Totality Success!!

Numerous folks from Denver travelled across the world to stand in the path of totality for the March 29, 2006 total solar eclipse in Sollum, Egypt. For 3:56 minutes, we gawked at the “big black hole in the sky” when the moon completely covered the sun. The people of Sollum created an enormous “tent city” where thousands of people from all walks of life converged peacefully to share the most breathtaking and spectacular event that Mother Nature provides.

This May we have the rare opportunity to see a comet (73P/Schwassmann Wachmann 3) come apart in the solar system. This is happening right now. The parts are dim and best viewed from darker skies. Using the 18-inch Cassegrain at SBO on April 15, with a fullish moon in the sky parts B and C appeared as dim globular...
The last month has been interesting—DU has started work on the Van Nattan Observatory, with some much needed attention to the wood work and the flashing. A recent sewer backup at Chamberlin led to the discovery of a large sewage cistern about 20 paces from the east window of the library at Chamberlin. They lifted a concrete lid in the yard and discovered a buried part of Chamberlin, complete with historic brickwork.

The financial health of the DAS is very good. Even after making the $10,000 donation to DU in support of Chamberlin Observatory, our financial status is healthy and we are very capable of supporting our outreach programs. We are in a position to award grants submitted by DU towards projects centered around Chamberlin. The Van Nattan-Hansen Scholarship fund is being moved into a position where we can fund two $1,000 scholarships from accrued interest, and still have a comfortable amount left over to grow the endowment.

The long range radar shows Colorado Astronomy Day on the 28th of October. We called the Denver Museum of Nature & Science to make sure we have our calendars coordinated. We will be meeting with them in early July to plan the fine tactical details. It is time to think about the DAS picnic! It is on July 1st this year, corresponding to our Jupiter event. So we are putting out a call to arms . . . as well as grills!

In the short term, we have our Saturn Madness Open House on May 6th and the University Hills Tour of Homes on May 7th. Several groups of Public Night guests received spectacular glimpses of the ringed planet with the Clark 20-inch refractor.

The summer months are kicking off, so we will have a number of opportunities to get out and observe without fear of frost bite. Now, where did I put that mosquito repellent...

Wayne Green, president of the Denver Astronomical Society, shows off his dapper DAS knit hat (for sale now!)
DAS May Meeting: John Spencer on The Geysers of Enceladus

The speaker at the May general meeting will be Dr. John Spencer, who will discuss the recent discovery of water-ice geysers on Saturn’s moon Enceladus and associated information coming from the Cassini mission.

John Spencer is a Staff Scientist at Southwest Research Institute’s Department of Space Studies in Boulder, Colorado. A native of England, he earned his PhD in Planetary Sciences from the University of Arizona in 1987. He spent four years at the University of Hawaii before joining the staff of Lowell Observatory in Flagstaff, Arizona, in 1991. He worked there until he joined Southwest Research Institute in January 2004.

He specializes in the four large “Galilean” satellites of Jupiter, which he studies using theoretical models, Earth-based telescopes, and the Hubble Space Telescope. He was responsible for temperature mapping of Jupiter’s moons with the Photopolarimeter–Radiometer (PPR) instrument on the Jupiter-orbiting Galileo spacecraft, and is now performing similar duties for Saturn’s moons using the Composite Infrared Spectrometer (CIRS) on the Cassini Saturn orbiter. He is particularly interested in the active volcanos and atmosphere of Jupiter’s moon Io. However, he has also published research on Mars, asteroids, Pluto, and Neptune’s moon Triton, and is a science team member on the New Horizons mission to Pluto and the Kuiper belt. His observational work has included discovery of several major volcanic eruptions on Io, the first observations of Io’s volcanic plumes with the Hubble Space Telescope; discovery of sulfur gas in Io’s plumes; co-discovery that Io’s atmosphere is highly asymmetrical; co-discovery of ice volcanic activity on Saturn’s moon Enceladus; and co-discovery of oxygen on Jupiter’s moon Ganymede. His theoretical work has improved our understanding of nitrogen frost on Pluto and Triton, water frost on Jupiter’s moons, and heat radiation from asteroids.
I wanted to keep out of the wind, cold and neighbors yard lights while viewing this winter so I made a temporary observatory out of PVC and a tarp. That worked very well but it was only 7 feet across — it didn't give me much room to move around inside. My house faces southwest, so the elliptic crosses the backyard perfectly.

I started looking online for manufactured dome observatories. They were very nice but expensive. Next, I looked for observatories that others had built and found a geodesic dome that I really liked. It was made out of 3" bead board and needed to be cut with a hot wire made from wire and a battery. After that I'd have to cover it with cement after the bead board was glued together. This seemed too complicated so I decided to use seven sheets of 4'x8' paneling. The plans had the dimensions of the triangles, and there were only two types. One size was for the pentagons and another for the hexagons. I figured I could handle that.

