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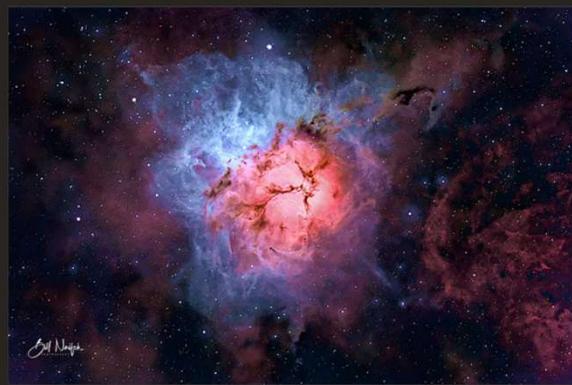
Preparing for the Lunar Eclipse

Naifeh Photography

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www.naifehphotography.com



Purpose of Today's Presentation

- Lunar Photography with a Telephoto Lens
- Solar Photography
- Timing and Specifics of the March 2, 2026 Lunar Eclipse

Equipment Needed

- Minimum Equipment
 - Any lens over 300mm
- Recommended Equipment
 - Any lens over 500mm
 - Tripod (required for lunar eclipses)
 - Tracker if interested in lunar eclipses
 - Remote Trigger

Tips for Narrow Field Lunar Photography



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Random Lunar FB Example



Nikon z8
180-600mm

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Lunar Comparison



Nikon z8
180-600mm

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Lunar Photography



Uncropped photo - 600mm Lens during Super Moon

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Lunar Photography Tips

- Use Manual or Spot Metering (No matrix)
 - When in doubt, bracket!
- Do NOT use auto focus!
 - Use Live Preview and zoom in to focus
- Fall/Winter have less visibility problems

Lunar Photography Tips

- f-stop – sweet spot for sharpness of your lens
 - (I would not go over f8)
- 1/400s, 1/200s minimum
- Low ISO (High ISO will lose detail)

Processing Full Moon Photos



Nikon z8 w/200-500 lens

Focal Length: 440mm

ISO 250

f/6.3

1/640

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Processing Full Moon Photos



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Processing Full Moon Photos



Clarity
Texture
Dehaze
Apply a reverse radial mask

Processing Full Moon Photos



Topaz for sharpening
Adjust Curves

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Problem with Eclipse

- 12 stops of light lost going from full moon to blood moon.
- Shutter Speed goes from 1/400 to over .5 seconds
- At .5 seconds and above, and a high magnification, motion blur becomes problematic.

Lunar Eclipse



400mm
ISO 640
f 6.3
1 sec

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Lunar Eclipse



600mm
ISO 1600
f 9
.8 sec

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Lunar Eclipse w/ Tracker



500mm
ISO 400
f4.8
4sec

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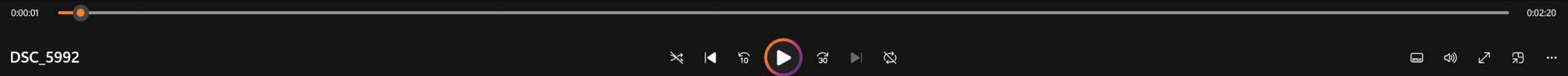
Trackers and Mounts

- The Moon does NOT move with the stars
- The Moon rotates about 3.3% slower than the stars
- A simple “Milky Way” tracker will introduce motion blur in long photos
- Advanced trackers and mounts should have a lunar rate.

Lunar Best Practice

- Take a video (30 seconds to several minutes)
- If you are not using a tracker, use software to center the moon.
- Use software to separate video into individual frames
- Use pixel shifting techniques to increase resolution
- Process as usual

Start of Video



End of Video



Media Player

0:02:17

0:00:04



DSC_5992

...

Centering the Moon in the Video

- **Planetary Imaging PreProcessor (PIPP)**
 - PIPP is a lunar and planetary image pre-processing tool. Its primary use is to help speed up image stacking of large video files obtained when capturing images of the Moon or planets.
 - The main functions of PIPP include:
 - Cropping frames to an area of interest, removing all the empty black space.
 - Centralising an object, such as a planet or the Moon, in case of tracking drift.
 - Quality estimation and reordering of each frame to ensure only the best frames are included in the final image stack. The number of frames that should be kept can be specified by the user.
 - *PIPP does not output a final stacked image* but helps prepare a video file or set of images for planetary or lunar image stacking software.
 - Support for PIPP has now been withdrawn by the developers, and the original website is no longer available.
- www.rsastro.com

PIPP

PIPP

File Options Processing Help Test Options

Source Files Input Options Processing Options Quality Options Animation Options Output Options Do Processing

Image Files (1908 frames) Dark Files (0 frames) Flat Files (0 frames) Flat Dark Files (0 frames)

Image Files List

Filename	Type	Frames	FPS	Size	Date	Filesize	Directory
DSC_6006.MOV	mov (hvc1)	1908	29.97	3840x2160	11/5/2025 1...	508.77 MB	D:\Pictures - 2025\2025-11-01 - Miscellaneous...

