

**Project Submission Success**
Project Name: BRIAN-000419809-17

Project BRIAN-000419809-17 has been submitted successfully to the FAA.

Your filing is assigned Aeronautical Study Number (ASN):

2017-ANE-2219-OE
2017-ANE-2220-OE
2017-ANE-2221-OE
2017-ANE-2222-OE
2017-ANE-2223-OE
2017-ANE-2224-OE
2017-ANE-2225-OE
2017-ANE-2226-OE
2017-ANE-2227-OE
2017-ANE-2228-OE
2017-ANE-2229-OE
2017-ANE-2230-OE
2017-ANE-2231-OE
2017-ANE-2232-OE
2017-ANE-2233-OE
2017-ANE-2234-OE
2017-ANE-2235-OE
2017-ANE-2236-OE
2017-ANE-2237-OE
2017-ANE-2238-OE
2017-ANE-2239-OE
2017-ANE-2240-OE
2017-ANE-2241-OE
2017-ANE-2242-OE
2017-ANE-2243-OE
2017-ANE-2244-OE
2017-ANE-2245-OE
2017-ANE-2246-OE
2017-ANE-2247-OE
2017-ANE-2248-OE
2017-ANE-2249-OE
2017-ANE-2250-OE
2017-ANE-2251-OE
2017-ANE-2252-OE
2017-ANE-2253-OE
2017-ANE-2254-OE
2017-ANE-2255-OE
2017-ANE-2256-OE
2017-ANE-2257-OE
2017-ANE-2258-OE
2017-ANE-2259-OE
2017-ANE-2260-OE
2017-ANE-2261-OE
2017-ANE-2262-OE

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Please return to the system at a later date for status updates.

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Solar Glare Hazard Analysis Flight Path Report

Generated June 8, 2017, 8:11 a.m.

Flight path: North Flight Path

North Flight Path

Glare found

 Print



Analysis & PV array parameters

Analysis name	New Milford
PV array axis tracking	none
Orientation of array (deg)	180.0
Tilt of solar panels (deg)	12.0
Rated power (kW)	27000.0
Vary reflectivity	True
PV surface material	Smooth glass without ARC

Timezone offset	-5.0
Subtended angle of sun (mrad)	9.3
Peak DNI (W/m ²)	1000.0
Ocular transmission coefficient	0.5
Pupil diameter (m)	0.002
Eye focal length (m)	0.017
Time interval (min)	1
Correlate slope error with material	True
Slope error (mrad)	6.55

Flight path parameters

Direction (deg)	155.25
Glide slope (deg)	3.0
Consider pilot visibility from cockpit	False

PV array vertices

id	Latitude (deg)	Longitude (deg)	Ground Elevation (ft)	Height of panels above ground (ft)	Total elevation (ft)
1	41.5686977782	-73.4509119989	807.26	10.0	817.26
2	41.5698536405	-73.4517273904	800.8	10.0	810.8
3	41.5698536405	-73.4524140359	779.55	10.0	789.55
4	41.5703512971	-73.4524998666	784.35	10.0	794.35
5	41.5703673504	-73.4533581735	755.72	10.0	765.72
6	41.5740755727	-73.4536585809	792.16	10.0	802.16
7	41.5735779448	-73.455160618	749.03	10.0	759.03
8	41.5740434678	-73.4555039407	731.06	10.0	741.06
9	41.5743966209	-73.4557185174	729.34	10.0	739.34
10	41.5745571444	-73.455224991	747.9	10.0	757.9
11	41.5751510787	-73.4556756021	735.49	10.0	745.49
12	41.5753437046	-73.4549245836	758.63	10.0	768.63
13	41.5770131049	-73.4552464486	787.87	10.0	797.87
14	41.5771254668	-73.4544525148	818.8	10.0	828.8
15	41.5775508353	-73.4544739725	830.72	10.0	840.72
16	41.5780725097	-73.4544310571	852.56	10.0	862.56
17	41.5782490755	-73.4528861047	926.49	10.0	936.49
18	41.5776952994	-73.4527680875	890.55	10.0	900.55
19	41.5773341385	-73.4526500703	864.02	10.0	874.02
20	41.5773341385	-73.4522852899	844.83	10.0	854.83
21	41.5772538802	-73.4517273904	832.89	10.0	842.89

