

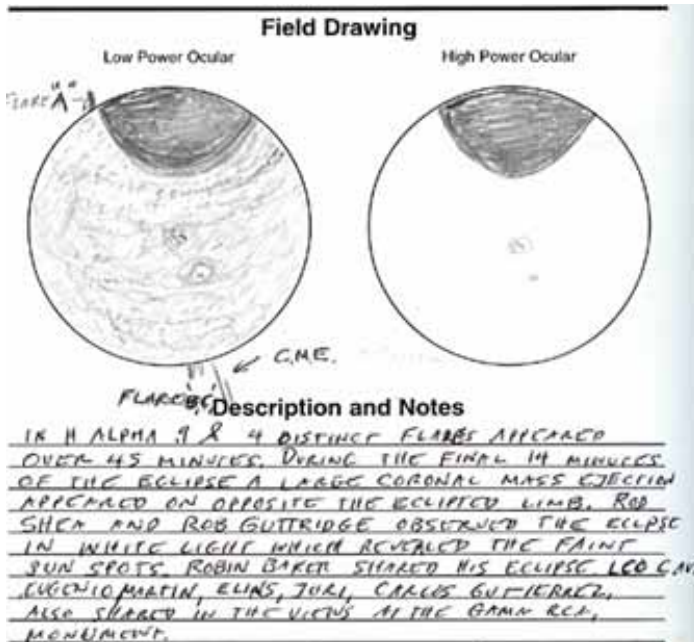
September 22, 2006 Annular Eclipse of the Sun

Upsallata, Argentina

By Bob McGown

Our observing trip to the high Andes valley of Upsallata culminated with an annular solar eclipse. After many nights of excellent observing, a small group of the amateur astronomers from Oregon and some of the GAMA Argentina group traveled out of town to observe the eclipse at 6 a.m. On Friday, 2006 September 22, an annular eclipse of the Sun will be visible from within a narrow corridor which traverses half the Earth.

from the north. We all warmed up as the Sun warmed the valley floor. I set up my Coronado solar telescope nearby. As we waited for the sunrise, we were wondering if the observing site was outside the window for optimum viewing.



Robin, Rod and Carlos waiting for the sunrise

As we stood in the great Andean alluvial plain, between the Cordillera Tigre and the Upsallata Mountain, we waited for the light of dawn to reach the summits of the Cordillera Tigre. It was like a Stanley Kubrick 2001 Space Odyssey movie as the line of the descending alpenglow illuminated the sunlit the Andean summits peering above alluvial valley, like guardians Andean ranges. Like a glowing soldiers marching along the Andean mountain tops, the horizontal line of sunlight crept down the high glaciers.

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The path of the Moon's antumbral shadow begins in northern South America and crosses the South Atlantic with no further landfall. A partial eclipse will be seen from a much larger region including Argentina and South America, the eastern Caribbean, western Africa, and Antarctica. This was the 16th eclipse of Saros 144. The series began with the first of eight partial eclipses on 1736 Apr 11. The first central eclipse was annular in the Southern Hemisphere on 1880 Jul 07.

The series will produce a total of 39 annular eclipses, the last of which is 2565 Aug 27. The eclipse series terminates on 2980 May 05 after 23 more partial eclipses. For future eclipse predictions, Fred Espenak has worked out many eclipses up to a thousand years into the future. (<http://sunearth.gsfc.nasa.gov/eclipse/eclipse.html>)

There were eight of us who ended up at a stone monument about 2 kilometers out of Upsallata. GAMA members who observed the eclipse at the monolith site: Leo Cavnano, Carlos Gutierrez, Elias Delgado & Eugenio Martin. Rod Shea set up his 90-mm Takahashi with an extender Q and white light filter. Robin Baker had his eclipse glasses and a lot of enthusiasm! Rob Guttridge had his 80 mm refractor set up below the monument, which initially blocked the cold breezes coming



Robin and Leo watching the eclipse

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In a coronal like glow above the Upsallata range, the sun rose to our cheering and shouts. It was a few minutes until we saw the bite out of the lower portion of the sun. We shared observations between scopes and studied the disc. Rod and Rob counted the tight sunspot group. After the sun rose higher in the atmosphere, they also spotted a faint sunspot group below the main group which was not easily detectable.

For this eclipse, I had my Coronado PST with a borrowed 13 mm Nagler Televue from Rod. As the Sun rose in the sky like an Incan god, the flares and prominences emerged along the disc. A distinct flare was visible at the edge of the eclipse. After the eclipse was 45-minutes into the migration of the moon across the sun's disc, a solar flare emerged on the south limb of the Sun. There were three distinct flares that stood alone. After awhile the easterly most flare emerged into space and became an amazing long flare. This flare was about 1/14 the diameter of the solar disc. Shortly thereafter, the flare separated and became a coronal mass ejection. It was observed by all as we all took photos of this amazing phenomenon.



We watched the valley come alive as great condors sailed on the high Argentine air currents. After the eclipse the Argentinian amateurs adorned the stone monument with eclipse information and the logo of GAMA and Rose City Astronomers. This was some excellent cosmic graffiti!

Meanwhile, at the Gran Hotel Upsallata, Greg and Joni Babcock set up their scope with a white light filter at about 8 a.m. They were joined by Dareth Murray as they observed the eclipse from the comfort of the hotel

As a coincidence, the space launch dispatchers cast off Solar-B an international solar research mission to study the sun was launched Friday, Sept. 22 at 4:36 p.m. CDT from Japan. The launch vehicle flew smoothly, and mission controllers have confirmed the satellite's successful placement into its scheduled orbit. In orbit, Solar-B's newly given nickname is "Hinode" which means 'sunrise'. The Japan Aerospace Exploration Agency, Solar-B is collaboration among the space agen-

cies of Japan, the United States, United Kingdom and Europe. The Marshall Center oversaw the development of the spacecraft instrumentation provided by NASA, with additional support by industry and academia.

There was a cosmic feeling after the eclipse. Seeing the concentric shadow's silhouette of the Moon against the bright Sun, one might imagine the dance of the solar system and the Moon's orbit. Like the ancient druids dancing before a Stonehenge eclipse ritual, the Andean eclipse brought about a feeling of closure to our astronomical expedition to Argentina.