Add Image Files Remove Selected Files Remove All Image Files

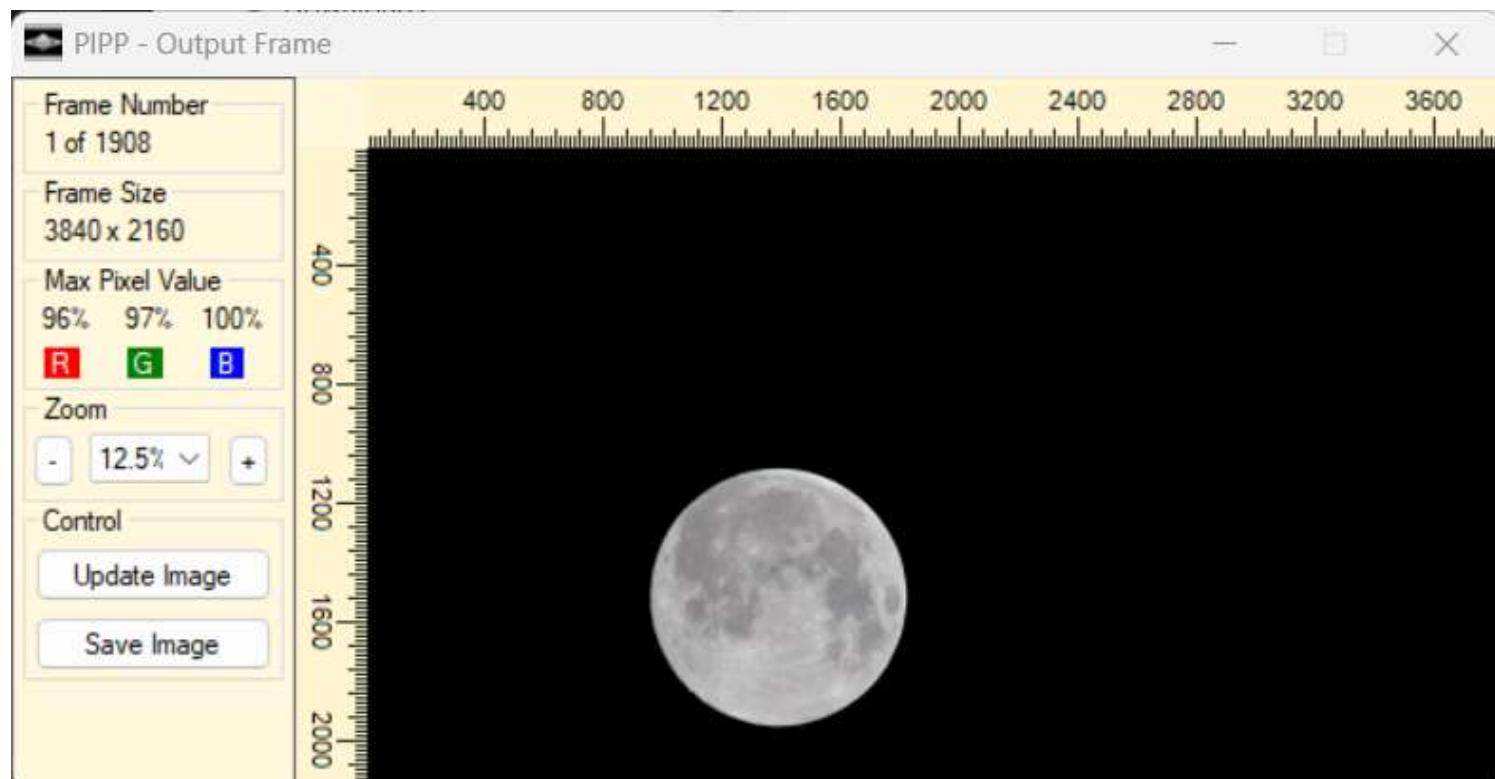
Multiple Source Files: Batch Mode Join Mode

Optimise Options For:

Planetary Solar/Lunar Close-up Planetary Animation (AVI)
 ISS Solar/Lunar Full Disc Planetary Animation (GIF)
 AVI Archive

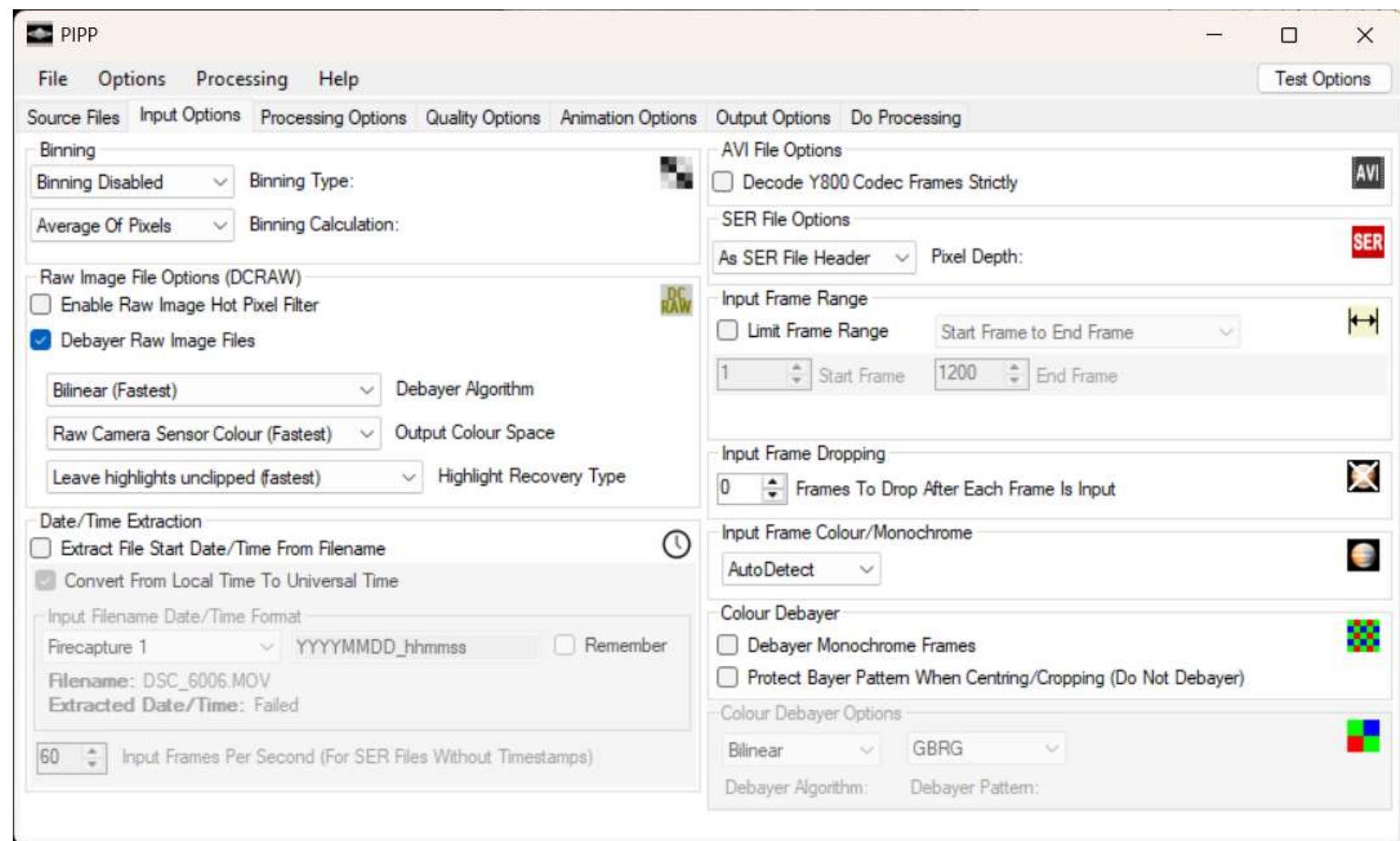
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PIPP



