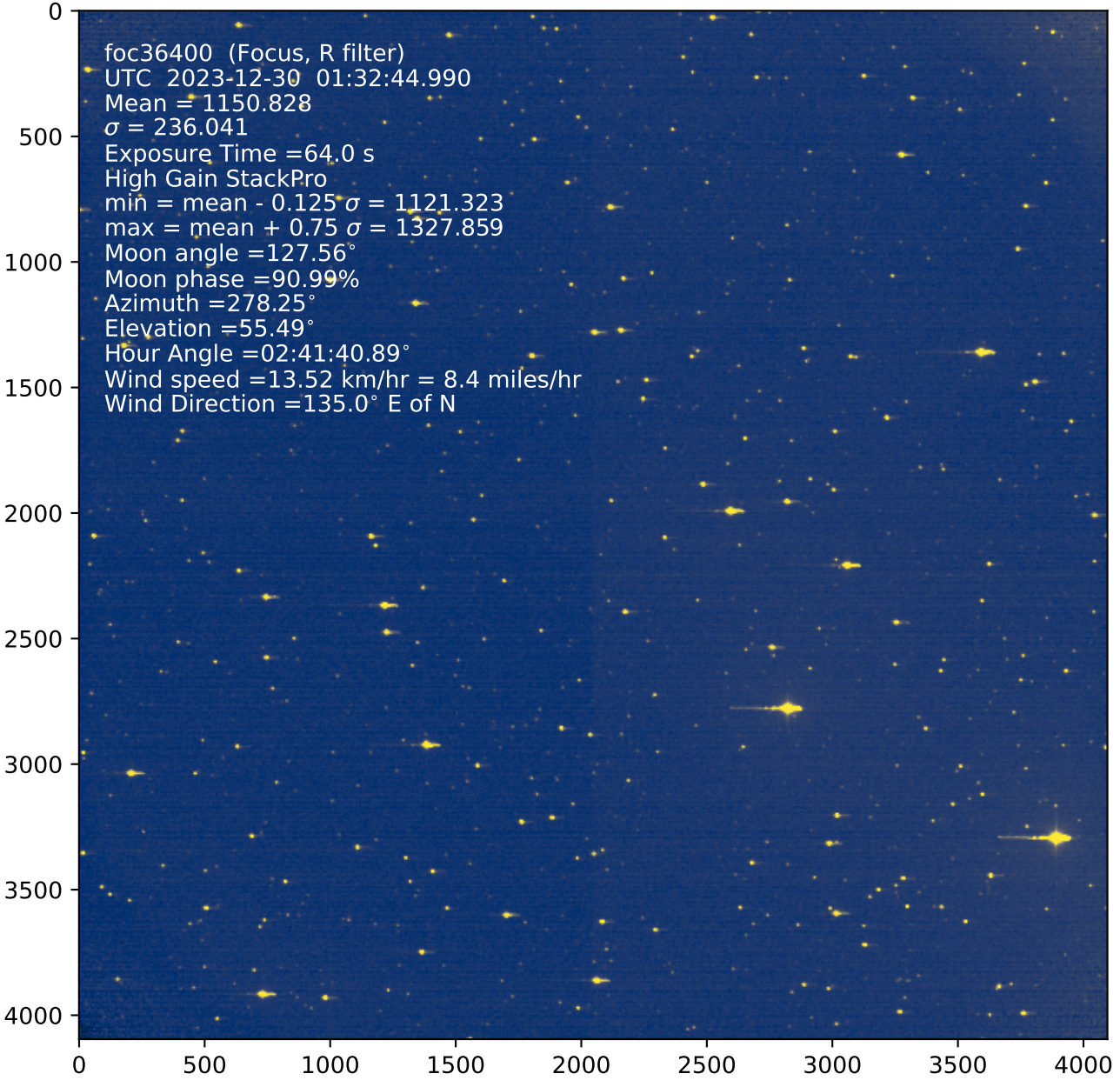
foc36400 (Focus, R filter)
UTC 2023-12-30 01:32:44.990
Mean = 1150.828
σ = 236.041
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 1121.323
max = mean + 0.75 σ = 1327.859
Moon angle =127.56°
Moon phase =90.99%
Azimuth =278.25°
Elevation =55.49°
Hour Angle =02:41:40.89°
Wind speed =13.52 km/hr = 8.4 miles/hr
Wind Direction =135.0° E of N
0
500
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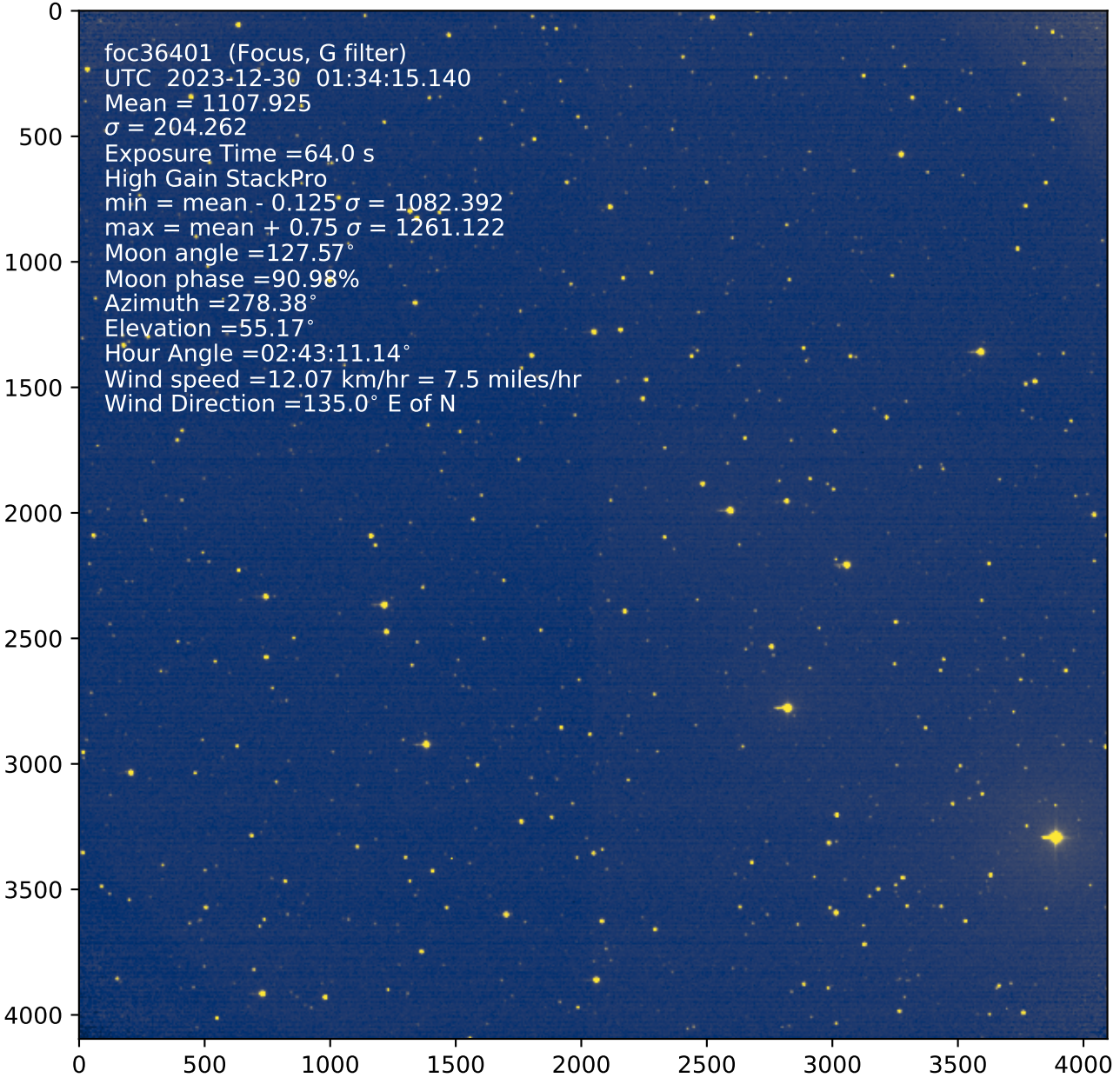
4000


foc36401 (Focus, G filter)
UTC 2023-12-30 01:34:15.140
Mean = 1107.925
σ = 204.262
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 1082.392
max = mean + 0.75 σ = 1261.122
Moon angle =127.57°
Moon phase =90.98%
Azimuth =278.38°
Elevation =55.17°
Hour Angle =02:43:11.14°
Wind speed =12.07 km/hr = 7.5 miles/hr
Wind Direction =135.0° E of N
0
500
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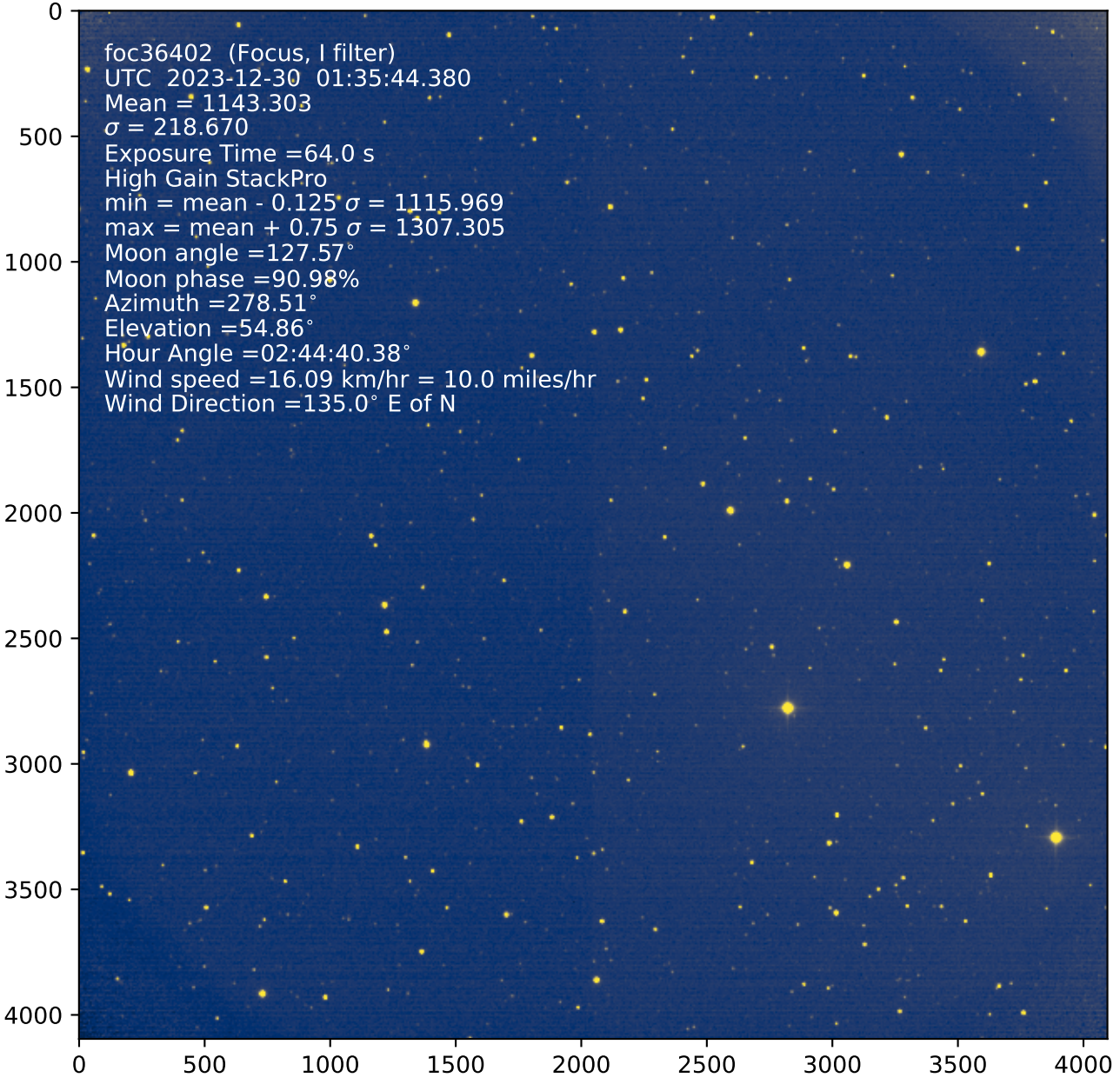
1500
2000
2500
3000
3500
4000


foc36402 (Focus, I filter)
UTC 2023-12-30 01:35:44.380
Mean = 1143.303
σ = 218.670
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 1115.969
max = mean + 0.75 σ = 1307.305
Moon angle =127.57°
Moon phase =90.98%
Azimuth =278.51°
Elevation =54.86°
Hour Angle =02:44:40.38°
Wind speed =16.09 km/hr = 10.0 miles/hr
Wind Direction =135.0° E of N
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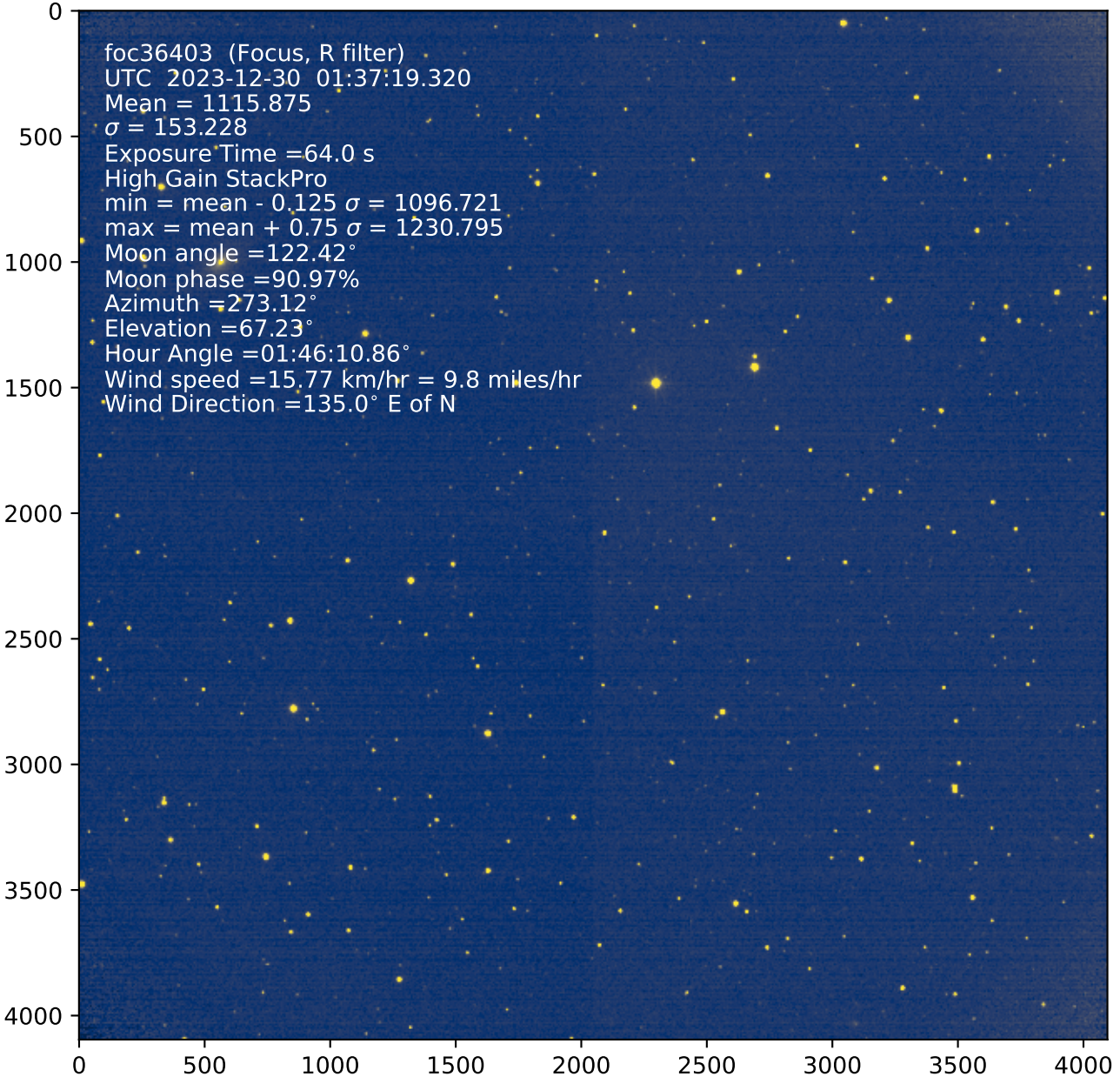
4000


foc36403 (Focus, R filter)
UTC 2023-12-30 01:37:19.320
Mean = 1115.875
σ = 153.228
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 1096.721
max = mean + 0.75 σ = 1230.795
Moon angle =122.42°
Moon phase =90.97%
Azimuth =273.12°
Elevation =67.23°
Hour Angle =01:46:10.86°
Wind speed =15.77 km/hr = 9.8 miles/hr
Wind Direction =135.0° E of N
0
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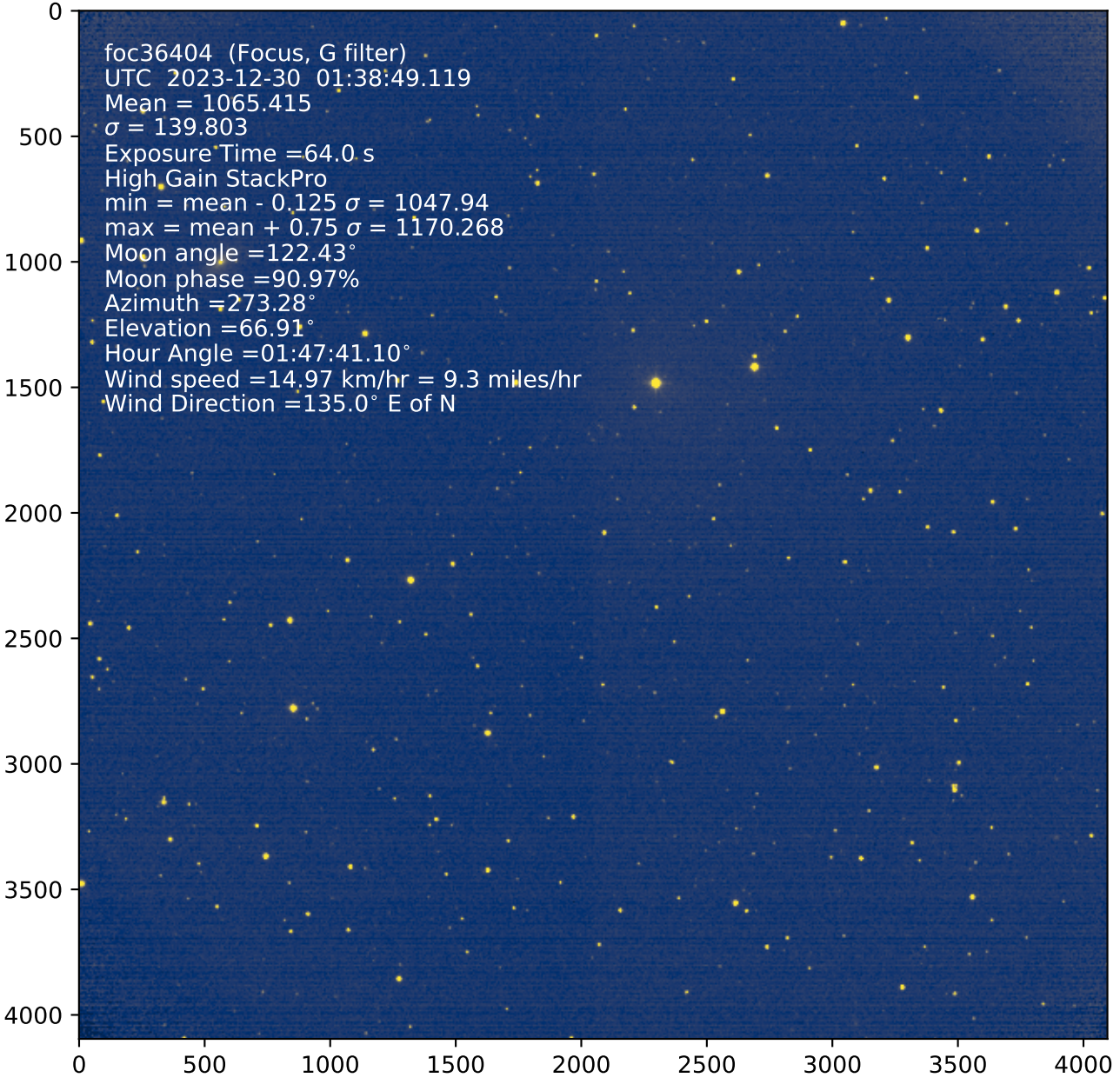
3000
3500
4000


foc36404 (Focus, G filter)
UTC 2023-12-30 01:38:49.119
Mean = 1065.415
σ = 139.803
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 1047.94
max = mean + 0.75 σ = 1170.268
Moon angle =122.43°
Moon phase =90.97%
Azimuth =273.28°
Elevation =66.91°
Hour Angle =01:47:41.10°
Wind speed =14.97 km/hr = 9.3 miles/hr
Wind Direction =135.0° E of N
0
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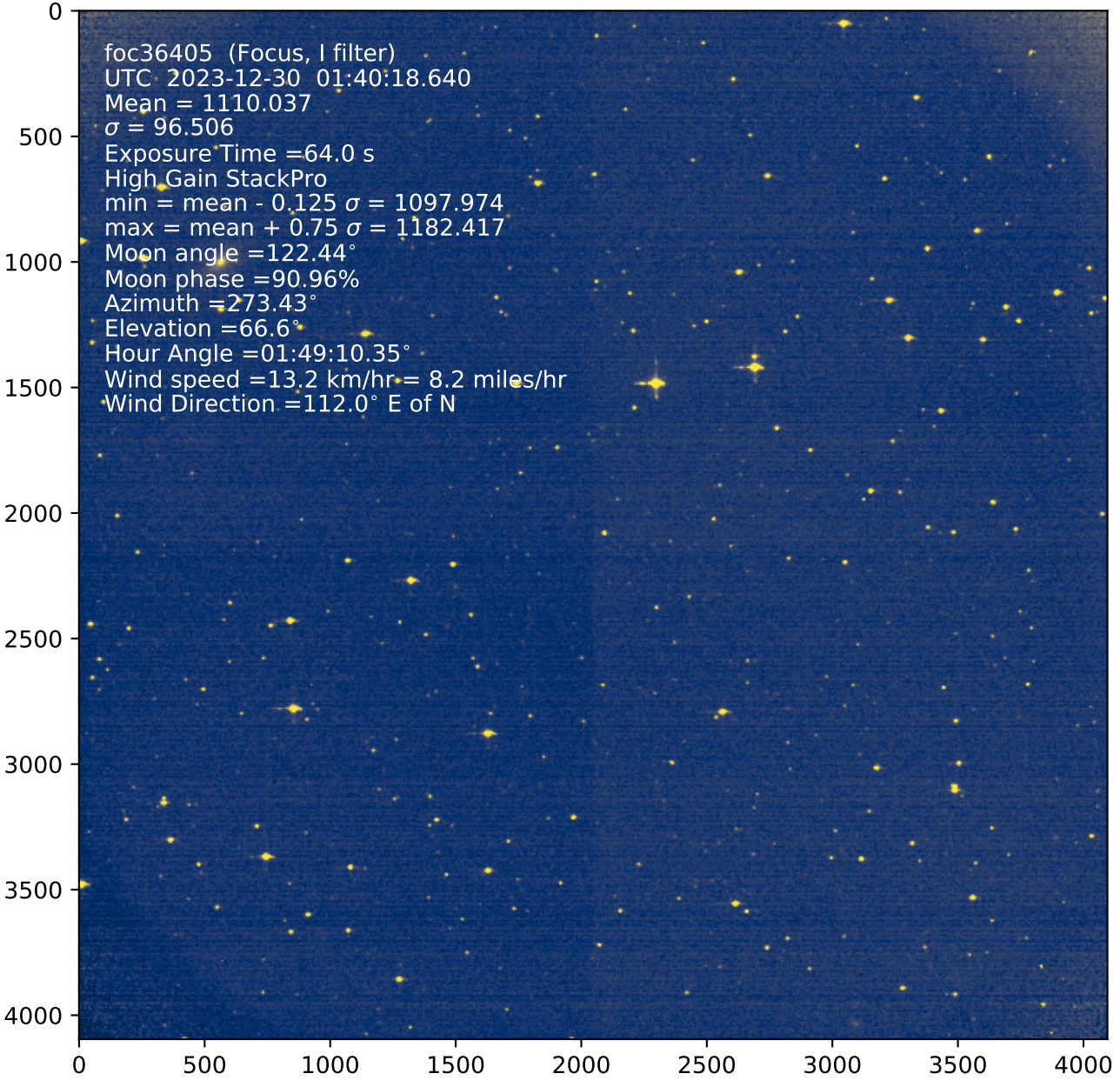
foc36405 (Focus, I filter)
UTC 2023-12-30 01:40:18.640
Mean = 1110.037
σ = 96.506
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 1097.974
max = mean + 0.75 σ = 1182.417
Moon angle =122.44°
Moon phase =90.96%
Azimuth =273.43°
Elevation =66.6°
Hour Angle =01:49:10.35°
Wind speed =13.2 km/hr= 8.2 miles/hr
Wind Direction =112.0° E of N
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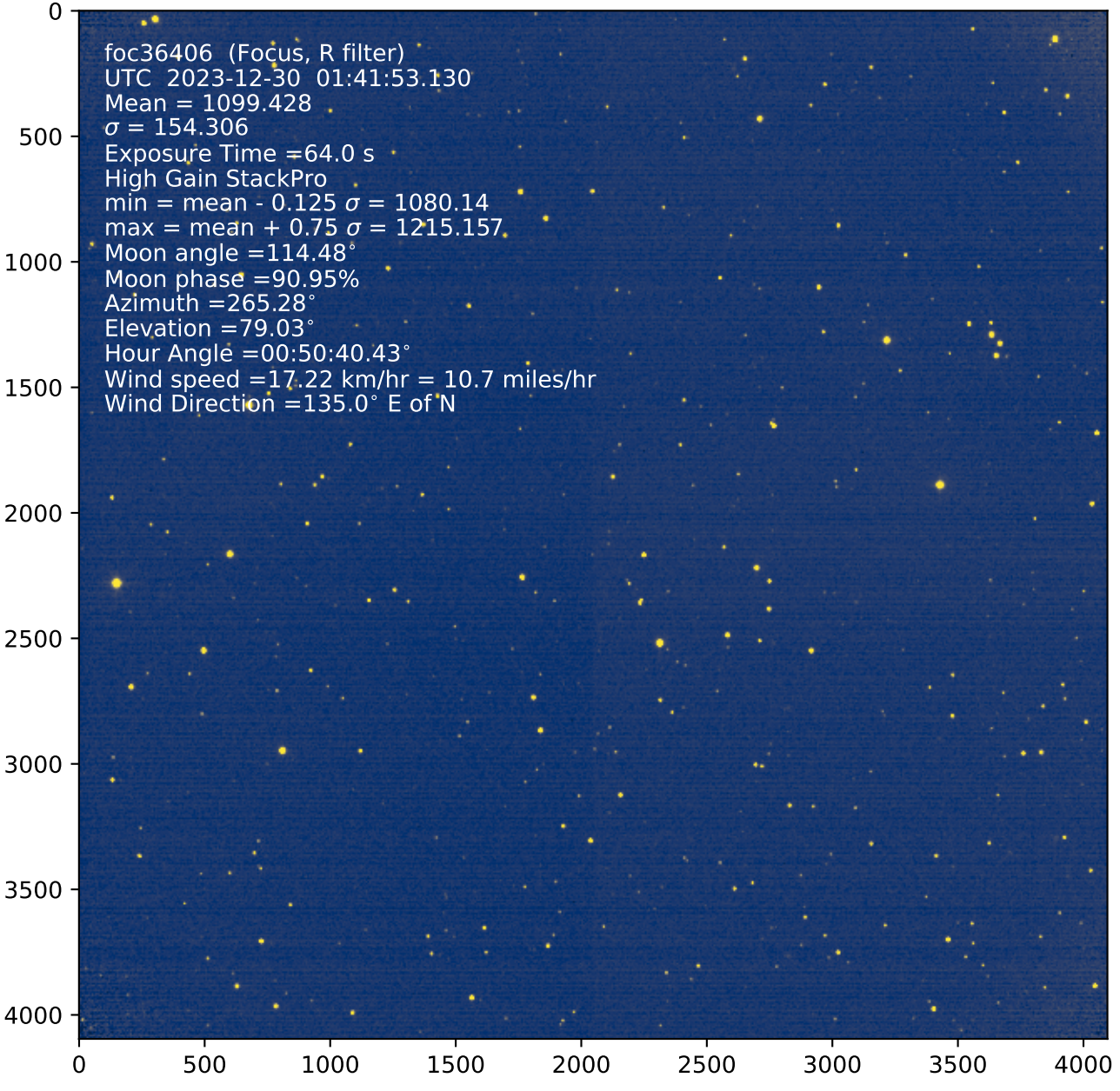
foc36406 (Focus, R filter)
UTC 2023-12-30 01:41:53.130
Mean = 1099.428
σ = 154.306
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 1080.14
max = mean + 0.75 σ = 1215.157
Moon angle =114.48°
Moon phase =90.95%
Azimuth =265.28°
Elevation =79.03°
Hour Angle =00:50:40.43°
Wind speed =17.22 km/hr = 10.7 miles/hr
Wind Direction =135.0° E of N
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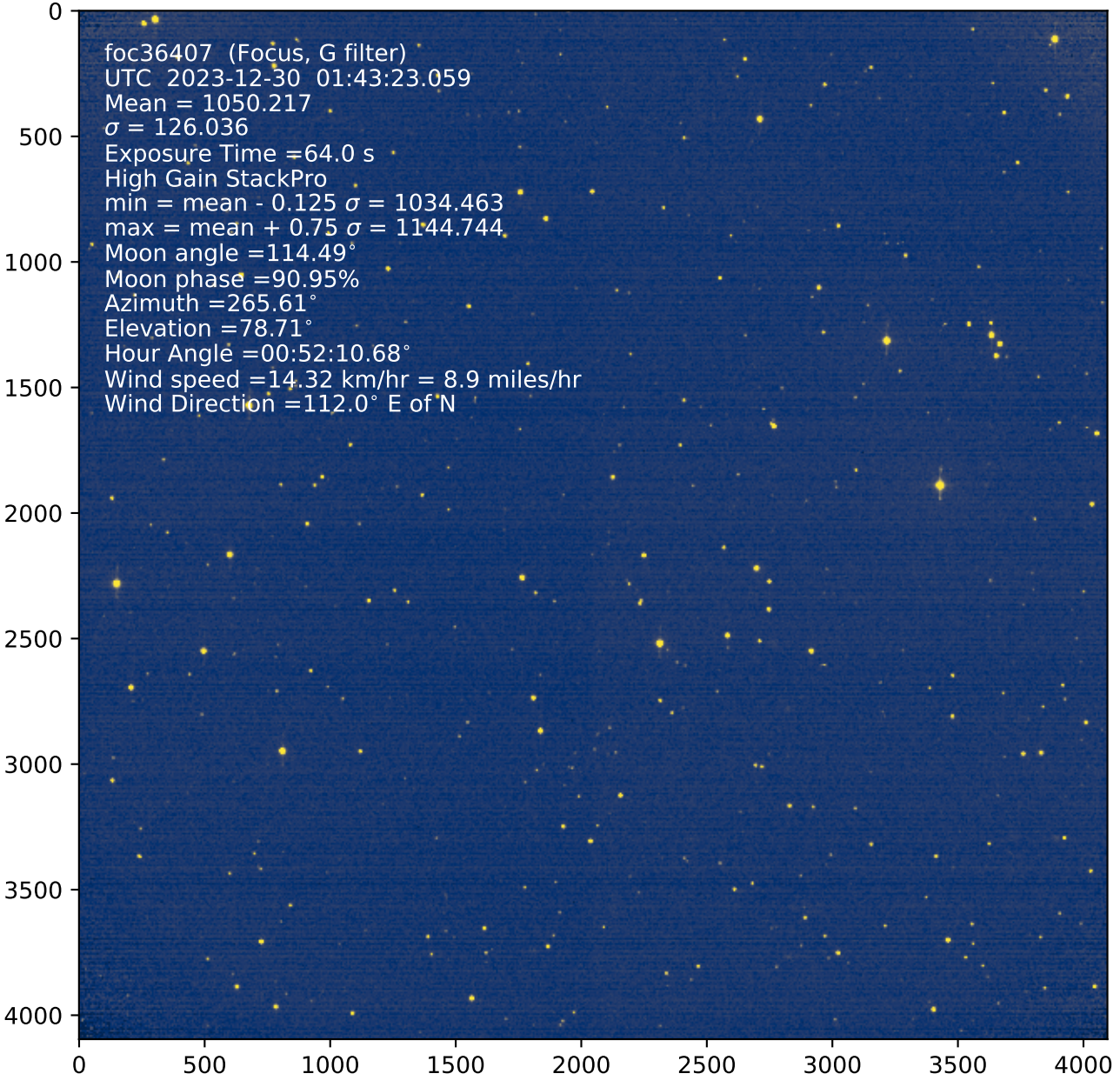
foc36407 (Focus, G filter)
UTC 2023-12-30 01:43:23.059
Mean = 1050.217
σ = 126.036
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 1034.463
max = mean + 0.75 σ = 1144.744
Moon angle =114.49°
Moon phase =90.95%
Azimuth =265.61°
Elevation =78.71°
Hour Angle =00:52:10.68°
Wind speed =14.32 km/hr = 8.9 miles/hr
Wind Direction =112.0° E of N
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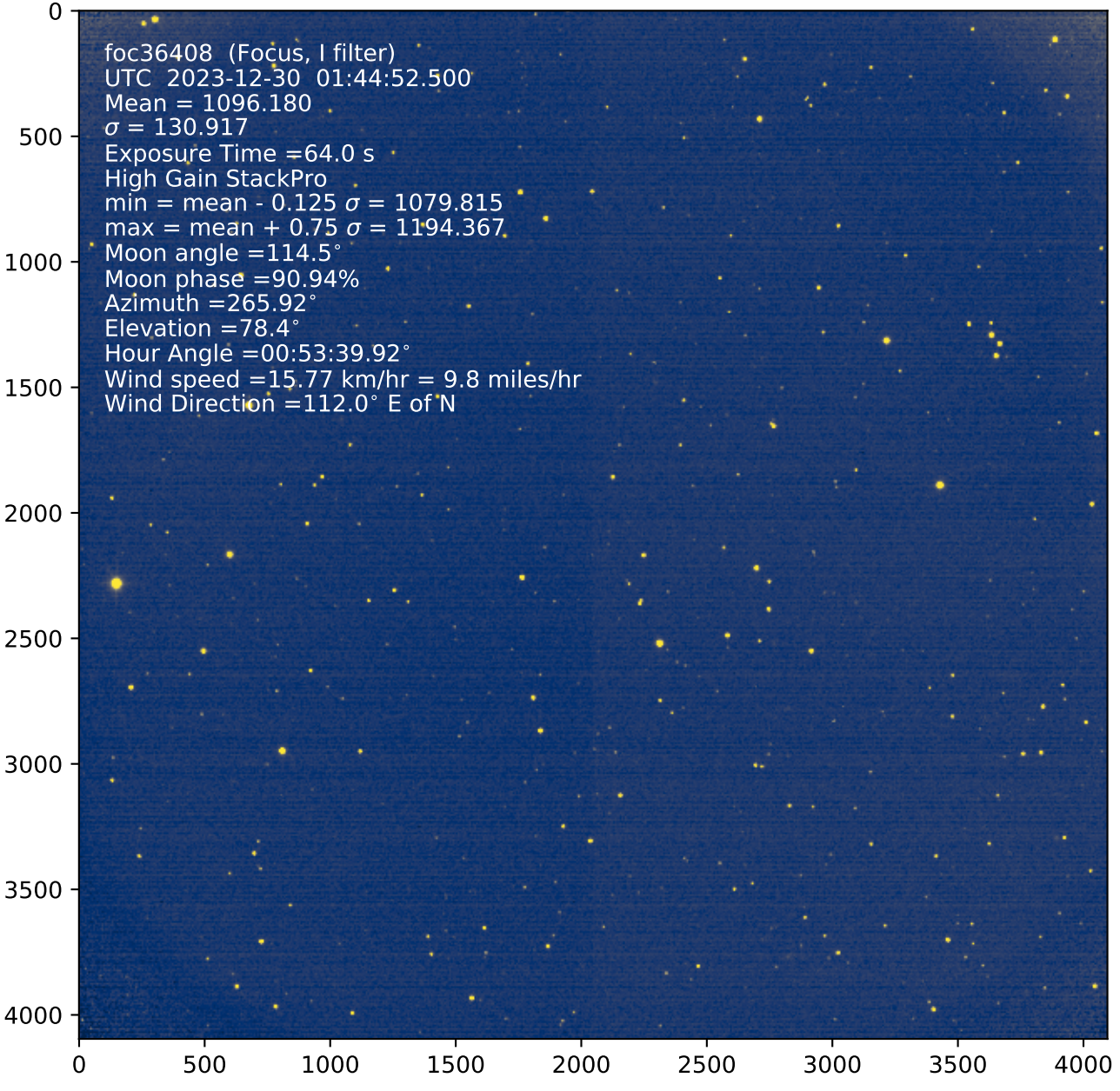
foc36408 (Focus, I filter)
UTC 2023-12-30 01:44:52.500
Mean = 1096.180
σ = 130.917
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 1079.815
max = mean + 0.75 σ = 1194.367
Moon angle =114.5°
Moon phase =90.94%
Azimuth =265.92°
Elevation =78.4°
Hour Angle =00:53:39.92°
Wind speed =15.77 km/hr = 9.8 miles/hr
Wind Direction =112.0° E of N
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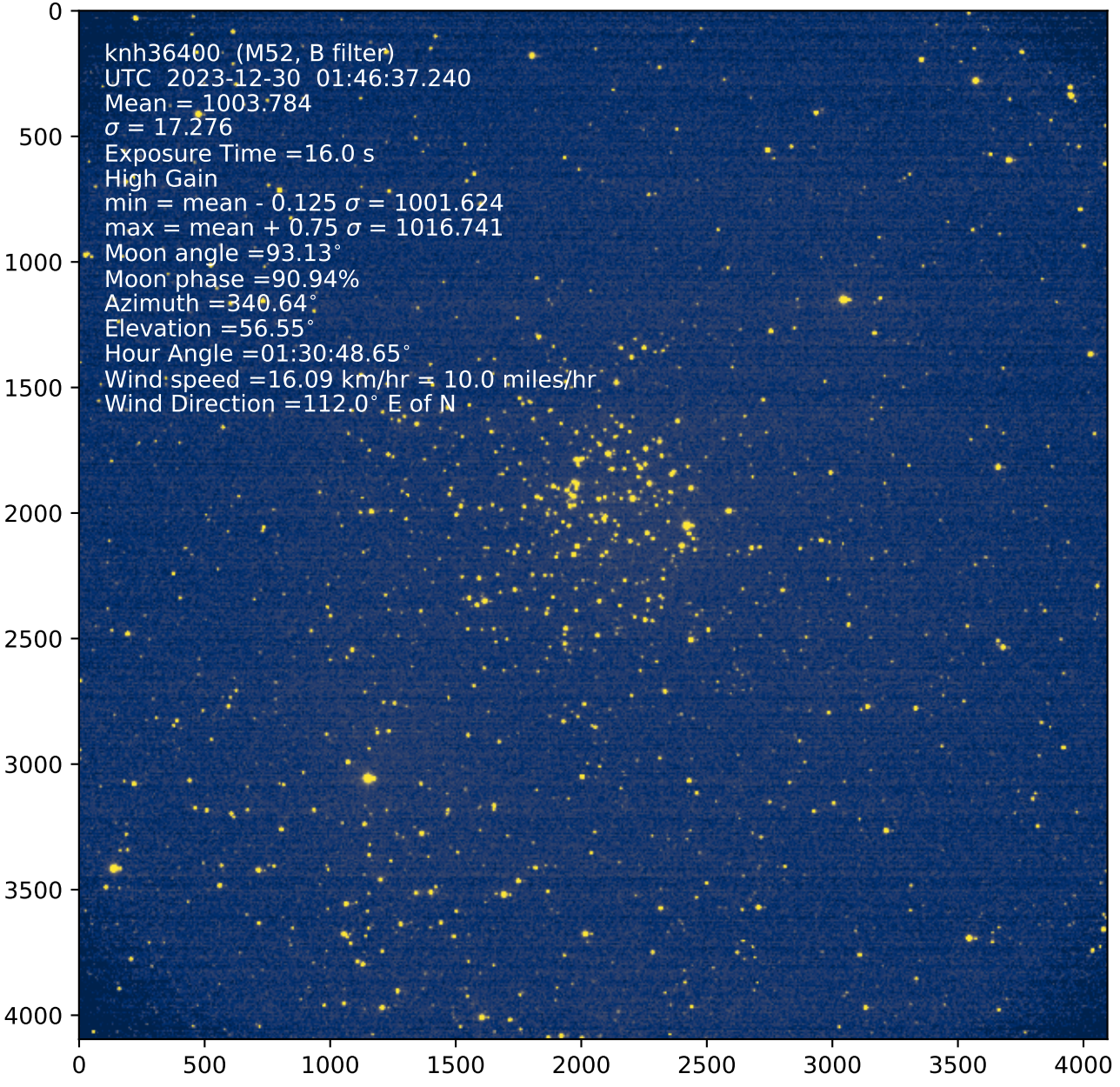
knh36400 (M52, B filter)
UTC 2023-12-30 01:46:37.240
Mean = 1003.784
σ = 17.276
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1001.624
max = mean + 0.75 σ = 1016.741
Moon angle =93.13°
Moon phase =90.94%
Azimuth =340.64°
Elevation =56.55°
Hour Angle =01:30:48.65°
Wind speed =16.09 km/hr = 10.0 miles/hr
Wind Direction =112.0° E of N
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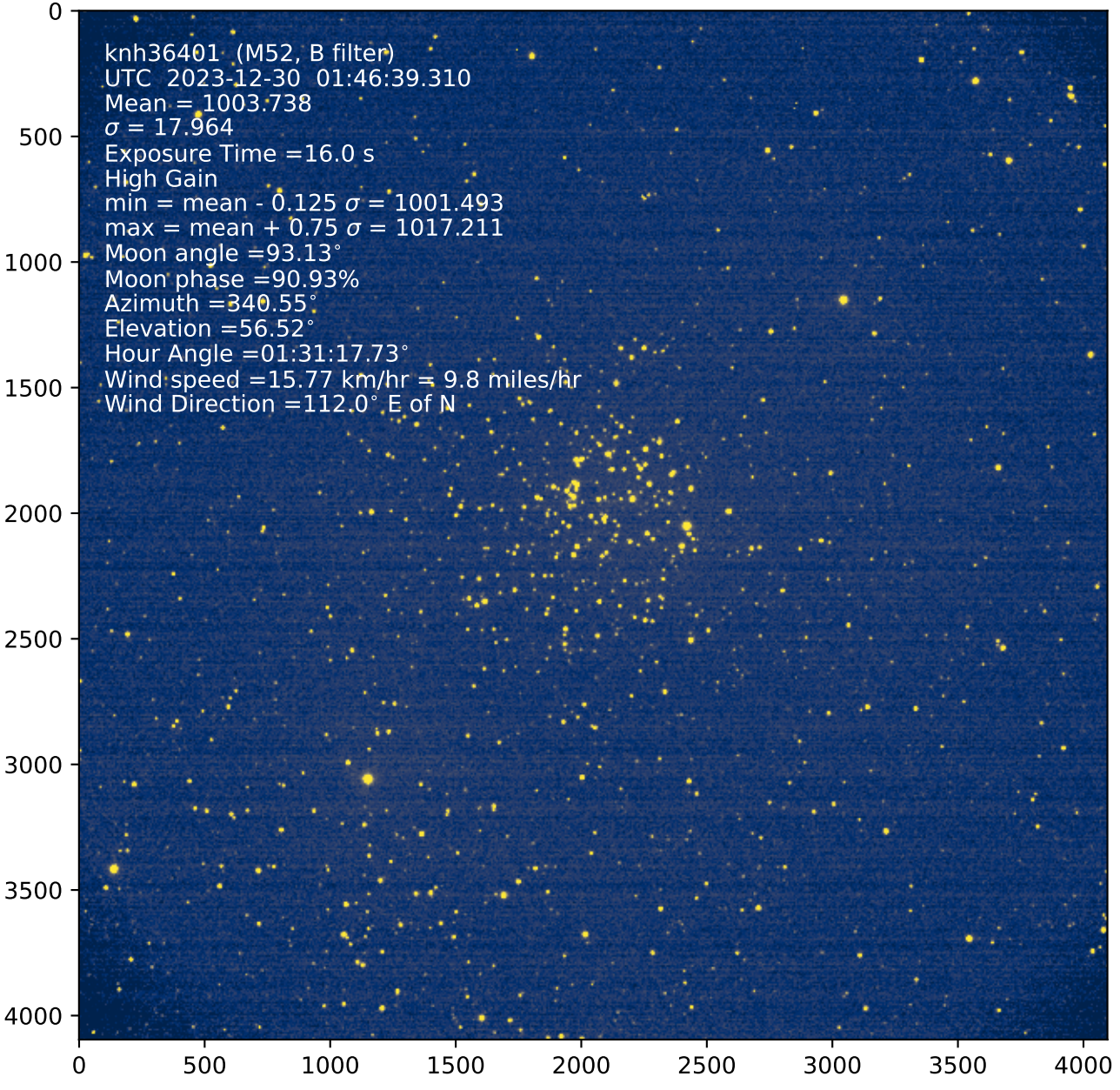
knh36401 (M52, B filter)
UTC 2023-12-30 01:46:39.310
Mean = 1003.738
σ = 17.964
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1001.493
max = mean + 0.75 σ = 1017.211
Moon angle =93.13°
Moon phase =90.93%
Azimuth =340.55°
Elevation =56.52°
Hour Angle =01:31:17.73°
Wind speed =15.77 km/hr = 9.8 miles/hr
Wind Direction =112.0° E of N
0
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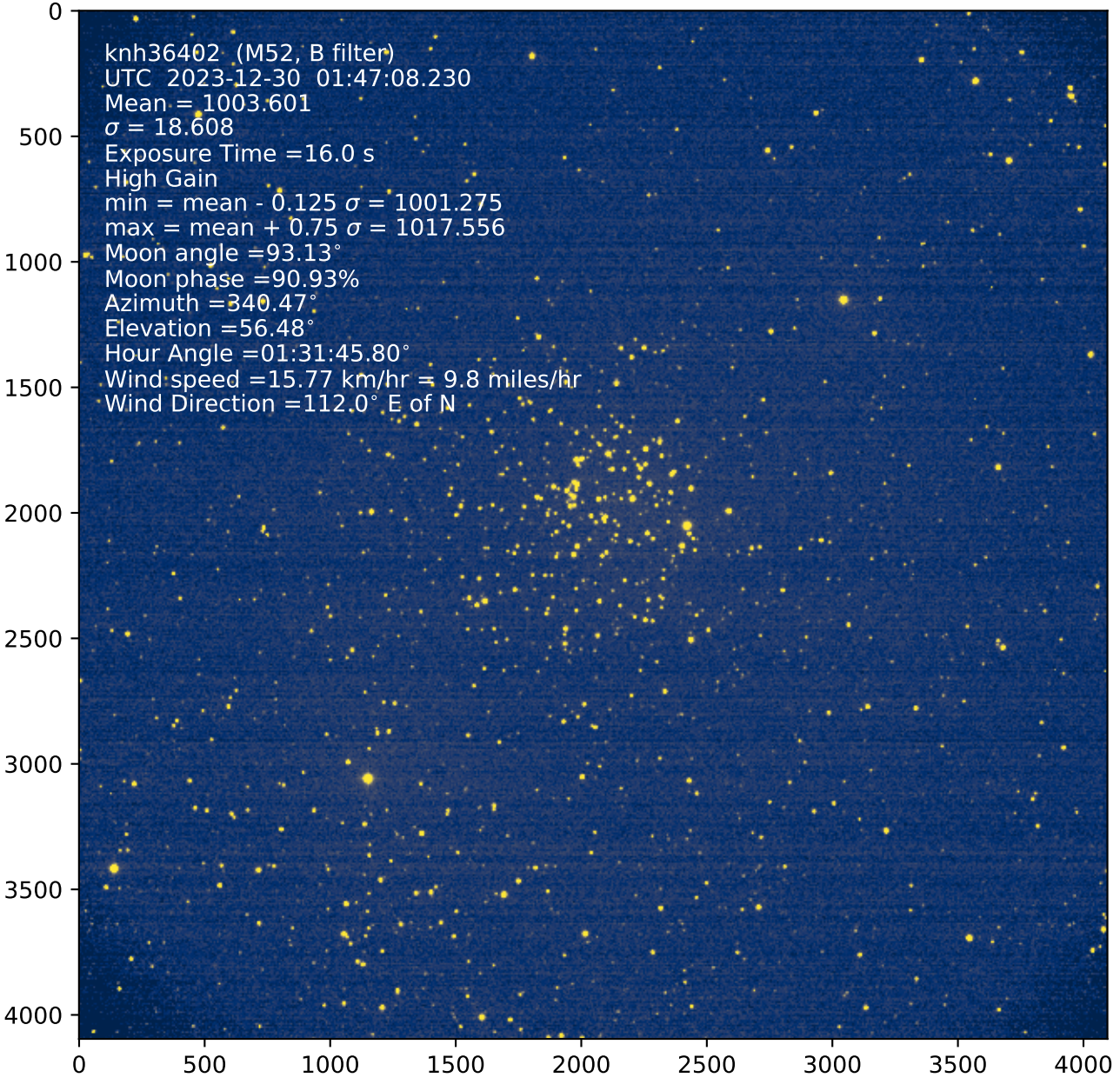
3500
4000


knh36402 (M52, B filter)
UTC 2023-12-30 01:47:08.230
Mean = 1003.601
σ = 18.608
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1001.275
max = mean + 0.75 σ = 1017.556
Moon angle =93.13°
Moon phase =90.93%
Azimuth =340.47°
Elevation =56.48°
Hour Angle =01:31:45.80°
Wind speed =15.77 km/hr = 9.8 miles/hr
Wind Direction =112.0° E of N
0
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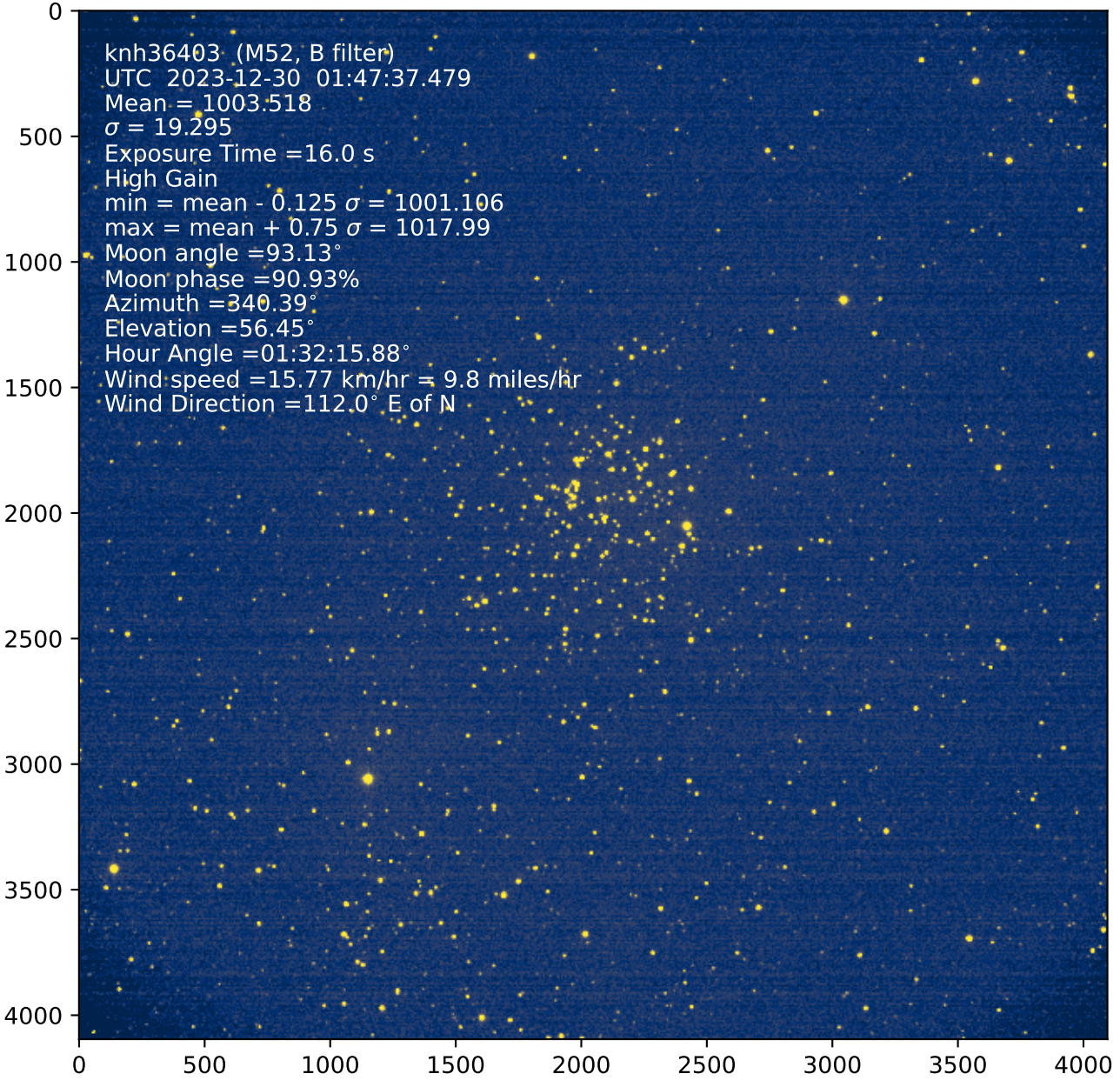
knh36403 (M52, B filter)
UTC 2023-12-30 01:47:37.479
Mean = 1003.518
σ = 19.295
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1001.106
max = mean + 0.75 σ = 1017.99
Moon angle =93.13°
Moon phase =90.93%
Azimuth =340.39°
Elevation =56.45°
Hour Angle =01:32:15.88°
Wind speed =15.77 km/hr = 9.8 miles/hr
Wind Direction =112.0° E of N
0
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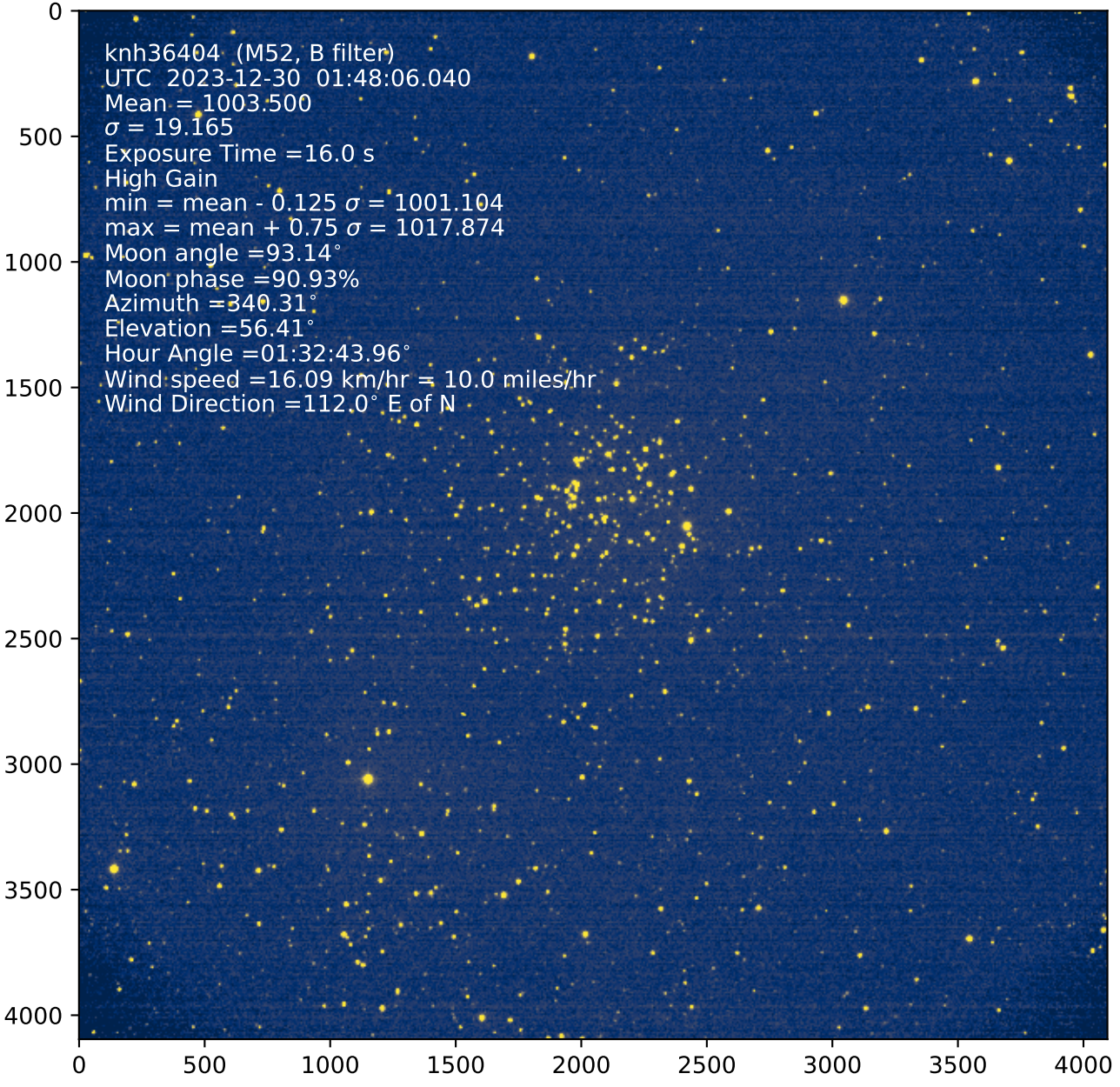
3500
4000


knh36404 (M52, B filter)
UTC 2023-12-30 01:48:06.040
Mean = 1003.500
σ = 19.165
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1001.104
max = mean + 0.75 σ = 1017.874
Moon angle =93.14°
Moon phase =90.93%
Azimuth =340.31°
Elevation =56.41°
Hour Angle =01:32:43.96°
Wind speed =16.09 km/hr = 10.0 miles/hr
Wind Direction =112.0° E of N
0
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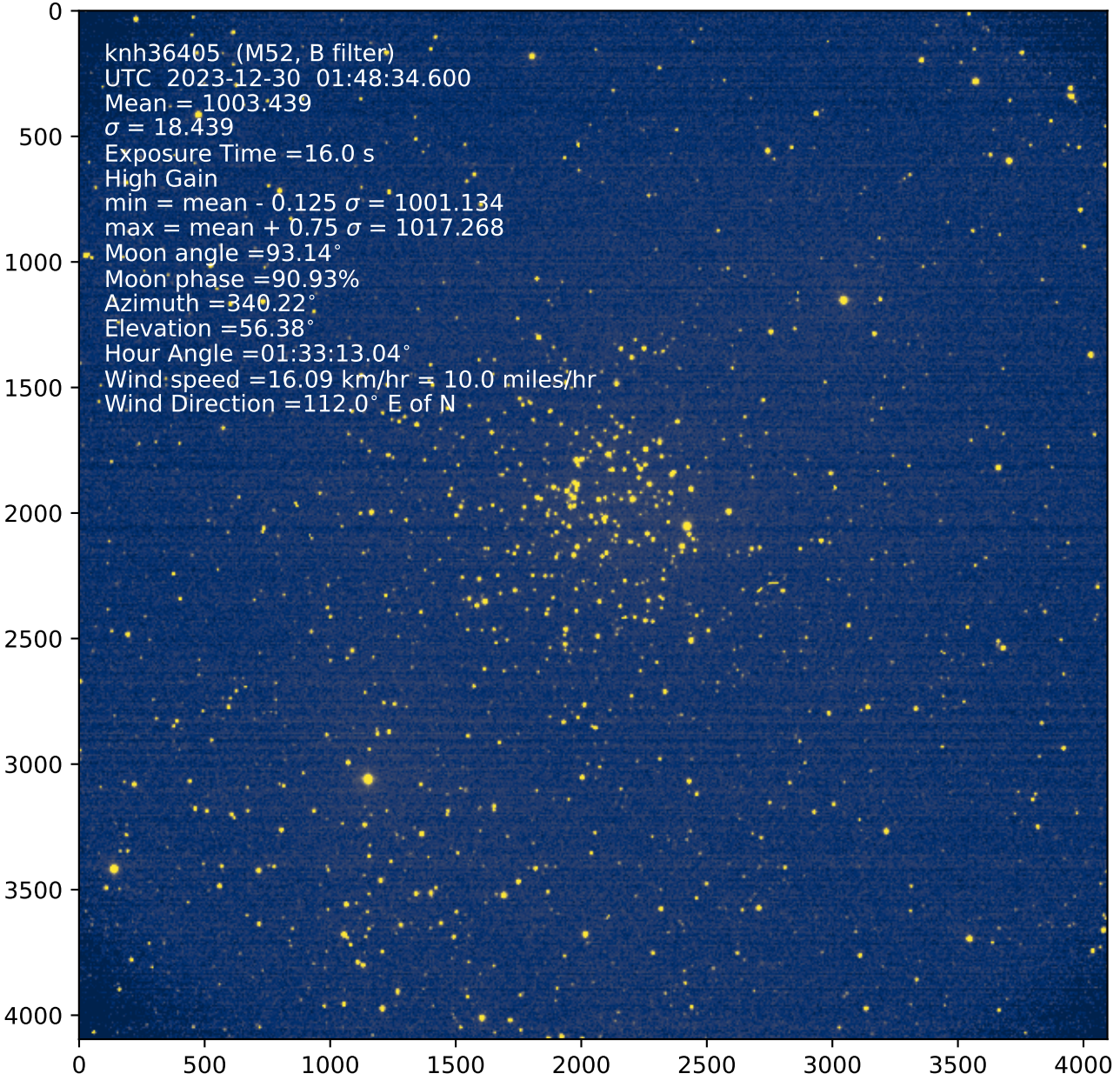
3500
4000


knh36405 (M52, B filter)
UTC 2023-12-30 01:48:34.600
Mean = 1003.439
σ = 18.439
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1001.134
max = mean + 0.75 σ = 1017.268
Moon angle =93.14°
Moon phase =90.93%
Azimuth =340.22°
Elevation =56.38°
Hour Angle =01:33:13.04°
Wind speed =16.09 km/hr = 10.0 miles/hr
Wind Direction =112.0° E of N
0
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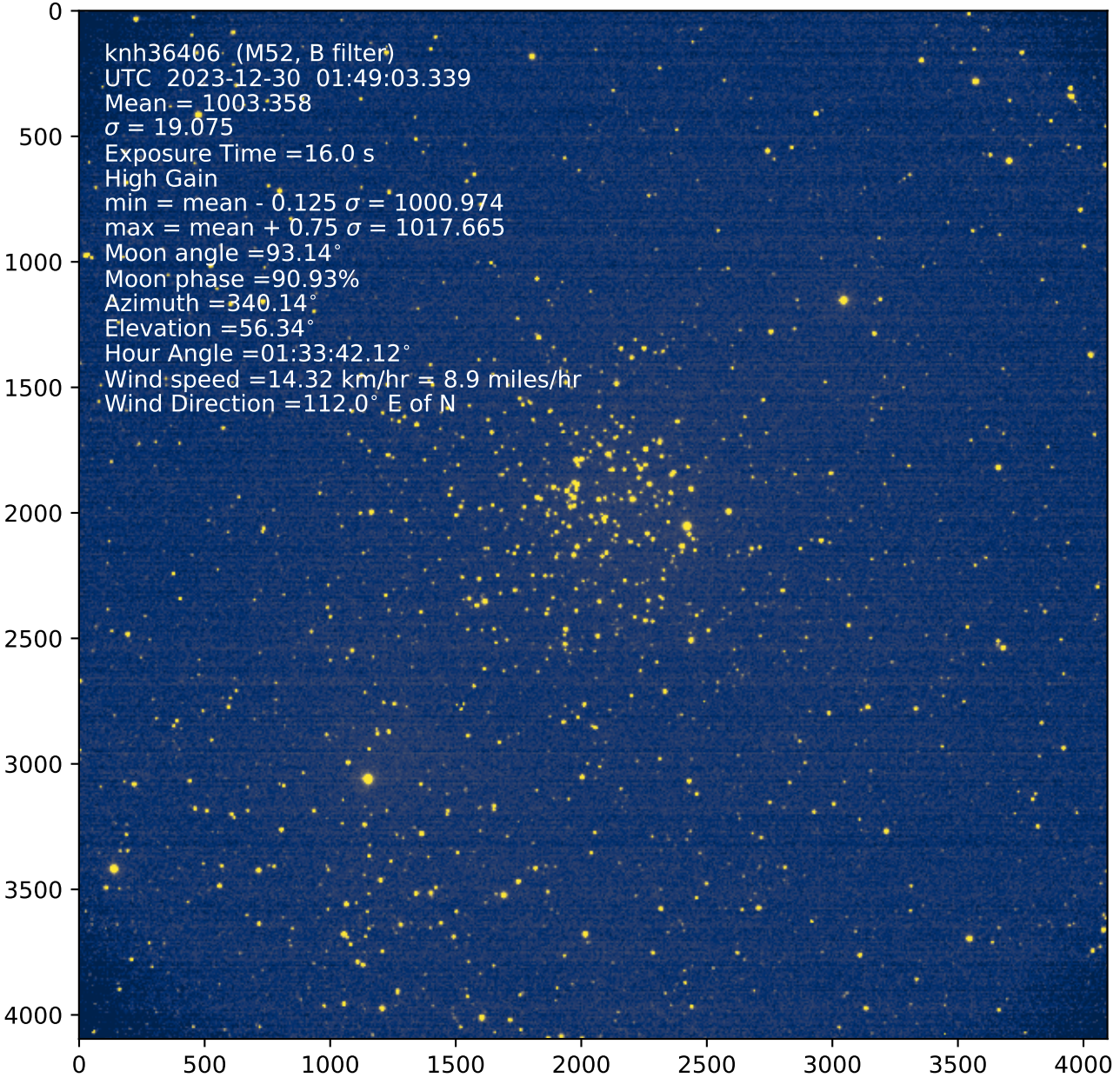
knh36406 (M52, B filter)
UTC 2023-12-30 01:49:03.339
Mean = 1003.358
σ = 19.075
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1000.974
max = mean + 0.75 σ = 1017.665
Moon angle =93.14°
Moon phase =90.93%
Azimuth =340.14°
Elevation =56.34°
Hour Angle =01:33:42.12°
Wind speed =14.32 km/hr = 8.9 miles/hr
Wind Direction =112.0° E of N
0
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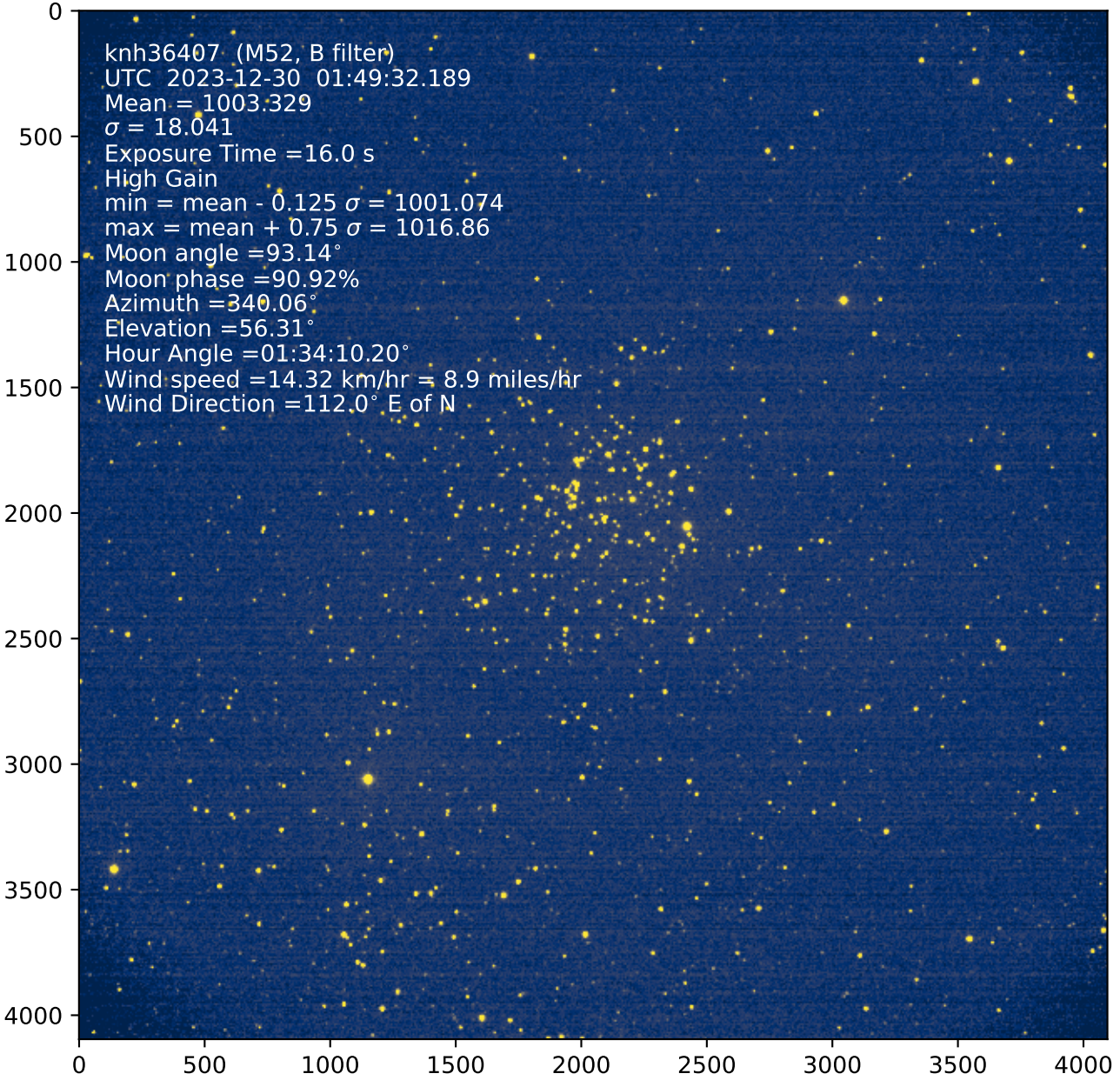
3500
4000


knh36407 (M52, B filter)
UTC 2023-12-30 01:49:32.189
Mean = 1003.329
σ = 18.041
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1001.074
max = mean + 0.75 σ = 1016.86
Moon angle =93.14°
Moon phase =90.92%
Azimuth =340.06°
Elevation =56.31°
Hour Angle =01:34:10.20°
Wind speed =14.32 km/hr = 8.9 miles/hr
Wind Direction =112.0° E of N
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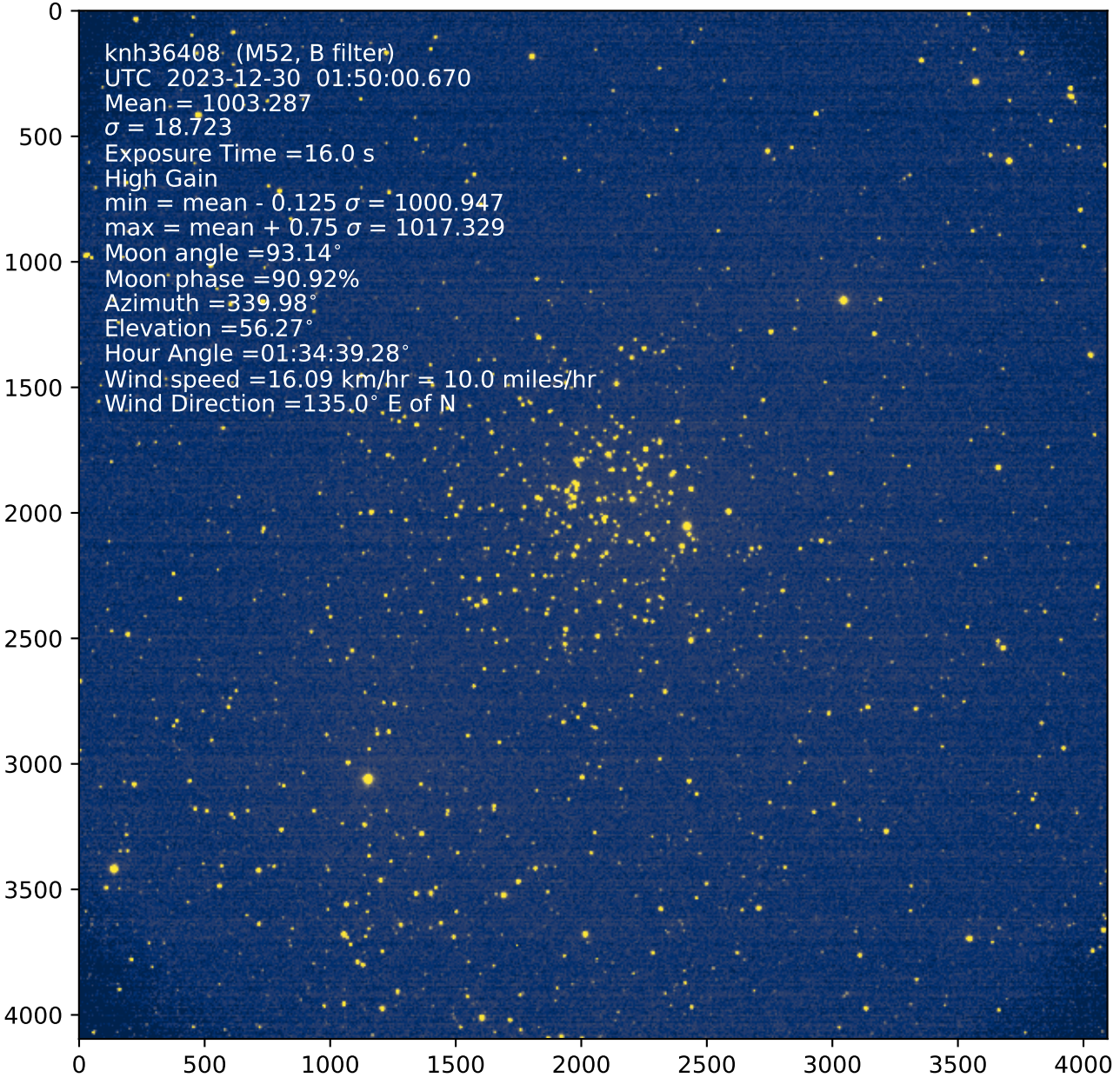
knh36408 (M52, B filter)
UTC 2023-12-30 01:50:00.670
Mean = 1003.287
σ = 18.723
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1000.947
max = mean + 0.75 σ = 1017.329
Moon angle =93.14°
Moon phase =90.92%
Azimuth =339.98°
Elevation =56.27°
Hour Angle =01:34:39.28°
Wind speed =16.09 km/hr = 10.0 miles/hr
Wind Direction =135.0° E of N
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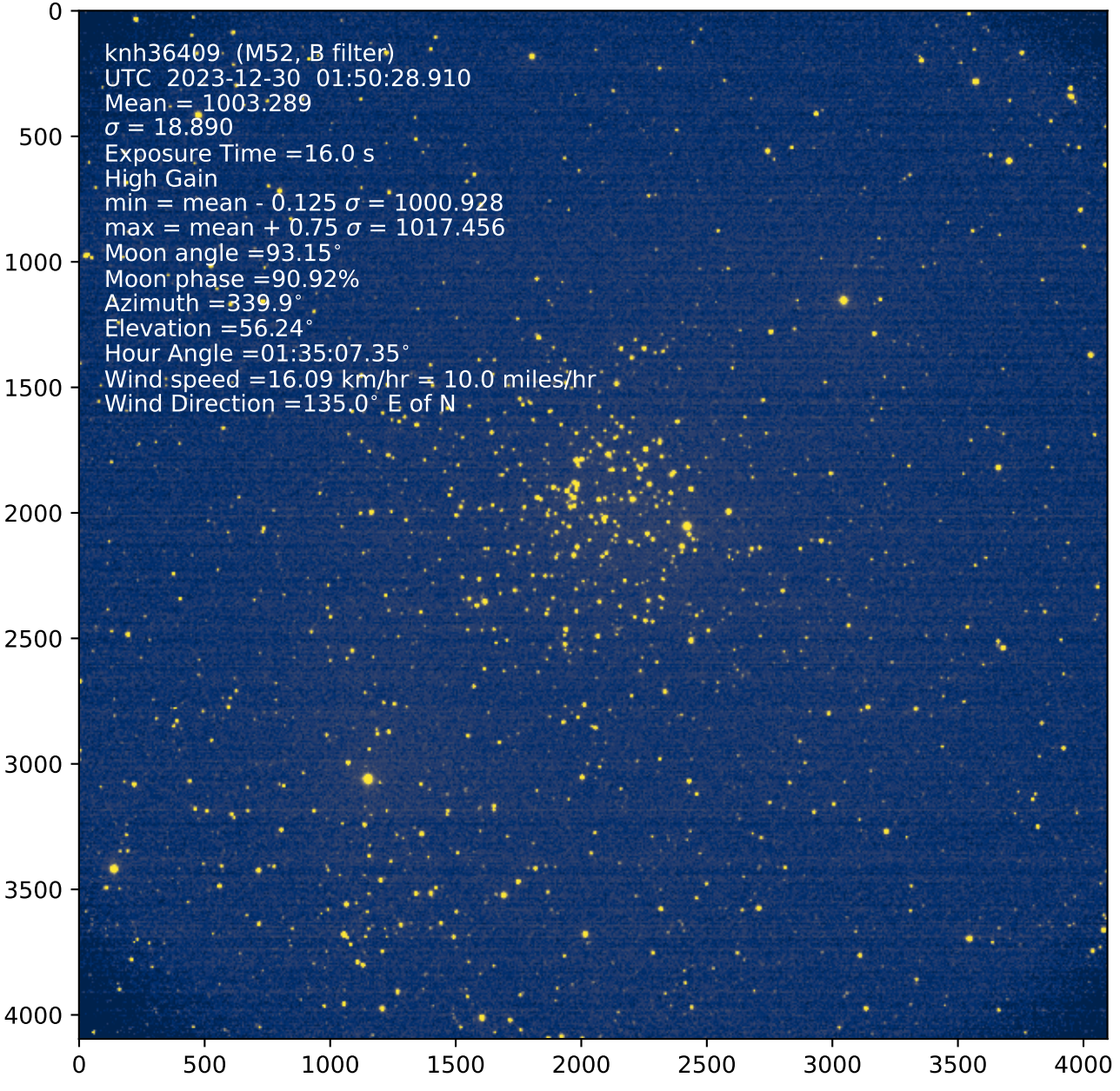
4000


knh36409 (M52, B filter)
UTC 2023-12-30 01:50:28.910
Mean = 1003.289
σ = 18.890
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1000.928
max = mean + 0.75 σ = 1017.456
Moon angle =93.15°
Moon phase =90.92%
Azimuth =339.9°
Elevation =56.24°
Hour Angle =01:35:07.35°
Wind speed =16.09 km/hr = 10.0 miles/hr
Wind Direction =135.0° E of N
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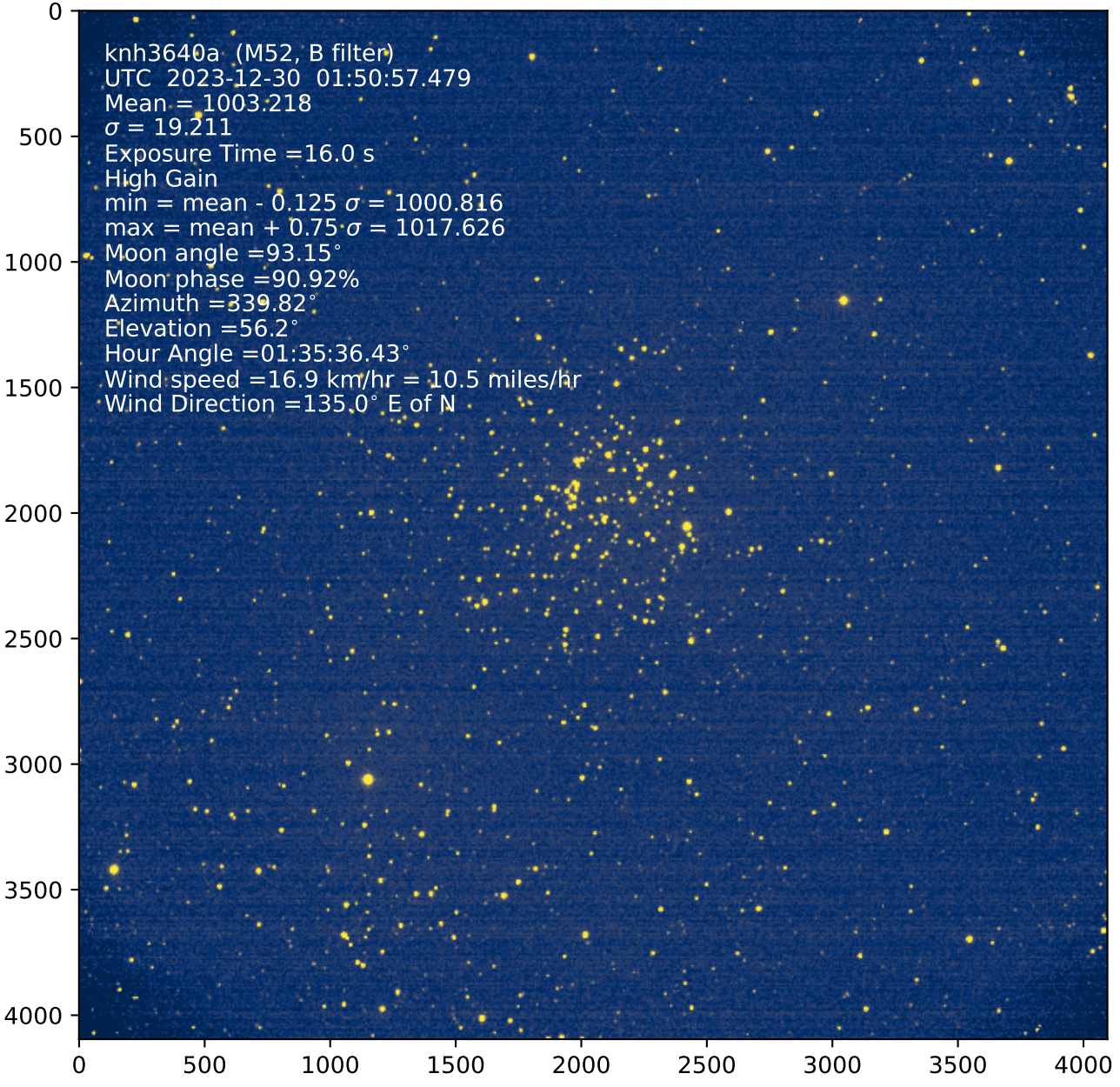
knh3640a (M52, B filter)
UTC 2023-12-30 01:50:57.479
Mean = 1003.218
σ = 19.211
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1000.816
max = mean + 0.75 σ = 1017.626
Moon angle =93.15°
Moon phase =90.92%
Azimuth =339.82°
Elevation =56.2°
Hour Angle =01:35:36.43°
Wind speed =16.9 km/hr = 10.5 miles/hr
Wind Direction =135.0° E of N
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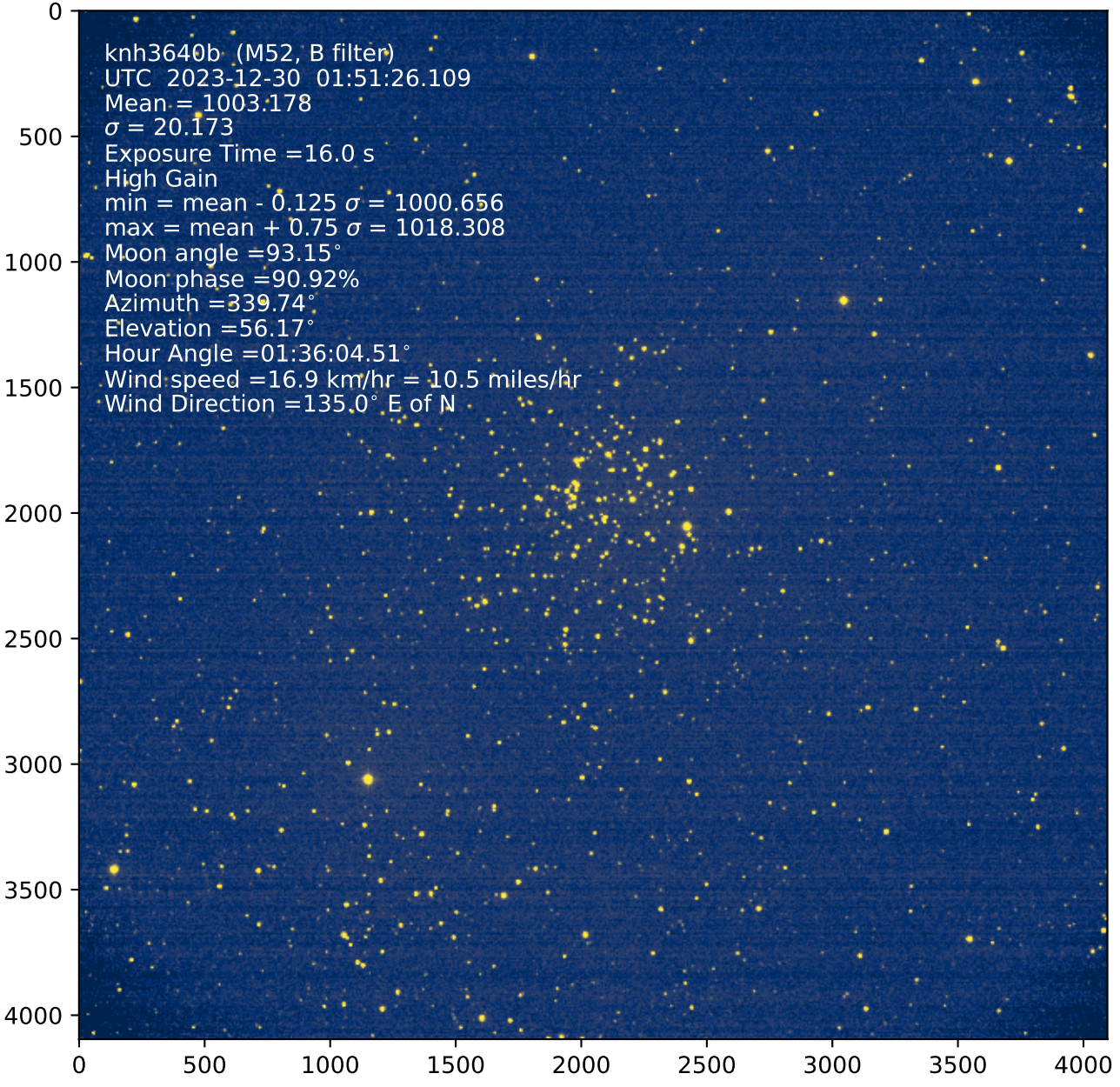
knh3640b (M52, B filter)
UTC 2023-12-30 01:51:26.109
Mean = 1003.178
σ = 20.173
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1000.656
max = mean + 0.75 σ = 1018.308
Moon angle =93.15°
Moon phase =90.92%
Azimuth =339.74°
Elevation =56.17°
Hour Angle =01:36:04.51°
Wind speed =16.9 km/hr = 10.5 miles/hr
Wind Direction =135.0° E of N
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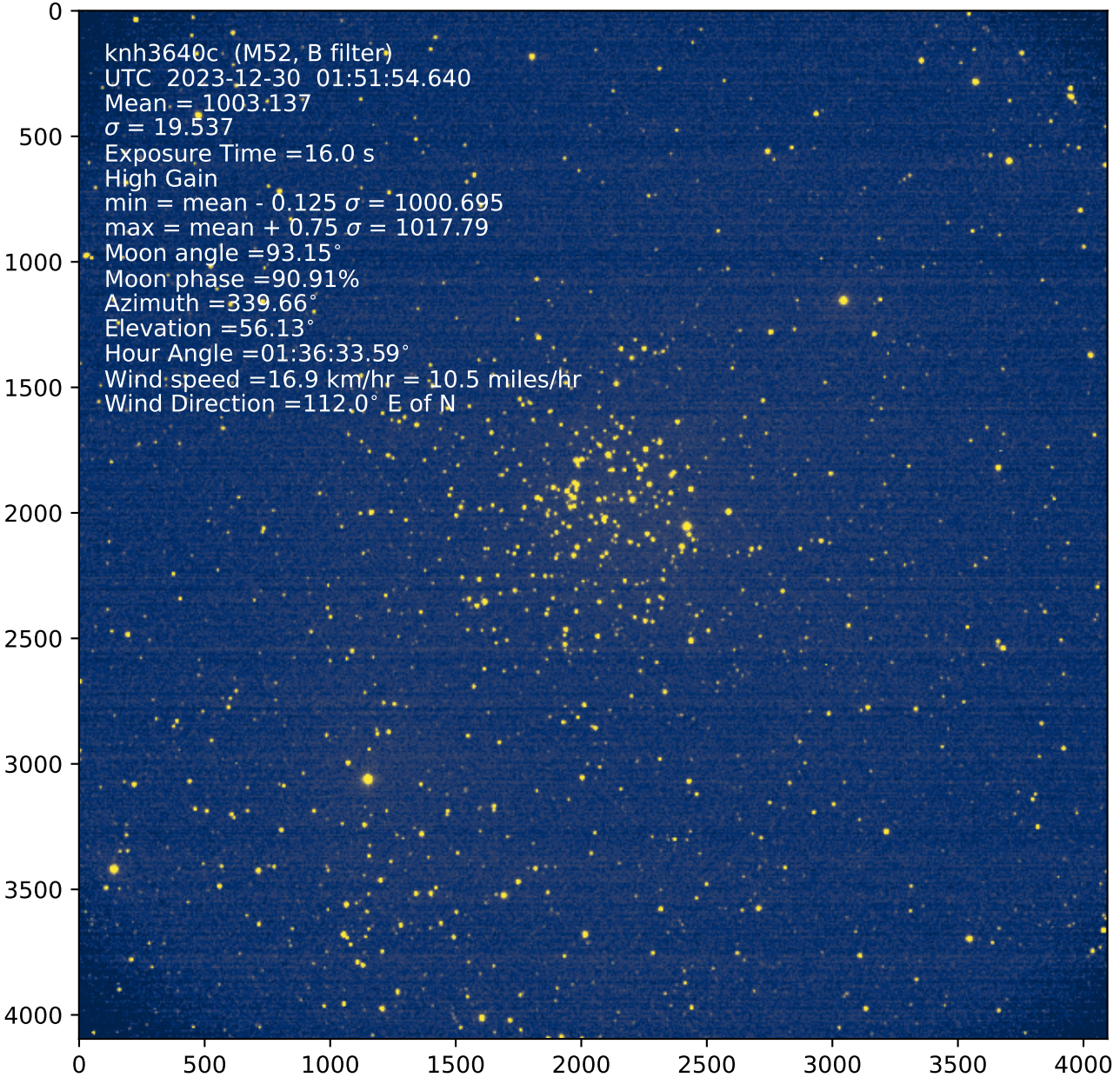
knh3640c (M52, B filter)
UTC 2023-12-30 01:51:54.640
Mean = 1003.137
σ = 19.537
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1000.695
max = mean + 0.75 σ = 1017.79
Moon angle =93.15°
Moon phase =90.91%
Azimuth =339.66°
Elevation =56.13°
Hour Angle =01:36:33.59°
Wind speed =16.9 km/hr = 10.5 miles/hr
Wind Direction =112.0° E of N
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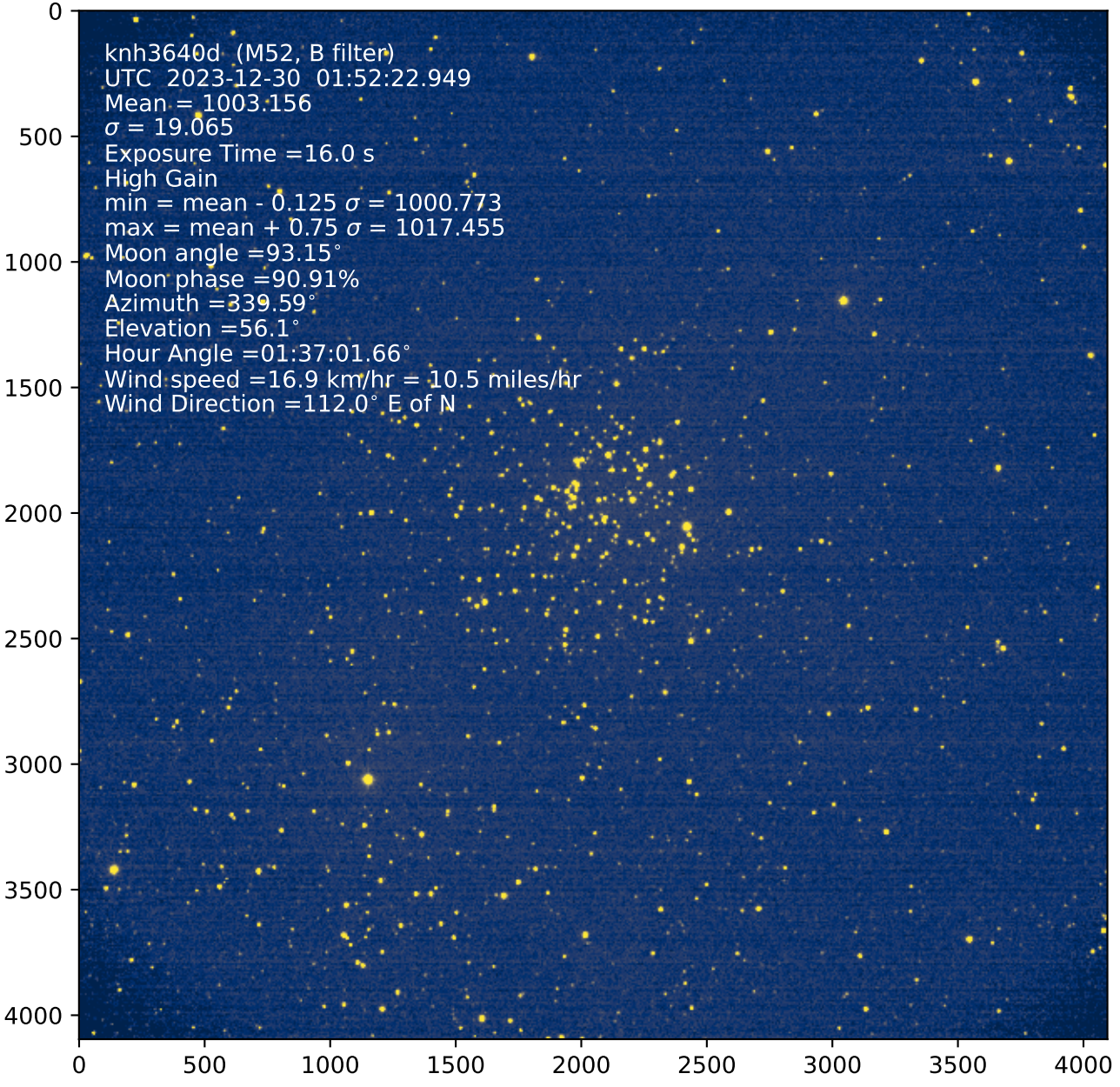
knh3640d (M52, B filter)
UTC 2023-12-30 01:52:22.949
Mean = 1003.156
σ = 19.065
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1000.773
max = mean + 0.75 σ = 1017.455
Moon angle =93.15°
Moon phase =90.91%
Azimuth =339.59°
Elevation =56.1°
Hour Angle =01:37:01.66°
Wind speed =16.9 km/hr = 10.5 miles/hr
Wind Direction =112.0° E of N
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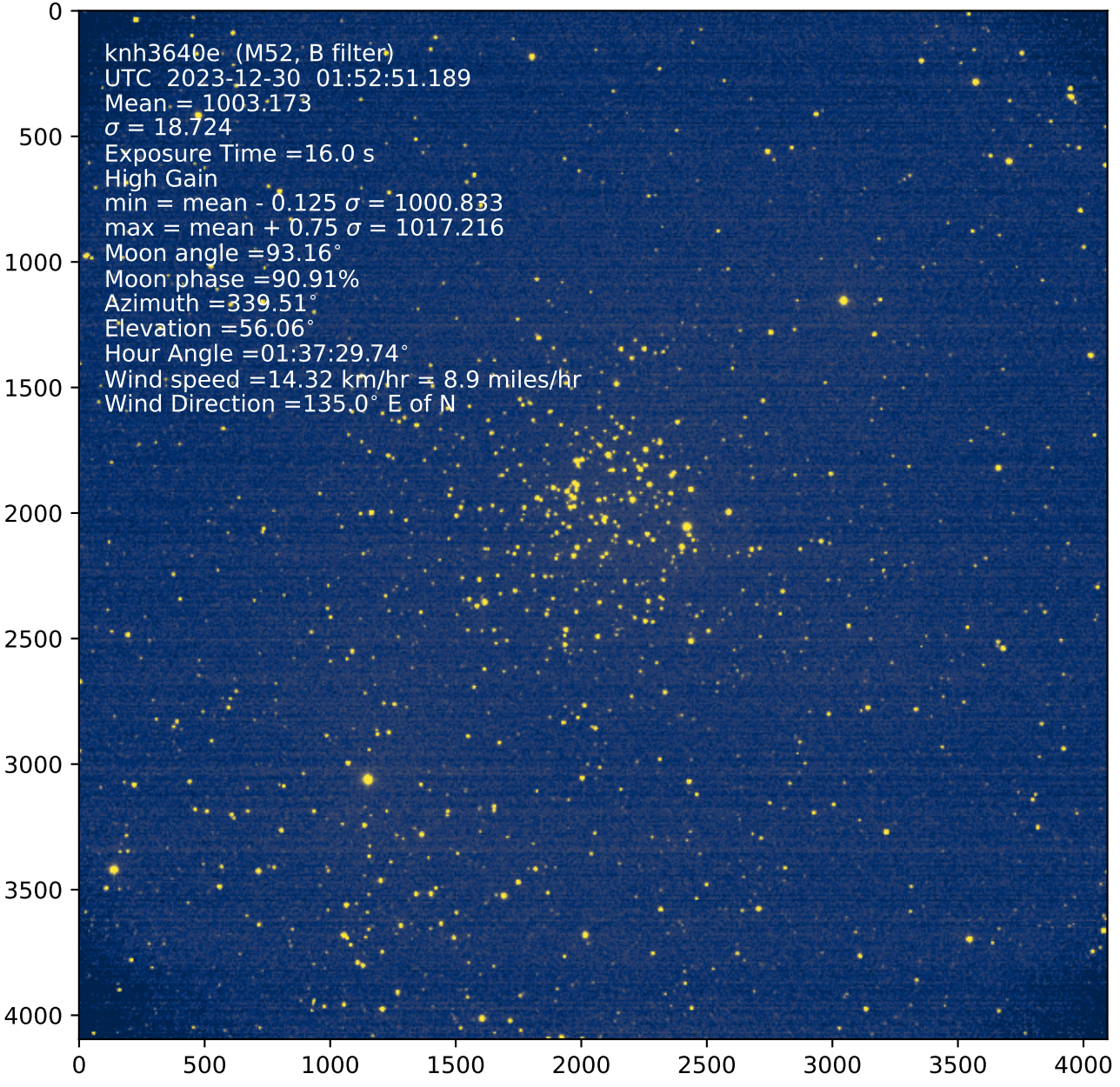
knh3640e (M52, B filter)
UTC 2023-12-30 01:52:51.189
Mean = 1003.173
σ = 18.724
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1000.833
max = mean + 0.75 σ = 1017.216
Moon angle =93.16°
Moon phase =90.91%
Azimuth =339.51°
Elevation =56.06°
Hour Angle =01:37:29.74°
Wind speed =14.32 km/hr = 8.9 miles/hr
Wind Direction =135.0° E of N
0
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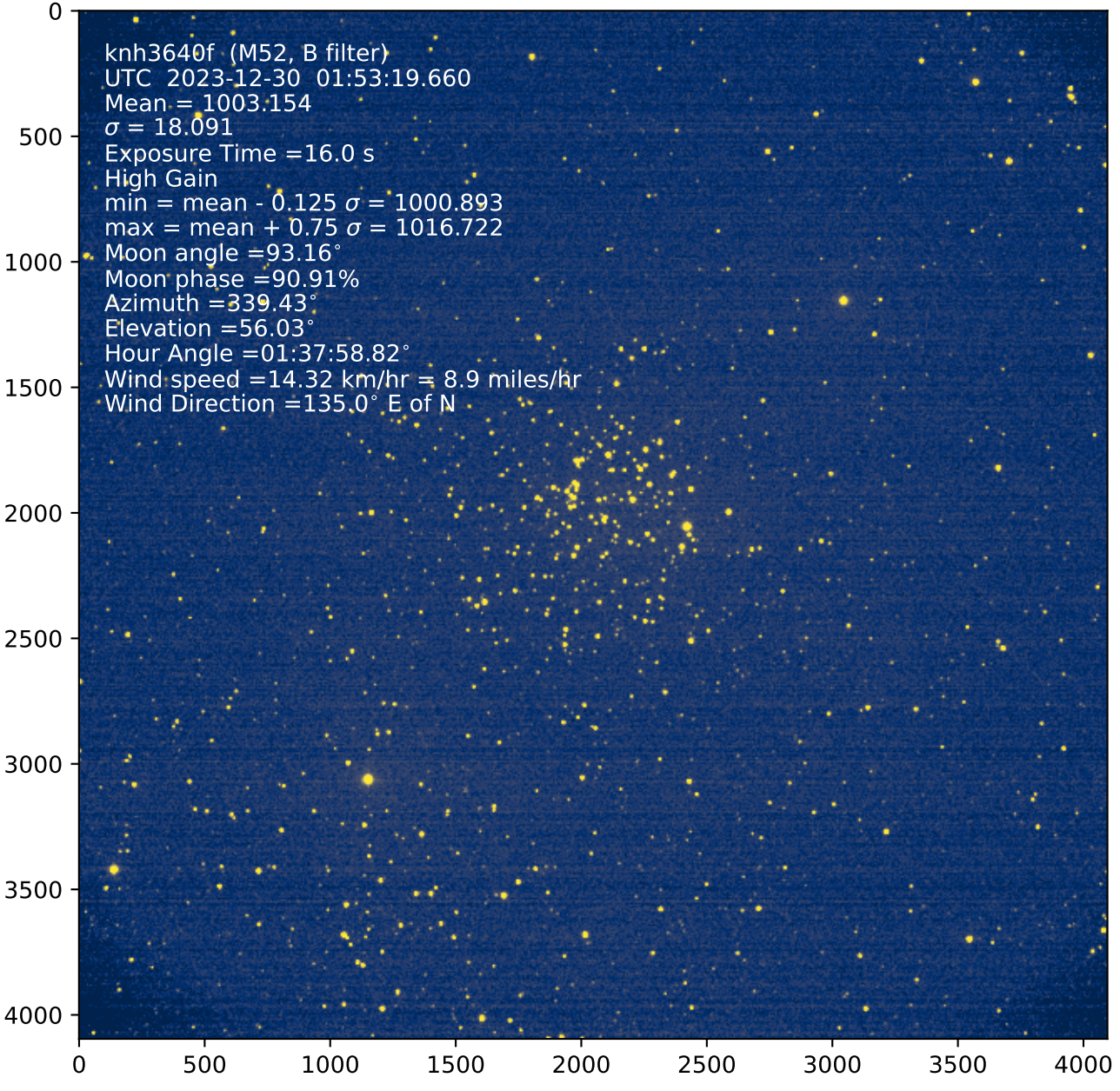
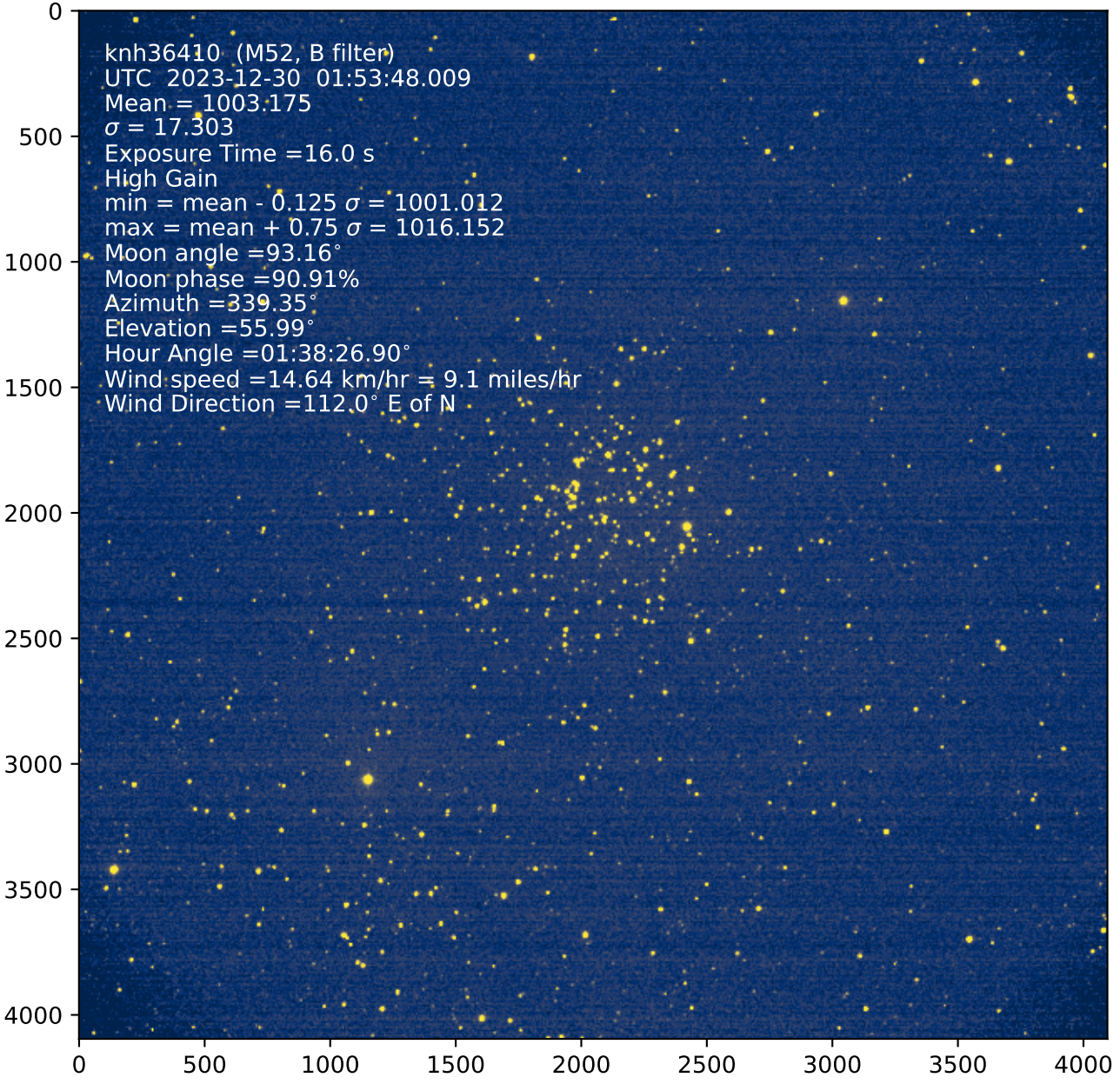
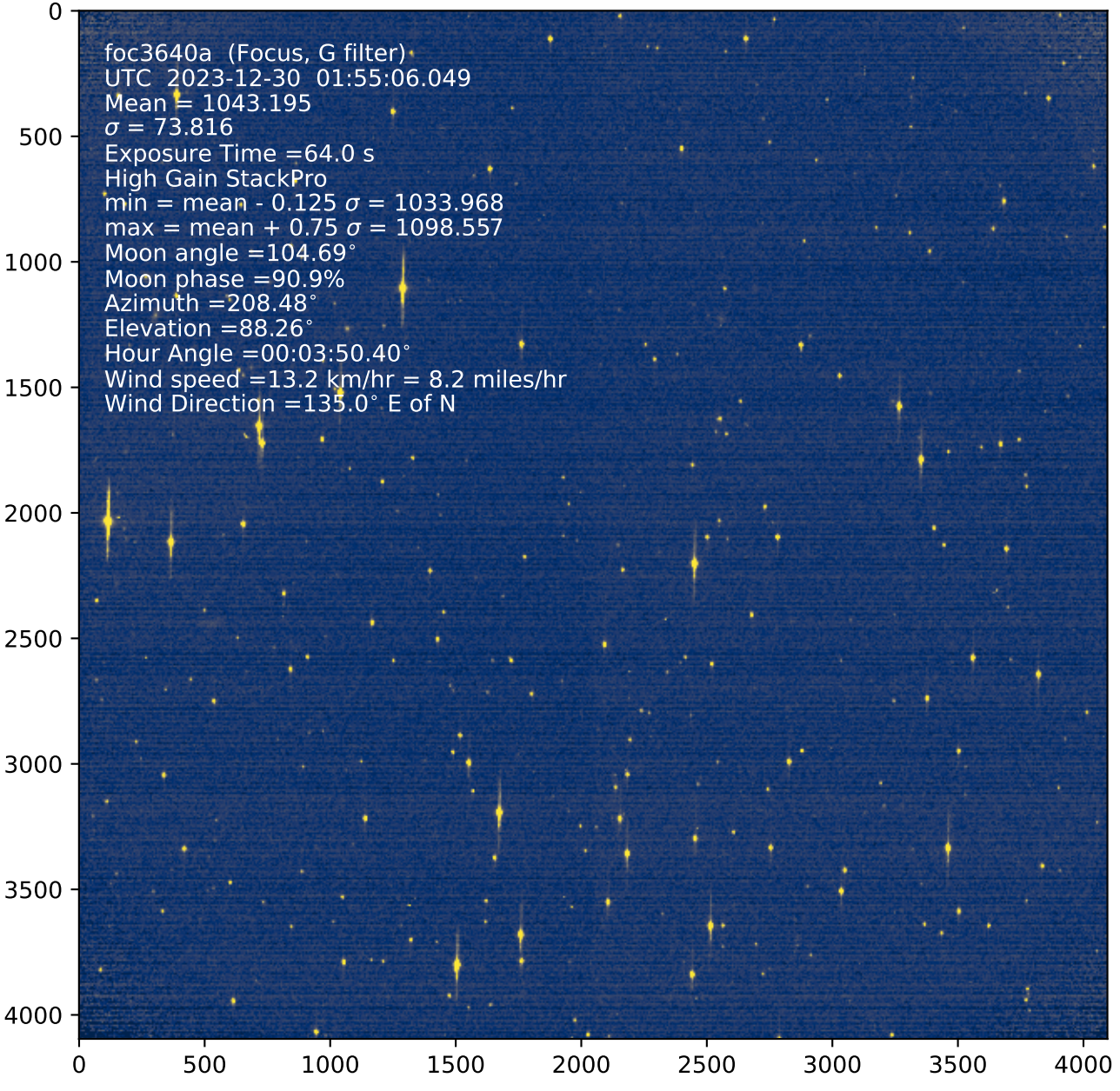
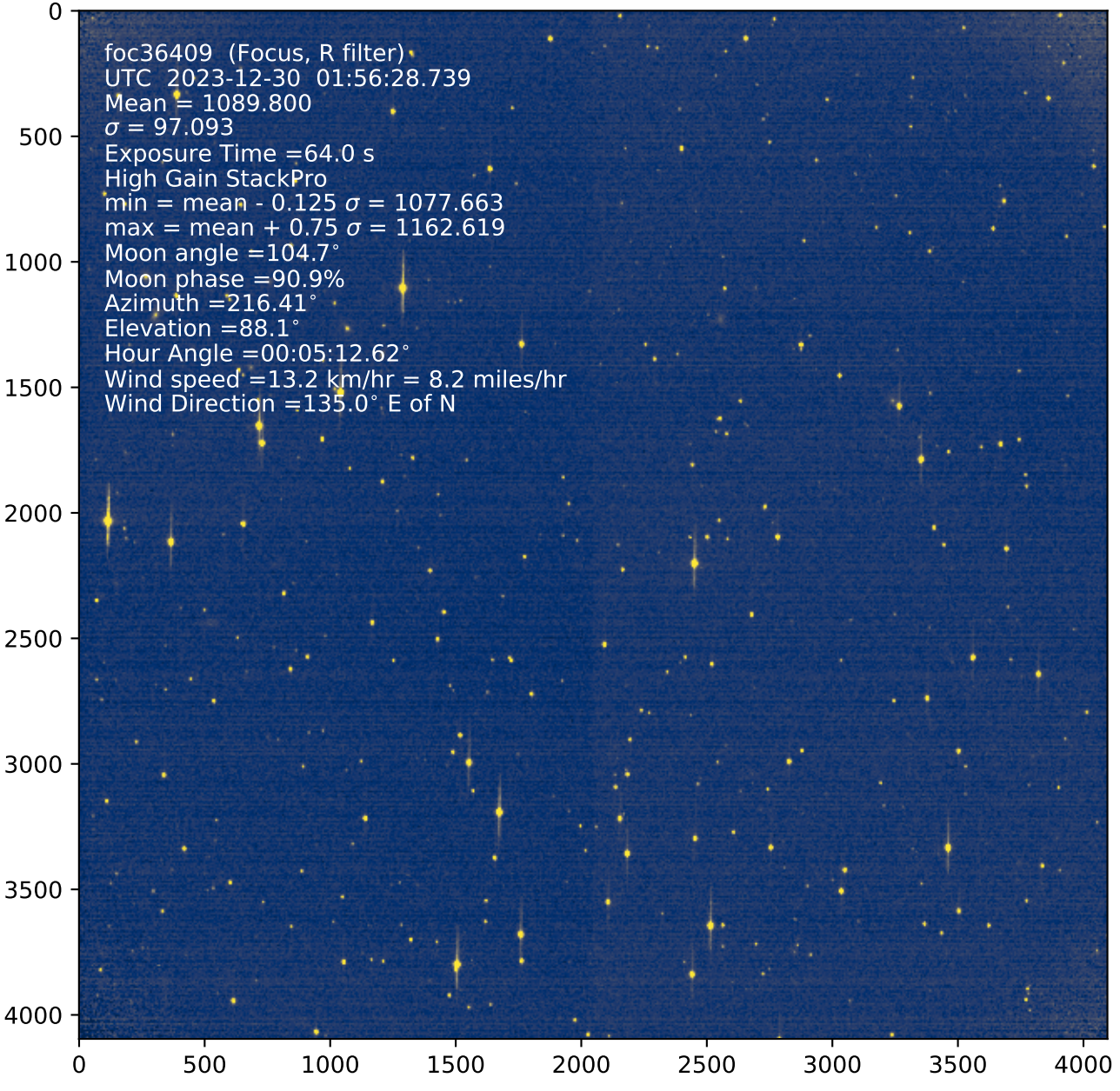
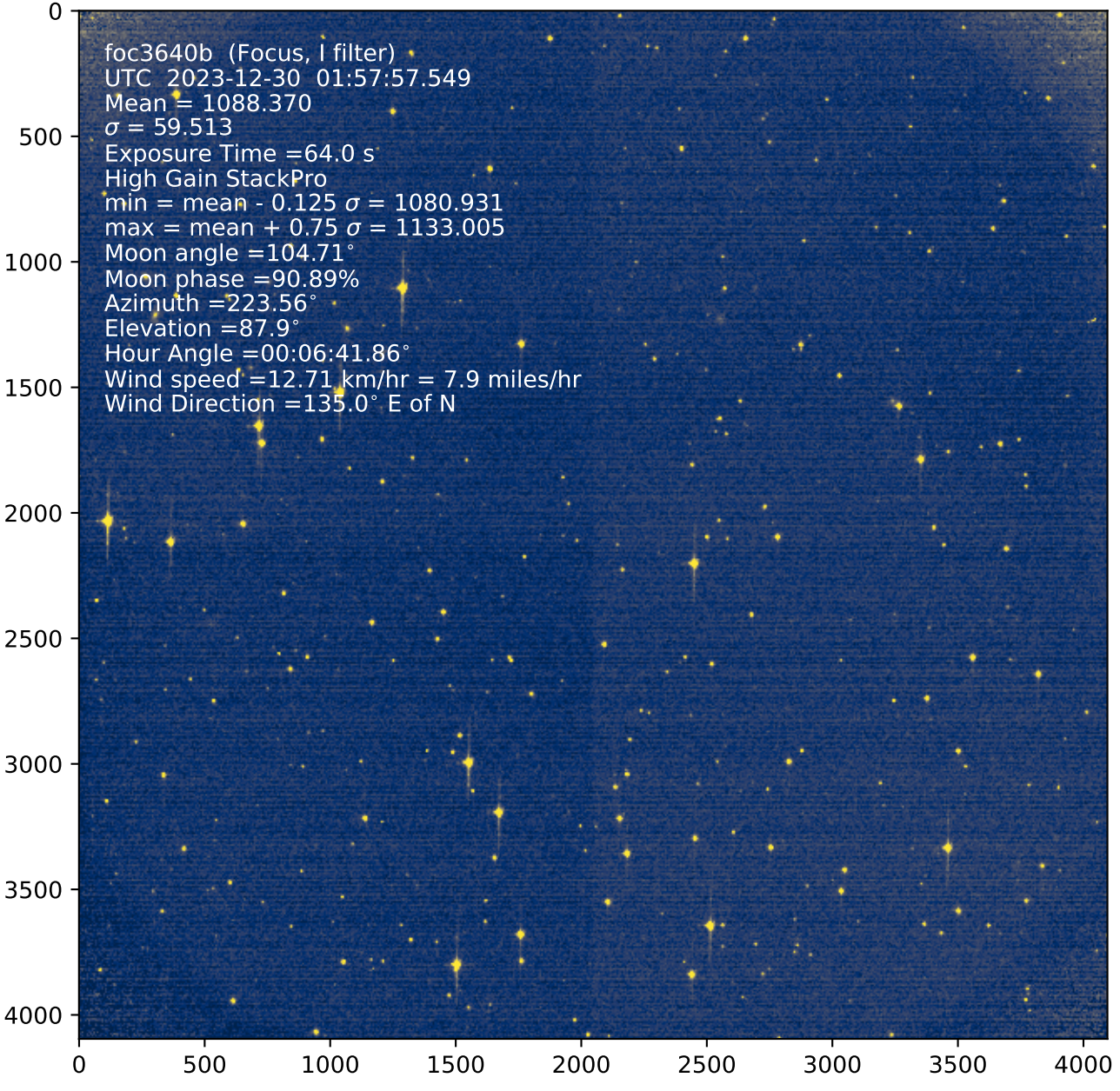
3000
3500
4000


knh3640f (M52, B filter)
UTC 2023-12-30 01:53:19.660
Mean = 1003.154
σ = 18.091
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1000.893
max = mean + 0.75 σ = 1016.722
Moon angle =93.16°
Moon phase =90.91%
Azimuth =339.43°
Elevation =56.03°
Hour Angle =01:37:58.82°
Wind speed =14.32 km/hr = 8.9 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh36410 (M52, B filter)
UTC 2023-12-30 01:53:48.009
Mean = 1003.175
σ = 17.303
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1001.012
max = mean + 0.75 σ = 1016.152
Moon angle =93.16°
Moon phase =90.91%
Azimuth =339.35°
Elevation =55.99°
Hour Angle =01:38:26.90°
Wind speed =14.64 km/hr = 9.1 miles/hr
Wind Direction =112.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


foc3640a (Focus, G filter)
UTC 2023-12-30 01:55:06.049
Mean = 1043.195
σ = 73.816
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 1033.968
max = mean + 0.75 σ = 1098.557
Moon angle =104.69°
Moon phase =90.9%
Azimuth =208.48°
Elevation =88.26°
Hour Angle =00:03:50.40°
Wind speed =13.2 km/hr = 8.2 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


foc36409 (Focus, R filter)
UTC 2023-12-30 01:56:28.739
Mean = 1089.800
σ = 97.093
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 1077.663
max = mean + 0.75 σ = 1162.619
Moon angle =104.7°
Moon phase =90.9%
Azimuth =216.41°
Elevation =88.1°
Hour Angle =00:05:12.62°
Wind speed =13.2 km/hr = 8.2 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


foc3640b (Focus, I filter)
UTC 2023-12-30 01:57:57.549
Mean = 1088.370
σ = 59.513
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 1080.931
max = mean + 0.75 σ = 1133.005
Moon angle =104.71°
Moon phase =90.89%
Azimuth =223.56°
Elevation =87.9°
Hour Angle =00:06:41.86°
Wind speed =12.71 km/hr = 7.9 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
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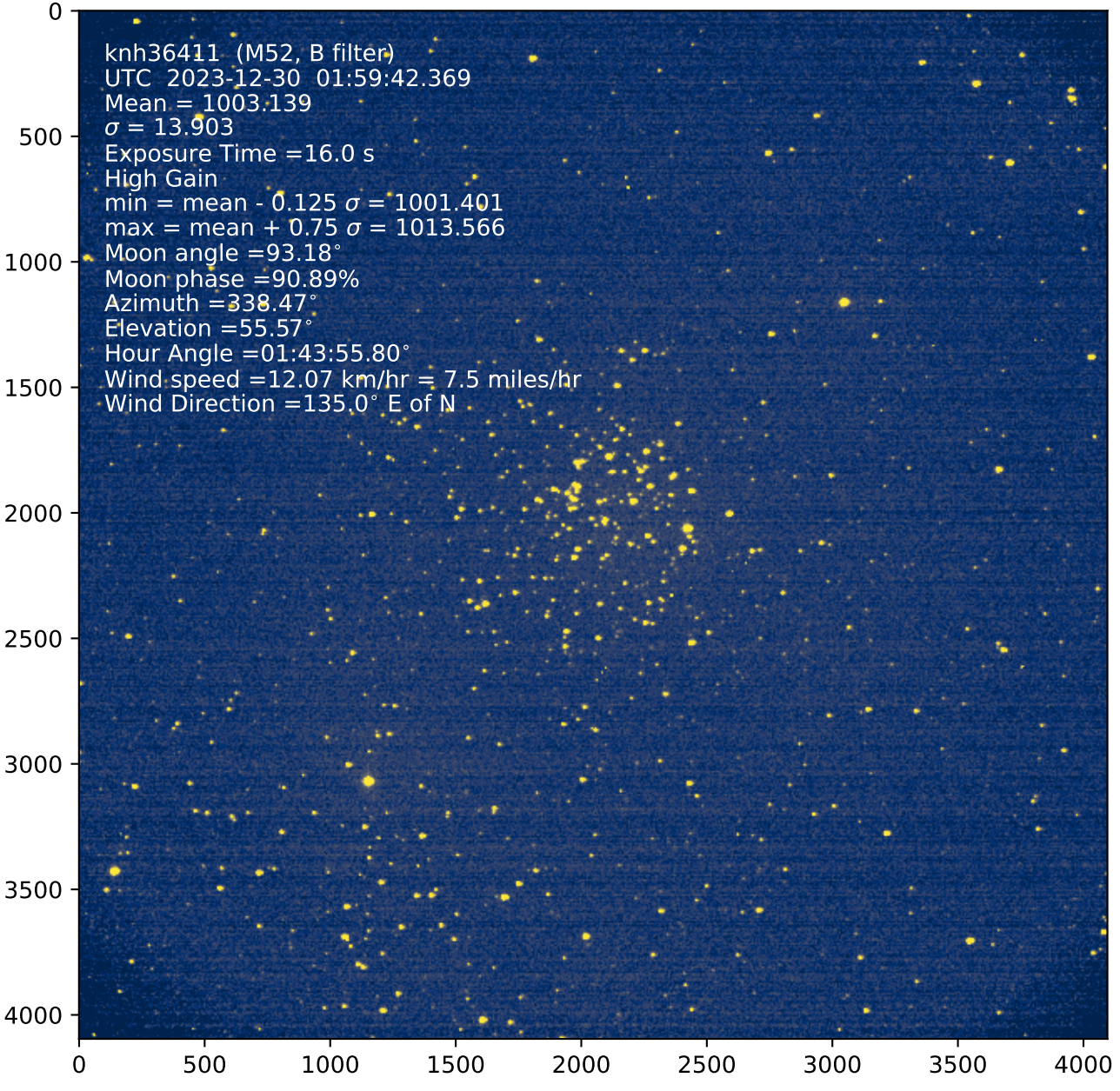
2500
3000
3500
4000


knh36411 (M52, B filter)
UTC 2023-12-30 01:59:42.369
Mean = 1003.139
σ = 13.903
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1001.401
max = mean + 0.75 σ = 1013.566
Moon angle =93.18°
Moon phase =90.89%
Azimuth =338.47°
Elevation =55.57°
Hour Angle =01:43:55.80°
Wind speed =12.07 km/hr = 7.5 miles/hr
Wind Direction =135.0° E of N
0
500
1000
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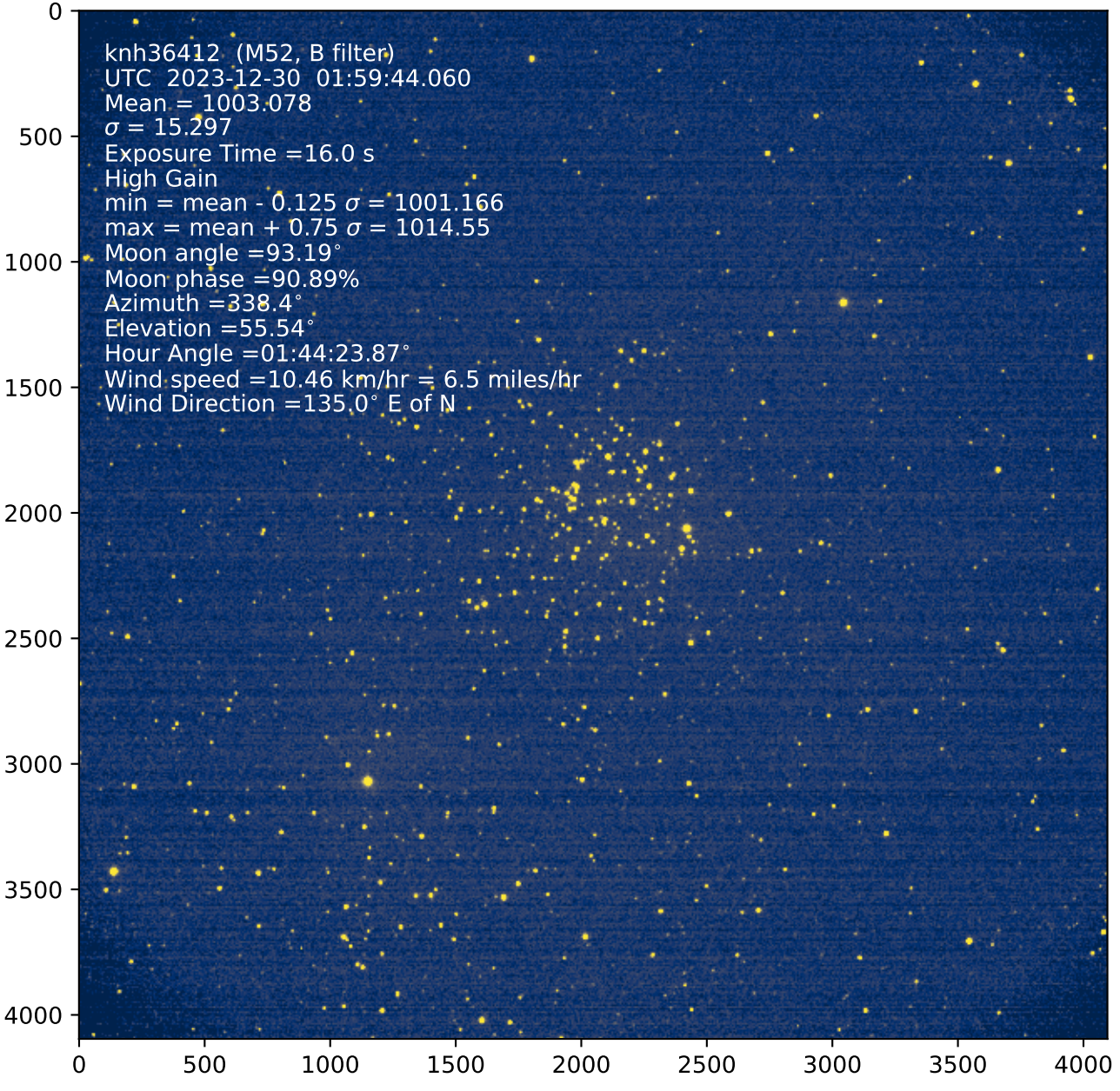
2500
3000
3500
4000


knh36412 (M52, B filter)
UTC 2023-12-30 01:59:44.060
Mean = 1003.078
σ = 15.297
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1001.166
max = mean + 0.75 σ = 1014.55
Moon angle =93.19°
Moon phase =90.89%
Azimuth =338.4°
Elevation =55.54°
Hour Angle =01:44:23.87°
Wind speed =10.46 km/hr = 6.5 miles/hr
Wind Direction =135.0° E of N
0
500
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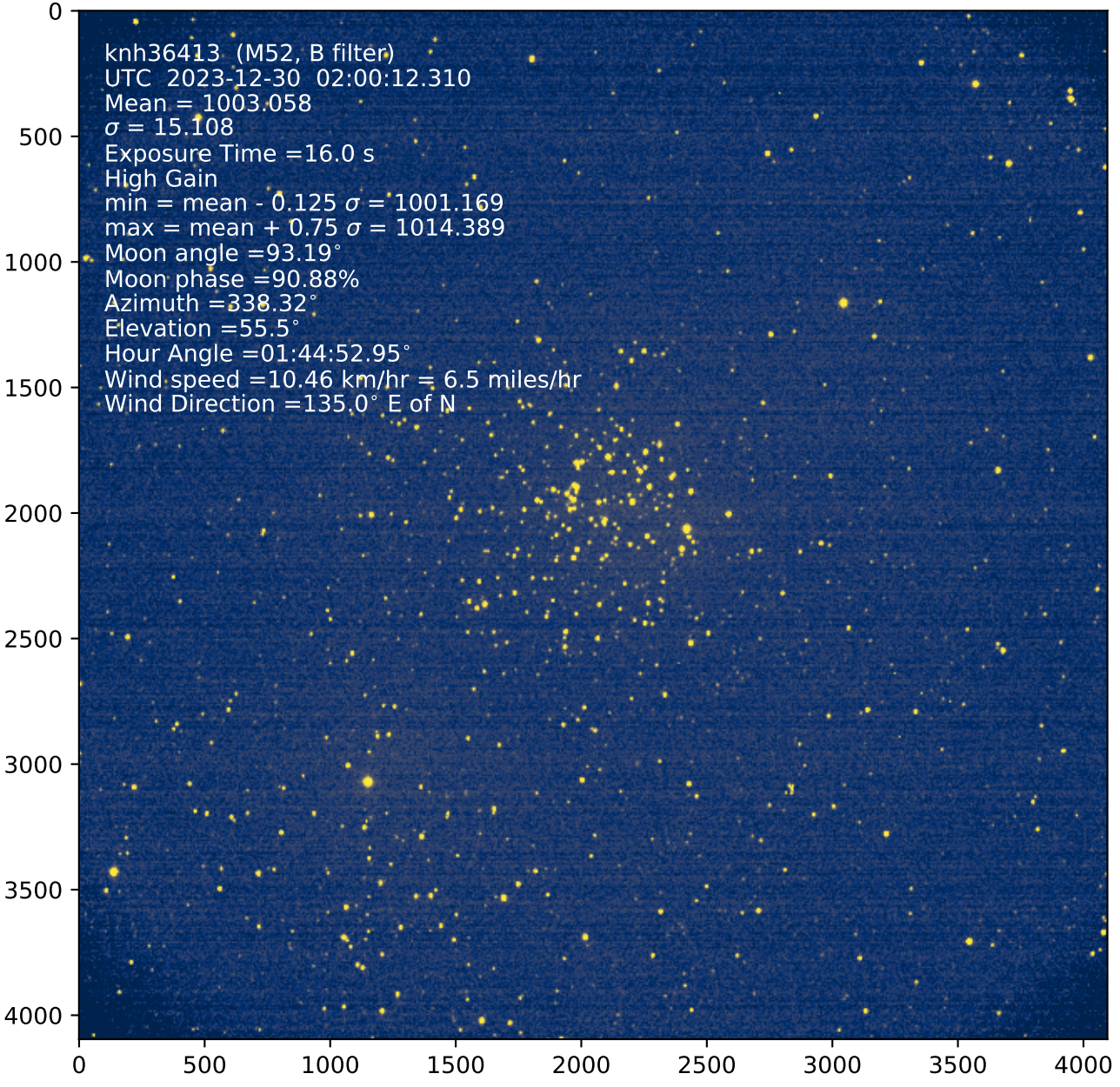
1500
2000
2500
3000
3500
4000


knh36413 (M52, B filter)
UTC 2023-12-30 02:00:12.310
Mean = 1003.058
σ = 15.108
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1001.169
max = mean + 0.75 σ = 1014.389
Moon angle =93.19°
Moon phase =90.88%
Azimuth =338.32°
Elevation =55.5°
Hour Angle =01:44:52.95°
Wind speed =10.46 km/hr = 6.5 miles/hr
Wind Direction =135.0° E of N
0
500
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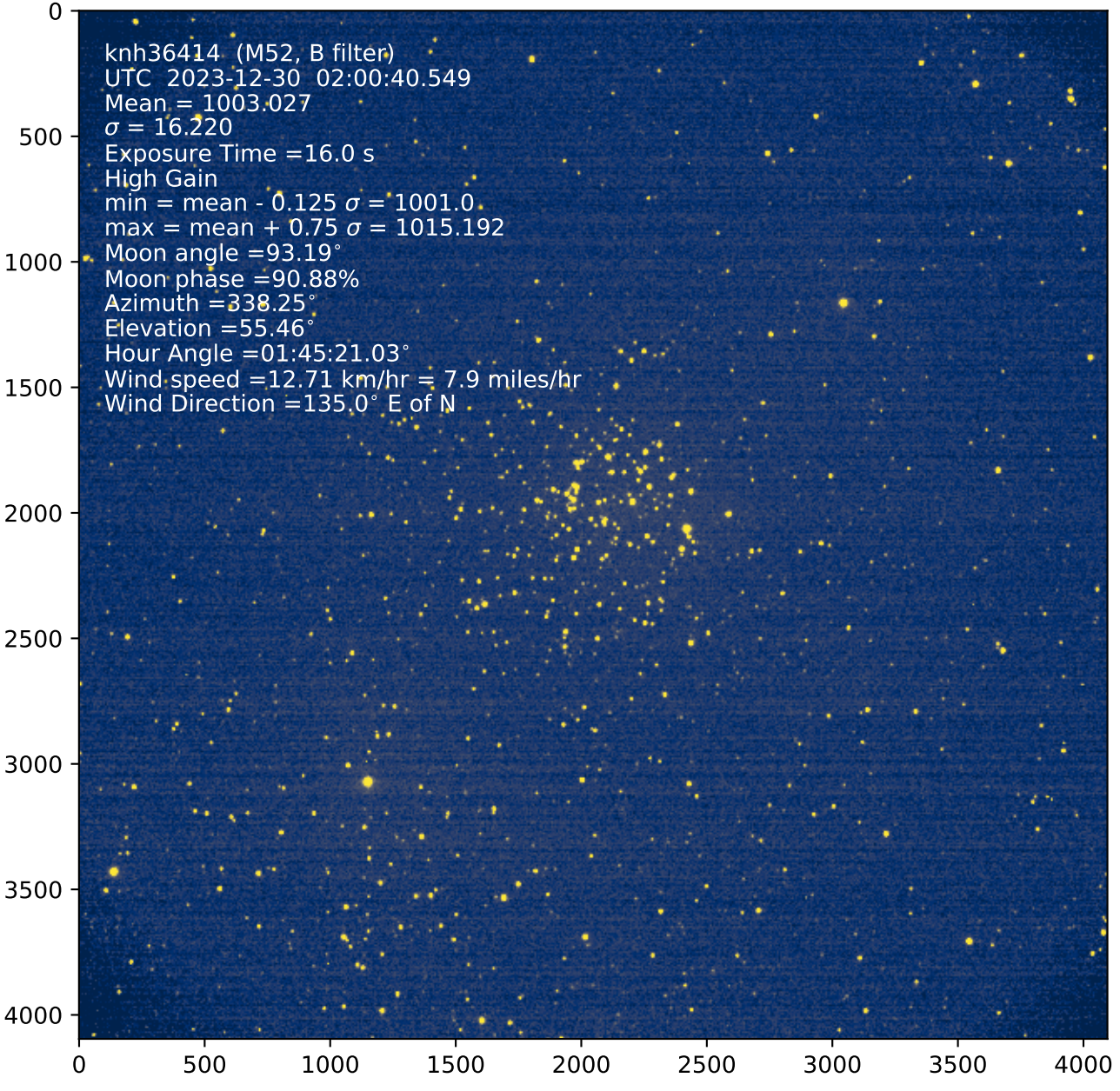
2000
2500
3000
3500
4000


knh36414 (M52, B filter)
UTC 2023-12-30 02:00:40.549
Mean = 1003.027
σ = 16.220
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1001.0
max = mean + 0.75 σ = 1015.192
Moon angle =93.19°
Moon phase =90.88%
Azimuth =338.25°
Elevation =55.46°
Hour Angle =01:45:21.03°
Wind speed =12.71 km/hr = 7.9 miles/hr
Wind Direction =135.0° E of N
0
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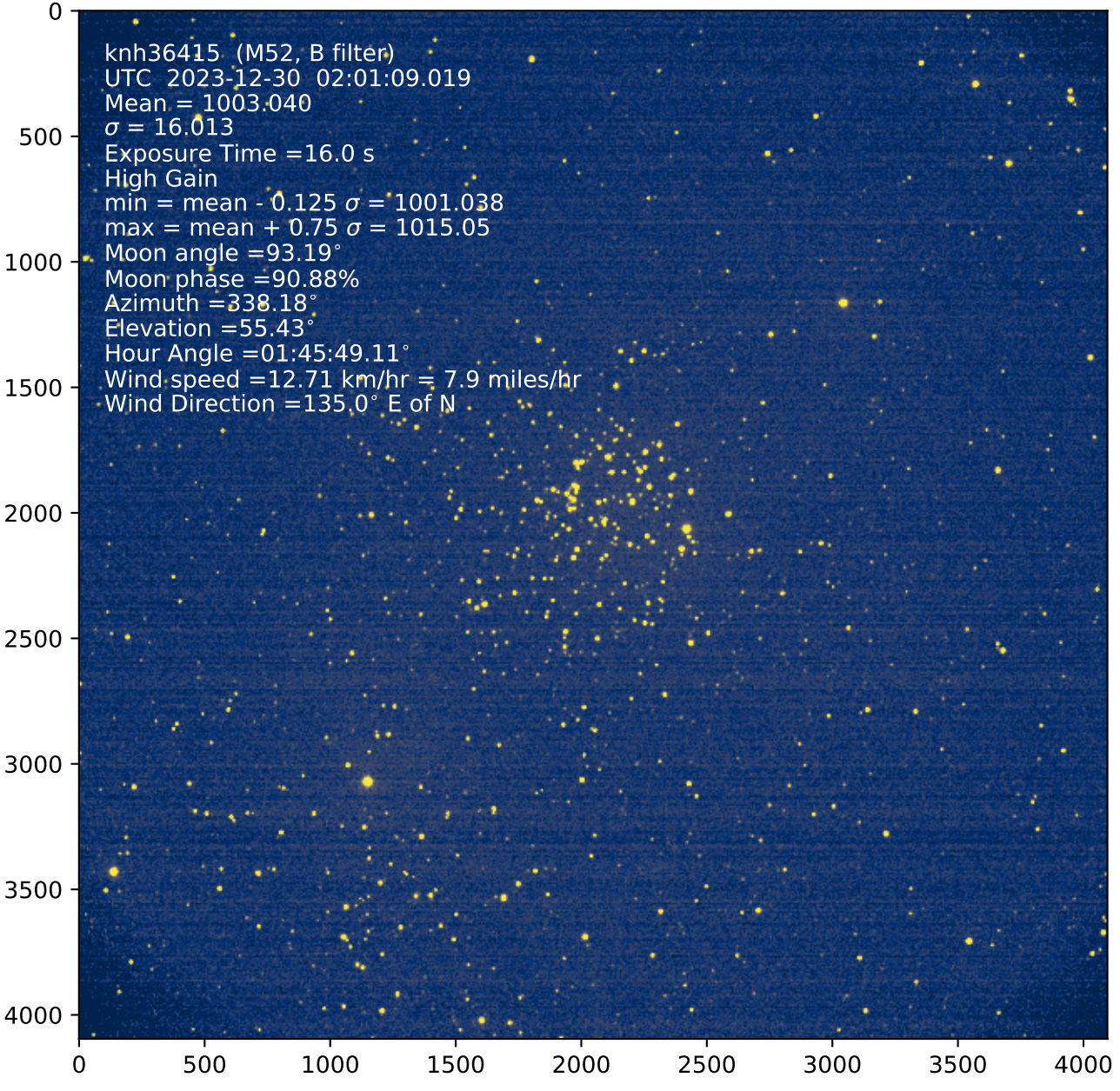
2000
2500
3000
3500
4000


knh36415 (M52, B filter)
UTC 2023-12-30 02:01:09.019
Mean = 1003.040
σ = 16.013
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1001.038
max = mean + 0.75 σ = 1015.05
Moon angle =93.19°
Moon phase =90.88%
Azimuth =338.18°
Elevation =55.43°
Hour Angle =01:45:49.11°
Wind speed =12.71 km/hr = 7.9 miles/hr
Wind Direction =135.0° E of N
0
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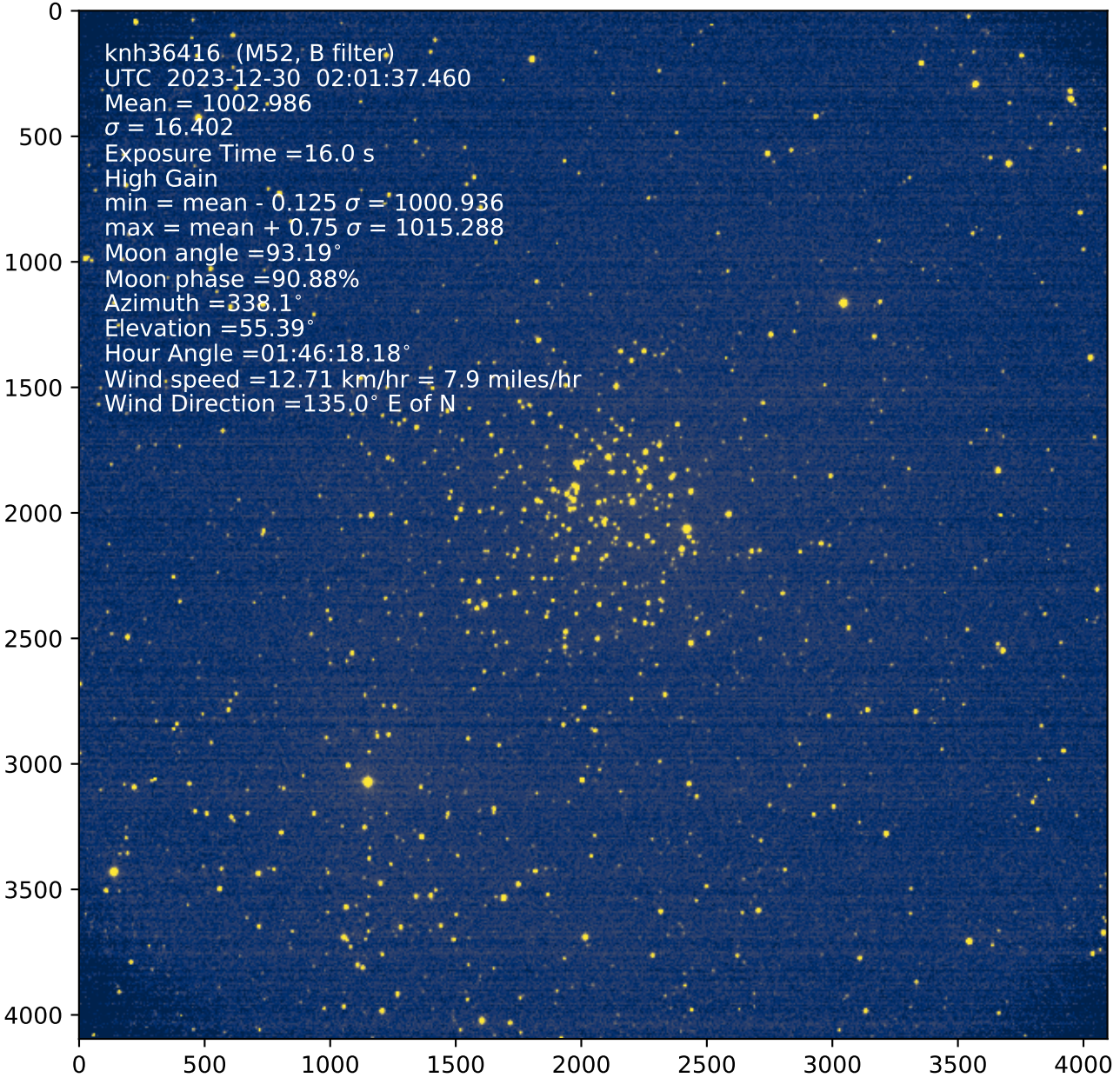
2500
3000
3500
4000


knh36416 (M52, B filter)
UTC 2023-12-30 02:01:37.460
Mean = 1002.986
σ = 16.402
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1000.936
max = mean + 0.75 σ = 1015.288
Moon angle =93.19°
Moon phase =90.88%
Azimuth =338.1°
Elevation =55.39°
Hour Angle =01:46:18.18°
Wind speed =12.71 km/hr = 7.9 miles/hr
Wind Direction =135.0° E of N
0
500
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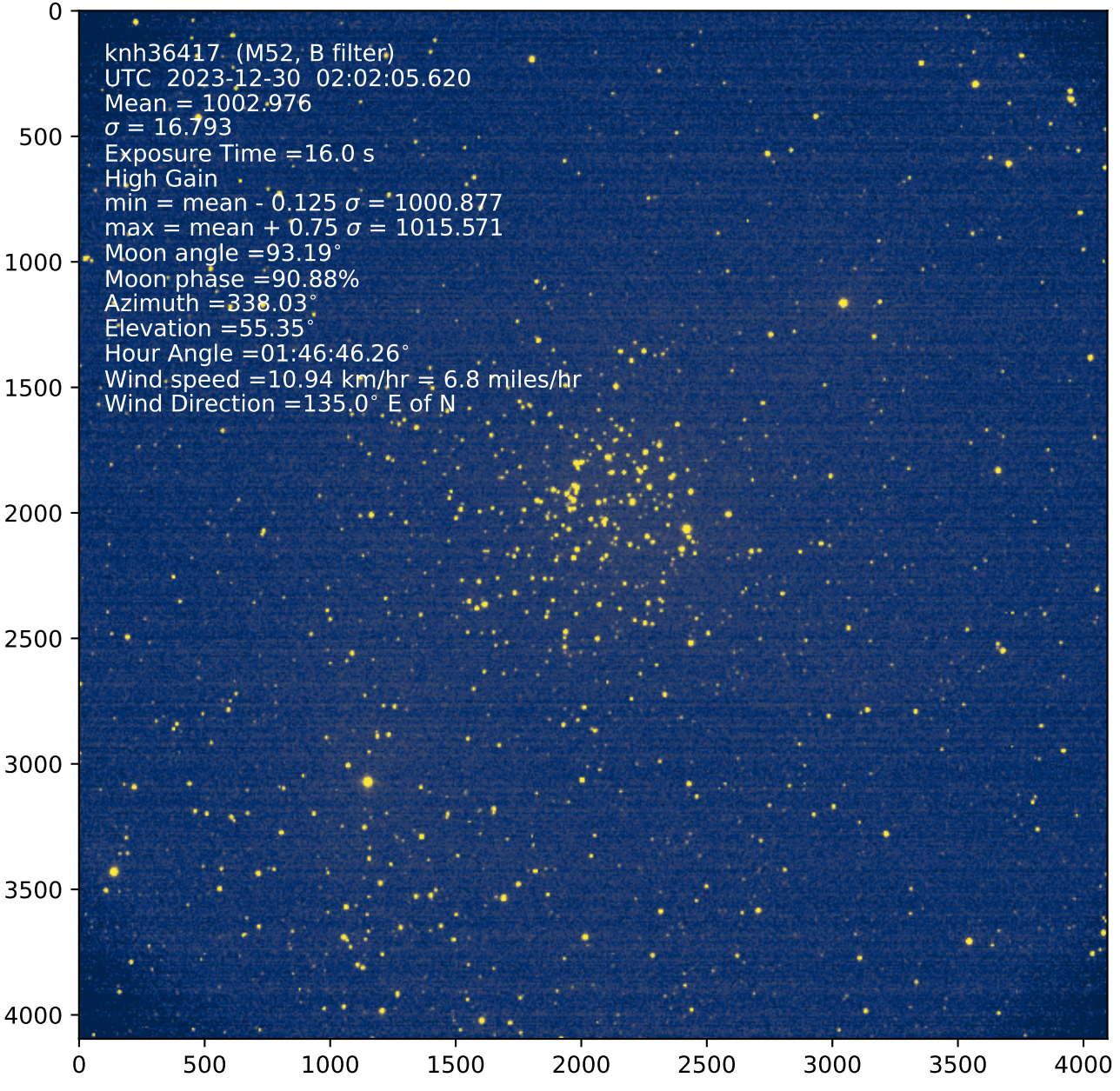
1500
2000
2500
3000
3500
4000


knh36417 (M52, B filter)
UTC 2023-12-30 02:02:05.620
Mean = 1002.976
σ = 16.793
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1000.877
max = mean + 0.75 σ = 1015.571
Moon angle =93.19°
Moon phase =90.88%
Azimuth =338.03°
Elevation =55.35°
Hour Angle =01:46:46.26°
Wind speed =10.94 km/hr = 6.8 miles/hr
Wind Direction =135.0° E of N
0
500
1000
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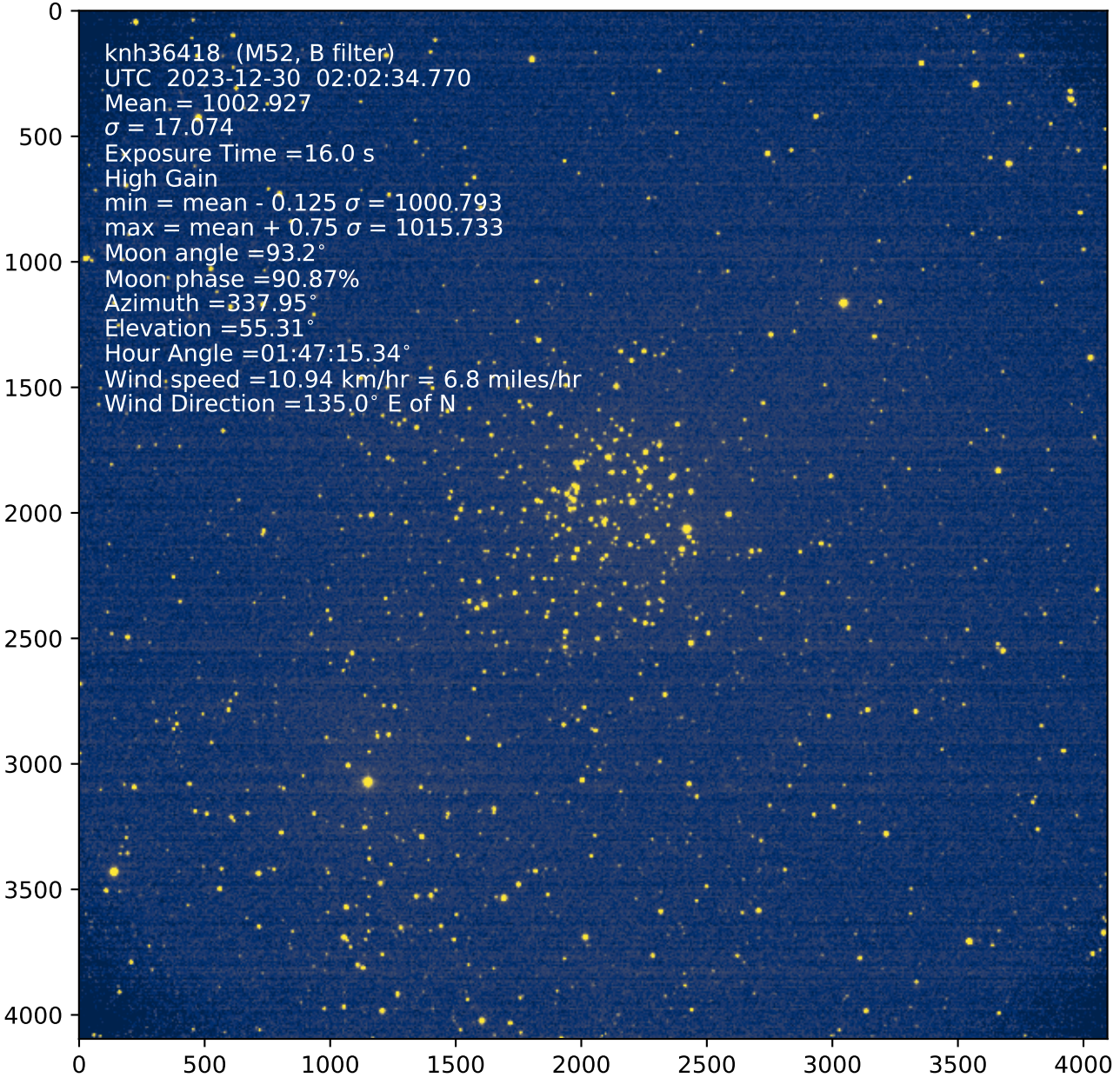
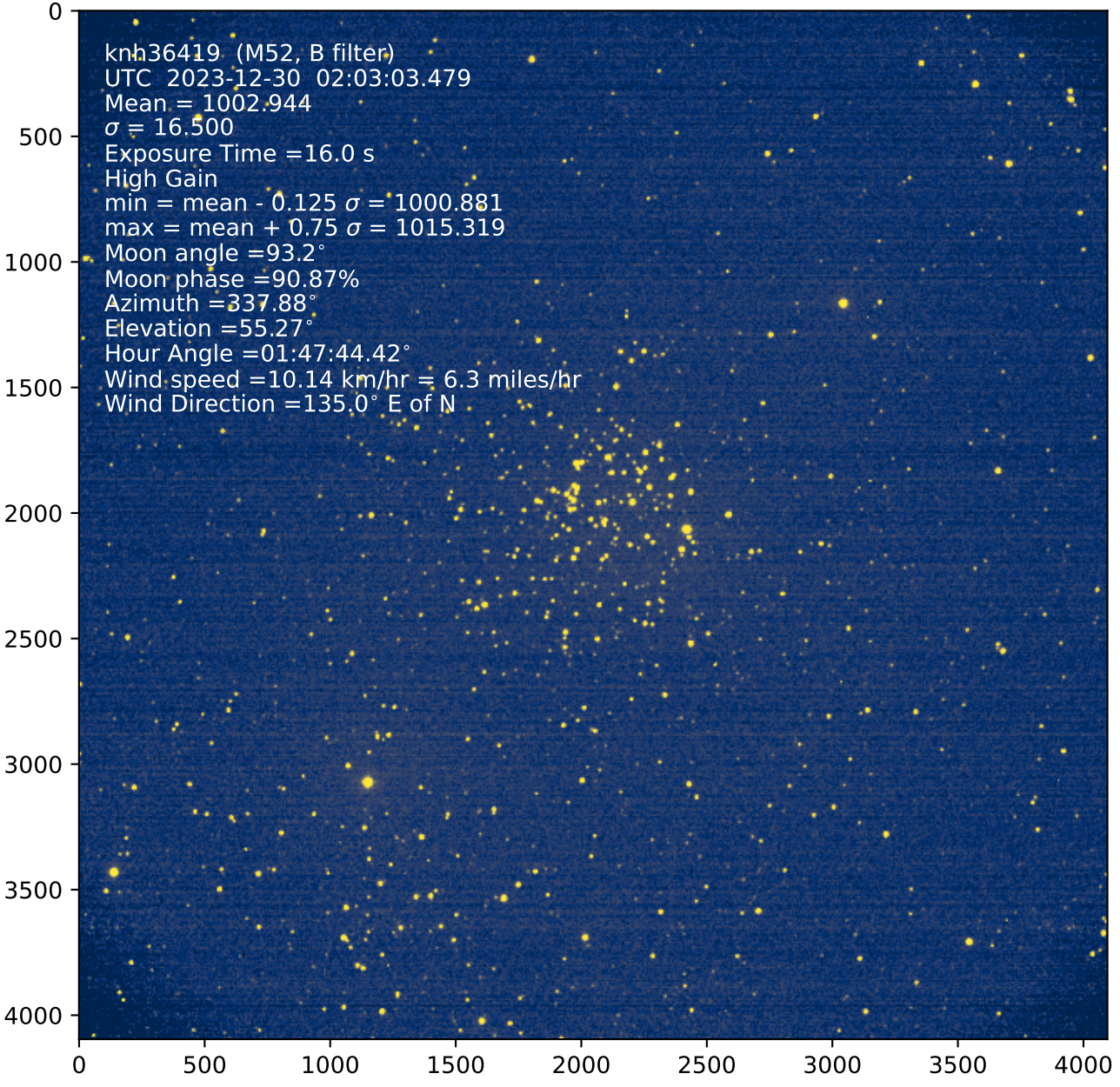
2000
2500
3000
3500
4000


knh36418 (M52, B filter)
UTC 2023-12-30 02:02:34.770
Mean = 1002.927
σ = 17.074
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1000.793
max = mean + 0.75 σ = 1015.733
Moon angle =93.2°
Moon phase =90.87%
Azimuth =337.95°
Elevation =55.31°
Hour Angle =01:47:15.34°
Wind speed =10.94 km/hr = 6.8 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh36419 (M52, B filter)
UTC 2023-12-30 02:03:03.479
Mean = 1002.944
σ = 16.500
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1000.881
max = mean + 0.75 σ = 1015.319
Moon angle =93.2°
Moon phase =90.87%
Azimuth =337.88°
Elevation =55.27°
Hour Angle =01:47:44.42°
Wind speed =10.14 km/hr = 6.3 miles/hr
Wind Direction =135.0° E of N
0
500
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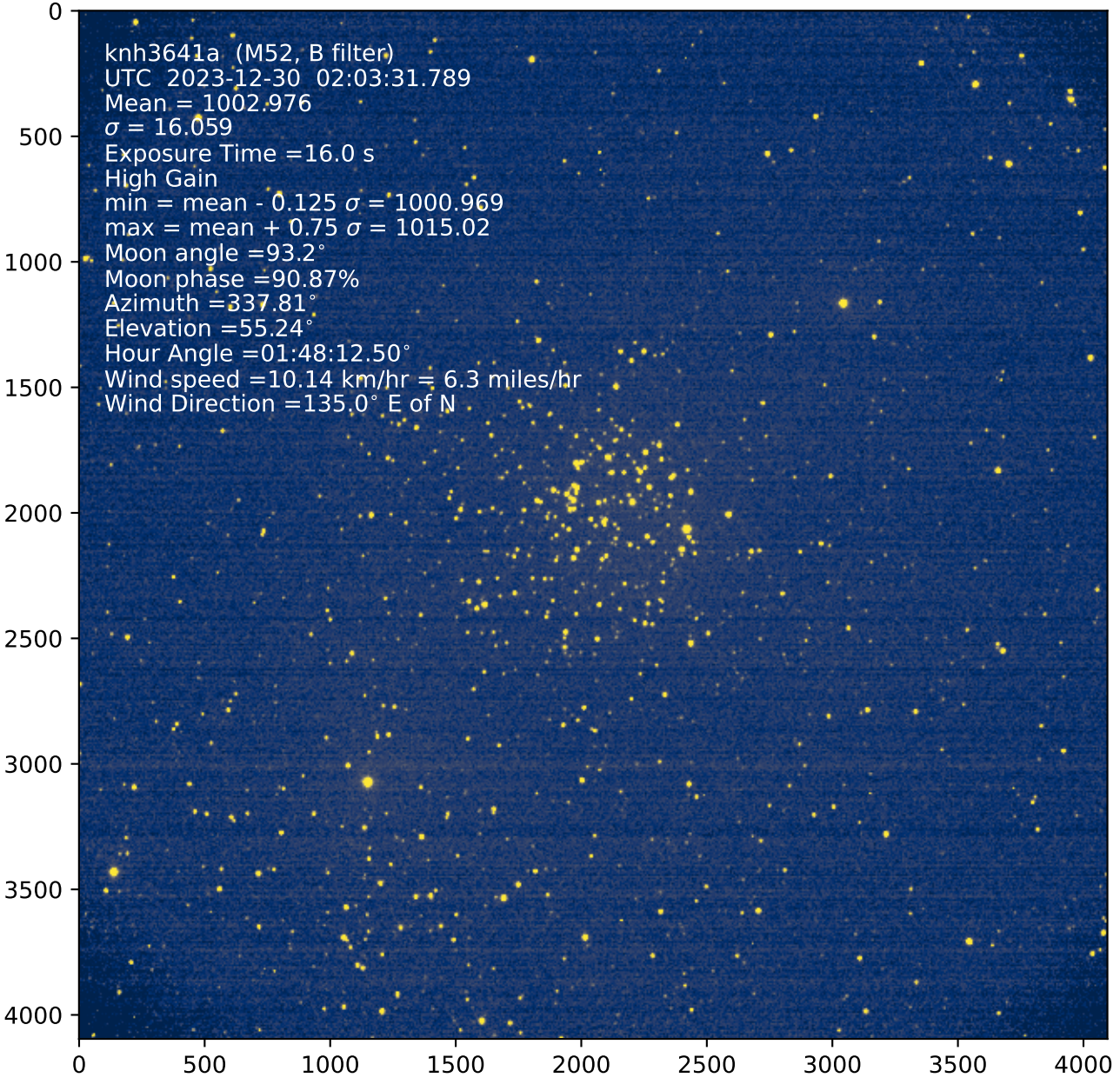
2000
2500
3000
3500
4000


knh3641a (M52, B filter)
UTC 2023-12-30 02:03:31.789
Mean = 1002.976
σ = 16.059
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1000.969
max = mean + 0.75 σ = 1015.02
Moon angle =93.2°
Moon phase =90.87%
Azimuth =337.81°
Elevation =55.24°
Hour Angle =01:48:12.50°
Wind speed =10.14 km/hr = 6.3 miles/hr
Wind Direction =135.0° E of N
0
500
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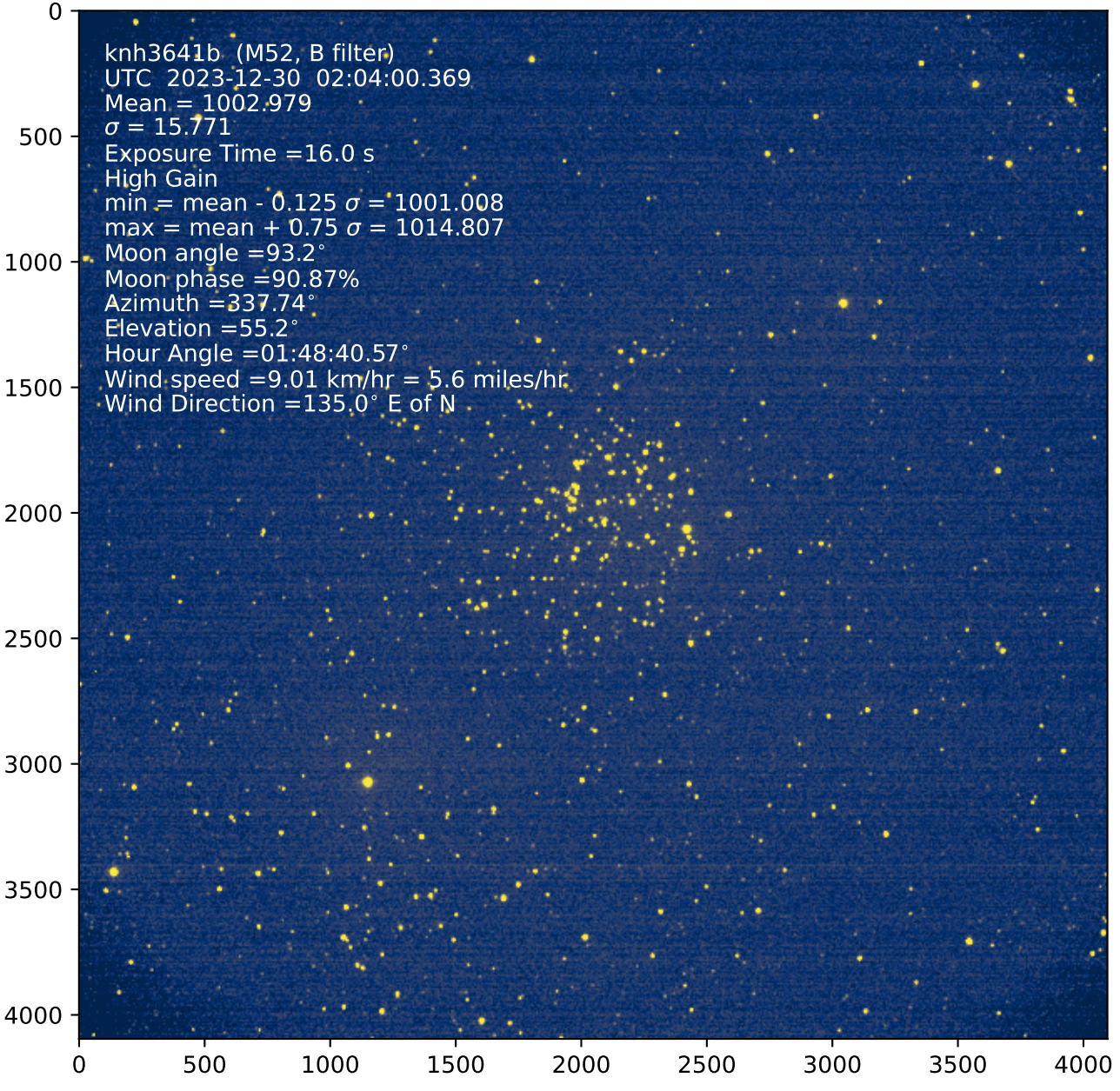
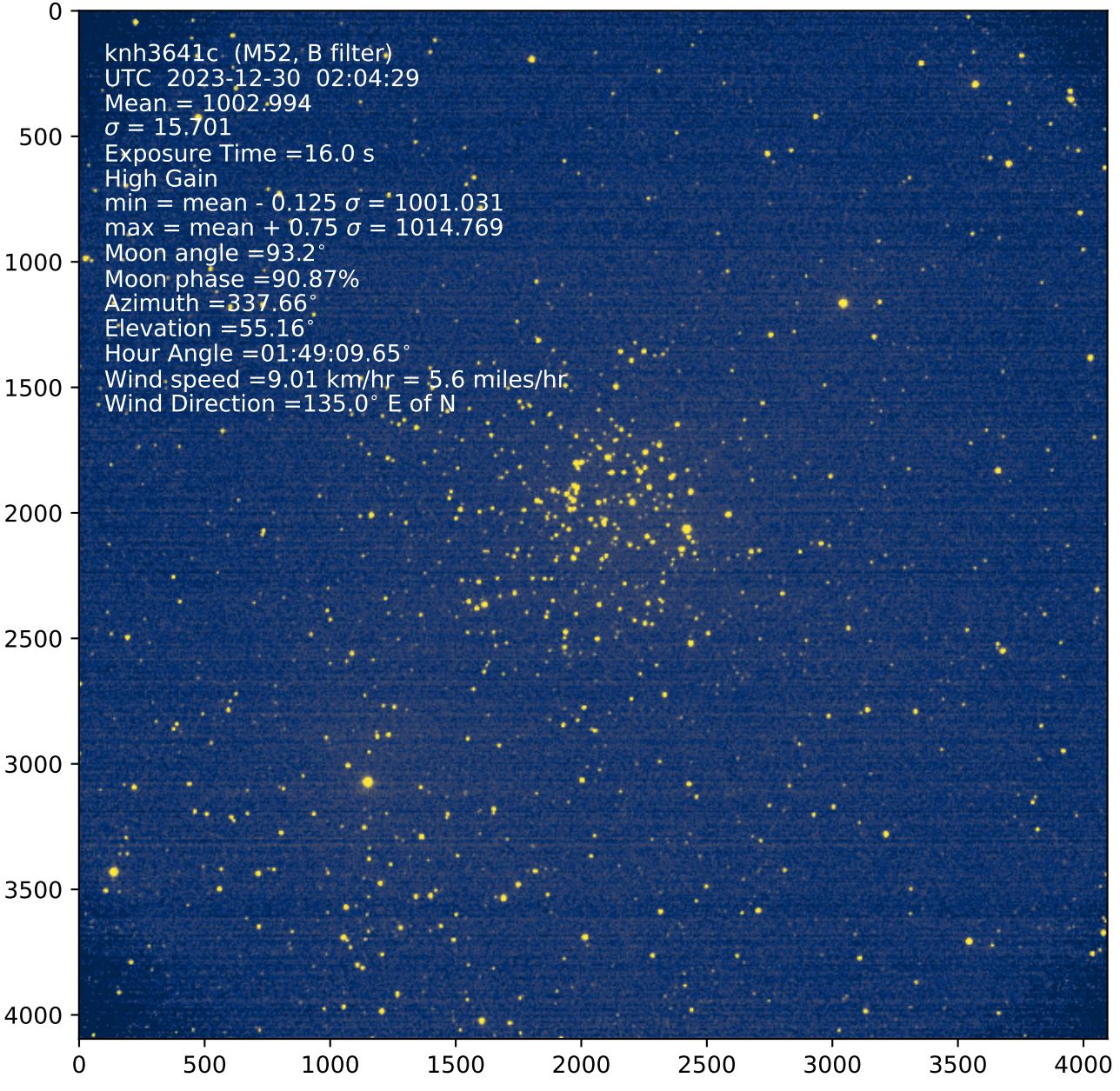
2500
3000
3500
4000


