CCD Commander Log File
Software v1.3.30
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22:53:43 Action starting.
22:53:43 Connecting to the Camera...
22:53:43 Connecting to the Mount...
22:53:45 Connecting to FocusMax...
22:53:45 Connecting to Rotator...
22:53:45 Connected to Pyxis rotator.
22:53:45 Pyxis reports current angle as 14 degrees.
22:53:45 Actual position angle is 89.95 degrees.
22:53:45 Turning on Fan.
22:53:45 Turning on cooler.
22:53:45 Setting cooler = -5
22:53:45 Simple Temperature Control complete.
22:53:45 Running script from C:\Program Files\CCD Commander\camera_cord_routing.vbs
22:53:48 Script complete.
22:53:48 In Rotate Function. Current PA = 89.95, New PA = 90.00
22:53:48 Current Rotator Angle = 14
22:53:48 New Rotator Angle = 13.95
22:53:48 No rotator movement necessary.
22:53:48 Running m27_red_6x5min_home.act
22:53:48 Starting move to action.
22:53:48 Precessing cooridnates.
22:53:48 J2000 Coordinates: RA: 20h 02m 22.0s Dec: +22°09'05"
22:53:48 JNow Coordinates: RA: 20h 02m 40.5s Dec: +22°10'09"
22:53:48 Slewing to SAO 88105...
22:53:55 Done slewing!
22:53:55 Starting post slew delay.
22:53:58 Completed post slew delay.
22:53:58 Setting imager bin mode to 2x2.
22:53:58 Setting filter to Luminance.
22:54:01 Taking 5 second image for Plate Solve...
22:54:11 Saving Image...
22:54:11 Performing Plate Solve with CCDSoft...
22:54:13 Plate solve results:
22:54:13 Pixel Scale = 1.75 asp.
22:54:13 North Angle = 270.06 degrees.
22:54:13 J2000 Coordinates = RA: 20h 02m 22.3s Dec: +22°09'20"
22:54:13 Adjusting current PA for Plate Solve. CurrentAngle = 89.95
22:54:13 Adjusted PA = 89.95
22:54:13 Syncing to RA 20.04467, Dec 22.1734O
22:54:21 Starting focus run...
22:56:00 Focus succeeded! HFD = 2.68
22:56:00 Starting move to action.
22:56:01 Precessing cooridnates.
22:56:01 J2000 Coordinates: RA: 19h 59m 36.0s Dec: +22°43'18"
22:56:01 JNow Coordinates: RA: 19h 59m 54.4s Dec: +22°44'21"
22:56:01 Slewing to M 27...
22:56:07 Done slewing!
22:56:07 Starting post slew delay.
22:56:10 Completed post slew delay.
22:56:10 Setting imager bin mode to 2x2.
22:56:10 Setting filter to Luminance.
22:56:13 Taking 5 second image for Plate Solve...
22:56:32 Saving Image...
22:56:33 Performing Plate Solve with CCDSoft...
22:56:35 Plate solve results:
22:56:35 Pixel Scale = 1.75 asp.
22:56:35 North Angle = 270.07 degrees.
22:56:35 J2000 Coordinates = RA: 19h 59m 34.6s Dec: +22°42'58"
22:56:35 Adjusting current PA for Plate Solve. CurrentAngle = 89.95
22:56:35 Adjusted PA = 89.95
22:56:35 Syncing to RA 19.99805, Dec 22.73343
22:56:41 Setting image type to Light.
22:56:41 Setting imager bin mode to 2x2.
22:56:41 Setting filter to Red.
22:56:45 Setting imager to full frame.
22:56:45 Setting imager exposure time to 300 seconds.
22:56:46 Setting autoguider bin mode to 2x2.
22:56:46 Taking a 2 second autoguider exposure.
22:56:55 Beginning guide star search...
22:56:57 Found possible guide star at 143, 117 with a max brightness of 15320 ADU.
22:56:57 Taking a 2 second autoguider exposure.
22:57:02 Beginning guide star search...
22:57:03 Found appropriate guide star at 143, 118 with a max brightness of 15037 ADU.
22:57:03 Matches previous possible guide star at 143, 117 with a max brightness of 15320 ADU.
22:57:03 Trying to autoguide on star at 143.0,118.0.
22:57:03 Starting to autoguide.
22:57:12 Checking autoguider max error...
22:57:13 Autoguider error: X=0.34 Y=0.05
22:57:13 Autoguider max error < 0.5!
22:57:13 Stopping autoguider...
22:57:15 Automatic guide star acquisition successful!
22:57:15 Setting autoguider exposure time to 2 seconds.
22:57:15 Setting guide star position to 143.0,118.0.
22:57:15 Starting to autoguide.

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22:57:23  Checking autoguider max error...
22:57:24  Autoguider error: X=-0.11 Y=0.20
22:57:24  Autoguider max error < 0.5!
22:57:24  Starting imager exposure (1 of 6).
23:02:31  Imager exposure complete.
23:02:31  Stopping autoguider...
23:02:33  Setting autoguider exposure time to 2 seconds.
23:02:33  Setting guide star position to 145.0,118.0.
23:02:33  Starting to autoguide.
23:02:41  Checking autoguider max error...
23:02:43  Autoguider error: X=-1.65 Y=-0.10
23:02:43  Checking autoguider max error...
23:02:46  Autoguider error: X=-1.42 Y=0.42
23:02:46  Checking autoguider max error...
23:02:49  Autoguider error: X=-1.33 Y=0.18
23:02:49  Checking autoguider max error...
23:02:52  Autoguider error: X=-1.07 Y=0.47
23:02:52  Checking autoguider max error...
23:02:56  Autoguider error: X=-0.17 Y=0.51
23:02:56  Checking autoguider max error...
23:02:59  Autoguider error: X=-0.19 Y=-0.59
23:02:59  Checking autoguider max error...
23:03:01  Autoguider error: X=-0.04 Y=0.57
23:03:01  Checking autoguider max error...
23:03:04  Autoguider error: X=-0.13 Y=0.91
23:03:04  Checking autoguider max error...
23:03:07  Autoguider error: X=-0.19 Y=-0.30
23:03:07  Autoguider max error < 0.5!
23:03:07  Starting imager exposure (2 of 6).
23:08:14  Imager exposure complete.
23:08:14  Stopping autoguider...
23:08:16  Setting autoguider exposure time to 2 seconds.
23:08:16  Setting guide star position to 145.0,120.0.
23:08:16  Starting to autoguide.
23:08:24  Checking autoguider max error...
23:08:27  Autoguider error: X=0.12 Y=0.65
23:08:27  Checking autoguider max error...
23:08:30  Autoguider error: X=0.06 Y=0.21
23:08:30  Autoguider max error < 0.5!
23:08:30  Starting imager exposure (3 of 6).
23:13:37  Imager exposure complete.
23:13:37  Stopping autoguider...
23:13:39  Setting autoguider exposure time to 2 seconds.
23:13:39  Setting guide star position to 143.0,120.0.
23:13:39  Starting to autoguide.
23:13:47  Checking autoguider max error...
23:13:51  Autoguider error: X=-2.37 Y=-0.33
23:13:51  Checking autoguider max error...
23:13:55  Autoguider error: X=-1.71 Y=-0.16
23:13:55  Checking autoguider max error...
23:13:58  Autoguider error: X=-1.39 Y=-0.36
23:13:58  Checking autoguider max error...
23:14:02  Autoguider error: X=-0.45 Y=-0.50
23:14:02  Checking autoguider max error...
23:14:05  Autoguider error: X=-0.22 Y=-0.09
23:14:05  Autoguider max error < 0.5!
23:14:05  Starting imager exposure (4 of 6).
23:19:12  Imager exposure complete.
23:19:12  Stopping autoguider...
23:19:14  Setting autoguider exposure time to 2 seconds.
23:19:14  Setting guide star position to 141.0,120.0.
23:19:14  Starting to autoguide.
23:19:22  Checking autoguider max error...
23:19:25  Autoguider error: X=-0.10 Y=-0.54
23:19:25  Checking autoguider max error...
23:19:28  Autoguider error: X=-0.45 Y=0.65
23:19:28  Checking autoguider max error...
23:19:32  Autoguider error: X=-0.09 Y=0.14
23:19:32  Autoguider max error < 0.5!
23:19:32  Starting imager exposure (5 of 6).
23:24:38  Imager exposure complete.
23:24:38  Stopping autoguider...
23:24:40  Setting autoguider exposure time to 2 seconds.
23:24:40  Setting guide star position to 141.0,118.0.
23:24:40  Starting to autoguide.
23:24:48  Checking autoguider max error...
23:24:52  Autoguider error: X=0.29 Y=-0.14
23:24:52  Autoguider max error < 0.5!
23:24:52  Starting imager exposure (6 of 6).
23:29:59  Imager exposure complete.
23:29:59  Stopping autoguider...
23:30:01  Take Images Action complete.
23:30:01  Done running m27_red_6x5min_home.act
23:30:01  Running script from C:\Program Files\CCD Commander\lightbox_install.vbs
23:33:35  Script complete.
23:33:35  In Auto Flat Action.
23:33:35  Slewing to flat target location.
23:33:35  Moving to Alt-Az position: Alt: 65°00' 00.0" Az: 150°00'00"
23:33:56  Done slewing!
23:33:56  Starting post slew delay.
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23:34:00  Completed post slew delay.
23:34:01  Setting imager bin mode to 1x1.
23:34:01  Setting filter to Luminance.
23:34:08  Setting imager to full frame.
23:34:17  Setting imager exposure time to 1.0 seconds.
23:34:17  Starting imager exposure...
23:34:27  Exposure complete.  Computing average ADU.
23:34:28  Average ADU = 2910
23:34:28  Target ADU = 18000
23:34:28  New exposure time computed to be 6.2
23:34:32  Setting imager exposure time to 6.2 seconds.
23:34:32  Starting imager exposure...
23:34:47  Exposure complete.  Computing average ADU.
23:34:48  Average ADU = 17459
23:34:48  Target ADU = 18000
23:34:48  Current exposure time good!  Taking Flats.
23:34:52  Setting imager exposure time to 6.2 seconds.
23:34:52  Starting imager exposure #1
23:35:09  Exposure complete.  Computing average ADU.
23:35:09  Average ADU = 17475
23:35:09  Recomputing exposure time...
23:35:09  New exposure time computed to be 6.4
23:35:13  Setting imager exposure time to 6.4 seconds.
23:35:13  Starting imager exposure #2
23:35:30  Exposure complete.  Computing average ADU.
23:35:30  Average ADU = 18068
23:35:30  Recomputing exposure time...
23:35:30  New exposure time computed to be 6.4
23:35:35  Setting imager exposure time to 6.4 seconds.
23:35:35  Starting imager exposure #3
23:35:52  Exposure complete.  Computing average ADU.
23:35:52  Average ADU = 18116
23:35:52  Recomputing exposure time...
23:35:52  New exposure time computed to be 6.4
23:35:52  Setting filter to Red.
23:35:56  Setting imager to full frame.
23:36:00  Setting imager exposure time to 1.0 seconds.
23:36:00  Starting imager exposure...
23:36:09  Exposure complete.  Computing average ADU.
23:36:10  Average ADU = 966
23:36:10  Target ADU = 18000
23:36:10  New exposure time computed to be 18.6
23:36:14  Setting imager exposure time to 18.6 seconds.
23:36:14  Starting imager exposure...
23:36:41  Exposure complete.  Computing average ADU.
23:36:42  Average ADU = 15967
23:36:42  Target ADU = 18000
23:36:42  New exposure time computed to be 21.0
23:36:46  Setting imager exposure time to 21.0 seconds.
23:36:46  Starting imager exposure...
23:37:16  Exposure complete.  Computing average ADU.
23:37:16  Average ADU = 18054
23:37:16  Target ADU = 18000
23:37:16  Current exposure time good!  Taking Flats.
23:37:20  Setting imager exposure time to 21.0 seconds.
23:37:20  Starting imager exposure #1
23:37:52  Exposure complete.  Computing average ADU.
23:37:52  Average ADU = 18170
23:37:52  Recomputing exposure time...
23:37:52  New exposure time computed to be 20.8
23:37:56  Setting imager exposure time to 20.8 seconds.
23:37:56  Starting imager exposure #2
23:38:27  Exposure complete.  Computing average ADU.
23:38:28  Average ADU = 18069
23:38:28  Recomputing exposure time...
23:38:28  New exposure time computed to be 20.7
23:38:32  Setting imager exposure time to 20.7 seconds.
23:38:32  Starting imager exposure #3
23:39:03  Exposure complete.  Computing average ADU.
23:39:03  Average ADU = 17990
23:39:03  Recomputing exposure time...
23:39:03  New exposure time computed to be 20.7
23:39:03  Setting filter to Green.
23:39:07  Setting imager to full frame.
23:39:11  Setting imager exposure time to 1.0 seconds.
23:39:11  Starting imager exposure...
23:39:21  Exposure complete.  Computing average ADU.
23:39:21  Average ADU = 1023
23:39:21  Target ADU = 18000
23:39:21  New exposure time computed to be 17.6
23:39:25  Setting imager exposure time to 17.6 seconds.
23:39:25  Starting imager exposure...
23:39:52  Exposure complete.  Computing average ADU.
23:39:52  Average ADU = 16012
23:39:52  Target ADU = 18000
23:39:52  New exposure time computed to be 19.8
23:39:56  Setting imager exposure time to 19.8 seconds.
23:39:56  Starting imager exposure...
23:40:25  Exposure complete.  Computing average ADU.
23:40:25  Average ADU = 17993
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23:40:25  Target ADU = 18000
23:40:25  Current exposure time good!  Taking Flats.
23:40:29  Setting imager exposure time to 19.8 seconds.
23:40:29  Starting imager exposure #1
23:41:00  Exposure complete.  Computing average ADU.
23:41:00  Average ADU = 17989
23:41:00  Recomputing exposure time...
23:41:00  New exposure time computed to be 19.8
23:41:04  Setting imager exposure time to 19.8 seconds.
23:41:04  Starting imager exposure #2
23:41:34  Exposure complete.  Computing average ADU.
23:41:35  Average ADU = 17993
23:41:35  Recomputing exposure time...
23:41:35  New exposure time computed to be 19.8
23:41:39  Setting imager exposure time to 19.8 seconds.
23:41:39  Starting imager exposure #3
23:42:09  Exposure complete.  Computing average ADU.
23:42:10  Average ADU = 17991
23:42:10  Recomputing exposure time...