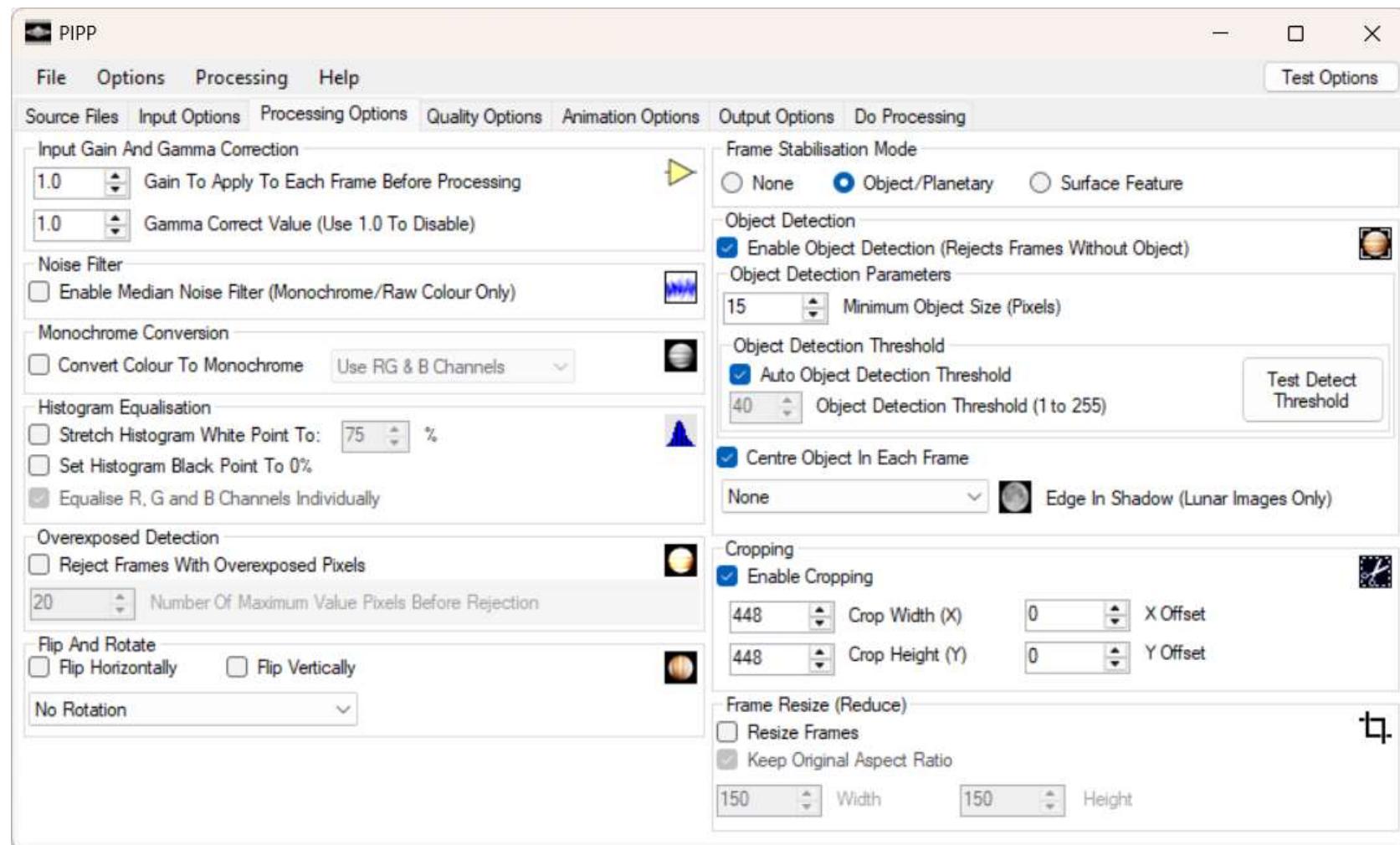
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PIPP