knh3641b (M52, B filter)
UTC 2023-12-30 02:04:00.369
Mean = 1002.979
σ = 15.771
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1001.008
max = mean + 0.75 σ = 1014.807
Moon angle =93.2°
Moon phase =90.87%
Azimuth =337.74°
Elevation =55.2°
Hour Angle =01:48:40.57°
Wind speed =9.01 km/hr = 5.6 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh3641c (M52, B filter)
UTC 2023-12-30 02:04:29
Mean = 1002.994
σ = 15.701
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1001.031
max = mean + 0.75 σ = 1014.769
Moon angle =93.2°
Moon phase =90.87%
Azimuth =337.66°
Elevation =55.16°
Hour Angle =01:49:09.65°
Wind speed =9.01 km/hr = 5.6 miles/hr
Wind Direction =135.0° E of N
0
500
1000
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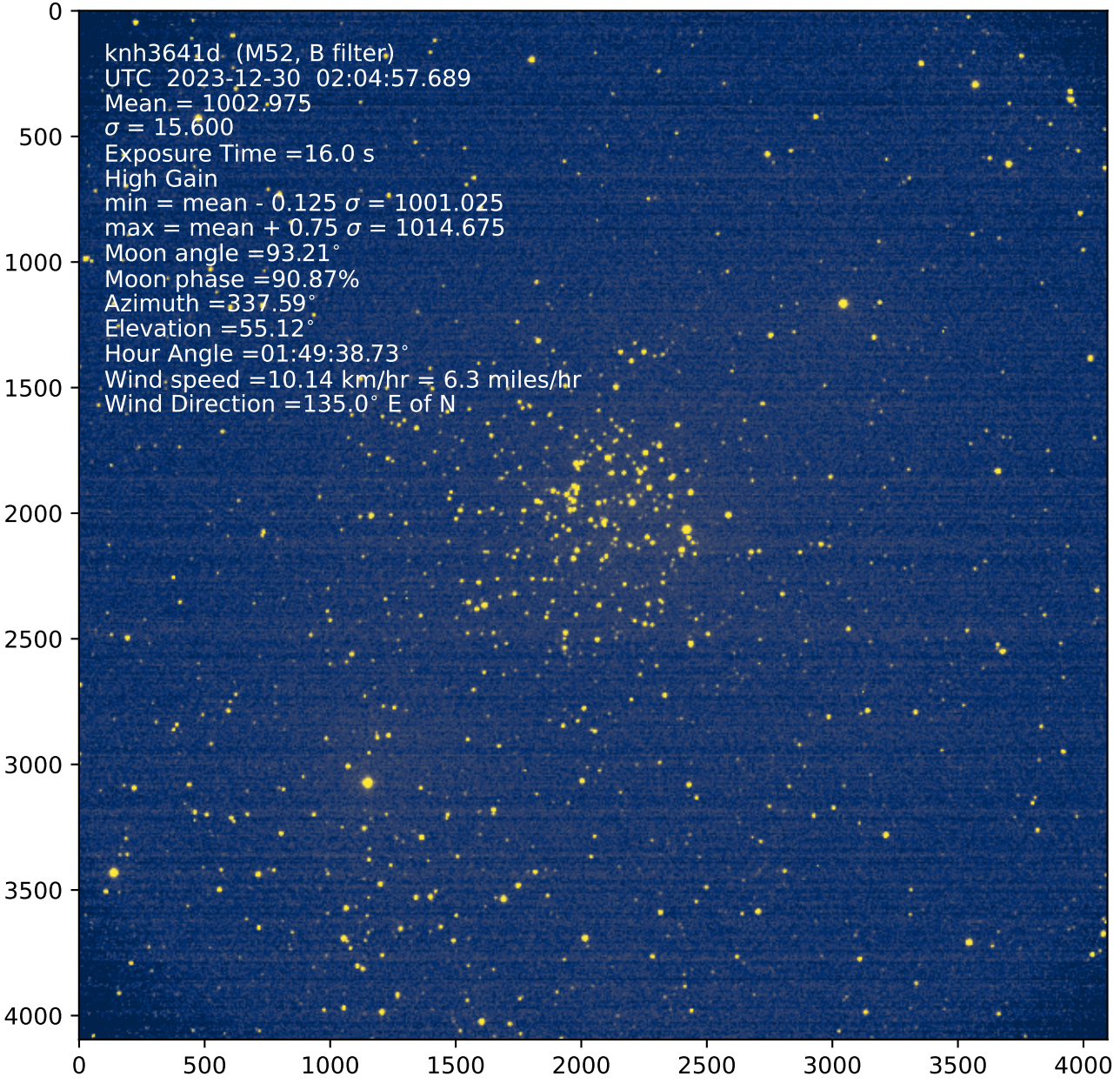
2000
2500
3000
3500
4000


knh3641d (M52, B filter)
UTC 2023-12-30 02:04:57.689
Mean = 1002.975
σ = 15.600
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1001.025
max = mean + 0.75 σ = 1014.675
Moon angle =93.21°
Moon phase =90.87%
Azimuth =337.59°
Elevation =55.12°
Hour Angle =01:49:38.73°
Wind speed =10.14 km/hr = 6.3 miles/hr
Wind Direction =135.0° E of N
0
500
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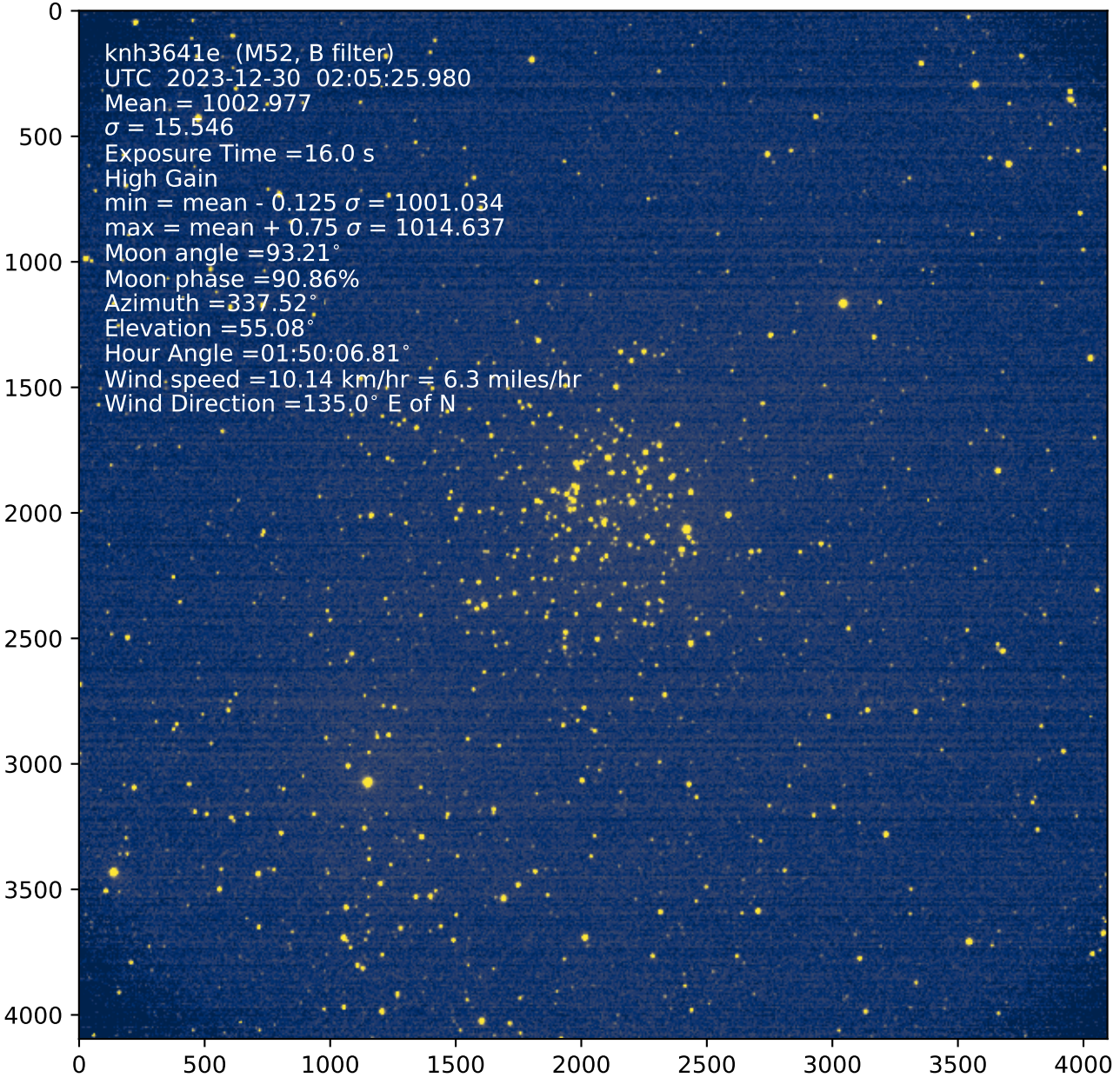
2500
3000
3500
4000


knh3641e (M52, B filter)
UTC 2023-12-30 02:05:25.980
Mean = 1002.977
σ = 15.546
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1001.034
max = mean + 0.75 σ = 1014.637
Moon angle =93.21°
Moon phase =90.86%
Azimuth =337.52°
Elevation =55.08°
Hour Angle =01:50:06.81°
Wind speed =10.14 km/hr = 6.3 miles/hr
Wind Direction =135.0° E of N
0
500
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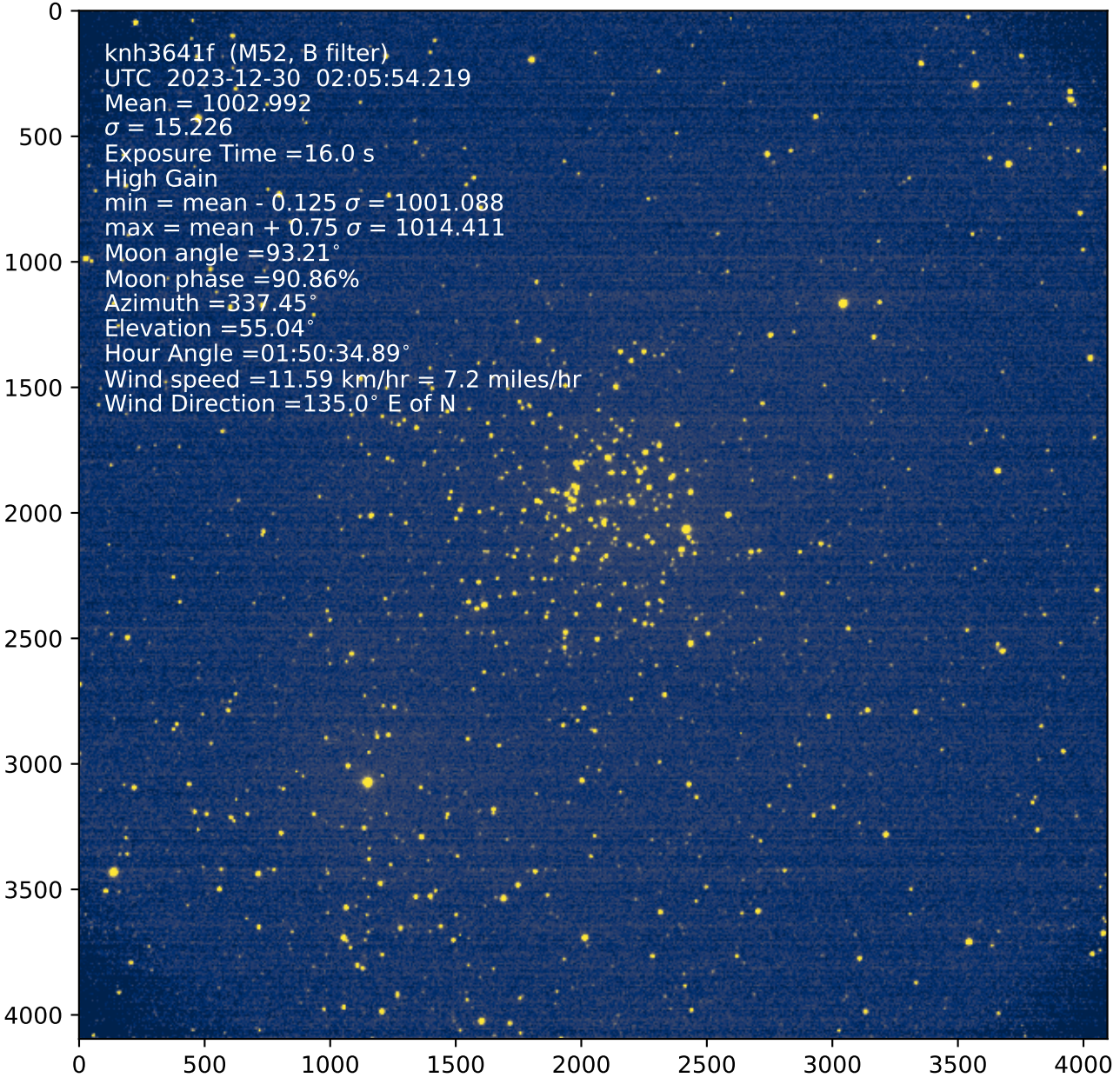
1500
2000
2500
3000
3500
4000


knh3641f (M52, B filter)
UTC 2023-12-30 02:05:54.219
Mean = 1002.992
σ = 15.226
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1001.088
max = mean + 0.75 σ = 1014.411
Moon angle =93.21°
Moon phase =90.86%
Azimuth =337.45°
Elevation =55.04°
Hour Angle =01:50:34.89°
Wind speed =11.59 km/hr = 7.2 miles/hr
Wind Direction =135.0° E of N
0
500
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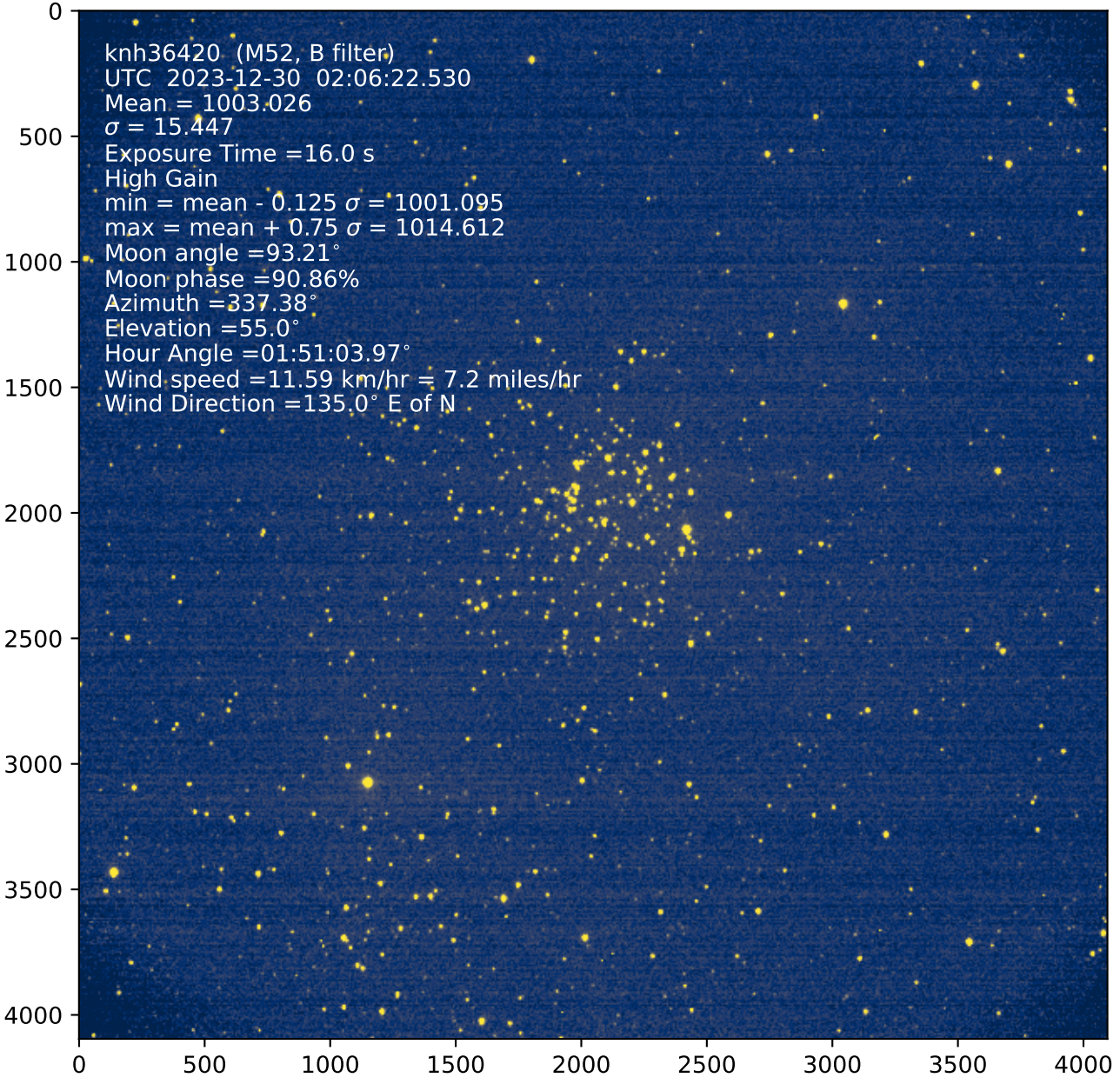
2500
3000
3500
4000


knh36420 (M52, B filter)
UTC 2023-12-30 02:06:22.530
Mean = 1003.026
σ = 15.447
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1001.095
max = mean + 0.75 σ = 1014.612
Moon angle =93.21°
Moon phase =90.86%
Azimuth =337.38°
Elevation =55.0°
Hour Angle =01:51:03.97°
Wind speed =11.59 km/hr = 7.2 miles/hr
Wind Direction =135.0° E of N
0
500
1000
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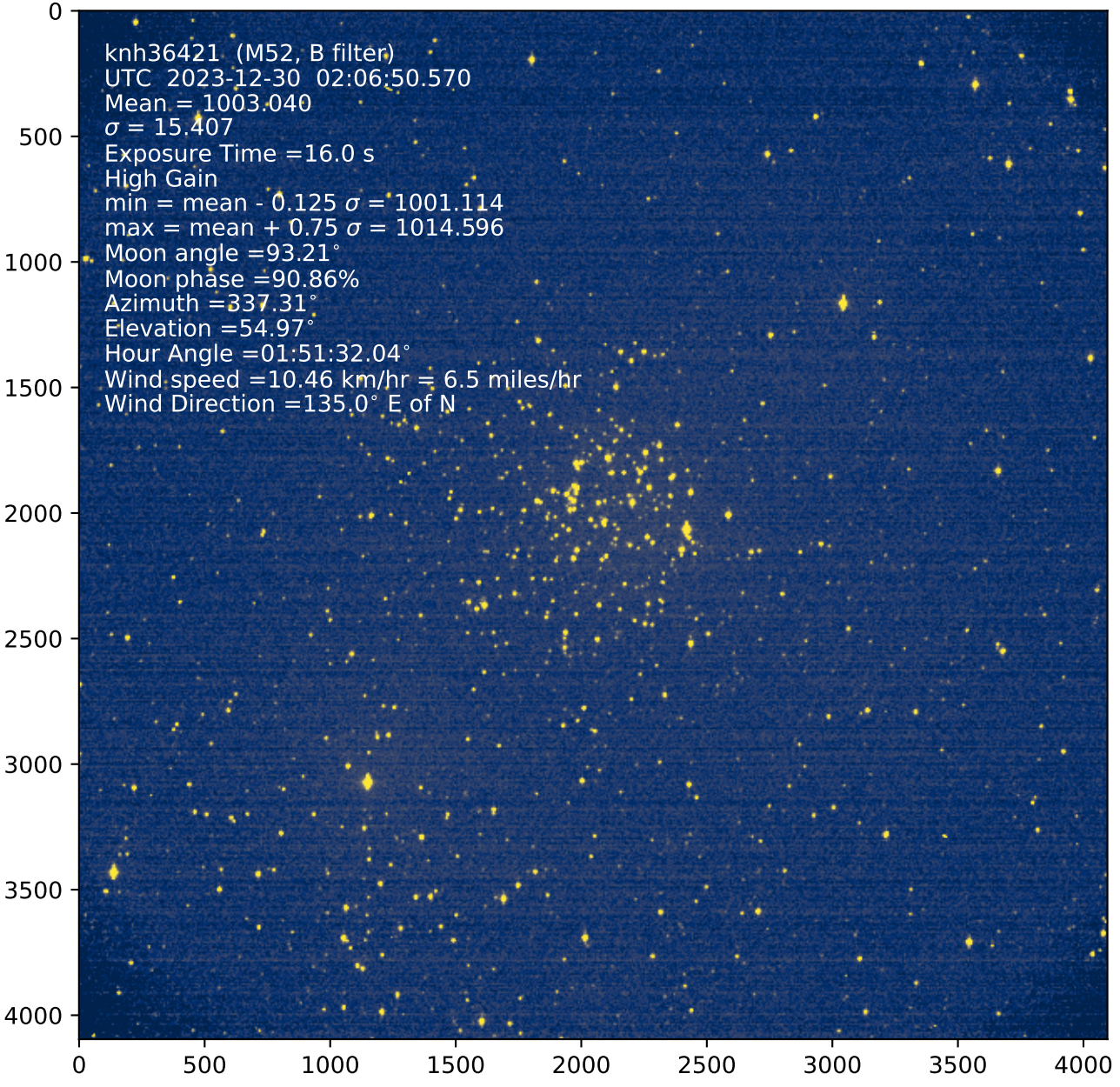
2000
2500
3000
3500
4000


knh36421 (M52, B filter)
UTC 2023-12-30 02:06:50.570
Mean = 1003.040
σ = 15.407
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1001.114
max = mean + 0.75 σ = 1014.596
Moon angle =93.21°
Moon phase =90.86%
Azimuth =337.31°
Elevation =54.97°
Hour Angle =01:51:32.04°
Wind speed =10.46 km/hr = 6.5 miles/hr
Wind Direction =135.0° E of N
0
500
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2500
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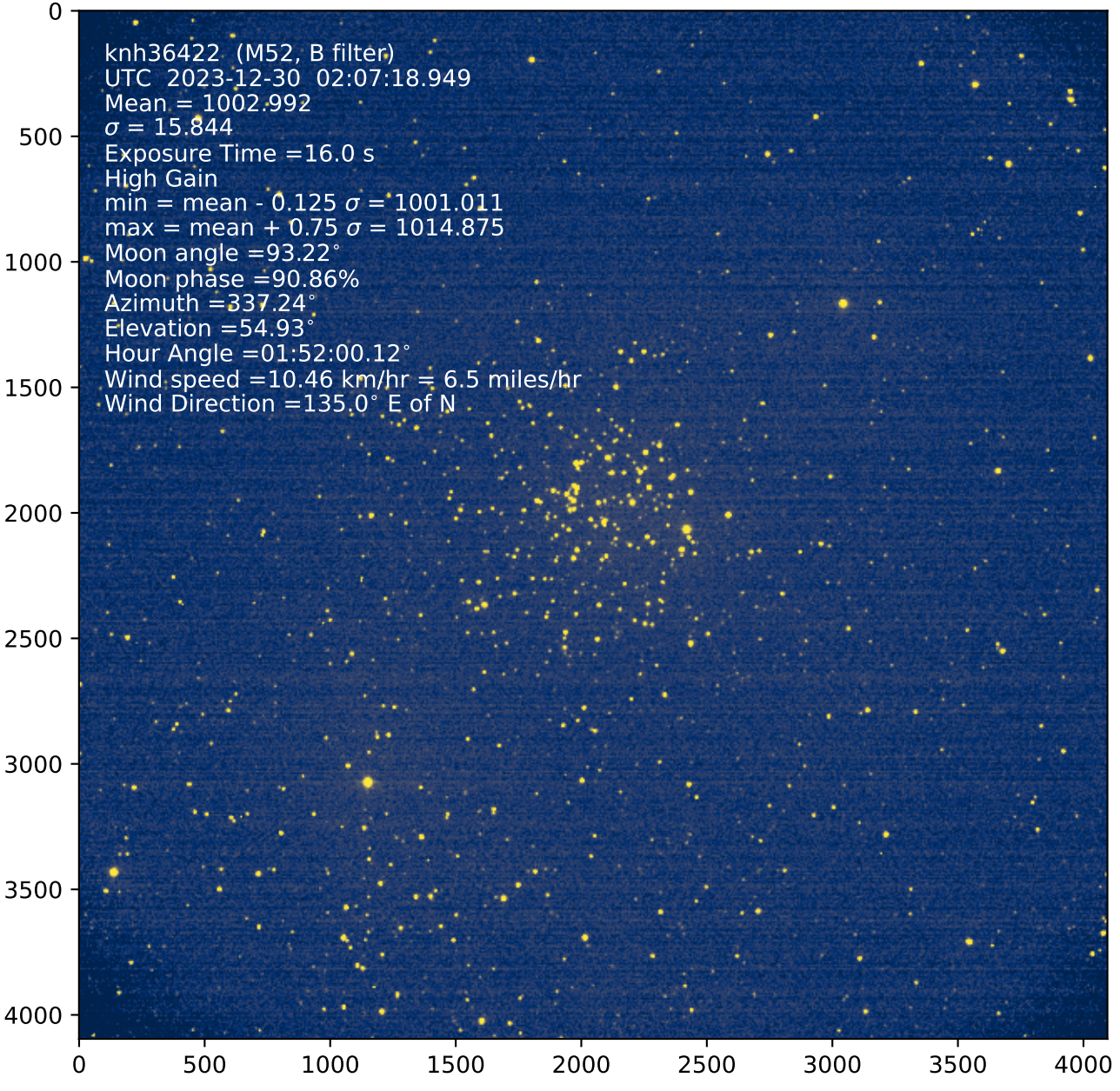
3500
4000


knh36422 (M52, B filter)
UTC 2023-12-30 02:07:18.949
Mean = 1002.992
σ = 15.844
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1001.011
max = mean + 0.75 σ = 1014.875
Moon angle =93.22°
Moon phase =90.86%
Azimuth =337.24°
Elevation =54.93°
Hour Angle =01:52:00.12°
Wind speed =10.46 km/hr = 6.5 miles/hr
Wind Direction =135.0° E of N
0
500
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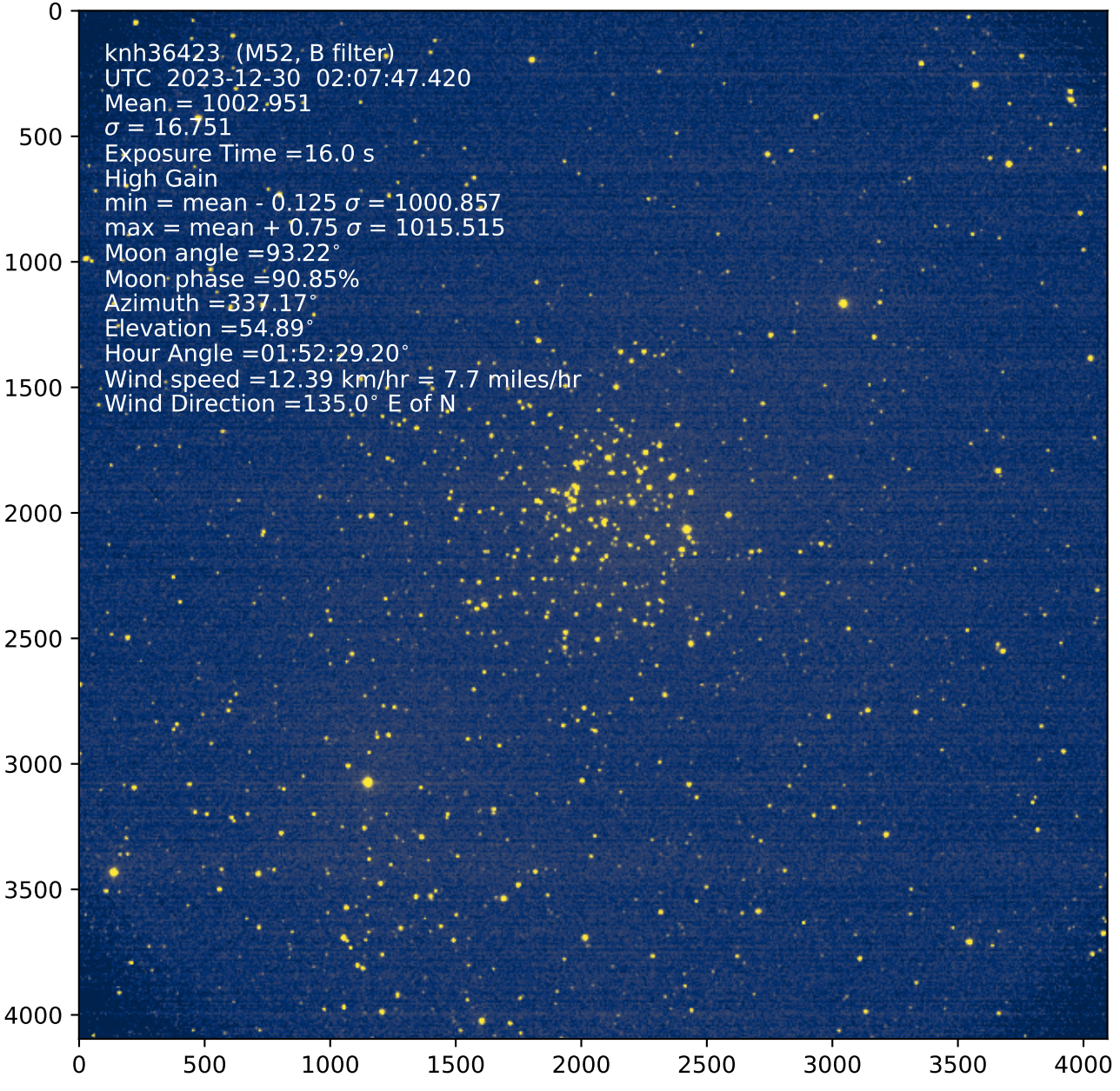
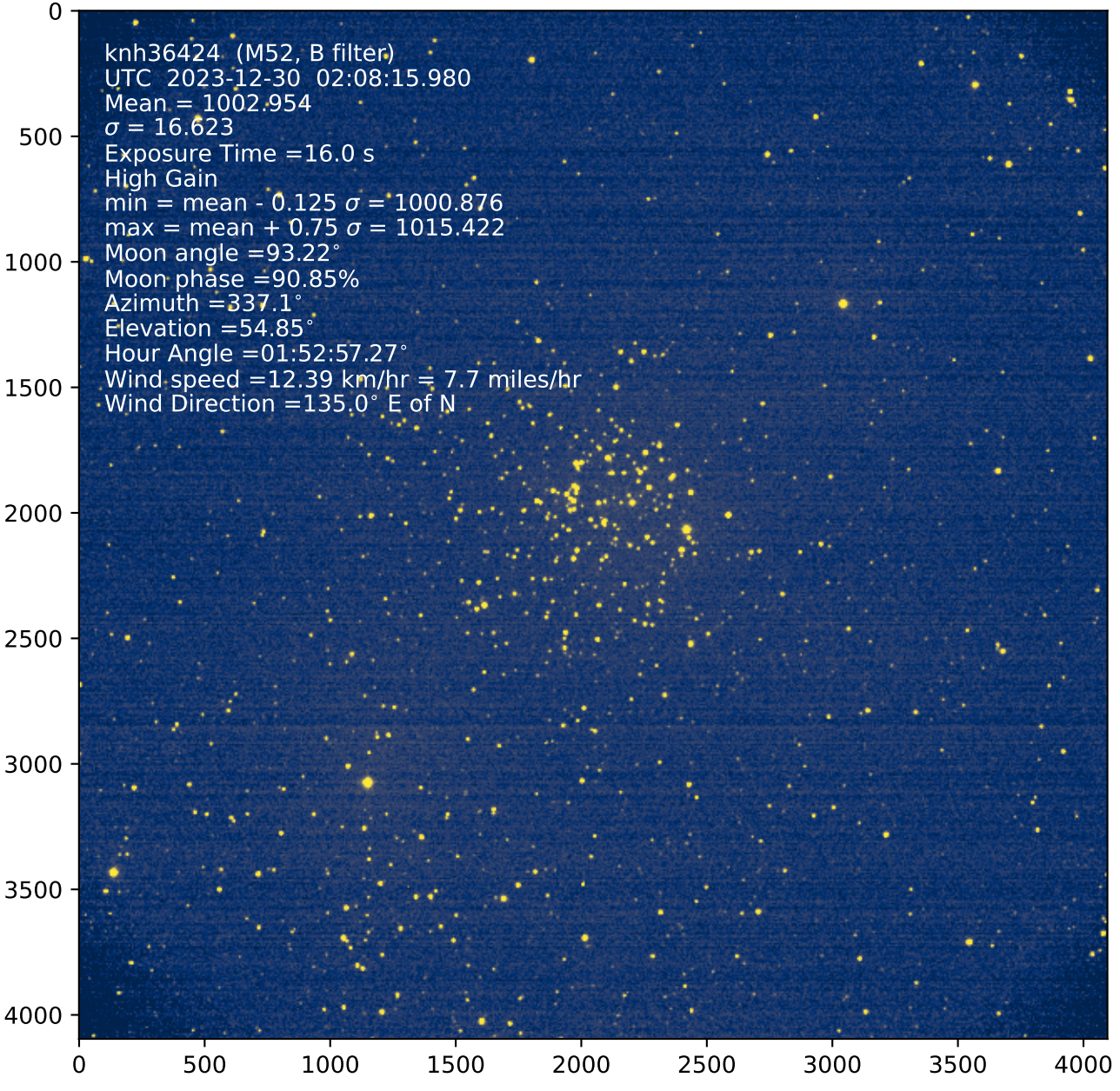
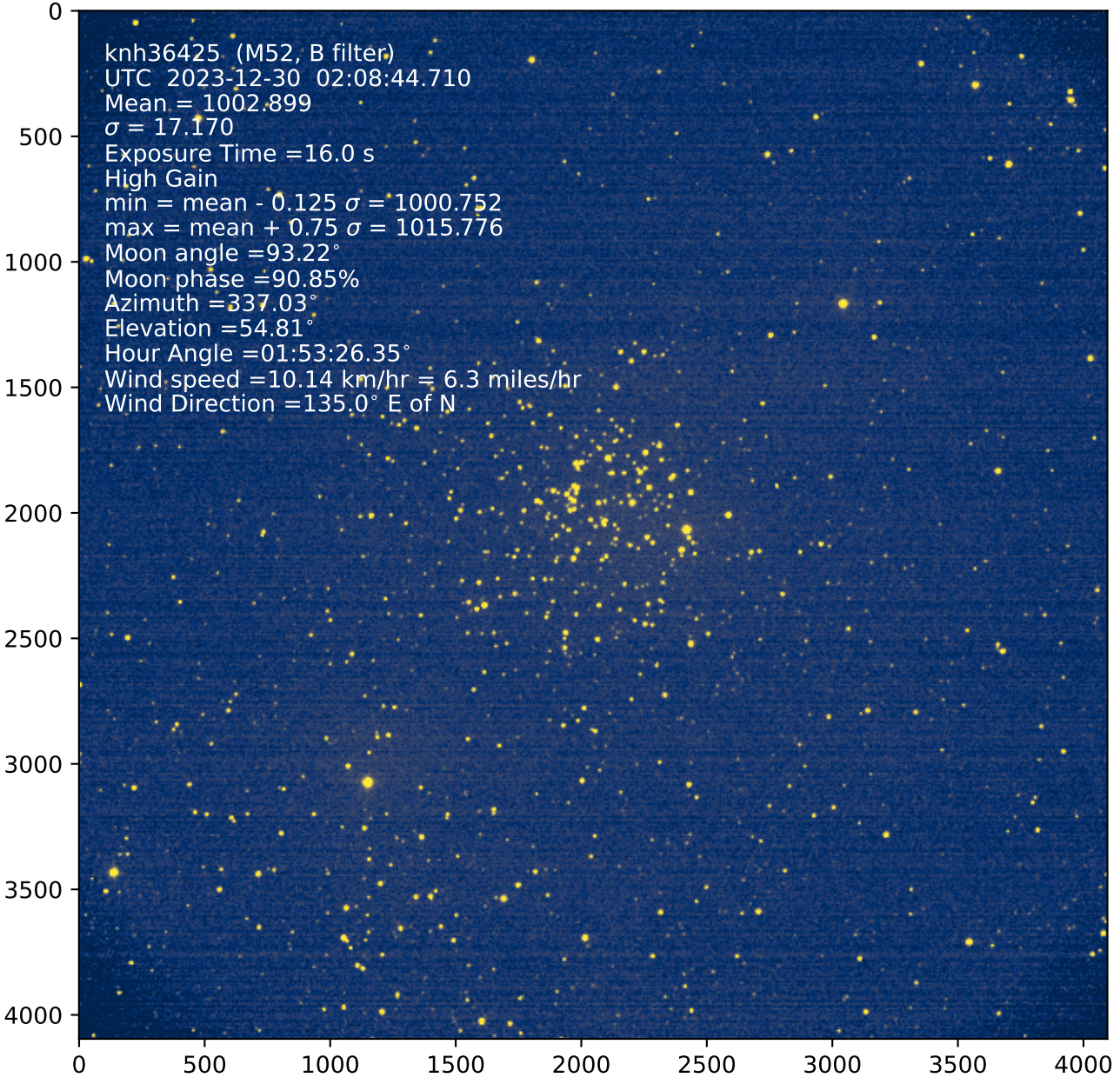
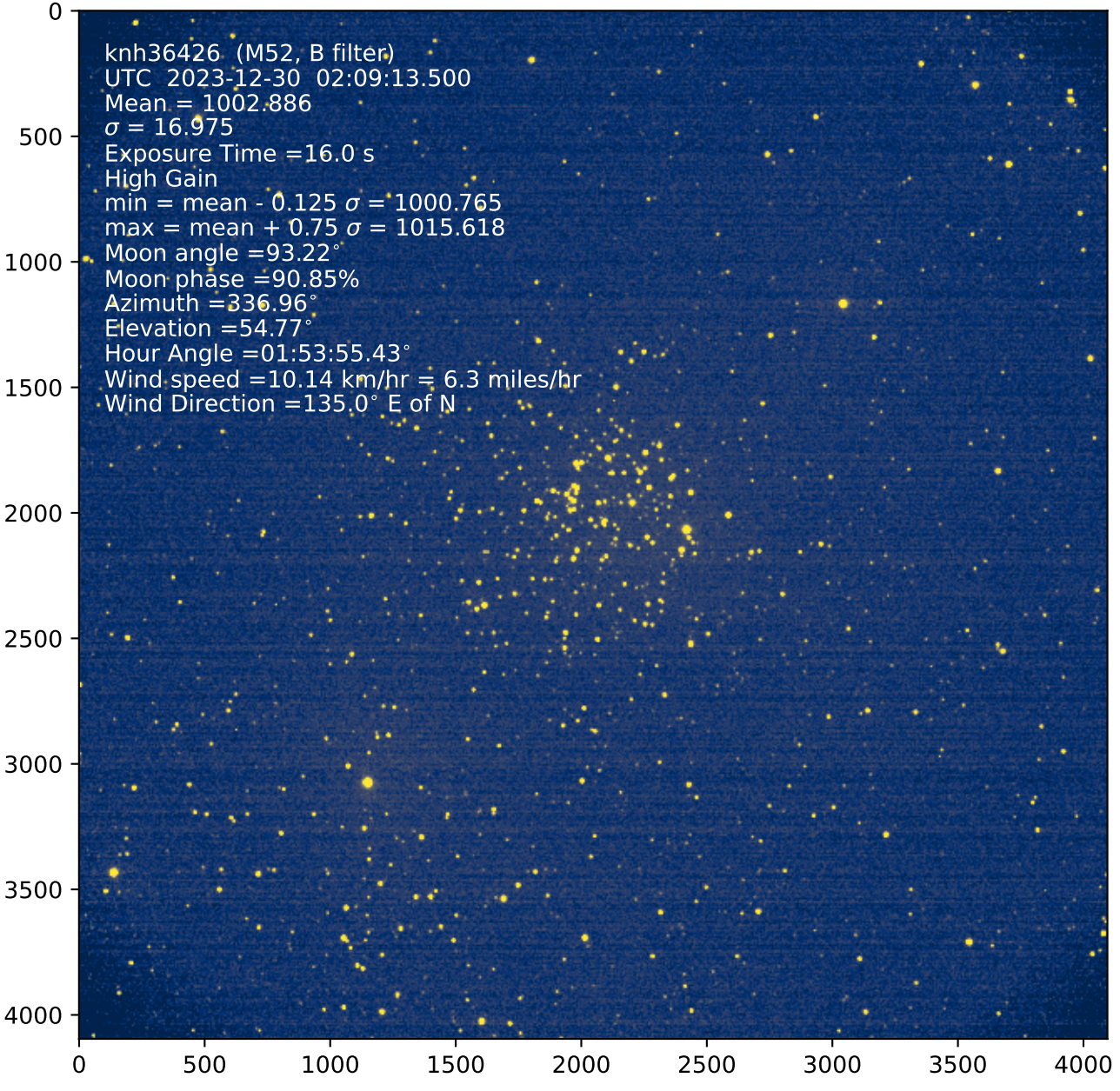
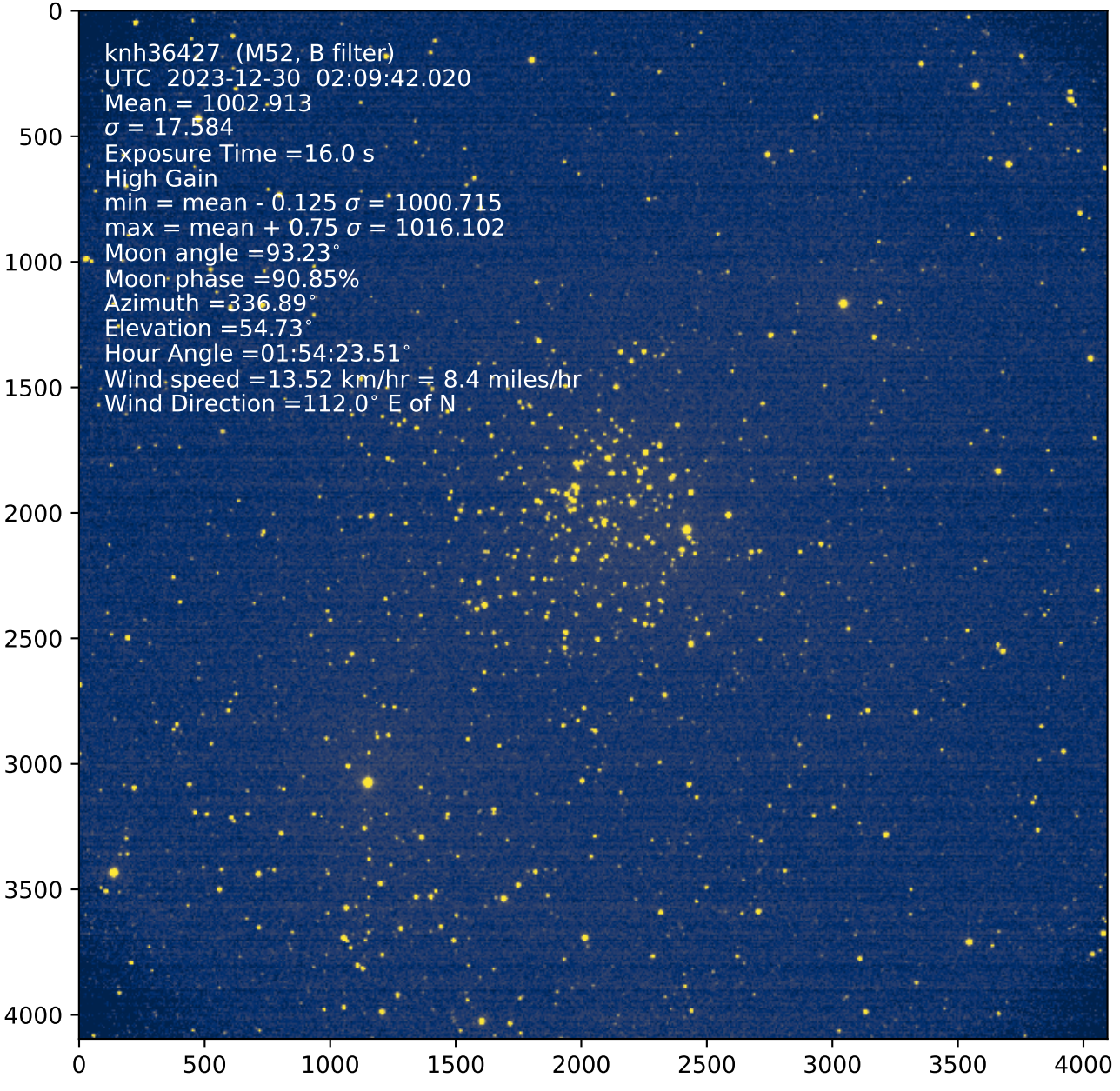
3000
3500
4000

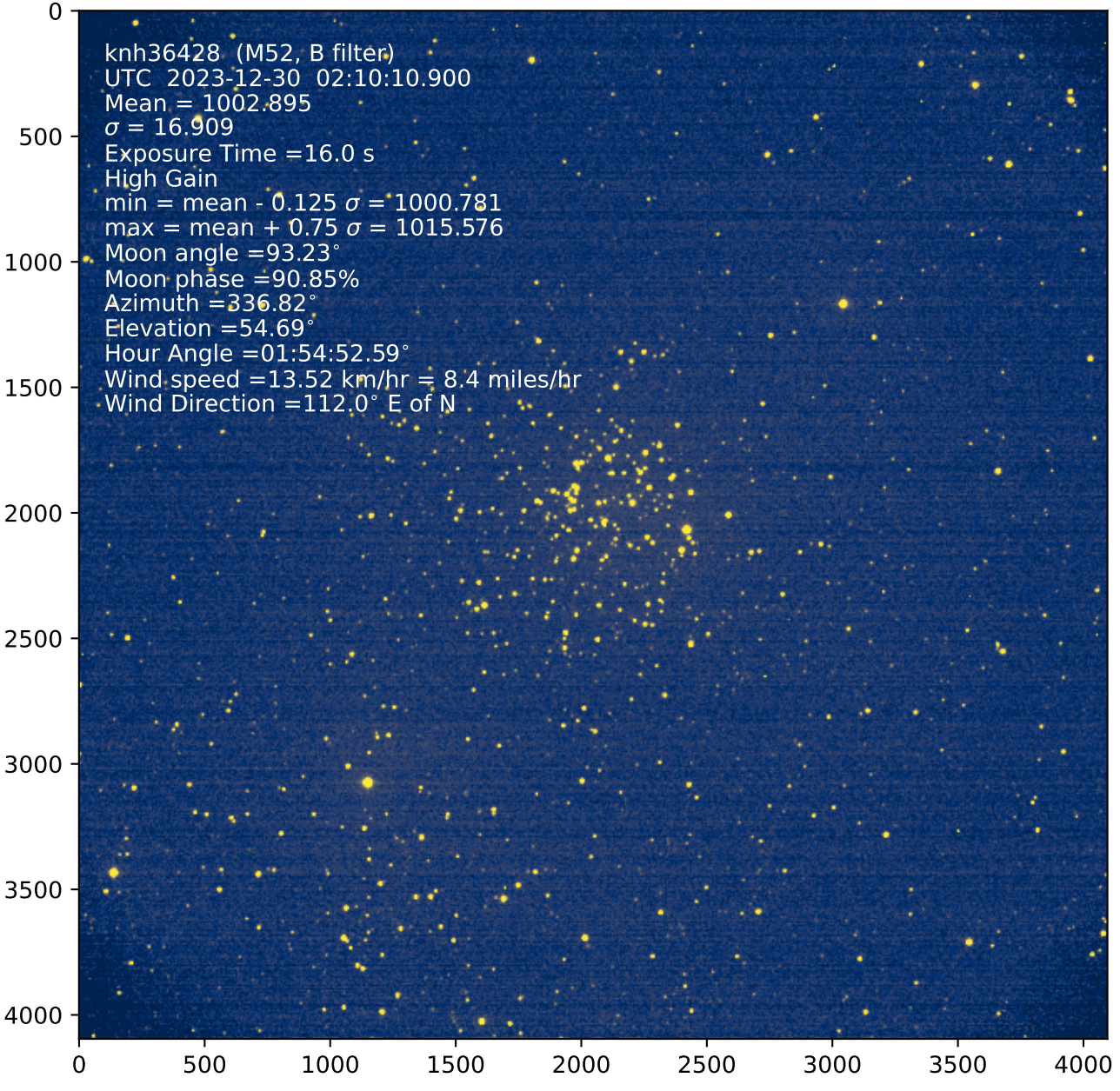

knh36423 (M52, B filter)
UTC 2023-12-30 02:07:47.420
Mean = 1002.951
σ = 16.751
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1000.857
max = mean + 0.75 σ = 1015.515
Moon angle =93.22°
Moon phase =90.85%
Azimuth =337.17°
Elevation =54.89°
Hour Angle =01:52:29.20°
Wind speed =12.39 km/hr = 7.7 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000

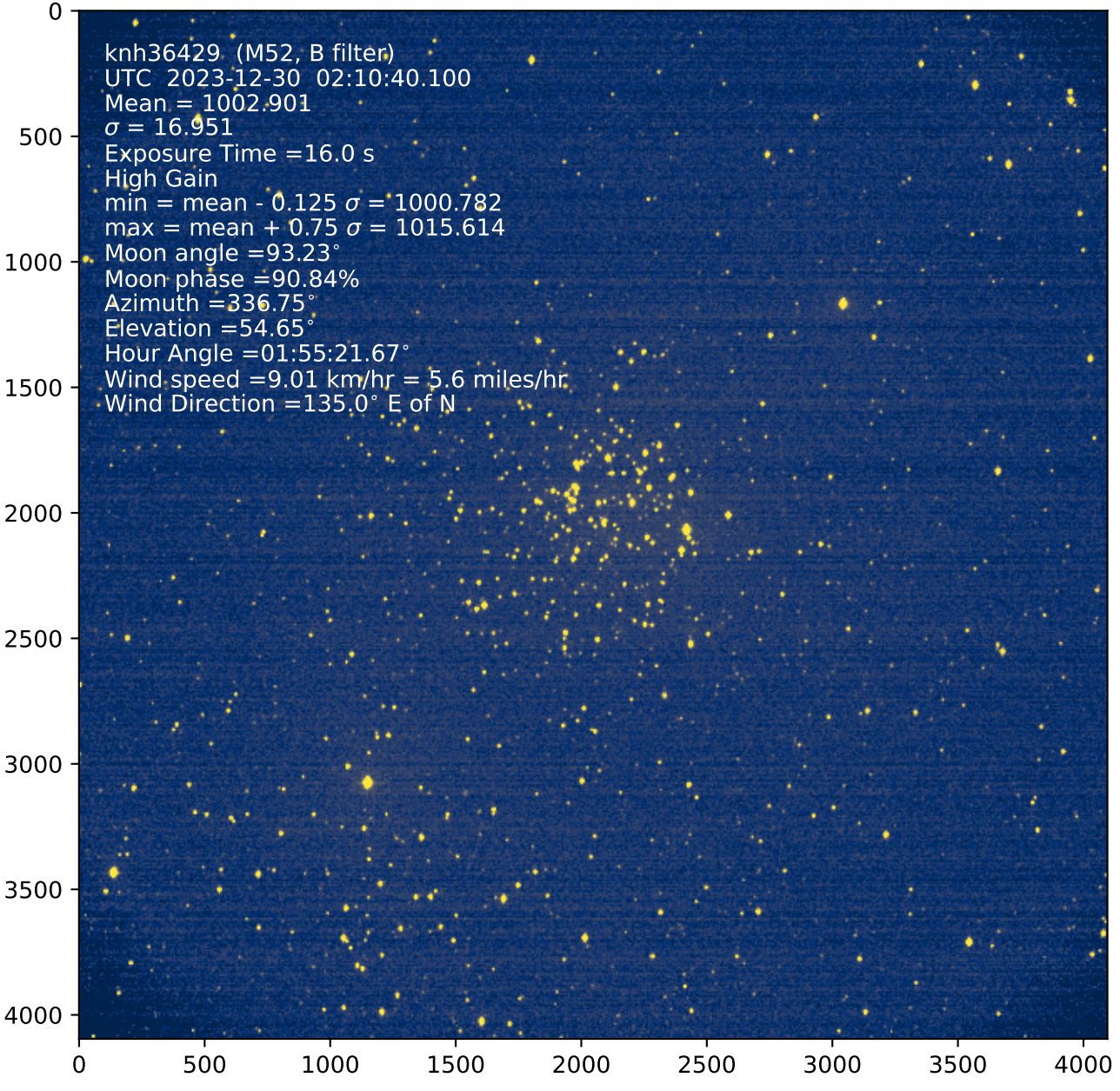

knh36424 (M52, B filter)
UTC 2023-12-30 02:08:15.980
Mean = 1002.954
σ = 16.623
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1000.876
max = mean + 0.75 σ = 1015.422
Moon angle =93.22°
Moon phase =90.85%
Azimuth =337.1°
Elevation =54.85°
Hour Angle =01:52:57.27°
Wind speed =12.39 km/hr = 7.7 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000

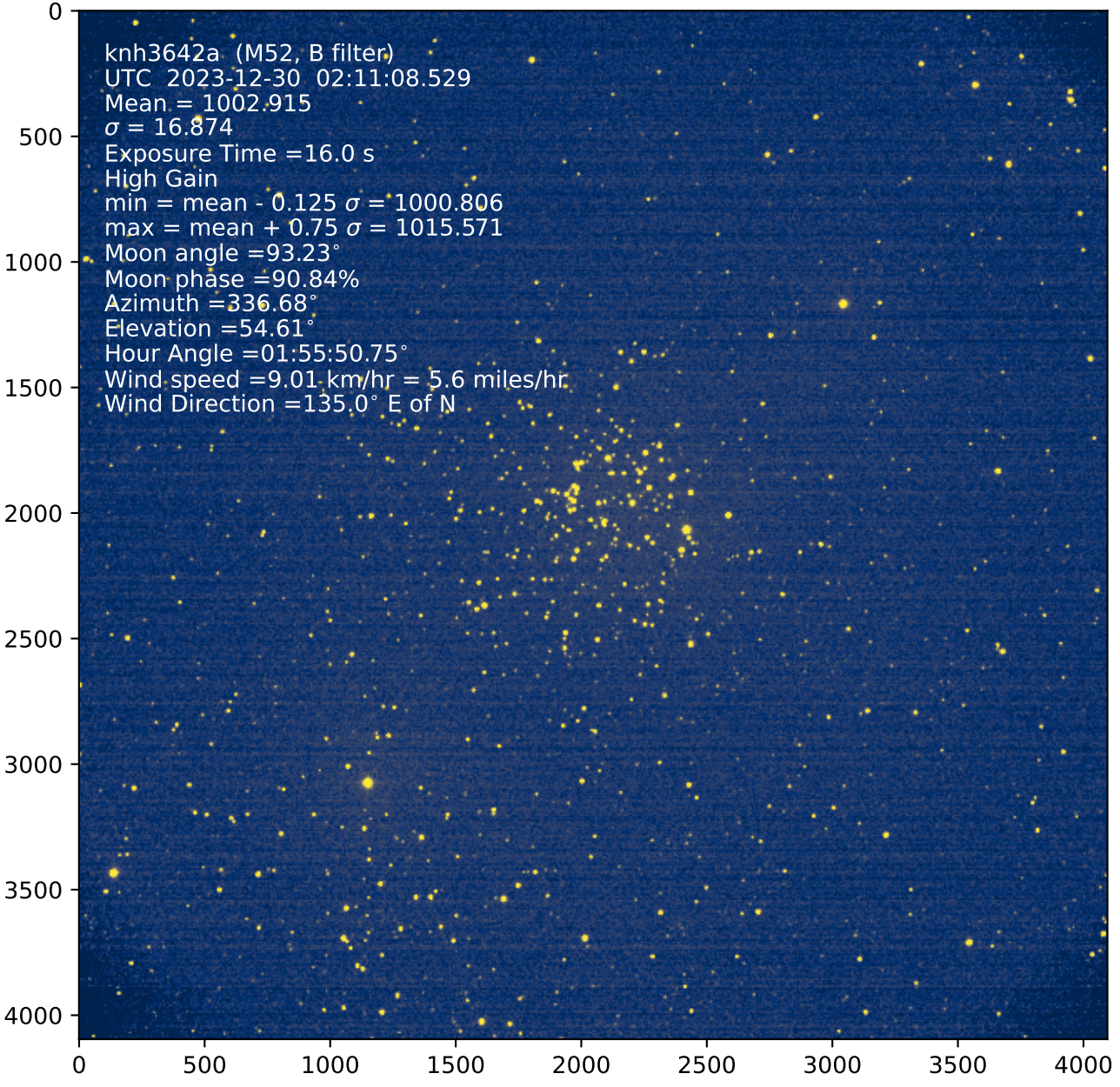

knh36425 (M52, B filter)
UTC 2023-12-30 02:08:44.710
Mean = 1002.899
σ = 17.170
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1000.752
max = mean + 0.75 σ = 1015.776
Moon angle =93.22°
Moon phase =90.85%
Azimuth =337.03°
Elevation =54.81°
Hour Angle =01:53:26.35°
Wind speed =10.14 km/hr = 6.3 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000

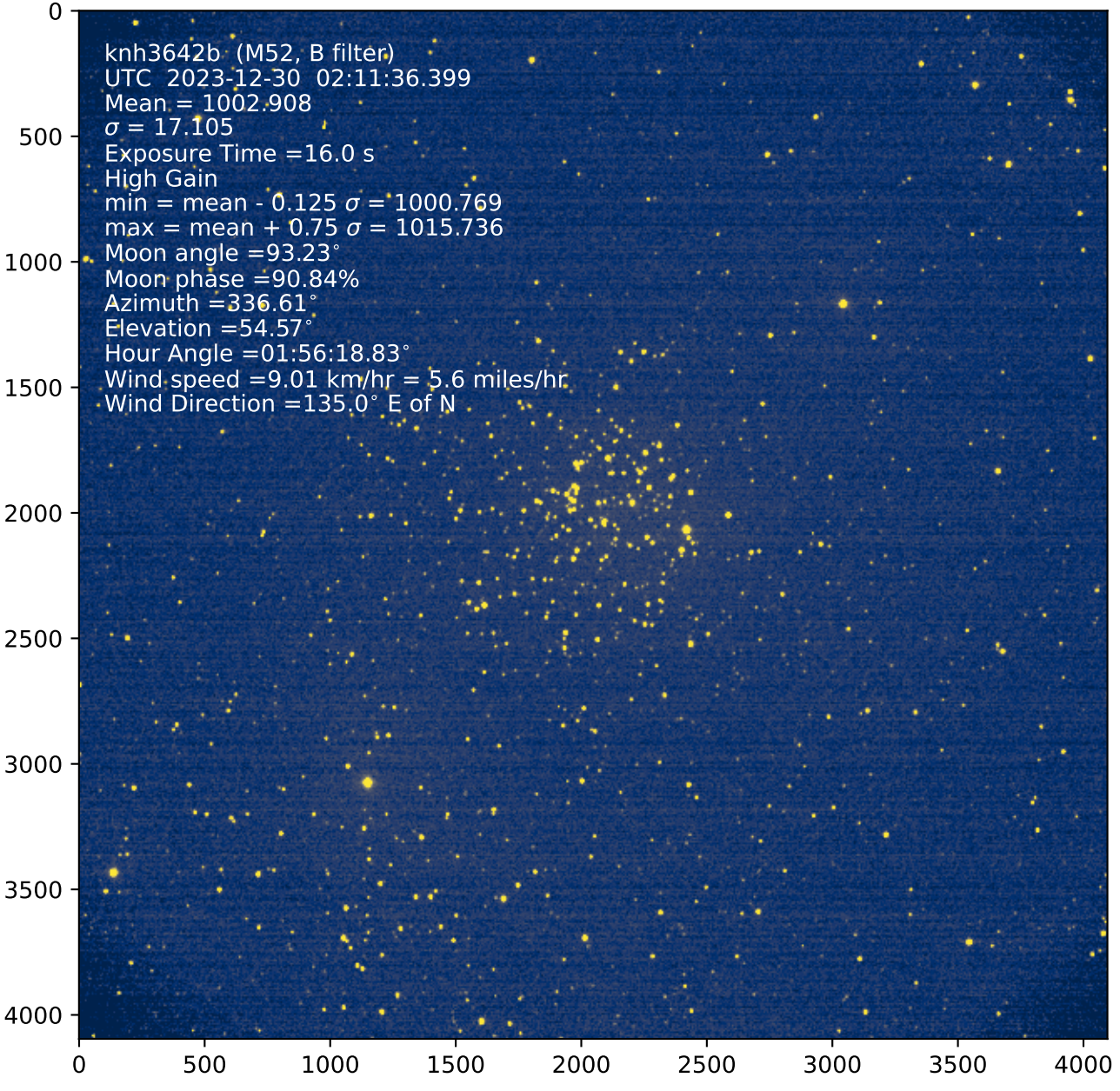

knh36426 (M52, B filter)
UTC 2023-12-30 02:09:13.500
Mean = 1002.886
σ = 16.975
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1000.765
max = mean + 0.75 σ = 1015.618
Moon angle =93.22°
Moon phase =90.85%
Azimuth =336.96°
Elevation =54.77°
Hour Angle =01:53:55.43°
Wind speed =10.14 km/hr = 6.3 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000

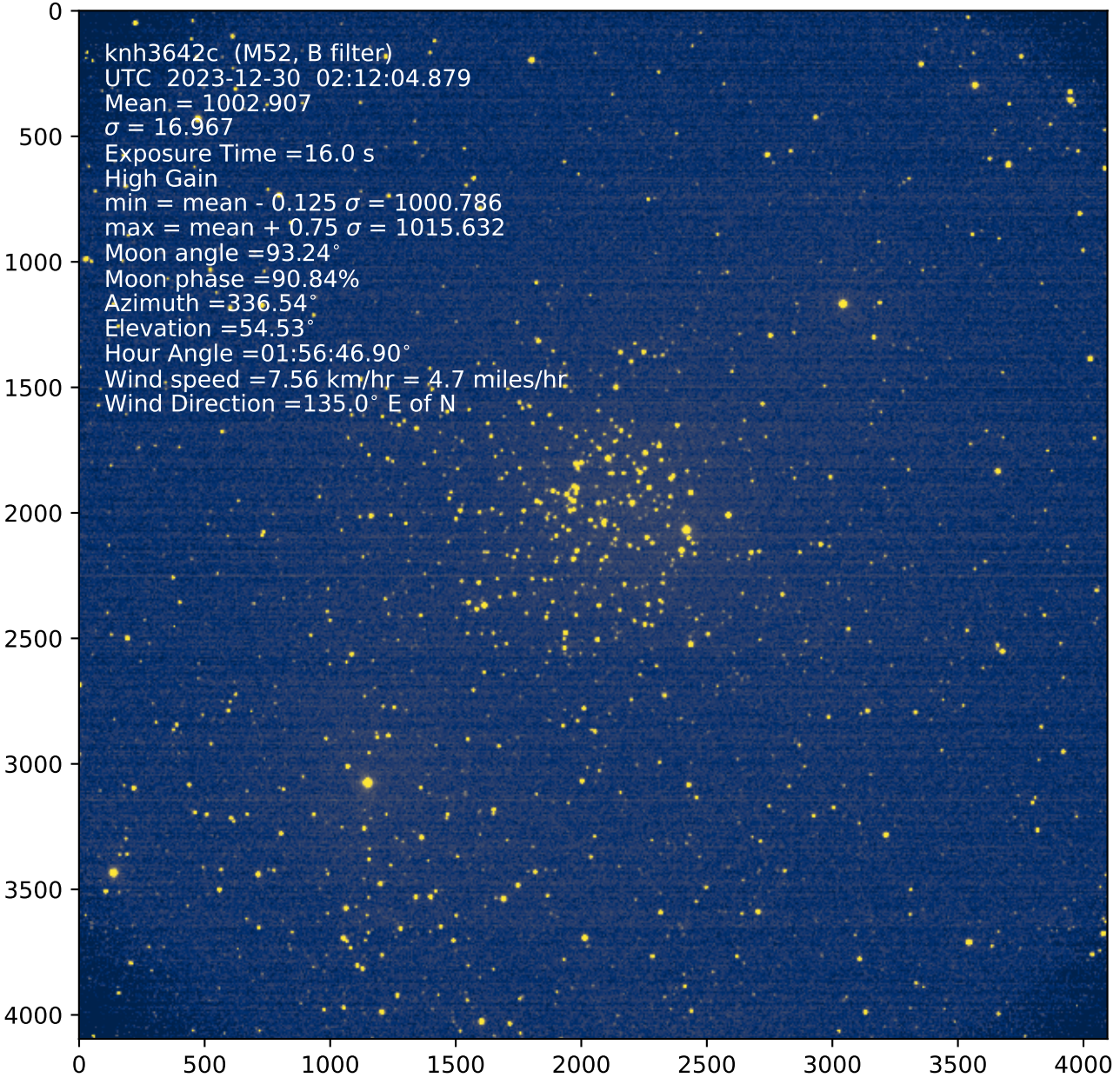

knh36427 (M52, B filter)
UTC 2023-12-30 02:09:42.020
Mean = 1002.913
σ = 17.584
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1000.715
max = mean + 0.75 σ = 1016.102
Moon angle =93.23°
Moon phase =90.85%
Azimuth =336.89°
Elevation =54.73°
Hour Angle =01:54:23.51°
Wind speed =13.52 km/hr = 8.4 miles/hr
Wind Direction =112.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000

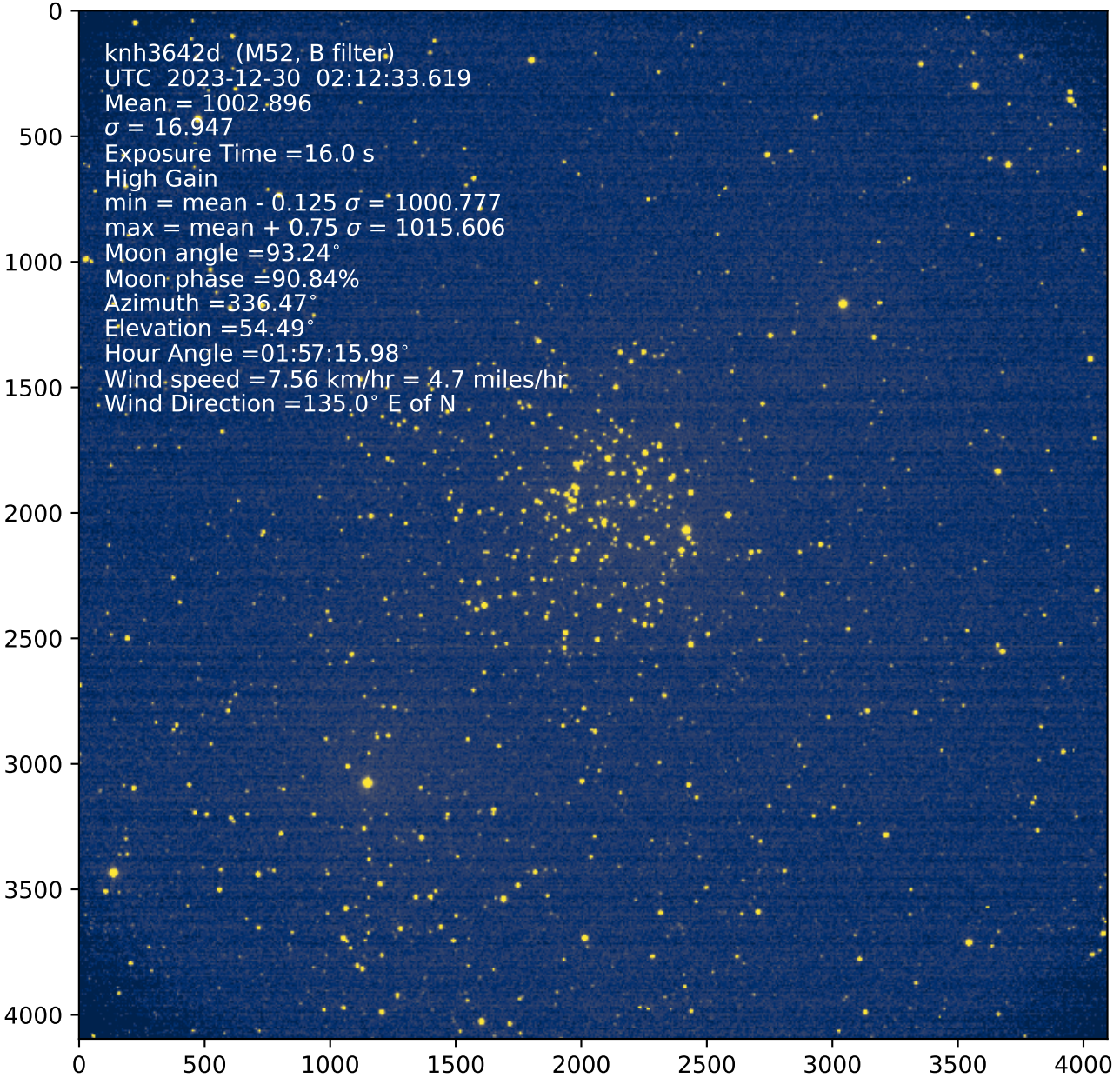

knh36428 (M52, B filter)
UTC 2023-12-30 02:10:10.900
Mean = 1002.895
σ = 16.909
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1000.781
max = mean + 0.75 σ = 1015.576
Moon angle =93.23°
Moon phase =90.85%
Azimuth =336.82°
Elevation =54.69°
Hour Angle =01:54:52.59°
Wind speed =13.52 km/hr = 8.4 miles/hr
Wind Direction =112.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000

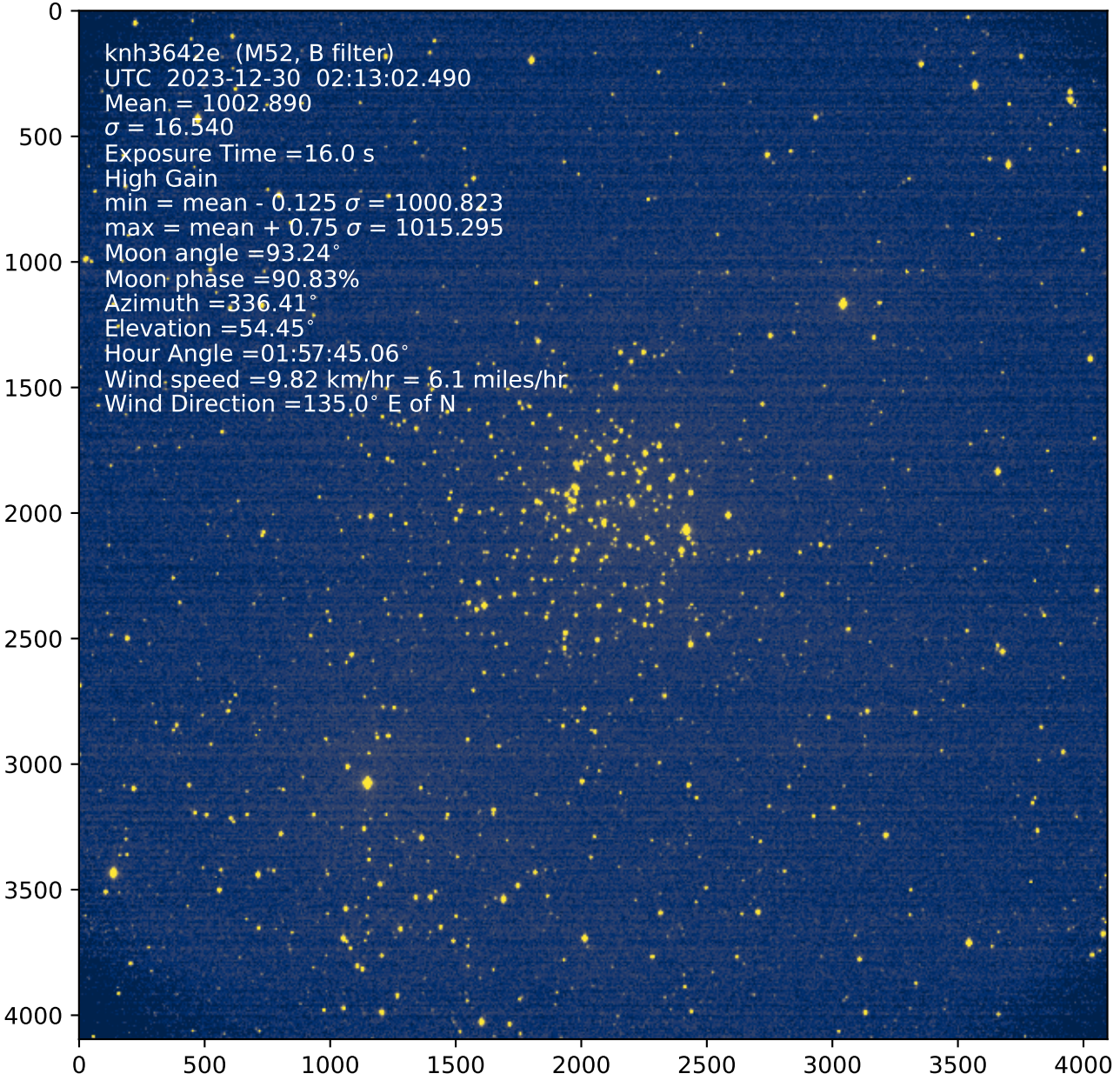

knh36429 (M52, B filter)
UTC 2023-12-30 02:10:40.100
Mean = 1002.901
σ = 16.951
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1000.782
max = mean + 0.75 σ = 1015.614
Moon angle =93.23°
Moon phase =90.84%
Azimuth =336.75°
Elevation =54.65°
Hour Angle =01:55:21.67°
Wind speed =9.01 km/hr = 5.6 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000

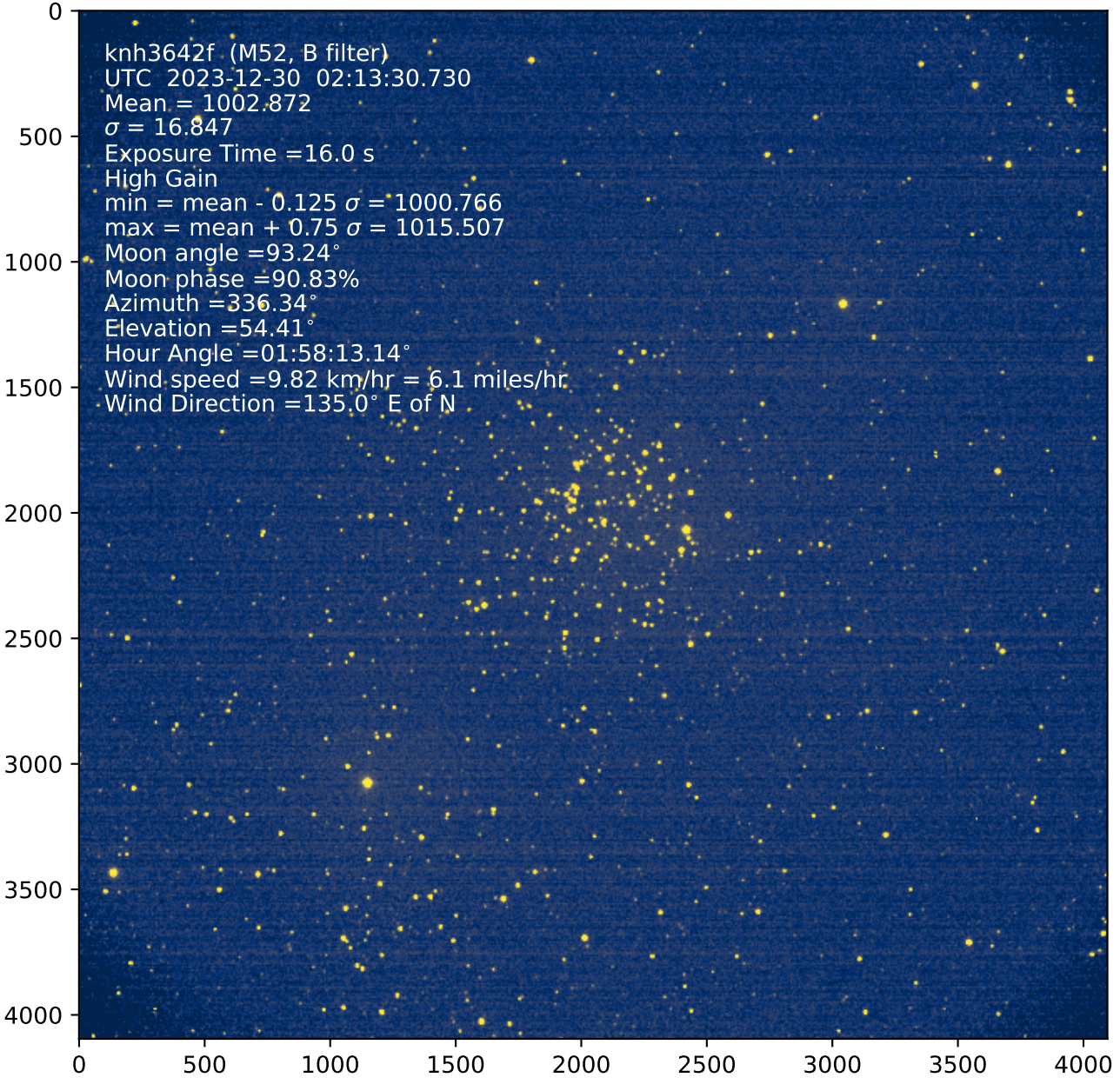

knh3642a (M52, B filter)
UTC 2023-12-30 02:11:08.529
Mean = 1002.915
σ = 16.874
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1000.806
max = mean + 0.75 σ = 1015.571
Moon angle =93.23°
Moon phase =90.84%
Azimuth =336.68°
Elevation =54.61°
Hour Angle =01:55:50.75°
Wind speed =9.01 km/hr = 5.6 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000

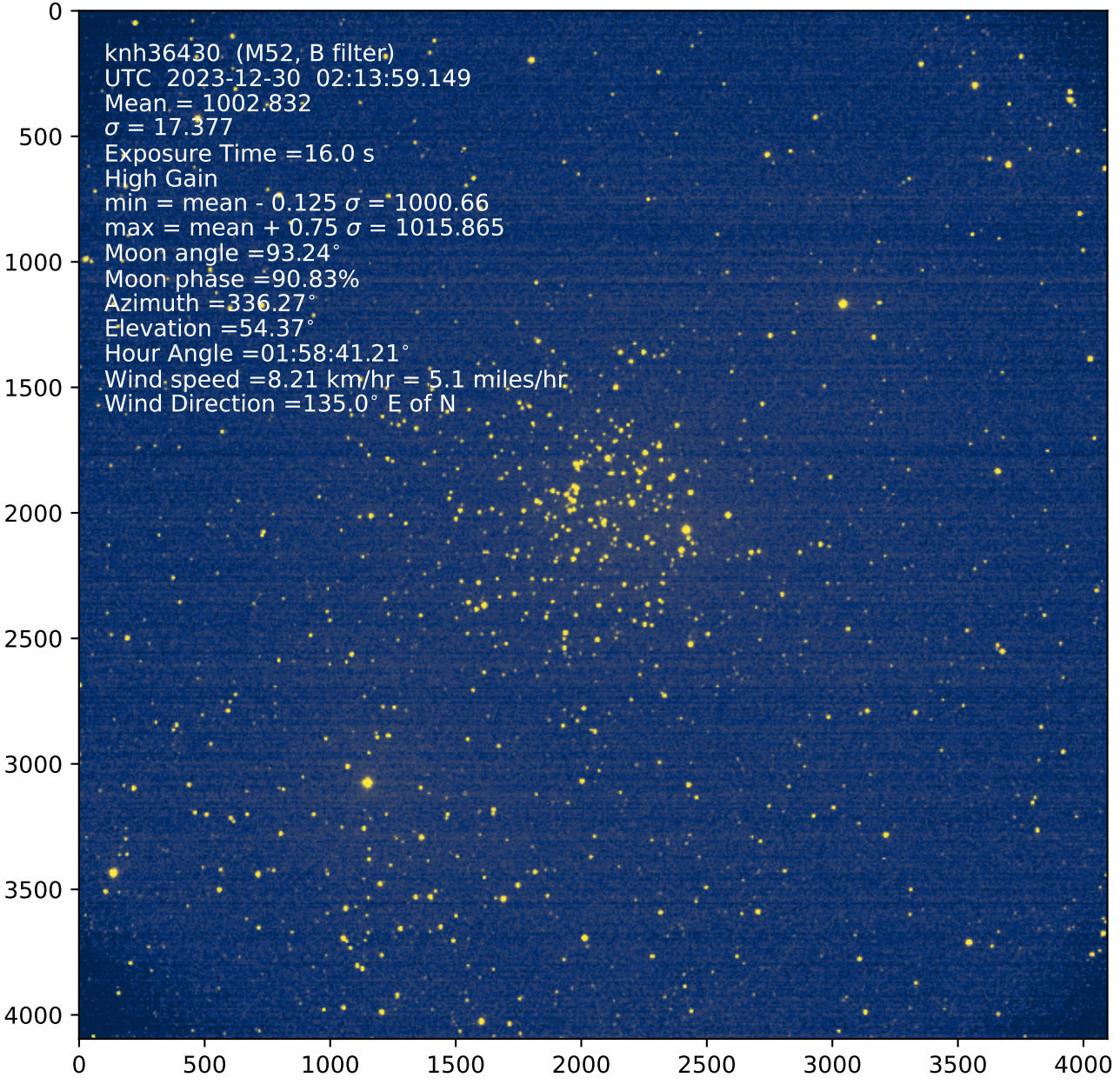

knh3642b (M52, B filter)
UTC 2023-12-30 02:11:36.399
Mean = 1002.908
σ = 17.105
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1000.769
max = mean + 0.75 σ = 1015.736
Moon angle =93.23°
Moon phase =90.84%
Azimuth =336.61°
Elevation =54.57°
Hour Angle =01:56:18.83°
Wind speed =9.01 km/hr = 5.6 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000

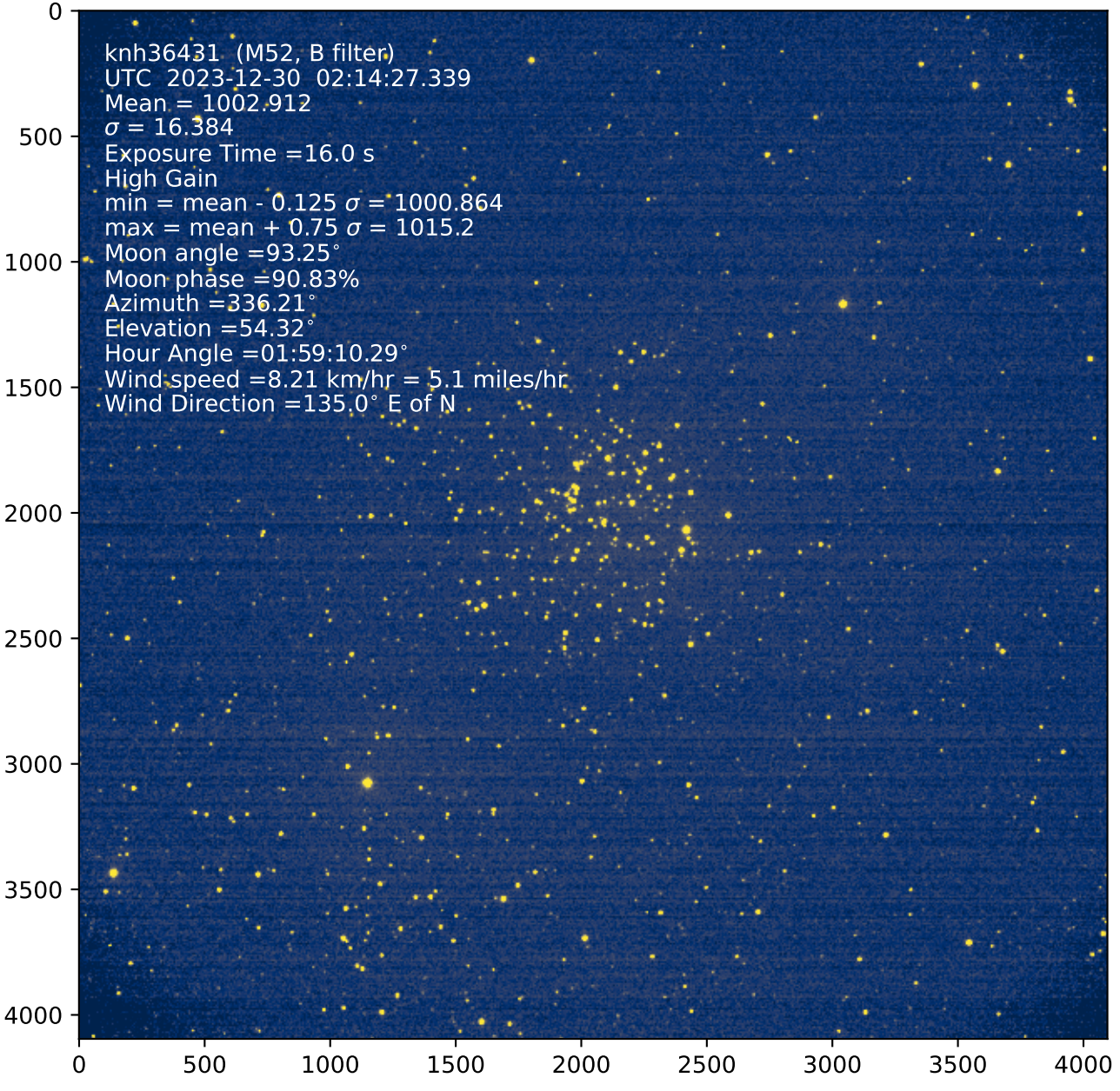

knh3642c (M52, B filter)
UTC 2023-12-30 02:12:04.879
Mean = 1002.907
σ = 16.967
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1000.786
max = mean + 0.75 σ = 1015.632
Moon angle =93.24°
Moon phase =90.84%
Azimuth =336.54°
Elevation =54.53°
Hour Angle =01:56:46.90°
Wind speed =7.56 km/hr = 4.7 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000

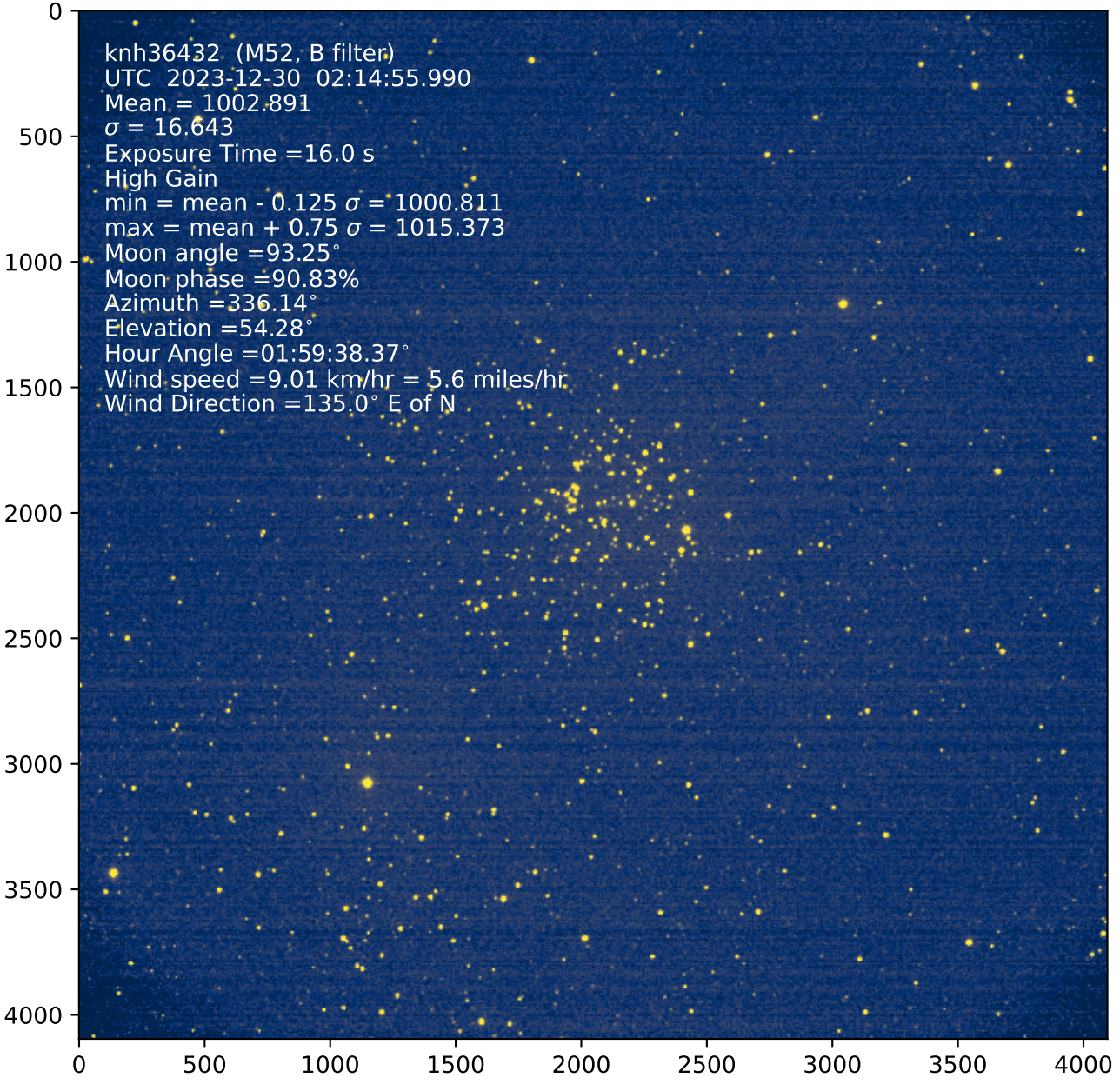

knh3642d (M52, B filter)
UTC 2023-12-30 02:12:33.619
Mean = 1002.896
σ = 16.947
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1000.777
max = mean + 0.75 σ = 1015.606
Moon angle =93.24°
Moon phase =90.84%
Azimuth =336.47°
Elevation =54.49°
Hour Angle =01:57:15.98°
Wind speed =7.56 km/hr = 4.7 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000

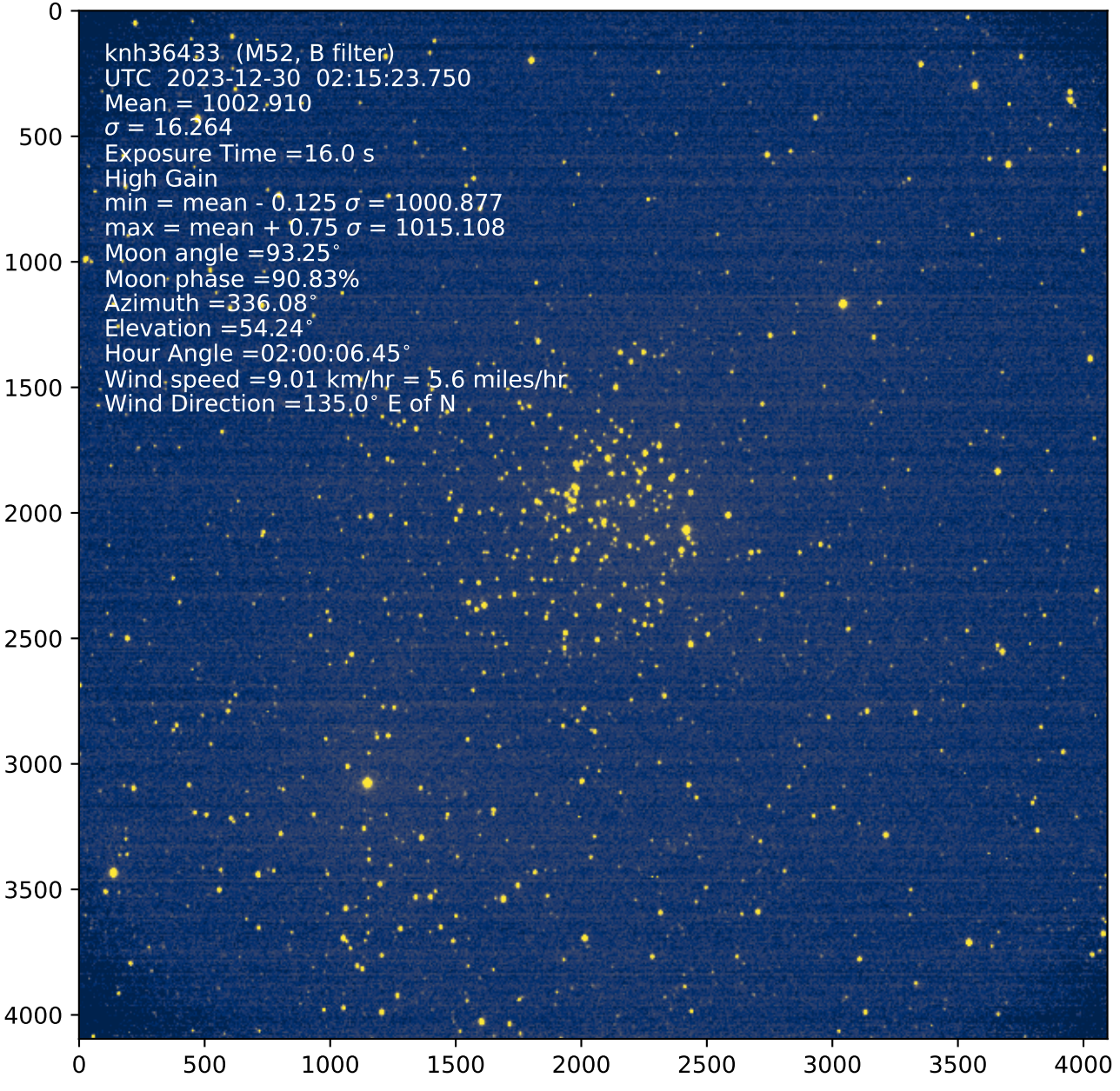

knh3642e (M52, B filter)
UTC 2023-12-30 02:13:02.490
Mean = 1002.890
σ = 16.540
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1000.823
max = mean + 0.75 σ = 1015.295
Moon angle =93.24°
Moon phase =90.83%
Azimuth =336.41°
Elevation =54.45°
Hour Angle =01:57:45.06°
Wind speed =9.82 km/hr = 6.1 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000

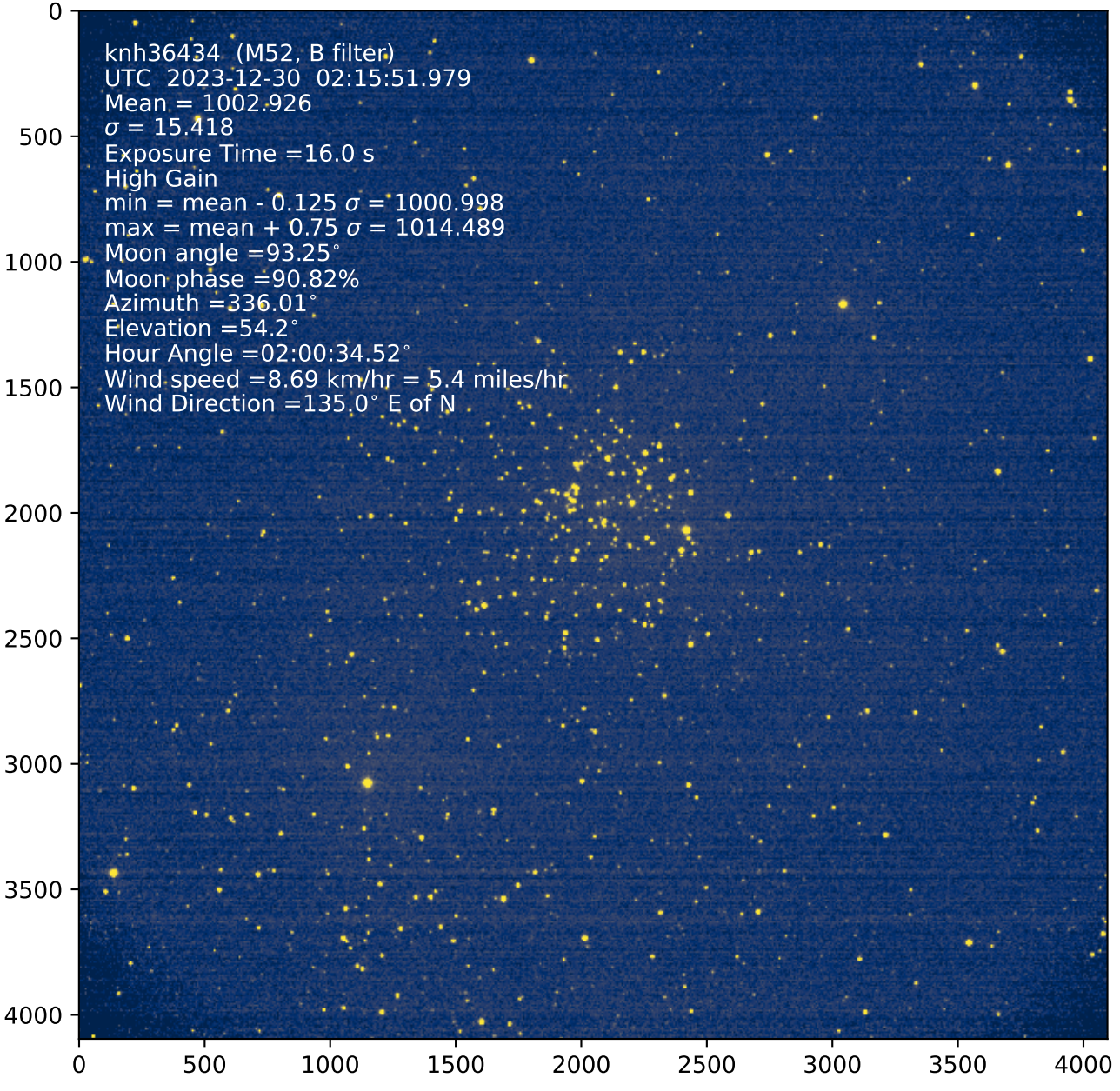

knh3642f (M52, B filter)
UTC 2023-12-30 02:13:30.730
Mean = 1002.872
σ = 16.847
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1000.766
max = mean + 0.75 σ = 1015.507
Moon angle =93.24°
Moon phase =90.83%
Azimuth =336.34°
Elevation =54.41°
Hour Angle =01:58:13.14°
Wind speed =9.82 km/hr = 6.1 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000

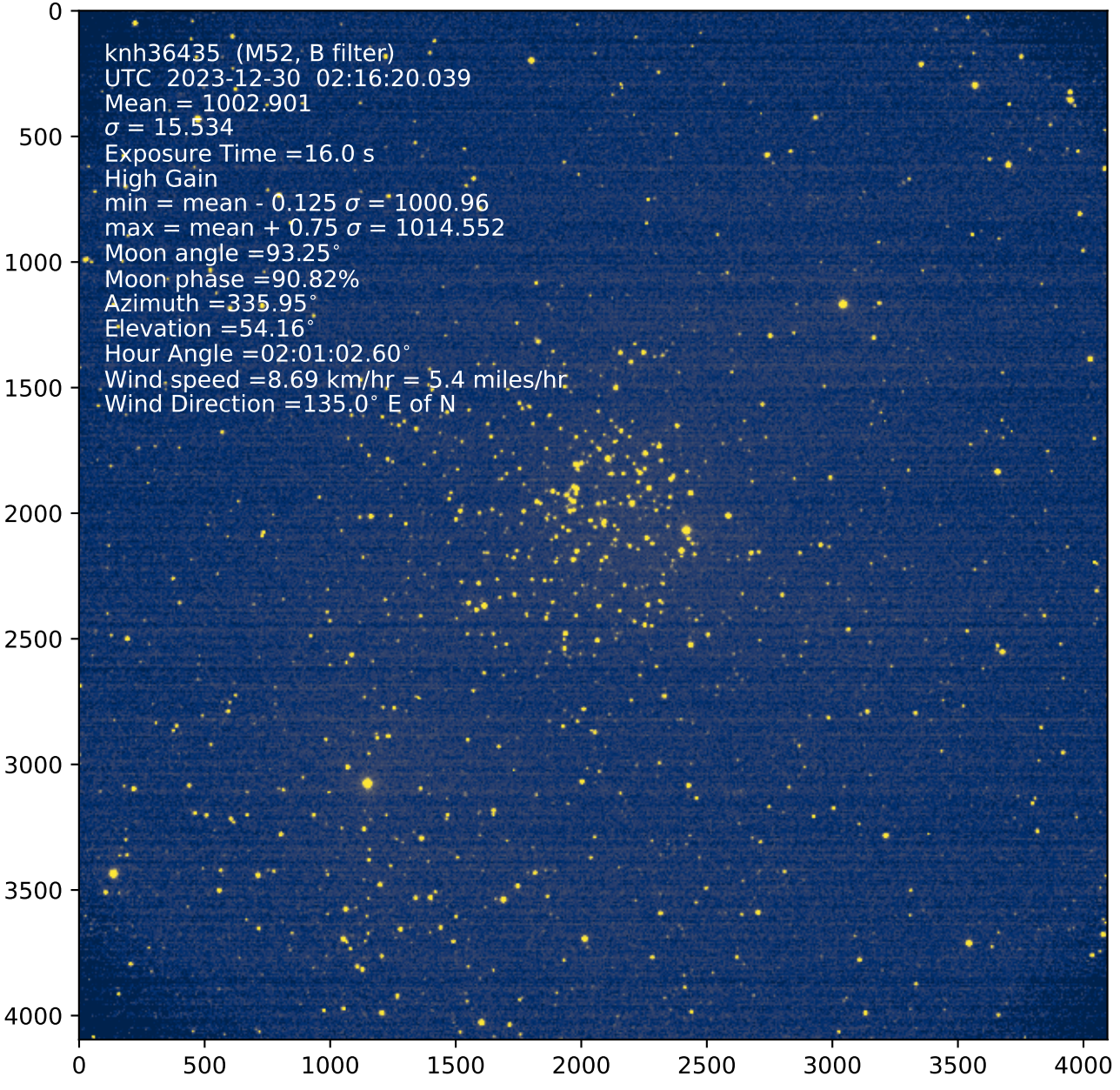

knh36430 (M52, B filter)
UTC 2023-12-30 02:13:59.149
Mean = 1002.832
σ = 17.377
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1000.66
max = mean + 0.75 σ = 1015.865
Moon angle =93.24°
Moon phase =90.83%
Azimuth =336.27°
Elevation =54.37°
Hour Angle =01:58:41.21°
Wind speed =8.21 km/hr = 5.1 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000

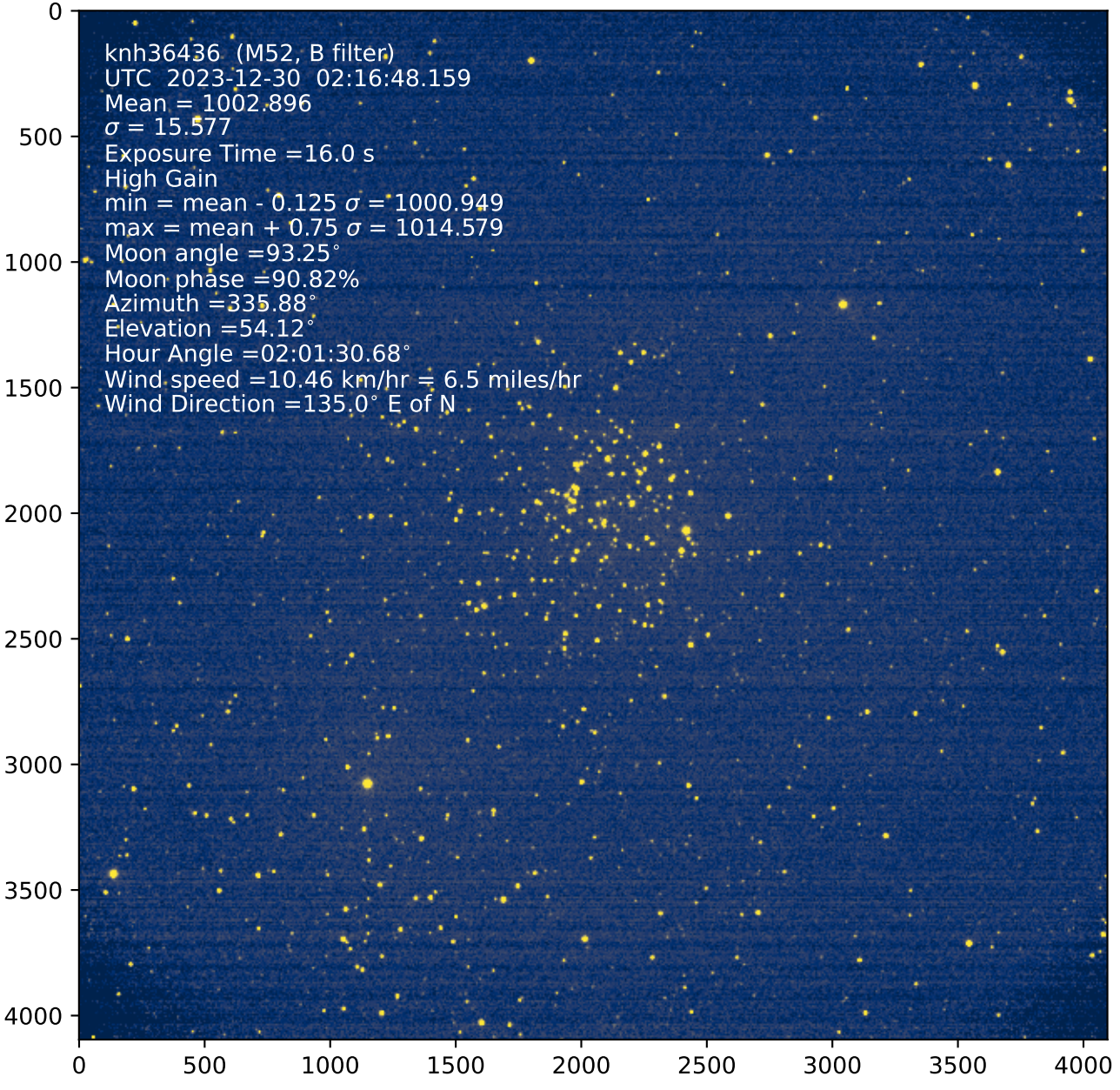

knh36431 (M52, B filter)
UTC 2023-12-30 02:14:27.339
Mean = 1002.912
σ = 16.384
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1000.864
max = mean + 0.75 σ = 1015.2
Moon angle =93.25°
Moon phase =90.83%
Azimuth =336.21°
Elevation =54.32°
Hour Angle =01:59:10.29°
Wind speed =8.21 km/hr = 5.1 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000

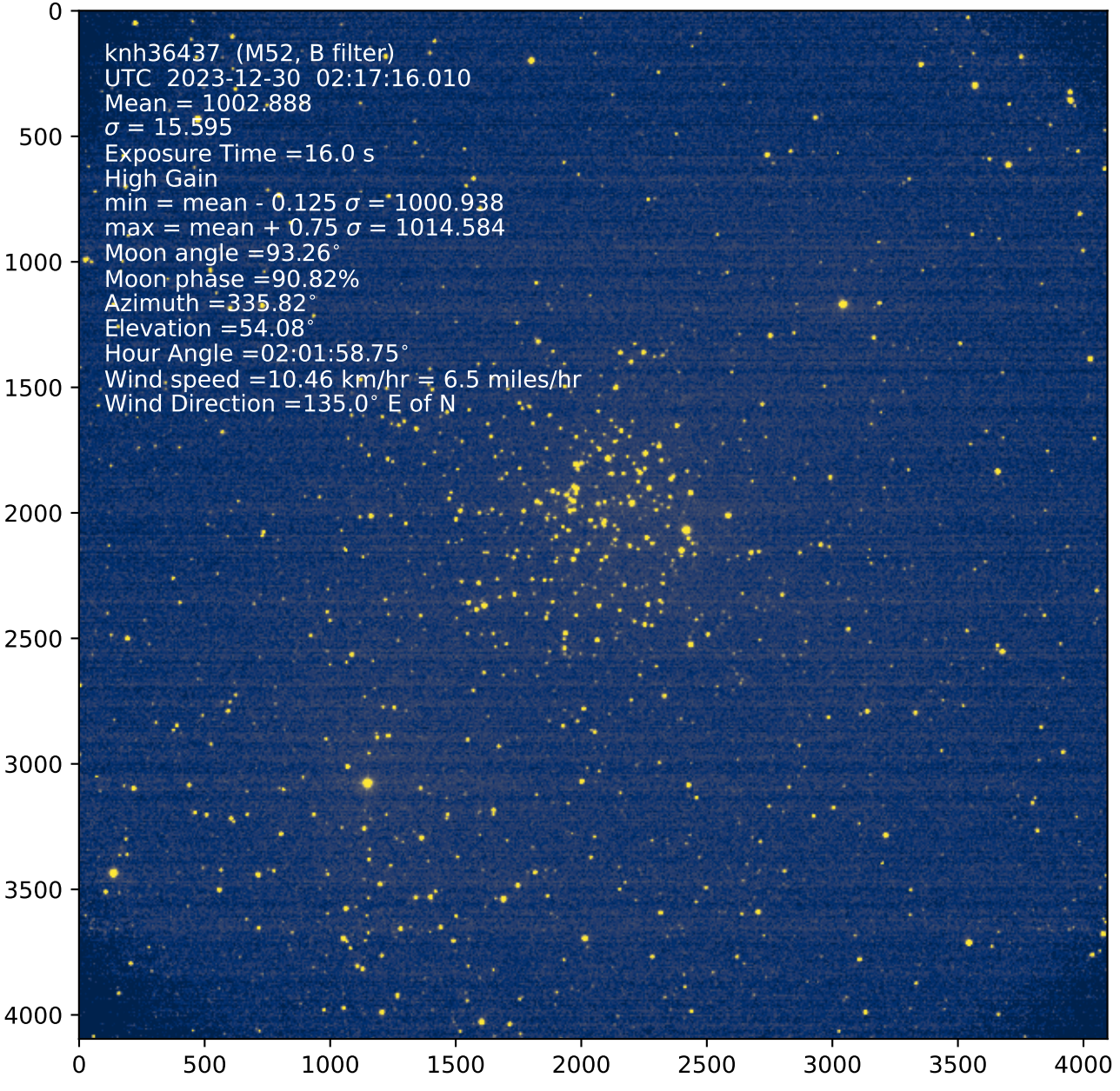

knh36432 (M52, B filter)
UTC 2023-12-30 02:14:55.990
Mean = 1002.891
σ = 16.643
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1000.811
max = mean + 0.75 σ = 1015.373
Moon angle =93.25°
Moon phase =90.83%
Azimuth =336.14°
Elevation =54.28°
Hour Angle =01:59:38.37°
Wind speed =9.01 km/hr = 5.6 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000

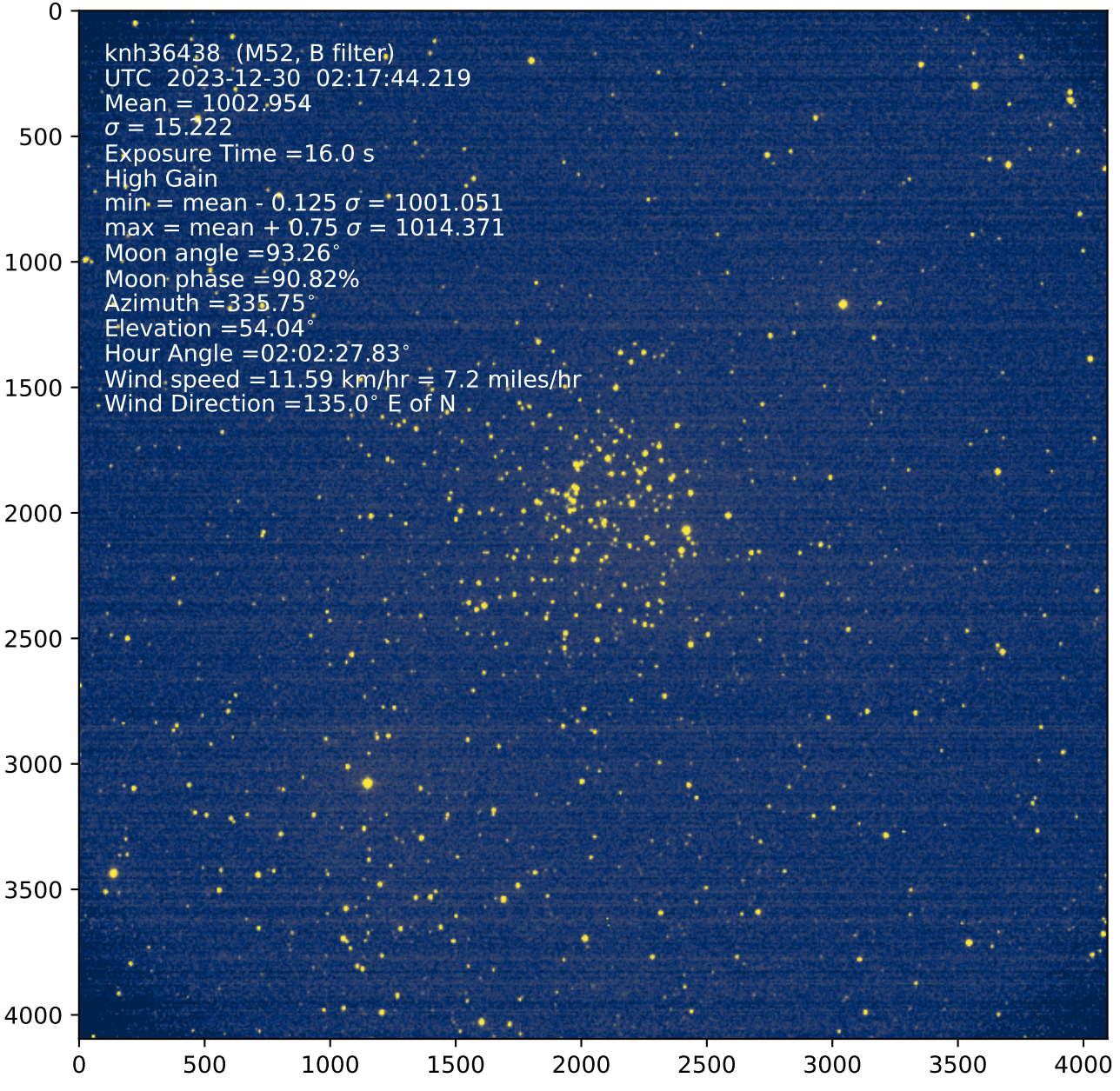

knh36433 (M52, B filter)
UTC 2023-12-30 02:15:23.750
Mean = 1002.910
σ = 16.264
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1000.877
max = mean + 0.75 σ = 1015.108
Moon angle =93.25°
Moon phase =90.83%
Azimuth =336.08°
Elevation =54.24°
Hour Angle =02:00:06.45°
Wind speed =9.01 km/hr = 5.6 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000

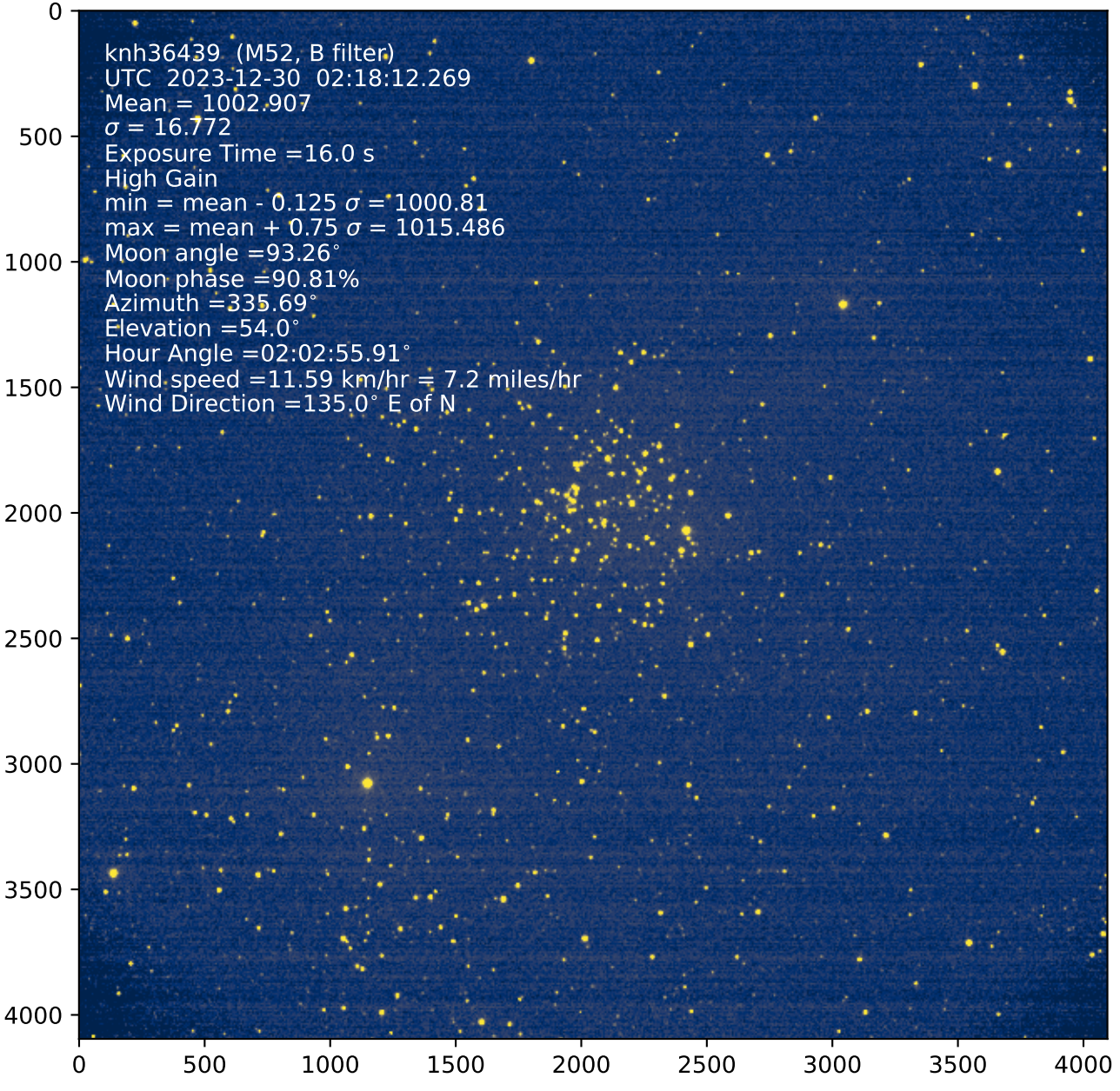

knh36434 (M52, B filter)
UTC 2023-12-30 02:15:51.979
Mean = 1002.926
σ = 15.418
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1000.998
max = mean + 0.75 σ = 1014.489
Moon angle =93.25°
Moon phase =90.82%
Azimuth =336.01°
Elevation =54.2°
Hour Angle =02:00:34.52°
Wind speed =8.69 km/hr = 5.4 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh36435 (M52, B filter)
UTC 2023-12-30 02:16:20.039
Mean = 1002.901
σ = 15.534
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1000.96
max = mean + 0.75 σ = 1014.552
Moon angle =93.25°
Moon phase =90.82%
Azimuth =335.95°
Elevation =54.16°
Hour Angle =02:01:02.60°
Wind speed =8.69 km/hr = 5.4 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh36436 (M52, B filter)
UTC 2023-12-30 02:16:48.159
Mean = 1002.896
σ = 15.577
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1000.949
max = mean + 0.75 σ = 1014.579
Moon angle =93.25°
Moon phase =90.82%
Azimuth =335.88°
Elevation =54.12°
Hour Angle =02:01:30.68°
Wind speed =10.46 km/hr = 6.5 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh36437 (M52, B filter)
UTC 2023-12-30 02:17:16.010
Mean = 1002.888
σ = 15.595
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1000.938
max = mean + 0.75 σ = 1014.584
Moon angle =93.26°
Moon phase =90.82%
Azimuth =335.82°
Elevation =54.08°
Hour Angle =02:01:58.75°
Wind speed =10.46 km/hr = 6.5 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh36438 (M52, B filter)
UTC 2023-12-30 02:17:44.219
Mean = 1002.954
σ = 15.222
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1001.051
max = mean + 0.75 σ = 1014.371
Moon angle =93.26°
Moon phase =90.82%
Azimuth =335.75°
Elevation =54.04°
Hour Angle =02:02:27.83°
Wind speed =11.59 km/hr = 7.2 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh36439 (M52, B filter)
UTC 2023-12-30 02:18:12.269
Mean = 1002.907
σ = 16.772
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1000.81
max = mean + 0.75 σ = 1015.486
Moon angle =93.26°
Moon phase =90.81%
Azimuth =335.69°
Elevation =54.0°
Hour Angle =02:02:55.91°
Wind speed =11.59 km/hr = 7.2 miles/hr
Wind Direction =135.0° E of N
0
500
1000
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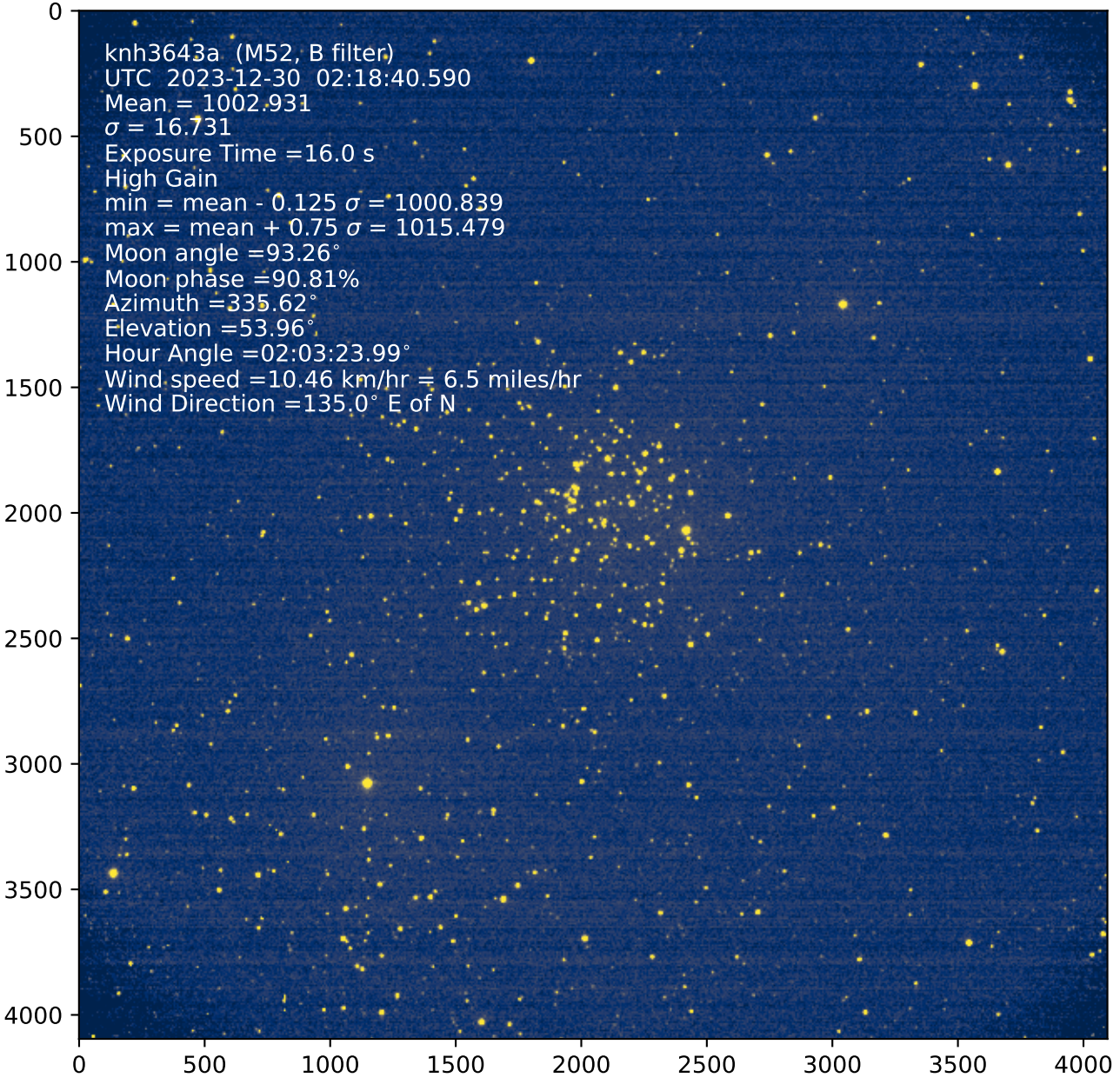
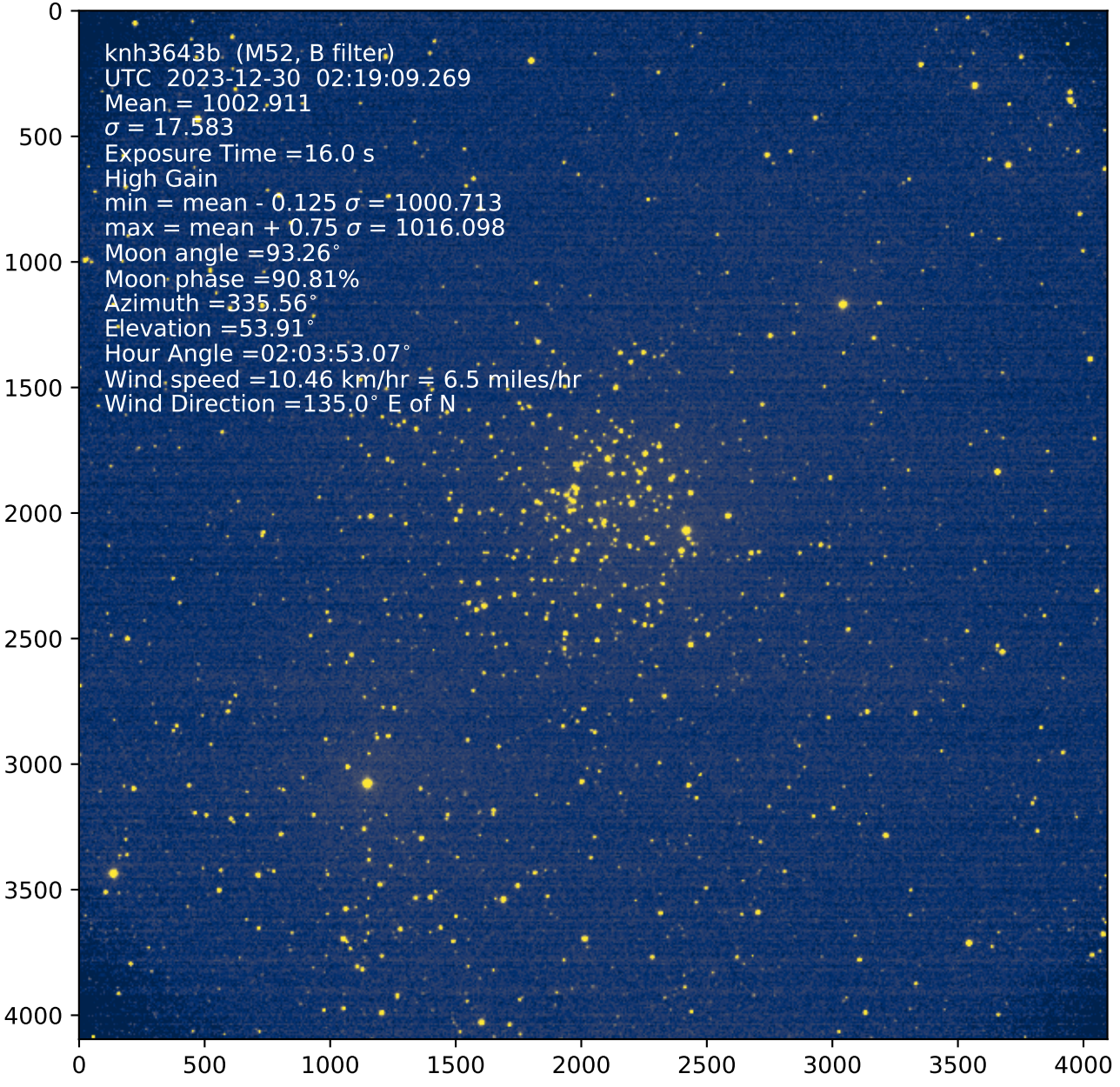
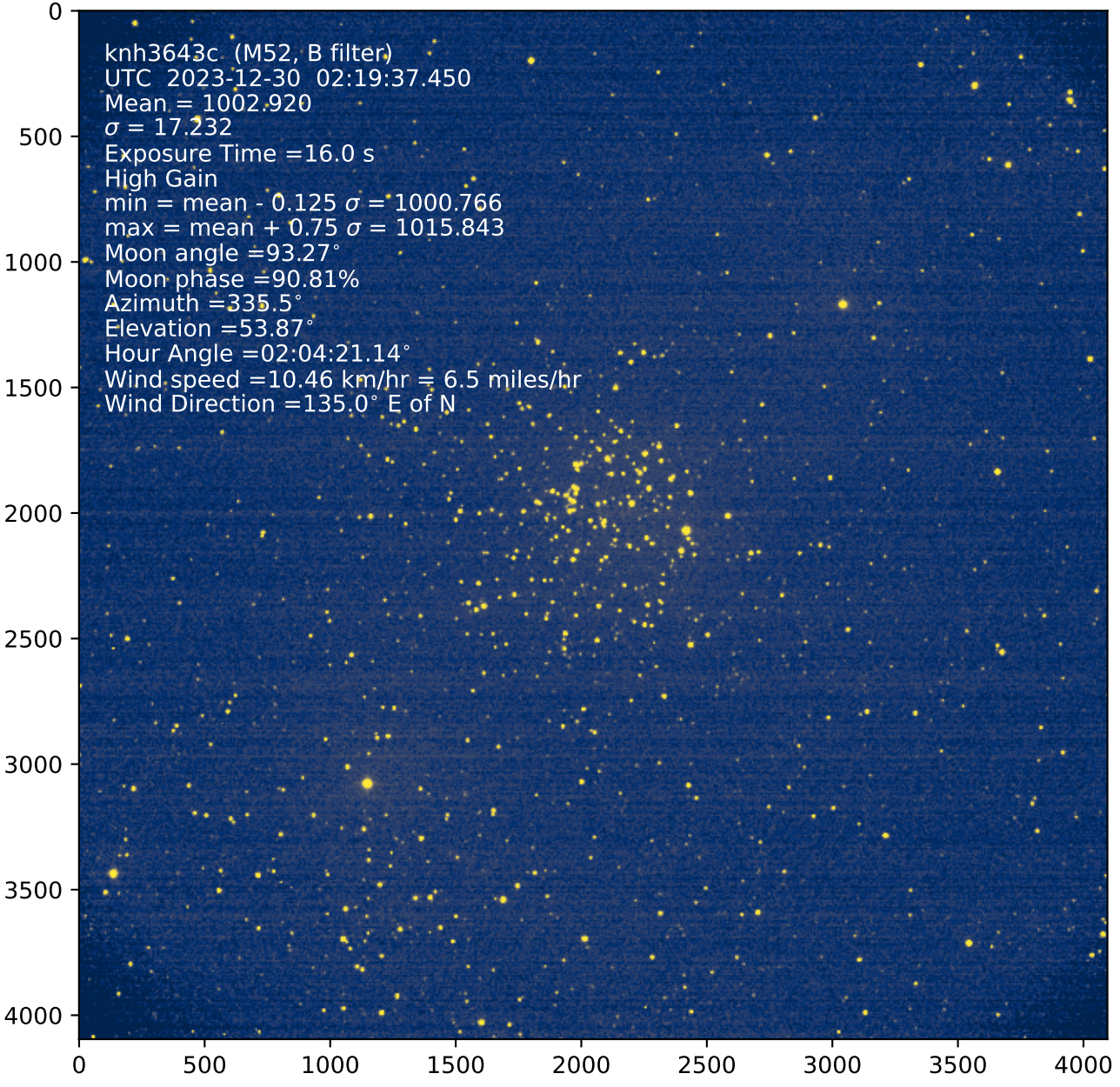
2000
2500
3000
3500
4000


knh3643a (M52, B filter)
UTC 2023-12-30 02:18:40.590
Mean = 1002.931
σ = 16.731
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1000.839
max = mean + 0.75 σ = 1015.479
Moon angle =93.26°
Moon phase =90.81%
Azimuth =335.62°
Elevation =53.96°
Hour Angle =02:03:23.99°
Wind speed =10.46 km/hr = 6.5 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh3643b (M52, B filter)
UTC 2023-12-30 02:19:09.269
Mean = 1002.911
σ = 17.583
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1000.713
max = mean + 0.75 σ = 1016.098
Moon angle =93.26°
Moon phase =90.81%
Azimuth =335.56°
Elevation =53.91°
Hour Angle =02:03:53.07°
Wind speed =10.46 km/hr = 6.5 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh3643c (M52, B filter)
UTC 2023-12-30 02:19:37.450
Mean = 1002.920
σ = 17.232
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1000.766
max = mean + 0.75 σ = 1015.843
Moon angle =93.27°
Moon phase =90.81%
Azimuth =335.5°
Elevation =53.87°
Hour Angle =02:04:21.14°
Wind speed =10.46 km/hr = 6.5 miles/hr
Wind Direction =135.0° E of N
0
500
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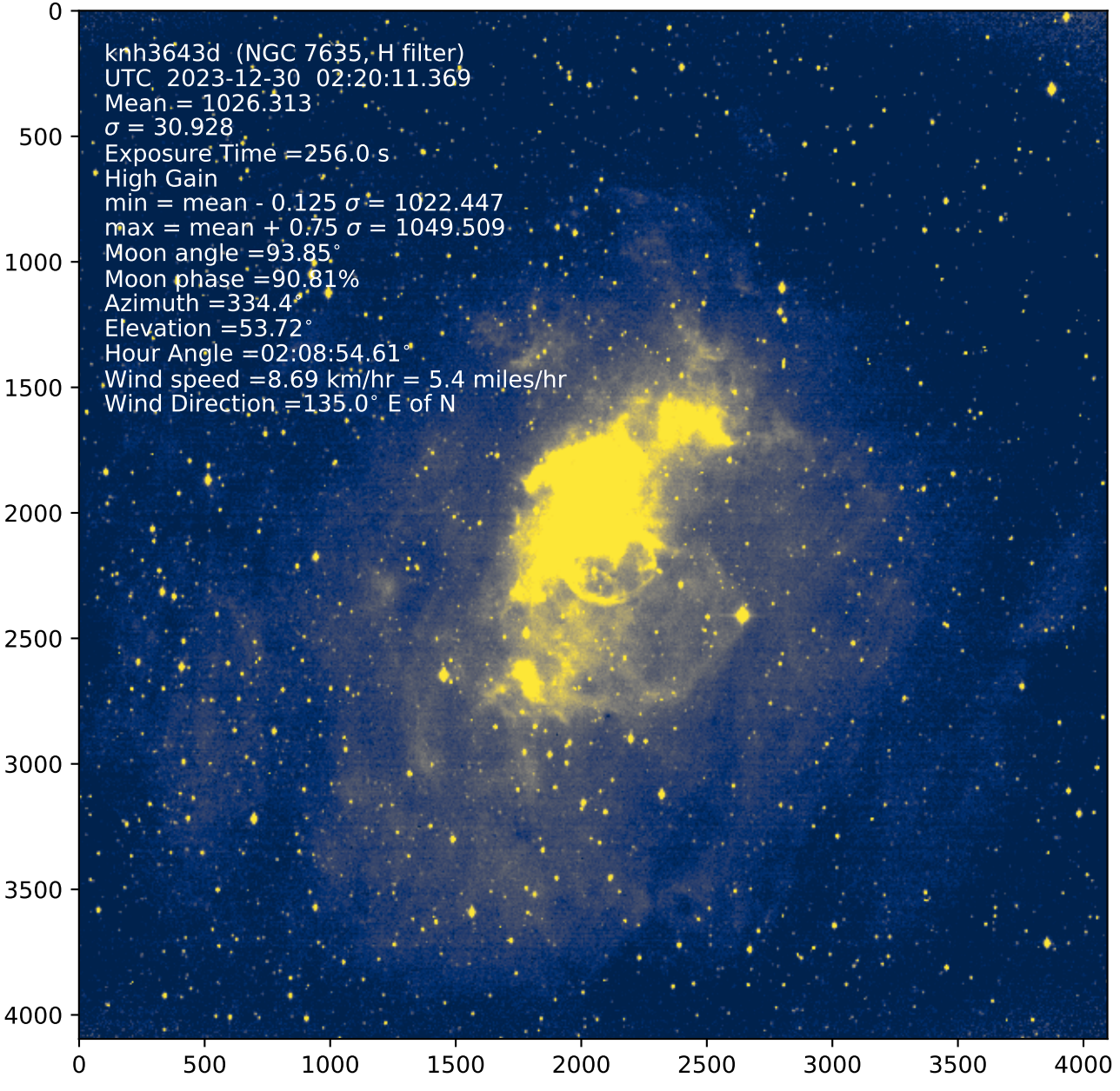
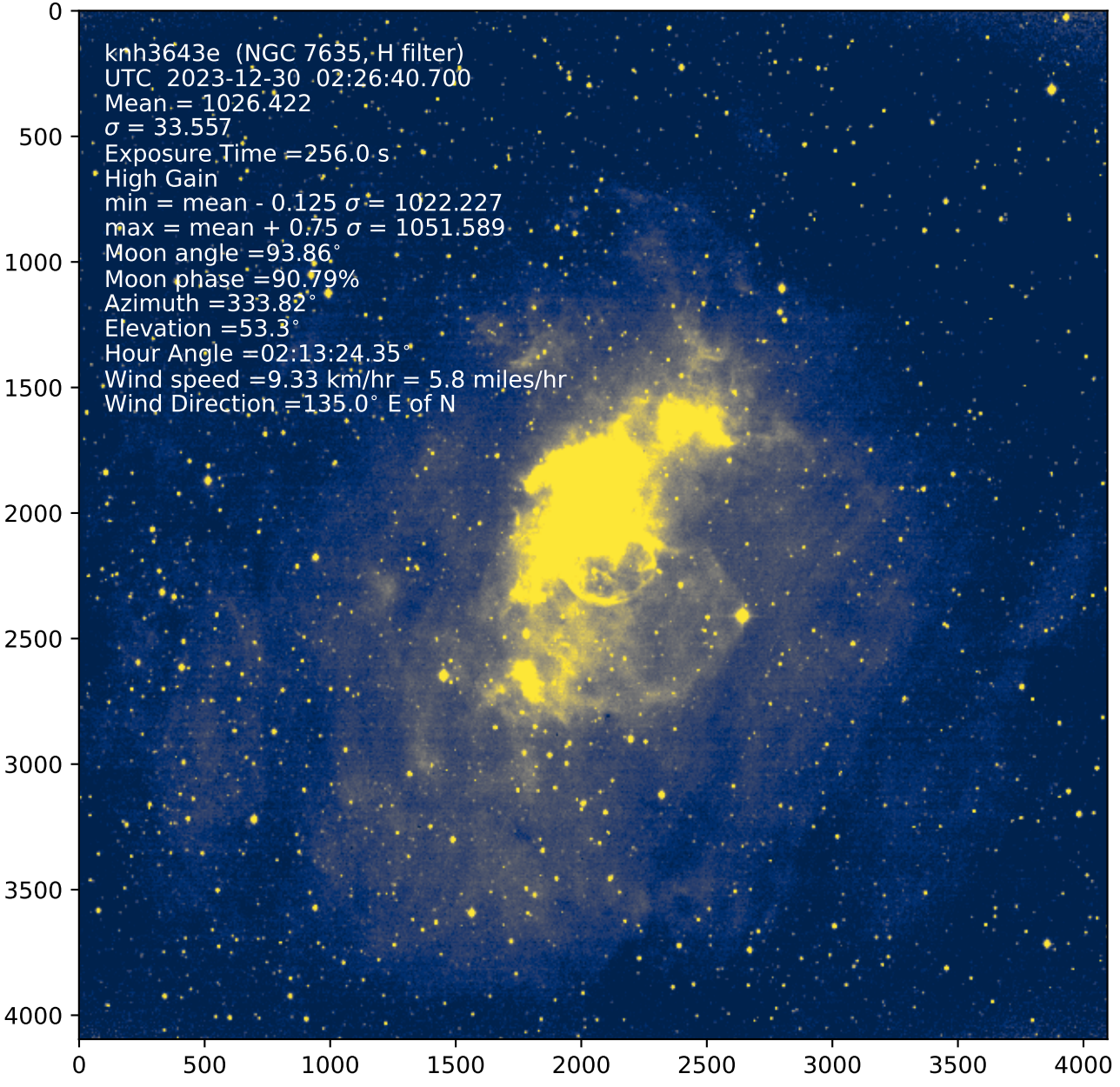
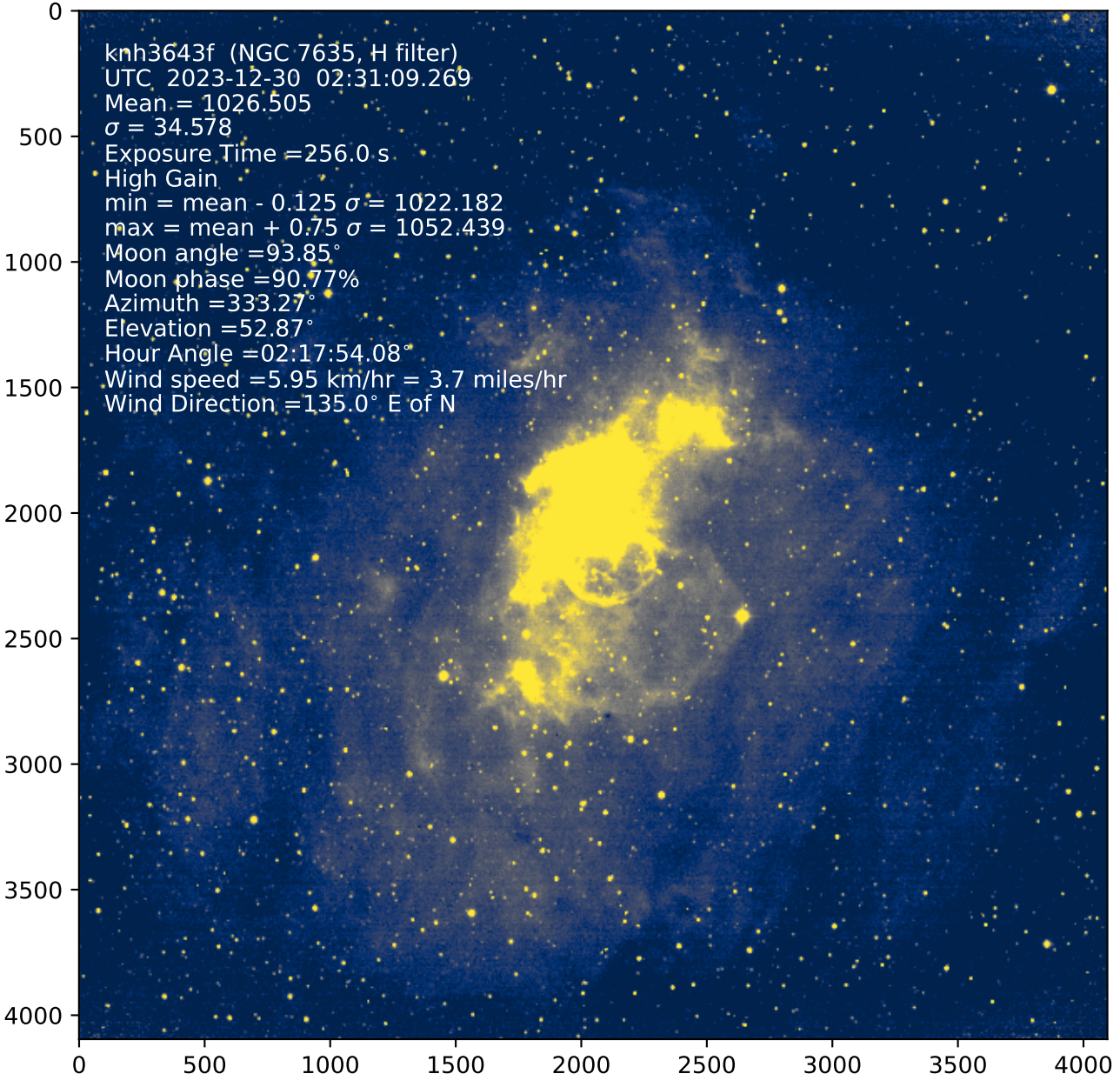
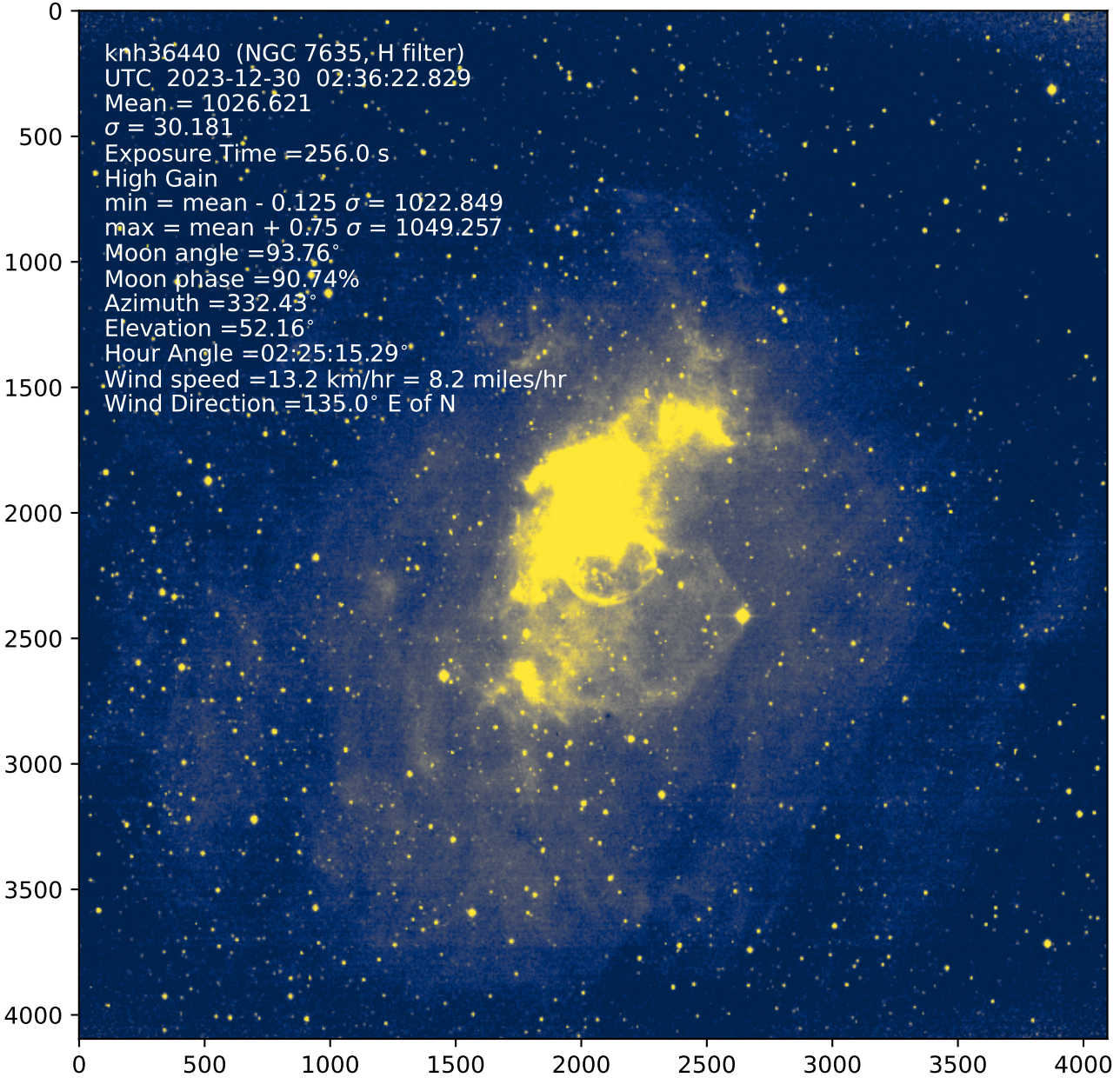
2000
2500
3000
3500
4000


