

Event Horizon

April 1997

Volume 4 Issue 6

The Recent Solar Flare in Perspective

As of 05:30 UTC on 10 April, the well publicized solar flare related disturbance of 07 April has not yet arrived. See below to place this disturbance into perspective.

New Solar Cycle 23 Status

It is now becoming quite clear that we have passed old solar cycle 22 and are ramping slowly upward toward the maximum of the present solar cycle 23. We have seen some reports and heard speculation regarding this matter that is somewhat inaccurate. Although the official word still isn't out yet, there is an increasingly abundant amount of evidence suggesting that we are now within solar cycle 23. Some of this evidence follows: Calcium plage emissions are slowly increasing and have been increasing for many months now; the background and daily average x-ray flux values are increasing - they are higher now than they have been since about 1995 when we were still in the decline of cycle 22; the occurrence of new-cycle sunspot regions is increasing and the frequency of old-cycle sunspot formation is decreasing. This latter item is usually considered the clincher.

Unless sunspot formation suddenly dies out for an extended period of time, the sunspot minimum of solar cycle 22 will almost certainly be May of 1996, where the smoothed sunspot number fell to 8.1.

Prospects for the Future of Solar Cycle 23

Solar Cycle 23 is predicted to be a larger than average solar cycle. Current predictions estimate the sunspot number for cycle 23 will probably peak near 160 (+/- 30) with a peak in the 10.7 cm solar radio flux near 205 (+/- 30). There is some excitement that this cycle may be a record breaker. The current champion of sunspot cycles is solar cycle 19 which had a smoothed sunspot

number of 201 in November of 1957. This is not likely to occur, but it is a notable possibility. The art of predicting the magnitude of sunspot cycles is still rooted primarily in empirical relationships. We do not yet understand the physical processes involved well enough to derive successful quantitative models of sunspot cycles. For this reason, there is a level of uncertainty that (however small) could result in a record-breaking cycle.

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Astrophotips

ASTROPHOTIPS
Event Horizon is starting a new monthly column on astrophotography tips. I'm sure those of you who have tried your hand at this very frustrating yet rewarding game will recognize most if not all of these tips.

Send in what you have experienced. Here's what we have so far.

TIP: If you're going out to shoot over an hour's worth of photos, take the camera with film in it. (Rob Roy)

TIP: Make sure you have the shutter speed set to "B" and NOT 1/500 sec for your 1 minute, 2 minute, 5 minute "all sky" shots. Do this BEFORE driving 1/2 hour to a dark site, taking the

pictures, then returning home. (AnnTe)

TIP: Open the shutter BEFORE a 30 minute guided exposure. (Rob Roy)

TIP: Make sure the camera back is snapped shut before you take a dozen shots. (Stewart Attlesey)

TIP: Don't try to screw in the cable release with the shutter cocked. (Rob Roy)

TIP: Pack your cable release (and ring, charts, flashlight, etc...) **before** driving out to your observing site. (Clive Gibbons)

TIP: If you're taking guided piggyback shots, cover the camera with the black cloth before and after shutter release-

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Editorial

It seems that all the experts have taken off for the month of April so we don't have an "Ask the Expert" column. However, we are fortunate that the UltraMind has graciously agreed to fill in. (Where have I seen that name before?)

A number of people I know who are not into astronomy seem to have taken notice of the reports about the recent solar flare and comet Hale-Bopp, but there still seems to a definite lack of understanding/appreciation of these events. It certainly doesn't help when the media either blows things out of

proportion or gives bad information. Some people were led to believe that the comet was only going to be visible the night of the Lunar eclipse on March 23! The worst cases of misinformation were reported on TV and on the radio. A TV newsanchor said the comet would cause the Lunar eclipse and a radio announcer said that at the peak of the eclipse the whole sky could turn red! We may never educate everyone, but we should take every opportunity to correct misinformation when we find it.

Stewart Attlesey
attlesey@interlog.com

Chair's Report

Like they said on the A-team, "I love it when a plan comes together!" Throughout most of the day on April 10th, the sky was crystal-clear. However, as evening approached some cirrus started to threaten our observing session at the Dundas Valley Conservation Area. It was a race against time since rain and snow were in the forecast for Friday and the weekend.

The first good news came at 7:30pm when HAA members with telescopes began to arrive. It was an amazing turn-out. If my memory serves, the following people helped with instruments: Stephen Barnes, Everett Cairns (he brought 2!), the Cutters, Mike DeVillaer, Pat Durrell, Mike Riks, Rob Roy, and Ann and Bill Tekatch. I brought the mighty 10x70 Fujinon binoculars (which clearly counts as two telescopes.) More good news: the DCVA had placed an ad in the Hamilton Spectator.

At first it looked like just the Moon would be visible and then maybe not for all that long. But gradually conditions improved to the point that it was essentially clear to the west. The young crescent moon was situated in

the Hyades and made for quite a binocular show. In fact, there were several times during the evening when I had a line-up to look through my binoculars - surely a sign of a good and interested crowd!

