

ObservationReport

all measures in mm

Observation-ID

0007

on

2022-03-09 22:09

Rating

Status

Published



Main Object	M82
Common Name	Cigar Galaxy
Alternate Name	NGC3034
Visual Mag. Size	8,02 11.0x5.1'
Distance	12 Mly
Object R.A. DEC coord.	09h 57m 41.05s +69° 34' 32.4"
Description	Spiral Galaxy
Constellation	Ursa Major
Other Objects	



20220309_M82_ASI294_0007-02WM.jpg

StarImage Link [OID0007](#)

Telescopius Link

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

Image Properties

Source Format	Photo	Optical Scale ["/px]	0,5882
Tot./Act. Frames/Pane	15 15	Picture Center R.A.	9h55m55.898s
H / V Panes	1 1	Picture Center DEC	+69°41m28.53s
Exp. [s] / Frame	180	FoV measured H/V [°]	0,674 0,459
Total Time / Pane [min]	45,00 45,00	Above horizon [°]	
		View Direction	

Camera Data	ZWO Optical	ASI294MC Pro	ZWOASI294
Camera Angle [°]	90,7	Pixel Pitch [µm]	4,630
Gain or ISO	120	Camera Temp. °C	-10

Observation Site

Observation Start	2022-03-09T22:09:42 UTC+/- +1h	Observation End	2022-03-09T22:34:49
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	4,5	%	Moon Rise Set	11:05:00 02:16:00
SQM Outside Temp. °C	1		Moon Age [d]	6,7
Moon Phase % Illum.	1st quarter 43,9	%	Moon ► Target Dist.	

Optical Configuration

Lens or Scope	TSO RC 203/1624s	Mechanical Focuser	M90 TS1624 Crayford
Type Of Build	Ritchey-Chretien Reflector	Electronic Focuser	☐
Brand	TS-Optics	Focuser Position	0 [mm]
Additional Optics	-	▶ Optical Factor	1
Filter	-	FoL norm actual [mm]	1624 1600,121
Diameter [mm]	203	DawesLimitLink	<u>1,45 Arcsec</u>
Aperture / f-stop	7,88		

Other Hardware & Software

Guide Scope + Camera	Omegon 50/200 ASI120MM	Mount	iOptron iEQ45 Pro
GuiderHW	ASiAirPro	SessionControl	ASiAirPro
GuiderSW	NONE	PostProcessingSW	PI-PixInsight, PI-FBPP, GraXpert, BlurXTerminator, NoiseXTerminator, StarXTerminator

More ...

Work Folder	2022\20220309_M82_0007_GOE-MBR
Comment	Cigar Galaxy (M82) in Ursa Major

Remarks

Version 01: 1st attempt to photograph M82 galaxy. Had trouble with guiding (jumped around for unknown reasons) so image integration failed. The resulting image was manually integrated using 3 of the original 15 frames.

Version 02: worked well using PixInsight FBPP

4. Plate Solving and Camera Rotation Results

Astrometry.net rotation measurement:

5. Post Processing (version 02)

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

1: FBPP: Fast Batch Pre Processor

2: GX: GraXpert

3: BX: BlurXTerminator

4: SPCC: Spectrometric Color Calibration

5: NX: NoiseXTerminator

6: SX: StarXTerminator: splitting the image into Stars and Galaxy

7: Applied HT (Histogram Transfer) and CT (Curves Transformation) to Stars and MAS to Galaxy

11: PixMath: Integrated Galaxy + Stars*0.8 into final image

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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