

## Instructions for Active Region Drawing Form

**DATE/TIME:** Enter the Universal Time (UT) drawing began and ended as follows: YYYY MM DD HH:MM to HH:MM for example 1993 12 21 14:55–15:12 UT.

**ROTATION:** This is the Carrington Rotation Number for the date of observation. This can be found in any good astronomical almanac and our Ephemeris Page.

**CEN.MERIDIAN:** Enter heliographic longitude of the central meridian. This can be found in a good astronomical almanac and interpolated to the time of observation. Accuracy of 1-degree is good enough for most purposes.

**A.R.:** Put the Active Region identification number, issued by NOAA/SESC, here, if applicable.

**ALT:** This is the altitude of the sun in degrees FROM the horizon. Do not put in the zenith distance or hour angle!

**SKY COND:** All that is wanted here is a one word description of the sky: hazy, cloudy, clear, etc.

**SEEING:** Put in the seeing in arc seconds where: <1" is where granulation can clearly and steadily seen, 1–2" granulation can just be seen, 2–3" penumbrae are mottled but individual fibrils cannot be made out, 3–4" no penumbral detail can be seen, 4–5" penumbral/umbral boundary not clear, >5" penumbrae not distinguishable from umbrae (you should probably not be working!)

**CLOUDS:** Put in your estimated percentage of cloud cover. This may require a note underneath to describe cloud type. For example, if you are observing through hazy cirrus that covers the whole sky. Your percentage would be 100% and without a note explaining that it is haze or cirrus this would be confusing.

**WIND:** A simple indication of none (0), light (lt), moderate (mod), and heavy (hvy) will be enough. This may be important when trying to determine if shaking was an observing problem.

**OBSERVATORY TYPE:** Circle the description that most closely matches the type of observatory you have.

### TELESCOPE

**INST. TYPE:** Enter your telescope optical configuration: sch-cas, refractor, Newt., etc.

**MOUNTING TYPE:** Here what is wanted is something like: Dobson, German Equatorial, Fork, etc.

**CLOCK DRIVEN?:** A simple yes or no is all that is needed.

**TYPE OF DRIVE:** Let us know if you have worm gear drive, spur gear drive, poncet mount and drive, sector drive, falling weight drive, pendulum drive or whatever.

**FULL APERTURE:** This should be self-explanatory, but choose your units of measure carefully because you will need to maintain them throughout the rest of the form.

**FOCAL LENGTH and f/:** Give this in the same units as the aperture.

**APERTURE STOP TYPE:** Enter the diameter of the stop and whether it is on or off axis.

**FINAL f/:** Redetermine the f/ratio with the stop diameter as the aperture.

**ADDRESS:** This should be your mailing address, preferably a home address and not a P.O.Box.

PHONE NO.: Give both a daytime (work) number and a night number. Remember, we are working with solar astronomers around the world and get requests for data and for observing at odd hours. Don't worry, we won't contact you in the middle of the night.

Put your drawing and any notes about unusual conditions or equipment, or observations made concurrently, here. Typical comments tell of settings for H-alpha filters (whether on-band or off-band and by how much), or of events observed to be happening on the sun during the photograph (flares, rapid motions, etc.). Be sure to note either celestial cardinal directions (north, south, east, west) or heliographic cardinal directions. If you know the scale of the drawing please include that. The scale can be quickly determined by allowing a sunspot to drift out of the field and time when the sunspot first touches the edge of your eyepiece field and when the last bit disappears. Take this timing in seconds of time and plug that into the simple equation:

$$D(\text{arc sec.}) = 15 t \cos S$$

where t is your timing and S is the declination of the sun on the date of observation.