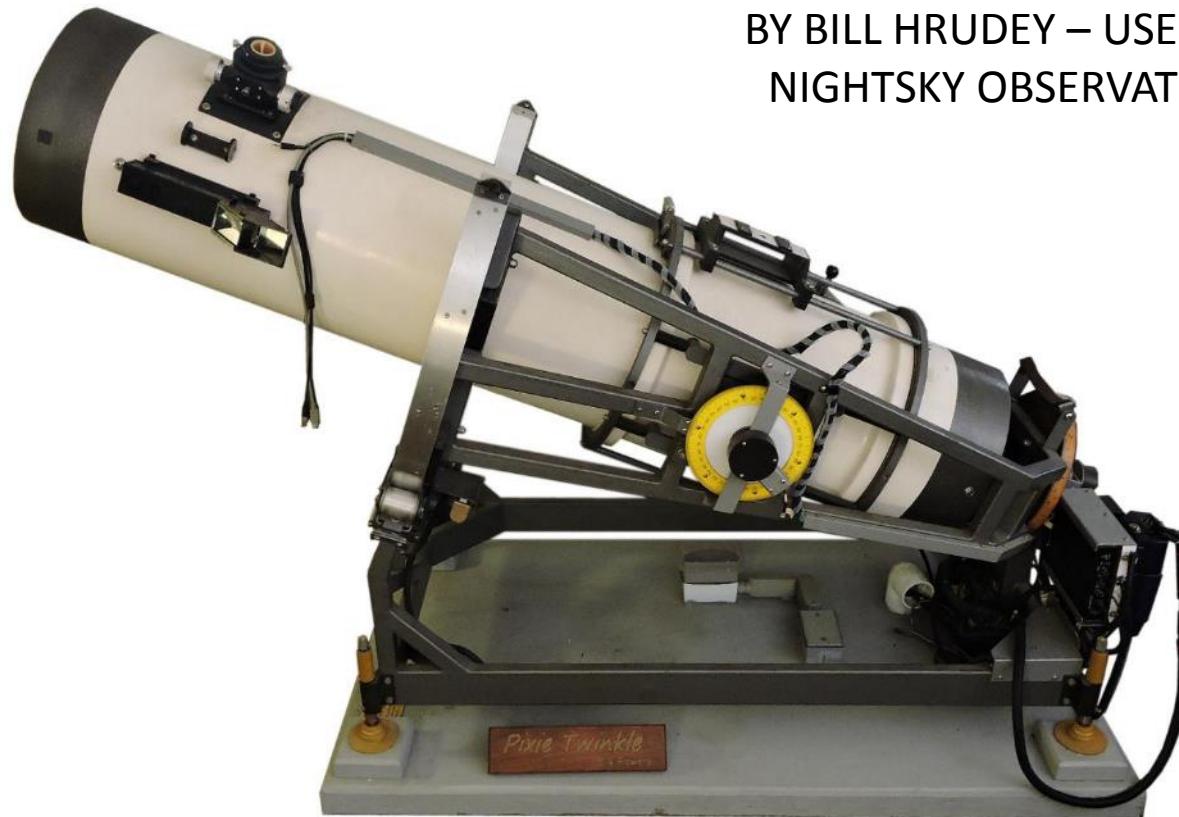
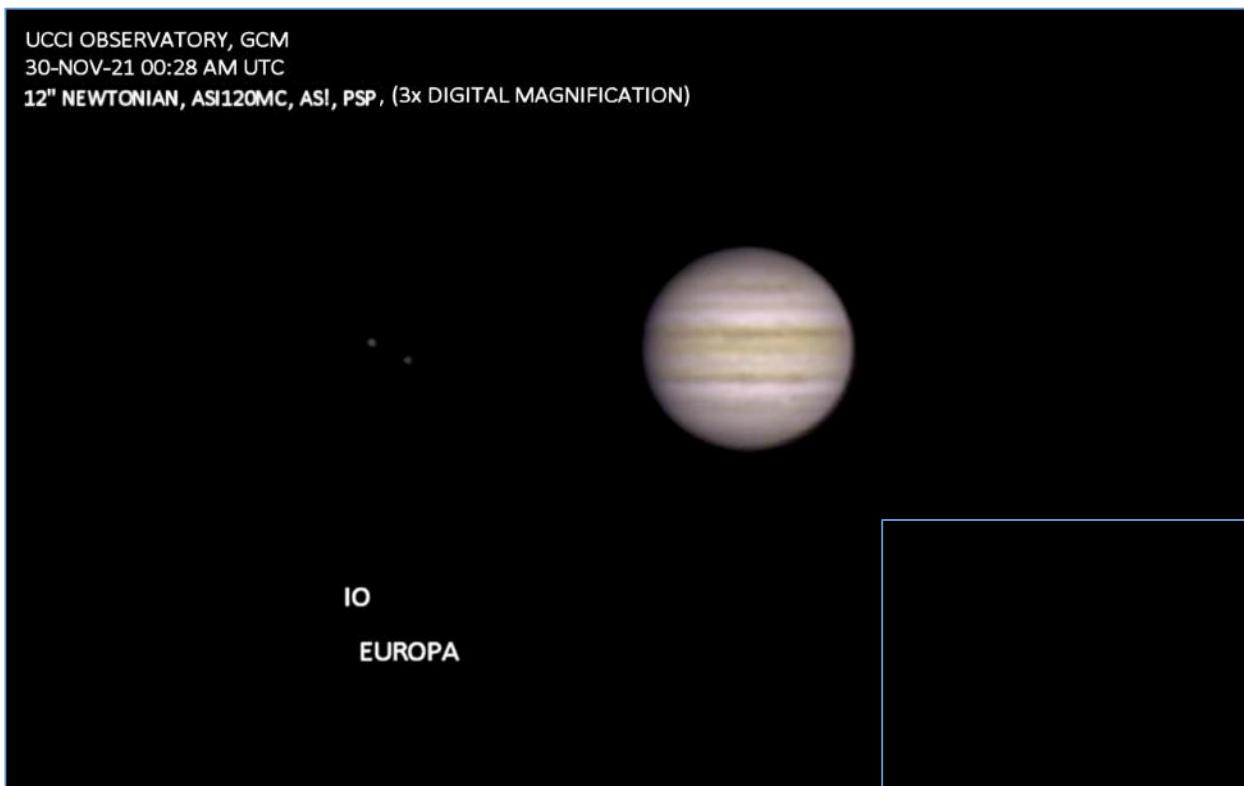


The William Hruedy Observatory

THE FIRST HAND BUILT TELESCOPE BY BILL HRUDEY – USED FOR NIGHTSKY OBSERVATIONS



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IO
EUROPA



UCCI OBSERVATORY, GCM
06-AUG-21 09:46 PM
12" NEWTONIAN 'PIXIE', ASI120MC, ASI, PSP

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UCCI OBSERVATORY, GCM
22-NOV-21 00:11 AM UTC
12" NEWTONIAN, ASI120MC, ASI, PSP