23:42:10  New exposure time computed to be 19.8
23:42:10  Setting filter to Blue.
23:42:13  Setting imager to full frame.
23:42:17  Setting imager exposure time to 1.0 seconds.
23:42:17  Starting imager exposure...
23:42:27  Exposure complete.  Computing average ADU.
23:42:28  Average ADU = 803
23:42:28  Target ADU = 18000
23:42:28  New exposure time computed to be 22.4
23:42:32  Setting imager exposure time to 22.4 seconds.
23:42:32  Starting imager exposure...
23:43:03  Exposure complete.  Computing average ADU.
23:43:04  Average ADU = 15591
23:43:04  Target ADU = 18000
23:43:04  New exposure time computed to be 25.9
23:43:08  Setting imager exposure time to 25.0 seconds.
23:43:08  Starting imager exposure...
23:43:42  Exposure complete.  Computing average ADU.
23:43:42  Average ADU = 17321
23:43:42  Target ADU = 18000
23:43:42  Current exposure time good!  Taking Flats.
23:43:46  Setting imager exposure time to 25.0 seconds.
23:43:46  Starting imager exposure #1
23:44:21  Exposure complete.  Computing average ADU.
23:44:22  Average ADU = 17331
23:44:22  Recomputing exposure time...
23:44:22  New exposure time computed to be 26.0
23:44:26  Setting imager exposure time to 25.0 seconds.
23:44:26  Starting imager exposure #2
23:45:01  Exposure complete.  Computing average ADU.
23:45:02  Average ADU = 17373
23:45:02  Recomputing exposure time...
23:45:02  New exposure time computed to be 25.9
23:45:06  Setting imager exposure time to 25.0 seconds.
23:45:06  Starting imager exposure #3
23:45:41  Exposure complete.  Computing average ADU.
23:45:42  Average ADU = 17403
23:45:42  Recomputing exposure time...
23:45:42  New exposure time computed to be 25.9
23:45:42  Automatic Flat Action complete.
23:45:42  Running script from C:\Program Files\CCD Commander\lightbox_off.vbs
23:46:24  Script complete.
23:46:24  Setting image type to Bias.
23:46:24  Setting imager bin mode to 1x1.
23:46:24  Setting filter to Luminance.
23:46:31  Setting imager to full frame.
23:46:32  Starting imager exposure (1 of 10).
23:46:42  Imager exposure complete.
23:46:42  Starting imager exposure (2 of 10).
23:46:51  Imager exposure complete.
23:46:51  Starting imager exposure (3 of 10).
23:47:01  Imager exposure complete.
23:47:01  Starting imager exposure (4 of 10).
23:47:11  Imager exposure complete.
23:47:11  Starting imager exposure (5 of 10).
23:47:21  Imager exposure complete.
23:47:21  Starting imager exposure (6 of 10).
23:47:31  Imager exposure complete.
23:47:31  Starting imager exposure (7 of 10).
23:47:41  Imager exposure complete.
23:47:41  Starting imager exposure (8 of 10).
23:47:50  Imager exposure complete.
23:47:50  Starting imager exposure (9 of 10).
23:48:00  Imager exposure complete.
23:48:00  Starting imager exposure (10 of 10).
23:48:09  Imager exposure complete.
23:48:09  Take Images Action complete.
23:48:09  Running script from C:\Program Files\CCD Commander\lightbox_remove.vbs
23:49:21  Script complete.
23:49:21  Running m27_grn_6x5min_home.act
23:49:21  Starting move to action.
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23:49:21  Precessing cooridnates.
23:49:21  J2000 Coordinates: RA: 20h 02m 22.0s Dec: +22°09'05"
23:49:21  JNow Coordinates: RA: 20h 02m 40.5s Dec: +22°10'09"
23:49:21  Slewing to SAO 88105...
23:49:43  Done slewing!
23:49:43  Starting post slew delay.
23:49:46  Completed post slew delay.
23:49:46  Setting imager bin mode to 2x2.
23:49:46  Setting filter to Luminance.
23:49:47  User aborted! Stopping imager and autoguider...
23:49:47  Adjusting current PA for Plate Solve.  CurrentAngle = 89.95
23:49:47  Adjusted PA = 89.95
23:49:47  North Angle is incorrect!  Specified angle is 89.95 degrees.
23:49:47  Plate Solve Failed.
23:49:47  Done running m27_grn_6x5min_home.act
23:49:47  Action stopped.

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Software v1.3.30
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23:52:09  Action starting.
23:52:09  Connecting to the Camera...
23:52:09  Connecting to the Mount...
23:52:11  Connecting to FocusMax...
23:52:11  Connecting to Rotator...
23:52:11  Connected to Pyxis rotator.
23:52:11  Pyxis reports current angle as 14 degrees.
23:52:11  Actual position angle is 89.95 degrees.
23:52:11  Turning on Fan.
23:52:11  Turning on cooler.
23:52:11  Setting cooler = -5
23:52:11  Simple Temperature Control complete.
23:52:11  Running m27_grn_6x5min_home.act
23:52:11  Starting move to action.
23:52:11  Precessing cooridnates.
23:52:11  J2000 Coordinates: RA: 20h 02m 22.0s Dec: +22°09'05"
23:52:11  JNow Coordinates: RA: 20h 02m 40.5s Dec: +22°10'09"
23:52:11  Slewing to SAO 88105...
23:52:14  Done slewing!
23:52:14  Starting post slew delay.
23:52:17  Completed post slew delay.
23:52:17  Setting imager bin mode to 2x2.
23:52:17  Setting filter to Luminance.
23:52:19  Taking 5 second image for Plate Solve...
23:52:30  Saving Image...
23:52:30  Performing Plate Solve with CCDSoft...
23:52:33  Plate solve results:
23:52:33  Pixel Scale = 1.75 asp.
23:52:33  North Angle = 89.92 degrees.
23:52:33  J2000 Coordinates = RA: 20h 02m 19.7s Dec: +22°06'22"
23:52:33  Adjusting current PA for Plate Solve.  CurrentAngle = 89.95
23:52:33  Adjusted PA = 89.95
23:52:33  Syncing to RA 20.04395, Dec 22.12392
23:52:41  Starting focus run...
23:54:20  Focus succeeded! HFD = 2.44
23:54:20  Starting move to action.
23:54:20  Precessing cooridnates.
23:54:20  J2000 Coordinates: RA: 19h 59m 36.0s Dec: +22°43'18"
23:54:20  JNow Coordinates: RA: 19h 59m 54.4s Dec: +22°44'21"
23:54:20  Slewing to M 27...
23:54:26  Done slewing!
23:54:26  Starting post slew delay.
23:54:29  Completed post slew delay.
23:54:29  Setting imager bin mode to 2x2.
23:54:29  Setting filter to Luminance.
23:54:32  Taking 5 second image for Plate Solve...
23:54:51  Saving Image...
23:54:52  Performing Plate Solve with CCDSoft...
23:54:54  Plate solve results:
23:54:54  Pixel Scale = 1.75 asp.
23:54:54  North Angle = 89.93 degrees.
23:54:54  J2000 Coordinates = RA: 19h 59m 34.4s Dec: +22°43'27"
23:54:54  Adjusting current PA for Plate Solve.  CurrentAngle = 89.95
23:54:54  Adjusted PA = 89.95
23:54:54  Syncing to RA 19.99799, Dec 22.74163
23:55:00  Setting image type to Light.
23:55:00  Setting imager bin mode to 2x2.
23:55:00  Setting filter to Green.
23:55:04  Setting imager to full frame.
23:55:04  Setting imager exposure time to 300 seconds.
23:55:06  Setting autoguider bin mode to 2x2.
23:55:06  Taking a 2 second autoguider exposure.
23:55:15  Beginning guide star search...
23:55:16  Found possible guide star at 136, 123 with a max brightness of 9436 ADU.
23:55:16  Taking a 2 second autoguider exposure.
23:55:22  Beginning guide star search...
23:55:23  Found appropriate guide star at 136, 123 with a max brightness of 8327 ADU.
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23:55:23  Matches previous possible guide star at 136, 123 with a max brightness of 9436 ADU.
23:55:23  Trying to autoguide on star at 136.0,123.0.
23:55:23  Starting to autoguide.
23:55:31  Checking autoguider max error...
23:55:34  Autoguider error: X=0.58 Y=0.69
23:55:34  Checking autoguider max error...
23:55:38  Autoguider error: X=0.61 Y=0.66
23:55:38  Checking autoguider max error...
23:55:41  Autoguider error: X=0.69 Y=0.21
23:55:41  Checking autoguider max error...
23:55:45  Autoguider error: X=0.33 Y=0.08
23:55:45  Autoguider max error < 0.5!
23:55:45  Stopping autoguider...
23:55:47  Automatic guide star acquisition successful!
23:55:47  Setting autoguider exposure time to 2 seconds.
23:55:47  Setting guide star position to 136.0,123.0.
23:55:47  Starting to autoguide.
23:55:55  Checking autoguider max error...
23:55:58  Autoguider error: X=0.27 Y=0.82
23:55:58  Checking autoguider max error...
23:56:02  Autoguider error: X=-0.05 Y=-0.36
23:56:02  Autoguider max error < 0.5!
23:56:02  Starting imager exposure (1 of 6).
00:01:09  Imager exposure complete.
00:01:09  Stopping autoguider...
00:01:11  Setting autoguider exposure time to 2 seconds.
00:01:11  Setting guide star position to 138.0,123.0.
00:01:11  Starting to autoguide.
00:01:19  Checking autoguider max error...
00:01:22  Autoguider error: X=-0.74 Y=0.86
00:01:22  Checking autoguider max error...
00:01:26  Autoguider error: X=-0.61 Y=-0.28
00:01:26  Checking autoguider max error...
00:01:29  Autoguider error: X=-0.55 Y=-0.35
00:01:29  Checking autoguider max error...
00:01:33  Autoguider error: X=-0.46 Y=0.08
00:01:33  Autoguider max error < 0.5!
00:01:33  Starting imager exposure (2 of 6).
00:06:40  Imager exposure complete.
00:06:40  Stopping autoguider...
00:06:42  Setting autoguider exposure time to 2 seconds.
00:06:42  Setting guide star position to 138.0,125.0.
00:06:42  Starting to autoguide.
00:06:50  Checking autoguider max error...
00:06:53  Autoguider error: X=0.15 Y=0.39
00:06:53  Autoguider max error < 0.5!
00:06:53  Starting imager exposure (3 of 6).
00:12:00  Imager exposure complete.
00:12:00  Stopping autoguider...
00:12:02  Setting autoguider exposure time to 2 seconds.
00:12:02  Setting guide star position to 136.0,125.0.
00:12:02  Starting to autoguide.
00:12:10  Checking autoguider max error...
00:12:13  Autoguider error: X=2.28 Y=-0.18
00:12:13  Checking autoguider max error...
00:12:17  Autoguider error: X=0.47 Y=-0.30
00:12:17  Autoguider max error < 0.5!
00:12:17  Starting imager exposure (4 of 6).
00:17:24  Imager exposure complete.
00:17:24  Stopping autoguider...
00:17:26  Setting autoguider exposure time to 2 seconds.
00:17:26  Setting guide star position to 134.0,125.0.
00:17:26  Starting to autoguide.
00:17:34  Checking autoguider max error...
00:17:38  Autoguider error: X=-2.17 Y=-1.01
00:17:38  Checking autoguider max error...
00:17:42  Autoguider error: X=-1.77 Y=-0.99
00:17:42  Checking autoguider max error...
00:17:46  Autoguider error: X=-1.52 Y=0.41
00:17:46  Checking autoguider max error...
00:17:49  Autoguider error: X=-0.72 Y=0.12
00:17:49  Checking autoguider max error...
00:17:52  Autoguider error: X=-0.48 Y=-0.15
00:17:52  Autoguider max error < 0.5!
00:17:52  Starting imager exposure (5 of 6).
00:22:59  Imager exposure complete.
00:22:59  Stopping autoguider...
00:23:01  Setting autoguider exposure time to 2 seconds.
00:23:01  Setting guide star position to 134.0,123.0.
00:23:01  Starting to autoguide.
00:23:09  Checking autoguider max error...
00:23:12  Autoguider error: X=0.33 Y=-0.01
00:23:12  Autoguider max error < 0.5!
00:23:12  Starting imager exposure (6 of 6).
00:28:19  Imager exposure complete.
00:28:19  Stopping autoguider...
00:28:21  Take Images Action complete.
00:28:21  Done running m27_grn_6x5min_home.act
00:28:21  Running m27_blu_6x5min_home.act
00:28:21  Starting move to action.
```

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00:28:21  Precessing cooridnates.
00:28:21  J2000 Coordinates: RA: 20h 02m 22.0s Dec: +22°09'05"
00:28:21  JNow Coordinates: RA: 20h 02m 40.5s Dec: +22°10'09"
00:28:21  Slewing to SAO 88105...
00:28:28  Done slewing!
00:28:28  Starting post slew delay.
00:28:31  Completed post slew delay.
00:28:31  Setting imager bin mode to 2x2.
00:28:31  Setting filter to Luminance.
00:28:38  Taking 5 second image for Plate Solve...
00:28:48  Saving Image...
00:28:48  Performing Plate Solve with CCDSoft...
00:28:51  Plate solve results:
00:28:51  Pixel Scale = 1.75 asp.
00:28:51  North Angle = 89.91 degrees.
00:28:51  J2000 Coordinates = RA: 20h 02m 23.6s Dec: +22°10'49"
00:28:51  Adjusting current PA for Plate Solve.  CurrentAngle = 89.95
00:28:51  Adjusted PA = 89.95
00:28:51  Syncing to RA 20.04502, Dec 22.19795
00:28:59  Starting focus run...
00:30:39  Focus succeeded! HFD = 2.40
00:30:39  Starting move to action.
00:30:39  Precessing cooridnates.
00:30:39  J2000 Coordinates: RA: 19h 59m 36.0s Dec: +22°43'18"
00:30:40  JNow Coordinates: RA: 19h 59m 54.4s Dec: +22°44'21"
00:30:40  Slewing to M 27...
00:30:45  Done slewing!
00:30:45  Starting post slew delay.
00:30:49  Completed post slew delay.
00:30:49  Setting imager bin mode to 2x2.
00:30:49  Setting filter to Luminance.
00:30:50  Taking 5 second image for Plate Solve...
00:31:10  Saving Image...
00:31:11  Performing Plate Solve with CCDSoft...
00:31:13  Plate solve results:
00:31:13  Pixel Scale = 1.75 asp.
