

ObservationReport

all measures in mm

ObservationID

331

on

2024-07-29 22:31

Object

Common Name	Hercules Globular Cluster
Alternate Name	NGC6205
Visual Magnitude	58
Distance ► Object	22.2 kly
Apparent Size	20'
Object R.A.	16h 41m 41.24s
Object DEC	+36° 27' 35.5"
WikiLink	https://en.wikipedia.org/wiki/Mesier_13

M13



20240729_M13_ASI294_0331-03WM.jpg

Link ► Picture	M13_20240729
Description	Globular Cluster
Constellation	Hercules

Picture Data

Work Status	Published	Quality	****		
Format	Photo	Picture Center R.A.	16h 41m 41.424s		
Tot./Act. Frames/Pane	29	29	Picture Center DEC	+36° 27' 42.708"	
H / V Panes	1	1	H/V FoV [°]	0,6739	0,4586
Exp. [s] / Frame	60	Above horizon [°]	71°24'		
Total Time / Pane [min]	29,00	29,00	View Direction	SSW	

Camera Data

ZWO	ASI294MC-Pro	ZWOASI294	
Camera Angle [°]	93	Pixel Pitch [µm]	4,63
Gain or ISO	120	Camera Temp. °C	-10

Observation Site

Observation Start	2024-07-29T22:31:15 UTC+/- +1h	Observation End	2024-07-29T23:00:14	
Observation Site	DE Göttingen MBR	Site Elevation /Bortle	182	5
Province	NDS	Site Coordinates	51° 34' N, 9° 56' E	

Sky & Moon

Sky Index Total Clouds	4,5	4	%	Moon Rise Set	18:01:00	03:58:00
Outside Temp. °C	10,4	Moon Age [d]	12,4			
Moon Phase % Illum.	2nd quarter	93	%	Moon ► Target Dist.	UNKNOWN	

Optical Configuration

TS1624AS294rt	TS1624ASI294rtT226				
Lens or Scope	TSO RC 203/1624	Focuser	M90 2.5" Rack Pinion Foc		
Type Of Build	Ritchey-Chretien Reflector	Focuser Position [mm]	32,62	EAF Steps	9901
Brand	TS-Optics	Optical Factor	1		
Additional Optics	-	FoL norm actual [mm]	1624	1606,95	
Filter	-	DawesLimitLink	1,45 Arcsec		
Diameter [mm]	203	Optical Scale ["/px]	0,588		
Aperture / f-stop	8,00				

Other Hardware & Software

GuideScope	ZWO 30/120 mini	Mount	iOptron iEQ45 Pro
GuiderHW	ASIAIR	SessionControl	ASIAIR
GuiderSW	ASIAIR	PostProcessingSW	PixInsight

More ...

Work Folder [2024\20240729_M13_0331_GOE-MBR](#)

Comment Hercules Globular Cluster

Remarks

1. Session Planning

First clear night after 2 months... still elaborating the collimation error of the TS1624RC telescope. Used the current state of the telescope to check acutal focal length and back focus against

2. Location and sky

At home, good sky

3. Session Results

New measured backfocus: 262 mm instead of 254 mm, only a small remaining deviation.

Focuser position: 31,8mm or 9901 EAF steps.

Cropped image size: 19.3 x 13.1 arcmin

4. Plate Solving and Camera Rotation Results

ASIAIR SkyAtlas planned rotation:

ASIAIR Plate Solve result after GoTo:

Astrometry.net rotation measurement:

5. Post Processing

Used PixInsight for image integration and post-processing. Steps:

1. 1st use of the FBPP Fast Batch Post Processing Script
2. Next updated the master light file with astrometric data using the Image Solver Script
3. Applied SPCC for color correction
4. Curves Transformation to enhance star colors
5. BlurXTerminator to sharpen the stars:

- var P = new BlurXTerminator;
- P.ai_file = "BlurXTerminator.4.pb";
- P.correct_only = false;
- P.correct_first = false;
- P.nonstellar_then_stellar = false;
- P.lum_only = false;
- P.sharpen_stars = 0.65;
- P.adjust_halos = 0.00;
- P.nonstellar_psf_diameter = 0.00;
- P.auto_nonstellar_psf = true;
- P.sharpen_nonstellar = 0.67;
- small color saturation adjustments in Adobe Lightroom

No further image post processing was required.

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

6. Lessons Learned

7. Main logfile entries

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