Ballydonagh Solar Farm
Residential Receptor Map
Figure 6.1

Key

- Development Boundary
- Panel Boundary
- Glare Possible at Receptor
- Glare Not Possible at Receptor
- 1km Study Area
- Non Reflection Zone
- Residential Area

0 0.25 0.5 1 Kilometers

Ordnance Survey Ireland Licence No. CYAL50297096

Neo Office Address:
Johnstown Business Centre, Johnstown House, Naas, Co. Kildare

Date: 24/11/2025
Drawn By: Oliver Henderson
Scale (A3): 1:16,000
Drawing No: NEO00XXX/037I/A

NEO ENVIRONMENTAL

Ballydonagh Solar Farm
Road Receptor Map
Figure 6.2

Key

- Development Boundary
- Panel Boundary
- Glare Possible at Receptor
- Glare Not Possible at Receptor
- 1km Study Area
- Non Reflection Zone

Neo Office Address:
Johnstown Business Centre, Johnstown House, Naas, Co. Kildare

0 0.25 0.5 1 Kilometers

Ordnance Survey Ireland Licence No. CYAL50297096

Date: 24/11/2025
Drawn By: Oliver Henderson
Scale (A3): 1:16,000
Drawing No: NEO00874/038I/A

neo ENVIRONMENTAL

Ballydonagh Solar Farm
Panel Area Labels Map
Figure 6.3

Key

- Development Boundary
- Panel Boundary

0 0.25 0.5 1 Kilometers

Ordnance Survey Ireland Licence No. CYAL50297096

Neo Office Address:
Johnstown Business Centre, Johnstown House, Naas, Co. Kildare

Date: 24/11/2025
Drawn By: Oliver Henderson
Scale (A3): 1:16,000
Drawing No: NEO00874/040I/A

neo ENVIRONMENTAL

Ballydonagh Solar Farm
Mitigation Measures Map
Figure 6.4

Key

- Development Boundary
- Panel Boundary
- Mitigation Measures

Microsoft, Vantor

0 0.25 0.5 1 Kilometers

Ordnance Survey Ireland Licence No. CYAL50297096

Neo Office Address:
Johnstown Business Centre, Johnstown House, Naas, Co. Kildare

Date: 24/11/2025
Drawn By: Oliver Henderson
Scale (A3): 1:16,000
Drawing No: NEO00874/039I/A

neo ENVIRONMENTAL

FORGESOLAR GLARE ANALYSIS

Project: **Ballydonagh Solar Farm**
Site configuration: **Residential Receptor Glare Results 10 degrees**

Created 25 Nov, 2025
Updated 25 Nov, 2025
Time-step 1 minute
Timezone offset UTC0
Minimum sun altitude 0.0 deg
DNI peaks at 1,000.0 W/m^2
Category 10 MW to 100 MW
Site ID 165605.13892

Ocular transmission coefficient 0.5
Pupil diameter 0.002 m
Eye focal length 0.017 m
Sun subtended angle 9.3 mrad
PV analysis methodology V2

Summary of Results

Glare with potential for temporary after-image predicted

PV Array	Tilt	Orient	Annual Green Glare		Annual Yellow Glare		Energy
	°	°	min	hr	min	hr	kWh
PV array 1	10.0	180.0	51,432	857.2	3,273	54.5	-
PV array 2	10.0	180.0	29,788	496.5	7,555	125.9	-
PV array 3	10.0	180.0	10,019	167.0	967	16.1	-
PV array 4	10.0	180.0	2,443	40.7	0	0.0	-
PV array 5	10.0	180.0	8,049	134.2	805	13.4	-

Total glare received by each receptor; may include duplicate times of glare from multiple reflective surfaces.

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	1,168	19.5	1,307	21.8
OP 7	950	15.8	1,515	25.2
OP 8	1,133	18.9	9	0.1
OP 9	311	5.2	0	0.0
OP 10	0	0.0	0	0.0
OP 11	1,544	25.7	0	0.0
OP 12	2,258	37.6	0	0.0

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 13	2,340	39.0	0	0.0
OP 14	2,520	42.0	0	0.0
OP 15	2,693	44.9	0	0.0
OP 16	2,883	48.0	209	3.5
OP 17	2,917	48.6	114	1.9
OP 18	3,391	56.5	0	0.0
OP 19	3,291	54.9	0	0.0
OP 20	3,213	53.5	131	2.2
OP 21	1,501	25.0	1,343	22.4
OP 22	3,523	58.7	927	15.4
OP 23	2,215	36.9	1,433	23.9
OP 24	3,847	64.1	516	8.6
OP 25	2,584	43.1	59	1.0
OP 26	3,092	51.5	137	2.3
OP 27	2,395	39.9	771	12.8
OP 28	1,897	31.6	0	0.0
OP 29	1,541	25.7	439	7.3
OP 30	922	15.4	0	0.0
OP 31	0	0.0	0	0.0
OP 32	1,017	16.9	0	0.0
OP 33	1,995	33.2	366	6.1
OP 34	1,167	19.4	0	0.0
OP 35	919	15.3	0	0.0
OP 36	1,559	26.0	0	0.0
OP 37	157	2.6	0	0.0
OP 38	3,637	60.6	0	0.0
OP 39	3,719	62.0	0	0.0
OP 40	4,219	70.3	893	14.9
OP 41	4,085	68.1	105	1.8
OP 42	5,010	83.5	577	9.6
OP 43	3,588	59.8	0	0.0
OP 44	5,451	90.8	1,328	22.1
OP 45	5,350	89.2	421	7.0
OP 46	2,258	37.6	0	0.0
OP 47	1,514	25.2	0	0.0
OP 48	1,133	18.9	0	0.0
OP 49	824	13.7	0	0.0
OP 50	0	0.0	0	0.0
OP 51	0	0.0	0	0.0
OP 52	0	0.0	0	0.0
OP 53	0	0.0	0	0.0
OP 54	0	0.0	0	0.0

Component Data

PV Arrays

Name: PV array 1
Axis tracking: Fixed (no rotation)
Tilt: 10.0°
Orientation: 180.0°
Rated power: -
Panel material: Light textured glass with AR coating
Reflectivity: Vary with sun
Slope error: correlate with material

Vertex	Latitude (°)	Longitude (°)	Ground elevation (m)	Height above ground (m)	Total elevation (m)
1	53.240101	-8.253587	80.52	3.50	84.02
2	53.240185	-8.253469	80.64	3.50	84.14
3	53.240166	-8.252772	81.23	3.50	84.73
4	53.240037	-8.252364	80.86	3.50	84.36
5	53.239344	-8.252504	79.41	3.50	82.91
6	53.239273	-8.252493	79.31	3.50	82.81
7	53.238837	-8.250605	79.13	3.50	82.63
8	53.239787	-8.249854	81.13	3.50	84.63
9	53.239813	-8.249553	81.19	3.50	84.69
10	53.238028	-8.248395	79.21	3.50	82.71
11	53.236209	-8.248545	79.03	3.50	82.53
12	53.234045	-8.250079	77.65	3.50	81.15
13	53.233827	-8.250551	76.65	3.50	80.15
14	53.234007	-8.253995	75.76	3.50	79.26
15	53.234180	-8.254059	75.85	3.50	79.35
16	53.234572	-8.253330	75.58	3.50	79.08
17	53.235169	-8.252740	76.67	3.50	80.17
18	53.235416	-8.252369	77.40	3.50	80.90
19	53.235635	-8.251736	78.53	3.50	82.03
20	53.236084	-8.251479	78.37	3.50	81.87
21	53.236431	-8.251479	78.07	3.50	81.57
22	53.236707	-8.251007	78.00	3.50	81.50
23	53.237086	-8.250857	77.87	3.50	81.37
24	53.237291	-8.252230	78.10	3.50	81.60
25	53.237272	-8.252455	78.31	3.50	81.81
26	53.237446	-8.253027	78.69	3.50	82.19
27	53.237555	-8.254486	80.00	3.50	83.50
28	53.238084	-8.254302	79.43	3.50	82.93
29	53.238071	-8.252853	78.60	3.50	82.10
30	53.238200	-8.252574	78.75	3.50	82.25
31	53.238463	-8.252403	79.00	3.50	82.50
32	53.238688	-8.252349	79.00	3.50	82.50
33	53.238880	-8.252681	79.00	3.50	82.50
34	53.238906	-8.254141	79.75	3.50	83.25
35	53.239233	-8.253980	79.80	3.50	83.30
36	53.239445	-8.253647	79.68	3.50	83.18

Name: PV array 2
Axis tracking: Fixed (no rotation)
Tilt: 10.0°
Orientation: 180.0°
Rated power: -
Panel material: Light textured glass with AR coating
Reflectivity: Vary with sun
Slope error: correlate with material

Vertex	Latitude (°)	Longitude (°)	Ground elevation (m)	Height above ground (m)	Total elevation (m)
1	53.237448	-8.238042	91.31	3.50	94.81
2	53.237326	-8.236701	90.92	3.50	94.42
3	53.235965	-8.236207	89.65	3.50	93.15
4	53.235939	-8.235220	91.32	3.50	94.82
5	53.235785	-8.234930	91.48	3.50	94.98
6	53.235785	-8.234673	91.48	3.50	94.98
7	53.235792	-8.233900	91.87	3.50	95.37
8	53.235785	-8.233804	91.98	3.50	95.48
9	53.233827	-8.233933	90.09	3.50	93.59
10	53.233811	-8.233992	90.03	3.50	93.53
11	53.233779	-8.233986	90.07	3.50	93.57
12	53.233727	-8.233943	90.22	3.50	93.72
13	53.233413	-8.233959	90.20	3.50	93.70
14	53.233624	-8.236899	86.14	3.50	89.64
15	53.233747	-8.237403	85.42	3.50	88.92
16	53.233689	-8.237918	84.66	3.50	88.16
17	53.233689	-8.238079	84.43	3.50	87.93
18	53.233920	-8.238702	84.48	3.50	87.98
19	53.234402	-8.238884	84.85	3.50	88.35
20	53.234774	-8.239485	85.00	3.50	88.50
21	53.234639	-8.240139	84.43	3.50	87.93
22	53.234247	-8.240096	84.48	3.50	87.98
23	53.234003	-8.242052	82.28	3.50	85.78
24	53.234151	-8.242535	81.80	3.50	85.30
25	53.233785	-8.242567	81.29	3.50	84.79
26	53.233560	-8.243275	80.85	3.50	84.35
27	53.233387	-8.246269	78.00	3.50	81.50
28	53.236386	-8.245485	81.07	3.50	84.57
29	53.236495	-8.245196	81.26	3.50	84.76
30	53.236270	-8.242471	82.03	3.50	85.53
31	53.236142	-8.238919	86.95	3.50	90.45
32	53.236411	-8.238522	88.04	3.50	91.54
33	53.236829	-8.238726	88.59	3.50	92.09
34	53.236855	-8.237514	89.62	3.50	93.12

Name: PV array 3
Axis tracking: Fixed (no rotation)
Tilt: 10.0°
Orientation: 180.0°
Rated power: -
Panel material: Light textured glass with AR coating
Reflectivity: Vary with sun
Slope error: correlate with material

Vertex	Latitude (°)	Longitude (°)	Ground elevation (m)	Height above ground (m)	Total elevation (m)
1	53.230937	-8.244341	80.00	3.50	83.50
2	53.230795	-8.242002	81.69	3.50	85.19
3	53.230680	-8.241723	81.90	3.50	85.40
4	53.230641	-8.240565	83.29	3.50	86.79
5	53.228804	-8.241122	82.00	3.50	85.50
6	53.229883	-8.245725	79.65	3.50	83.15
7	53.230230	-8.247216	78.00	3.50	81.50
8	53.231245	-8.247195	78.10	3.50	81.60
9	53.231521	-8.247002	78.43	3.50	81.93
10	53.231919	-8.247002	78.17	3.50	81.67
11	53.231894	-8.246551	78.44	3.50	81.94
12	53.230256	-8.246304	78.46	3.50	81.96
13	53.230192	-8.245757	79.24	3.50	82.74
14	53.230018	-8.245317	80.05	3.50	83.55

Name: PV array 4
Axis tracking: Fixed (no rotation)
Tilt: 10.0°
Orientation: 180.0°
Rated power: -
Panel material: Light textured glass with AR coating
Reflectivity: Vary with sun
Slope error: correlate with material

Vertex	Latitude (°)	Longitude (°)	Ground elevation (m)	Height above ground (m)	Total elevation (m)
1	53.227543	-8.254478	76.00	3.50	79.50
2	53.227774	-8.254478	76.00	3.50	79.50
3	53.228417	-8.253405	77.05	3.50	80.55
4	53.228481	-8.253008	77.40	3.50	80.90
5	53.228057	-8.252483	77.45	3.50	80.95
6	53.227042	-8.251946	78.11	3.50	81.61
7	53.226856	-8.252568	77.32	3.50	80.82
8	53.226888	-8.252944	76.78	3.50	80.28
9	53.226978	-8.252965	76.74	3.50	80.24
10	53.227402	-8.253523	76.02	3.50	79.52
11	53.227376	-8.254360	75.99	3.50	79.49

Name: PV array 5
Axis tracking: Fixed (no rotation)
Tilt: 10.0°
Orientation: 180.0°
Rated power: -
Panel material: Light textured glass with AR coating
Reflectivity: Vary with sun
Slope error: correlate with material

Vertex	Latitude (°)	Longitude (°)	Ground elevation (m)	Height above ground (m)	Total elevation (m)
1	53.226282	-8.253467	76.62	3.50	80.12
2	53.226301	-8.252598	77.28	3.50	80.78
3	53.226141	-8.252287	77.73	3.50	81.23
4	53.226282	-8.251493	78.35	3.50	81.85
5	53.226141	-8.251386	78.18	3.50	81.68
6	53.226109	-8.251171	78.14	3.50	81.64
7	53.225216	-8.249734	77.23	3.50	80.73
8	53.224590	-8.249198	76.21	3.50	79.71
9	53.224506	-8.249134	76.27	3.50	79.77
10	53.224320	-8.248512	76.77	3.50	80.27
11	53.223614	-8.247728	77.00	3.50	80.50
12	53.223273	-8.248200	76.69	3.50	80.19
13	53.222965	-8.248758	74.98	3.50	78.48
14	53.222849	-8.249177	74.05	3.50	77.55
15	53.222862	-8.249606	73.45	3.50	76.95
16	53.222612	-8.250228	71.82	3.50	75.32
17	53.221552	-8.253307	71.50	3.50	75.00
18	53.223453	-8.253114	73.00	3.50	76.50
19	53.224333	-8.253061	73.55	3.50	77.05
20	53.224596	-8.252728	73.94	3.50	77.44
21	53.224763	-8.253769	74.28	3.50	77.78
22	53.225347	-8.253983	75.30	3.50	78.80
23	53.225430	-8.254638	75.05	3.50	78.55
24	53.225578	-8.254670	75.10	3.50	78.60
25	53.225796	-8.254649	75.20	3.50	78.70
26	53.225931	-8.254488	75.46	3.50	78.96

Discrete Observation Point Receptors

Name	ID	Latitude (°)	Longitude (°)	Elevation (m)	Height (m)
OP 1	1	53.244295	-8.266774	79.62	2.00
OP 2	2	53.243916	-8.266983	79.08	2.00
OP 3	3	53.242042	-8.264513	78.62	2.00
OP 4	4	53.241318	-8.267867	77.01	2.00
OP 5	5	53.240879	-8.268650	76.00	2.00
OP 6	6	53.238617	-8.255118	79.72	2.00
OP 7	7	53.236787	-8.252501	78.70	2.00
OP 8	8	53.236736	-8.259324	78.38	2.00
OP 9	9	53.236074	-8.261234	78.19	2.00
OP 10	10	53.237271	-8.268826	76.93	2.00
OP 11	11	53.235640	-8.268948	72.03	2.00
OP 12	12	53.235036	-8.268777	71.39	2.00
OP 13	13	53.234997	-8.267361	72.07	2.00
OP 14	14	53.235017	-8.265424	73.73	2.00
OP 15	15	53.234452	-8.265161	74.00	2.00
OP 16	16	53.234579	-8.263046	73.48	2.00
OP 17	17	53.234341	-8.262032	73.67	2.00
OP 18	18	53.233612	-8.262542	73.00	2.00
OP 19	19	53.233840	-8.260525	75.14	2.00
OP 20	20	53.233846	-8.258502	75.53	2.00
OP 21	21	53.234243	-8.246657	78.91	2.00
OP 22	22	53.232488	-8.256146	76.00	2.00
OP 23	23	53.231254	-8.253233	77.63	2.00
OP 24	24	53.231135	-8.250428	77.99	2.00
OP 25	25	53.229917	-8.247734	78.31	2.00
OP 26	26	53.229808	-8.247289	78.47	2.00
OP 27	27	53.229705	-8.246876	78.62	2.00
OP 28	28	53.218629	-8.267092	70.34	2.00
OP 29	29	53.218449	-8.266513	70.96	2.00
OP 30	30	53.218214	-8.263762	70.39	2.00
OP 31	31	53.217141	-8.245885	73.00	2.00
OP 32	32	53.217469	-8.239318	79.62	2.00
OP 33	33	53.220501	-8.239124	80.97	2.00
OP 34	34	53.223044	-8.231433	84.33	2.00
OP 35	35	53.223770	-8.230382	84.73	2.00
OP 36	36	53.223680	-8.229008	84.22	2.00
OP 37	37	53.226776	-8.233772	89.82	2.00
OP 38	38	53.227970	-8.227584	87.39	2.00
OP 39	39	53.227794	-8.227444	87.46	2.00
OP 40	40	53.230061	-8.221516	87.30	2.00
OP 41	41	53.231635	-8.230564	92.38	2.00
OP 42	42	53.233191	-8.230236	94.75	2.00
OP 43	43	53.233994	-8.230569	96.21	2.00
OP 44	44	53.234999	-8.230456	99.18	2.00
OP 45	45	53.235127	-8.231094	97.48	2.00
OP 46	46	53.235327	-8.226199	101.98	2.00
OP 47	47	53.237975	-8.234594	94.59	2.00
OP 48	48	53.238790	-8.237120	91.22	2.00
OP 49	49	53.239191	-8.236262	91.70	2.00
OP 50	50	53.242028	-8.228035	91.30	2.00
OP 51	51	53.243955	-8.229128	86.27	2.00

Name	ID	Latitude (°)	Longitude (°)	Elevation (m)	Height (m)
OP 52	52	53.244603	-8.229927	85.59	2.00
OP 53	53	53.244758	-8.230625	86.11	2.00
OP 54	54	53.245486	-8.230590	84.42	2.00

Glare Analysis Results

Summary of Results

Glare with potential for temporary after-image predicted

PV Array	Tilt	Orient	Annual Green Glare		Annual Yellow Glare		Energy
	°	°	min	hr	min	hr	kWh
PV array 1	10.0	180.0	51,432	857.2	3,273	54.5	-
PV array 2	10.0	180.0	29,788	496.5	7,555	125.9	-
PV array 3	10.0	180.0	10,019	167.0	967	16.1	-
PV array 4	10.0	180.0	2,443	40.7	0	0.0	-
PV array 5	10.0	180.0	8,049	134.2	805	13.4	-

Total glare received by each receptor; may include duplicate times of glare from multiple reflective surfaces.

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	1,168	19.5	1,307	21.8
OP 7	950	15.8	1,515	25.2
OP 8	1,133	18.9	9	0.1
OP 9	311	5.2	0	0.0
OP 10	0	0.0	0	0.0
OP 11	1,544	25.7	0	0.0
OP 12	2,258	37.6	0	0.0
OP 13	2,340	39.0	0	0.0
OP 14	2,520	42.0	0	0.0
OP 15	2,693	44.9	0	0.0
OP 16	2,883	48.0	209	3.5
OP 17	2,917	48.6	114	1.9
OP 18	3,391	56.5	0	0.0
OP 19	3,291	54.9	0	0.0
OP 20	3,213	53.5	131	2.2
OP 21	1,501	25.0	1,343	22.4
OP 22	3,523	58.7	927	15.4
OP 23	2,215	36.9	1,433	23.9
OP 24	3,847	64.1	516	8.6
OP 25	2,584	43.1	59	1.0
OP 26	3,092	51.5	137	2.3
OP 27	2,395	39.9	771	12.8
OP 28	1,897	31.6	0	0.0

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 29	1,541	25.7	439	7.3
OP 30	922	15.4	0	0.0
OP 31	0	0.0	0	0.0
OP 32	1,017	16.9	0	0.0
OP 33	1,995	33.2	366	6.1
OP 34	1,167	19.4	0	0.0
OP 35	919	15.3	0	0.0
OP 36	1,559	26.0	0	0.0
OP 37	157	2.6	0	0.0
OP 38	3,637	60.6	0	0.0
OP 39	3,719	62.0	0	0.0
OP 40	4,219	70.3	893	14.9
OP 41	4,085	68.1	105	1.8
OP 42	5,010	83.5	577	9.6
OP 43	3,588	59.8	0	0.0
OP 44	5,451	90.8	1,328	22.1
OP 45	5,350	89.2	421	7.0
OP 46	2,258	37.6	0	0.0
OP 47	1,514	25.2	0	0.0
OP 48	1,133	18.9	0	0.0
OP 49	824	13.7	0	0.0
OP 50	0	0.0	0	0.0
OP 51	0	0.0	0	0.0
OP 52	0	0.0	0	0.0
OP 53	0	0.0	0	0.0
OP 54	0	0.0	0	0.0

PV: PV array 1 potential temporary after-image

Receptor results ordered by category of glare

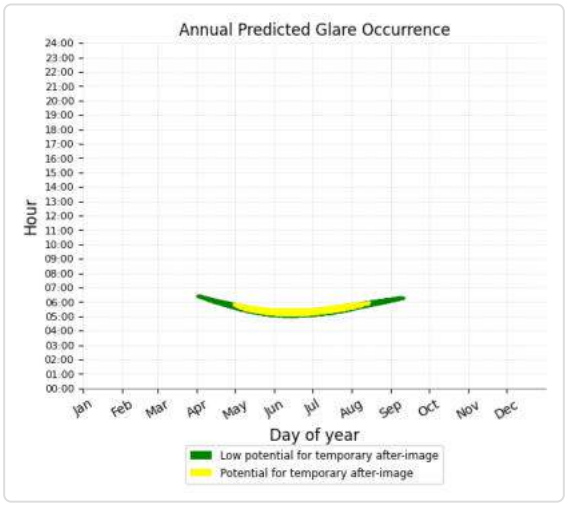
Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 6	1,168	19.5	1,307	21.8
OP 7	950	15.8	1,515	25.2
OP 8	1,133	18.9	9	0.1
OP 16	2,017	33.6	209	3.5
OP 17	1,966	32.8	114	1.9
OP 20	1,774	29.6	31	0.5
OP 21	905	15.1	28	0.5
OP 22	1,236	20.6	60	1.0
OP 11	1,360	22.7	0	0.0
OP 12	1,821	30.4	0	0.0
OP 13	1,857	30.9	0	0.0
OP 14	1,921	32.0	0	0.0
OP 15	1,862	31.0	0	0.0
OP 18	2,210	36.8	0	0.0
OP 19	1,923	32.0	0	0.0
OP 37	114	1.9	0	0.0
OP 38	1,527	25.4	0	0.0
OP 39	1,553	25.9	0	0.0
OP 40	2,264	37.7	0	0.0
OP 41	2,768	46.1	0	0.0
OP 42	3,438	57.3	0	0.0
OP 43	3,588	59.8	0	0.0
OP 44	3,187	53.1	0	0.0
OP 45	3,161	52.7	0	0.0
OP 46	2,258	37.6	0	0.0
OP 47	1,514	25.2	0	0.0
OP 48	1,133	18.9	0	0.0
OP 49	824	13.7	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 23	0	0.0	0	0.0
OP 24	0	0.0	0	0.0

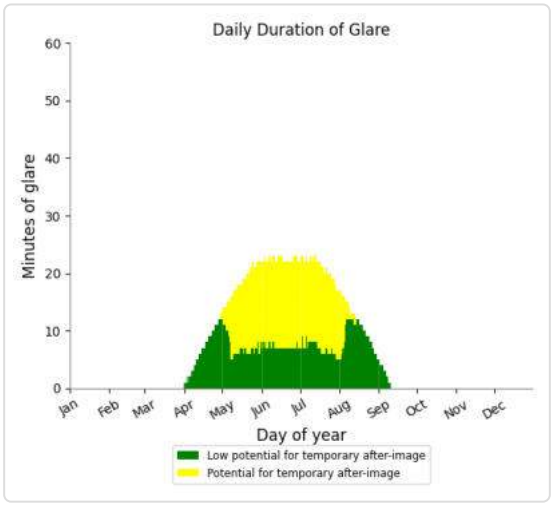
Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 25	0	0.0	0	0.0
OP 26	0	0.0	0	0.0
OP 27	0	0.0	0	0.0
OP 28	0	0.0	0	0.0
OP 29	0	0.0	0	0.0
OP 30	0	0.0	0	0.0
OP 31	0	0.0	0	0.0
OP 32	0	0.0	0	0.0
OP 33	0	0.0	0	0.0
OP 34	0	0.0	0	0.0
OP 35	0	0.0	0	0.0
OP 36	0	0.0	0	0.0
OP 50	0	0.0	0	0.0
OP 51	0	0.0	0	0.0
OP 52	0	0.0	0	0.0
OP 53	0	0.0	0	0.0
OP 54	0	0.0	0	0.0

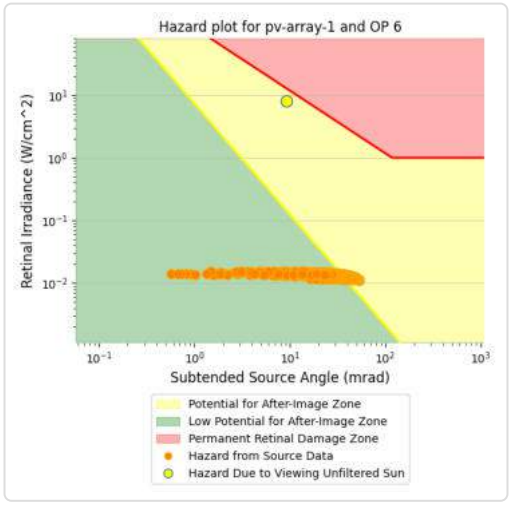
PV array 1 and OP 6

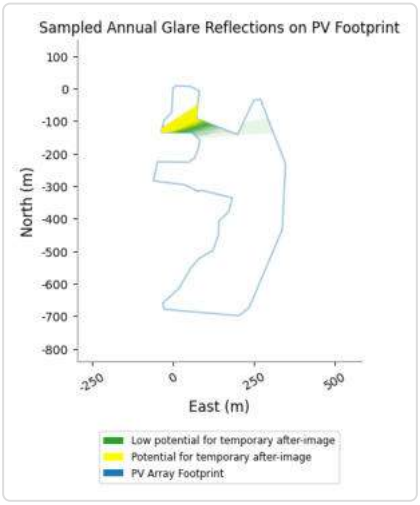
Yellow glare: 1,307 min.

Green glare: 1,168 min.





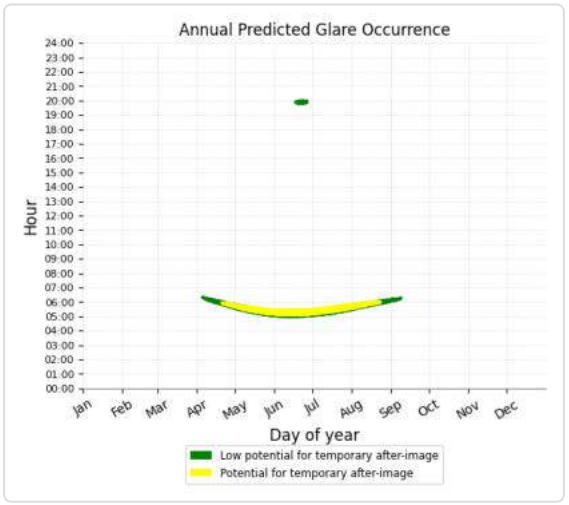


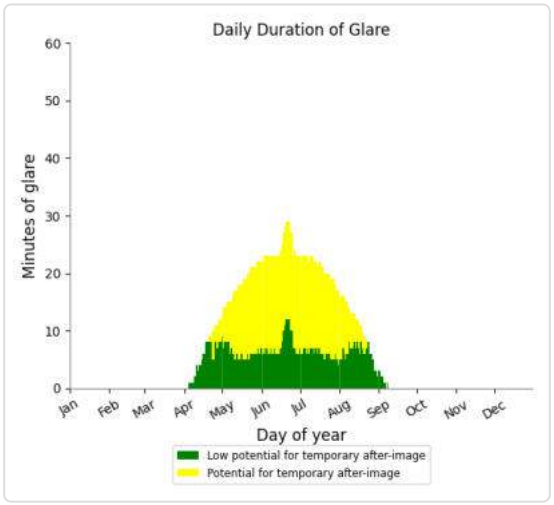


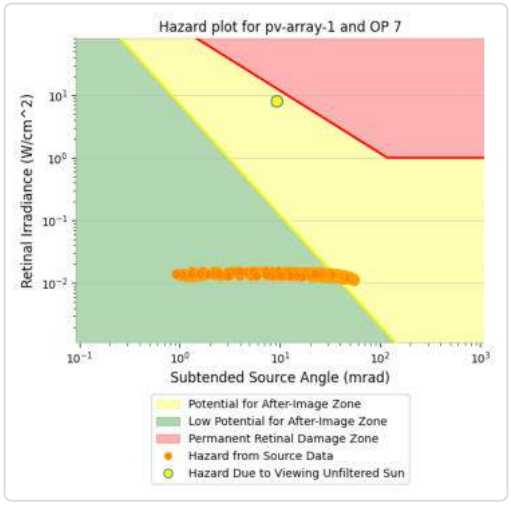
PV array 1 and OP 7

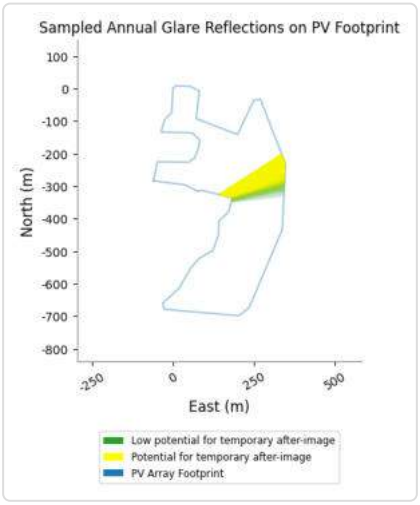
Yellow glare: 1,515 min.

Green glare: 950 min.





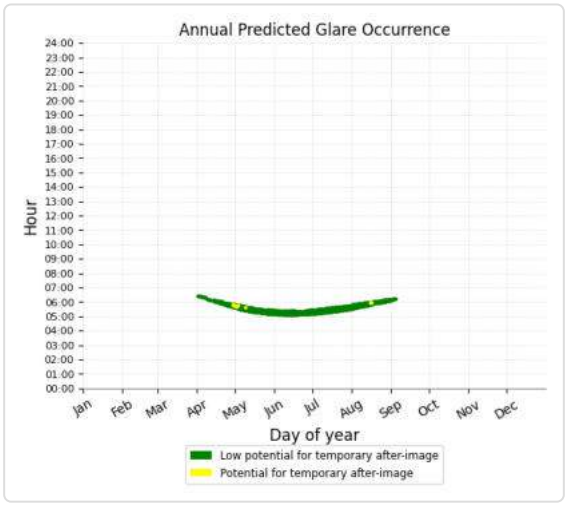


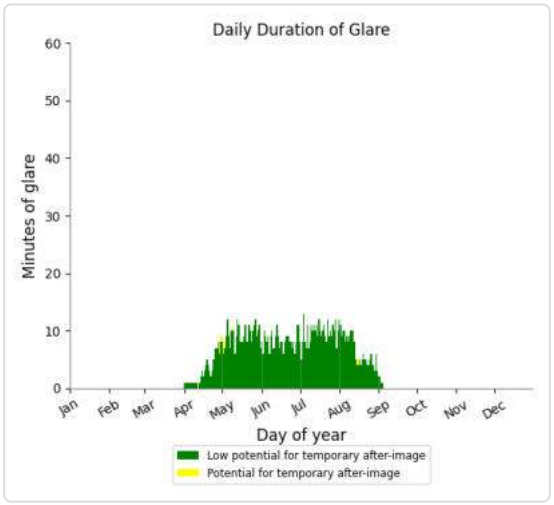


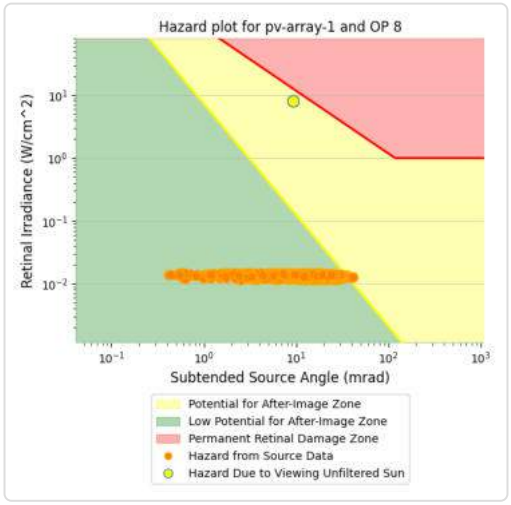
PV array 1 and OP 8

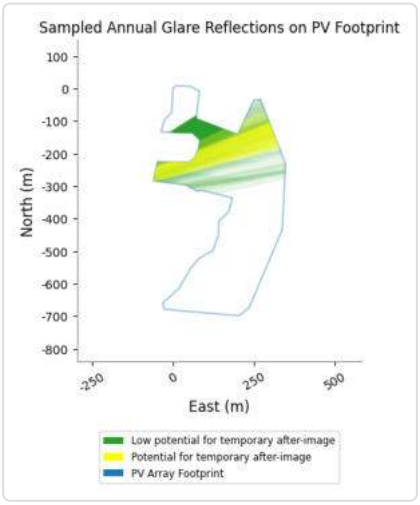
Yellow glare: 9 min.

Green glare: 1,133 min.





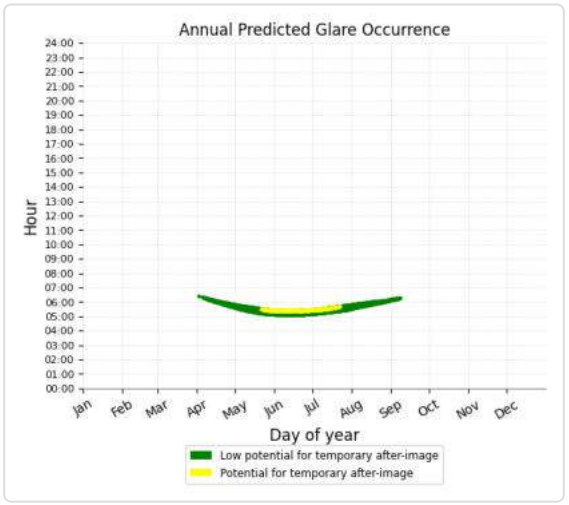


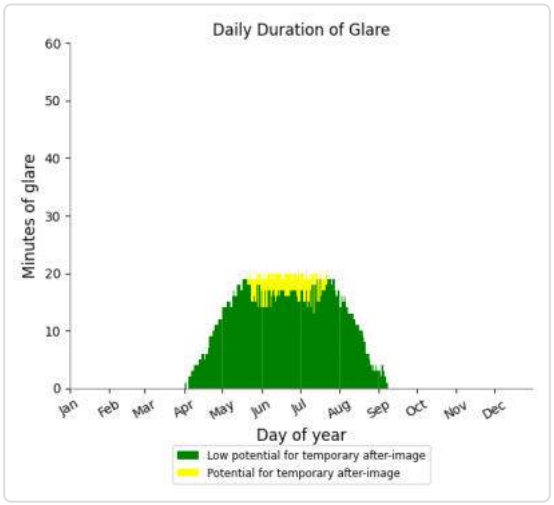


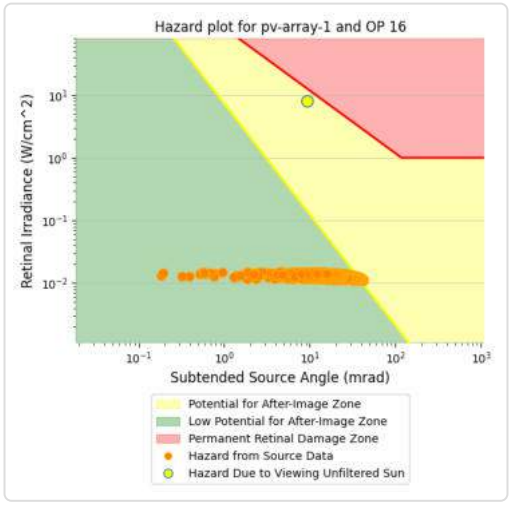
PV array 1 and OP 16

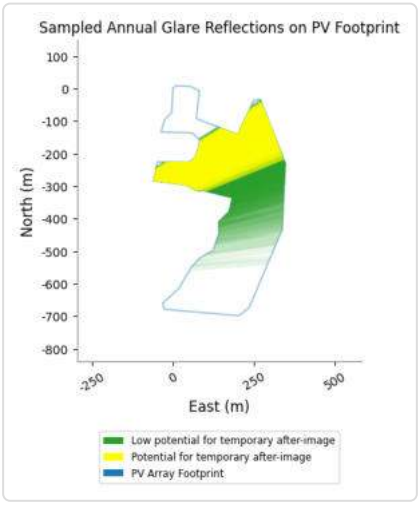
Yellow glare: 209 min.

Green glare: 2,017 min.





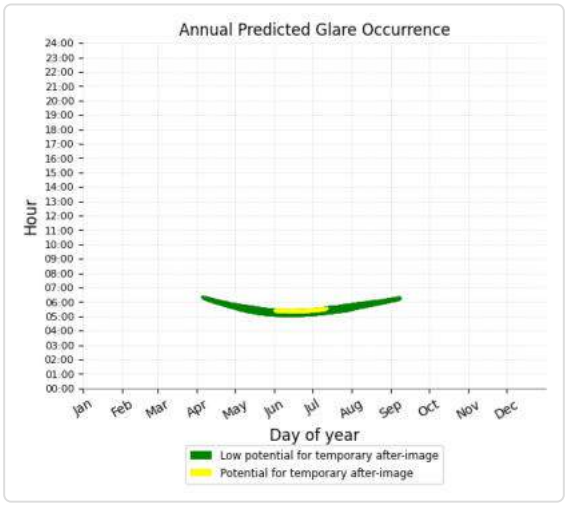


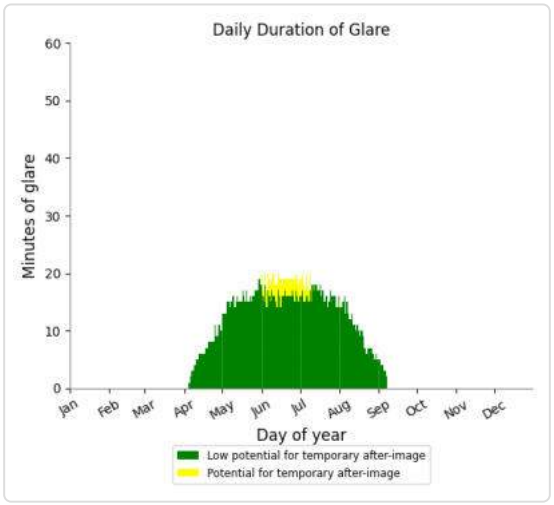


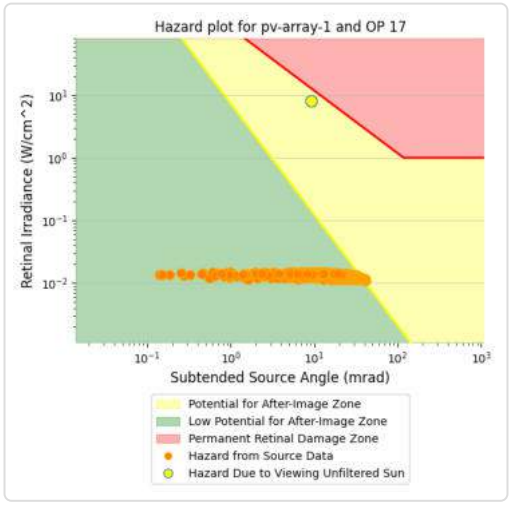
PV array 1 and OP 17

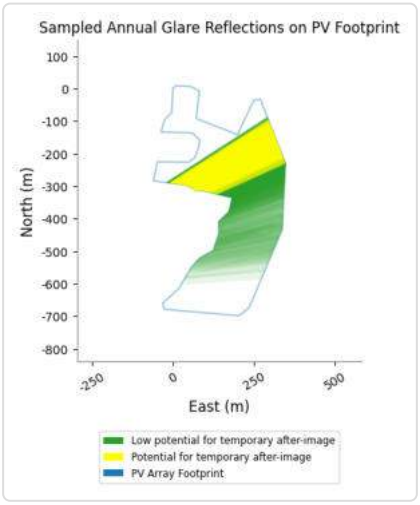
Yellow glare: 114 min.

Green glare: 1,966 min.





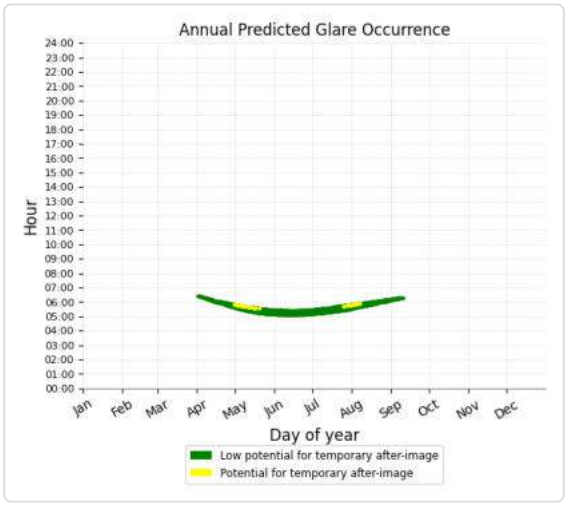


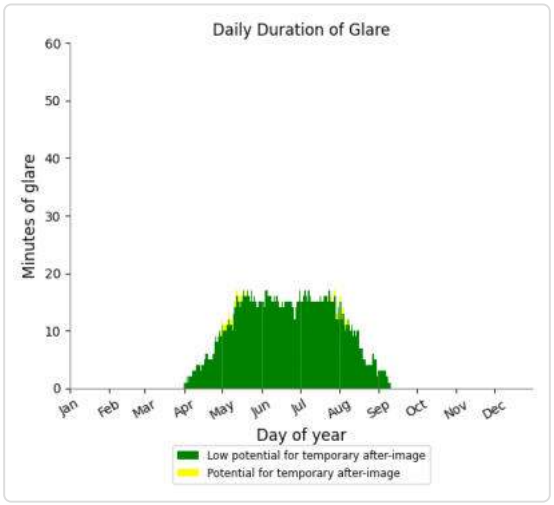


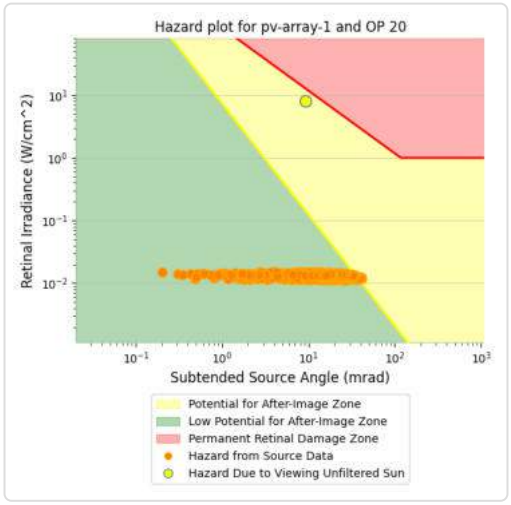
PV array 1 and OP 20

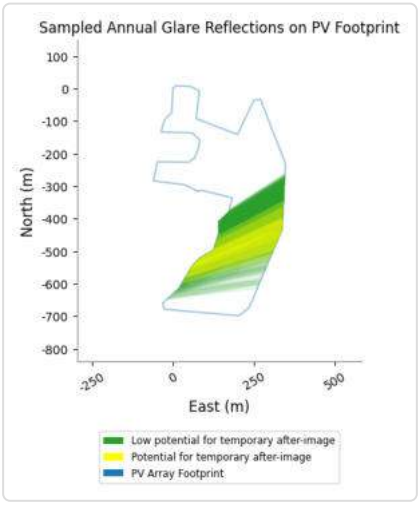
Yellow glare: 31 min.

Green glare: 1,774 min.





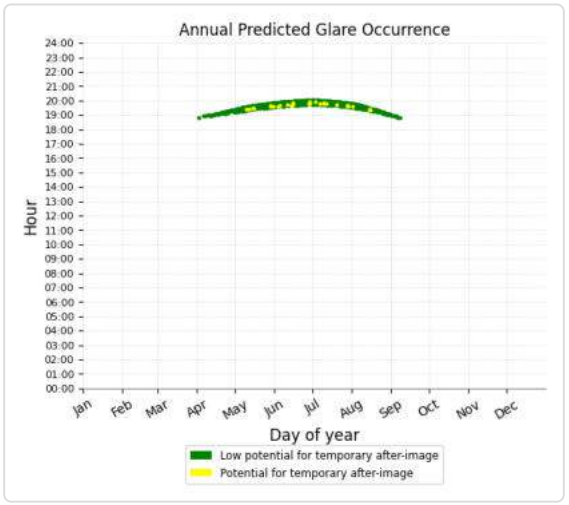


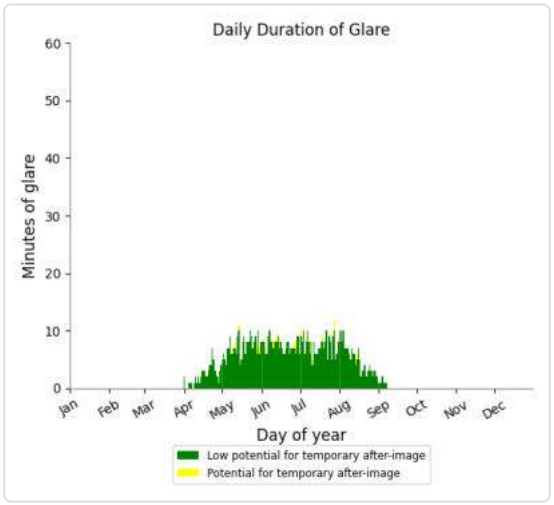


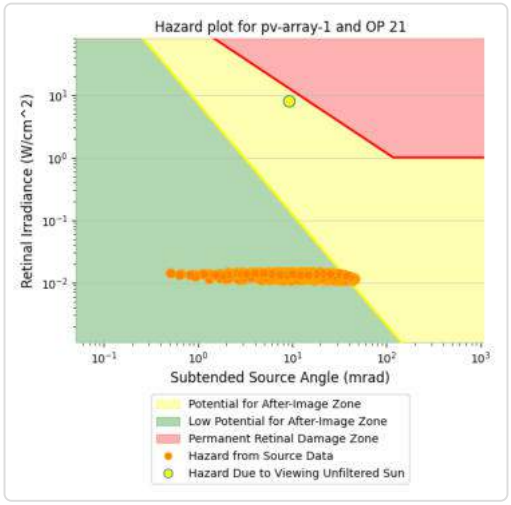
PV array 1 and OP 21

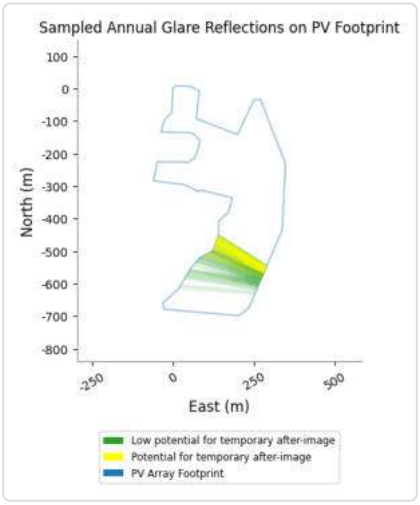
Yellow glare: 28 min.

Green glare: 905 min.





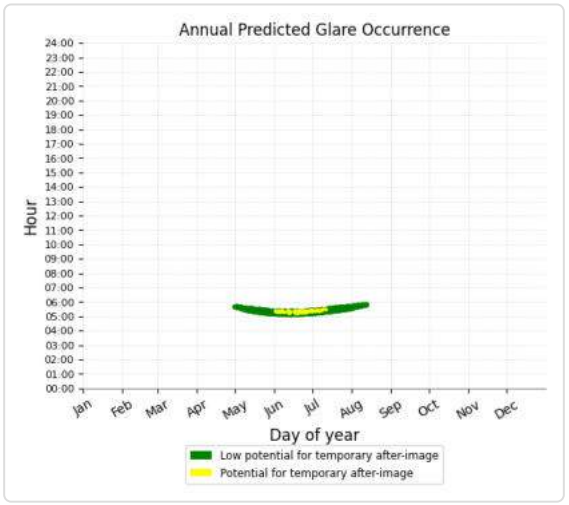


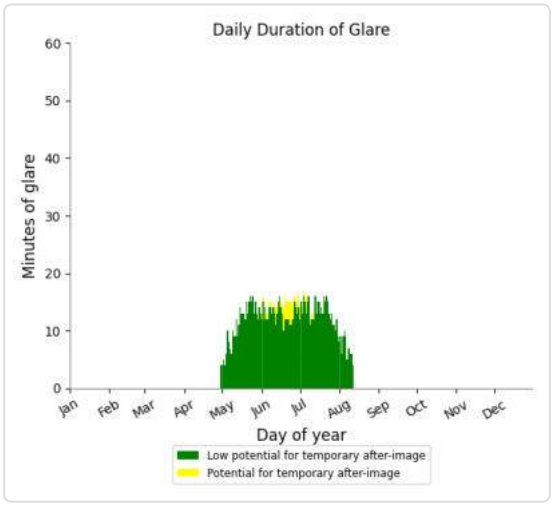


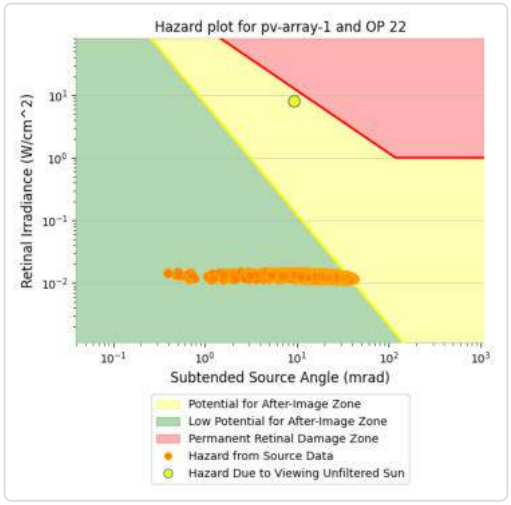
PV array 1 and OP 22

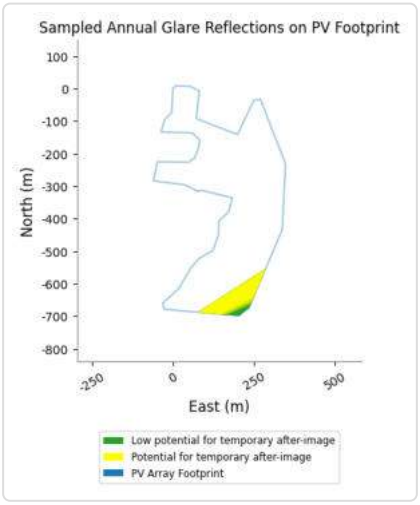
Yellow glare: 60 min.

Green glare: 1,236 min.





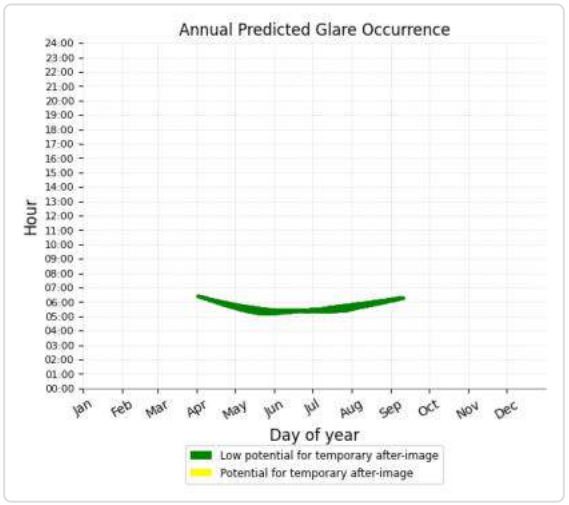


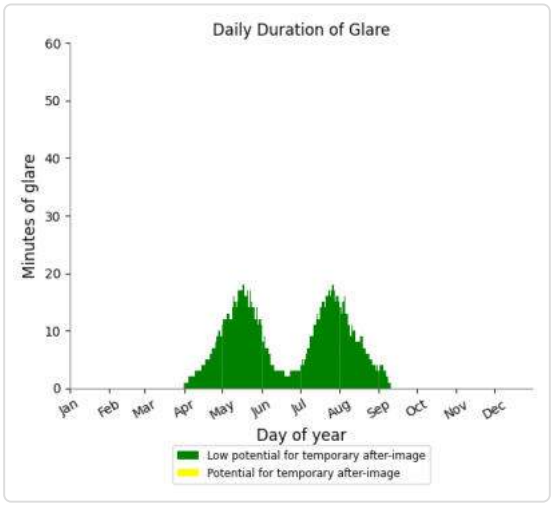


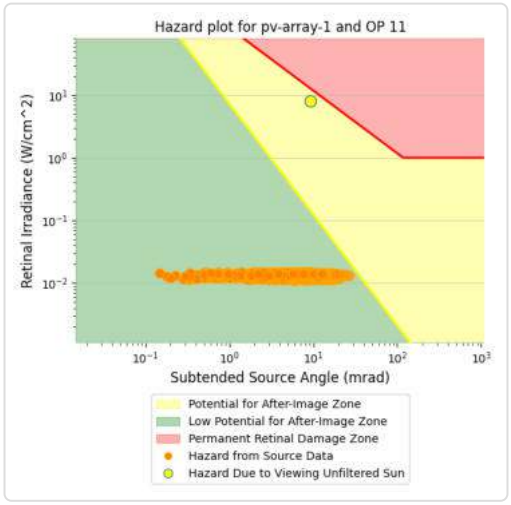
PV array 1 and OP 11

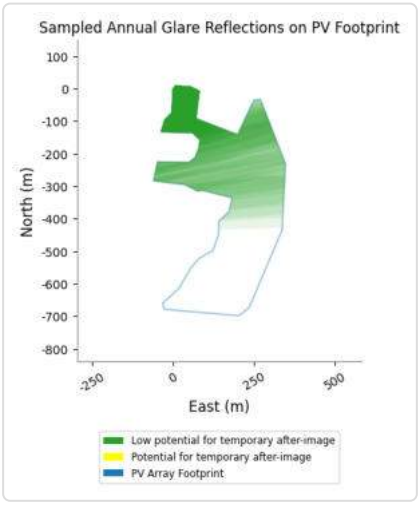
Yellow glare: none

Green glare: 1,360 min.





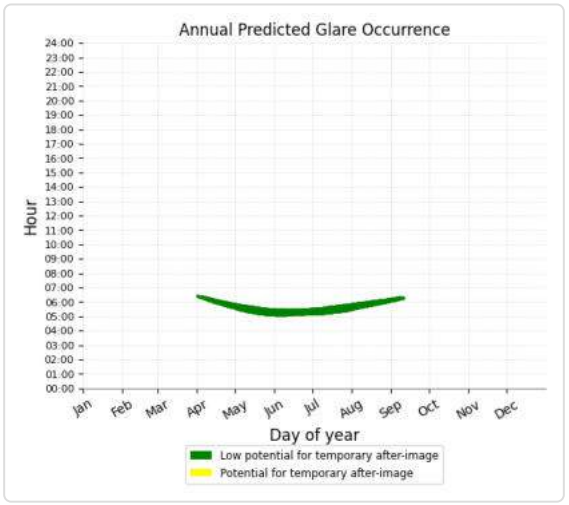


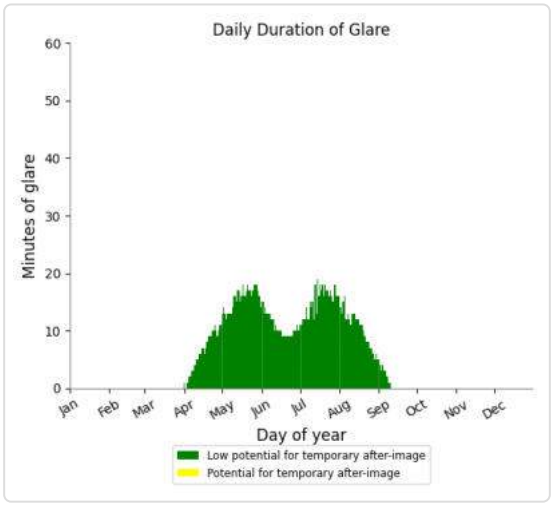


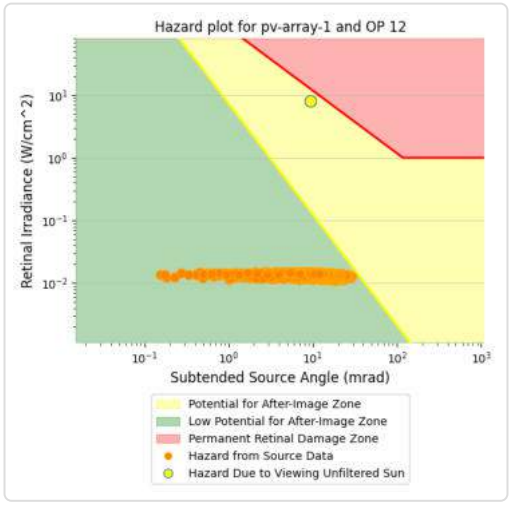
PV array 1 and OP 12

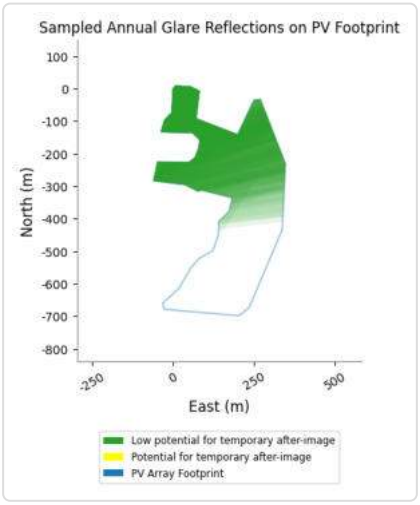
Yellow glare: none

Green glare: 1,821 min.





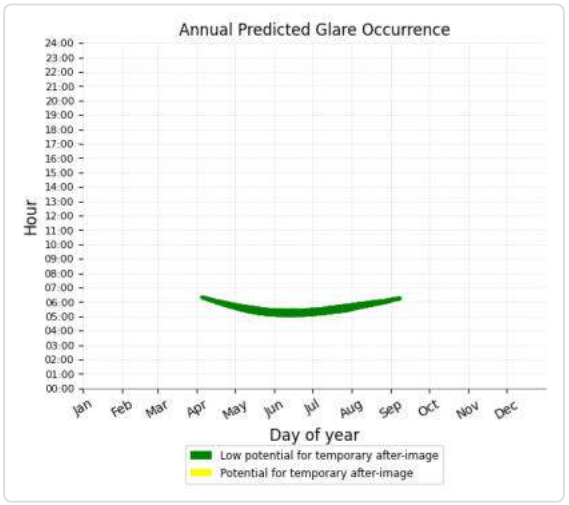


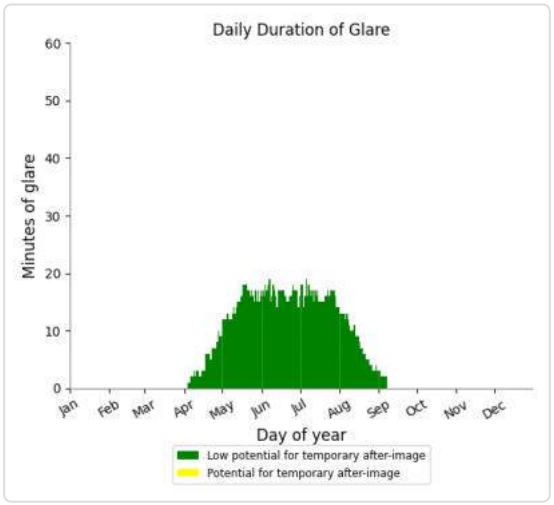


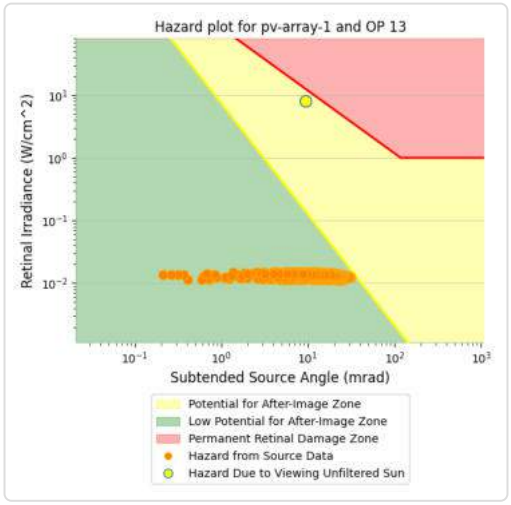
PV array 1 and OP 13

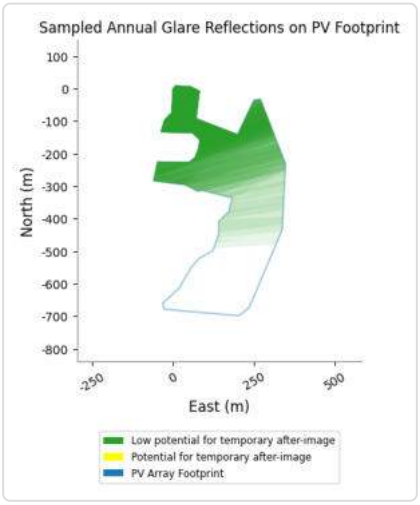
Yellow glare: none

Green glare: 1,857 min.





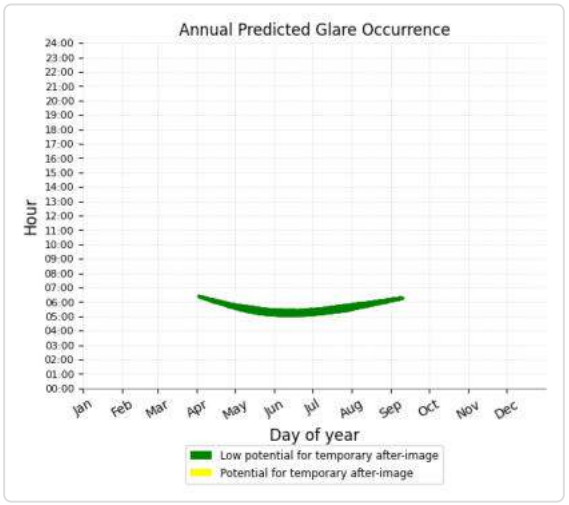


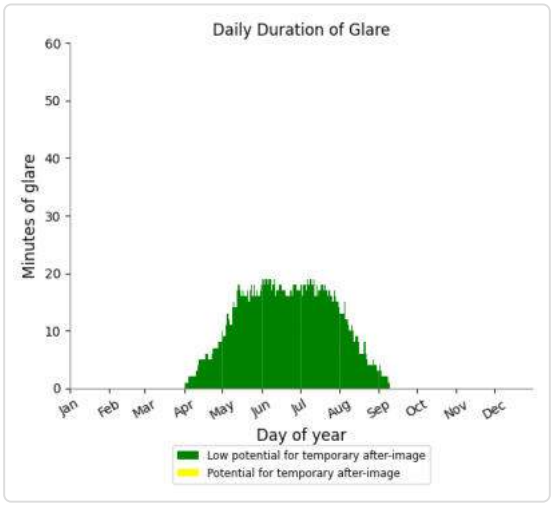


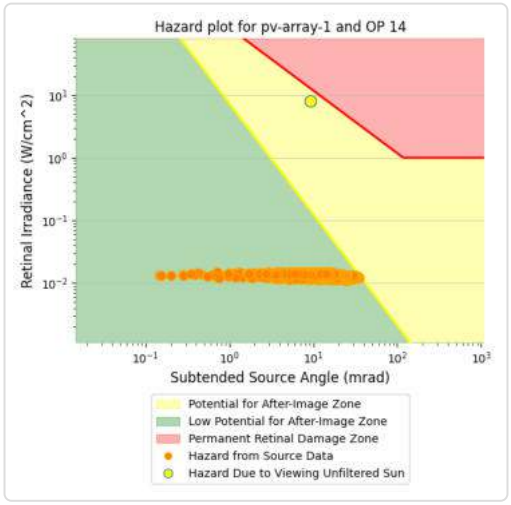
PV array 1 and OP 14

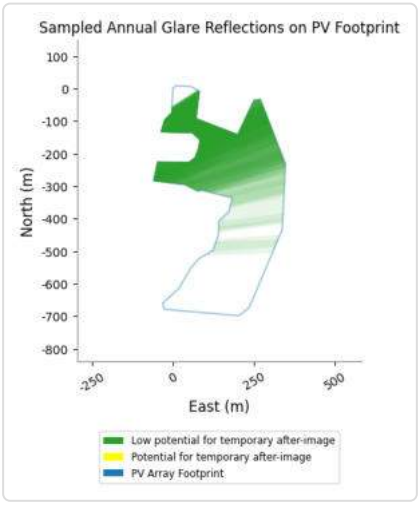
Yellow glare: none

Green glare: 1,921 min.





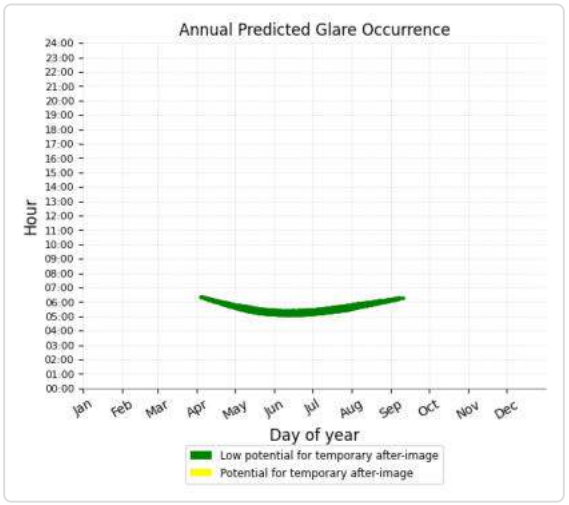


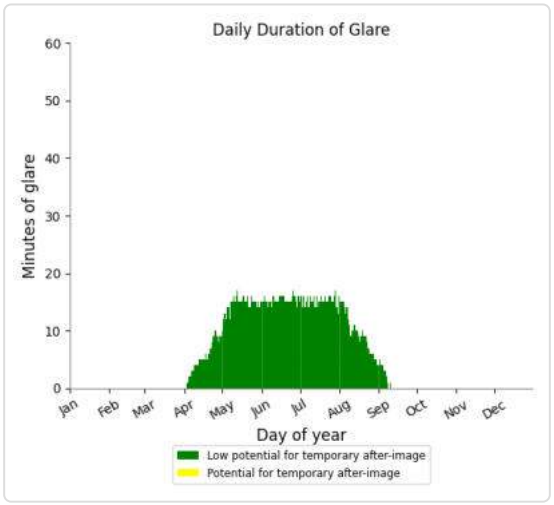


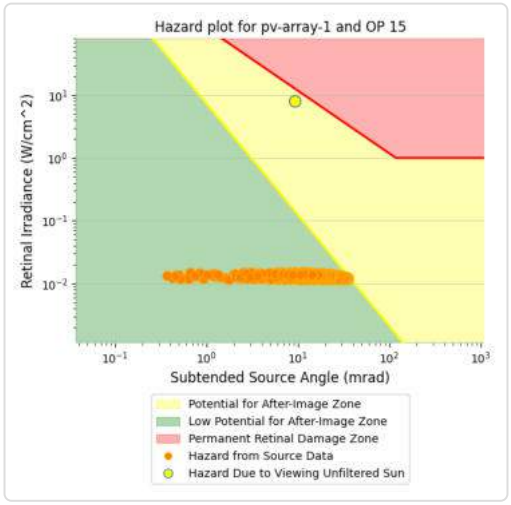
PV array 1 and OP 15

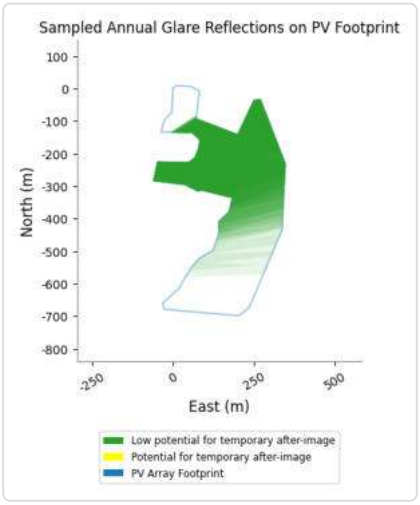
Yellow glare: none

Green glare: 1,862 min.





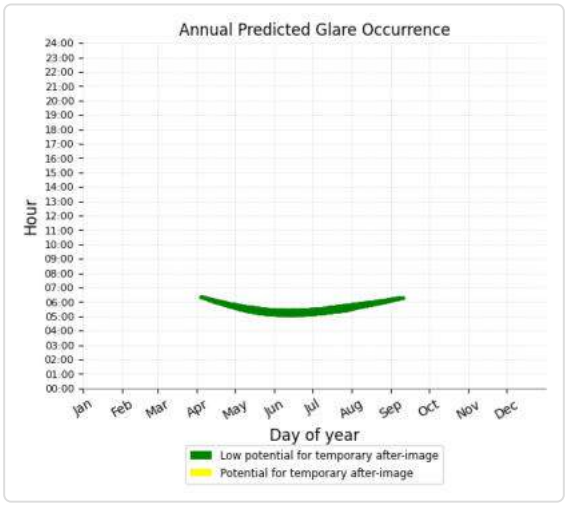


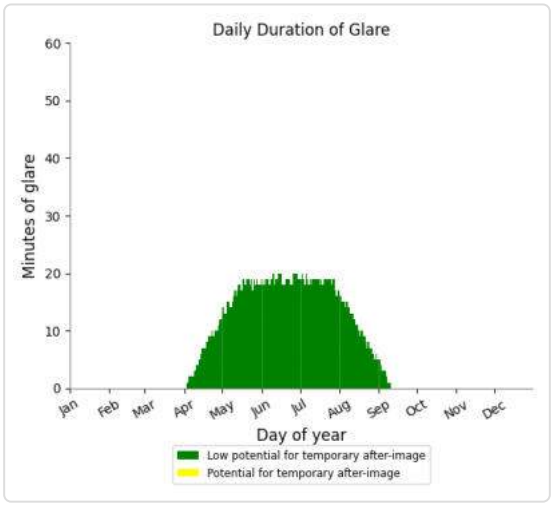


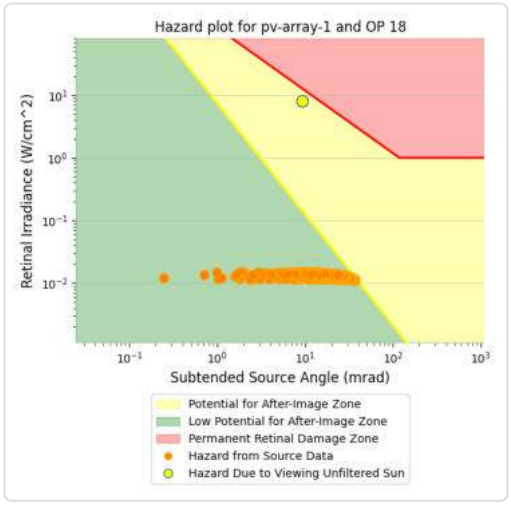
PV array 1 and OP 18

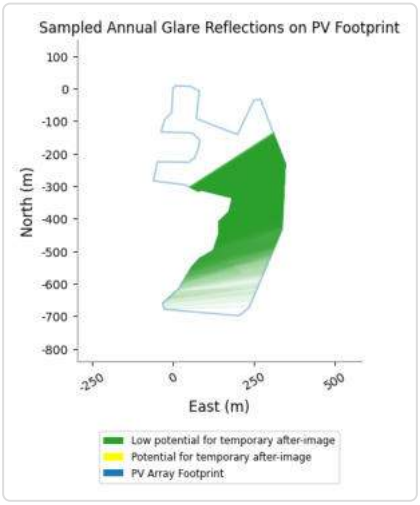
Yellow glare: none

Green glare: 2,210 min.





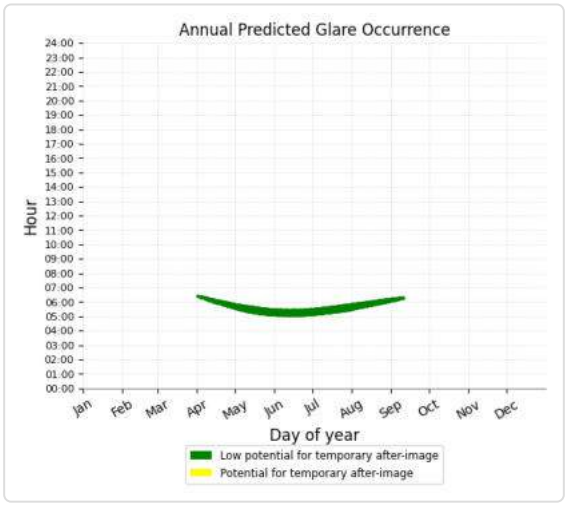


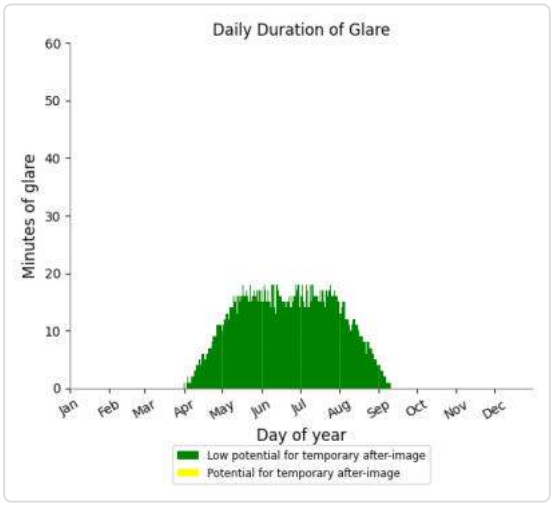


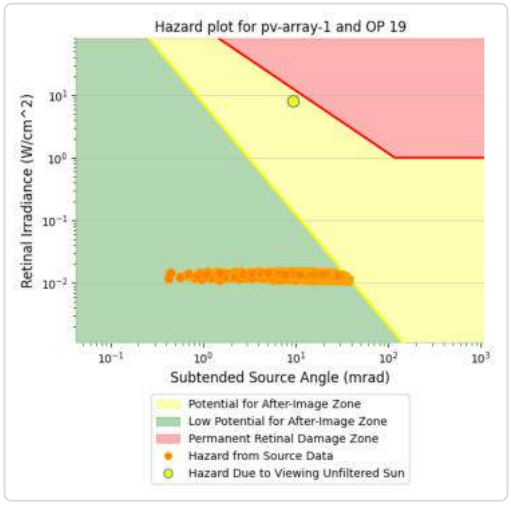
PV array 1 and OP 19

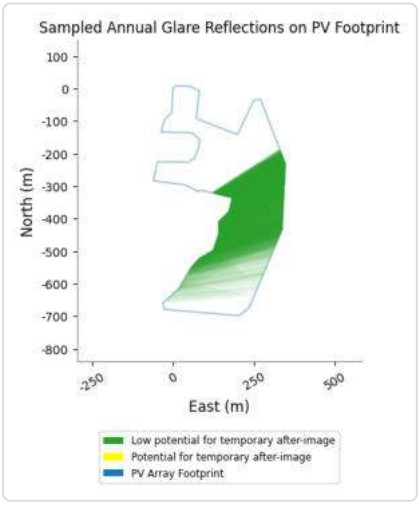
Yellow glare: none

Green glare: 1,923 min.





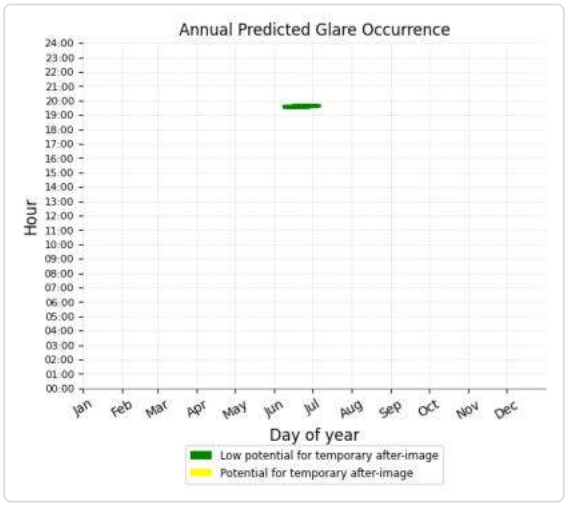


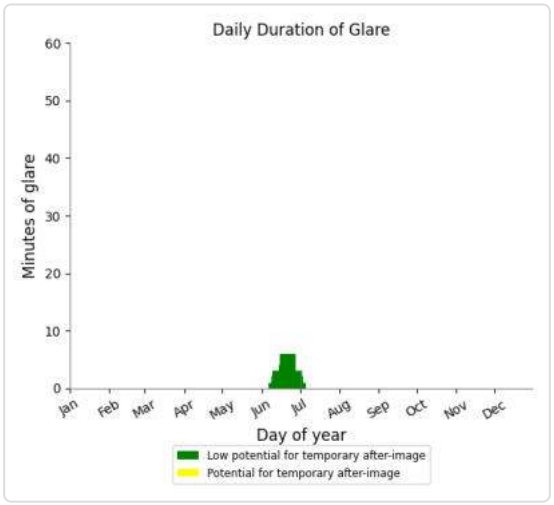


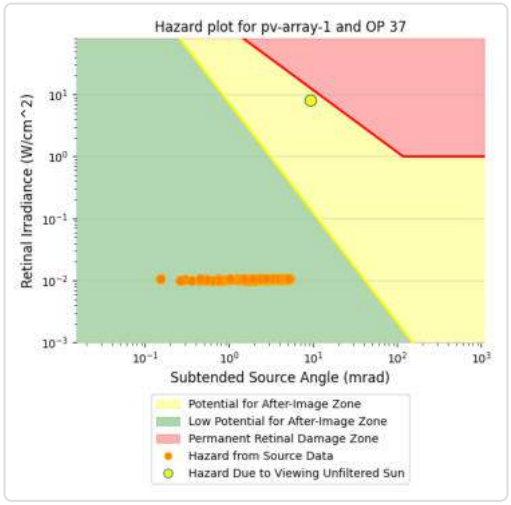
PV array 1 and OP 37

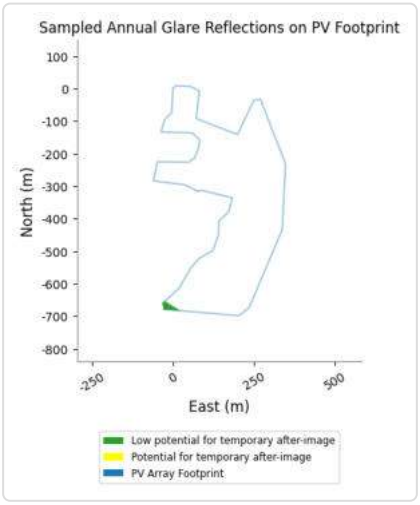
Yellow glare: none

Green glare: 114 min.





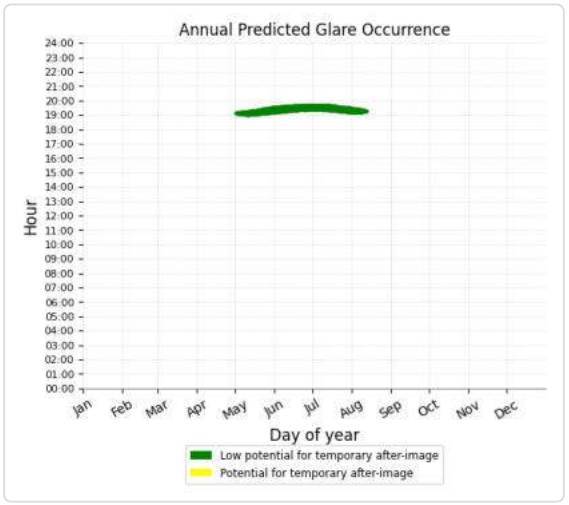


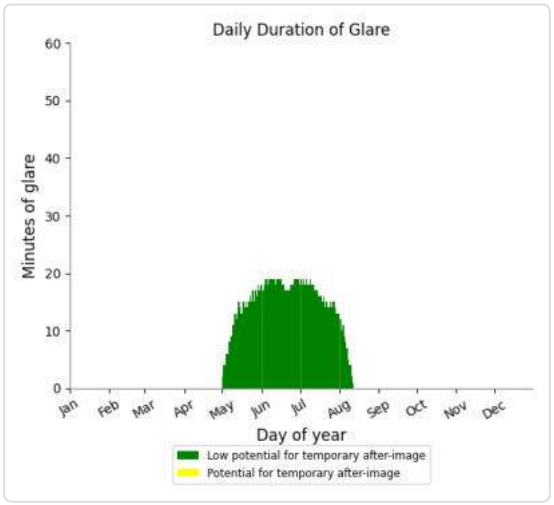


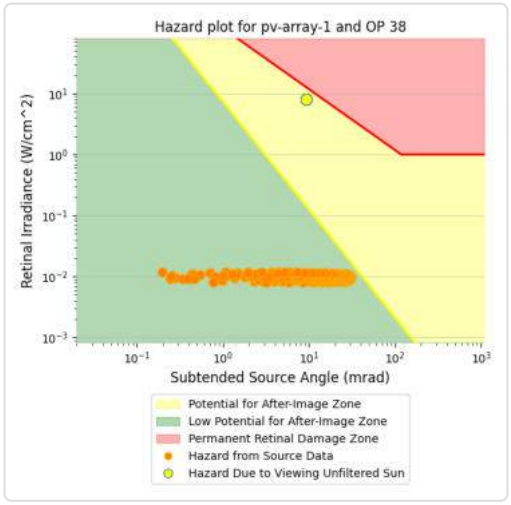
PV array 1 and OP 38

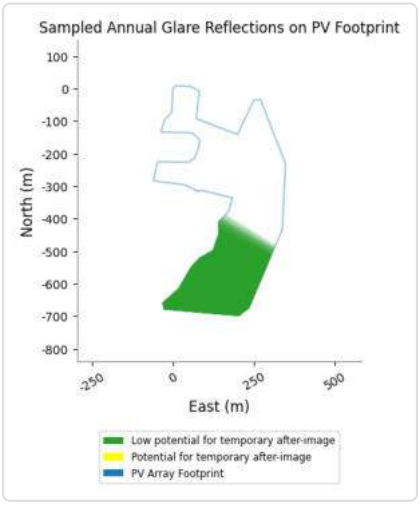
Yellow glare: none

Green glare: 1,527 min.





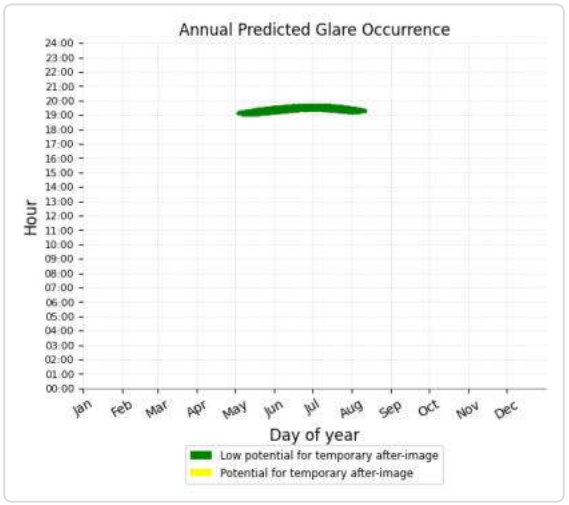


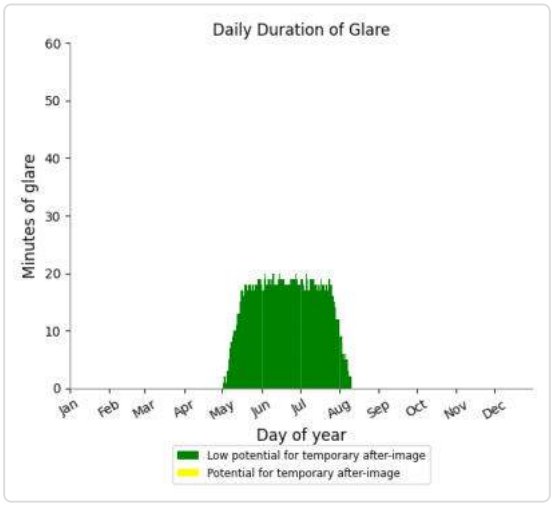


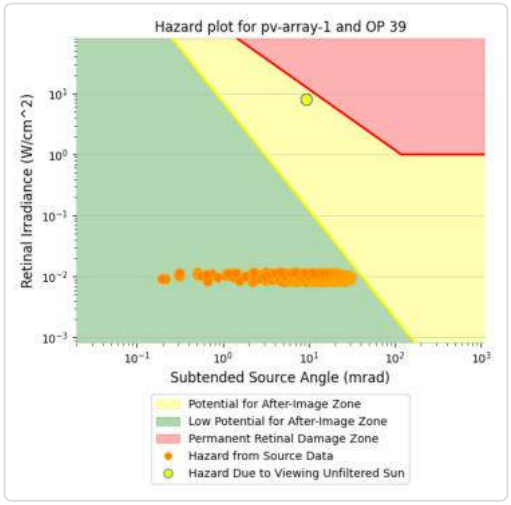
PV array 1 and OP 39

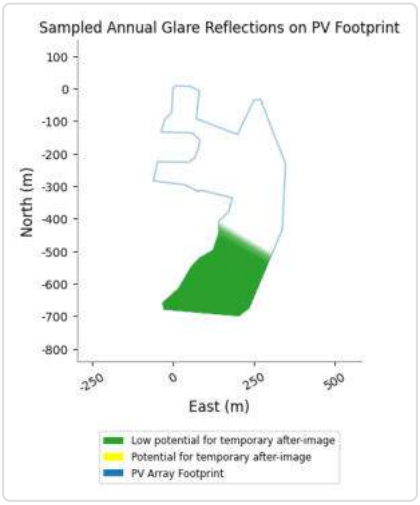
Yellow glare: none

Green glare: 1,553 min.





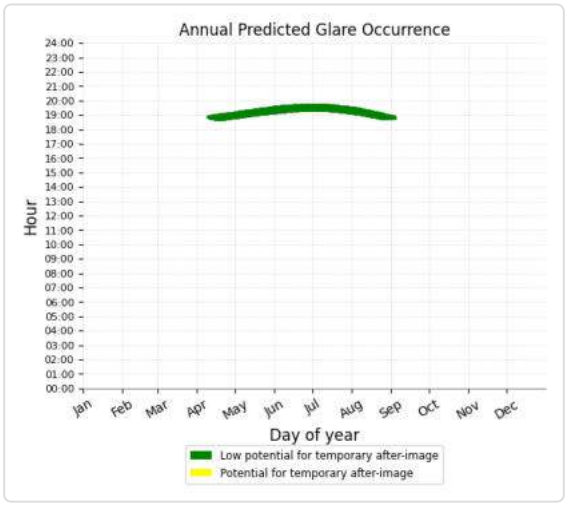


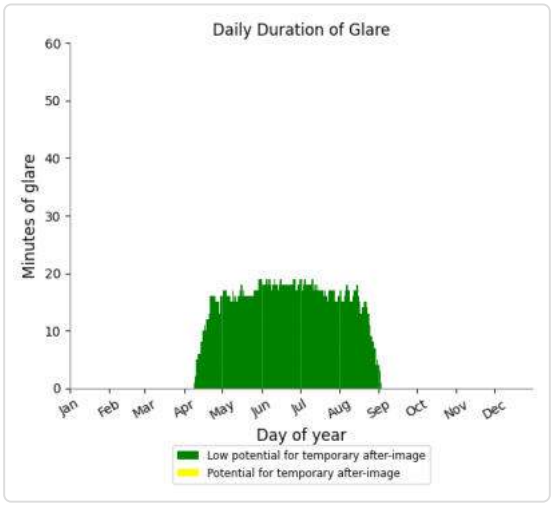


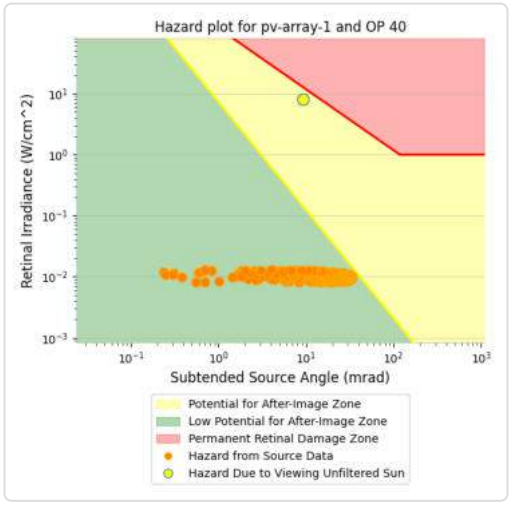
PV array 1 and OP 40

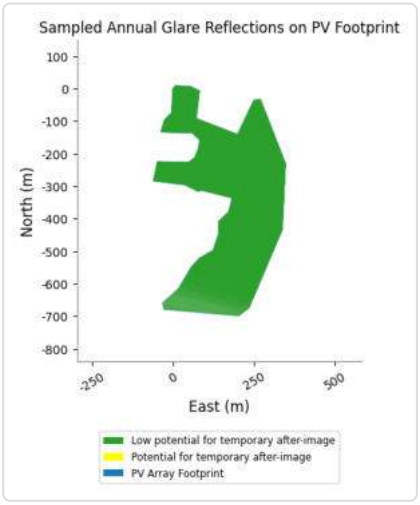
Yellow glare: none

Green glare: 2,264 min.





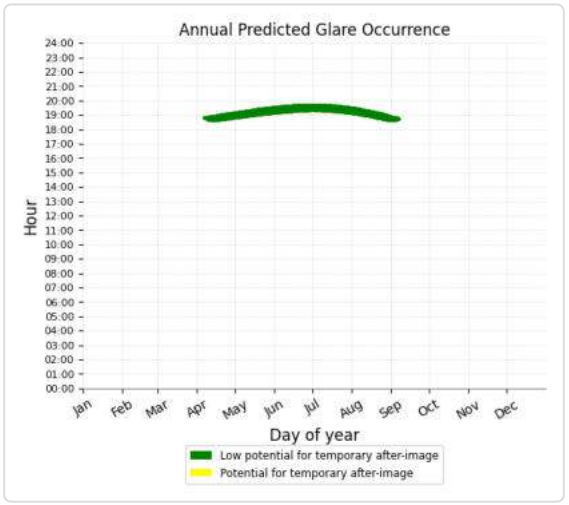


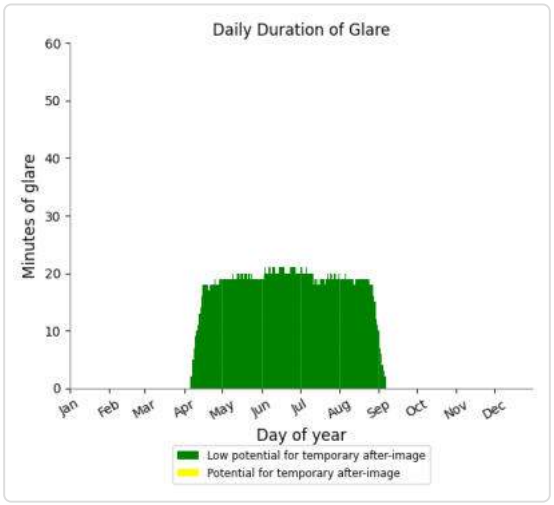


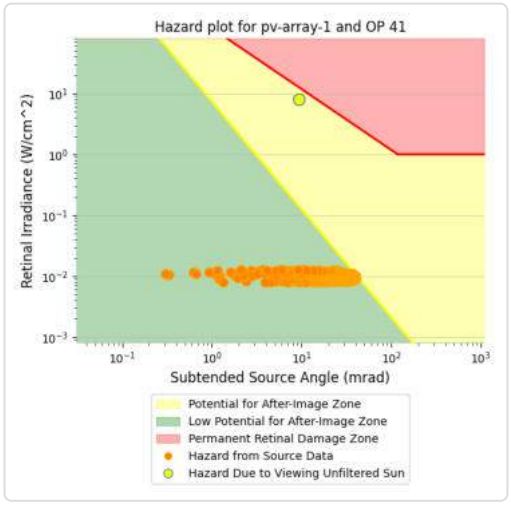
PV array 1 and OP 41

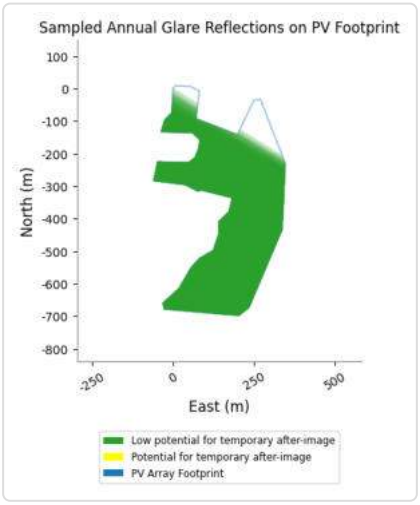
Yellow glare: none

Green glare: 2,768 min.





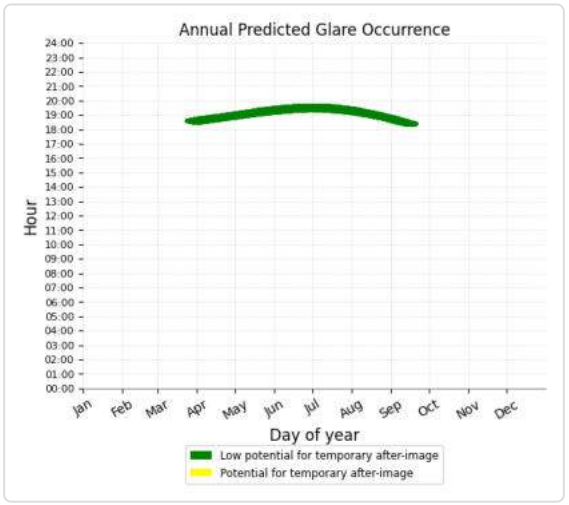


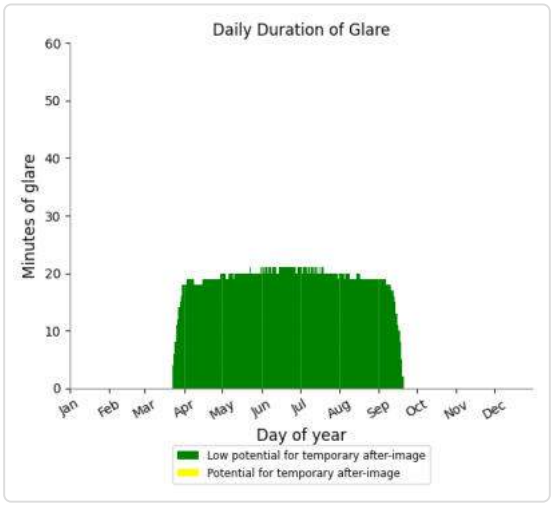


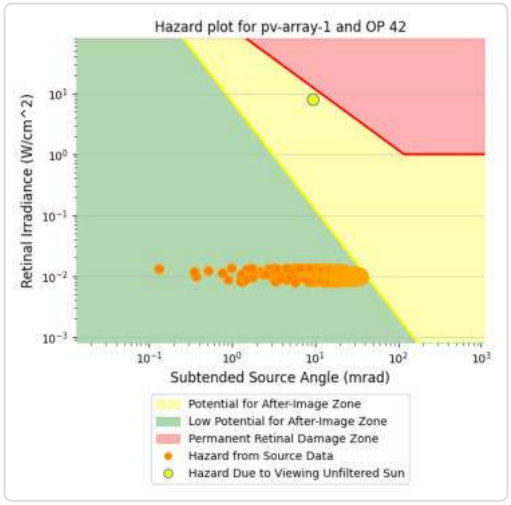
PV array 1 and OP 42

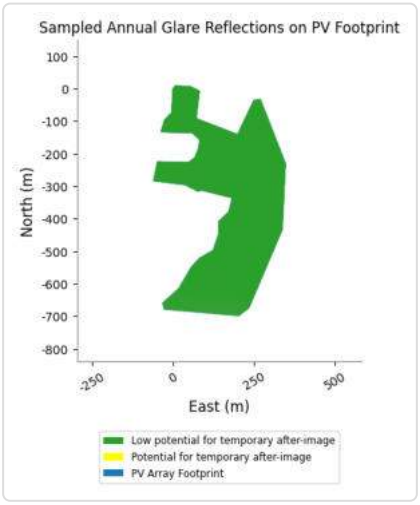
Yellow glare: none

Green glare: 3,438 min.





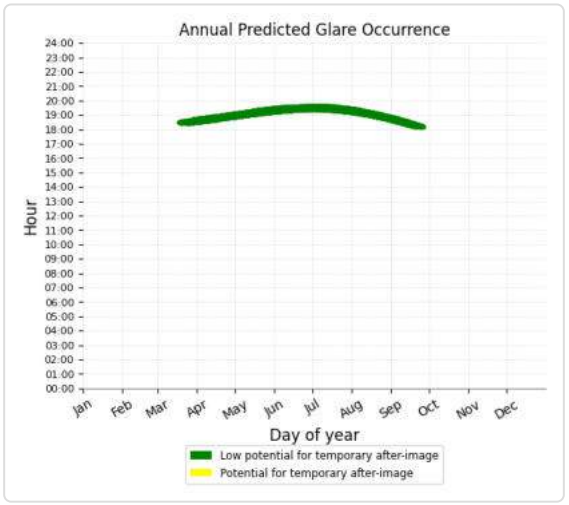


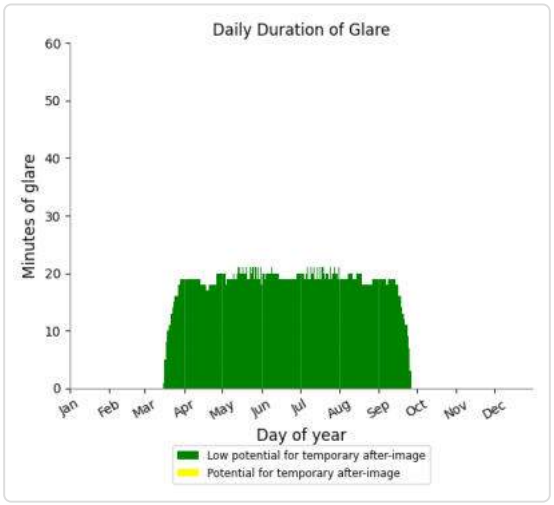


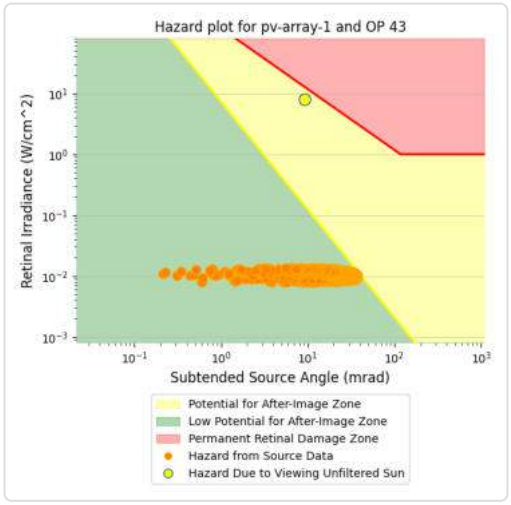
PV array 1 and OP 43

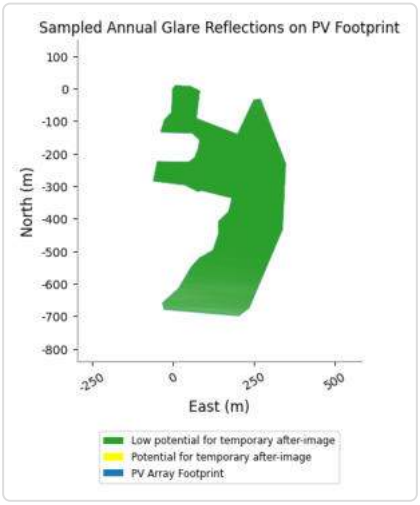
Yellow glare: none

Green glare: 3,588 min.





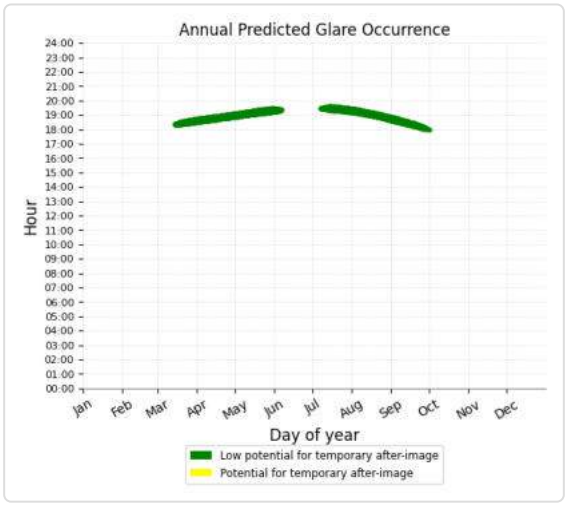


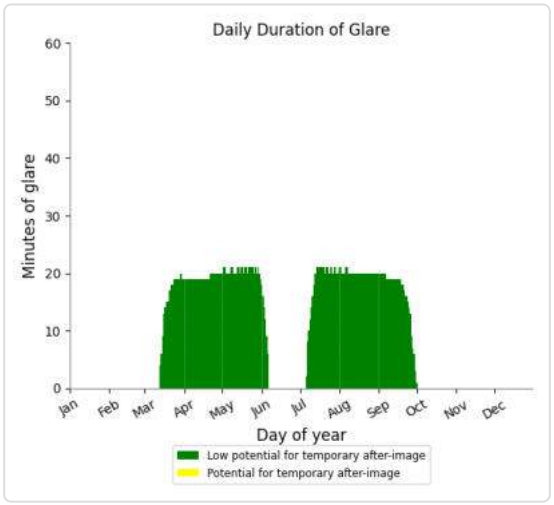


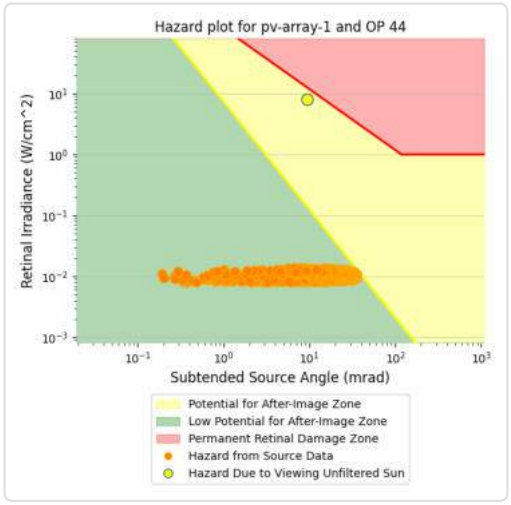
PV array 1 and OP 44

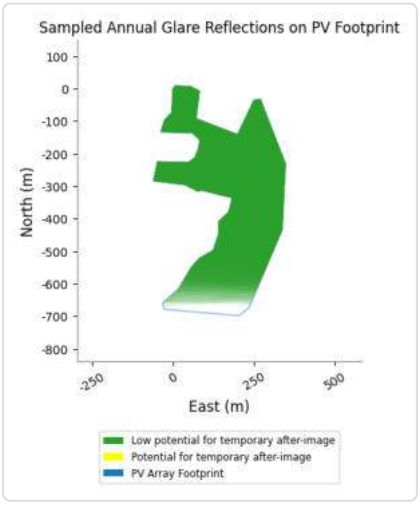
Yellow glare: none

Green glare: 3,187 min.





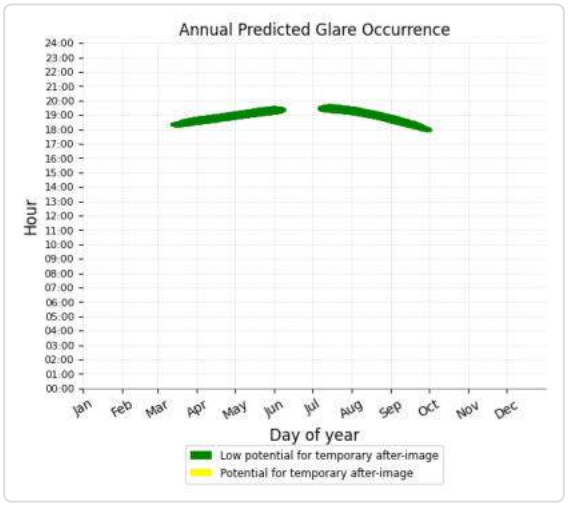


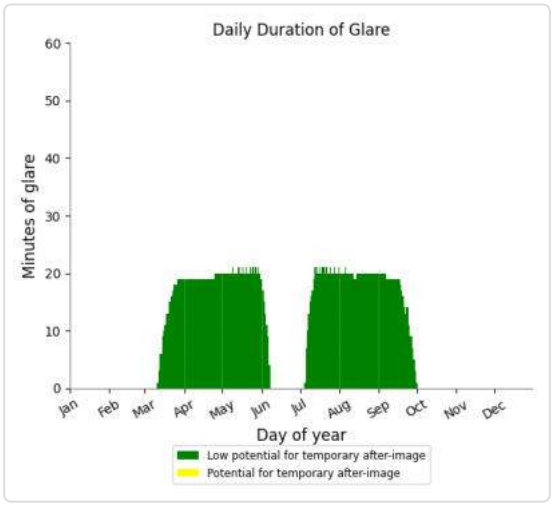


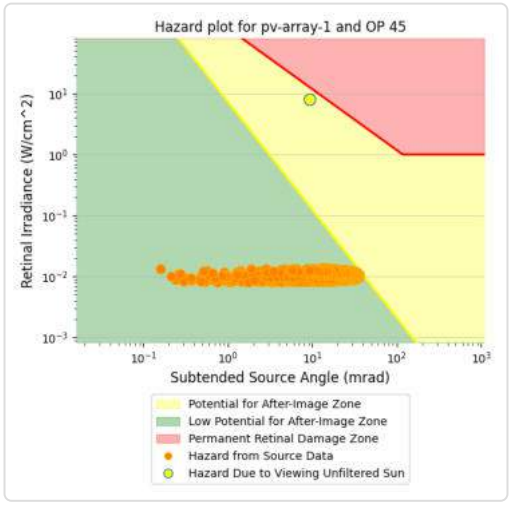
PV array 1 and OP 45

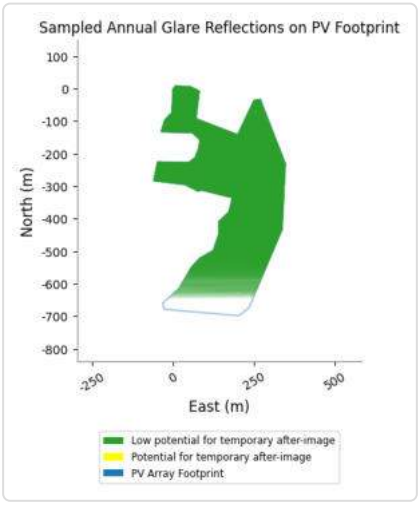
Yellow glare: none

Green glare: 3,161 min.





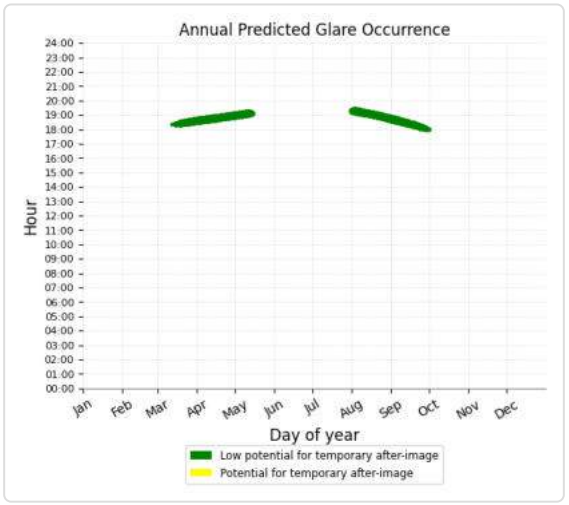


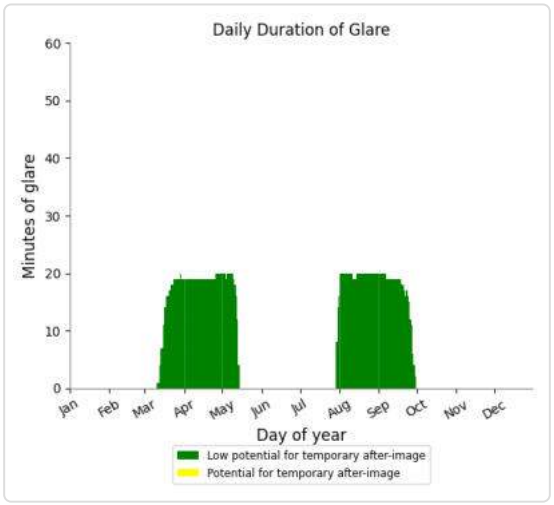


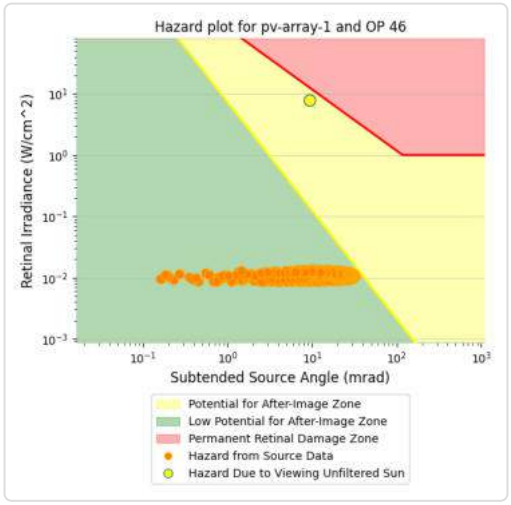
PV array 1 and OP 46

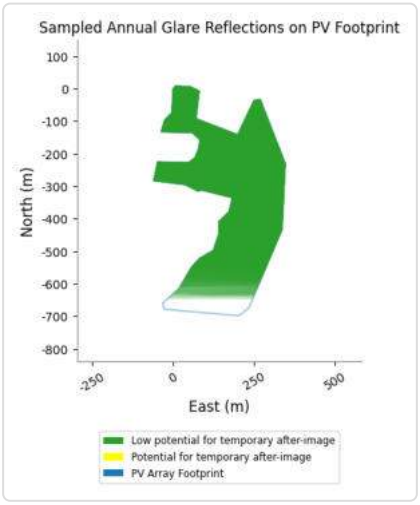
Yellow glare: none

Green glare: 2,258 min.





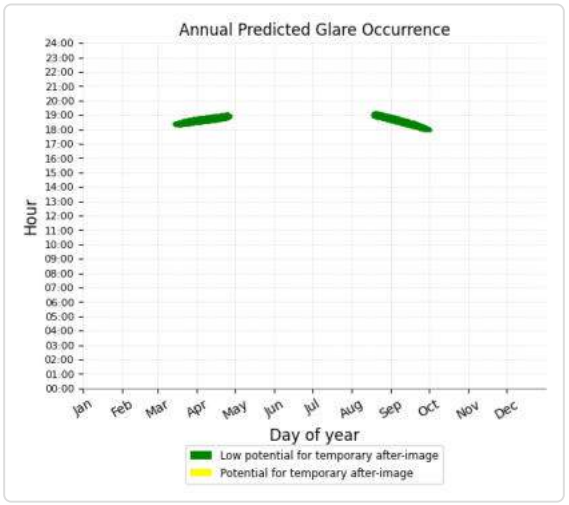


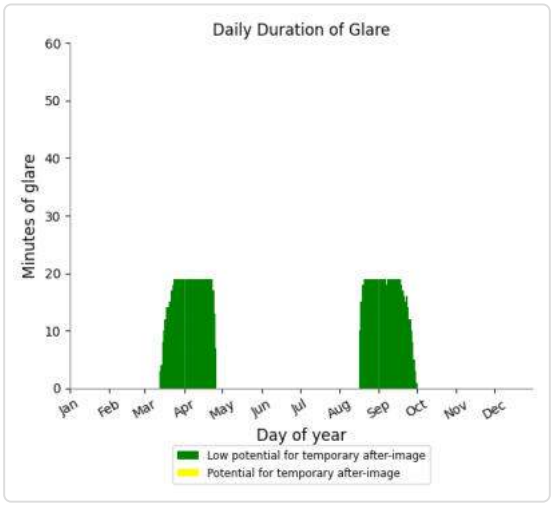


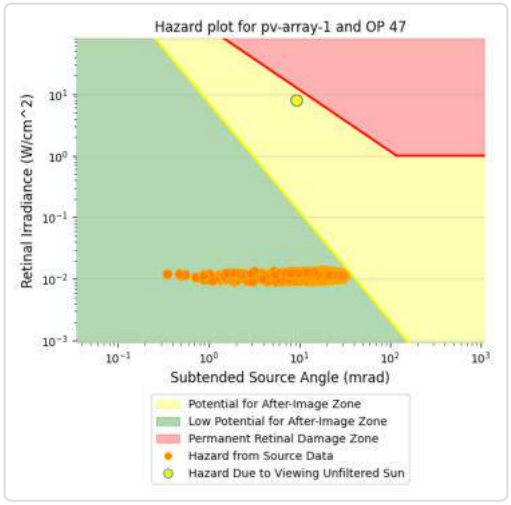
PV array 1 and OP 47

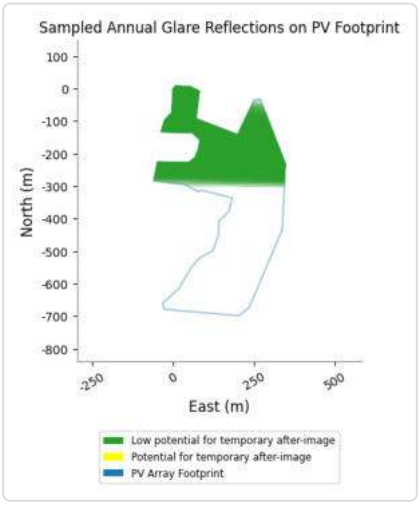
Yellow glare: none

Green glare: 1,514 min.





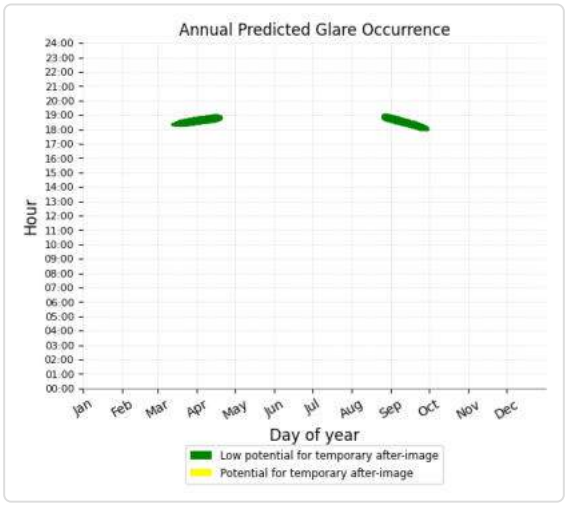


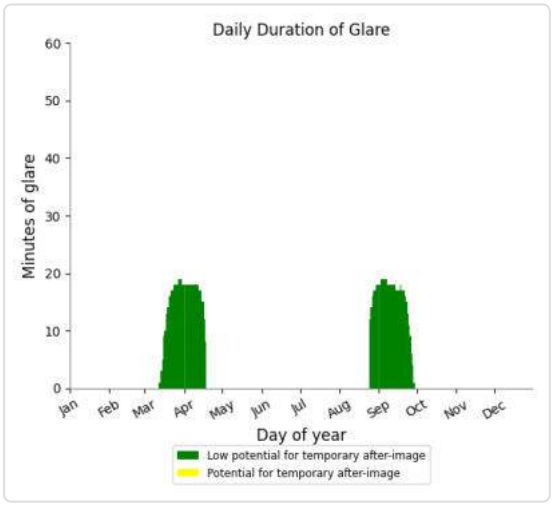


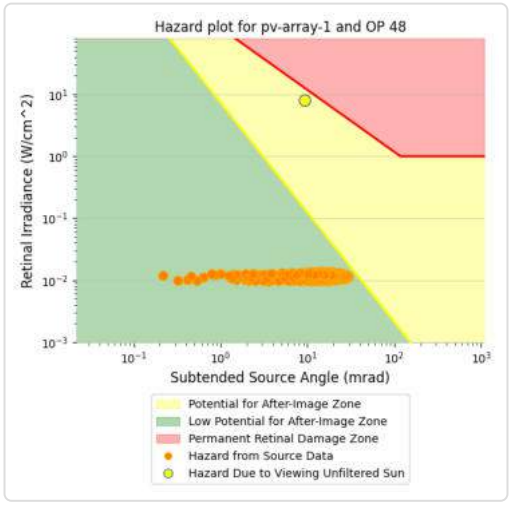
PV array 1 and OP 48

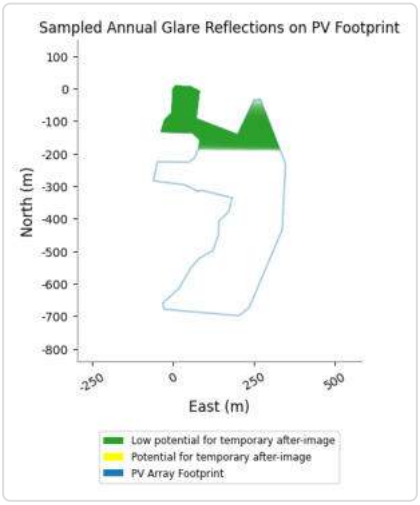
Yellow glare: none

Green glare: 1,133 min.



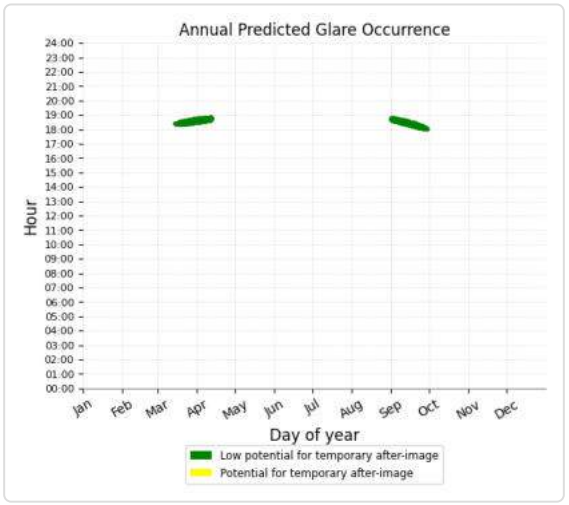


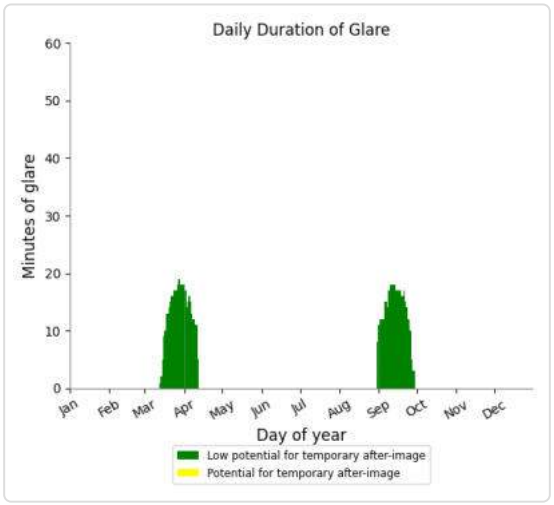


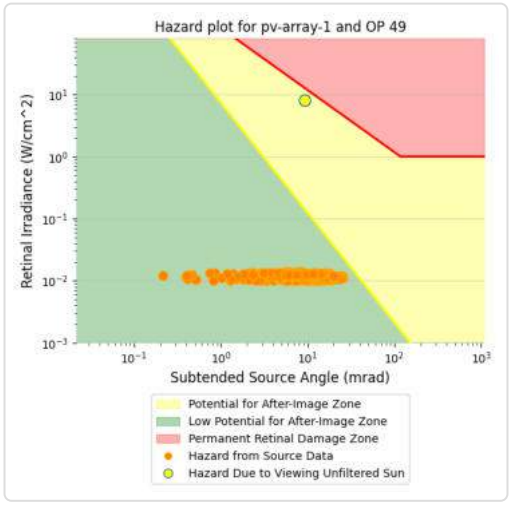


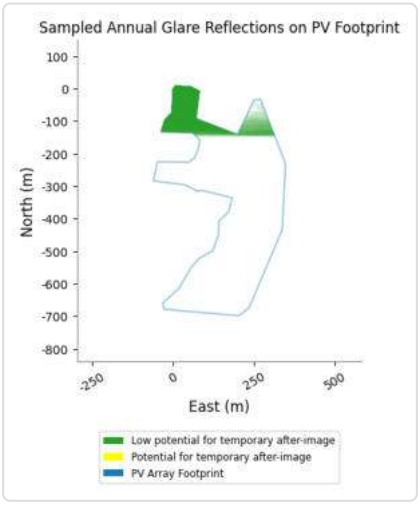
PV array 1 and OP 49

Yellow glare: none
Green glare: 824 min.









PV array 1 and OP 1

No glare found

PV array 1 and OP 2

No glare found

PV array 1 and OP 3

No glare found

PV array 1 and OP 4

No glare found

PV array 1 and OP 5

No glare found

PV array 1 and OP 9

No glare found

PV array 1 and OP 10

No glare found

PV array 1 and OP 23

No glare found

PV array 1 and OP 24

No glare found

PV array 1 and OP 25

No glare found

PV array 1 and OP 26

No glare found

PV array 1 and OP 27

No glare found

PV array 1 and OP 28

No glare found

PV array 1 and OP 29

No glare found

PV array 1 and OP 30

No glare found

PV array 1 and OP 31

No glare found

PV array 1 and OP 32

No glare found

PV array 1 and OP 33

No glare found

PV array 1 and OP 34

No glare found

PV array 1 and OP 35

No glare found

PV array 1 and OP 36

No glare found

PV array 1 and OP 50

No glare found

PV array 1 and OP 51

No glare found

PV array 1 and OP 52

No glare found

PV array 1 and OP 53

No glare found

PV array 1 and OP 54

No glare found

PV: PV array 2 potential temporary after-image

Receptor results ordered by category of glare

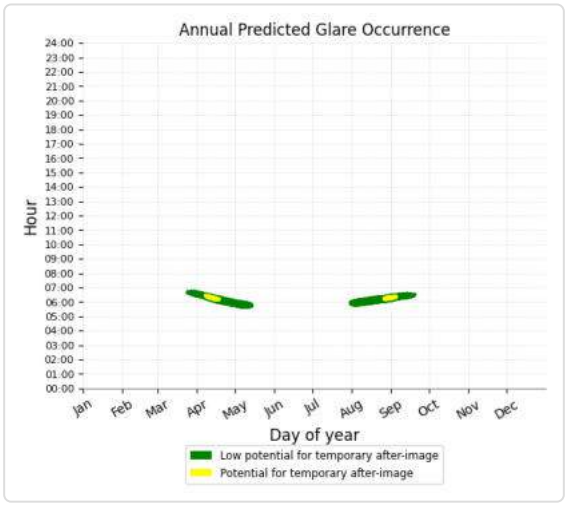
Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 20	1,439	24.0	100	1.7
OP 21	596	9.9	1,315	21.9
OP 22	2,287	38.1	867	14.4
OP 23	1,322	22.0	1,433	23.9
OP 24	1,896	31.6	516	8.6
OP 40	1,772	29.5	893	14.9
OP 41	1,317	21.9	105	1.8
OP 42	1,572	26.2	577	9.6
OP 44	2,264	37.7	1,328	22.1
OP 45	2,189	36.5	421	7.0
OP 9	311	5.2	0	0.0
OP 11	184	3.1	0	0.0
OP 12	437	7.3	0	0.0
OP 13	483	8.1	0	0.0
OP 14	599	10.0	0	0.0
OP 15	831	13.8	0	0.0
OP 16	866	14.4	0	0.0
OP 17	951	15.8	0	0.0
OP 18	1,181	19.7	0	0.0
OP 19	1,368	22.8	0	0.0
OP 25	1,469	24.5	0	0.0
OP 26	1,246	20.8	0	0.0
OP 27	1,091	18.2	0	0.0
OP 38	1,085	18.1	0	0.0
OP 39	1,032	17.2	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 28	0	0.0	0	0.0
OP 29	0	0.0	0	0.0
OP 30	0	0.0	0	0.0
OP 31	0	0.0	0	0.0
OP 32	0	0.0	0	0.0

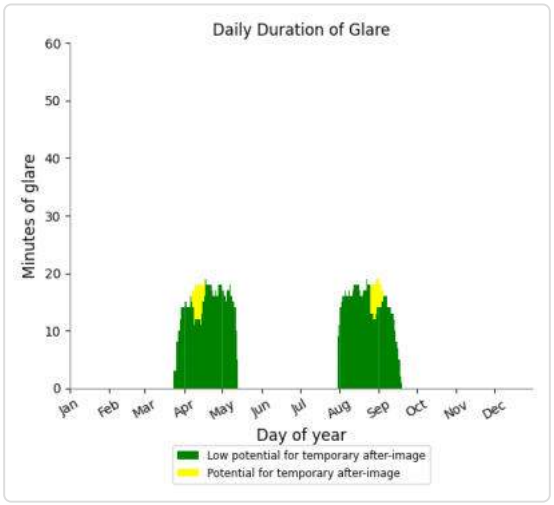
Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 33	0	0.0	0	0.0
OP 34	0	0.0	0	0.0
OP 35	0	0.0	0	0.0
OP 36	0	0.0	0	0.0
OP 37	0	0.0	0	0.0
OP 43	0	0.0	0	0.0
OP 46	0	0.0	0	0.0
OP 47	0	0.0	0	0.0
OP 48	0	0.0	0	0.0
OP 49	0	0.0	0	0.0
OP 50	0	0.0	0	0.0
OP 51	0	0.0	0	0.0
OP 52	0	0.0	0	0.0
OP 53	0	0.0	0	0.0
OP 54	0	0.0	0	0.0

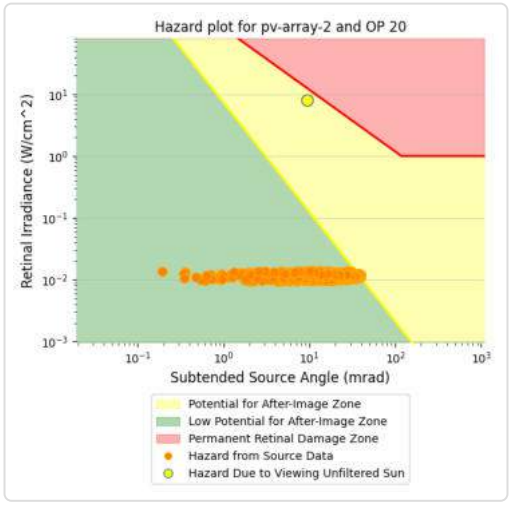
PV array 2 and OP 20

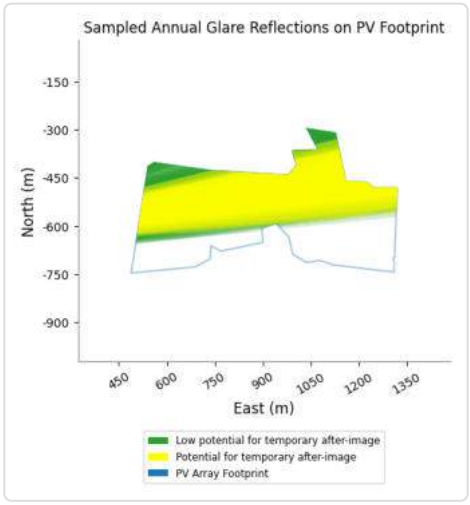
Yellow glare: 100 min.

Green glare: 1,439 min.





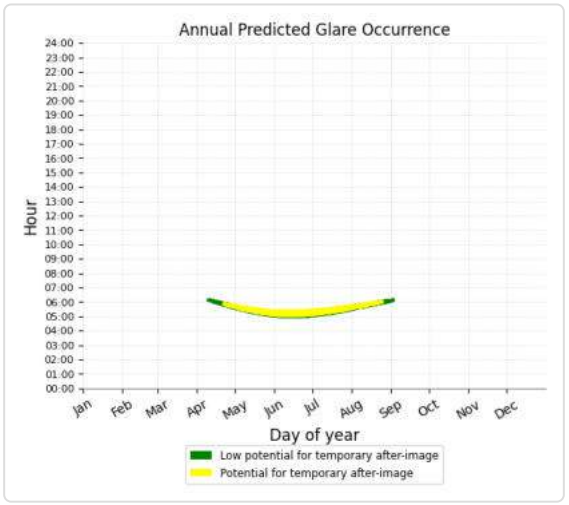


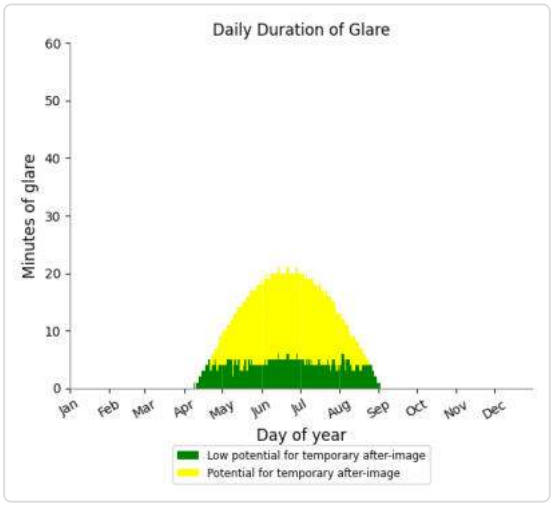


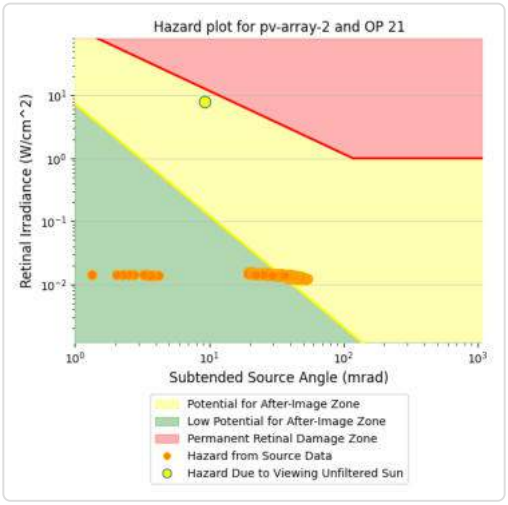
PV array 2 and OP 21

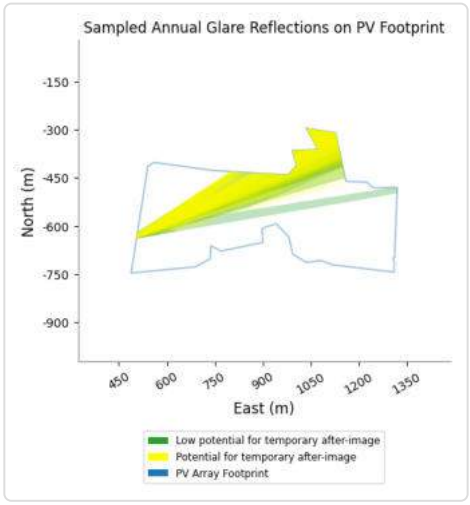
Yellow glare: 1,315 min.

Green glare: 596 min.



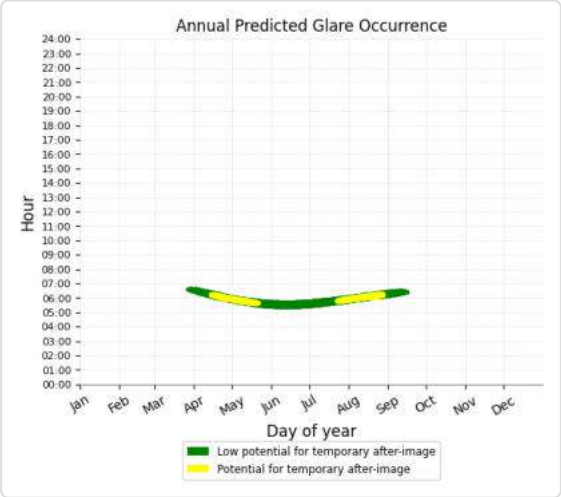


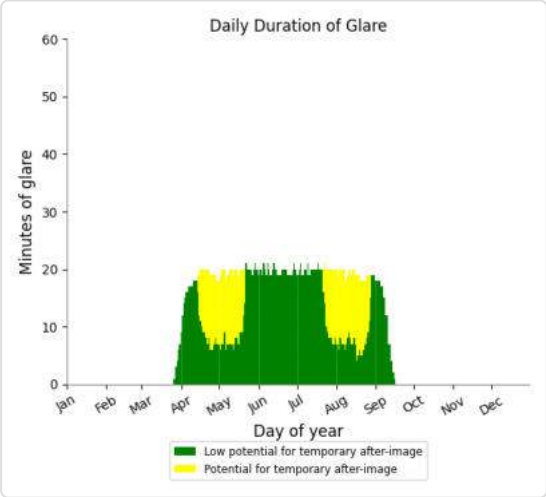


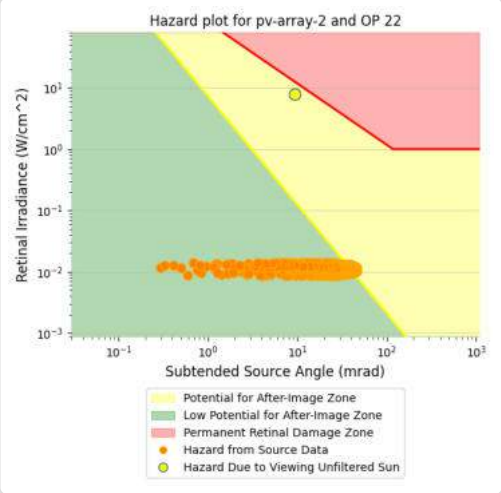


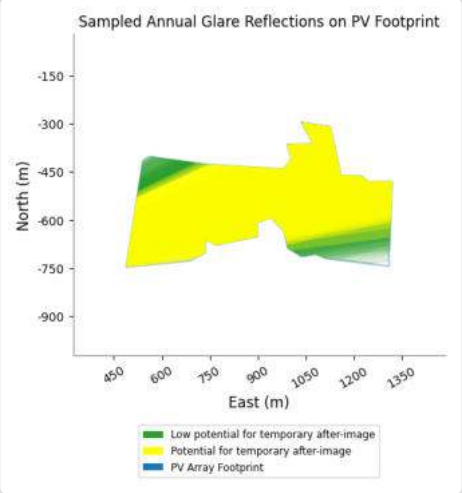
PV array 2 and OP 22

Yellow glare: 867 min.
Green glare: 2,287 min.





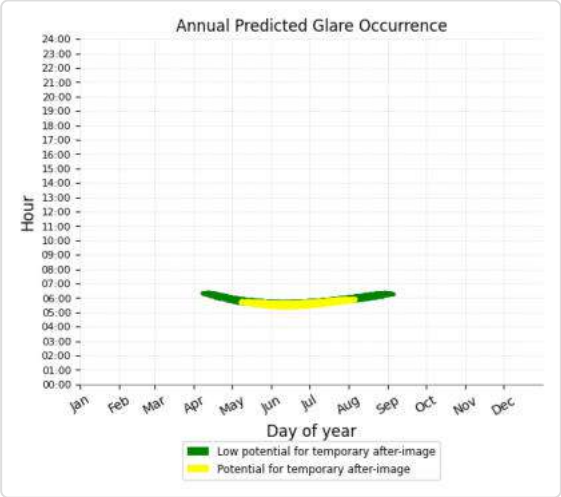


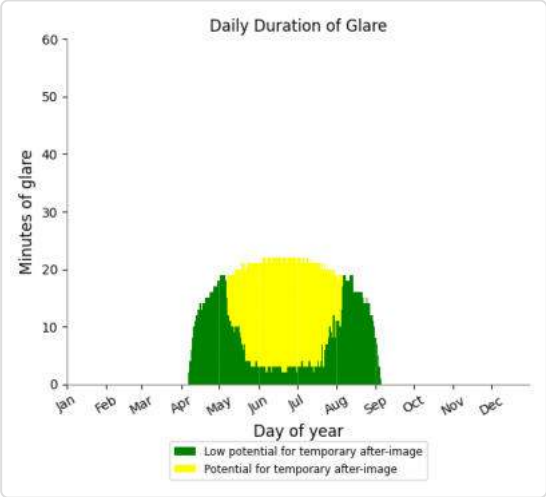


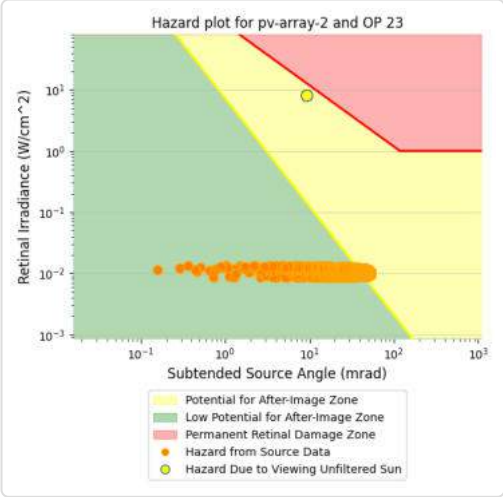
PV array 2 and OP 23

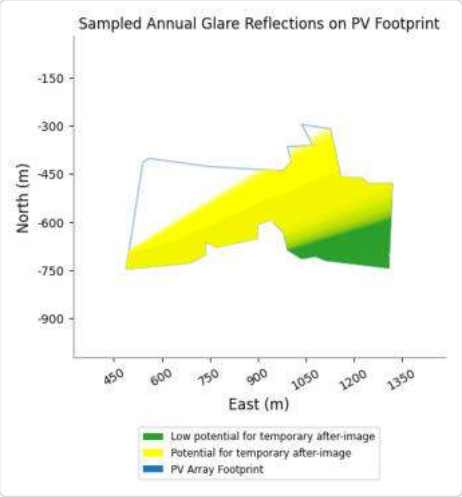
Yellow glare: 1,433 min.

Green glare: 1,322 min.





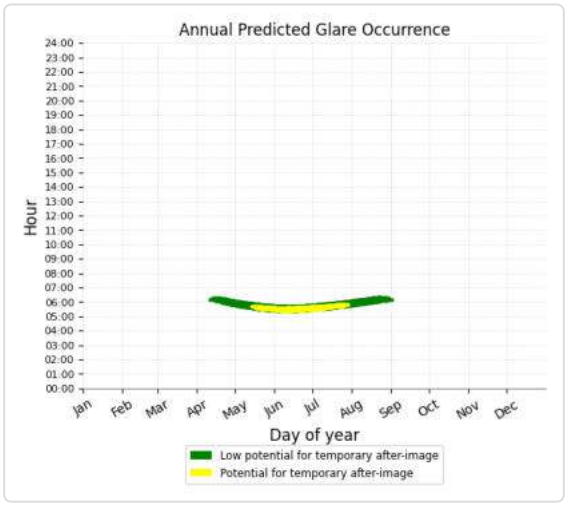


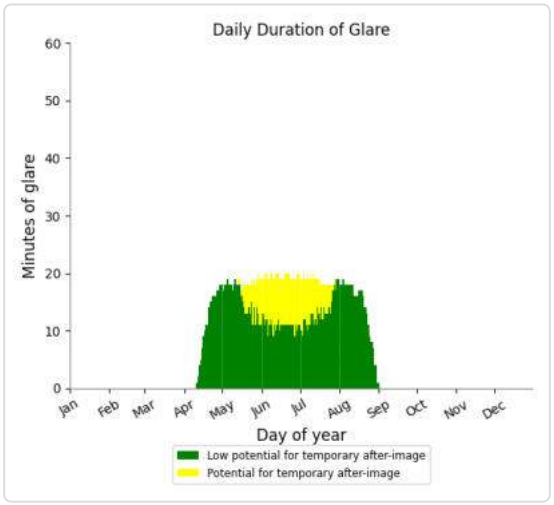


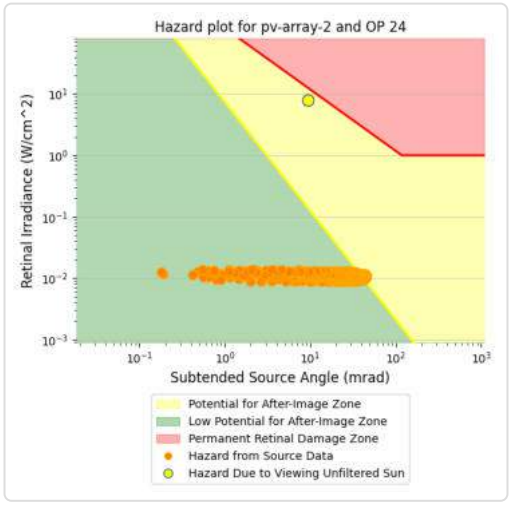
PV array 2 and OP 24

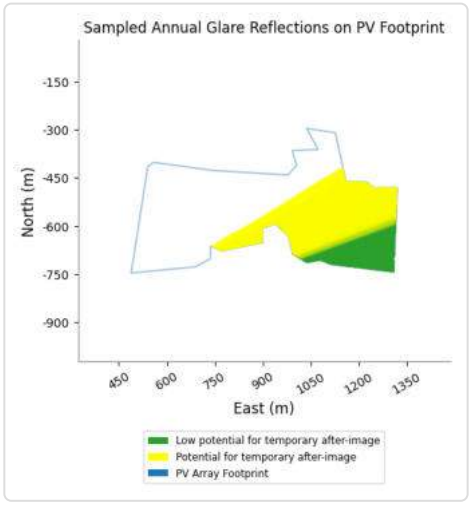
Yellow glare: 516 min.

Green glare: 1,896 min.





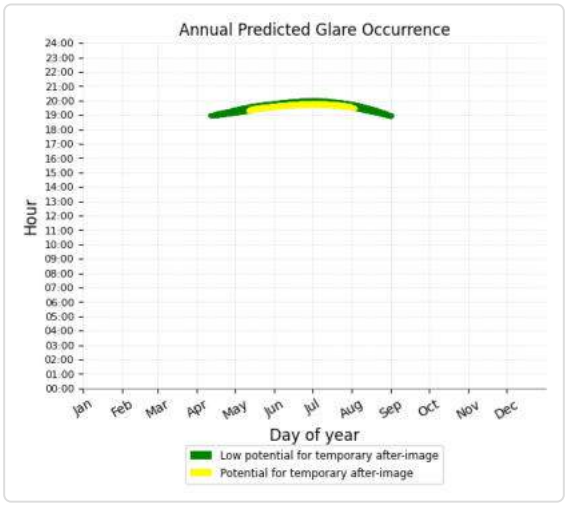


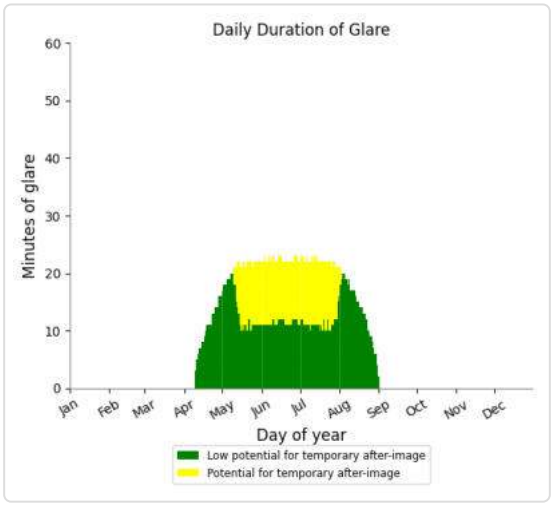


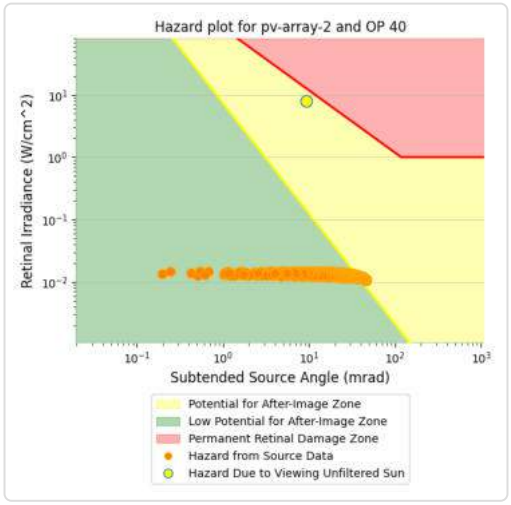
PV array 2 and OP 40

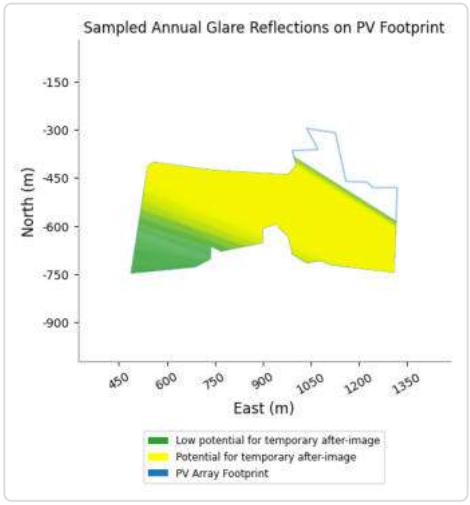
Yellow glare: 893 min.

Green glare: 1,772 min.





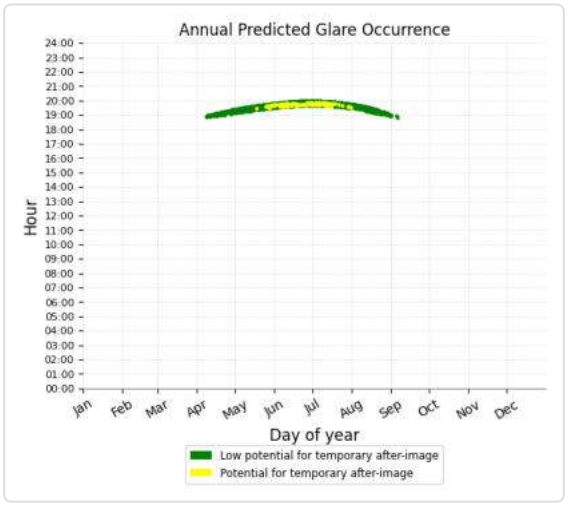


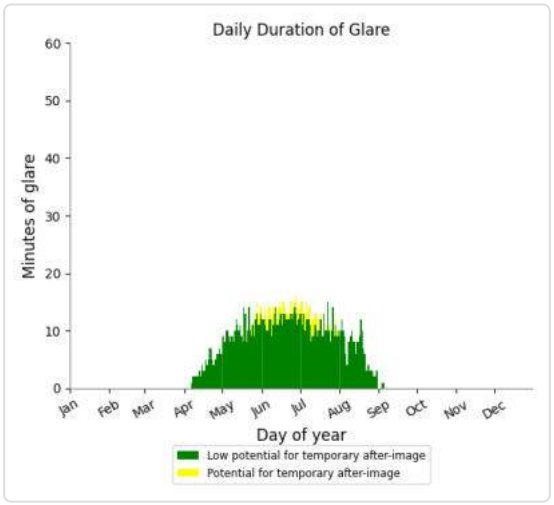


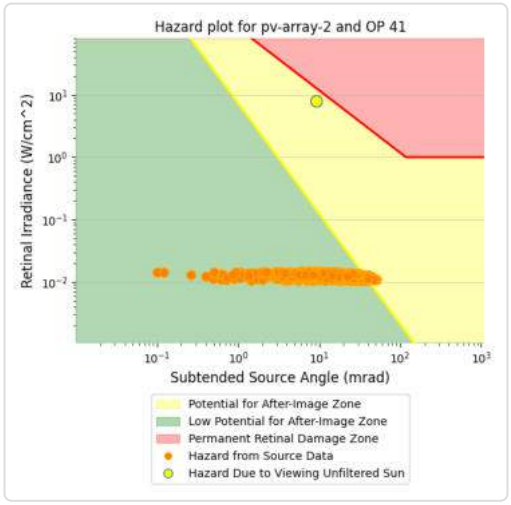
PV array 2 and OP 41

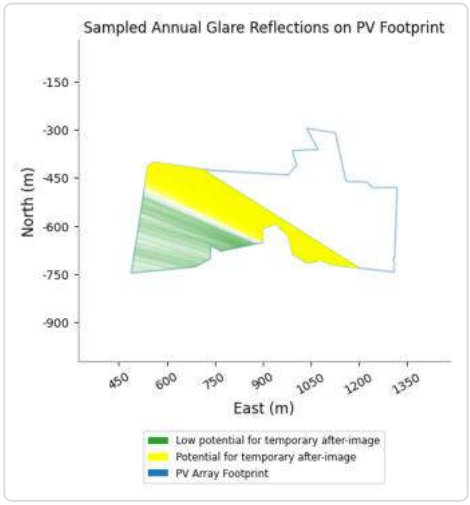
Yellow glare: 105 min.

Green glare: 1,317 min.





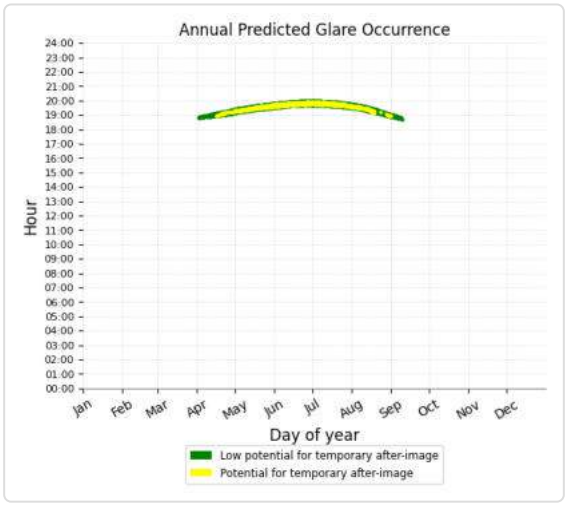


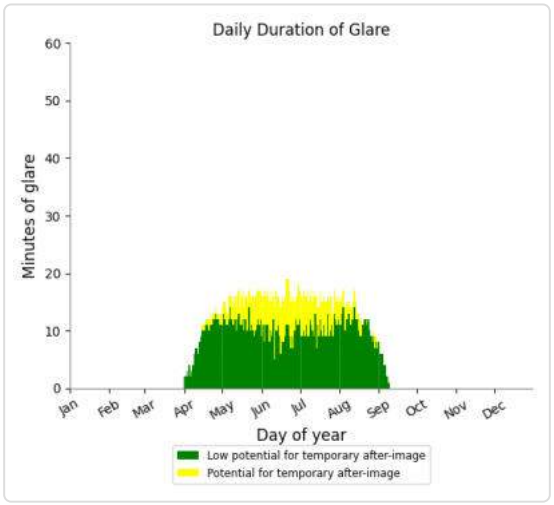


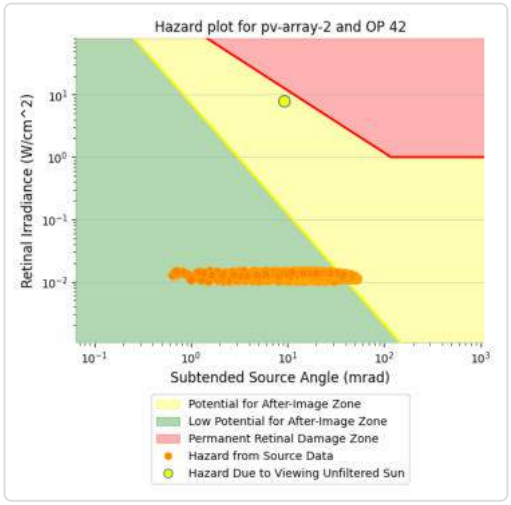
PV array 2 and OP 42

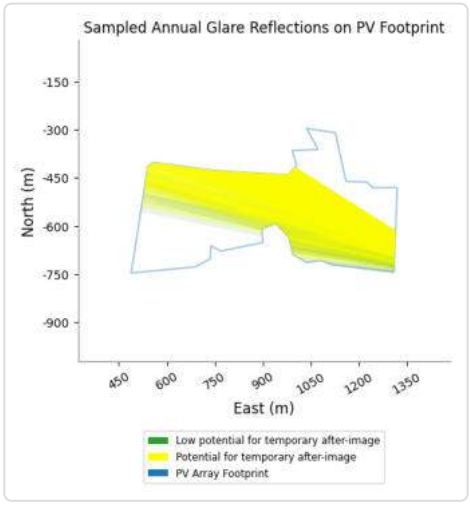
Yellow glare: 577 min.

Green glare: 1,572 min.



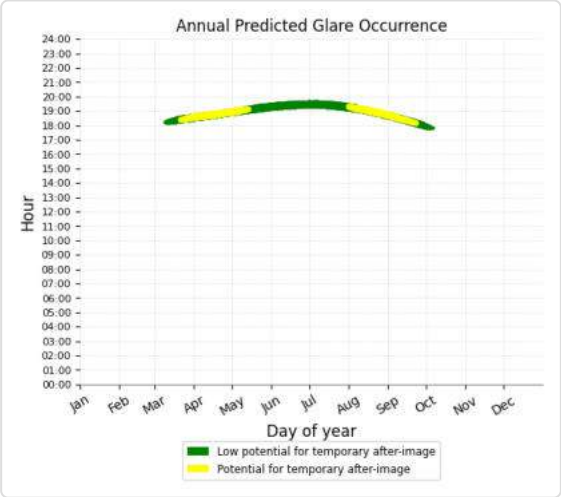


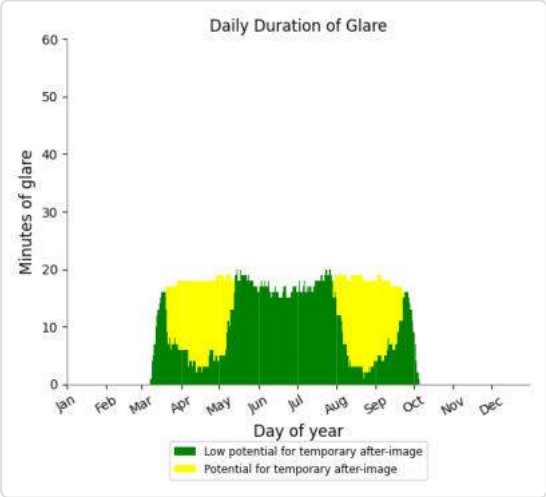


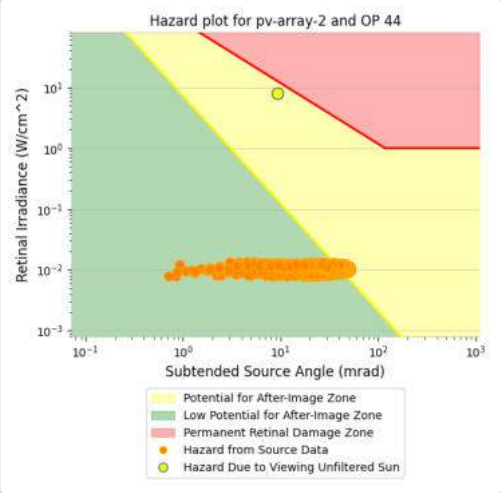


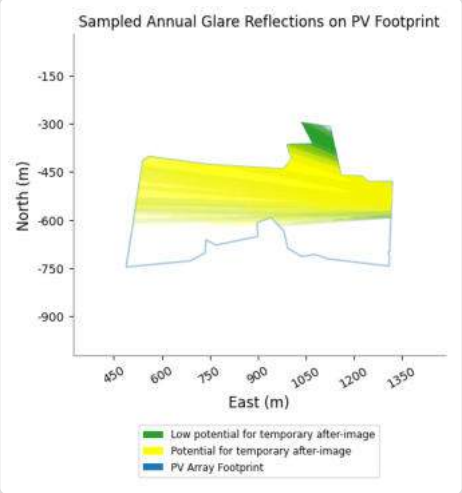
PV array 2 and OP 44

Yellow glare: 1,328 min.
Green glare: 2,264 min.





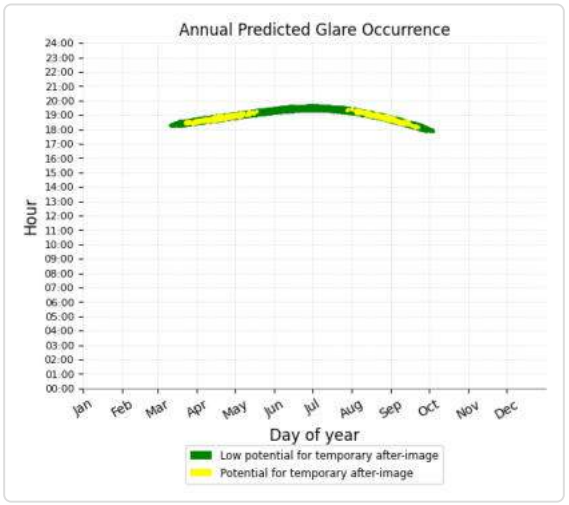


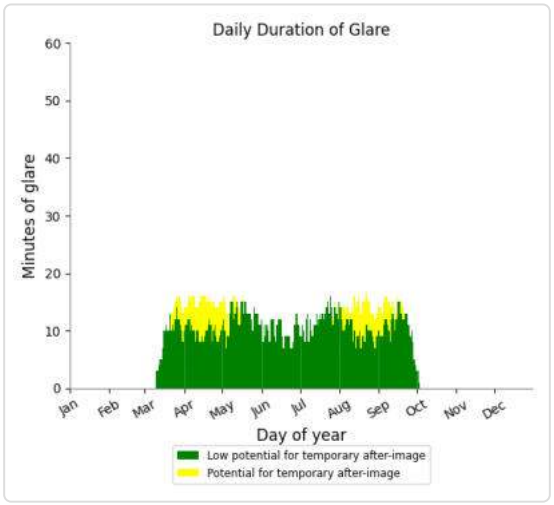


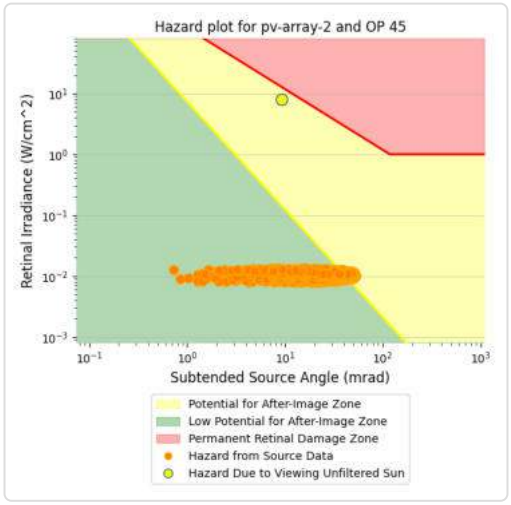
PV array 2 and OP 45

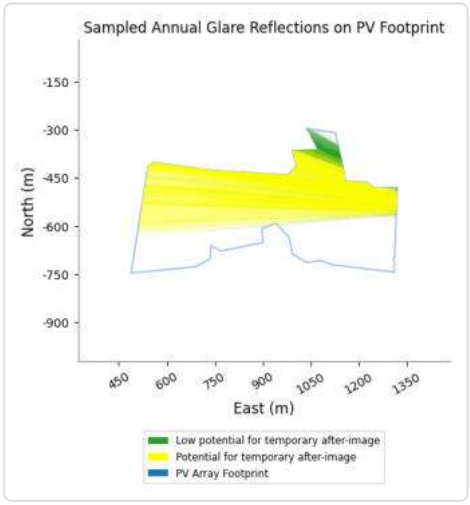
Yellow glare: 421 min.

Green glare: 2,189 min.





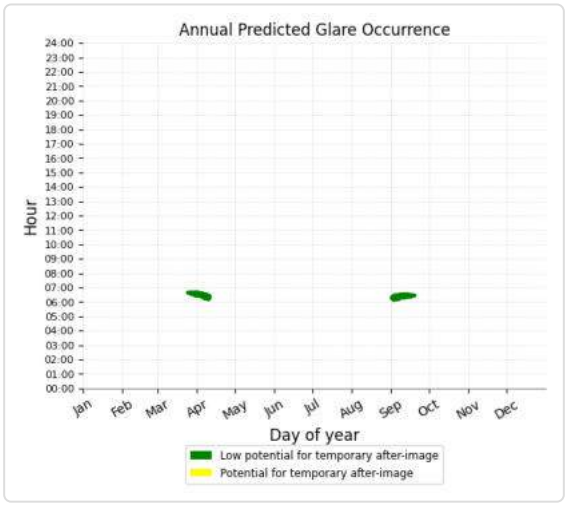


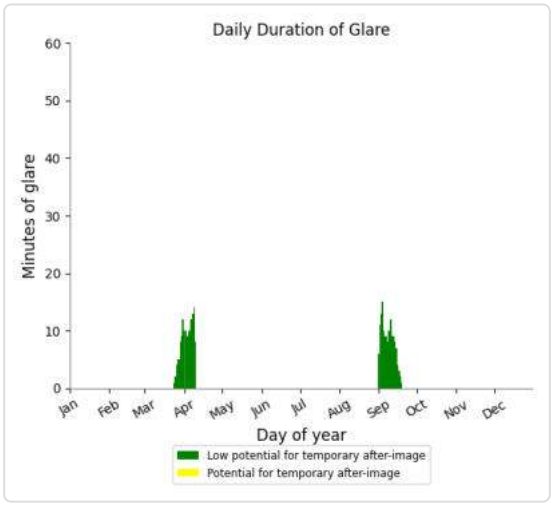


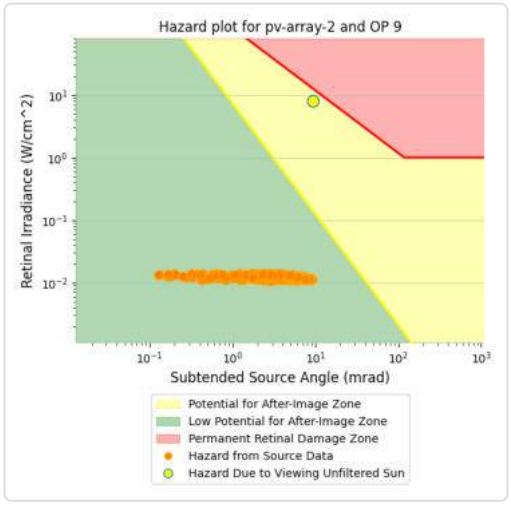
PV array 2 and OP 9

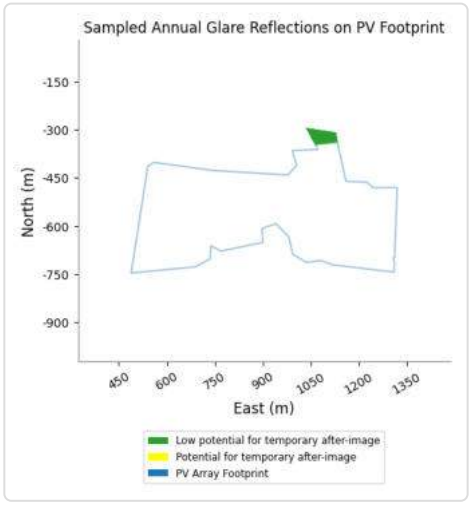
Yellow glare: none

Green glare: 311 min.





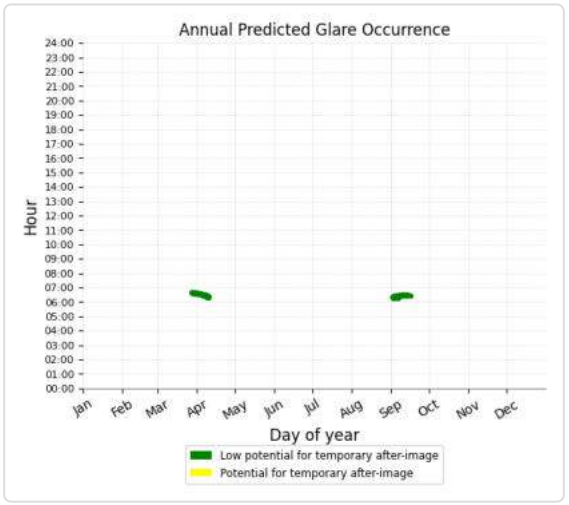


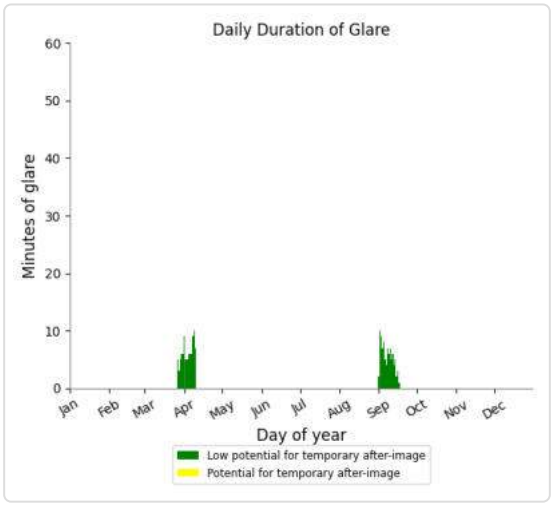


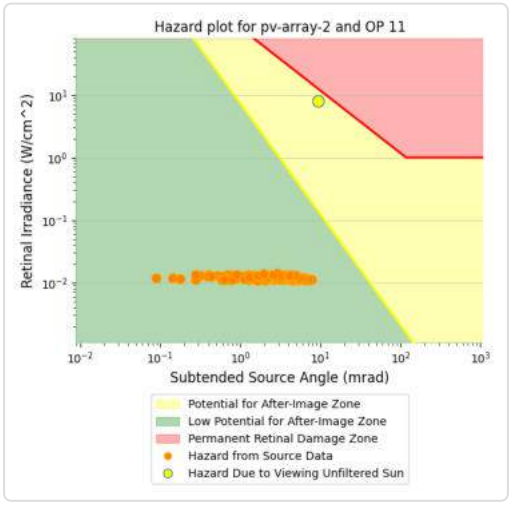
PV array 2 and OP 11

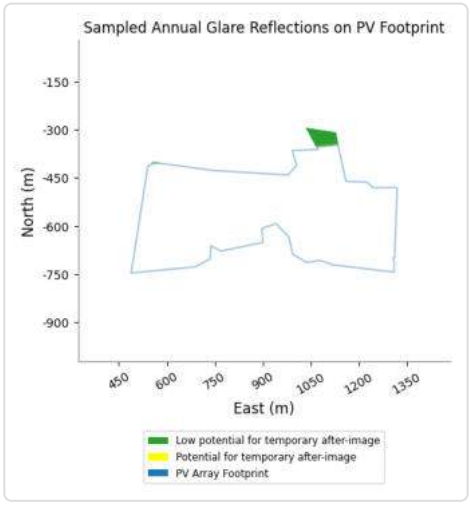
Yellow glare: none

Green glare: 184 min.





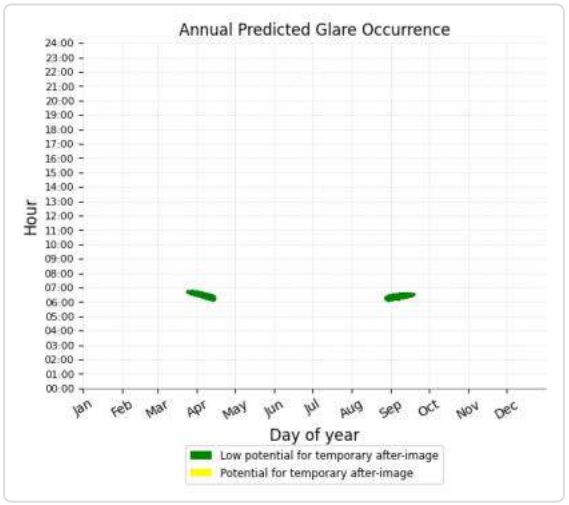


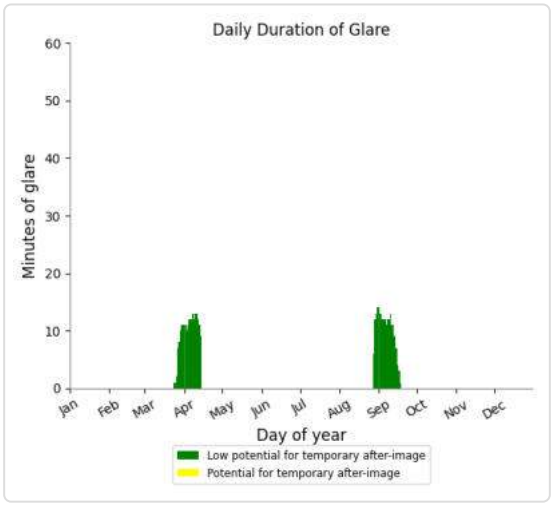


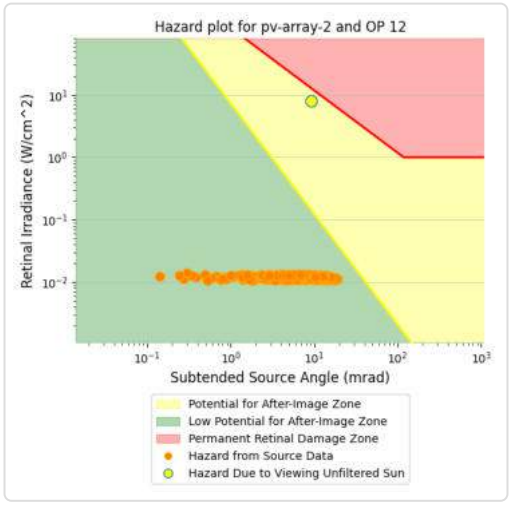
PV array 2 and OP 12

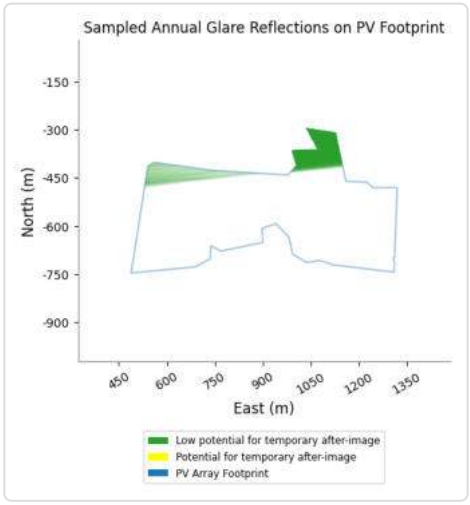
Yellow glare: none

Green glare: 437 min.





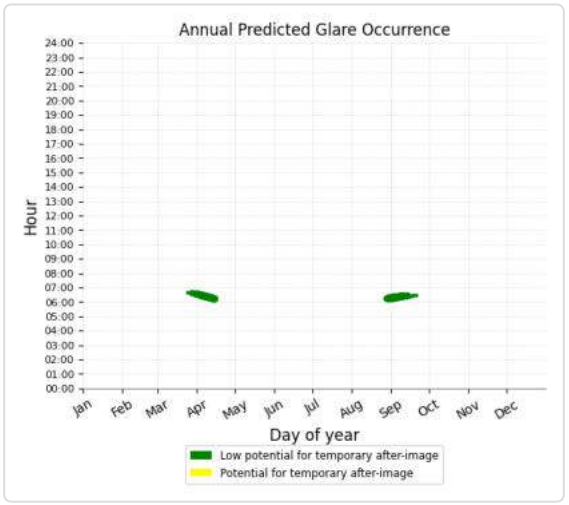


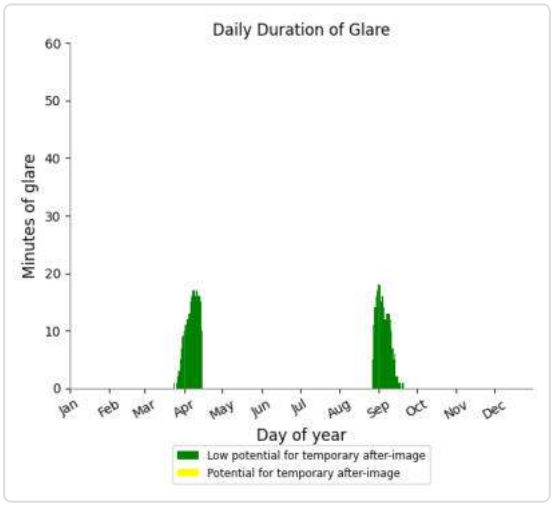


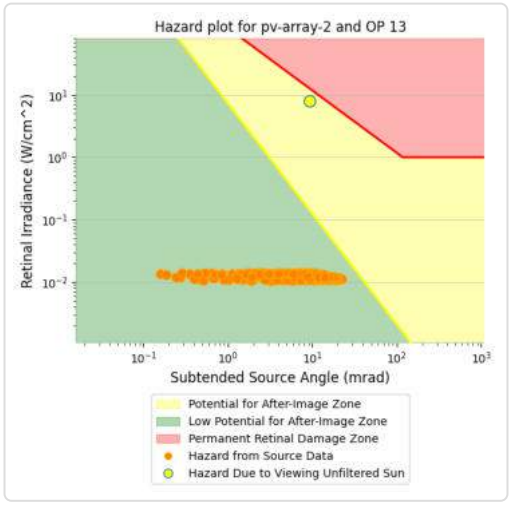
PV array 2 and OP 13

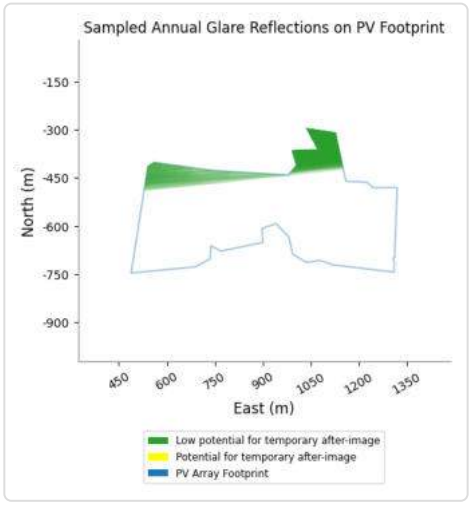
Yellow glare: none

Green glare: 483 min.





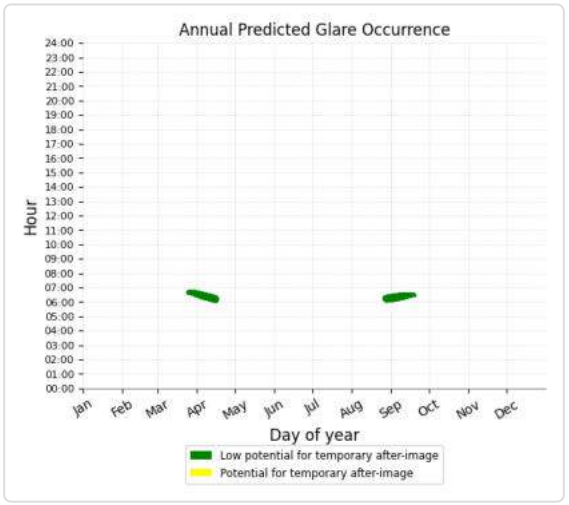


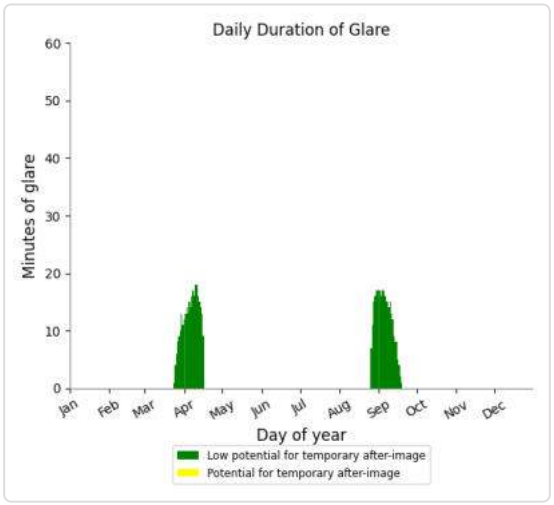


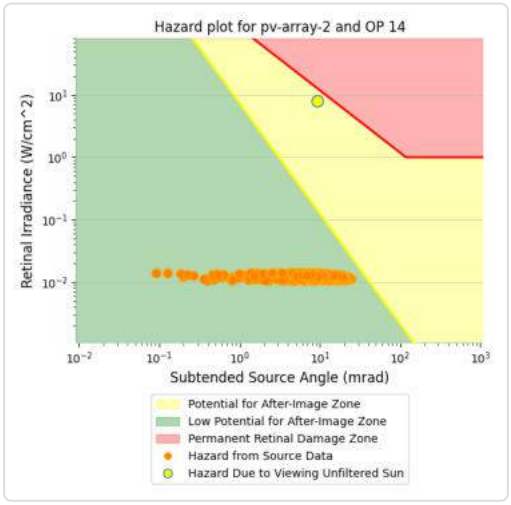
PV array 2 and OP 14

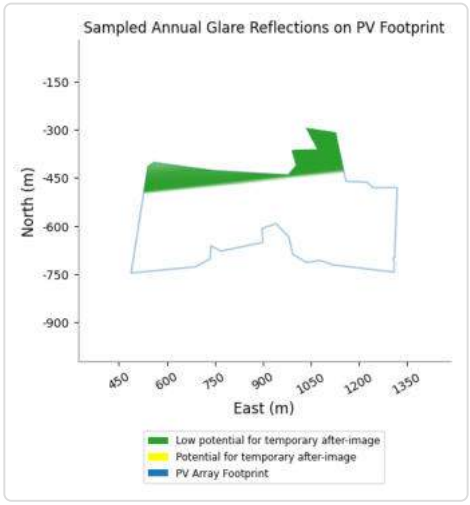
Yellow glare: none

Green glare: 599 min.





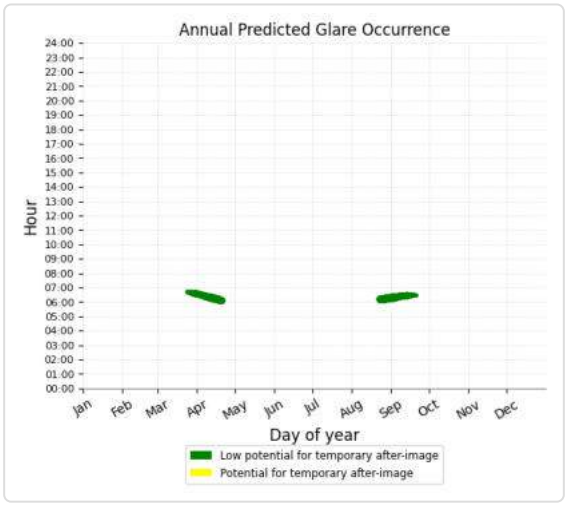


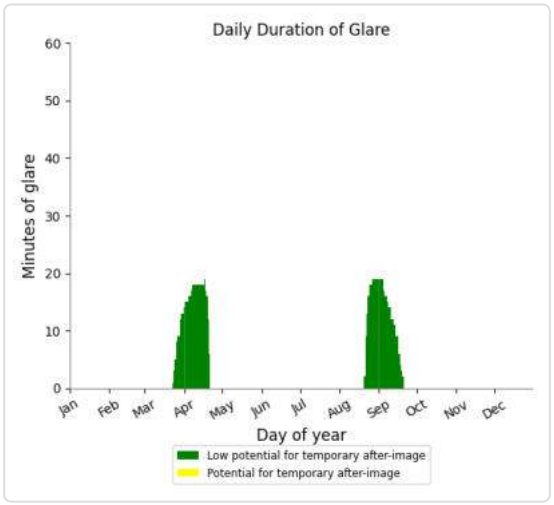


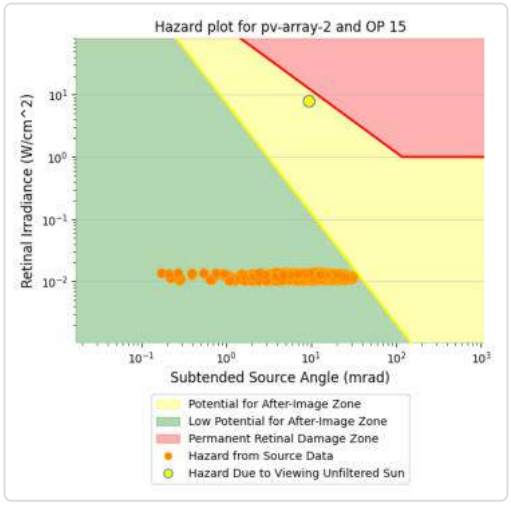
PV array 2 and OP 15

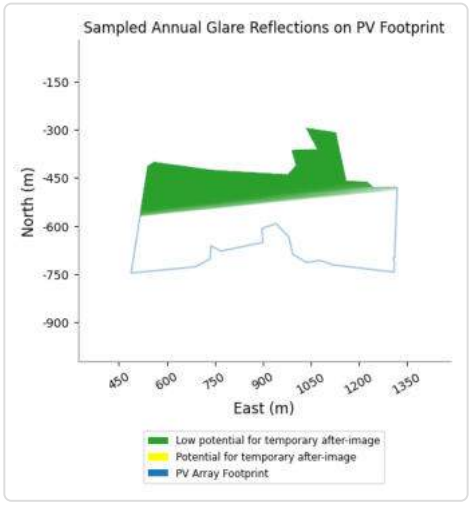
Yellow glare: none

Green glare: 831 min.





