

BPAA Newsletter

Battle Point Astronomical Association, Bainbridge Island, WA

ISSUE 58: SEPTEMBER - OCTOBER 2003

SEPTEMBER-OCTOBER-NOVEMBER CALENDAR

(Unless otherwise noted, all events are at the Edwin Ritchie Observatory, Battle Point Park)

September

- September 3: BPAA Board Meeting 7 p.m.; First-quarter Moon 5:35 a.m.
- September 10: Member Meeting 7 p.m.; Full Moon 9:37 a.m.
- September 18: Last-quarter Moon 12:04 p.m.
- September 20: Star Party Battle Point Park. Beginner session 7 p.m.
- September 23: Autumnal equinox
- September 25: New Moon 8:10 p.m.

October

- October 1: BPAA Board Meeting 7 p.m.
- October 2: First-quarter Moon 12:10 p.m.
- October 8: Member Meeting 7 p.m.
- October 10: Full Moon 12:29 a.m.
- October 18: Star Party Battle Point Park. Beginner session 6 p.m.; Last-quarter Moon 5:32 a.m.
- October 25: New Moon 5:51 a.m.
- October 26: Daylight Savings Time ends
- October 31: First-quarter Moon 8:26 p.m.

November

- November 5: BPAA Board Meeting 7 p.m.
- November 8: Full Moon 4:14 p.m.
- November 11: Tycho Brahe discovers supernova in Cassiopeia (1572)
- November 12: Member Meeting 7 p.m.
- November 13: William Herschel discovers planetary nebulae (1790)
- November 15: Star Party Battle Point Park. Beginner session 6 p.m.
- November 16: Last-quarter Moon 8:16 p.m.
- November 23: New Moon 3:00 p.m.
- November 30: First-quarter Moon 10:17 a.m.

Calendar Notes:

By now, Mars mania may be over. Let's get back to normal, and enjoy the long evenings in Fall, offering the advantage of several extra hours of darkness for investigating the night sky.

Cassiopeia, with its distinctive W-shape, dominates the Autumn sky. The great square of Pegasus is prominent. Use the right side of the square to form a sight line south to Fomalhaut, a first-magnitude star near the horizon.

Use the left side to aim down to Diphda, a second-magnitude star, in the constellation Andromeda, whose stars angle up to the northeast. Andromeda contains the only galaxy similar to the Milky Way Galaxy that is (Cont. on p.

visible to the unaided eye. The Andromeda Galaxy is a faint fourth-magnitude smudge, the most distant object that can be viewed naked eye.

Our star parties in October and November will begin at 6:00 p.m. to take advantage of those extra hours of darkness. Other star parties may be scheduled at any time via our email yahoogroup. Any member who plans to observe can invite others to join in by sending an email to bpaa@yahoogleroups.com. To join our email group, send an email with your name to bpaa-owner@yahoogleroups.com and we can enroll you. If you want to also have web access to the messages and files, you can join the yahoogroups by clicking the register link for new users on <http://groups.yahoo.com/>, and then you can request to join our group on this page: <http://groups.yahoo.com/group/bpaa/>. The system will send us a message, and we'll approve your request after we verify your membership.

Diane Colvin
(dcolvin@bainbridgeisland.net)

NEWS BRIEFS

David Levy in Seattle, Oct. 2 - 4

Tickets for the October 3rd VIP Buffet with David Levy and his wife Wendy Wallach-Levy and for his multimedia presentation are available through D. Ingram, www.boeingastro.com. Reservations must be made before September 25. The Museum is free to the public on Oct. 2 from 5 – 9 p.m. and the web site has information on admission prices, directions and hours for all events.

Mars - Information about that big, bright light in the eastern sky at sunset and the missions to it is available on NASA's Mars page: <http://mpfwww.jpl.nasa.gov/>

ISS-AT Update

"The whole thing began as one of Mac Gardiner's nutty ideas," Richard Berry begins his article "A Public Star Party from Earth Orbit" (*Sky & Telescope*, October 2003, pp. 76-80). Berry goes on to recount the preparations for realizing Mac's idea (and the enthusiasm it is now generating among amateur astronomers) with the steps that the project members are taking at Arizona Sky Village with Telescope Alpha as it goes into its third observing season. "To make the most effective use of telescope time, every image from Telescope Alpha becomes public domain as soon as it is taken," he reports.

