

# ObservationReport

all measures in mm

ObservationID 0304 on 2023-11-16 00:13

<b>Object</b>	<b>NGC2238</b>
Common Name	Rosette Nebula
Alternate Name (s)	NGC2237, NGC2239, NGC2244, N
Visual Magnitude	9
Distance ► Object	5200 ly
Apparent Size	1.3 °
Object R.A.	06h 33m 45s
Object DEC	+04° 59' 54"
WikiLink	<a href="https://en.wikipedia.org/wiki/Rosette_Nebula">https://en.wikipedia.org/wiki/Rosette_Nebula</a>



20231116\_NGC2238\_ASI294\_0304-02\_NX\_BXWM.jpg

Link ► Picture	<a href="#">NGC2238_20231116</a>
Description	Emission Nebula
Constellation	Monoceros

## Picture Data

Work Status	Published	Quality	*****
Source Format	Photo	Picture Center R.A.	06h 32m 02.917s
Tot./Act. Frames/Pane	110 110	Picture Center DEC	+04° 57' 33.072"
H / V Panes	1 1	H/V FoV [°]	1,8268 1,2434
Exp. [s] / Frame	180	Above horizon [°]	30°
Total Time / Pane [min]	330,00 330,00	View Direction	3h 51m E
<b>Camera Data</b>	<b>ZWO</b>	<b>ASI294MC-Pro</b>	<b>ZWOASI294</b>
Camera Angle [°]	124,8	Pixel Pitch [µm]	4,63
Gain or ISO	120	Camera Temp. °C	-10

## Observation Site

Observation Start	2023-11-16T00:13:32 UTC+/- +h	Observation End	2023-11-16T06:38:35
Observation Site	ES La Palma Jardin	Site Elevation /Bortle	470 3
Province	La Palma	Site Coordinates	28° 38' 52.0" N, 017° 53' 4

## Sky & Moon

Sky Index   Total Clouds	3,9 0 %	Moon Rise   Set	10:46:00 20:54:00
Outside Temp. °C	20	Moon Age [d]	2
Moon Phase  % Illum.	1st quarter 8 %	Moon ► Target Dist.	29° 18'

## Optical Configuration

<b>TS600AS294</b>	<b>TS600ASI294T252</b>		
Lens or Scope	TSO APO 90/600	Focuser	M90 TS600 Rack + Pinion
Type Of Build	APO Triplet Refractor	Focuser Position [mm]	59,83 EAF Steps 20629
Brand	TS-Optics	Optical Factor	1
Additional Optics	M63 WO Rotator	FoL norm actual [mm]	599 599
Filter	-	<a href="#">DawesLimitLink</a>	<a href="#">1,74 Arcsec</a>
Diameter [mm]	90	Optical Scale ["/px]	1,595
Aperture / f-stop	6,66		

## Other Hardware & Software

GuideScope	ZWO 30/120 mini	Mount	EQ6R-PRO
GuiderHW	ASIAIR	SessionControl	ASIAIR
GuiderSW	ASIAIR	PostProcessingSW	NoiseXTerminator, BlurXTerminator, LrC, PixInsight

## More ...

Work Folder	<a href="#">2023\20231116_NGC2238_0304_La-Palma-Jardin</a>
Comment	image center = SatelliteCluster NGC2244 , image size: 1.83 x 1.25 deg, radius: 1.109 deg
Remarks	<a href="#">1. Session Planning</a> Used ASIAIR SkyAtlas to setup the image acquisition plan and the camera rotation.

## 2. Location and sky

All light frames were taken on La Palma (Canary Islands, Spain) at about 500 meters above sea level.

Seeing conditions were quite good, but arc.sec. was only at about 1.5, which is quite bad for this location.

## 3. Session Results

Good quality even without using any filter.

## 4. Plate Solving and Camera Rotation Results

ASI AIR rotation measurement: -124.842 deg, RA: 6h 32m 02.878s, DEC: +4° 57' 33.12"

Astrometry.net rotation measurement: Orientation: Up is 124.8 degrees E of N, RA: 06h 32m 02.917s, DEC: +04° 57' 33.072"

Plate Solve result (ASI AIR):

## 5. Post Processing

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

Image was enhanced with BlurXTerminator and NoiseXTerminator.

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

## 6. Lessons Learned

The Optolong 2" L-eNhanche would have improved the image even more.