knh3643d (NGC 7635, H filter)
UTC 2023-12-30 02:20:11.369
Mean = 1026.313
σ = 30.928
Exposure Time =256.0 s
High Gain
min = mean - 0.125 σ = 1022.447
max = mean + 0.75 σ = 1049.509
Moon angle =93.85°
Moon phase =90.81%
Azimuth =334.4°
Elevation =53.72°
Hour Angle =02:08:54.61°
Wind speed =8.69 km/hr = 5.4 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh3643e (NGC 7635, H filter)
UTC 2023-12-30 02:26:40.700
Mean = 1026.422
σ = 33.557
Exposure Time =256.0 s
High Gain
min = mean - 0.125 σ = 1022.227
max = mean + 0.75 σ = 1051.589
Moon angle =93.86°
Moon phase =90.79%
Azimuth =333.82°
Elevation =53.3°
Hour Angle =02:13:24.35°
Wind speed =9.33 km/hr = 5.8 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh3643f (NGC 7635, H filter)
UTC 2023-12-30 02:31:09.269
Mean = 1026.505
σ = 34.578
Exposure Time =256.0 s
High Gain
min = mean - 0.125 σ = 1022.182
max = mean + 0.75 σ = 1052.439
Moon angle =93.85°
Moon phase =90.77%
Azimuth =333.27°
Elevation =52.87°
Hour Angle =02:17:54.08°
Wind speed =5.95 km/hr = 3.7 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh36440 (NGC 7635, H filter)
UTC 2023-12-30 02:36:22.829
Mean = 1026.621
σ = 30.181
Exposure Time =256.0 s
High Gain
min = mean - 0.125 σ = 1022.849
max = mean + 0.75 σ = 1049.257
Moon angle =93.76°
Moon phase =90.74%
Azimuth =332.43°
Elevation =52.16°
Hour Angle =02:25:15.29°
Wind speed =13.2 km/hr = 8.2 miles/hr
Wind Direction =135.0° E of N
0
500
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2500
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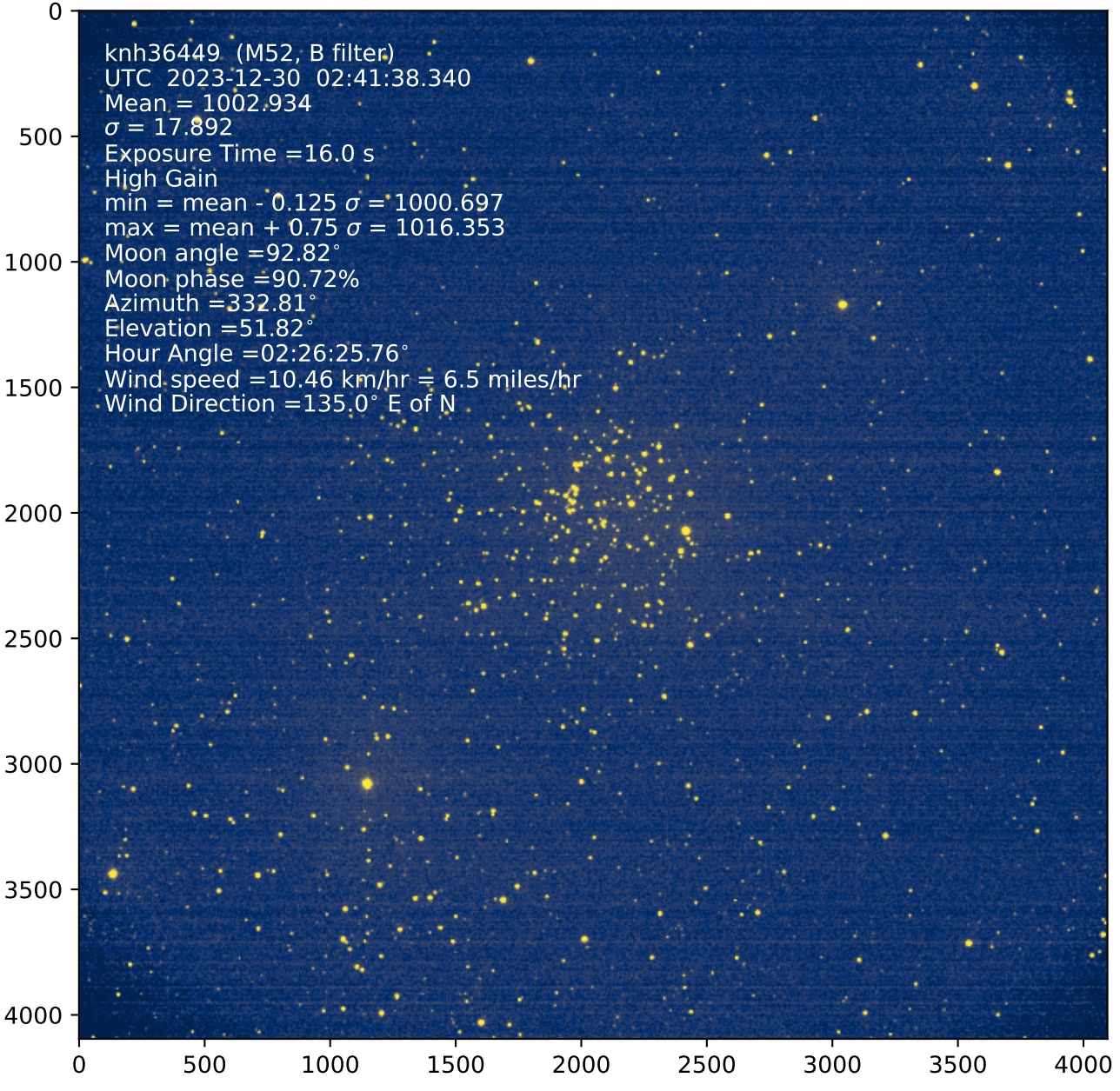
knh36449 (M52, B filter)
UTC 2023-12-30 02:41:38.340
Mean = 1002.934
σ = 17.892
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1000.697
max = mean + 0.75 σ = 1016.353
Moon angle =92.82°
Moon phase =90.72%
Azimuth =332.81°
Elevation =51.82°
Hour Angle =02:26:25.76°
Wind speed =10.46 km/hr = 6.5 miles/hr
Wind Direction =135.0° E of N
0
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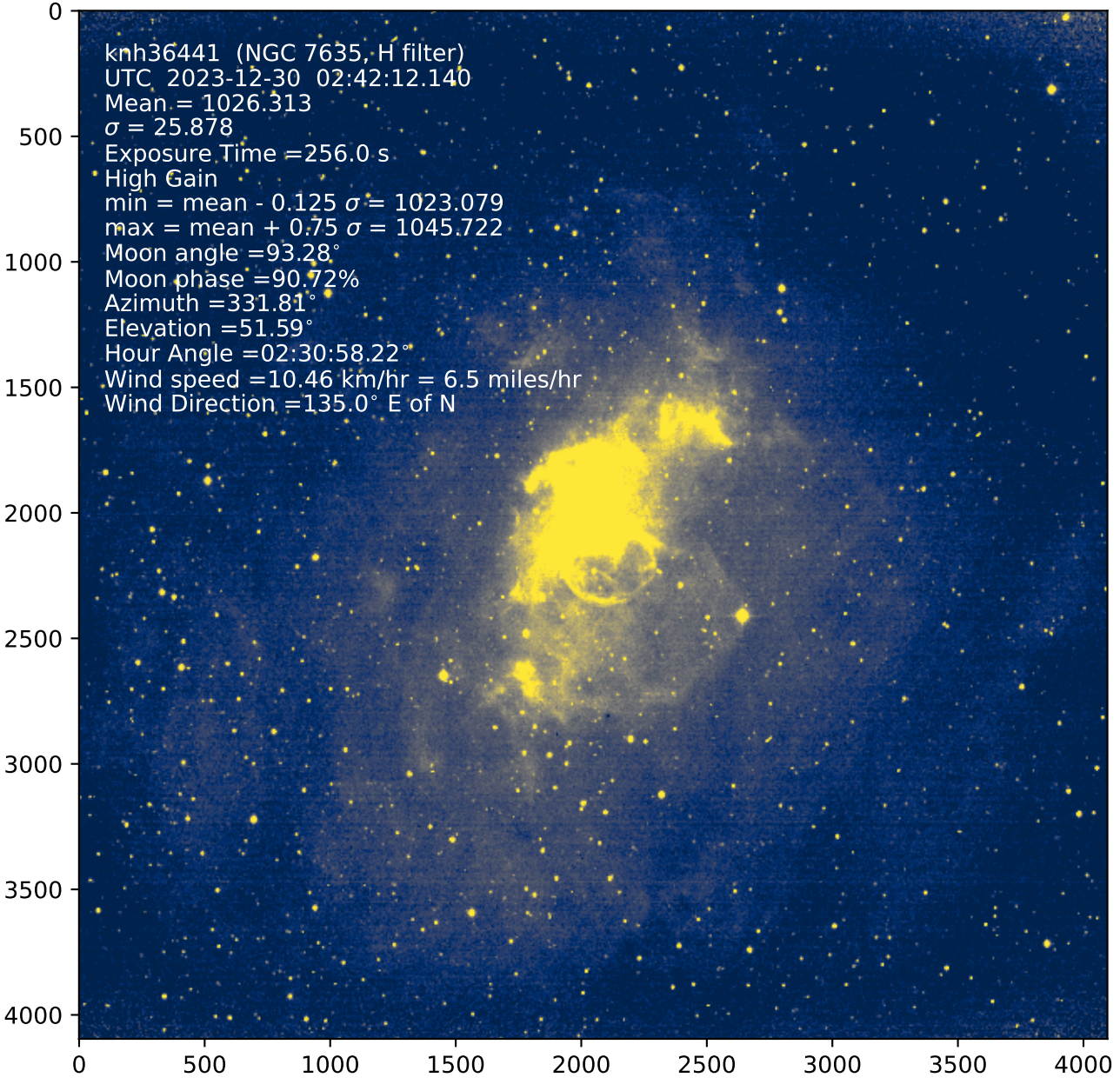
knh36441 (NGC 7635, H filter)
UTC 2023-12-30 02:42:12.140
Mean = 1026.313
σ = 25.878
Exposure Time =256.0 s
High Gain
min = mean - 0.125 σ = 1023.079
max = mean + 0.75 σ = 1045.722
Moon angle =93.28°
Moon phase =90.72%
Azimuth =331.81°
Elevation =51.59°
Hour Angle =02:30:58.22°
Wind speed =10.46 km/hr = 6.5 miles/hr
Wind Direction =135.0° E of N
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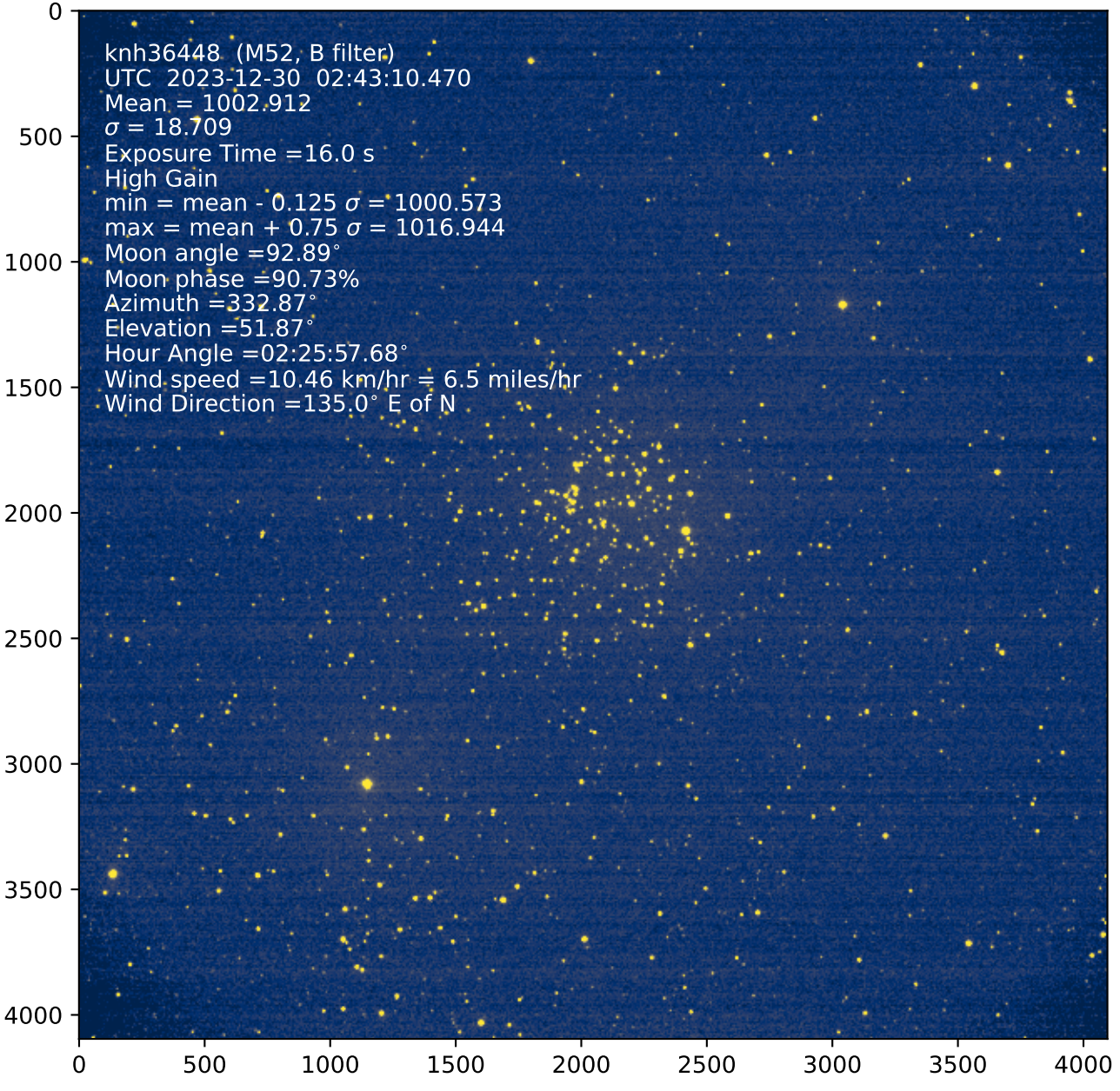
knh36448 (M52, B filter)
UTC 2023-12-30 02:43:10.470
Mean = 1002.912
σ = 18.709
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1000.573
max = mean + 0.75 σ = 1016.944
Moon angle =92.89°
Moon phase =90.73%
Azimuth =332.87°
Elevation =51.87°
Hour Angle =02:25:57.68°
Wind speed =10.46 km/hr = 6.5 miles/hr
Wind Direction =135.0° E of N
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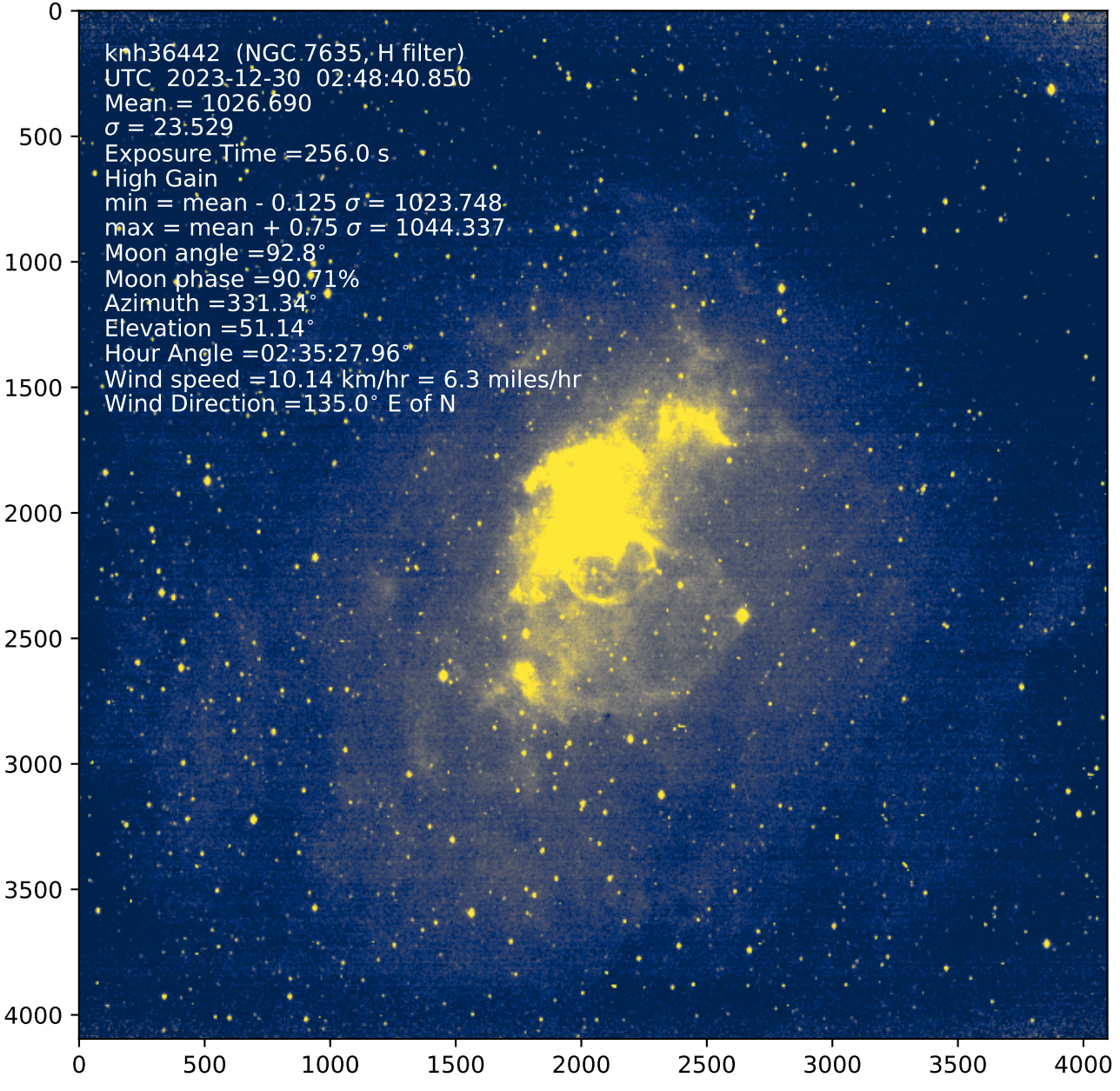
knh36442 (NGC 7635, H filter)
UTC 2023-12-30 02:48:40.850
Mean = 1026.690
σ = 23.529
Exposure Time =256.0 s
High Gain
min = mean - 0.125 σ = 1023.748
max = mean + 0.75 σ = 1044.337
Moon angle =92.8°
Moon phase =90.71%
Azimuth =331.34°
Elevation =51.14°
Hour Angle =02:35:27.96°
Wind speed =10.14 km/hr = 6.3 miles/hr
Wind Direction =135.0° E of N
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3500
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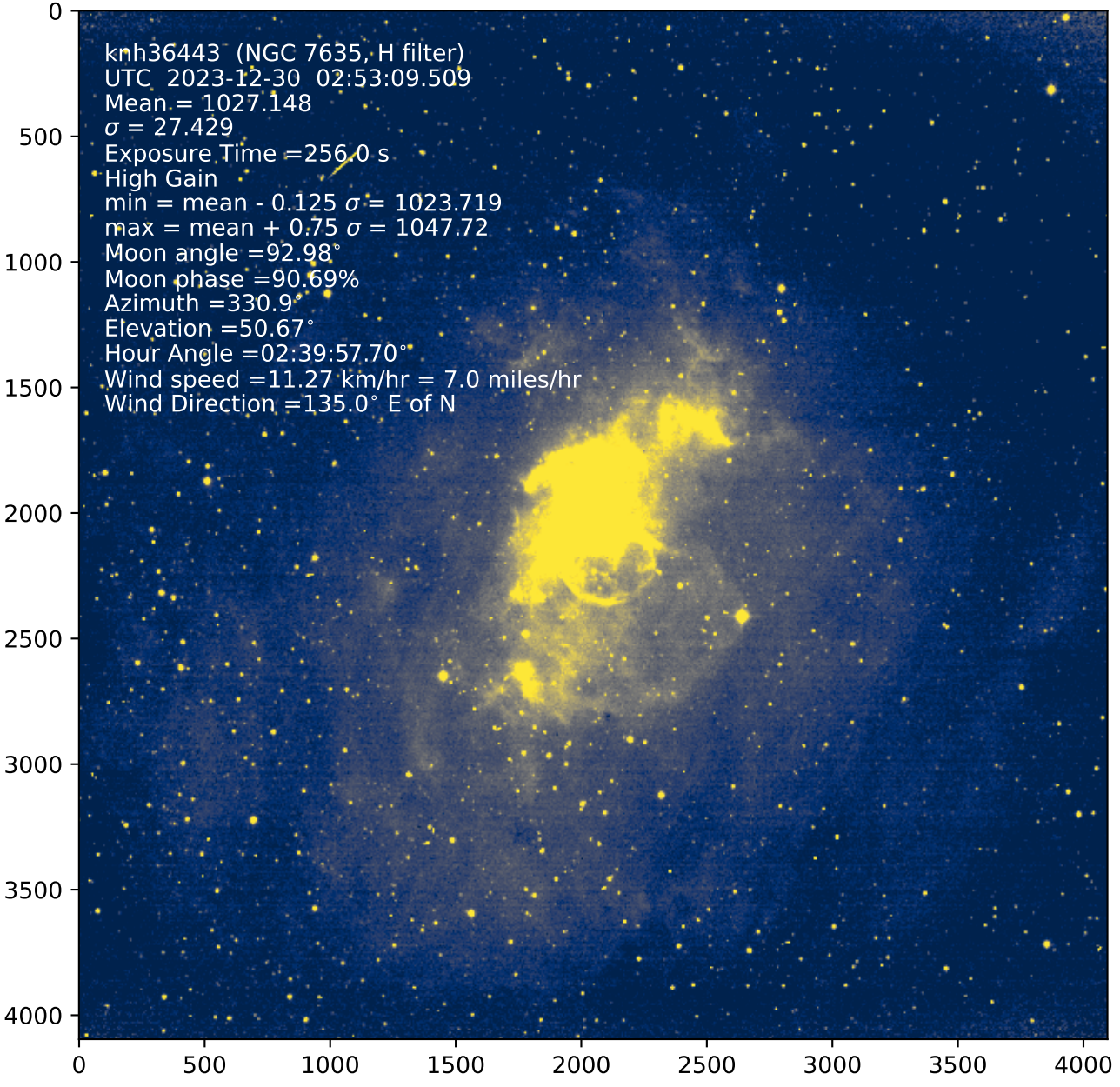
knh36443 (NGC 7635, H filter)
UTC 2023-12-30 02:53:09.509
Mean = 1027.148
σ = 27.429
Exposure Time =256.0 s
High Gain
min = mean - 0.125 σ = 1023.719
max = mean + 0.75 σ = 1047.72
Moon angle =92.98°
Moon phase =90.69%
Azimuth =330.9°
Elevation =50.67°
Hour Angle =02:39:57.70°
Wind speed =11.27 km/hr = 7.0 miles/hr
Wind Direction =135.0° E of N
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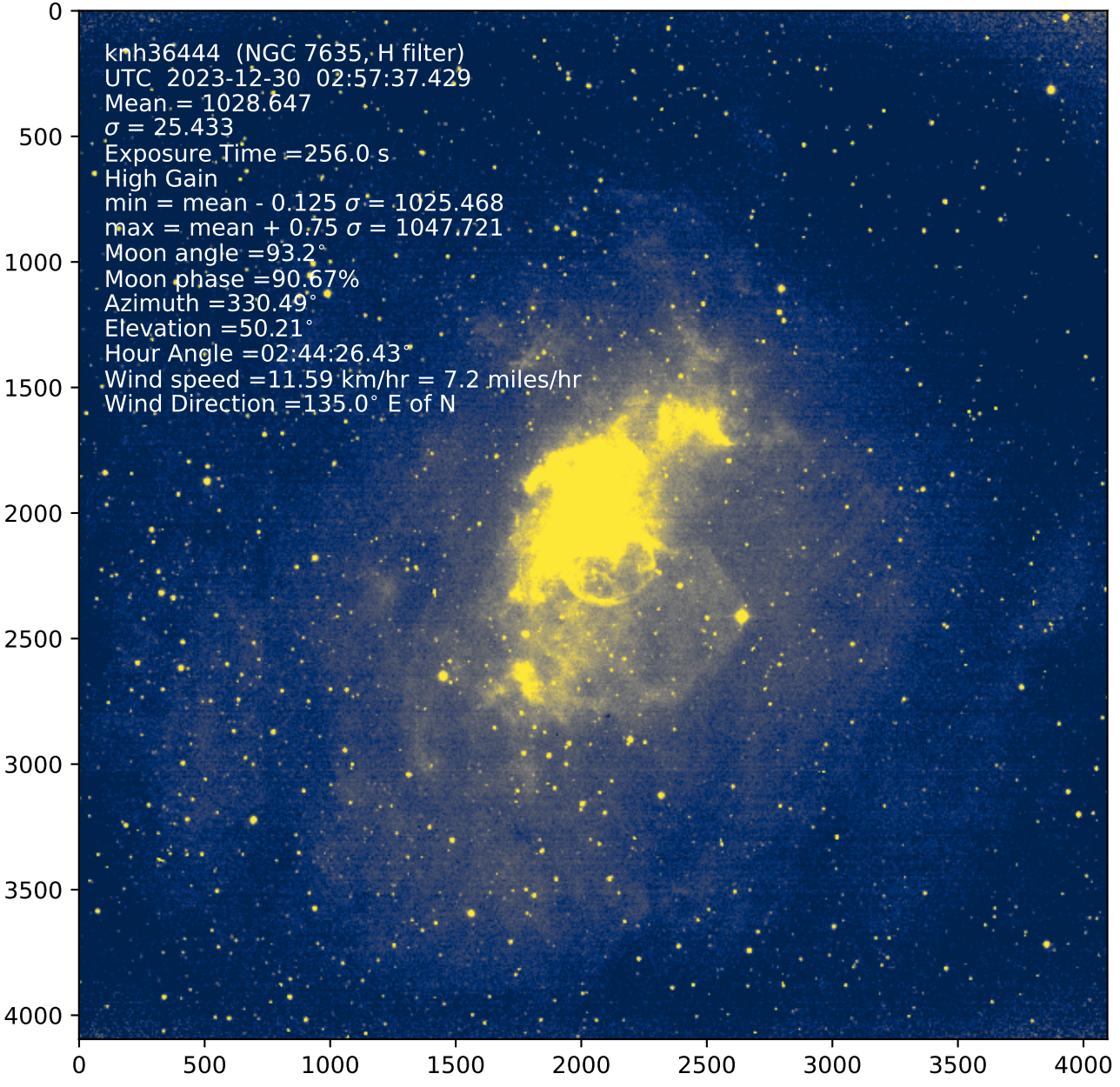
knh36444 (NGC 7635, H filter)
UTC 2023-12-30 02:57:37.429
Mean = 1028.647
σ = 25.433
Exposure Time =256.0 s
High Gain
min = mean - 0.125 σ = 1025.468
max = mean + 0.75 σ = 1047.721
Moon angle =93.2°
Moon phase =90.67%
Azimuth =330.49°
Elevation =50.21°
Hour Angle =02:44:26.43°
Wind speed =11.59 km/hr = 7.2 miles/hr
Wind Direction =135.0° E of N
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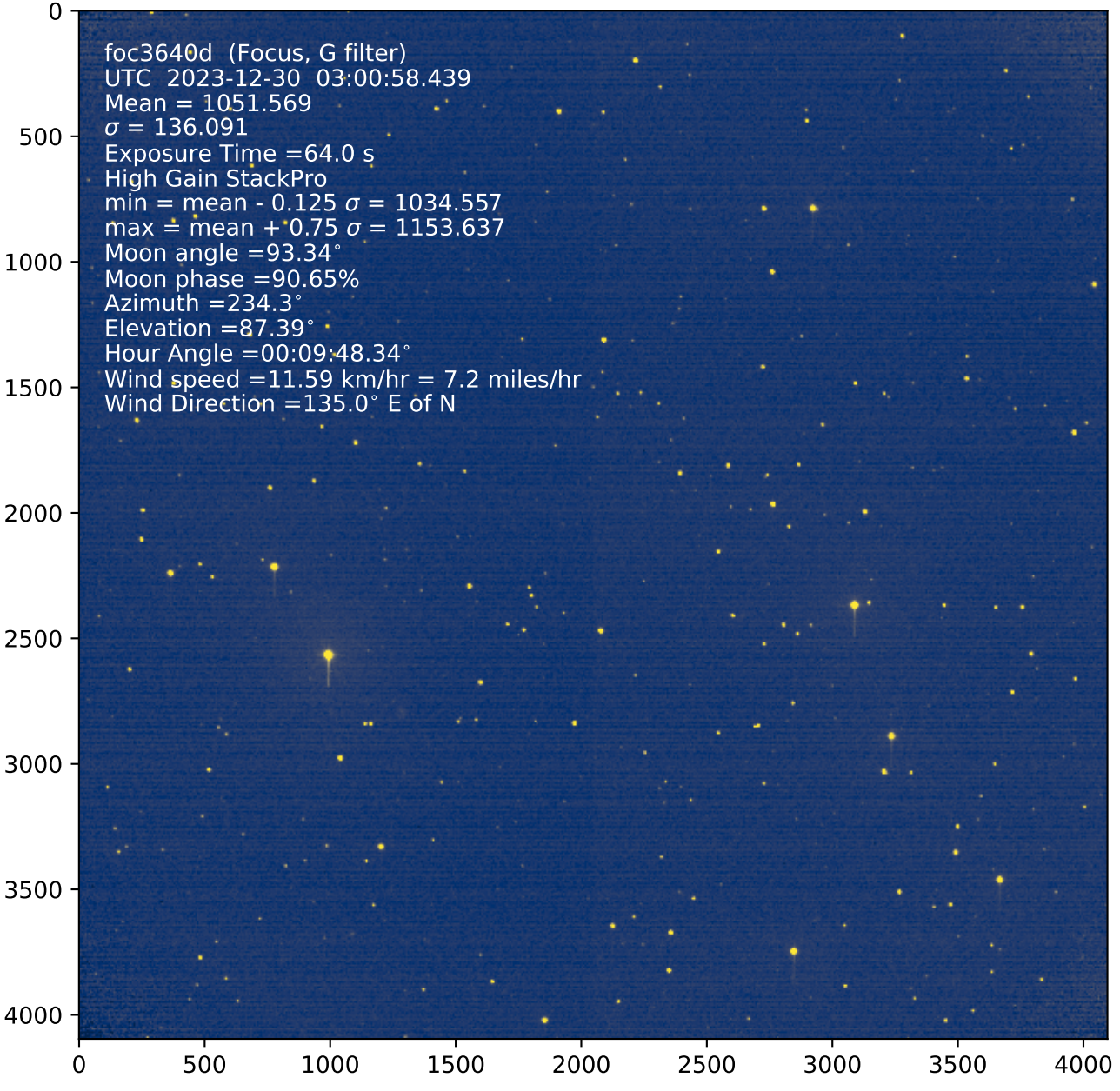
foc3640d (Focus, G filter)
UTC 2023-12-30 03:00:58.439
Mean = 1051.569
σ = 136.091
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 1034.557
max = mean + 0.75 σ = 1153.637
Moon angle =93.34°
Moon phase =90.65%
Azimuth =234.3°
Elevation =87.39°
Hour Angle =00:09:48.34°
Wind speed =11.59 km/hr = 7.2 miles/hr
Wind Direction =135.0° E of N
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2500
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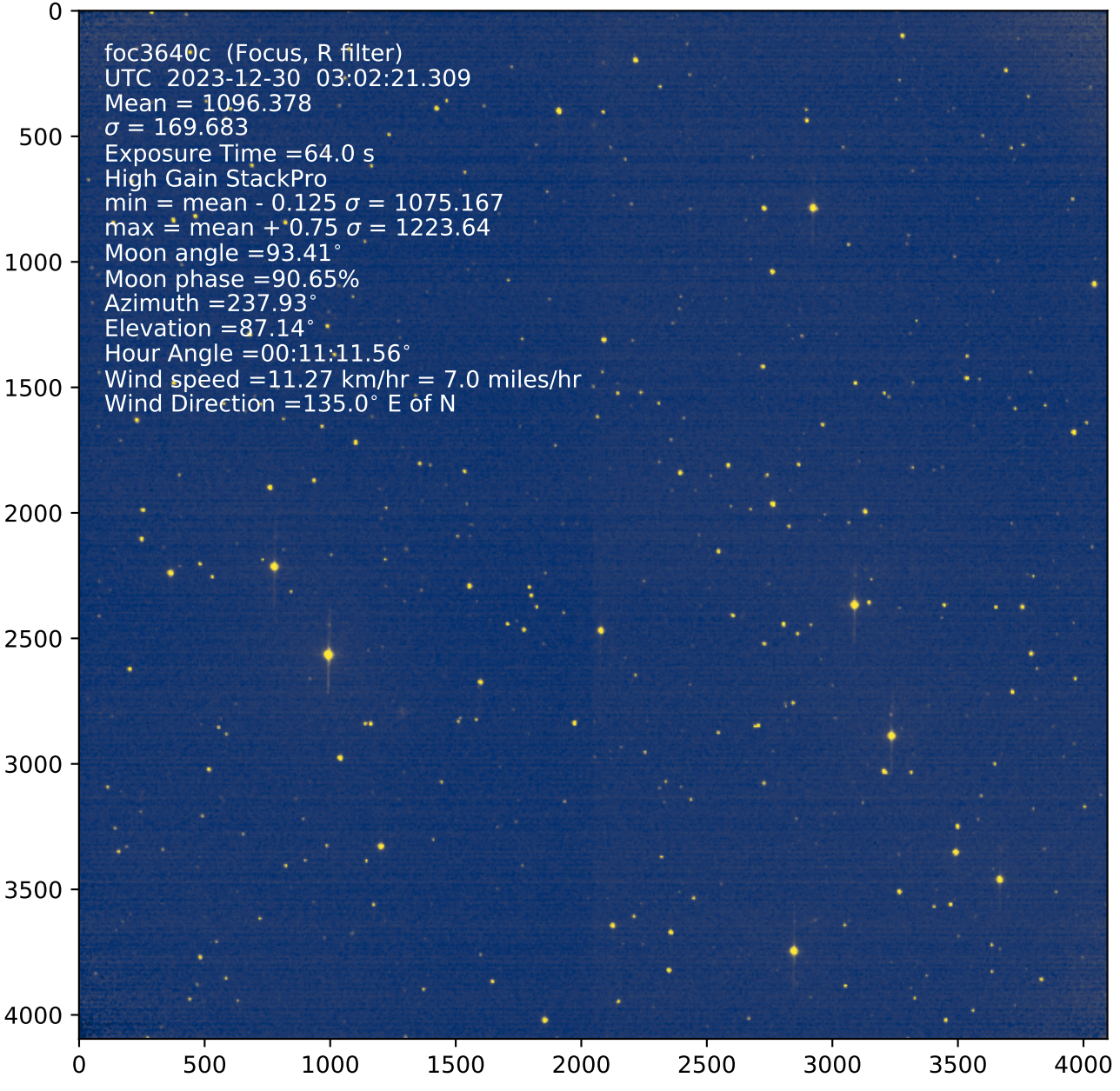
4000


foc3640c (Focus, R filter)
UTC 2023-12-30 03:02:21.309
Mean = 1096.378
σ = 169.683
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 1075.167
max = mean + 0.75 σ = 1223.64
Moon angle =93.41°
Moon phase =90.65%
Azimuth =237.93°
Elevation =87.14°
Hour Angle =00:11:11.56°
Wind speed =11.27 km/hr = 7.0 miles/hr
Wind Direction =135.0° E of N
0
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2500
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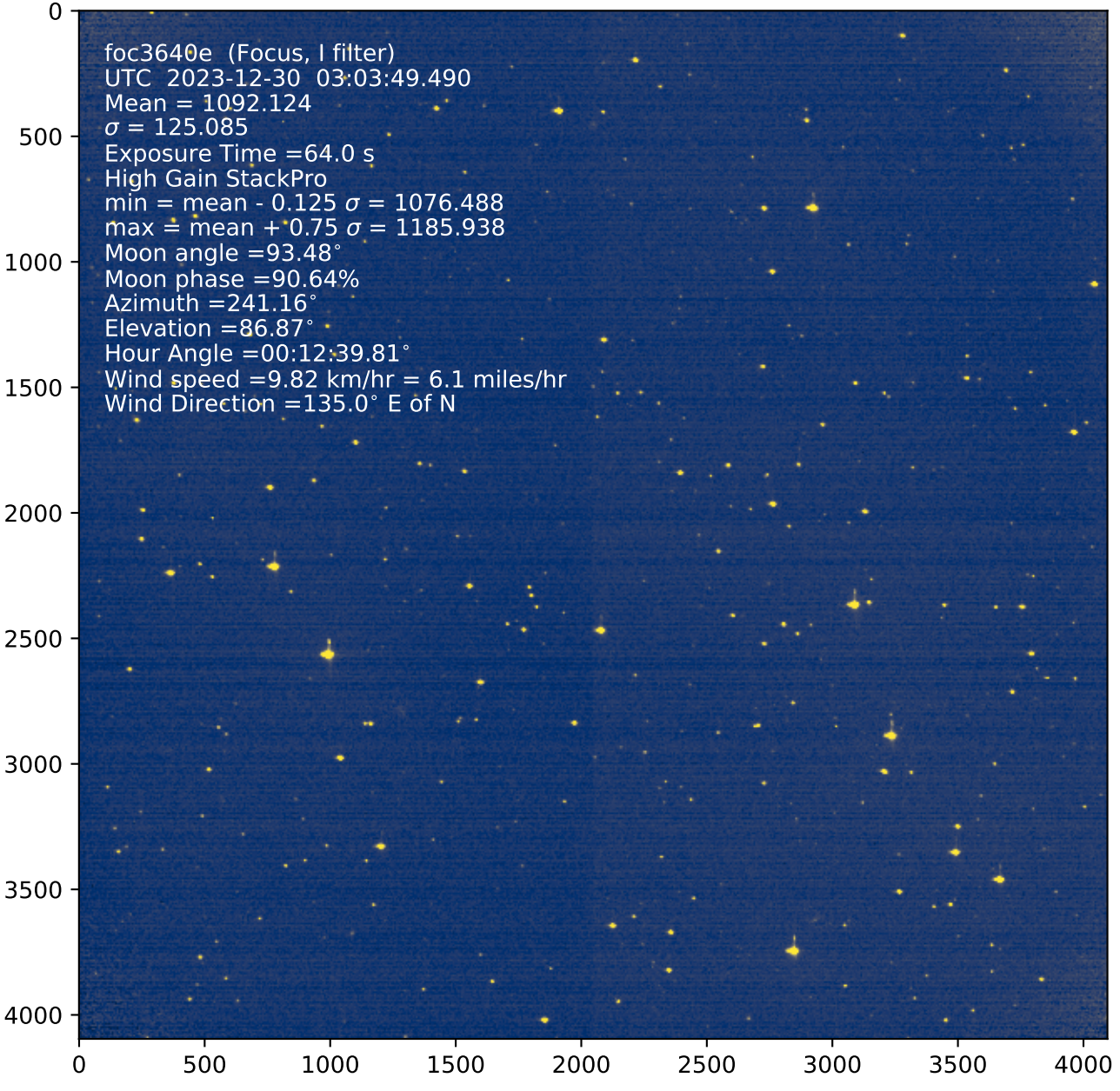
3500
4000


foc3640e (Focus, I filter)
UTC 2023-12-30 03:03:49.490
Mean = 1092.124
σ = 125.085
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 1076.488
max = mean + 0.75 σ = 1185.938
Moon angle =93.48°
Moon phase =90.64%
Azimuth =241.16°
Elevation =86.87°
Hour Angle =00:12:39.81°
Wind speed =9.82 km/hr = 6.1 miles/hr
Wind Direction =135.0° E of N
0
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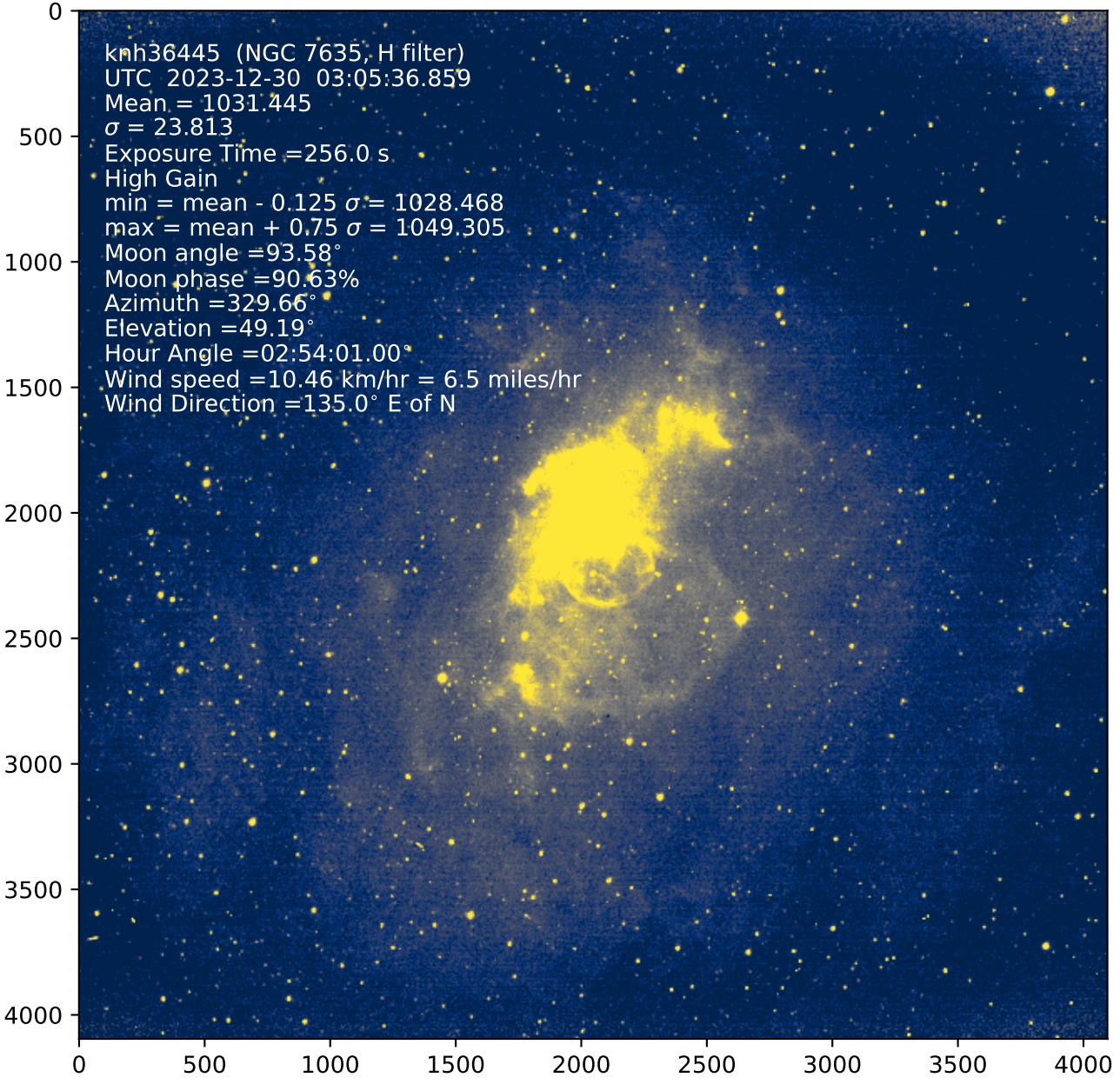
3000
3500
4000


knh36445 (NGC 7635, H filter)
UTC 2023-12-30 03:05:36.859
Mean = 1031.445
σ = 23.813
Exposure Time =256.0 s
High Gain
min = mean - 0.125 σ = 1028.468
max = mean + 0.75 σ = 1049.305
Moon angle =93.58°
Moon phase =90.63%
Azimuth =329.66°
Elevation =49.19°
Hour Angle =02:54:01.00°
Wind speed =10.46 km/hr = 6.5 miles/hr
Wind Direction =135.0° E of N
0
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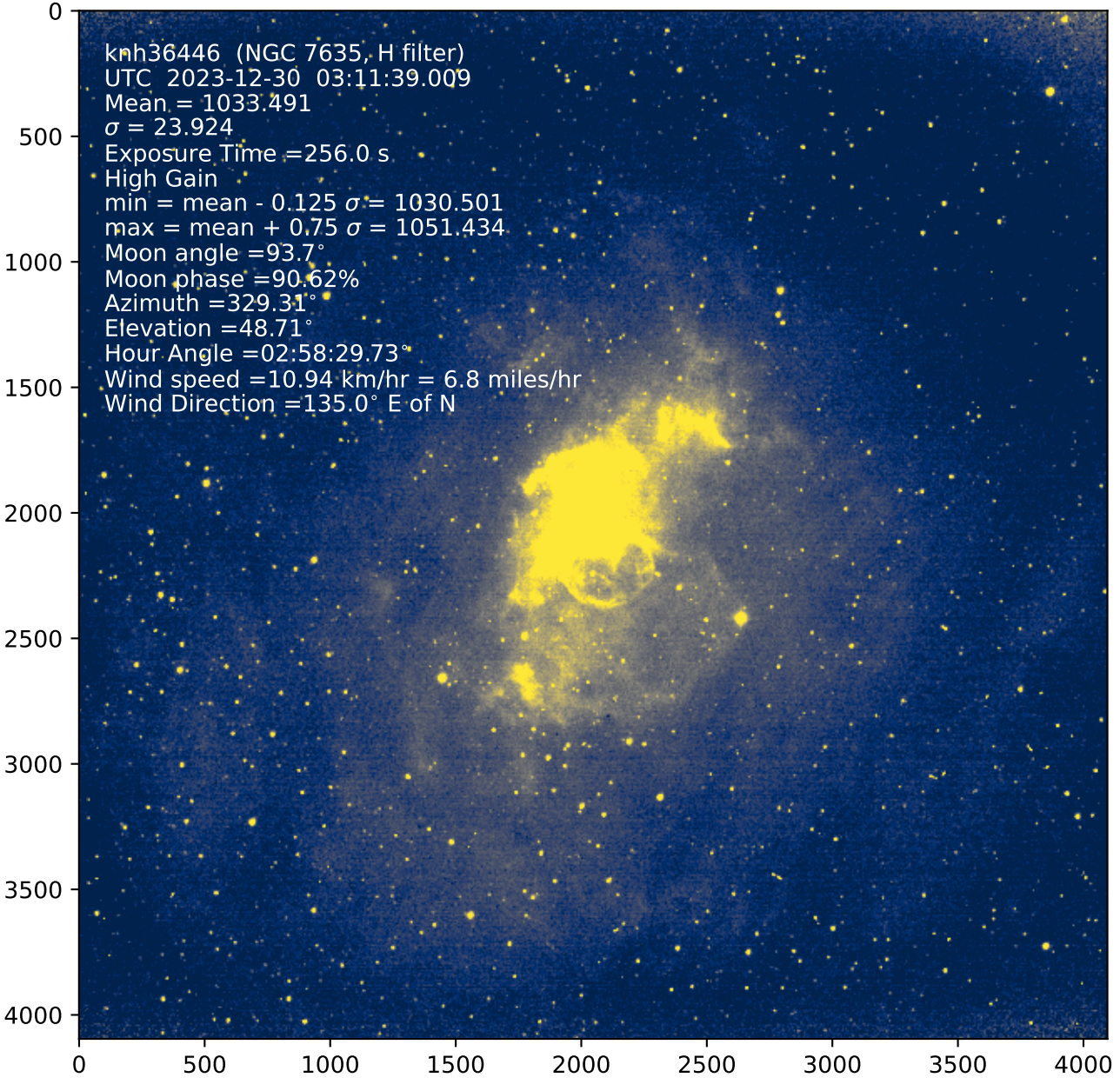
4000


knh36446 (NGC 7635, H filter)
UTC 2023-12-30 03:11:39.009
Mean = 1033.491
σ = 23.924
Exposure Time =256.0 s
High Gain
min = mean - 0.125 σ = 1030.501
max = mean + 0.75 σ = 1051.434
Moon angle =93.7°
Moon phase =90.62%
Azimuth =329.31°
Elevation =48.71°
Hour Angle =02:58:29.73°
Wind speed =10.94 km/hr = 6.8 miles/hr
Wind Direction =135.0° E of N
0
500
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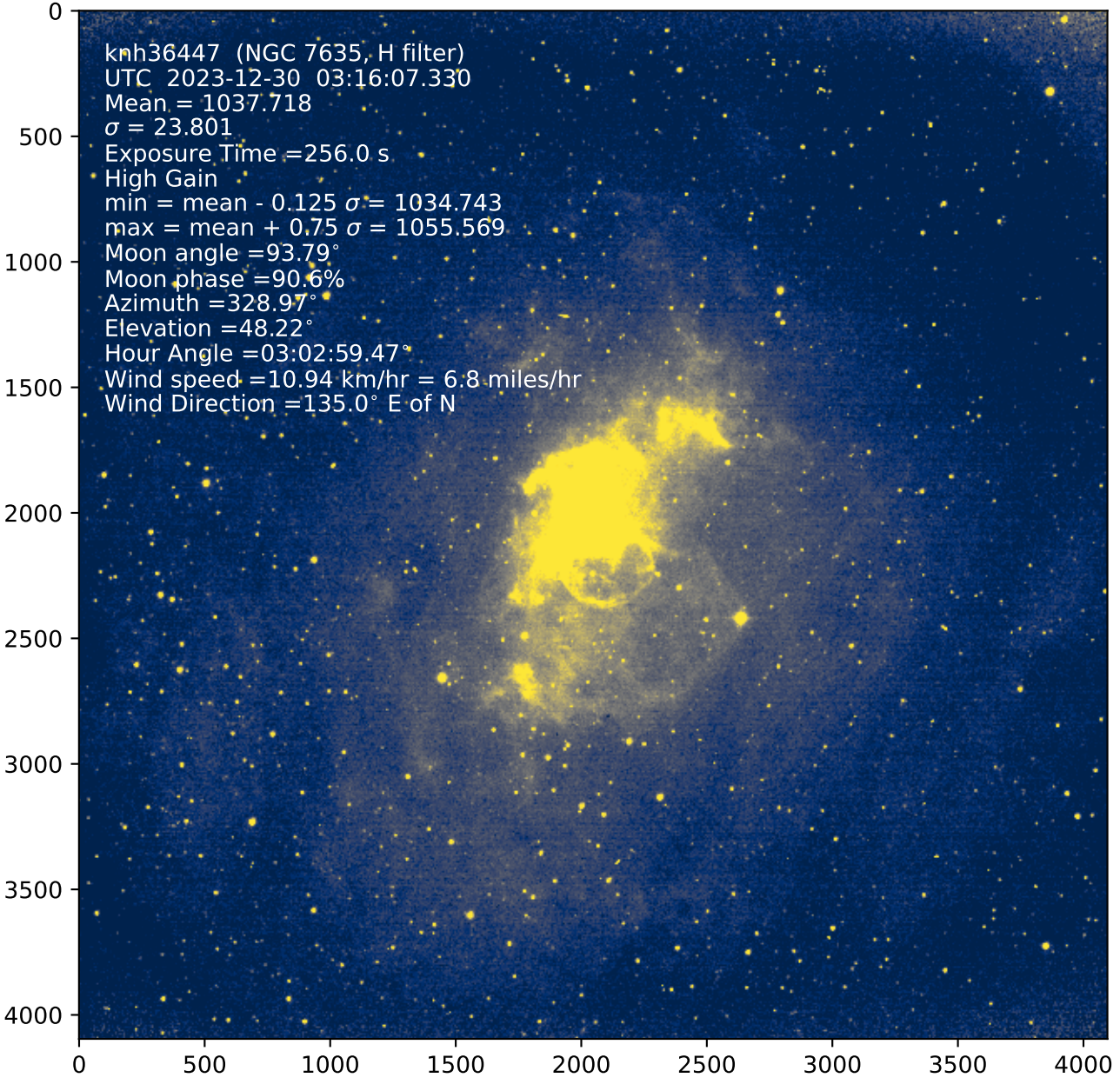
4000


knh36447 (NGC 7635, H filter)
UTC 2023-12-30 03:16:07.330
Mean = 1037.718
σ = 23.801
Exposure Time =256.0 s
High Gain
min = mean - 0.125 σ = 1034.743
max = mean + 0.75 σ = 1055.569
Moon angle =93.79°
Moon phase =90.6%
Azimuth =328.97°
Elevation =48.22°
Hour Angle =03:02:59.47°
Wind speed =10.94 km/hr = 6.8 miles/hr
Wind Direction =135.0° E of N
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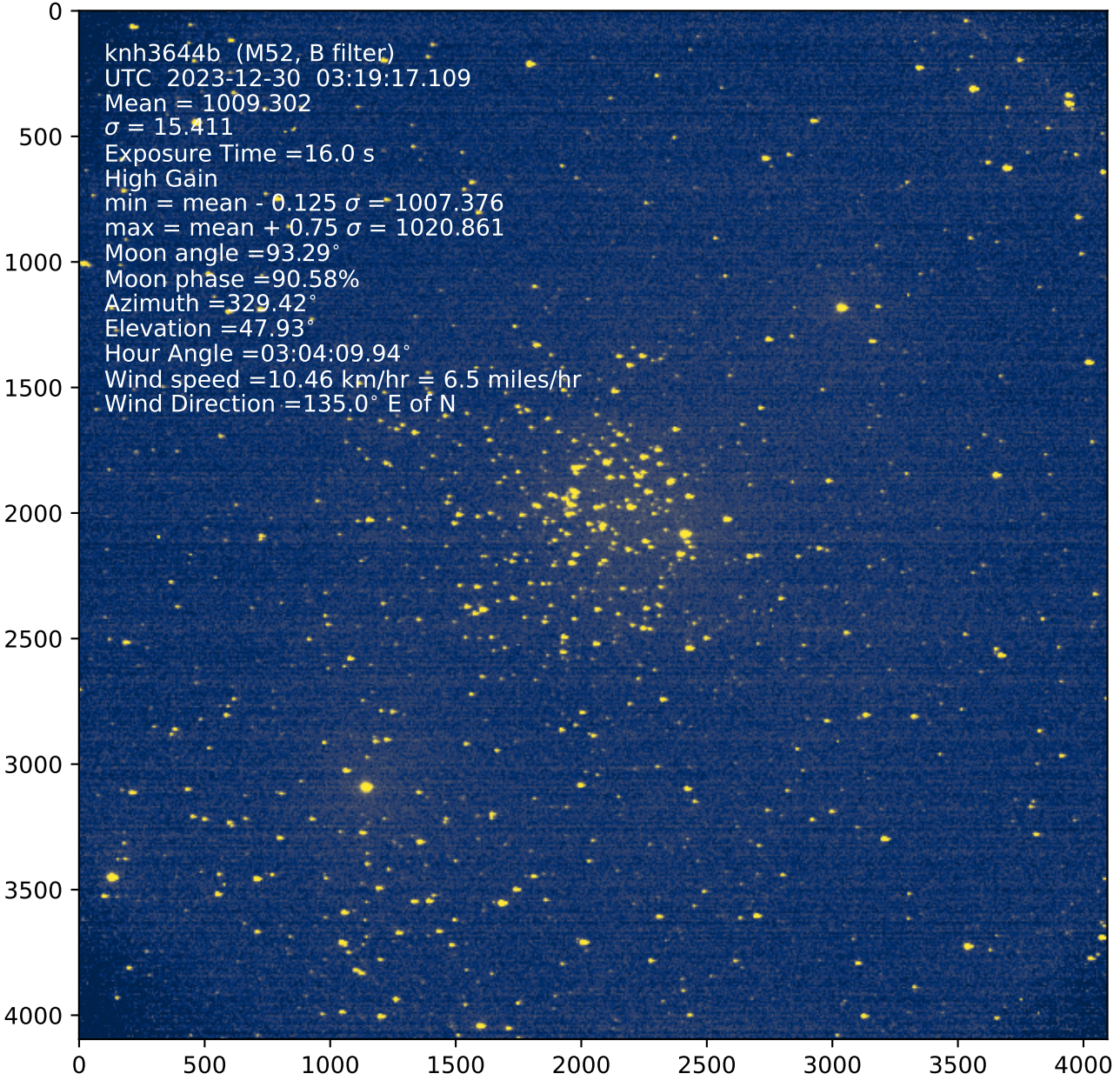
knh3644b (M52, B filter)
UTC 2023-12-30 03:19:17.109
Mean = 1009.302
σ = 15.411
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1007.376
max = mean + 0.75 σ = 1020.861
Moon angle =93.29°
Moon phase =90.58%
Azimuth =329.42°
Elevation =47.93°
Hour Angle =03:04:09.94°
Wind speed =10.46 km/hr = 6.5 miles/hr
Wind Direction =135.0° E of N
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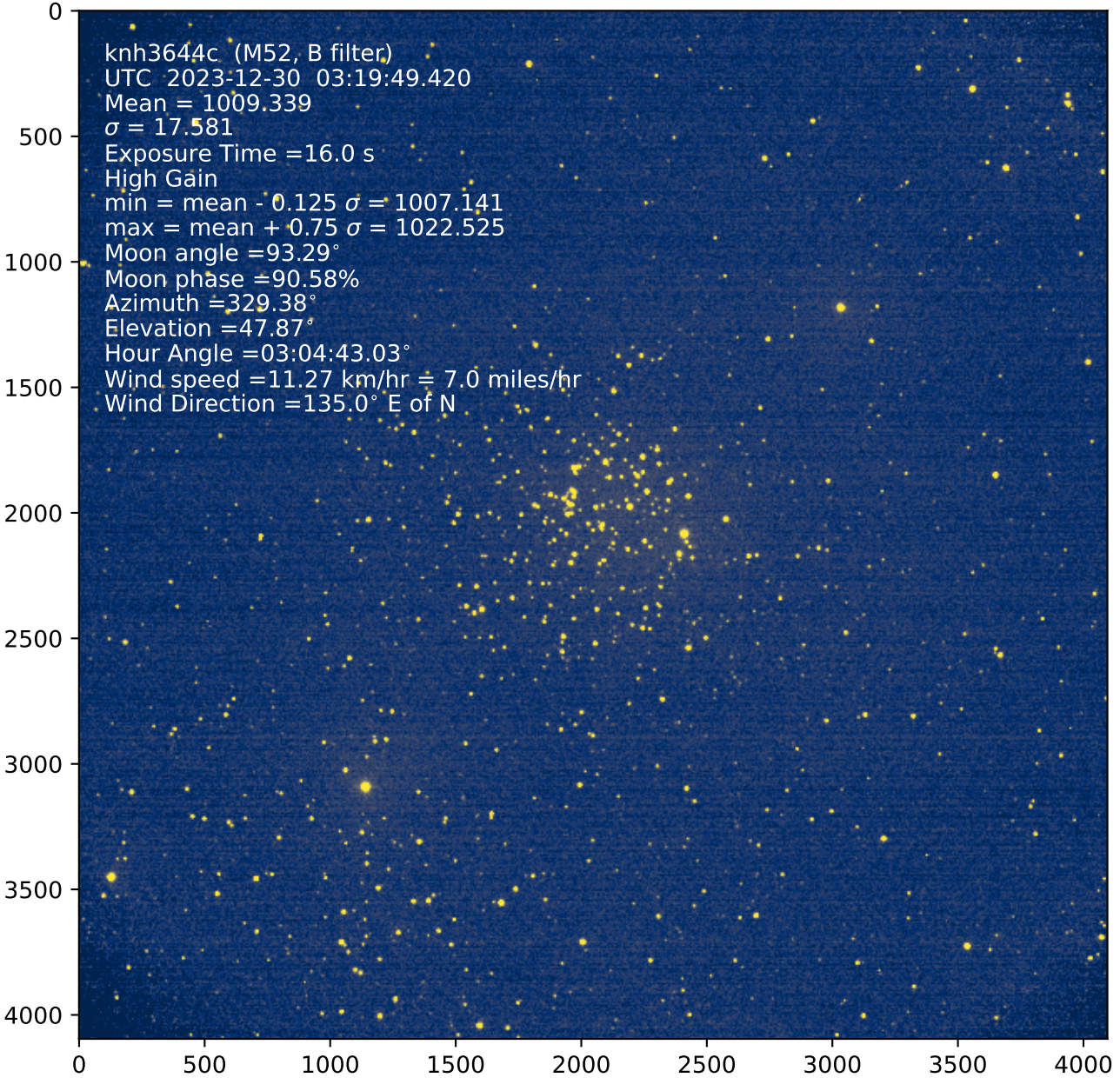
knh3644c (M52, B filter)
UTC 2023-12-30 03:19:49.420
Mean = 1009.339
σ = 17.581
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1007.141
max = mean + 0.75 σ = 1022.525
Moon angle =93.29°
Moon phase =90.58%
Azimuth =329.38°
Elevation =47.87°
Hour Angle =03:04:43.03°
Wind speed =11.27 km/hr = 7.0 miles/hr
Wind Direction =135.0° E of N
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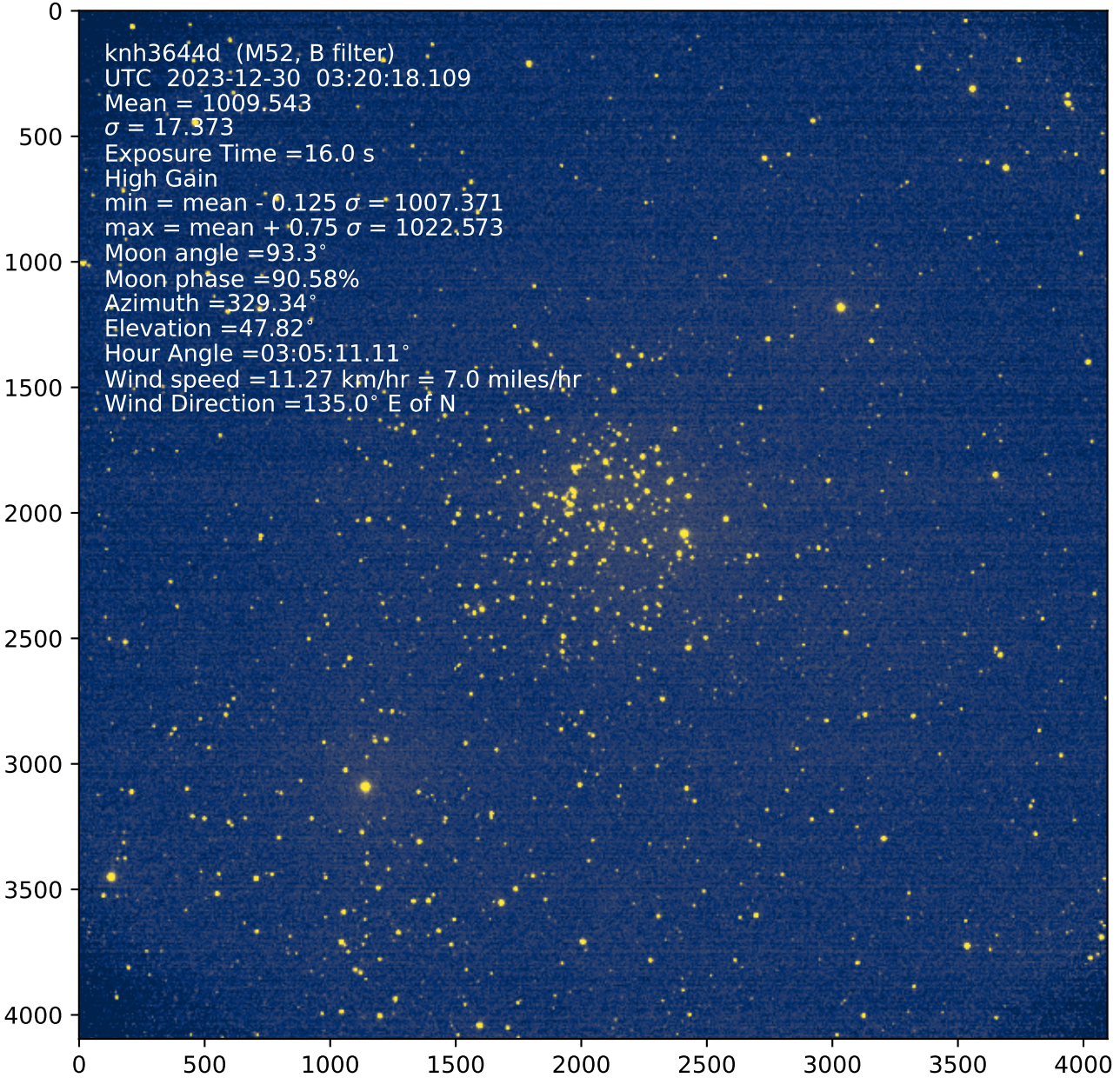
knh3644d (M52, B filter)
UTC 2023-12-30 03:20:18.109
Mean = 1009.543
σ = 17.373
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1007.371
max = mean + 0.75 σ = 1022.573
Moon angle =93.3°
Moon phase =90.58%
Azimuth =329.34°
Elevation =47.82°
Hour Angle =03:05:11.11°
Wind speed =11.27 km/hr = 7.0 miles/hr
Wind Direction =135.0° E of N
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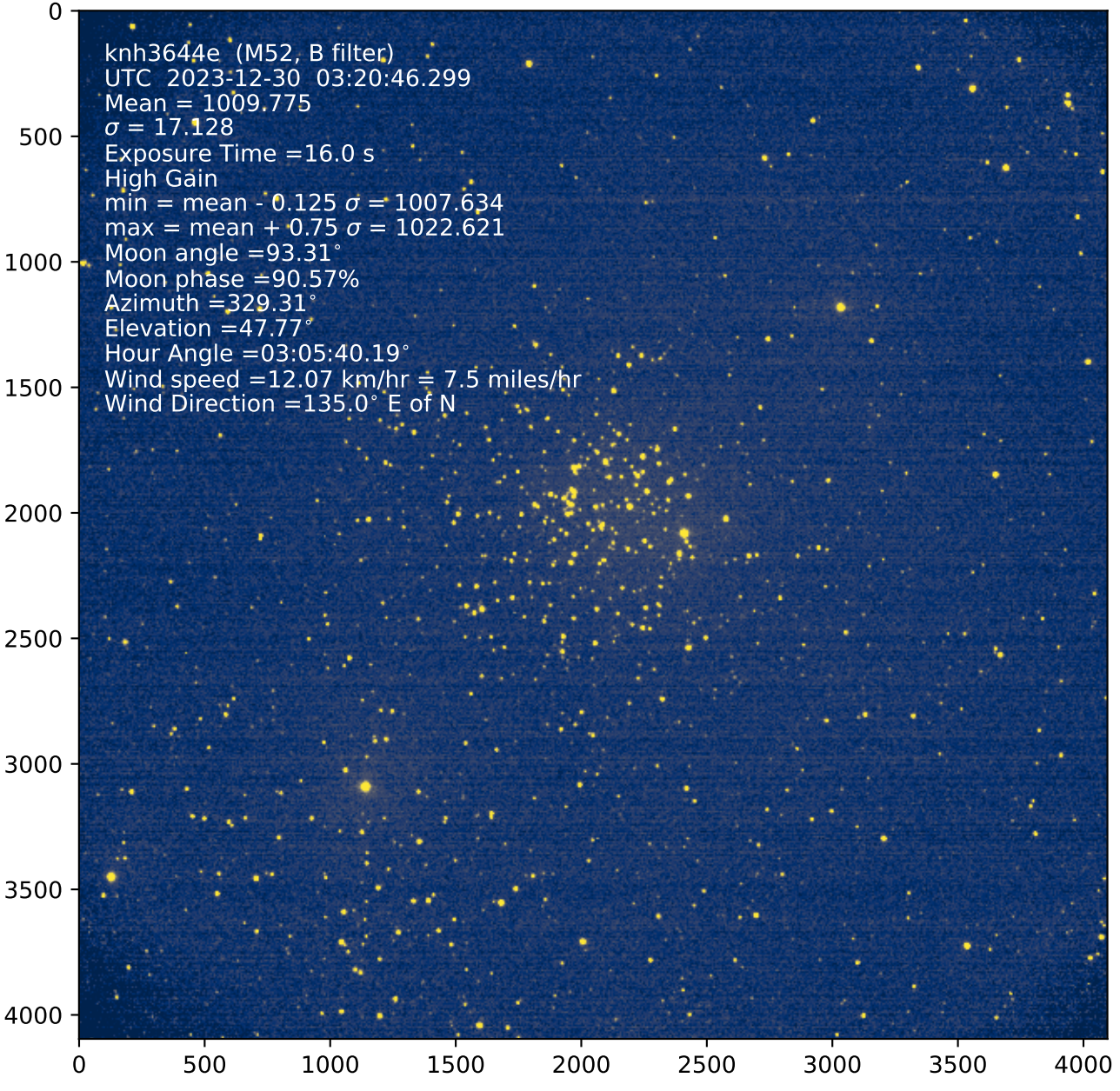
knh3644e (M52, B filter)
UTC 2023-12-30 03:20:46.299
Mean = 1009.775
σ = 17.128
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1007.634
max = mean + 0.75 σ = 1022.621
Moon angle =93.31°
Moon phase =90.57%
Azimuth =329.31°
Elevation =47.77°
Hour Angle =03:05:40.19°
Wind speed =12.07 km/hr = 7.5 miles/hr
Wind Direction =135.0° E of N
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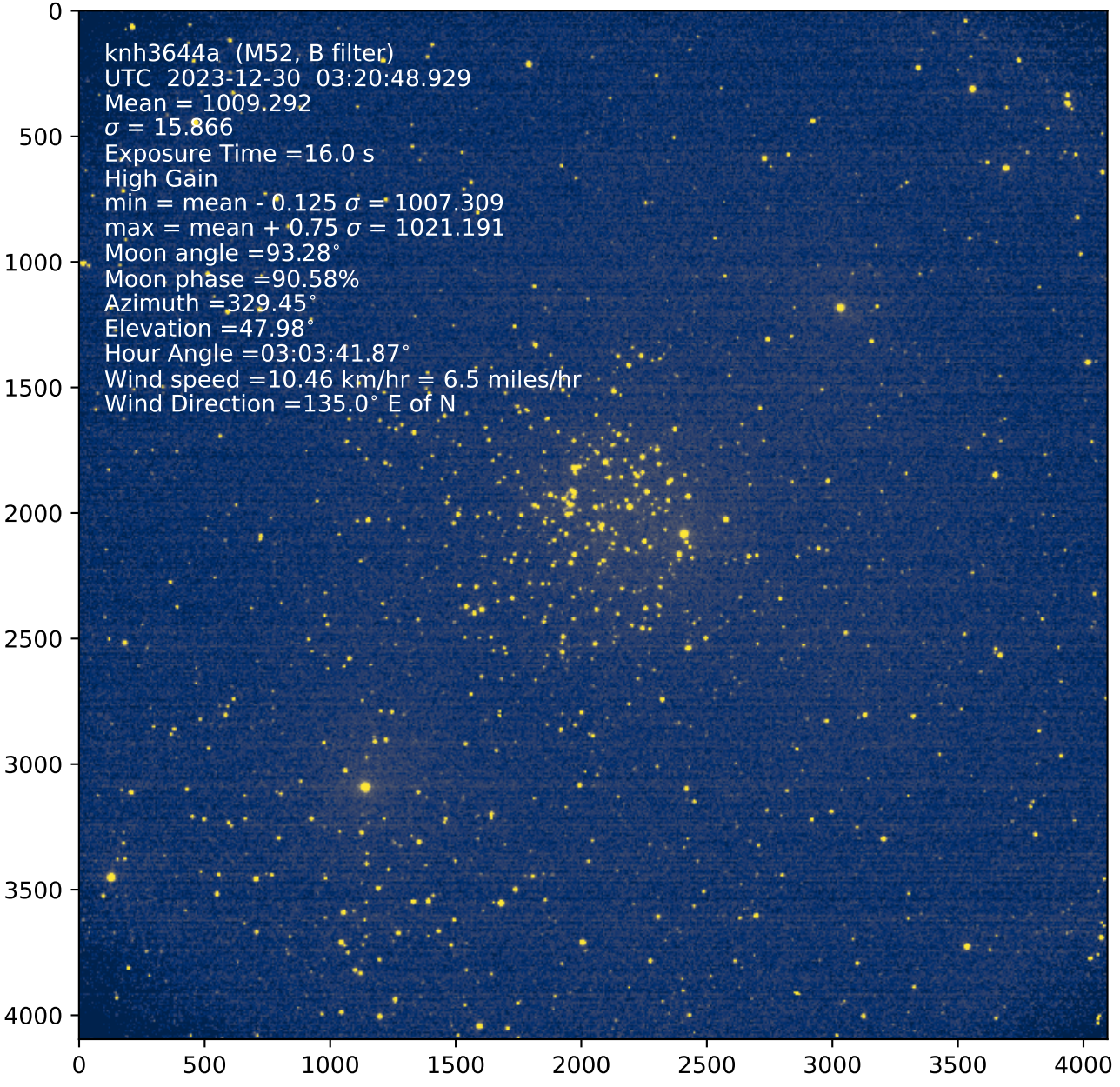
knh3644a (M52, B filter)
UTC 2023-12-30 03:20:48.929
Mean = 1009.292
σ = 15.866
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1007.309
max = mean + 0.75 σ = 1021.191
Moon angle =93.28°
Moon phase =90.58%
Azimuth =329.45°
Elevation =47.98°
Hour Angle =03:03:41.87°
Wind speed =10.46 km/hr = 6.5 miles/hr
Wind Direction =135.0° E of N
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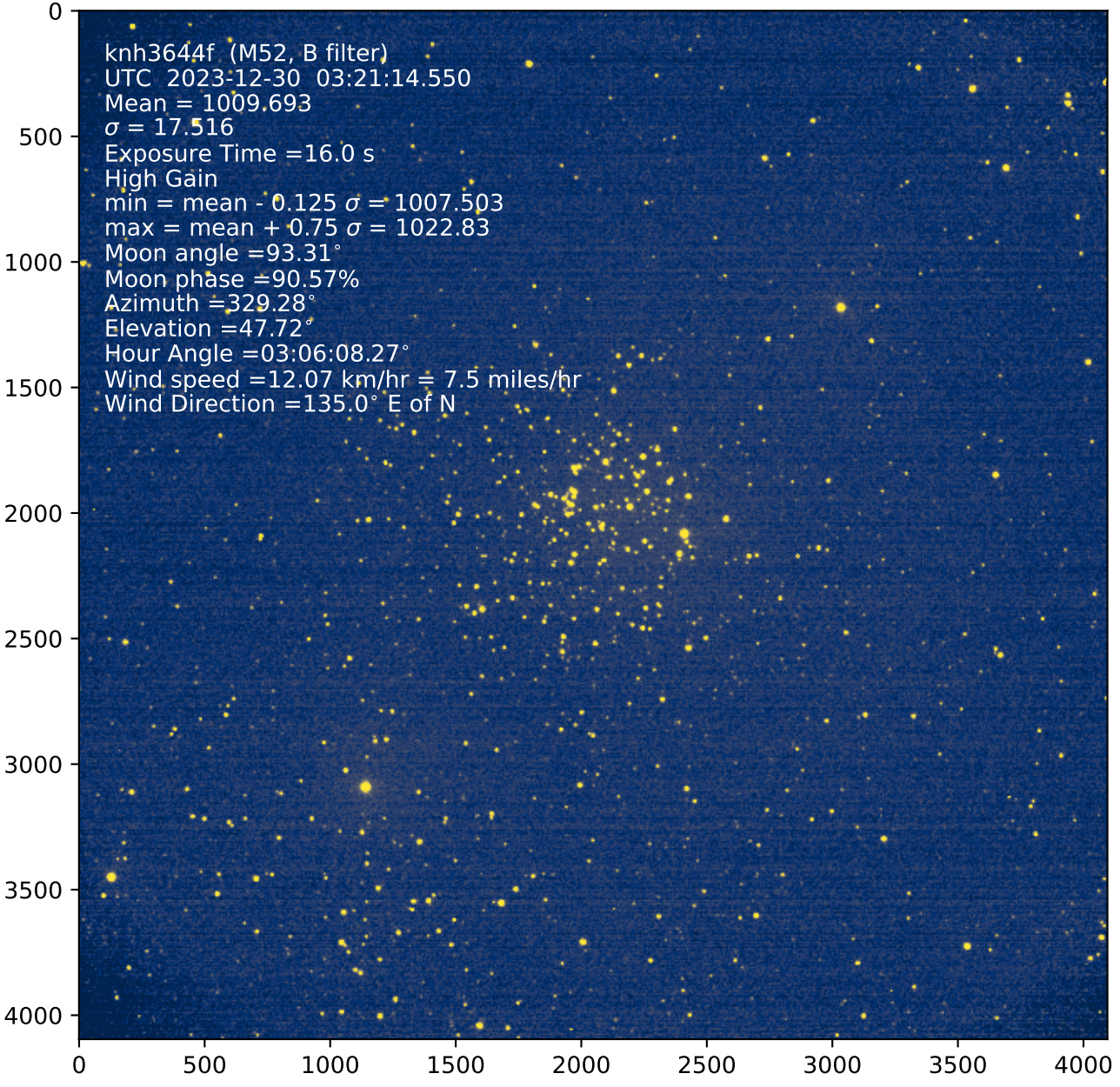
knh3644f (M52, B filter)
UTC 2023-12-30 03:21:14.550
Mean = 1009.693
σ = 17.516
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1007.503
max = mean + 0.75 σ = 1022.83
Moon angle =93.31°
Moon phase =90.57%
Azimuth =329.28°
Elevation =47.72°
Hour Angle =03:06:08.27°
Wind speed =12.07 km/hr = 7.5 miles/hr
Wind Direction =135.0° E of N
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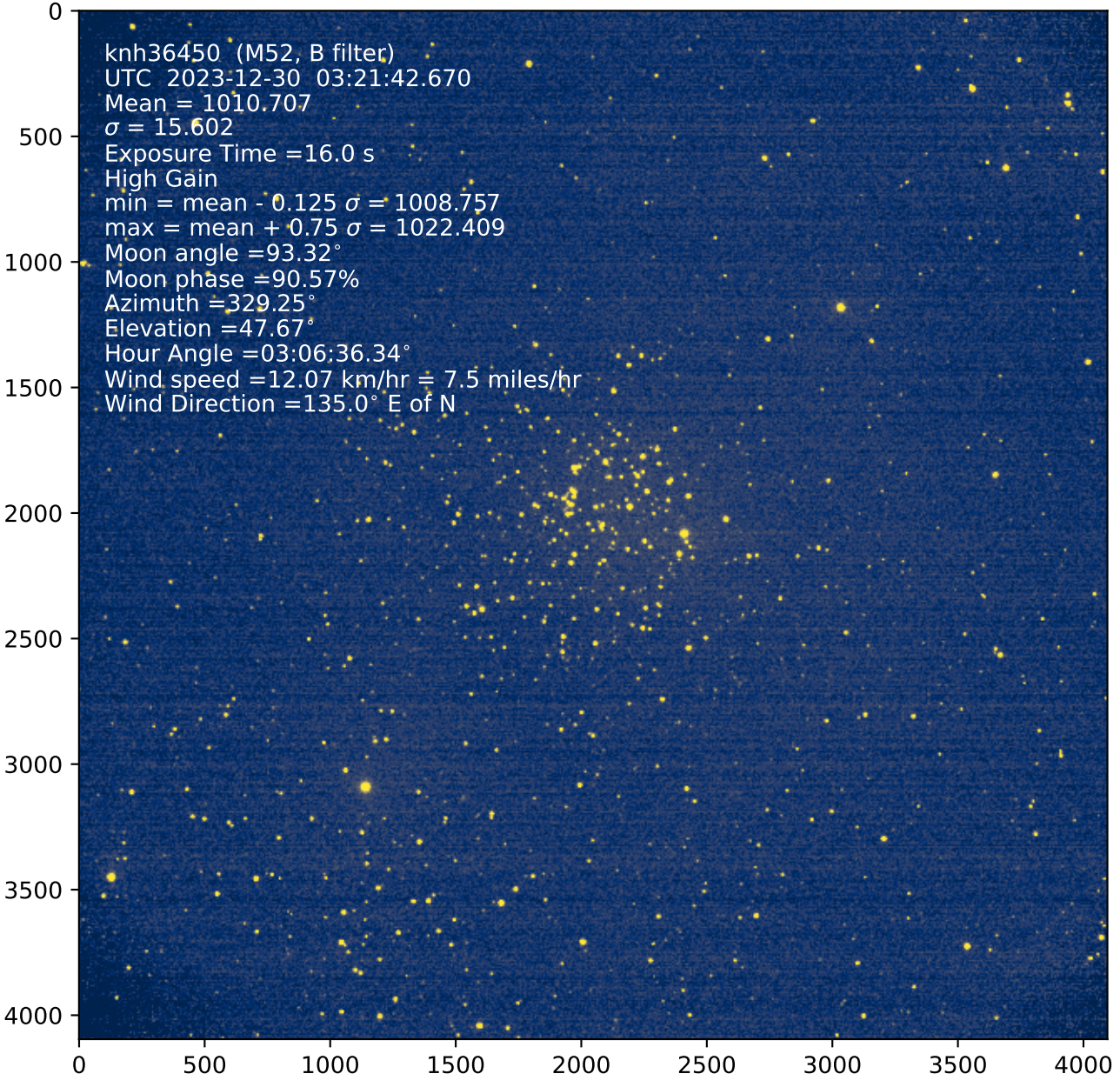
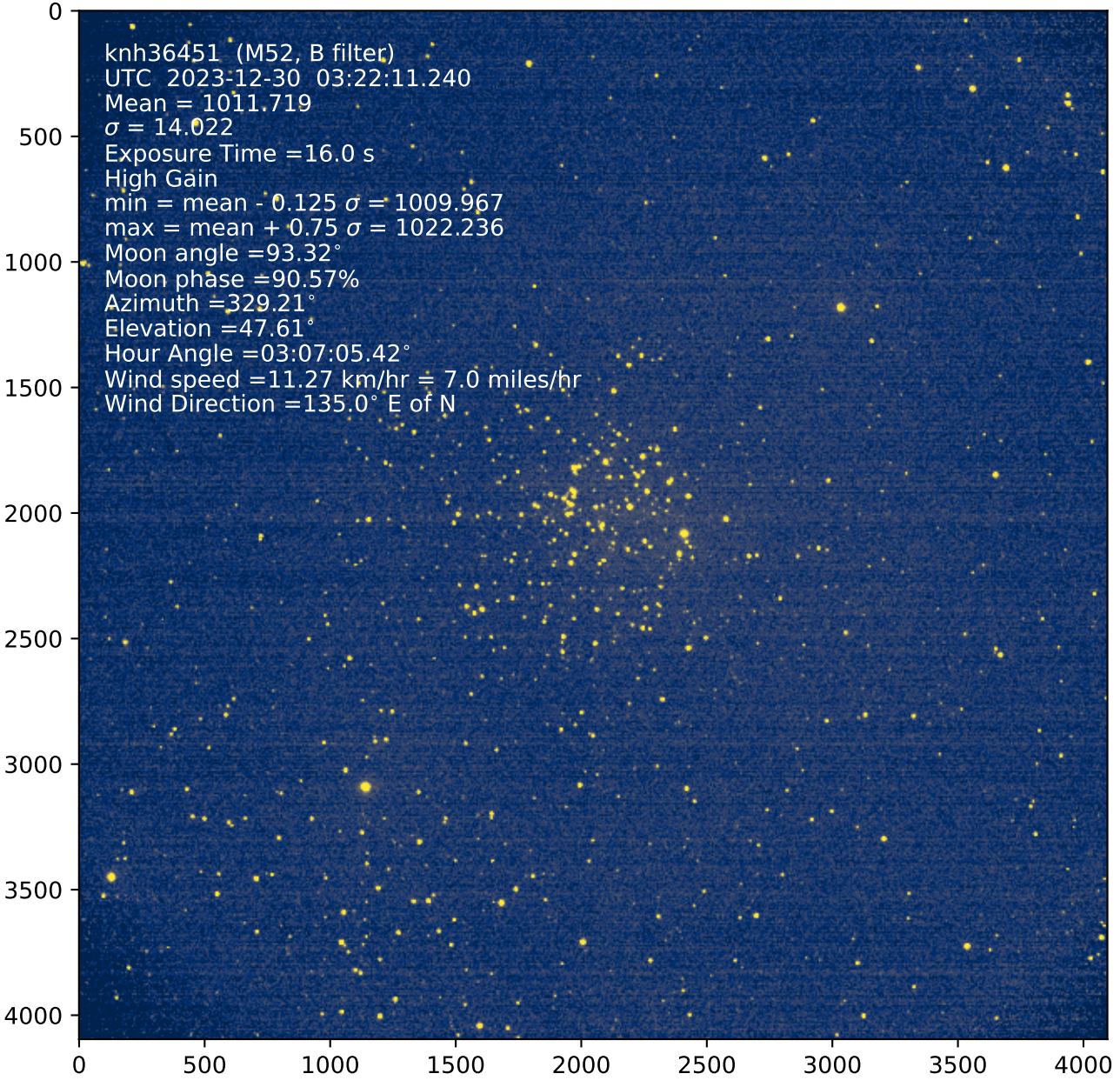
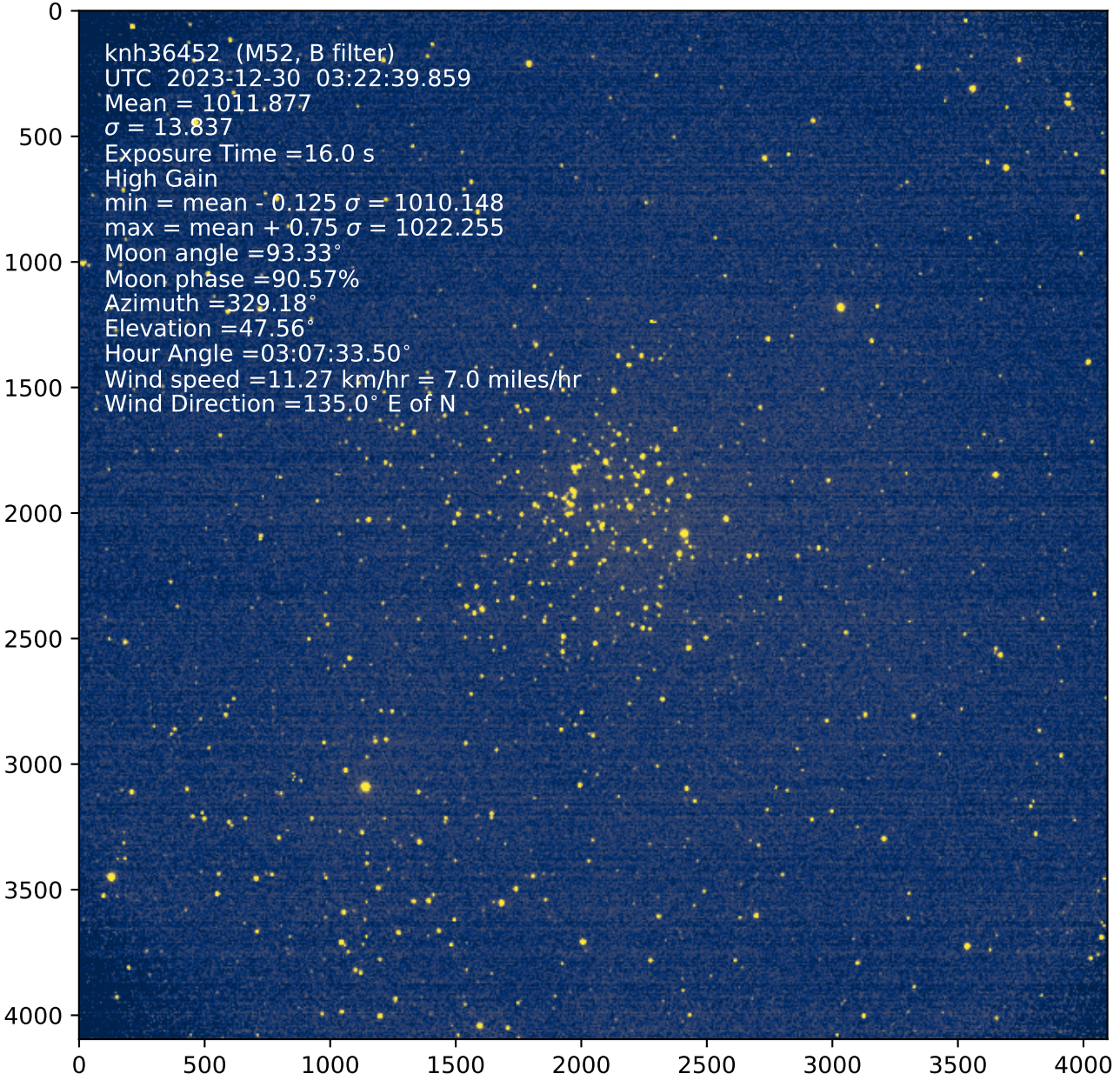
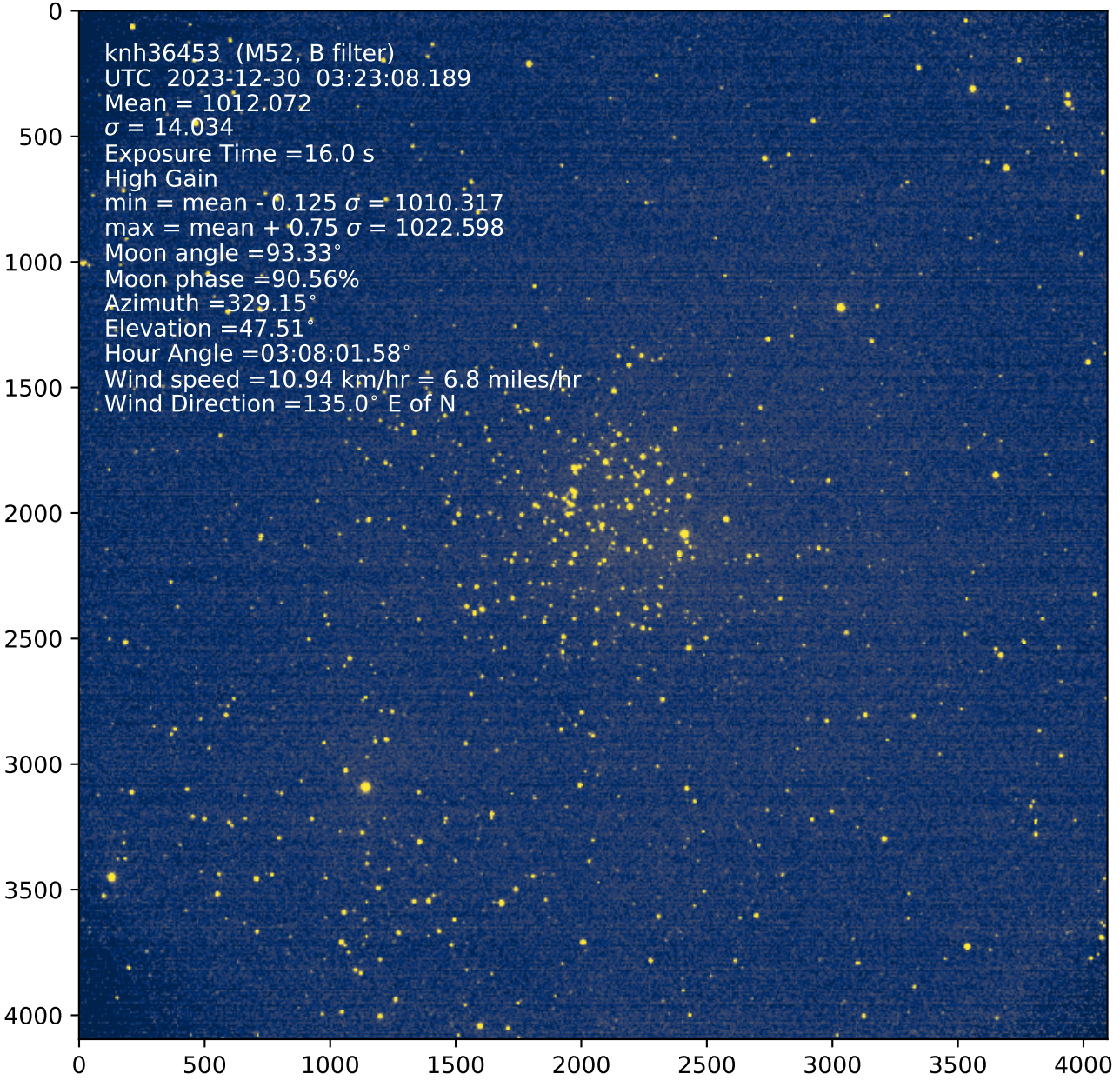

knh36450 (M52, B filter)
UTC 2023-12-30 03:21:42.670
Mean = 1010.707
σ = 15.602
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1008.757
max = mean + 0.75 σ = 1022.409
Moon angle =93.32°
Moon phase =90.57%
Azimuth =329.25°
Elevation =47.67°
Hour Angle =03:06:36.34°
Wind speed =12.07 km/hr = 7.5 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh36451 (M52, B filter)
UTC 2023-12-30 03:22:11.240
Mean = 1011.719
σ = 14.022
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1009.967
max = mean + 0.75 σ = 1022.236
Moon angle =93.32°
Moon phase =90.57%
Azimuth =329.21°
Elevation =47.61°
Hour Angle =03:07:05.42°
Wind speed =11.27 km/hr = 7.0 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh36452 (M52, B filter)
UTC 2023-12-30 03:22:39.859
Mean = 1011.877
σ = 13.837
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1010.148
max = mean + 0.75 σ = 1022.255
Moon angle =93.33°
Moon phase =90.57%
Azimuth =329.18°
Elevation =47.56°
Hour Angle =03:07:33.50°
Wind speed =11.27 km/hr = 7.0 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh36453 (M52, B filter)
UTC 2023-12-30 03:23:08.189
Mean = 1012.072
σ = 14.034
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1010.317
max = mean + 0.75 σ = 1022.598
Moon angle =93.33°
Moon phase =90.56%
Azimuth =329.15°
Elevation =47.51°
Hour Angle =03:08:01.58°
Wind speed =10.94 km/hr = 6.8 miles/hr
Wind Direction =135.0° E of N
0
500
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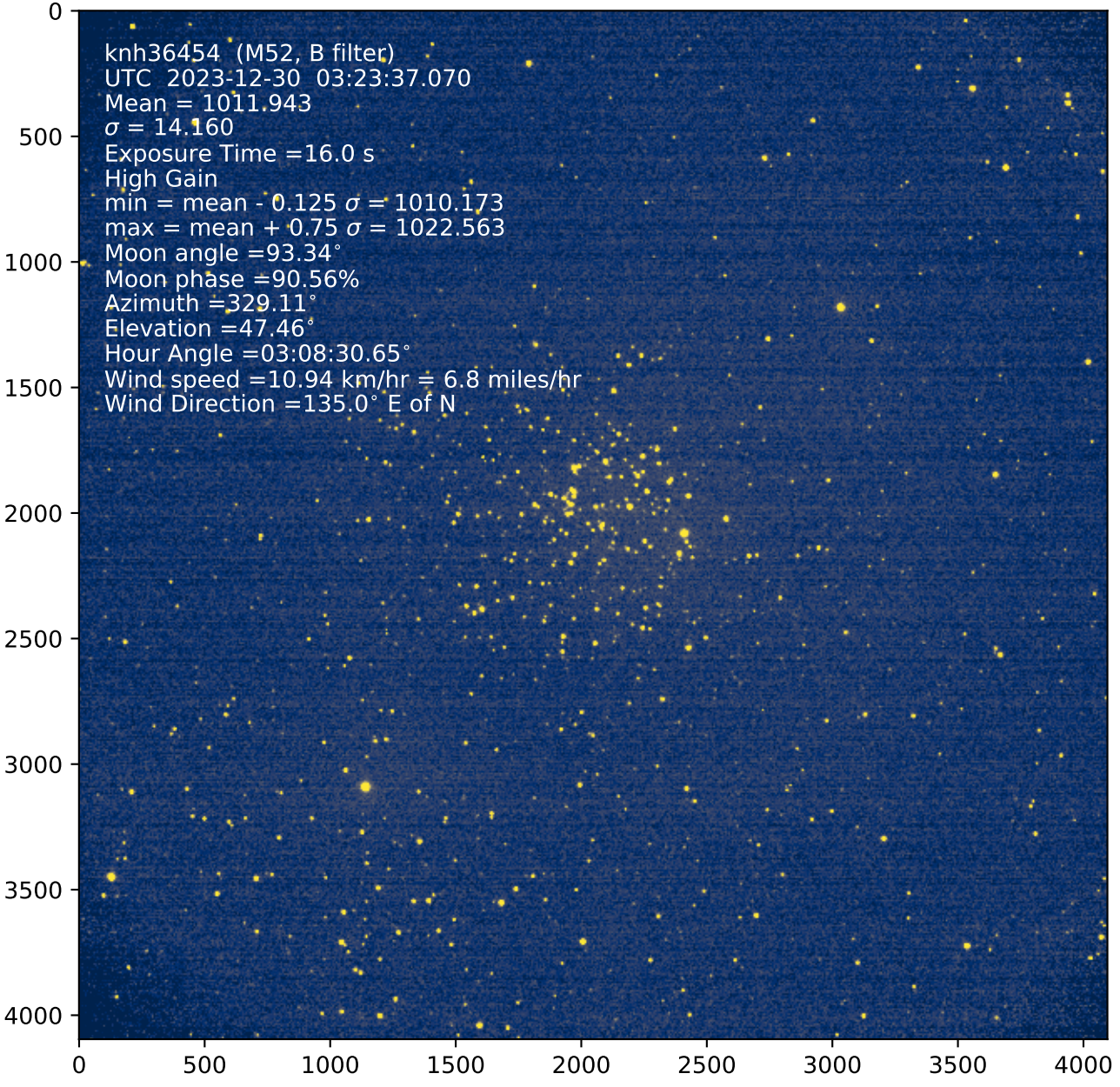
1500
2000
2500
3000
3500
4000


knh36454 (M52, B filter)
UTC 2023-12-30 03:23:37.070
Mean = 1011.943
σ = 14.160
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1010.173
max = mean + 0.75 σ = 1022.563
Moon angle =93.34°
Moon phase =90.56%
Azimuth =329.11°
Elevation =47.46°
Hour Angle =03:08:30.65°
Wind speed =10.94 km/hr = 6.8 miles/hr
Wind Direction =135.0° E of N
0
500
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3500
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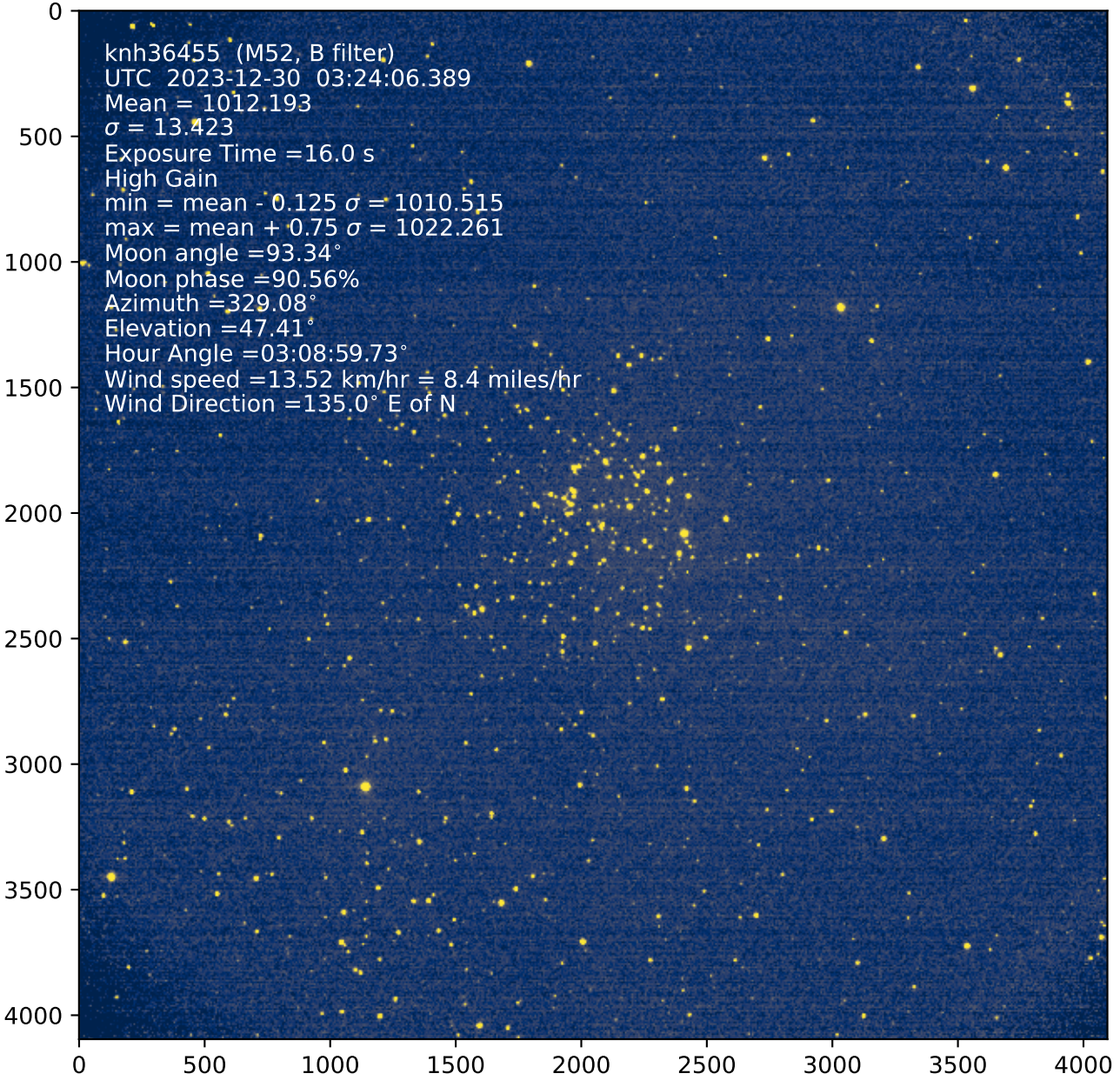
knh36455 (M52, B filter)
UTC 2023-12-30 03:24:06.389
Mean = 1012.193
σ = 13.423
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1010.515
max = mean + 0.75 σ = 1022.261
Moon angle =93.34°
Moon phase =90.56%
Azimuth =329.08°
Elevation =47.41°
Hour Angle =03:08:59.73°
Wind speed =13.52 km/hr = 8.4 miles/hr
Wind Direction =135.0° E of N
0
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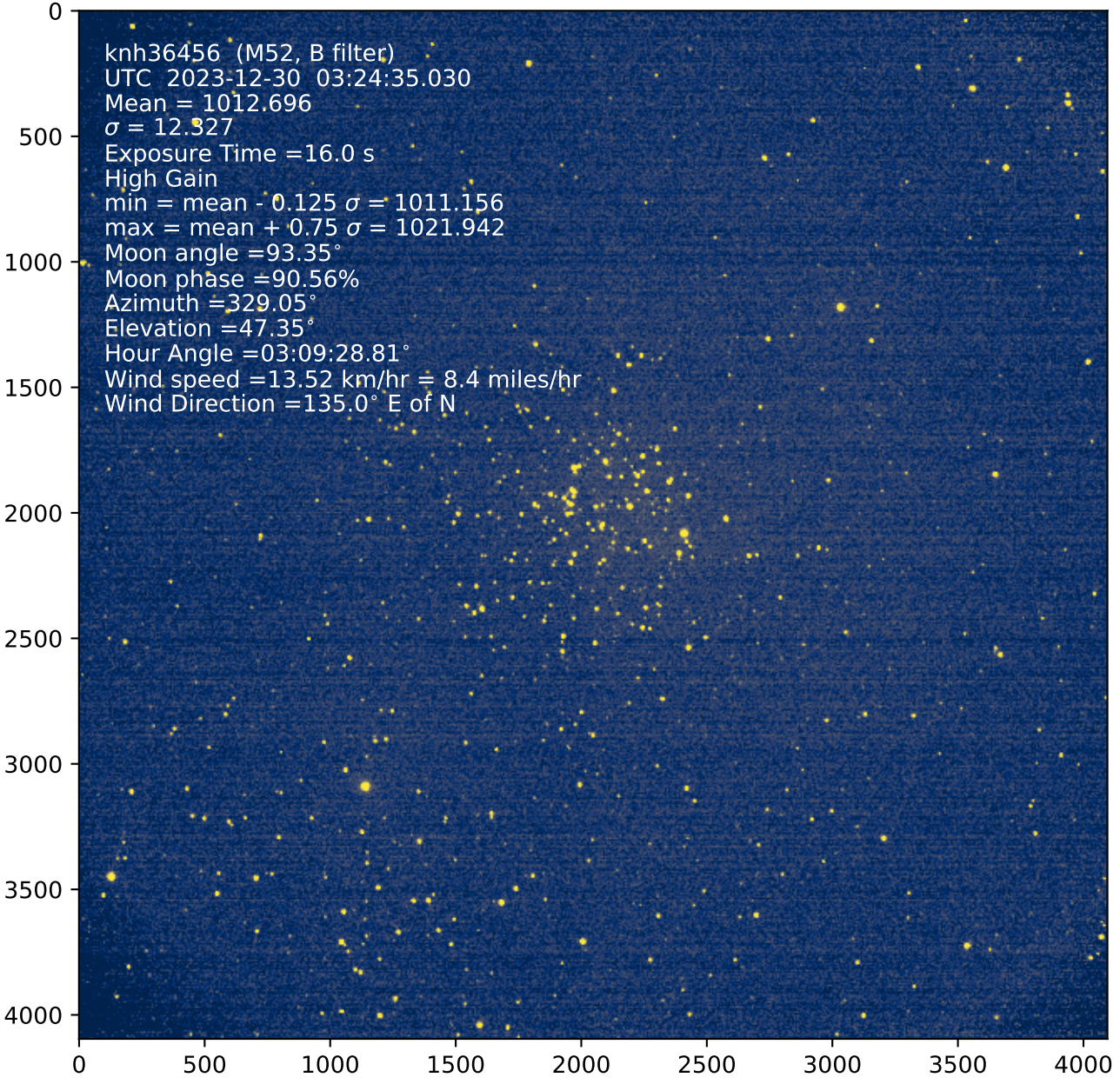
knh36456 (M52, B filter)
UTC 2023-12-30 03:24:35.030
Mean = 1012.696
σ = 12.327
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1011.156
max = mean + 0.75 σ = 1021.942
Moon angle =93.35°
Moon phase =90.56%
Azimuth =329.05°
Elevation =47.35°
Hour Angle =03:09:28.81°
Wind speed =13.52 km/hr = 8.4 miles/hr
Wind Direction =135.0° E of N
0
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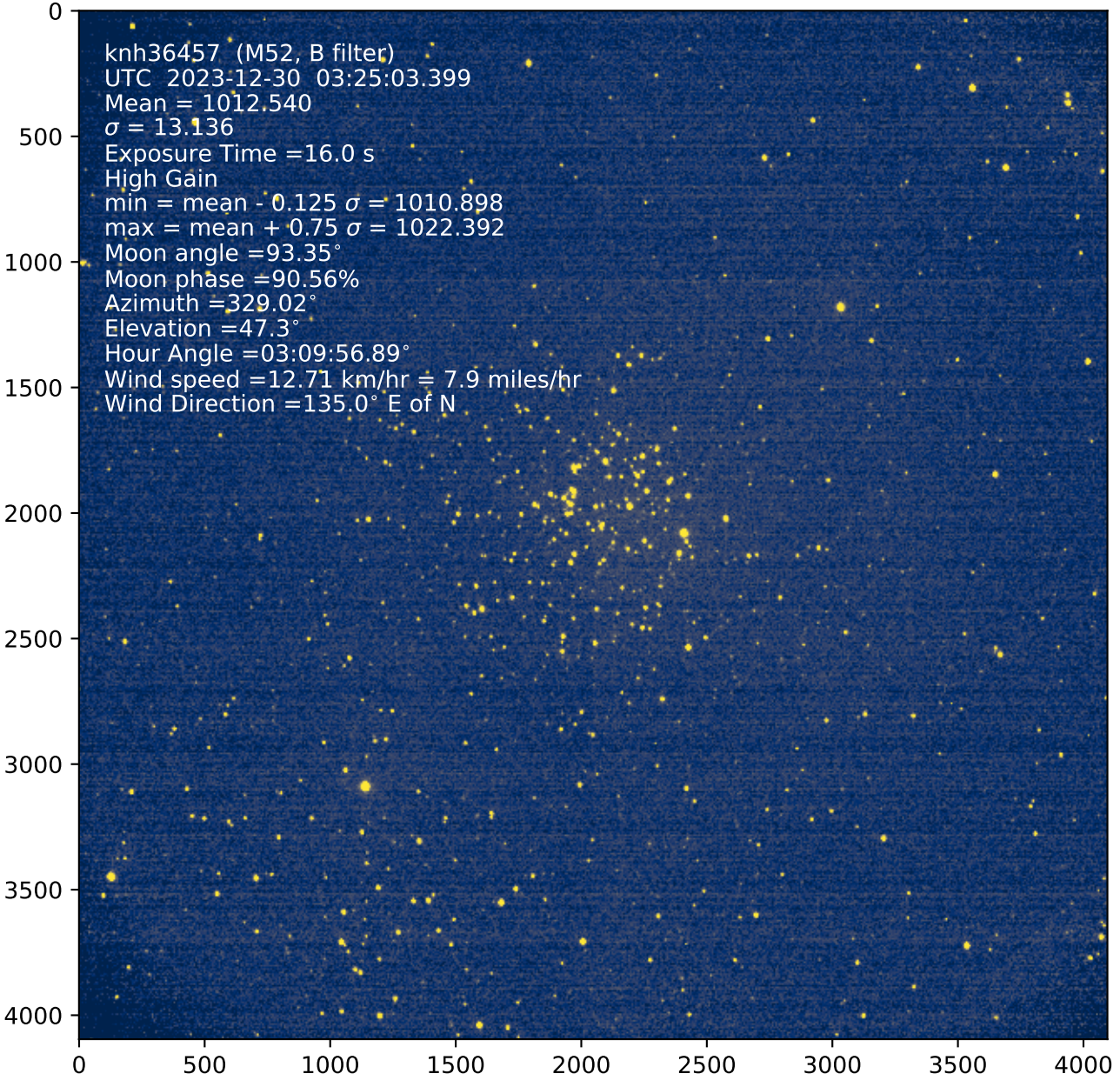
knh36457 (M52, B filter)
UTC 2023-12-30 03:25:03.399
Mean = 1012.540
σ = 13.136
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1010.898
max = mean + 0.75 σ = 1022.392
Moon angle =93.35°
Moon phase =90.56%
Azimuth =329.02°
Elevation =47.3°
Hour Angle =03:09:56.89°
Wind speed =12.71 km/hr = 7.9 miles/hr
Wind Direction =135.0° E of N
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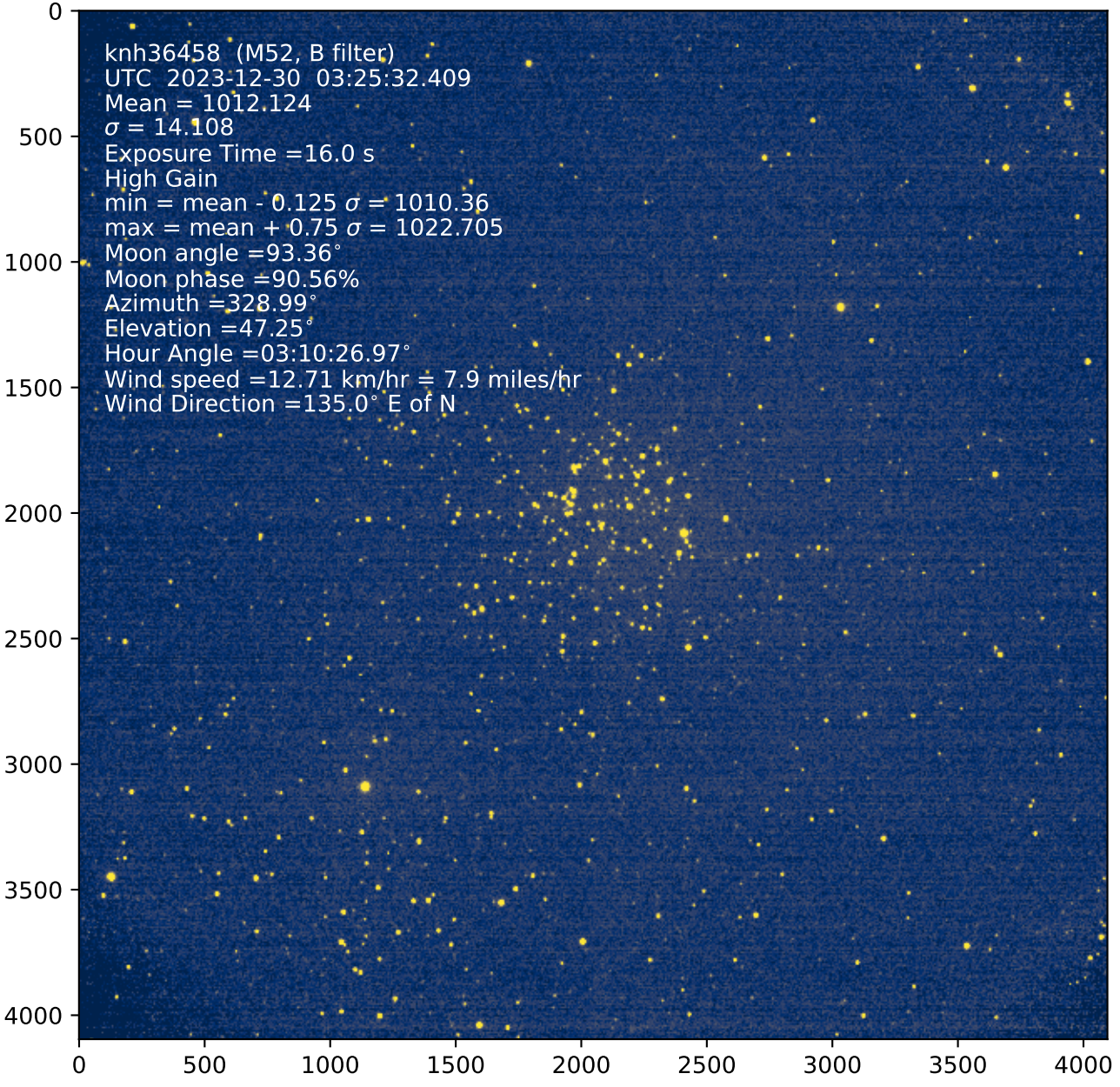
knh36458 (M52, B filter)
UTC 2023-12-30 03:25:32.409
Mean = 1012.124
σ = 14.108
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1010.36
max = mean + 0.75 σ = 1022.705
Moon angle =93.36°
Moon phase =90.56%
Azimuth =328.99°
Elevation =47.25°
Hour Angle =03:10:26.97°
Wind speed =12.71 km/hr = 7.9 miles/hr
Wind Direction =135.0° E of N
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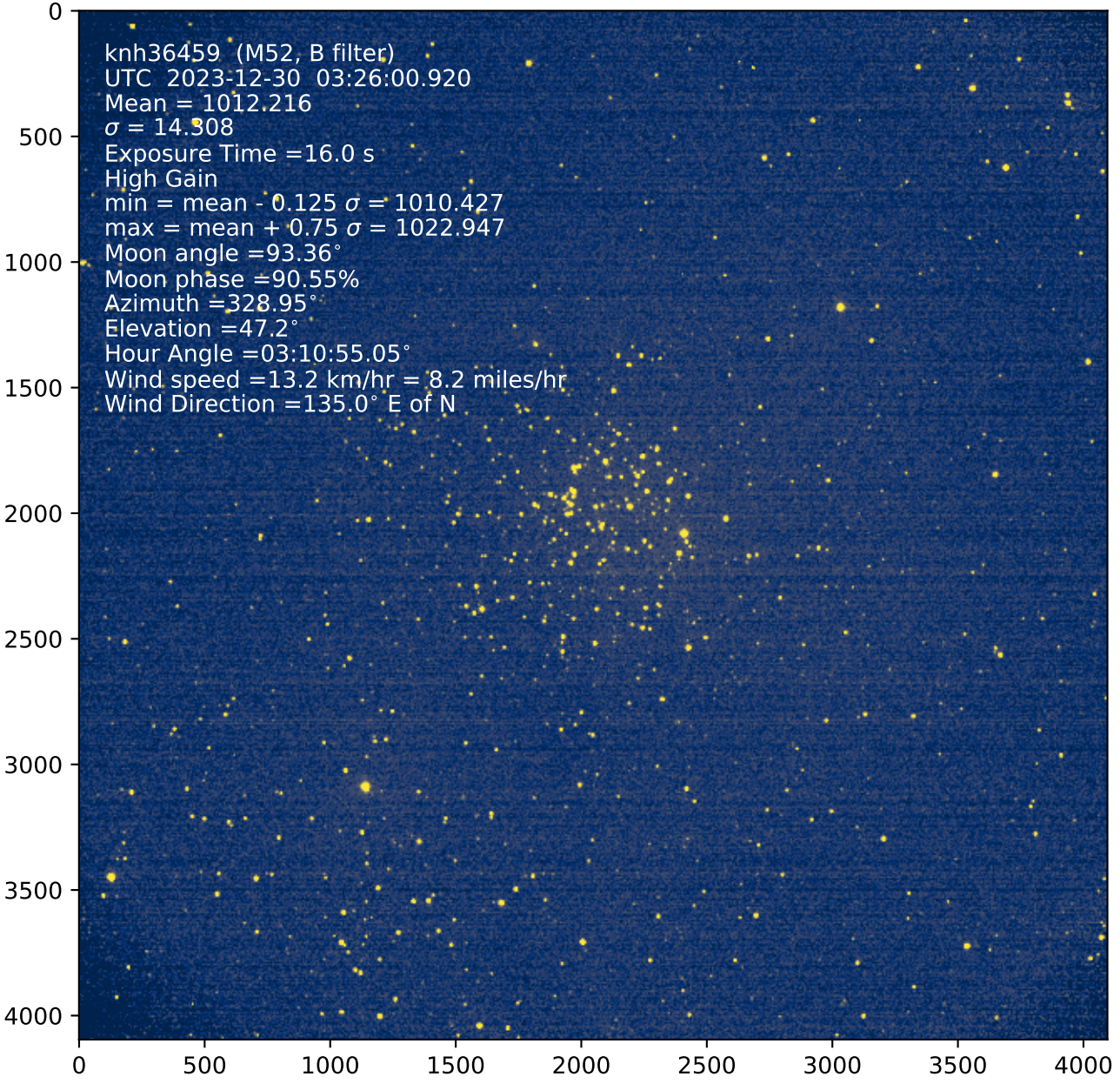
knh36459 (M52, B filter)
UTC 2023-12-30 03:26:00.920
Mean = 1012.216
σ = 14.308
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1010.427
max = mean + 0.75 σ = 1022.947
Moon angle =93.36°
Moon phase =90.55%
Azimuth =328.95°
Elevation =47.2°
Hour Angle =03:10:55.05°
Wind speed =13.2 km/hr = 8.2 miles/hr
Wind Direction =135.0° E of N
0
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3000
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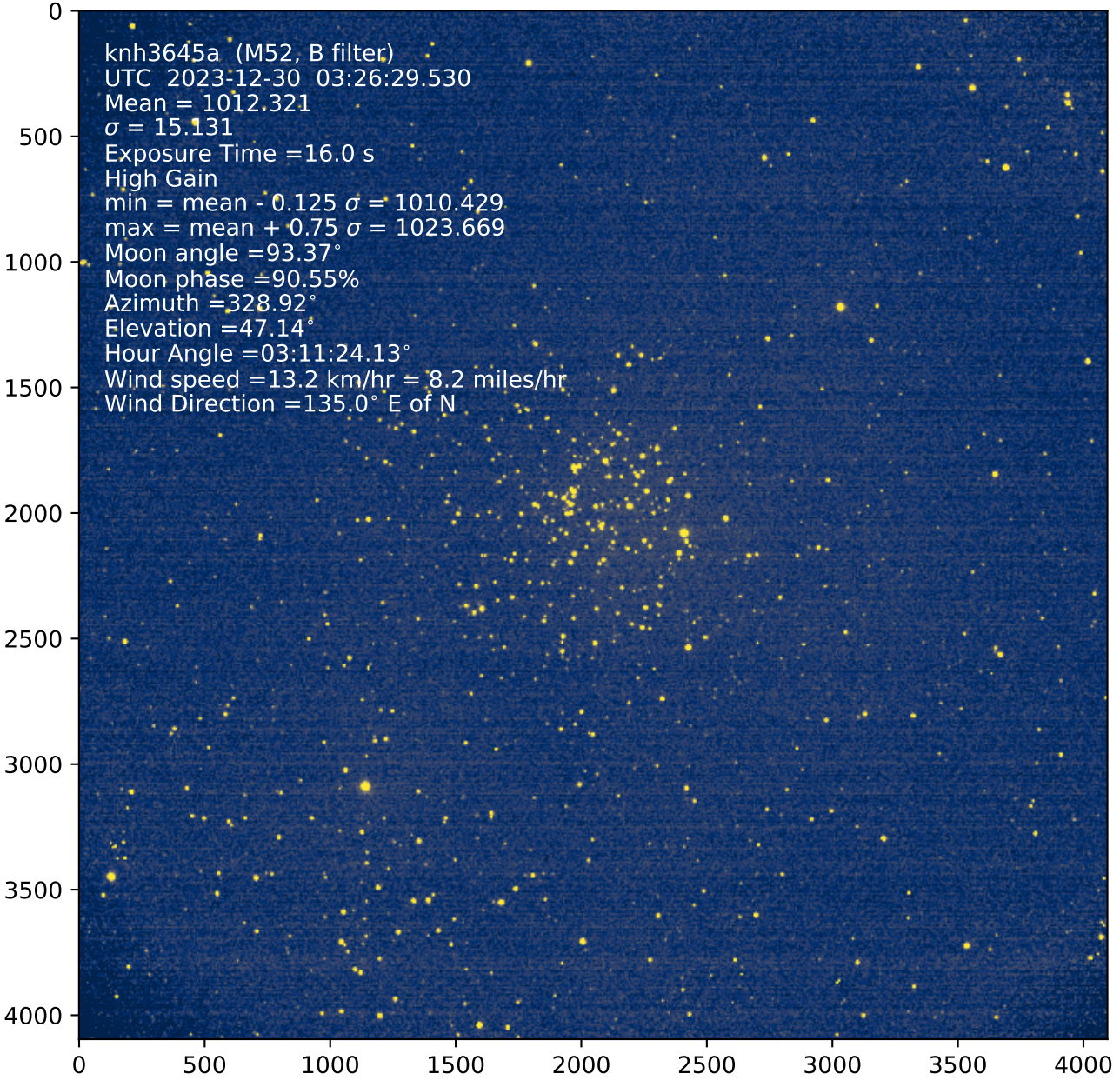
4000


knh3645a (M52, B filter)
UTC 2023-12-30 03:26:29.530
Mean = 1012.321
σ = 15.131
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1010.429
max = mean + 0.75 σ = 1023.669
Moon angle =93.37°
Moon phase =90.55%
Azimuth =328.92°
Elevation =47.14°
Hour Angle =03:11:24.13°
Wind speed =13.2 km/hr = 8.2 miles/hr
Wind Direction =135.0° E of N
0
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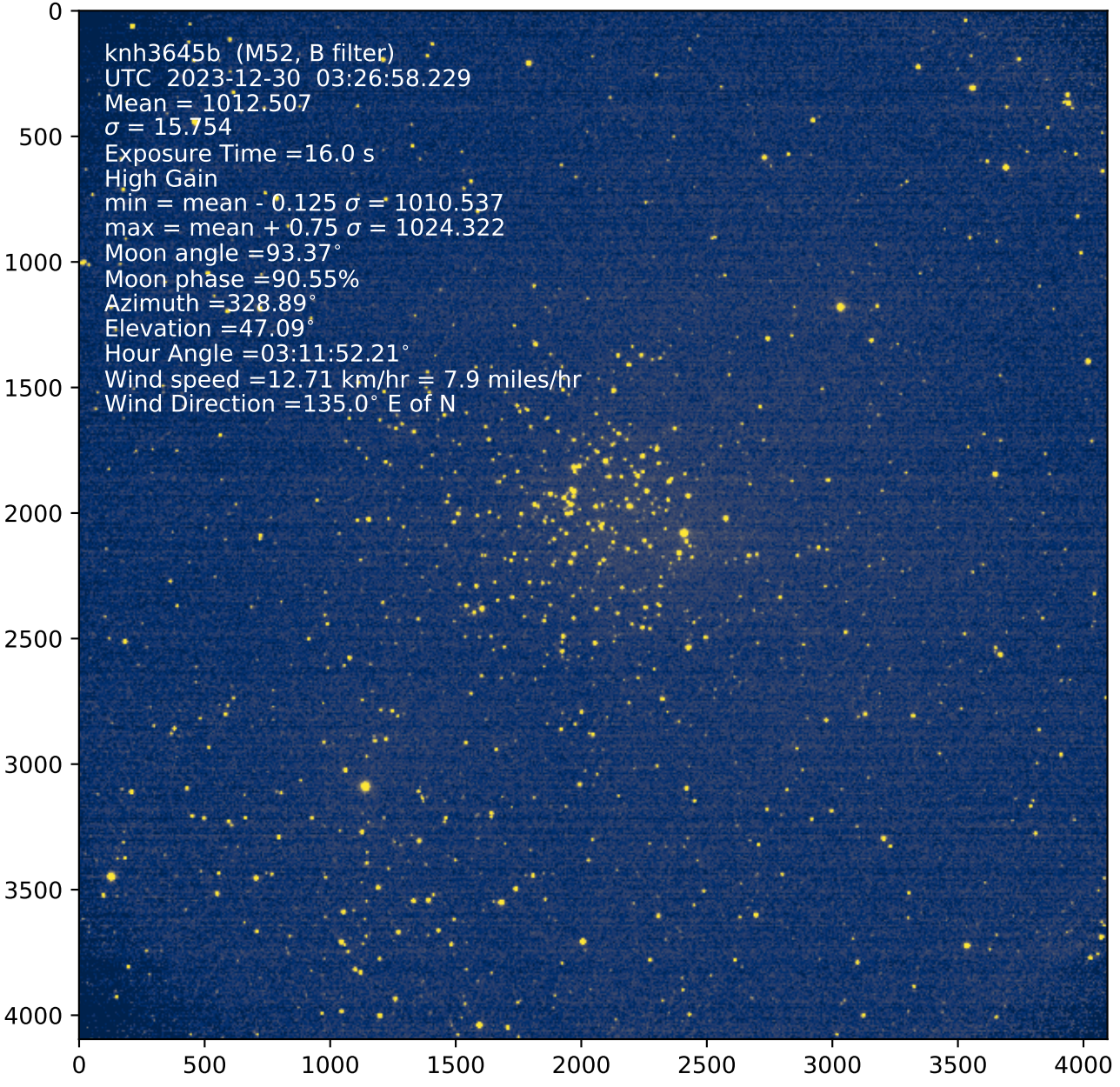
3000
3500
4000


knh3645b (M52, B filter)
UTC 2023-12-30 03:26:58.229
Mean = 1012.507
σ = 15.754
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1010.537
max = mean + 0.75 σ = 1024.322
Moon angle =93.37°
Moon phase =90.55%
Azimuth =328.89°
Elevation =47.09°
Hour Angle =03:11:52.21°
Wind speed =12.71 km/hr = 7.9 miles/hr
Wind Direction =135.0° E of N
0
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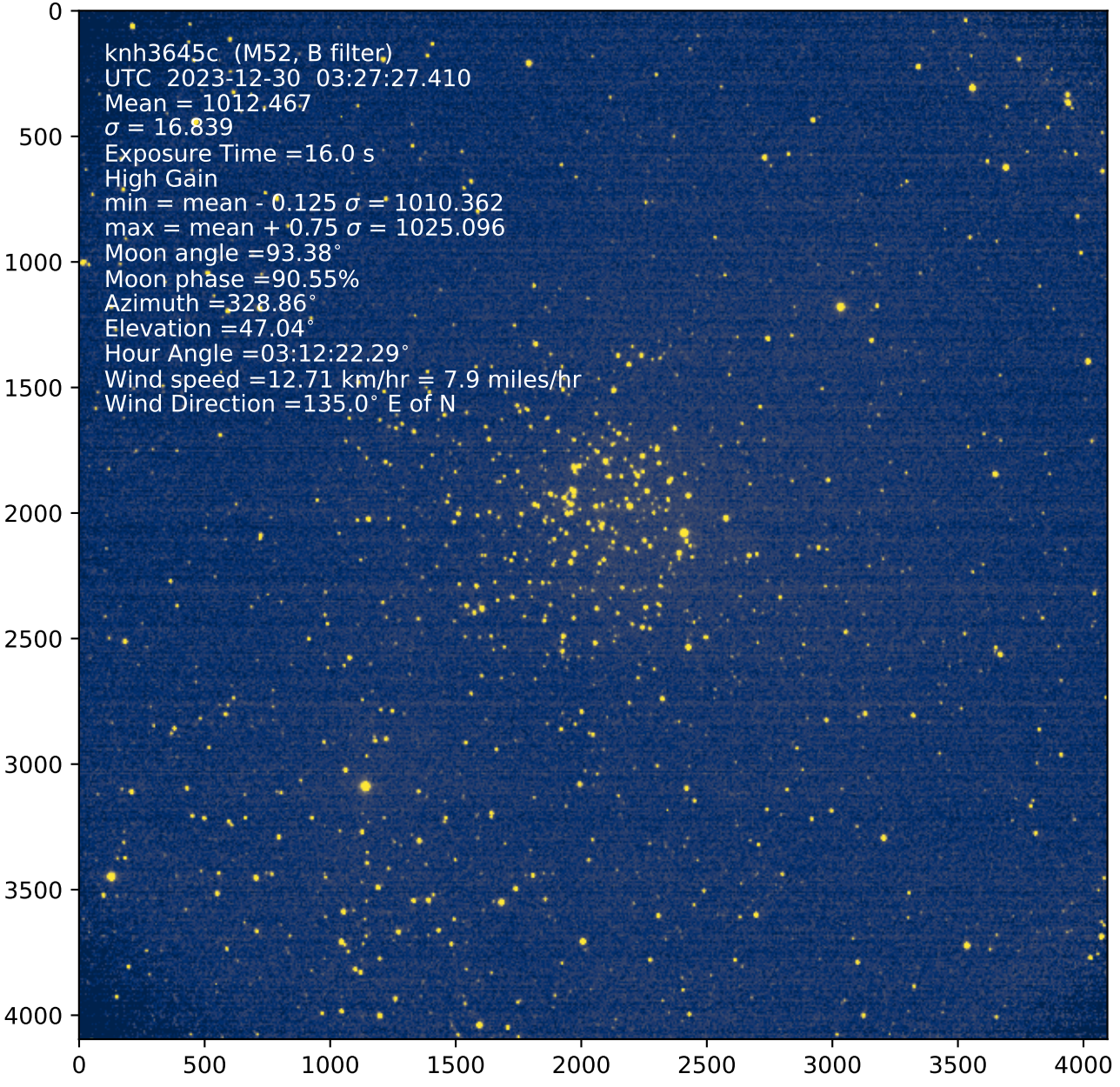
4000


knh3645c (M52, B filter)
UTC 2023-12-30 03:27:27.410
Mean = 1012.467
σ = 16.839
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1010.362
max = mean + 0.75 σ = 1025.096
Moon angle =93.38°
Moon phase =90.55%
Azimuth =328.86°
Elevation =47.04°
Hour Angle =03:12:22.29°
Wind speed =12.71 km/hr = 7.9 miles/hr
Wind Direction =135.0° E of N
0
500
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2000
2500
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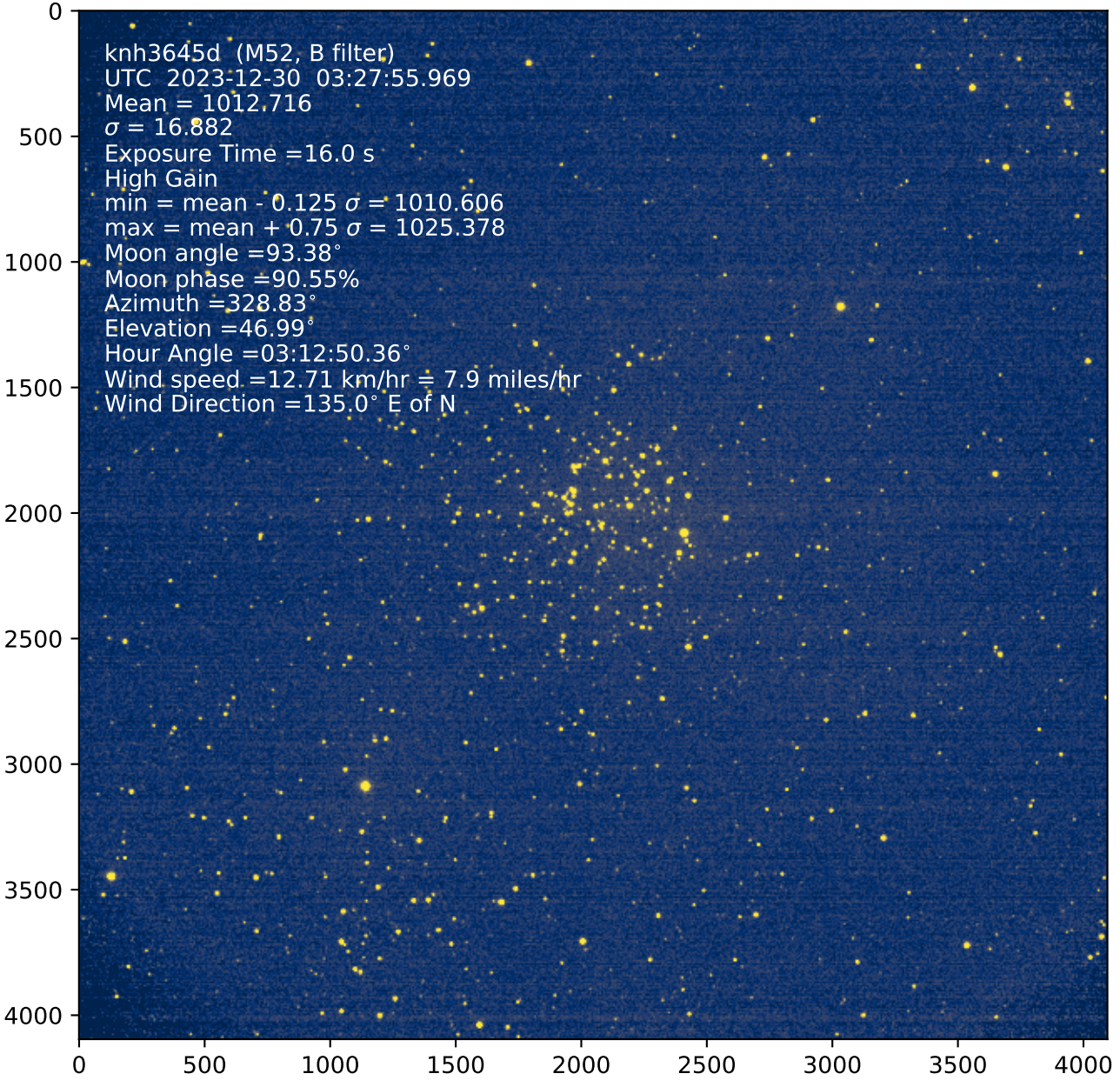
3500
4000


knh3645d (M52, B filter)
UTC 2023-12-30 03:27:55.969
Mean = 1012.716
σ = 16.882
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1010.606
max = mean + 0.75 σ = 1025.378
Moon angle =93.38°
Moon phase =90.55%
Azimuth =328.83°
Elevation =46.99°
Hour Angle =03:12:50.36°
Wind speed =12.71 km/hr = 7.9 miles/hr
Wind Direction =135.0° E of N
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2500
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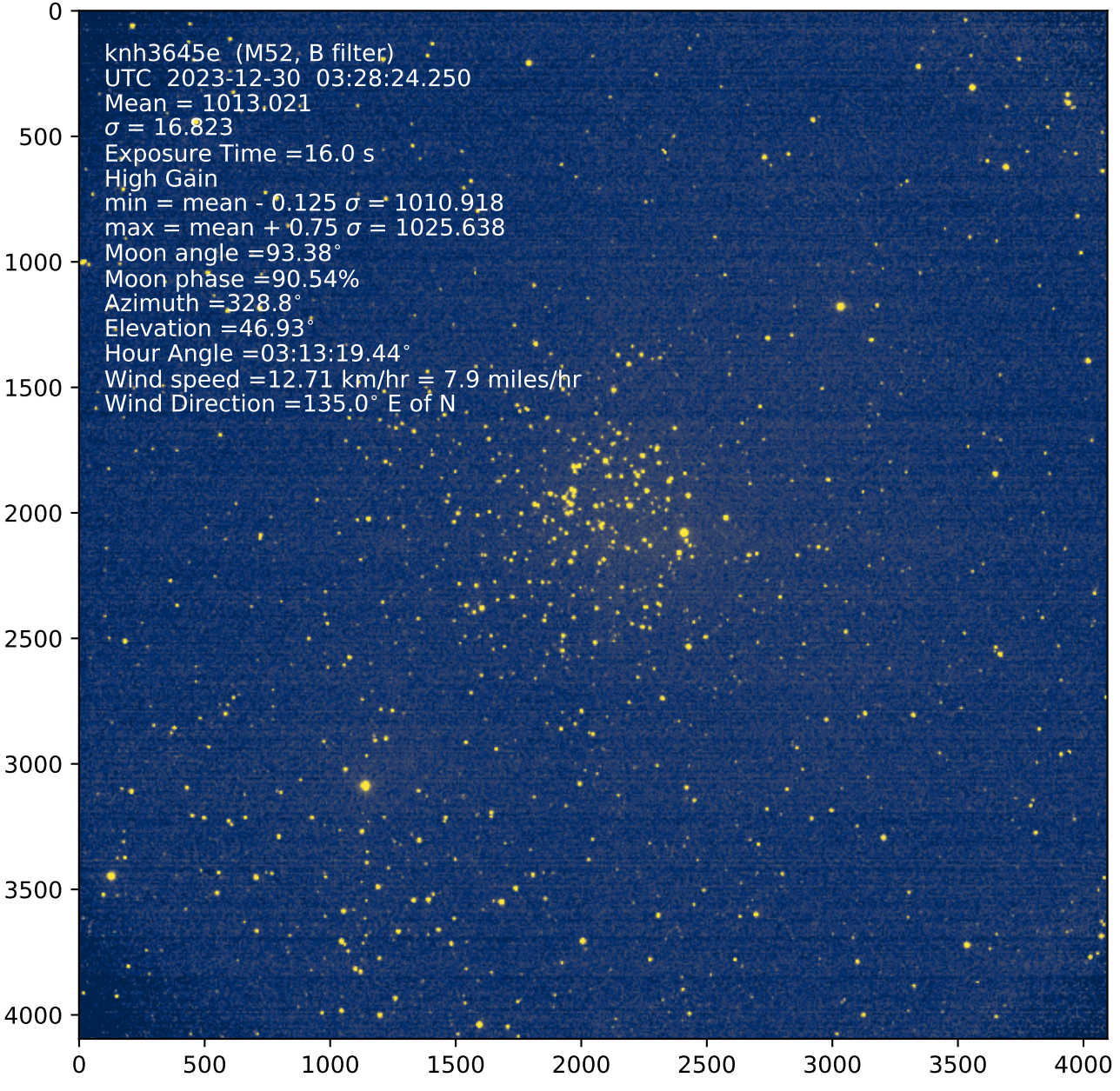
knh3645e (M52, B filter)
UTC 2023-12-30 03:28:24.250
Mean = 1013.021
σ = 16.823
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1010.918
max = mean + 0.75 σ = 1025.638
Moon angle =93.38°
Moon phase =90.54%
Azimuth =328.8°
Elevation =46.93°
Hour Angle =03:13:19.44°
Wind speed =12.71 km/hr = 7.9 miles/hr
Wind Direction =135.0° E of N
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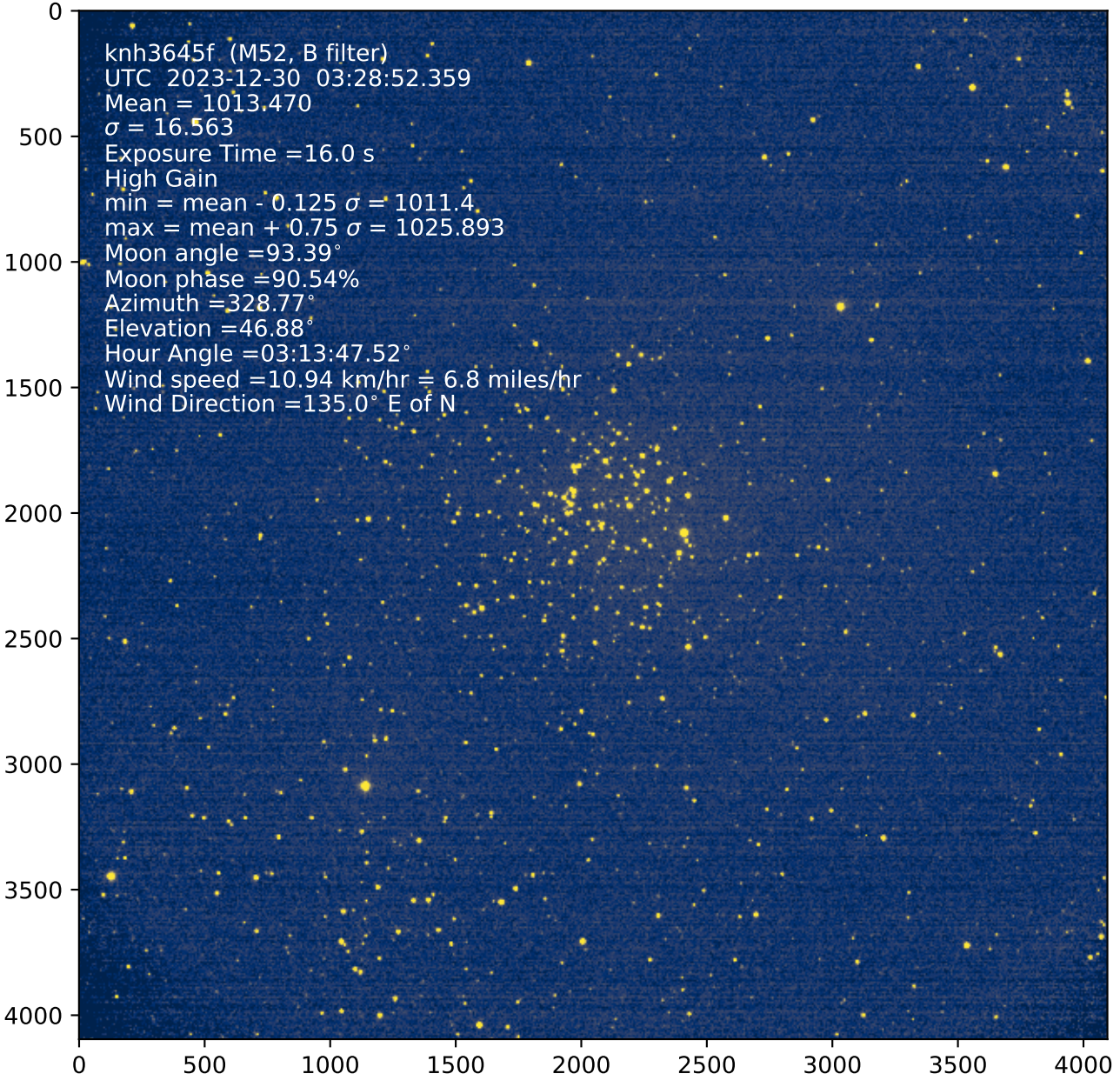
knh3645f (M52, B filter)
UTC 2023-12-30 03:28:52.359
Mean = 1013.470
σ = 16.563
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1011.4
max = mean + 0.75 σ = 1025.893
Moon angle =93.39°
Moon phase =90.54%
Azimuth =328.77°
Elevation =46.88°
Hour Angle =03:13:47.52°
Wind speed =10.94 km/hr = 6.8 miles/hr
Wind Direction =135.0° E of N
0
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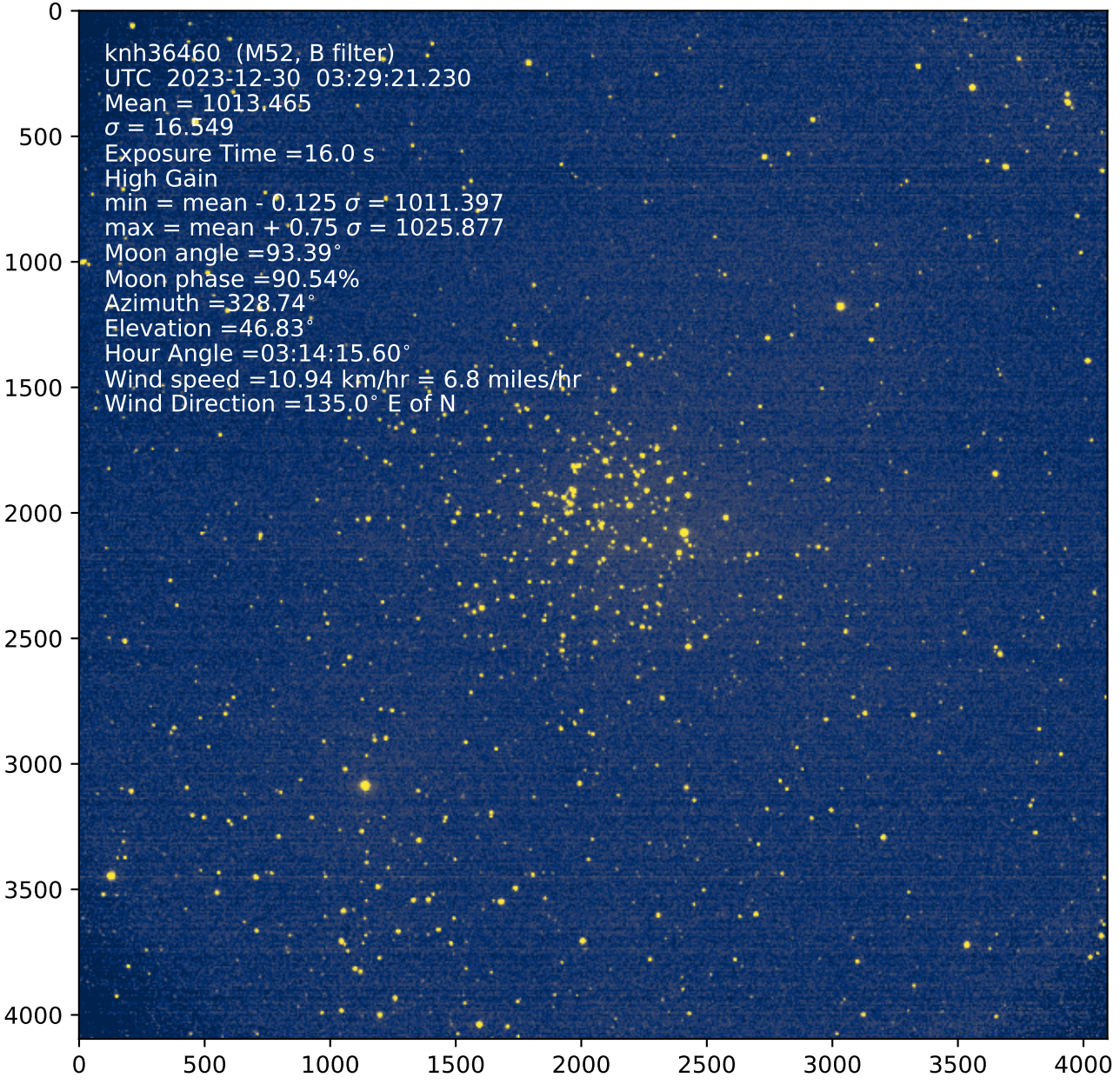
knh36460 (M52, B filter)
UTC 2023-12-30 03:29:21.230
Mean = 1013.465
σ = 16.549
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1011.397
max = mean + 0.75 σ = 1025.877
Moon angle =93.39°
Moon phase =90.54%
Azimuth =328.74°
Elevation =46.83°
Hour Angle =03:14:15.60°
Wind speed =10.94 km/hr = 6.8 miles/hr
Wind Direction =135.0° E of N
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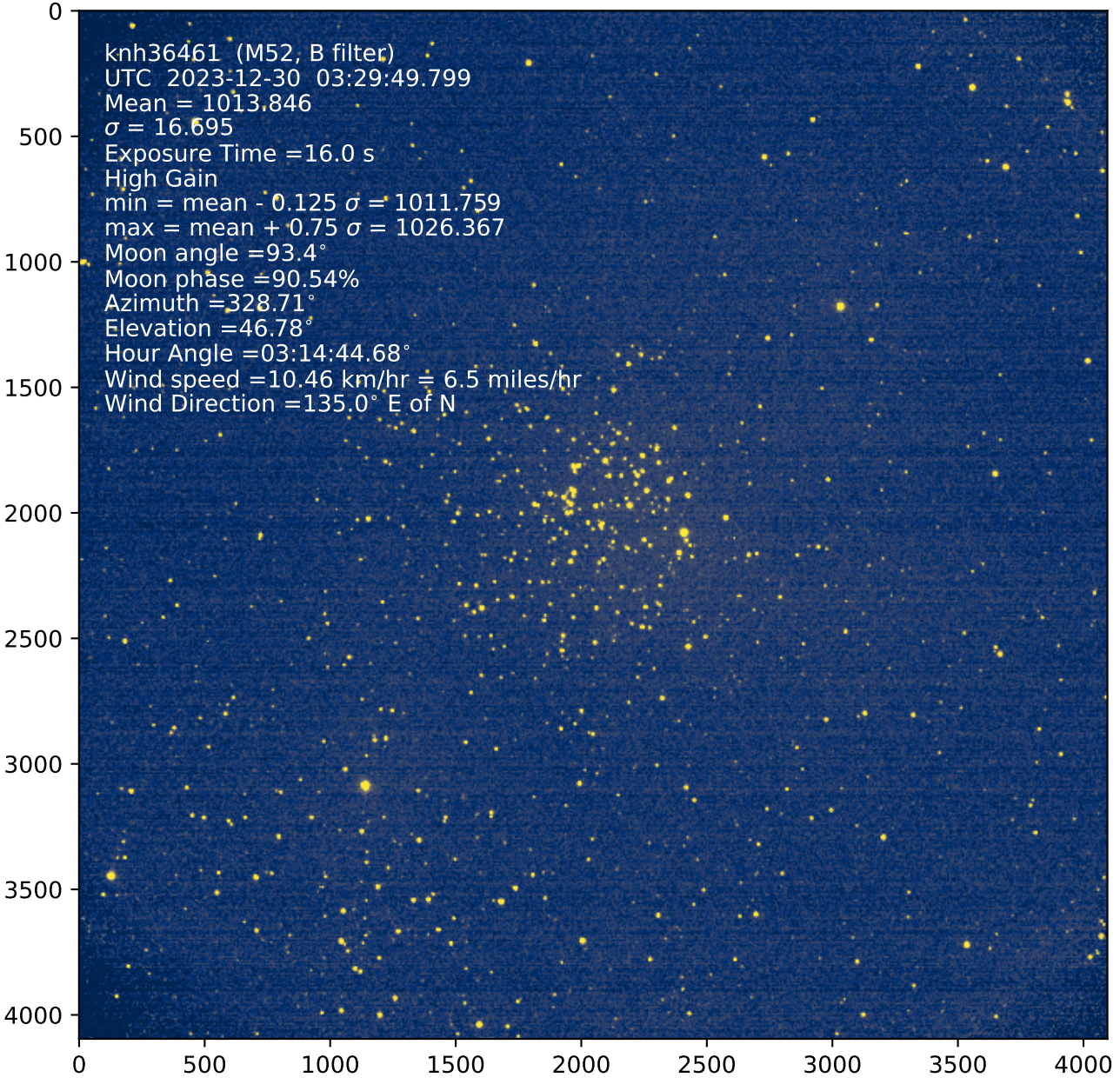
knh36461 (M52, B filter)
UTC 2023-12-30 03:29:49.799
Mean = 1013.846
σ = 16.695
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1011.759
max = mean + 0.75 σ = 1026.367
Moon angle =93.4°
Moon phase =90.54%
Azimuth =328.71°
Elevation =46.78°
Hour Angle =03:14:44.68°
Wind speed =10.46 km/hr = 6.5 miles/hr
Wind Direction =135.0° E of N
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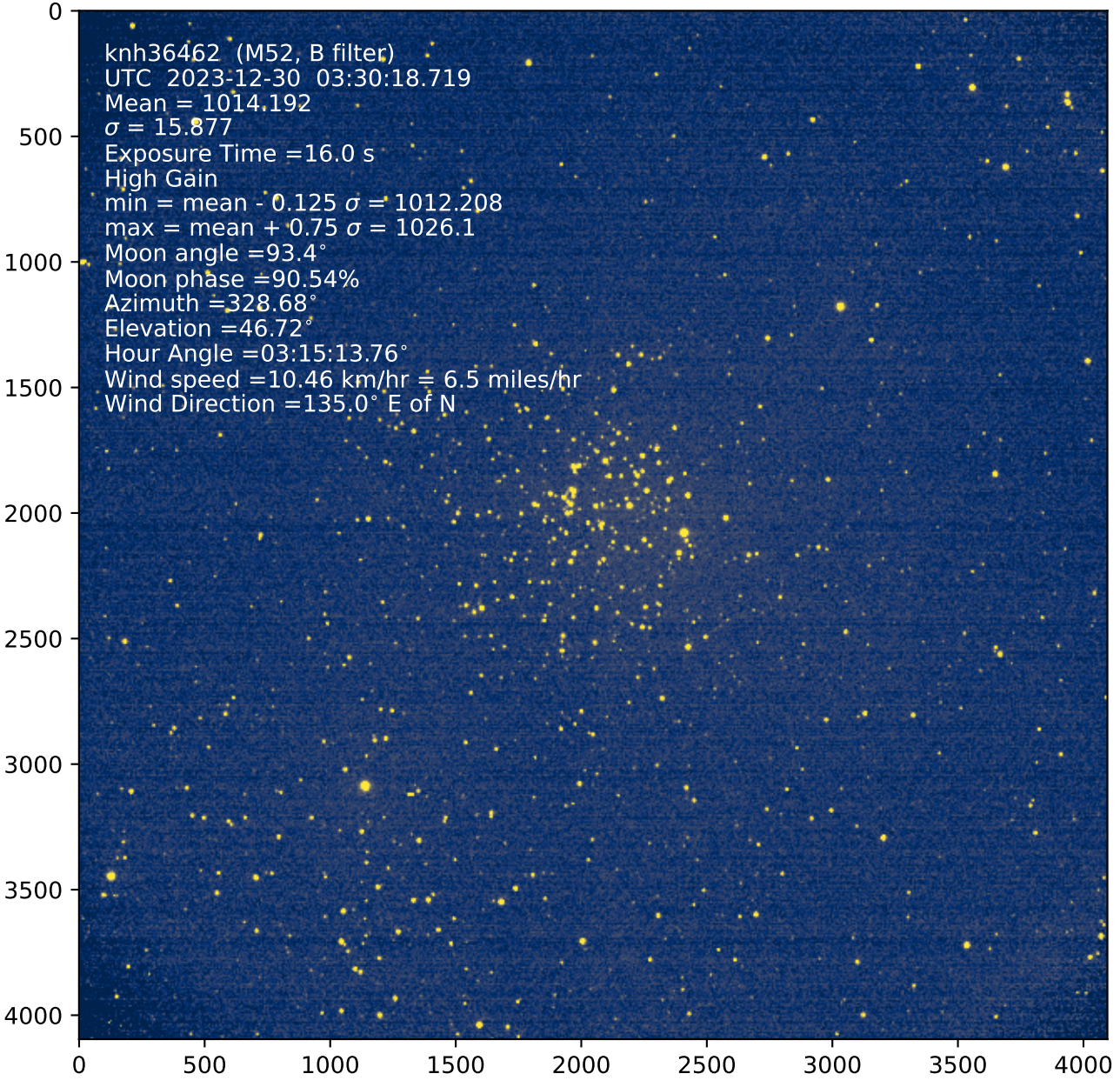
knh36462 (M52, B filter)
UTC 2023-12-30 03:30:18.719
Mean = 1014.192
σ = 15.877
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1012.208
max = mean + 0.75 σ = 1026.1
Moon angle =93.4°
Moon phase =90.54%
Azimuth =328.68°
Elevation =46.72°
Hour Angle =03:15:13.76°
Wind speed =10.46 km/hr = 6.5 miles/hr
Wind Direction =135.0° E of N
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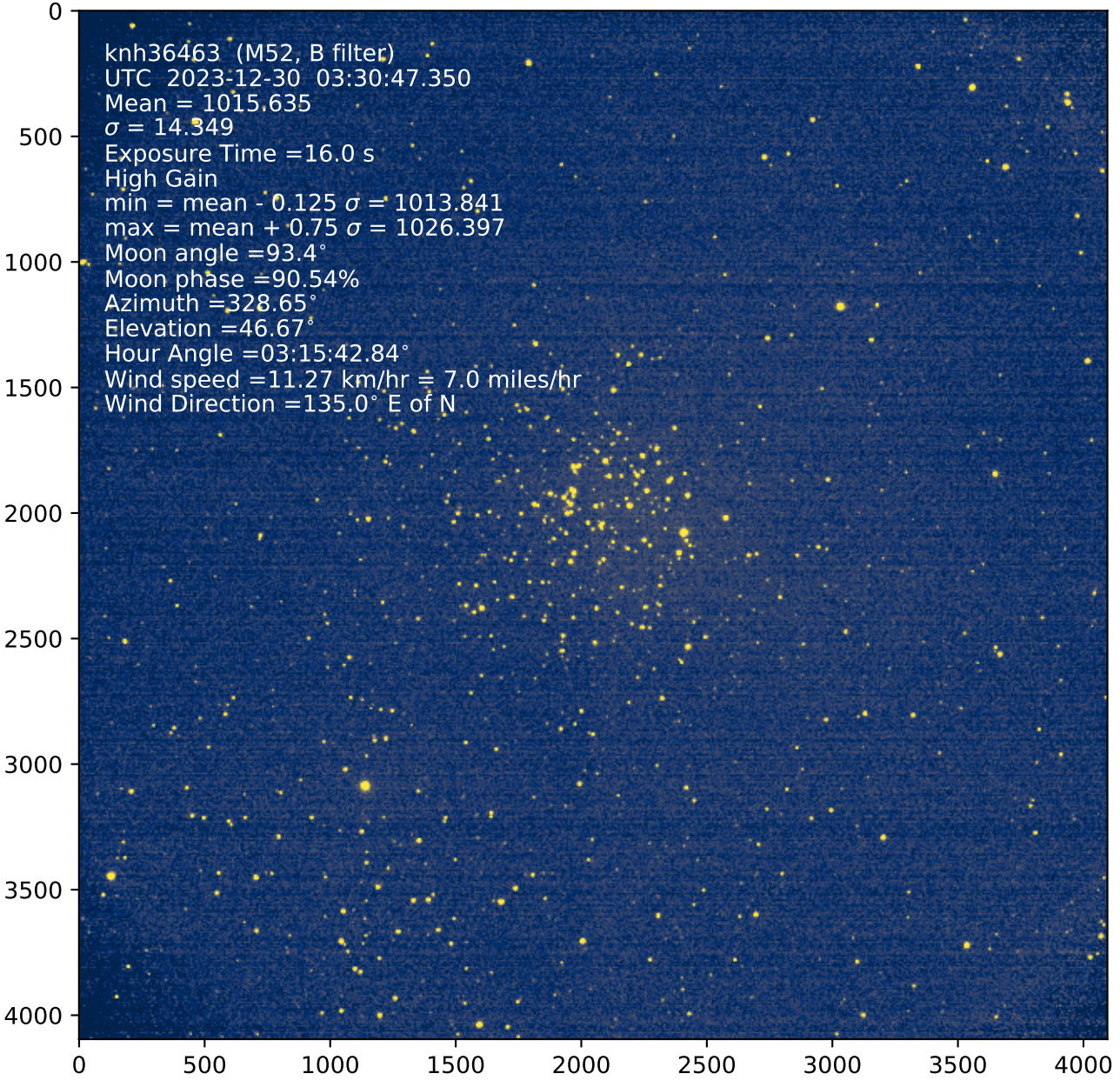
knh36463 (M52, B filter)
UTC 2023-12-30 03:30:47.350
Mean = 1015.635
σ = 14.349
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1013.841
max = mean + 0.75 σ = 1026.397
Moon angle =93.4°
Moon phase =90.54%
Azimuth =328.65°
Elevation =46.67°
Hour Angle =03:15:42.84°
Wind speed =11.27 km/hr = 7.0 miles/hr
Wind Direction =135.0° E of N
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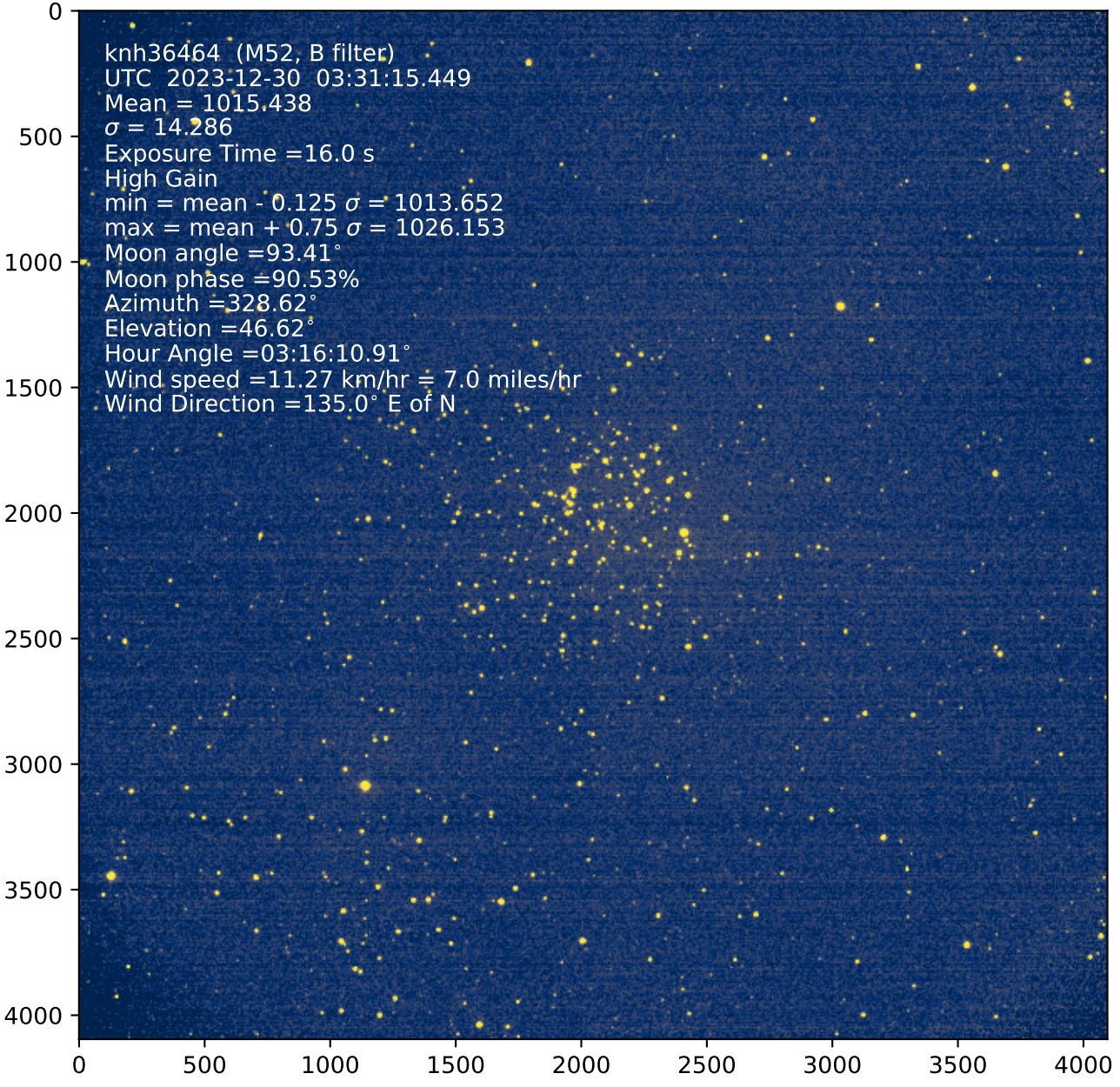
knh36464 (M52, B filter)
UTC 2023-12-30 03:31:15.449
Mean = 1015.438
σ = 14.286
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1013.652
max = mean + 0.75 σ = 1026.153
Moon angle =93.41°
Moon phase =90.53%
Azimuth =328.62°
Elevation =46.62°
Hour Angle =03:16:10.91°
Wind speed =11.27 km/hr = 7.0 miles/hr
Wind Direction =135.0° E of N
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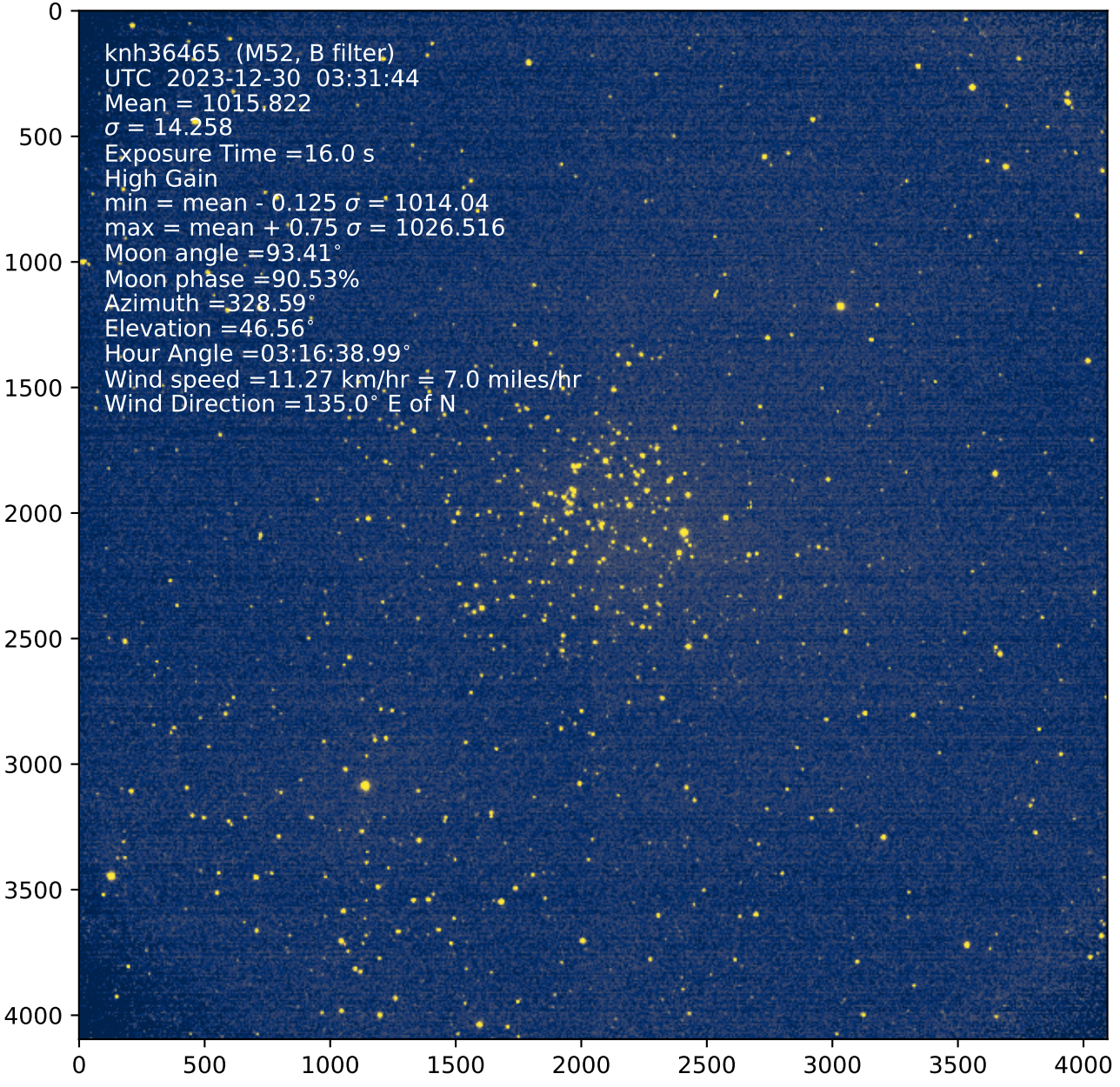
knh36465 (M52, B filter)
UTC 2023-12-30 03:31:44
Mean = 1015.822
σ = 14.258
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1014.04
max = mean + 0.75 σ = 1026.516
Moon angle =93.41°
Moon phase =90.53%
Azimuth =328.59°
Elevation =46.56°
Hour Angle =03:16:38.99°
Wind speed =11.27 km/hr = 7.0 miles/hr
Wind Direction =135.0° E of N
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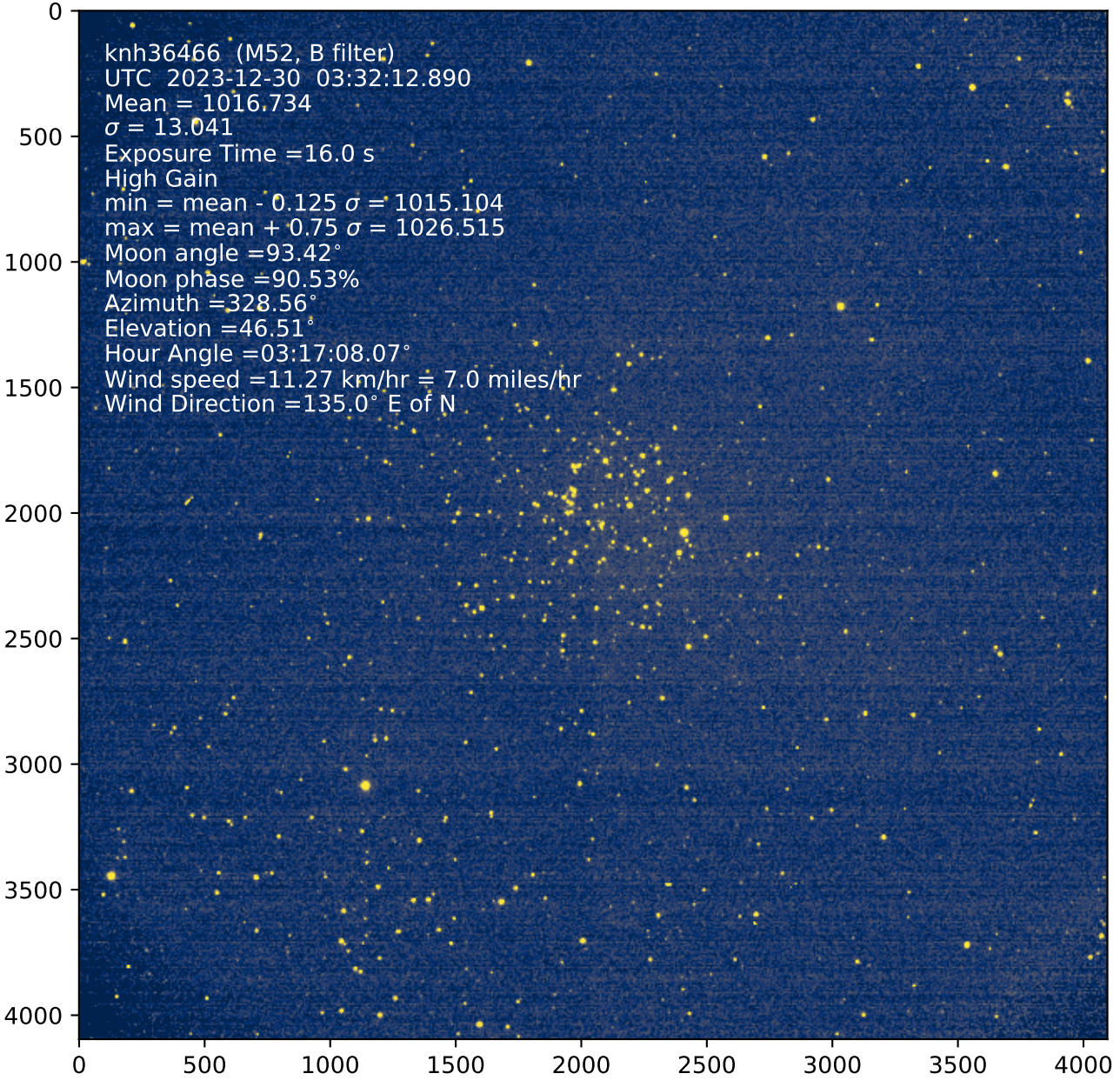
knh36466 (M52, B filter)
UTC 2023-12-30 03:32:12.890
Mean = 1016.734
σ = 13.041
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1015.104
max = mean + 0.75 σ = 1026.515
Moon angle =93.42°
Moon phase =90.53%
Azimuth =328.56°
Elevation =46.51°
Hour Angle =03:17:08.07°
Wind speed =11.27 km/hr = 7.0 miles/hr
Wind Direction =135.0° E of N
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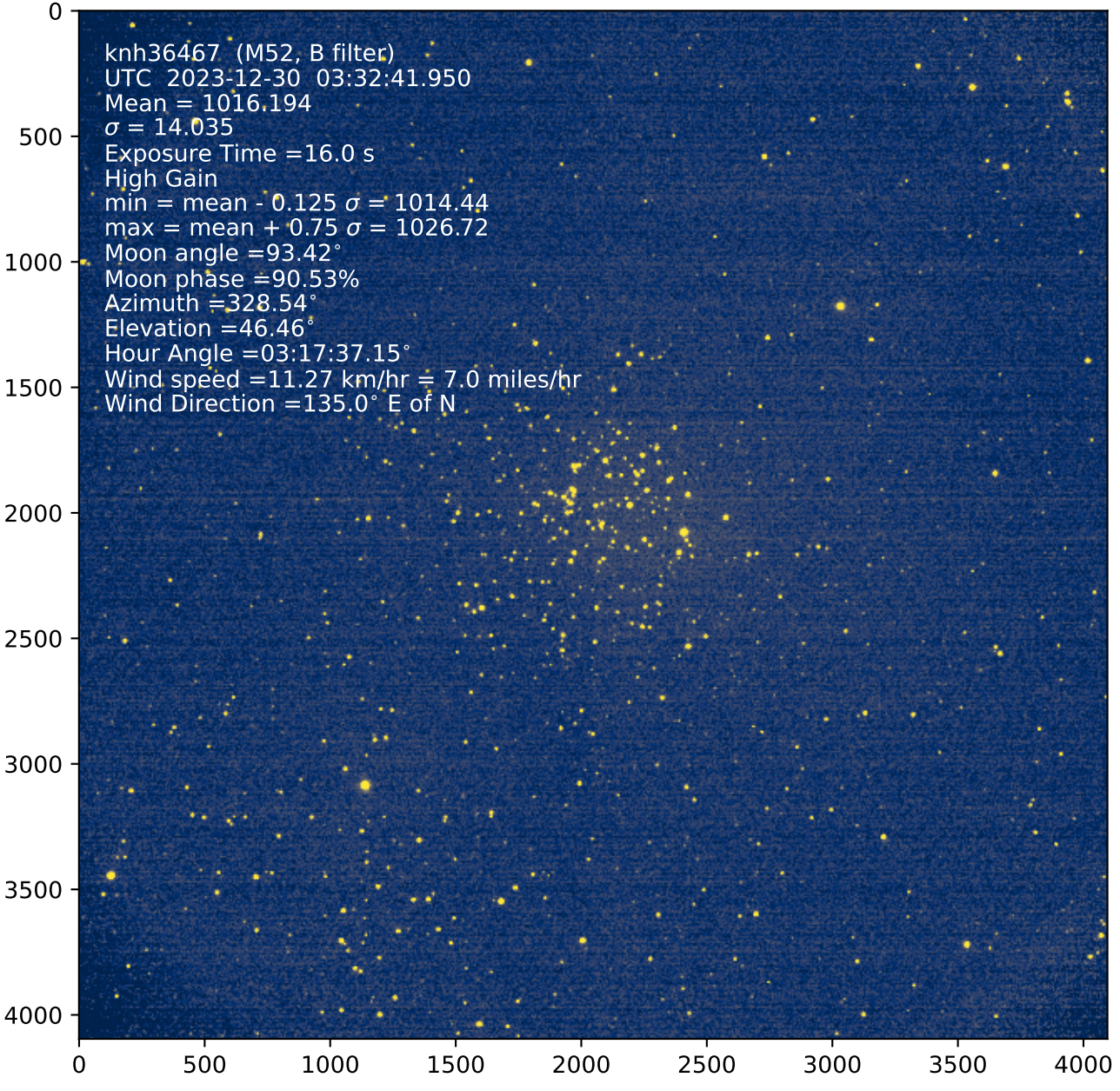
knh36467 (M52, B filter)
UTC 2023-12-30 03:32:41.950
Mean = 1016.194
σ = 14.035
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1014.44
max = mean + 0.75 σ = 1026.72
Moon angle =93.42°
Moon phase =90.53%
Azimuth =328.54°
Elevation =46.46°
Hour Angle =03:17:37.15°
Wind speed =11.27 km/hr = 7.0 miles/hr
Wind Direction =135.0° E of N
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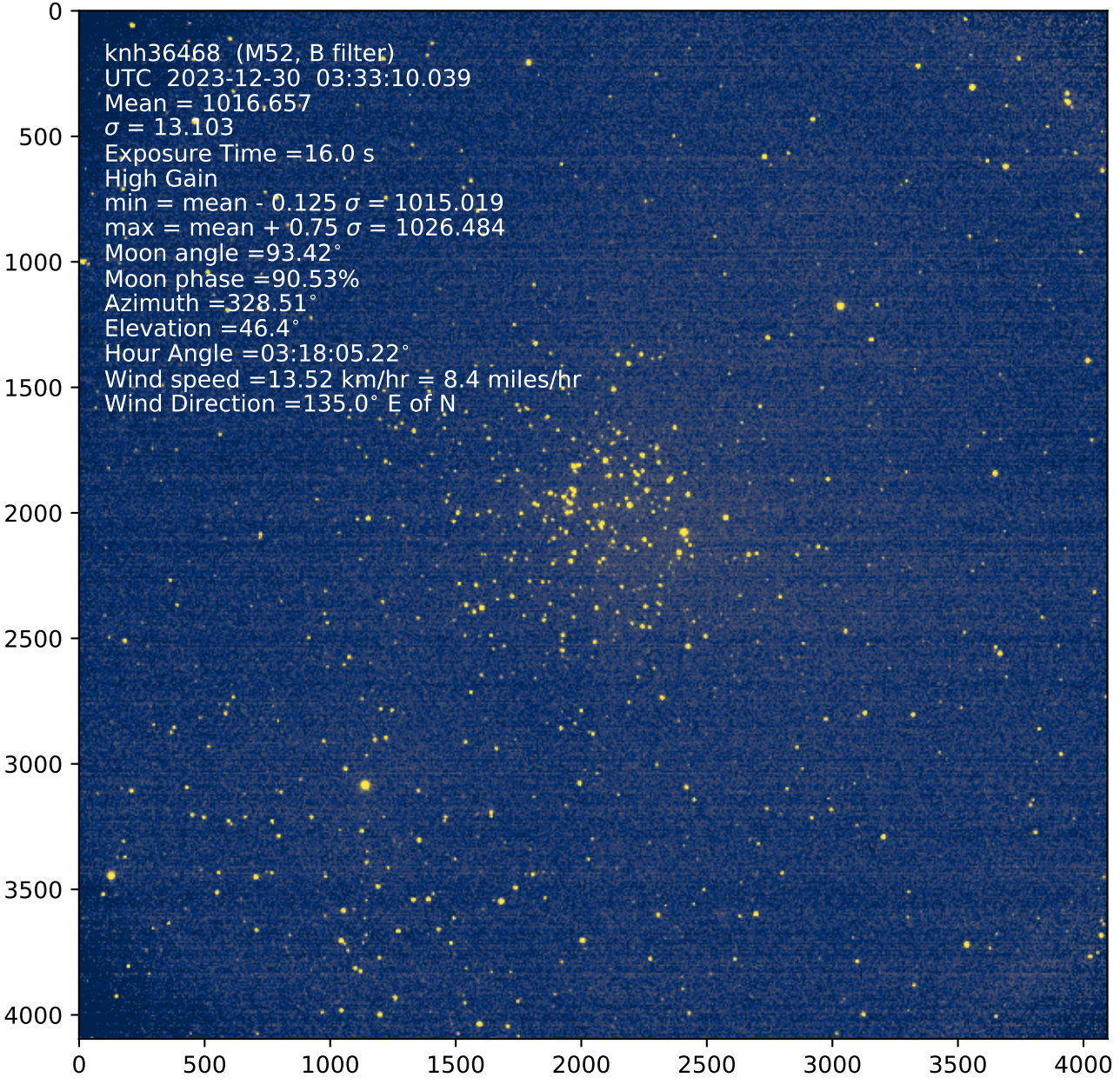
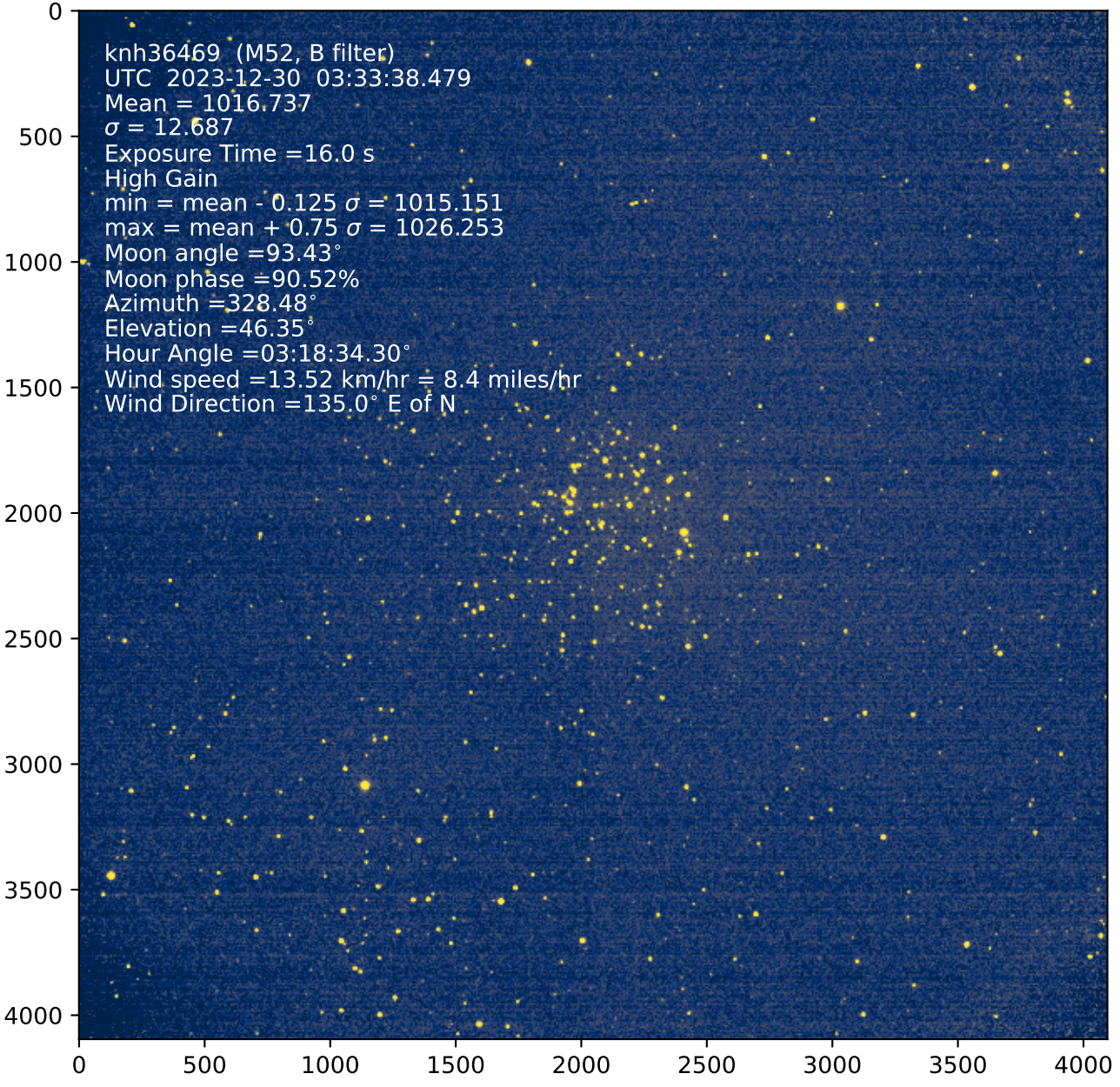
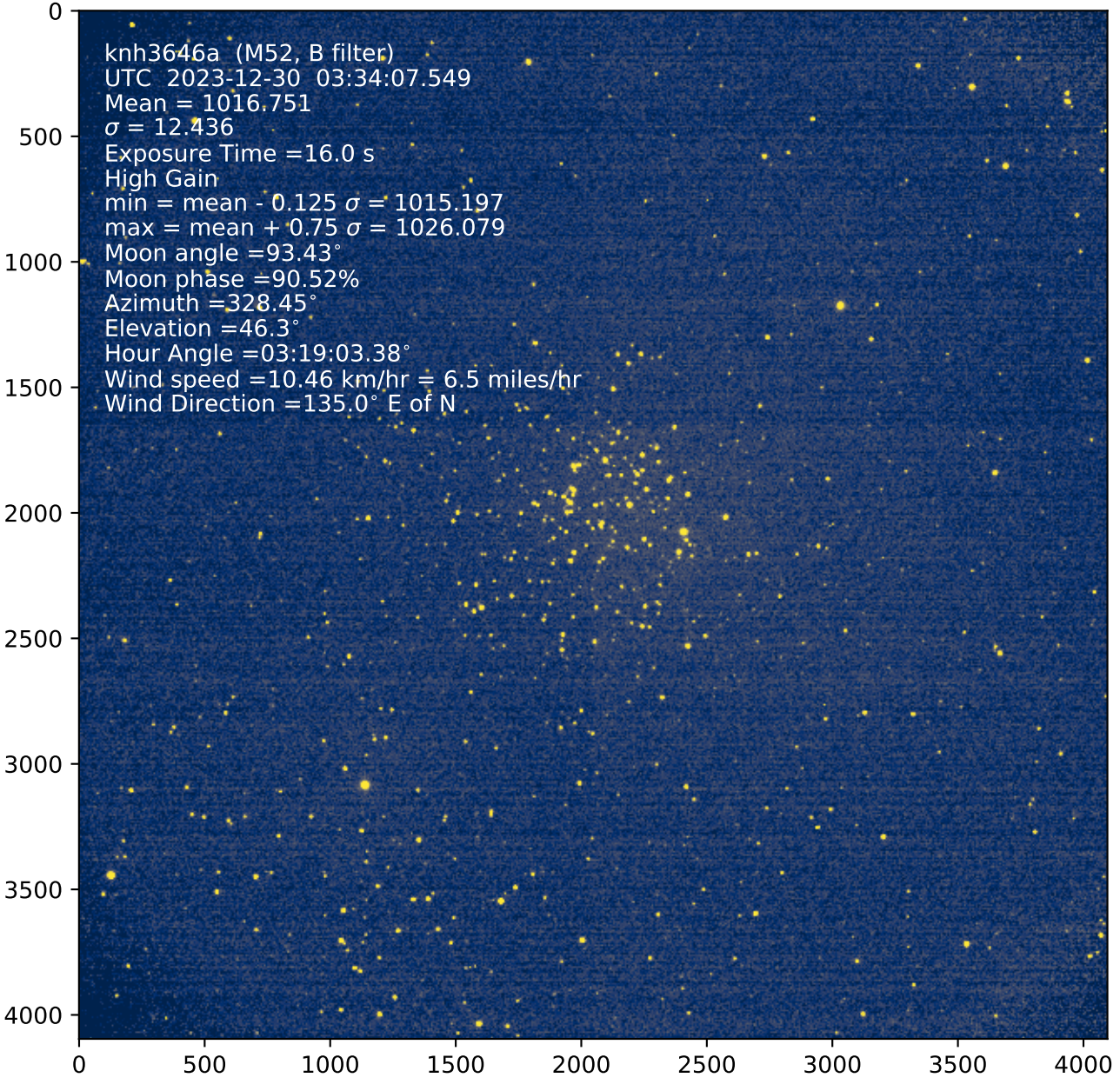
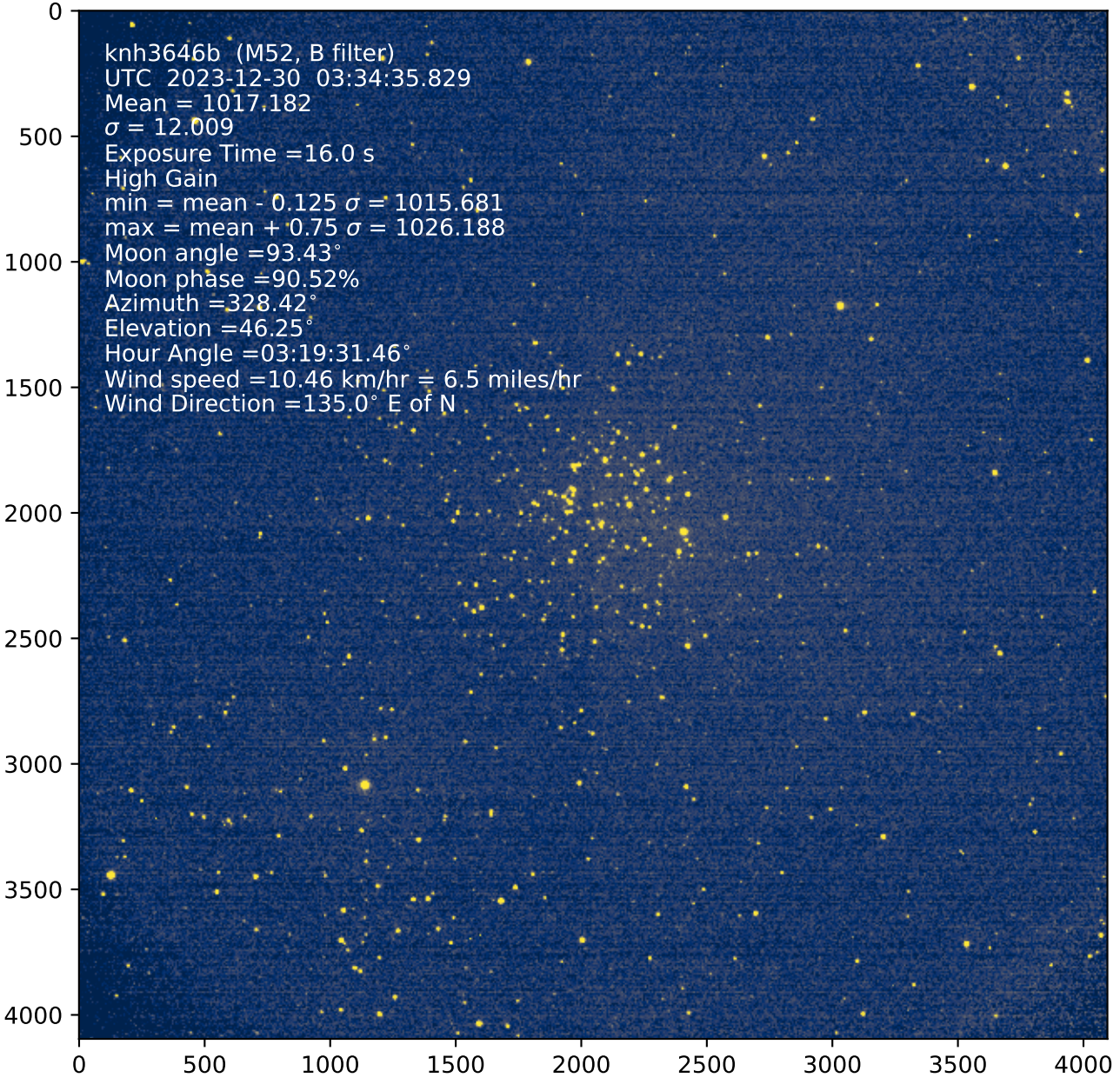
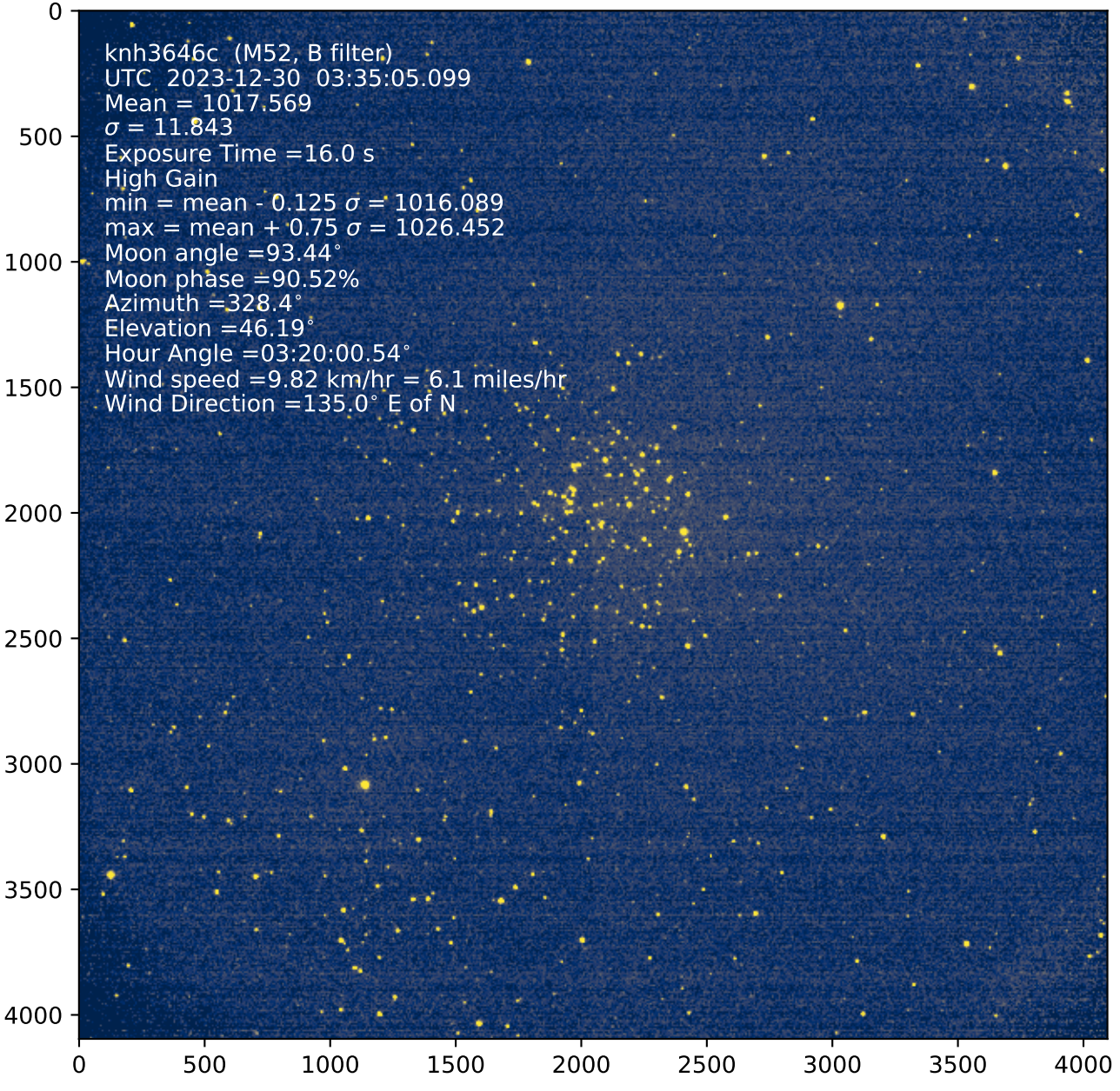
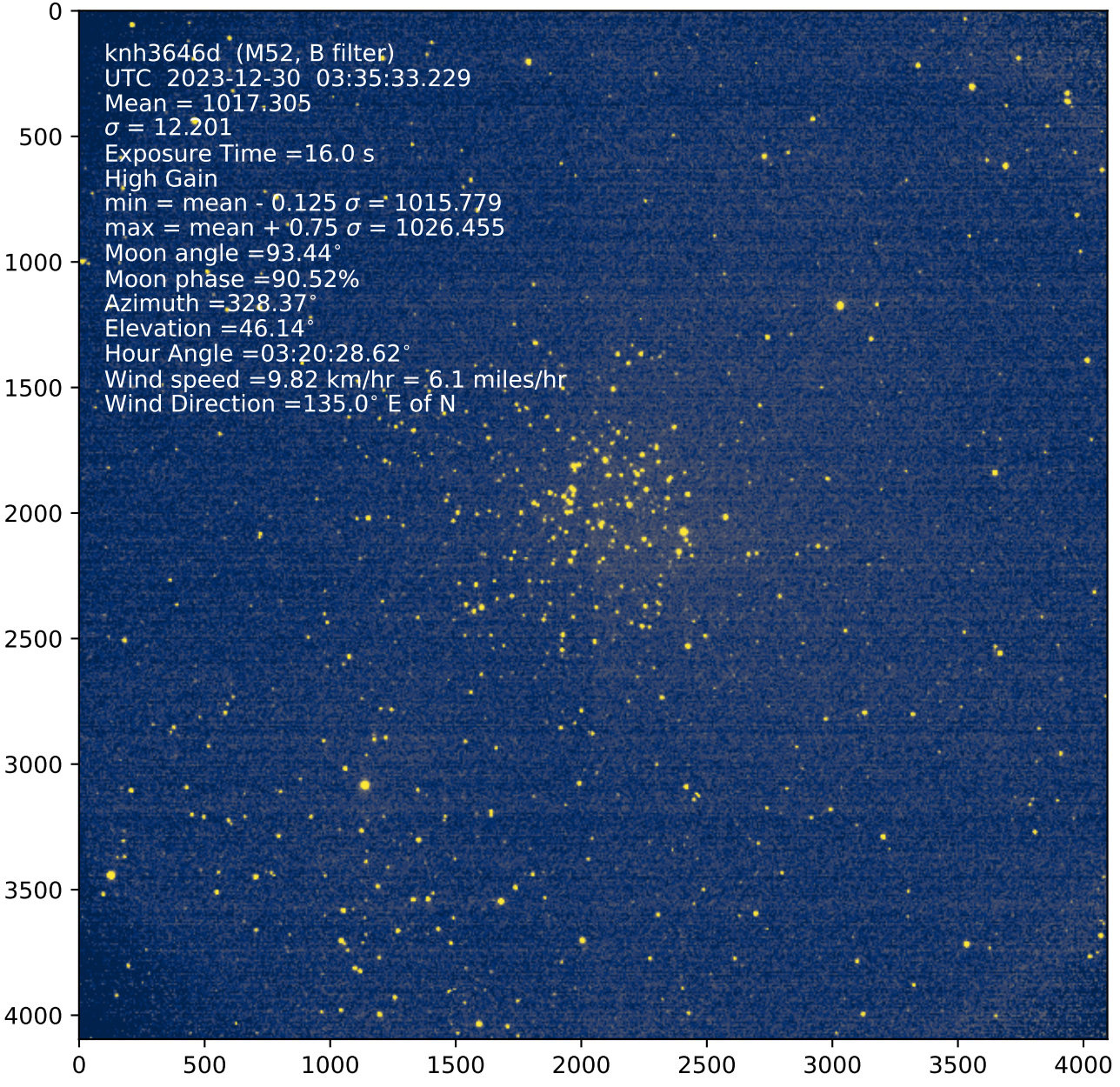