Mac continues to keep in touch with the team, and shares the letter he got recently from the ISS-AT chairman, Terry Mann: "We greatly appreciate everything you, Richard [Berry], Harry Colvin and the BPAA have done. The donation might be used to help equip the observatory..."

Astronomy Concepts Survey

At least 15 of our members took the quiz that the Astronomical Society of the Pacific posted on the web this summer. They congratulate BPAA for its participation and report that by early October we should learn where we

stand in the overall performance on such questions as what's at the center of the universe, where the Sun gets all its energy, and how well we thought we did.

The Swan at Table Mountain



This image was captured by David Warman during the 2003 Table Mountain Star Party, using the Club's CCD camera mounted on his 150mm refractor.

M17 is called either the Omega Nebula, the Swan Nebula, or the Checkmark nebula. The open cluster associated with the nebula is magnitude 6, which makes it a faint patch of light, naked eye visible if seen from a dark location. The nebula is 40 minutes by 30 minutes, and is 4,890 ly away.

Dr. Ken Crowell: *Magnificent Mars*

Author of a number of books on astronomy, Dr. Crowell will be speaking at the University of Washington, Physics/Astronomy building, on Wednesday, November 19 at 7:30 p.m. His subject is the planet Mars, its geology and atmosphere, illustrated with a number of the images that illustrate his books. The lecture is free.

(Brief Notes continued on p. 3)

Clear Sky Clock

Do you use the Clear Sky Clock for the Ritchie Observatory? You can find it on our web site at the bottom of our Calendar Page,

<http://bicomnet.com/ritchieobs/pages/events.htm> or you can access it directly at

<http://cleardarksky.com/c/RitchObWKey.html>

It provides a roughly two-day forecast of hourly cloud cover, transparency, and seeing, along with the measure of darkness. You can also click on the chart and get even more information. It is based on Environment Canada data, and is created and hosted by an amateur astronomer who does these as a labor of love. As forecasts for observing go, I find it as good or better than other web sites.

To help defray the hosting costs, he accepts sponsorships. In return, he tends to give processing time priority to the sponsored clocks. We can update our ranking by either using the page more or by being sponsors. Our current ranking is 369 out of more than 1700, so I know some of you have been using this clock!

You can either send a check to his address in the following message, or use PayPal from the web site (from the clear sky clock click on the link for sponsorship, www.danko@clearsky.com). At a recent Board Meeting, we voted to send \$20 from the club, but individual donations would be good. As the web site says, no amount is too small.

Paul Below

Comet 2P/Encke

This year sees comet 2P/Encke's 59th observed return to perihelion since its discovery by Mechain in 1786. The orbit is quite stable, and with a period of 3.3 years apparitions repeat on a 10-year cycle.

This year the comet is well seen from the Northern Hemisphere prior to perihelion, which is in late December. The comet tracks through Andromeda during October and early November, then accelerates southwards through Cygnus and begins December in Ophiuchus. The comet might be observable from October until early December, when it could be 6th magnitude.

This magnitude may however be optimistic as observations from the SOHO spacecraft in 2000 showed that it suddenly brightened after perihelion, by which time it will be at a poor elongation. A possible explanation of this behavior is that Encke has two active regions, an old one with declining activity, which operates prior to perihelion and a recently activated one present after perihelion. The comet is the progenitor of the Taurid meteor complex and may be associated with several Apollo asteroids.

Paul Below

July 4th on Bainbridge

Paul Below

What a glorious day: The Sun shone until after I packed up.

I set up before 9 a.m. on a grassy spot near the Senior Center with the HA filter and had pretty steady traffic all day long. A few times there was a line of more than half a dozen people waiting to look at the Sun, but usually I had just a few folks. That allowed me to answer questions and help people see what there was to see.

The viewing was best in the morning. I'm not sure if that is because it usually is. Maybe the filter heats up during the day, or maybe the atmosphere blurs up as the Earth heats up, or maybe the Sun was less active after noon. Anyway, we always had at least one little prominence, sometimes four or five to look at. Also, one nice sunspot group, at least one nice filament were seen.

