

SPECTRUM

Northern Cross Science Foundation Newsletter

May 1999

LOOKING UP

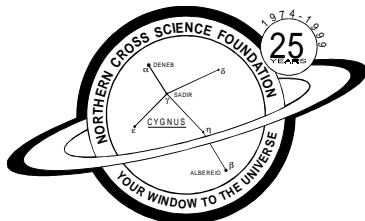
May 6 Thursday
Astronomy 101
7:00 PM
General Meeting
8:00 PM
Carlson Tool & Mfg.

May. 19 Wednesday
Board Of Directors
7:30 PM
Jeff Setzer's House

May 22 Saturday
National Astronomy Day
10:00 a.m. – 12:00 p.m.
Jansen Family Park
West Bend

May 29 & 30 Sat. & Sun.
Public Viewing
8:00 PM
Pike Lake State Park

May 29 & 30 Sat. & Sun.
Public Viewing
9:00 AM – 5:00 PM
West Bend Airport



A Publication Of
The Northern Cross
Science Foundation

A Volatile Variable

By Dan Prosser

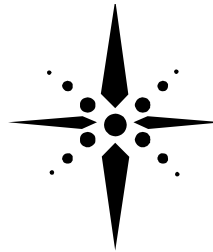
Hello fellow astronomers! I would like to share with you something I read about in Sky & Telescope about a year ago. Although I have not really been interested in the study of variable stars in the past, this article changed my mind. It was an article about a particular type of variable star called a Luminous Blue Variable (or LBV).

What is a LBV? Luminous Blue Variables are very massive, hot supergiants thought to have evolved from stars with initial masses exceeding 40 solar masses. They are unstable and variable with irregular mass ejections. These mass ejections are most likely due to instabilities in their stellar envelopes caused by radiation pressure. LBV's show different types of variations occurring on a wide range of time scales. The largest variations are associated with sudden brightening by more than three magnitudes, lasting several hundred, to several thousand years.

The smallest variations (0.5 mag.) last from several months to several years.

A cool (8000-9000 degree Kelvin) shell forms around the star, with optical spectra showing an A-type supergiant. In between these episodes of mass ejection the hot (20,000-25,000 degree Kelvin) stellar photosphere is

revealed yielding a spectra of an O-type supergiant. Some examples of LBV'S include eta Carina, P-Cygnus, and S-Dorado.



Something to remember....viewing these distant stars through a telescope can sometimes be, well, unimpressive. Other than observing the color of a star, a stars magnitude, or viewing a stars companion, there's not much to see. Understanding what's going on within a star makes them much more impressive and makes observing much more enjoyable.

Air Show Festival!

By Kevin Bert

I was contacted by one of the organizers of last years EAA Fly In (West Bend Chapter), that the Northern Cross was invited to participate in this years event. The 99 event was expanded to two days and was renamed to the West Bend Air Show Festival. This event is not sponsored by the EAA chapter but promised to be just as exciting. 3 to 5 thousand people are expected to attend. It will be held at the West Bend Airport on May 29 and 30. Each day will run from 8:00 a.m. to 5:00 p.

m. Free airplane rides will be given to children between age 7 to 17 starting at 8:00 a.m. A number of other activities will follow. We will set up displays and telescopes similar to last year starting at 9:00 a.m. Set up will be in a larger hanger than last year. Displays could be locked up on Saturday Afternoon if you wish. Remember that Pike Lake public viewing night will follow each evening.



April Minutes

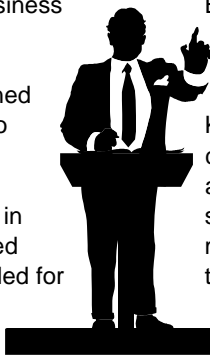
By Kevin Bert

The April meeting of the Northern Cross Science Foundation was held in the conference room of Carlson Tool & Mfg. in Cedarburg. The Main Program preceded the business meeting.

President Jeff Setzer opened the meeting at 9:00 p.m. to over 23 people.

Jeff thanked all members in attendance and recognized three guests. Jeff then called for the regular reports.

Brad Plaumann reported that \$210.00 was spent on three new vinyl NCSF Banners. They will be kept at Carlson Tool to mark the main road there and the parking lot and entrance.



This will make it easier for guests to find and attend meetings. They will be used for other club activities too.

