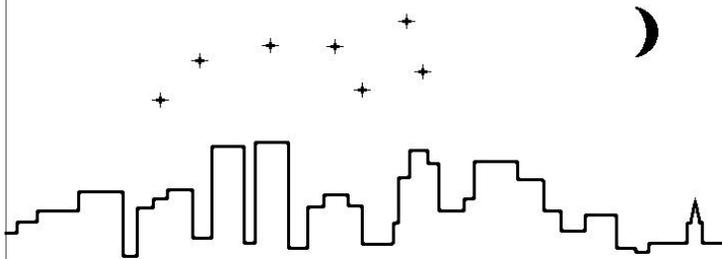


STARLITE

THE OFFICIAL PUBLICATION OF
THE PEORIA ASTRONOMICAL SOCIETY

www.astronomical.org



Peoria Astronomical Society

SUMMER 2008

Inside this issue:

Northmoor Fundraiser Success story	1
Summer Star Party lineup	
Upcoming Events	
Astronomical Data Calen-	2
Sunspots, Solar Cycles, Aurora & Global Warming	3
Member news	
From Starlites Past	4



Please welcome our newest members!

LAURA THORP
TIM KAUFFMAN
JEANNETTE HOLLAND

Northmoor fundraiser nets over \$6,800!

By Terry Beachler

Paparazzi was the place to be on Sunday May 18, 2008. I received a phone call from **Bruce Brown** a month or two back. Bruce asked me to Co-chair a fundraiser for the Northmoor Observatory. "Aw come on, Bruce," I said, "I'm only involved around the edges of the organization." After a short and convincing sales talk, I accepted, and what a wonderful evening! Bruce said it would be a great success and he was right on. All had a great evening spending time with both old and new friends.

The contributions made by all were nothing short of remarkable. What I found most interesting were contributions and support from those who had never visited the observatory. Their generosity is sincerely appreciated.

Bruce Brown is a character I have known on and off over time. He is the hero of the year for putting this event together and gathering people from his large group of friends. People like Bruce make Peoria a great place to live.

Thank you Bruce, Lisa and staff. Thank you to all who made the evening a great success.

-Terry Beachler



Editor's note: Just over \$6,800 was raised at the \$100 per person dinner. That figure was matched by a \$10,000 donation from the Caterpillar Foundation and all the money will go toward making improvements to the observatory. **Rich Tennis, Terry Beachler, Bruce Brown**, spearheaded the effort. About half the guests were PAS members, and the others were from the park district, CAT, Building Trade Council, Kenyon & Associates and other Paparazzi guests.

Summer Star Parties Set

By John Barra

Like last year, the Peoria Astronomical Society will not have summer general meetings at Lakeview Planetarium. Instead we will be conducting monthly star parties. General meetings at Lakeview will resume in September.

The first star party will be at the Northmoor Observatory on **Saturday, June 14**. This party will be open to the public in conjunction with the normal Saturday public viewing. It will be around the first-quarter moon to give special attention to lunar viewing. Members are encouraged to bring telescopes.

The July star party will be at our Jubilee observatory on **Saturday July 26**. It will be open only to members and guests. This party is scheduled around the new moon to allow for dark, deep-sky viewing.

Finally, the August Star Party will be on **Saturday, August 23**. Like last year's party, it will be at Jubilee State Park at the Prairie Lane picnic area and will be open to the public. We will make a special effort again to advertise at the camping areas in hope of drawing as large a crowd as last year. It is also scheduled for a new-moon weekend.



Upcoming Events

SUMMER MEETING LOCATION CHANGES!!

This year, we will not be holding our summer meetings at Lakeview Planetarium. Instead, we will be holding star parties for our June, July, and August meetings.

June 14—Northmoor Star Party (public invited)

July 26—Jubilee Star Party (PAS members & guests only)

Aug 23—Jubilee Star Party (public invited)— This one will be at the Prairie Lane picnic area in the park.)

AREA STAR PARTIES

ICC Summer Star Party

June 20, 21, 27, 28 (1st clear date)
Jubilee Observatory

Prairie Skies Star Party

September 25-28, 2008
<http://www.prairieskies.org/>

Illinois Dark Skies Star Party

September 25th - 28th
<http://www.sas-sky.org/main.html>

Astrofest

September 5th—7th
<http://chicagoastro.org/af/index.html>

NSA Club to visit Peoria

Members from the Northwest Suburban Astronomers (NSA) are making a trip down from Chicago on **Saturday, July 12th**.