I packed up around 4 p.m. as the crowd thinned out. I heard that five members plus the Robot Club marched in the parade: Bill and Anna Edmonds, Eric Cederwall, Jim Vaughan, and Russ Heglund. I also heard the Robot Club had their robot working, and it was a crowd pleaser (see article p.4).

ARTICLES AND REPORTS

"What's That Bright Orange Star?"

By Paul Below

On August 27, Mars rose at 8:33 p.m., (sunset was at 8:01 p.m.). Mars transit (the highest it got in our southern sky) was at 1:23 a.m., and Mars set at 6:14 a.m.

On that date, at 10 p.m. from our observatory, Mars was an incredible magnitude -2.9 (that is a negative 2.9; recall that lower numbers are brighter, and Sirius, the brightest star seen from Earth, is dimmer at magnitude -1.44). Mars was 0.373 AU from Earth (an AU is an Astronomical Unit, where the average distance from Earth to the Sun equals 1.0).

The disk of Mars was 99.8% illuminated, and the angular size was 25.1 arcseconds, almost half of an arcminute. I heard some crazy stories online that some reporter somewhere was saying that Mars was going to look as big as the Moon. When it is full, the Moon is about a half degree, or 30 arcminutes, across. So, quick math reveals we could fit over 71 tiny Mars disks, even at this historically close opposition, across the face of a full Moon. If we *had* 71 tiny Mars, which, luckily, we don't (because they'd be zipping around, some eventually bumping into us)!

So, how is the view of Mars going to change over the next couple of months? (Cont. on p. 4)

The following data is for every coming Saturday for the September and October weekends. After the date the numbers are Magnitude, distance in AU, percent illuminated, and angular size in seconds.

For dates in between, just interpolate.

Sept 6: -2.8, 0.382, 99.3%, 24.5
 Sept 13: -2.6, 0.396, 98.3%, 23.6
 Sept 20: -2.4, 0.416, 97%, 22.5
 Sept 27: -2.2, 0.442, 95.5%, 21.2

Oct 4: -2.0, 0.473, 94.0%, 19.8
 Oct 11: -1.8, 0.508, 92.6%, 18.4
 Oct 18: -1.5, 0.548, 91.3%, 17.1
 Oct 25: -1.3, 0.590, 90.1%, 15.9,

Here are the times of rise, transit, and set from Battle Point Park for the same dates. Time of set is actually the next day. Times are all Daylight Savings Time.

Sept 6: 7:46PM, 12:34AM, 5:21AM
 Sept 13: 7:13PM, Midnight, 4:47AM
 Sept 20: 6:41PM, 11:28PM, 4:16AM
 Sept 27: 6:09PM, 10:59PM, 3:49AM

Oct 4: 5:39PM, 10:32PM, 3:26AM
 Oct 11: 5:11PM, 10:08PM, 3:06AM
 Oct 18: 4:44PM, 9:46PM, 2:48AM
 Oct 25: 4:18PM, 9:26PM, 2:34AM

Junk Yard Wars Robotics

By Jim Vaughan

The robot club reconvened at the beginning of May after being dark for four months. I was not at all sure what to do and who would show up. Daniel Cox, Nathan Abell, and Stuart Handberg were there. I started out showing them how to design a computer. Very soon their eyes glossed over. I think that it was Nathan who suggested that, "What we really want to do is to build a BIG robot." The first words out of my mouth were, "Big robots cost a lot more to build than little robots. We need a sponsor." After a bit of brainstorming, someone suggested that we build a Tour Guide Robot for the Solar System walk. And so it began.

The rest of the month was spent planning and writing a set of requirements and a proposal for the Board of Directors of the BPAA. On June 5th, the Board approved a budget of \$550 for construction. We then ordered a GPS unit that could interface to a PC from Garmin and some motors and motor drivers from a surplus dealer on the Internet. The rest of the month was spent trying to build a gear system to drive the robot, the motor

driver electronics, and an interface to a radio control unit that Nathan bought on Ebay. Then came the Rotary Auction.