00:31:13  North Angle = 89.92 degrees.
00:31:13  J2000 Coordinates = RA: 19h 59m 34.8s Dec: +22°40'55"
00:31:13  Adjusting current PA for Plate Solve.  CurrentAngle = 89.95
00:31:13  Adjusted PA = 89.95
00:31:13  Syncing to RA 19.99812, Dec 22.69929
00:31:19  Setting image type to Light.
00:31:19  Setting imager bin mode to 2x2.
00:31:19  Setting filter to Blue.
00:31:23  Setting imager to full frame.
00:31:23  Setting imager exposure time to 300 seconds.
00:31:24  Setting autoguider bin mode to 2x2.
00:31:24  Taking a 2 second autoguider exposure.
00:31:32  Beginning guide star search...
00:31:34  Found possible guide star at 141, 117 with a max brightness of 5800 ADU.
00:31:34  Taking a 2 second autoguider exposure.
00:31:39  Beginning guide star search...
00:31:40  Found appropriate guide star at 141, 118 with a max brightness of 5143 ADU.
00:31:40  Matches previous possible guide star at 141, 117 with a max brightness of 5800 ADU.
00:31:40  Trying to autoguide on star at 141.0,118.0.
00:31:40  Starting to autoguide.
00:31:48  Checking autoguider max error...
00:31:50  Autoguider error: X=0.54 Y=0.77
00:31:50  Checking autoguider max error...
00:31:53  Autoguider error: X=0.07 Y=-0.19
00:31:53  Autoguider max error < 0.5!
00:31:53  Stopping autoguider...
00:31:55  Automatic guide star acquisition successful!
00:31:55  Setting autoguider exposure time to 2 seconds.
00:31:55  Setting guide star position to 141.0,118.0.
00:31:55  Starting to autoguide.
00:32:03  Checking autoguider max error...
00:32:05  Autoguider error: X=0.26 Y=-0.06
00:32:05  Autoguider max error < 0.5!
00:32:05  Starting imager exposure (1 of 6).
00:37:11  Imager exposure complete.
00:37:11  Stopping autoguider...
00:37:13  Setting autoguider exposure time to 2 seconds.
00:37:13  Setting guide star position to 143.0,118.0.
00:37:13  Starting to autoguide.
00:37:21  Checking autoguider max error...
00:37:23  Autoguider error: X=-0.86 Y=0.41
00:37:23  Checking autoguider max error...
00:37:25  Autoguider error: X=-0.80 Y=0.46
00:37:25  Checking autoguider max error...
00:37:29  Autoguider error: X=-0.78 Y=-0.70
00:37:29  Checking autoguider max error...
00:37:31  Autoguider error: X=-0.88 Y=0.29
00:37:31  Checking autoguider max error...
00:37:34  Autoguider error: X=-1.11 Y=0.95
00:37:34  Checking autoguider max error...
00:37:37  Autoguider error: X=-0.88 Y=-0.22
00:37:37  Checking autoguider max error...
00:37:40  Autoguider error: X=-0.58 Y=-0.10
00:37:40  Checking autoguider max error...
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00:37:43  Autoguider error: X=-0.74 Y=-0.17
00:37:43  Checking autoguider max error...
00:37:46  Autoguider error: X=-0.42 Y=-0.30
00:37:46  Autoguider max error < 0.5!
00:37:46  Starting imager exposure (2 of 6).
00:42:52  Imager exposure complete.
00:42:52  Stopping autoguider...
00:42:54  Setting autoguider exposure time to 2 seconds.
00:42:55  Setting guide star position to 143.0,120.0.
00:42:55  Starting to autoguide.
00:43:03  Checking autoguider max error...
00:43:04  Autoguider error: X=0.11 Y=-0.80
00:43:04  Checking autoguider max error...
00:43:07  Autoguider error: X=0.14 Y=0.21
00:43:07  Autoguider max error < 0.5!
00:43:07  Starting imager exposure (3 of 6).
00:48:14  Imager exposure complete.
00:48:14  Stopping autoguider...
00:48:16  Setting autoguider exposure time to 2 seconds.
00:48:16  Setting guide star position to 141.0,120.0.
00:48:16  Starting to autoguide.
00:48:24  Checking autoguider max error...
00:48:26  Autoguider error: X=-1.75 Y=0.69
00:48:26  Checking autoguider max error...
00:48:29  Autoguider error: X=-1.30 Y=0.08
00:48:29  Checking autoguider max error...
00:48:33  Autoguider error: X=-1.15 Y=0.66
00:48:33  Checking autoguider max error...
00:48:36  Autoguider error: X=-1.04 Y=0.16
00:48:36  Checking autoguider max error...
00:48:38  Autoguider error: X=-1.05 Y=-0.09
00:48:38  Checking autoguider max error...
00:48:41  Autoguider error: X=-0.25 Y=-0.10
00:48:41  Autoguider max error < 0.5!
00:48:41  Starting imager exposure (4 of 6).
00:53:47  Imager exposure complete.
00:53:47  Stopping autoguider...
00:53:50  Setting autoguider exposure time to 2 seconds.
00:53:50  Setting guide star position to 139.0,120.0.
00:53:50  Starting to autoguide.
00:53:58  Checking autoguider max error...
00:53:59  Autoguider error: X=-1.46 Y=0.74
00:53:59  Checking autoguider max error...
00:54:03  Autoguider error: X=-0.95 Y=0.17
00:54:03  Checking autoguider max error...
00:54:06  Autoguider error: X=-0.80 Y=0.45
00:54:06  Checking autoguider max error...
00:54:09  Autoguider error: X=-0.91 Y=1.17
00:54:09  Checking autoguider max error...
00:54:12  Autoguider error: X=-0.82 Y=-0.04
00:54:12  Checking autoguider max error...
00:54:14  Autoguider error: X=-0.79 Y=0.19
00:54:14  Checking autoguider max error...
00:54:17  Autoguider error: X=-0.15 Y=0.66
00:54:17  Checking autoguider max error...
00:54:20  Autoguider error: X=-0.19 Y=0.09
00:54:20  Autoguider max error < 0.5!
00:54:20  Starting imager exposure (5 of 6).
00:59:27  Imager exposure complete.
00:59:27  Stopping autoguider...
00:59:29  Setting autoguider exposure time to 2 seconds.
00:59:29  Setting guide star position to 139.0,118.0.
00:59:29  Starting to autoguide.
00:59:37  Checking autoguider max error...
00:59:38  Autoguider error: X=-0.15 Y=0.60
00:59:38  Checking autoguider max error...
00:59:41  Autoguider error: X=-0.07 Y=-0.03
00:59:41  Autoguider max error < 0.5!
00:59:41  Starting imager exposure (6 of 6).
01:04:48  Imager exposure complete.
01:04:48  Stopping autoguider...
01:04:50  Take Images Action complete.
01:04:50  Done running m27_blu_6x5min_home.act
01:04:50  Running m27_lum_6x5min_home.act
01:04:50  Running Action List Iteration #1
01:04:50  Starting move to action.
01:04:50  Precessing cooridnates.
01:04:50  J2000 Coordinates: RA: 20h 02m 22.0s Dec: +22°09'05"
01:04:50  JNow Coordinates: RA: 20h 02m 40.5s Dec: +22°10'09"
01:04:50  Slewing to SAO 88105...
01:04:57  Done slewing!
01:04:57  Starting post slew delay.
01:05:00  Completed post slew delay.
01:05:00  Setting imager bin mode to 2x2.
01:05:00  Setting filter to Luminance.
01:05:06  Taking 5 second image for Plate Solve...
01:05:16  Saving Image...
01:05:17  Performing Plate Solve with CCDSoft...
01:05:20  Plate solve results:
01:05:20  Pixel Scale = 1.75 asp.
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01:05:20  North Angle = 89.90 degrees.
01:05:20  J2000 Coordinates = RA: 20h 02m 24.8s Dec: +22°10'48"
01:05:20  Adjusting current PA for Plate Solve.  CurrentAngle = 89.95
01:05:20  Adjusted PA = 89.95
01:05:20  Syncing to RA 20.04535, Dec 22.19769
01:05:28  Starting focus run...
01:07:21  Focus succeeded! HFD = 2.54
01:07:21  Starting move to action.
01:07:21  Precessing cooridnates.
01:07:21  J2000 Coordinates: RA: 19h 59m 36.0s Dec: +22°43'18"
01:07:21  JNow Coordinates: RA: 19h 59m 54.4s Dec: +22°44'21"
01:07:21  Flipping mount...
01:09:29  Slewing to M 27...
01:11:37  Done slewing!
01:11:37  Starting post slew delay.
01:11:40  Completed post slew delay.
01:11:40  In Rotate Function. Current PA = 89.95, New PA = 89.95
01:11:40  On east side - angles computed on west side, adding 180 degrees.
01:11:40  Adjusted PA = 269.95
01:11:40  Current Rotator Angle = 14
01:11:40  New Rotator Angle = 194
01:11:40  Moving rotator...
01:12:04  Rotation complete.
01:12:04  Guider calibration angle different than current angle.
01:12:04  Recomputing calibration coefficients.
01:12:04  Current Angle = 89.95
01:12:04  GuiderCalAngle = 270.00
01:12:04  Setting imager bin mode to 2x2.
01:12:04  Setting filter to Luminance.
01:12:06  Taking 5 second image for Plate Solve...
01:12:25  Saving Image...
01:12:26  Performing Plate Solve with CCDSoft...
01:12:28  Plate solve results:
01:12:28  Pixel Scale = 1.75 asp.
01:12:28  North Angle = 270.10 degrees.
01:12:28  J2000 Coordinates = RA: 19h 59m 59.2s Dec: +22°41'54"
01:12:28  Adjusting current PA for Plate Solve.  CurrentAngle = 89.95
01:12:28  Adjusted PA = 89.95
01:12:28  Syncing to RA 20.00489, Dec 22.71569
01:14:47  Setting image type to Light.
01:14:47  Setting imager bin mode to 1x1.
01:14:47  Setting filter to Luminance.
01:14:49  Setting imager to full frame.
01:14:49  Setting imager exposure time to 300 seconds.
01:14:50  Setting autoguider bin mode to 2x2.
01:14:50  Taking a 2 second autoguider exposure.
01:14:58  Beginning guide star search...
01:15:00  Taking a 8.08 second autoguider exposure.
01:15:21  Beginning guide star search...
01:15:22  Taking a 20 second autoguider exposure.
01:16:07  Beginning guide star search...
01:16:08  Cannot find star greater then 3000 ADU.
01:16:08  Stopping autoguider...
01:16:09  Unable to find a guide star.
01:16:09  Take Images Action failed.
01:16:10  Running Action List Iteration #2
01:16:10  Starting move to action.
01:16:10  Precessing cooridnates.
01:16:10  J2000 Coordinates: RA: 20h 02m 22.0s Dec: +22°09'05"
01:16:10  JNow Coordinates: RA: 20h 02m 40.5s Dec: +22°10'09"
01:16:10  Slewing to SAO 88105...
01:16:17  Done slewing!
01:16:17  Starting post slew delay.
01:16:20  Completed post slew delay.
01:16:20  Setting imager bin mode to 2x2.
01:16:20  Setting filter to Luminance.
01:16:22  Taking 5 second image for Plate Solve...
01:16:32  Saving Image...
01:16:32  Performing Plate Solve with CCDSoft...
01:16:34  Plate solve results:
01:16:34  Pixel Scale = 1.75 asp.
01:16:35  North Angle = 270.39 degrees.
01:16:35  J2000 Coordinates = RA: 20h 03m 03.6s Dec: +22°21'20"
01:16:35  Adjusting current PA for Plate Solve.  CurrentAngle = 89.95
01:16:35  Adjusted PA = 89.95
01:16:35  Syncing to RA 20.05613, Dec 22.37338
01:16:45  Starting focus run...
01:18:43  Focus succeeded! HFD = 2.81
01:18:43  Starting move to action.
01:18:43  Precessing cooridnates.
01:18:43  J2000 Coordinates: RA: 19h 59m 36.0s Dec: +22°43'18"
01:18:43  JNow Coordinates: RA: 19h 59m 54.4s Dec: +22°44'21"
01:18:43  Slewing to M 27...
01:18:49  Done slewing!
01:18:49  Starting post slew delay.
01:18:52  Completed post slew delay.
01:18:52  Setting imager bin mode to 2x2.
01:18:52  Setting filter to Luminance.
01:18:54  Taking 5 second image for Plate Solve...
01:19:13  Saving Image...
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01:19:13  Performing Plate Solve with CCDSoft...
01:19:16  Plate solve results:
01:19:16  Pixel Scale = 1.75 asp.
01:19:16  North Angle = 270.39 degrees.
01:19:16  J2000 Coordinates = RA: 19h 59m 34.6s Dec: +22°41'15"
01:19:16  Adjusting current PA for Plate Solve.  CurrentAngle = 89.95
01:19:16  Adjusted PA = 89.95
01:19:16  Syncing to RA 19.99805, Dec 22.70476
01:19:22  Setting image type to Light.
01:19:22  Setting imager bin mode to 1x1.
01:19:22  Setting filter to Luminance.
01:19:24  Setting imager to full frame.
01:19:24  Setting imager exposure time to 300 seconds.
01:19:25  Setting autoguider bin mode to 2x2.
01:19:25  Taking a 2 second autoguider exposure.
01:19:34  Beginning guide star search...
01:19:35  Found possible guide star at 144, 114 with a max brightness of 12350 ADU.
01:19:35  Taking a 2 second autoguider exposure.
01:19:40  Beginning guide star search...
01:19:42  Found appropriate guide star at 144, 115 with a max brightness of 9633 ADU.
01:19:42  Matches previous possible guide star at 144, 114 with a max brightness of 12350 ADU.
01:19:42  Trying to autoguide on star at 144.0,115.0.
01:19:42  Starting to autoguide.
01:19:50  Checking autoguider max error...
01:19:51  Autoguider error: X=0.17 Y=1.03
01:19:51  Checking autoguider max error...
01:19:54  Autoguider error: X=0.37 Y=0.69
01:19:54  Checking autoguider max error...
01:19:57  Autoguider error: X=-0.05 Y=2.09
01:19:57  Checking autoguider max error...
01:20:00  Autoguider error: X=-0.20 Y=13.92
01:20:00  Checking autoguider max error...
01:20:33  Never received GuideError event - switching to another event.
01:20:35  Autoguider error: X=-0.20 Y=13.92
01:20:35  Checking autoguider max error...
01:20:41  Autoguider error: X=-0.20 Y=13.92
01:20:41  Checking autoguider max error...