A number of my long-suffering students in SCI2D3 at McMaster came out to see what was in the sky. This is especially remarkable considering that the last lecture for the course was earlier that day! It was really nice to be able to chat with them and their parents and friends in a relaxed and informal setting.

As the sky became clearer, our hundred visitors were treated to more and more objects including Mars, the Orion Nebula, the spiral structure around the nucleus of Hale-Bopp, the Beehive and Double clusters. I left with a very good feeling about the evening!

We all owe a debt of gratitude to Rob Roy for arranging the whole thing and to those hardy souls who stood by their telescopes and helped make the night a success. We clearly should do this more often!!

Doug Welch
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**HAMILTON
AMATEUR
ASTRONOMERS** ✨

Event Horizon is a publication of the Hamilton Amateur Astronomers (HAA).

The HAA is an amateur astronomy club dedicated to the promotion and enjoyment of astronomy for people of all ages and experience levels

The cost of the subscription is included in the \$15 individual or \$20 family membership fee for the year. Event Horizon is published 10 times a year.

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Rob'serving Report

Jupiter's Satellite Phenomena

Jupiter is now rising early enough that some of its satellite events can be observed in the wee hours of morning before dawn. Possibilities are: a TRANSIT of a satellite or its SHADOW across the face of the planet, an OCCULTATION as it passes behind the planet, or an ECLIPSE by Jupiter's shadow.

Starting with this issue, shadow transit times will be listed which occur between the hours of Jupiter's rising and morning twilight. Times will be converted to EDT (Eastern Daylight Time) for your convenience. The first time is the start of the shadow crossing (ingress) and the second is the end (egress). Only one of the shadow's ingress and egress times may be listed, because of the short period time that Jupiter is visible this early in the "Jupiter season."

A window of UT (Universal Times) will also be given so you can search in "Sky and Telescope" and in the "RASC Handbook" for other events you may wish to observe. Events on either side of this window occur either before Jupiter rises or after the morning twilight. To get your local EDT subtract 4 hours from the UT shown for each event.

May 02 Io *---> 3:44 EDT
 May 13 Io 2:55 ---> *
 May 23 Ganymede *---> 2:18
 May 25 Io 1:36 ---> *
 May 30 Ganymede 2:43 ---> *

For other events, search the table in the "RASC Handbook", page 159, between 6:30-8:30 UT near the beginning of May to 5:00-7:30 UT closer to the end of the month. "Sky and Telescope" will probably start including Jupiter's satellite phenomena in their June or July issue. It's great stuff to look

at. Have fun!

*** Shown below in Monthly In-Sights

are two daytime occultations by the Moon- May 4 & May 8. The Moon will not likely even be visible, so setting circles may be needed (one of those fancy, over-rated LX contraptions might work, too.) Yellow-orange filters should also help. Leave your scope focused from a prior night's session, as there is little hope of finding Saturn or Aldebaran in an unfocused scope in daylight. Saturn will be particularly difficult because of its lower surface brightness.

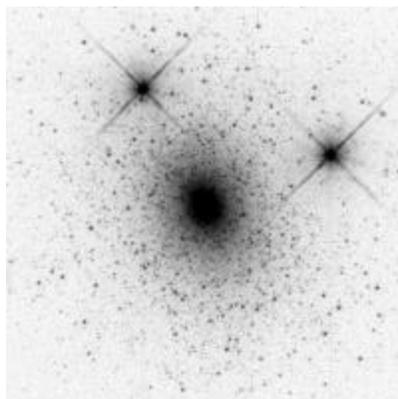
Monthly In-Sights

April

- 19-2am. Moon 4 deg. S of Mars.
- 21- Lyrid Meteor Shower peaks (washed out by full Moon.)
- 29-2am. Mars stationary against the background of stars.

May

- 2- a-Scorpid meteors peak.
- 4- n-Aquarid meteors peak. (Waning crescent Moon shouldn't interfere with either shower.)
- 4-3:01pm --->4:03pm. Moon occults Saturn.
- 5- Mercury 1.2 degrees N of Moon.
- 8-before Moonrise --->12:50pm. Moon occults Aldebaran.
- 21- Mars 2 deg. N of Moon.
- 22- Mercury at greatest western elongation (25 deg.) in morning sky.



Globular cluster G1 in the Andromeda Galaxy.

- Mercury is a morning "star" in May.
- Venus becomes visible in the evening by mid-May.
- Mars is at the meridian at sunset and sets several hours later.
- Jupiter rises earlier each morning. (See notes above.)
- Saturn is just visible in the late morning twilight.
- Neptune & Uranus are a bit west of Jupiter in the morning sky.

Rob Roy
 Observing Director
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Cosmology Corner

The Cosmology Discussion Group's next topic is "Reality". If you would like to read something on the topic, here are two choices. Schrodiger's Kittens and the Search for Reality, Solving the Quantum Mysteries, a book by John Gribbin. The other selection is an article in the March-April 1997 issue of the magazine American Scientist. Yes, that is not Scientific American. The article is titled "Does Nature Violate Local Realism?". Also check the HAA web site cosmology page. If this is not enough to keep you busy, try and practice your magic tricks and bring your illusions optical and otherwise. We will have fun discussing magic, the tricks nature plays on us, and how that changes the way we see our universe. See you there Saturday May 24, at 8:00 pm.