On Sunday, Nathan proudly showed us a very rusty and tired looking "Lectronic Caddy" that he had purchased for \$5. It had all the right parts, good wheels, two good motors, and a motor controller. We immediately scrapped everything else and started over. We had five whole days to get everything working for the 4th of July parade. The only thing that we saved was a piece of ¾ inch plywood that we used as a base. A couple trips to ACE Hardware later, we had the motors and wheels mounted. We tried the controller board and it seemed to work. Stu built a cover out of scrap wood in my garage. Nathan put together an interface that would allow the radio receiver to talk to the control board. Daniel got the GPS and the text to a speech program to work with his laptop. I put together a narrative that was written by Barbara Winther of the Bainbridge Historical Society. Daniel and I tried out the GPS and the narrative in my car at about 20 miles per hour. The narrative was still talking when we got back to my house, but the GPS worked. It was Thursday night, the parade was tomorrow, and all was going smoothly. We were on track to get in the parade.

Then disaster struck. When we tried to connect the controller board, it didn't work. At supper all was gloom. At 9 p.m., Nathan said that he had a couple power relays that he had salvaged from old microwave ovens or something. Off he went. By 11, we had it working. The speed control on the controller board still worked and the relays allowed us to control the robot with a wire and two push buttons mounted in a Macintosh mouse that we got free at the auction. Everybody showed up at 8 a.m. on the 4th and we finished putting everything together in time to get into the parade. While we were in the parade, the left wheel motor didn't work and the robot kept veering into the audience, and the computer crashed about at the hardware store. But we made it to the end.

The next two weeks were spent getting ready for the BPAA open house. Of course everybody was busy with other commitments. We were able to interface the radio transmitter, but the motor controller completely died. Nathan decided that we didn't need speed control. I tried to put together a solar system narrative from material on the Internet. We finally located all the planets on the walking path the night before the open house, but we never had a dry run. The next morning I was frantically trying to edit the narrative. When the walk took place, the narrative was still too long, the locations were inaccurate, and the front wheel (free from the auction) destroyed itself at Uranus.

(Cont. on p. 5)



Jim Vaughan, Daniel Cox, and Nathan Abell with the robot on the Solar Walk

Where do we go from here? We are working on getting a variable speed radio control and I have ordered a heavy-duty caster for the front wheel. I hope that in a few weeks we will have a robot that can be used for a historic tour of Madison Ave, Parfitt Way, Winslow Way and Erickson. I think that Barbara Winther will be happy to add to the narrative, and the Historical Society will help promote it. We will also try to get a better Solar System Walk tour put together. We hope to make the robot completely autonomous and not depend on radio control for the Solar System Walk. The Seattle Robotic Society "Robothon," at Seattle Center, is in October. We will be there.

I think that for seven days of work, the robot has been an outstanding success.

Where Did the Snow Go? A report on the Mt. Bachelor Star Party

By Harry Colvin

I have dreamed of a star party where there is no dust and dirt, the site is level, there are paved roads to the site, you can hike and mountain bike during the day, there is lots of room to park a trailer and car next to one's scope, there are heated restrooms with flush toilets, you can watch movies at night, shopping is only minutes away from the observing site, you can go to a gourmet restaurant before viewing and watch knock-out sunsets, 110 outlets are available to charge batteries, and all this with DARK INK BLACK SKIES. Turns out this is not a dream, but what we experienced at the Mt. Bachelor Star Party near Bend, Oregon, sponsored by the Sunriver Nature Center Observatory.

My spouse and I have skied at Mt. Bachelor each year for about the past 10 years. We could not therefore pass up an opportunity to see the place in summer. The event was held in the very parking lot where over 300

inches of snow falls every winter season, and next to the Sunset Lodge where we go for breakfast each ski day before attacking the mountain. In the winter, conditions on this mountain can be so difficult that grooming machines can't keep up and visibility is often at "white out" conditions. Where snow banks over two stories high stood in the winter, there was nothing. Roads existed that we had never seen before. All in all, it was quite a shock.

Setting up at the site was a joy after the Table Mountain Star Party. A level site on asphalt and so much room I did not even have to back up the trailer. I used masonry nails to anchor my pad and set up the new 10" LX200 GPS. Later in the day we went shopping in Bend 20 minutes away for some LED's to construct lights for the tripod legs.