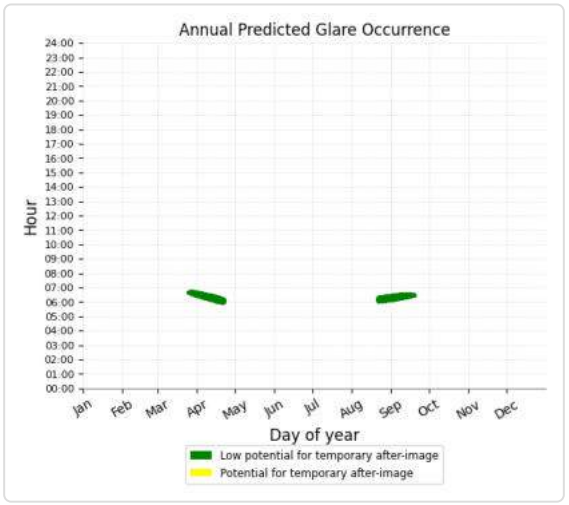


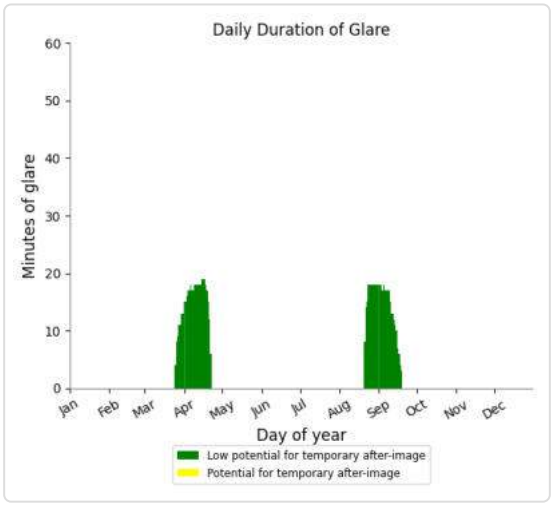


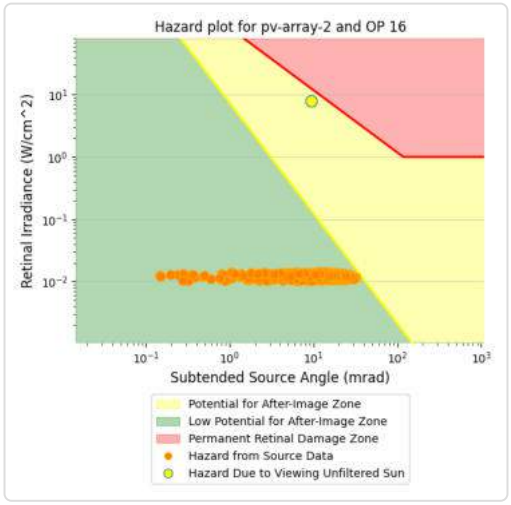
PV array 2 and OP 16

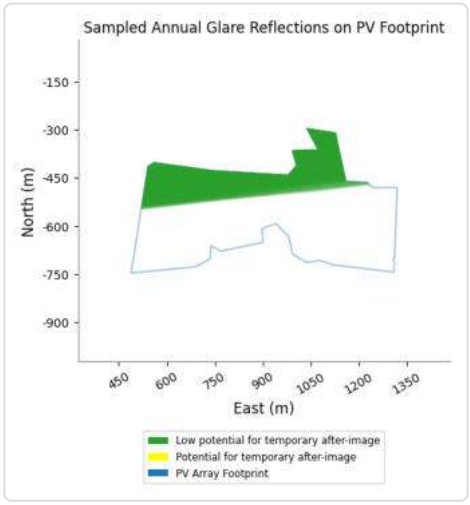
Yellow glare: none

Green glare: 866 min.





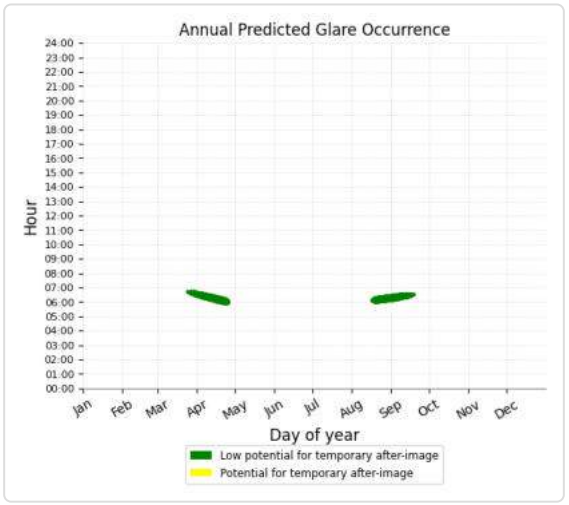


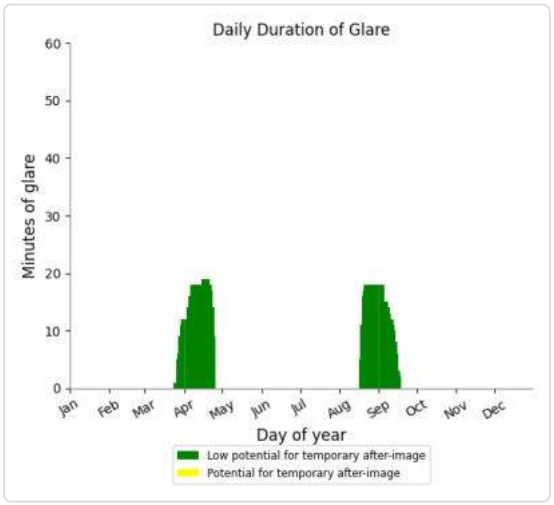


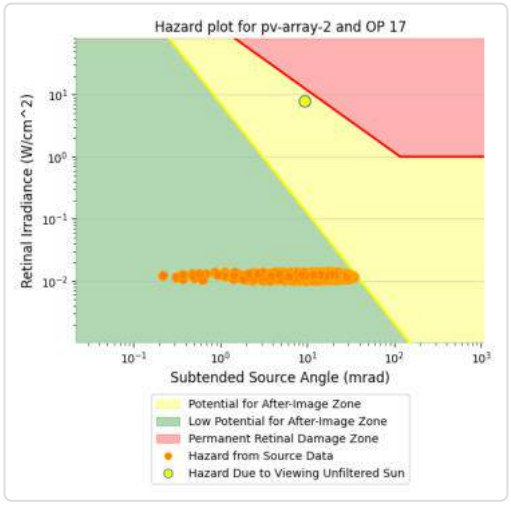
PV array 2 and OP 17

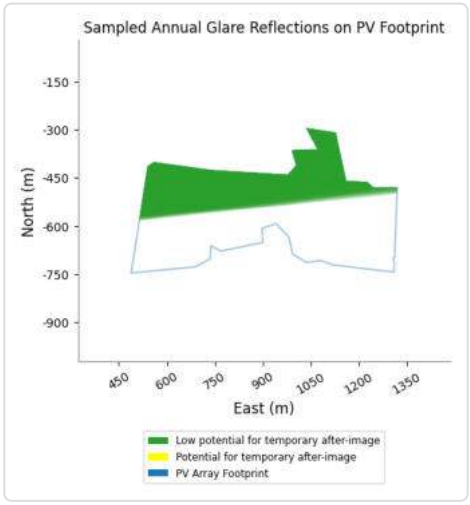
Yellow glare: none

Green glare: 951 min.





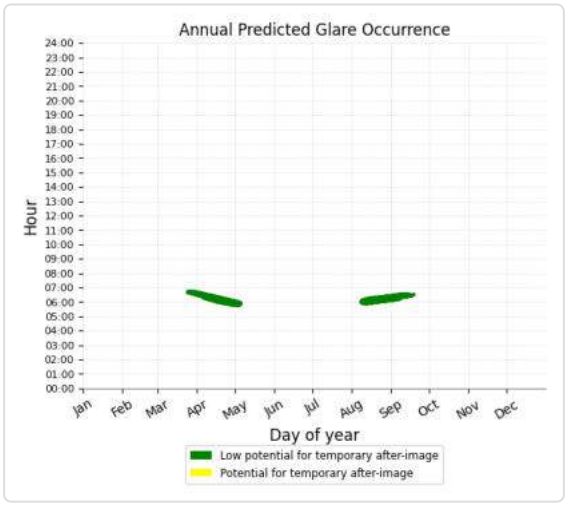


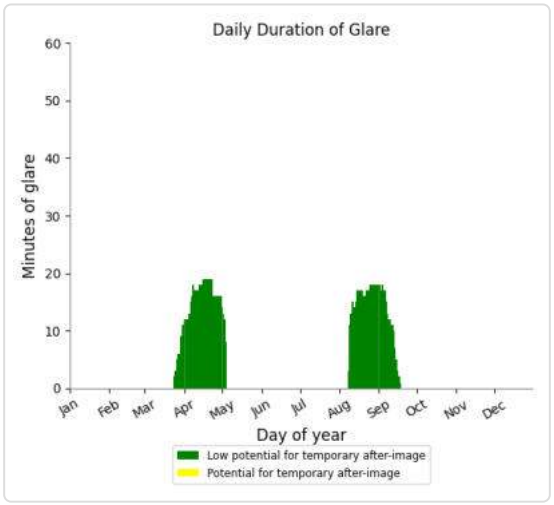


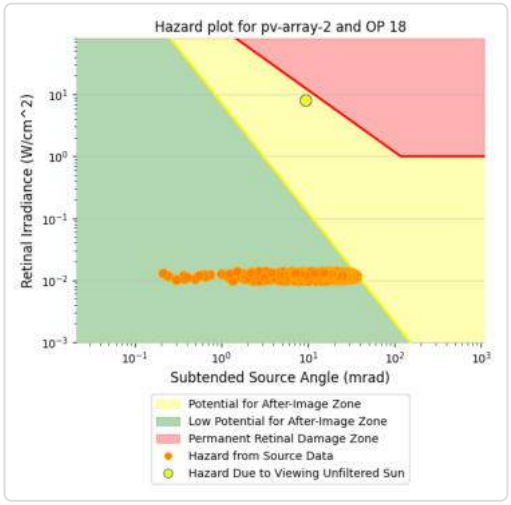
PV array 2 and OP 18

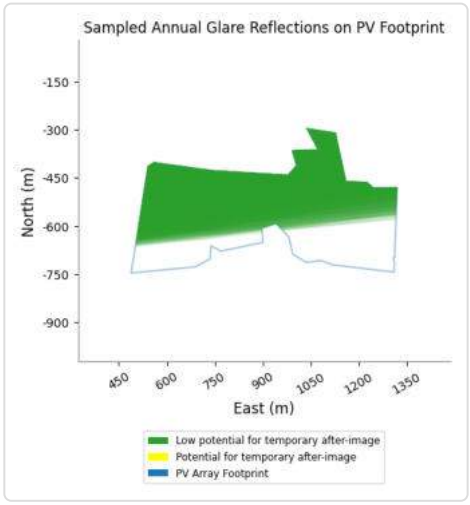
Yellow glare: none

Green glare: 1,181 min.





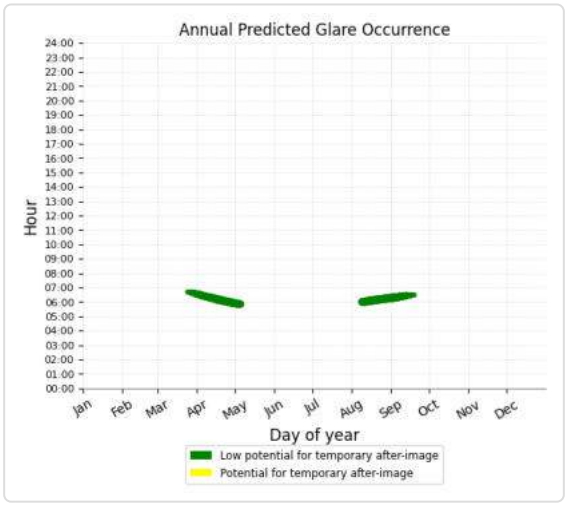


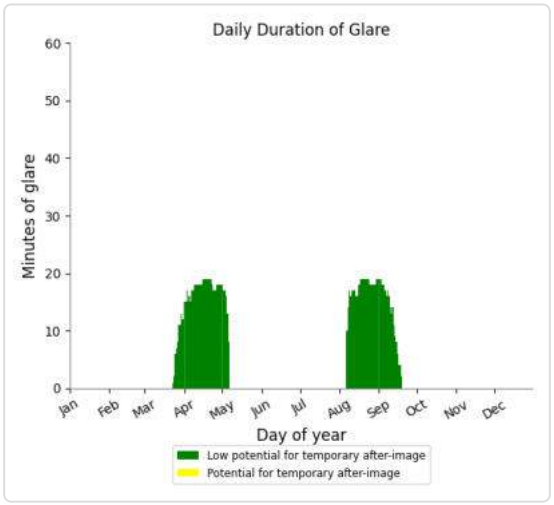


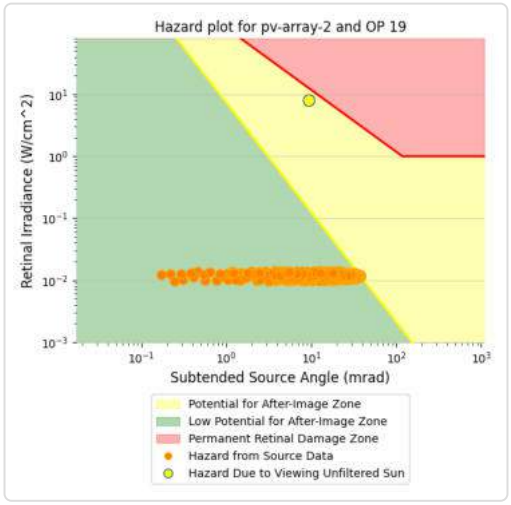
PV array 2 and OP 19

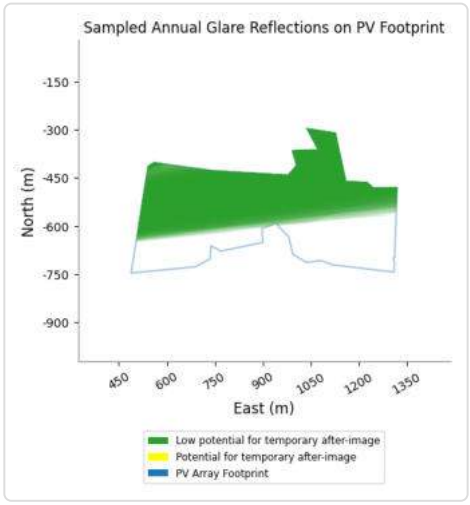
Yellow glare: none

Green glare: 1,368 min.





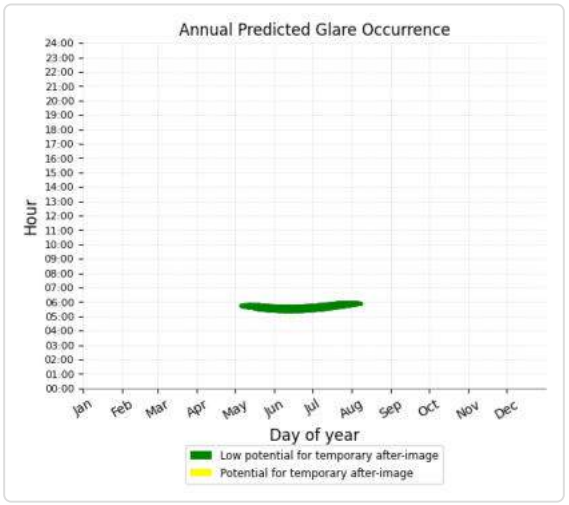


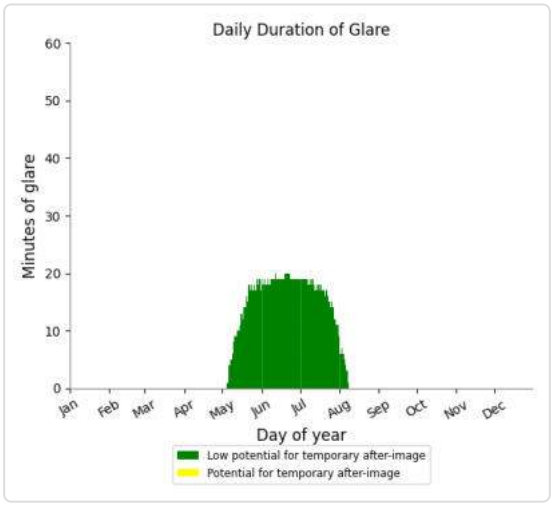


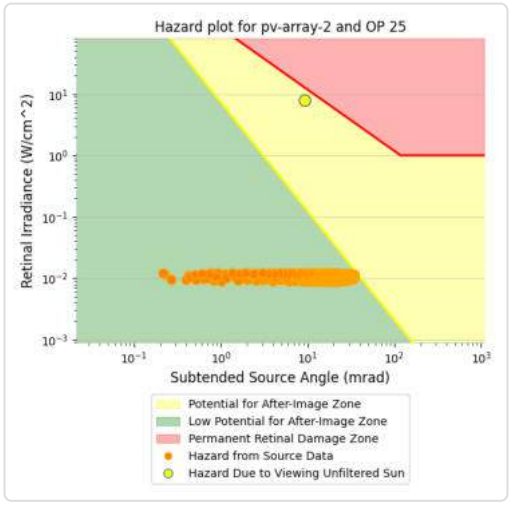
PV array 2 and OP 25

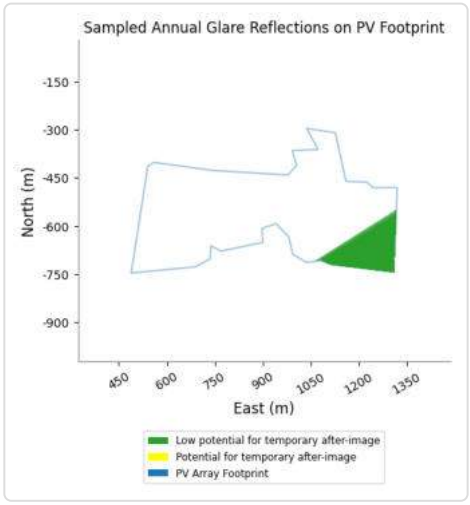
Yellow glare: none

Green glare: 1,469 min.





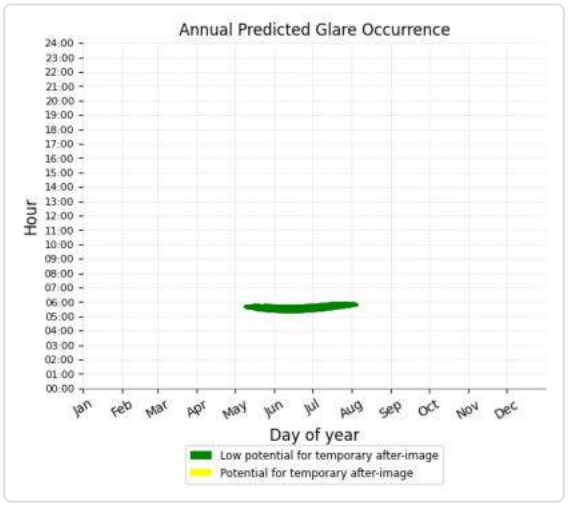


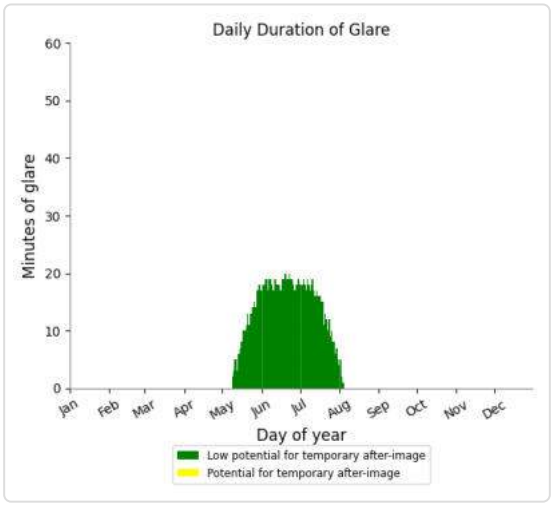


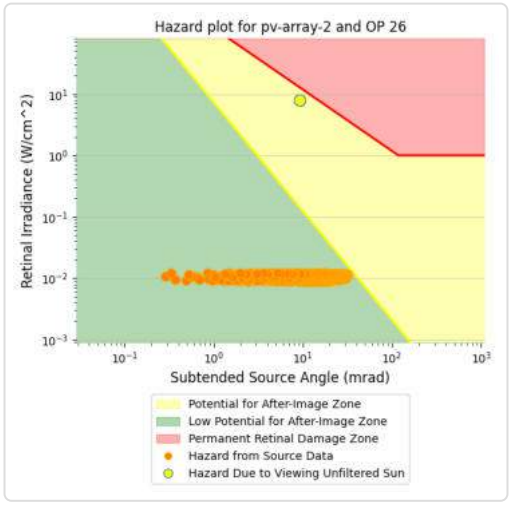
PV array 2 and OP 26

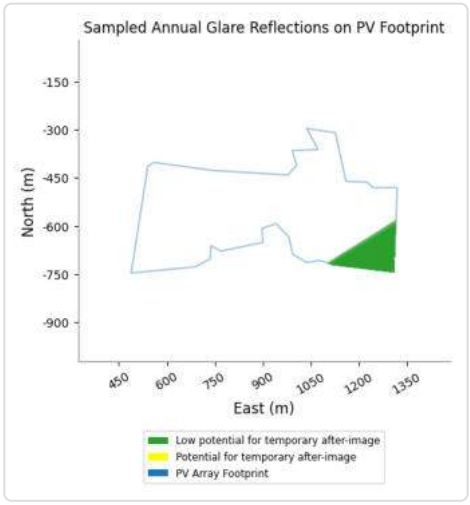
Yellow glare: none

Green glare: 1,246 min.





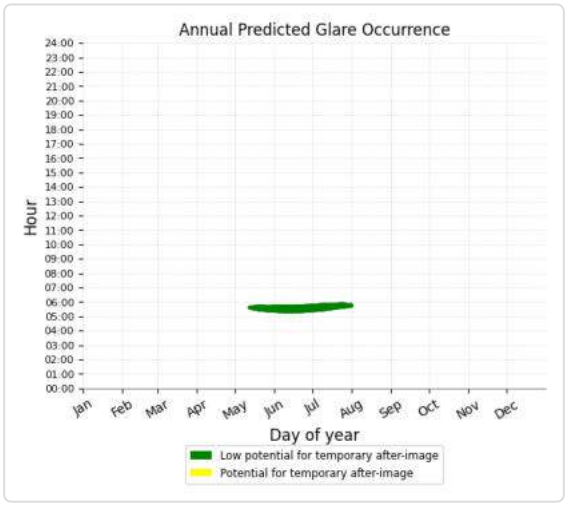


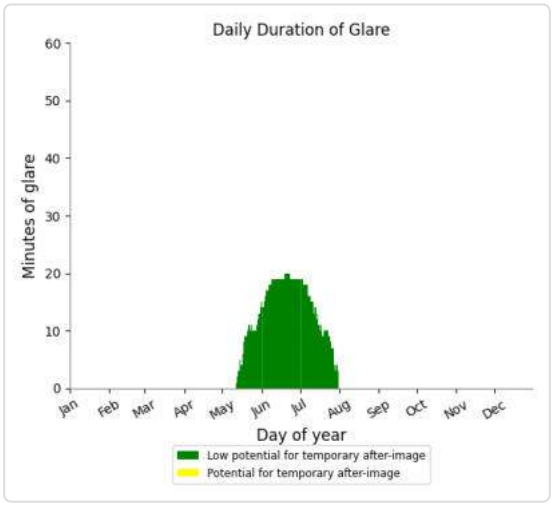


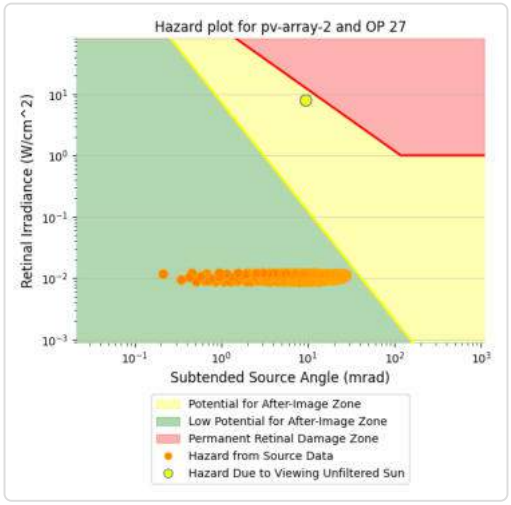
PV array 2 and OP 27

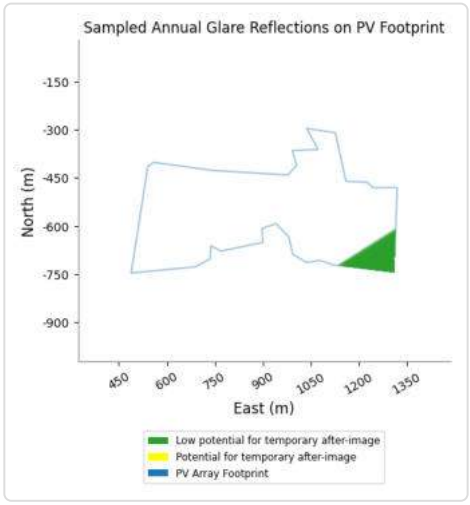
Yellow glare: none

Green glare: 1,091 min.





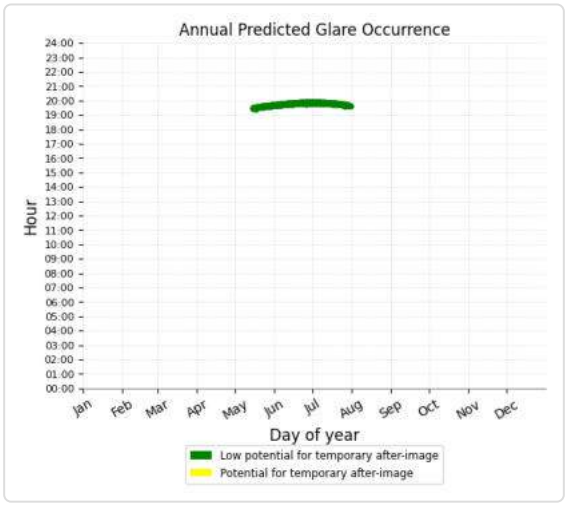


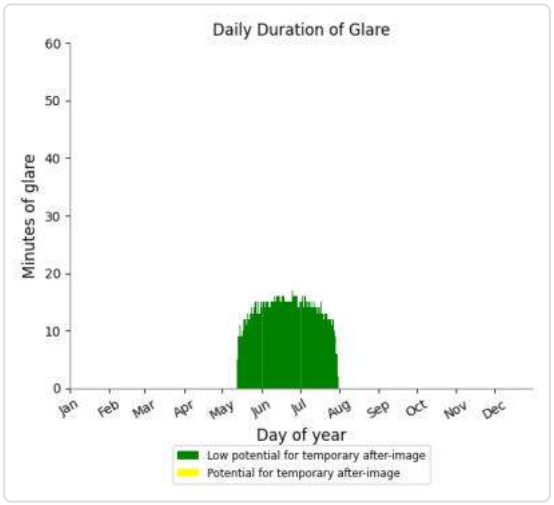


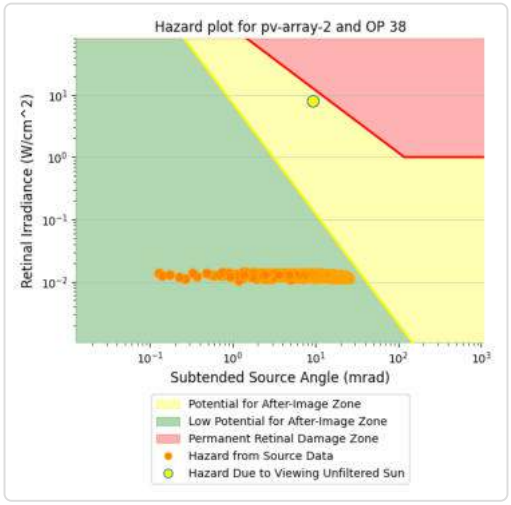
PV array 2 and OP 38

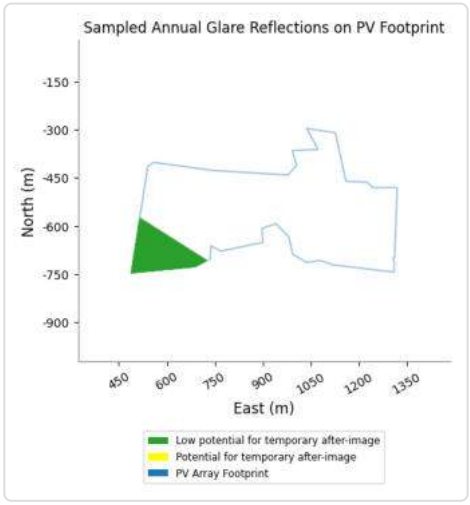
Yellow glare: none

Green glare: 1,085 min.



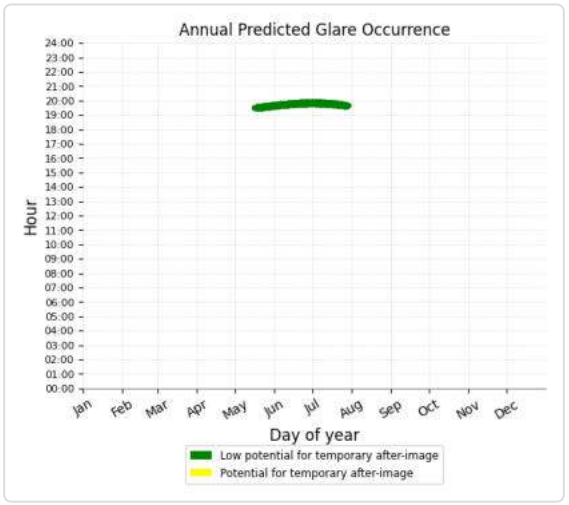


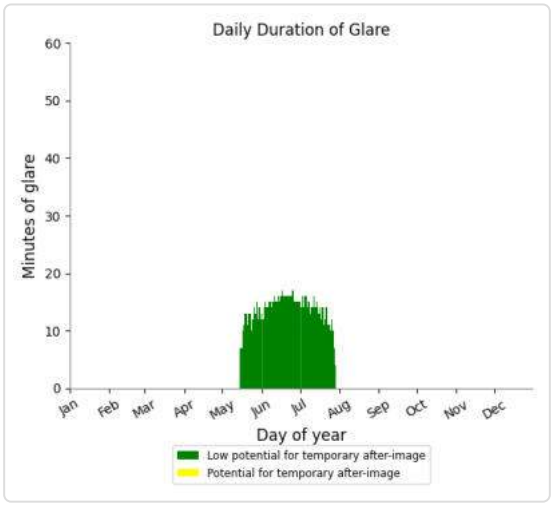


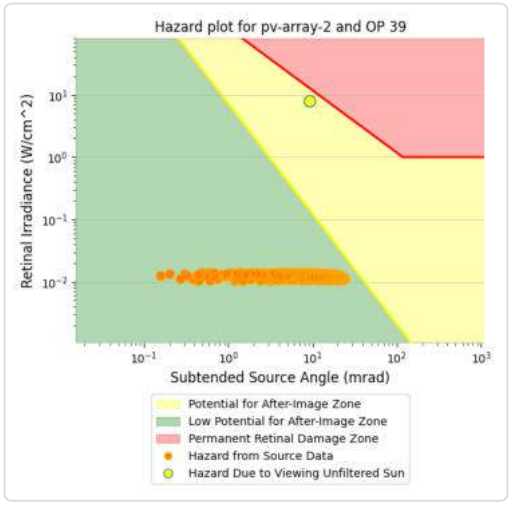


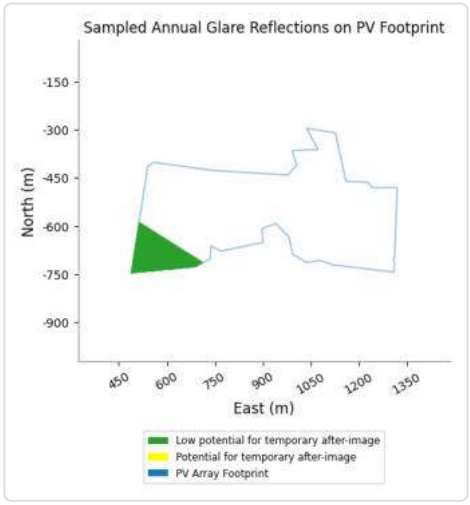
PV array 2 and OP 39

Yellow glare: none
Green glare: 1,032 min.









PV array 2 and OP 1

No glare found

PV array 2 and OP 2

No glare found

PV array 2 and OP 3

No glare found

PV array 2 and OP 4

No glare found

PV array 2 and OP 5

No glare found

PV array 2 and OP 6

No glare found

PV array 2 and OP 7

No glare found

PV array 2 and OP 8

No glare found

PV array 2 and OP 10

No glare found

PV array 2 and OP 28

No glare found

PV array 2 and OP 29

No glare found

PV array 2 and OP 30

No glare found

PV array 2 and OP 31

No glare found

PV array 2 and OP 32

No glare found

PV array 2 and OP 33

No glare found

PV array 2 and OP 34

No glare found

PV array 2 and OP 35

No glare found

PV array 2 and OP 36

No glare found

PV array 2 and OP 37

No glare found

PV array 2 and OP 43

No glare found

PV array 2 and OP 46

No glare found

PV array 2 and OP 47

No glare found

PV array 2 and OP 48

No glare found

PV array 2 and OP 49

No glare found

PV array 2 and OP 50

No glare found

PV array 2 and OP 51

No glare found

PV array 2 and OP 52

No glare found

PV array 2 and OP 53

No glare found

PV array 2 and OP 54

No glare found

PV: PV array 3 potential temporary after-image

Receptor results ordered by category of glare

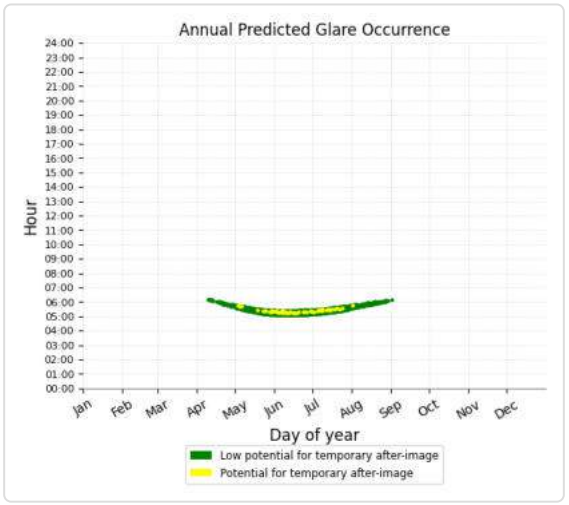
Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 25	1,115	18.6	59	1.0
OP 26	1,846	30.8	137	2.3
OP 27	1,304	21.7	771	12.8
OP 23	893	14.9	0	0.0
OP 24	1,951	32.5	0	0.0
OP 36	638	10.6	0	0.0
OP 38	998	16.6	0	0.0
OP 39	1,091	18.2	0	0.0
OP 40	183	3.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0
OP 21	0	0.0	0	0.0
OP 22	0	0.0	0	0.0
OP 28	0	0.0	0	0.0
OP 29	0	0.0	0	0.0
OP 30	0	0.0	0	0.0
OP 31	0	0.0	0	0.0
OP 32	0	0.0	0	0.0
OP 33	0	0.0	0	0.0
OP 34	0	0.0	0	0.0
OP 35	0	0.0	0	0.0

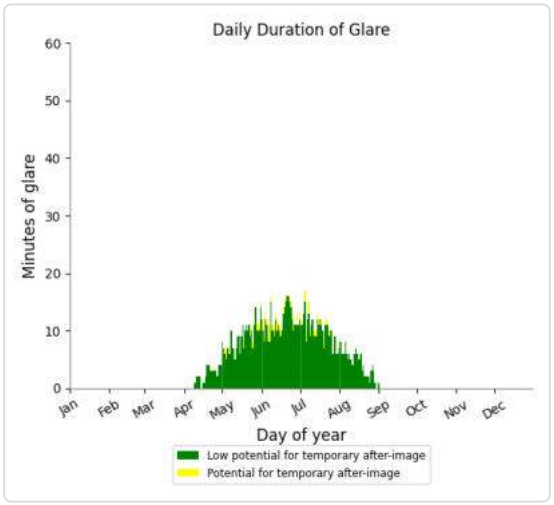
Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 37	0	0.0	0	0.0
OP 41	0	0.0	0	0.0
OP 42	0	0.0	0	0.0
OP 43	0	0.0	0	0.0
OP 44	0	0.0	0	0.0
OP 45	0	0.0	0	0.0
OP 46	0	0.0	0	0.0
OP 47	0	0.0	0	0.0
OP 48	0	0.0	0	0.0
OP 49	0	0.0	0	0.0
OP 50	0	0.0	0	0.0
OP 51	0	0.0	0	0.0
OP 52	0	0.0	0	0.0
OP 53	0	0.0	0	0.0
OP 54	0	0.0	0	0.0

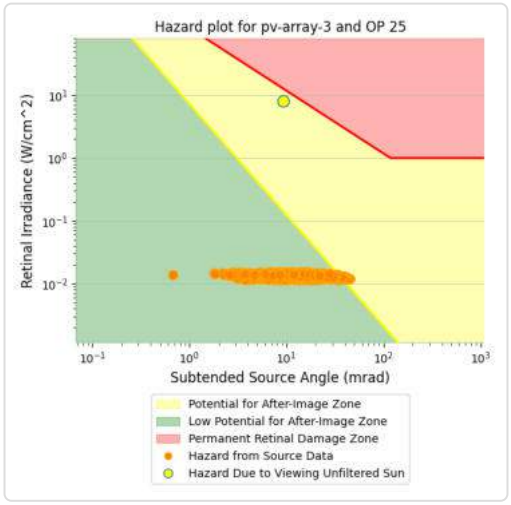
PV array 3 and OP 25

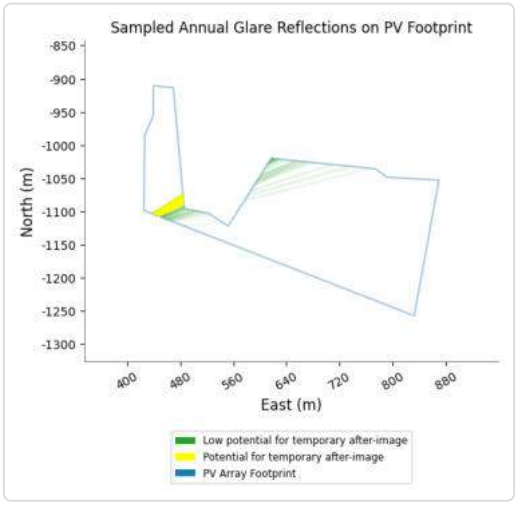
Yellow glare: 59 min.

Green glare: 1,115 min.





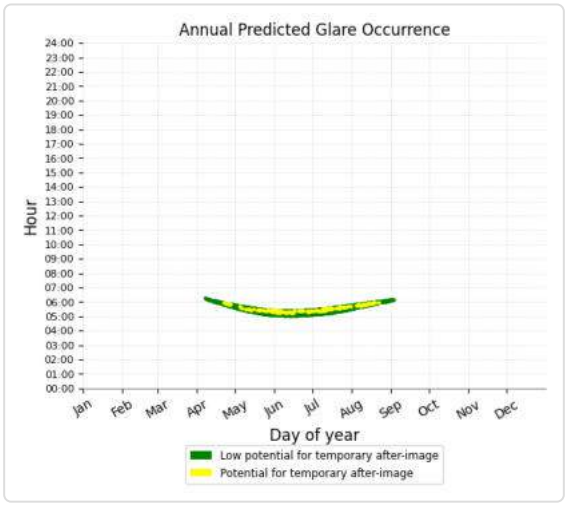


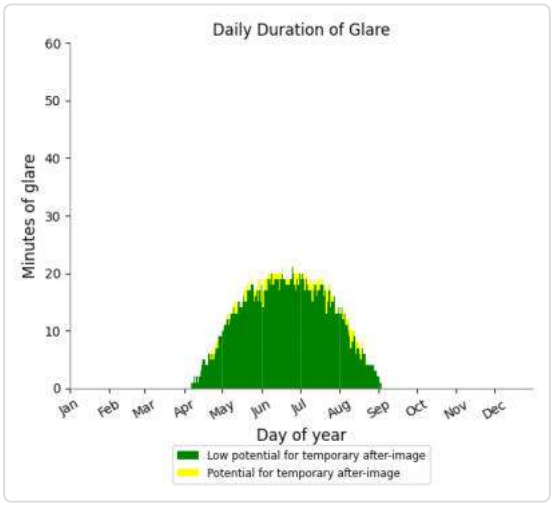


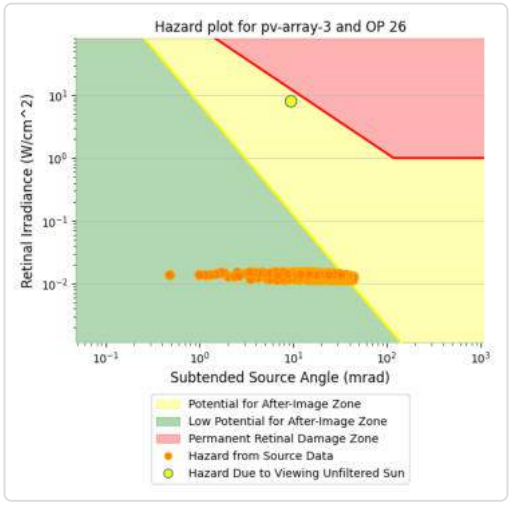
PV array 3 and OP 26

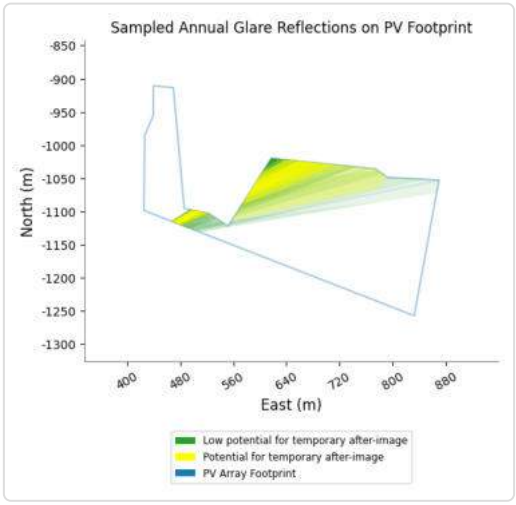
Yellow glare: 137 min.

Green glare: 1,846 min.





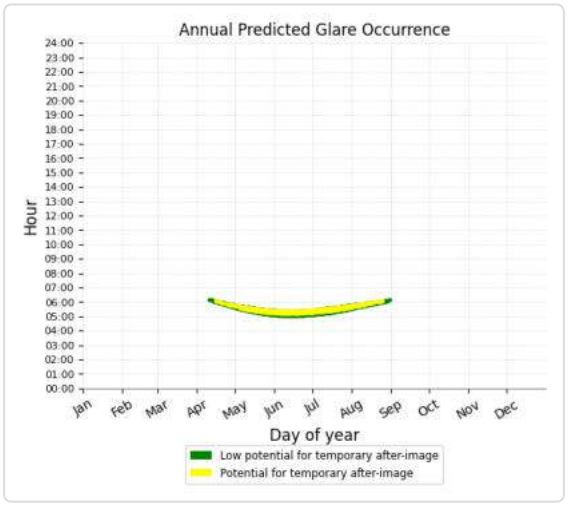


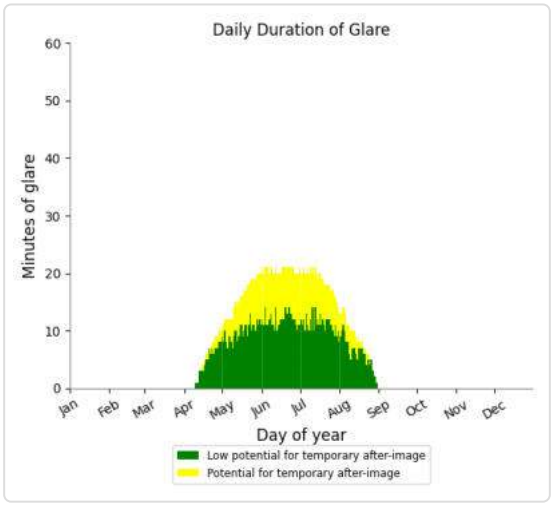


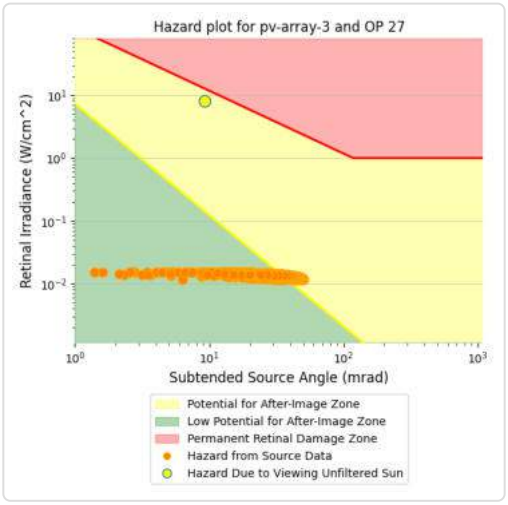
PV array 3 and OP 27

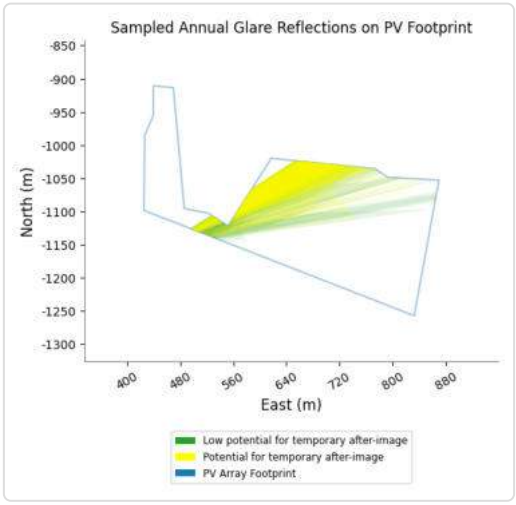
Yellow glare: 771 min.

Green glare: 1,304 min.





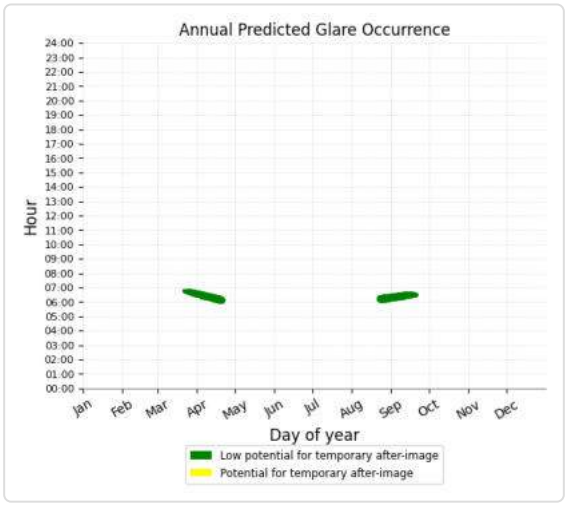


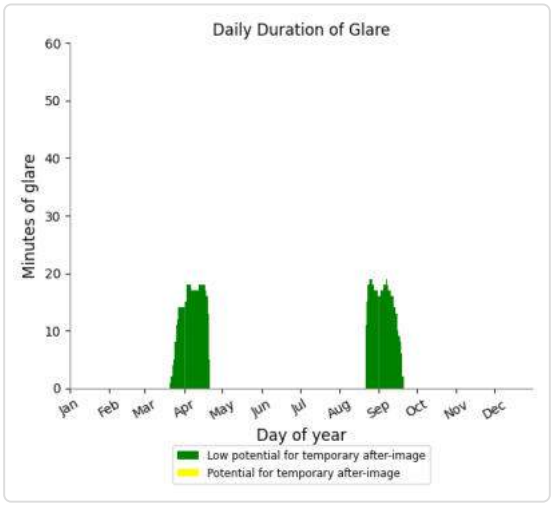


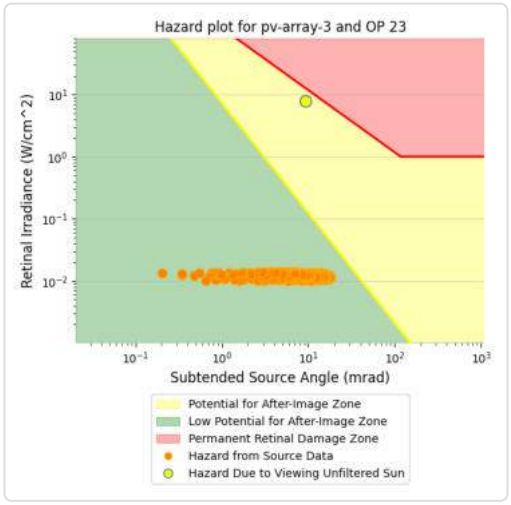
PV array 3 and OP 23

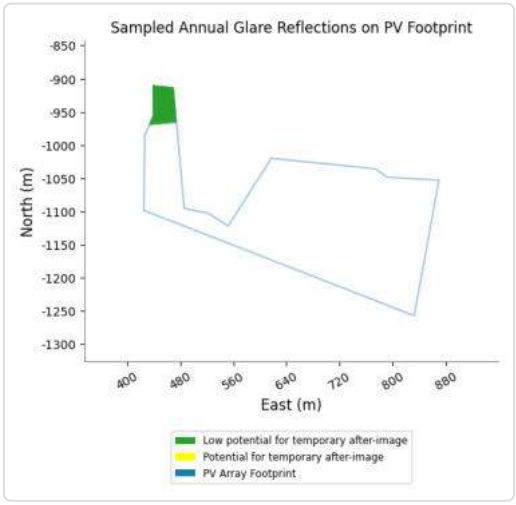
Yellow glare: none

Green glare: 893 min.





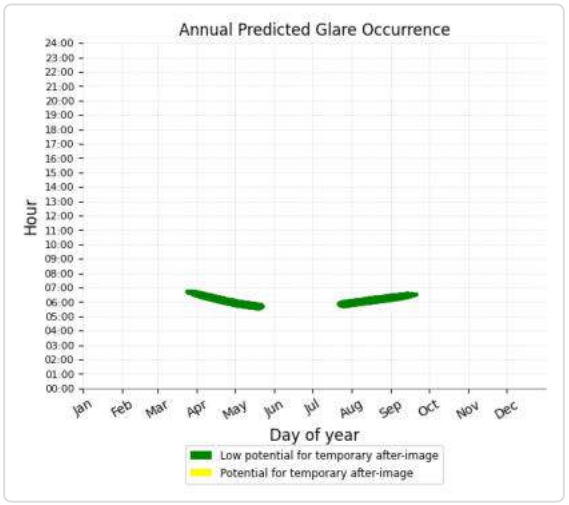


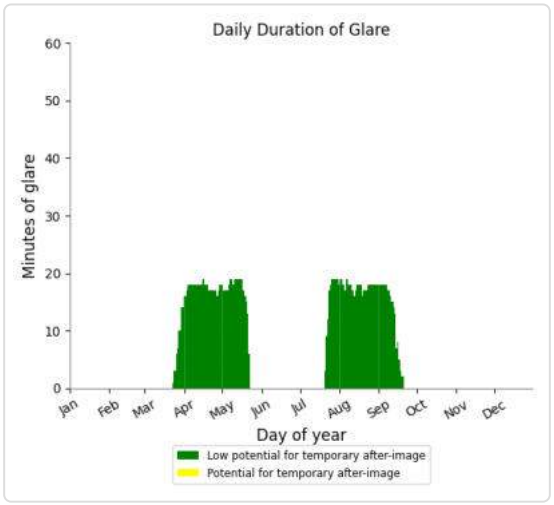


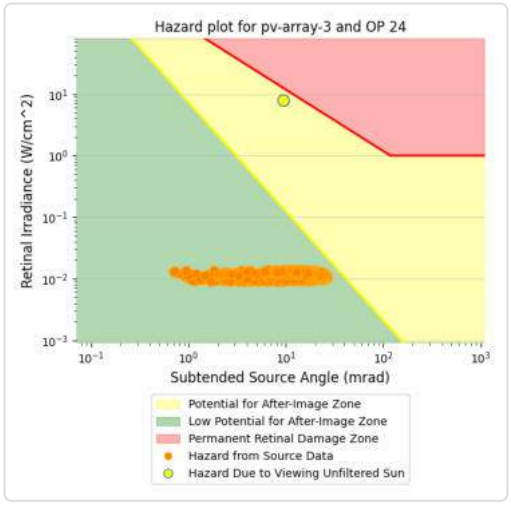
PV array 3 and OP 24

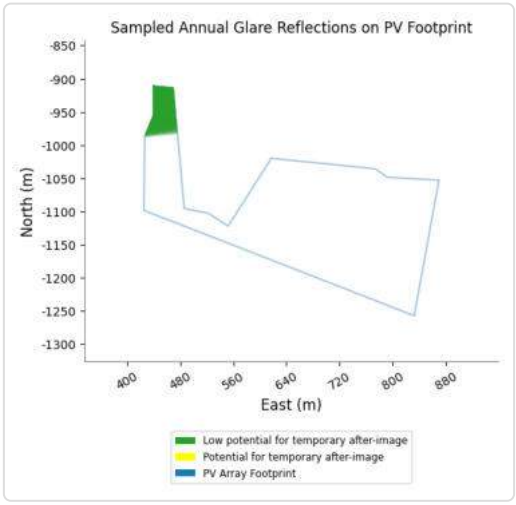
Yellow glare: none

Green glare: 1,951 min.





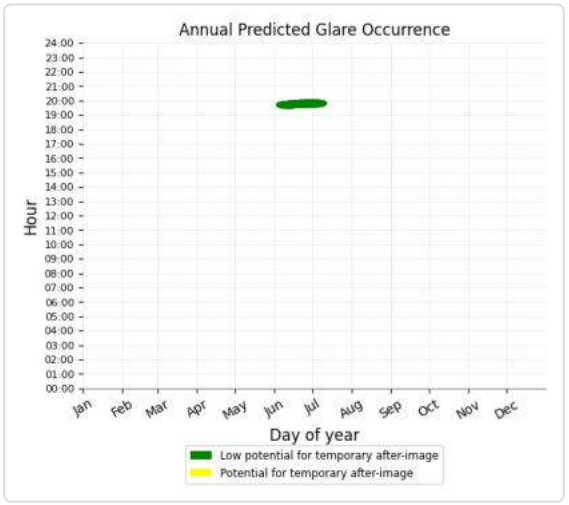


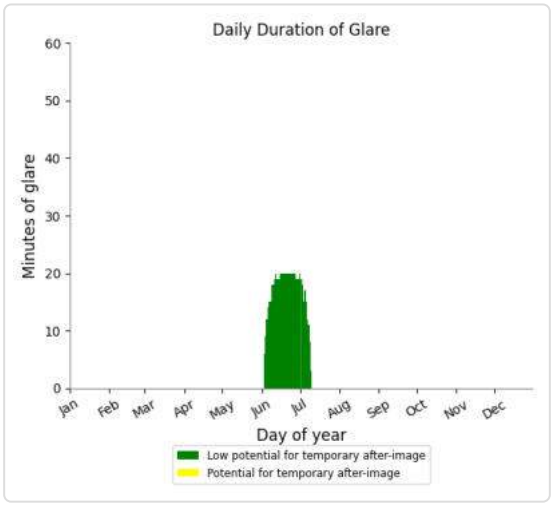


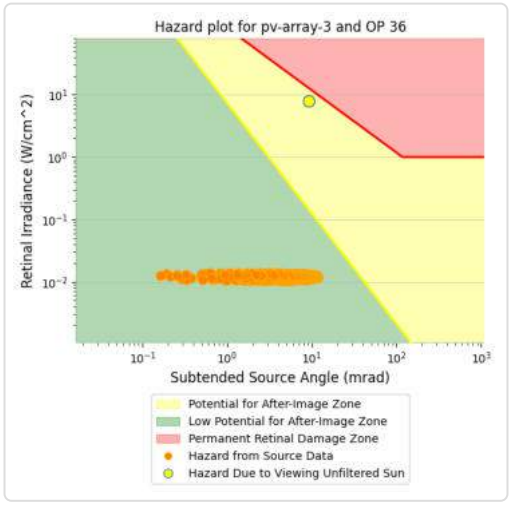
PV array 3 and OP 36

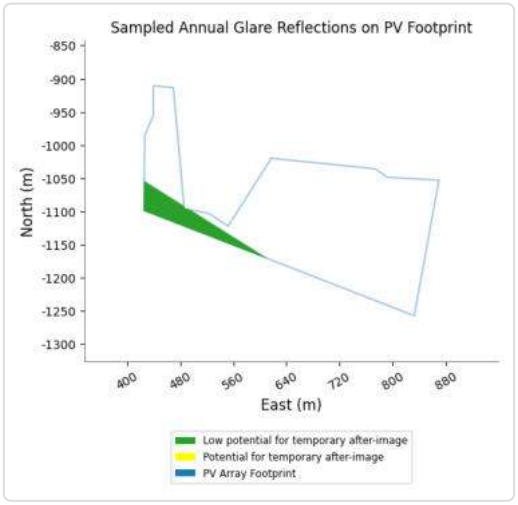
Yellow glare: none

Green glare: 638 min.





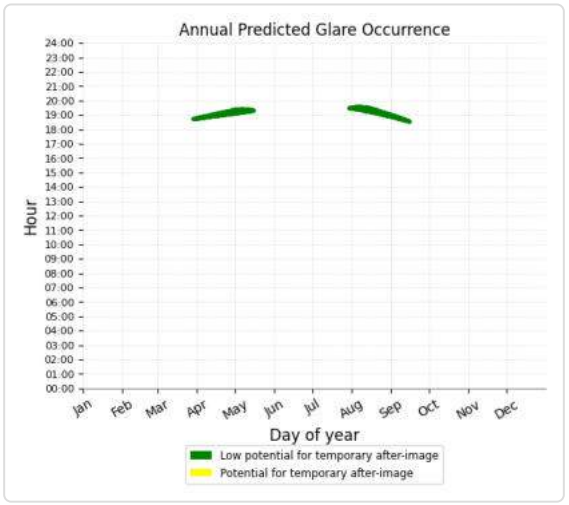


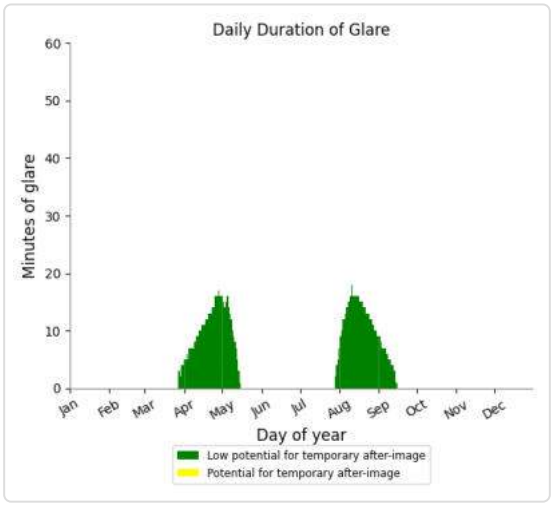


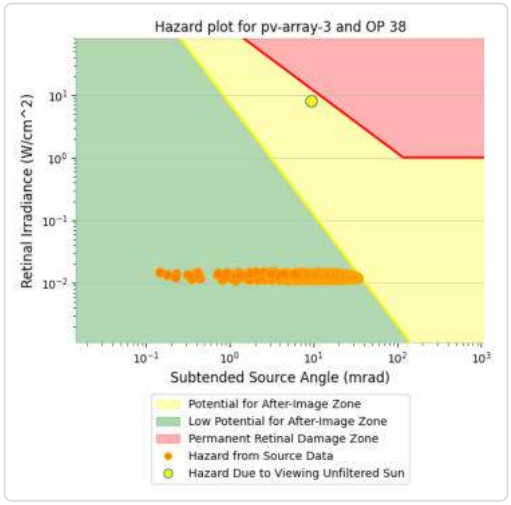
PV array 3 and OP 38

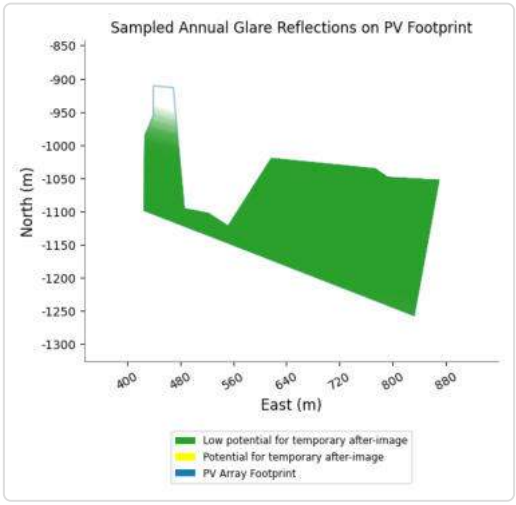
Yellow glare: none

Green glare: 998 min.





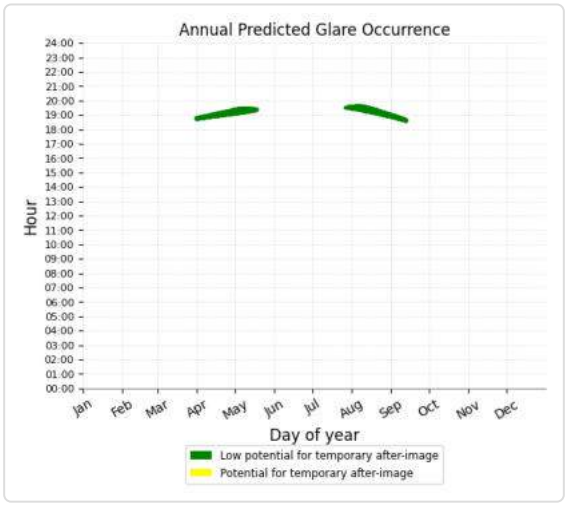


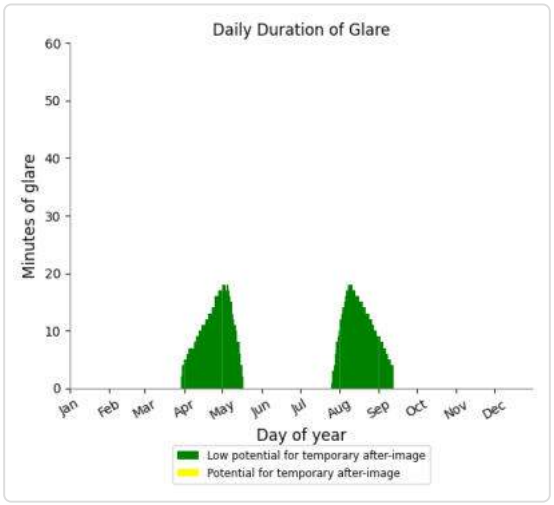


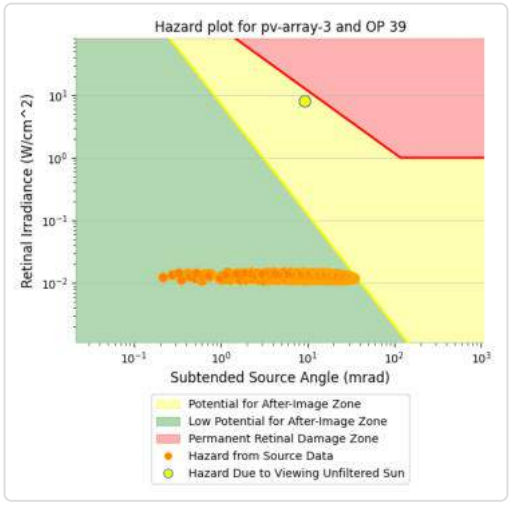
PV array 3 and OP 39

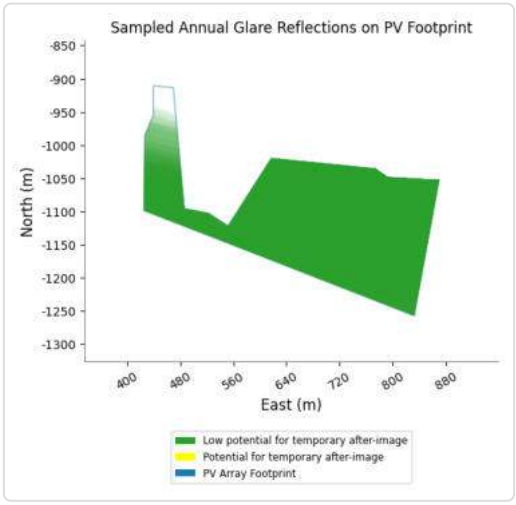
Yellow glare: none

Green glare: 1,091 min.



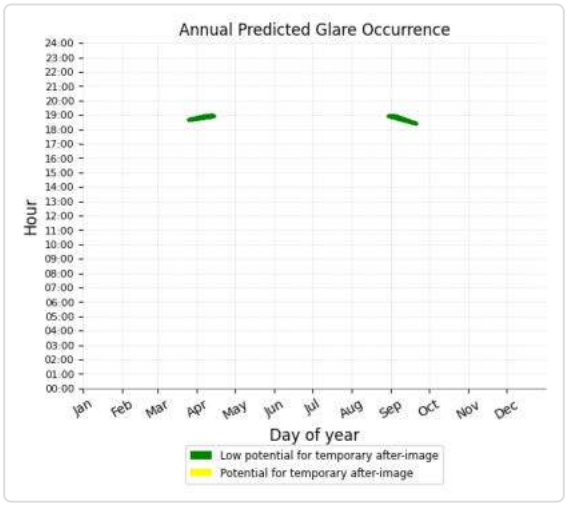


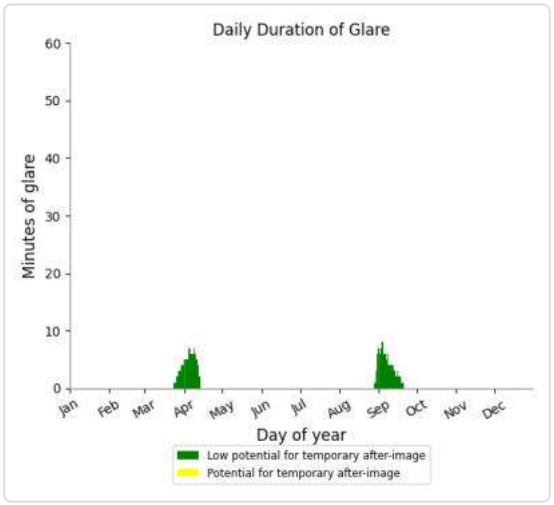


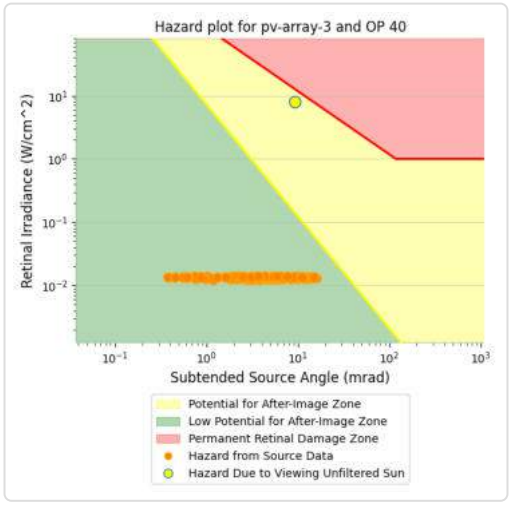


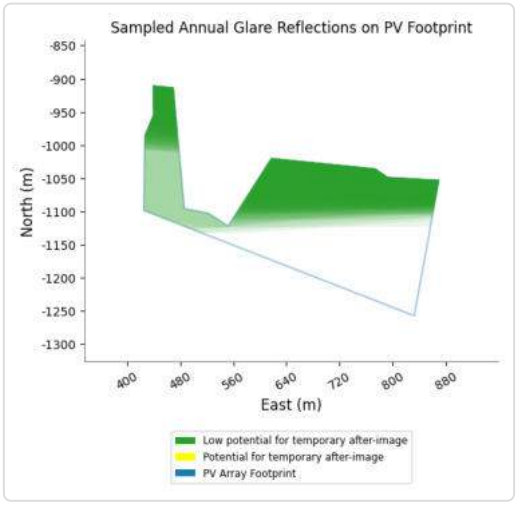
PV array 3 and OP 40

Yellow glare: none
Green glare: 183 min.









PV array 3 and OP 1

No glare found

PV array 3 and OP 2

No glare found

PV array 3 and OP 3

No glare found

PV array 3 and OP 4

No glare found

PV array 3 and OP 5

No glare found

PV array 3 and OP 6

No glare found

PV array 3 and OP 7

No glare found

PV array 3 and OP 8

No glare found

PV array 3 and OP 9

No glare found

PV array 3 and OP 10

No glare found

PV array 3 and OP 11

No glare found

PV array 3 and OP 12

No glare found

PV array 3 and OP 13

No glare found

PV array 3 and OP 14

No glare found

PV array 3 and OP 15

No glare found

PV array 3 and OP 16

No glare found

PV array 3 and OP 17

No glare found

PV array 3 and OP 18

No glare found

PV array 3 and OP 19

No glare found

PV array 3 and OP 20

No glare found

PV array 3 and OP 21

No glare found

PV array 3 and OP 22

No glare found

PV array 3 and OP 28

No glare found

PV array 3 and OP 29

No glare found

PV array 3 and OP 30

No glare found

PV array 3 and OP 31

No glare found

PV array 3 and OP 32

No glare found

PV array 3 and OP 33

No glare found

PV array 3 and OP 34

No glare found

PV array 3 and OP 35

No glare found

PV array 3 and OP 37

No glare found

PV array 3 and OP 41

No glare found

PV array 3 and OP 42

No glare found

PV array 3 and OP 43

No glare found

PV array 3 and OP 44

No glare found

PV array 3 and OP 45

No glare found

PV array 3 and OP 46

No glare found

PV array 3 and OP 47

No glare found

PV array 3 and OP 48

No glare found

PV array 3 and OP 49

No glare found

PV array 3 and OP 50

No glare found

PV array 3 and OP 51

No glare found

PV array 3 and OP 52

No glare found

PV array 3 and OP 53

No glare found

PV array 3 and OP 54

No glare found

PV: PV array 4 low potential for temporary after-image

Receptor results ordered by category of glare

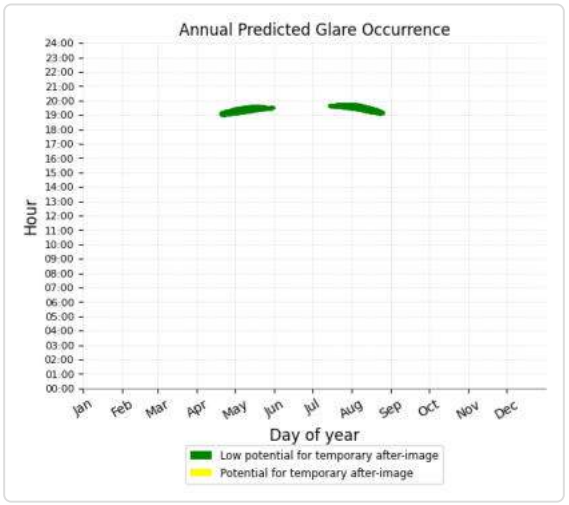
Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 34	866	14.4	0	0.0
OP 35	761	12.7	0	0.0
OP 36	703	11.7	0	0.0
OP 37	43	0.7	0	0.0
OP 38	27	0.5	0	0.0
OP 39	43	0.7	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0
OP 21	0	0.0	0	0.0
OP 22	0	0.0	0	0.0
OP 23	0	0.0	0	0.0
OP 24	0	0.0	0	0.0
OP 25	0	0.0	0	0.0
OP 26	0	0.0	0	0.0
OP 27	0	0.0	0	0.0
OP 28	0	0.0	0	0.0
OP 29	0	0.0	0	0.0
OP 30	0	0.0	0	0.0
OP 31	0	0.0	0	0.0
OP 32	0	0.0	0	0.0
OP 33	0	0.0	0	0.0

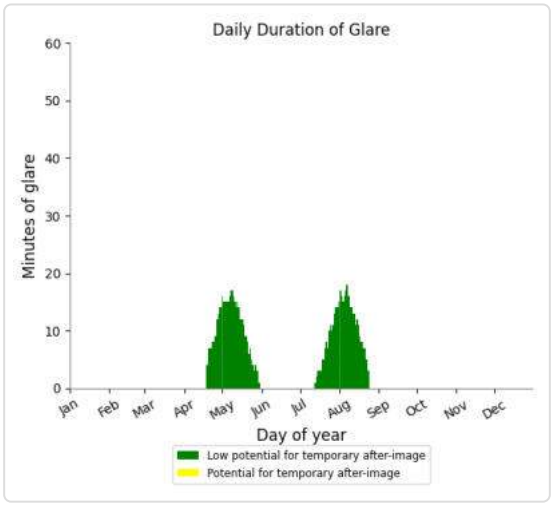
Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 40	0	0.0	0	0.0
OP 41	0	0.0	0	0.0
OP 42	0	0.0	0	0.0
OP 43	0	0.0	0	0.0
OP 44	0	0.0	0	0.0
OP 45	0	0.0	0	0.0
OP 46	0	0.0	0	0.0
OP 47	0	0.0	0	0.0
OP 48	0	0.0	0	0.0
OP 49	0	0.0	0	0.0
OP 50	0	0.0	0	0.0
OP 51	0	0.0	0	0.0
OP 52	0	0.0	0	0.0
OP 53	0	0.0	0	0.0
OP 54	0	0.0	0	0.0

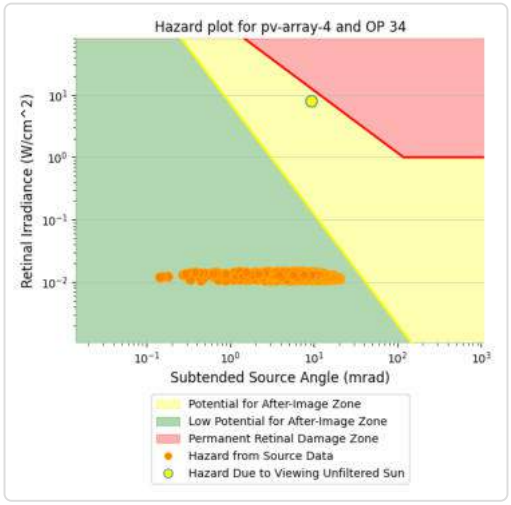
PV array 4 and OP 34

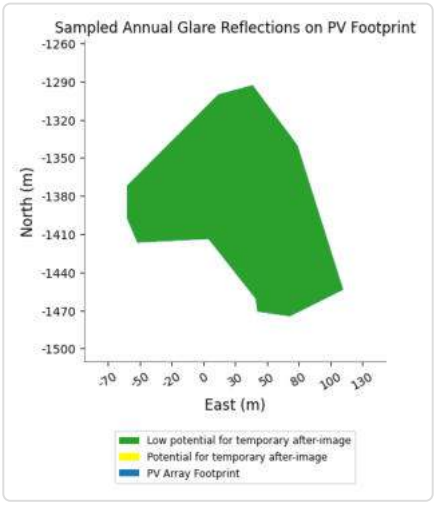
Yellow glare: none

Green glare: 866 min.





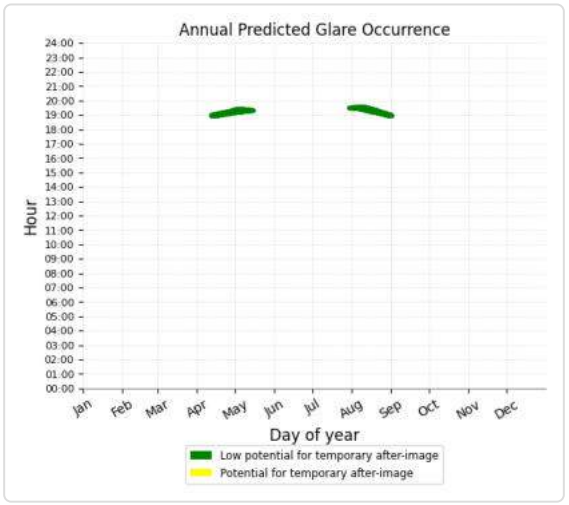


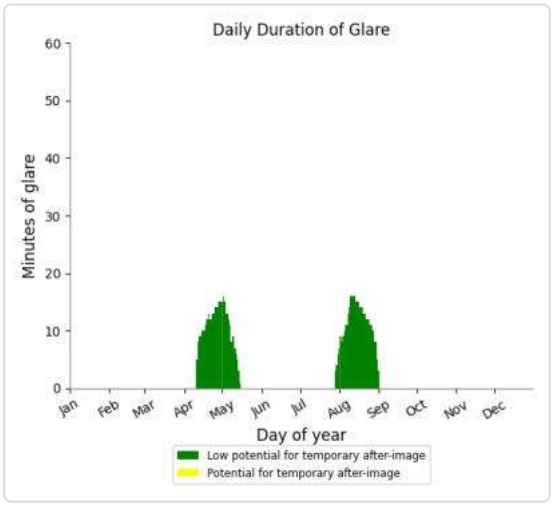


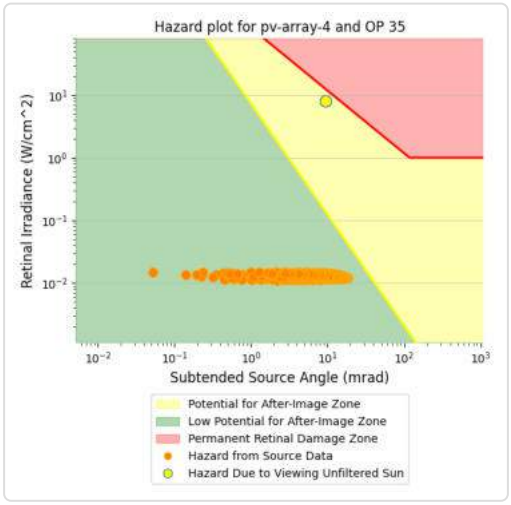
PV array 4 and OP 35

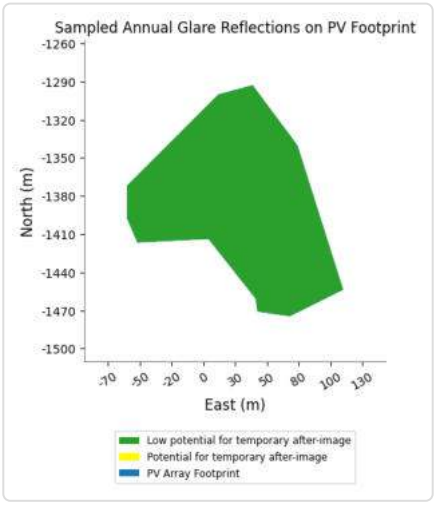
Yellow glare: none

Green glare: 761 min.





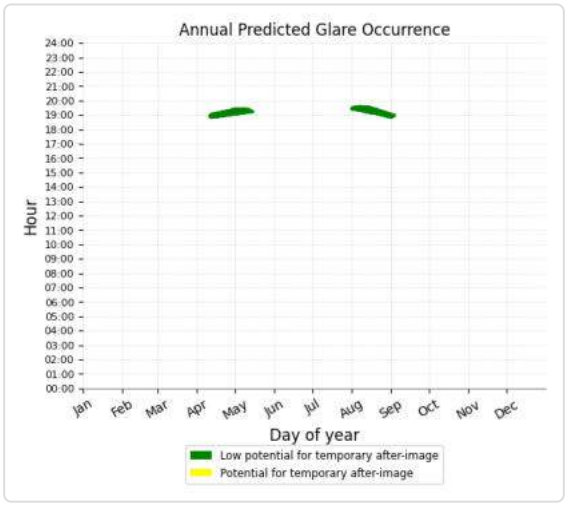


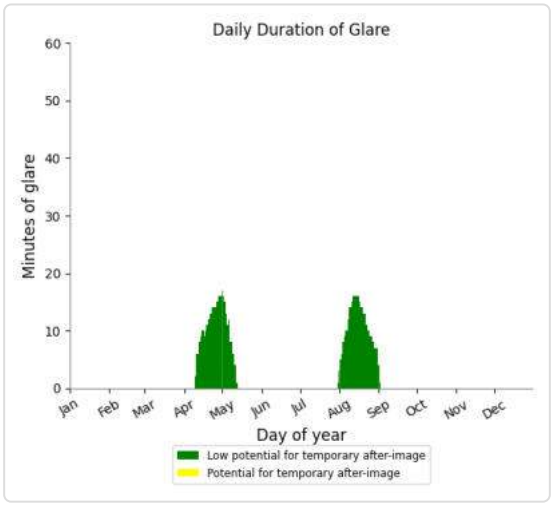


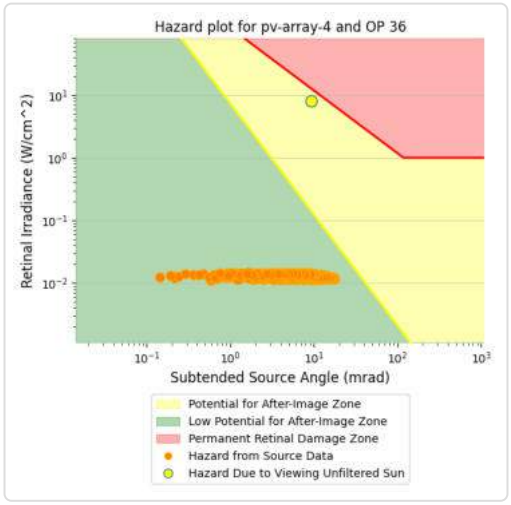
PV array 4 and OP 36

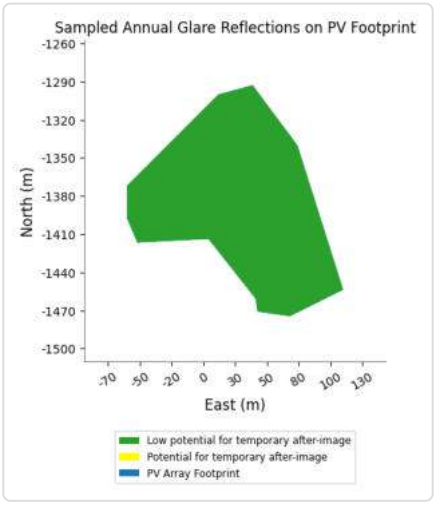
Yellow glare: none

Green glare: 703 min.





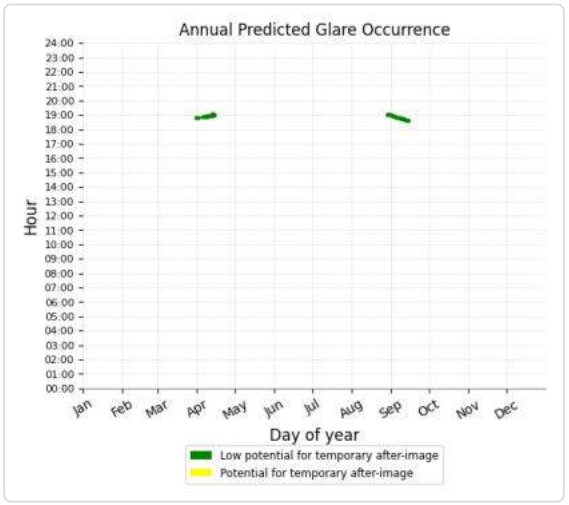


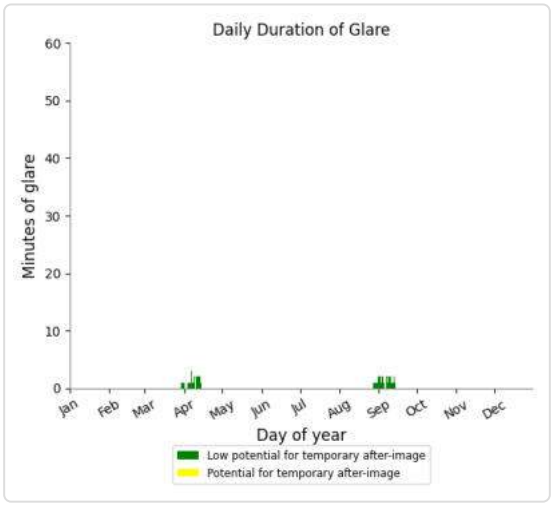


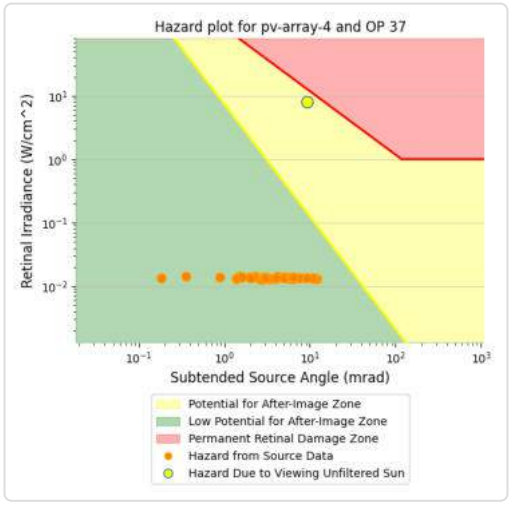
PV array 4 and OP 37

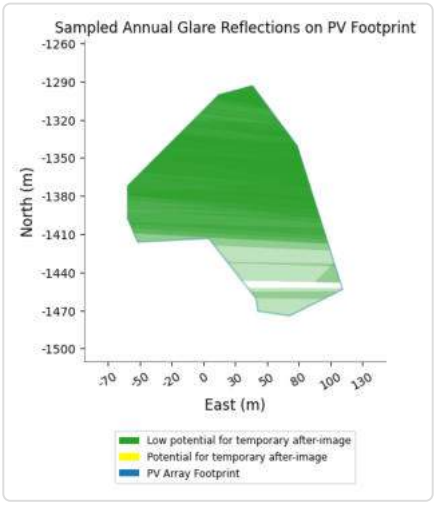
Yellow glare: none

Green glare: 43 min.





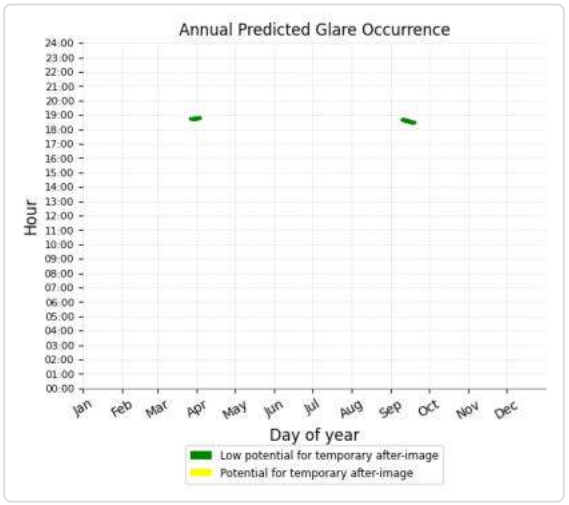


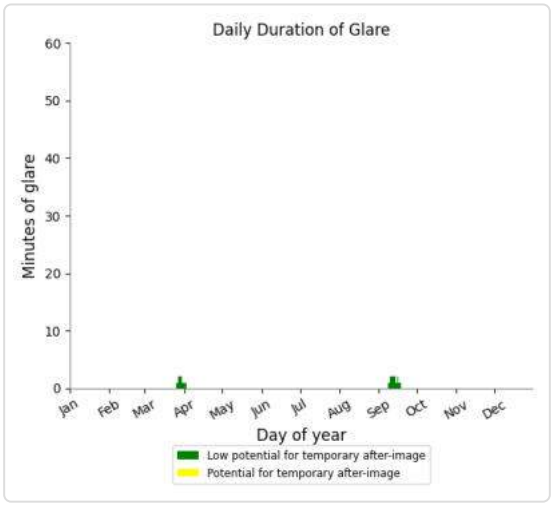


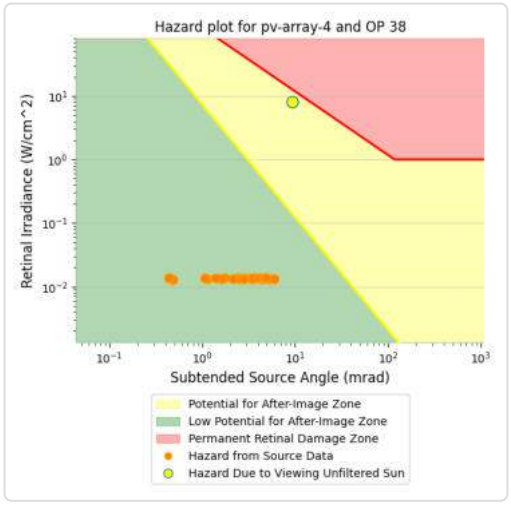
PV array 4 and OP 38

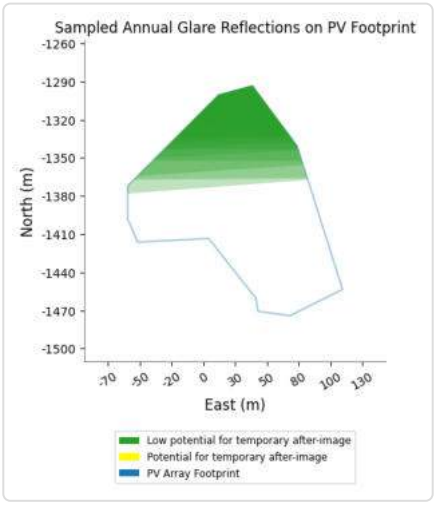
Yellow glare: none

Green glare: 27 min.



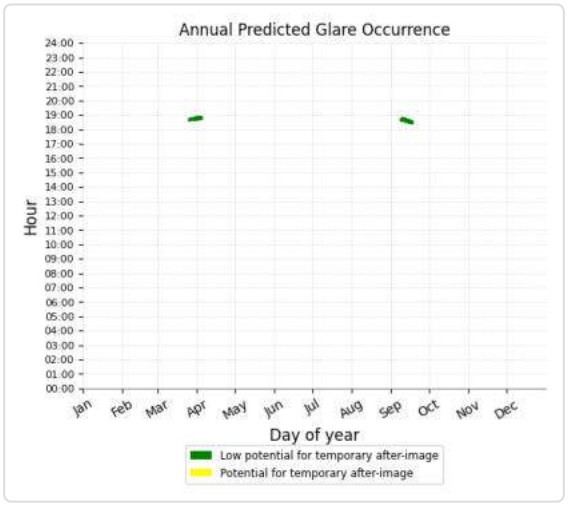


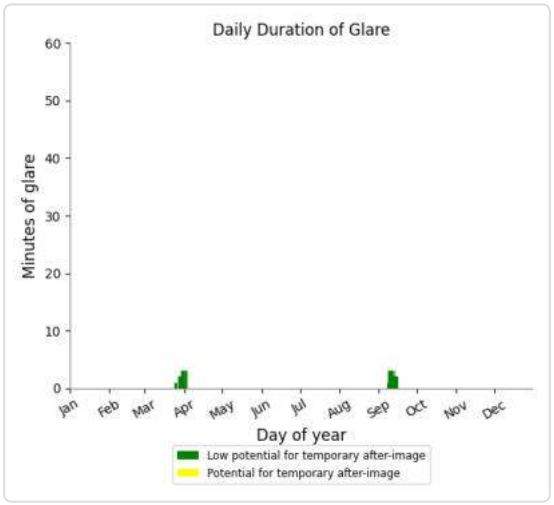


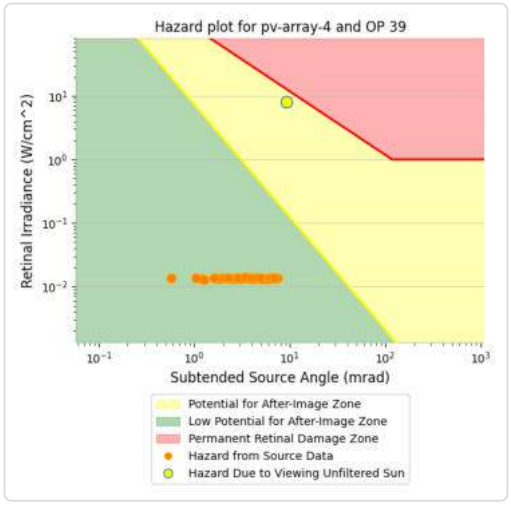


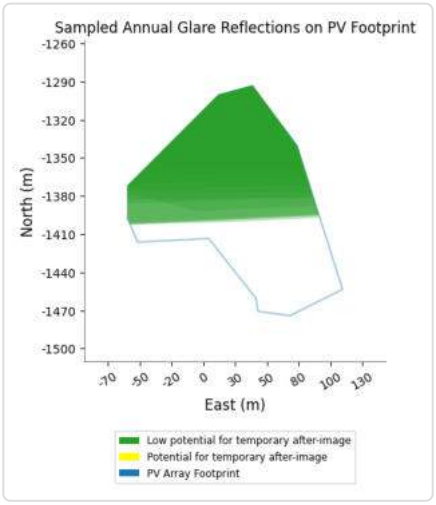
PV array 4 and OP 39

Yellow glare: none
Green glare: 43 min.









PV array 4 and OP 1

No glare found

PV array 4 and OP 2

No glare found

PV array 4 and OP 3

No glare found

PV array 4 and OP 4

No glare found

PV array 4 and OP 5

No glare found

PV array 4 and OP 6

No glare found

PV array 4 and OP 7

No glare found

PV array 4 and OP 8

No glare found

PV array 4 and OP 9

No glare found

PV array 4 and OP 10

No glare found

PV array 4 and OP 11

No glare found

PV array 4 and OP 12

No glare found

PV array 4 and OP 13

No glare found

PV array 4 and OP 14

No glare found

PV array 4 and OP 15

No glare found

PV array 4 and OP 16

No glare found

PV array 4 and OP 17

No glare found

PV array 4 and OP 18

No glare found

PV array 4 and OP 19

No glare found

PV array 4 and OP 20

No glare found

PV array 4 and OP 21

No glare found

PV array 4 and OP 22

No glare found

PV array 4 and OP 23

No glare found

PV array 4 and OP 24

No glare found

PV array 4 and OP 25

No glare found

PV array 4 and OP 26

No glare found

PV array 4 and OP 27

No glare found

PV array 4 and OP 28

No glare found

PV array 4 and OP 29

No glare found

PV array 4 and OP 30

No glare found

PV array 4 and OP 31

No glare found

PV array 4 and OP 32

No glare found

PV array 4 and OP 33

No glare found

PV array 4 and OP 40

No glare found

PV array 4 and OP 41

No glare found

PV array 4 and OP 42

No glare found

PV array 4 and OP 43

No glare found

PV array 4 and OP 44

No glare found

PV array 4 and OP 45

No glare found

PV array 4 and OP 46

No glare found

PV array 4 and OP 47

No glare found

PV array 4 and OP 48

No glare found

PV array 4 and OP 49

No glare found

PV array 4 and OP 50

No glare found

PV array 4 and OP 51

No glare found

PV array 4 and OP 52

No glare found

PV array 4 and OP 53

No glare found

PV array 4 and OP 54

No glare found

PV: PV array 5 potential temporary after-image

Receptor results ordered by category of glare

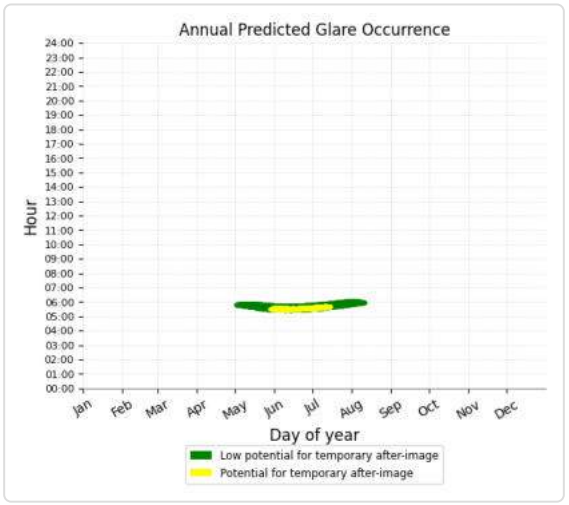
Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 29	1,541	25.7	439	7.3
OP 33	1,995	33.2	366	6.1
OP 28	1,897	31.6	0	0.0
OP 30	922	15.4	0	0.0
OP 32	1,017	16.9	0	0.0
OP 34	301	5.0	0	0.0
OP 35	158	2.6	0	0.0
OP 36	218	3.6	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0
OP 21	0	0.0	0	0.0
OP 22	0	0.0	0	0.0
OP 23	0	0.0	0	0.0
OP 24	0	0.0	0	0.0
OP 25	0	0.0	0	0.0
OP 26	0	0.0	0	0.0
OP 27	0	0.0	0	0.0
OP 31	0	0.0	0	0.0
OP 37	0	0.0	0	0.0
OP 38	0	0.0	0	0.0
OP 39	0	0.0	0	0.0

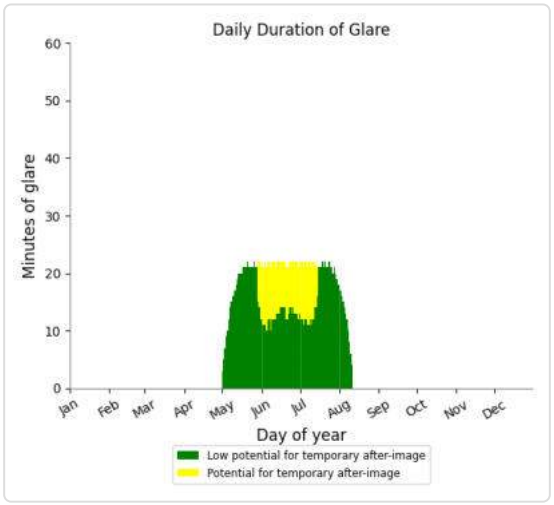
Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 40	0	0.0	0	0.0
OP 41	0	0.0	0	0.0
OP 42	0	0.0	0	0.0
OP 43	0	0.0	0	0.0
OP 44	0	0.0	0	0.0
OP 45	0	0.0	0	0.0
OP 46	0	0.0	0	0.0
OP 47	0	0.0	0	0.0
OP 48	0	0.0	0	0.0
OP 49	0	0.0	0	0.0
OP 50	0	0.0	0	0.0
OP 51	0	0.0	0	0.0
OP 52	0	0.0	0	0.0
OP 53	0	0.0	0	0.0
OP 54	0	0.0	0	0.0

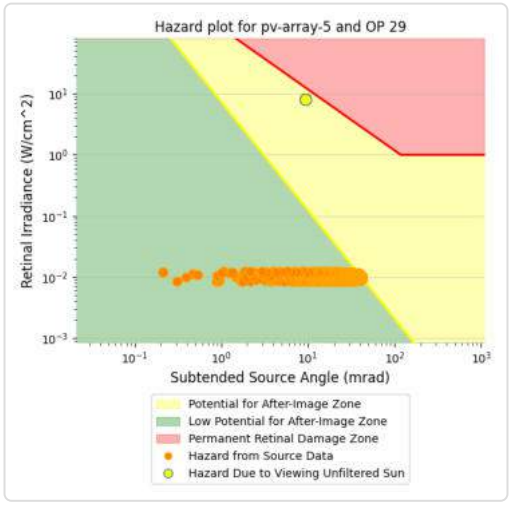
PV array 5 and OP 29

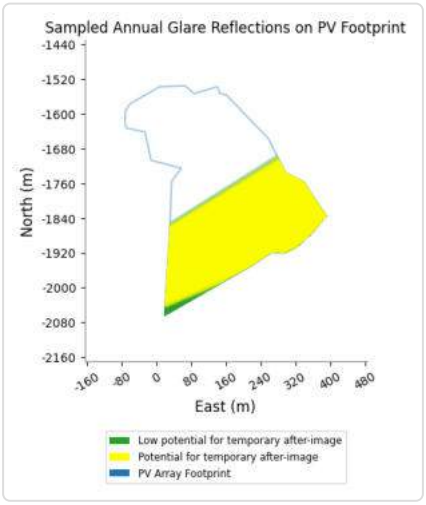
Yellow glare: 439 min.

Green glare: 1,541 min.





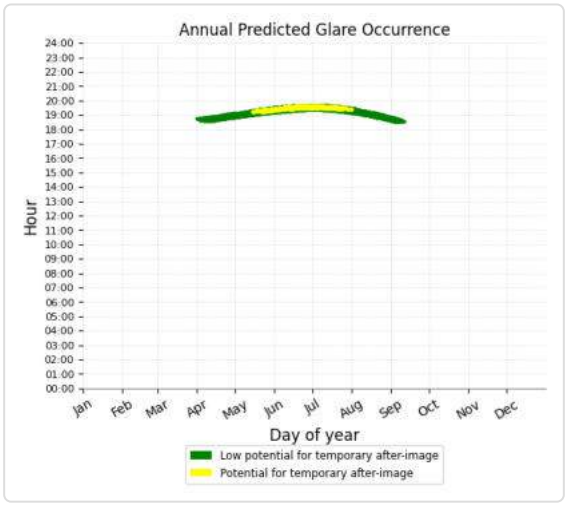


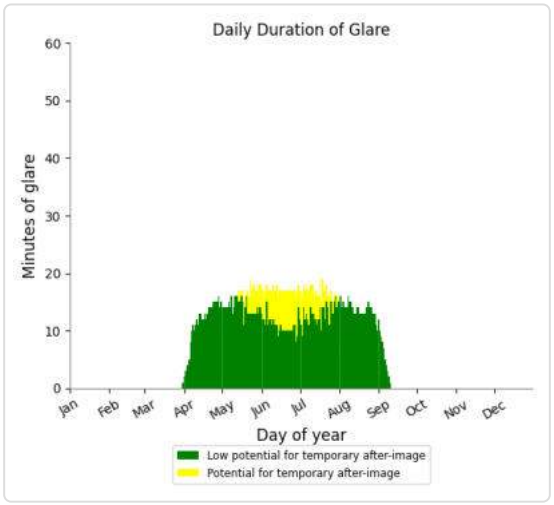


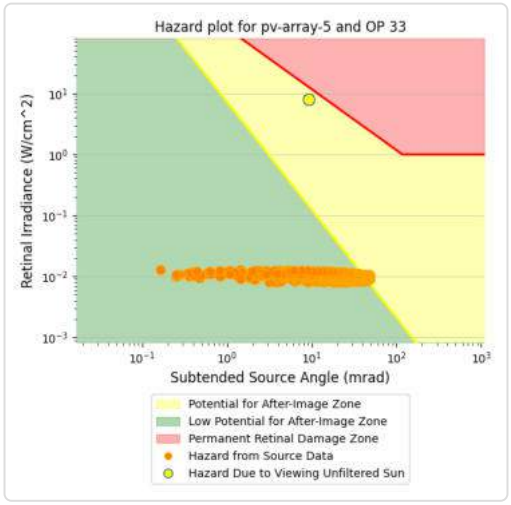
PV array 5 and OP 33

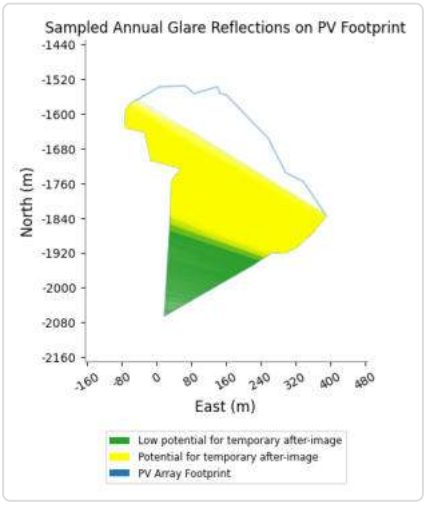
Yellow glare: 366 min.

Green glare: 1,995 min.





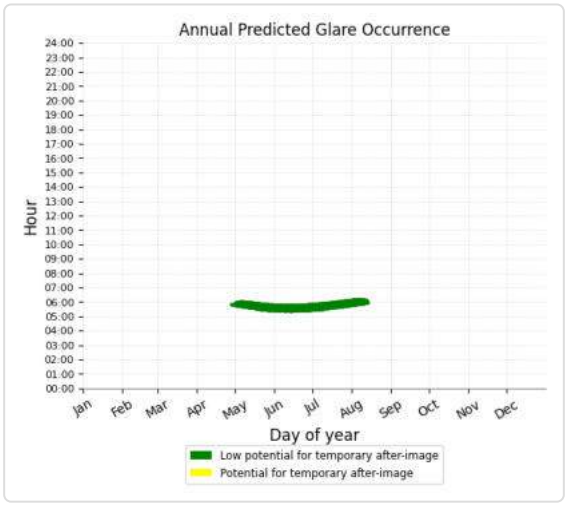


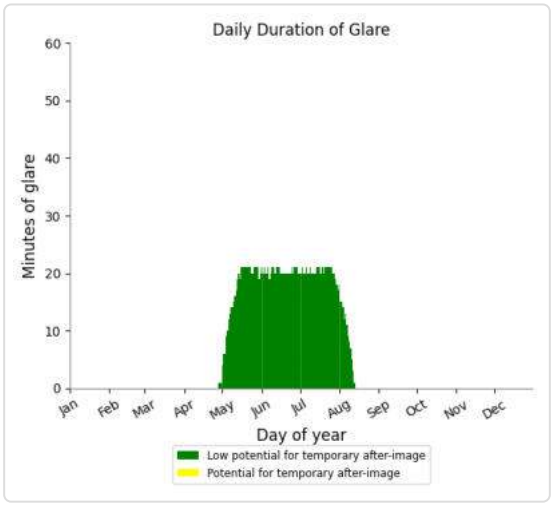


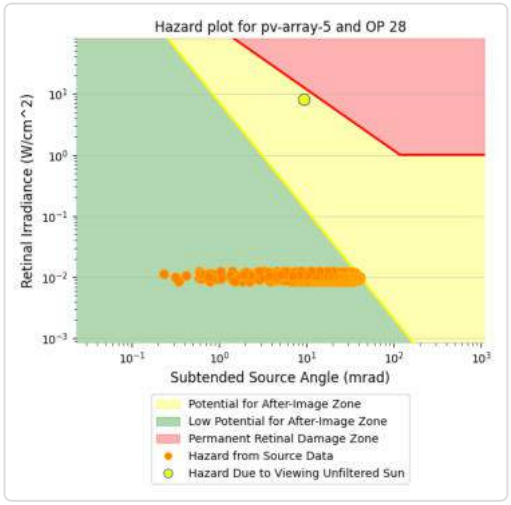
PV array 5 and OP 28

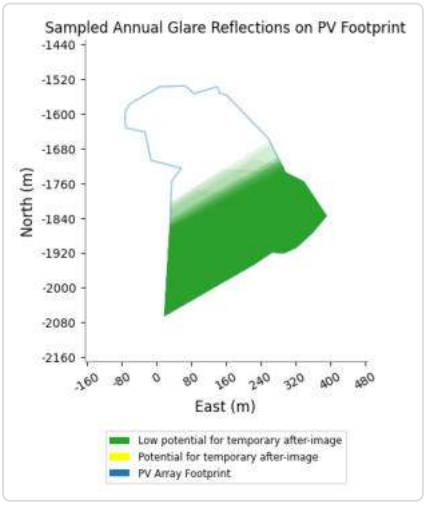
Yellow glare: none

Green glare: 1,897 min.





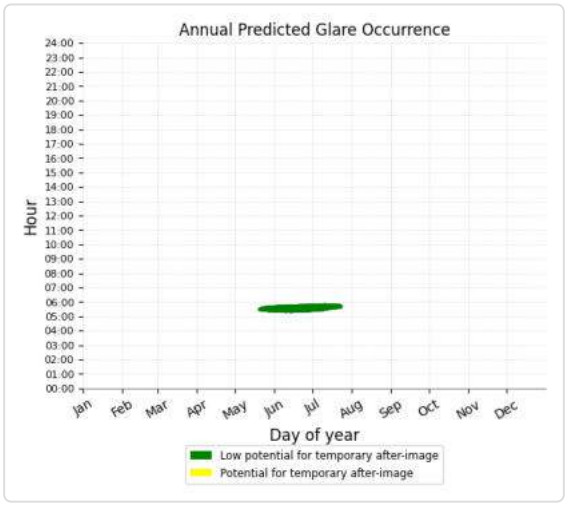


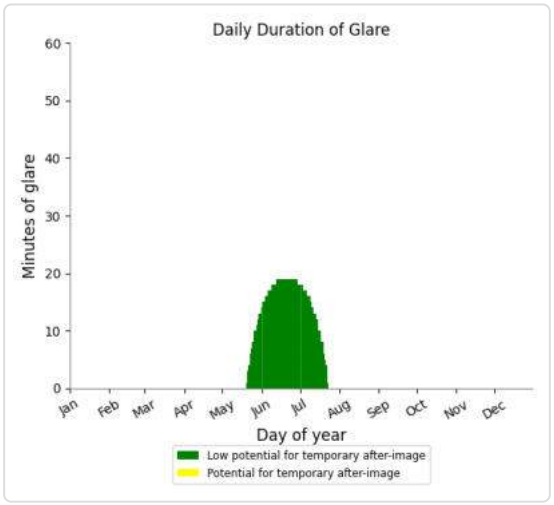


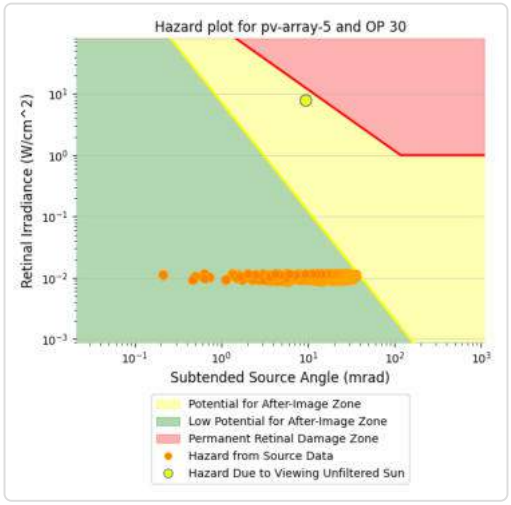
PV array 5 and OP 30

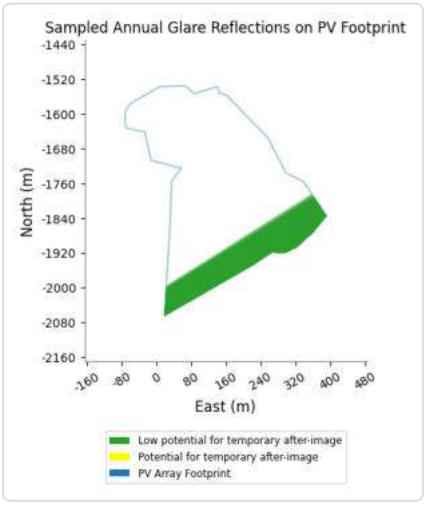
Yellow glare: none

Green glare: 922 min.





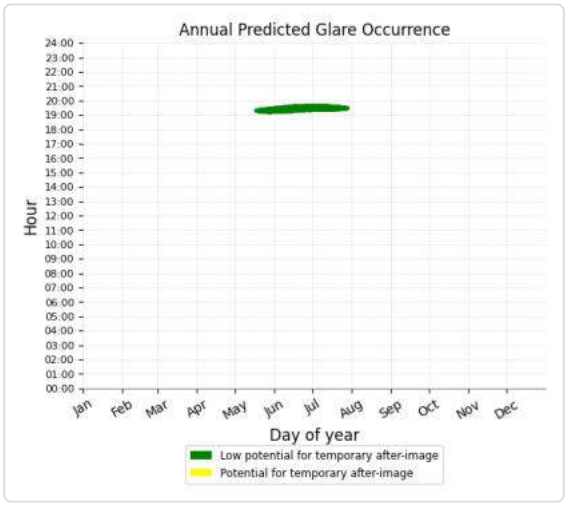


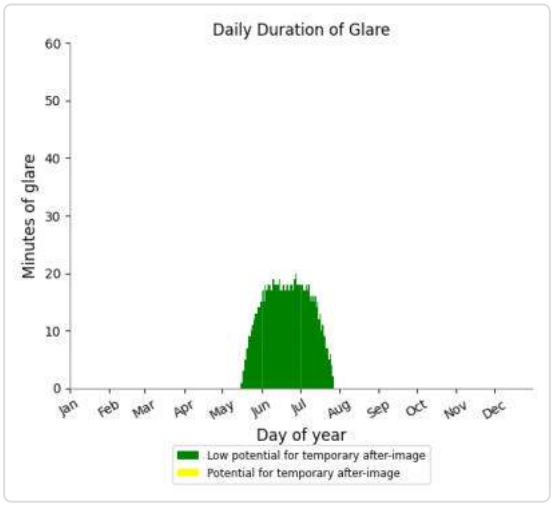


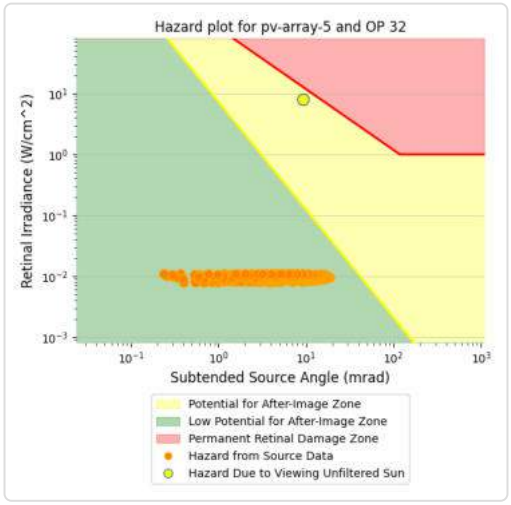
PV array 5 and OP 32

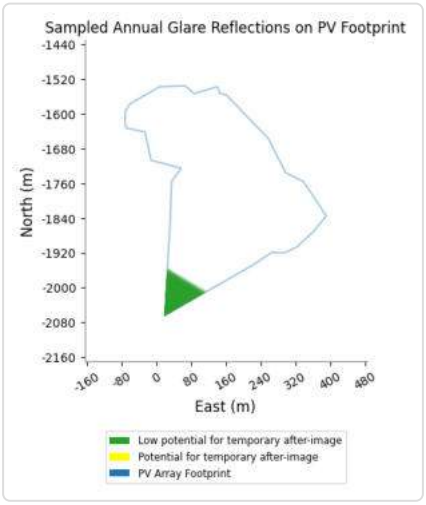
Yellow glare: none

Green glare: 1,017 min.





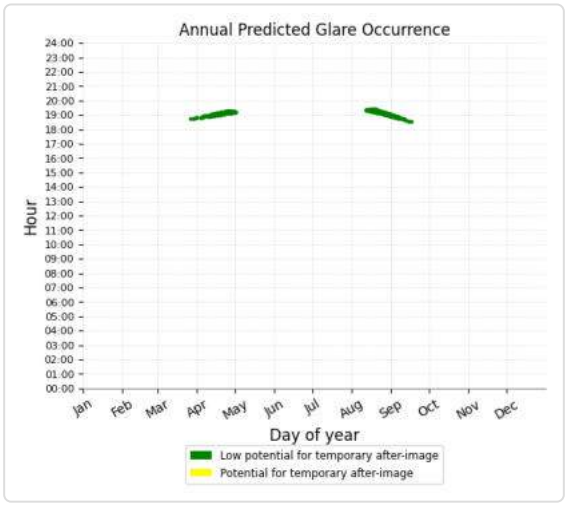


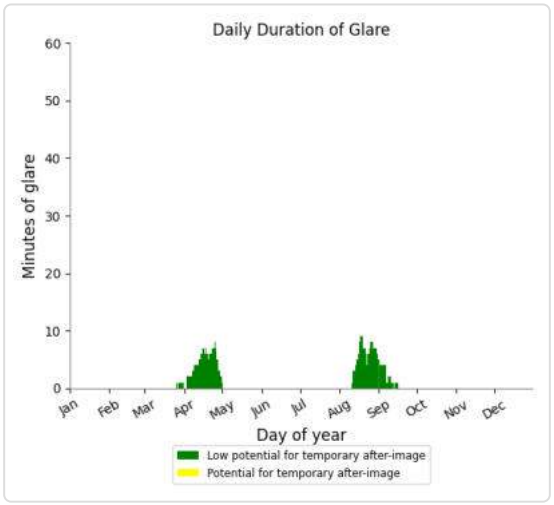


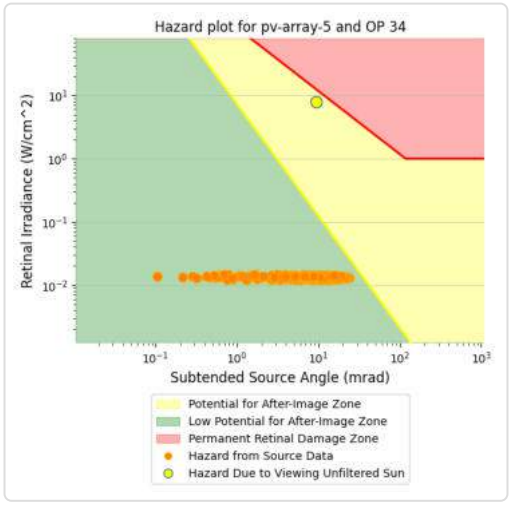
PV array 5 and OP 34

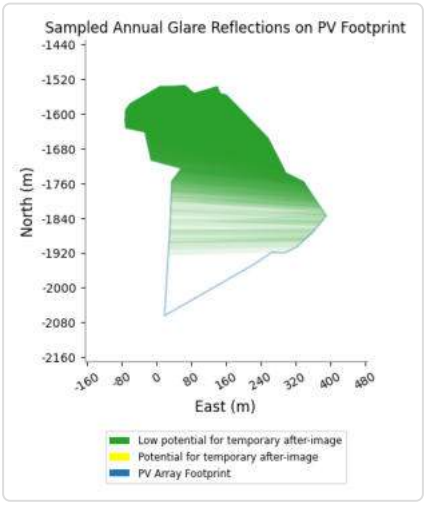
Yellow glare: none

Green glare: 301 min.





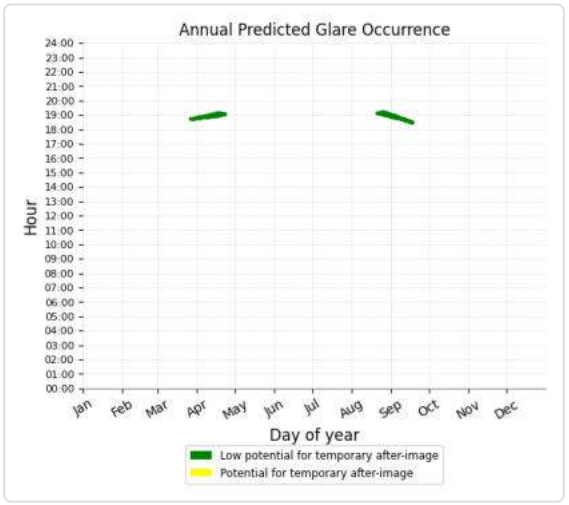


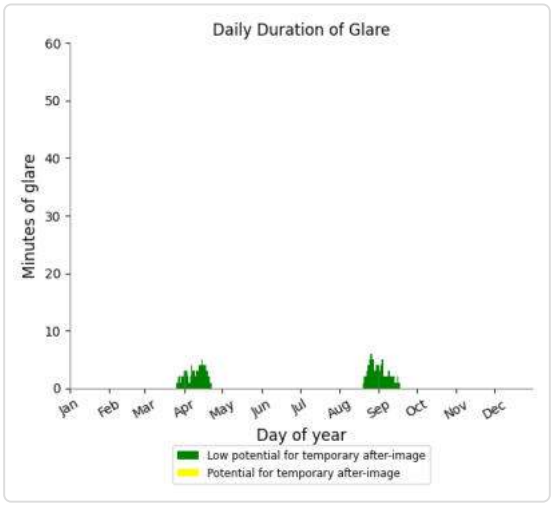


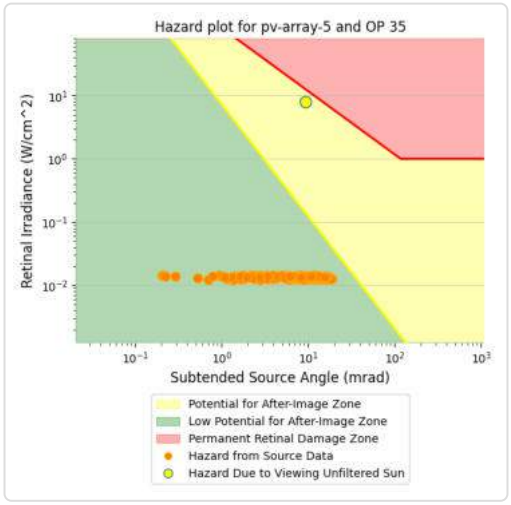
PV array 5 and OP 35

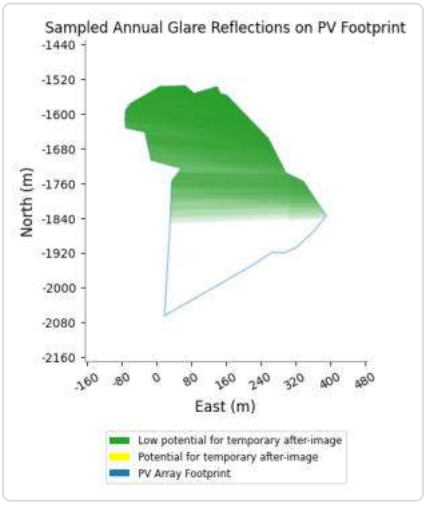
Yellow glare: none

Green glare: 158 min.



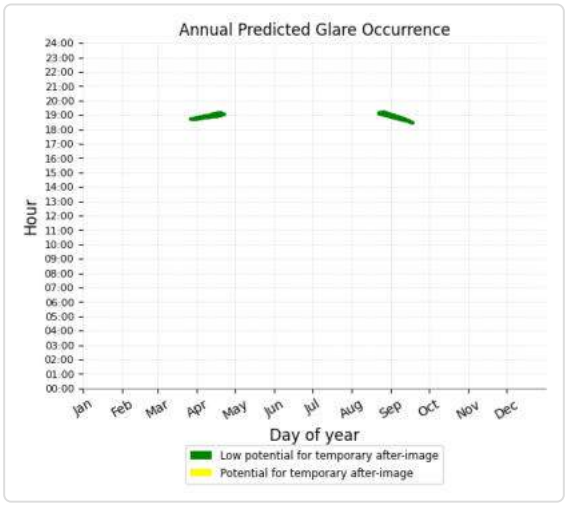


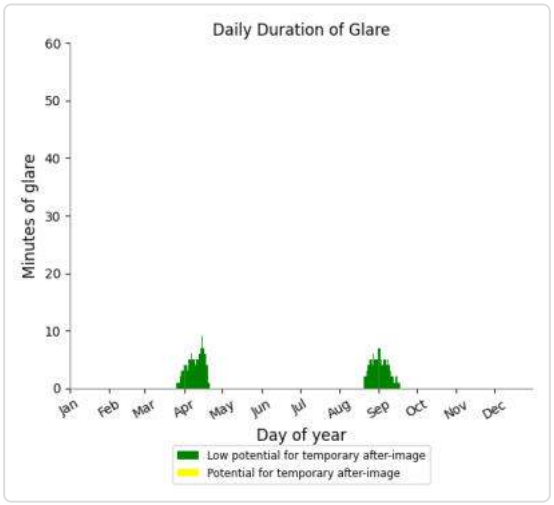


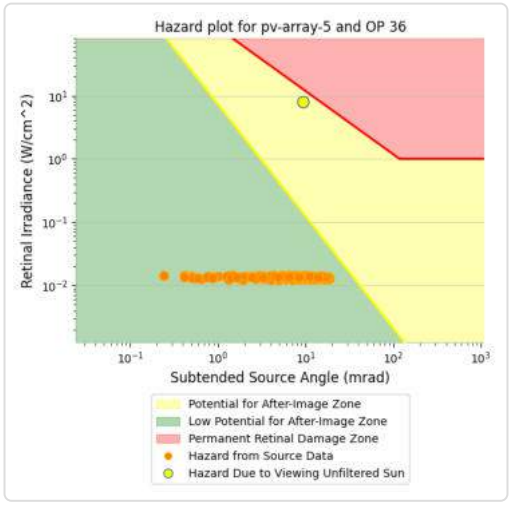


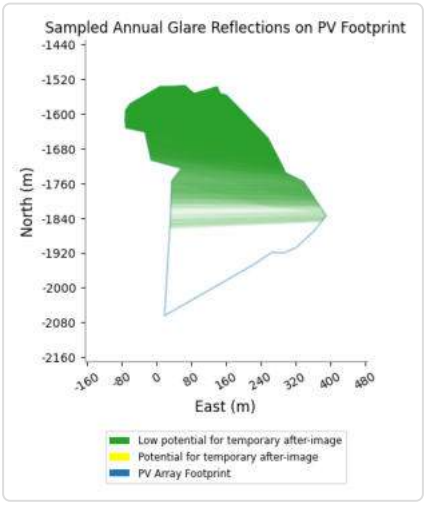
PV array 5 and OP 36

Yellow glare: none
Green glare: 218 min.









PV array 5 and OP 1

No glare found

PV array 5 and OP 2

No glare found

PV array 5 and OP 3

No glare found

PV array 5 and OP 4

No glare found

PV array 5 and OP 5

No glare found

PV array 5 and OP 6

No glare found

PV array 5 and OP 7

No glare found

PV array 5 and OP 8

No glare found

PV array 5 and OP 9

No glare found

PV array 5 and OP 10

No glare found

PV array 5 and OP 11

No glare found

PV array 5 and OP 12

No glare found

PV array 5 and OP 13

No glare found

PV array 5 and OP 14

No glare found

PV array 5 and OP 15

No glare found

PV array 5 and OP 16

No glare found

PV array 5 and OP 17

No glare found

PV array 5 and OP 18

No glare found

PV array 5 and OP 19

No glare found

PV array 5 and OP 20

No glare found

PV array 5 and OP 21

No glare found

PV array 5 and OP 22

No glare found

PV array 5 and OP 23

No glare found

PV array 5 and OP 24

No glare found

PV array 5 and OP 25

No glare found

PV array 5 and OP 26

No glare found

PV array 5 and OP 27

No glare found

PV array 5 and OP 31

No glare found

PV array 5 and OP 37

No glare found

PV array 5 and OP 38

No glare found

PV array 5 and OP 39

No glare found

PV array 5 and OP 40

No glare found

PV array 5 and OP 41

No glare found

PV array 5 and OP 42

No glare found

PV array 5 and OP 43

No glare found

PV array 5 and OP 44

No glare found

PV array 5 and OP 45

No glare found

PV array 5 and OP 46

No glare found

PV array 5 and OP 47

No glare found

PV array 5 and OP 48

No glare found

PV array 5 and OP 49

No glare found

PV array 5 and OP 50

No glare found

PV array 5 and OP 51

No glare found

PV array 5 and OP 52

No glare found

PV array 5 and OP 53

No glare found

PV array 5 and OP 54

No glare found

Assumptions

"Green" glare is glare with low potential to cause an after-image (flash blindness) when observed prior to a typical blink response time.
"Yellow" glare is glare with potential to cause an after-image (flash blindness) when observed prior to a typical blink response time.
Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
The algorithm does not rigorously represent the detailed geometry of a system; detailed features such as gaps between modules, variable height of the PV array, and support structures may impact actual glare results. However, we have validated our models against several systems, including a PV array causing glare to the air-traffic control tower at Manchester-Boston Regional Airport and several sites in Albuquerque, and the tool accurately predicted the occurrence and intensity of glare at different times and days of the year.
Several V1 calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for large PV footprints. Additional analyses of array sub-sections can provide additional information on expected glare. This primarily affects V1 analyses of path receptors.
Random number computations are utilized by various steps of the annual hazard analysis algorithm. Predicted minutes of glare can vary between runs as a result. This limitation primarily affects analyses of Observation Point receptors, including ATCTs. Note that the SGHAT/ ForgeSolar methodology has always relied on an analytical, qualitative approach to accurately determine the overall hazard (i.e. green vs. yellow) of expected glare on an annual basis.
The analysis does not automatically consider obstacles (either man-made or natural) between the observation points and the prescribed solar installation that may obstruct observed glare, such as trees, hills, buildings, etc.
The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub-array size. Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)
The variable direct normal irradiance (DNI) feature (if selected) scales the user-prescribed peak DNI using a typical clear-day irradiance profile. This profile has a lower DNI in the mornings and evenings and a maximum at solar noon. The scaling uses a clear-day irradiance profile based on a normalized time relative to sunrise, solar noon, and sunset, which are prescribed by a sun-position algorithm and the latitude and longitude obtained from Google maps. The actual DNI on any given day can be affected by cloud cover, atmospheric attenuation, and other environmental factors.
The ocular hazard predicted by the tool depends on a number of environmental, optical, and human factors, which can be uncertain. We provide input fields and typical ranges of values for these factors so that the user can vary these parameters to see if they have an impact on the results. The speed of SGHAT allows expedited sensitivity and parametric analyses.
The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.
Hazard zone boundaries shown in the Glare Hazard plot are an approximation and visual aid based on aggregated research data. Actual ocular impact outcomes encompass a continuous, not discrete, spectrum.
Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.
Refer to the Help page at **www.forgesolar.com/help/** for assumptions and limitations not listed here.

Default glare analysis parameters and observer eye characteristics (for reference only):

- Analysis time interval: 1 minute
- Ocular transmission coefficient: 0.5
- Pupil diameter: 0.002 meters
- Eye focal length: 0.017 meters
- Sun subtended angle: 9.3 milliradians

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FORGESOLAR GLARE ANALYSIS

Project: **Ballydonagh Solar Farm**
Site configuration: **Residential Receptor Glare Results 40 degrees**

Created 25 Nov, 2025
Updated 25 Nov, 2025
Time-step 1 minute
Timezone offset UTC0
Minimum sun altitude 0.0 deg
DNI peaks at 1,000.0 W/m^2
Category 10 MW to 100 MW
Site ID 165610.13892

Ocular transmission coefficient 0.5
Pupil diameter 0.002 m
Eye focal length 0.017 m
Sun subtended angle 9.3 mrad
PV analysis methodology V2

Summary of Results

Glare with potential for temporary after-image predicted

PV Array	Tilt	Orient	Annual Green Glare		Annual Yellow Glare		Energy
	°	°	min	hr	min	hr	kWh
PV array 1	40.0	180.0	52,262	871.0	5,605	93.4	-
PV array 2	40.0	180.0	30,536	508.9	7,534	125.6	-
PV array 3	40.0	180.0	10,622	177.0	2,839	47.3	-
PV array 4	40.0	180.0	3,970	66.2	0	0.0	-
PV array 5	40.0	180.0	10,118	168.6	0	0.0	-

Total glare received by each receptor; may include duplicate times of glare from multiple reflective surfaces.

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	842	14.0	2,104	35.1
OP 7	797	13.3	2,313	38.5
OP 8	1,511	25.2	162	2.7
OP 9	578	9.6	0	0.0
OP 10	0	0.0	0	0.0
OP 11	2,821	47.0	6	0.1
OP 12	3,112	51.9	0	0.0

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 13	2,989	49.8	1	0.0
OP 14	2,994	49.9	15	0.2
OP 15	3,213	53.5	18	0.3
OP 16	3,527	58.8	68	1.1
OP 17	3,318	55.3	246	4.1
OP 18	3,521	58.7	440	7.3
OP 19	3,277	54.6	529	8.8
OP 20	3,118	52.0	796	13.3
OP 21	1,768	29.5	2,965	49.4
OP 22	3,185	53.1	762	12.7
OP 23	3,218	53.6	343	5.7
OP 24	4,330	72.2	0	0.0
OP 25	2,514	41.9	88	1.5
OP 26	2,712	45.2	883	14.7
OP 27	1,915	31.9	1,645	27.4
OP 28	1,812	30.2	0	0.0
OP 29	1,887	31.4	0	0.0
OP 30	925	15.4	0	0.0
OP 31	0	0.0	0	0.0
OP 32	1,128	18.8	0	0.0
OP 33	2,326	38.8	0	0.0
OP 34	2,188	36.5	0	0.0
OP 35	1,655	27.6	0	0.0
OP 36	1,734	28.9	0	0.0
OP 37	261	4.3	0	0.0
OP 38	3,690	61.5	131	2.2
OP 39	3,788	63.1	92	1.5
OP 40	4,832	80.5	315	5.2
OP 41	3,944	65.7	0	0.0
OP 42	4,843	80.7	744	12.4
OP 43	3,323	55.4	0	0.0
OP 44	4,834	80.6	994	16.6
OP 45	4,624	77.1	318	5.3
OP 46	1,868	31.1	0	0.0
OP 47	1,198	20.0	0	0.0
OP 48	838	14.0	0	0.0
OP 49	550	9.2	0	0.0
OP 50	0	0.0	0	0.0
OP 51	0	0.0	0	0.0
OP 52	0	0.0	0	0.0
OP 53	0	0.0	0	0.0
OP 54	0	0.0	0	0.0

Component Data

PV Arrays

Name: PV array 1
Axis tracking: Fixed (no rotation)
Tilt: 40.0°
Orientation: 180.0°
Rated power: -
Panel material: Light textured glass with AR coating
Reflectivity: Vary with sun
Slope error: correlate with material

Vertex	Latitude (°)	Longitude (°)	Ground elevation (m)	Height above ground (m)	Total elevation (m)
1	53.240101	-8.253587	80.52	3.50	84.02
2	53.240185	-8.253469	80.64	3.50	84.14
3	53.240166	-8.252772	81.23	3.50	84.73
4	53.240037	-8.252364	80.86	3.50	84.36
5	53.239344	-8.252504	79.41	3.50	82.91
6	53.239273	-8.252493	79.31	3.50	82.81
7	53.238837	-8.250605	79.13	3.50	82.63
8	53.239787	-8.249854	81.13	3.50	84.63
9	53.239813	-8.249553	81.19	3.50	84.69
10	53.238028	-8.248395	79.21	3.50	82.71
11	53.236209	-8.248545	79.03	3.50	82.53
12	53.234045	-8.250079	77.65	3.50	81.15
13	53.233827	-8.250551	76.65	3.50	80.15
14	53.234007	-8.253995	75.76	3.50	79.26
15	53.234180	-8.254059	75.85	3.50	79.35
16	53.234572	-8.253330	75.58	3.50	79.08
17	53.235169	-8.252740	76.67	3.50	80.17
18	53.235416	-8.252369	77.40	3.50	80.90
19	53.235635	-8.251736	78.53	3.50	82.03
20	53.236084	-8.251479	78.37	3.50	81.87
21	53.236431	-8.251479	78.07	3.50	81.57
22	53.236707	-8.251007	78.00	3.50	81.50
23	53.237086	-8.250857	77.87	3.50	81.37
24	53.237291	-8.252230	78.10	3.50	81.60
25	53.237272	-8.252455	78.31	3.50	81.81
26	53.237446	-8.253027	78.69	3.50	82.19
27	53.237555	-8.254486	80.00	3.50	83.50
28	53.238084	-8.254302	79.43	3.50	82.93
29	53.238071	-8.252853	78.60	3.50	82.10
30	53.238200	-8.252574	78.75	3.50	82.25
31	53.238463	-8.252403	79.00	3.50	82.50
32	53.238688	-8.252349	79.00	3.50	82.50
33	53.238880	-8.252681	79.00	3.50	82.50
34	53.238906	-8.254141	79.75	3.50	83.25
35	53.239233	-8.253980	79.80	3.50	83.30
36	53.239445	-8.253647	79.68	3.50	83.18

Name: PV array 2
Axis tracking: Fixed (no rotation)
Tilt: 40.0°
Orientation: 180.0°
Rated power: -
Panel material: Light textured glass with AR coating
Reflectivity: Vary with sun
Slope error: correlate with material

Vertex	Latitude (°)	Longitude (°)	Ground elevation (m)	Height above ground (m)	Total elevation (m)
1	53.237448	-8.238042	91.31	3.50	94.81
2	53.237326	-8.236701	90.92	3.50	94.42
3	53.235965	-8.236207	89.65	3.50	93.15
4	53.235939	-8.235220	91.32	3.50	94.82
5	53.235785	-8.234930	91.48	3.50	94.98
6	53.235785	-8.234673	91.48	3.50	94.98
7	53.235792	-8.233900	91.87	3.50	95.37
8	53.235785	-8.233804	91.98	3.50	95.48
9	53.233827	-8.233933	90.09	3.50	93.59
10	53.233811	-8.233992	90.03	3.50	93.53
11	53.233779	-8.233986	90.07	3.50	93.57
12	53.233727	-8.233943	90.22	3.50	93.72
13	53.233413	-8.233959	90.20	3.50	93.70
14	53.233624	-8.236899	86.14	3.50	89.64
15	53.233747	-8.237403	85.42	3.50	88.92
16	53.233689	-8.237918	84.66	3.50	88.16
17	53.233689	-8.238079	84.43	3.50	87.93
18	53.233920	-8.238702	84.48	3.50	87.98
19	53.234402	-8.238884	84.85	3.50	88.35
20	53.234774	-8.239485	85.00	3.50	88.50
21	53.234639	-8.240139	84.43	3.50	87.93
22	53.234247	-8.240096	84.48	3.50	87.98
23	53.234003	-8.242052	82.28	3.50	85.78
24	53.234151	-8.242535	81.80	3.50	85.30
25	53.233785	-8.242567	81.29	3.50	84.79
26	53.233560	-8.243275	80.85	3.50	84.35
27	53.233387	-8.246269	78.00	3.50	81.50
28	53.236386	-8.245485	81.07	3.50	84.57
29	53.236495	-8.245196	81.26	3.50	84.76
30	53.236270	-8.242471	82.03	3.50	85.53
31	53.236142	-8.238919	86.95	3.50	90.45
32	53.236411	-8.238522	88.04	3.50	91.54
33	53.236829	-8.238726	88.59	3.50	92.09
34	53.236855	-8.237514	89.62	3.50	93.12

Name: PV array 3
Axis tracking: Fixed (no rotation)
Tilt: 40.0°
Orientation: 180.0°
Rated power: -
Panel material: Light textured glass with AR coating
Reflectivity: Vary with sun
Slope error: correlate with material

Vertex	Latitude (°)	Longitude (°)	Ground elevation (m)	Height above ground (m)	Total elevation (m)
1	53.230937	-8.244341	80.00	3.50	83.50
2	53.230795	-8.242002	81.69	3.50	85.19
3	53.230680	-8.241723	81.90	3.50	85.40
4	53.230641	-8.240565	83.29	3.50	86.79
5	53.228804	-8.241122	82.00	3.50	85.50
6	53.229883	-8.245725	79.65	3.50	83.15
7	53.230230	-8.247216	78.00	3.50	81.50
8	53.231245	-8.247195	78.10	3.50	81.60
9	53.231521	-8.247002	78.43	3.50	81.93
10	53.231919	-8.247002	78.17	3.50	81.67
11	53.231894	-8.246551	78.44	3.50	81.94
12	53.230256	-8.246304	78.46	3.50	81.96
13	53.230192	-8.245757	79.24	3.50	82.74
14	53.230018	-8.245317	80.05	3.50	83.55

Name: PV array 4
Axis tracking: Fixed (no rotation)
Tilt: 40.0°
Orientation: 180.0°
Rated power: -
Panel material: Light textured glass with AR coating
Reflectivity: Vary with sun
Slope error: correlate with material

Vertex	Latitude (°)	Longitude (°)	Ground elevation (m)	Height above ground (m)	Total elevation (m)
1	53.227543	-8.254478	76.00	3.50	79.50
2	53.227774	-8.254478	76.00	3.50	79.50
3	53.228417	-8.253405	77.05	3.50	80.55
4	53.228481	-8.253008	77.40	3.50	80.90
5	53.228057	-8.252483	77.45	3.50	80.95
6	53.227042	-8.251946	78.11	3.50	81.61
7	53.226856	-8.252568	77.32	3.50	80.82
8	53.226888	-8.252944	76.78	3.50	80.28
9	53.226978	-8.252965	76.74	3.50	80.24
10	53.227402	-8.253523	76.02	3.50	79.52
11	53.227376	-8.254360	75.99	3.50	79.49

Name: PV array 5
Axis tracking: Fixed (no rotation)
Tilt: 40.0°
Orientation: 180.0°
Rated power: -
Panel material: Light textured glass with AR coating
Reflectivity: Vary with sun
Slope error: correlate with material

Vertex	Latitude (°)	Longitude (°)	Ground elevation (m)	Height above ground (m)	Total elevation (m)
1	53.226282	-8.253467	76.62	3.50	80.12
2	53.226301	-8.252598	77.28	3.50	80.78
3	53.226141	-8.252287	77.73	3.50	81.23
4	53.226282	-8.251493	78.35	3.50	81.85
5	53.226141	-8.251386	78.18	3.50	81.68
6	53.226109	-8.251171	78.14	3.50	81.64
7	53.225216	-8.249734	77.23	3.50	80.73
8	53.224590	-8.249198	76.21	3.50	79.71
9	53.224506	-8.249134	76.27	3.50	79.77
10	53.224320	-8.248512	76.77	3.50	80.27
11	53.223614	-8.247728	77.00	3.50	80.50
12	53.223273	-8.248200	76.69	3.50	80.19
13	53.222965	-8.248758	74.98	3.50	78.48
14	53.222849	-8.249177	74.05	3.50	77.55
15	53.222862	-8.249606	73.45	3.50	76.95
16	53.222612	-8.250228	71.82	3.50	75.32
17	53.221552	-8.253307	71.50	3.50	75.00
18	53.223453	-8.253114	73.00	3.50	76.50
19	53.224333	-8.253061	73.55	3.50	77.05
20	53.224596	-8.252728	73.94	3.50	77.44
21	53.224763	-8.253769	74.28	3.50	77.78
22	53.225347	-8.253983	75.30	3.50	78.80
23	53.225430	-8.254638	75.05	3.50	78.55
24	53.225578	-8.254670	75.10	3.50	78.60
25	53.225796	-8.254649	75.20	3.50	78.70
26	53.225931	-8.254488	75.46	3.50	78.96

Discrete Observation Point Receptors

Name	ID	Latitude (°)	Longitude (°)	Elevation (m)	Height (m)
OP 1	1	53.244295	-8.266774	79.62	2.00
OP 2	2	53.243916	-8.266983	79.08	2.00
OP 3	3	53.242042	-8.264513	78.62	2.00
OP 4	4	53.241318	-8.267867	77.01	2.00
OP 5	5	53.240879	-8.268650	76.00	2.00
OP 6	6	53.238617	-8.255118	79.72	2.00
OP 7	7	53.236787	-8.252501	78.70	2.00
OP 8	8	53.236736	-8.259324	78.38	2.00
OP 9	9	53.236074	-8.261234	78.19	2.00
OP 10	10	53.237271	-8.268826	76.93	2.00
OP 11	11	53.235640	-8.268948	72.03	2.00
OP 12	12	53.235036	-8.268777	71.39	2.00
OP 13	13	53.234997	-8.267361	72.07	2.00
OP 14	14	53.235017	-8.265424	73.73	2.00
OP 15	15	53.234452	-8.265161	74.00	2.00
OP 16	16	53.234579	-8.263046	73.48	2.00
OP 17	17	53.234341	-8.262032	73.67	2.00
OP 18	18	53.233612	-8.262542	73.00	2.00
OP 19	19	53.233840	-8.260525	75.14	2.00
OP 20	20	53.233846	-8.258502	75.53	2.00
OP 21	21	53.234243	-8.246657	78.91	2.00
OP 22	22	53.232488	-8.256146	76.00	2.00
OP 23	23	53.231254	-8.253233	77.63	2.00
OP 24	24	53.231135	-8.250428	77.99	2.00
OP 25	25	53.229917	-8.247734	78.31	2.00
OP 26	26	53.229808	-8.247289	78.47	2.00
OP 27	27	53.229705	-8.246876	78.62	2.00
OP 28	28	53.218629	-8.267092	70.34	2.00
OP 29	29	53.218449	-8.266513	70.96	2.00
OP 30	30	53.218214	-8.263762	70.39	2.00
OP 31	31	53.217141	-8.245885	73.00	2.00
OP 32	32	53.217469	-8.239318	79.62	2.00
OP 33	33	53.220501	-8.239124	80.97	2.00
OP 34	34	53.223044	-8.231433	84.33	2.00
OP 35	35	53.223770	-8.230382	84.73	2.00
OP 36	36	53.223680	-8.229008	84.22	2.00
OP 37	37	53.226776	-8.233772	89.82	2.00
OP 38	38	53.227970	-8.227584	87.39	2.00
OP 39	39	53.227794	-8.227444	87.46	2.00
OP 40	40	53.230061	-8.221516	87.30	2.00
OP 41	41	53.231635	-8.230564	92.38	2.00
OP 42	42	53.233191	-8.230236	94.75	2.00
OP 43	43	53.233994	-8.230569	96.21	2.00
OP 44	44	53.234999	-8.230456	99.18	2.00
OP 45	45	53.235127	-8.231094	97.48	2.00
OP 46	46	53.235327	-8.226199	101.98	2.00
OP 47	47	53.237975	-8.234594	94.59	2.00
OP 48	48	53.238790	-8.237120	91.22	2.00
OP 49	49	53.239191	-8.236262	91.70	2.00
OP 50	50	53.242028	-8.228035	91.30	2.00
OP 51	51	53.243955	-8.229128	86.27	2.00

Name	ID	Latitude (°)	Longitude (°)	Elevation (m)	Height (m)
OP 52	52	53.244603	-8.229927	85.59	2.00
OP 53	53	53.244758	-8.230625	86.11	2.00
OP 54	54	53.245486	-8.230590	84.42	2.00

Glare Analysis Results

Summary of Results

Glare with potential for temporary after-image predicted

PV Array	Tilt	Orient	Annual Green Glare		Annual Yellow Glare		Energy
	°	°	min	hr	min	hr	kWh
PV array 1	40.0	180.0	52,262	871.0	5,605	93.4	-
PV array 2	40.0	180.0	30,536	508.9	7,534	125.6	-
PV array 3	40.0	180.0	10,622	177.0	2,839	47.3	-
PV array 4	40.0	180.0	3,970	66.2	0	0.0	-
PV array 5	40.0	180.0	10,118	168.6	0	0.0	-

Total glare received by each receptor; may include duplicate times of glare from multiple reflective surfaces.

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	842	14.0	2,104	35.1
OP 7	797	13.3	2,313	38.5
OP 8	1,511	25.2	162	2.7
OP 9	578	9.6	0	0.0
OP 10	0	0.0	0	0.0
OP 11	2,821	47.0	6	0.1
OP 12	3,112	51.9	0	0.0
OP 13	2,989	49.8	1	0.0
OP 14	2,994	49.9	15	0.2
OP 15	3,213	53.5	18	0.3
OP 16	3,527	58.8	68	1.1
OP 17	3,318	55.3	246	4.1
OP 18	3,521	58.7	440	7.3
OP 19	3,277	54.6	529	8.8
OP 20	3,118	52.0	796	13.3
OP 21	1,768	29.5	2,965	49.4
OP 22	3,185	53.1	762	12.7
OP 23	3,218	53.6	343	5.7
OP 24	4,330	72.2	0	0.0
OP 25	2,514	41.9	88	1.5
OP 26	2,712	45.2	883	14.7
OP 27	1,915	31.9	1,645	27.4
OP 28	1,812	30.2	0	0.0

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 29	1,887	31.4	0	0.0
OP 30	925	15.4	0	0.0
OP 31	0	0.0	0	0.0
OP 32	1,128	18.8	0	0.0
OP 33	2,326	38.8	0	0.0
OP 34	2,188	36.5	0	0.0
OP 35	1,655	27.6	0	0.0
OP 36	1,734	28.9	0	0.0
OP 37	261	4.3	0	0.0
OP 38	3,690	61.5	131	2.2
OP 39	3,788	63.1	92	1.5
OP 40	4,832	80.5	315	5.2
OP 41	3,944	65.7	0	0.0
OP 42	4,843	80.7	744	12.4
OP 43	3,323	55.4	0	0.0
OP 44	4,834	80.6	994	16.6
OP 45	4,624	77.1	318	5.3
OP 46	1,868	31.1	0	0.0
OP 47	1,198	20.0	0	0.0
OP 48	838	14.0	0	0.0
OP 49	550	9.2	0	0.0
OP 50	0	0.0	0	0.0
OP 51	0	0.0	0	0.0
OP 52	0	0.0	0	0.0
OP 53	0	0.0	0	0.0
OP 54	0	0.0	0	0.0

PV: PV array 1 potential temporary after-image

Receptor results ordered by category of glare

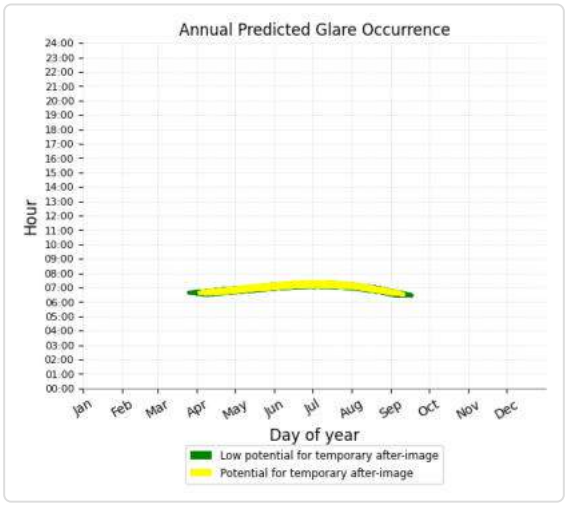
Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 6	842	14.0	2,104	35.1
OP 7	662	11.0	2,313	38.5
OP 8	1,290	21.5	162	2.7
OP 11	2,342	39.0	6	0.1
OP 13	2,297	38.3	1	0.0
OP 14	2,231	37.2	15	0.2
OP 17	2,393	39.9	62	1.0
OP 18	2,420	40.3	196	3.3
OP 19	2,056	34.3	249	4.2
OP 20	1,833	30.6	421	7.0
OP 21	1,040	17.3	76	1.3
OP 12	2,538	42.3	0	0.0
OP 15	2,269	37.8	0	0.0
OP 16	2,602	43.4	0	0.0
OP 22	819	13.7	0	0.0
OP 38	1,544	25.7	0	0.0
OP 39	1,567	26.1	0	0.0
OP 40	2,233	37.2	0	0.0
OP 41	2,730	45.5	0	0.0
OP 42	3,387	56.5	0	0.0
OP 43	3,323	55.4	0	0.0
OP 44	2,701	45.0	0	0.0
OP 45	2,689	44.8	0	0.0
OP 46	1,868	31.1	0	0.0
OP 47	1,198	20.0	0	0.0
OP 48	838	14.0	0	0.0
OP 49	550	9.2	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 23	0	0.0	0	0.0
OP 24	0	0.0	0	0.0
OP 25	0	0.0	0	0.0

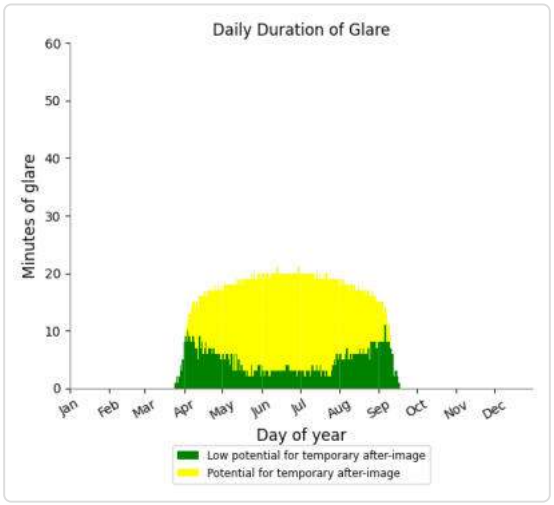
Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 26	0	0.0	0	0.0
OP 27	0	0.0	0	0.0
OP 28	0	0.0	0	0.0
OP 29	0	0.0	0	0.0
OP 30	0	0.0	0	0.0
OP 31	0	0.0	0	0.0
OP 32	0	0.0	0	0.0
OP 33	0	0.0	0	0.0
OP 34	0	0.0	0	0.0
OP 35	0	0.0	0	0.0
OP 36	0	0.0	0	0.0
OP 37	0	0.0	0	0.0
OP 50	0	0.0	0	0.0
OP 51	0	0.0	0	0.0
OP 52	0	0.0	0	0.0
OP 53	0	0.0	0	0.0
OP 54	0	0.0	0	0.0

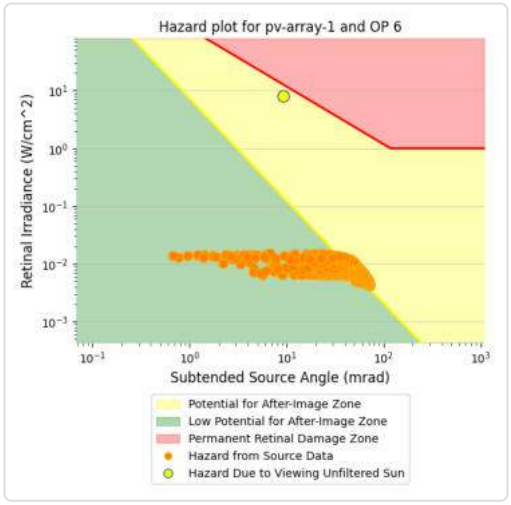
PV array 1 and OP 6

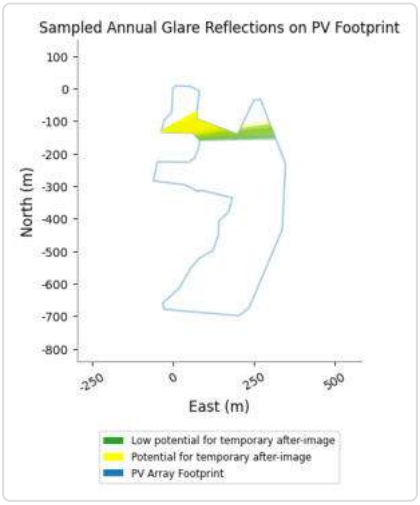
Yellow glare: 2,104 min.

Green glare: 842 min.





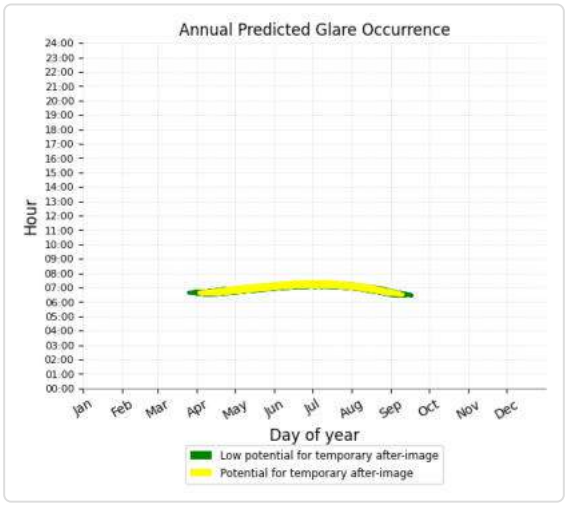


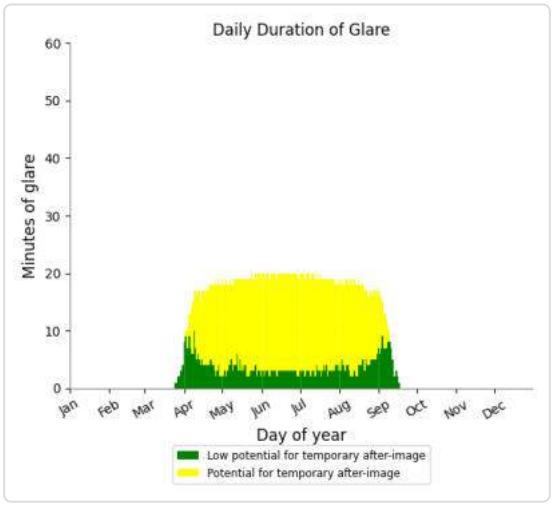


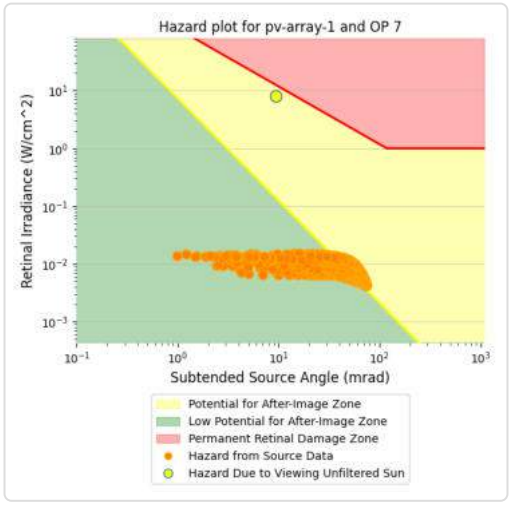
PV array 1 and OP 7

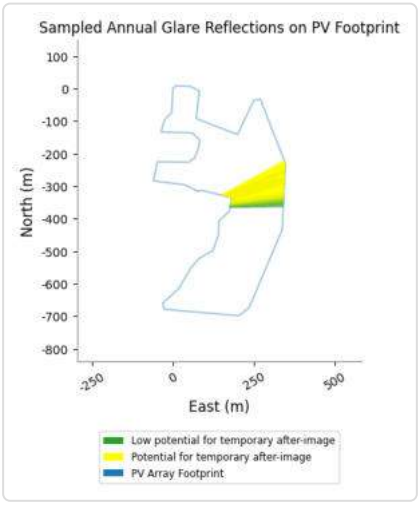
Yellow glare: 2,313 min.

Green glare: 662 min.





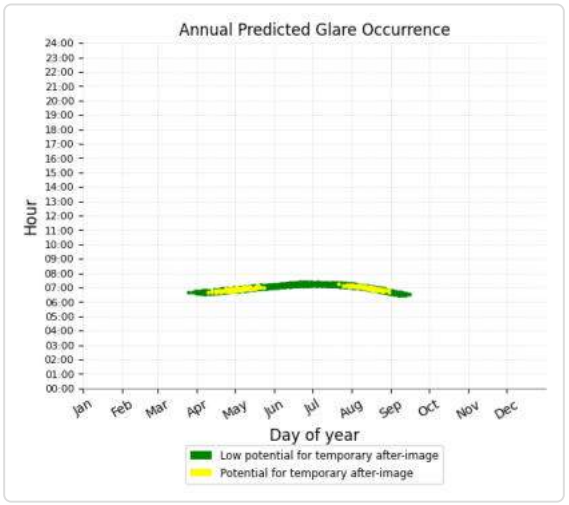


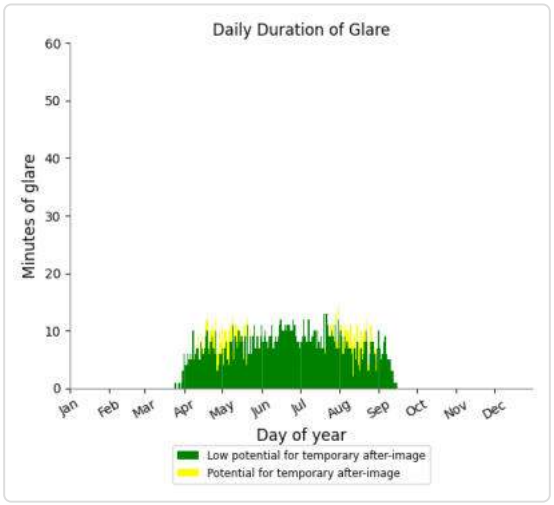


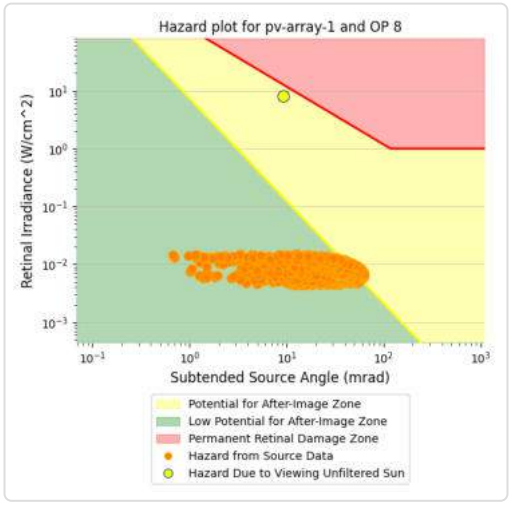
PV array 1 and OP 8

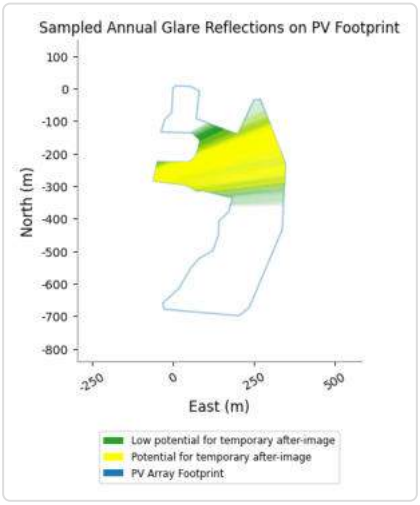
Yellow glare: 162 min.

Green glare: 1,290 min.





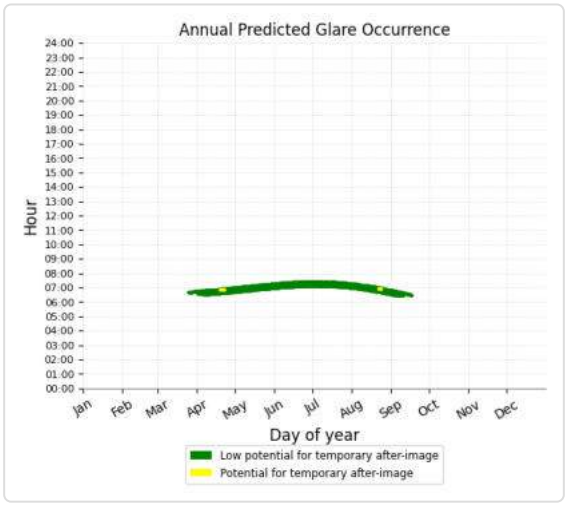


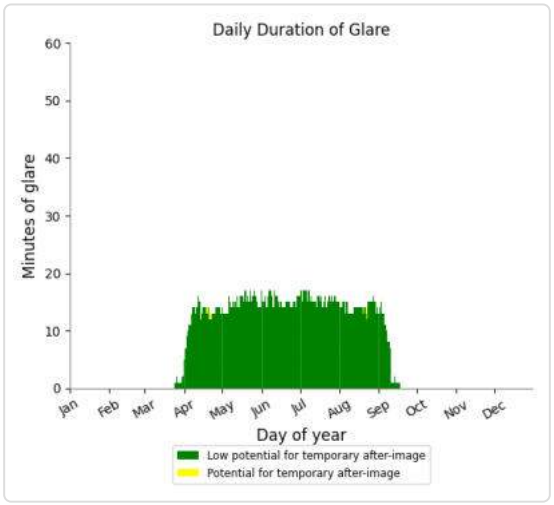


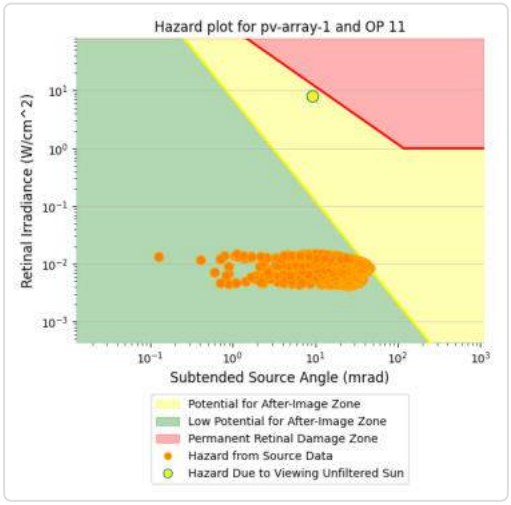
PV array 1 and OP 11

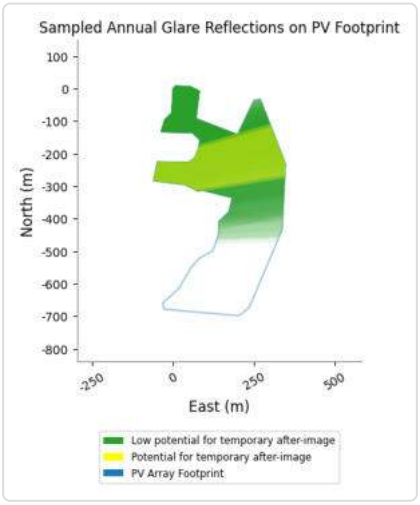
Yellow glare: 6 min.

Green glare: 2,342 min.





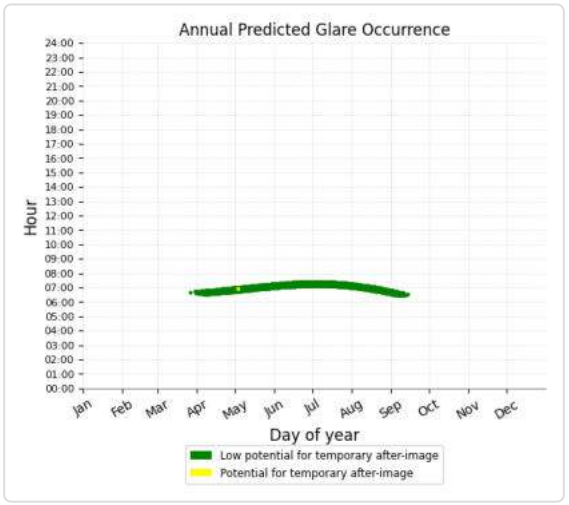


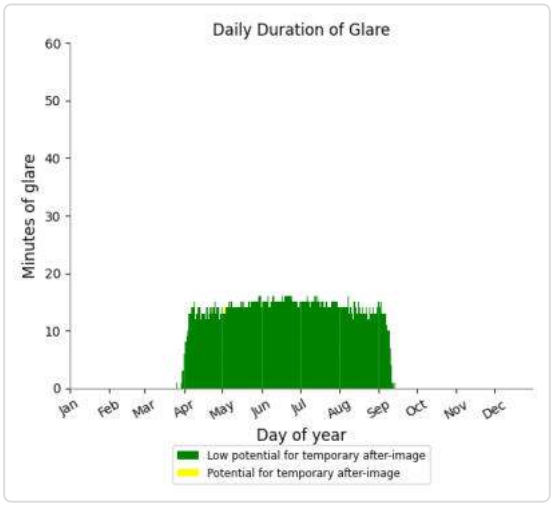


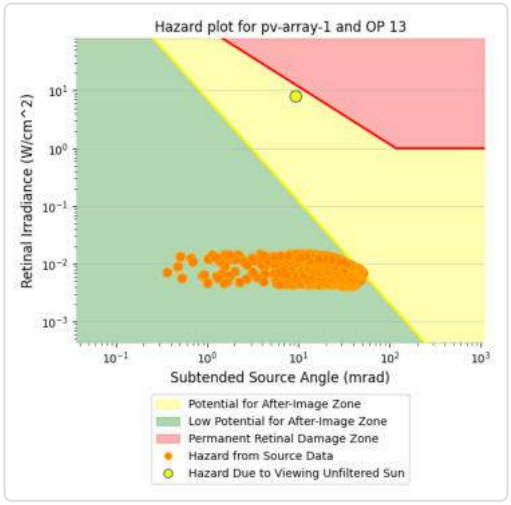
PV array 1 and OP 13

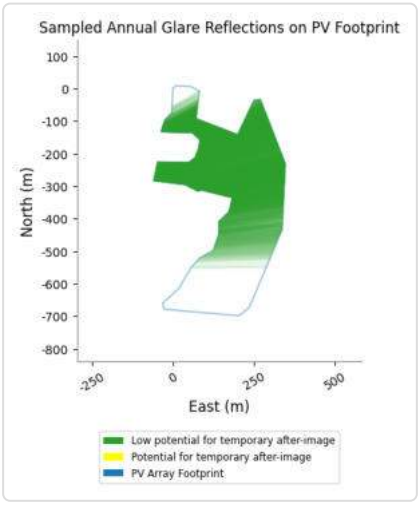
Yellow glare: 1 min.

Green glare: 2,297 min.





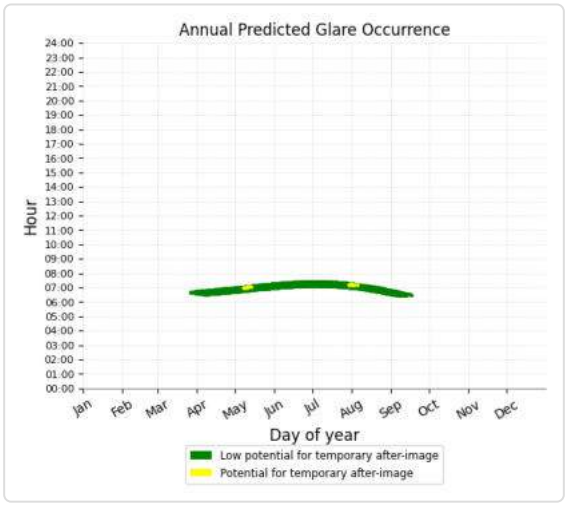


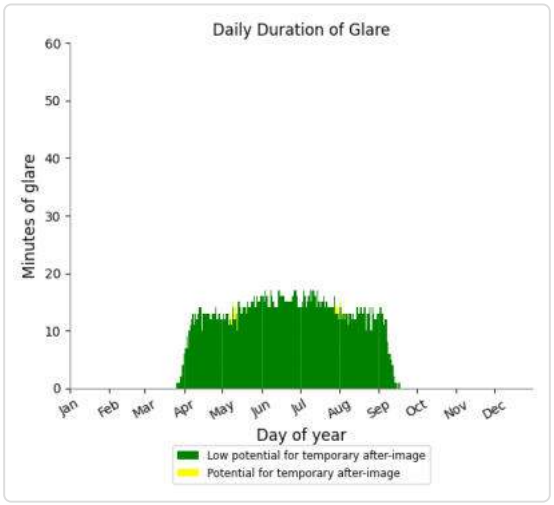


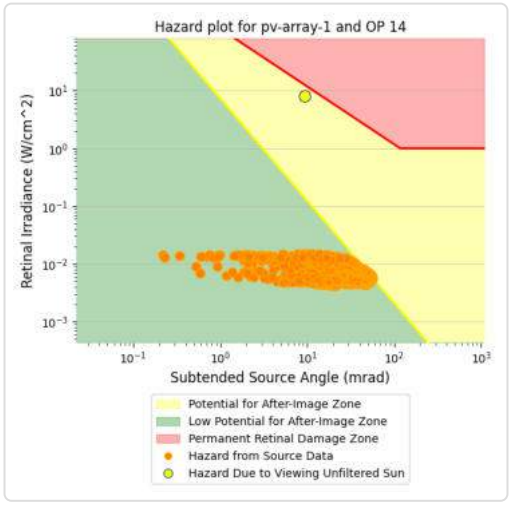
PV array 1 and OP 14

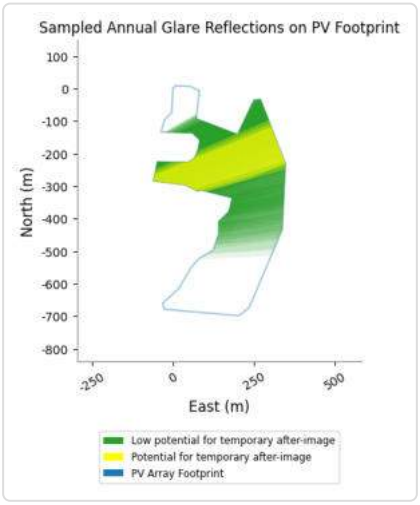
Yellow glare: 15 min.

Green glare: 2,231 min.





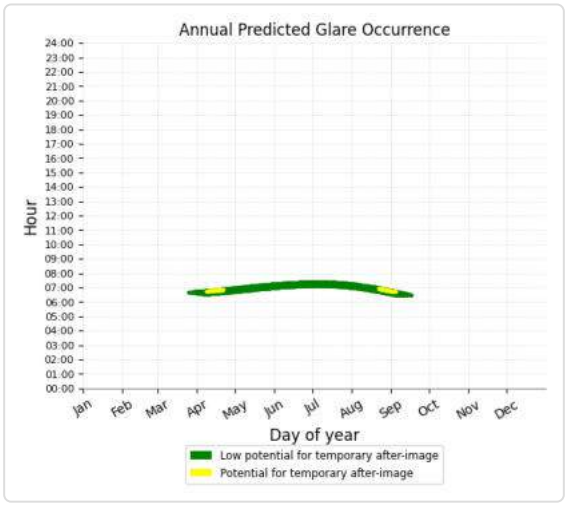


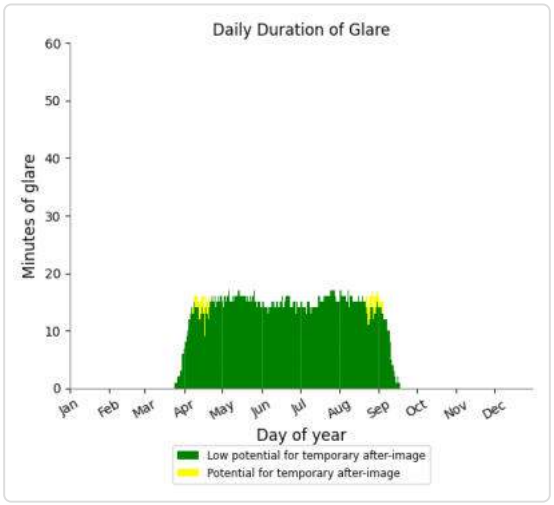


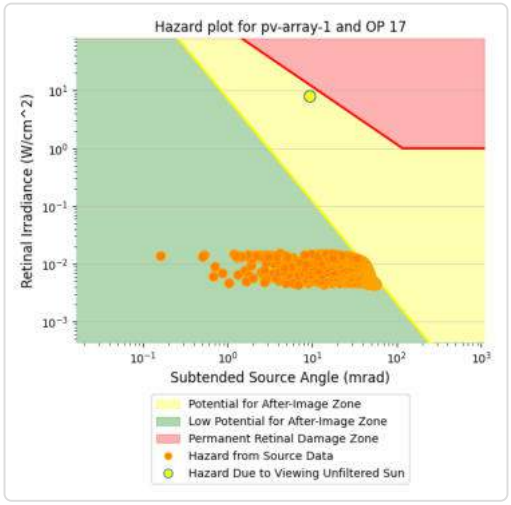
PV array 1 and OP 17

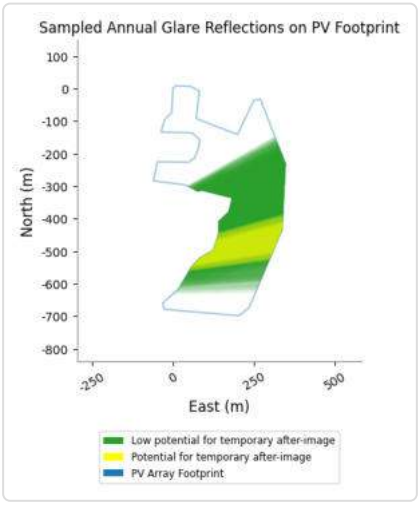
Yellow glare: 62 min.

Green glare: 2,393 min.





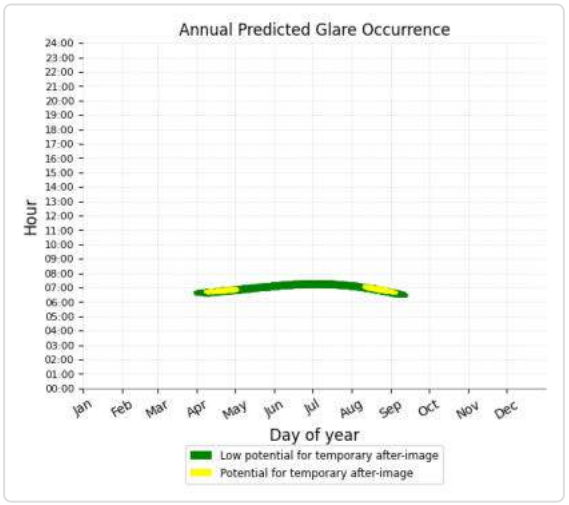


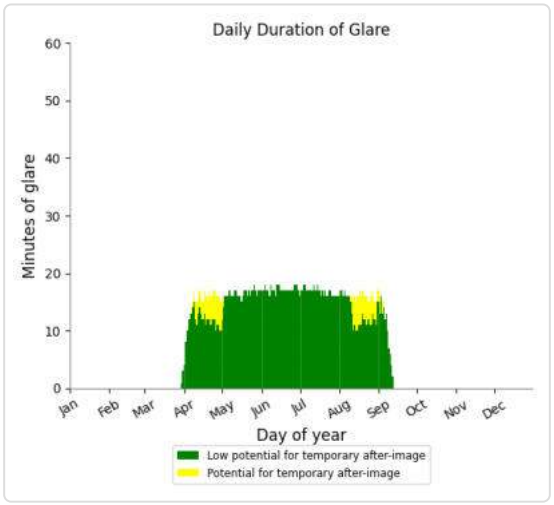


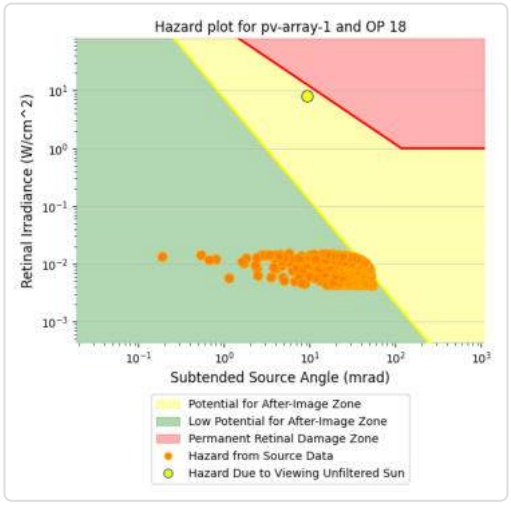
PV array 1 and OP 18

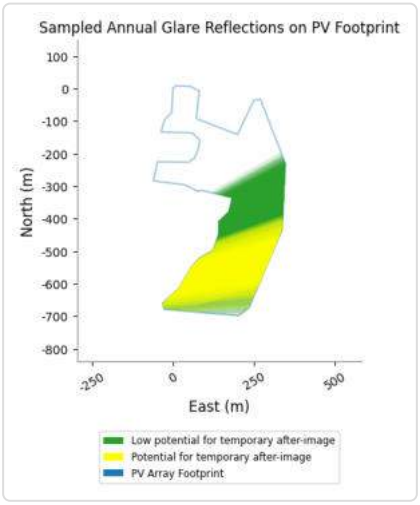
Yellow glare: 196 min.

Green glare: 2,420 min.





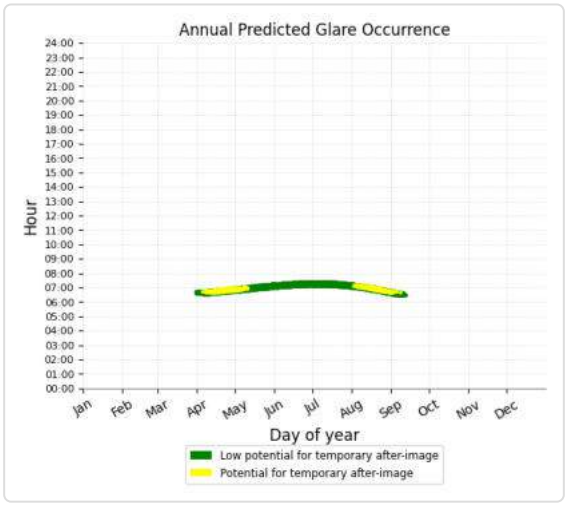


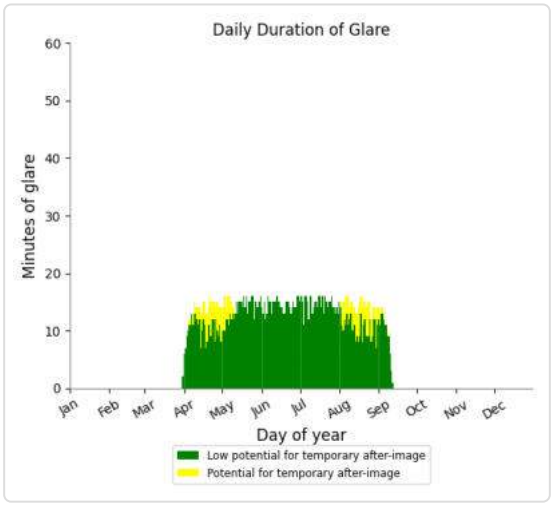


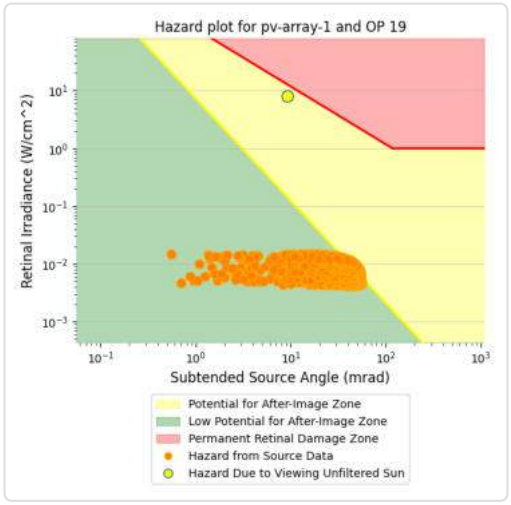
PV array 1 and OP 19

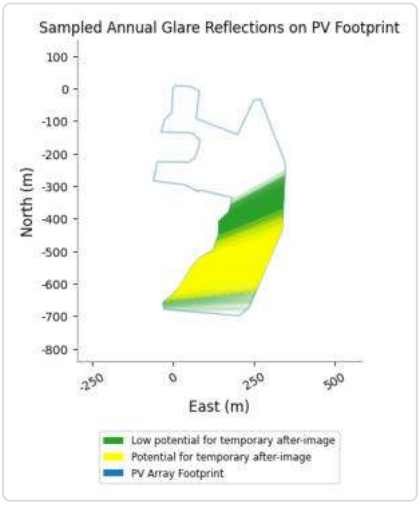
Yellow glare: 249 min.

Green glare: 2,056 min.





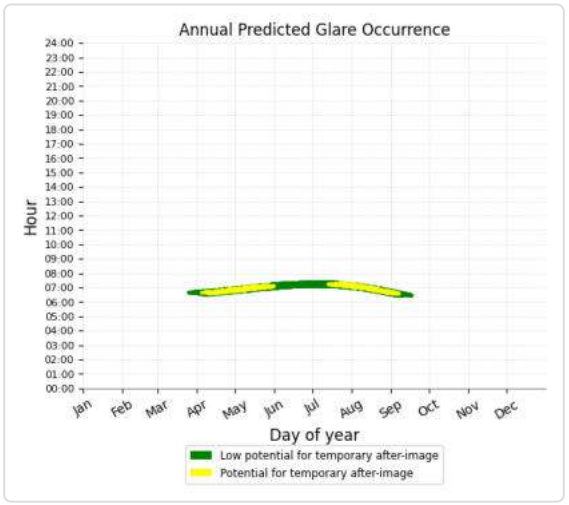


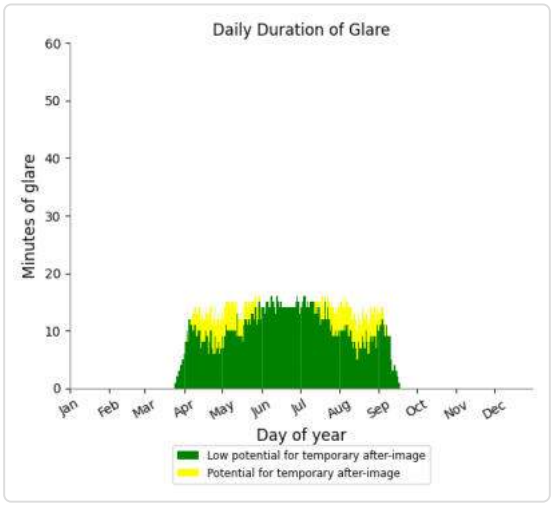


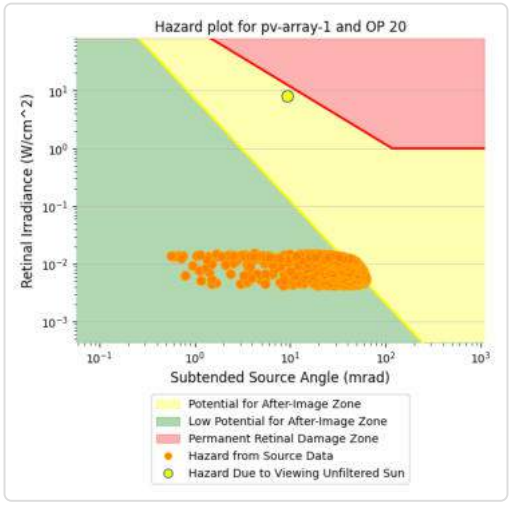
PV array 1 and OP 20

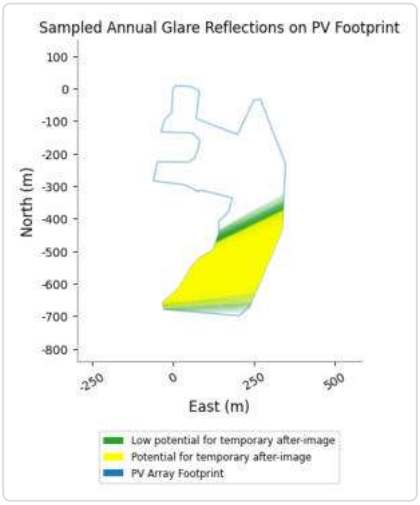
Yellow glare: 421 min.