Bill Tekatch,
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Ask the UltraMind!

Dear UltraMind,
I'd like to discover a comet, but don't know where to look. Got any ideas??

Signed,

W. Bradfield
(not the famous comet hunter)

The UltraMind Replies...

Gentle Reader;

Above the horizon on a clear night, is a good place to start. Any more hints and I'd be giving the game away!

Actually, comet hunting entails far more than such a glib statement implies. Where to look, while important, is only a small part of the total preparation of any successful "Fuzzbuster".

Starting with the telescope to use, a combination of wide field, good light grasp and smooth alt-azimuth scanning action, are ideal for the job. Bearing this in mind however, almost any telescope is useable for comet sweeping, although I've no knowledge of a comet ever being discovered with a Tasco 60mm refractor at 675x.

Most comet searchers sweep areas of sky where comets are most likely to be seen; namely, within 30 to 40 degrees of the western horizon after sunset and an equivalent chunk of sky above the eastern horizon before sunrise. Comets brightening as they approach the Sun can be discovered in these areas. Circumpolar regions away from the Milky Way are also favourite hunting grounds to explore. You might want to start looking in smaller, less confusing constellations like Apus the bee, Lacerta the Italian breathmint or Bufo* the toad, if Draco or Camelopardalis look too intimidating. Needless to say, the Milky Way and any galaxy-rich patch of sky are celestial minefields

because of the endless number of pseudo-comets they contain - as Charles Messier attested to.

Keep in mind that the vast

“Keep in mind that the vast majority of fuzzy looking objects in the sky aren't comets.”

majority of fuzzy looking objects in the sky aren't comets. For every person who actually discovers a comet, there are literally thousands who mistake a faint globular cluster or galaxy for one. The key here is to make sure it's a comet before phoning Brian Marsden at the Central Bureau for Astronomical Telegrams. If you make a habit of calling Mr. Marsden every time you stumble across the Crab Nebula, he's likely to become annoyed and won't listen to you when you do make a legitimate discovery.

Another key to fruitful comet spotting is the appropriate mental preparation; i.e., learning to think like a comet hunter. This often involves extensively reassessing one's priorities in life. It helps if you don't have much of a social life to begin with, but such obstacles as work, family, friends and sleep are easily overcome after pondering the everlasting glory that goes with sticking your name on some as-yet-unseen celestial snowball.

On the other hand, there's always the chance that your new discovery will be hailed as "THE COMET OF THE CENTURY", only to have it fade to 10th magnitude at perihelion. Years from now, veteran observers could be whiling away the cloudy nights with stories like, "... oh yeah? Well, if you thought Comet Austin in '89 was a dud, how about that useless Comet <your name here>! Didn't they measure the tail length of that one in arc seconds?! Heh, heh...".

Take some advice from the UltraMind - get involved in astrophotography and *really* go nuts!

* Bufo the toad, while not a currently recognized pattern, was a legitimate constellation from 1780 to 1943, when it was quietly abolished and its stars allocated to the neighbouring constellation of Norma the truckstop waitress. If you, like a growing number of astronomers, would like to see Bufo in the Heavens again, send \$10 to the Society for the Preservation of the Archaic Constellations of Yesteryear (S.P.A.C.Y.). With your financial help, perhaps we'll see other, long forgotten, groupings like Flagellum the bull whip, back in the heavens where they belong.

Dear UltraMind;

Recently I've read several articles in different magazines about a certain "paradox". The person who invented this paradox was apparently trying to answer the question, "Why is the sky dark at night?". Living where I do, this leaves me with a question which maybe you can answer; Is the sky supposed to be dark at night??

Signed,

Lightly Polluted.

The UltraMind replies...

Gentle Reader;

Your letter raises an interesting question that German physician and astronomer Heinrich Wilhelm Matthias Olbers (known as "Little Heinie" to his friends) considered in 1826. Based on the assumptions that the universe is infinite, and the stars are evenly distributed through space, he deduced that their combined light should make the night sky as bright as the Sun! Now, that's baaaad light pollution!!

Needless to say, he was wrong, which just goes to show that astronomers generally assume too much. While the night sky isn't quite

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Observing Hazards

The following e-mail messages were recently extracted from an AAVSO discussion group. Perhaps this is not a particularly good way to promote the AAVSO!

From: Gary Poyner <gp@star.sr.bham.ac.uk>
To: Rik Hill <rhill@lpl.arizona.edu>
Subject: Re: Physical problems

I too have had one or two problems.

In 1982 I had an eyepiece stick to my eye in -18 degrees temperature. Very painful! Also in September 1996 my aluminum step ladder broke in the observatory whilst I was on the top step! This resulted in quite serious damage to my left leg and back. Ruined my night that did (and it was very clear too!)

