

Ideas for the MAS mentoring project:

Observing the Features of the Sun

Resources provided by
MAS member Ned Pastor

**NEVER LOOK
AT OUR SUN
WITHOUT
THE SAFEST,
CORRECT
EQUIPMENT**

Features of the Sun:



A solar telescope:

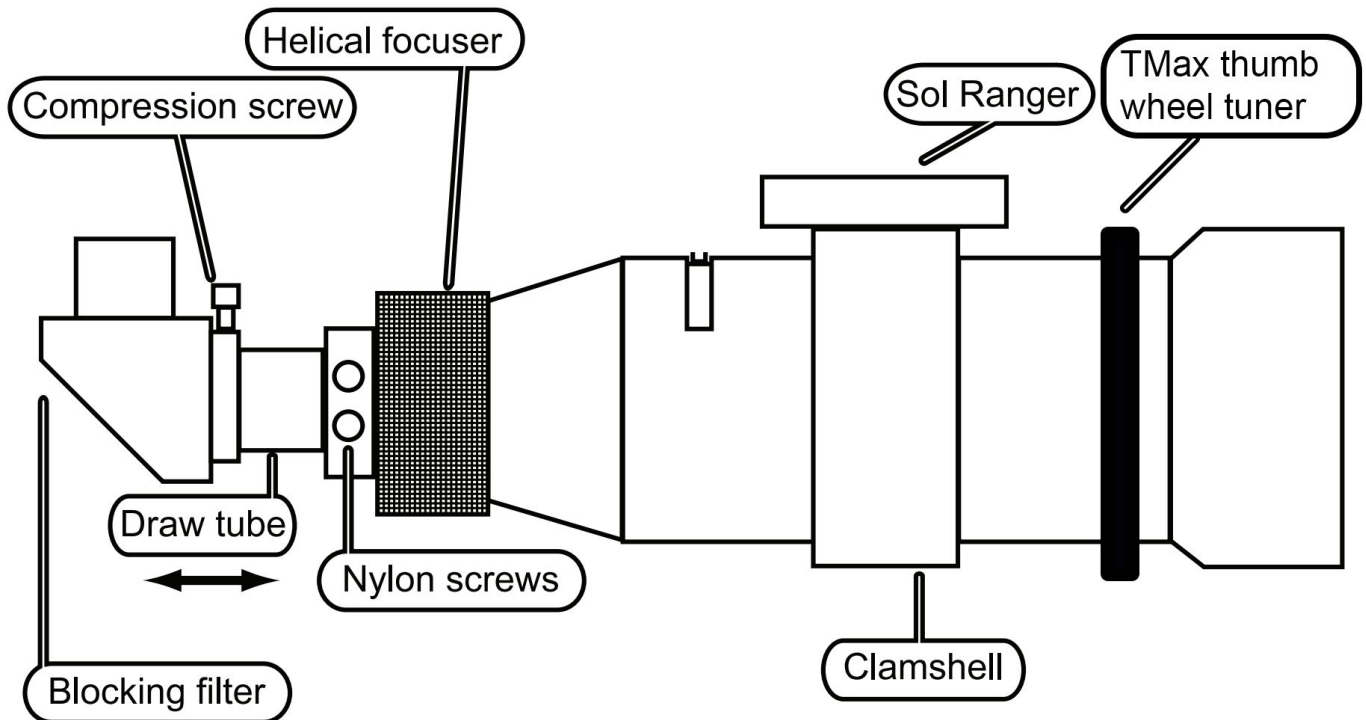


More information:

- Aperture: 60mm
- Focal Length: 400mm
- F/Ratio: f 6.6
- Bandwidth (single stacked) : <0.7 Angstroms

