

ObservationReport

ObservationID

0357

on

2025-02-21 21:31

all measures in mm



Main Object	NGC2264
Common Name	Christmas Tree Cluster
Alternate Name	Cr112
Visual Mag. Size	3,90
Distance	2350 ± 52 ly
Object R.A. DEC coord.	6h 41m +9° 53
Description	Emission Nebula
Constellation	Monoceros
Other Objects	



20250221_NGC2264_ASI2600_0357-02WM.jpg

StarImage Link [NGC2264_20250221](#)

Telescopius Link

Wikipedia Link <https://en.wikipedia.org/>

Image Properties

Work Status	Published	Rating	****
Source Format	Photo	Picture Center R.A.	6° 41' 05.590"
Tot./Act. Frames/Pane	14 11	Picture Center DEC	+9° 54' 25.10"
H / V Panes	1 1	FoV measured H/V [°]	1° 52' 6.5" 1° 14' 44.4"
Exp. [s] / Frame	180	Above horizon [°]	47,6°
Total Time / Pane [min]	33,00 33,00	View Direction	S 194°
Camera Data	ZWO Optical	ASI2600MCAir	ZWOASI2600
Camera Angle [°]	177,586	Pixel Pitch [µm]	3,761
Gain or ISO	100	Camera Temp. °C	-10

Observation Site

Observation Start	2025-02-21T21:31:05 UTC+/- +1h	Observation End	2025-02-21T22:12:04
Observation Site	DE Göttingen MBR	Site Elevation / Bortle	182 4
Province	NDS	Site Coordinates	51° 34' N, 9° 56' E

Sky & Moon

Sky Index Total Clouds	5,0 100 %	Moon Rise Set	03:10:00 10:01:00
Outside Temp. °C	0	Moon Age [d]	23,5
Moon Phase % Illum.	3rd quarter 38 %	Moon ► Target Dist.	UNKNOWN

Optical Configuration

TS600ASI2600x075i	TS600ASI2600T173R75		
Lens or Scope	TSO APO 90/600	Focuser	M90 TS600 Rack + Pinion
Type Of Build	APO Triplet Refractor	Focuser Position [mm]	40,22 EAF Steps 13867
Brand	TS-Optics	Optical Factor	0,75
Additional Optics	M63 Riccardi 0.75 Reducer	FoL norm actual [mm]	449,25 449,25
Filter	Optolong 2" L-eNhanche	DawesLimitLink	2,32 Arcsec
Diameter [mm]	90	Optical Scale ["/px]	1,727
Aperture / f-stop	4,99		

Other Hardware & Software

GuideScope	ASI2600 Guide Sensor	Mount	ZWO AM3
GuiderHW	ASIAIR Pro	SessionControl	ASIAIR Pro
GuiderSW	ASiAir App	PostProcessingSW	PixInsight

More ...

Work Folder	2025\20250221_NGC2264_0357_GOE-MBR
Comment	Cone Nebula
Remarks	1. Session Planning same as observation #0363 2. Location and sky same as observation #0363

3. Session Results

Quite nice image after many post-processing steps.

Focus points:

- OLeN filter: EAF step position 13867, focuser position= 40,22mm

No Filter: EAF step=13500, focuser position=39,15mm

4. Plate Solving and Camera Rotation Results

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Projection ..... Gnomonic
Projection origin ..... [1949.747163 1299.913478] px -> [RA: 6 41 05.591 Dec:
+9 54 25.09]
Resolution ..... 1.725 arcsec/px
Rotation ..... 177.586 deg
Reference system ..... ICRS
Observation start time ... 2025-02-21 20:28:03 UTC
Observation end time .... 2025-02-21 21:08:58 UTC
Geodetic coordinates ..... 9 56 06 E 51 34 26 N 0 m
Focal distance ..... 449.66 mm
Pixel size ..... 3.76 um
Field of view ..... 1d 52' 6.5" x 1d 14' 44.4"
Image center ..... RA: 6 41 05.590 Dec: +9 54 25.10 ex: -0.012419 px
ey: -0.005850 px
Image bounds:
  top-left ..... RA: 6 37 25.454 Dec: +9 14 45.25 ex: -1.109757 px
ey: -1.830713 px
  top-right ..... RA: 6 44 58.727 Dec: +9 19 25.78 ex: +0.016806 px
ey: -1.166552 px
  bottom-left ..... RA: 6 37 11.833 Dec: +10 29 15.70 ex: -1.836062 px
ey: +1.174155 px
  bottom-right ..... RA: 6 44 46.981 Dec: +10 33 58.74 ex: +0.202640 px
ey: +1.976698 px
```

5. Post Processing

Version 01:

Image selection, registration, background enhancement and color correction were done in PixInsight (Post Processing using PixInsight (starlust.de)).

- Subframe Selector
- WBPP instead of FBPP because FBPP didn't accept the flat frame with an Optolong OLeN filter and it's not possible FBPP to add the flat frame with the Add Custom option available in WBPP.
- ABE - Automatic Background Extraction
- PCC - Photometric Color Correction
- Deconvolution: BlurXTerminator
- Noise Reduction: NoiseXTerminator

Version 02:

- Additional cropping to 3900x2600 pixel (3:2 format) using Dynamic Crop in Pixel Insight on the fully stretched 20250221_NGC2264_ASI2600_0357-01_ABE_PCC_BX_NX_CT_FULL.xisf image
- Cropped image information by astrometry.net
- Center coordinates:
- RA: 06h 41m 05.612s, DEC+09° 54' 24.568"
- Size: 1.87 x 1.25 deg
- Radius: 1.123 deg
- Pixel scale: 1.73 arcsec/pixel
- Orientation: Up is 182.4 degrees E of N

No further image post processing was required.

No color or hue changes were made; the final image has natural colors.

6. Lessons Learned

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7. Main logfile entries

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