knh36468 (M52, B filter)
UTC 2023-12-30 03:33:10.039
Mean = 1016.657
σ = 13.103
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1015.019
max = mean + 0.75 σ = 1026.484
Moon angle =93.42°
Moon phase =90.53%
Azimuth =328.51°
Elevation =46.4°
Hour Angle =03:18:05.22°
Wind speed =13.52 km/hr = 8.4 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh36469 (M52, B filter)
UTC 2023-12-30 03:33:38.479
Mean = 1016.737
σ = 12.687
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1015.151
max = mean + 0.75 σ = 1026.253
Moon angle =93.43°
Moon phase =90.52%
Azimuth =328.48°
Elevation =46.35°
Hour Angle =03:18:34.30°
Wind speed =13.52 km/hr = 8.4 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh3646a (M52, B filter)
UTC 2023-12-30 03:34:07.549
Mean = 1016.751
σ = 12.436
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1015.197
max = mean + 0.75 σ = 1026.079
Moon angle =93.43°
Moon phase =90.52%
Azimuth =328.45°
Elevation =46.3°
Hour Angle =03:19:03.38°
Wind speed =10.46 km/hr = 6.5 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh3646b (M52, B filter)
UTC 2023-12-30 03:34:35.829
Mean = 1017.182
σ = 12.009
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1015.681
max = mean + 0.75 σ = 1026.188
Moon angle =93.43°
Moon phase =90.52%
Azimuth =328.42°
Elevation =46.25°
Hour Angle =03:19:31.46°
Wind speed =10.46 km/hr = 6.5 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh3646c (M52, B filter)
UTC 2023-12-30 03:35:05.099
Mean = 1017.569
σ = 11.843
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1016.089
max = mean + 0.75 σ = 1026.452
Moon angle =93.44°
Moon phase =90.52%
Azimuth =328.4°
Elevation =46.19°
Hour Angle =03:20:00.54°
Wind speed =9.82 km/hr = 6.1 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh3646d (M52, B filter)
UTC 2023-12-30 03:35:33.229
Mean = 1017.305
σ = 12.201
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1015.779
max = mean + 0.75 σ = 1026.455
Moon angle =93.44°
Moon phase =90.52%
Azimuth =328.37°
Elevation =46.14°
Hour Angle =03:20:28.62°
Wind speed =9.82 km/hr = 6.1 miles/hr
Wind Direction =135.0° E of N
0
500
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2500
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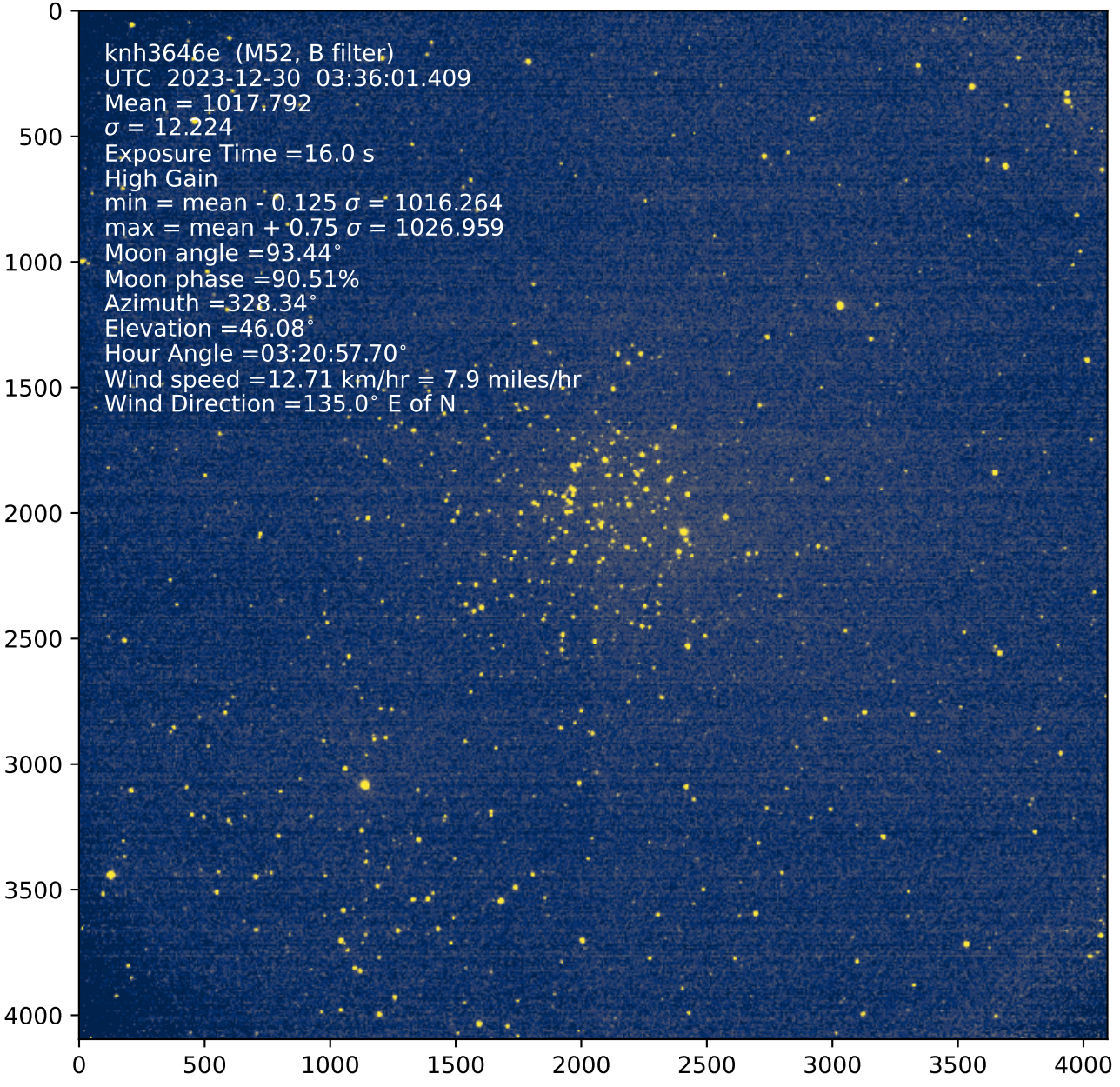
3500
4000


knh3646e (M52, B filter)
UTC 2023-12-30 03:36:01.409
Mean = 1017.792
σ = 12.224
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1016.264
max = mean + 0.75 σ = 1026.959
Moon angle =93.44°
Moon phase =90.51%
Azimuth =328.34°
Elevation =46.08°
Hour Angle =03:20:57.70°
Wind speed =12.71 km/hr = 7.9 miles/hr
Wind Direction =135.0° E of N
0
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2500
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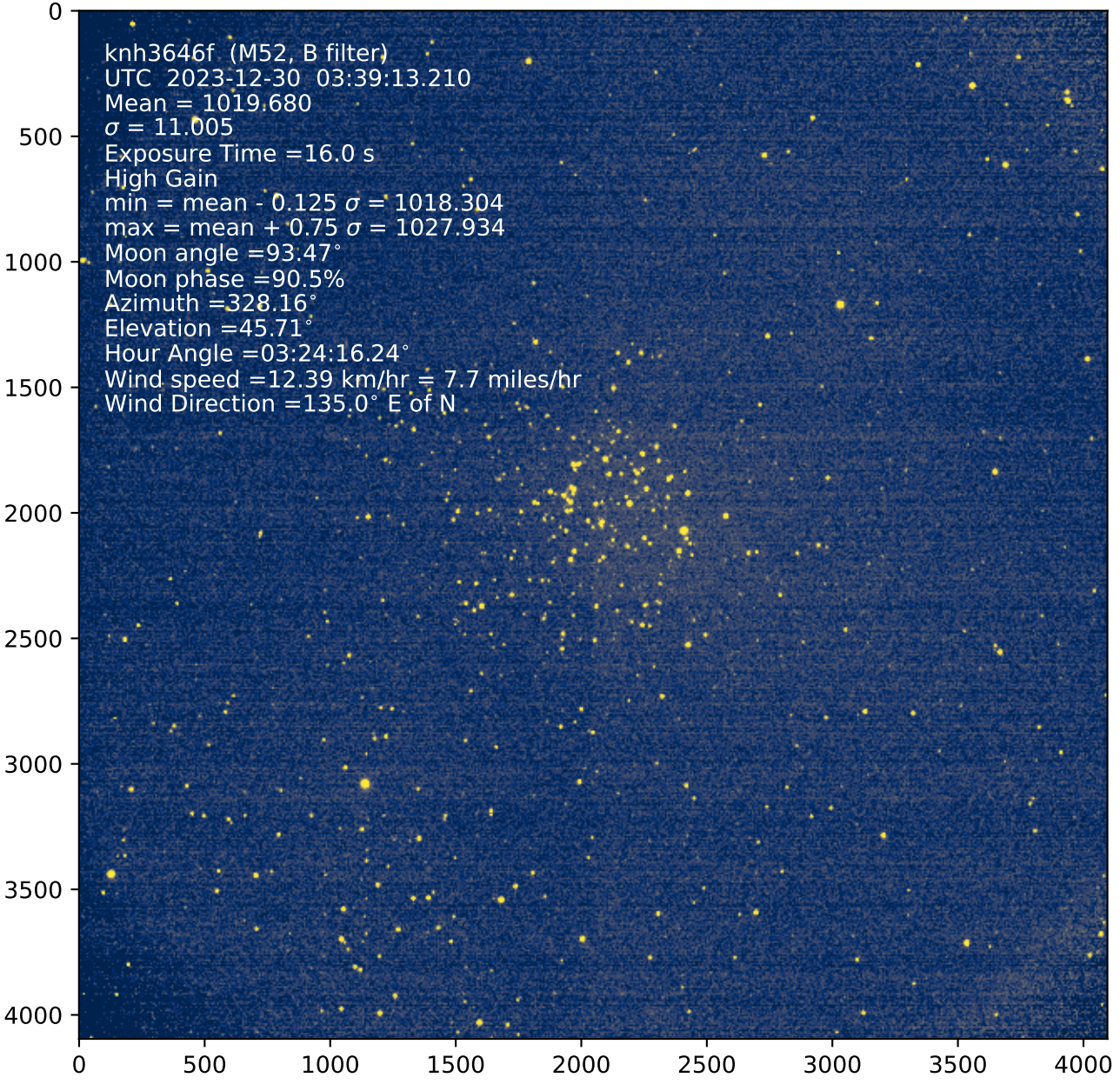
knh3646f (M52, B filter)
UTC 2023-12-30 03:39:13.210
Mean = 1019.680
σ = 11.005
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1018.304
max = mean + 0.75 σ = 1027.934
Moon angle =93.47°
Moon phase =90.5%
Azimuth =328.16°
Elevation =45.71°
Hour Angle =03:24:16.24°
Wind speed =12.39 km/hr = 7.7 miles/hr
Wind Direction =135.0° E of N
0
500
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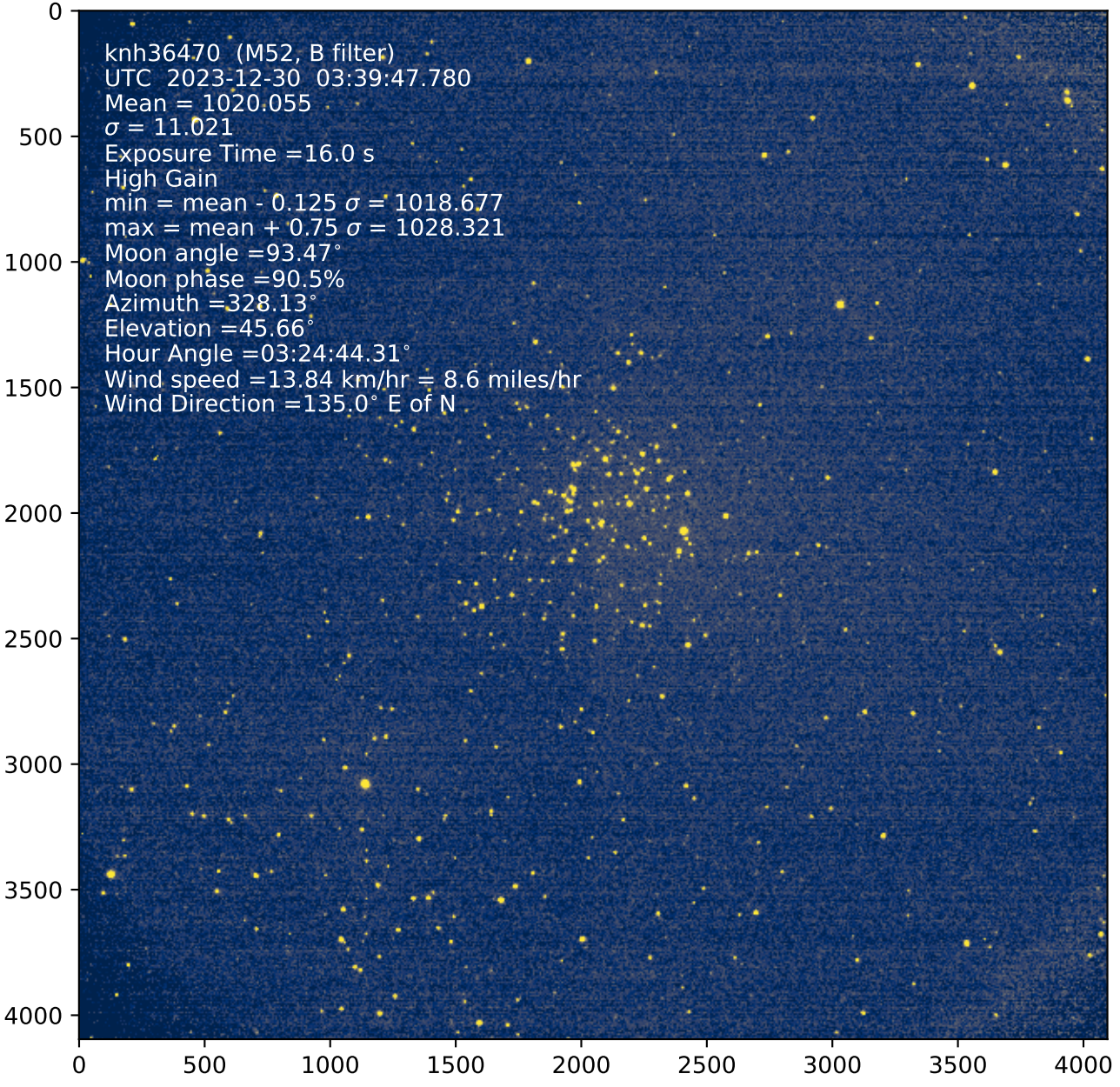
2500
3000
3500
4000


knh36470 (M52, B filter)
UTC 2023-12-30 03:39:47.780
Mean = 1020.055
σ = 11.021
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1018.677
max = mean + 0.75 σ = 1028.321
Moon angle =93.47°
Moon phase =90.5%
Azimuth =328.13°
Elevation =45.66°
Hour Angle =03:24:44.31°
Wind speed =13.84 km/hr = 8.6 miles/hr
Wind Direction =135.0° E of N
0
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3000
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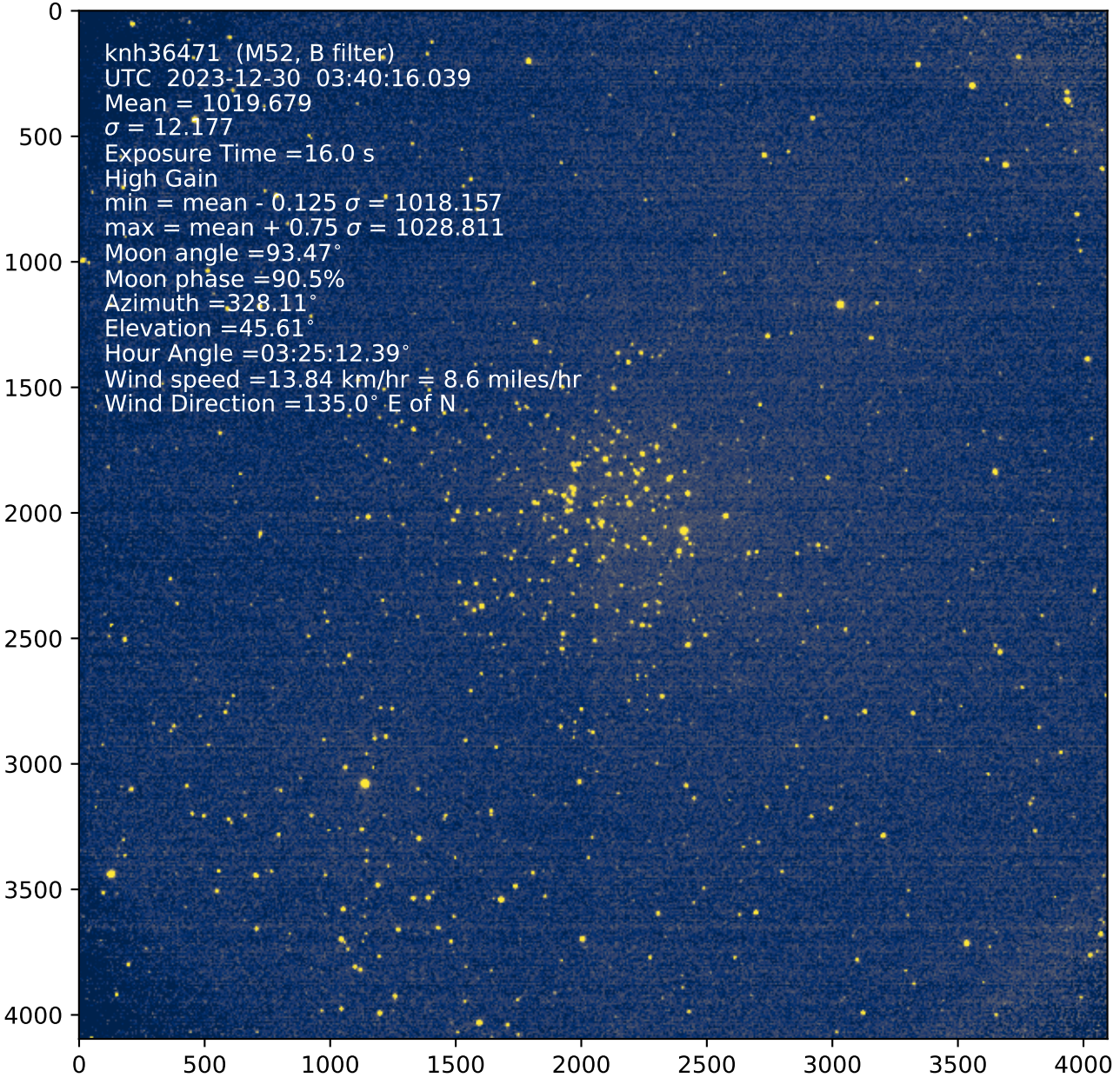
knh36471 (M52, B filter)
UTC 2023-12-30 03:40:16.039
Mean = 1019.679
σ = 12.177
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1018.157
max = mean + 0.75 σ = 1028.811
Moon angle =93.47°
Moon phase =90.5%
Azimuth =328.11°
Elevation =45.61°
Hour Angle =03:25:12.39°
Wind speed =13.84 km/hr = 8.6 miles/hr
Wind Direction =135.0° E of N
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3000
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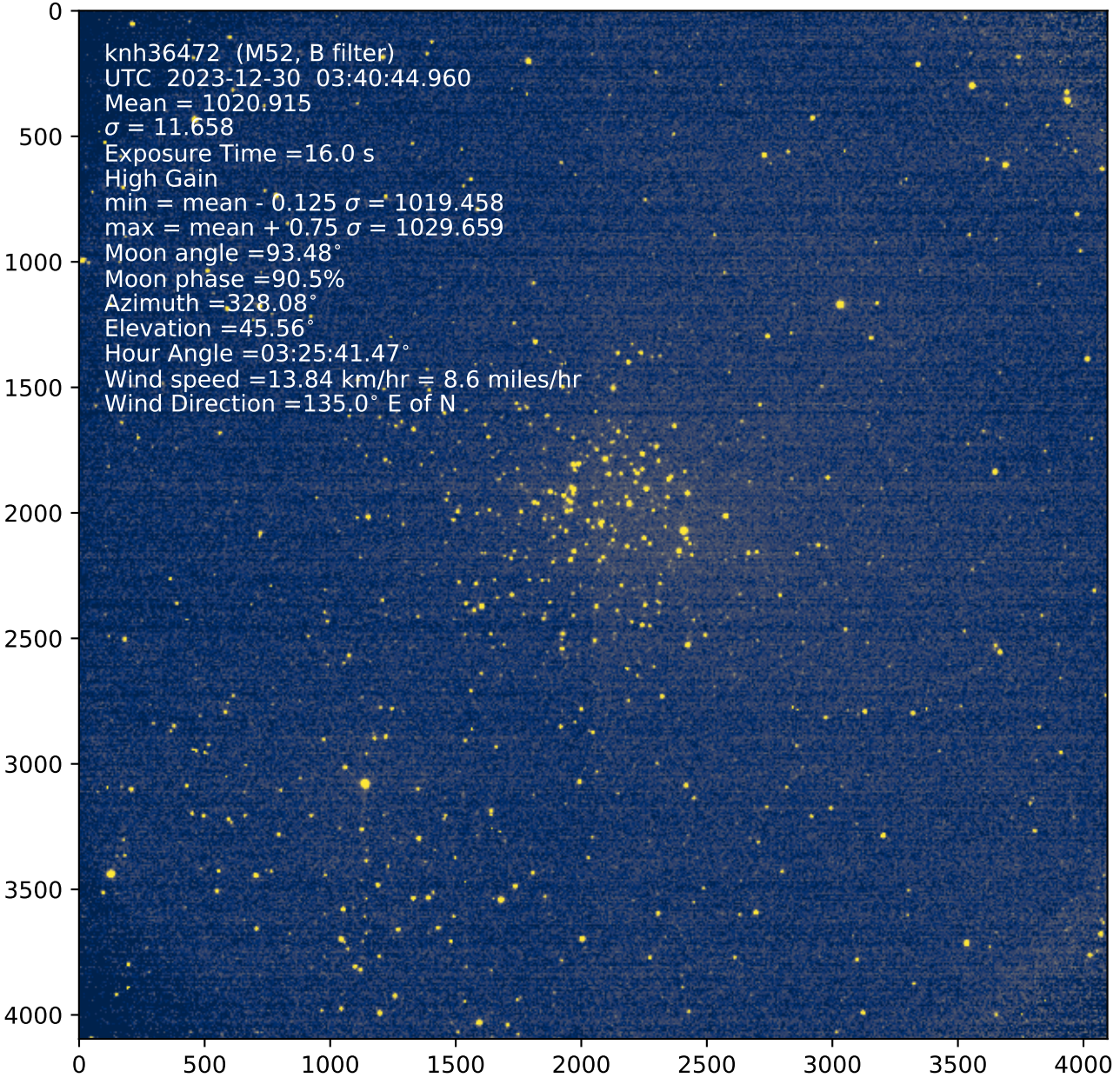
4000


knh36472 (M52, B filter)
UTC 2023-12-30 03:40:44.960
Mean = 1020.915
σ = 11.658
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1019.458
max = mean + 0.75 σ = 1029.659
Moon angle =93.48°
Moon phase =90.5%
Azimuth =328.08°
Elevation =45.56°
Hour Angle =03:25:41.47°
Wind speed =13.84 km/hr = 8.6 miles/hr
Wind Direction =135.0° E of N
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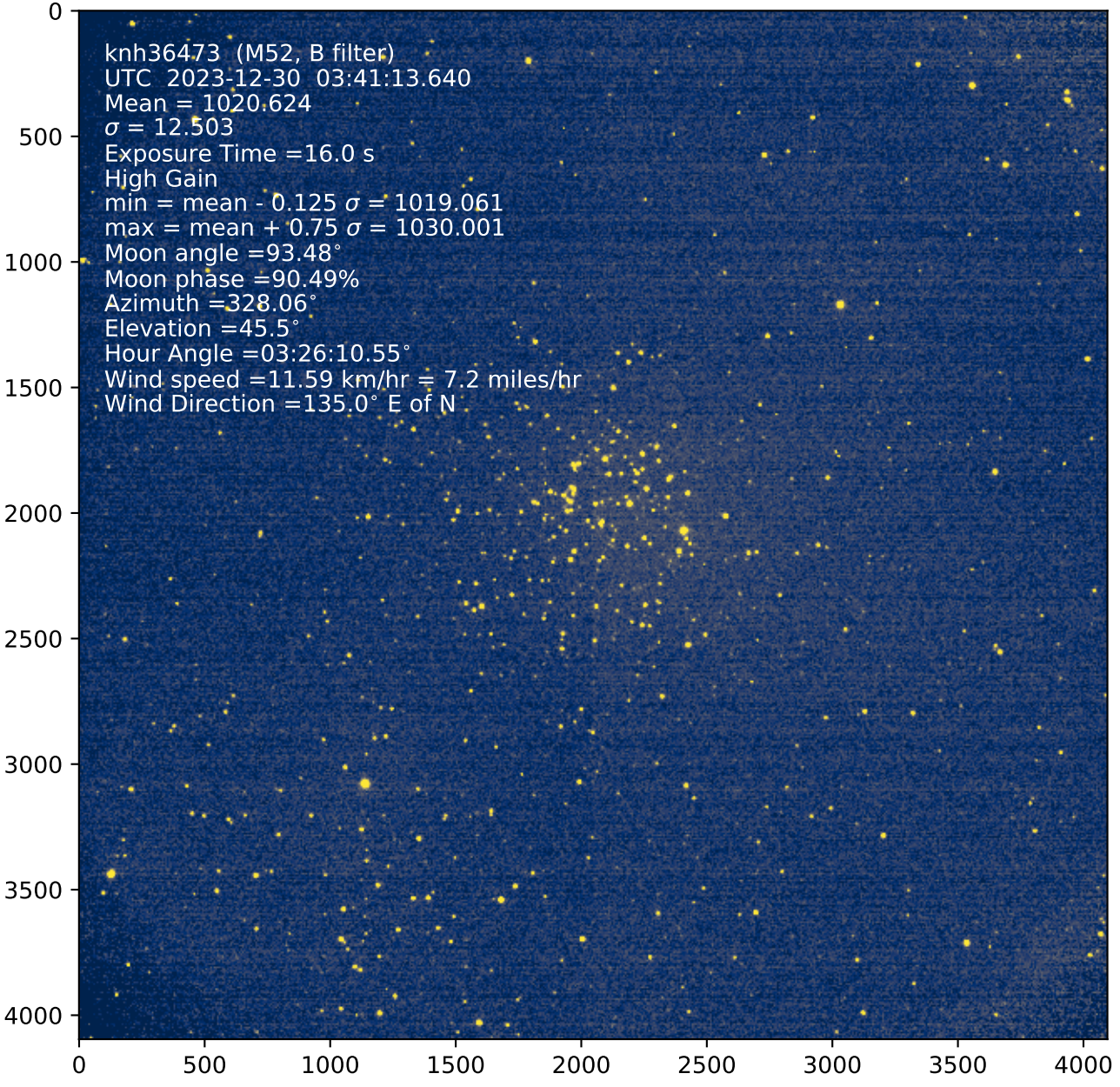
knh36473 (M52, B filter)
UTC 2023-12-30 03:41:13.640
Mean = 1020.624
σ = 12.503
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1019.061
max = mean + 0.75 σ = 1030.001
Moon angle =93.48°
Moon phase =90.49%
Azimuth =328.06°
Elevation =45.5°
Hour Angle =03:26:10.55°
Wind speed =11.59 km/hr = 7.2 miles/hr
Wind Direction =135.0° E of N
0
500
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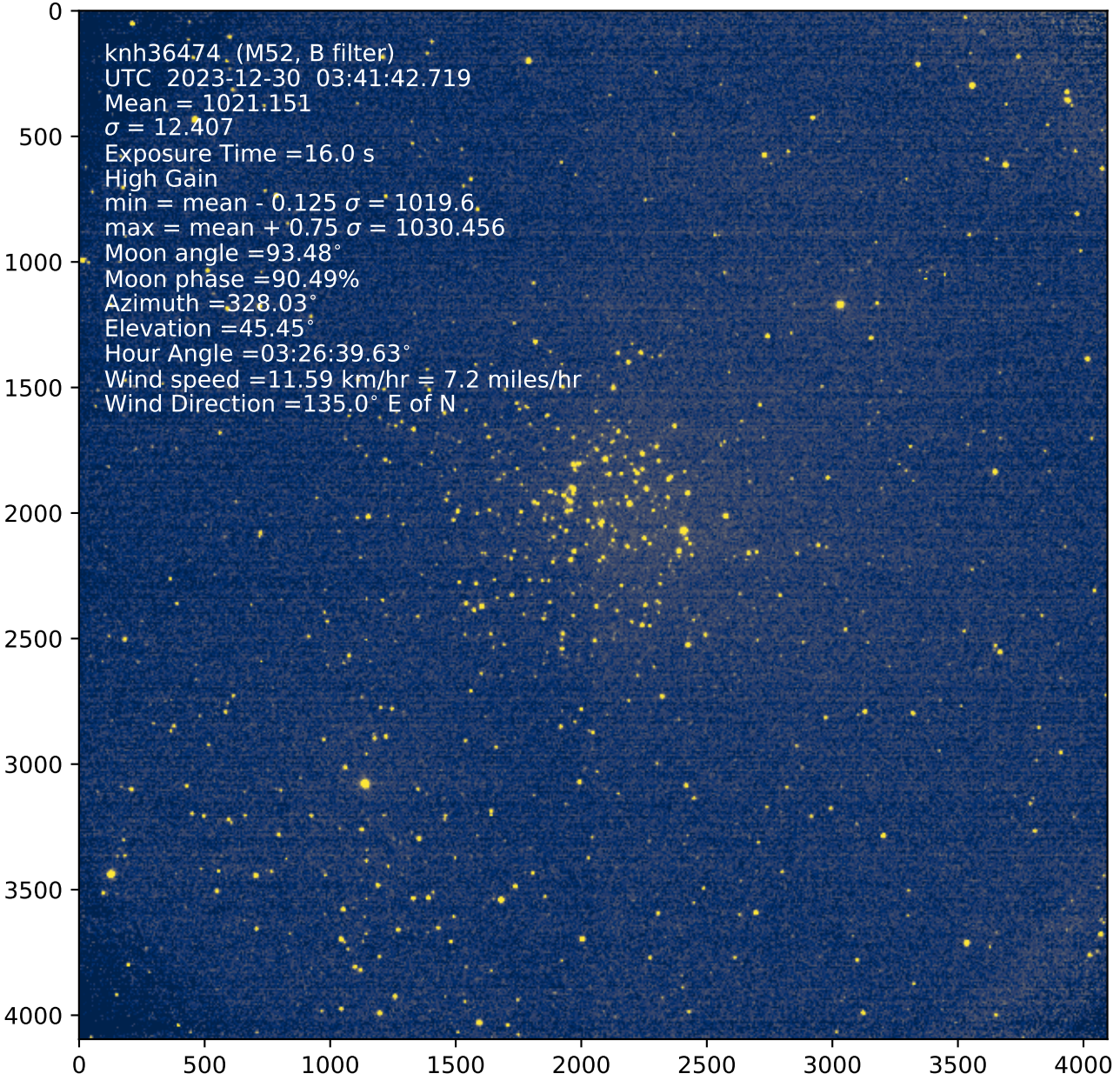
2000
2500
3000
3500
4000


knh36474 (M52, B filter)
UTC 2023-12-30 03:41:42.719
Mean = 1021.151
σ = 12.407
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1019.6
max = mean + 0.75 σ = 1030.456
Moon angle =93.48°
Moon phase =90.49%
Azimuth =328.03°
Elevation =45.45°
Hour Angle =03:26:39.63°
Wind speed =11.59 km/hr = 7.2 miles/hr
Wind Direction =135.0° E of N
0
500
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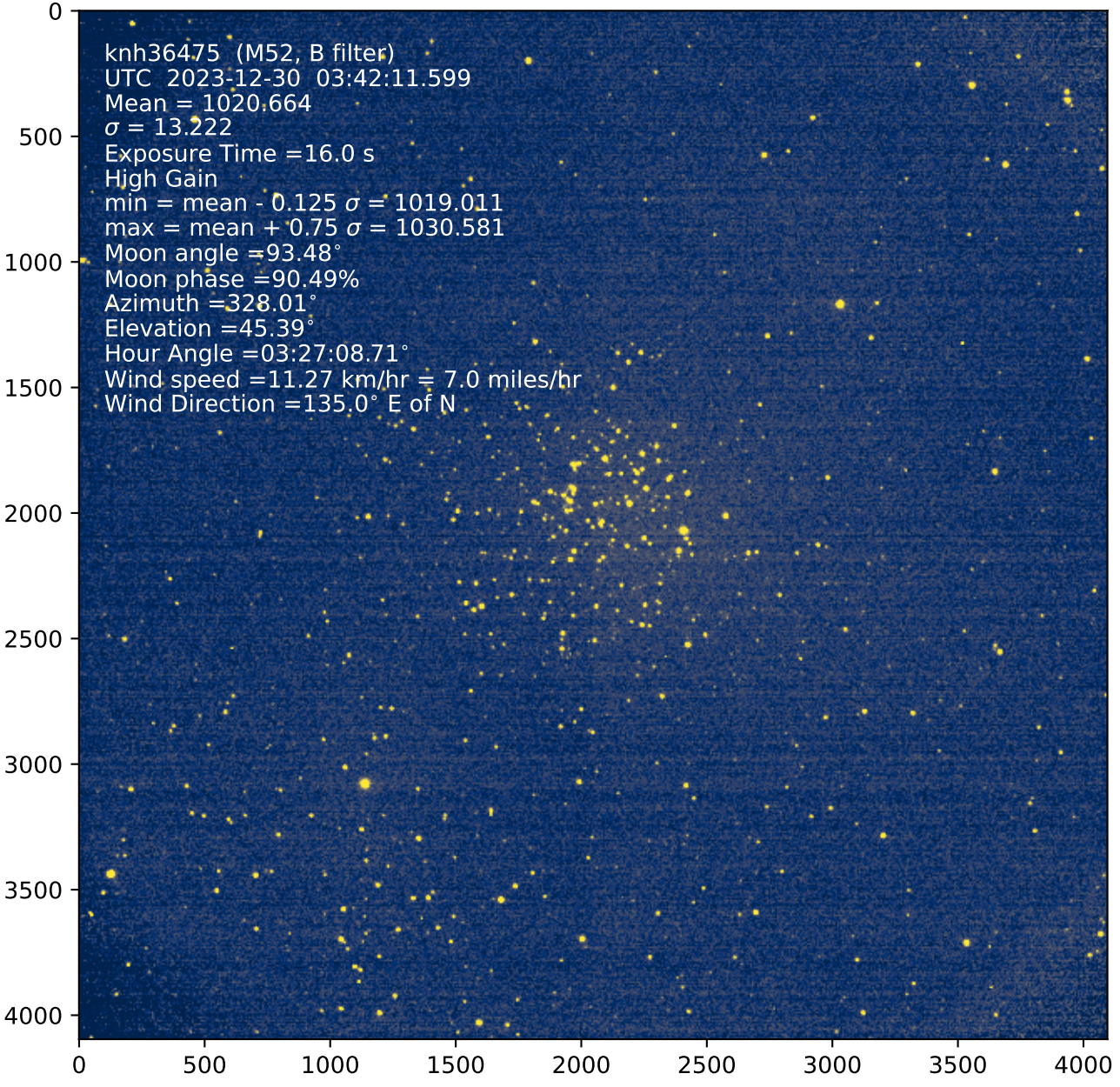
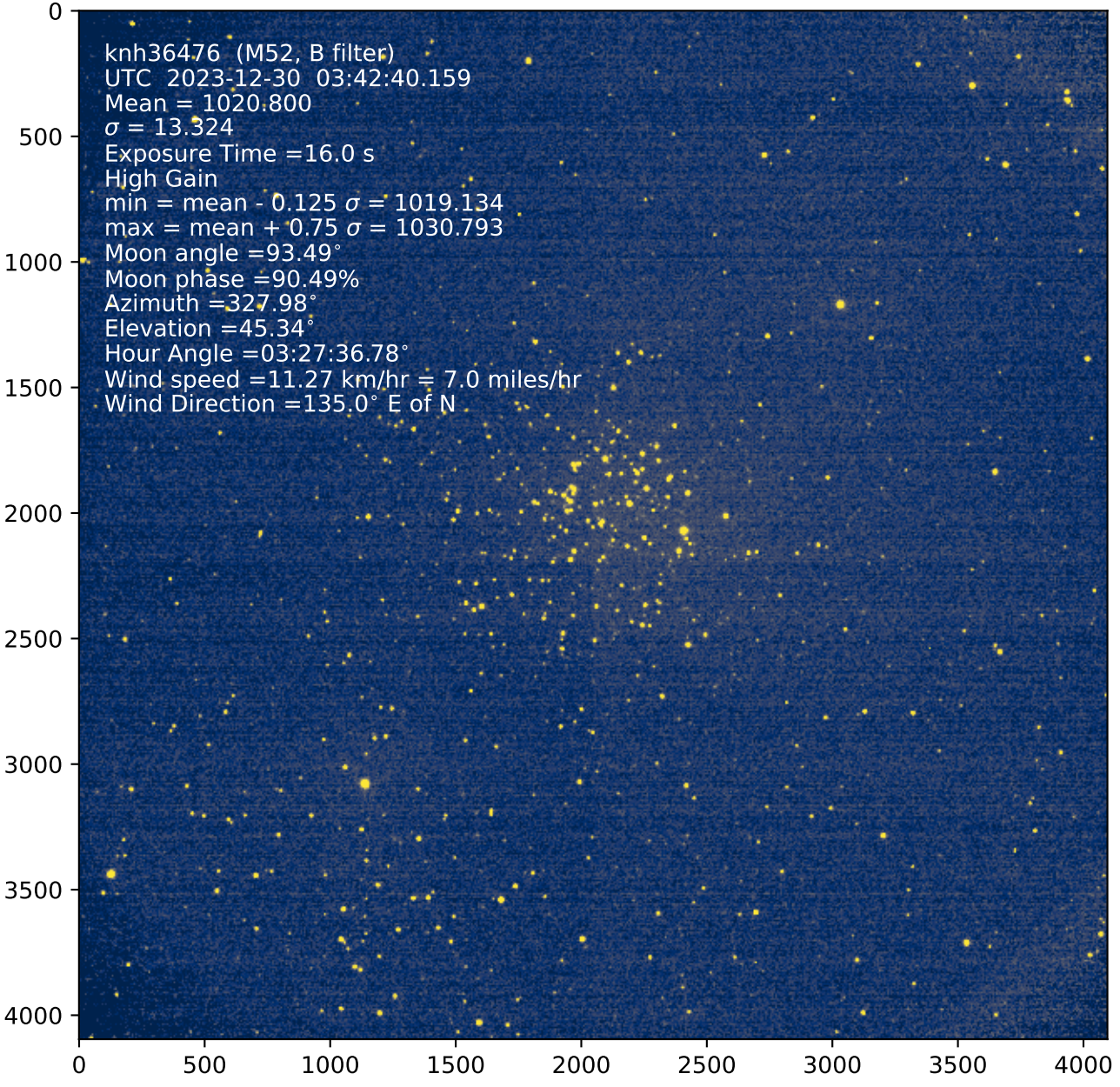
2000
2500
3000
3500
4000


knh36475 (M52, B filter)
UTC 2023-12-30 03:42:11.599
Mean = 1020.664
σ = 13.222
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1019.011
max = mean + 0.75 σ = 1030.581
Moon angle =93.48°
Moon phase =90.49%
Azimuth =328.01°
Elevation =45.39°
Hour Angle =03:27:08.71°
Wind speed =11.27 km/hr = 7.0 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh36476 (M52, B filter)
UTC 2023-12-30 03:42:40.159
Mean = 1020.800
σ = 13.324
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1019.134
max = mean + 0.75 σ = 1030.793
Moon angle =93.49°
Moon phase =90.49%
Azimuth =327.98°
Elevation =45.34°
Hour Angle =03:27:36.78°
Wind speed =11.27 km/hr = 7.0 miles/hr
Wind Direction =135.0° E of N
0
500
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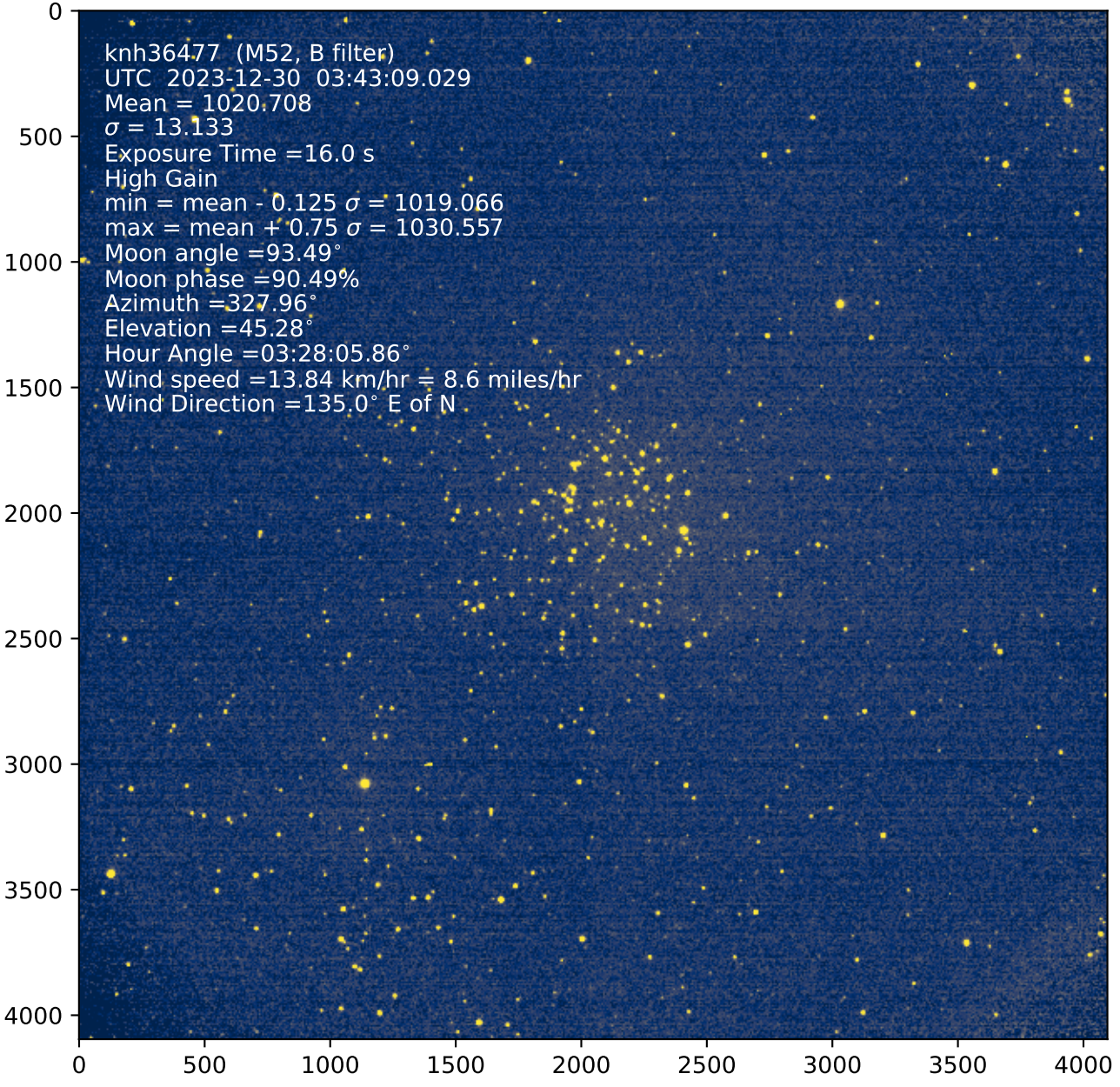
1500
2000
2500
3000
3500
4000


knh36477 (M52, B filter)
UTC 2023-12-30 03:43:09.029
Mean = 1020.708
σ = 13.133
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1019.066
max = mean + 0.75 σ = 1030.557
Moon angle =93.49°
Moon phase =90.49%
Azimuth =327.96°
Elevation =45.28°
Hour Angle =03:28:05.86°
Wind speed =13.84 km/hr = 8.6 miles/hr
Wind Direction =135.0° E of N
0
500
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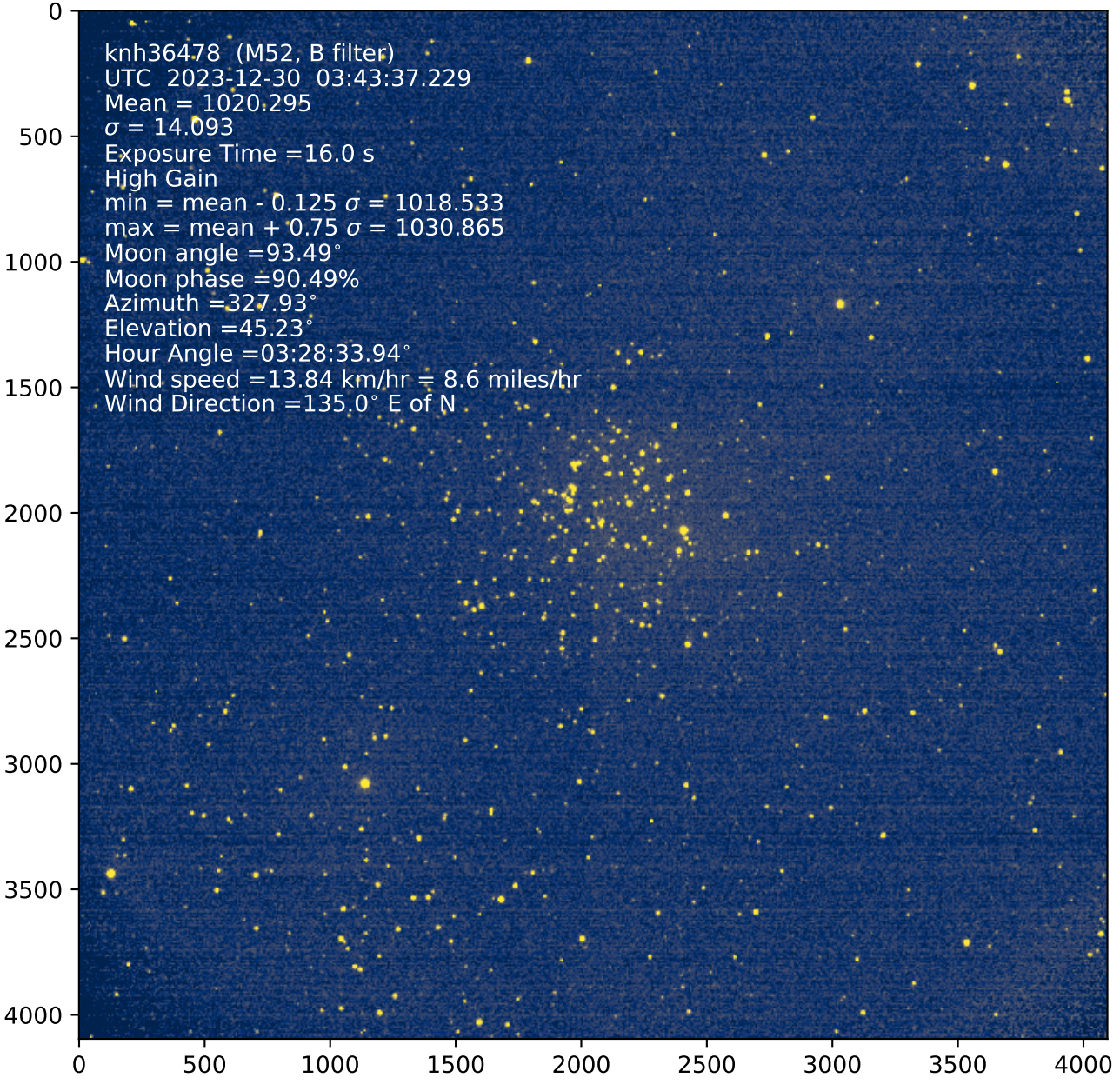
2000
2500
3000
3500
4000


knh36478 (M52, B filter)
UTC 2023-12-30 03:43:37.229
Mean = 1020.295
σ = 14.093
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1018.533
max = mean + 0.75 σ = 1030.865
Moon angle =93.49°
Moon phase =90.49%
Azimuth =327.93°
Elevation =45.23°
Hour Angle =03:28:33.94°
Wind speed =13.84 km/hr = 8.6 miles/hr
Wind Direction =135.0° E of N
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2500
3000
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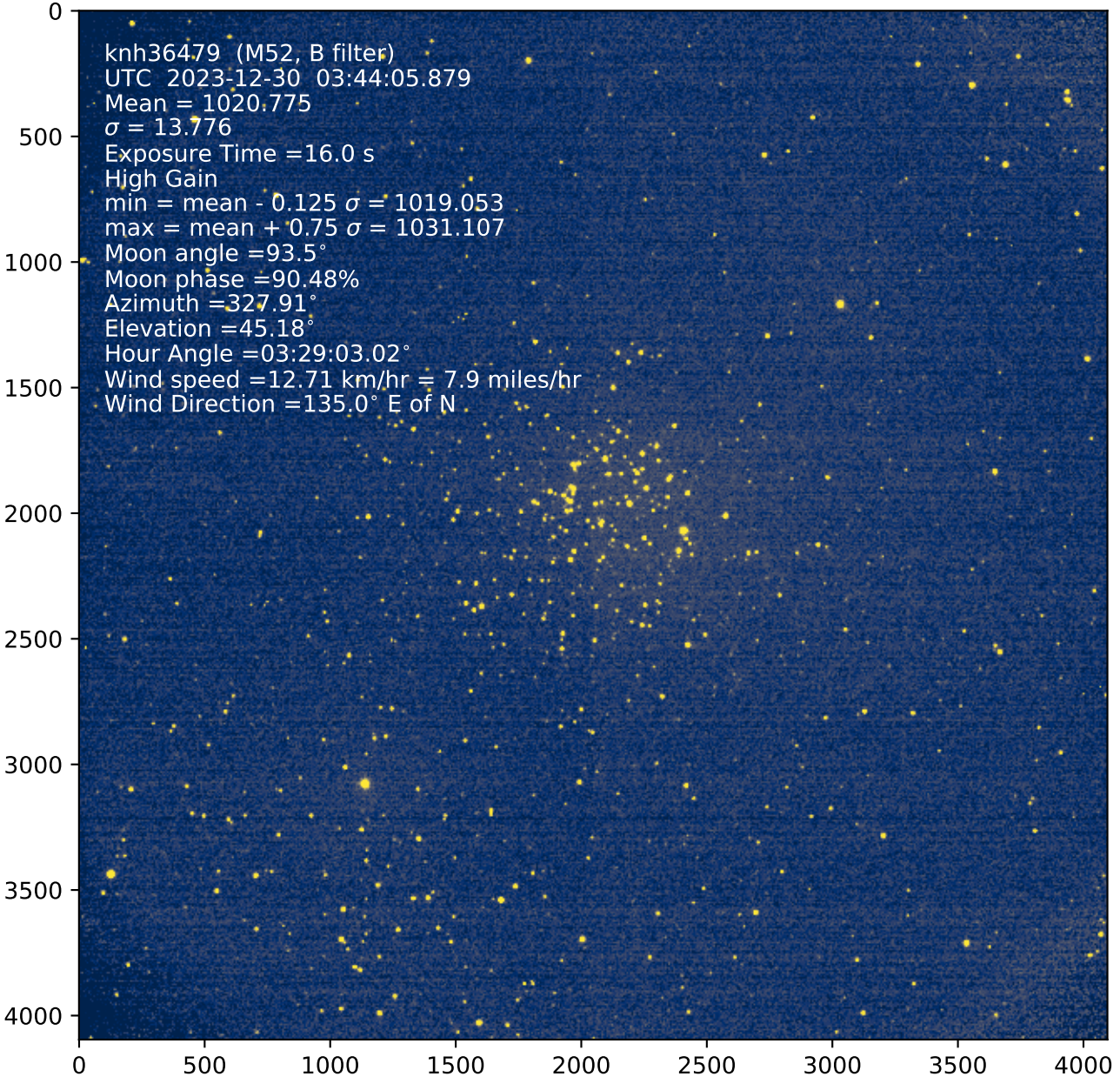
4000


knh36479 (M52, B filter)
UTC 2023-12-30 03:44:05.879
Mean = 1020.775
σ = 13.776
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1019.053
max = mean + 0.75 σ = 1031.107
Moon angle =93.5°
Moon phase =90.48%
Azimuth =327.91°
Elevation =45.18°
Hour Angle =03:29:03.02°
Wind speed =12.71 km/hr = 7.9 miles/hr
Wind Direction =135.0° E of N
0
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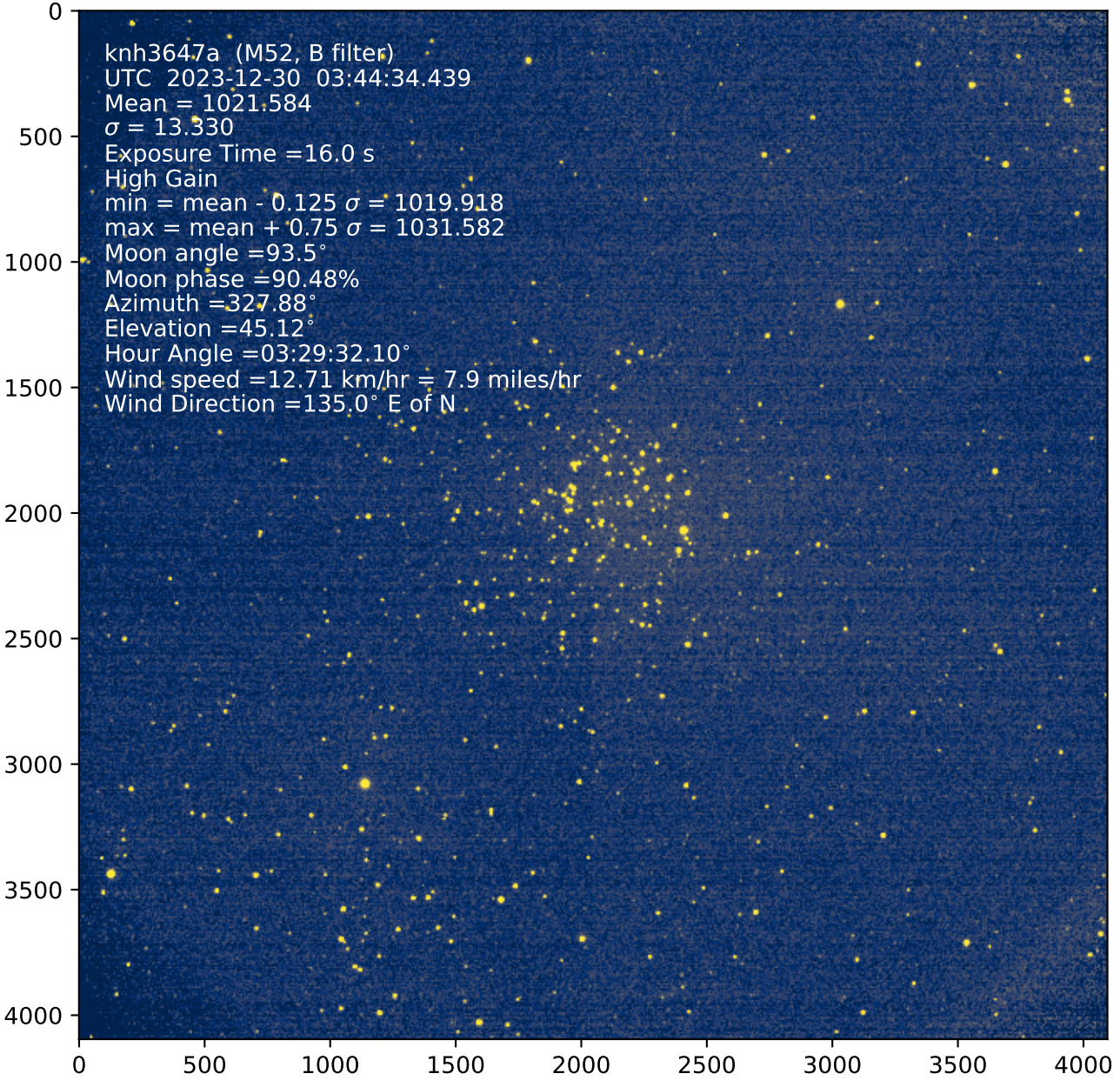
4000


knh3647a (M52, B filter)
UTC 2023-12-30 03:44:34.439
Mean = 1021.584
σ = 13.330
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1019.918
max = mean + 0.75 σ = 1031.582
Moon angle =93.5°
Moon phase =90.48%
Azimuth =327.88°
Elevation =45.12°
Hour Angle =03:29:32.10°
Wind speed =12.71 km/hr = 7.9 miles/hr
Wind Direction =135.0° E of N
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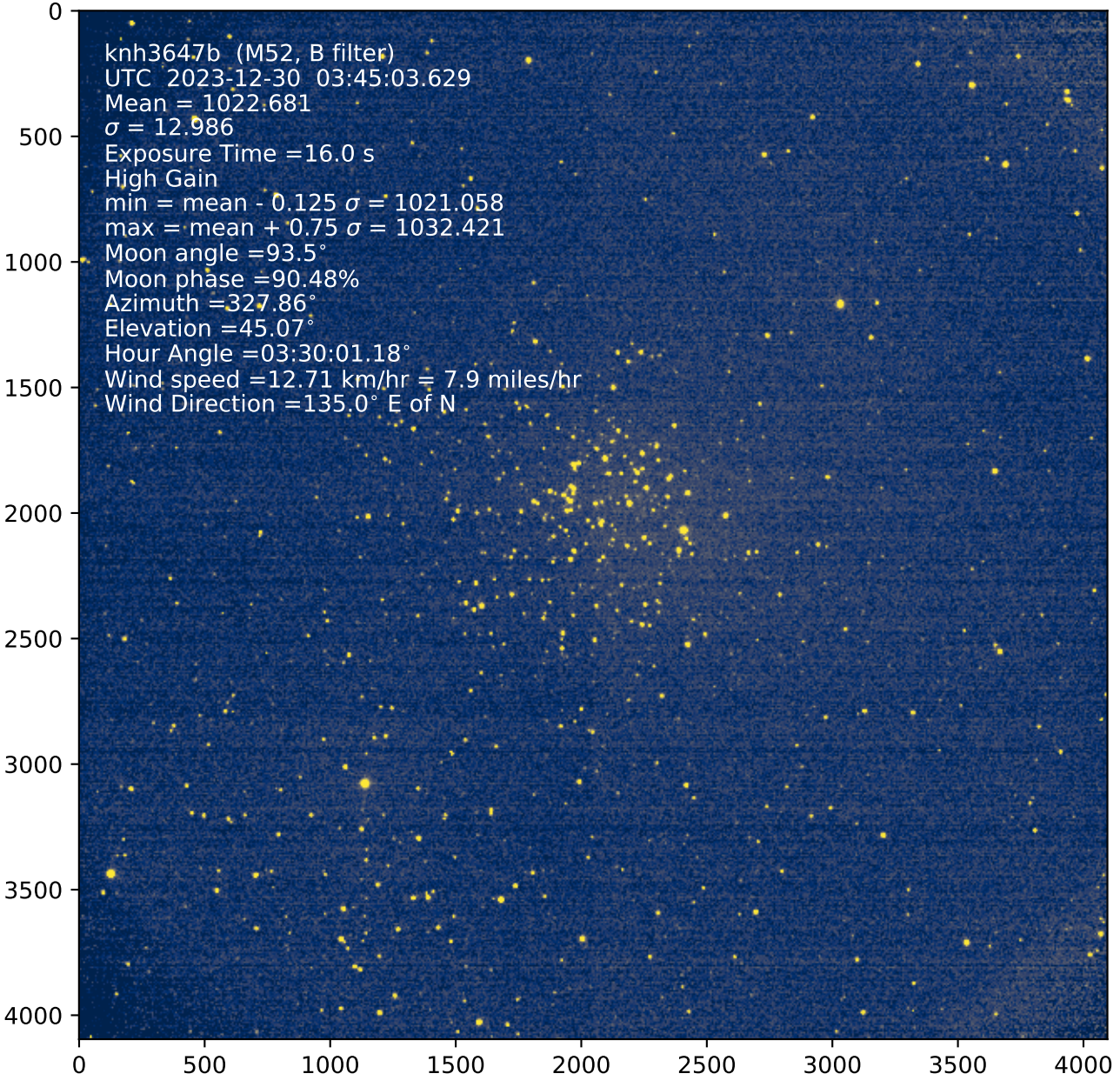
knh3647b (M52, B filter)
UTC 2023-12-30 03:45:03.629
Mean = 1022.681
σ = 12.986
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1021.058
max = mean + 0.75 σ = 1032.421
Moon angle =93.5°
Moon phase =90.48%
Azimuth =327.86°
Elevation =45.07°
Hour Angle =03:30:01.18°
Wind speed =12.71 km/hr = 7.9 miles/hr
Wind Direction =135.0° E of N
0
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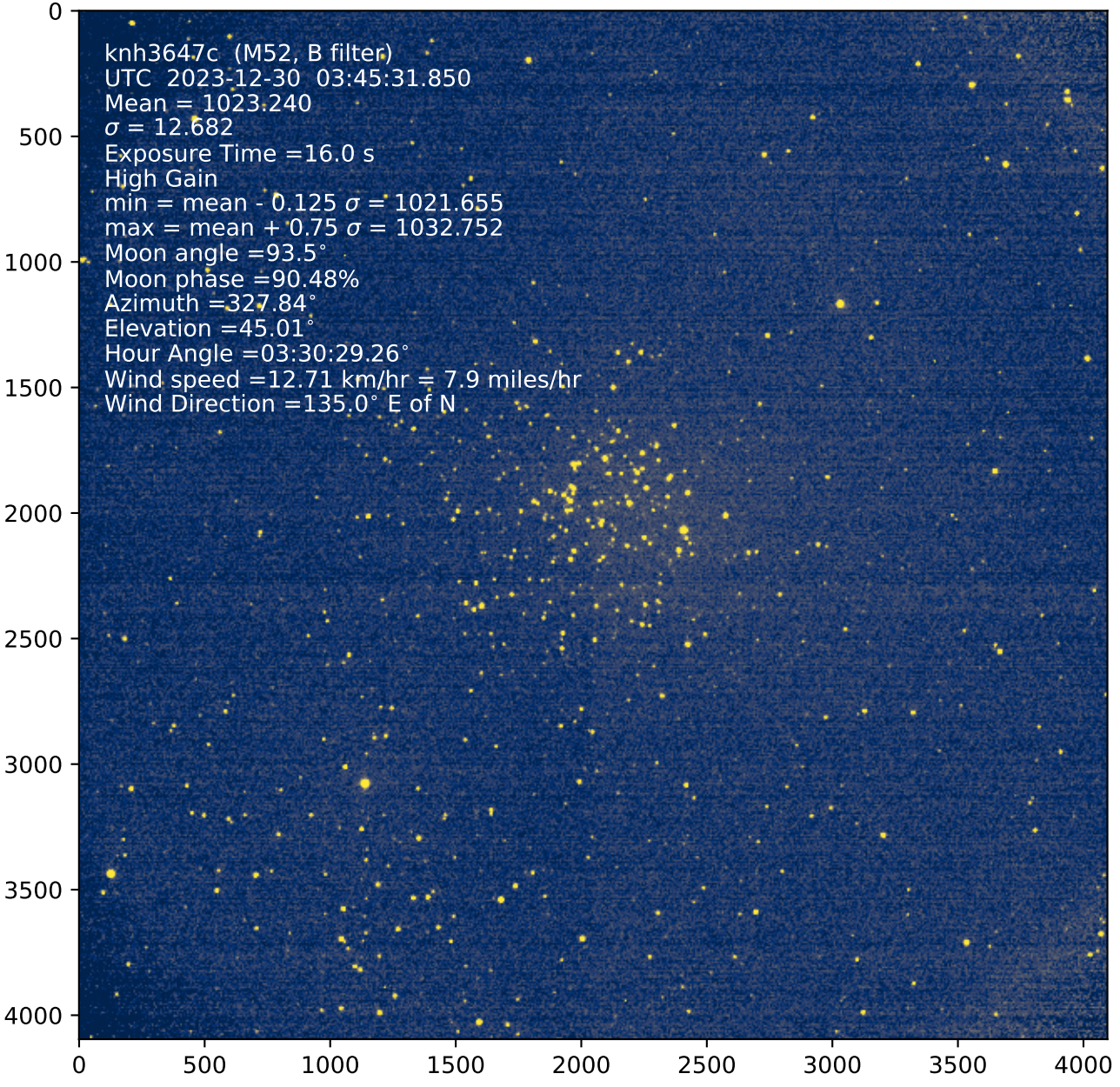
4000


knh3647c (M52, B filter)
UTC 2023-12-30 03:45:31.850
Mean = 1023.240
σ = 12.682
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1021.655
max = mean + 0.75 σ = 1032.752
Moon angle =93.5°
Moon phase =90.48%
Azimuth =327.84°
Elevation =45.01°
Hour Angle =03:30:29.26°
Wind speed =12.71 km/hr = 7.9 miles/hr
Wind Direction =135.0° E of N
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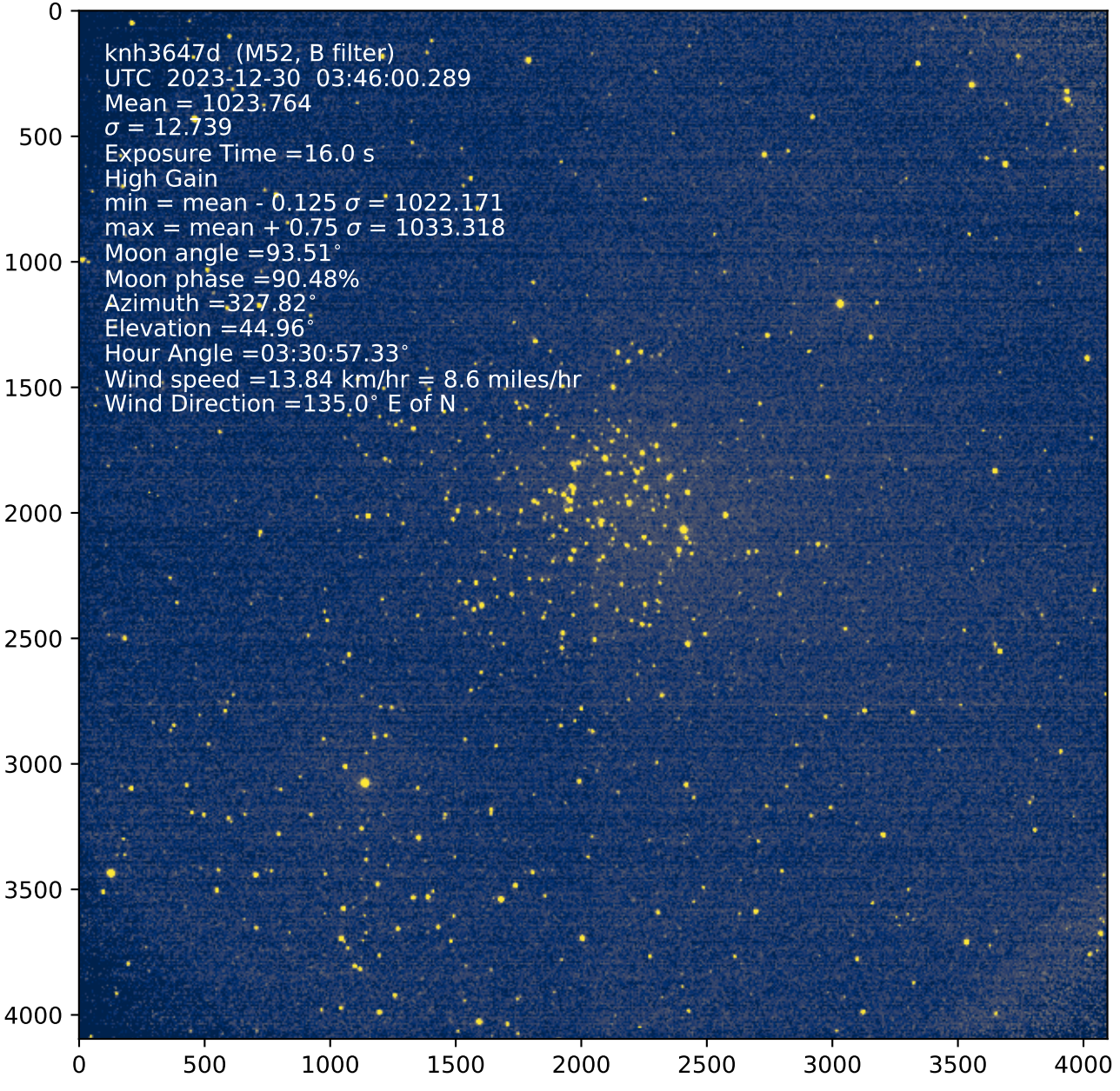
knh3647d (M52, B filter)
UTC 2023-12-30 03:46:00.289
Mean = 1023.764
σ = 12.739
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1022.171
max = mean + 0.75 σ = 1033.318
Moon angle =93.51°
Moon phase =90.48%
Azimuth =327.82°
Elevation =44.96°
Hour Angle =03:30:57.33°
Wind speed =13.84 km/hr = 8.6 miles/hr
Wind Direction =135.0° E of N
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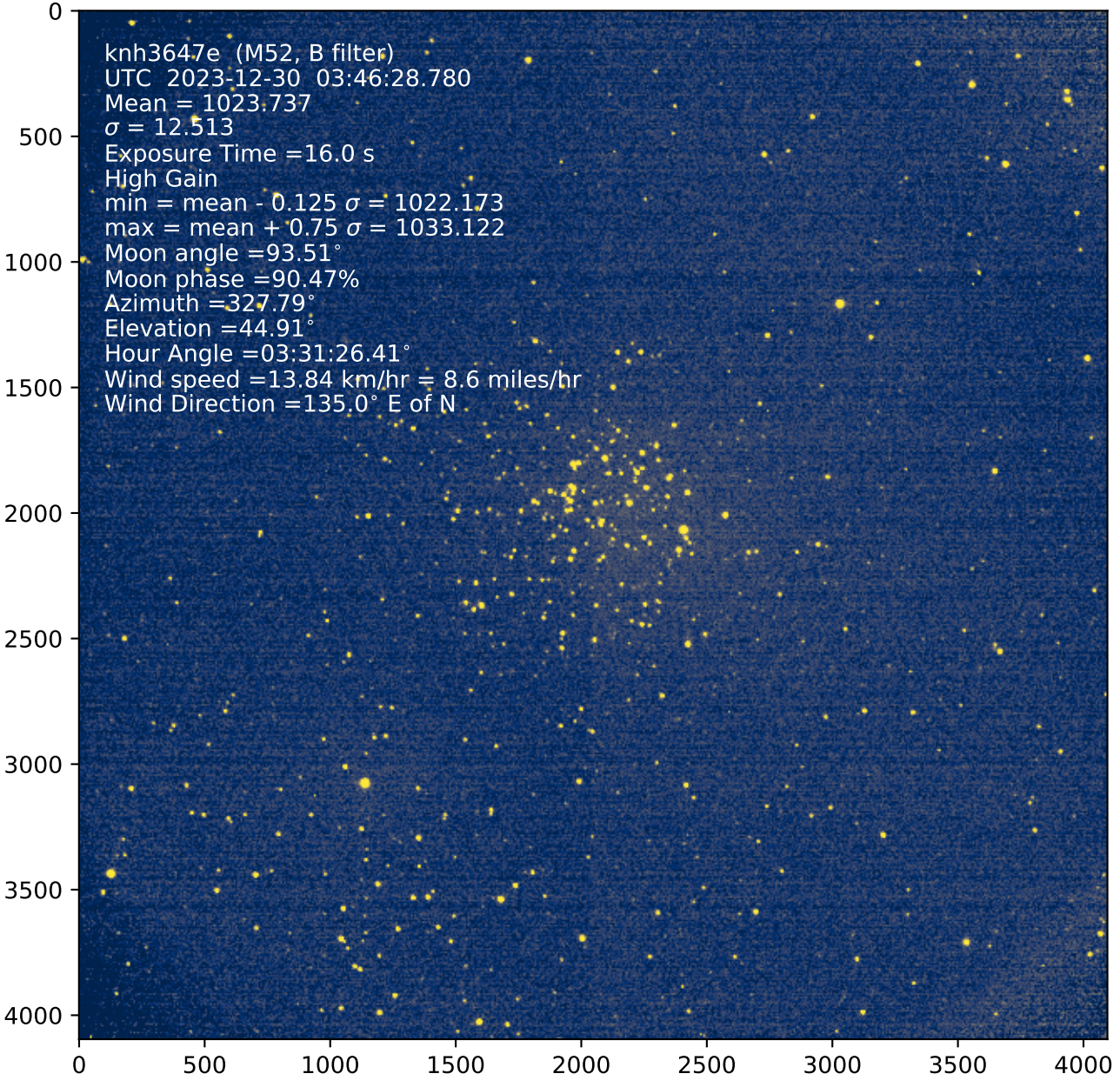
knh3647e (M52, B filter)
UTC 2023-12-30 03:46:28.780
Mean = 1023.737
σ = 12.513
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1022.173
max = mean + 0.75 σ = 1033.122
Moon angle =93.51°
Moon phase =90.47%
Azimuth =327.79°
Elevation =44.91°
Hour Angle =03:31:26.41°
Wind speed =13.84 km/hr = 8.6 miles/hr
Wind Direction =135.0° E of N
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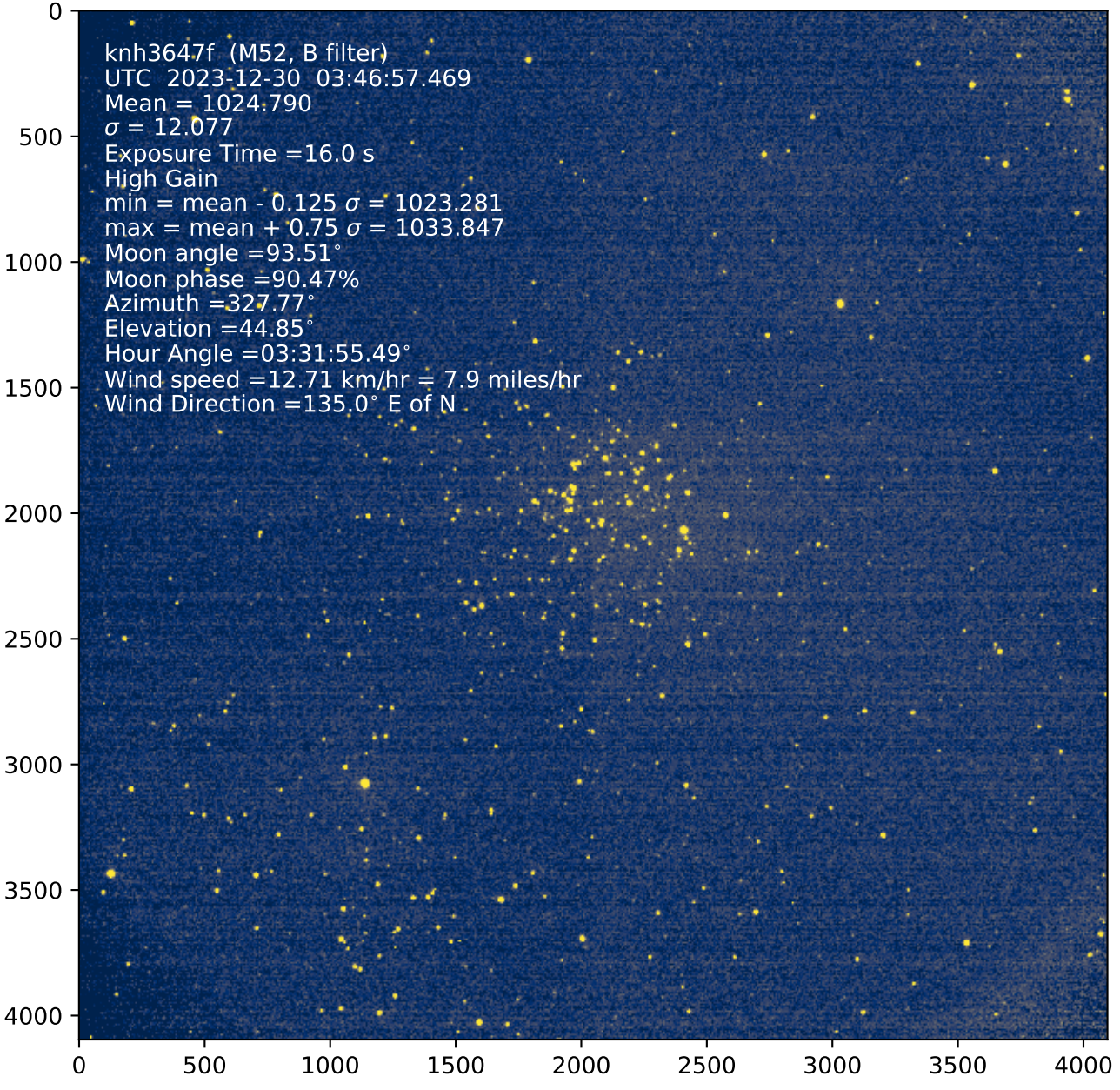
knh3647f (M52, B filter)
UTC 2023-12-30 03:46:57.469
Mean = 1024.790
σ = 12.077
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1023.281
max = mean + 0.75 σ = 1033.847
Moon angle =93.51°
Moon phase =90.47%
Azimuth =327.77°
Elevation =44.85°
Hour Angle =03:31:55.49°
Wind speed =12.71 km/hr = 7.9 miles/hr
Wind Direction =135.0° E of N
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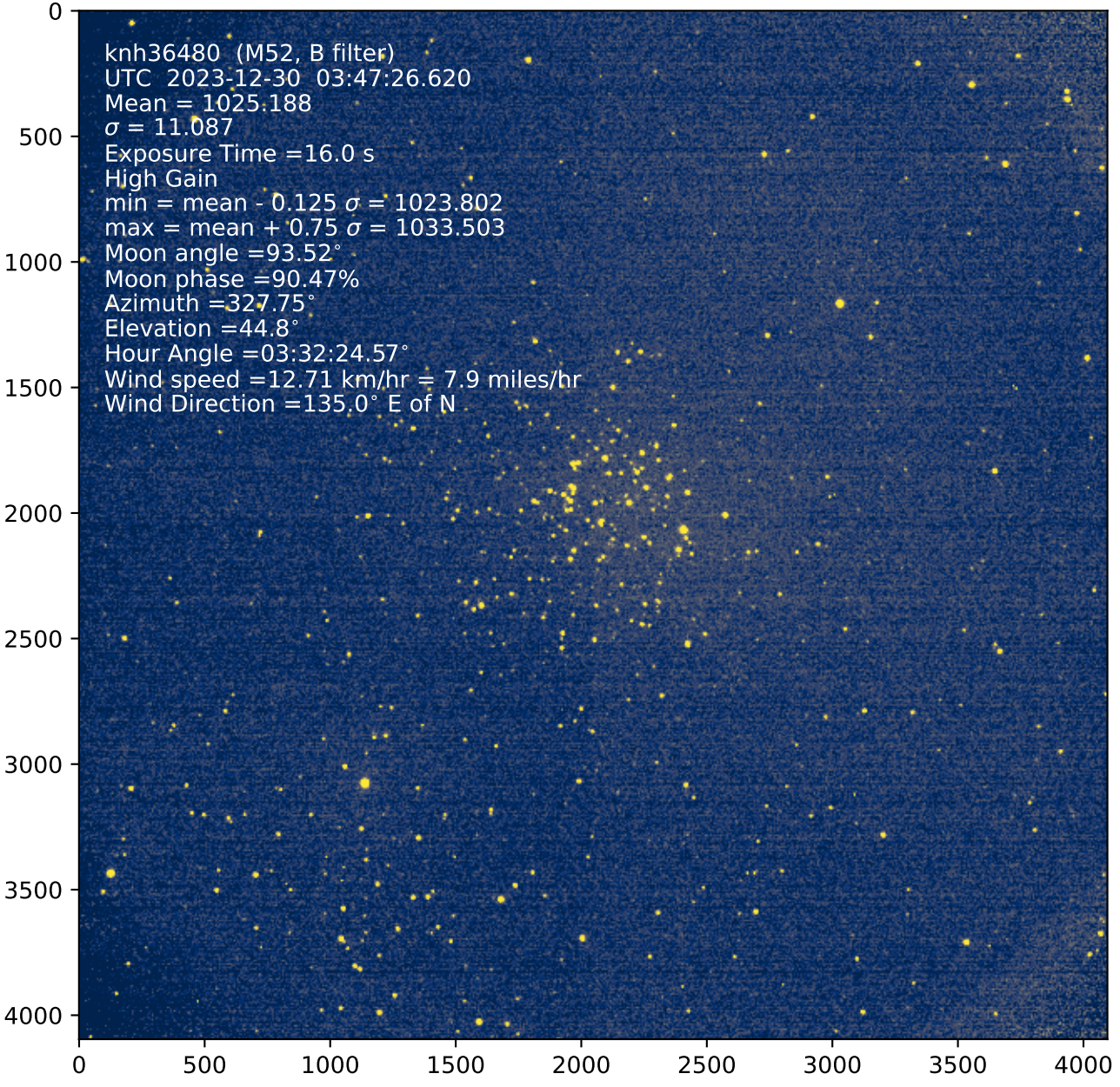
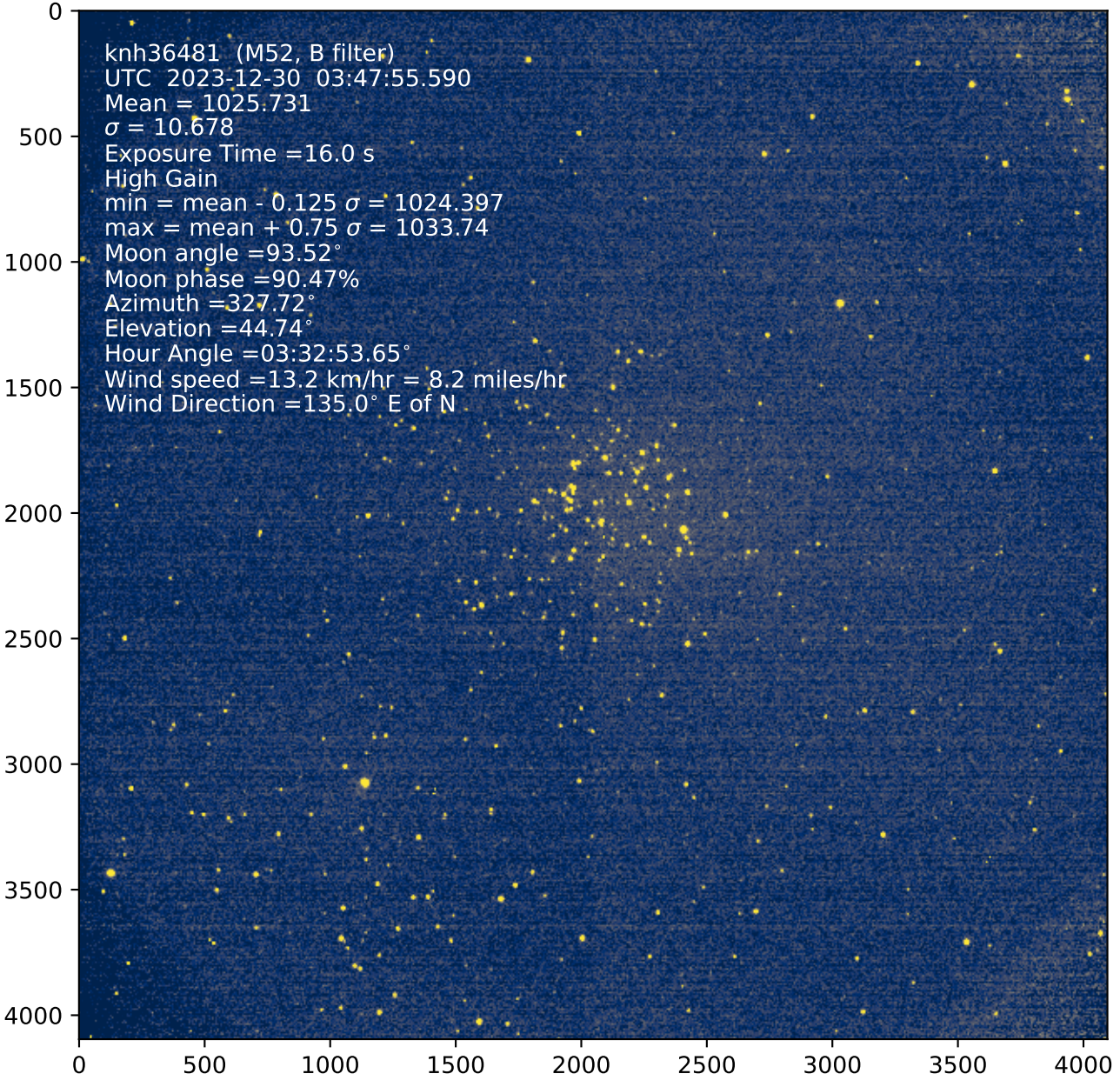
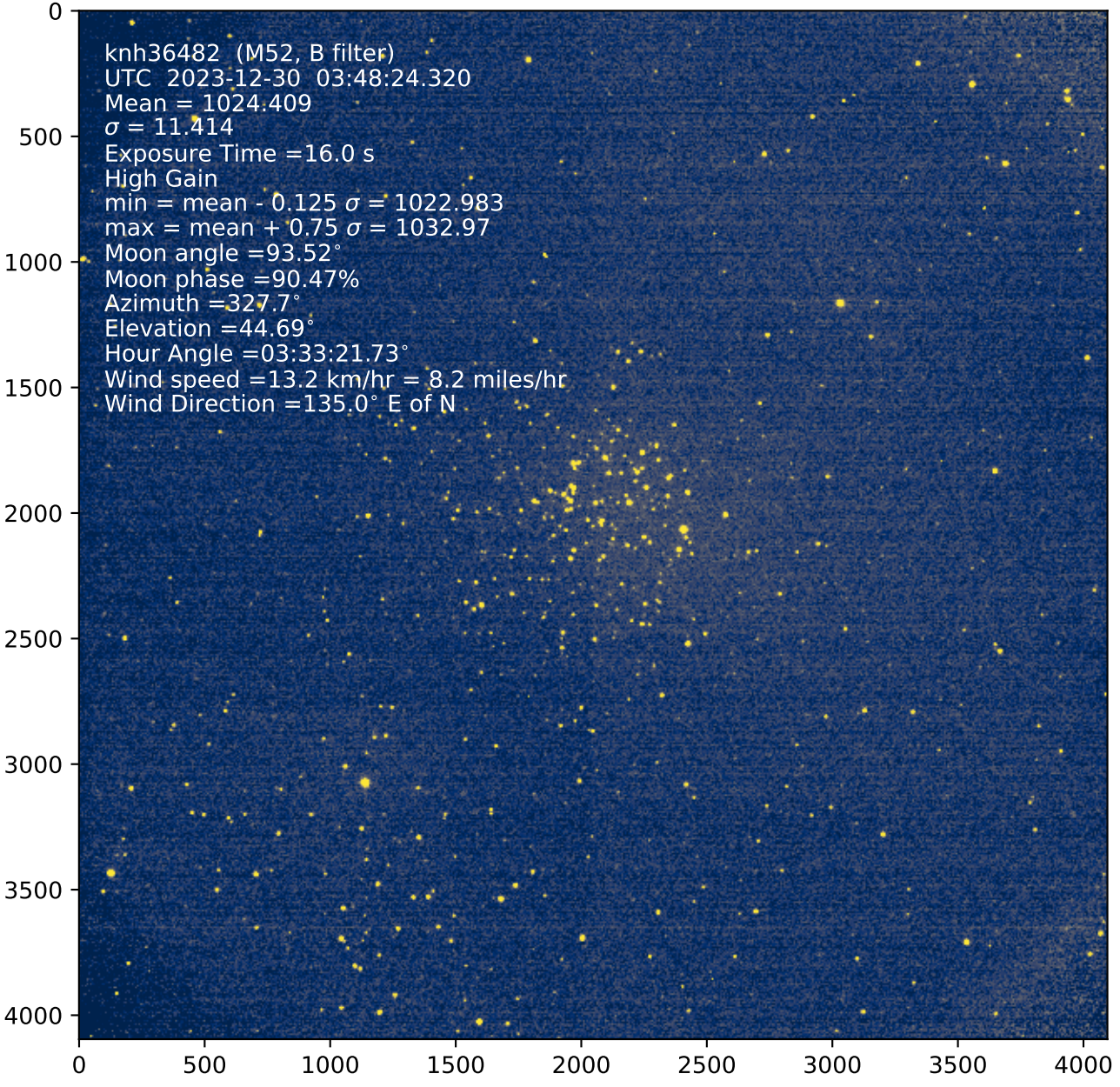
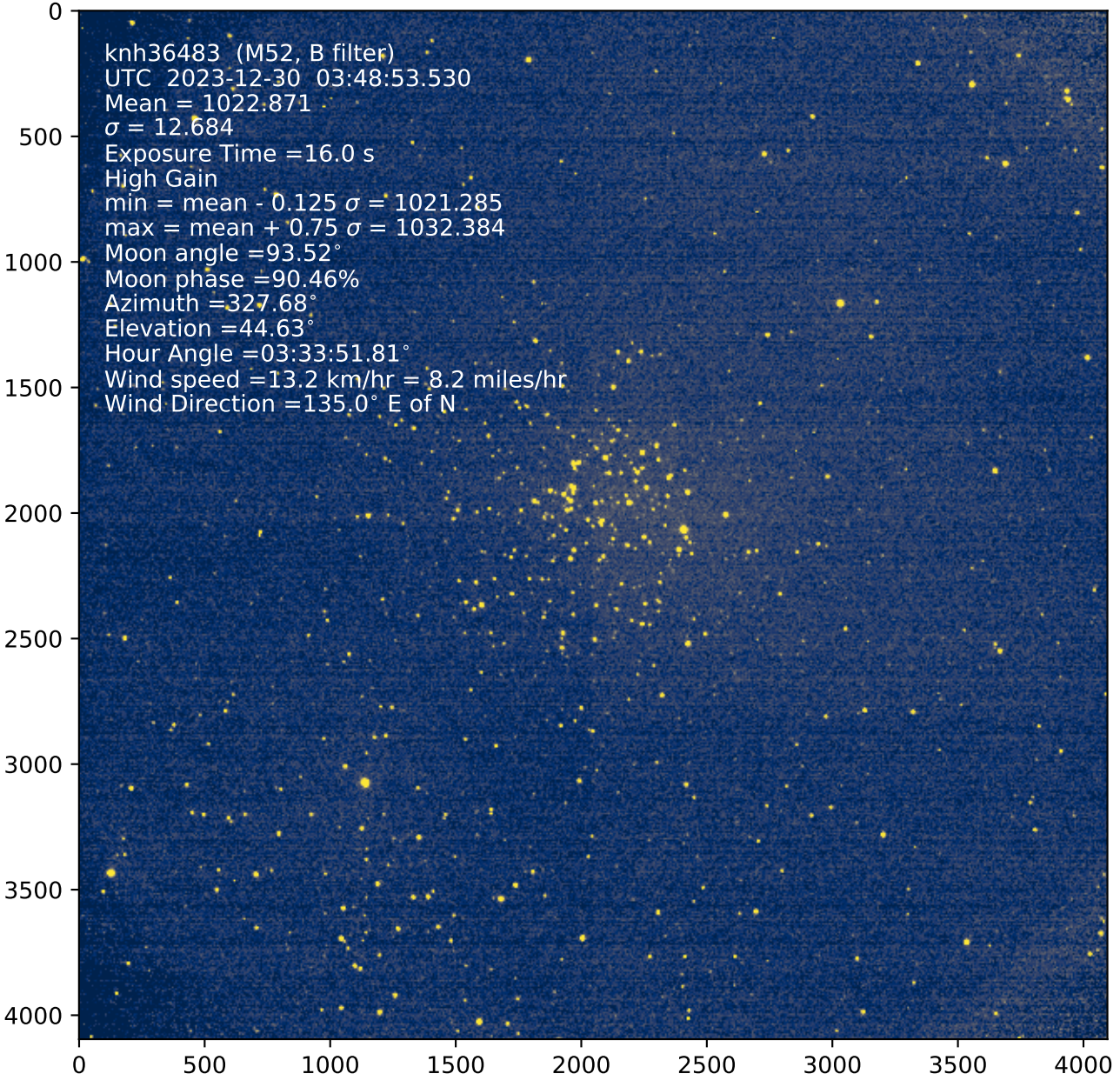
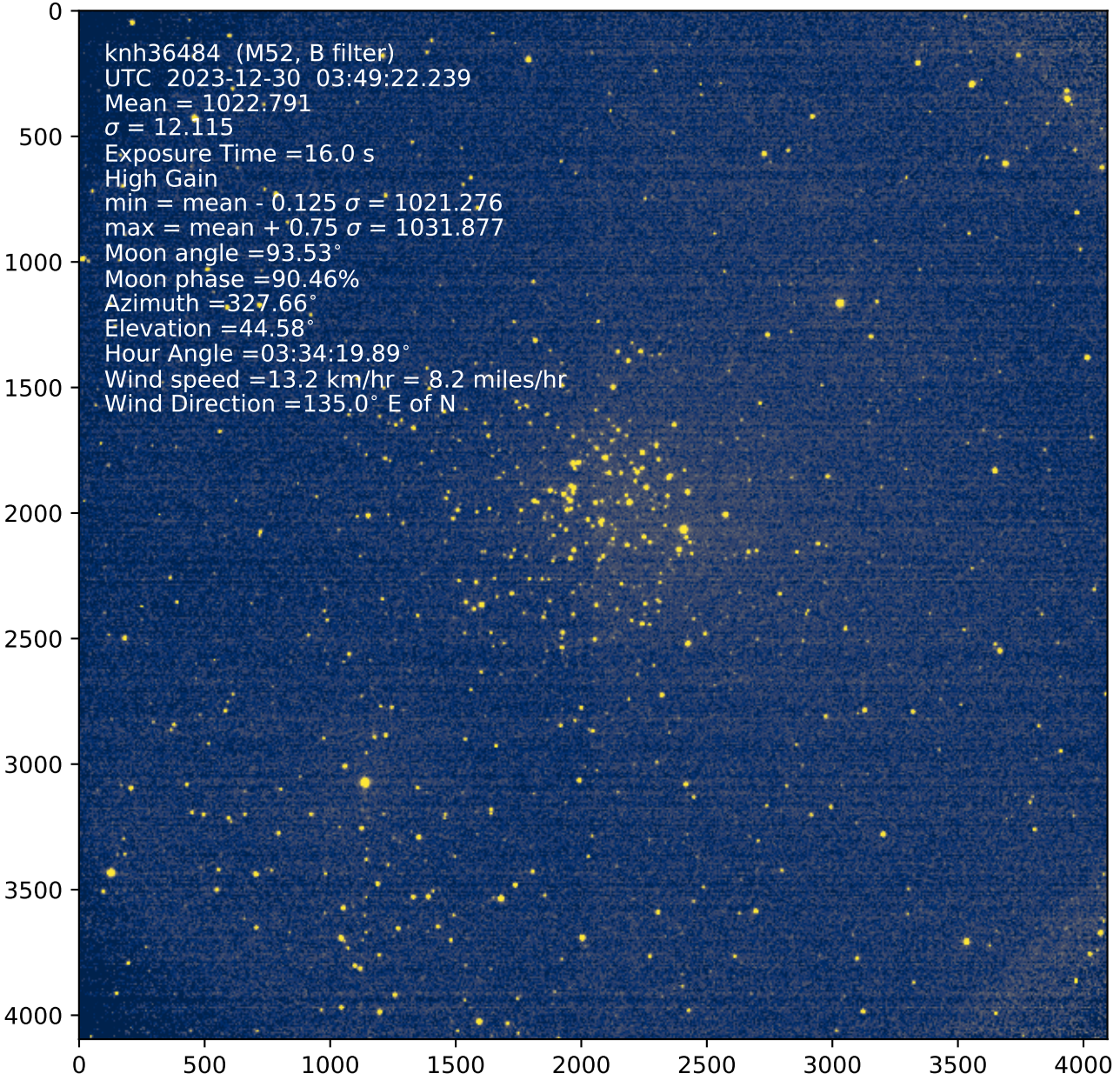

knh36480 (M52, B filter)
UTC 2023-12-30 03:47:26.620
Mean = 1025.188
σ = 11.087
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1023.802
max = mean + 0.75 σ = 1033.503
Moon angle =93.52°
Moon phase =90.47%
Azimuth =327.75°
Elevation =44.8°
Hour Angle =03:32:24.57°
Wind speed =12.71 km/hr = 7.9 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh36481 (M52, B filter)
UTC 2023-12-30 03:47:55.590
Mean = 1025.731
σ = 10.678
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1024.397
max = mean + 0.75 σ = 1033.74
Moon angle =93.52°
Moon phase =90.47%
Azimuth =327.72°
Elevation =44.74°
Hour Angle =03:32:53.65°
Wind speed =13.2 km/hr = 8.2 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh36482 (M52, B filter)
UTC 2023-12-30 03:48:24.320
Mean = 1024.409
σ = 11.414
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1022.983
max = mean + 0.75 σ = 1032.97
Moon angle =93.52°
Moon phase =90.47%
Azimuth =327.7°
Elevation =44.69°
Hour Angle =03:33:21.73°
Wind speed =13.2 km/hr = 8.2 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh36483 (M52, B filter)
UTC 2023-12-30 03:48:53.530
Mean = 1022.871
σ = 12.684
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1021.285
max = mean + 0.75 σ = 1032.384
Moon angle =93.52°
Moon phase =90.46%
Azimuth =327.68°
Elevation =44.63°
Hour Angle =03:33:51.81°
Wind speed =13.2 km/hr = 8.2 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh36484 (M52, B filter)
UTC 2023-12-30 03:49:22.239
Mean = 1022.791
σ = 12.115
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1021.276
max = mean + 0.75 σ = 1031.877
Moon angle =93.53°
Moon phase =90.46%
Azimuth =327.66°
Elevation =44.58°
Hour Angle =03:34:19.89°
Wind speed =13.2 km/hr = 8.2 miles/hr
Wind Direction =135.0° E of N
0
500
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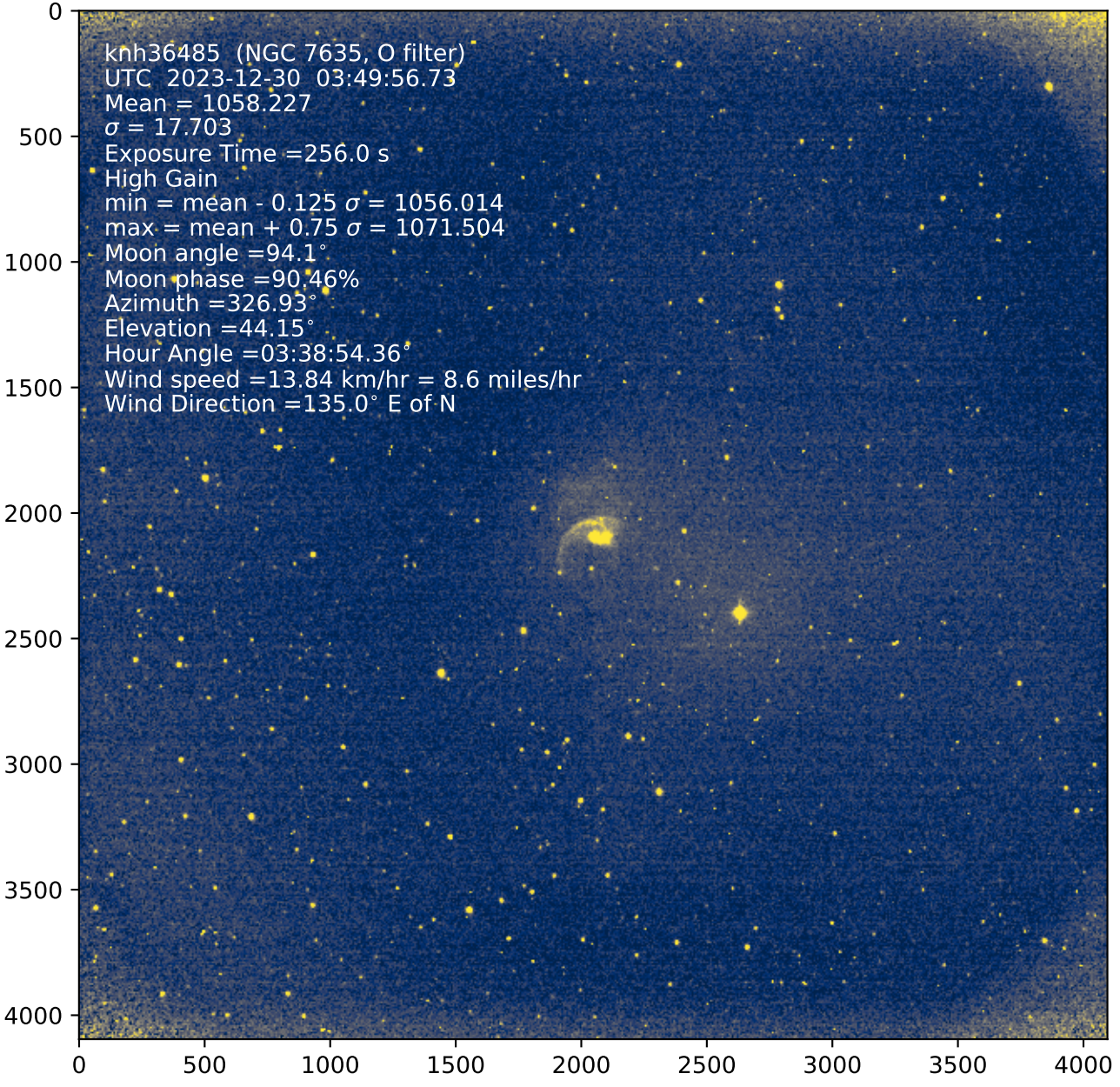
2500
3000
3500
4000


knh36485 (NGC 7635, O filter)
UTC 2023-12-30 03:49:56.73
Mean = 1058.227
σ = 17.703
Exposure Time =256.0 s
High Gain
min = mean - 0.125 σ = 1056.014
max = mean + 0.75 σ = 1071.504
Moon angle =94.1°
Moon phase =90.46%
Azimuth =326.93°
Elevation =44.15°
Hour Angle =03:38:54.36°
Wind speed =13.84 km/hr = 8.6 miles/hr
Wind Direction =135.0° E of N
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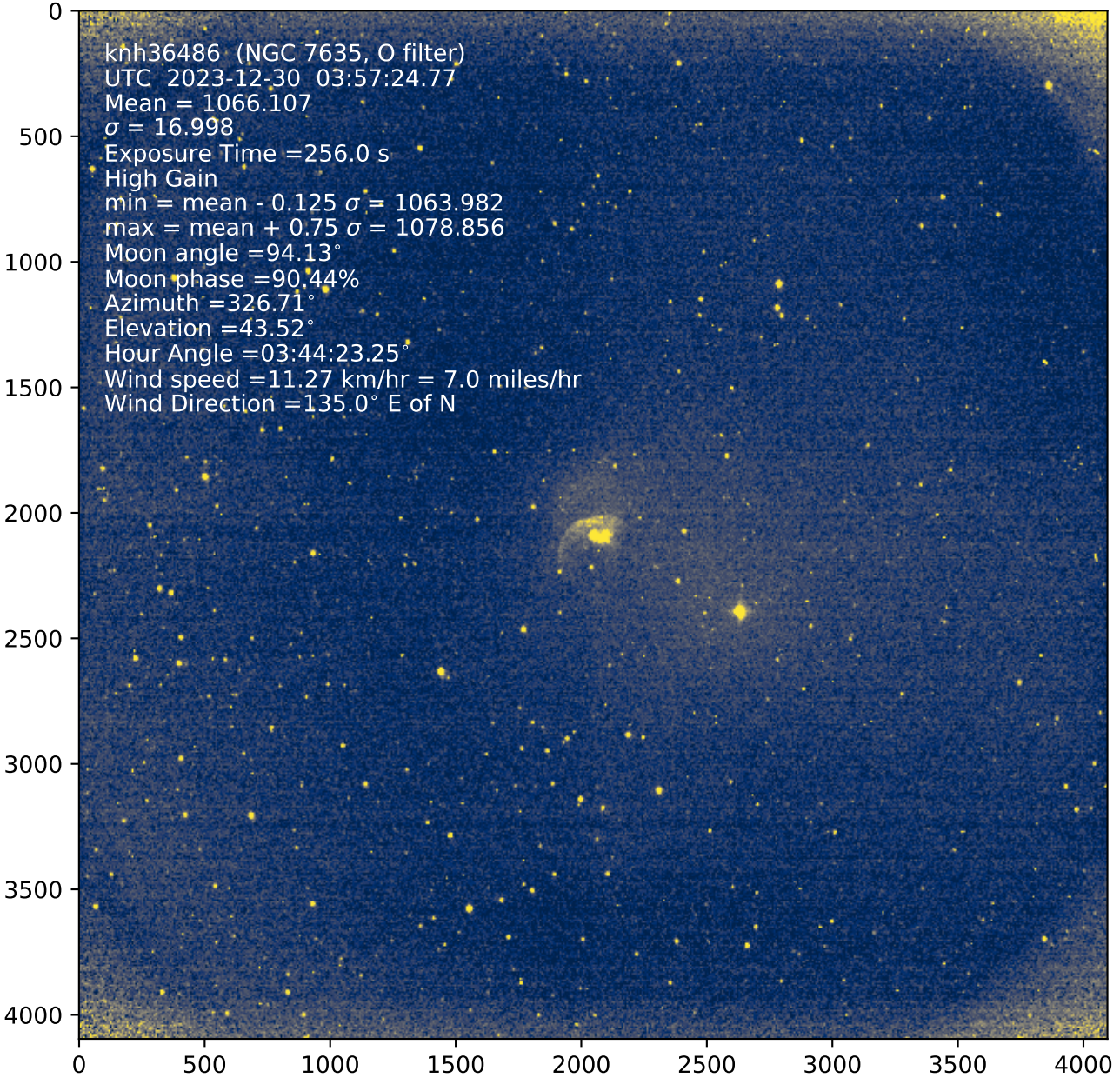
knh36486 (NGC 7635, O filter)
UTC 2023-12-30 03:57:24.77
Mean = 1066.107
σ = 16.998
Exposure Time =256.0 s
High Gain
min = mean - 0.125 σ = 1063.982
max = mean + 0.75 σ = 1078.856
Moon angle =94.13°
Moon phase =90.44%
Azimuth =326.71°
Elevation =43.52°
Hour Angle =03:44:23.25°
Wind speed =11.27 km/hr = 7.0 miles/hr
Wind Direction =135.0° E of N
0
500
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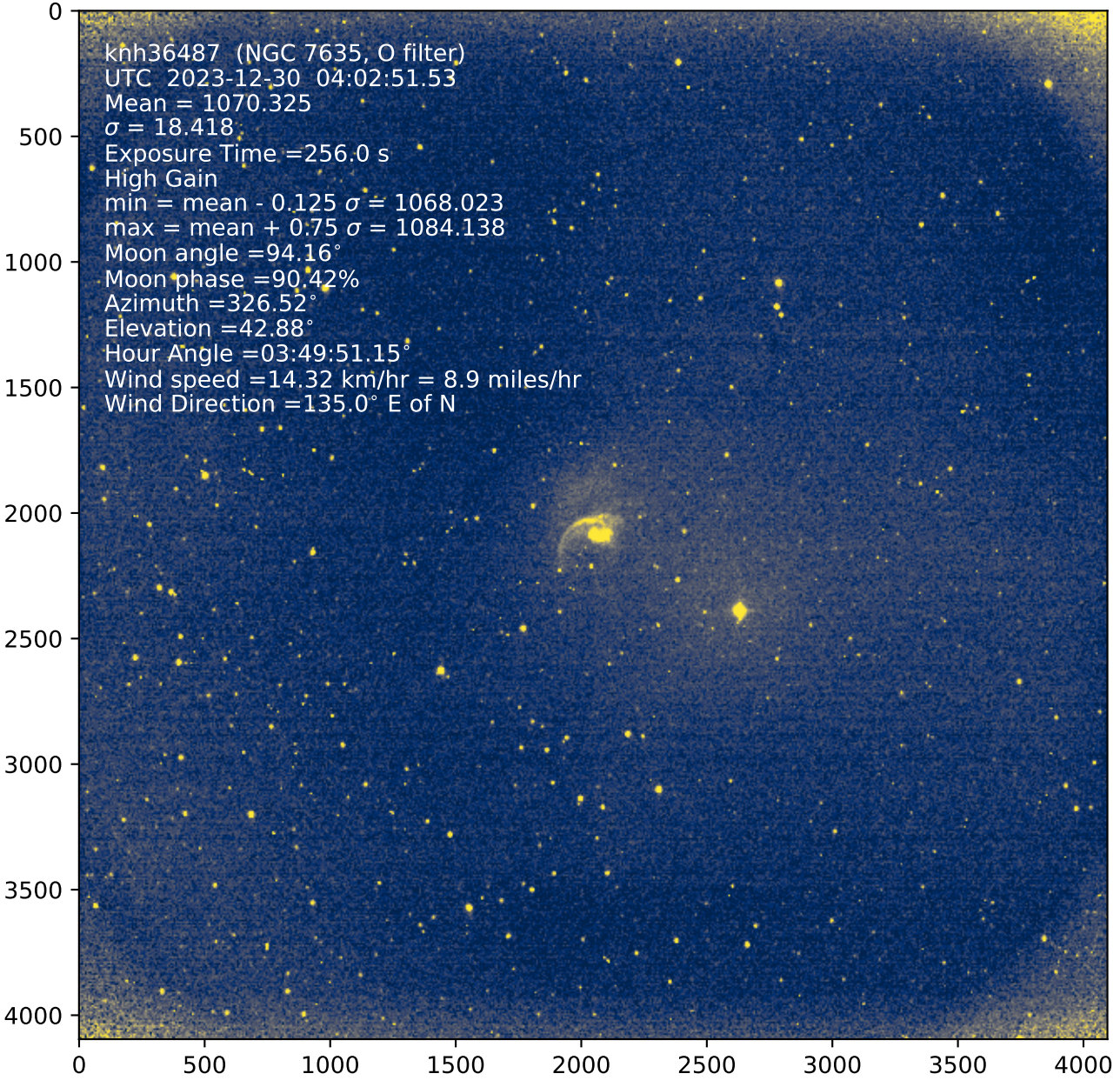
2500
3000
3500
4000


knh36487 (NGC 7635, O filter)
UTC 2023-12-30 04:02:51.53
Mean = 1070.325
σ = 18.418
Exposure Time =256.0 s
High Gain
min = mean - 0.125 σ = 1068.023
max = mean + 0.75 σ = 1084.138
Moon angle =94.16°
Moon phase =90.42%
Azimuth =326.52°
Elevation =42.88°
Hour Angle =03:49:51.15°
Wind speed =14.32 km/hr = 8.9 miles/hr
Wind Direction =135.0° E of N
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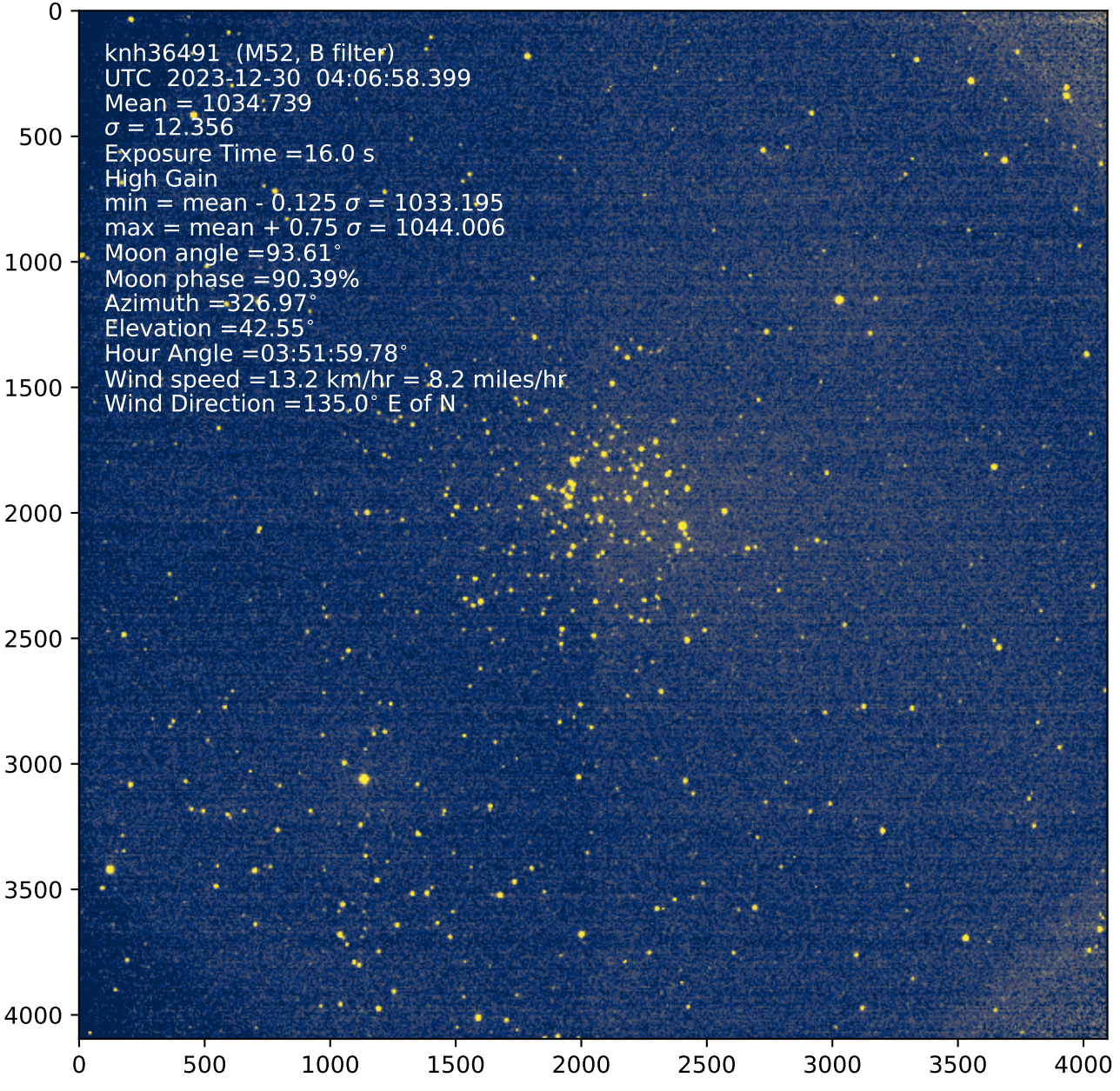
knh36491 (M52, B filter)
UTC 2023-12-30 04:06:58.399
Mean = 1034.739
σ = 12.356
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1033.195
max = mean + 0.75 σ = 1044.006
Moon angle =93.61°
Moon phase =90.39%
Azimuth =326.97°
Elevation =42.55°
Hour Angle =03:51:59.78°
Wind speed =13.2 km/hr = 8.2 miles/hr
Wind Direction =135.0° E of N
0
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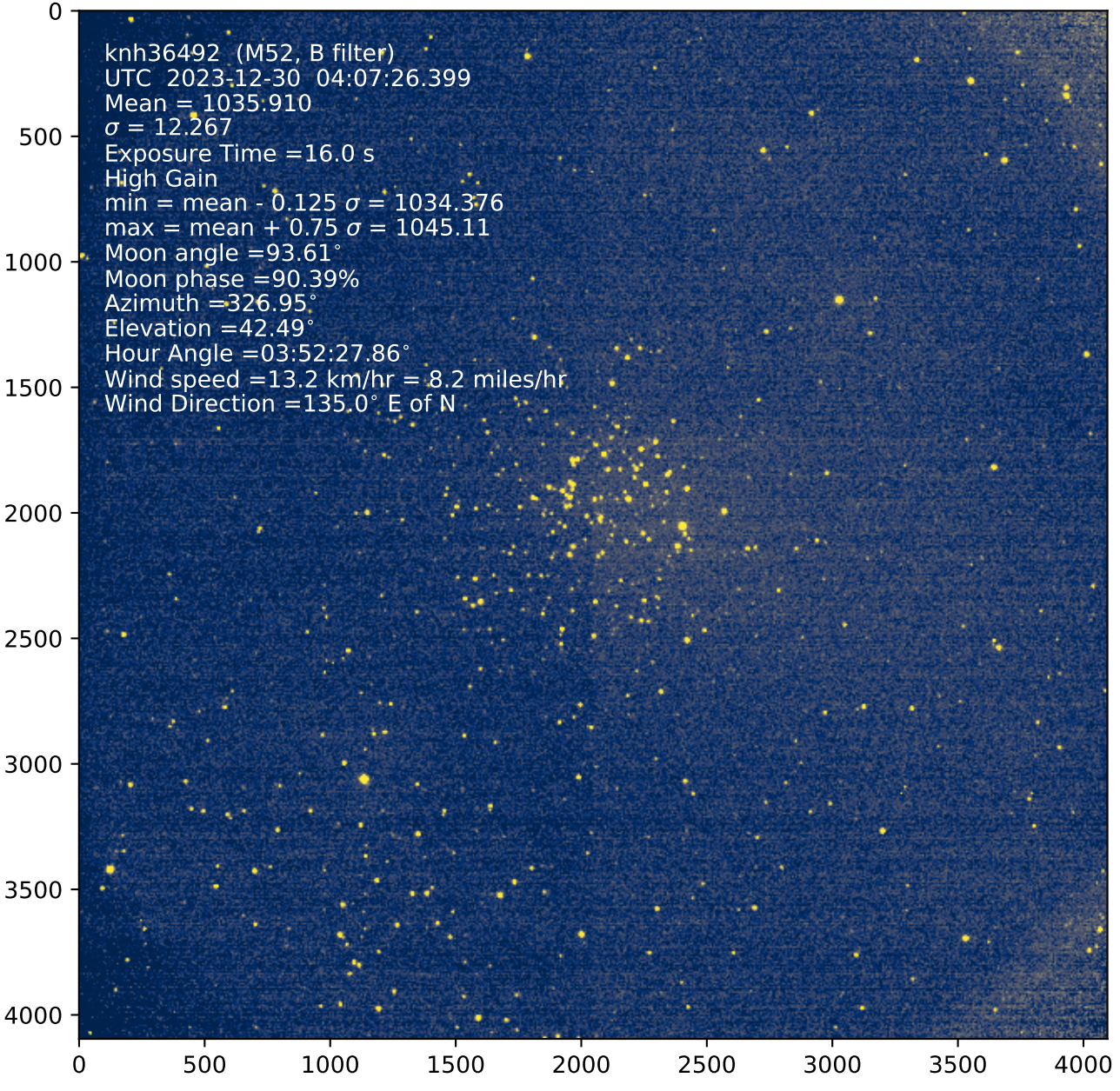
2500
3000
3500
4000


knh36492 (M52, B filter)
UTC 2023-12-30 04:07:26.399
Mean = 1035.910
σ = 12.267
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1034.376
max = mean + 0.75 σ = 1045.11
Moon angle =93.61°
Moon phase =90.39%
Azimuth =326.95°
Elevation =42.49°
Hour Angle =03:52:27.86°
Wind speed =13.2 km/hr = 8.2 miles/hr
Wind Direction =135.0° E of N
0
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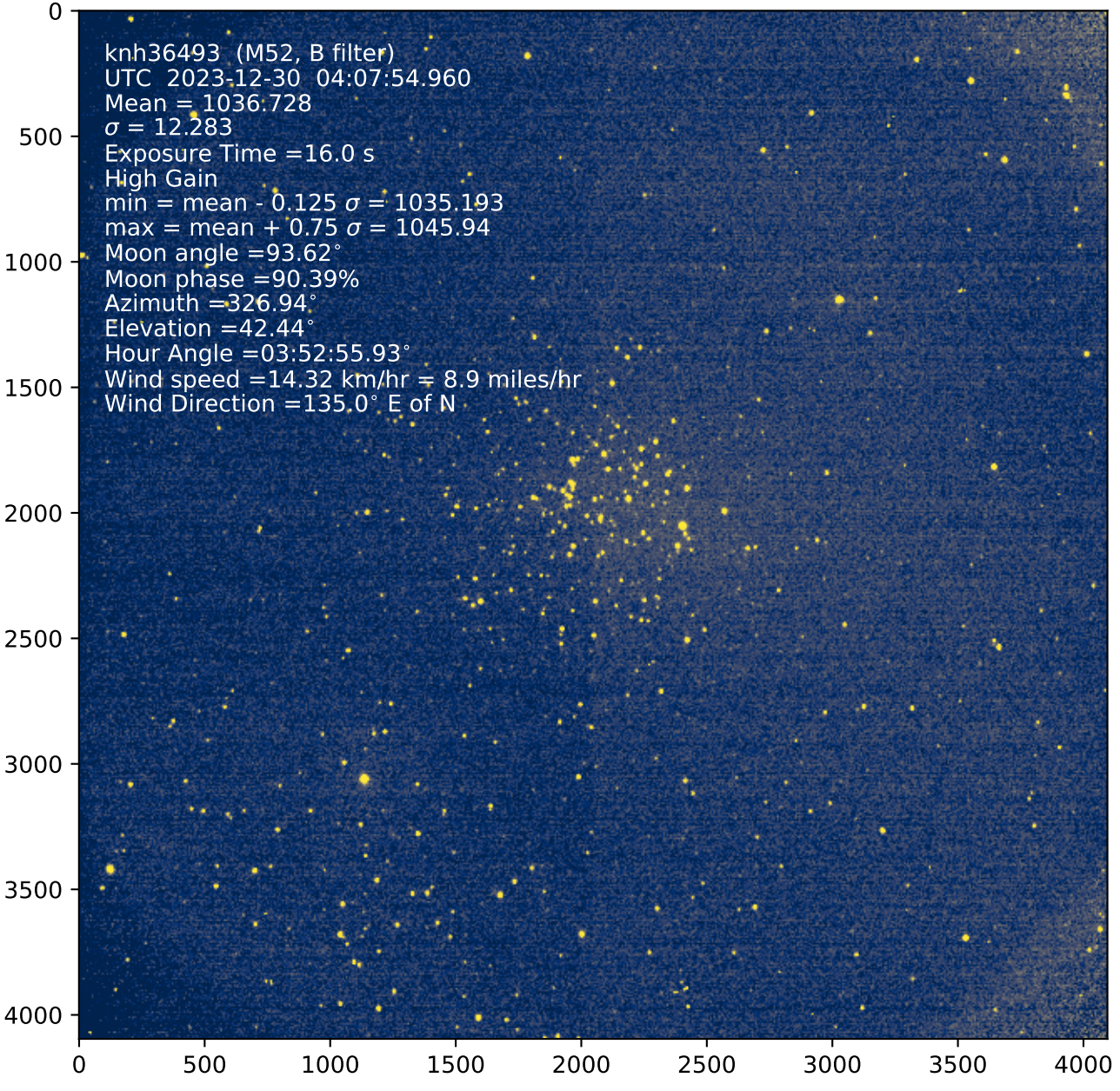
2500
3000
3500
4000


knh36493 (M52, B filter)
UTC 2023-12-30 04:07:54.960
Mean = 1036.728
σ = 12.283
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1035.193
max = mean + 0.75 σ = 1045.94
Moon angle =93.62°
Moon phase =90.39%
Azimuth =326.94°
Elevation =42.44°
Hour Angle =03:52:55.93°
Wind speed =14.32 km/hr = 8.9 miles/hr
Wind Direction =135.0° E of N
0
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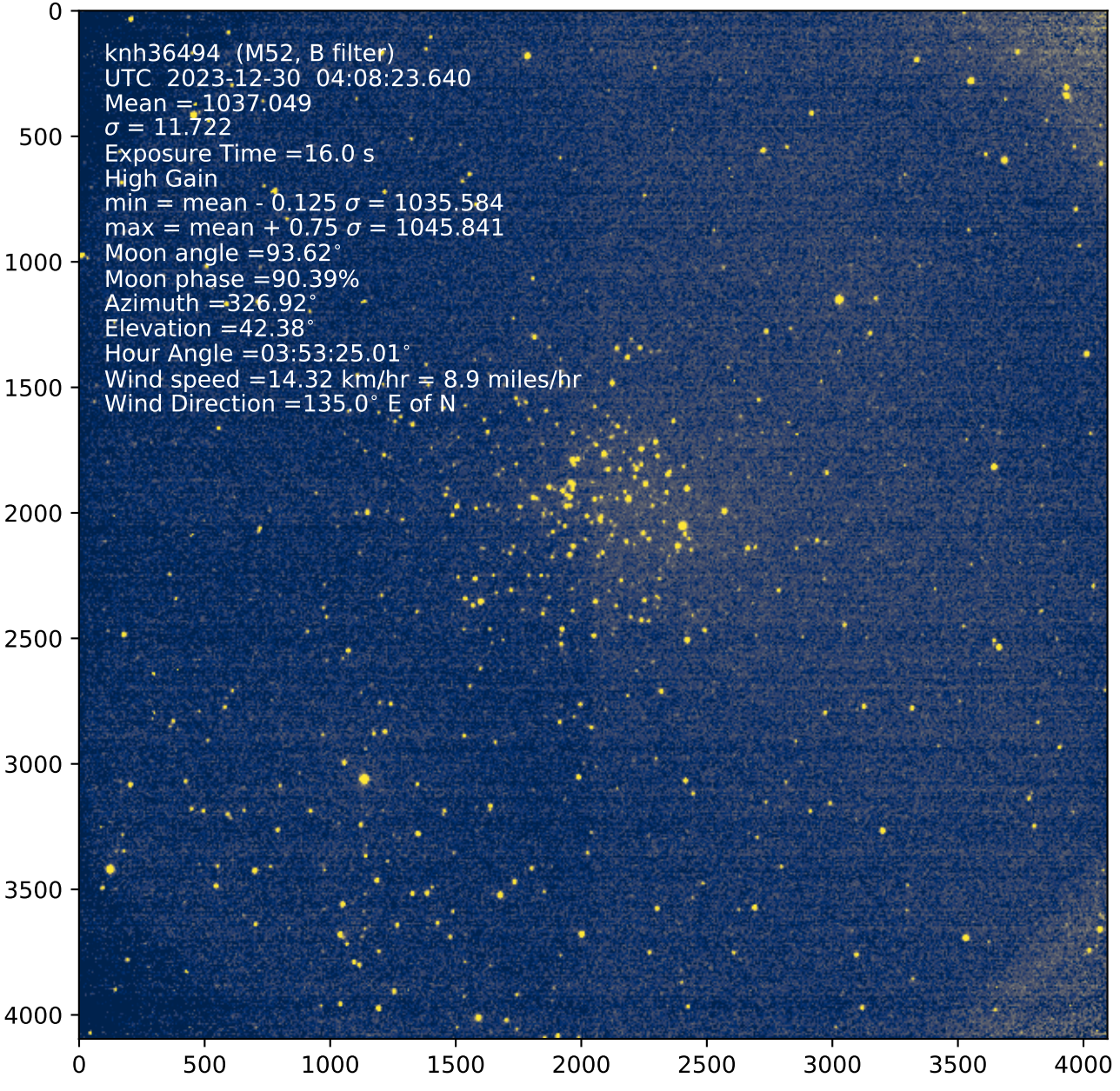
3000
3500
4000


knh36494 (M52, B filter)
UTC 2023-12-30 04:08:23.640
Mean = 1037.049
σ = 11.722
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1035.584
max = mean + 0.75 σ = 1045.841
Moon angle =93.62°
Moon phase =90.39%
Azimuth =326.92°
Elevation =42.38°
Hour Angle =03:53:25.01°
Wind speed =14.32 km/hr = 8.9 miles/hr
Wind Direction =135.0° E of N
0
500
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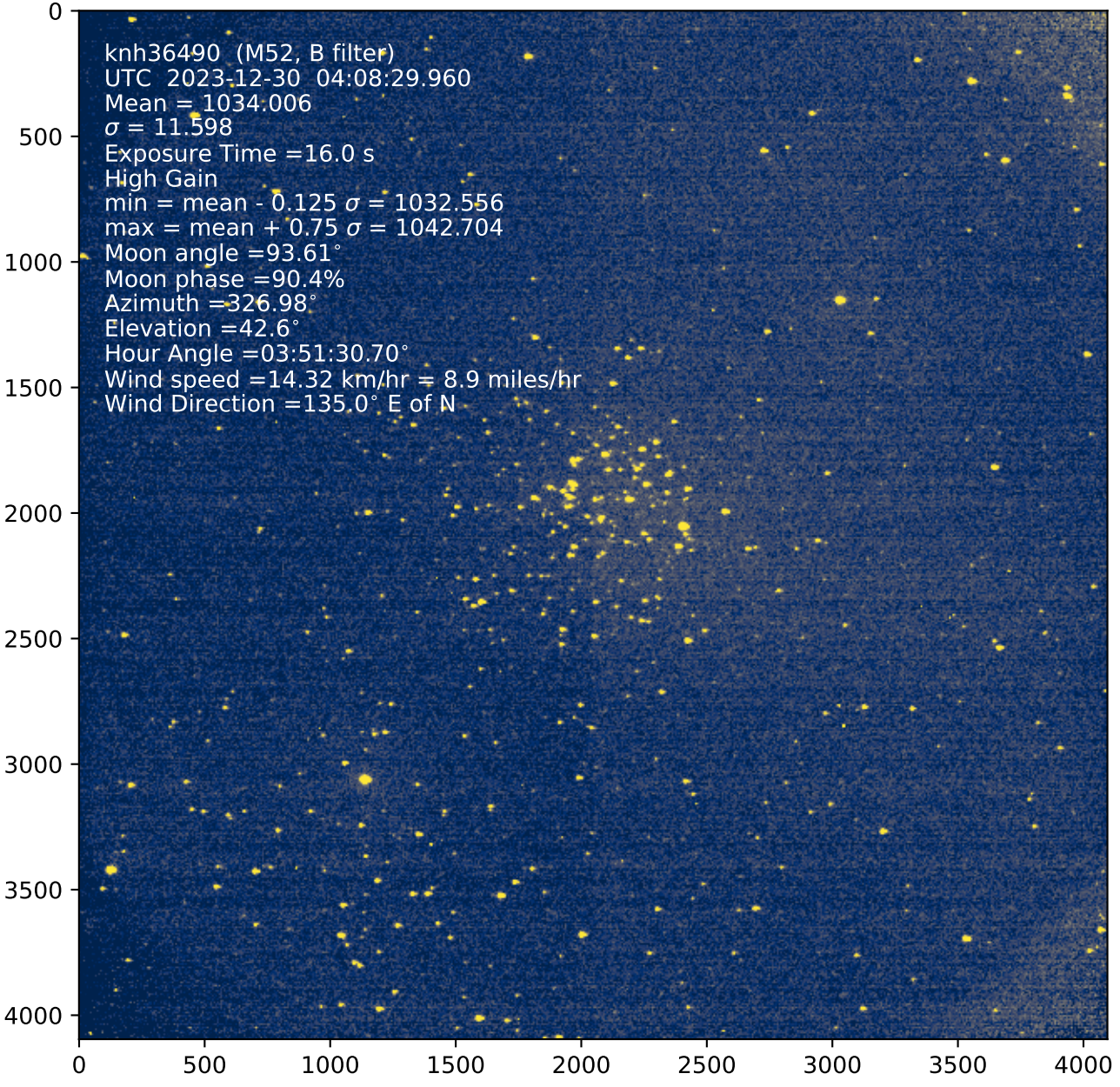
2500
3000
3500
4000


knh36490 (M52, B filter)
UTC 2023-12-30 04:08:29.960
Mean = 1034.006
σ = 11.598
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1032.556
max = mean + 0.75 σ = 1042.704
Moon angle =93.61°
Moon phase =90.4%
Azimuth =326.98°
Elevation =42.6°
Hour Angle =03:51:30.70°
Wind speed =14.32 km/hr = 8.9 miles/hr
Wind Direction =135.0° E of N
0
500
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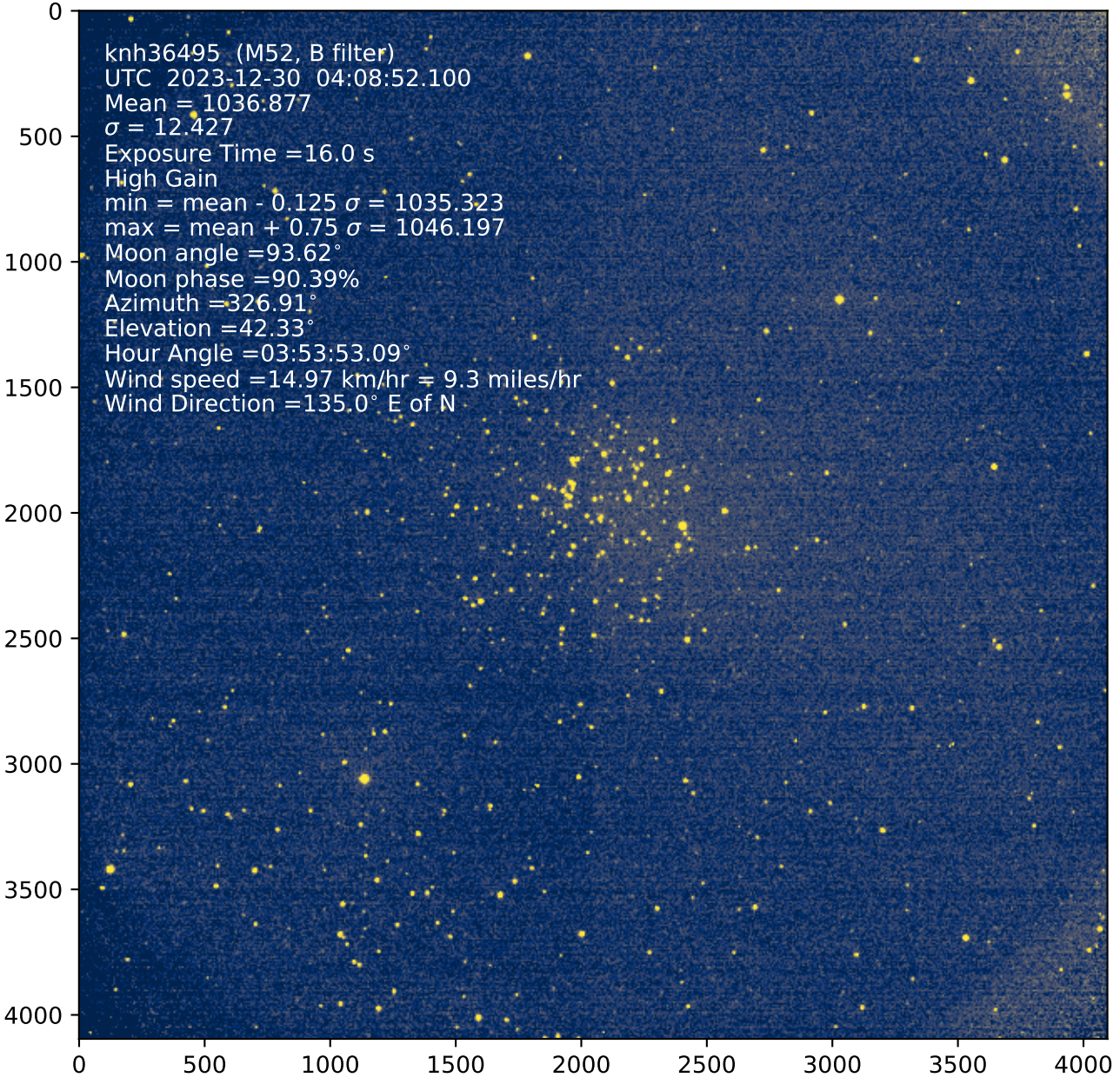
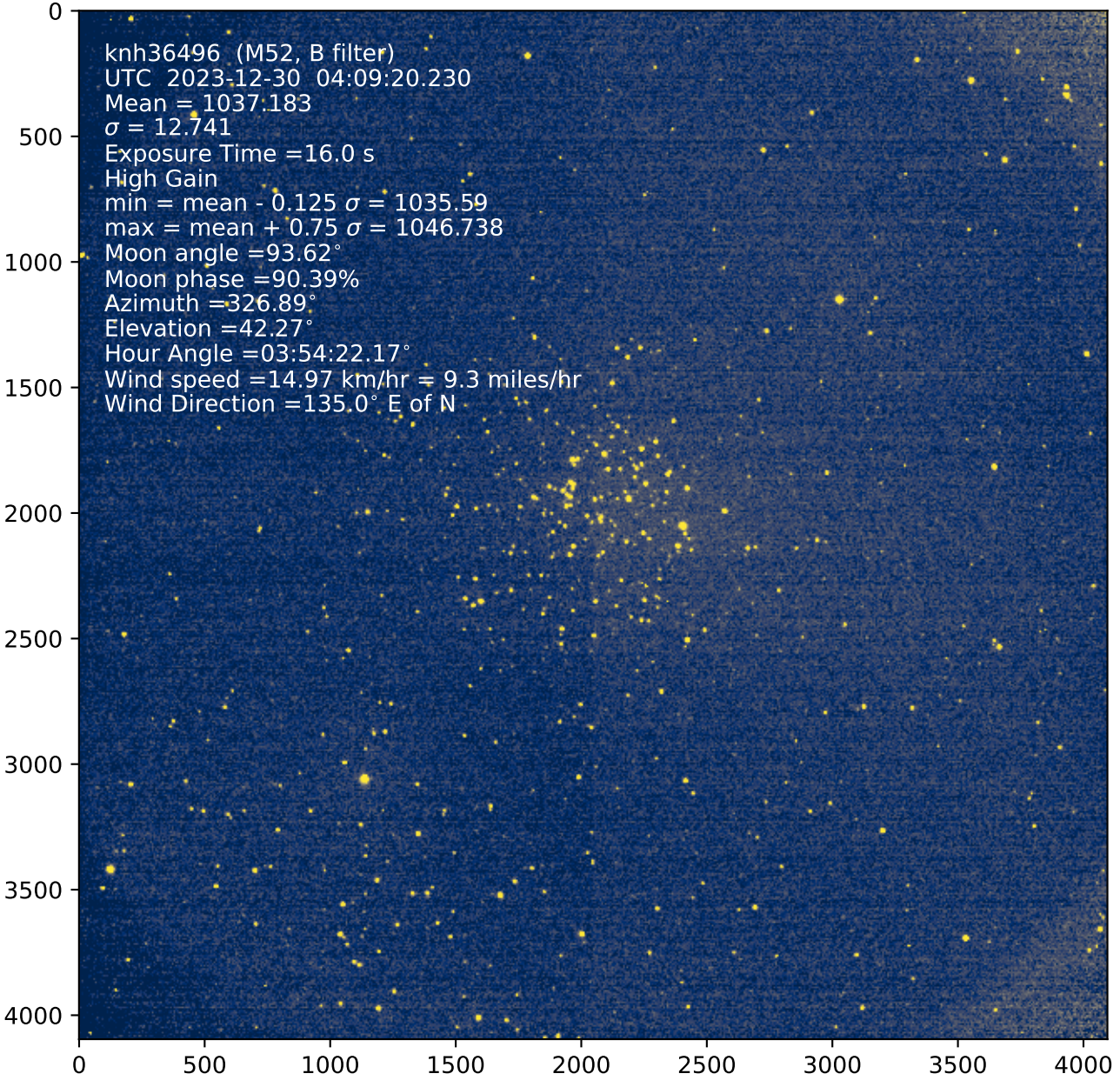
2000
2500
3000
3500
4000


knh36495 (M52, B filter)
UTC 2023-12-30 04:08:52.100
Mean = 1036.877
σ = 12.427
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1035.323
max = mean + 0.75 σ = 1046.197
Moon angle =93.62°
Moon phase =90.39%
Azimuth =326.91°
Elevation =42.33°
Hour Angle =03:53:53.09°
Wind speed =14.97 km/hr = 9.3 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh36496 (M52, B filter)
UTC 2023-12-30 04:09:20.230
Mean = 1037.183
σ = 12.741
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1035.59
max = mean + 0.75 σ = 1046.738
Moon angle =93.62°
Moon phase =90.39%
Azimuth =326.89°
Elevation =42.27°
Hour Angle =03:54:22.17°
Wind speed =14.97 km/hr = 9.3 miles/hr
Wind Direction =135.0° E of N
0
500
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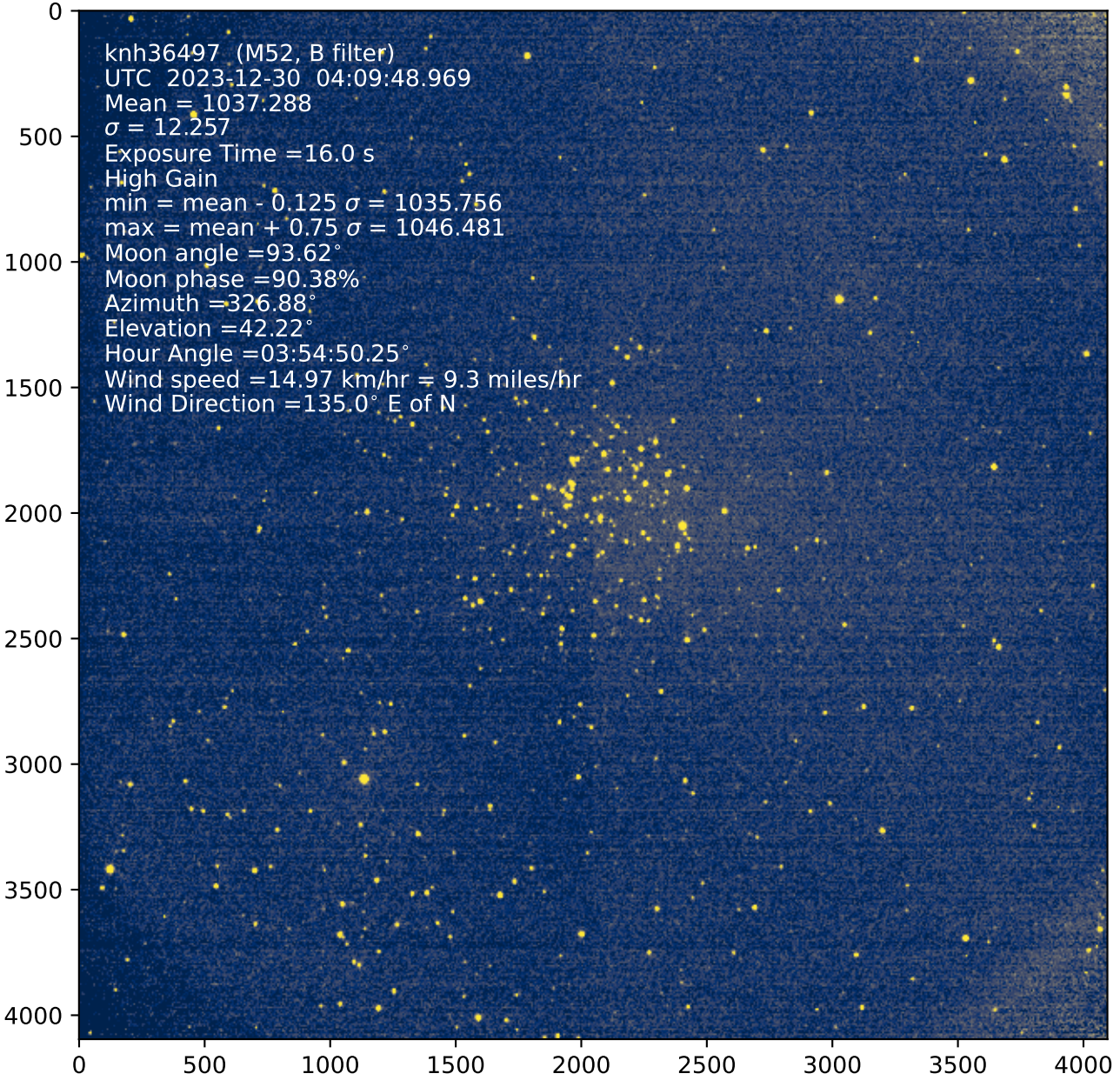
2000
2500
3000
3500
4000


knh36497 (M52, B filter)
UTC 2023-12-30 04:09:48.969
Mean = 1037.288
σ = 12.257
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1035.756
max = mean + 0.75 σ = 1046.481
Moon angle =93.62°
Moon phase =90.38%
Azimuth =326.88°
Elevation =42.22°
Hour Angle =03:54:50.25°
Wind speed =14.97 km/hr = 9.3 miles/hr
Wind Direction =135.0° E of N
0
500
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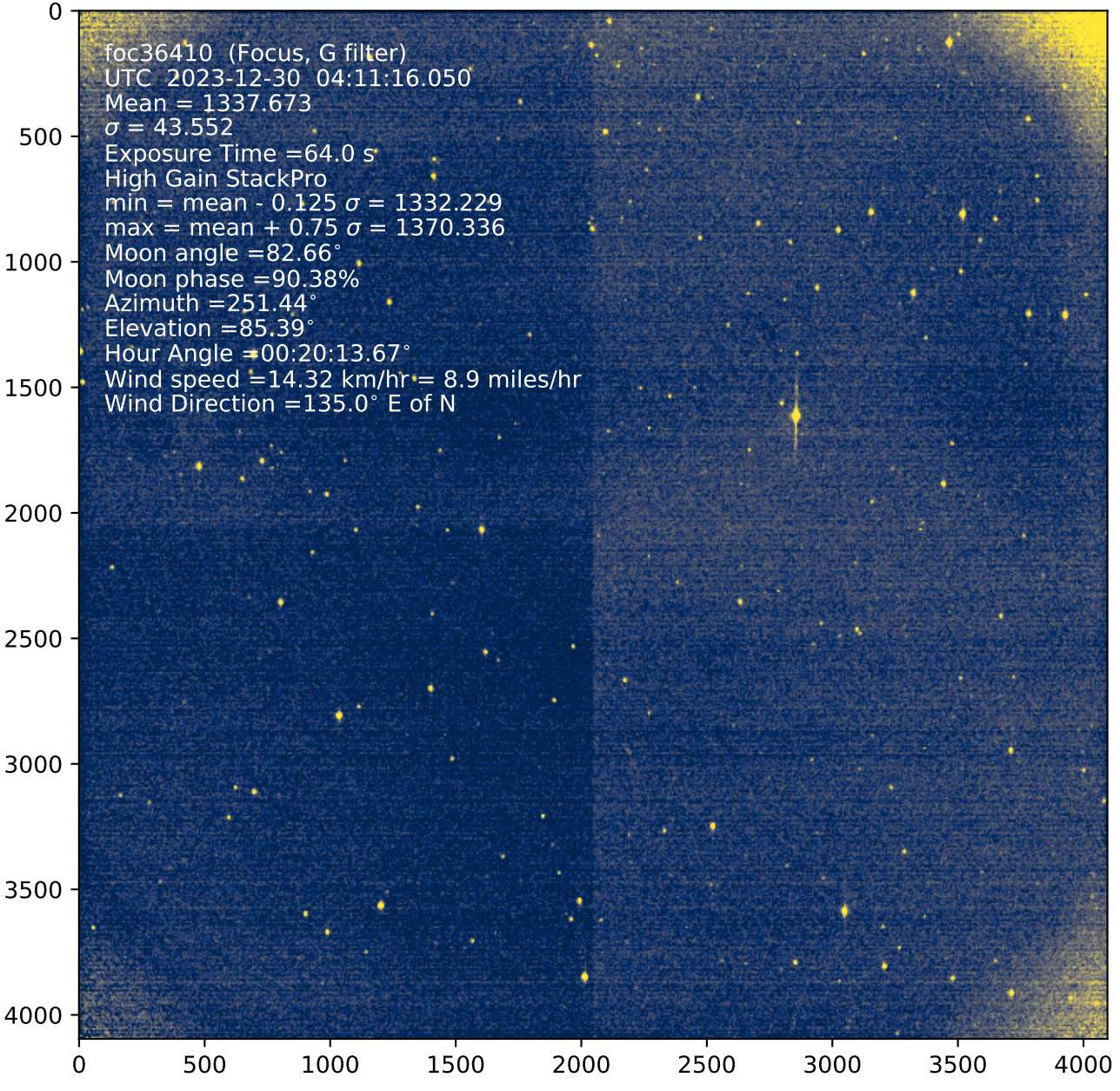
3000
3500
4000


foc36410 (Focus, G filter)
UTC 2023-12-30 04:11:16.050
Mean = 1337.673
σ = 43.552
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 1332.229
max = mean + 0.75 σ = 1370.336
Moon angle =82.66°
Moon phase =90.38%
Azimuth =251.44°
Elevation =85.39°
Hour Angle =00:20:13.67°
Wind speed =14.32 km/hr = 8.9 miles/hr
Wind Direction =135.0° E of N
0
500
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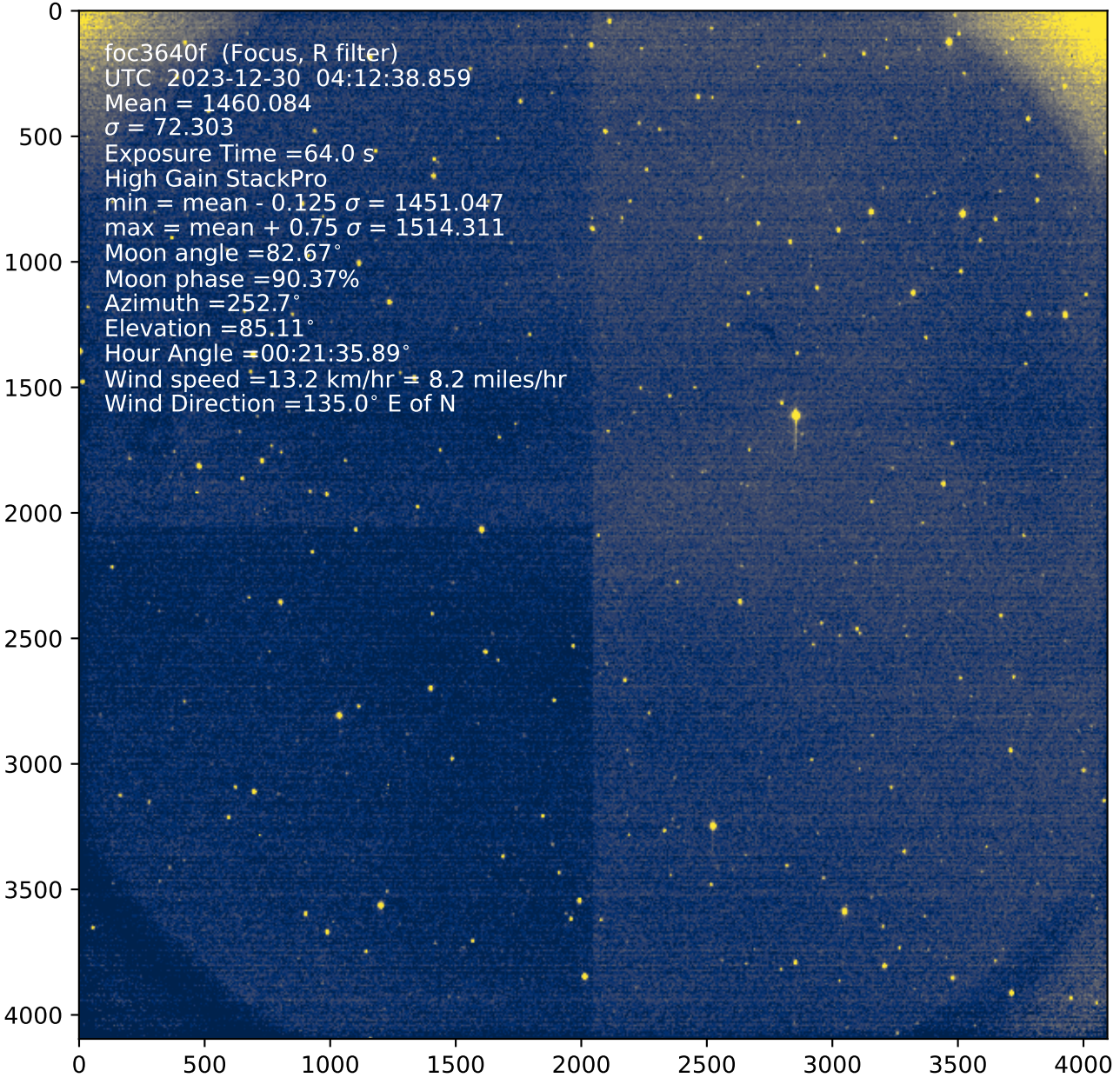
2500
3000
3500
4000