## 7. Main logfile entries

```
2023/11/15 23:42:02 Plan NGC2238 Start
2023/11/15 23:42:02 [Autorun|Begin] NGC2244SatelliteCluster
Start
2023/11/15 23:42:02 Wait 17min57s
2023/11/16 00:06:29 [Guide] Stop Guiding
2023/11/16 00:06:29 [AutoCenter|Begin] Auto-Center 1#
2023/11/16 00:06:29 Mount slews to target position:
RA:6h33m15s DEC:+4°56'18"
2023/11/16 00:06:34 Exposure 2.0s
2023/11/16 00:06:37 Plate Solve
2023/11/16 00:06:39 Solve succeeded: RA:6h33m15s DEC:+4°
56'58" Angle = -124.856, Star number = 1001
2023/11/16 00:06:40 [AutoCenter|End] The target is centered
2023/11/16 00:06:40 Start Tracking
2023/11/16 00:06:40 [Guide] Start Tracking failed
...
2023/11/16 00:09:27 Auto focus succeeded, the focused
position is 20629
2023/11/16 00:09:27 [AutoFocus|End] Auto focus succeeded
2023/11/16 00:09:29 [Guide] ReSelect Guide star
2023/11/16 00:09:30 [Guide] Start Guiding
2023/11/16 00:09:31 [Guide] Guide Settle
2023/11/16 00:10:31 [Guide] Settle Timeout
2023/11/16 00:10:31 Exposure 180.0s image 1#
2023/11/16 00:13:32 Exposure 180.0s image 2#
2023/11/16 00:16:33 Exposure 180.0s image 3#
2023/11/16 00:16:39 Stop Autorun Manually
2023/11/16 00:16:39 [Guide] Stop Guiding
2023/11/16 00:16:40 [Autorun|End] Pause Autorun
2023/11/16 00:16:40 Pause Plan NGC2238
Log disabled at 2023/11/16 00:16:40
Log enabled at 2023/11/16 00:23:19
2023/11/16 00:23:19 Plan NGC2238 Start
2023/11/16 00:23:20 [Autorun|Begin] NGC2244SatelliteCluster
Start
2023/11/16 00:23:20 [Guide] Stop Guiding
2023/11/16 00:23:21 [AutoCenter|Begin] Auto-Center 1#
2023/11/16 00:23:21 Mount slews to target position:
RA:6h33m15s DEC:+4°56'18"
2023/11/16 00:23:26 Exposure 2.0s
2023/11/16 00:23:29 Plate Solve
2023/11/16 00:23:31 Solve succeeded: RA:6h33m15s DEC:+4°
56'48" Angle = -124.853, Star number = 1160
```

```

2023/11/16 00:23:31 [AutoCenter|End] The target is centered
2023/11/16 00:23:32 Start Tracking
2023/11/16 00:23:32 [Guide] Start Tracking failed
...
2023/11/16 00:23:39 Shooting 130 light frames, exposure
180.0s Bin1
2023/11/16 00:23:39 Exposure 180.0s image 3#
2023/11/16 00:26:40 Exposure 180.0s image 4#
2023/11/16 00:29:42 Exposure 180.0s image 5#
2023/11/16 00:32:43 [Guide] Dither
...
2023/11/16 00:33:44 Exposure 180.0s image 6#
...
2023/11/16 01:18:01 Exposure 180.0s image 20#
2023/11/16 01:21:02 [Guide] Dither
2023/11/16 01:21:02 [Guide] Dither Settle
2023/11/16 01:22:03 [Guide] Settle Timeout
2023/11/16 01:22:03 Start Tracking
2023/11/16 01:22:03 [Guide] Start Tracking failed
2023/11/16 01:22:03 [Guide] Stop Guiding
2023/11/16 01:22:03 [AutoFocus|Begin] Run AF 1 hours later,
exposure 5.0s Bin1, temperature 23.0°C
2023/11/16 01:24:43 Auto focus succeeded, the focused
position is 20601
2023/11/16 01:24:43 [AutoFocus|End] Auto focus succeeded
2023/11/16 01:24:46 [Guide] ReSelect Guide star
2023/11/16 01:24:46 [Guide] Start Guiding
2023/11/16 01:24:48 [Guide] Guide Settle
2023/11/16 01:25:48 [Guide] Settle Timeout
2023/11/16 01:25:48 Exposure 180.0s image 21#
...
2023/11/16 02:23:08 Exposure 180.0s image 39#
2023/11/16 02:26:09 Start Tracking
...
2023/11/16 02:28:41 Auto focus succeeded, the focused
position is 20610
2023/11/16 02:28:41 [AutoFocus|End] Auto focus succeeded
...
2023/11/16 02:32:52 Exposure 180.0s image 41#
...
2023/11/16 03:59:12 Exposure 180.0s image 67#
2023/11/16 04:02:14 [Meridian Flip|Begin] Wait 4min42s to
Meridian Flip
2023/11/16 04:06:56 Meridian Flip 1# Start
2023/11/16 04:06:56 [AutoCenter|Begin] Auto-Center 1#
2023/11/16 04:06:56 Mount slews to target position:
RA:6h33m15s DEC:+4°56'18"
2023/11/16 04:07:49 Exposure 2.0s
2023/11/16 04:07:52 Plate Solve
2023/11/16 04:07:54 Solve succeeded: RA:6h35m4s DEC:+5°13'29"
Angle = 55.1165, Star number = 1809
...
2023/11/16 04:08:09 Solve succeeded: RA:6h33m18s DEC:+4°
56'21" Angle = 55.1598, Star number = 1522
2023/11/16 04:08:09 [AutoCenter|End] The target is centered
2023/11/16 04:08:09 [Meridian Flip|End] Meridian Flip
succeeded
2023/11/16 04:08:09 Start Tracking
...
2023/11/16 04:10:53 Auto focus succeeded, the focused
position is 20591
2023/11/16 04:10:53 [AutoFocus|End] Auto focus succeeded
...
2023/11/16 04:15:10 Exposure 180.0s image 68#
...