One other story. Not so much physical problems but interesting to relate. I was returning from a VS meeting in November 1981 with four others, when we were stopped by no less than SEVEN police cars, and arrested for armed robbery of a bank. It appears that our car was stolen during the day, and returned to the same place after taking part in the robbery. At the end of the meeting we innocently returned to the car which was under surveillance by the police. We were all locked up until we could prove where we had been that day (which was no problem because we had about 60 witnesses).

Exciting hobby eh?

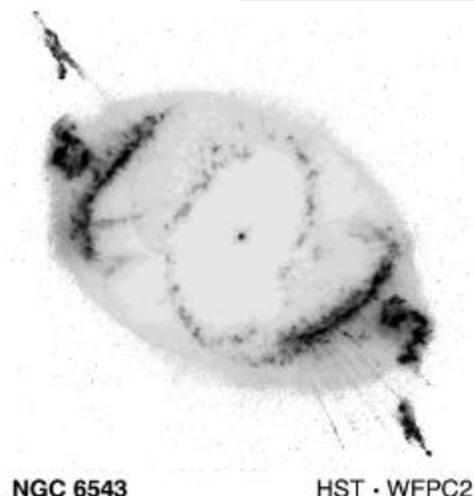
regards,
Gary Poyner (PYG)

From: Dbwilyumz@aol.com
To: aavso-discussion@physics.mcmaster.ca
Subject: Observing hazards

While observing a visual minimum of eclipsing binary Y Leonis

from a national park in Arizona, I had a skunk wander over and stick its nose up my pant leg. I heard something snuffling along the ground and looked down. Fortunately, there was a quarter moon, which offered enough light at the otherwise black site so that I could see the double white stripe moving toward me. It wasn't cold, but this was a situation in which I froze to the eyepiece too!

-- David B. Williams (WI)



NGC 6543

HST · WFPC2

Astrophotips...

(Continued from page 1)
NOT the scope. (Rob Roy)

TIP: Using a double-holed mask for focusing on the bright Moon? Don't forget to remove it before taking a picture. (Rob Roy)

TIP: If you have just taken 36 irreplaceable astrophotos on a 24-exposure roll, check your take-up spool. (Clive Gibbons)

TIP: If you can't find a guide star after more than 20 minutes of looking, take the cover off the end of your scope. (Rob Roy)

TIP: Don't rely upon the battery of your fancy electronic camera to hold the shutter open for a long exposure. It will always fail during the most important shot of your life. (Rob Roy)

TIP: Always ask the photofinisher to leave your negs or slides *uncut*, unless you prefer having all your deepsky images neatly bisected. (Clive Gibbons)

TIP: If you find your camera pointing at the ground after a 5 minute exposure when using a heavy telephoto lens, glue your camera to the tripod head. (Rob

Roy)

TIP: *Preserve your mental health by avoiding astrophotography altogether!*
(Clive Gibbons)

Send your submissions to:

EH ASTROPHOTIPS
c/o Rob Roy
RR #2, Binbrook
Ontario. L0R1C0

OR e-mail: royrg@mcmaster.ca

OR phone:
1-900-AST-TIPS (charge of 5.00/min)

Please keep them short and sweet. All submissions are subject to final approval and will not be returned. Employees (and the families thereof) of McDonalds are not eligible to participate.

Submitted by Rob Roy

The Recent Solar Flare ...

(Continued from page 1)

If current projections are correct, the sunspot maximum is currently estimated to peak in March of the year 2000. It must be noted, however, that predicting the month of maximum is even less certain than the sunspot number. The actual month of sunspot maximum could be as early as January 1999 or as late as June, 2001.

Geomagnetic activity is expected to gradually become

“Over the next 3 to 6 years, we can expect to see some solar flares 100 to 1,000 times more powerful than this one.”

increasingly disturbed as we move toward the solar maximum of cycle 23. The number of days of disturbed conditions is expected to increase from 1997 through to a peak near the year 2002. Thereafter, activity should begin a gradual decline. This is good news for people interested in watching auroral activity, but it is bad news for people reliant on ionospheric radio communications and satellite health. For people reliant on ionospheric radio communications, there is a bitter-sweet story. Although the frequency of degrading interplanetary disturbances will increase, the large increase in ionizing radiation from sunspot regions will provide ever-improving propagation conditions with bands gradually opening into the higher frequencies of the HF bands. The years from 1999 through 2005 will be the worst in terms of geomagnetic and ionospheric disturbances. And of those, the year 2001 is expected to be significantly disturbed, seconded by the year 1999 and the year 2004.

Placing the 07 April Solar Flare in Perspective

A few notes and caveats regarding the solar flare and related

coronal mass ejection of 07 April is in order, considering how well publicized this event is becoming. We have seen a sufficient number of reports on TV, the Internet and radio to feel justified in placing this disturbance in perspective. Some sources are blowing this event a fair bit out of proportion.