id	Latitude (deg)	Longitude (deg)	Ground Elevation (ft)	Height of panels above ground (ft)	Total elevation (ft)
22	41.577005079	-73.4516737462	821.02	10.0	831.02
23	41.5767562768	-73.4516844751	817.48	10.0	827.48
24	41.5766278624	-73.4522852899	830.81	10.0	840.81
25	41.5758573706	-73.4520277978	811.83	10.0	821.83
26	41.5752473915	-73.4519419671	813.85	10.0	823.85
27	41.5742216509	-73.4517338278	809.84	10.0	819.84
28	41.5734206311	-73.451225281	808.89	10.0	818.89
29	41.5729551036	-73.4504528048	798.69	10.0	808.69
30	41.5726019426	-73.4494657519	747.79	10.0	757.79
31	41.571542448	-73.4484357836	731.8	10.0	741.8
32	41.569969227	-73.4481782916	721.81	10.0	731.81
33	41.5694555139	-73.449723244	790.03	10.0	800.03
34	41.5689417967	-73.449980736	794.77	10.0	804.77

Flight Path Observation Points

	Latitude (deg)	Longitude (deg)	Ground Elevation (ft)	Eye-level height above ground (ft)	Glare?
Threshold	41.5733339455	-73.464910984	685.3	50.0	Yes
1/4 mi	41.5766157421	-73.4669356927	668.93	135.54	Yes
1/2 mi	41.5798975386	-73.4689604013	425.9	447.77	No
3/4 mi	41.5831793351	-73.4709851099	630.04	312.8	No
1 mi	41.5864611317	-73.4730098186	633.12	378.89	No
1 1/4 mi	41.5897429282	-73.4750345272	782.37	298.82	No

