



President's message

By Patrick Donnelly

The wait is almost over. That's right — the opposition of Mars is just around the corner. In fact, on August 27 at approximately 9:52 UT Mars will be closer to the Earth than it has been for the last 100,000 years. Mars will be closer in the year 2287, but I don't think I shall be around to see that opposition. So, make your plans. Our Members Appreciation Night this year is on August 23, and that would be a good time to come up to the peak to observe Mars. On the following Saturday, August 30, I anticipate some very large crowds for Mars. We could probably use some help for that night for crowd control purposes. Also, if any of you have big light bucket telescopes we could probably use them to give more people a chance to see Mars. I might suggest August 30 as the date to view Mars, since the Moon will set by 10:30 PM that night. Two more important things happen on August 30. First, the Sun will be neither fast nor slow, and your sundials will be running on time. Also, the end of August is absolutely the best time to view the Milky Way. I hope you can make it to the peak.

The 2003 Star-B-Que will be held on July 26. As always, if you wish to attend, please notify the FPOA Board, so that the proper amount of food can be purchased. I don't know who our guest speaker will be yet. If you are planning to attend you should notify Ron Dammann or me by e-mail or call the observatory and leave a message. [*Contact info on page 4.*]

There is one administrative matter to bring up. We had an occurrence whereby people went up to the pad area without notifying the DPR first. As of right now the area near the ranger's house and all spots up to and including the pads is open to anyone. The only requirement to use the area is to give the DPR in San

Juan advance notice. This should be done at least one day before you go to the peak. You can call the San Juan Office (numerous phone numbers are listed on the FPOA Members Only page on our web site), Fax the San Juan Office (831-623-4612), or send an E-mail to CL Price (cprice@parks.ca.gov). This is not a big deal, and it helps the DPR know who is in the park. Finally, make sure you pay your use fee. If you have any questions on this, you can always contact me.

There is one last item to I would like to relate to you. The FPOA Board has been negotiating with the DPR on a new contract. We held a meeting on June 11 to discuss the proposed contract. The result of that meeting is that more time is needed to resolve any differences between DPR and FPOA. I am cautiously optimistic that we can reach an agreement. Our plan from here is to see if we can ensure ourselves to our satisfaction that FPOA has adequate liability coverage for our activities at the peak. I intend to keep you informed on how we are doing.

Contract update

by Bob Black

On Wednesday, June 11, Pat Donnelly, Doug Brown, Duncan McNeill (by speakerphone) and I met with representatives of the California Department of Parks and Recreation at the Monterey District headquarters to discuss the proposed contract between FPOA and DPR. DPR explained to us that, due to cost cutting, the new contract must be as an interpretive concessionaire contract. We explained why this would be burdensome for FPOA, but agreed to consider it if certain contract requirements were modified or relaxed. Then we discussed some of the details of the

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Contract talks

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proposed contract. We found significant areas of agreement, but there were important issues over which we did not agree. We agreed that those issues could not be resolved in the short time that remained for this meeting. We established a procedure for working on those issues through telephone conferencing, and set a deadline of the end of October for resolving all issues so that we could sign the contract. The meeting was intense, but cordial. Keep tuned.

FPO “peak” observations

by Jane Houston Jones

August 14 and 15, 1999; Einstein’s Cross; 100X, 200X, 400X. This is the famous mag. 15 gravitational lensing galaxy (CGCG 378-15) plus quasar QSO (G2237+030) combination in Pegasus.

I wondered if I’d be able to see this object through my 17.5-inch f/4.5 dob. But the fog played tricks on us all night. Then just when it looked like a washout, the sky blackened. Stars came out. A quick look at the clock — 2:30 a.m. A quick look at the sky — mag 6.4 stars were visible naked

eye. I had already put away my 17.5-inch f/4.5 Litebox reflector. Robert Hoyle was doing some imaging. We were taking turns on the 30-inch, and he was finishing up, when I suggested we try for Einstein’s Cross. RA 22h40m30.3s dec +03°21’30”. The galaxy is magnitude 15.1. Quasar 2237 +030 shines at combined magnitude 16.8; its four components are lensed through the massive (though distant) galaxy’s core. The individually lensed elements measure 17.36; 17.39; 18.43; and 18.72 in magnitude. Robert was at the computer; I was up on the ladder.