Our first night of viewing was outstanding, very dark skies with just a slight light dome from Bend. The only problem was the horizon in some directions was rather high. We had set up in the lower lot and there were some trees blocking our view of certain southern constellations. Next year we will go to the upper lot.

We are very new to imaging and although scope calibration is automatic, focusing our new Starlight Express MX 916 is still a time consuming challenge, but it is getting easier. Around 10:30 p.m. my spouse began imaging Messier objects. The LX200 performed well, finding objects sufficiently close so we could get them centered on the chip. What fun! Although most exposures were short, between 10 and 30 seconds, the detail was amazing, with spiral arms in M51 and M101 showing even without dark frame subtraction. Around 2:30 p.m. I started imaging 11-12 magnitude NGC objects. For these, I needed to stack at least 10 exposures to get detail, but by dawn I was getting the hang of it. It was a great night.

The next day we went on a hike up the mountain to see one of the ski runs we do in winter. It seemed much steeper in summer! For dinner we took the ski lift up to the Pine Mountain Lodge and had a great meal. But by 8 p.m. the clouds moved in so viewing was a bust. Mel Bartels was the featured speaker that evening, presenting an interesting talk on observing Mars.

Saturday morning it just kept getting more cloudy. Saturday night viewing was again a bust, but the speakers were excellent. Tim Hogle, Project Manager for NASA/JPL Voyager Mission and Paul Mortfield from NASA's SOHO Project presented outstanding lectures on the Voyager Mission to the Outer Planets and on Sun And Space Weather. Later we watched the movie First Contact.

Here's the deal. Even if it's cloudy, the Mt. Bachelor Star Party is a pleasure. If it's clear, it's about all you could ask for: dark skies and creature comforts too. Next year may be even better.

(Cont. on p. 6)

The organizers are proposing that the site will be open a few days early for those wishing to arrive before the official star party, and that in addition to all the other amenities, showers may be available too!

This star party is tops on our calendar for 2004.

Buying a Star: A Dilemma for Amateur Astronomers

By Paul Below

As you probably know, there are several companies that advertise nationally, offering stars for sale or offering to allow you to "name" a star.

These organizations will take your money and mail you a certificate, but the documents have no validity and are not recognized by anyone else. They make vague claims about registering the star, but the International Astronomical Union does not recognize these claims. And the IAU is the only organization that names things in the sky.

The topic of star buying comes up periodically at our monthly Beginner Sessions at the Ritchie Observatory. Our short answer is that you would be money ahead to pick your own star and print yourself out a nice certificate on your home computer.

For fun, in the past BPAA has identified a "birth star" for some people at no charge. This is fairly simple to do in this age of computers. Basically, you determine the exact location, date and time of birth of the person. Enter this information into a planetarium software program. Look for a star (preferably, 4th magnitude or brighter, so it can be seen easily naked eye) that was just rising at the minute of birth. Print out a star chart showing the location and name of the star. It's easy, an interesting gift, and one that just about anyone can do for no cost.

Or, on your birthday, find a star that is your age in light-years away from Earth. For example, Denebola in Leo is 36 light-years away, so on your 36th birthday, go outside and find it and see starlight that left Denebola the year you were born!

If the intent of the considered star purchase is to honor a family member, a better option than "naming a star" may be to make a donation to a favorite charity, perhaps an organization that raises funds by engraving bricks or other items at their location. Zoos or wildlife organizations often allow for the "adoption" of an endangered animal.

If the intent is to give a gift to a budding astronomer, some suggested items would be a subscription to an astronomy magazine, a book, a red flashlight, a good pair of binoculars, a planisphere, a good star chart, some astronomy software, filters, a Telrad or red dot finder, an adjustable observing chair, camping gear, etc. Gift ideas for amateur astronomers are endless. (We're always dreaming of expensive new eyepieces thanks to "Uncle" Al Nagler!)

Also good gifts would be a membership in a club (<http://bicomnet.com/ritchieobs/pages/memberap.htm>) or in an organization like the International Darksky Association (<http://www.darksky.org/>) or the Astronomical Society of the Pacific (<http://www.astrosociety.org/>).