First, the flare itself was rated a class C6/3N event. The C6 portion identifies the magnitude of the flare in soft x-rays. The flare in x-rays was really not that unusual or spectacular. It was very small compared to the solar flares that we will be observing over the next 3 to 6 years. The last portion of the rating ("3N") defines the optical size and brilliance of the flare. In this case, the flare was quite large, but of only average ("N"ormal) brilliance. A size 4 flare is the largest optical flare rated.

So the flare itself was not very spectacular in x-rays, but it was fairly large optically. Since x-rays are considered the more accurate indicator of a flare's true magnitude (and potential influence on the Earth), we can conclude that this flare was really rather diminutive.

Over the next 3 to 6 years, we can expect to see some solar flares 100 to 1,000 times more powerful than this one. This should help bring the ordinary nature of this flare into perspective.

What few people realize is that solar flares themselves are NOT well correlated with the magnitude of interplanetary disturbances (technically called coronal mass ejections or CMEs). Most solar flares don't even produce disturbances that escape the Sun. In fact, a great number of CMEs are not associated with flares at all. And some aren't even associated with any discernable changes in the appearance of the Sun. Some researchers even argue that solar flares are not related to coronal mass ejections at all, but that they are two separate and

distinct types of unrelated phenomena. The jury is still out on that one. Caution must therefore be exercised in relating solar flares with coronal mass ejections.

This particular event does appear to have been related to the C6/3N solar flare of 07 April. The coronal mass ejection itself was larger than most the Solar and Heliospheric Spacecraft (SOHO) has seen, but remember that SOHO has not been in space long enough to see anything but the sparse and less active disturbances associated with solar sunspot minimum conditions. SOHO will undoubtedly see some disturbances over the next several years that will blow the lid off the disturbance currently being publicized. This disturbance is probably being publicized so strongly because of our new and very much improved ability to observe these solar events with new state-of-the-art spacecraft and high resolution.

So, placed into perspective, what has really occurred is an event that is not out of the ordinary or liable to produce any serious impacts on Earth. The most probably impact that will be observed is a rather weak shockwave hitting the Earth (marking the

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Lirpa Sloof

The only smart thing that listeners to a Michigan radio station did was to shade their eyes before looking skywards. WHNN-Saginaw, had announced that the comet Hale-Bopp would collide at noon with an asteroid called Lirpa (April backwards) and that the best way to view the event would be through green plastic bottles. More than 70 lirpa sloof fell for it and were seen ylhsilooof gazing skyward through green plastic bottles!

Submitted by Rob Roy

The Recent Solar Flare ...

(Continued from page 6)

disturbances arrival) and producing a sudden (and small) impulse in the Earth's magnetic field, followed a few hours later by somewhat stronger fluctuations in the Earth's magnetic field (perhaps a few of which may be large enough to be classified as "minor" or "major" fluctuations). But these too are not out of the ordinary. We routinely see (sometimes several times a month) brief periods of minor and major geomagnetic activity - particularly over the higher latitude regions where such activity is strongest. The geomagnetic activity should coincide with increased levels of auroral activity - but again nothing particularly magnificent is expected. We do not expect auroral activity to become visible from any of the lower latitudes below about 40 to 45 degrees north latitude (over North America). Some locations in New Zealand and (perhaps) extreme southern regions of Australia may observe activity, but this too is not unusual. New Zealand regularly reports sightings of auroral activity - even during the solar minimum. We have received sighting reports from New Zealand observers at least once or twice a month even during the lull of the solar cycle.

Wait until the true powerhouses of solar activity start appearing on the Sun. THEN you'll see how insignificant this disturbance will likely be. As we rise toward the solar maximum, we will begin to see some periods of geomagnetic and auroral activity that will dwarf this disturbance in comparison. Sightings of auroral activity are usually possible from the southern regions of North America (and sometimes even into the tropics) at least once or twice each solar cycle. Powerful displays visible throughout most of the continental United States, Europe, Russia, Australia and New Zealand will become much more common over the next 3 to 6 years, occurring possibly dozens of times during this new solar cycle.

Over the next several years, there will undoubtedly be an increasing number of satellites that suffer anomalies and even failures. The increased sensitivity of satellite components translates (in many cases) to increased vulnerability as well. This should indeed be a very interesting decade of activity and one for which satellite owners are likely going to have to sweat through.

Available Tools and Sources of Information

The advent of the world wide web and easy access to the Internet has opened up a wide assortment of possibilities for amateurs and professionals alike. You can now obtain current (almost realtime) images of the Sun and the solar corona. A good source of information is at the WWW page for the Solar Data Analysis Center (SDAC) at: <http://umbra.gsfc.nasa.gov>

Current predictions and other information can be obtained from the Space Environment Center at: <http://www.sec.noaa.gov>

Information regarding current solar flux and geomagnetic data can also be found at: <http://solar.uleth.ca/solar>

