

Observing Logs



An Observing Log is a very important and often neglected tool of recreational astronomy. They're often considered inconvenient to keep, or thought to get in the way of actual observing. However, a well-kept log isn't really an obstacle, and can contribute significantly to the enjoyment of astronomy.

Anyone who observes the sky should keep a logbook. "If the hours we spend under the stars are precious, an observing log helps us remember them. Relying on memory alone just isn't good enough; as years pass, details fade away until events might as well not have happened ... So many people have told me that they would like to start an observing log but haven't gotten around to it. Yet it's easy and fun to do, and our observations will mean so much more when they're recorded accurately." - David Levy – Amateur astronomer and author

For sketching, a dark pencil, eraser and clipboard are useful, as well as sheets of paper with pre-drawn circles representing the field of view. Many observers design a standard observing form, which can be filled in at the telescope. This ensures you don't forget some important detail. After the observing session, your rough observing notes should be edited and transferred to a standard record keeping system, which will map your progress as a deep-sky observer.

Why and When

Why would you waste time keeping a log instead of spending the time observing? There are several reasons. An observing log helps you to preserve and to relive your experiences. Re-reading old logs can bring back memories, especially small details easily forgotten. A well-kept log is a requirement to qualify for any of the Astronomical League observing program certificates. And especially important, filling in the log can help you to train your eye and mind to make you a better observer, and to get more out of your observations.

You should keep a written log during every observing session. Observing logs can contain different levels of detail. So you may wish to keep more than one to accommodate the different types of observing you do. You may want to keep a small notebook for casual sessions, and a larger one for more serious work. When working on one of the observing certificates, you should probably keep a separate log for it. The main thing is to record every observation.

A notebook is your private record of the universe. Although at first you may have to adjust to updating it, the notebook will eventually contain unique records of your journey through the universe. Astronomy offers great personal satisfaction. It would be a shame if all those wonderful memories of your involvement with astronomy simply faded away with time.

What's in a Log

How you record your observations is up to you, but it usually makes sense to separate your log into two parts. One is for the session itself, containing information that won't change much over the course of the night. The other contains entries for observations of individual objects. For both sections, you can reduce the amount of writing you do by establishing codes for frequently repeated words or phrases. Make sure you use the codes consistently, and keep a key handy in case you forget what a particular code means.

What data should you record during your observing? That varies depending on what kind of observing you're doing. As a starting place, important data for the overall observing session would be:

Date, beginning/ending time (UT), observing site, equipment used, Moon phase and altitude, seeing, limiting magnitude, weather conditions

Although that seems like a lot, you only have to record some items at the beginning and end of the session, and it only takes a minute once you get the hang of it.

For each individual observation, the data to record varies depending on what you're observing, and how seriously you're observing it. Some things to consider recording:

Object observed, location, general notes on appearance (distinctive shape, dust lanes, structure, etc.), number of stars, size of object, position angle, brightness, color, other objects in field,

instrument (type, aperture, and eyepiece), How hard/easy was it to find? Sketch of the object

That really is a lot, but even so it's not exhaustive. Pick and choose what's useful to you, and periodically review your logs to see if something else should be recorded, or if something isn't useful. If you observe certain types of objects systematically, you might consider keeping separate observing logs ... Why not take rough notes in the field and then transfer the data to files on your home computer?

Even the most casual celestial sightseeing becomes more meaningful if a few notes are jotted down in a permanent record. Keeping a notebook makes a more satisfied observer. It will remind you of all the things you've seen, the way you felt while observing, and the frustration and successes you've had with the hobby. And, most importantly, it will prompt you to observe more carefully and to see more when you observe.

Sketching the object is more important than many people realize. Even crude sketches can be very effective at jogging your memory later. They are also useful for comparing against photographs for positive identification of the object or features you've observed.

A Happy Medium

You can record your observations on any media that make sense for you. Examples are standard loose-leaf notebooks. Note cards, loose sheets of paper, or spiral-bound notebooks. The main thing to consider is that a useful log is small enough to carry easily, big enough to be able to find in the dark, heavy enough not to blow away in a good breeze, and readable under red light.

Some people find it useful to keep observing logs in a computer database, particularly if you have a laptop, or you already have a computer controlling your telescope. Some people like to record their observations on tape. This is probably the easiest method in the field, but it does require a functioning tape recorder with fresh batteries, and the recordings must be transcribed afterwards. Unless you are a very concise recorder, the transcribing may take longer than the original observing session.

If you are observing a particular set of objects, such as for a Messier certificate, a spiral-bound set of 3 x 5 or 5 x 7 note cards can work very well. Record a single object on each card. You can put a chart showing the location of the object on the back of the preceding card. Photocopy pages from your star atlases, draw on Telrad and eyepiece field-of-view rings, and then cut out the area containing the object and glue it onto the card.

The format of your log is not important; the content is. So any system that works is fine. Some observers prefer to draw in their logs, while others would rather compute. Some keep a diary. And some prefer the discipline of forms. Although forms insure that you remember what to put down, You might find them confining. Blank paper lets you record the unexpected. ... The free-form approach leaves unlimited room for variable star estimates, planetary drawing, times for photographic exposures and notes from other observers.

Finally, try to make the first draft of your log the last draft. If you must transcribe your logs, resist the temptation to edit the entries. If you do, you may lose some of the info, which makes the log valuable, or unintentionally add info from other sources. You'll want your observing log to be the truest record of your session possible.