01:20:47  Autoguider error: X=-0.20 Y=13.92
01:20:47  Checking autoguider max error...
01:20:53  Autoguider error: X=-0.20 Y=13.92
01:20:53  Checking autoguider max error...
01:20:58  Autoguider error: X=-0.20 Y=13.92
01:20:58  Checking autoguider max error...
01:21:04  Autoguider error: X=-0.20 Y=13.92
01:21:04  Checking autoguider max error...
01:21:10  Autoguider error: X=-0.20 Y=13.92
01:21:10  Checking autoguider max error...
01:21:16  Autoguider error: X=-0.20 Y=13.92
01:21:16  Checking autoguider max error...
01:21:21  Autoguider error: X=-0.20 Y=13.92
01:21:21  Checking autoguider max error...
01:21:27  Autoguider error: X=-0.20 Y=13.92
01:21:27  Checking autoguider max error...
01:21:33  Autoguider error: X=-0.20 Y=13.92
01:21:33  Checking autoguider max error...
01:21:39  Autoguider error: X=-0.20 Y=13.92
01:21:39  Checking autoguider max error...
01:21:44  Autoguider error: X=-0.20 Y=13.92
01:21:44  Checking autoguider max error...
01:21:50  Autoguider error: X=-0.20 Y=13.92
01:21:50  Checking autoguider max error...
01:21:56  Autoguider error: X=-0.20 Y=13.92
01:21:56  Checking autoguider max error...
01:22:02  Autoguider error: X=-0.20 Y=13.92
01:22:02  Autoguider error failed to decrease to < 0.5!
01:22:03  Taking a 2 second autoguider exposure.
01:22:12  Beginning guide star search...
01:22:14  Taking a 3.22 second autoguider exposure.
01:22:25  Beginning guide star search...
01:22:27  Found possible guide star at 146, 110 with a max brightness of 3639 ADU.
01:22:27  Taking a 3.22 second autoguider exposure.
01:22:34  Beginning guide star search...
01:22:35  Found appropriate guide star at 147, 110 with a max brightness of 4272 ADU.
01:22:35  Matches previous possible guide star at 146, 110 with a max brightness of 3639 ADU.
01:22:35  Trying to autoguide on star at 147.0,110.0.
01:22:35  Starting to autoguide.
01:22:48  Checking autoguider max error...
01:22:50  Autoguider error: X=-0.09 Y=-0.37
01:22:50  Autoguider max error < 0.5!
01:22:50  Stopping autoguider...
01:22:52  Automatic guide star acquisition successful!
01:22:53  Setting autoguider exposure time to 3.22 seconds.
01:22:53  Setting guide star position to 147.0,110.0.
01:22:53  Starting to autoguide.
01:23:06  Checking autoguider max error...
01:23:08  Autoguider error: X=-4.18 Y=-2.24
01:23:08  Checking autoguider max error...
01:23:08  Autoguider error: X=-4.18 Y=-2.24
01:23:08  Checking autoguider max error...
01:23:13  Autoguider error: X=-4.05 Y=0.03
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01:23:13  Checking autoguider max error...
01:23:14  Autoguider error: X=-4.05 Y=0.03
01:23:14  Checking autoguider max error...
01:23:18  Autoguider error: X=-3.67 Y=-0.07
01:23:18  Checking autoguider max error...
01:23:19  Autoguider error: X=-3.67 Y=-0.07
01:23:19  Checking autoguider max error...
01:23:23  Autoguider error: X=-2.81 Y=0.08
01:23:23  Checking autoguider max error...
01:23:24  Autoguider error: X=-2.81 Y=0.08
01:23:24  Checking autoguider max error...
01:23:29  Autoguider error: X=-2.76 Y=-2.39
01:23:29  Checking autoguider max error...
01:23:29  Autoguider error: X=-2.76 Y=-2.39
01:23:29  Checking autoguider max error...
01:23:34  Autoguider error: X=1.22 Y=3.33
01:23:34  Checking autoguider max error...
01:23:35  Autoguider error: X=1.22 Y=3.33
01:23:35  Checking autoguider max error...
01:23:40  Autoguider error: X=3.69 Y=1.53
01:23:40  Checking autoguider max error...
01:23:40  Autoguider error: X=3.69 Y=1.53
01:23:40  Checking autoguider max error...
01:23:45  Autoguider error: X=4.75 Y=0.48
01:23:45  Checking autoguider max error...
01:23:45  Autoguider error: X=4.75 Y=0.48
01:23:45  Checking autoguider max error...
01:23:50  Autoguider error: X=4.64 Y=-0.23
01:23:50  Checking autoguider max error...
01:23:51  Autoguider error: X=4.64 Y=-0.23
01:23:51  Checking autoguider max error...
01:23:55  Autoguider error: X=2.65 Y=-0.32
01:23:55  Checking autoguider max error...
01:23:56  Autoguider error: X=2.65 Y=-0.32
01:23:56  Autoguider error failed to decrease to < 0.5!
01:23:57  Take Images Action failed.
01:23:57  Done running m27_lum_6x5min_home.act
01:23:57  Running m27_blu_6x5min_home.act
01:23:57  Starting move to action.
01:23:57  Precessing cooridnates.
01:23:57  J2000 Coordinates: RA: 20h 02m 22.0s Dec: +22°09'05"
01:23:57  JNow Coordinates: RA: 20h 02m 40.5s Dec: +22°10'09"
01:23:57  Slewing to SAO 88105...
01:24:04  Done slewing!
01:24:04  Starting post slew delay.
01:24:07  Completed post slew delay.
01:24:07  Setting imager bin mode to 2x2.
01:24:07  Setting filter to Luminance.
01:24:09  Taking 5 second image for Plate Solve...
01:24:20  Saving Image...
01:24:20  Performing Plate Solve with CCDSoft...
01:24:22  Plate solve results:
01:24:22  Pixel Scale = 1.75 asp.
01:24:22  North Angle = 270.37 degrees.
01:24:22  J2000 Coordinates = RA: 20h 02m 22.6s Dec: +22°10'35"
01:24:22  Adjusting current PA for Plate Solve.  CurrentAngle = 89.95
01:24:22  Adjusted PA = 89.95
01:24:22  Syncing to RA 20.04474, Dec 22.19417
01:24:30  Starting focus run...
01:26:44  Focus succeeded! HFD = 2.64
01:26:44  Starting move to action.
01:26:44  Precessing cooridnates.
01:26:44  J2000 Coordinates: RA: 19h 59m 36.0s Dec: +22°43'18"
01:26:44  JNow Coordinates: RA: 19h 59m 54.4s Dec: +22°44'21"
01:26:44  Slewing to M 27...
01:26:50  Done slewing!
01:26:50  Starting post slew delay.
01:26:53  Completed post slew delay.
01:26:53  Setting imager bin mode to 2x2.
01:26:53  Setting filter to Luminance.
01:26:55  Taking 5 second image for Plate Solve...
01:27:14  Saving Image...
01:27:14  Performing Plate Solve with CCDSoft...
01:27:16  Plate solve results:
01:27:16  Pixel Scale = 1.74 asp.
01:27:16  North Angle = 270.37 degrees.
01:27:16  J2000 Coordinates = RA: 19h 59m 34.3s Dec: +22°41'35"
01:27:16  Adjusting current PA for Plate Solve.  CurrentAngle = 89.95
01:27:16  Adjusted PA = 89.95
01:27:16  Syncing to RA 19.99797, Dec 22.71039
01:27:23  Setting image type to Light.
01:27:23  Setting imager bin mode to 2x2.
01:27:23  Setting filter to Blue.
01:27:25  Setting imager to full frame.
01:27:25  Setting imager exposure time to 300 seconds.
01:27:26  Setting autoguider bin mode to 2x2.
01:27:26  Taking a 2 second autoguider exposure.
01:27:35  Beginning guide star search...
01:27:36  Taking a 6.4 second autoguider exposure.
01:27:54  Beginning guide star search...
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01:27:55  Taking a 12.03 second autoguider exposure.
01:28:24  Beginning guide star search...
01:28:26  Taking a 20 second autoguider exposure.
01:29:10  Beginning guide star search...
01:29:12  Found possible guide star at 149, 185 with a max brightness of 9361 ADU.
01:29:12  Taking a 20 second autoguider exposure.
01:29:34  Beginning guide star search...
01:29:35  Found possible guide star at 150, 183 with a max brightness of 21151 ADU.
01:29:35  Taking a 20 second autoguider exposure.
01:29:58  Beginning guide star search...
01:29:59  Found possible guide star at 150, 181 with a max brightness of 23227 ADU.
01:29:59  Found possible guide star at 150, 181 with a max brightness of 23227 ADU.
01:29:59  Found appropriate guide star at 150, 181 with a max brightness of 23227 ADU.
01:29:59  Matches previous possible guide star at 150, 181 with a max brightness of 23227 ADU.
01:29:59  Trying to autoguide on star at 150.0,181.0.
01:29:59  Starting to autoguide.
01:30:37  User aborted! Stopping imager and autoguider...
01:30:37  Checking autoguider max error...
01:30:37  Stopping autoguider...
01:30:38  Automatic guide star acquisition successful!
01:30:38  Done running m27_blu_6x5min_home.act
01:30:38  Action stopped.

CCD Commander Log File
Software v1.3.31
This copy is registered to:
Jon K. Olson
jon@astroham.com

22:21:51  Action starting.
22:21:51  Connecting to the Camera...
22:21:51  Connecting to the Mount...
22:21:52  Connecting to FocusMax...
22:21:52  Connecting to Rotator...
22:21:53  Connected to Pyxis rotator.
22:21:53  Pyxis reports current angle as 15 degrees.
22:21:53  Actual position angle is 89.67 degrees.
22:21:53  Turning on Fan.
22:21:53  Turning on cooler.
22:21:53  Setting cooler = -5
22:21:53  Simple Temperature Control complete.
22:21:53  Running script from C:\Program Files\CCD Commander\camera_cord_routing.vbs
22:21:58  Script complete.
22:21:58  In Rotate Function. Current PA = 89.67, New PA = 90.00
22:21:58  Current Rotator Angle = 15
22:21:58  New Rotator Angle = 14.67
22:21:58  No rotator movement necessary.
22:21:58  Running m27_blu_6x5min_home.act
22:21:58  Starting move to action.
22:21:58  Precessing cooridnates.
22:21:58  J2000 Coordinates: RA: 20h 02m 22.0s Dec: +22°09'05"
22:21:58  JNow Coordinates: RA: 20h 02m 40.5s Dec: +22°10'10"
22:21:58  Slewing to SAO 88105...
22:22:04  Done slewing!
22:22:04  Starting post slew delay.
22:22:07  Completed post slew delay.
22:22:08  Setting imager bin mode to 2x2.
22:22:08  Setting filter to Luminance.
22:22:15  Taking 5 second image for Plate Solve...
22:22:26  Saving Image...
22:22:27  Performing Plate Solve with CCDSoft...
22:22:33  Plate solve results:
22:22:33  Pixel Scale = 1.75 asp.
22:22:33  North Angle = 89.53 degrees.
22:22:33  J2000 Coordinates = RA: 20h 02m 19.8s Dec: +22°08'34"
22:22:33  Adjusting current PA for Plate Solve.  CurrentAngle = 89.67
22:22:33  Adjusted PA = 89.67
22:22:33  Syncing to RA 20.04397, Dec 22.16088
22:22:41  Starting focus run...
22:24:28  Focus succeeded! HFD = 2.70
22:24:28  Starting move to action.
22:24:28  Precessing cooridnates.
22:24:28  J2000 Coordinates: RA: 19h 59m 36.0s Dec: +22°43'18"
22:24:28  JNow Coordinates: RA: 19h 59m 54.4s Dec: +22°44'21"
22:24:28  Slewing to M 27...
22:24:34  Done slewing!
22:24:34  Starting post slew delay.
22:24:38  Completed post slew delay.
22:24:38  Setting imager bin mode to 2x2.
22:24:38  Setting filter to Luminance.
22:24:40  Taking 5 second image for Plate Solve...
22:25:00  Saving Image...
22:25:00  Performing Plate Solve with CCDSoft...
22:25:02  Plate solve results:
22:25:02  Pixel Scale = 1.75 asp.
22:25:02  North Angle = 89.53 degrees.
22:25:02  J2000 Coordinates = RA: 19h 59m 34.6s Dec: +22°41'18"
22:25:03  Adjusting current PA for Plate Solve.  CurrentAngle = 89.67
22:25:03  Adjusted PA = 89.67
22:25:03  Syncing to RA 19.99806, Dec 22.70606
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22:25:09  Setting image type to Light.
22:25:09  Setting imager bin mode to 2x2.
22:25:09  Setting filter to Blue.
22:25:13  Setting imager to full frame.
22:25:13  Setting imager exposure time to 300 seconds.
22:25:14  Setting autoguider bin mode to 2x2.
22:25:14  Taking a 2 second autoguider exposure.
22:25:24  Beginning guide star search...
22:25:25  Found possible guide star at 138, 117 with a max brightness of 8548 ADU.
22:25:25  Taking a 2 second autoguider exposure.
22:25:31  Beginning guide star search...
22:25:33  Found possible guide star at 138, 119 with a max brightness of 9883 ADU.
22:25:33  Taking a 2 second autoguider exposure.
22:25:38  Beginning guide star search...
22:25:39  Found possible guide star at 138, 120 with a max brightness of 8819 ADU.
22:25:39  Found appropriate guide star at 138, 120 with a max brightness of 8819 ADU.
22:25:39  Matches previous possible guide star at 138, 119 with a max brightness of 9883 ADU.
22:25:39  Trying to autoguide on star at 138.0,120.0.
22:25:39  Starting to autoguide.
22:25:47  Checking autoguider max error...
22:25:50  Autoguider error: X=-0.11 Y=0.08
22:25:50  Autoguider max error < 0.5!
22:25:50  Stopping autoguider...
22:25:52  Automatic guide star acquisition successful!
22:25:53  Setting autoguider exposure time to 2 seconds.
22:25:53  Setting guide star position to 138.0,120.0.
22:25:53  Starting to autoguide.
22:26:01  Checking autoguider max error...
22:26:03  Autoguider error: X=-0.12 Y=0.29
22:26:03  Autoguider max error < 0.5!
22:26:04  Starting imager exposure (1 of 6).
22:31:09  Imager exposure complete.
22:31:09  Stopping autoguider...
22:31:11  Setting autoguider exposure time to 2 seconds.