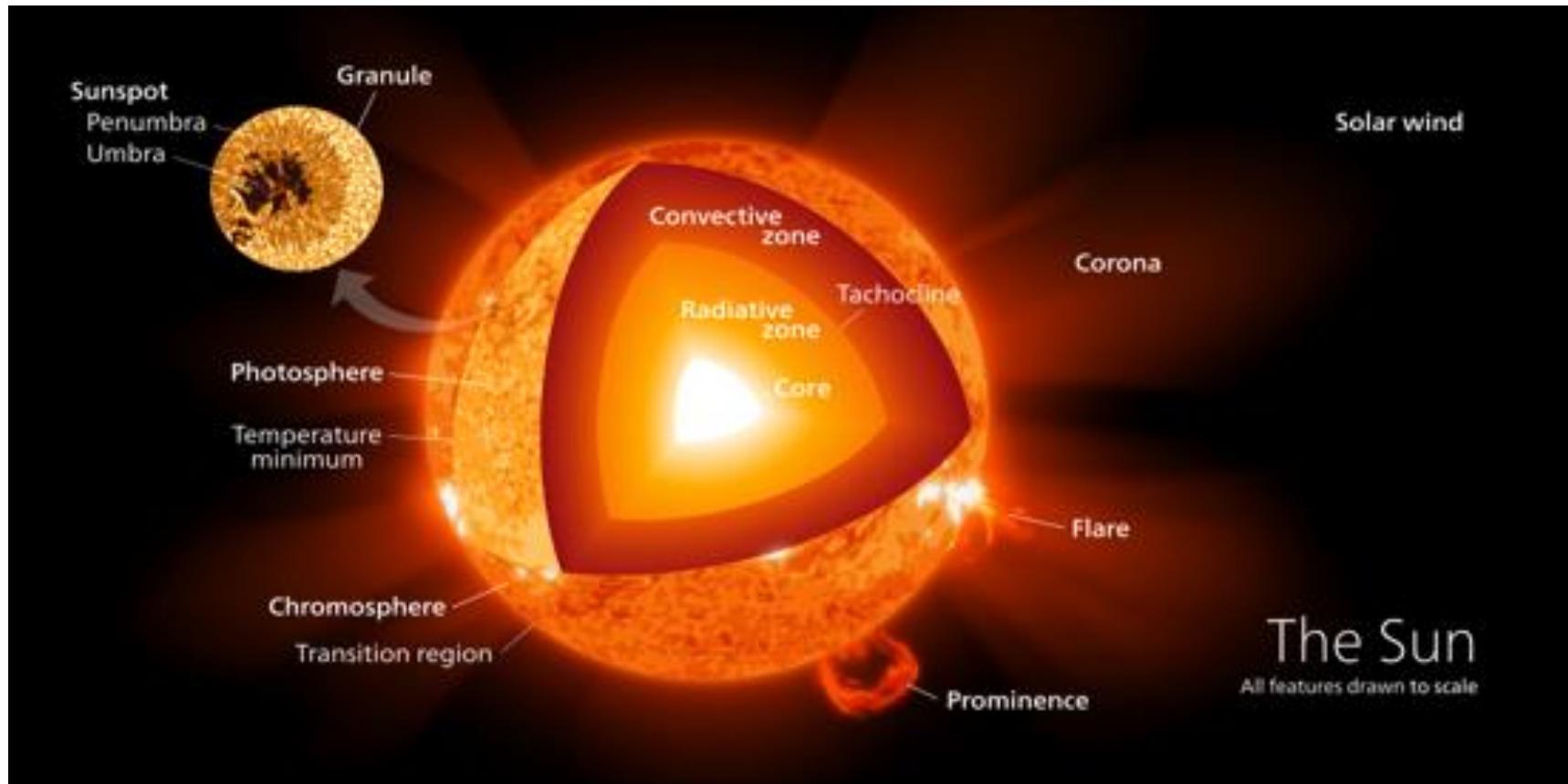


GANYMED
CALISTO

IO

EUROPA

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Element	% of total atoms	% of total mass
Hydrogen	91.2	71.0
Helium	8.7	27.1
Oxygen	0.078	0.97
Carbon	0.043	0.40
Nitrogen	0.0088	0.096
Silicon	0.0045	0.099
Magnesium	0.0038	0.076
Neon	0.0035	0.058
Iron	0.030	0.014
Sulfur	0.015	0.040

About 67 elements have been detected in the solar spectrum.

Continuous spectrum.



Emission Lines

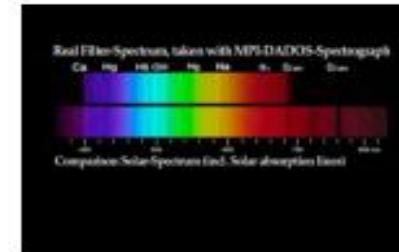
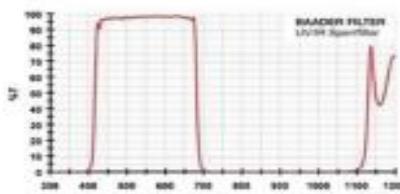


Calcium H,K

White Light

Hydrogen-Alpha

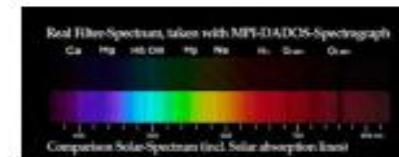
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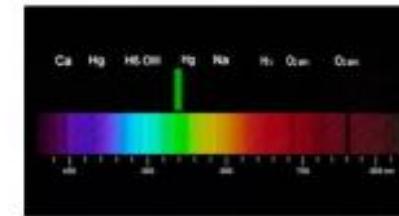
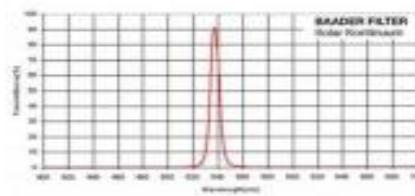
UV/IR cut filter