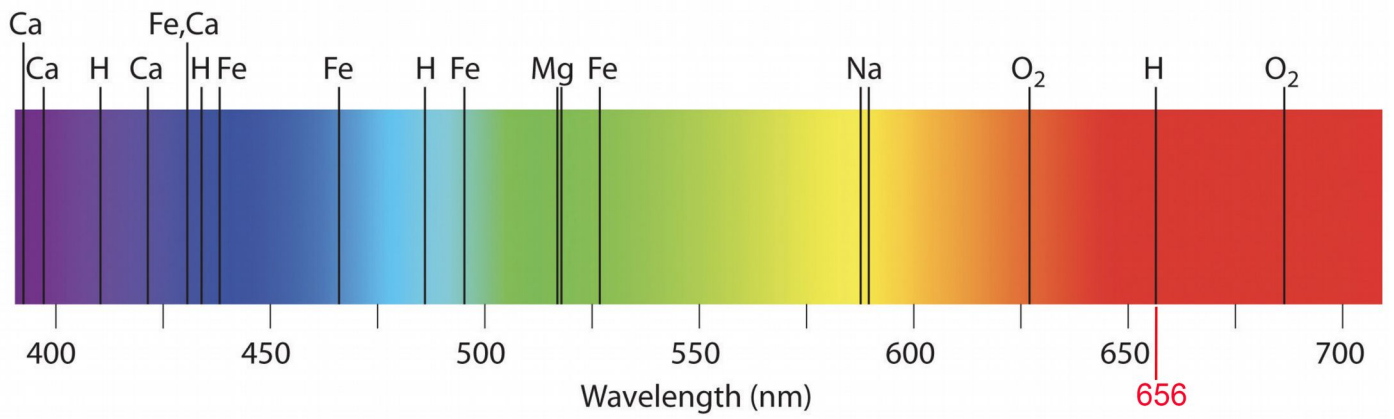
MaxScope 60 Product Description For those looking for more aperture we proudly present the SolarMax 60 dedicated H-alpha telescope. Built to our exacting standards the SolarMax 60 telescope provides the user a telescope with the same lightweight portability of our SolarMax 40 telescope but the extra aperture greatly increases the resolution of detail on the surface and on the limb. With over twice the surface area of the SolarMax 40 telescope the difference is obvious.

The SolarMax 60 telescope comes standard at <0.7 Angstroms with a BF10 and is available with an internal module to lower that to <0.5 Angstroms



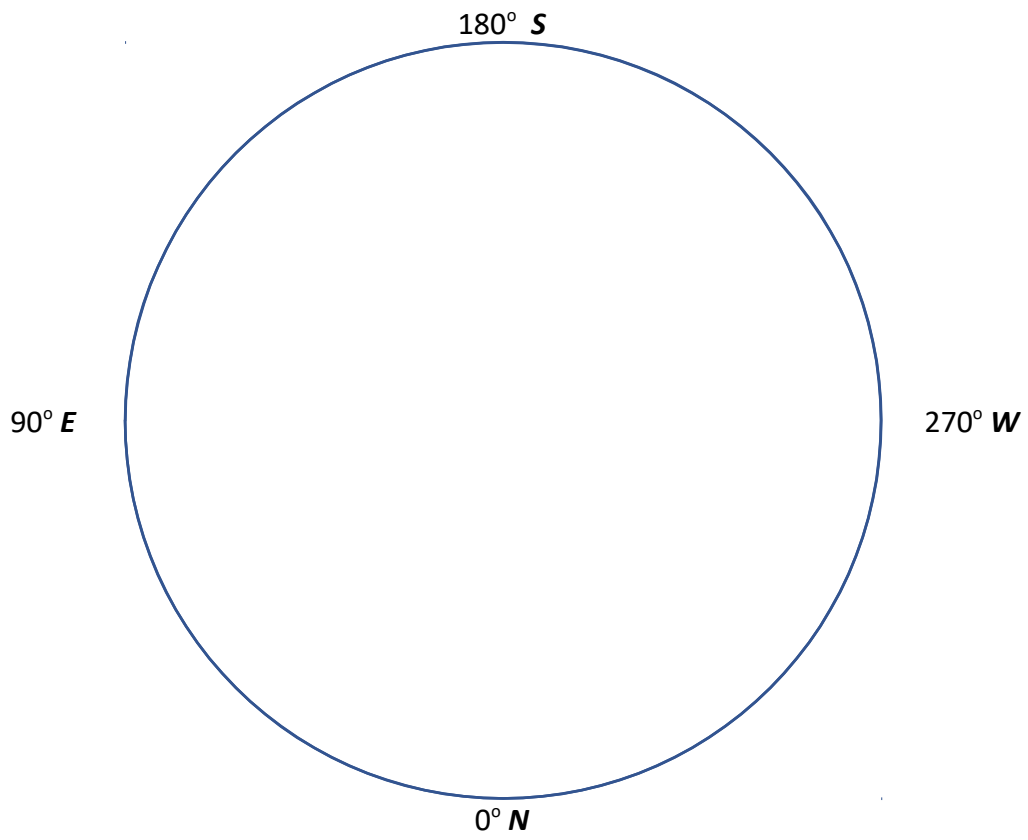
SolarMax II 60

The spectrum of light from the Sun



Simulation 1

Observe and record any active regions on the photosphere and chromosphere



INFORMATION DETAILS

Location:

