

## 2: How to use the book

Most objects in the book have three parts: an image of the object, a diagram showing the best months to view the object, and finally a star chart showing where the object is.

The image of the object in most cases is **not meant to be representative of what you will see in your telescope**. Exceptions to that include the sun and moon, and possibly Saturn and Jupiter if you have a sufficiently good telescope.



In the image set above, the image on the left is an image like what would appear in this book, the image on the right is what you might see in an amateur telescope.

The reason I include images that you will not be able to see is so that you know what you are looking for. I find that if I know what an object is supposed to look like, I can see a little more than if I just have no idea at all. In this way, unrealistic images can be beneficial.

Use the image set above and see if you can see more in the image on the right by seeing what is supposed to be there.

The diagram showing the best month is set for the central United States at midnight on the 15<sup>th</sup> of the central month. If you are in a different time zone then you can adjust these charts to suit you. Once you know how many months to add or subtract to one chart, you know for all of them.

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Looking at the above chart, the object is highest in the sky on the 15<sup>th</sup> of April (as opposed to the 15<sup>th</sup> of March or 15<sup>th</sup> of May) at midnight CST and so April is the central point of the gray bar at the bottom.

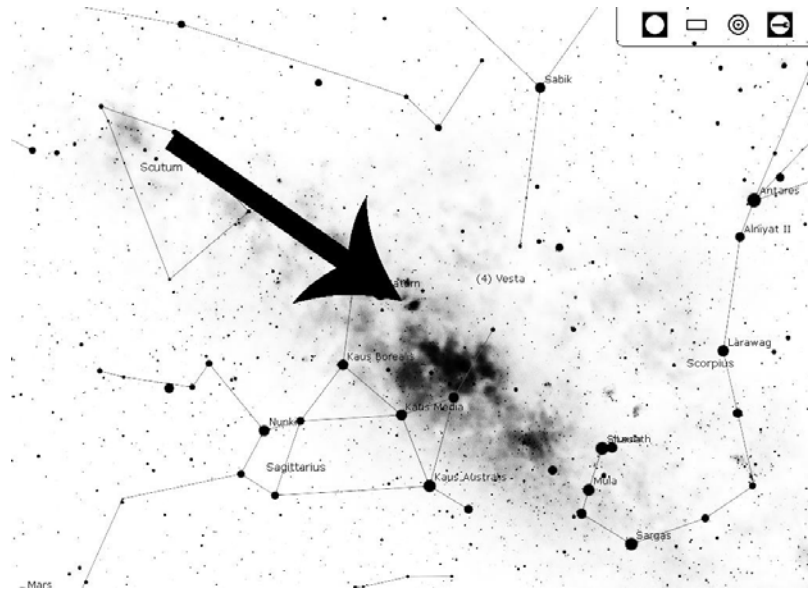
Depending on your location, the object may not be far enough above the horizon to view on months other than the central month.

Unfortunately there is no perfect way to make such a chart but this one has proven to be fairly useful to a great number of people for many years so I continue to use it.

Lastly is the star chart. I have experimented with a lot of different types of charts in my books over the years and decided to try something new. These charts are screenshots out of the freeware program Stellarium and were used with the permission of Alexander Wolf.

I have framed the object with some constellations and major stars and then put a huge arrow pointing to the object you are looking for.

After many years of trying to show people where objects in the sky were it became clear the easiest way to accomplish this was to have them find the constellations, and then navigate from there.



Because books are printed on imperfect presses, and the paper and ink are never perfect, the images can be less than ideal. For that reason you can download the charts off of my website at [www.allans-stuff.com/50amazing/](http://www.allans-stuff.com/50amazing/) in full resolution and color. Of course you could also download Stellarium from <https://stellarium.org/> and look up the objects yourself.

I suggest you buy a good planisphere such as the Miller Planisphere so you can easily find the constellations. This will make finding all the objects in this book fast and easy, even for the novice.

Planispheres typically take a novice a few minutes to figure out and then they are good to go. A quality one like the Miller's will work excellent outside in the dew and last years. They are a great investment. You can find them at <https://amzn.to/2NqrfVn>

If you prefer not to purchase a planisphere, look at the website <https://in-the-sky.org/whatsup.php> as it will provide much of the functionality and more, it is just not as convenient to have outside under the stars.

Once you get outside and start to look for objects there are some important things you need to remember:

- 1) Let your telescope warm up or cool down. If it has been inside in Texas in the summer it is probably 70 degrees and you will be taking it outside into 90 degree temps. Let it acclimate outside for an hour before use and your views will be much better.
- 2) Your eyes need time to adjust too! Find some place away from as much light as possible, spend 15-30 minutes goofing around (not looking at your phone or tablet) until your eyes are adjusted and then start viewing. You can see much more detail with adjusted eyes than without.
- 3) If you need a light to look something up or adjust something, use a red light. Also make sure the red light is as dim as possible. You want just barely enough light to do the task you need done so your eyes stay used to the darkness.
- 4) Be patient, it takes time and experience to make out the most of an object. While I don't expect everyone who reads this book to do this hobby for thirty years or more, the more experience you have, the more you will see, period. This also doesn't mean you won't see anything unless you have thirty years of experience, it just means you need to slow down and work at it.
- 5) Don't be afraid to ask for help. Find your local astronomy club (call a local college, high school, or library) and tell them you could use some help. Most club members are happy to help a newcomer to the hobby.
- 6) Can't find local help and having a problem? Check out my website at [allans-stuff.com](http://allans-stuff.com) and my YouTube site at [www.youtube.com/c/AllanHall](http://www.youtube.com/c/AllanHall).

On many of the objects you may see things on the end of the names such as M20, NGC104, or C41. These are the catalog numbers of the objects.

Virtually every object in the sky has a catalog number so that astronomers can reference specific objects. There are different catalogs, some of which are object type specific, for example some are only stars.

In this book I have tried to limit things to three popular catalogs; Messier (M001), New General Catalog (NGC001), and Caldwell (C001).

As you get more experienced and want to expand beyond the objects presented in this book you can find information on the other objects such as the Messier if you are in the Northern Hemisphere or Caldwell if you are in the Southern.

There are many more objects in the catalog. The Messier contains 110 objects while the Caldwell contains 109. The New General Catalog contains thousands.

There are of course many other catalogs you can choose from but that is far beyond the scope of this book.

One last note; you will notice that the glossary has terms included that do not appear in this book. This is intentional so that it can be used as a reference as your interest in astronomy grows beyond the confines of this beginner text.