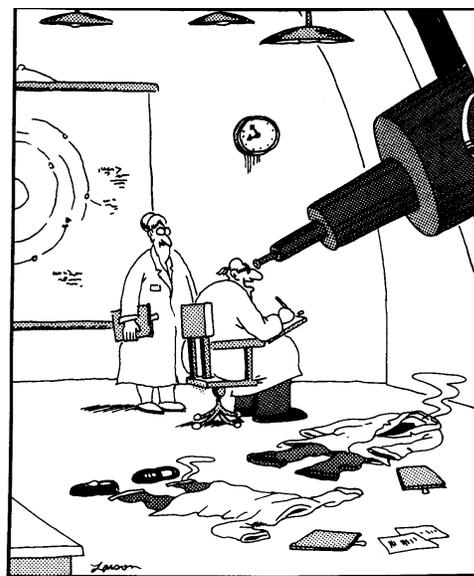
For those nearer to Australia, a great deal of information is available from IPS Radio and Space Services in Australia at: <http://www.ips.oz.au>

These are good starting points for finding information on the current state of the Sun.

For those with a real hunger for REALTIME information, a substantial software package is available for those with Windows 95 computer systems (and soon Windows 3.1 systems) that will haul down a huge amount of critical solar and geophysical information IN REALTIME over the Internet. All you need is a computer that can be connected to the Internet (whether via a modem and an Internet

Service Provider, or a direct line). The software effectively turns your computer into a solar, geomagnetic, space and ionospheric "weather" analysis center. The same data is used by professional solar and space weather forecasters. You can observe the progress of solar flares, AS THEY HAPPEN, updated on-screen as frequently as you desire (up to once each minute). You can study the CURRENT state of the ionosphere, obtain current geomagnetic readings from up to 11 magnetic observatories world-wide, set up to 43 audible warnings providing you with exceptional "activity trapping" capabilities, track the current locations, sizes and shapes of active solar regions and coronal holes, and much more. We feel it is ideal for anyone who wants to stay on top of current conditions. Details can be found at: <http://solar.uleth.ca/solar/www/swarm.html>

Cary Oler, oler@holly.cc.uleth.ca



"First that cretin Foster and now that jerk Cummings has instantly evaporated! ... I tell you, Ms. Goodman, without a doubt, I'm looking at an authentic full-fledged wishing star!"

Carl Wetzlar's Wedding Night

Every amateur astronomer remembers their "first night" with a new telescope; that exciting, euphoric evening when observer and instrument meld together for the first time to explore the heavens as one. It all starts with great expectations of what the night will bring, but the inevitable fumbling around with unfamiliar parts in the dark and the anxiety over achieving proper polar alignment (especially if friends are present), can ruin the whole experience. It's been 22 years since that first magical evening with my long-lost Wetzlar 4.5" reflector, but time has not dulled the vivid memories; back when times were more innocent, bell-bottoms were "cool", the night sky was darker and I thought Carl Wetzlar was German... (Harp music plays as the scene fades to a bygone time)

"Polar alignment was cursory at best. There was no way of leveling the tripod in the snow and I could have been sighting on Gamma Draconis instead of Polaris..."

A cold winter evening awaited me and my freshly assembled, shiny white telescope. Up until that fateful night, I had never used an instrument of such immense aperture and certainly never with a genuine equatorial mount. Outside, the temperature was hovering around 0 degrees F. (this was years before metric) and I was appropriately dressed for a space walk. Virtually every piece of clothing I owned now wrapped, protected and encased every square inch of skin several times over, leaving only my right eyeball exposed to the chill of deep space. It was time to "Go For It!". I could no longer resist the call of the clear night sky, quite apart from the fact that my boots were starting to fill with sweat and myself and the scope were an impassible roadblock in the front hallway. A bystander, watching me carry the telescope out of the house, would no

doubt have compared my egress to Neil Armstrong trying to shift a canoe through the front hatch of the Lunar Lander. The noise was deafening as control cables, finderscope, focuser, telescope tube and tripod legs all managed to smash into the screen door on the way out, followed by parental bellowing about a sudden cold draft in the living room.

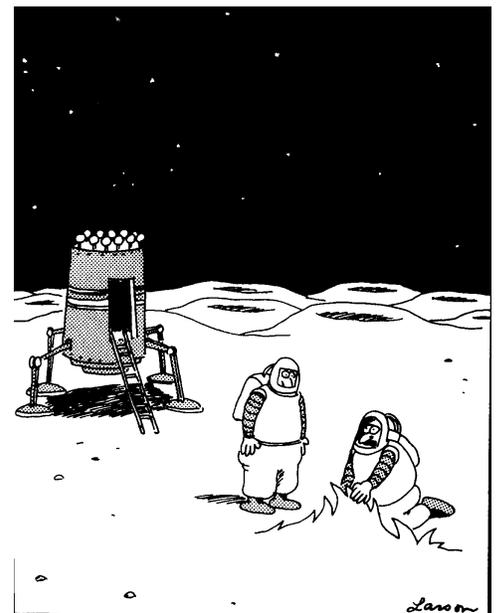
With a final BANG!, the door was shut and we were alone under the starry firmament. Alone, that is, with a foot of snow on the ground and the neighbor's porch light only 30 feet away. The remedy was a long march across "Siberia" to find a dark, sheltered spot to view from. After about 50 yards of pitiful slogging, my telescope and self came to rest in the darkest region of our townhouse complex. The vault of heaven would have been spectacular, if it hadn't been obscured by the steam billowing from my overheated and overdressed body parts. At first, I was puzzled by the strange silence of the evening; no barking dogs or traffic noises, not even the crunch of snow underfoot. Perhaps it was muffled by all the toques and scarves...