They will be spending the day at Lakeview, and wish to visit our observatories that night. If you are free, please help host them at either Northmoor (open for public viewing anyway) or Jubilee Observatory.

Astronomical Data Calendar

June

- 7 Mercury Inferior Conjunction
- 7 Moon and Mars 1.7° apart
- 8 Venus Superior Conjunction
- 10 First Quarter Moon
- 15 June Lyrids peak
- 18 Full Moon
- 23 Moon occults Neptune
- 26 Third Quarter Moon
- 26 June Bootids peak



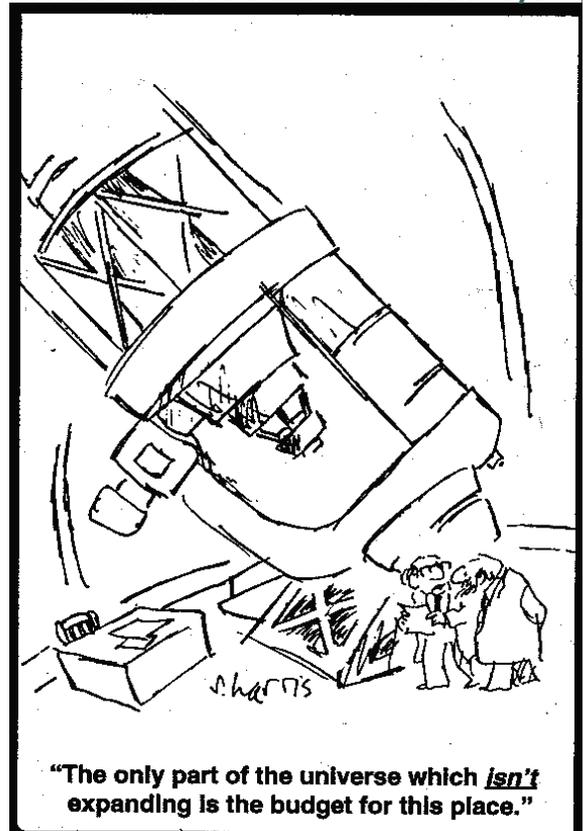
July

- 1 Mercury Greatest W Elongation
- 2 New Moon
- 3 Moon and Venus 1.2° apart
- 9 Jupiter Opposition
- 9 First Quarter Moon
- 10 Mars and Saturn 38' apart
- 18 Full Moon
- 25 Third Quarter Moon
- 27 Southern delta-Aquarids peak
- 29 Mercury Superior Conjunction

August

- 1 New Moon
- 1 Moon and Mercury 1.5° apart
- 8 First Quarter Moon
- 12 Perseids peak
- 13 Venus and Saturn 13' apart
- 15 Neptune Opposition
- 15 Mercury and Saturn 38' apart
- 16 Full Moon
- 20 Mercury and Venus 56' apart
- 23 Third Quarter Moon
- 30 New Moon

Could this be Northmoor Observatory?



Sunspots, Solar Cycles, Auroras and Global Warming

By Judd Isbell

Sunspots are more than just cooler spots on the surface of the sun. They are complex magnetic storms. They form when a magnetic filament breaks through the surface. The filaments are the large, pretty prominences that you see in some pictures of the sun. They loop out into space for several hundred thousand miles before returning to the surface and charged hydrogen particles flow along the arcs. A sunspot has two polarity regions, a north and a south magnetic field. The prominences exit one region and reenter the other. The prominences are extremely hot, millions of times hotter than the surface of the sun. The complexity of the sunspots and prominences are due to the fact that the sun rotates at different speeds. The equator rotates around the sun much faster than the Polar Regions. This causes the magnetic fields to become tangled and distorted. When enough stress is placed on the magnetic fields they break through the surface and create the sunspots. If the magnetic tension is great enough the magnetic filaments (prominences) snap like an over stretched rubber band. When this happens, the resulting break sends billions of tons of charged particles flying out into space at millions of miles per hour. This is called a Coronal Mass Ejection (CME).

If the earth is in the path of the CME, the charged particles strike our own magnetic field and are channeled down to the poles. When the charged particles hit our atmosphere, they excite and ionize the gases causing them to glow and the Aurora Borealis (Northern Lights) is created. The CMEs can also cause satellite communication problems and has even caused power outages by the charged particles creating spikes in power grids.