22:31:11  Setting guide star position to 140.0,120.0.
22:31:11  Starting to autoguide.
22:31:19  Checking autoguider max error...
22:31:21  Autoguider error: X=-1.43 Y=0.48
22:31:21  Checking autoguider max error...
22:31:24  Autoguider error: X=-1.38 Y=-0.14
22:31:24  Checking autoguider max error...
22:31:27  Autoguider error: X=-1.46 Y=0.09
22:31:27  Checking autoguider max error...
22:31:30  Autoguider error: X=-1.36 Y=0.07
22:31:30  Checking autoguider max error...
22:31:33  Autoguider error: X=-1.05 Y=-0.12
22:31:33  Checking autoguider max error...
22:31:36  Autoguider error: X=-0.64 Y=-0.05
22:31:36  Checking autoguider max error...
22:31:39  Autoguider error: X=-0.69 Y=0.30
22:31:39  Checking autoguider max error...
22:31:42  Autoguider error: X=-0.63 Y=0.34
22:31:42  Checking autoguider max error...
22:31:45  Autoguider error: X=-0.47 Y=0.12
22:31:45  Autoguider max error < 0.5!
22:31:45  Starting imager exposure (2 of 6).
22:36:50  Imager exposure complete.
22:36:50  Stopping autoguider...
22:36:52  Setting autoguider exposure time to 2 seconds.
22:36:52  Setting guide star position to 140.0,122.0.
22:36:52  Starting to autoguide.
22:37:00  Checking autoguider max error...
22:37:01  Autoguider error: X=0.12 Y=-0.26
22:37:01  Autoguider max error < 0.5!
22:37:01  Starting imager exposure (3 of 6).
22:42:07  Imager exposure complete.
22:42:07  Stopping autoguider...
22:42:09  Setting autoguider exposure time to 2 seconds.
22:42:09  Setting guide star position to 138.0,122.0.
22:42:09  Starting to autoguide.
22:42:17  Checking autoguider max error...
22:42:19  Autoguider error: X=-1.24 Y=1.02
22:42:19  Checking autoguider max error...
22:42:22  Autoguider error: X=0.07 Y=-0.36
22:42:22  Autoguider max error < 0.5!
22:42:22  Starting imager exposure (4 of 6).
22:47:28  Imager exposure complete.
22:47:28  Stopping autoguider...
22:47:30  Setting autoguider exposure time to 2 seconds.
22:47:30  Setting guide star position to 136.0,122.0.
22:47:30  Starting to autoguide.
22:47:38  Checking autoguider max error...
22:47:40  Autoguider error: X=-0.56 Y=0.16
22:47:40  Checking autoguider max error...
22:47:43  Autoguider error: X=0.52 Y=0.67
22:47:43  Checking autoguider max error...
22:47:46  Autoguider error: X=-0.85 Y=-0.13
22:47:46  Checking autoguider max error...
22:47:50  Autoguider error: X=0.54 Y=0.19
22:47:50  Checking autoguider max error...
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22:47:53  Autoguider error: X=-0.34 Y=0.51
22:47:53  Checking autoguider max error...
22:47:56  Autoguider error: X=0.53 Y=-0.41
22:47:56  Checking autoguider max error...
22:48:00  Autoguider error: X=-0.26 Y=0.14
22:48:00  Autoguider max error < 0.5!
22:48:00  Starting imager exposure (5 of 6).
22:53:05  Imager exposure complete.
22:53:05  Stopping autoguider...
22:53:07  Setting autoguider exposure time to 2 seconds.
22:53:07  Setting guide star position to 136.0,120.0.
22:53:07  Starting to autoguide.
22:53:15  Checking autoguider max error...
22:53:17  Autoguider error: X=0.22 Y=0.37
22:53:17  Autoguider max error < 0.5!
22:53:17  Starting imager exposure (6 of 6).
22:58:22  Imager exposure complete.
22:58:22  Stopping autoguider...
22:58:24  Take Images Action complete.
22:58:24  Done running m27_blu_6x5min_home.act
22:58:24  Running script from C:\Program Files\CCD Commander\lightbox_install.vbs
23:00:51  Script complete.
23:00:51  In Auto Flat Action.
23:00:51  Slewing to flat target location.
23:00:51  Moving to Alt-Az position: Alt: 65°00' 00.0" Az: 150°00'00"
23:01:13  Done slewing!
23:01:13  Starting post slew delay.
23:01:16  Completed post slew delay.
23:01:17  Setting imager bin mode to 1x1.
23:01:17  Setting filter to Luminance.
23:01:23  Setting imager to full frame.
23:01:30  Setting imager exposure time to 1.0 seconds.
23:01:30  Starting imager exposure...
23:01:40  Exposure complete.  Computing average ADU.
23:01:40  Average ADU = 5653
23:01:40  Target ADU = 18000
23:01:40  New exposure time computed to be 3.2
23:01:44  Setting imager exposure time to 3.2 seconds.
23:01:44  Starting imager exposure...
23:01:56  Exposure complete.  Computing average ADU.
23:01:56  Average ADU = 17894
23:01:56  Target ADU = 18000
23:01:56  Current exposure time good!  Taking Flats.
23:02:00  Setting imager exposure time to 3.2 seconds.
23:02:00  Starting imager exposure #1
23:02:13  Exposure complete.  Computing average ADU.
23:02:14  Average ADU = 18083
23:02:14  Recomputing exposure time...
23:02:14  New exposure time computed to be 3.2
23:02:18  Setting imager exposure time to 3.2 seconds.
23:02:18  Starting imager exposure #2
23:02:30  Exposure complete.  Computing average ADU.
23:02:31  Average ADU = 18071
23:02:31  Recomputing exposure time...
23:02:31  New exposure time computed to be 3.2
23:02:35  Setting imager exposure time to 3.2 seconds.
23:02:35  Starting imager exposure #3
23:02:48  Exposure complete.  Computing average ADU.
23:02:48  Average ADU = 18004
23:02:48  Recomputing exposure time...
23:02:48  New exposure time computed to be 3.2
23:02:48  Setting filter to Blue.
23:02:52  Setting imager to full frame.
23:02:56  Setting imager exposure time to 1.0 seconds.
23:02:56  Starting imager exposure...
23:03:05  Exposure complete.  Computing average ADU.
23:03:06  Average ADU = 1474
23:03:06  Target ADU = 18000
23:03:06  New exposure time computed to be 12.2
23:03:10  Setting imager exposure time to 12.2 seconds.
23:03:10  Starting imager exposure...
23:03:30  Exposure complete.  Computing average ADU.
23:03:31  Average ADU = 16702
23:03:31  Target ADU = 18000
23:03:31  Current exposure time good!  Taking Flats.
23:03:35  Setting imager exposure time to 12.2 seconds.
23:03:35  Starting imager exposure #1
23:03:57  Exposure complete.  Computing average ADU.
23:03:57  Average ADU = 16809
23:03:57  Recomputing exposure time...
23:03:57  New exposure time computed to be 13.1
23:04:01  Setting imager exposure time to 13.1 seconds.
23:04:01  Starting imager exposure #2
23:04:24  Exposure complete.  Computing average ADU.
23:04:24  Average ADU = 18107
23:04:24  Recomputing exposure time...
23:04:24  New exposure time computed to be 13.0
23:04:28  Setting imager exposure time to 13.0 seconds.
23:04:28  Starting imager exposure #3
23:04:51  Exposure complete.  Computing average ADU.
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23:04:51  Average ADU = 17982
23:04:51  Recomputing exposure time...
23:04:51  New exposure time computed to be 13.0
23:04:51  Automatic Flat Action complete.
23:04:51  Running script from C:\Program Files\CCD Commander\lightbox_off.vbs
23:05:17  Script complete.
23:05:17  Setting image type to Bias.
23:05:17  Setting imager bin mode to 1x1.
23:05:17  Setting filter to Luminance.
23:05:23  Setting imager to full frame.
23:05:24  Starting imager exposure (1 of 10).
23:05:34  Imager exposure complete.
23:05:34  Starting imager exposure (2 of 10).
23:05:43  Imager exposure complete.
23:05:43  Starting imager exposure (3 of 10).
23:05:53  Imager exposure complete.
23:05:53  Starting imager exposure (4 of 10).
23:06:02  Imager exposure complete.
23:06:02  Starting imager exposure (5 of 10).
23:06:11  Imager exposure complete.
23:06:11  Starting imager exposure (6 of 10).
23:06:21  Imager exposure complete.
23:06:21  Starting imager exposure (7 of 10).
23:06:30  Imager exposure complete.
23:06:30  Starting imager exposure (8 of 10).
23:06:40  Imager exposure complete.
23:06:40  Starting imager exposure (9 of 10).
23:06:49  Imager exposure complete.
23:06:49  Starting imager exposure (10 of 10).
23:06:58  Imager exposure complete.
23:06:58  Take Images Action complete.
23:06:58  Running script from C:\Program Files\CCD Commander\lightbox_remove.vbs
23:08:09  Script complete.
23:08:09  Running m27_lum_6x5min_home.act
23:08:09  Running Action List Iteration #1
23:08:09  Starting move to action.
23:08:09  Precessing cooridnates.
23:08:09  J2000 Coordinates: RA: 20h 02m 22.0s Dec: +22°09'05"
23:08:09  JNow Coordinates: RA: 20h 02m 40.5s Dec: +22°10'10"
23:08:09  Slewing to SAO 88105...
23:08:31  Done slewing!
23:08:31  Starting post slew delay.
23:08:34  Completed post slew delay.
23:08:34  Setting imager bin mode to 2x2.
23:08:34  Setting filter to Luminance.
23:08:36  Taking 5 second image for Plate Solve...
23:08:47  Saving Image...
23:08:47  Performing Plate Solve with CCDSoft...
23:08:49  Plate solve results:
23:08:49  Pixel Scale = 1.75 asp.
23:08:49  North Angle = 89.51 degrees.
23:08:49  J2000 Coordinates = RA: 20h 02m 11.3s Dec: +22°08'58"
23:08:49  Adjusting current PA for Plate Solve.  CurrentAngle = 89.67
23:08:50  Adjusted PA = 89.67
23:08:50  Syncing to RA 20.04162, Dec 22.16745
23:08:59  Starting focus run...
23:10:51  Focus succeeded! HFD = 3.24
23:10:51  Starting move to action.
23:10:51  Precessing cooridnates.
23:10:51  J2000 Coordinates: RA: 19h 59m 36.0s Dec: +22°43'18"
23:10:51  JNow Coordinates: RA: 19h 59m 54.4s Dec: +22°44'21"
23:10:51  Slewing to M 27...
23:10:57  Done slewing!
23:10:57  Starting post slew delay.
23:11:00  Completed post slew delay.
23:11:00  Setting imager bin mode to 2x2.
23:11:00  Setting filter to Luminance.
23:11:02  Taking 5 second image for Plate Solve...
23:11:21  Saving Image...
23:11:21  Performing Plate Solve with CCDSoft...
23:11:24  Plate solve results:
23:11:24  Pixel Scale = 1.75 asp.
23:11:24  North Angle = 89.51 degrees.
23:11:24  J2000 Coordinates = RA: 19h 59m 36.2s Dec: +22°43'12"
23:11:24  Adjusting current PA for Plate Solve.  CurrentAngle = 89.67
23:11:24  Adjusted PA = 89.67
23:11:24  Syncing to RA 19.99849, Dec 22.73754
23:11:30  Setting image type to Light.
23:11:30  Setting imager bin mode to 1x1.
23:11:30  Setting filter to Luminance.
23:11:32  Setting imager to full frame.
23:11:32  Setting imager exposure time to 300 seconds.
23:11:33  Setting autoguider bin mode to 2x2.
23:11:33  Taking a 2 second autoguider exposure.
23:11:42  Beginning guide star search...
23:11:45  Taking a 2.21 second autoguider exposure.
23:11:54  Beginning guide star search...
23:11:56  Taking a 2.72 second autoguider exposure.
23:12:07  Beginning guide star search...
23:12:08  Found possible guide star at 73, 41 with a max brightness of 3903 ADU.
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23:12:08  Taking a 2.72 second autoguider exposure.
23:12:15  Beginning guide star search...
23:12:16  Found appropriate guide star at 73, 40 with a max brightness of 3497 ADU.
23:12:16  Matches previous possible guide star at 73, 41 with a max brightness of 3903 ADU.
23:12:16  Trying to autoguide on star at 73.0,40.0.
23:12:16  Starting to autoguide.
23:12:27  Checking autoguider max error...
23:12:27  Autoguider error: X=-0.26 Y=0.10
23:12:27  Autoguider max error < 0.5!
23:12:27  Stopping autoguider...
23:12:29  Automatic guide star acquisition successful!
23:12:29  Setting autoguider exposure time to 2.72 seconds.
23:12:29  Setting guide star position to 73.0,40.0.
23:12:29  Starting to autoguide.
23:12:40  Checking autoguider max error...
23:12:41  Autoguider error: X=-0.04 Y=0.13
23:12:41  Autoguider max error < 0.5!
23:12:41  Starting imager exposure (1 of 6).
23:17:51  Imager exposure complete.
23:17:51  Stopping autoguider...
23:17:53  Setting autoguider exposure time to 2.72 seconds.
23:17:53  Setting guide star position to 75.0,40.0.
23:17:53  Starting to autoguide.
23:18:04  Checking autoguider max error...
23:18:05  Autoguider error: X=-1.43 Y=-0.21
23:18:05  Checking autoguider max error...
23:18:09  Autoguider error: X=-1.53 Y=-0.90
23:18:09  Checking autoguider max error...
23:18:13  Autoguider error: X=-1.54 Y=0.48
23:18:13  Checking autoguider max error...
23:18:17  Autoguider error: X=-1.41 Y=-0.22
23:18:17  Checking autoguider max error...
23:18:21  Autoguider error: X=-1.33 Y=-0.07
23:18:21  Checking autoguider max error...
23:18:25  Autoguider error: X=-1.28 Y=-0.31
23:18:25  Checking autoguider max error...
23:18:29  Autoguider error: X=-1.48 Y=-0.50
23:18:29  Checking autoguider max error...
23:18:33  Autoguider error: X=-1.42 Y=0.41
23:18:33  Checking autoguider max error...
23:18:36  Autoguider error: X=-1.43 Y=-0.03
23:18:36  Checking autoguider max error...
23:18:40  Autoguider error: X=-1.30 Y=0.03
23:18:40  Checking autoguider max error...
23:18:45  Autoguider error: X=-1.30 Y=0.17
23:18:45  Checking autoguider max error...