No Spectrum Graph
As full spectrum used

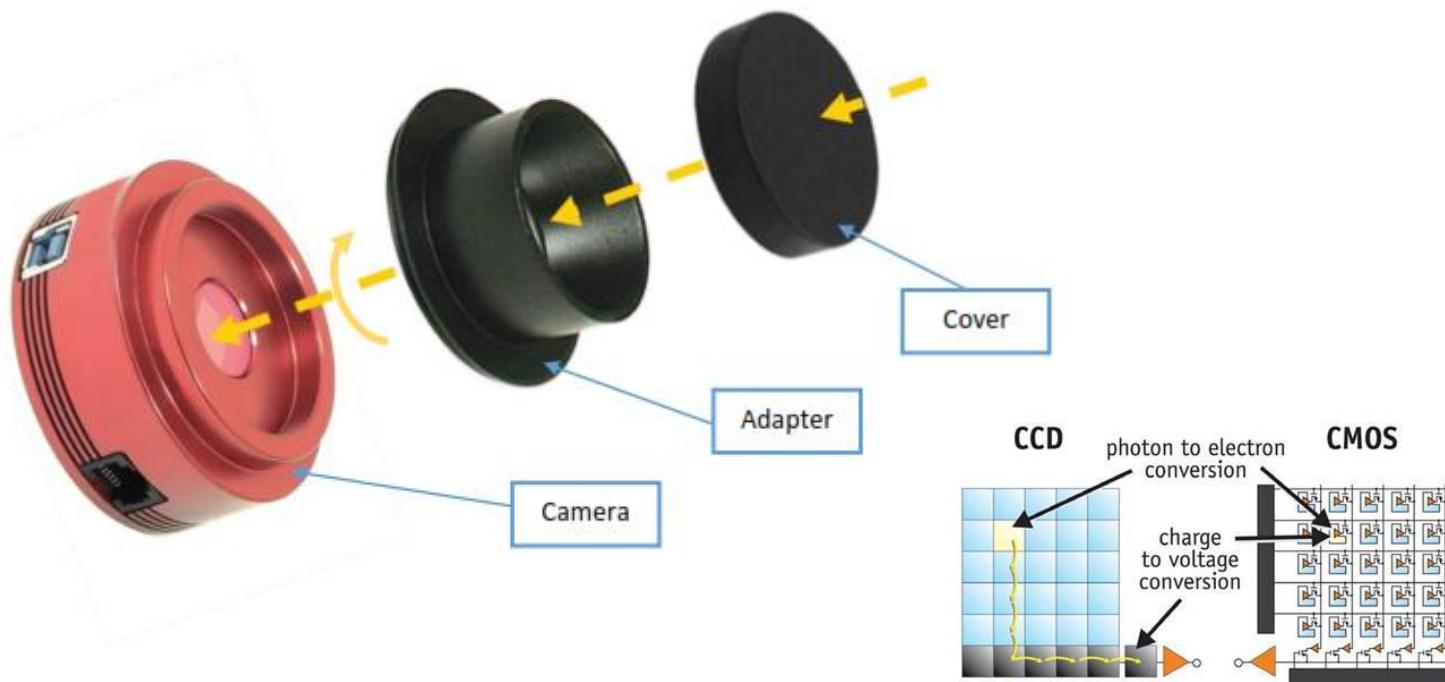


Neutral density filter



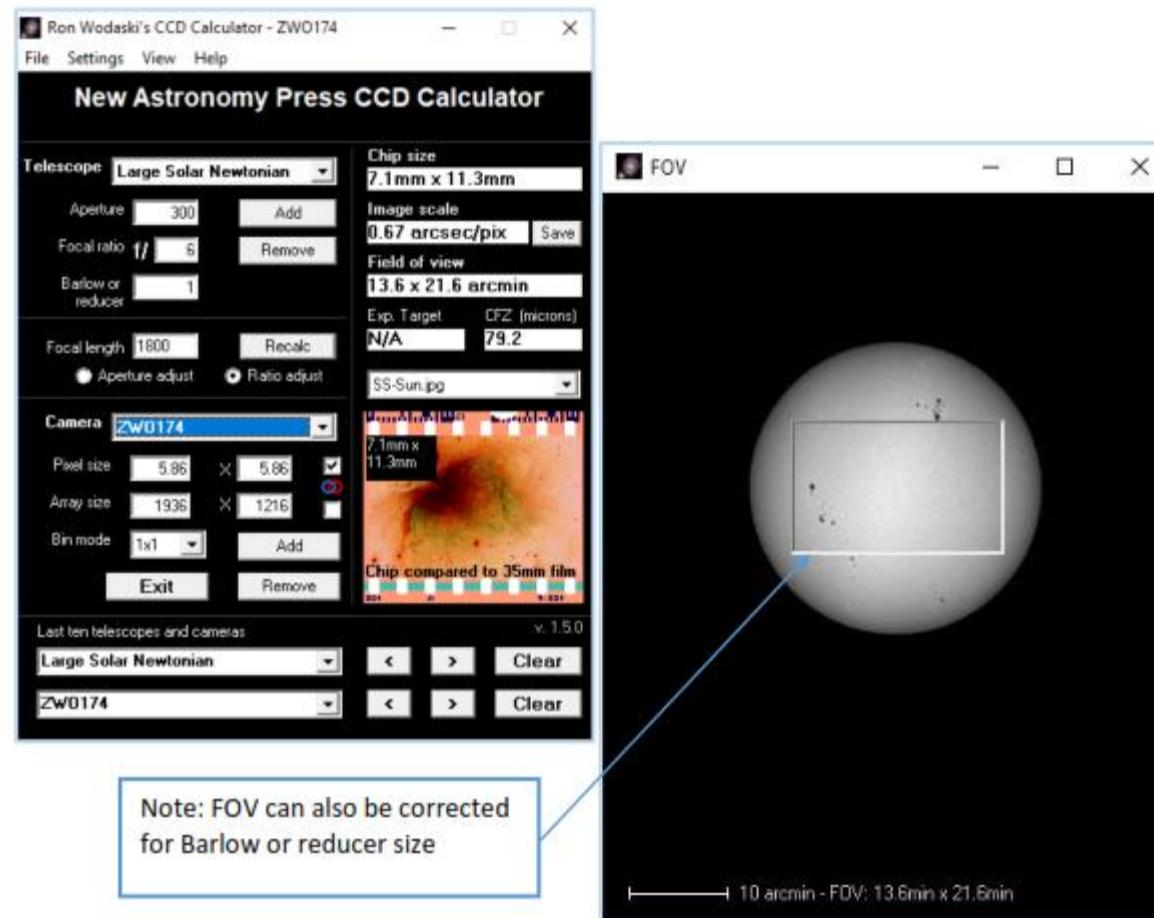
Solar continuum filter

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Make	Camera	Sensor Type	Range, bit	Sensor Size, pixel	Pixel Size, μm	Quantum Efficiency, %	Frames / Sec, fps
Imaging Source	DMK41	CCD	16	1280 x 960	4.65	38	15
ZWO	ASI174	CMOS	16	1936 x 1216	5.86	76	128

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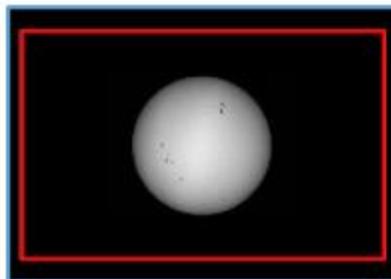


The f/ratio is the focal length of the telescope divided by its aperture.

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With No Barlow Lens,

F/8.3

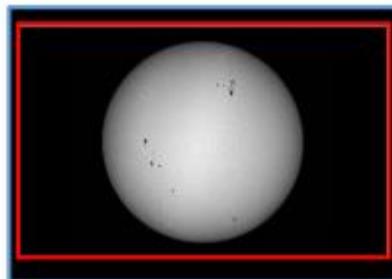


Lunt60 ASI174MM 2.42 asec/pix

FOV: 49.1amin x 78.2amin

(Reduced to 69% to show FOV)

