

# ObservationReport

all measures in mm

Observation-ID

0281 v 03 on

2023-06-13 00:30

Rating

\*

Status

Published



<b>Main Object</b>	<b>M51</b>
Common Name	Whirlpool Galaxy
Alternate Name	NGC5194, NGC5195
Visual Mag.   Size	7,92 13,7x11,7'
Distance	28 Mly
Object R.A.   DEC coord.	13h 30m 48,42s +47° 04' 54.7"
Description	Spiral Galaxy
Constellation	Canes Venatici
Other Objects	



20230613\_M51\_ASI294\_0281-03.jpg

StarImage Link [OID0281](#)

Telescopius Link

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

## Image Properties

Source Format	Photo	Optical Scale ["/px]	0,5882
Tot./Act. Frames/Pane	9 9	Picture Center R.A.	13h29m51.328s
H / V Panes	1 1	Picture Center DEC	+47°11m08.43s
Exp. [s] / Frame	60	FoV measured H/V [°]	0,674 0,459
Total Time / Pane [min]	9,00 9,00	Above horizon [°]	0
		View Direction	N

## Camera Data

ZWO Optical

ASI294MC Pro

ZWOASI294

Camera Angle [°]	-89,759	Pixel Pitch [µm]	4,630
Gain or ISO	120	Camera Temp. °C	18

## Observation Site

Observation Start	2023-06-13T00:30:38 UTC+/- +1h	Observation End	2023-06-13T00:50:03
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	1,7 11 %	Moon Rise   Set	02:37:00 16:29:00
SQM   Outside Temp. °C	10	Moon Age [d]	0
Moon Phase   % Illum.	? 0 %	Moon ► Target Dist.	UNKNOWN

## Optical Configuration

TS1624sAS294c

TS1624sASI294cT185

Lens or Scope	TSO RC 203/1624s	Mechanical Focuser	M90 TS1624 Crayford
Type Of Build	Ritchey-Chretien Reflector	Electronic Focuser	<input type="checkbox"/>
Brand	TS-Optics	Focuser Position	12649 [mm]
Additional Optics	-	► Optical Factor	1
Filter	NONE	FoL norm actual [mm]	1624 1625,592
Diameter [mm]	203	<a href="#">DawesLimitLink</a>	<a href="#">1,45 Arcsec</a>
Aperture / f-stop	8,00		

## Other Hardware & Software

Guide Scope + Camera	Omegon 50/200 ASI120MM	Mount	iOptron iEQ45 Pro
GuiderHW	ASIAIR Pro	SessionControl	ASIAIR Pro
GuiderSW	ASiapp	PostProcessingSW	PI-FBPP, GraXpert, BlurXTerminator, PI-SPCC, NoiseXTerminator, PI-MAS

## More ... (see also next page)

Work Folder	<a href="#">2023\20230613_0281_M51_GOE-MBR</a>
Comment/Title	Whirlpool Galaxy (M51) in Canes Venatici

**1. Session Planning**

Test of TSO 203/1624 RC after collimation with **TS RCKOLLI 2" LED Collimator**. No planning done as this was intended to check the collimation.

**2. Location and sky**

Mid June = no darkness even after midnight in North Europe.

**3. Session Results**

Picture coordinates are invalid because of missing star alignment.

The collimation was improved but stars still look like little soft blobs instead of points.

Either the telescope or the collimation is not ok.

**4. Plate Solving and Camera Rotation Results**

see details

**5. Post Processing**

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

No further image post processing was required.

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

**Session Planning**

Enter Text

**Location and sky**

see details

**Post Processing**

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

**Culling**

Blink

SubframeSelector

**Alignment and Integration**

FBPP: Fast Batch PreProcessor (Autocrop, Drizzle)

WBPP: Weighted Batch PreProcessor (Autocrop, Drizzle)

**Linear Image Processing**

DC: Dynamic Crop + Plate Solve

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.

**6. Lessons Learned**

The telescope TSO 203/1624 RC still needs further collimation.

**Image Keywords**

ObservationID=#0281, M51, Whirlpool Galaxy, \*, Constellation=Canes Venatici, 2023, JUN, Type=Photo, Site=Göttingen MBR, DE, Config=TS1624sAS294c, D=203mm, f/8.0, f=1626mm, Filter=NONE, Gain=120, Lens=TS1624s, LensName=TSO RC 203/1624s, Mount=iOptron iEQ45 Pro, n=9, OtherOptics=-, PanesH=1, PanesV=1, Status=PostProcessed, t=60s, ZWOASI294, AstroSW=PI-FBPP, AstroSW=GraXpert, AstroSW=BlurXTerminator, AstroSW=PI-SPCC, AstroSW=NoiseXTerminator, AstroSW=PI-MAS