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PIPP



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PIPP

Media Player



0:00:22

0:00:28



DSC_5993_pipp

0:00:28



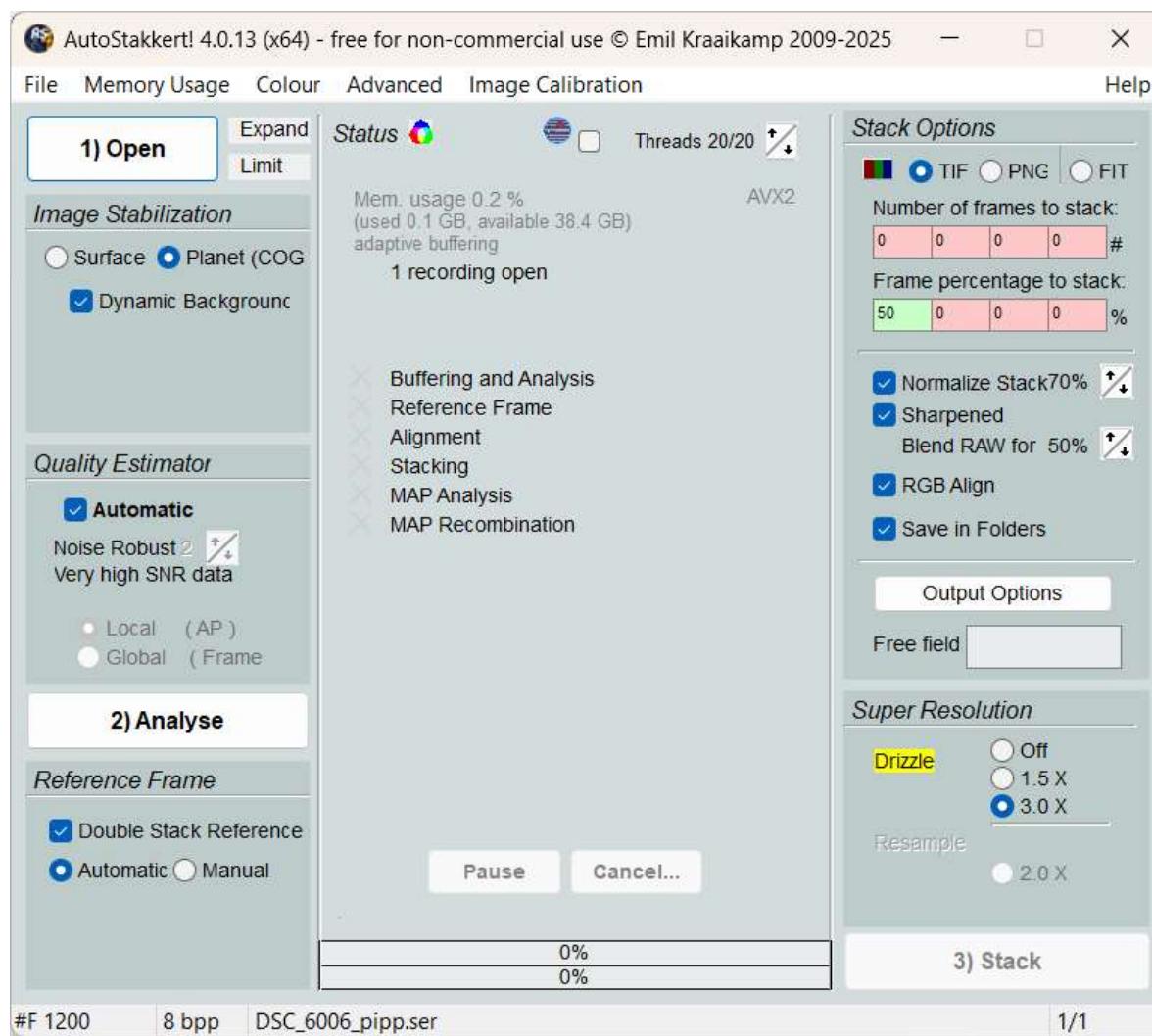
PIPP

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Pixel Shifting Video Software

- AutoStakkert
- www.autostakkert.com
- AutoStakkert! is all about alignment and stacking of image sequences, minimizing the influence of atmospheric distortions (seeing).
- Its goal is to create high quality images of the Planets, the Sun, and the Moon, without too much hassle.

AutoStakkert



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AutoStakkert

Browse - 1 file is selected for processing

D:\Pictures - 2025\2025-11-01 - Miscellaneous\Astroprocessing Files\pipp_20251105_001531

filename	profile	filter	w x h	shutter	gain	duration	num frames	camera	temp.	size GiB	date modified	selected
DSC_6006_pipp.ser		bgr	1800 x 1200				# 1200			7.24	2025-11-05 00:18	<input checked="" type="checkbox"/>

Close and Process Data

Sequences Images ser avi mp4 mkv mov avi Read metadata Clear/Reset APs on file open

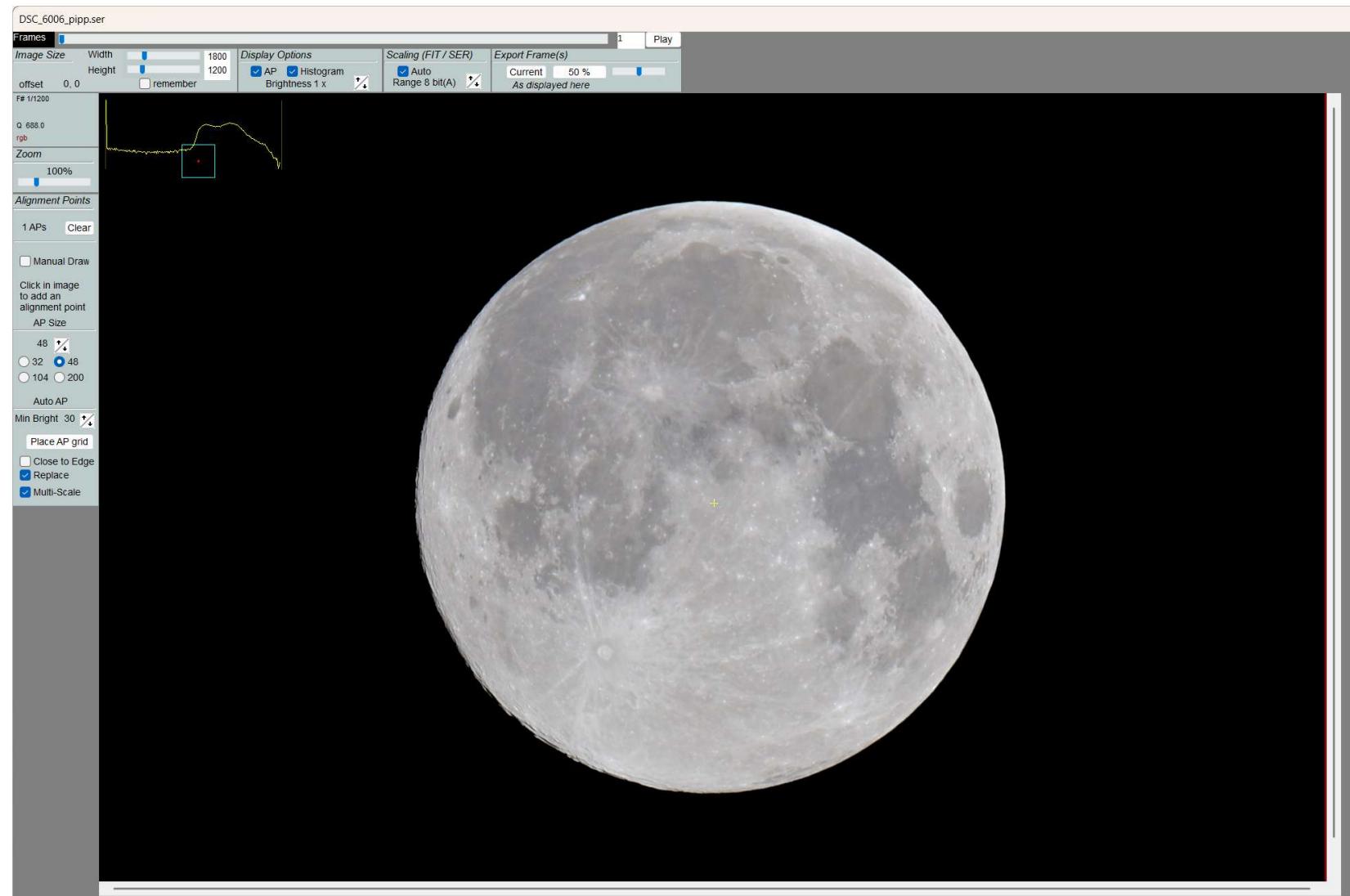
Hint: Click once in the list below to directly open a single file.
Use the [up] and [down] keys to switch to a different file.
Use [Shift] + left click to load a selection of files in AS!.
Use [Ctrl] + click to add files to your selection.