F/7.1



Lunt100 ASI174MM 1.7 asec/pix

FOV: 34.5amin x 54.9amin

F/5.5



8" Solar ASI174MM 1.1 asec/pix

FOV: 22.2amin x 35.4amin

F/4.5

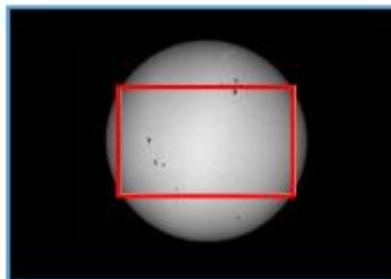


12"Solar ASI174MM 0.89 asec/pix

FOV: 18.1amin x 28.9amin

Using 3xBarlow Lens,

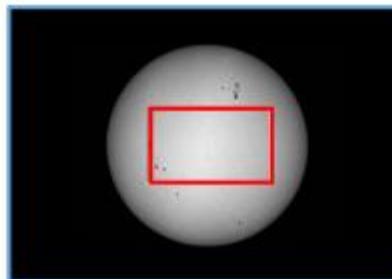
F/24.9



Lunt60 ASI174MM 0.81 asec/pix

FOV: 16.4 amin x 26.1amin

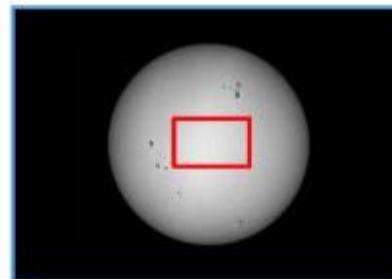
F/21.3



Lunt100 ASI174MM 0.57 asec/pix

FOV: 11.5amin x 18.3amin

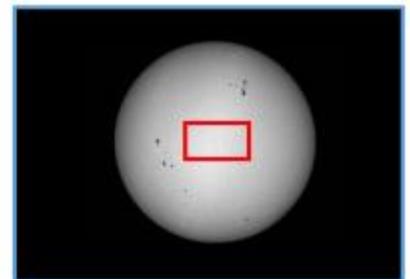
F/16.5



8"Solar ASI174MM 0.37 asec/pix

FOV: 7.4amin x 11.8amin

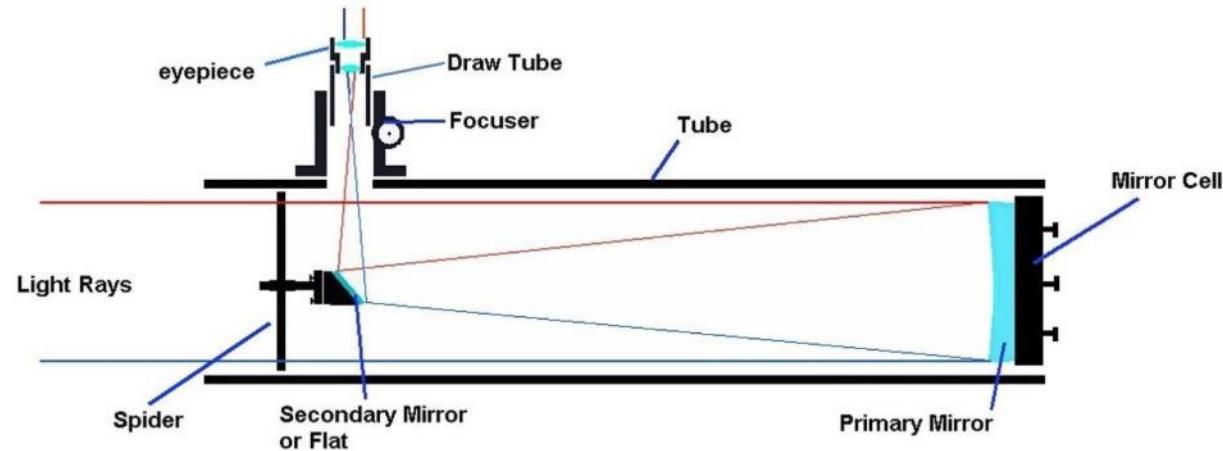
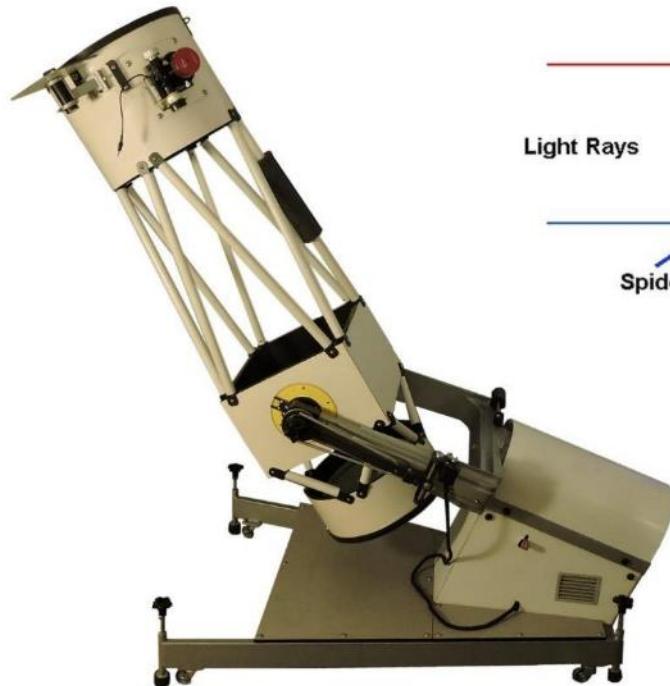
F/13.5