The sun goes through solar cycles roughly every 11 years. When a solar cycle ends and a new begins, the magnetic poles on the sun reverse. North and south trade places. We are currently at the end of #23 and starting the beginning of cycle #24. This is solar minimum when the polarity change is taking place. Very little activity takes place on the surface of the sun during solar minimum. The Solar HelioSpherical Observatory (SOHO) is capable of photographing the magnetic fields on the sun. Through the observations they determined that the sunspots observed during the week of March 24th, 2008 were still associated with cycle#23. In January, we did have one lone sunspot that had its poles reversed. This indicates the start of the new cycle# 24. Scientist think that the amount of solar activity influences the weather on earth. Current predictions for #24 are for less activity than usual. The solar maximum for cycle#24 is expected in 2012.

History has shown that increased sunspot counts and solar activity creates a warming effect on earth. Decreased activity creates cooler global temperatures. Scientist are worried that we may be entering a cooling period with their predictions of less solar activity than usual. The last 2 solar cycles had increased activity and we had some global warming. Plants and animals appear to flourish with the warmer temperatures. Cooler global temperatures can be disastrous. So much for global warming!

 Judd Isbell
March 31, 2008

PAS member has asteroid named after him

By Eric Clifton

One of our long-time PAS members, **Bart Benjamin**, Recently had an asteroid named after him by it's discoverer, **Bert Stevens** (formally of the Chicago Astronomical Society and now in New Mexico). Bart lives in the western suburbs of Chicago and is also Director of the Cernan Planetarium at Triton College.

Here is a link to the details of the discovery on the NASA JPL site:

<http://ssd.jpl.nasa.gov/sbdb.cgi?sstr=128065;orb=0;cov=0;log=0#discovery>

Messier Marathon draws small crowd

By John Barra



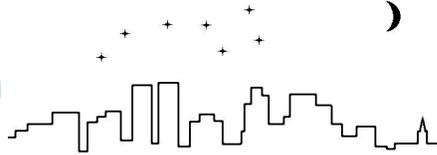
Despite good weather, only four people attended the club's Messier Marathon the first Saturday in April at the Starhouse. The April marathon in which the first ten objects were difficult or impossible to view may have accounted for the small number.

Weather problems have been responsible in the past years for small numbers. Even as a passionate marathoner as myself, I have to

admit that I called it a night at 3:00 am, even with the better than usual weather. So I suspect we will have to do something different to draw more members in the future, when weather allows.

I am looking for suggestions for next year. I have a few ideas which I will discuss at future meetings, but welcome those ideas from other members.

STARLITE



Peoria Astronomical Society

PO Box 10111
PEORIA, IL 61612-0111

From Starlites Past...

By John Barra

40 YEARS AGO

Summer Starlite 1968

"At the turn of the century, several suggestions were being studied on how to contact the inhabitants of Mars. One was to cover the surface of Lake Superior with petroleum and set it afire. It was theorized that such a huge blaze would certainly bring fast results."

That sure would be awful expensive today with the price of oil at \$130 a barrel. But with the huge wildfires lately, I am surprised we have yet to get the Martians attention. Do you think the Martians have yet to invent a telescope? Maybe we should send one up with our next Martian lander.

"Miles Chamberlain, a former Peoria astronomer, is now the director of Chicago's Adler Planetarium. He began his duties March 4. Many of our readers may remember he spoke before the Bradley alumni dinner here last June."

Writing this column for each issue requires that I read all the old Starlites. I learn something new each time. It ceases to amaze me how many Peorians have made a mark in astronomy over the years.

25 YEARS AGO

Summer Starlite 1983

"Time can really get away from us. It seems as though we just had our first monthly meeting at Lakeview, back in October. Well, we are now finished with our monthly meetings until next October...We need programs for next year, so if anyone would like to volunteer..."

Ditto twenty-five years later. Looking for volunteers for next season. Anyone who has an idea for a program (and preferably would also like to present it), please let me know.

"An interesting program (for the banquet) is scheduled, with Sheldon Schafer, Lakeview Planetarium Director, giving a planetarium show on Halley's Comet..."

We have a new generation of equipment at the planetarium. Sheldon, of course, is the same. The shows from the new equipment are spectacular. However, Sheldon informs me he does not expect to do another program on Halley's Comet when it comes back the next time.