Green glare: 1,833 min.





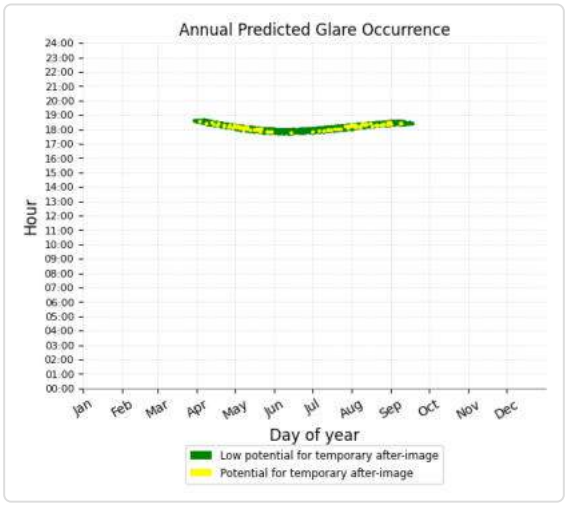


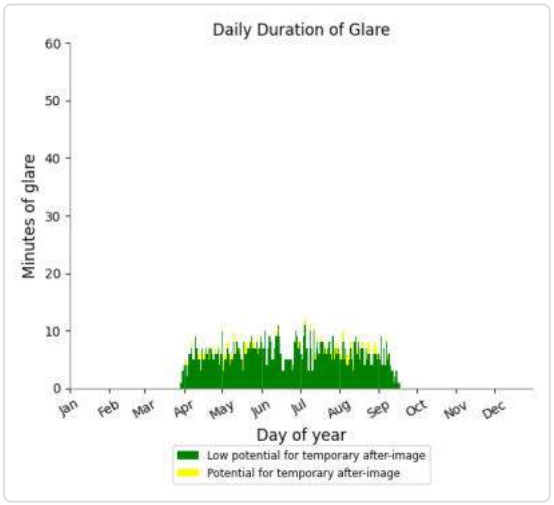


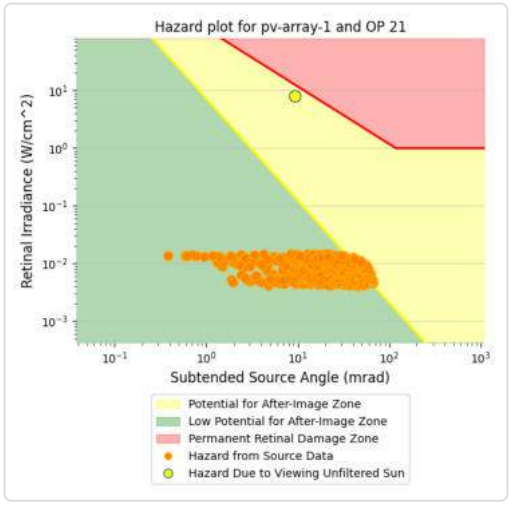
PV array 1 and OP 21

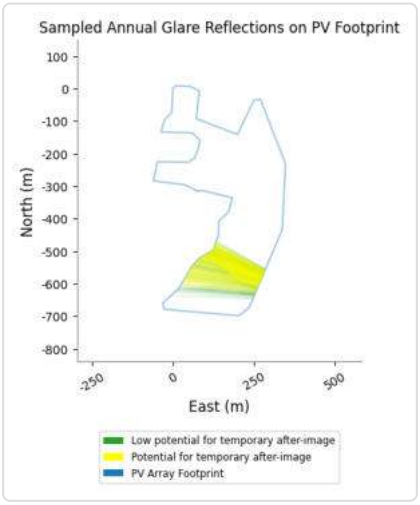
Yellow glare: 76 min.

Green glare: 1,040 min.





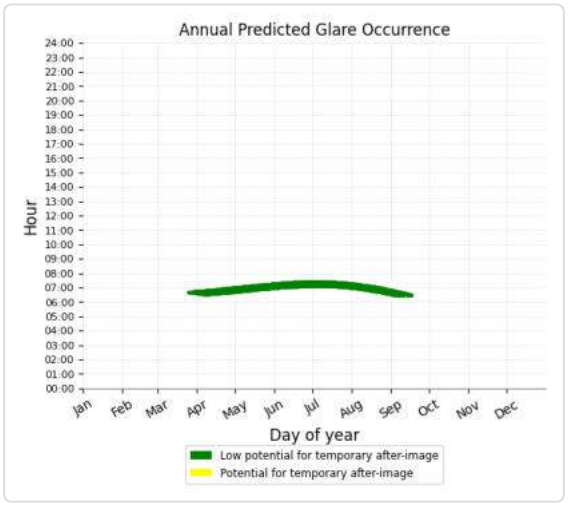


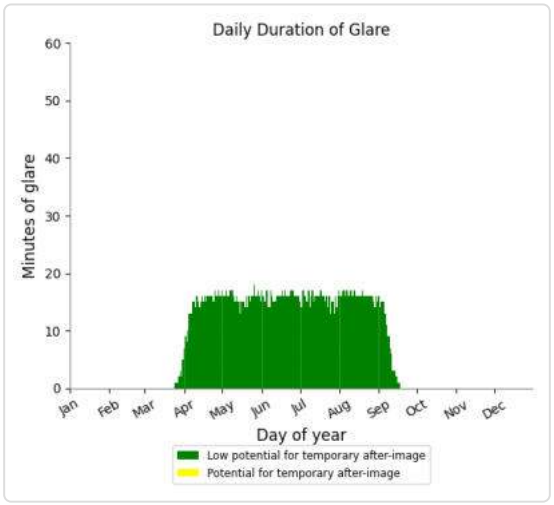


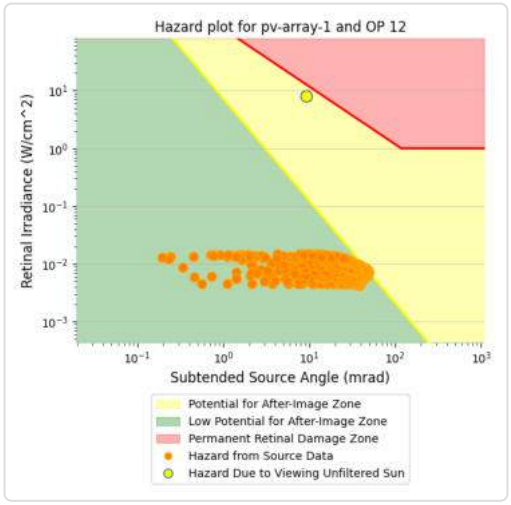
PV array 1 and OP 12

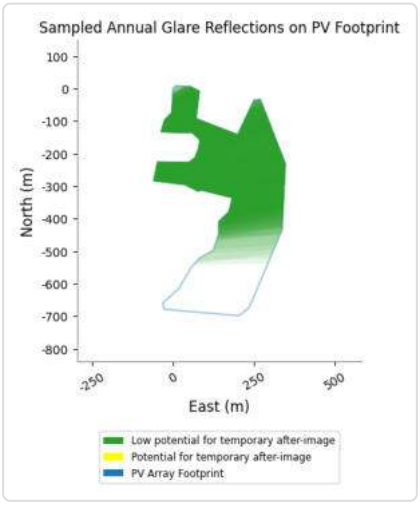
Yellow glare: none

Green glare: 2,538 min.





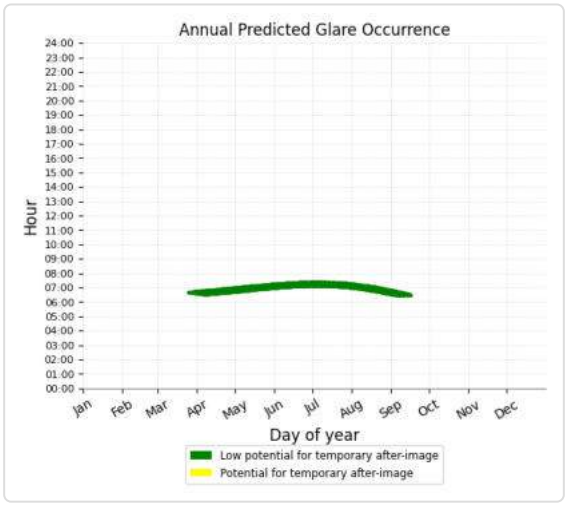


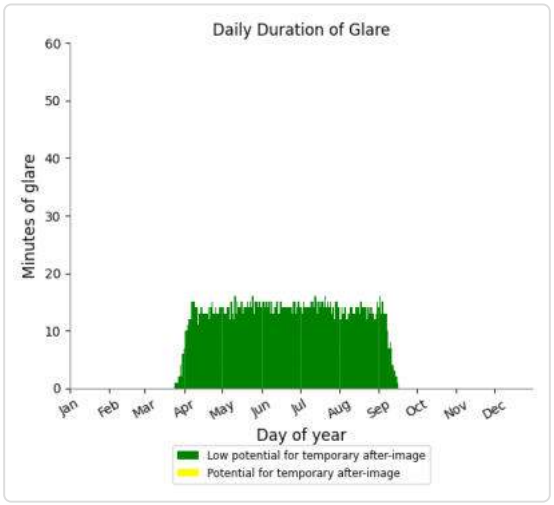


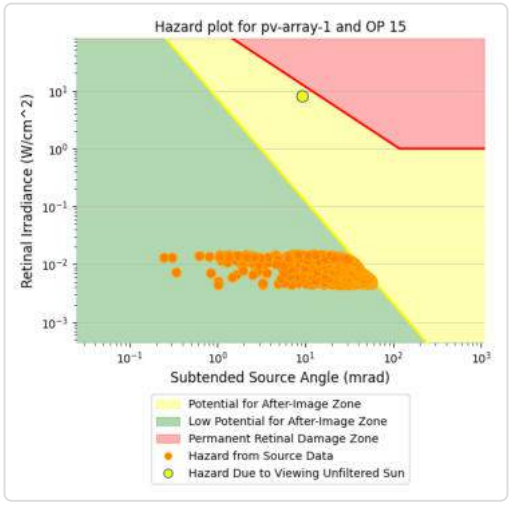
PV array 1 and OP 15

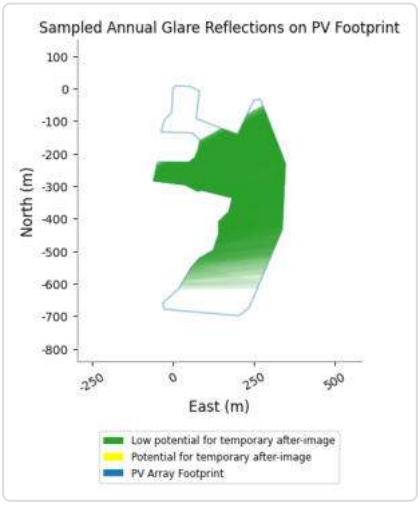
Yellow glare: none

Green glare: 2,269 min.





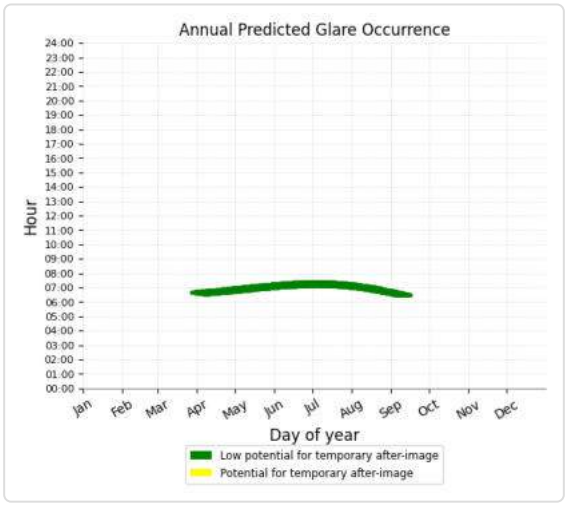


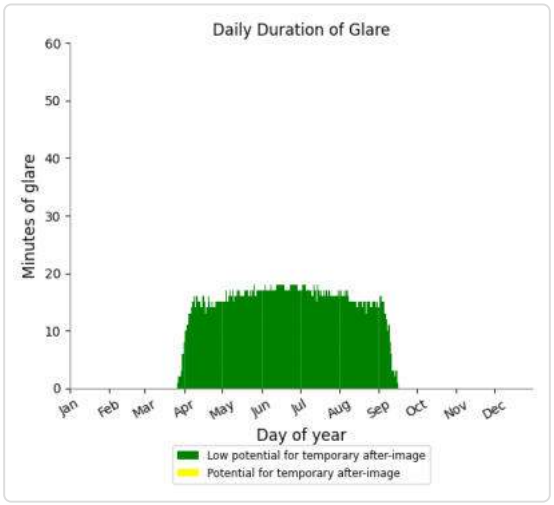


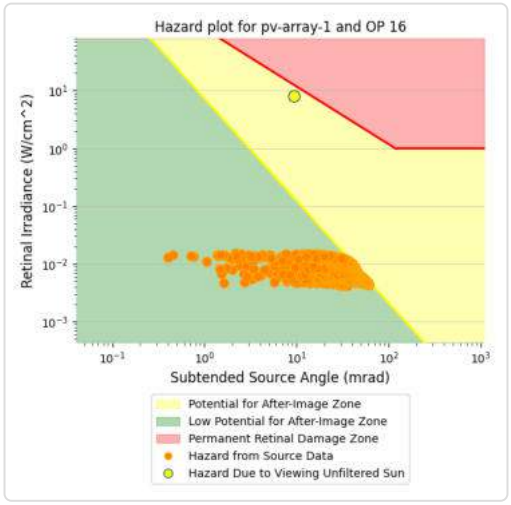
PV array 1 and OP 16

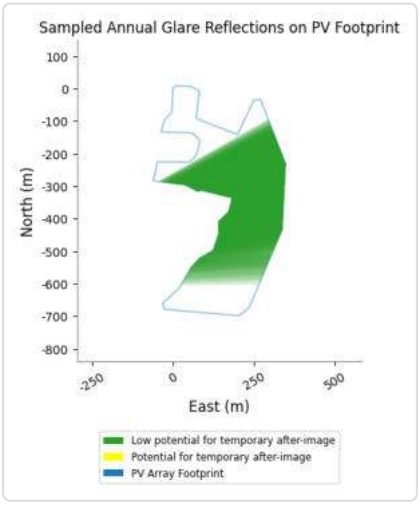
Yellow glare: none

Green glare: 2,602 min.





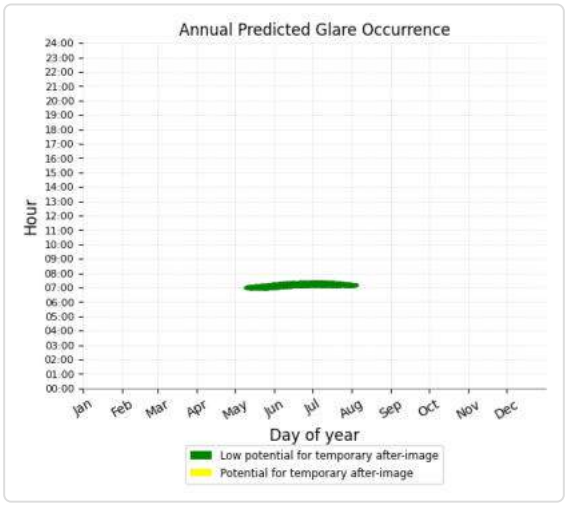


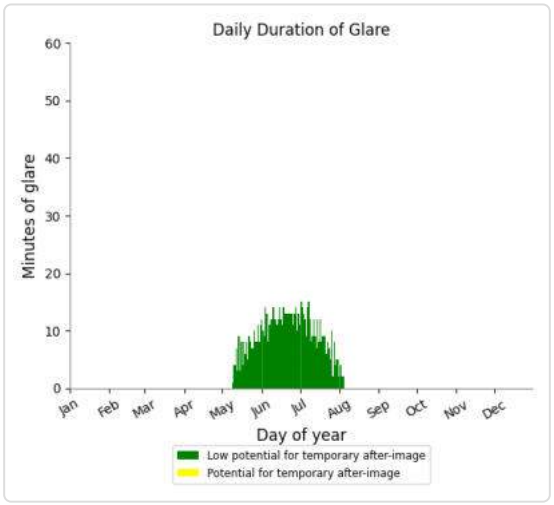


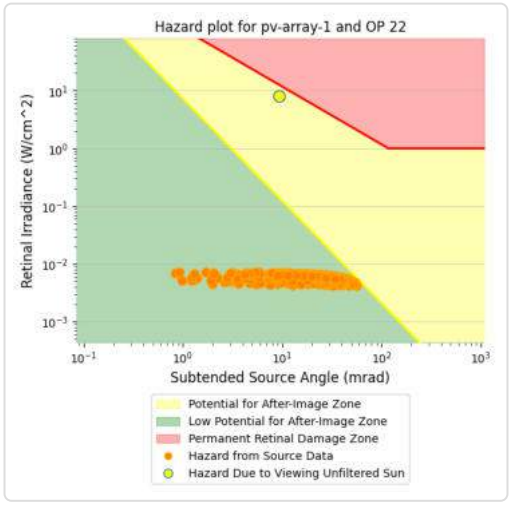
PV array 1 and OP 22

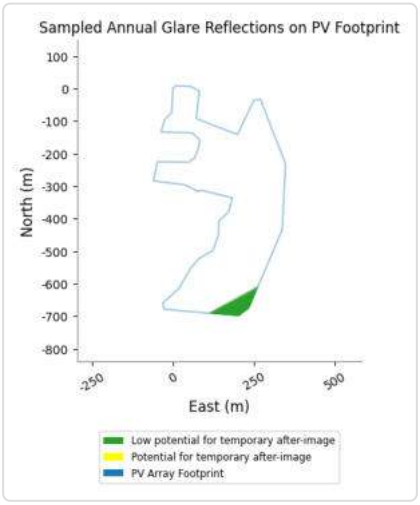
Yellow glare: none

Green glare: 819 min.





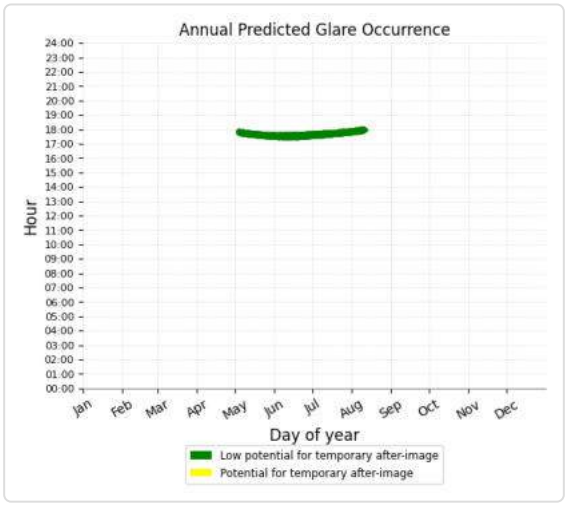


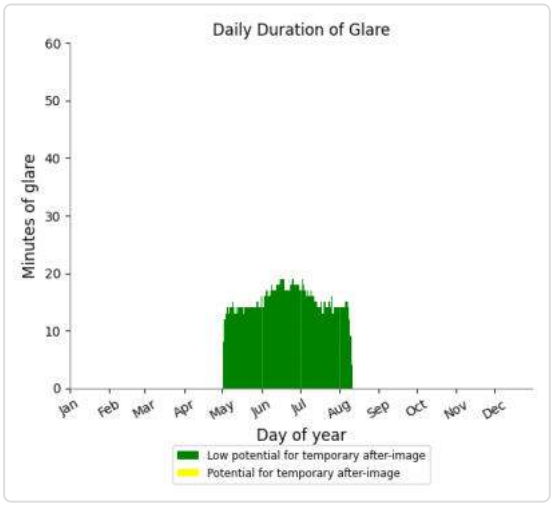


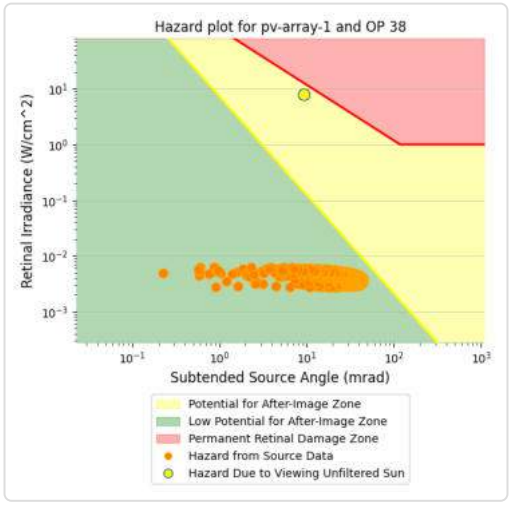
PV array 1 and OP 38

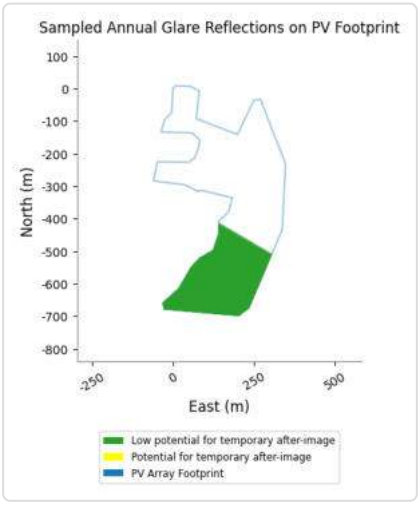
Yellow glare: none

Green glare: 1,544 min.





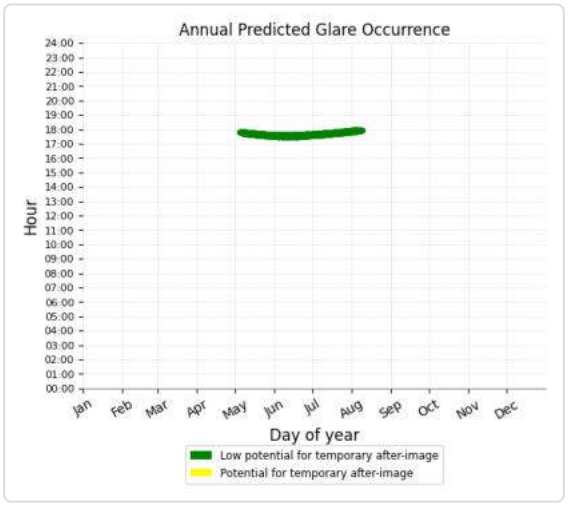


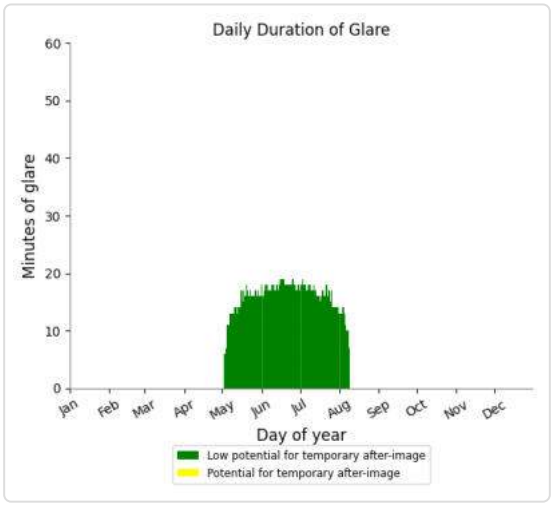


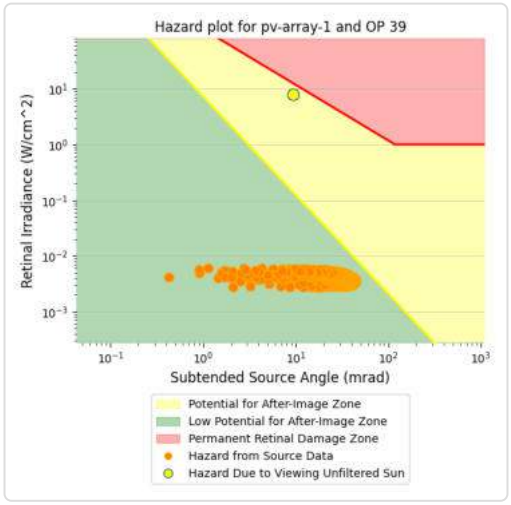
PV array 1 and OP 39

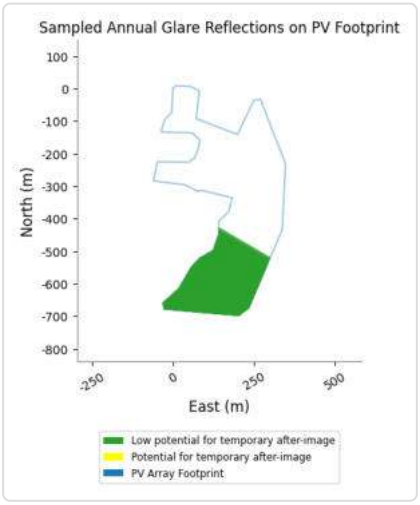
Yellow glare: none

Green glare: 1,567 min.





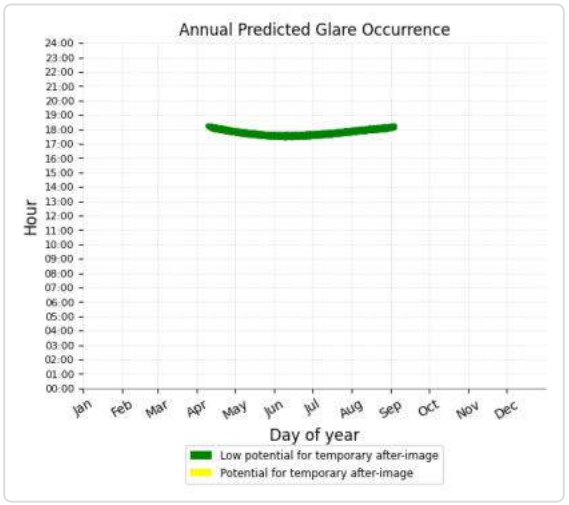


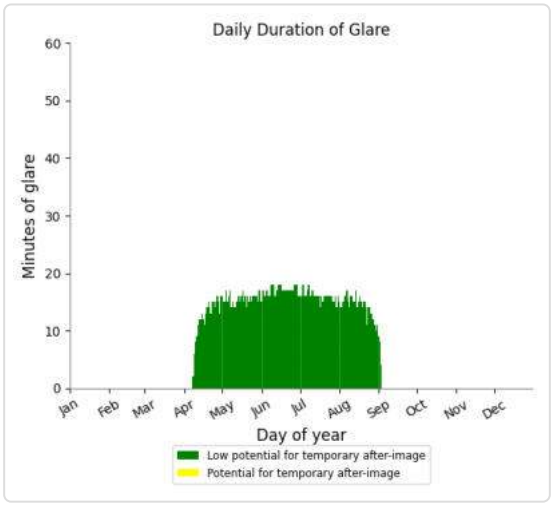


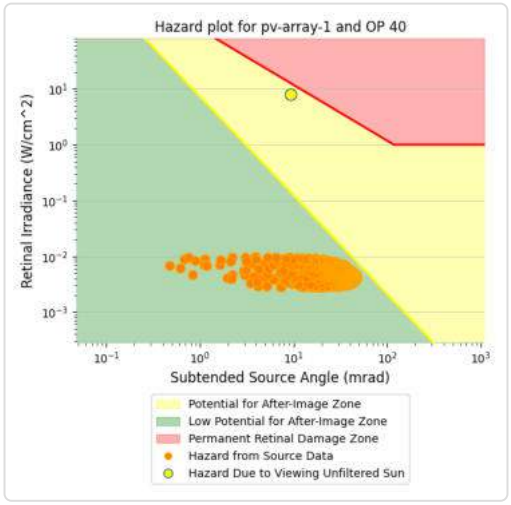
PV array 1 and OP 40

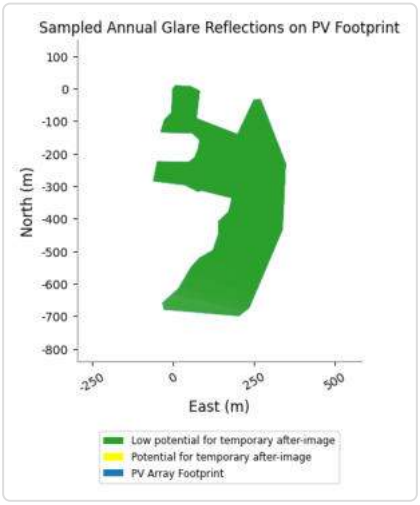
Yellow glare: none

Green glare: 2,233 min.





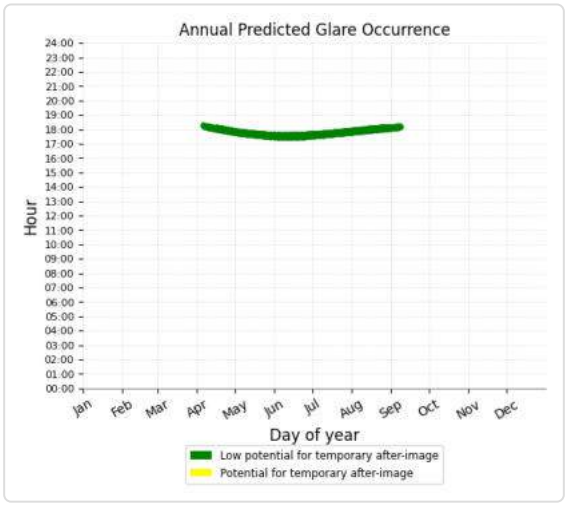


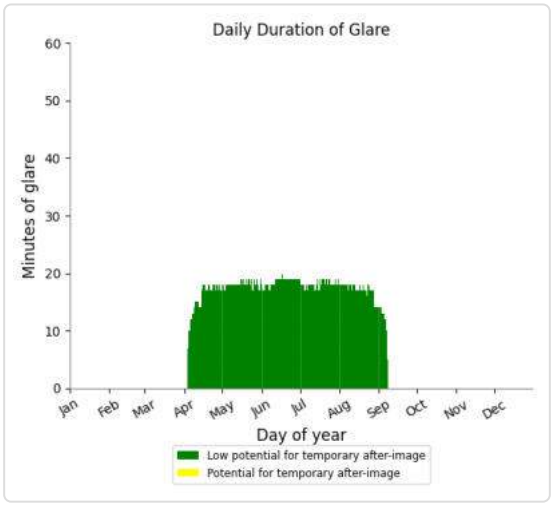


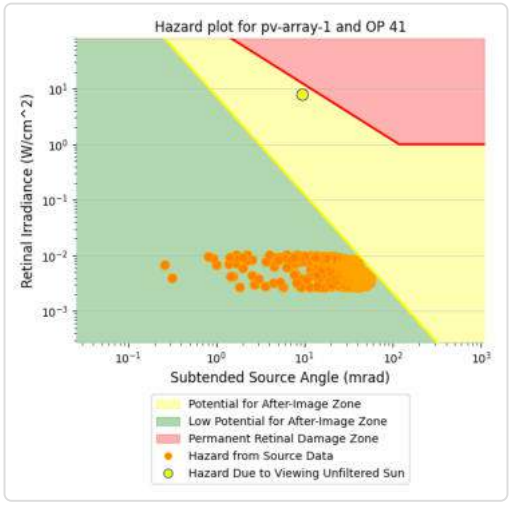
PV array 1 and OP 41

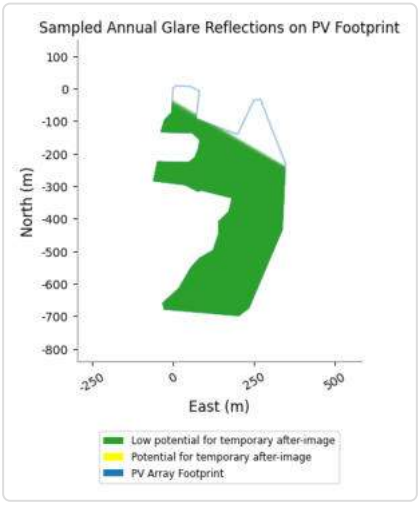
Yellow glare: none

Green glare: 2,730 min.





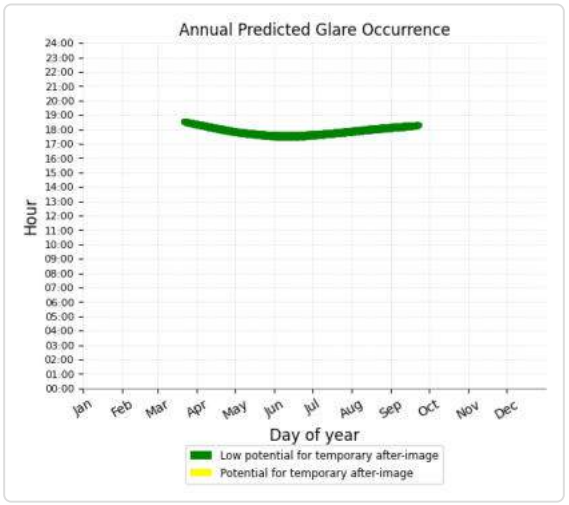


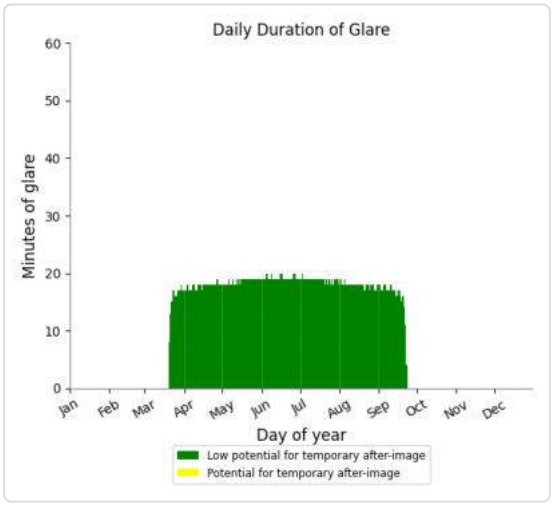


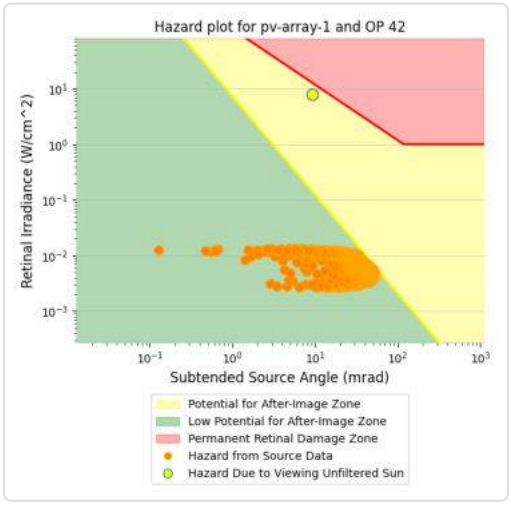
PV array 1 and OP 42

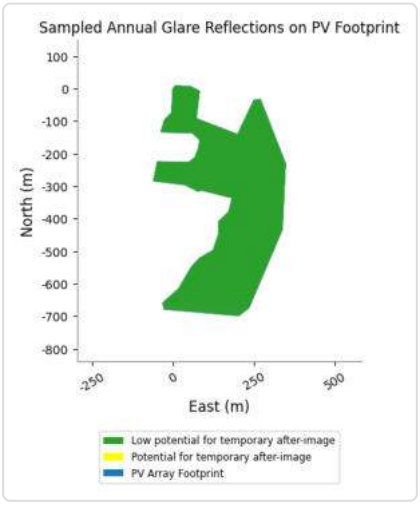
Yellow glare: none

Green glare: 3,387 min.





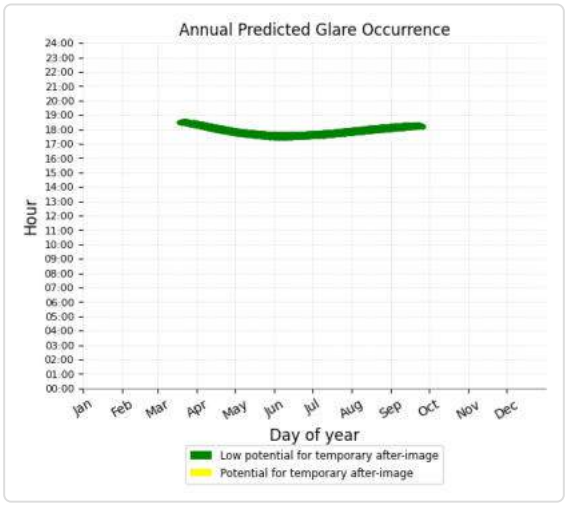


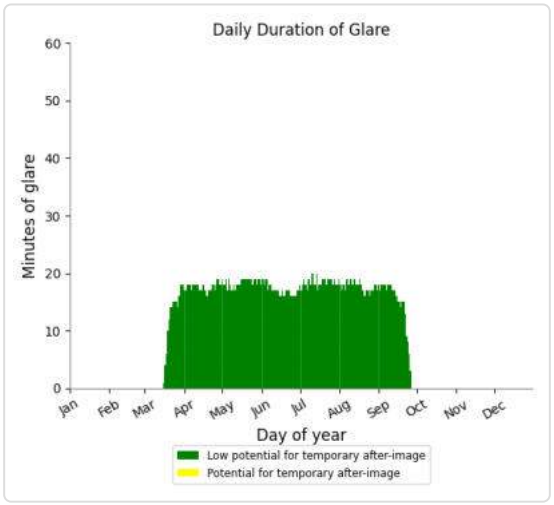


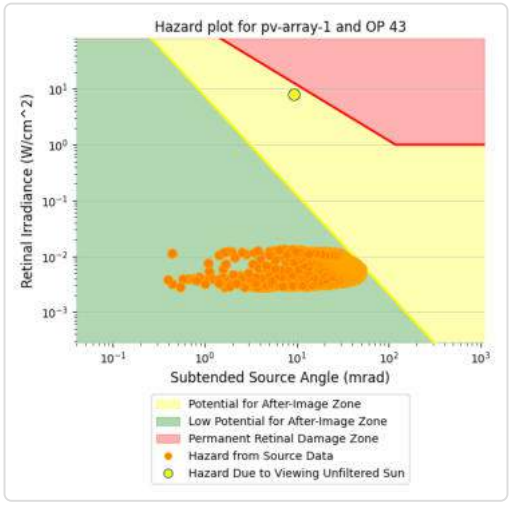
PV array 1 and OP 43

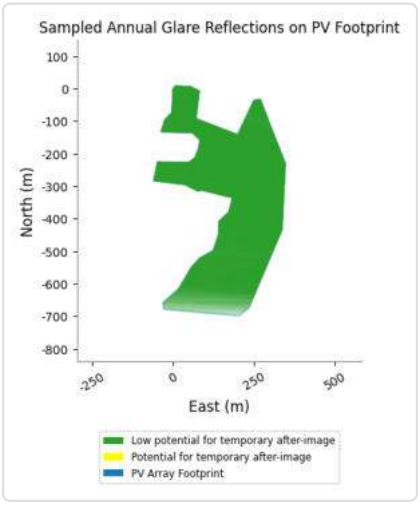
Yellow glare: none

Green glare: 3,323 min.





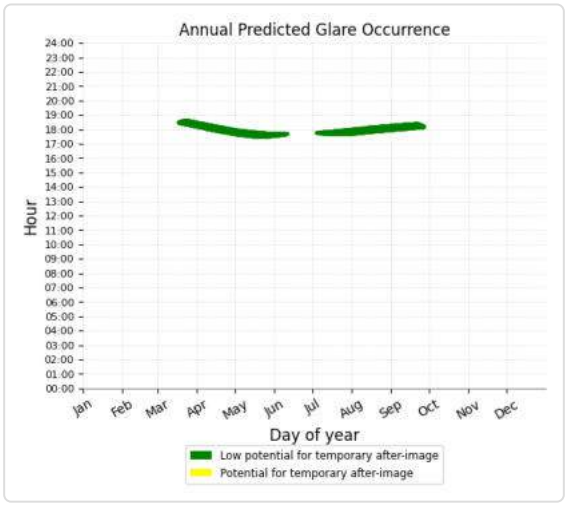


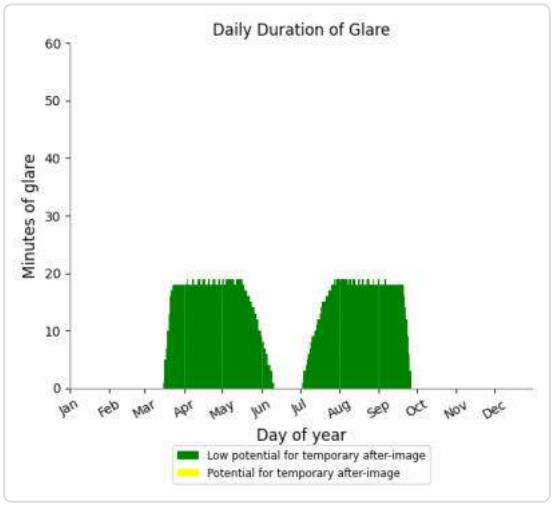


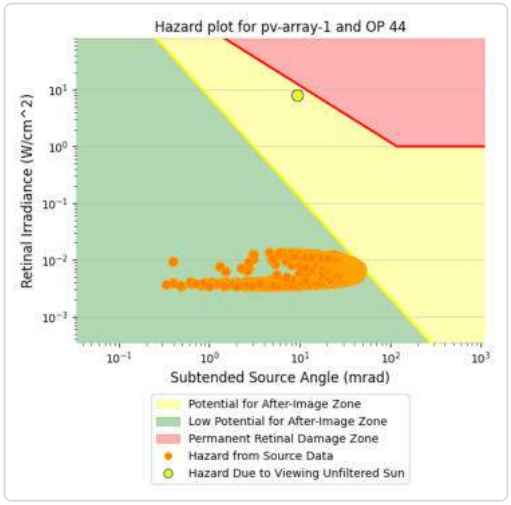
PV array 1 and OP 44

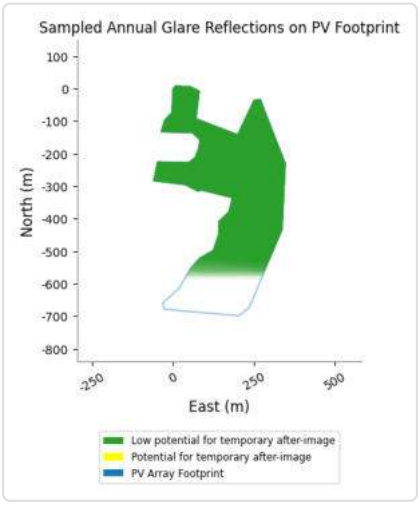
Yellow glare: none

Green glare: 2,701 min.





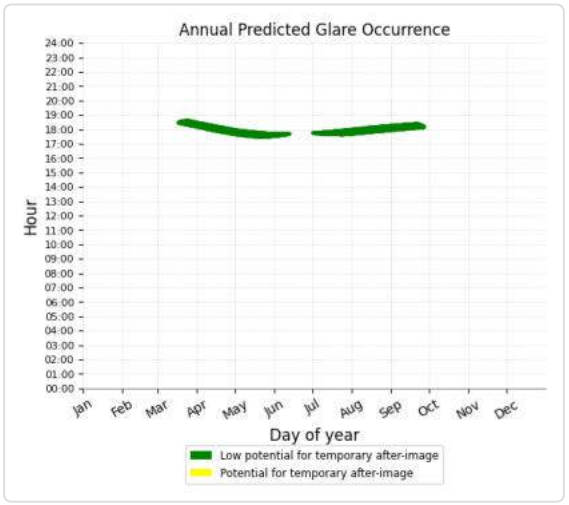


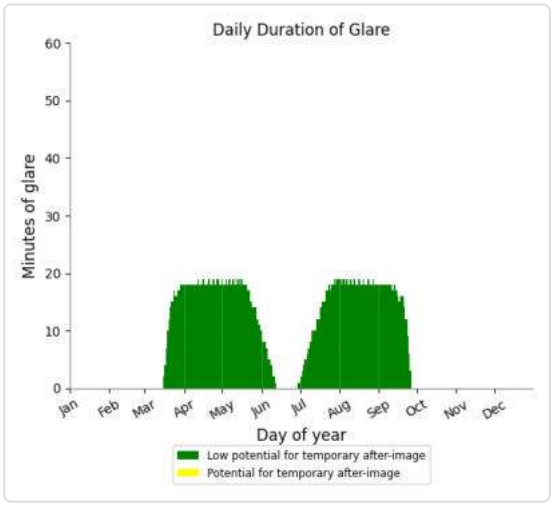


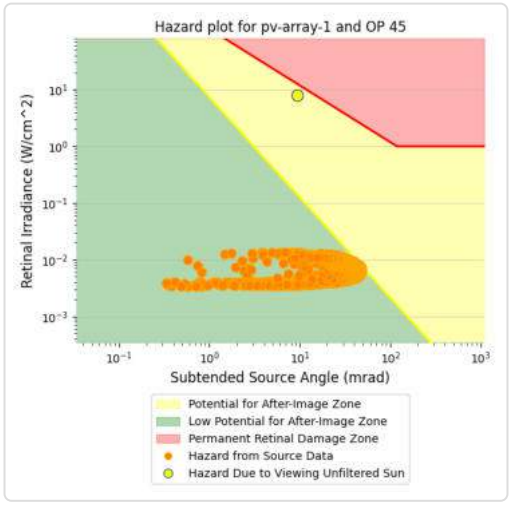
PV array 1 and OP 45

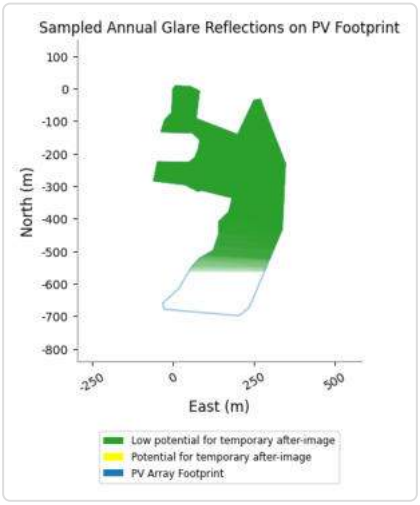
Yellow glare: none

Green glare: 2,689 min.





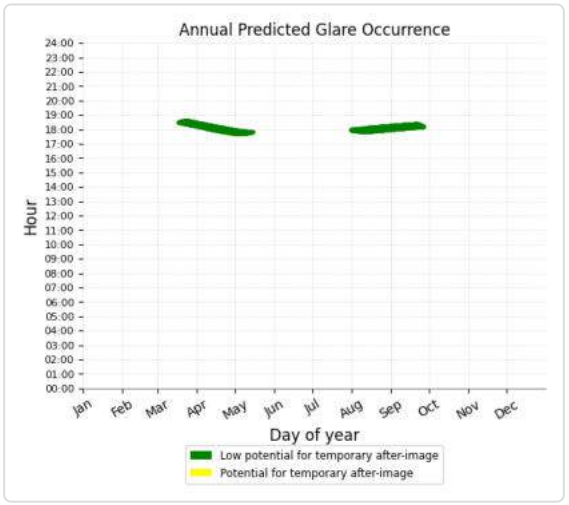


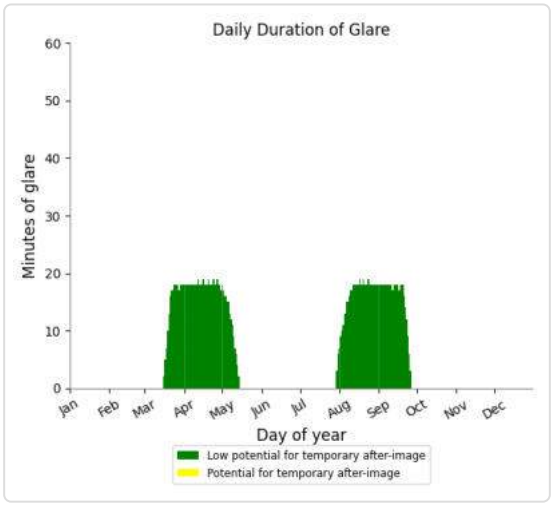


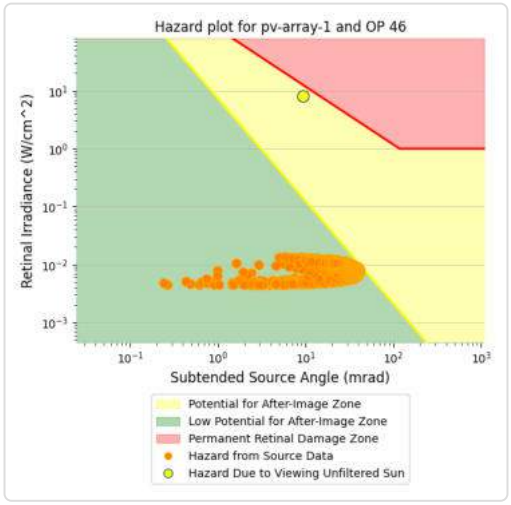
PV array 1 and OP 46

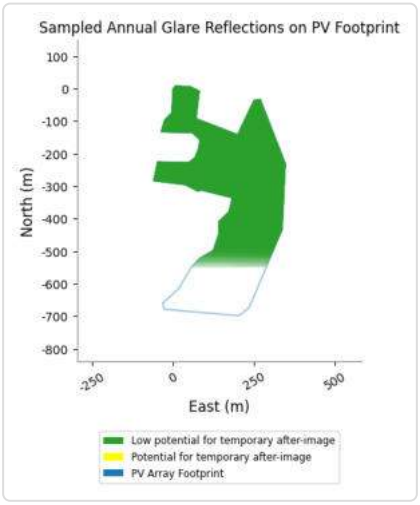
Yellow glare: none

Green glare: 1,868 min.





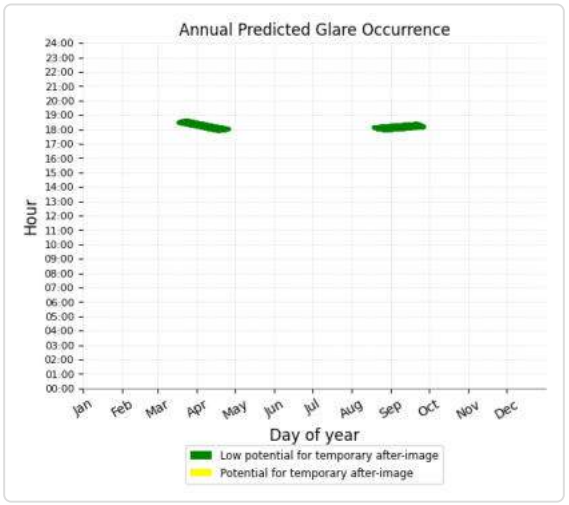


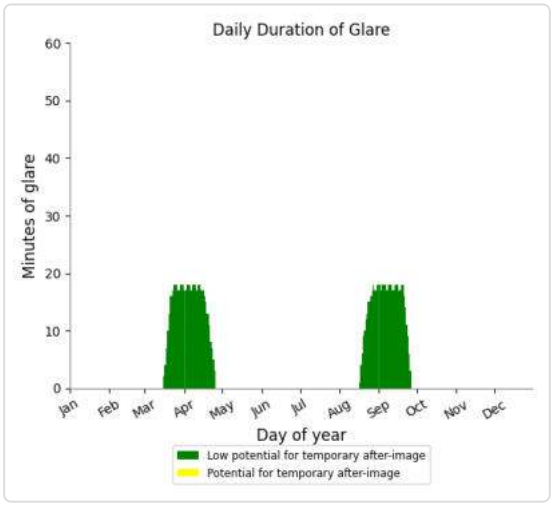


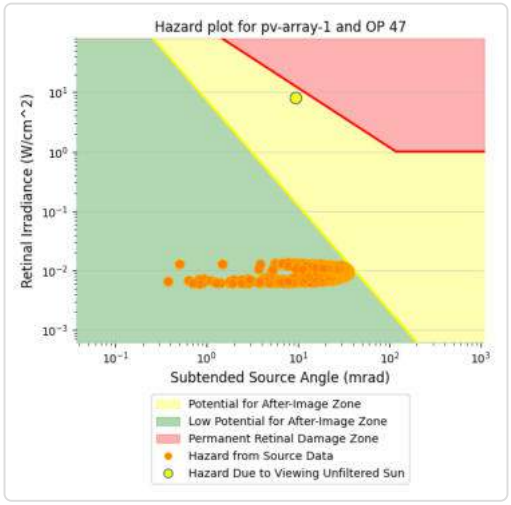
PV array 1 and OP 47

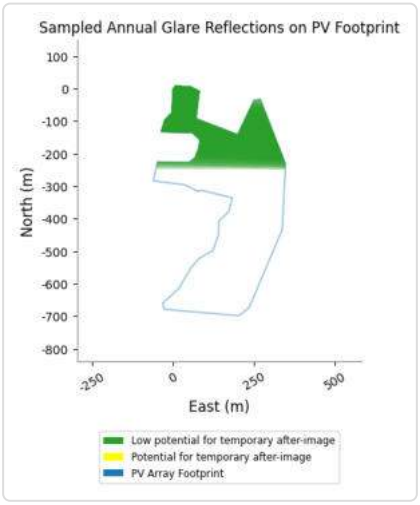
Yellow glare: none

Green glare: 1,198 min.





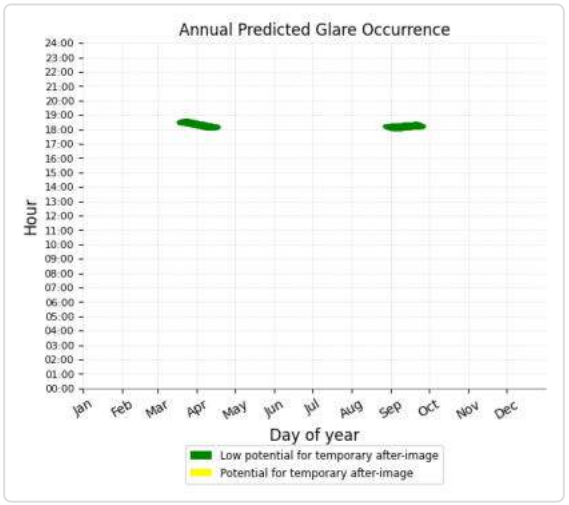


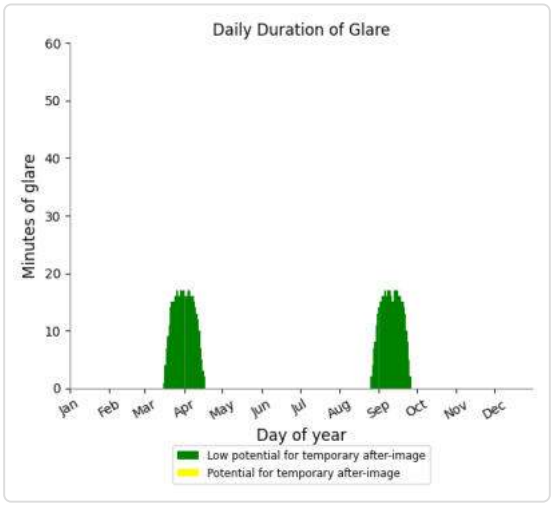


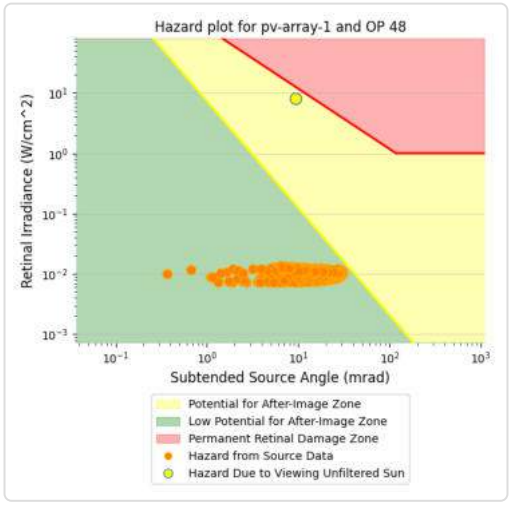
PV array 1 and OP 48

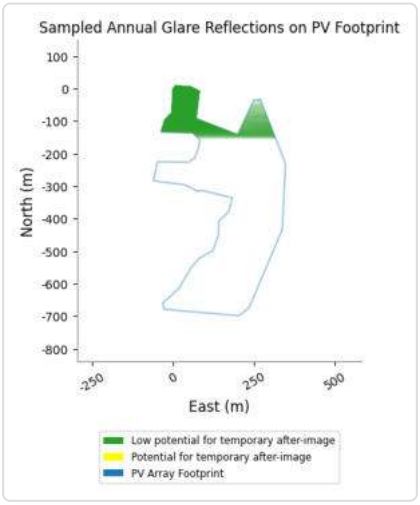
Yellow glare: none

Green glare: 838 min.



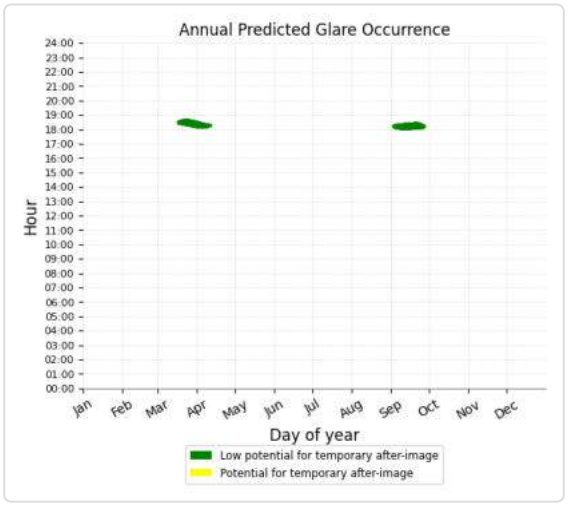


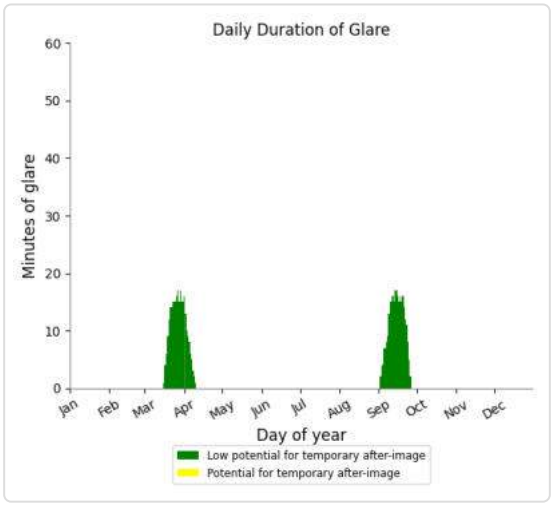


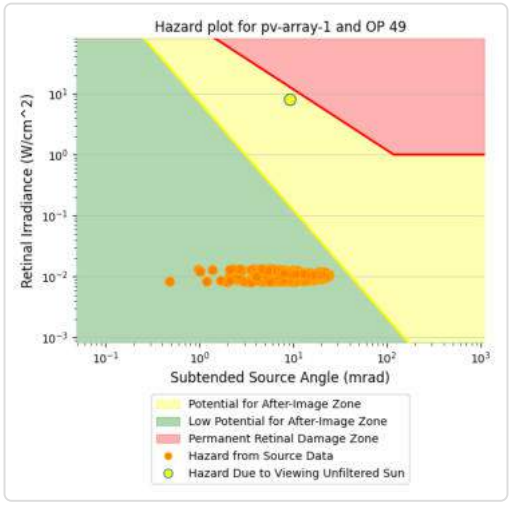


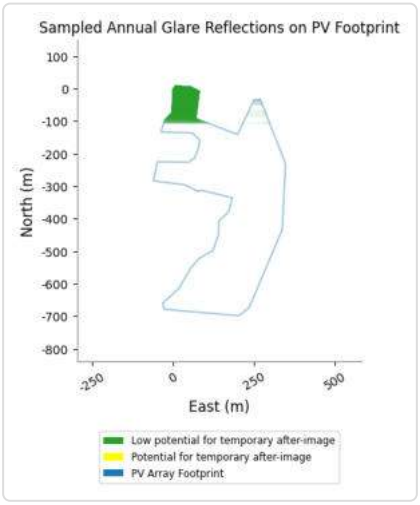
PV array 1 and OP 49

Yellow glare: none
Green glare: 550 min.









PV array 1 and OP 1

No glare found

PV array 1 and OP 2

No glare found

PV array 1 and OP 3

No glare found

PV array 1 and OP 4

No glare found

PV array 1 and OP 5

No glare found

PV array 1 and OP 9

No glare found

PV array 1 and OP 10

No glare found

PV array 1 and OP 23

No glare found

PV array 1 and OP 24

No glare found

PV array 1 and OP 25

No glare found

PV array 1 and OP 26

No glare found

PV array 1 and OP 27

No glare found

PV array 1 and OP 28

No glare found

PV array 1 and OP 29

No glare found

PV array 1 and OP 30

No glare found

PV array 1 and OP 31

No glare found

PV array 1 and OP 32

No glare found

PV array 1 and OP 33

No glare found

PV array 1 and OP 34

No glare found

PV array 1 and OP 35

No glare found

PV array 1 and OP 36

No glare found

PV array 1 and OP 37

No glare found

PV array 1 and OP 50

No glare found

PV array 1 and OP 51

No glare found

PV array 1 and OP 52

No glare found

PV array 1 and OP 53

No glare found

PV array 1 and OP 54

No glare found

PV: PV array 2 potential temporary after-image

Receptor results ordered by category of glare

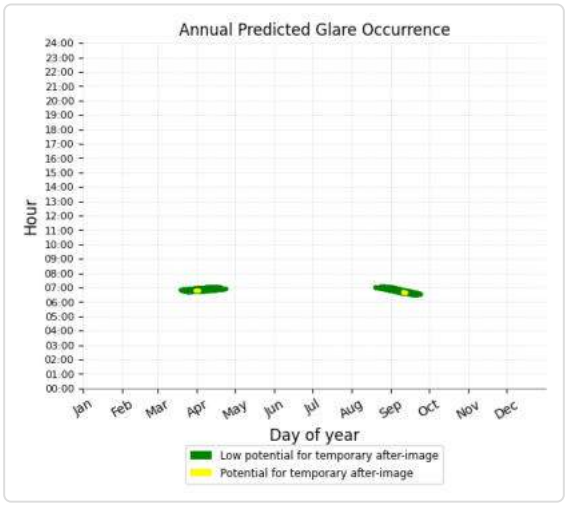
Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 15	944	15.7	18	0.3
OP 16	925	15.4	68	1.1
OP 17	925	15.4	184	3.1
OP 18	1,101	18.4	244	4.1
OP 19	1,221	20.4	280	4.7
OP 20	1,285	21.4	375	6.2
OP 21	728	12.1	2,889	48.1
OP 22	2,366	39.4	762	12.7
OP 23	2,289	38.1	343	5.7
OP 40	2,081	34.7	315	5.2
OP 42	1,456	24.3	744	12.4
OP 44	2,133	35.5	994	16.6
OP 45	1,935	32.2	318	5.3
OP 7	135	2.2	0	0.0
OP 8	221	3.7	0	0.0
OP 9	578	9.6	0	0.0
OP 11	479	8.0	0	0.0
OP 12	574	9.6	0	0.0
OP 13	692	11.5	0	0.0
OP 14	763	12.7	0	0.0
OP 24	2,274	37.9	0	0.0
OP 25	1,304	21.7	0	0.0
OP 26	1,097	18.3	0	0.0
OP 27	908	15.1	0	0.0
OP 38	480	8.0	0	0.0
OP 39	428	7.1	0	0.0
OP 41	1,214	20.2	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 28	0	0.0	0	0.0
OP 29	0	0.0	0	0.0
OP 30	0	0.0	0	0.0
OP 31	0	0.0	0	0.0
OP 32	0	0.0	0	0.0

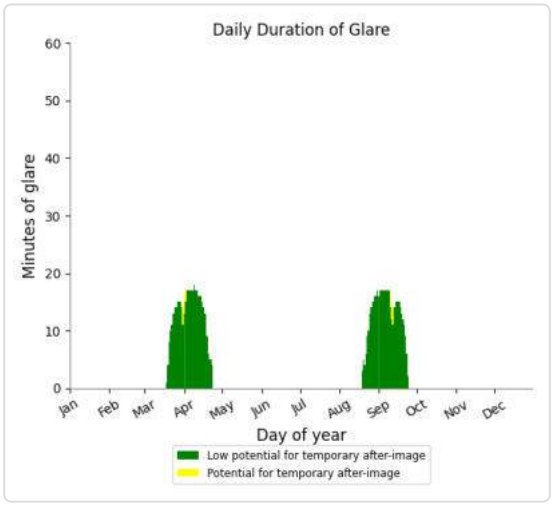
Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 33	0	0.0	0	0.0
OP 34	0	0.0	0	0.0
OP 35	0	0.0	0	0.0
OP 36	0	0.0	0	0.0
OP 37	0	0.0	0	0.0
OP 43	0	0.0	0	0.0
OP 46	0	0.0	0	0.0
OP 47	0	0.0	0	0.0
OP 48	0	0.0	0	0.0
OP 49	0	0.0	0	0.0
OP 50	0	0.0	0	0.0
OP 51	0	0.0	0	0.0
OP 52	0	0.0	0	0.0
OP 53	0	0.0	0	0.0
OP 54	0	0.0	0	0.0

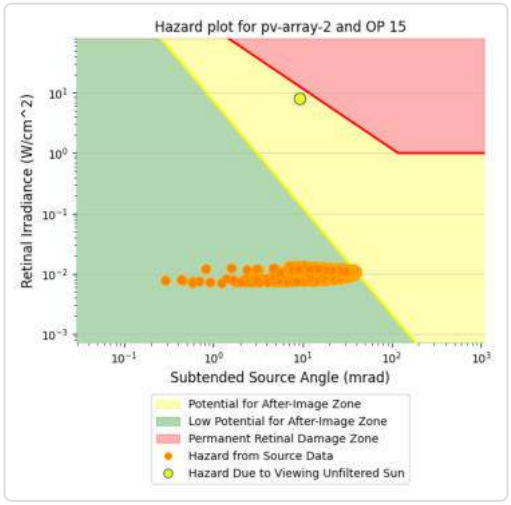
PV array 2 and OP 15

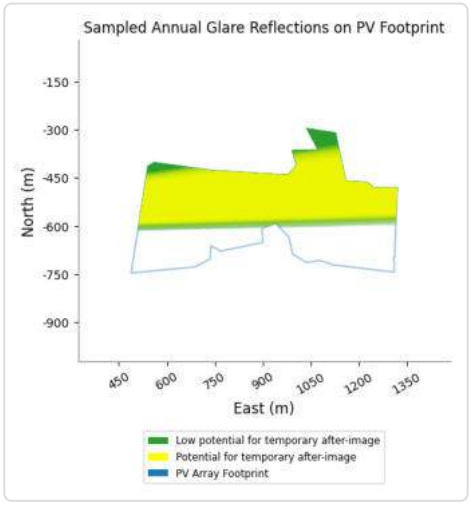
Yellow glare: 18 min.

Green glare: 944 min.





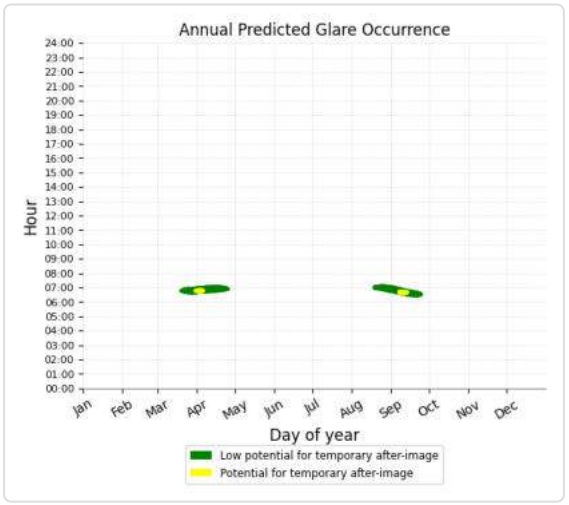


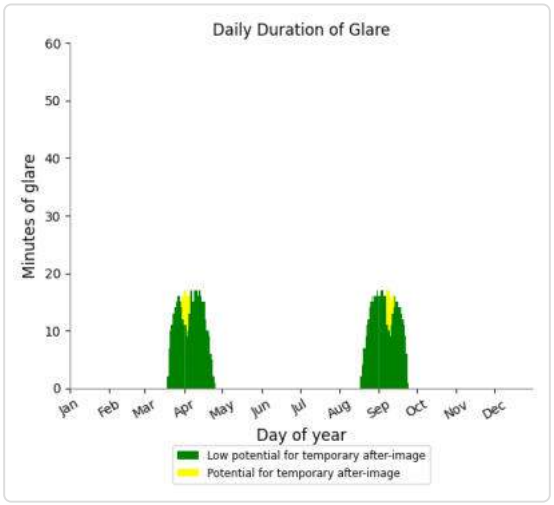


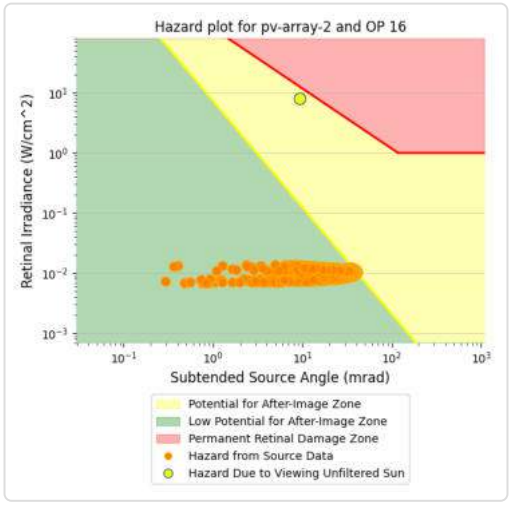
PV array 2 and OP 16

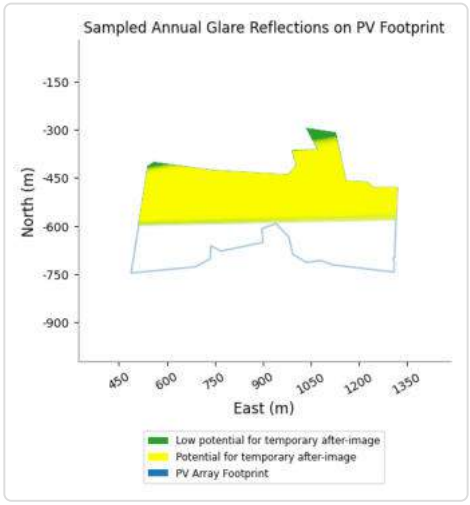
Yellow glare: 68 min.

Green glare: 925 min.





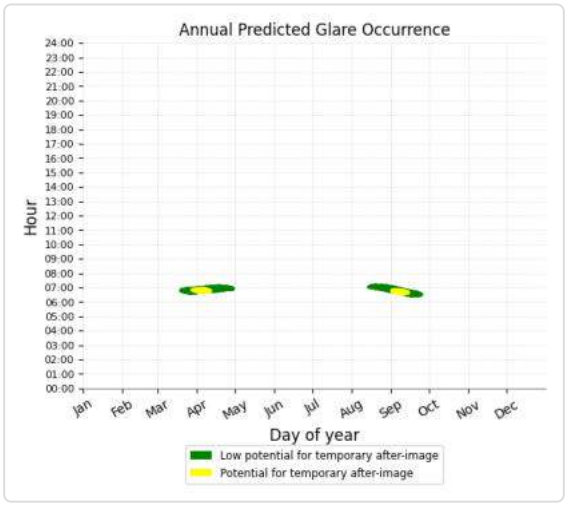


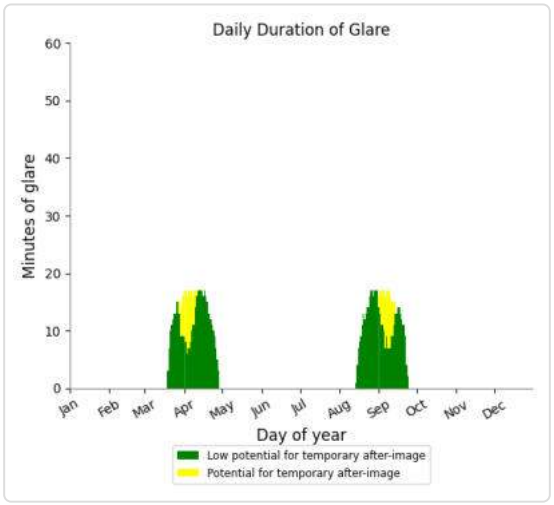


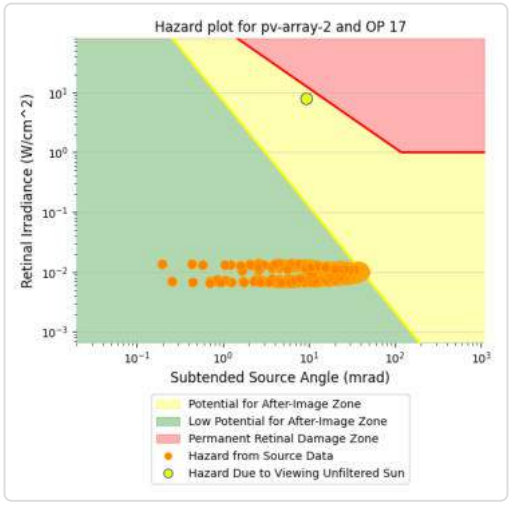
PV array 2 and OP 17

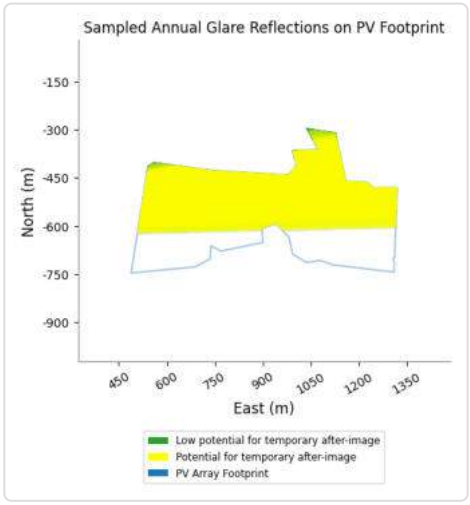
Yellow glare: 184 min.

Green glare: 925 min.





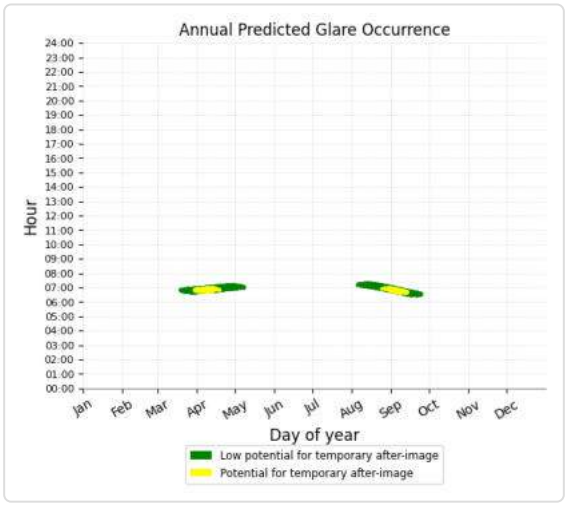


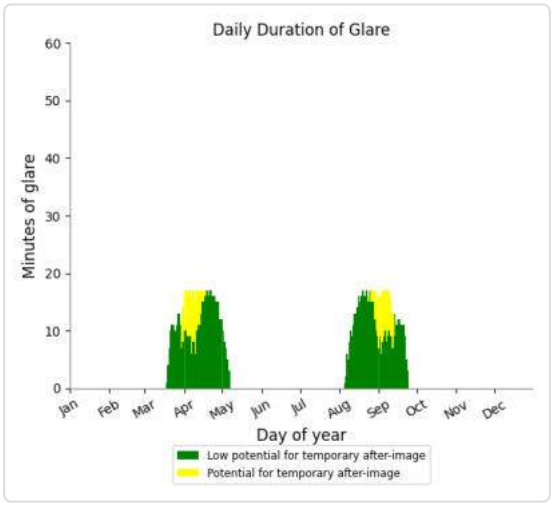


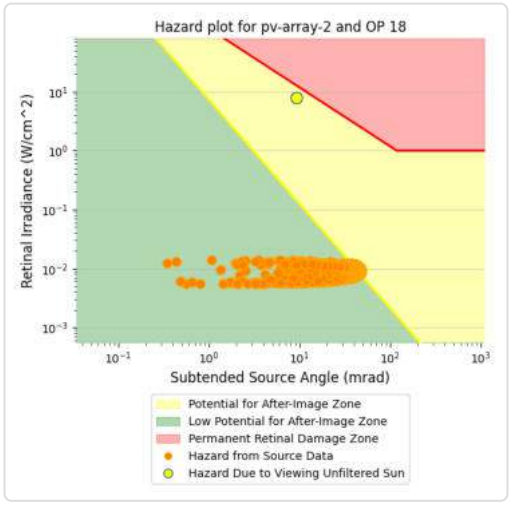
PV array 2 and OP 18

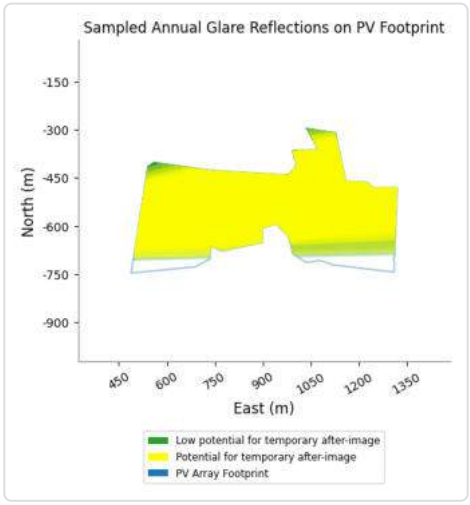
Yellow glare: 244 min.

Green glare: 1,101 min.





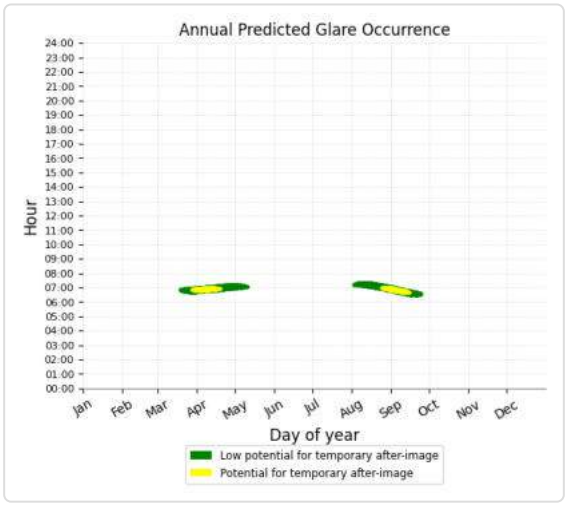


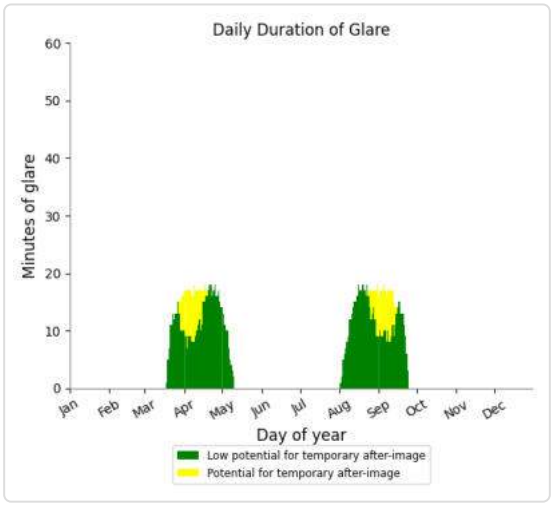


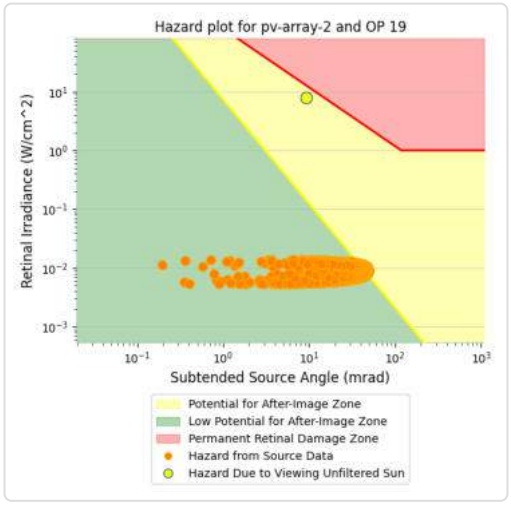
PV array 2 and OP 19

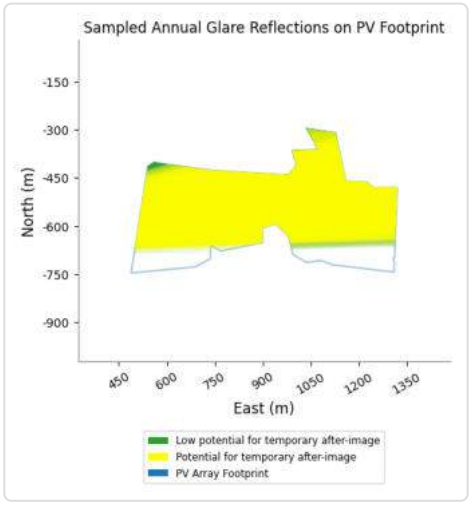
Yellow glare: 280 min.

Green glare: 1,221 min.





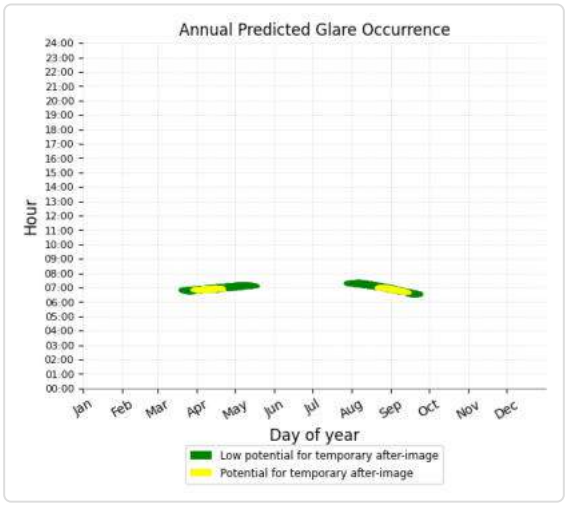


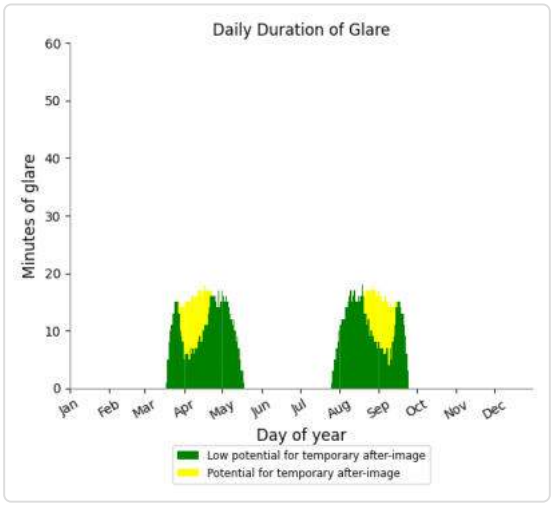


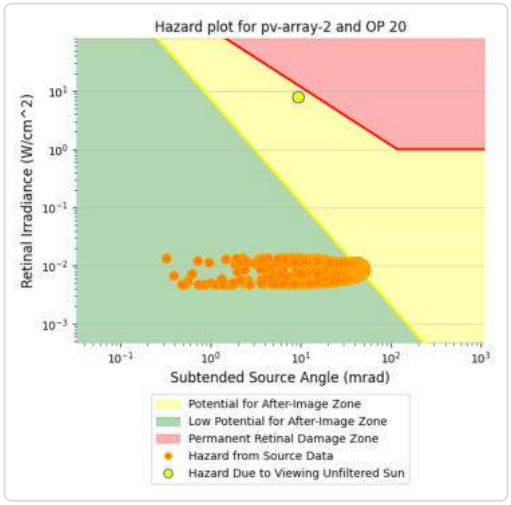
PV array 2 and OP 20

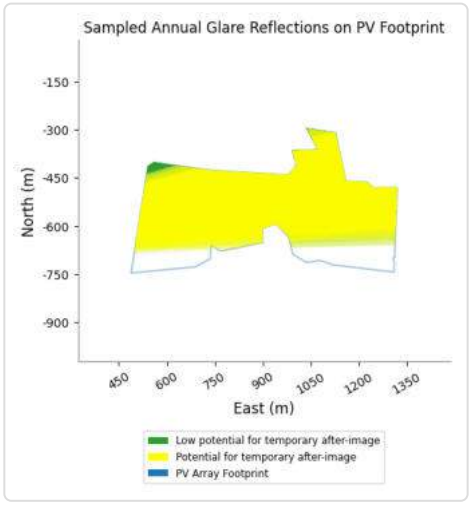
Yellow glare: 375 min.

Green glare: 1,285 min.





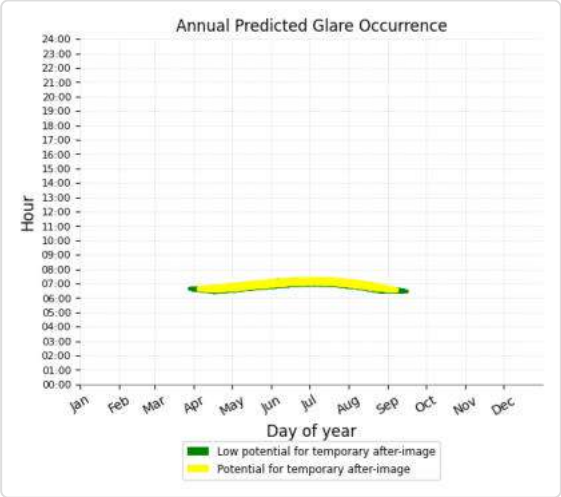


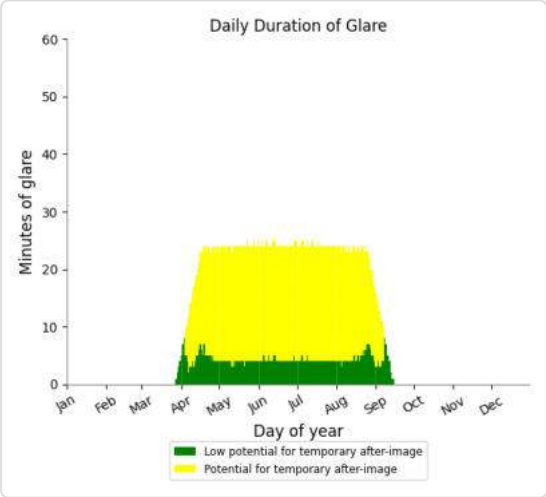


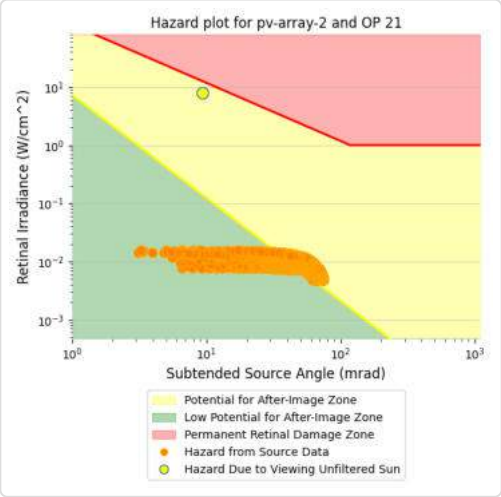
PV array 2 and OP 21

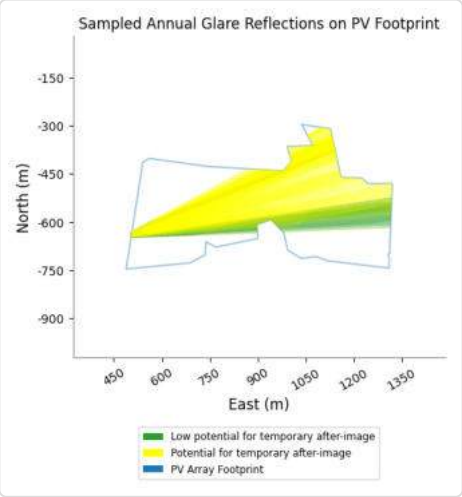
Yellow glare: 2,889 min.

Green glare: 728 min.





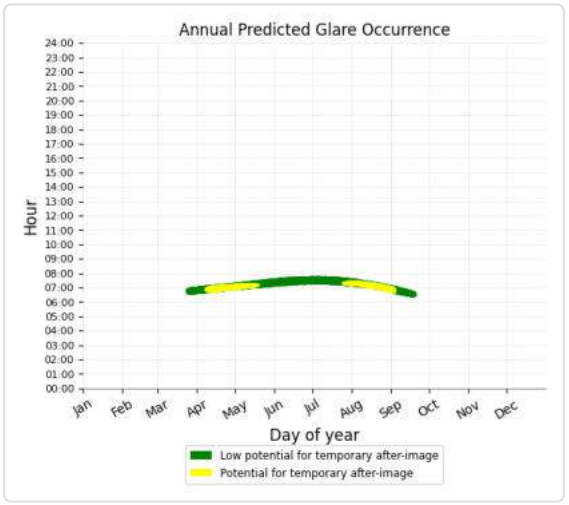


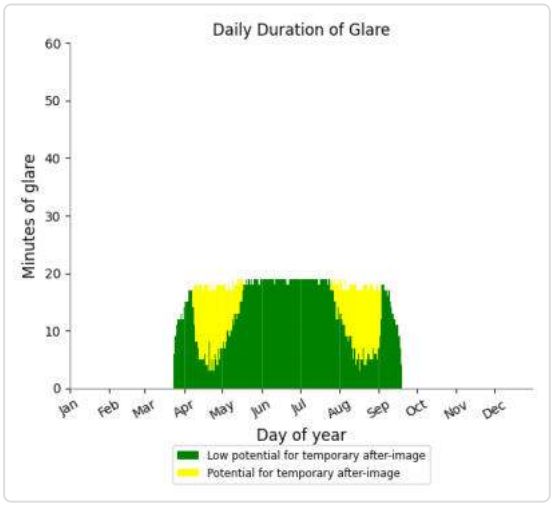


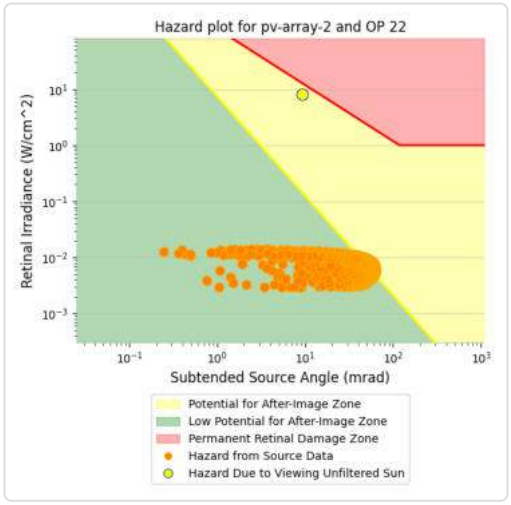
PV array 2 and OP 22

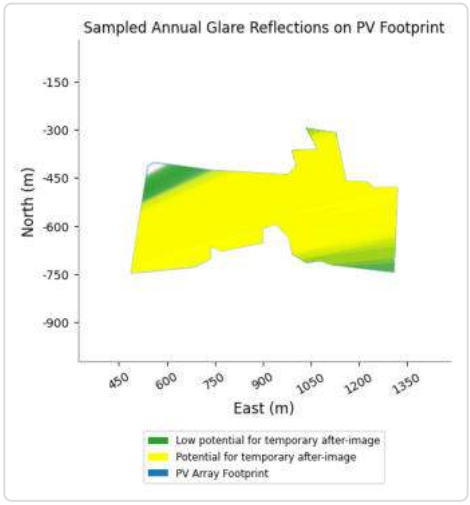
Yellow glare: 762 min.

Green glare: 2,366 min.





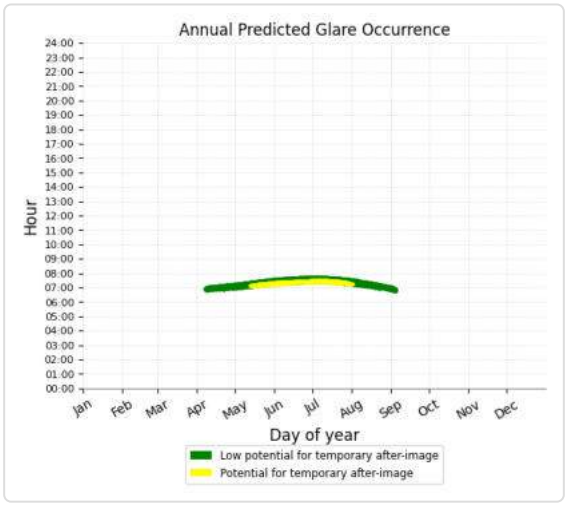


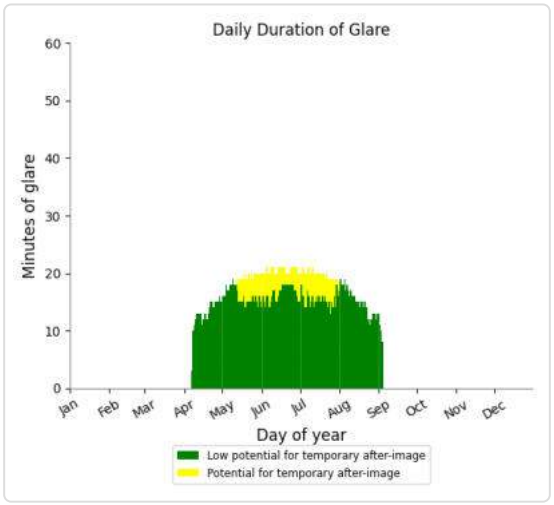


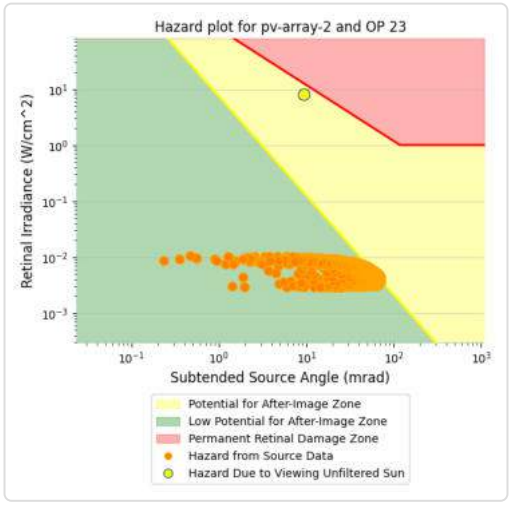
PV array 2 and OP 23

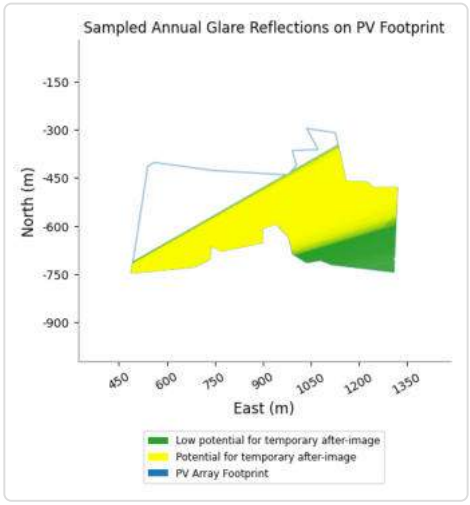
Yellow glare: 343 min.

Green glare: 2,289 min.





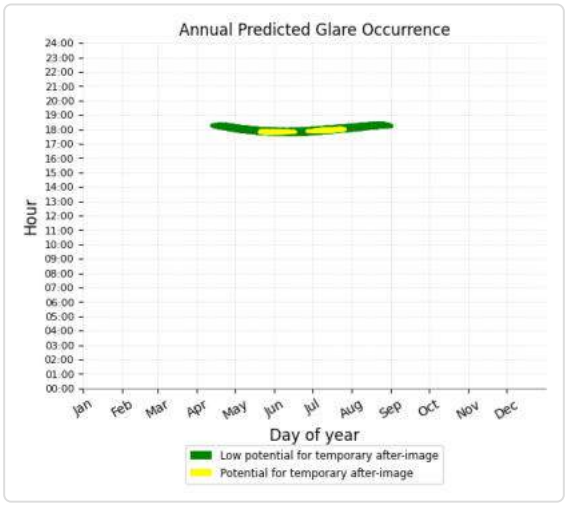


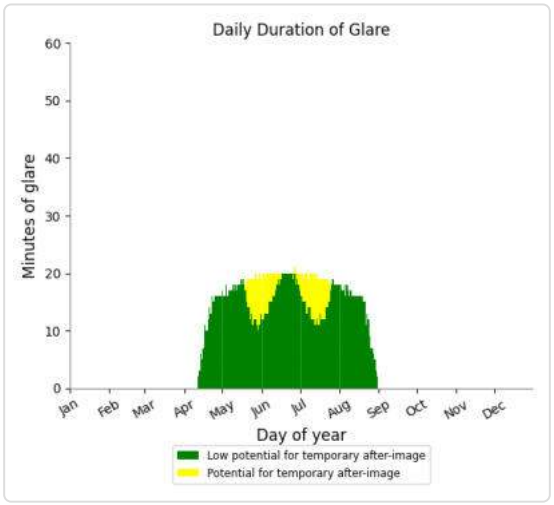


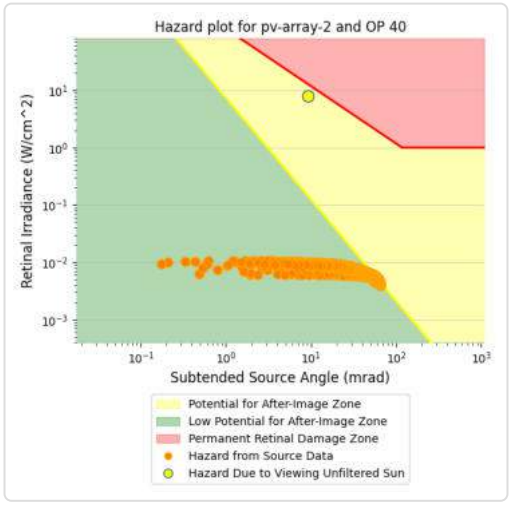
PV array 2 and OP 40

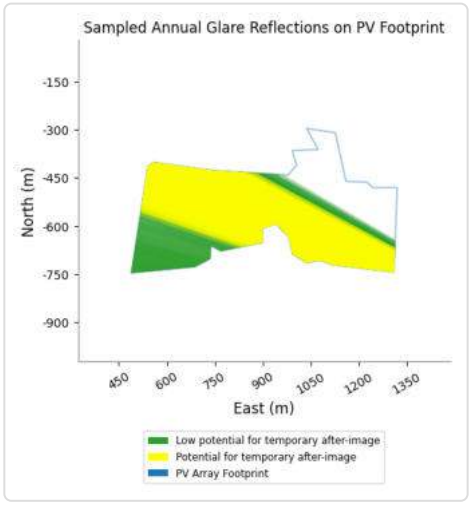
Yellow glare: 315 min.

Green glare: 2,081 min.





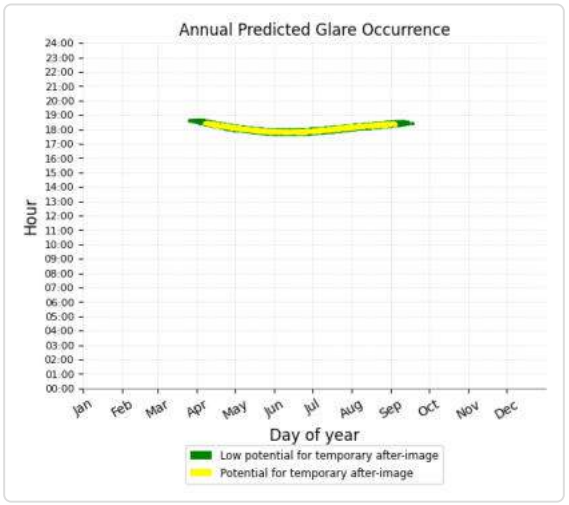


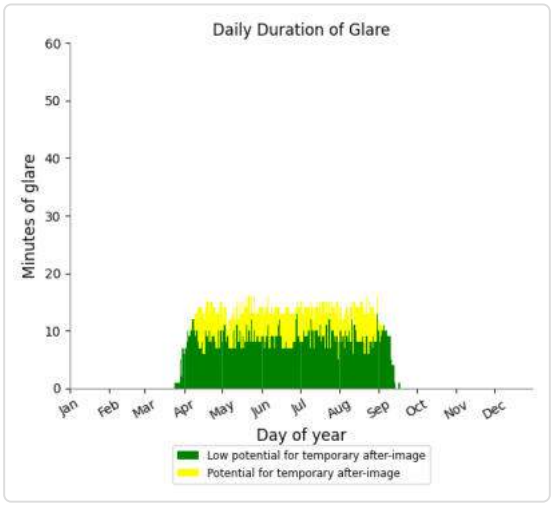


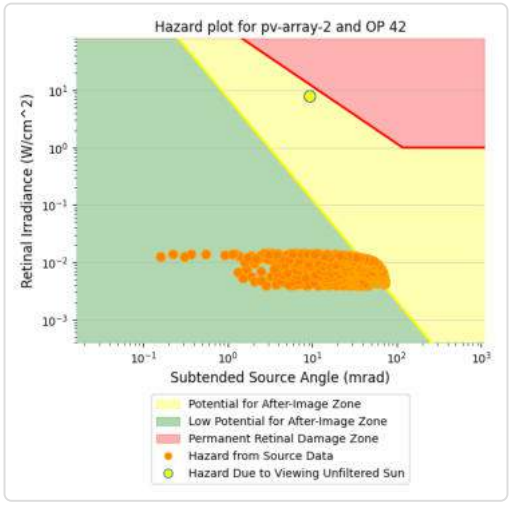
PV array 2 and OP 42

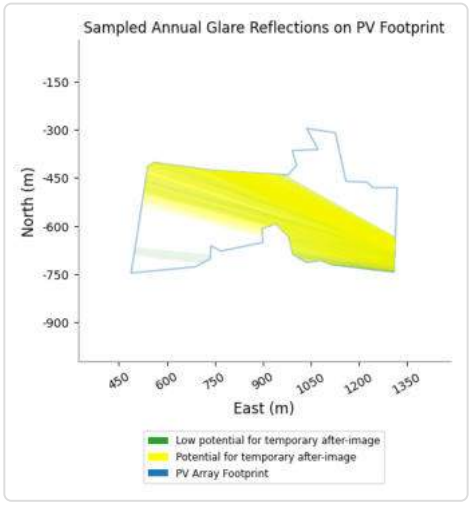
Yellow glare: 744 min.

Green glare: 1,456 min.





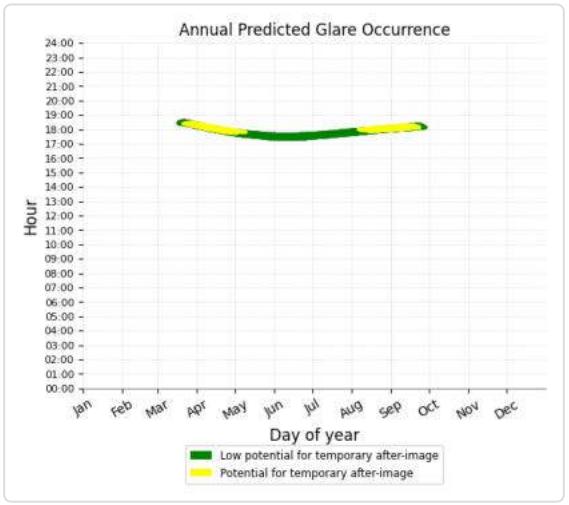


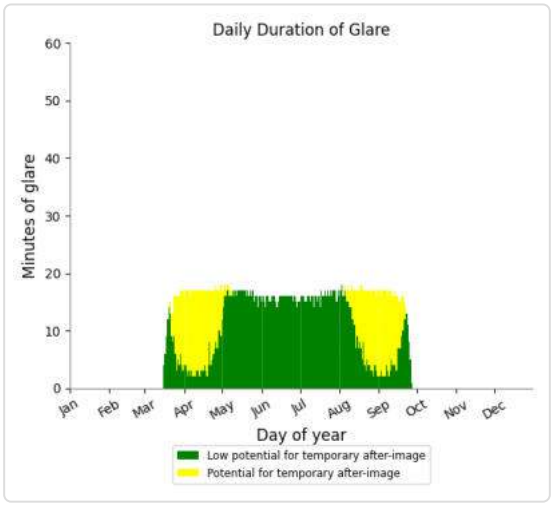


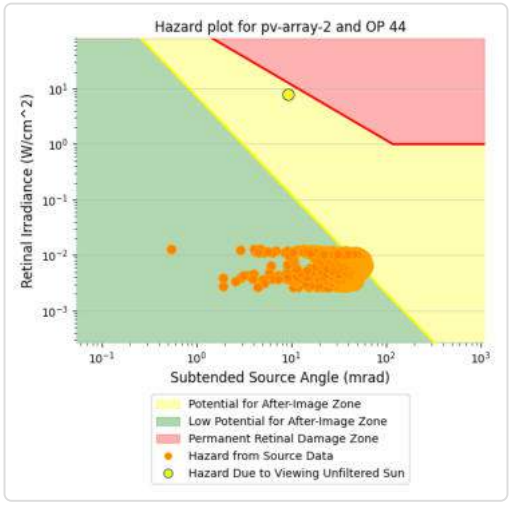
PV array 2 and OP 44

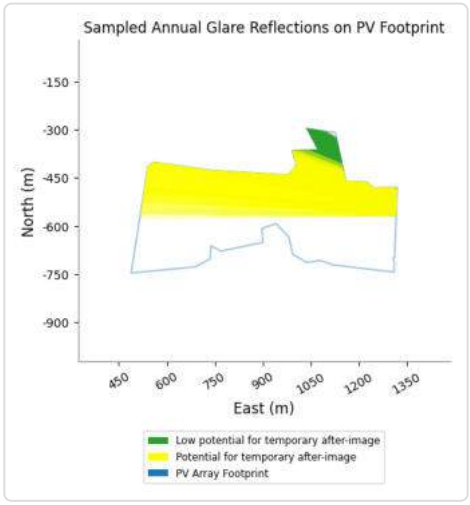
Yellow glare: 994 min.

Green glare: 2,133 min.





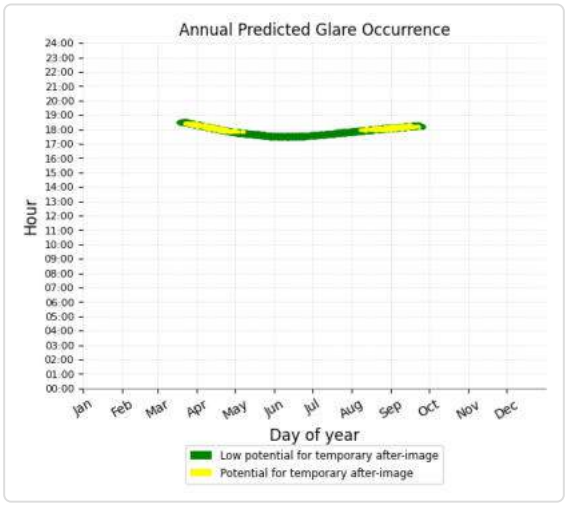


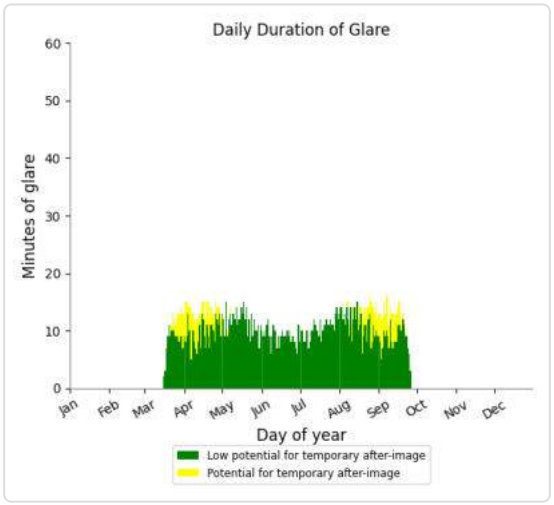


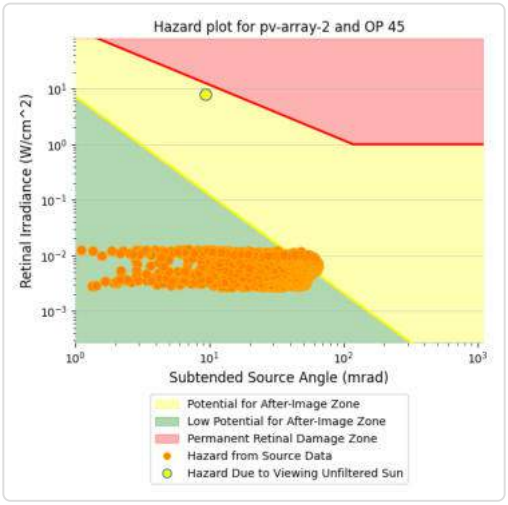
PV array 2 and OP 45

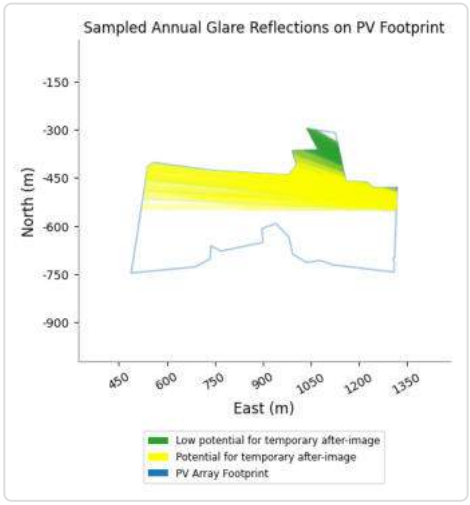
Yellow glare: 318 min.

Green glare: 1,935 min.





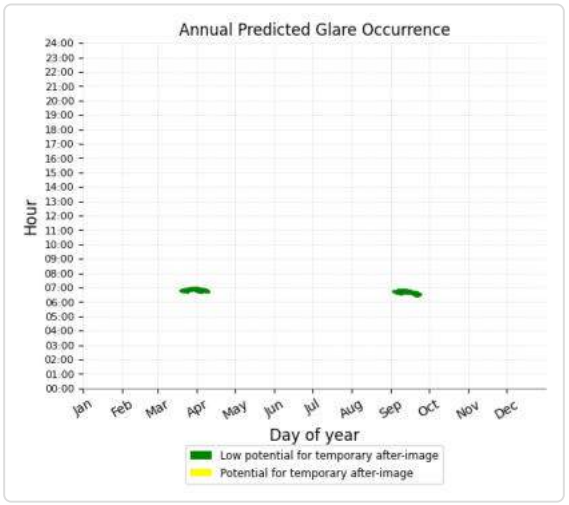


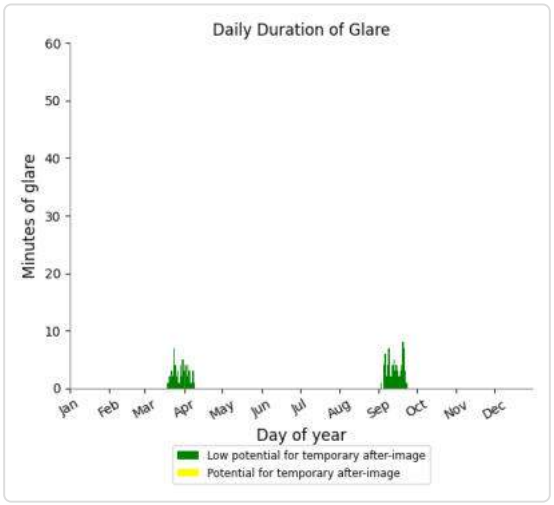


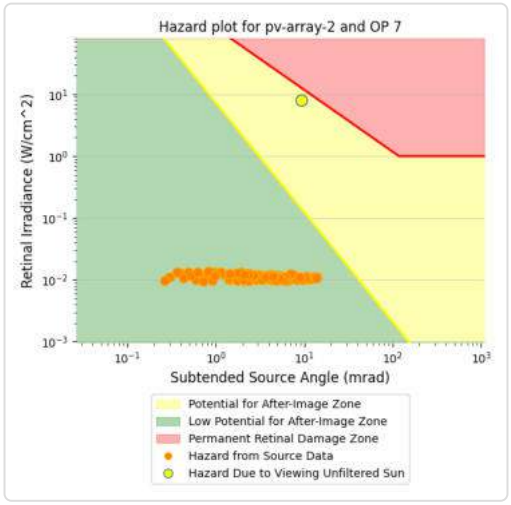
PV array 2 and OP 7

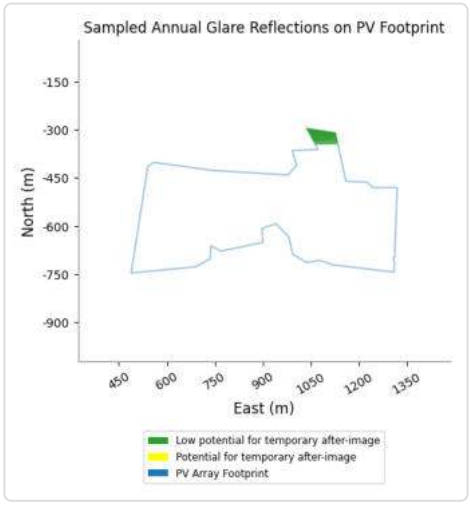
Yellow glare: none

Green glare: 135 min.





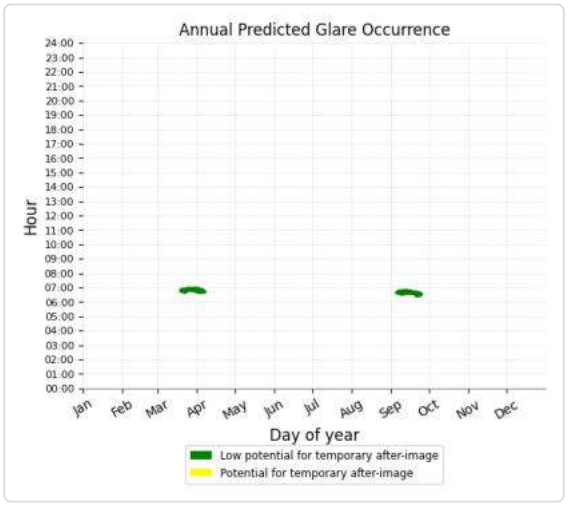


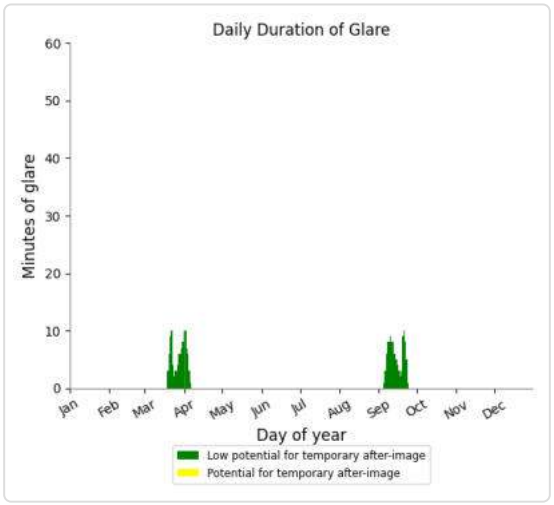


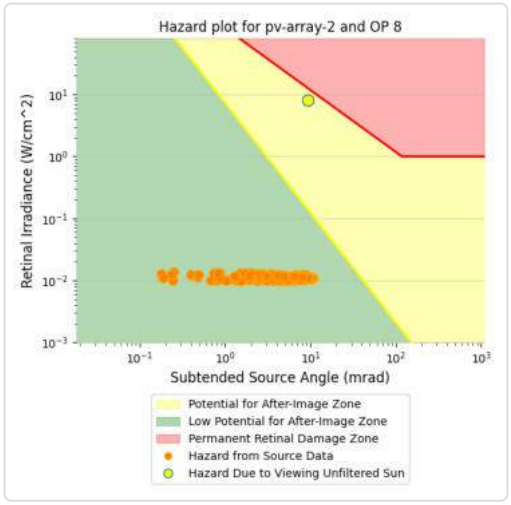
PV array 2 and OP 8

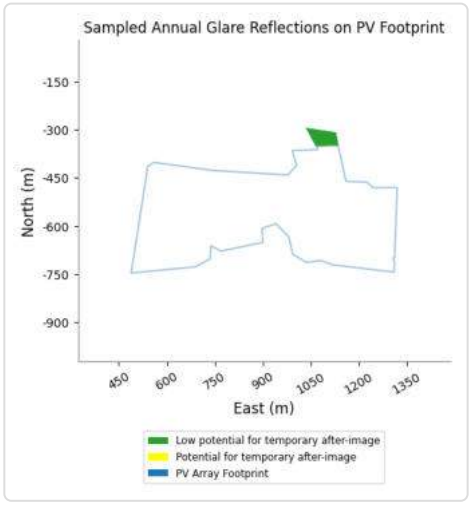
Yellow glare: none

Green glare: 221 min.





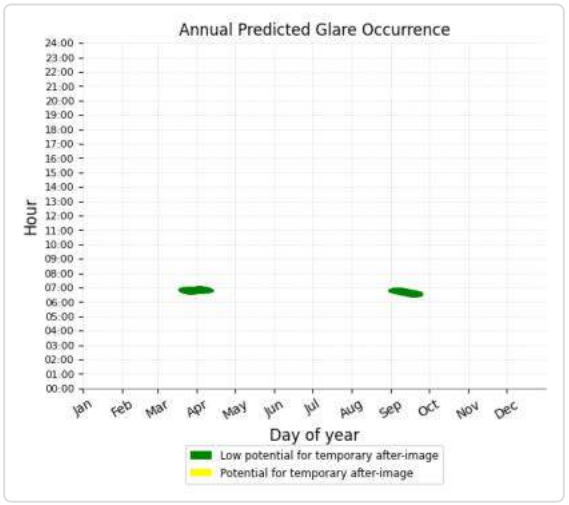


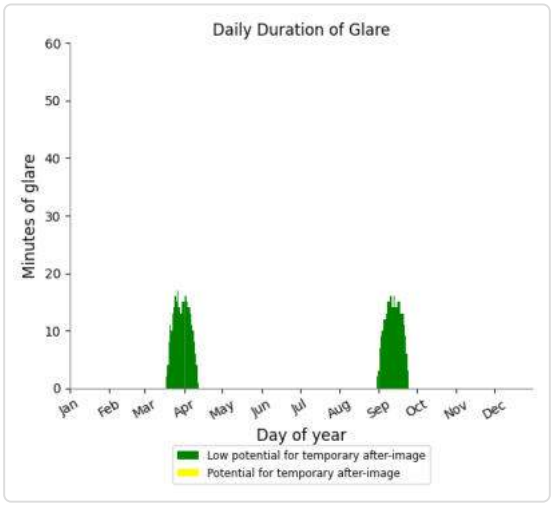


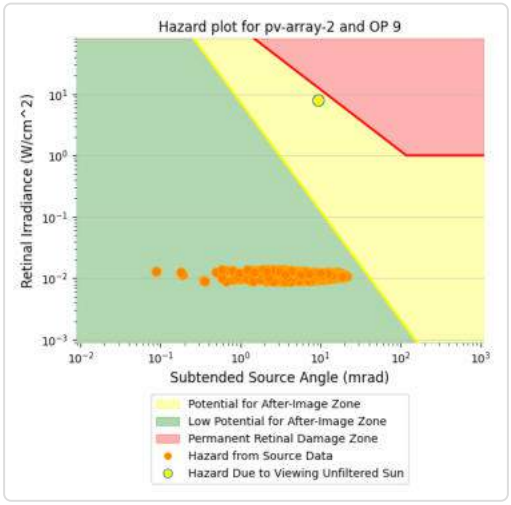
PV array 2 and OP 9

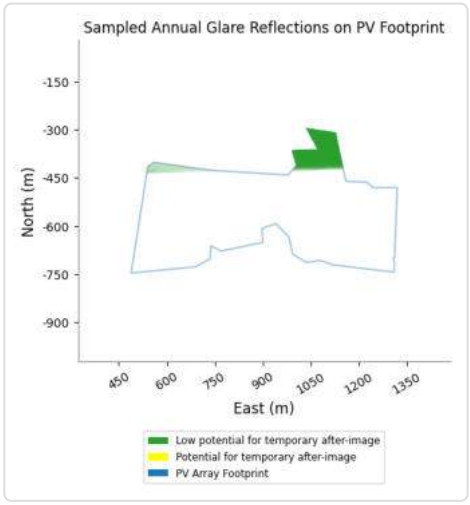
Yellow glare: none

Green glare: 578 min.





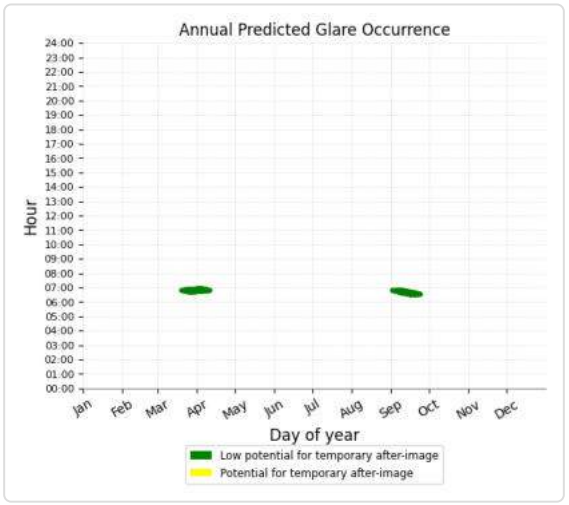


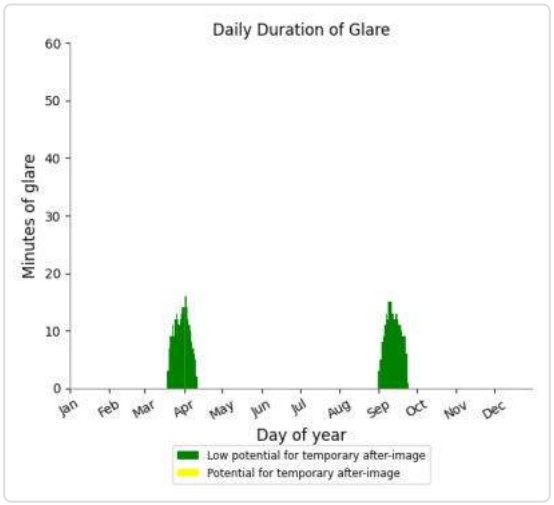


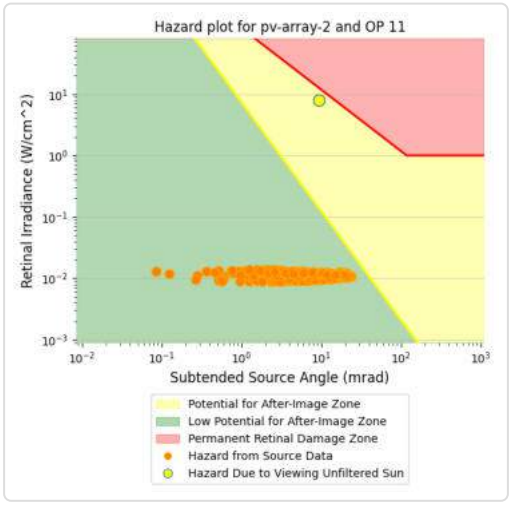
PV array 2 and OP 11

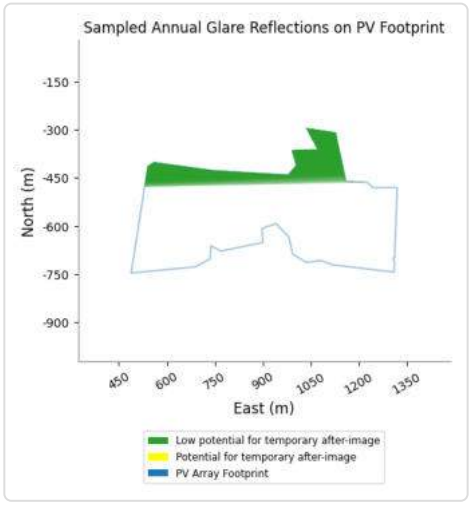
Yellow glare: none

Green glare: 479 min.





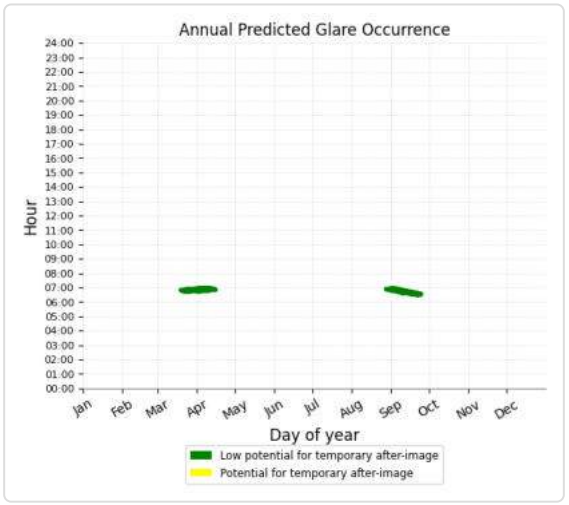


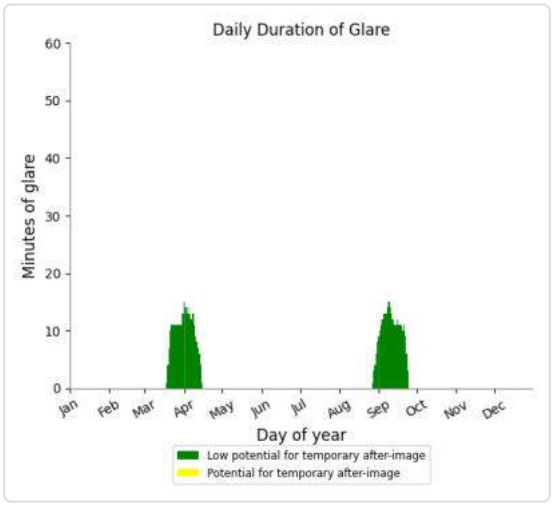


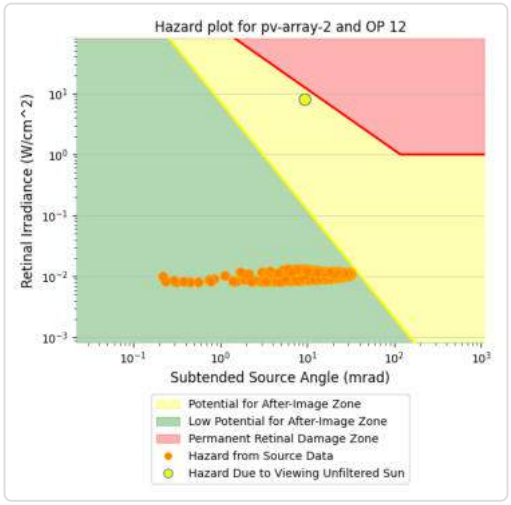
PV array 2 and OP 12

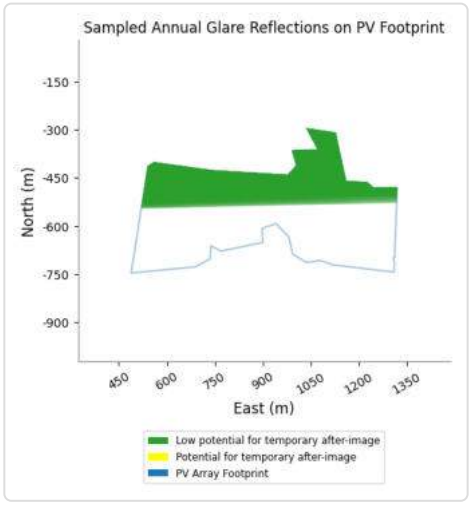
Yellow glare: none

Green glare: 574 min.





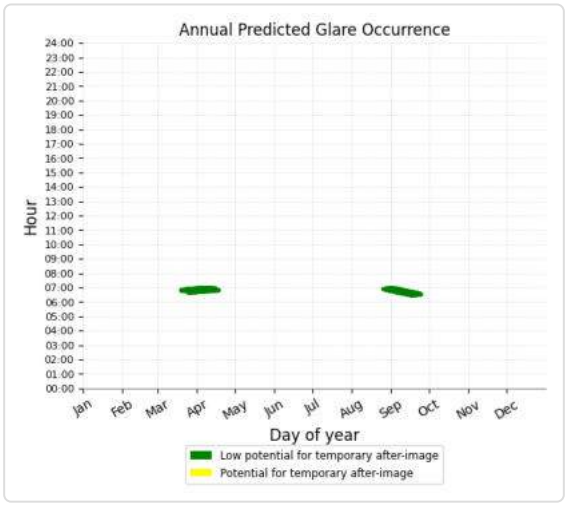


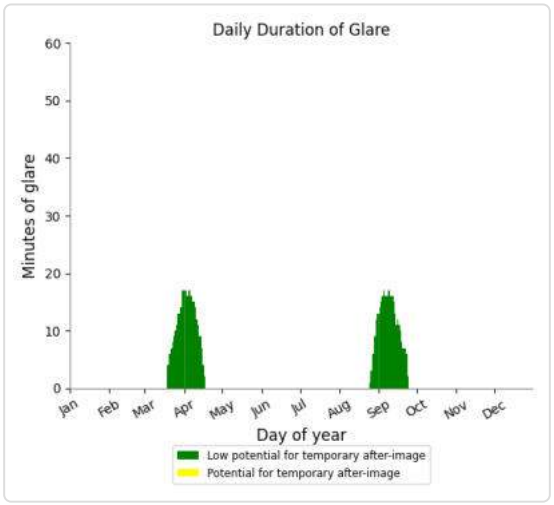


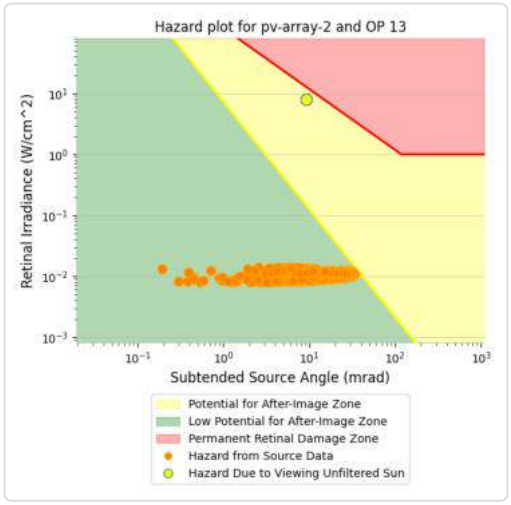
PV array 2 and OP 13

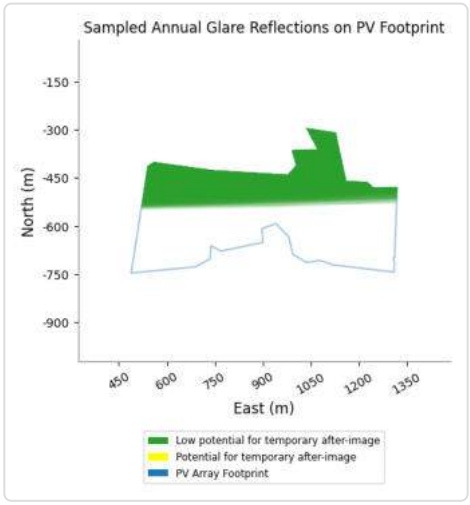
Yellow glare: none

Green glare: 692 min.





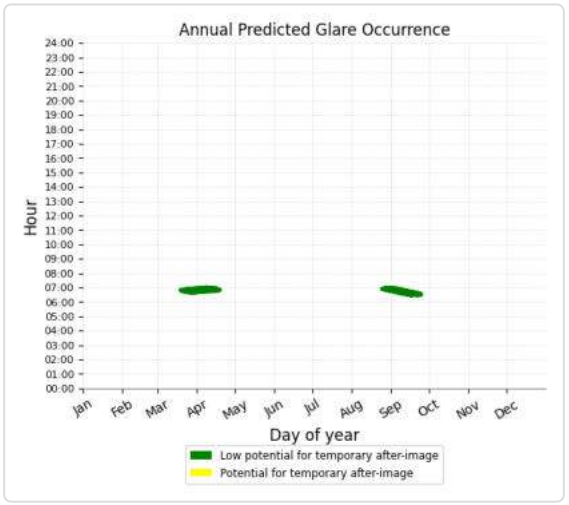


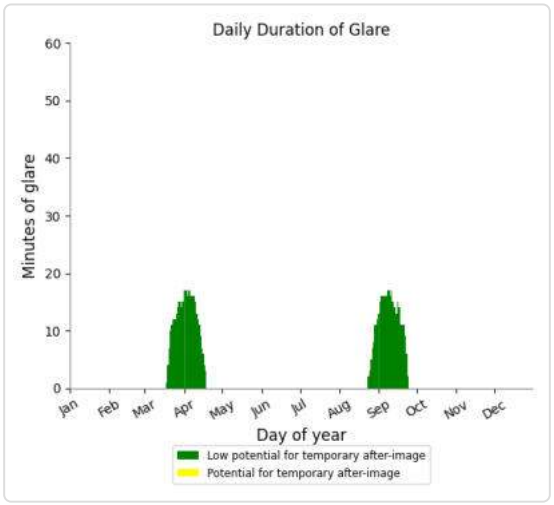


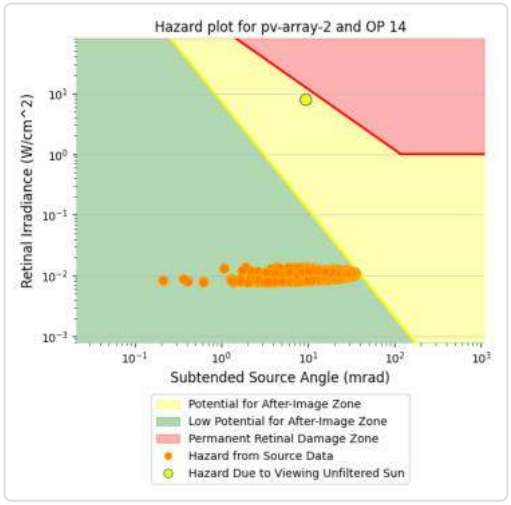
PV array 2 and OP 14

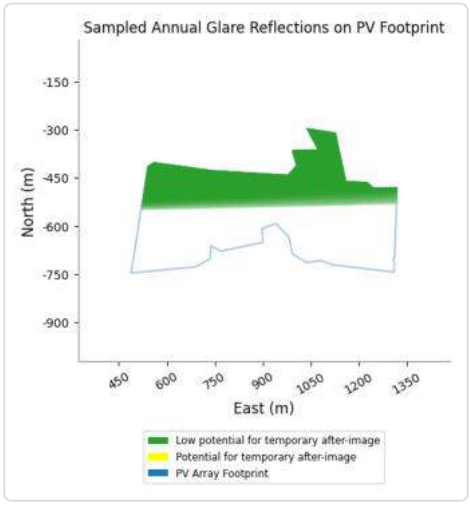
Yellow glare: none

Green glare: 763 min.





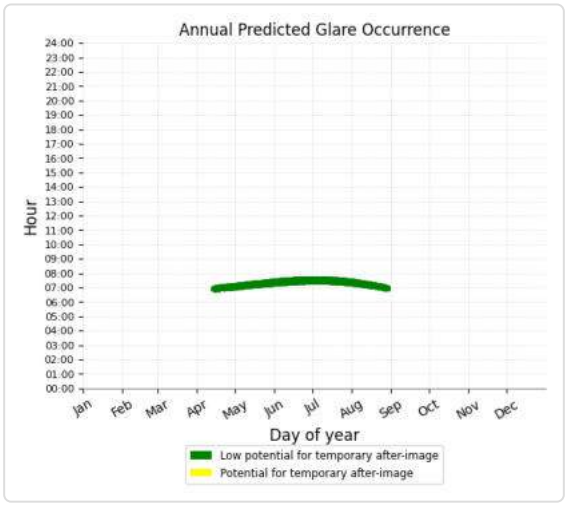


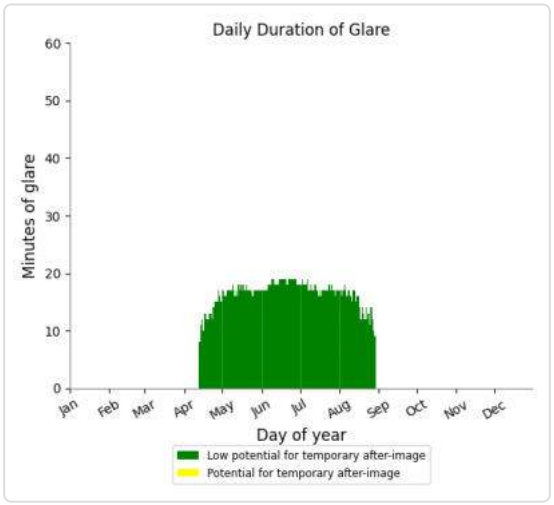


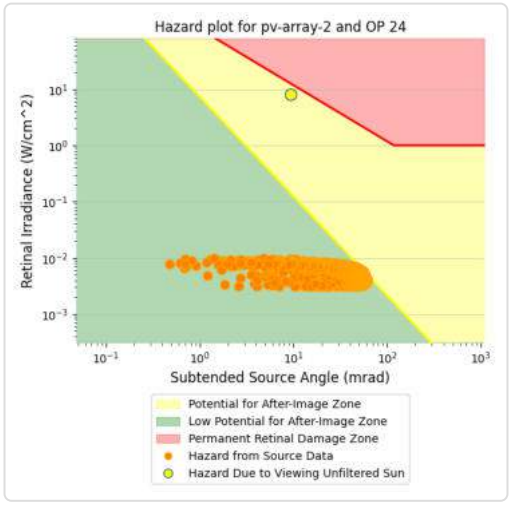
PV array 2 and OP 24

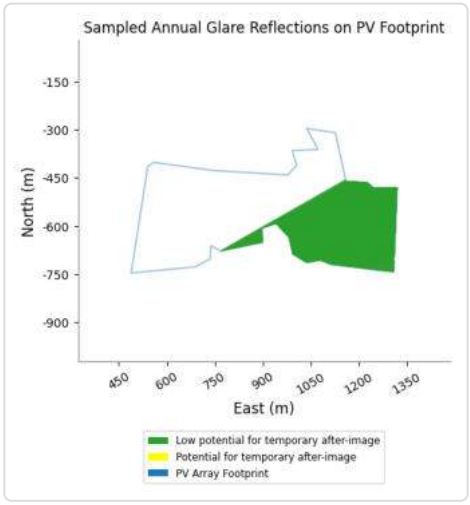
Yellow glare: none

Green glare: 2,274 min.





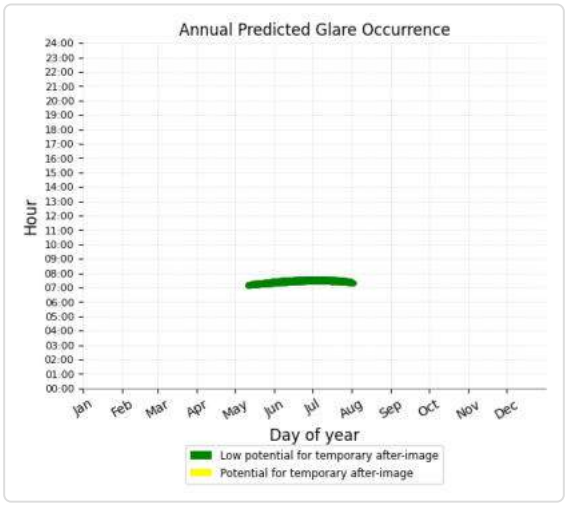


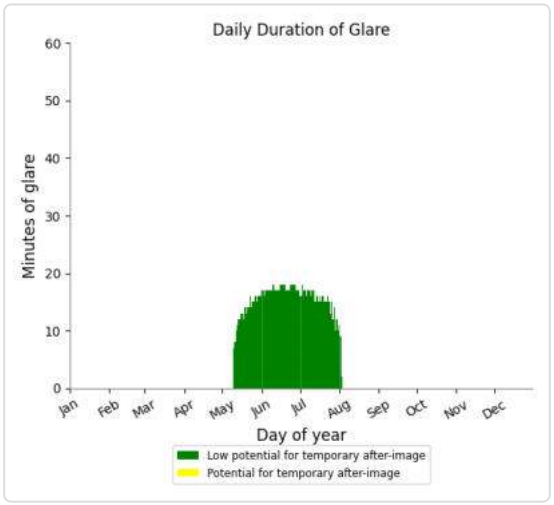


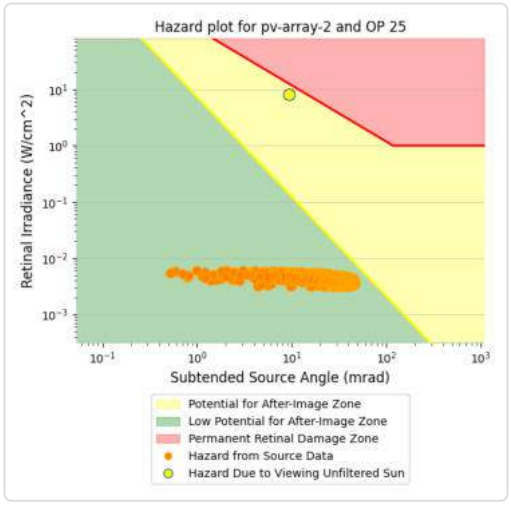
PV array 2 and OP 25

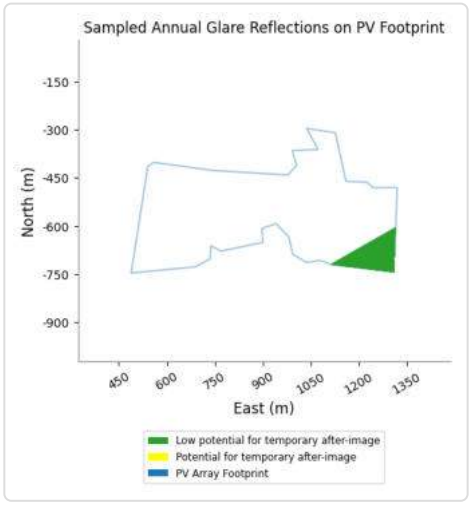
Yellow glare: none

Green glare: 1,304 min.





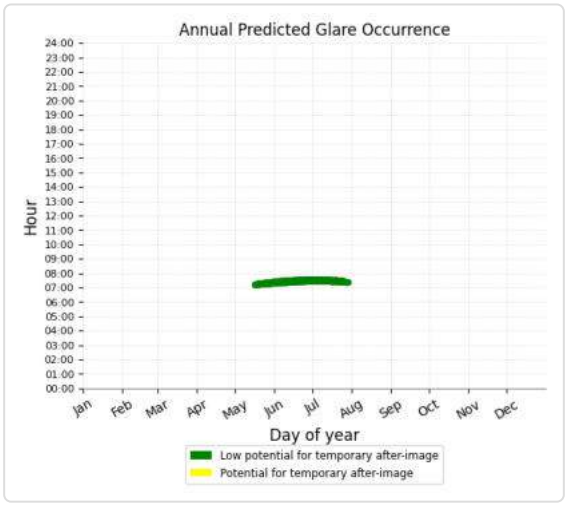


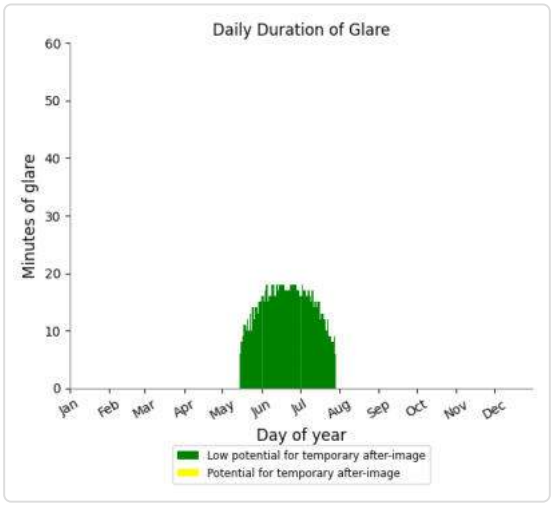


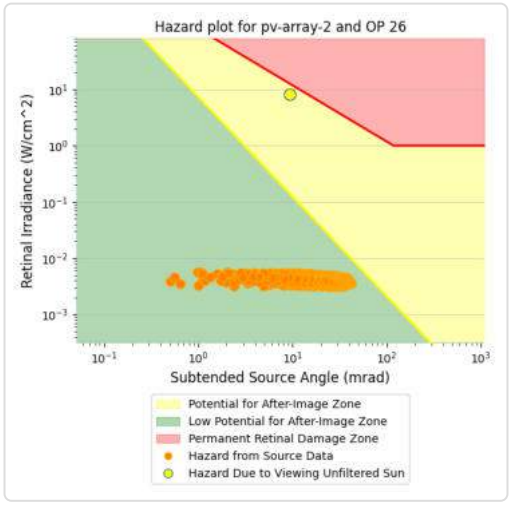
PV array 2 and OP 26

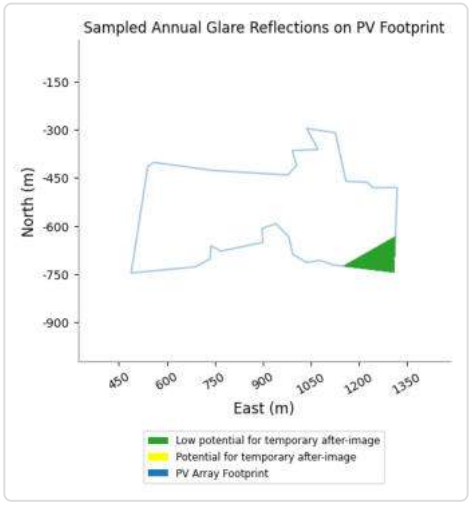
Yellow glare: none

Green glare: 1,097 min.





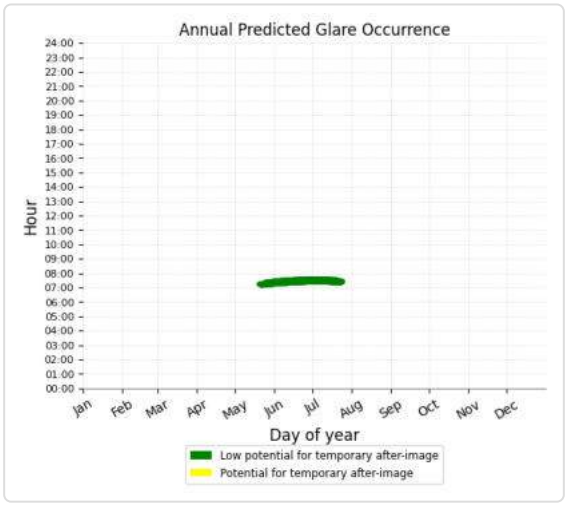


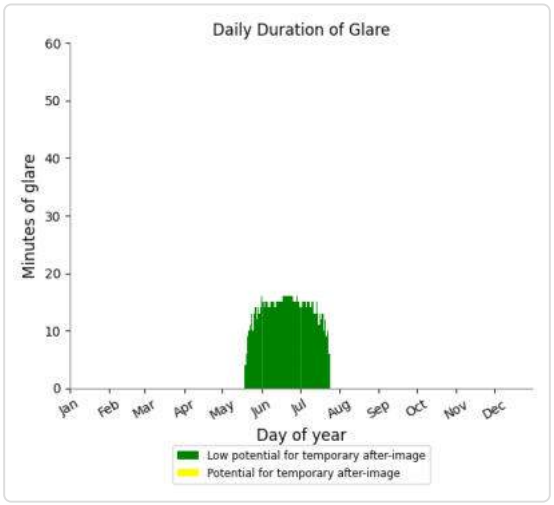


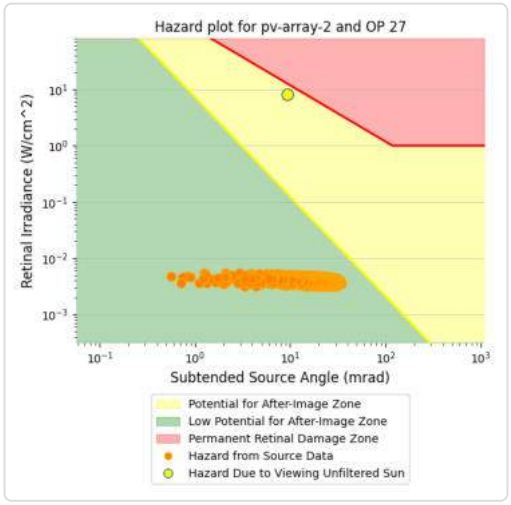
PV array 2 and OP 27

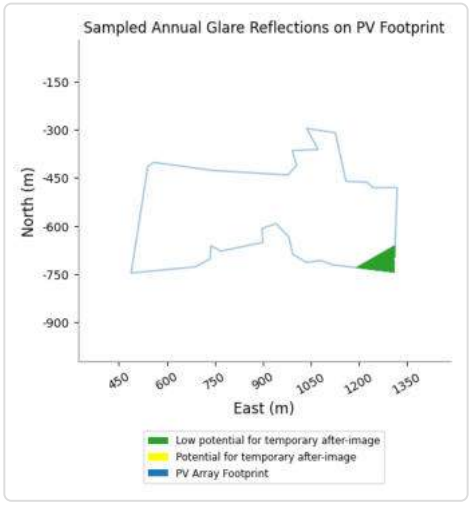
Yellow glare: none

Green glare: 908 min.





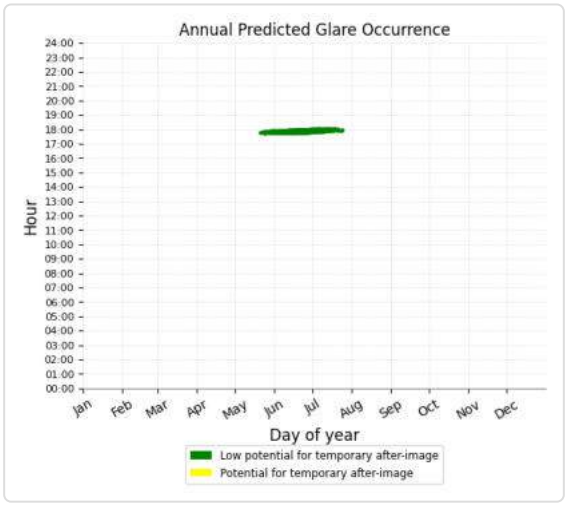


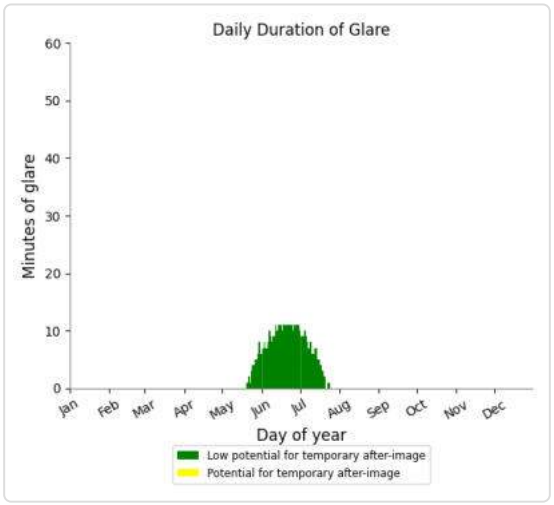


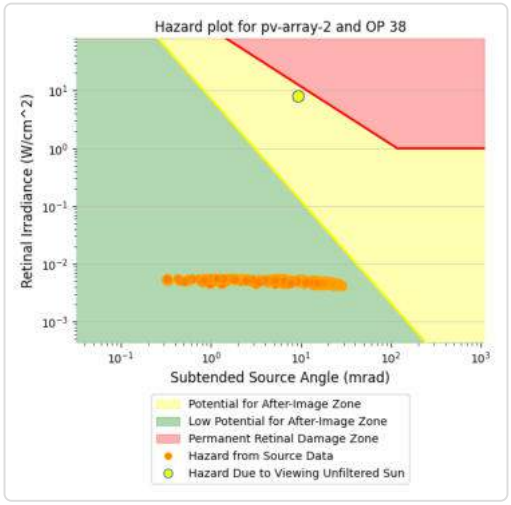
PV array 2 and OP 38

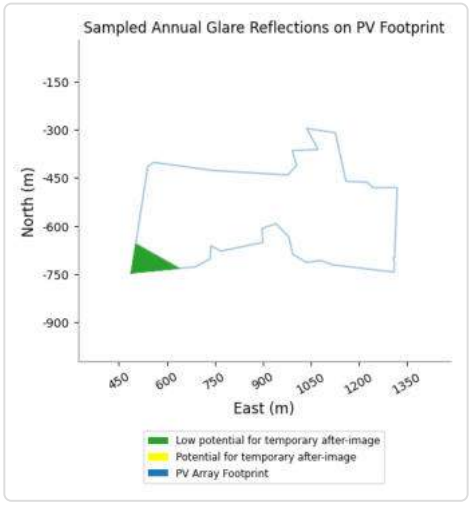
Yellow glare: none

Green glare: 480 min.





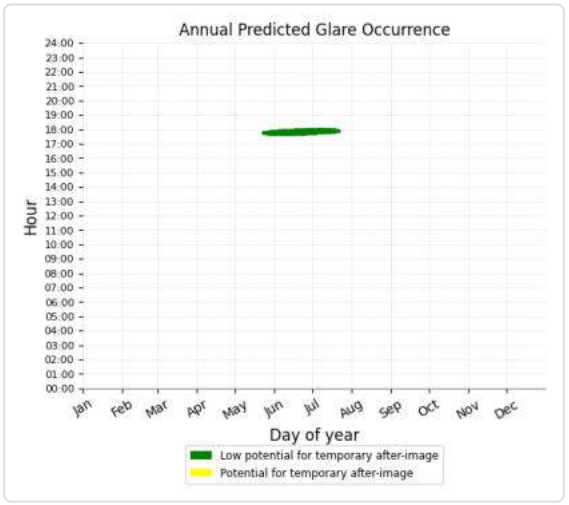


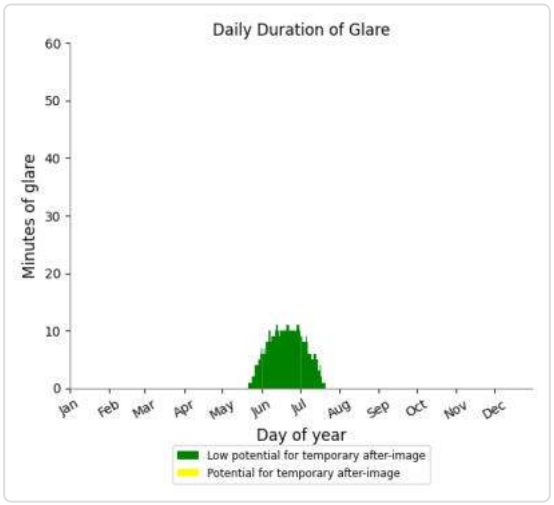


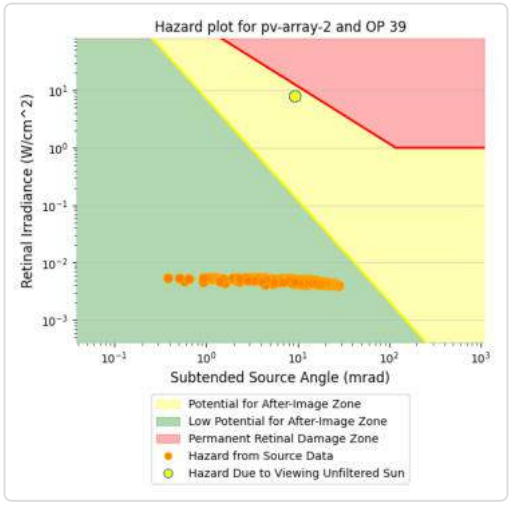
PV array 2 and OP 39

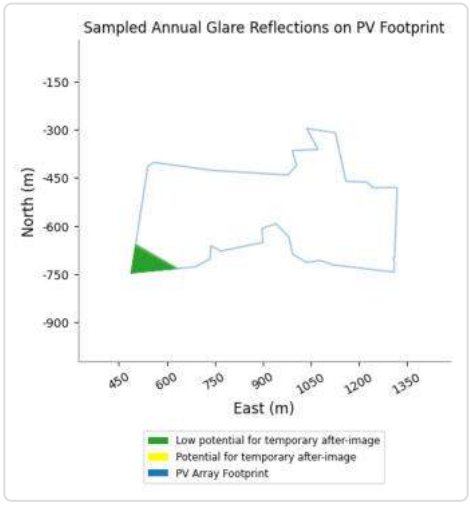
Yellow glare: none

Green glare: 428 min.



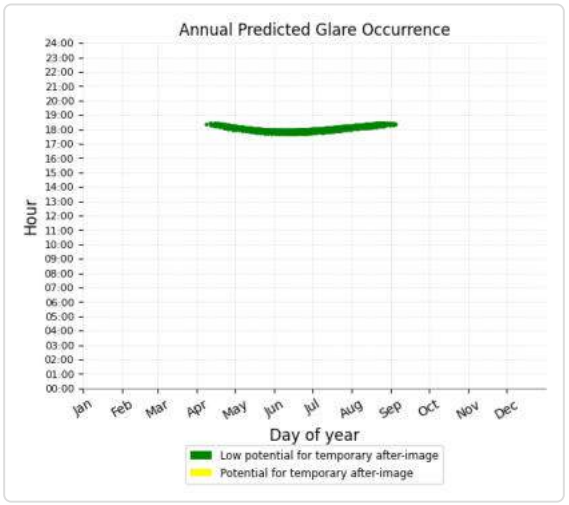


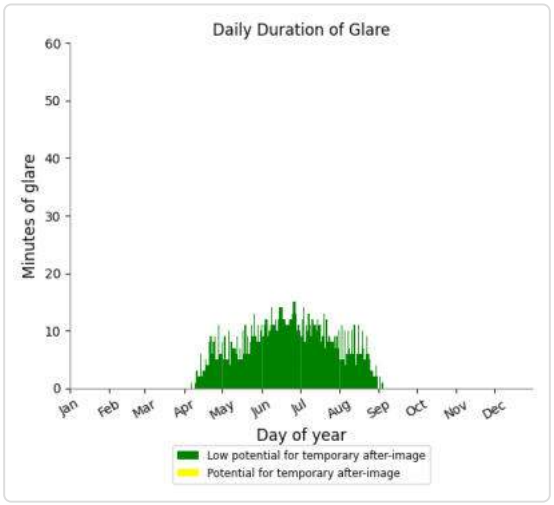


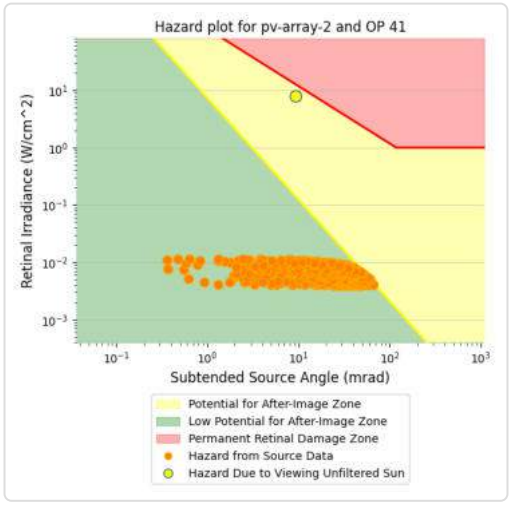


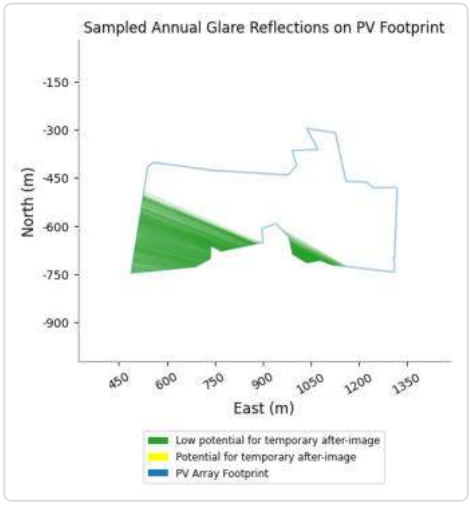
PV array 2 and OP 41

Yellow glare: none
Green glare: 1,214 min.









PV array 2 and OP 1

No glare found

PV array 2 and OP 2

No glare found

PV array 2 and OP 3

No glare found

PV array 2 and OP 4

No glare found

PV array 2 and OP 5

No glare found

PV array 2 and OP 6

No glare found

PV array 2 and OP 10

No glare found

PV array 2 and OP 28

No glare found

PV array 2 and OP 29

No glare found

PV array 2 and OP 30

No glare found

PV array 2 and OP 31

No glare found

PV array 2 and OP 32

No glare found

PV array 2 and OP 33

No glare found

PV array 2 and OP 34

No glare found

PV array 2 and OP 35

No glare found

PV array 2 and OP 36

No glare found

PV array 2 and OP 37

No glare found

PV array 2 and OP 43

No glare found

PV array 2 and OP 46

No glare found

PV array 2 and OP 47

No glare found

PV array 2 and OP 48

No glare found

PV array 2 and OP 49

No glare found

PV array 2 and OP 50

No glare found

PV array 2 and OP 51

No glare found

PV array 2 and OP 52

No glare found

PV array 2 and OP 53

No glare found

PV array 2 and OP 54

No glare found

PV: PV array 3 potential temporary after-image

Receptor results ordered by category of glare

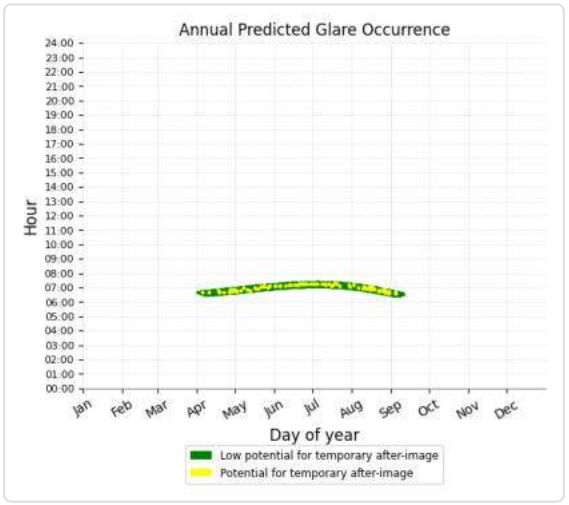
Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 25	1,210	20.2	88	1.5
OP 26	1,615	26.9	883	14.7
OP 27	1,007	16.8	1,645	27.4
OP 38	1,591	26.5	131	2.2
OP 39	1,696	28.3	92	1.5
OP 23	929	15.5	0	0.0
OP 24	2,056	34.3	0	0.0
OP 40	518	8.6	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0
OP 21	0	0.0	0	0.0
OP 22	0	0.0	0	0.0
OP 28	0	0.0	0	0.0
OP 29	0	0.0	0	0.0
OP 30	0	0.0	0	0.0
OP 31	0	0.0	0	0.0
OP 32	0	0.0	0	0.0
OP 33	0	0.0	0	0.0
OP 34	0	0.0	0	0.0
OP 35	0	0.0	0	0.0
OP 36	0	0.0	0	0.0

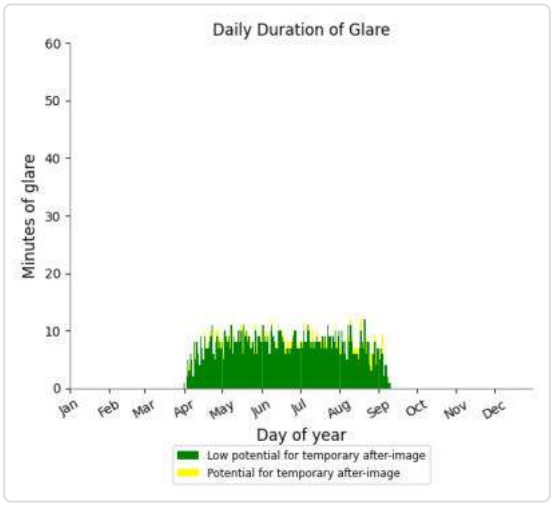
Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 37	0	0.0	0	0.0
OP 41	0	0.0	0	0.0
OP 42	0	0.0	0	0.0
OP 43	0	0.0	0	0.0
OP 44	0	0.0	0	0.0
OP 45	0	0.0	0	0.0
OP 46	0	0.0	0	0.0
OP 47	0	0.0	0	0.0
OP 48	0	0.0	0	0.0
OP 49	0	0.0	0	0.0
OP 50	0	0.0	0	0.0
OP 51	0	0.0	0	0.0
OP 52	0	0.0	0	0.0
OP 53	0	0.0	0	0.0
OP 54	0	0.0	0	0.0

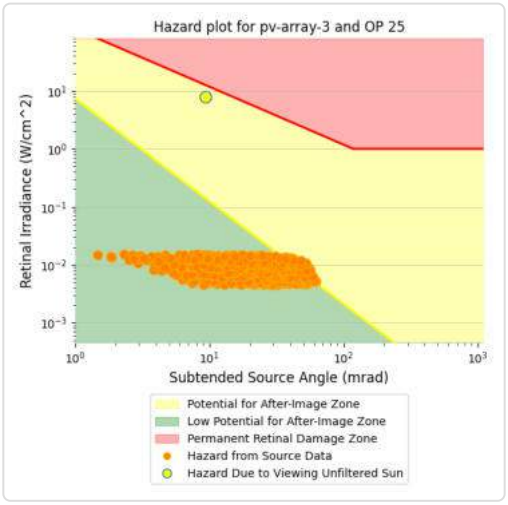
PV array 3 and OP 25

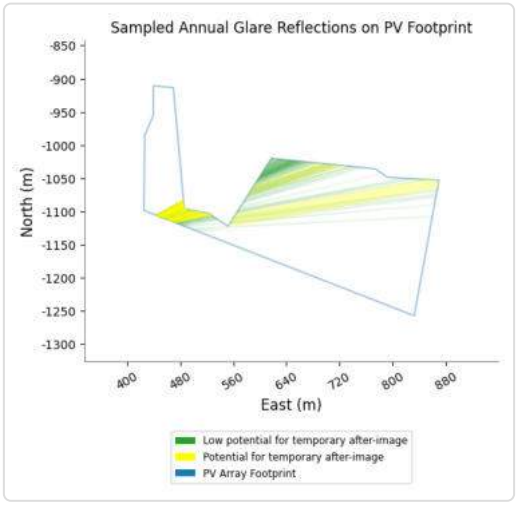
Yellow glare: 88 min.

Green glare: 1,210 min.





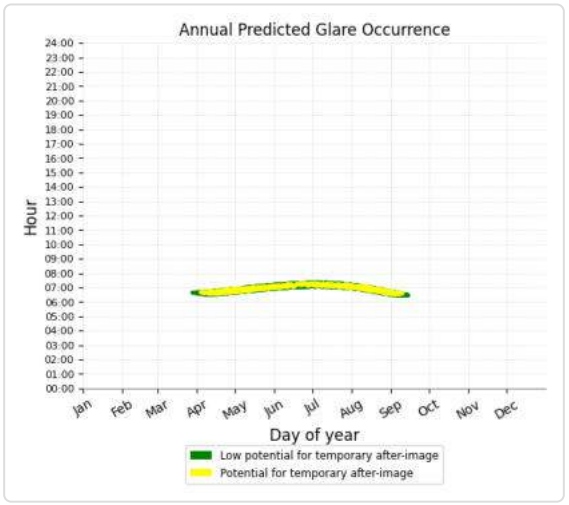


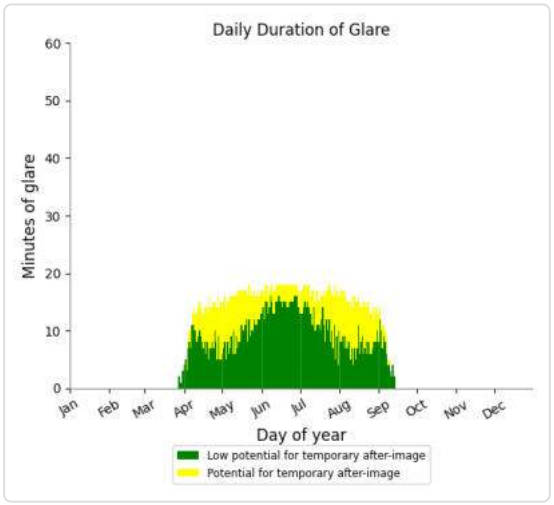


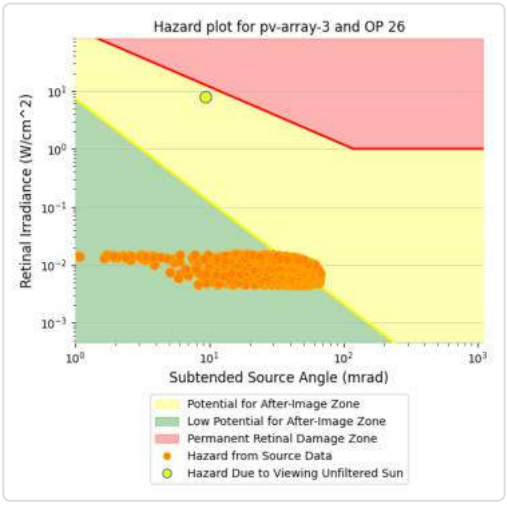
PV array 3 and OP 26

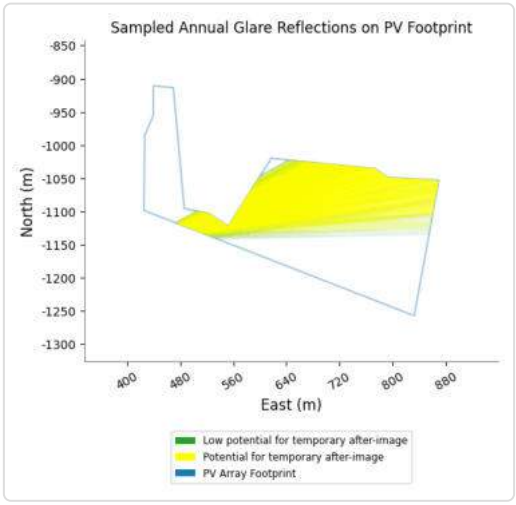
Yellow glare: 883 min.

Green glare: 1,615 min.





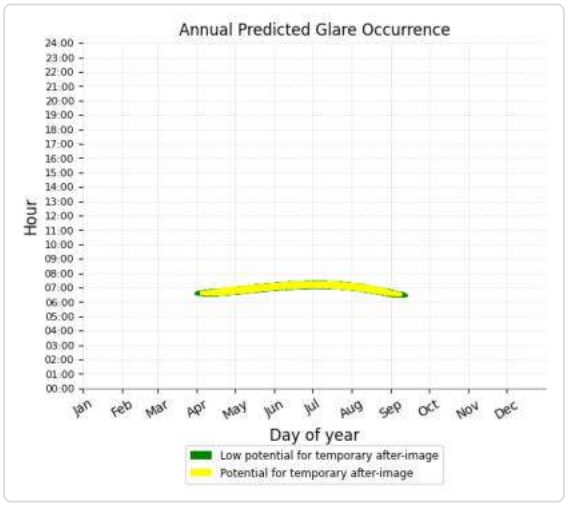


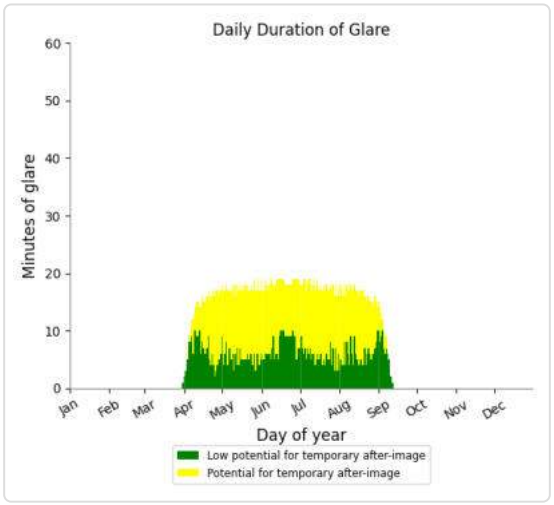


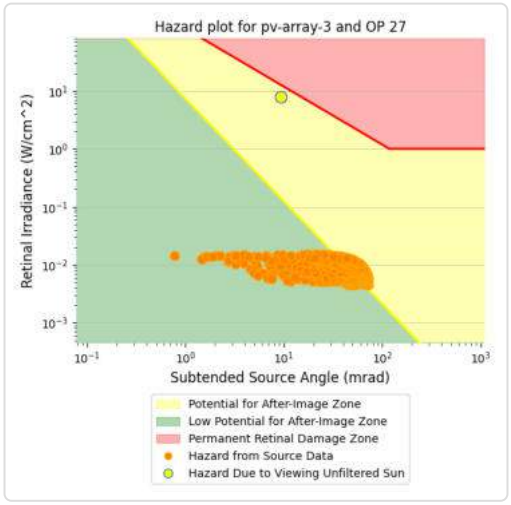
PV array 3 and OP 27

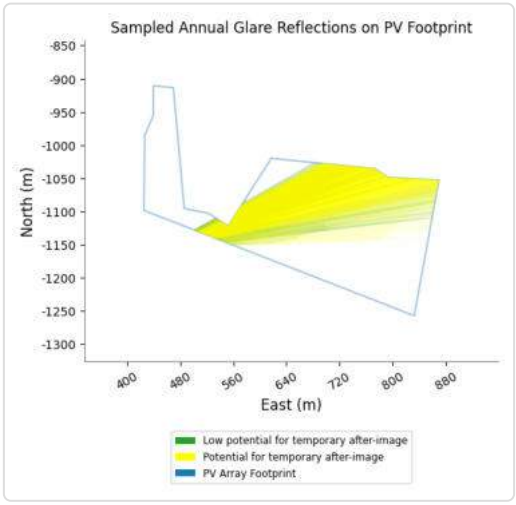
Yellow glare: 1,645 min.

Green glare: 1,007 min.





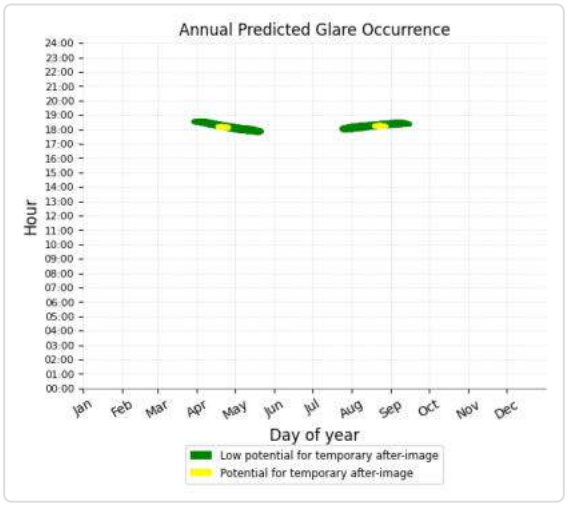


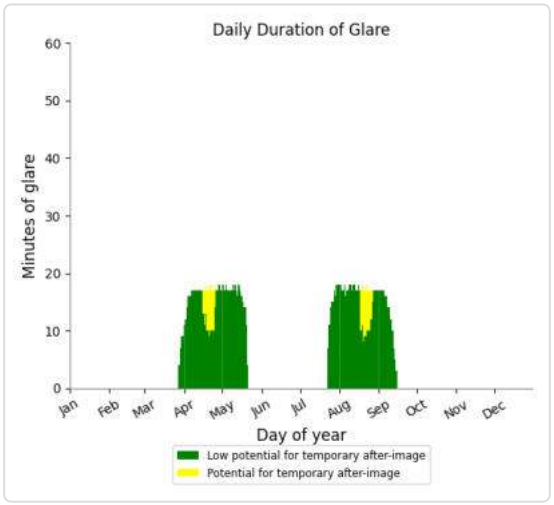


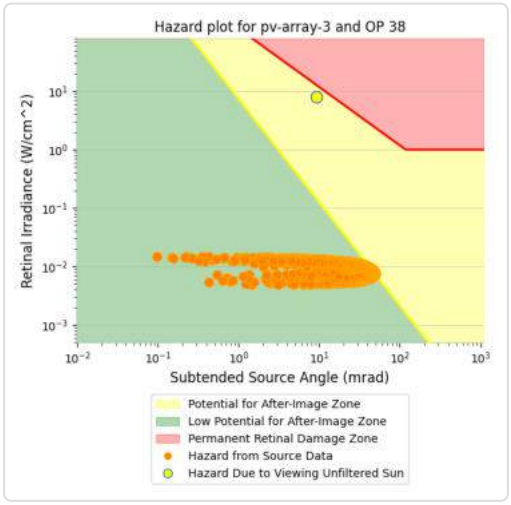
PV array 3 and OP 38

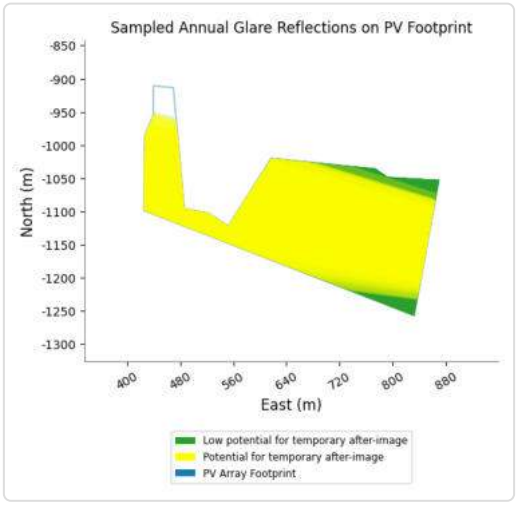
Yellow glare: 131 min.

Green glare: 1,591 min.





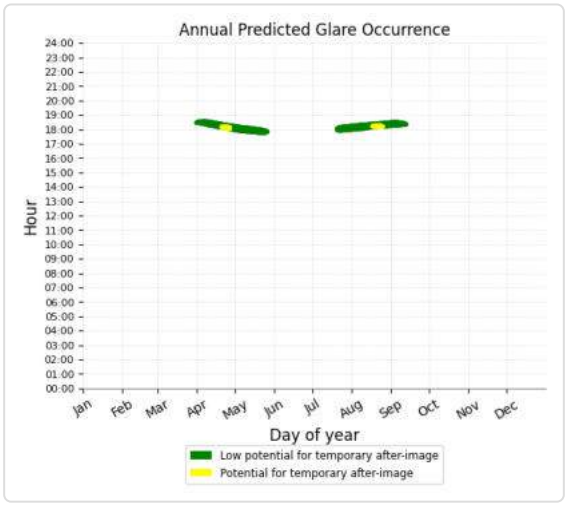


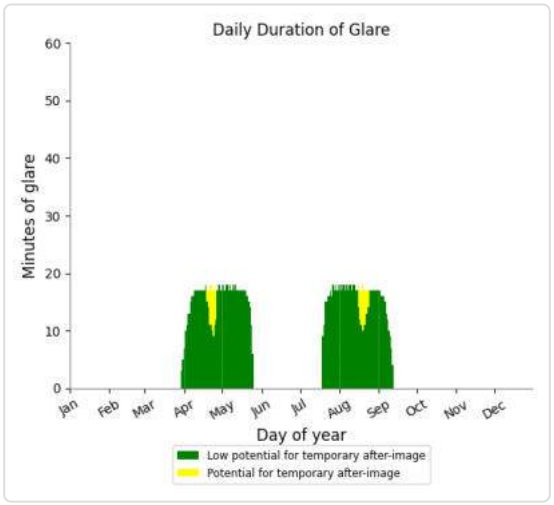


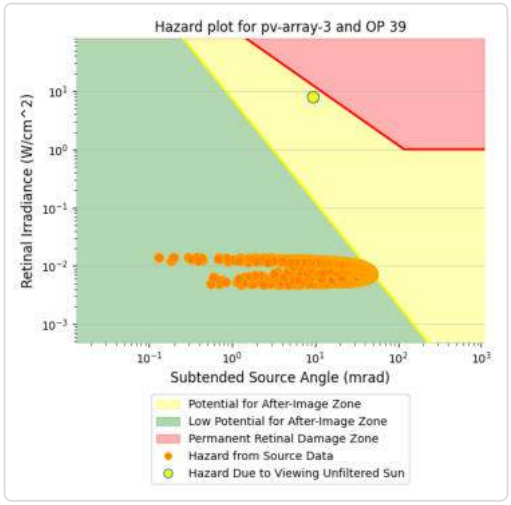
PV array 3 and OP 39

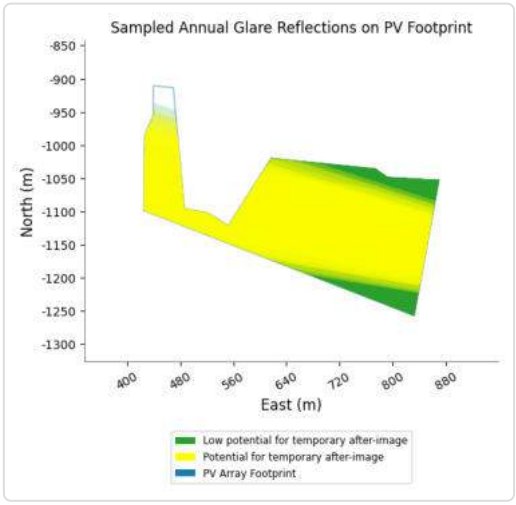
Yellow glare: 92 min.

Green glare: 1,696 min.





