Mars returns in 2003, from page 1

rises well before dawn and is large enough to see some surface detail in small telescopes. After opposition, as the ecliptic climbs and Mars rises in the evening, it will transit at a higher altitude, possibly providing steadier views. To help you plan your observations, the accompanying table lists rise, transit, and set times for Washington, DC for every Saturday between May 3 and December 27, 2003. Also, the sky chart below shows Mars’s motion against the background stars for about the same period.

**Tips for observing Mars**

Here are several important observing techniques that will help you get the most out of watching Mars:

- **Learn about your target.** Mars has myriad interesting surface features, and there are several maps available that will help you identify what you are seeing (see the references).
- **Optimize your local “seeing” conditions.** By letting your scope reach thermal equilibrium with the environment and by avoiding observing locations near large areas of stone or pavement. Also avoid observing over nearby houses, if possible.
- **Keep your scope collimated.** Even slight misalignment of the optical system can have a dramatic effect on image quality.
- **Make a sketch.** Sketching helps train the eye and gives you a scientific record of the observation. NOVAC member Bob Bunge has made hundreds of detailed Mars sketches (see figure on page 3). See the Dobbins, et al., or Beish and Capen books referenced below for advice on making accurate sketches.
- **Use color filters.** Certain color filters can make surface features easier to see. For Mars, a few of the most useful filters are:
  - Red (Wratten 23A, 25) enhances all surface details;

![Mars Sky Chart](image-url)

Mars will trace a path through Capricorn, Aquarius, and Pisces between May and December, 2003.