

## **HOW TO READ A STARCHART** [adapted to southern African conditions from Brian Ventrudo's "One Minute Astronomer"]

When you're just starting out you need a good basic star chart that shows you where to find the bright stars and main constellations at a particular time and place. At first, star charts are a little confusing. From the webpage: <http://www.skymaps.com/downloads.html>, the latest version of the Southern Hemisphere star chart can be downloaded. A map for the current month is available. The chart tries to represent a hemispherical sky on a flat surface. The edge of the chart represents the horizon, and the centre of the chart is supposed to represent the zenith (the point directly overhead) at 35° South, but can be used up to 15° North and South of this latitude. East and west are reversed compared to a map of the Earth but they will point in the right directions when you raise the map over your head. To learn the night sky, you will need star charts. So here's how to read a star chart:

- Find a location that's isolated from street and house lights. Stray light will make it harder for you to see fainter stars. Also, for the same reason, try to avoid nights with a full moon or too much haze.
- Once you go outside, give your eyes 5 or 10 minutes to become adapted to the dark. And to see the star charts, use a red LED flashlight or a white flashlight covered with red plastic. The red light will preserve the sensitivity of your eye for night viewing.
- Pick a direction to face, say, South, and rotate the chart so South is at the bottom. Now raise the chart overhead. The directions on the chart will now correspond to the directions in the sky.
- Don't try to take in the whole sky at once. Choose a quarter of the map, preferably one with several bright stars or a large well-known constellation like Orion or Crux (Southern Cross). Now, look up at the quarter of the sky that corresponds to the quarter of the map. Make a connection with what you see in the sky with what you see on the map. Take your time... it's a little strange and overwhelming at first.
- Learn a few more stars at a time... don't rush. Once you've identified a few bright stars and constellations, move from what you know to what you don't know. Once you've learned most of a quarter of the sky, move to another quarter.
- While the charts are set for 21.00 (9 p.m.) local time, they are still useful for an hour or two on either side. The stars will appear in about the same position, except for the stars near the horizon. After 3 hours, the stars will have turned 1/8 of the way around the sky. And after 6 hours, they will have turned 1/4 of the way around the sky.
- If you see an out-of-place star near the ecliptic (and in one of the constellations of the zodiac), it's almost certainly a planet. Since the planets move around in the sky almost daily, you will need to consult an almanac or website to figure out which planet you are seeing. We also review the positions of the planets each month in the SKY THIS MONTH.

That's all there is to it. Well, that and a whole lot of practice. Be patient, and savour your personal discovery of each new star and constellation.

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