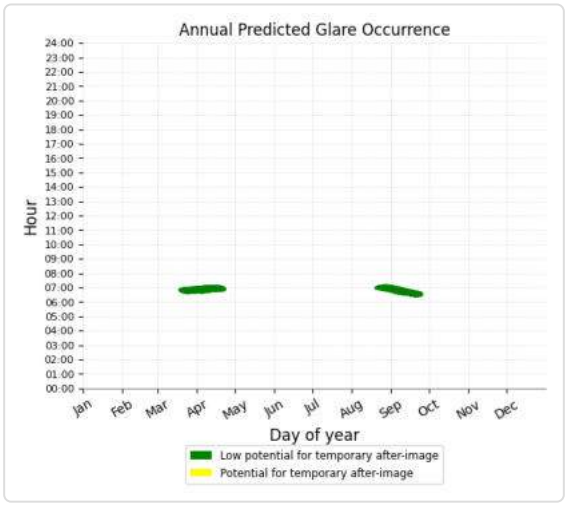


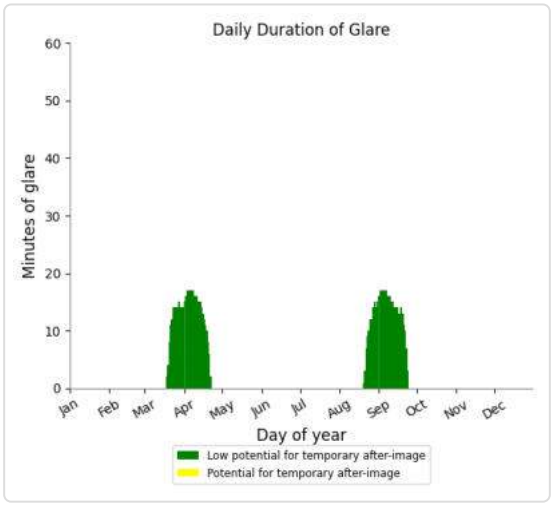


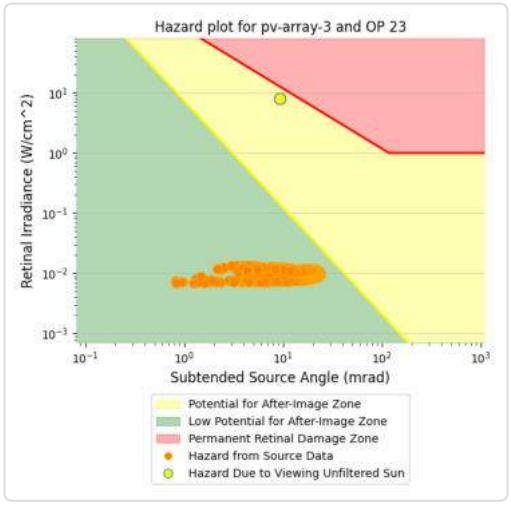
PV array 3 and OP 23

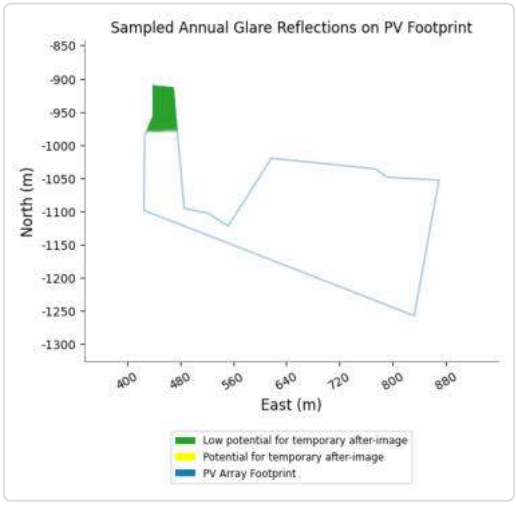
Yellow glare: none

Green glare: 929 min.





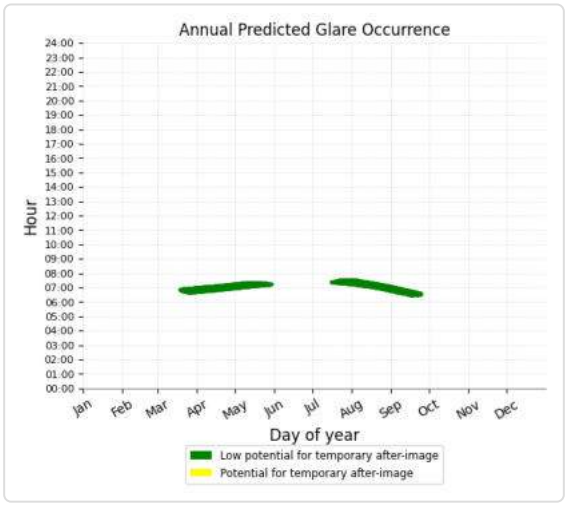


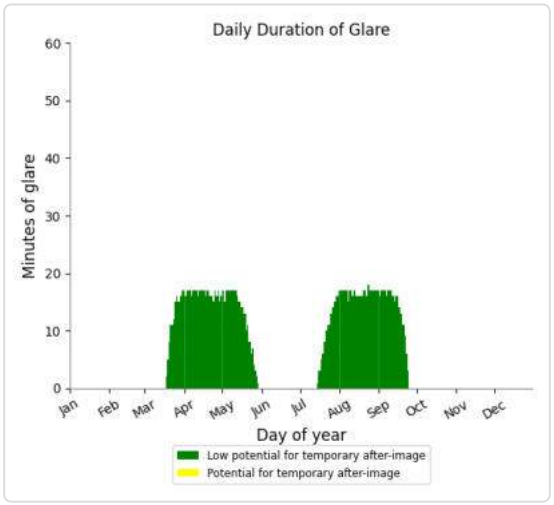


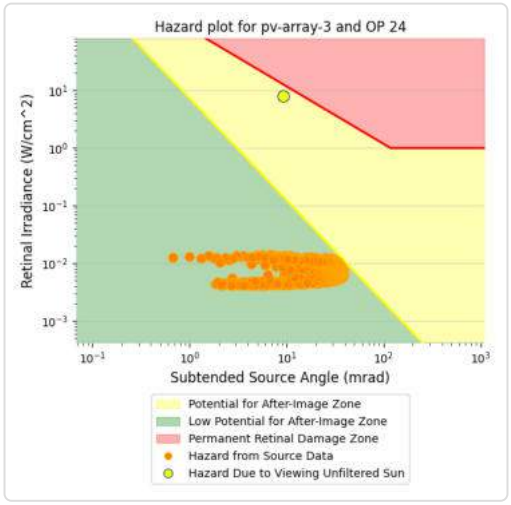
PV array 3 and OP 24

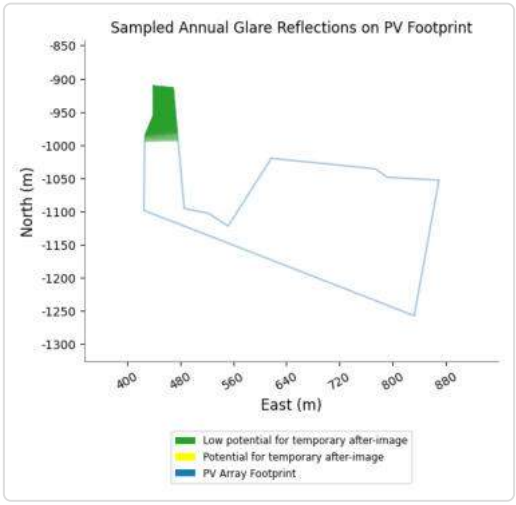
Yellow glare: none

Green glare: 2,056 min.



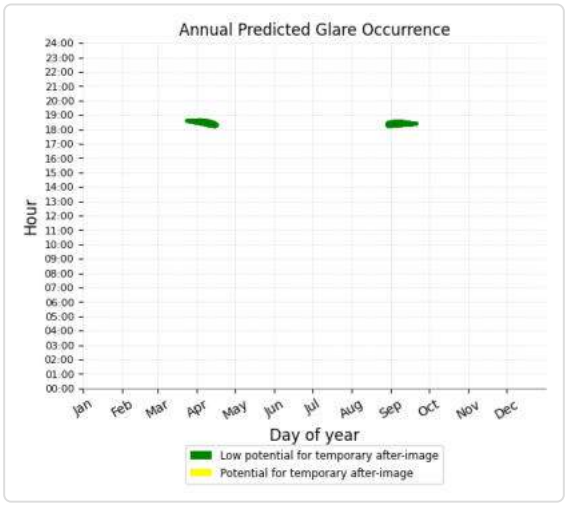


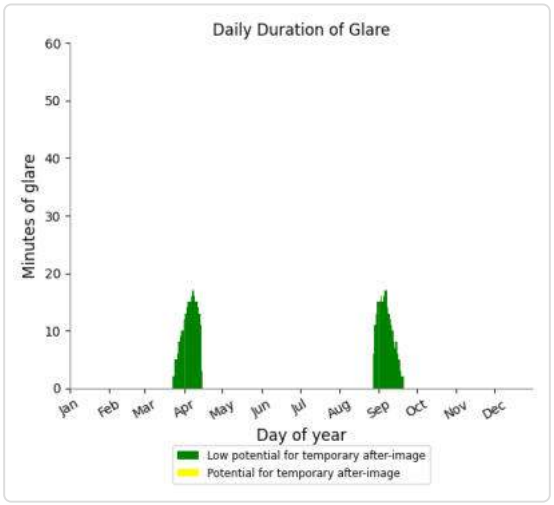


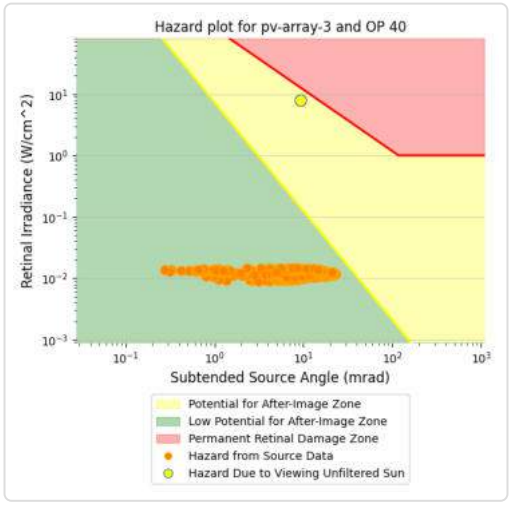


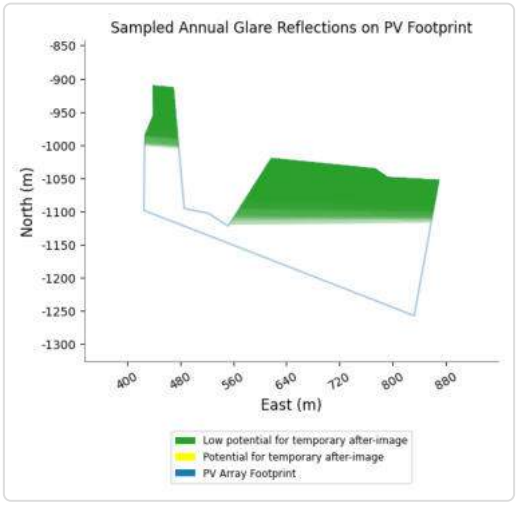
PV array 3 and OP 40

Yellow glare: none
Green glare: 518 min.









PV array 3 and OP 1

No glare found

PV array 3 and OP 2

No glare found

PV array 3 and OP 3

No glare found

PV array 3 and OP 4

No glare found

PV array 3 and OP 5

No glare found

PV array 3 and OP 6

No glare found

PV array 3 and OP 7

No glare found

PV array 3 and OP 8

No glare found

PV array 3 and OP 9

No glare found

PV array 3 and OP 10

No glare found

PV array 3 and OP 11

No glare found

PV array 3 and OP 12

No glare found

PV array 3 and OP 13

No glare found

PV array 3 and OP 14

No glare found

PV array 3 and OP 15

No glare found

PV array 3 and OP 16

No glare found

PV array 3 and OP 17

No glare found

PV array 3 and OP 18

No glare found

PV array 3 and OP 19

No glare found

PV array 3 and OP 20

No glare found

PV array 3 and OP 21

No glare found

PV array 3 and OP 22

No glare found

PV array 3 and OP 28

No glare found

PV array 3 and OP 29

No glare found

PV array 3 and OP 30

No glare found

PV array 3 and OP 31

No glare found

PV array 3 and OP 32

No glare found

PV array 3 and OP 33

No glare found

PV array 3 and OP 34

No glare found

PV array 3 and OP 35

No glare found

PV array 3 and OP 36

No glare found

PV array 3 and OP 37

No glare found

PV array 3 and OP 41

No glare found

PV array 3 and OP 42

No glare found

PV array 3 and OP 43

No glare found

PV array 3 and OP 44

No glare found

PV array 3 and OP 45

No glare found

PV array 3 and OP 46

No glare found

PV array 3 and OP 47

No glare found

PV array 3 and OP 48

No glare found

PV array 3 and OP 49

No glare found

PV array 3 and OP 50

No glare found

PV array 3 and OP 51

No glare found

PV array 3 and OP 52

No glare found

PV array 3 and OP 53

No glare found

PV array 3 and OP 54

No glare found

PV: PV array 4 low potential for temporary after-image

Receptor results ordered by category of glare

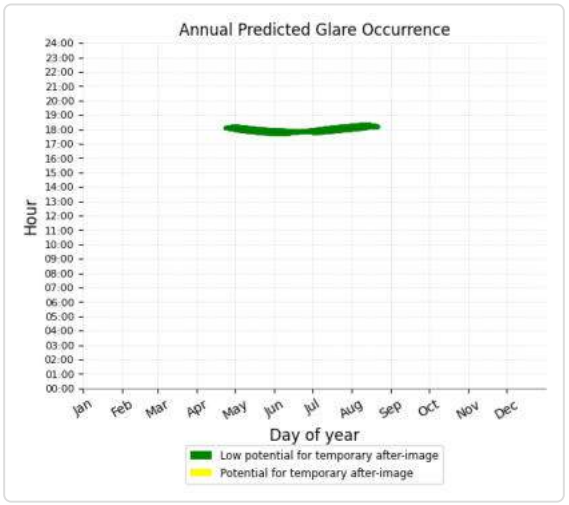
Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 34	1,423	23.7	0	0.0
OP 35	1,088	18.1	0	0.0
OP 36	1,026	17.1	0	0.0
OP 37	261	4.3	0	0.0
OP 38	75	1.2	0	0.0
OP 39	97	1.6	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0
OP 21	0	0.0	0	0.0
OP 22	0	0.0	0	0.0
OP 23	0	0.0	0	0.0
OP 24	0	0.0	0	0.0
OP 25	0	0.0	0	0.0
OP 26	0	0.0	0	0.0
OP 27	0	0.0	0	0.0
OP 28	0	0.0	0	0.0
OP 29	0	0.0	0	0.0
OP 30	0	0.0	0	0.0
OP 31	0	0.0	0	0.0
OP 32	0	0.0	0	0.0
OP 33	0	0.0	0	0.0

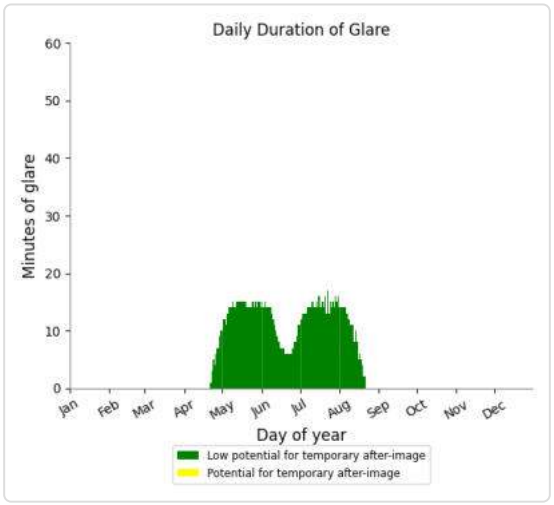
Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 40	0	0.0	0	0.0
OP 41	0	0.0	0	0.0
OP 42	0	0.0	0	0.0
OP 43	0	0.0	0	0.0
OP 44	0	0.0	0	0.0
OP 45	0	0.0	0	0.0
OP 46	0	0.0	0	0.0
OP 47	0	0.0	0	0.0
OP 48	0	0.0	0	0.0
OP 49	0	0.0	0	0.0
OP 50	0	0.0	0	0.0
OP 51	0	0.0	0	0.0
OP 52	0	0.0	0	0.0
OP 53	0	0.0	0	0.0
OP 54	0	0.0	0	0.0

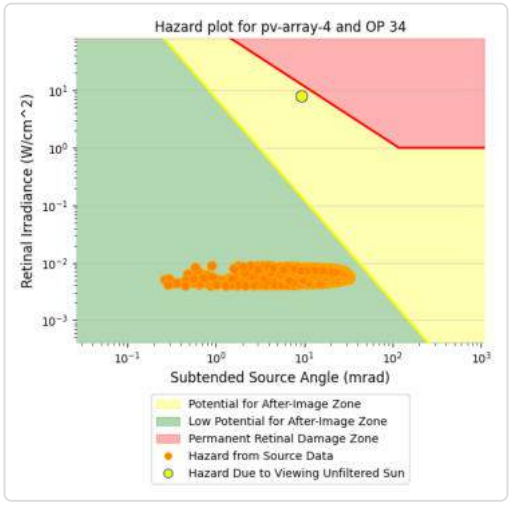
PV array 4 and OP 34

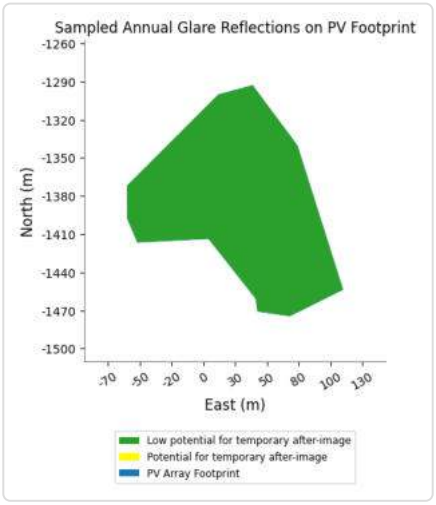
Yellow glare: none

Green glare: 1,423 min.





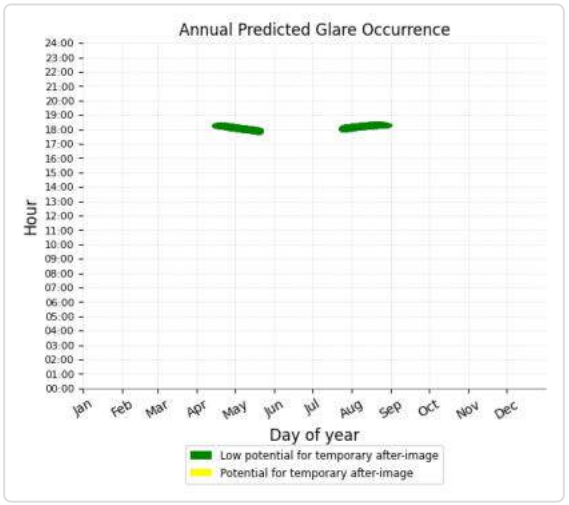


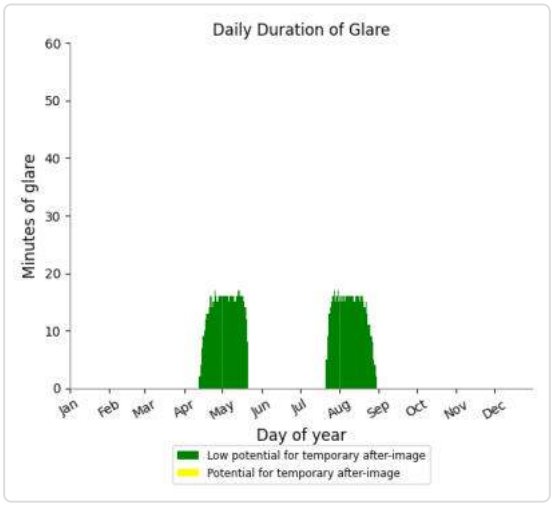


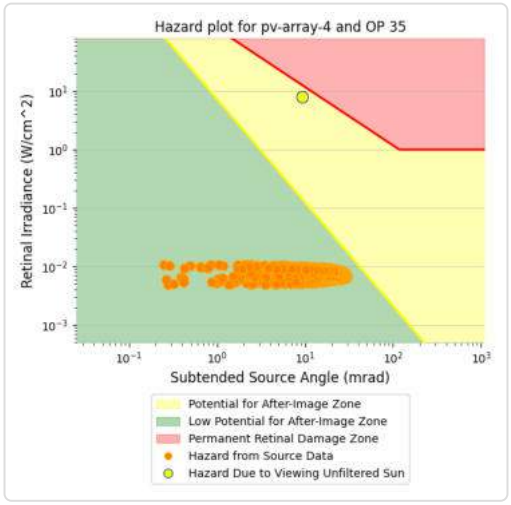
PV array 4 and OP 35

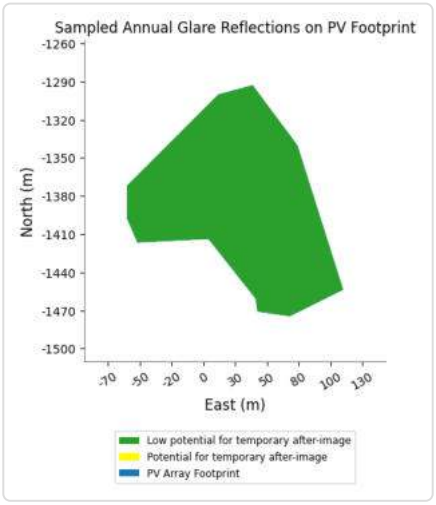
Yellow glare: none

Green glare: 1,088 min.





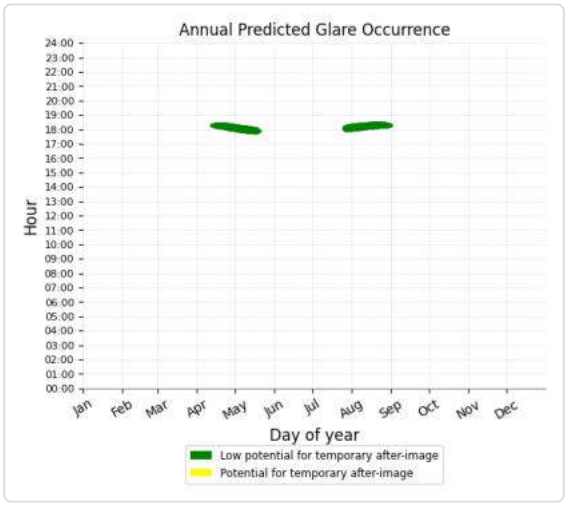


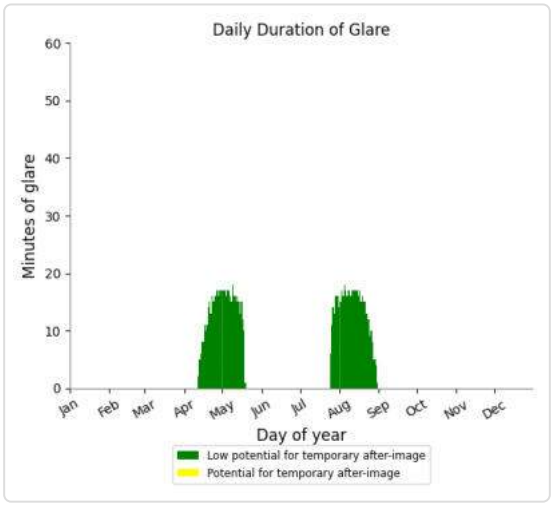


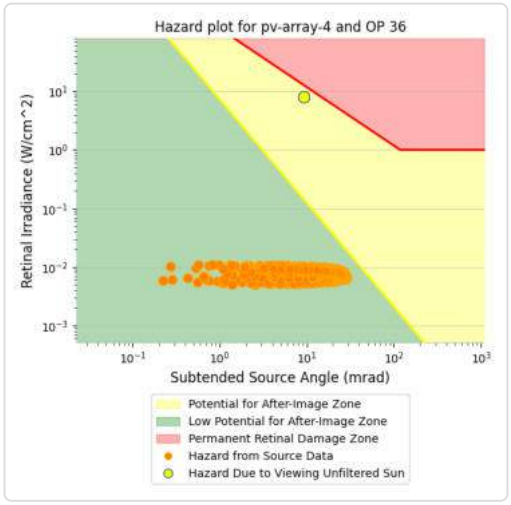
PV array 4 and OP 36

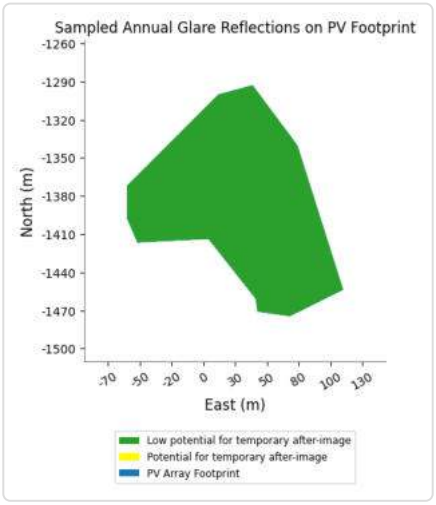
Yellow glare: none

Green glare: 1,026 min.





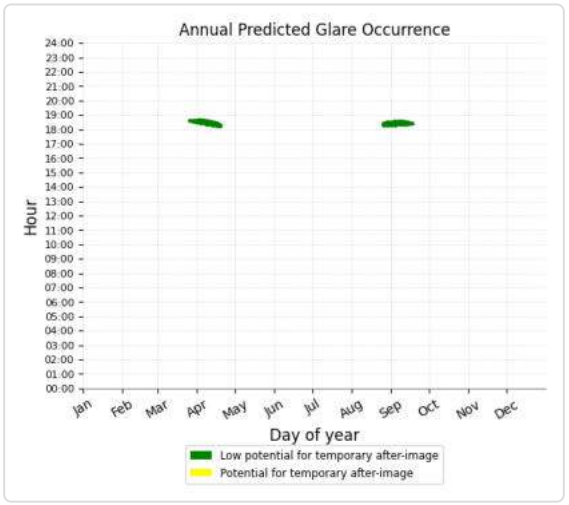


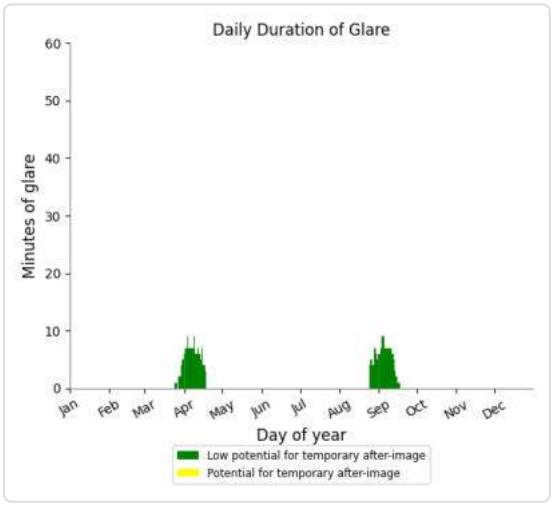


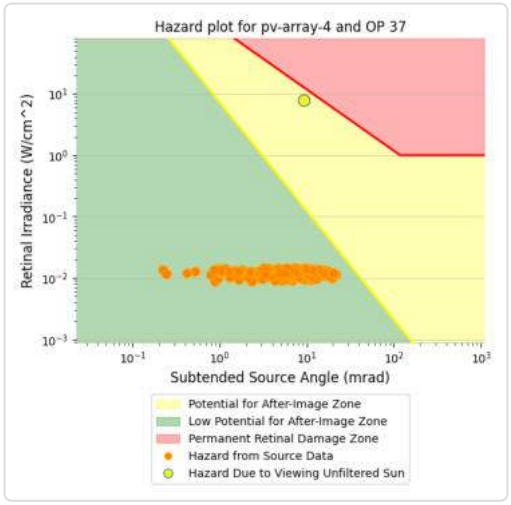
PV array 4 and OP 37

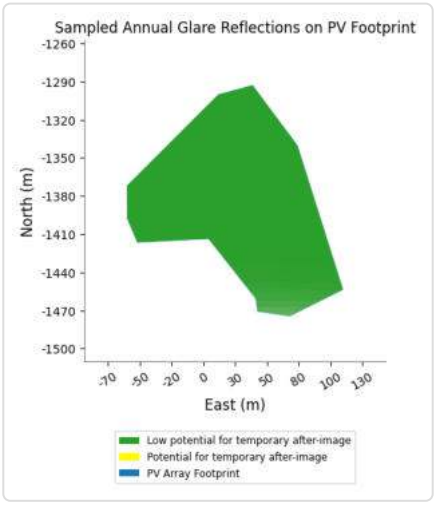
Yellow glare: none

Green glare: 261 min.





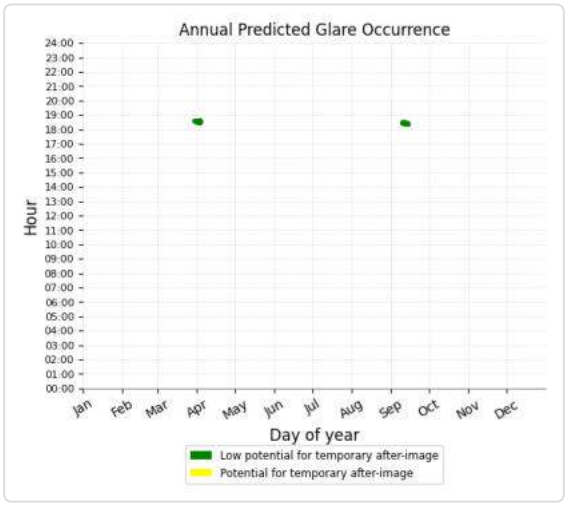


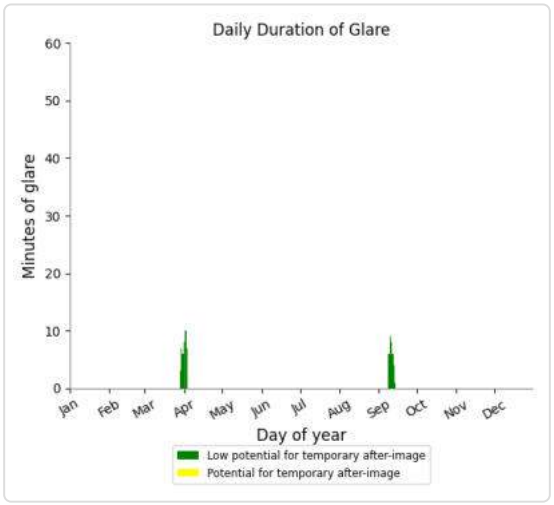


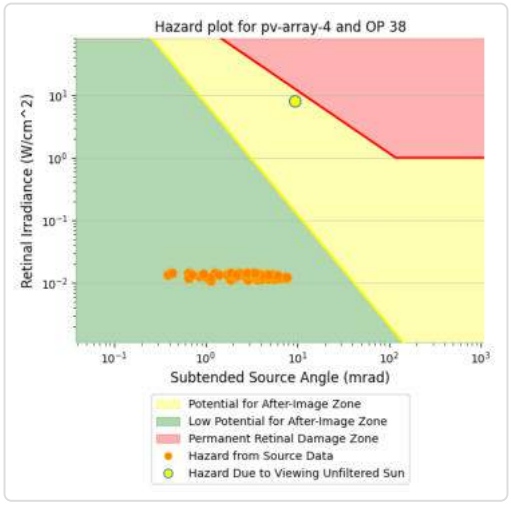
PV array 4 and OP 38

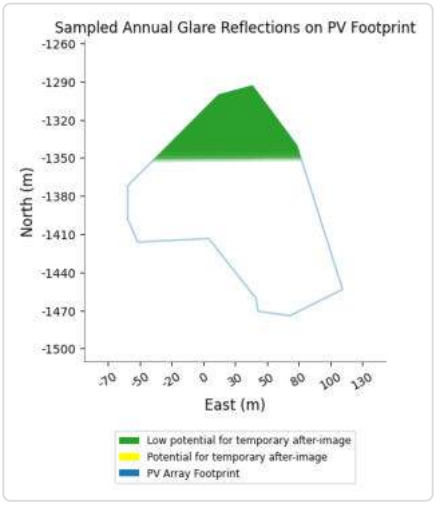
Yellow glare: none

Green glare: 75 min.



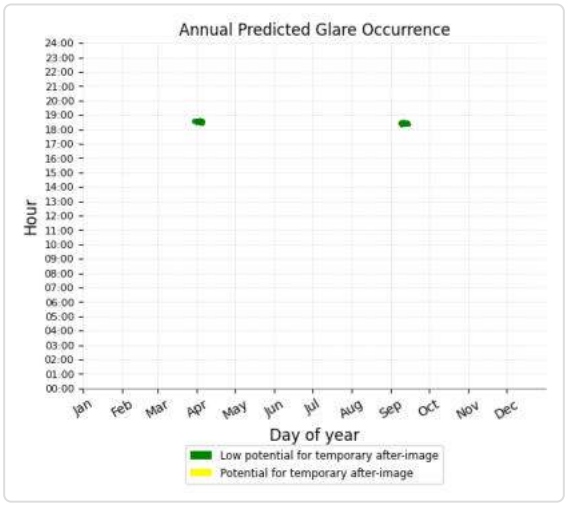


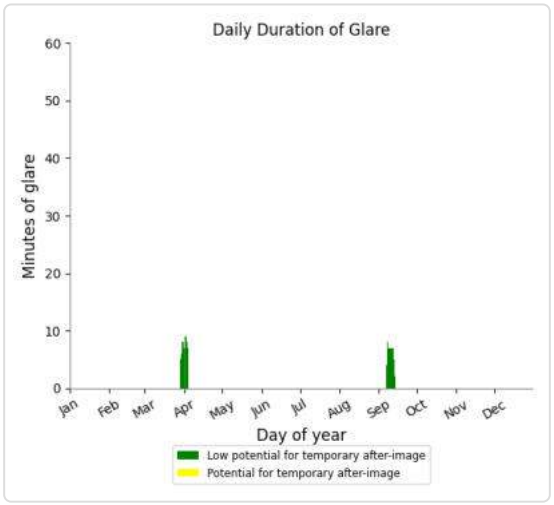


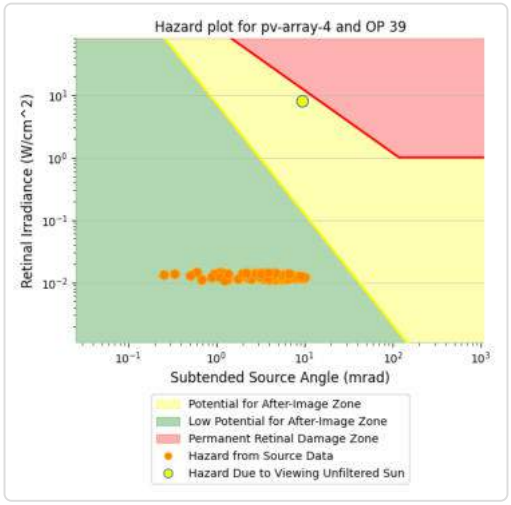


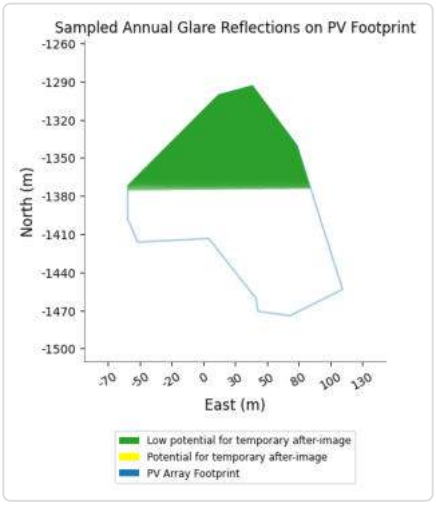
PV array 4 and OP 39

Yellow glare: none
Green glare: 97 min.









PV array 4 and OP 1

No glare found

PV array 4 and OP 2

No glare found

PV array 4 and OP 3

No glare found

PV array 4 and OP 4

No glare found

PV array 4 and OP 5

No glare found

PV array 4 and OP 6

No glare found

PV array 4 and OP 7

No glare found

PV array 4 and OP 8

No glare found

PV array 4 and OP 9

No glare found

PV array 4 and OP 10

No glare found

PV array 4 and OP 11

No glare found

PV array 4 and OP 12

No glare found

PV array 4 and OP 13

No glare found

PV array 4 and OP 14

No glare found

PV array 4 and OP 15

No glare found

PV array 4 and OP 16

No glare found

PV array 4 and OP 17

No glare found

PV array 4 and OP 18

No glare found

PV array 4 and OP 19

No glare found

PV array 4 and OP 20

No glare found

PV array 4 and OP 21

No glare found

PV array 4 and OP 22

No glare found

PV array 4 and OP 23

No glare found

PV array 4 and OP 24

No glare found

PV array 4 and OP 25

No glare found

PV array 4 and OP 26

No glare found

PV array 4 and OP 27

No glare found

PV array 4 and OP 28

No glare found

PV array 4 and OP 29

No glare found

PV array 4 and OP 30

No glare found

PV array 4 and OP 31

No glare found

PV array 4 and OP 32

No glare found

PV array 4 and OP 33

No glare found

PV array 4 and OP 40

No glare found

PV array 4 and OP 41

No glare found

PV array 4 and OP 42

No glare found

PV array 4 and OP 43

No glare found

PV array 4 and OP 44

No glare found

PV array 4 and OP 45

No glare found

PV array 4 and OP 46

No glare found

PV array 4 and OP 47

No glare found

PV array 4 and OP 48

No glare found

PV array 4 and OP 49

No glare found

PV array 4 and OP 50

No glare found

PV array 4 and OP 51

No glare found

PV array 4 and OP 52

No glare found

PV array 4 and OP 53

No glare found

PV array 4 and OP 54

No glare found

PV: PV array 5 low potential for temporary after-image

Receptor results ordered by category of glare

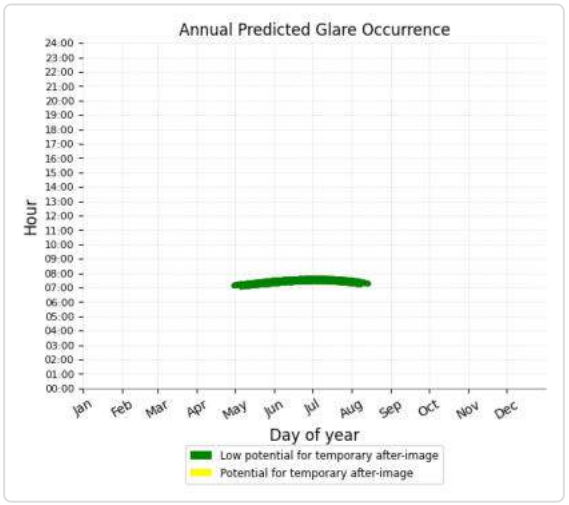
Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 28	1,812	30.2	0	0.0
OP 29	1,887	31.4	0	0.0
OP 30	925	15.4	0	0.0
OP 32	1,128	18.8	0	0.0
OP 33	2,326	38.8	0	0.0
OP 34	765	12.8	0	0.0
OP 35	567	9.4	0	0.0
OP 36	708	11.8	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0
OP 21	0	0.0	0	0.0
OP 22	0	0.0	0	0.0
OP 23	0	0.0	0	0.0
OP 24	0	0.0	0	0.0
OP 25	0	0.0	0	0.0
OP 26	0	0.0	0	0.0
OP 27	0	0.0	0	0.0
OP 31	0	0.0	0	0.0
OP 37	0	0.0	0	0.0
OP 38	0	0.0	0	0.0
OP 39	0	0.0	0	0.0

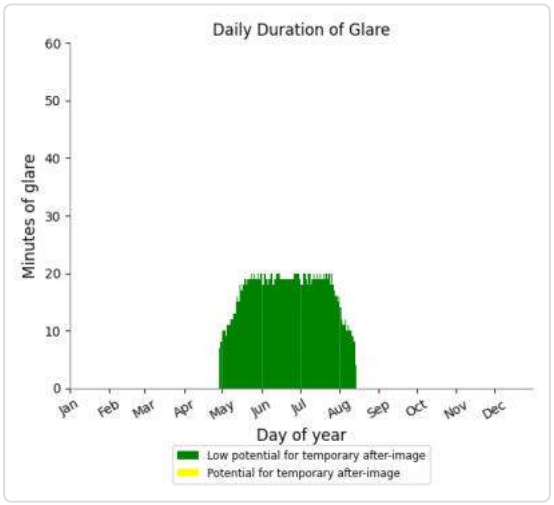
Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 40	0	0.0	0	0.0
OP 41	0	0.0	0	0.0
OP 42	0	0.0	0	0.0
OP 43	0	0.0	0	0.0
OP 44	0	0.0	0	0.0
OP 45	0	0.0	0	0.0
OP 46	0	0.0	0	0.0
OP 47	0	0.0	0	0.0
OP 48	0	0.0	0	0.0
OP 49	0	0.0	0	0.0
OP 50	0	0.0	0	0.0
OP 51	0	0.0	0	0.0
OP 52	0	0.0	0	0.0
OP 53	0	0.0	0	0.0
OP 54	0	0.0	0	0.0

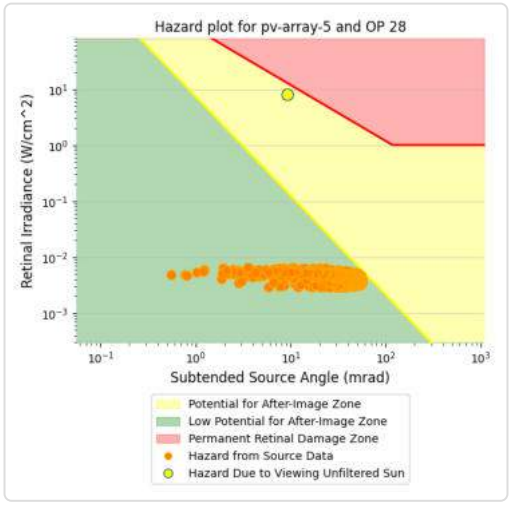
PV array 5 and OP 28

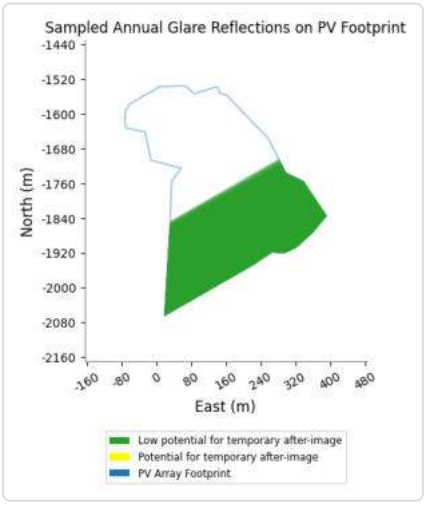
Yellow glare: none

Green glare: 1,812 min.





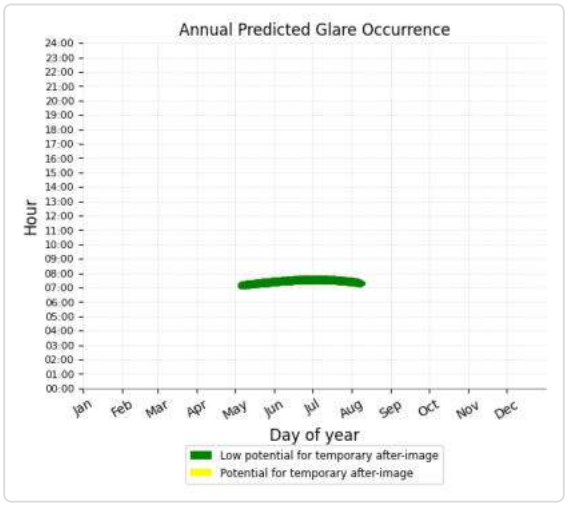


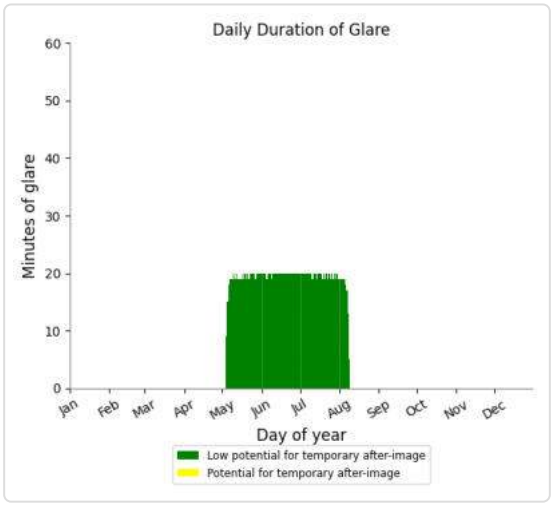


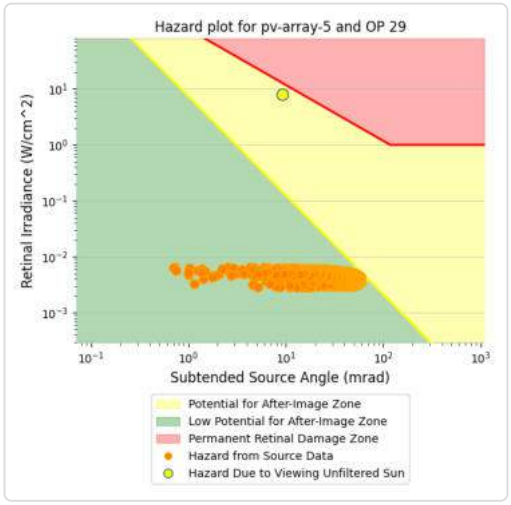
PV array 5 and OP 29

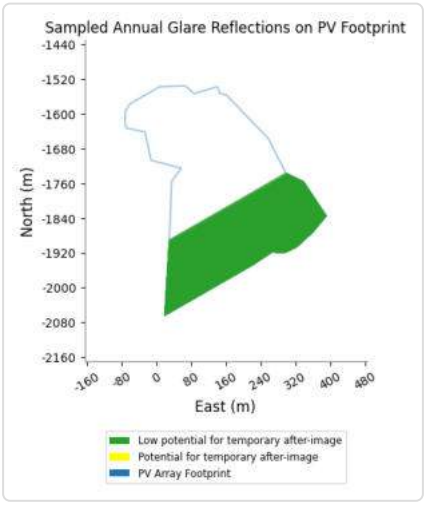
Yellow glare: none

Green glare: 1,887 min.





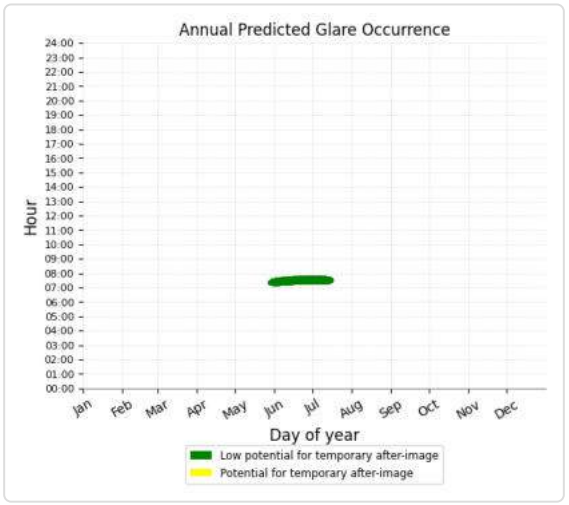


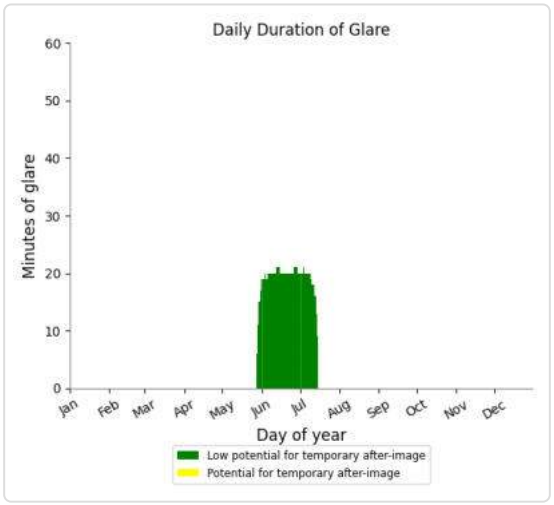


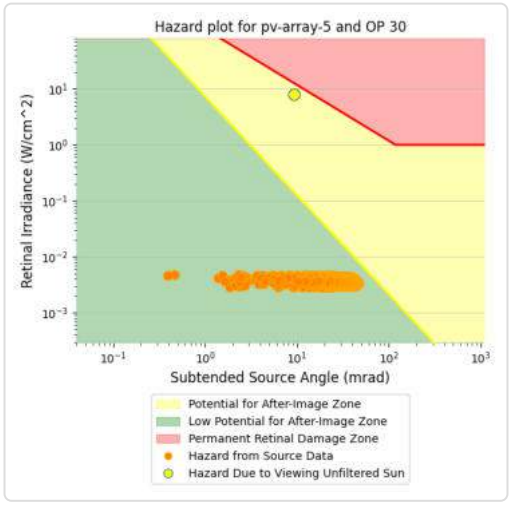
PV array 5 and OP 30

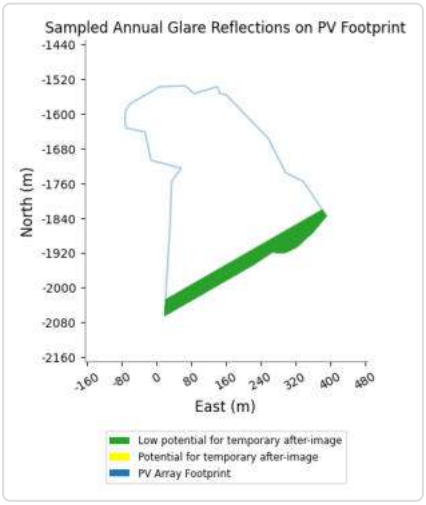
Yellow glare: none

Green glare: 925 min.





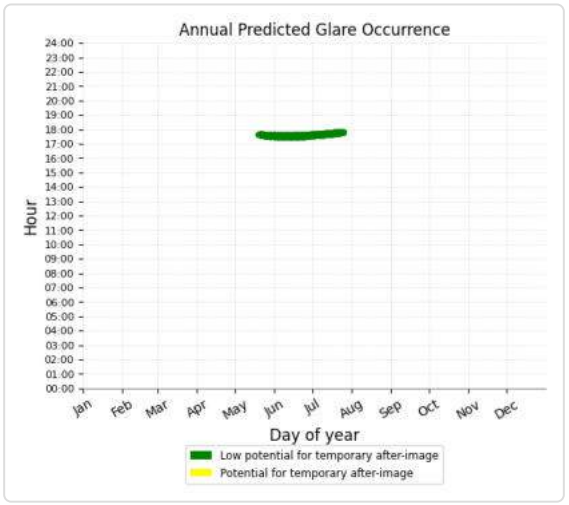


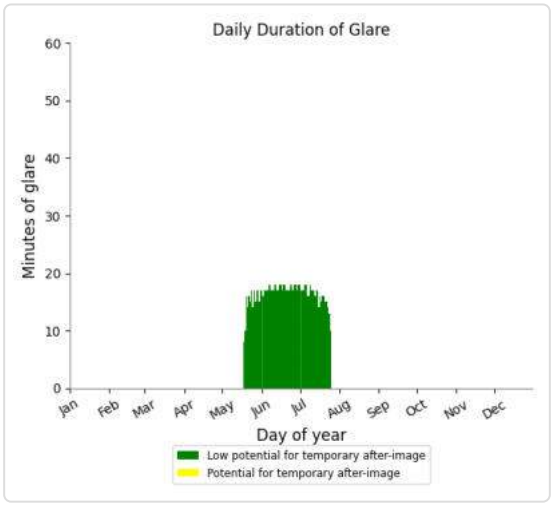


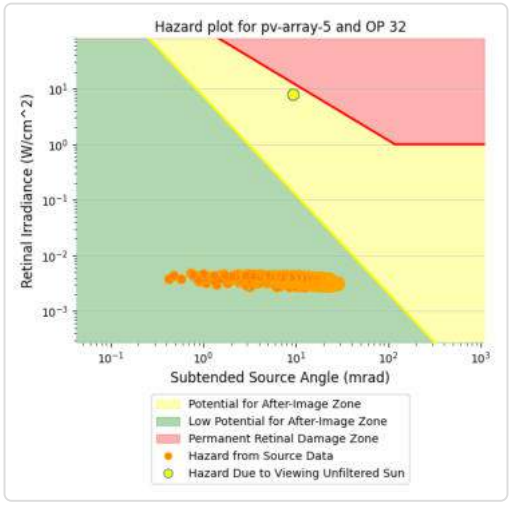
PV array 5 and OP 32

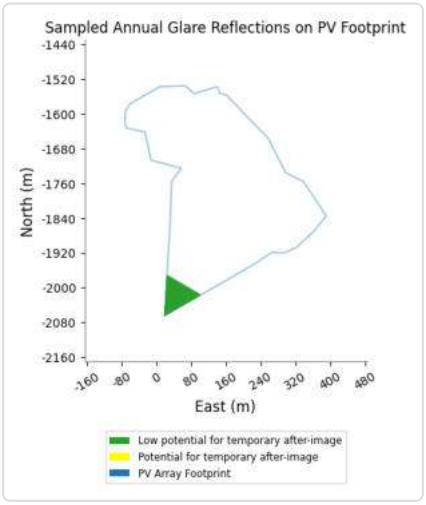
Yellow glare: none

Green glare: 1,128 min.





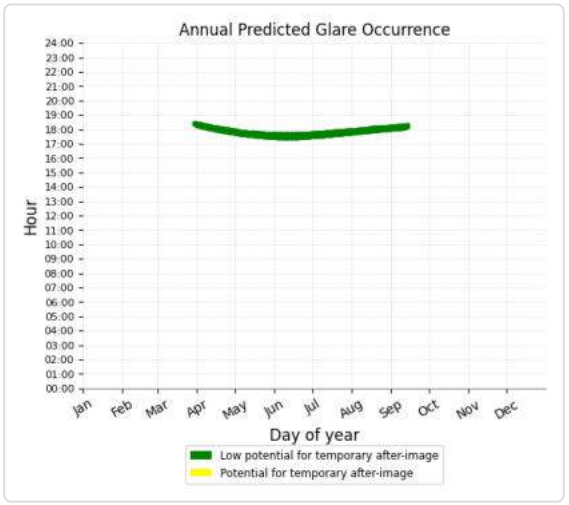


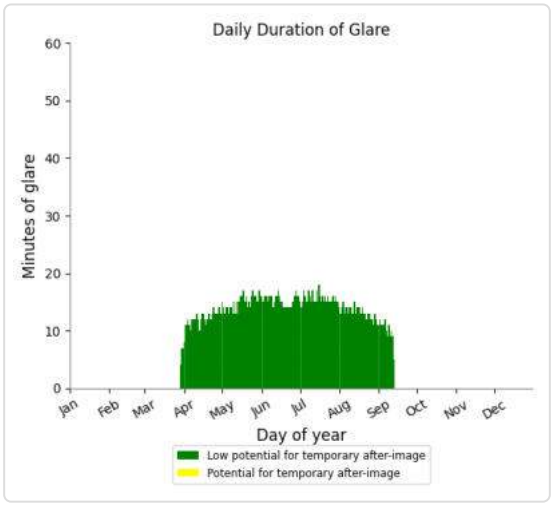


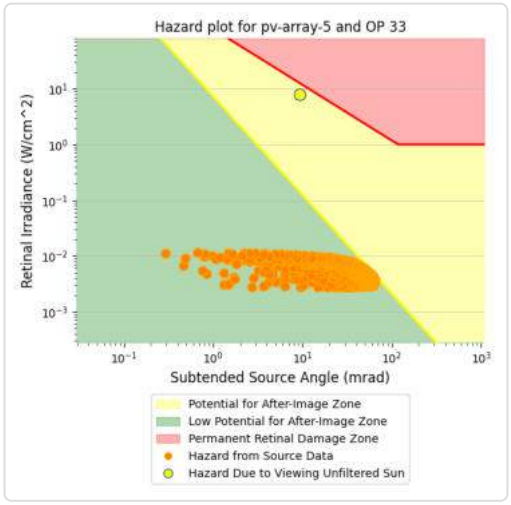
PV array 5 and OP 33

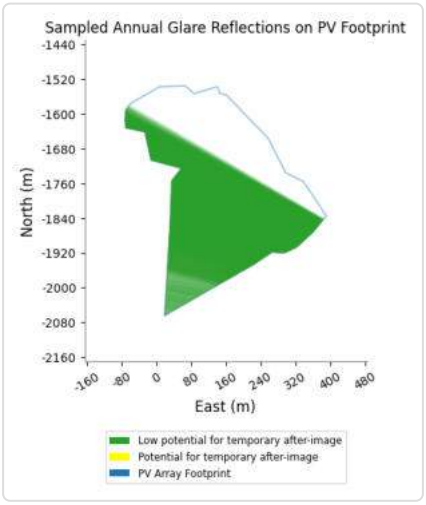
Yellow glare: none

Green glare: 2,326 min.





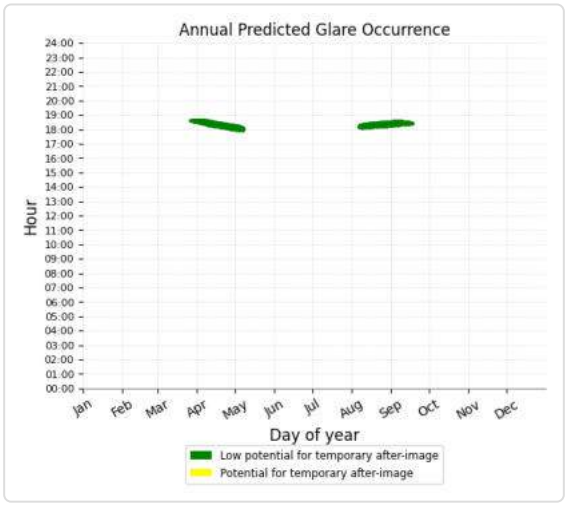


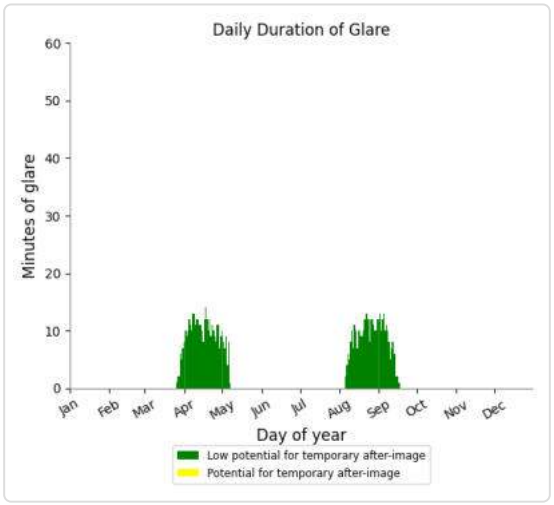


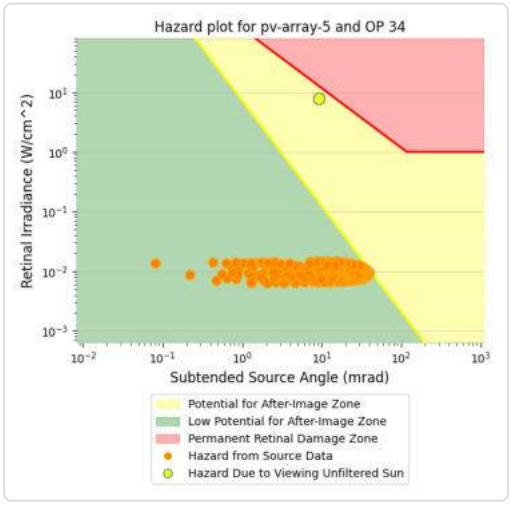
PV array 5 and OP 34

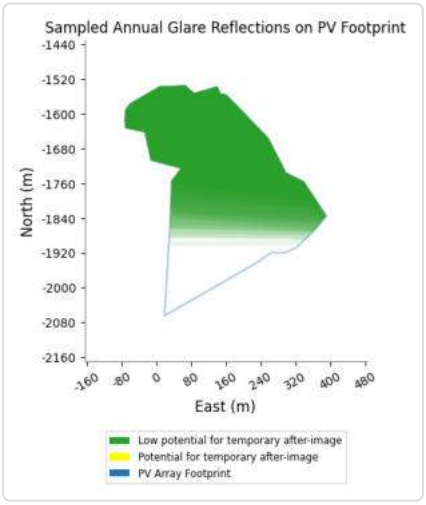
Yellow glare: none

Green glare: 765 min.





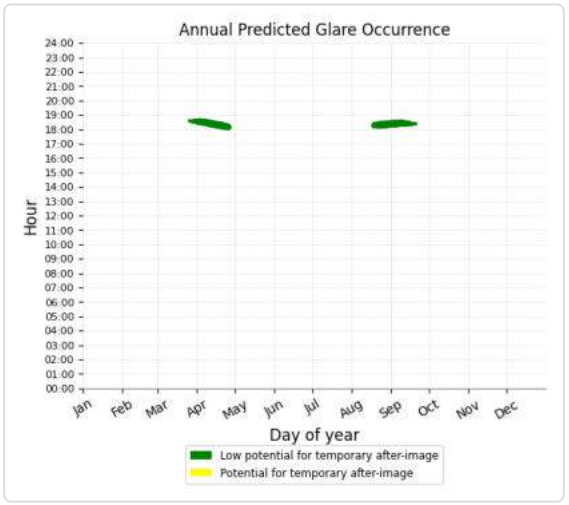


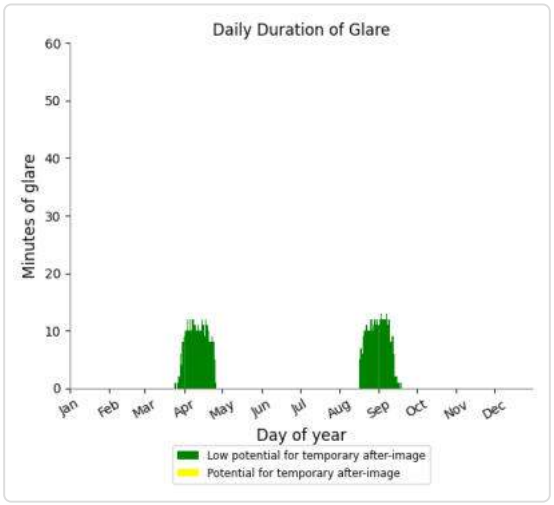


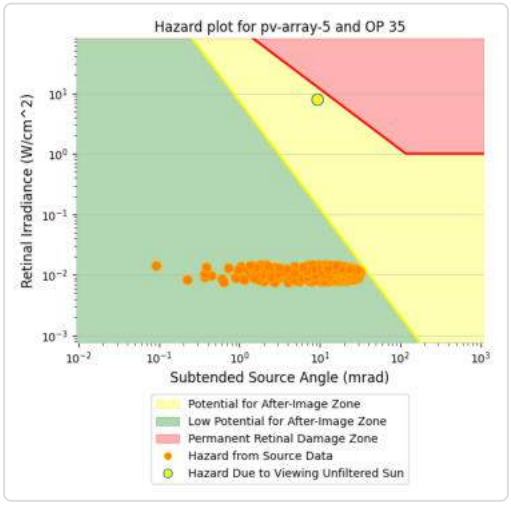
PV array 5 and OP 35

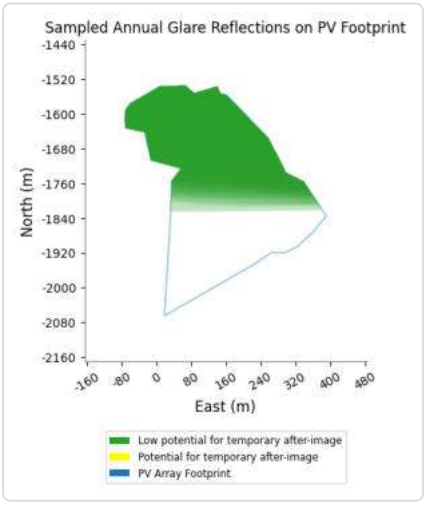
Yellow glare: none

Green glare: 567 min.



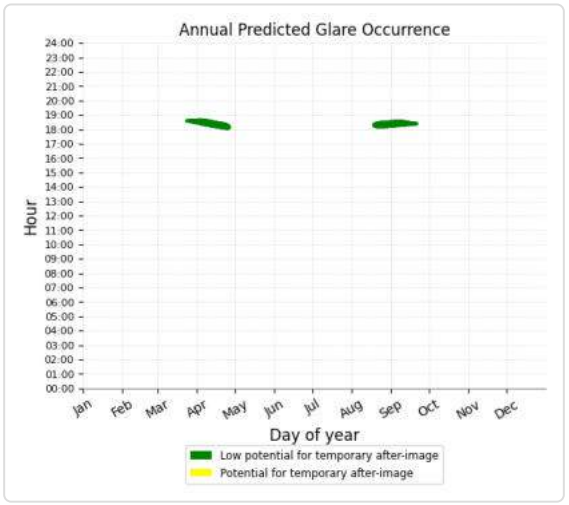


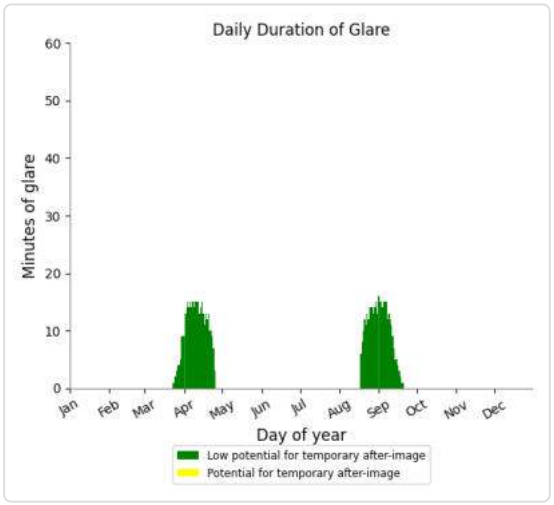


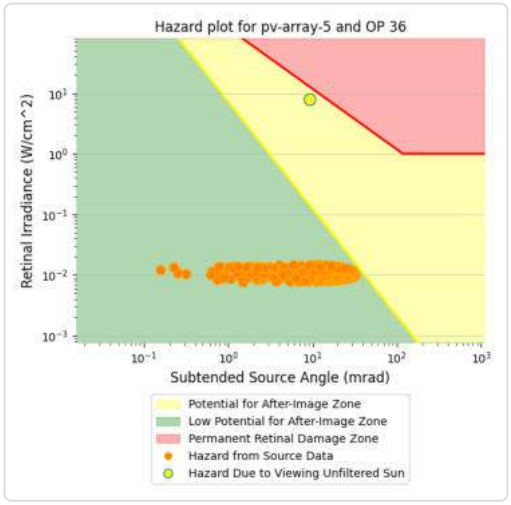


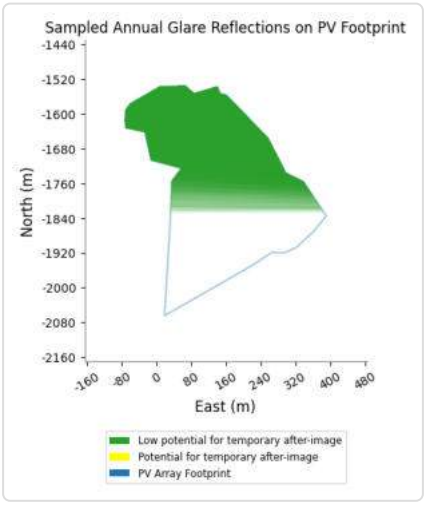
PV array 5 and OP 36

Yellow glare: none
Green glare: 708 min.









PV array 5 and OP 1

No glare found

PV array 5 and OP 2

No glare found

PV array 5 and OP 3

No glare found

PV array 5 and OP 4

No glare found

PV array 5 and OP 5

No glare found

PV array 5 and OP 6

No glare found

PV array 5 and OP 7

No glare found

PV array 5 and OP 8

No glare found

PV array 5 and OP 9

No glare found

PV array 5 and OP 10

No glare found

PV array 5 and OP 11

No glare found

PV array 5 and OP 12

No glare found

PV array 5 and OP 13

No glare found

PV array 5 and OP 14

No glare found

PV array 5 and OP 15

No glare found

PV array 5 and OP 16

No glare found

PV array 5 and OP 17

No glare found

PV array 5 and OP 18

No glare found

PV array 5 and OP 19

No glare found

PV array 5 and OP 20

No glare found

PV array 5 and OP 21

No glare found

PV array 5 and OP 22

No glare found

PV array 5 and OP 23

No glare found

PV array 5 and OP 24

No glare found

PV array 5 and OP 25

No glare found

PV array 5 and OP 26

No glare found

PV array 5 and OP 27

No glare found

PV array 5 and OP 31

No glare found

PV array 5 and OP 37

No glare found

PV array 5 and OP 38

No glare found

PV array 5 and OP 39

No glare found

PV array 5 and OP 40

No glare found

PV array 5 and OP 41

No glare found

PV array 5 and OP 42

No glare found

PV array 5 and OP 43

No glare found

PV array 5 and OP 44

No glare found

PV array 5 and OP 45

No glare found

PV array 5 and OP 46

No glare found

PV array 5 and OP 47

No glare found

PV array 5 and OP 48

No glare found

PV array 5 and OP 49

No glare found

PV array 5 and OP 50

No glare found

PV array 5 and OP 51

No glare found

PV array 5 and OP 52

No glare found

PV array 5 and OP 53

No glare found

PV array 5 and OP 54

No glare found

Assumptions

"Green" glare is glare with low potential to cause an after-image (flash blindness) when observed prior to a typical blink response time.
"Yellow" glare is glare with potential to cause an after-image (flash blindness) when observed prior to a typical blink response time.
Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
The algorithm does not rigorously represent the detailed geometry of a system; detailed features such as gaps between modules, variable height of the PV array, and support structures may impact actual glare results. However, we have validated our models against several systems, including a PV array causing glare to the air-traffic control tower at Manchester-Boston Regional Airport and several sites in Albuquerque, and the tool accurately predicted the occurrence and intensity of glare at different times and days of the year.
Several V1 calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for large PV footprints. Additional analyses of array sub-sections can provide additional information on expected glare. This primarily affects V1 analyses of path receptors.
Random number computations are utilized by various steps of the annual hazard analysis algorithm. Predicted minutes of glare can vary between runs as a result. This limitation primarily affects analyses of Observation Point receptors, including ATCTs. Note that the SGHAT/ ForgeSolar methodology has always relied on an analytical, qualitative approach to accurately determine the overall hazard (i.e. green vs. yellow) of expected glare on an annual basis.
The analysis does not automatically consider obstacles (either man-made or natural) between the observation points and the prescribed solar installation that may obstruct observed glare, such as trees, hills, buildings, etc.
The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub-array size. Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)
The variable direct normal irradiance (DNI) feature (if selected) scales the user-prescribed peak DNI using a typical clear-day irradiance profile. This profile has a lower DNI in the mornings and evenings and a maximum at solar noon. The scaling uses a clear-day irradiance profile based on a normalized time relative to sunrise, solar noon, and sunset, which are prescribed by a sun-position algorithm and the latitude and longitude obtained from Google maps. The actual DNI on any given day can be affected by cloud cover, atmospheric attenuation, and other environmental factors.
The ocular hazard predicted by the tool depends on a number of environmental, optical, and human factors, which can be uncertain. We provide input fields and typical ranges of values for these factors so that the user can vary these parameters to see if they have an impact on the results. The speed of SGHAT allows expedited sensitivity and parametric analyses.
The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.
Hazard zone boundaries shown in the Glare Hazard plot are an approximation and visual aid based on aggregated research data. Actual ocular impact outcomes encompass a continuous, not discrete, spectrum.
Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.
Refer to the Help page at **www.forgesolar.com/help/** for assumptions and limitations not listed here.

Default glare analysis parameters and observer eye characteristics (for reference only):

- Analysis time interval: 1 minute
- Ocular transmission coefficient: 0.5
- Pupil diameter: 0.002 meters
- Eye focal length: 0.017 meters
- Sun subtended angle: 9.3 milliradians

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FORGESOLAR GLARE ANALYSIS

Project: **Ballydonagh Solar Farm**
Site configuration: **Road Receptor Glare Results 10 degrees**

Created 25 Nov, 2025
Updated 25 Nov, 2025
Time-step 1 minute
Timezone offset UTC0
Minimum sun altitude 0.0 deg
DNI peaks at 1,000.0 W/m^2
Category 10 MW to 100 MW
Site ID 165606.13892

Ocular transmission coefficient 0.5
Pupil diameter 0.002 m
Eye focal length 0.017 m
Sun subtended angle 9.3 mrad
PV analysis methodology V2

Summary of Results

Glare with potential for temporary after-image predicted

PV Array	Tilt	Orient	Annual Green Glare		Annual Yellow Glare		Energy
	°	°	min	hr	min	hr	kWh
PV array 1	10.0	180.0	44,196	736.6	8,894	148.2	-
PV array 2	10.0	180.0	30,499	508.3	6,353	105.9	-
PV array 3	10.0	180.0	20,172	336.2	3,819	63.6	-
PV array 4	10.0	180.0	3,860	64.3	0	0.0	-
PV array 5	10.0	180.0	8,495	141.6	434	7.2	-

Total glare received by each receptor; may include duplicate times of glare from multiple reflective surfaces.

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 1	2,450	40.8	0	0.0
OP 2	1,990	33.2	317	5.3
OP 3	1,915	31.9	2,999	50.0
OP 4	872	14.5	1,896	31.6
OP 5	2,007	33.5	1,991	33.2
OP 6	3,663	61.0	1,863	31.1
OP 7	2,057	34.3	0	0.0
OP 8	2,785	46.4	0	0.0
OP 9	3,036	50.6	58	1.0
OP 10	3,153	52.5	31	0.5
OP 11	4,140	69.0	811	13.5
OP 12	1,952	32.5	1,622	27.0

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 13	2,022	33.7	1,434	23.9
OP 14	5,206	86.8	260	4.3
OP 15	2,945	49.1	415	6.9
OP 16	1,695	28.2	1,632	27.2
OP 17	2,540	42.3	832	13.9
OP 18	942	15.7	859	14.3
OP 19	735	12.2	0	0.0
OP 20	3,215	53.6	32	0.5
OP 21	3,415	56.9	0	0.0
OP 22	3,778	63.0	0	0.0
OP 23	0	0.0	0	0.0
OP 24	0	0.0	0	0.0
OP 25	0	0.0	0	0.0
OP 26	0	0.0	0	0.0
OP 27	782	13.0	0	0.0
OP 28	1,370	22.8	0	0.0
OP 29	5,379	89.7	290	4.8
OP 30	3,700	61.7	0	0.0
OP 31	4,623	77.0	586	9.8
OP 32	4,551	75.8	126	2.1
OP 33	3,809	63.5	0	0.0
OP 34	3,898	65.0	0	0.0
OP 35	4,513	75.2	124	2.1
OP 36	4,086	68.1	839	14.0
OP 37	2,301	38.4	49	0.8
OP 38	1,000	16.7	0	0.0
OP 39	1,430	23.8	0	0.0
OP 40	2,647	44.1	13	0.2
OP 41	1,794	29.9	32	0.5
OP 42	1,688	28.1	0	0.0
OP 43	738	12.3	0	0.0
OP 44	0	0.0	0	0.0
OP 45	0	0.0	0	0.0
OP 46	0	0.0	0	0.0
OP 47	892	14.9	0	0.0
OP 48	1,508	25.1	389	6.5

Component Data

PV Arrays

Name: PV array 1
Axis tracking: Fixed (no rotation)
Tilt: 10.0°
Orientation: 180.0°
Rated power: -
Panel material: Light textured glass with AR coating
Reflectivity: Vary with sun
Slope error: correlate with material

Vertex	Latitude (°)	Longitude (°)	Ground elevation (m)	Height above ground (m)	Total elevation (m)
1	53.240101	-8.253587	80.52	3.50	84.02
2	53.240185	-8.253469	80.64	3.50	84.14
3	53.240166	-8.252772	81.23	3.50	84.73
4	53.240037	-8.252364	80.86	3.50	84.36
5	53.239344	-8.252504	79.41	3.50	82.91
6	53.239273	-8.252493	79.31	3.50	82.81
7	53.238837	-8.250605	79.13	3.50	82.63
8	53.239787	-8.249854	81.13	3.50	84.63
9	53.239813	-8.249553	81.19	3.50	84.69
10	53.238028	-8.248395	79.21	3.50	82.71
11	53.236209	-8.248545	79.03	3.50	82.53
12	53.234045	-8.250079	77.65	3.50	81.15
13	53.233827	-8.250551	76.65	3.50	80.15
14	53.234007	-8.253995	75.76	3.50	79.26
15	53.234180	-8.254059	75.85	3.50	79.35
16	53.234572	-8.253330	75.58	3.50	79.08
17	53.235169	-8.252740	76.67	3.50	80.17
18	53.235416	-8.252369	77.40	3.50	80.90
19	53.235635	-8.251736	78.53	3.50	82.03
20	53.236084	-8.251479	78.37	3.50	81.87
21	53.236431	-8.251479	78.07	3.50	81.57
22	53.236707	-8.251007	78.00	3.50	81.50
23	53.237086	-8.250857	77.87	3.50	81.37
24	53.237291	-8.252230	78.10	3.50	81.60
25	53.237272	-8.252455	78.31	3.50	81.81
26	53.237446	-8.253027	78.69	3.50	82.19
27	53.237555	-8.254486	80.00	3.50	83.50
28	53.238084	-8.254302	79.43	3.50	82.93
29	53.238071	-8.252853	78.60	3.50	82.10
30	53.238200	-8.252574	78.75	3.50	82.25
31	53.238463	-8.252403	79.00	3.50	82.50
32	53.238688	-8.252349	79.00	3.50	82.50
33	53.238880	-8.252681	79.00	3.50	82.50
34	53.238906	-8.254141	79.75	3.50	83.25
35	53.239233	-8.253980	79.80	3.50	83.30
36	53.239445	-8.253647	79.68	3.50	83.18

Name: PV array 2
Axis tracking: Fixed (no rotation)
Tilt: 10.0°
Orientation: 180.0°
Rated power: -
Panel material: Light textured glass with AR coating
Reflectivity: Vary with sun
Slope error: correlate with material

Vertex	Latitude (°)	Longitude (°)	Ground elevation (m)	Height above ground (m)	Total elevation (m)
1	53.237448	-8.238042	91.31	3.50	94.81
2	53.237326	-8.236701	90.92	3.50	94.42
3	53.235965	-8.236207	89.65	3.50	93.15
4	53.235939	-8.235220	91.32	3.50	94.82
5	53.235785	-8.234930	91.48	3.50	94.98
6	53.235785	-8.234673	91.48	3.50	94.98
7	53.235792	-8.233900	91.87	3.50	95.37
8	53.235785	-8.233804	91.98	3.50	95.48
9	53.233827	-8.233933	90.09	3.50	93.59
10	53.233811	-8.233992	90.03	3.50	93.53
11	53.233779	-8.233986	90.07	3.50	93.57
12	53.233727	-8.233943	90.22	3.50	93.72
13	53.233413	-8.233959	90.20	3.50	93.70
14	53.233624	-8.236899	86.14	3.50	89.64
15	53.233747	-8.237403	85.42	3.50	88.92
16	53.233689	-8.237918	84.66	3.50	88.16
17	53.233689	-8.238079	84.43	3.50	87.93
18	53.233920	-8.238702	84.48	3.50	87.98
19	53.234402	-8.238884	84.85	3.50	88.35
20	53.234774	-8.239485	85.00	3.50	88.50
21	53.234639	-8.240139	84.43	3.50	87.93
22	53.234247	-8.240096	84.48	3.50	87.98
23	53.234003	-8.242052	82.28	3.50	85.78
24	53.234151	-8.242535	81.80	3.50	85.30
25	53.233785	-8.242567	81.29	3.50	84.79
26	53.233560	-8.243275	80.85	3.50	84.35
27	53.233387	-8.246269	78.00	3.50	81.50
28	53.236386	-8.245485	81.07	3.50	84.57
29	53.236495	-8.245196	81.26	3.50	84.76
30	53.236270	-8.242471	82.03	3.50	85.53
31	53.236142	-8.238919	86.95	3.50	90.45
32	53.236411	-8.238522	88.04	3.50	91.54
33	53.236829	-8.238726	88.59	3.50	92.09
34	53.236855	-8.237514	89.62	3.50	93.12

Name: PV array 3
Axis tracking: Fixed (no rotation)
Tilt: 10.0°
Orientation: 180.0°
Rated power: -
Panel material: Light textured glass with AR coating
Reflectivity: Vary with sun
Slope error: correlate with material

Vertex	Latitude (°)	Longitude (°)	Ground elevation (m)	Height above ground (m)	Total elevation (m)
1	53.230937	-8.244341	80.00	3.50	83.50
2	53.230795	-8.242002	81.69	3.50	85.19
3	53.230680	-8.241723	81.90	3.50	85.40
4	53.230641	-8.240565	83.29	3.50	86.79
5	53.228804	-8.241122	82.00	3.50	85.50
6	53.229883	-8.245725	79.65	3.50	83.15
7	53.230230	-8.247216	78.00	3.50	81.50
8	53.231245	-8.247195	78.10	3.50	81.60
9	53.231521	-8.247002	78.43	3.50	81.93
10	53.231919	-8.247002	78.17	3.50	81.67
11	53.231894	-8.246551	78.44	3.50	81.94
12	53.230256	-8.246304	78.46	3.50	81.96
13	53.230192	-8.245757	79.24	3.50	82.74
14	53.230018	-8.245317	80.05	3.50	83.55

Name: PV array 4
Axis tracking: Fixed (no rotation)
Tilt: 10.0°
Orientation: 180.0°
Rated power: -
Panel material: Light textured glass with AR coating
Reflectivity: Vary with sun
Slope error: correlate with material

Vertex	Latitude (°)	Longitude (°)	Ground elevation (m)	Height above ground (m)	Total elevation (m)
1	53.227543	-8.254478	76.00	3.50	79.50
2	53.227774	-8.254478	76.00	3.50	79.50
3	53.228417	-8.253405	77.05	3.50	80.55
4	53.228481	-8.253008	77.40	3.50	80.90
5	53.228057	-8.252483	77.45	3.50	80.95
6	53.227042	-8.251946	78.11	3.50	81.61
7	53.226856	-8.252568	77.32	3.50	80.82
8	53.226888	-8.252944	76.78	3.50	80.28
9	53.226978	-8.252965	76.74	3.50	80.24
10	53.227402	-8.253523	76.02	3.50	79.52
11	53.227376	-8.254360	75.99	3.50	79.49

Name: PV array 5
Axis tracking: Fixed (no rotation)
Tilt: 10.0°
Orientation: 180.0°
Rated power: -
Panel material: Light textured glass with AR coating
Reflectivity: Vary with sun
Slope error: correlate with material

Vertex	Latitude (°)	Longitude (°)	Ground elevation (m)	Height above ground (m)	Total elevation (m)
1	53.226282	-8.253467	76.62	3.50	80.12
2	53.226301	-8.252598	77.28	3.50	80.78
3	53.226141	-8.252287	77.73	3.50	81.23
4	53.226282	-8.251493	78.35	3.50	81.85
5	53.226141	-8.251386	78.18	3.50	81.68
6	53.226109	-8.251171	78.14	3.50	81.64
7	53.225216	-8.249734	77.23	3.50	80.73
8	53.224590	-8.249198	76.21	3.50	79.71
9	53.224506	-8.249134	76.27	3.50	79.77
10	53.224320	-8.248512	76.77	3.50	80.27
11	53.223614	-8.247728	77.00	3.50	80.50
12	53.223273	-8.248200	76.69	3.50	80.19
13	53.222965	-8.248758	74.98	3.50	78.48
14	53.222849	-8.249177	74.05	3.50	77.55
15	53.222862	-8.249606	73.45	3.50	76.95
16	53.222612	-8.250228	71.82	3.50	75.32
17	53.221552	-8.253307	71.50	3.50	75.00
18	53.223453	-8.253114	73.00	3.50	76.50
19	53.224333	-8.253061	73.55	3.50	77.05
20	53.224596	-8.252728	73.94	3.50	77.44
21	53.224763	-8.253769	74.28	3.50	77.78
22	53.225347	-8.253983	75.30	3.50	78.80
23	53.225430	-8.254638	75.05	3.50	78.55
24	53.225578	-8.254670	75.10	3.50	78.60
25	53.225796	-8.254649	75.20	3.50	78.70
26	53.225931	-8.254488	75.46	3.50	78.96

Discrete Observation Point Receptors

Name	ID	Latitude (°)	Longitude (°)	Elevation (m)	Height (m)
OP 1	1	53.240024	-8.253884	80.40	1.50
OP 2	2	53.238158	-8.254643	79.31	1.50
OP 3	3	53.237277	-8.253107	79.05	1.50
OP 4	4	53.235928	-8.252066	78.45	1.50
OP 5	5	53.234544	-8.253977	76.15	1.50
OP 6	6	53.233337	-8.255854	75.70	1.50
OP 7	7	53.235392	-8.268894	71.81	1.50
OP 8	8	53.234992	-8.266051	73.07	1.50
OP 9	9	53.234273	-8.263476	73.58	1.50
OP 10	10	53.233531	-8.260719	74.40	1.50
OP 11	11	53.232789	-8.258100	75.23	1.50
OP 12	12	53.232085	-8.255412	75.88	1.50
OP 13	13	53.231393	-8.252557	77.83	1.50
OP 14	14	53.230698	-8.249740	79.00	1.50
OP 15	15	53.230055	-8.247110	78.11	1.50
OP 16	16	53.229390	-8.244396	81.00	1.50
OP 17	17	53.228722	-8.241570	82.02	1.50
OP 18	18	53.228072	-8.238963	84.15	1.50
OP 19	19	53.227669	-8.234505	89.21	1.50
OP 20	20	53.227643	-8.231676	90.35	1.50
OP 21	21	53.227800	-8.228641	88.00	1.50
OP 22	22	53.226606	-8.227004	86.80	1.50
OP 23	23	53.245769	-8.231647	84.07	1.50
OP 24	24	53.244342	-8.229855	86.21	1.50
OP 25	25	53.242579	-8.228749	90.60	1.50
OP 26	26	53.240761	-8.228696	93.52	1.50
OP 27	27	53.238921	-8.229758	97.15	1.50
OP 28	28	53.237586	-8.230339	99.54	1.50
OP 29	29	53.235708	-8.230629	100.31	1.50
OP 30	30	53.233991	-8.230297	96.84	1.50
OP 31	31	53.232180	-8.229557	93.82	1.50
OP 32	32	53.230418	-8.228784	89.85	1.50
OP 33	33	53.228543	-8.228022	87.92	1.50
OP 34	34	53.228228	-8.226574	86.23	1.50
OP 35	35	53.229114	-8.224053	86.09	1.50
OP 36	36	53.229970	-8.221322	86.89	1.50
OP 37	37	53.225309	-8.228571	85.98	1.50
OP 38	38	53.223722	-8.230073	84.66	1.50
OP 39	39	53.222206	-8.231614	85.46	1.50
OP 40	40	53.220544	-8.233709	84.02	1.50
OP 41	41	53.219426	-8.236145	82.00	1.50
OP 42	42	53.218341	-8.238376	80.81	1.50
OP 43	43	53.217653	-8.240554	77.80	1.50
OP 44	44	53.217608	-8.243601	74.85	1.50
OP 45	45	53.217621	-8.246640	72.96	1.50
OP 46	46	53.217902	-8.260416	70.92	1.50
OP 47	47	53.218397	-8.263109	71.06	1.50
OP 48	48	53.218512	-8.265898	70.93	1.50

Glare Analysis Results

Summary of Results

Glare with potential for temporary after-image predicted

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OP 20	3,215	53.6	32	0.5
OP 21	3,415	56.9	0	0.0
OP 22	3,778	63.0	0	0.0
OP 23	0	0.0	0	0.0
OP 24	0	0.0	0	0.0
OP 25	0	0.0	0	0.0
OP 26	0	0.0	0	0.0
OP 27	782	13.0	0	0.0
OP 28	1,370	22.8	0	0.0

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 29	5,379	89.7	290	4.8
OP 30	3,700	61.7	0	0.0
OP 31	4,623	77.0	586	9.8
OP 32	4,551	75.8	126	2.1
OP 33	3,809	63.5	0	0.0
OP 34	3,898	65.0	0	0.0
OP 35	4,513	75.2	124	2.1
OP 36	4,086	68.1	839	14.0
OP 37	2,301	38.4	49	0.8
OP 38	1,000	16.7	0	0.0
OP 39	1,430	23.8	0	0.0
OP 40	2,647	44.1	13	0.2
OP 41	1,794	29.9	32	0.5
OP 42	1,688	28.1	0	0.0
OP 43	738	12.3	0	0.0
OP 44	0	0.0	0	0.0
OP 45	0	0.0	0	0.0
OP 46	0	0.0	0	0.0
OP 47	892	14.9	0	0.0
OP 48	1,508	25.1	389	6.5

PV: PV array 1 potential temporary after-image

Receptor results ordered by category of glare

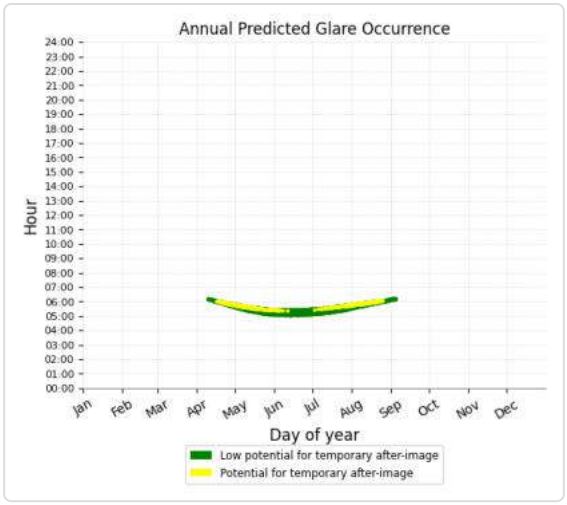
Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 2	1,990	33.2	317	5.3
OP 3	1,915	31.9	2,999	50.0
OP 4	608	10.1	1,896	31.6
OP 5	604	10.1	1,896	31.6
OP 6	1,080	18.0	1,346	22.4
OP 9	2,148	35.8	58	1.0
OP 11	1,645	27.4	382	6.4
OP 1	2,450	40.8	0	0.0
OP 7	1,766	29.4	0	0.0
OP 8	2,160	36.0	0	0.0
OP 10	1,679	28.0	0	0.0
OP 12	447	7.5	0	0.0
OP 19	621	10.3	0	0.0
OP 20	1,238	20.6	0	0.0
OP 21	1,456	24.3	0	0.0
OP 22	1,197	19.9	0	0.0
OP 27	782	13.0	0	0.0
OP 28	1,370	22.8	0	0.0
OP 29	2,608	43.5	0	0.0
OP 30	3,700	61.7	0	0.0
OP 31	2,988	49.8	0	0.0
OP 32	2,417	40.3	0	0.0
OP 33	1,664	27.7	0	0.0
OP 34	1,569	26.1	0	0.0
OP 35	1,900	31.7	0	0.0
OP 36	2,025	33.8	0	0.0
OP 37	169	2.8	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 23	0	0.0	0	0.0
OP 24	0	0.0	0	0.0
OP 25	0	0.0	0	0.0
OP 26	0	0.0	0	0.0

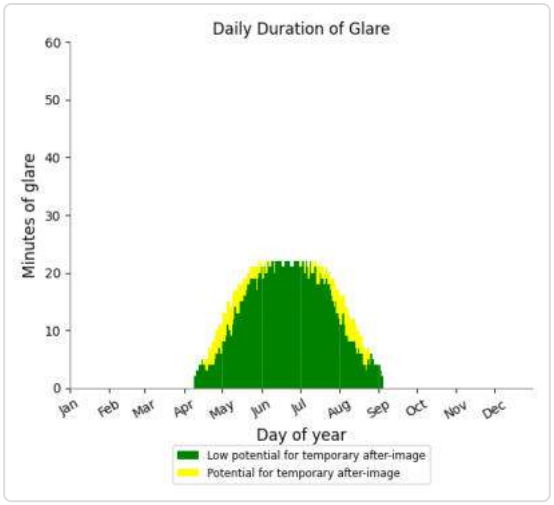
Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 38	0	0.0	0	0.0
OP 39	0	0.0	0	0.0
OP 40	0	0.0	0	0.0
OP 41	0	0.0	0	0.0
OP 42	0	0.0	0	0.0
OP 43	0	0.0	0	0.0
OP 44	0	0.0	0	0.0
OP 45	0	0.0	0	0.0
OP 46	0	0.0	0	0.0
OP 47	0	0.0	0	0.0
OP 48	0	0.0	0	0.0

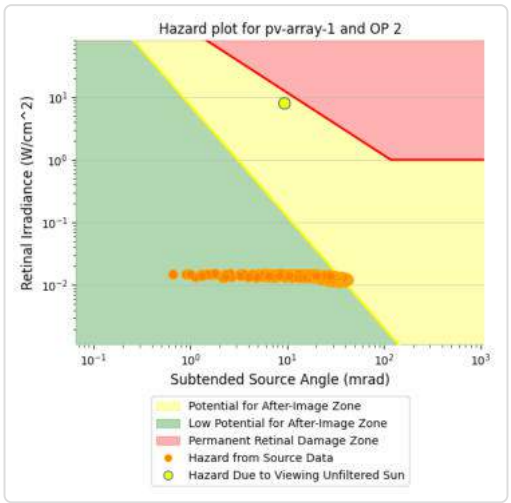
PV array 1 and OP 2

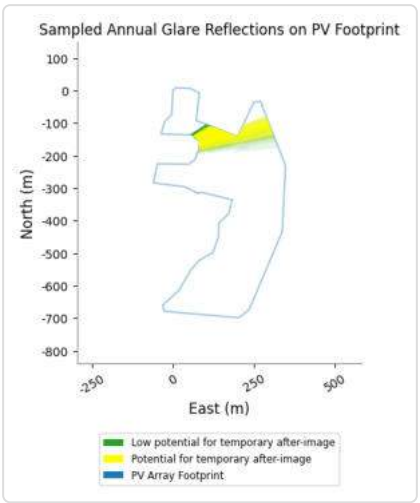
Yellow glare: 317 min.

Green glare: 1,990 min.





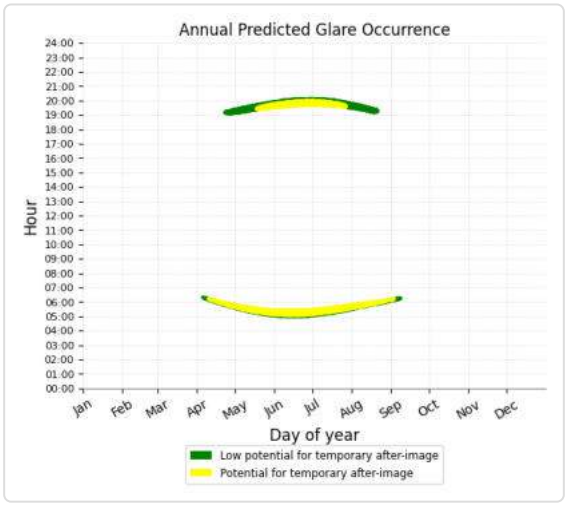


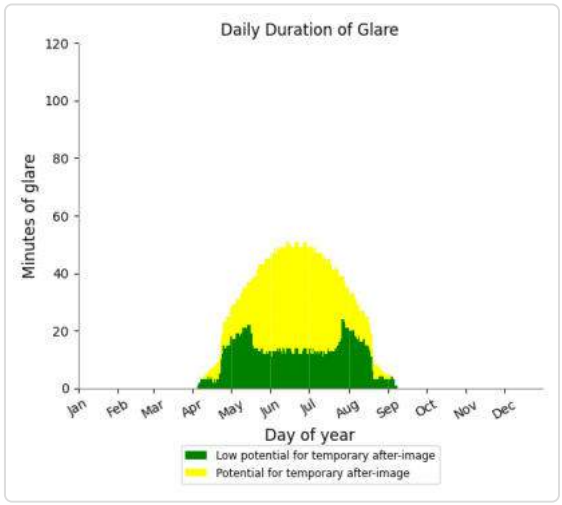


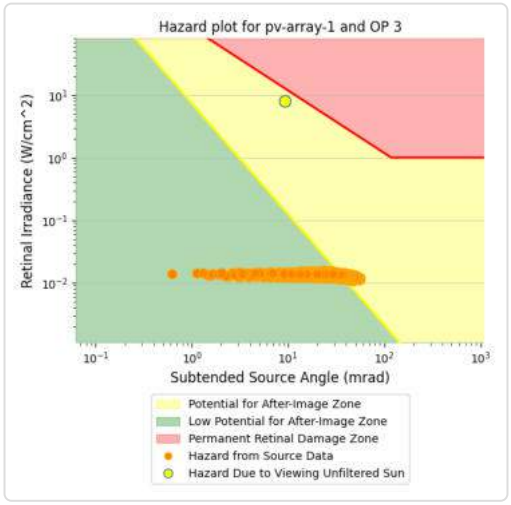
PV array 1 and OP 3

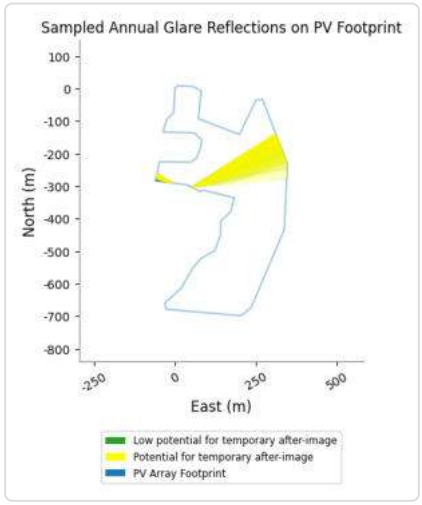
Yellow glare: 2,999 min.

Green glare: 1,915 min.





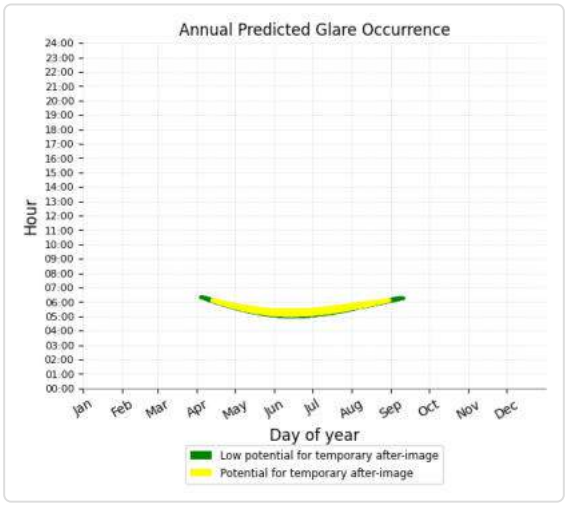


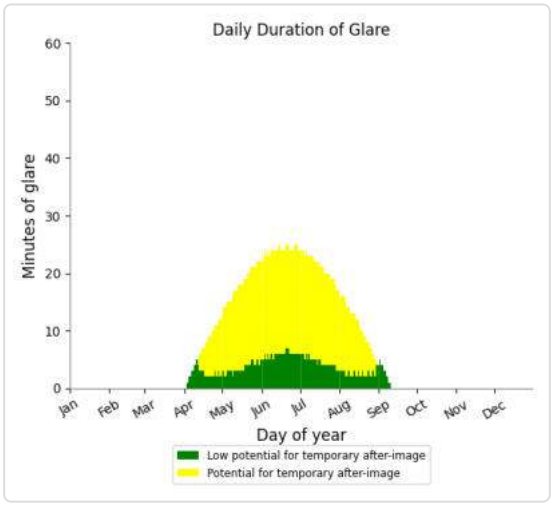


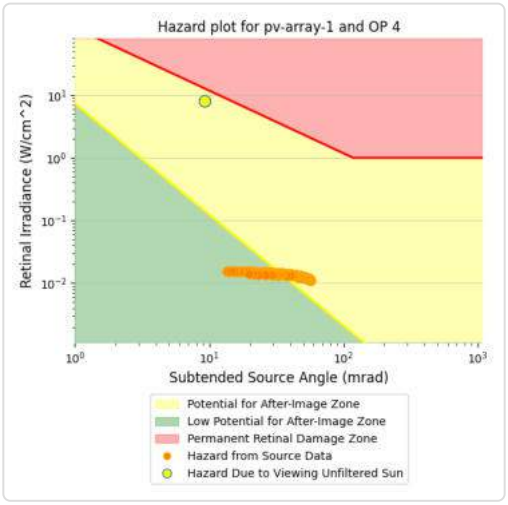
PV array 1 and OP 4

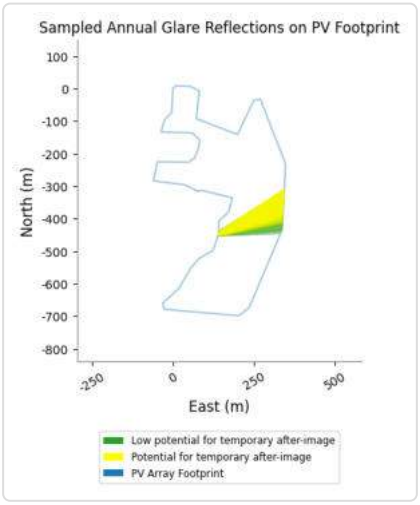
Yellow glare: 1,896 min.

Green glare: 608 min.





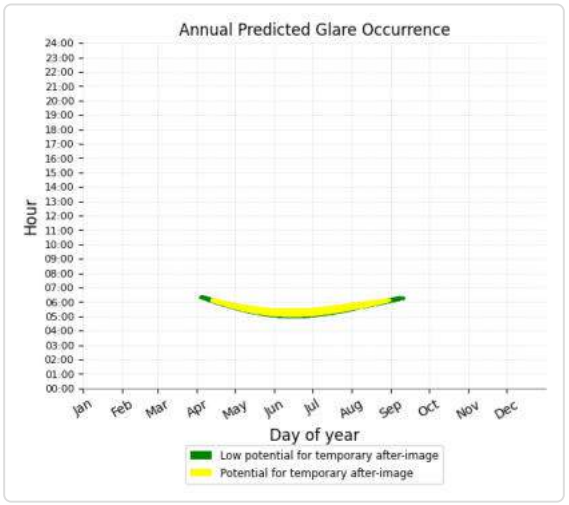


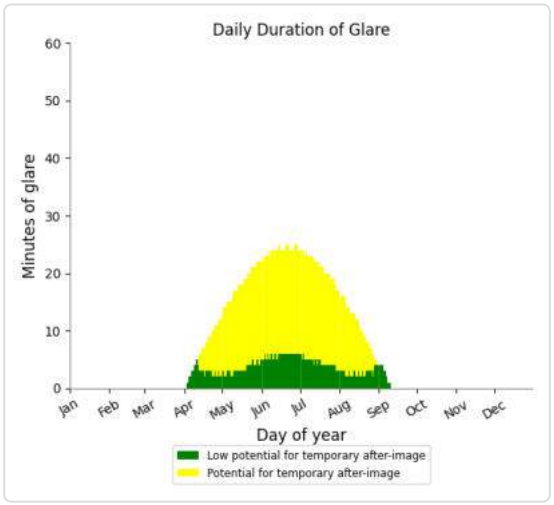


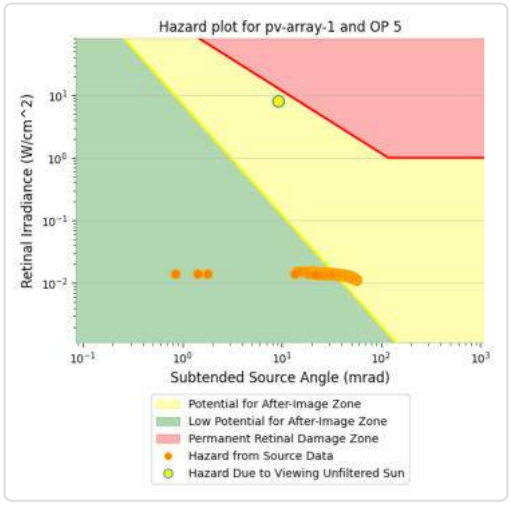
PV array 1 and OP 5

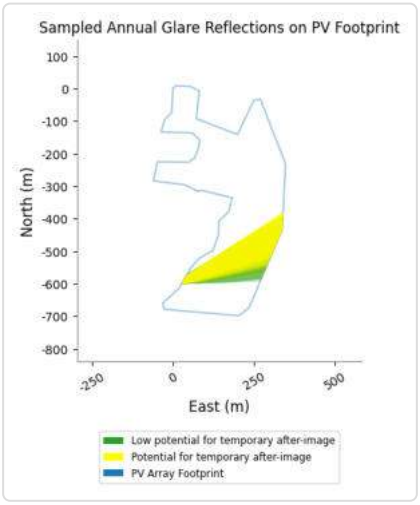
Yellow glare: 1,896 min.

Green glare: 604 min.





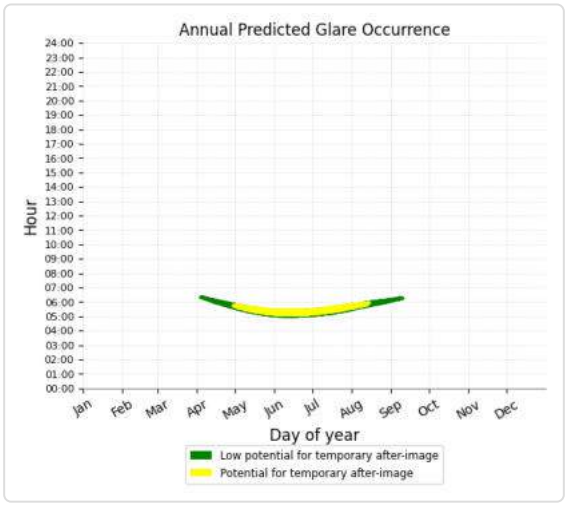


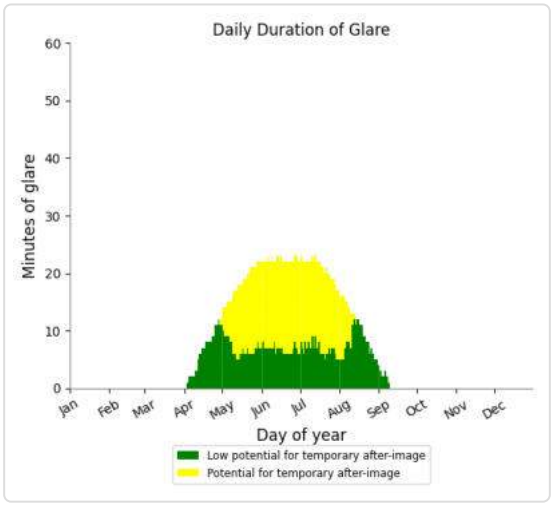


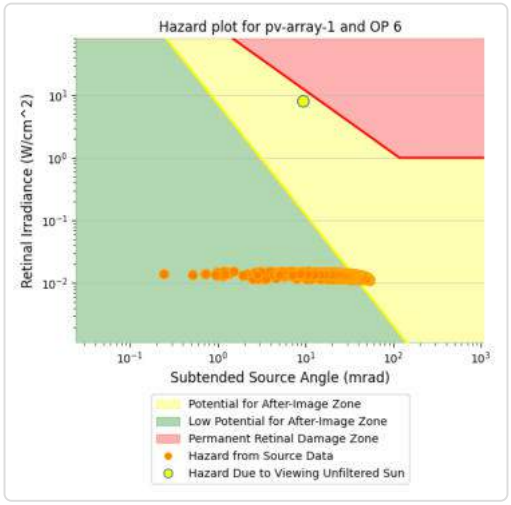
PV array 1 and OP 6

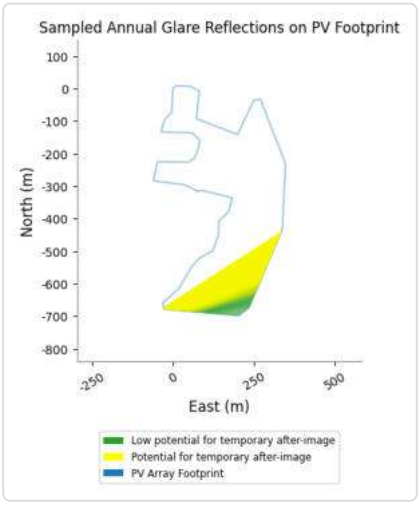
Yellow glare: 1,346 min.

Green glare: 1,080 min.





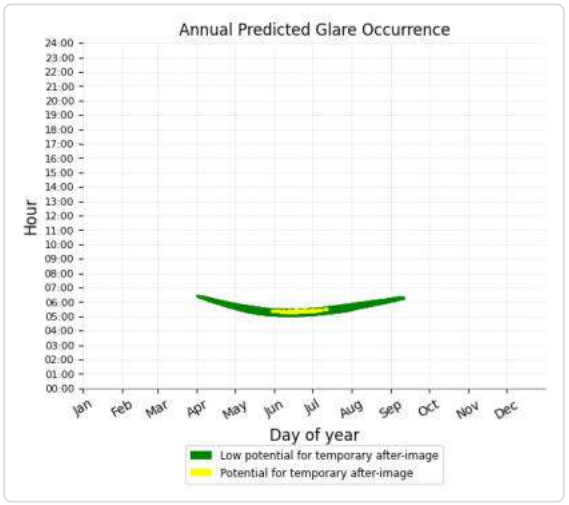


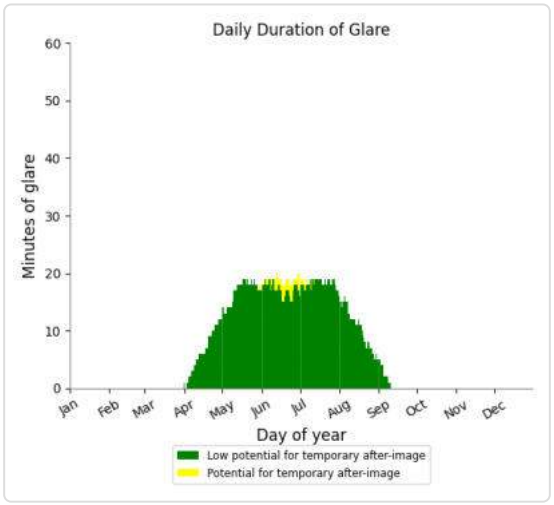


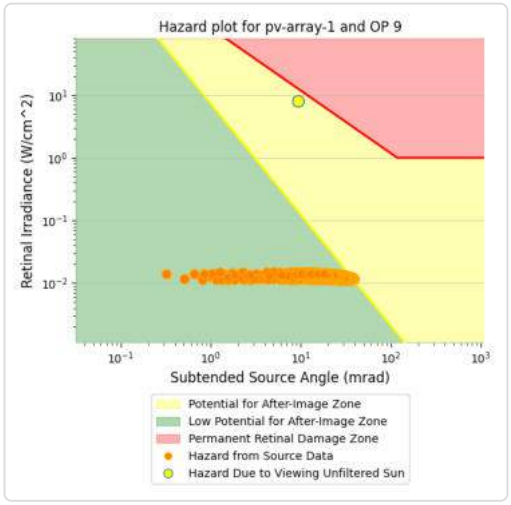
PV array 1 and OP 9

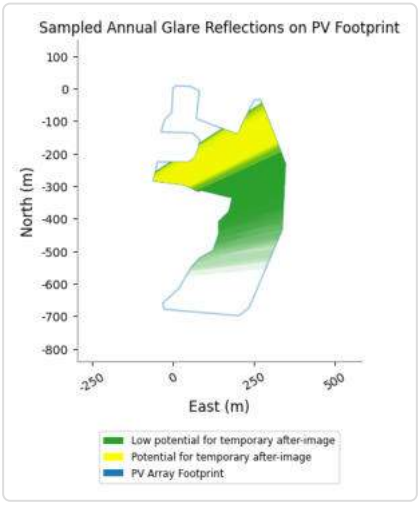
Yellow glare: 58 min.

Green glare: 2,148 min.





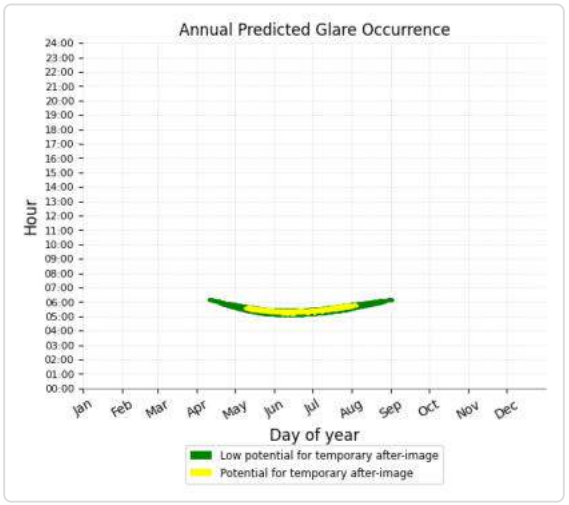


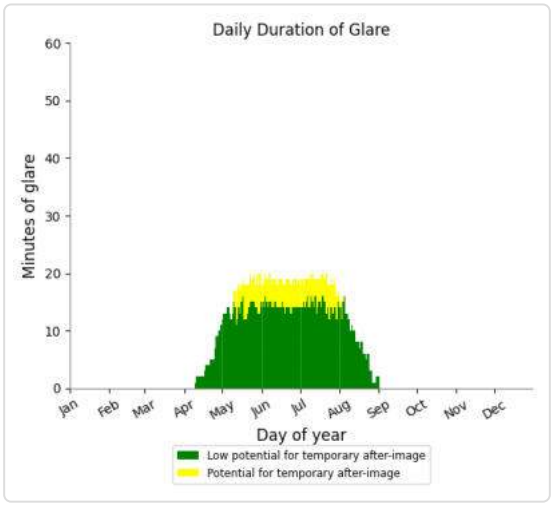


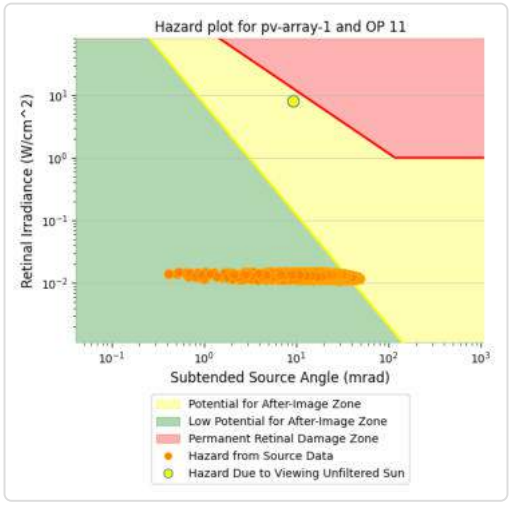
PV array 1 and OP 11

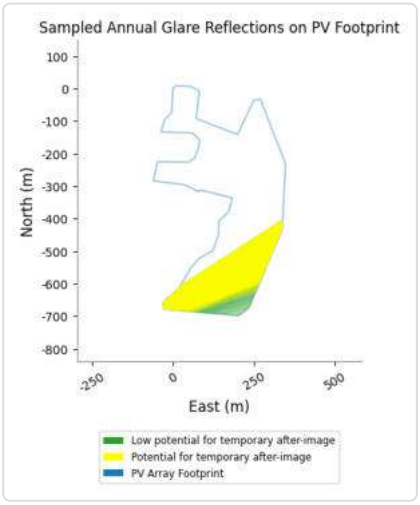
Yellow glare: 382 min.

Green glare: 1,645 min.





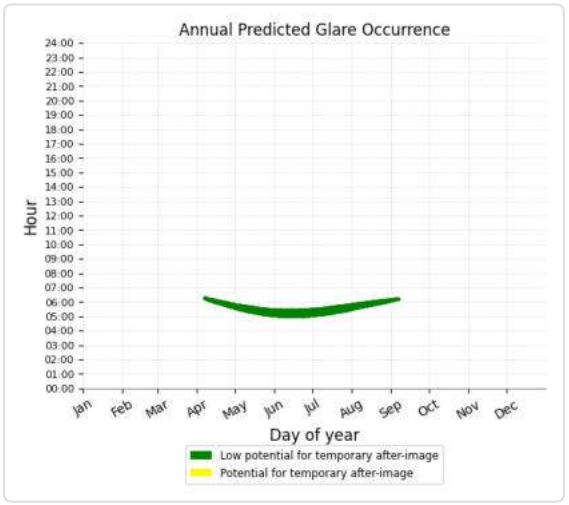


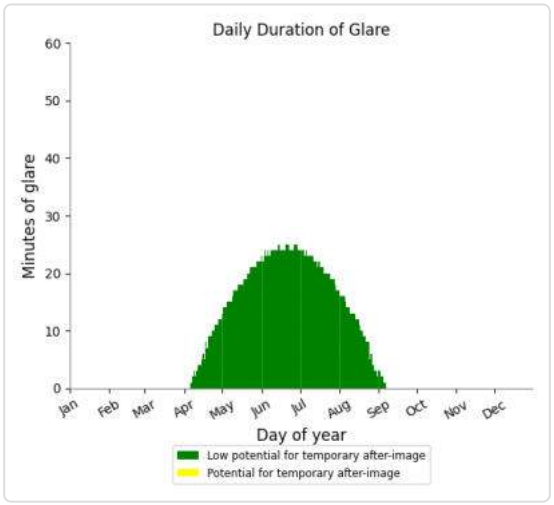


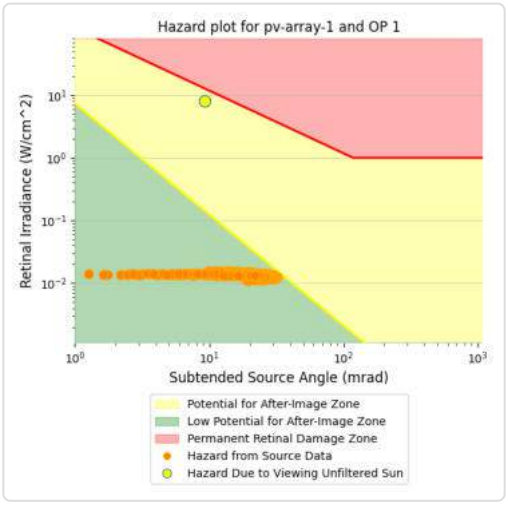
PV array 1 and OP 1

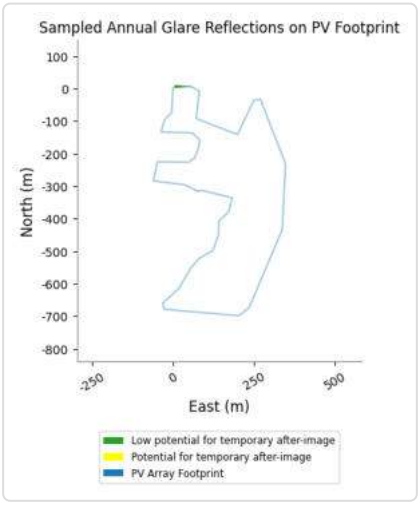
Yellow glare: none

Green glare: 2,450 min.





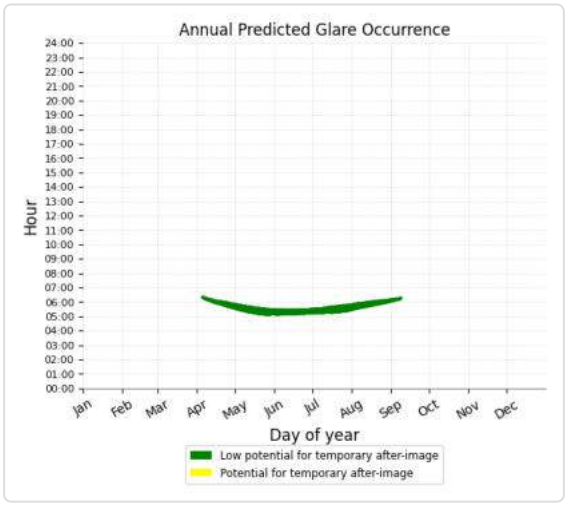


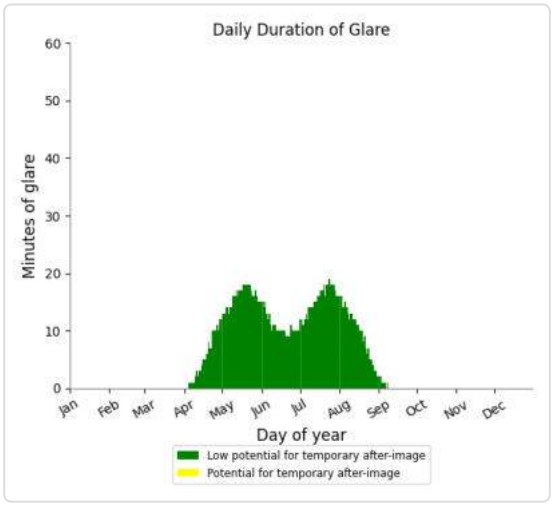


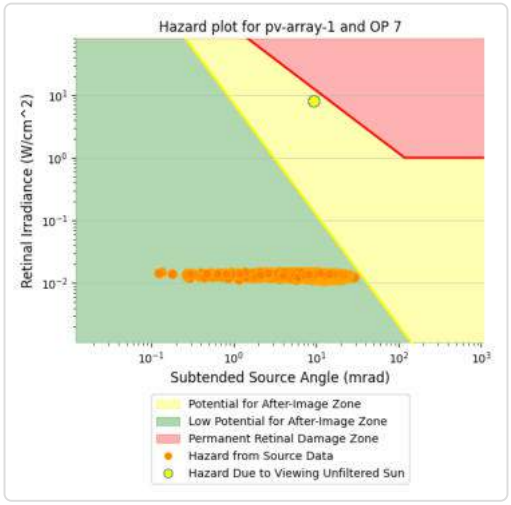
PV array 1 and OP 7

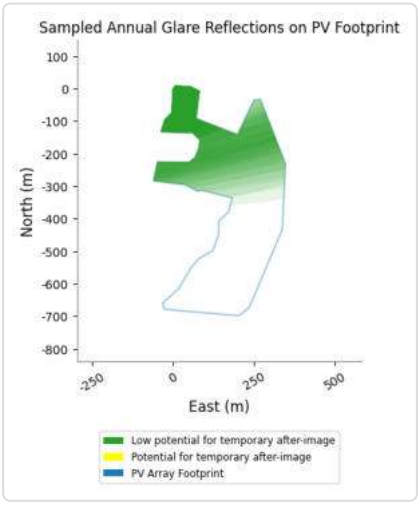
Yellow glare: none

Green glare: 1,766 min.





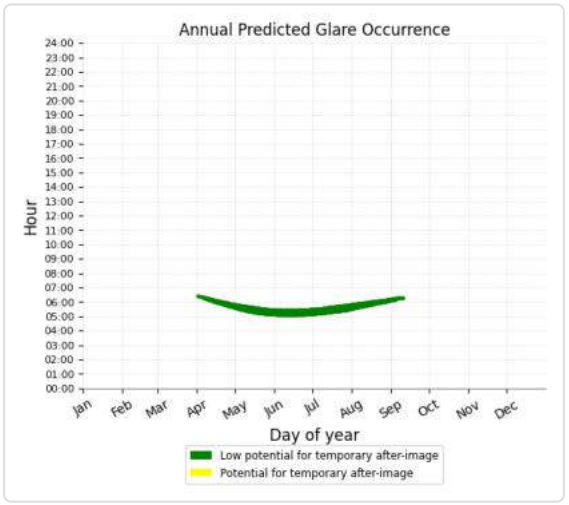


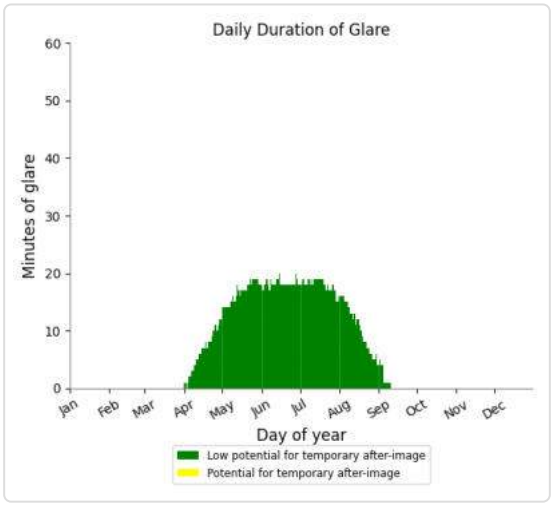


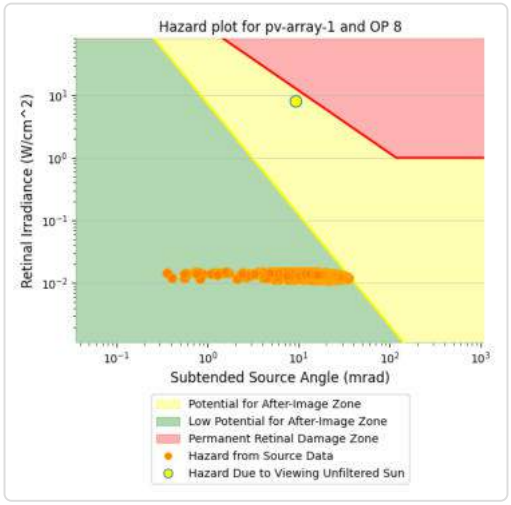
PV array 1 and OP 8

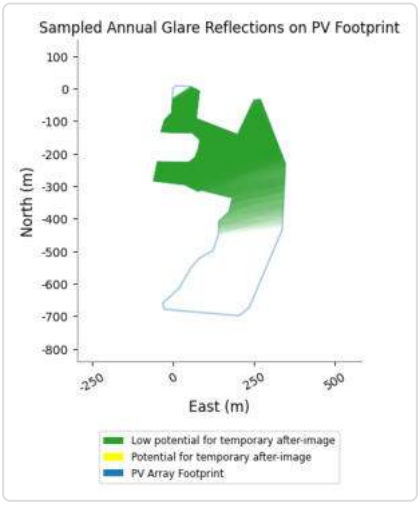
Yellow glare: none

Green glare: 2,160 min.





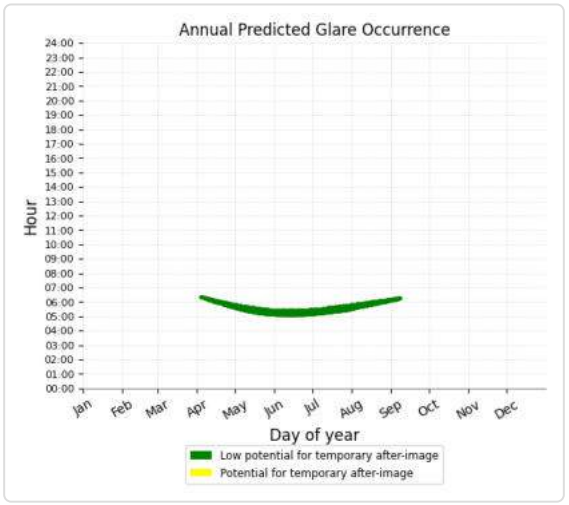


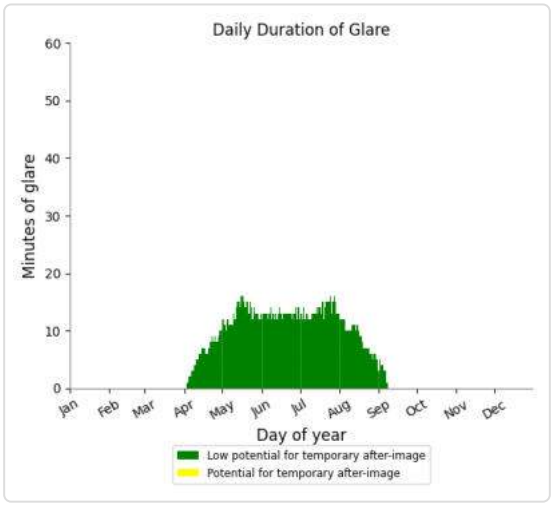


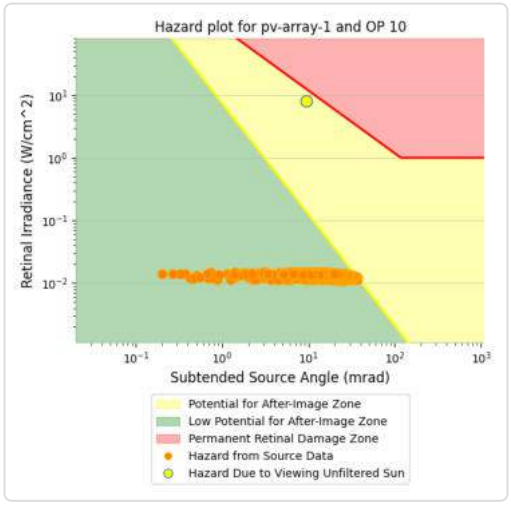
PV array 1 and OP 10

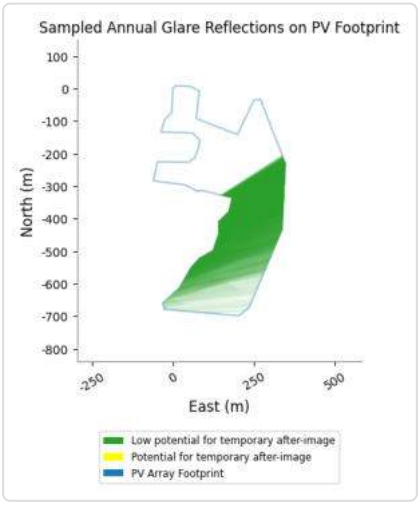
Yellow glare: none

Green glare: 1,679 min.





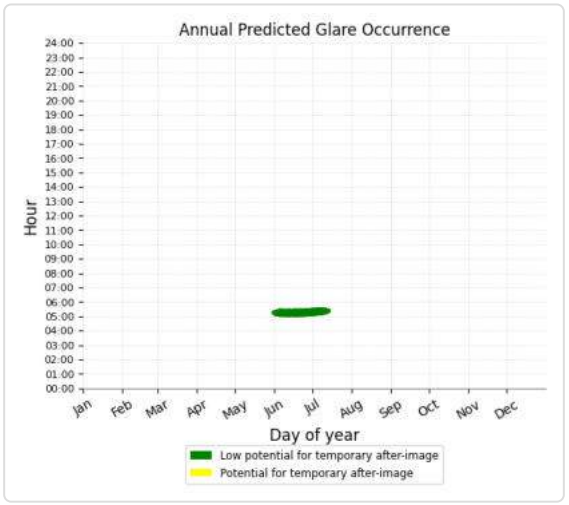


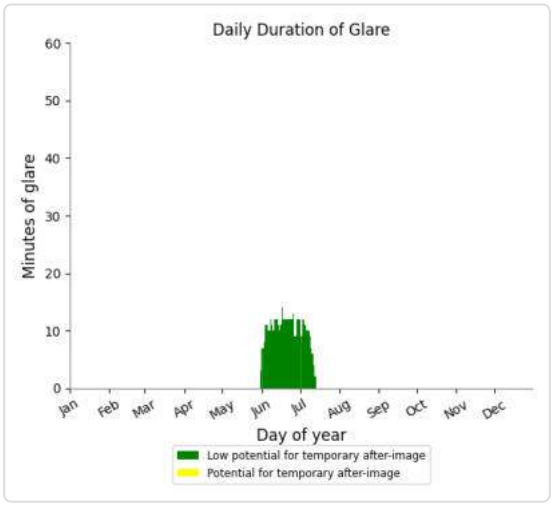


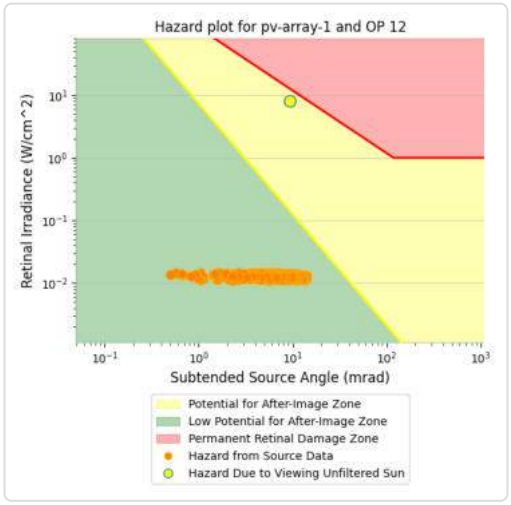
PV array 1 and OP 12

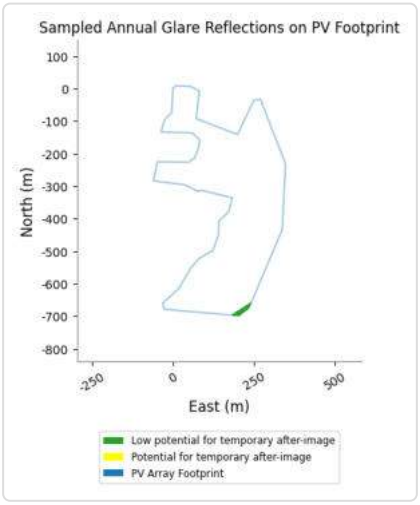
Yellow glare: none

Green glare: 447 min.





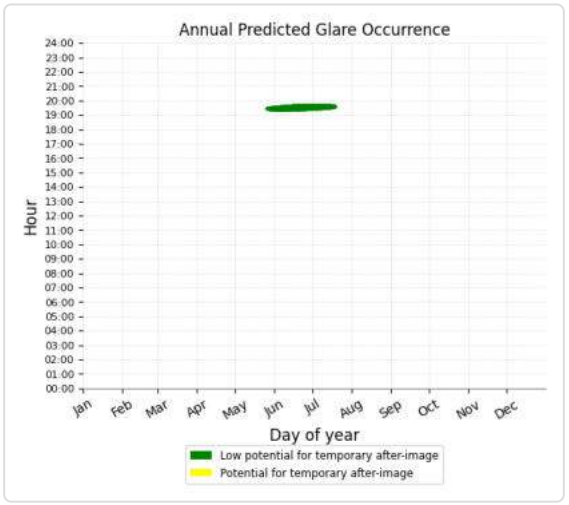


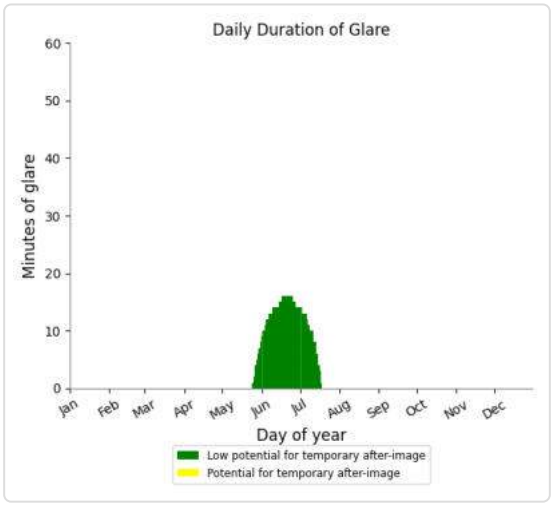


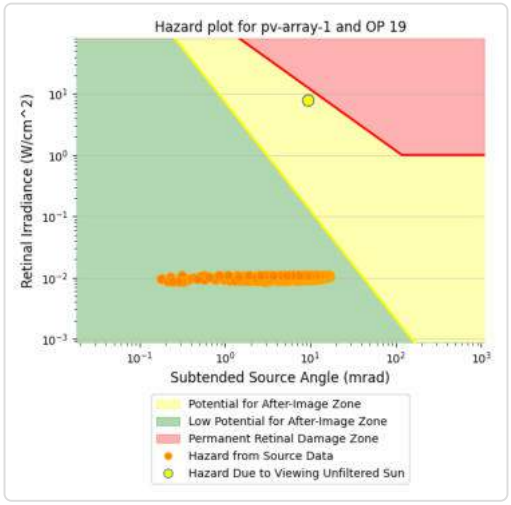
PV array 1 and OP 19

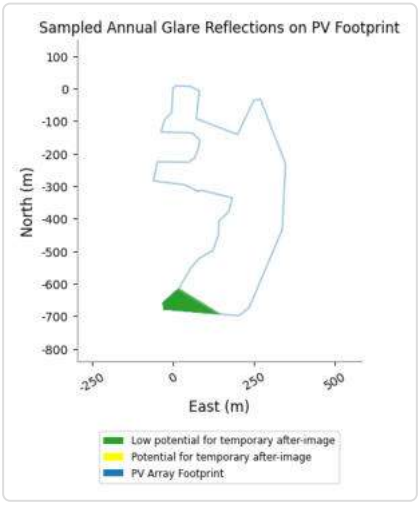
Yellow glare: none

Green glare: 621 min.





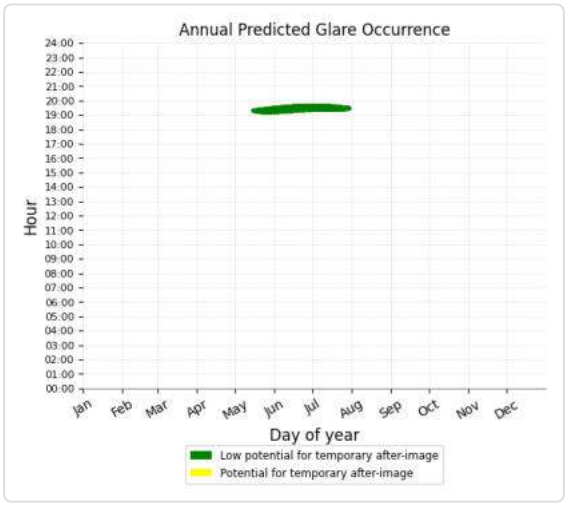


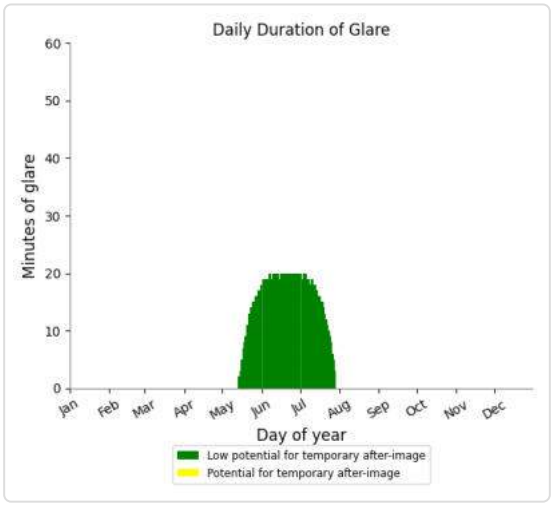


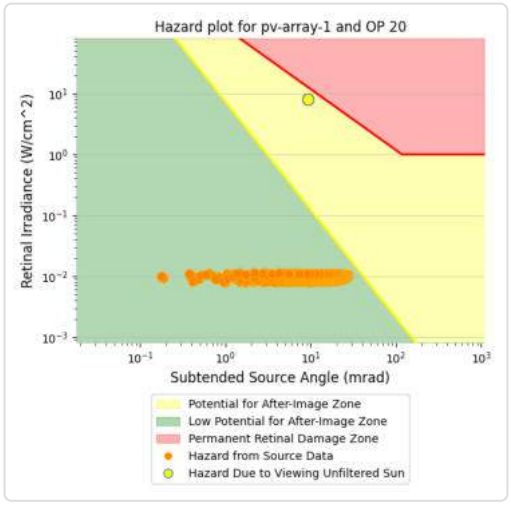
PV array 1 and OP 20

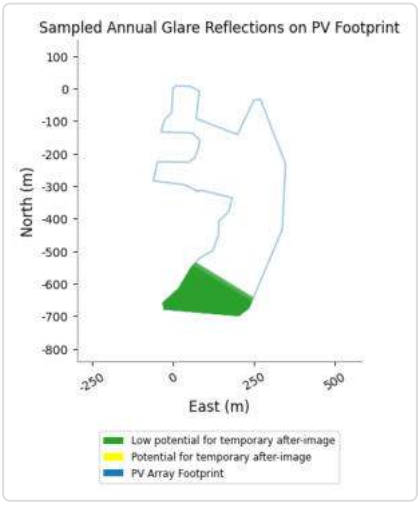
Yellow glare: none

Green glare: 1,238 min.





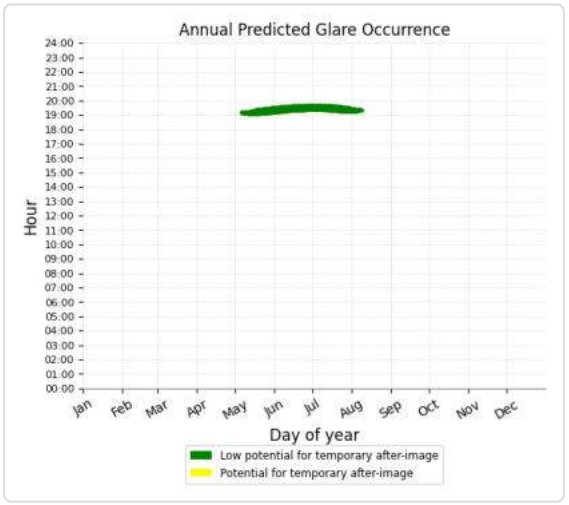


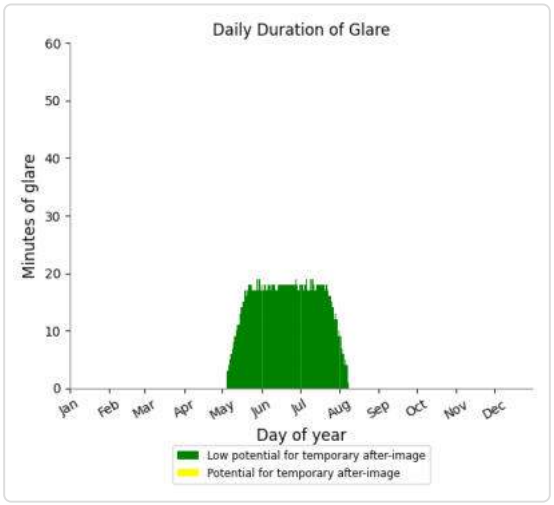


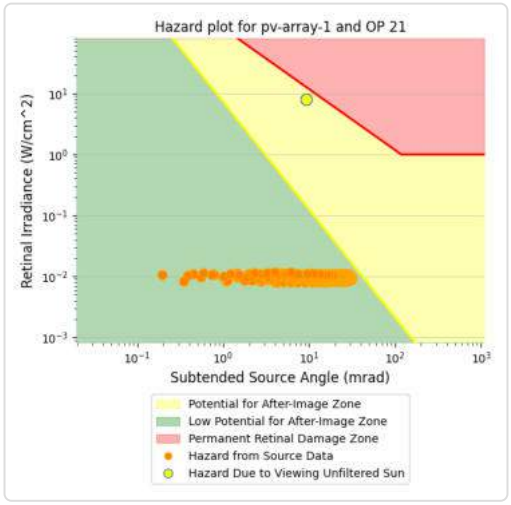
PV array 1 and OP 21

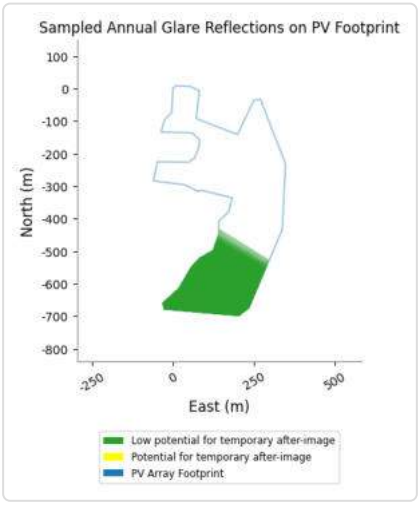
Yellow glare: none

Green glare: 1,456 min.





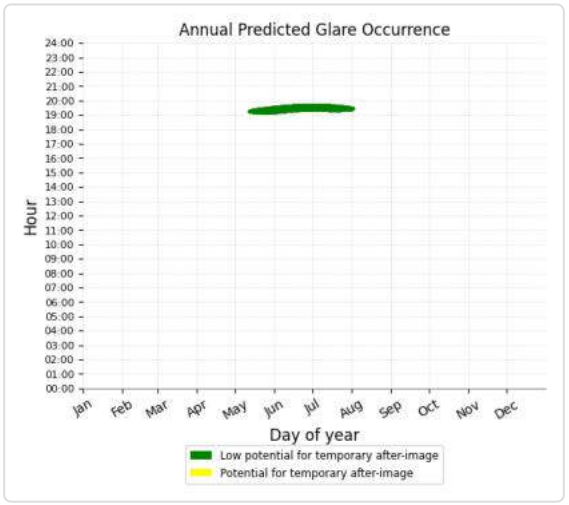


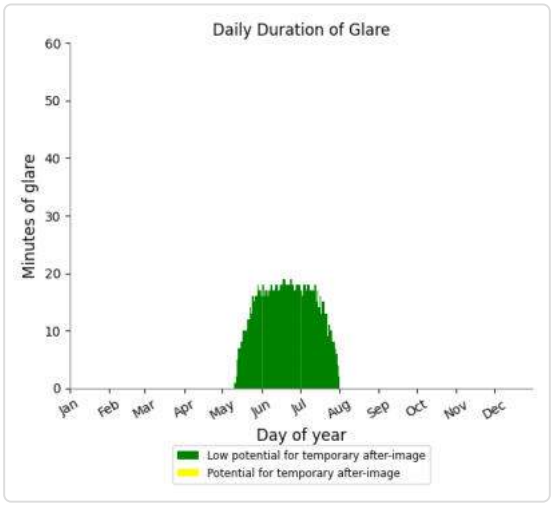


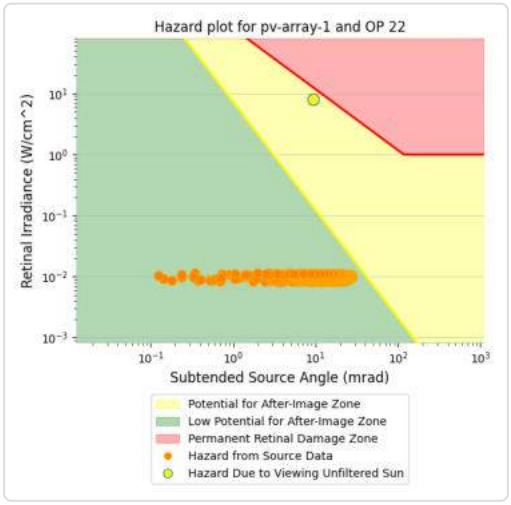
PV array 1 and OP 22

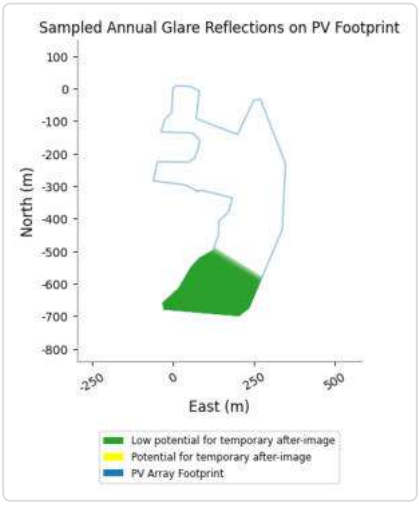
Yellow glare: none

Green glare: 1,197 min.





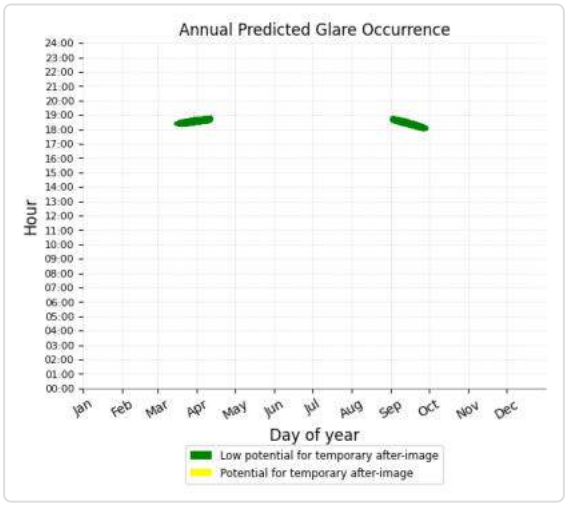


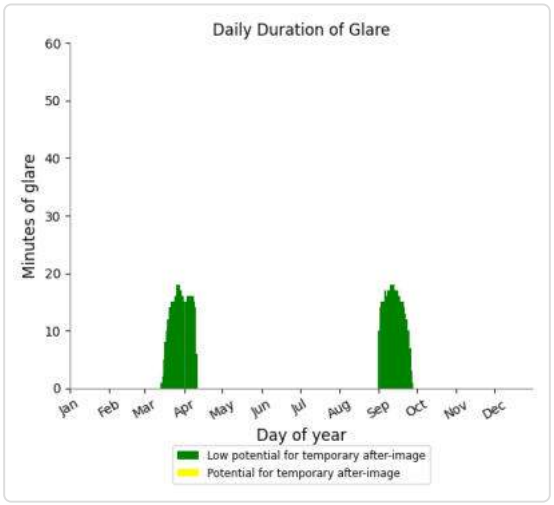


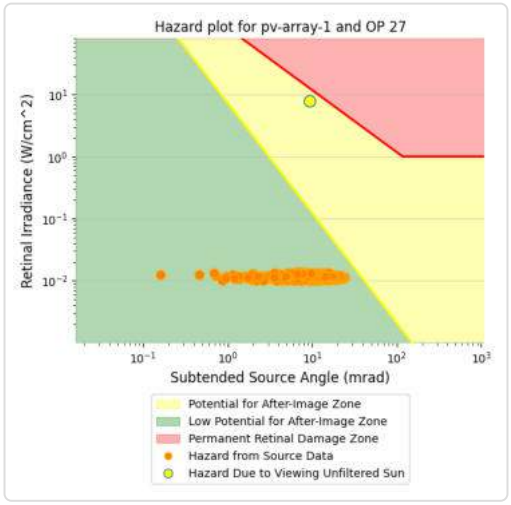
PV array 1 and OP 27

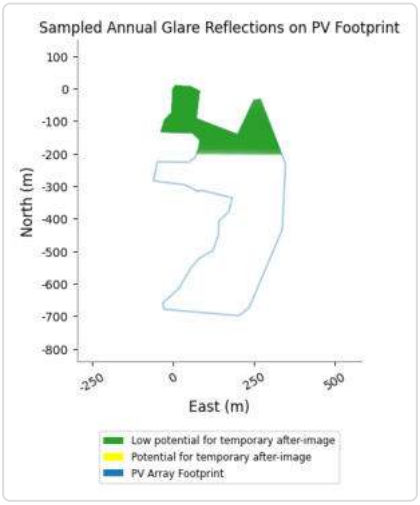
Yellow glare: none

Green glare: 782 min.





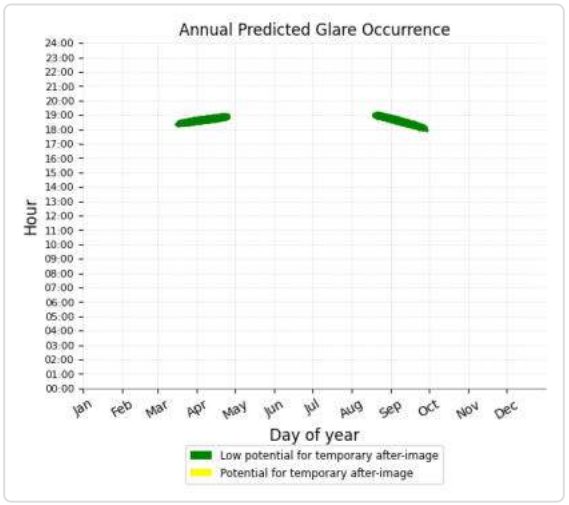


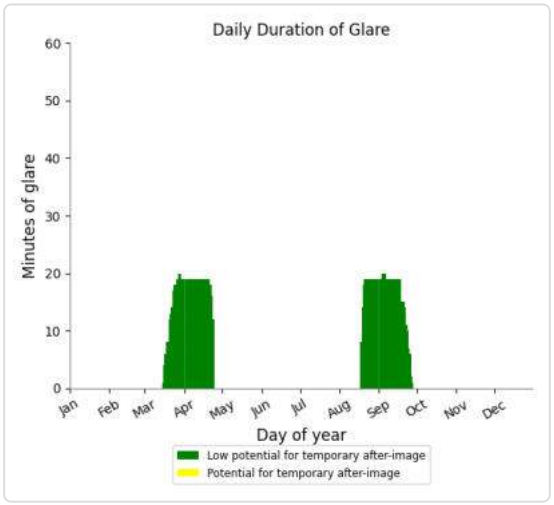


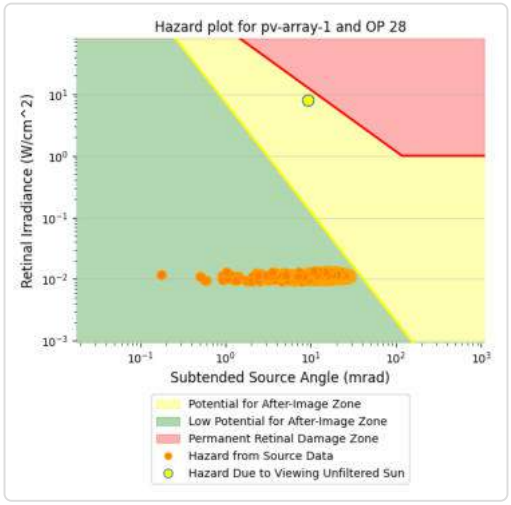
PV array 1 and OP 28

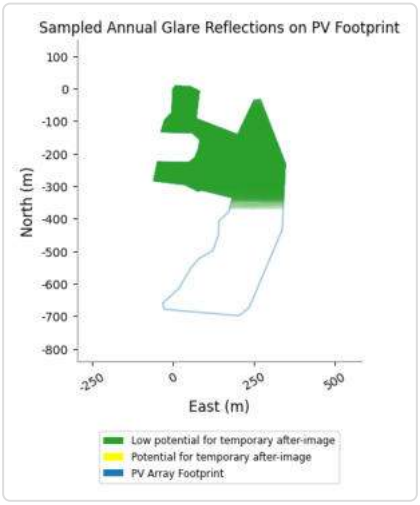
Yellow glare: none

Green glare: 1,370 min.





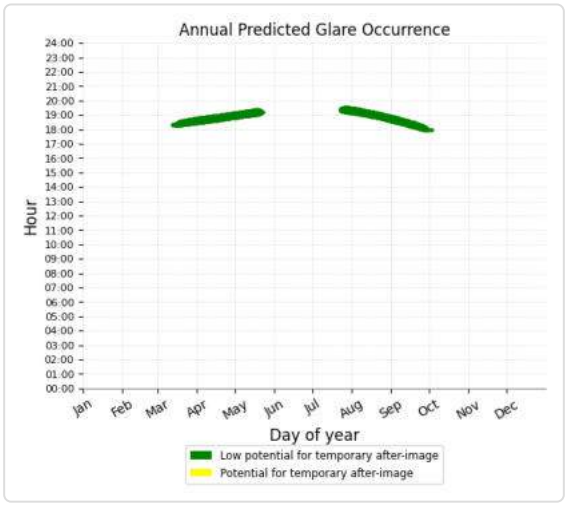


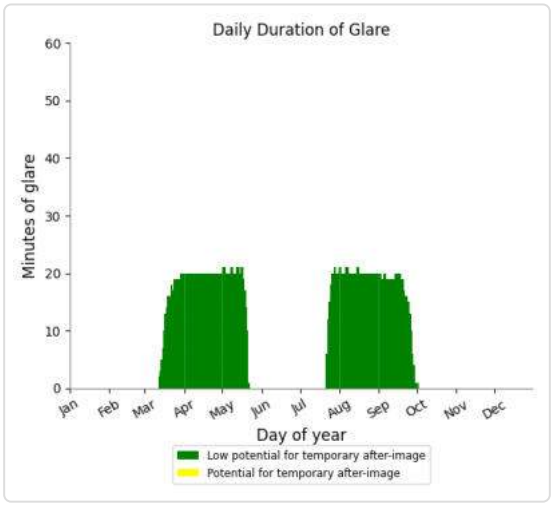


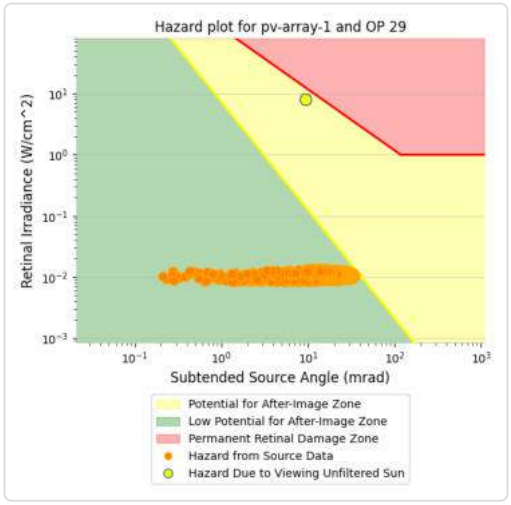
PV array 1 and OP 29

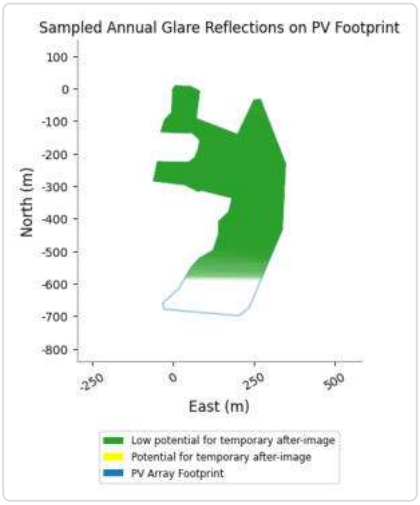
Yellow glare: none

Green glare: 2,608 min.





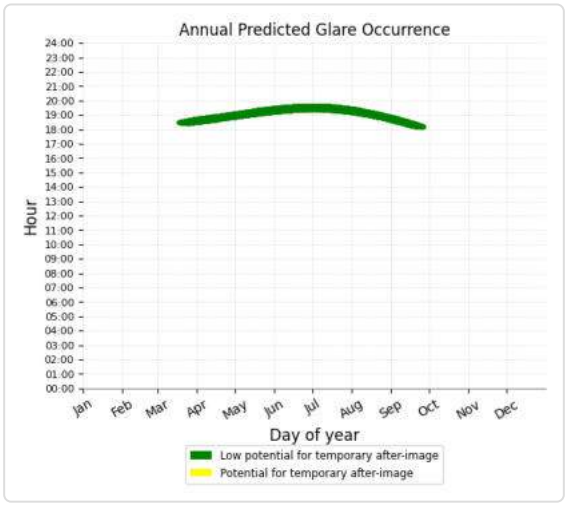


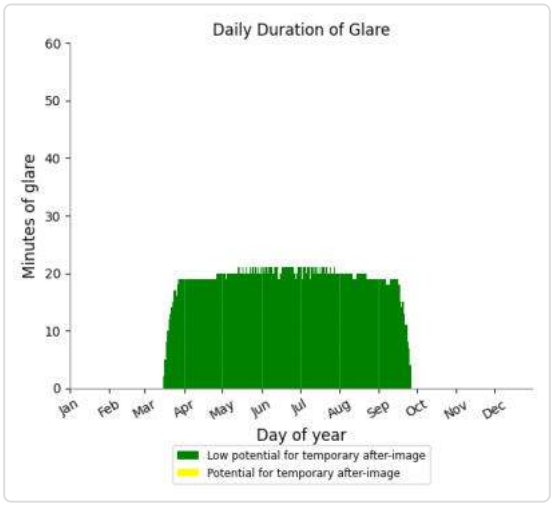


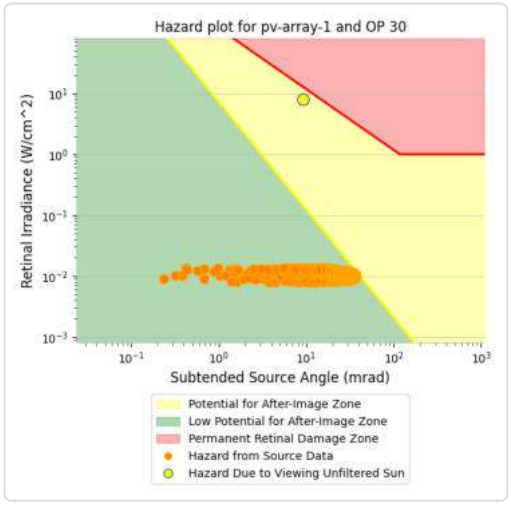
PV array 1 and OP 30

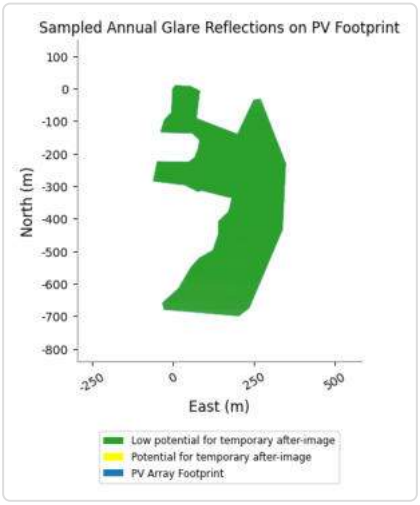
Yellow glare: none

Green glare: 3,700 min.





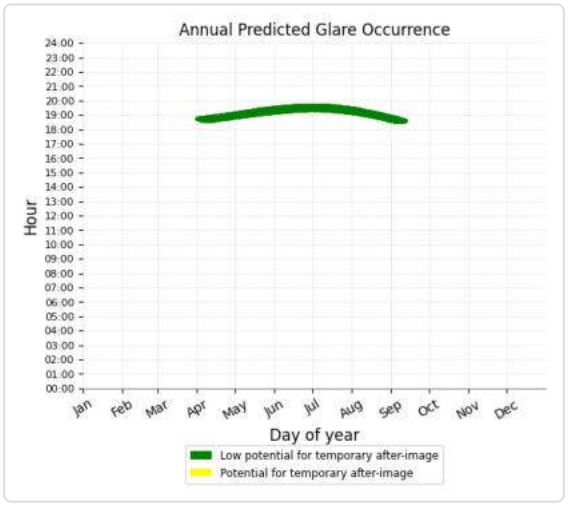


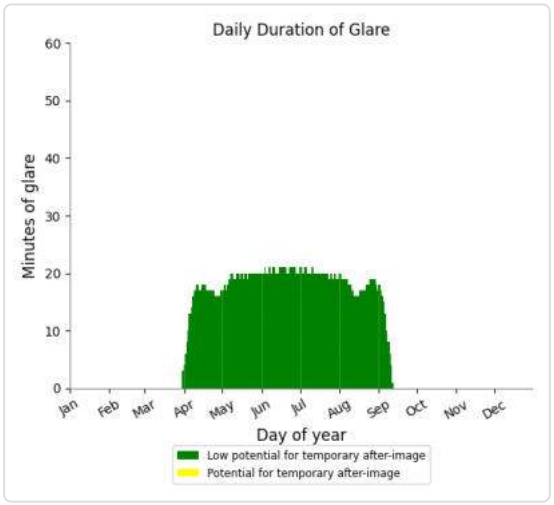


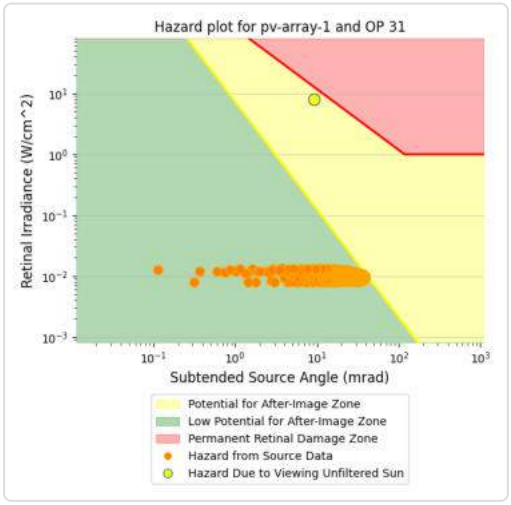
PV array 1 and OP 31

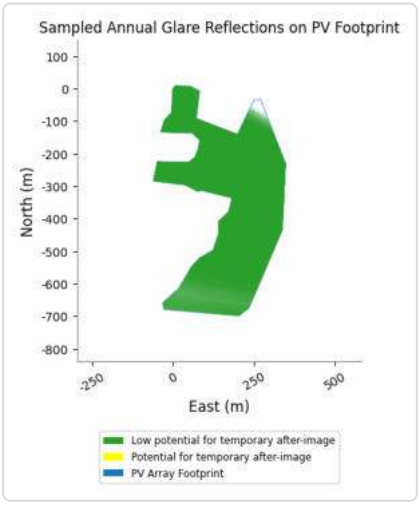
Yellow glare: none

Green glare: 2,988 min.





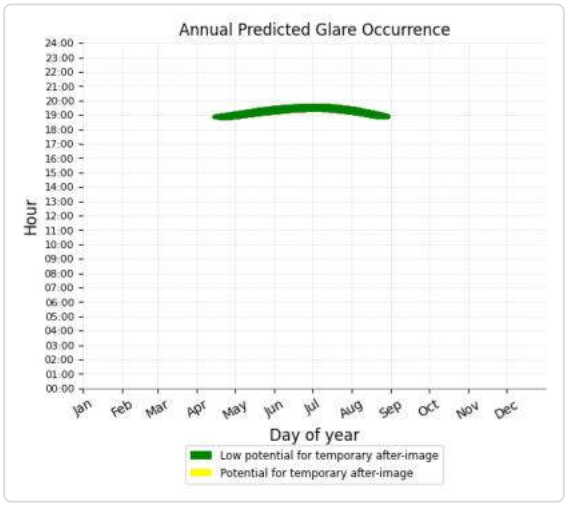


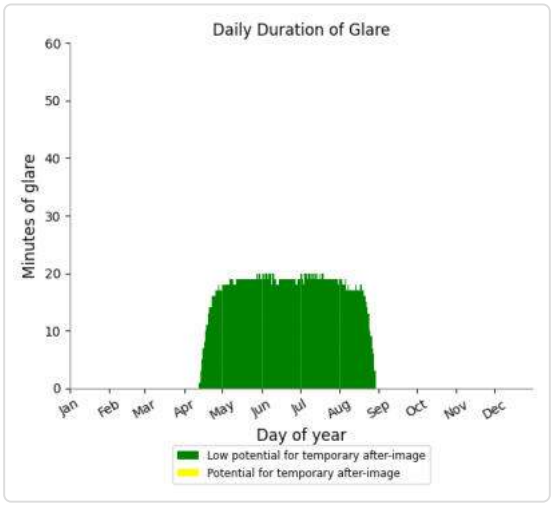


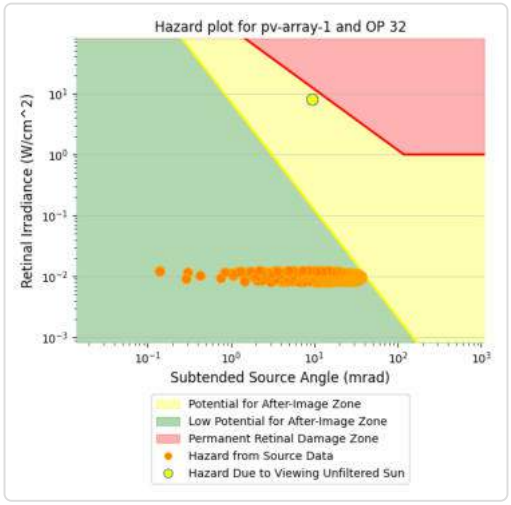
PV array 1 and OP 32

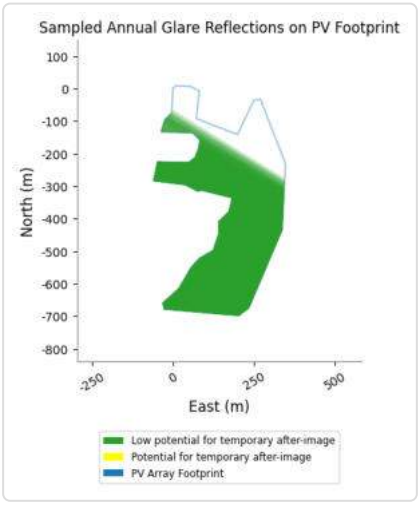
Yellow glare: none

Green glare: 2,417 min.





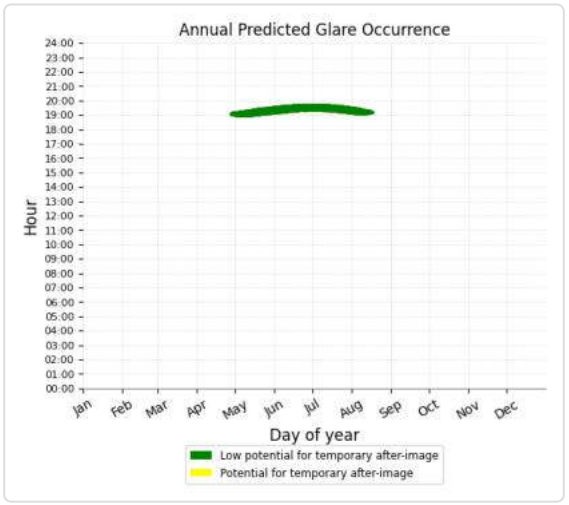


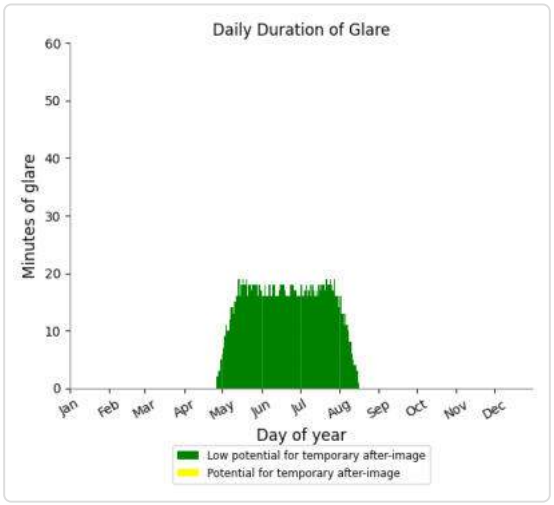


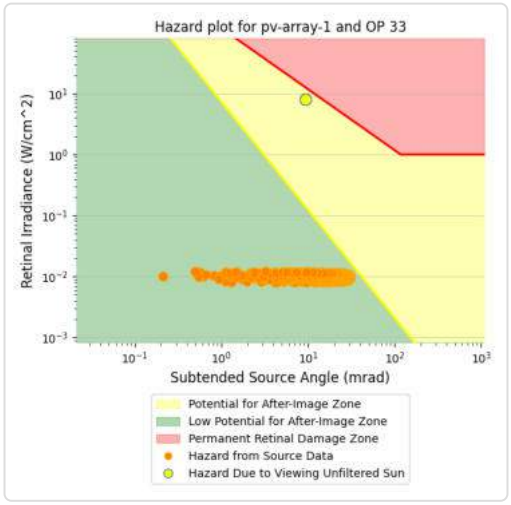
PV array 1 and OP 33

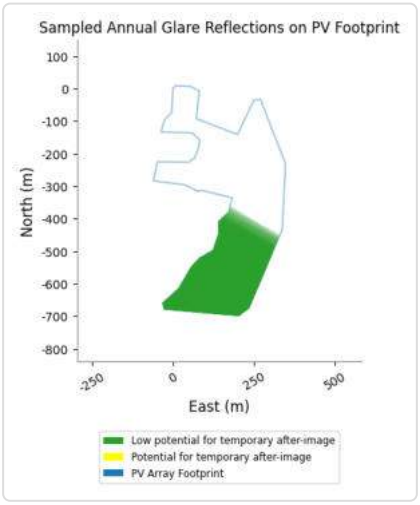
Yellow glare: none

Green glare: 1,664 min.





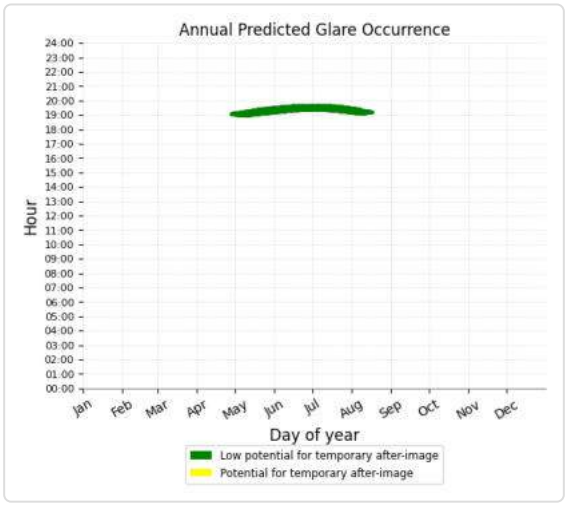


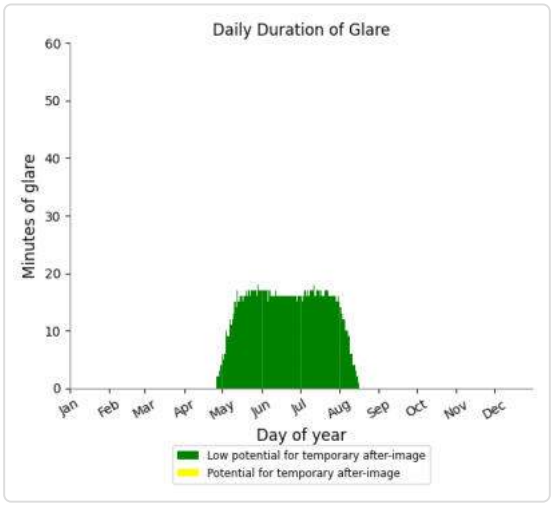


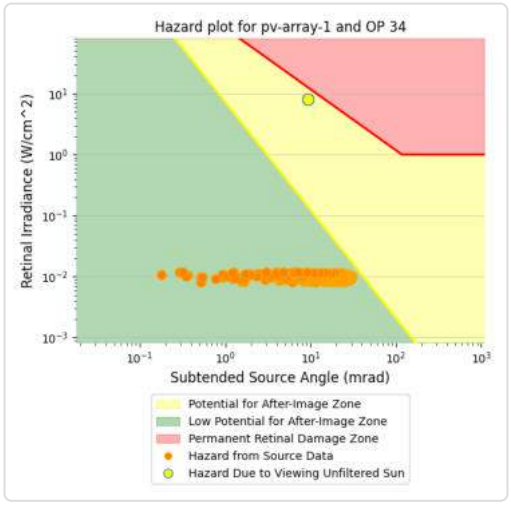
PV array 1 and OP 34

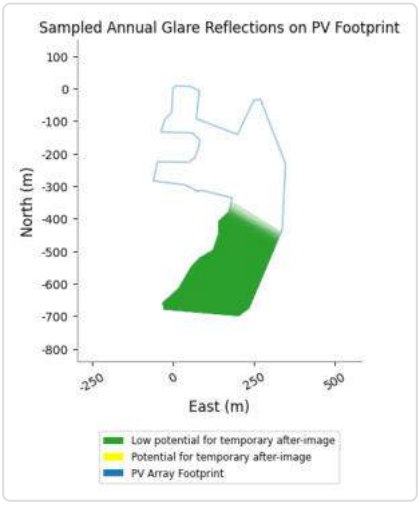
Yellow glare: none

Green glare: 1,569 min.





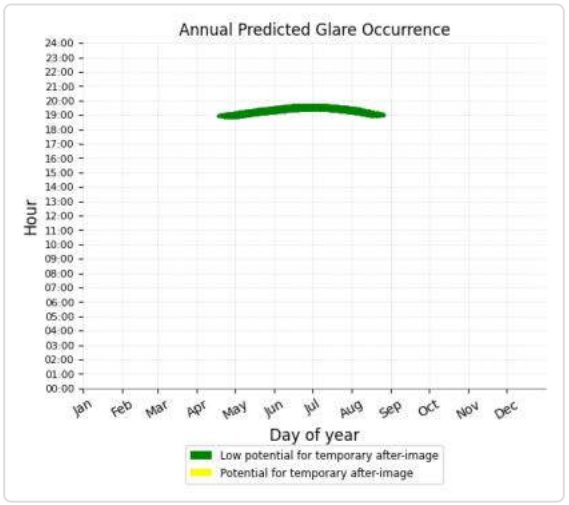


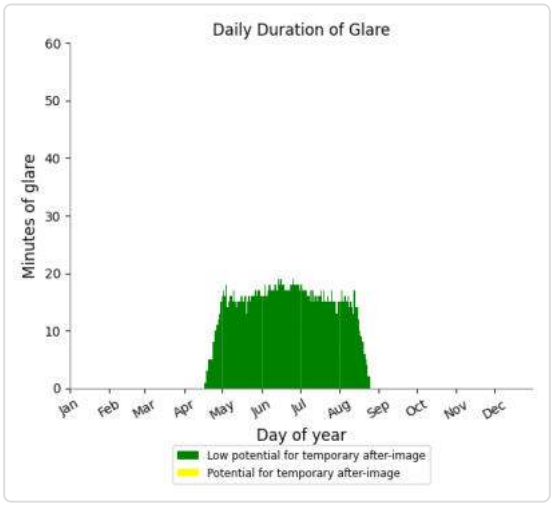


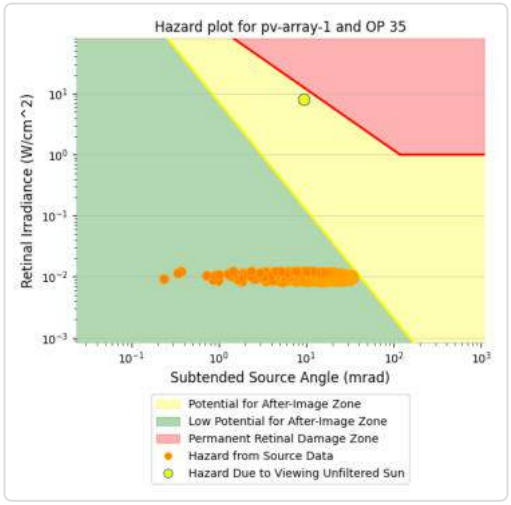
PV array 1 and OP 35

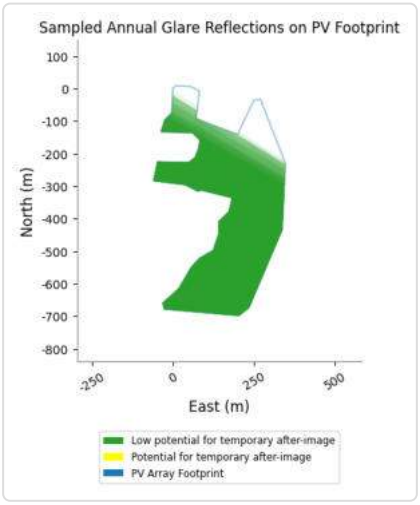
Yellow glare: none

Green glare: 1,900 min.





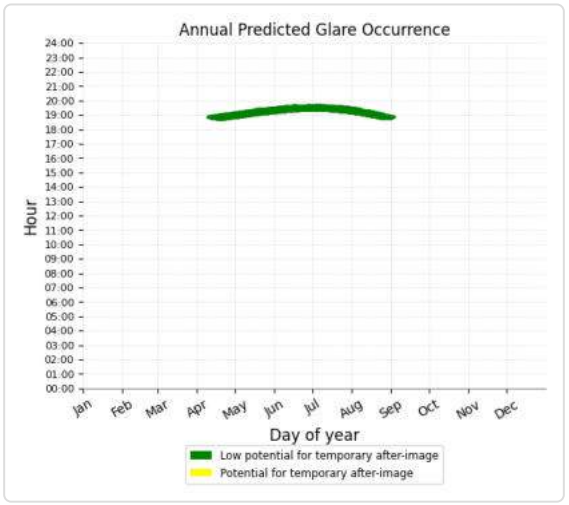


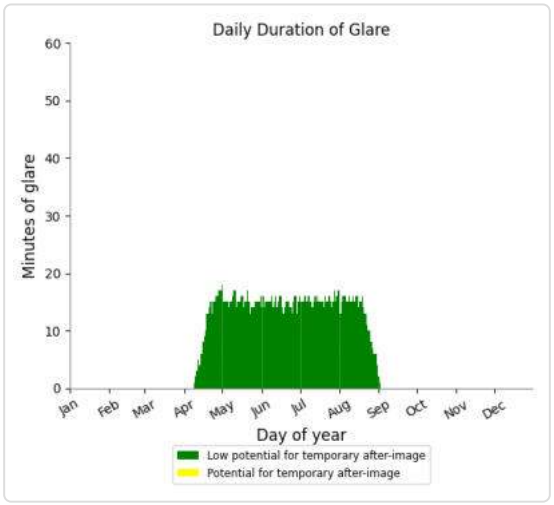


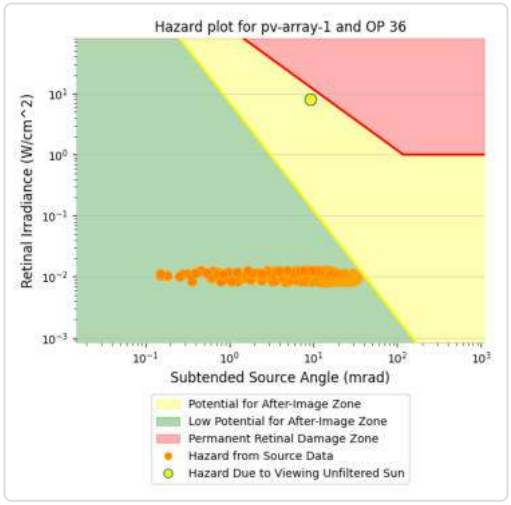
PV array 1 and OP 36

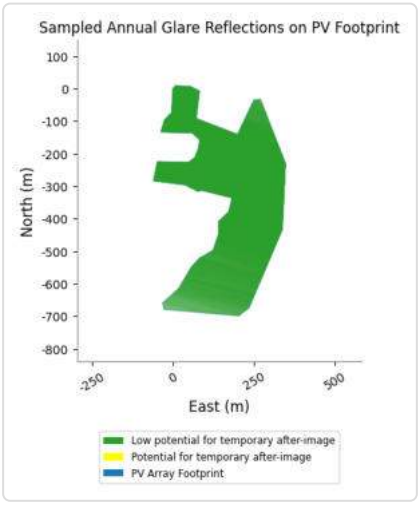
Yellow glare: none

Green glare: 2,025 min.



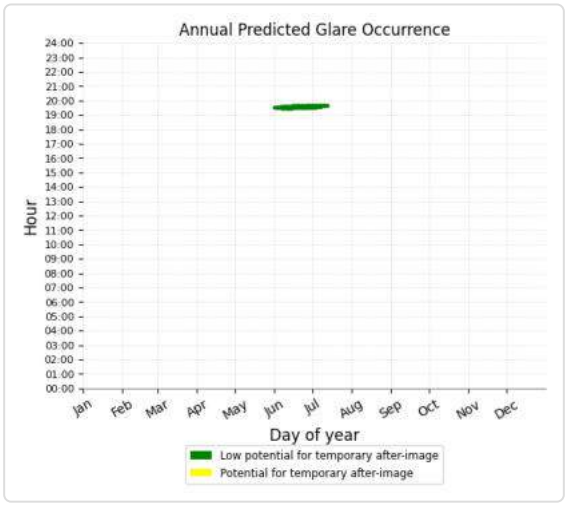


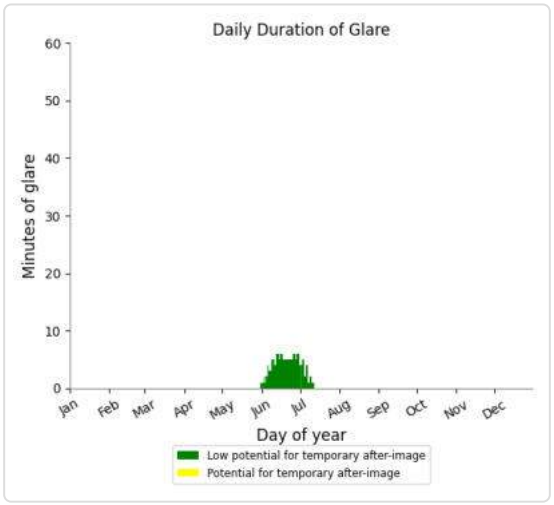


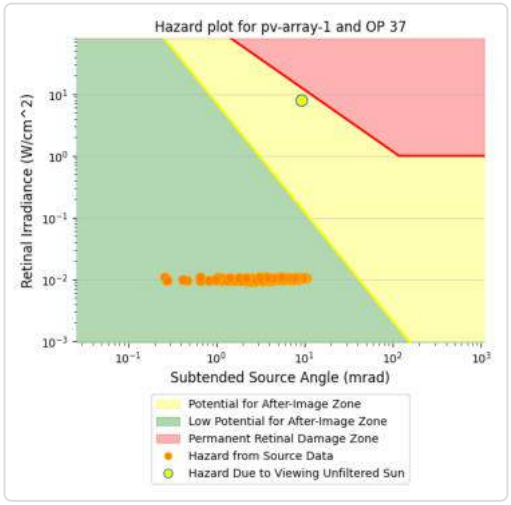


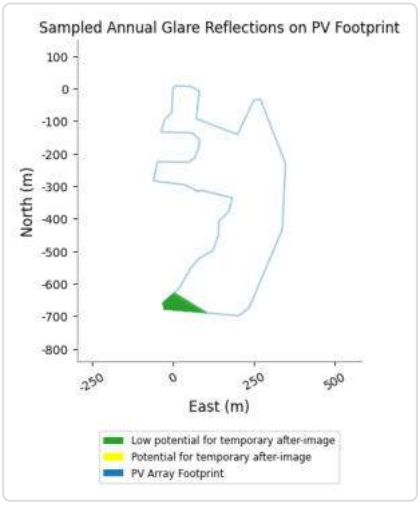
PV array 1 and OP 37

Yellow glare: none
Green glare: 169 min.