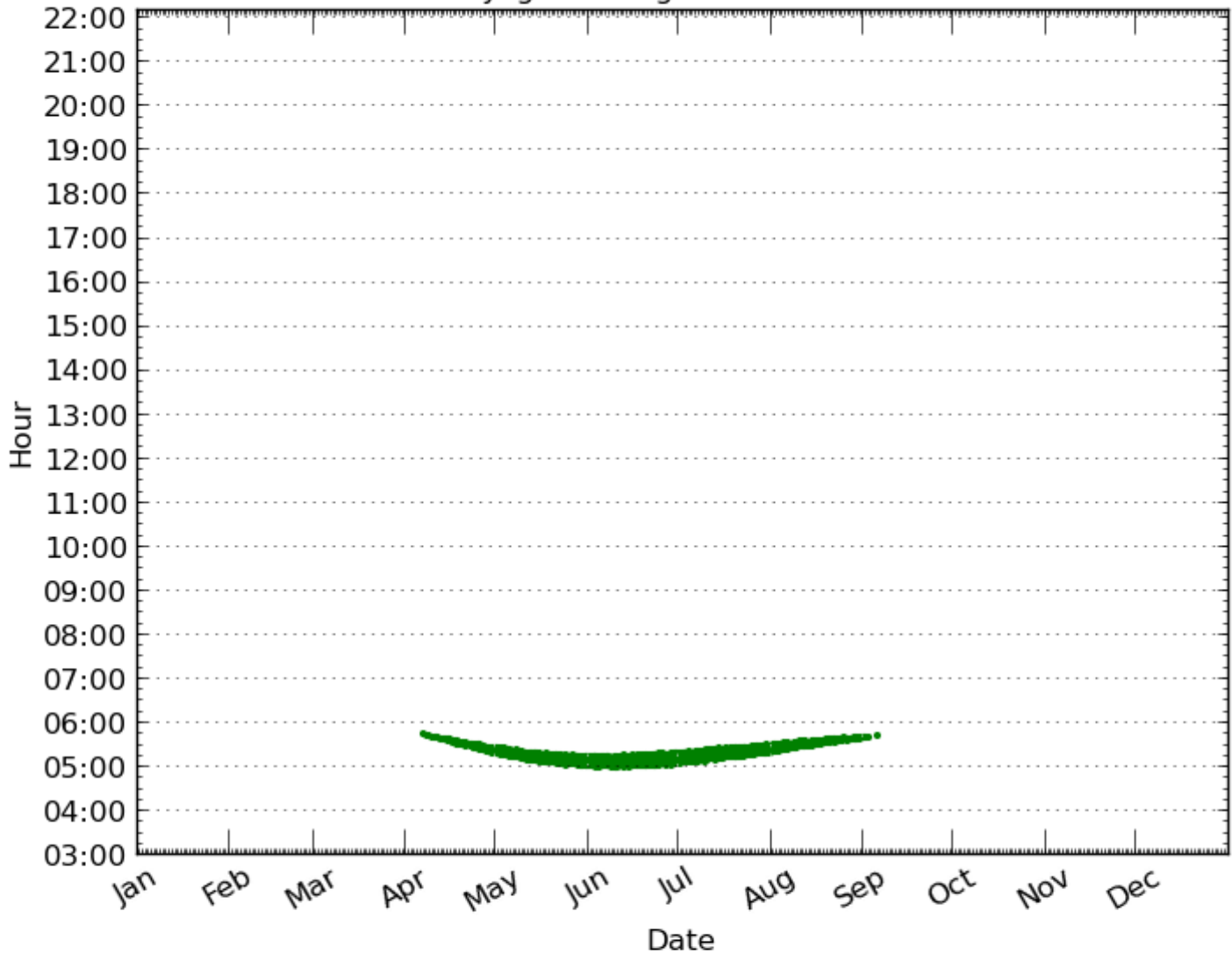
	Latitude (deg)	Longitude (deg)	Ground Elevation (ft)	Eye-level height above ground (ft)	Glare?
1 1/2 mi	41.5930247247	-73.4770592358	839.41	310.96	No
1 3/4 mi	41.5963065212	-73.4790839444	888.24	331.31	No
2 mi	41.5995883178	-73.4811086531	840.76	447.96	No

Glare occurrence plots

All times are in standard time. For Daylight Savings Time add one hour.