Select all with column value: 1800 x 1200 Refresh

1 files 1 files selected

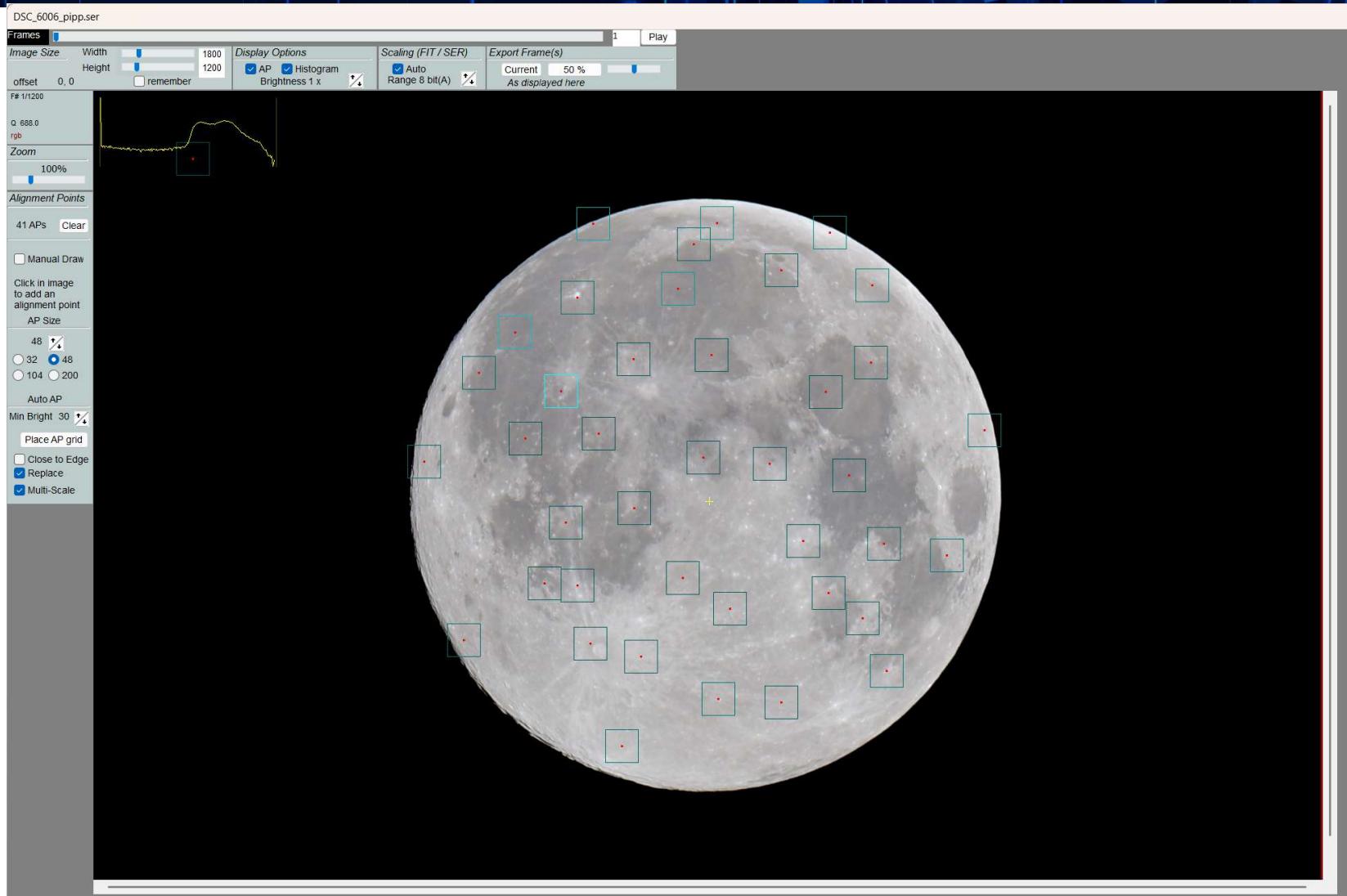
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AutoStakkert