The "dilemma" referred to in the title of this article occurs when we are contacted by someone who has already purchased or received a star. In this case, we have these two choices:

- Tell the person the truth, that the star name is not recognized by any astronomer;
- Don't tell the person the truth, but try to help them find the star (which may be impossible since some stars that are given are not even real) and become an accessory to a sleazy business practice.

I always have told the person the truth, but it bothers me greatly to do so. The problem, you see, is when the star was named for a recently deceased person. Last month, for example, I received an email from a man who had a star that was named for his departed wife (I think he received it as a gift, but he might have purchased it himself). We have also had visitors to the observatory who asked us to find stars named for a dead child.

Also, sometimes people, thinking that since they paid for the star an astronomer is obligated to show it to them, actually become angry if the star cannot be found.

Please do not buy a star for anyone. Please explain the facts to anyone you know who is considering such a purchase. Thank you in advance.

For more, see: <http://home.columbus.rr.com/starfaq/>

SEEING STARS

By Anna Edmonds

Astronomy 0.001

In the July-August Newsletter we talked about the coordinates of a star, its right ascension (RA) and declination (Dec.). The path of the ecliptic is another measure that's useful in finding the locations of things in the sky, particularly the planets.

To recap, right ascension marks a distance east or west from the imaginary line that starts on the vernal equinox directly above the Royal Observatory in Greenwich, England. Declination likewise is an imaginary line; its base is directly above the Earth's equator, and the measurements describe the distance north or south from it. The Earth's equator is projected into the sky to describe the celestial equator.

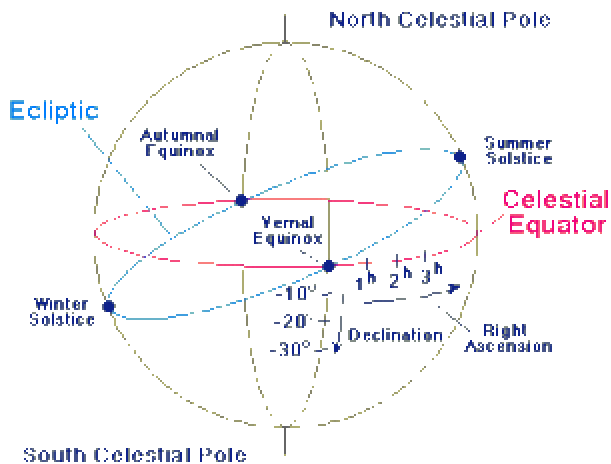
The ecliptic is the path of the Earth's orbit around the Sun.

The Earth spins itself around once every day; we see the effect of this rotation with the Sun rising every morning and setting every evening.

(Cont. on p. 7)

But the Earth's rotation is n't perpendicular to the Sun; it's tilted at a $23\frac{1}{2}^\circ$ angle as it revolves around the Sun every year.

The tilting takes the plane of the Earth's revolution above the plane of the celestial equator for half the year, and below it the other half. The two planes intersect at the points of the spring and the fall equinoxes. At these times the Sun rises due east and sets due west, and the day time is equal to the night time. Without this yearly swinging the Sun would always rise and set due east and west. The tilting carries the Earth farthest north of the celestial equator at our Northern Hemisphere summer solstice, and farthest south at our winter solstice. It also means that the Earth experiences the changing seasons—and for life here this is critical. For us in winter the Sun's rays fall at a low angle when the Sun appears in the southern sky. Its path then above the horizon is short, making the daylight hours short. Six months later the Sun is to the north; its rays come at us from higher in the sky, and the northern half of the Earth experiences summer.



The ecliptic is also the path that the Sun appears to follow every year around the stars as we look at the sky from Earth. It, too, is at the same tilt of $23\frac{1}{2}^\circ$. As we look towards the Sun over the course of the year, because of our revolution the Sun appears to move around against the background of the constellations. Ancient astronomers observed this regular path and named the groupings of stars that the Sun moves through each month the zodiac.

The orbit of the Moon is at a 5° tilt to that of the Earth's orbit. Half the time the Moon is above our orbit, half below. When the Moon comes close to our ecliptic, that is, when the Sun, the Moon, and the Earth are in a line with the Moon between the others, then the Moon's shadow can hit the Earth, and the Sun is eclipsed. Similarly, when the Earth is between the Sun and the Moon the Moon will be in eclipse. At these times the Moon is in the same plane that we are—the ecliptic.