Threshold

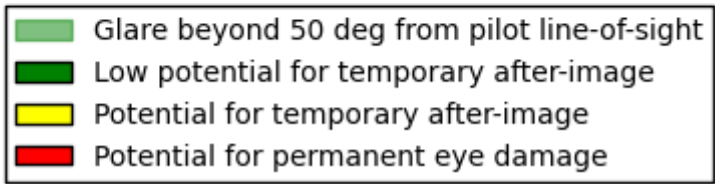
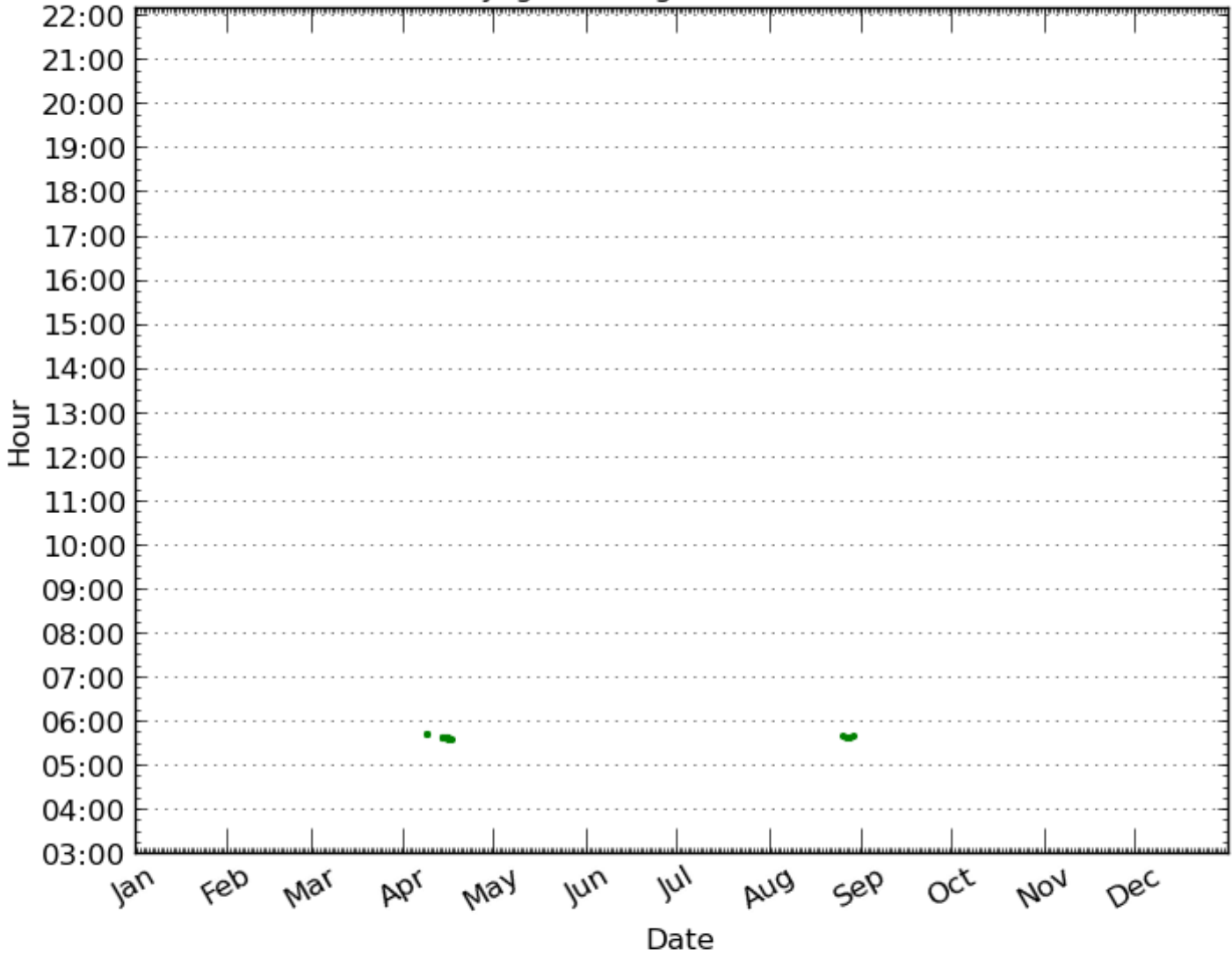
1-minute time interval.
All times are in standard time.
For Daylight Savings Time add one hour.



- Glare beyond 50 deg from pilot line-of-sight
- Low potential for temporary after-image
- Potential for temporary after-image
- Potential for permanent eye damage

1/4 mi

1-minute time interval.
All times are in standard time.
For Daylight Savings Time add one hour.



1/2 mi

No glare

3/4 mi

No glare

1 mi

No glare

1 1/4 mi

No glare

1 1/2 mi

No glare

1 3/4 mi

No glare

2 mi

No glare

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Solar Glare Hazard Analysis Flight Path Report

Generated June 8, 2017, 8:36 a.m.

