



October, 2008

-Regular Meeting-

Will be held on Wednesday, October 1 at 7 p.m. at the Nielsen Observatory on Nickel Plate Diagonal (at the Equestrian Center just down the road from the Visitor's Center).

Elections and more.

-Board Meeting-

Will be held on Thursday, October 9 at Blue Sky Restaurant on Rt. 58 in Amherst.

The meeting is always open to everyone.

-Programs on the Way-

November, 2008 - Telescopes 101 by Jim Cunningham.

December, 2008 - Holiday Dinner

-Selling Points-

For sale: Celestron CPC 1100 XLT GoTo Schmidt Cassegrain-

- Optical design: 11" Schmidt-Cassegrain
- Focal length: 2800mm, f/10
- Finder scope: 50mm, with quick-release bracket
- Mount: Altazimuth, dual fork arms

Contact: Piper Pasquale by phone at (216) 212-9901 or e-mail piperpasquale@yahoo.com.

Astro-News

October, 2008

September 24 - The solar wind is a constant stream of charged particles emanating from the Sun. Though deadly to astronauts, it actually forms a protective envelope around the solar system known as the heliosphere (both Voyagers have crossed the termination shock and are now in the heliosheath - the furthest any man-made object has ever been from the sun). The heliosphere protects us in large part from cosmic rays emanating from elsewhere in the galaxy.

Recent data has shown that the solar wind is at its weakest since accurate measurements were available. This could have an effect on the size and strength of the heliosphere, and thus an effect on us. Though the sun goes through natural 11-year cycles, each with a solar maximum and minimum, the solar wind has been weak for much longer than expected. Of course, the time to worry about this is probably never. Our own atmosphere protects us from most of the cosmic rays raining down on our planet.

September 20 - Add to dark matter and dark energy a new cosmic mystery - "dark flow." The problem arises from observations of the CMB (cosmic microwave background) done by WMAP (Wilson Microwave Anisotropy Probe). Scientists used a tricky method to get the measurements. In looking at WMAP's measurements, clusters which contain very hot x-ray emitting gas will scatter photons coming from the CMB. This scattering can be measured by astronomers, who can use it to determine the motions of far-away clusters. Recently, a group of scientists used this technique on a large number of clusters, and discovered that many of them were moving towards a patch of sky between the constellations Vela and Centaurus.

This movement cannot be explained by any observed object or standard theory in cosmology. According to inflationary theory, however, which states that the universe expanded early on so quickly that some light from the furthest reaches has not had time to reach us, the movement could be accounted for by gravitational interactions with clusters outside the visible universe. If so, this could be another piece of evidence to add to the puzzle.

September 27 - It is always good to be reminded of how little we know, even about some of our closest neighbors. The newly touched down Mars Phoenix lander will be doing something unprecedented - it will be looking under a rock. The rock in question is a small, unobtrusive thing known unofficially as 'headless.' The lander, though not designed for such an operation, will have attempted the peak on the 23rd of September. The point of this move is to dig under the rock to check out where the subsurface layer of ice is. In theory, it should be down further underneath it. If this is the case, it would show that the layer of ice and the atmosphere of Mars are in equilibrium.

October 1 - The first stages of returning to the moon are going to be set in motion in the early months of next year. The Lunar Reconnaissance Orbiter will be heading there with a two-fold purpose - the first is to find the best sites for human landing. The second is more scientific in nature - LRO's cameras will be doing a map of the best sites, and can see things down to one meter (perhaps good enough to put the moon-landing deniers to rest?). Also, LRO will be doing a precise map of the Moon's shape, leading hopefully to a better understanding of its internal structure.