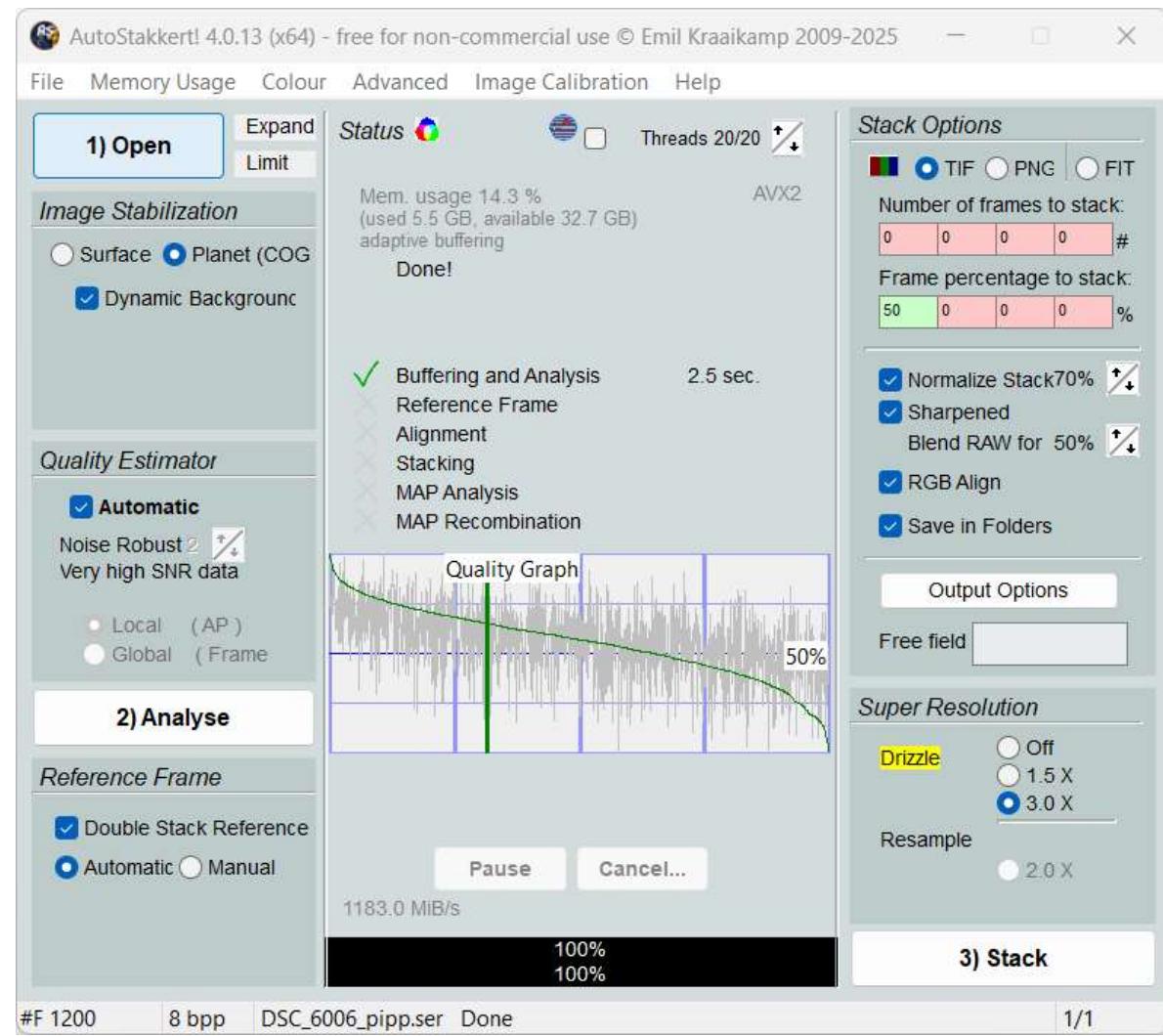
AIFEH

AutoStakkert



NAIFEH

AutoStakkert



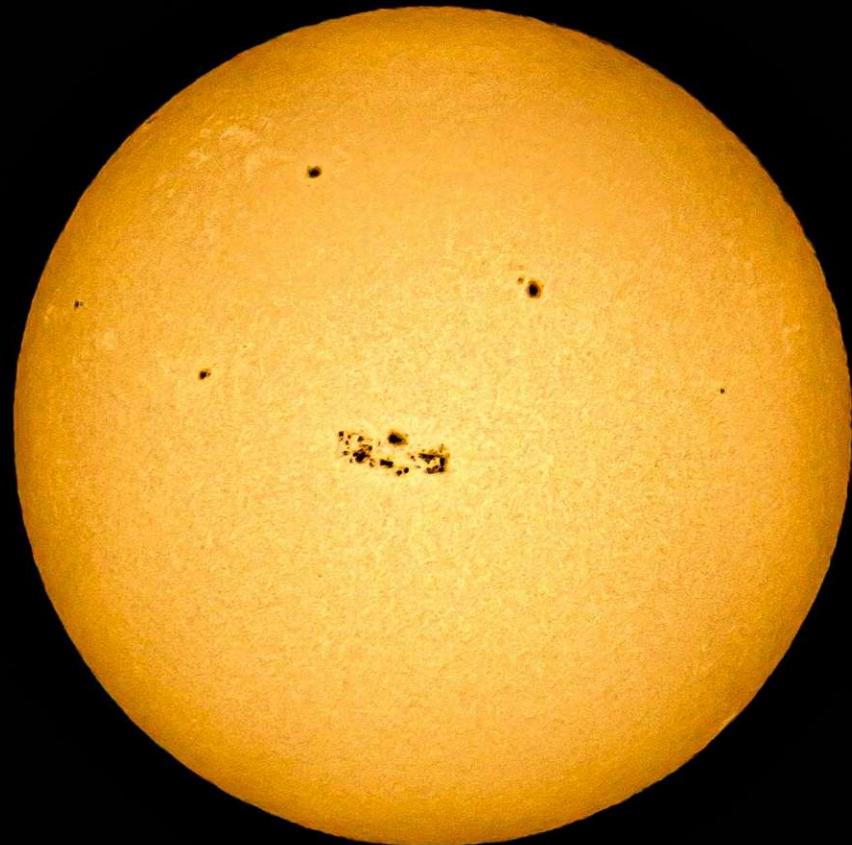
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AutoStakkert Output (unedited)



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Solar Photography



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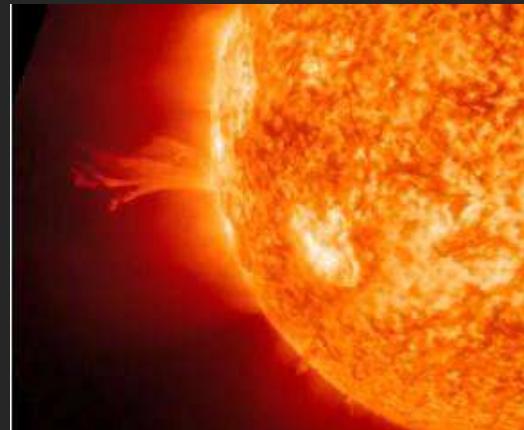
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Solar Filters

Solar Safe Technology

EclipSmart solar products feature Solar Safe filter technology—the ultimate protection from harmful solar radiation, *including IR and UV light*, plus 99.999% of visible light. Celestron Solar Safe filter technology is SAFE for direct observation of the Sun and has been independently tested to conform to and meet the transmission requirements of ISO 12312-2:2015(E), Filters for Direct Observation of the Sun, EN 1836:2005 + A1:2007 (E) for an E15 Filter for the Direct Observation of the Sun and AS/NZS 1338.1:2012, Filters for Eye Protectors.

