

ObservationReport

ObservationID

297

on 2023-11-10 20:30

Object

Common Name Pacman Nebula
Alternate Name LBN616
Visual Magnitude 7,4
Distance ► Object 4100 ly
Apparent Size 25x30'
Object R.A. 00h 54m 05.17s
Object DEC +56° 43' 09.09"
WikiLink https://en.wikipedia.org/wiki/NGC_281

NGC281



20231110-212619_NGC281_ZWOASI294_0001_01-WM.jpg

Link ► Picture [NGC281_20231110](#)
Description Bright Nebula
Constellation Cassiopeia

Picture Data

Work Status	Published	Quality	****
Format	Photo	Picture Center R.A.	0h54m20s
Tot./Act. Frames/Pane	100 100	Picture Center DEC	+56°44'58"
H / V Panes	1 1	H/V FoV [°]	1,8268 1,2434
Exp. [s] / Frame	30	Above horizon [°]	0
Total Time / Pane [min]	50,00 50,00	View Direction	N

Camera Data

Camera Angle [°]	-91,7869	ASI294MC-Pro	ZWOASI294
Gain or ISO	120	Pixel Pitch [µm]	4,63
		Camera Temp. °C	-10

Observation Data

Observation Start	2023-11-10T20:30:17 UTC+/- +h	Observation End	2023-11-10T21:26:19
Observation Site	ES La Palma Jardin	Site Elevation /Bortle	470 3
Province	La Palma	Site Coordinates	28° 38' 52.0" N, 017° 53' 47.

Sky & Moon

Sky Quality	1,3	Outside Temp. °C	20
Seeing Index 1	4	Seeing Index 2	2
Moon Phase	4th quarter	Moon Age [d]	27,1
Moon Percent %	6	Distance ► Target	UNKNOWN
MoonRise	04:42:00	MoonSet	16:43:00

Optical Config.

Lens or Scope	TS600	FocalLength [mm]	599
Type Of Build	APO Triplet Refractor	Diameter [mm]	90
Brand	TS-Optics	Aperture / f-stop	6,66
Additional Optics	M63 WO Rotator	DawesLimitLink	1,74 Arcsec
Filter	-	Optical Scale ["/px]	1,595
Focuser	TS600 Rack + Pinion		
Focuser Position	63,29	EAF Position	20420

Other Hardware & Software

GuideScope	ZWO 30/120 mini	Mount	EQ6R-PRO
GuiderHW	ASIAIR	SessionControl	ASIAIR
GuiderSW	ASIAIR	PostProcessingSW	Pixlsight, LR

More ...

Work Folder [2023\20231110-203017_NGC281_La-Palma-Jardin](#)
Comment
Remarks [1. Session Planning](#)

Used Skysafari for planning (view limited to northern directions)

2. Location and sky

Acceptable, but light high veil clouds

3. Session Results

Despite the protective cap, the camera sensor was slightly dirty, which only became visible after shooting flat frames, but the problem could be eliminated during image processing.

4. Plate Solving and Camera Rotation Results

ASIAIR rotation measurement: 91.7869°

Astrometry.net rotation measurement: Up is 271.3 degrees E of N (identical with 91,3°)

Plate Solve result (ASIAIR): Solve succeeded: RA:0h54m20s DEC:+56°44'58" Angle = -91.7869, Star number = 2552

5. Post Processing

PixInsight Core 1.8.9-1 Ripley (x64)

- WBPP (WeightedBatchPreprocessing 2.5.9), computing time on my old laptop: 04:48:25.6 for 100 light frames
 - Master dark: MasterDark20_030.0s_TS600AS294_gain120_20231111.fit
 - Master flat: Master_Flat20_TS600AS294_NoFilter_DirtySensor_20231111.fit (file was not used although it was provided)
 - Master Bias: MasterBias50_1.0ms_20230704-103931.fit (file was not used although it was provided)
 - BN (Background Neutralization) with Working Mode: Target Background = 0.0
 - STF (Screen Transfer Function) + MLT (Multiscale Linear Transform) to create a final version and export to .jpg
- Lightroom was used on the jpg picture for a slight increase in color dynamics and color saturation

No color or hue changes have been applied; the final image is showing natural, slightly enhanced colors.