Brad also mentioned that he was looking into some neon tubes for a future program on spectroscopy.

Kevin Bert said the Astronomy 101 class would start over soon. A few additional subjects were being considered. He said that he would keep members posted for details. He said that Jeff Setzer could provide information on the NCRAL convention if any members needed it.

Hy Pitt announced that the model A Ford club that he belongs to is planning a spring tour to Yerkes Observa-

tory on April 18th. He explained that he had extra room and invited anyone interested in attending to contact him.

Jeff covered the upcoming events for April. He confirmed that Astronomy Day would be held at the Jansen Family Park in West Bend. A list of activities were suggested. Most were similar to last years activities. It was reassuring to know that displays would be set up inside if the weather turned bad.

The business meeting was closed by Jeff Setzer at 9:30 p.m.

Respectfully submitted,
Kevin Bert, secretary

Iridium Flares

By Kevin Bert

<http://www.gsoc.dlr.de/satvis/>

Observer's Location: Cedarburg (43.2970°N, 87.9880°W)

Local Time: Central Daylight Time (GMT - 5:00)

Date	Local Time	Intensity		Azimuth	Distance to flare centre	(Mag.) at	
		(Mag.)	Elev.			center	Satellite
03 May	03:20:06	-3	24°	118° (ESE)	39.9 km (W)	-7	Iridium 43
03 May	05:22:32	-7	69°	211° (SSW)	4.2 km (W)	-8	Iridium 68
03 May	23:01:56	-0	16°	254° (WSW)	153.2 km (E)	-6	Iridium 58
03 May	23:10:52	-6	12°	255° (WSW)	5.7 km (E)	-6	Iridium 59
04 May	03:13:54	-3	23°	120° (ESE)	31.4 km (E)	-7	Iridium 40
04 May	05:16:26	-1	70°	211° (SSW)	21.9 km (E)	-9	Iridium 75
04 May	23:04:58	-4	13°	257° (WSW)	44.2 km (E)	-6	Iridium 28
04 May	23:13:57	-2	10°	258° (WSW)	90.0 km (W)	-6	Iridium 29
05 May	22:59:06	-2	14°	259° (WSW)	85.0 km (E)	-6	Iridium 31
05 May	23:08:05	-3	11°	260° (W)	61.9 km (W)	-6	Iridium 32
06 May	03:10:59	-4	27°	124° (SE)	24.5 km (W)	-7	Iridium 41
06 May	22:53:13	-1	14°	260° (W)	134.0 km (E)	-6	Iridium 57
06 May	23:02:15	-6	11°	262° (W)	24.5 km (W)	-6	Iridium 58
07 May	03:04:48	-3	26°	125° (SE)	34.9 km (E)	-7	Iridium 42
07 May	22:56:19	-6	12°	264° (W)	26.8 km (E)	-6	Iridium 55

See You At Astronomy Day !

By Jeff Setzer

Don't you wish that astronomy had its own day of celebration, like Earth Day or Arbor Day? Well, it does: National Astronomy Day. This year, Astronomy Day falls on May 22. That means there's a good chance that the weather will be nice. With good weather and some publicity, we can get lots of people to visit us, so I hope everyone is ready to jump in and support this worthwhile event.

Our location for the entire event is Jansen Family Park in West Bend. This is privately owned land that has both indoor and outdoor tracks for radio-controlled cars. Bathroom and kitchen facilities will be open for our use. To get there, simply take Highway 33

west, past the junction of Highway 45. Look for an Applebees Restaurant on the north west corner of an upcoming intersection. This will be County Trunk B. Take B north and you'll find the place just down the road as it turns to the west. If you point your Web browser to <http://www.hnet.net/~mwtc/> you can get a birds-eye view of the grounds looking south.

Co-sponsoring this event is West Bend Hobbies. They have been very gracious in allowing us to use the Park as our Astronomy Day headquarters. For those of you who might be in the market for new gear, they

*(See **DAY** on page 4)*

Astronomy 101

By Kevin Bert



The May 101 topic will be "Comets" by Dan Prosser and Kevin Bert. In addition to talking about how to view a comet, they will have informational handouts on comet structure and properties and show you the recipe on how to make one.

The highlighted constellation will be Serpens.