Date:

Time:

Transparency: How clear is our sky which impacts on seeing conditions for features of the Sun

Sun's Surface Granulations

Resolved	Excellent	
Blurred	Good	
Intermittent	Fair	
Not Visible	Poor	

Tick one

Equipment

Telescope

Filter

Eyepiece

Mount

Solar Diagram Scale: 1 mm = Earth's diameter (12713 km)

Sun Diameter: 1,392,000 km

Sun Distance: 150,000,000 km

Photosphere Temperature: 5778 ° C

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**Sun's Surface
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Resolved	Excellent	
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Tick one

Equipment

Telescope 60 mm Solar refractor
Single stacked < 0.7 Angstroms
Focal length 400 mm
f ratio 6.6

Filter Hydrogen Alpha

Eyepiece 12 mm CMAX
33 X magnification
Plus Barlow to give 66 X magnification

Mount Altazimuth

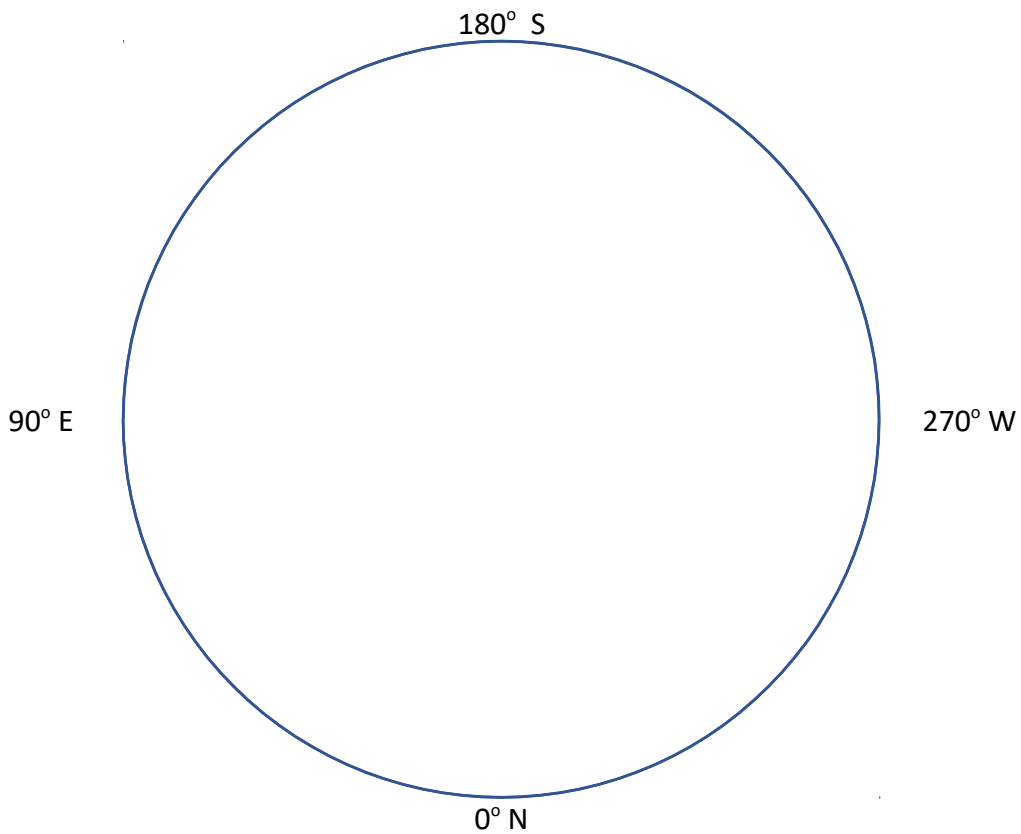
Solar Diagram Scale: 1 mm = Earth's diameter (12713 km)

Sun Diameter: 1,392,000 km

Sun Distance: 150,000,000 km

Photosphere Temperature: 5778 ° C

1: Observe and record any active regions on the photosphere and chromosphere



Location:

Date:

Time:

Transparency:

For the sake of consistency, the Sun should always be exactly 109mm in diameter. 1 mm = 1 Earth diameter

2. Identify and explain what these features that you recorded are:

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3. How do these features affect Earth's:

Magnetosphere

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Atmosphere

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Weather

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Climate

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4. Does our planet benefit from solar activity?