12"Solar ASI174MM 0.30 asec/pix

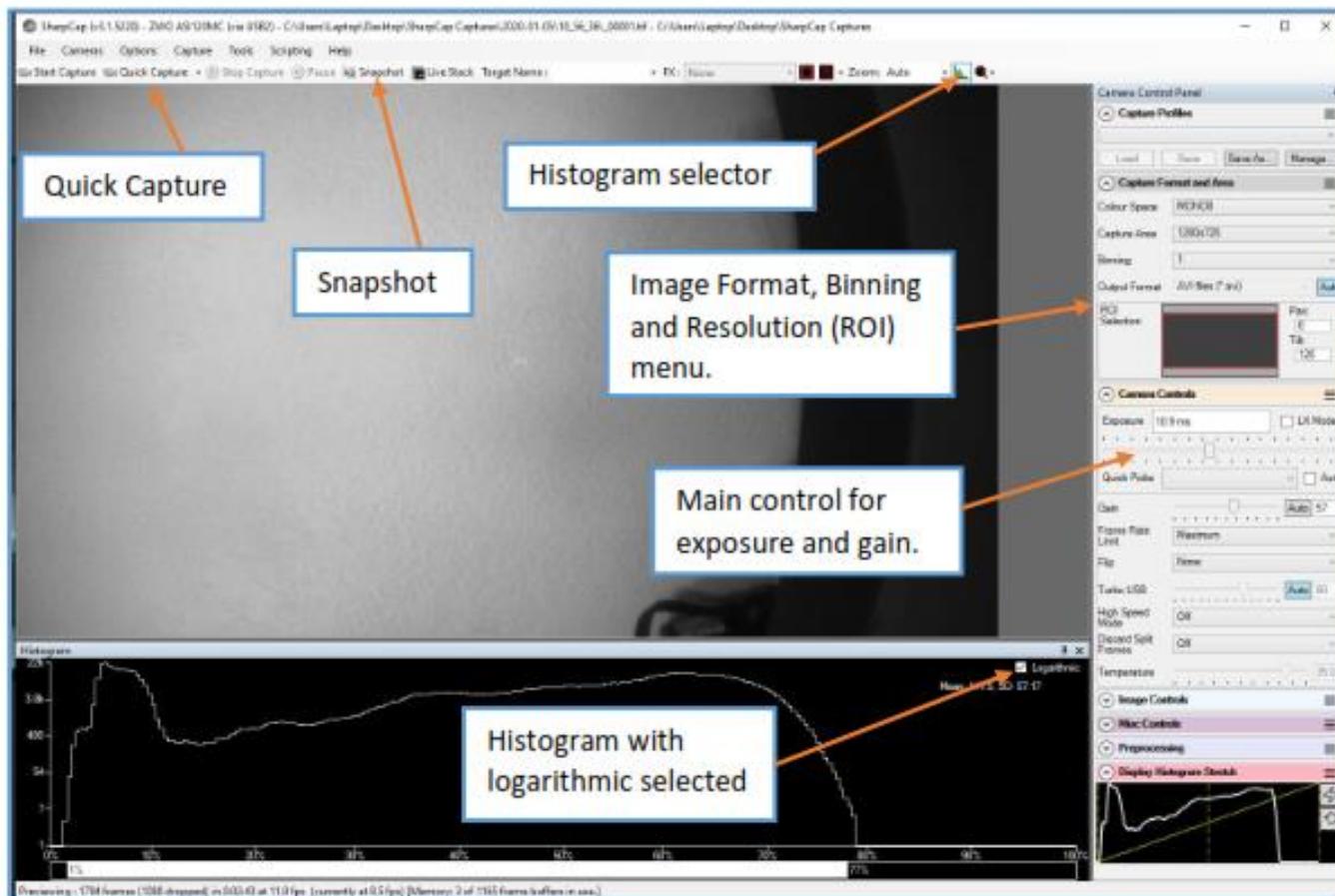
FOV: 6.0amin x 9.6amin

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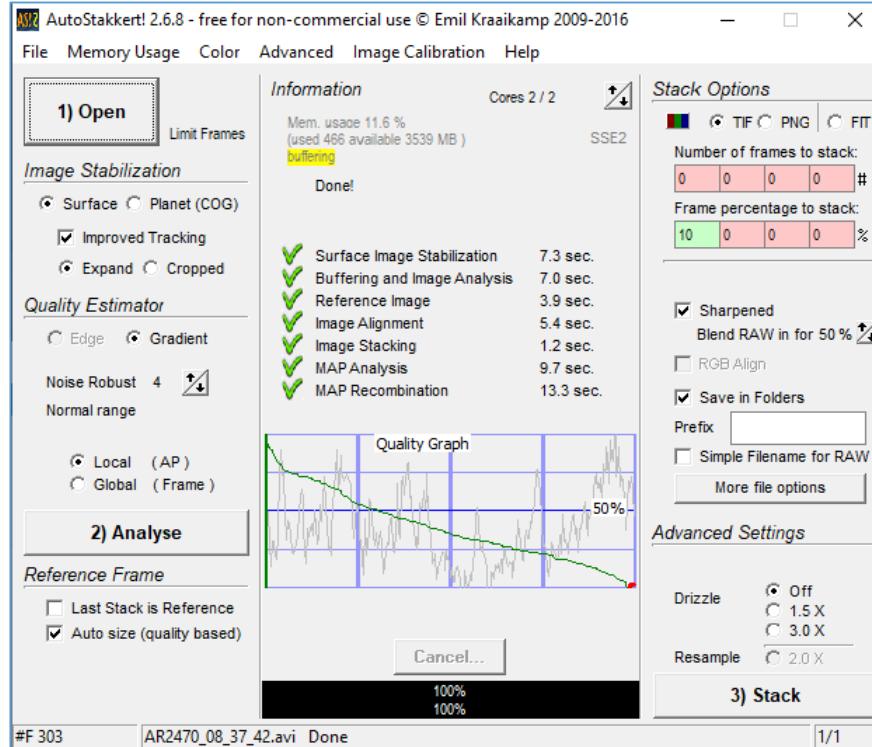


THE SOLAR NEWTONIAN

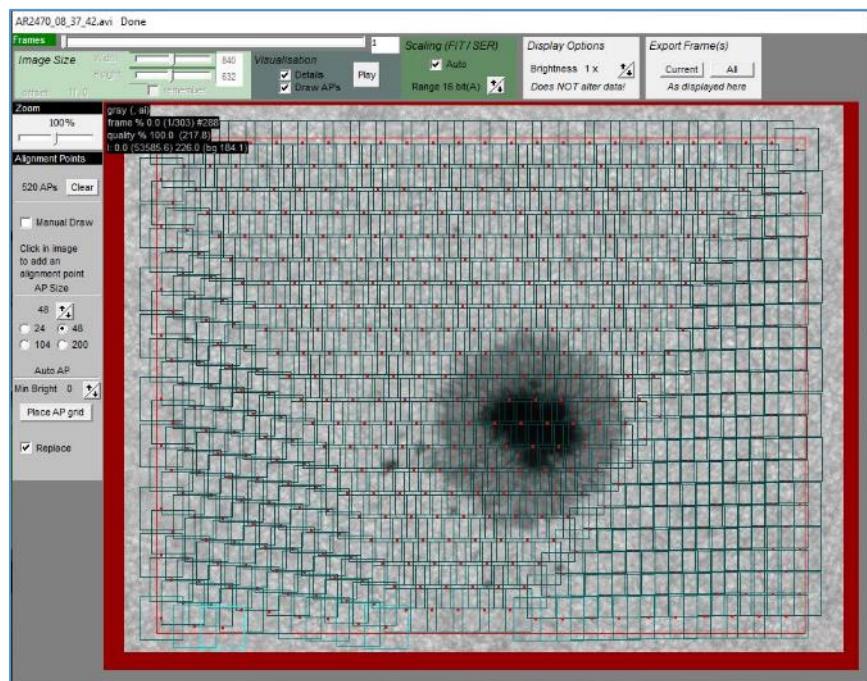
STEP 1



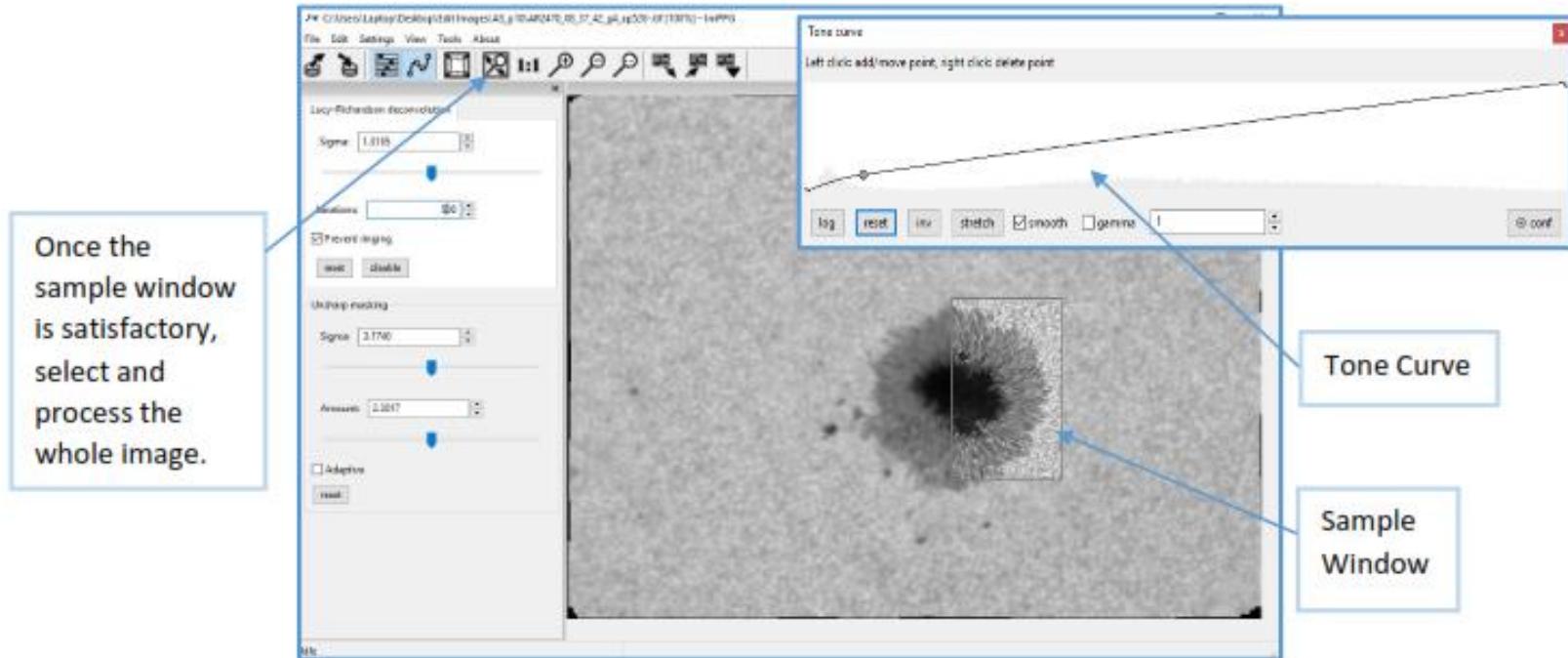
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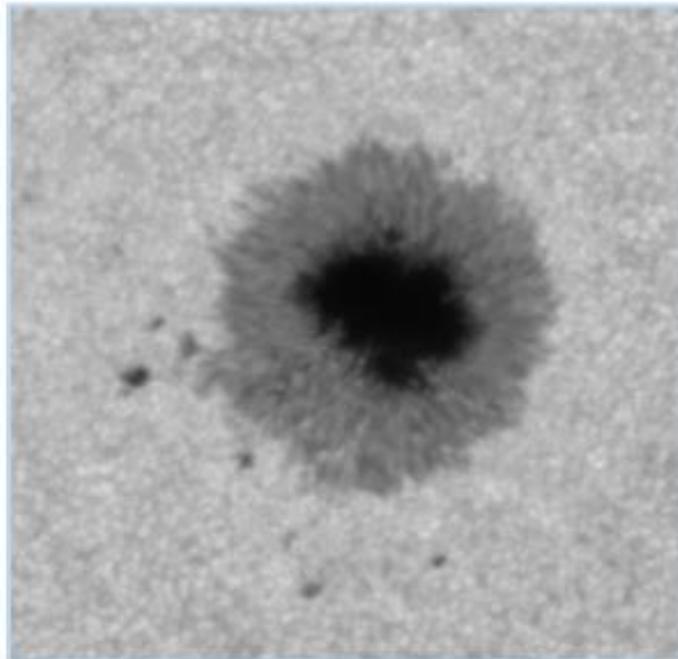
STEP 2