From The Editor

By Kevin Bert

National Astronomy Day will be our biggest event of the year. Jeff Setzer will give you some details on page 3 of this Spectrum.

Dan Prosser has the lead article on LBV stars. Thanks Dan for sending me an article. I would encourage other members to do the same if they can.



rial Day weekend. See page one for information.

Member Ernie Mastroianni will present the main program for May. His talk and slide presentation will be on stargazing from Mauna Kea. In addition he will show some lunar, planetary and deep sky photos as well, and just open it up to discussion on astrophotography in general.

It has been long overdue but the

A recent addition to the public schedule is the Air Show Festival on Memo-

CURRENT CLACK

Clear Skies for ABC Kids Care

It was a cool and windy night for people in attendance at ABC Kids Care in Cedarburg. A small group of the public showed up to view Venus, Mars and the Moon. Thanks to the members that took the time to set up telescopes.

Congratulations!!

At the April meeting Gene Du Pree and Charlotte Nelson announced that they are getting married. The date has been set for August 7th of this year.

Cedarburg Library Presentation May 5th

Mike Matthies and Brad Plaumann will entertain the public with programs on Astronomical Spectroscopy and the Hubble Space Telescope. It is sponsored by the Cedarburg Friends of the Library. The first program starts at 7:00 p.m. The last program finishes around 8:45 p.m. There is no charge to attend and refreshments will be served.

Panarusky 20-Inch Telescope

The work load at Carlson Tool has increased dramatically. A large number of people are working both Saturday and Sunday to make the delivery dates for jobs. Little work has been done on the scope over the past month.

membership roster is enclosed in this issue. Jeff Setzer made a neat program that handles the information. The board members spent a lot of time at their last meeting going over the data. I now have a copy that will continue being updated on a regular basis.

What you see is the latest version with paid up members only. Please check over your own information to see that it is correct. If not I would appreciate it if you contact me about it.

Iridium flare predictions for Cedarburg are on page 2

See you at the meeting.

1998 OFFICERS

President - Jeff Setzer
8142 N. 66th Street
Brown Deer, WI 53223
414/355-3698
jeffrey.setzer@gxsc.com

Vice President - Dan Prosser
1857 Blackfoot CT
Grafton, WI 53024
414/375-9087
pprosser@execpc.com

Secretary - Kevin Bert
2292 Ridgewood Road
Grafton, WI 53024
414/375-2239
kevin.bert@mixcom.com

Treasurer - Brad Plaumann
4266 N. 88th Street
Milwaukee, WI 53222
414/535-0219

(DAY from page 3)

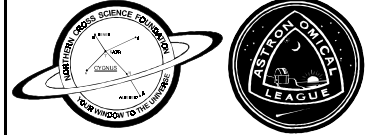
will have several commercial telescopes on display.

The setup for the daytime events will begin at 10:00 am. The public will be invited to come onto the ground at noon. Planned events include Make A Crater, Lunar Geography, Mirror Grinding, Telescope Clinic, and the Space Telescope Slide Show. At nightfall, we will have telescopes pointed at various celestial objects. Two special nighttime programs, the Starlight Scavenger Hunt and the Binocular Tour of the Universe, will be held at various times. We will have an Information Booth, and perhaps some refreshments, during all hours of the daytime and evening.

Did I mention the need for volunteers? We need ten people for the daytime events, not including the static telescope displays. At night, we need a few people to man the Information Booth and one hearty soul to lead the Binocular Tour of the Universe. In addition, we need at least six telescopes and their operators to support the Starlight Scavenger Hunt. Can we count on you? Leave a message at (414) 355-3698.

SPECTRUM

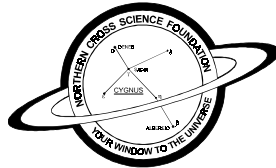
SPECTRUM is published by the Northern Cross Science Foundation, Inc. A nonprofit organization based the state of southeastern Wisconsin and a Member of the North-Central Region of the Astronomical League.



Send inquiries to:
SPECTRUM
2292 Ridgewood Road
Grafton, WI 53024

This Issue, along with back Issues of SPECTRUM, can be found on the NCSF Web Site.

SPECTRUM
2292 Ridgewood Road
Grafton, WI 53024



Check out our great site
On the World Wide Web
<http://www.gxsc.com/ncsf>