Mars in Opposition
By
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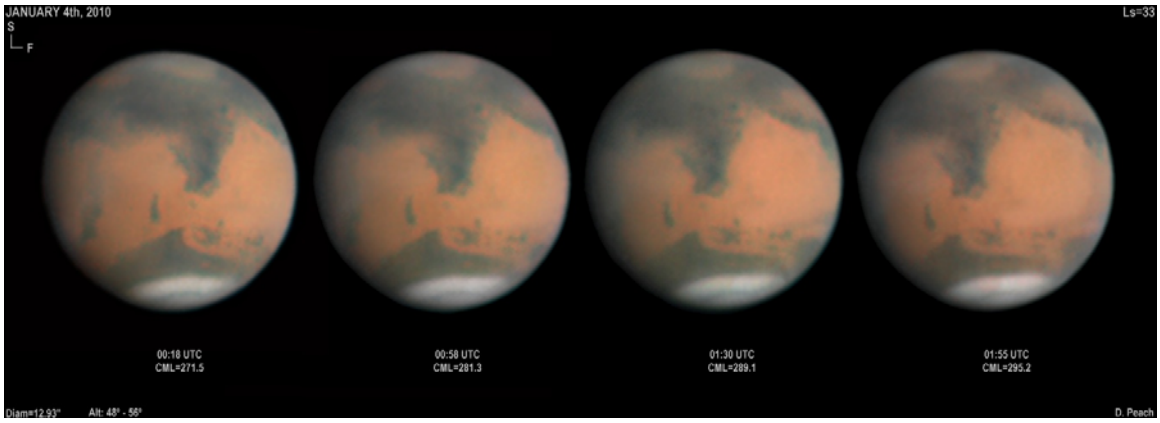
Many of our regular Heavenly News readers have probably either gotten an E-mail or read a blog which states “Mars will be brighter than it has been in thousands of years, and that it will look as big as the full Moon” during January. Both of these statements were born during the Mars opposition that took place in August of 2003. At that time, Mars was closer to the earth than it had been in approximately 60,000 years. However even though Mars was relatively close to the earth at that time, it still only looked like a bright star. The original, astronomically correct statement had been that, through a 75 power telescope, Mars would appear to be about the size of the full moon observed with the naked eye.

Mars is coming back and we will have another Mars opposition on January 29th. However, unlike the opposition of 2003, Mars will be about 61.7 million miles from earth at this opposition (instead of about 34 million miles in 2003). A planetary opposition occurs when the planet lies directly opposite the sun from the point of view of someone on the earth. Since the orbits of the planets are ellipses (kind of like flattened circles), the distance between the planet and the sun varies over the planets year. While earth’s orbit has an eccentricity near zero (meaning its largely circular), Mar’s orbit has an eccentricity of almost 10%. This large eccentricity directly leads to the variation in distances between earth and Mars at opposition.

While Mars will be farther from earth than it was in 2003, it will still be the closest that it will be for the next four years or so. And it will be high in the early night’s sky. For that reason, weather permitting, the **Cameron Park Rotary Observatory will be hosting a “Mars in Opposition” event at the observatory on Friday, January 29th 7:00 PM – 10:00 PM with additional telescopes trained on Mars with docents available to answer your questions.**

Surface features are always somewhat difficult to detect when observing Mars through telescopes. However, the polar cap is especially bright this year and that should be readily apparent from the observatory telescopes. If the air is quiet (and seeing is good), we may also be able to see some of the darker features on the planet’s surface. The image below (taken by Damien Peach) shows how Mars looks when imaged through telescopes similar to those at the



observatory. Our views won’t be this good but we may well see some of these details.

Please join us at the Community Observatory, a gift of the Cameron Park Rotary Club, and let us show you the sights in the sky (including Mars). The docents will be happy to explain what you are seeing and discuss how and why the objects look the way they do. For more information about the observatory and driving directions go to www.communityobservatory.com .