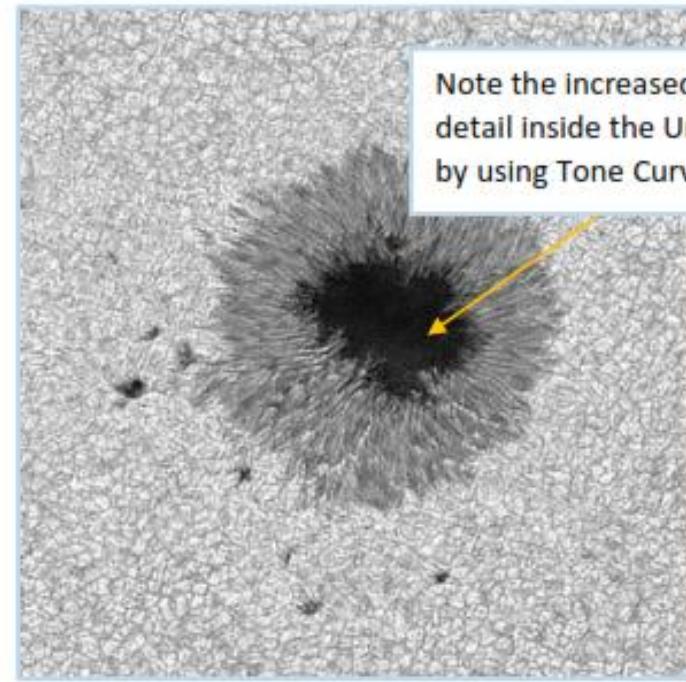
STEP 3



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Stacked Image

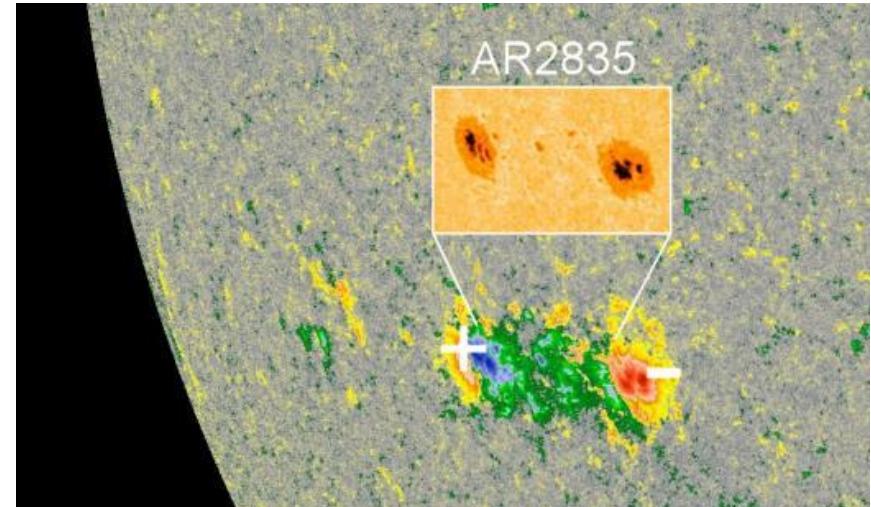


Sharpened Image

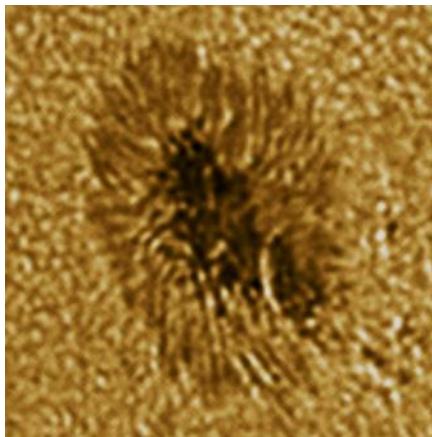
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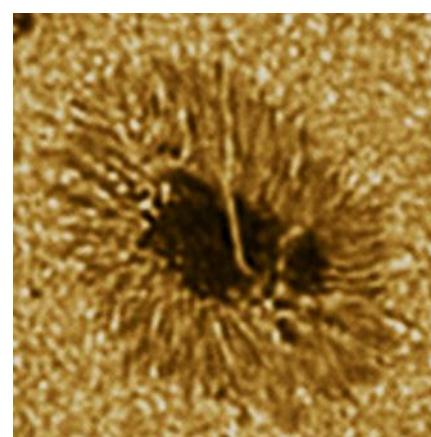
White light image for AR2835



Magnetogram for AR2835 (from spaceweather.com)