PV array 1 and OP 13

No glare found

PV array 1 and OP 14

No glare found

PV array 1 and OP 15

No glare found

PV array 1 and OP 16

No glare found

PV array 1 and OP 17

No glare found

PV array 1 and OP 18

No glare found

PV array 1 and OP 23

No glare found

PV array 1 and OP 24

No glare found

PV array 1 and OP 25

No glare found

PV array 1 and OP 26

No glare found

PV array 1 and OP 38

No glare found

PV array 1 and OP 39

No glare found

PV array 1 and OP 40

No glare found

PV array 1 and OP 41

No glare found

PV array 1 and OP 42

No glare found

PV array 1 and OP 43

No glare found

PV array 1 and OP 44

No glare found

PV array 1 and OP 45

No glare found

PV array 1 and OP 46

No glare found

PV array 1 and OP 47

No glare found

PV array 1 and OP 48

No glare found

PV: PV array 2 potential temporary after-image

Receptor results ordered by category of glare

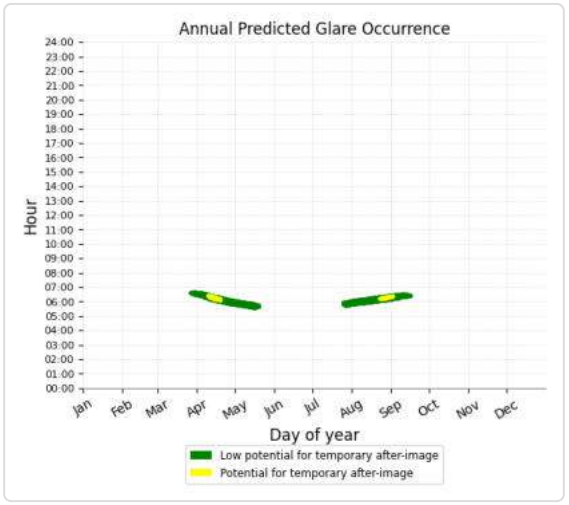
Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 5	1,403	23.4	95	1.6
OP 6	2,583	43.0	517	8.6
OP 10	1,474	24.6	31	0.5
OP 11	2,495	41.6	429	7.2
OP 12	1,505	25.1	1,622	27.0
OP 13	1,369	22.8	1,434	23.9
OP 14	1,850	30.8	260	4.3
OP 29	2,771	46.2	290	4.8
OP 31	1,635	27.2	586	9.8
OP 32	1,978	33.0	126	2.1
OP 35	2,264	37.7	124	2.1
OP 36	1,850	30.8	839	14.0
OP 4	264	4.4	0	0.0
OP 7	291	4.8	0	0.0
OP 8	625	10.4	0	0.0
OP 9	888	14.8	0	0.0
OP 15	1,234	20.6	0	0.0
OP 21	703	11.7	0	0.0
OP 22	424	7.1	0	0.0
OP 33	1,362	22.7	0	0.0
OP 34	1,531	25.5	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0
OP 23	0	0.0	0	0.0
OP 24	0	0.0	0	0.0
OP 25	0	0.0	0	0.0
OP 26	0	0.0	0	0.0
OP 27	0	0.0	0	0.0
OP 28	0	0.0	0	0.0
OP 30	0	0.0	0	0.0
OP 37	0	0.0	0	0.0
OP 38	0	0.0	0	0.0
OP 39	0	0.0	0	0.0

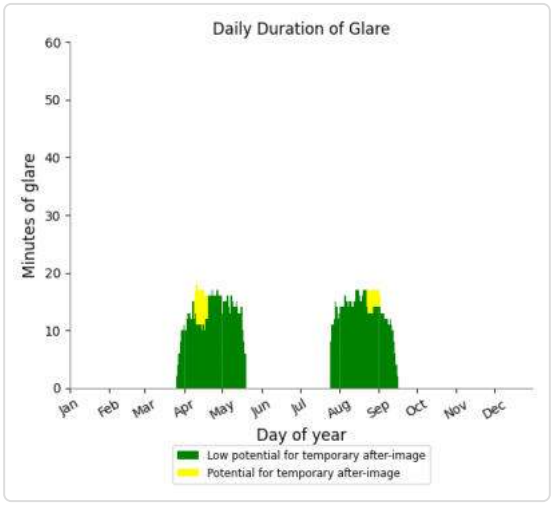
Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 40	0	0.0	0	0.0
OP 41	0	0.0	0	0.0
OP 42	0	0.0	0	0.0
OP 43	0	0.0	0	0.0
OP 44	0	0.0	0	0.0
OP 45	0	0.0	0	0.0
OP 46	0	0.0	0	0.0
OP 47	0	0.0	0	0.0
OP 48	0	0.0	0	0.0

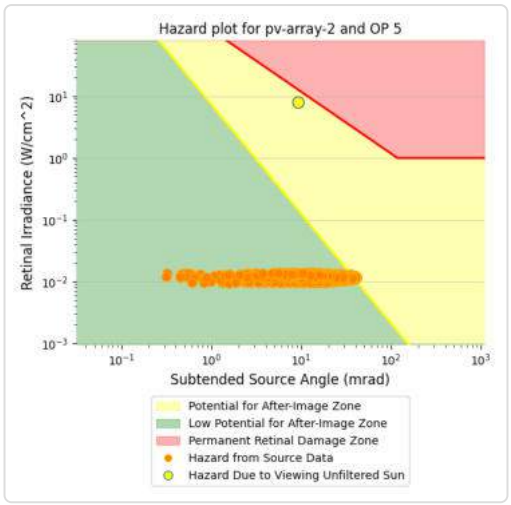
PV array 2 and OP 5

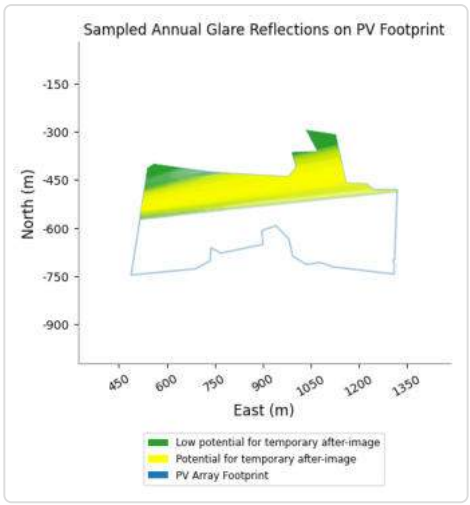
Yellow glare: 95 min.

Green glare: 1,403 min.





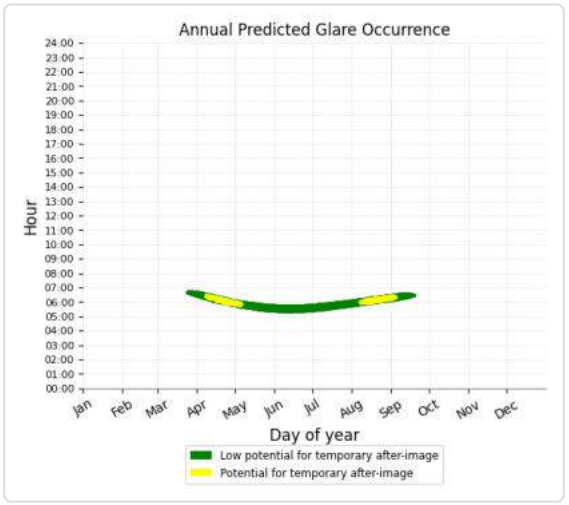


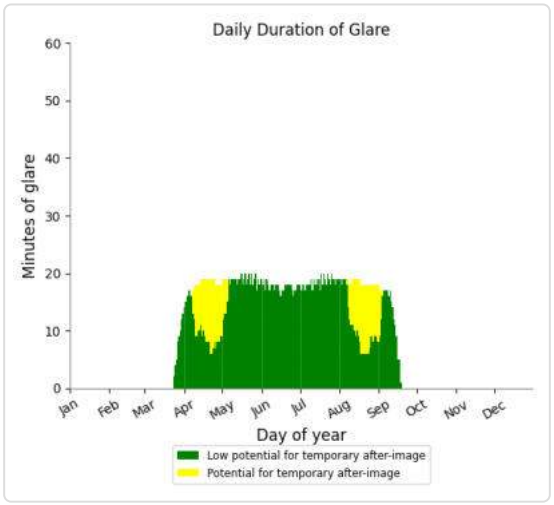


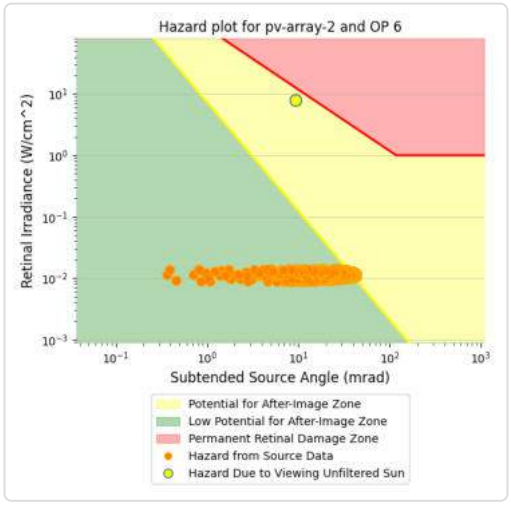
PV array 2 and OP 6

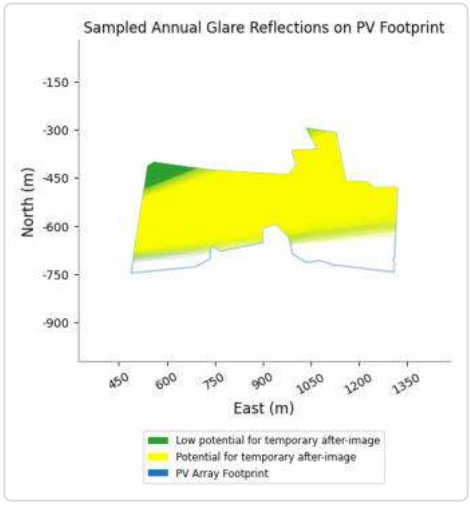
Yellow glare: 517 min.

Green glare: 2,583 min.





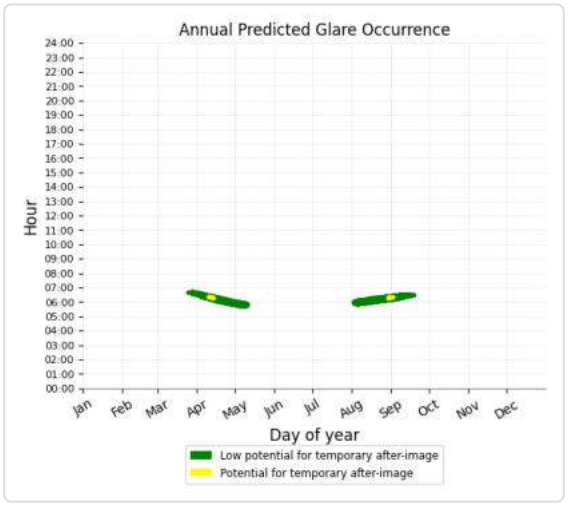


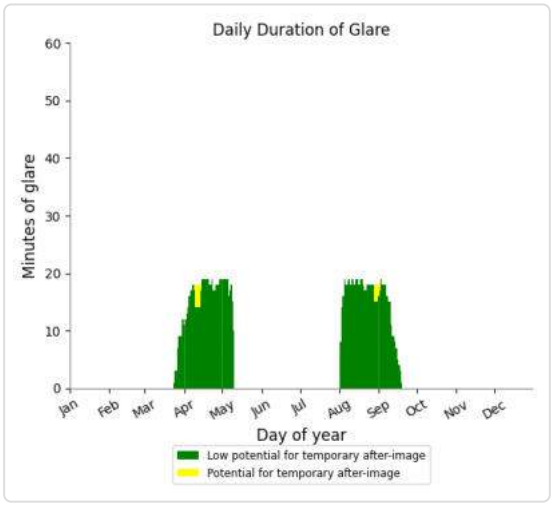


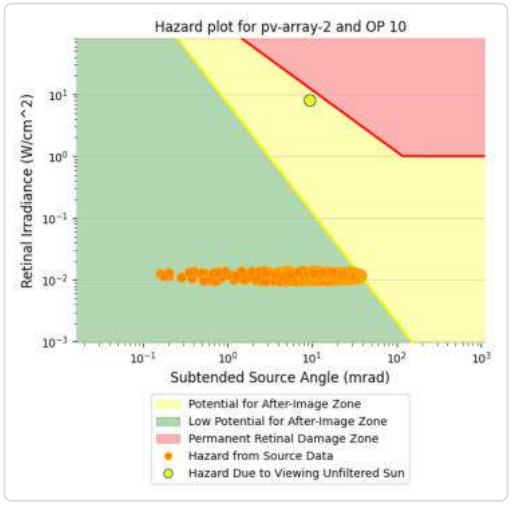
PV array 2 and OP 10

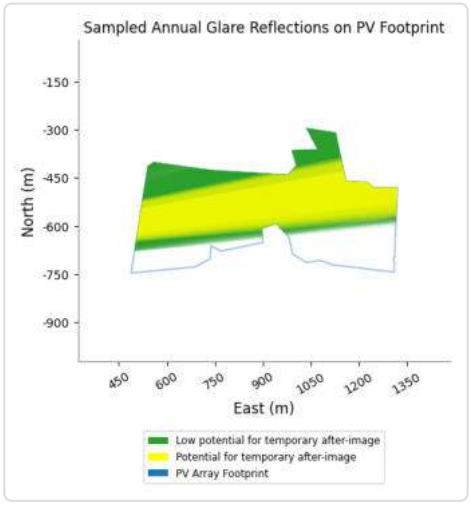
Yellow glare: 31 min.

Green glare: 1,474 min.





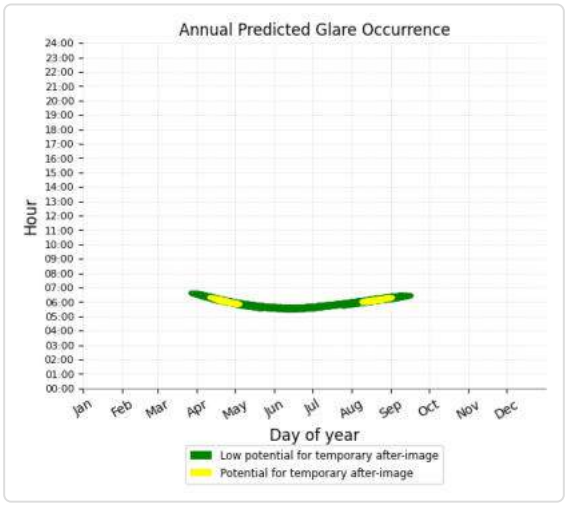


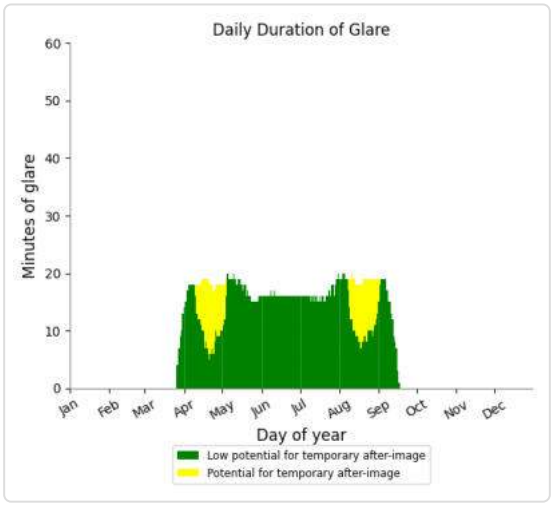


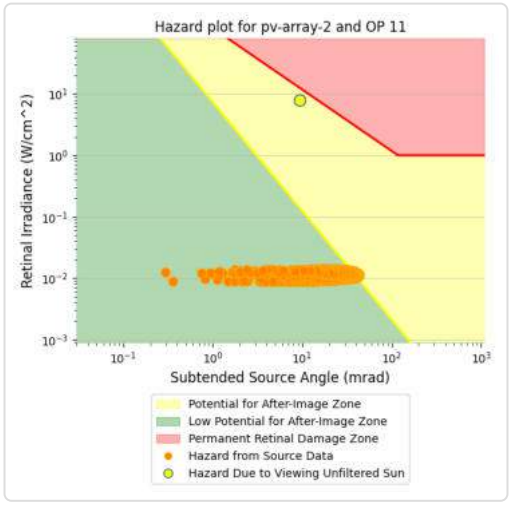
PV array 2 and OP 11

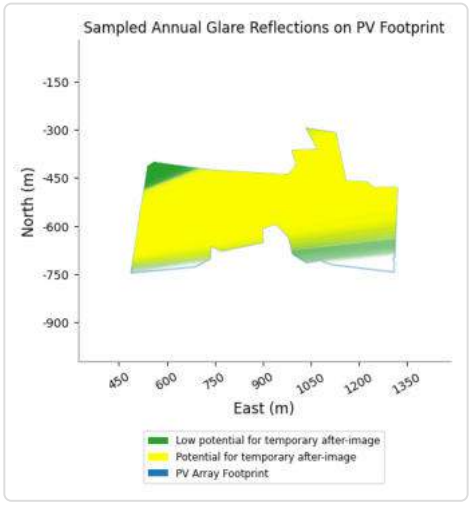
Yellow glare: 429 min.

Green glare: 2,495 min.





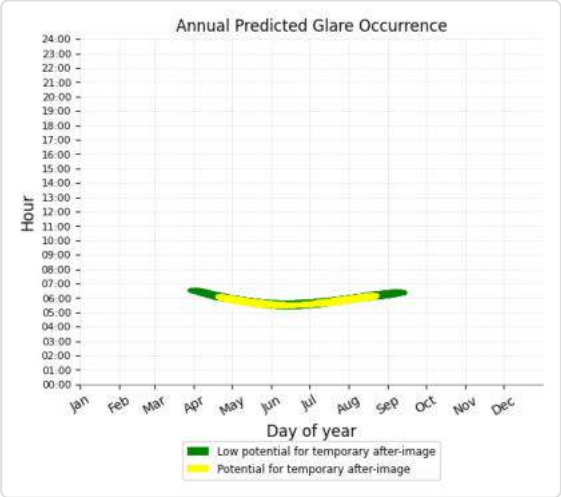


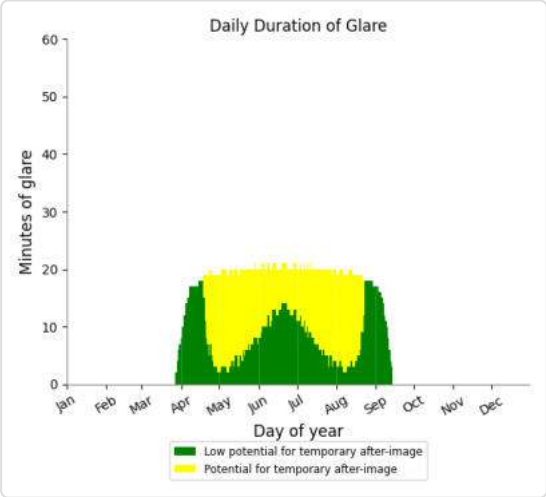


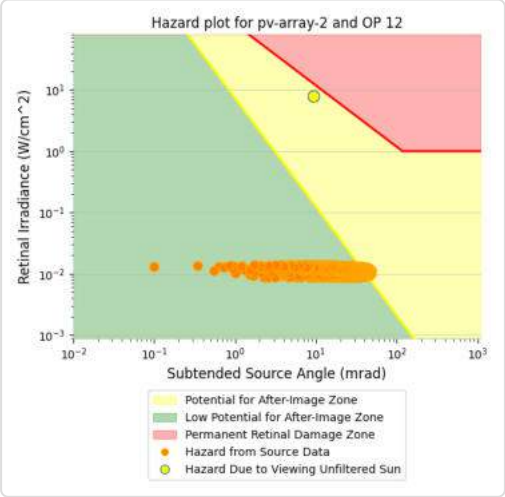
PV array 2 and OP 12

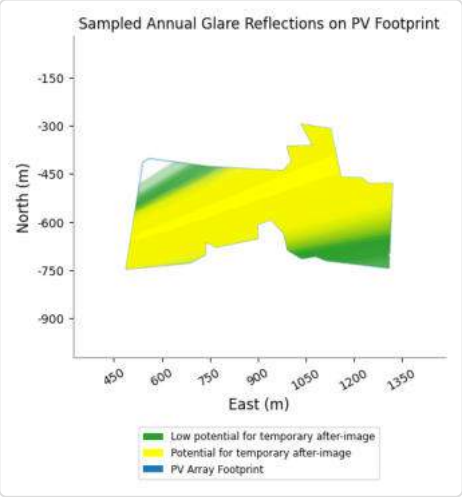
Yellow glare: 1,622 min.

Green glare: 1,505 min.





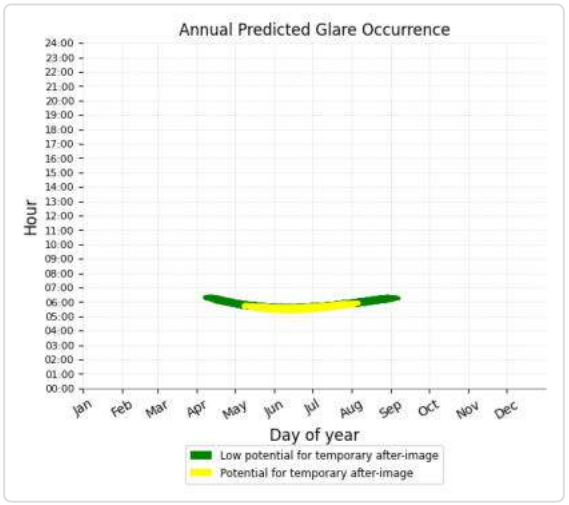


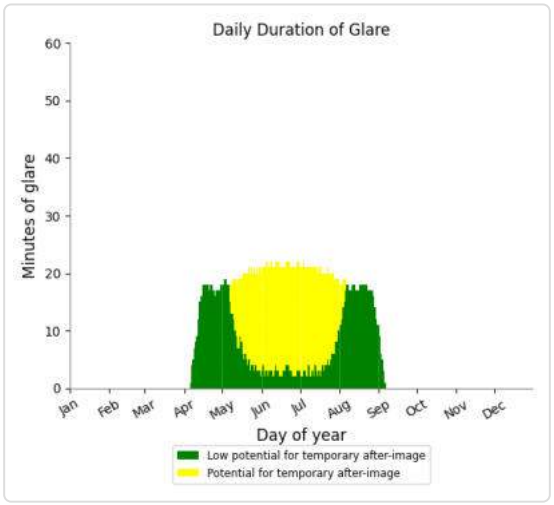


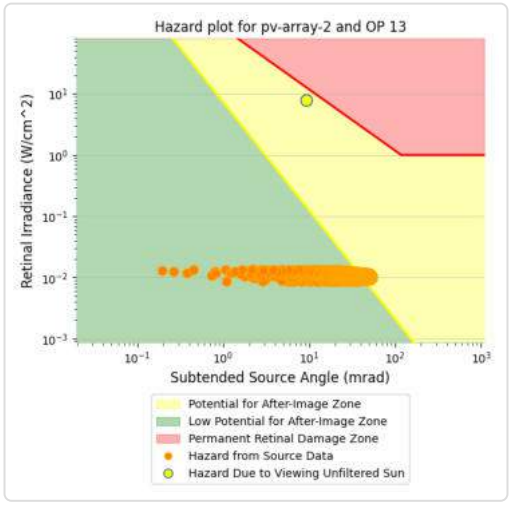
PV array 2 and OP 13

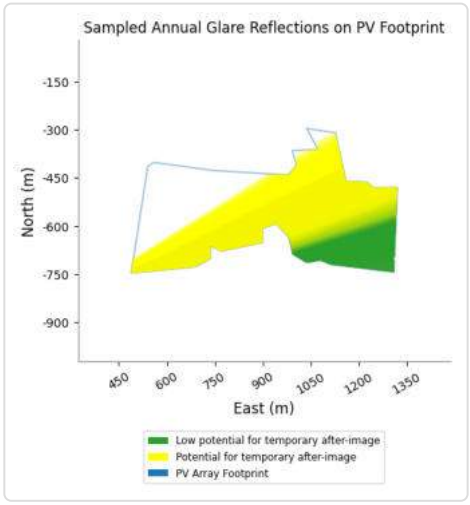
Yellow glare: 1,434 min.

Green glare: 1,369 min.





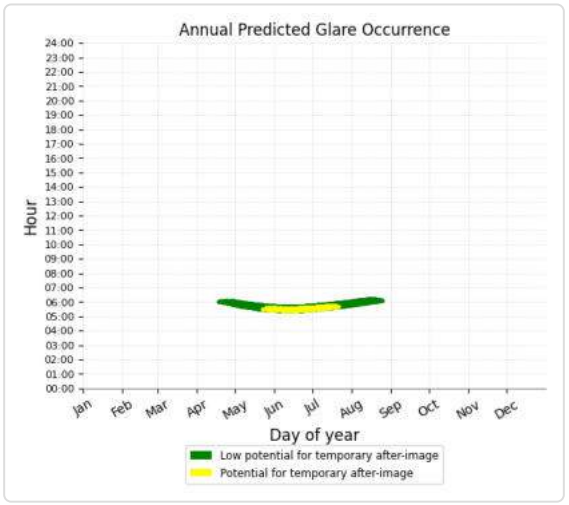


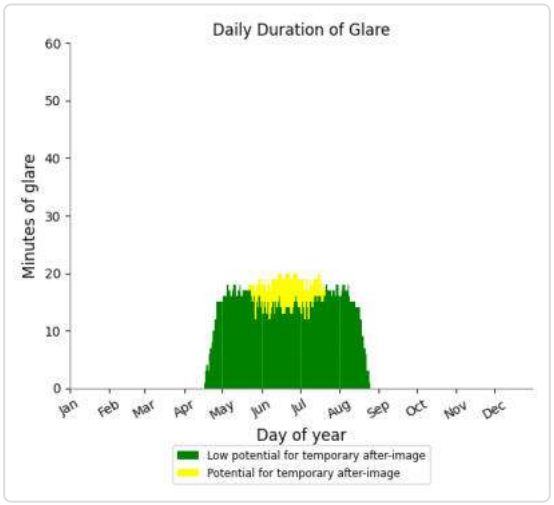


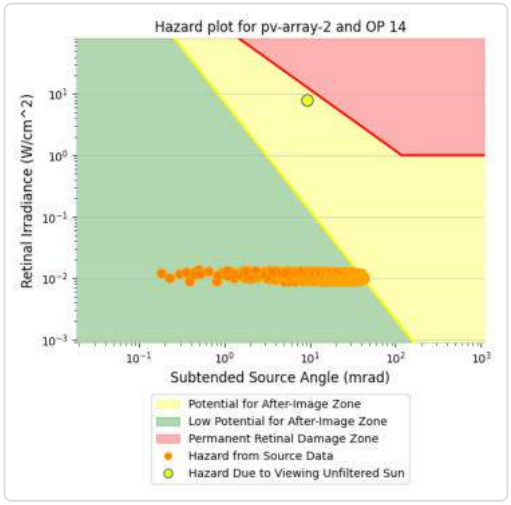
PV array 2 and OP 14

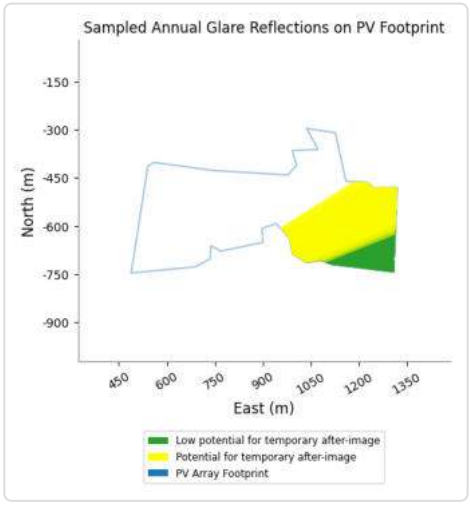
Yellow glare: 260 min.

Green glare: 1,850 min.





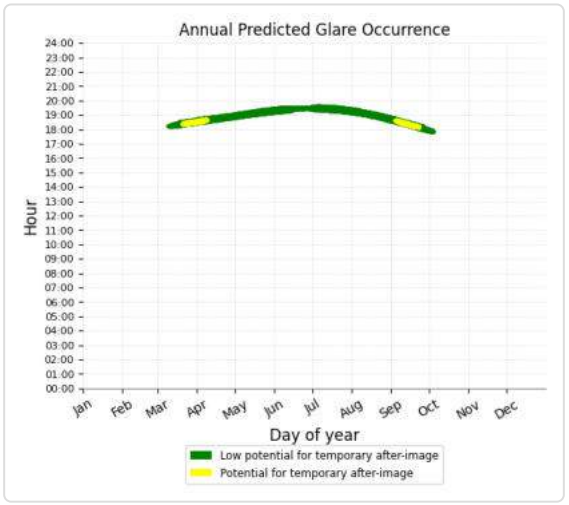


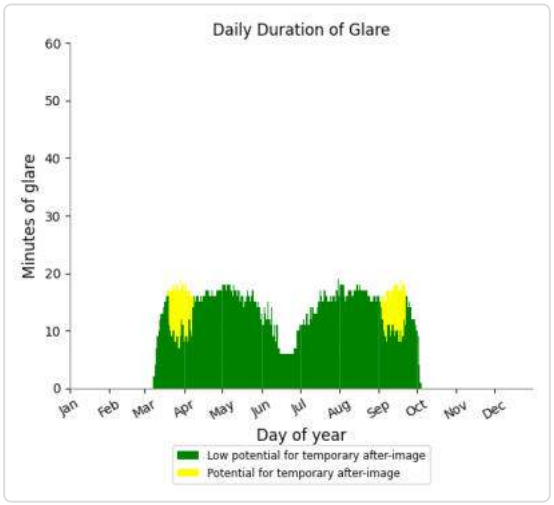


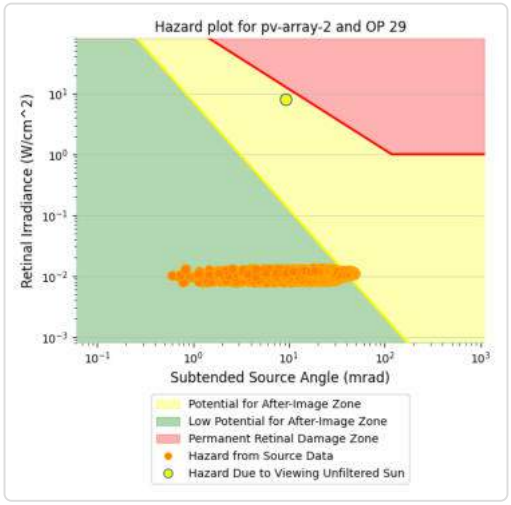
PV array 2 and OP 29

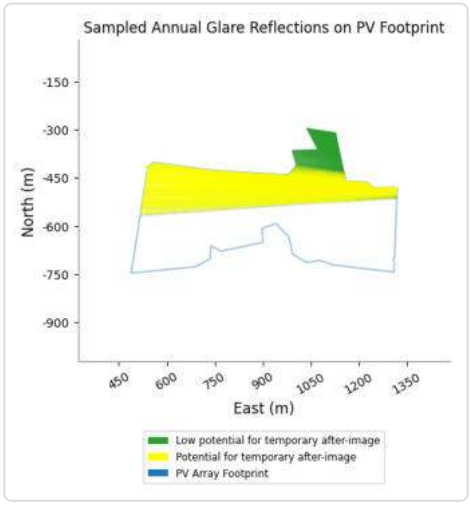
Yellow glare: 290 min.

Green glare: 2,771 min.





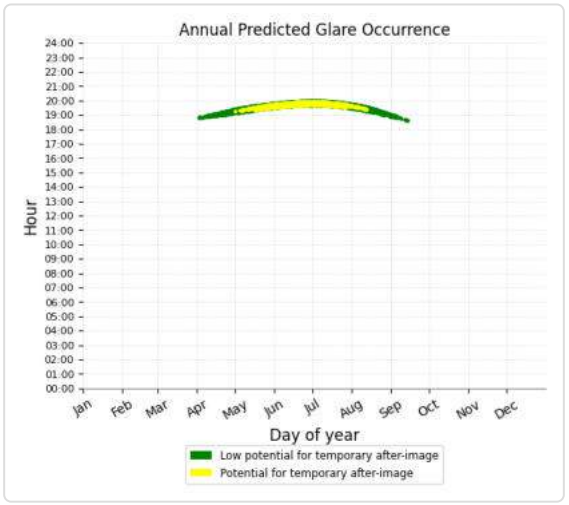


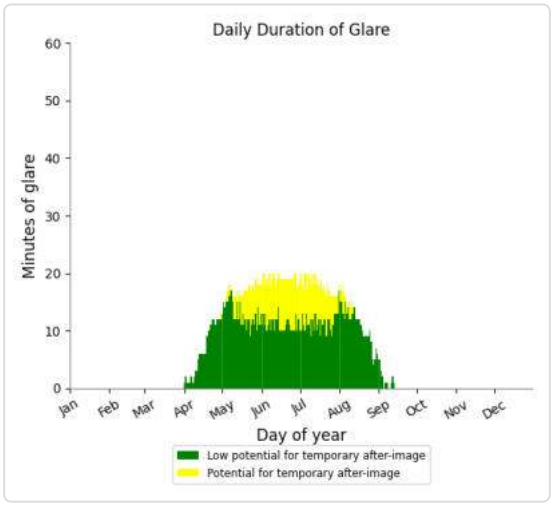


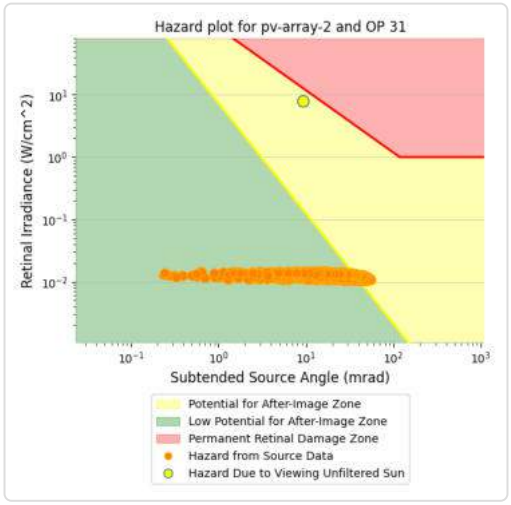
PV array 2 and OP 31

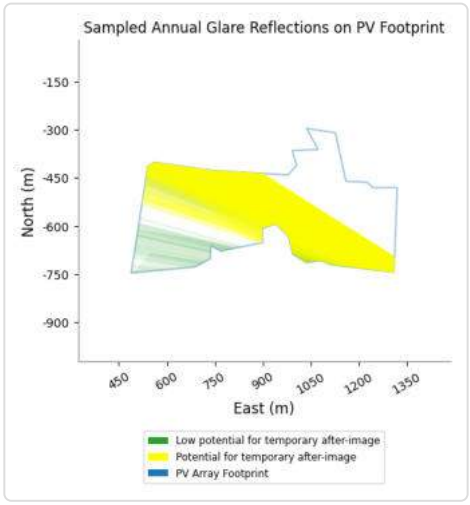
Yellow glare: 586 min.

Green glare: 1,635 min.





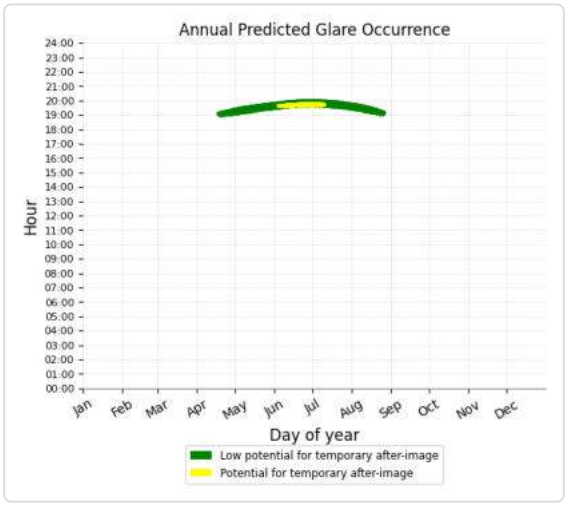


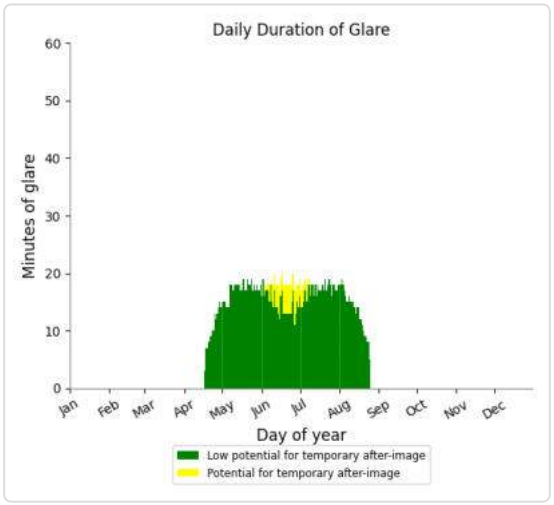


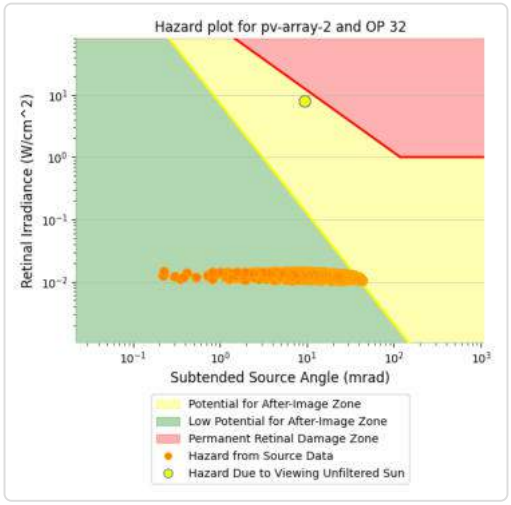
PV array 2 and OP 32

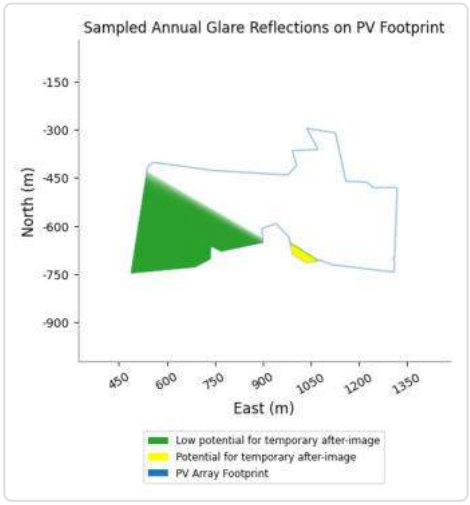
Yellow glare: 126 min.

Green glare: 1,978 min.





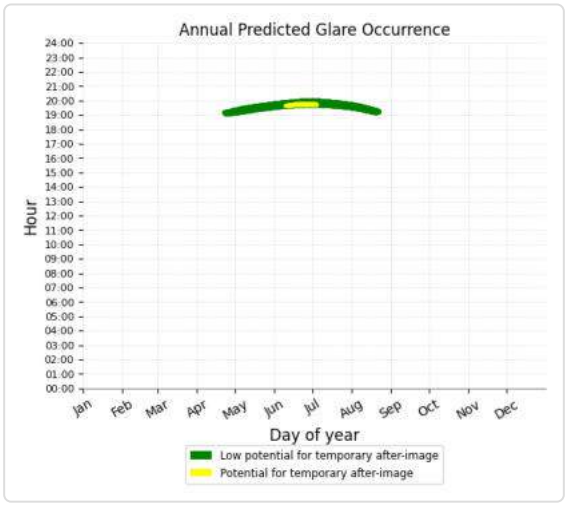


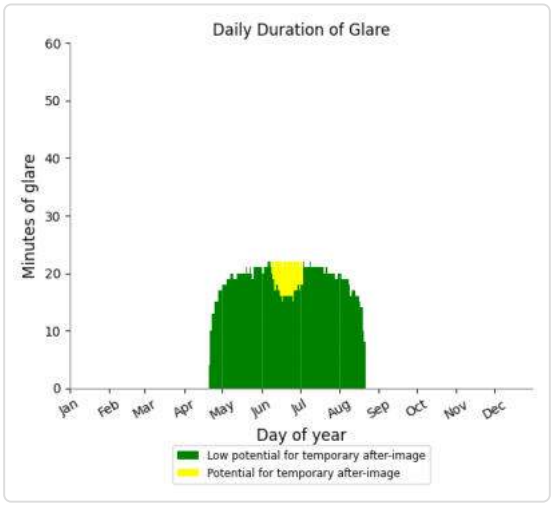


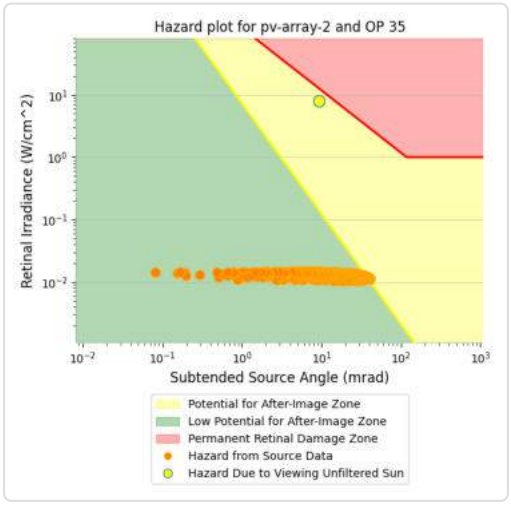
PV array 2 and OP 35

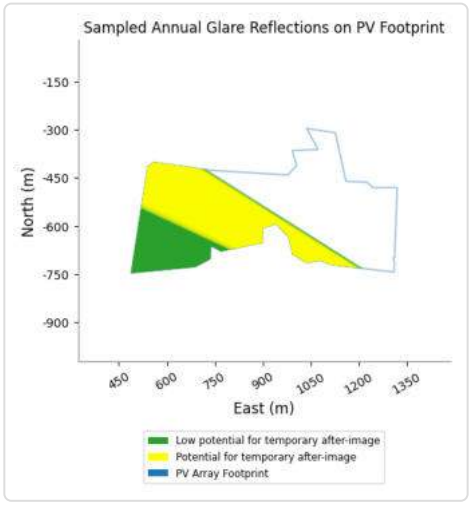
Yellow glare: 124 min.

Green glare: 2,264 min.





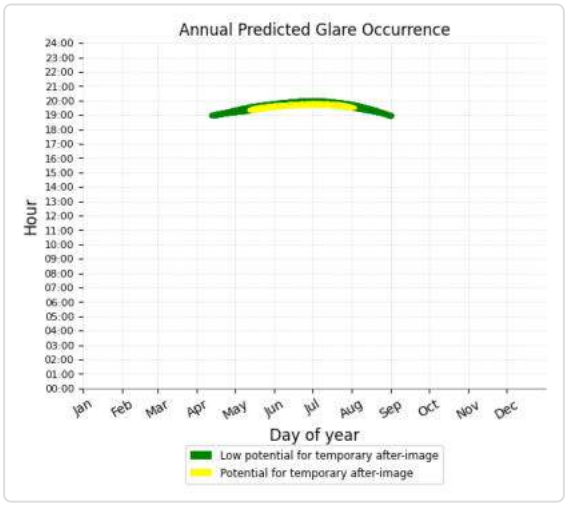


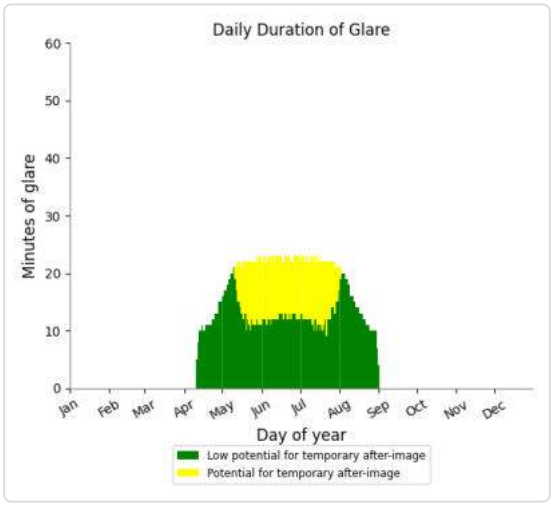


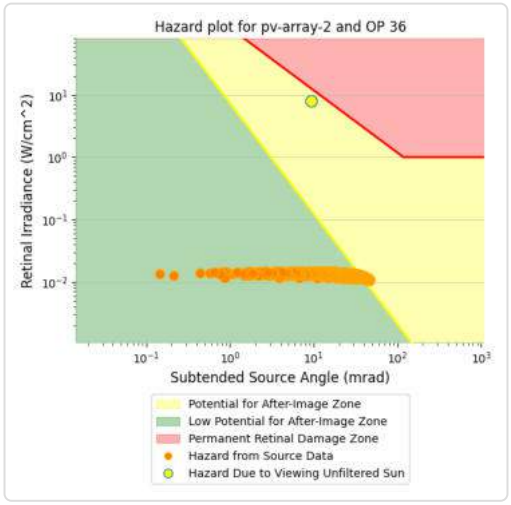
PV array 2 and OP 36

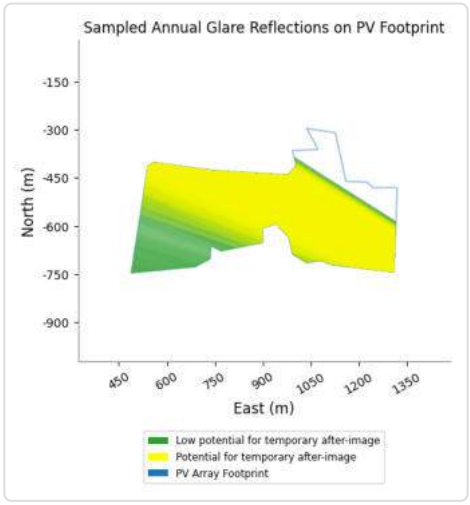
Yellow glare: 839 min.

Green glare: 1,850 min.





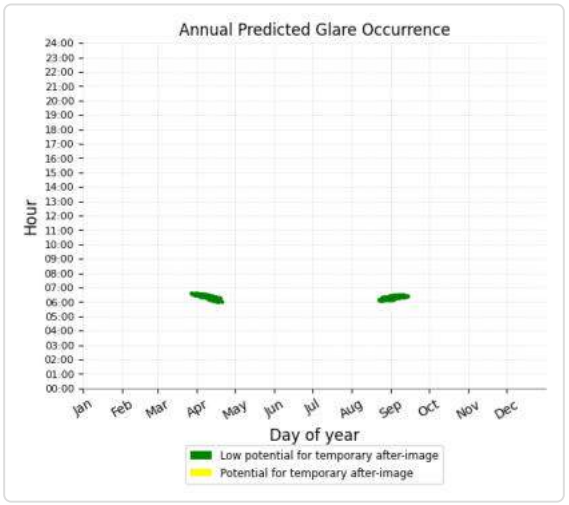


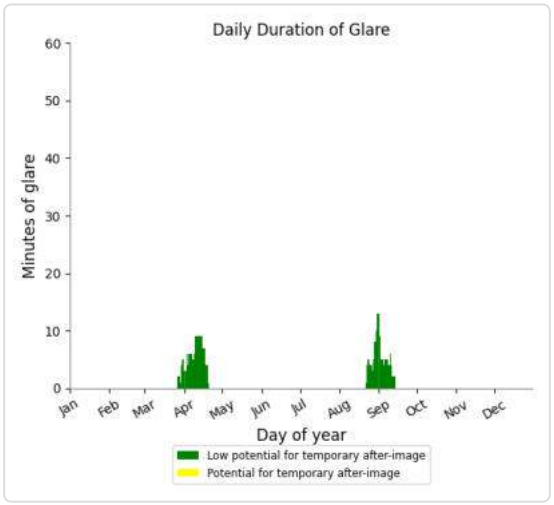


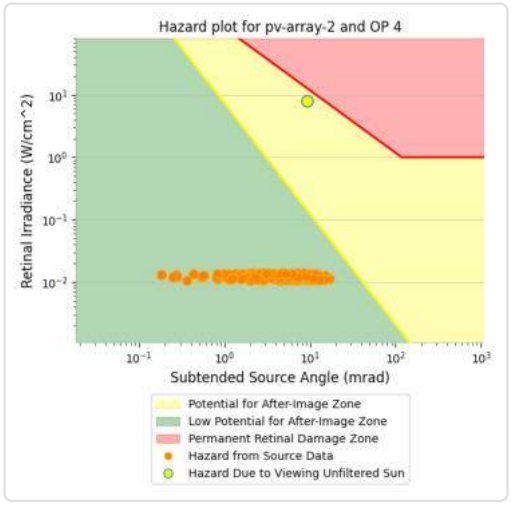
PV array 2 and OP 4

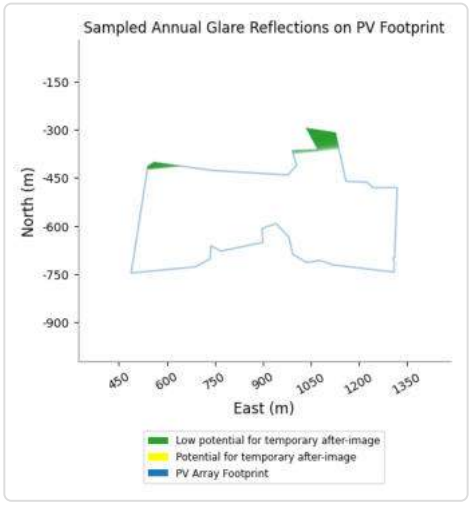
Yellow glare: none

Green glare: 264 min.





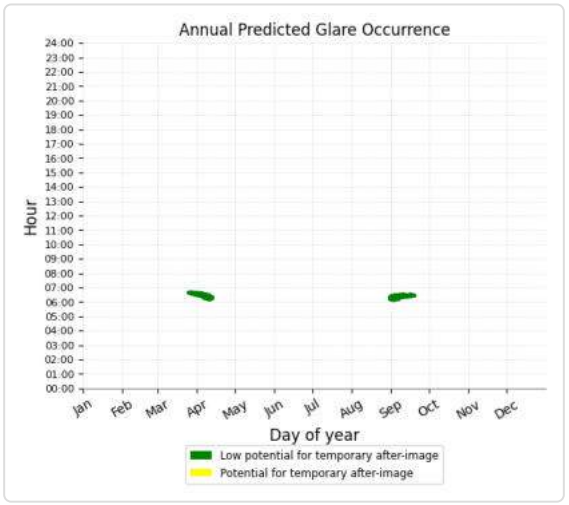


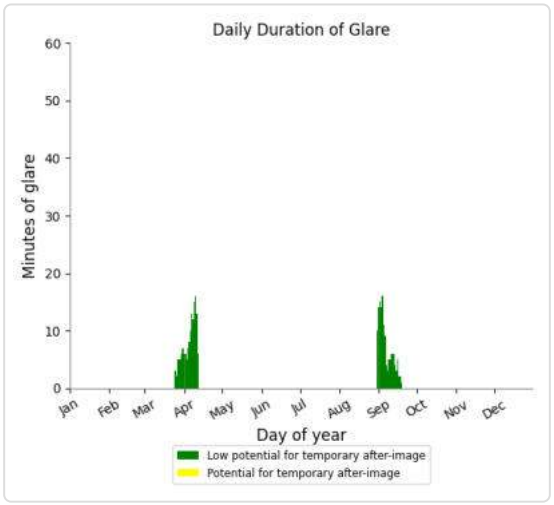


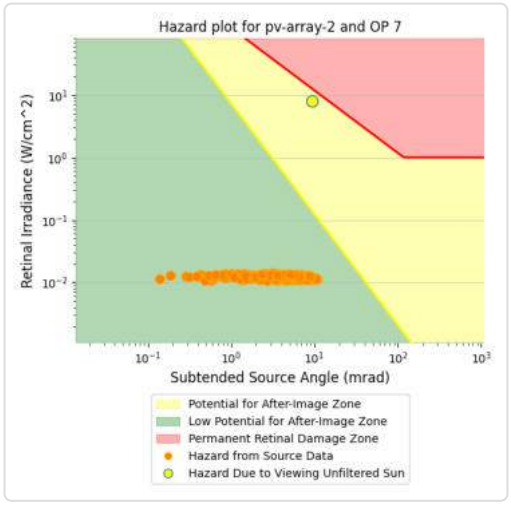
PV array 2 and OP 7

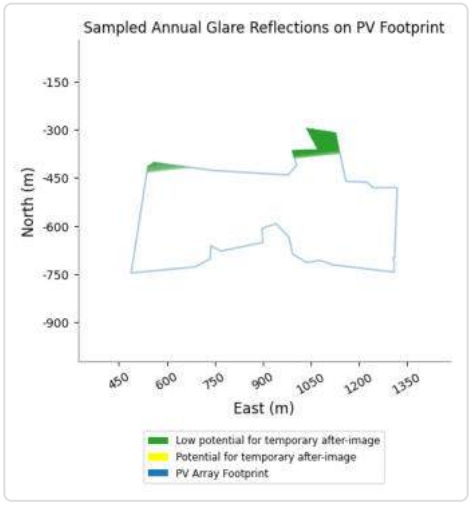
Yellow glare: none

Green glare: 291 min.





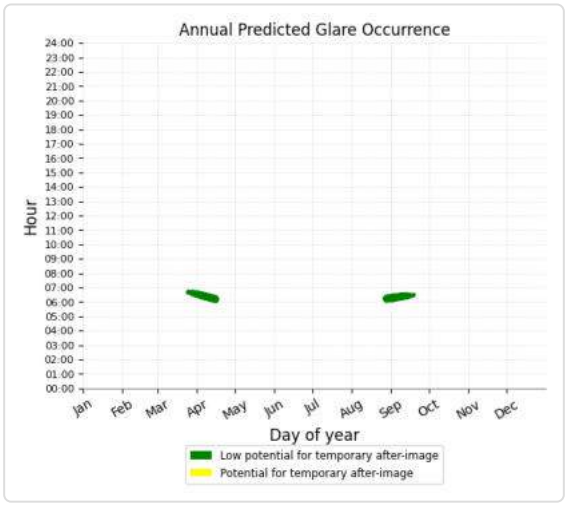


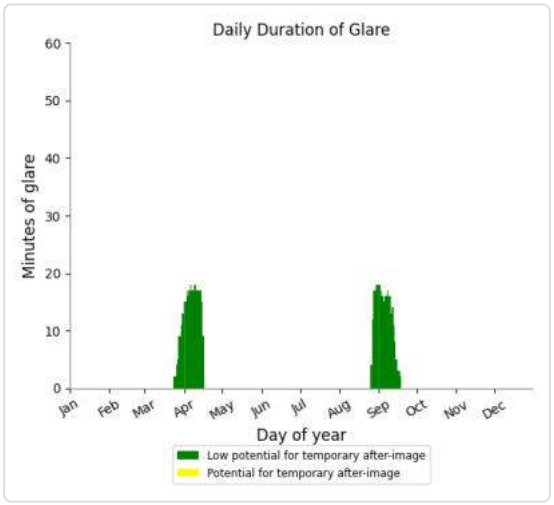


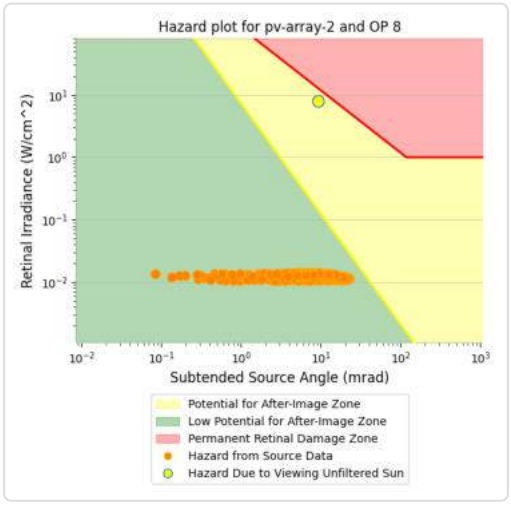
PV array 2 and OP 8

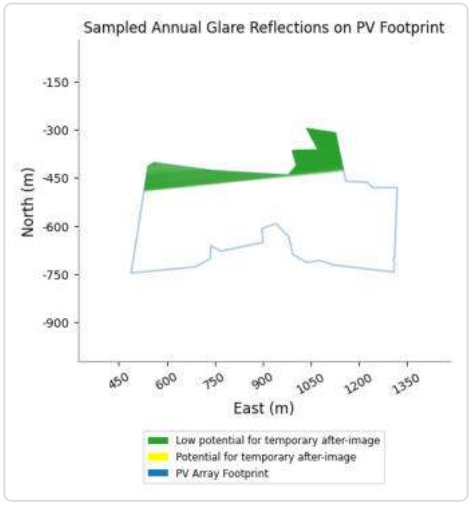
Yellow glare: none

Green glare: 625 min.





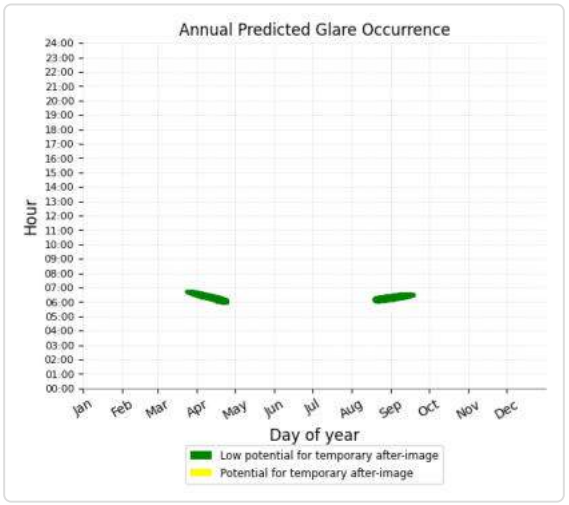


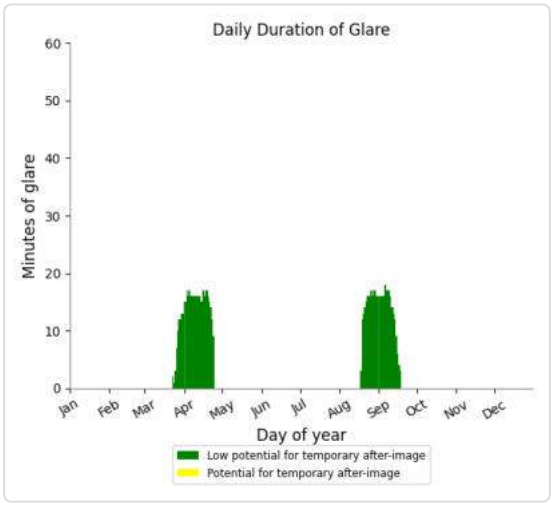


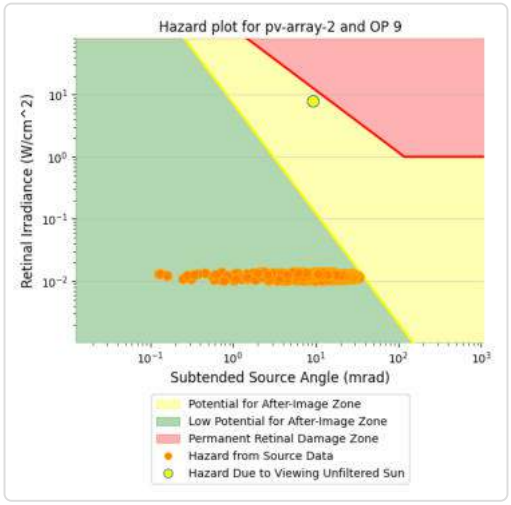
PV array 2 and OP 9

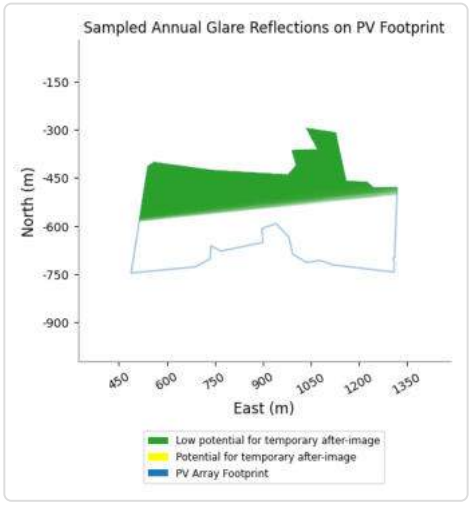
Yellow glare: none

Green glare: 888 min.





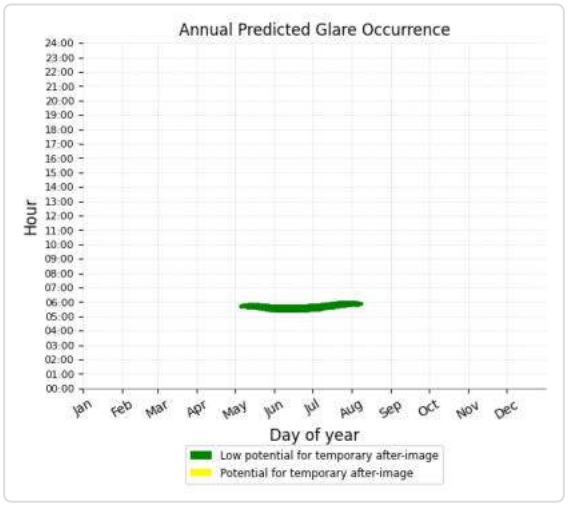


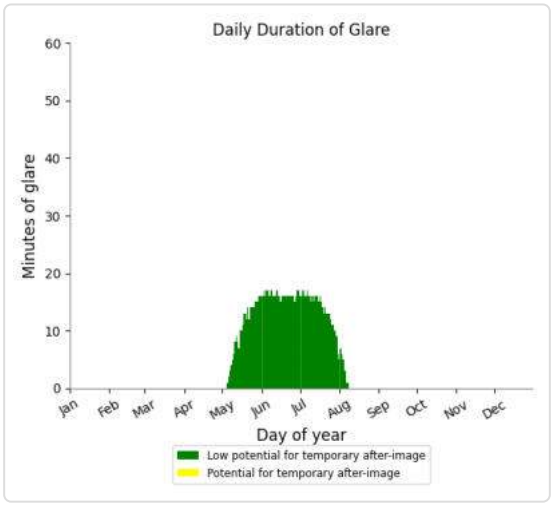


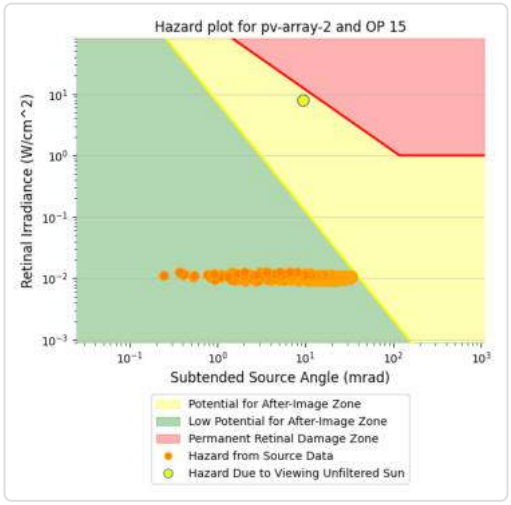
PV array 2 and OP 15

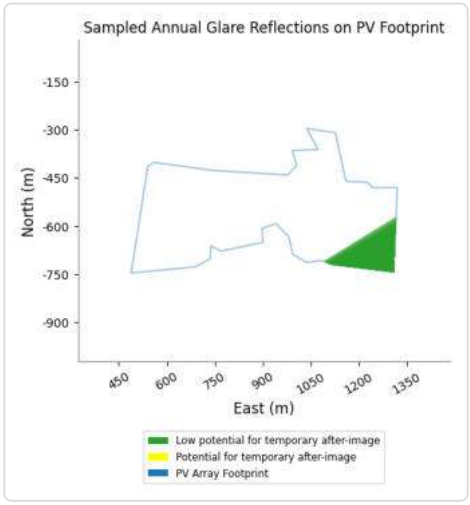
Yellow glare: none

Green glare: 1,234 min.





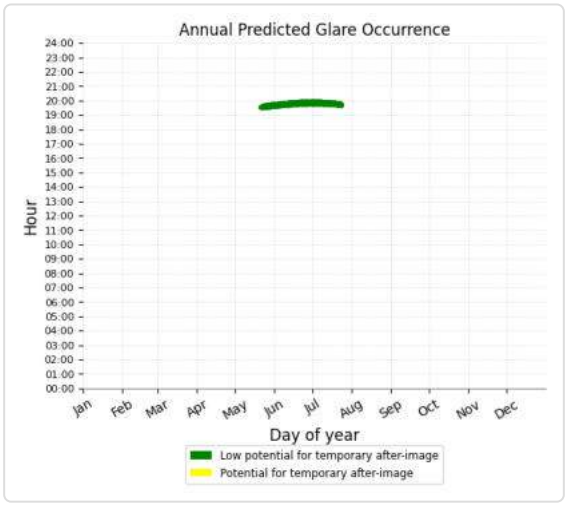


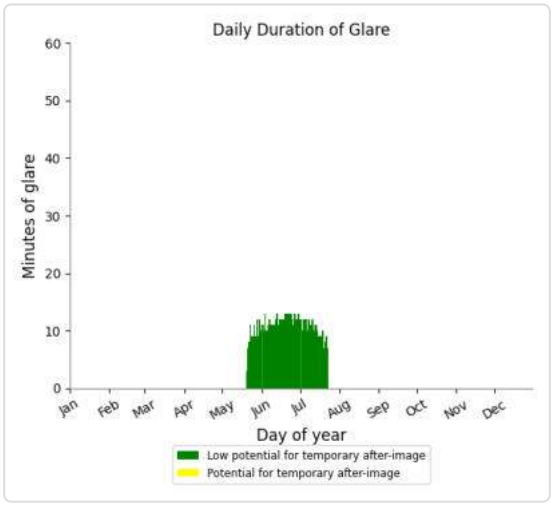


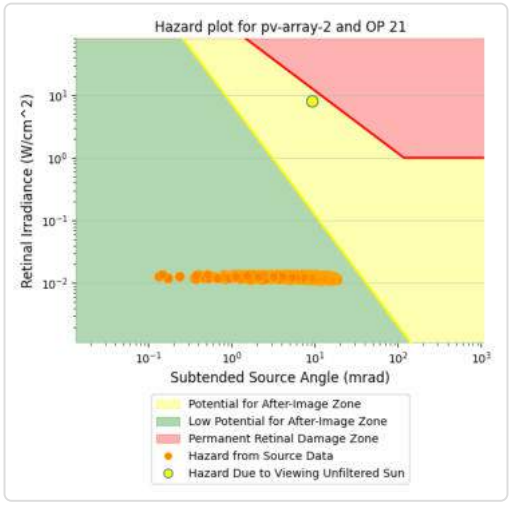
PV array 2 and OP 21

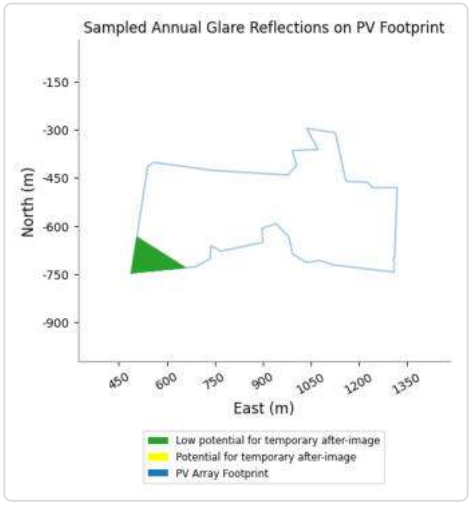
Yellow glare: none

Green glare: 703 min.





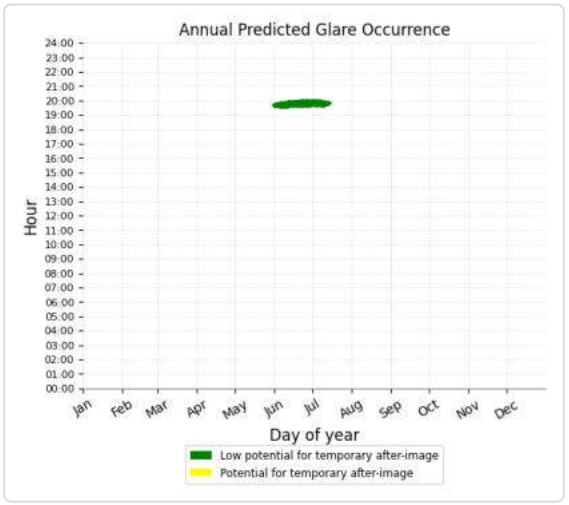


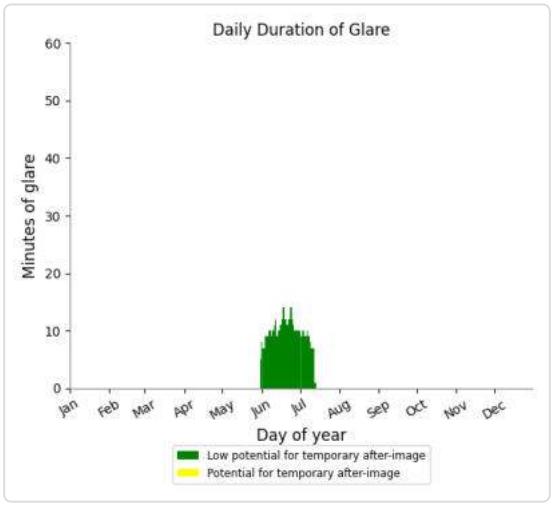


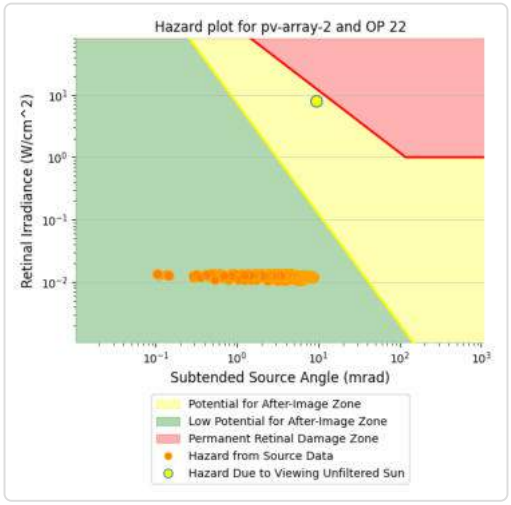
PV array 2 and OP 22

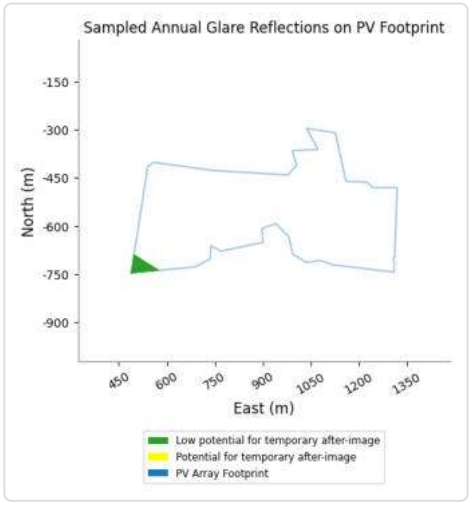
Yellow glare: none

Green glare: 424 min.





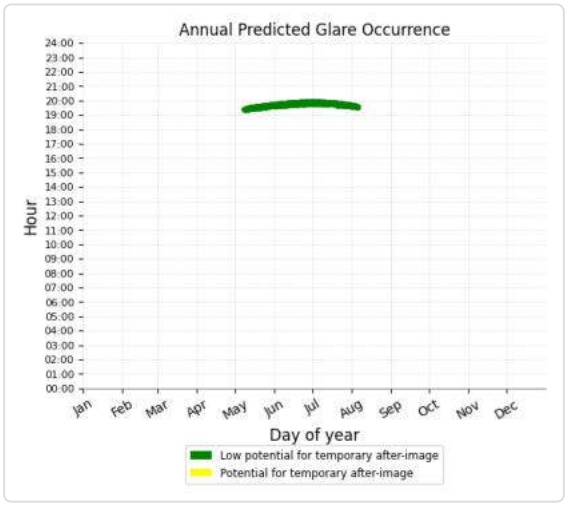


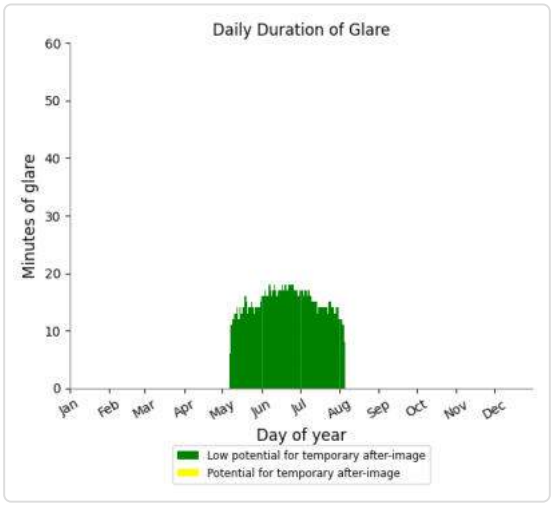


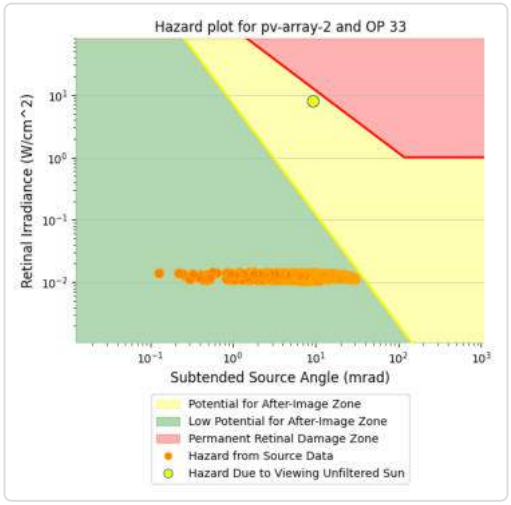
PV array 2 and OP 33

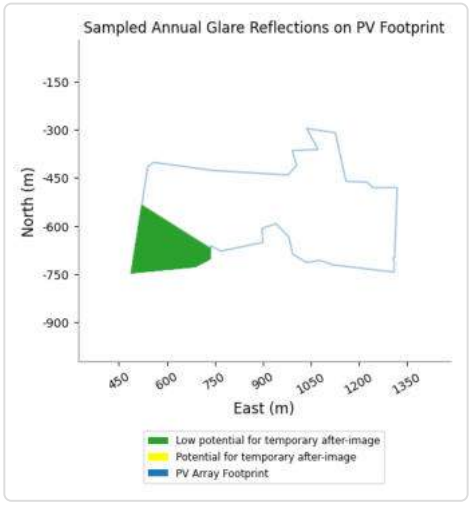
Yellow glare: none

Green glare: 1,362 min.



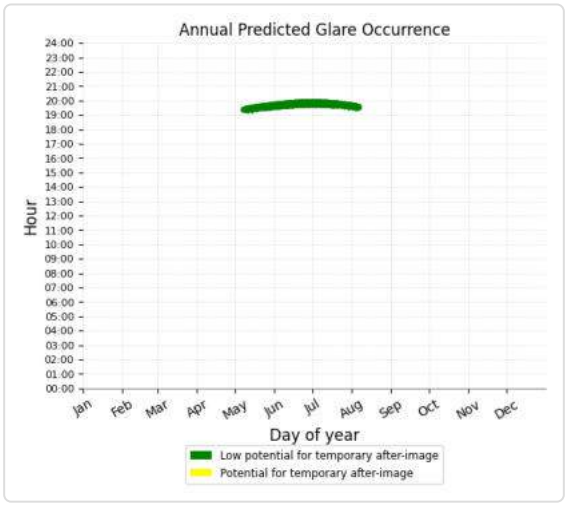


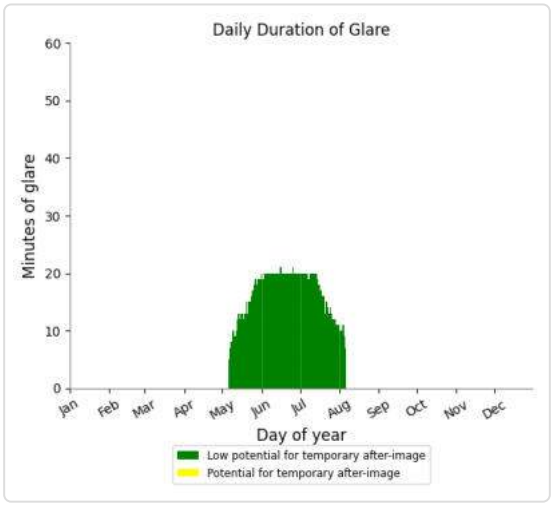


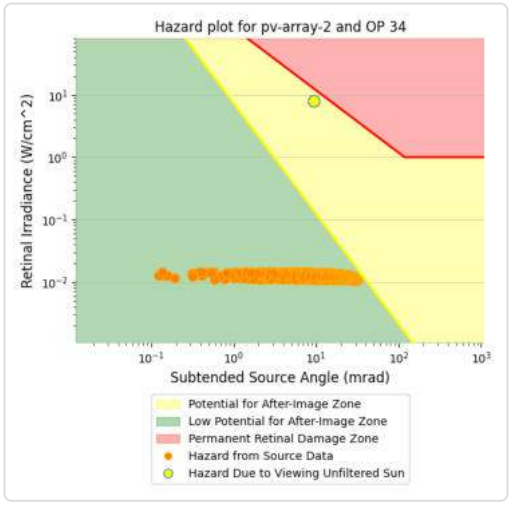


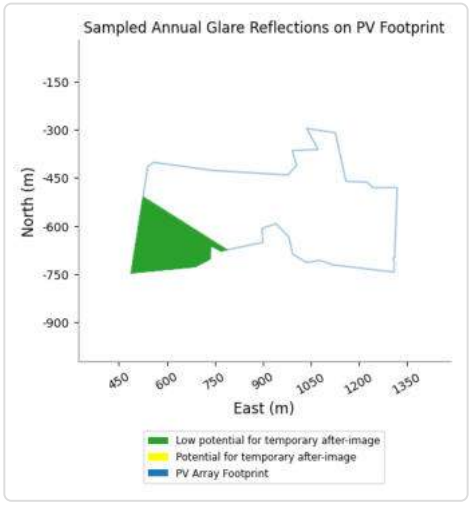
PV array 2 and OP 34

Yellow glare: none
Green glare: 1,531 min.









PV array 2 and OP 1

No glare found

PV array 2 and OP 2

No glare found

PV array 2 and OP 3

No glare found

PV array 2 and OP 16

No glare found

PV array 2 and OP 17

No glare found

PV array 2 and OP 18

No glare found

PV array 2 and OP 19

No glare found

PV array 2 and OP 20

No glare found

PV array 2 and OP 23

No glare found

PV array 2 and OP 24

No glare found

PV array 2 and OP 25

No glare found

PV array 2 and OP 26

No glare found

PV array 2 and OP 27

No glare found

PV array 2 and OP 28

No glare found

PV array 2 and OP 30

No glare found

PV array 2 and OP 37

No glare found

PV array 2 and OP 38

No glare found

PV array 2 and OP 39

No glare found

PV array 2 and OP 40

No glare found

PV array 2 and OP 41

No glare found

PV array 2 and OP 42

No glare found

PV array 2 and OP 43

No glare found

PV array 2 and OP 44

No glare found

PV array 2 and OP 45

No glare found

PV array 2 and OP 46

No glare found

PV array 2 and OP 47

No glare found

PV array 2 and OP 48

No glare found

PV: PV array 3 potential temporary after-image

Receptor results ordered by category of glare

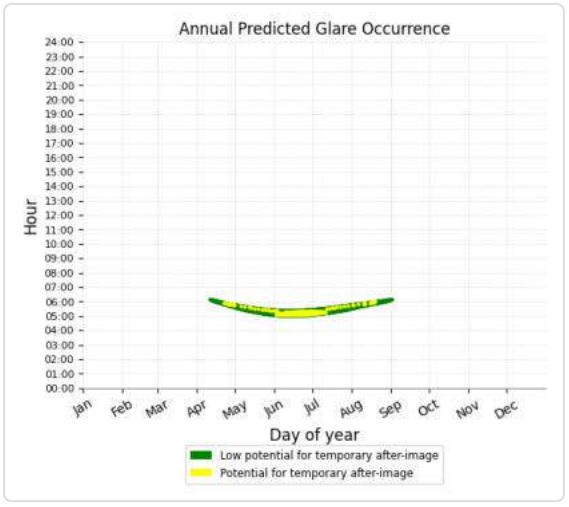
Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 15	1,711	28.5	415	6.9
OP 16	1,695	28.2	1,632	27.2
OP 17	2,540	42.3	832	13.9
OP 18	942	15.7	859	14.3
OP 20	1,941	32.4	32	0.5
OP 37	1,729	28.8	49	0.8
OP 13	653	10.9	0	0.0
OP 14	3,356	55.9	0	0.0
OP 19	40	0.7	0	0.0
OP 21	1,225	20.4	0	0.0
OP 22	2,007	33.5	0	0.0
OP 32	156	2.6	0	0.0
OP 33	783	13.1	0	0.0
OP 34	772	12.9	0	0.0
OP 35	349	5.8	0	0.0
OP 36	211	3.5	0	0.0
OP 38	62	1.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 23	0	0.0	0	0.0
OP 24	0	0.0	0	0.0
OP 25	0	0.0	0	0.0
OP 26	0	0.0	0	0.0
OP 27	0	0.0	0	0.0
OP 28	0	0.0	0	0.0
OP 29	0	0.0	0	0.0
OP 30	0	0.0	0	0.0
OP 31	0	0.0	0	0.0
OP 39	0	0.0	0	0.0

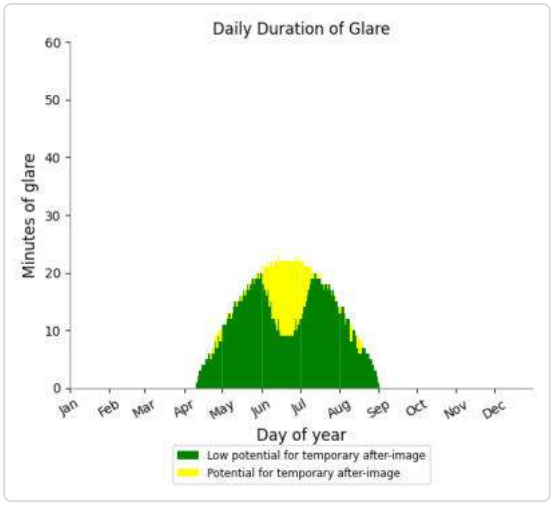
Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 40	0	0.0	0	0.0
OP 41	0	0.0	0	0.0
OP 42	0	0.0	0	0.0
OP 43	0	0.0	0	0.0
OP 44	0	0.0	0	0.0
OP 45	0	0.0	0	0.0
OP 46	0	0.0	0	0.0
OP 47	0	0.0	0	0.0
OP 48	0	0.0	0	0.0

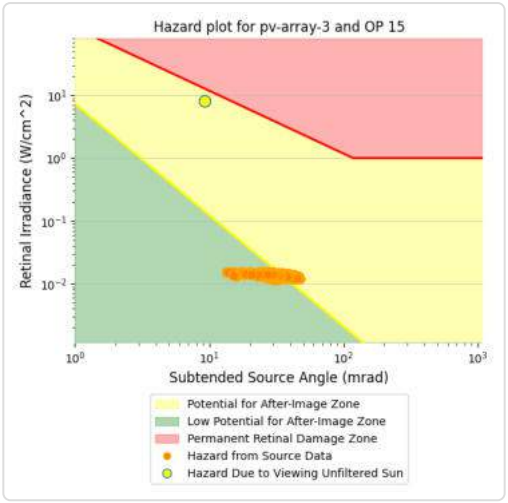
PV array 3 and OP 15

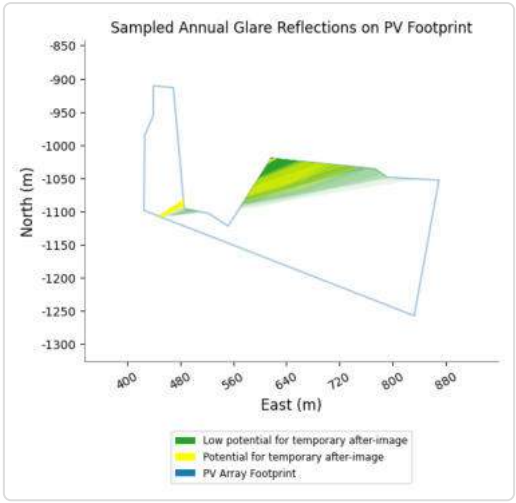
Yellow glare: 415 min.

Green glare: 1,711 min.





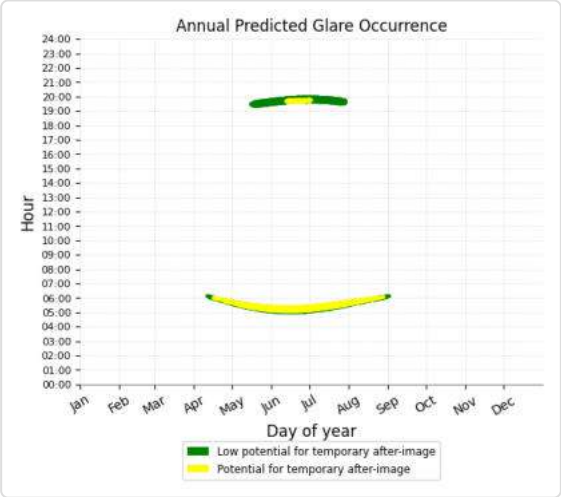


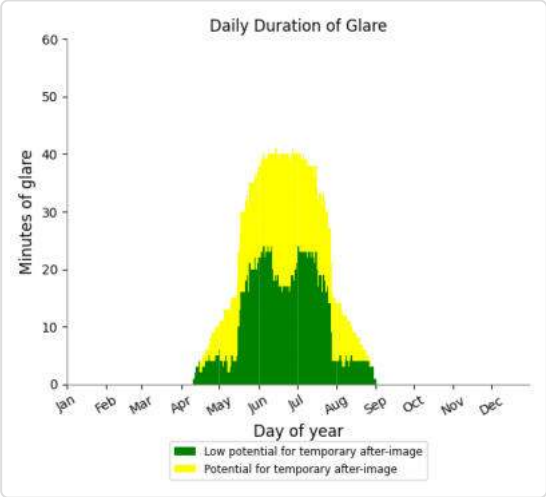


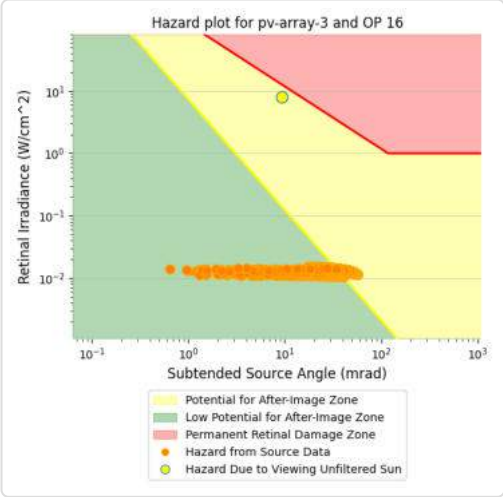
PV array 3 and OP 16

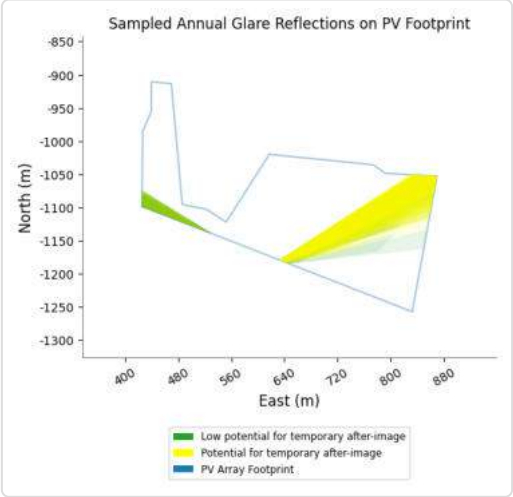
Yellow glare: 1,632 min.

Green glare: 1,695 min.





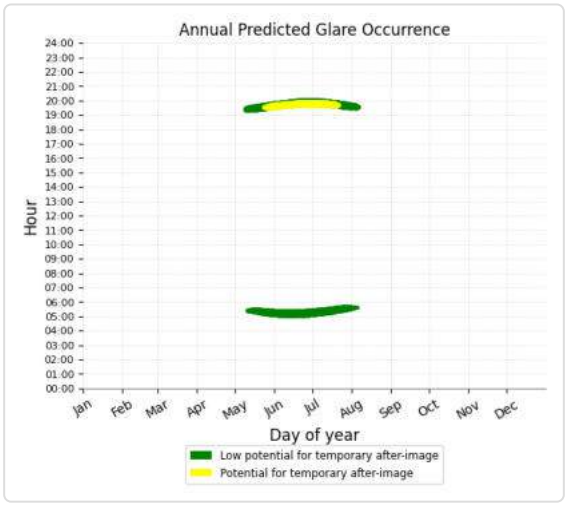


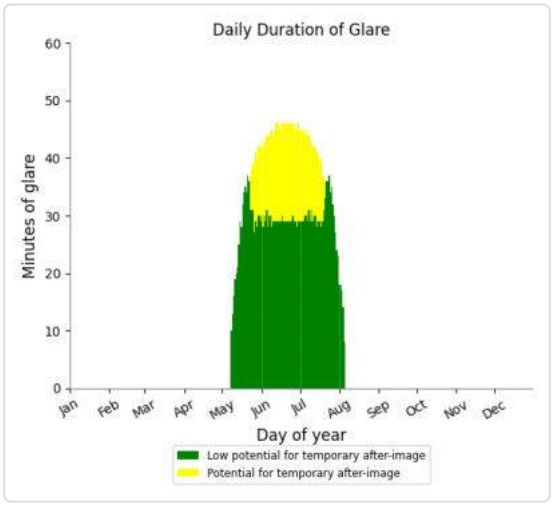


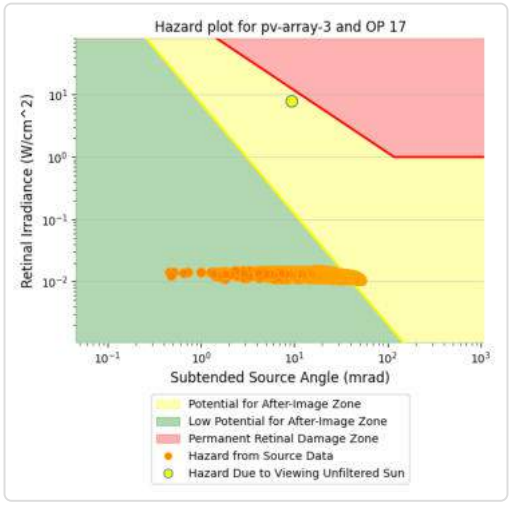
PV array 3 and OP 17

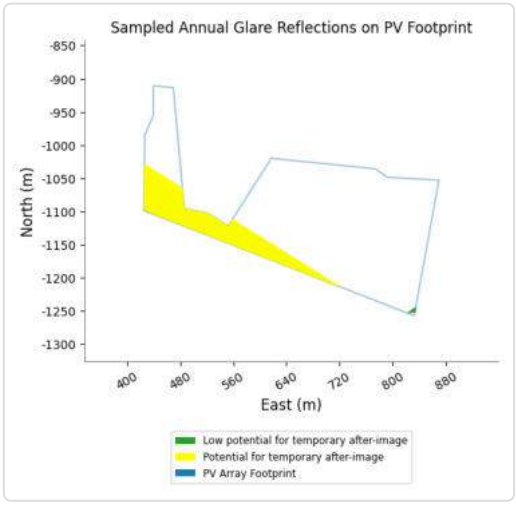
Yellow glare: 832 min.

Green glare: 2,540 min.





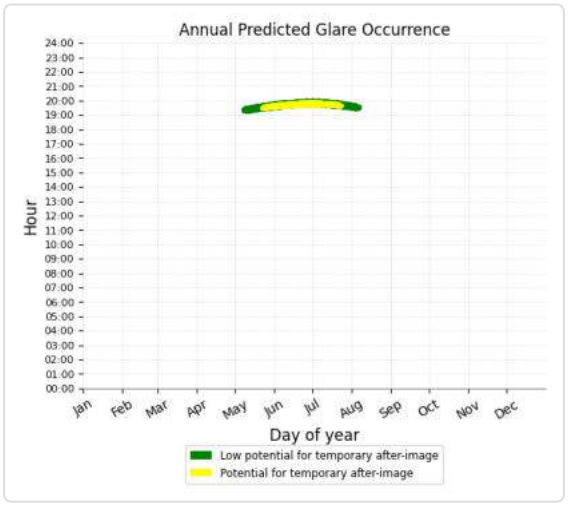


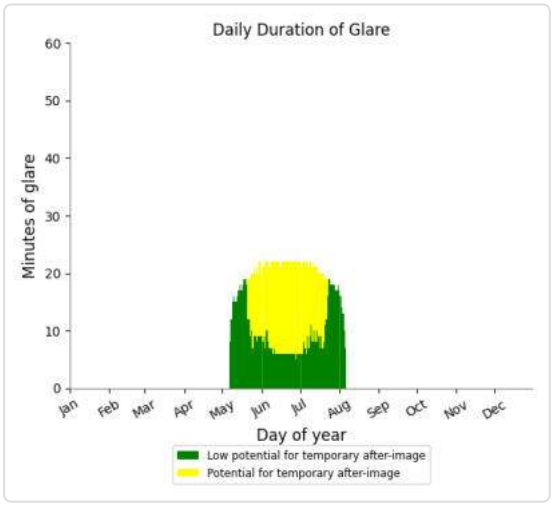


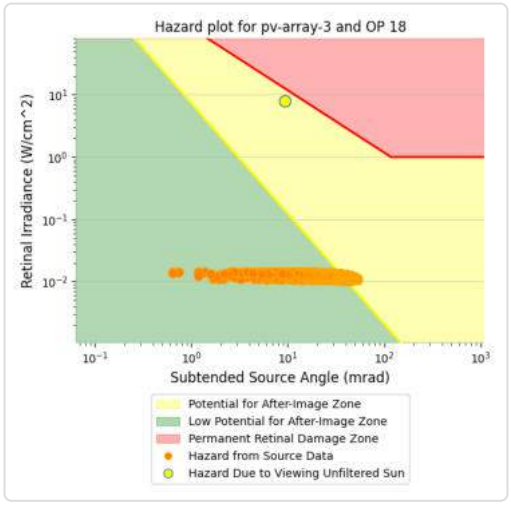
PV array 3 and OP 18

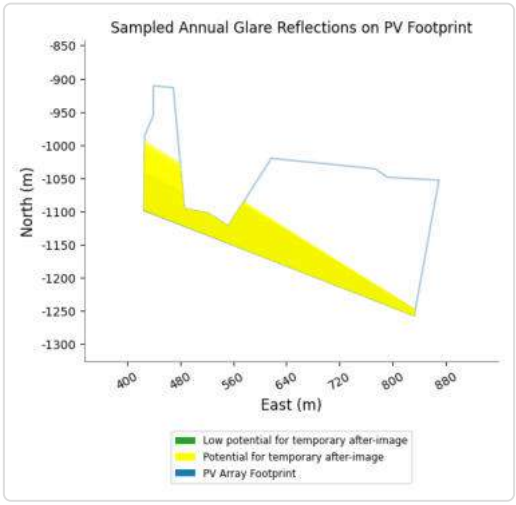
Yellow glare: 859 min.

Green glare: 942 min.





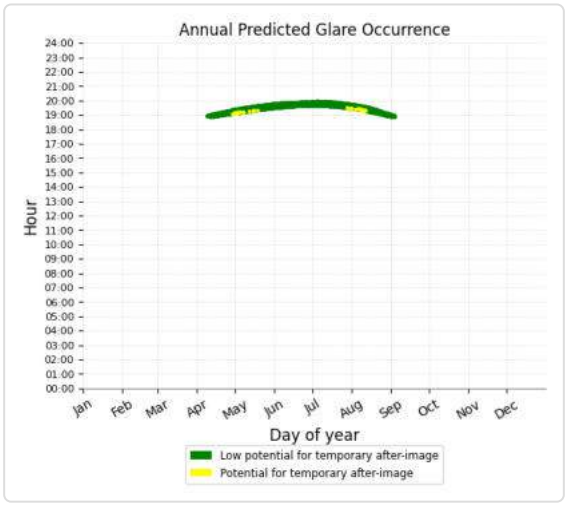


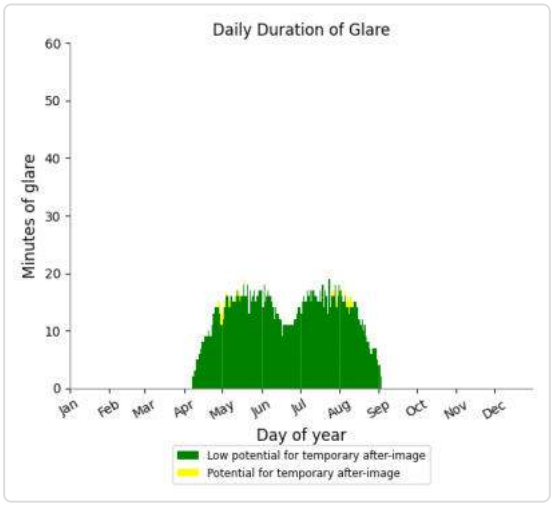


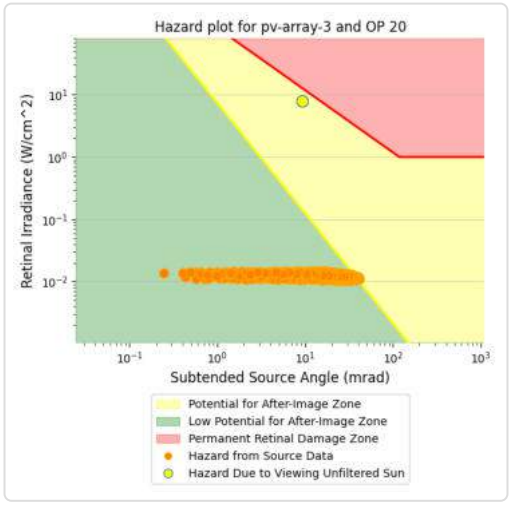
PV array 3 and OP 20

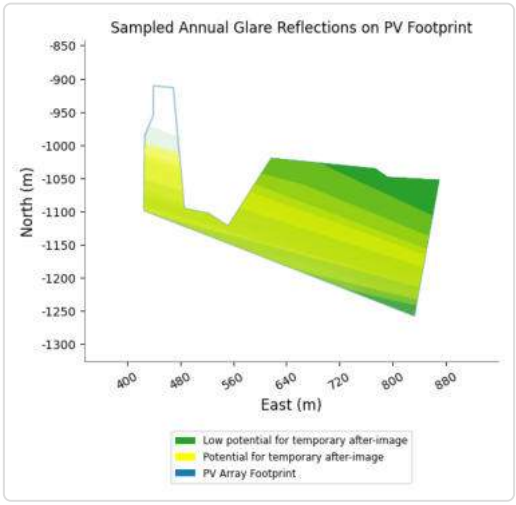
Yellow glare: 32 min.

Green glare: 1,941 min.





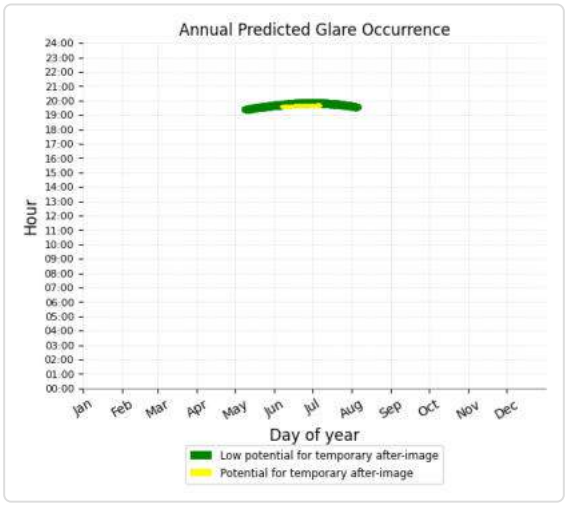


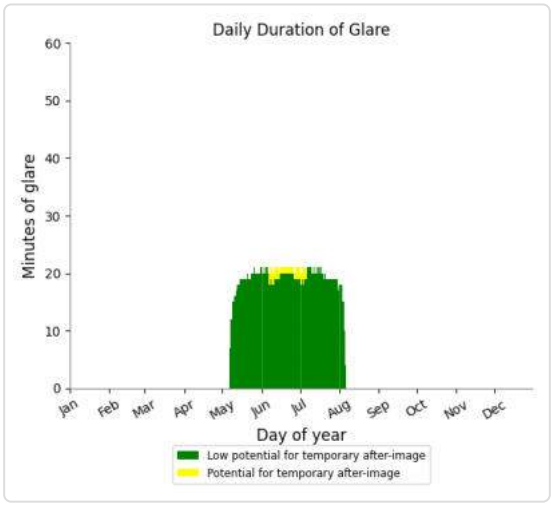


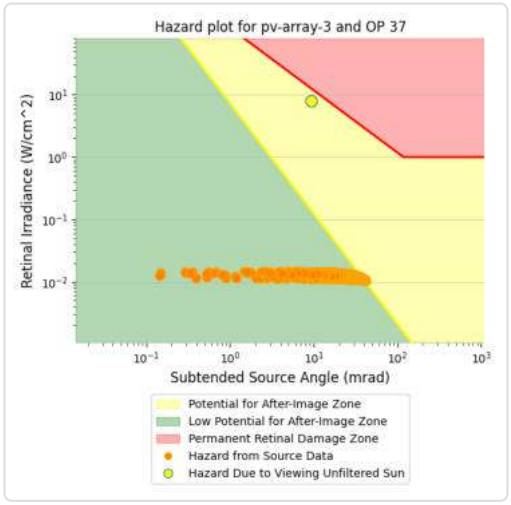
PV array 3 and OP 37

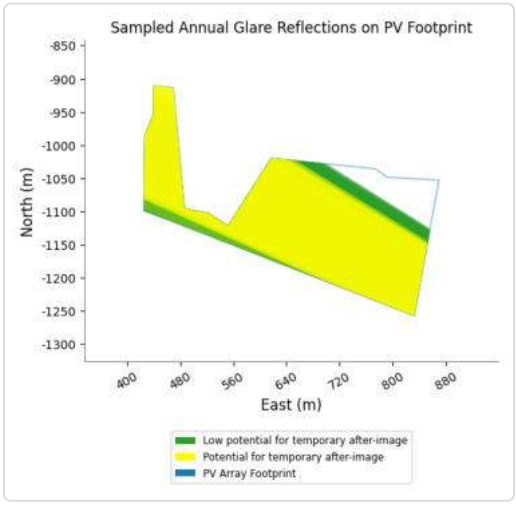
Yellow glare: 49 min.

Green glare: 1,729 min.





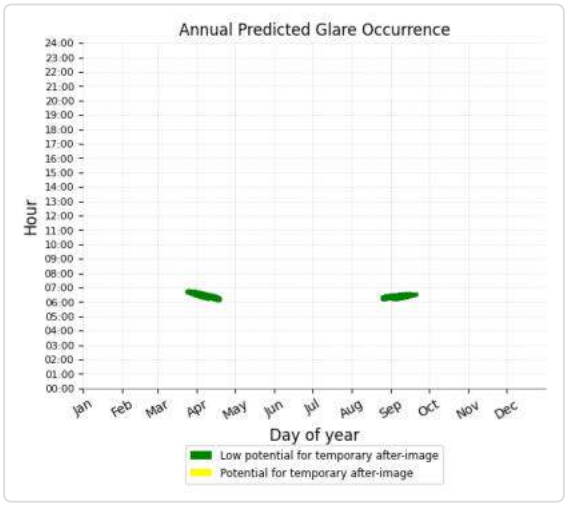


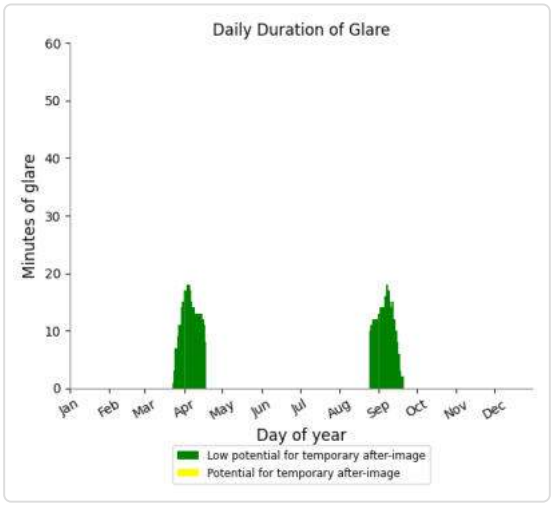


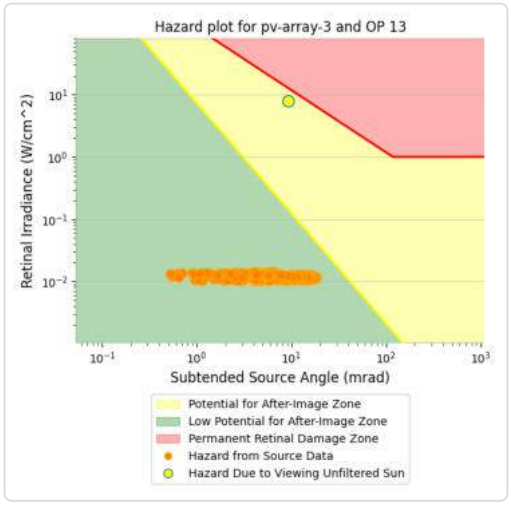
PV array 3 and OP 13

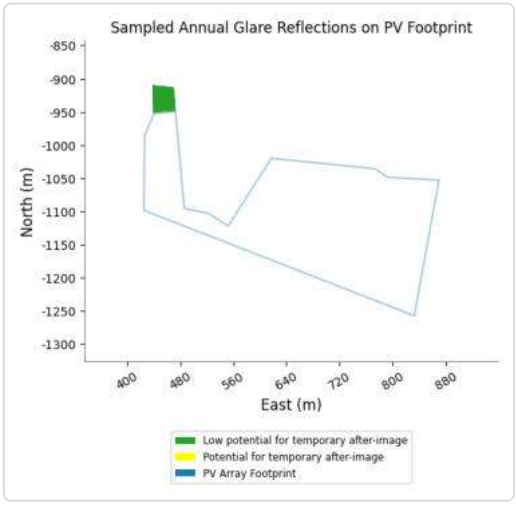
Yellow glare: none

Green glare: 653 min.





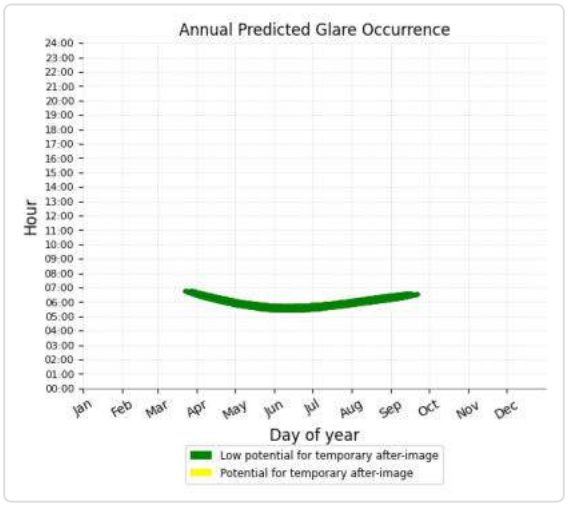


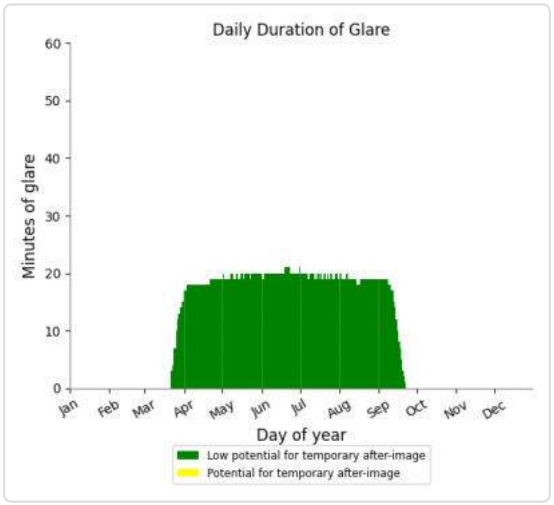


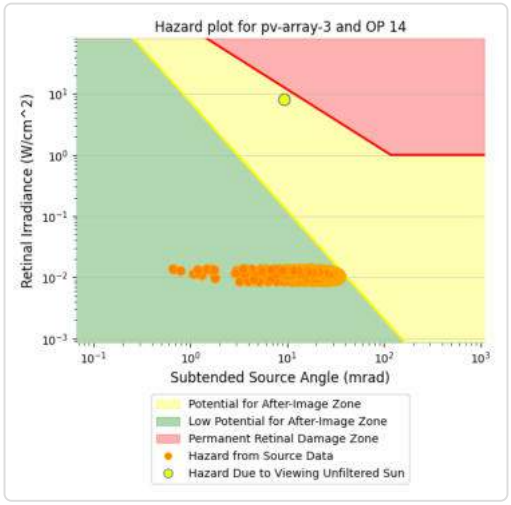
PV array 3 and OP 14

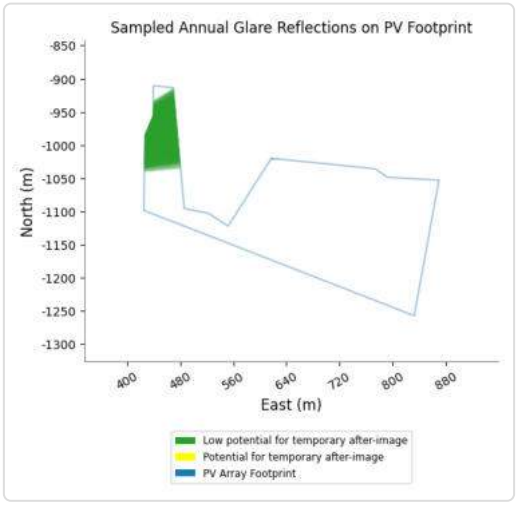
Yellow glare: none

Green glare: 3,356 min.





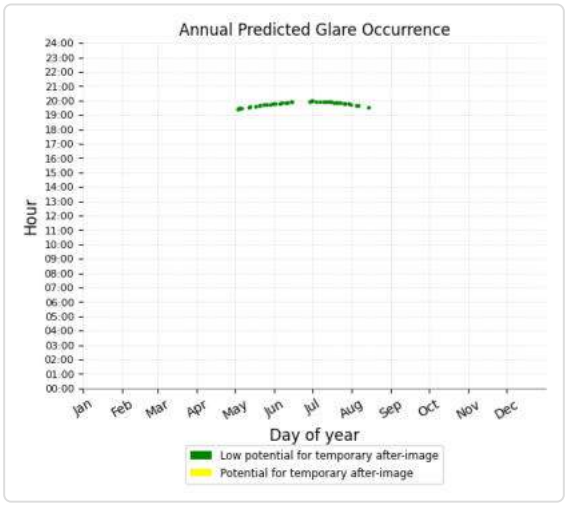


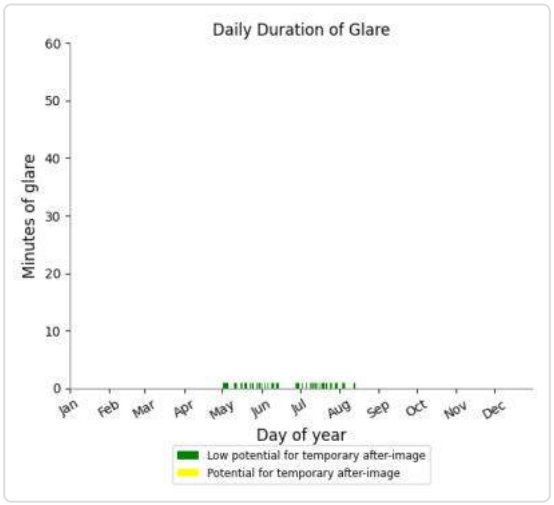


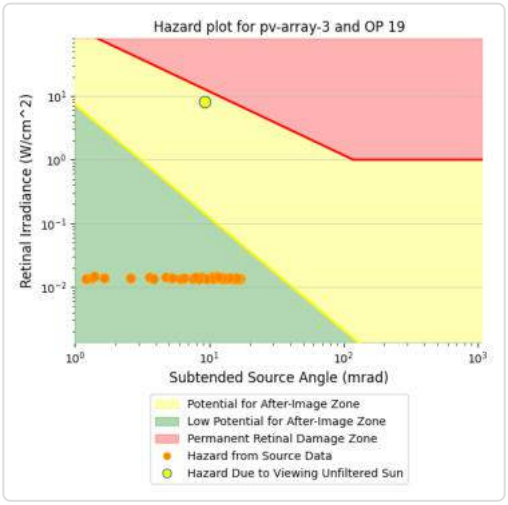
PV array 3 and OP 19

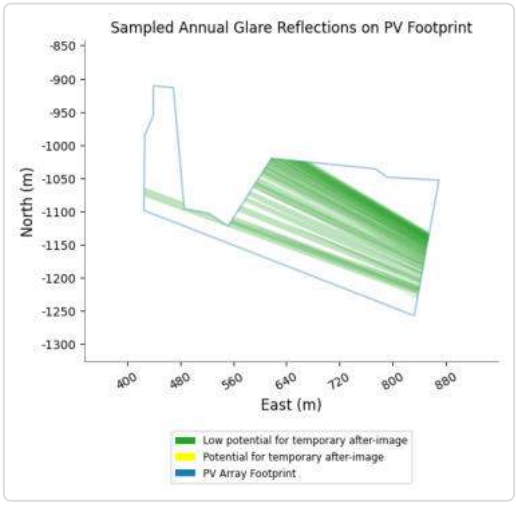
Yellow glare: none

Green glare: 40 min.





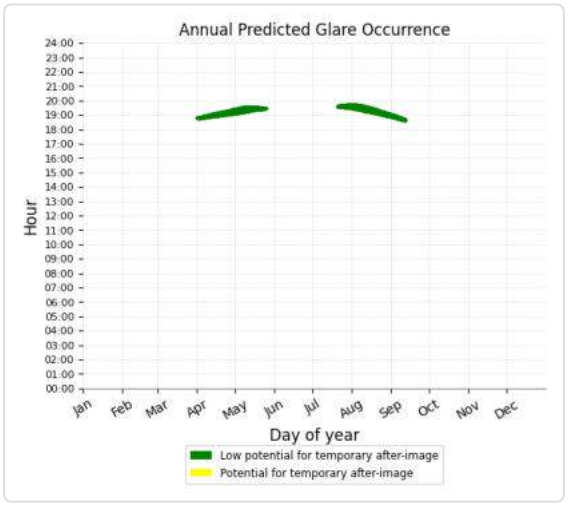


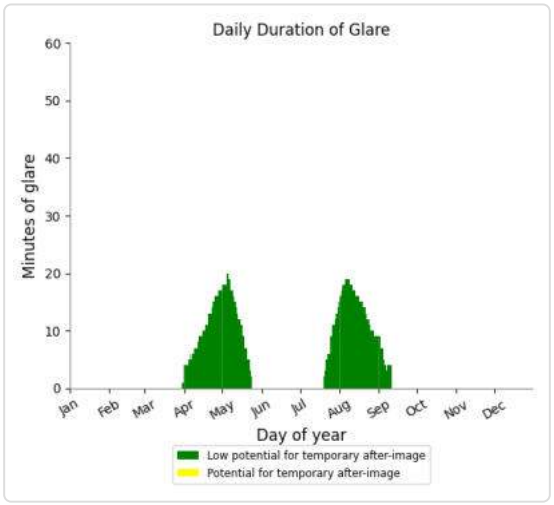


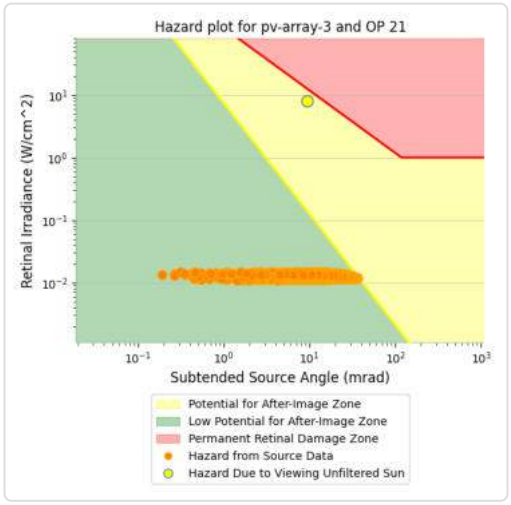
PV array 3 and OP 21

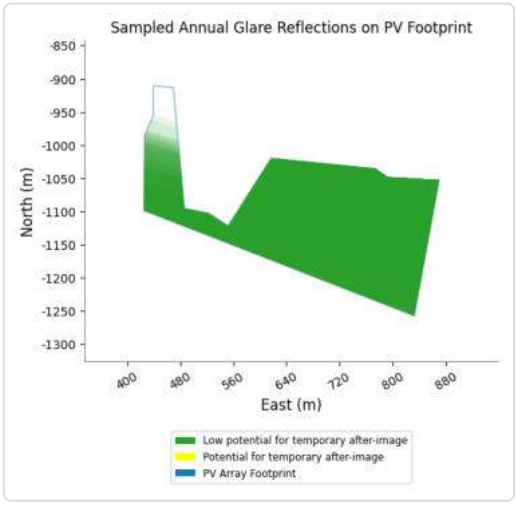
Yellow glare: none

Green glare: 1,225 min.





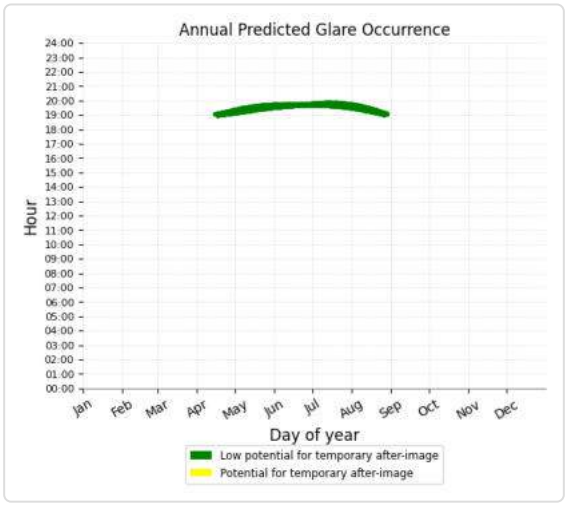


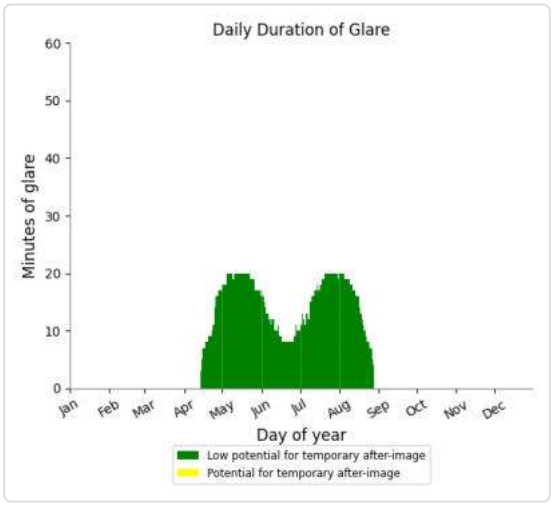


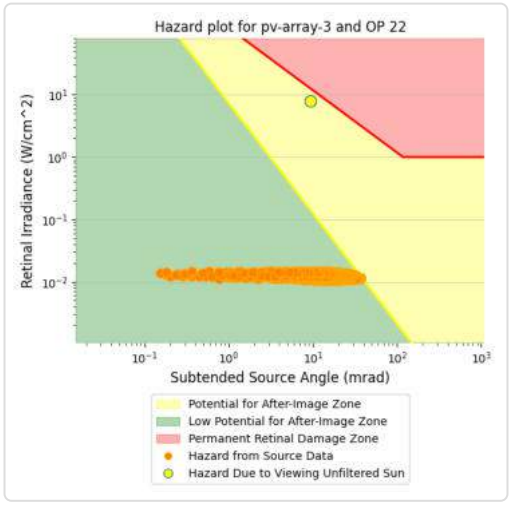
PV array 3 and OP 22

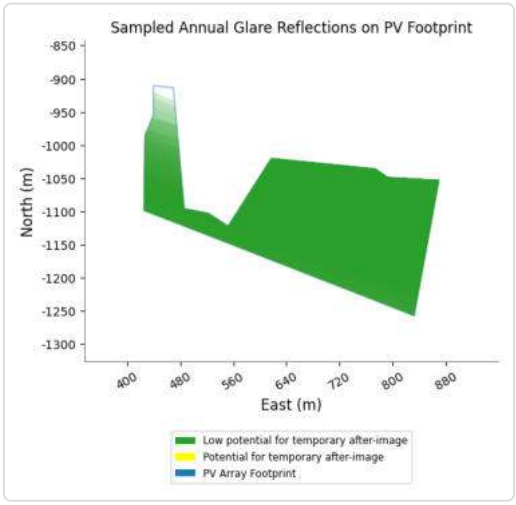
Yellow glare: none

Green glare: 2,007 min.





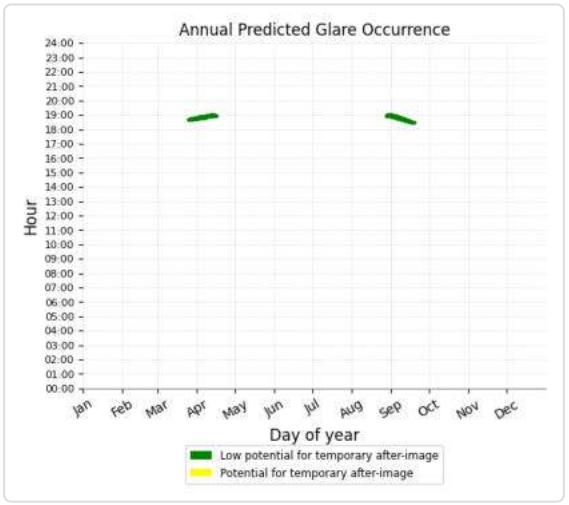


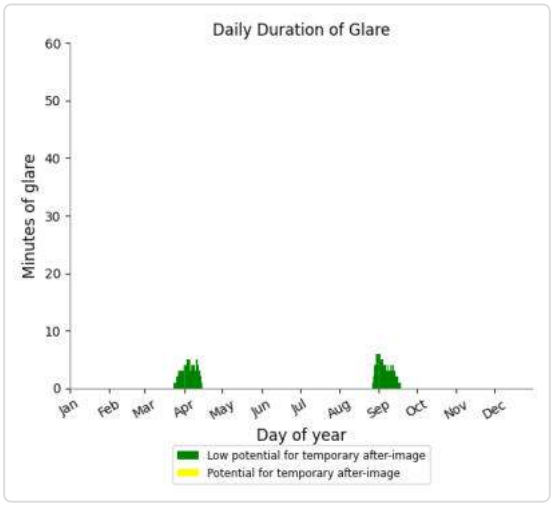


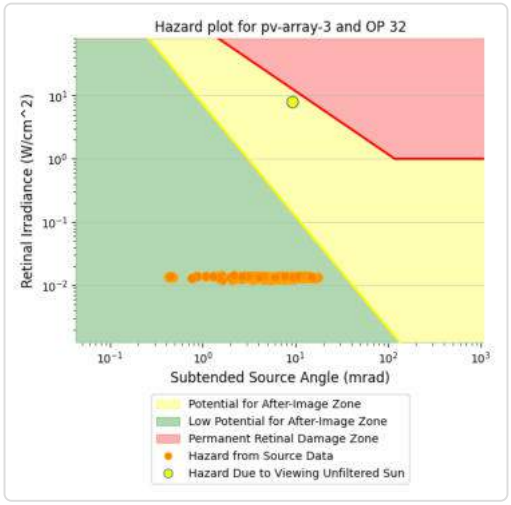
PV array 3 and OP 32

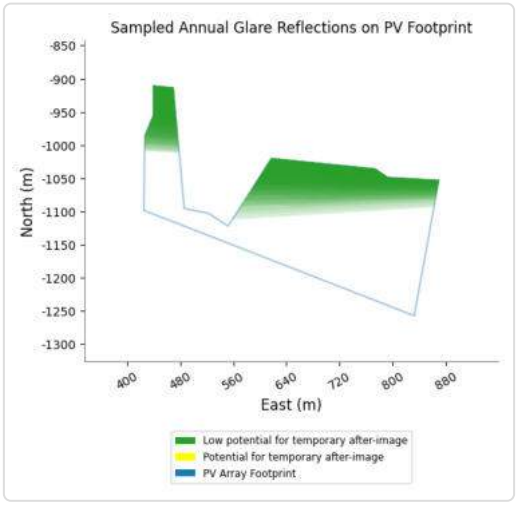
Yellow glare: none

Green glare: 156 min.





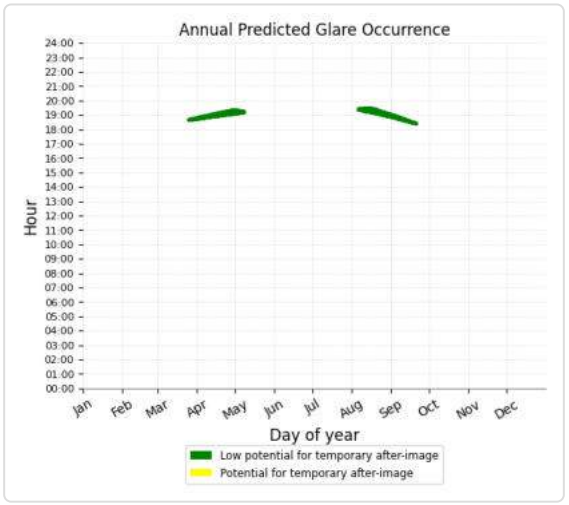


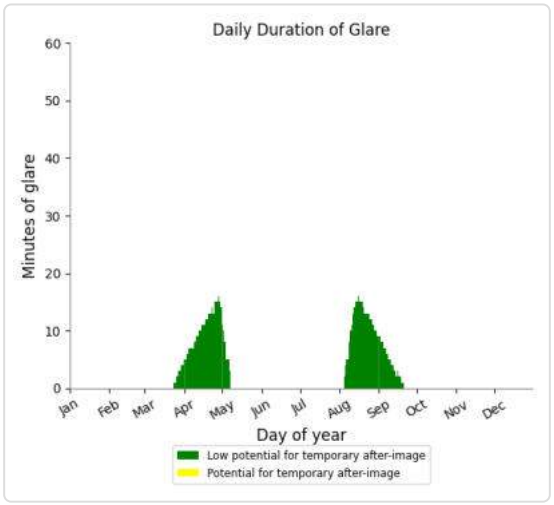


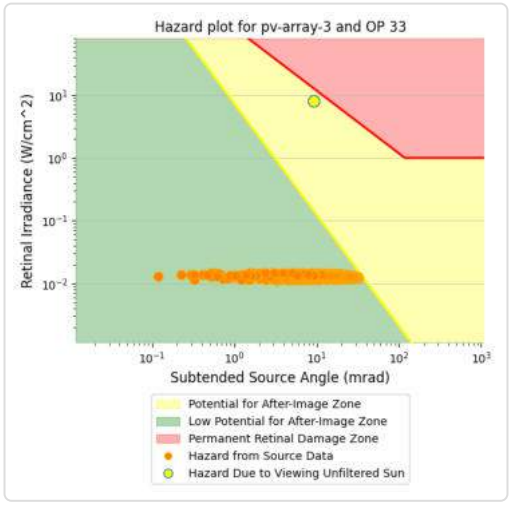
PV array 3 and OP 33

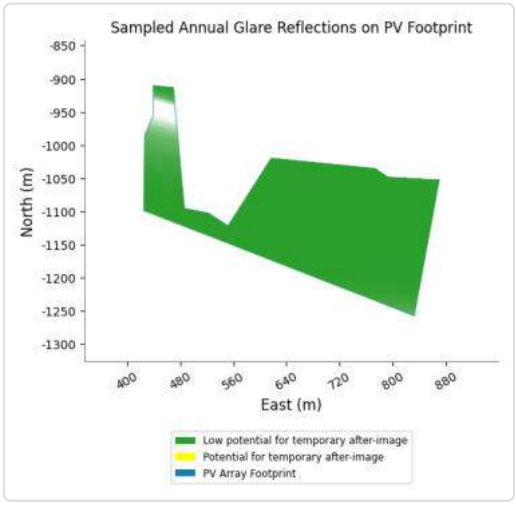
Yellow glare: none

Green glare: 783 min.





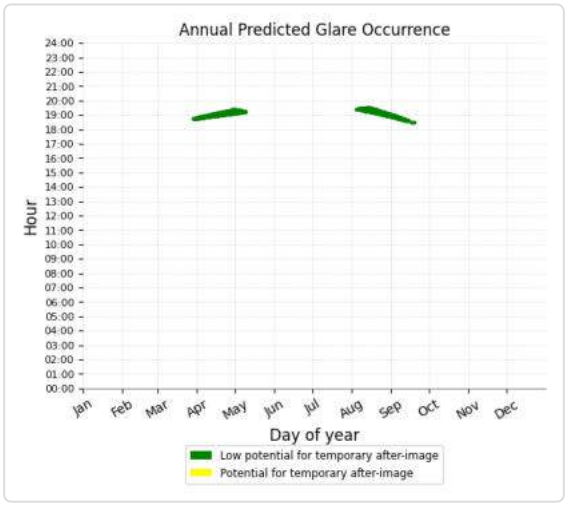


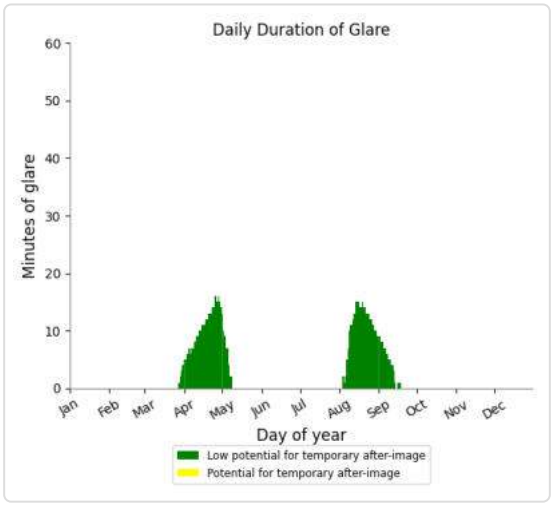


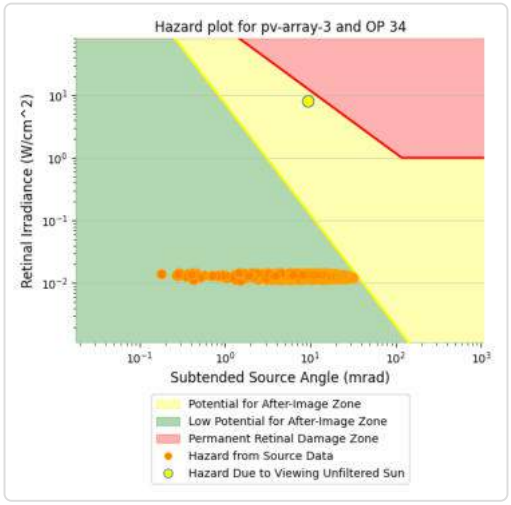
PV array 3 and OP 34

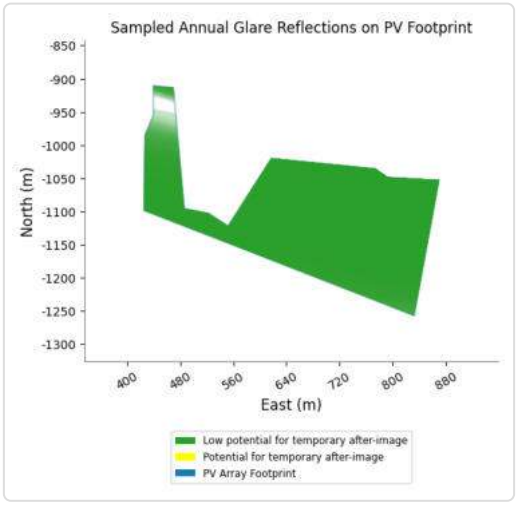
Yellow glare: none

Green glare: 772 min.





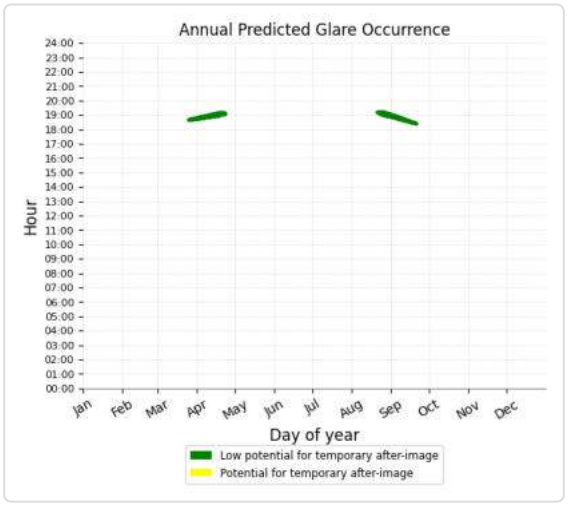


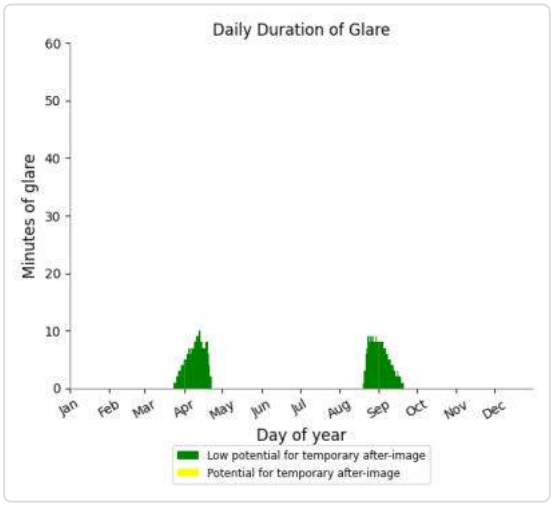


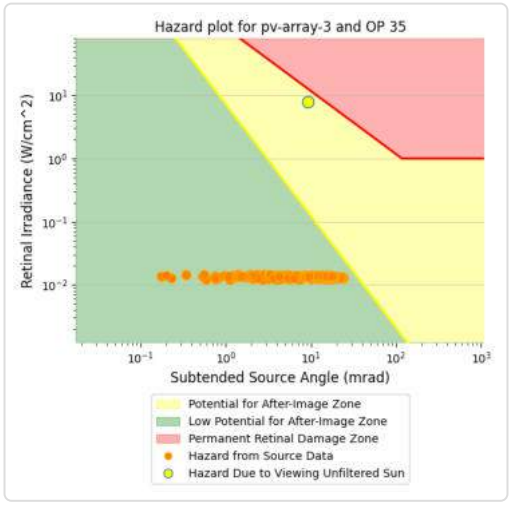
PV array 3 and OP 35

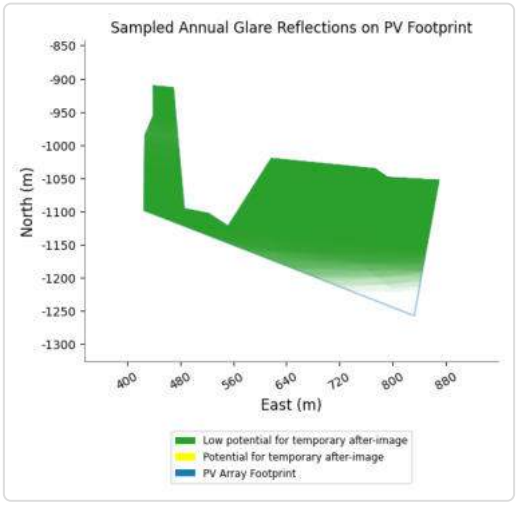
Yellow glare: none

Green glare: 349 min.





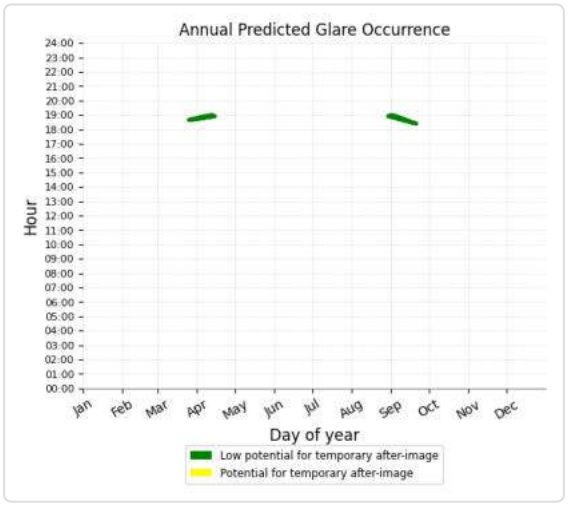


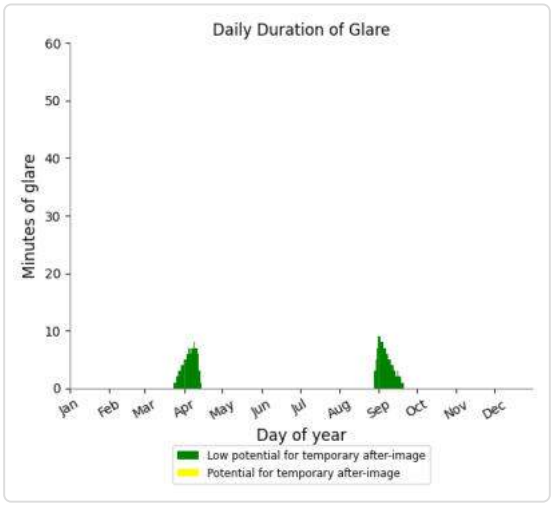


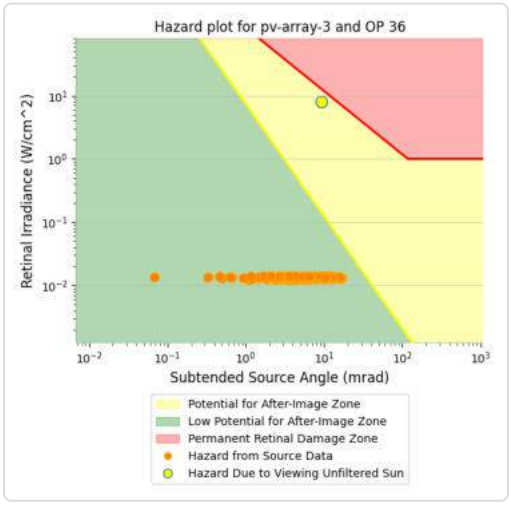
PV array 3 and OP 36

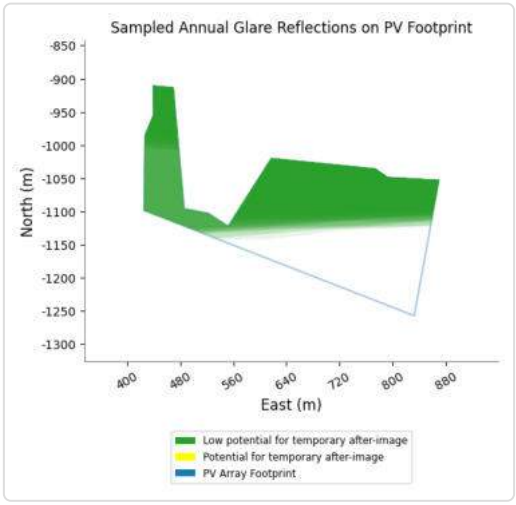
Yellow glare: none

Green glare: 211 min.



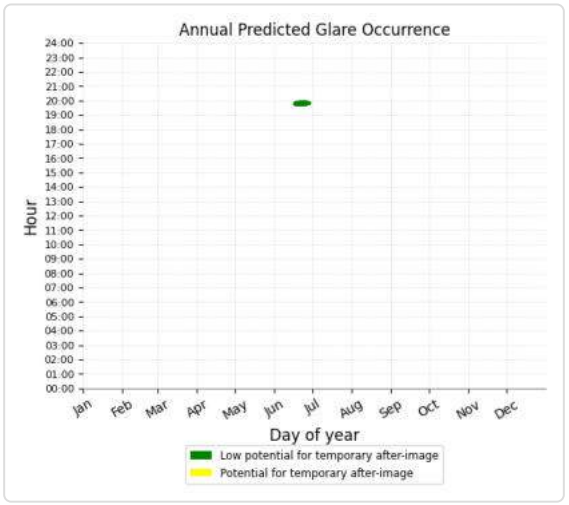


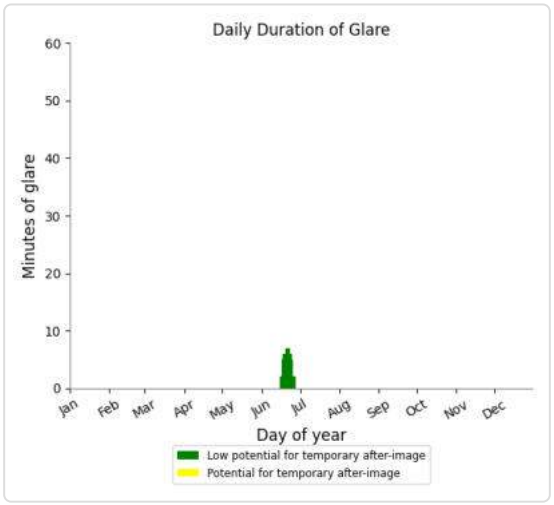


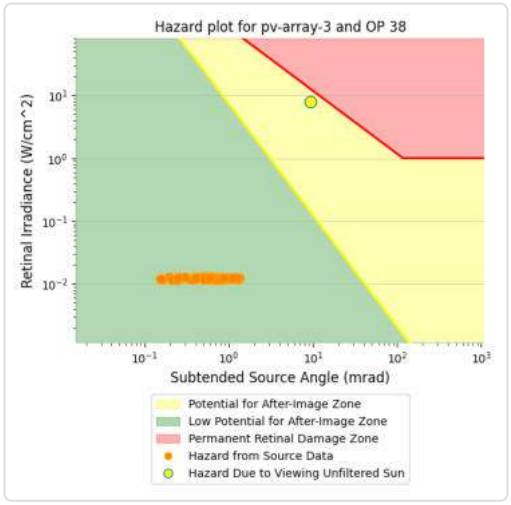


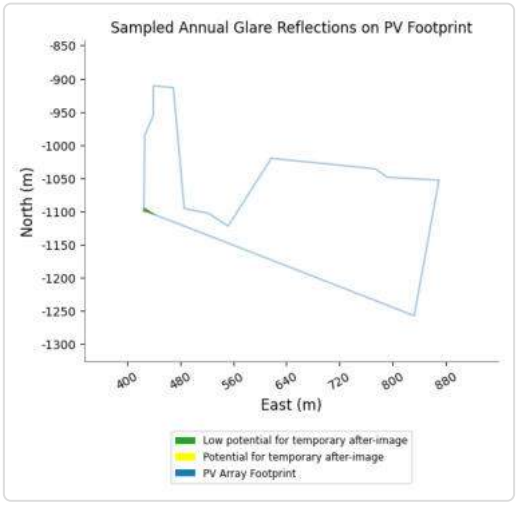
PV array 3 and OP 38

Yellow glare: none
Green glare: 62 min.









PV array 3 and OP 1

No glare found

PV array 3 and OP 2

No glare found

PV array 3 and OP 3

No glare found

PV array 3 and OP 4

No glare found

PV array 3 and OP 5

No glare found

PV array 3 and OP 6

No glare found

PV array 3 and OP 7

No glare found

PV array 3 and OP 8

No glare found

PV array 3 and OP 9

No glare found

PV array 3 and OP 10

No glare found

PV array 3 and OP 11

No glare found

PV array 3 and OP 12

No glare found

PV array 3 and OP 23

No glare found

PV array 3 and OP 24

No glare found

PV array 3 and OP 25

No glare found

PV array 3 and OP 26

No glare found

PV array 3 and OP 27

No glare found

PV array 3 and OP 28

No glare found

PV array 3 and OP 29

No glare found

PV array 3 and OP 30

No glare found

PV array 3 and OP 31

No glare found

PV array 3 and OP 39

No glare found

PV array 3 and OP 40

No glare found

PV array 3 and OP 41

No glare found

PV array 3 and OP 42

No glare found

PV array 3 and OP 43

No glare found

PV array 3 and OP 44

No glare found

PV array 3 and OP 45

No glare found

PV array 3 and OP 46

No glare found

PV array 3 and OP 47

No glare found

PV array 3 and OP 48

No glare found

PV: PV array 4 low potential for temporary after-image

Receptor results ordered by category of glare

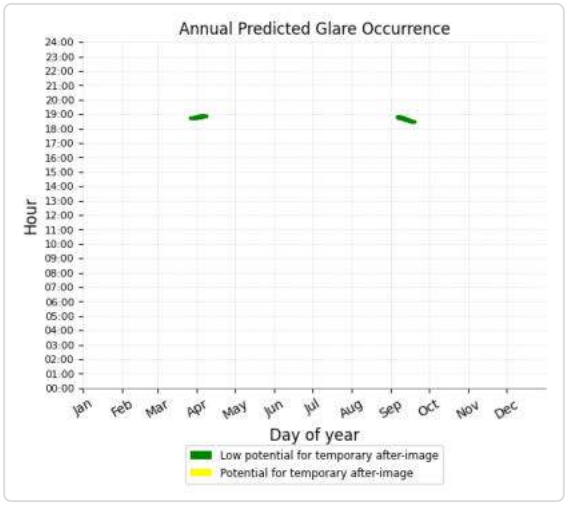
Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 19	74	1.2	0	0.0
OP 20	36	0.6	0	0.0
OP 21	31	0.5	0	0.0
OP 22	150	2.5	0	0.0
OP 34	26	0.4	0	0.0
OP 37	342	5.7	0	0.0
OP 38	775	12.9	0	0.0
OP 39	1,430	23.8	0	0.0
OP 40	996	16.6	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 23	0	0.0	0	0.0
OP 24	0	0.0	0	0.0
OP 25	0	0.0	0	0.0
OP 26	0	0.0	0	0.0
OP 27	0	0.0	0	0.0
OP 28	0	0.0	0	0.0
OP 29	0	0.0	0	0.0
OP 30	0	0.0	0	0.0
OP 31	0	0.0	0	0.0
OP 32	0	0.0	0	0.0
OP 33	0	0.0	0	0.0
OP 35	0	0.0	0	0.0

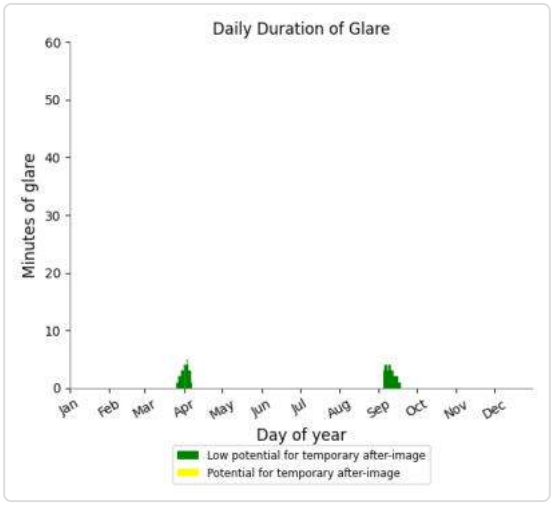
Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 36	0	0.0	0	0.0
OP 41	0	0.0	0	0.0
OP 42	0	0.0	0	0.0
OP 43	0	0.0	0	0.0
OP 44	0	0.0	0	0.0
OP 45	0	0.0	0	0.0
OP 46	0	0.0	0	0.0
OP 47	0	0.0	0	0.0
OP 48	0	0.0	0	0.0

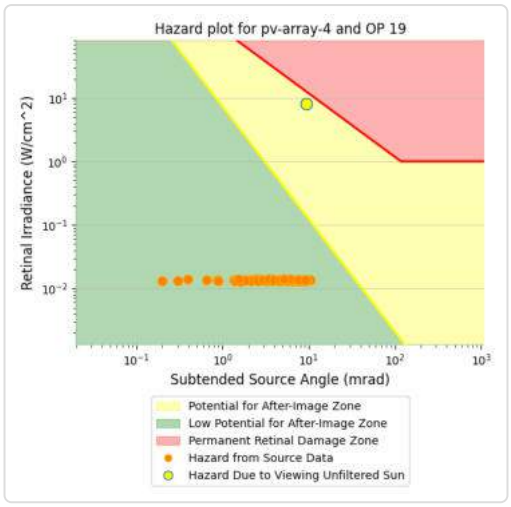
PV array 4 and OP 19

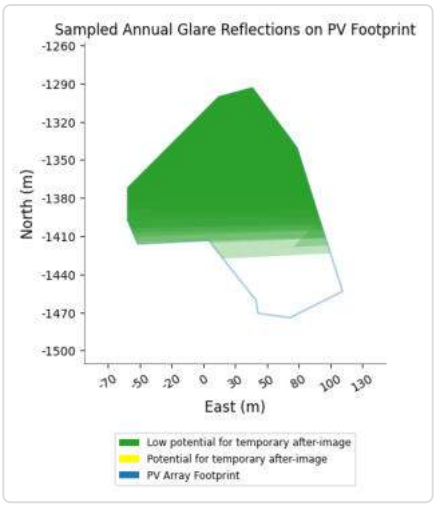
Yellow glare: none

Green glare: 74 min.





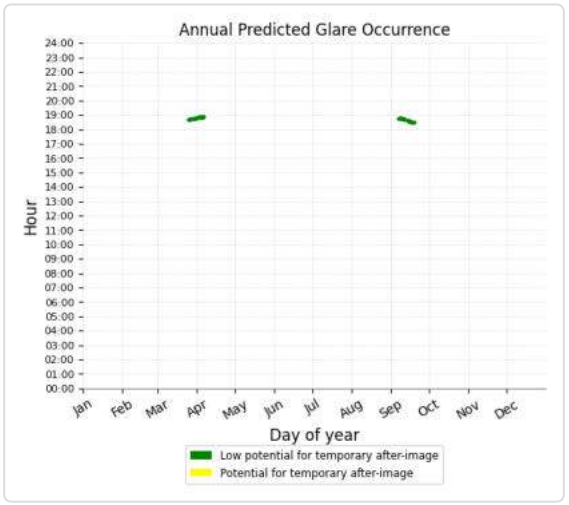


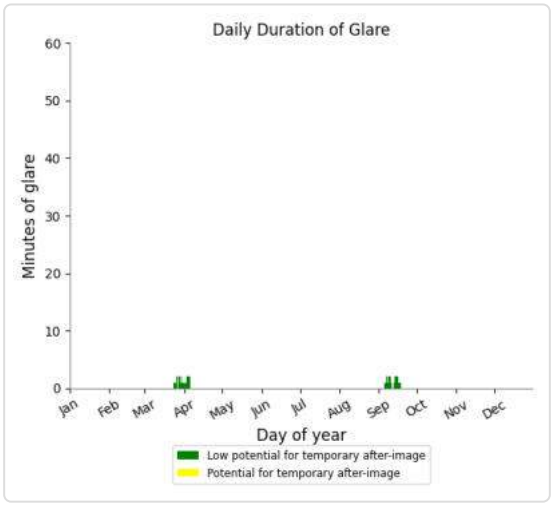


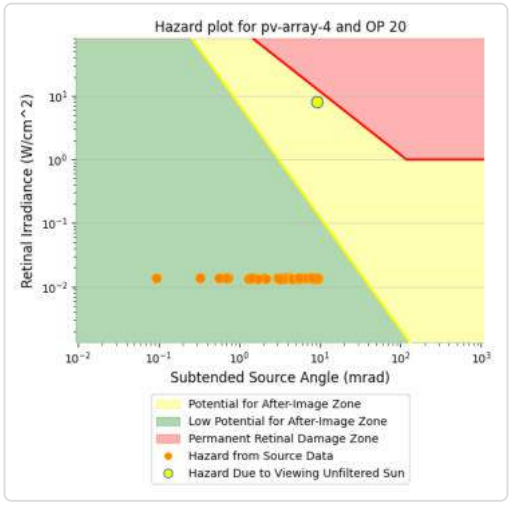
PV array 4 and OP 20

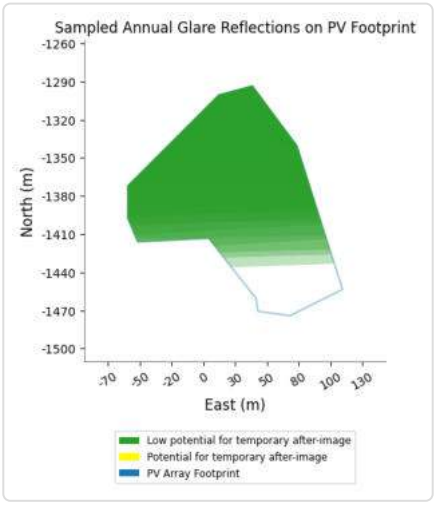
Yellow glare: none

Green glare: 36 min.





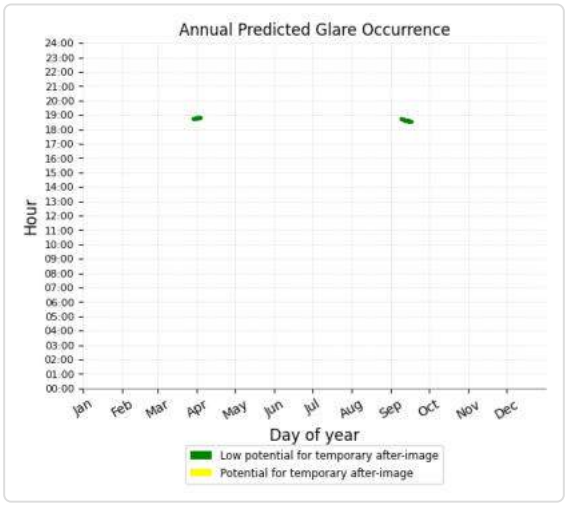


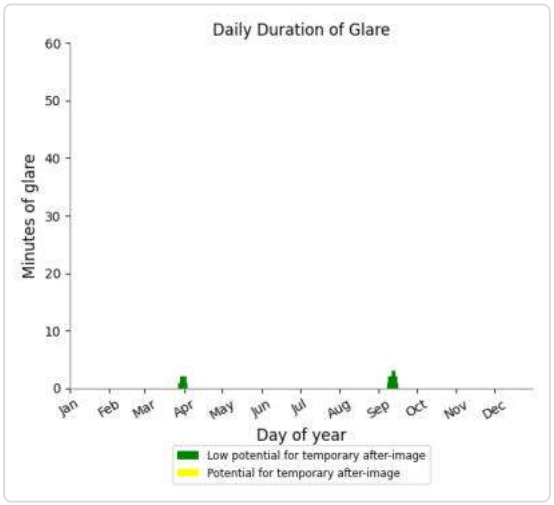


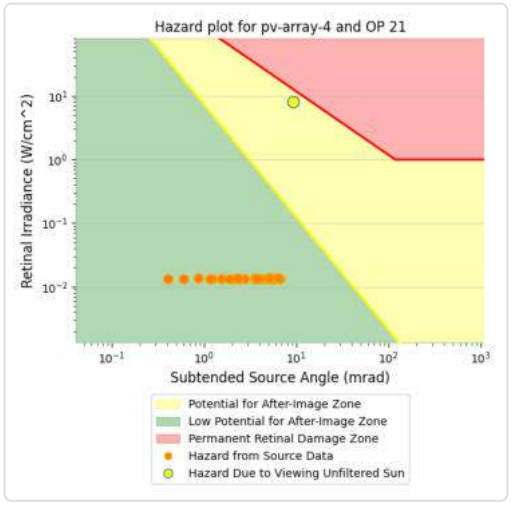
PV array 4 and OP 21

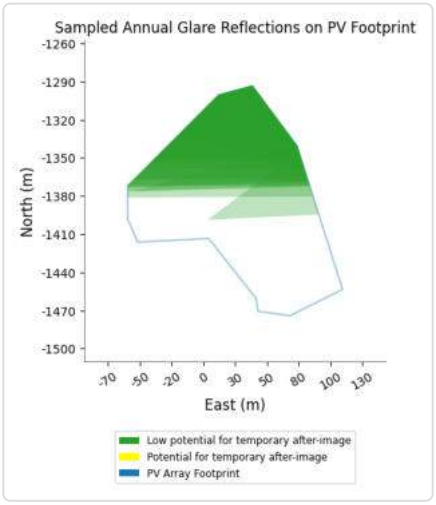
Yellow glare: none

Green glare: 31 min.





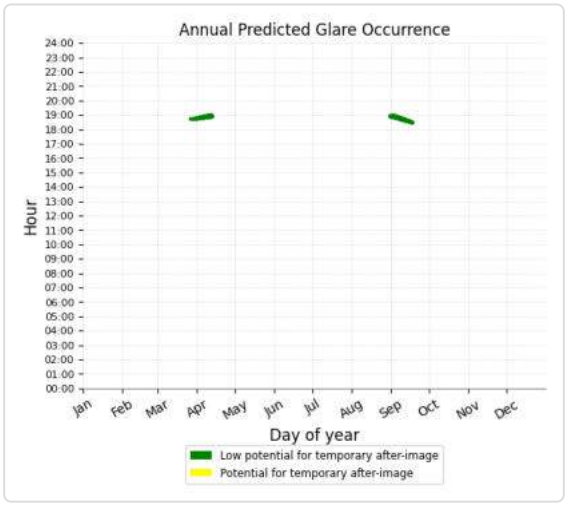


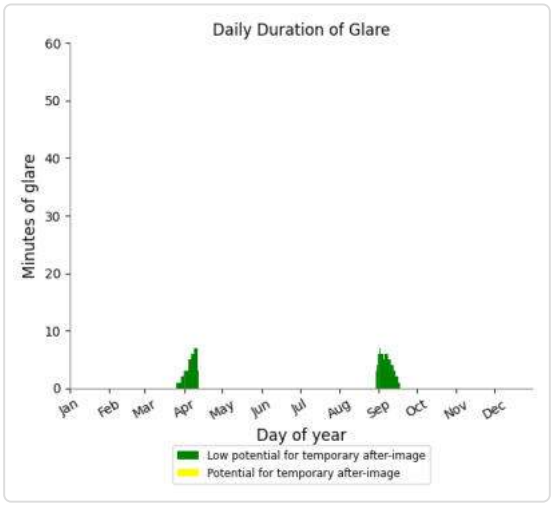


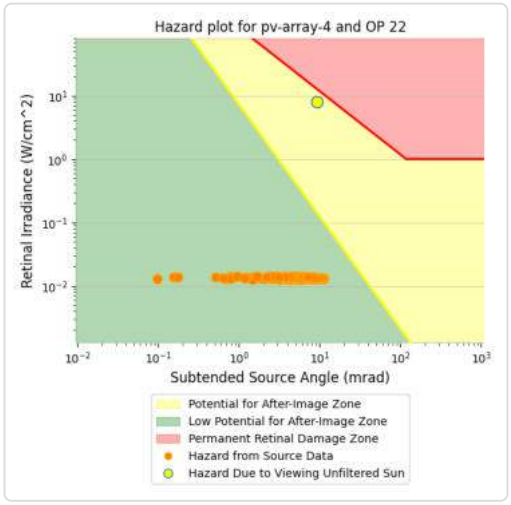
PV array 4 and OP 22

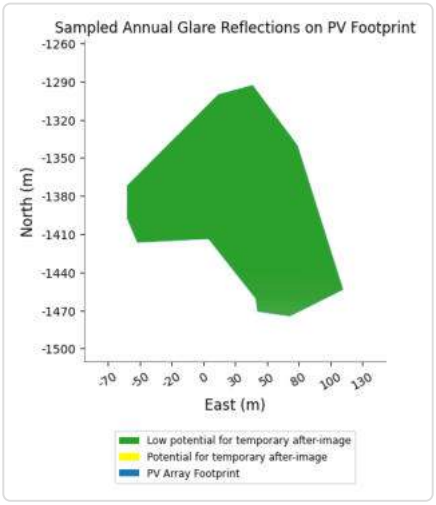
Yellow glare: none

Green glare: 150 min.





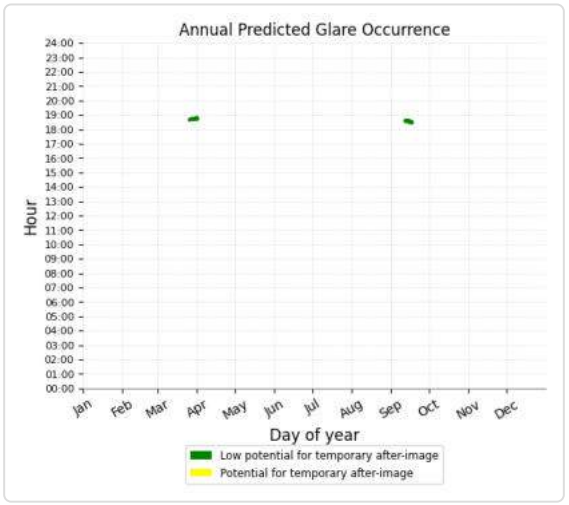


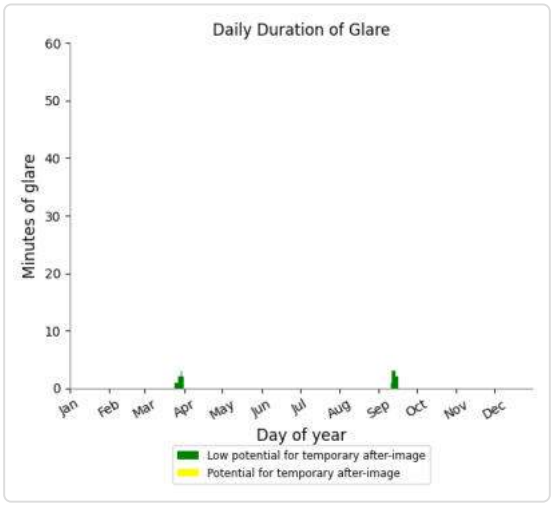


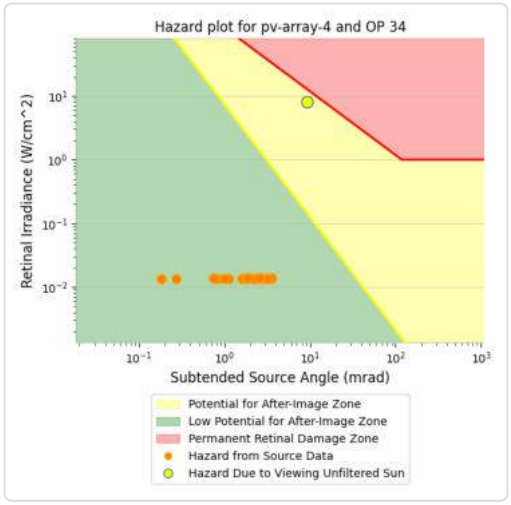
PV array 4 and OP 34

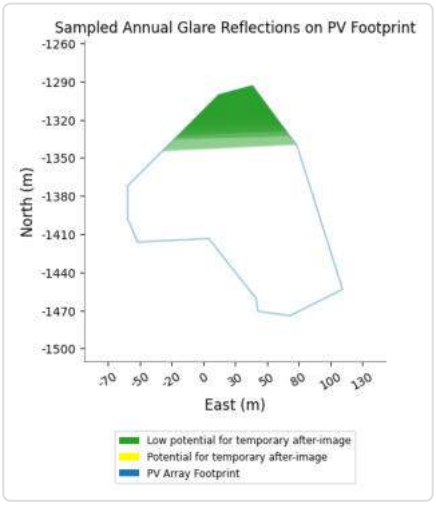
Yellow glare: none

Green glare: 26 min.





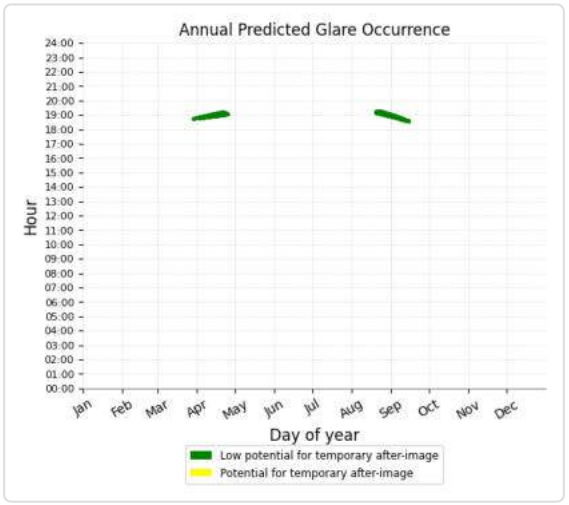


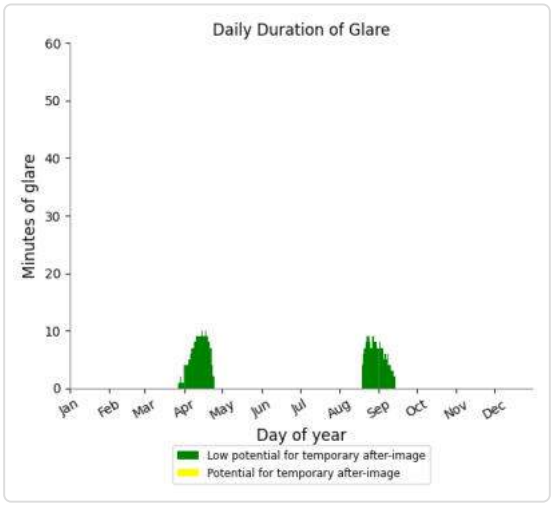


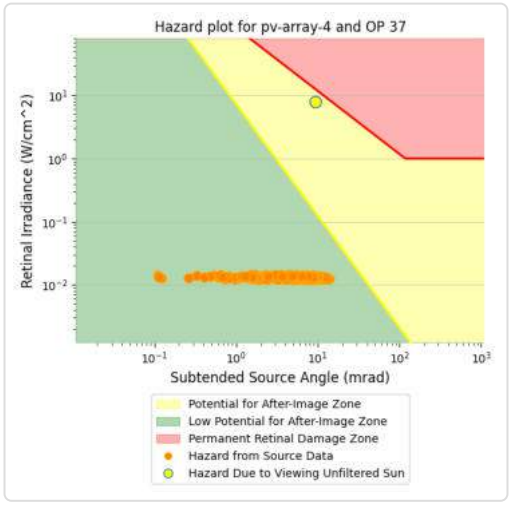
PV array 4 and OP 37

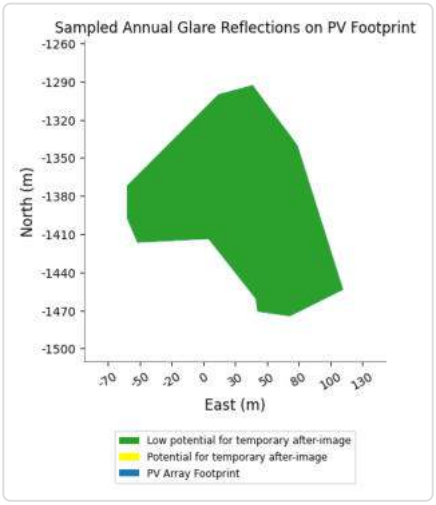
Yellow glare: none

Green glare: 342 min.





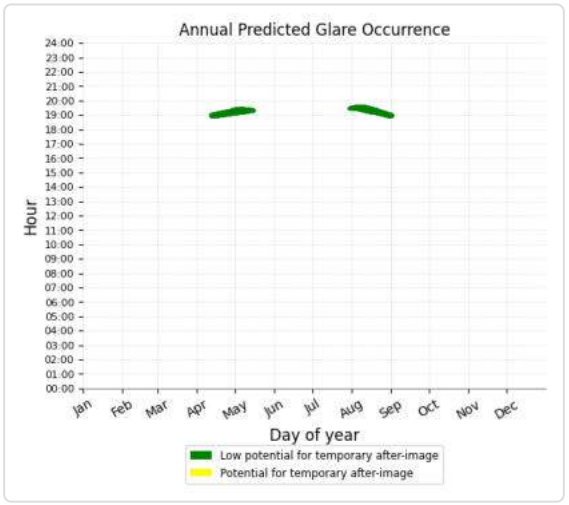


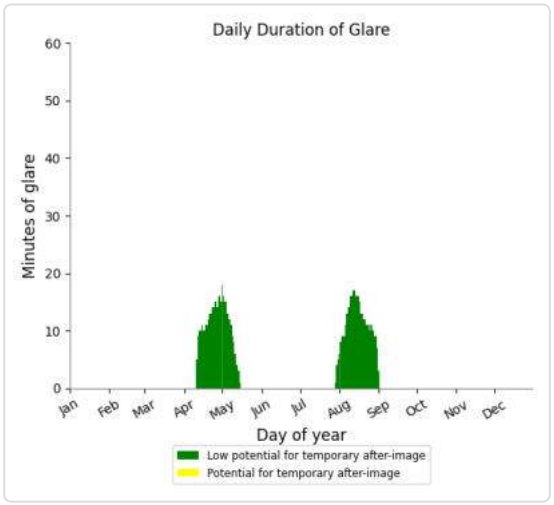


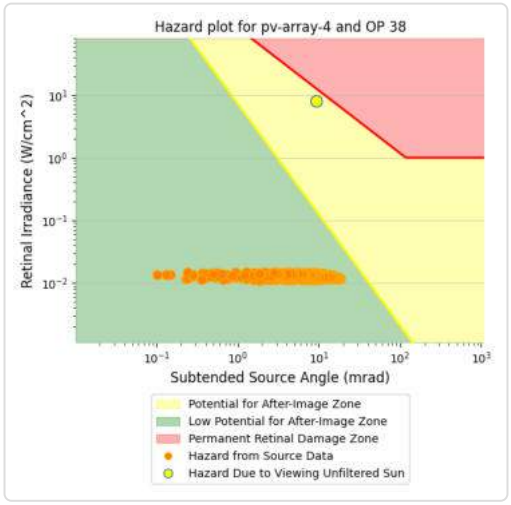
PV array 4 and OP 38

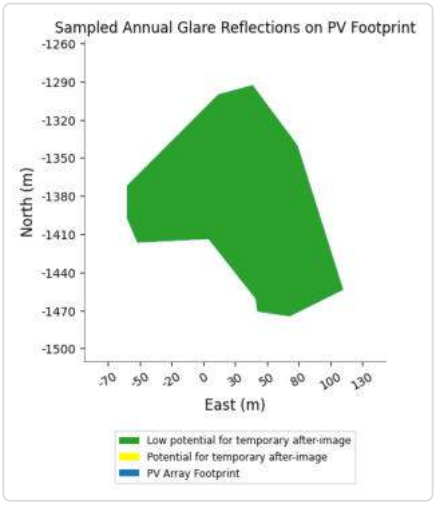
Yellow glare: none

Green glare: 775 min.





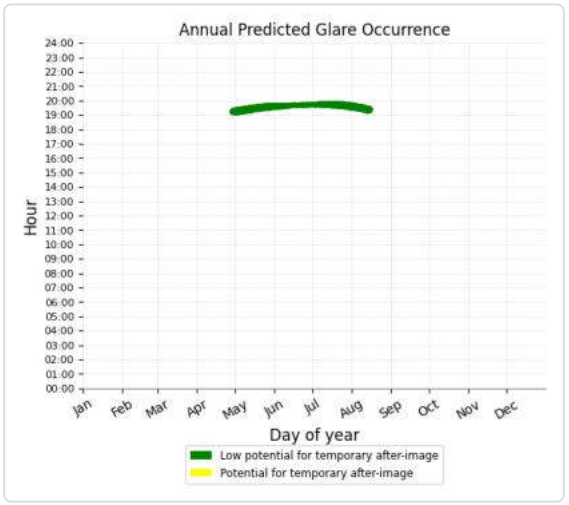


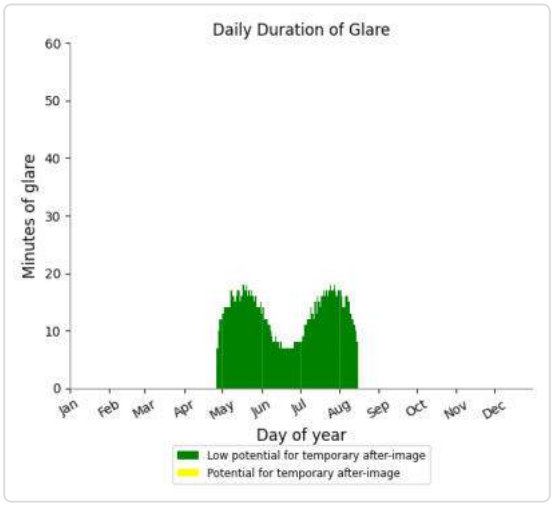


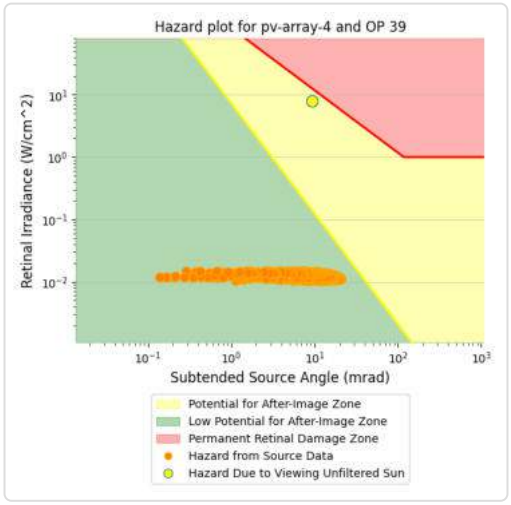
PV array 4 and OP 39

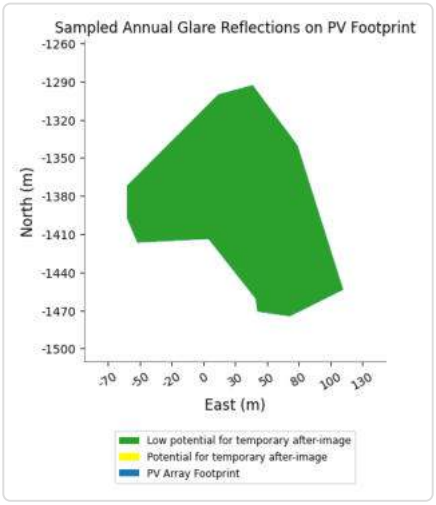
Yellow glare: none

Green glare: 1,430 min.



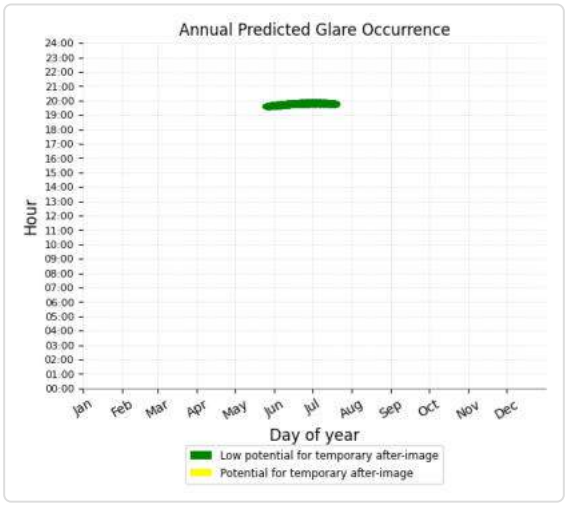


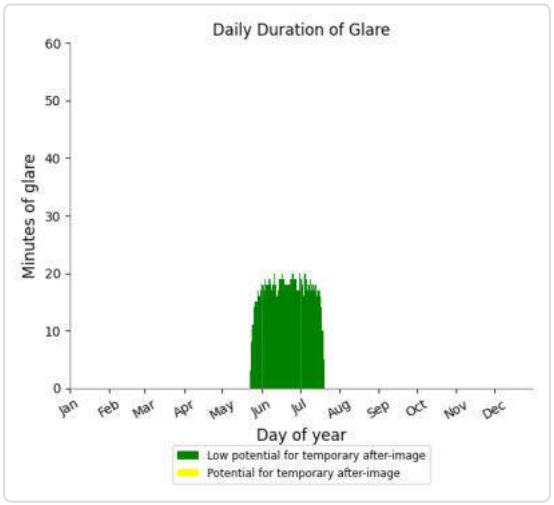


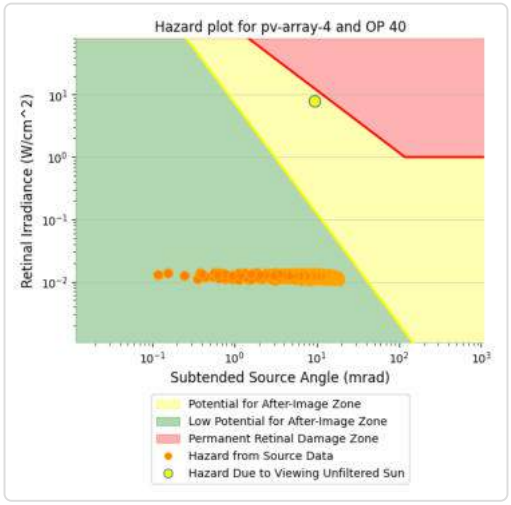


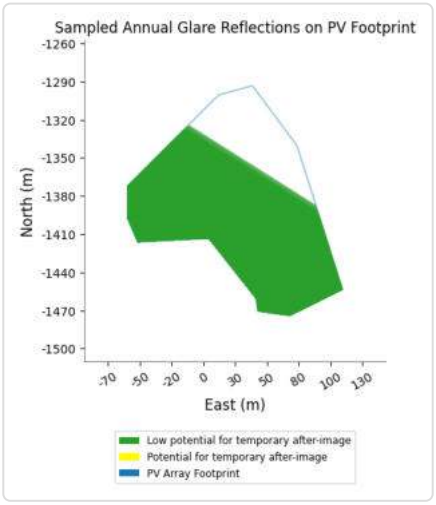
PV array 4 and OP 40

Yellow glare: none
Green glare: 996 min.









PV array 4 and OP 1

No glare found

PV array 4 and OP 2

No glare found

PV array 4 and OP 3

No glare found

PV array 4 and OP 4

No glare found

PV array 4 and OP 5

No glare found

PV array 4 and OP 6

No glare found

PV array 4 and OP 7

No glare found

PV array 4 and OP 8

No glare found

PV array 4 and OP 9

No glare found

PV array 4 and OP 10

No glare found

PV array 4 and OP 11

No glare found

PV array 4 and OP 12

No glare found

PV array 4 and OP 13

No glare found

PV array 4 and OP 14

No glare found

PV array 4 and OP 15

No glare found

PV array 4 and OP 16

No glare found

PV array 4 and OP 17

No glare found

PV array 4 and OP 18

No glare found

PV array 4 and OP 23

No glare found

PV array 4 and OP 24

No glare found

PV array 4 and OP 25

No glare found

PV array 4 and OP 26

No glare found

PV array 4 and OP 27

No glare found

PV array 4 and OP 28

No glare found

PV array 4 and OP 29

No glare found

PV array 4 and OP 30

No glare found

PV array 4 and OP 31

No glare found

PV array 4 and OP 32

No glare found

PV array 4 and OP 33

No glare found

PV array 4 and OP 35

No glare found

PV array 4 and OP 36

No glare found

PV array 4 and OP 41

No glare found

PV array 4 and OP 42

No glare found

PV array 4 and OP 43

No glare found

PV array 4 and OP 44

No glare found

PV array 4 and OP 45

No glare found

PV array 4 and OP 46

No glare found

PV array 4 and OP 47

No glare found

PV array 4 and OP 48

No glare found

PV: PV array 5 potential temporary after-image

Receptor results ordered by category of glare

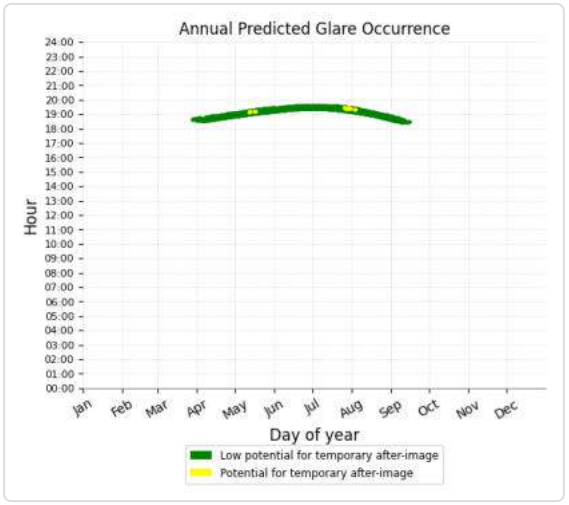
Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 40	1,651	27.5	13	0.2
OP 41	1,794	29.9	32	0.5
OP 48	1,508	25.1	389	6.5
OP 37	61	1.0	0	0.0
OP 38	163	2.7	0	0.0
OP 42	1,688	28.1	0	0.0
OP 43	738	12.3	0	0.0
OP 47	892	14.9	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0
OP 21	0	0.0	0	0.0
OP 22	0	0.0	0	0.0
OP 23	0	0.0	0	0.0
OP 24	0	0.0	0	0.0
OP 25	0	0.0	0	0.0
OP 26	0	0.0	0	0.0
OP 27	0	0.0	0	0.0
OP 28	0	0.0	0	0.0
OP 29	0	0.0	0	0.0
OP 30	0	0.0	0	0.0
OP 31	0	0.0	0	0.0

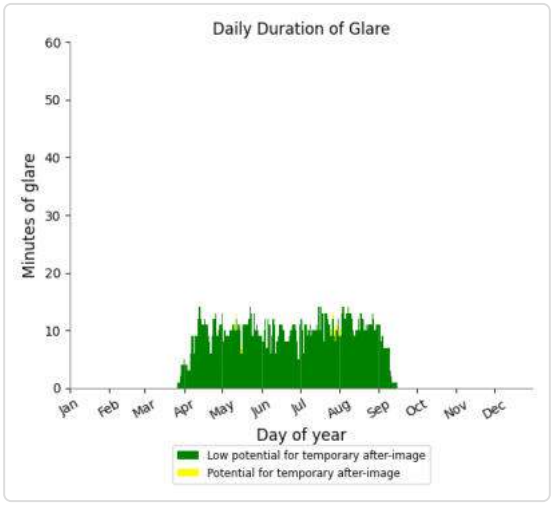
Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 32	0	0.0	0	0.0
OP 33	0	0.0	0	0.0
OP 34	0	0.0	0	0.0
OP 35	0	0.0	0	0.0
OP 36	0	0.0	0	0.0
OP 39	0	0.0	0	0.0
OP 44	0	0.0	0	0.0
OP 45	0	0.0	0	0.0
OP 46	0	0.0	0	0.0

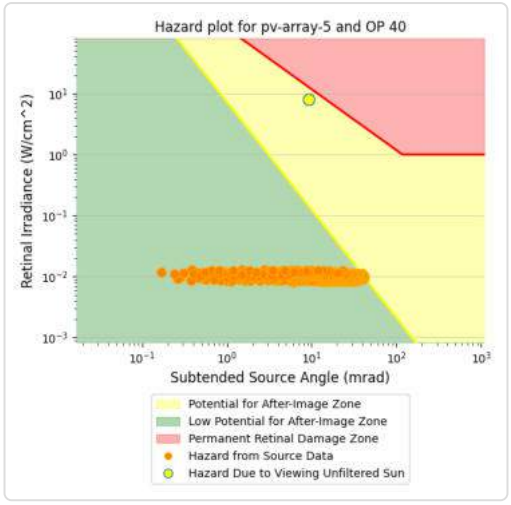
PV array 5 and OP 40

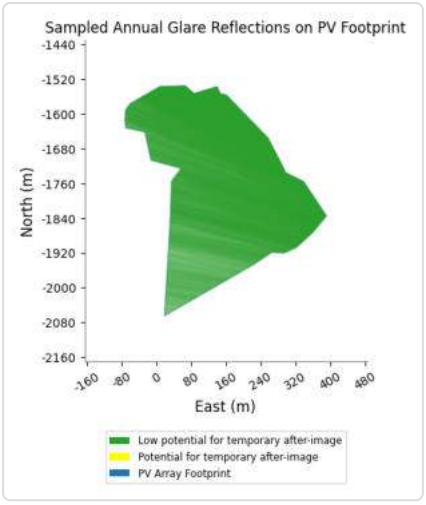
Yellow glare: 13 min.