All of the planets, except for odd Pluto, revolve around the Sun in almost the same plane that we do. The planets are always located close to the path of the Sun and within the zodiac. Since the Moon moves within that path, if you can see the Moon and a planet, you can use the arc that they mark to look for any other planets that may be visible.

Table Mountain Star Party 2003

Paul Below, photographs by Russ Heglund.

In the years that I have been attending TMSP, I have never ever encountered 4 clear nights in a row. The summer drought of 2003 proved to be resistant to the astronomer rain-making curse. In fact, it took the historic opposition of Mars in August to bring clouds back to the Pacific Northwest.

Below: A beautiful pier mounted refractor on the main telescope field.



The main field was more crowded than usual due to a change in the Forest Service policy. We were told that two weeks prior to the event a new Forester took control, and TMSP was limited to the number of vehicles allowed in and limited on where they could park. The large corral area, in previous years an area where many cars were parked, was off limits this year. Vehicles were parked on the sides of what used to be the main observing field.

The policy change triggered an emergency message on the TMSP web site, which caused people with large RV's to arrive early. When we arrived on Wednesday, the entire RV parking place was already full and had been full for a few days. However, even with these changes, the organizers managed to find room for all the vehicles that had pre-registered. Some people who had not pre-registered were not allowed in, and they had to camp outside down the main road.

(Cont. on p. 8)

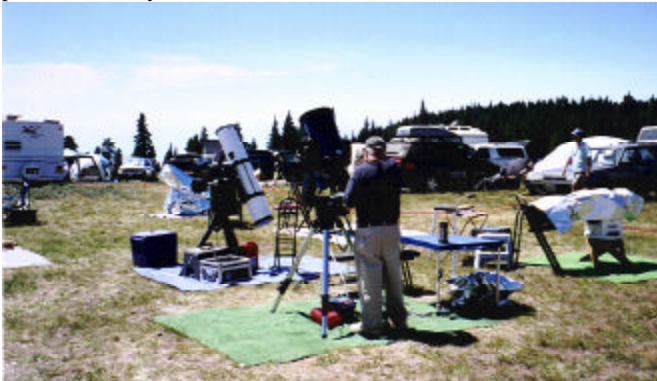
Due to the event occurring later in July than usual, and due to a drier year than usual, there was more dust than in previous years. That can be seen in this picture below of vendor row, which actually was set up facing away from the road this year.



Below: The Espresso truck was a tent this year.



Below: The Colvin's have gotten the imaging bug. Here is a picture of Harry with their new Meade SCT.

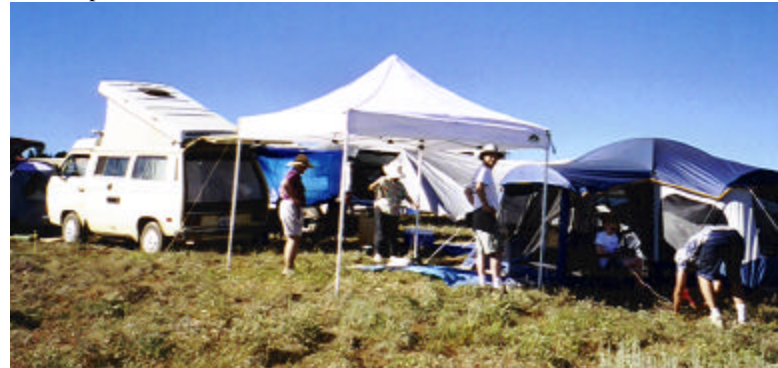


We took the Club's Coronado HA filter and 90mm refractor for solar viewing. Here, Benjamin and I look on as Malcolm views a solar prominence. Malcolm obtained a 6 volt rechargable battery, and wired it up to work on the drive motor. This will save us from having to buy D cell batteries. We determined that the rechargable battery

was able to run the drive motor all day long for over two days without recharging.



Below: We arrived on Wednesday, and here we are setting up our camp.



In closing, below is a picture of the largest scope that was on the Mountain this year. It had a lift off shelter, lots of electronics, and a reflecting finder scope that was large enough to be a primary telescope for someone else.