23:18:49  Autoguider error: X=-1.22 Y=0.17
23:18:49  Checking autoguider max error...
23:18:53  Autoguider error: X=-0.66 Y=1.11
23:18:53  Checking autoguider max error...
23:18:57  Autoguider error: X=-0.19 Y=-0.08
23:18:57  Autoguider max error < 0.5!
23:18:57  Starting imager exposure (2 of 6).
23:24:07  Imager exposure complete.
23:24:07  Stopping autoguider...
23:24:09  Setting autoguider exposure time to 2.72 seconds.
23:24:09  Setting guide star position to 75.0,42.0.
23:24:09  Starting to autoguide.
23:24:20  Checking autoguider max error...
23:24:22  Autoguider error: X=1.57 Y=-0.10
23:24:22  Checking autoguider max error...
23:24:26  Autoguider error: X=1.49 Y=0.61
23:24:26  Checking autoguider max error...
23:24:28  Action Paused.
23:24:46  Action Resumed.
23:24:46  Autoguider error: X=1.92 Y=-0.10
23:24:46  Checking autoguider max error...
23:24:48  Autoguider error: X=1.00 Y=-0.42
23:24:48  Checking autoguider max error...
23:24:52  Autoguider error: X=0.08 Y=-0.32
23:24:52  Autoguider max error < 0.5!
23:24:52  Starting imager exposure (3 of 6).
23:30:02  Imager exposure complete.
23:30:02  Stopping autoguider...
23:30:04  Setting autoguider exposure time to 2.72 seconds.
23:30:04  Setting guide star position to 73.0,42.0.
23:30:04  Starting to autoguide.
23:30:15  Checking autoguider max error...
23:30:17  Autoguider error: X=2.58 Y=0.00
23:30:17  Checking autoguider max error...
23:30:21  Autoguider error: X=-1.64 Y=-0.49
23:30:21  Checking autoguider max error...
23:30:26  Autoguider error: X=-0.58 Y=-0.21
23:30:26  Checking autoguider max error...
23:30:30  Autoguider error: X=-0.54 Y=-1.13
23:30:30  Checking autoguider max error...
23:30:34  Autoguider error: X=-0.44 Y=-0.56
23:30:34  Checking autoguider max error...
23:30:38  Autoguider error: X=-0.38 Y=0.41
23:30:38  Autoguider max error < 0.5!
```

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23:30:38  Starting imager exposure (4 of 6).
23:35:47  Imager exposure complete.
23:35:47  Stopping autoguider...
23:35:49  Setting autoguider exposure time to 2.72 seconds.
23:35:50  Setting guide star position to 71.0,42.0.
23:35:50  Starting to autoguide.
23:36:01  Checking autoguider max error...
23:36:03  Autoguider error: X=-0.84 Y=-0.17
23:36:03  Checking autoguider max error...
23:36:08  Autoguider error: X=0.05 Y=-0.38
23:36:08  Autoguider max error < 0.5!
23:36:08  Starting imager exposure (5 of 6).
23:41:18  Imager exposure complete.
23:41:18  Stopping autoguider...
23:41:20  Setting autoguider exposure time to 2.72 seconds.
23:41:20  Setting guide star position to 71.0,40.0.
23:41:20  Starting to autoguide.
23:41:31  Checking autoguider max error...
23:41:33  Autoguider error: X=-0.04 Y=-0.78
23:41:33  Checking autoguider max error...
23:41:37  Autoguider error: X=0.17 Y=0.25
23:41:37  Autoguider max error < 0.5!
23:41:37  Starting imager exposure (6 of 6).
23:46:47  Imager exposure complete.
23:46:47  Stopping autoguider...
23:46:49  Take Images Action complete.
23:46:49  Running Action List Iteration #2
23:46:49  Starting move to action.
23:46:49  Precessing cooridnates.
23:46:49  J2000 Coordinates: RA: 20h 02m 22.0s Dec: +22°09'05"
23:46:49  JNow Coordinates: RA: 20h 02m 40.5s Dec: +22°10'10"
23:46:50  Slewing to SAO 88105...
23:46:56  Done slewing!
23:46:56  Starting post slew delay.
23:47:00  Completed post slew delay.
23:47:00  Setting imager bin mode to 2x2.
23:47:00  Setting filter to Luminance.
23:47:02  Taking 5 second image for Plate Solve...
23:47:13  Saving Image...
23:47:13  Performing Plate Solve with CCDSoft...
23:47:15  Plate solve results:
23:47:15  Pixel Scale = 1.75 asp.
23:47:15  North Angle = 89.48 degrees.
23:47:15  J2000 Coordinates = RA: 20h 02m 27.5s Dec: +22°10'44"
23:47:15  Adjusting current PA for Plate Solve.  CurrentAngle = 89.67
23:47:15  Adjusted PA = 89.67
23:47:15  Syncing to RA 20.04612, Dec 22.19698
23:47:24  Starting focus run...
23:49:07  Focus succeeded! HFD = 2.37
23:49:07  Starting move to action.
23:49:07  Precessing cooridnates.
23:49:07  J2000 Coordinates: RA: 19h 59m 36.0s Dec: +22°43'18"
23:49:07  JNow Coordinates: RA: 19h 59m 54.4s Dec: +22°44'21"
23:49:07  Slewing to M 27...
23:49:13  Done slewing!
23:49:13  Starting post slew delay.
23:49:17  Completed post slew delay.
23:49:17  Setting imager bin mode to 2x2.
23:49:17  Setting filter to Luminance.
23:49:19  Taking 5 second image for Plate Solve...
23:49:39  Saving Image...
23:49:39  Performing Plate Solve with CCDSoft...
23:49:42  Plate solve results:
23:49:42  Pixel Scale = 1.75 asp.
23:49:42  North Angle = 89.50 degrees.
23:49:42  J2000 Coordinates = RA: 19h 59m 34.4s Dec: +22°41'09"
23:49:42  Adjusting current PA for Plate Solve.  CurrentAngle = 89.67
23:49:42  Adjusted PA = 89.67
23:49:42  Syncing to RA 19.99801, Dec 22.70331
23:49:48  Setting image type to Light.
23:49:48  Setting imager bin mode to 1x1.
23:49:48  Setting filter to Luminance.
23:49:50  Setting imager to full frame.
23:49:50  Setting imager exposure time to 300 seconds.
23:49:51  Setting autoguider bin mode to 2x2.
23:49:52  Taking a 2 second autoguider exposure.
23:50:02  Beginning guide star search...
23:50:03  Found possible guide star at 134, 114 with a max brightness of 36903 ADU.
23:50:03  Taking a 2 second autoguider exposure.
23:50:10  Beginning guide star search...
23:50:12  Taking a 2.28 second autoguider exposure.
23:50:23  Beginning guide star search...
23:50:25  Taking a 2.98 second autoguider exposure.
23:50:36  Beginning guide star search...
23:50:38  Found possible guide star at 113, 169 with a max brightness of 3003 ADU.
23:50:38  Taking a 2.98 second autoguider exposure.
23:50:45  Beginning guide star search...
23:50:46  Found possible guide star at 113, 170 with a max brightness of 3582 ADU.
23:50:47  Found appropriate guide star at 113, 170 with a max brightness of 3582 ADU.
23:50:47  Matches previous possible guide star at 113, 169 with a max brightness of 3003 ADU.
```

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23:50:47  Trying to autoguide on star at 113.0,170.0.
23:50:47  Starting to autoguide.
23:50:59  Checking autoguider max error...
23:51:01  Autoguider error: X=0.19 Y=0.22
23:51:01  Autoguider max error < 0.5!
23:51:01  Stopping autoguider...
23:51:03  Automatic guide star acquisition successful!
23:51:03  Setting autoguider exposure time to 2.98 seconds.
23:51:03  Setting guide star position to 113.0,170.0.
23:51:03  Starting to autoguide.
23:51:15  Checking autoguider max error...
23:51:17  Autoguider error: X=0.12 Y=0.03
23:51:17  Autoguider max error < 0.5!
23:51:17  Starting imager exposure (1 of 6).
23:56:27  Imager exposure complete.
23:56:27  Stopping autoguider...
23:56:29  Setting autoguider exposure time to 2.98 seconds.
23:56:29  Setting guide star position to 115.0,170.0.
23:56:29  Starting to autoguide.
23:56:41  Checking autoguider max error...
23:56:43  Autoguider error: X=-0.93 Y=-0.03
23:56:43  Checking autoguider max error...
23:56:48  Autoguider error: X=-0.92 Y=0.12
23:56:48  Checking autoguider max error...
23:56:52  Autoguider error: X=-0.85 Y=-0.26
23:56:52  Checking autoguider max error...
23:56:57  Autoguider error: X=-0.57 Y=0.57
23:56:57  Checking autoguider max error...
23:57:01  Autoguider error: X=-0.59 Y=-0.49
23:57:01  Checking autoguider max error...
23:57:05  Autoguider error: X=-0.26 Y=0.68
23:57:05  Checking autoguider max error...
23:57:10  Autoguider error: X=-0.26 Y=-0.25
23:57:10  Autoguider max error < 0.5!
23:57:10  Starting imager exposure (2 of 6).
00:02:20  Imager exposure complete.
00:02:20  Stopping autoguider...
00:02:22  Setting autoguider exposure time to 2.98 seconds.
00:02:22  Setting guide star position to 115.0,172.0.
00:02:22  Starting to autoguide.
00:02:34  Checking autoguider max error...
00:02:36  Autoguider error: X=0.19 Y=0.17
00:02:36  Autoguider max error < 0.5!
00:02:36  Starting imager exposure (3 of 6).
00:07:46  Imager exposure complete.
00:07:46  Stopping autoguider...
00:07:48  Setting autoguider exposure time to 2.98 seconds.
00:07:49  Setting guide star position to 113.0,172.0.
00:07:49  Starting to autoguide.
00:08:01  Checking autoguider max error...
00:08:03  Autoguider error: X=-1.90 Y=1.20
00:08:03  Checking autoguider max error...
00:08:08  Autoguider error: X=-1.02 Y=0.13
00:08:08  Checking autoguider max error...
00:08:12  Autoguider error: X=-0.96 Y=0.98
00:08:13  Checking autoguider max error...
00:08:17  Autoguider error: X=-0.87 Y=-0.21
00:08:17  Checking autoguider max error...
00:08:21  Autoguider error: X=-0.78 Y=0.07
00:08:21  Checking autoguider max error...
00:08:26  Autoguider error: X=-0.68 Y=-0.20
00:08:26  Checking autoguider max error...
00:08:30  Autoguider error: X=-0.26 Y=-0.12
00:08:30  Autoguider max error < 0.5!
00:08:30  Starting imager exposure (4 of 6).
00:13:40  Imager exposure complete.
00:13:40  Stopping autoguider...
00:13:42  Setting autoguider exposure time to 2.98 seconds.
00:13:42  Setting guide star position to 111.0,172.0.
00:13:42  Starting to autoguide.
00:13:54  Checking autoguider max error...
00:13:57  Autoguider error: X=-1.51 Y=0.16
00:13:57  Checking autoguider max error...
00:14:02  Autoguider error: X=-0.60 Y=-0.43
00:14:02  Checking autoguider max error...
00:14:06  Autoguider error: X=-0.50 Y=-0.13
00:14:06  Checking autoguider max error...
00:14:11  Autoguider error: X=-0.17 Y=-0.17
00:14:11  Autoguider max error < 0.5!
00:14:11  Starting imager exposure (5 of 6).
00:19:21  Imager exposure complete.
00:19:21  Stopping autoguider...
00:19:23  Setting autoguider exposure time to 2.98 seconds.
00:19:23  Setting guide star position to 111.0,170.0.
00:19:23  Starting to autoguide.
00:19:35  Checking autoguider max error...
00:19:37  Autoguider error: X=0.28 Y=-0.87
00:19:37  Checking autoguider max error...
00:19:41  Autoguider error: X=0.03 Y=-0.42
00:19:41  Autoguider max error < 0.5!
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00:19:41 Starting imager exposure (6 of 6).
00:24:51 Imager exposure complete.
00:24:51 Stopping autoguider...
00:24:53 Take Images Action complete.
00:24:53 Running Action List Iteration #3
00:24:53 Starting move to action.
00:24:53 Precessing cooridnates.
00:24:53 J2000 Coordinates: RA: 20h 02m 22.0s Dec: +22°09'05"
00:24:53 JNow Coordinates: RA: 20h 02m 40.5s Dec: +22°10'10"
00:24:53 Slewing to SAO 88105...
00:25:00 Done slewing!
00:25:00 Starting post slew delay.
00:25:03 Completed post slew delay.
00:25:03 Setting imager bin mode to 2x2.
00:25:03 Setting filter to Luminance.
00:25:06 Taking 5 second image for Plate Solve...
00:25:16 Saving Image...
00:25:16 Performing Plate Solve with CCDSoft...
00:25:19 Plate solve results:
00:25:19 Pixel Scale = 1.75 asp.
00:25:19 North Angle = 89.47 degrees.
00:25:19 J2000 Coordinates = RA: 20h 02m 22.6s Dec: +22°10'41"
00:25:19 Adjusting current PA for Plate Solve. CurrentAngle = 89.67
00:25:19 Adjusted PA = 89.67
00:25:19 Syncing to RA 20.04475, Dec 22.19593
00:25:27 Starting focus run...
00:27:06 Focus succeeded! HFD = 2.44
00:27:06 Starting move to action.
00:27:06 Precessing cooridnates.
00:27:06 J2000 Coordinates: RA: 19h 59m 36.0s Dec: +22°43'18"
00:27:06 JNow Coordinates: RA: 19h 59m 54.4s Dec: +22°44'21"
00:27:06 Slewing to M 27...
00:27:12 Done slewing!
00:27:12 Starting post slew delay.
00:27:15 Completed post slew delay.
00:27:15 Setting imager bin mode to 2x2.
00:27:15 Setting filter to Luminance.
00:27:18 Taking 5 second image for Plate Solve...
00:27:38 Saving Image...
00:27:38 Performing Plate Solve with CCDSoft...
00:27:41 Plate solve results:
00:27:41 Pixel Scale = 1.75 asp.
00:27:41 North Angle = 89.48 degrees.
00:27:41 J2000 Coordinates = RA: 19h 59m 35.1s Dec: +22°41'11"
00:27:41 Adjusting current PA for Plate Solve. CurrentAngle = 89.67
00:27:41 Adjusted PA = 89.67
00:27:41 Syncing to RA 19.99818, Dec 22.70403
00:27:47 Setting image type to Light.