Flight path: South Flight Path

South Flight Path

Glare found

 Print



Analysis & PV array parameters

Analysis name	New Milford
PV array axis tracking	none
Orientation of array (deg)	180.0
Tilt of solar panels (deg)	12.0
Rated power (kW)	27000.0
Vary reflectivity	True
PV surface material	Smooth glass without ARC

Timezone offset	-5.0
Subtended angle of sun (mrad)	9.3
Peak DNI (W/m ²)	1000.0
Ocular transmission coefficient	0.5
Pupil diameter (m)	0.002
Eye focal length (m)	0.017
Time interval (min)	1
Correlate slope error with material	True
Slope error (mrad)	6.55

Flight path parameters

Direction (deg)	332.66
Glide slope (deg)	3.0
Consider pilot visibility from cockpit	False

PV array vertices

id	Latitude (deg)	Longitude (deg)	Ground Elevation (ft)	Height of panels above ground (ft)	Total elevation (ft)
1	41.5686977782	-73.4509119989	807.26	10.0	817.26
2	41.5698536405	-73.4517273904	800.8	10.0	810.8
3	41.5698536405	-73.4524140359	779.55	10.0	789.55
4	41.5703512971	-73.4524998666	784.35	10.0	794.35
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9	41.5743966209	-73.4557185174	729.34	10.0	739.34
10	41.5745571444	-73.455224991	747.9	10.0	757.9
11	41.5751510787	-73.4556756021	735.49	10.0	745.49
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15	41.5775508353	-73.4544739725	830.72	10.0	840.72
16	41.5780725097	-73.4544310571	852.56	10.0	862.56
17	41.5782490755	-73.4528861047	926.49	10.0	936.49
18	41.5776952994	-73.4527680875	890.55	10.0	900.55
19	41.5773341385	-73.4526500703	864.02	10.0	874.02
20	41.5773341385	-73.4522852899	844.83	10.0	854.83
21	41.5772538802	-73.4517273904	832.89	10.0	842.89

id	Latitude (deg)	Longitude (deg)	Ground Elevation (ft)	Height of panels above ground (ft)	Total elevation (ft)
22	41.577005079	-73.4516737462	821.02	10.0	831.02
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25	41.5758573706	-73.4520277978	811.83	10.0	821.83
26	41.5752473915	-73.4519419671	813.85	10.0	823.85
27	41.5742216509	-73.4517338278	809.84	10.0	819.84
28	41.5734206311	-73.451225281	808.89	10.0	818.89
29	41.5729551036	-73.4504528048	798.69	10.0	808.69
30	41.5726019426	-73.4494657519	747.79	10.0	757.79
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33	41.5694555139	-73.449723244	790.03	10.0	800.03
34	41.5689417967	-73.449980736	794.77	10.0	804.77

Flight Path Observation Points

	Latitude (deg)	Longitude (deg)	Ground Elevation (ft)	Eye-level height above ground (ft)	Glare?
Threshold	41.5655961121	-73.459546566	652.11	50.0	Yes
1/4 mi	41.5623860352	-73.4573257263	653.4	117.88	No
1/2 mi	41.5591759583	-73.4551048865	775.36	65.11	No
3/4 mi	41.5559658814	-73.4528840468	867.72	41.92	No
1 mi	41.5527558045	-73.450663207	693.59	285.22	No
1 1/4 mi	41.5495457277	-73.4484423673	533.04	514.96	No