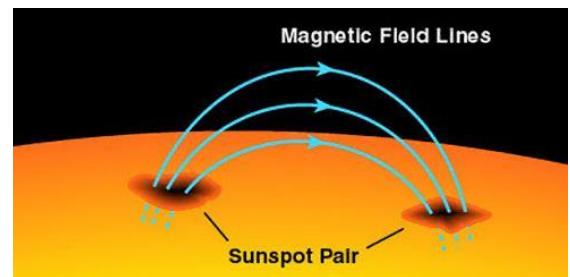


Left part - positive side

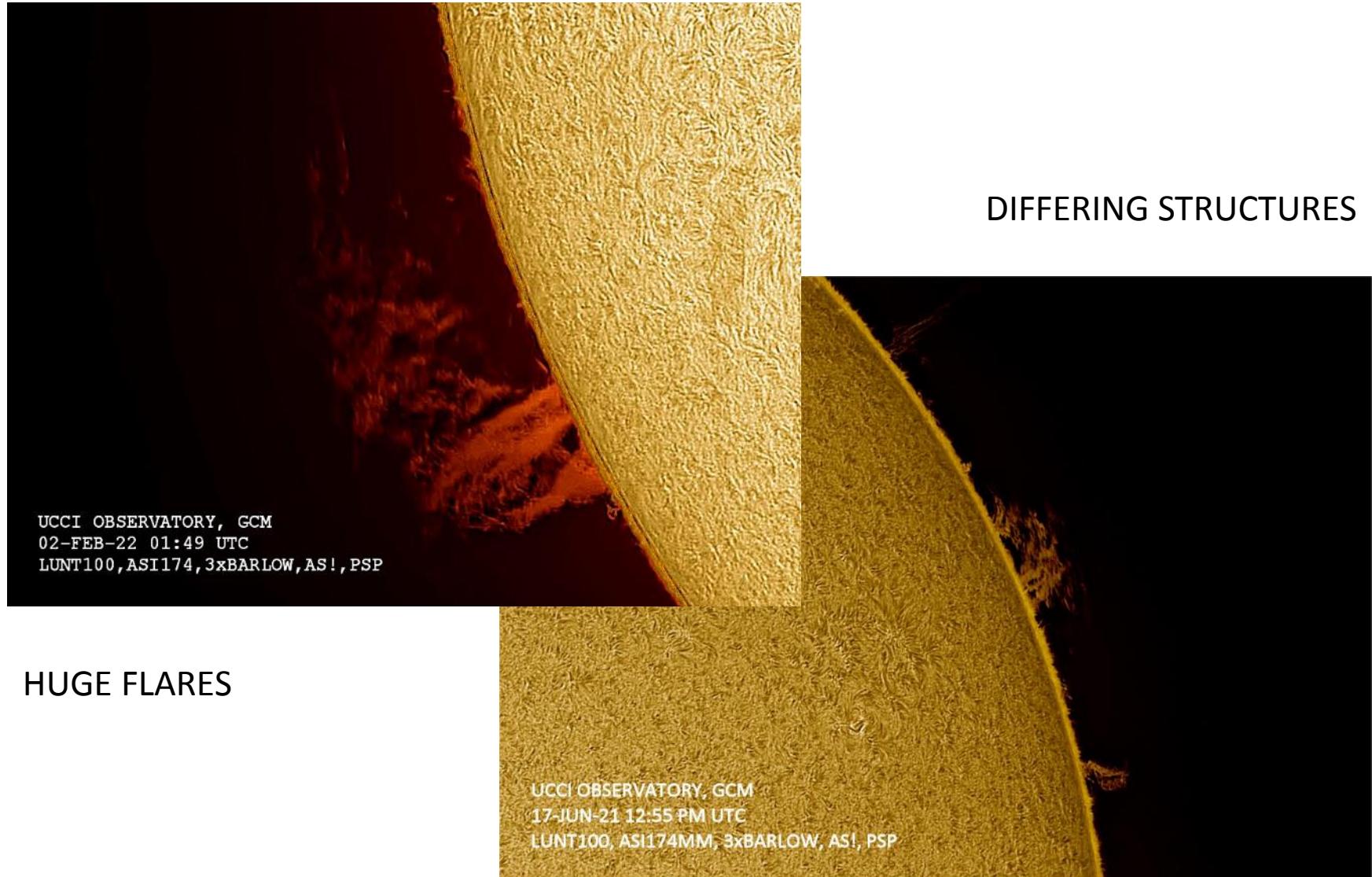


Right part – negative side

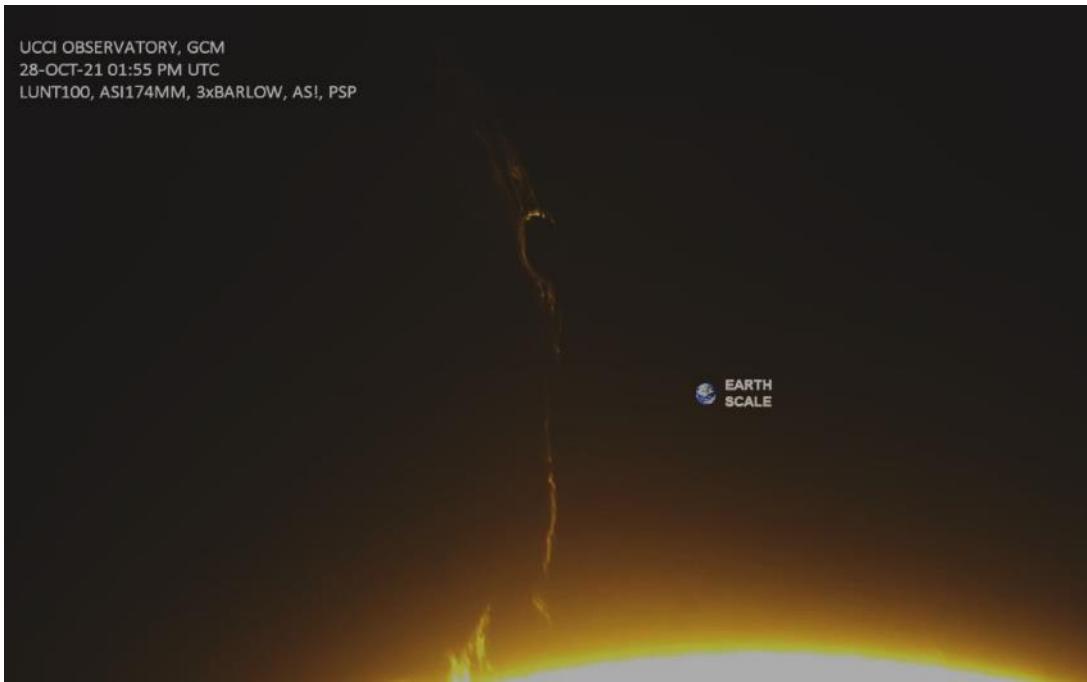
White Light images for AR2835



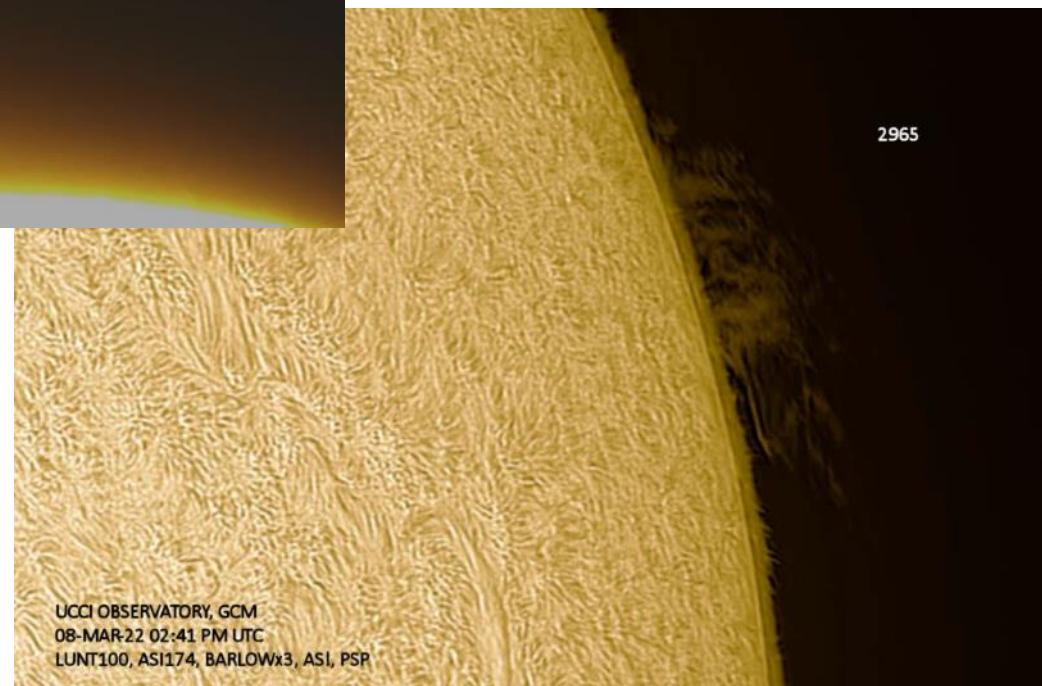
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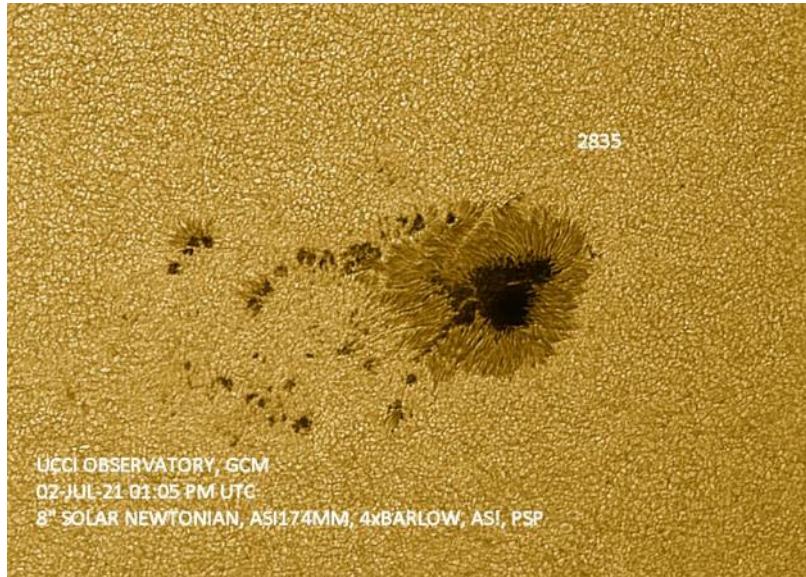