00:27:47 Setting imager bin mode to 1x1.
00:27:47 Setting filter to Luminance.
00:27:49 Setting imager to full frame.
00:27:49 Setting imager exposure time to 300 seconds.
00:27:50 Setting autoguider bin mode to 2x2.
00:27:50 Taking a 2 second autoguider exposure.
00:28:00 Beginning guide star search...
00:28:01 Found possible guide star at 138, 113 with a max brightness of 32600 ADU.
00:28:01 Taking a 2 second autoguider exposure.
00:28:07 Beginning guide star search...
00:28:08 Found appropriate guide star at 138, 114 with a max brightness of 26819 ADU.
00:28:08 Matches previous possible guide star at 138, 113 with a max brightness of 32600 ADU.
00:28:08 Trying to autoguide on star at 138.0,114.0.
00:28:08 Starting to autoguide.
00:28:16 Checking autoguider max error...
00:28:19 Autoguider error: X=-0.25 Y=0.13
00:28:19 Autoguider max error < 0.5!
00:28:19 Stopping autoguider...
00:28:21 Automatic guide star acquisition successful!
00:28:21 Setting autoguider exposure time to 2 seconds.
00:28:21 Setting guide star position to 138.0,114.0.
00:28:21 Starting to autoguide.
00:28:29 Checking autoguider max error...
00:28:32 Autoguider error: X=-0.45 Y=0.54
00:28:32 Checking autoguider max error...
00:28:36 Autoguider error: X=-0.19 Y=0.17
00:28:36 Autoguider max error < 0.5!
00:28:36 Starting imager exposure (1 of 6).
00:33:46 Imager exposure complete.
00:33:46 Stopping autoguider...
00:33:48 Setting autoguider exposure time to 2 seconds.
00:33:48 Setting guide star position to 140.0,114.0.
00:33:48 Starting to autoguide.
00:33:56 Checking autoguider max error...
00:33:59 Autoguider error: X=-1.71 Y=-0.05
00:33:59 Checking autoguider max error...
00:34:03 Autoguider error: X=-1.59 Y=-0.34
00:34:03 Checking autoguider max error...
00:34:06 Autoguider error: X=-1.71 Y=-0.25
00:34:06 Checking autoguider max error...
00:34:10 Autoguider error: X=-1.61 Y=-0.85
00:34:10 Checking autoguider max error...

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00:34:13  Autoguider error: X=-1.53 Y=0.06
00:34:13  Checking autoguider max error...
00:34:17  Autoguider error: X=-1.40 Y=0.06
00:34:17  Checking autoguider max error...
00:34:21  Autoguider error: X=-1.45 Y=-0.79
00:34:21  Checking autoguider max error...
00:34:24  Autoguider error: X=-1.39 Y=0.66
00:34:24  Checking autoguider max error...
00:34:28  Autoguider error: X=-1.55 Y=-0.74
00:34:28  Checking autoguider max error...
00:34:31  Autoguider error: X=-1.45 Y=0.01
00:34:31  Checking autoguider max error...
00:34:35  Autoguider error: X=-1.46 Y=0.00
00:34:35  Checking autoguider max error...
00:34:38  Autoguider error: X=-1.37 Y=-0.46
00:34:38  Checking autoguider max error...
00:34:42  Autoguider error: X=-1.45 Y=0.24
00:34:42  Checking autoguider max error...
00:34:45  Autoguider error: X=-1.36 Y=-0.08
00:34:45  Checking autoguider max error...
00:34:49  Autoguider error: X=-1.38 Y=-0.19
00:34:49  Checking autoguider max error...
00:34:53  Autoguider error: X=-1.35 Y=-0.03
00:34:53  Checking autoguider max error...
00:34:56  Autoguider error: X=-1.27 Y=-0.07
00:34:56  Checking autoguider max error...
00:35:00  Autoguider error: X=-1.27 Y=-0.05
00:35:00  Checking autoguider max error...
00:35:03  Autoguider error: X=-1.29 Y=0.69
00:35:03  Checking autoguider max error...
00:35:07  Autoguider error: X=-1.27 Y=-0.64
00:35:07  Autoguider error failed to decrease to < 0.5!
00:35:08  Take Images Action failed.
00:35:08  Done running m27_lum_6x5min_home.act
00:35:08  Running m27_lum_6x5min_home.act
00:35:08  Starting move to action.
00:35:08  Precessing cooridnates.
00:35:08  J2000 Coordinates: RA: 20h 02m 22.0s Dec: +22°09'05"
00:35:08  JNow Coordinates: RA: 20h 02m 40.5s Dec: +22°10'10"
00:35:08  Slewing to SAO 88105...
00:35:15  Done slewing!
00:35:15  Starting post slew delay.
00:35:18  Completed post slew delay.
00:35:18  Setting imager bin mode to 2x2.
00:35:18  Setting filter to Luminance.
00:35:21  Taking 5 second image for Plate Solve...
00:35:31  Saving Image...
00:35:32  Performing Plate Solve with CCDSoft...
00:35:34  Plate solve results:
00:35:34  Pixel Scale = 1.75 asp.
00:35:34  North Angle = 89.46 degrees.
00:35:34  J2000 Coordinates = RA: 20h 02m 22.2s Dec: +22°11'06"
00:35:34  Adjusting current PA for Plate Solve.  CurrentAngle = 89.67
00:35:34  Adjusted PA = 89.67
00:35:34  Syncing to RA 20.04464, Dec 22.20312
00:35:42  Starting focus run...
00:37:30  Focus succeeded! HFD = 2.59
00:37:30  Starting move to action.
00:37:30  Precessing cooridnates.
00:37:30  J2000 Coordinates: RA: 19h 59m 36.0s Dec: +22°43'18"
00:37:30  JNow Coordinates: RA: 19h 59m 54.4s Dec: +22°44'21"
00:37:30  Slewing to M 27...
00:37:36  Done slewing!
00:37:36  Starting post slew delay.
00:37:39  Completed post slew delay.
00:37:39  Setting imager bin mode to 2x2.
00:37:39  Setting filter to Luminance.
00:37:41  Taking 5 second image for Plate Solve...
00:38:01  Saving Image...
00:38:01  Performing Plate Solve with CCDSoft...
00:38:04  Plate solve results:
00:38:04  Pixel Scale = 1.75 asp.
00:38:04  North Angle = 89.47 degrees.
00:38:04  J2000 Coordinates = RA: 19h 59m 34.8s Dec: +22°42'49"
00:38:04  Adjusting current PA for Plate Solve.  CurrentAngle = 89.67
00:38:04  Adjusted PA = 89.67
00:38:04  Syncing to RA 19.99812, Dec 22.73132
00:38:10  Setting image type to Light.
00:38:10  Setting imager bin mode to 1x1.
00:38:10  Setting filter to Luminance.
00:38:13  Setting imager to full frame.
00:38:13  Setting imager exposure time to 300 seconds.
00:38:14  Setting autoguider bin mode to 2x2.
00:38:14  Taking a 2 second autoguider exposure.
00:38:24  Beginning guide star search...
00:38:25  Found possible guide star at 135, 122 with a max brightness of 34695 ADU.
00:38:25  Taking a 2 second autoguider exposure.
00:38:30  Beginning guide star search...
00:38:32  Found possible guide star at 136, 124 with a max brightness of 33881 ADU.
00:38:32  Taking a 2 second autoguider exposure.
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00:38:37 Beginning guide star search...
00:38:38 Found possible guide star at 136, 125 with a max brightness of 39228 ADU.
00:38:38 Found appropriate guide star at 136, 125 with a max brightness of 39228 ADU.
00:38:38 Matches previous possible guide star at 136, 124 with a max brightness of 33881 ADU.
00:38:38 Trying to autoguide on star at 136.0,125.0.
00:38:38 Starting to autoguide.
00:38:47 Checking autoguider max error...
00:38:49 Autoguider error: X=-0.26 Y=0.09
00:38:49 Autoguider max error < 0.5!
00:38:49 Stopping autoguider...
00:38:51 Automatic guide star acquisition successful!
00:38:51 Setting autoguider exposure time to 2 seconds.
00:38:51 Setting guide star position to 136.0,125.0.
00:38:51 Starting to autoguide.
00:39:00 Checking autoguider max error...
00:39:02 Autoguider error: X=0.45 Y=0.72
00:39:02 Checking autoguider max error...
00:39:05 Autoguider error: X=0.04 Y=0.29
00:39:05 Autoguider max error < 0.5!
00:39:05 Starting imager exposure (1 of 6).
00:44:15 Imager exposure complete.
00:44:15 Stopping autoguider...
00:44:17 Setting autoguider exposure time to 2 seconds.
00:44:17 Setting guide star position to 138.0,125.0.
00:44:17 Starting to autoguide.
00:44:25 Checking autoguider max error...
00:44:29 Autoguider error: X=-1.15 Y=-0.23
00:44:29 Checking autoguider max error...
00:44:32 Autoguider error: X=-1.23 Y=-0.63
00:44:32 Checking autoguider max error...
00:44:36 Autoguider error: X=-1.20 Y=1.19
00:44:36 Checking autoguider max error...
00:44:39 Autoguider error: X=-1.04 Y=0.13
00:44:39 Checking autoguider max error...
00:44:43 Autoguider error: X=-0.66 Y=0.04
00:44:43 Checking autoguider max error...
00:44:46 Autoguider error: X=-0.56 Y=0.20
00:44:46 Checking autoguider max error...
00:44:50 Autoguider error: X=-0.30 Y=-0.23
00:44:50 Autoguider max error < 0.5!
00:44:50 Starting imager exposure (2 of 6).
00:50:00 Imager exposure complete.
00:50:00 Stopping autoguider...
00:50:02 Setting autoguider exposure time to 2 seconds.
00:50:02 Setting guide star position to 138.0,127.0.
00:50:02 Starting to autoguide.
00:50:10 Checking autoguider max error...
00:50:12 Autoguider error: X=0.59 Y=0.02
00:50:12 Checking autoguider max error...
00:50:15 Autoguider error: X=0.73 Y=-0.25
00:50:15 Checking autoguider max error...
00:50:19 Autoguider error: X=0.79 Y=0.72
00:50:19 Checking autoguider max error...
00:50:22 Autoguider error: X=0.18 Y=-0.64
00:50:22 Checking autoguider max error...
00:50:25 Autoguider error: X=0.31 Y=0.28
00:50:25 Autoguider max error < 0.5!
00:50:25 Starting imager exposure (3 of 6).
00:55:36 Imager exposure complete.
00:55:36 Stopping autoguider...
00:55:38 Setting autoguider exposure time to 2 seconds.
00:55:38 Setting guide star position to 136.0,127.0.
00:55:38 Starting to autoguide.
00:55:46 Checking autoguider max error...
00:55:49 Autoguider error: X=3.80 Y=0.61
00:55:49 Checking autoguider max error...
00:55:53 Autoguider error: X=3.87 Y=1.27
00:55:53 Checking autoguider max error...
00:55:57 Autoguider error: X=3.91 Y=-0.25
00:55:57 Checking autoguider max error...
00:56:00 Autoguider error: X=3.83 Y=0.19
00:56:00 Checking autoguider max error...
00:56:04 Autoguider error: X=3.89 Y=0.27
00:56:04 Checking autoguider max error...
00:56:08 Autoguider error: X=3.98 Y=0.13
00:56:08 Checking autoguider max error...
00:56:12 Autoguider error: X=3.93 Y=0.46
00:56:12 Checking autoguider max error...
00:56:16 Autoguider error: X=3.53 Y=-0.27
00:56:16 Checking autoguider max error...
00:56:20 Autoguider error: X=-1.62 Y=-0.20
00:56:20 Checking autoguider max error...
00:56:24 Autoguider error: X=-3.73 Y=-0.28
00:56:24 Checking autoguider max error...
00:56:27 Autoguider error: X=-4.61 Y=-0.45
00:56:27 Checking autoguider max error...
00:56:31 Autoguider error: X=-4.82 Y=0.99
00:56:31 Checking autoguider max error...
00:56:35 Autoguider error: X=-5.09 Y=-0.27
00:56:35 Checking autoguider max error...

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00:56:39  Autoguider error: X=-5.15 Y=0.10
00:56:39  Checking autoguider max error...
00:56:43  Autoguider error: X=-4.99 Y=-0.12
00:56:43  Checking autoguider max error...
00:56:47  Autoguider error: X=-4.78 Y=-0.28
00:56:47  Checking autoguider max error...
00:56:50  Autoguider error: X=-4.77 Y=-0.16
00:56:50  Checking autoguider max error...
00:56:53  Action Paused.
00:57:36  Action Resumed.
00:57:36  Never received GuideError event - switching to another event.
00:57:36  Autoguider error: X=0.00 Y=0.08
00:57:36  Autoguider max error < 0.5!
00:57:36  Starting imager exposure (4 of 6).
01:02:52  Imager exposure complete.
01:02:52  Need to do a meridian flip!
01:02:52  Stopping autoguider...
01:02:53  Flipping....
01:05:03  Recentering....
01:05:23  In Rotate Function. Current PA = 89.67, New PA = 89.67
01:05:23  On east side - angles computed on west side, adding 180 degrees.
01:05:23  Adjusted PA = 269.67
01:05:23  Current Rotator Angle = 15
01:05:23  New Rotator Angle = 195
01:05:23  Moving rotator...
01:05:46  Rotation complete.
01:05:46  Guider calibration angle different than current angle.
01:05:46  Recomputing calibration coefficients.
01:05:46  Current Angle = 89.67
01:05:46  GuiderCalAngle = 269.67
01:05:47  Setting imager bin mode to 2x2.
01:05:47  Setting filter to Luminance.
01:05:49  Taking 5 second image for Plate Solve...
01:05:59  Saving Image...
01:06:00  Performing Plate Solve with CCDSoft...
01:06:03  Plate solve results:
01:06:03  Pixel Scale = 1.75 asp.
01:06:03  North Angle = 89.85 degrees.
01:06:03  J2000 Coordinates = RA: 20h 01m 07.1s Dec: +22°55'34"
01:06:03  Adjusting current PA for Plate Solve.  CurrentAngle = 89.67
01:06:03  Adjusted PA = 89.67
01:06:03  Syncing to RA 20.02375, Dec 22.94398
01:06:10  Flip complete.
01:06:10  Setting filter to Luminance.
01:06:13  Taking a 2 second autoguider exposure.
01:06:22  Beginning guide star search...
01:06:24  Found possible guide star at 107, 118 with a max brightness of 35287 ADU.
