

ObservationReport

all measures in mm

Observation-ID

0140

on

2022-10-06 22:07

Rating

Status

PostProcessed



Main Object	NGC7000
Common Name	North America Nebula
Alternate Name	Caldwell 20
Visual Mag. Size	4,00 120 × 100'
Distance	2590 ly
Object R.A. DEC coord.	20h 59m 17.1s +44° 31' 44"
Description	Emission Nebula
Constellation	Cygnus
Other Objects	



20221006_NGC7000_ASI294_0140-03WM.jpg

StarImage Link [OID0140](#)

Telescopius Link

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

Image Properties

Source Format	Photo	Optical Scale ["/px]	1,5946
Tot./Act. Frames/Pane	9 9	Picture Center R.A.	20h57m27.383s
H / V Panes	1 1	Picture Center DEC	+44°10m38.43s
Exp. [s] / Frame	180	FoV measured H/V [°]	1,827 1,243
Total Time / Pane [min]	27,00 27,00	Above horizon [°]	71.6
		View Direction	332NW

Camera Data

ZWO Optical

ASI294MC Pro

ZWOASI294

Camera Angle [°]	-125,093	Pixel Pitch [µm]	4,630
Gain or ISO	120	Camera Temp. °C	-10

Observation Site

Observation Start	2022-10-06T22:07:10 UTC+/- +1h	Observation End	2022-10-06T22:34:09
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	2,8	%	Moon Rise Set	18:10:00 04:24:00	
SQM Outside Temp. °C		7	Moon Age [d]	11,1	
Moon Phase % Illum.	2nd quarter	89	%	Moon ► Target Dist.	UNKNOWN

Optical Configuration

TS600AS294

TS600ASI294T251WOR

Lens or Scope	TSO APO 90/600	Mechanical Focuser	M90 TS600 Rack + Pinion Focu
Type Of Build	APO Triplet Refractor	Electronic Focuser	<input checked="" type="checkbox"/>
Brand	TS-Optics	Focuser Position Steps	20595 [mm] 59,73
Additional Optics	M63 WO Rotator	► Optical Factor	1
Filter	-	FoL norm actual [mm]	599 599,3285
Diameter [mm]	90	DawesLimitLink	1,74 Arcsec
Aperture / f-stop	6,66		

Other Hardware & Software

Guide Scope + Camera	Omegon 50/200 ASI120MM	Mount	iOptron iEQ45 Pro
GuiderHW	ASiAirPro	SessionControl	ASiAirPro
GuiderSW	NONE	PostProcessingSW	PixInsight

More ... (see also next page)

Work Folder	2022\20221006_0140_NGC7000_GOE-MBR
Comment	North America Nebula (NGC7000) in Cygnus

Remarks

Location and sky

see details

Session Results

acceptable

Post Processing

Image selection, registration, background enhancement and color correction were done in PixInsight.

Culling

- NONE -

Alignment and Integration

FBPP: Fast Batch PreProcessor

Linear Image Processing

GX: GraXpert

BX: BlurXTerminator

SPCC: Spectrometric Color Calibration

NX: NoiseXTerminator

Splitting and De-Linearizing the image

SX: StarXTerminator: splitting the image into Stars and DSO objects

Stars Image:

HT: Histogram Transfer

CT: Curves Transformation

DSO Image:

MAS: Multiscale Adaptive Stretch

FAME: Free Hand Adaptive Mask to enhance the DSO image

CT: Curves Transformation

Combining Stars and DSO Image

PixMath: Add DSO and Stars into final image

No further image post processing was required.

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