Green glare: 1,651 min.





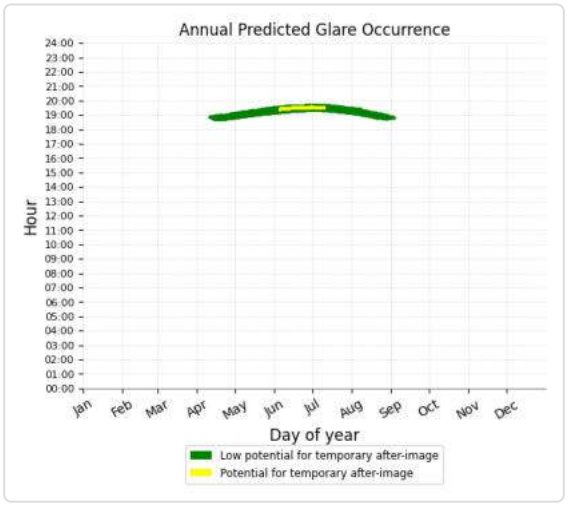


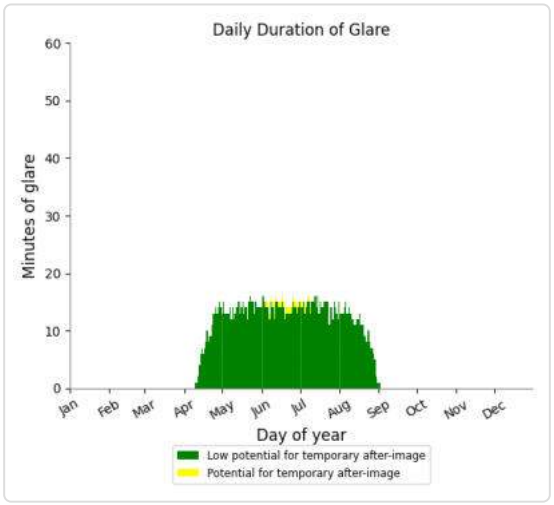


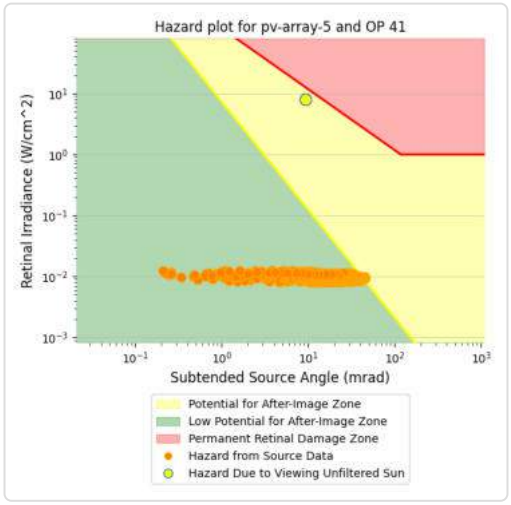
PV array 5 and OP 41

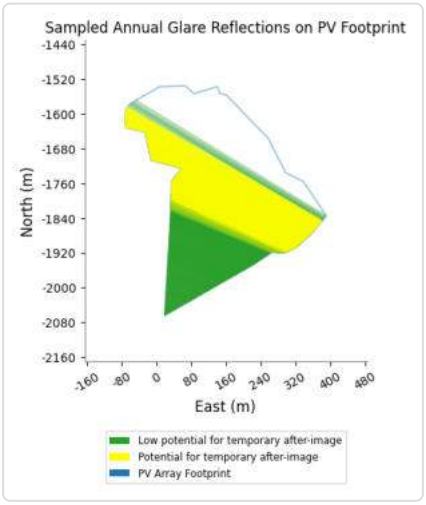
Yellow glare: 32 min.

Green glare: 1,794 min.





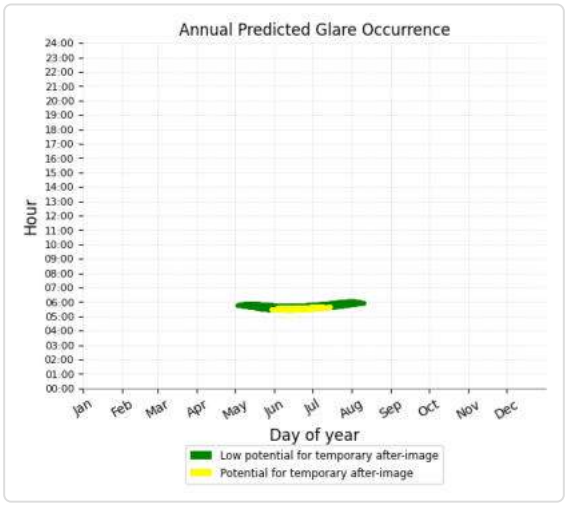


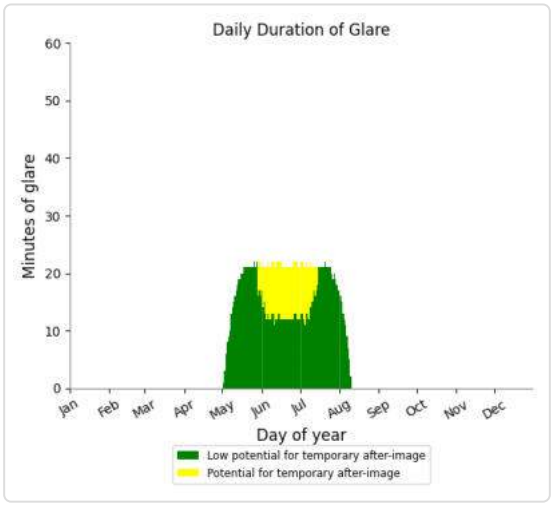


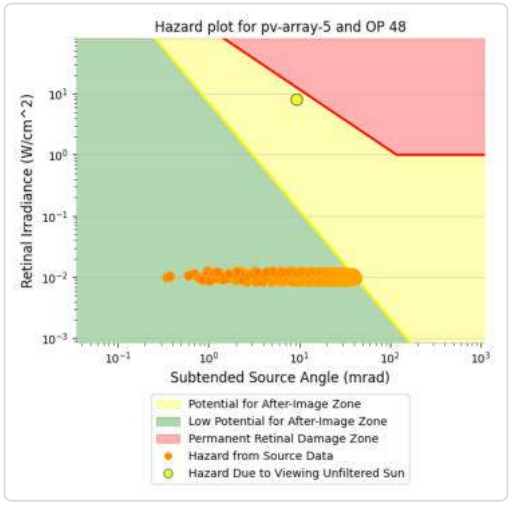
PV array 5 and OP 48

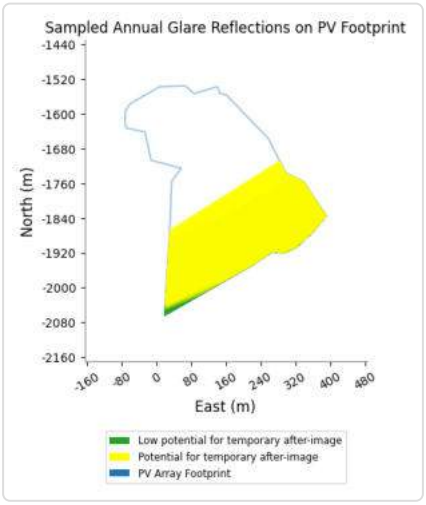
Yellow glare: 389 min.

Green glare: 1,508 min.





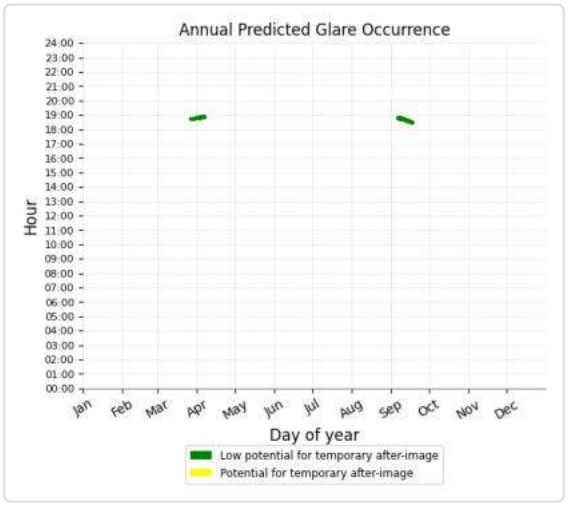


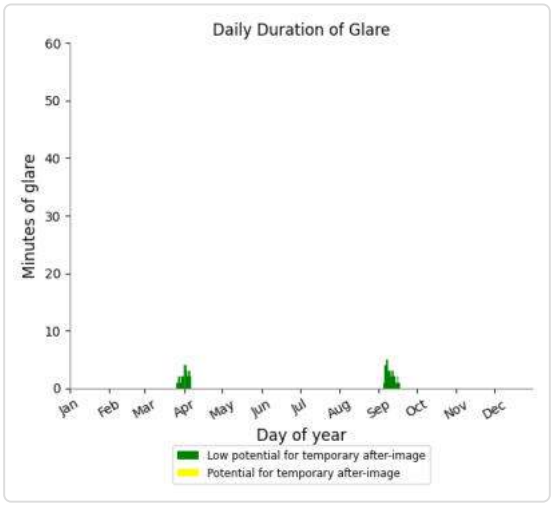


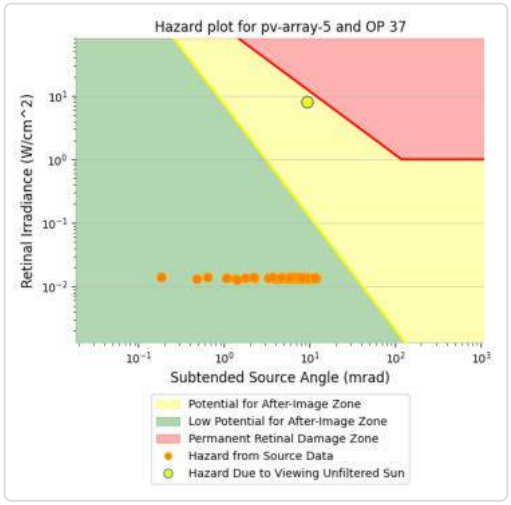
PV array 5 and OP 37

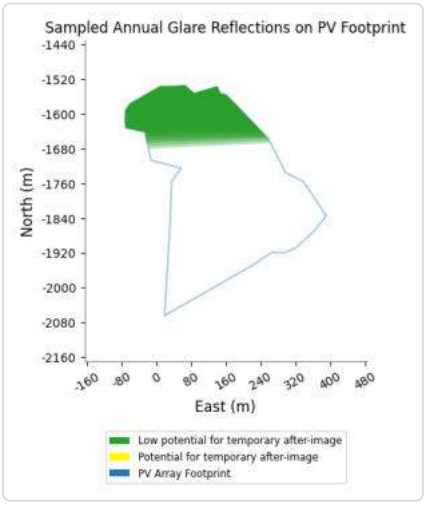
Yellow glare: none

Green glare: 61 min.





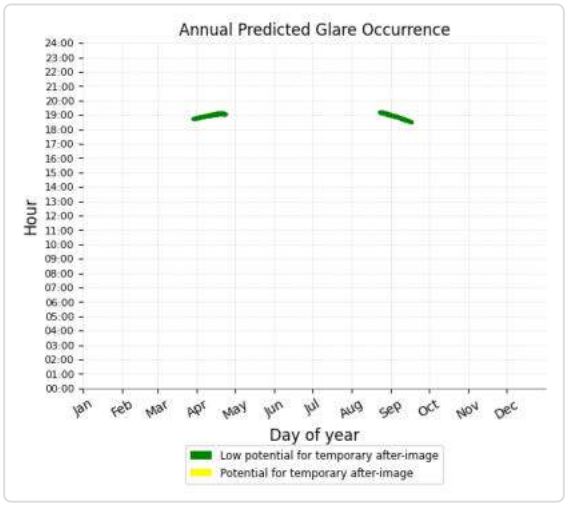


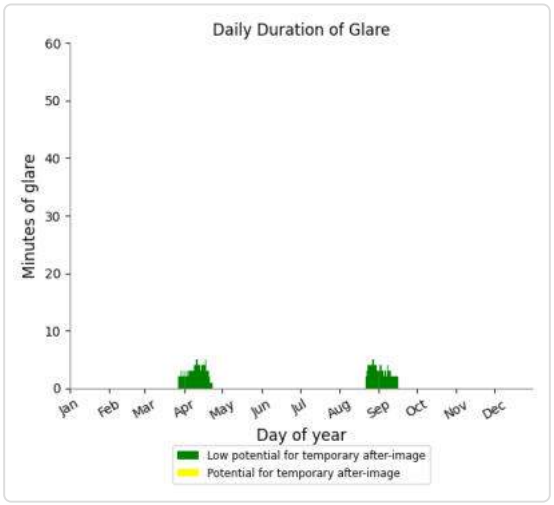


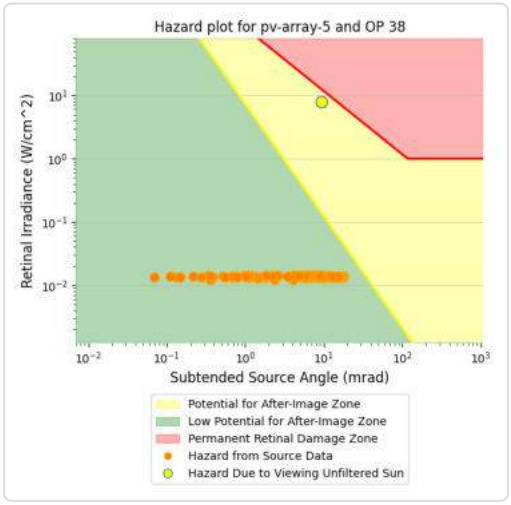
PV array 5 and OP 38

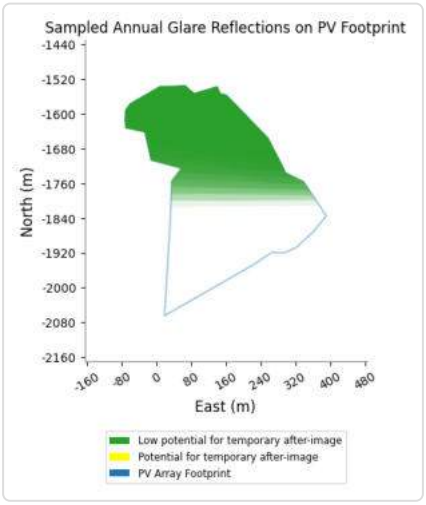
Yellow glare: none

Green glare: 163 min.





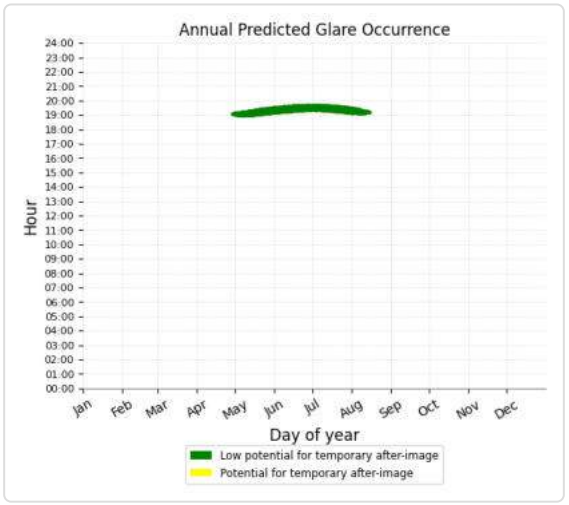


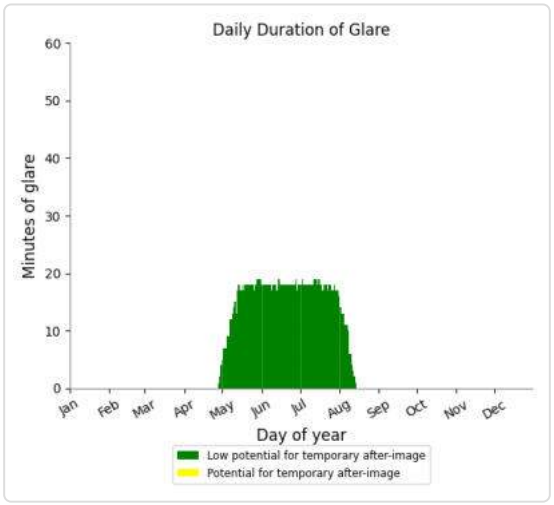


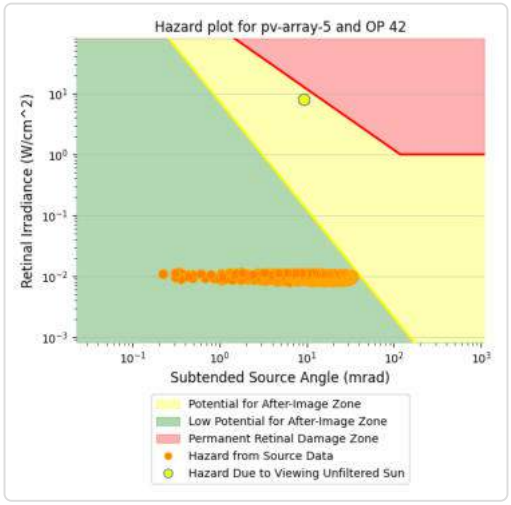
PV array 5 and OP 42

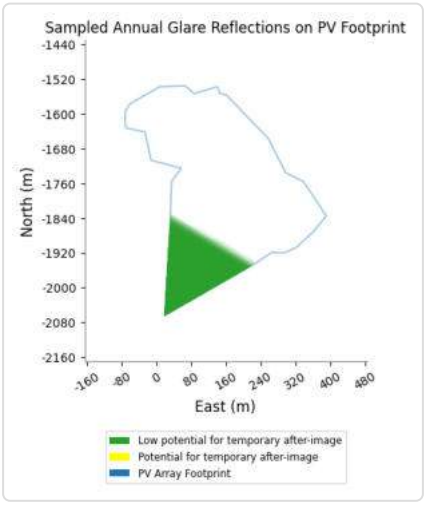
Yellow glare: none

Green glare: 1,688 min.





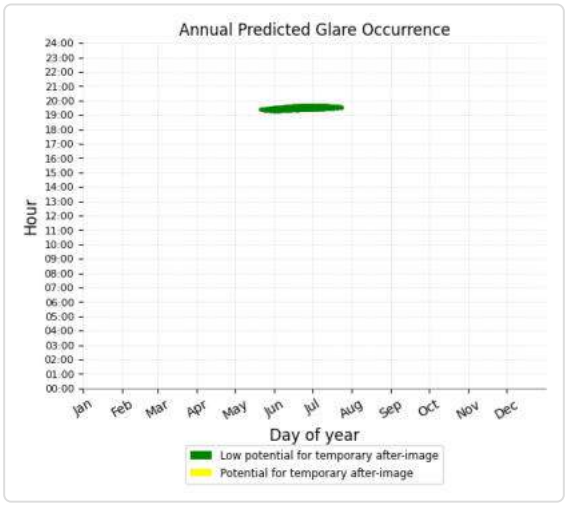


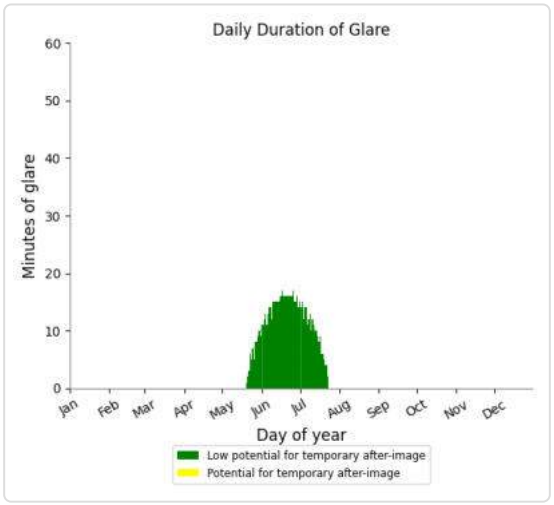


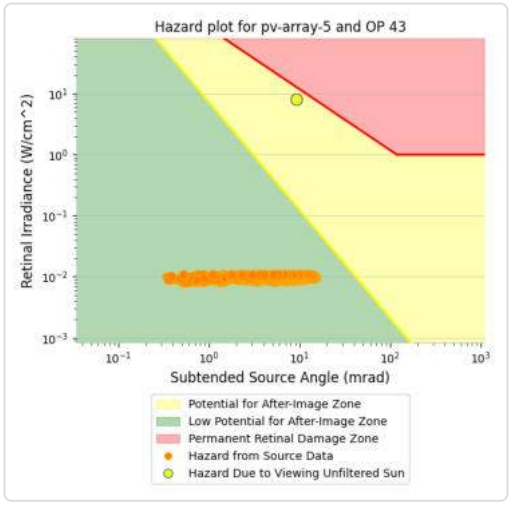
PV array 5 and OP 43

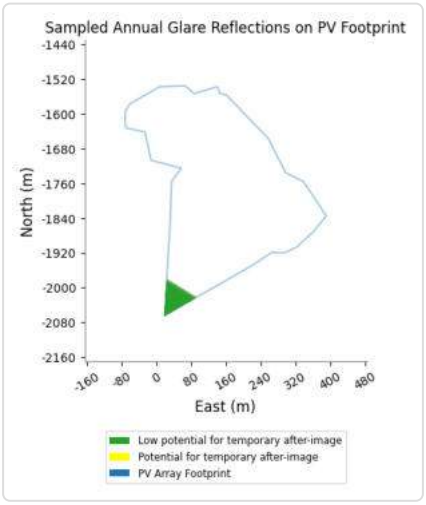
Yellow glare: none

Green glare: 738 min.



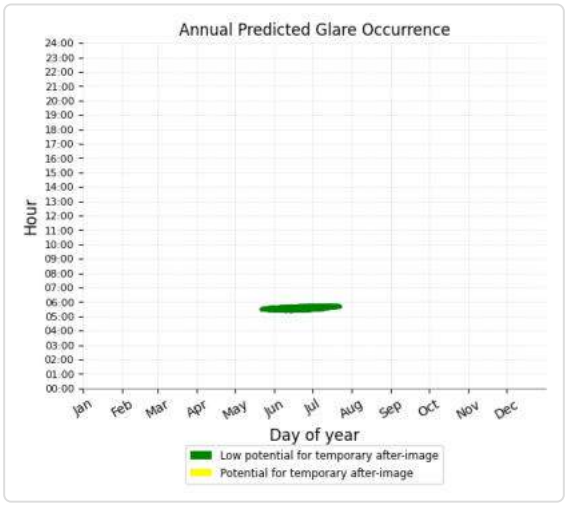


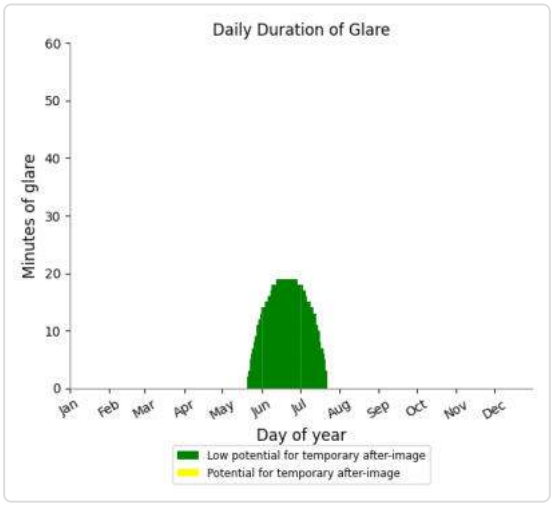


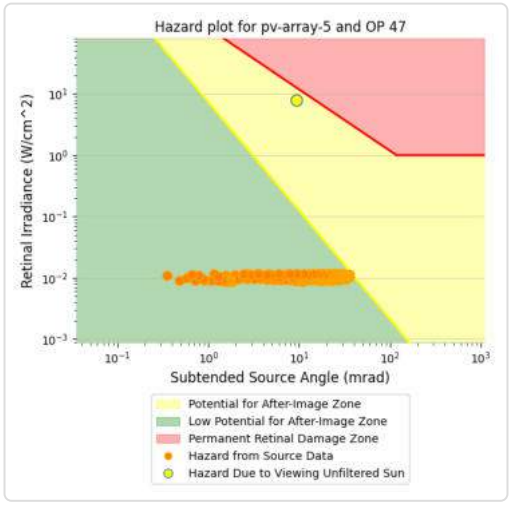


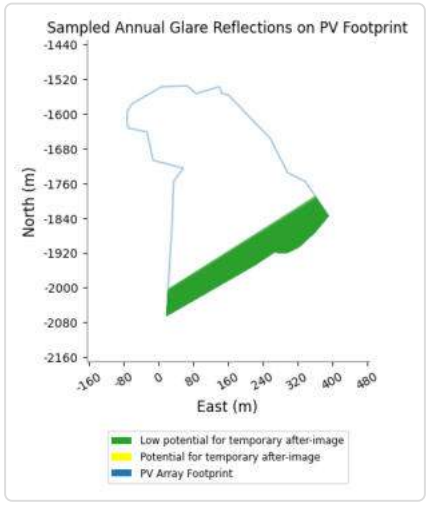
PV array 5 and OP 47

Yellow glare: none
Green glare: 892 min.









PV array 5 and OP 1

No glare found

PV array 5 and OP 2

No glare found

PV array 5 and OP 3

No glare found

PV array 5 and OP 4

No glare found

PV array 5 and OP 5

No glare found

PV array 5 and OP 6

No glare found

PV array 5 and OP 7

No glare found

PV array 5 and OP 8

No glare found

PV array 5 and OP 9

No glare found

PV array 5 and OP 10

No glare found

PV array 5 and OP 11

No glare found

PV array 5 and OP 12

No glare found

PV array 5 and OP 13

No glare found

PV array 5 and OP 14

No glare found

PV array 5 and OP 15

No glare found

PV array 5 and OP 16

No glare found

PV array 5 and OP 17

No glare found

PV array 5 and OP 18

No glare found

PV array 5 and OP 19

No glare found

PV array 5 and OP 20

No glare found

PV array 5 and OP 21

No glare found

PV array 5 and OP 22

No glare found

PV array 5 and OP 23

No glare found

PV array 5 and OP 24

No glare found

PV array 5 and OP 25

No glare found

PV array 5 and OP 26

No glare found

PV array 5 and OP 27

No glare found

PV array 5 and OP 28

No glare found

PV array 5 and OP 29

No glare found

PV array 5 and OP 30

No glare found

PV array 5 and OP 31

No glare found

PV array 5 and OP 32

No glare found

PV array 5 and OP 33

No glare found

PV array 5 and OP 34

No glare found

PV array 5 and OP 35

No glare found

PV array 5 and OP 36

No glare found

PV array 5 and OP 39

No glare found

PV array 5 and OP 44

No glare found

PV array 5 and OP 45

No glare found

PV array 5 and OP 46

No glare found

Assumptions

"Green" glare is glare with low potential to cause an after-image (flash blindness) when observed prior to a typical blink response time.
"Yellow" glare is glare with potential to cause an after-image (flash blindness) when observed prior to a typical blink response time.
Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
The algorithm does not rigorously represent the detailed geometry of a system; detailed features such as gaps between modules, variable height of the PV array, and support structures may impact actual glare results. However, we have validated our models against several systems, including a PV array causing glare to the air-traffic control tower at Manchester-Boston Regional Airport and several sites in Albuquerque, and the tool accurately predicted the occurrence and intensity of glare at different times and days of the year.
Several V1 calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for large PV footprints. Additional analyses of array sub-sections can provide additional information on expected glare. This primarily affects V1 analyses of path receptors.
Random number computations are utilized by various steps of the annual hazard analysis algorithm. Predicted minutes of glare can vary between runs as a result. This limitation primarily affects analyses of Observation Point receptors, including ATCTs. Note that the SGHAT/ ForgeSolar methodology has always relied on an analytical, qualitative approach to accurately determine the overall hazard (i.e. green vs. yellow) of expected glare on an annual basis.
The analysis does not automatically consider obstacles (either man-made or natural) between the observation points and the prescribed solar installation that may obstruct observed glare, such as trees, hills, buildings, etc.
The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub-array size. Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)
The variable direct normal irradiance (DNI) feature (if selected) scales the user-prescribed peak DNI using a typical clear-day irradiance profile. This profile has a lower DNI in the mornings and evenings and a maximum at solar noon. The scaling uses a clear-day irradiance profile based on a normalized time relative to sunrise, solar noon, and sunset, which are prescribed by a sun-position algorithm and the latitude and longitude obtained from Google maps. The actual DNI on any given day can be affected by cloud cover, atmospheric attenuation, and other environmental factors.
The ocular hazard predicted by the tool depends on a number of environmental, optical, and human factors, which can be uncertain. We provide input fields and typical ranges of values for these factors so that the user can vary these parameters to see if they have an impact on the results. The speed of SGHAT allows expedited sensitivity and parametric analyses.
The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.
Hazard zone boundaries shown in the Glare Hazard plot are an approximation and visual aid based on aggregated research data. Actual ocular impact outcomes encompass a continuous, not discrete, spectrum.
Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.
Refer to the Help page at **www.forgesolar.com/help/** for assumptions and limitations not listed here.

Default glare analysis parameters and observer eye characteristics (for reference only):

- Analysis time interval: 1 minute
- Ocular transmission coefficient: 0.5
- Pupil diameter: 0.002 meters
- Eye focal length: 0.017 meters
- Sun subtended angle: 9.3 milliradians

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FORGESOLAR GLARE ANALYSIS

Project: **Ballydonagh Solar Farm**
Site configuration: **Road Receptor Glare Results 40 degrees**

Created 25 Nov, 2025
Updated 25 Nov, 2025
Time-step 1 minute
Timezone offset UTC0
Minimum sun altitude 0.0 deg
DNI peaks at 1,000.0 W/m^2
Category 10 MW to 100 MW
Site ID 165607.13892

Ocular transmission coefficient 0.5
Pupil diameter 0.002 m
Eye focal length 0.017 m
Sun subtended angle 9.3 mrad
PV analysis methodology V2

Summary of Results

Glare with potential for temporary after-image predicted

PV Array	Tilt	Orient	Annual Green Glare		Annual Yellow Glare		Energy
	°	°	min	hr	min	hr	kWh
PV array 1	40.0	180.0	44,642	744.0	18,741	312.4	-
PV array 2	40.0	180.0	28,482	474.7	4,748	79.1	-
PV array 3	40.0	180.0	24,421	407.0	5,545	92.4	-
PV array 4	40.0	180.0	4,667	77.8	0	0.0	-
PV array 5	40.0	180.0	9,566	159.4	0	0.0	-

Total glare received by each receptor; may include duplicate times of glare from multiple reflective surfaces.

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 1	1,665	27.8	4,137	69.0
OP 2	1,426	23.8	1,457	24.3
OP 3	2,941	49.0	3,958	66.0
OP 4	1,261	21.0	3,203	53.4
OP 5	2,279	38.0	3,774	62.9
OP 6	3,260	54.3	2,516	41.9
OP 7	3,066	51.1	3	0.1
OP 8	3,296	54.9	33	0.6
OP 9	3,489	58.1	139	2.3
OP 10	3,209	53.5	744	12.4
OP 11	3,732	62.2	1,128	18.8
OP 12	2,109	35.1	929	15.5

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 13	2,907	48.5	527	8.8
OP 14	5,326	88.8	0	0.0
OP 15	3,054	50.9	2,500	41.7
OP 16	1,086	18.1	2,698	45.0
OP 17	4,309	71.8	0	0.0
OP 18	1,241	20.7	0	0.0
OP 19	1,021	17.0	0	0.0
OP 20	3,327	55.5	85	1.4
OP 21	3,652	60.9	90	1.5
OP 22	3,910	65.2	0	0.0
OP 23	0	0.0	0	0.0
OP 24	0	0.0	0	0.0
OP 25	0	0.0	0	0.0
OP 26	0	0.0	0	0.0
OP 27	538	9.0	0	0.0
OP 28	1,126	18.8	0	0.0
OP 29	4,304	71.7	181	3.0
OP 30	3,377	56.3	0	0.0
OP 31	4,508	75.1	438	7.3
OP 32	4,665	77.8	0	0.0
OP 33	3,793	63.2	119	2.0
OP 34	3,986	66.4	53	0.9
OP 35	4,704	78.4	0	0.0
OP 36	4,696	78.3	322	5.4
OP 37	2,456	40.9	0	0.0
OP 38	1,757	29.3	0	0.0
OP 39	1,445	24.1	0	0.0
OP 40	1,759	29.3	0	0.0
OP 41	1,808	30.1	0	0.0
OP 42	1,717	28.6	0	0.0
OP 43	882	14.7	0	0.0
OP 44	0	0.0	0	0.0
OP 45	0	0.0	0	0.0
OP 46	0	0.0	0	0.0
OP 47	887	14.8	0	0.0
OP 48	1,804	30.1	0	0.0

Component Data

PV Arrays

Name: PV array 1
Axis tracking: Fixed (no rotation)
Tilt: 40.0°
Orientation: 180.0°
Rated power: -
Panel material: Light textured glass with AR coating
Reflectivity: Vary with sun
Slope error: correlate with material

Vertex	Latitude (°)	Longitude (°)	Ground elevation (m)	Height above ground (m)	Total elevation (m)
1	53.240101	-8.253587	80.52	3.50	84.02
2	53.240185	-8.253469	80.64	3.50	84.14
3	53.240166	-8.252772	81.23	3.50	84.73
4	53.240037	-8.252364	80.86	3.50	84.36
5	53.239344	-8.252504	79.41	3.50	82.91
6	53.239273	-8.252493	79.31	3.50	82.81
7	53.238837	-8.250605	79.13	3.50	82.63
8	53.239787	-8.249854	81.13	3.50	84.63
9	53.239813	-8.249553	81.19	3.50	84.69
10	53.238028	-8.248395	79.21	3.50	82.71
11	53.236209	-8.248545	79.03	3.50	82.53
12	53.234045	-8.250079	77.65	3.50	81.15
13	53.233827	-8.250551	76.65	3.50	80.15
14	53.234007	-8.253995	75.76	3.50	79.26
15	53.234180	-8.254059	75.85	3.50	79.35
16	53.234572	-8.253330	75.58	3.50	79.08
17	53.235169	-8.252740	76.67	3.50	80.17
18	53.235416	-8.252369	77.40	3.50	80.90
19	53.235635	-8.251736	78.53	3.50	82.03
20	53.236084	-8.251479	78.37	3.50	81.87
21	53.236431	-8.251479	78.07	3.50	81.57
22	53.236707	-8.251007	78.00	3.50	81.50
23	53.237086	-8.250857	77.87	3.50	81.37
24	53.237291	-8.252230	78.10	3.50	81.60
25	53.237272	-8.252455	78.31	3.50	81.81
26	53.237446	-8.253027	78.69	3.50	82.19
27	53.237555	-8.254486	80.00	3.50	83.50
28	53.238084	-8.254302	79.43	3.50	82.93
29	53.238071	-8.252853	78.60	3.50	82.10
30	53.238200	-8.252574	78.75	3.50	82.25
31	53.238463	-8.252403	79.00	3.50	82.50
32	53.238688	-8.252349	79.00	3.50	82.50
33	53.238880	-8.252681	79.00	3.50	82.50
34	53.238906	-8.254141	79.75	3.50	83.25
35	53.239233	-8.253980	79.80	3.50	83.30
36	53.239445	-8.253647	79.68	3.50	83.18

Name: PV array 2
Axis tracking: Fixed (no rotation)
Tilt: 40.0°
Orientation: 180.0°
Rated power: -
Panel material: Light textured glass with AR coating
Reflectivity: Vary with sun
Slope error: correlate with material

Vertex	Latitude (°)	Longitude (°)	Ground elevation (m)	Height above ground (m)	Total elevation (m)
1	53.237448	-8.238042	91.31	3.50	94.81
2	53.237326	-8.236701	90.92	3.50	94.42
3	53.235965	-8.236207	89.65	3.50	93.15
4	53.235939	-8.235220	91.32	3.50	94.82
5	53.235785	-8.234930	91.48	3.50	94.98
6	53.235785	-8.234673	91.48	3.50	94.98
7	53.235792	-8.233900	91.87	3.50	95.37
8	53.235785	-8.233804	91.98	3.50	95.48
9	53.233827	-8.233933	90.09	3.50	93.59
10	53.233811	-8.233992	90.03	3.50	93.53
11	53.233779	-8.233986	90.07	3.50	93.57
12	53.233727	-8.233943	90.22	3.50	93.72
13	53.233413	-8.233959	90.20	3.50	93.70
14	53.233624	-8.236899	86.14	3.50	89.64
15	53.233747	-8.237403	85.42	3.50	88.92
16	53.233689	-8.237918	84.66	3.50	88.16
17	53.233689	-8.238079	84.43	3.50	87.93
18	53.233920	-8.238702	84.48	3.50	87.98
19	53.234402	-8.238884	84.85	3.50	88.35
20	53.234774	-8.239485	85.00	3.50	88.50
21	53.234639	-8.240139	84.43	3.50	87.93
22	53.234247	-8.240096	84.48	3.50	87.98
23	53.234003	-8.242052	82.28	3.50	85.78
24	53.234151	-8.242535	81.80	3.50	85.30
25	53.233785	-8.242567	81.29	3.50	84.79
26	53.233560	-8.243275	80.85	3.50	84.35
27	53.233387	-8.246269	78.00	3.50	81.50
28	53.236386	-8.245485	81.07	3.50	84.57
29	53.236495	-8.245196	81.26	3.50	84.76
30	53.236270	-8.242471	82.03	3.50	85.53
31	53.236142	-8.238919	86.95	3.50	90.45
32	53.236411	-8.238522	88.04	3.50	91.54
33	53.236829	-8.238726	88.59	3.50	92.09
34	53.236855	-8.237514	89.62	3.50	93.12

Name: PV array 3
Axis tracking: Fixed (no rotation)
Tilt: 40.0°
Orientation: 180.0°
Rated power: -
Panel material: Light textured glass with AR coating
Reflectivity: Vary with sun
Slope error: correlate with material

Vertex	Latitude (°)	Longitude (°)	Ground elevation (m)	Height above ground (m)	Total elevation (m)
1	53.230937	-8.244341	80.00	3.50	83.50
2	53.230795	-8.242002	81.69	3.50	85.19
3	53.230680	-8.241723	81.90	3.50	85.40
4	53.230641	-8.240565	83.29	3.50	86.79
5	53.228804	-8.241122	82.00	3.50	85.50
6	53.229883	-8.245725	79.65	3.50	83.15
7	53.230230	-8.247216	78.00	3.50	81.50
8	53.231245	-8.247195	78.10	3.50	81.60
9	53.231521	-8.247002	78.43	3.50	81.93
10	53.231919	-8.247002	78.17	3.50	81.67
11	53.231894	-8.246551	78.44	3.50	81.94
12	53.230256	-8.246304	78.46	3.50	81.96
13	53.230192	-8.245757	79.24	3.50	82.74
14	53.230018	-8.245317	80.05	3.50	83.55

Name: PV array 4
Axis tracking: Fixed (no rotation)
Tilt: 40.0°
Orientation: 180.0°
Rated power: -
Panel material: Light textured glass with AR coating
Reflectivity: Vary with sun
Slope error: correlate with material

Vertex	Latitude (°)	Longitude (°)	Ground elevation (m)	Height above ground (m)	Total elevation (m)
1	53.227543	-8.254478	76.00	3.50	79.50
2	53.227774	-8.254478	76.00	3.50	79.50
3	53.228417	-8.253405	77.05	3.50	80.55
4	53.228481	-8.253008	77.40	3.50	80.90
5	53.228057	-8.252483	77.45	3.50	80.95
6	53.227042	-8.251946	78.11	3.50	81.61
7	53.226856	-8.252568	77.32	3.50	80.82
8	53.226888	-8.252944	76.78	3.50	80.28
9	53.226978	-8.252965	76.74	3.50	80.24
10	53.227402	-8.253523	76.02	3.50	79.52
11	53.227376	-8.254360	75.99	3.50	79.49

Name: PV array 5
Axis tracking: Fixed (no rotation)
Tilt: 40.0°
Orientation: 180.0°
Rated power: -
Panel material: Light textured glass with AR coating
Reflectivity: Vary with sun
Slope error: correlate with material

Vertex	Latitude (°)	Longitude (°)	Ground elevation (m)	Height above ground (m)	Total elevation (m)
1	53.226282	-8.253467	76.62	3.50	80.12
2	53.226301	-8.252598	77.28	3.50	80.78
3	53.226141	-8.252287	77.73	3.50	81.23
4	53.226282	-8.251493	78.35	3.50	81.85
5	53.226141	-8.251386	78.18	3.50	81.68
6	53.226109	-8.251171	78.14	3.50	81.64
7	53.225216	-8.249734	77.23	3.50	80.73
8	53.224590	-8.249198	76.21	3.50	79.71
9	53.224506	-8.249134	76.27	3.50	79.77
10	53.224320	-8.248512	76.77	3.50	80.27
11	53.223614	-8.247728	77.00	3.50	80.50
12	53.223273	-8.248200	76.69	3.50	80.19
13	53.222965	-8.248758	74.98	3.50	78.48
14	53.222849	-8.249177	74.05	3.50	77.55
15	53.222862	-8.249606	73.45	3.50	76.95
16	53.222612	-8.250228	71.82	3.50	75.32
17	53.221552	-8.253307	71.50	3.50	75.00
18	53.223453	-8.253114	73.00	3.50	76.50
19	53.224333	-8.253061	73.55	3.50	77.05
20	53.224596	-8.252728	73.94	3.50	77.44
21	53.224763	-8.253769	74.28	3.50	77.78
22	53.225347	-8.253983	75.30	3.50	78.80
23	53.225430	-8.254638	75.05	3.50	78.55
24	53.225578	-8.254670	75.10	3.50	78.60
25	53.225796	-8.254649	75.20	3.50	78.70
26	53.225931	-8.254488	75.46	3.50	78.96

Discrete Observation Point Receptors

Name	ID	Latitude (°)	Longitude (°)	Elevation (m)	Height (m)
OP 1	1	53.240024	-8.253884	80.40	1.50
OP 2	2	53.238158	-8.254643	79.31	1.50
OP 3	3	53.237277	-8.253107	79.05	1.50
OP 4	4	53.235928	-8.252066	78.45	1.50
OP 5	5	53.234544	-8.253977	76.15	1.50
OP 6	6	53.233337	-8.255854	75.70	1.50
OP 7	7	53.235392	-8.268894	71.81	1.50
OP 8	8	53.234992	-8.266051	73.07	1.50
OP 9	9	53.234273	-8.263476	73.58	1.50
OP 10	10	53.233531	-8.260719	74.40	1.50
OP 11	11	53.232789	-8.258100	75.23	1.50
OP 12	12	53.232085	-8.255412	75.88	1.50
OP 13	13	53.231393	-8.252557	77.83	1.50
OP 14	14	53.230698	-8.249740	79.00	1.50
OP 15	15	53.230055	-8.247110	78.11	1.50
OP 16	16	53.229390	-8.244396	81.00	1.50
OP 17	17	53.228722	-8.241570	82.02	1.50
OP 18	18	53.228072	-8.238963	84.15	1.50
OP 19	19	53.227669	-8.234505	89.21	1.50
OP 20	20	53.227643	-8.231676	90.35	1.50
OP 21	21	53.227800	-8.228641	88.00	1.50
OP 22	22	53.226606	-8.227004	86.80	1.50
OP 23	23	53.245769	-8.231647	84.07	1.50
OP 24	24	53.244342	-8.229855	86.21	1.50
OP 25	25	53.242579	-8.228749	90.60	1.50
OP 26	26	53.240761	-8.228696	93.52	1.50
OP 27	27	53.238921	-8.229758	97.15	1.50
OP 28	28	53.237586	-8.230339	99.54	1.50
OP 29	29	53.235708	-8.230629	100.31	1.50
OP 30	30	53.233991	-8.230297	96.84	1.50
OP 31	31	53.232180	-8.229557	93.82	1.50
OP 32	32	53.230418	-8.228784	89.85	1.50
OP 33	33	53.228543	-8.228022	87.92	1.50
OP 34	34	53.228228	-8.226574	86.23	1.50
OP 35	35	53.229114	-8.224053	86.09	1.50
OP 36	36	53.229970	-8.221322	86.89	1.50
OP 37	37	53.225309	-8.228571	85.98	1.50
OP 38	38	53.223722	-8.230073	84.66	1.50
OP 39	39	53.222206	-8.231614	85.46	1.50
OP 40	40	53.220544	-8.233709	84.02	1.50
OP 41	41	53.219426	-8.236145	82.00	1.50
OP 42	42	53.218341	-8.238376	80.81	1.50
OP 43	43	53.217653	-8.240554	77.80	1.50
OP 44	44	53.217608	-8.243601	74.85	1.50
OP 45	45	53.217621	-8.246640	72.96	1.50
OP 46	46	53.217902	-8.260416	70.92	1.50
OP 47	47	53.218397	-8.263109	71.06	1.50
OP 48	48	53.218512	-8.265898	70.93	1.50

Glare Analysis Results

Summary of Results

Glare with potential for temporary after-image predicted

PV Array	Tilt	Orient	Annual Green Glare		Annual Yellow Glare		Energy
	°	°	min	hr	min	hr	kWh
PV array 1	40.0	180.0	44,642	744.0	18,741	312.4	-
PV array 2	40.0	180.0	28,482	474.7	4,748	79.1	-
PV array 3	40.0	180.0	24,421	407.0	5,545	92.4	-
PV array 4	40.0	180.0	4,667	77.8	0	0.0	-
PV array 5	40.0	180.0	9,566	159.4	0	0.0	-

Total glare received by each receptor; may include duplicate times of glare from multiple reflective surfaces.

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 1	1,665	27.8	4,137	69.0
OP 2	1,426	23.8	1,457	24.3
OP 3	2,941	49.0	3,958	66.0
OP 4	1,261	21.0	3,203	53.4
OP 5	2,279	38.0	3,774	62.9
OP 6	3,260	54.3	2,516	41.9
OP 7	3,066	51.1	3	0.1
OP 8	3,296	54.9	33	0.6
OP 9	3,489	58.1	139	2.3
OP 10	3,209	53.5	744	12.4
OP 11	3,732	62.2	1,128	18.8
OP 12	2,109	35.1	929	15.5
OP 13	2,907	48.5	527	8.8
OP 14	5,326	88.8	0	0.0
OP 15	3,054	50.9	2,500	41.7
OP 16	1,086	18.1	2,698	45.0
OP 17	4,309	71.8	0	0.0
OP 18	1,241	20.7	0	0.0
OP 19	1,021	17.0	0	0.0
OP 20	3,327	55.5	85	1.4
OP 21	3,652	60.9	90	1.5
OP 22	3,910	65.2	0	0.0
OP 23	0	0.0	0	0.0
OP 24	0	0.0	0	0.0
OP 25	0	0.0	0	0.0
OP 26	0	0.0	0	0.0
OP 27	538	9.0	0	0.0
OP 28	1,126	18.8	0	0.0

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 29	4,304	71.7	181	3.0
OP 30	3,377	56.3	0	0.0
OP 31	4,508	75.1	438	7.3
OP 32	4,665	77.8	0	0.0
OP 33	3,793	63.2	119	2.0
OP 34	3,986	66.4	53	0.9
OP 35	4,704	78.4	0	0.0
OP 36	4,696	78.3	322	5.4
OP 37	2,456	40.9	0	0.0
OP 38	1,757	29.3	0	0.0
OP 39	1,445	24.1	0	0.0
OP 40	1,759	29.3	0	0.0
OP 41	1,808	30.1	0	0.0
OP 42	1,717	28.6	0	0.0
OP 43	882	14.7	0	0.0
OP 44	0	0.0	0	0.0
OP 45	0	0.0	0	0.0
OP 46	0	0.0	0	0.0
OP 47	887	14.8	0	0.0
OP 48	1,804	30.1	0	0.0

PV: PV array 1 potential temporary after-image

Receptor results ordered by category of glare

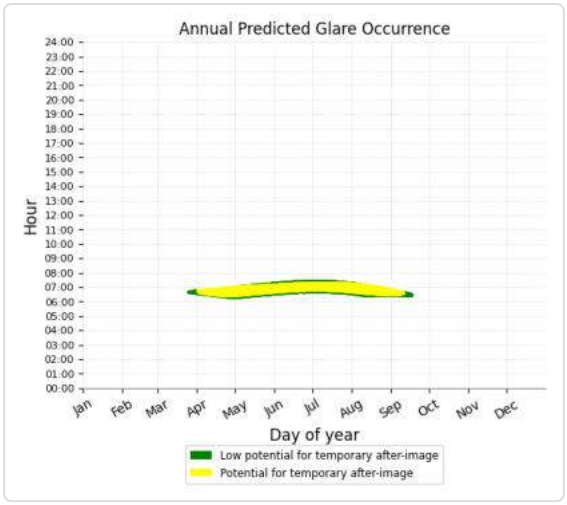
Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 1	1,665	27.8	4,137	69.0
OP 2	1,426	23.8	1,457	24.3
OP 3	2,941	49.0	3,958	66.0
OP 4	781	13.0	3,203	53.4
OP 5	910	15.2	3,454	57.6
OP 6	922	15.4	1,726	28.8
OP 7	2,522	42.0	3	0.1
OP 8	2,508	41.8	33	0.6
OP 10	1,984	33.1	308	5.1
OP 11	1,486	24.8	462	7.7
OP 9	2,618	43.6	0	0.0
OP 19	800	13.3	0	0.0
OP 20	1,322	22.0	0	0.0
OP 21	1,502	25.0	0	0.0
OP 22	1,244	20.7	0	0.0
OP 27	538	9.0	0	0.0
OP 28	1,126	18.8	0	0.0
OP 29	2,183	36.4	0	0.0
OP 30	3,377	56.3	0	0.0
OP 31	2,946	49.1	0	0.0
OP 32	2,420	40.3	0	0.0
OP 33	1,659	27.6	0	0.0
OP 34	1,627	27.1	0	0.0
OP 35	1,883	31.4	0	0.0
OP 36	2,015	33.6	0	0.0
OP 37	237	4.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 23	0	0.0	0	0.0
OP 24	0	0.0	0	0.0
OP 25	0	0.0	0	0.0
OP 26	0	0.0	0	0.0

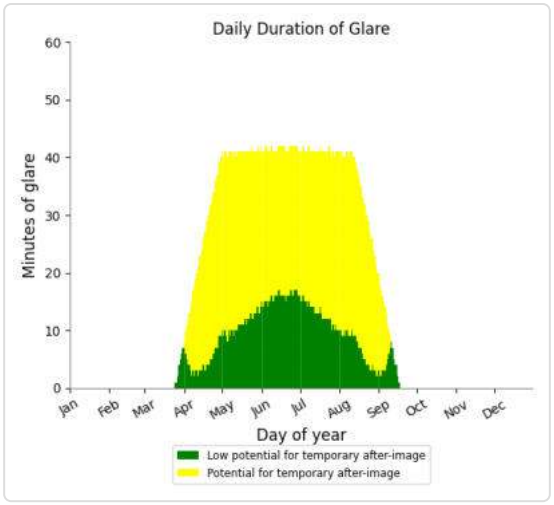
Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 38	0	0.0	0	0.0
OP 39	0	0.0	0	0.0
OP 40	0	0.0	0	0.0
OP 41	0	0.0	0	0.0
OP 42	0	0.0	0	0.0
OP 43	0	0.0	0	0.0
OP 44	0	0.0	0	0.0
OP 45	0	0.0	0	0.0
OP 46	0	0.0	0	0.0
OP 47	0	0.0	0	0.0
OP 48	0	0.0	0	0.0

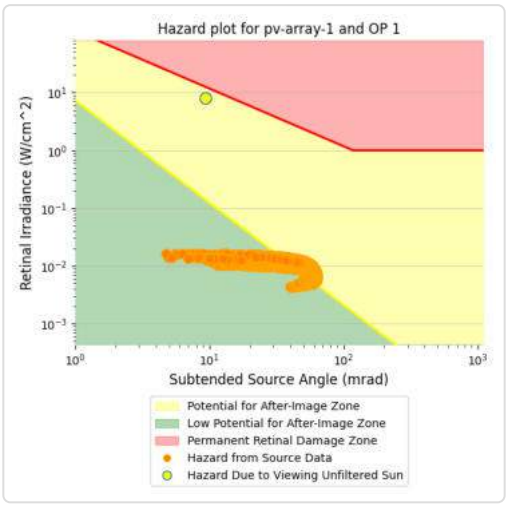
PV array 1 and OP 1

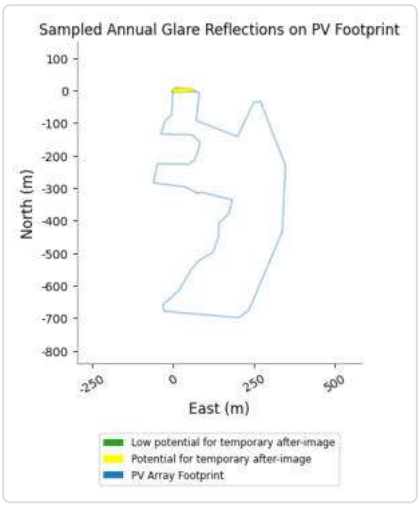
Yellow glare: 4,137 min.

Green glare: 1,665 min.





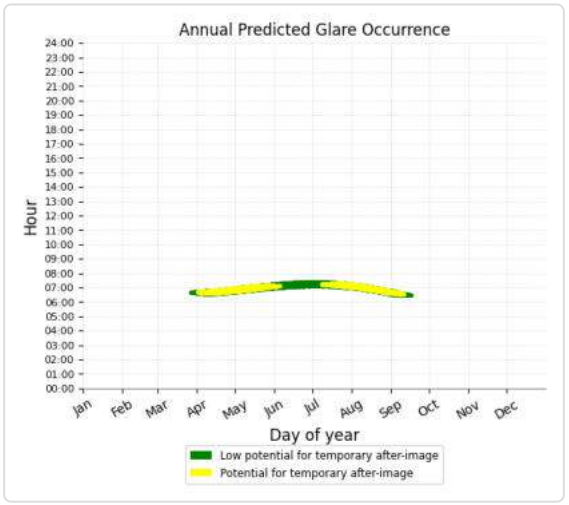


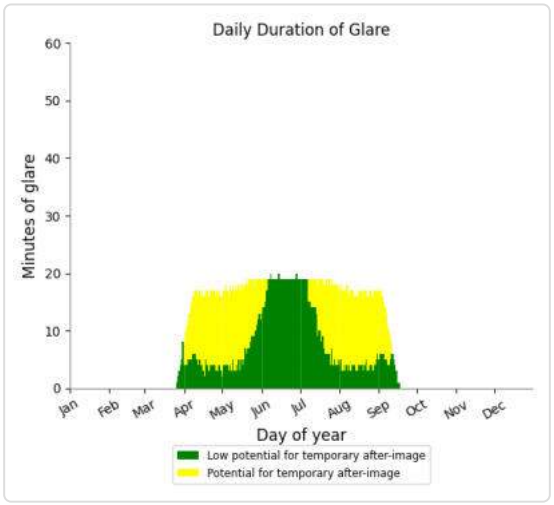


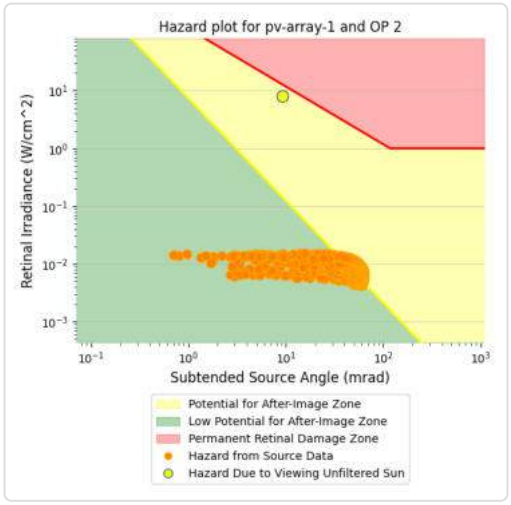
PV array 1 and OP 2

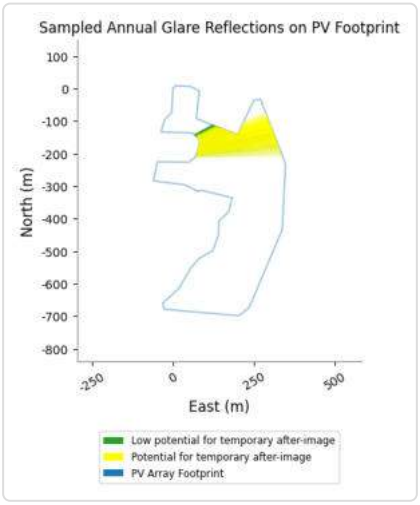
Yellow glare: 1,457 min.

Green glare: 1,426 min.





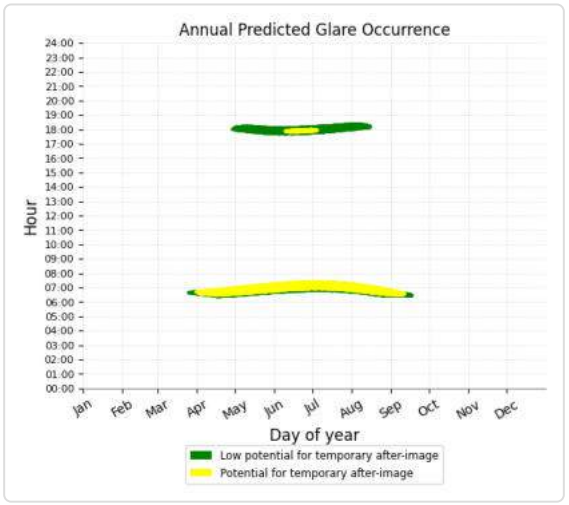


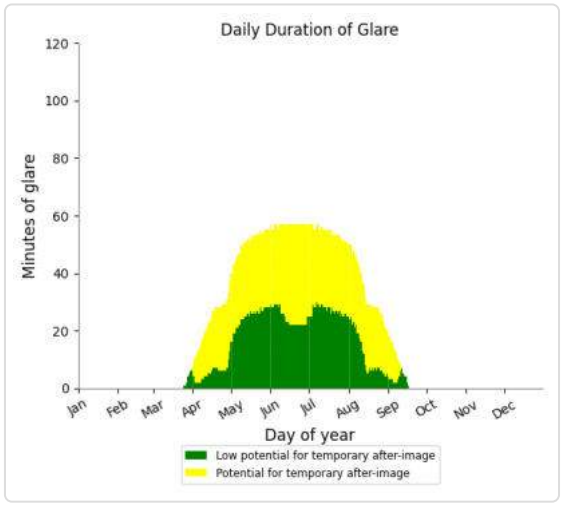


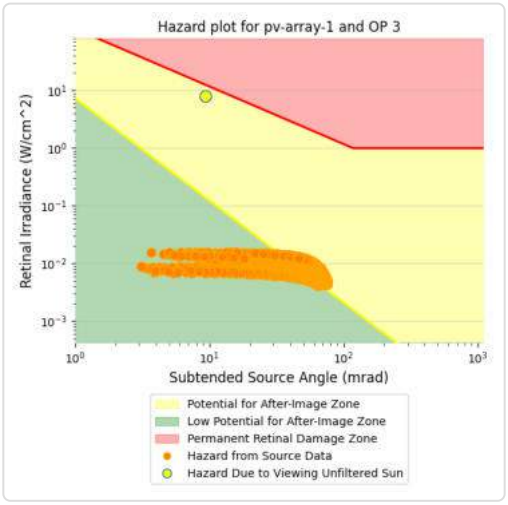
PV array 1 and OP 3

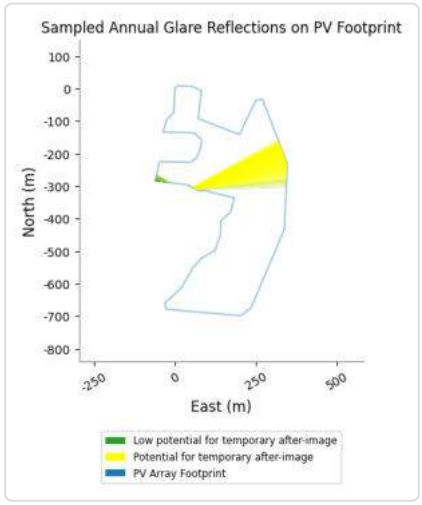
Yellow glare: 3,958 min.

Green glare: 2,941 min.





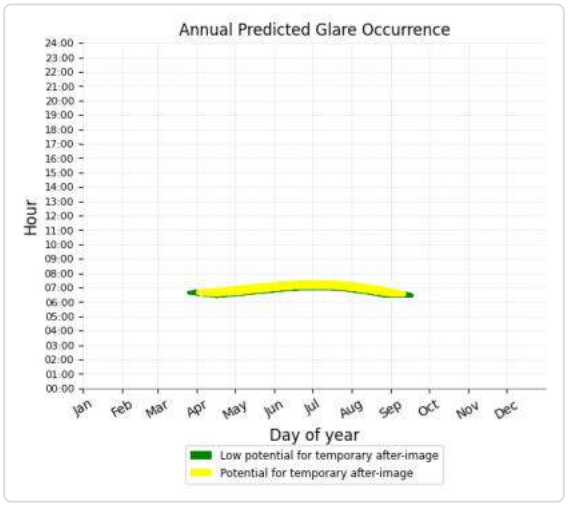


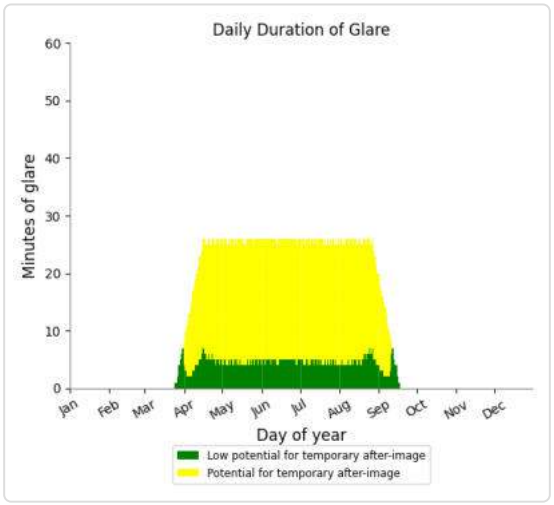


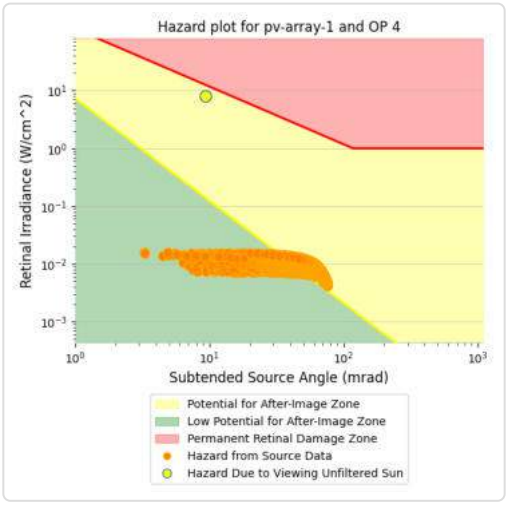
PV array 1 and OP 4

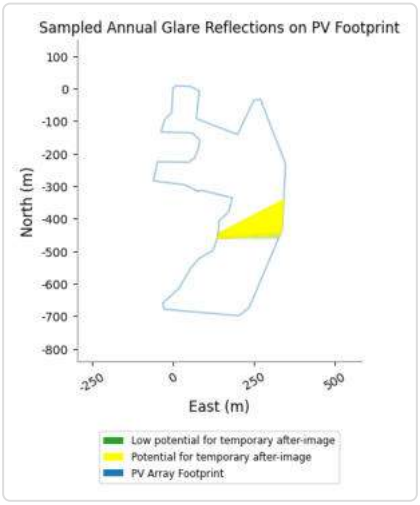
Yellow glare: 3,203 min.

Green glare: 781 min.





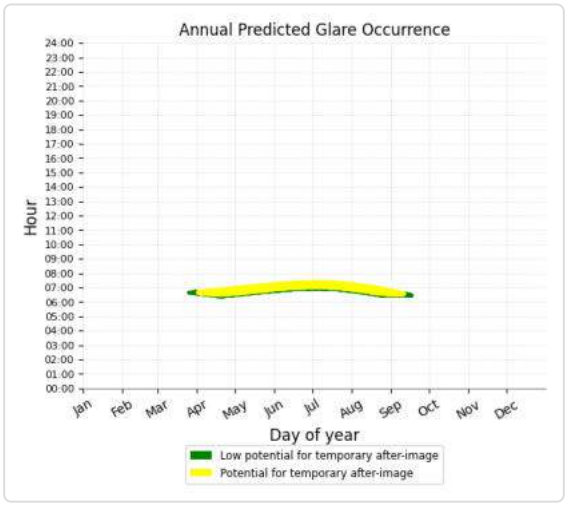


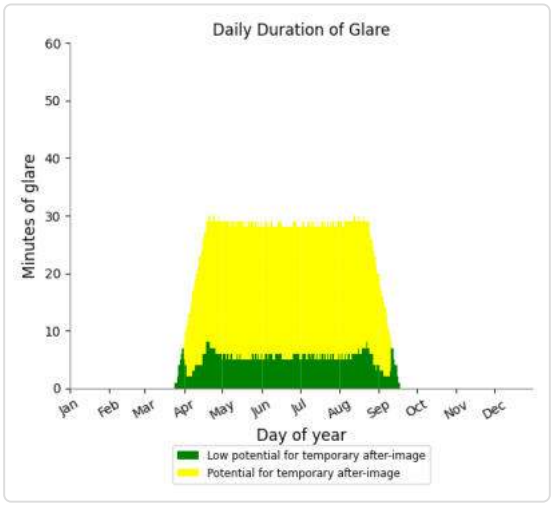


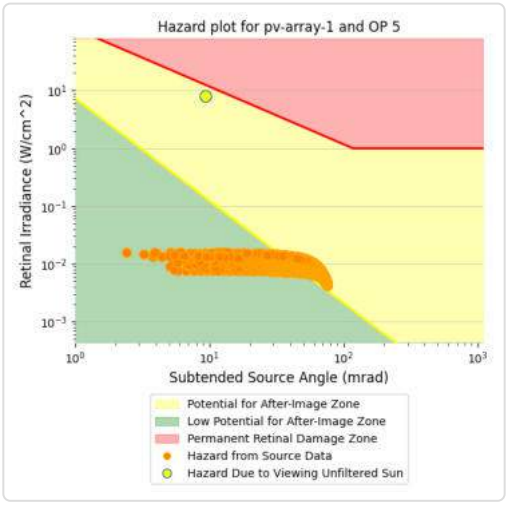
PV array 1 and OP 5

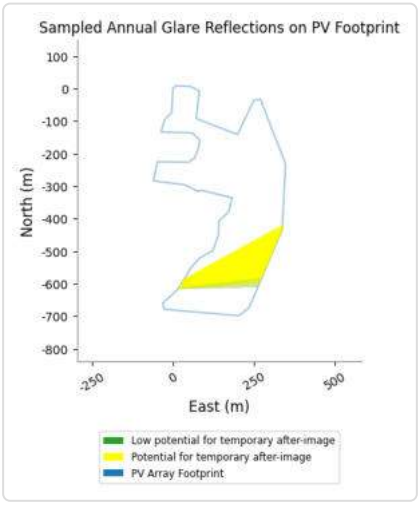
Yellow glare: 3,454 min.

Green glare: 910 min.





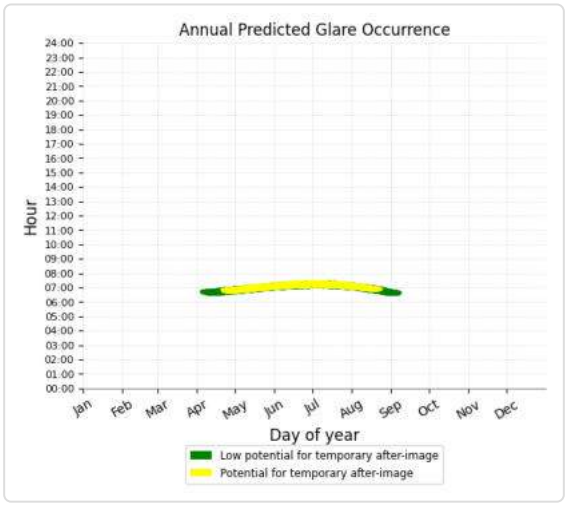


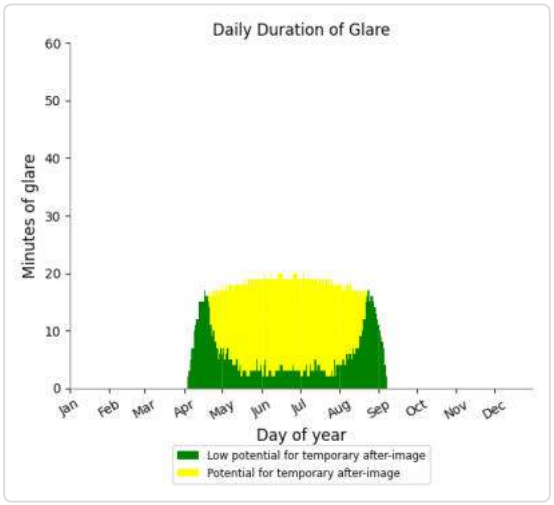


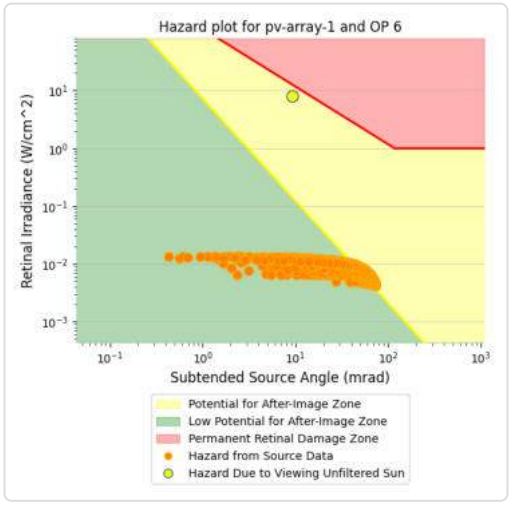
PV array 1 and OP 6

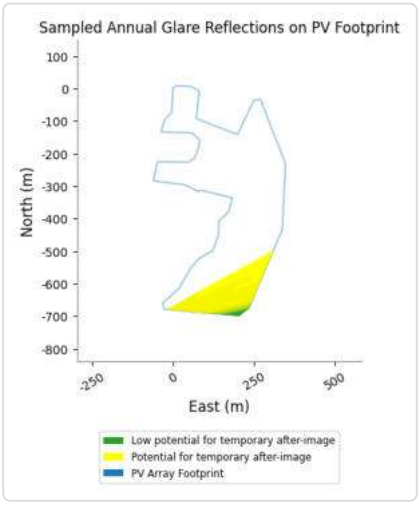
Yellow glare: 1,726 min.

Green glare: 922 min.





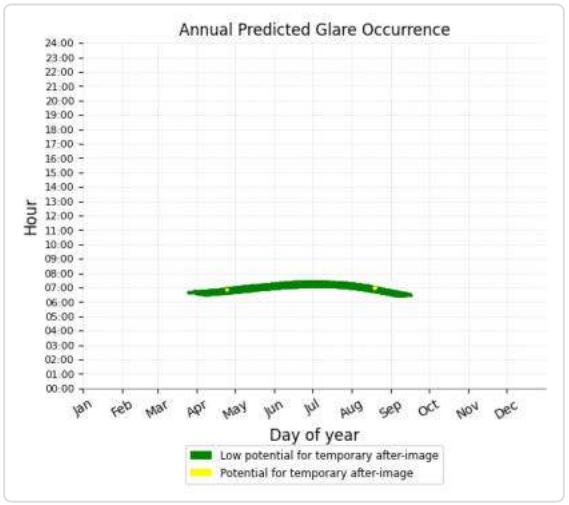


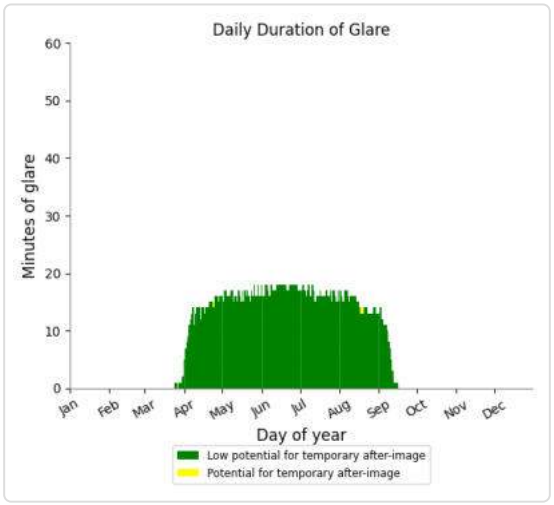


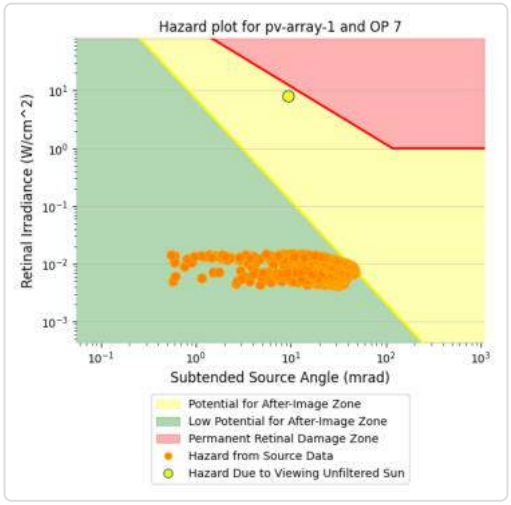
PV array 1 and OP 7

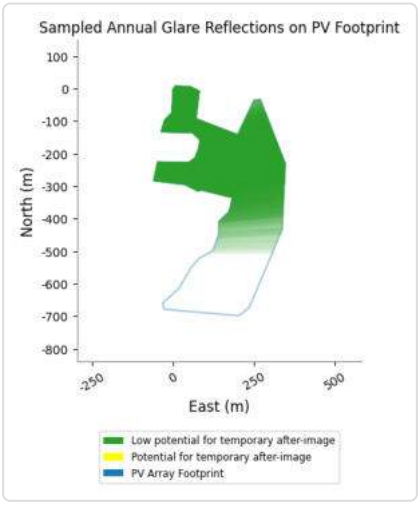
Yellow glare: 3 min.

Green glare: 2,522 min.





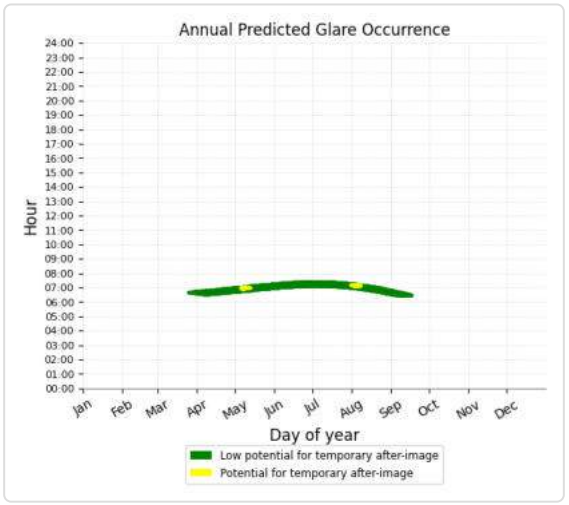


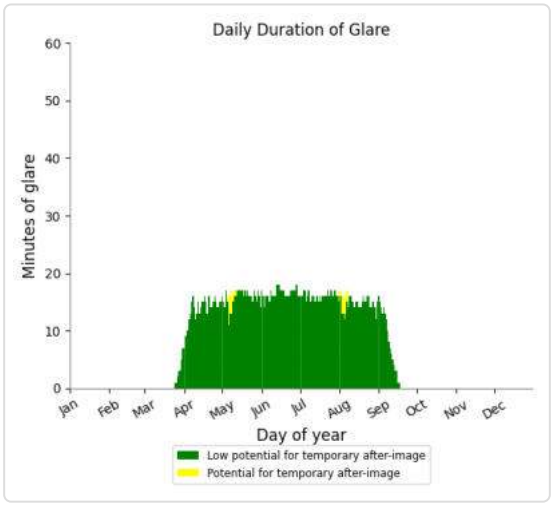


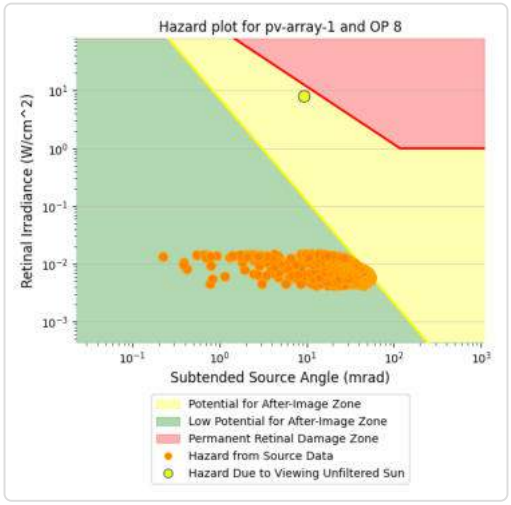
PV array 1 and OP 8

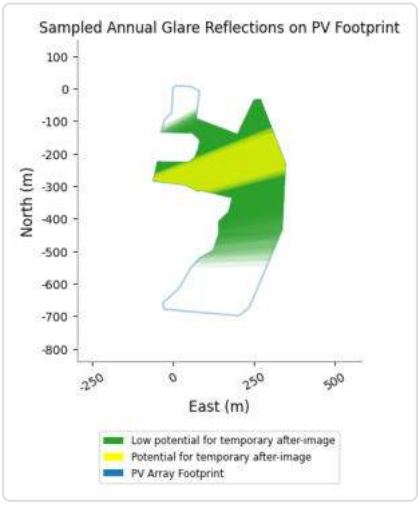
Yellow glare: 33 min.

Green glare: 2,508 min.





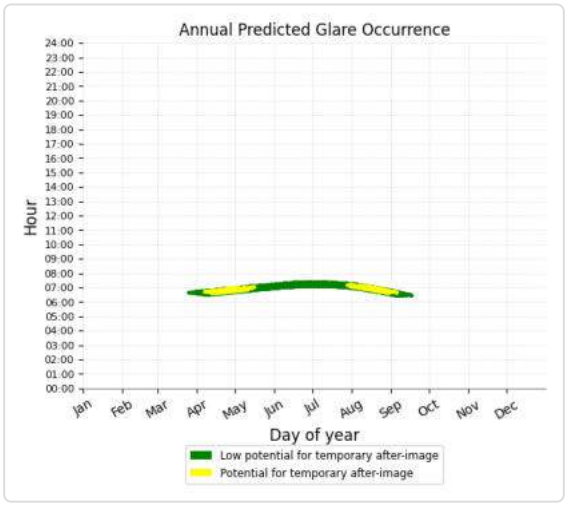


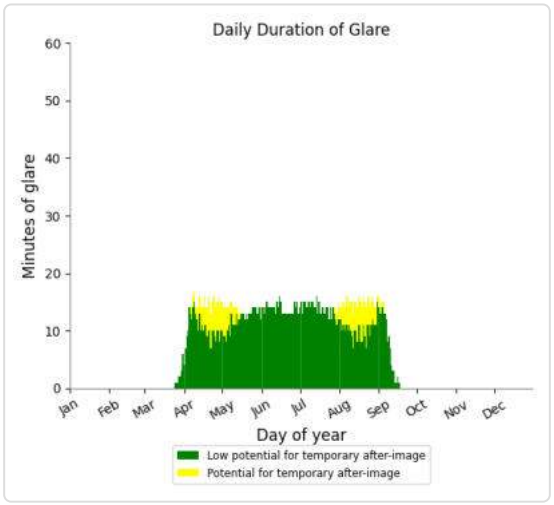


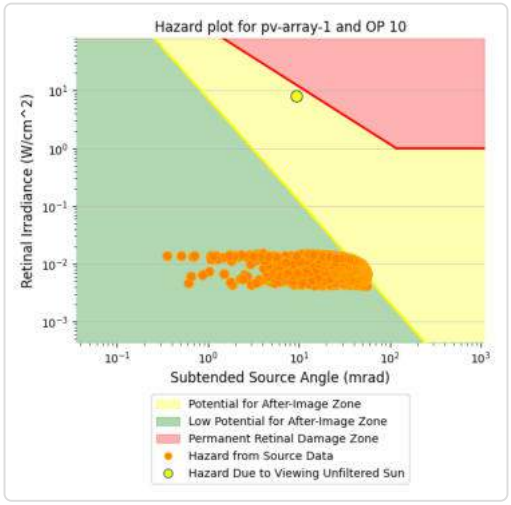
PV array 1 and OP 10

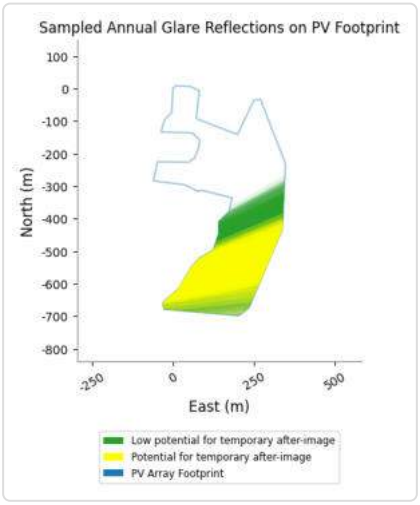
Yellow glare: 308 min.

Green glare: 1,984 min.





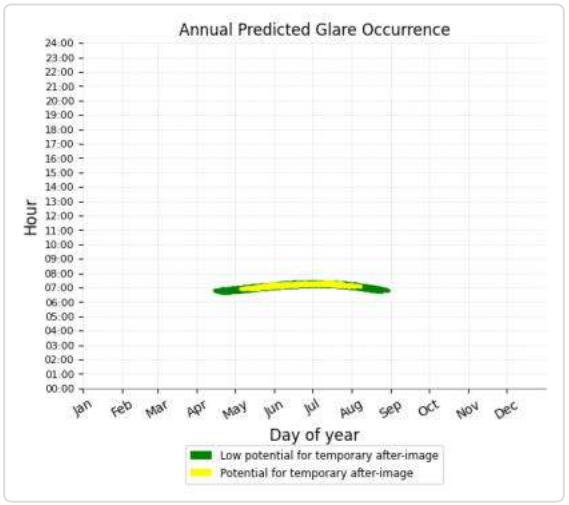


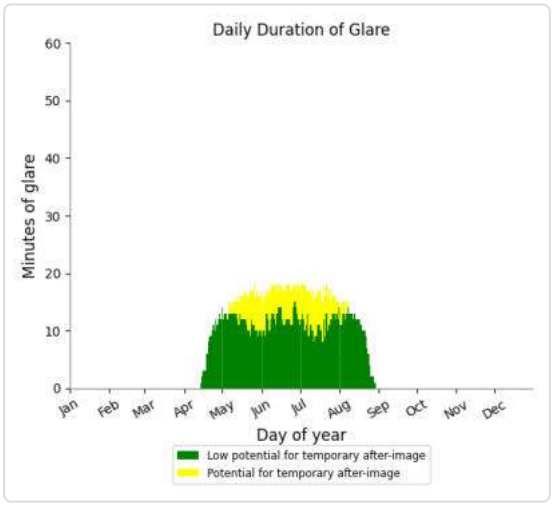


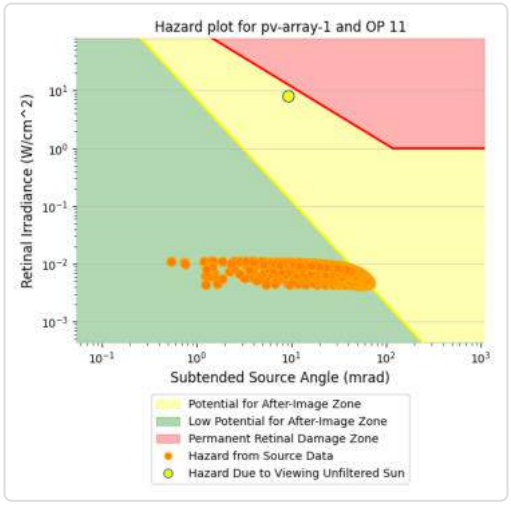
PV array 1 and OP 11

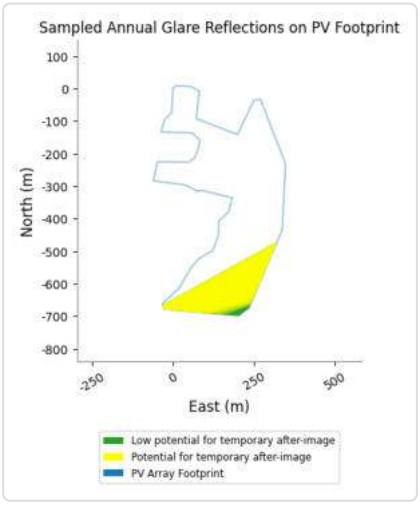
Yellow glare: 462 min.

Green glare: 1,486 min.





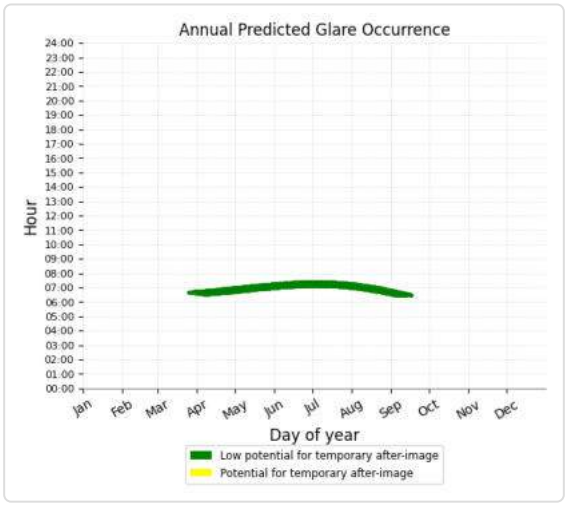


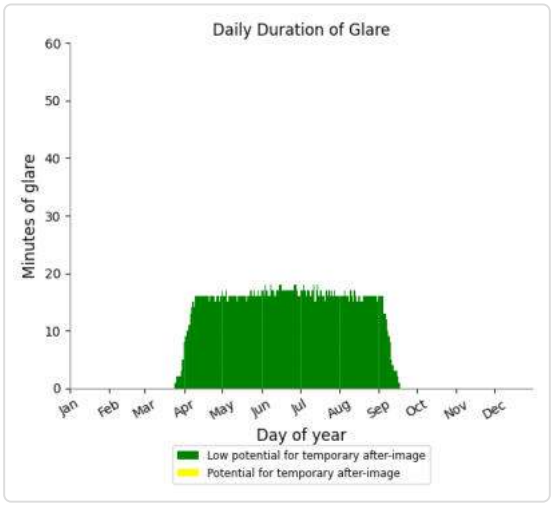


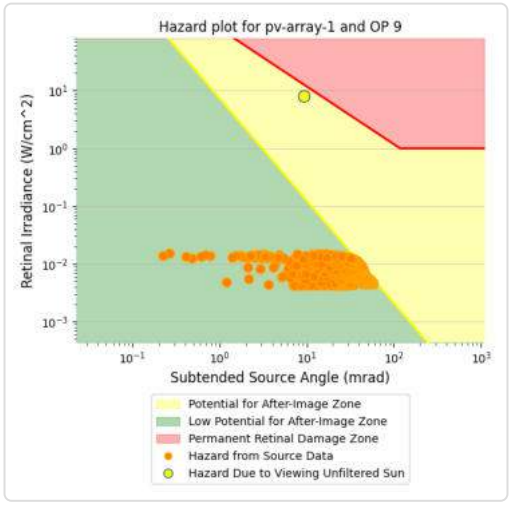
PV array 1 and OP 9

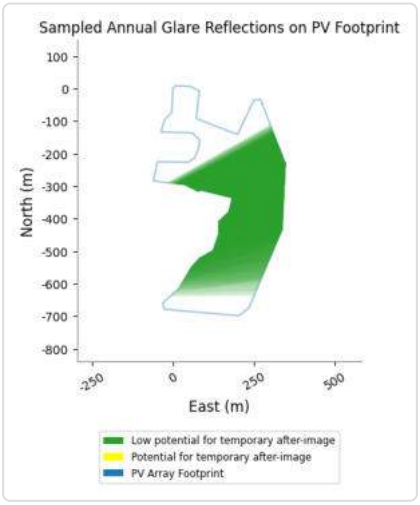
Yellow glare: none

Green glare: 2,618 min.





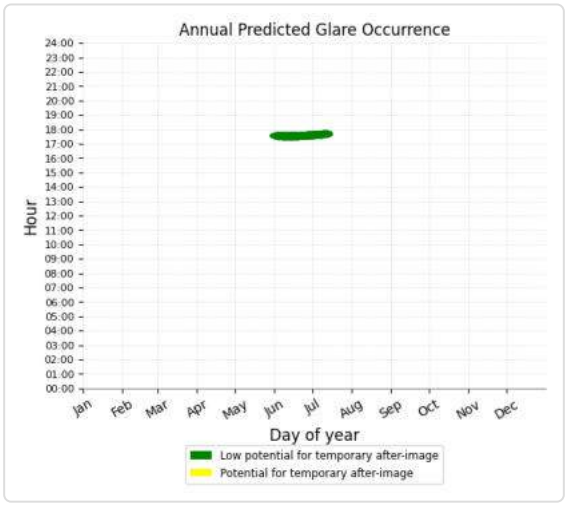


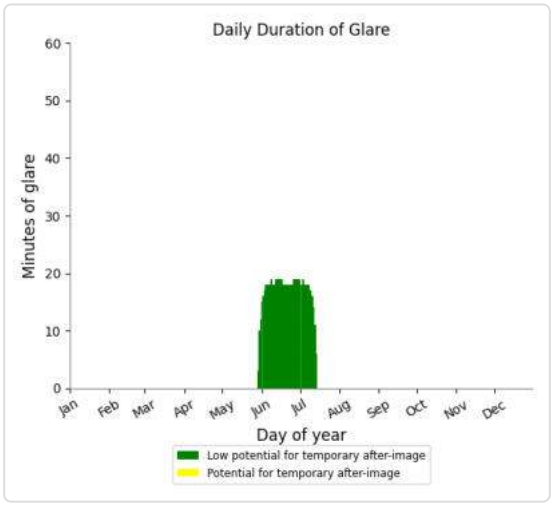


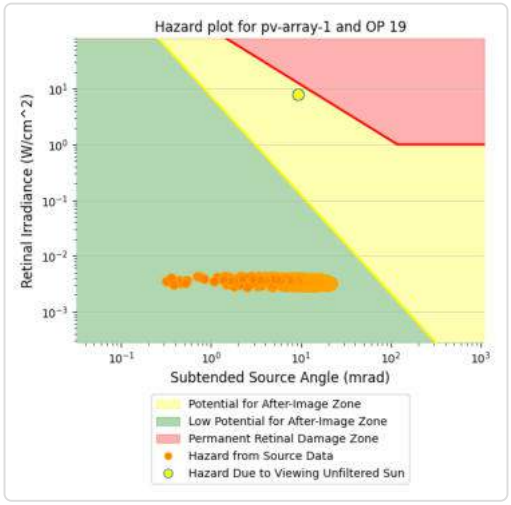
PV array 1 and OP 19

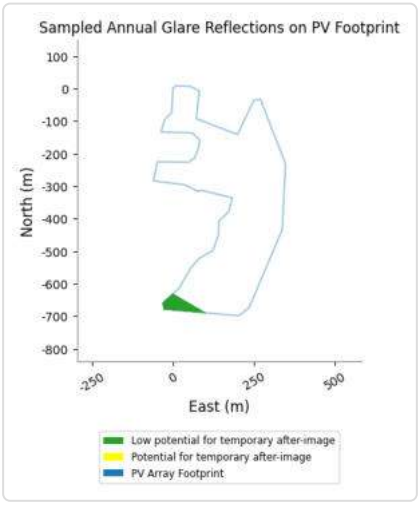
Yellow glare: none

Green glare: 800 min.





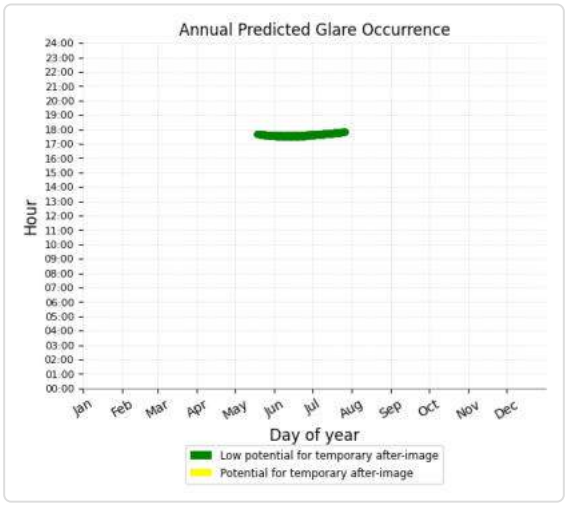


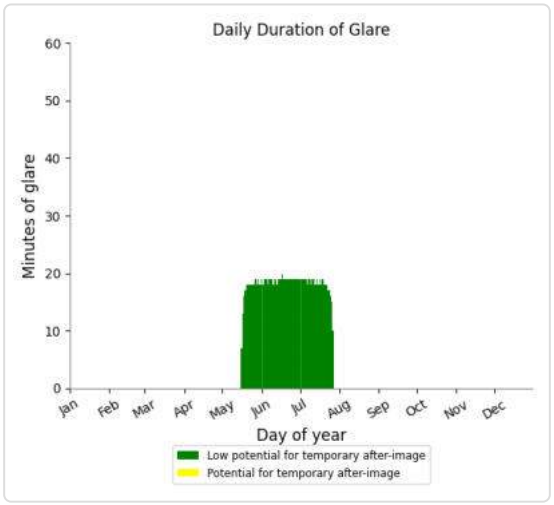


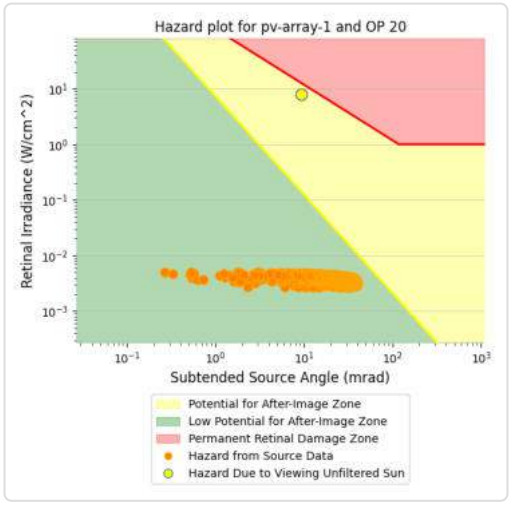
PV array 1 and OP 20

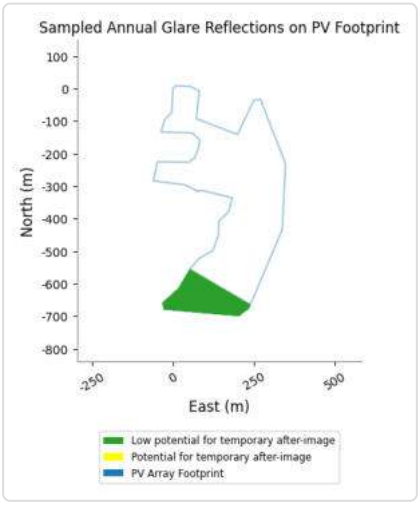
Yellow glare: none

Green glare: 1,322 min.





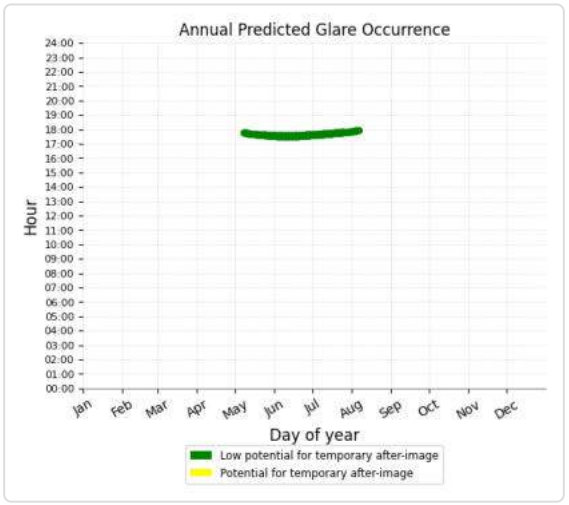


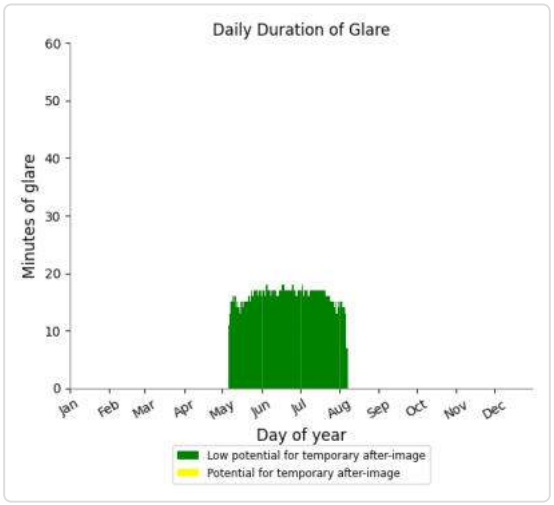


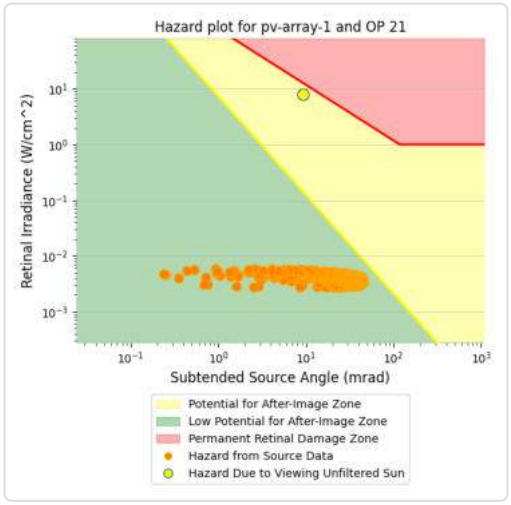
PV array 1 and OP 21

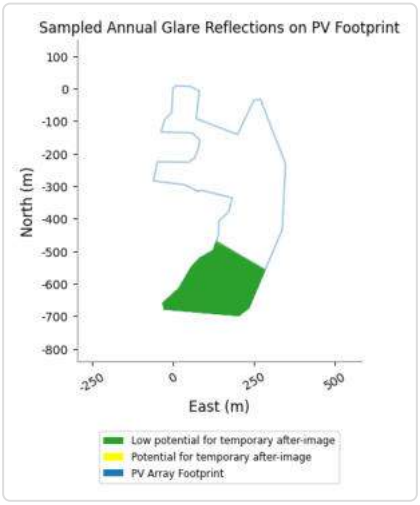
Yellow glare: none

Green glare: 1,502 min.





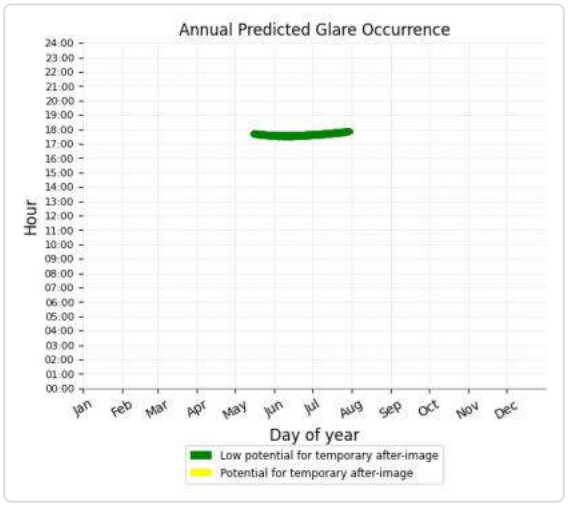


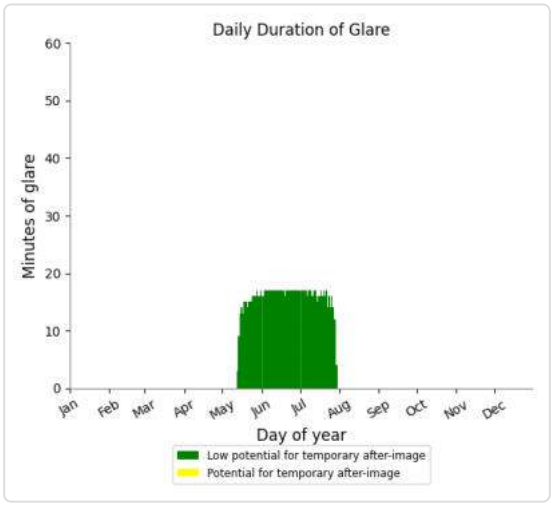


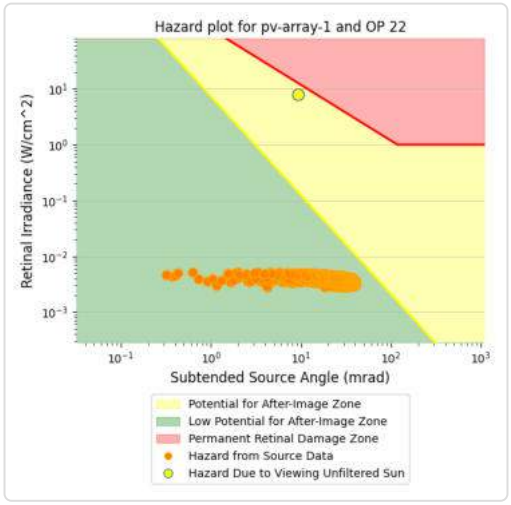
PV array 1 and OP 22

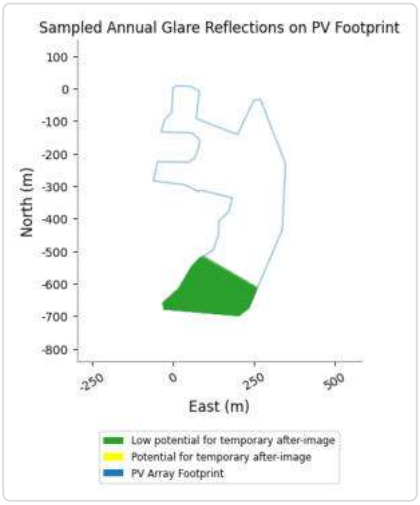
Yellow glare: none

Green glare: 1,244 min.





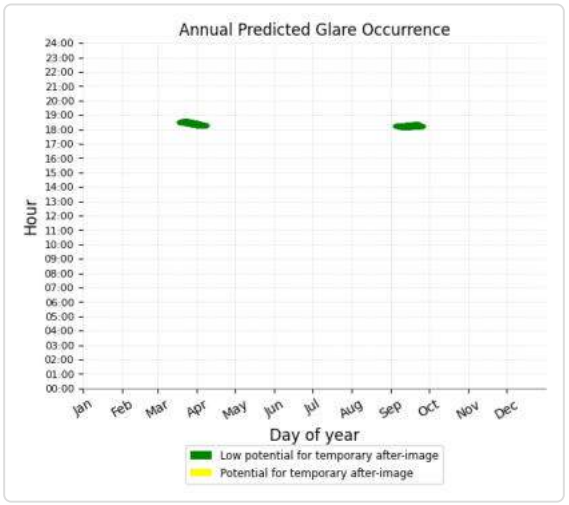


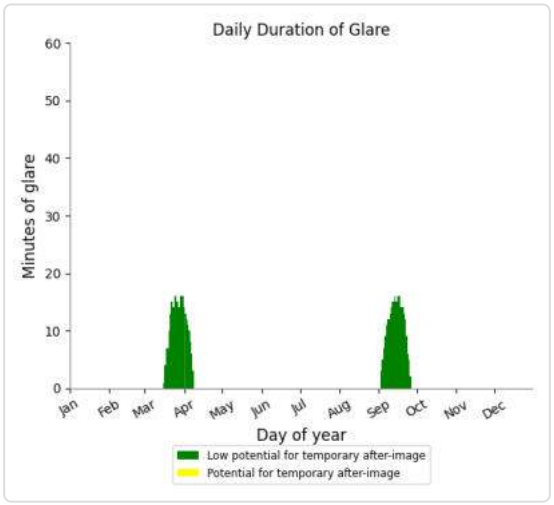


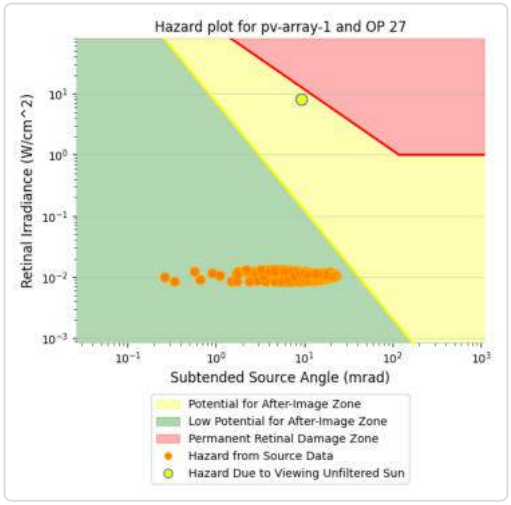
PV array 1 and OP 27

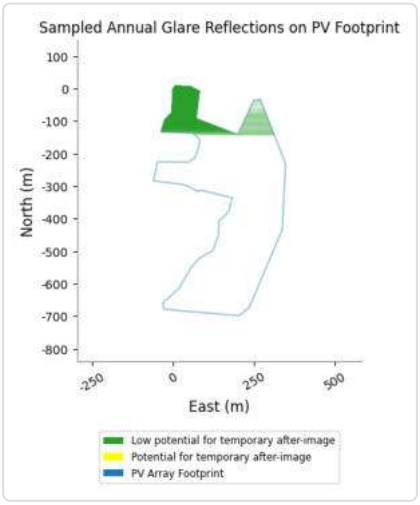
Yellow glare: none

Green glare: 538 min.





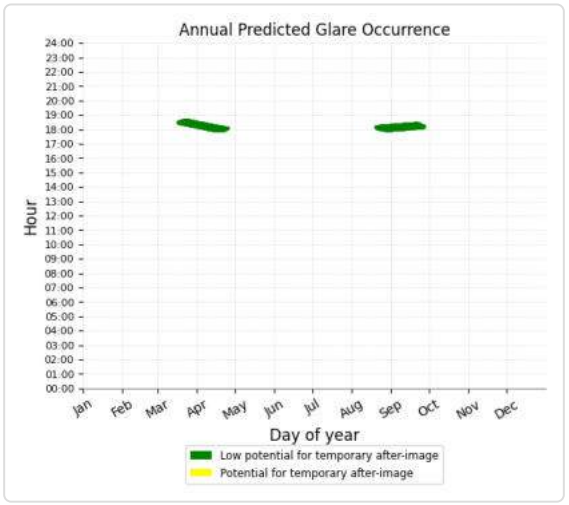


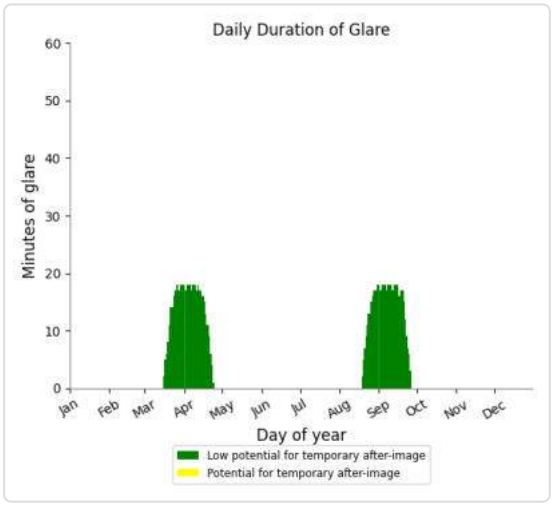


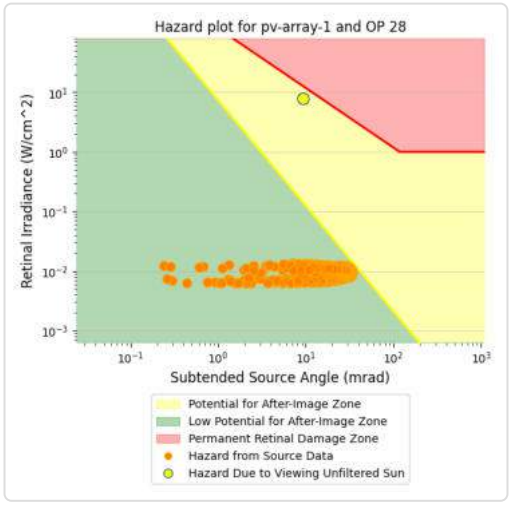
PV array 1 and OP 28

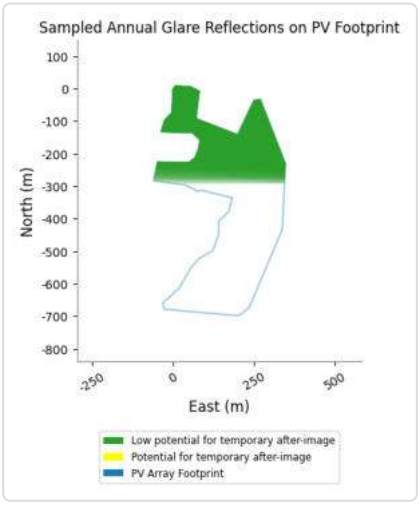
Yellow glare: none

Green glare: 1,126 min.





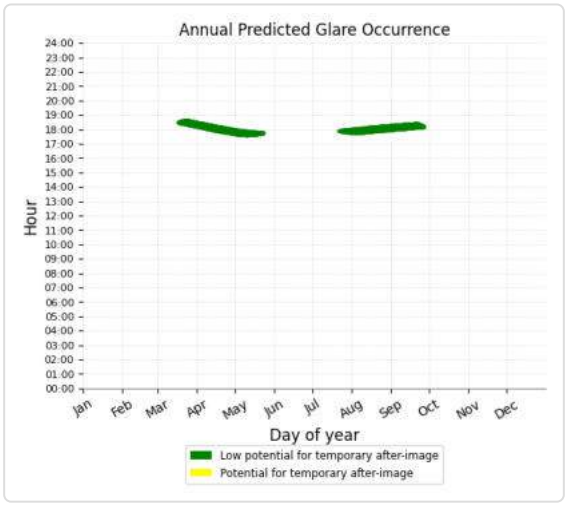


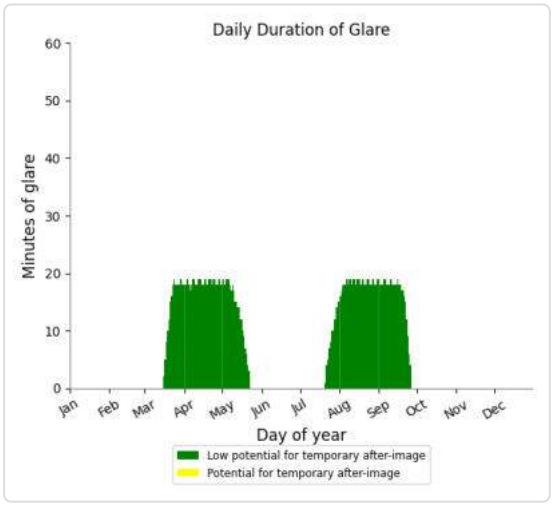


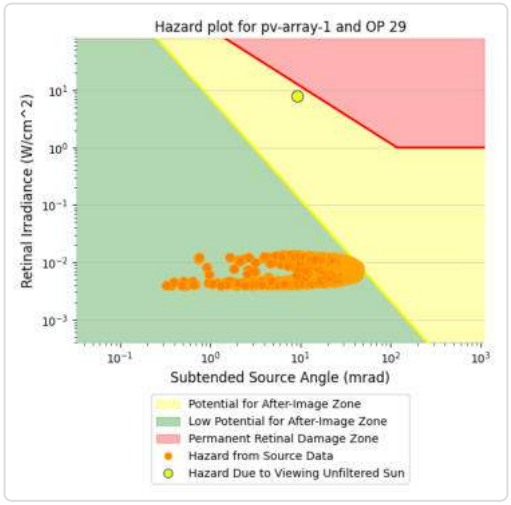
PV array 1 and OP 29

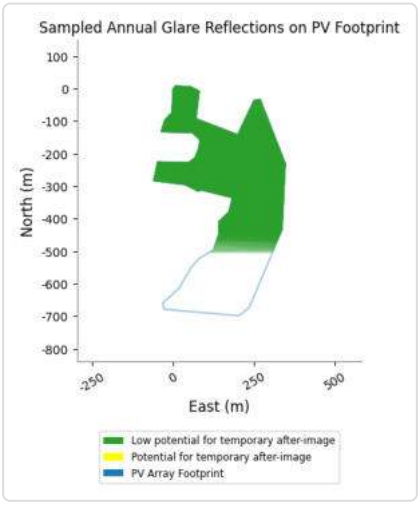
Yellow glare: none

Green glare: 2,183 min.





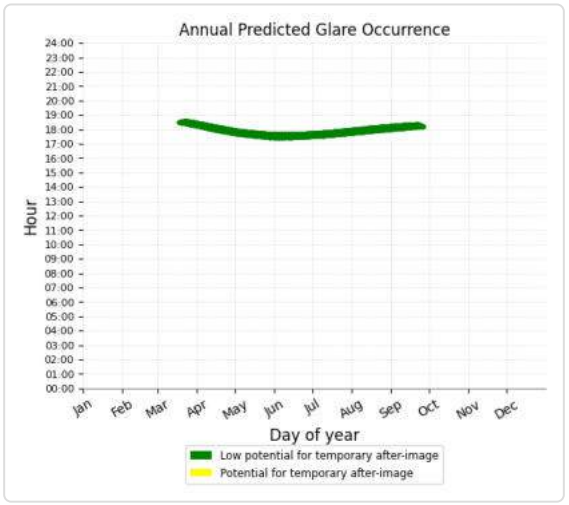


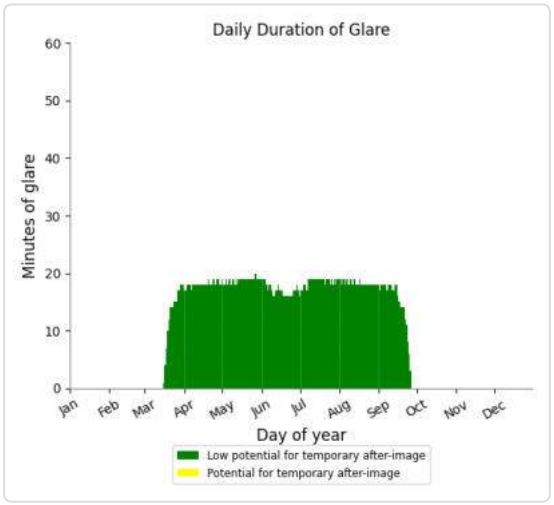


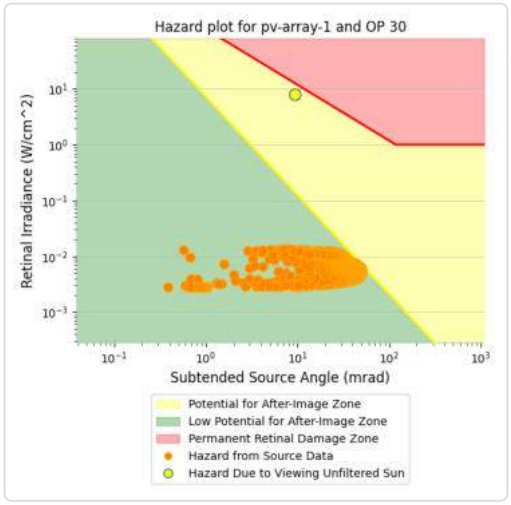
PV array 1 and OP 30

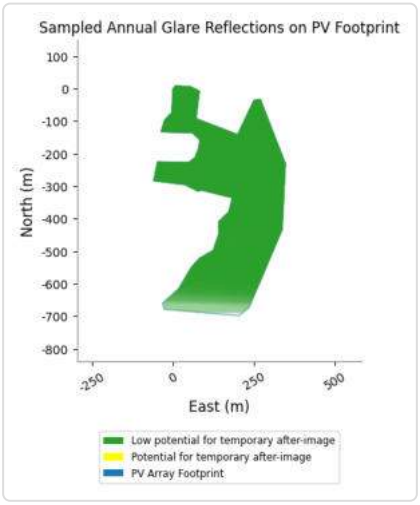
Yellow glare: none

Green glare: 3,377 min.





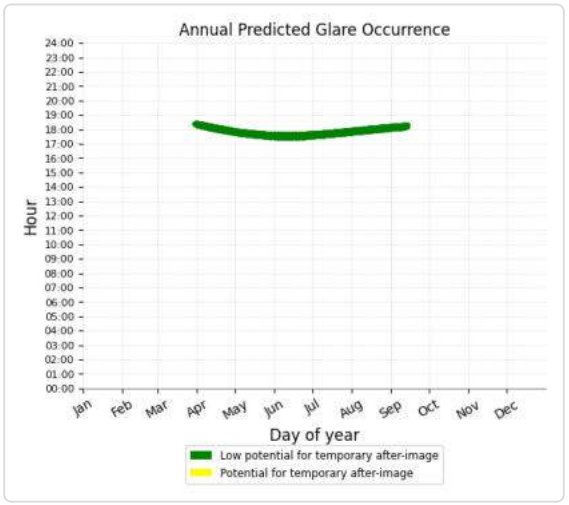


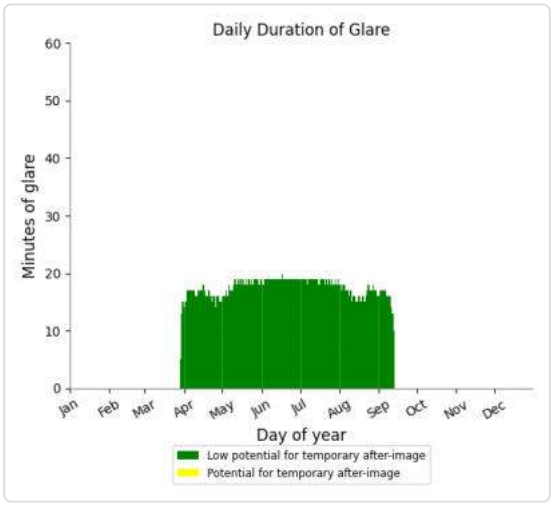


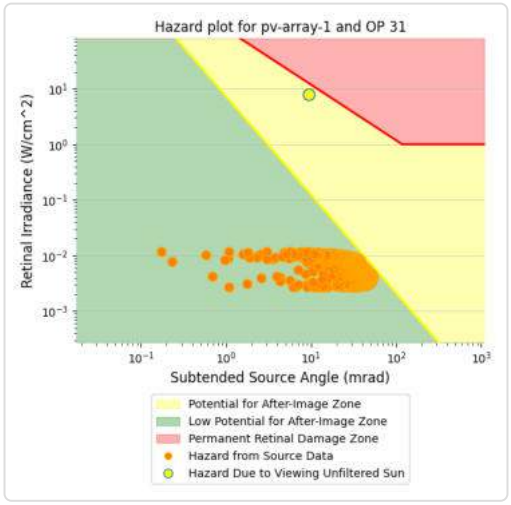
PV array 1 and OP 31

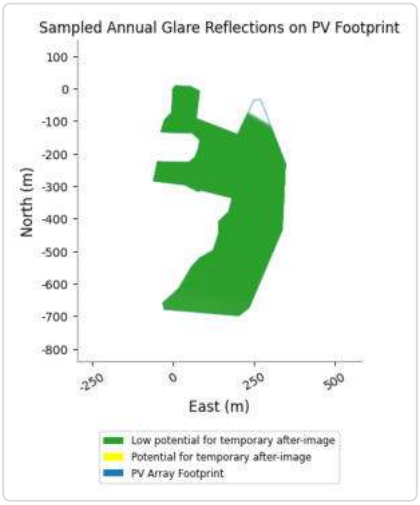
Yellow glare: none

Green glare: 2,946 min.





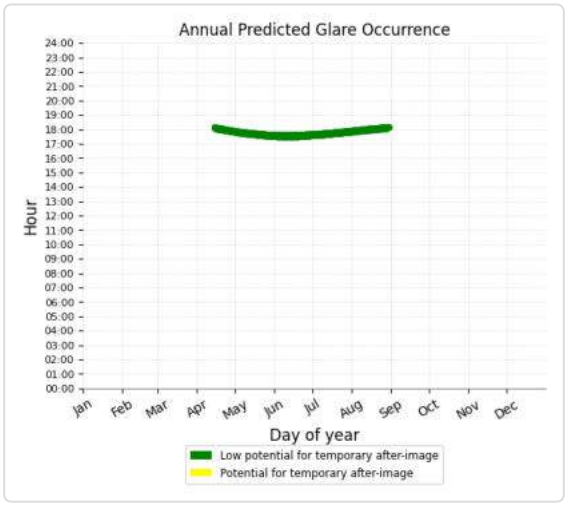


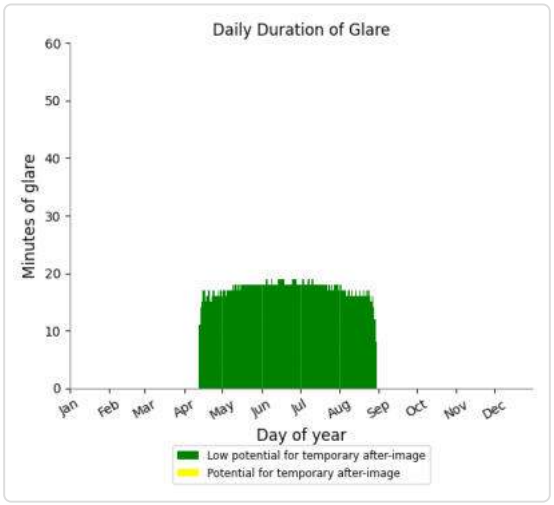


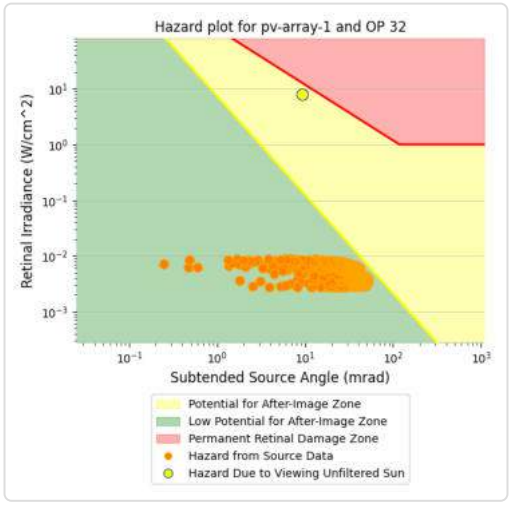
PV array 1 and OP 32

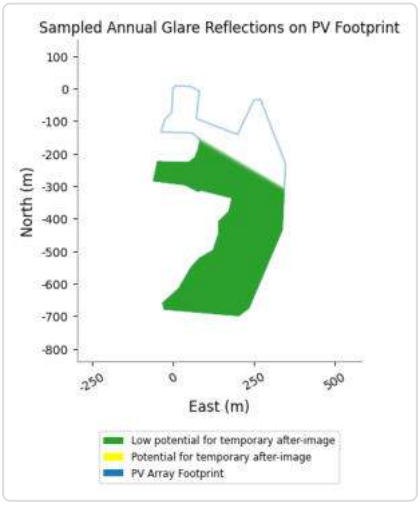
Yellow glare: none

Green glare: 2,420 min.





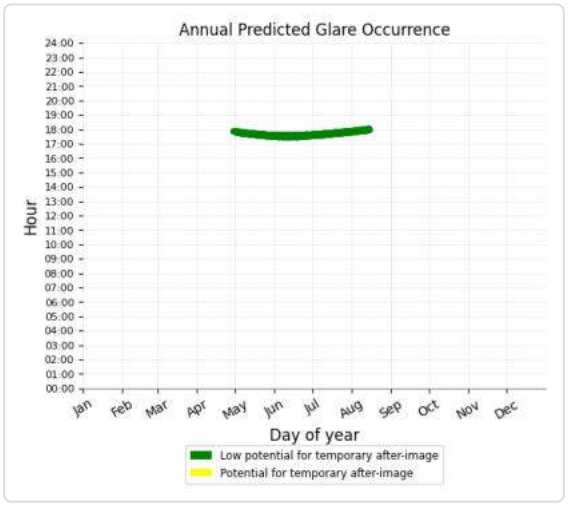


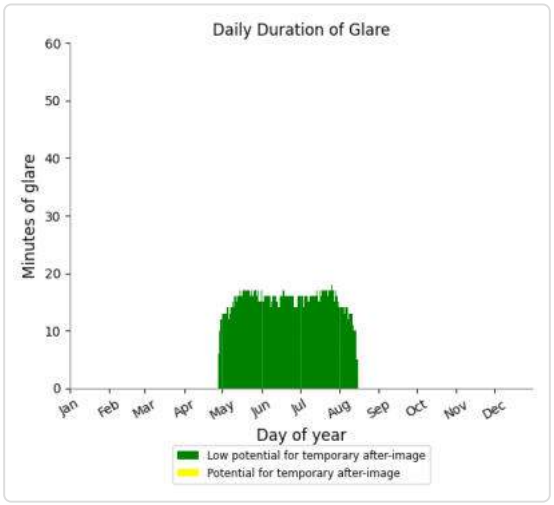


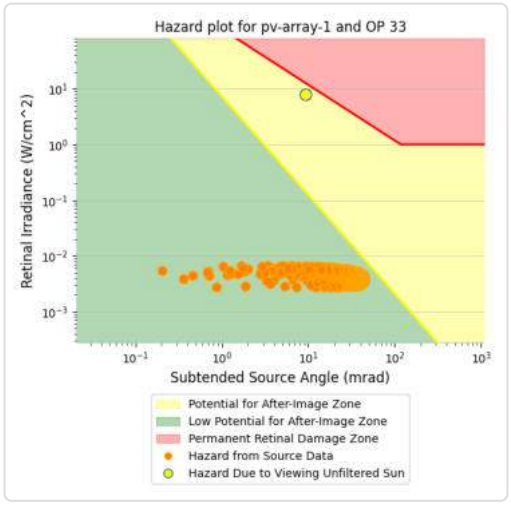
PV array 1 and OP 33

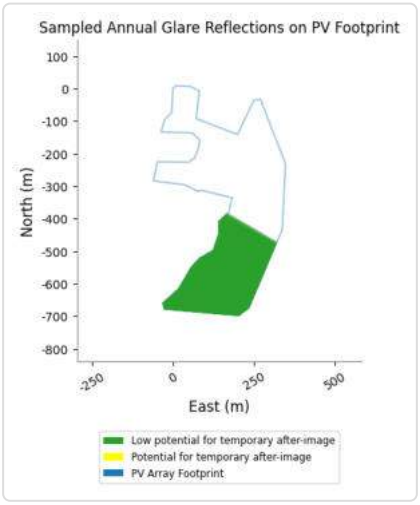
Yellow glare: none

Green glare: 1,659 min.





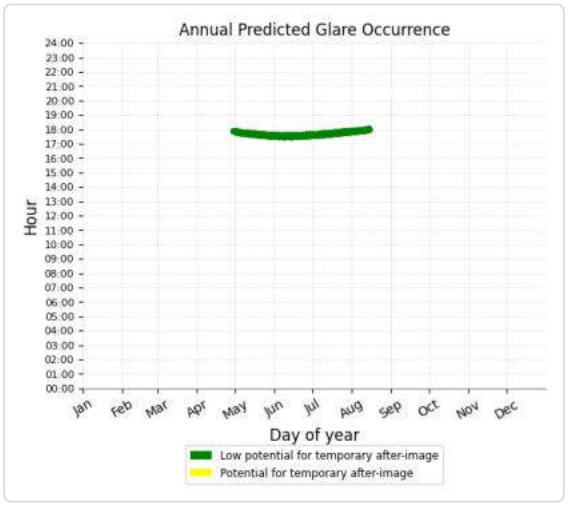


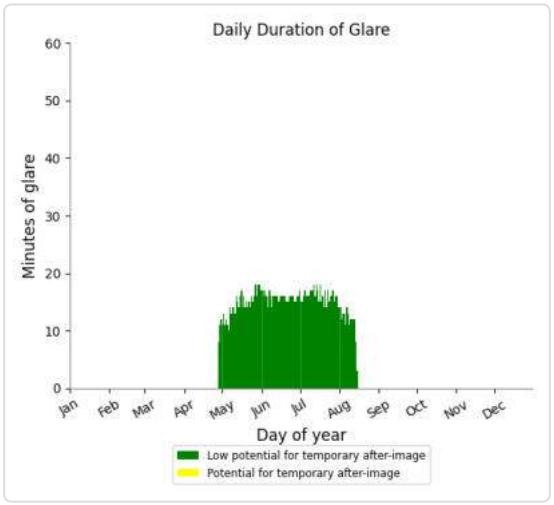


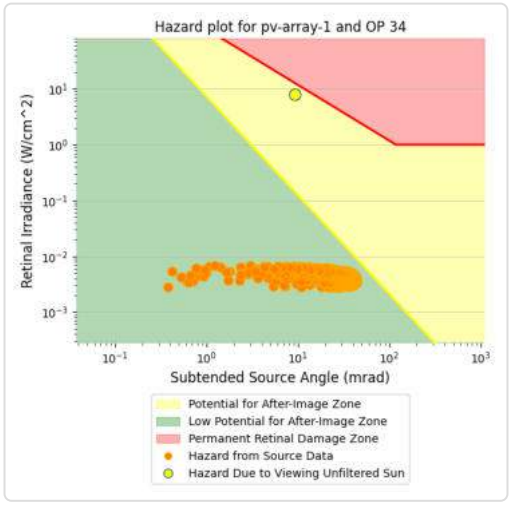
PV array 1 and OP 34

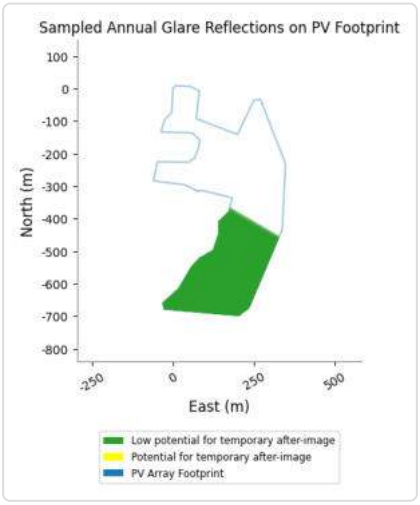
Yellow glare: none

Green glare: 1,627 min.





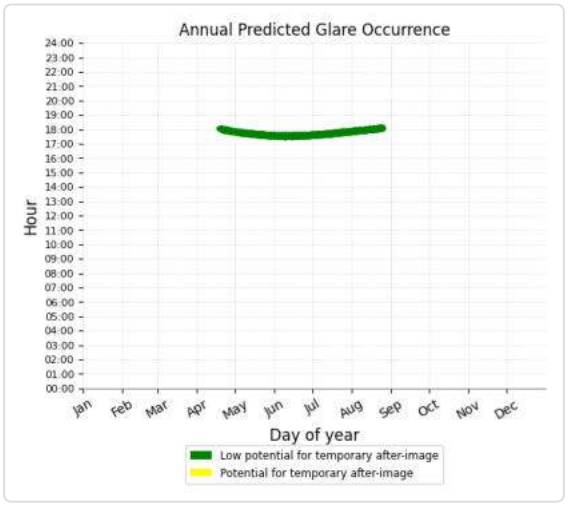


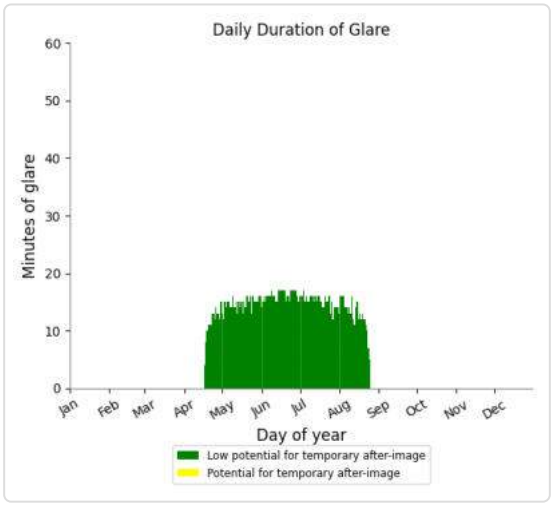


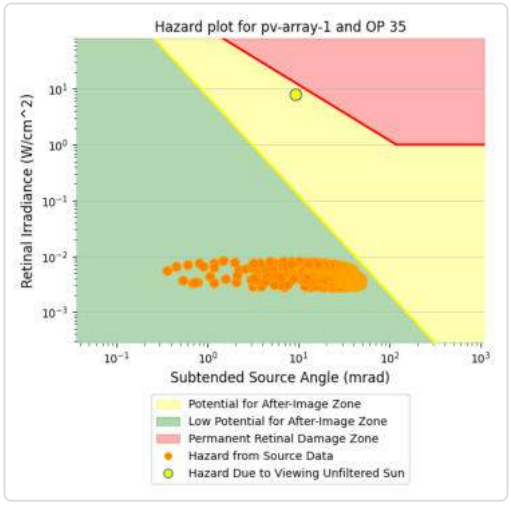
PV array 1 and OP 35

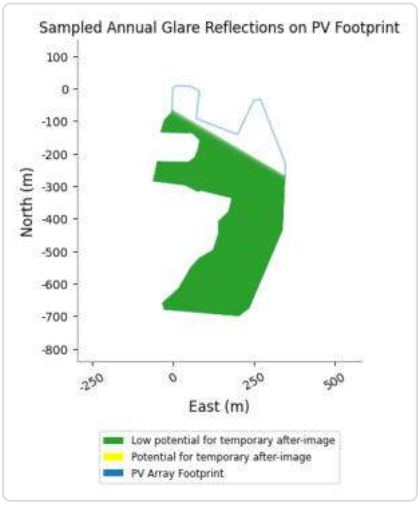
Yellow glare: none

Green glare: 1,883 min.





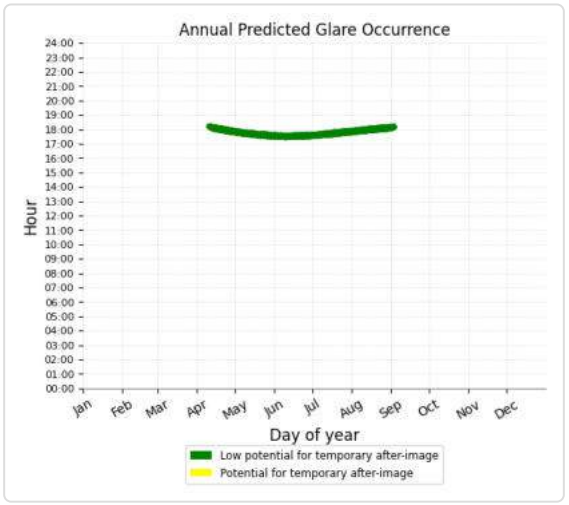


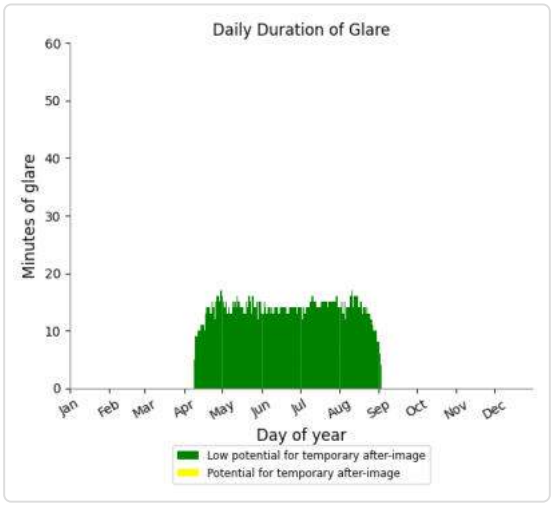


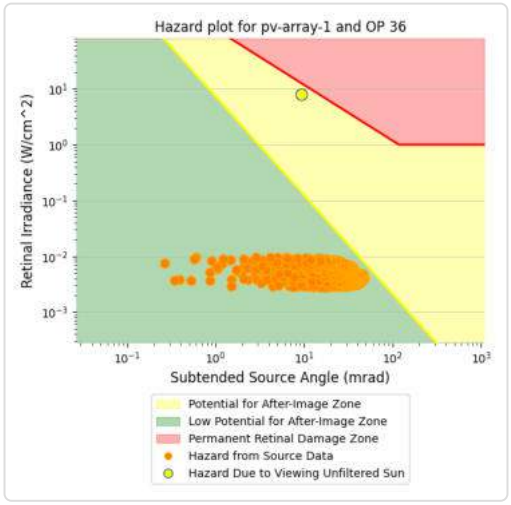
PV array 1 and OP 36

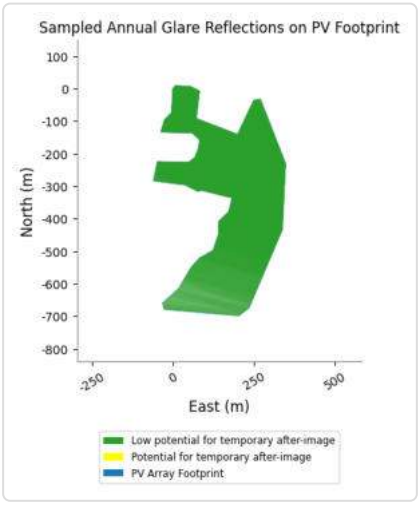
Yellow glare: none

Green glare: 2,015 min.



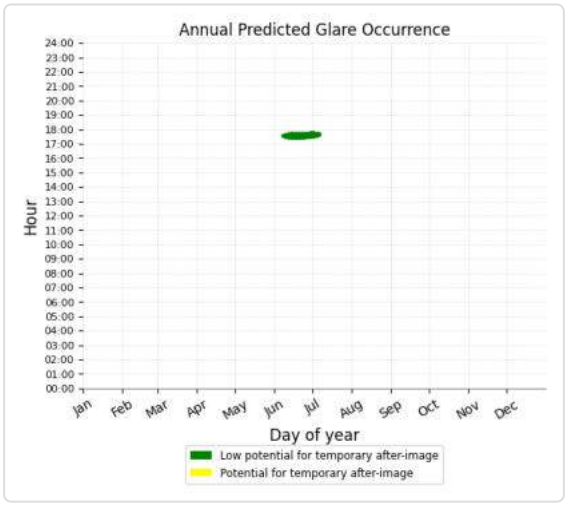


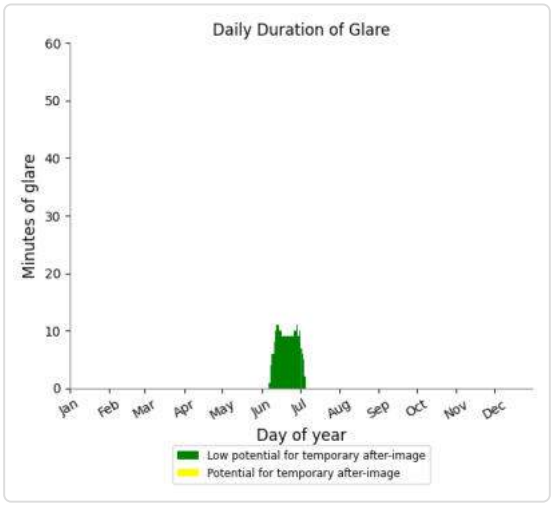


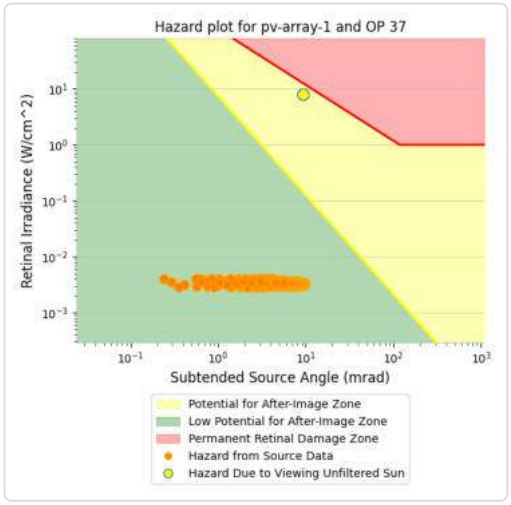


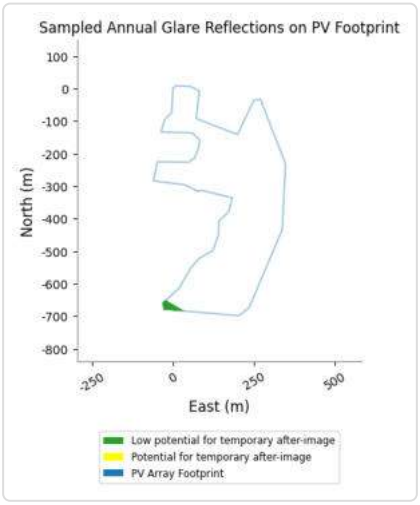
PV array 1 and OP 37

Yellow glare: none
Green glare: 237 min.









PV array 1 and OP 12

No glare found

PV array 1 and OP 13

No glare found

PV array 1 and OP 14

No glare found

PV array 1 and OP 15

No glare found

PV array 1 and OP 16

No glare found

PV array 1 and OP 17

No glare found

PV array 1 and OP 18

No glare found

PV array 1 and OP 23

No glare found

PV array 1 and OP 24

No glare found

PV array 1 and OP 25

No glare found

PV array 1 and OP 26

No glare found

PV array 1 and OP 38

No glare found

PV array 1 and OP 39

No glare found

PV array 1 and OP 40

No glare found

PV array 1 and OP 41

No glare found

PV array 1 and OP 42

No glare found

PV array 1 and OP 43

No glare found

PV array 1 and OP 44

No glare found

PV array 1 and OP 45

No glare found

PV array 1 and OP 46

No glare found

PV array 1 and OP 47

No glare found

PV array 1 and OP 48

No glare found

PV: PV array 2 potential temporary after-image

Receptor results ordered by category of glare

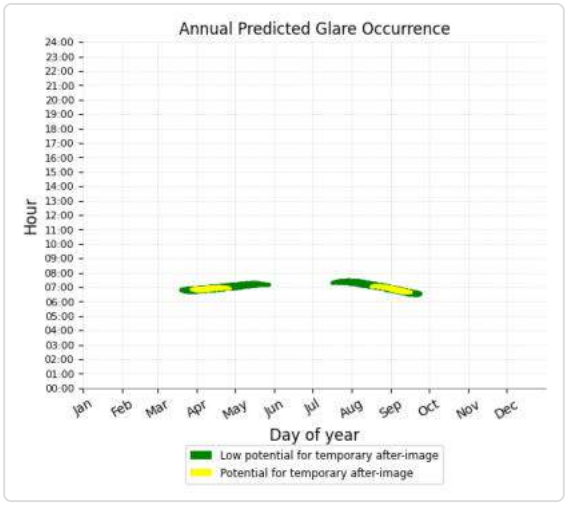
Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 5	1,369	22.8	320	5.3
OP 6	2,338	39.0	790	13.2
OP 9	871	14.5	139	2.3
OP 10	1,225	20.4	436	7.3
OP 11	2,246	37.4	666	11.1
OP 12	2,109	35.1	929	15.5
OP 13	2,172	36.2	527	8.8
OP 29	2,121	35.4	181	3.0
OP 31	1,562	26.0	438	7.3
OP 36	2,095	34.9	322	5.4
OP 4	480	8.0	0	0.0
OP 7	544	9.1	0	0.0
OP 8	788	13.1	0	0.0
OP 14	1,988	33.1	0	0.0
OP 15	1,112	18.5	0	0.0
OP 21	127	2.1	0	0.0
OP 32	1,759	29.3	0	0.0
OP 33	794	13.2	0	0.0
OP 34	866	14.4	0	0.0
OP 35	1,916	31.9	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0
OP 22	0	0.0	0	0.0
OP 23	0	0.0	0	0.0
OP 24	0	0.0	0	0.0
OP 25	0	0.0	0	0.0
OP 26	0	0.0	0	0.0
OP 27	0	0.0	0	0.0
OP 28	0	0.0	0	0.0
OP 30	0	0.0	0	0.0
OP 37	0	0.0	0	0.0
OP 38	0	0.0	0	0.0
OP 39	0	0.0	0	0.0

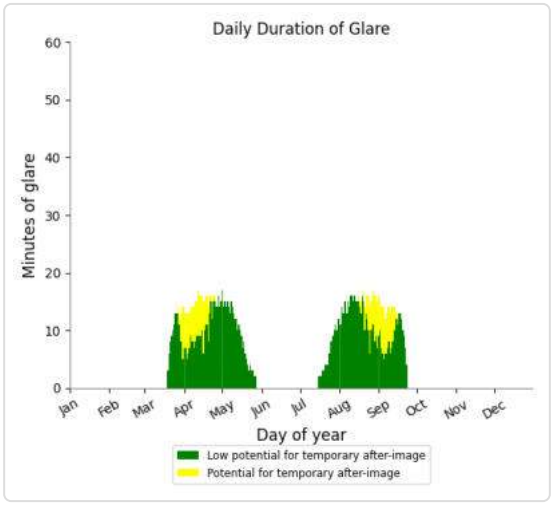
Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 40	0	0.0	0	0.0
OP 41	0	0.0	0	0.0
OP 42	0	0.0	0	0.0
OP 43	0	0.0	0	0.0
OP 44	0	0.0	0	0.0
OP 45	0	0.0	0	0.0
OP 46	0	0.0	0	0.0
OP 47	0	0.0	0	0.0
OP 48	0	0.0	0	0.0

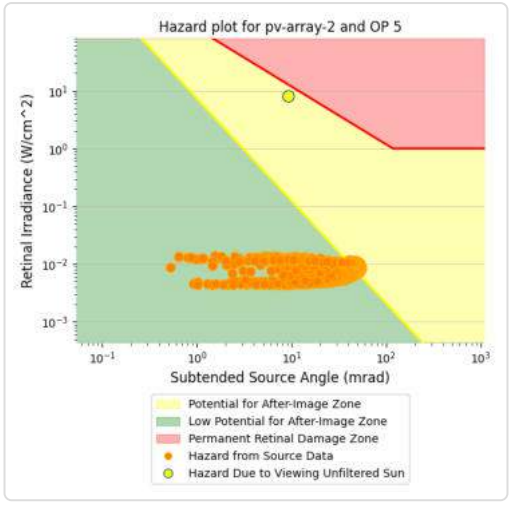
PV array 2 and OP 5

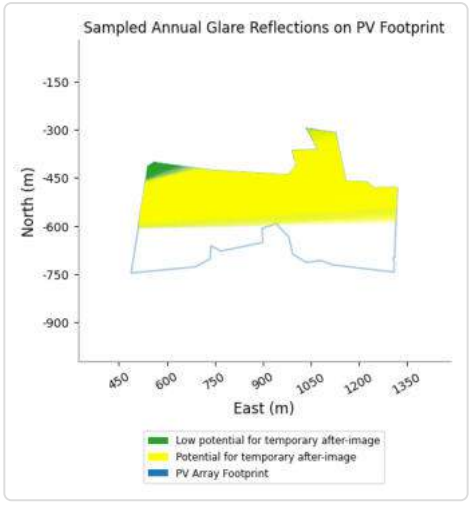
Yellow glare: 320 min.

Green glare: 1,369 min.





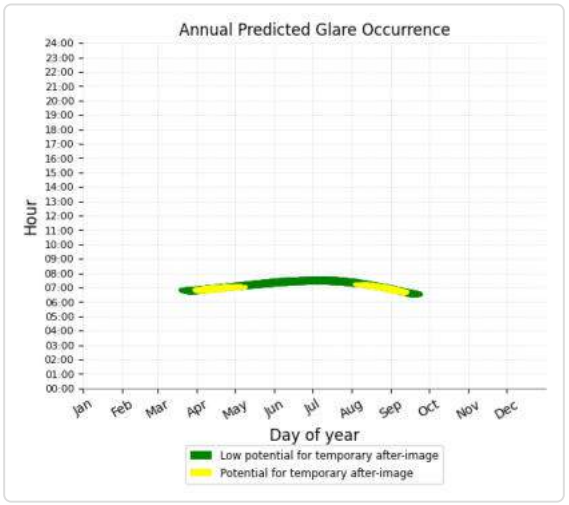


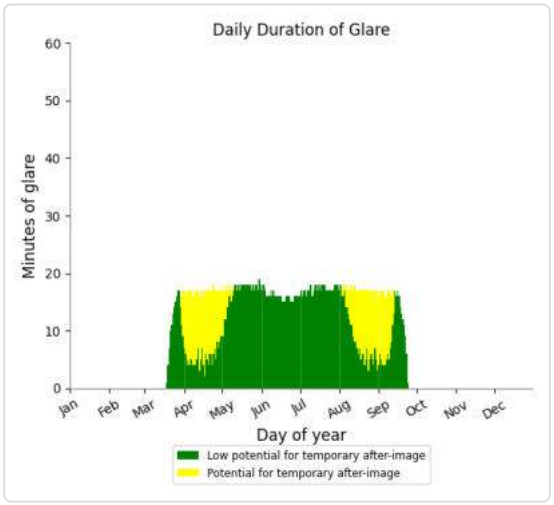


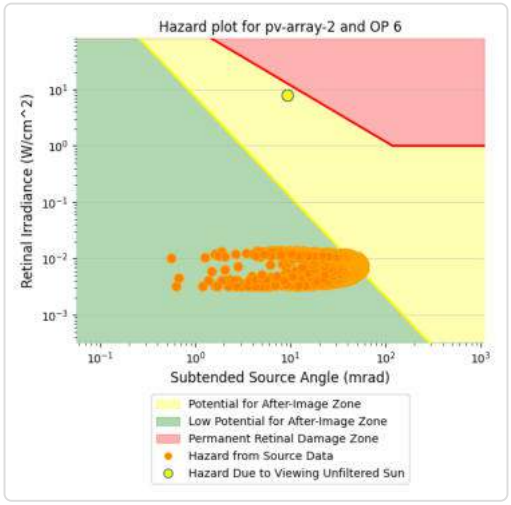
PV array 2 and OP 6

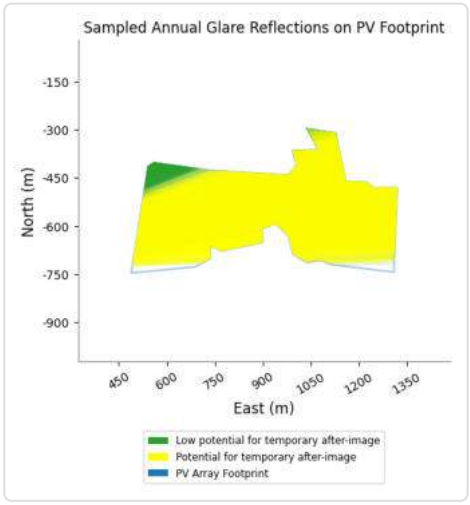
Yellow glare: 790 min.

Green glare: 2,338 min.





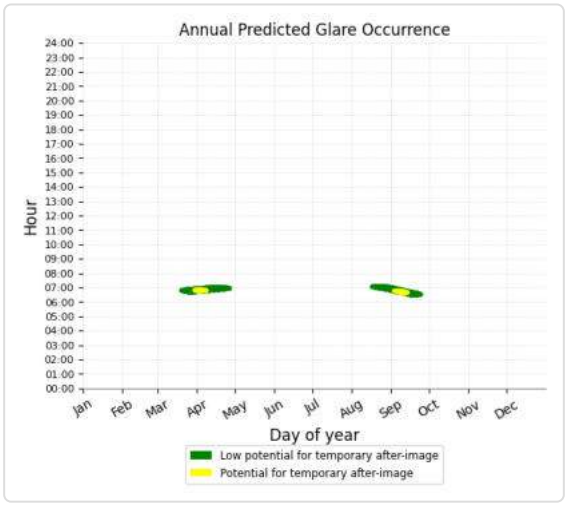


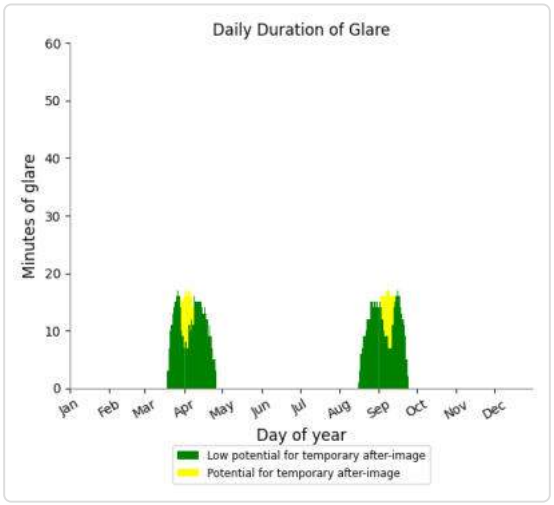


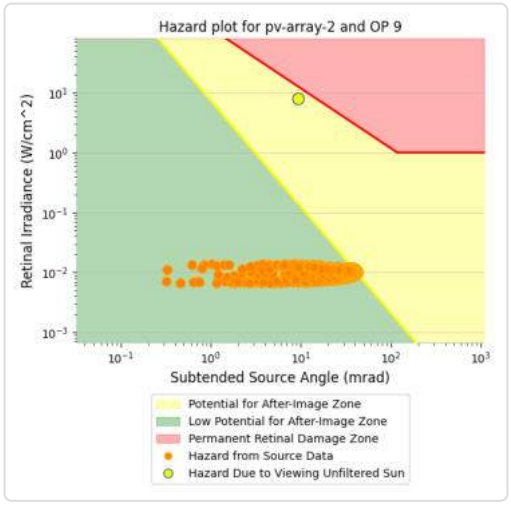
PV array 2 and OP 9

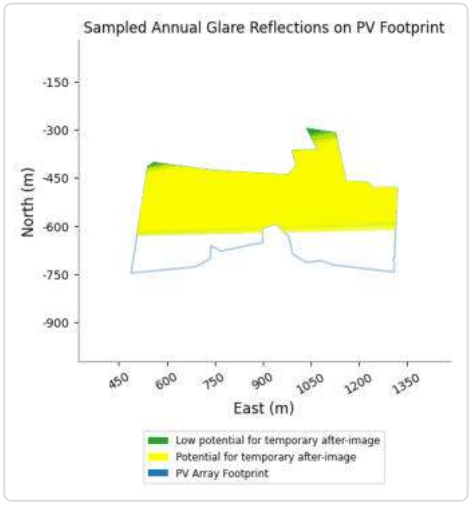
Yellow glare: 139 min.

Green glare: 871 min.





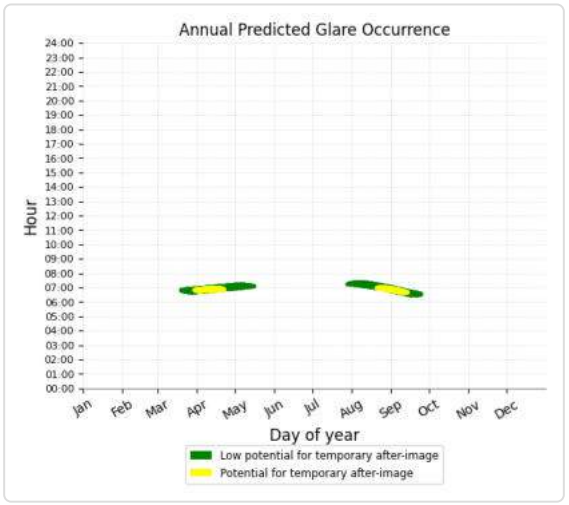


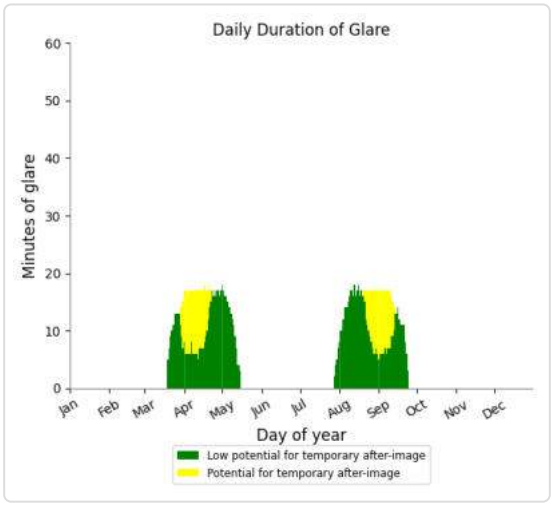


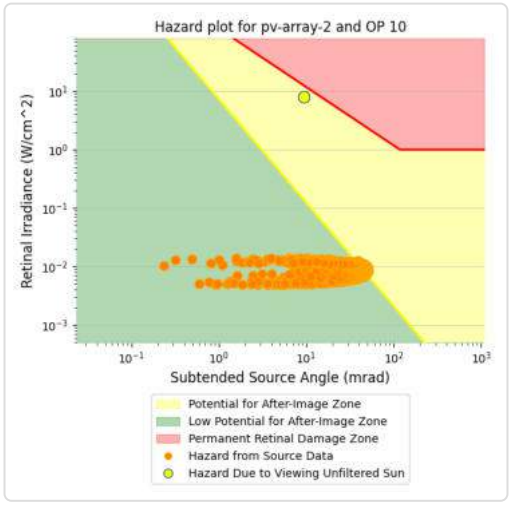
PV array 2 and OP 10

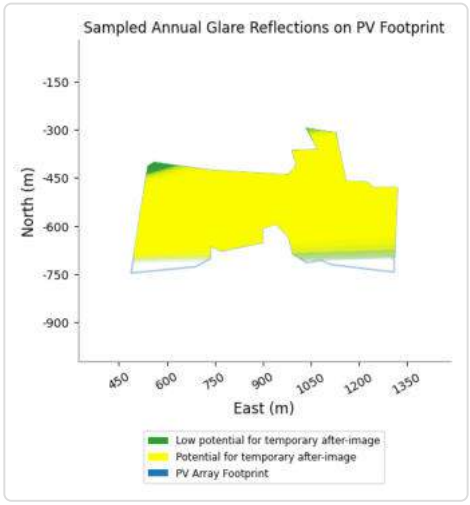
Yellow glare: 436 min.

Green glare: 1,225 min.





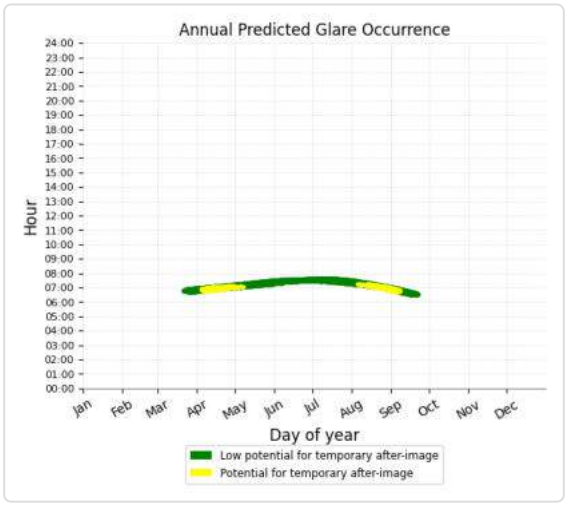


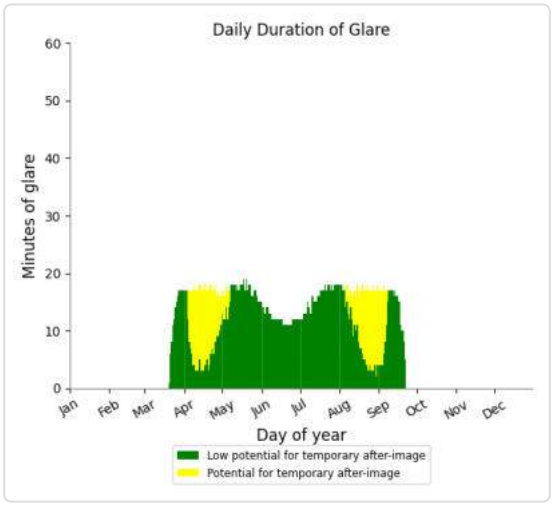


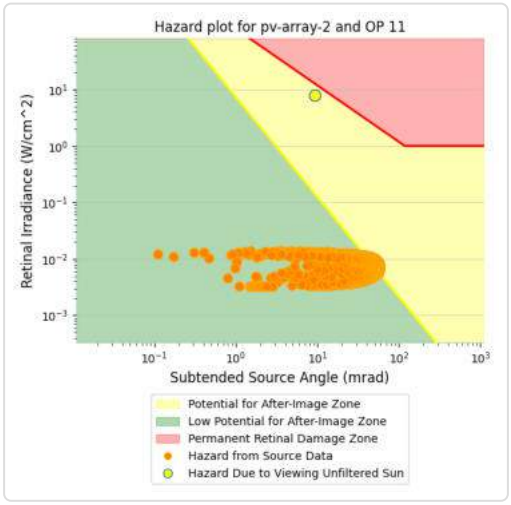
PV array 2 and OP 11

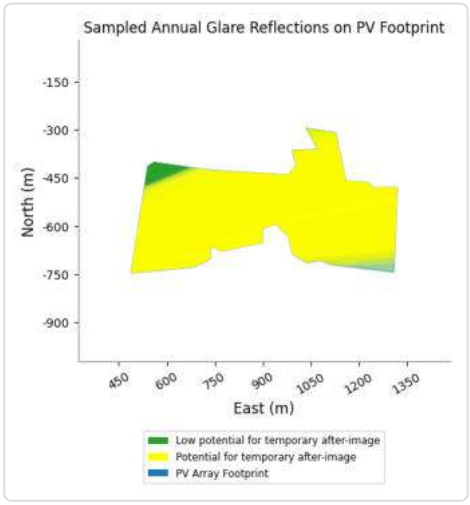
Yellow glare: 666 min.

Green glare: 2,246 min.



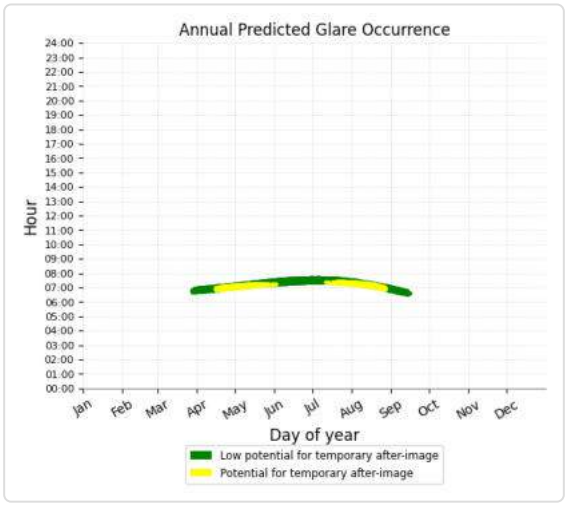


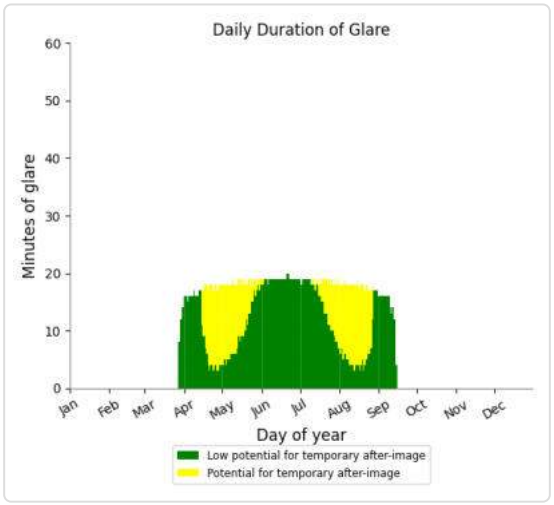


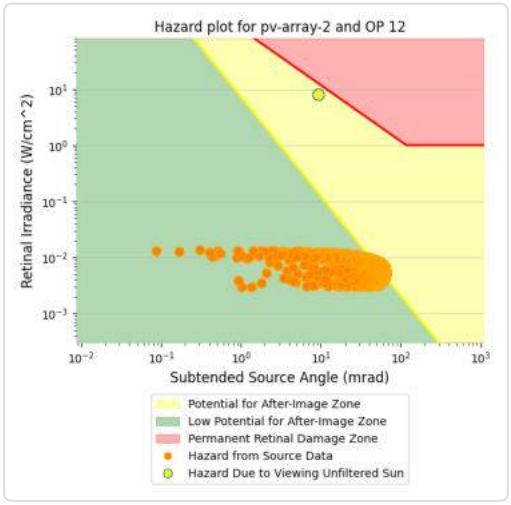


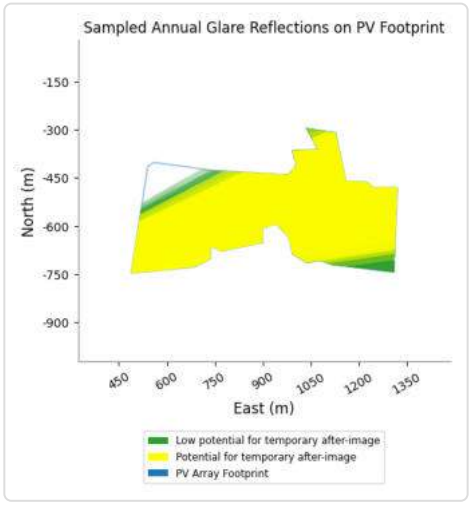
PV array 2 and OP 12

Yellow glare: 929 min.
Green glare: 2,109 min.





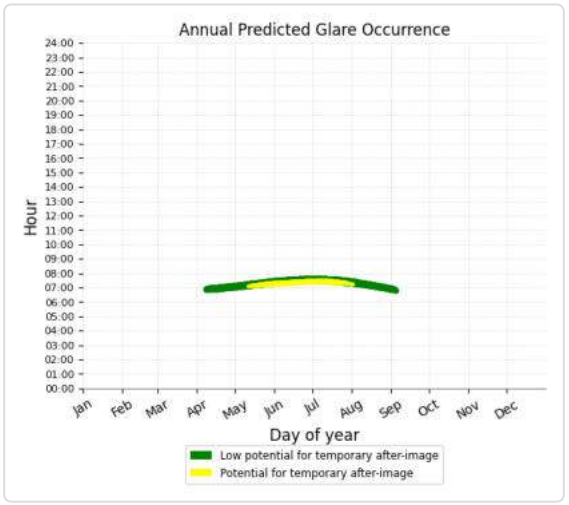


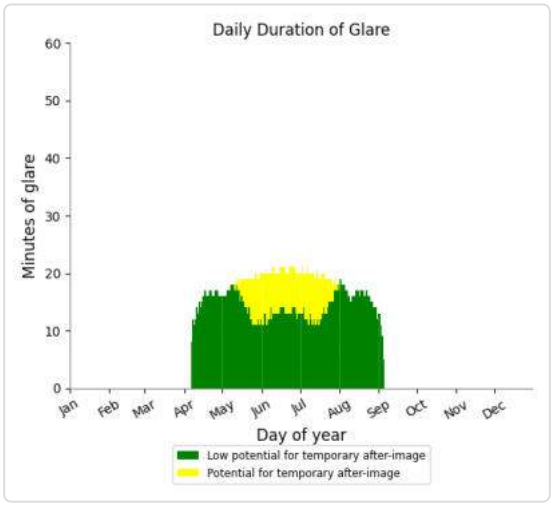


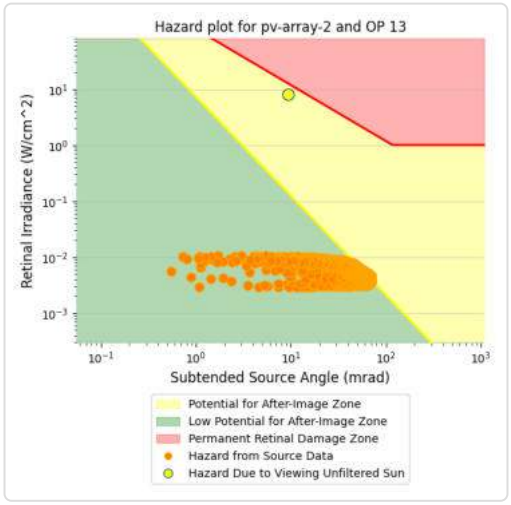
PV array 2 and OP 13

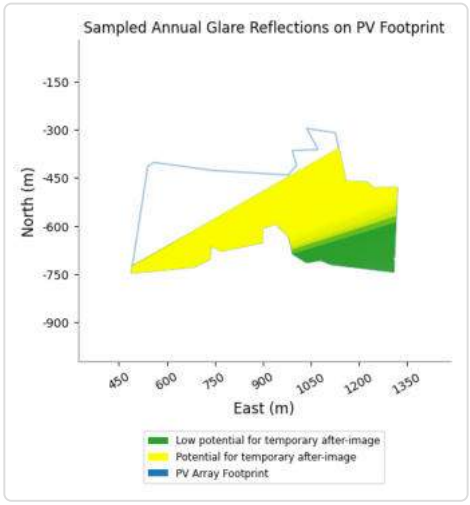
Yellow glare: 527 min.

Green glare: 2,172 min.





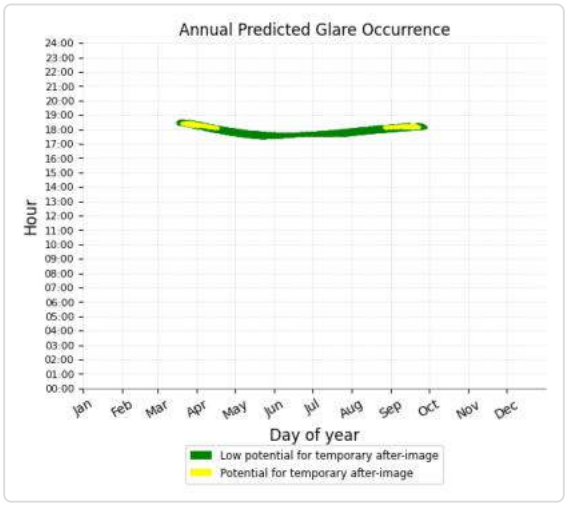


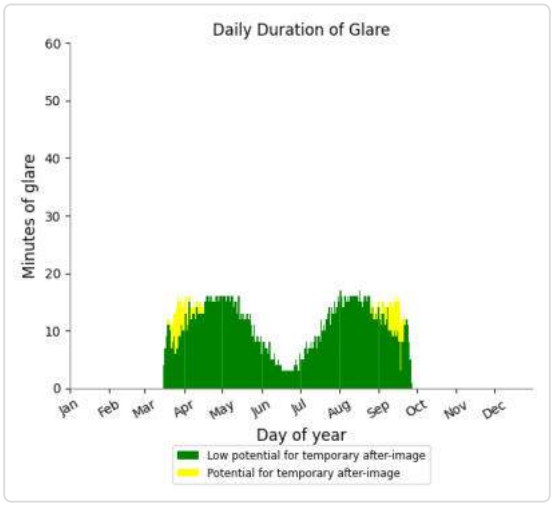


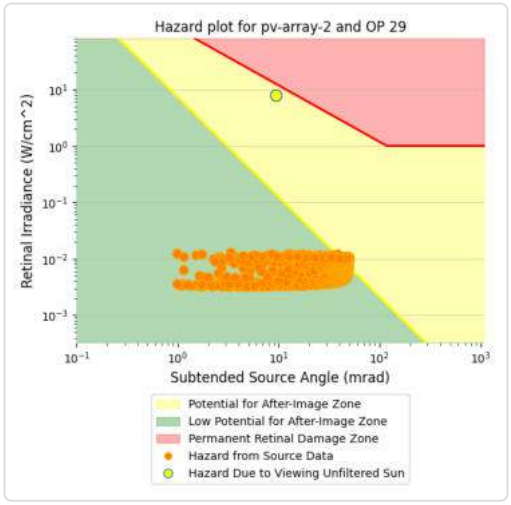
PV array 2 and OP 29

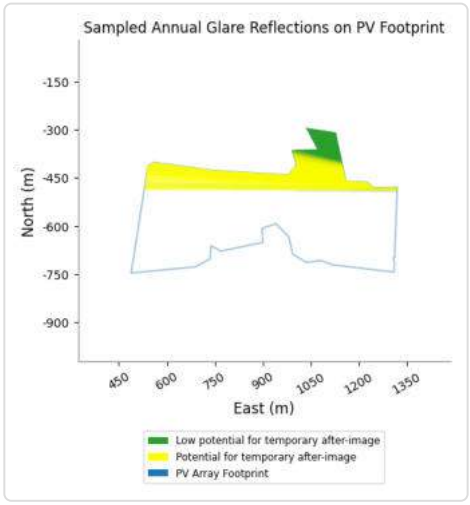
Yellow glare: 181 min.

Green glare: 2,121 min.





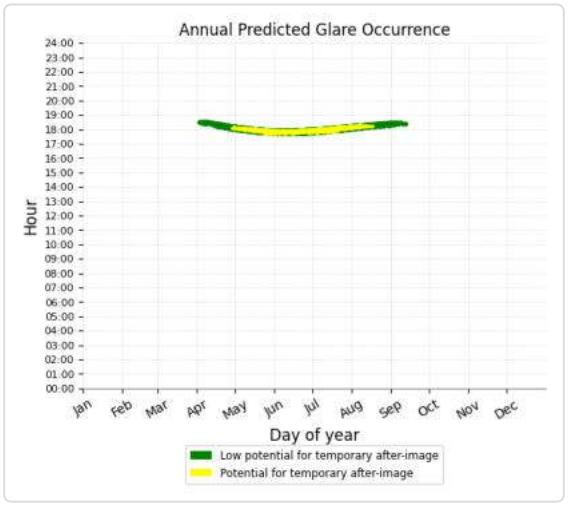


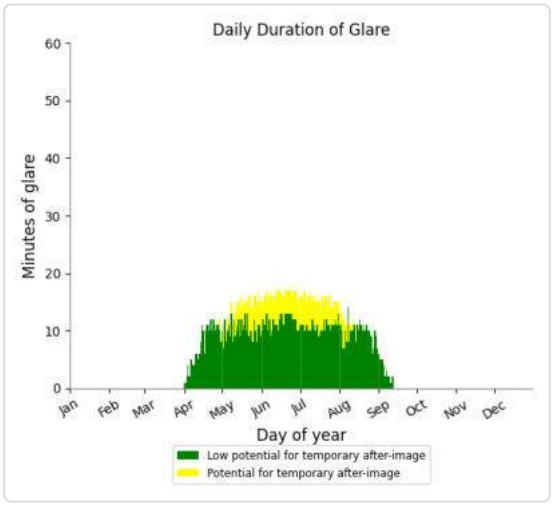


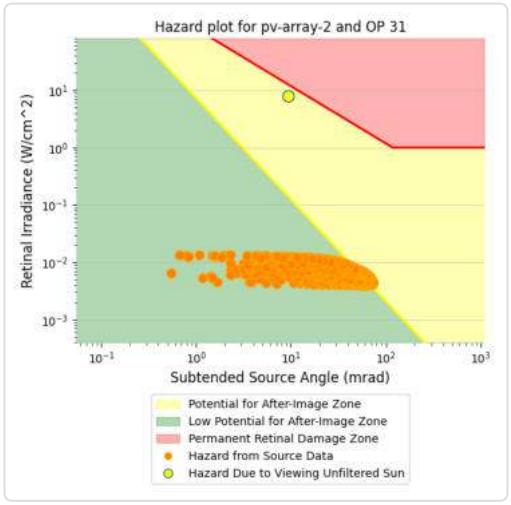
PV array 2 and OP 31

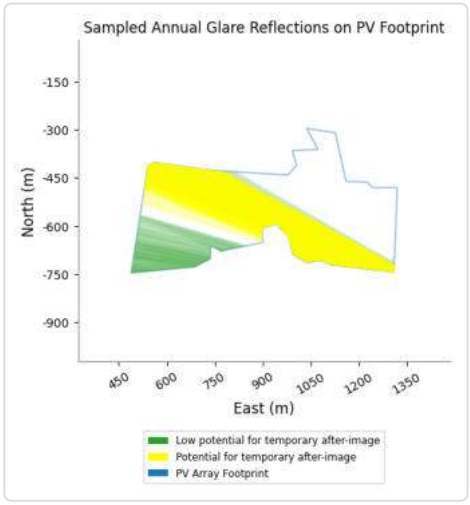
Yellow glare: 438 min.

Green glare: 1,562 min.





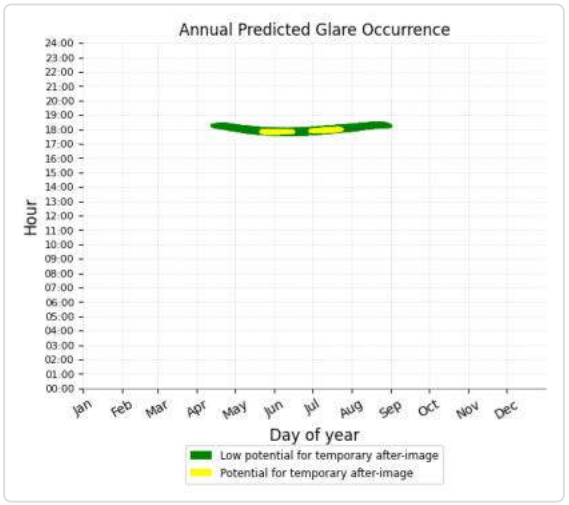


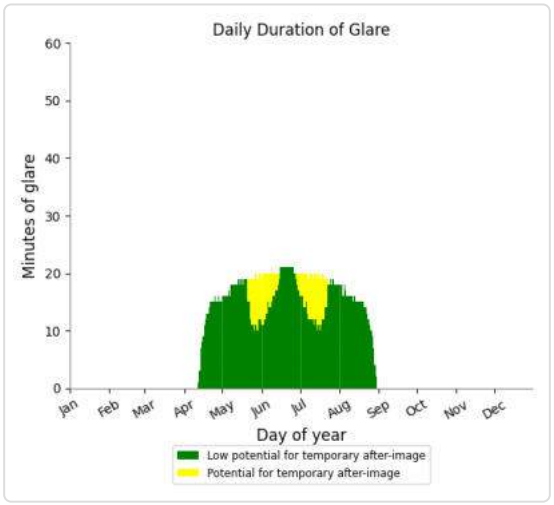


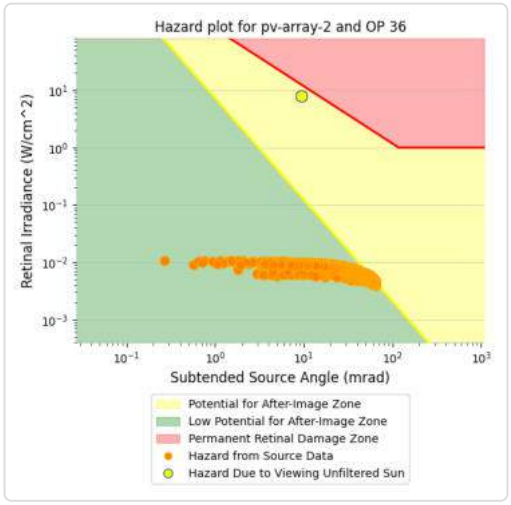
PV array 2 and OP 36

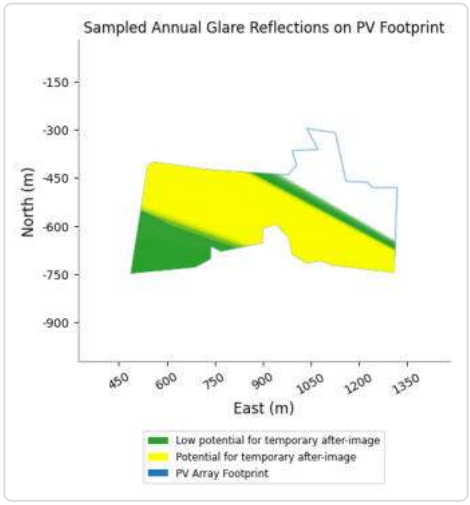
Yellow glare: 322 min.

Green glare: 2,095 min.





