

The Sun in H-Alpha Observing Program

The purpose of this program is to provide you with an opportunity to observe features on the Sun using hydrogen-alpha ($H-\alpha$) filters. The Astronomical League has a Sunspotters Club (<http://astroleague.org/al/obsclubs/sunspot/sunsptcl.html>) that provides the observer with several features and tasks to be seen on the Sun using “white light” filters. Our program lists features and tasks to be observed on the Sun using an $H-\alpha$ filter. Both programs illustrate the dynamism of our nearest star and allow you, the observer, to fully appreciate its uniqueness.

1. Requirements for Completing the Program:

- Observers will be required to observe features and perform tasks in the list provided below for the Sun in H-alpha Observing Program certification.
- Observations will be telescopic and can be recorded either visually (V) with drawings or electronically/photographically (E).
- For Visual observations, log sheets should contain:
 - Latitude and Longitude of observation.
 - Telescope aperture and focal length.
 - Magnification
 - The type of H-alpha filter used.
 - A small sketch indicating the feature required.
- Photographic or digital imaging observations:
 - The image should be labeled with the feature indicated on the image with an arrow or line.
 - In addition, a log sheet should contain:
 - Type of camera used.
 - Any image processing data

2. Rules for Completing the Program:

- The sketches and electronic files containing digital images (which should be submitted on a CD-ROM) should be sent to the DVAA **Observing Chair** ([hyperlink](#)) for verification.

3. List of features and tasks to be recorded:

- Granulations on the surface
- Sunspots and detail of immediate surroundings (plage, umbra, penumbra and penumbra fibrils)
- Filaments on disk
- Prominences on limb
- Spicules
- Pores
- Faculae

- Demonstration of the changing structural features of a single prominence using at least 3 or more sketches or images.
- Demonstration of the changing structural features of a single coronal loop using at least 3 or more sketches or images.
- Solar flare using 2 or more sketches or images.

Optional tasks:

1. A planetary transit of the Sun.
2. Transit of the ISS
3. Solar eclipse before totality

Hints on the Sun

- **NEVER VIEW THE SUN WITHOUT PROPER FILTRATION!**
- Any observation of the Sun requires proper filtration for safe viewing and protection of your eyes.
- Providing a shade for your eyepiece and eye and/or camera at the telescope helps you discern some of the dimmer features and appreciate any delicate detail

Certificate:

Certificate will have an indication after the certificate number: a **V** for Visual observation or an **E** for electronic observation.