Solar Photography

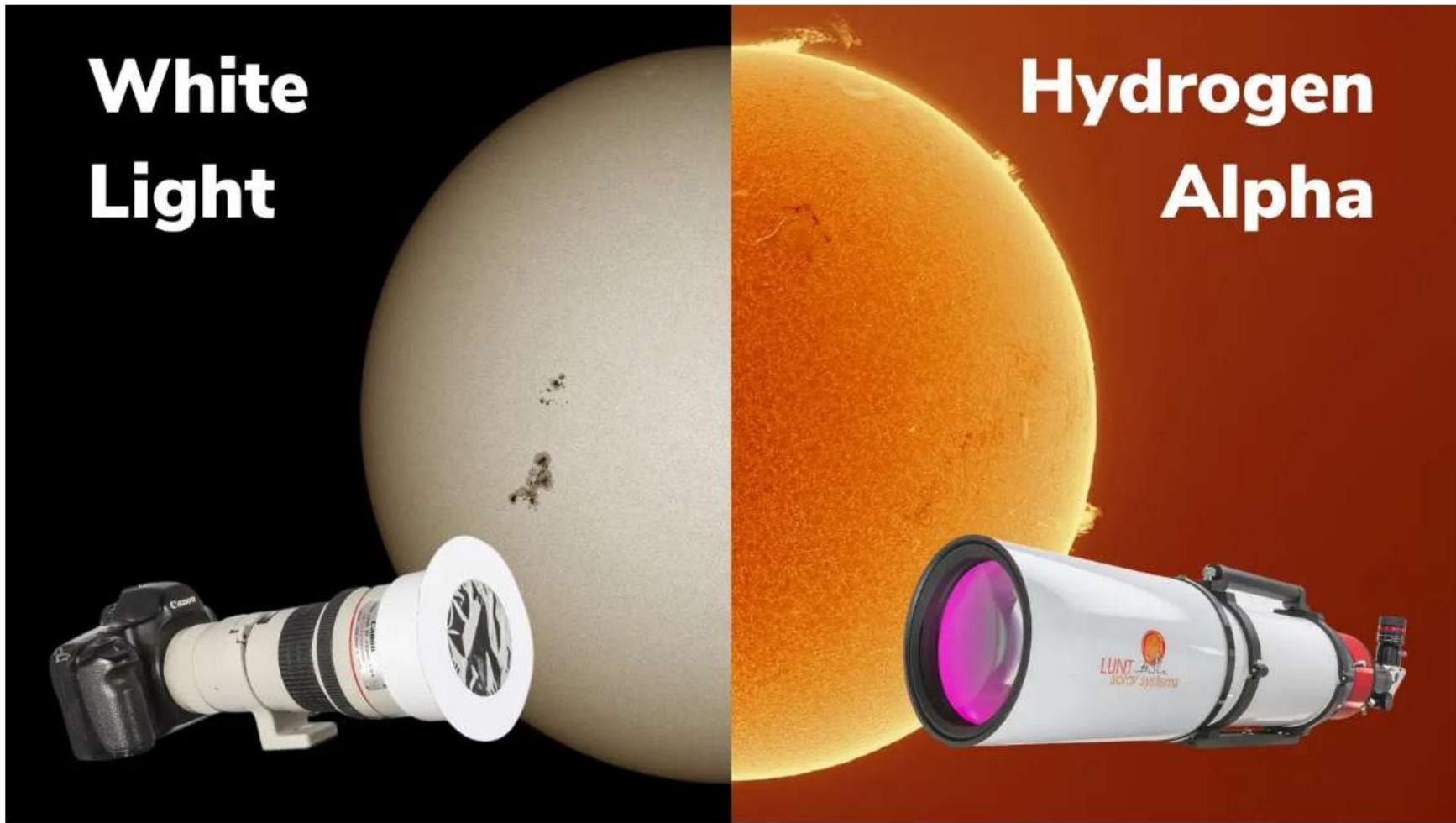


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Solar Telescopes

**White
Light**

**Hydrogen
Alpha**



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H-Alpha Filter

DayStar Quark COMBO Gemini Switchable Dual Bandpass H-Alpha Filter

SKU: OFIL-DS-DSZCG | MFG #: DSZCG | ITEM CAN SHIP: To US Only



Ask a question

\$2,595.00

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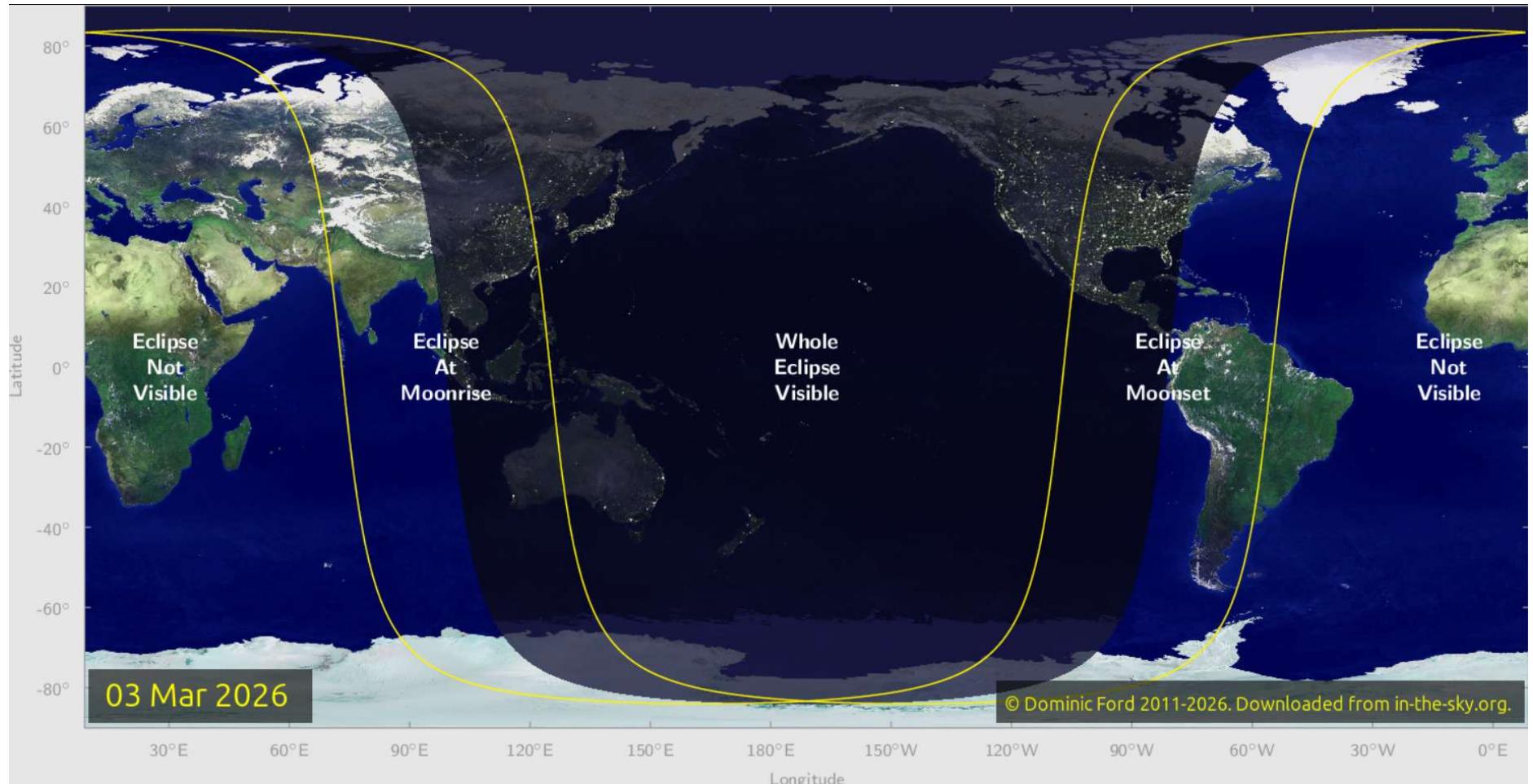
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March 3, 2026



