

## Observing 101

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### Helpful Hints for Beginning Astronomical Observing

Observing will be neither fun nor rewarding if you are not properly prepared. Be prepared for the weather and dress accordingly. It can get quite chilly once the sun sets.

Make sure you have read everything **BEFORE** you go outside! It will be dark! And maybe cold, wet, etc. Have your materials handy and easy to carry.

- observing logs
- pen or pencil (keep in mind that papers will be wet when the humidity is high)
- red flashlight\*
- planisphere, star charts, field guide, etc.

Complete your observing log **DURING** your observing session, in real time. *Do not* rely on your memory. It **will** fail you and it will be reflected in your grade(s).

You cannot rush. You're *observing* – details are the whole point!

- what might seem like a minor detail while observing could prove a critical factor in how you interpret your data later
- sketch everything in the field of view (FOV) just as it appears and label objects of interest
- make careful records: relative sizes, shapes, colors, brightness, variations, etc.

**Each observation** must be properly documented.

- object
- location of the observing site (city and state or latitude and longitude)
- date (including the year – it matters!)
- time (including am/pm) and whether daylight savings time is in use
- temperature (estimate)
- relative humidity (estimate)
- atmospheric conditions (approximate wind speed and direction, seeing, transparency, fog, cloud cover, etc.)
- equipment used to make the observation: eyes, binoculars, or telescope
  - binocular or telescopic observations must indicate an aperture size
  - telescopic observations must include whether a refractor or reflector
  - telescopic observations must include the focal length of the primary
  - telescopic observations must include the instrument used, e.g. if it's an eyepiece you must include its focal length
  - always include notes about any problems with any of the equipment

Start with your eyes and locate the general region of the object on the sky. Gradually decrease your field of view, usually going next to binoculars, and finally to telescopes. With practice, you will adjust to seeing smaller FOVs and finding where you are on the sky will begin to get easier.

Make sure you have followed all instructions and recorded all requested information, including signatures of telescope operators and any other attendance requirements. Full and complete documentation is required for each observation. Incomplete attempts cannot receive full credit.

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\* Do not use another color of light. You will ruin your night vision and possibly that of other observers. Anyone using a light other than red will be asked to turn it off or leave. Any standard flashlight can be covered with a few layers of red cellophane (such as Saran wrap) or a balloon and secured with a rubber band or some tape. While you can purchase red filters (usually plastic or glass) that will fit in most flashlight heads, it is not necessary.