foc3640f (Focus, R filter)
UTC 2023-12-30 04:12:38.859
Mean = 1460.084
σ = 72.303
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 1451.047
max = mean + 0.75 σ = 1514.311
Moon angle =82.67°
Moon phase =90.37%
Azimuth =252.7°
Elevation =85.11°
Hour Angle =00:21:35.89°
Wind speed =13.2 km/hr = 8.2 miles/hr
Wind Direction =135.0° E of N
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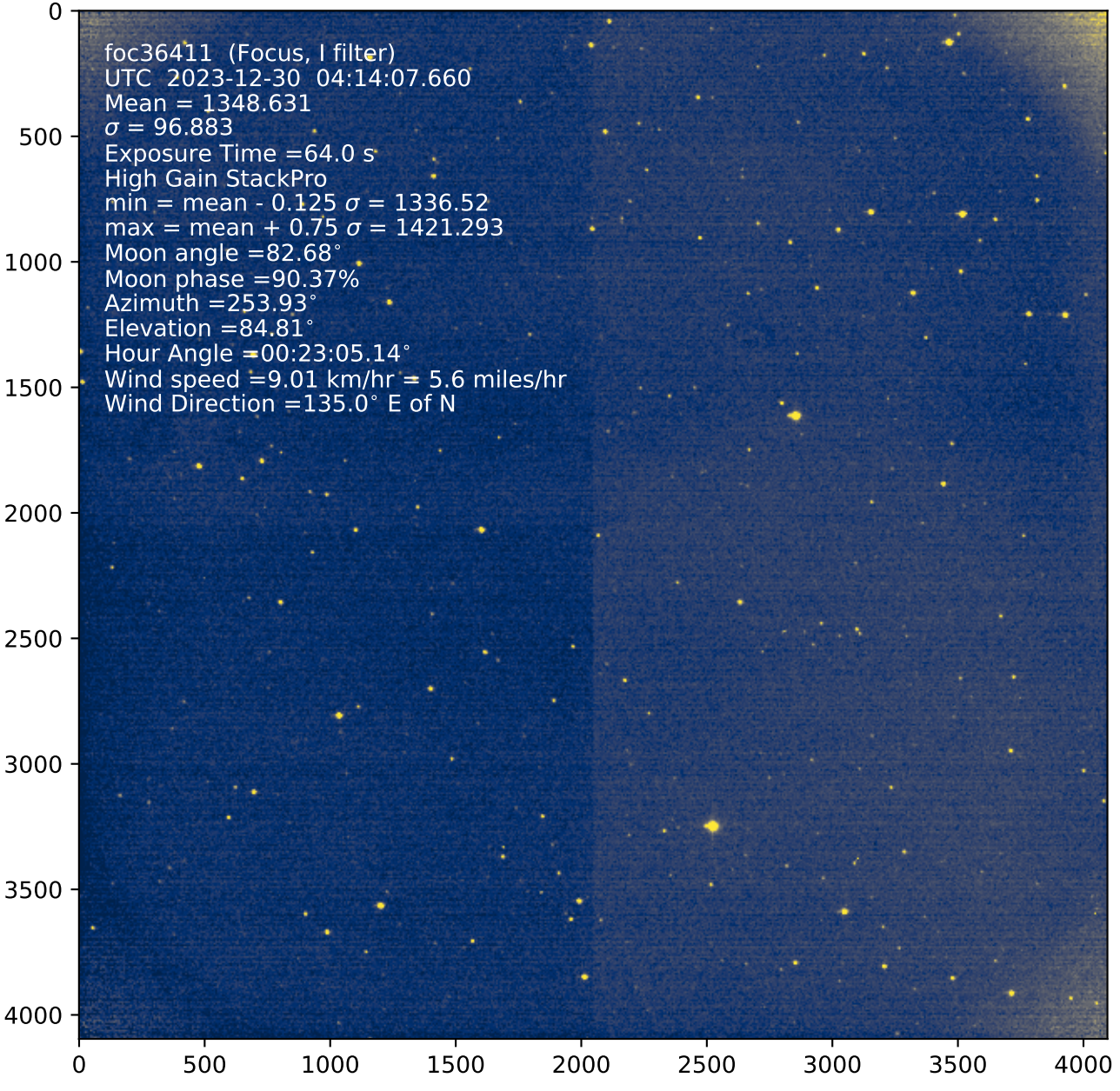
3000
3500
4000


foc36411 (Focus, I filter)
UTC 2023-12-30 04:14:07.660
Mean = 1348.631
σ = 96.883
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 1336.52
max = mean + 0.75 σ = 1421.293
Moon angle =82.68°
Moon phase =90.37%
Azimuth =253.93°
Elevation =84.81°
Hour Angle =00:23:05.14°
Wind speed =9.01 km/hr = 5.6 miles/hr
Wind Direction =135.0° E of N
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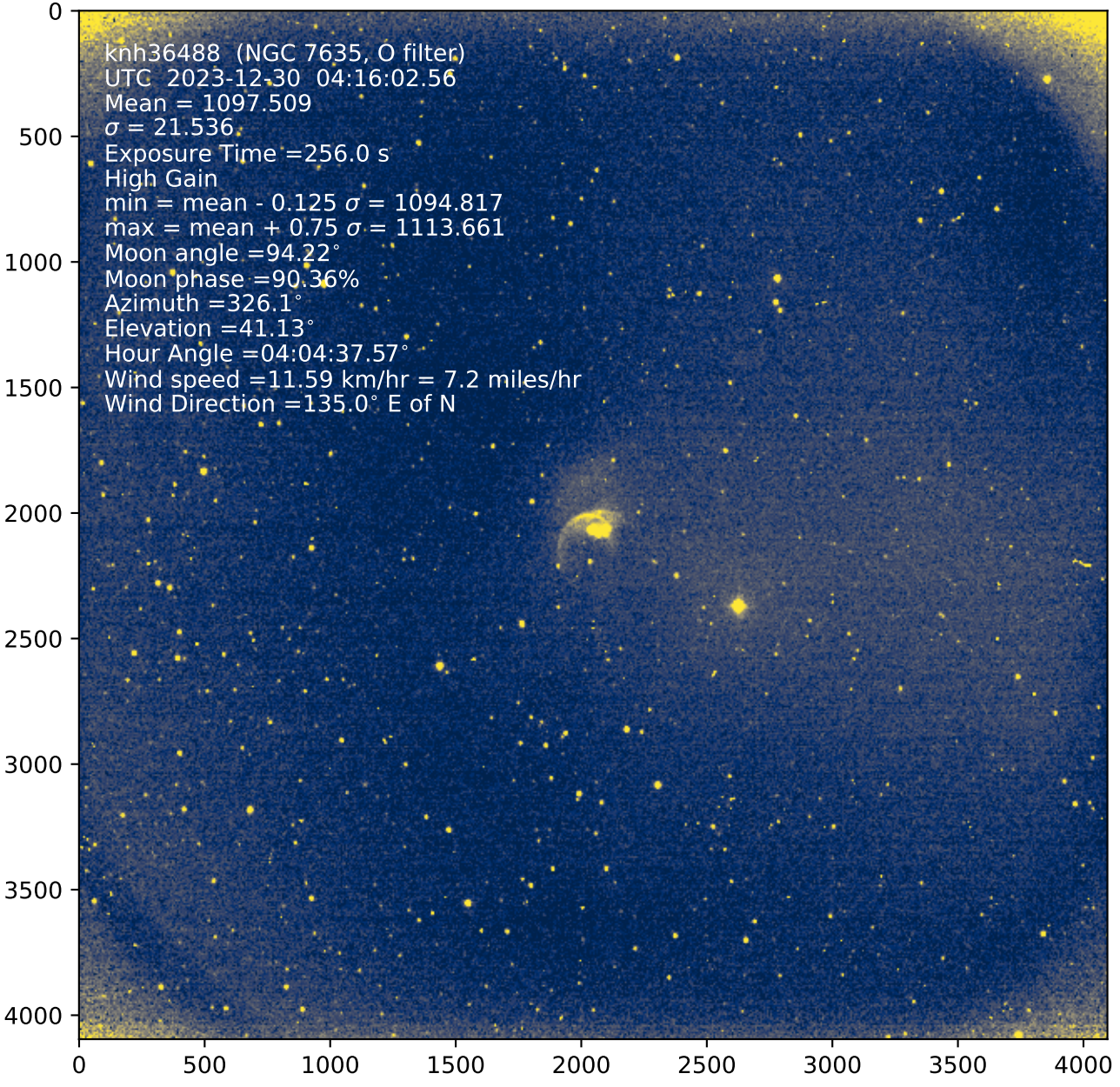
4000


knh36488 (NGC 7635, O filter)
UTC 2023-12-30 04:16:02.56
Mean = 1097.509
σ = 21.536
Exposure Time =256.0 s
High Gain
min = mean - 0.125 σ = 1094.817
max = mean + 0.75 σ = 1113.661
Moon angle =94.22°
Moon phase =90.36%
Azimuth =326.1°
Elevation =41.13°
Hour Angle =04:04:37.57°
Wind speed =11.59 km/hr = 7.2 miles/hr
Wind Direction =135.0° E of N
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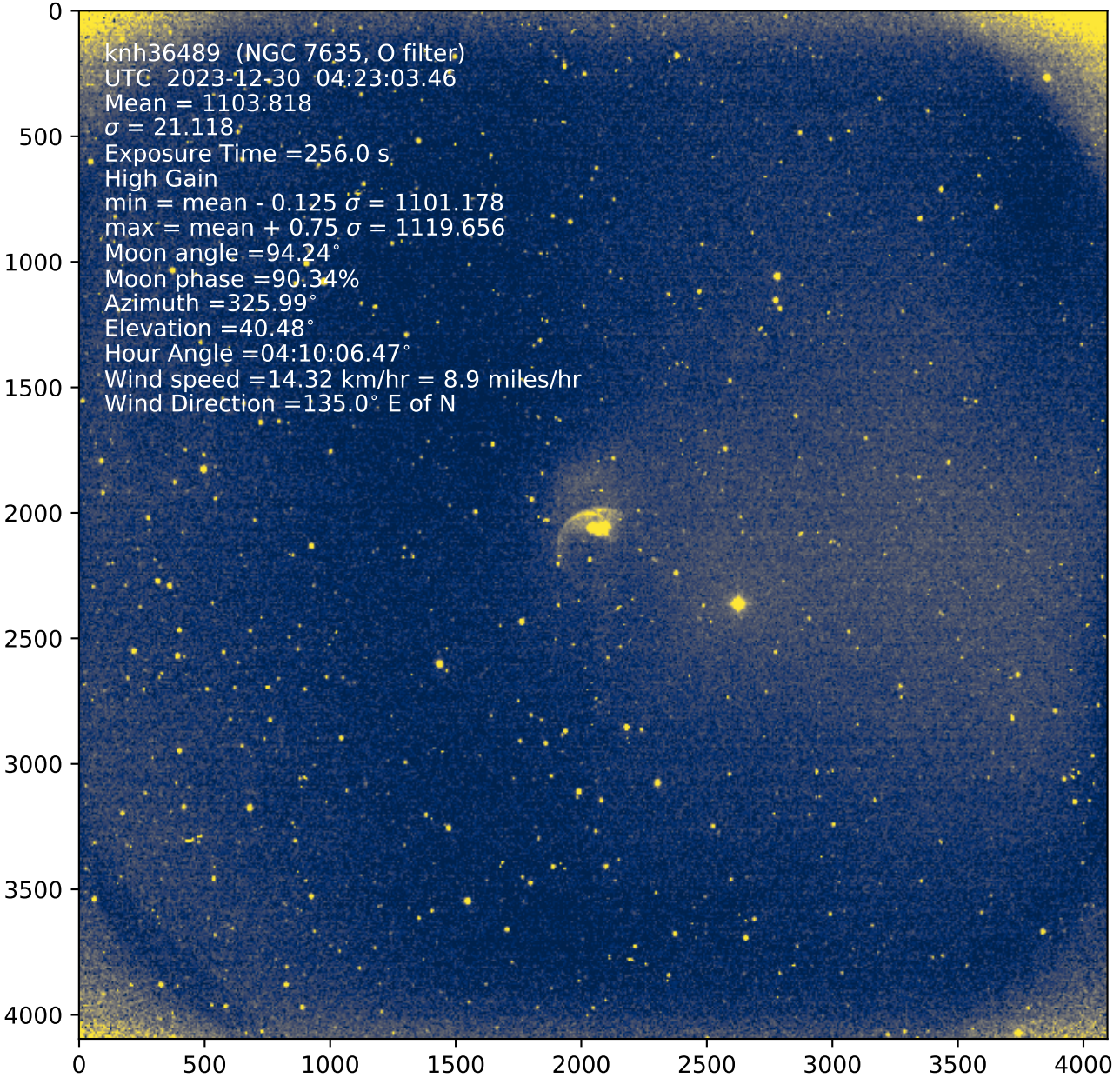
knh36489 (NGC 7635, O filter)
UTC 2023-12-30 04:23:03.46
Mean = 1103.818
σ = 21.118
Exposure Time =256.0 s
High Gain
min = mean - 0.125 σ = 1101.178
max = mean + 0.75 σ = 1119.656
Moon angle =94.24°
Moon phase =90.34%
Azimuth =325.99°
Elevation =40.48°
Hour Angle =04:10:06.47°
Wind speed =14.32 km/hr = 8.9 miles/hr
Wind Direction =135.0° E of N
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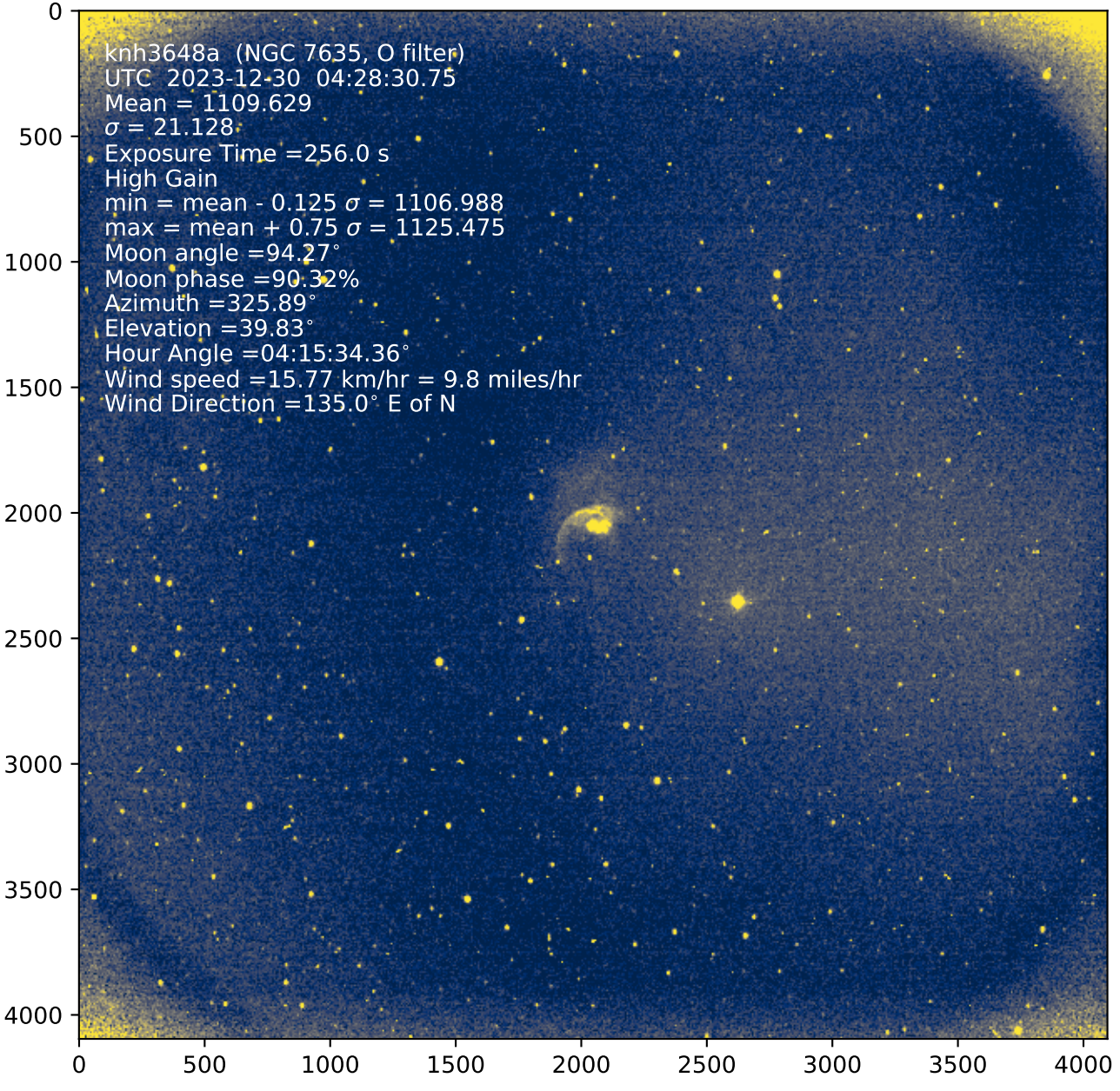
knh3648a (NGC 7635, O filter)
UTC 2023-12-30 04:28:30.75
Mean = 1109.629
σ = 21.128
Exposure Time =256.0 s
High Gain
min = mean - 0.125 σ = 1106.988
max = mean + 0.75 σ = 1125.475
Moon angle =94.27°
Moon phase =90.32%
Azimuth =325.89°
Elevation =39.83°
Hour Angle =04:15:34.36°
Wind speed =15.77 km/hr = 9.8 miles/hr
Wind Direction =135.0° E of N
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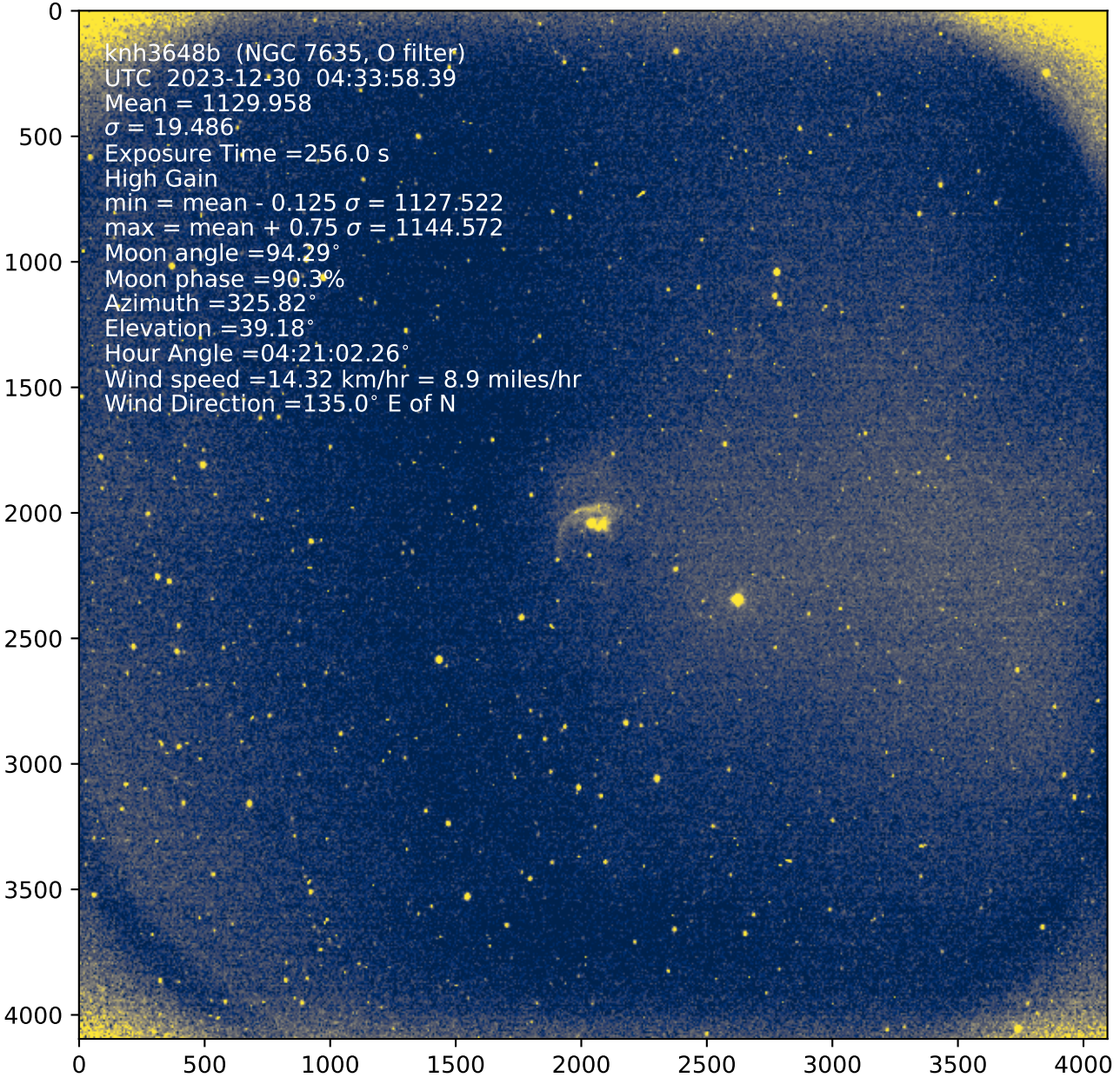
knh3648b (NGC 7635, O filter)
UTC 2023-12-30 04:33:58.39
Mean = 1129.958
σ = 19.486
Exposure Time =256.0 s
High Gain
min = mean - 0.125 σ = 1127.522
max = mean + 0.75 σ = 1144.572
Moon angle =94.29°
Moon phase =90.3%
Azimuth =325.82°
Elevation =39.18°
Hour Angle =04:21:02.26°
Wind speed =14.32 km/hr = 8.9 miles/hr
Wind Direction =135.0° E of N
0
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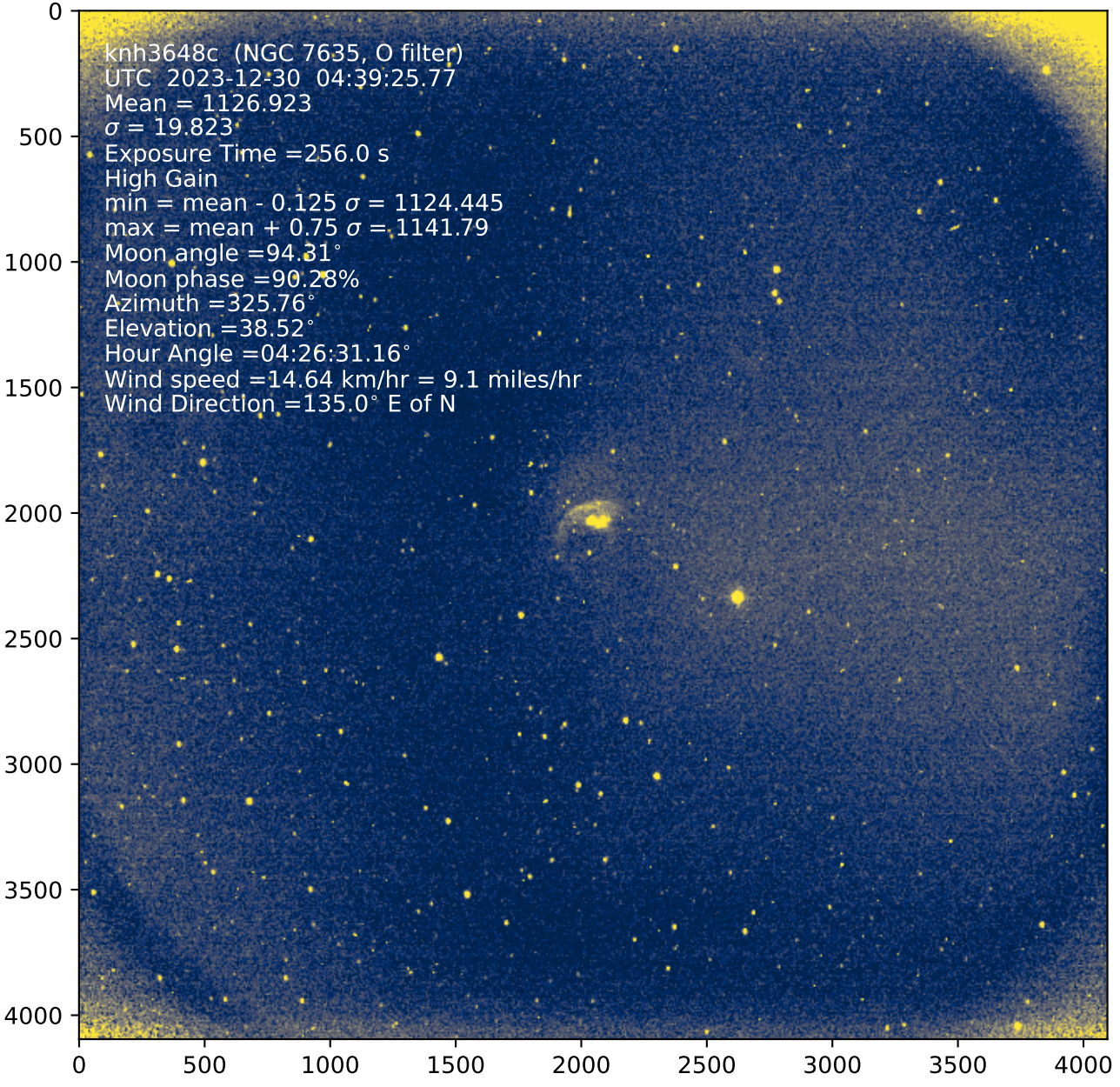
knh3648c (NGC 7635, O filter)
UTC 2023-12-30 04:39:25.77
Mean = 1126.923
σ = 19.823
Exposure Time =256.0 s
High Gain
min = mean - 0.125 σ = 1124.445
max = mean + 0.75 σ = 1141.79
Moon angle =94.31°
Moon phase =90.28%
Azimuth =325.76°
Elevation =38.52°
Hour Angle =04:26:31.16°
Wind speed =14.64 km/hr = 9.1 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
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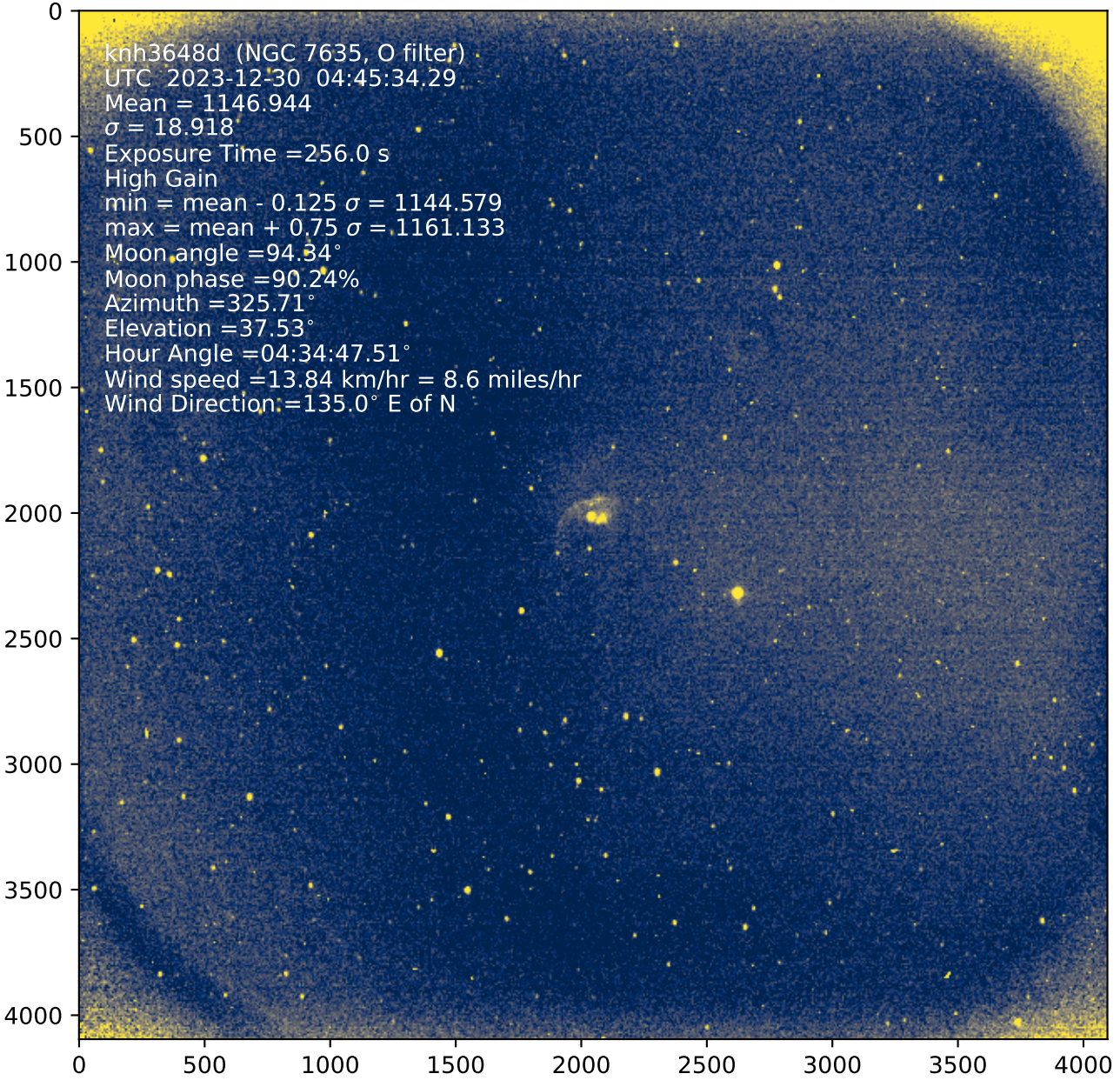
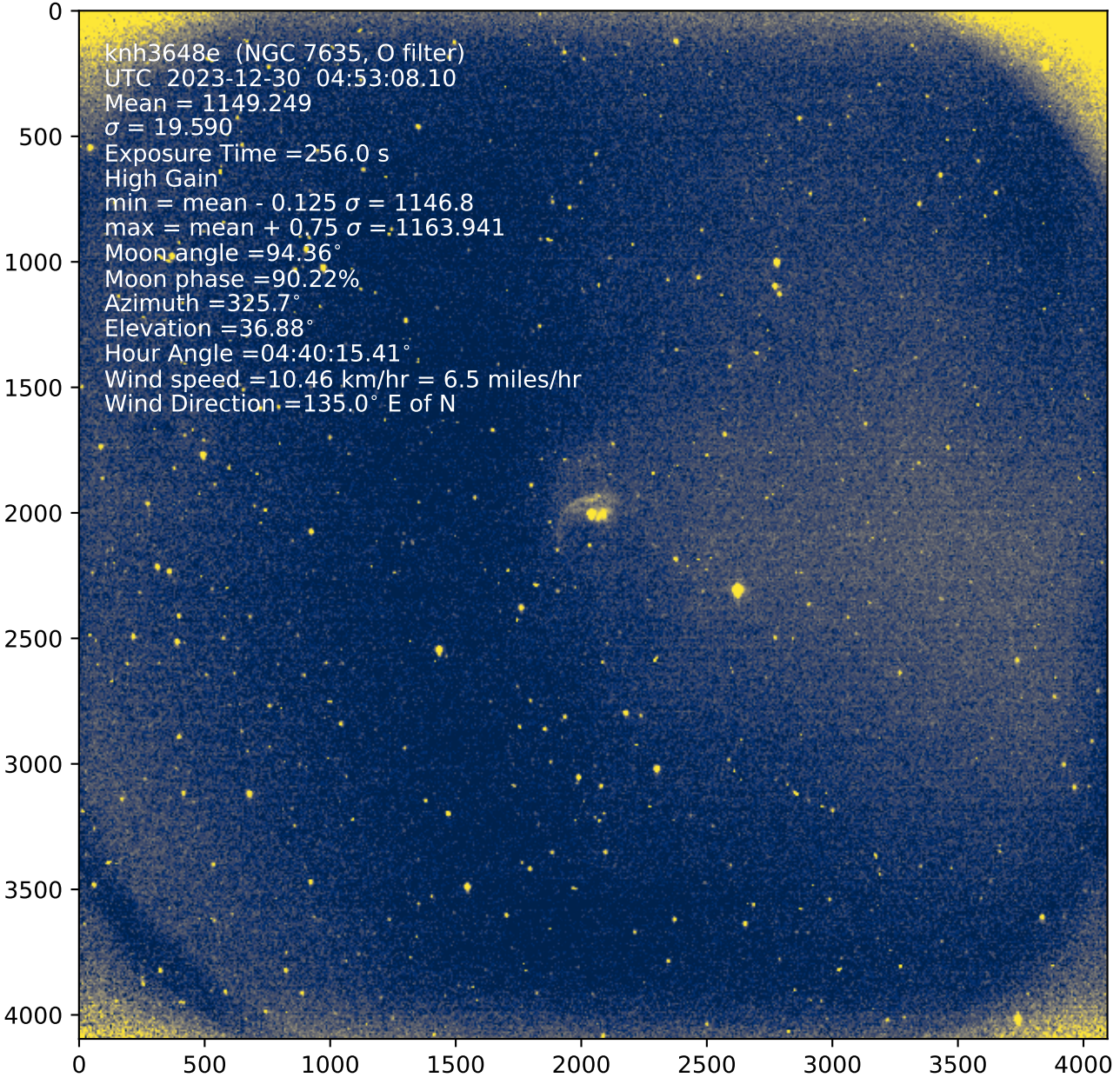
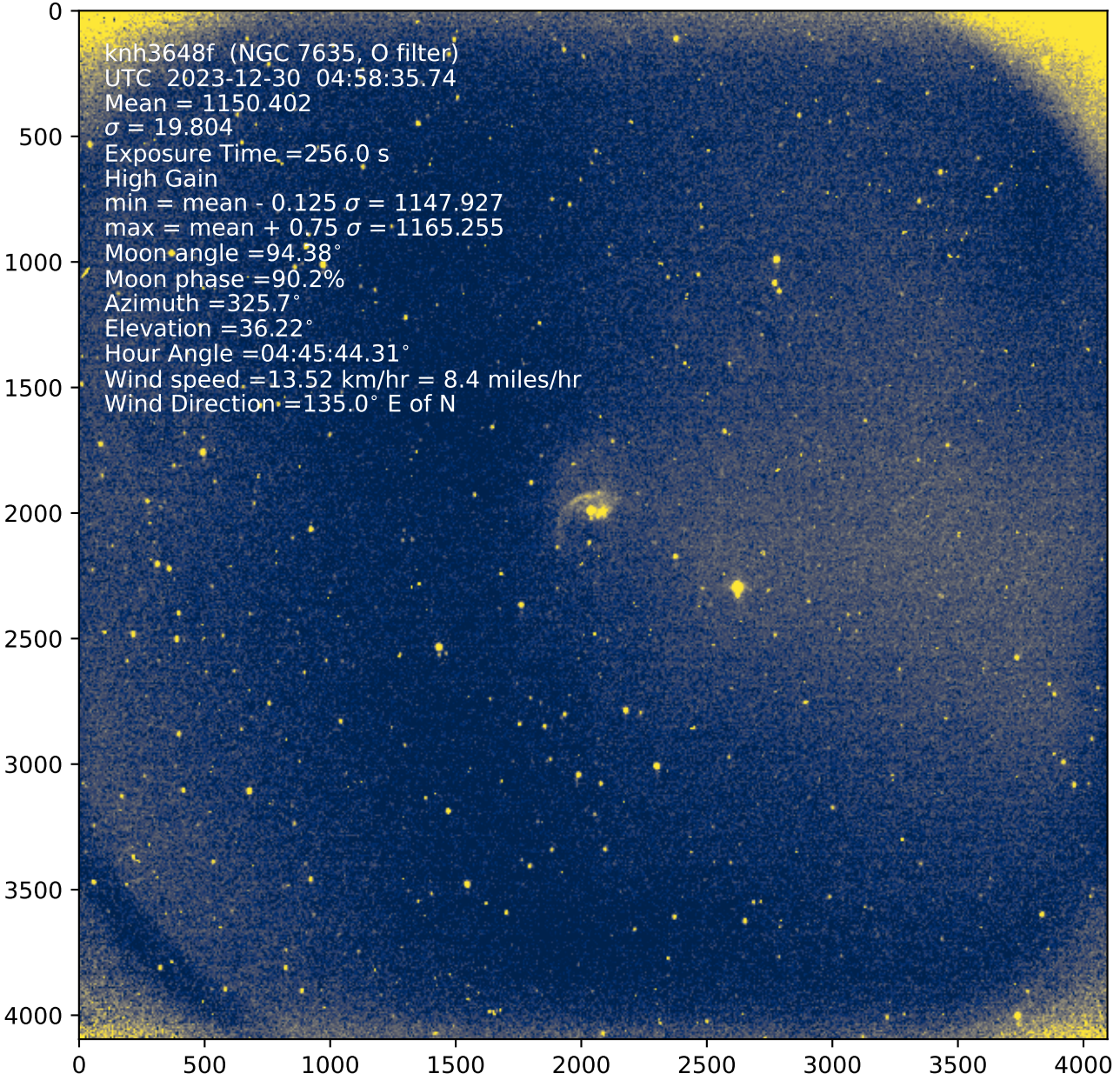
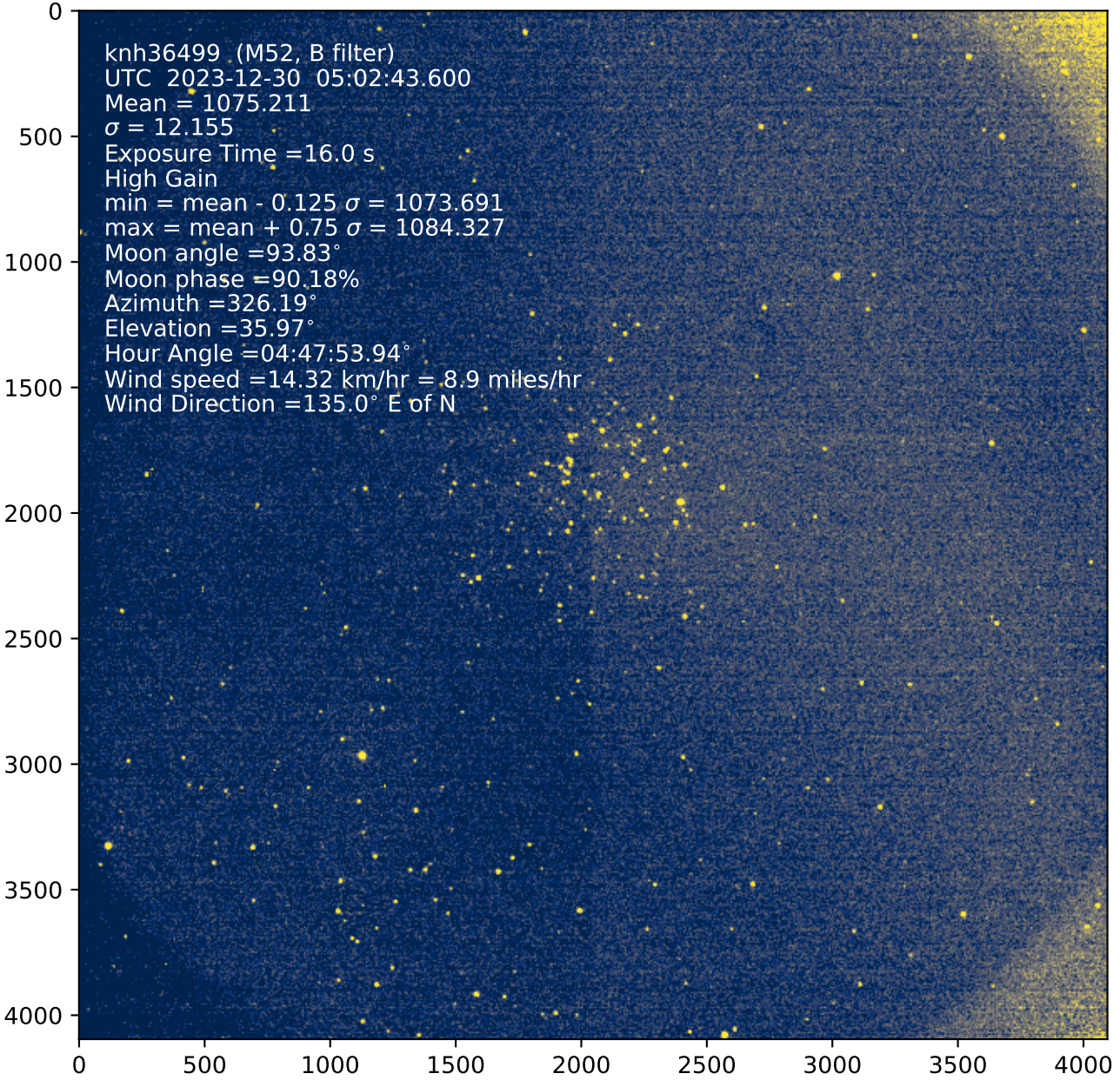
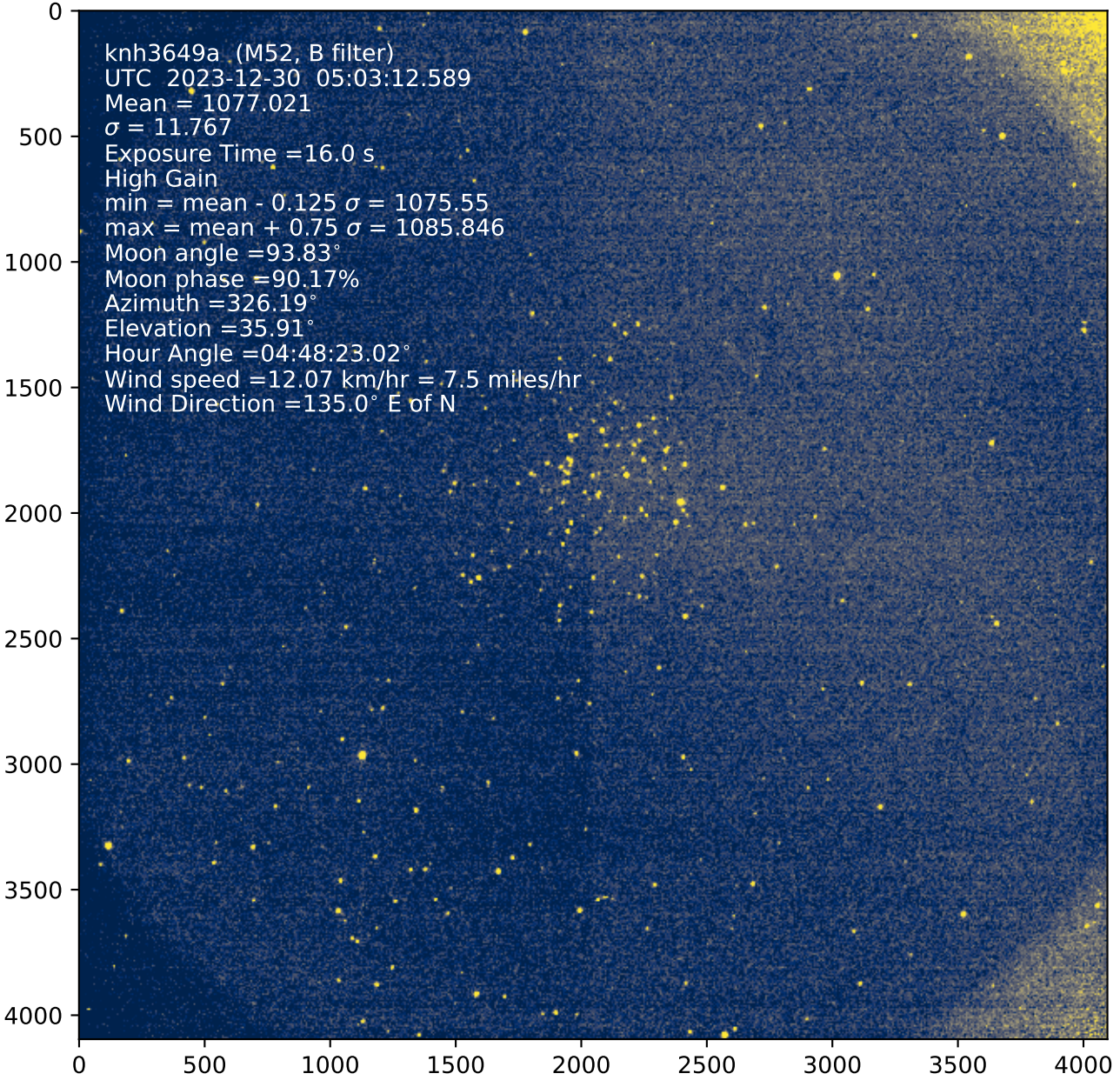
2500
3000
3500
4000


knh3648d (NGC 7635, O filter)
UTC 2023-12-30 04:45:34.29
Mean = 1146.944
σ = 18.918
Exposure Time =256.0 s
High Gain
min = mean - 0.125 σ = 1144.579
max = mean + 0.75 σ = 1161.133
Moon angle =94.34°
Moon phase =90.24%
Azimuth =325.71°
Elevation =37.53°
Hour Angle =04:34:47.51°
Wind speed =13.84 km/hr = 8.6 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh3648e (NGC 7635, O filter)
UTC 2023-12-30 04:53:08.10
Mean = 1149.249
σ = 19.590
Exposure Time =256.0 s
High Gain
min = mean - 0.125 σ = 1146.8
max = mean + 0.75 σ = 1163.941
Moon angle =94.36°
Moon phase =90.22%
Azimuth =325.7°
Elevation =36.88°
Hour Angle =04:40:15.41°
Wind speed =10.46 km/hr = 6.5 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh3648f (NGC 7635, O filter)
UTC 2023-12-30 04:58:35.74
Mean = 1150.402
σ = 19.804
Exposure Time =256.0 s
High Gain
min = mean - 0.125 σ = 1147.927
max = mean + 0.75 σ = 1165.255
Moon angle =94.38°
Moon phase =90.2%
Azimuth =325.7°
Elevation =36.22°
Hour Angle =04:45:44.31°
Wind speed.=13.52 km/hr = 8.4 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh36499 (M52, B filter)
UTC 2023-12-30 05:02:43.600
Mean = 1075.211
σ = 12.155
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1073.691
max = mean + 0.75 σ = 1084.327
Moon angle =93.83°
Moon phase =90.18%
Azimuth =326.19°
Elevation =35.97°
Hour Angle =04:47:53.94°
Wind speed =14.32 km/hr = 8.9 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh3649a (M52, B filter)
UTC 2023-12-30 05:03:12.589
Mean = 1077.021
σ = 11.767
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1075.55
max = mean + 0.75 σ = 1085.846
Moon angle =93.83°
Moon phase =90.17%
Azimuth =326.19°
Elevation =35.91°
Hour Angle =04:48:23.02°
Wind speed =12.07 km/hr = 7.5 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
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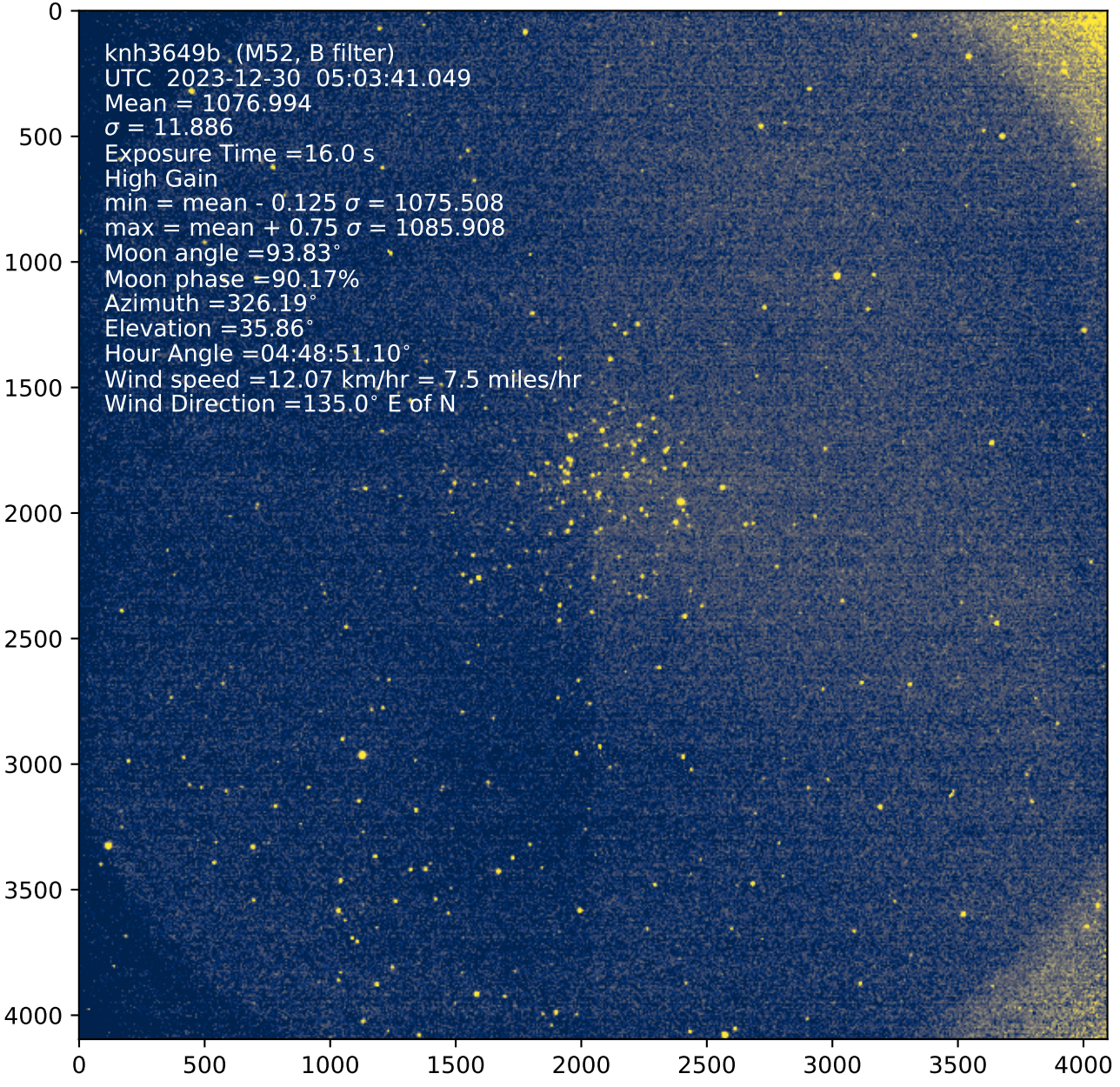
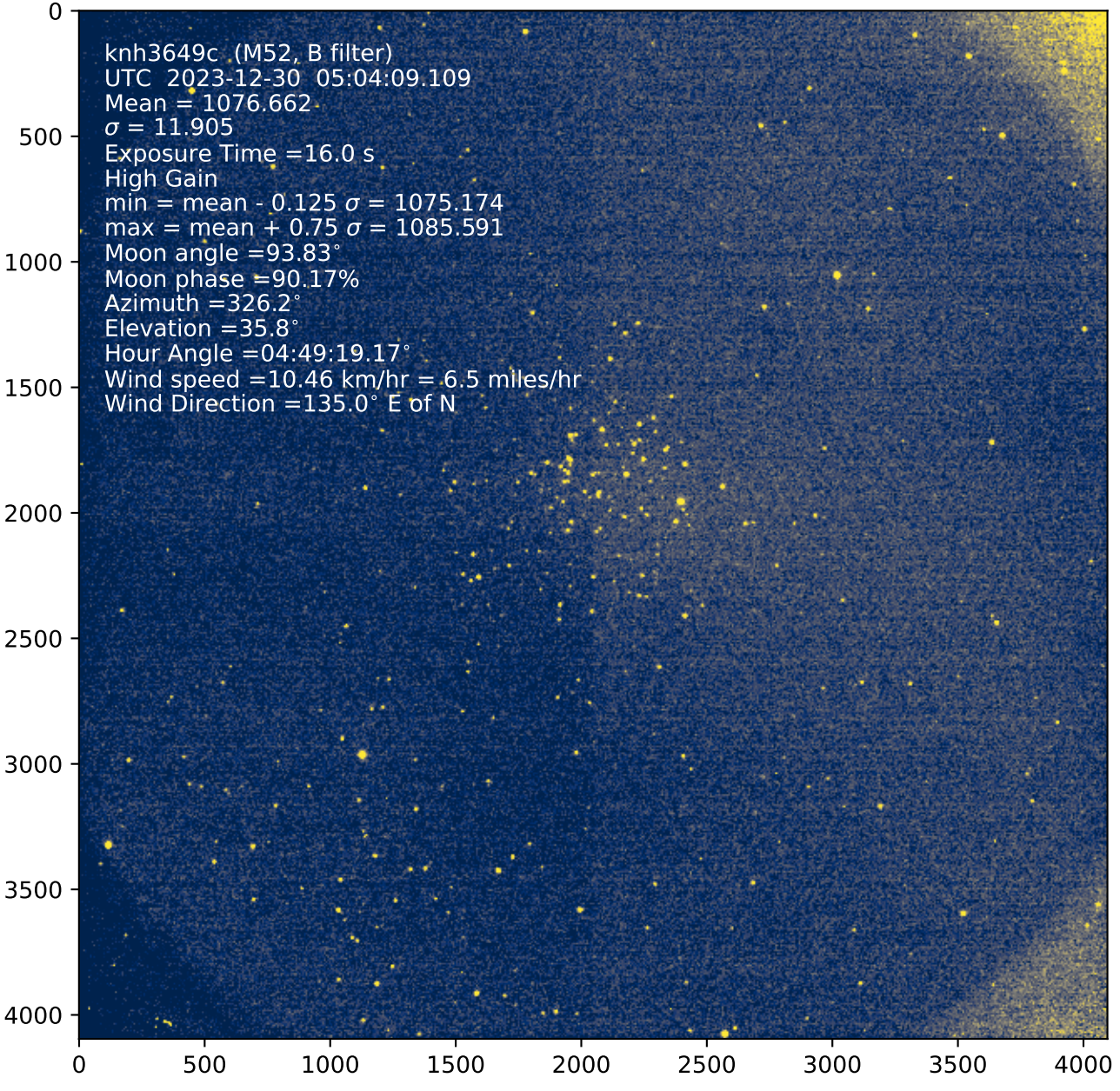
2500
3000
3500
4000


knh3649b (M52, B filter)
UTC 2023-12-30 05:03:41.049
Mean = 1076.994
σ = 11.886
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1075.508
max = mean + 0.75 σ = 1085.908
Moon angle =93.83°
Moon phase =90.17%
Azimuth =326.19°
Elevation =35.86°
Hour Angle =04:48:51.10°
Wind speed =12.07 km/hr = 7.5 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh3649c (M52, B filter)
UTC 2023-12-30 05:04:09.109
Mean = 1076.662
σ = 11.905
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1075.174
max = mean + 0.75 σ = 1085.591
Moon angle =93.83°
Moon phase =90.17%
Azimuth =326.2°
Elevation =35.8°
Hour Angle =04:49:19.17°
Wind speed =10.46 km/hr = 6.5 miles/hr
Wind Direction =135.0° E of N
0
500
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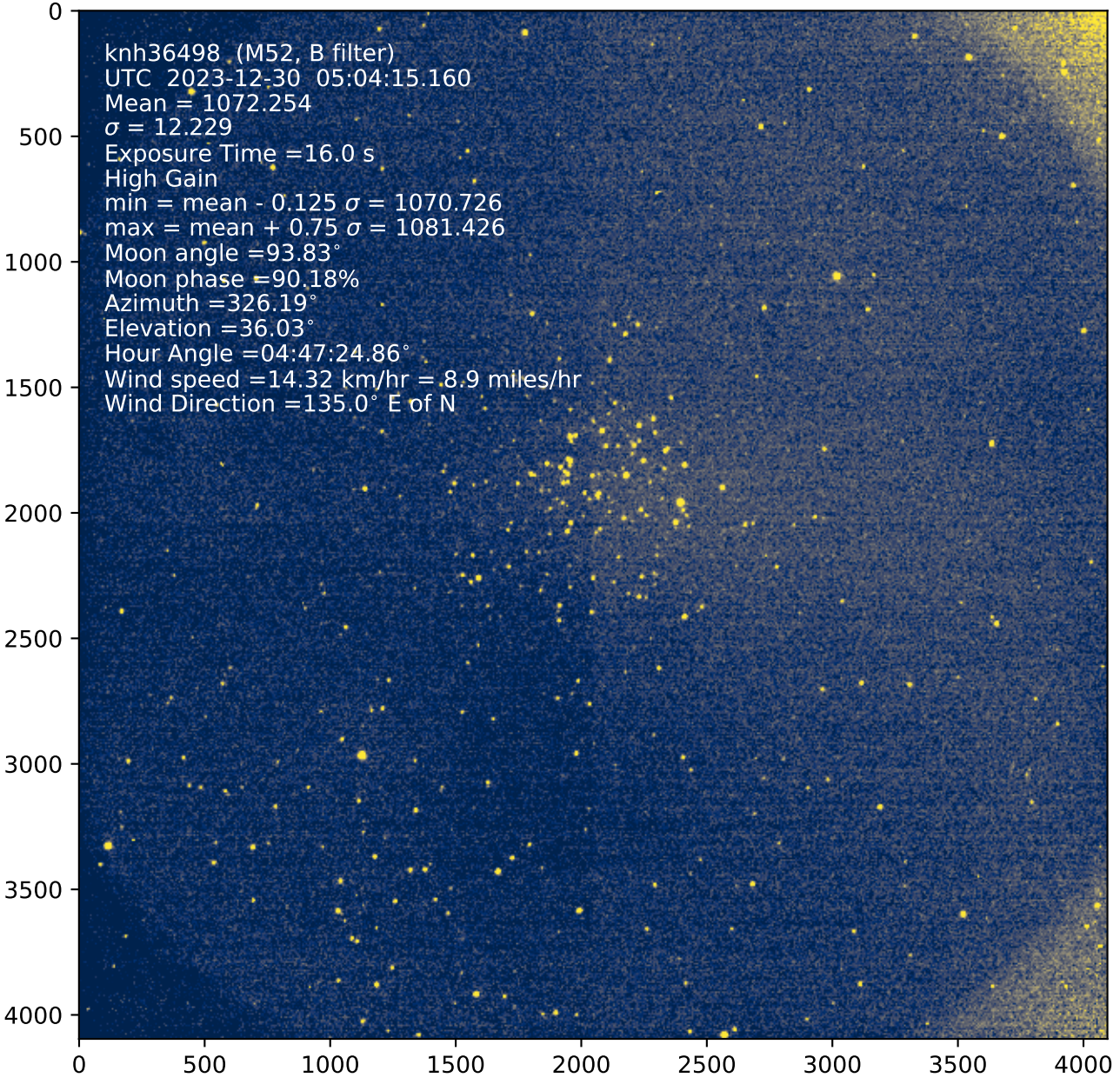
2000
2500
3000
3500
4000


knh36498 (M52, B filter)
UTC 2023-12-30 05:04:15.160
Mean = 1072.254
σ = 12.229
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1070.726
max = mean + 0.75 σ = 1081.426
Moon angle =93.83°
Moon phase =90.18%
Azimuth =326.19°
Elevation =36.03°
Hour Angle =04:47:24.86°
Wind speed =14.32 km/hr = 8.9 miles/hr
Wind Direction =135.0° E of N
0
500
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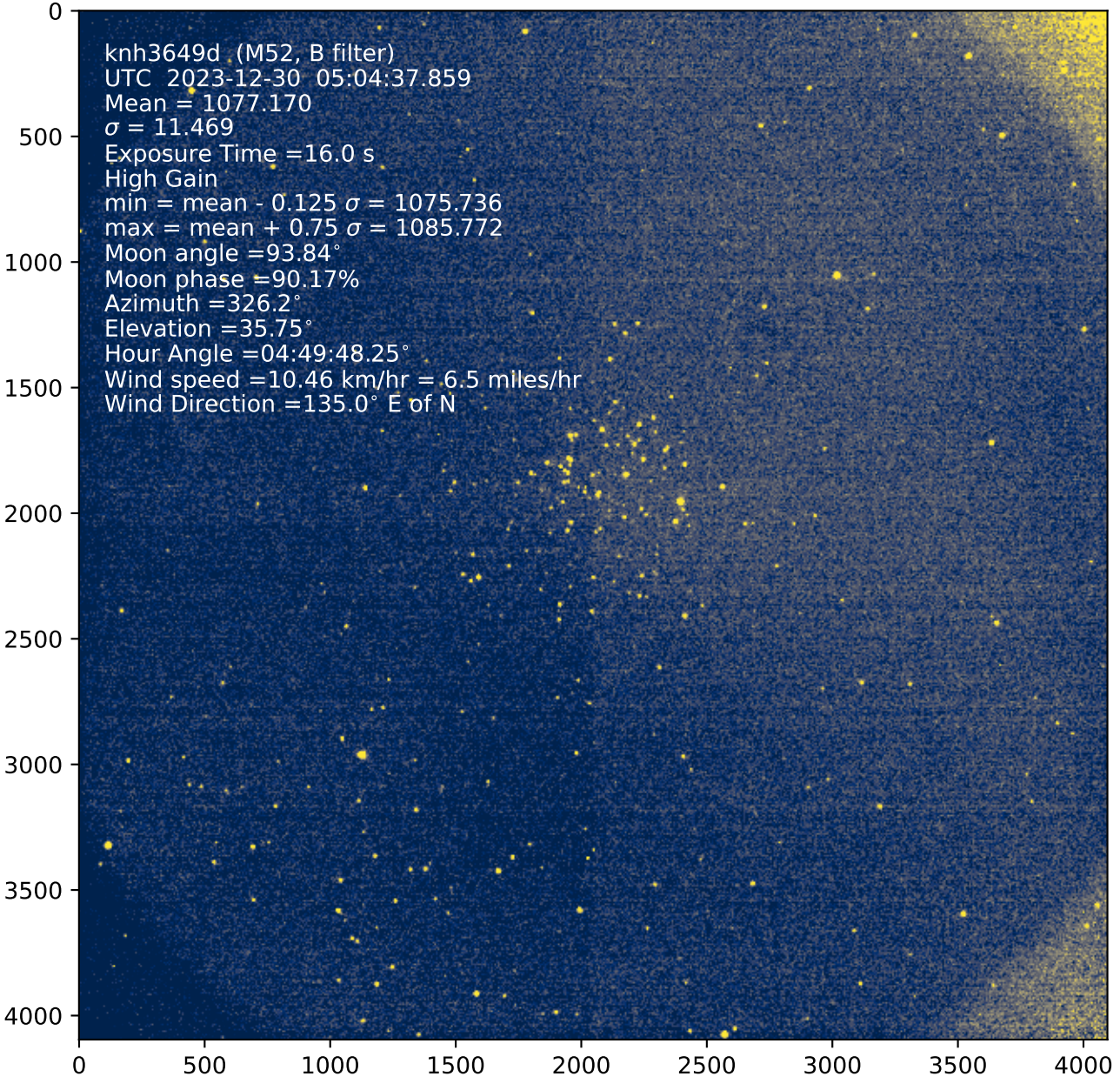
2500
3000
3500
4000


knh3649d (M52, B filter)
UTC 2023-12-30 05:04:37.859
Mean = 1077.170
σ = 11.469
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1075.736
max = mean + 0.75 σ = 1085.772
Moon angle =93.84°
Moon phase =90.17%
Azimuth =326.2°
Elevation =35.75°
Hour Angle =04:49:48.25°
Wind speed =10.46 km/hr = 6.5 miles/hr
Wind Direction =135.0° E of N
0
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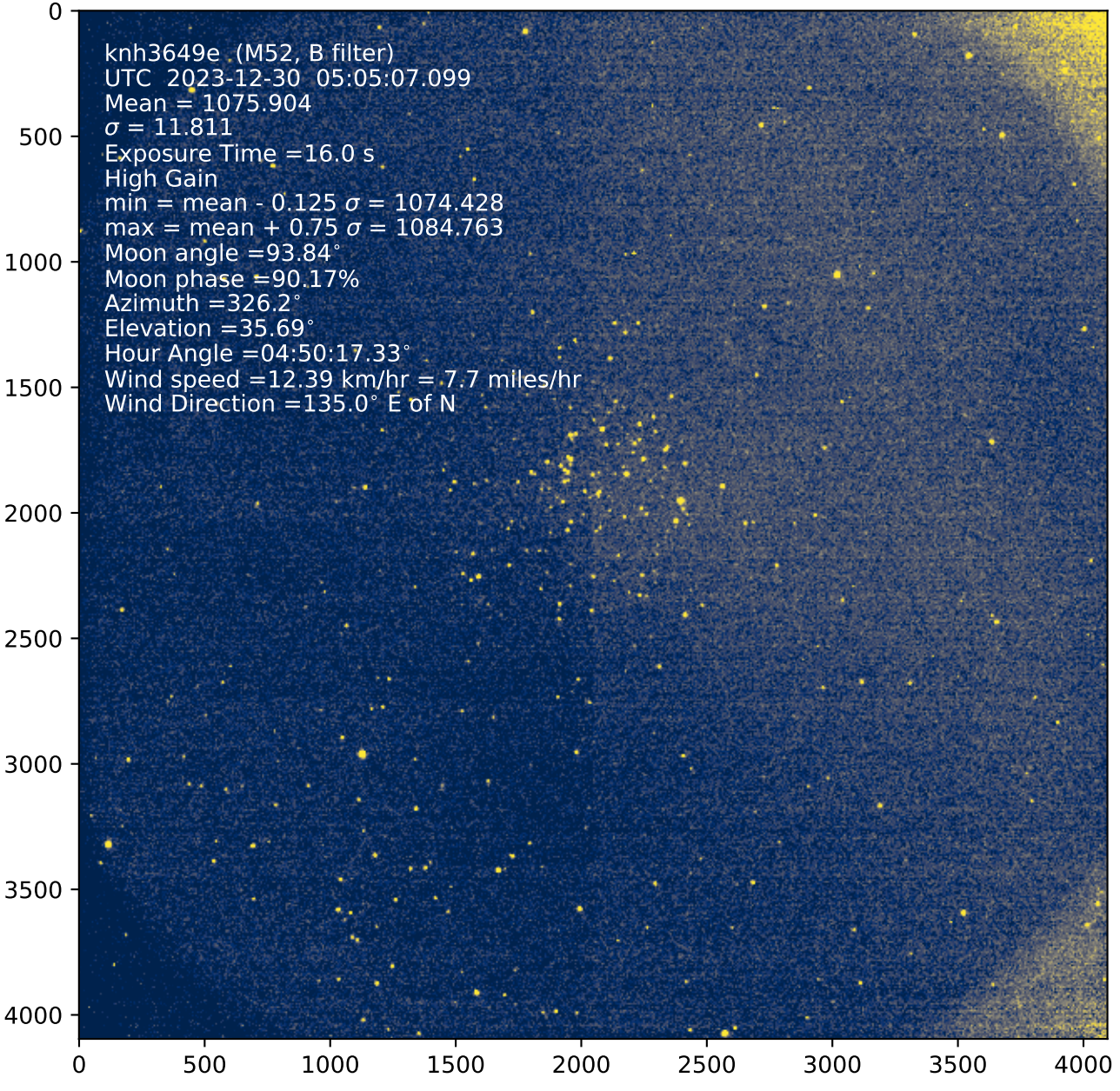
4000


knh3649e (M52, B filter)
UTC 2023-12-30 05:05:07.099
Mean = 1075.904
σ = 11.811
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1074.428
max = mean + 0.75 σ = 1084.763
Moon angle =93.84°
Moon phase =90.17%
Azimuth =326.2°
Elevation =35.69°
Hour Angle =04:50:17.33°
Wind speed =12.39 km/hr = 7.7 miles/hr
Wind Direction =135.0° E of N
0
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2500
3000
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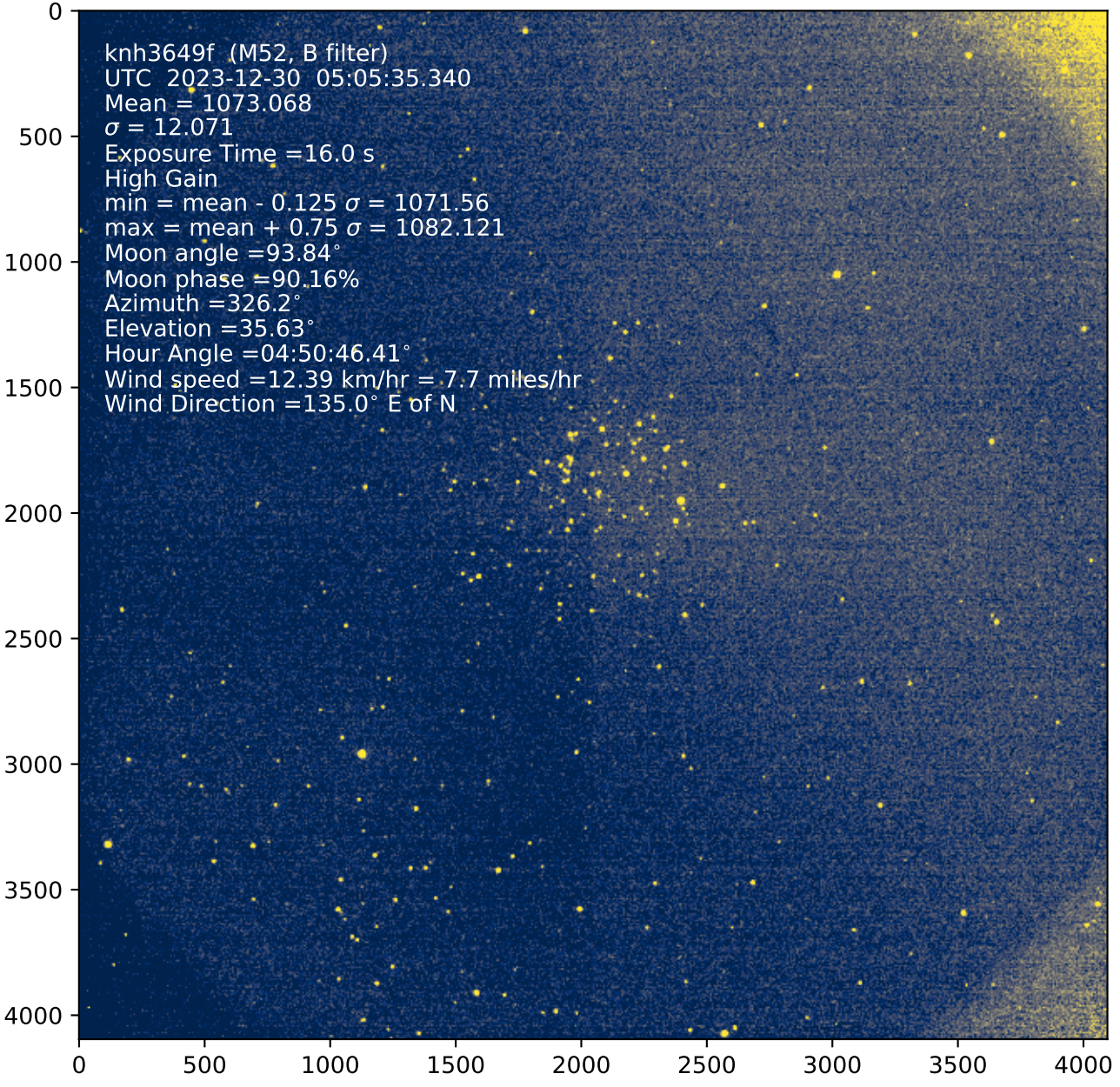
4000


knh3649f (M52, B filter)
UTC 2023-12-30 05:05:35.340
Mean = 1073.068
σ = 12.071
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1071.56
max = mean + 0.75 σ = 1082.121
Moon angle =93.84°
Moon phase =90.16%
Azimuth =326.2°
Elevation =35.63°
Hour Angle =04:50:46.41°
Wind speed =12.39 km/hr = 7.7 miles/hr
Wind Direction =135.0° E of N
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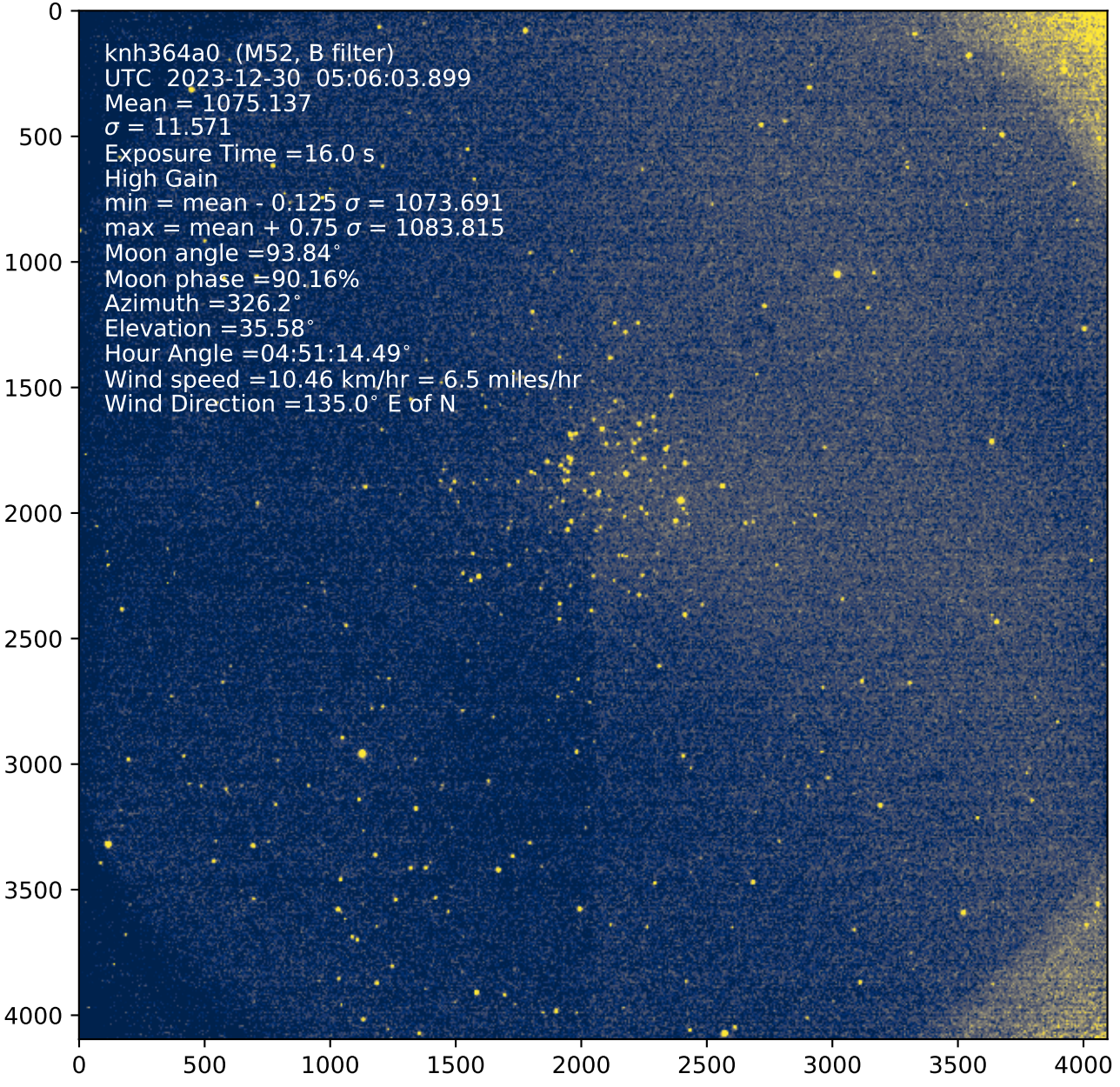
4000


knh364a0 (M52, B filter)
UTC 2023-12-30 05:06:03.899
Mean = 1075.137
σ = 11.571
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1073.691
max = mean + 0.75 σ = 1083.815
Moon angle =93.84°
Moon phase =90.16%
Azimuth =326.2°
Elevation =35.58°
Hour Angle =04:51:14.49°
Wind speed =10.46 km/hr = 6.5 miles/hr
Wind Direction =135.0° E of N
0
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2500
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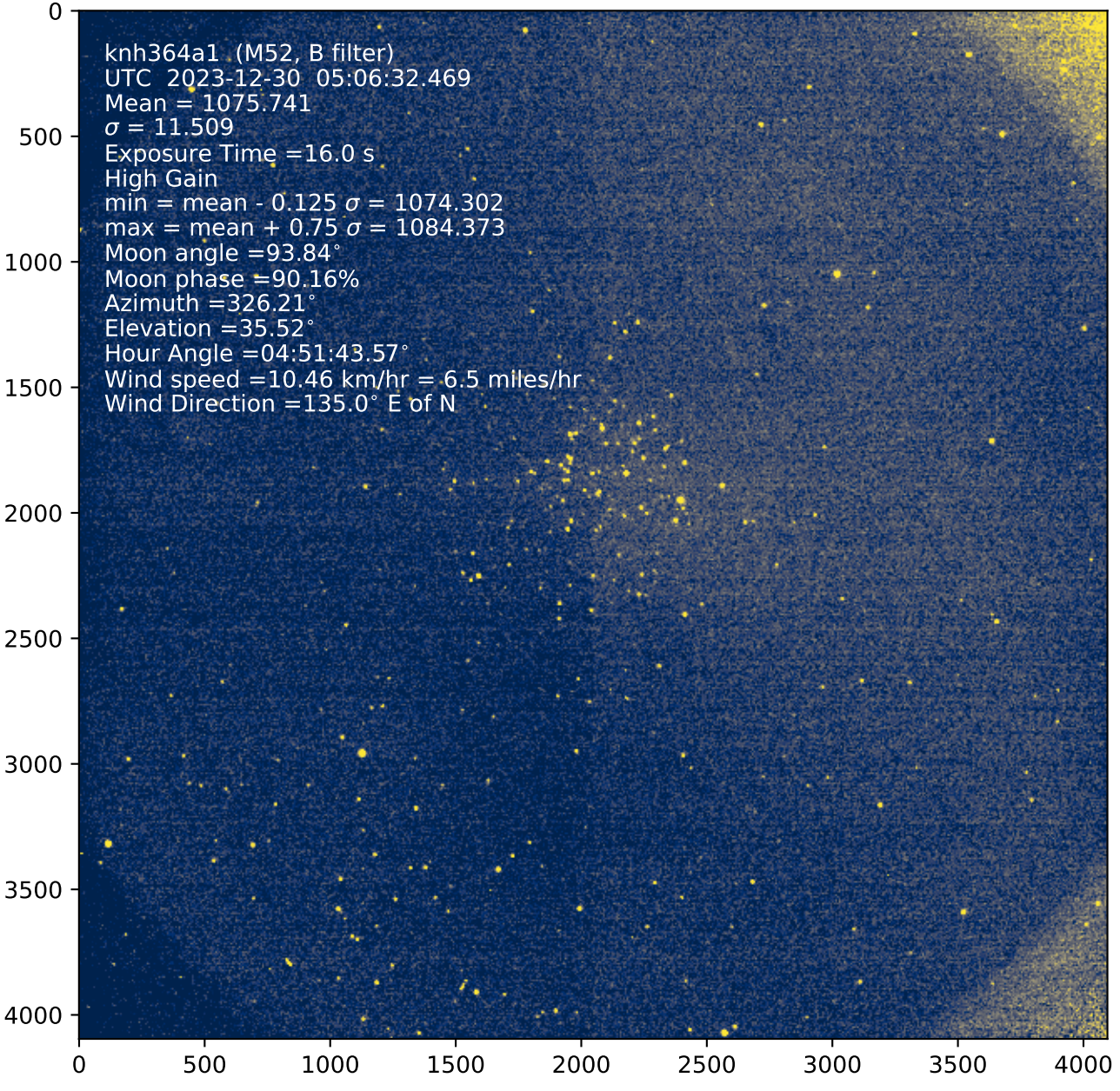
3500
4000


knh364a1 (M52, B filter)
UTC 2023-12-30 05:06:32.469
Mean = 1075.741
σ = 11.509
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1074.302
max = mean + 0.75 σ = 1084.373
Moon angle =93.84°
Moon phase =90.16%
Azimuth =326.21°
Elevation =35.52°
Hour Angle =04:51:43.57°
Wind speed =10.46 km/hr = 6.5 miles/hr
Wind Direction =135.0° E of N
0
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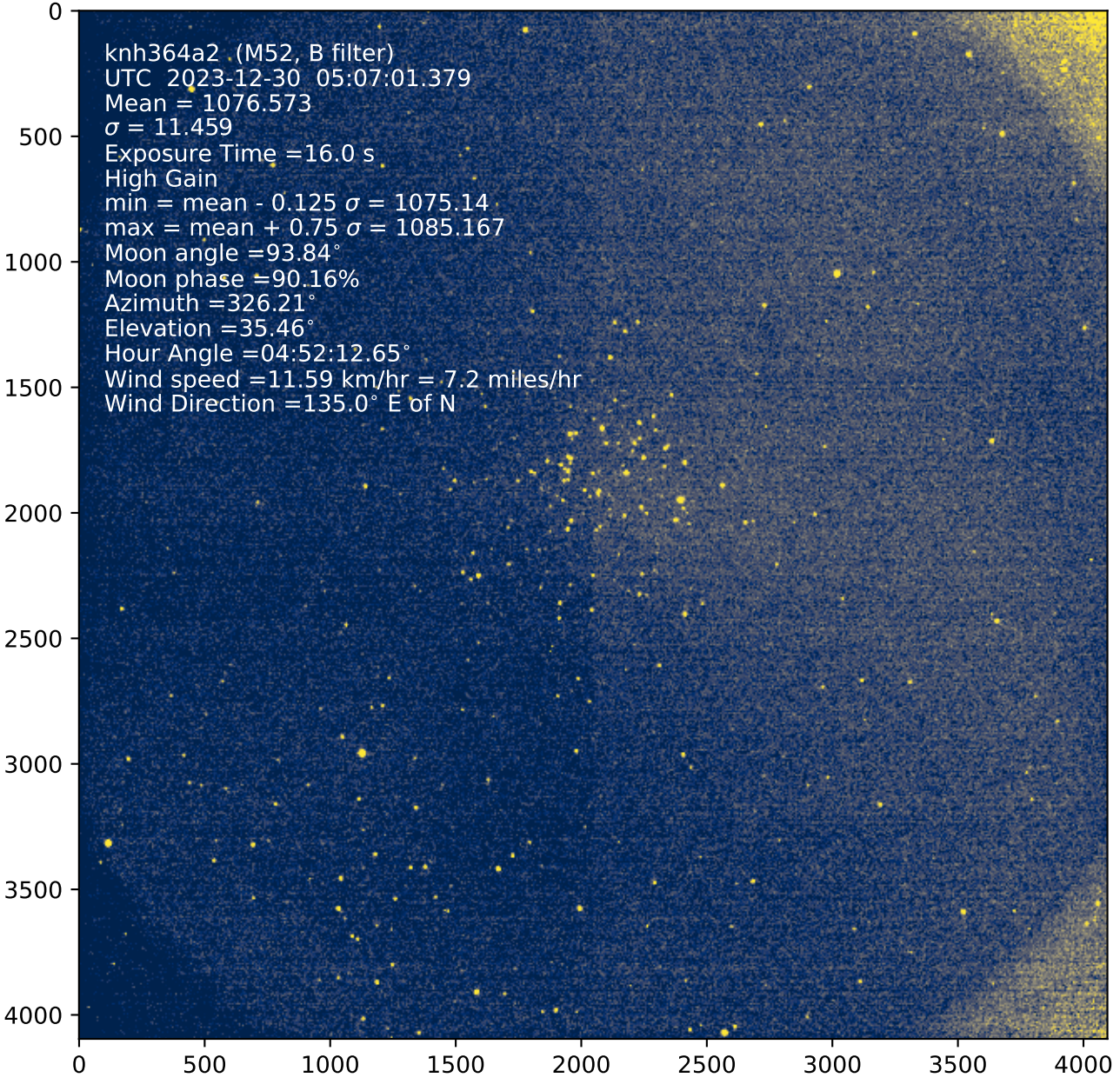
3000
3500
4000


knh364a2 (M52, B filter)
UTC 2023-12-30 05:07:01.379
Mean = 1076.573
σ = 11.459
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1075.14
max = mean + 0.75 σ = 1085.167
Moon angle =93.84°
Moon phase =90.16%
Azimuth =326.21°
Elevation =35.46°
Hour Angle =04:52:12.65°
Wind speed =11.59 km/hr = 7.2 miles/hr
Wind Direction =135.0° E of N
0
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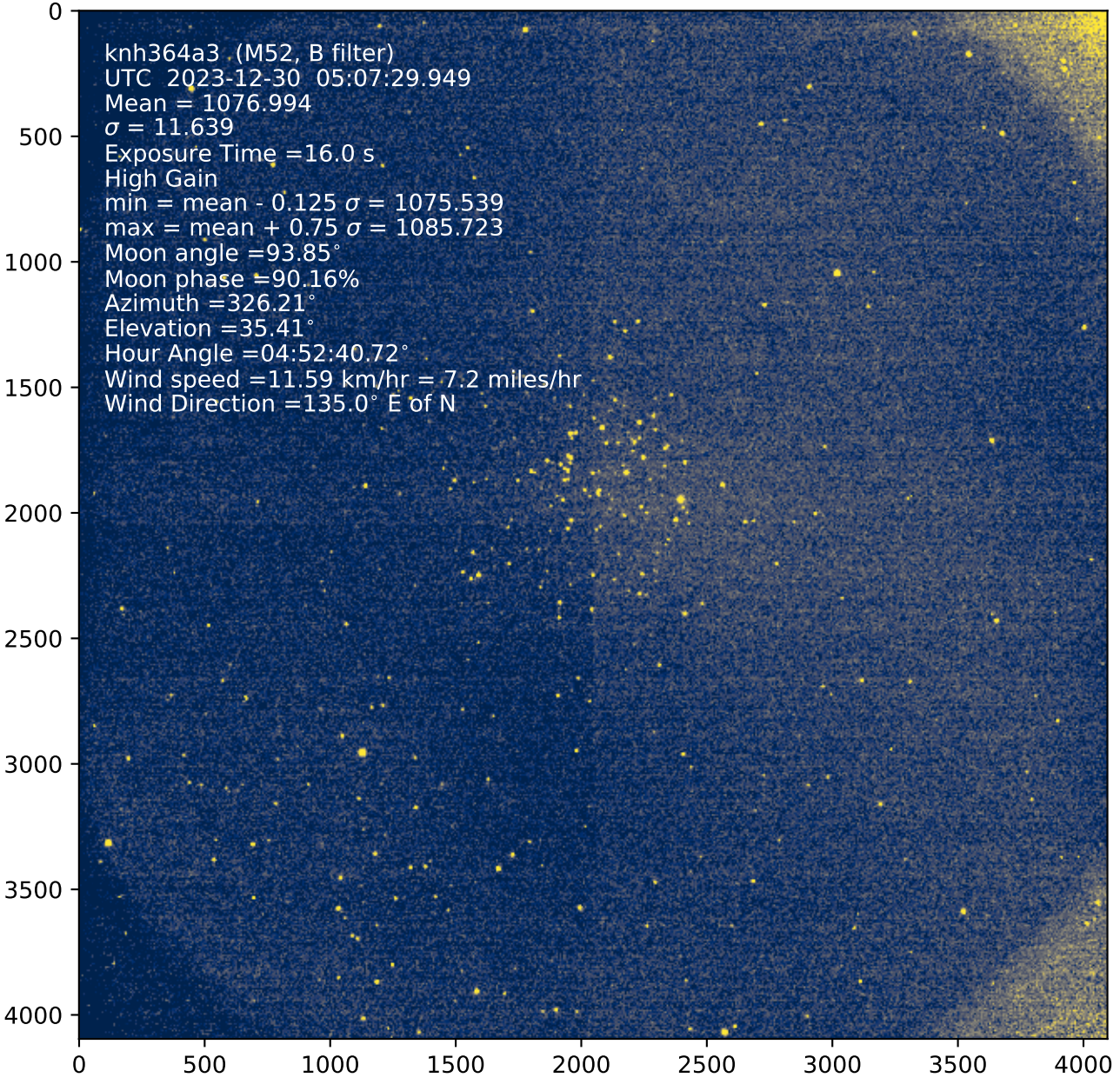
2500
3000
3500
4000


knh364a3 (M52, B filter)
UTC 2023-12-30 05:07:29.949
Mean = 1076.994
σ = 11.639
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1075.539
max = mean + 0.75 σ = 1085.723
Moon angle =93.85°
Moon phase =90.16%
Azimuth =326.21°
Elevation =35.41°
Hour Angle =04:52:40.72°
Wind speed =11.59 km/hr = 7.2 miles/hr
Wind Direction =135.0° E of N
0
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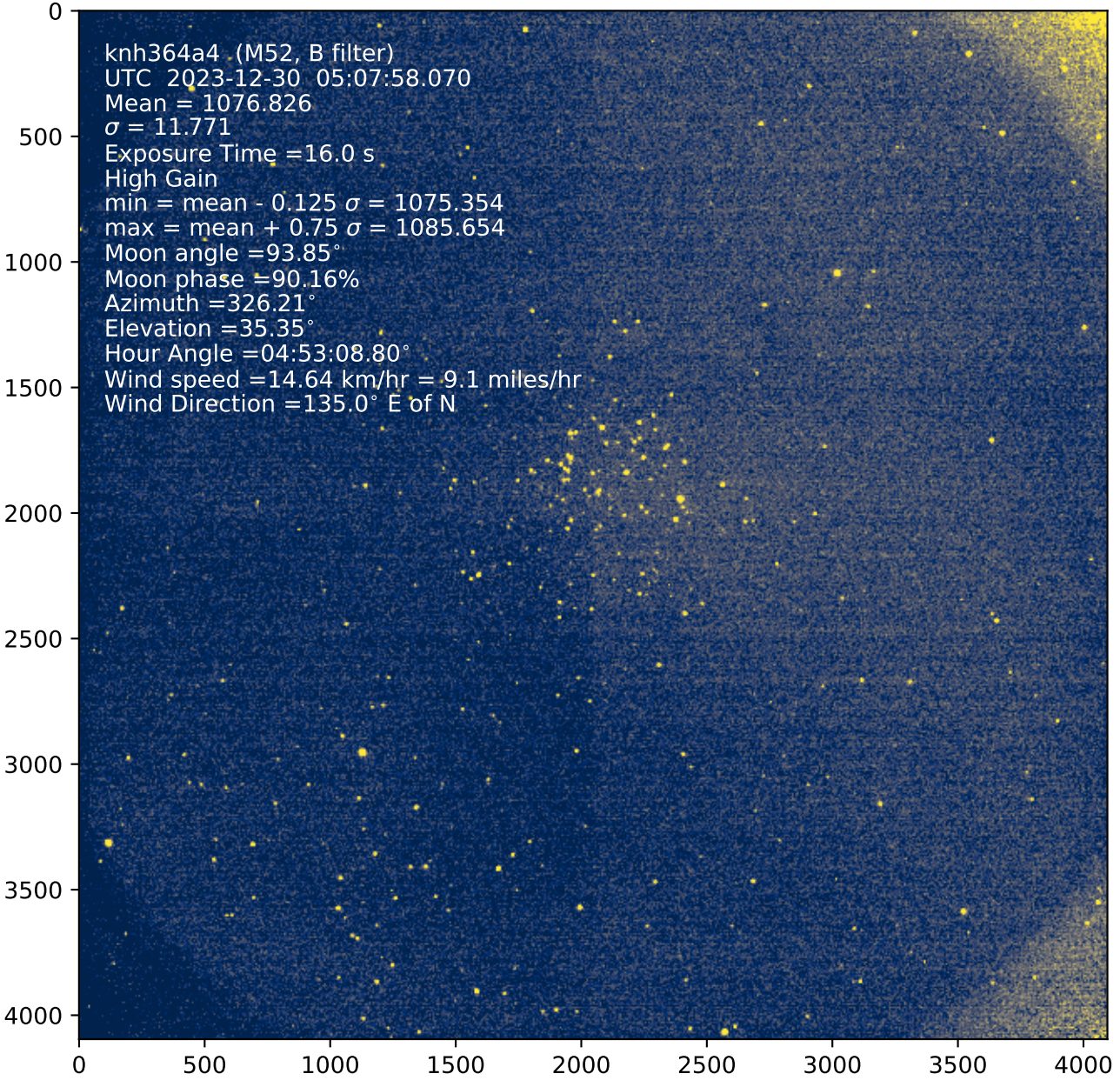
2000
2500
3000
3500
4000


knh364a4 (M52, B filter)
UTC 2023-12-30 05:07:58.070
Mean = 1076.826
σ = 11.771
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1075.354
max = mean + 0.75 σ = 1085.654
Moon angle =93.85°
Moon phase =90.16%
Azimuth =326.21°
Elevation =35.35°
Hour Angle =04:53:08.80°
Wind speed =14.64 km/hr = 9.1 miles/hr
Wind Direction =135.0° E of N
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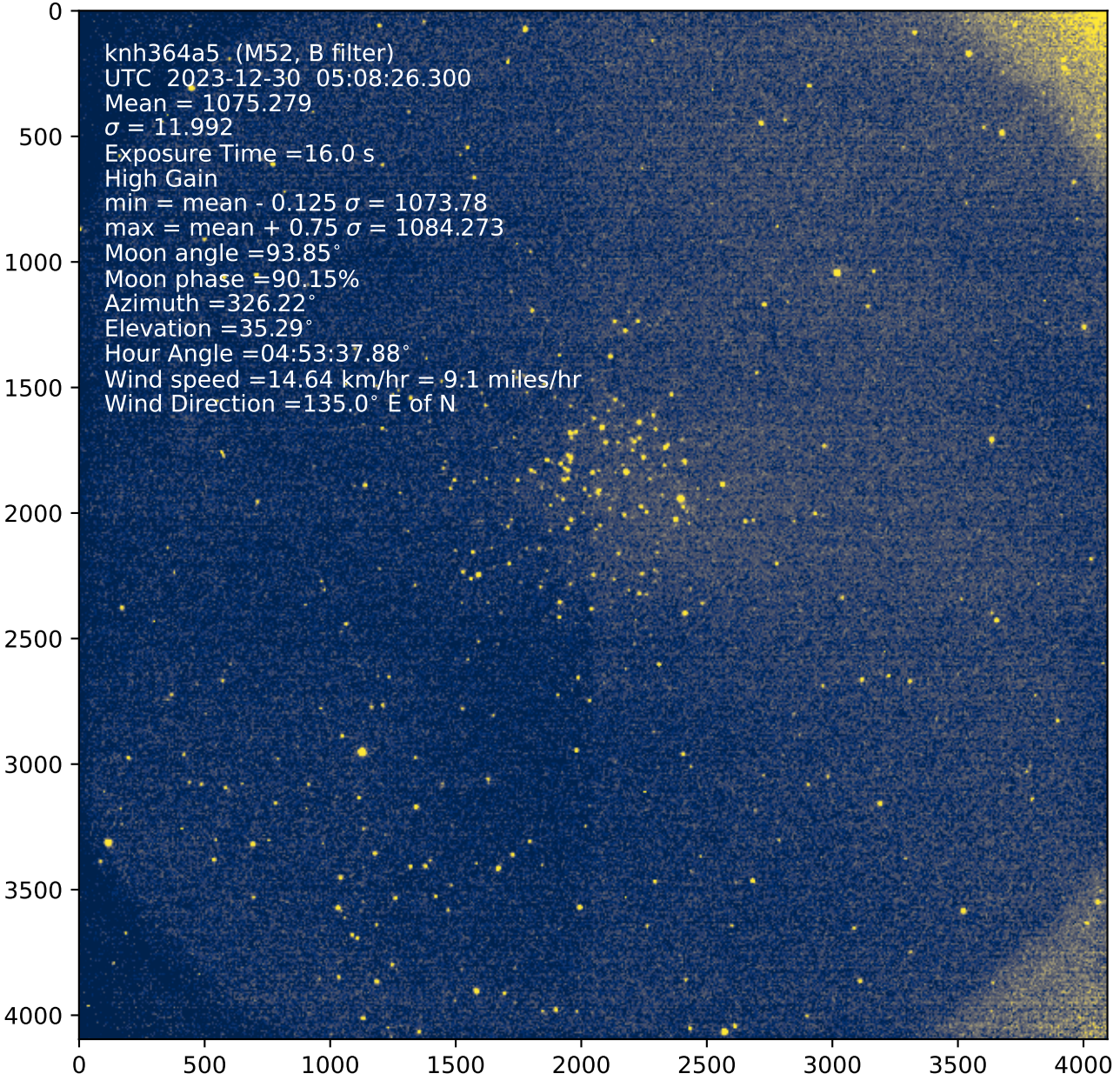
2500
3000
3500
4000


knh364a5 (M52, B filter)
UTC 2023-12-30 05:08:26.300
Mean = 1075.279
σ = 11.992
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1073.78
max = mean + 0.75 σ = 1084.273
Moon angle =93.85°
Moon phase =90.15%
Azimuth =326.22°
Elevation =35.29°
Hour Angle =04:53:37.88°
Wind speed =14.64 km/hr = 9.1 miles/hr
Wind Direction =135.0° E of N
0
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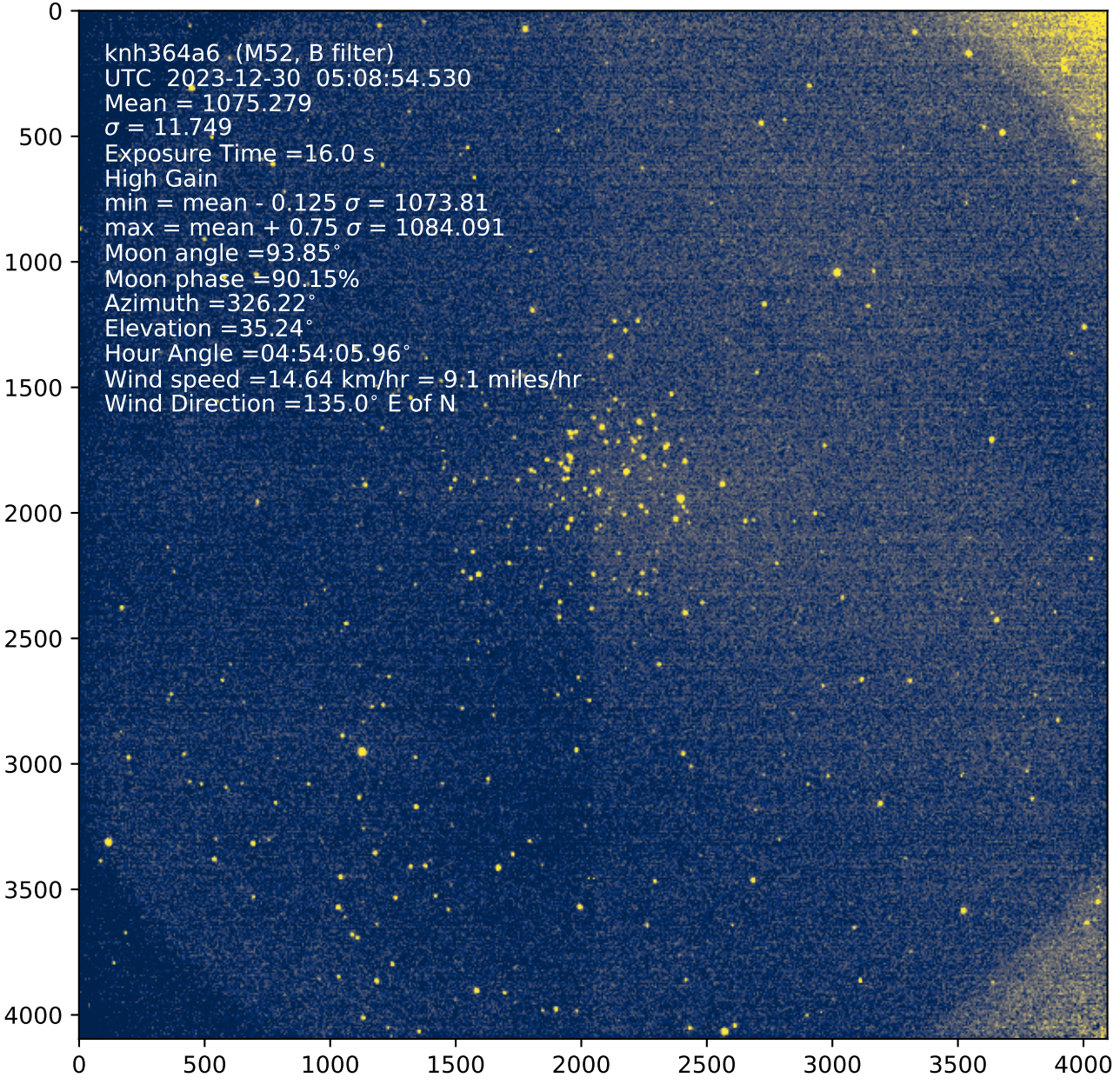
2500
3000
3500
4000


knh364a6 (M52, B filter)
UTC 2023-12-30 05:08:54.530
Mean = 1075.279
σ = 11.749
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1073.81
max = mean + 0.75 σ = 1084.091
Moon angle =93.85°
Moon phase =90.15%
Azimuth =326.22°
Elevation =35.24°
Hour Angle =04:54:05.96°
Wind speed =14.64 km/hr = 9.1 miles/hr
Wind Direction =135.0° E of N
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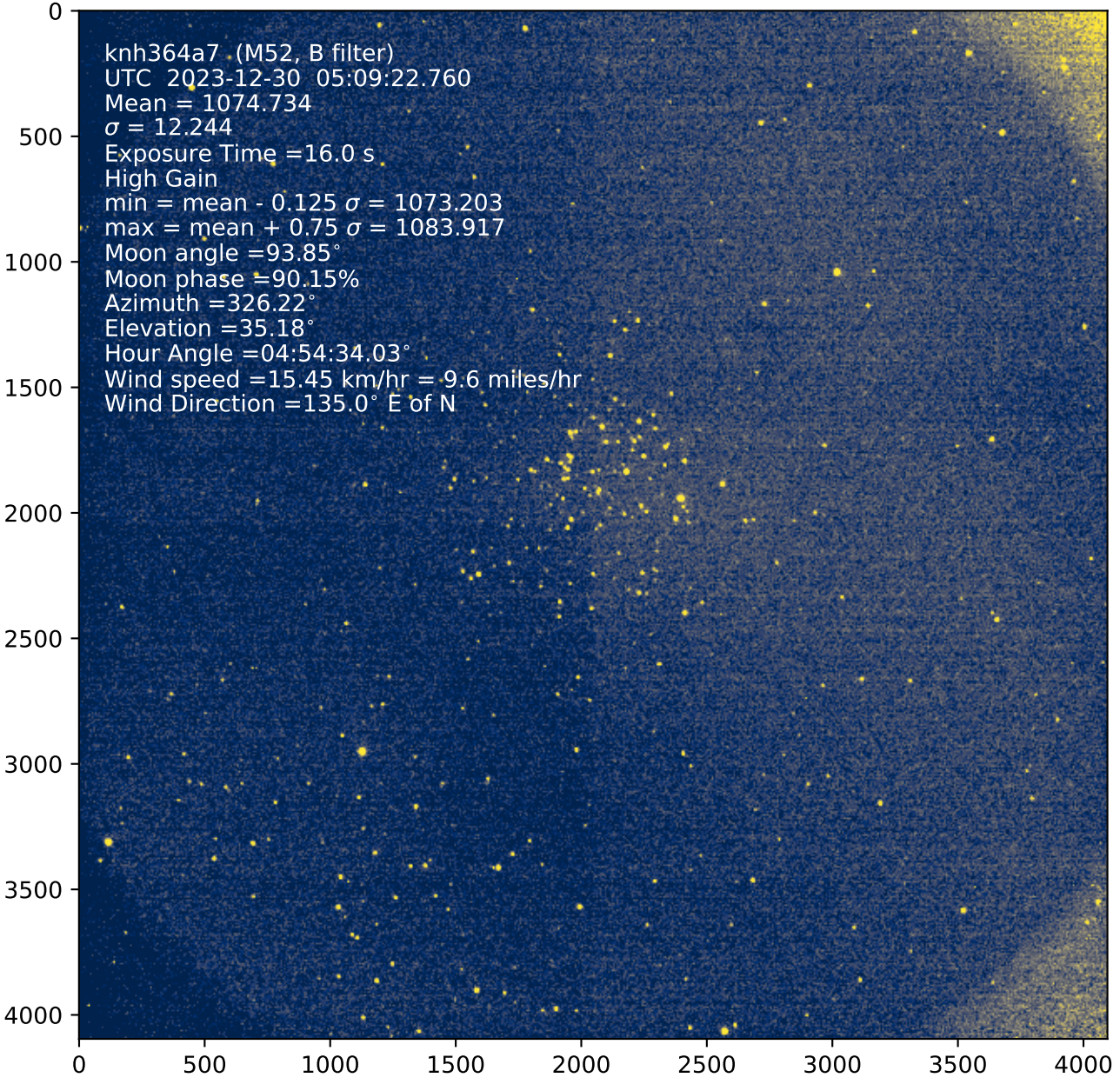
2500
3000
3500
4000


knh364a7 (M52, B filter)
UTC 2023-12-30 05:09:22.760
Mean = 1074.734
σ = 12.244
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1073.203
max = mean + 0.75 σ = 1083.917
Moon angle =93.85°
Moon phase =90.15%
Azimuth =326.22°
Elevation =35.18°
Hour Angle =04:54:34.03°
Wind speed =15.45 km/hr = 9.6 miles/hr
Wind Direction =135.0° E of N
0
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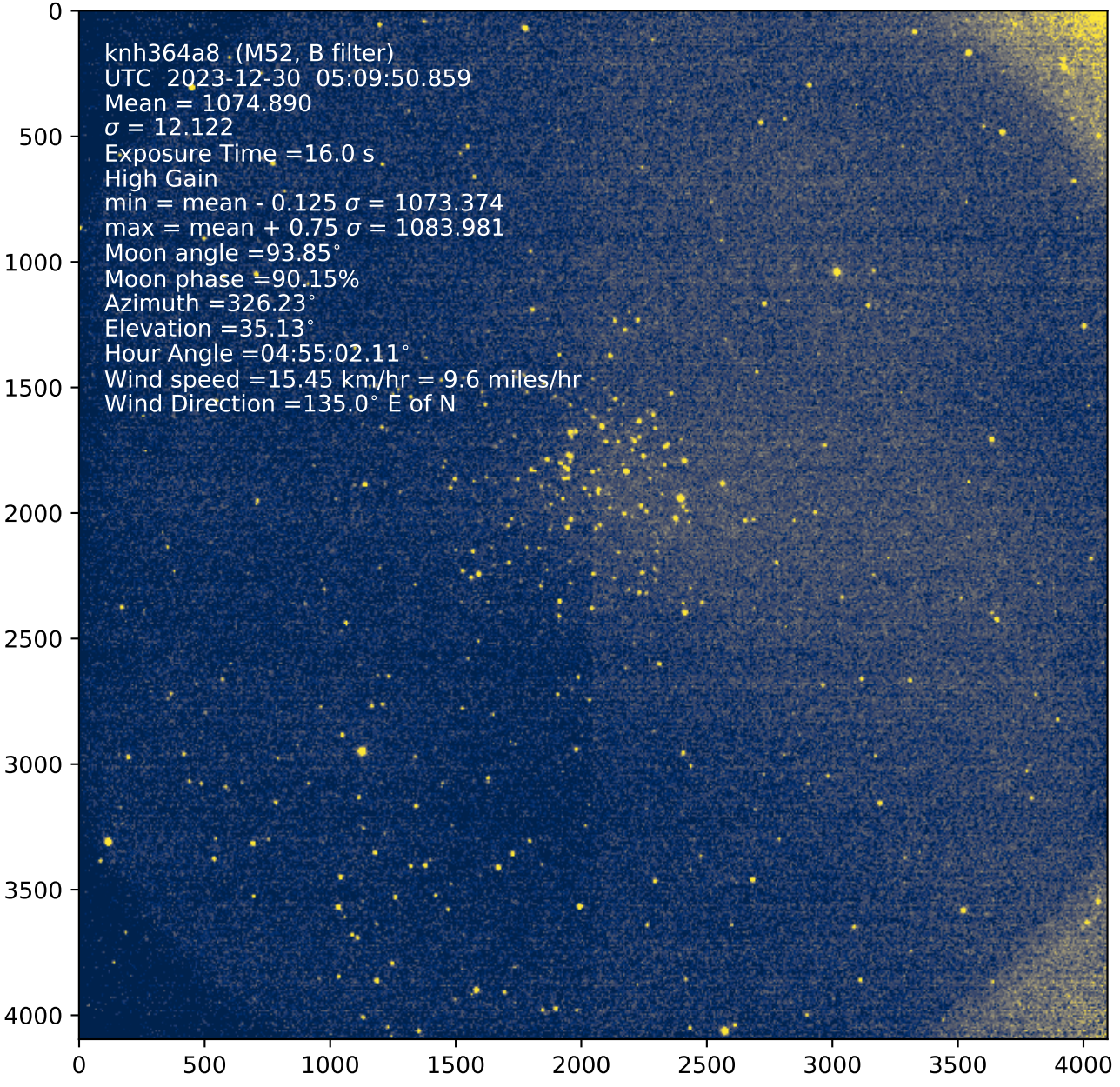
4000


knh364a8 (M52, B filter)
UTC 2023-12-30 05:09:50.859
Mean = 1074.890
σ = 12.122
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1073.374
max = mean + 0.75 σ = 1083.981
Moon angle =93.85°
Moon phase =90.15%
Azimuth =326.23°
Elevation =35.13°
Hour Angle =04:55:02.11°
Wind speed =15.45 km/hr = 9.6 miles/hr
Wind Direction =135.0° E of N
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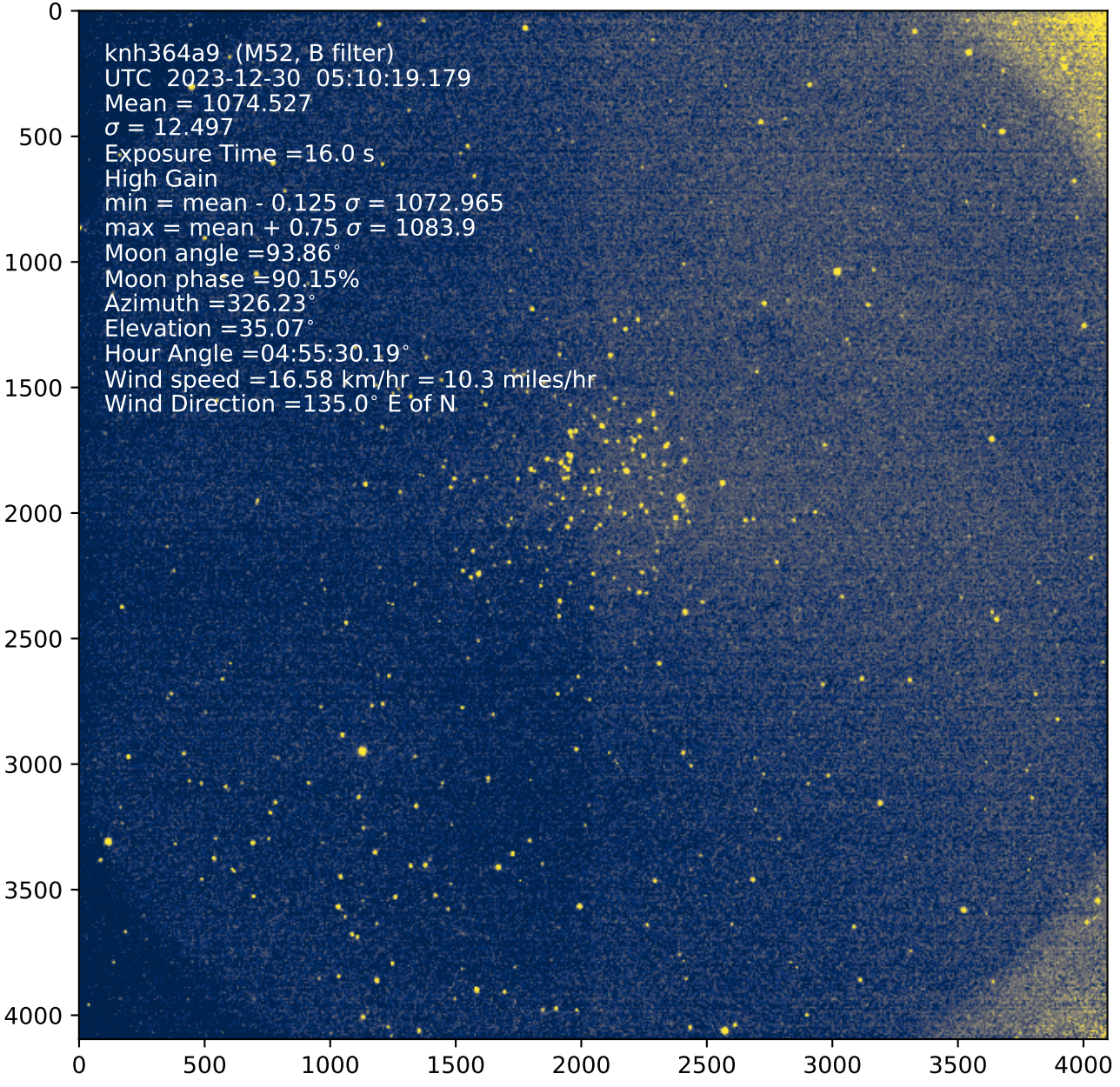
knh364a9 (M52, B filter)
UTC 2023-12-30 05:10:19.179
Mean = 1074.527
σ = 12.497
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1072.965
max = mean + 0.75 σ = 1083.9
Moon angle =93.86°
Moon phase =90.15%
Azimuth =326.23°
Elevation =35.07°
Hour Angle =04:55:30.19°
Wind speed =16.58 km/hr = 10.3 miles/hr
Wind Direction =135.0° E of N
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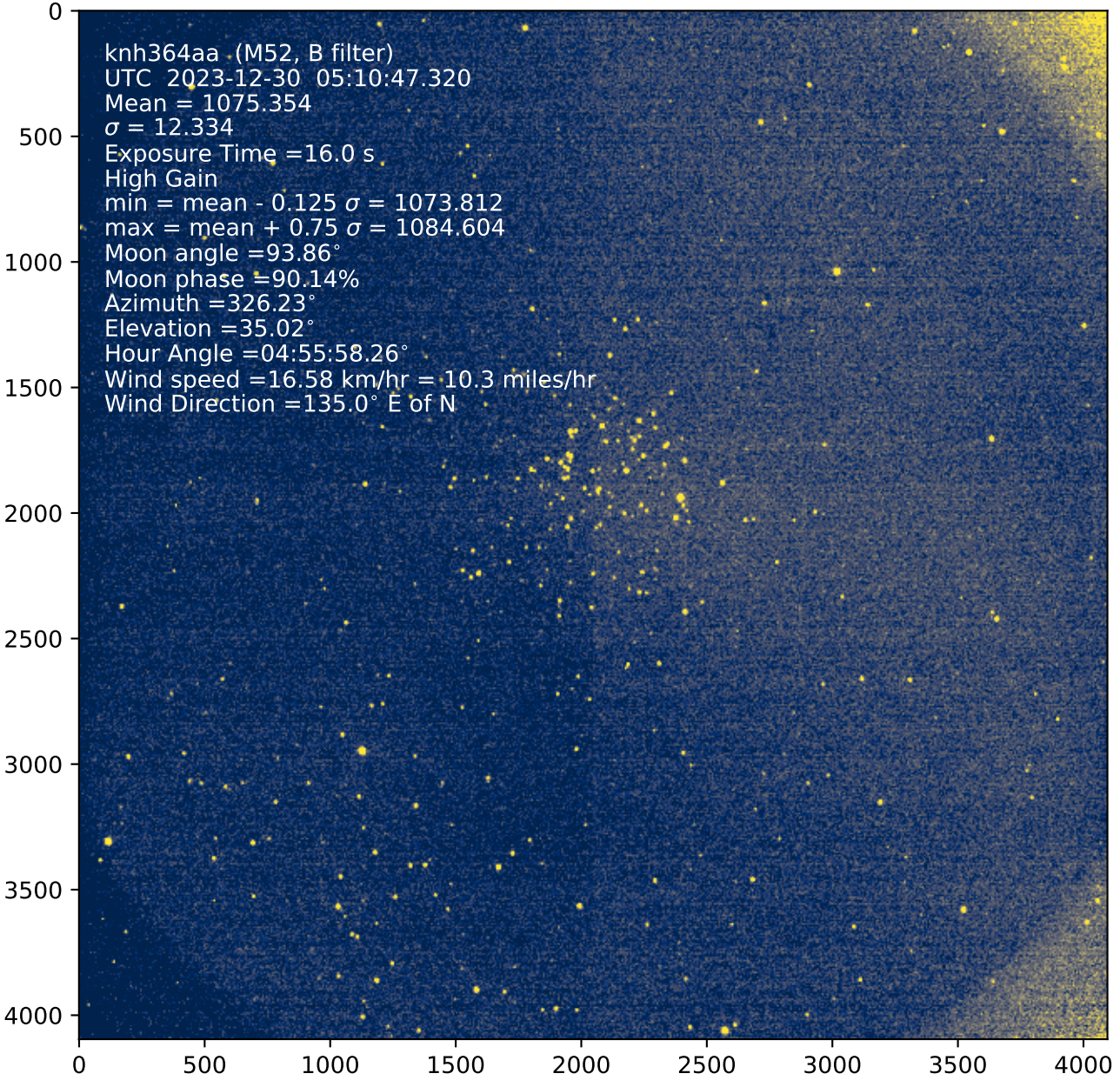
knh364aa (M52, B filter)
UTC 2023-12-30 05:10:47.320
Mean = 1075.354
σ = 12.334
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1073.812
max = mean + 0.75 σ = 1084.604
Moon angle =93.86°
Moon phase =90.14%
Azimuth =326.23°
Elevation =35.02°
Hour Angle =04:55:58.26°
Wind speed =16.58 km/hr = 10.3 miles/hr
Wind Direction =135.0° E of N
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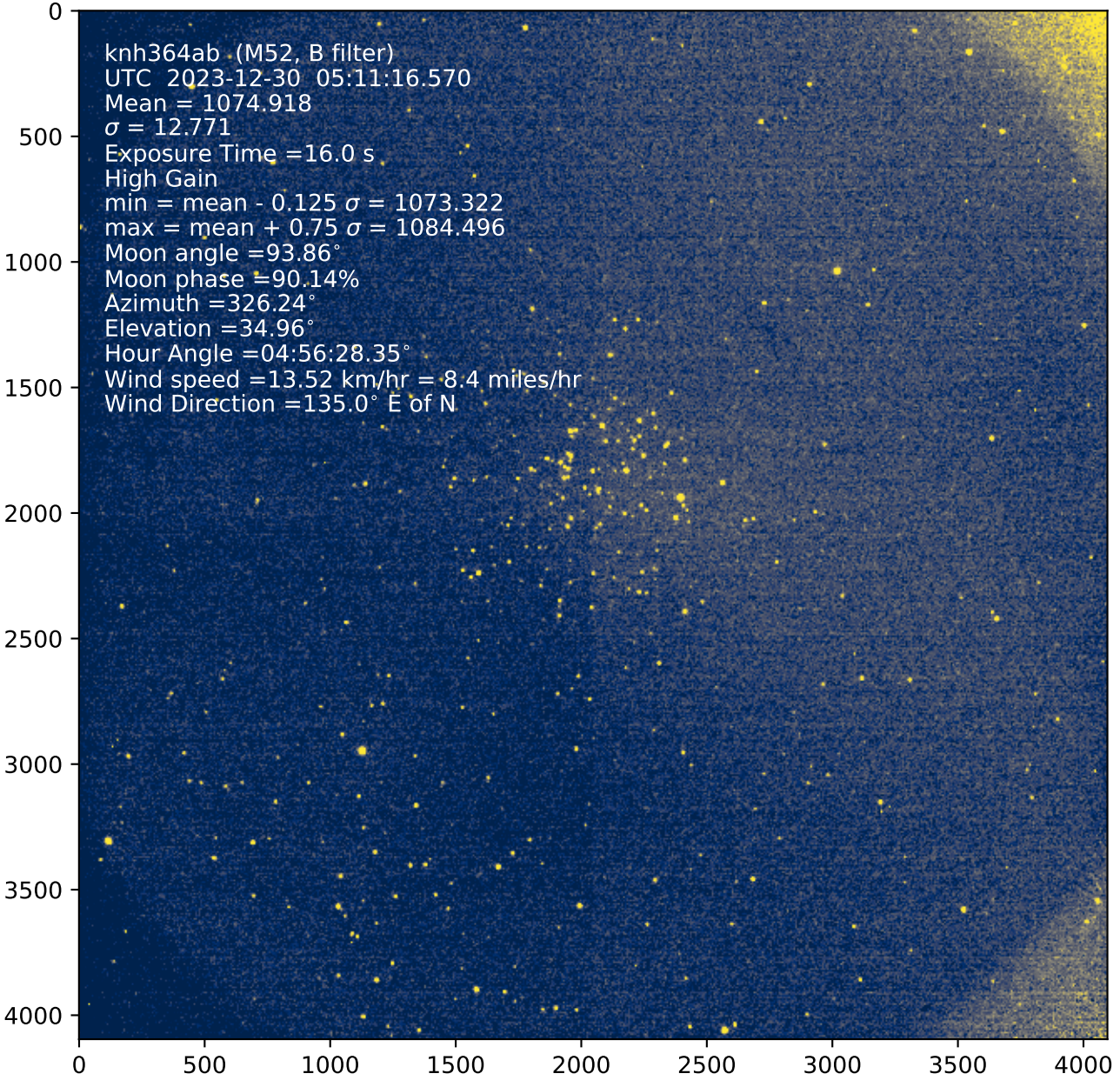
knh364ab (M52, B filter)
UTC 2023-12-30 05:11:16.570
Mean = 1074.918
σ = 12.771
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1073.322
max = mean + 0.75 σ = 1084.496
Moon angle =93.86°
Moon phase =90.14%
Azimuth =326.24°
Elevation =34.96°
Hour Angle =04:56:28.35°
Wind speed =13.52 km/hr = 8.4 miles/hr
Wind Direction =135.0° E of N
0
500
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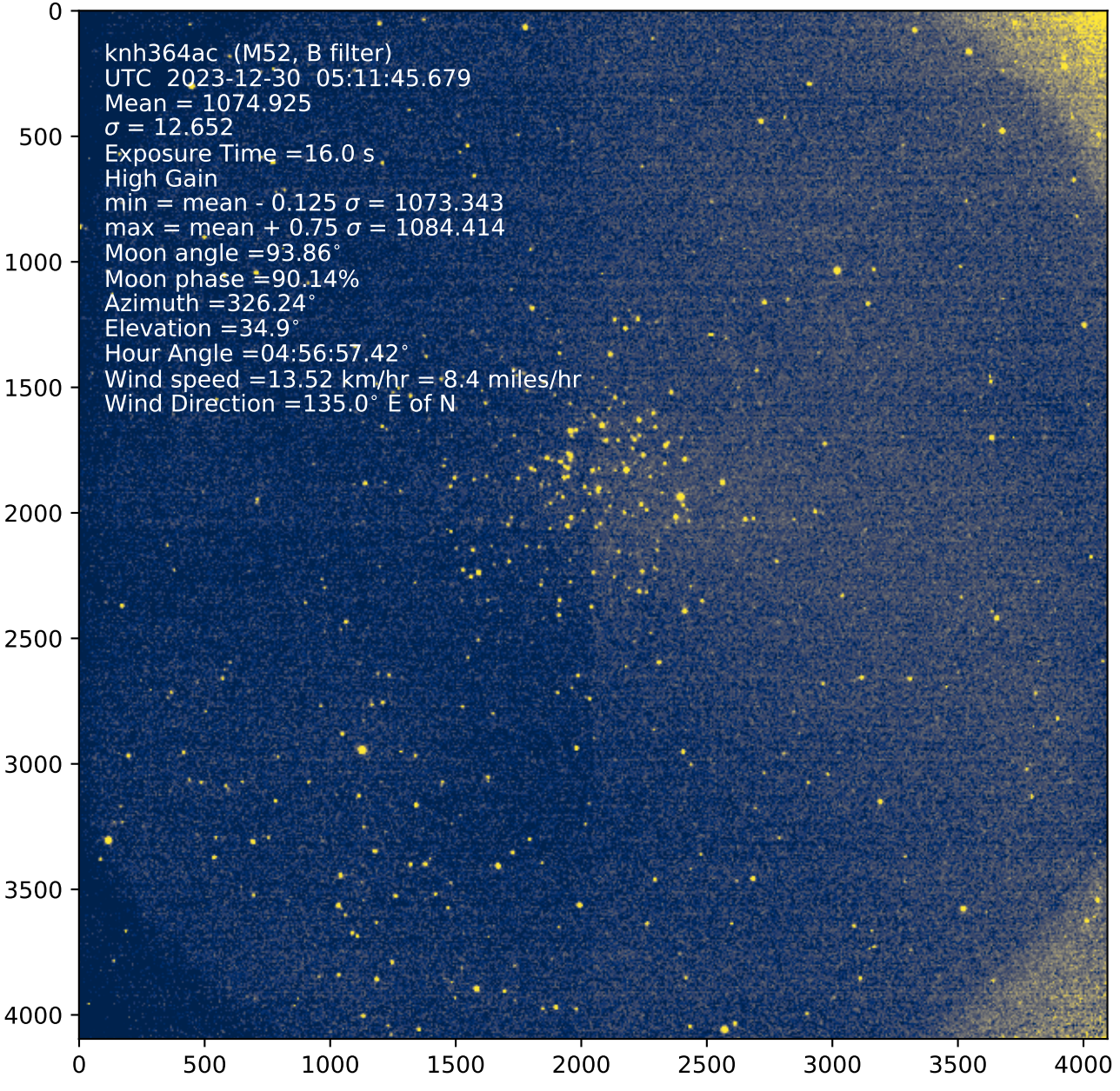
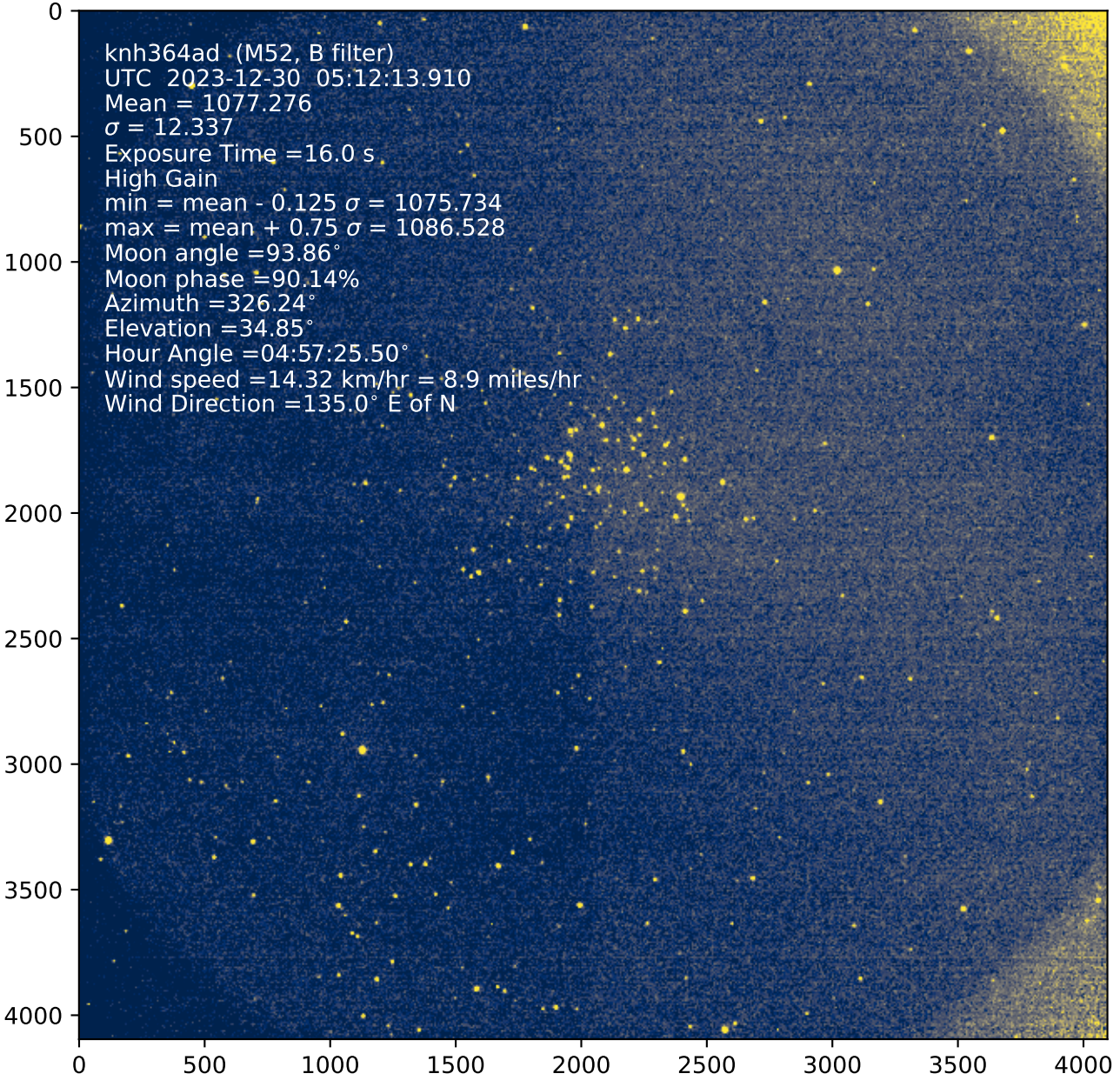
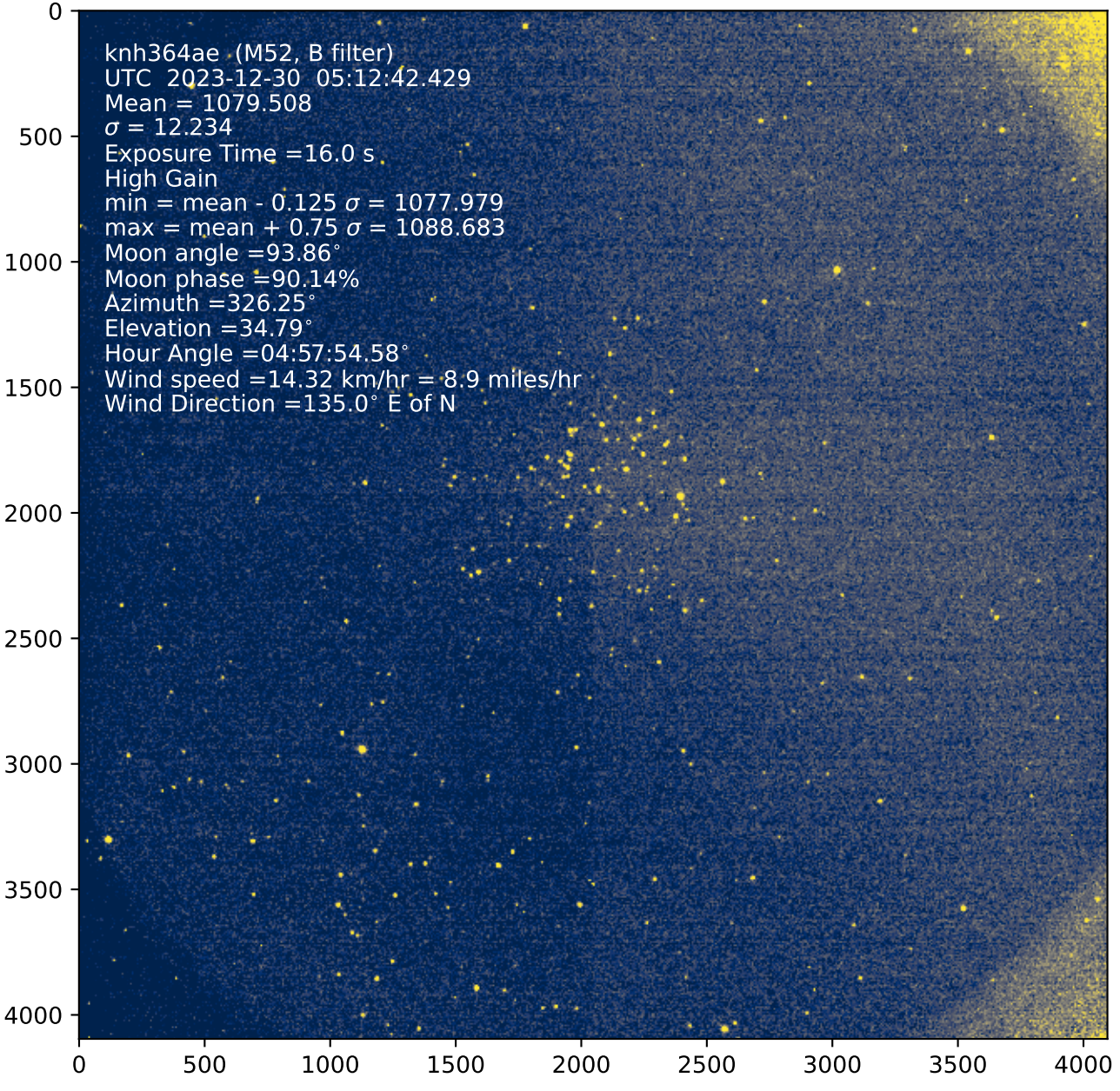
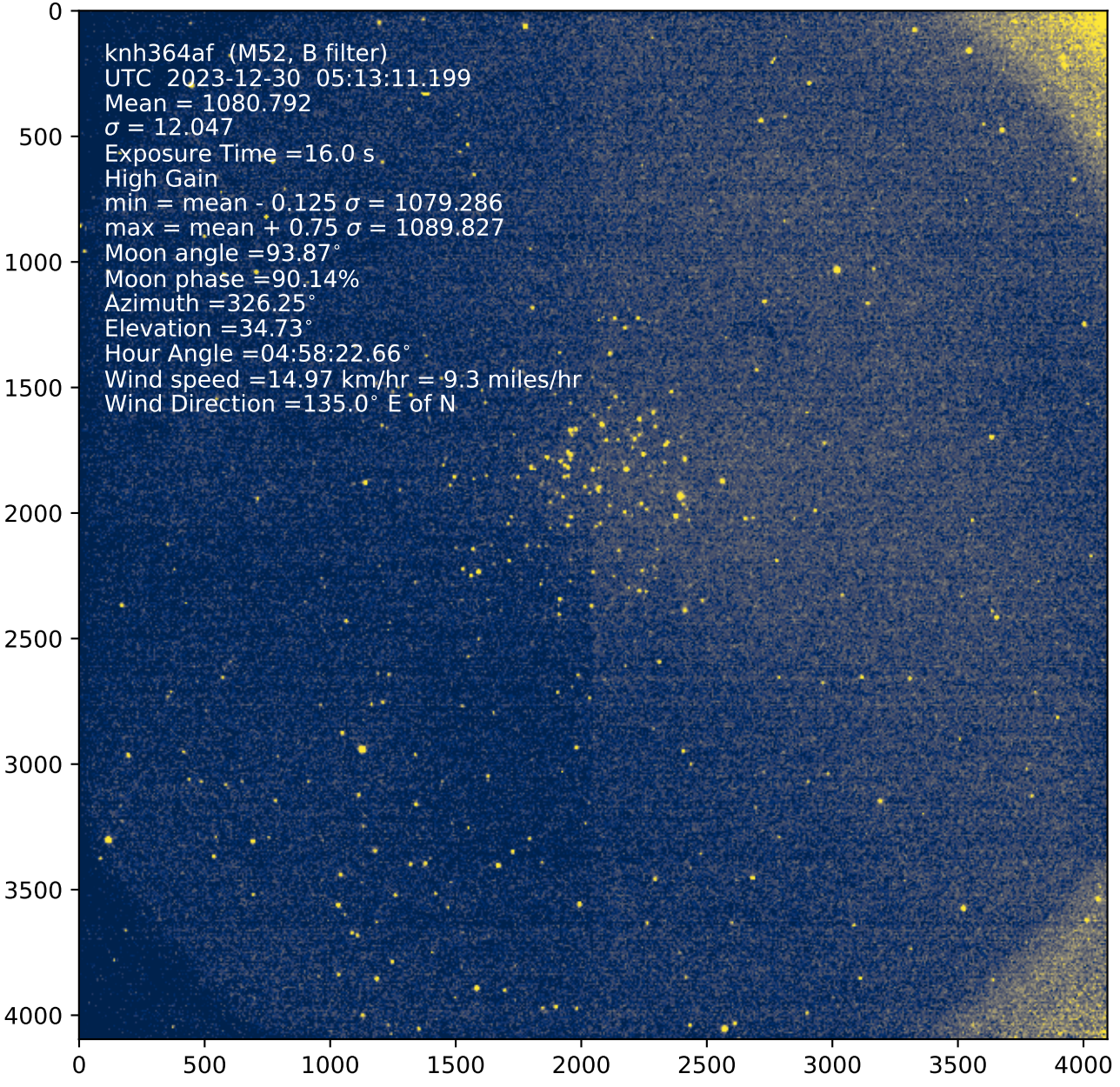
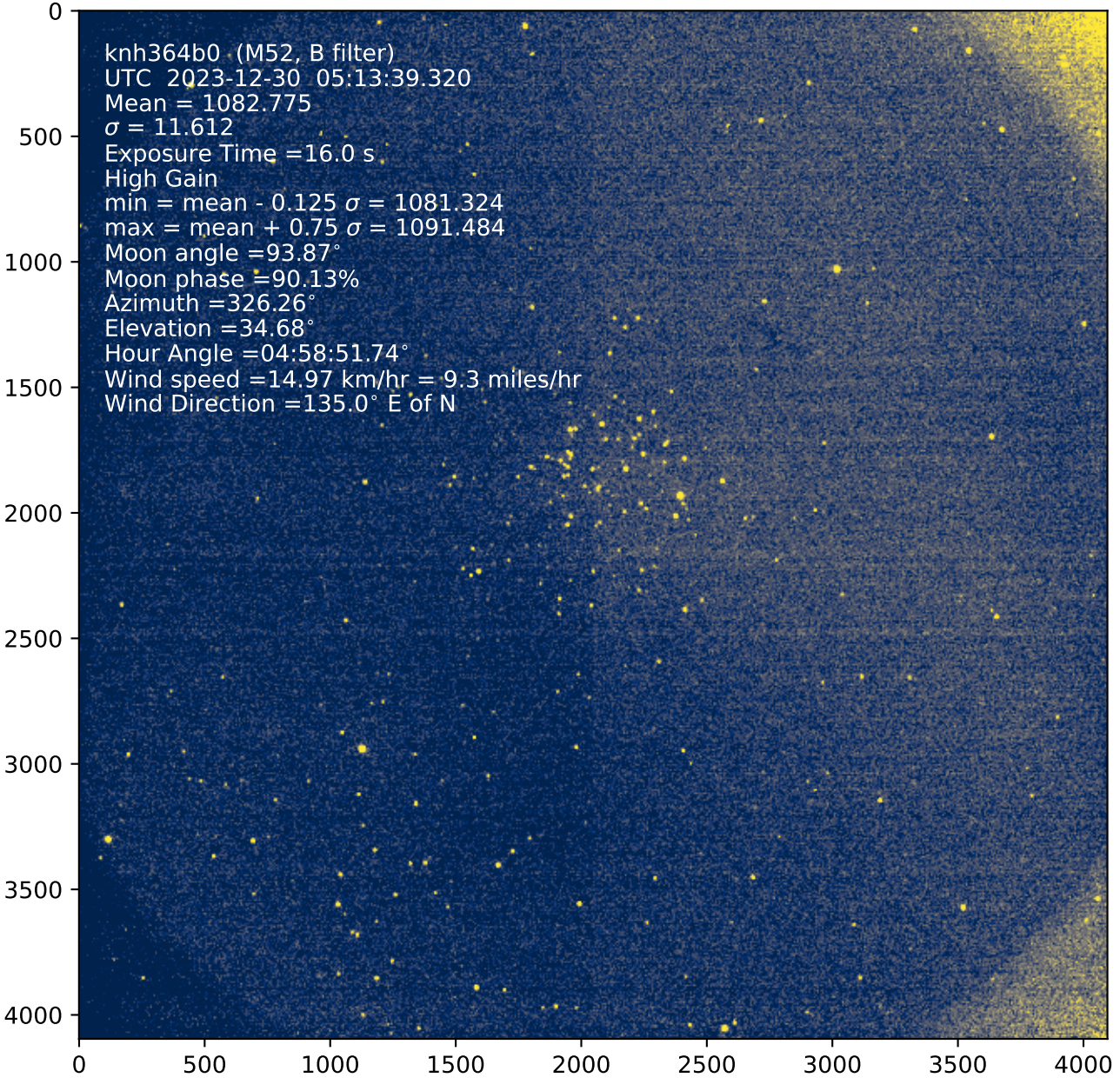
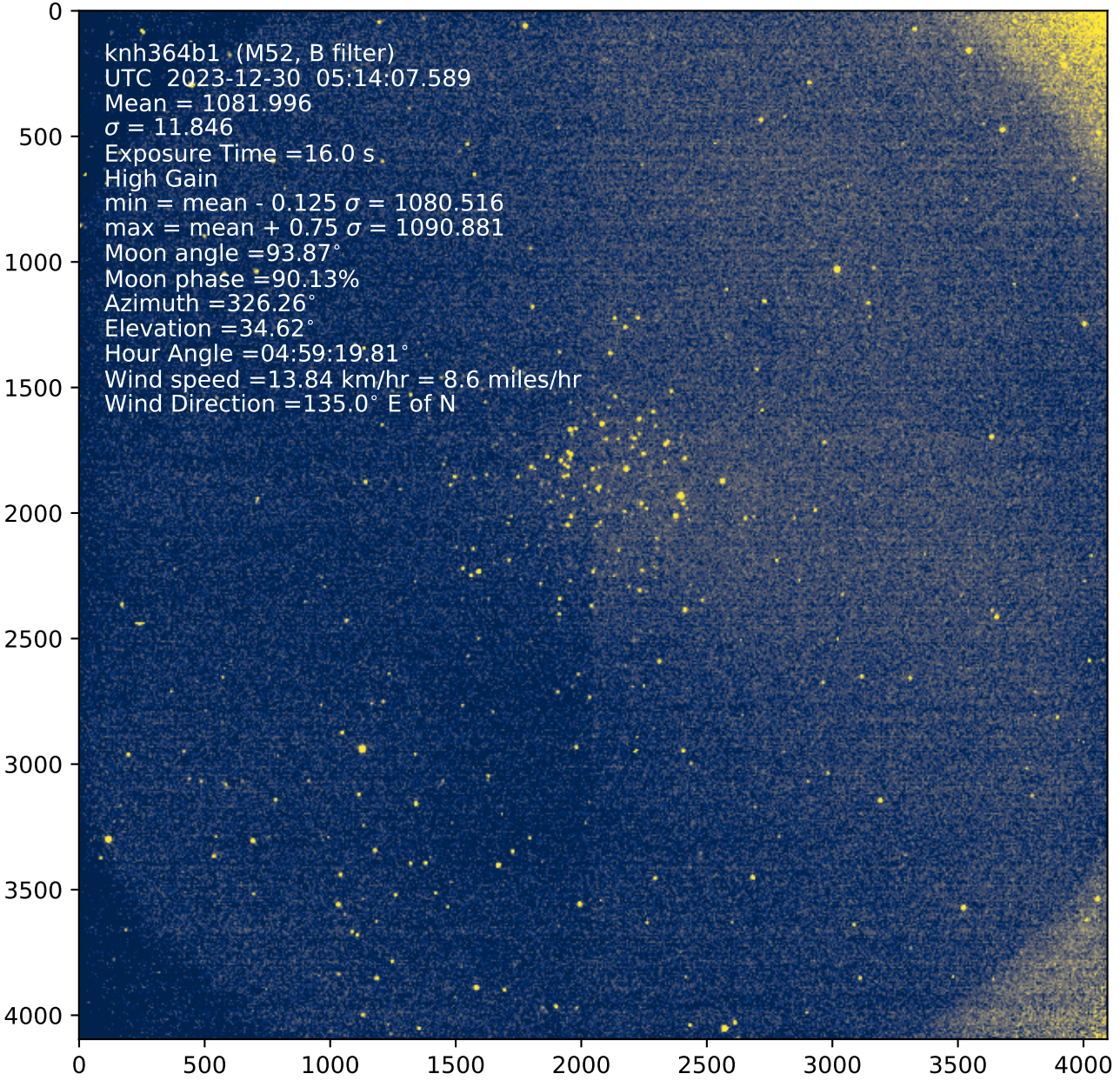

knh364ac (M52, B filter)
UTC 2023-12-30 05:11:45.679
Mean = 1074.925
σ = 12.652
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1073.343
max = mean + 0.75 σ = 1084.414
Moon angle =93.86°
Moon phase =90.14%
Azimuth =326.24°
Elevation =34.9°
Hour Angle =04:56:57.42°
Wind speed =13.52 km/hr = 8.4 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh364ad (M52, B filter)
UTC 2023-12-30 05:12:13.910
Mean = 1077.276
σ = 12.337
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1075.734
max = mean + 0.75 σ = 1086.528
Moon angle =93.86°
Moon phase =90.14%
Azimuth =326.24°
Elevation =34.85°
Hour Angle =04:57:25.50°
Wind speed =14.32 km/hr = 8.9 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh364ae (M52, B filter)
UTC 2023-12-30 05:12:42.429
Mean = 1079.508
σ = 12.234
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1077.979
max = mean + 0.75 σ = 1088.683
Moon angle =93.86°
Moon phase =90.14%
Azimuth =326.25°
Elevation =34.79°
Hour Angle =04:57:54.58°
Wind speed =14.32 km/hr = 8.9 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh364af (M52, B filter)
UTC 2023-12-30 05:13:11.199
Mean = 1080.792
σ = 12.047
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1079.286
max = mean + 0.75 σ = 1089.827
Moon angle =93.87°
Moon phase =90.14%
Azimuth =326.25°
Elevation =34.73°
Hour Angle =04:58:22.66°
Wind speed =14.97 km/hr = 9.3 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh364b0 (M52, B filter)
UTC 2023-12-30 05:13:39.320
Mean = 1082.775
σ = 11.612
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1081.324
max = mean + 0.75 σ = 1091.484
Moon angle =93.87°
Moon phase =90.13%
Azimuth =326.26°
Elevation =34.68°
Hour Angle =04:58:51.74°
Wind speed =14.97 km/hr = 9.3 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh364b1 (M52, B filter)
UTC 2023-12-30 05:14:07.589
Mean = 1081.996
σ = 11.846
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1080.516
max = mean + 0.75 σ = 1090.881
Moon angle =93.87°
Moon phase =90.13%
Azimuth =326.26°
Elevation =34.62°
Hour Angle =04:59:19.81°
Wind speed =13.84 km/hr = 8.6 miles/hr
Wind Direction =135.0° E of N
0
500
1000
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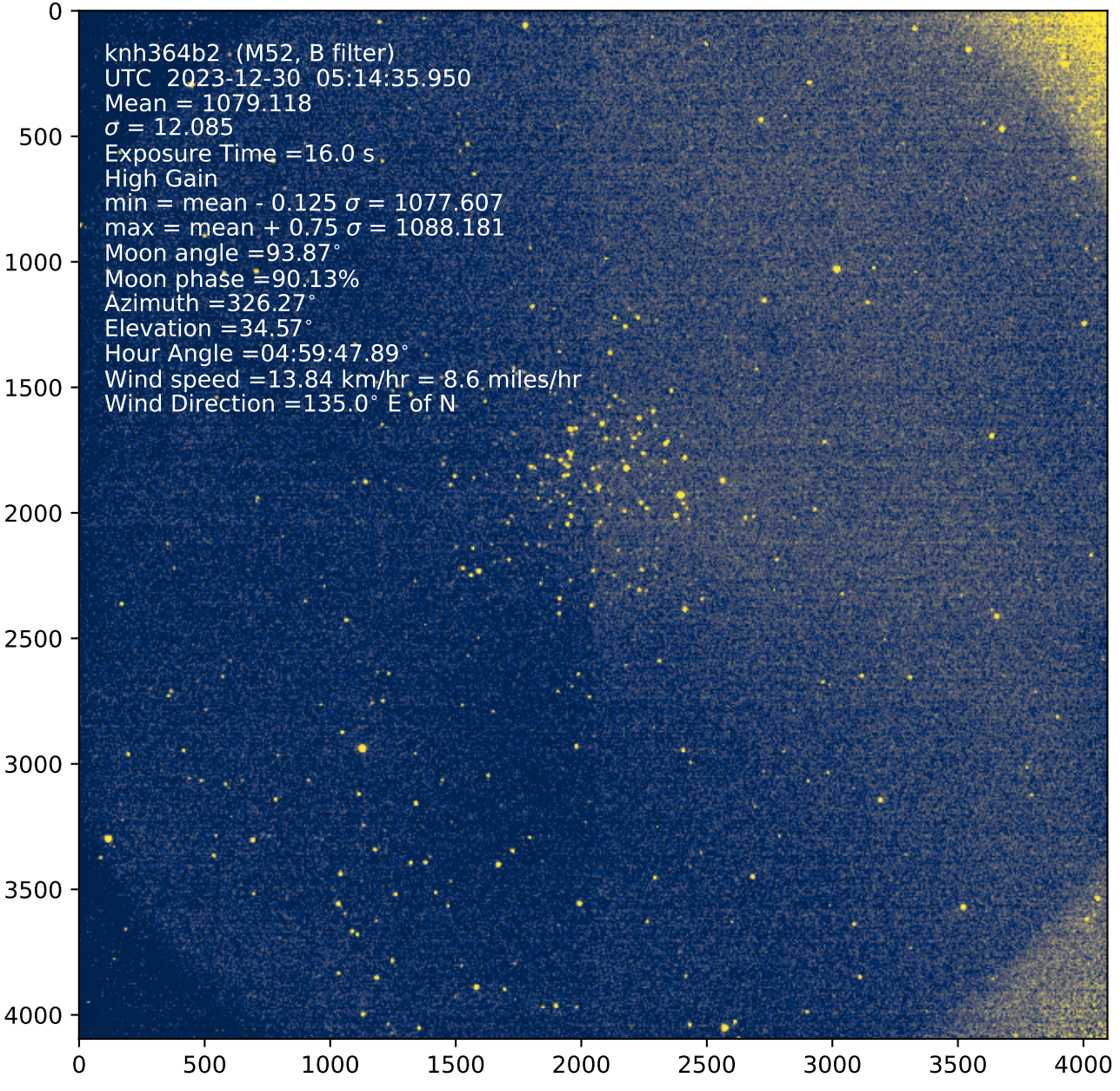
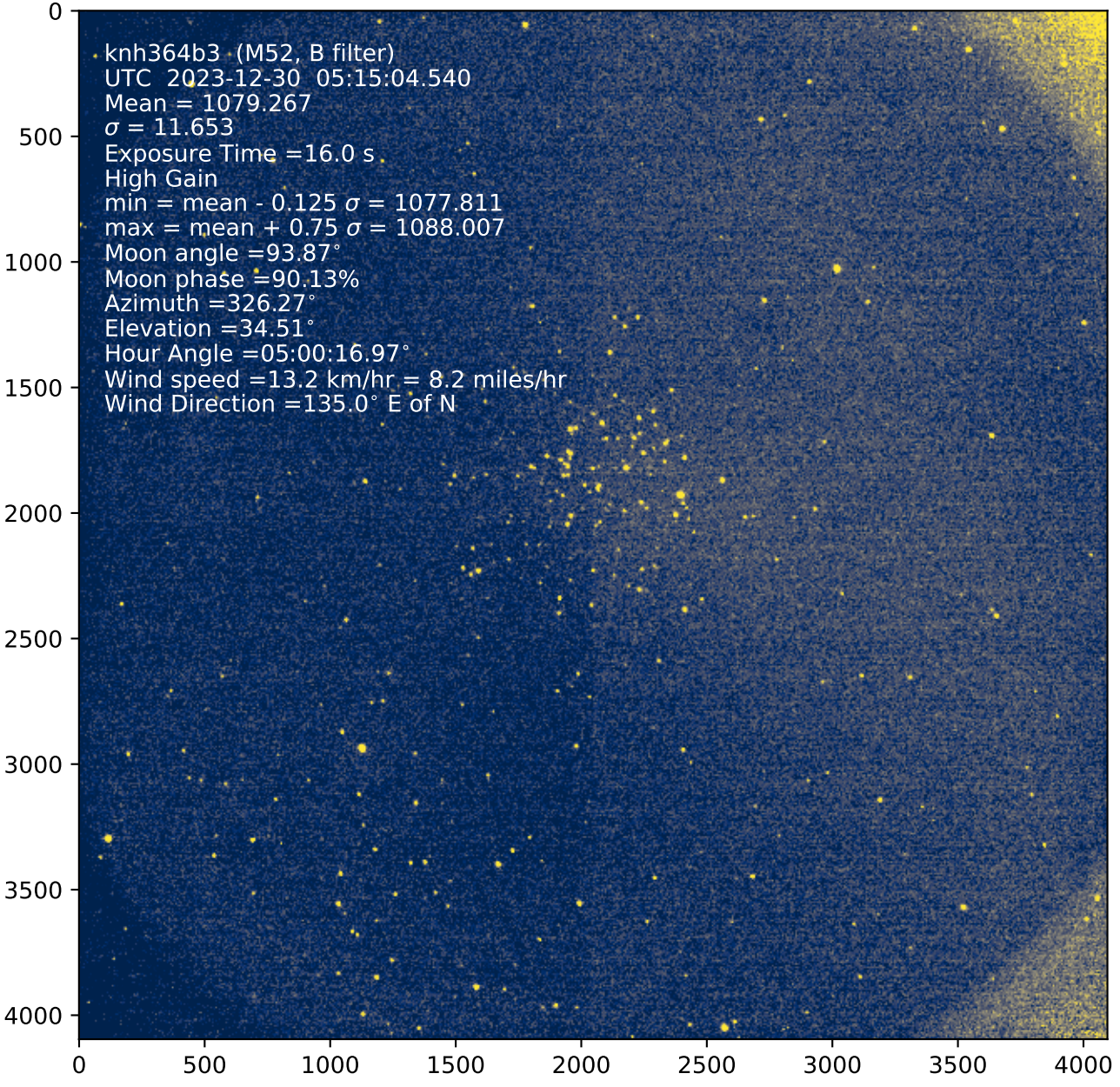
2000
2500
3000
3500
4000


knh364b2 (M52, B filter)
UTC 2023-12-30 05:14:35.950
Mean = 1079.118
σ = 12.085
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1077.607
max = mean + 0.75 σ = 1088.181
Moon angle =93.87°
Moon phase =90.13%
Azimuth =326.27°
Elevation =34.57°
Hour Angle =04:59:47.89°
Wind speed =13.84 km/hr = 8.6 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh364b3 (M52, B filter)
UTC 2023-12-30 05:15:04.540
Mean = 1079.267
σ = 11.653
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1077.811
max = mean + 0.75 σ = 1088.007
Moon angle =93.87°
Moon phase =90.13%
Azimuth =326.27°
Elevation =34.51°
Hour Angle =05:00:16.97°
Wind speed =13.2 km/hr = 8.2 miles/hr
Wind Direction =135.0° E of N
0
500
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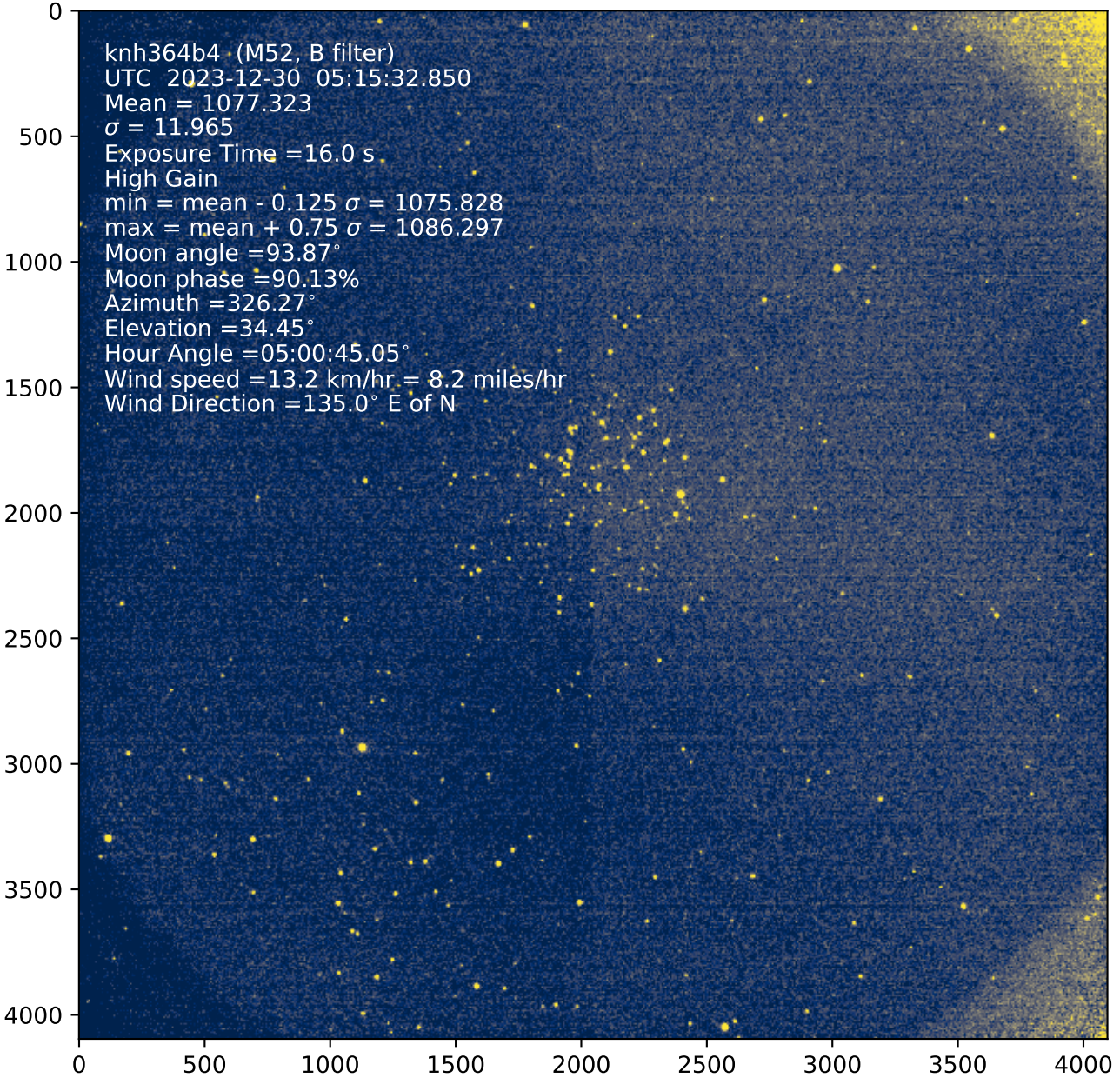
1500
2000
2500
3000
3500
4000


knh364b4 (M52, B filter)
UTC 2023-12-30 05:15:32.850
Mean = 1077.323
σ = 11.965
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1075.828
max = mean + 0.75 σ = 1086.297
Moon angle =93.87°
Moon phase =90.13%
Azimuth =326.27°
Elevation =34.45°
Hour Angle =05:00:45.05°
Wind speed =13.2 km/hr = 8.2 miles/hr
Wind Direction =135.0° E of N
0
500
1000
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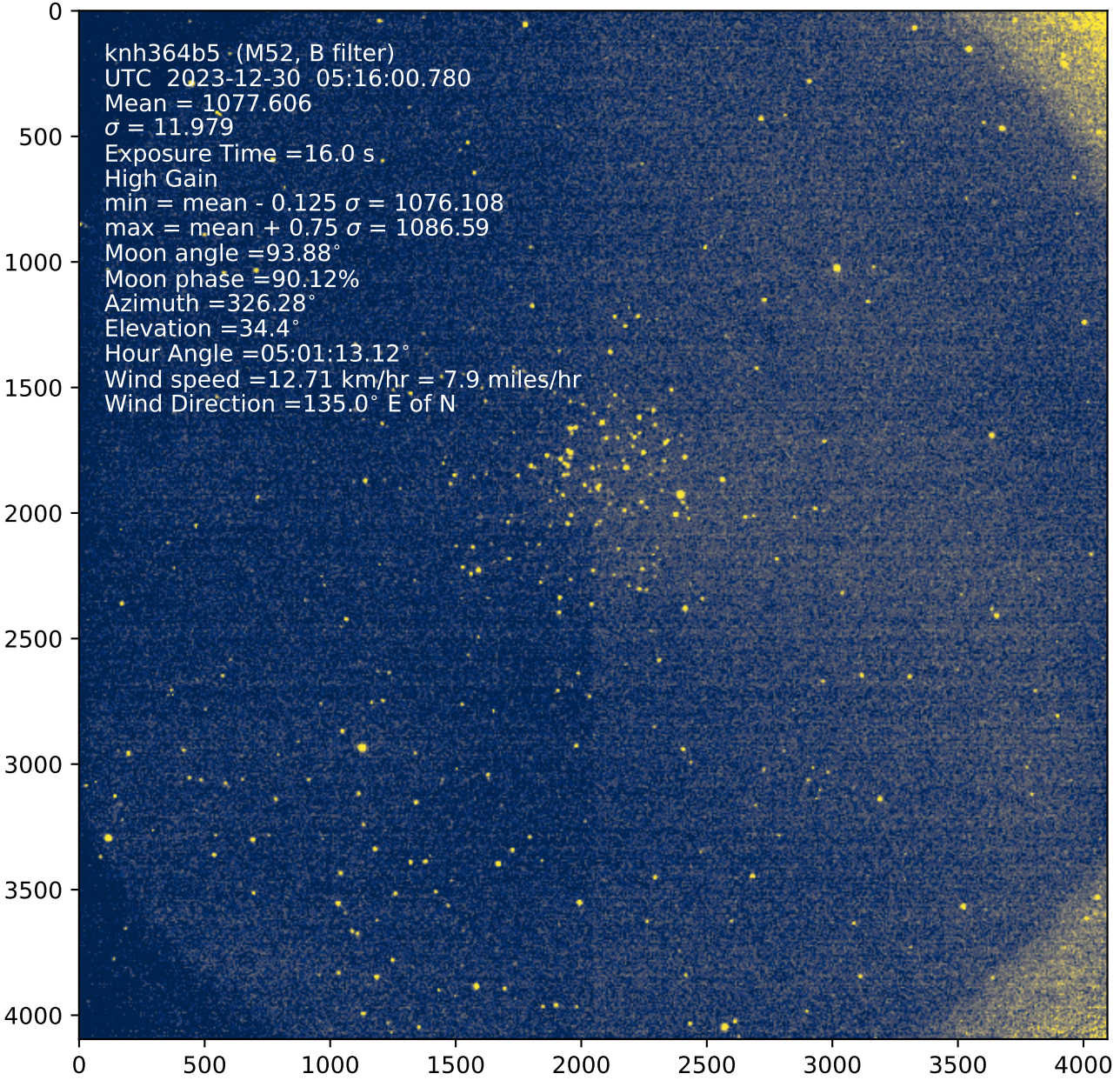
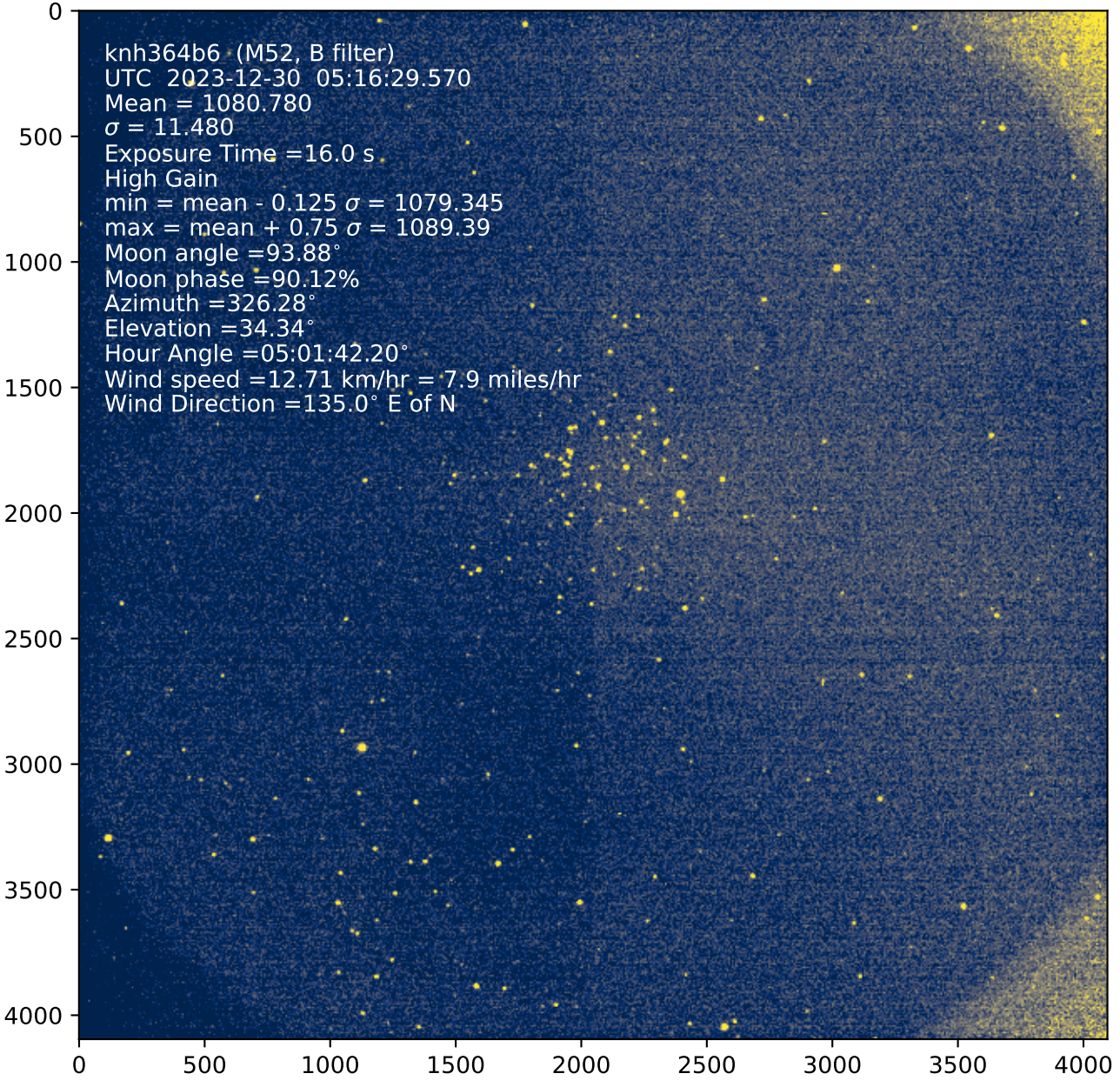
2000
2500
3000
3500
4000


knh364b5 (M52, B filter)
UTC 2023-12-30 05:16:00.780
Mean = 1077.606
σ = 11.979
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1076.108
max = mean + 0.75 σ = 1086.59
Moon angle =93.88°
Moon phase =90.12%
Azimuth =326.28°
Elevation =34.4°
Hour Angle =05:01:13.12°
Wind speed =12.71 km/hr = 7.9 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh364b6 (M52, B filter)
UTC 2023-12-30 05:16:29.570
Mean = 1080.780
σ = 11.480
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1079.345
max = mean + 0.75 σ = 1089.39
Moon angle =93.88°
Moon phase =90.12%
Azimuth =326.28°
Elevation =34.34°
Hour Angle =05:01:42.20°
Wind speed =12.71 km/hr = 7.9 miles/hr
Wind Direction =135.0° E of N
0
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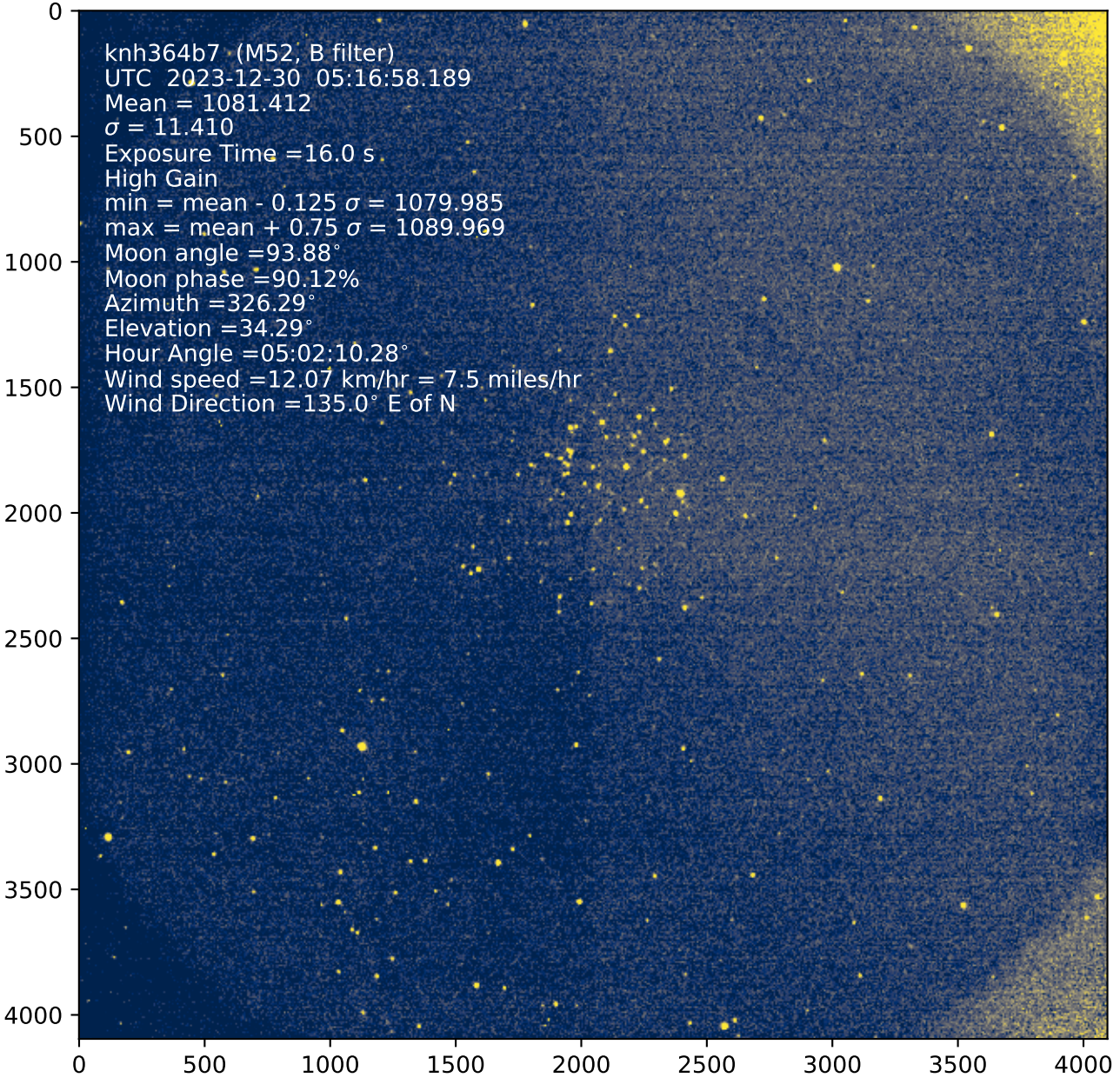
2500
3000
3500
4000