Polar alignment was cursory at best. There was no way of leveling the tripod in the snow and I could have been sighting on Gamma Draconis instead of Polaris, but who needed polar alignment to look at the Moon? Soon, I was trying to spot the fat crescent through the 5X24mm finderscope. Several problems became immediately obvious. One, my extensive winter apparel made it impossible to squeeze my head in behind the finder eyepiece and two, the finderscope had suffered a serious misalignment upon exiting the house. What I didn't know then, was that on Carl Wetzlar telescopes, the term "finderscope" was a euphemism for "carry handle". Out of desperation, I tried sighting along the telescope tube to find the Moon. This exercise consisted of crouching in a snowbank and looking up the tube by craning my

neck, so that both carotid arteries were nearly pinched off. Then, up to the eyepiece I'd spring, just in time to see a ghost image of the Moon zoom out of view. After 5 minutes of fruitless sweeping, it was back to crouching and near unconsciousness, to repeat the folly. Half an hour later, I was defeated. With cramped muscles, wrapped in 50 pounds of soggy clothes, I slumped into the snow. I couldn't even find the Moon...

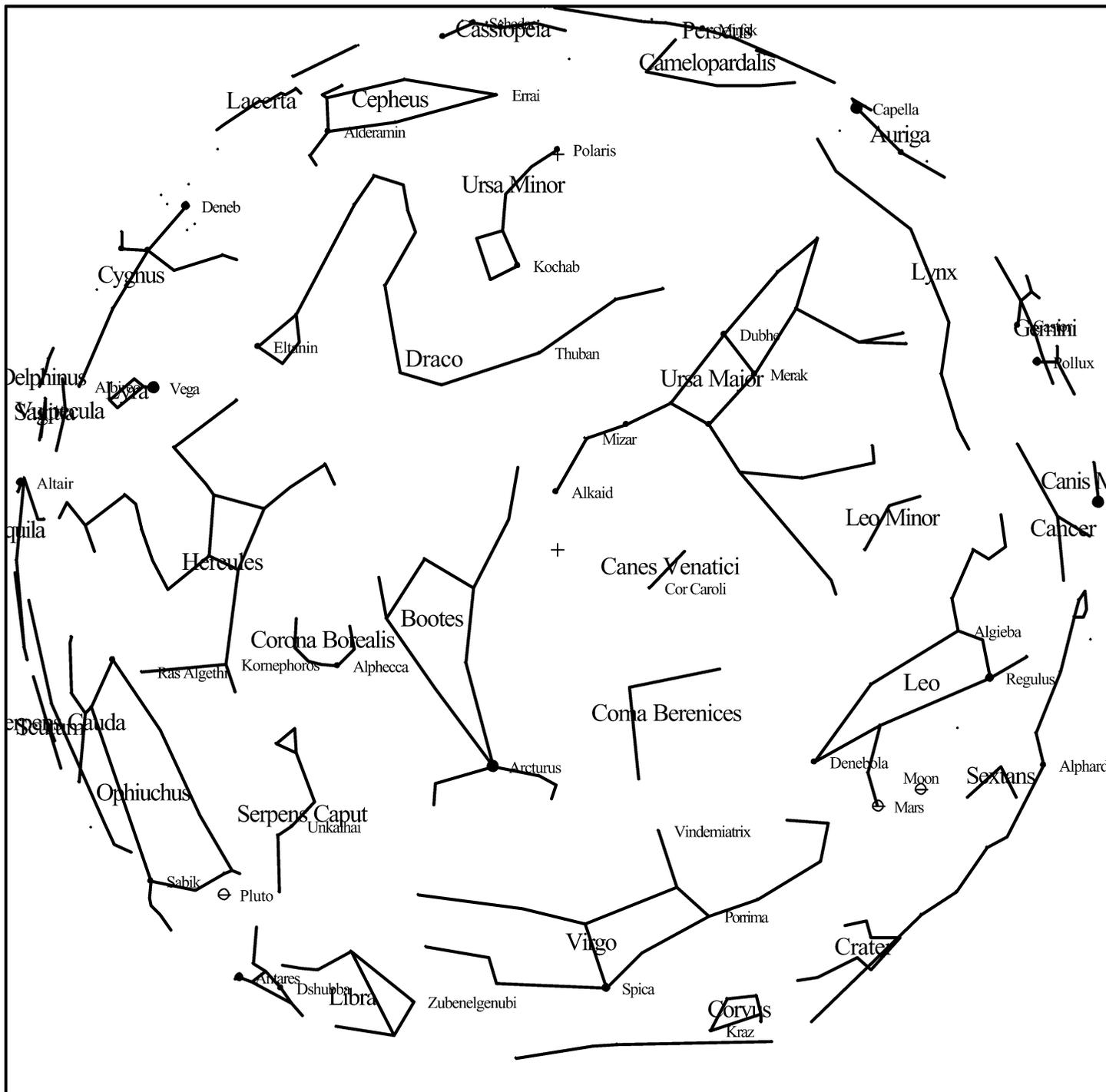
It's been a long time since that first, unsatisfying evening with my 4 1/2 inch. As time went by, I gained valuable experience with a range of different telescopes, but things really started to improve when I discovered friends who shared my affection for the night sky. It's taught me that no matter how big or small your instrument is, it's more fun to use it with a buddy. And nowadays, if I'm having trouble finding a deepsky object or getting frustrated trying to focus the camera for a astrophoto, I just think back to the night I couldn't even find the Moon and think, "Hey, things aren't *that* bad!!".

