

Brief Guidance Notes on Reporting H-alpha Events

Prominences can appear as a variety of shapes often described by observers as mounds, trees or hedgerows and can form arches, loops, spires or spicules. Some hover above the limb for days whilst others are attached and then can become detached from the limb and drift away into space.

Eruptive prominences are spectacular events. A small prominence very quickly develops into jets and surges, loops or sprays and part or whole of the prominence can be ejected into space.

The size of prominences varies considerably from the smallest spicule or mound to a spectacular eruptive prominence event that can reach to over a million km from the limb. For recording purposes the smallest prominences are not counted i.e. those under 30 arc seconds in height (that equates to a one tenth of an inch on the scale of a 6" diameter disk solar drawing).

Also prominence activity should be expressed by the number of active areas (AAs) rather than individual prominences. The solar limb has been arbitrarily divided into 5° latitude zones, north and south i.e. 0° to 4.9°; 5° to 9.9°; 10° to 14.9° and so on. Each zone is regarded as an AA, so all qualifying prominences within that zone on a particular observing session/day would qualify as 1 event. A prominence has to be attached to the solar limb to be countable so detached prominences, ejecta and hovering clouds are **not** counted. Also an eruptive prominence of short duration is **not** counted.

Filaments are seen in H-alpha as long dark winding strands across the solar disk.

They are in fact prominences but seen face on rather than at the Sun's limb.

Sometimes a limb prominence can be seen looping away over the solar disk as a filament. No count is currently made of filaments but a description and if possible location of the main filaments during the month should be noted and commented upon in an observer's monthly return.

Solar Flares are sudden brightening of flocculus near an active sunspot group becoming brilliant within a few minutes. The flare then fades more slowly than the sudden brightening. The whole event can be short lived, 10 minutes or so or extend for some hours. Activity can reoccur within an active region several times until activity dies down. Optical flares are recorded according to brightness F – faint; N – normal; B – brilliant. They are also recorded under the heading 'Importance' referring to the extent of the flare at maximum brightness S – subflare (area up to 2 square degrees); 1 – area 2 to 5 sq degrees; 2 – area 5 to 12 sq degrees; 3 – 12 to 25 sq degrees; 4 – area more than 25 sq degrees.

When reporting H-alpha events, images can be sent in jpg format to the Director.

Pencil sketches on 6" diameter disk is also acceptable. It is advisable to colour code the separate features for ease of understanding i.e. prominences in bright red; filaments in dark red; flares in yellow.