```

2023/11/16 05:09:29 Exposure 180.0s image 85#  
...  
2023/11/16 05:16:11 Auto focus succeeded, the **focused position is 20592**  
...  
2023/11/16 05:16:19 Exposure 180.0s image 86#  
...  
2023/11/16 06:13:40 Exposure 180.0s image 104#  
...  
2023/11/16 06:19:20 Auto focus succeeded, the **focused position is 20598**  
2023/11/16 06:19:20 [AutoFocus|End] Auto focus succeeded  
...  
2023/11/16 06:23:30 Exposure 180.0s image 106#  
...  
2023/11/16 06:35:34 Exposure 180.0s image 110#  
...  
**2023/11/16 06:38:48 Stop Autorun Manually**  
2023/11/16 06:38:48 [Guide] Stop Guiding  
2023/11/16 06:38:49 [Autorun|End] Pause Autorun  
2023/11/16 06:38:49 Pause Plan NGC2238  
...  
**2023/11/16 06:41:26 Plan NGC2238 Start**  
2023/11/16 06:41:27 [Autorun|Begin] NGC2244SatelliteCluster Start  
2023/11/16 06:41:27 [AutoCenter|Begin] Auto-Center 1#  
...  
2023/11/16 06:41:52 Plate Solve  
2023/11/16 06:41:54 Solve succeeded: RA:6h33m17s DEC:+4° 56'18" Angle = 55.1144, Star number = 1000  
...  
2023/11/16 06:42:03 [AutoFocus|Begin] Run AF before Autorun start, exposure 5.0s Bin1, temperature 22.1°C  
...  
2023/11/16 06:44:51 Auto focus succeeded, the focused position is 20592  
2023/11/16 06:44:51 [AutoFocus|End] Auto focus succeeded  
2023/11/16 06:44:53 [Guide] ReSelect Guide star  
2023/11/16 06:44:54 [Guide] Start Guiding  
2023/11/16 06:44:55 [Guide] Guide Settle  
2023/11/16 06:44:59 [Guide] Settle Done  
2023/11/16 06:44:59 Exposure 180.0s image 1#  
2023/11/16 06:48:00 Exposure 180.0s image 2#  
**2023/11/16 06:48:20 Stop Autorun Manually**  
2023/11/16 06:48:20 [Guide] Stop Guiding  
2023/11/16 06:48:20 [Autorun|End] Pause Autorun  
2023/11/16 06:48:20 Pause Plan NGC2238  
Log disabled at 2023/11/16 06:48:20