knh364b7 (M52, B filter)
UTC 2023-12-30 05:16:58.189
Mean = 1081.412
σ = 11.410
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1079.985
max = mean + 0.75 σ = 1089.969
Moon angle =93.88°
Moon phase =90.12%
Azimuth =326.29°
Elevation =34.29°
Hour Angle =05:02:10.28°
Wind speed =12.07 km/hr = 7.5 miles/hr
Wind Direction =135.0° E of N
0
500
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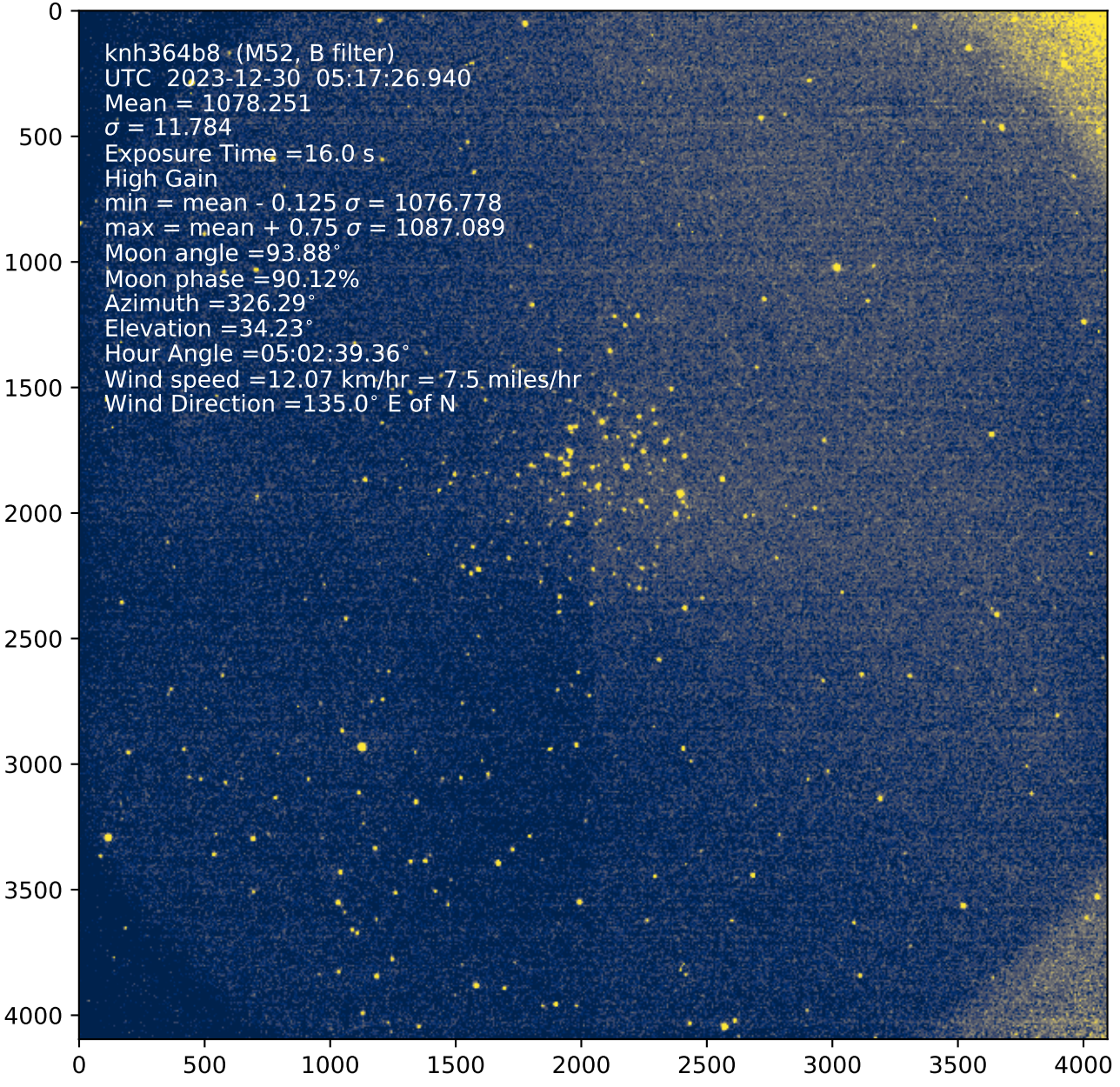
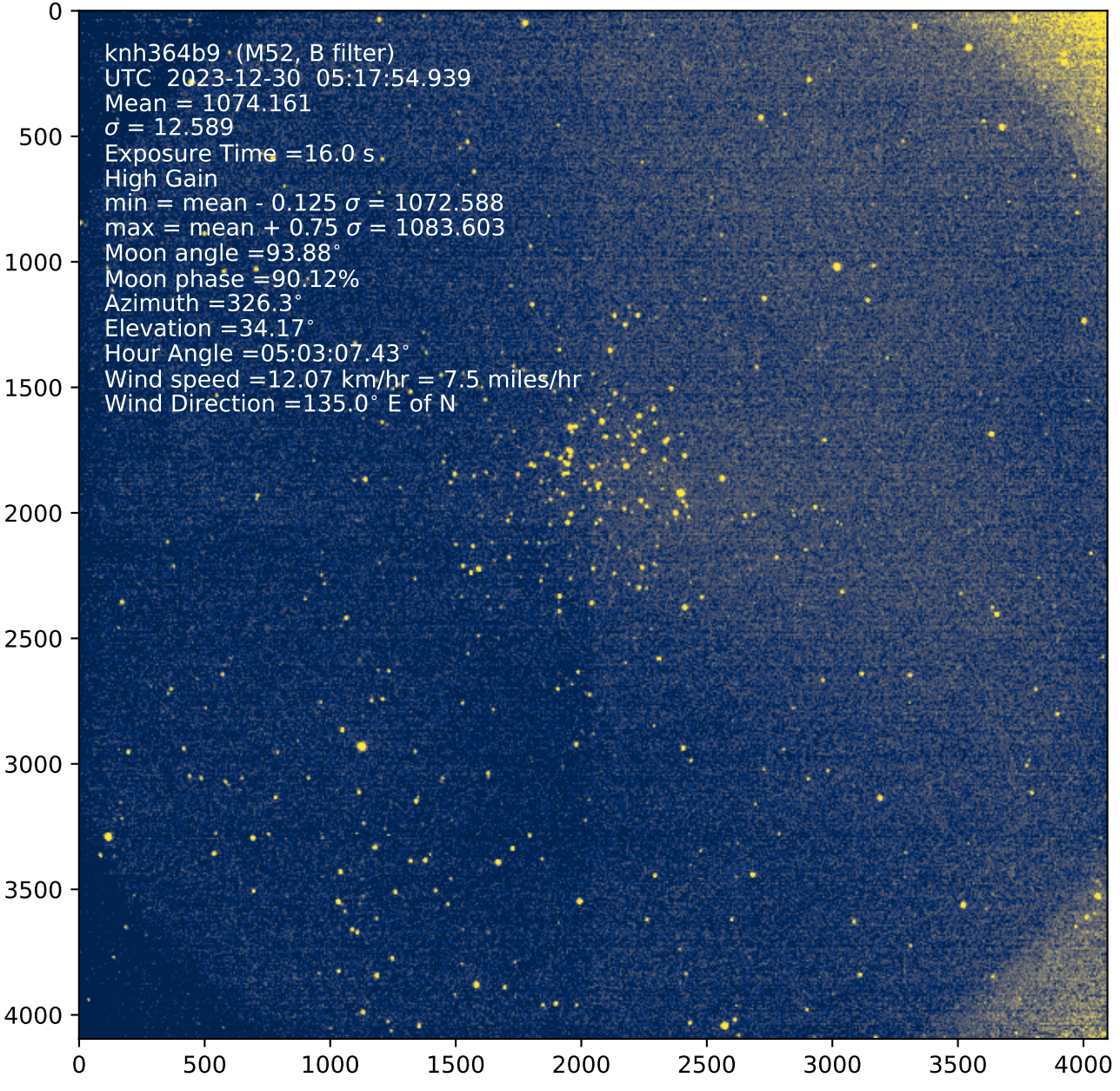
1500
2000
2500
3000
3500
4000


knh364b8 (M52, B filter)
UTC 2023-12-30 05:17:26.940
Mean = 1078.251
σ = 11.784
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1076.778
max = mean + 0.75 σ = 1087.089
Moon angle =93.88°
Moon phase =90.12%
Azimuth =326.29°
Elevation =34.23°
Hour Angle =05:02:39.36°
Wind speed =12.07 km/hr = 7.5 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh364b9 (M52, B filter)
UTC 2023-12-30 05:17:54.939
Mean = 1074.161
σ = 12.589
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1072.588
max = mean + 0.75 σ = 1083.603
Moon angle =93.88°
Moon phase =90.12%
Azimuth =326.3°
Elevation =34.17°
Hour Angle =05:03:07.43°
Wind speed =12.07 km/hr = 7.5 miles/hr
Wind Direction =135.0° E of N
0
500
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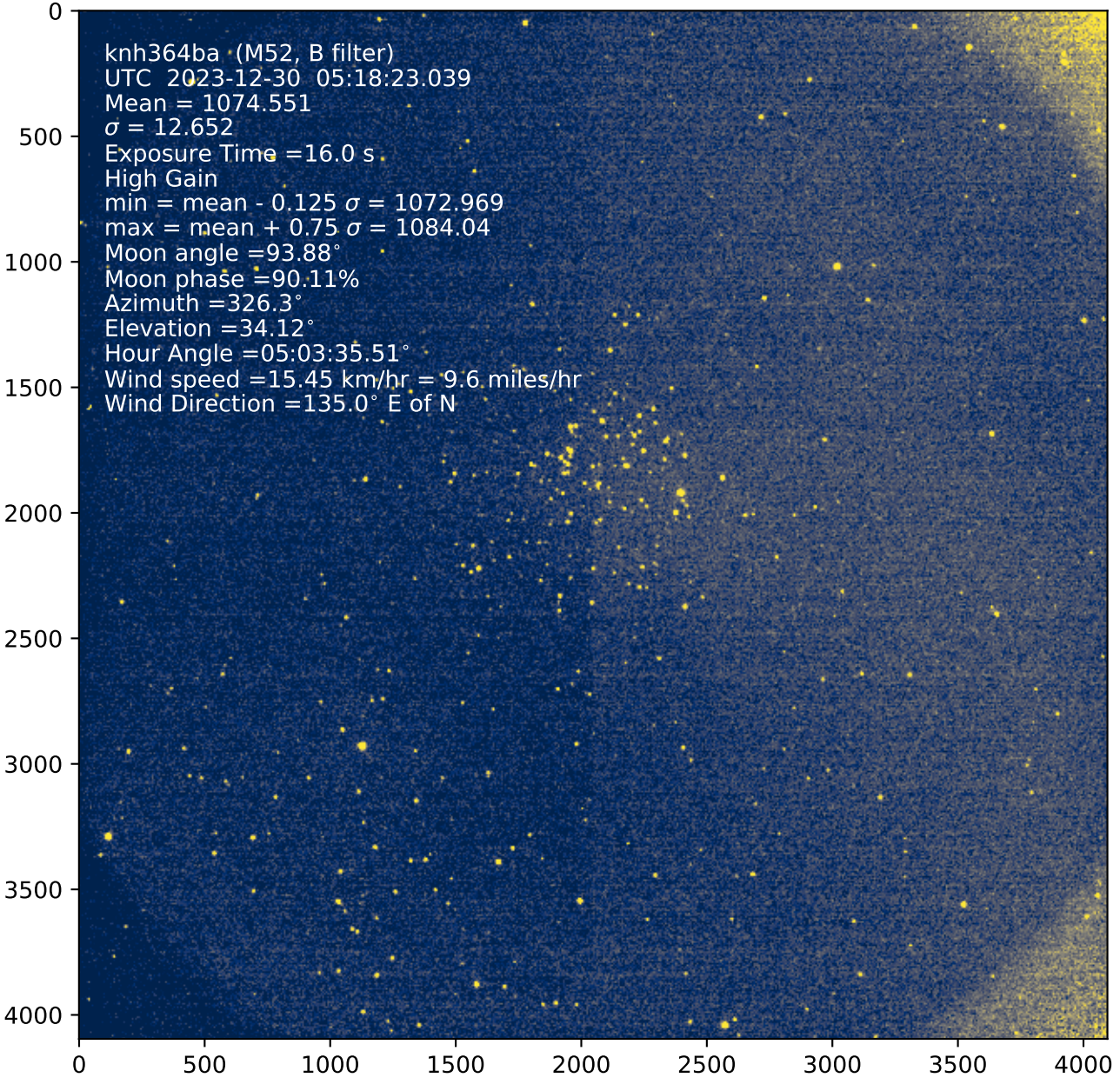
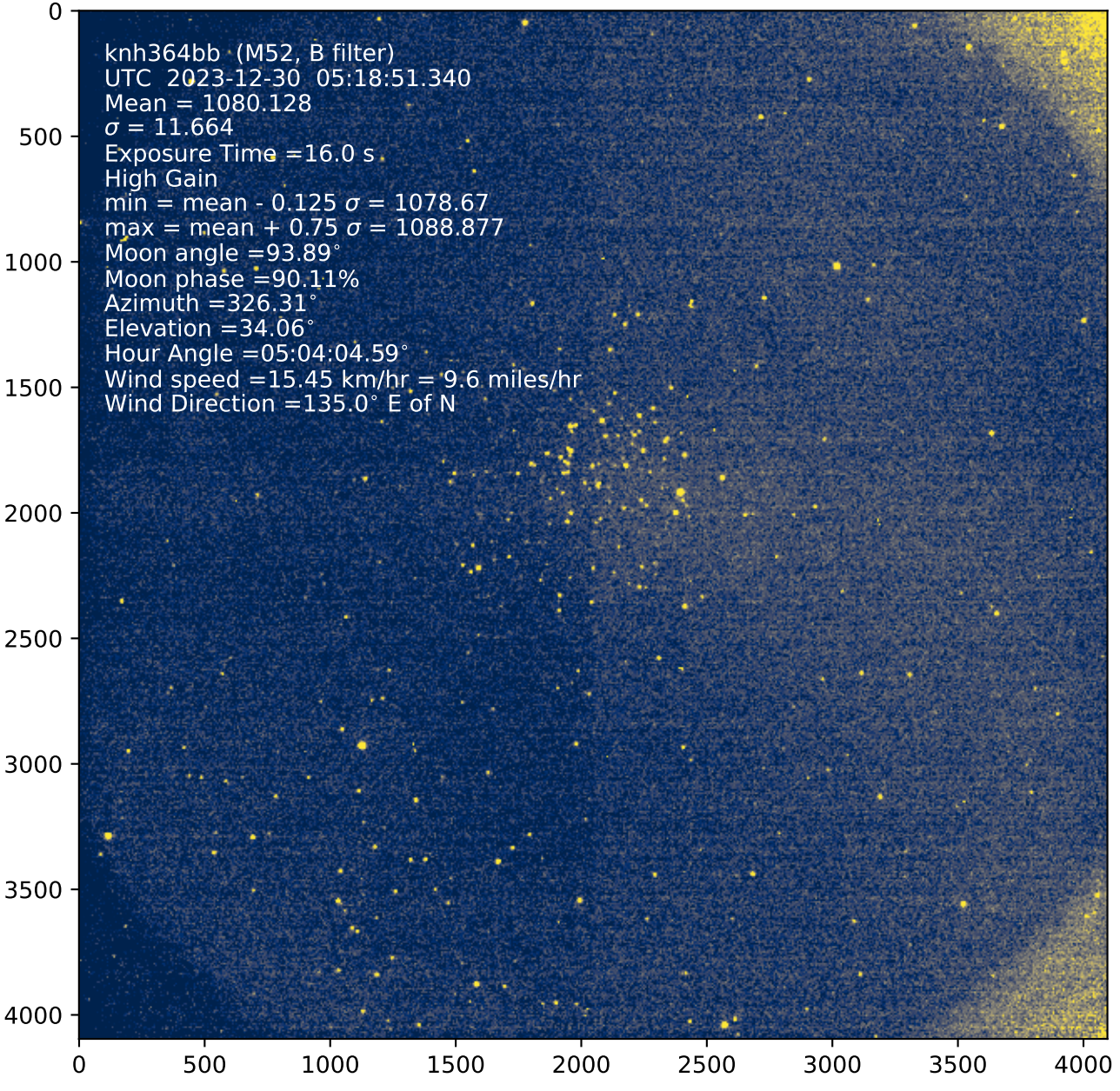
1500
2000
2500
3000
3500
4000


knh364ba (M52, B filter)
UTC 2023-12-30 05:18:23.039
Mean = 1074.551
σ = 12.652
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1072.969
max = mean + 0.75 σ = 1084.04
Moon angle =93.88°
Moon phase =90.11%
Azimuth =326.3°
Elevation =34.12°
Hour Angle =05:03:35.51°
Wind speed =15.45 km/hr = 9.6 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh364bb (M52, B filter)
UTC 2023-12-30 05:18:51.340
Mean = 1080.128
σ = 11.664
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1078.67
max = mean + 0.75 σ = 1088.877
Moon angle =93.89°
Moon phase =90.11%
Azimuth =326.31°
Elevation =34.06°
Hour Angle =05:04:04.59°
Wind speed =15.45 km/hr = 9.6 miles/hr
Wind Direction =135.0° E of N
0
500
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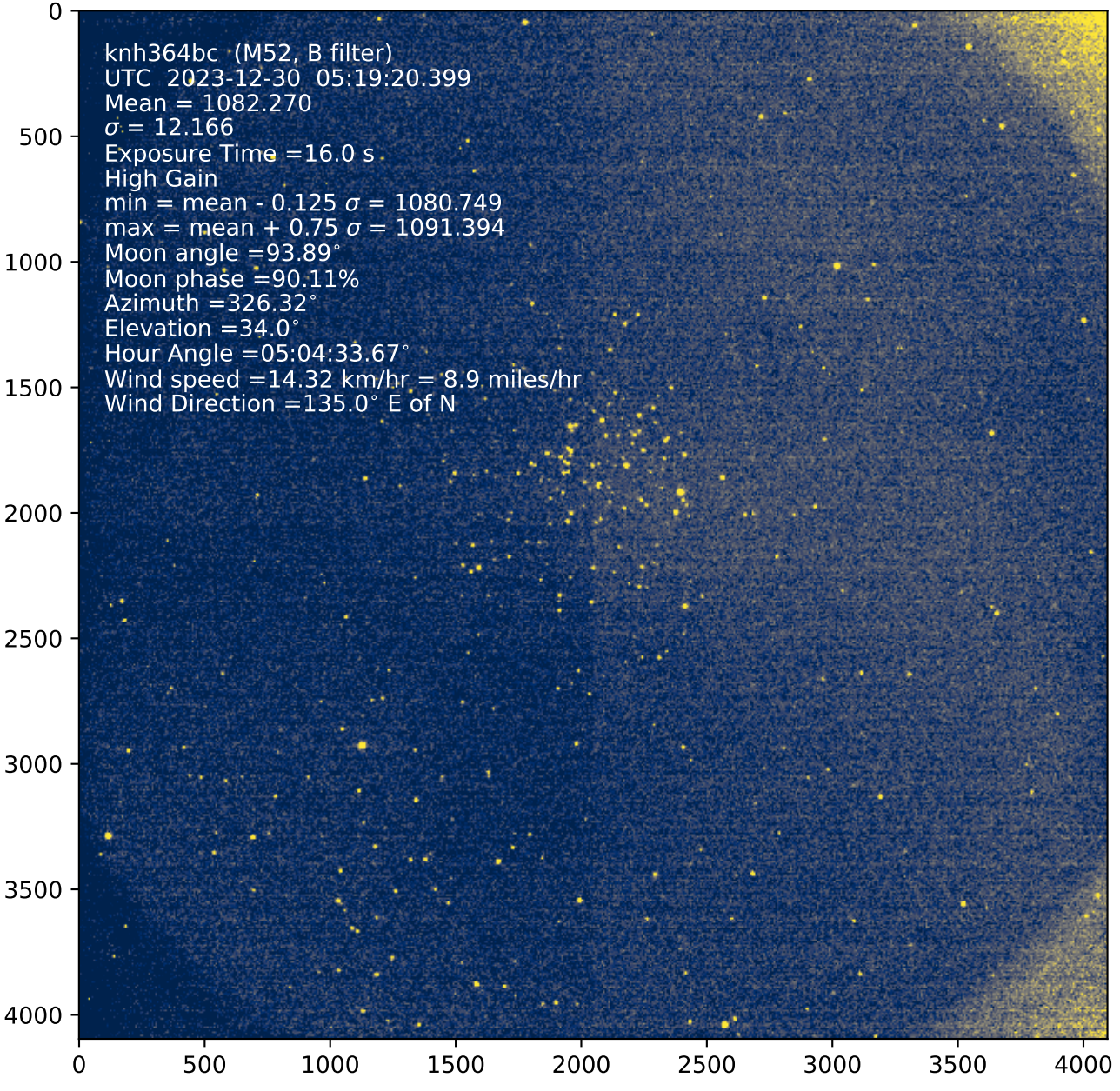
1500
2000
2500
3000
3500
4000


knh364bc (M52, B filter)
UTC 2023-12-30 05:19:20.399
Mean = 1082.270
σ = 12.166
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1080.749
max = mean + 0.75 σ = 1091.394
Moon angle =93.89°
Moon phase =90.11%
Azimuth =326.32°
Elevation =34.0°
Hour Angle =05:04:33.67°
Wind speed =14.32 km/hr = 8.9 miles/hr
Wind Direction =135.0° E of N
0
500
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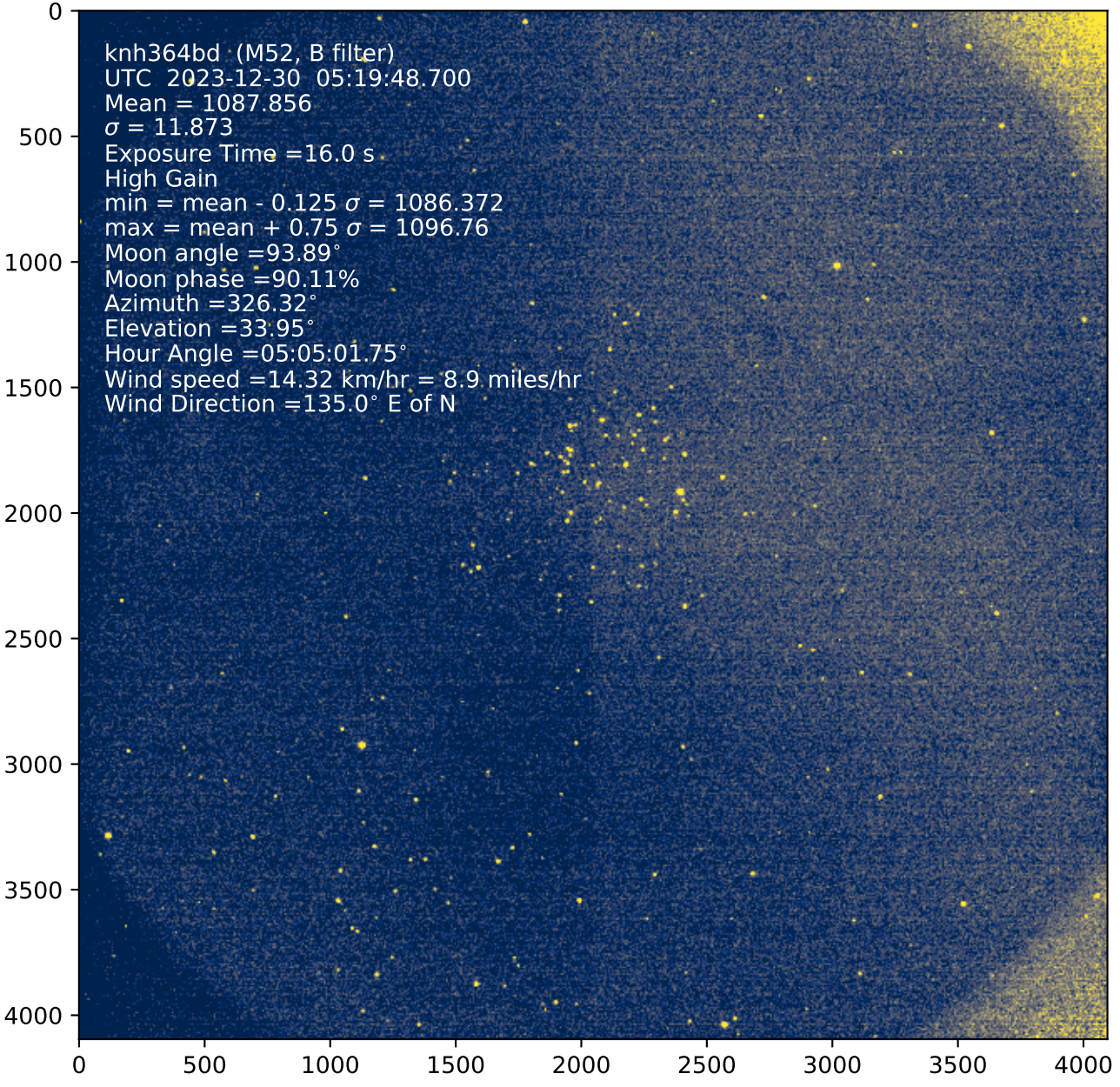
3000
3500
4000


knh364bd (M52, B filter)
UTC 2023-12-30 05:19:48.700
Mean = 1087.856
σ = 11.873
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1086.372
max = mean + 0.75 σ = 1096.76
Moon angle =93.89°
Moon phase =90.11%
Azimuth =326.32°
Elevation =33.95°
Hour Angle =05:05:01.75°
Wind speed =14.32 km/hr = 8.9 miles/hr
Wind Direction =135.0° E of N
0
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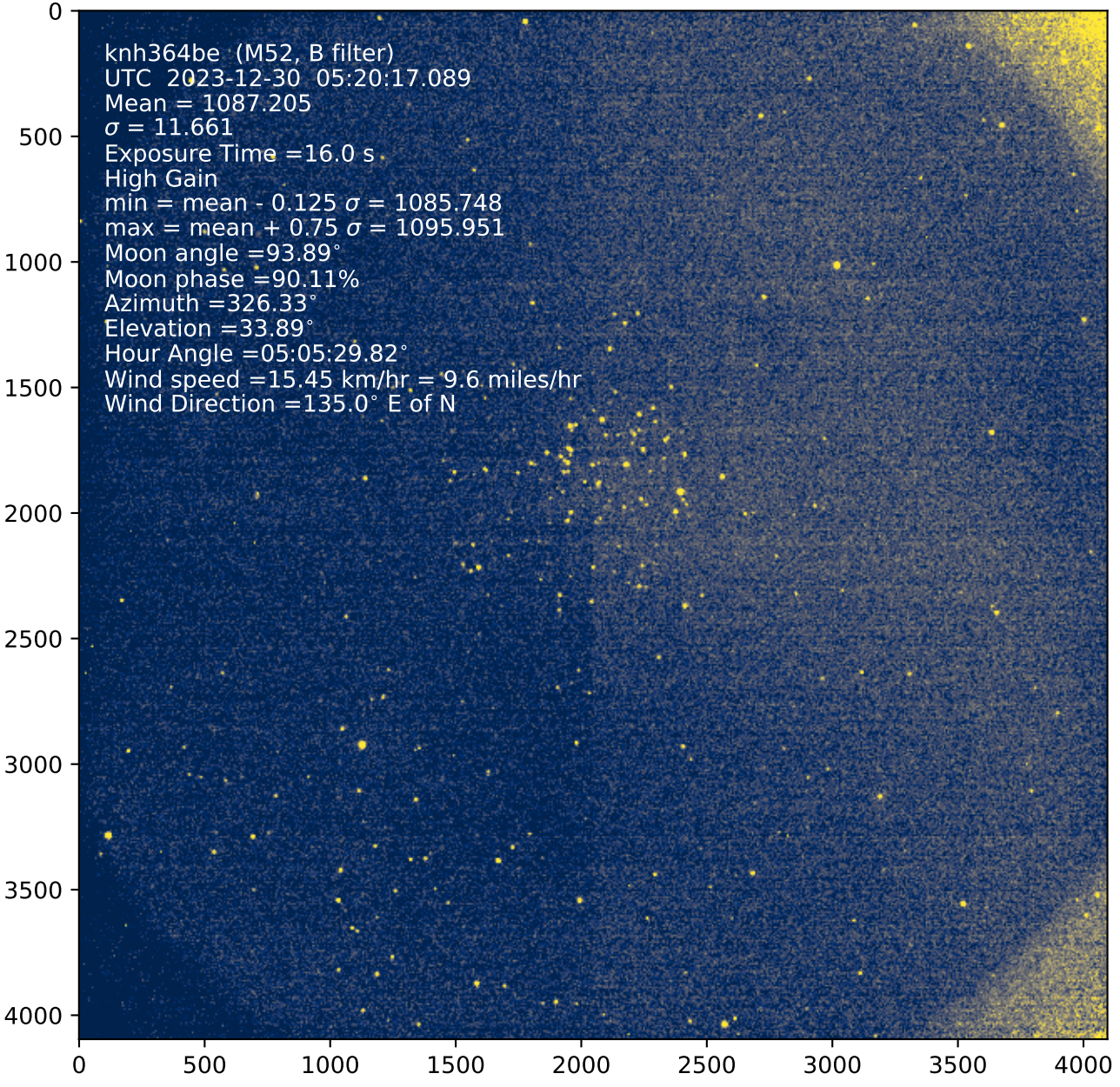
knh364be (M52, B filter)
UTC 2023-12-30 05:20:17.089
Mean = 1087.205
σ = 11.661
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1085.748
max = mean + 0.75 σ = 1095.951
Moon angle =93.89°
Moon phase =90.11%
Azimuth =326.33°
Elevation =33.89°
Hour Angle =05:05:29.82°
Wind speed =15.45 km/hr = 9.6 miles/hr
Wind Direction =135.0° E of N
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2500
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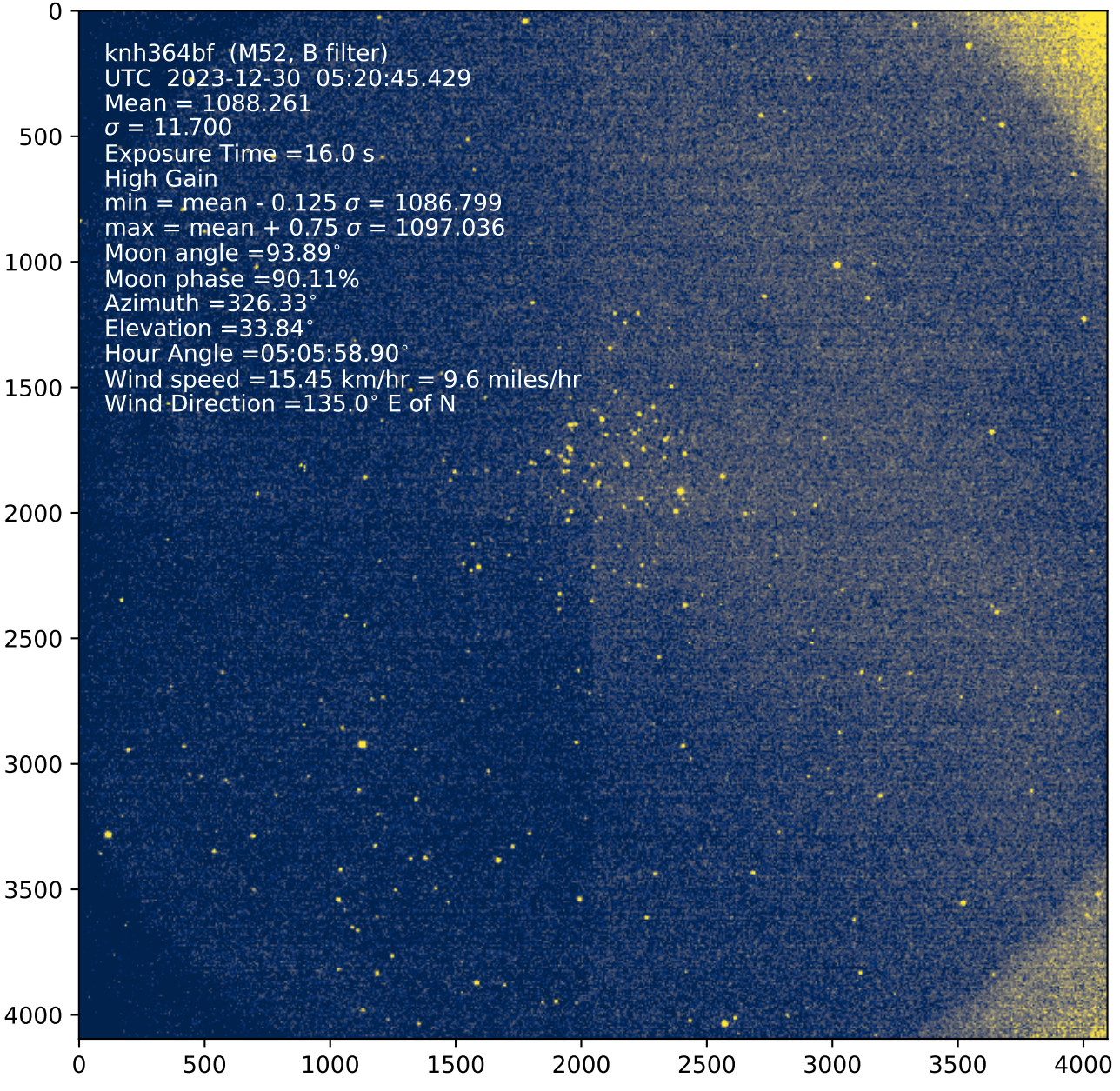
4000


knh364bf (M52, B filter)
UTC 2023-12-30 05:20:45.429
Mean = 1088.261
σ = 11.700
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1086.799
max = mean + 0.75 σ = 1097.036
Moon angle =93.89°
Moon phase =90.11%
Azimuth =326.33°
Elevation =33.84°
Hour Angle =05:05:58.90°
Wind speed =15.45 km/hr = 9.6 miles/hr
Wind Direction =135.0° E of N
0
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2500
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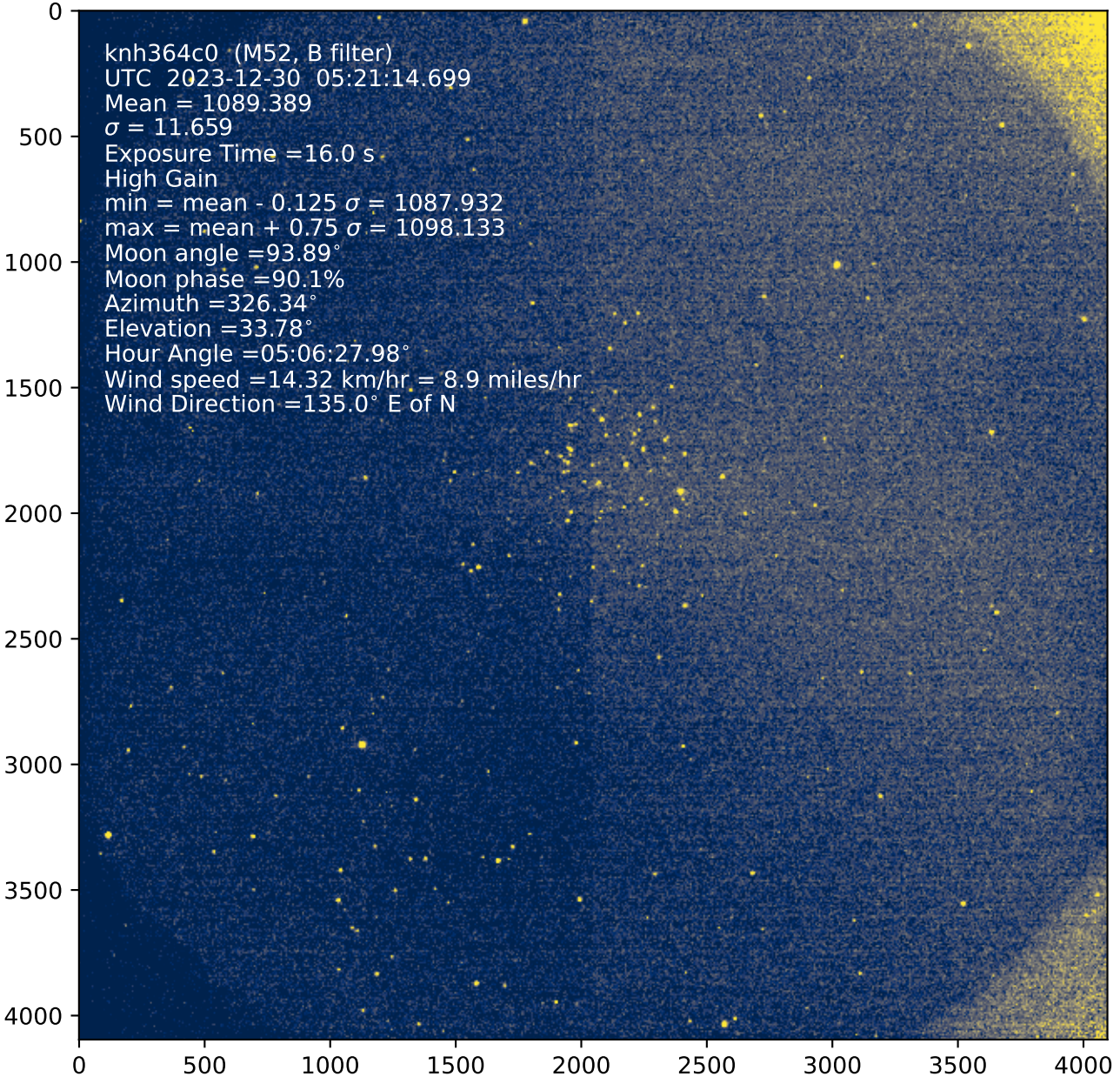
4000


knh364c0 (M52, B filter)
UTC 2023-12-30 05:21:14.699
Mean = 1089.389
σ = 11.659
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1087.932
max = mean + 0.75 σ = 1098.133
Moon angle =93.89°
Moon phase =90.1%
Azimuth =326.34°
Elevation =33.78°
Hour Angle =05:06:27.98°
Wind speed =14.32 km/hr = 8.9 miles/hr
Wind Direction =135.0° E of N
0
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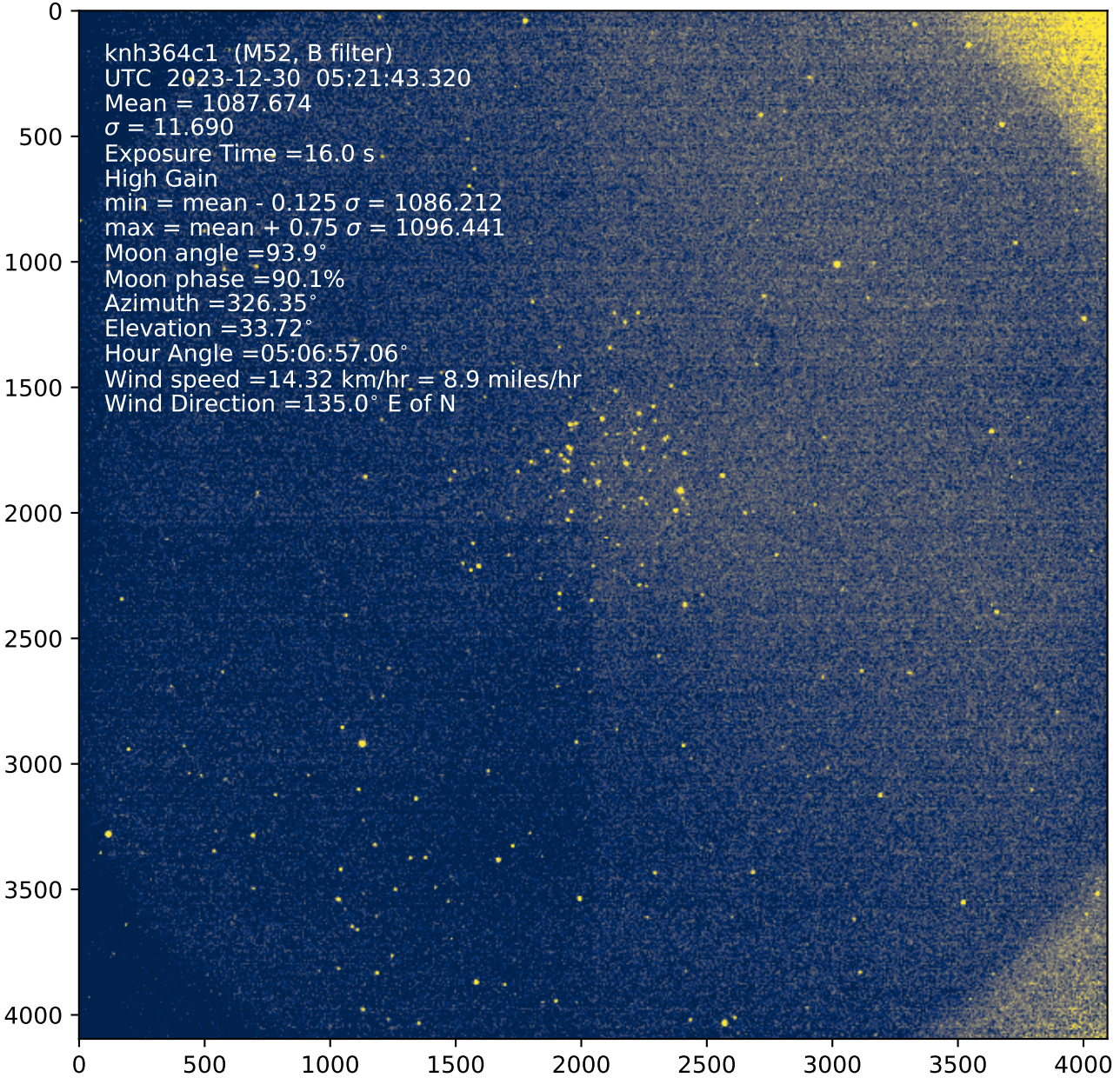
4000


knh364c1 (M52, B filter)
UTC 2023-12-30 05:21:43.320
Mean = 1087.674
σ = 11.690
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1086.212
max = mean + 0.75 σ = 1096.441
Moon angle =93.9°
Moon phase =90.1%
Azimuth =326.35°
Elevation =33.72°
Hour Angle =05:06:57.06°
Wind speed =14.32 km/hr = 8.9 miles/hr
Wind Direction =135.0° E of N
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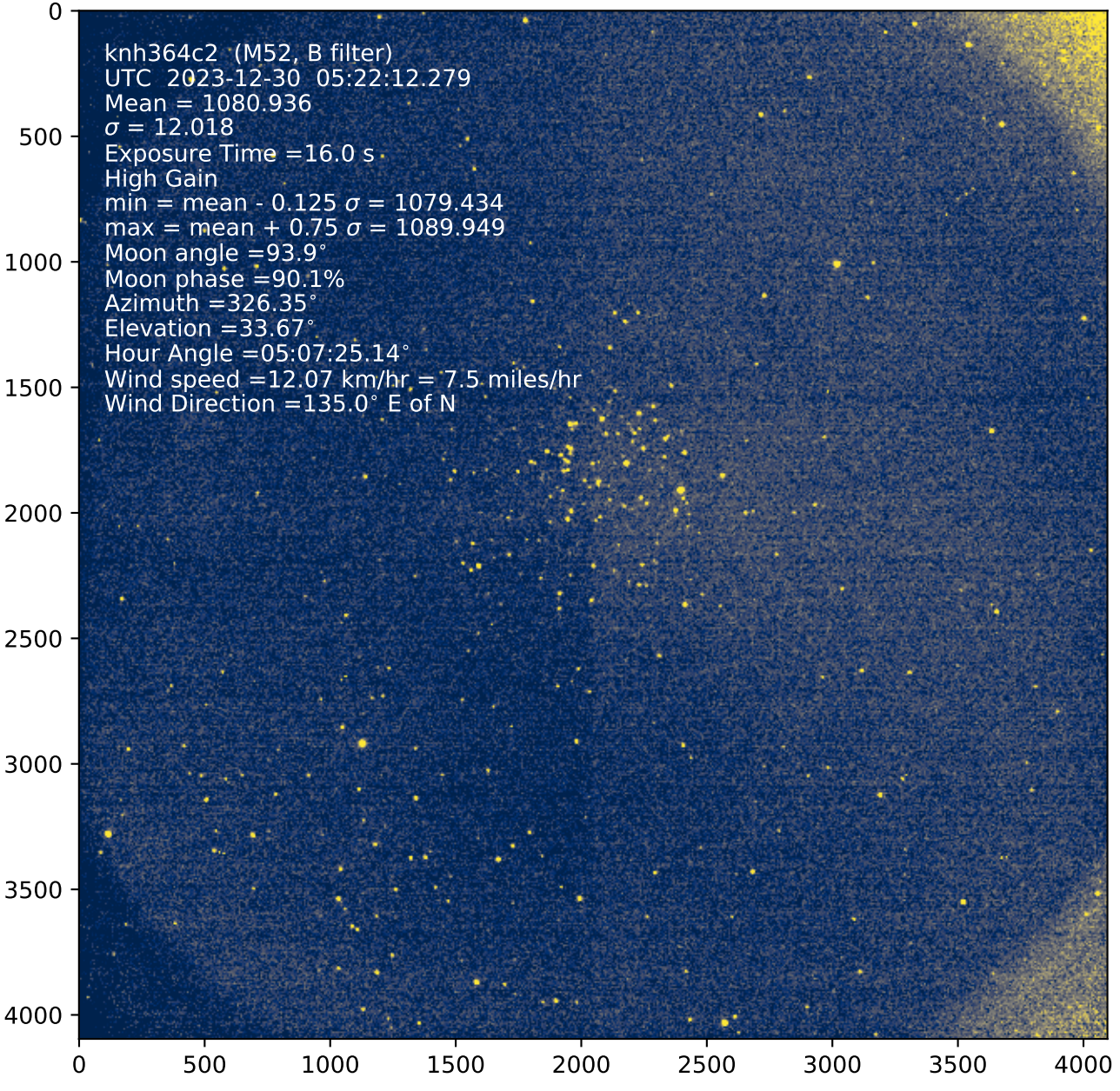
knh364c2 (M52, B filter)
UTC 2023-12-30 05:22:12.279
Mean = 1080.936
σ = 12.018
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1079.434
max = mean + 0.75 σ = 1089.949
Moon angle =93.9°
Moon phase =90.1%
Azimuth =326.35°
Elevation =33.67°
Hour Angle =05:07:25.14°
Wind speed =12.07 km/hr = 7.5 miles/hr
Wind Direction =135.0° E of N
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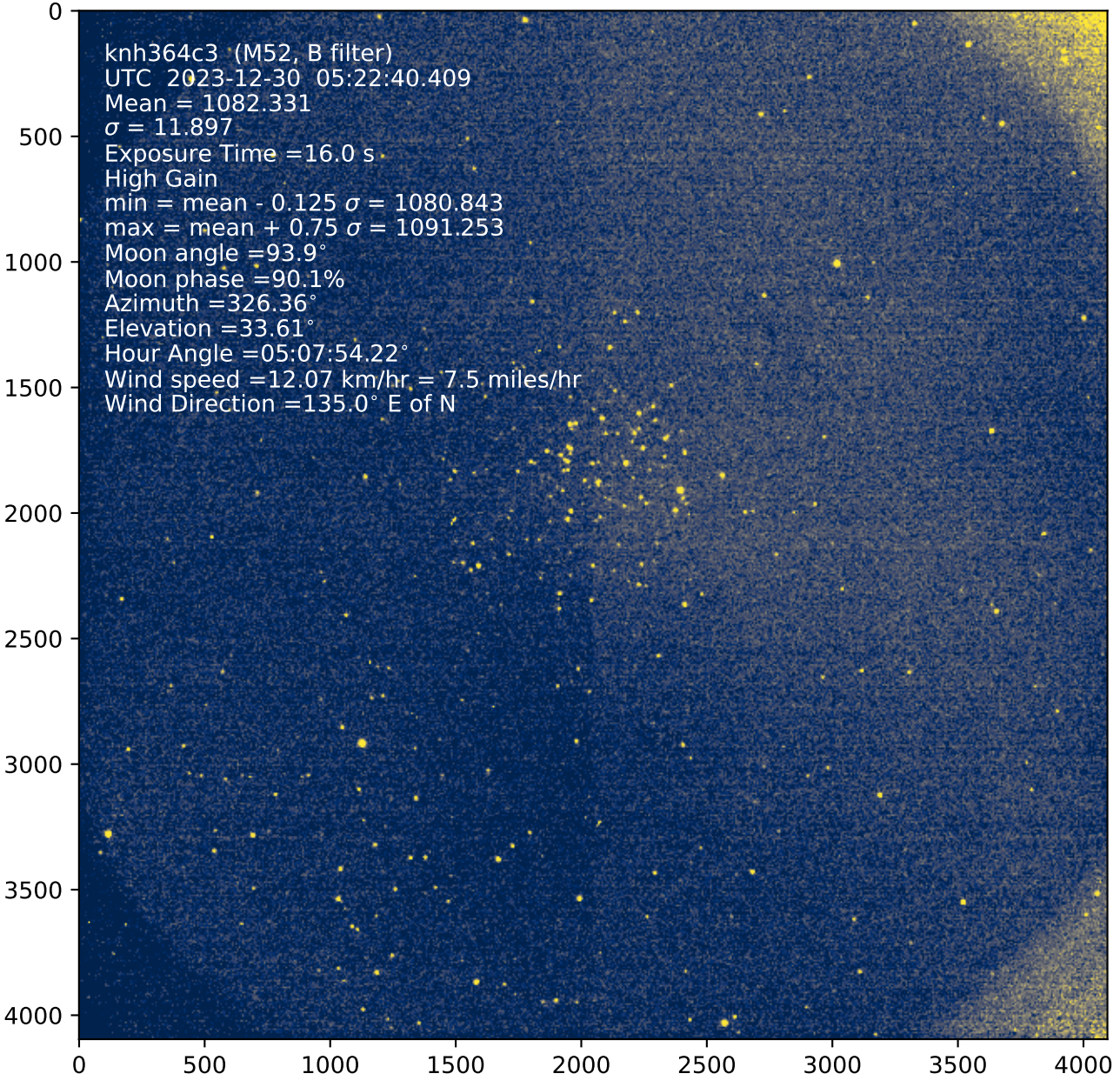
knh364c3 (M52, B filter)
UTC 2023-12-30 05:22:40.409
Mean = 1082.331
σ = 11.897
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1080.843
max = mean + 0.75 σ = 1091.253
Moon angle =93.9°
Moon phase =90.1%
Azimuth =326.36°
Elevation =33.61°
Hour Angle =05:07:54.22°
Wind speed =12.07 km/hr = 7.5 miles/hr
Wind Direction =135.0° E of N
0
500
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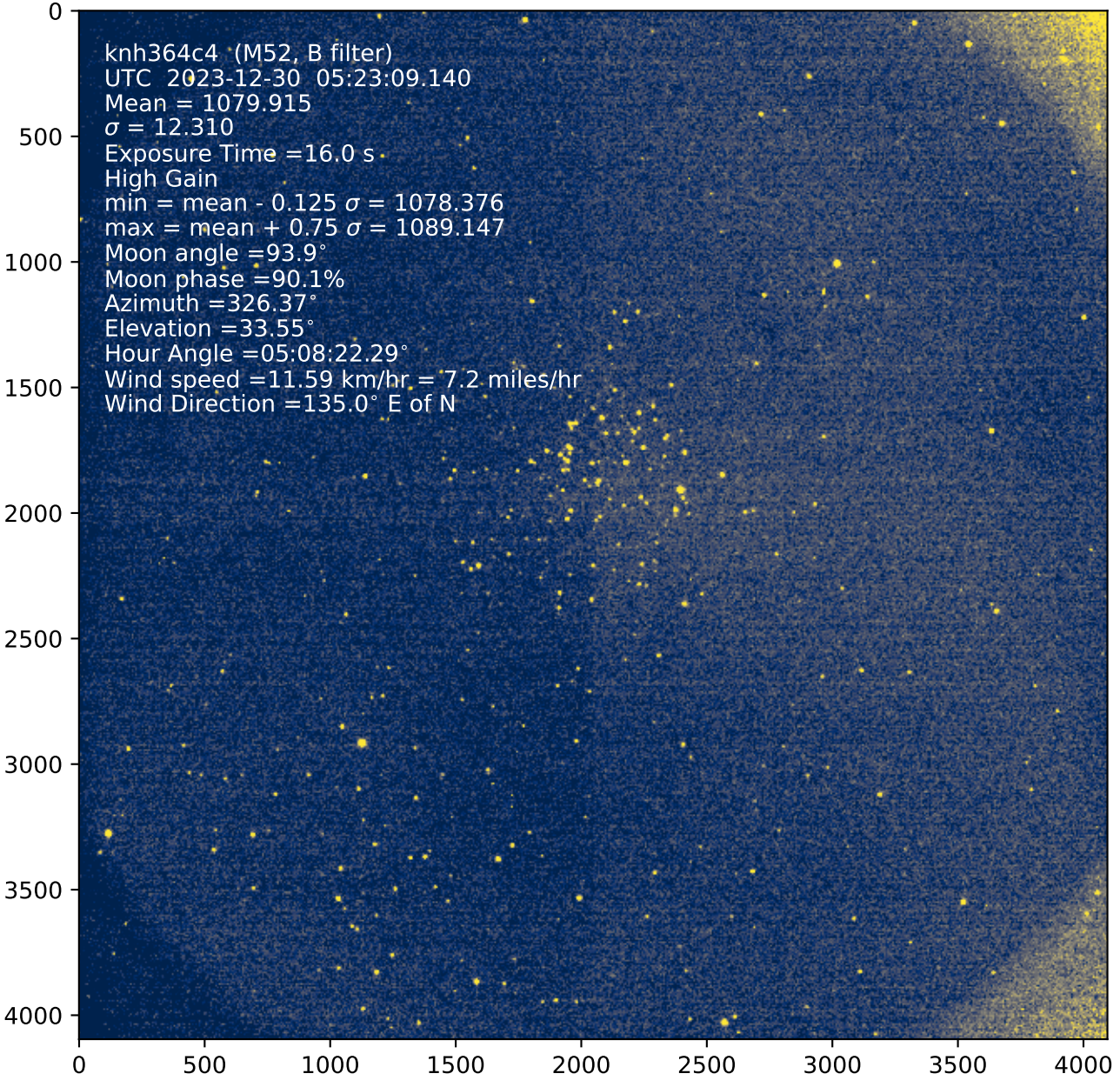
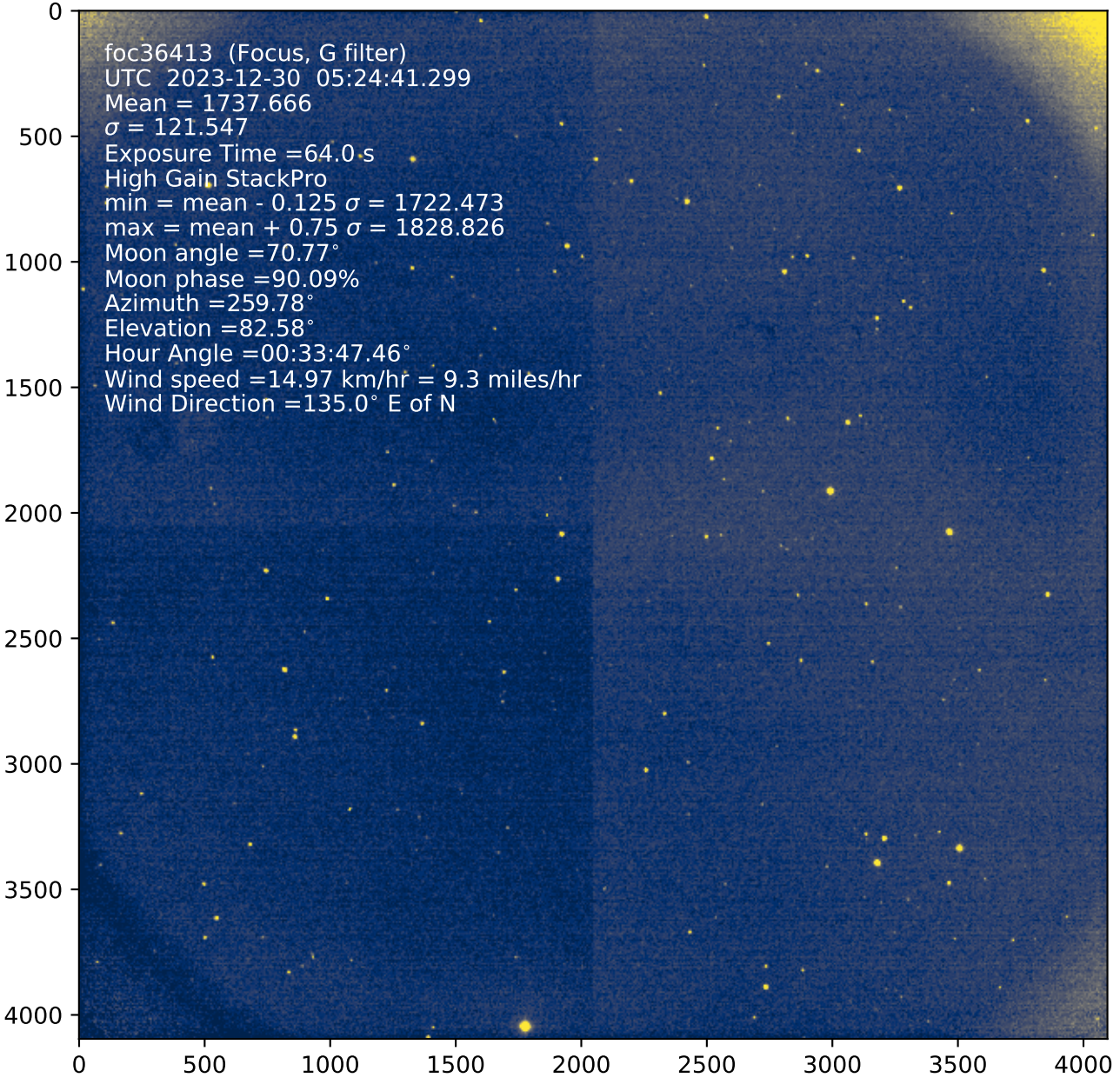
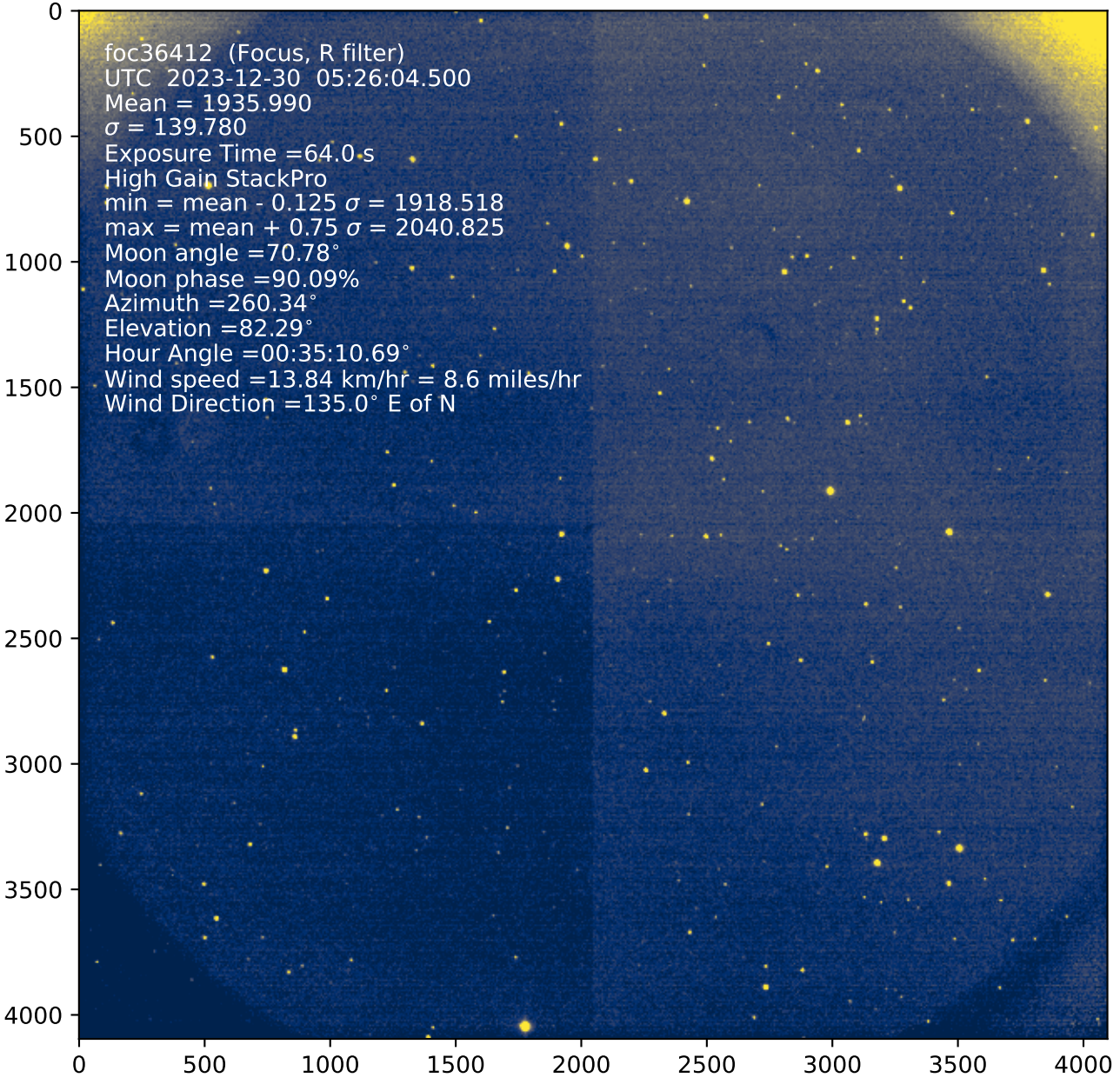
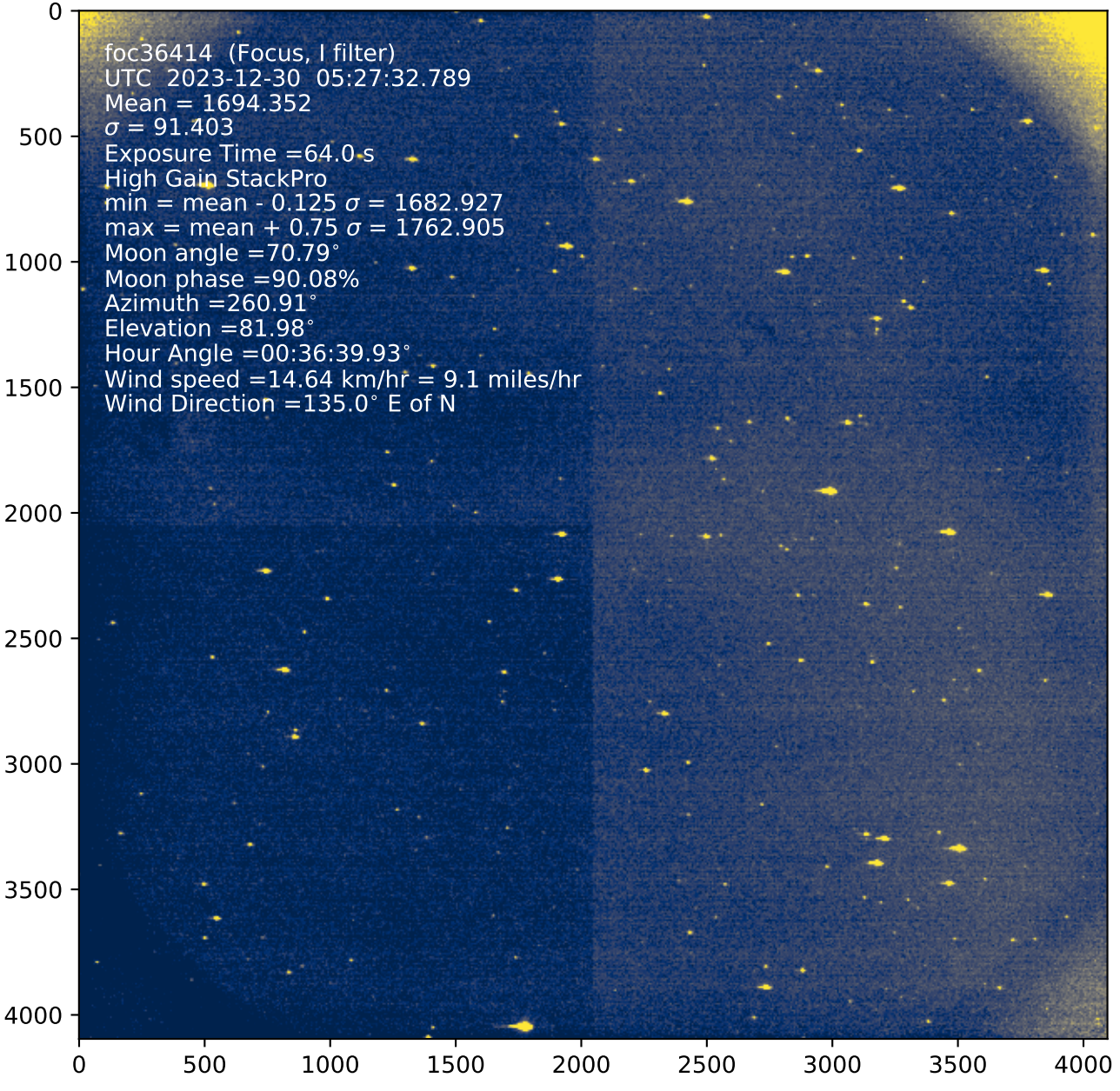

knh364c4 (M52, B filter)
UTC 2023-12-30 05:23:09.140
Mean = 1079.915
σ = 12.310
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1078.376
max = mean + 0.75 σ = 1089.147
Moon angle =93.9°
Moon phase =90.1%
Azimuth =326.37°
Elevation =33.55°
Hour Angle =05:08:22.29°
Wind speed =11.59 km/hr = 7.2 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


foc36413 (Focus, G filter)
UTC 2023-12-30 05:24:41.299
Mean = 1737.666
σ = 121.547
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 1722.473
max = mean + 0.75 σ = 1828.826
Moon angle =70.77°
Moon phase =90.09%
Azimuth =259.78°
Elevation =82.58°
Hour Angle =00:33:47.46°
Wind speed =14.97 km/hr = 9.3 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


foc36412 (Focus, R filter)
UTC 2023-12-30 05:26:04.500
Mean = 1935.990
σ = 139.780
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 1918.518
max = mean + 0.75 σ = 2040.825
Moon angle =70.78°
Moon phase =90.09%
Azimuth =260.34°
Elevation =82.29°
Hour Angle =00:35:10.69°
Wind speed =13.84 km/hr = 8.6 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


foc36414 (Focus, I filter)
UTC 2023-12-30 05:27:32.789
Mean = 1694.352
σ = 91.403
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 1682.927
max = mean + 0.75 σ = 1762.905
Moon angle =70.79°
Moon phase =90.08%
Azimuth =260.91°
Elevation =81.98°
Hour Angle =00:36:39.93°
Wind speed =14.64 km/hr = 9.1 miles/hr
Wind Direction =135.0° E of N
0
500
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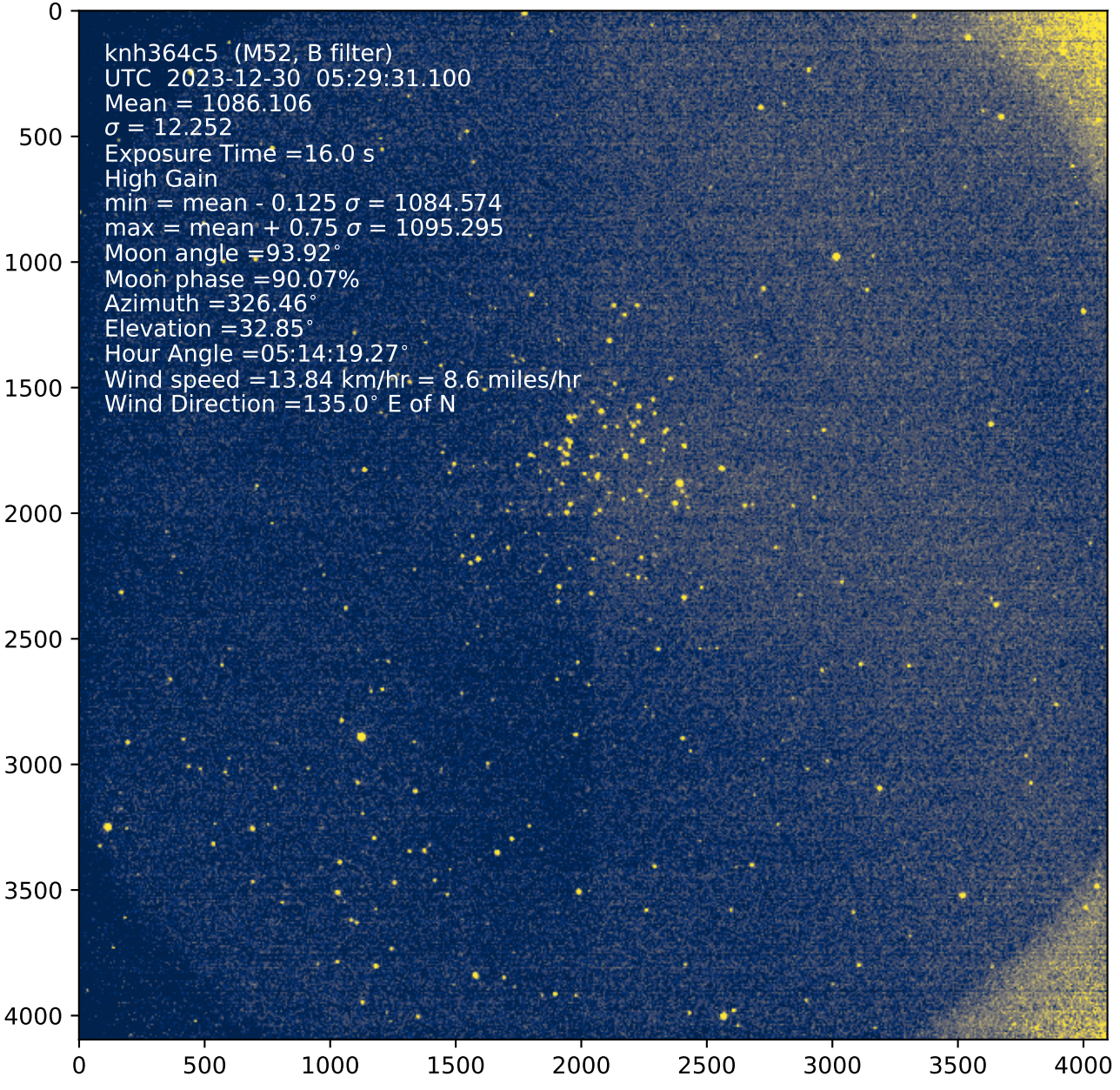
2000
2500
3000
3500
4000


knh364c5 (M52, B filter)
UTC 2023-12-30 05:29:31.100
Mean = 1086.106
σ = 12.252
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1084.574
max = mean + 0.75 σ = 1095.295
Moon angle =93.92°
Moon phase =90.07%
Azimuth =326.46°
Elevation =32.85°
Hour Angle =05:14:19.27°
Wind speed =13.84 km/hr = 8.6 miles/hr
Wind Direction =135.0° E of N
0
500
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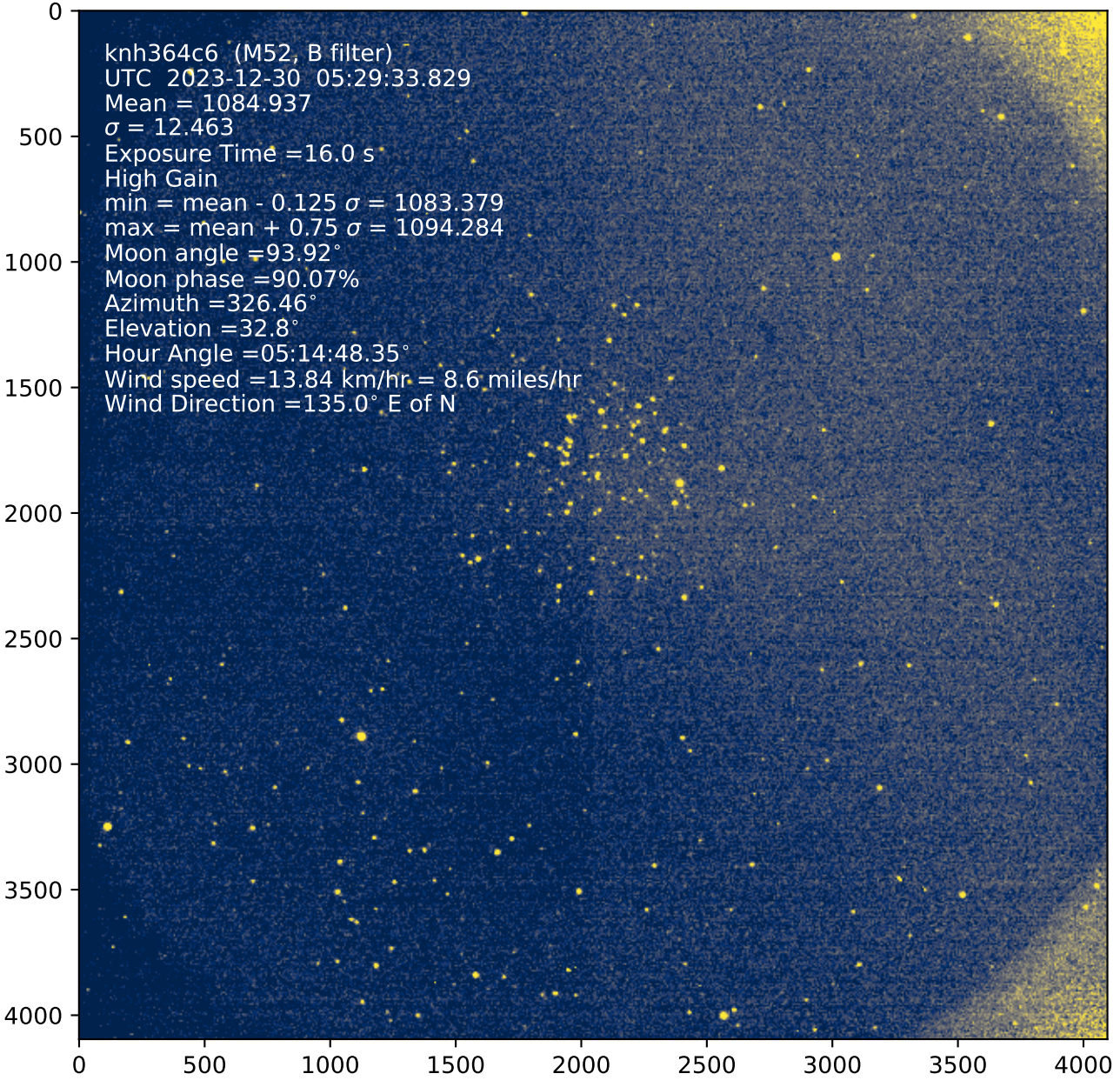
2500
3000
3500
4000


knh364c6 (M52, B filter)
UTC 2023-12-30 05:29:33.829
Mean = 1084.937
σ = 12.463
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1083.379
max = mean + 0.75 σ = 1094.284
Moon angle =93.92°
Moon phase =90.07%
Azimuth =326.46°
Elevation =32.8°
Hour Angle =05:14:48.35°
Wind speed =13.84 km/hr = 8.6 miles/hr
Wind Direction =135.0° E of N
0
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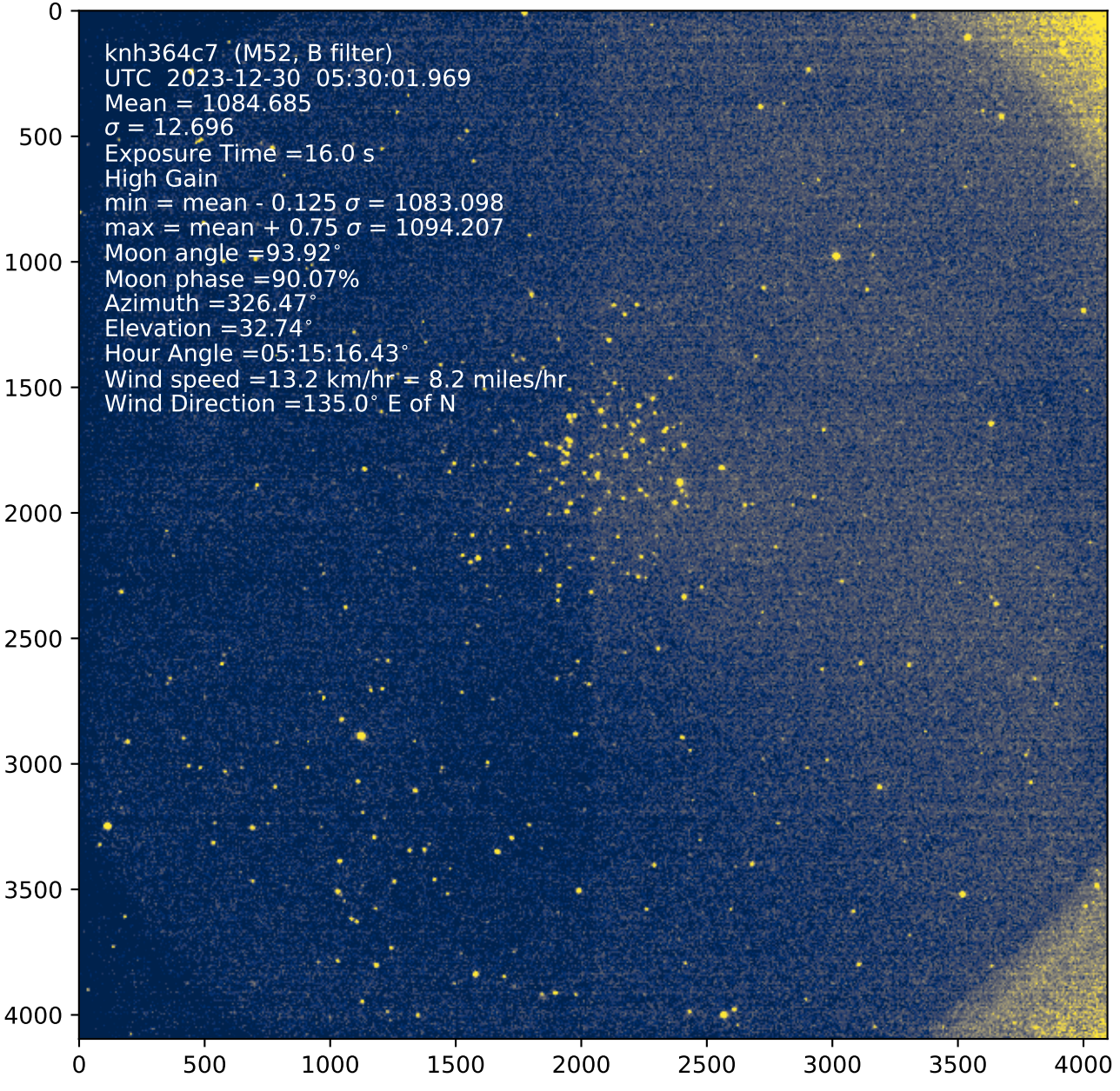
knh364c7 (M52, B filter)
UTC 2023-12-30 05:30:01.969
Mean = 1084.685
σ = 12.696
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1083.098
max = mean + 0.75 σ = 1094.207
Moon angle =93.92°
Moon phase =90.07%
Azimuth =326.47°
Elevation =32.74°
Hour Angle =05:15:16.43°
Wind speed =13.2 km/hr = 8.2 miles/hr
Wind Direction =135.0° E of N
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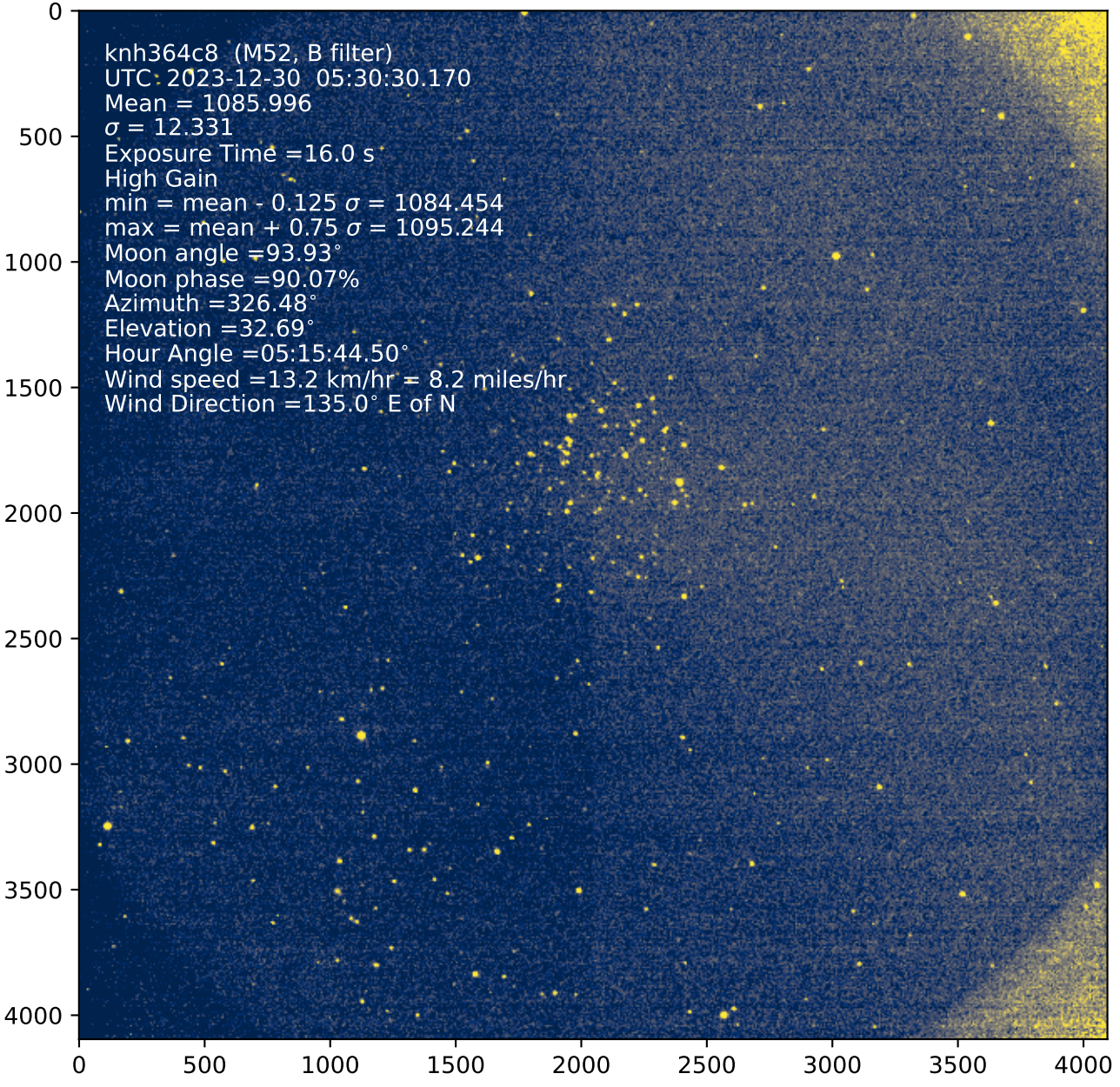
4000


knh364c8 (M52, B filter)
UTC: 2023-12-30 05:30:30.170
Mean = 1085.996
σ = 12.331
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1084.454
max = mean + 0.75 σ = 1095.244
Moon angle =93.93°
Moon phase =90.07%
Azimuth =326.48°
Elevation =32.69°
Hour Angle =05:15:44.50°
Wind speed =13.2 km/hr = 8.2 miles/hr
Wind Direction =135.0° E of N
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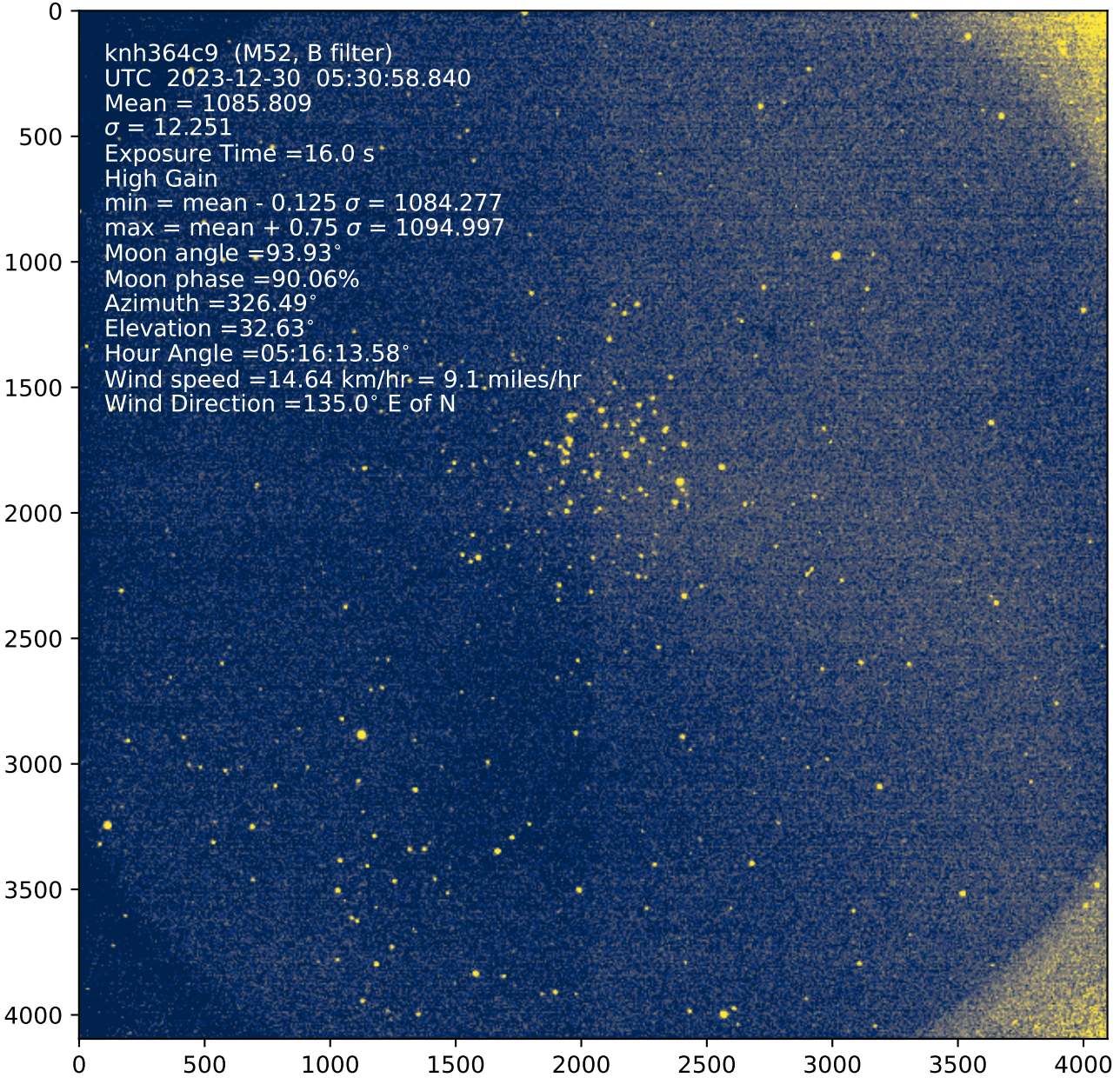
knh364c9 (M52, B filter)
UTC 2023-12-30 05:30:58.840
Mean = 1085.809
σ = 12.251
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1084.277
max = mean + 0.75 σ = 1094.997
Moon angle =93.93°
Moon phase =90.06%
Azimuth =326.49°
Elevation =32.63°
Hour Angle =05:16:13.58°
Wind speed =14.64 km/hr = 9.1 miles/hr
Wind Direction =135.0° E of N
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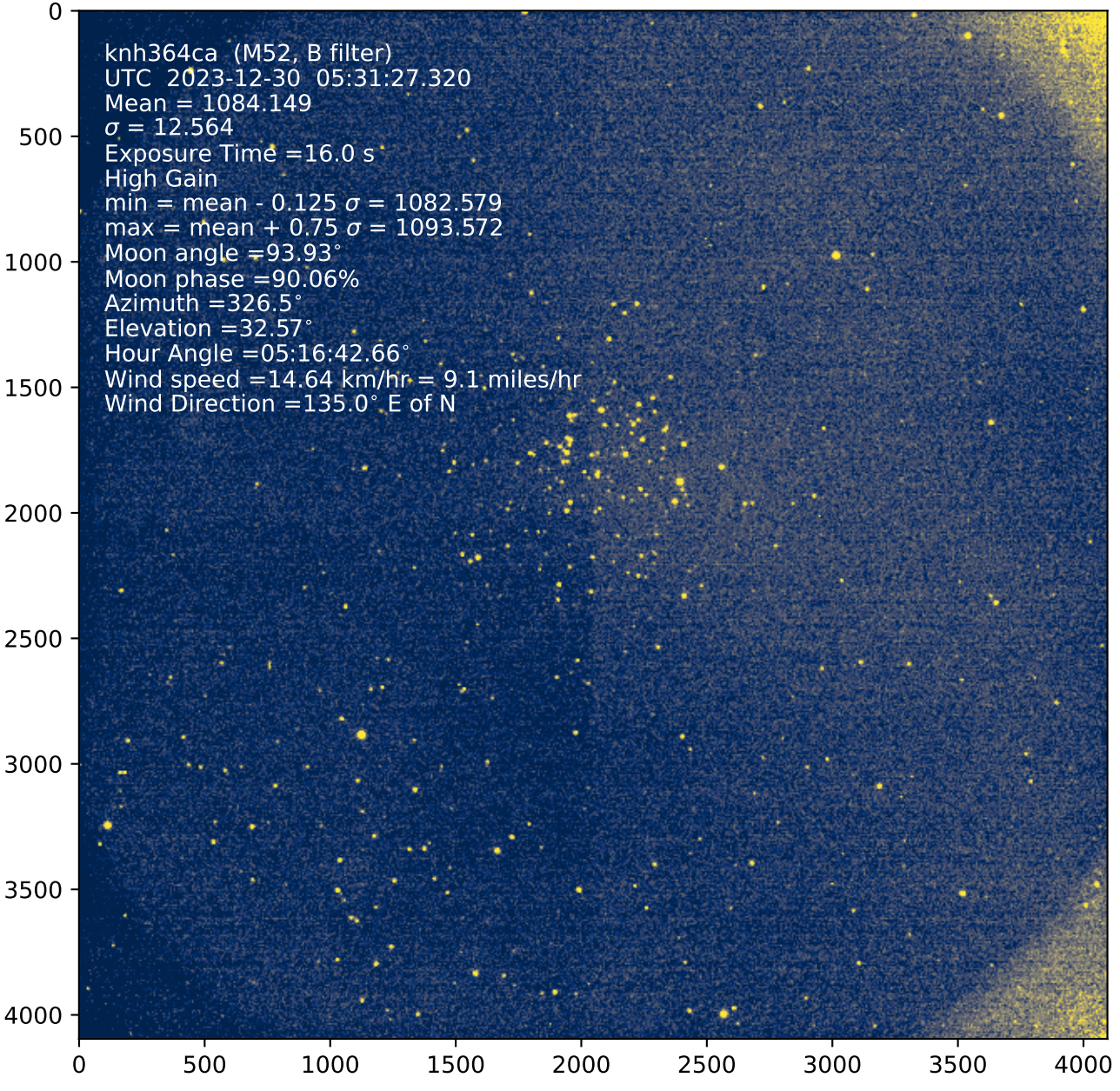
knh364ca (M52, B filter)
UTC 2023-12-30 05:31:27.320
Mean = 1084.149
σ = 12.564
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1082.579
max = mean + 0.75 σ = 1093.572
Moon angle =93.93°
Moon phase =90.06%
Azimuth =326.5°
Elevation =32.57°
Hour Angle =05:16:42.66°
Wind speed =14.64 km/hr = 9.1 miles/hr
Wind Direction =135.0° E of N
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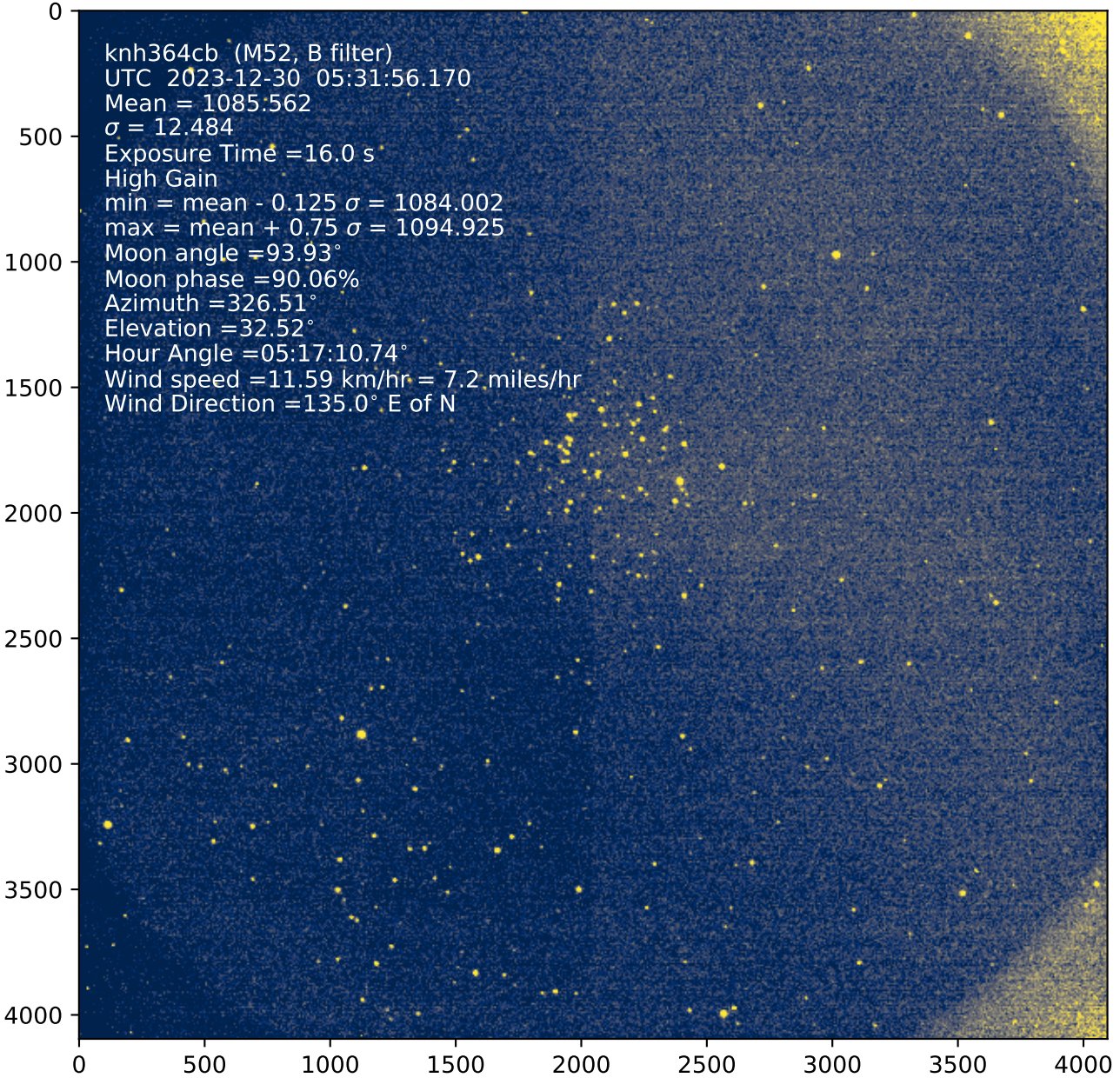
knh364cb (M52, B filter)
UTC 2023-12-30 05:31:56.170
Mean = 1085.562
σ = 12.484
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1084.002
max = mean + 0.75 σ = 1094.925
Moon angle =93.93°
Moon phase =90.06%
Azimuth =326.51°
Elevation =32.52°
Hour Angle =05:17:10.74°
Wind speed =11.59 km/hr = 7.2 miles/hr
Wind Direction =135.0° E of N
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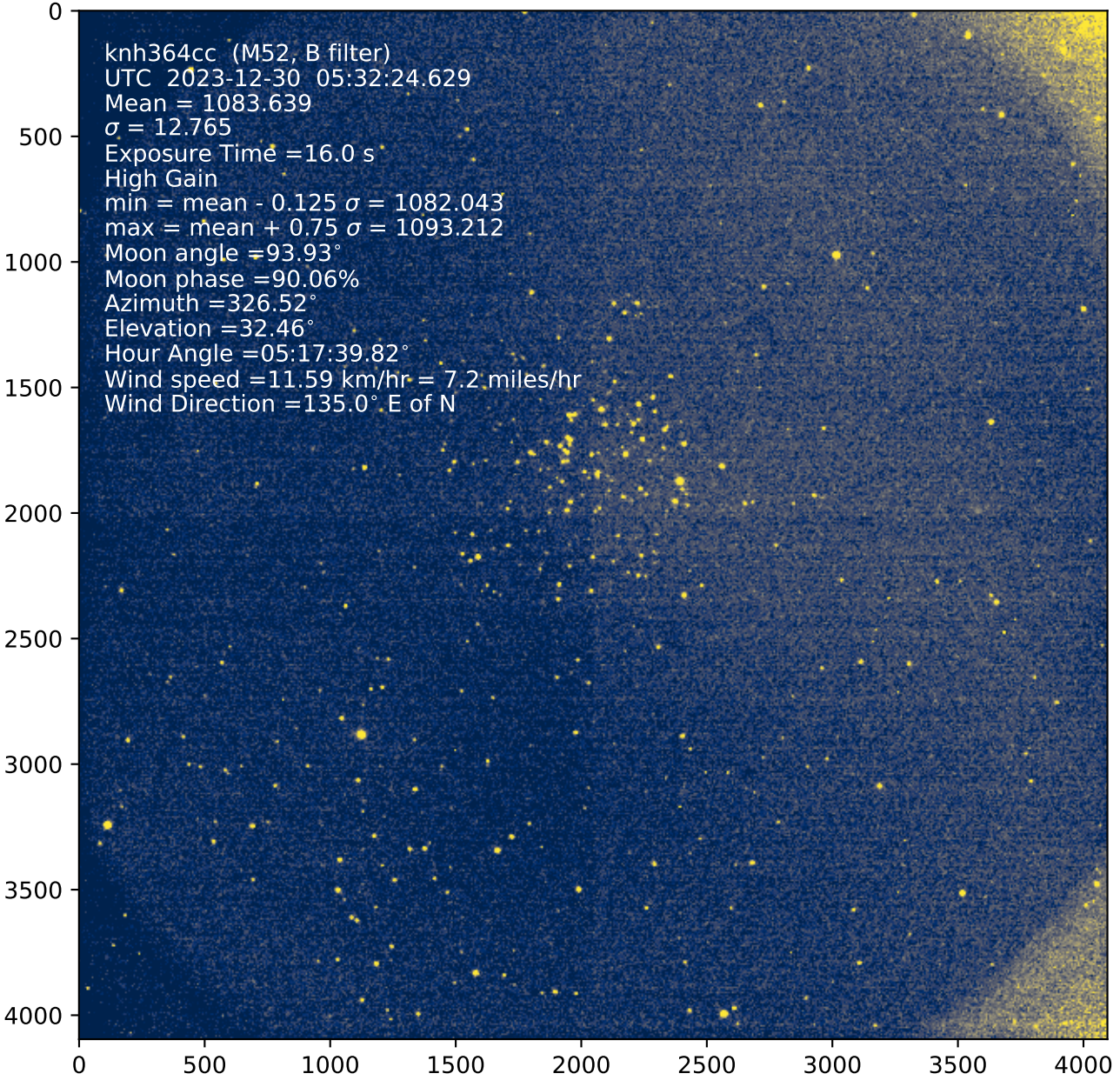
knh364cc (M52, B filter)
UTC 2023-12-30 05:32:24.629
Mean = 1083.639
σ = 12.765
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1082.043
max = mean + 0.75 σ = 1093.212
Moon angle =93.93°
Moon phase =90.06%
Azimuth =326.52°
Elevation =32.46°
Hour Angle =05:17:39.82°
Wind speed =11.59 km/hr = 7.2 miles/hr
Wind Direction =135.0° E of N
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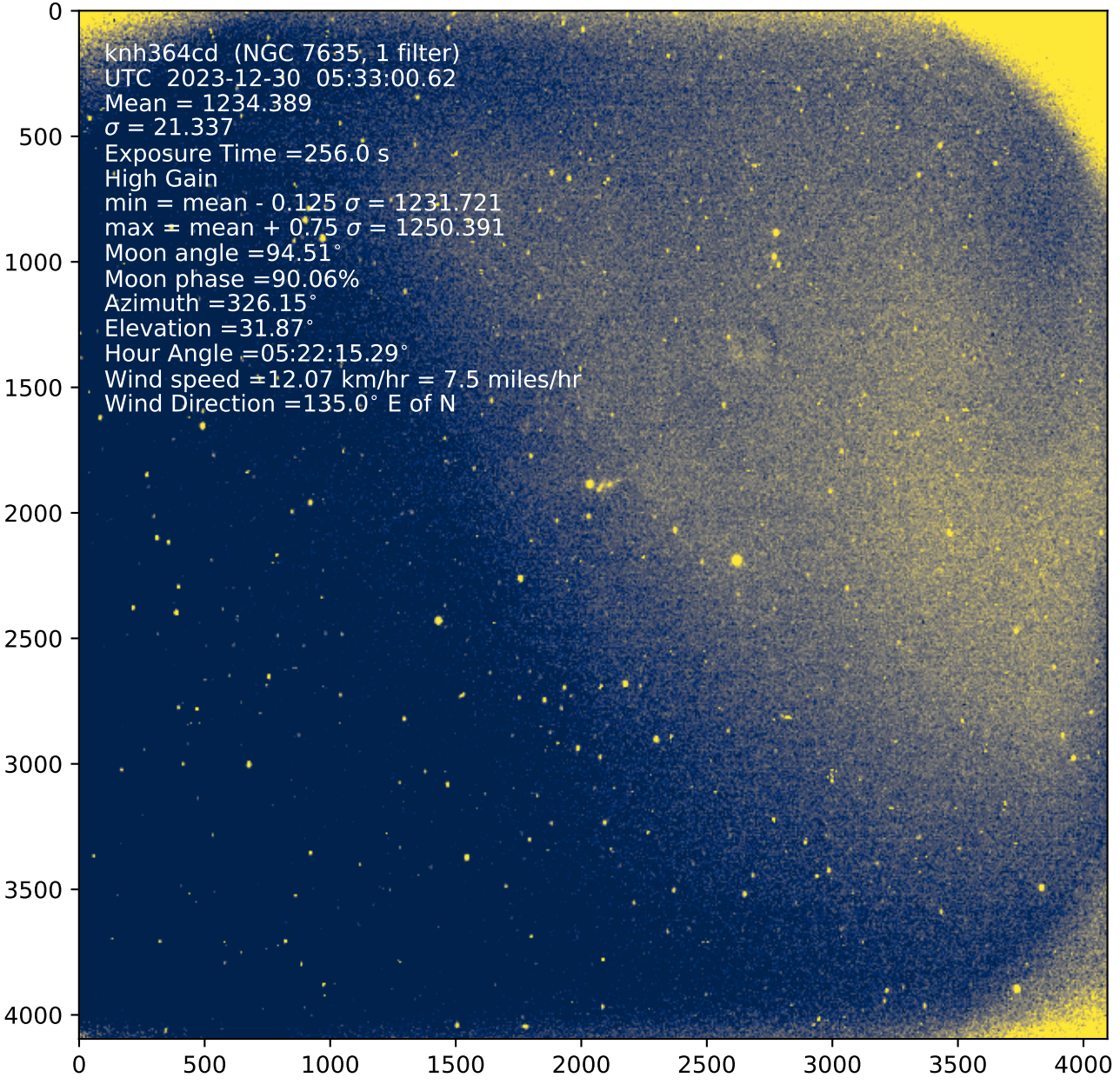
knh364cd (NGC 7635, 1 filter)
UTC 2023-12-30 05:33:00.62
Mean = 1234.389
σ = 21.337
Exposure Time =256.0 s
High Gain
min = mean - 0.125 σ = 1231.721
max = mean + 0.75 σ = 1250.391
Moon angle =94.51°
Moon phase =90.06%
Azimuth =326.15°
Elevation =31.87°
Hour Angle =05:22:15.29°
Wind speed =12.07 km/hr = 7.5 miles/hr
Wind Direction =135.0° E of N
0
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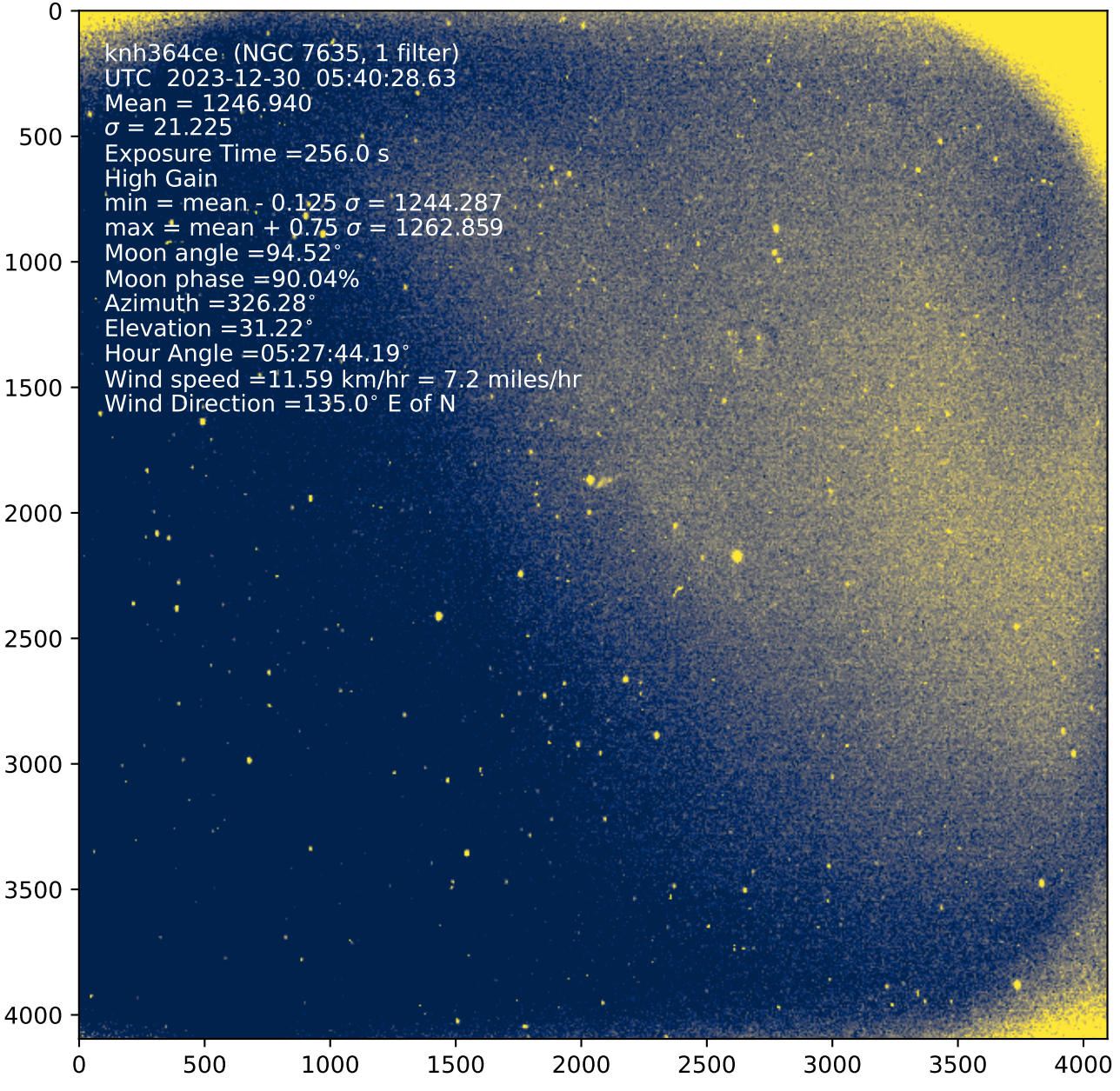
3000
3500
4000


knh364ce (NGC 7635, 1 filter)
UTC 2023-12-30 05:40:28.63
Mean = 1246.940
σ = 21.225
Exposure Time =256.0 s
High Gain
min = mean - 0.125 σ = 1244.287
max = mean + 0.75 σ = 1262.859
Moon angle =94.52°
Moon phase =90.04%
Azimuth =326.28°
Elevation =31.22°
Hour Angle =05:27:44.19°
Wind speed =11.59 km/hr = 7.2 miles/hr
Wind Direction =135.0° E of N
0
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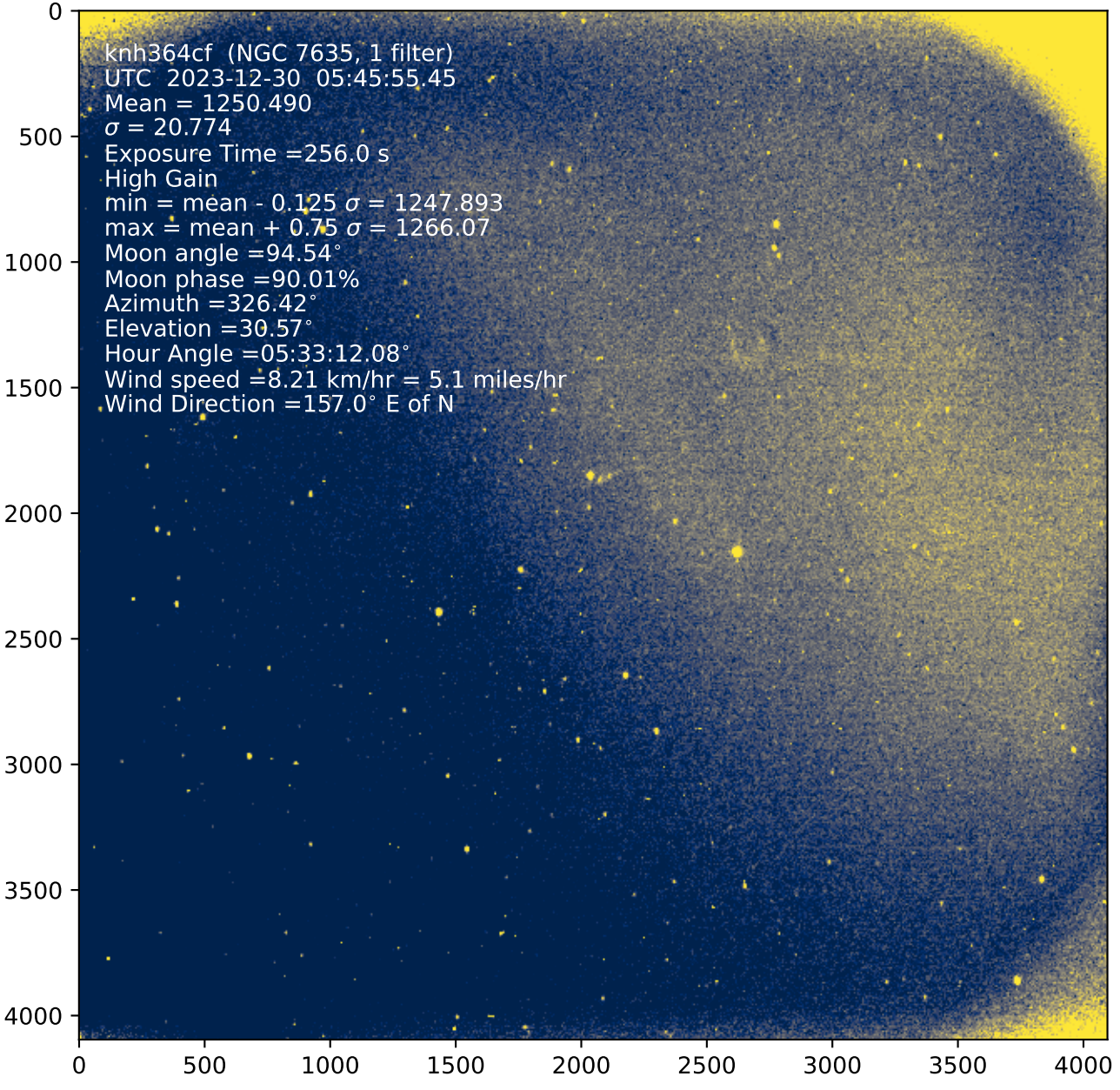
2500
3000
3500
4000


knh364cf (NGC 7635, 1 filter)
UTC 2023-12-30 05:45:55.45
Mean = 1250.490
σ = 20.774
Exposure Time =256.0 s
High Gain
min = mean - 0.125 σ = 1247.893
max = mean + 0.75 σ = 1266.07
Moon angle =94.54°
Moon phase =90.01%
Azimuth =326.42°
Elevation =30.57°
Hour Angle =05:33:12.08°
Wind speed =8.21 km/hr = 5.1 miles/hr
Wind Direction =157.0° E of N
0
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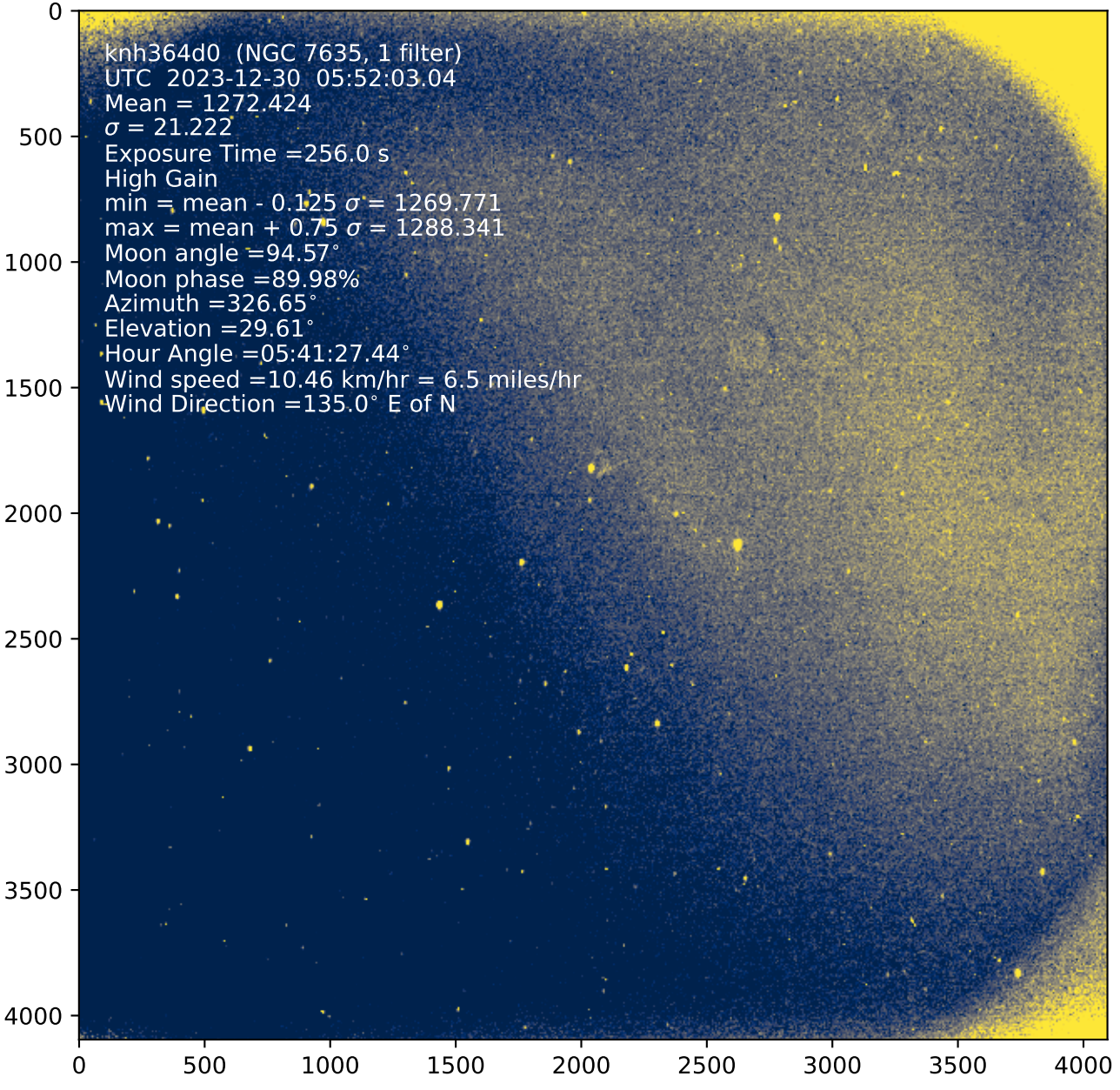
2500
3000
3500
4000


knh364d0 (NGC 7635, 1 filter)
UTC 2023-12-30 05:52:03.04
Mean = 1272.424
σ = 21.222
Exposure Time =256.0 s
High Gain
min = mean - 0.125 σ = 1269.771
max = mean + 0.75 σ = 1288.341
Moon angle =94.57°
Moon phase =89.98%
Azimuth =326.65°
Elevation =29.61°
Hour Angle =05:41:27.44°
Wind speed =10.46 km/hr = 6.5 miles/hr
Wind Direction =135.0° E of N
0
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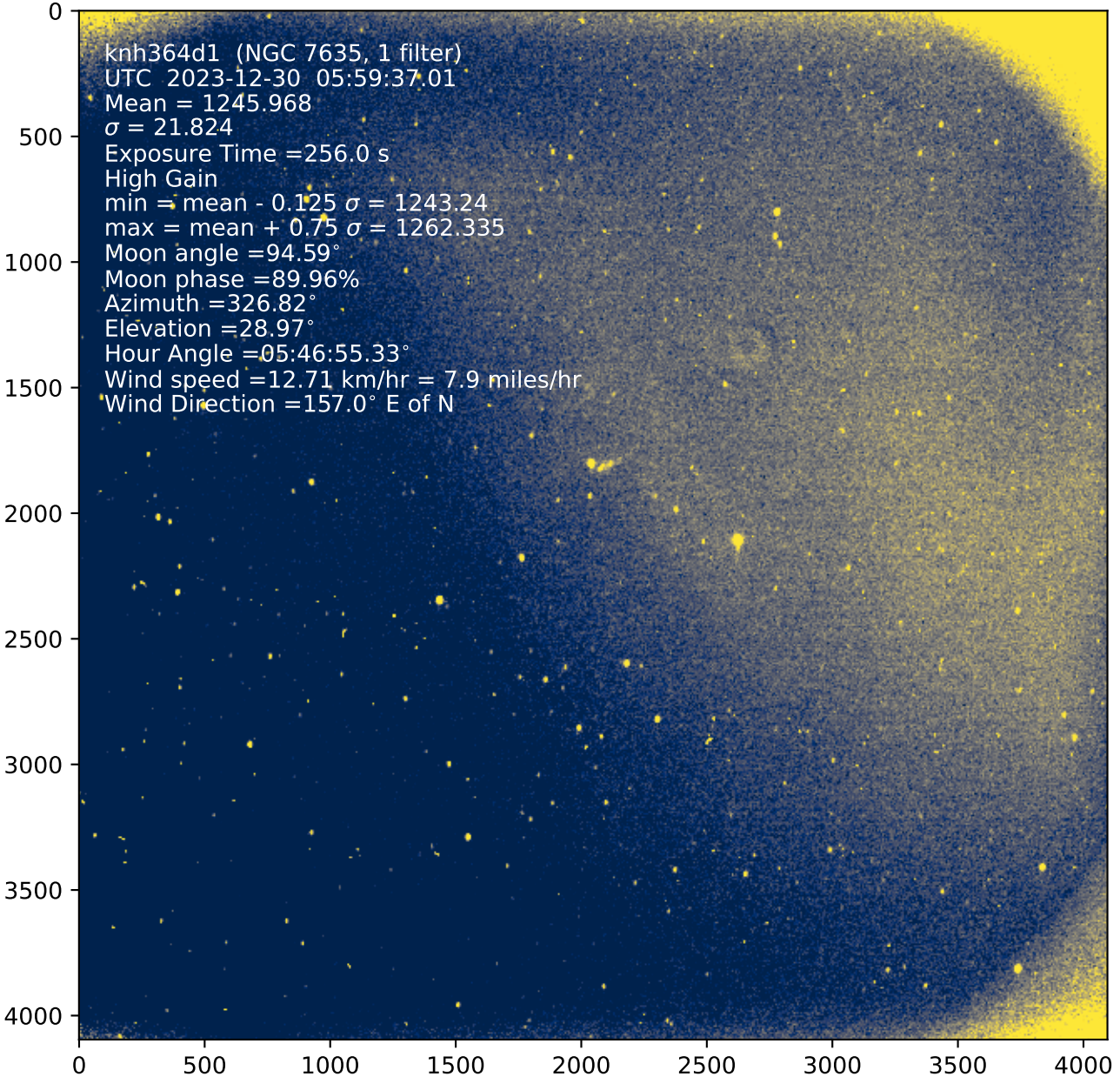
4000


knh364d1 (NGC 7635, 1 filter)
UTC 2023-12-30 05:59:37.01
Mean = 1245.968
σ = 21.824
Exposure Time =256.0 s
High Gain
min = mean - 0.125 σ = 1243.24
max = mean + 0.75 σ = 1262.335
Moon angle =94.59°
Moon phase =89.96%
Azimuth =326.82°
Elevation =28.97°
Hour Angle =05:46:55.33°
Wind speed =12.71 km/hr = 7.9 miles/hr
Wind Direction =157.0° E of N
0
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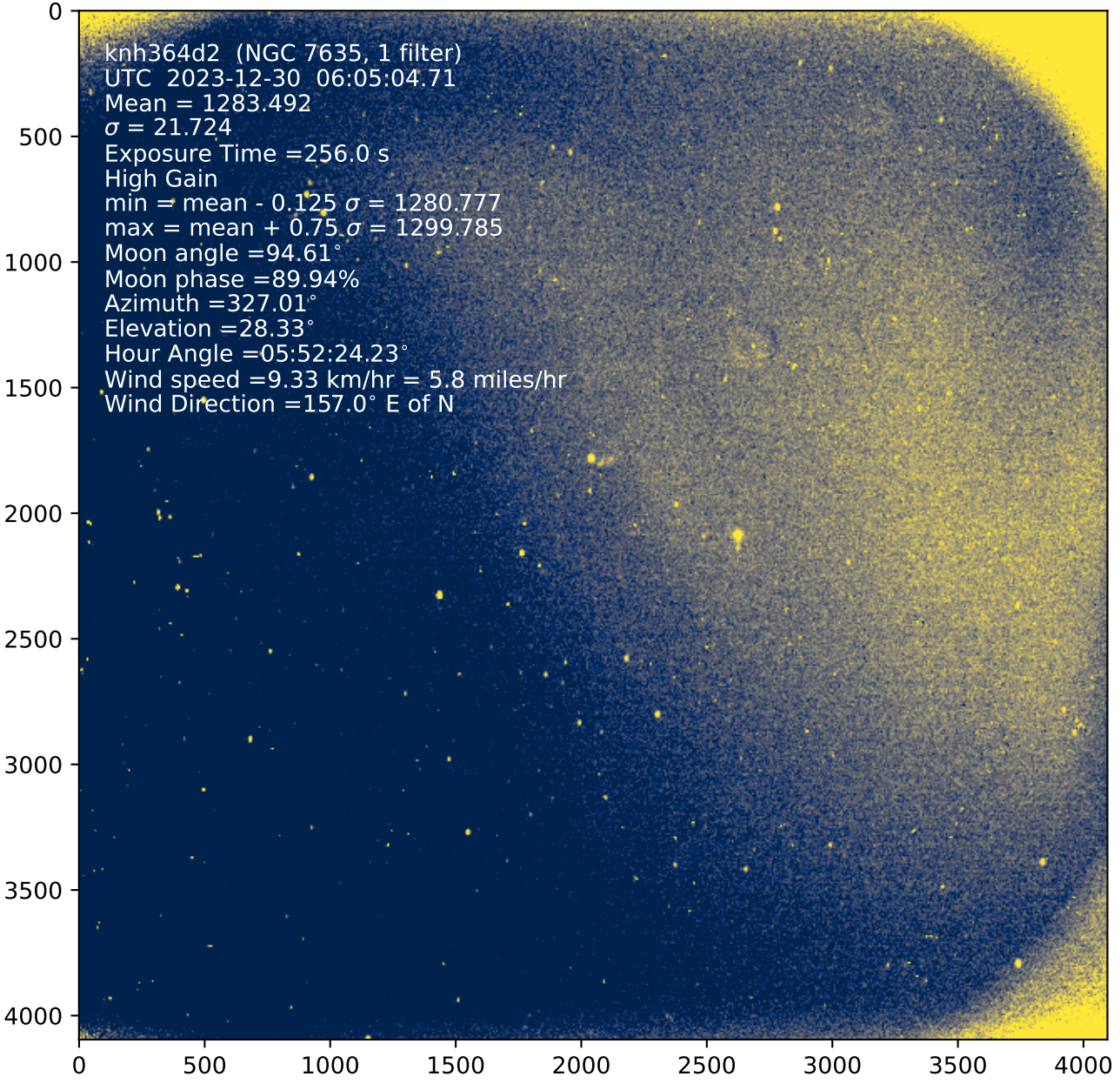
knh364d2 (NGC 7635, 1 filter)
UTC 2023-12-30 06:05:04.71
Mean = 1283.492
σ = 21.724
Exposure Time =256.0 s
High Gain
min = mean - 0.125 σ = 1280.777
max = mean + 0.75 σ = 1299.785
Moon angle =94.61°
Moon phase =89.94%
Azimuth =327.01°
Elevation =28.33°
Hour Angle =05:52:24.23°
Wind speed =9.33 km/hr = 5.8 miles/hr
Wind Direction =157.0° E of N
0
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2500
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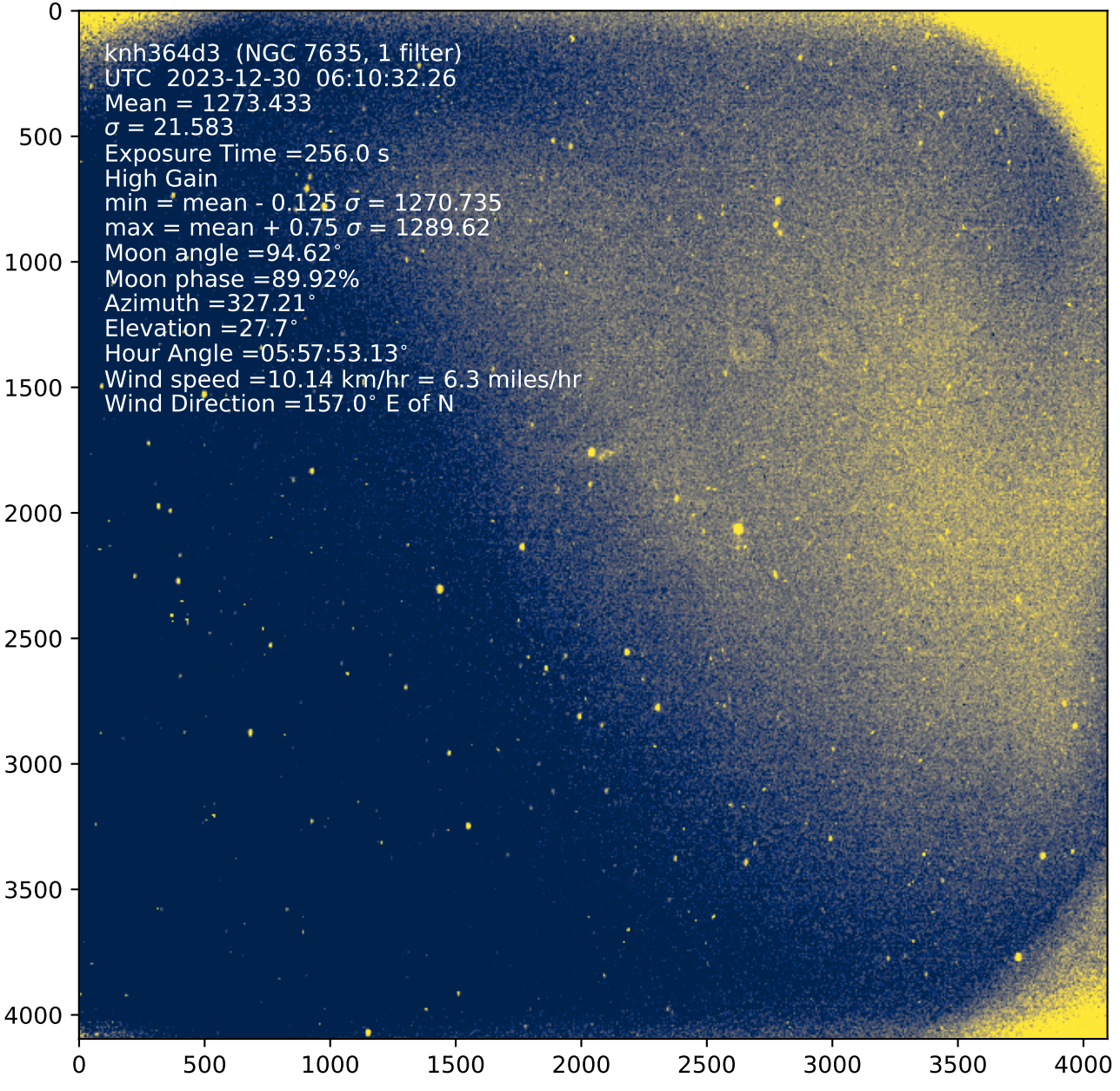
3500
4000


knh364d3 (NGC 7635, 1 filter)
UTC 2023-12-30 06:10:32.26
Mean = 1273.433
σ = 21.583
Exposure Time =256.0 s
High Gain
min = mean - 0.125 σ = 1270.735
max = mean + 0.75 σ = 1289.62
Moon angle =94.62°
Moon phase =89.92%
Azimuth =327.21°
Elevation =27.7°
Hour Angle =05:57:53.13°
Wind speed =10.14 km/hr = 6.3 miles/hr
Wind Direction =157.0° E of N
0
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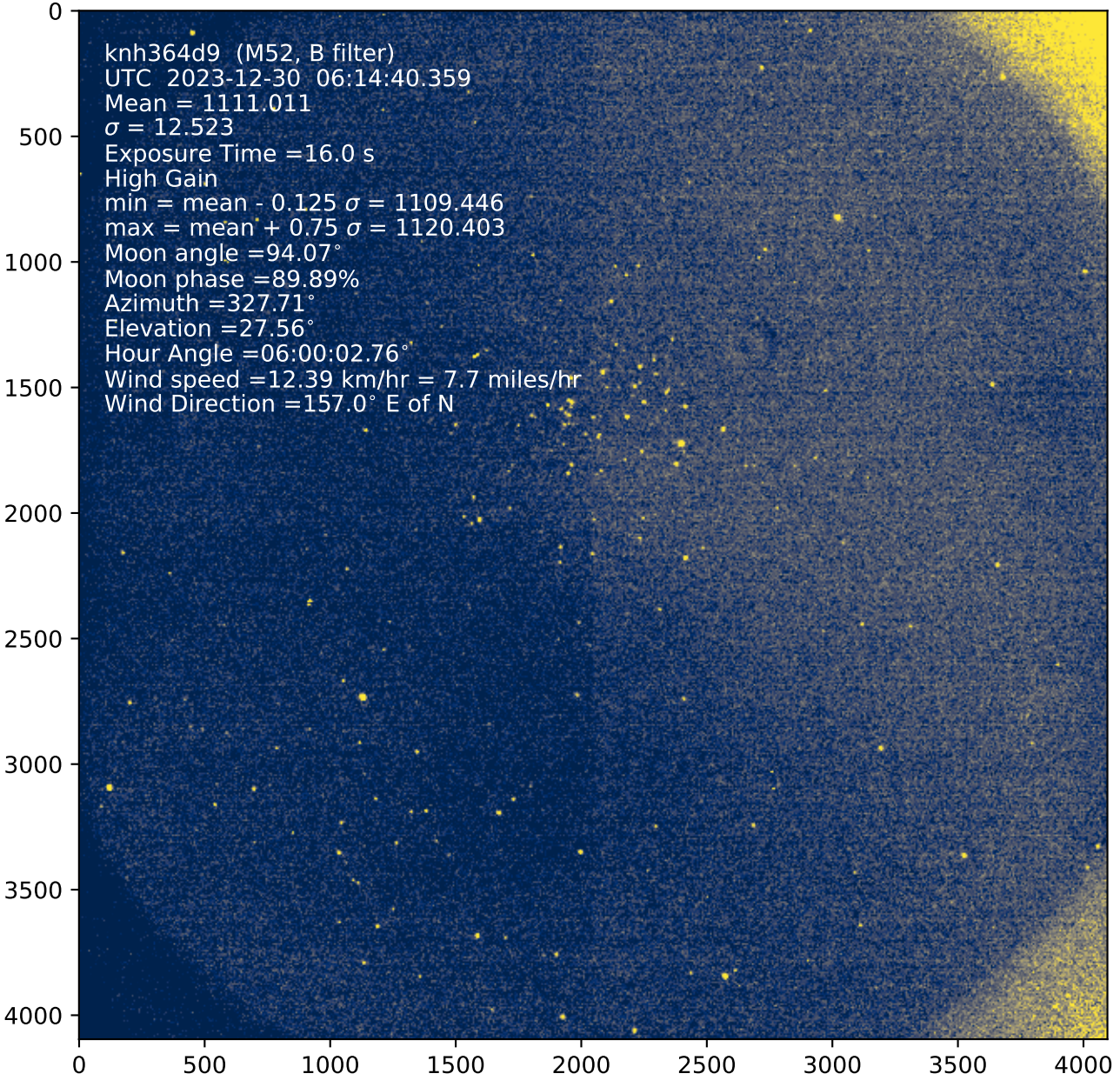
knh364d9 (M52, B filter)
UTC 2023-12-30 06:14:40.359
Mean = 1111.011
σ = 12.523
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1109.446
max = mean + 0.75 σ = 1120.403
Moon angle =94.07°
Moon phase =89.89%
Azimuth =327.71°
Elevation =27.56°
Hour Angle =06:00:02.76°
Wind speed =12.39 km/hr = 7.7 miles/hr
Wind Direction =157.0° E of N
0
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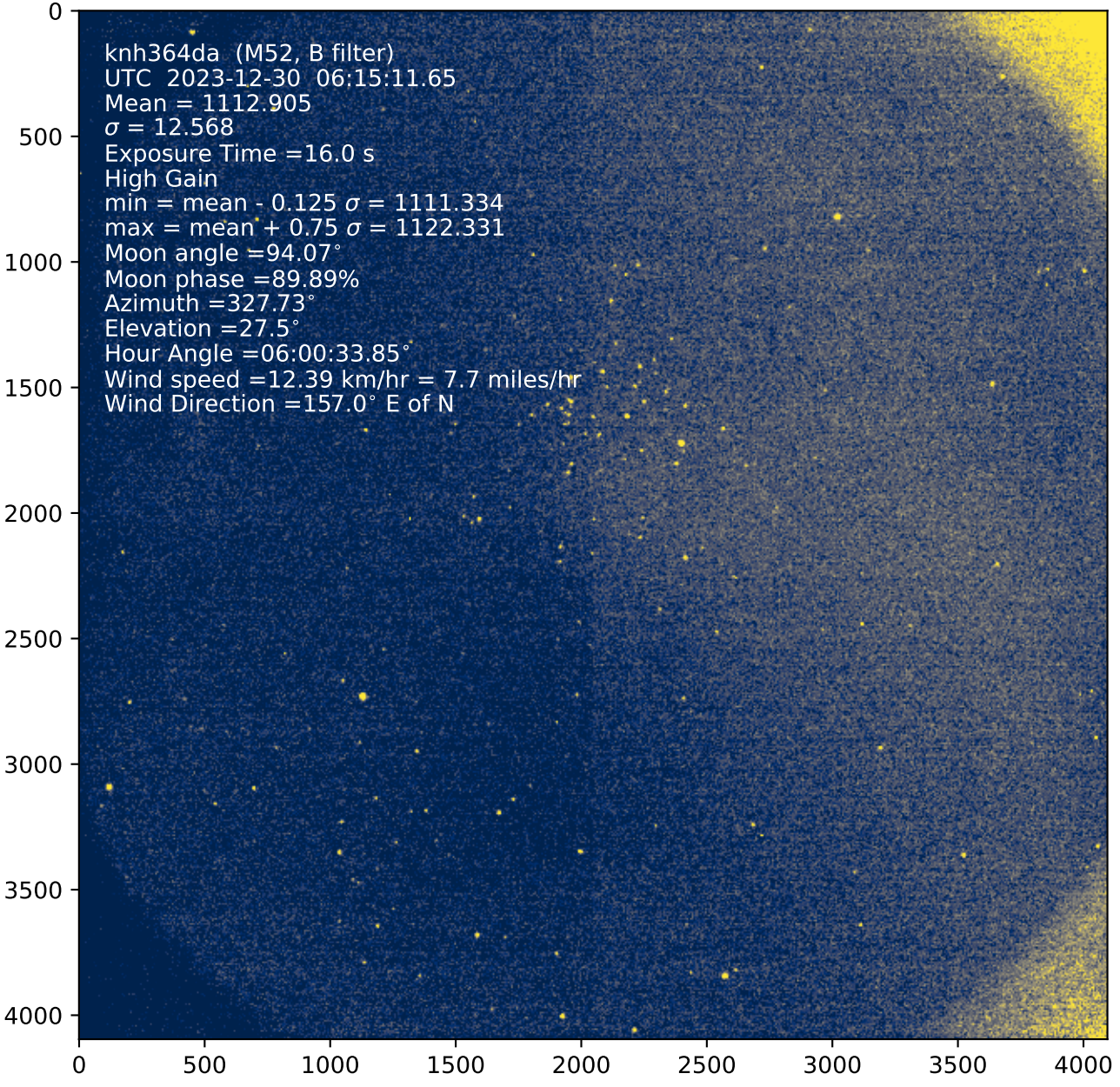
knh364da (M52, B filter)
UTC 2023-12-30 06:15:11.65
Mean = 1112.905
σ = 12.568
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1111.334
max = mean + 0.75 σ = 1122.331
Moon angle =94.07°
Moon phase =89.89%
Azimuth =327.73°
Elevation =27.5°
Hour Angle =06:00:33.85°
Wind speed =12.39 km/hr = 7.7 miles/hr
Wind Direction =157.0° E of N
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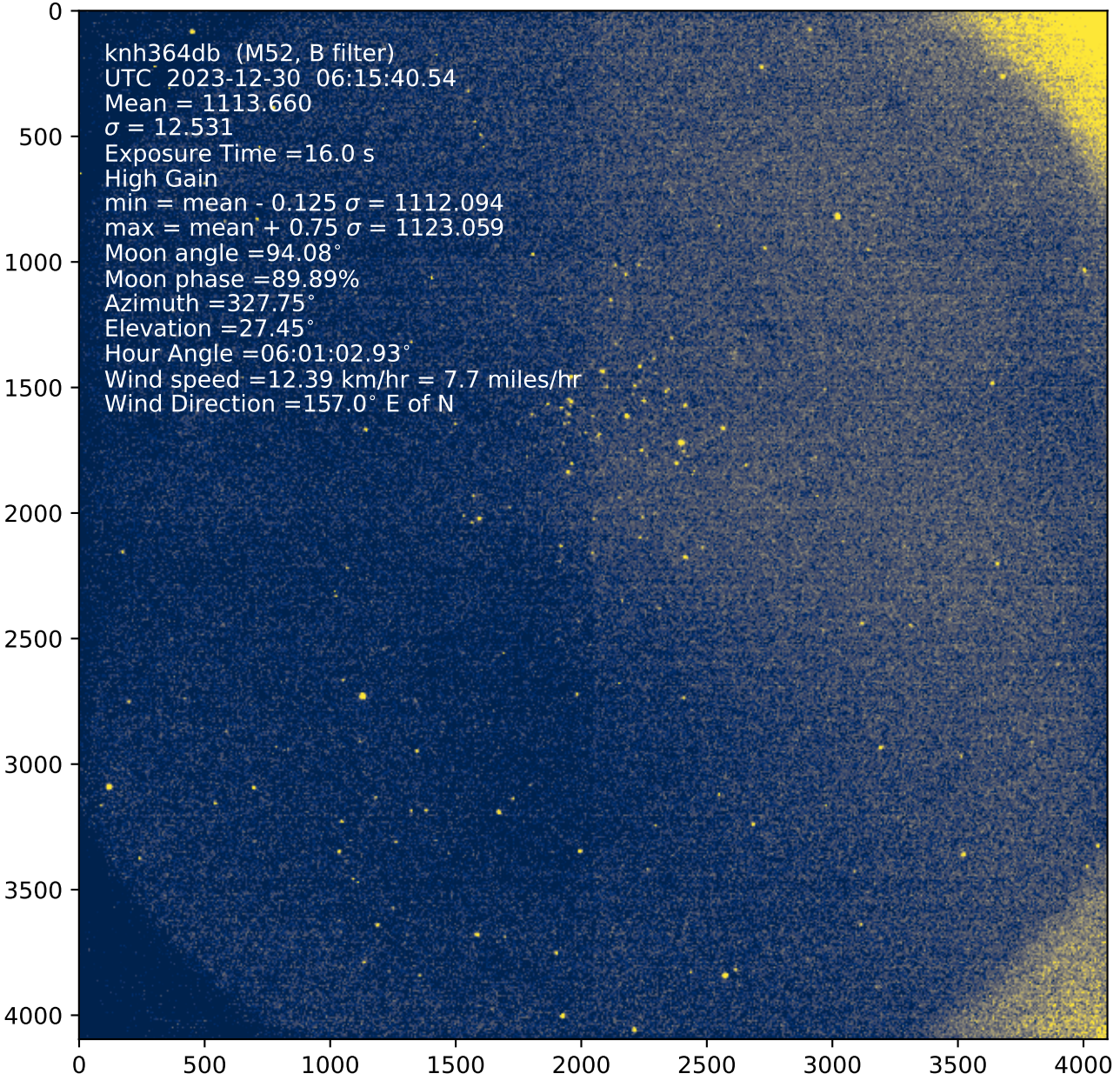
knh364db (M52, B filter)
UTC 2023-12-30 06:15:40.54
Mean = 1113.660
σ = 12.531
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1112.094
max = mean + 0.75 σ = 1123.059
Moon angle =94.08°
Moon phase =89.89%
Azimuth =327.75°
Elevation =27.45°
Hour Angle =06:01:02.93°
Wind speed =12.39 km/hr = 7.7 miles/hr
Wind Direction =157.0° E of N
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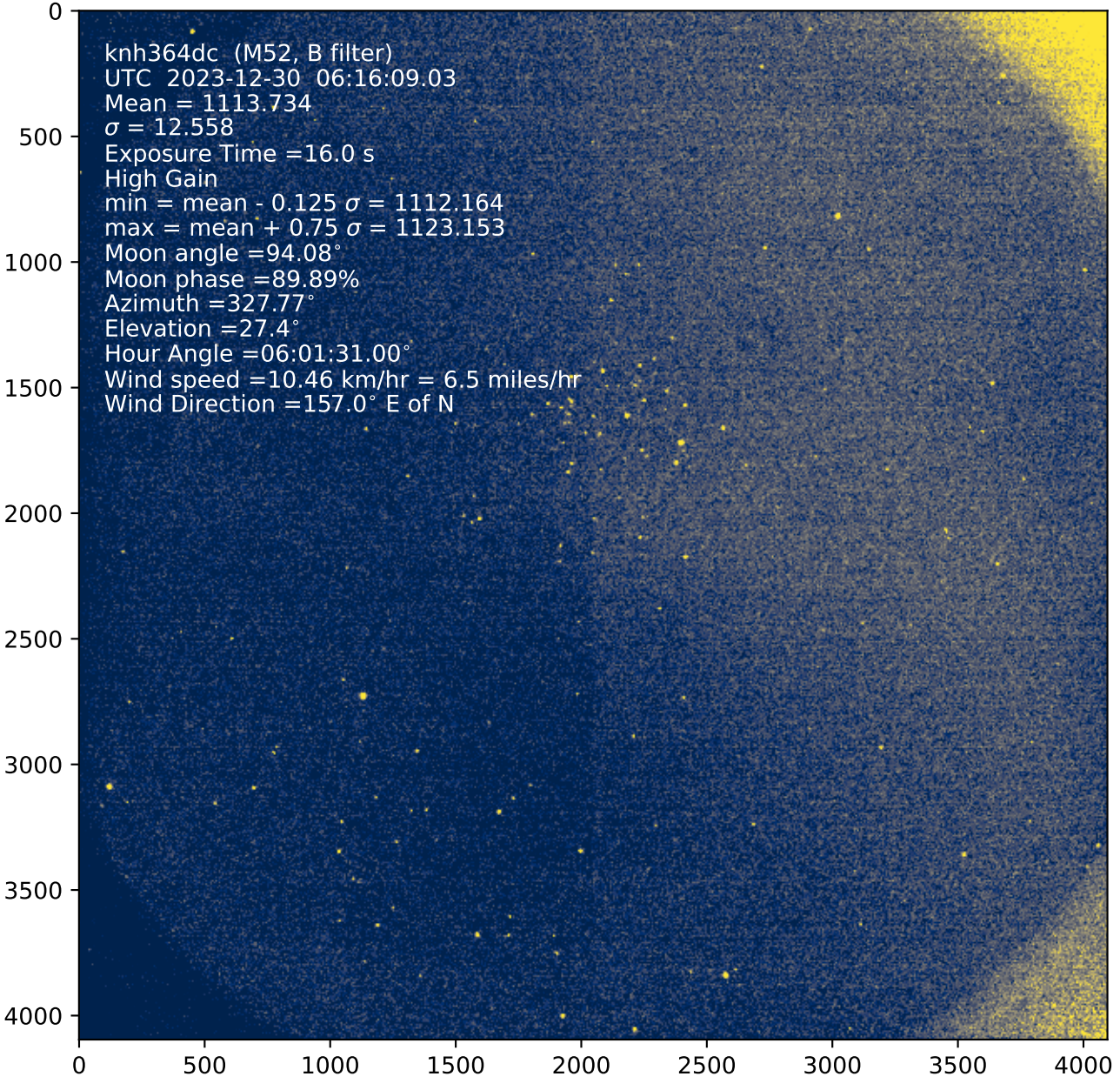
knh364dc (M52, B filter)
UTC 2023-12-30 06:16:09.03
Mean = 1113.734
σ = 12.558
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1112.164
max = mean + 0.75 σ = 1123.153
Moon angle =94.08°
Moon phase =89.89%
Azimuth =327.77°
Elevation =27.4°
Hour Angle =06:01:31.00°
Wind speed =10.46 km/hr = 6.5 miles/hr
Wind Direction =157.0° E of N
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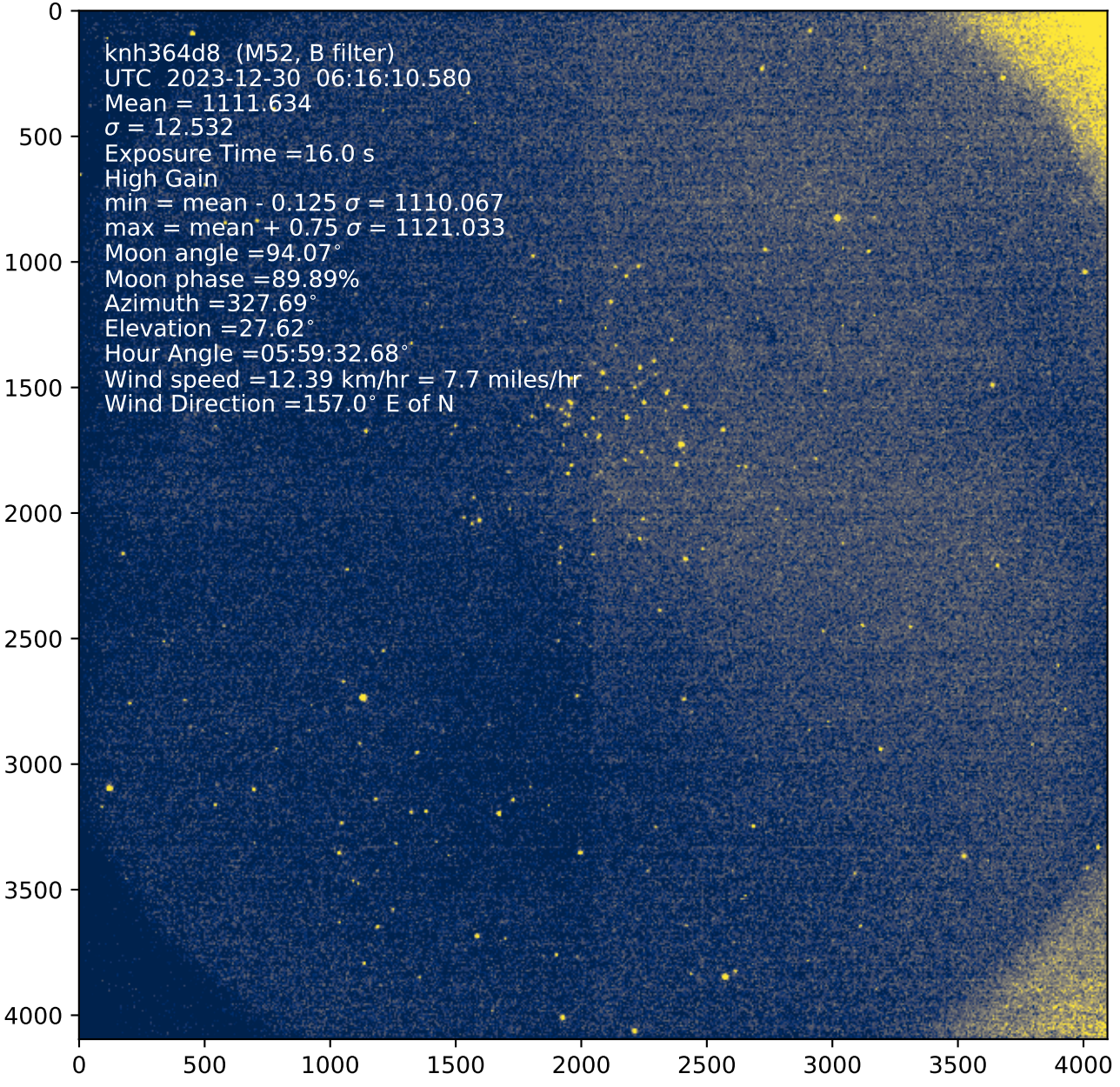
knh364d8 (M52, B filter)
UTC 2023-12-30 06:16:10.580
Mean = 1111.634
σ = 12.532
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1110.067
max = mean + 0.75 σ = 1121.033
Moon angle =94.07°
Moon phase =89.89%
Azimuth =327.69°
Elevation =27.62°
Hour Angle =05:59:32.68°
Wind speed =12.39 km/hr = 7.7 miles/hr
Wind Direction =157.0° E of N
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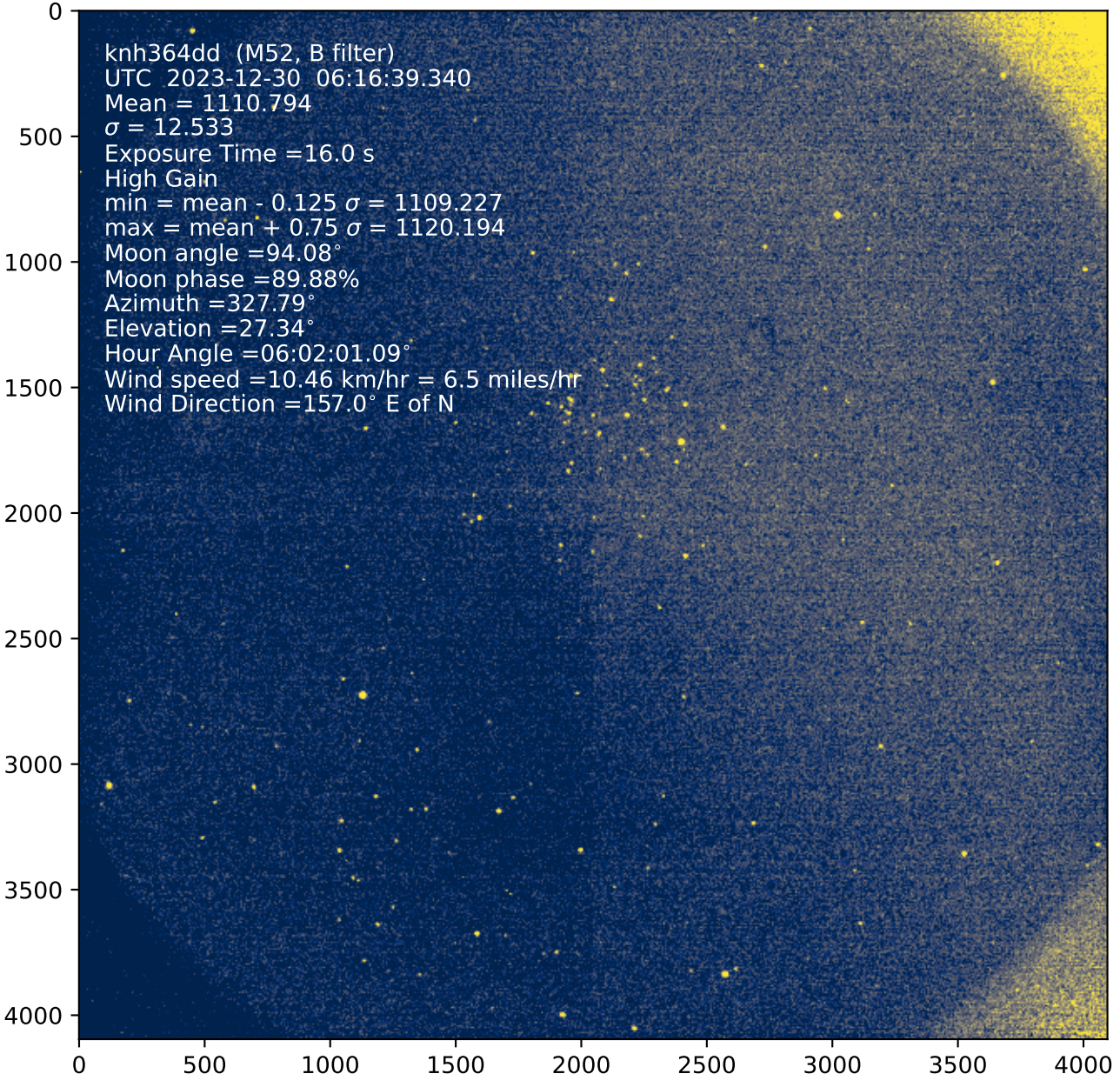
knh364dd (M52, B filter)
UTC 2023-12-30 06:16:39.340
Mean = 1110.794
σ = 12.533
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1109.227
max = mean + 0.75 σ = 1120.194
Moon angle =94.08°
Moon phase =89.88%
Azimuth =327.79°
Elevation =27.34°
Hour Angle =06:02:01.09°
Wind speed =10.46 km/hr = 6.5 miles/hr
Wind Direction =157.0° E of N
0
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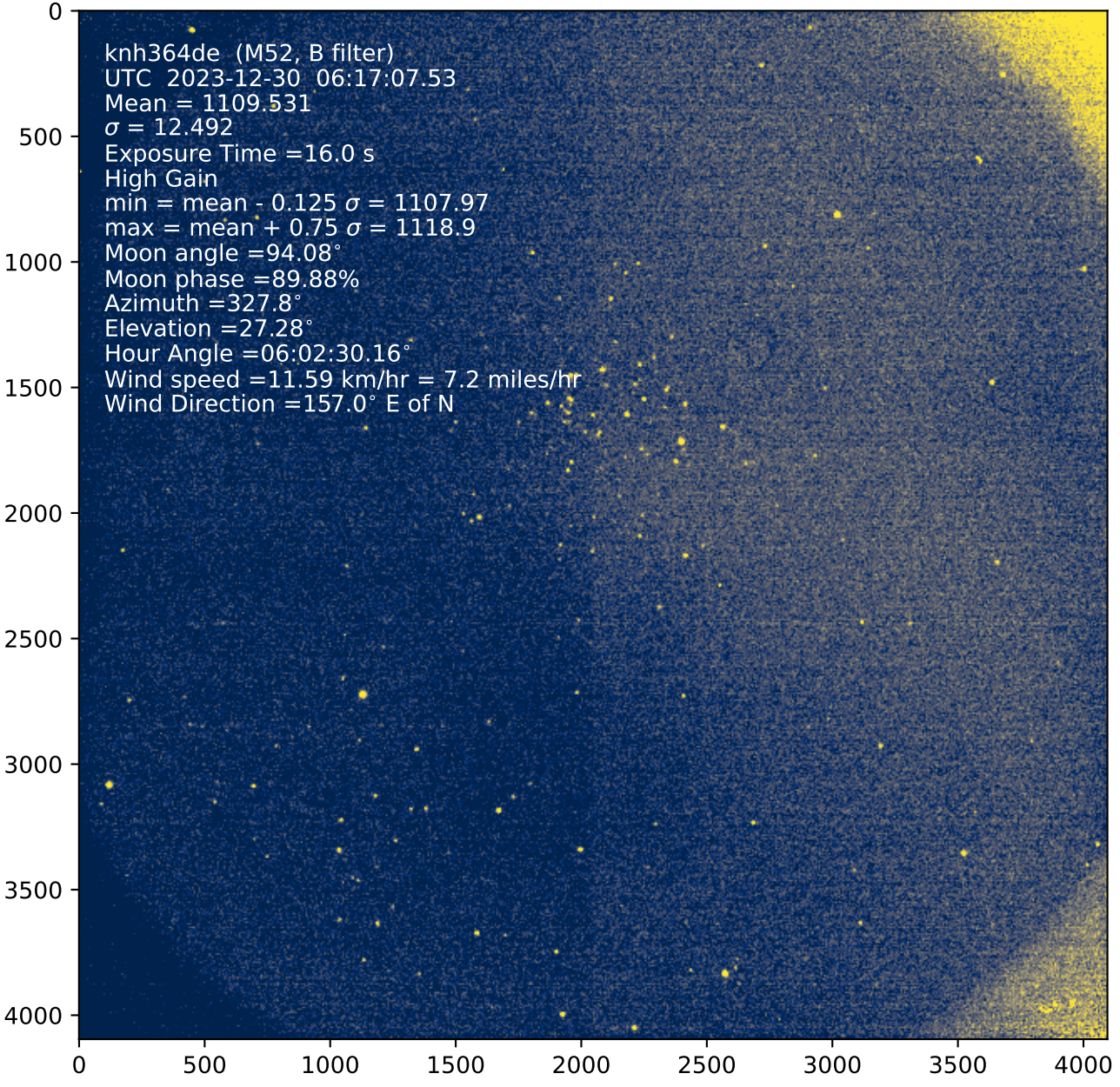
knh364de (M52, B filter)
UTC 2023-12-30 06:17:07.53
Mean = 1109.531
σ = 12.492
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1107.97
max = mean + 0.75 σ = 1118.9
Moon angle =94.08°
Moon phase =89.88%
Azimuth =327.8°
Elevation =27.28°
Hour Angle =06:02:30.16°
Wind speed =11.59 km/hr = 7.2 miles/hr
Wind Direction =157.0° E of N
0
500
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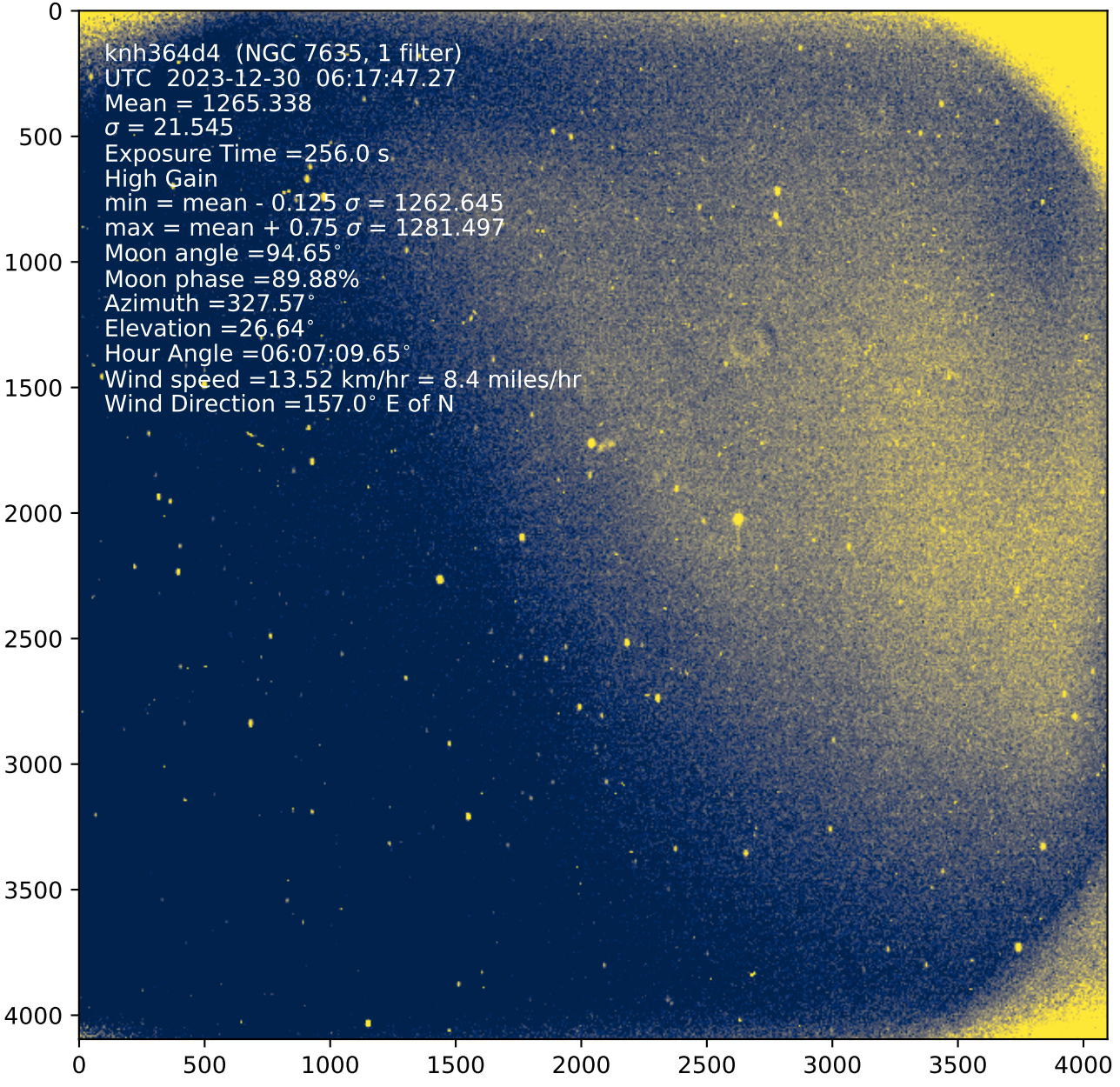
2000
2500
3000
3500
4000