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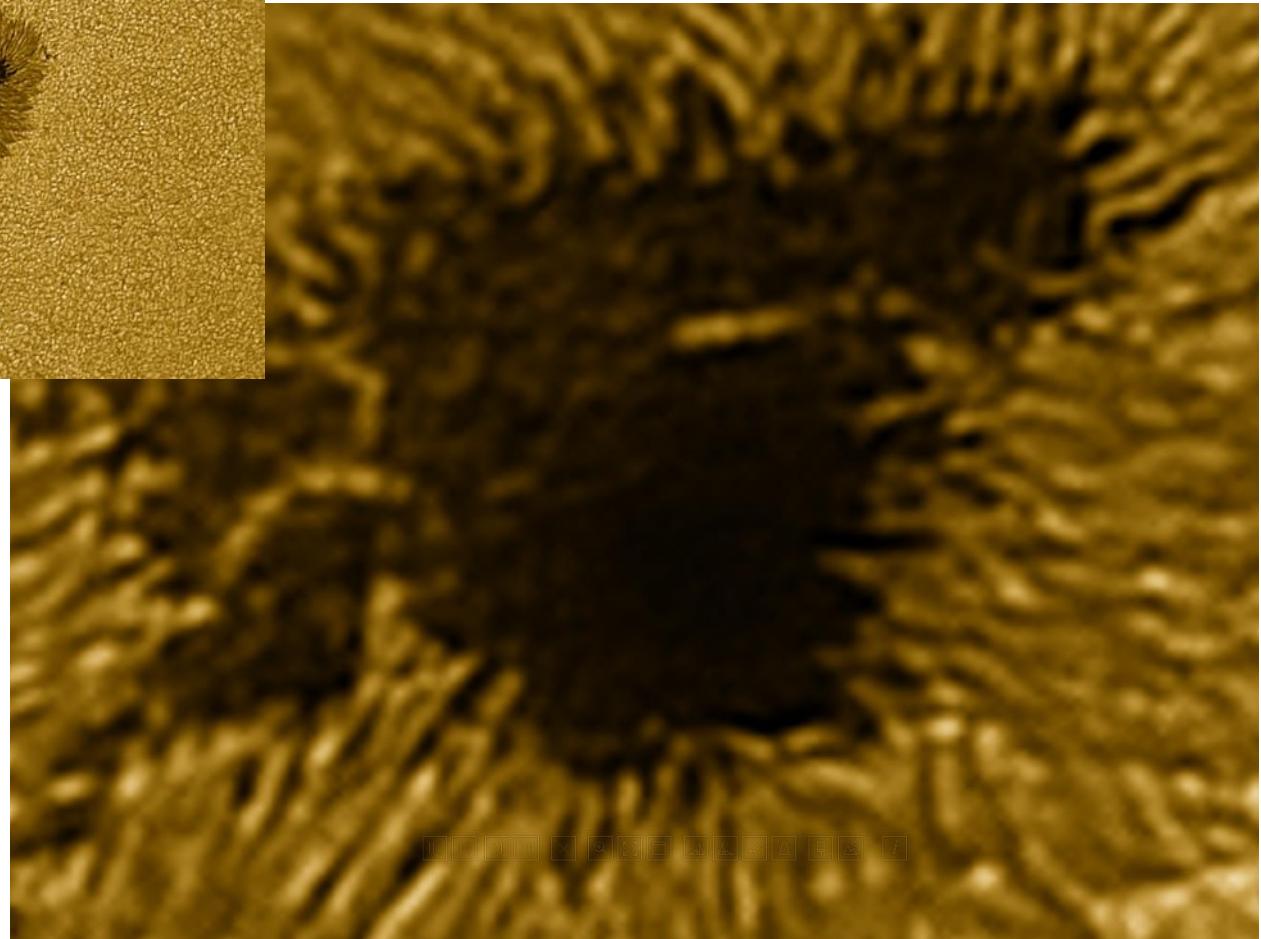
FLARES OF GREAT MAGNITUDE



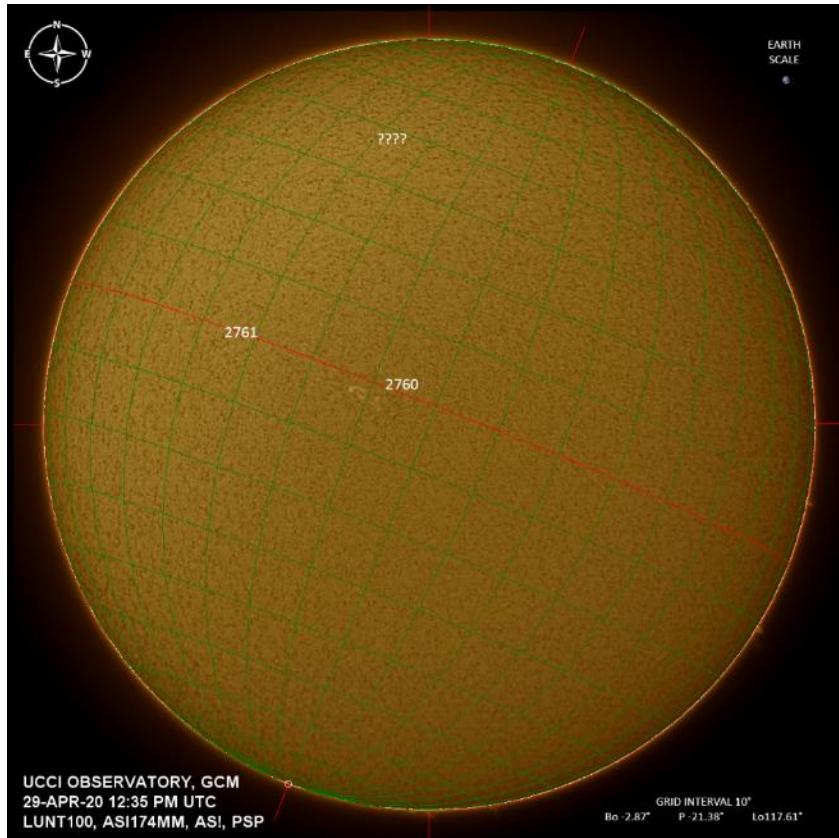
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SUNSPOTS WITH STRUCTURE



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SOLAR COORDINATE SYSTEMS