01:06:24  Taking a 2 second autoguider exposure.
01:06:30  Beginning guide star search...
01:06:33  Taking a 3 second autoguider exposure.
01:06:43  Beginning guide star search...
01:06:44  Found possible guide star at 86, 171 with a max brightness of 3625 ADU.
01:06:45  Taking a 3 second autoguider exposure.
01:06:51  Beginning guide star search...
01:06:54  Taking a 3.39 second autoguider exposure.
01:07:05  Beginning guide star search...
01:07:07  Found possible guide star at 86, 172 with a max brightness of 4116 ADU.
01:07:07  Found appropriate guide star at 86, 172 with a max brightness of 4116 ADU.
01:07:07  Matches previous possible guide star at 86, 171 with a max brightness of 3625 ADU.
01:07:07  Trying to autoguide on star at 86.0,172.0.
01:07:07  Starting to autoguide.
01:07:21  Checking autoguider max error...
01:07:22  Autoguider error: X=0.55 Y=-0.33
01:07:22  Checking autoguider max error...
01:07:22  Autoguider error: X=0.55 Y=-0.33
01:07:22  Checking autoguider max error...
01:07:26  Autoguider error: X=0.68 Y=-0.15
01:07:26  Checking autoguider max error...
01:07:26  Autoguider error: X=0.68 Y=-0.15
01:07:26  Checking autoguider max error...
01:07:30  Autoguider error: X=0.82 Y=-0.29
01:07:30  Checking autoguider max error...
01:07:31  Autoguider error: X=0.82 Y=-0.29
01:07:31  Checking autoguider max error...
01:07:35  Autoguider error: X=0.91 Y=0.16
01:07:35  Checking autoguider max error...
01:07:35  Autoguider error: X=0.91 Y=0.16
01:07:35  Checking autoguider max error...
01:07:39  Autoguider error: X=0.94 Y=0.26
01:07:39  Checking autoguider max error...
01:07:40  Autoguider error: X=0.94 Y=0.26
01:07:40  Checking autoguider max error...
01:07:44  Autoguider error: X=1.15 Y=0.35
01:07:44  Checking autoguider max error...
01:07:44  Autoguider error: X=1.15 Y=0.35
01:07:44  Checking autoguider max error...
01:07:49  Autoguider error: X=1.18 Y=0.59
01:07:49  Checking autoguider max error...
01:07:49  Autoguider error: X=1.18 Y=0.59
01:07:49  Checking autoguider max error...
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01:07:54  Autoguider error: X=1.32 Y=0.31
01:07:54  Checking autoguider max error...
01:07:54  Autoguider error: X=1.32 Y=0.31
01:07:54  Checking autoguider max error...
01:07:54  Action Paused.
01:08:04  Action Resumed.
01:08:04  Autoguider error: X=0.59 Y=0.23
01:08:04  Checking autoguider max error...
01:08:08  Autoguider error: X=0.24 Y=-0.03
01:08:08  Autoguider max error < 0.5!
01:08:08  Stopping autoguider...
01:08:10  Setting autoguider exposure time to 3.39 seconds.
01:08:10  Setting guide star position to 86.0,172.0.
01:08:10  Starting to autoguide.
01:08:23  Checking autoguider max error...
01:08:25  Autoguider error: X=0.33 Y=-0.02
01:08:25  Autoguider max error < 0.5!
01:08:25  Starting imager exposure (5 of 6).
01:13:35  Imager exposure complete.
01:13:35  Stopping autoguider...
01:13:37  Setting autoguider exposure time to 3.39 seconds.
01:13:37  Setting guide star position to 88.0,172.0.
01:13:38  Starting to autoguide.
01:13:51  Checking autoguider max error...
01:13:53  Autoguider error: X=-1.47 Y=-0.14
01:13:53  Checking autoguider max error...
01:13:53  Autoguider error: X=-1.47 Y=-0.14
01:13:53  Checking autoguider max error...
01:13:58  Autoguider error: X=-1.25 Y=-0.16
01:13:58  Checking autoguider max error...
01:13:58  Autoguider error: X=-1.25 Y=-0.16
01:13:58  Checking autoguider max error...
01:14:03  Autoguider error: X=-1.20 Y=-0.83
01:14:03  Checking autoguider max error...
01:14:03  Autoguider error: X=-1.20 Y=-0.83
01:14:03  Checking autoguider max error...
01:14:08  Autoguider error: X=-1.07 Y=0.11
01:14:08  Checking autoguider max error...
01:14:08  Autoguider error: X=-1.07 Y=0.11
01:14:08  Checking autoguider max error...
01:14:13  Autoguider error: X=-1.04 Y=-0.64
01:14:13  Checking autoguider max error...
01:14:13  Autoguider error: X=-1.04 Y=-0.64
01:14:13  Checking autoguider max error...
01:14:16  Action Paused.
01:14:23  Action Resumed.
01:14:23  Autoguider error: X=-0.13 Y=-0.35
01:14:23  Autoguider max error < 0.5!
01:14:23  Starting imager exposure (6 of 6).
01:19:33  Imager exposure complete.
01:19:33  Stopping autoguider...
01:19:35  Take Images Action complete.
01:19:35  Done running m27_lum_6x5min_home.act
01:19:35  Running m27_blu_6x5min_home.act
01:19:35  Starting move to action.
01:19:35  Precessing cooridnates.
01:19:35  J2000 Coordinates: RA: 20h 02m 22.0s Dec: +22°09'05"
01:19:35  JNow Coordinates: RA: 20h 02m 40.5s Dec: +22°10'10"
01:19:35  Slewing to SAO 88105...
01:19:42  Done slewing!
01:19:42  Starting post slew delay.
01:19:45  Completed post slew delay.
01:19:46  Setting imager bin mode to 2x2.
01:19:46  Setting filter to Luminance.
01:19:48  Taking 5 second image for Plate Solve...
01:19:58  Saving Image...
01:19:59  Performing Plate Solve with CCDSoft...
01:20:01  Plate solve results:
01:20:01  Pixel Scale = 1.75 asp.
01:20:01  North Angle = 89.87 degrees.
01:20:01  J2000 Coordinates = RA: 20h 02m 21.4s Dec: +22°09'45"
01:20:01  Adjusting current PA for Plate Solve.  CurrentAngle = 89.67
01:20:01  Adjusted PA = 89.67
01:20:01  Syncing to RA 20.04442, Dec 22.18047
01:20:09  Starting focus run...
01:21:49  Focus succeeded! HFD = 2.49
01:21:49  Starting move to action.
01:21:49  Precessing cooridnates.
01:21:49  J2000 Coordinates: RA: 19h 59m 36.0s Dec: +22°43'18"
01:21:49  JNow Coordinates: RA: 19h 59m 54.4s Dec: +22°44'21"
01:21:49  Slewing to M 27...
01:21:55  Done slewing!
01:21:55  Starting post slew delay.
01:21:58  Completed post slew delay.
01:21:58  Setting imager bin mode to 2x2.
01:21:58  Setting filter to Luminance.
01:22:01  Taking 5 second image for Plate Solve...
01:22:20  Saving Image...
01:22:21  Performing Plate Solve with CCDSoft...
01:22:23  Plate solve results:
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01:22:23 Pixel Scale = 1.75 asp.
01:22:23 North Angle = 89.87 degrees.
01:22:23 J2000 Coordinates = RA: 19h 59m 30.5s Dec: +22°41'29"
01:22:23 Adjusting current PA for Plate Solve. CurrentAngle = 89.67
01:22:23 Adjusted PA = 89.67
01:22:23 Syncing to RA 19.99693, Dec 22.70905
01:22:30 Setting image type to Light.
01:22:30 Setting imager bin mode to 2x2.
01:22:30 Setting filter to Blue.
01:22:35 Setting imager to full frame.
01:22:35 Setting imager exposure time to 300 seconds.
01:22:36 Setting autoguider bin mode to 2x2.
01:22:36 Taking a 2 second autoguider exposure.
01:22:45 Beginning guide star search...
01:22:46 Found possible guide star at 142, 155 with a max brightness of 5309 ADU.
01:22:47 Taking a 2 second autoguider exposure.
01:22:53 Beginning guide star search...
01:22:54 Found possible guide star at 142, 158 with a max brightness of 6987 ADU.
01:22:54 Taking a 2 second autoguider exposure.
01:23:01 Beginning guide star search...
01:23:02 Found possible guide star at 142, 159 with a max brightness of 6384 ADU.
01:23:02 Found appropriate guide star at 142, 159 with a max brightness of 6384 ADU.
01:23:02 Matches previous possible guide star at 142, 158 with a max brightness of 6987 ADU.
01:23:02 Trying to autoguide on star at 142.0,159.0.
01:23:02 Starting to autoguide.
01:23:10 Checking autoguider max error...
01:23:13 Autoguider error: X=0.40 Y=0.67
01:23:13 Checking autoguider max error...
01:23:13 Autoguider error: X=0.40 Y=0.67
01:23:13 Checking autoguider max error...
01:23:16 Autoguider error: X=-0.05 Y=0.24
01:23:16 Autoguider max error < 0.5!
01:23:16 Stopping autoguider...
01:23:18 Automatic guide star acquisition successful!
01:23:18 Setting autoguider exposure time to 2 seconds.
01:23:18 Setting guide star position to 142.0,159.0.
01:23:18 Starting to autoguide.
01:23:27 Checking autoguider max error...
01:23:30 Autoguider error: X=0.13 Y=0.74
01:23:30 Checking autoguider max error...
01:23:30 Autoguider error: X=0.13 Y=0.74
01:23:30 Checking autoguider max error...
01:23:33 Autoguider error: X=0.35 Y=0.70
01:23:33 Checking autoguider max error...
01:23:33 Autoguider error: X=0.35 Y=0.70
01:23:33 Checking autoguider max error...
01:23:37 Autoguider error: X=0.07 Y=-0.08
01:23:37 Autoguider max error < 0.5!
01:23:37 Starting imager exposure (1 of 6).
01:29:43 Imager exposure complete.
01:29:43 Stopping autoguider...
01:29:45 Setting autoguider exposure time to 2 seconds.
01:29:45 Setting guide star position to 144.0,159.0.
01:29:45 Starting to autoguide.
01:29:53 Checking autoguider max error...
01:29:53 Autoguider error: X=-1.65 Y=-0.41
01:29:53 Checking autoguider max error...
01:29:57 Autoguider error: X=-1.22 Y=-0.57
01:29:57 Checking autoguider max error...
01:29:57 Autoguider error: X=-1.22 Y=-0.57
01:29:57 Checking autoguider max error...
01:30:00 Autoguider error: X=-1.07 Y=-0.10
01:30:00 Checking autoguider max error...
01:30:00 Autoguider error: X=-1.07 Y=-0.10
01:30:00 Checking autoguider max error...
01:30:04 Autoguider error: X=-0.96 Y=-0.43
01:30:04 Checking autoguider max error...
01:30:04 Autoguider error: X=-0.96 Y=-0.43
01:30:04 Checking autoguider max error...
01:30:07 Autoguider error: X=-1.02 Y=-0.25
01:30:07 Checking autoguider max error...
01:30:08 Autoguider error: X=-1.02 Y=-0.25
01:30:08 Checking autoguider max error...
01:30:11 Autoguider error: X=-0.98 Y=-0.48
01:30:11 Checking autoguider max error...
01:30:11 Autoguider error: X=-0.98 Y=-0.48
01:30:11 Checking autoguider max error...
01:30:14 Autoguider error: X=-0.87 Y=0.11
01:30:14 Checking autoguider max error...
01:30:15 Autoguider error: X=-0.87 Y=0.11
01:30:15 Checking autoguider max error...
01:30:18 Autoguider error: X=-0.63 Y=0.71
01:30:18 Checking autoguider max error...
01:30:18 Autoguider error: X=-0.63 Y=0.71
01:30:18 Checking autoguider max error...
01:30:21 Autoguider error: X=-0.24 Y=-0.51
01:30:21 Checking autoguider max error...
01:30:21 Autoguider error: X=-0.24 Y=-0.51
01:30:21 Checking autoguider max error...
01:30:24 Autoguider error: X=-0.09 Y=0.01

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01:30:24  Autoguider max error < 0.5!
01:30:24  Starting imager exposure (2 of 6).
01:35:30  Imager exposure complete.
01:35:30  Stopping autoguider...
01:35:32  Setting autoguider exposure time to 2 seconds.
01:35:32  Setting guide star position to 144.0,161.0.
01:35:32  Starting to autoguide.
01:35:40  Checking autoguider max error...
01:35:43  Autoguider error: X=0.22 Y=0.08
01:35:43  Autoguider max error < 0.5!
01:35:43  Starting imager exposure (3 of 6).
01:40:49  Imager exposure complete.
01:40:49  Stopping autoguider...
01:40:51  Setting autoguider exposure time to 2 seconds.
01:40:51  Setting guide star position to 142.0,161.0.
01:40:51  Starting to autoguide.
01:40:59  Checking autoguider max error...
01:40:59  Autoguider error: X=2.29 Y=0.57
01:40:59  Checking autoguider max error...
01:41:03  Autoguider error: X=-2.20 Y=-0.31
01:41:03  Checking autoguider max error...
01:41:04  Autoguider error: X=-2.20 Y=-0.31
01:41:04  Checking autoguider max error...
01:41:07  Autoguider error: X=-1.69 Y=-0.22
01:41:07  Checking autoguider max error...
01:41:08  Autoguider error: X=-1.69 Y=-0.22
01:41:08  Checking autoguider max error...
01:41:11  Autoguider error: X=-1.88 Y=-0.18
01:41:11  Checking autoguider max error...
01:41:12  Autoguider error: X=-1.88 Y=-0.18
01:41:12  Checking autoguider max error...
01:41:15  Autoguider error: X=-1.24 Y=-0.01
01:41:15  Checking autoguider max error...
01:41:15  Autoguider error: X=-1.24 Y=-0.01
01:41:15  Checking autoguider max error...
01:41:19  Autoguider error: X=-0.53 Y=0.19
01:41:19  Checking autoguider max error...
01:41:19  Autoguider error: X=-0.53 Y=0.19
01:41:19  Checking autoguider max error...
01:41:22  Autoguider error: X=-0.12 Y=0.06
01:41:22  Autoguider max error < 0.5!
01:41:22  Starting imager exposure (4 of 6).
01:43:15  User aborted! Stopping imager and autoguider...
01:43:15  Done running m27_blu_6x5min_home.act
01:43:15  Action stopped.
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