knh364d4 (NGC 7635, 1 filter)
UTC 2023-12-30 06:17:47.27
Mean = 1265.338
σ = 21.545
Exposure Time =256.0 s
High Gain
min = mean - 0.125 σ = 1262.645
max = mean + 0.75 σ = 1281.497
Moon angle =94.65°
Moon phase =89.88%
Azimuth =327.57°
Elevation =26.64°
Hour Angle =06:07:09.65°
Wind speed =13.52 km/hr = 8.4 miles/hr
Wind Direction =157.0° E of N
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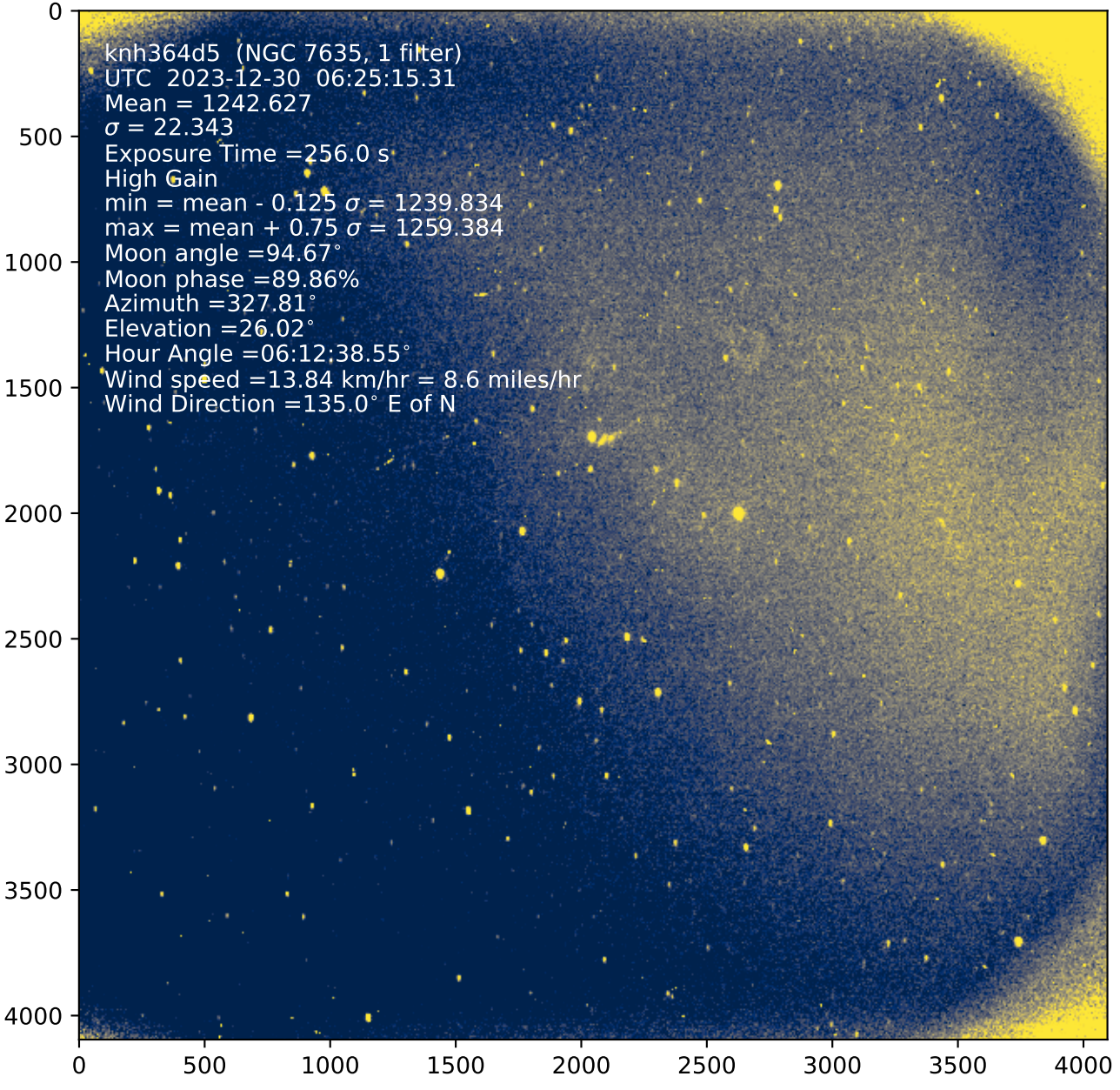
knh364d5 (NGC 7635, 1 filter)
UTC 2023-12-30 06:25:15.31
Mean = 1242.627
σ = 22.343
Exposure Time =256.0 s
High Gain
min = mean - 0.125 σ = 1239.834
max = mean + 0.75 σ = 1259.384
Moon angle =94.67°
Moon phase =89.86%
Azimuth =327.81°
Elevation =26.02°
Hour Angle =06:12:38.55°
Wind speed =13.84 km/hr = 8.6 miles/hr
Wind Direction =135.0° E of N
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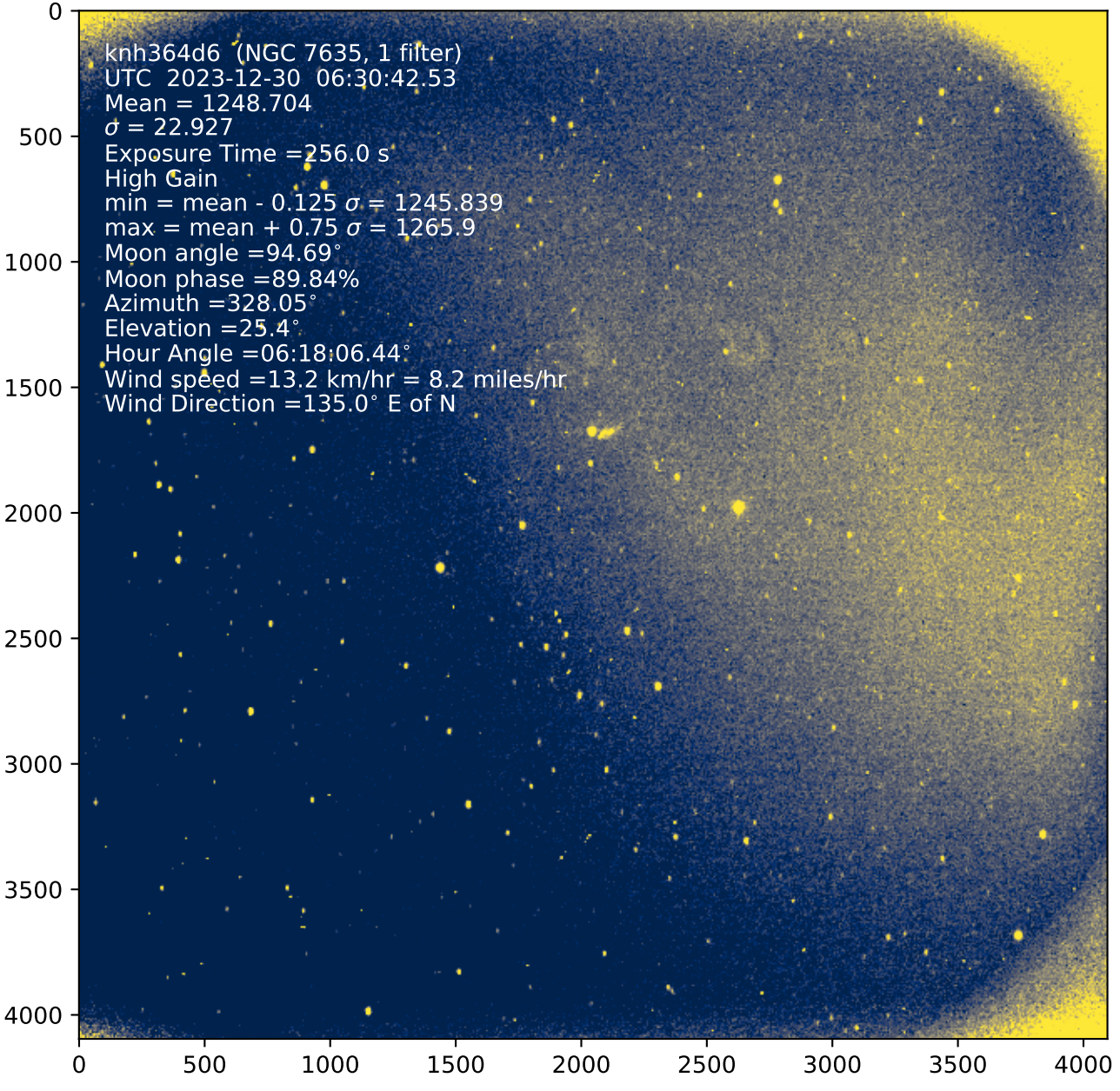
knh364d6 (NGC 7635, 1 filter)
UTC 2023-12-30 06:30:42.53
Mean = 1248.704
σ = 22.927
Exposure Time =256.0 s
High Gain
min = mean - 0.125 σ = 1245.839
max = mean + 0.75 σ = 1265.9
Moon angle =94.69°
Moon phase =89.84%
Azimuth =328.05°
Elevation =25.4°
Hour Angle =06:18:06.44°
Wind speed =13.2 km/hr = 8.2 miles/hr
Wind Direction =135.0° E of N
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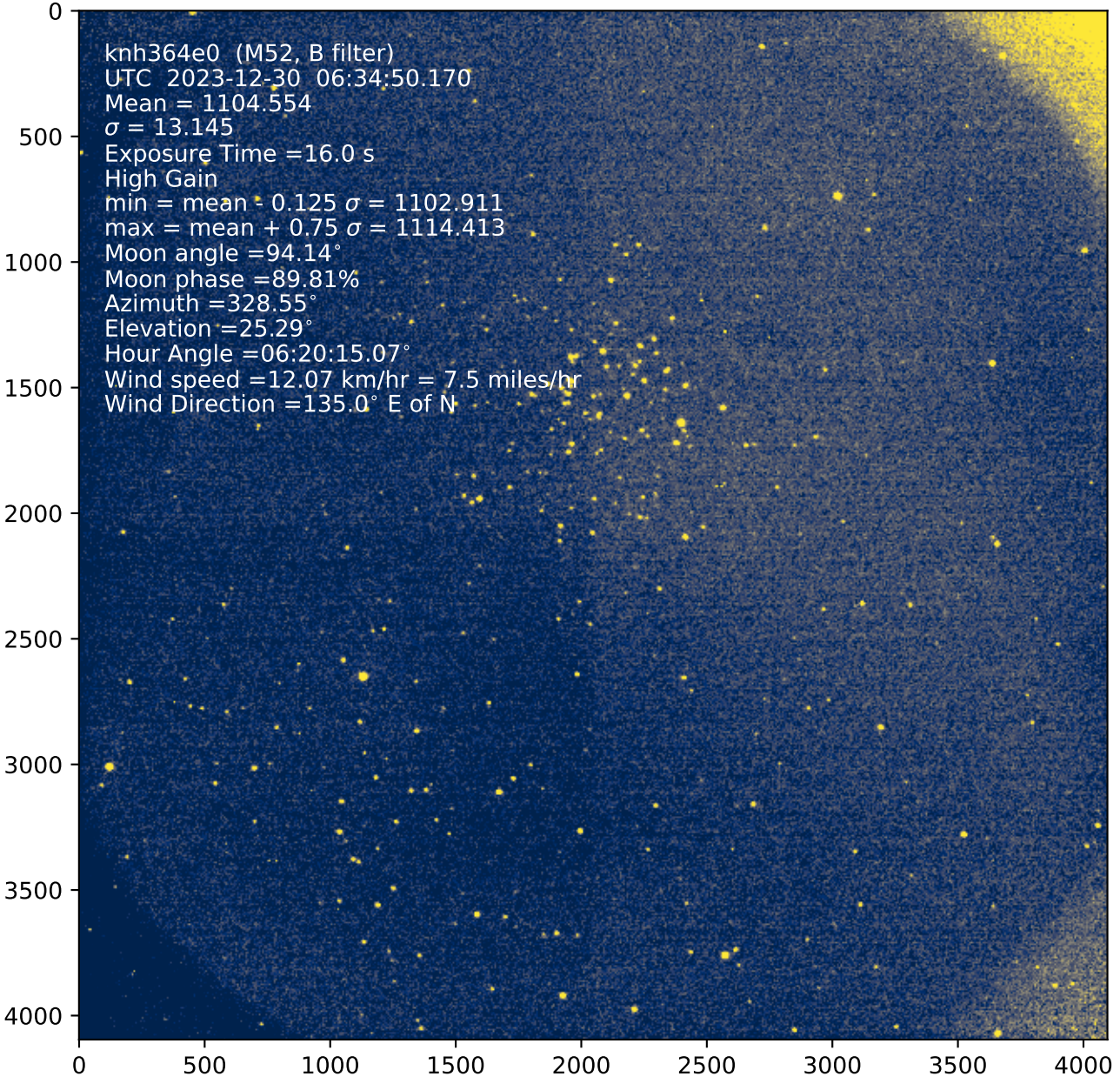
knh364e0 (M52, B filter)
UTC 2023-12-30 06:34:50.170
Mean = 1104.554
σ = 13.145
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1102.911
max = mean + 0.75 σ = 1114.413
Moon angle =94.14°
Moon phase =89.81%
Azimuth =328.55°
Elevation =25.29°
Hour Angle =06:20:15.07°
Wind speed =12.07 km/hr = 7.5 miles/hr
Wind Direction =135.0° E of N
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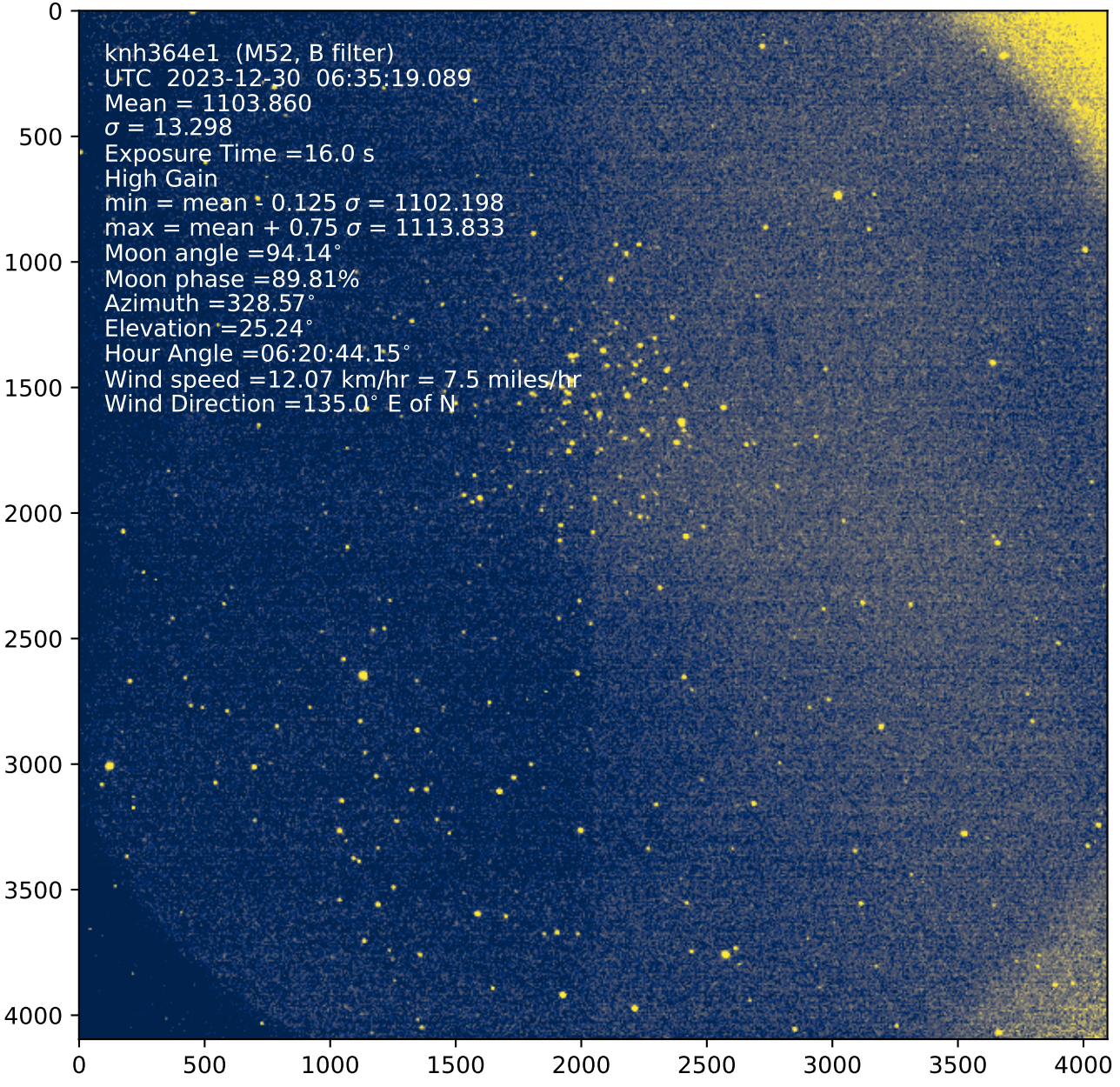
knh364e1 (M52, B filter)
UTC 2023-12-30 06:35:19.089
Mean = 1103.860
σ = 13.298
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1102.198
max = mean + 0.75 σ = 1113.833
Moon angle =94.14°
Moon phase =89.81%
Azimuth =328.57°
Elevation =25.24°
Hour Angle =06:20:44.15°
Wind speed =12.07 km/hr = 7.5 miles/hr
Wind Direction =135.0° E of N
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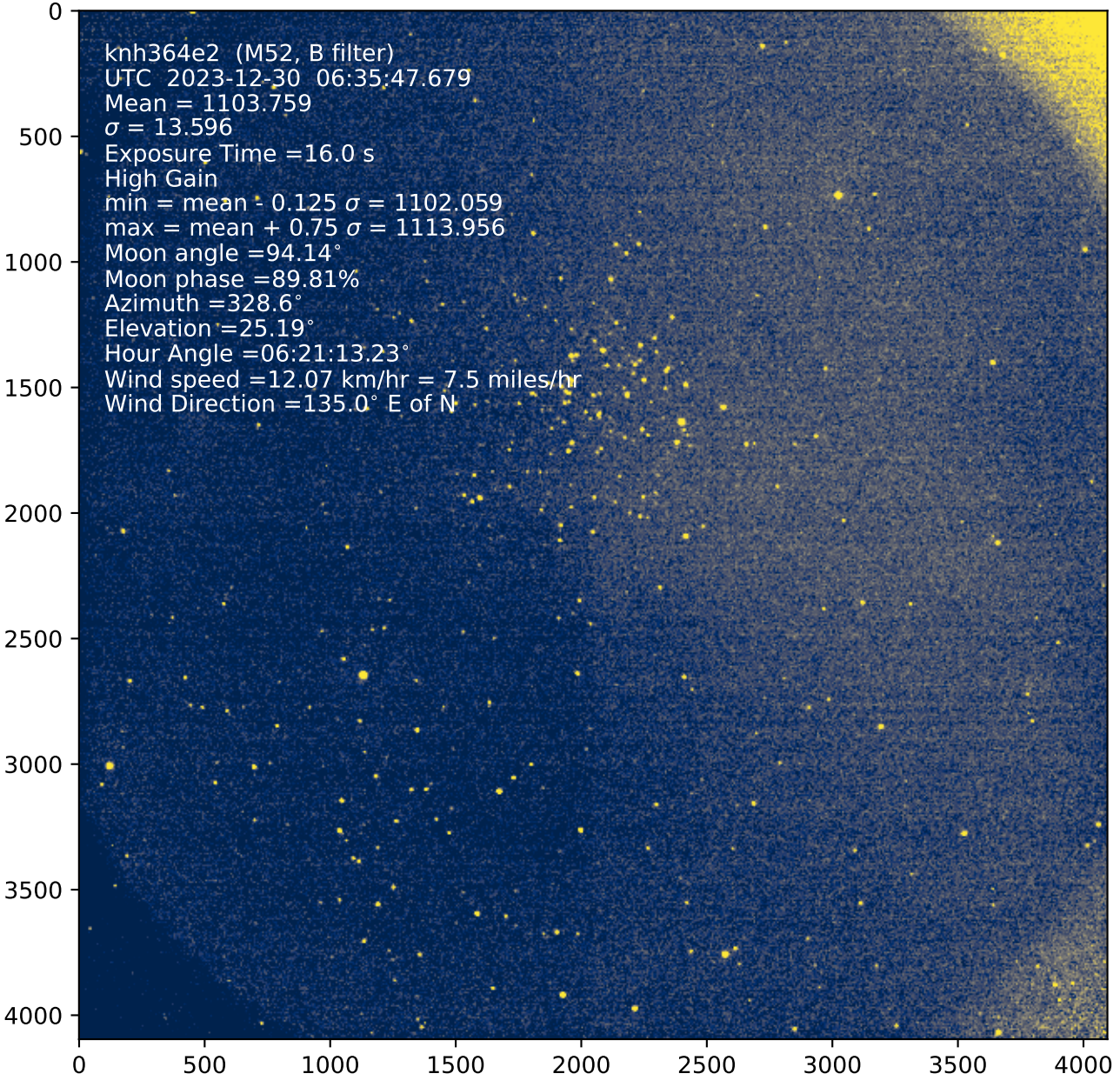
knh364e2 (M52, B filter)
UTC 2023-12-30 06:35:47.679
Mean = 1103.759
σ = 13.596
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1102.059
max = mean + 0.75 σ = 1113.956
Moon angle =94.14°
Moon phase =89.81%
Azimuth =328.6°
Elevation =25.19°
Hour Angle =06:21:13.23°
Wind speed =12.07 km/hr = 7.5 miles/hr
Wind Direction =135.0° E of N
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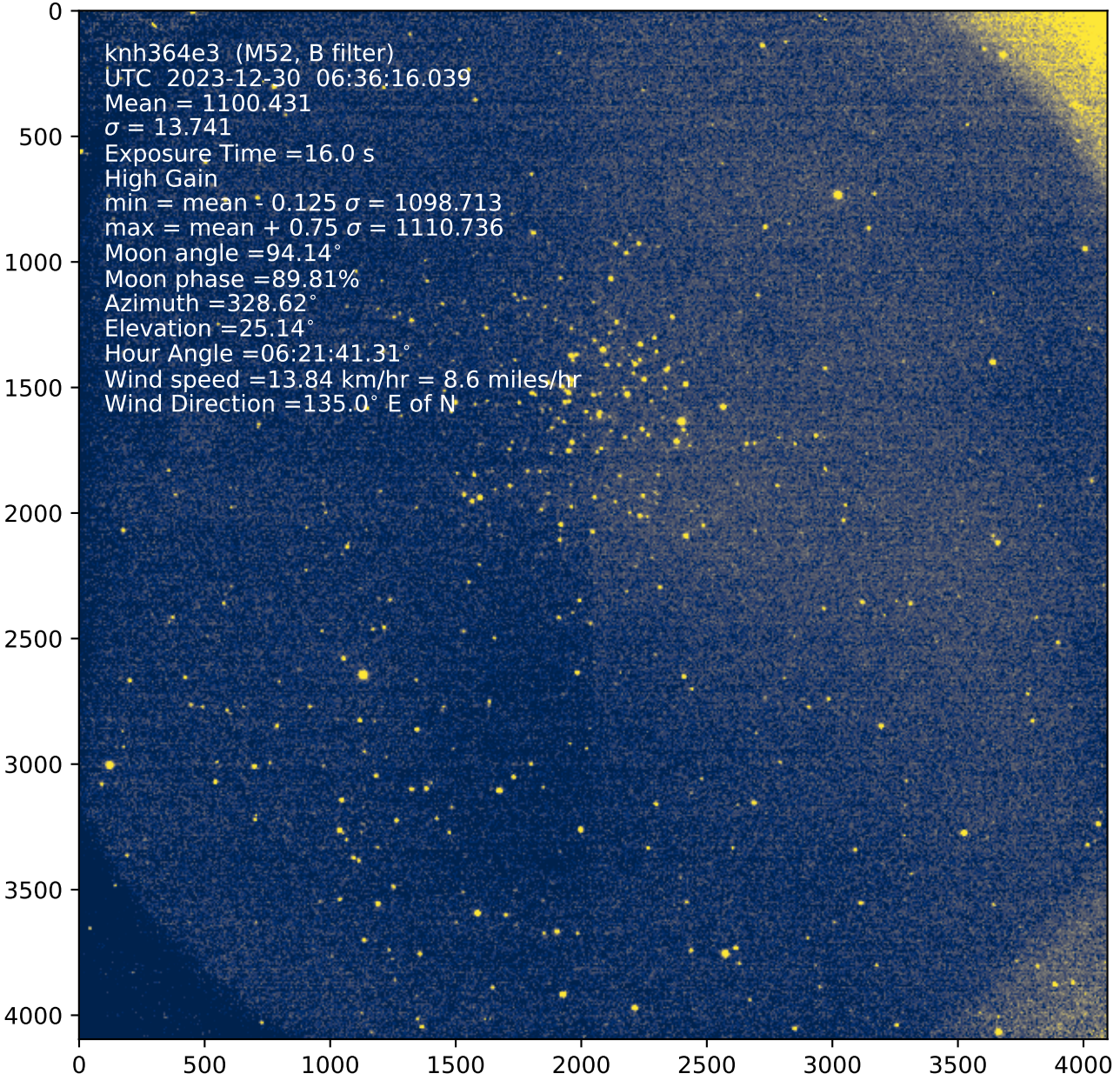
knh364e3 (M52, B filter)
UTC 2023-12-30 06:36:16.039
Mean = 1100.431
σ = 13.741
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1098.713
max = mean + 0.75 σ = 1110.736
Moon angle =94.14°
Moon phase =89.81%
Azimuth =328.62°
Elevation =25.14°
Hour Angle =06:21:41.31°
Wind speed =13.84 km/hr = 8.6 miles/hr
Wind Direction =135.0° E of N
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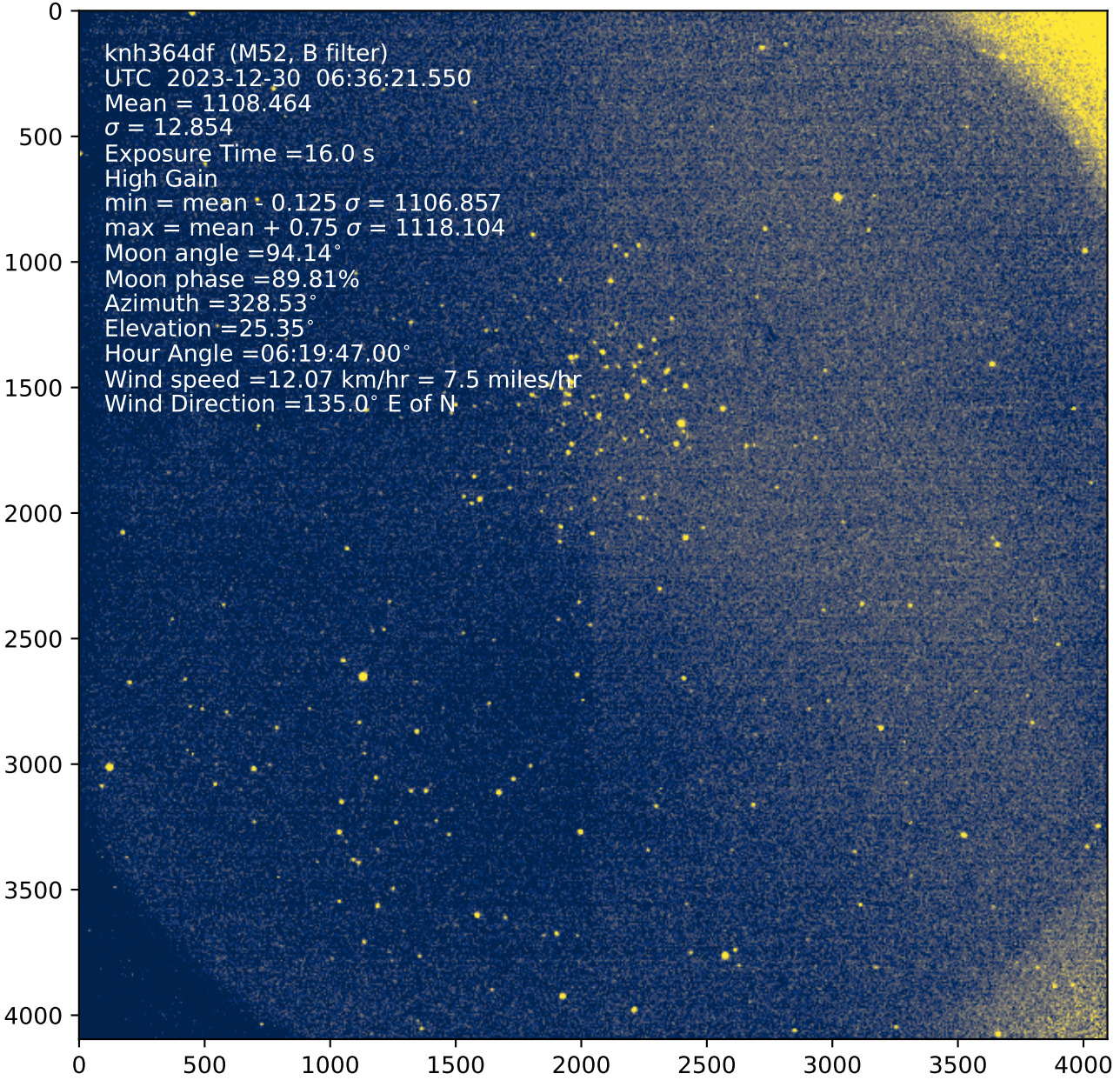
knh364df (M52, B filter)
UTC 2023-12-30 06:36:21.550
Mean = 1108.464
σ = 12.854
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1106.857
max = mean + 0.75 σ = 1118.104
Moon angle =94.14°
Moon phase =89.81%
Azimuth =328.53°
Elevation =25.35°
Hour Angle =06:19:47.00°
Wind speed =12.07 km/hr = 7.5 miles/hr
Wind Direction =135.0° E of N
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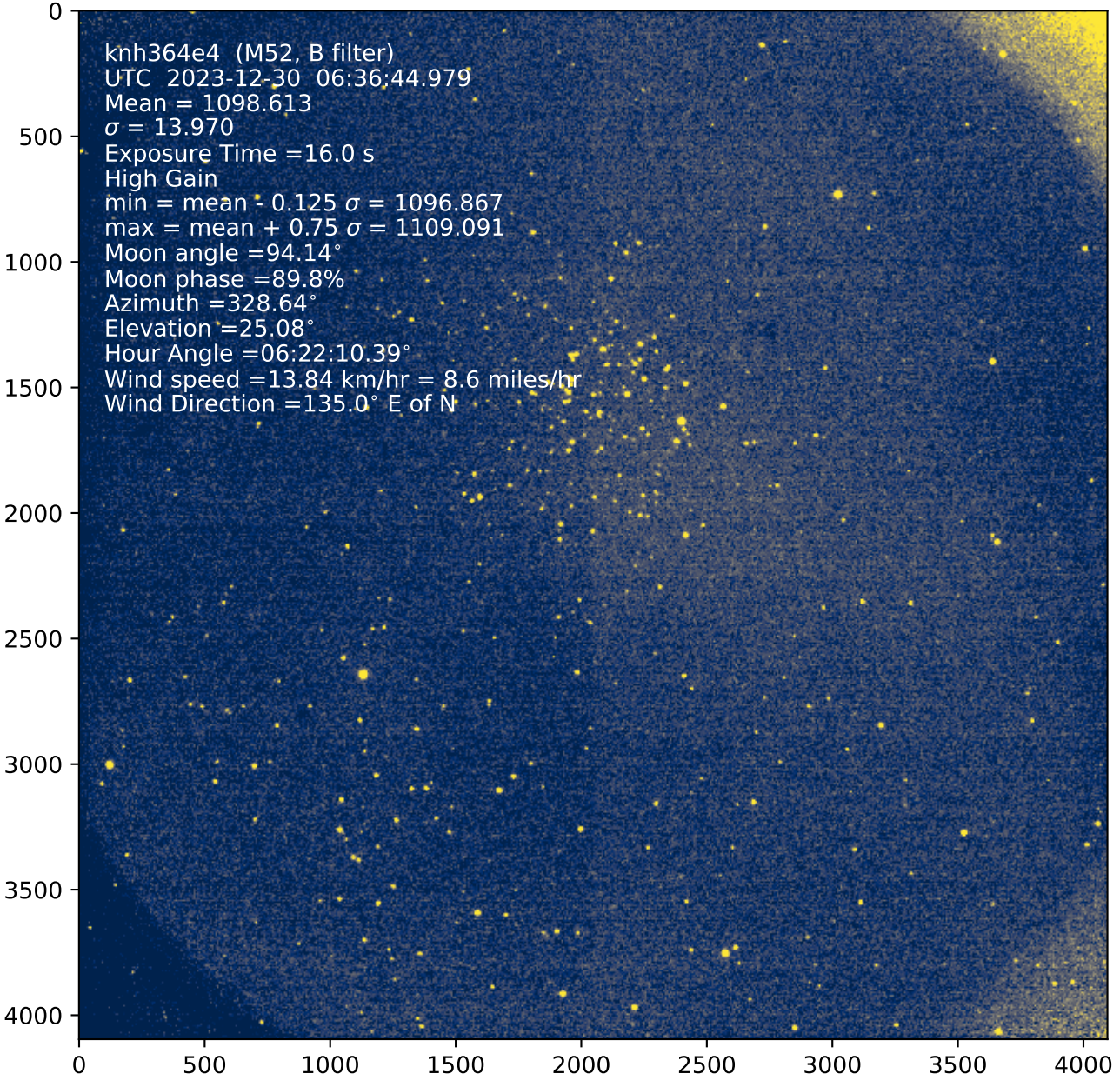
knh364e4 (M52, B filter)
UTC 2023-12-30 06:36:44.979
Mean = 1098.613
σ = 13.970
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1096.867
max = mean + 0.75 σ = 1109.091
Moon angle =94.14°
Moon phase =89.8%
Azimuth =328.64°
Elevation =25.08°
Hour Angle =06:22:10.39°
Wind speed =13.84 km/hr = 8.6 miles/hr
Wind Direction =135.0° E of N
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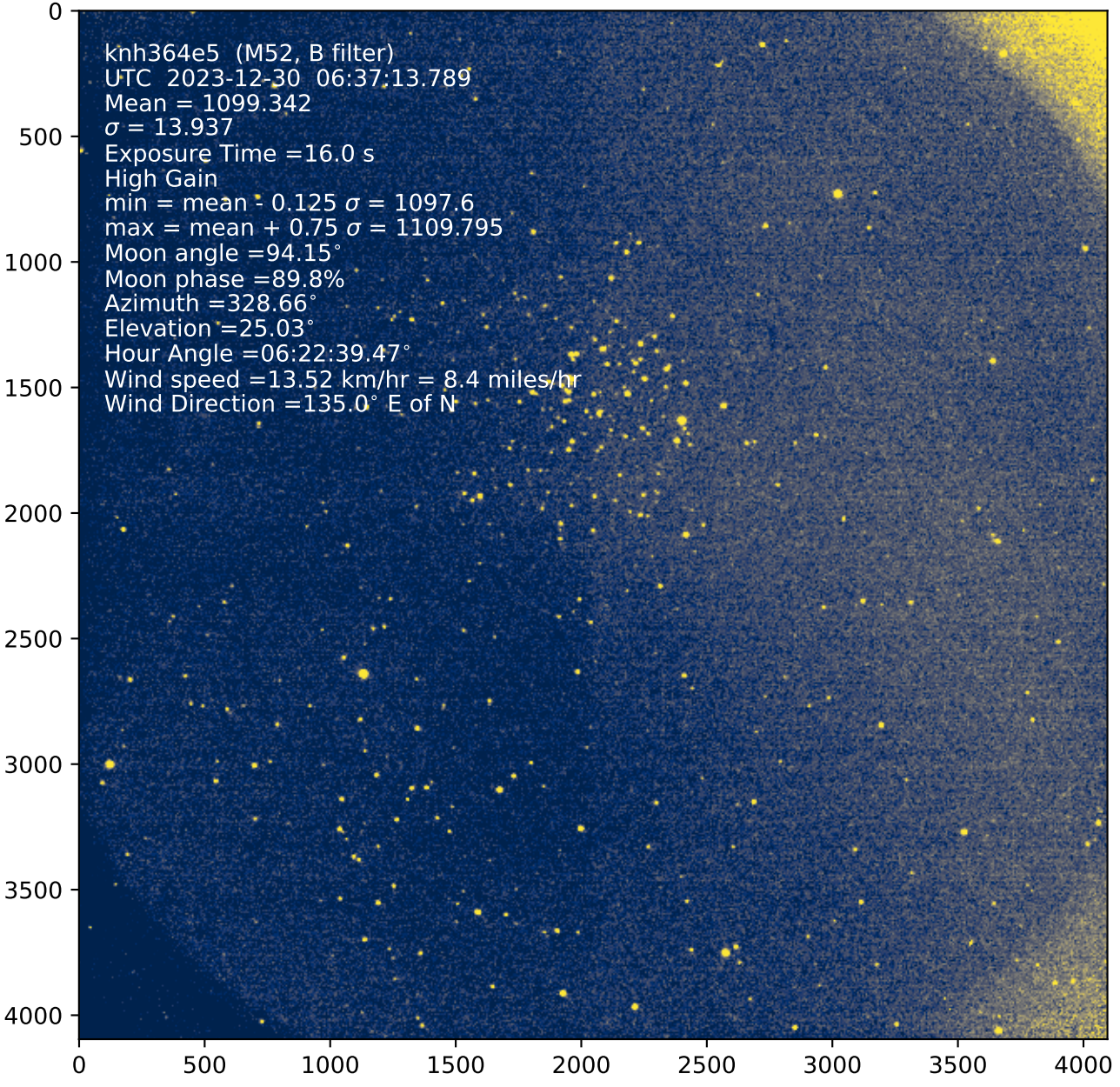
knh364e5 (M52, B filter)
UTC 2023-12-30 06:37:13.789
Mean = 1099.342
σ = 13.937
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1097.6
max = mean + 0.75 σ = 1109.795
Moon angle =94.15°
Moon phase =89.8%
Azimuth =328.66°
Elevation =25.03°
Hour Angle =06:22:39.47°
Wind speed =13.52 km/hr = 8.4 miles/hr
Wind Direction =135.0° E of N
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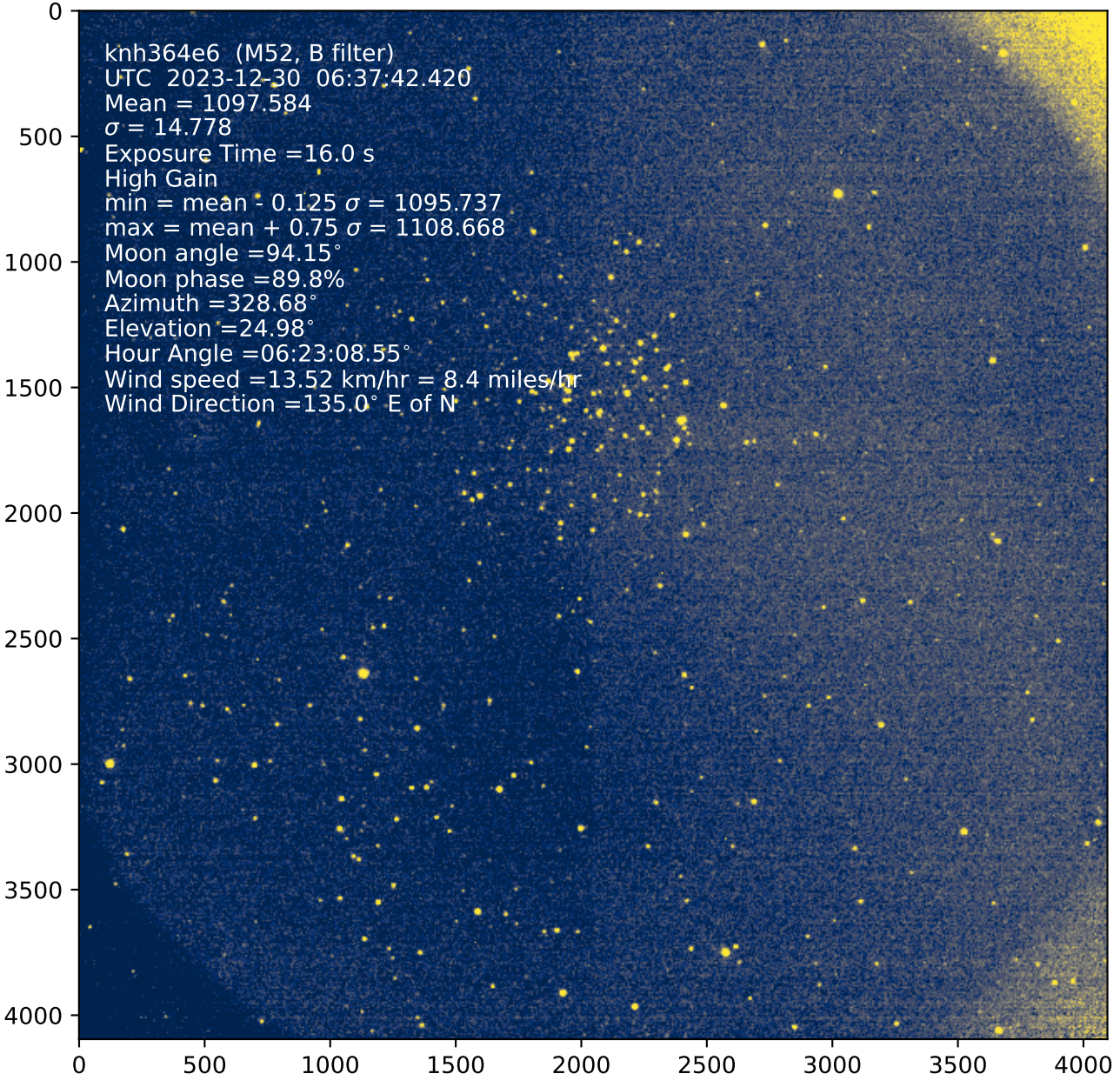
knh364e6 (M52, B filter)
UTC 2023-12-30 06:37:42.420
Mean = 1097.584
σ = 14.778
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1095.737
max = mean + 0.75 σ = 1108.668
Moon angle =94.15˚
Moon phase =89.8%
Azimuth =328.68˚
Elevation =24.98˚
Hour Angle =06:23:08.55˚
Wind speed =13.52 km/hr = 8.4 miles/hr
Wind Direction =135.0˚ E of N
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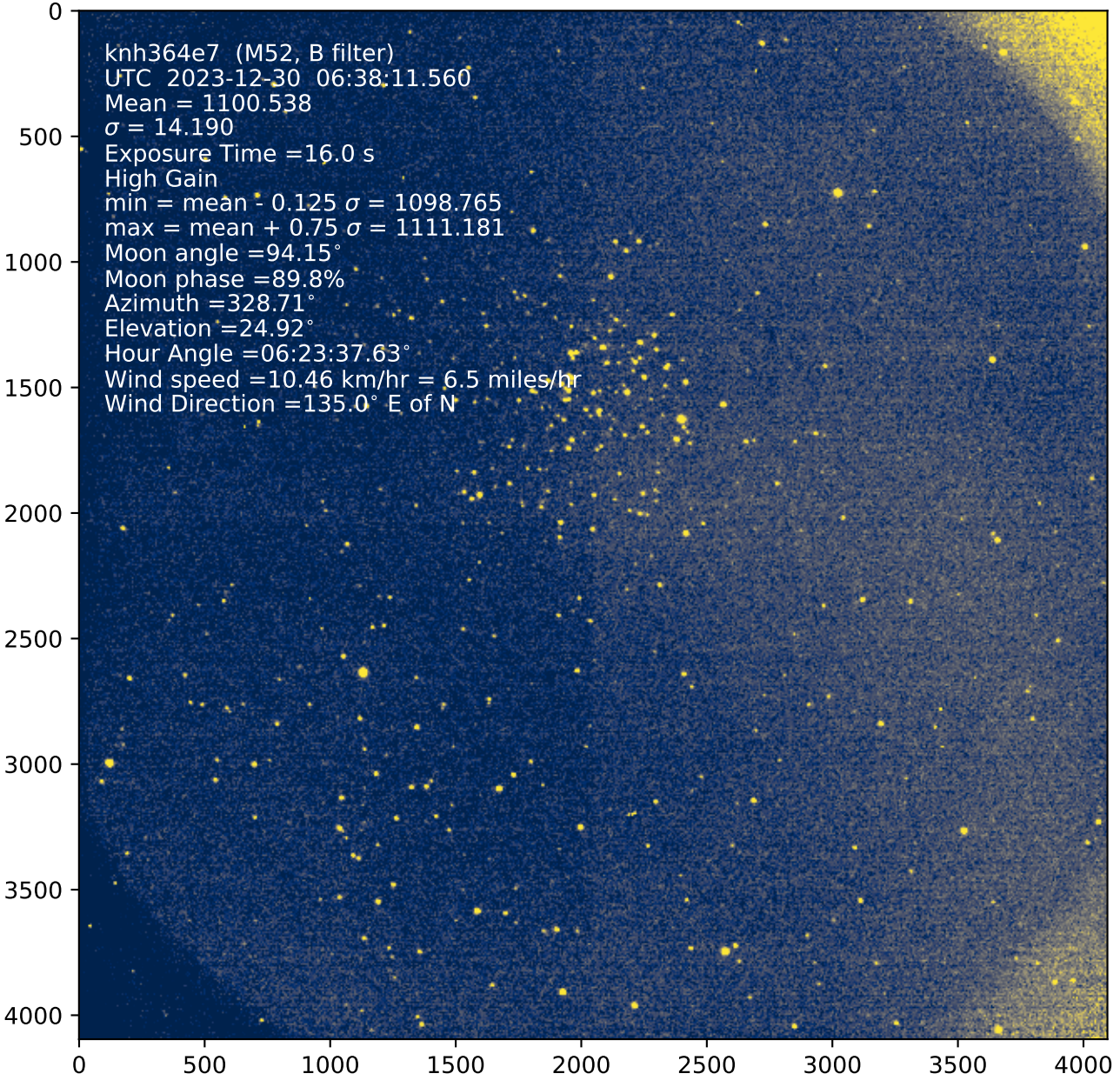
knh364e7 (M52, B filter)
UTC 2023-12-30 06:38:11.560
Mean = 1100.538
σ = 14.190
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1098.765
max = mean + 0.75 σ = 1111.181
Moon angle =94.15°
Moon phase =89.8%
Azimuth =328.71°
Elevation =24.92°
Hour Angle =06:23:37.63°
Wind speed =10.46 km/hr = 6.5 miles/hr
Wind Direction =135.0° E of N
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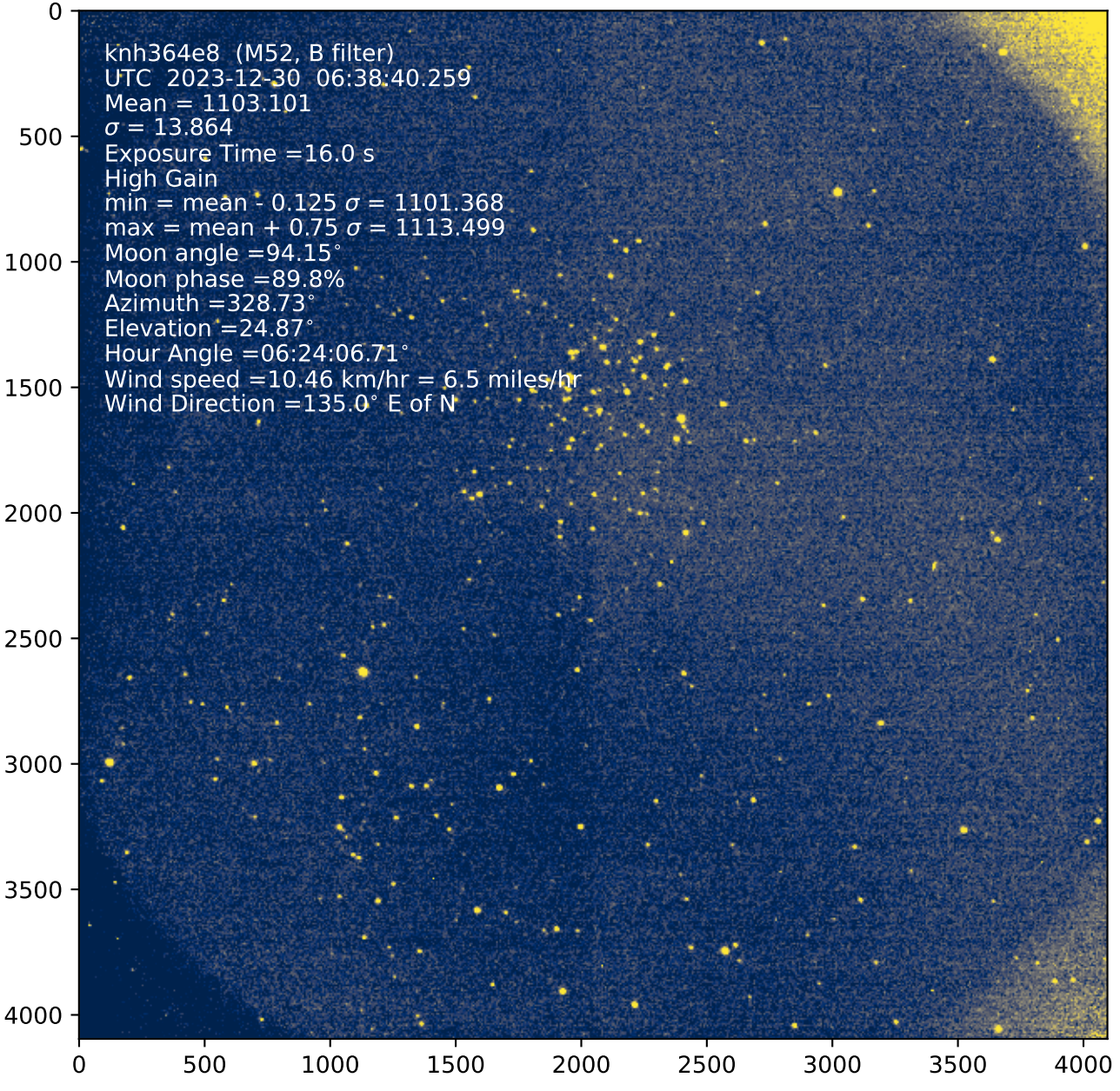
3500
4000


knh364e8 (M52, B filter)
UTC 2023-12-30 06:38:40.259
Mean = 1103.101
σ = 13.864
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1101.368
max = mean + 0.75 σ = 1113.499
Moon angle =94.15°
Moon phase =89.8%
Azimuth =328.73°
Elevation =24.87°
Hour Angle =06:24:06.71°
Wind speed =10.46 km/hr = 6.5 miles/hr
Wind Direction =135.0° E of N
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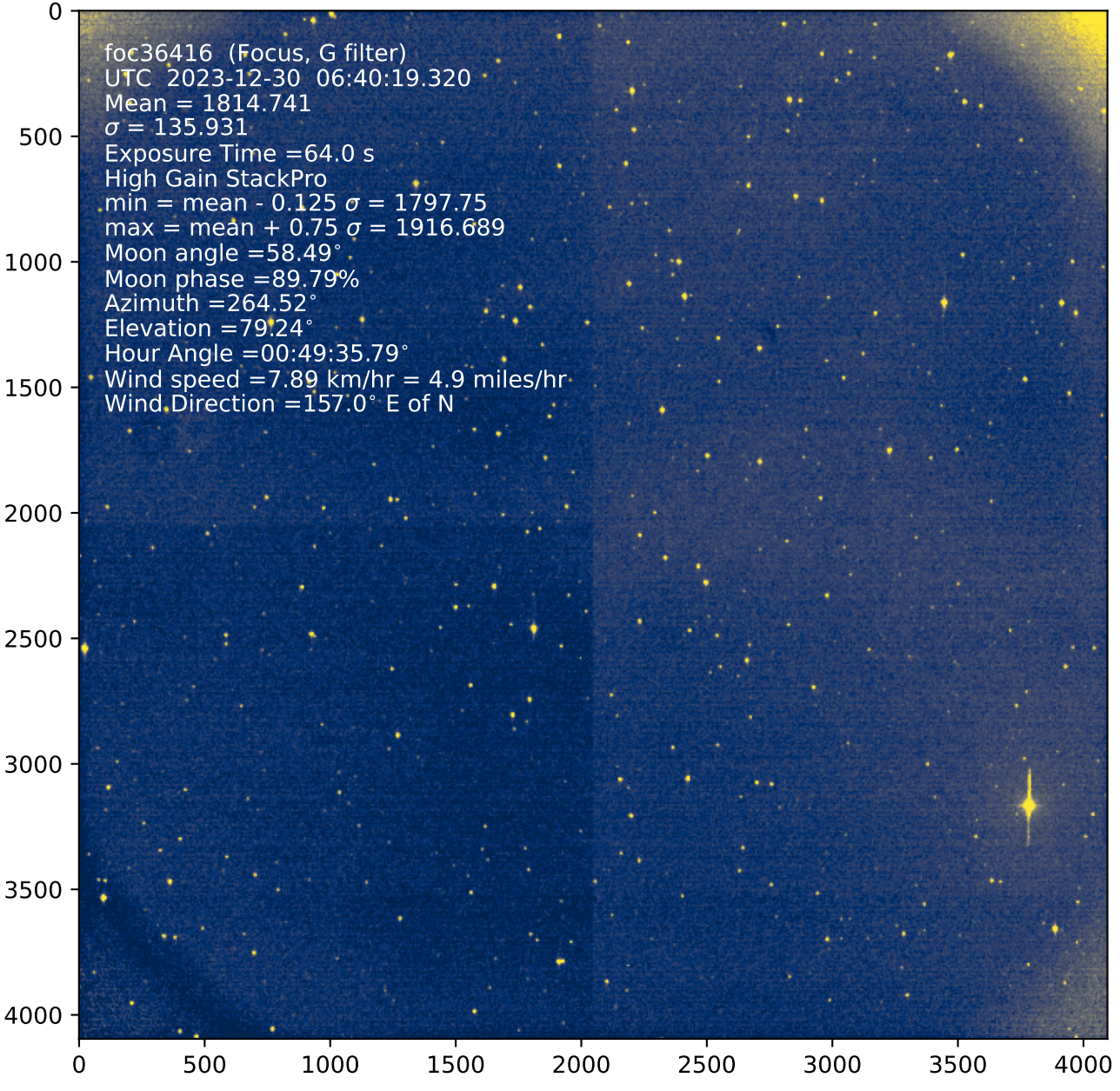
foc36416 (Focus, G filter)
UTC 2023-12-30 06:40:19.320
Mean = 1814.741
σ = 135.931
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 1797.75
max = mean + 0.75 σ = 1916.689
Moon angle =58.49°
Moon phase =89.79%
Azimuth =264.52°
Elevation =79.24°
Hour Angle =00:49:35.79°
Wind speed =7.89 km/hr = 4.9 miles/hr
Wind Direction =157.0° E of N
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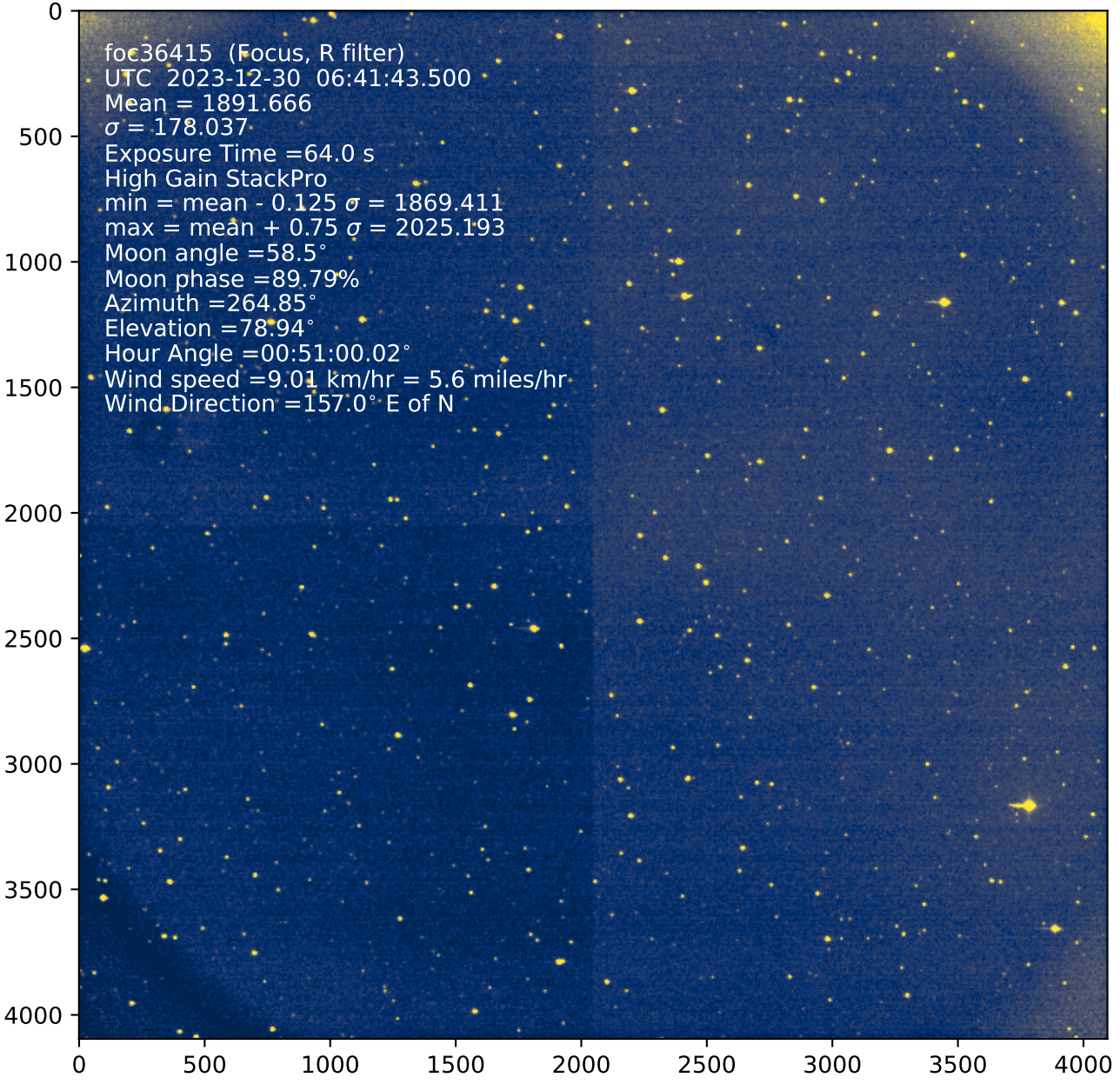
foc36415 (Focus, R filter)
UTC 2023-12-30 06:41:43.500
Mean = 1891.666
σ = 178.037
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 1869.411
max = mean + 0.75 σ = 2025.193
Moon angle =58.5°
Moon phase =89.79%
Azimuth =264.85°
Elevation =78.94°
Hour Angle =00:51:00.02°
Wind speed =9.01 km/hr = 5.6 miles/hr
Wind Direction =157.0° E of N
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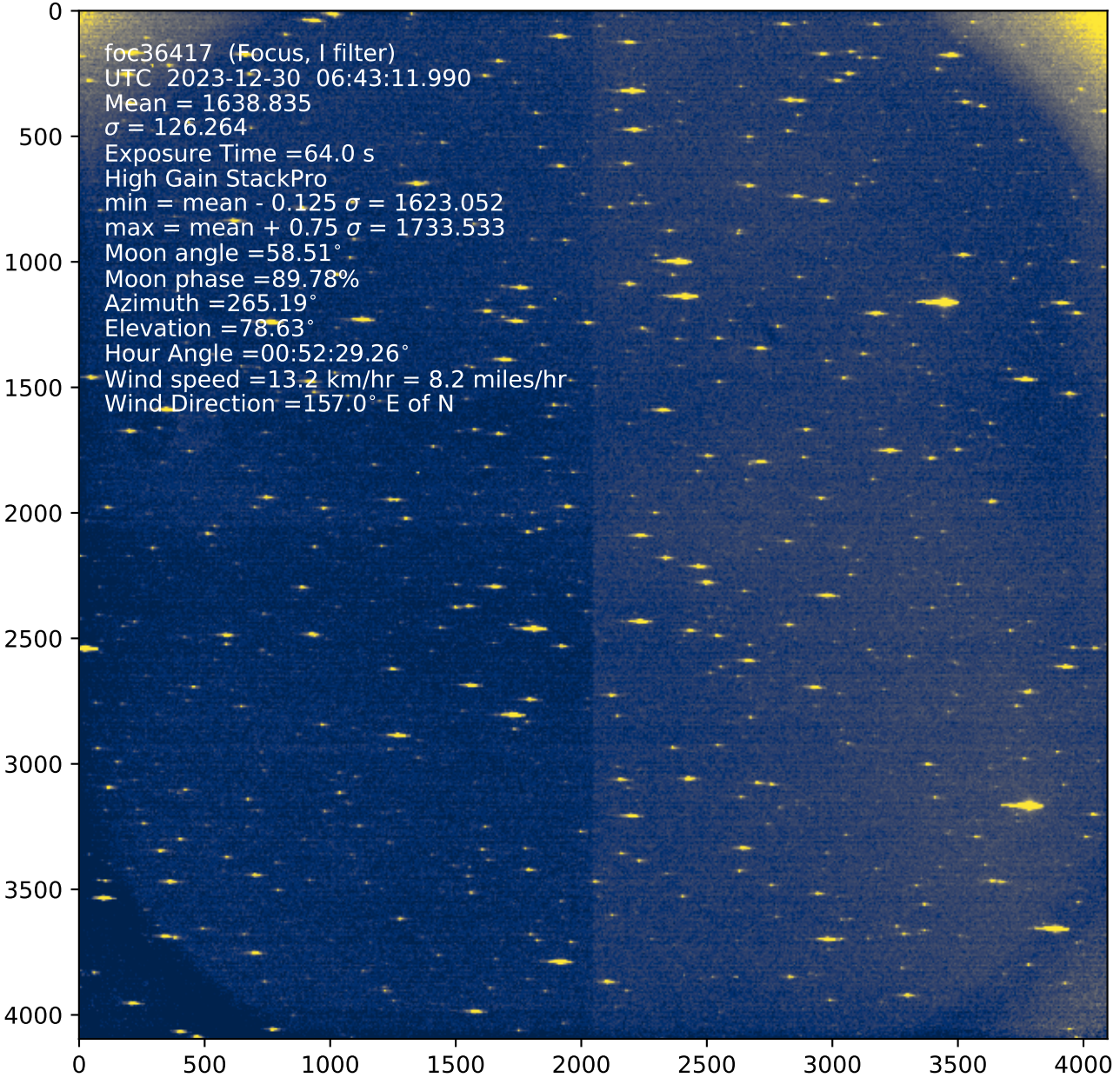
foc36417 (Focus, I filter)
UTC 2023-12-30 06:43:11.990
Mean = 1638.835
σ = 126.264
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 1623.052
max = mean + 0.75 σ = 1733.533
Moon angle =58.51°
Moon phase =89.78%
Azimuth =265.19°
Elevation =78.63°
Hour Angle =00:52:29.26°
Wind speed =13.2 km/hr = 8.2 miles/hr
Wind Direction =157.0° E of N
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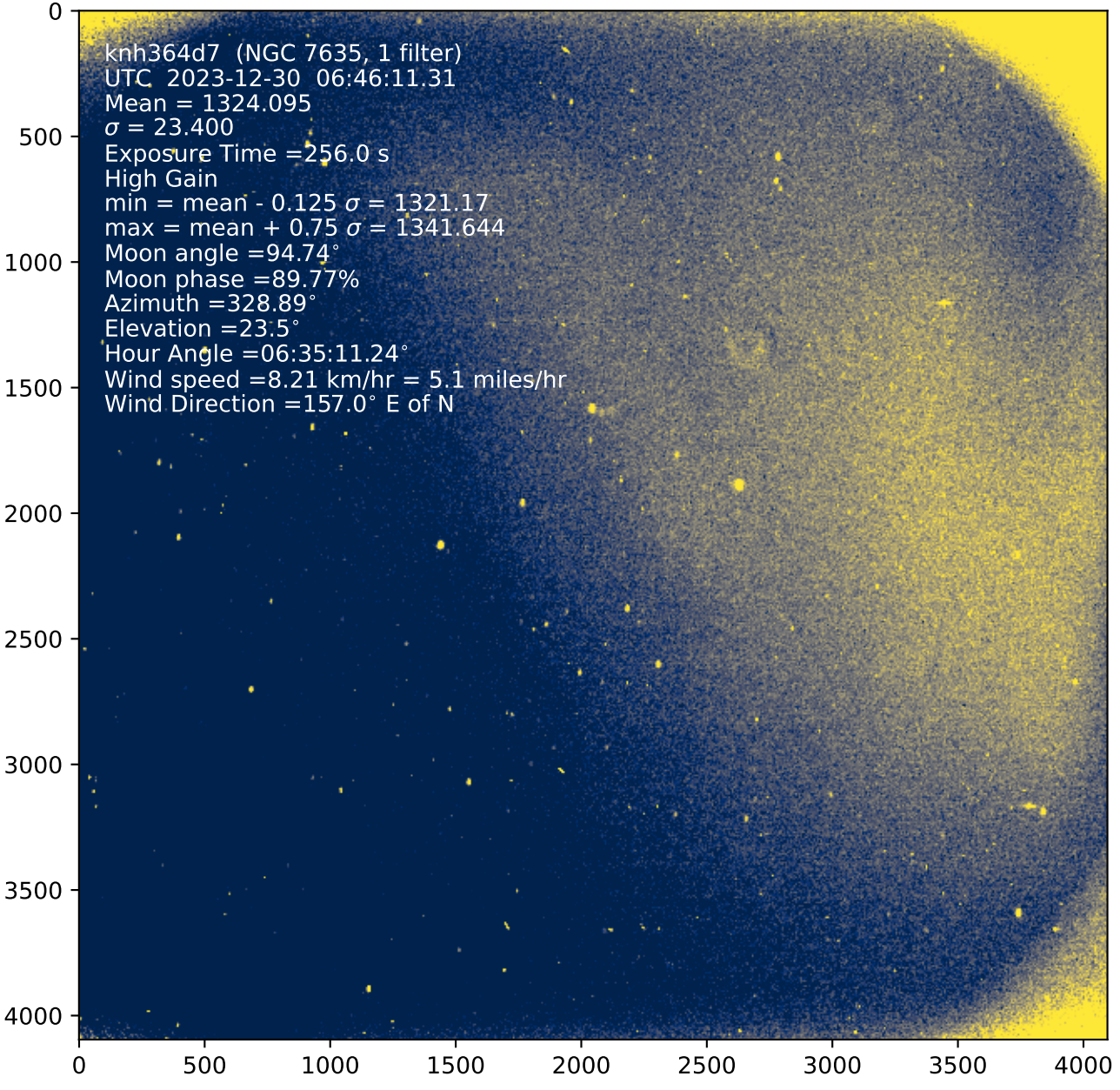
knh364d7 (NGC 7635, 1 filter)
UTC 2023-12-30 06:46:11.31
Mean = 1324.095
σ = 23.400
Exposure Time =256.0 s
High Gain
min = mean - 0.125 σ = 1321.17
max = mean + 0.75 σ = 1341.644
Moon angle =94.74°
Moon phase =89.77%
Azimuth =328.89°
Elevation =23.5°
Hour Angle =06:35:11.24°
Wind speed =8.21 km/hr = 5.1 miles/hr
Wind Direction =157.0° E of N
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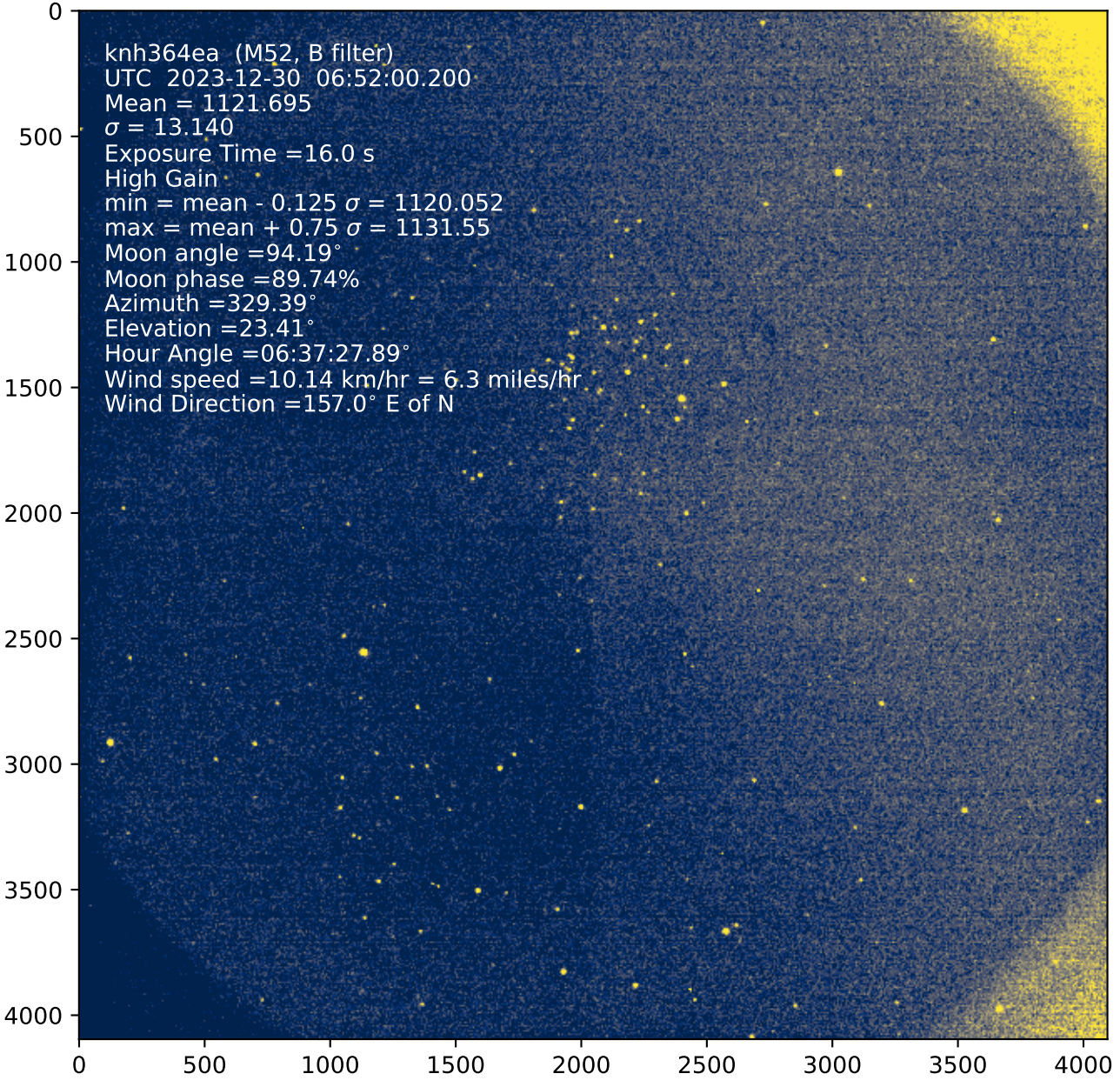
knh364ea (M52, B filter)
UTC 2023-12-30 06:52:00.200
Mean = 1121.695
σ = 13.140
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1120.052
max = mean + 0.75 σ = 1131.55
Moon angle =94.19°
Moon phase =89.74%
Azimuth =329.39°
Elevation =23.41°
Hour Angle =06:37:27.89°
Wind speed =10.14 km/hr = 6.3 miles/hr
Wind Direction =157.0° E of N
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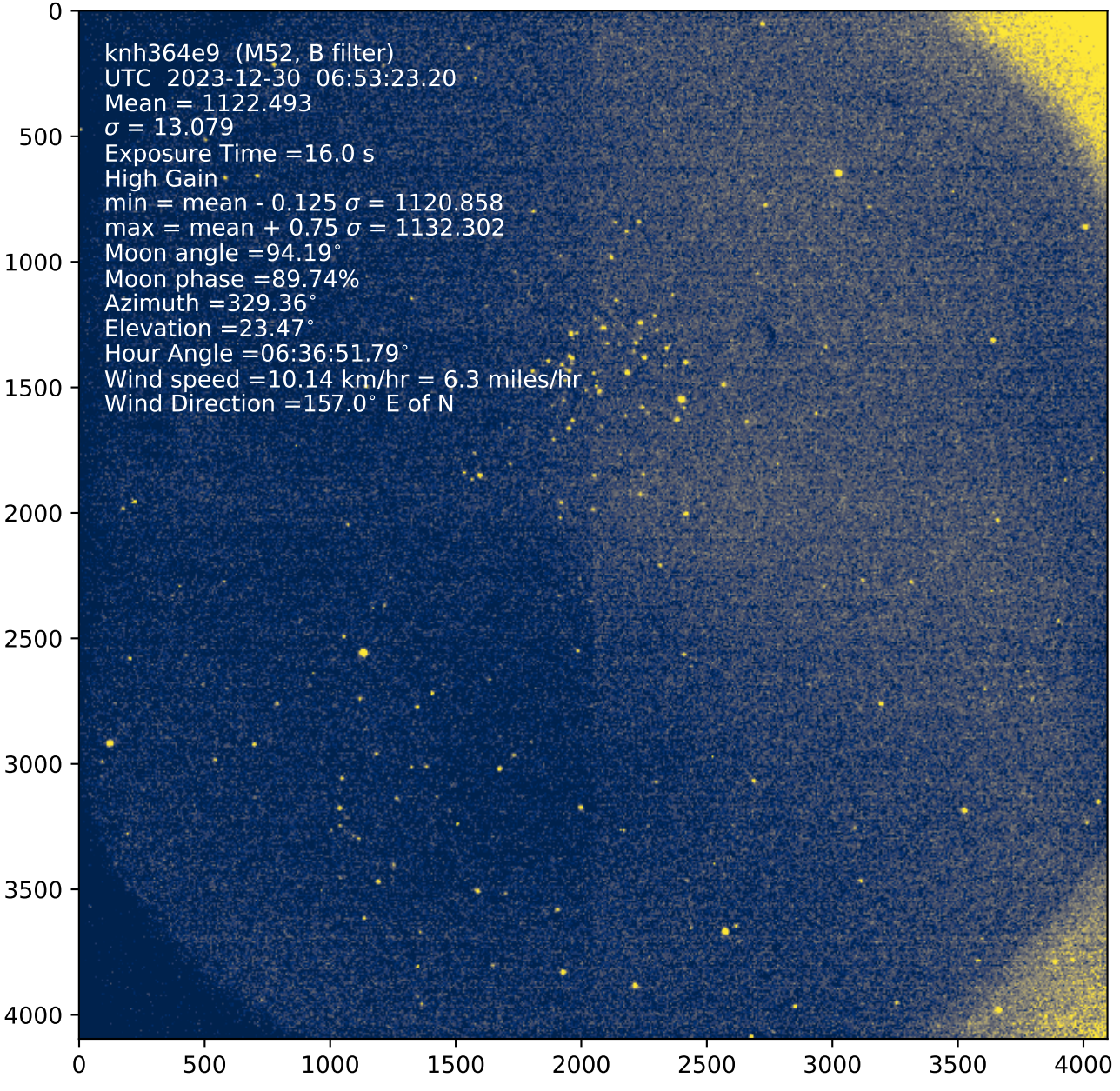
knh364e9 (M52, B filter)
UTC 2023-12-30 06:53:23.20
Mean = 1122.493
σ = 13.079
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1120.858
max = mean + 0.75 σ = 1132.302
Moon angle =94.19°
Moon phase =89.74%
Azimuth =329.36°
Elevation =23.47°
Hour Angle =06:36:51.79°
Wind speed =10.14 km/hr = 6.3 miles/hr
Wind Direction =157.0° E of N
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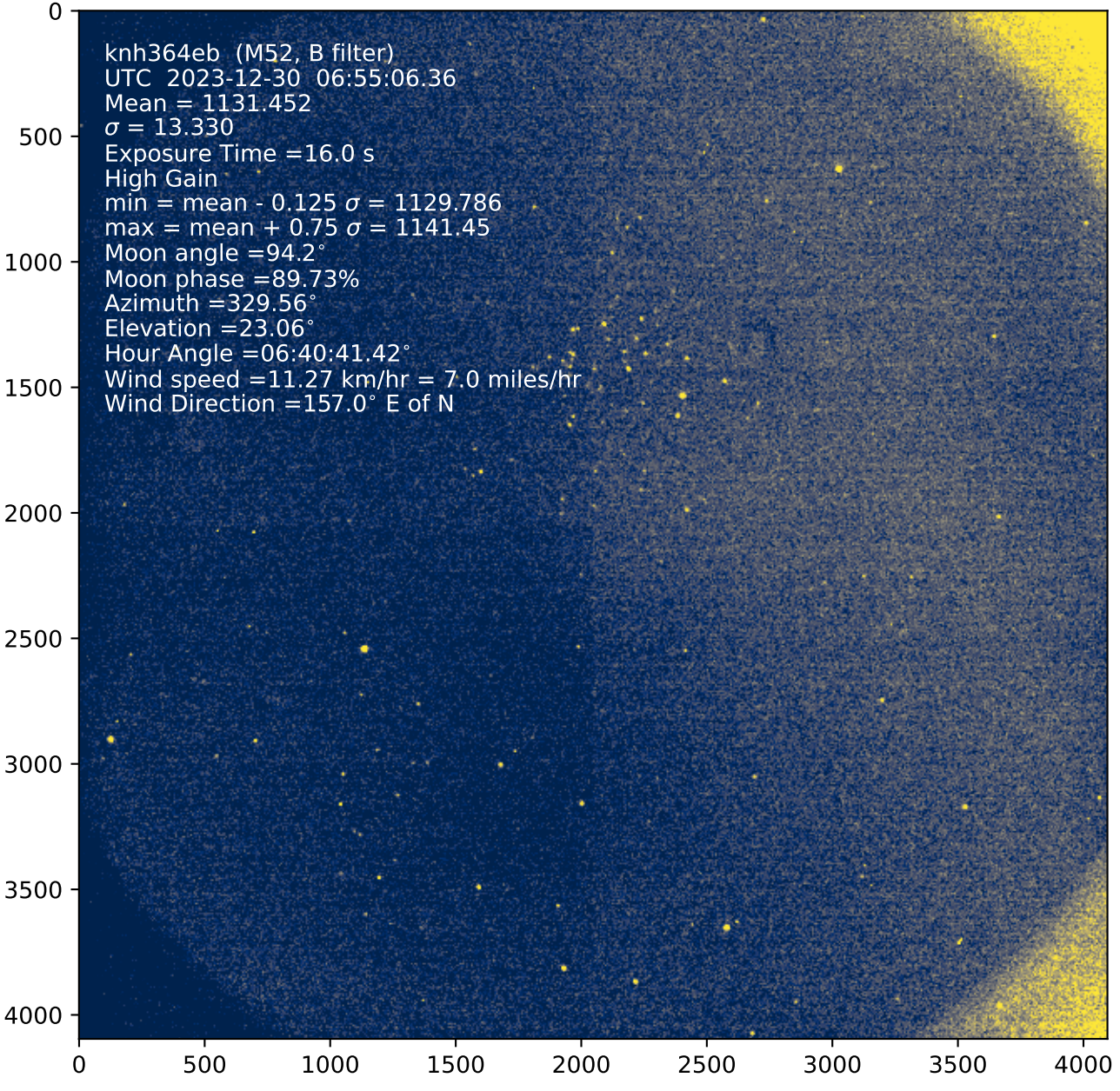
knh364eb (M52, B filter)
UTC 2023-12-30 06:55:06.36
Mean = 1131.452
σ = 13.330
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1129.786
max = mean + 0.75 σ = 1141.45
Moon angle =94.2°
Moon phase =89.73%
Azimuth =329.56°
Elevation =23.06°
Hour Angle =06:40:41.42°
Wind speed =11.27 km/hr = 7.0 miles/hr
Wind Direction =157.0° E of N
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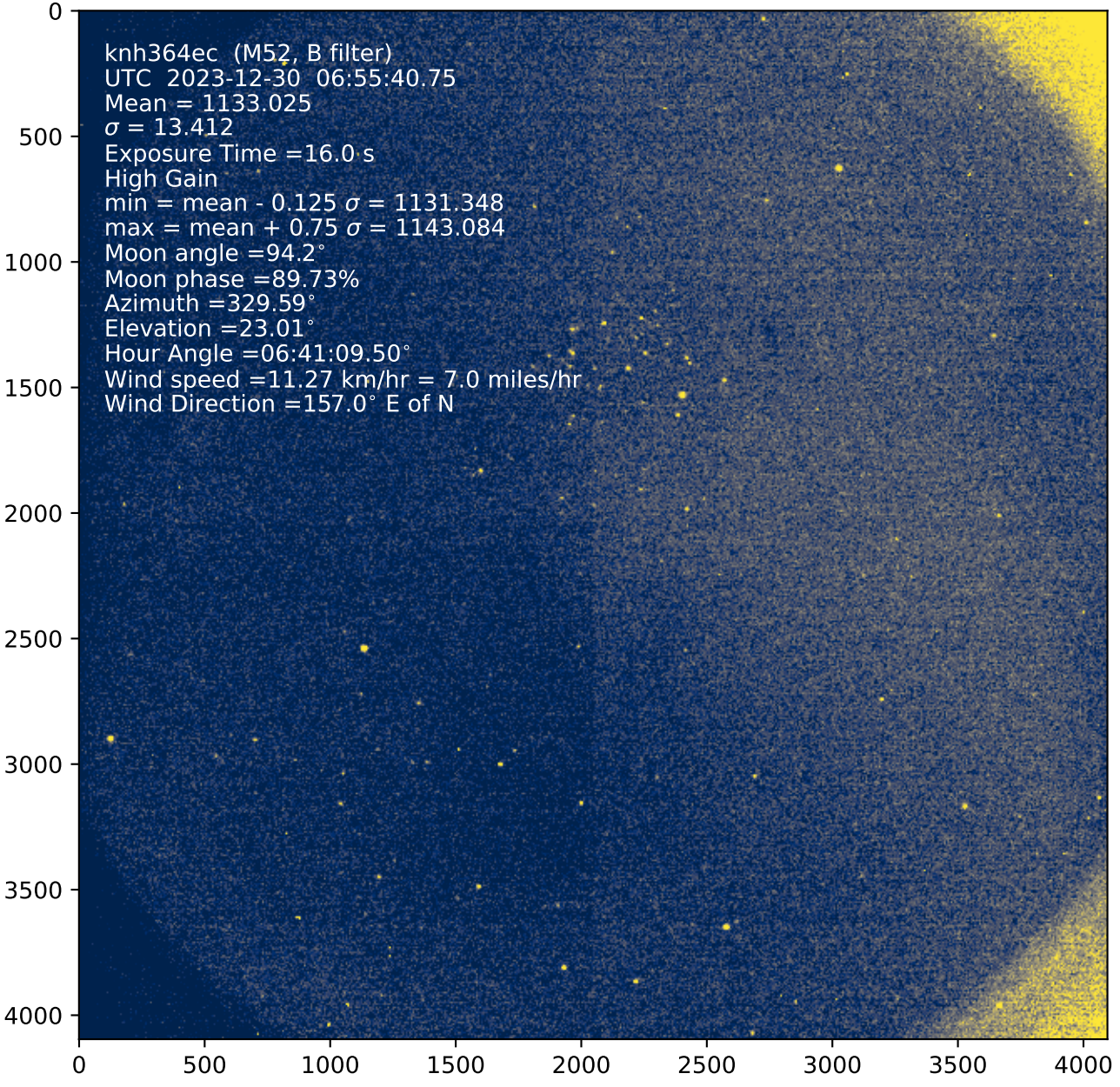
knh364ec (M52, B filter)
UTC 2023-12-30 06:55:40.75
Mean = 1133.025
σ = 13.412
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1131.348
max = mean + 0.75 σ = 1143.084
Moon angle =94.2°
Moon phase =89.73%
Azimuth =329.59°
Elevation =23.01°
Hour Angle =06:41:09.50°
Wind speed =11.27 km/hr = 7.0 miles/hr
Wind Direction =157.0° E of N
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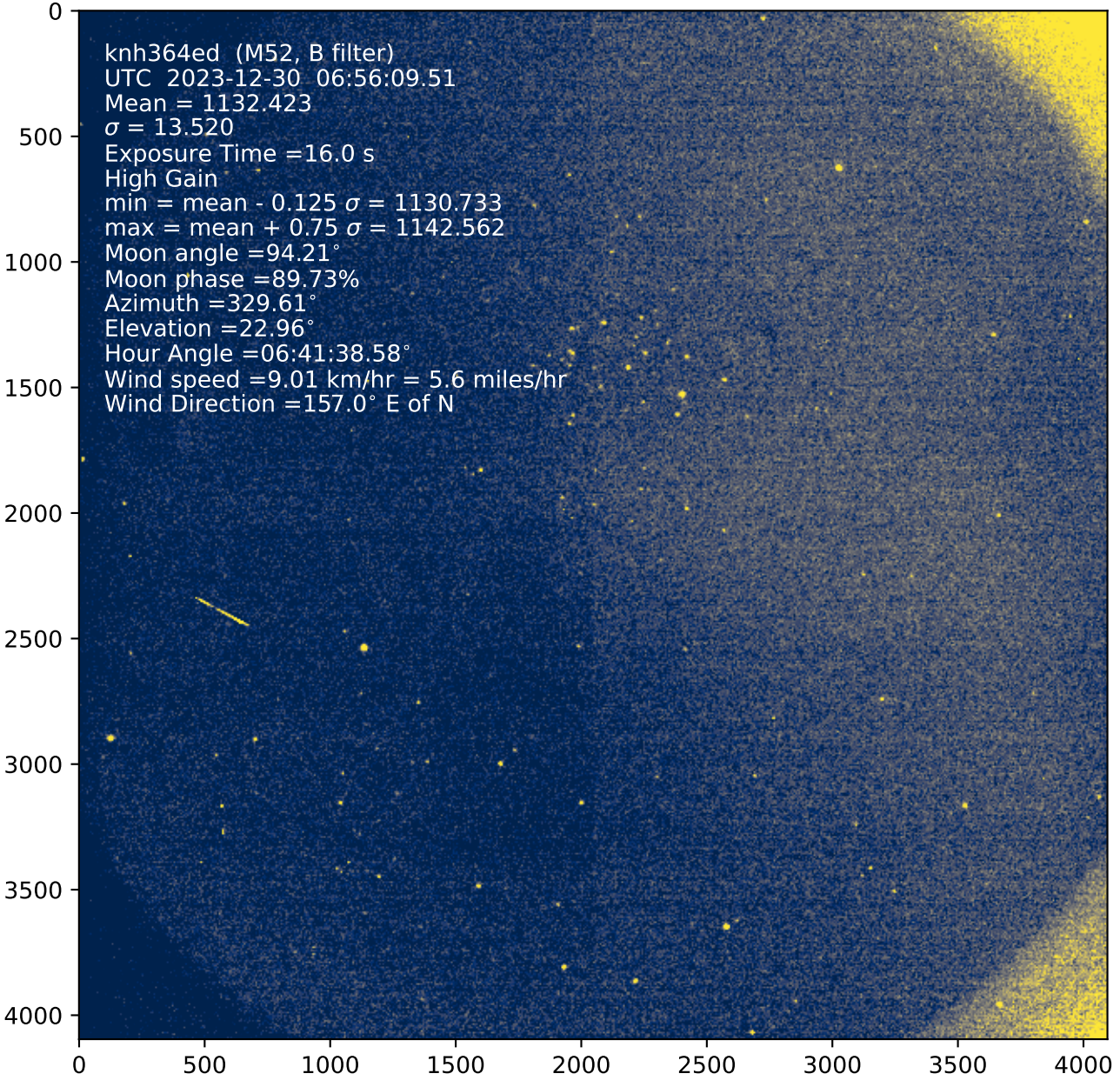
knh364ed (M52, B filter)
UTC 2023-12-30 06:56:09.51
Mean = 1132.423
σ = 13.520
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1130.733
max = mean + 0.75 σ = 1142.562
Moon angle =94.21°
Moon phase =89.73%
Azimuth =329.61°
Elevation =22.96°
Hour Angle =06:41:38.58°
Wind speed =9.01 km/hr = 5.6 miles/hr
Wind Direction =157.0° E of N
0
500
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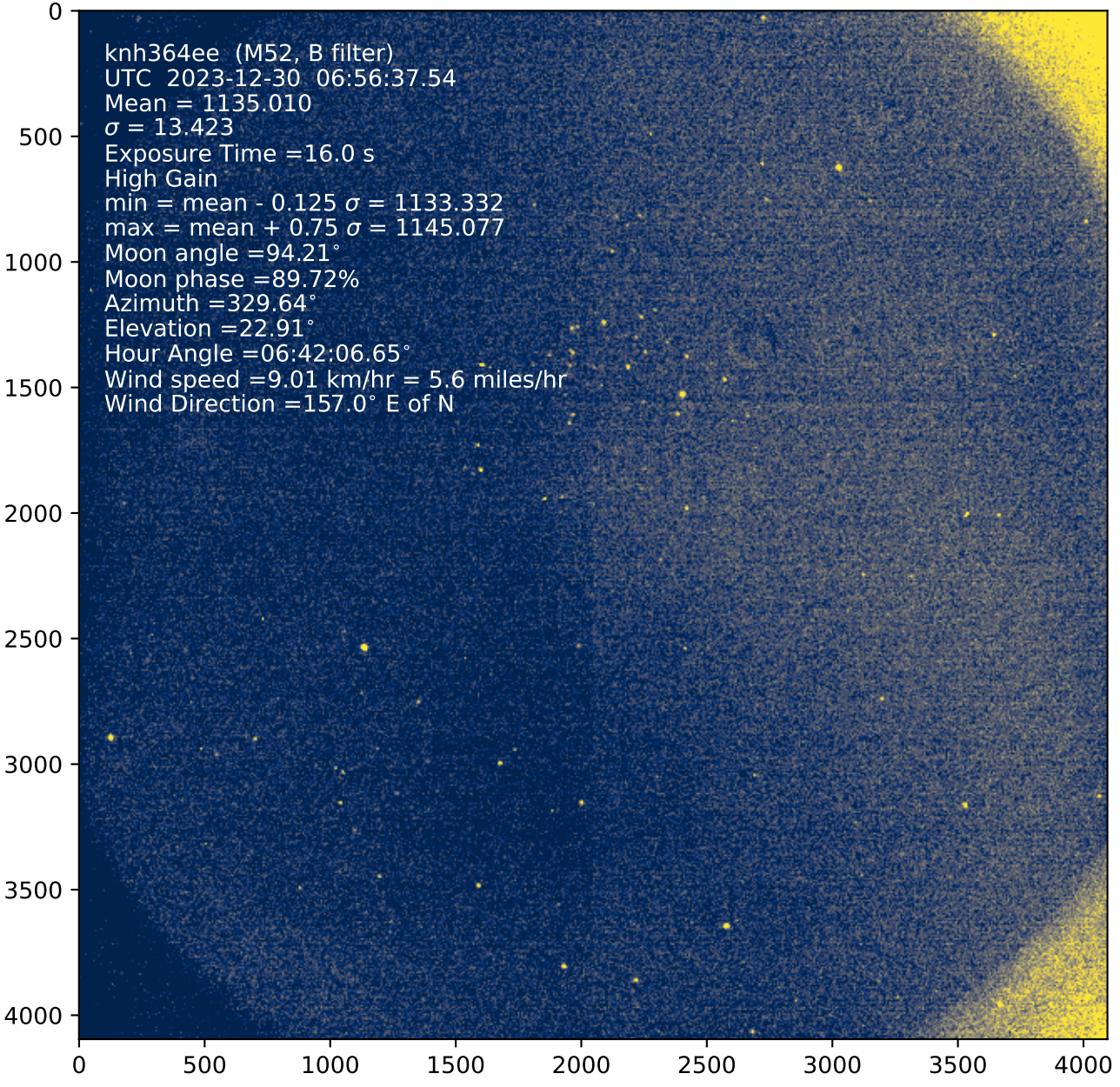
4000


knh364ee (M52, B filter)
UTC 2023-12-30 06:56:37.54
Mean = 1135.010
σ = 13.423
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1133.332
max = mean + 0.75 σ = 1145.077
Moon angle =94.21°
Moon phase =89.72%
Azimuth =329.64°
Elevation =22.91°
Hour Angle =06:42:06.65°
Wind speed =9.01 km/hr = 5.6 miles/hr
Wind Direction =157.0° E of N
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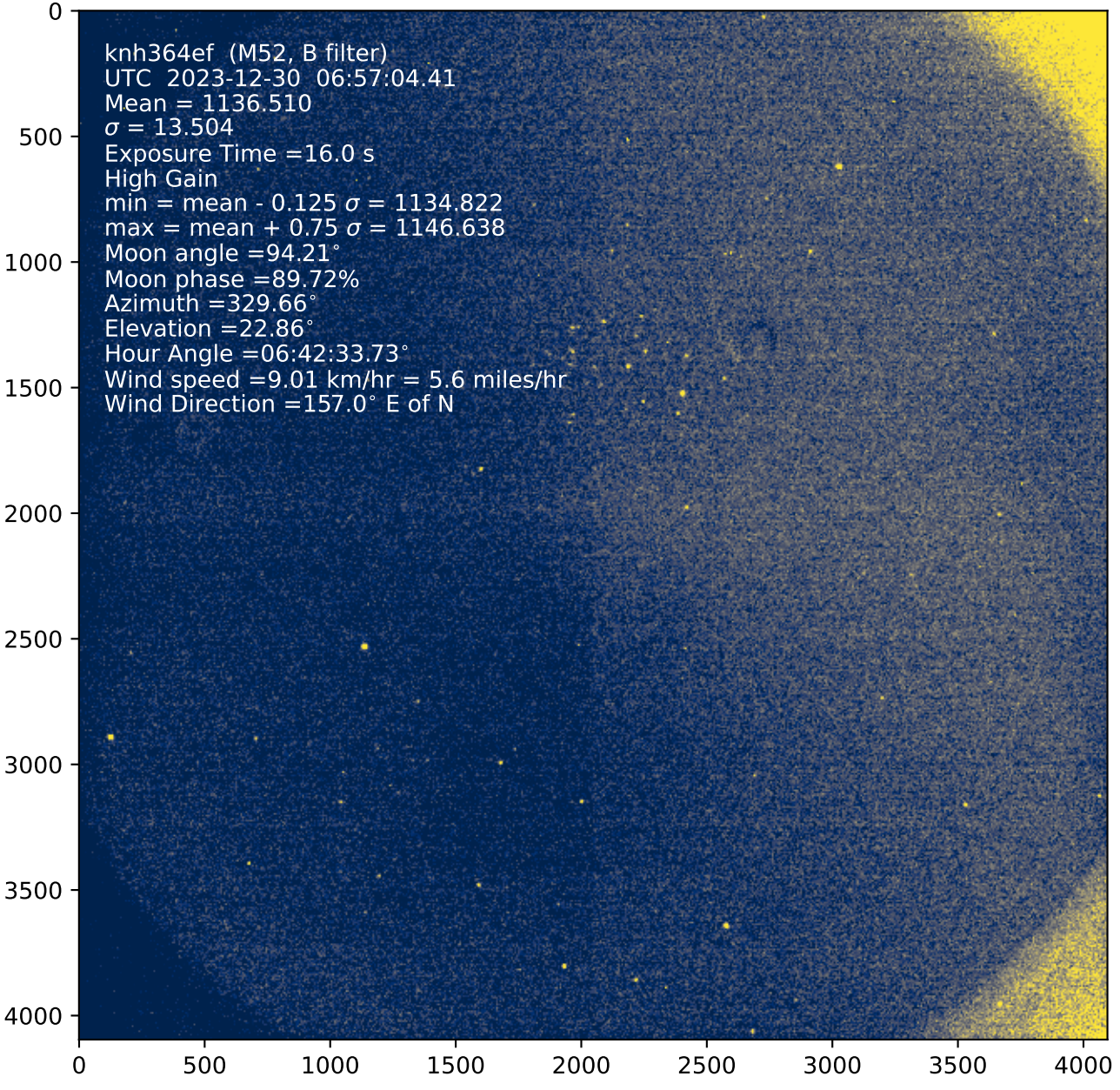
knh364ef (M52, B filter)
UTC 2023-12-30 06:57:04.41
Mean = 1136.510
σ = 13.504
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1134.822
max = mean + 0.75 σ = 1146.638
Moon angle =94.21°
Moon phase =89.72%
Azimuth =329.66°
Elevation =22.86°
Hour Angle =06:42:33.73°
Wind speed =9.01 km/hr = 5.6 miles/hr
Wind Direction =157.0° E of N
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3000
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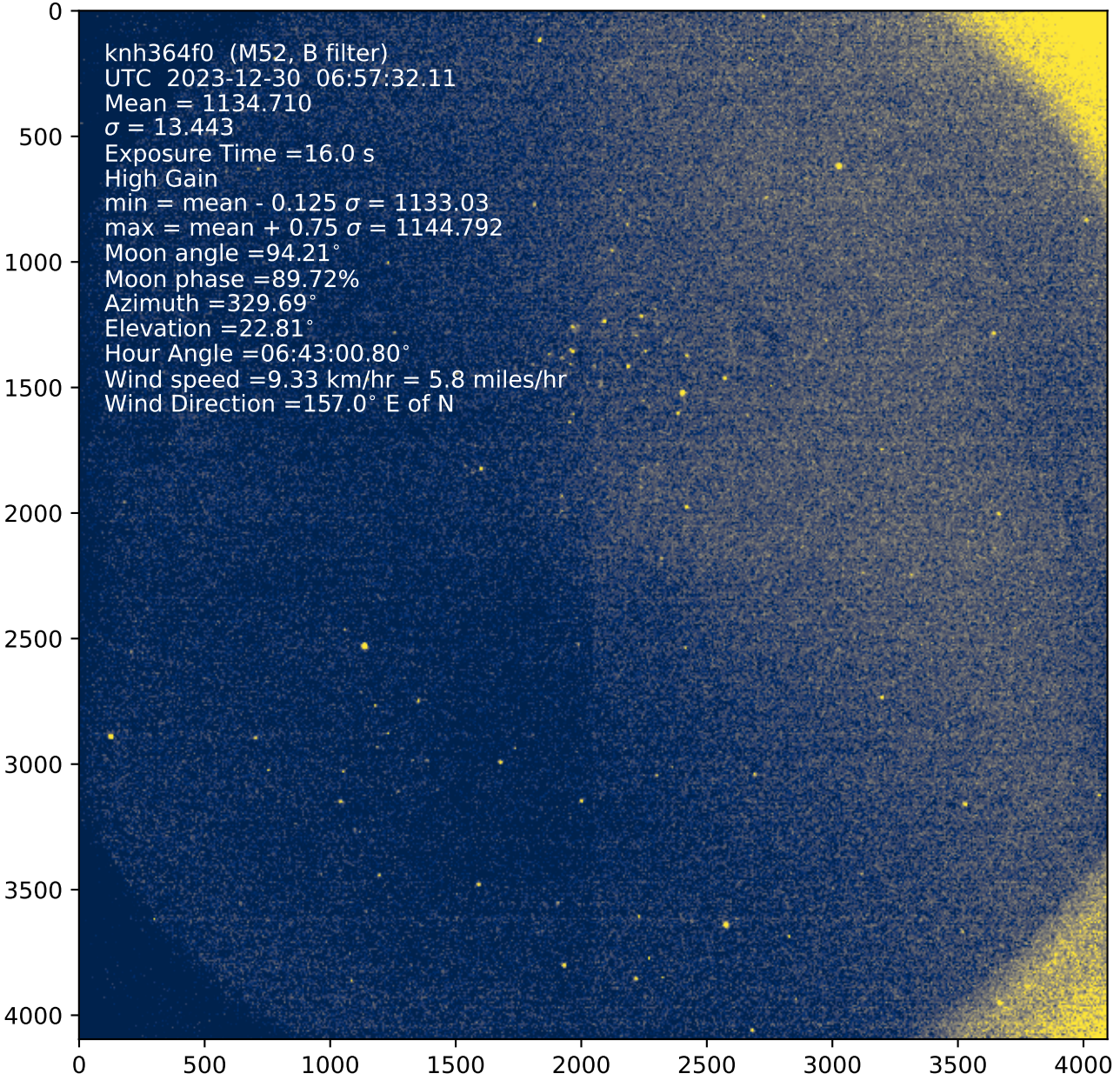
knh364f0 (M52, B filter)
UTC 2023-12-30 06:57:32.11
Mean = 1134.710
σ = 13.443
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1133.03
max = mean + 0.75 σ = 1144.792
Moon angle =94.21°
Moon phase =89.72%
Azimuth =329.69°
Elevation =22.81°
Hour Angle =06:43:00.80°
Wind speed =9.33 km/hr = 5.8 miles/hr
Wind Direction =157.0° E of N
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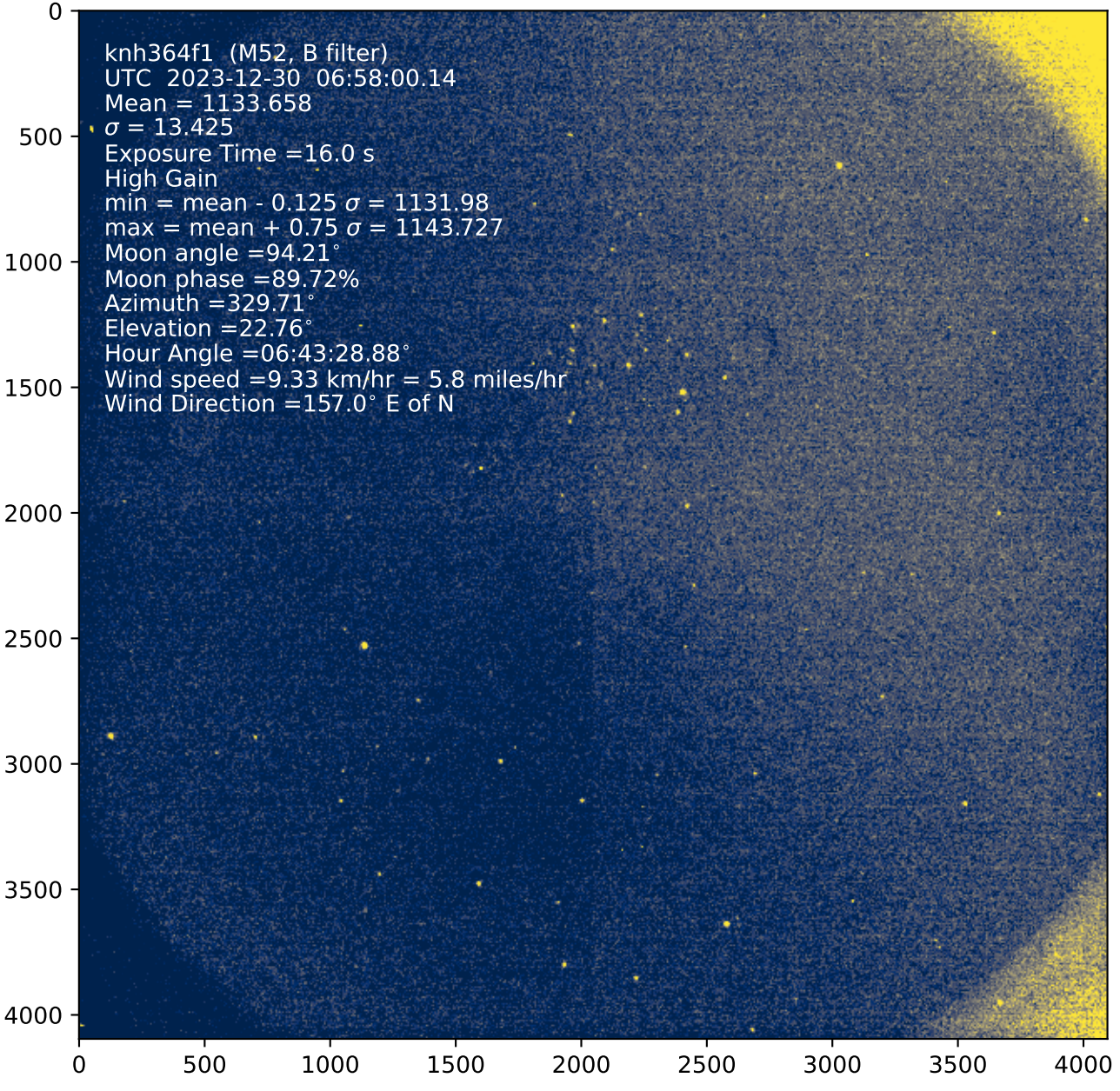
knh364f1 (M52, B filter)
UTC 2023-12-30 06:58:00.14
Mean = 1133.658
σ = 13.425
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1131.98
max = mean + 0.75 σ = 1143.727
Moon angle =94.21°
Moon phase =89.72%
Azimuth =329.71°
Elevation =22.76°
Hour Angle =06:43:28.88°
Wind speed =9.33 km/hr = 5.8 miles/hr
Wind Direction =157.0° E of N
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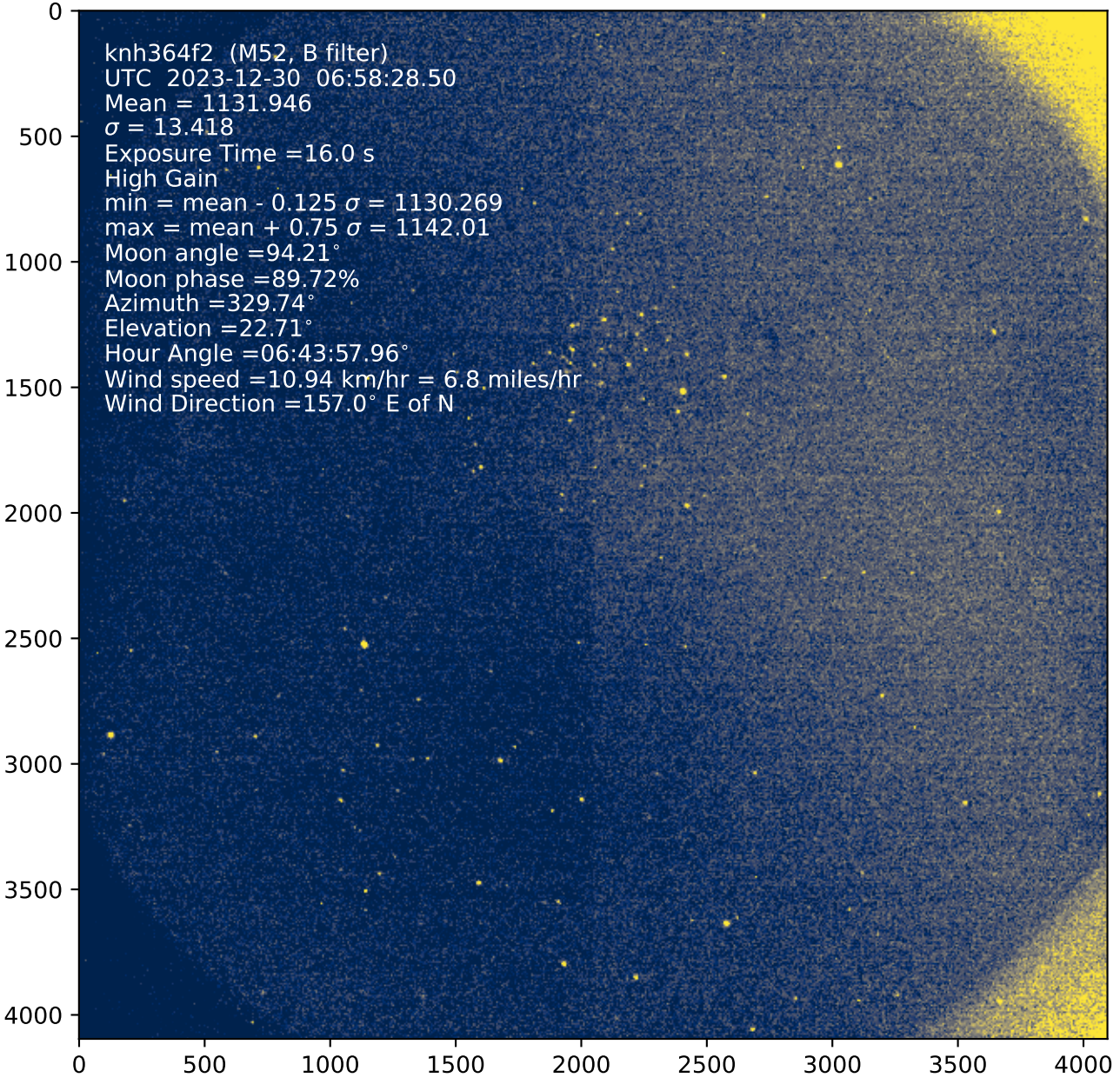
knh364f2 (M52, B filter)
UTC 2023-12-30 06:58:28.50
Mean = 1131.946
σ = 13.418
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1130.269
max = mean + 0.75 σ = 1142.01
Moon angle =94.21°
Moon phase =89.72%
Azimuth =329.74°
Elevation =22.71°
Hour Angle =06:43:57.96°
Wind speed =10.94 km/hr = 6.8 miles/hr
Wind Direction =157.0° E of N
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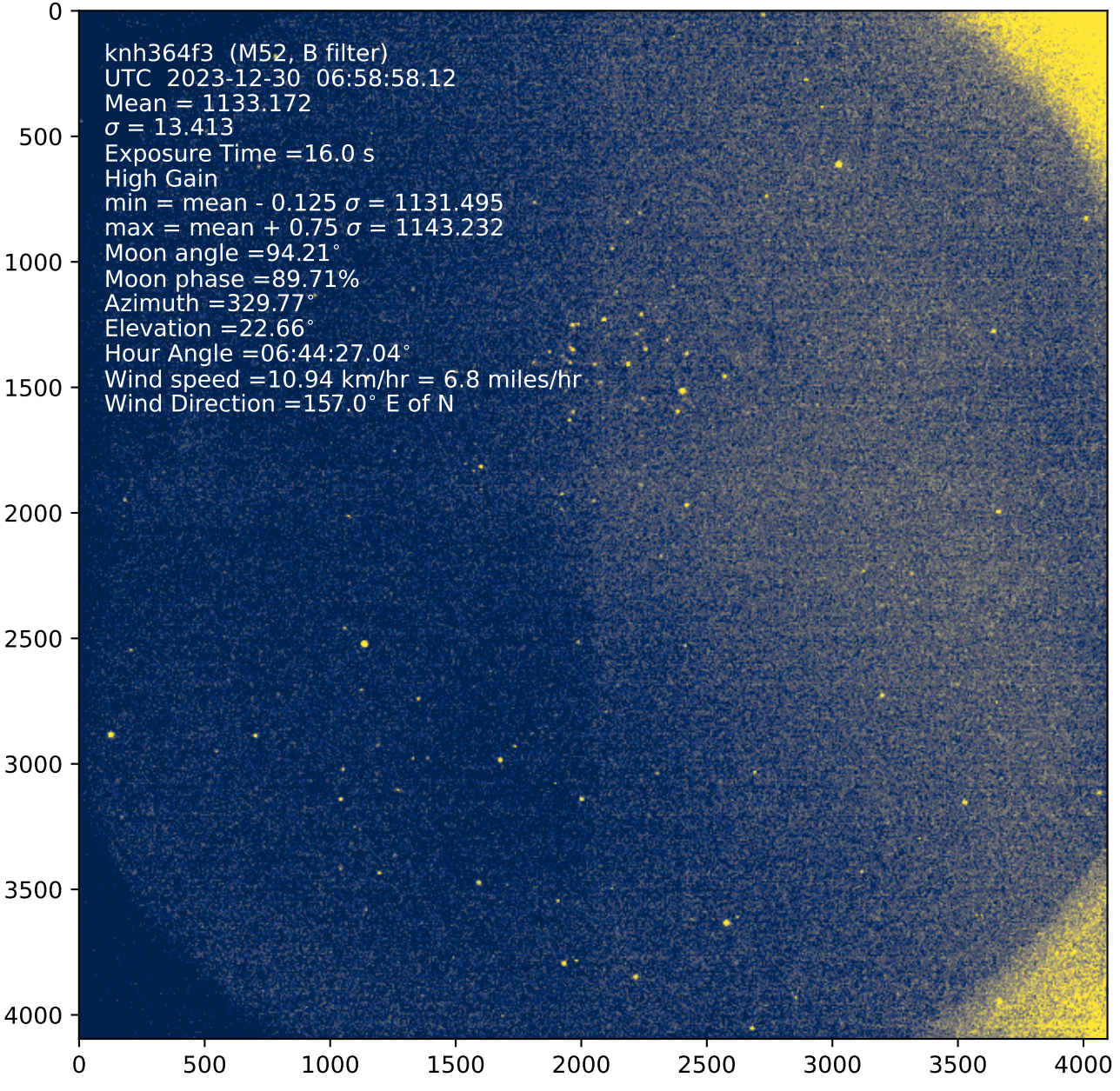
knh364f3 (M52, B filter)
UTC 2023-12-30 06:58:58.12
Mean = 1133.172
σ = 13.413
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1131.495
max = mean + 0.75 σ = 1143.232
Moon angle =94.21°
Moon phase =89.71%
Azimuth =329.77°
Elevation =22.66°
Hour Angle =06:44:27.04°
Wind speed =10.94 km/hr = 6.8 miles/hr
Wind Direction =157.0° E of N
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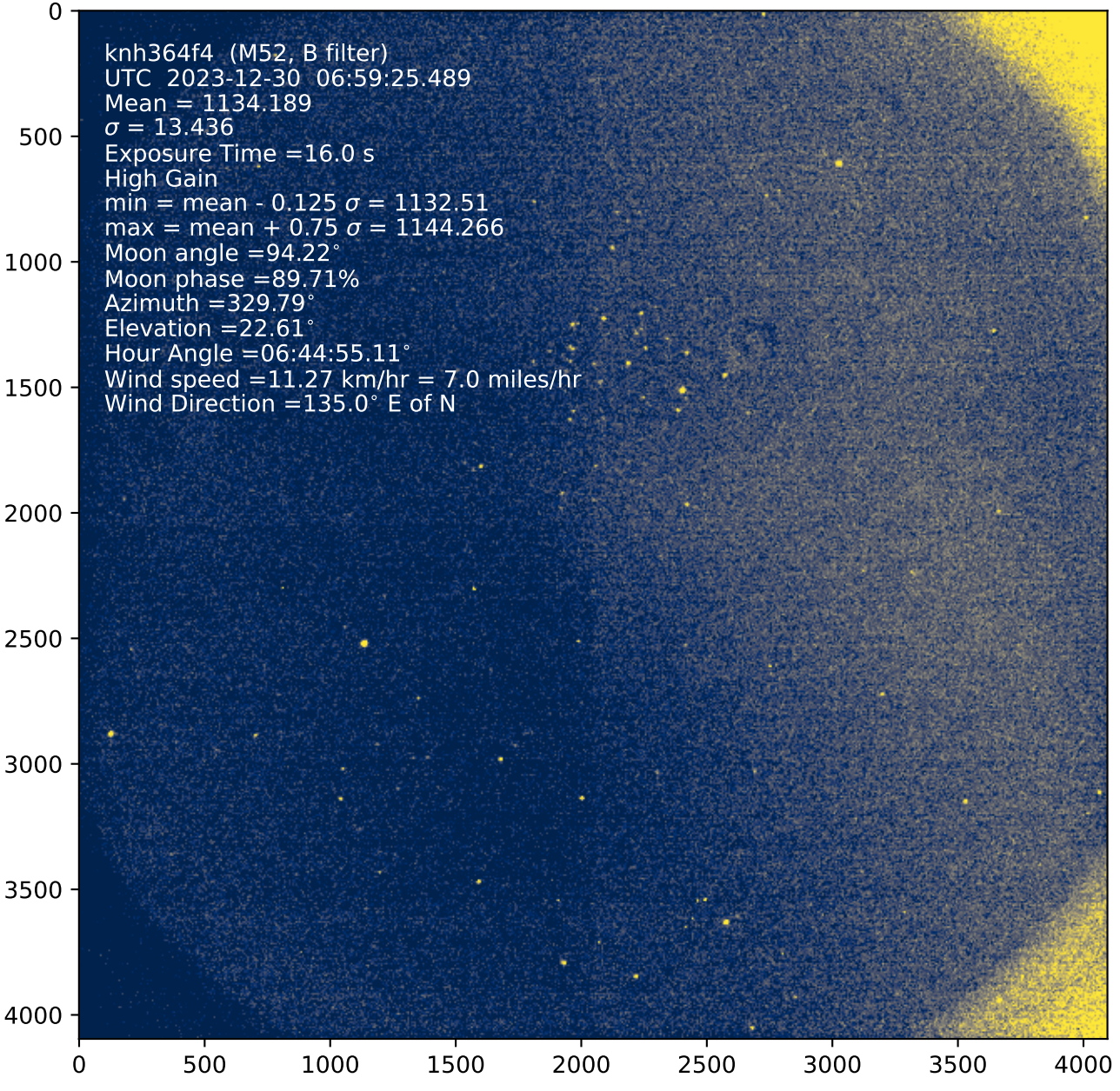
knh364f4 (M52, B filter)
UTC 2023-12-30 06:59:25.489
Mean = 1134.189
σ = 13.436
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1132.51
max = mean + 0.75 σ = 1144.266
Moon angle =94.22°
Moon phase =89.71%
Azimuth =329.79°
Elevation =22.61°
Hour Angle =06:44:55.11°
Wind speed =11.27 km/hr = 7.0 miles/hr
Wind Direction =135.0° E of N
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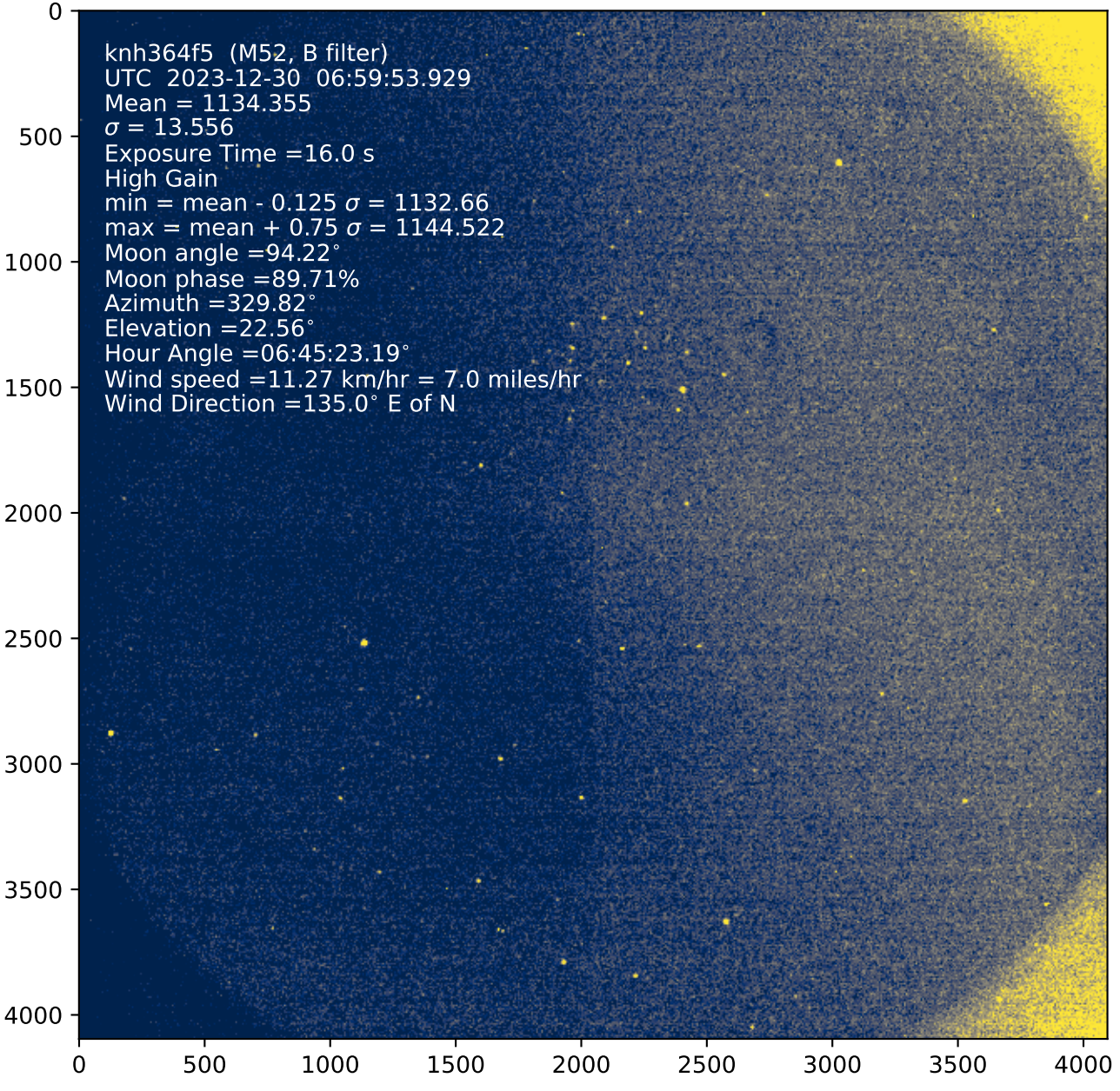
knh364f5 (M52, B filter)
UTC 2023-12-30 06:59:53.929
Mean = 1134.355
σ = 13.556
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1132.66
max = mean + 0.75 σ = 1144.522
Moon angle =94.22°
Moon phase =89.71%
Azimuth =329.82°
Elevation =22.56°
Hour Angle =06:45:23.19°
Wind speed =11.27 km/hr = 7.0 miles/hr
Wind Direction =135.0° E of N
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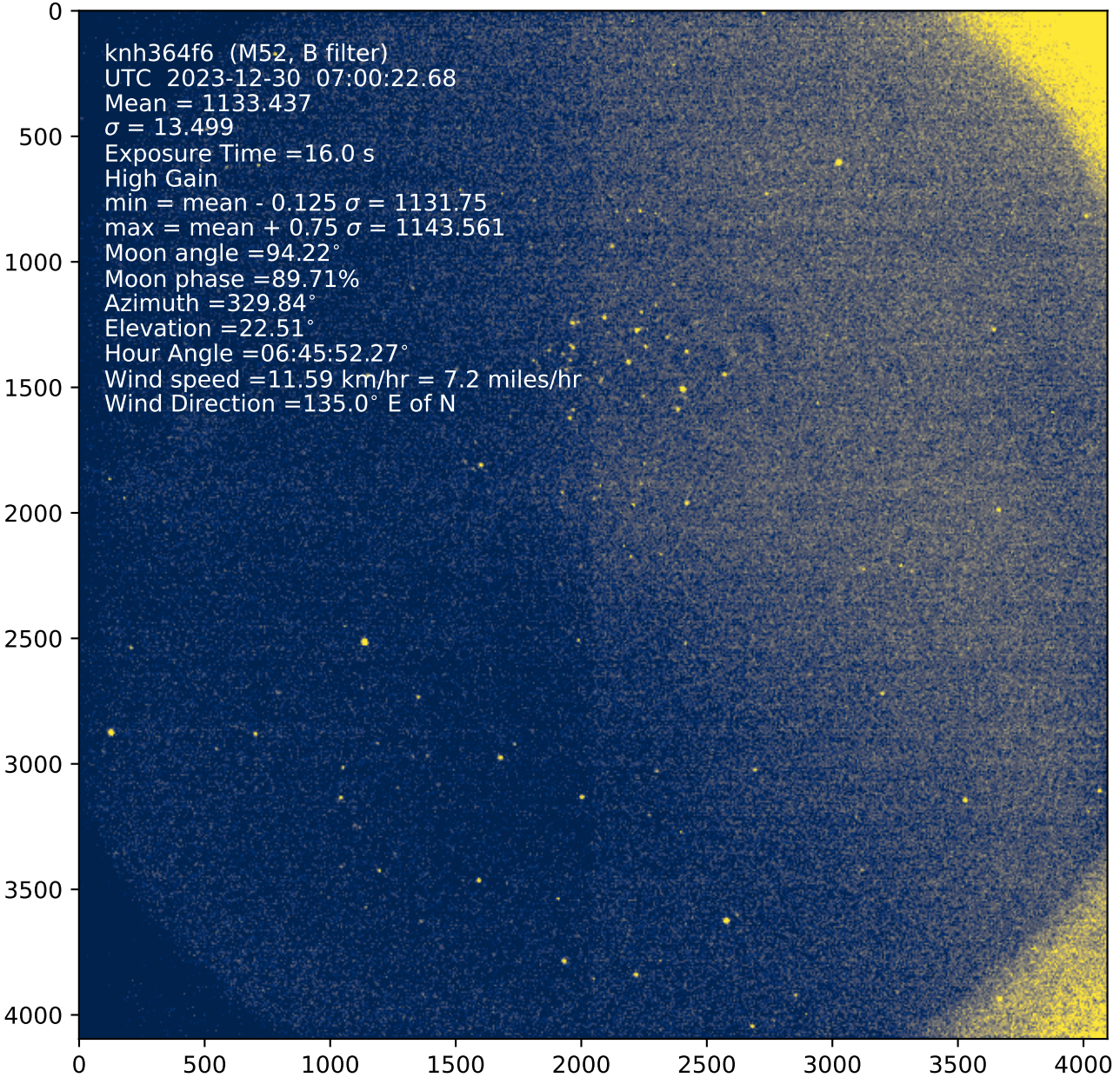
knh364f6 (M52, B filter)
UTC 2023-12-30 07:00:22.68
Mean = 1133.437
σ = 13.499
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1131.75
max = mean + 0.75 σ = 1143.561
Moon angle =94.22°
Moon phase =89.71%
Azimuth =329.84°
Elevation =22.51°
Hour Angle =06:45:52.27°
Wind speed =11.59 km/hr = 7.2 miles/hr
Wind Direction =135.0° E of N
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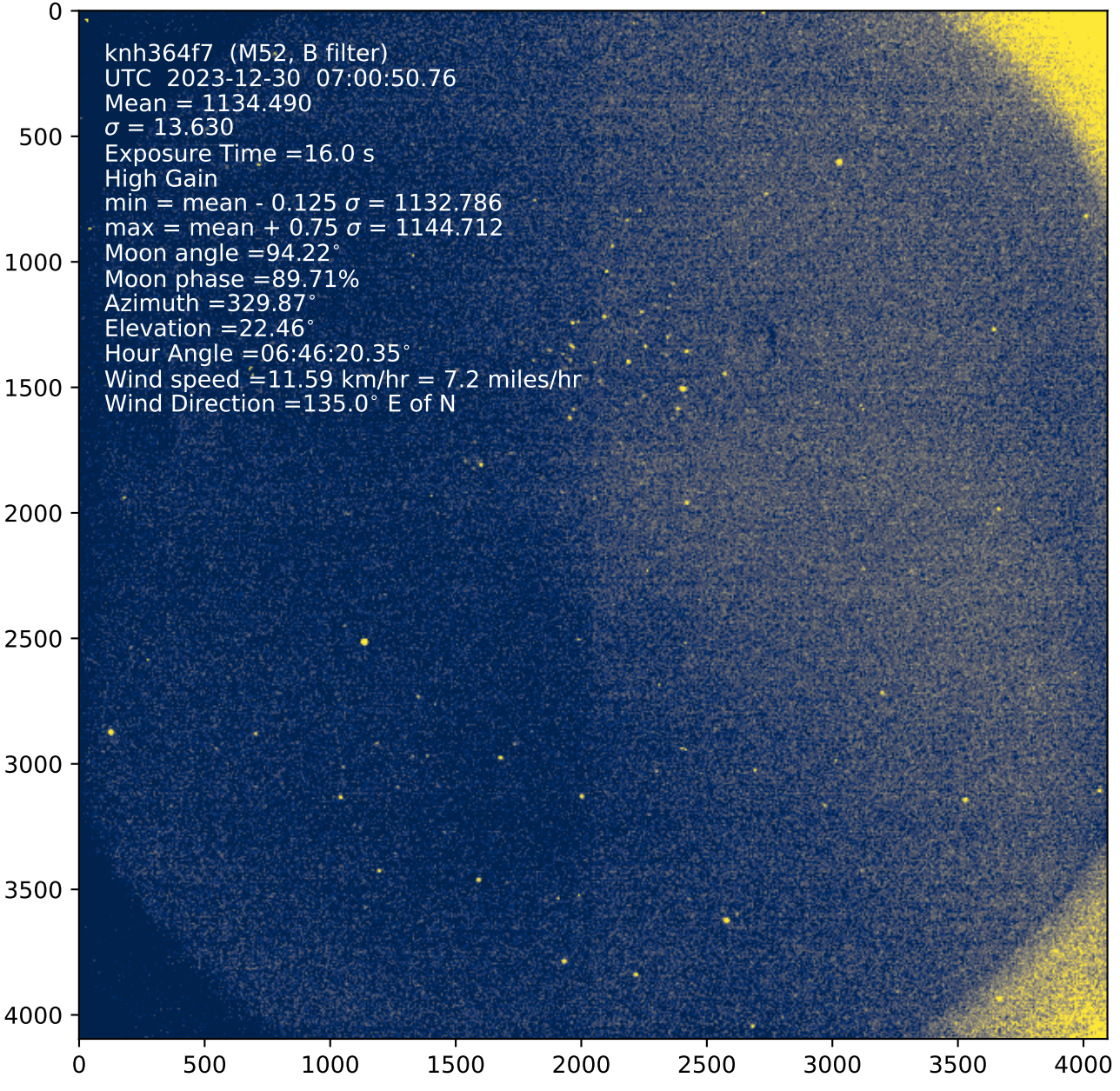
knh364f7 (M52, B filter)
UTC 2023-12-30 07:00:50.76
Mean = 1134.490
σ = 13.630
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1132.786
max = mean + 0.75 σ = 1144.712
Moon angle =94.22°
Moon phase =89.71%
Azimuth =329.87°
Elevation =22.46°
Hour Angle =06:46:20.35°
Wind speed =11.59 km/hr = 7.2 miles/hr
Wind Direction =135.0° E of N
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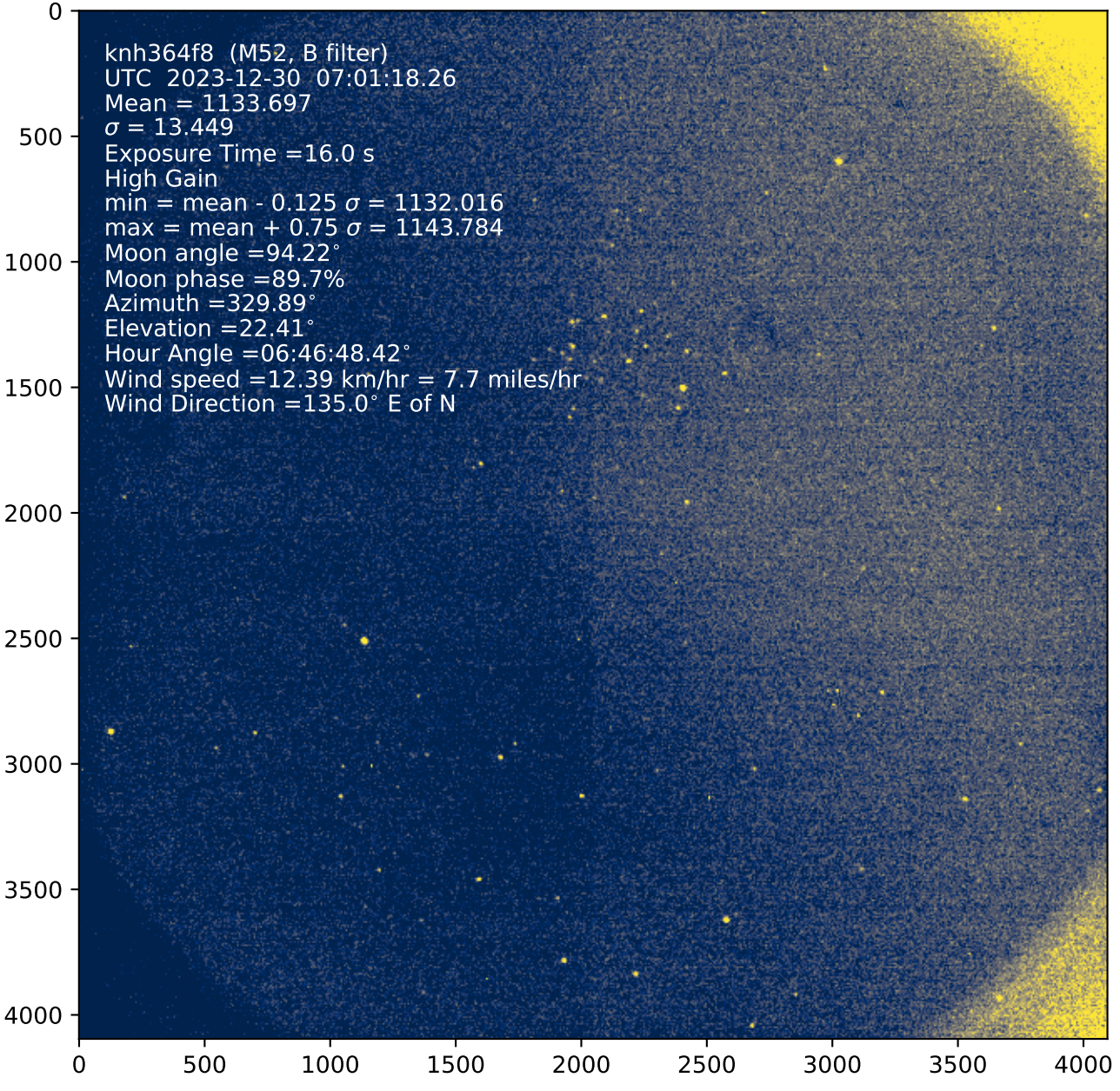
knh364f8 (M52, B filter)
UTC 2023-12-30 07:01:18.26
Mean = 1133.697
σ = 13.449
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1132.016
max = mean + 0.75 σ = 1143.784
Moon angle =94.22°
Moon phase =89.7%
Azimuth =329.89°
Elevation =22.41°
Hour Angle =06:46:48.42°
Wind speed =12.39 km/hr = 7.7 miles/hr
Wind Direction =135.0° E of N
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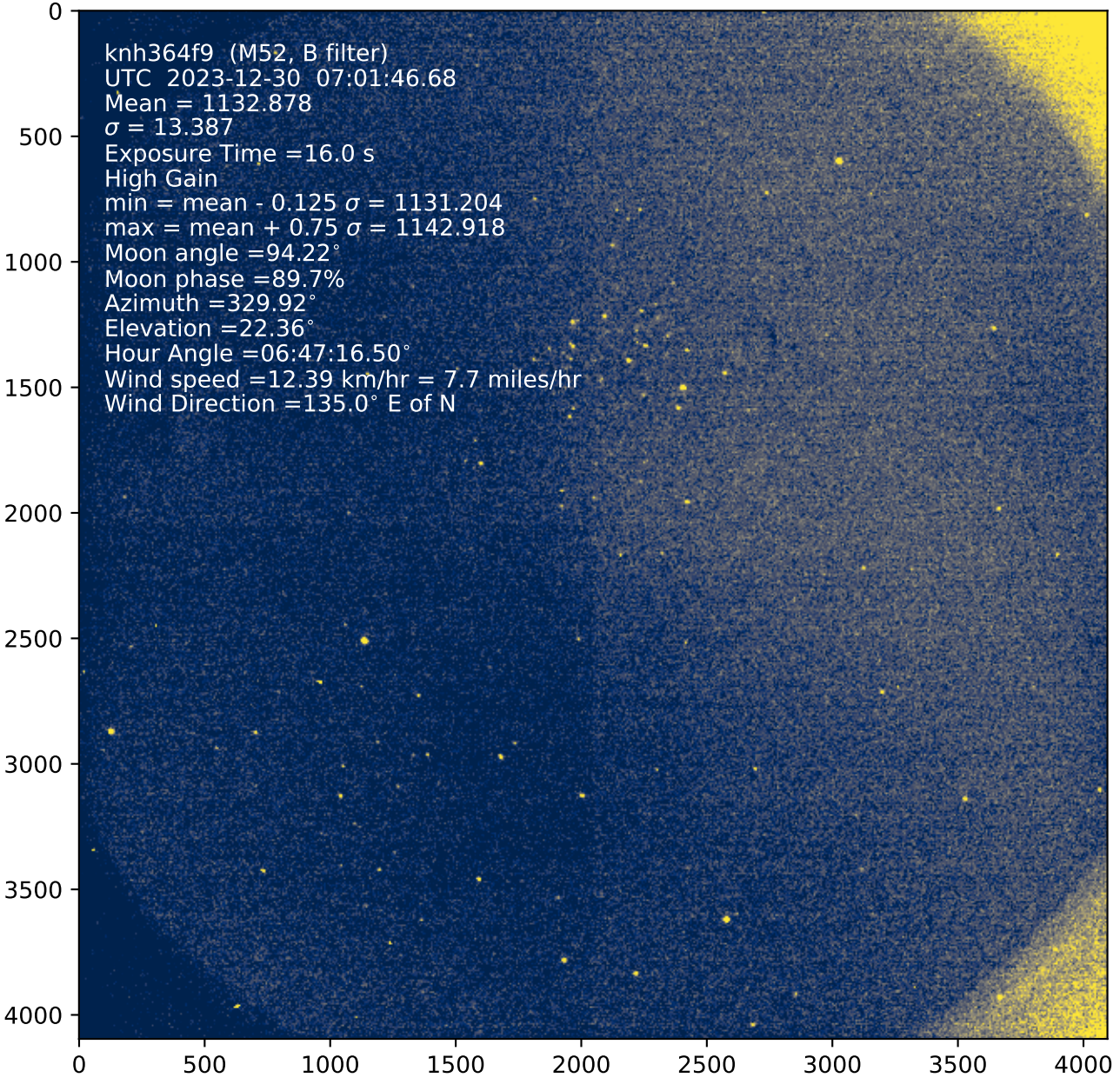
knh364f9 (M52, B filter)
UTC 2023-12-30 07:01:46.68
Mean = 1132.878
σ = 13.387
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1131.204
max = mean + 0.75 σ = 1142.918
Moon angle =94.22°
Moon phase =89.7%
Azimuth =329.92°
Elevation =22.36°
Hour Angle =06:47:16.50°
Wind speed =12.39 km/hr = 7.7 miles/hr
Wind Direction =135.0° E of N
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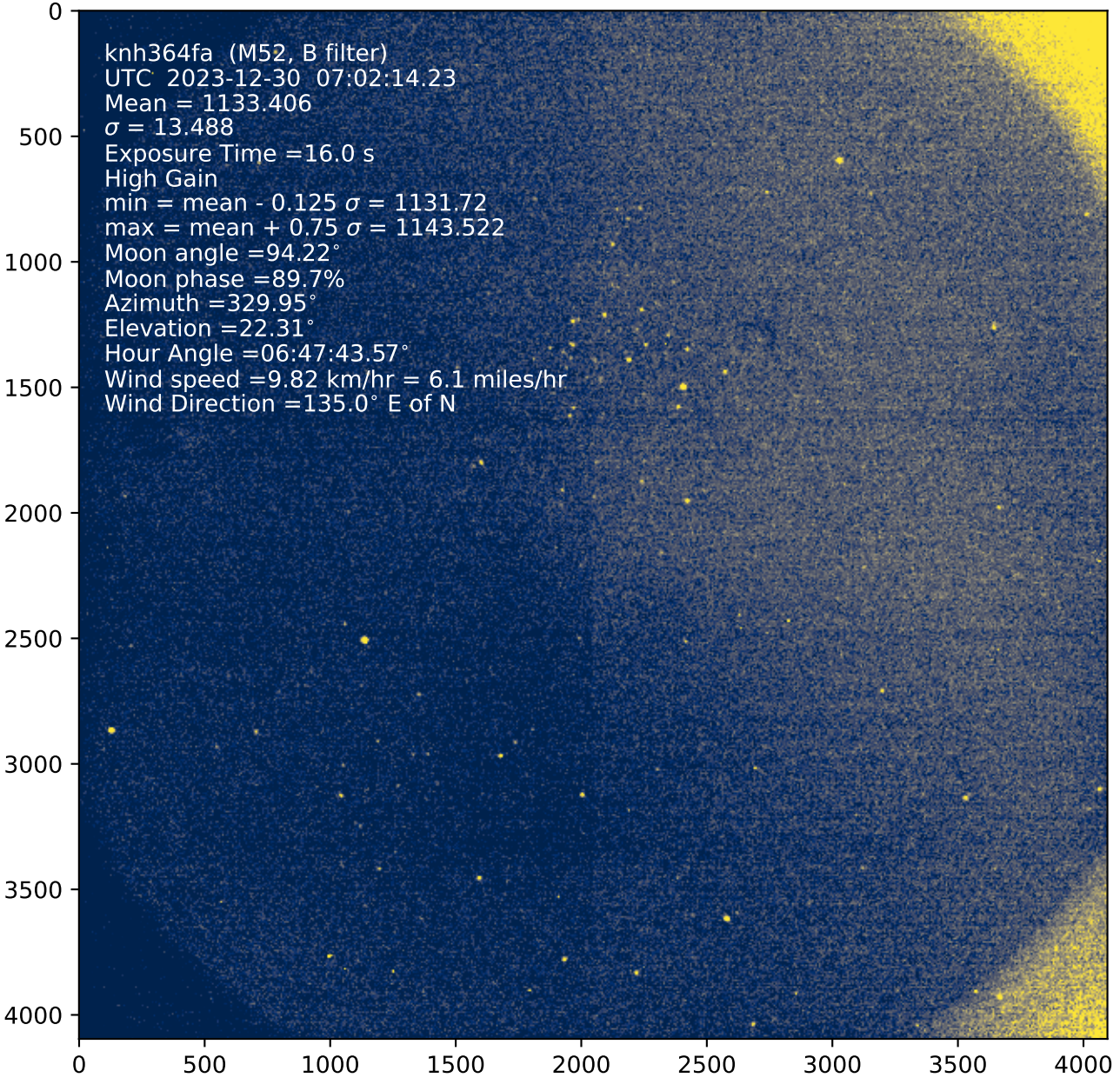
knh364fa (M52, B filter)
UTC 2023-12-30 07:02:14.23
Mean = 1133.406
σ = 13.488
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1131.72
max = mean + 0.75 σ = 1143.522
Moon angle =94.22°
Moon phase =89.7%
Azimuth =329.95°
Elevation =22.31°
Hour Angle =06:47:43.57°
Wind speed =9.82 km/hr = 6.1 miles/hr
Wind Direction =135.0° E of N
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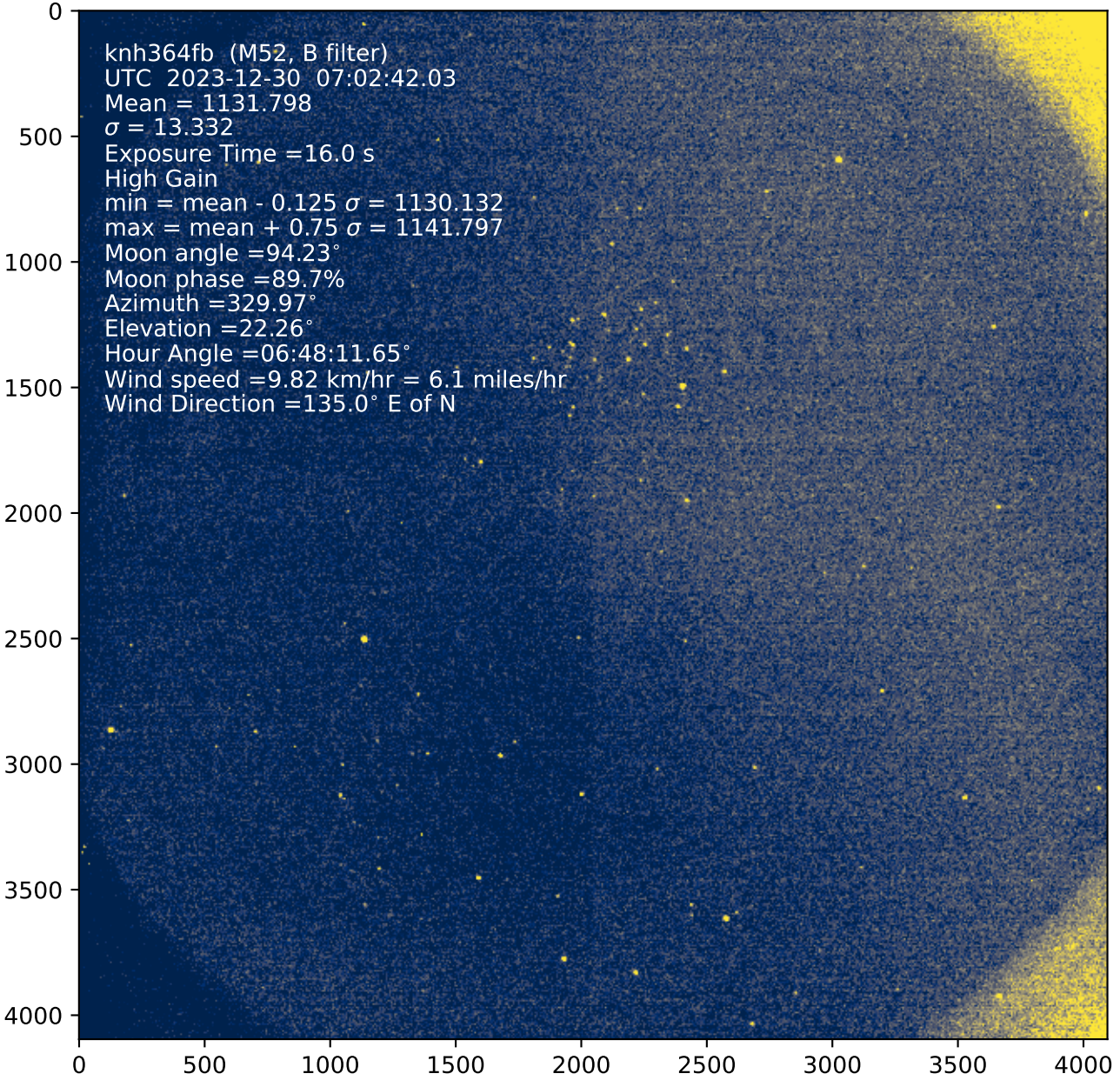
knh364fb (M52, B filter)
UTC 2023-12-30 07:02:42.03
Mean = 1131.798
σ = 13.332
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1130.132
max = mean + 0.75 σ = 1141.797
Moon angle =94.23°
Moon phase =89.7%
Azimuth =329.97°
Elevation =22.26°
Hour Angle =06:48:11.65°
Wind speed =9.82 km/hr = 6.1 miles/hr
Wind Direction =135.0° E of N
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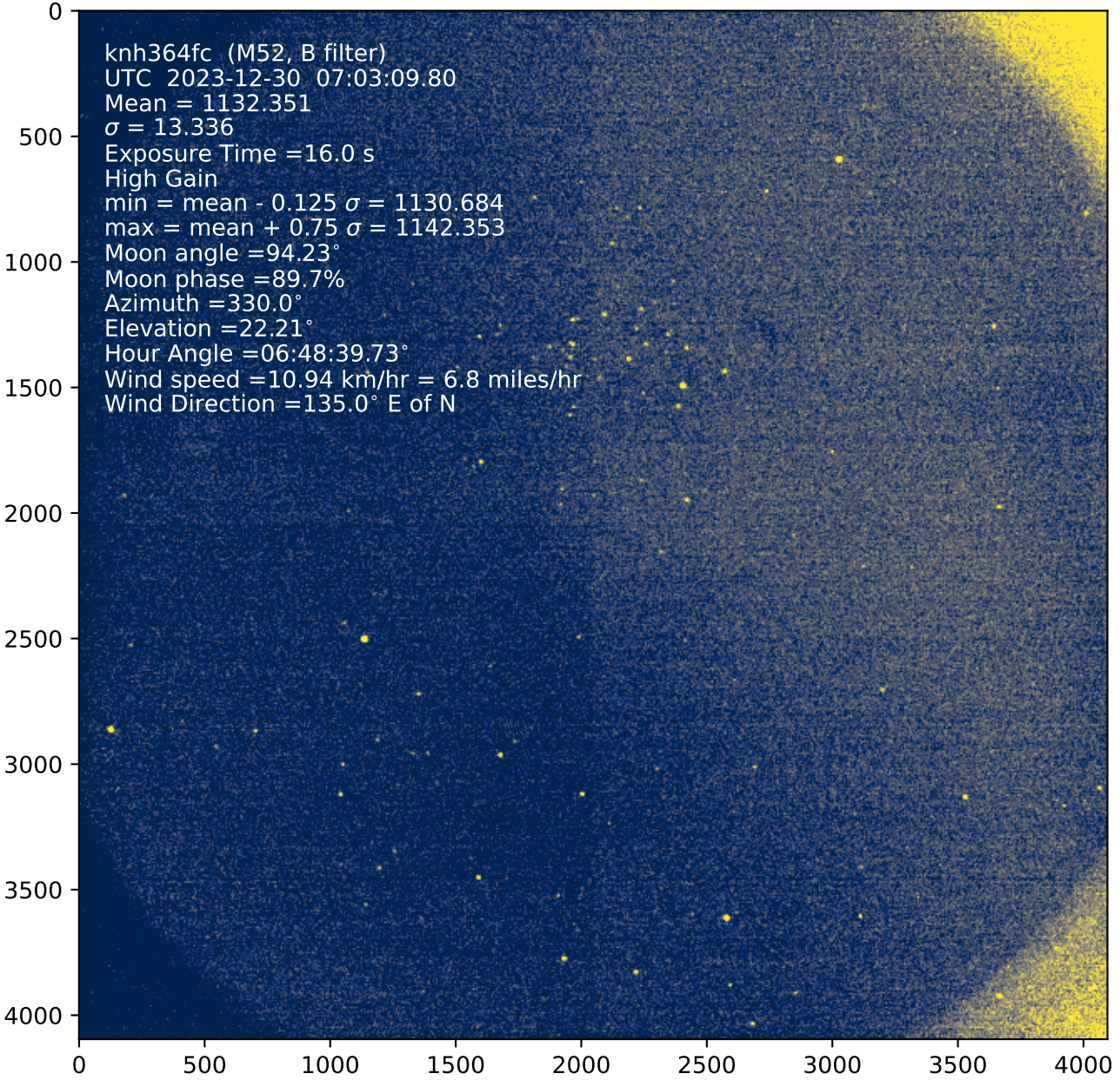
knh364fc (M52, B filter)
UTC 2023-12-30 07:03:09.80
Mean = 1132.351
σ = 13.336
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1130.684
max = mean + 0.75 σ = 1142.353
Moon angle =94.23°
Moon phase =89.7%
Azimuth =330.0°
Elevation =22.21°
Hour Angle =06:48:39.73°
Wind speed =10.94 km/hr = 6.8 miles/hr
Wind Direction =135.0° E of N
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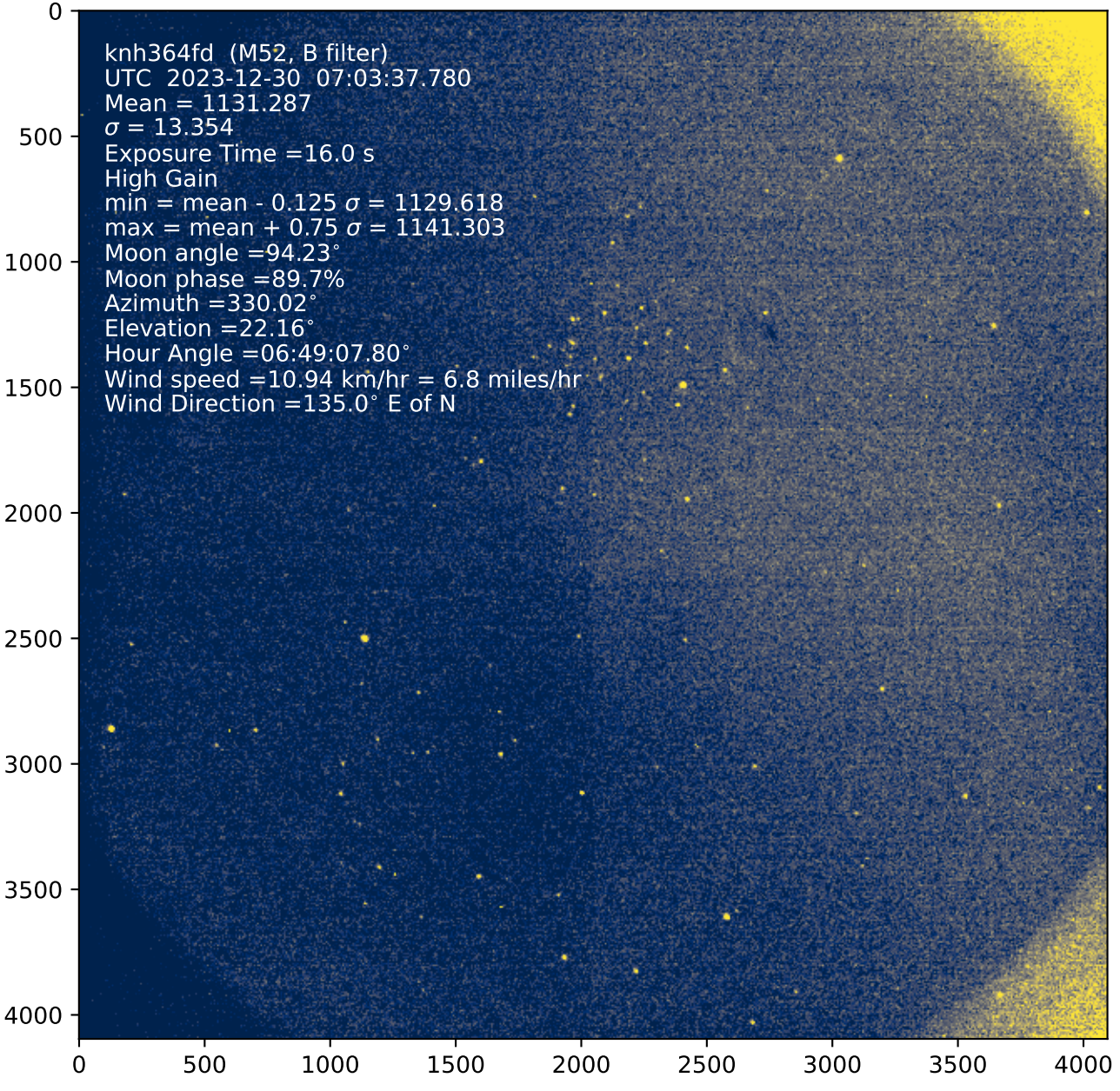
knh364fd (M52, B filter)
UTC 2023-12-30 07:03:37.780
Mean = 1131.287
σ = 13.354
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1129.618
max = mean + 0.75 σ = 1141.303
Moon angle =94.23°
Moon phase =89.7%
Azimuth =330.02°
Elevation =22.16°
Hour Angle =06:49:07.80°
Wind speed =10.94 km/hr = 6.8 miles/hr
Wind Direction =135.0° E of N
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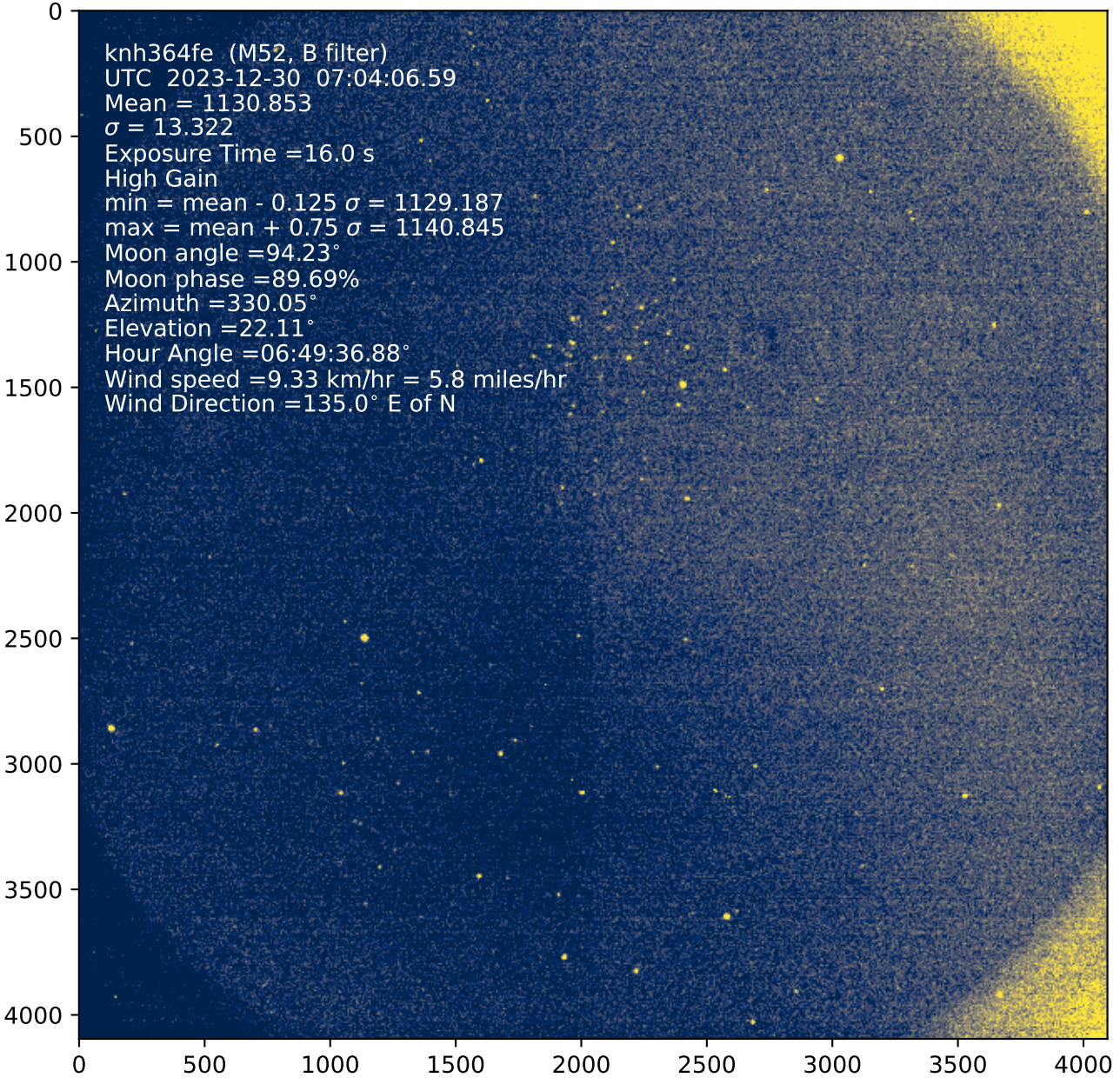
knh364fe (M52, B filter)
UTC 2023-12-30 07:04:06.59
Mean = 1130.853
σ = 13.322
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1129.187
max = mean + 0.75 σ = 1140.845
Moon angle =94.23°
Moon phase =89.69%
Azimuth =330.05°
Elevation =22.11°
Hour Angle =06:49:36.88°
Wind speed =9.33 km/hr = 5.8 miles/hr
Wind Direction =135.0° E of N
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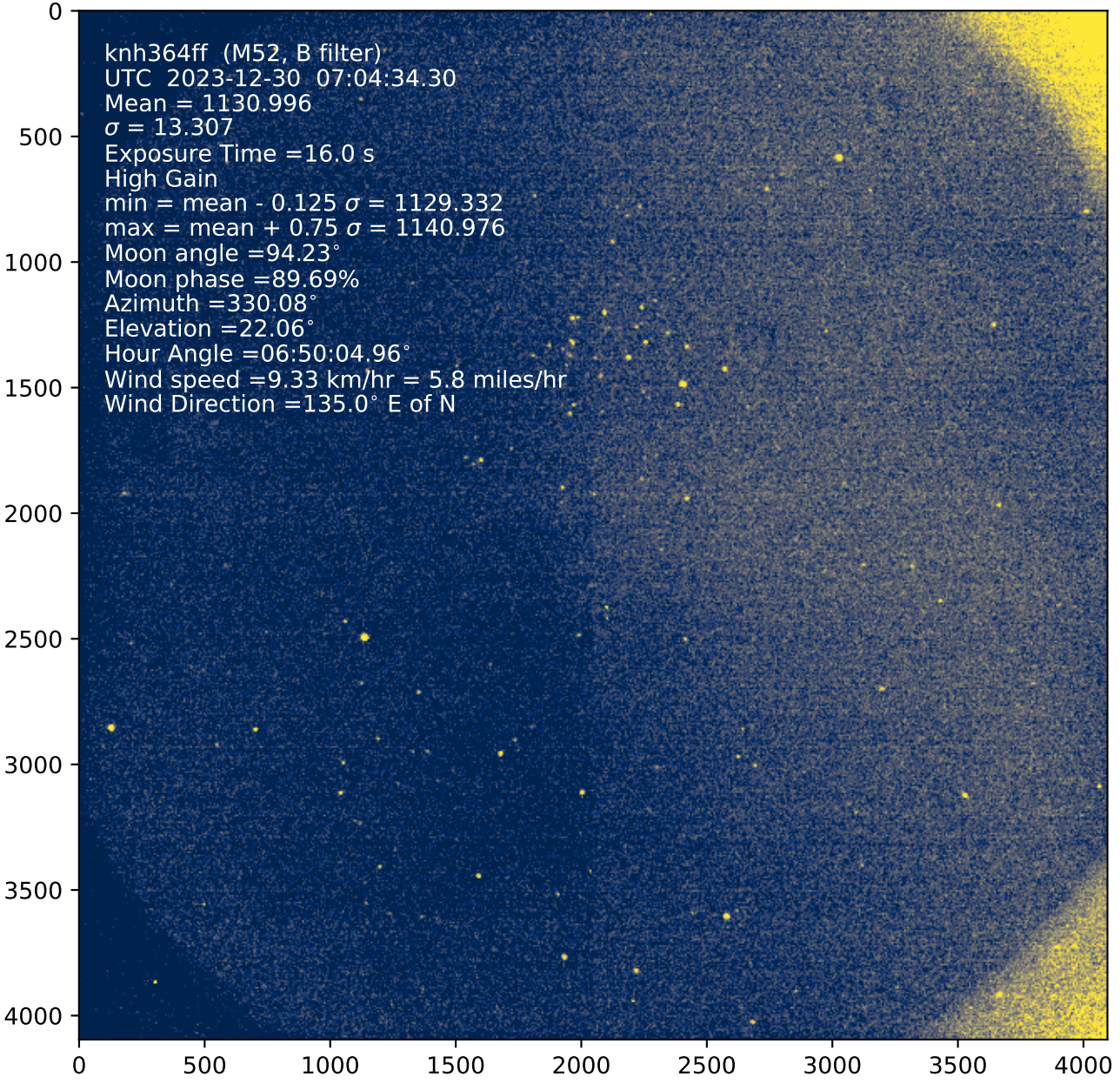
knh364ff (M52, B filter)
UTC 2023-12-30 07:04:34.30
Mean = 1130.996
σ = 13.307
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1129.332
max = mean + 0.75 σ = 1140.976
Moon angle =94.23°
Moon phase =89.69%
Azimuth =330.08°
Elevation =22.06°
Hour Angle =06:50:04.96°
Wind speed =9.33 km/hr = 5.8 miles/hr
Wind Direction =135.0° E of N
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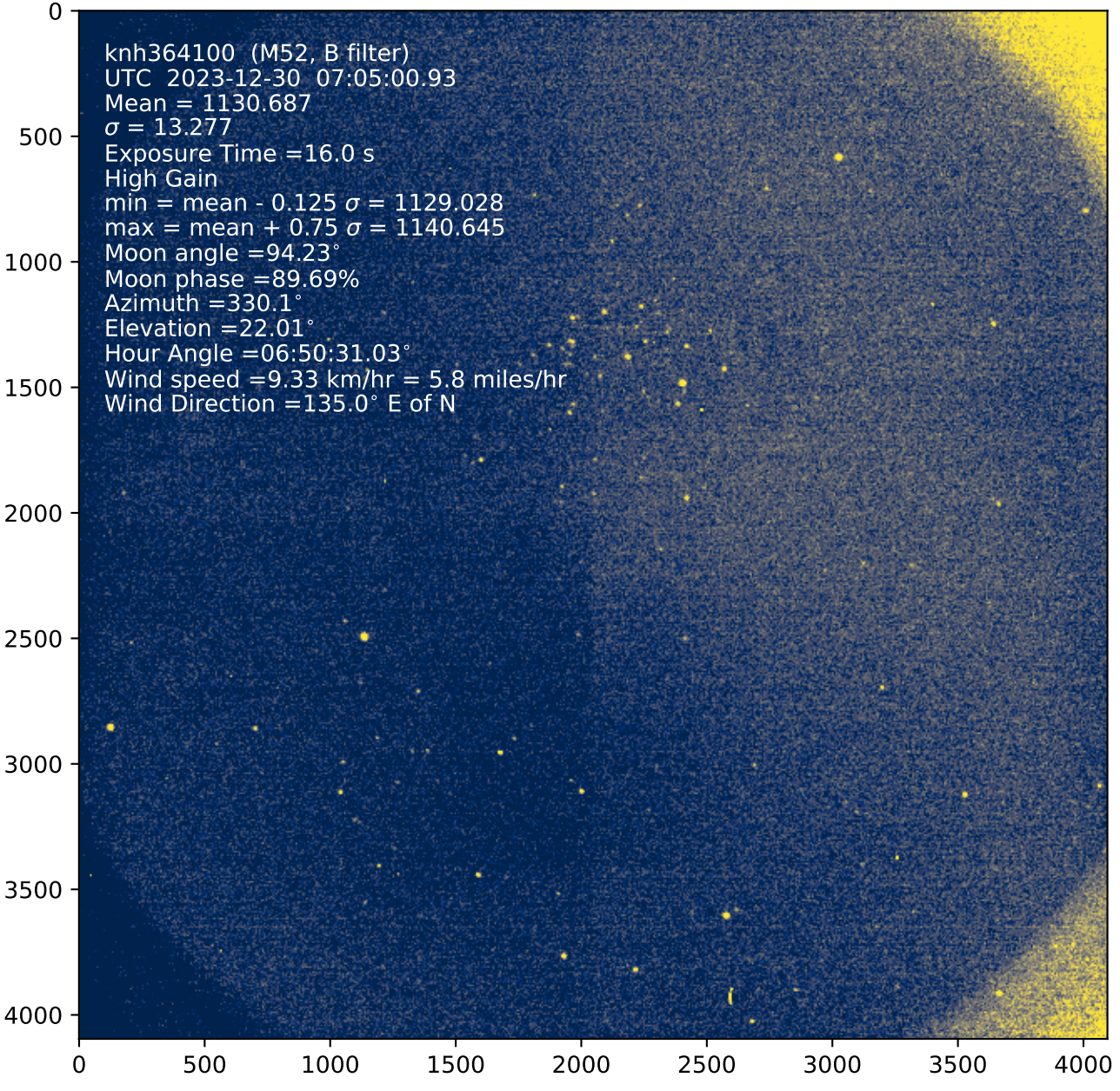
knh364100 (M52, B filter)
UTC 2023-12-30 07:05:00.93
Mean = 1130.687
σ = 13.277
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1129.028
max = mean + 0.75 σ = 1140.645
Moon angle =94.23°
Moon phase =89.69%
Azimuth =330.1°
Elevation =22.01°
Hour Angle =06:50:31.03°
Wind speed =9.33 km/hr = 5.8 miles/hr
Wind Direction =135.0° E of N
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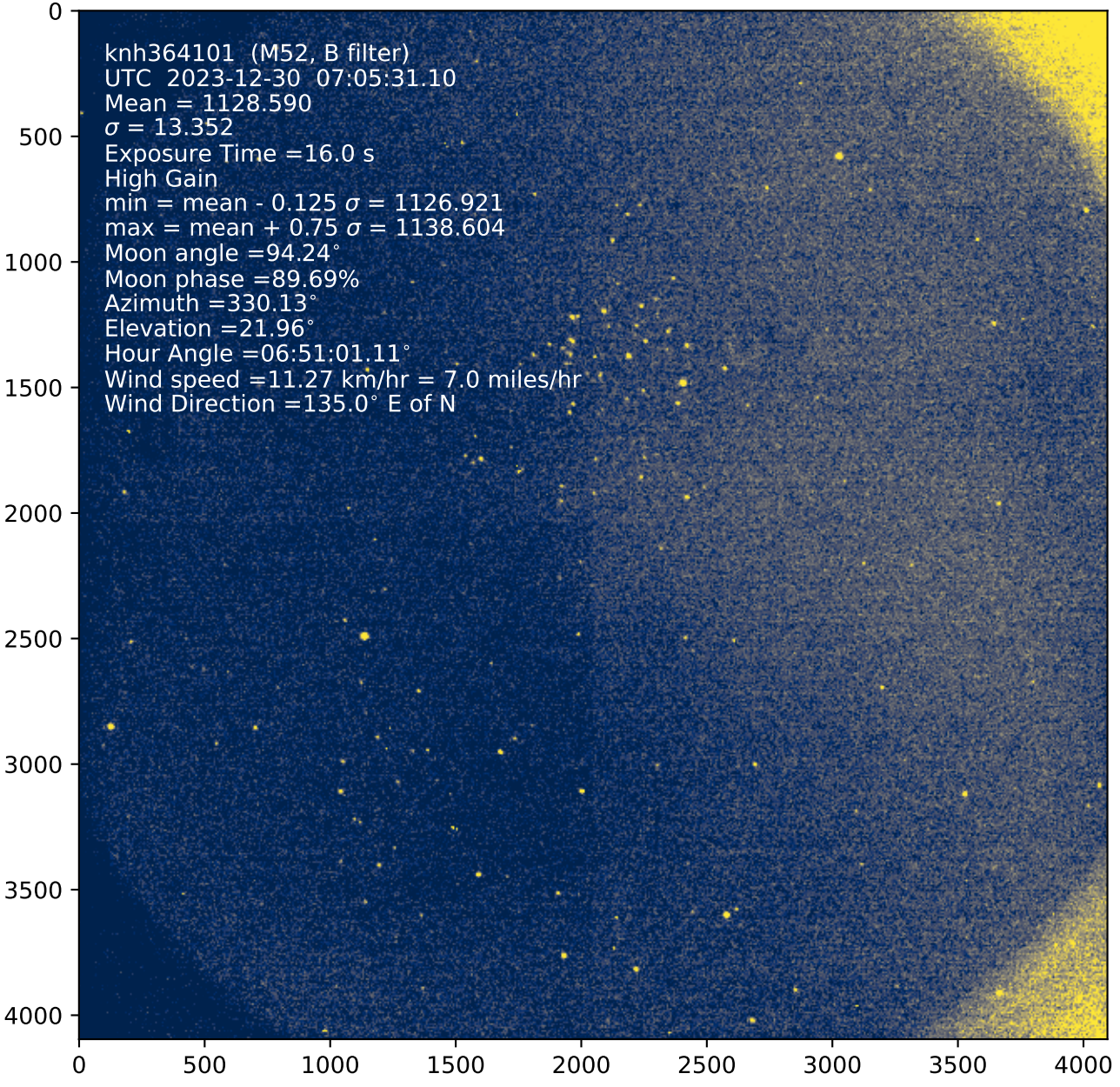
knh364101 (M52, B filter)
UTC 2023-12-30 07:05:31.10
Mean = 1128.590
σ = 13.352
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1126.921
max = mean + 0.75 σ = 1138.604
Moon angle =94.24°
Moon phase =89.69%
Azimuth =330.13°
Elevation =21.96°
Hour Angle =06:51:01.11°
Wind speed =11.27 km/hr = 7.0 miles/hr
Wind Direction =135.0° E of N
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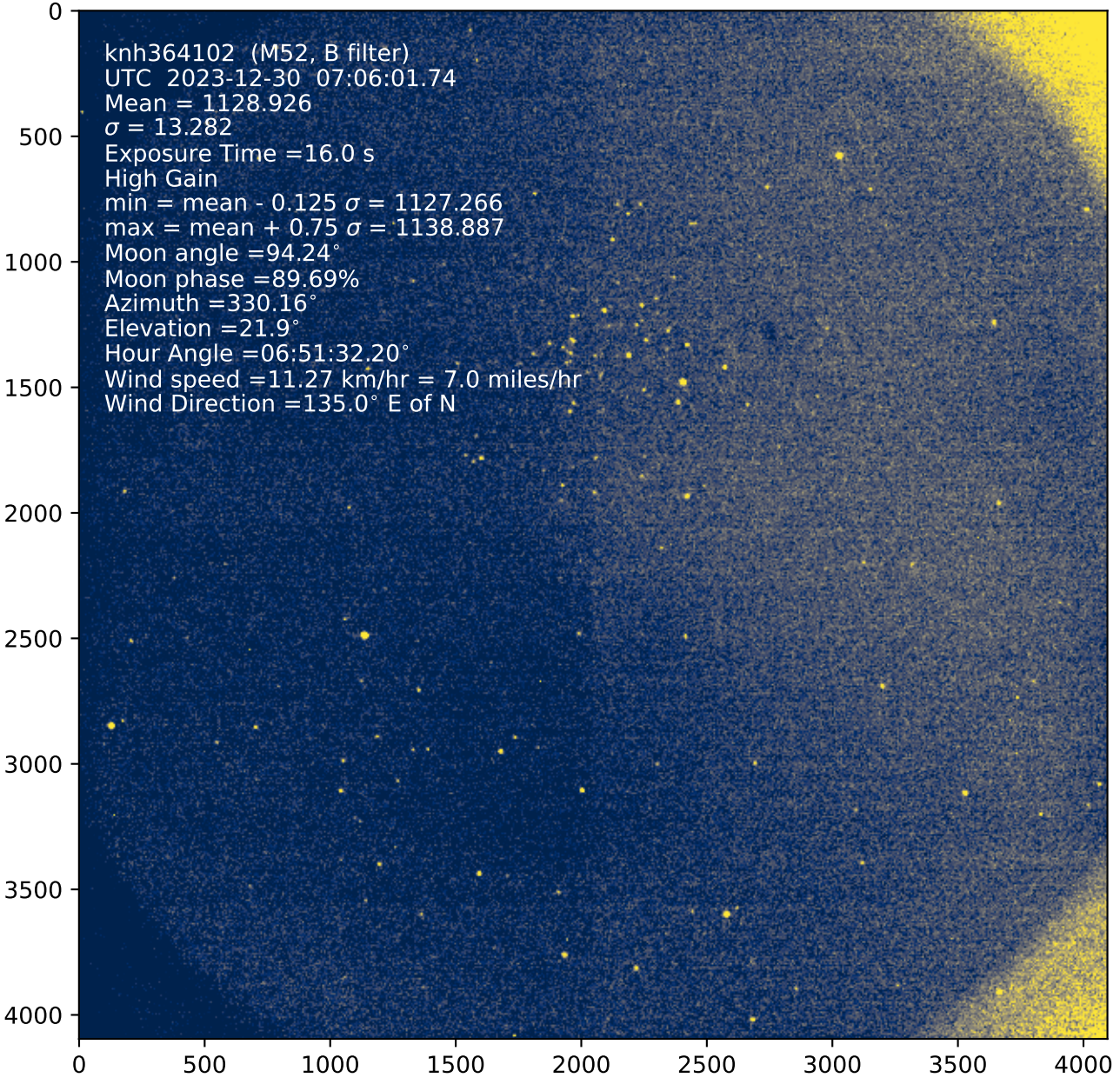
knh364102 (M52, B filter)
UTC 2023-12-30 07:06:01.74
Mean = 1128.926
σ = 13.282
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1127.266
max = mean + 0.75 σ = 1138.887
Moon angle =94.24°
Moon phase =89.69%
Azimuth =330.16°
Elevation =21.9°
Hour Angle =06:51:32.20°
Wind speed =11.27 km/hr = 7.0 miles/hr
Wind Direction =135.0° E of N
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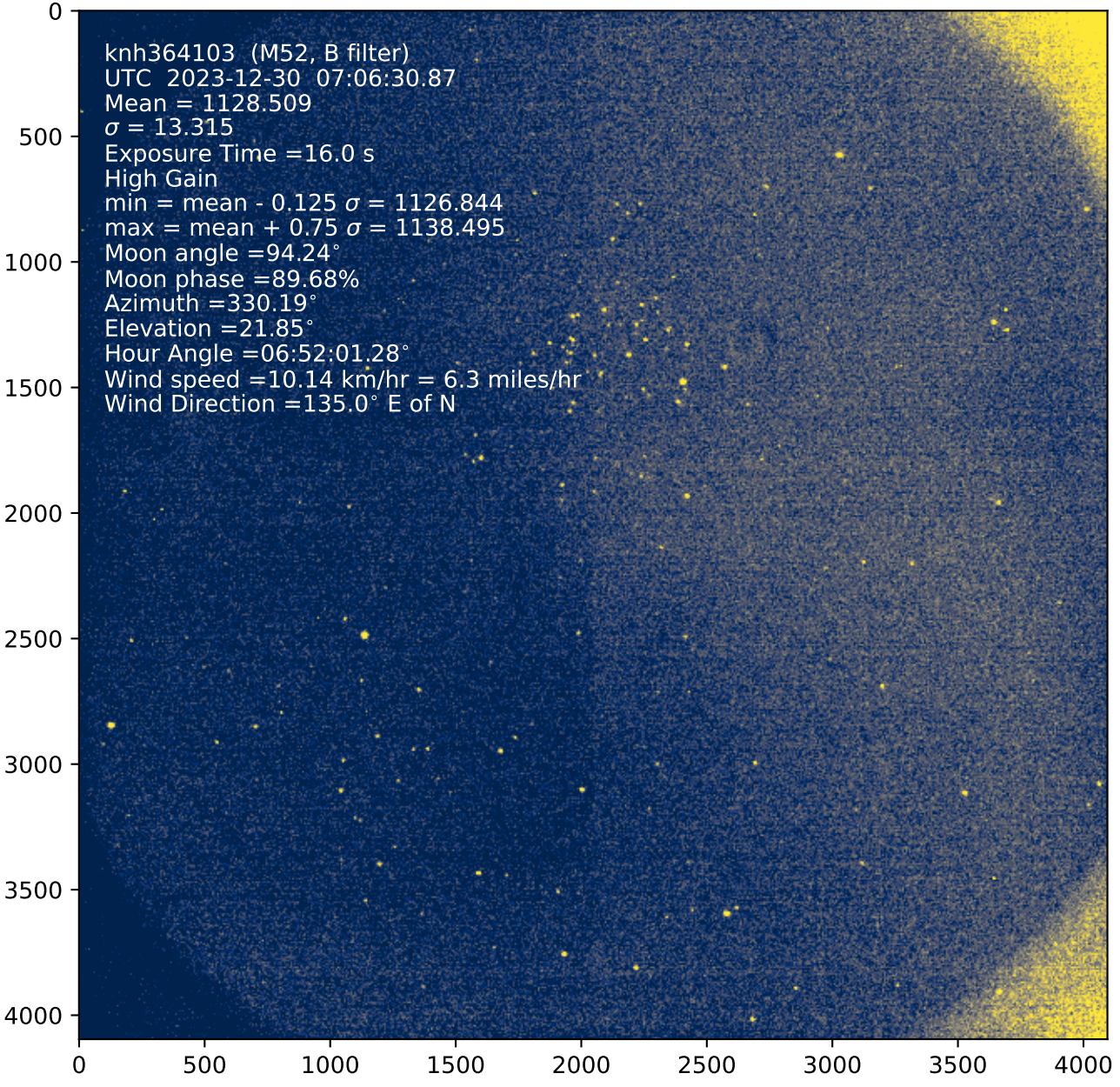
knh364103 (M52, B filter)
UTC 2023-12-30 07:06:30.87
Mean = 1128.509
σ = 13.315
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1126.844
max = mean + 0.75 σ = 1138.495
Moon angle =94.24°
Moon phase =89.68%
Azimuth =330.19°
Elevation =21.85°
Hour Angle =06:52:01.28°
Wind speed =10.14 km/hr = 6.3 miles/hr
Wind Direction =135.0° E of N
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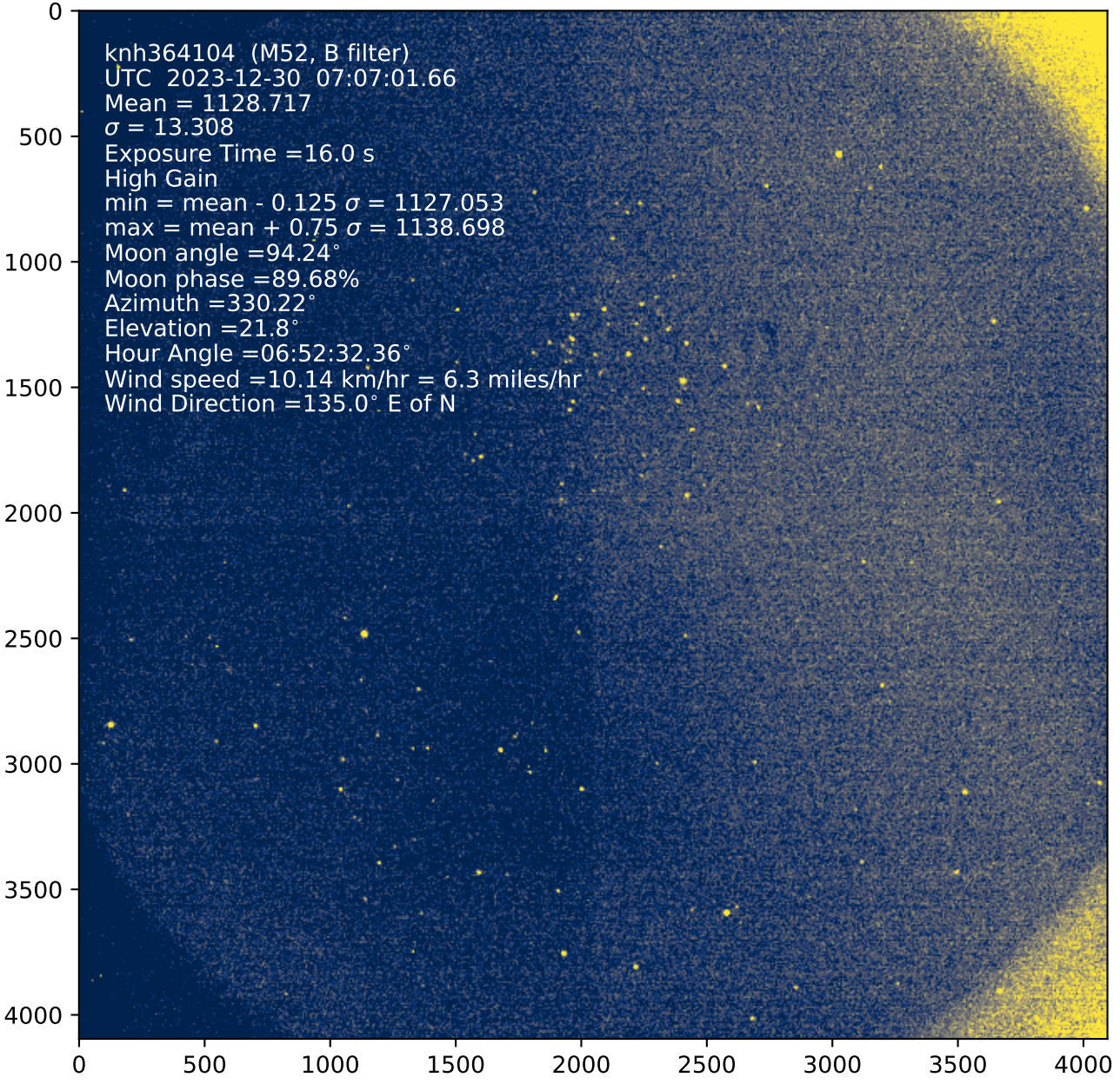
knh364104 (M52, B filter)
UTC 2023-12-30 07:07:01.66
Mean = 1128.717
σ = 13.308
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1127.053
max = mean + 0.75 σ = 1138.698
Moon angle =94.24°
Moon phase =89.68%
Azimuth =330.22°
Elevation =21.8°
Hour Angle =06:52:32.36°
Wind speed =10.14 km/hr = 6.3 miles/hr
Wind Direction =135.0° E of N
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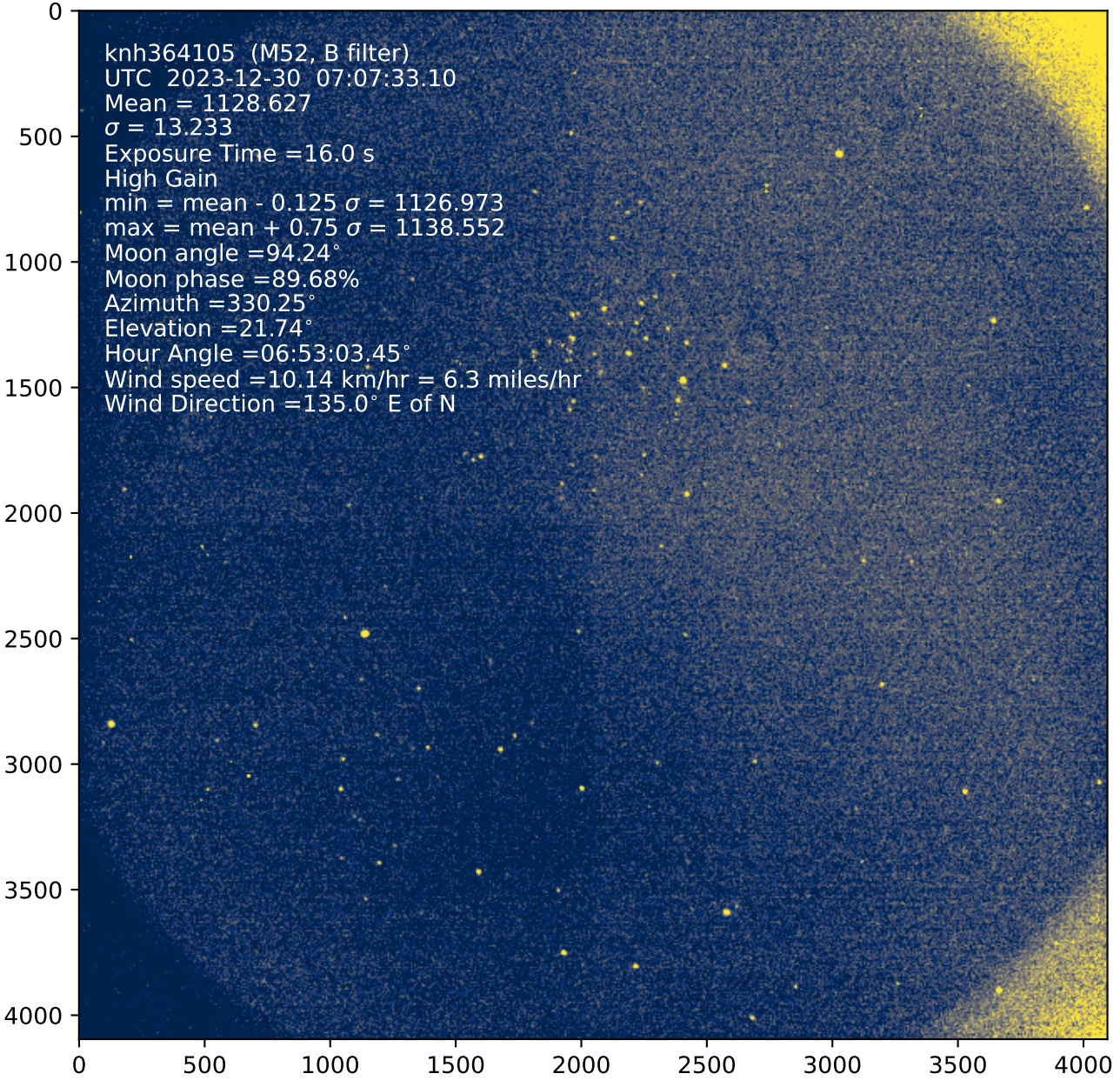
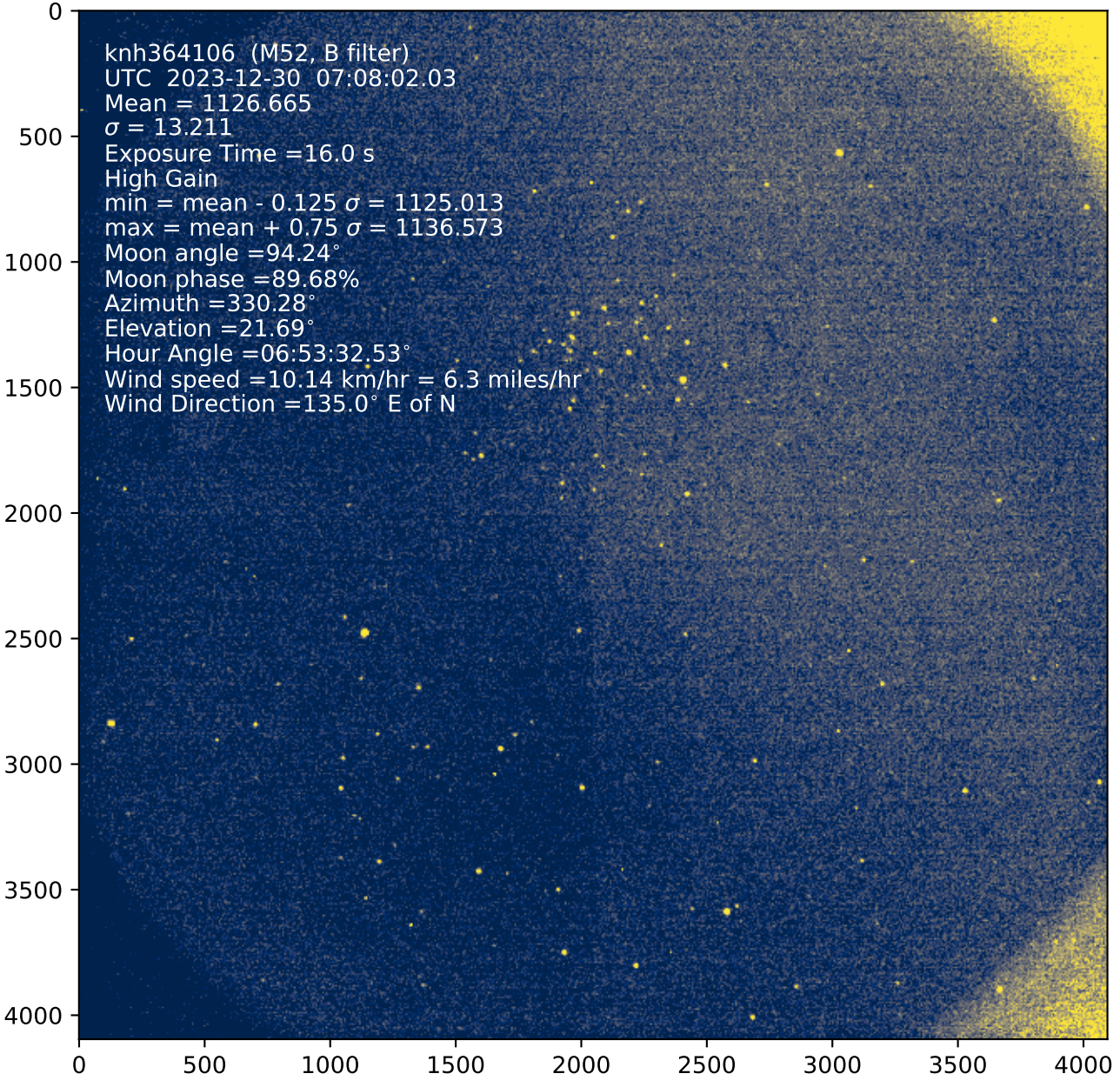
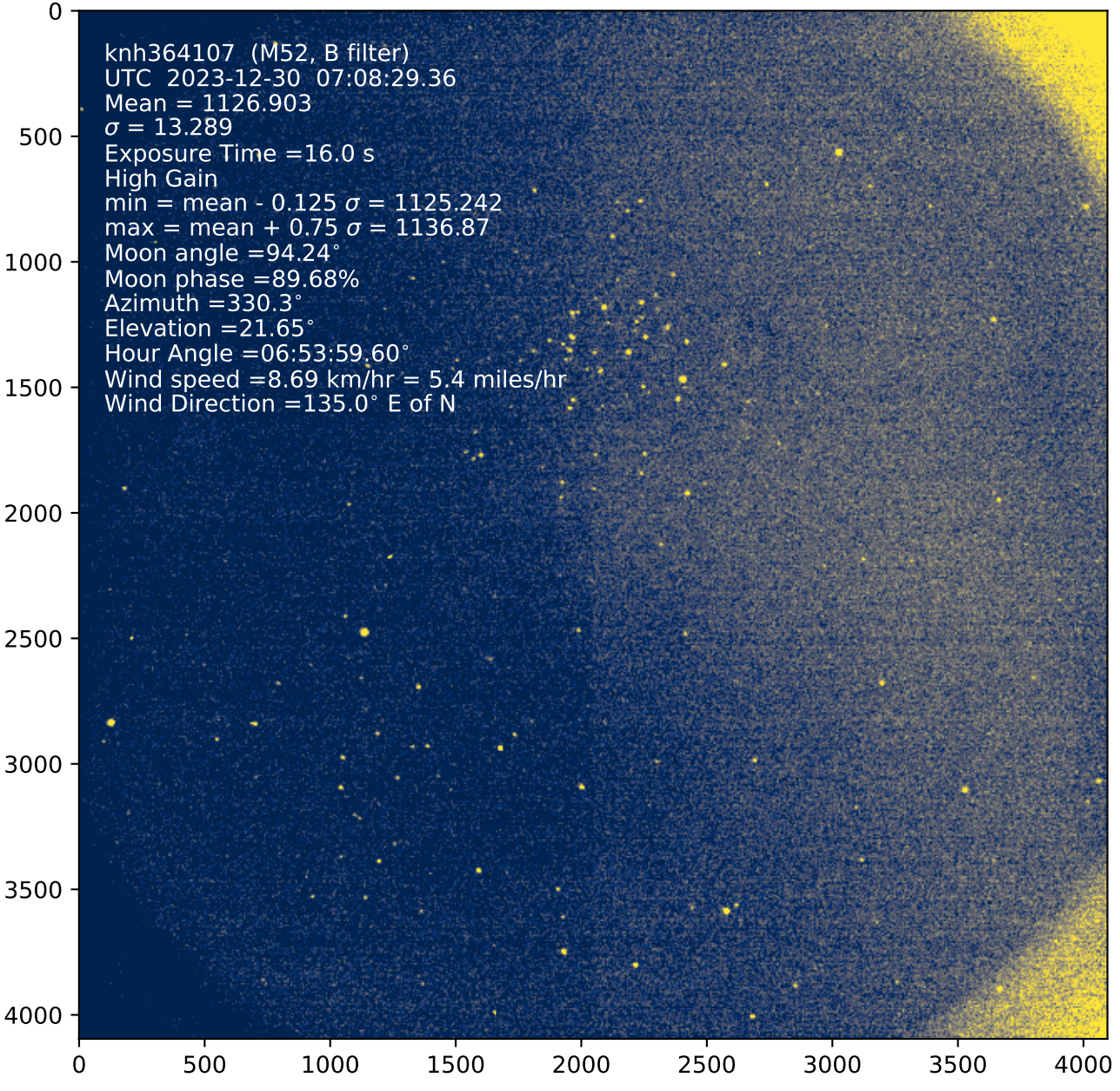
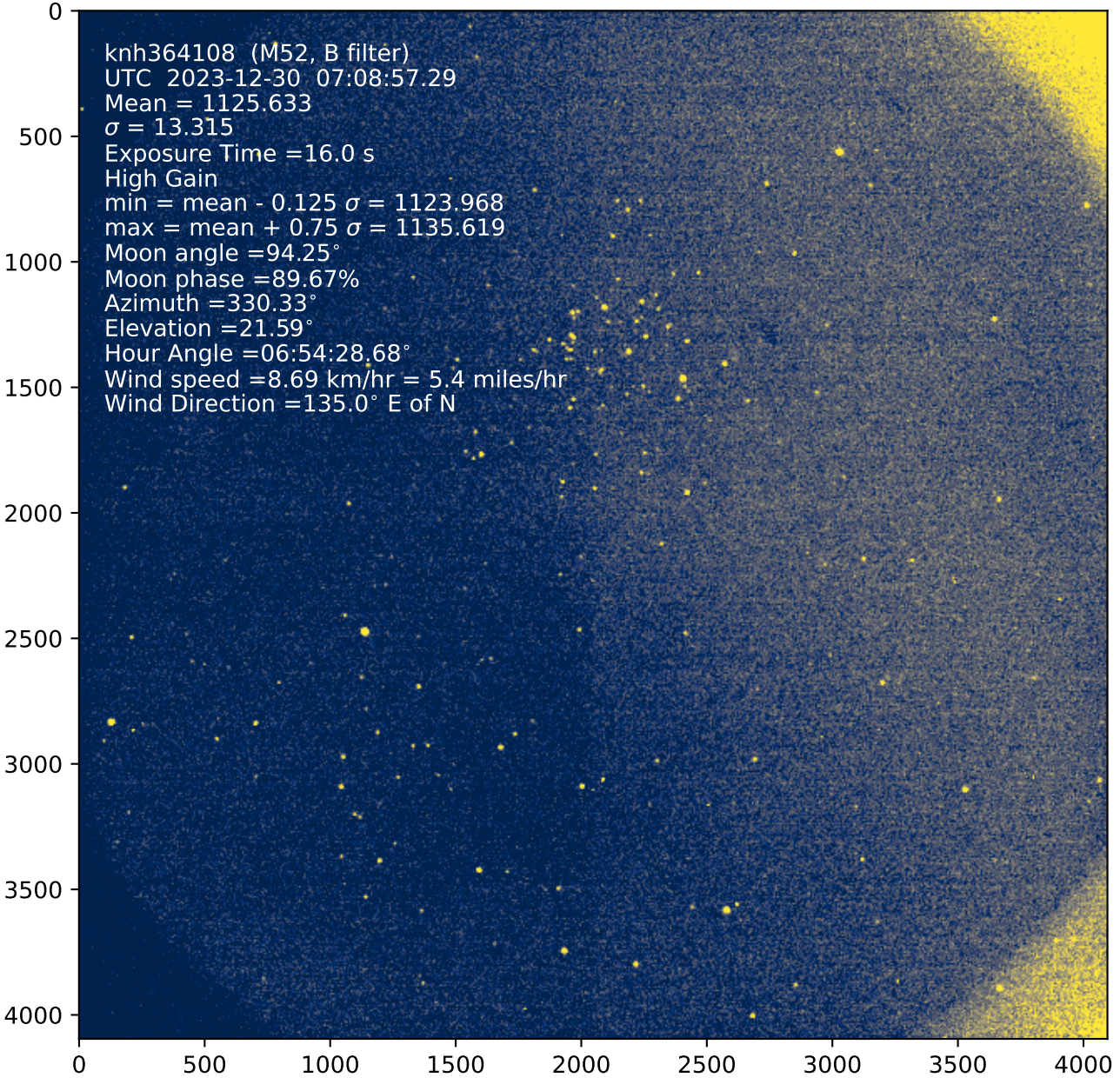
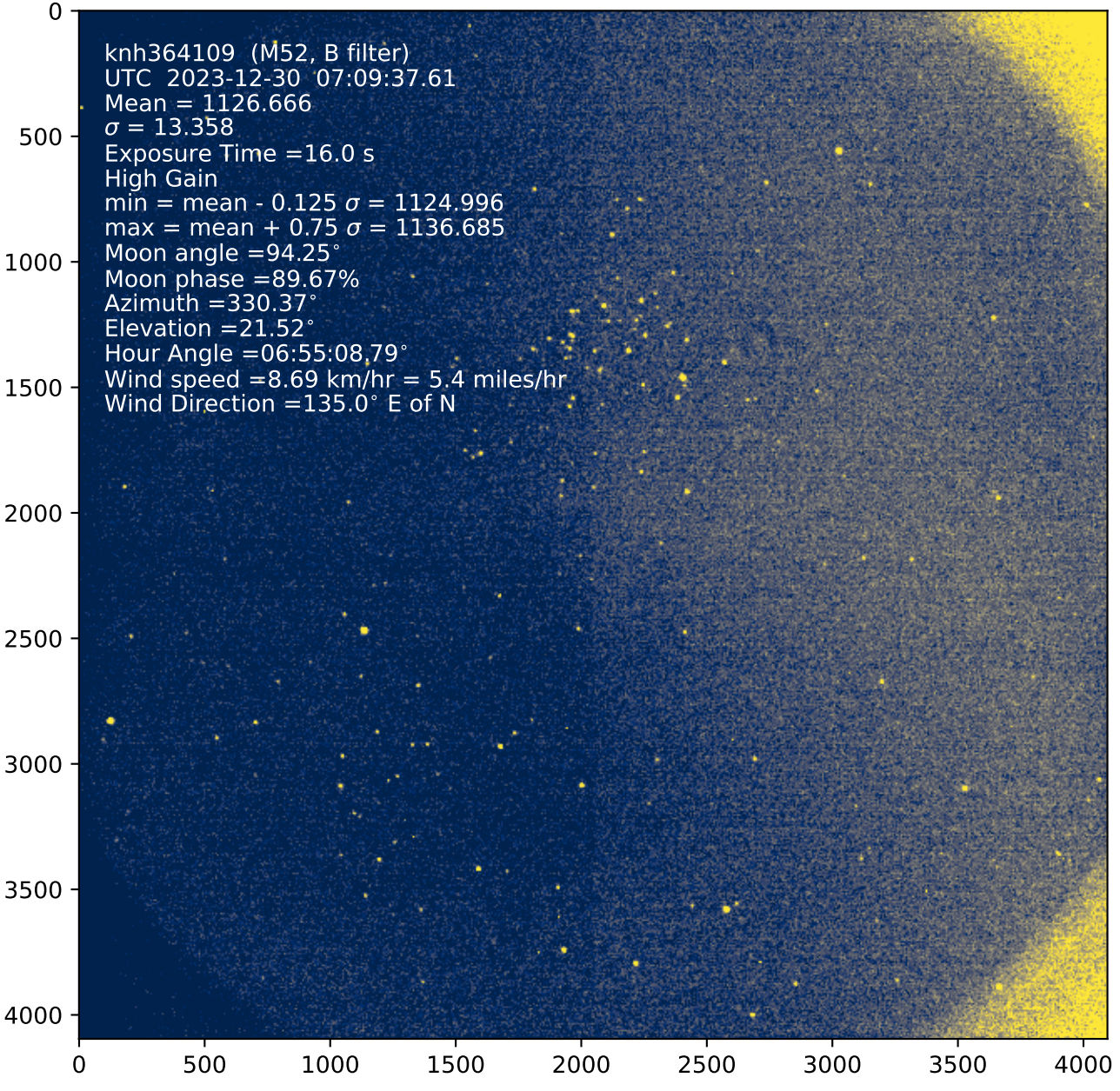
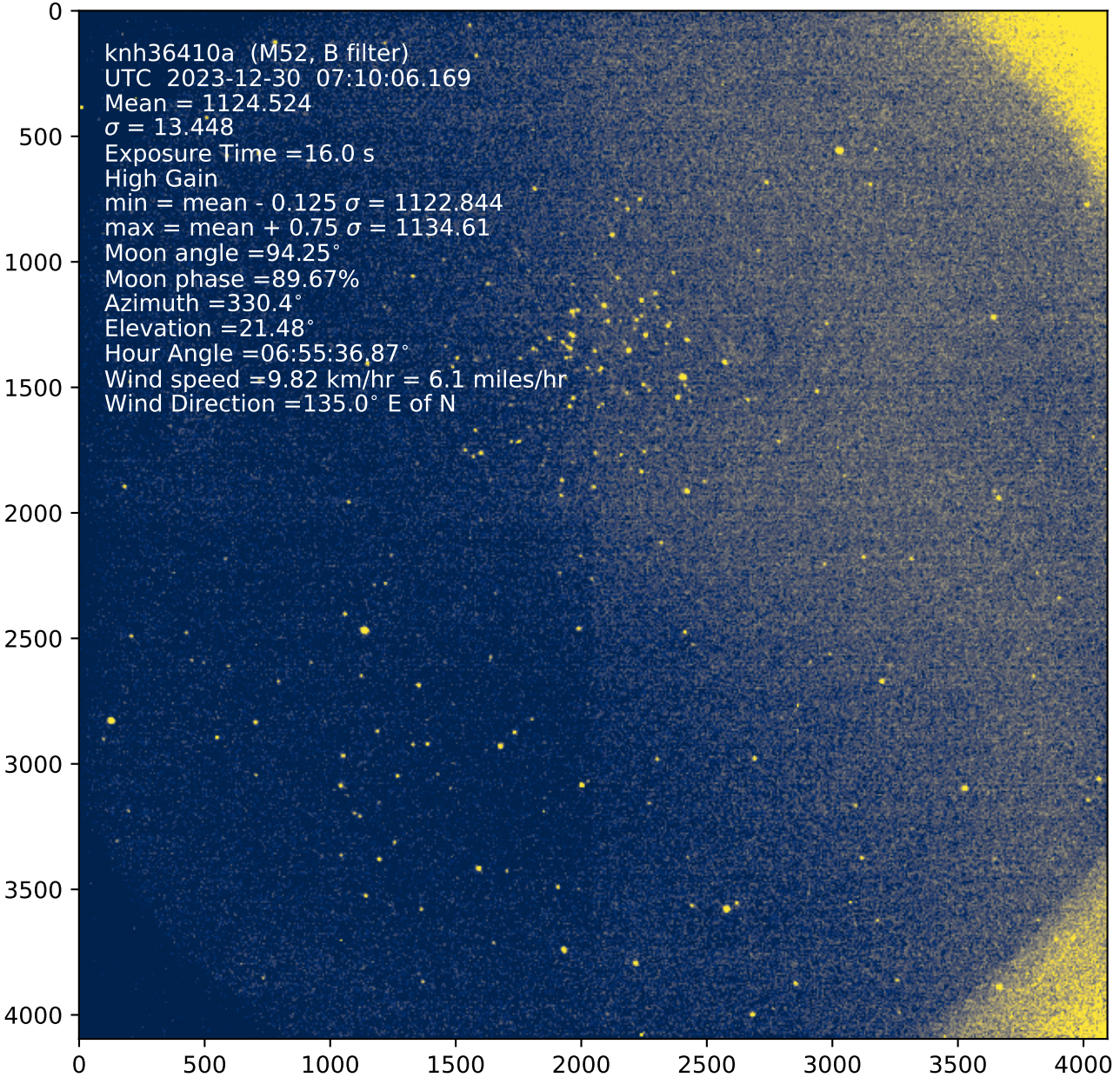