Clive Gibbons



"Say ... It's only a paper moon."

May Night Skies



ECU V3.0 (Star Atlas Mode) - May Night Skies

UTC: 1997/05/16 at 03:30
LMT: 1997/05/15 at 10:30pm

RA=13h46.3m Dec=+43°06'
Field=180.0° Azim=351°34' Alt=+90°00'

Ask the UltraMind ...

(Continued from page 4)

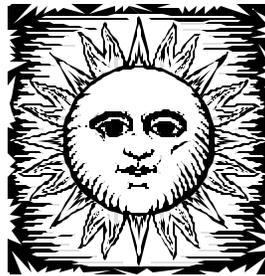
dark, it isn't pitch black for a number of important scientific reasons that temporarily escape me. I have this theory, though, which might account for what you're seeing. We've all heard about the "cosmic background radiation" that hums softly in all directions. Well, it doesn't have anything to do with that, but may, in fact, be the often observed but little understood phenomenon of "cosmic foreground radiation".

"But what causes this mysterious glow??", I can hear you all wondering. I'm not a scientist and don't even play one on television, so don't ask me, BUT, if you're looking for hard-hitting and potentially disturbing insights into "The Big Picture", write to the Subgenius** Foundation, P.O. Box 140306, Dallas, Texas 75214. Just take a piece of 8-1/2X11" paper and write "why?" in the middle of it, mail to the above address and prepare yourself for a 20,000 volt joybuzzer for your brain.

No salesmen will call and no alien medical examination is required.

****Important Note!:**

The Subgenius Foundation is not, in any way, associated with Heaven's Gate, or any other mystical, pseudo-scientific, hocus pocus, "bunch o'wackos" cult. You will **NOT** be required to commit suicide (but you might want to, once you learn the "truth"). Persons previously abducted by "The Greys" need not apply.



CALENDAR OF EVENTS

- ◆ Monday, April 21 7:00 PM
- ◆ Friday, April 25, 7:30 PM
- ◆ Thursday, May 1, 8:00 PM
- ◆ May 2,3,10,30,31. 8:00PM
- ◆ Friday, May 2, 11:59 PM
- ◆ Friday, May 9, 7:30 PM
- ◆ Saturday, May 24, 8:00 PM
- ◆ June 7,8 and 9

HAMILTON AMATEUR JUNIOR ASTRONOMERS - Mac Burke Science Building, Rm B148 (beside the planetarium) Topic to be "Comet Hale-Bopp". For more information contact Rosa Assalone at 540-8793

COUNCIL MEETING - At the home of Doug Welch. Call Doug at 525-9140 Extension 23186 if you are interested in attending.

ROYAL ASTRONOMICAL SOCIETY OF CANADA Hamilton Centre - General Meeting - McMaster University Medical Building Room 1A6.

BINBROOK OBSERVING SESSIONS - Proposed observing nights. For confirmation or directions call Rob Roy (692-3245) or Ann Tekatch (575-5433)

EVENT HORIZON DEADLINE - Please submit your articles and pictures to Stewart Attlesey, attlesey@interlog.com or modem (905)827-9105 or snail mail to 1317 Mapleridge Cres., Oakville, L6M 2G8

HAA GENERAL MEETING - at the Spectator Building auditorium. Speaker to be Oscar Cole-Arnal "The Planet Mercury" (K-W joint mtg) Parking lot observing, weather permitting.

COSMOLOGY DISCUSSION GROUP - Room B148 (next to the Planetarium) Burke Science Building, McMaster University. Topic will be "Reality". For more information contact Bill Tekatch at 575-5433 or tekatchb@mcmaster.ca

H.A.A. STAR PARTY - York Soaring Association airfield near Arthur. Next Month's issue will have a map and more details.

For Sale

Meade 2045 Schmidt-Cassegrain 4 inch 3 eyepieces 6mm, 16mm & 25mm Barlow lens AC Power Supply Battery pack fiberglass case table-top tripod 2 finder scopes \$800 O.B.O.

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Asking \$3800.

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