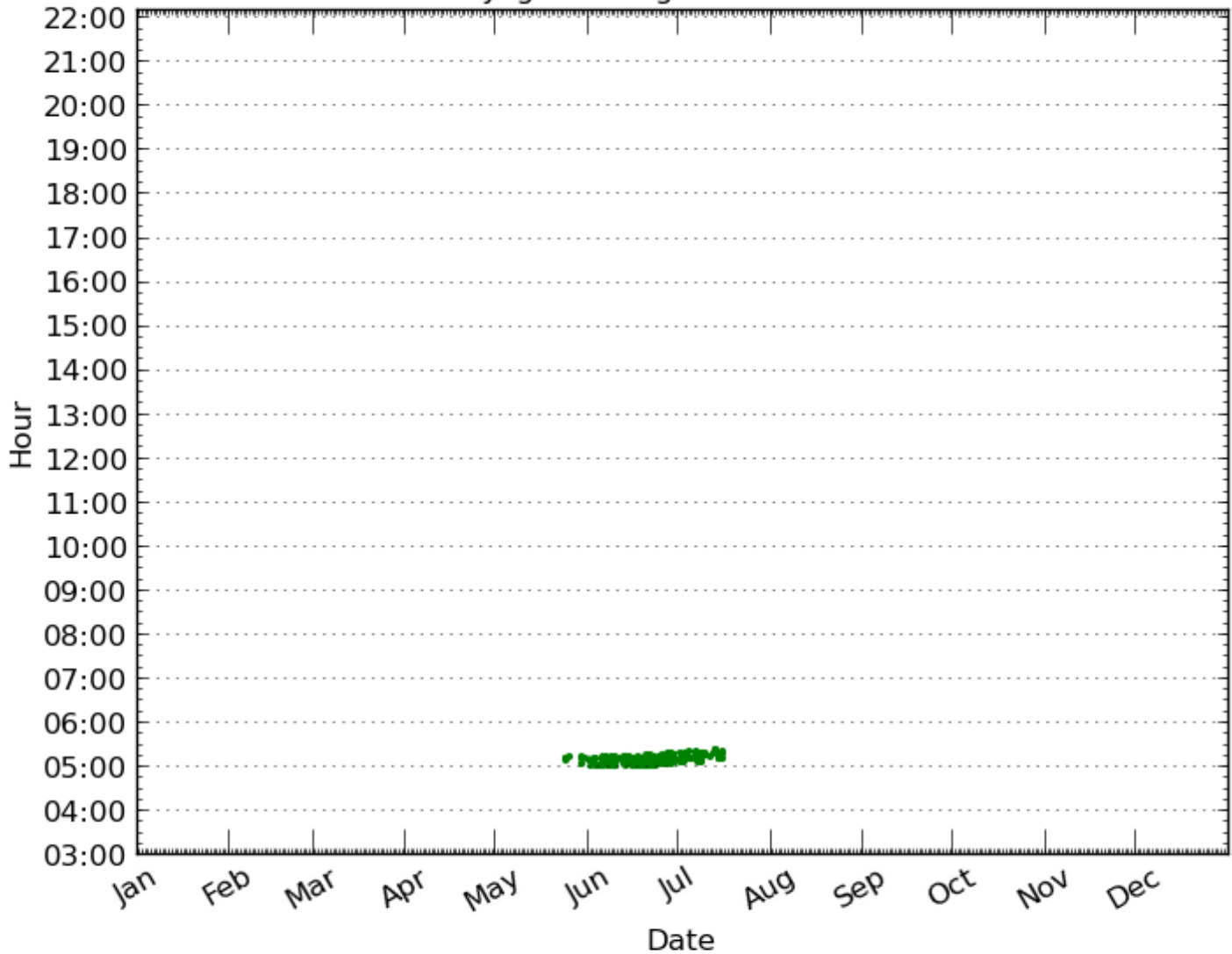
	Latitude (deg)	Longitude (deg)	Ground Elevation (ft)	Eye-level height above ground (ft)	Glare?
1 1/2 mi	41.5463356508	-73.4462215275	423.23	693.94	No
1 3/4 mi	41.5431255739	-73.4440006878	423.23	763.13	No
2 mi	41.539915497	-73.441779848	531.77	723.77	No

Glare occurrence plots

All times are in standard time. For Daylight Savings Time add one hour.

Threshold

1-minute time interval.
All times are in standard time.
For Daylight Savings Time add one hour.



- Glare beyond 50 deg from pilot line-of-sight
- Low potential for temporary after-image
- Potential for temporary after-image
- Potential for permanent eye damage

1/4 mi

No glare

1/2 mi

No glare

3/4 mi

No glare

1 mi

No glare

1 1/4 mi

No glare

1 1/2 mi

No glare

1 3/4 mi

No glare

2 mi

No glare

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