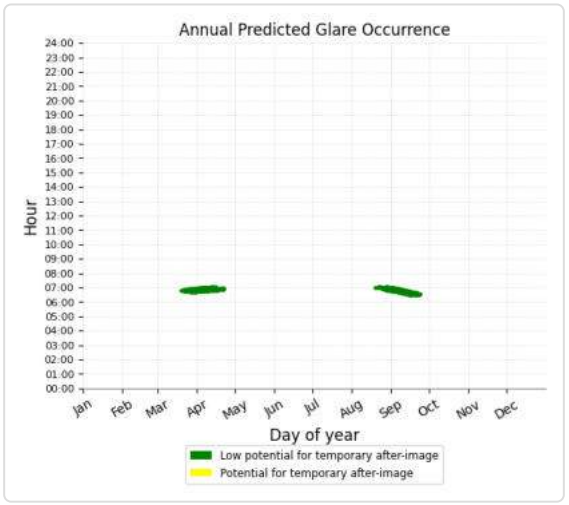


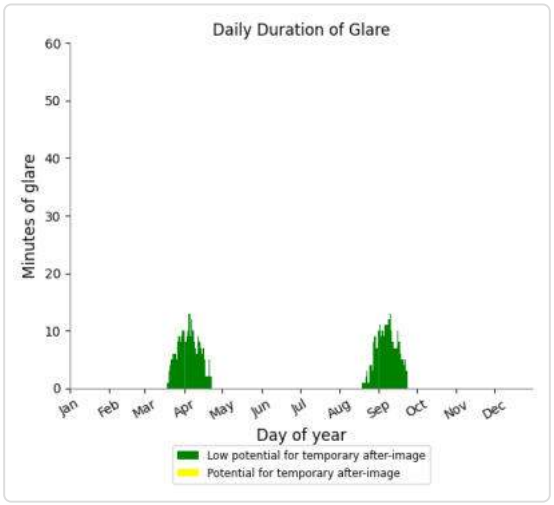


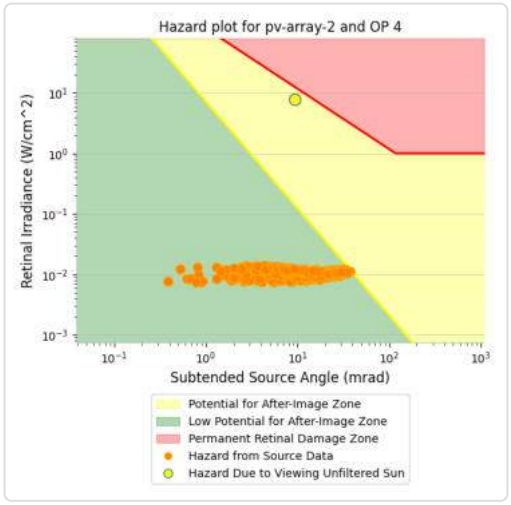
PV array 2 and OP 4

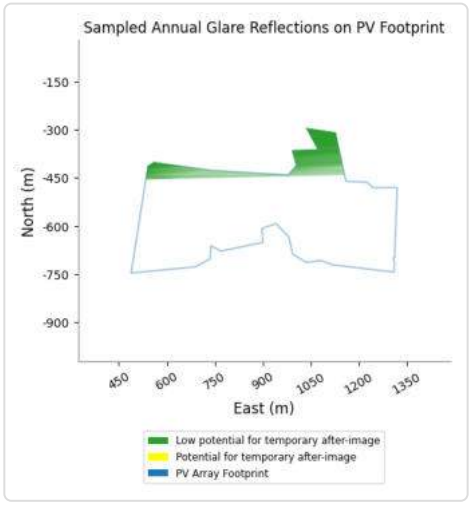
Yellow glare: none

Green glare: 480 min.





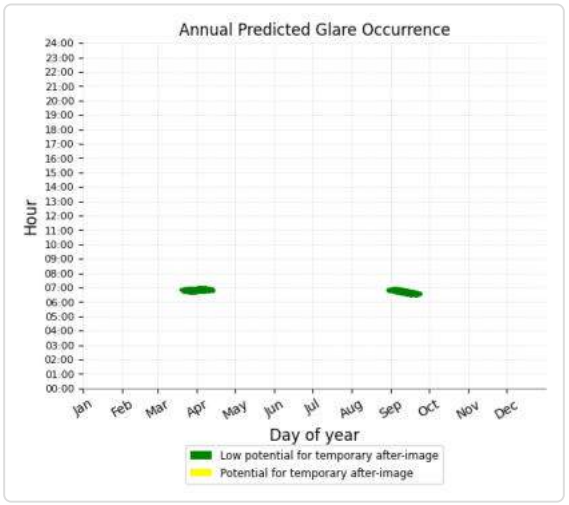


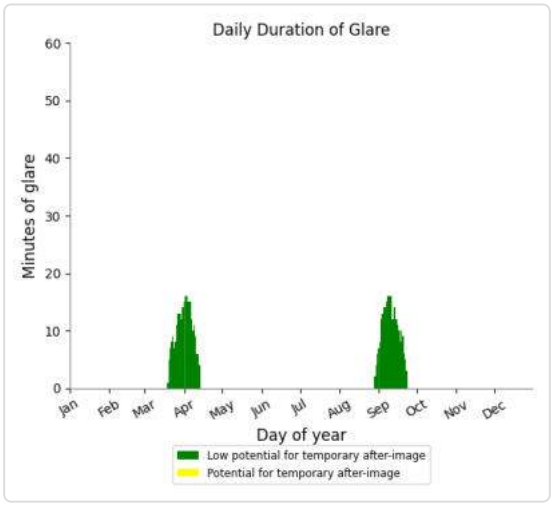


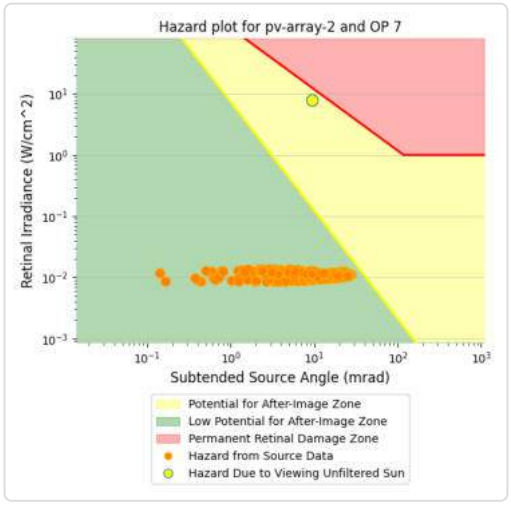
PV array 2 and OP 7

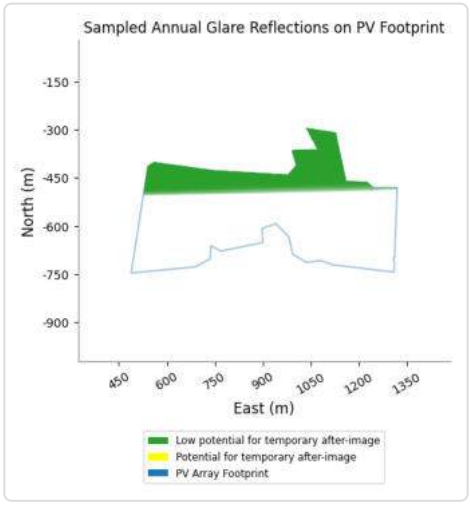
Yellow glare: none

Green glare: 544 min.





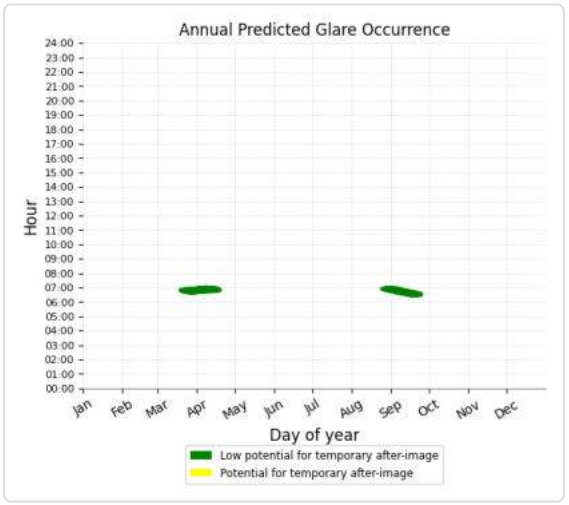


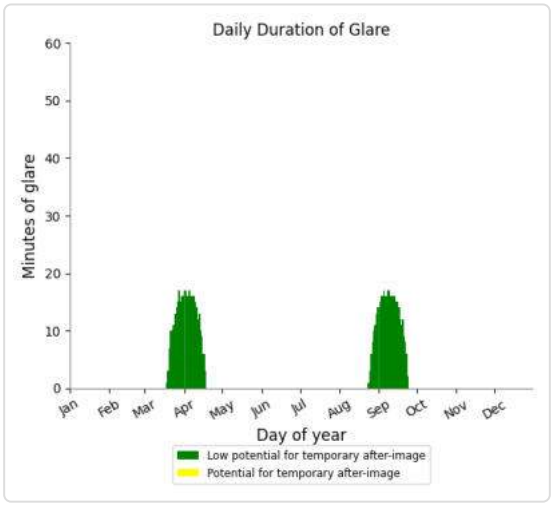


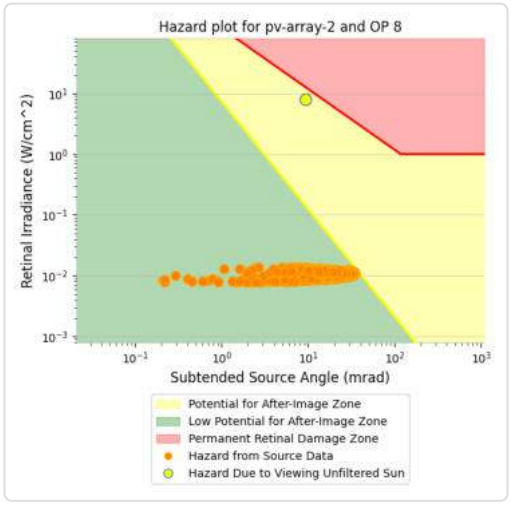
PV array 2 and OP 8

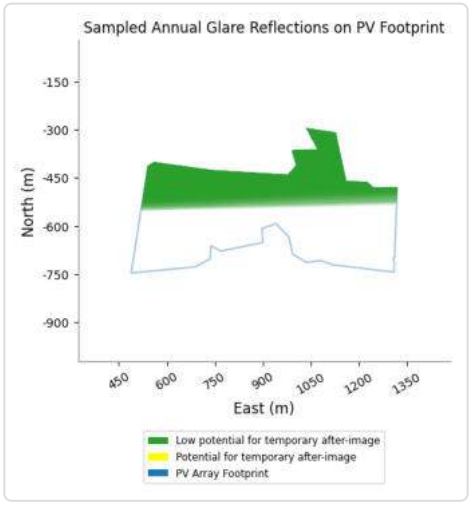
Yellow glare: none

Green glare: 788 min.





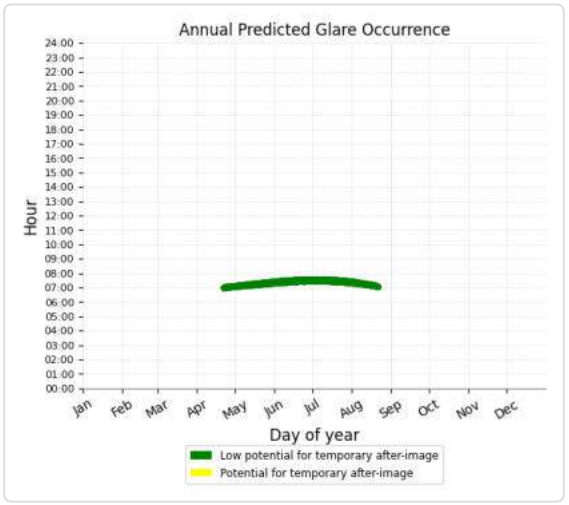


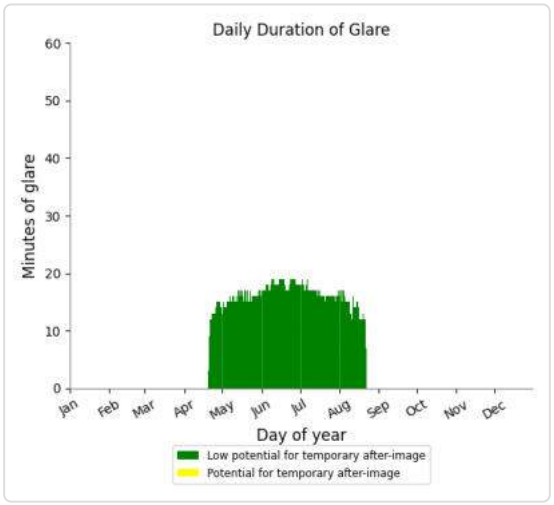


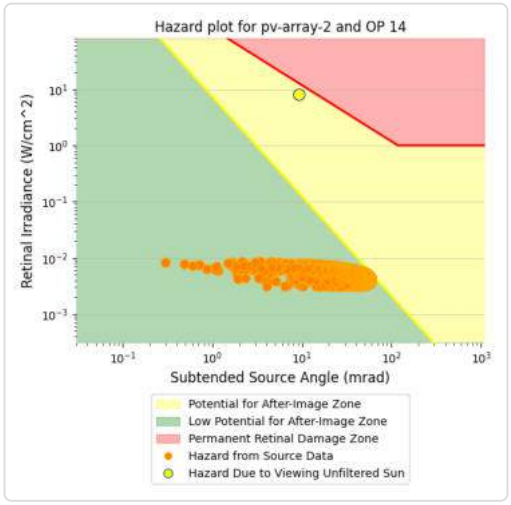
PV array 2 and OP 14

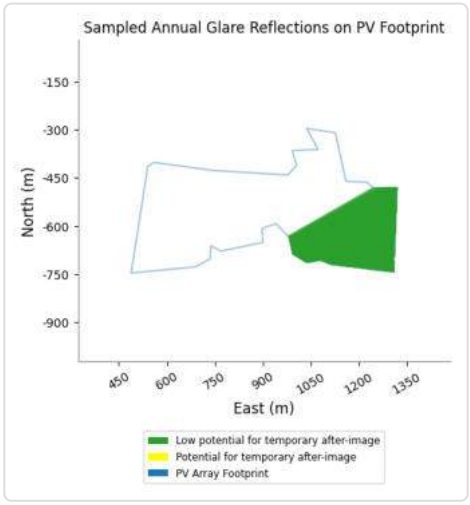
Yellow glare: none

Green glare: 1,988 min.





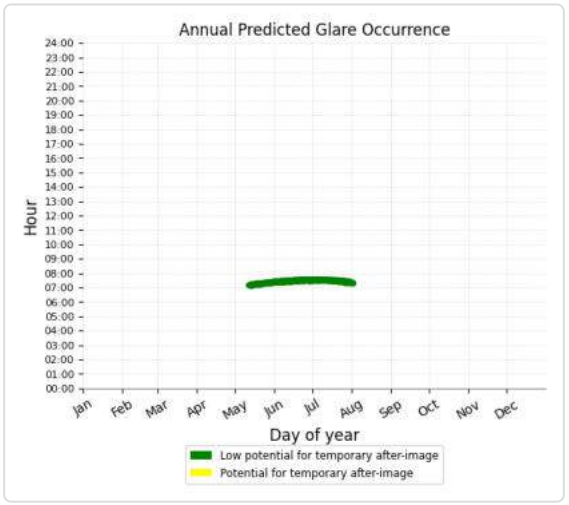


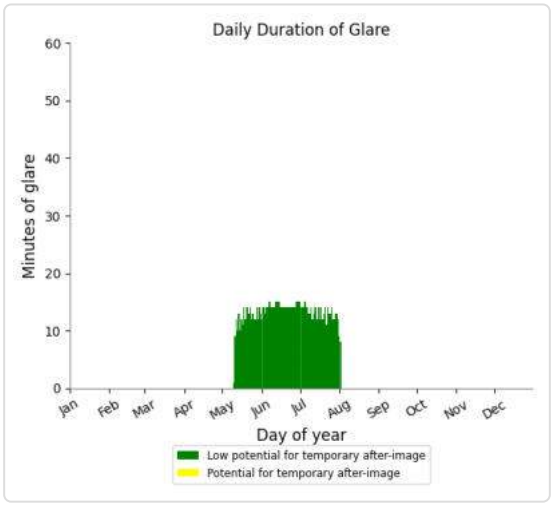


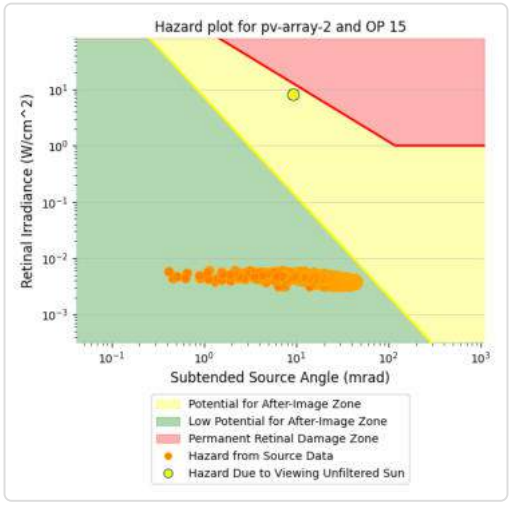
PV array 2 and OP 15

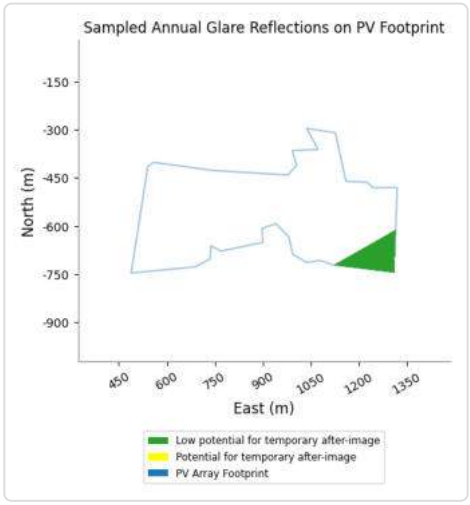
Yellow glare: none

Green glare: 1,112 min.





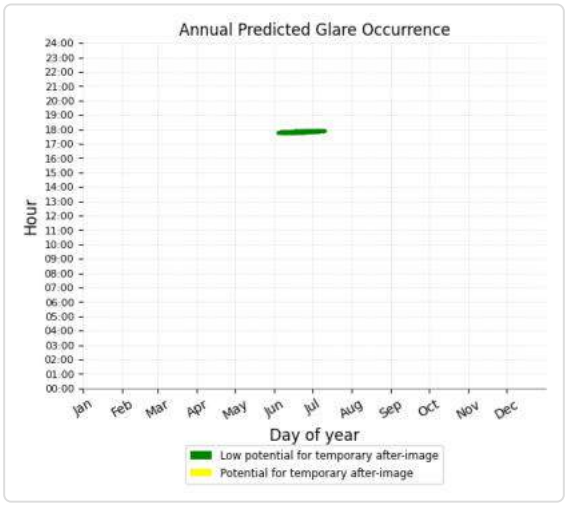


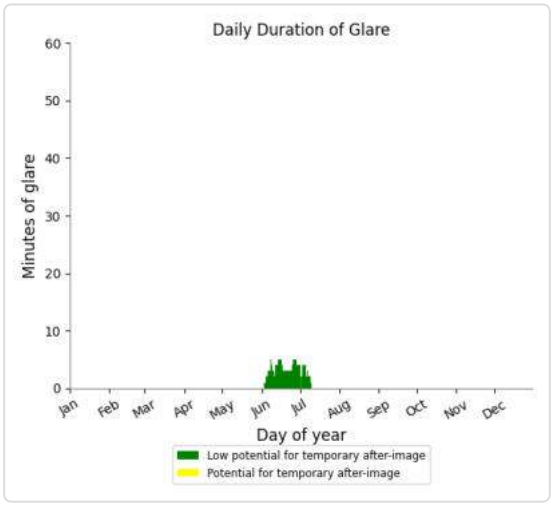


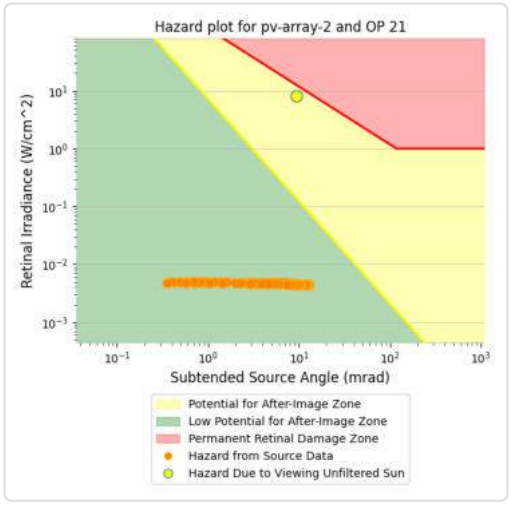
PV array 2 and OP 21

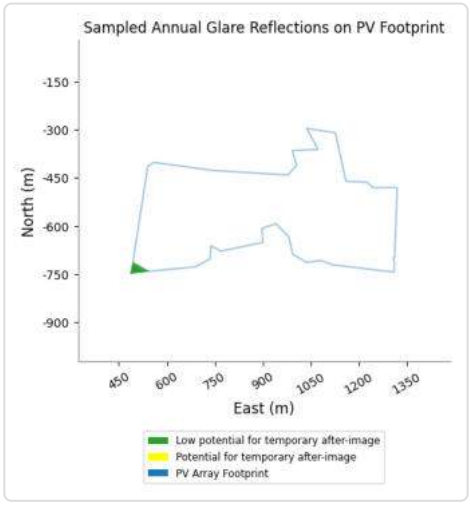
Yellow glare: none

Green glare: 127 min.





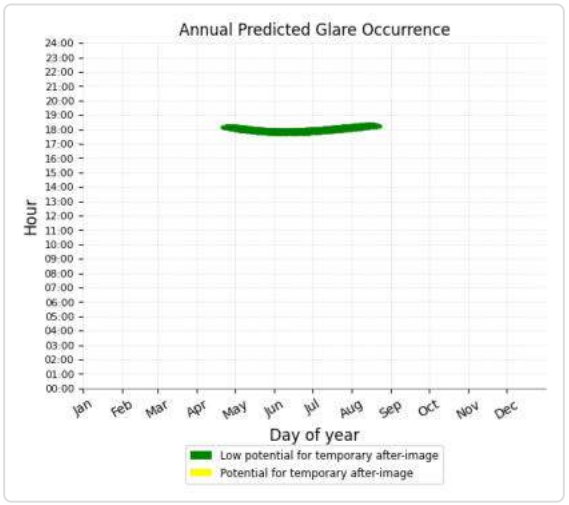


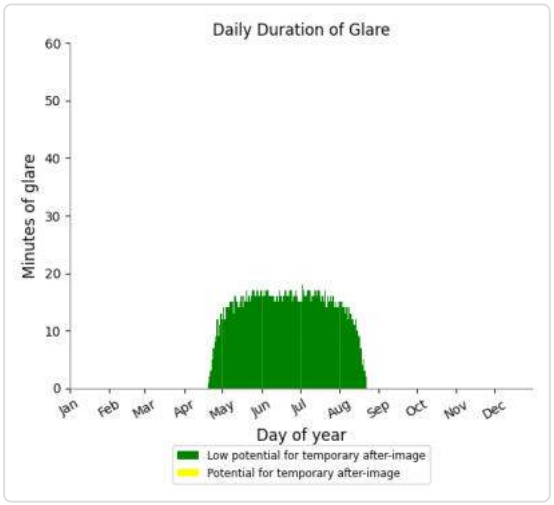


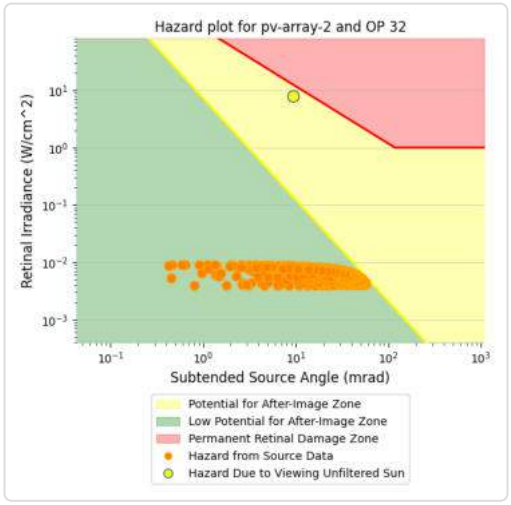
PV array 2 and OP 32

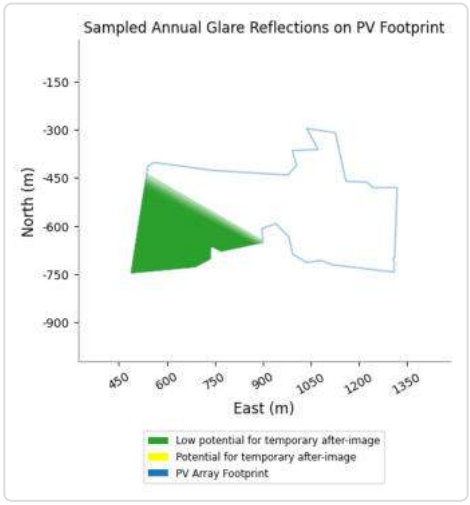
Yellow glare: none

Green glare: 1,759 min.





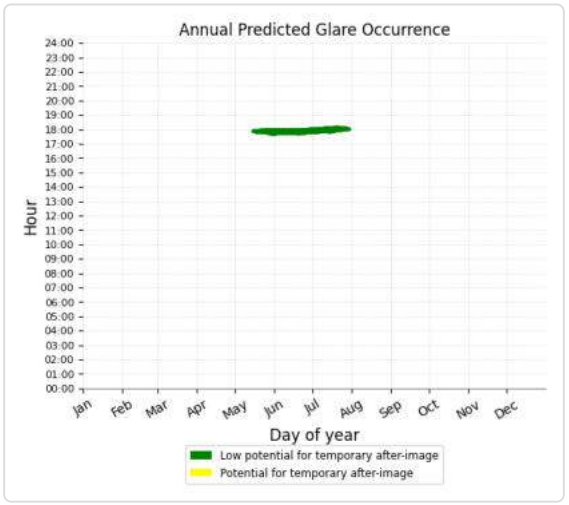


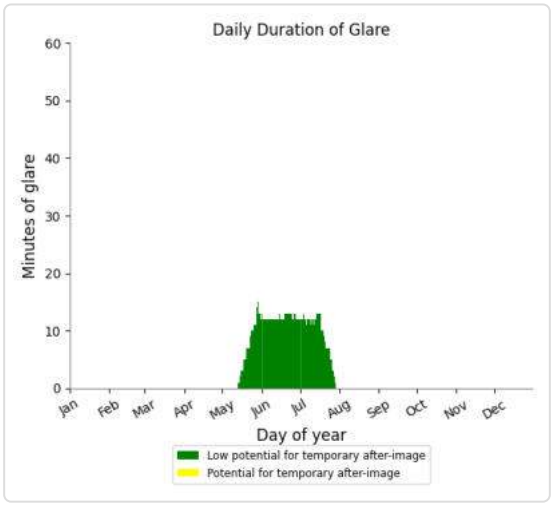


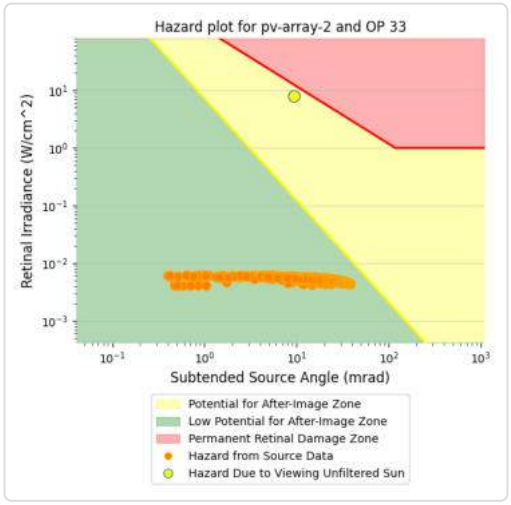
PV array 2 and OP 33

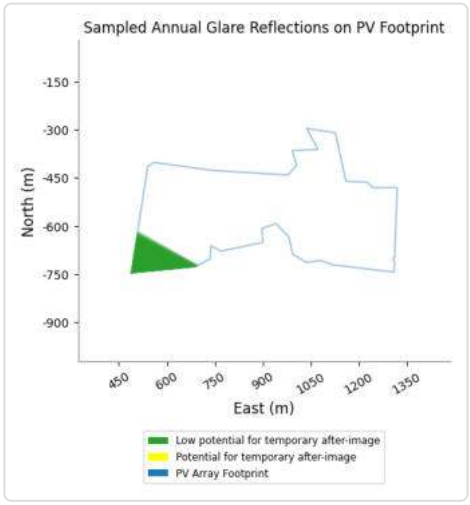
Yellow glare: none

Green glare: 794 min.





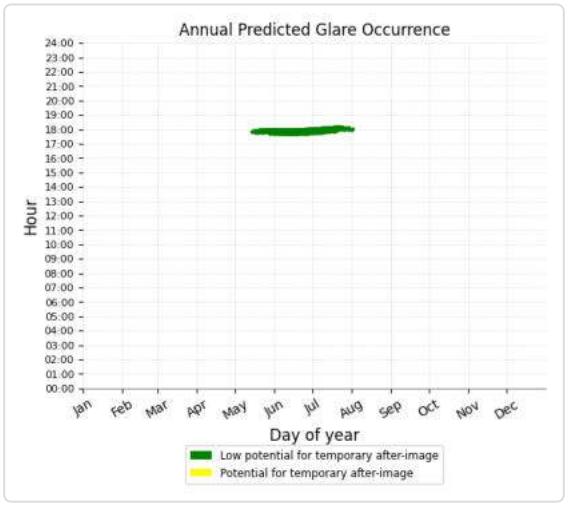


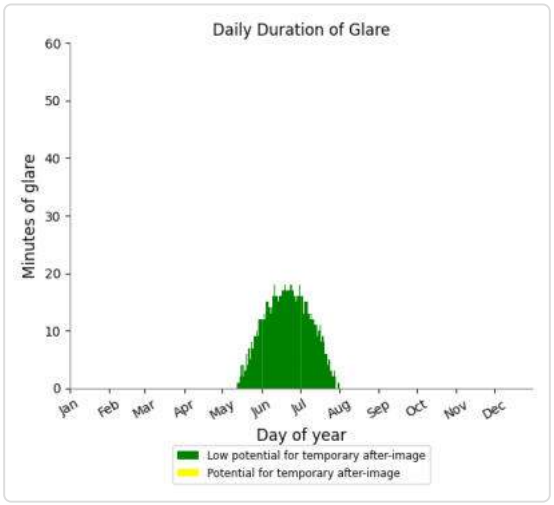


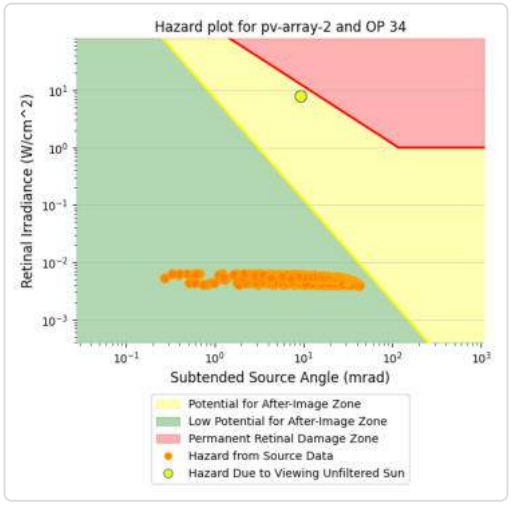
PV array 2 and OP 34

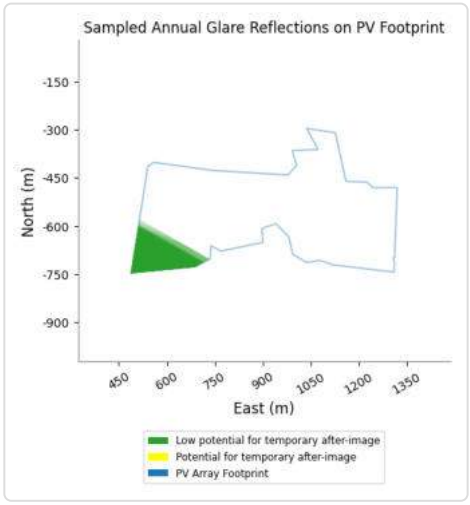
Yellow glare: none

Green glare: 866 min.



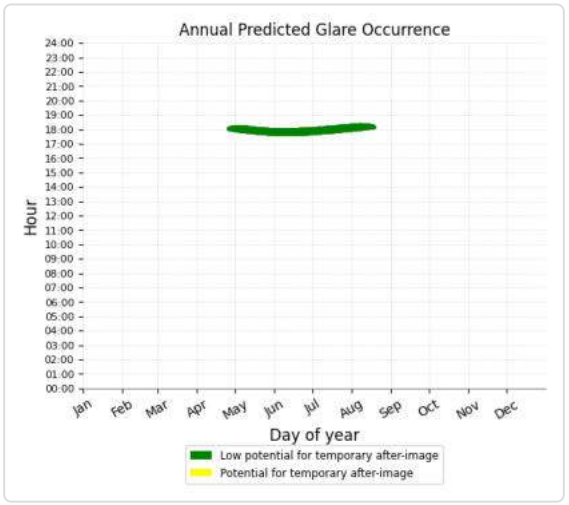


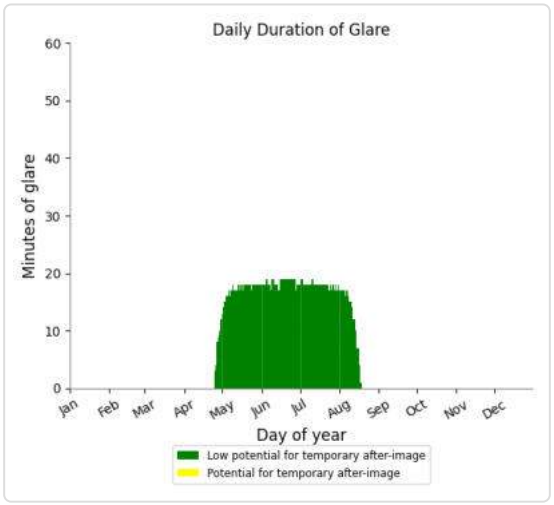


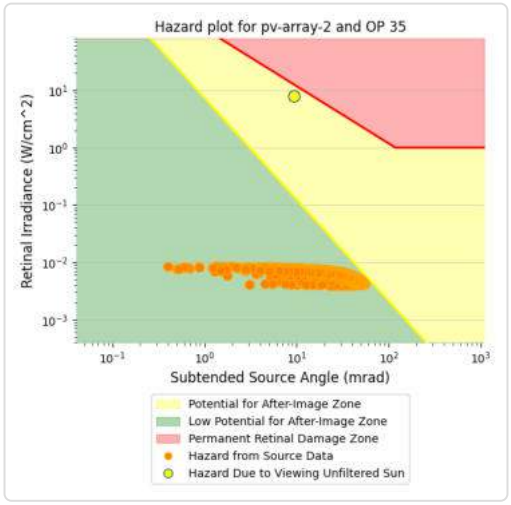


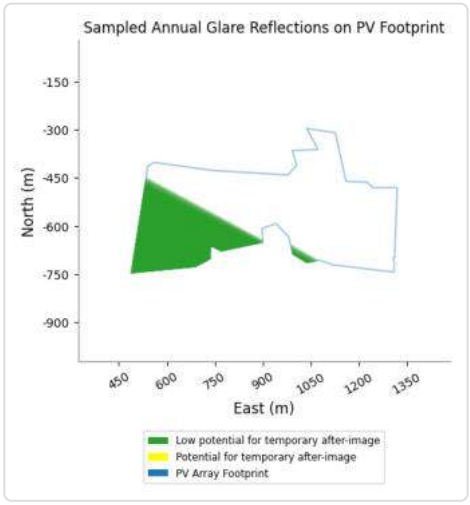
PV array 2 and OP 35

Yellow glare: none
Green glare: 1,916 min.









PV array 2 and OP 1

No glare found

PV array 2 and OP 2

No glare found

PV array 2 and OP 3

No glare found

PV array 2 and OP 16

No glare found

PV array 2 and OP 17

No glare found

PV array 2 and OP 18

No glare found

PV array 2 and OP 19

No glare found

PV array 2 and OP 20

No glare found

PV array 2 and OP 22

No glare found

PV array 2 and OP 23

No glare found

PV array 2 and OP 24

No glare found

PV array 2 and OP 25

No glare found

PV array 2 and OP 26

No glare found

PV array 2 and OP 27

No glare found

PV array 2 and OP 28

No glare found

PV array 2 and OP 30

No glare found

PV array 2 and OP 37

No glare found

PV array 2 and OP 38

No glare found

PV array 2 and OP 39

No glare found

PV array 2 and OP 40

No glare found

PV array 2 and OP 41

No glare found

PV array 2 and OP 42

No glare found

PV array 2 and OP 43

No glare found

PV array 2 and OP 44

No glare found

PV array 2 and OP 45

No glare found

PV array 2 and OP 46

No glare found

PV array 2 and OP 47

No glare found

PV array 2 and OP 48

No glare found

PV: PV array 3 potential temporary after-image

Receptor results ordered by category of glare

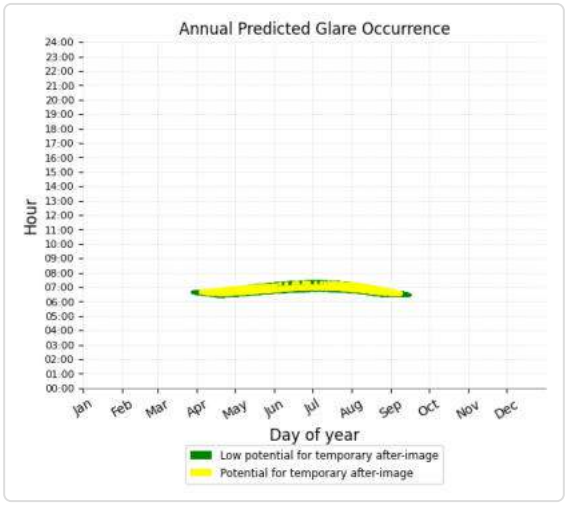
Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 15	1,942	32.4	2,500	41.7
OP 16	1,086	18.1	2,698	45.0
OP 20	1,843	30.7	85	1.4
OP 21	1,894	31.6	90	1.5
OP 33	1,340	22.3	119	2.0
OP 34	1,440	24.0	53	0.9
OP 13	735	12.2	0	0.0
OP 14	3,338	55.6	0	0.0
OP 17	4,309	71.8	0	0.0
OP 18	1,135	18.9	0	0.0
OP 19	33	0.6	0	0.0
OP 22	2,184	36.4	0	0.0
OP 32	486	8.1	0	0.0
OP 35	905	15.1	0	0.0
OP 36	586	9.8	0	0.0
OP 37	1,165	19.4	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 23	0	0.0	0	0.0
OP 24	0	0.0	0	0.0
OP 25	0	0.0	0	0.0
OP 26	0	0.0	0	0.0
OP 27	0	0.0	0	0.0
OP 28	0	0.0	0	0.0
OP 29	0	0.0	0	0.0
OP 30	0	0.0	0	0.0
OP 31	0	0.0	0	0.0
OP 38	0	0.0	0	0.0
OP 39	0	0.0	0	0.0

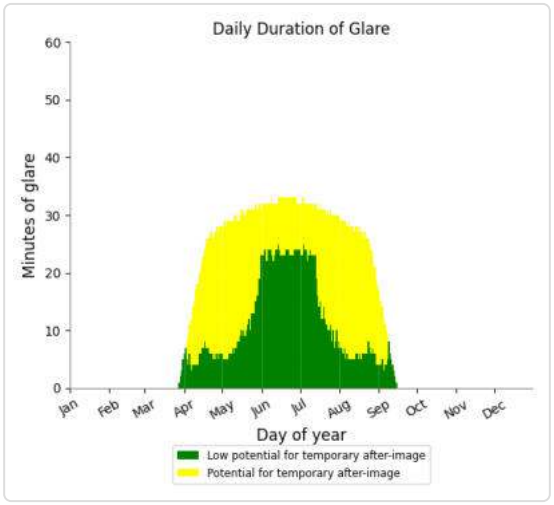
Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 40	0	0.0	0	0.0
OP 41	0	0.0	0	0.0
OP 42	0	0.0	0	0.0
OP 43	0	0.0	0	0.0
OP 44	0	0.0	0	0.0
OP 45	0	0.0	0	0.0
OP 46	0	0.0	0	0.0
OP 47	0	0.0	0	0.0
OP 48	0	0.0	0	0.0

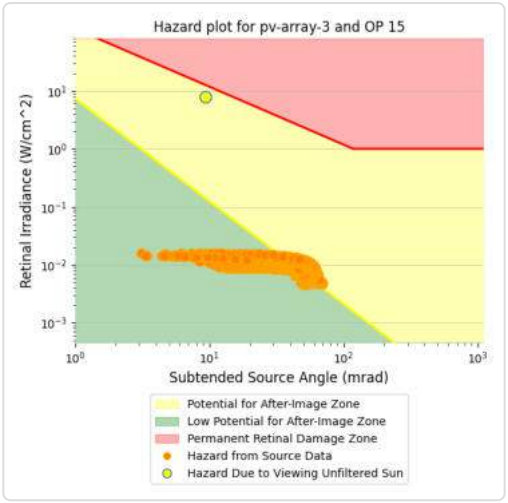
PV array 3 and OP 15

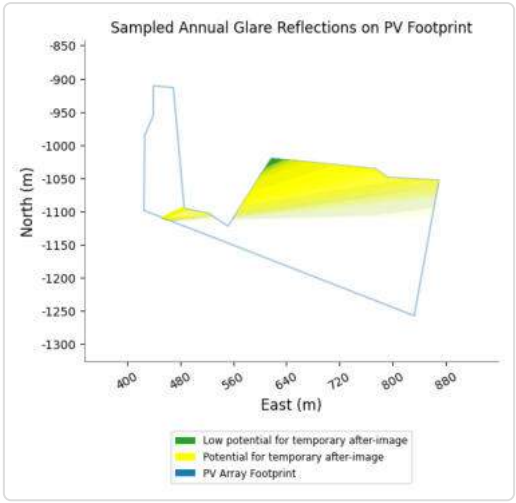
Yellow glare: 2,500 min.

Green glare: 1,942 min.





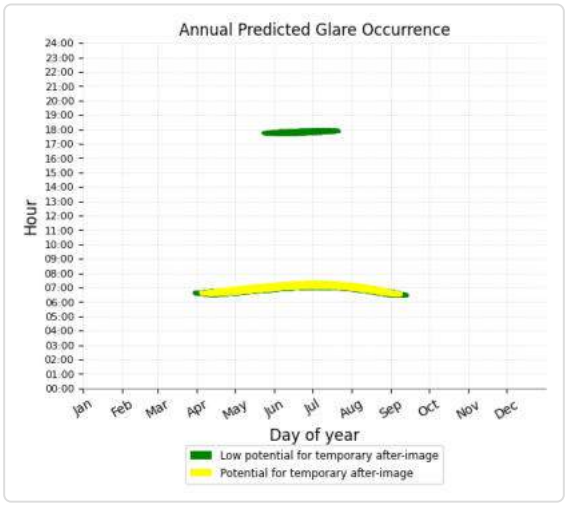


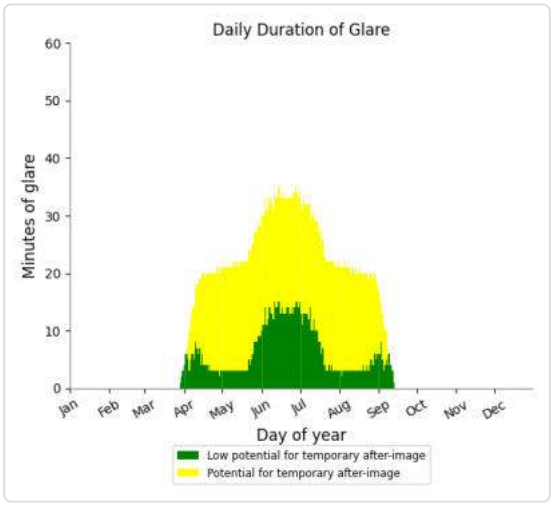


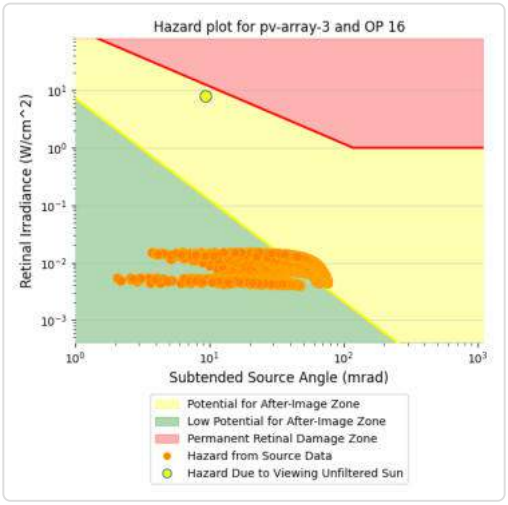
PV array 3 and OP 16

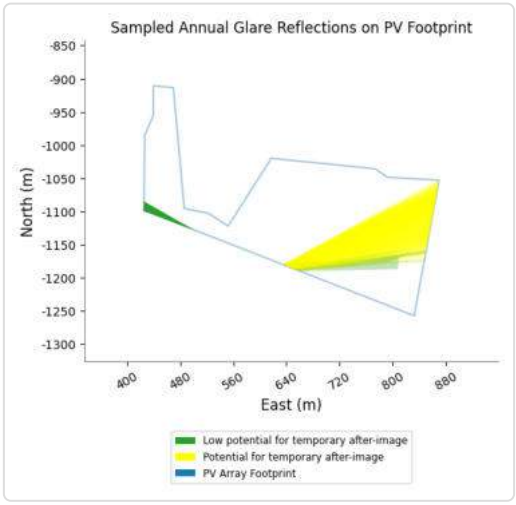
Yellow glare: 2,698 min.

Green glare: 1,086 min.





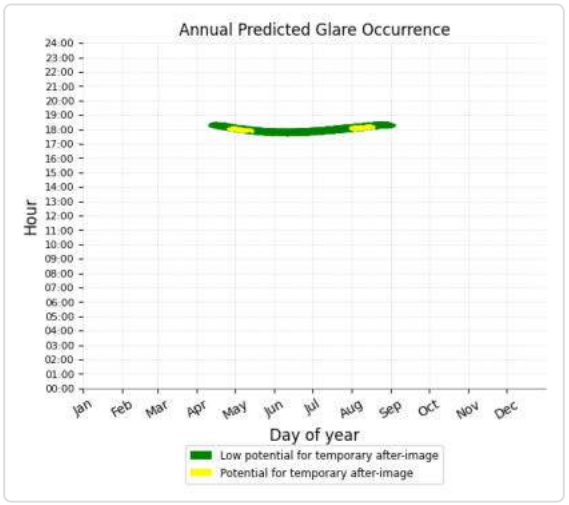


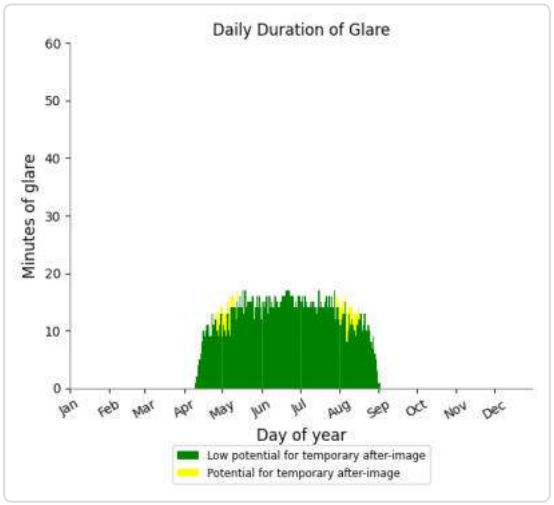


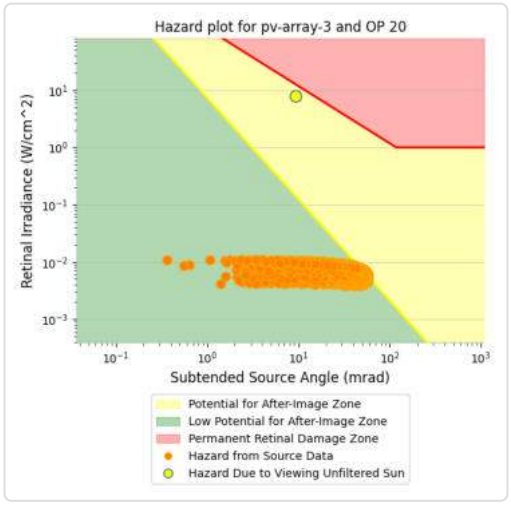
PV array 3 and OP 20

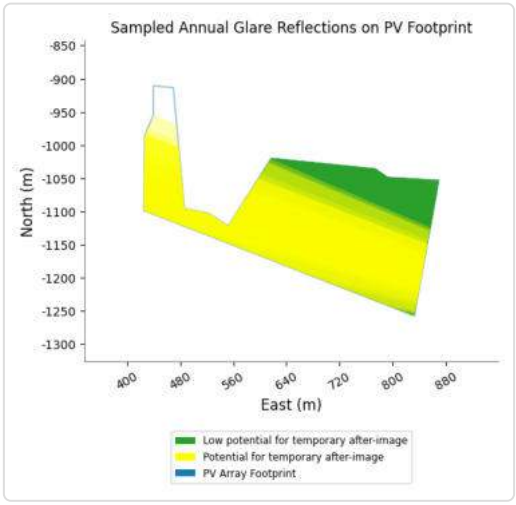
Yellow glare: 85 min.

Green glare: 1,843 min.





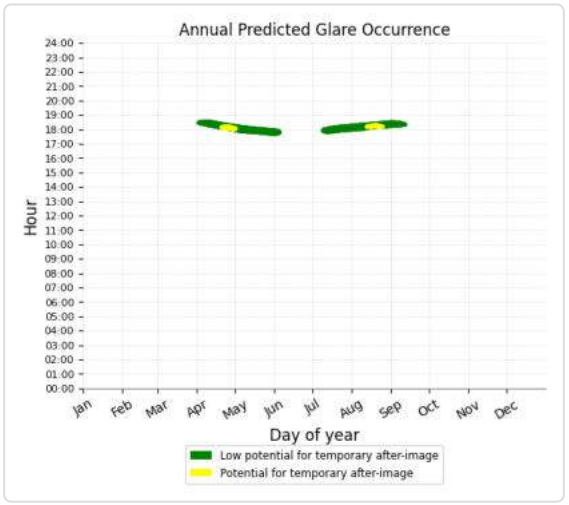


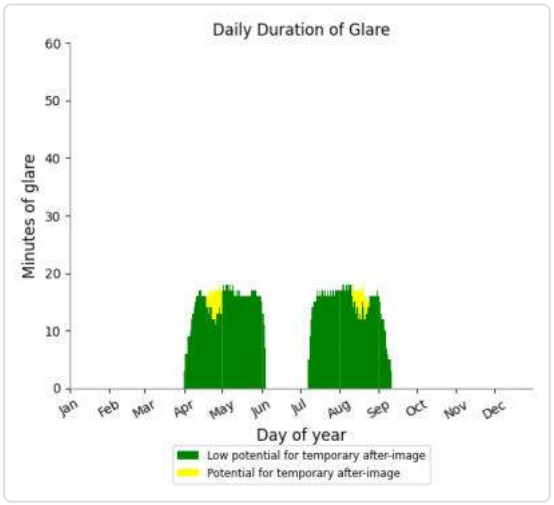


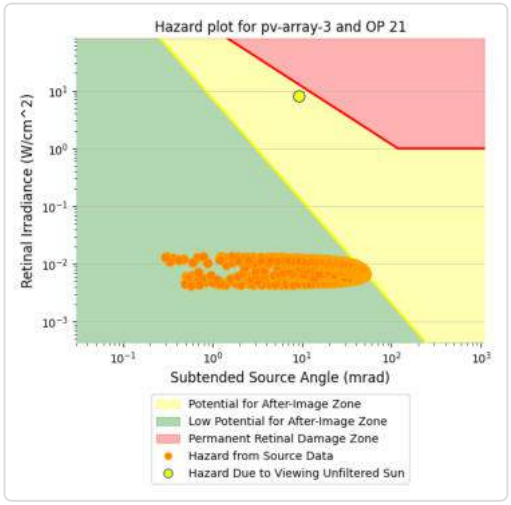
PV array 3 and OP 21

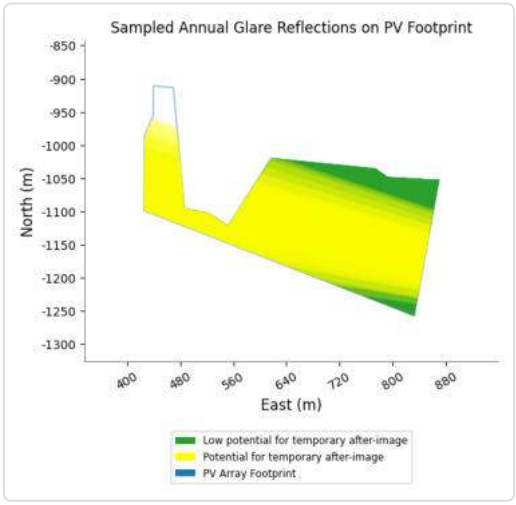
Yellow glare: 90 min.

Green glare: 1,894 min.





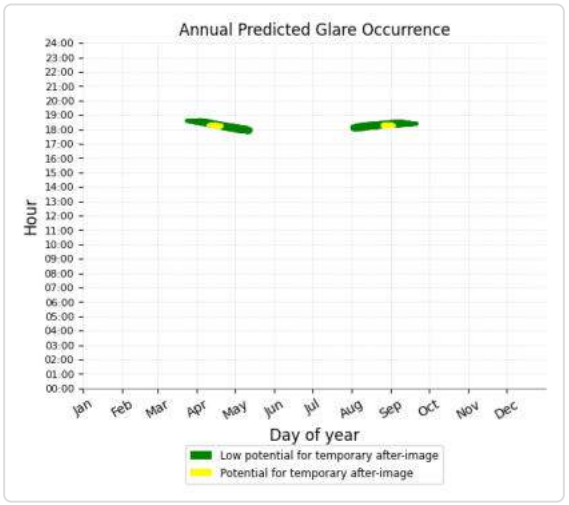


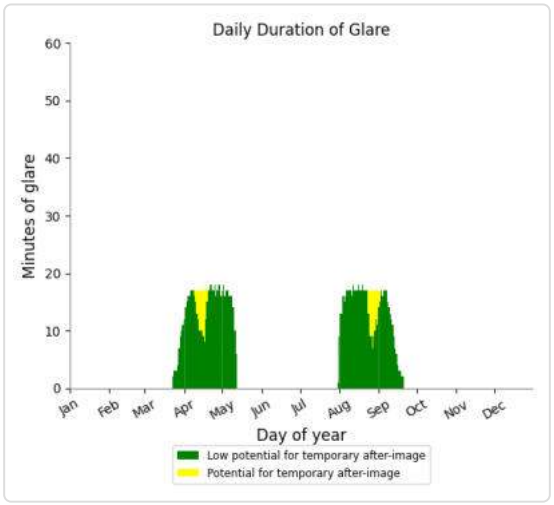


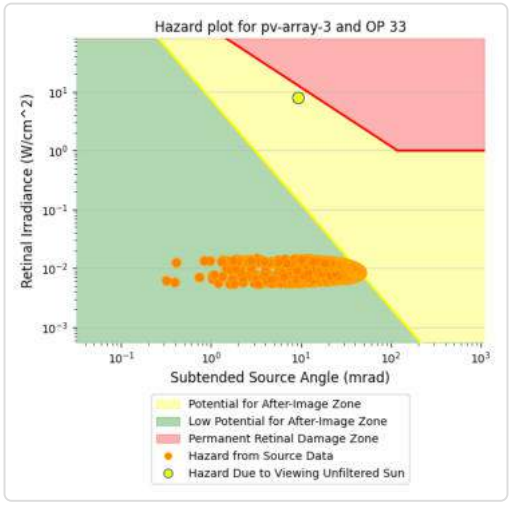
PV array 3 and OP 33

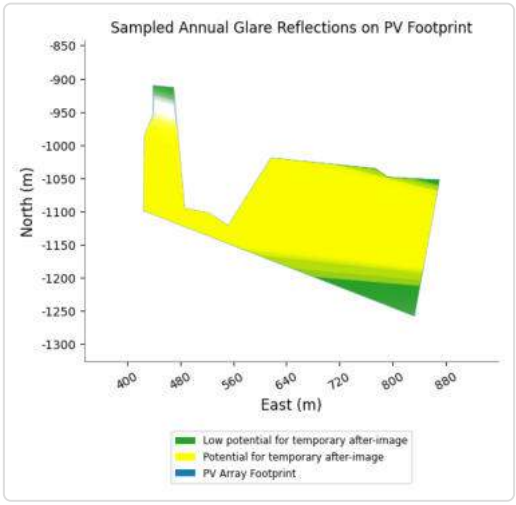
Yellow glare: 119 min.

Green glare: 1,340 min.





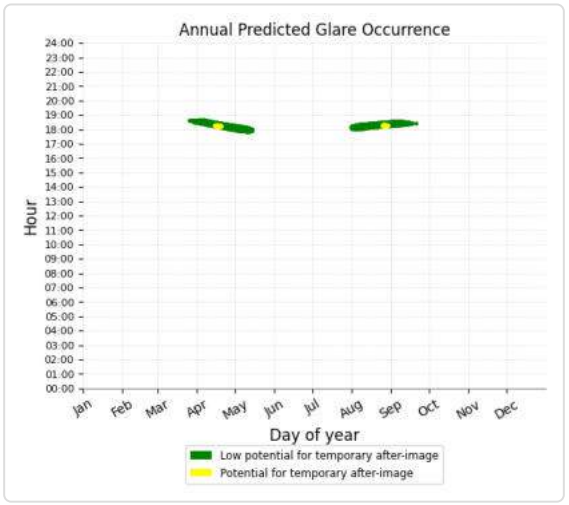


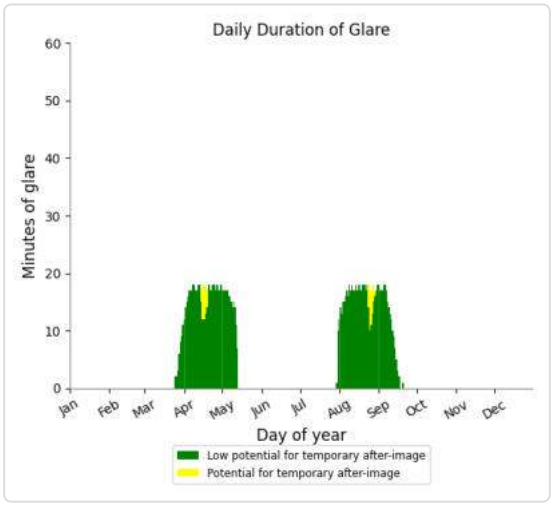


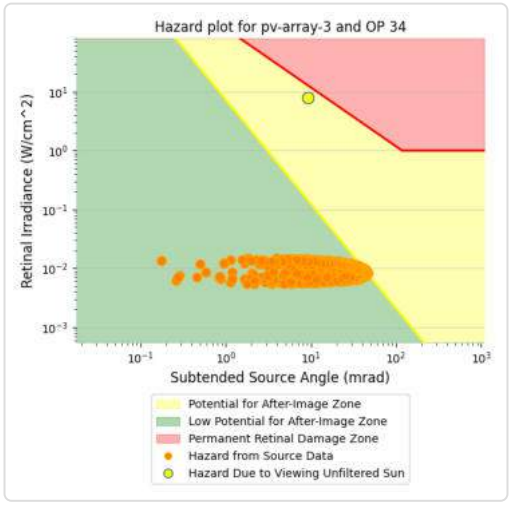
PV array 3 and OP 34

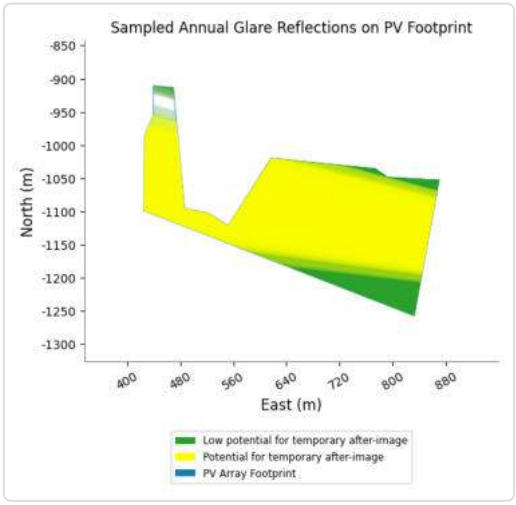
Yellow glare: 53 min.

Green glare: 1,440 min.





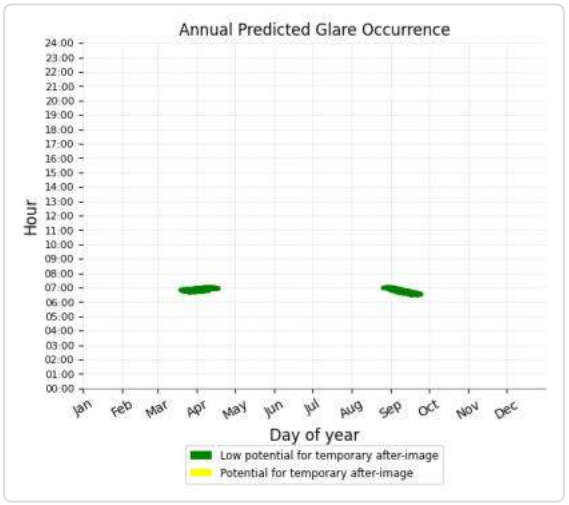


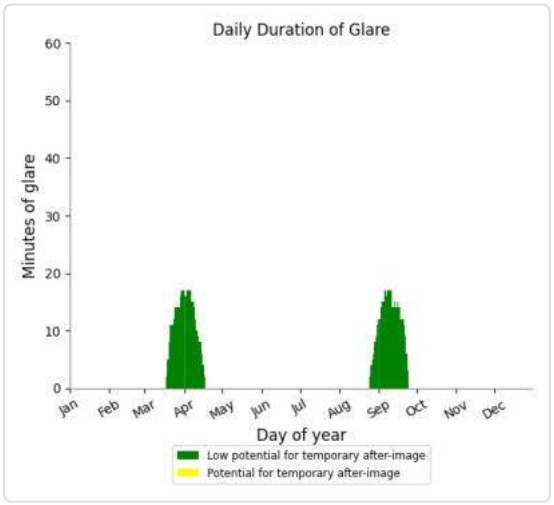


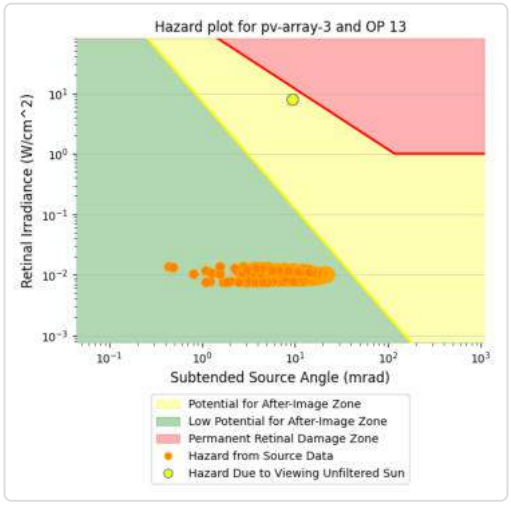
PV array 3 and OP 13

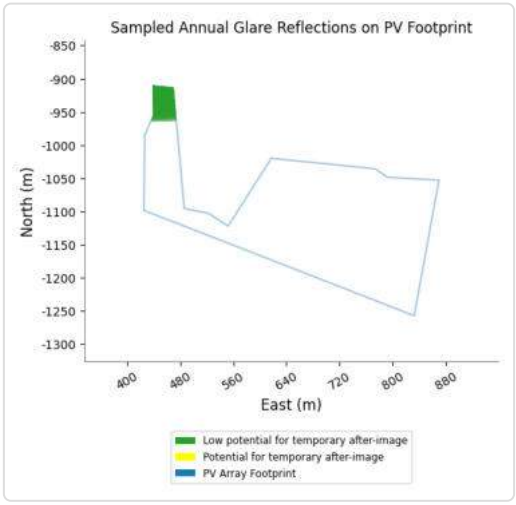
Yellow glare: none

Green glare: 735 min.





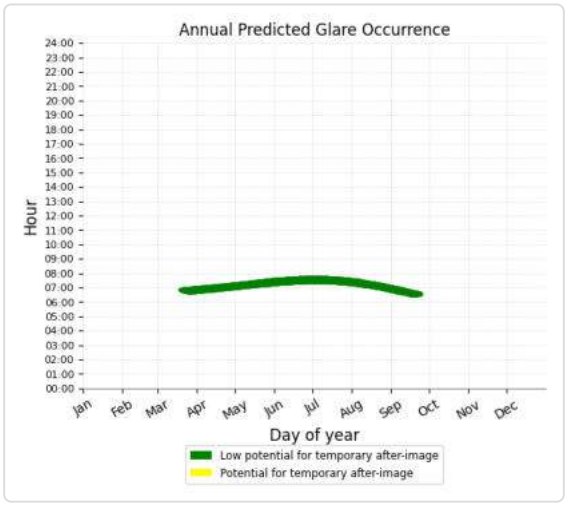


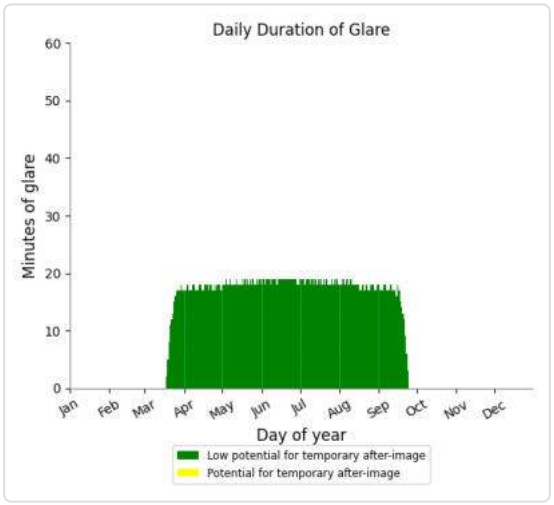


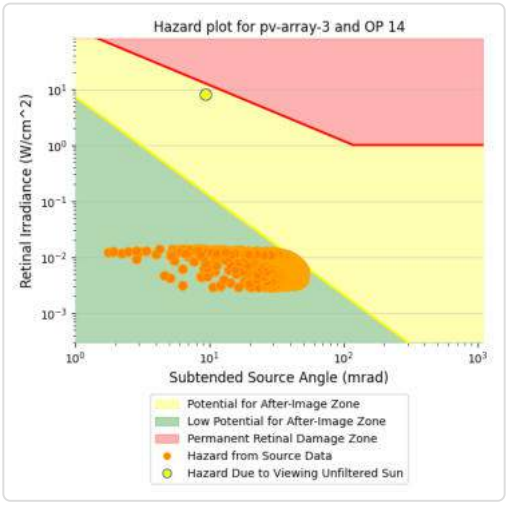
PV array 3 and OP 14

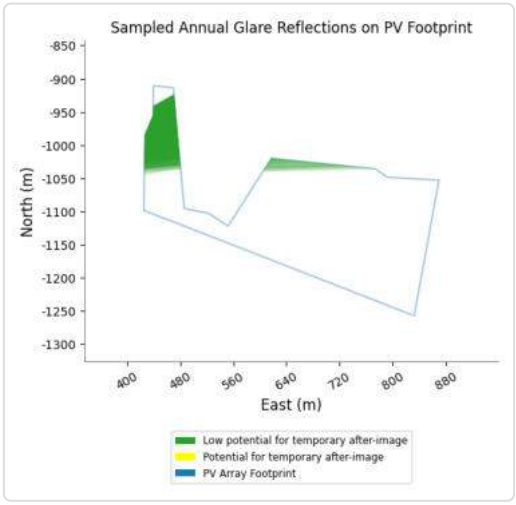
Yellow glare: none

Green glare: 3,338 min.





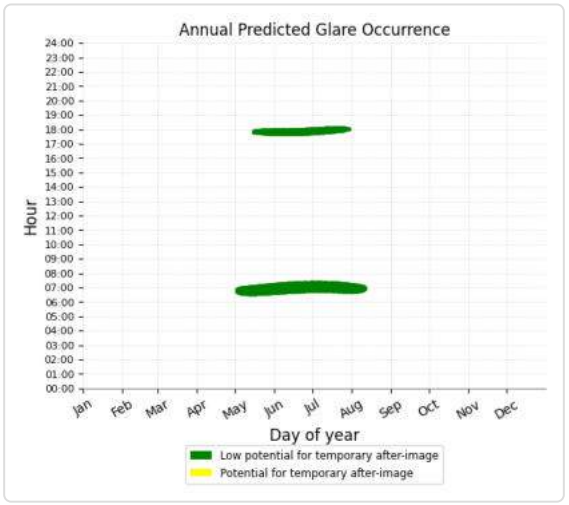


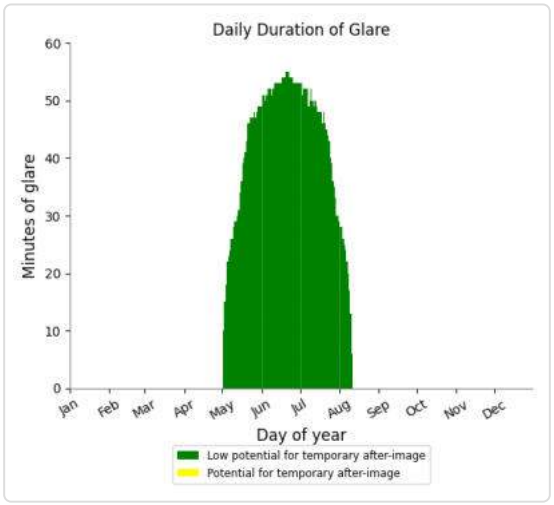


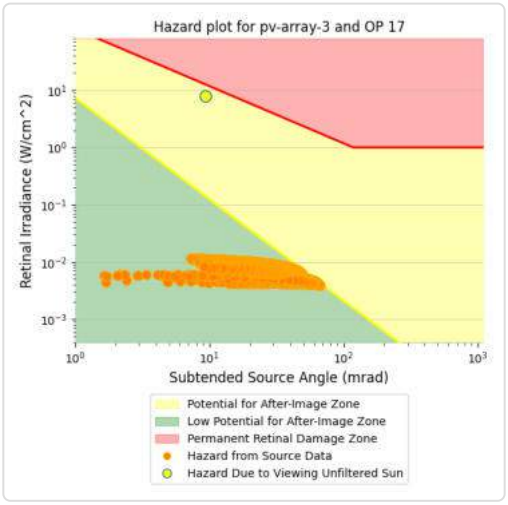
PV array 3 and OP 17

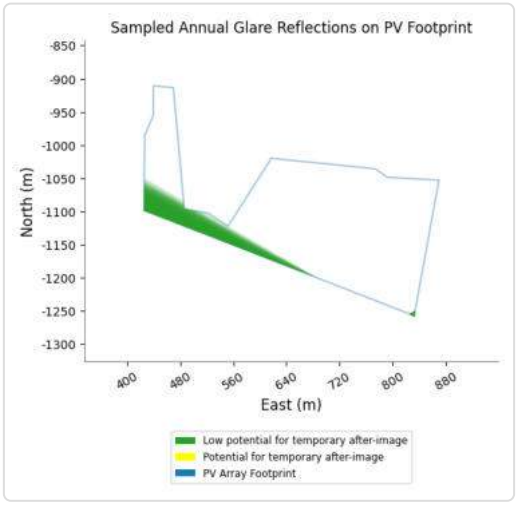
Yellow glare: none

Green glare: 4,309 min.





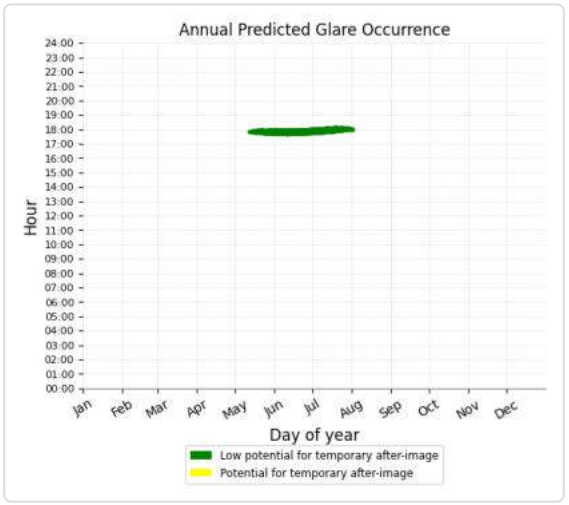


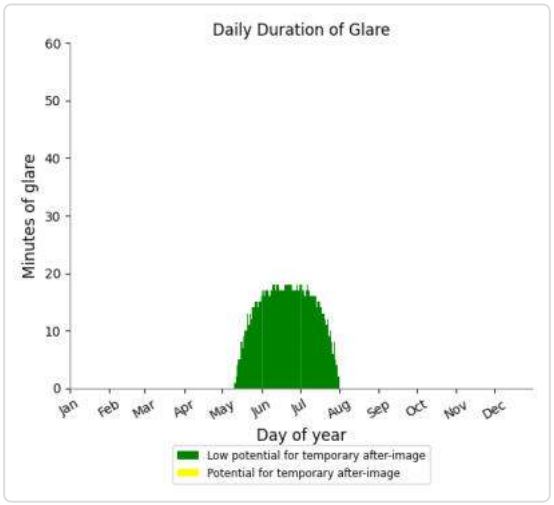


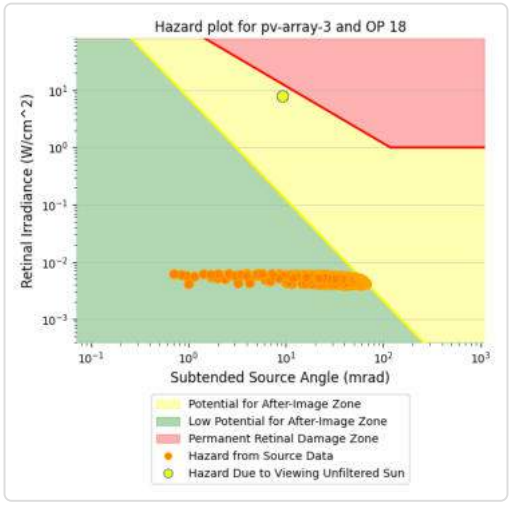
PV array 3 and OP 18

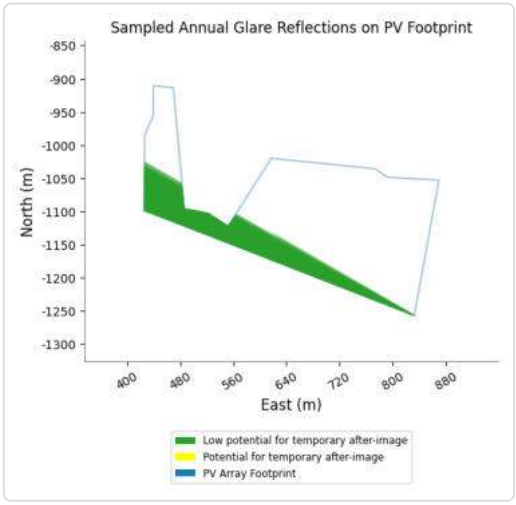
Yellow glare: none

Green glare: 1,135 min.





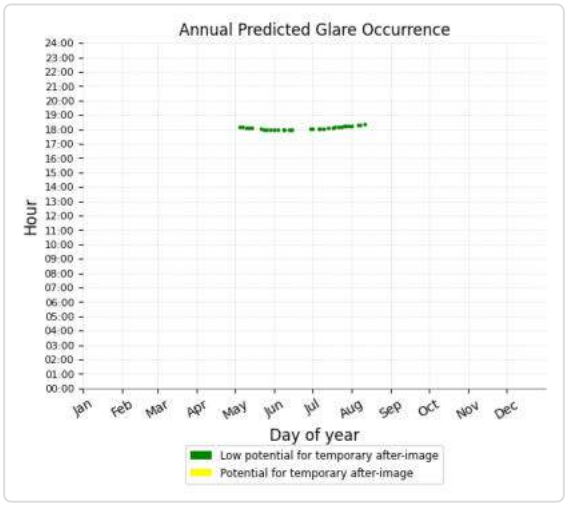


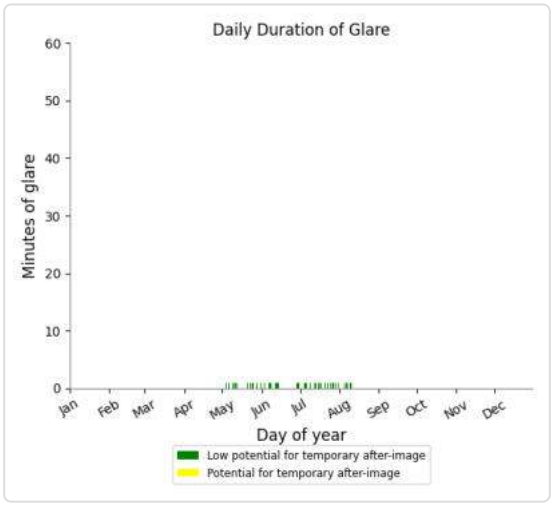


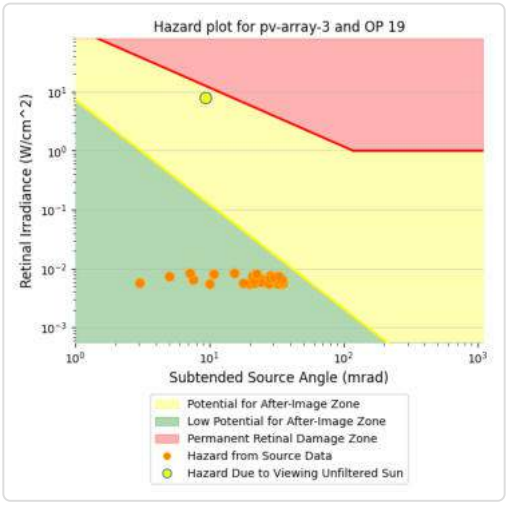
PV array 3 and OP 19

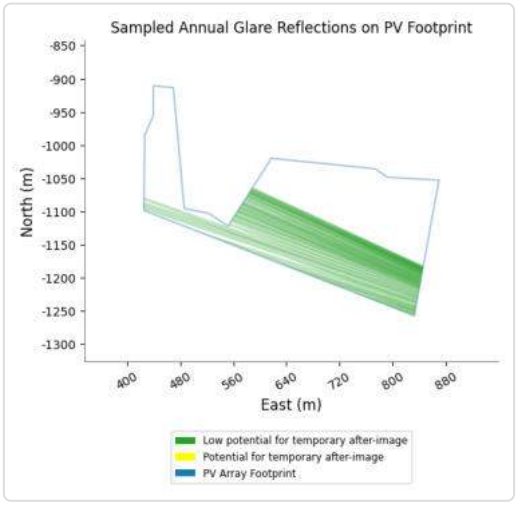
Yellow glare: none

Green glare: 33 min.





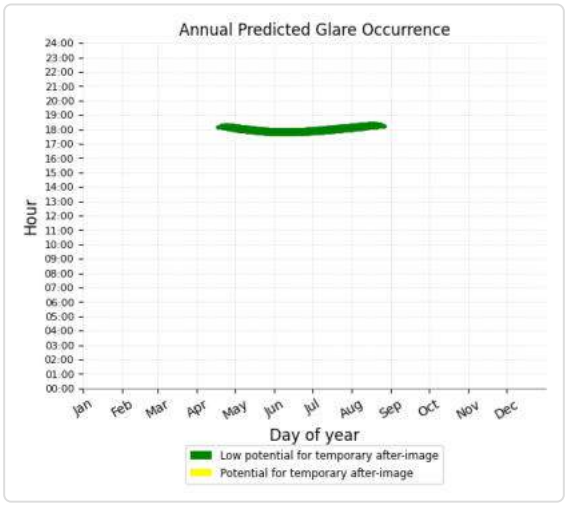


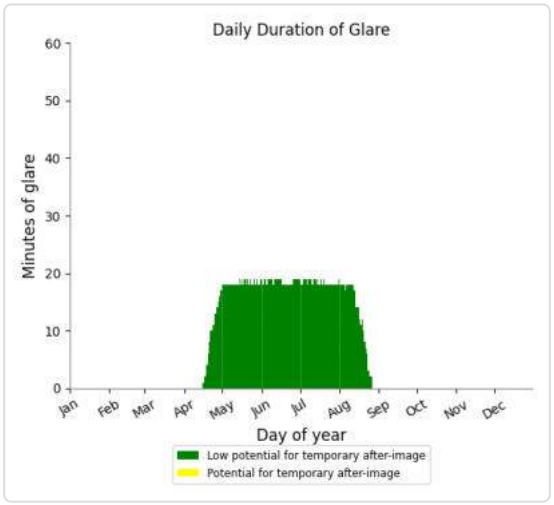


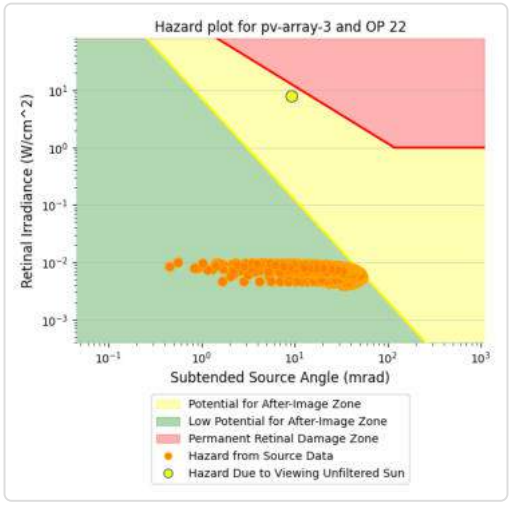
PV array 3 and OP 22

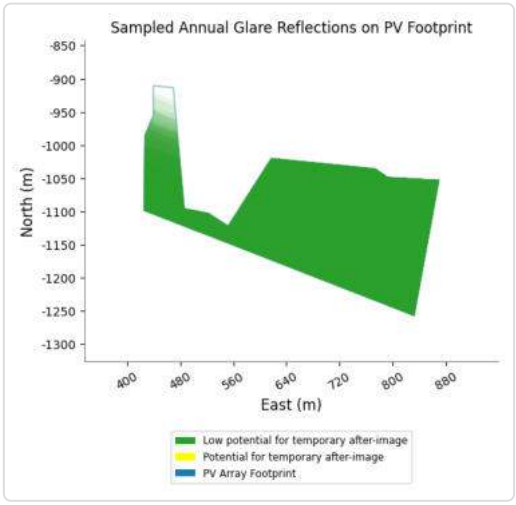
Yellow glare: none

Green glare: 2,184 min.





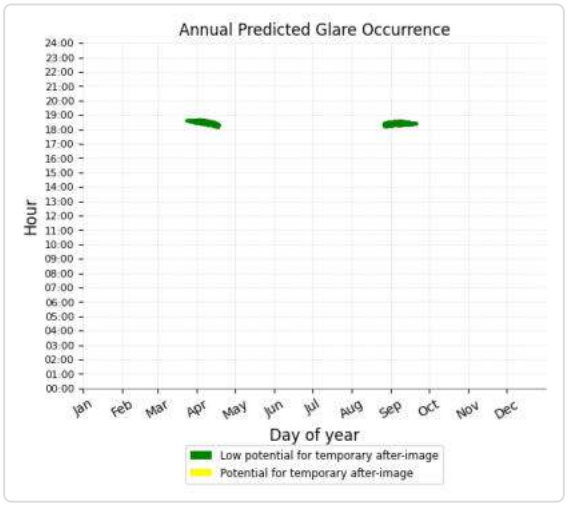


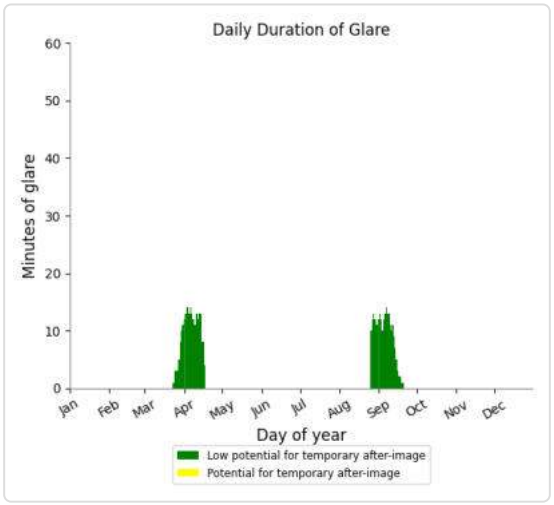


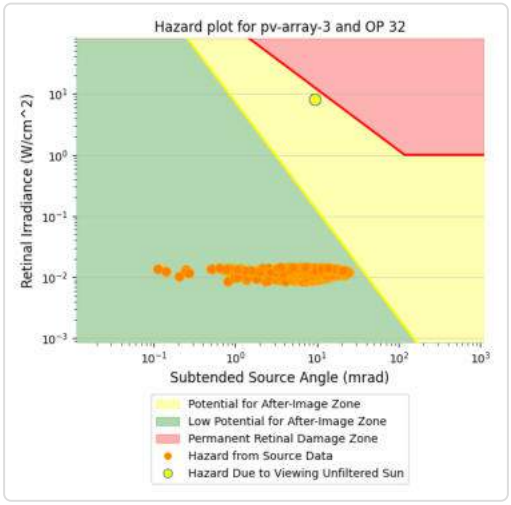
PV array 3 and OP 32

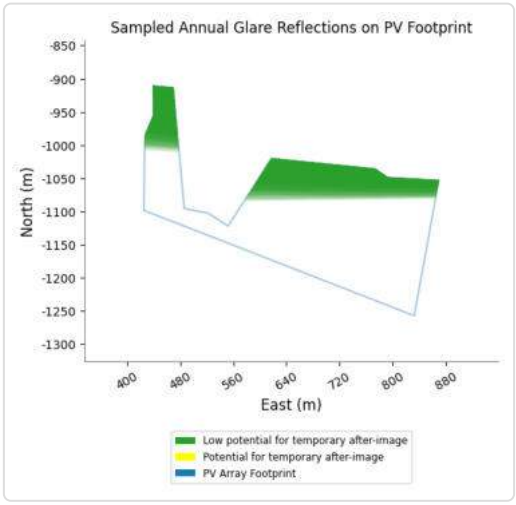
Yellow glare: none

Green glare: 486 min.





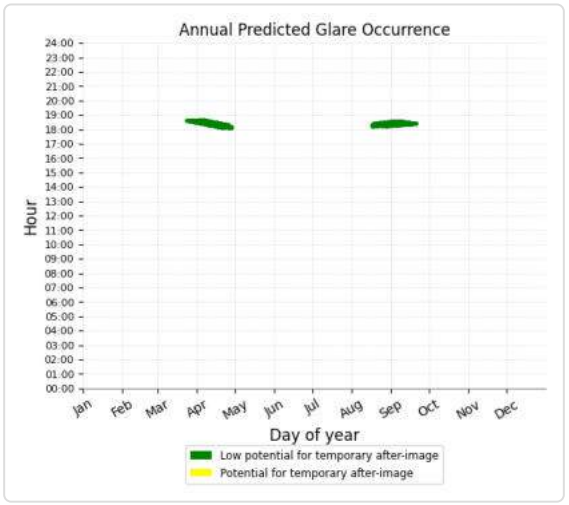


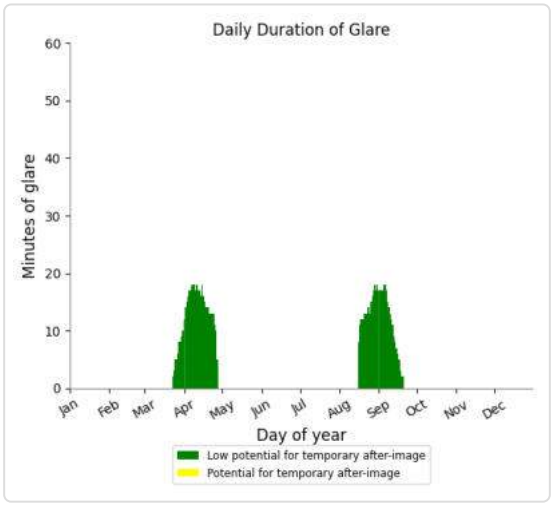


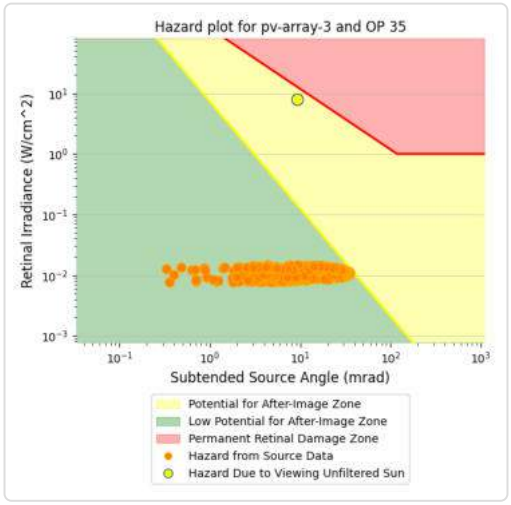
PV array 3 and OP 35

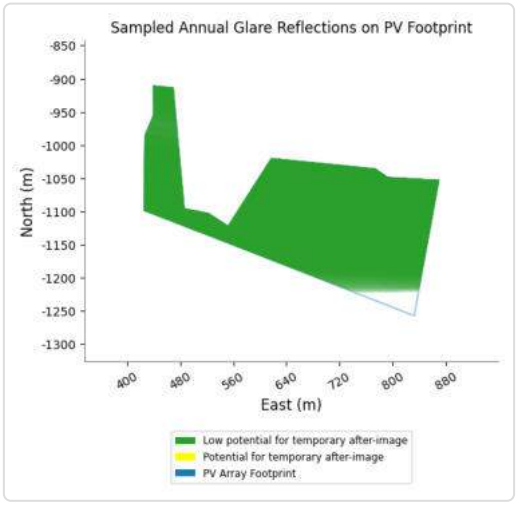
Yellow glare: none

Green glare: 905 min.





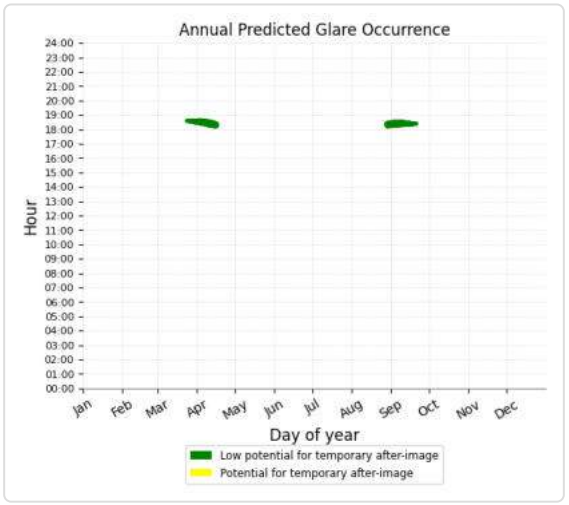


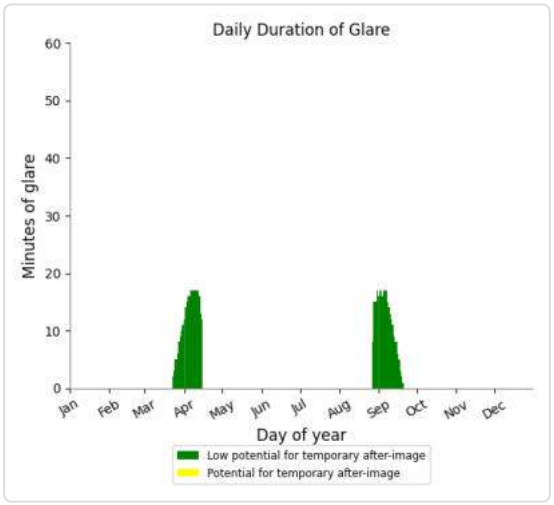


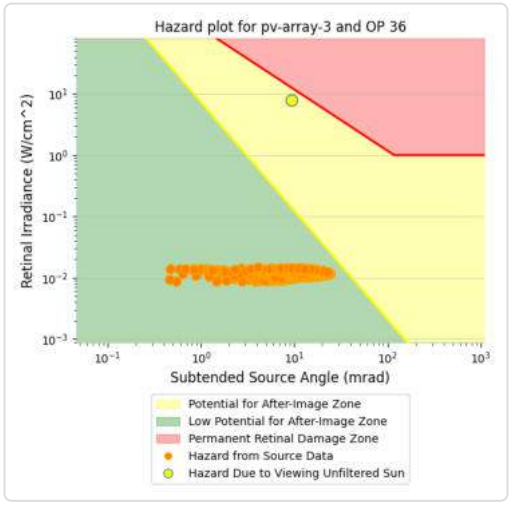
PV array 3 and OP 36

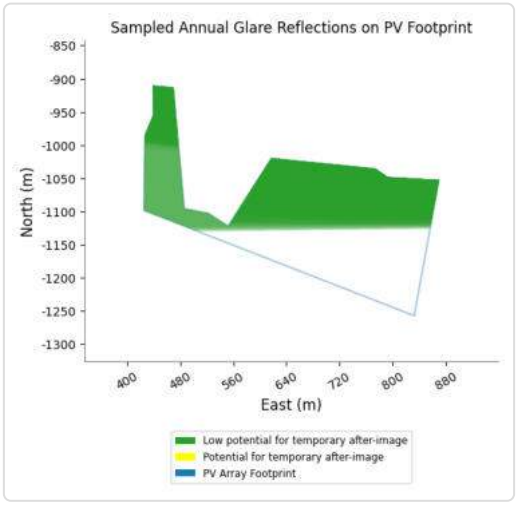
Yellow glare: none

Green glare: 586 min.



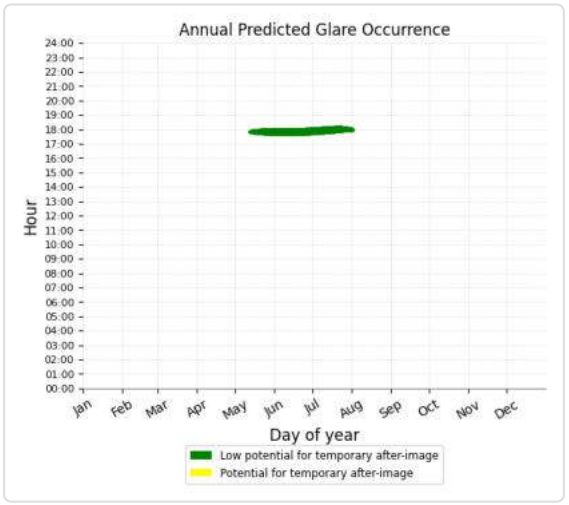


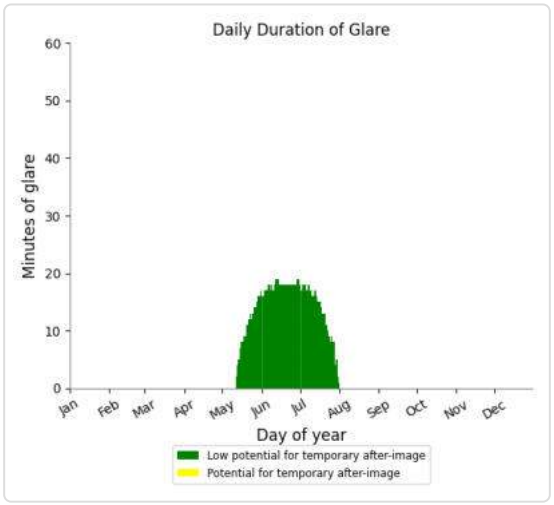


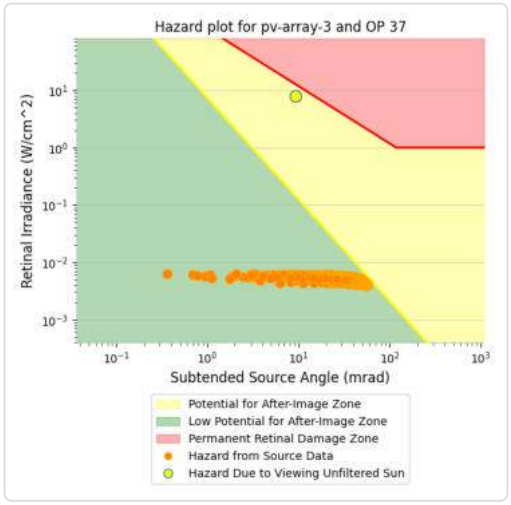


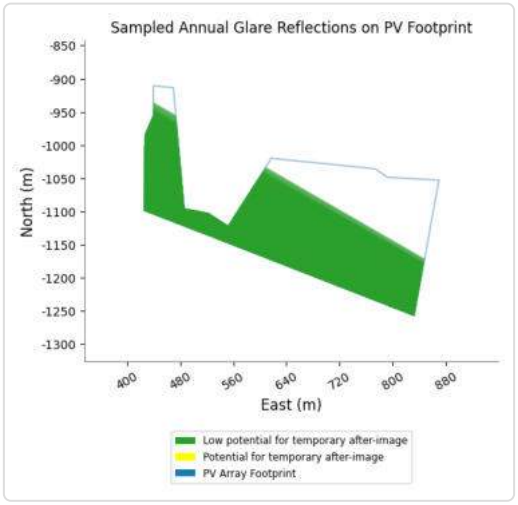
PV array 3 and OP 37

Yellow glare: none
Green glare: 1,165 min.









PV array 3 and OP 1

No glare found

PV array 3 and OP 2

No glare found

PV array 3 and OP 3

No glare found

PV array 3 and OP 4

No glare found

PV array 3 and OP 5

No glare found

PV array 3 and OP 6

No glare found

PV array 3 and OP 7

No glare found

PV array 3 and OP 8

No glare found

PV array 3 and OP 9

No glare found

PV array 3 and OP 10

No glare found

PV array 3 and OP 11

No glare found

PV array 3 and OP 12

No glare found

PV array 3 and OP 23

No glare found

PV array 3 and OP 24

No glare found

PV array 3 and OP 25

No glare found

PV array 3 and OP 26

No glare found

PV array 3 and OP 27

No glare found

PV array 3 and OP 28

No glare found

PV array 3 and OP 29

No glare found

PV array 3 and OP 30

No glare found

PV array 3 and OP 31

No glare found

PV array 3 and OP 38

No glare found

PV array 3 and OP 39

No glare found

PV array 3 and OP 40

No glare found

PV array 3 and OP 41

No glare found

PV array 3 and OP 42

No glare found

PV array 3 and OP 43

No glare found

PV array 3 and OP 44

No glare found

PV array 3 and OP 45

No glare found

PV array 3 and OP 46

No glare found

PV array 3 and OP 47

No glare found

PV array 3 and OP 48

No glare found

PV: PV array 4 low potential for temporary after-image

Receptor results ordered by category of glare

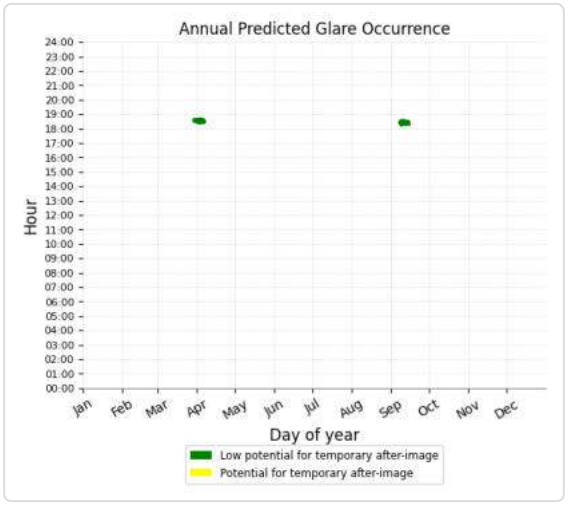
Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 18	106	1.8	0	0.0
OP 19	188	3.1	0	0.0
OP 20	162	2.7	0	0.0
OP 21	129	2.1	0	0.0
OP 22	482	8.0	0	0.0
OP 34	53	0.9	0	0.0
OP 37	829	13.8	0	0.0
OP 38	1,114	18.6	0	0.0
OP 39	1,445	24.1	0	0.0
OP 40	159	2.6	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 23	0	0.0	0	0.0
OP 24	0	0.0	0	0.0
OP 25	0	0.0	0	0.0
OP 26	0	0.0	0	0.0
OP 27	0	0.0	0	0.0
OP 28	0	0.0	0	0.0
OP 29	0	0.0	0	0.0
OP 30	0	0.0	0	0.0
OP 31	0	0.0	0	0.0
OP 32	0	0.0	0	0.0
OP 33	0	0.0	0	0.0
OP 35	0	0.0	0	0.0

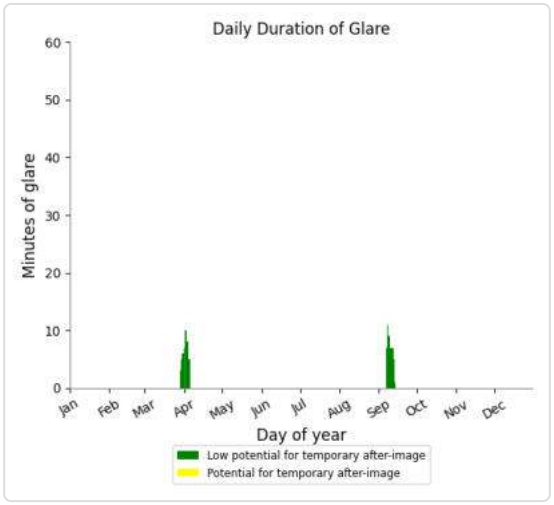
Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 36	0	0.0	0	0.0
OP 41	0	0.0	0	0.0
OP 42	0	0.0	0	0.0
OP 43	0	0.0	0	0.0
OP 44	0	0.0	0	0.0
OP 45	0	0.0	0	0.0
OP 46	0	0.0	0	0.0
OP 47	0	0.0	0	0.0
OP 48	0	0.0	0	0.0

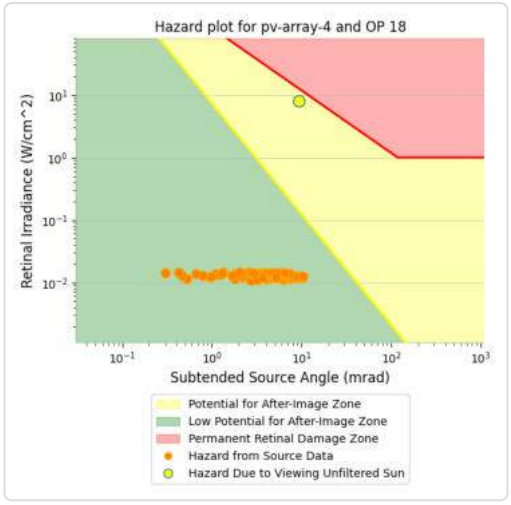
PV array 4 and OP 18

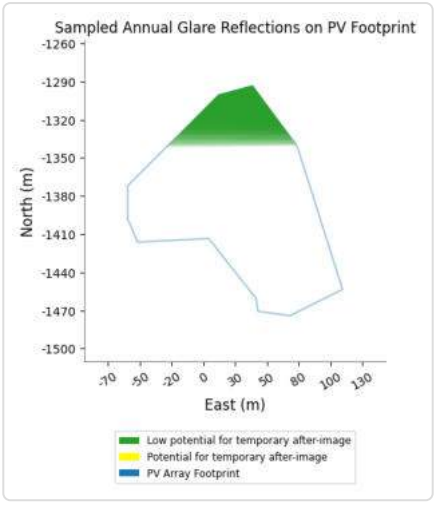
Yellow glare: none

Green glare: 106 min.





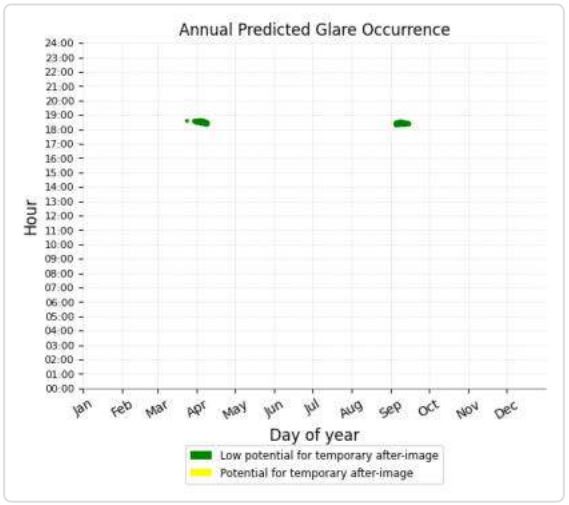


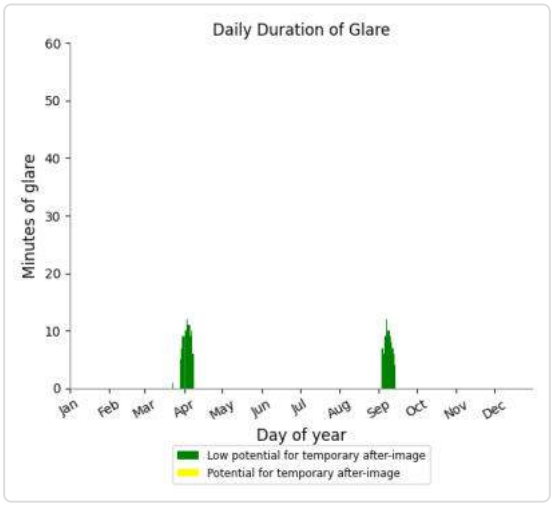


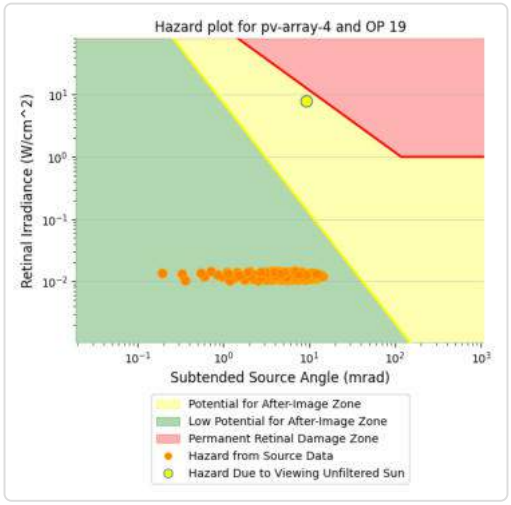
PV array 4 and OP 19

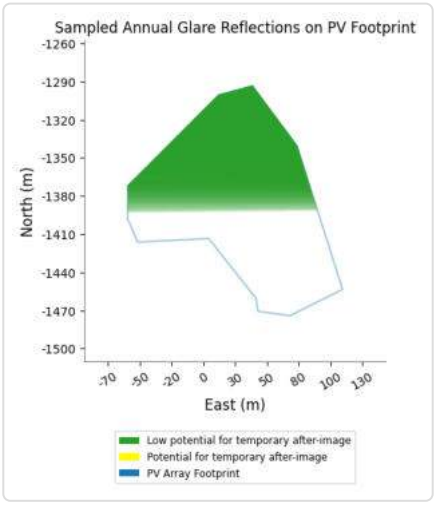
Yellow glare: none

Green glare: 188 min.





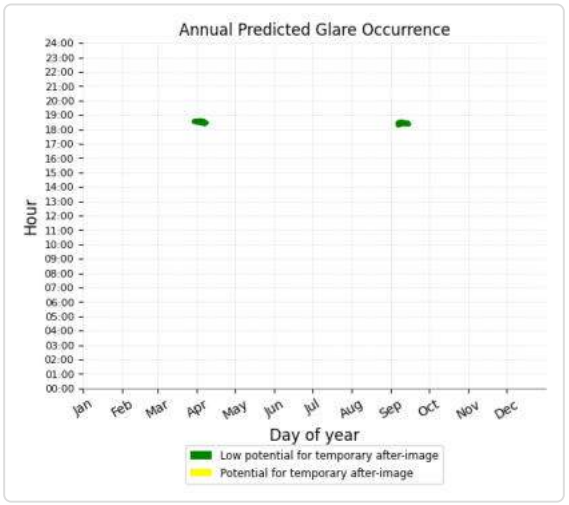


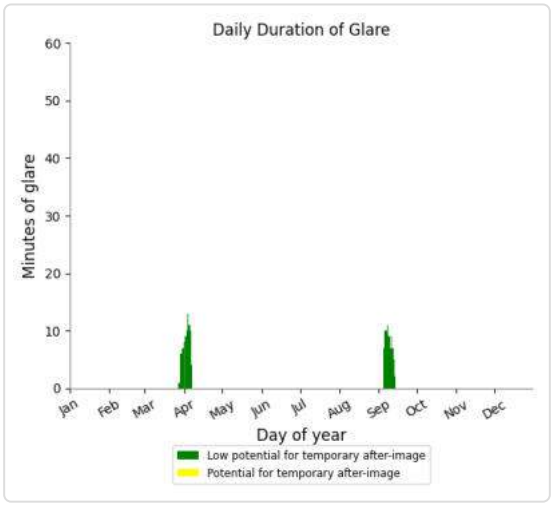


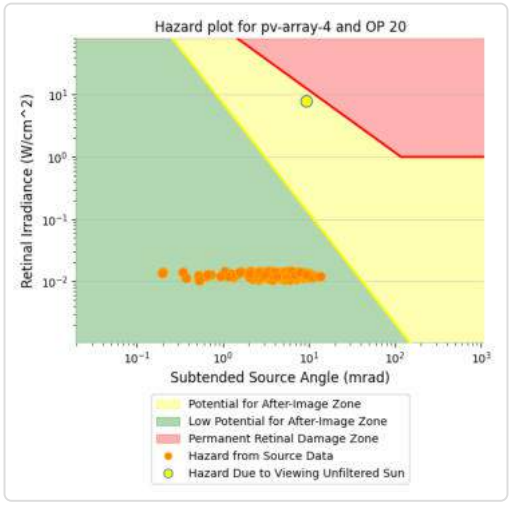
PV array 4 and OP 20

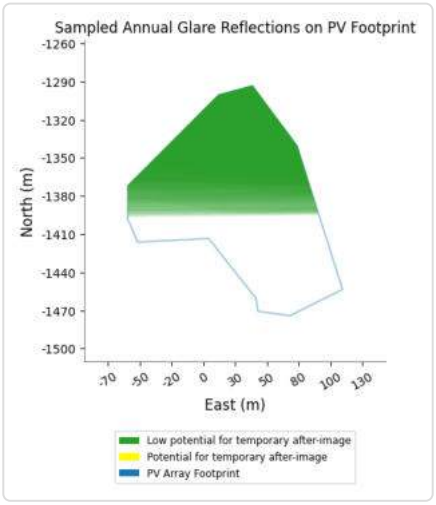
Yellow glare: none

Green glare: 162 min.





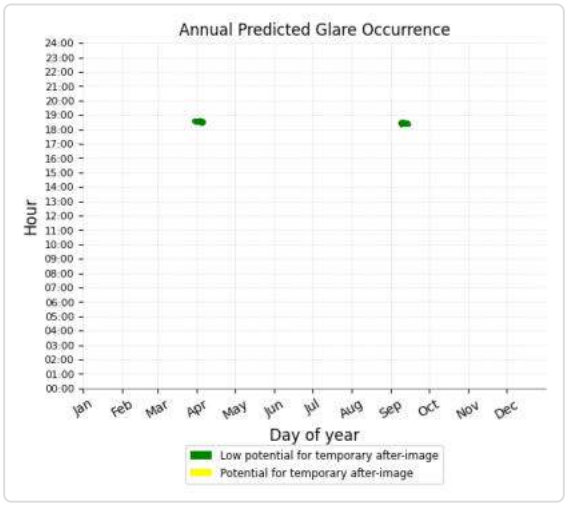


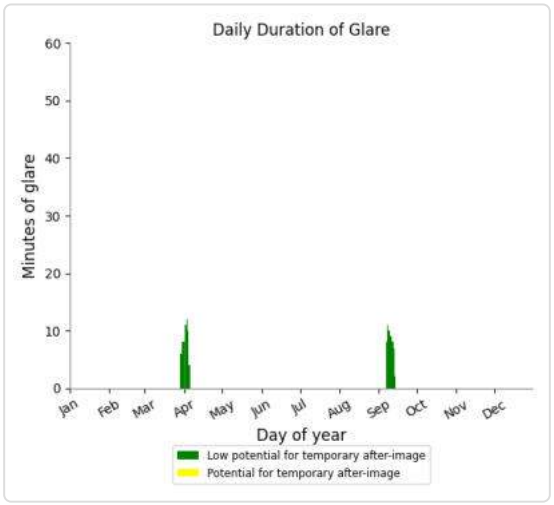


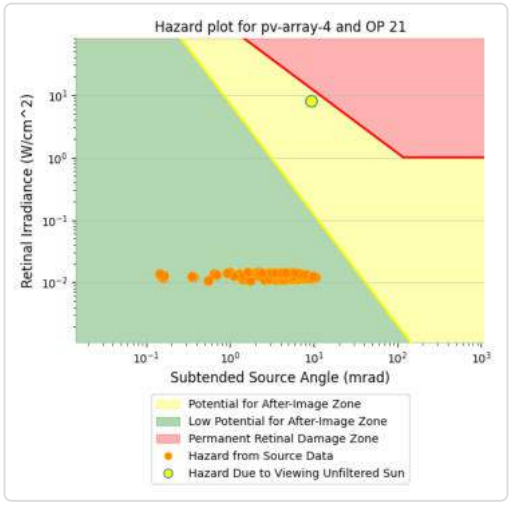
PV array 4 and OP 21

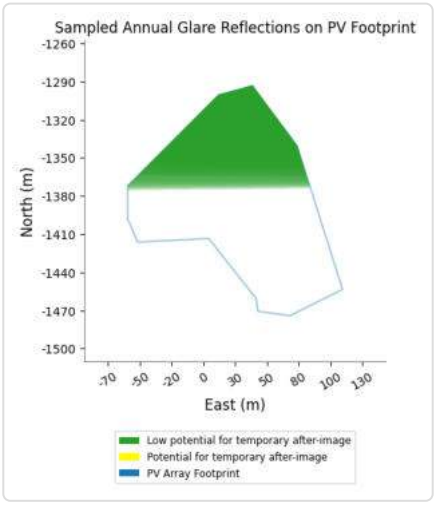
Yellow glare: none

Green glare: 129 min.





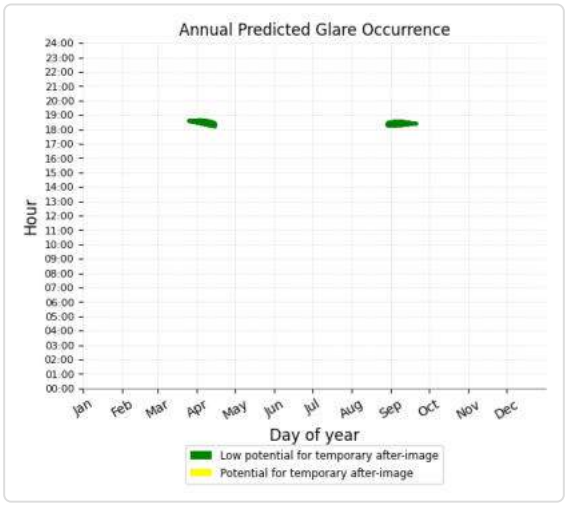


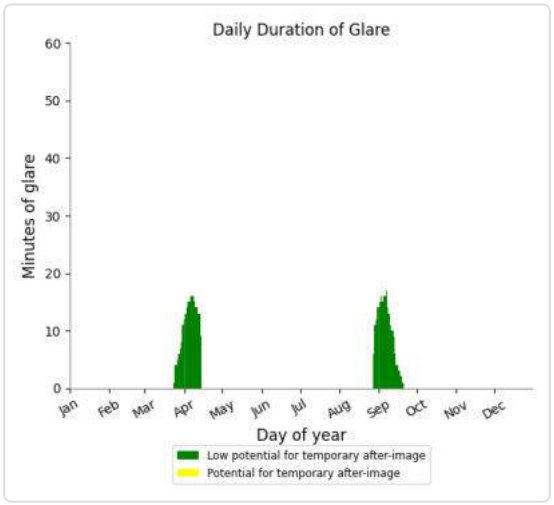


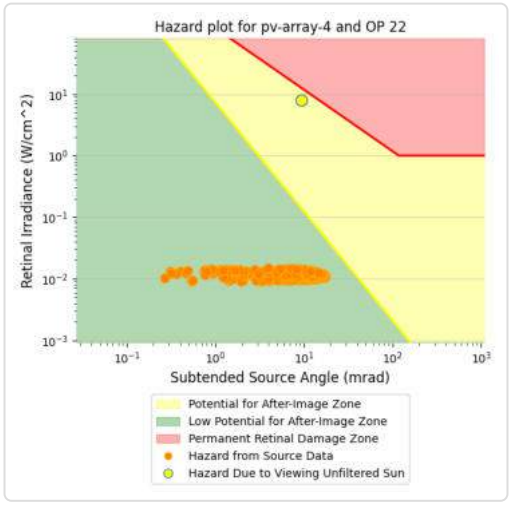
PV array 4 and OP 22

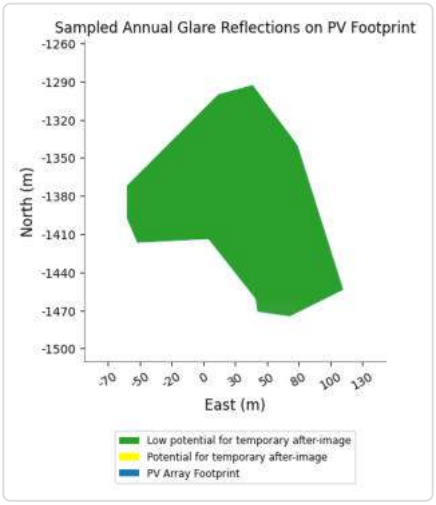
Yellow glare: none

Green glare: 482 min.





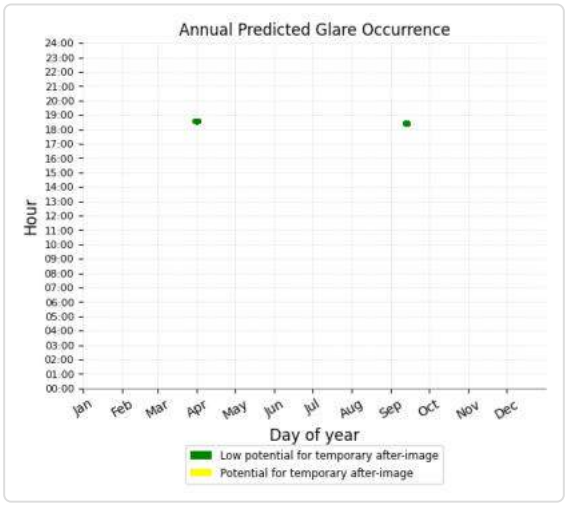


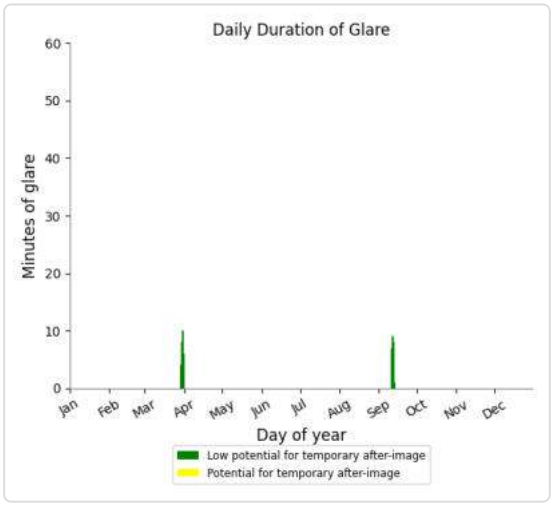


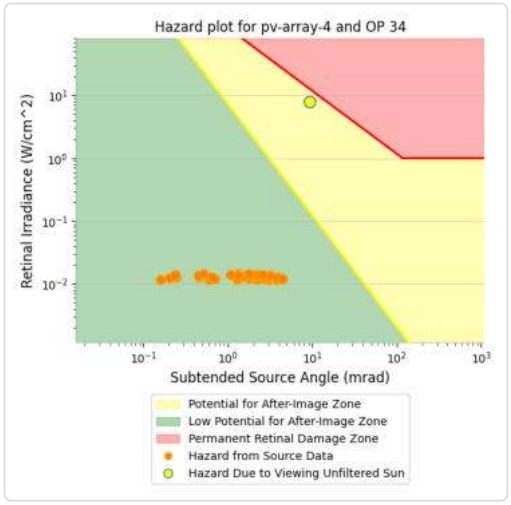
PV array 4 and OP 34

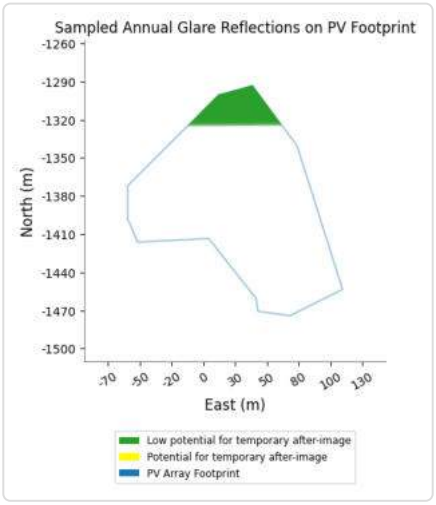
Yellow glare: none

Green glare: 53 min.





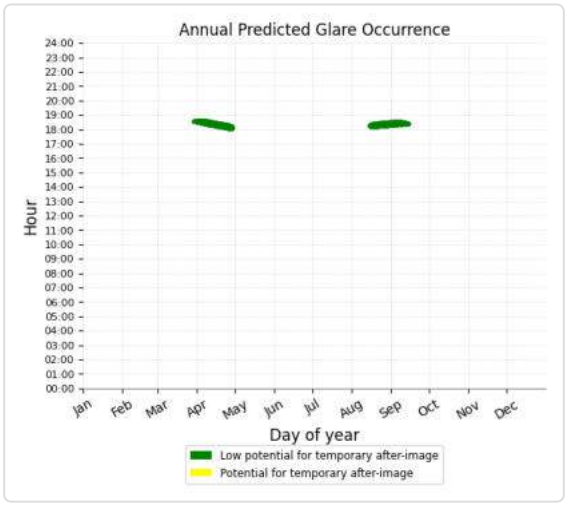


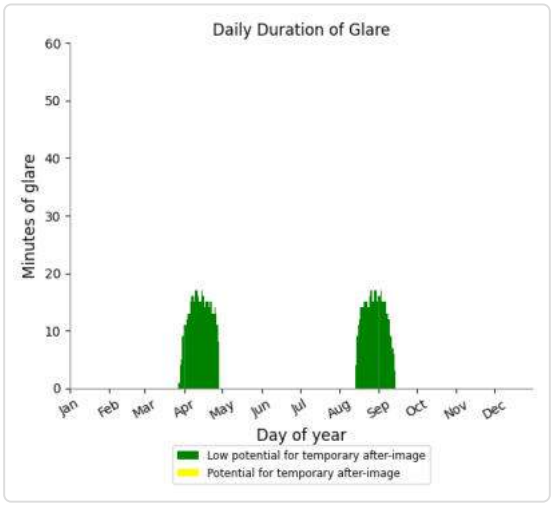


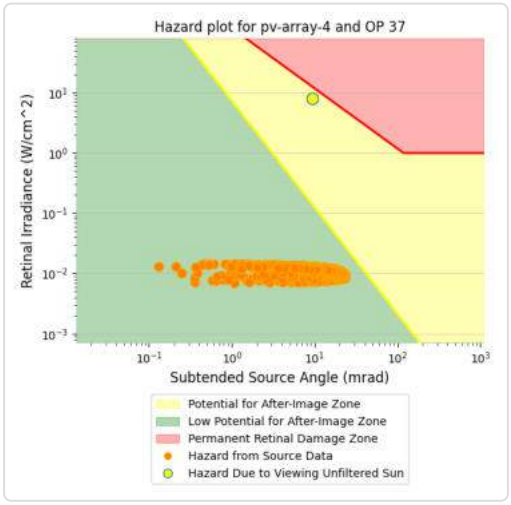
PV array 4 and OP 37

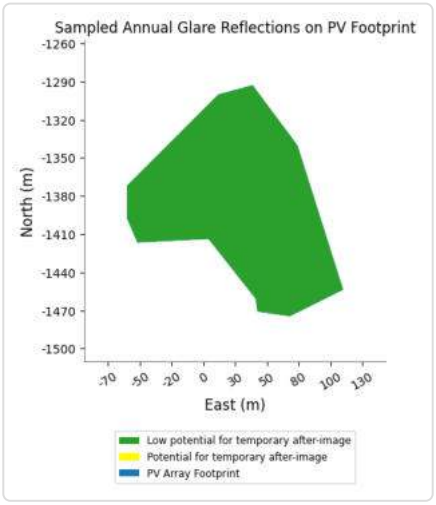
Yellow glare: none

Green glare: 829 min.





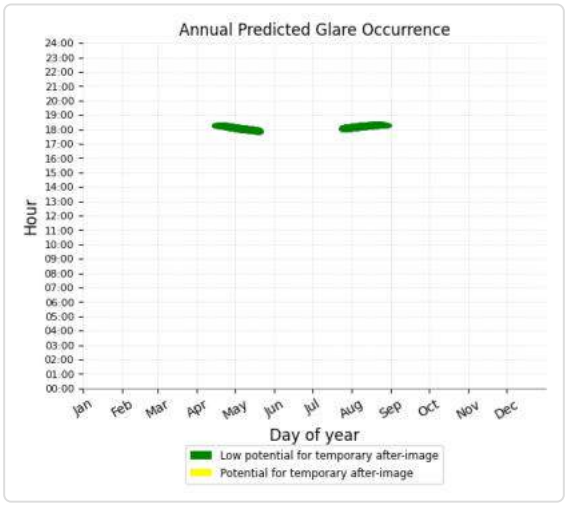


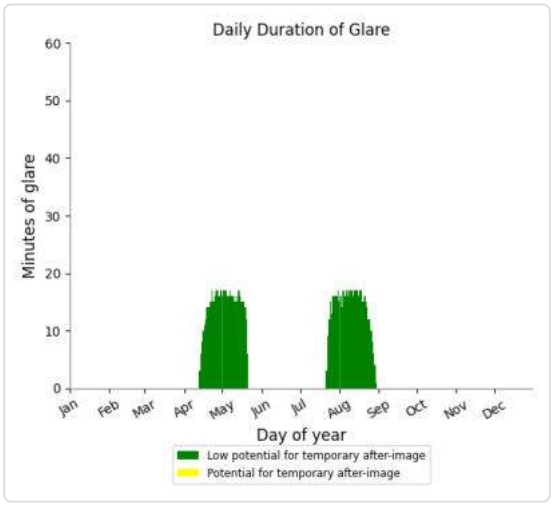


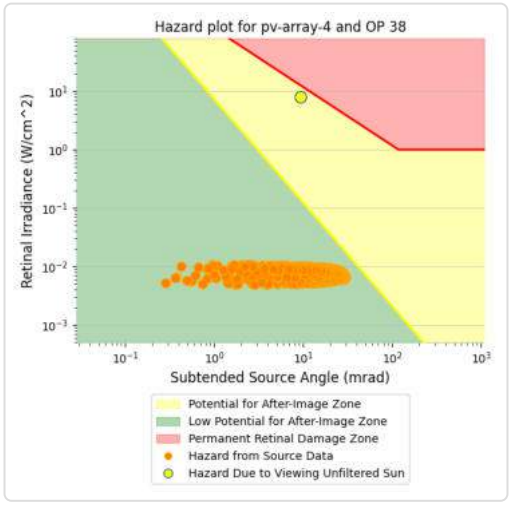
PV array 4 and OP 38

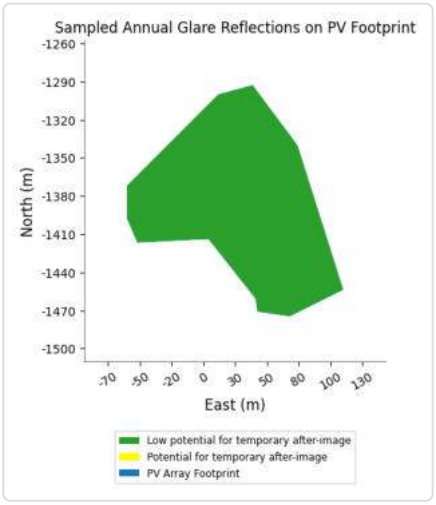
Yellow glare: none

Green glare: 1,114 min.





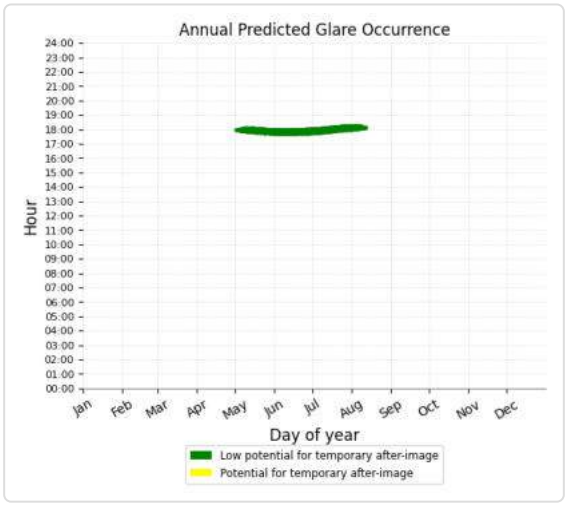


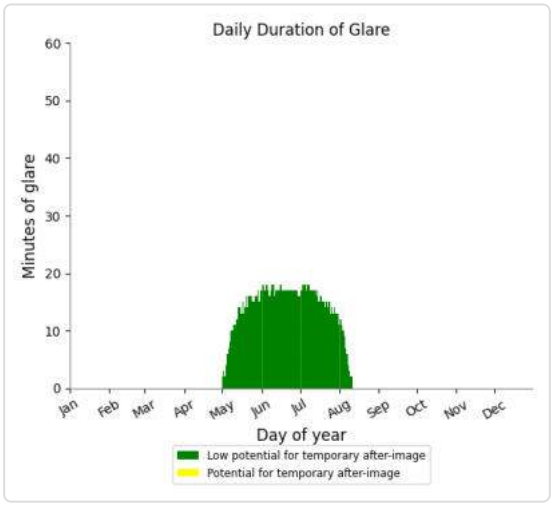


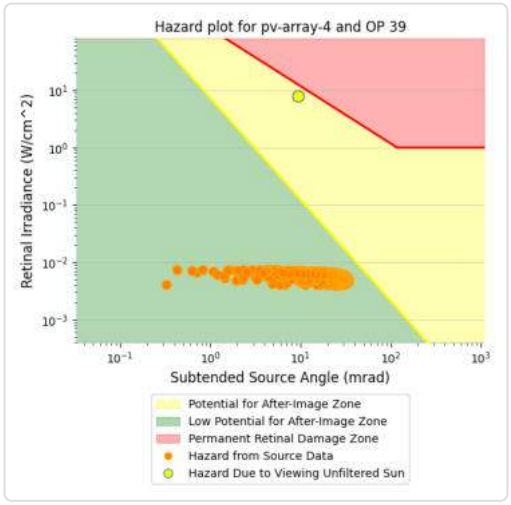
PV array 4 and OP 39

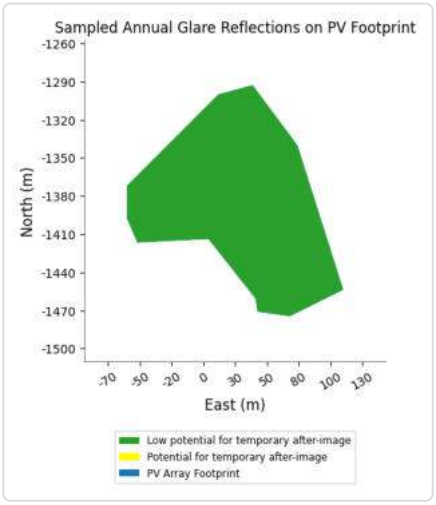
Yellow glare: none

Green glare: 1,445 min.



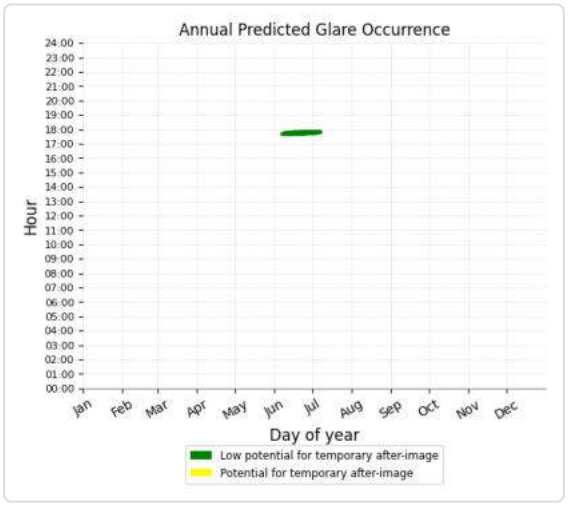


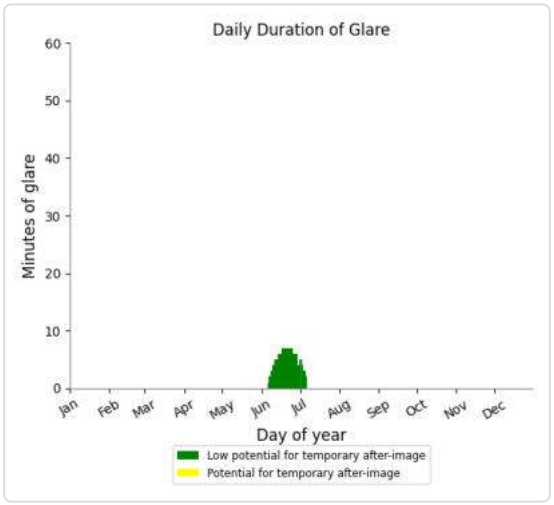


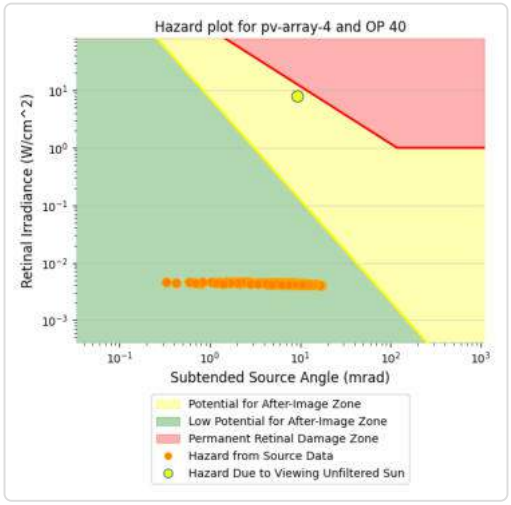


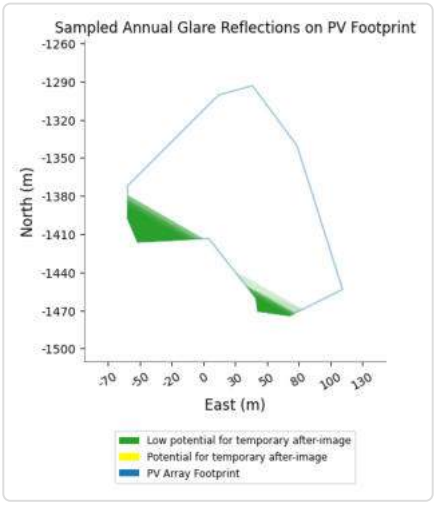
PV array 4 and OP 40

Yellow glare: none
Green glare: 159 min.









PV array 4 and OP 1

No glare found

PV array 4 and OP 2

No glare found

PV array 4 and OP 3

No glare found

PV array 4 and OP 4

No glare found

PV array 4 and OP 5

No glare found

PV array 4 and OP 6

No glare found

PV array 4 and OP 7

No glare found

PV array 4 and OP 8

No glare found

PV array 4 and OP 9

No glare found

PV array 4 and OP 10

No glare found

PV array 4 and OP 11

No glare found

PV array 4 and OP 12

No glare found

PV array 4 and OP 13

No glare found

PV array 4 and OP 14

No glare found

PV array 4 and OP 15

No glare found

PV array 4 and OP 16

No glare found

PV array 4 and OP 17

No glare found

PV array 4 and OP 23

No glare found

PV array 4 and OP 24

No glare found

PV array 4 and OP 25

No glare found

PV array 4 and OP 26

No glare found

PV array 4 and OP 27

No glare found

PV array 4 and OP 28

No glare found

PV array 4 and OP 29

No glare found

PV array 4 and OP 30

No glare found

PV array 4 and OP 31

No glare found

PV array 4 and OP 32

No glare found

PV array 4 and OP 33

No glare found

PV array 4 and OP 35

No glare found

PV array 4 and OP 36

No glare found

PV array 4 and OP 41

No glare found

PV array 4 and OP 42

No glare found

PV array 4 and OP 43

No glare found

PV array 4 and OP 44

No glare found

PV array 4 and OP 45

No glare found

PV array 4 and OP 46

No glare found

PV array 4 and OP 47

No glare found

PV array 4 and OP 48

No glare found

PV: PV array 5 low potential for temporary after-image

Receptor results ordered by category of glare

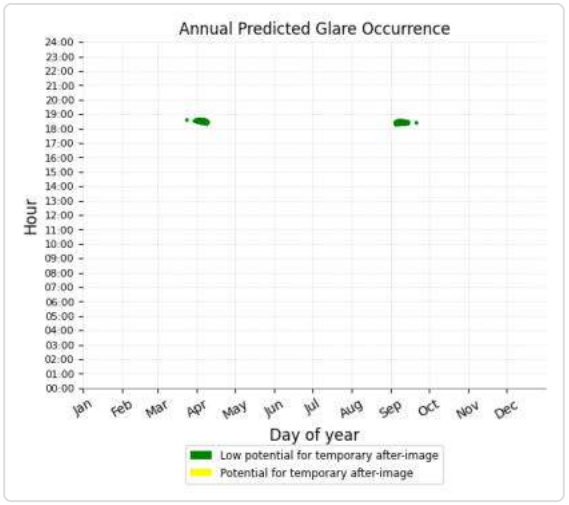
Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 37	225	3.8	0	0.0
OP 38	643	10.7	0	0.0
OP 40	1,600	26.7	0	0.0
OP 41	1,808	30.1	0	0.0
OP 42	1,717	28.6	0	0.0
OP 43	882	14.7	0	0.0
OP 47	887	14.8	0	0.0
OP 48	1,804	30.1	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0
OP 21	0	0.0	0	0.0
OP 22	0	0.0	0	0.0
OP 23	0	0.0	0	0.0
OP 24	0	0.0	0	0.0
OP 25	0	0.0	0	0.0
OP 26	0	0.0	0	0.0
OP 27	0	0.0	0	0.0
OP 28	0	0.0	0	0.0
OP 29	0	0.0	0	0.0
OP 30	0	0.0	0	0.0
OP 31	0	0.0	0	0.0

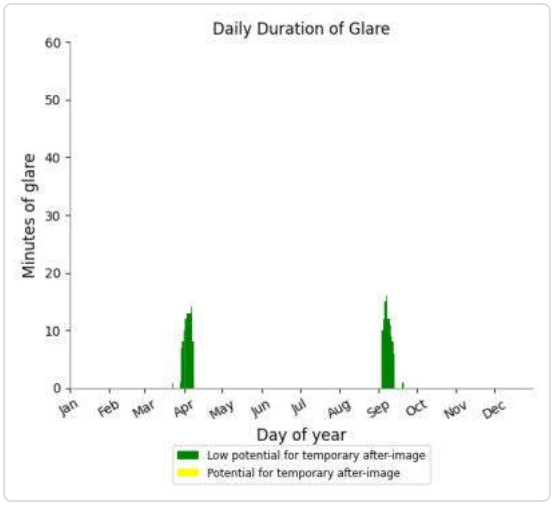
Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 32	0	0.0	0	0.0
OP 33	0	0.0	0	0.0
OP 34	0	0.0	0	0.0
OP 35	0	0.0	0	0.0
OP 36	0	0.0	0	0.0
OP 39	0	0.0	0	0.0
OP 44	0	0.0	0	0.0
OP 45	0	0.0	0	0.0
OP 46	0	0.0	0	0.0

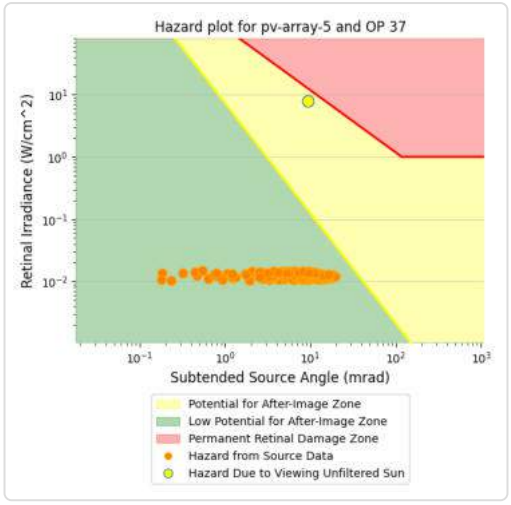
PV array 5 and OP 37

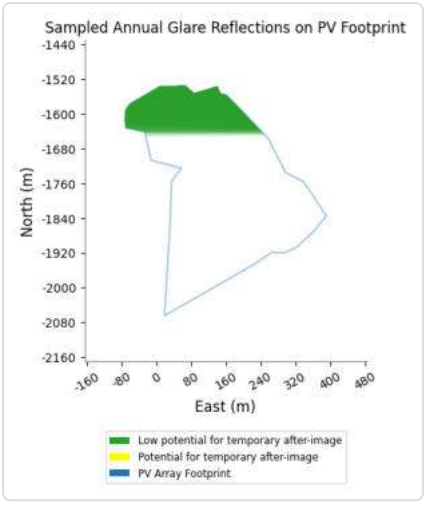
Yellow glare: none

Green glare: 225 min.





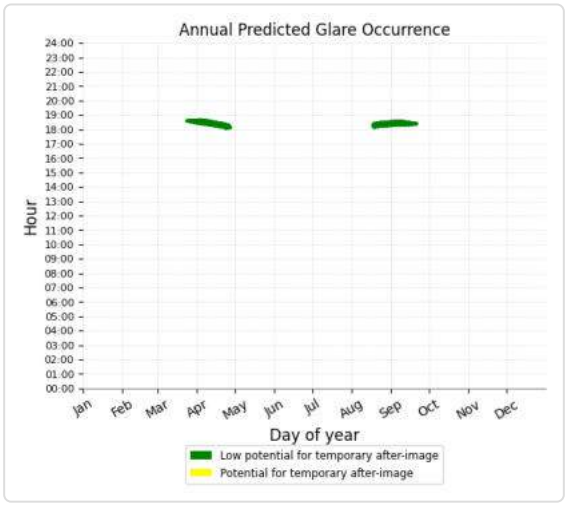


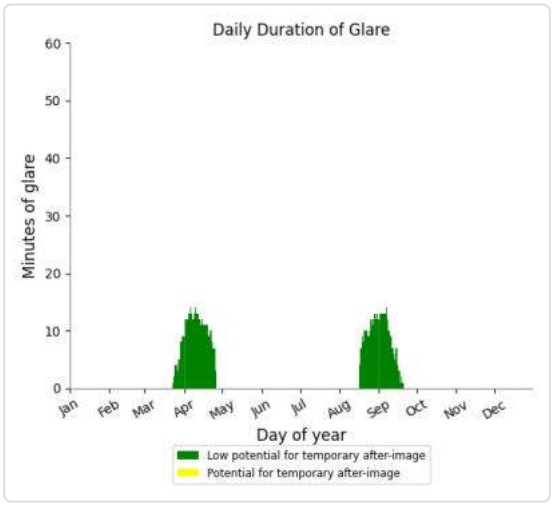


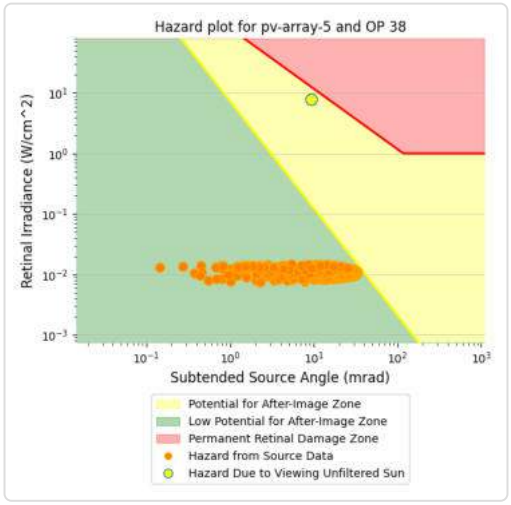
PV array 5 and OP 38

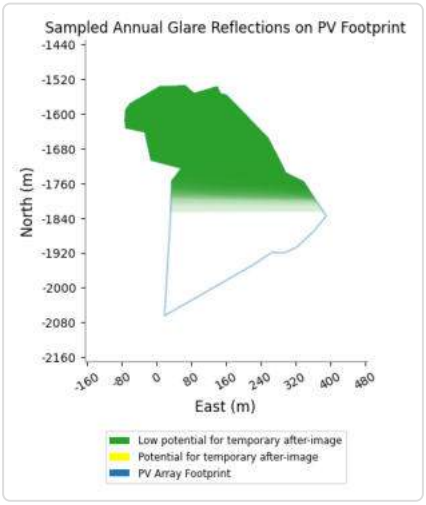
Yellow glare: none

Green glare: 643 min.





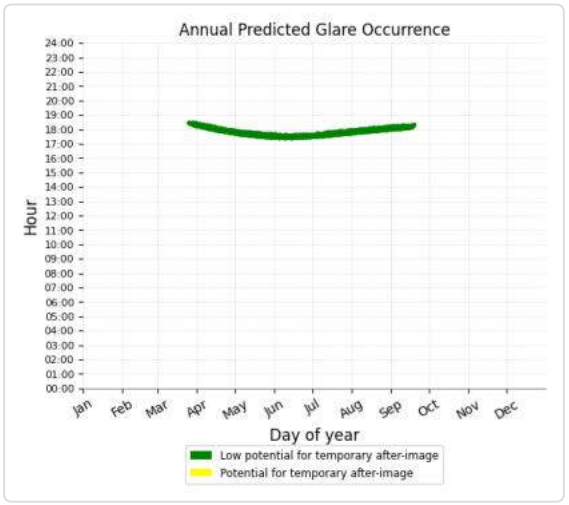


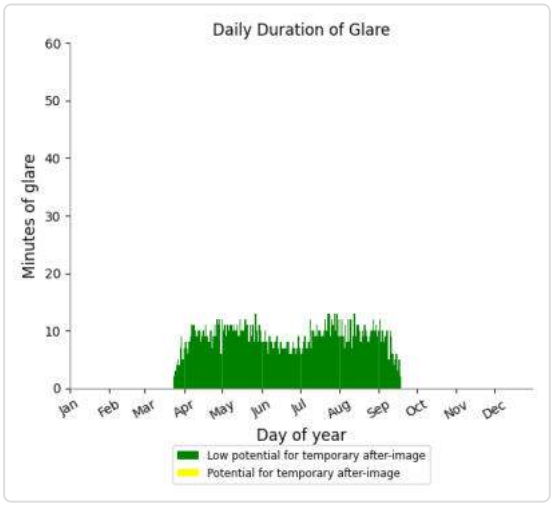


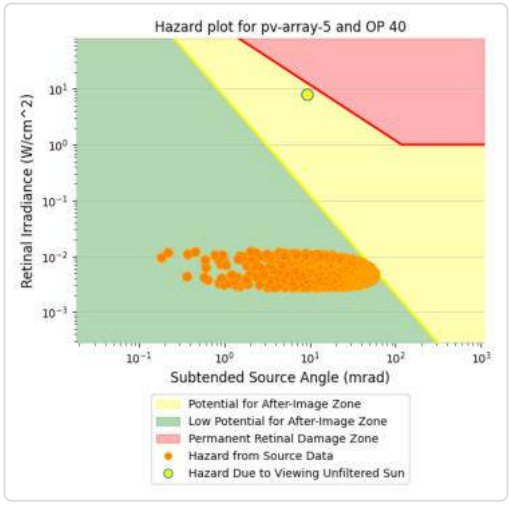
PV array 5 and OP 40

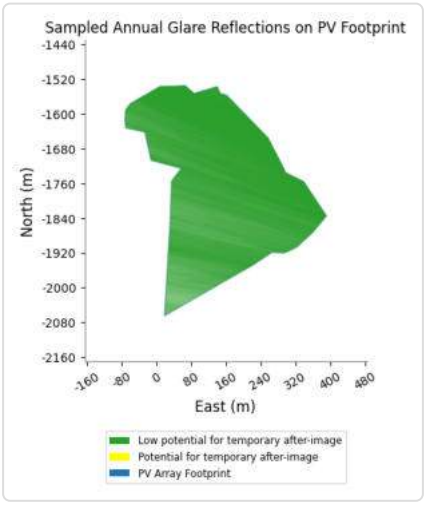
Yellow glare: none

Green glare: 1,600 min.





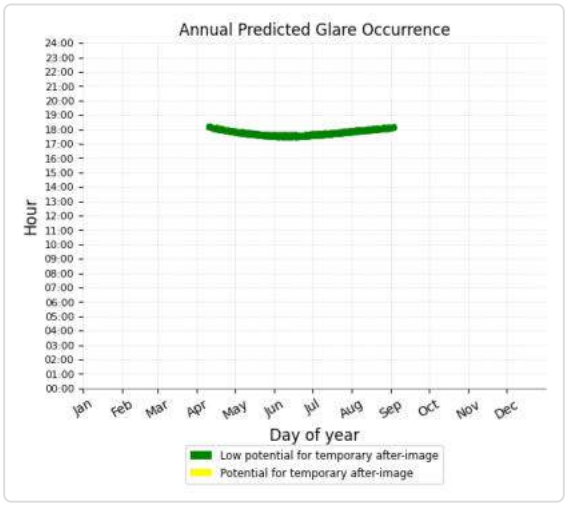


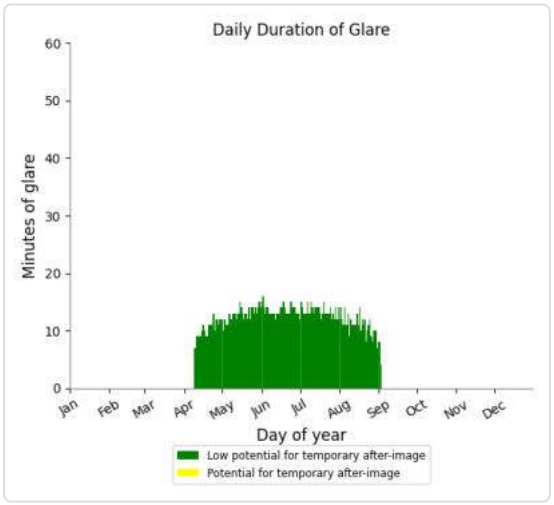


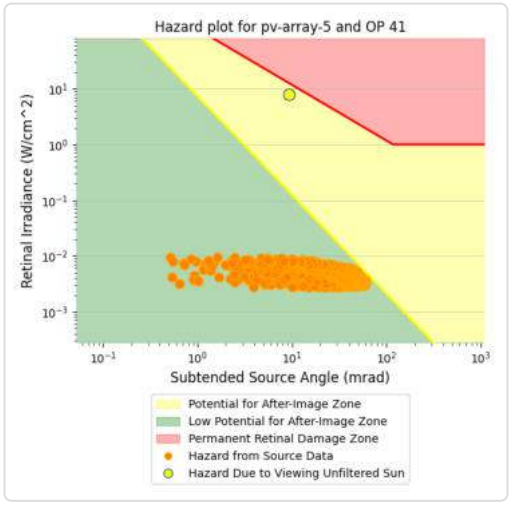
PV array 5 and OP 41

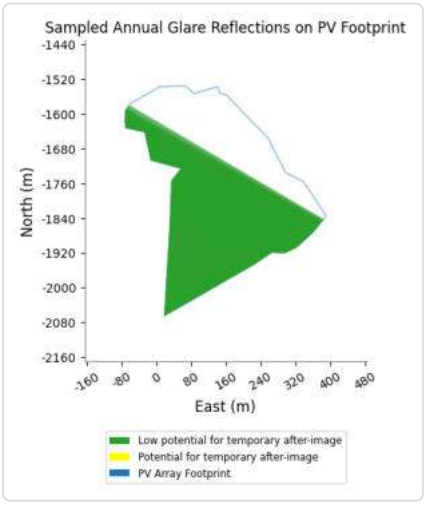
Yellow glare: none

Green glare: 1,808 min.





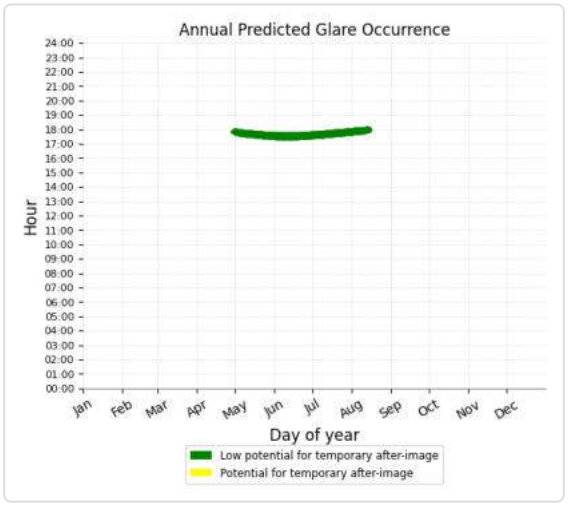


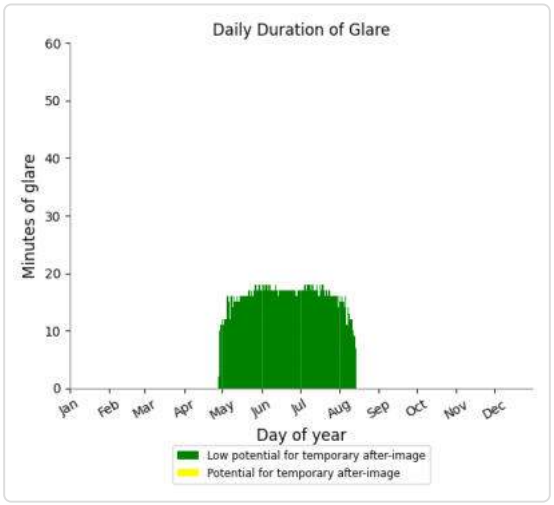


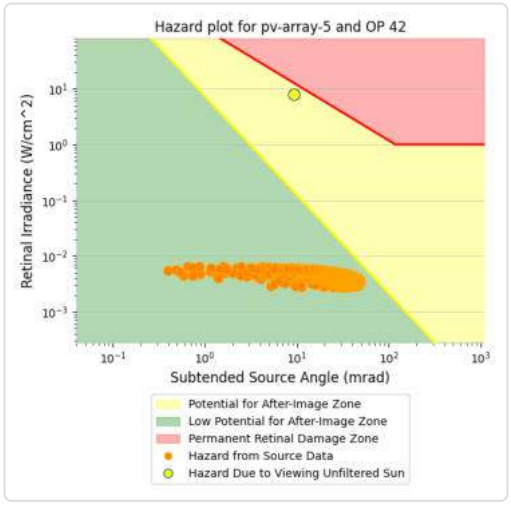
PV array 5 and OP 42

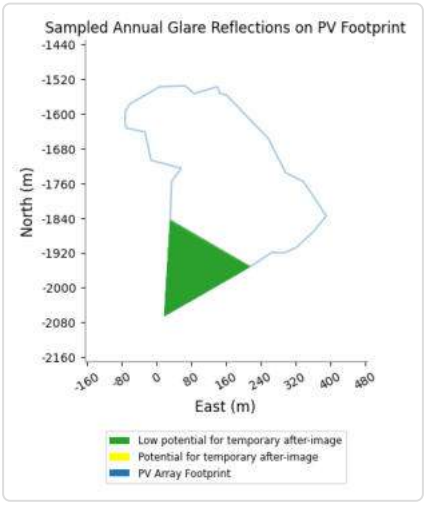
Yellow glare: none

Green glare: 1,717 min.





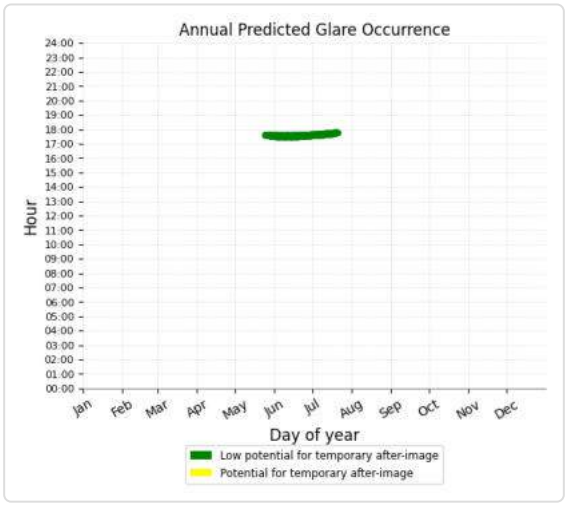


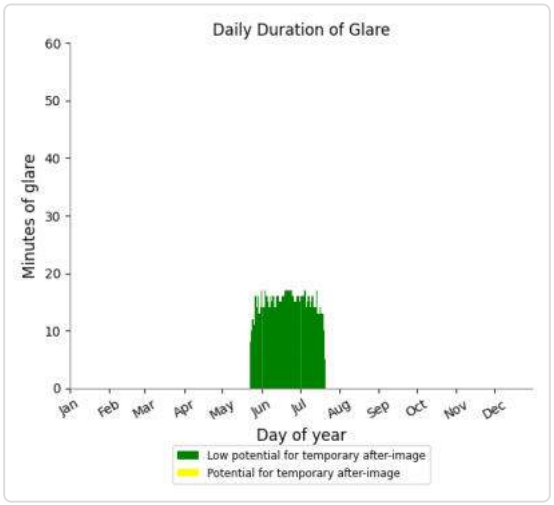


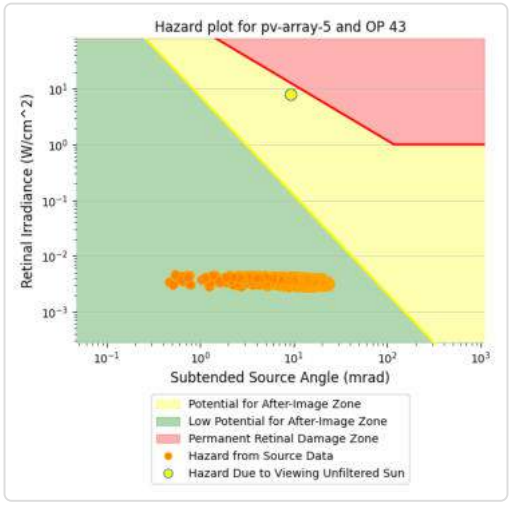
PV array 5 and OP 43

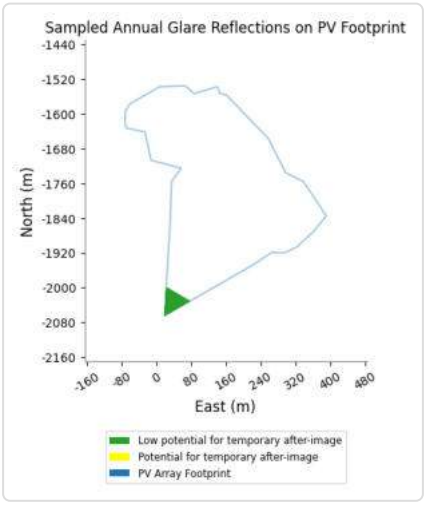
Yellow glare: none

Green glare: 882 min.





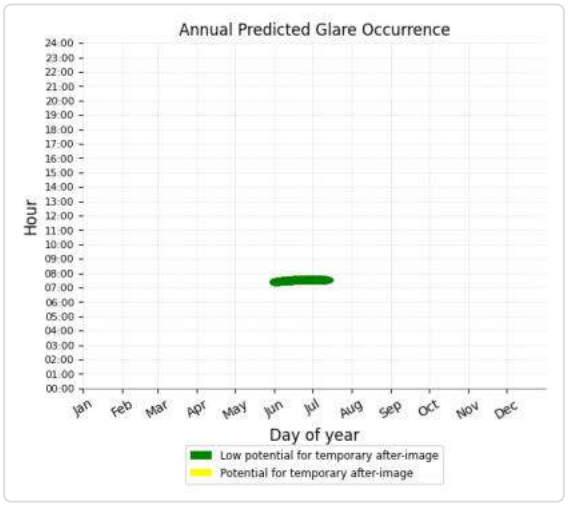


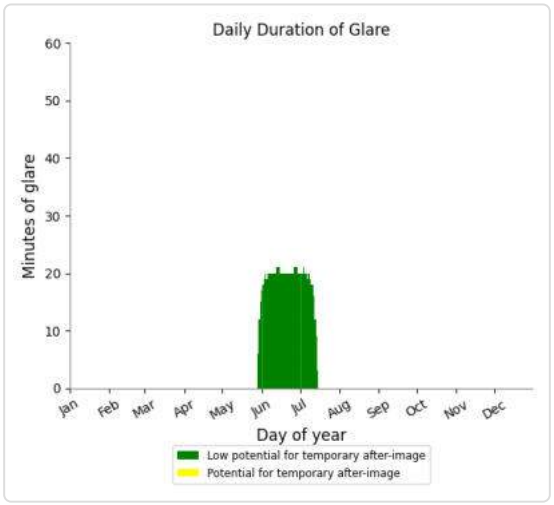


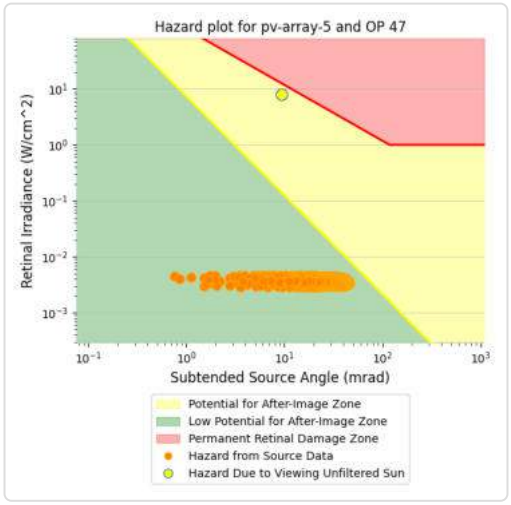
PV array 5 and OP 47

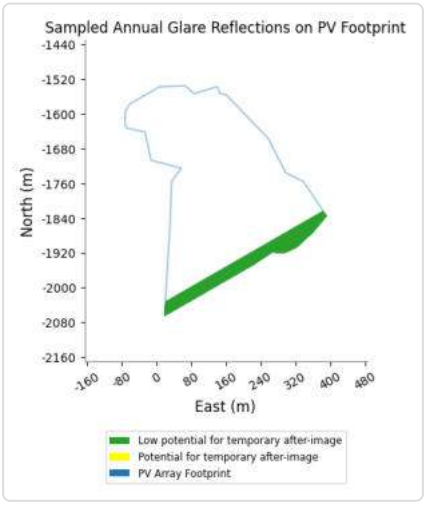
Yellow glare: none

Green glare: 887 min.



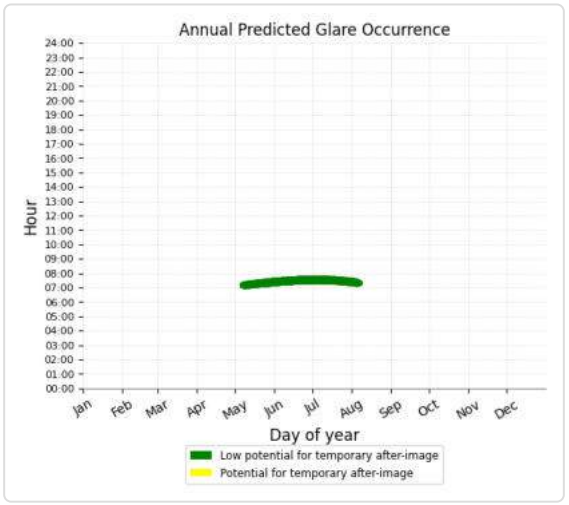


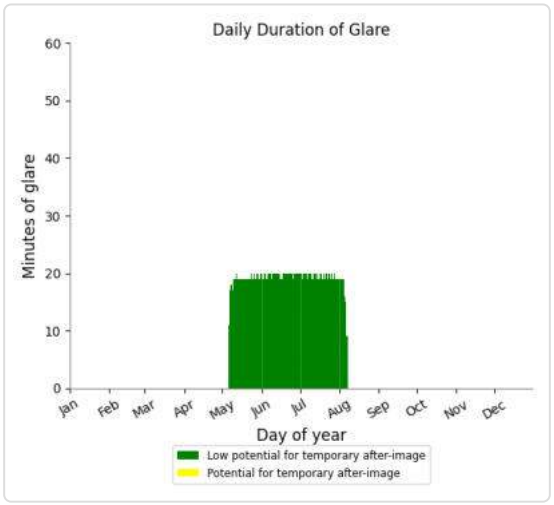


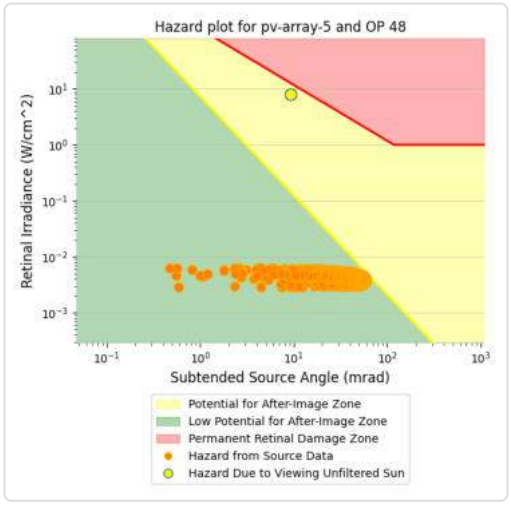


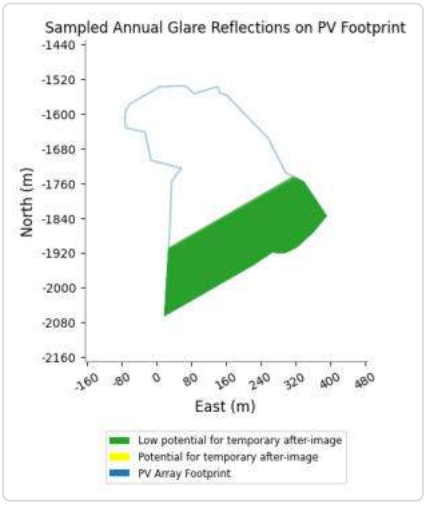
PV array 5 and OP 48

Yellow glare: none
Green glare: 1,804 min.









PV array 5 and OP 1

No glare found

PV array 5 and OP 2

No glare found

PV array 5 and OP 3

No glare found

PV array 5 and OP 4

No glare found

PV array 5 and OP 5

No glare found

PV array 5 and OP 6

No glare found

PV array 5 and OP 7

No glare found

PV array 5 and OP 8

No glare found

PV array 5 and OP 9

No glare found

PV array 5 and OP 10

No glare found

PV array 5 and OP 11

No glare found

PV array 5 and OP 12

No glare found

PV array 5 and OP 13

No glare found

PV array 5 and OP 14

No glare found

PV array 5 and OP 15

No glare found

PV array 5 and OP 16

No glare found

PV array 5 and OP 17

No glare found

PV array 5 and OP 18

No glare found

PV array 5 and OP 19

No glare found

PV array 5 and OP 20

No glare found

PV array 5 and OP 21

No glare found

PV array 5 and OP 22

No glare found

PV array 5 and OP 23

No glare found

PV array 5 and OP 24

No glare found

PV array 5 and OP 25

No glare found

PV array 5 and OP 26

No glare found

PV array 5 and OP 27

No glare found

PV array 5 and OP 28

No glare found

PV array 5 and OP 29

No glare found

PV array 5 and OP 30

No glare found

PV array 5 and OP 31

No glare found

PV array 5 and OP 32

No glare found

PV array 5 and OP 33

No glare found

PV array 5 and OP 34

No glare found

PV array 5 and OP 35

No glare found

PV array 5 and OP 36

No glare found

PV array 5 and OP 39

No glare found

PV array 5 and OP 44

No glare found

PV array 5 and OP 45

No glare found

PV array 5 and OP 46

No glare found

Assumptions

"Green" glare is glare with low potential to cause an after-image (flash blindness) when observed prior to a typical blink response time.
"Yellow" glare is glare with potential to cause an after-image (flash blindness) when observed prior to a typical blink response time.
Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
The algorithm does not rigorously represent the detailed geometry of a system; detailed features such as gaps between modules, variable height of the PV array, and support structures may impact actual glare results. However, we have validated our models against several systems, including a PV array causing glare to the air-traffic control tower at Manchester-Boston Regional Airport and several sites in Albuquerque, and the tool accurately predicted the occurrence and intensity of glare at different times and days of the year.
Several V1 calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for large PV footprints. Additional analyses of array sub-sections can provide additional information on expected glare. This primarily affects V1 analyses of path receptors.
Random number computations are utilized by various steps of the annual hazard analysis algorithm. Predicted minutes of glare can vary between runs as a result. This limitation primarily affects analyses of Observation Point receptors, including ATCTs. Note that the SGHAT/ ForgeSolar methodology has always relied on an analytical, qualitative approach to accurately determine the overall hazard (i.e. green vs. yellow) of expected glare on an annual basis.
The analysis does not automatically consider obstacles (either man-made or natural) between the observation points and the prescribed solar installation that may obstruct observed glare, such as trees, hills, buildings, etc.
The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub-array size. Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)
The variable direct normal irradiance (DNI) feature (if selected) scales the user-prescribed peak DNI using a typical clear-day irradiance profile. This profile has a lower DNI in the mornings and evenings and a maximum at solar noon. The scaling uses a clear-day irradiance profile based on a normalized time relative to sunrise, solar noon, and sunset, which are prescribed by a sun-position algorithm and the latitude and longitude obtained from Google maps. The actual DNI on any given day can be affected by cloud cover, atmospheric attenuation, and other environmental factors.
The ocular hazard predicted by the tool depends on a number of environmental, optical, and human factors, which can be uncertain. We provide input fields and typical ranges of values for these factors so that the user can vary these parameters to see if they have an impact on the results. The speed of SGHAT allows expedited sensitivity and parametric analyses.
The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.
Hazard zone boundaries shown in the Glare Hazard plot are an approximation and visual aid based on aggregated research data. Actual ocular impact outcomes encompass a continuous, not discrete, spectrum.
Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.
Refer to the Help page at **www.forgesolar.com/help/** for assumptions and limitations not listed here.