I used paneling connectors and pop rivets to hold the triangles in place. It took almost a month to cut out the triangles and pop them together — I'm retired so it kept me out of trouble. My friend Rachel was a big help doing this as it's more than a one person task.

The dome rotates on six rubber wheels that are installed on the base and I used six clothesline rollers mounted horizontally on the base to keep it centered. Maybe this summer I can figure out how to motorize everything. The first time I closed the slit while I was inside the dome, I realized I needed a handle in there so I could open it again to get out.

I had planned to use fiberglass to cover the dome to strengthen it but that was much too expensive so I used...
Both images: Jim’s finished dome outside in his backyard is ready for observing!

sunscreen and contact cement instead. Rachel and I cut out the sunscreen into triangles two inches larger than the paneling triangles so there would be an overlap. That was messy enough but it did a great job. I then painted everything with mobile home rubber roofing paint to water proof it.

One of the neighborhood kids often stopped by on his way home from grade school, and told me it wouldn’t hold up under the weight of the snow we get! I didn’t know they taught structural engineering in grade school! But, just in case he was right I suspended myself from the top of the slit and it didn’t sag a bit. I’m a large person so the dome can withstand any snow load nature can send. I’m now ready for some serious observing!

**May Skies**

*Continued from page 1*

clusters. The comet is passing along Bootes, into Vega, Cygnus, Pegasus, under Cygnus and part of Pisces. Jupiter is beginning to make an appearance in the later evening sky as a very bright object: People are certainly noticing it. Saturn continues to put on quite a show. Even with Saturn past the meridian at midnight (closest to Earth) the faint moons continue to impress to Chamberlin visitors when the seeing is good.

— Prepared by Public Night Team 5.

*The Edmund G. Kline Dark Site: Observing and imaging under some of the region’s finest skies. For site information, please visit the DAS website.*
Walk Like an Egyptian

After a rather hazy beginning to eclipse day, the skies cleared beautifully to the cheers of all attending the total solar eclipse in Sollum, Egypt on March 29, 2006. The sun wasn’t the only celebrity present for

Photos clockwise from top left: Sollum welcomes all to the eclipse; thousands of years ago, the Avenue of the Sphinxes connected the complexes of Luxor Temple and Karnak in Luxor and stretched for three kilometers; totality captured in an instant; and a kind of “where’s Waldo” shot of the site where DAS members Pauline Ide, Laurie Scholl and Sandy Shaw staked out their eclipse observing spots.

Photo copyright 2006 by Pauline Ide

Photo copyright 2006 by Patti Kurtz

Photo copyright 2006 by Pauline Ide
the show: Egypt’s president Mubarak arrived in the nick of time. A success all around, the day was full of memories that will be cherished for a lifetime.

Photos clockwise from top left: the traditional photo of minicrescents projected from a straw hat; Colgate archaeoastronomy professor Anthony Aveni glows in the shadow; stellar kids Zack and Nick Kurtz greet their first total solar eclipse; and Ramses II at Luxor.
About the Denver Astronomical Society

Membership in The Denver Astronomical Society is open to anyone wishing to join. The DAS provides trained volunteers who operate the University of Denver’s Historic Chamberlin Observatory, which the DAS helped place on the National Register of Historic Places. First light at Chamberlin in 1894 was a public night of viewing, a tradition the DAS has helped maintain since its founding in 1952.

The DAS is a long-time member in good standing of the Astronomical League and participates in NASA’s Project Astro program.

The DAS’ credo is to provide its members a forum for increasing and sharing their knowledge of astronomy, to promote astronomical education to the public, and to preserve Historic Chamberlin Observatory and its telescope in cooperation with the University of Denver.

The DAS is a 501(c)(3) tax-exempt corporation and has established three tax-deductible funds: the Van Nattan-Hansen Scholarship Fund, the Public Outreach Fund, and the Edmund G. Kline Dark Site Fund. To contribute, please see the bottom of the membership form for details.

More information about the DAS, its activities, and the special tax-deductible funds is available on the DAS web site at www.thedas.org.

APPLICATION FOR MEMBERSHIP TO THE DENVER ASTRONOMICAL SOCIETY

New Renewal

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Please make donations to the Dark Sky Site Fund payable to the DAS EGKDS Fund and mail to Steve Solon, 9774 W. Elmhurst Place, Littleton, CO 80128-5199. Please make other amounts payable to the Denver Astronomical Society and mail along with this completed form to Brad Gilman, DAS Treasurer, 7003 S. Cherry St., Centennial, CO 80122-1179.

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