knh364105 (M52, B filter)
UTC 2023-12-30 07:07:33.10
Mean = 1128.627
σ = 13.233
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1126.973
max = mean + 0.75 σ = 1138.552
Moon angle =94.24°
Moon phase =89.68%
Azimuth =330.25°
Elevation =21.74°
Hour Angle =06:53:03.45°
Wind speed =10.14 km/hr = 6.3 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh364106 (M52, B filter)
UTC 2023-12-30 07:08:02.03
Mean = 1126.665
σ = 13.211
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1125.013
max = mean + 0.75 σ = 1136.573
Moon angle =94.24°
Moon phase =89.68%
Azimuth =330.28°
Elevation =21.69°
Hour Angle =06:53:32.53°
Wind speed =10.14 km/hr = 6.3 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh364107 (M52, B filter)
UTC 2023-12-30 07:08:29.36
Mean = 1126.903
σ = 13.289
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1125.242
max = mean + 0.75 σ = 1136.87
Moon angle =94.24°
Moon phase =89.68%
Azimuth =330.3°
Elevation =21.65°
Hour Angle =06:53:59.60°
Wind speed =8.69 km/hr = 5.4 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh364108 (M52, B filter)
UTC 2023-12-30 07:08:57.29
Mean = 1125.633
σ = 13.315
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1123.968
max = mean + 0.75 σ = 1135.619
Moon angle =94.25°
Moon phase =89.67%
Azimuth =330.33°
Elevation =21.59°
Hour Angle =06:54:28.68°
Wind speed =8.69 km/hr = 5.4 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh364109 (M52, B filter)
UTC 2023-12-30 07:09:37.61
Mean = 1126.666
σ = 13.358
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1124.996
max = mean + 0.75 σ = 1136.685
Moon angle =94.25°
Moon phase =89.67%
Azimuth =330.37°
Elevation =21.52°
Hour Angle =06:55:08.79°
Wind speed =8.69 km/hr = 5.4 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


knh36410a (M52, B filter)
UTC 2023-12-30 07:10:06.169
Mean = 1124.524
σ = 13.448
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1122.844
max = mean + 0.75 σ = 1134.61
Moon angle =94.25°
Moon phase =89.67%
Azimuth =330.4°
Elevation =21.48°
Hour Angle =06:55:36,87°
Wind speed =9.82 km/hr = 6.1 miles/hr
Wind Direction =135.0° E of N
0
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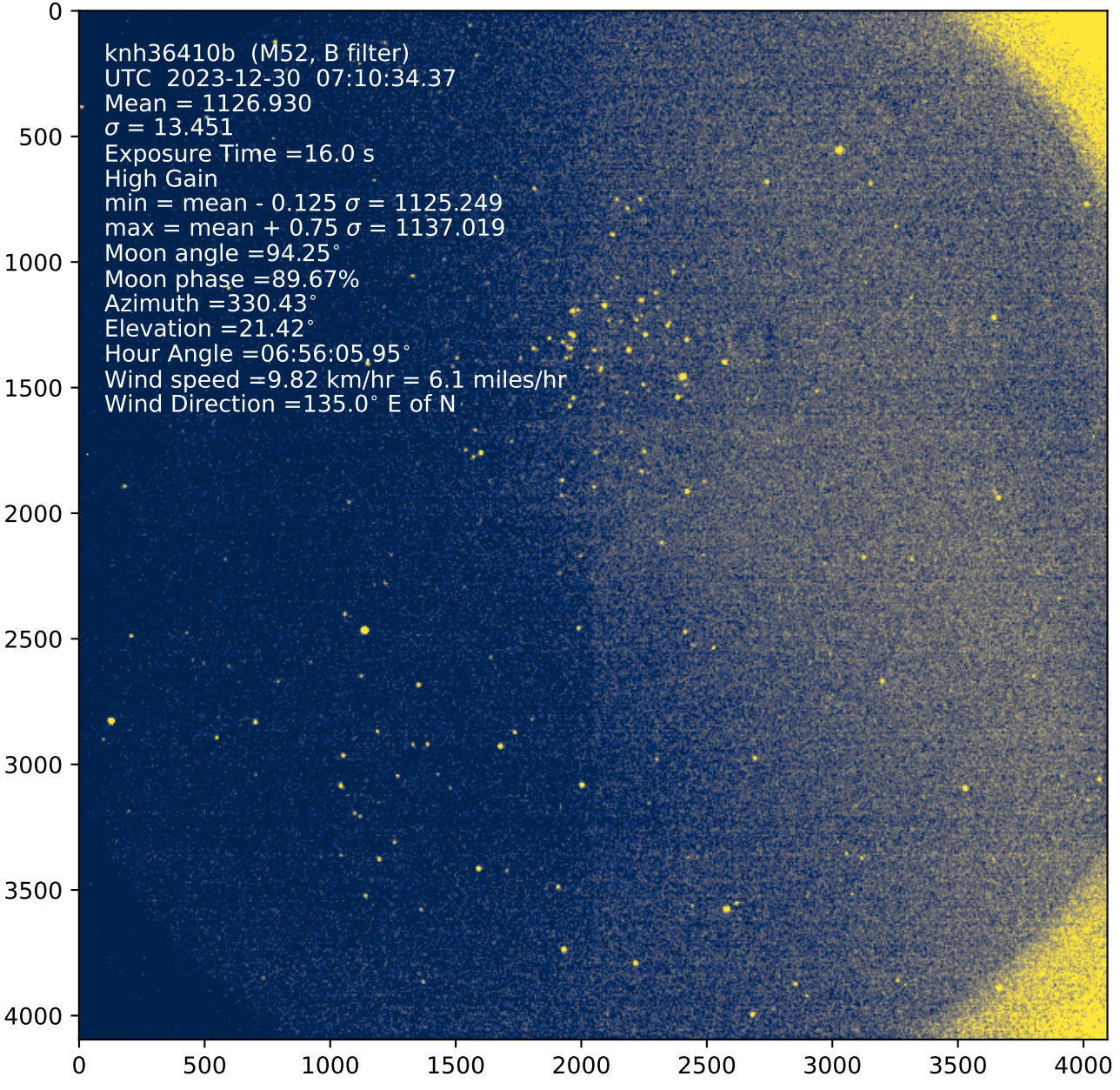
4000


knh36410b (M52, B filter)
UTC 2023-12-30 07:10:34.37
Mean = 1126.930
σ = 13.451
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1125.249
max = mean + 0.75 σ = 1137.019
Moon angle =94.25°
Moon phase =89.67%
Azimuth =330.43°
Elevation =21.42°
Hour Angle =06:56:05,95°
Wind speed =9.82 km/hr = 6.1 miles/hr
Wind Direction =135.0° E of N
0
500
1000
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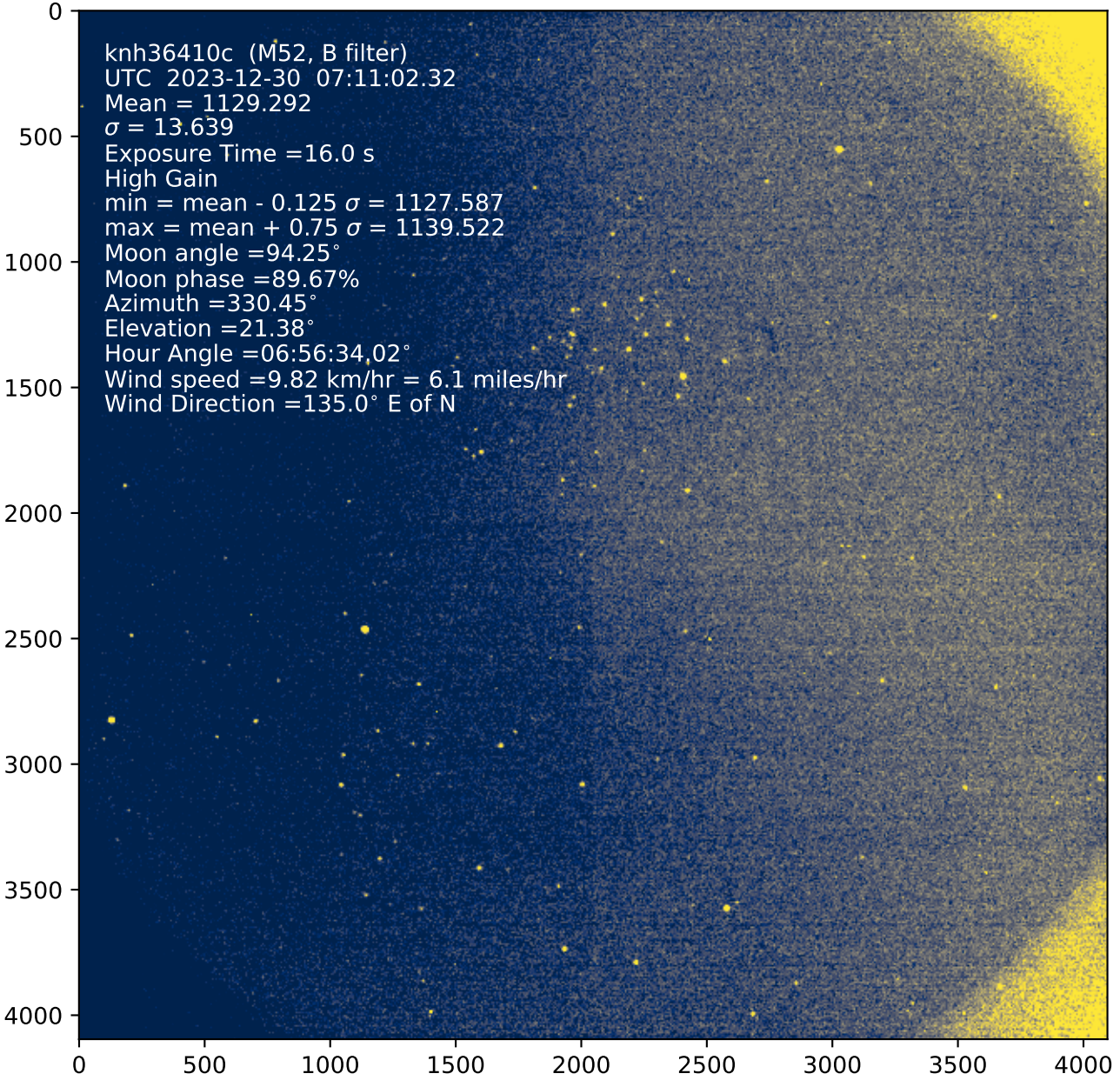
2000
2500
3000
3500
4000


knh36410c (M52, B filter)
UTC 2023-12-30 07:11:02.32
Mean = 1129.292
σ = 13.639
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1127.587
max = mean + 0.75 σ = 1139.522
Moon angle =94.25°
Moon phase =89.67%
Azimuth =330.45°
Elevation =21.38°
Hour Angle =06:56:34.02°
Wind speed =9.82 km/hr = 6.1 miles/hr
Wind Direction =135.0° E of N
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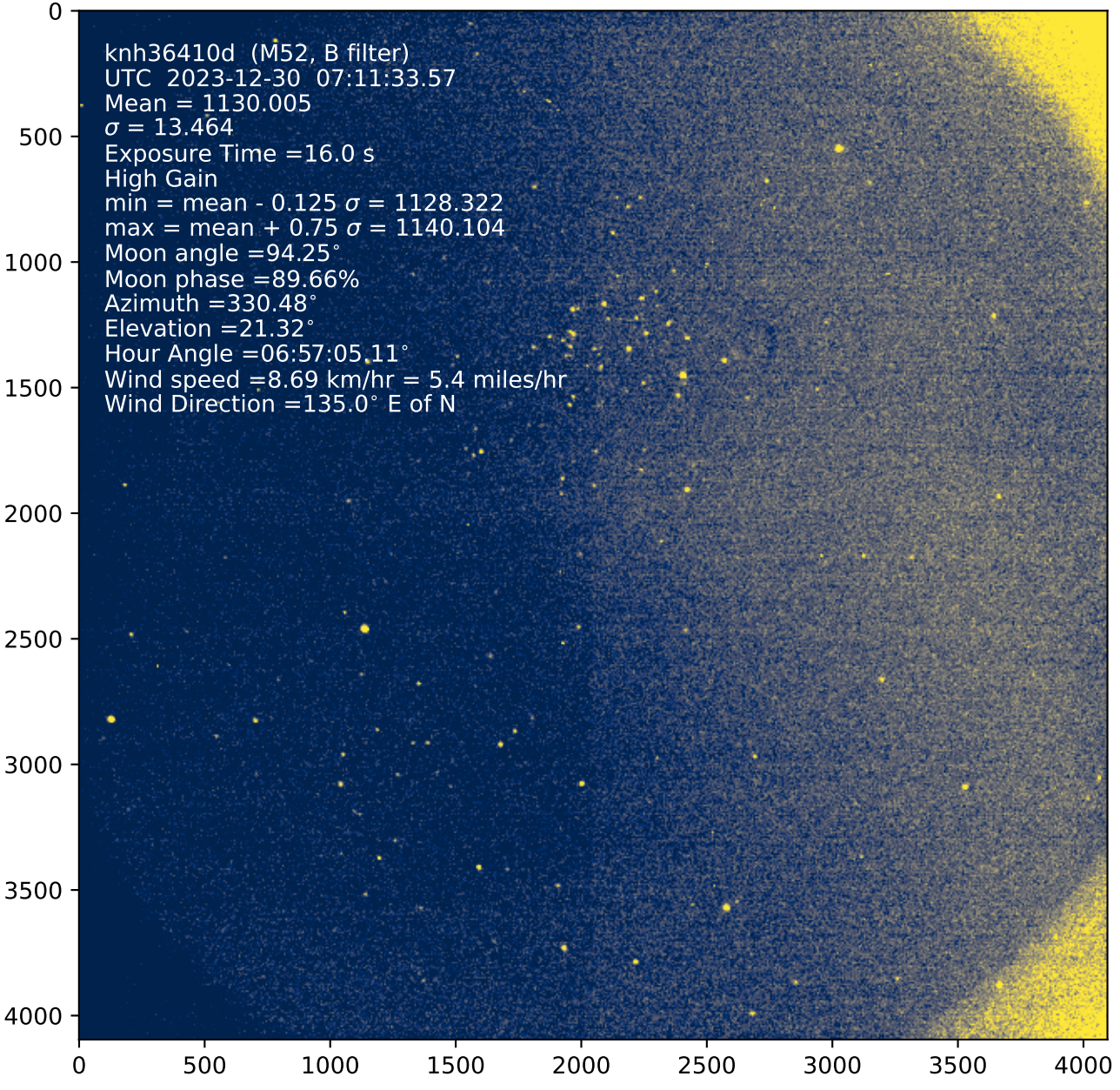
2500
3000
3500
4000


knh36410d (M52, B filter)
UTC 2023-12-30 07:11:33.57
Mean = 1130.005
σ = 13.464
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1128.322
max = mean + 0.75 σ = 1140.104
Moon angle =94.25°
Moon phase =89.66%
Azimuth =330.48°
Elevation =21.32°
Hour Angle =06:57:05.11°
Wind speed =8.69 km/hr = 5.4 miles/hr
Wind Direction =135.0° E of N
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500
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2500
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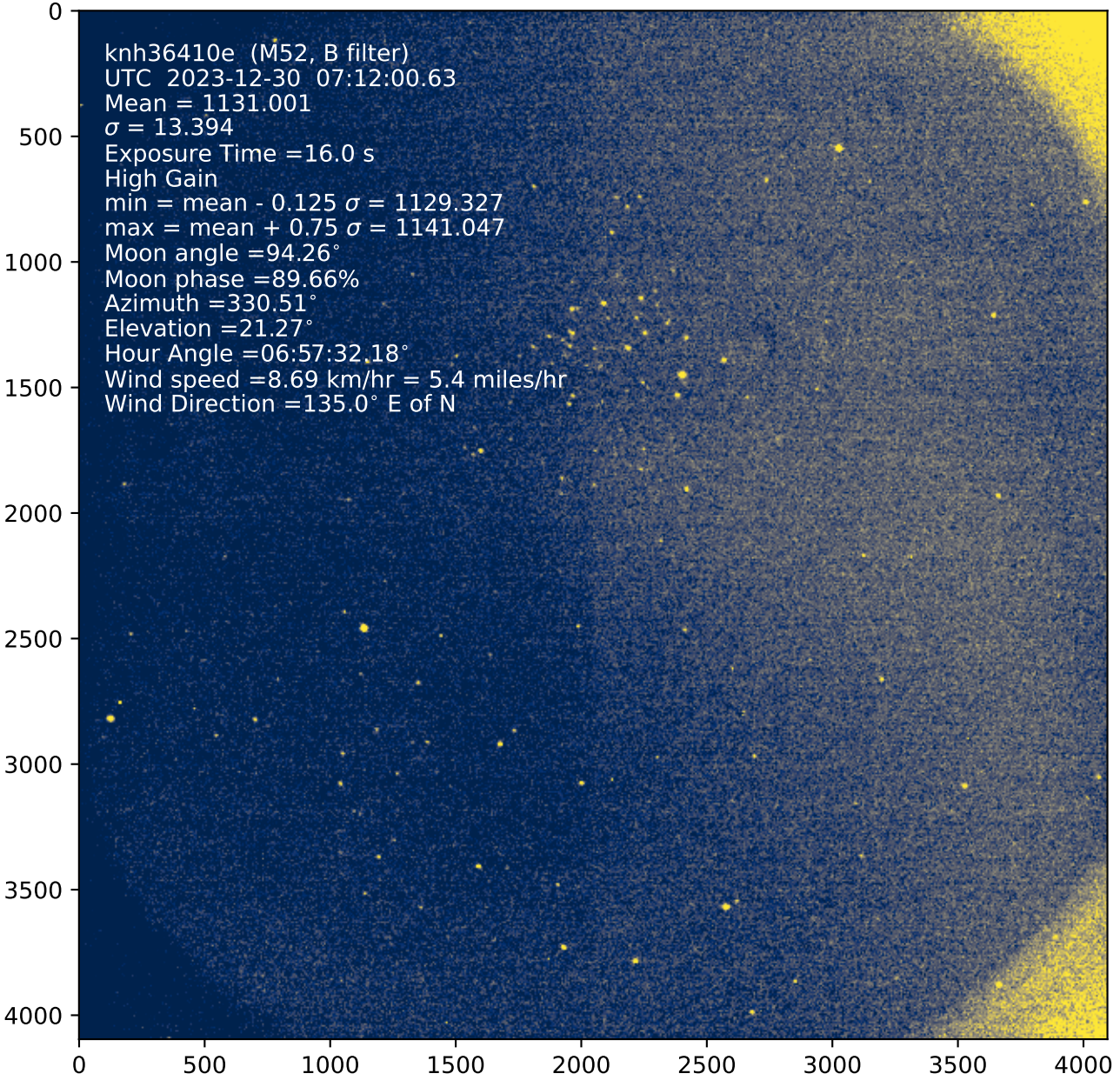
4000


knh36410e (M52, B filter)
UTC 2023-12-30 07:12:00.63
Mean = 1131.001
σ = 13.394
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1129.327
max = mean + 0.75 σ = 1141.047
Moon angle =94.26°
Moon phase =89.66%
Azimuth =330.51°
Elevation =21.27°
Hour Angle =06:57:32.18°
Wind speed =8.69 km/hr = 5.4 miles/hr
Wind Direction =135.0° E of N
0
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1000
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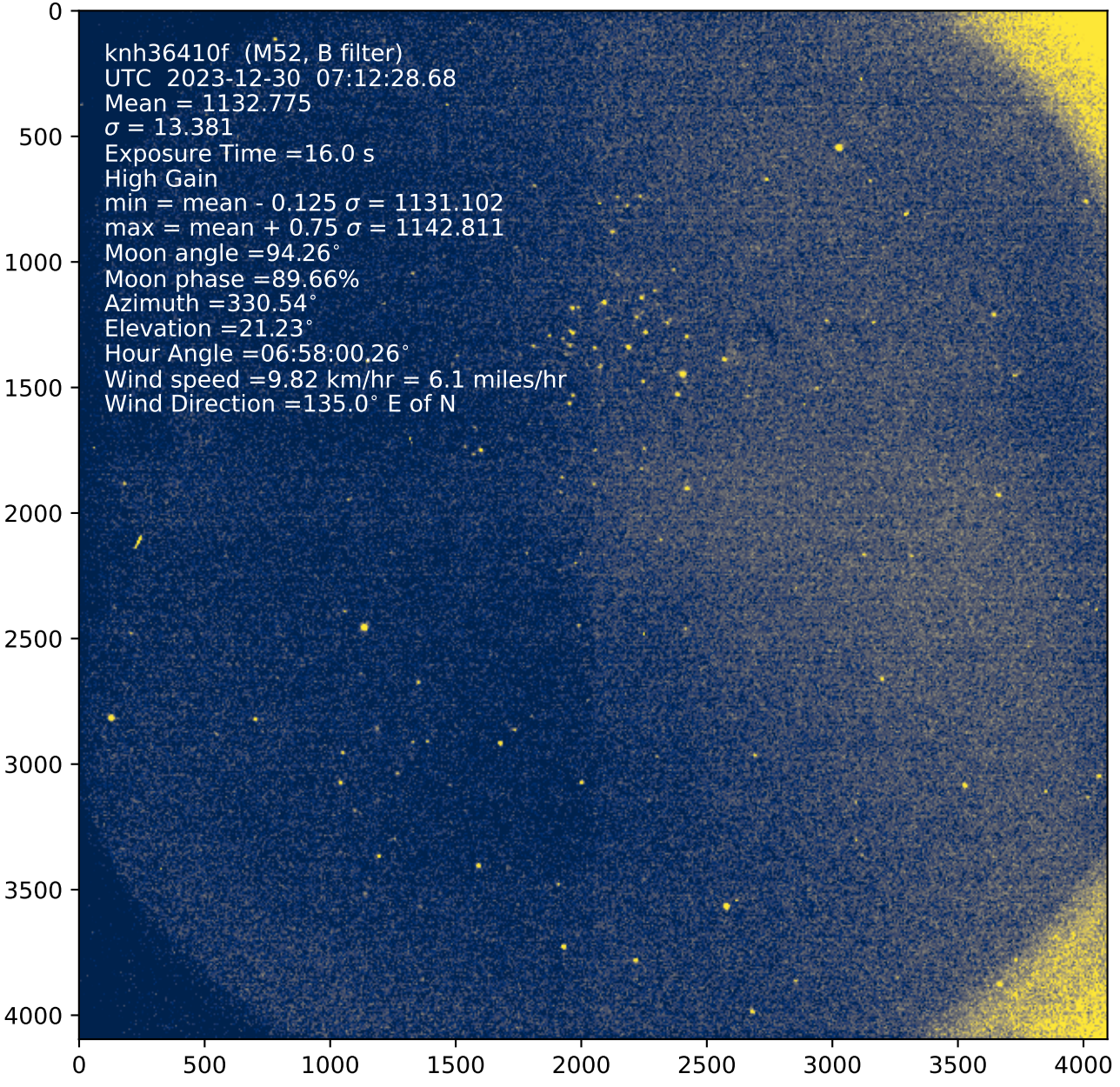
2500
3000
3500
4000


knh36410f (M52, B filter)
UTC 2023-12-30 07:12:28.68
Mean = 1132.775
σ = 13.381
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1131.102
max = mean + 0.75 σ = 1142.811
Moon angle =94.26°
Moon phase =89.66%
Azimuth =330.54°
Elevation =21.23°
Hour Angle =06:58:00.26°
Wind speed =9.82 km/hr = 6.1 miles/hr
Wind Direction =135.0° E of N
0
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3000
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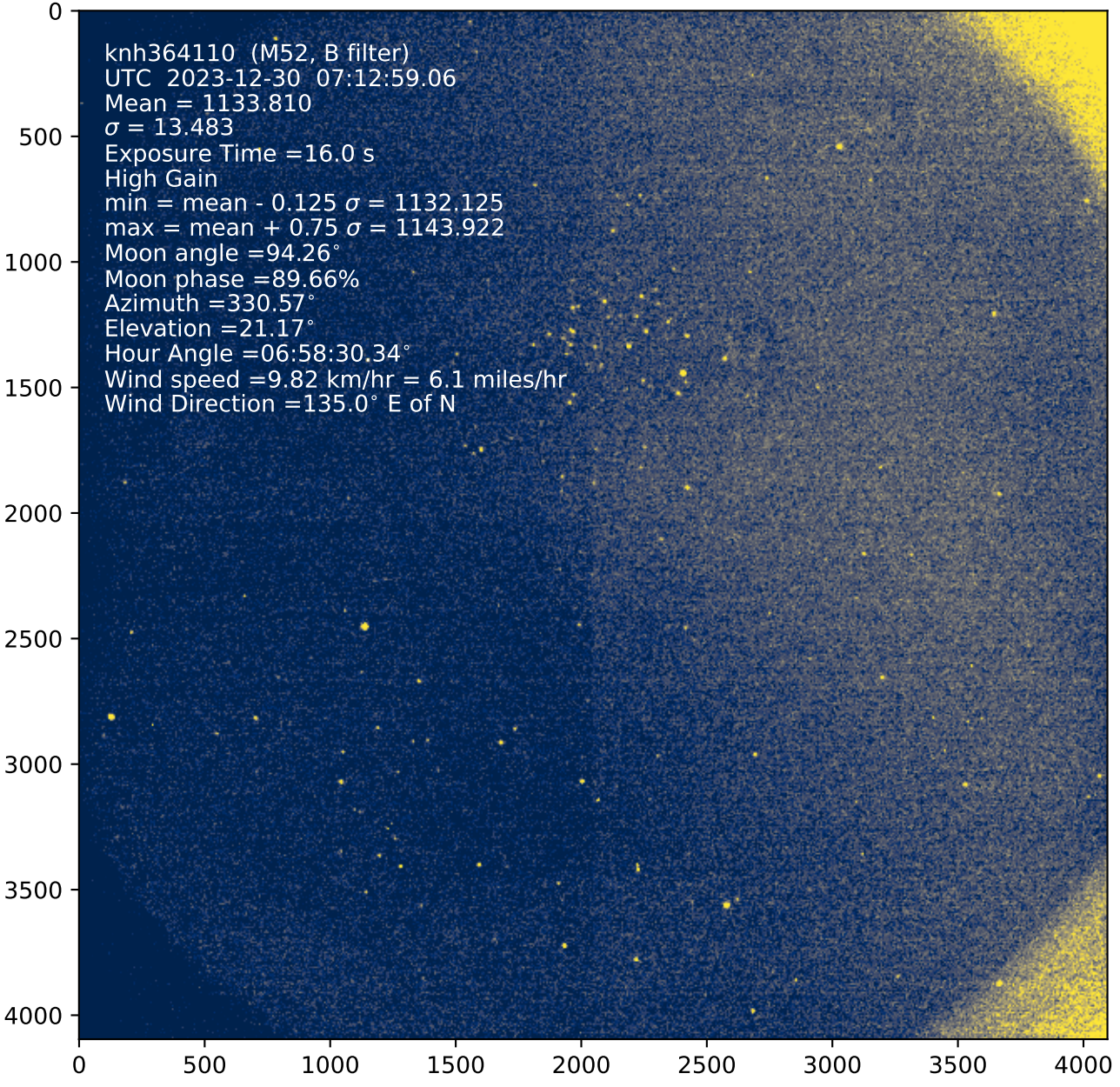
4000


knh364110 (M52, B filter)
UTC 2023-12-30 07:12:59.06
Mean = 1133.810
σ = 13.483
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1132.125
max = mean + 0.75 σ = 1143.922
Moon angle =94.26°
Moon phase =89.66%
Azimuth =330.57°
Elevation =21.17°
Hour Angle =06:58:30.34°
Wind speed =9.82 km/hr = 6.1 miles/hr
Wind Direction =135.0° E of N
0
500
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2500
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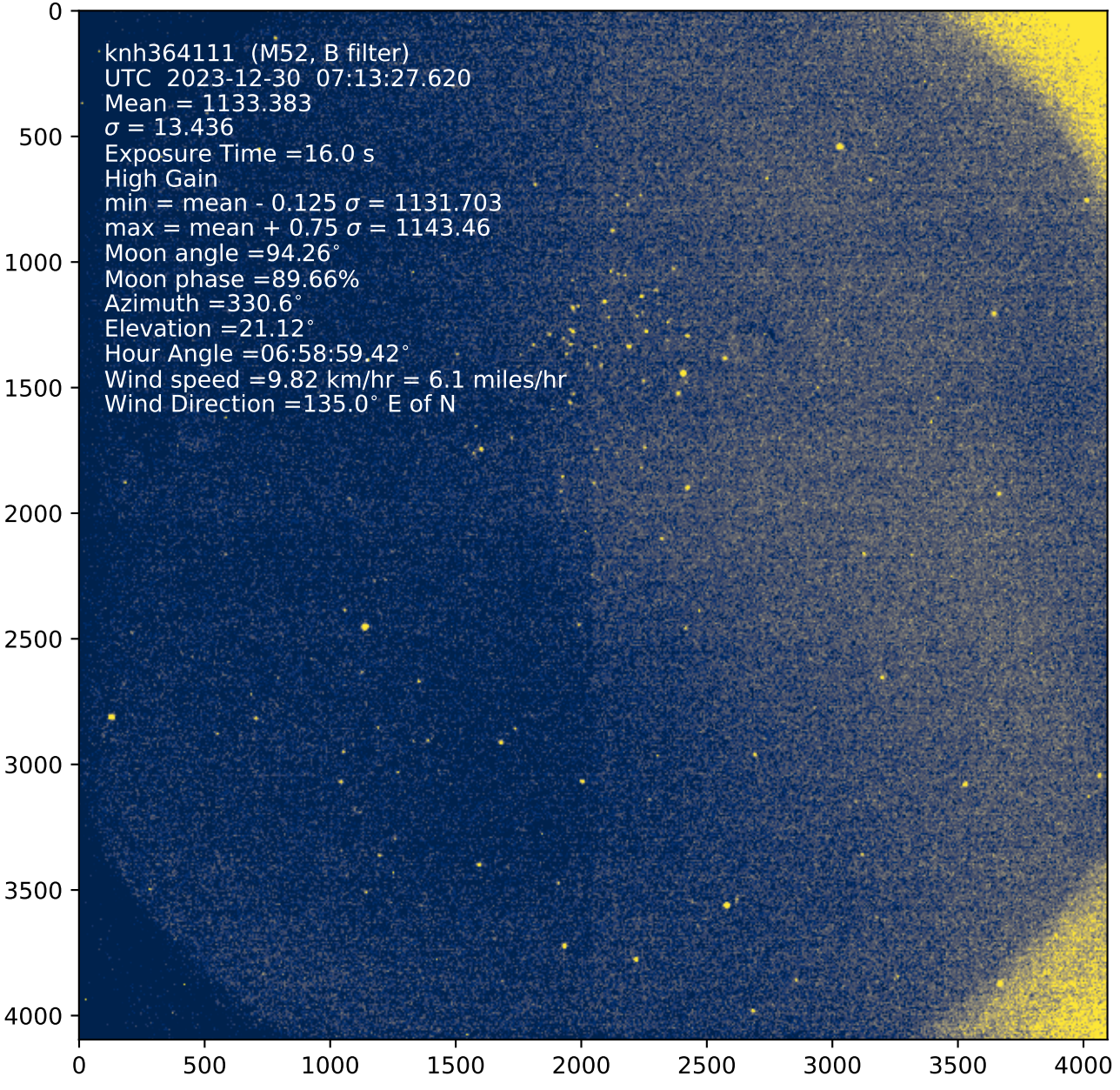
3500
4000


knh364111 (M52, B filter)
UTC 2023-12-30 07:13:27.620
Mean = 1133.383
σ = 13.436
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1131.703
max = mean + 0.75 σ = 1143.46
Moon angle =94.26°
Moon phase =89.66%
Azimuth =330.6°
Elevation =21.12°
Hour Angle =06:58:59.42°
Wind speed =9.82 km/hr = 6.1 miles/hr
Wind Direction =135.0° E of N
0
500
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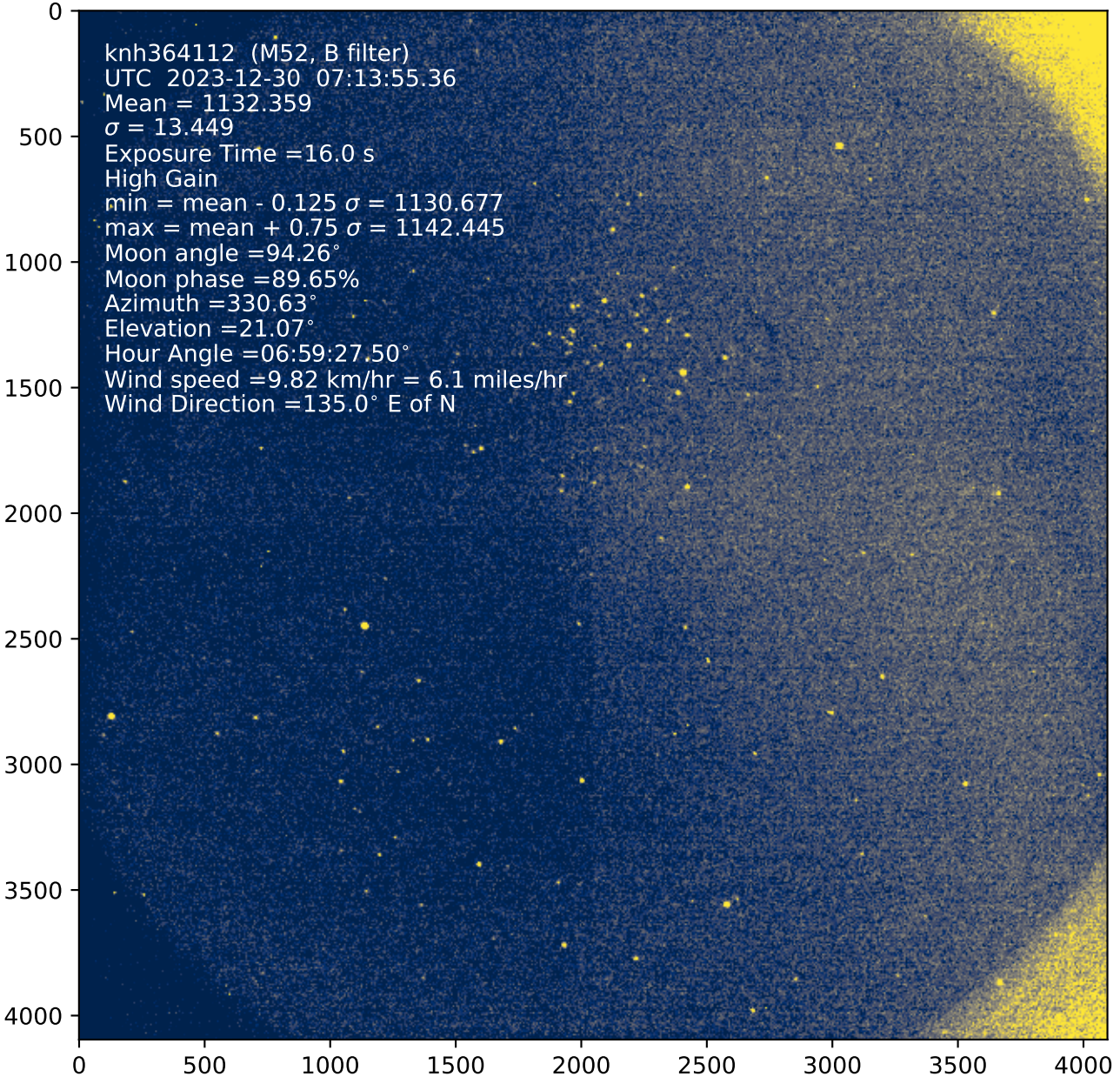
2000
2500
3000
3500
4000


knh364112 (M52, B filter)
UTC 2023-12-30 07:13:55.36
Mean = 1132.359
σ = 13.449
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1130.677
max = mean + 0.75 σ = 1142.445
Moon angle =94.26°
Moon phase =89.65%
Azimuth =330.63°
Elevation =21.07°
Hour Angle =06:59:27.50°
Wind speed =9.82 km/hr = 6.1 miles/hr
Wind Direction =135.0° E of N
0
500
1000
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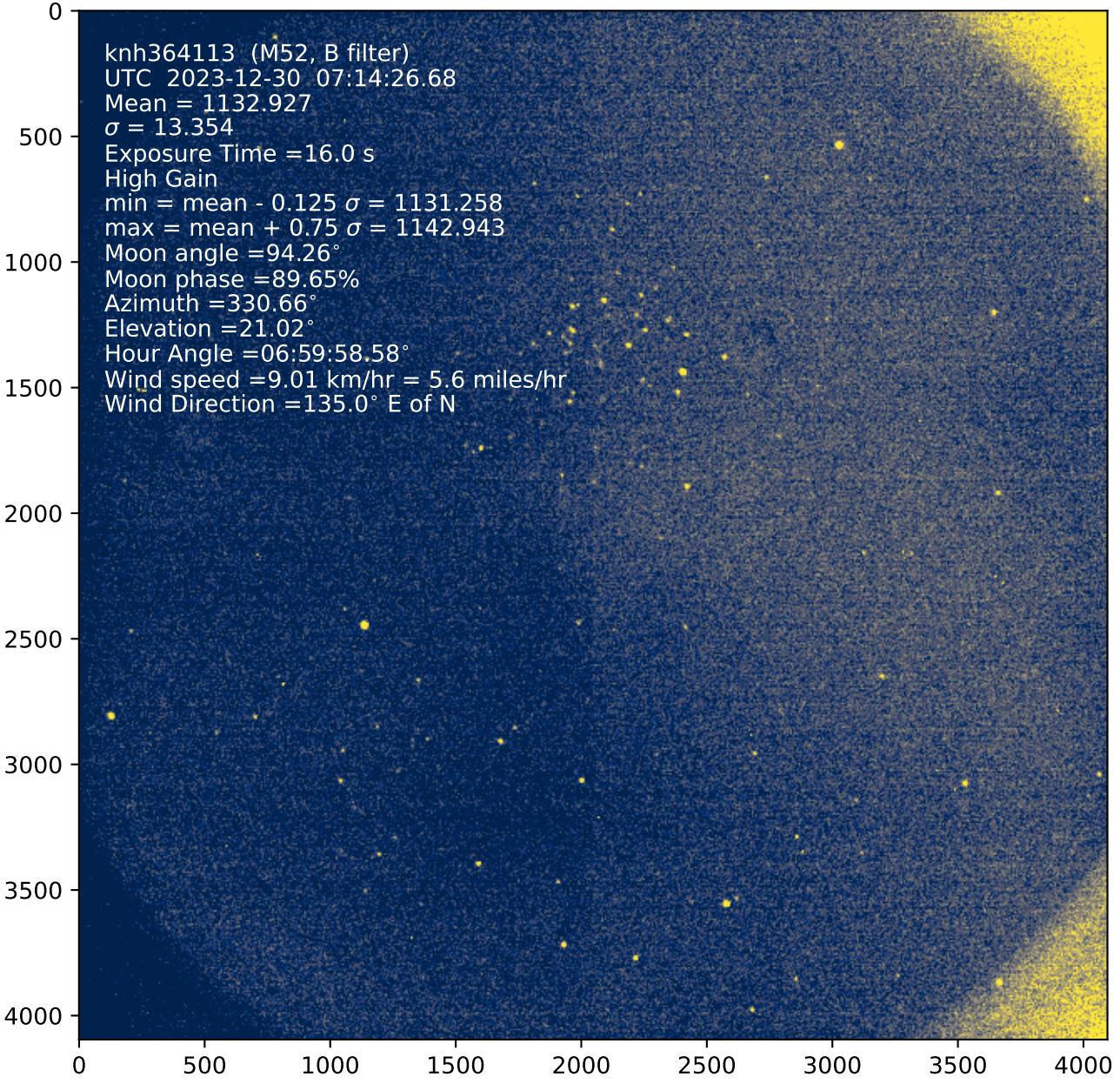
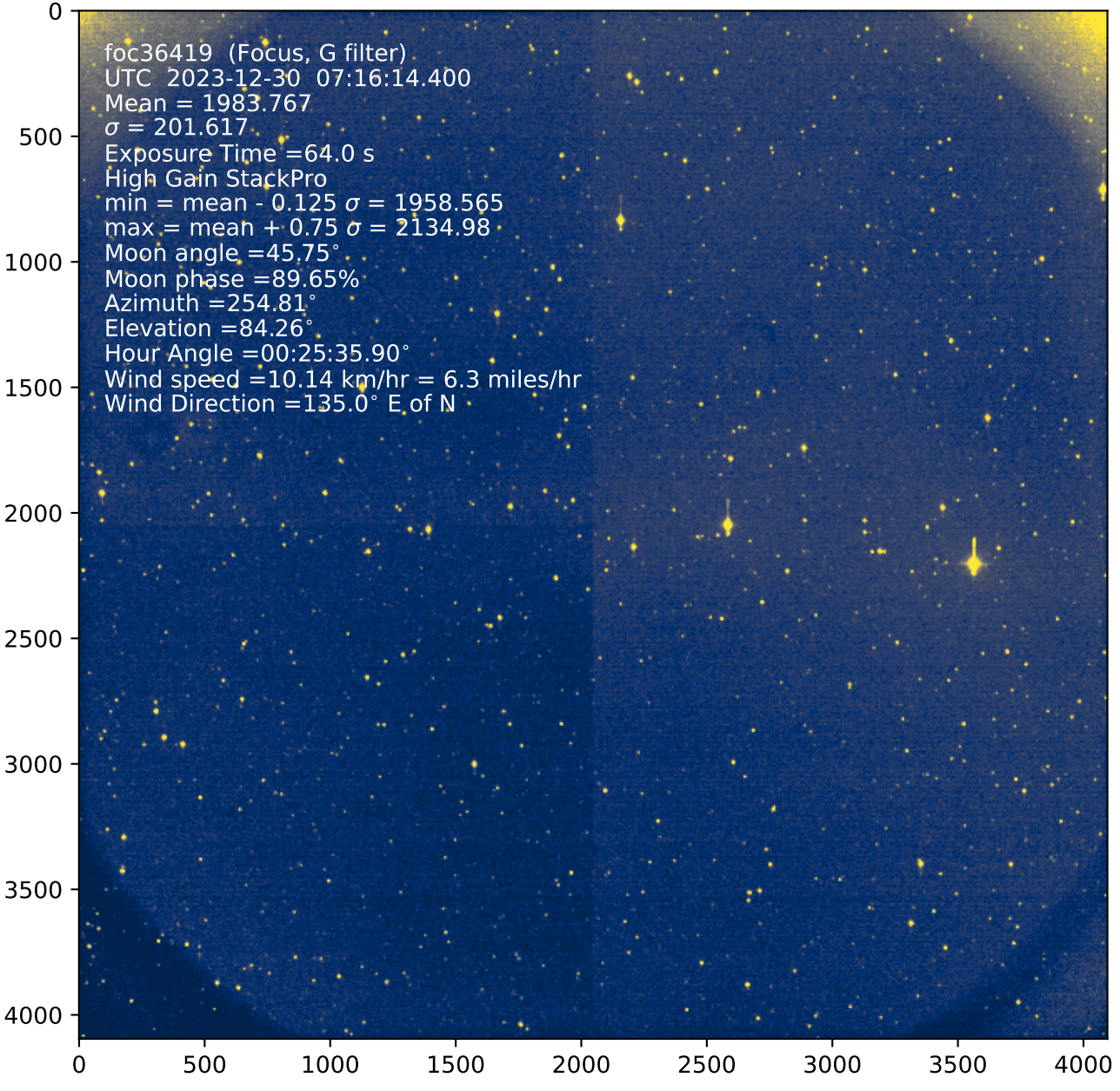
2000
2500
3000
3500
4000


knh364113 (M52, B filter)
UTC 2023-12-30 07:14:26.68
Mean = 1132.927
σ = 13.354
Exposure Time =16.0 s
High Gain
min = mean - 0.125 σ = 1131.258
max = mean + 0.75 σ = 1142.943
Moon angle =94.26°
Moon phase =89.65%
Azimuth =330.66°
Elevation =21.02°
Hour Angle =06:59:58.58°
Wind speed =9.01 km/hr = 5.6 miles/hr
Wind Direction =135.0° E of N
0
500
1000
1500
2000
2500
3000
3500
4000


foc36419 (Focus, G filter)
UTC 2023-12-30 07:16:14.400
Mean = 1983.767
σ = 201.617
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 1958.565
max = mean + 0.75 σ = 2134.98
Moon angle =45.75°
Moon phase =89.65%
Azimuth =254.81°
Elevation =84.26°
Hour Angle =00:25:35.90°
Wind speed =10.14 km/hr = 6.3 miles/hr
Wind Direction =135.0° E of N
0
500
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2500
3000
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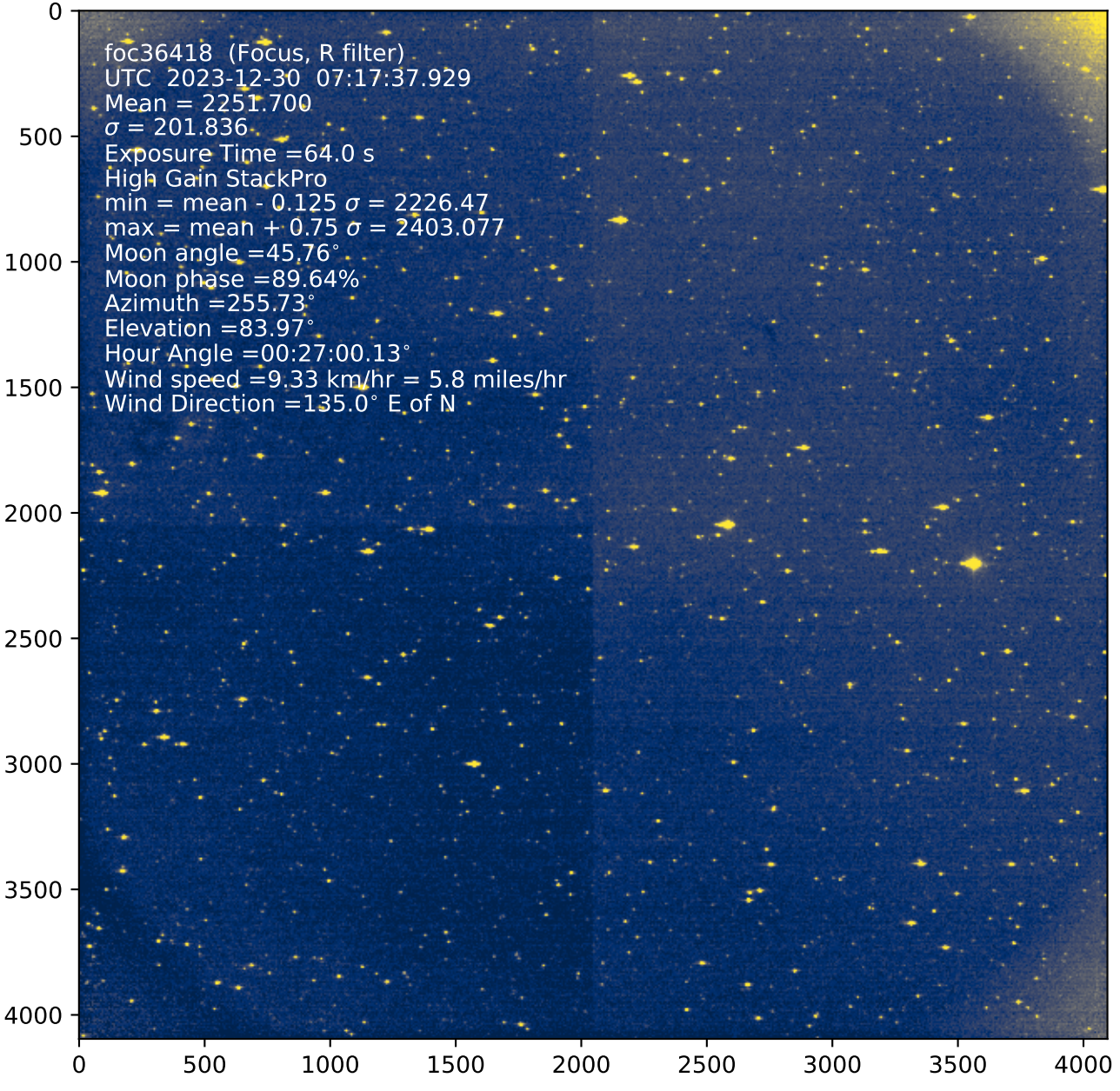
4000


foc36418 (Focus, R filter)
UTC 2023-12-30 07:17:37.929
Mean = 2251.700
σ = 201.836
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 2226.47
max = mean + 0.75 σ = 2403.077
Moon angle =45.76°
Moon phase =89.64%
Azimuth =255.73°
Elevation =83.97°
Hour Angle =00:27:00.13°
Wind speed =9.33 km/hr = 5.8 miles/hr
Wind Direction =135.0° E of N
0
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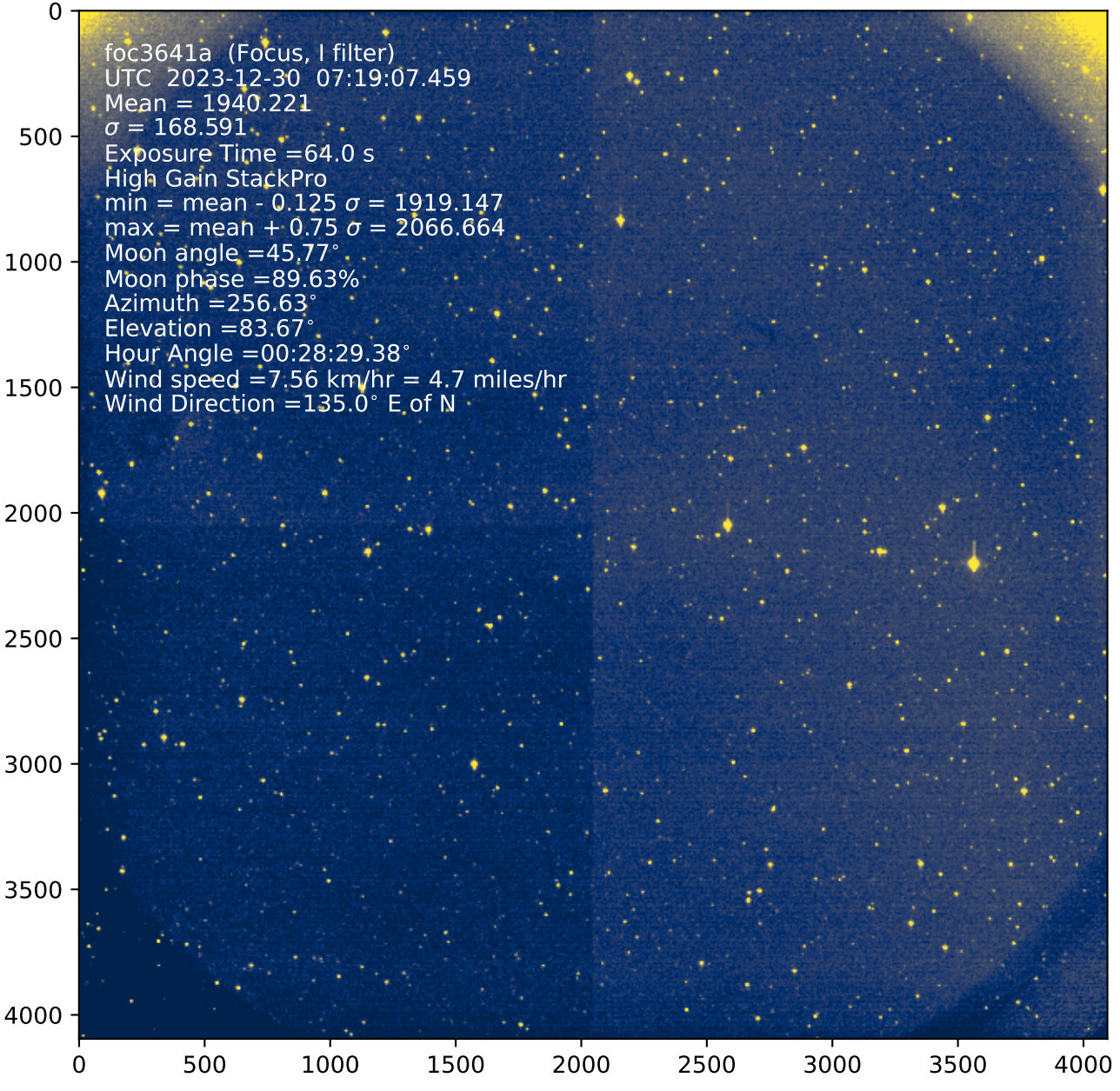
foc3641a (Focus, I filter)
UTC 2023-12-30 07:19:07.459
Mean = 1940.221
σ = 168.591
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 1919.147
max = mean + 0.75 σ = 2066.664
Moon angle =45.77°
Moon phase =89.63%
Azimuth =256.63°
Elevation =83.67°
Hour Angle =00:28:29.38°
Wind speed =7.56 km/hr = 4.7 miles/hr
Wind Direction =135.0° E of N
0
500
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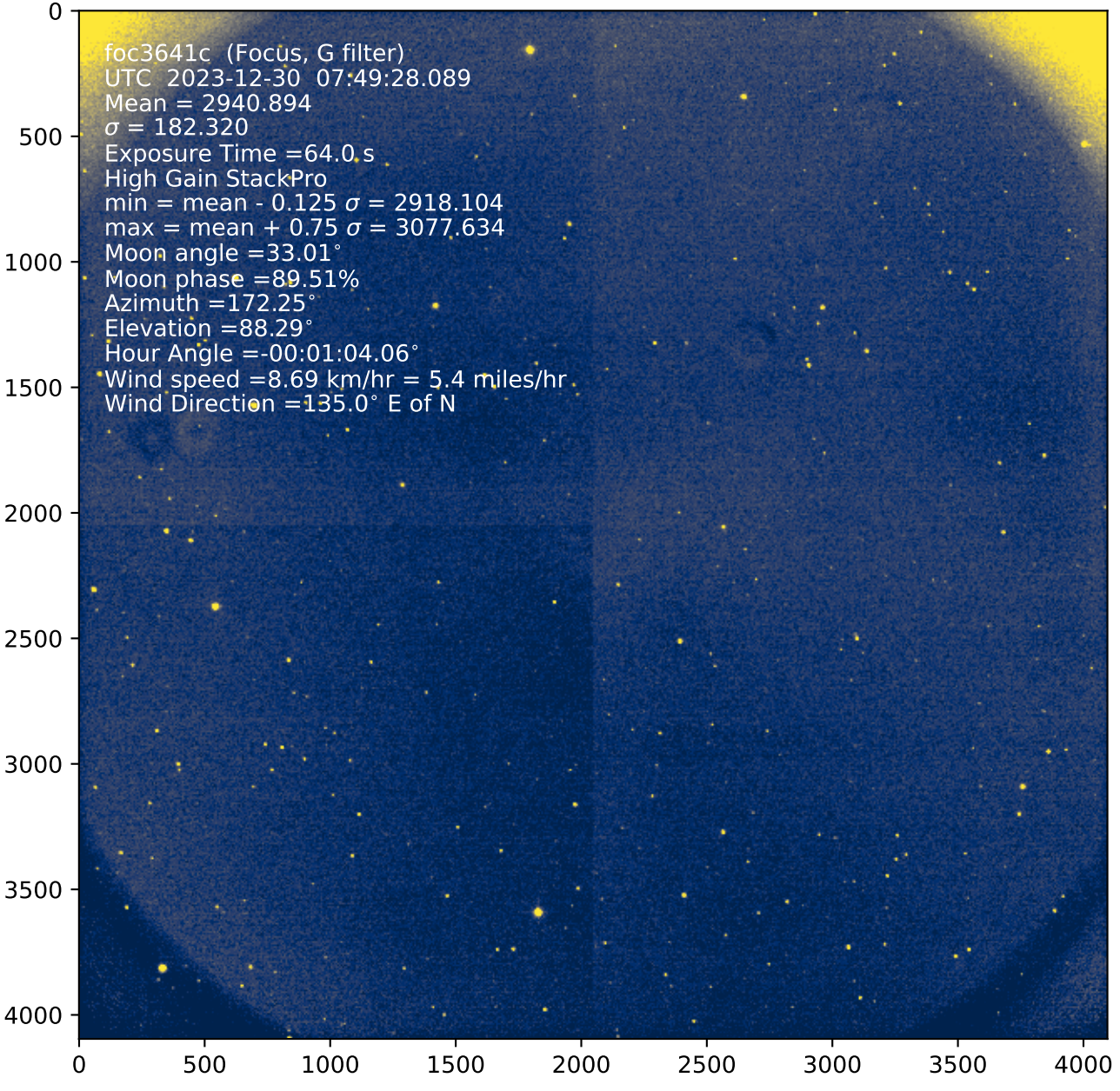
3500
4000


foc3641c (Focus, G filter)
UTC 2023-12-30 07:49:28.089
Mean = 2940.894
σ = 182.320
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 2918.104
max = mean + 0.75 σ = 3077.634
Moon angle =33.01°
Moon phase =89.51%
Azimuth =172.25°
Elevation =88.29°
Hour Angle =-00:01:04.06°
Wind speed =8.69 km/hr = 5.4 miles/hr
Wind Direction =135.0° E of N
0
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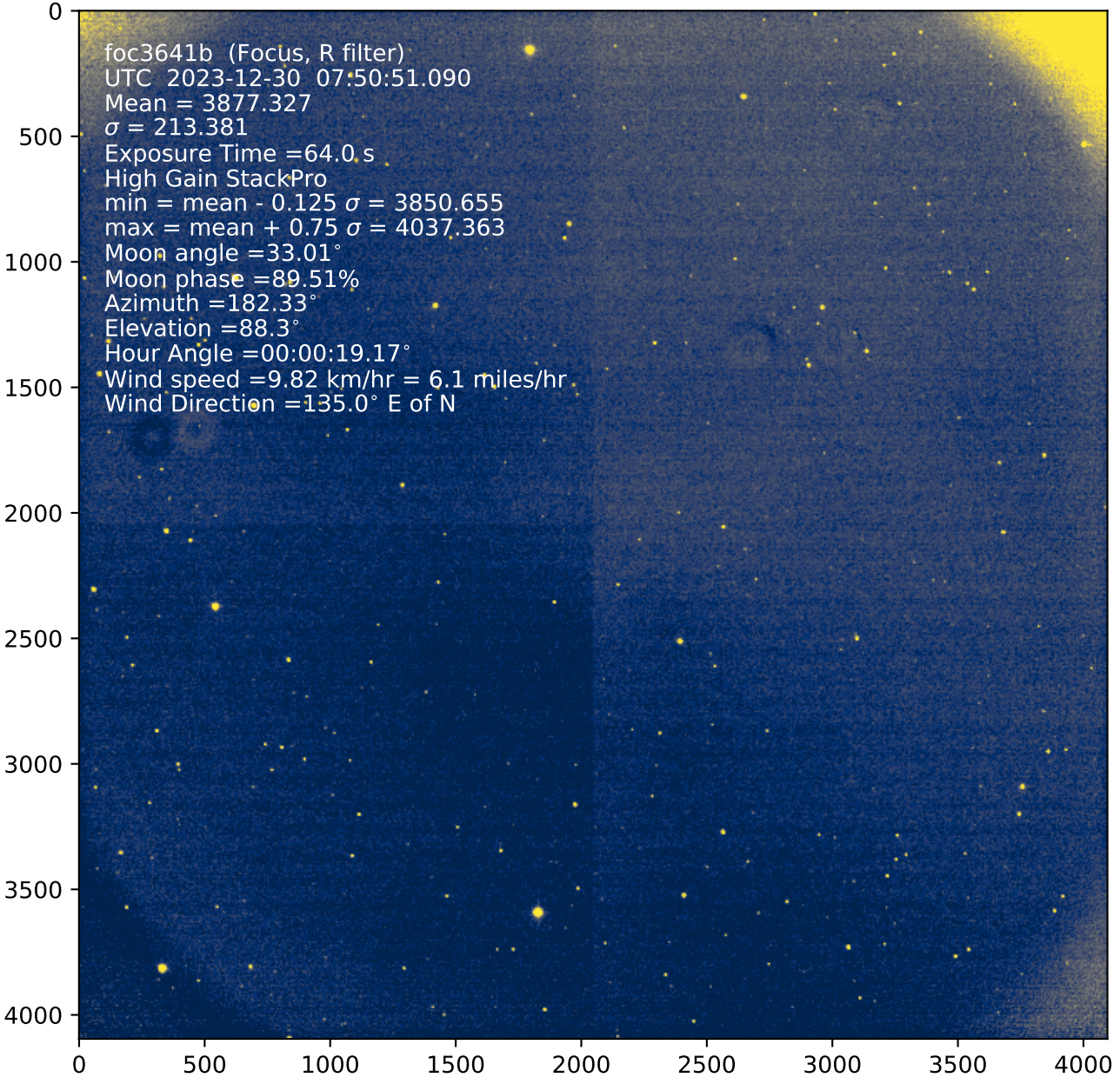
foc3641b (Focus, R filter)
UTC 2023-12-30 07:50:51.090
Mean = 3877.327
σ = 213.381
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 3850.655
max = mean + 0.75 σ = 4037.363
Moon angle =33.01°
Moon phase =89.51%
Azimuth =182.33°
Elevation =88.3°
Hour Angle =00:00:19.17°
Wind speed =9.82 km/hr = 6.1 miles/hr
Wind Direction =135.0° E of N
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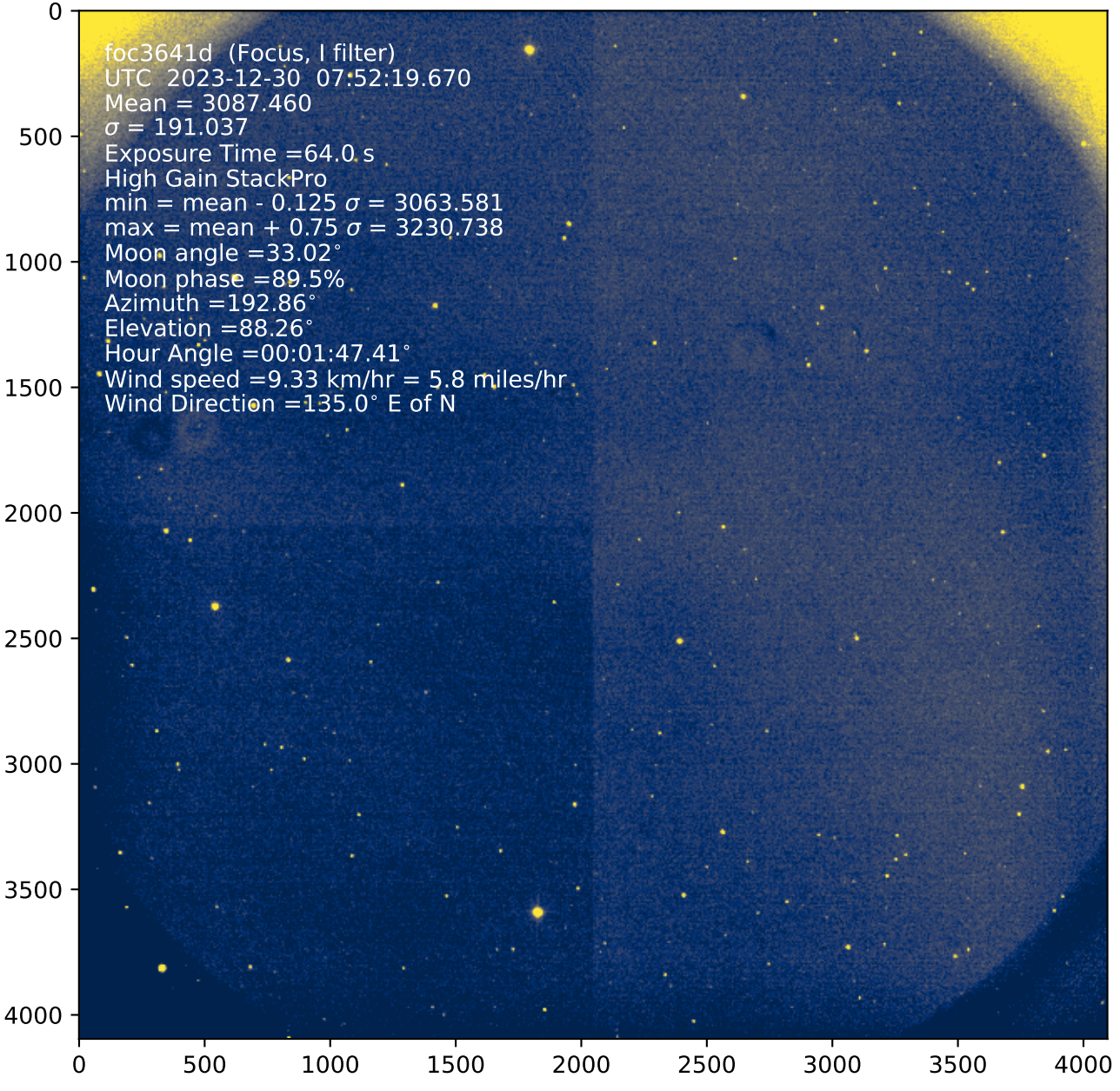
foc3641d (Focus, I filter)
UTC 2023-12-30 07:52:19.670
Mean = 3087.460
σ = 191.037
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 3063.581
max = mean + 0.75 σ = 3230.738
Moon angle =33.02°
Moon phase =89.5%
Azimuth =192.86°
Elevation =88.26°
Hour Angle =00:01:47.41°
Wind speed =9.33 km/hr = 5.8 miles/hr
Wind Direction =135.0° E of N
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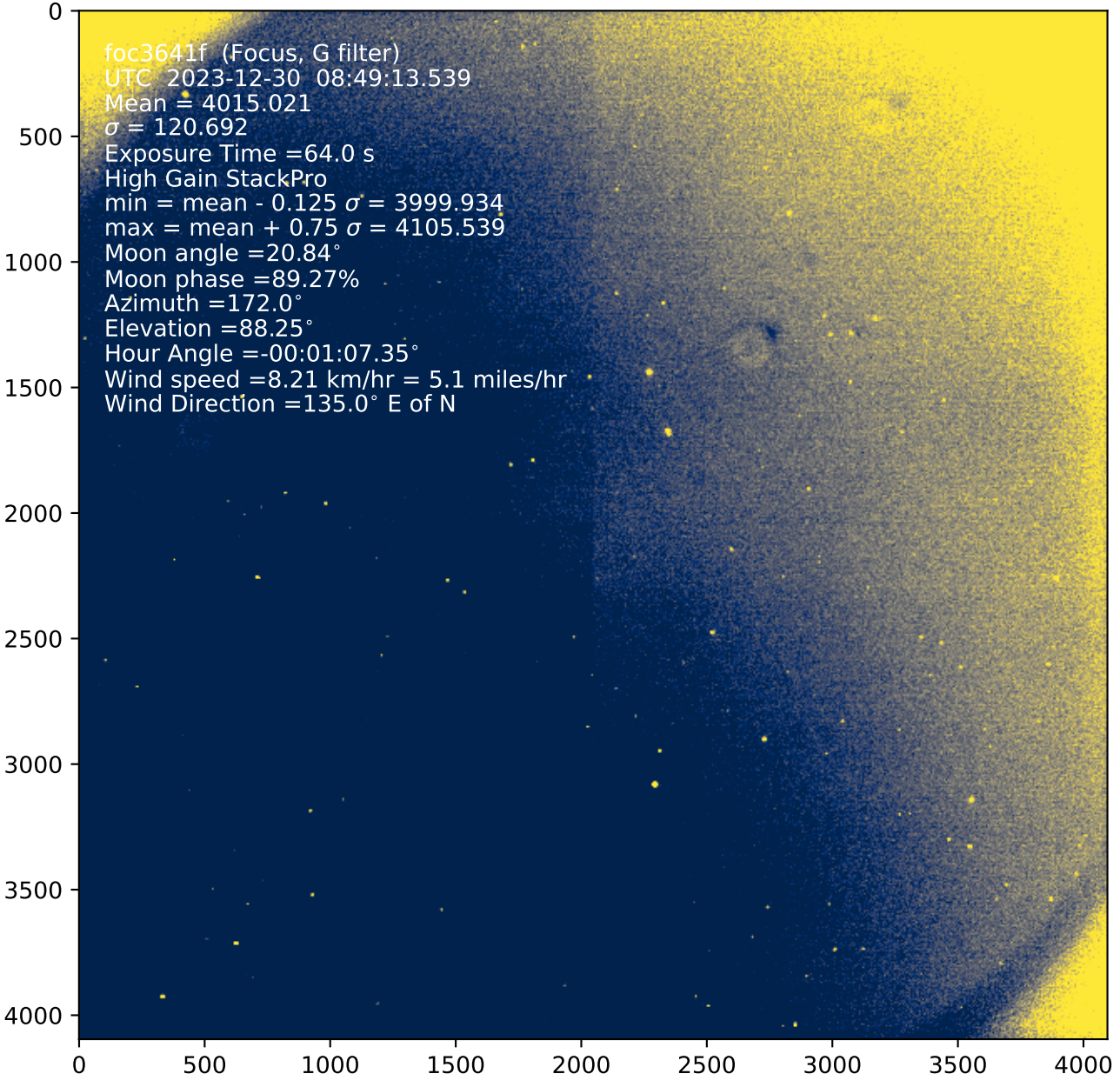
foc3641f (Focus, G filter)
UTC 2023-12-30 08:49:13.539
Mean = 4015.021
σ = 120.692
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 3999.934
max = mean + 0.75 σ = 4105.539
Moon angle =20.84°
Moon phase =89.27%
Azimuth =172.0°
Elevation =88.25°
Hour Angle =-00:01:07.35°
Wind speed =8.21 km/hr = 5.1 miles/hr
Wind Direction =135.0° E of N
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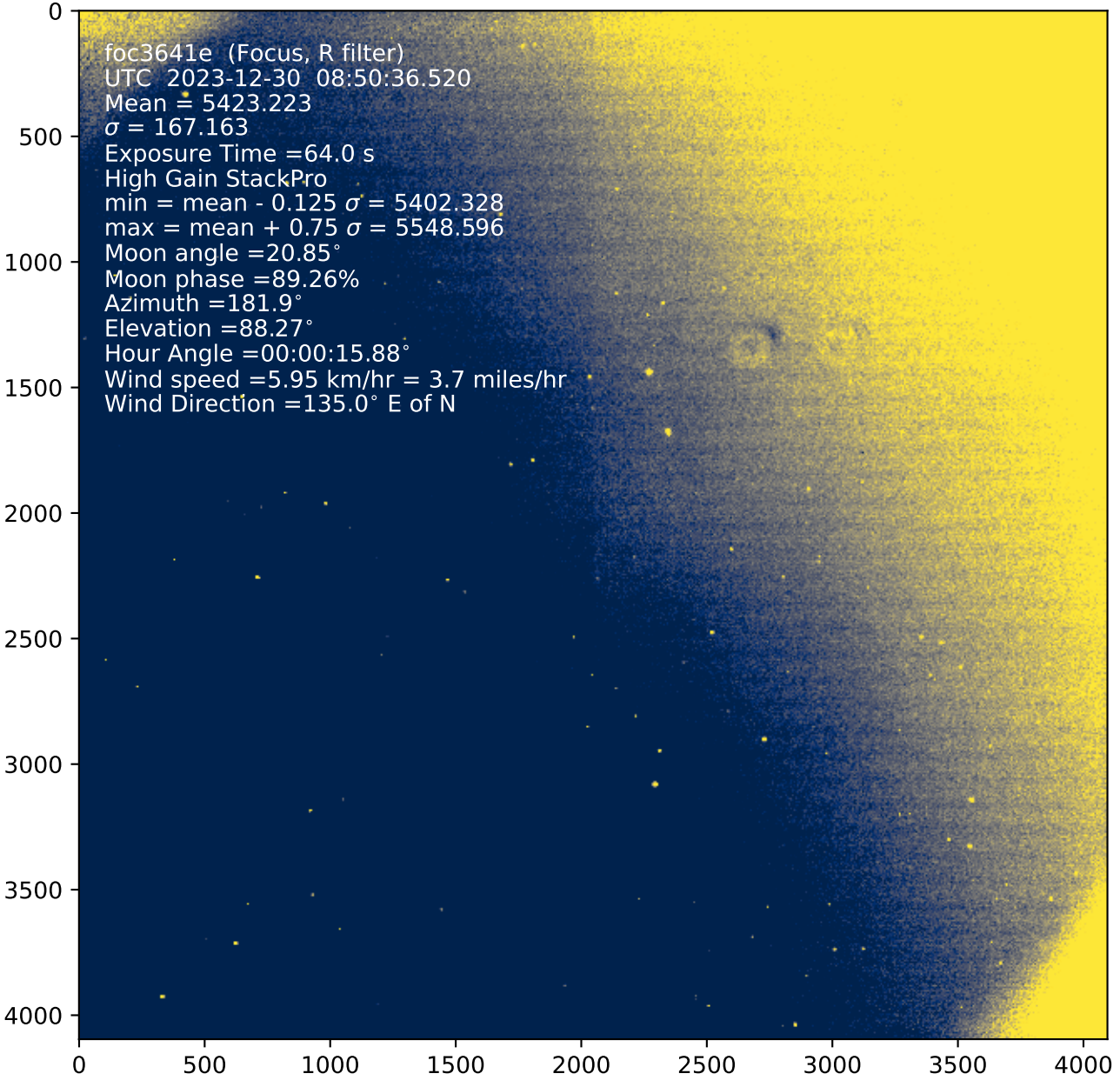
foc3641e (Focus, R filter)
UTC 2023-12-30 08:50:36.520
Mean = 5423.223
σ = 167.163
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 5402.328
max = mean + 0.75 σ = 5548.596
Moon angle =20.85°
Moon phase =89.26%
Azimuth =181.9°
Elevation =88.27°
Hour Angle =00:00:15.88°
Wind speed =5.95 km/hr = 3.7 miles/hr
Wind Direction =135.0° E of N
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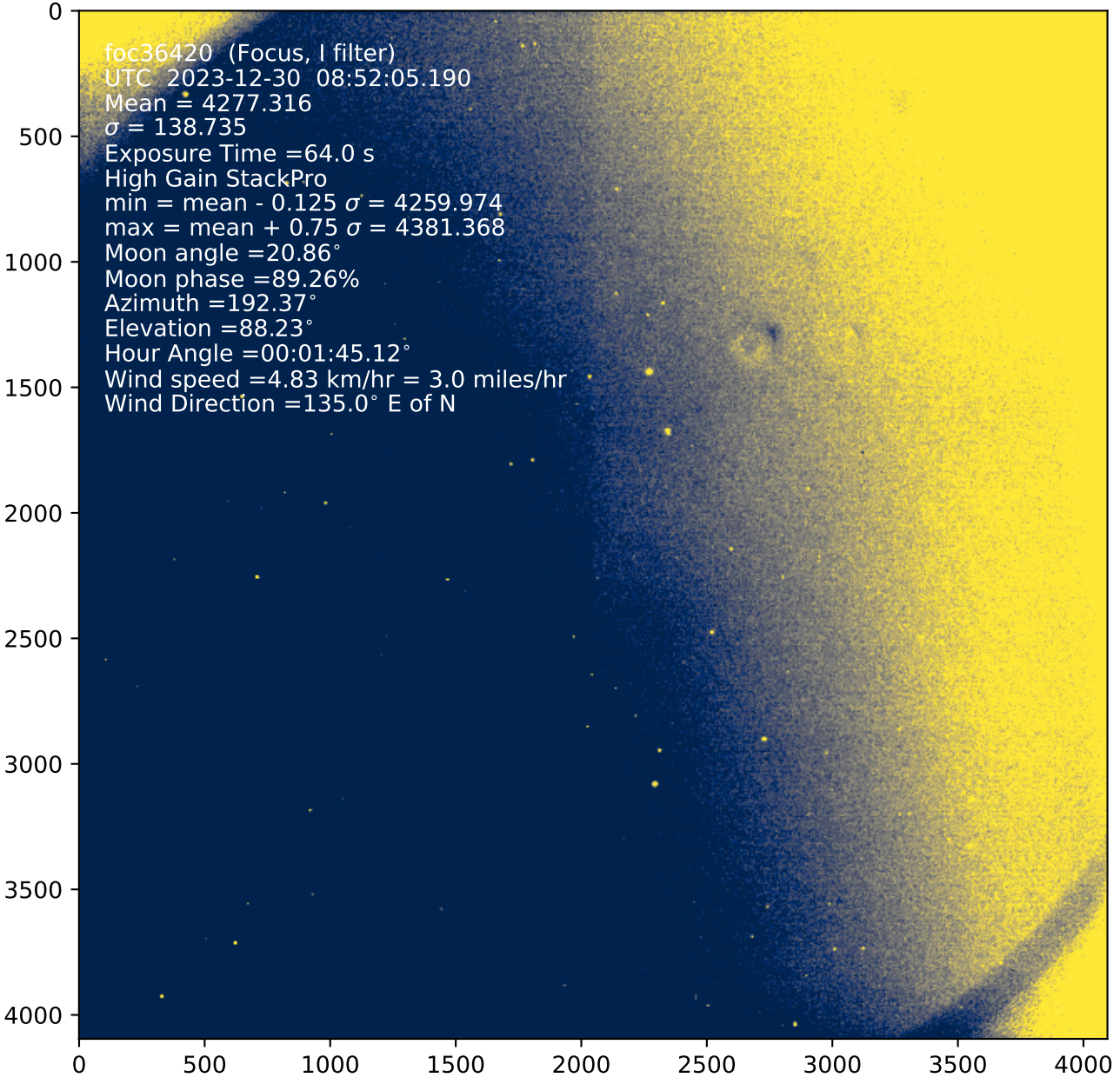
foc36420 (Focus, I filter)
UTC 2023-12-30 08:52:05.190
Mean = 4277.316
σ = 138.735
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 4259.974
max = mean + 0.75 σ = 4381.368
Moon angle =20.86°
Moon phase =89.26%
Azimuth =192.37°
Elevation =88.23°
Hour Angle =00:01:45.12°
Wind speed =4.83 km/hr = 3.0 miles/hr
Wind Direction =135.0° E of N
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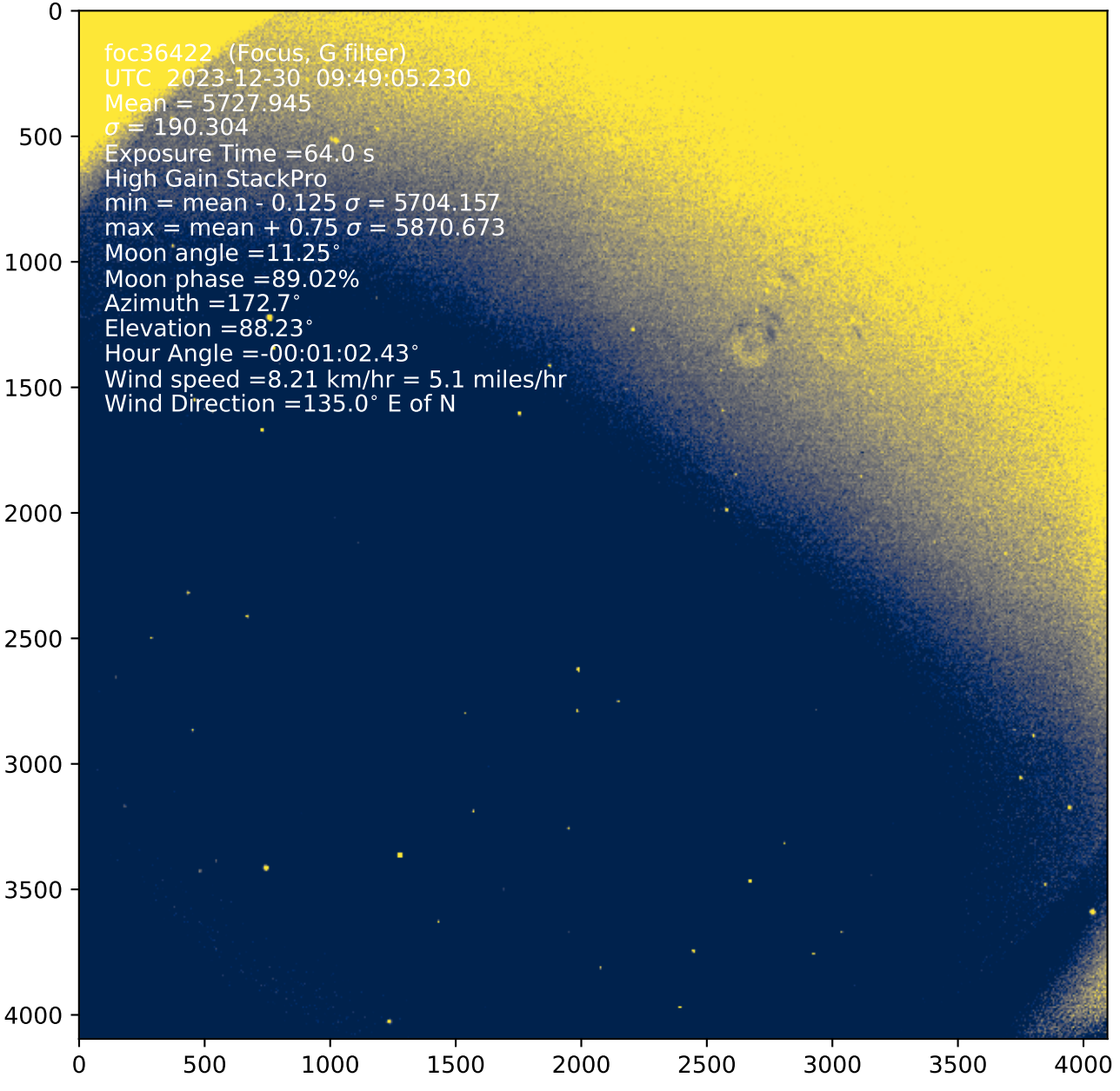
foc36422 (Focus, G filter)
UTC 2023-12-30 09:49:05.230
Mean = 5727.945
σ = 190.304
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 5704.157
max = mean + 0.75 σ = 5870.673
Moon angle =11.25°
Moon phase =89.02%
Azimuth =172.7°
Elevation =88.23°
Hour Angle =-00:01:02.43°
Wind speed =8.21 km/hr = 5.1 miles/hr
Wind Direction =135.0° E of N
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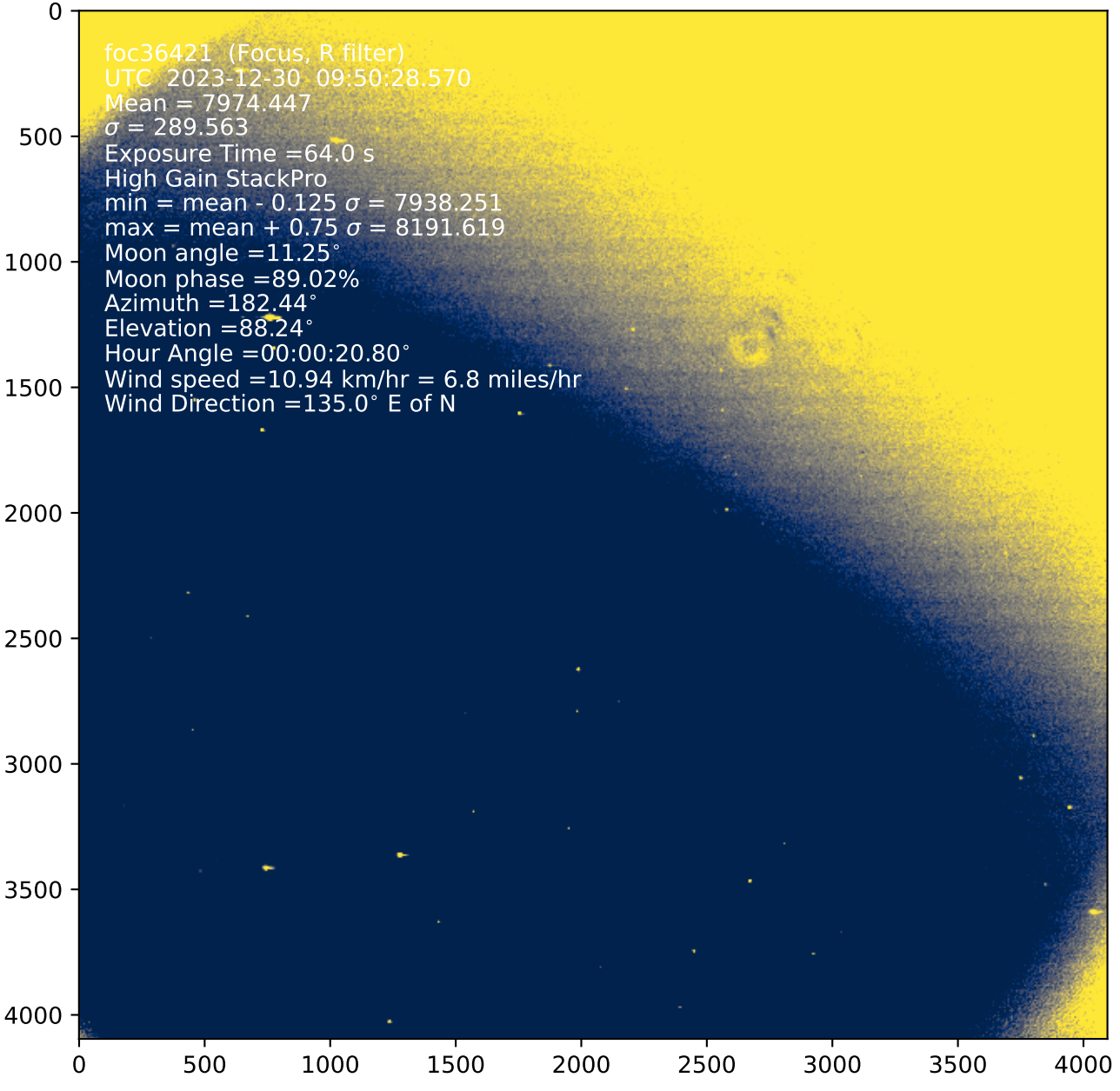
foc36421 (Focus, R filter)
UTC 2023-12-30 09:50:28.570
Mean = 7974.447
σ = 289.563
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 7938.251
max = mean + 0.75 σ = 8191.619
Moon angle =11.25°
Moon phase =89.02%
Azimuth =182.44°
Elevation =88.24°
Hour Angle =00:00:20.80°
Wind speed =10.94 km/hr = 6.8 miles/hr
Wind Direction =135.0° E of N
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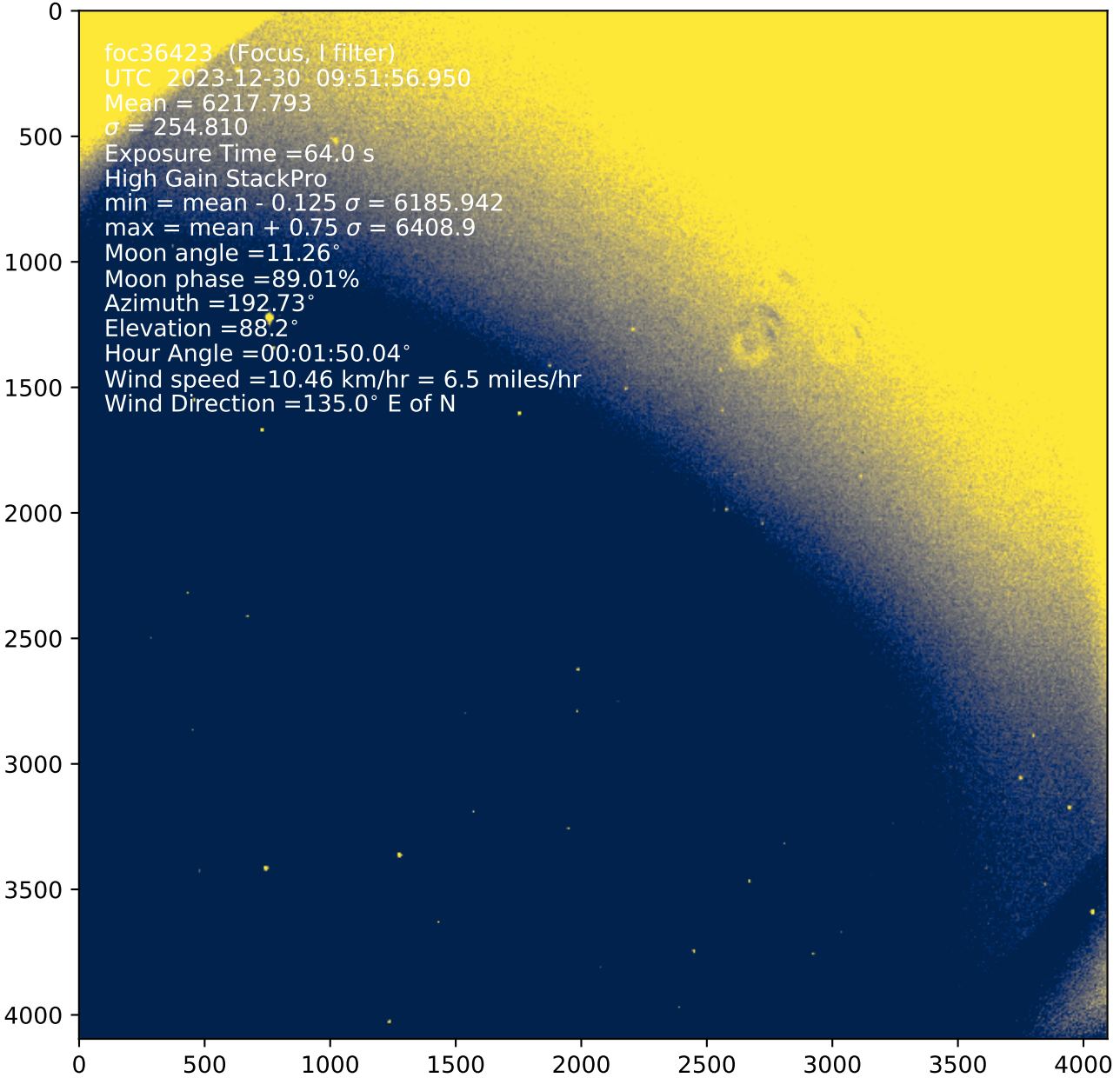
foc36423 (Focus, I filter)
UTC 2023-12-30 09:51:56.950
Mean = 6217.793
σ = 254.810
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 6185.942
max = mean + 0.75 σ = 6408.9
Moon angle =11.26°
Moon phase =89.01%
Azimuth =192.73°
Elevation =88.2°
Hour Angle =00:01:50.04°
Wind speed =10.46 km/hr = 6.5 miles/hr
Wind Direction =135.0° E of N
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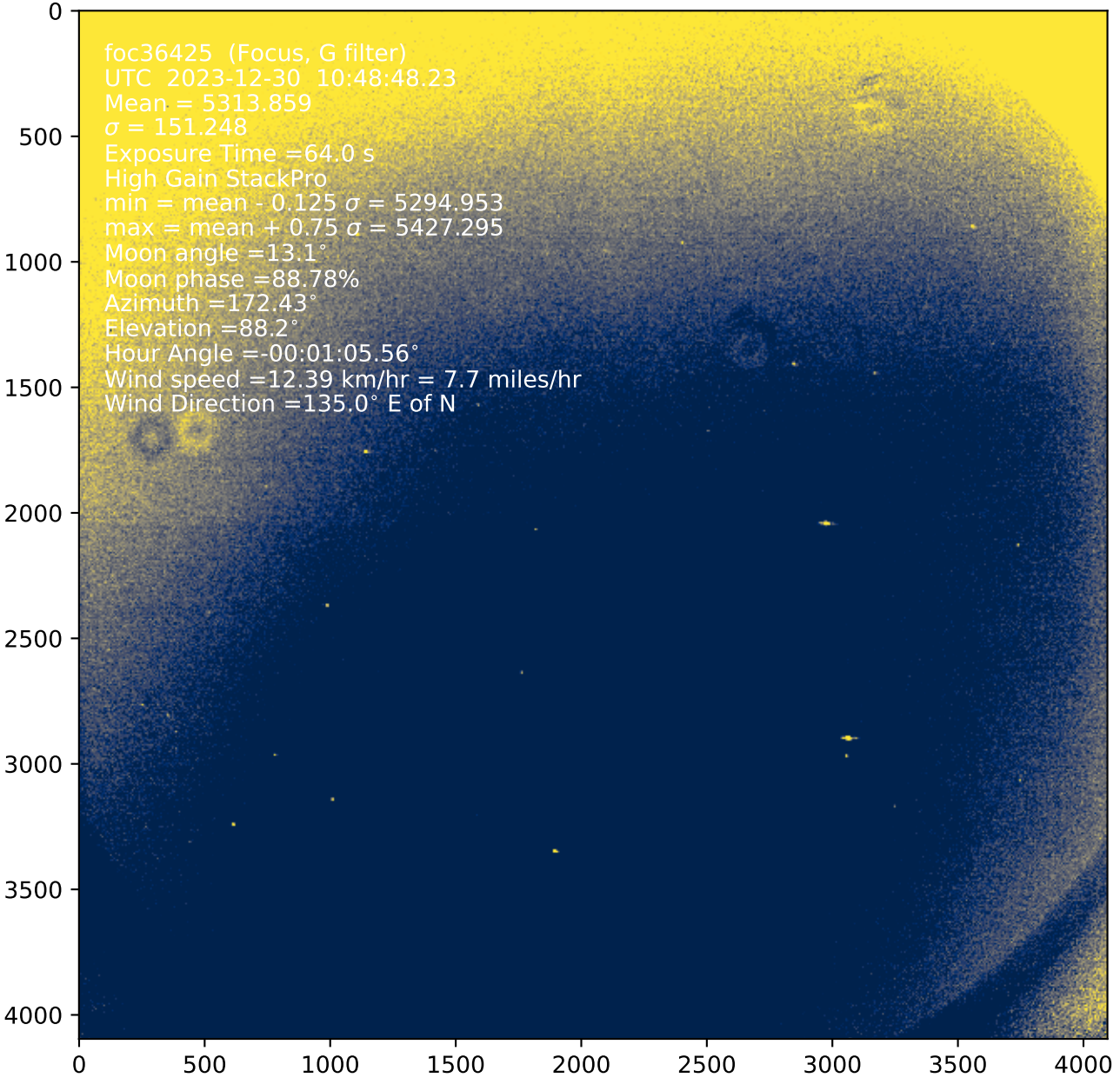
foc36425 (Focus, G filter)
UTC 2023-12-30 10:48:48.23
Mean = 5313.859
σ = 151.248
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 5294.953
max = mean + 0.75 σ = 5427.295
Moon angle =13.1°
Moon phase =88.78%
Azimuth =172.43°
Elevation =88.2°
Hour Angle =-00:01:05.56°
Wind speed =12.39 km/hr = 7.7 miles/hr
Wind Direction =135.0° E of N
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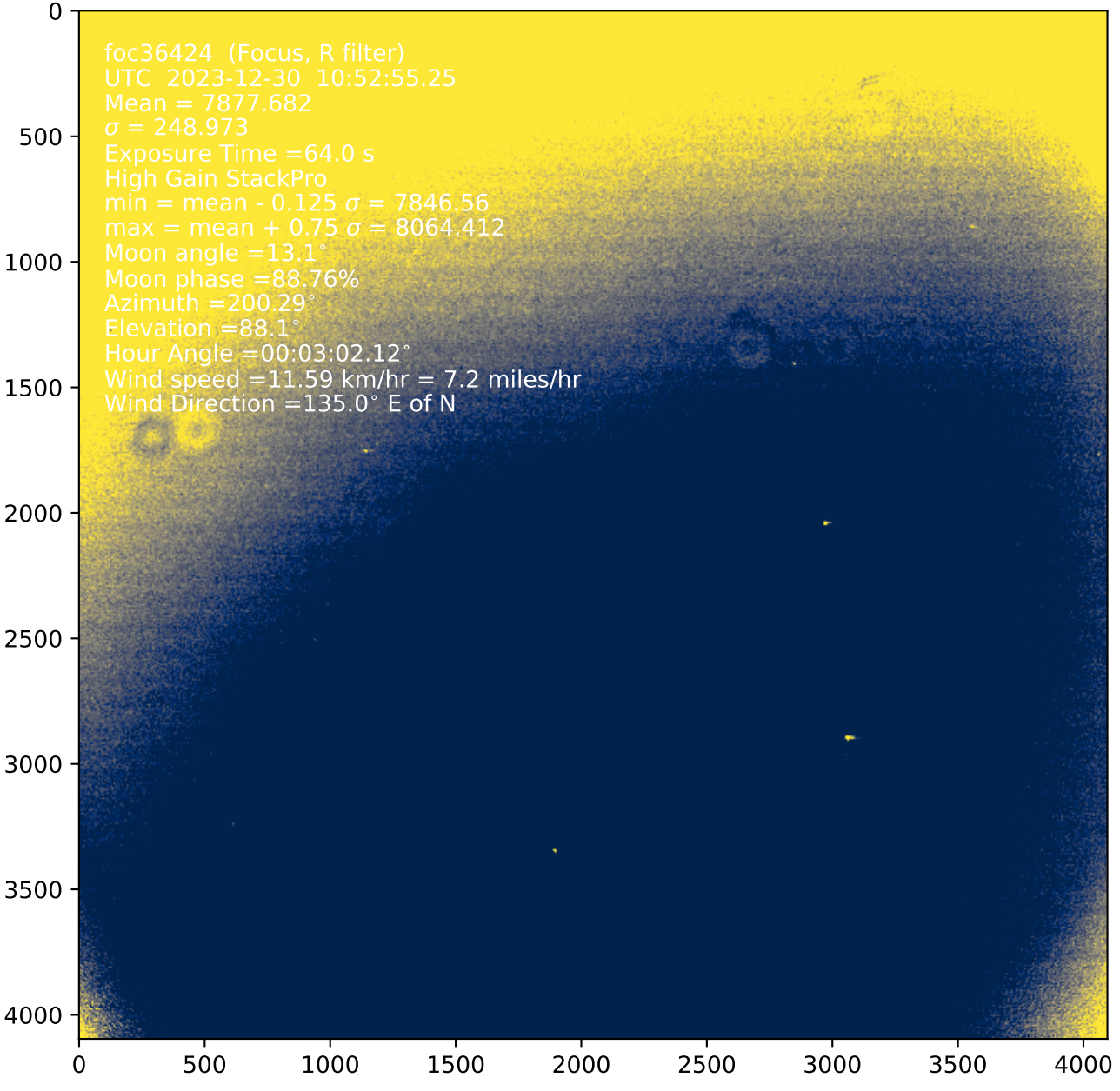
foc36424 (Focus, R filter)
UTC 2023-12-30 10:52:55.25
Mean = 7877.682
σ = 248.973
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 7846.56
max = mean + 0.75 σ = 8064.412
Moon angle =13.1°
Moon phase =88.76%
Azimuth =200.29°
Elevation =88.1°
Hour Angle =00:03:02.12°
Wind speed =11.59 km/hr = 7.2 miles/hr
Wind Direction =135.0° E of N
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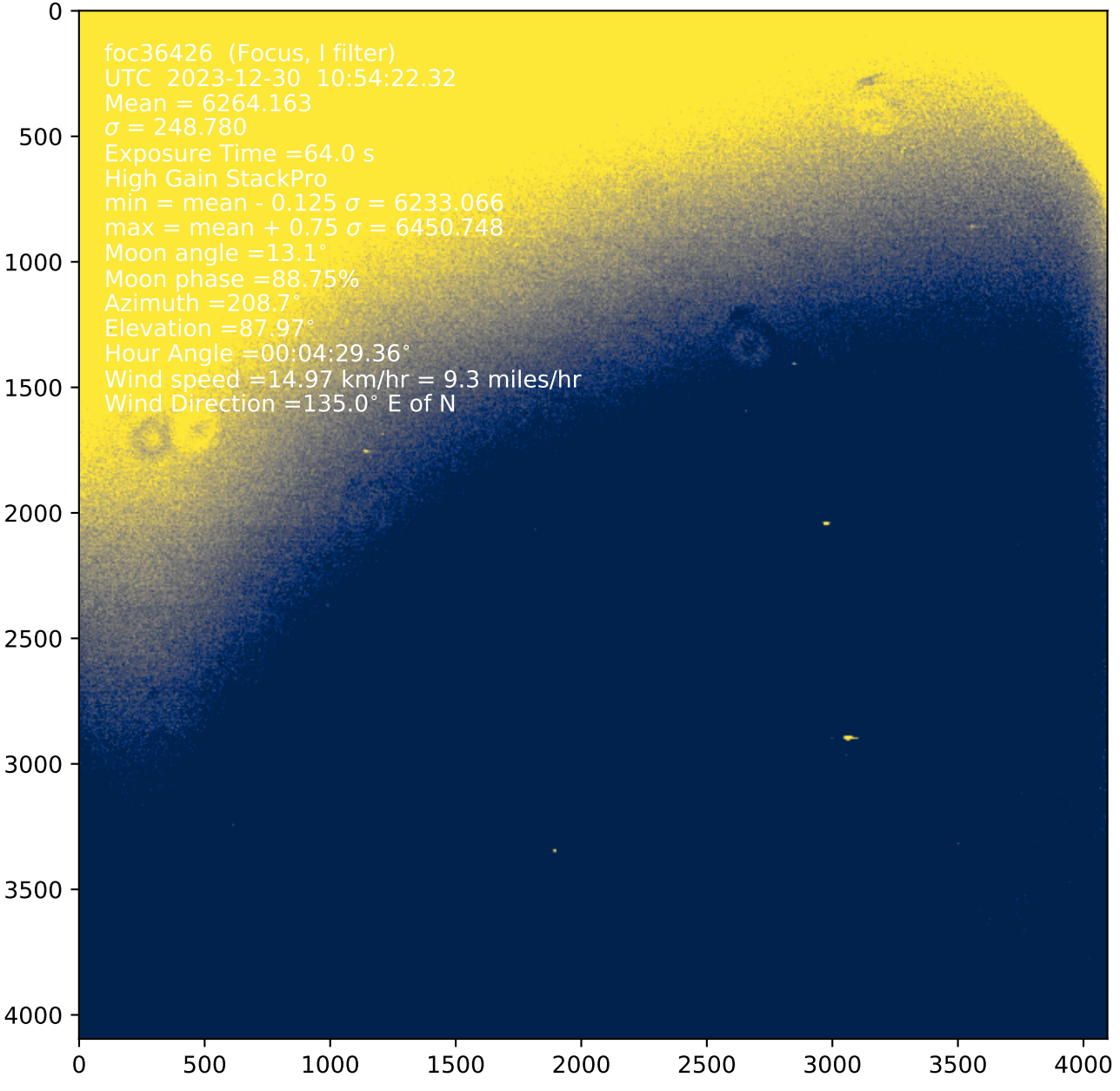
foc36426 (Focus, I filter)
UTC 2023-12-30 10:54:22.32
Mean = 6264.163
σ = 248.780
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 6233.066
max = mean + 0.75 σ = 6450.748
Moon angle =13.1°
Moon phase =88.75%
Azimuth =208.7°
Elevation =87.97°
Hour Angle =00:04:29.36°
Wind speed =14.97 km/hr = 9.3 miles/hr
Wind Direction =135.0° E of N
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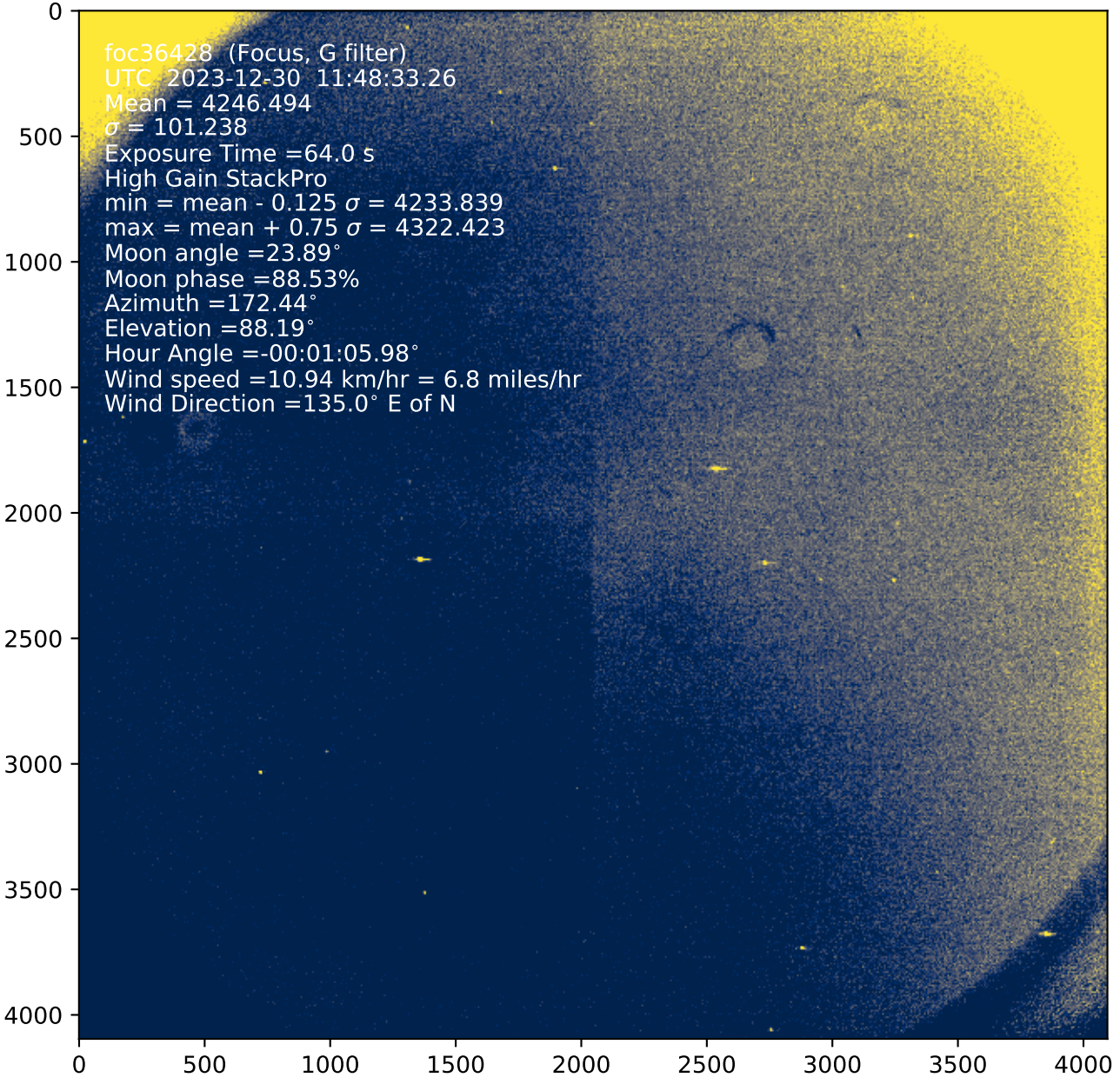
foc36428 (Focus, G filter)
UTC 2023-12-30 11:48:33.26
Mean = 4246.494
σ = 101.238
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 4233.839
max = mean + 0.75 σ = 4322.423
Moon angle =23.89°
Moon phase =88.53%
Azimuth =172.44°
Elevation =88.19°
Hour Angle =-00:01:05.98°
Wind speed =10.94 km/hr = 6.8 miles/hr
Wind Direction =135.0° E of N
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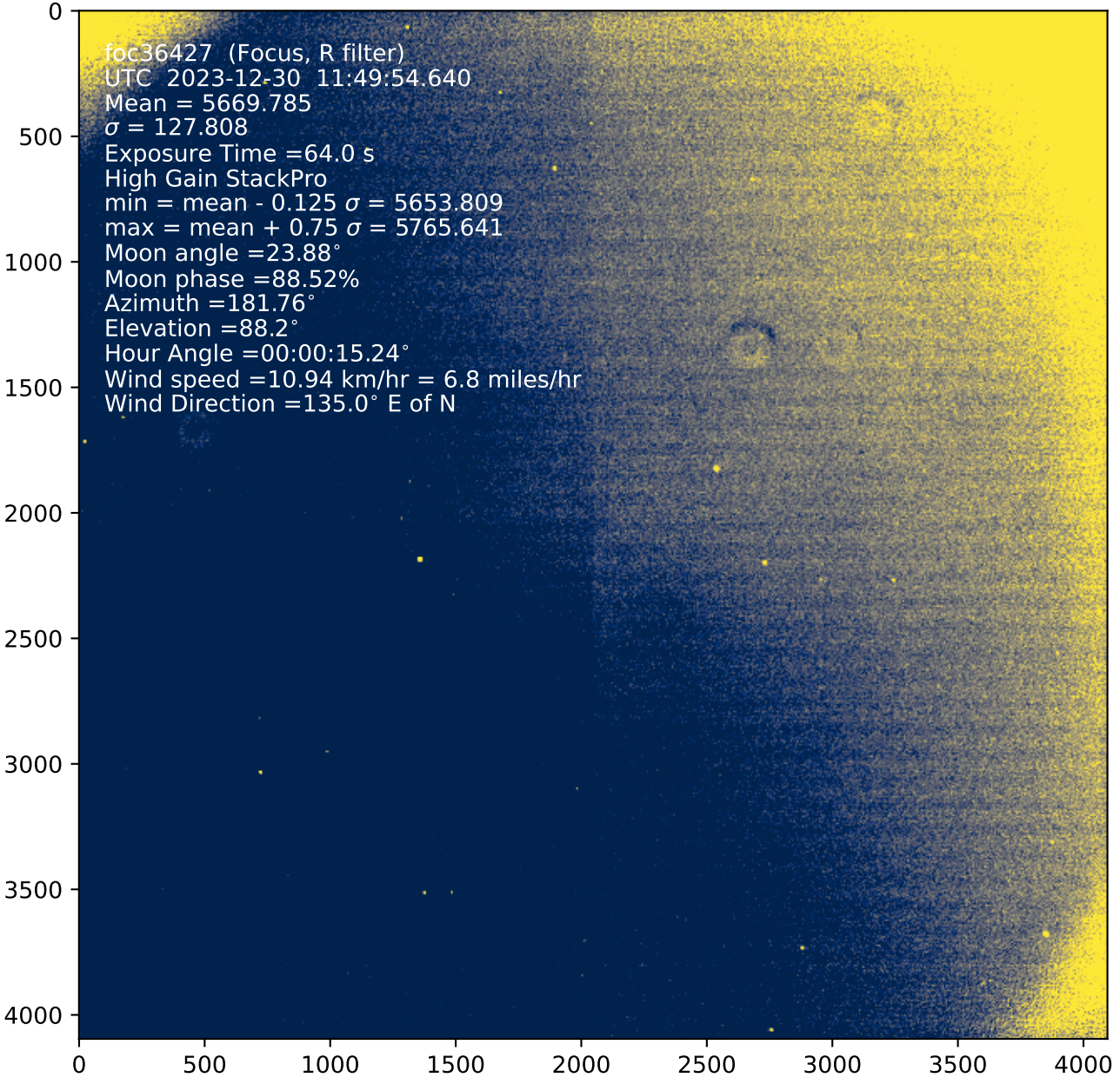
foc36427 (Focus, R filter)
UTC 2023-12-30 11:49:54.640
Mean = 5669.785
σ = 127.808
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 5653.809
max = mean + 0.75 σ = 5765.641
Moon angle =23.88°
Moon phase =88.52%
Azimuth =181.76°
Elevation =88.2°
Hour Angle =00:00:15.24°
Wind speed =10.94 km/hr = 6.8 miles/hr
Wind Direction =135.0° E of N
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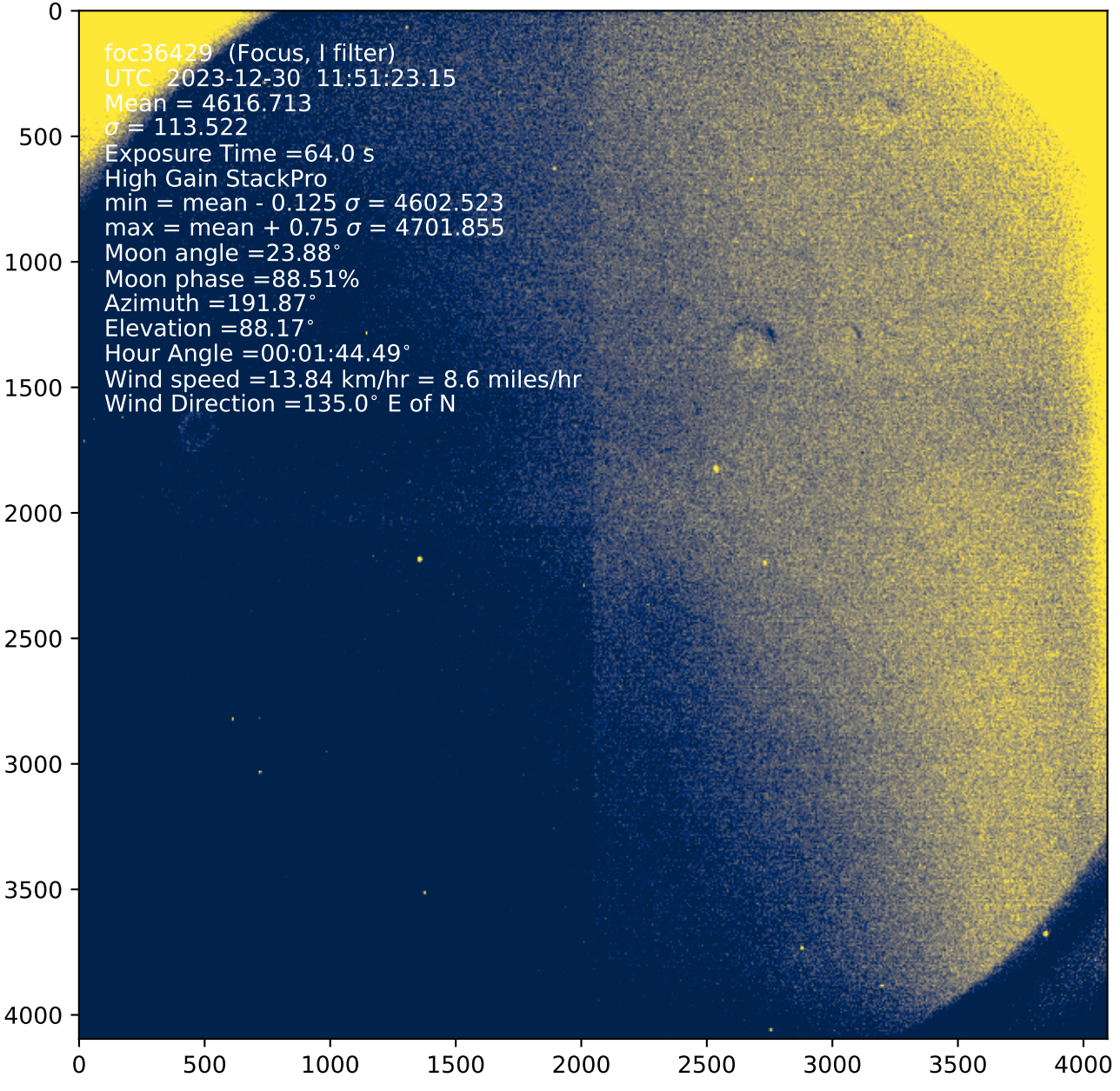
foc36429 (Focus, I filter)
UTC 2023-12-30 11:51:23.15
Mean = 4616.713
σ = 113.522
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 4602.523
max = mean + 0.75 σ = 4701.855
Moon angle =23.88°
Moon phase =88.51%
Azimuth =191.87°
Elevation =88.17°
Hour Angle =00:01:44.49°
Wind speed =13.84 km/hr = 8.6 miles/hr
Wind Direction =135.0° E of N
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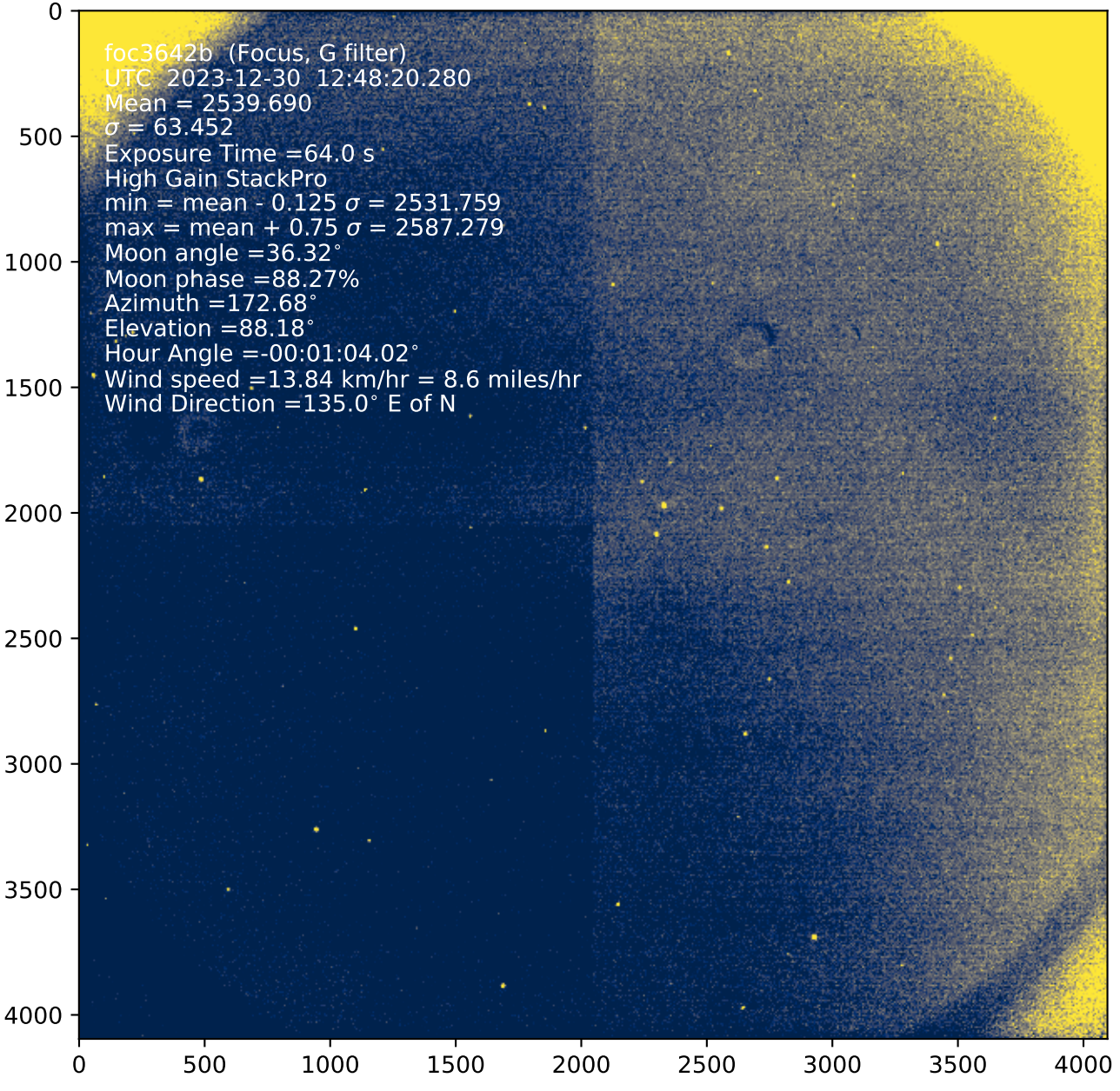
foc3642b (Focus, G filter)
UTC 2023-12-30 12:48:20.280
Mean = 2539.690
σ = 63.452
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 2531.759
max = mean + 0.75 σ = 2587.279
Moon angle =36.32˚
Moon phase =88.27%
Azimuth =172.68˚
Elevation =88.18˚
Hour Angle =-00:01:04.02˚
Wind speed =13.84 km/hr = 8.6 miles/hr
Wind Direction =135.0˚ E of N
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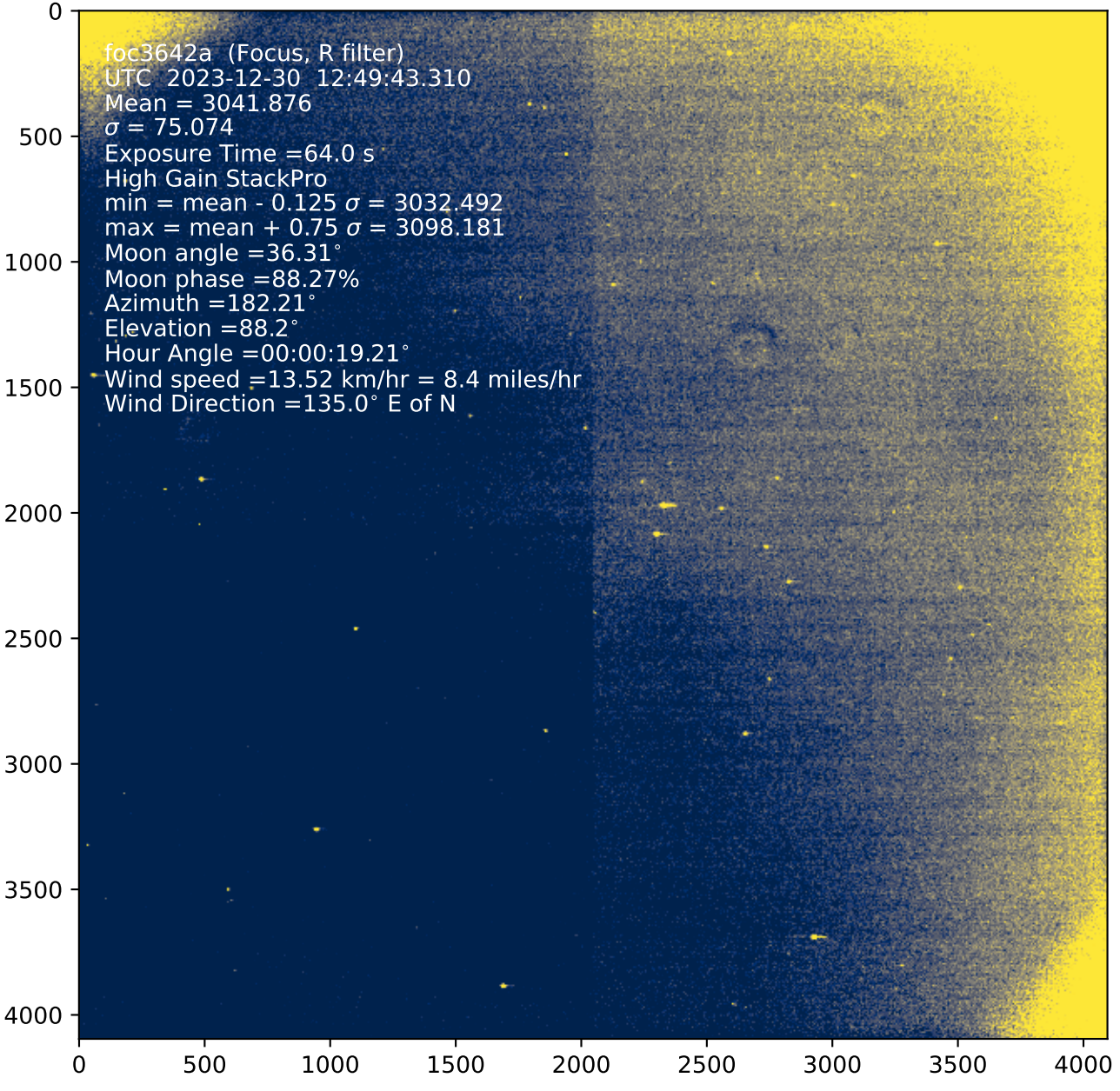
foc3642a (Focus, R filter)
UTC 2023-12-30 12:49:43.310
Mean = 3041.876
σ = 75.074
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 3032.492
max = mean + 0.75 σ = 3098.181
Moon angle =36.31˚
Moon phase =88.27%
Azimuth =182.21˚
Elevation =88.2˚
Hour Angle =00:00:19.21˚
Wind speed =13.52 km/hr = 8.4 miles/hr
Wind Direction =135.0˚ E of N
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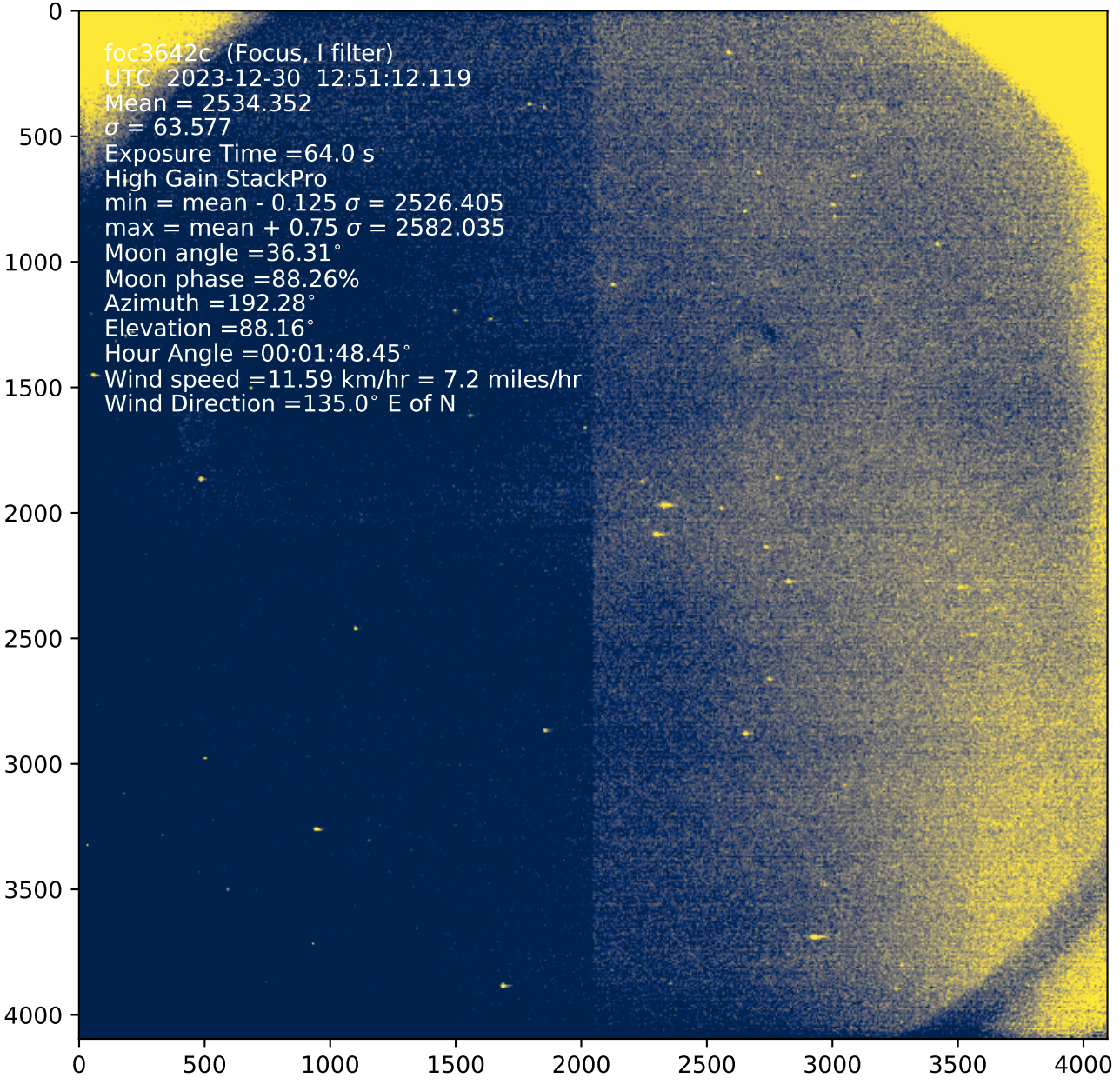
foc3642c (Focus, I filter)
UTC 2023-12-30 12:51:12.119
Mean = 2534.352
σ = 63.577
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 2526.405
max = mean + 0.75 σ = 2582.035
Moon angle =36.31°
Moon phase =88.26%
Azimuth =192.28°
Elevation =88.16°
Hour Angle =00:01:48.45°
Wind speed =11.59 km/hr = 7.2 miles/hr
Wind Direction =135.0° E of N
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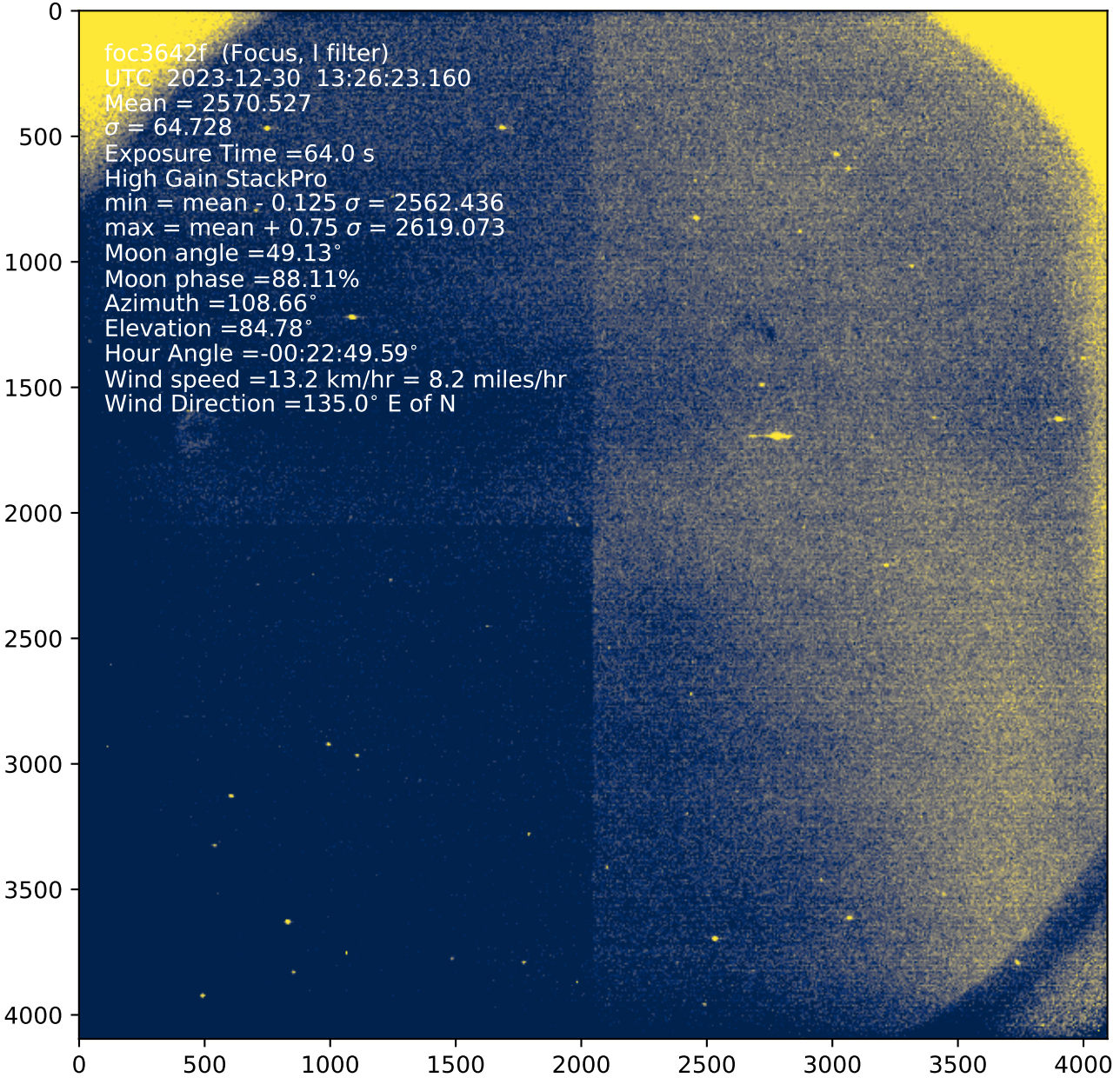
foc3642f (Focus, I filter)
UTC 2023-12-30 13:26:23.160
Mean = 2570.527
σ = 64.728
Exposure Time =64.0 s
High Gain StackPro
min = mean - 0.125 σ = 2562.436
max = mean + 0.75 σ = 2619.073
Moon angle =49.13°
Moon phase =88.11%
Azimuth =108.66°
Elevation =84.78°
Hour Angle =-00:22:49.59°
Wind speed =13.2 km/hr = 8.2 miles/hr
Wind Direction =135.0° E of N
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2000
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3500
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