Default glare analysis parameters and observer eye characteristics (for reference only):

- Analysis time interval: 1 minute
- Ocular transmission coefficient: 0.5
- Pupil diameter: 0.002 meters
- Eye focal length: 0.017 meters
- Sun subtended angle: 9.3 milliradians

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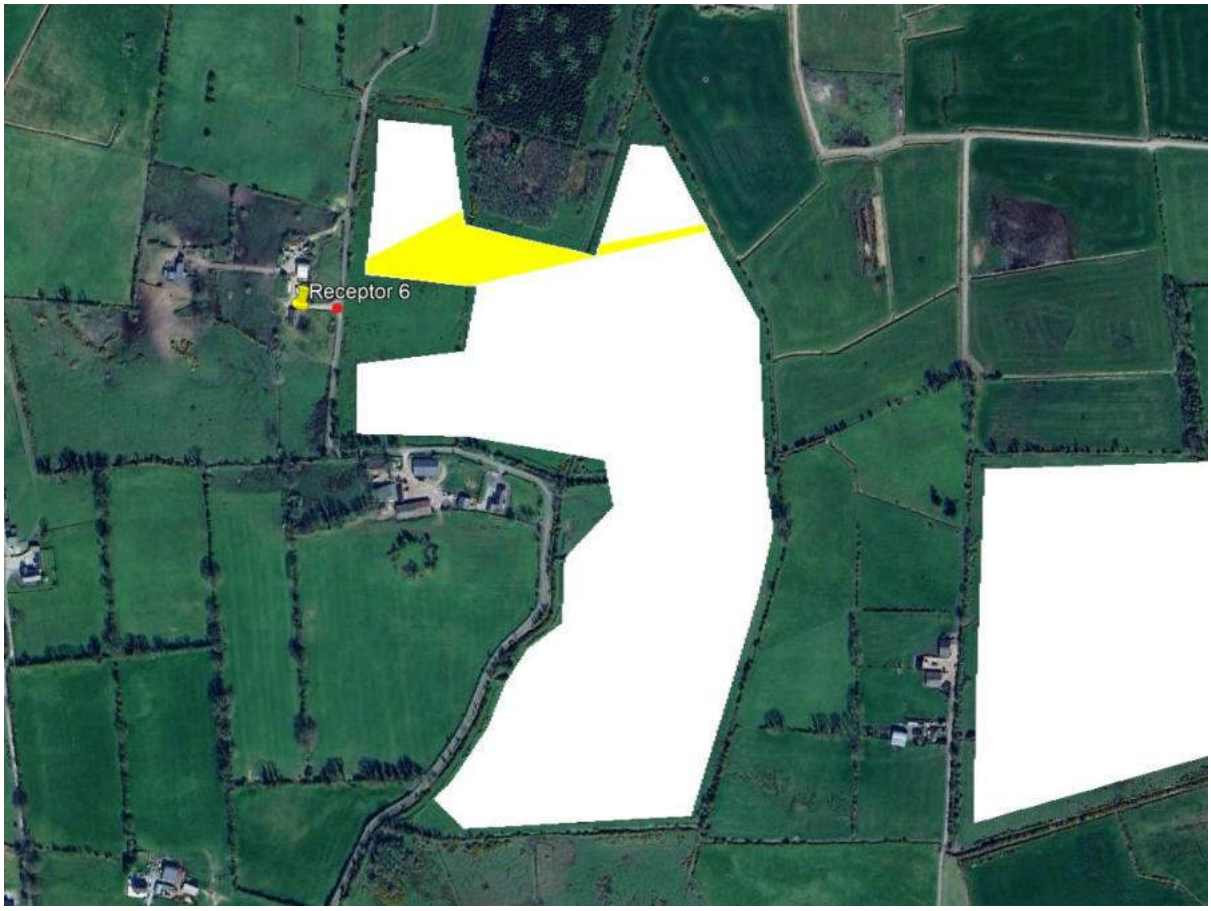
Appendix 6F: Visibility Assessment Evidence

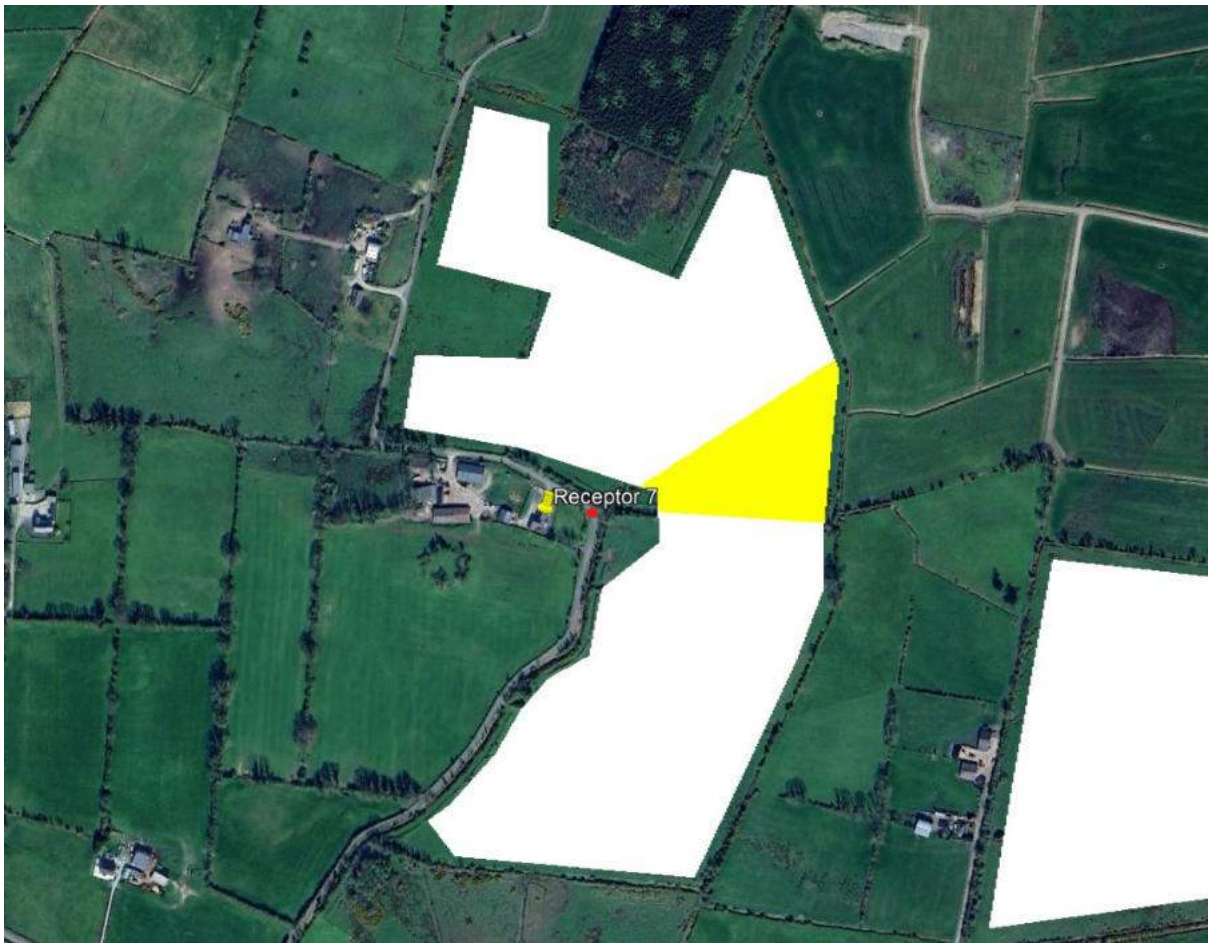
Left Blank

Residential Receptors

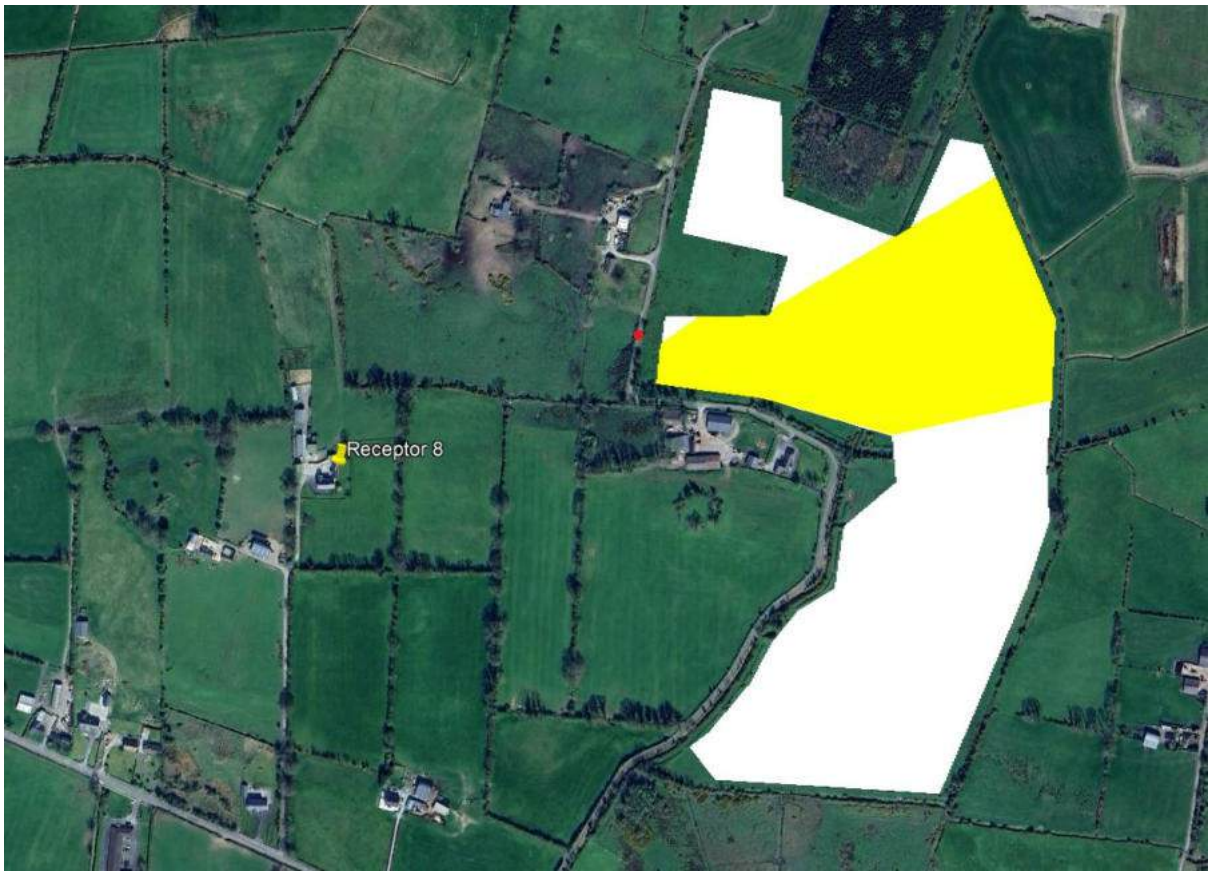
Receptor 6



Receptor 7

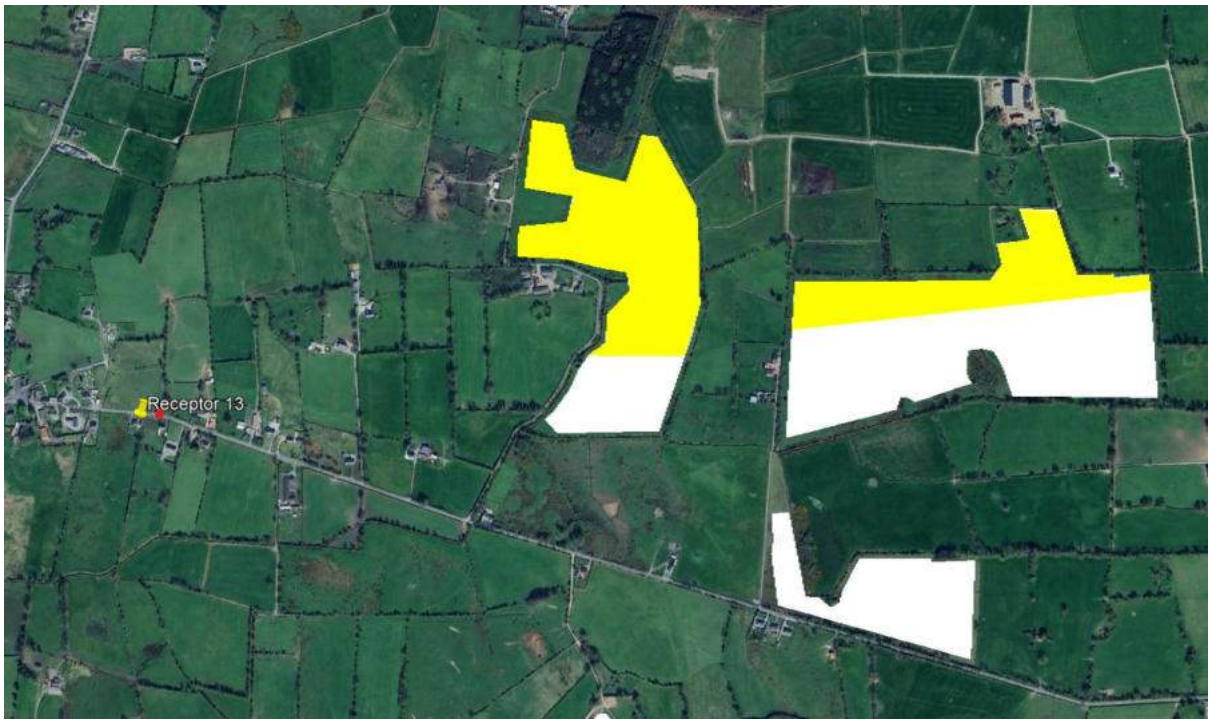


Receptor 8



Receptor 11

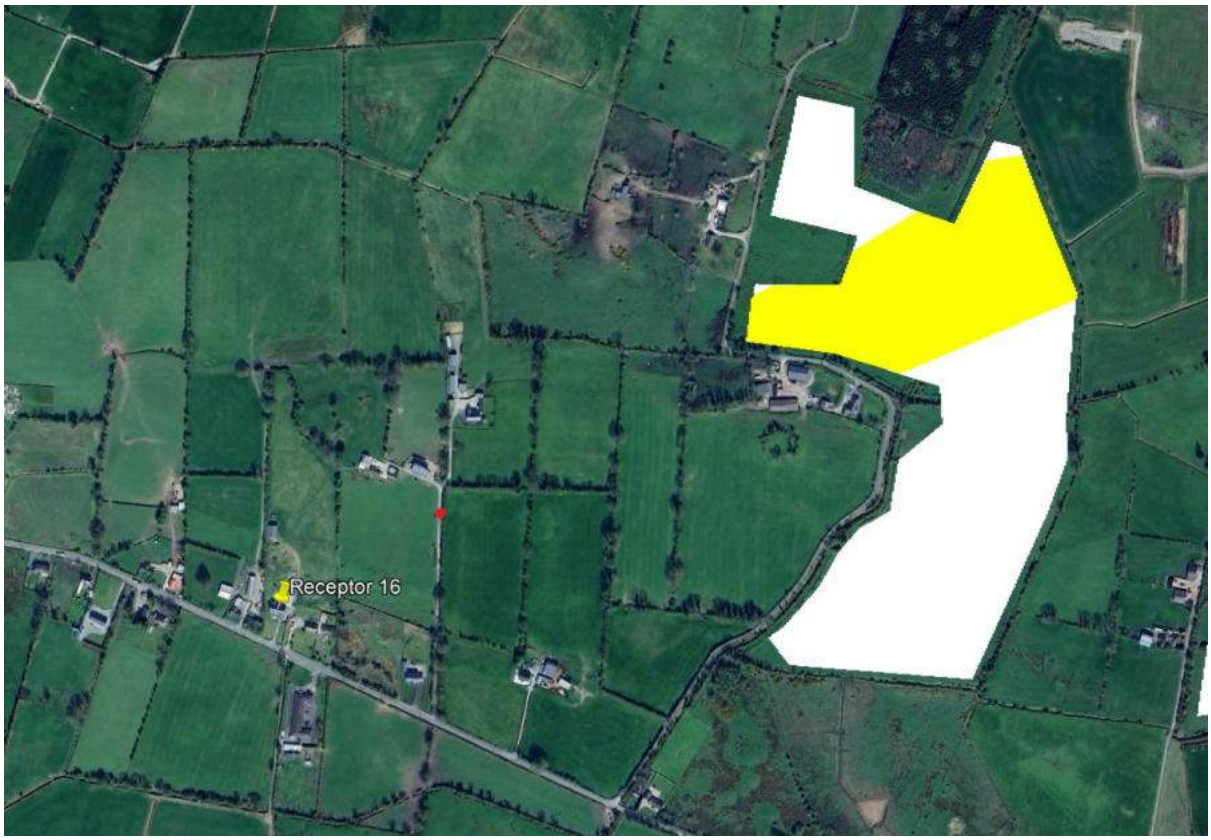
Receptor 13

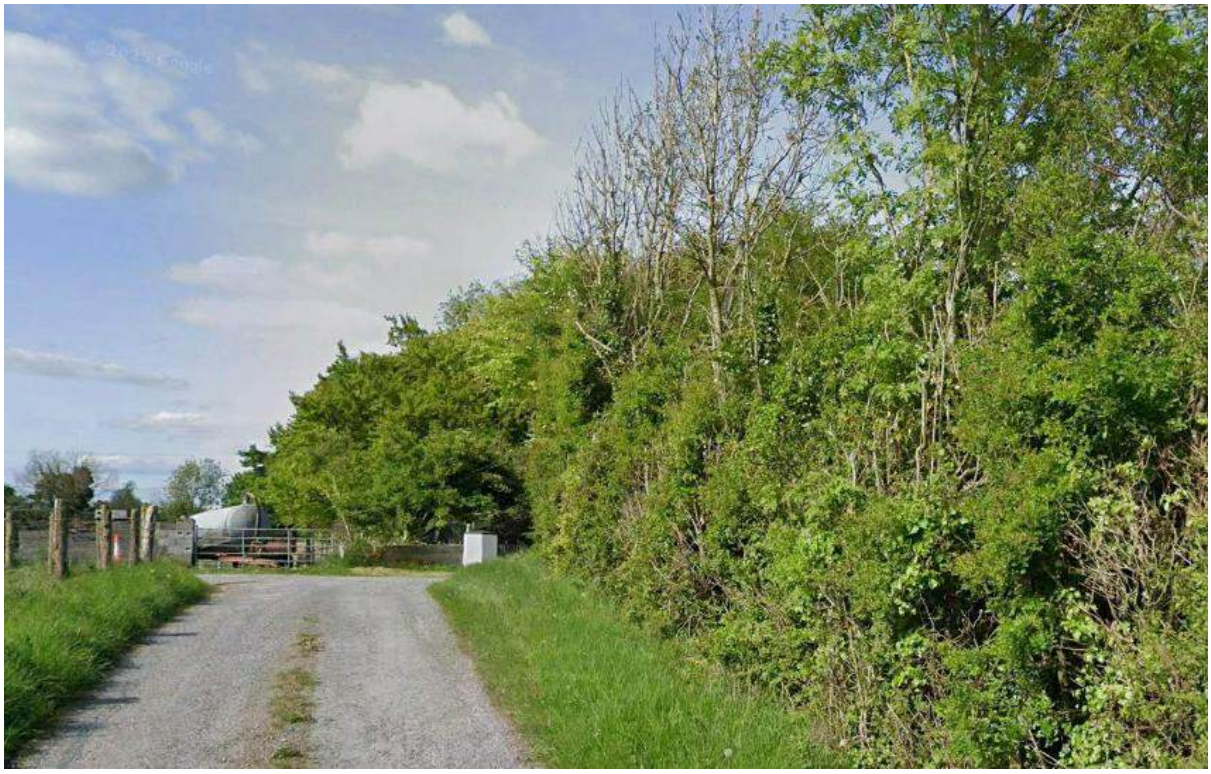


Receptor 14

Receptor 15

Receptor 16





Receptor 17

Receptor 18

Receptor 19

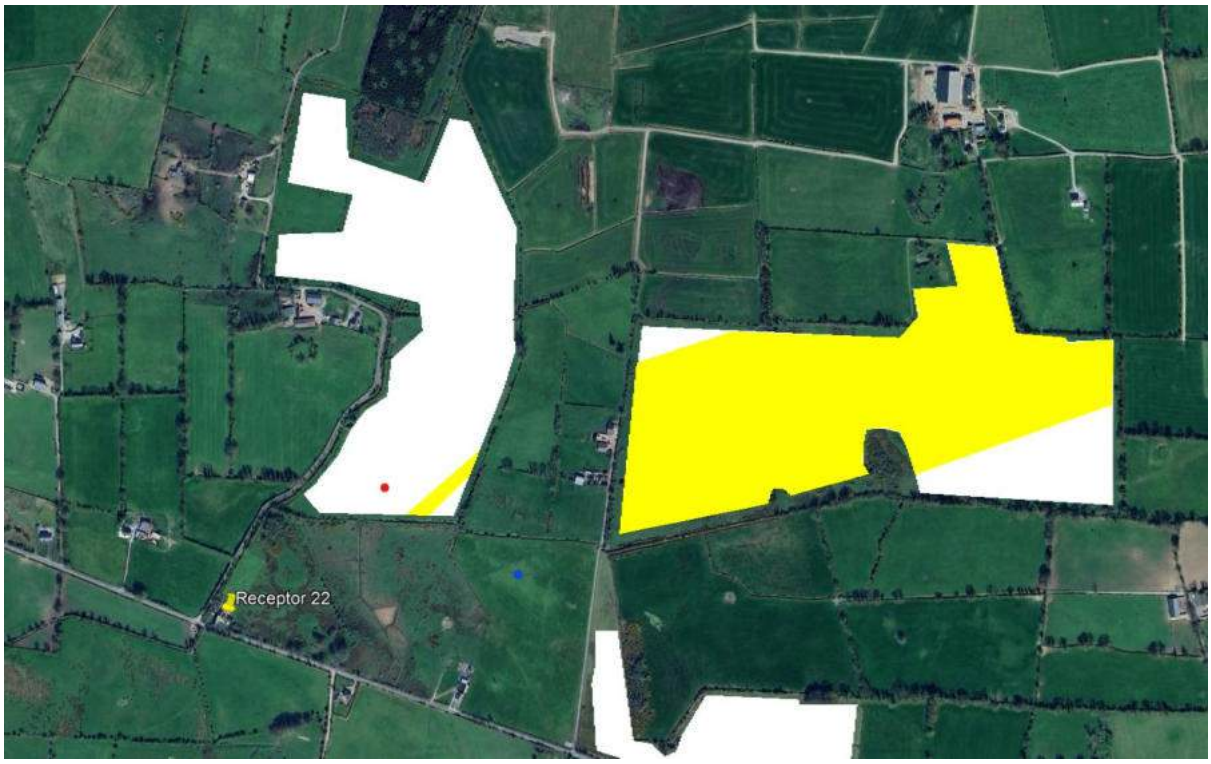
Receptor 20

Receptor 21

Facing east

Facing west

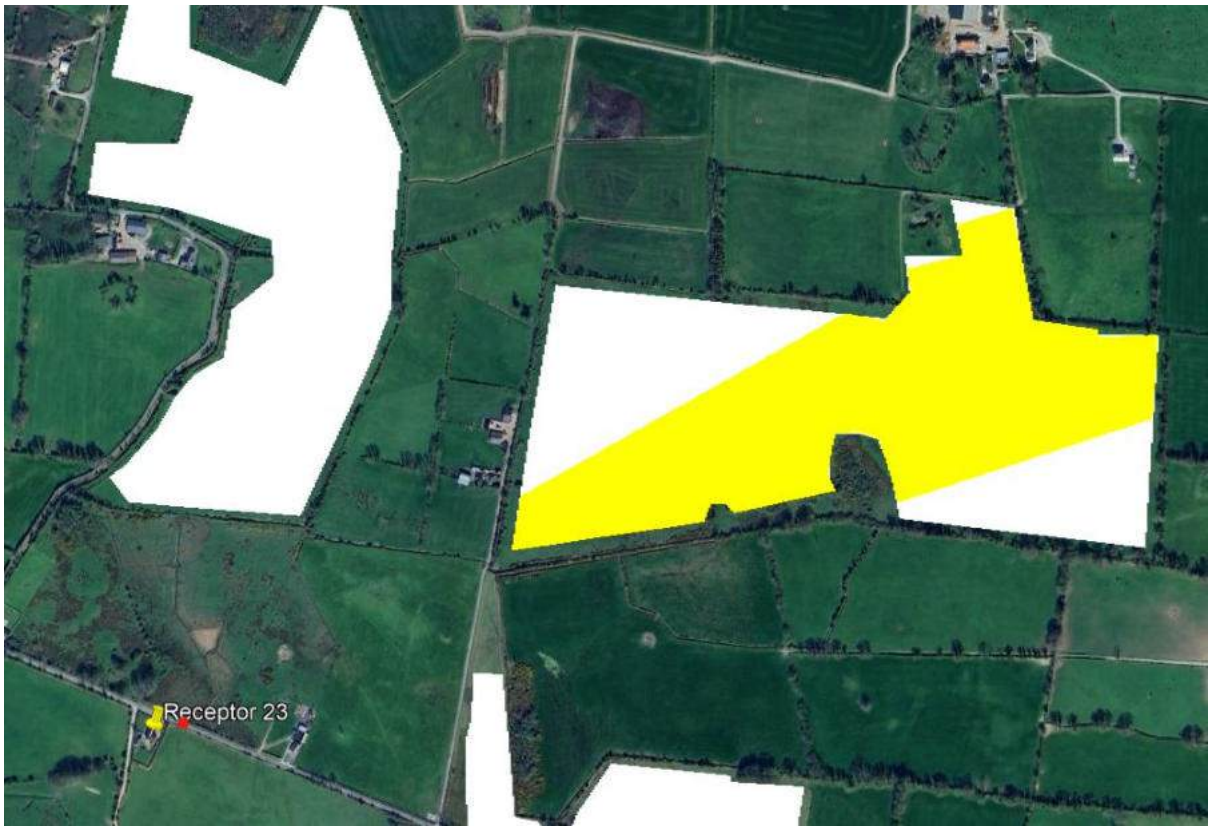
Receptor 22



Facing south

Facing east

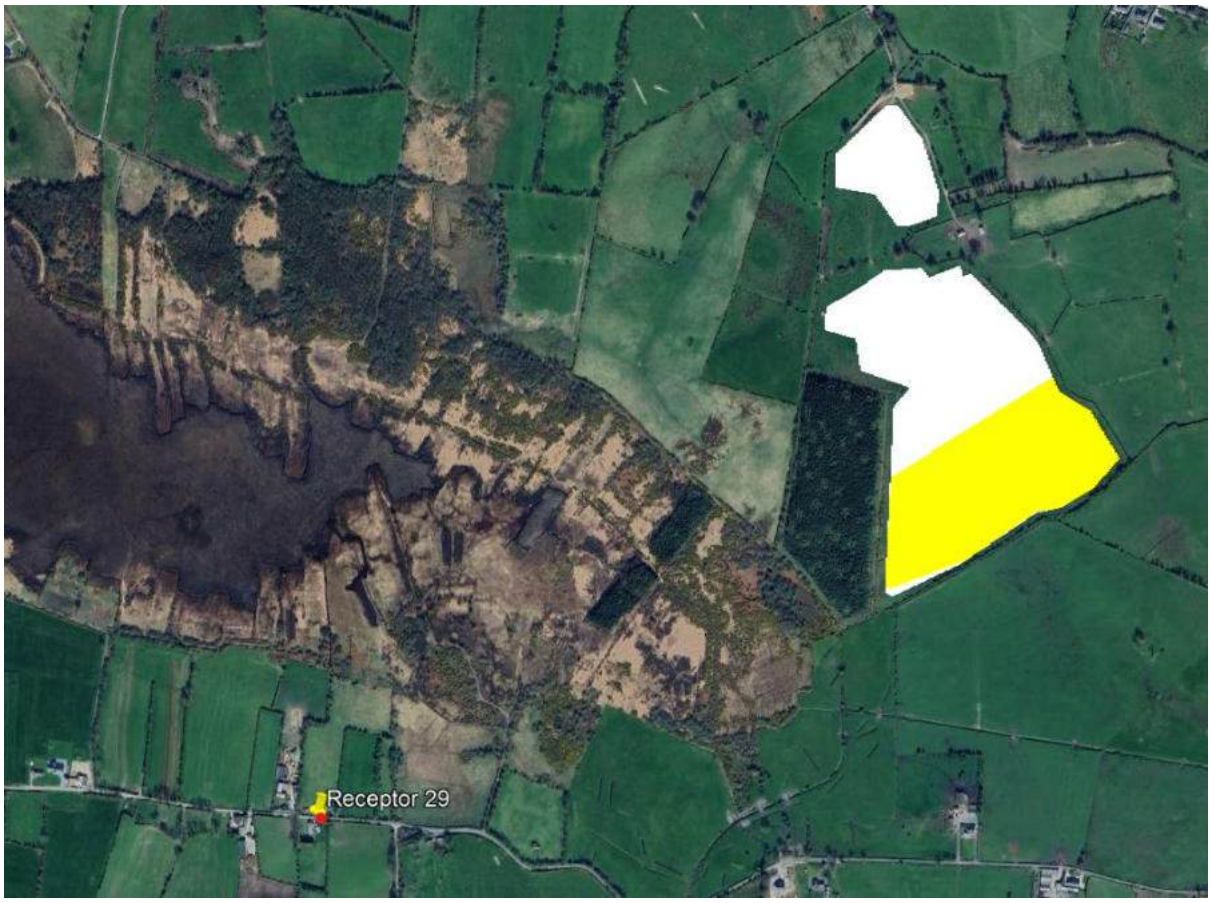
Receptor 23



Receptor 24

Receptor 25 - 27

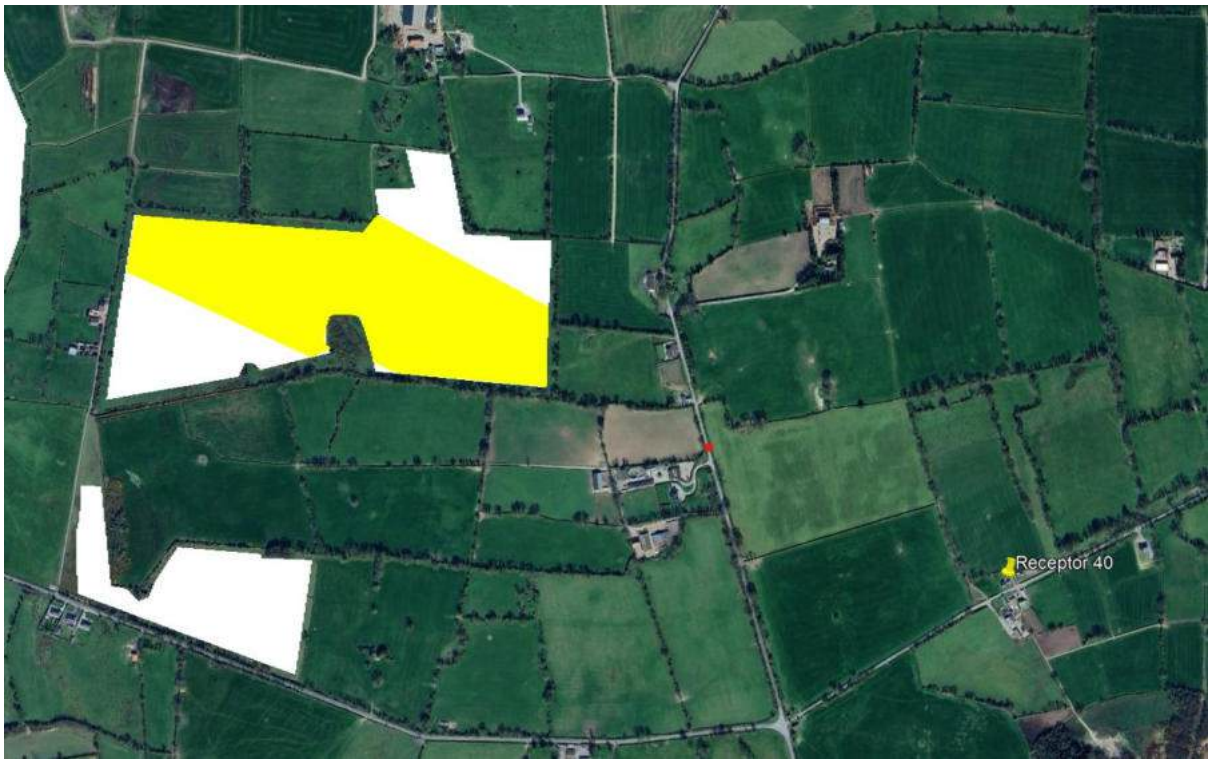
Receptor 29

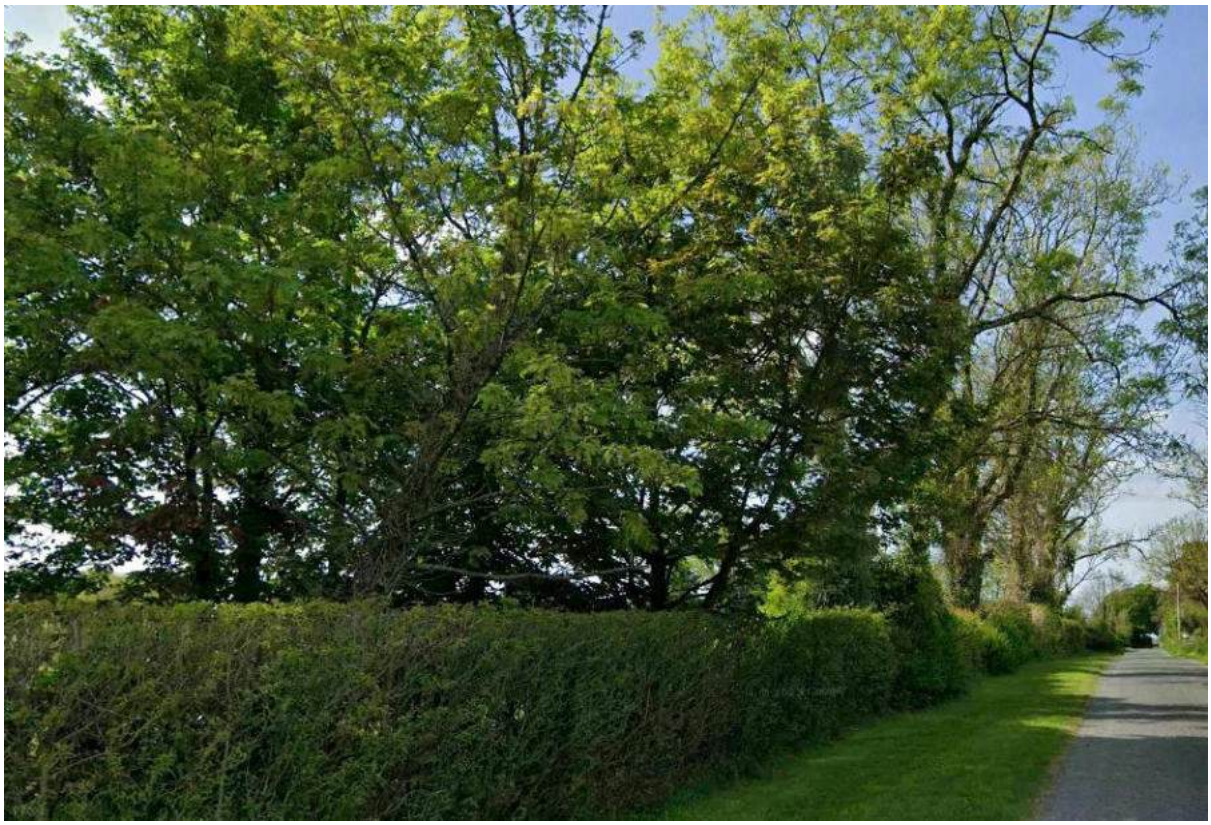


Receptor 33

Receptor 38 and 39

Receptor 40





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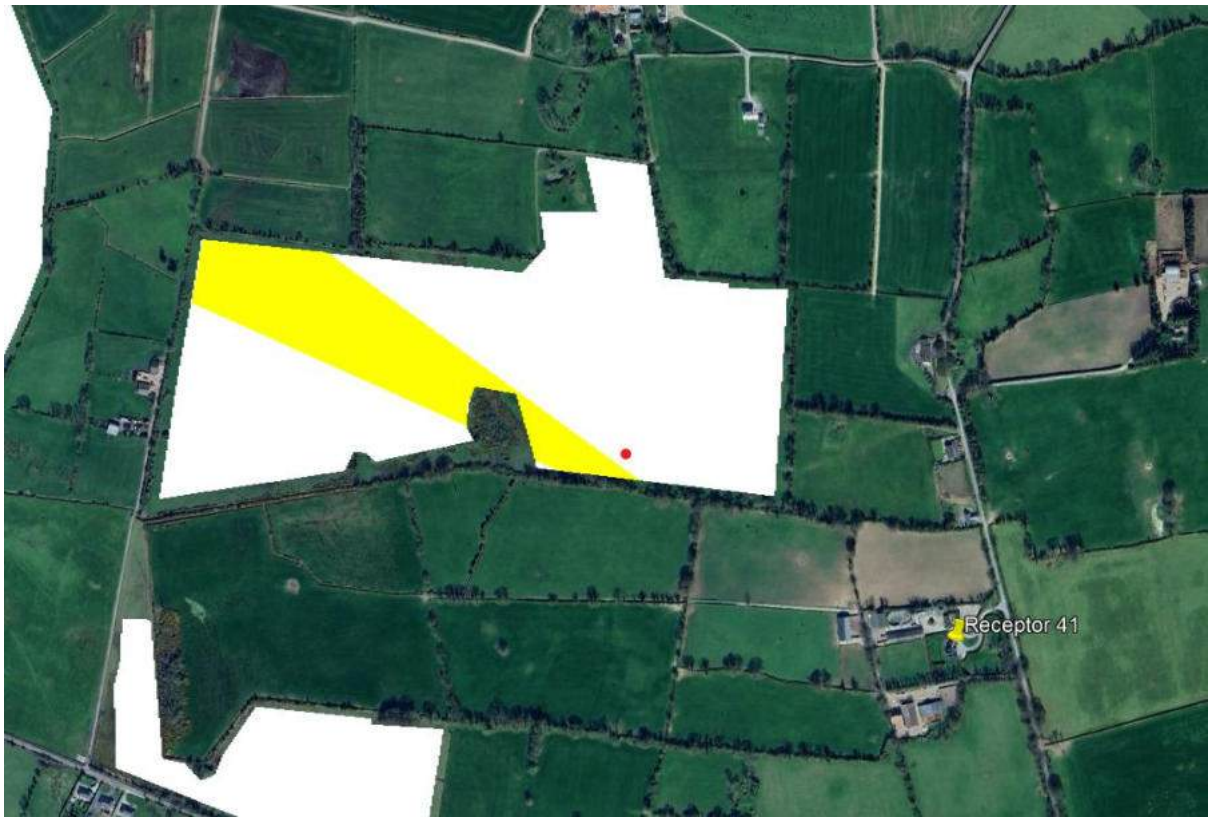


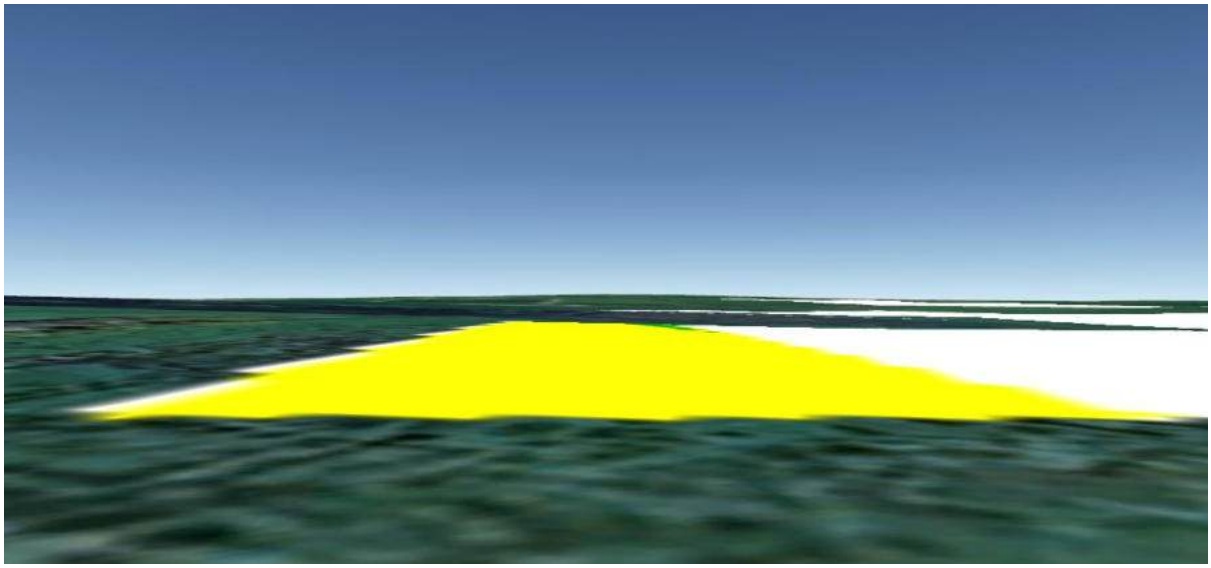
Receptor 42

Receptor 44

Receptor 45

Road Receptors

Receptor 1



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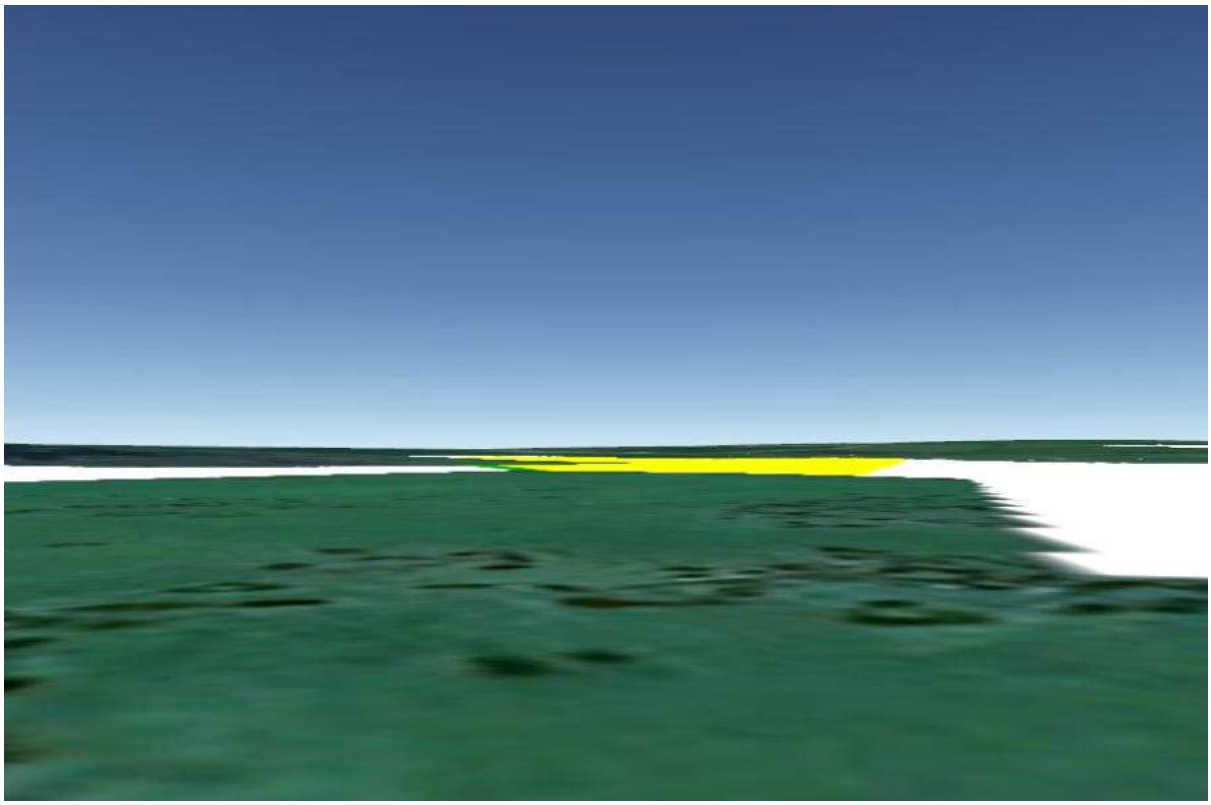
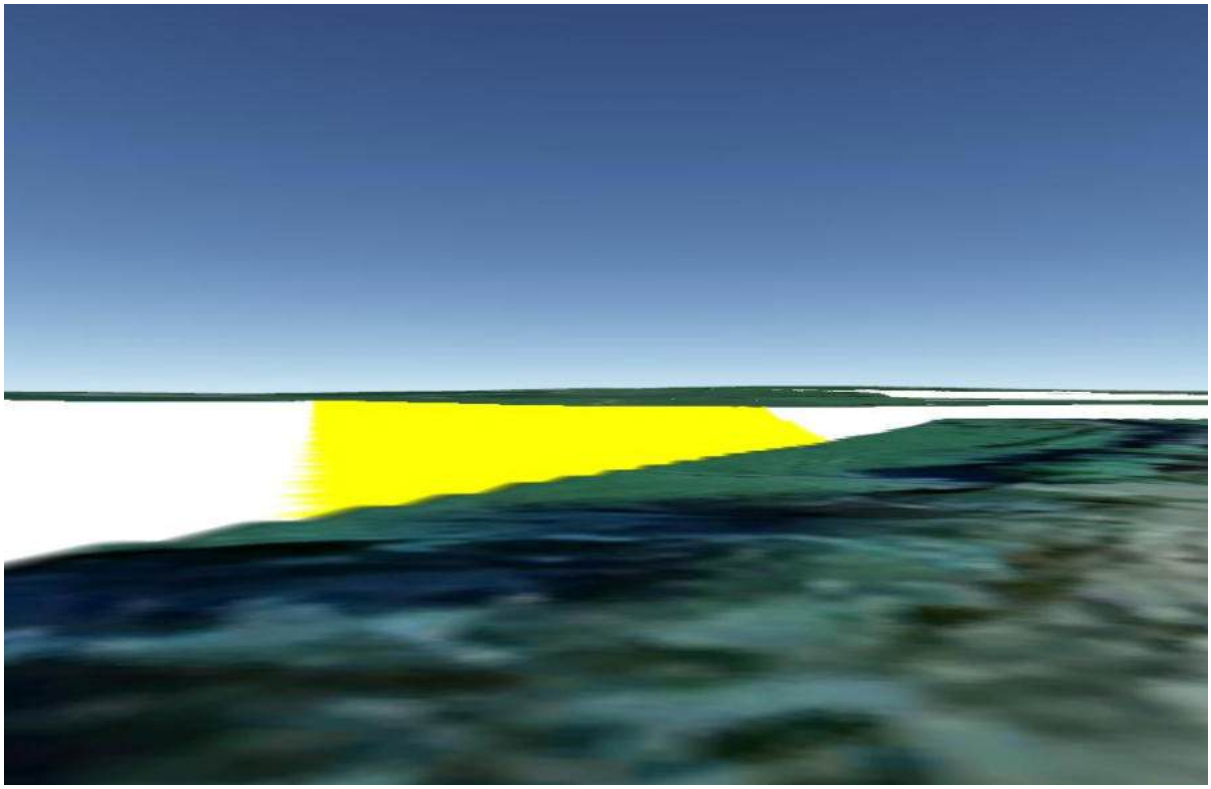


Receptor 3

Facing east



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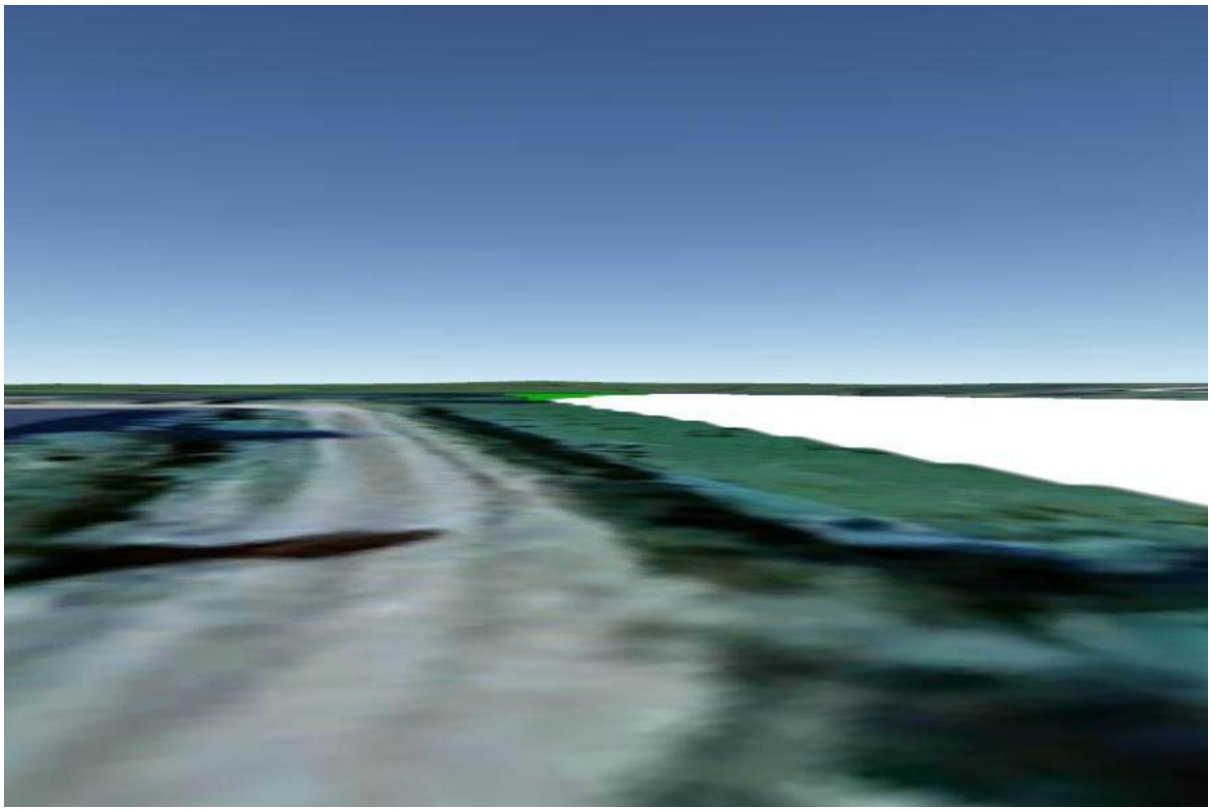
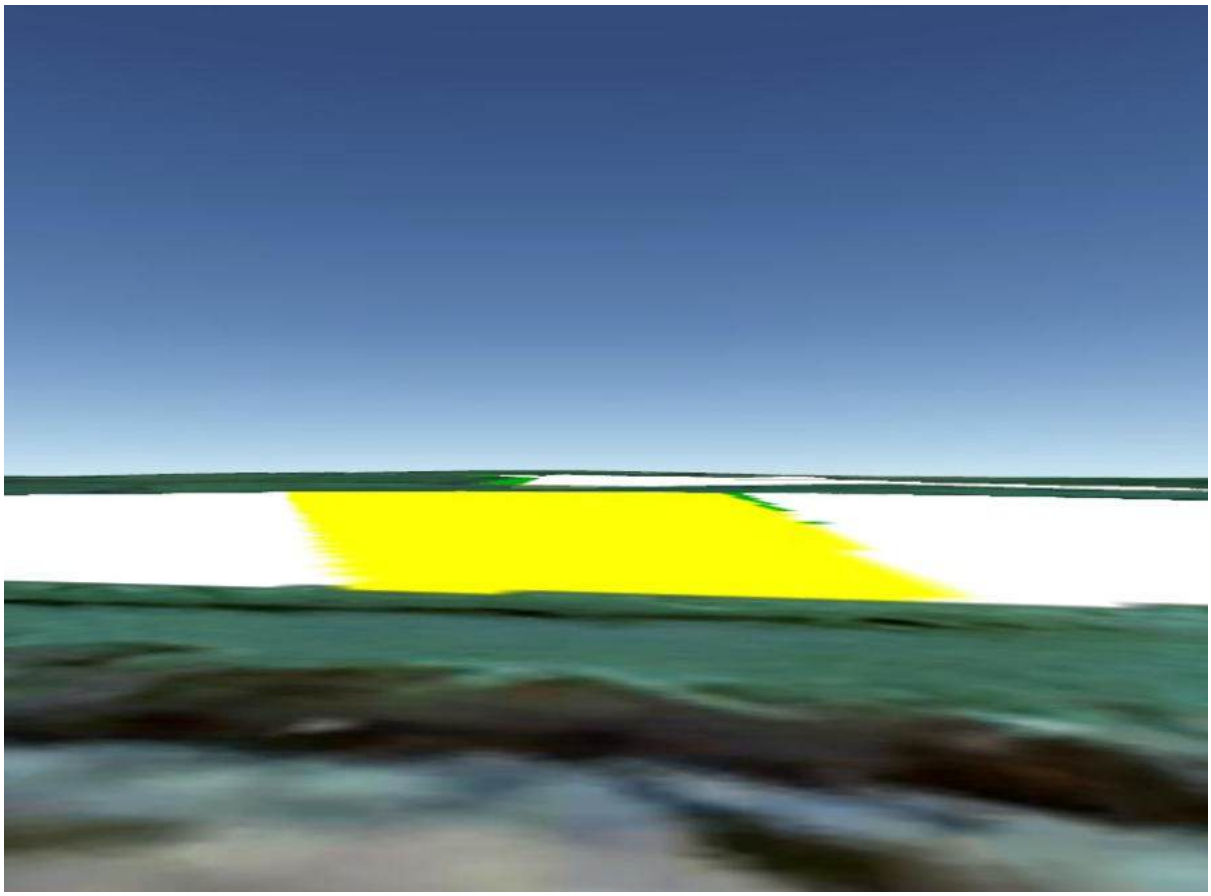


Receptor 4



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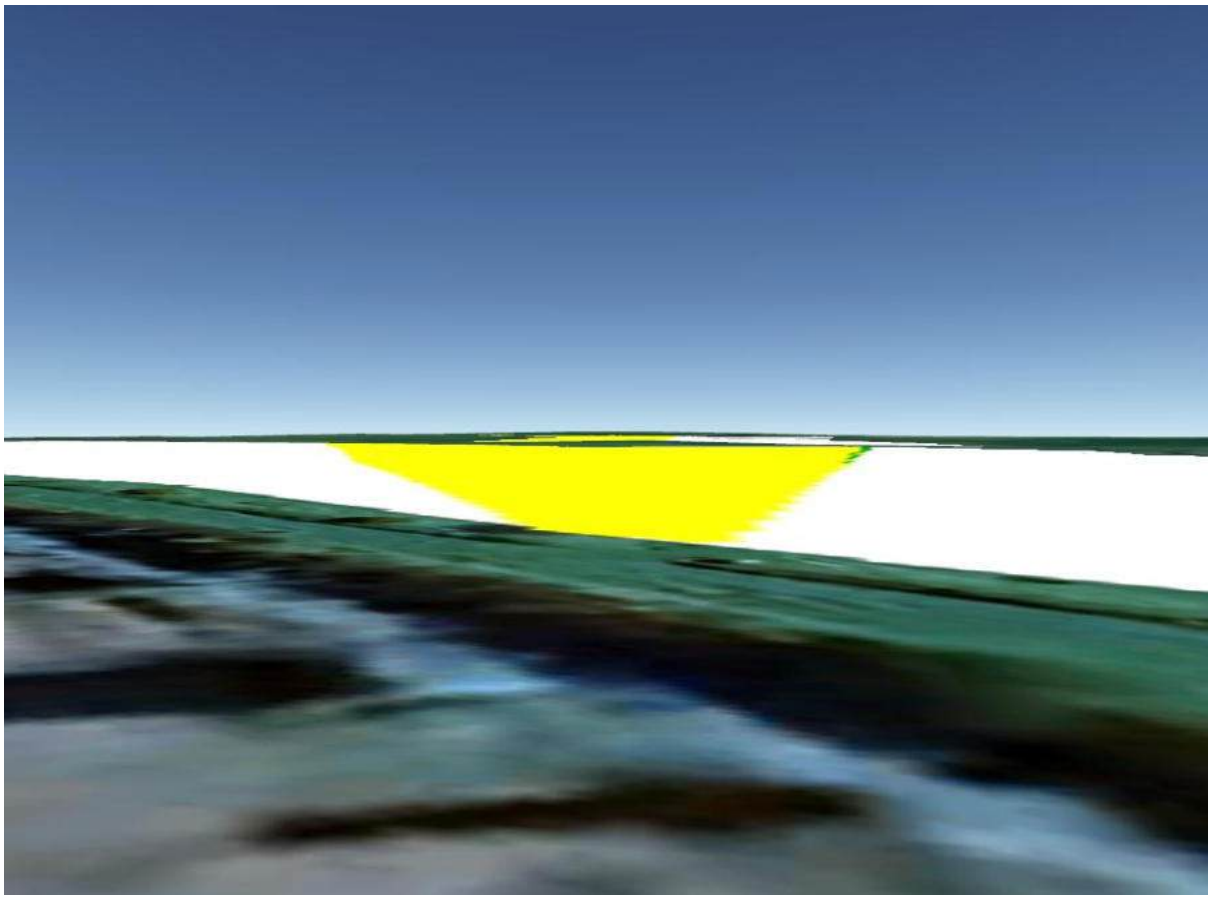

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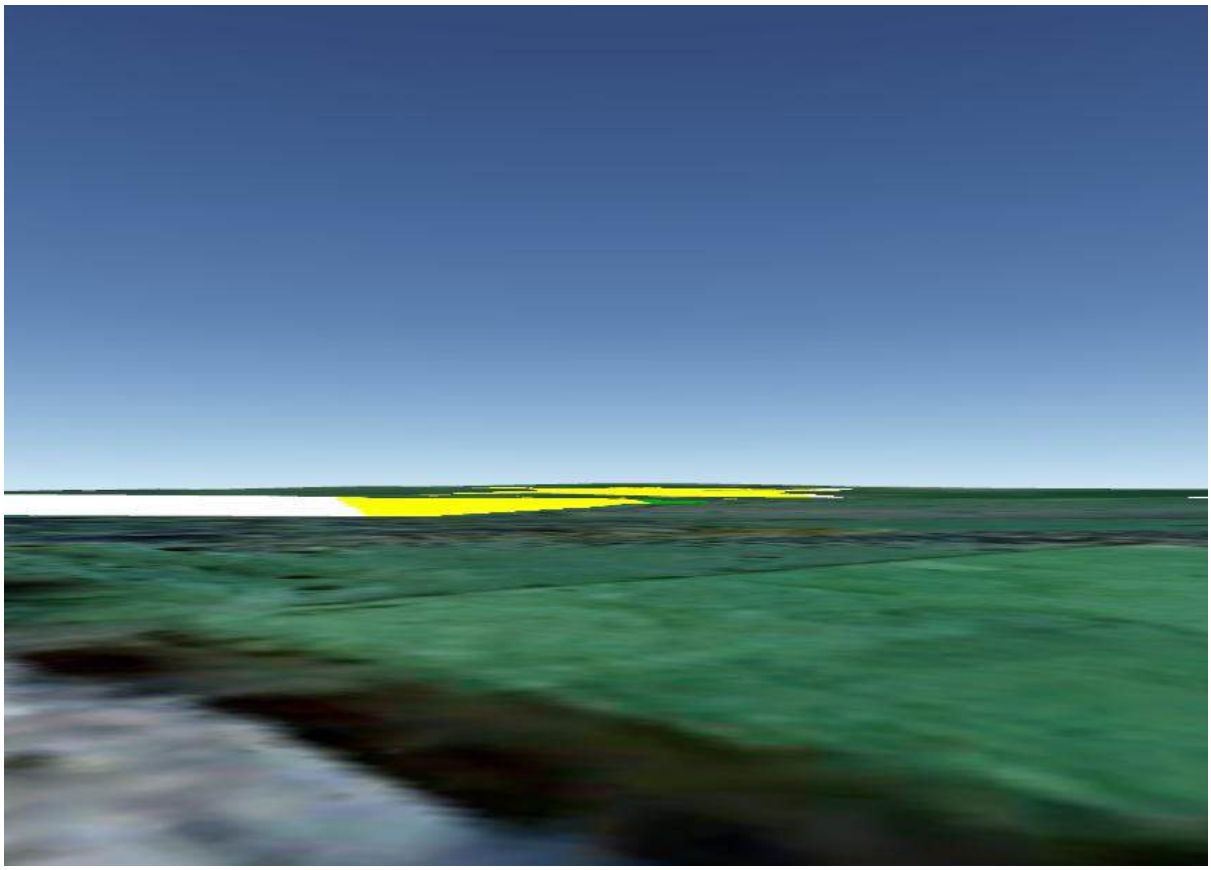

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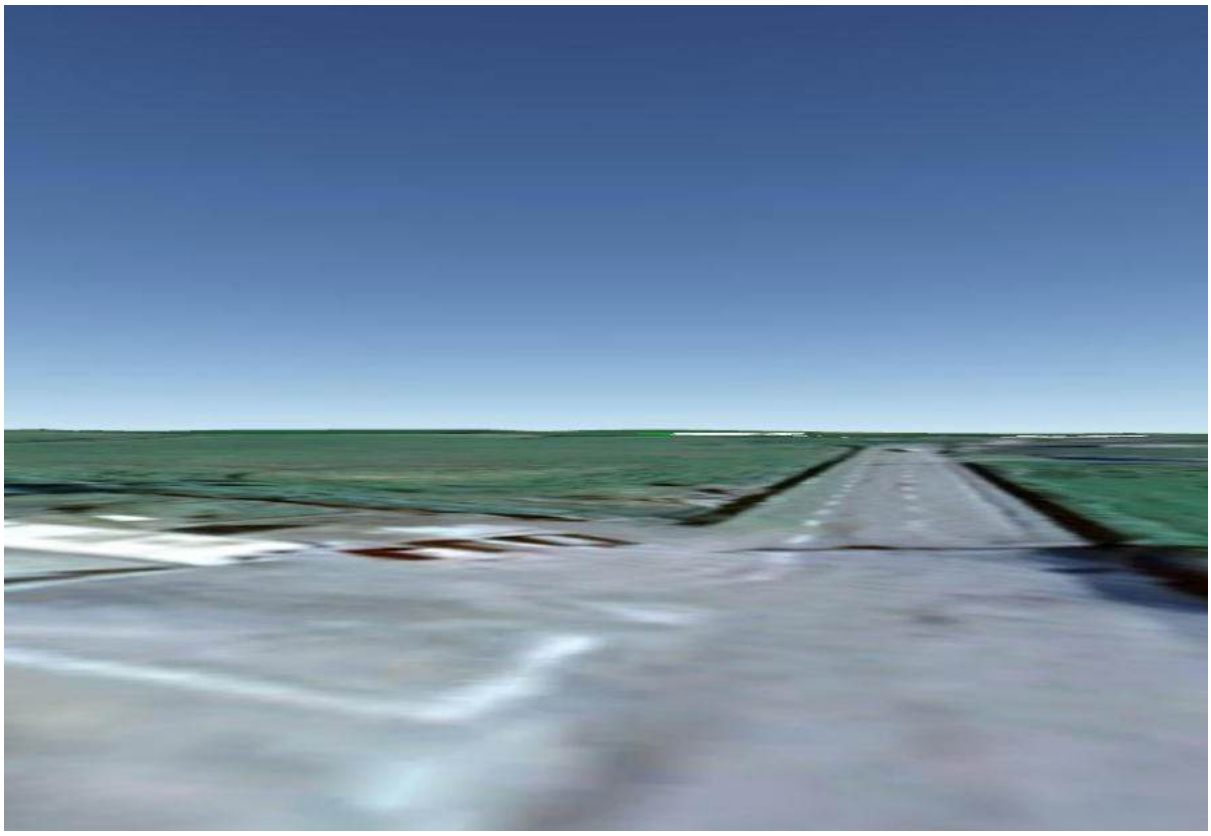

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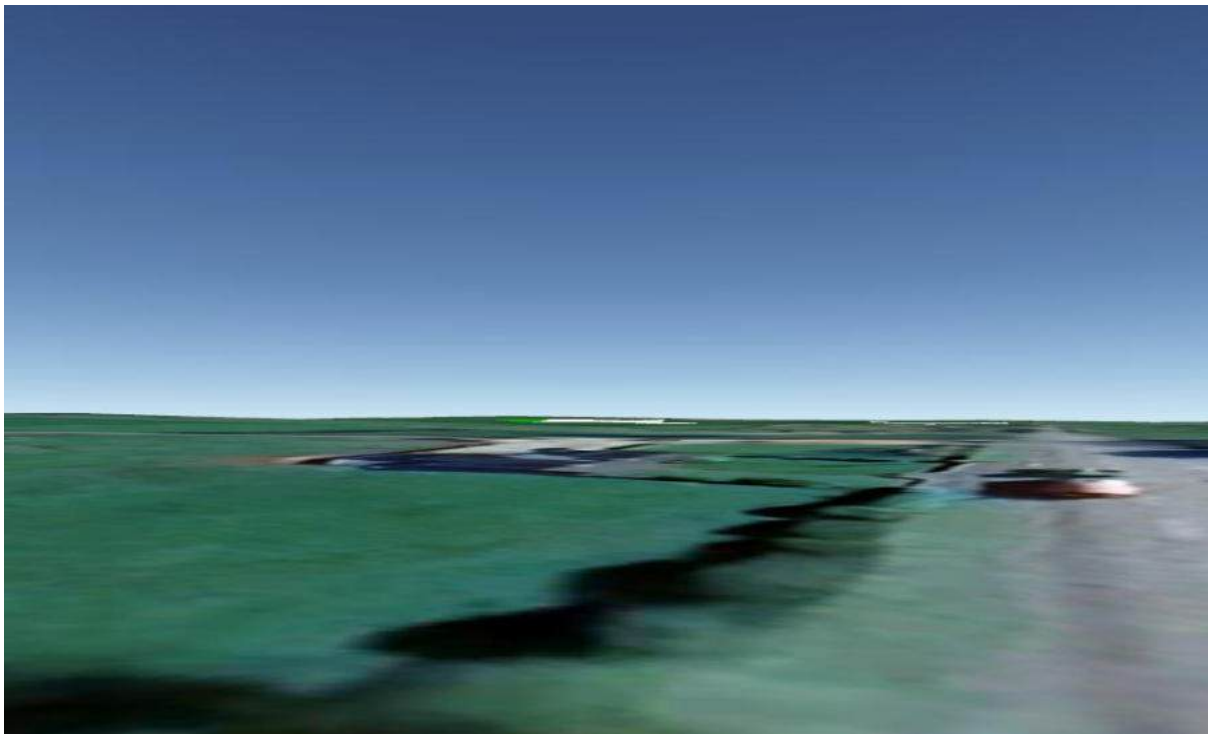
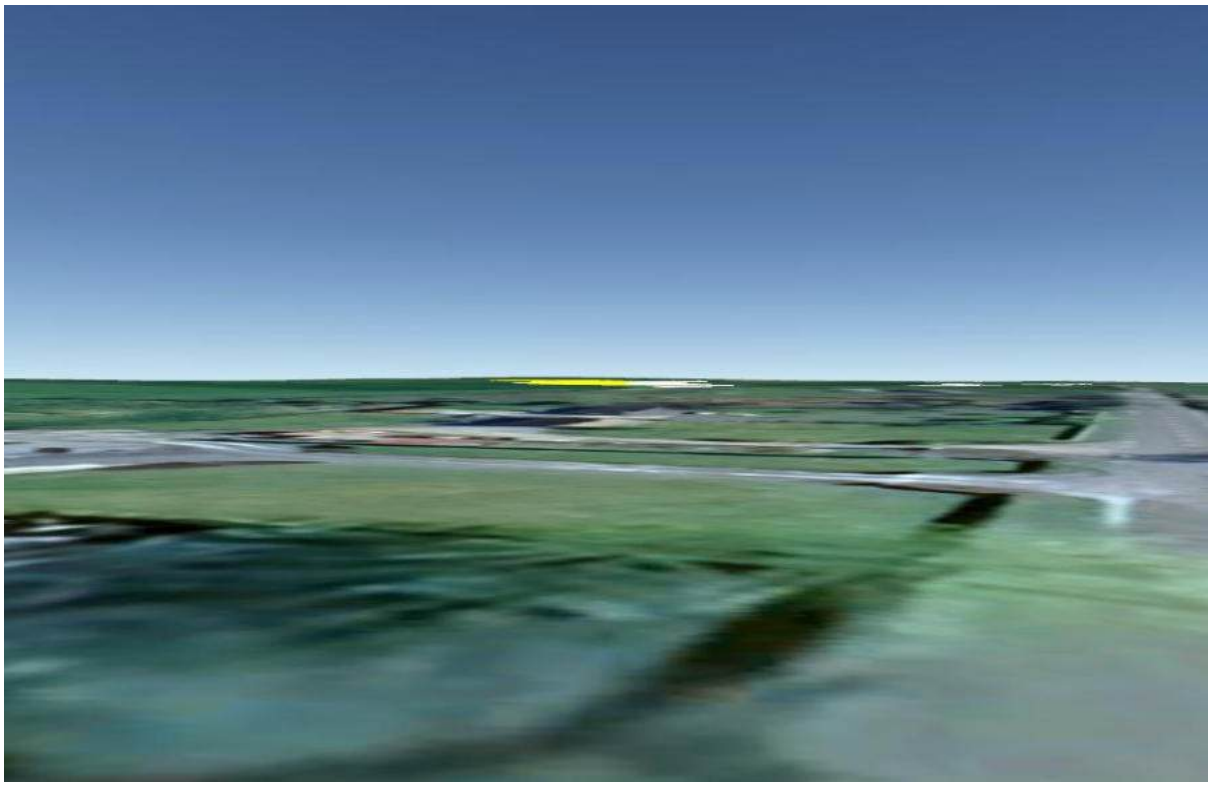
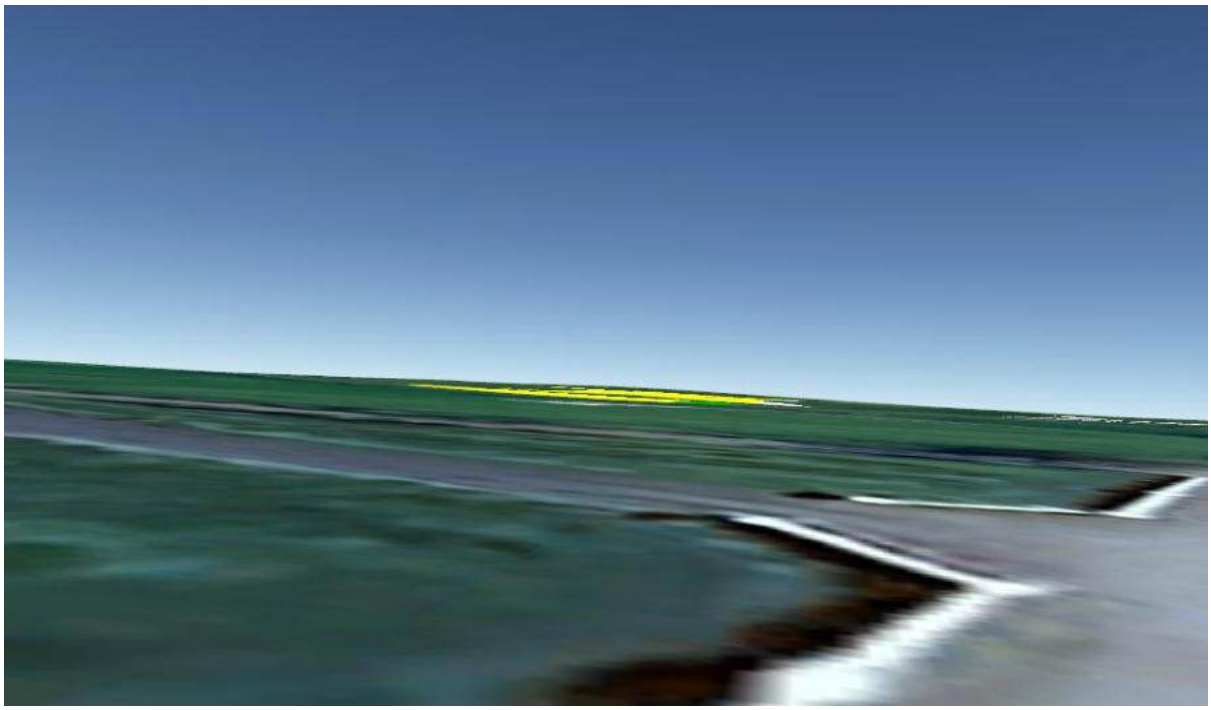


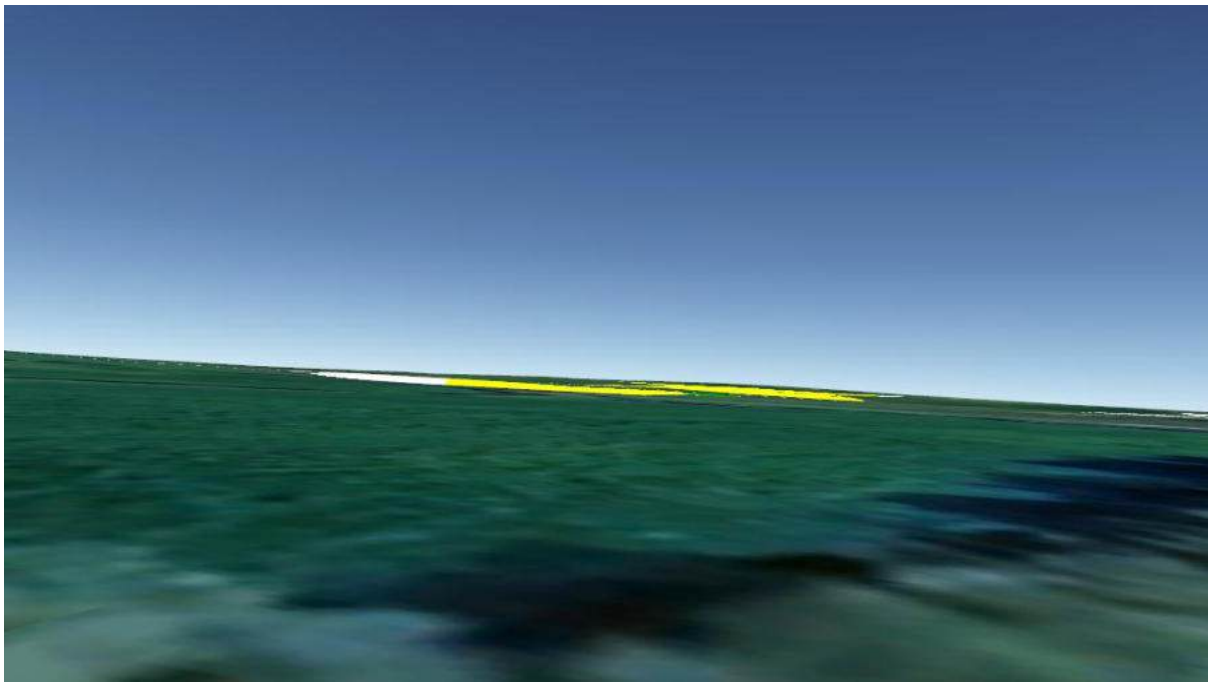
Receptor 9



Receptor 10



Receptor 11



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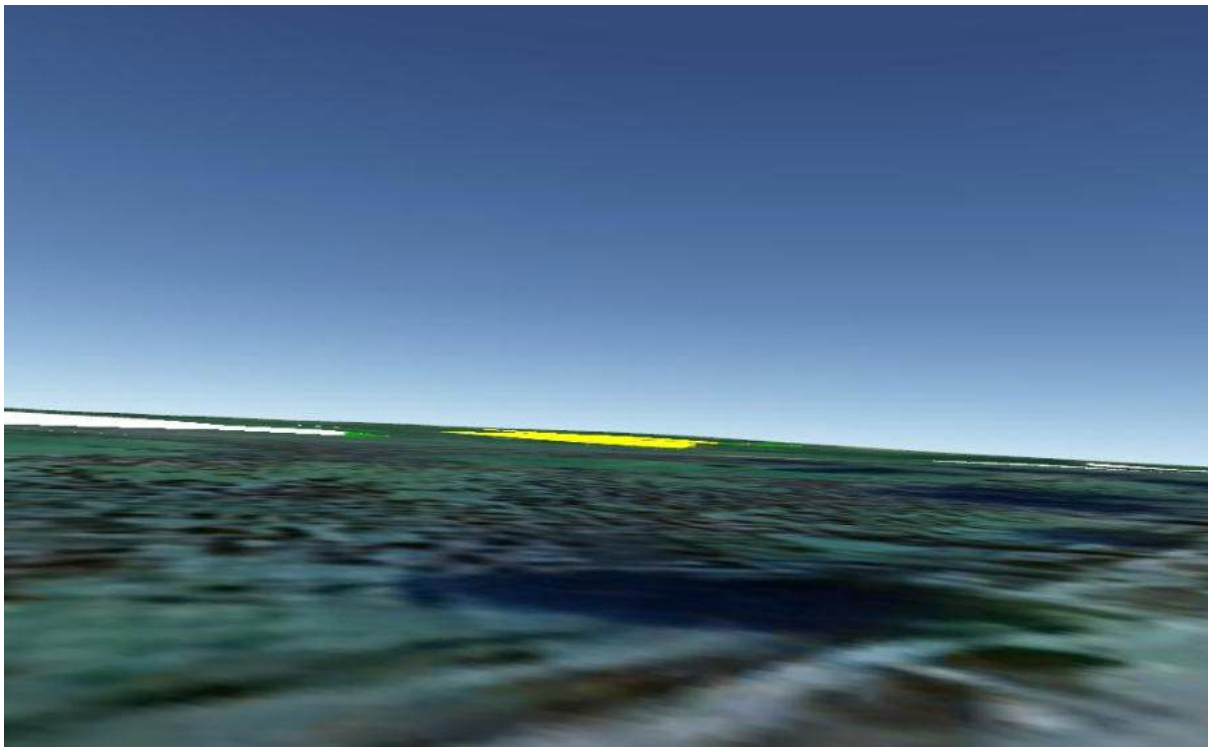

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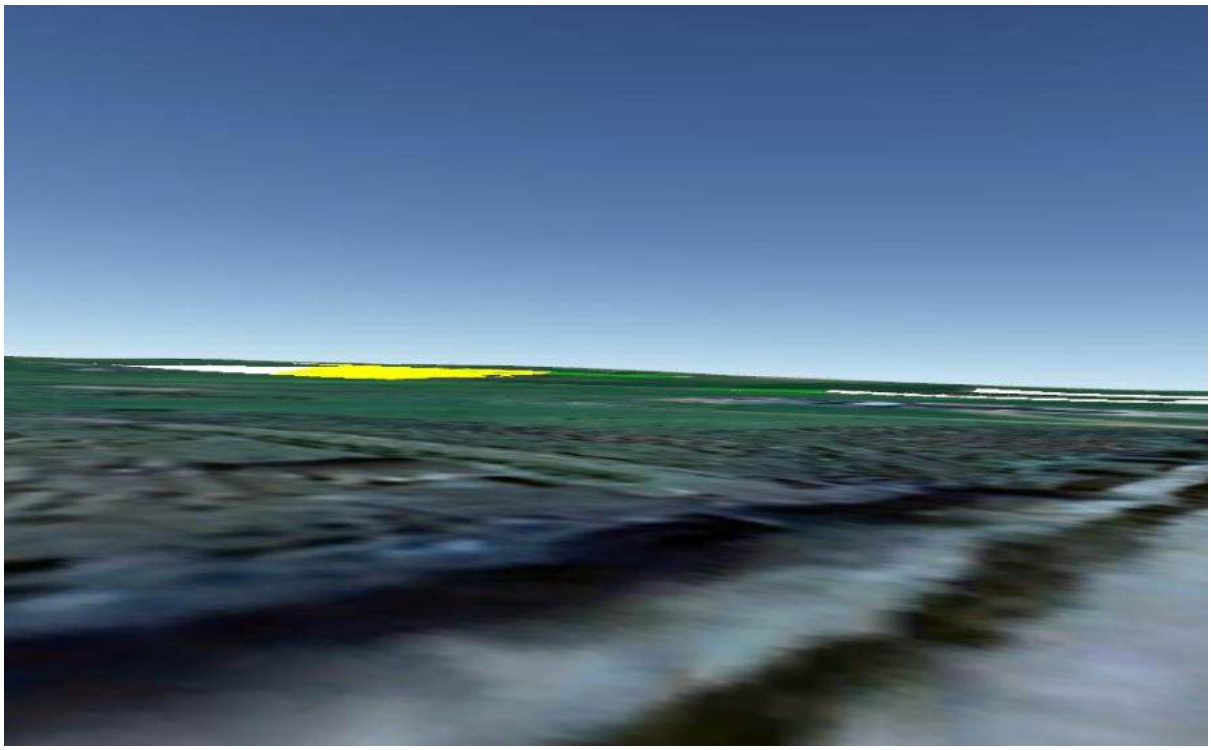

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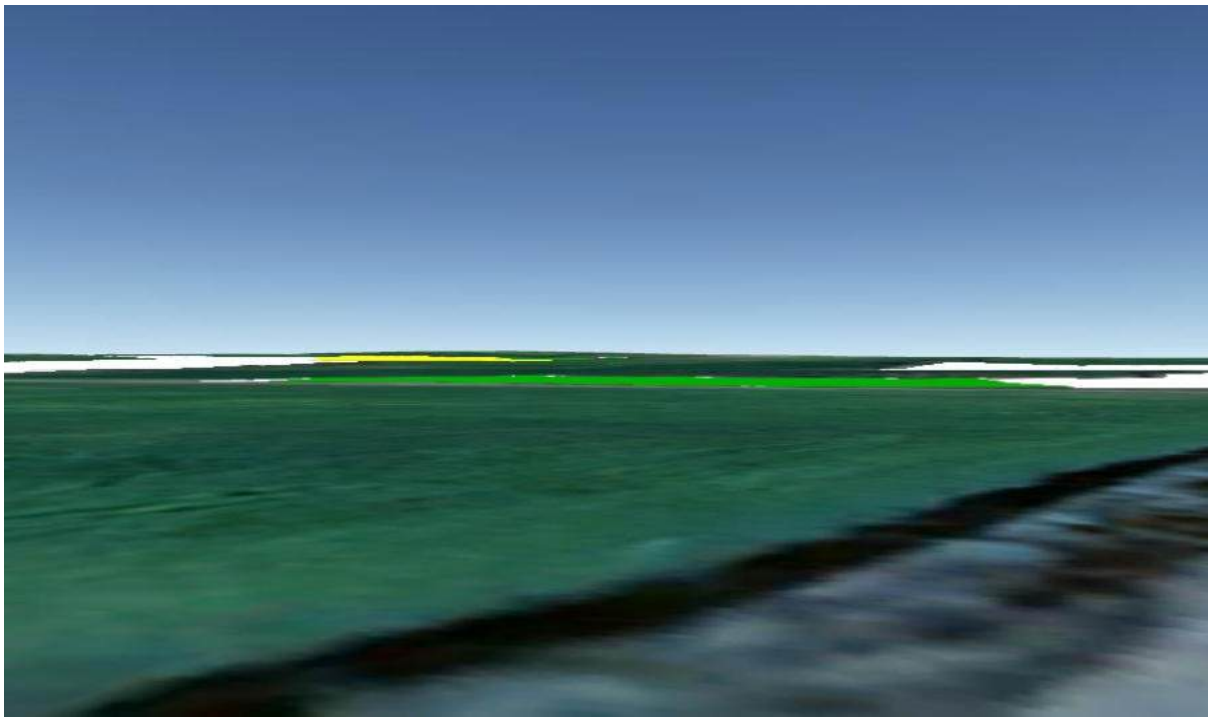

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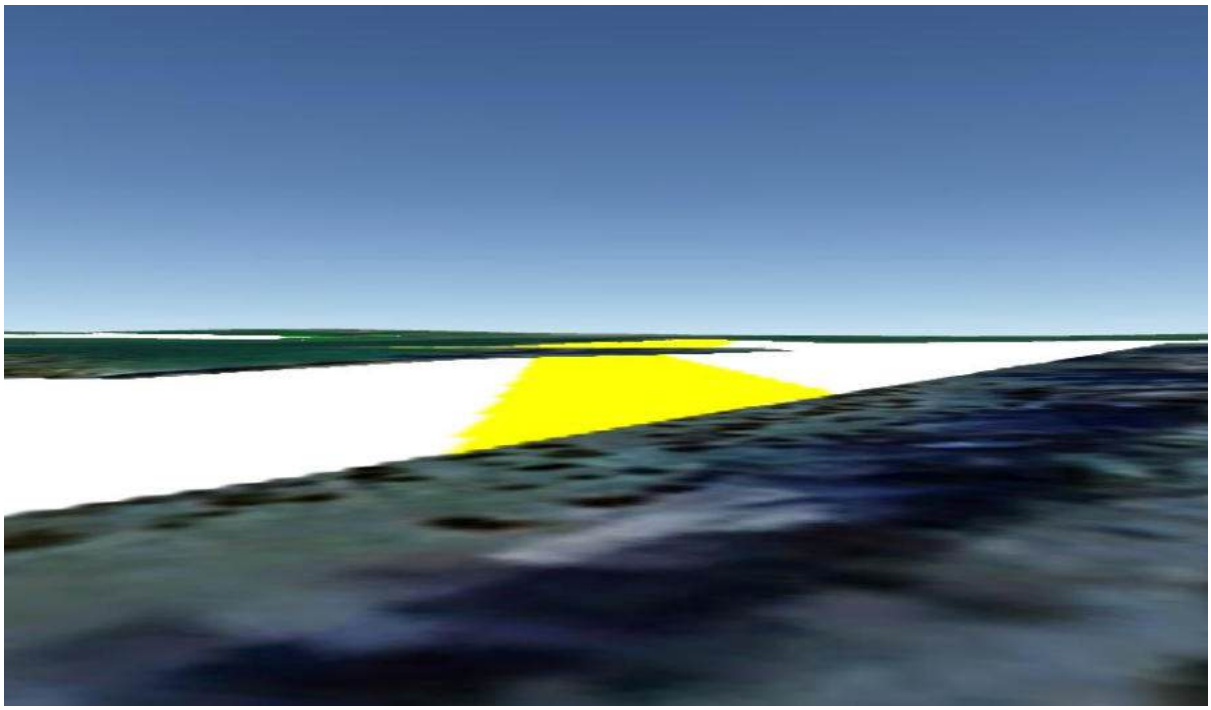
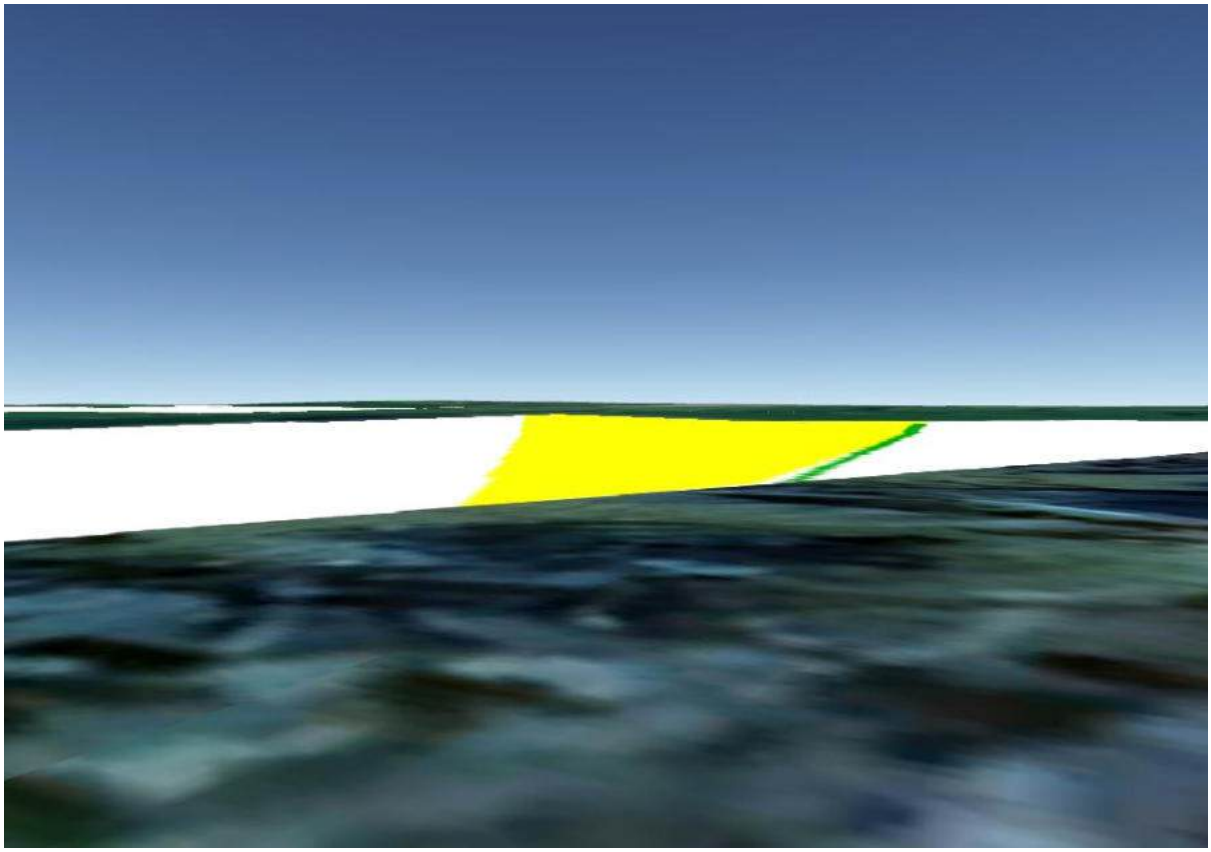
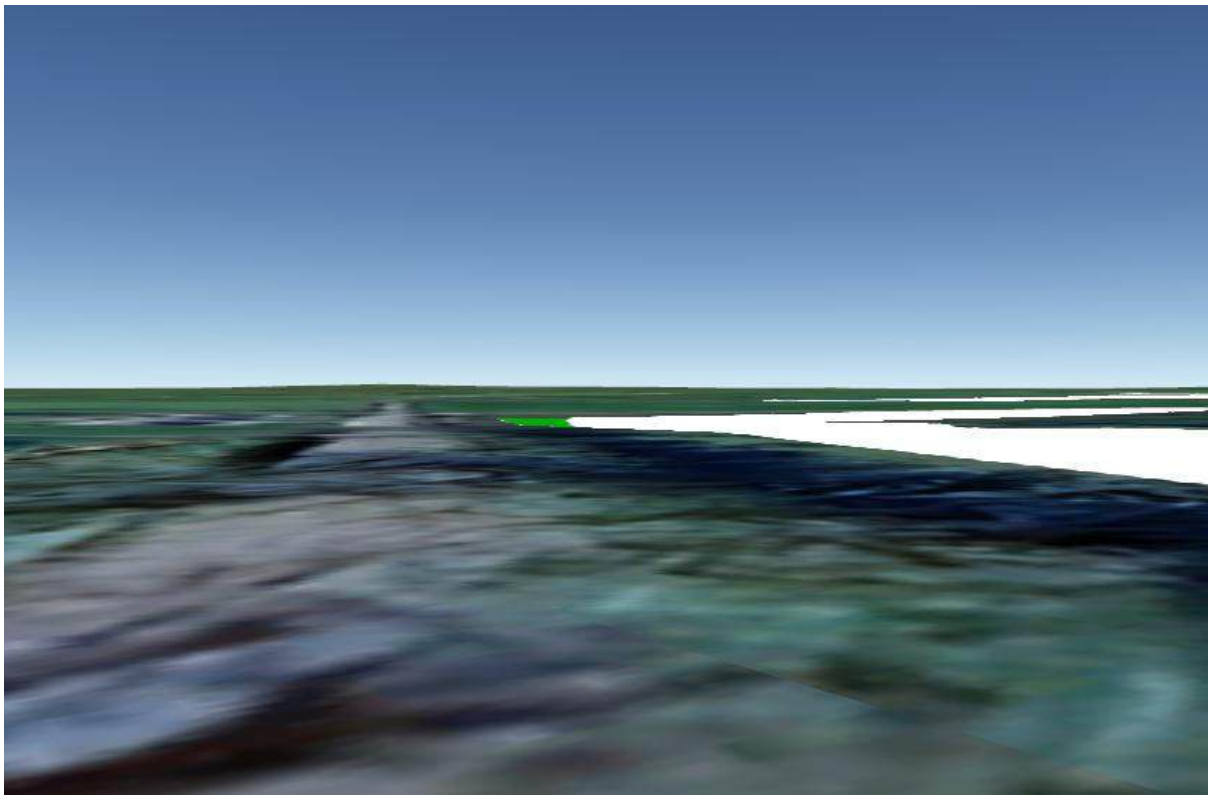


Receptor 16

Facing east

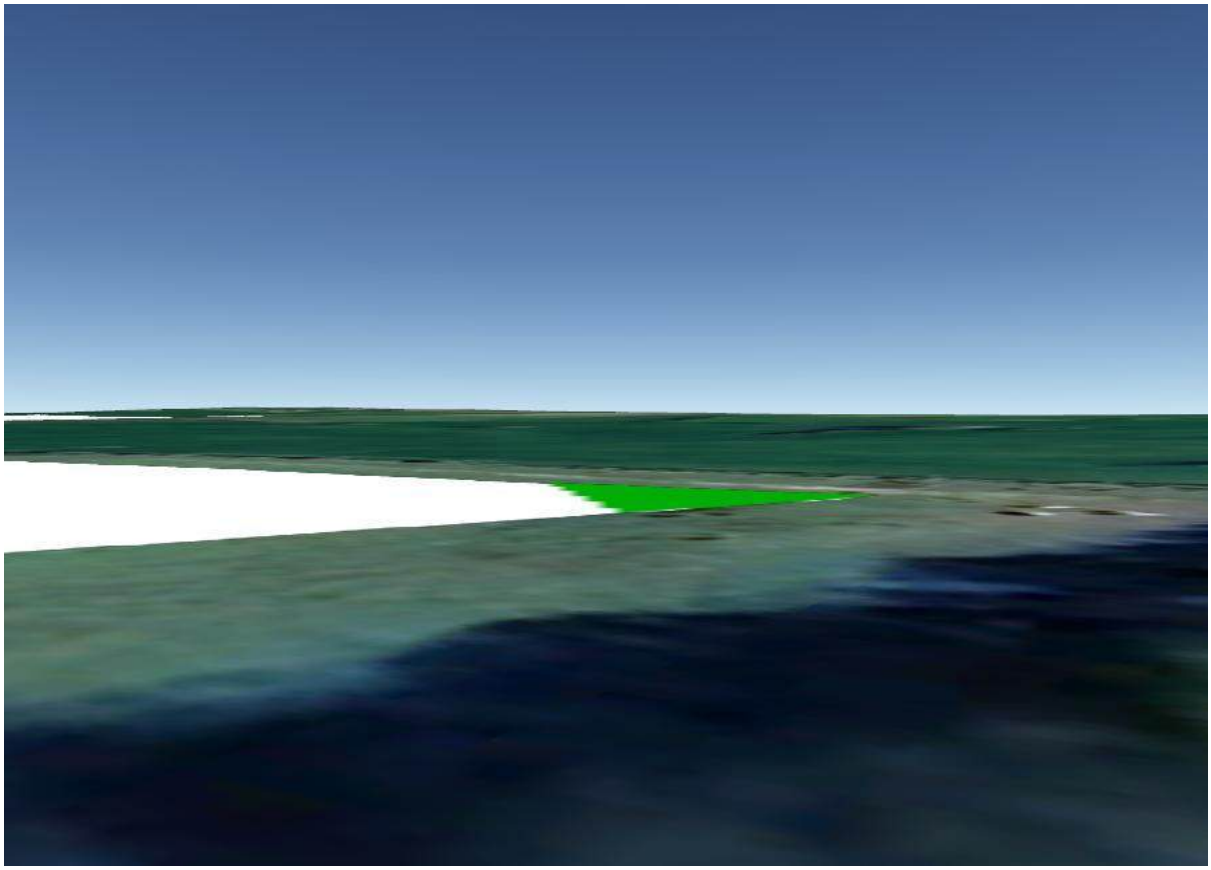


Facing west



Receptor 17

Facing east



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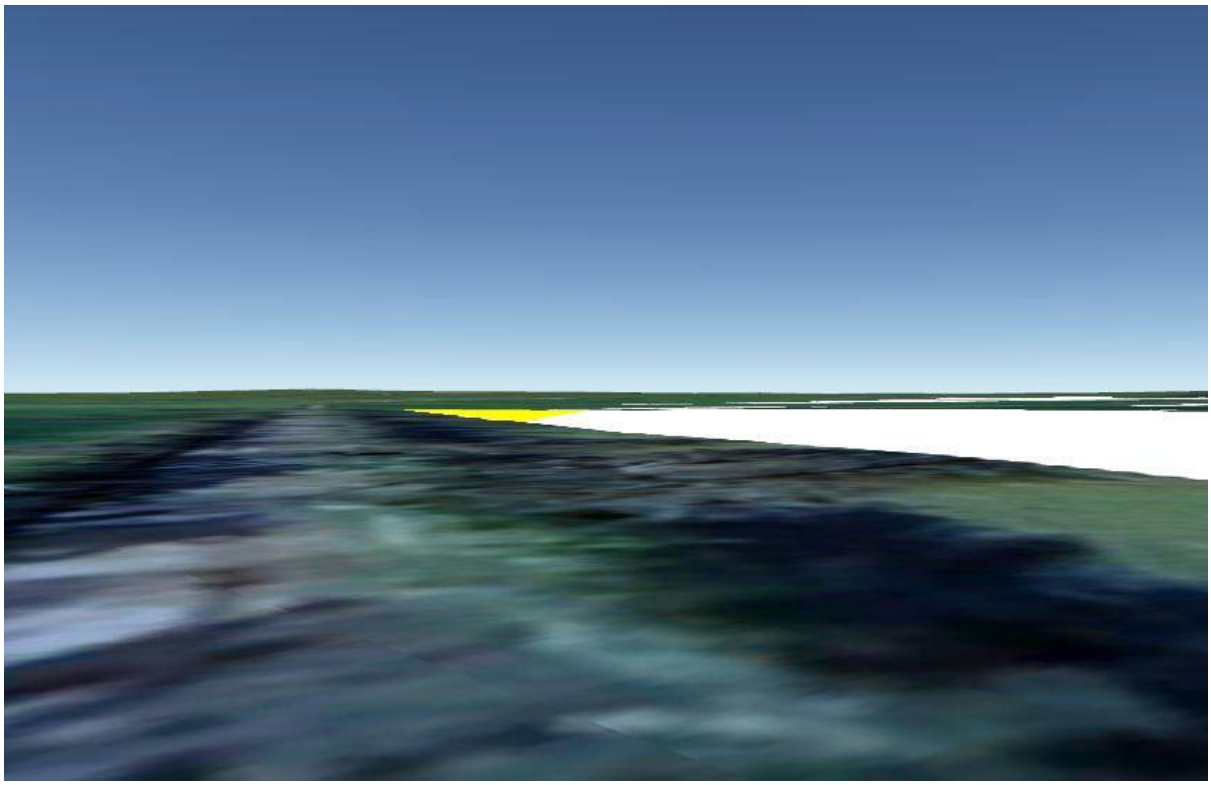

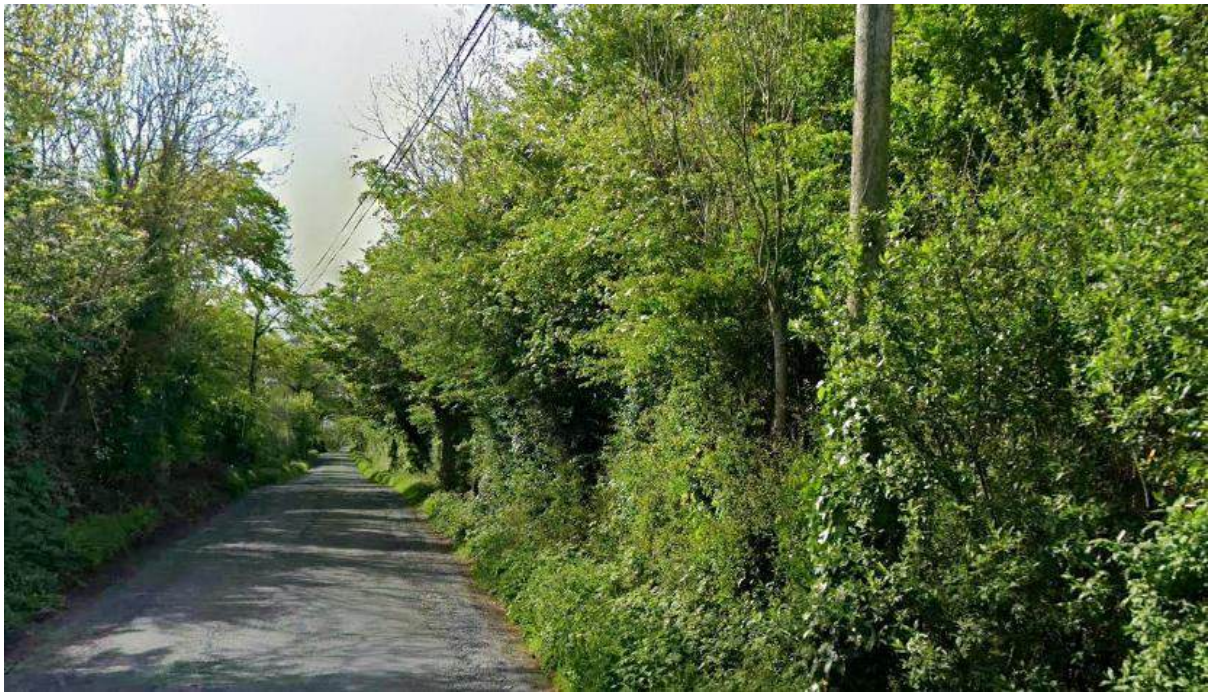

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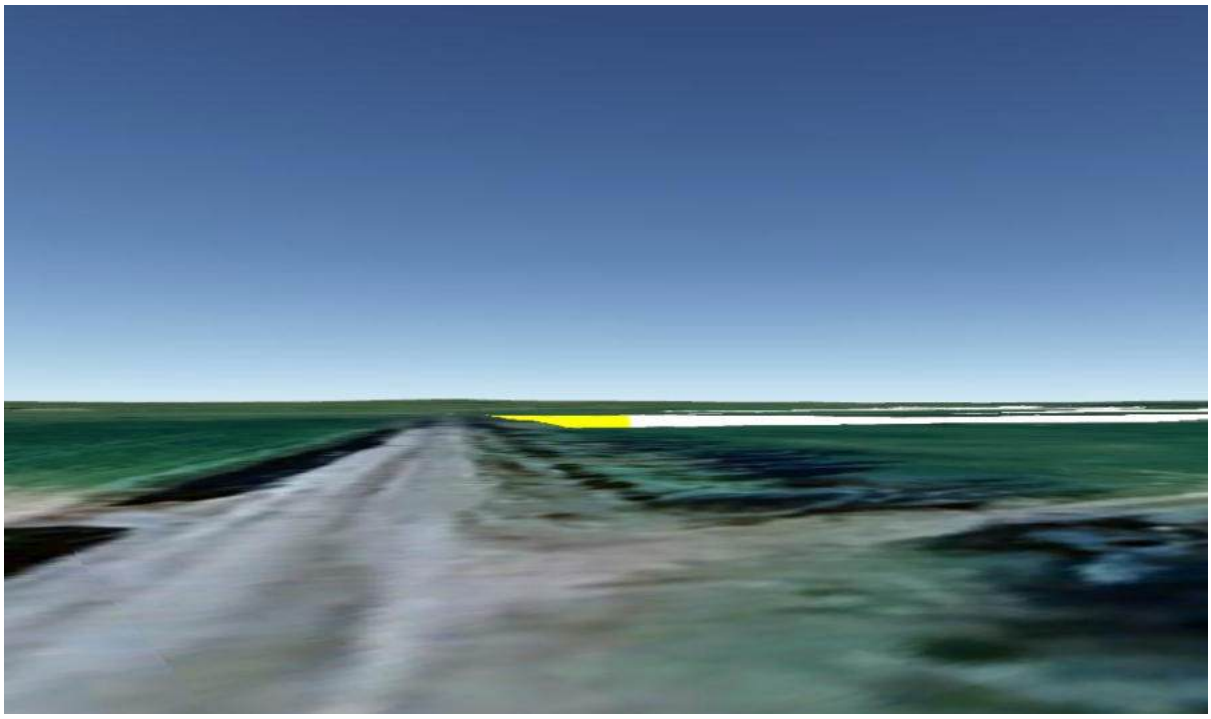

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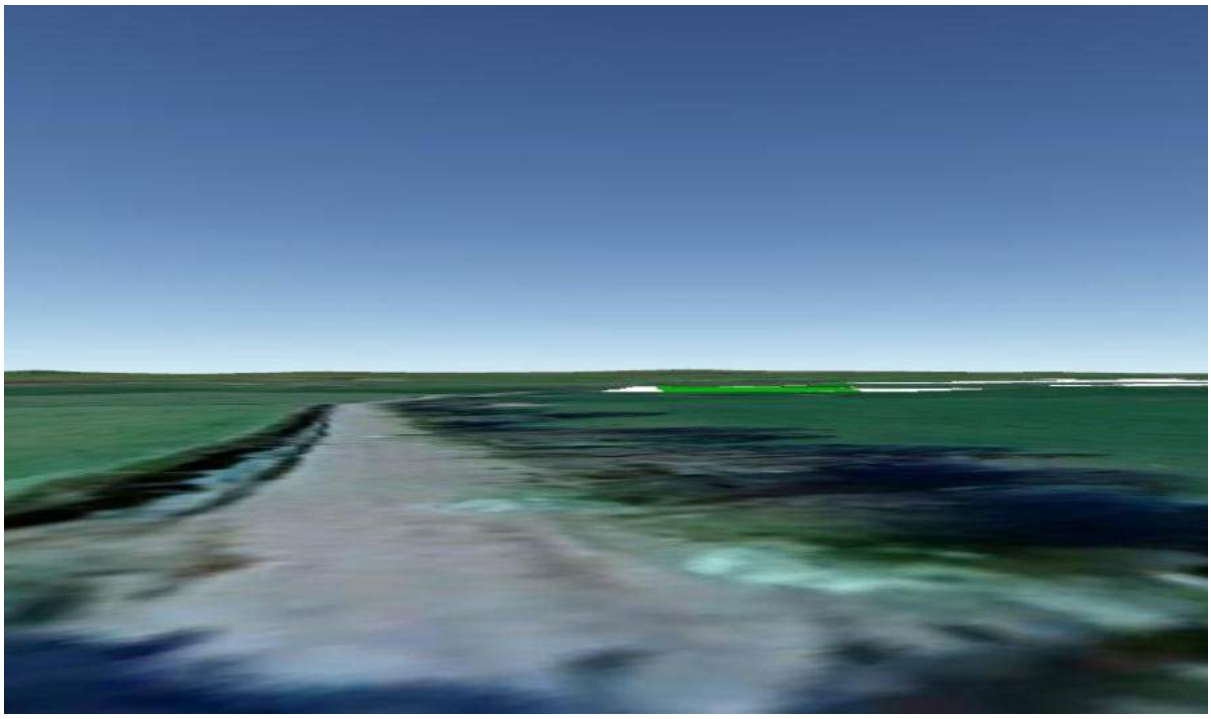

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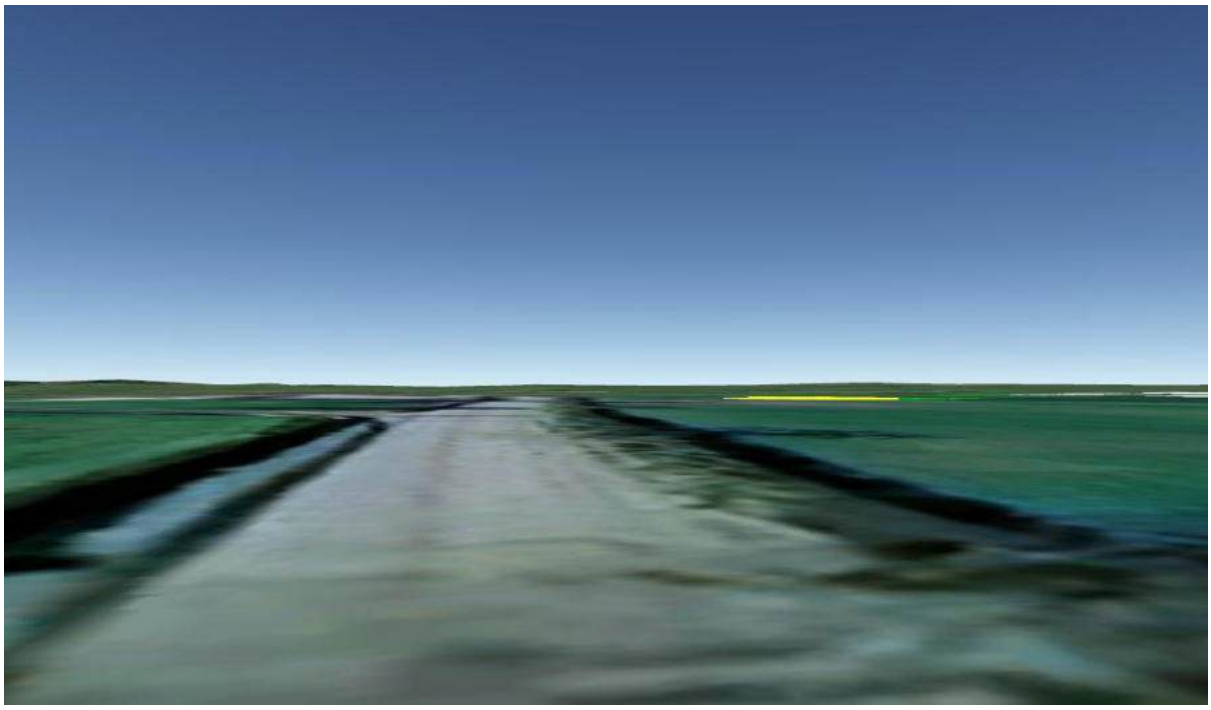

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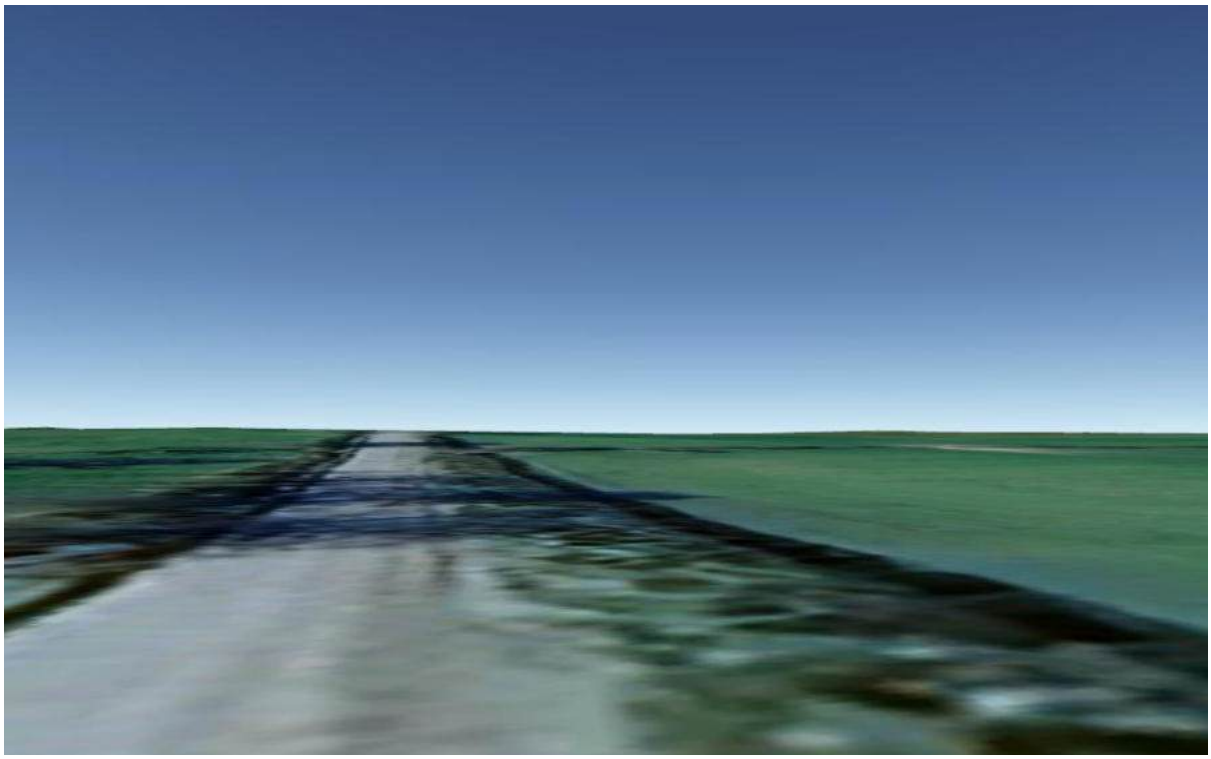

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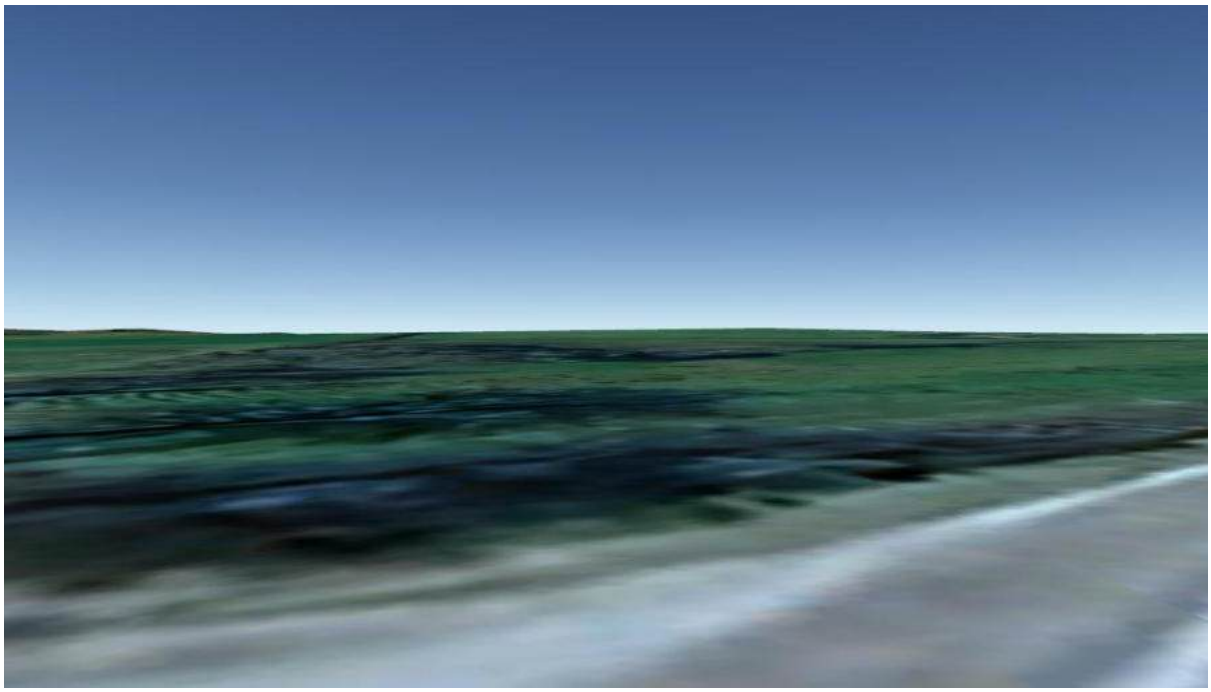

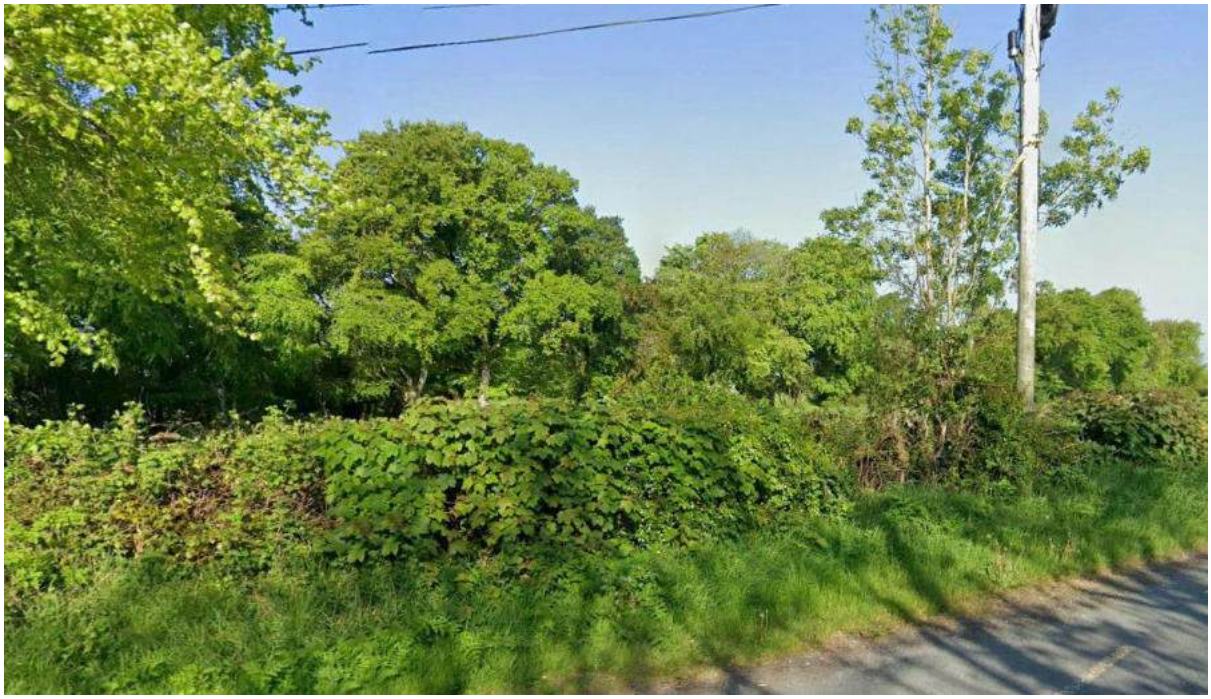

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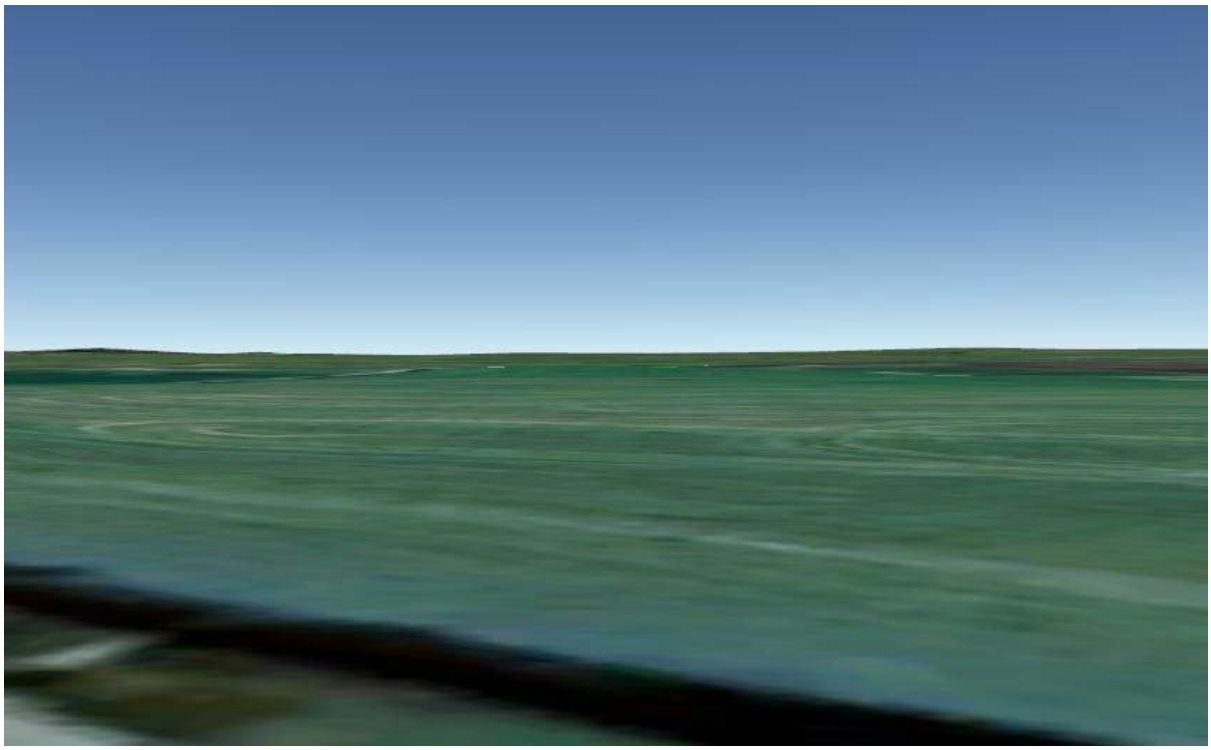

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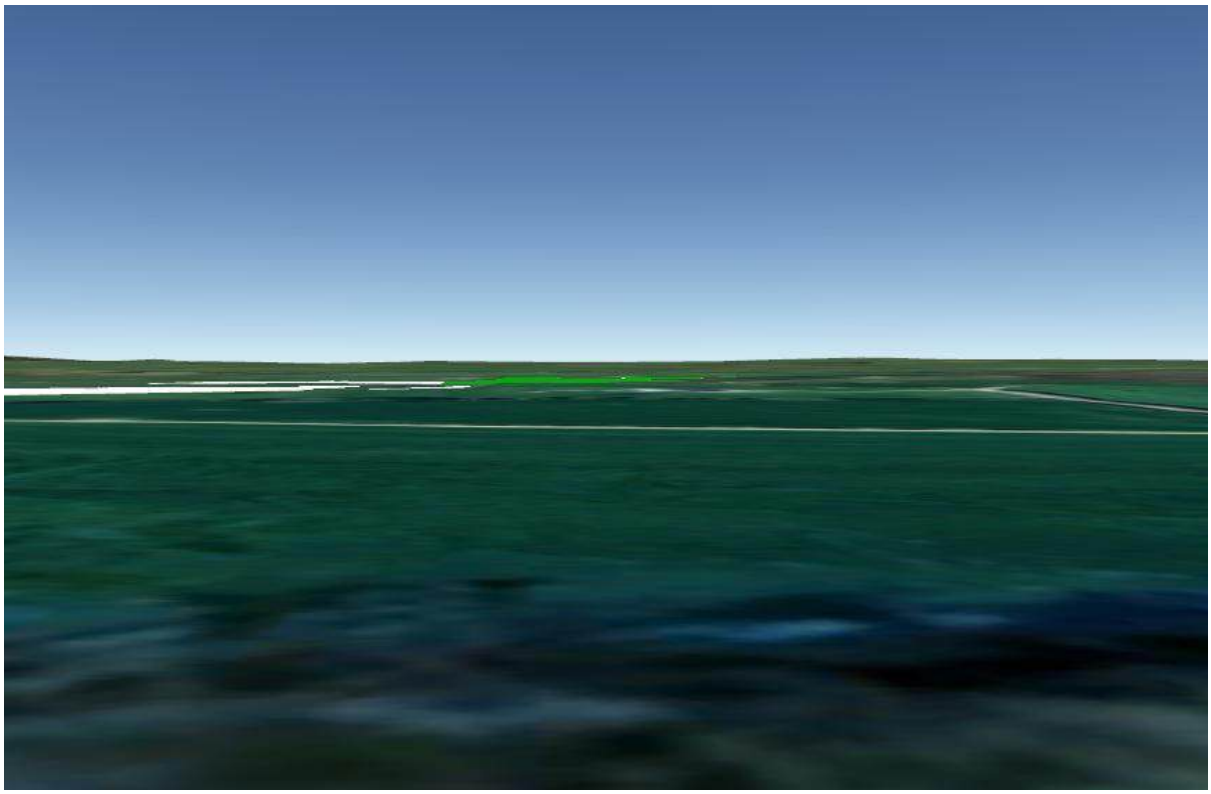

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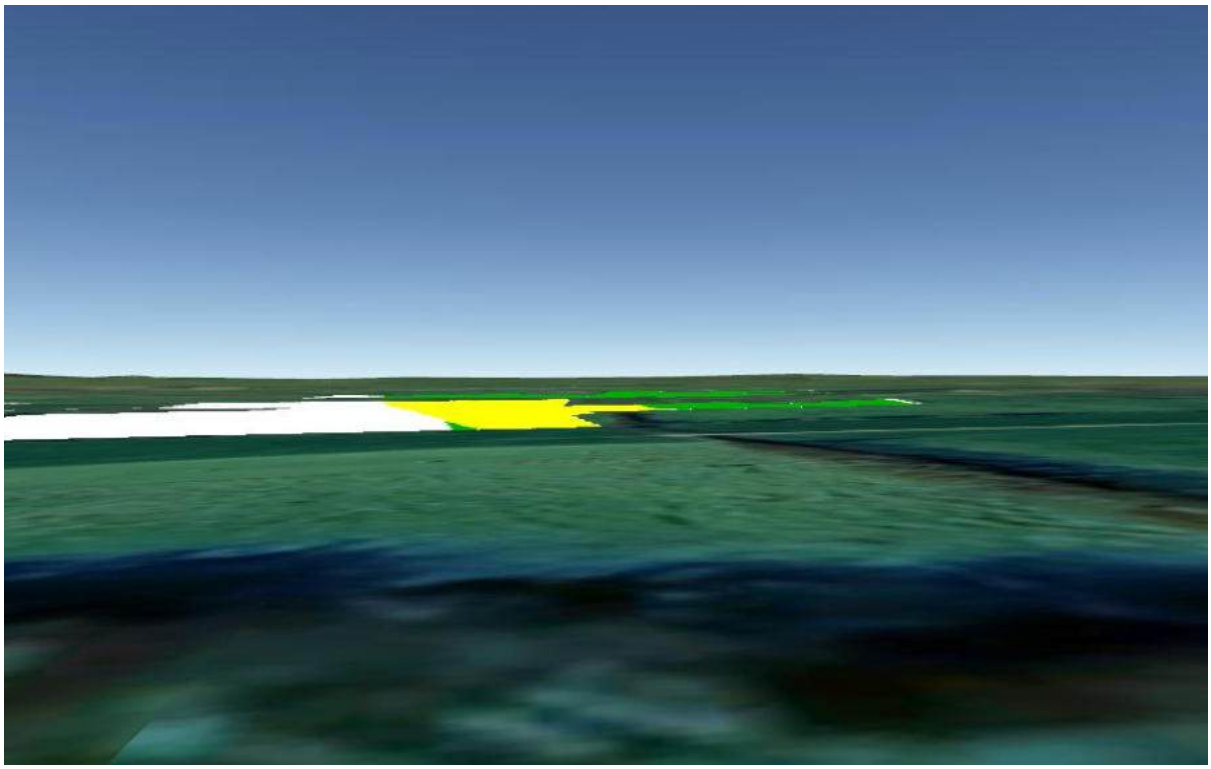

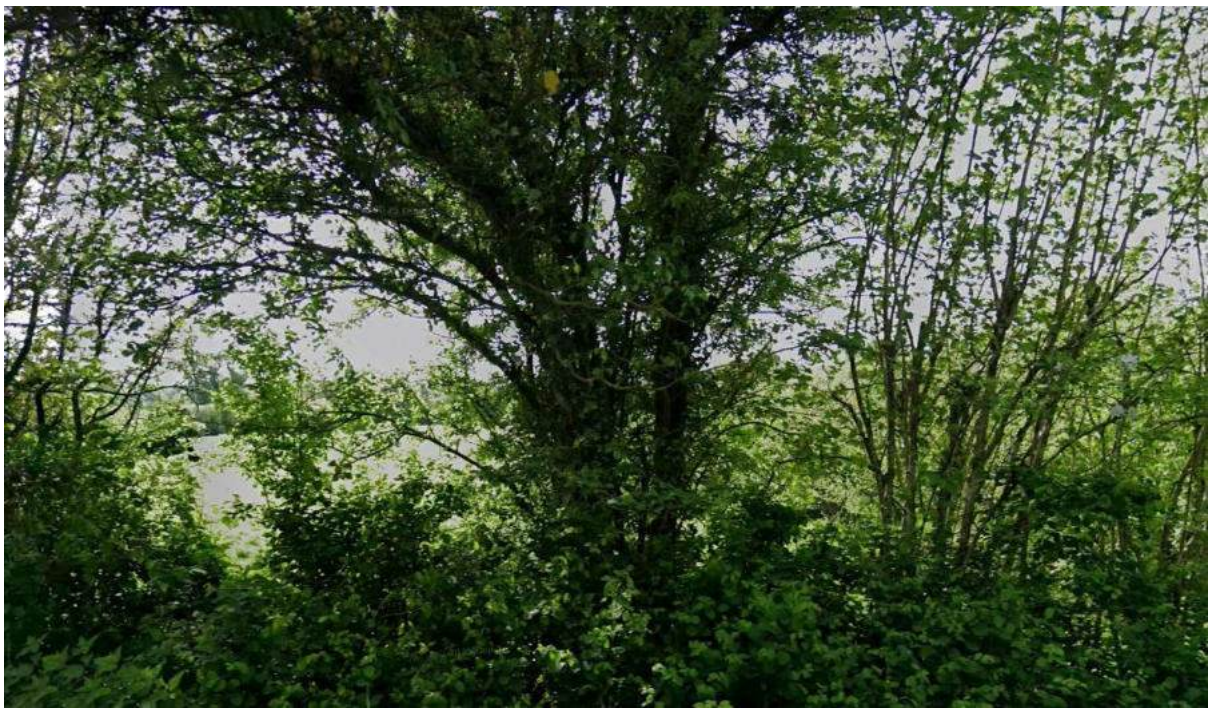

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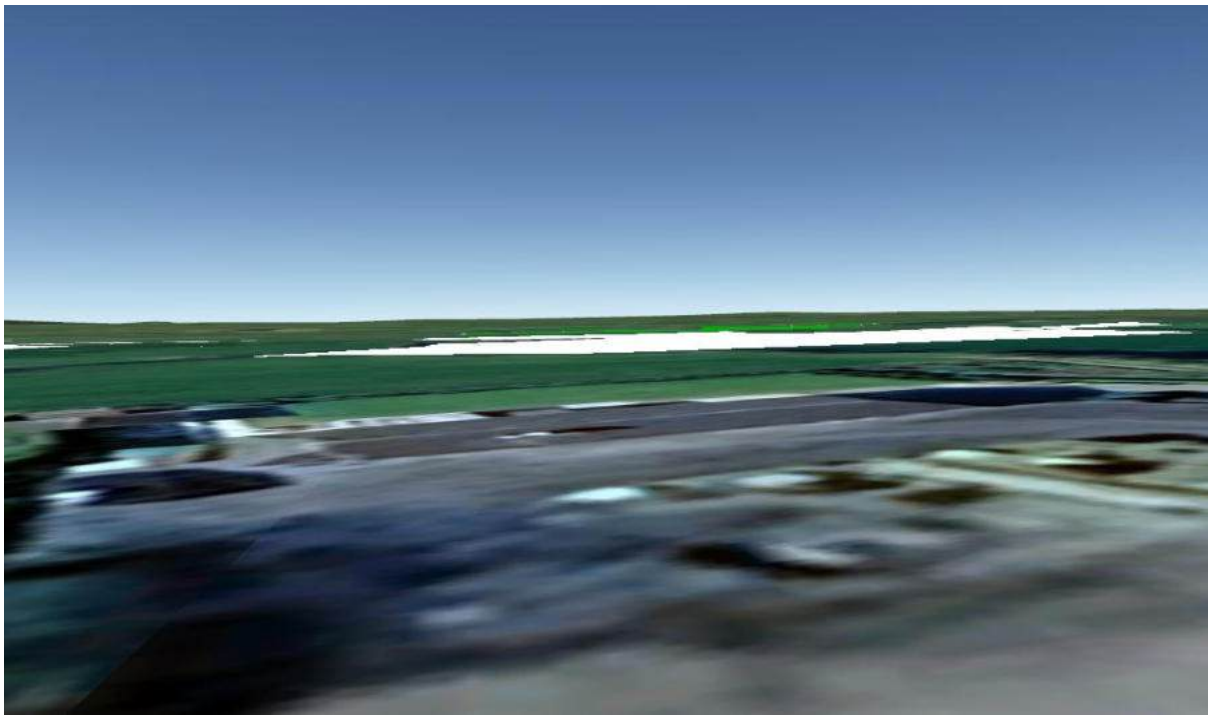

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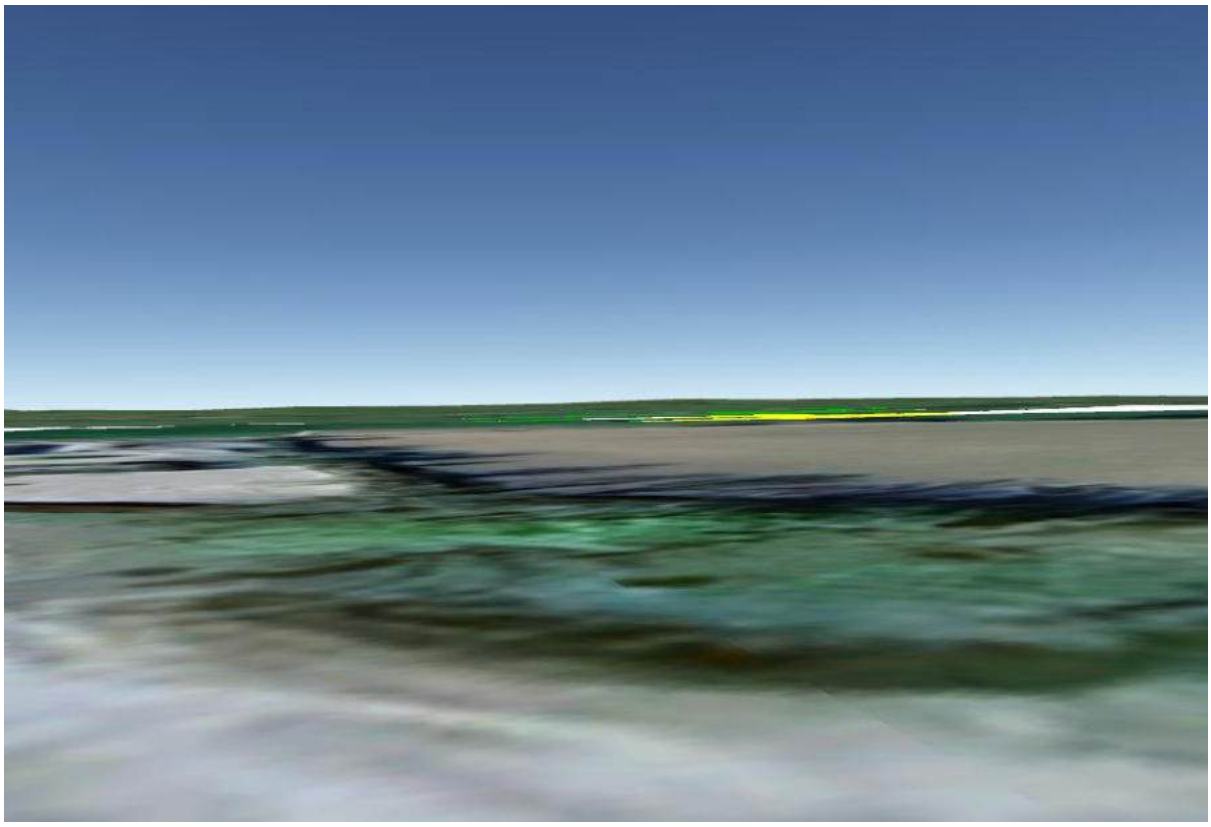

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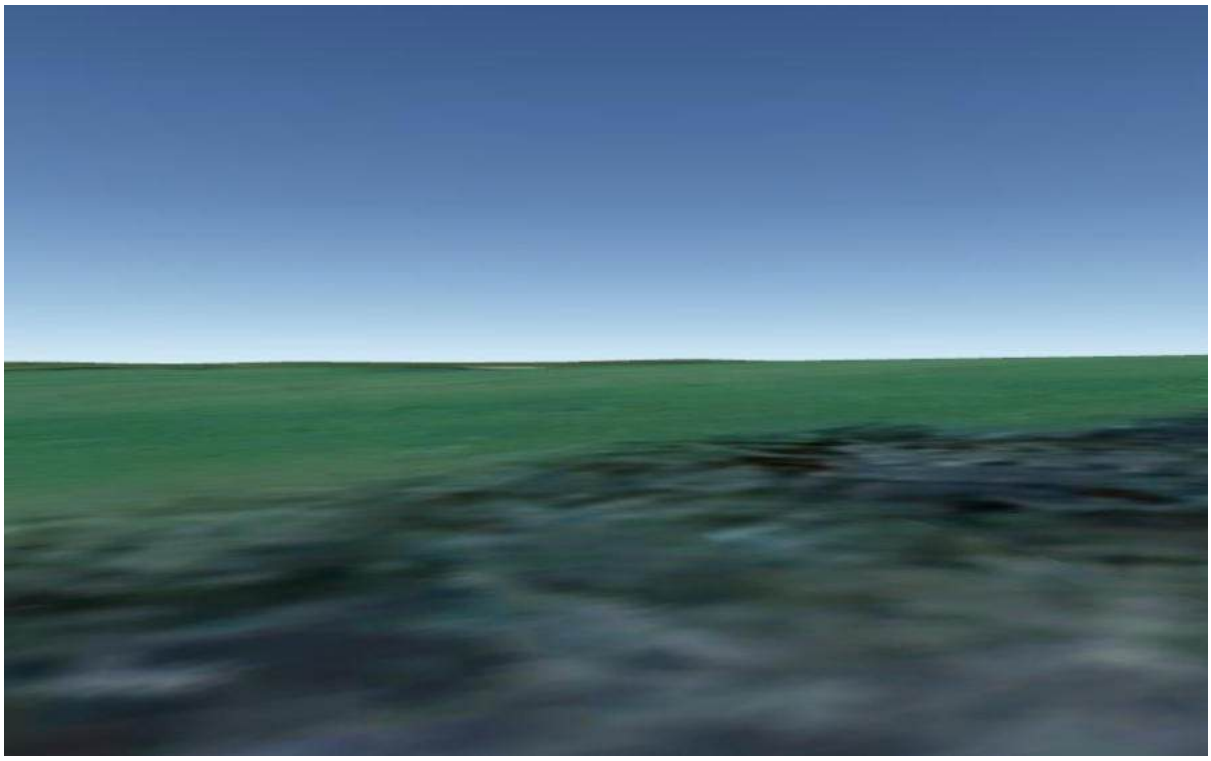

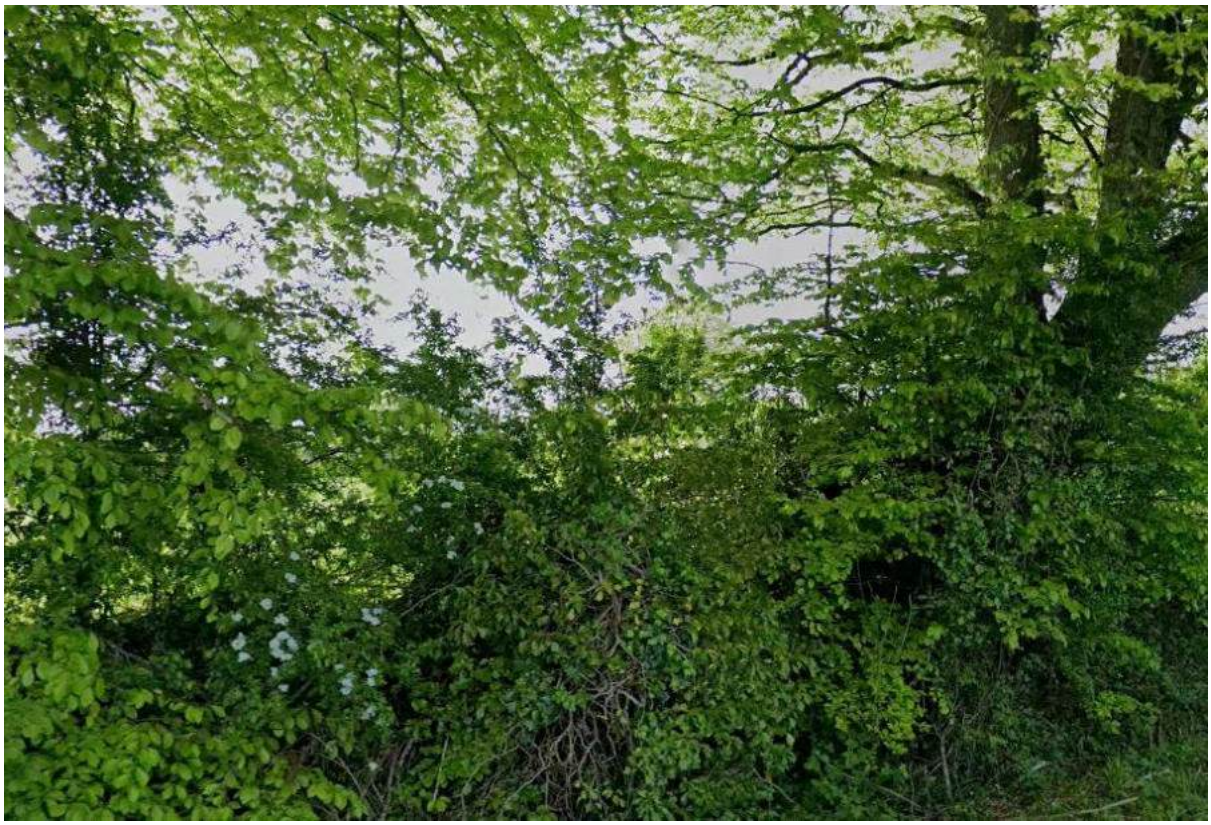

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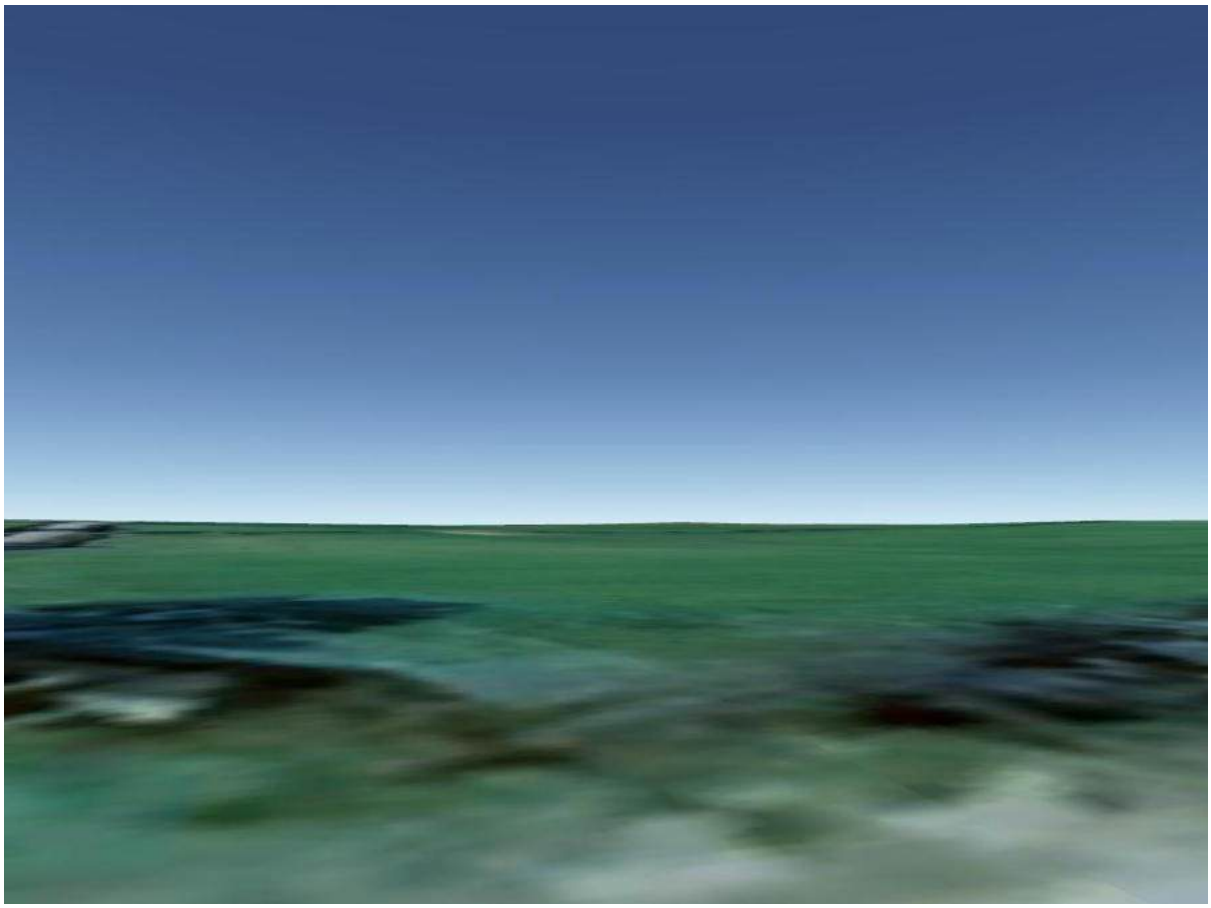

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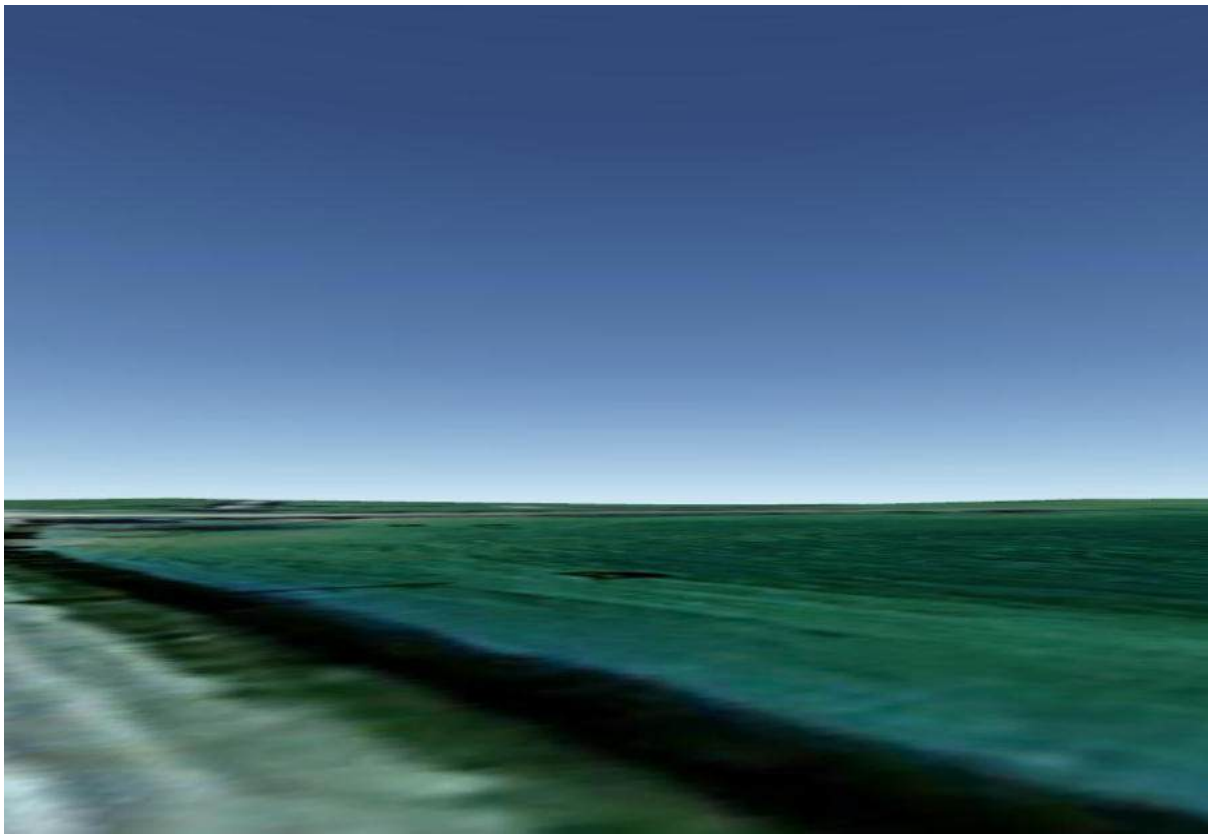

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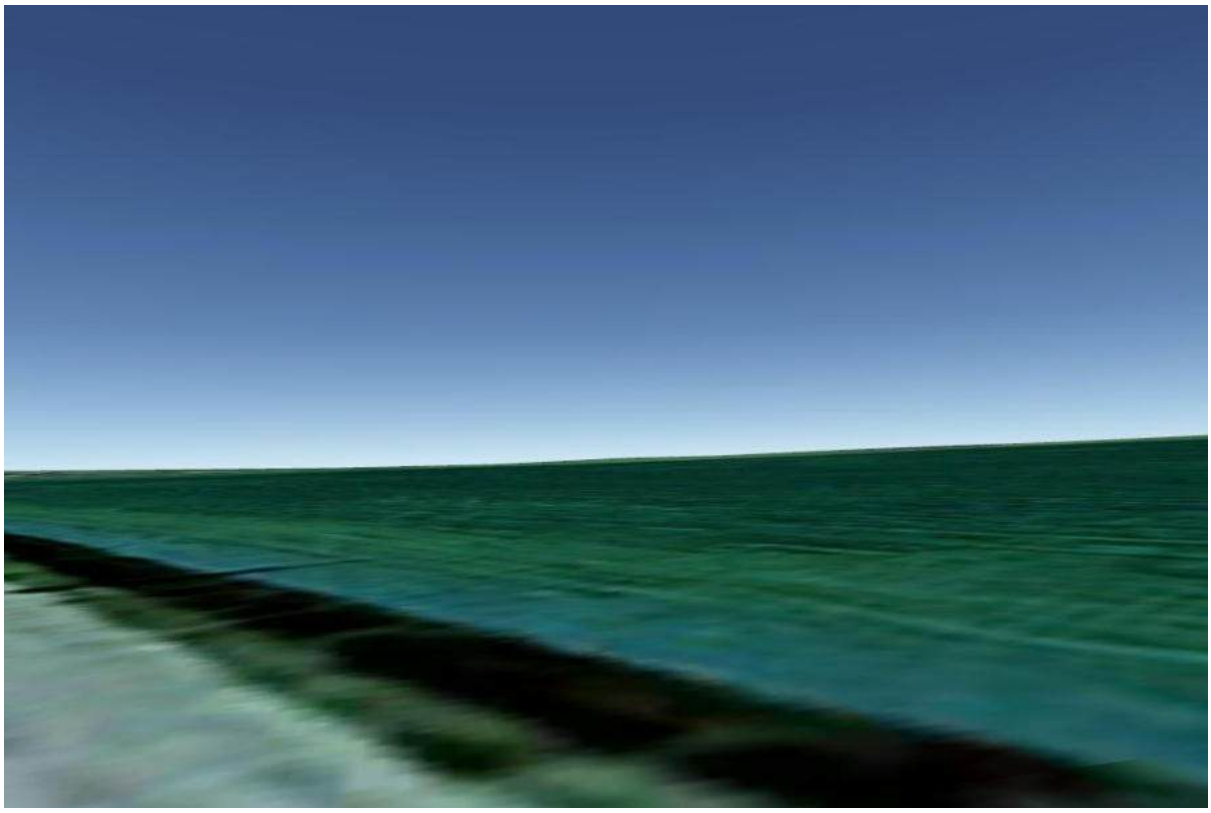

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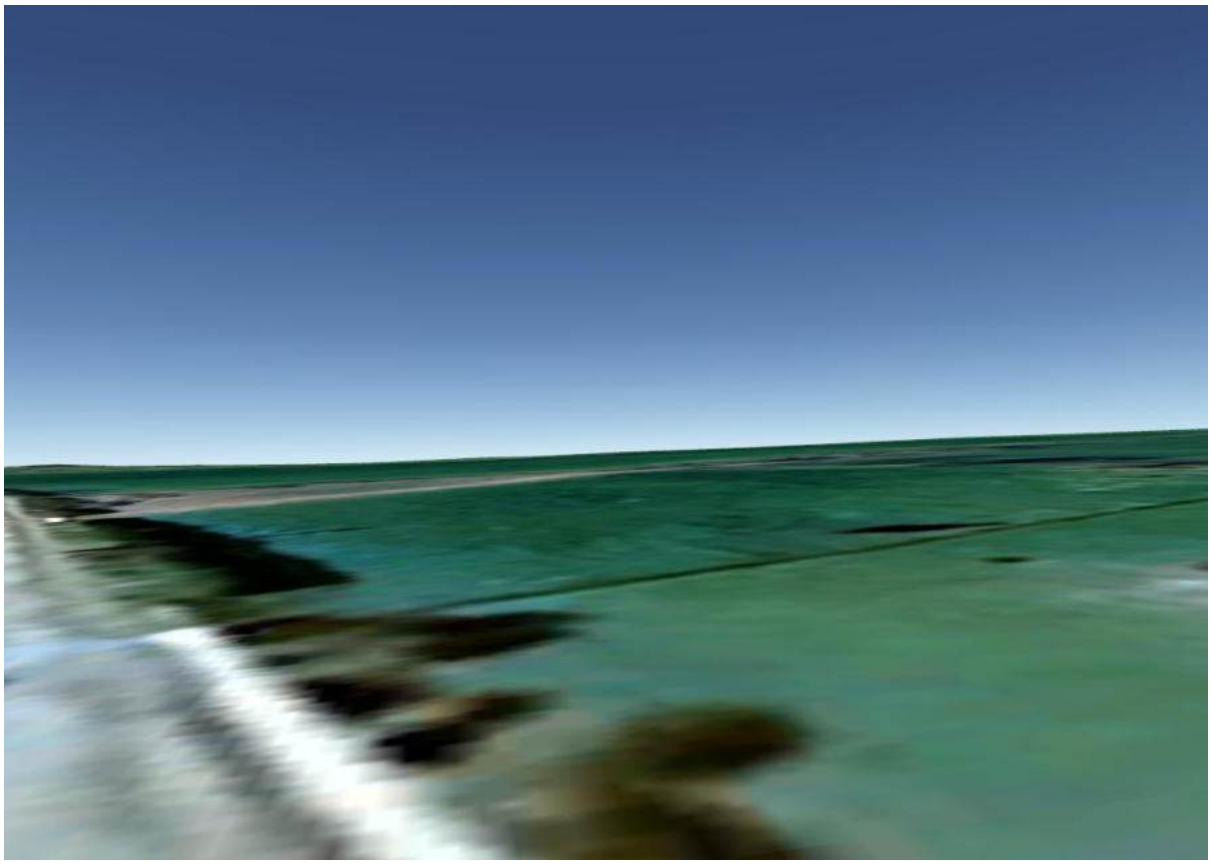

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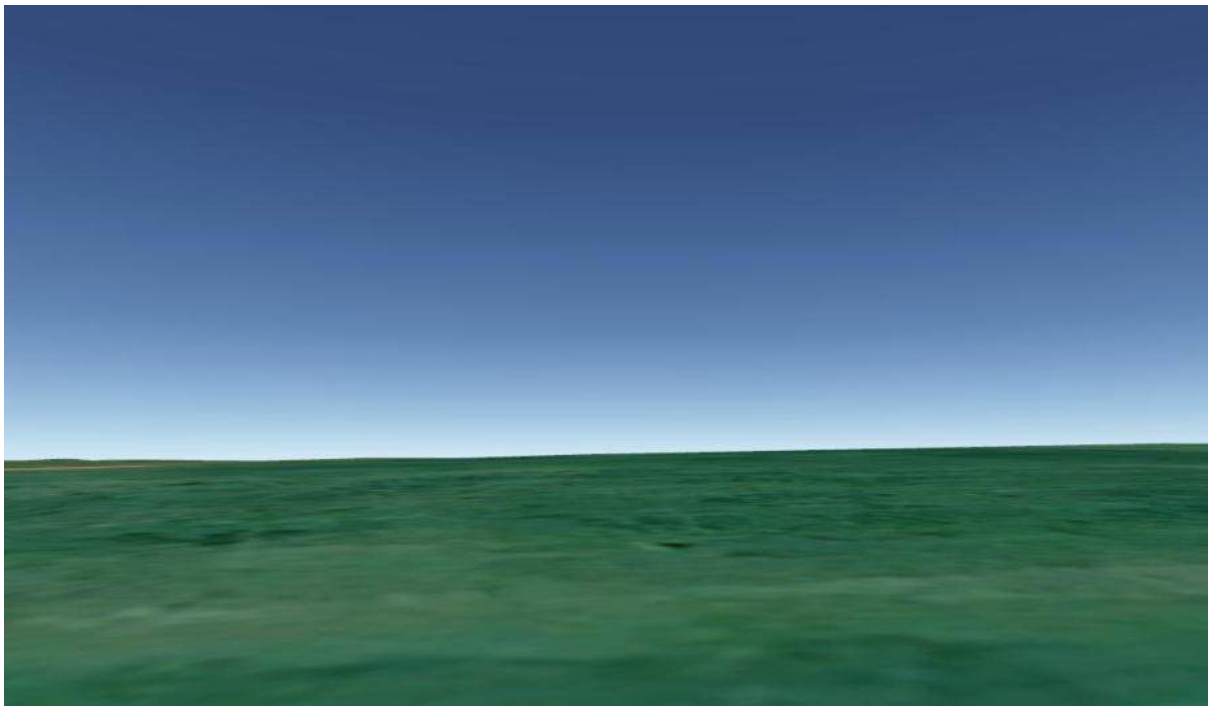

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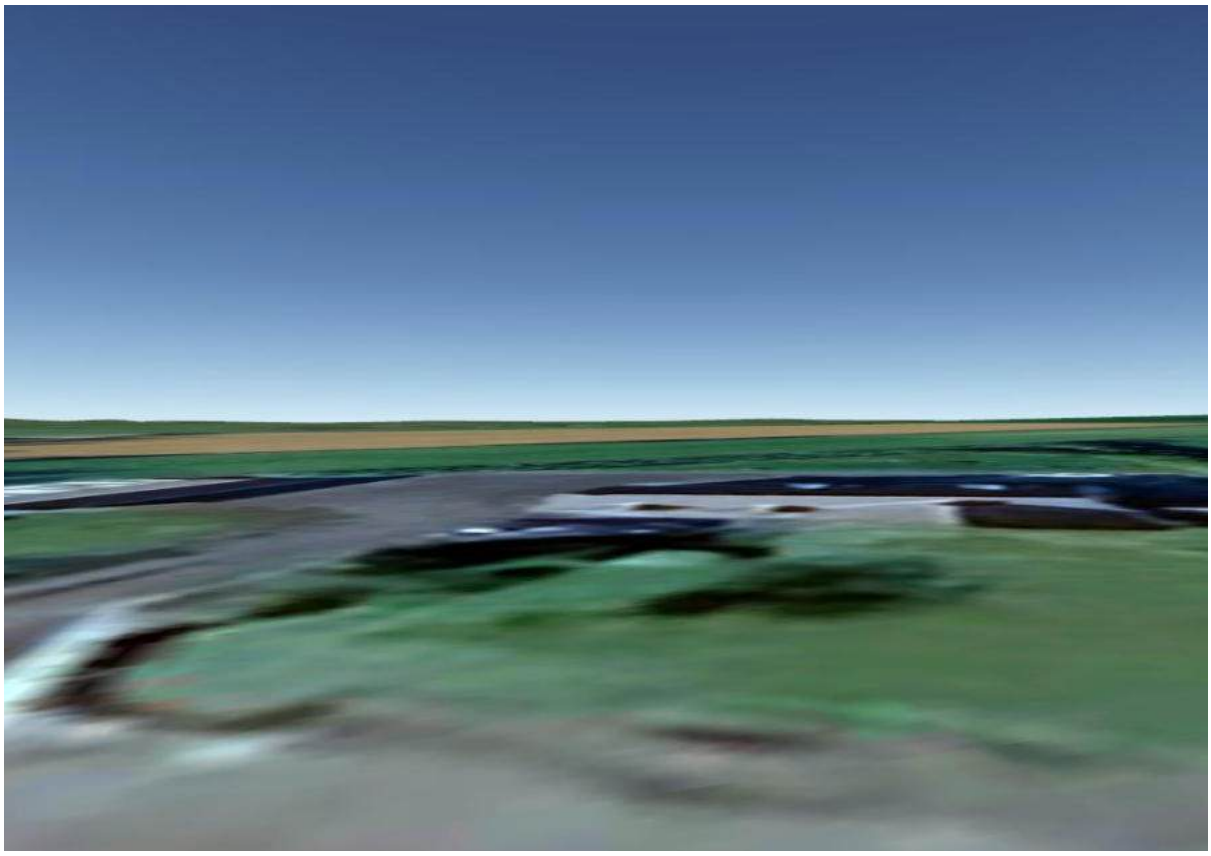

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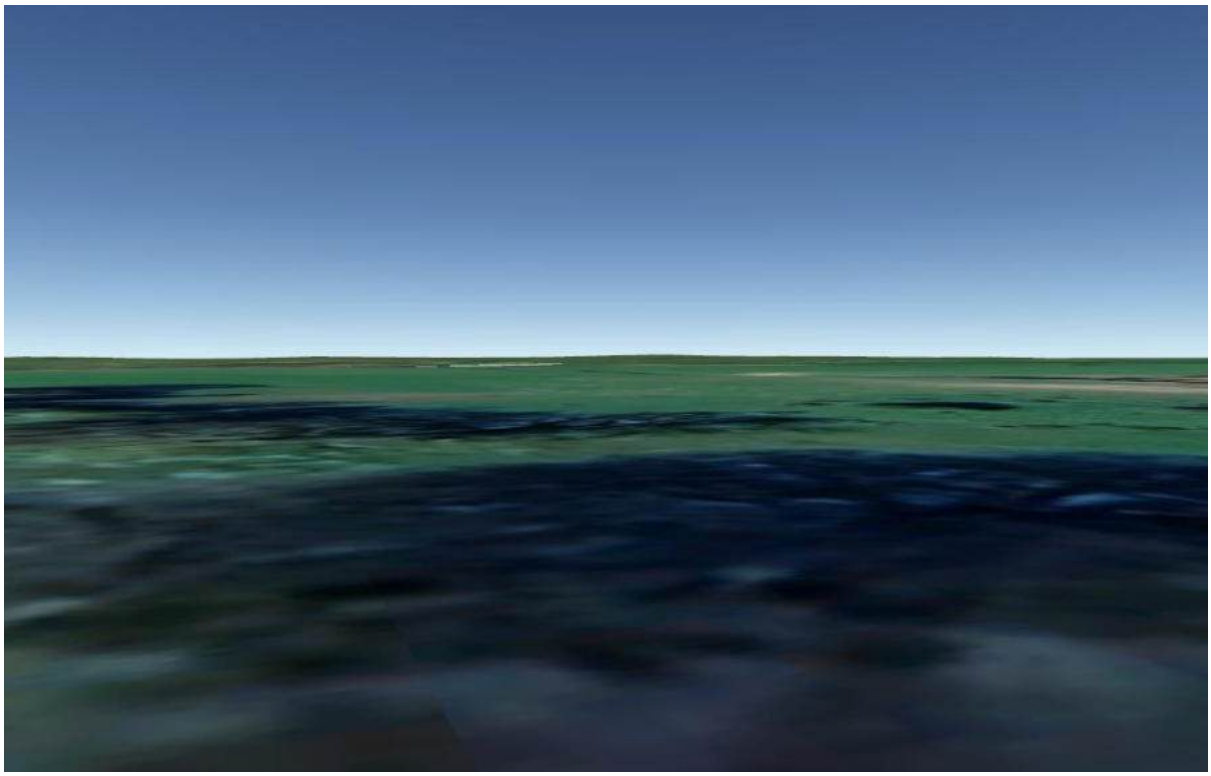

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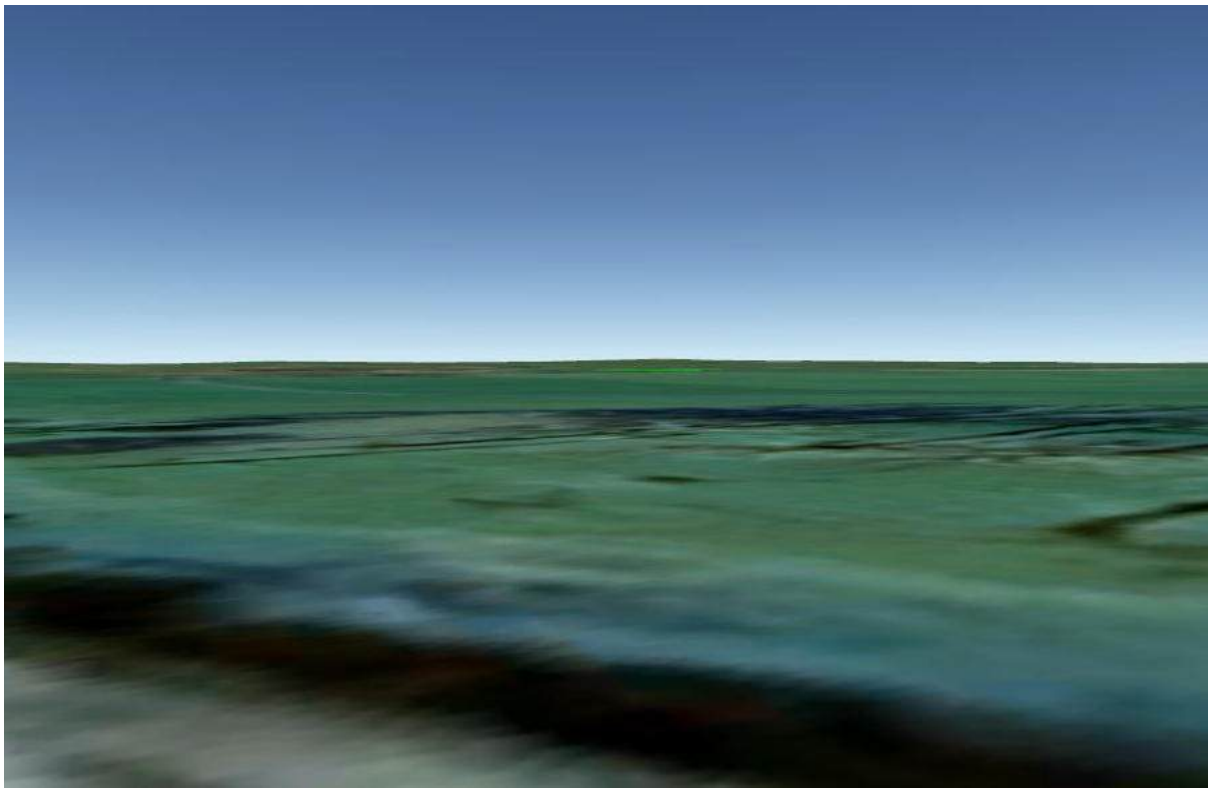

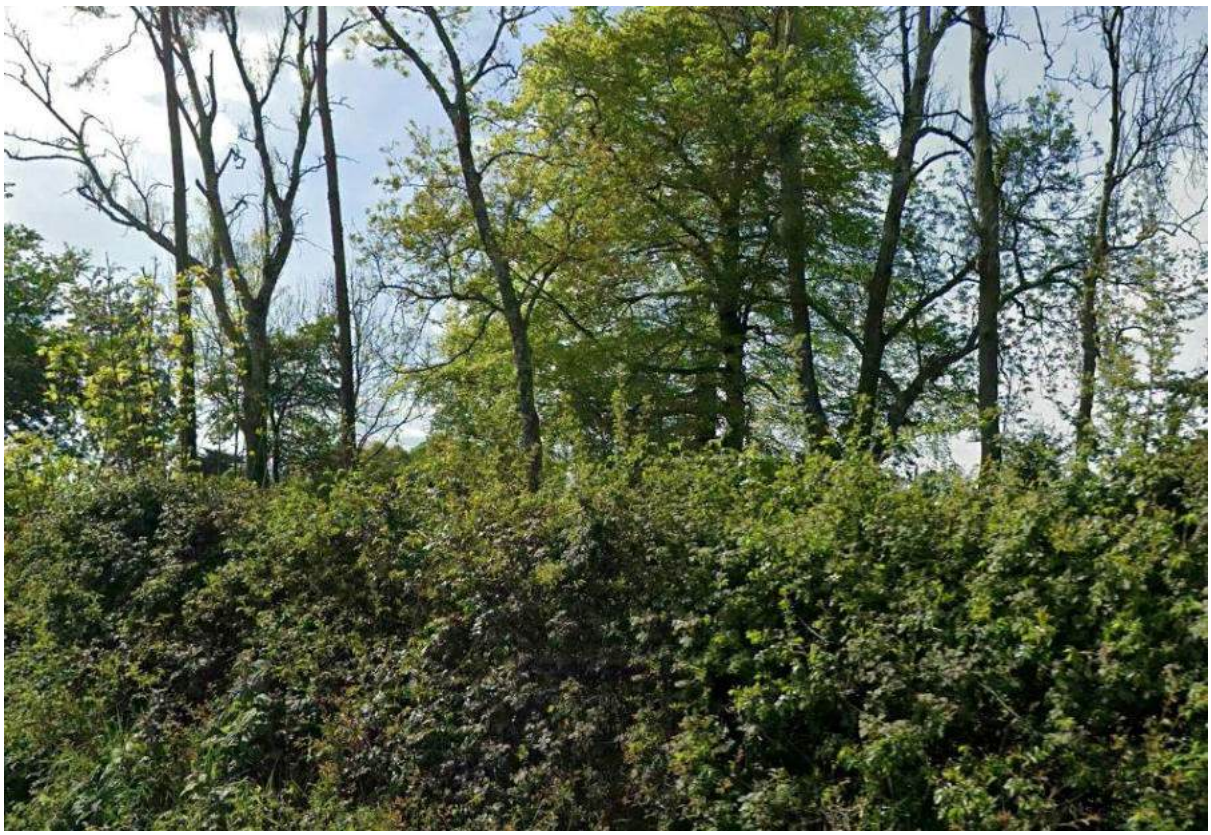

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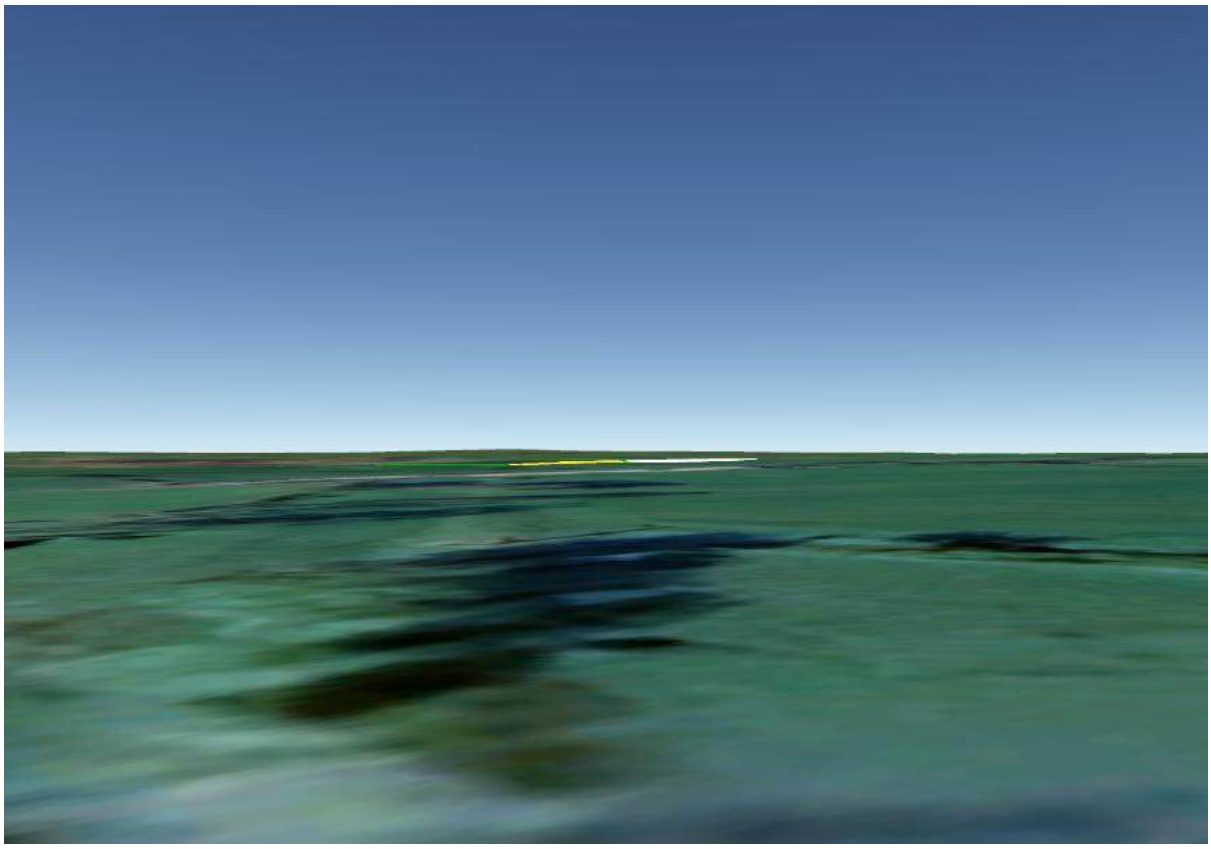

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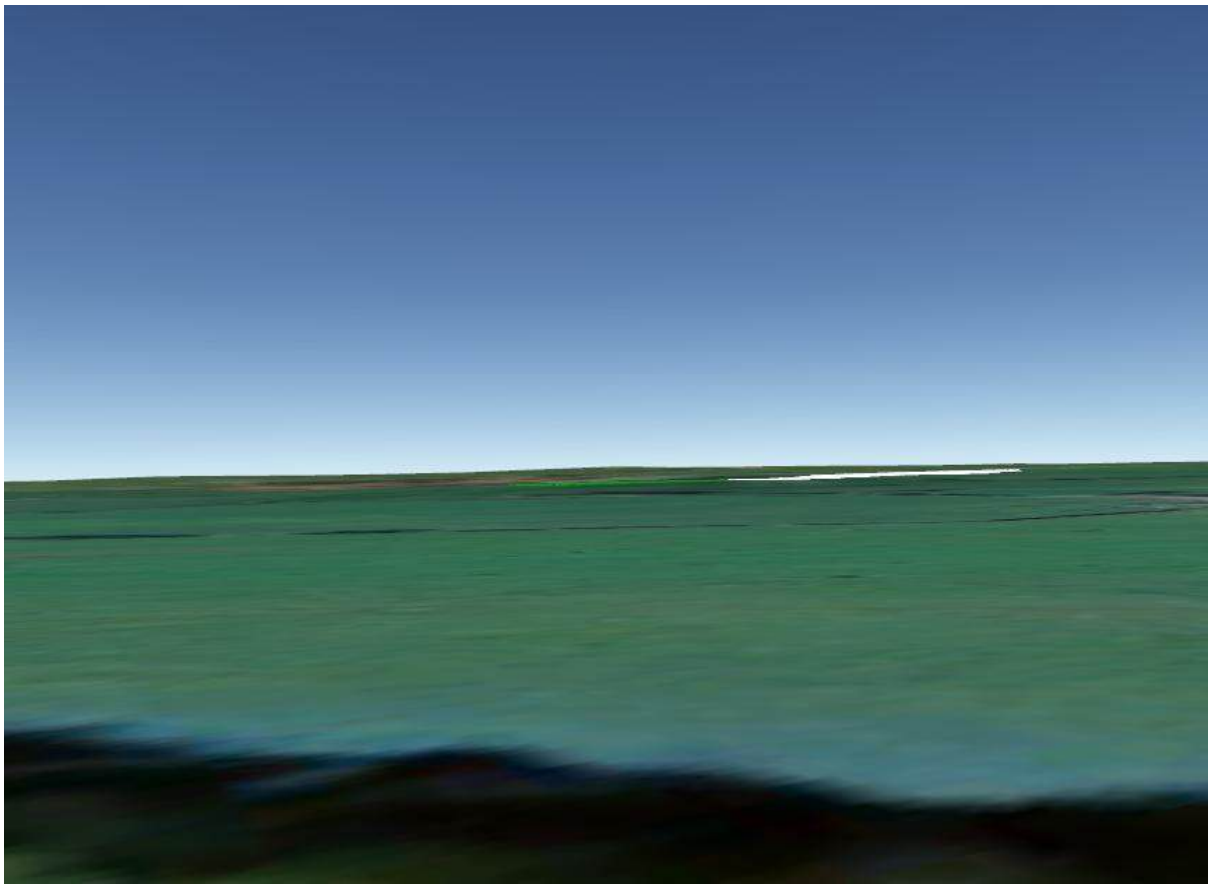

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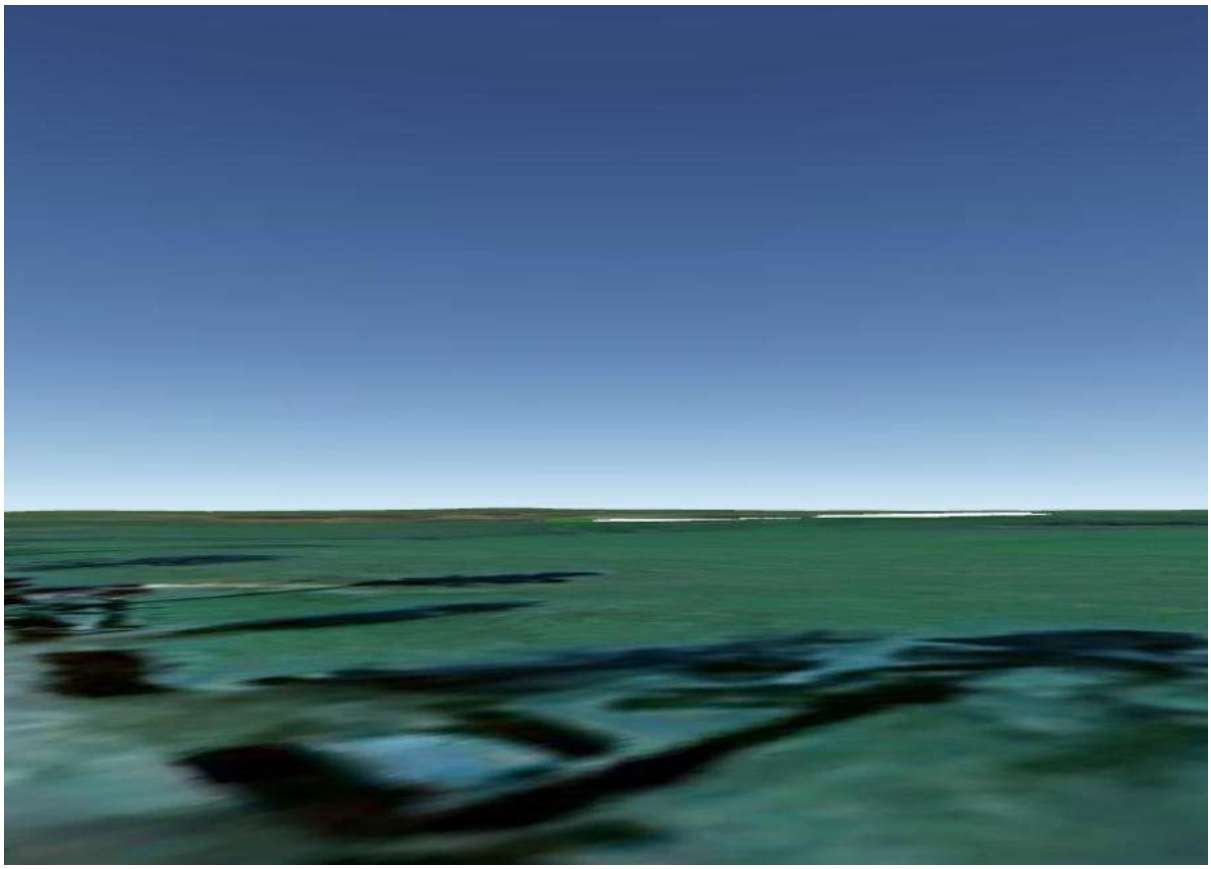

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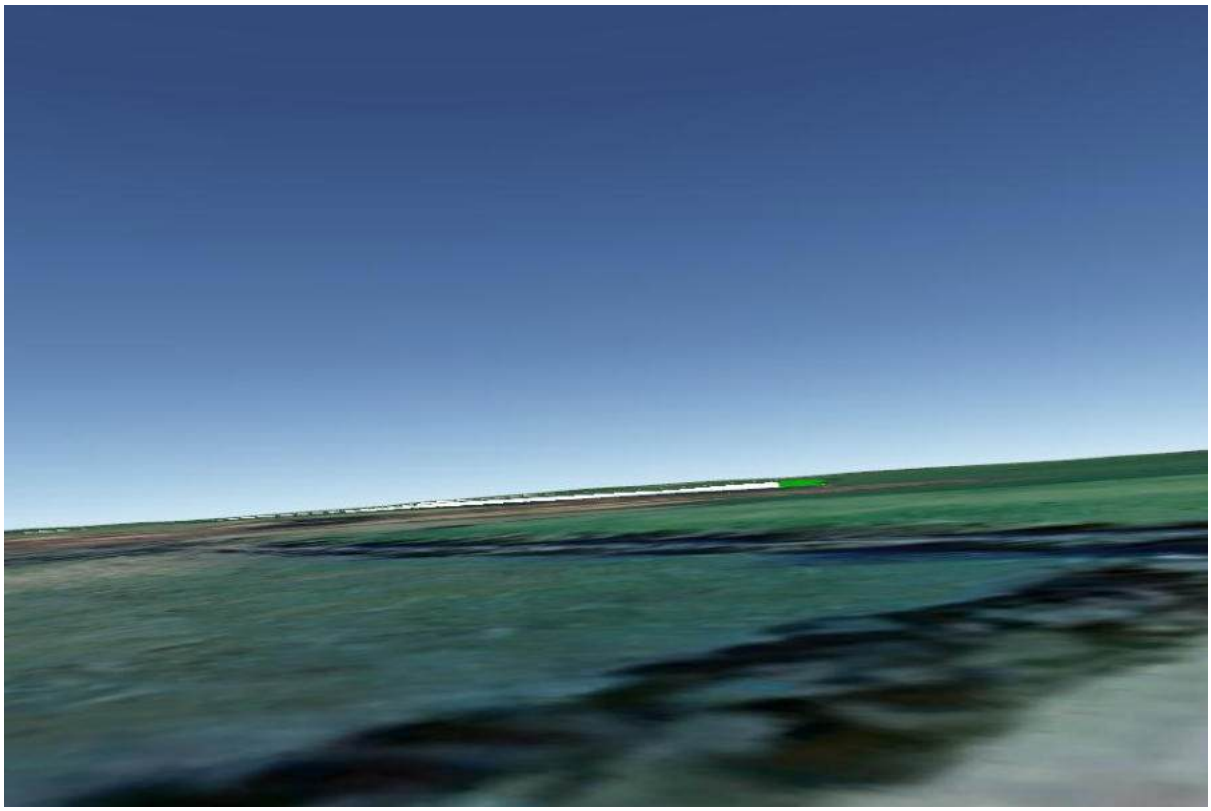

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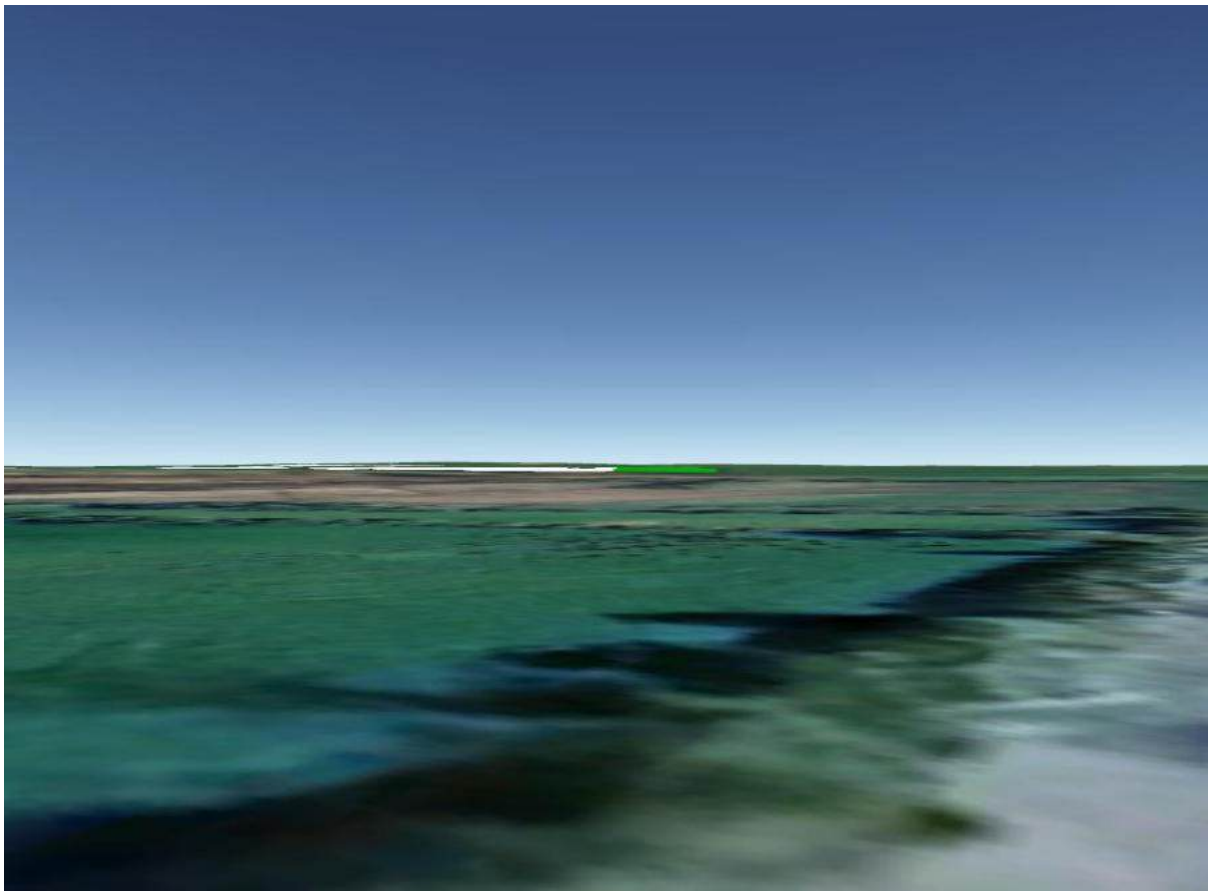


Appendix 7E

Solar Module Glare and Reflectance Technical Memo

Technical Notification

TITLE: SunPower Solar Module Glare and Reflectance
AUTHORS: Technical Support
APPLICATION: Residential/ Commercial
SCOPE: SunPower Modules

SUMMARY:

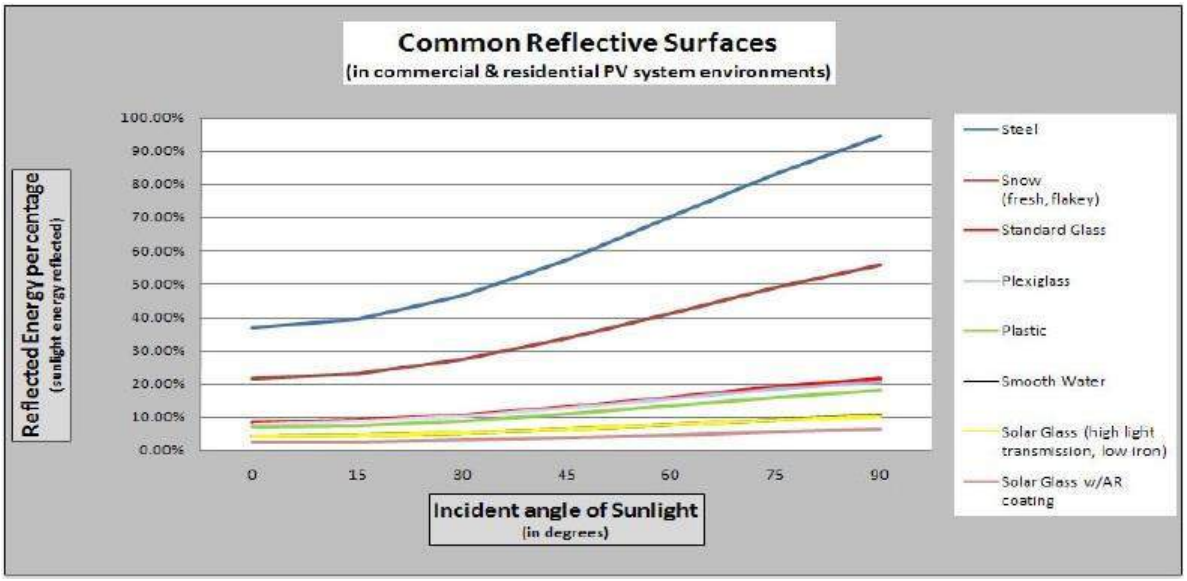
The objective of this document is to increase awareness concerning the possible glare and reflectance impact of PV Systems on their surrounding environment.

The glare and reflectance levels from a given PV system are decisively lower than the glare andreflectance generated by the standard glass and other common reflective surfaces in the environments surrounding the given PV system. Concerning random glare and reflectance observed from the air: SunPower has several large projects installed near airports or on air force bases. Each of these large projects has passed FAA or Air Force standards and all projects have been determined as "No Hazard toAir Navigation". Although the possible glare and reflectance from PV systems are at safe levels and are usually decisively lower than other standard residential and commercial reflective surfaces, SunPower suggests that customers and installers discuss any possible concerns with the neighbors/cohabitants near the planned PV system installation.

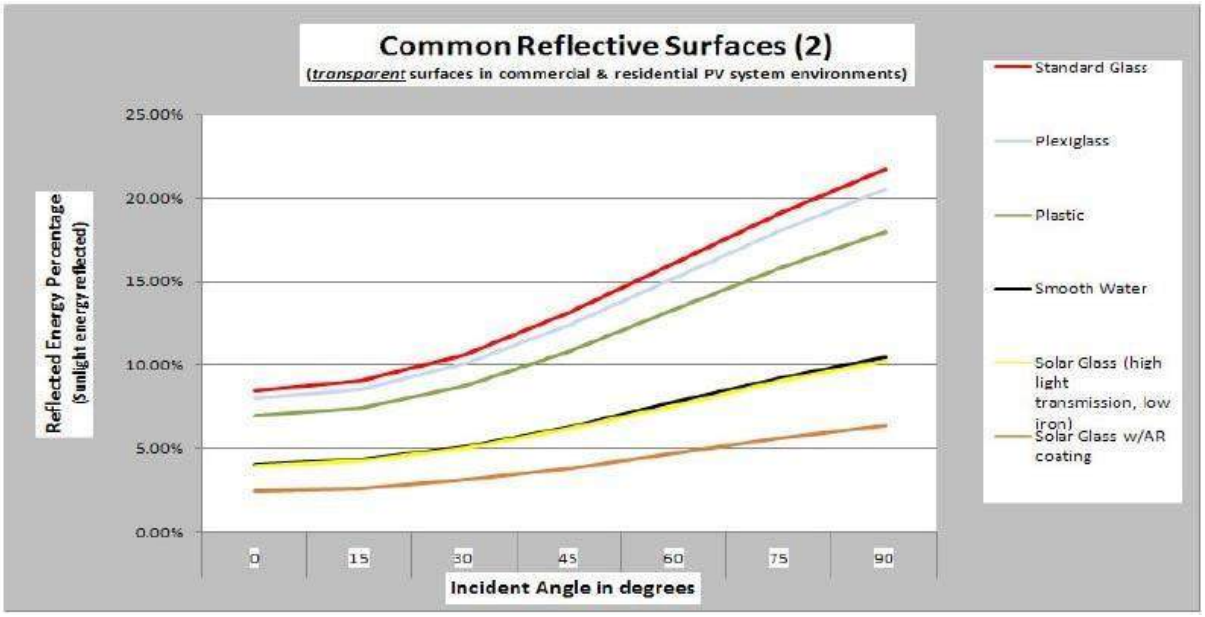
DETAILED EXPLANATION:

In general, since the whole concept of efficient solar power is to absorb as much light as possible while reflecting as little light as possible, standard solar module produces less glare and reflectance than standard window glass. This is pointed out very well in US Patent #6359212 which explains the differences in the refraction and reflection of solar module glass versus standard window glass. Solar modules use "high-transmission, low iron glass" which absorbs more light, producing small amounts of glare and reflectance than normal glass.

In the graph below, we show the reflected energy percentages of sunlight, of some common residential and commercial surfaces. The legend and the graph lists the items from top to bottom in order of the highest percentage of reflected energy.



It should be noted that the reflected energy percentage of Solar Glass is far below that of a standard glass and more on the level of smooth water. Also, below are the ratios of the common reflective surfaces:



Light beam physics resolves that the least amount of light is reflected when the beam is the normal, in other words, least light energy is reflected when the beam is at 0 degrees to the normal. The chart below is a result of light beam physics calculations:

Common Reflective Surfaces (in surrounding environments for PV systems)		Incident angle in degrees						
		0	15	30	45	60	75	90
Material Reflectivity (percent of incident light reflected)	Steel	36.78%	39.22%	46.34%	57.11%	70.02%	83.15%	94.40%
	Snow (fresh, flakey)	21.63%	23.09%	27.29%	33.63%	41.23%	48.96%	55.59%
	Standard Glass	8.44%	9.01%	10.65%	13.12%	16.09%	19.10%	21.69%
	Plexiglass	8.00%	8.54%	10.09%	12.44%	15.25%	18.11%	20.56%
	Plastic	6.99%	7.46%	8.82%	10.87%	13.33%	15.83%	17.97%
	Smooth Water	4.07%	4.35%	5.14%	6.33%	7.76%	9.22%	10.47%
	Solar Glass (high light transmission, low iron)	3.99%	4.26%	5.03%	6.20%	7.61%	9.03%	10.26%
	Solar Glass w/AR coating	2.47%	2.64%	3.12%	3.84%	4.71%	5.59%	6.35%

(Note: Index of refraction values may vary slightly depending on suppliers and reference documentation. The values for the above calculations are averages or single values obtained from the list of references for this document).

Important reference – "Stipples glass": In addition to the superior refractive/reflective properties of solar glass versus standard glass, SunPower uses stippled solar glass for our modules. Stippled glass is used with high powered telescopes and powerful beacons and lights. The basic concept behind stippling is for the surfaces of the glass to be textured with small types of indentations. As a result, stippling allows more light energy to be channeled/ transmitted through the glass while diffusing the reflected lightenergy. This concept is why the reflection of off a SunPower solar module will look hazy and less-defined than the reflection from standard glass, this occurs because the stippled SunPower glass is transmitting a larger percentage of light to the solar cell while breaking up the intensity of the reflected light energy.

SUMMARY/ACTION REQUIRED:

The studies, data and light beam physics behind the charts and graphs prove beyond a reasonable doubt that solar glass has less glare and reflectance than standard glass. The figures also make it clear that the difference is very decisive between solar glass and other common residential/commercial glasses. In addition, not to be lost in the standard light/glass equations and calculations, the SunPower solar glass is stippled and has a very photon-absorbent solar cell attached to the back side, contributing two additional factors which results in even less light energy being reflected.

REGIONAL CONTACTS:

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  - Spain: SunPower – Soporte Técnico España: soportetecnico@sunpowercorp.com
  - Germany: SunPower – Technischer Support: technischersupport@sunpowercorp.com
  - Italy: SunPower – Servizio Tecnico Italia: serviziotecnico@sunpowercorp.com
  - France: SunPower – Support Technique France: supporttechnique@sunpowercorp.com

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Korea – SPK (SunPower Korea) contact number: (02) 3453-0941

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