Astrobiology: Martian Near Miss

August 14-17th there was a convention in Eugene that I'd like to have attended. It was a gathering of the Mars Society, an organization founded by Robert Zubrin in 1998 to advocate for human exploration of the red planet so prominent in the news and sky these days. 300 of its 6,000 members turned out to hear Zubrin and 100 other speakers. The highlights included reports on *Mars analog research stations* in the Arctic (Canada and Iceland), Utah and Australia, where support systems and social factors crucial to living on Mars are being evaluated. In addition, preliminary research was reported on airplanes and space elevators akin to those described in Kim Robinson's fictional *Red Mars*!

An incentive was offered, **The Kepler Prize**, to spur design of an earth return vehicle, and a NASA prototype for drilling to find life below the Martian surface was described. There was even a rock group, **The Extremophiles**, with a CD somehow involving time-delayed harmony. Ambitious plans were laid to lobby congressmen, especially in the wake of the critical report from the Columbia shuttle investigators, for a visionary plan to build the necessary assets for exploring Mars.

The Mars Society web page (www.marssociety.org) provides links to all sorts of Mars-related internet sites. A particularly timely site presents new sharp photos of the red planet from Hubble telescope (www.space.com/scienceastronomy/mars_hubble_030827.html).

Last month Cathy Koehler reviewed *Higher Than Everest*, a book describing some Martian features written by our June 11th speaker, UW professor Paul Hodge. The Mars Society meeting marked the debut of a somewhat similar book, written by William Hartmann, recipient of the first Carl Sagan Medal for Public Communication of Planetary Science from the American Astronomical Society.

It's entitled *A Traveler's Guide to Mars*. Hartmann is a scientist-artist who has participated in several space missions, currently Mars Global Surveyor, and he makes extensive use of the information and photos from these missions. I've just learned that a copy I reserved at the King County Library is being held for me to pick up the next time I go across the Sound (KRLS also had it on order). While Hodge described high spots throughout the whole solar system, Hartmann concentrated on the 30 sights on Mars that shouldn't be missed. Like Frommer's guidebooks, it's a \$19 paperback suitable for reading on the plane (or space ship).

Either book should provide a tantalizing preview of the landscape which will some day be trod by explorers from earth if Robert Zubrin and others from the Mars

Society prevail over the less-visionary powers that be. Personally, I'm glad I spent the time horseback riding with my grand-daughter, rather than participating in the Martian madness at Eugene, but I look forward to hearing from people who did attend when classes resume at UW. Bill O'Neill (biophil@bainbridge.net)

BPAA Financial Statement for July 2003

BALANCE SHEET:		\$
Current Assets		21,051
Fixed Assets		246,591
Total Assets		267,642
Liabilities		-0-
Equity		267,642
Total Liability/Equity		267,642
PROFIT & LOSS:		\$ July \$ YTD
Income:		
Contributions	-0-	8,703
Membership Dues	85	1,430
Other	15	2,983
Total Income	100	13,116
Expense:		
Administration	44	939
Program	506	4,632
Utilities	-0-	593
Total Expenses	550	6,164
Net Income (Loss)	(450)	6,952

Eric Cederwall, Treasurer

You know you're an Amateur Astronomer if...

- all the interior lights in your car are tinted red.
- you will drive hundreds of miles to look for a dark sky.
- you will buy a house near a cemetery just to get away from street lights.
- you own a flashlight that shines red light.
- you've ever called "1,000 years" very recent.
- if North is drawn at the top of the page, you expect East on the left and West on the right.
- you think that -1 is bigger than 6 (it's brighter, anyway).
- the last "dirty snowball" you saw was beautiful.
- you upgrade the suspension and tires on your new van so you can haul a trailer full of telescopes up the mountain.
- you fly thousands of miles to see an event that is over in two and a half minutes.
- someone calls you a "wimp" and you wonder what dark matter has to do with you.

(Compiled from the Web.)

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7. Table Mountain Star Party;
9. Astrobiology: Martian Near Miss; Financial Statement; You know you're an Amateur Astronomer if...

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Bainbridge Island, Tel. (206)842-9152

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To be announced, or by special appointment.

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