6. Lessons Learned

Always clean the sensor before use!

Although the EAF position found by ASIAIR was 20006, there were still 414 step left after a GoTo 0, then setting the position to 5000 and applying a new GoTo 0 command. Looks like the start position was not exactly at 0, has to be checked next time. As a result, the focus position could be 20.420 for this configuration (and not 20006 as determined by ASIAIR).

7. Main logfile entries

Log enabled at 2023/11/10 20:23:15

2023/11/10 20:23:15 Plan NGC281 Start

2023/11/10 20:23:15 [Autorun|Begin] NGC281 Start

2023/11/10 20:26:25 [AutoCenter|Begin] Auto-Center 1#

2023/11/10 20:26:25 Mount slews to target position: RA:0h54m18s DEC:+56°45'15"

2023/11/10 20:26:30 Exposure 2.0s

2023/11/10 20:26:33 Plate Solve

2023/11/10 20:26:36 Solve succeeded: RA:0h54m22s DEC:+56°39'7" Angle = -91.7893, Star number = 2550

2023/11/10 20:26:36 [AutoCenter|End] Too far from center, distance = 8%(0.102514°)

2023/11/10 20:26:38 [AutoCenter|Begin] Auto-Center 2#

2023/11/10 20:26:38 Mount slews to target position: RA:0h54m18s DEC:+56°45'15"

2023/11/10 20:26:43 Exposure 2.0s

2023/11/10 20:26:46 Plate Solve

2023/11/10 20:26:50 Solve succeeded: RA:0h54m20s DEC:+56°44'58" Angle = -91.7869, Star number = 2552

2023/11/10 20:26:50 [AutoCenter|End] The target is centered

.....

2023/11/10 20:26:59 [AutoFocus|Begin] Run AF before Autorun start, exposure 5.0s Bin1, temperature 21.0°C

2023/11/10 20:26:59 Find Focus Star

2023/11/10 20:27:22 Find Focus Star: detect and calculate star size 6.7 , EAF position 20135

2023/11/10 20:27:22 Calculate V-Curve

...

2023/11/10 20:29:38 Calculate Focus Point: detect and calculate star size 3.2 , EAF position 20006
2023/11/10 20:29:38 Auto focus succeeded, the focused position is 20006
2023/11/10 20:29:38 [AutoFocus|End] Auto focus succeeded
2023/11/10 20:29:41 [Guide] ReSelect Guide star
2023/11/10 20:29:41 [Guide] Start Guiding
2023/11/10 20:29:43 [Guide] Guide Settle
2023/11/10 20:29:46 [Guide] Settle Done
2023/11/10 20:29:46 Exposure 30.0s image 1#
2023/11/10 20:30:17 Exposure 30.0s image 2#
2023/11/10 20:30:48 Exposure 30.0s image 3#
...
2023/11/10 21:25:48 Exposure 30.0s image 100#
2023/11/10 21:26:19 [Guide] Stop Guiding
2023/11/10 21:26:19 [Autorun|End] Finish Autorun
2023/11/10 21:26:19 Plan NGC281 Finish
2023/11/10 21:26:19 Turn Off Cooling
2023/11/10 21:26:19 [Guide] Stop Looping
2023/11/10 21:26:19 Stop Tracking
2023/11/10 21:26:20 [Guide] Stop Tracking failed
2023/11/10 21:26:20 Stop Tracking
2023/11/10 21:26:20 [Guide] Stop Tracking failed
2023/11/10 21:26:47 Mount GoTo Home POS
2023/11/10 21:26:47 Stop Tracking
2023/11/10 21:26:47 [Guide] Stop Tracking failed
2023/11/10 21:26:47 Stop Tracking
2023/11/10 21:26:47 [Guide] Stop Tracking failed
Log disabled at 2023/11/10 21:26:47