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5. What solar processes lead to these active features becoming visible on the Sun's photosphere?

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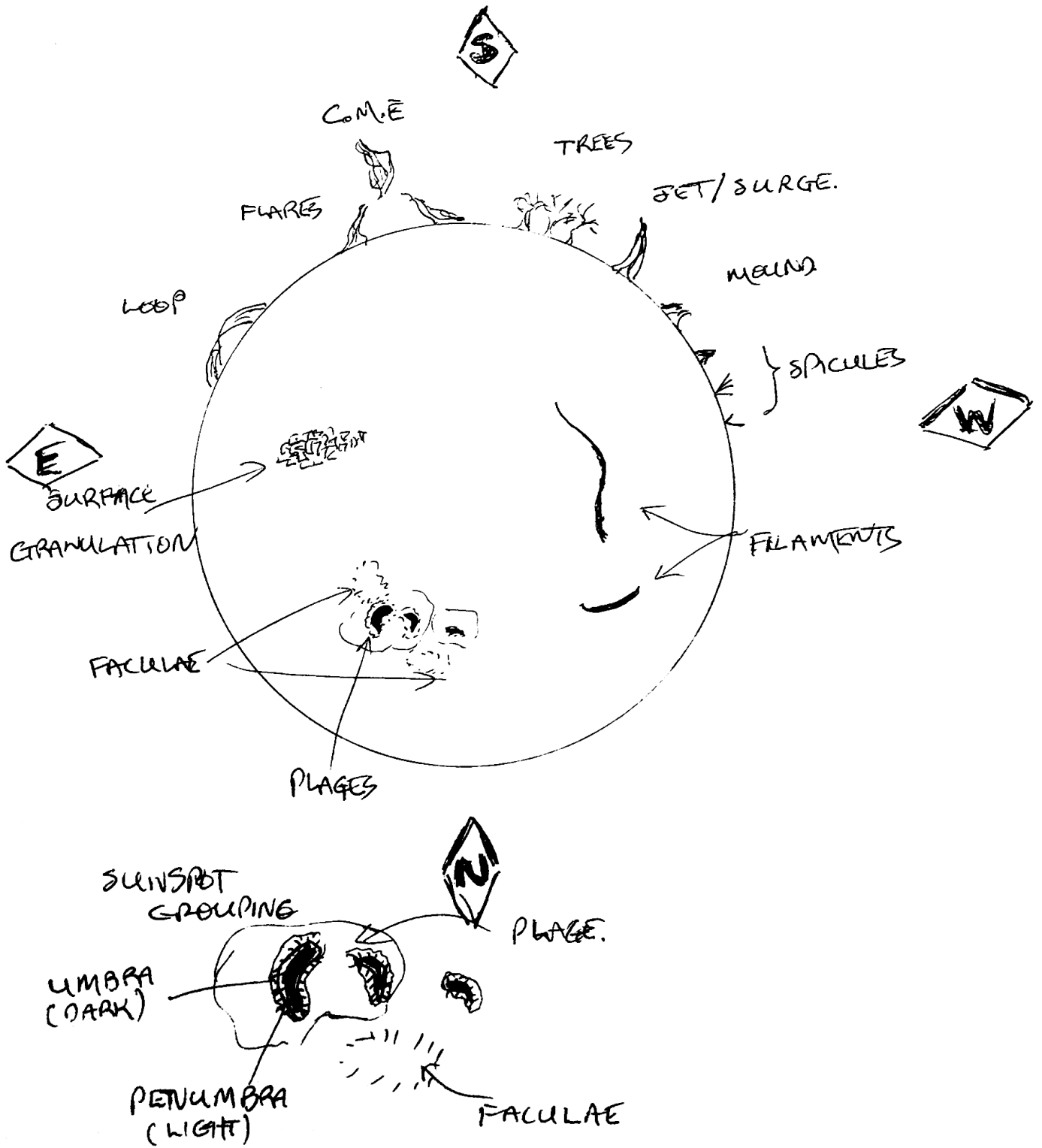
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A sample observation sheet:

EXAMPLES OF POSSIBLE ACTIVE FEATURES



Research the following features on the Sun:

Prominences

Loop
Flare
Tree
Jet / Surge
Mound
Spicules

Coronal Mass Ejection

Sunspot - Grouping

Filaments

Faculae

Plages

Granulation