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March 3, 2026



3:27 AM

NAIFEH

March 3, 2026



Date and Time

Date and Time	Julian Day
2026 - 3 - 3	4 : 1 : 57

4:01 AM - 30 degrees

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March 3, 2026

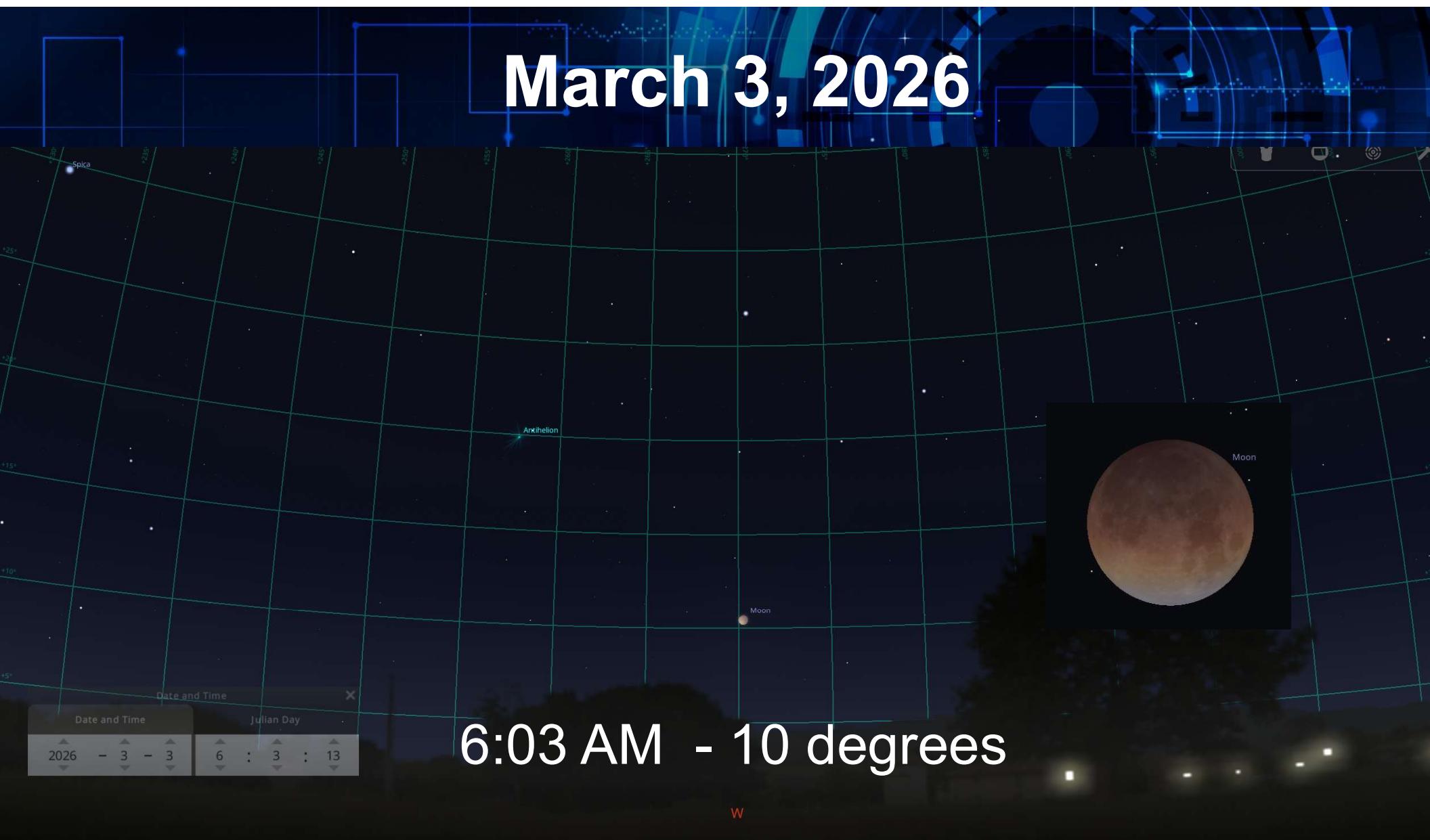


Date and Time		
Date and Time		
2026	-	3
5	:	5
32	:	32

5:05 AM - 22.5 degrees

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March 3, 2026



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March 3, 2026



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March 3, 2026



6:52 AM

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Winter Milky Way



84 – 1 minute subs
35mm
Nikon z8
ISO 400

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Thank You