Photo credit: Hubble Space Telescope. The image is a composite of 5 WFPC2 images in the V band (5400 Å), with exposures from 200-800 seconds, link with info <http://www.astr.ua.edu/keel/agn/qso223>

Light from the distant quasar is seen to bend in its path by the gravitational field of the galaxy to produce the four outer components seen in the photos. The core of the intervening galaxy was not visible. Nearby I first spotted another galaxy, CGCG 378-14 which is magnitude 15.7. Luckily, I had read several observing reports of the Einstein’s Cross project and was expecting this other galaxy to pop into view. At low power the correct galaxy appeared as a small elongated patch. At high power the four “cloverleaf” images were visible. The brighter of the four was visible with steady vision. The other three blinked out and were glimpsed with averted vision. We whooped and hollered, and woke up Mojo who was catching a few “zzzz’s.” It was worth the wake up call!

The quasar is approximately 8 billion light-years distant, while the galaxy is twenty times closer (400 million light years). Gravitational lensing occurs when the light from a distant source passes through or close to a massive foreground object. Depending on the detailed alignment of foreground and background objects with the line of sight to the Earth, several images of the background object may be seen. Wow! This was my most exciting find in the 30-inch.

May 30, 2003; Hickson 50; 100x, 200x, 400x. This is the most difficult of the 100 Hickson compact galaxy groups, although many observers have seen it in instruments of 18 to 36 inches of aperture. This galaxy group is located in the same low power eyepiece field of view as M97, the Owl Nebula in Ursa Major.

I noticed that Mojo had the 30-inch aimed at M97 at our SFAA club night at Fremont Peak. I took over the telescope for about 45 minutes and visually moved the big scope by pushing my hands against the truss poles and peering into the eyepiece while moving the telescope and holding a paper chart in my other hand while balancing at the top of the tall ladder. Ursa Major was high over head. From M97, I changed the eyepiece from 9mm Nagler (400x) back to the 31mm Nagler (114x). A distinctive trapezoid (like the Hercules keystone) asterism of stars led the way east of M97. Exactly one asterism further east were the pair of mag 13 stars. Directly between these two and a little north should be Hickson 50. I moved the tele-

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FPO "Peak" Observations

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scope past the trapezoid shaped asterism and voila, a little clump of galactic matter popped easily into view! These range in the 18-19 blue ("B") magnitude range — the visual magnitudes are a little brighter.

Then I pumped up the power to 200x with the 16mm Nagler, and then higher using the 9mm Nagler for 400x. At each magnification change, I presented Hickson 50 to a group of about 12 members of the SFAA for their viewing pleasure. I think all were mighty impressed. I distinctly made out 4 components, roughly in a tight circle. Two of the galaxies, 50a and 50c, were brighter than the others, and appeared more elliptical or round. The other two, 50b and 50d, were elongated. I didn't see 50e.

Both of these are worthy summer projects. Give them a try next time you run the Challenger telescope at Fremont Peak.



The author entertains members of the San Francisco Amateur Astronomers who trekked south from the foggy city for some dark sky photons this past May 30, 2003. Photo by Michael Portuesi.

Observing area procedure

State Parks reminds us that, as mentioned in the previous *FPOA Observer*, it's still a requirement to notify the park office before using the closed observing area behind the gate.

For permission and the gate combination, please contact the park office in San Juan Bautista the day before visiting the park. You can telephone their

office at (831) 623-4526, send a fax to (831) 623-4612, or even exchange email with supervising ranger C.L. Price at cprice@parks.ca.gov.

Though it may seem harmless at the time, it's important not to give out the gate combination to other visitors and astronomers who might ask. Have them call the park office or speak to a ranger.

From the logbook

April 5, 2003

Fog retreated 7:30 p.m. telescope operator Pat Donnelly. Saturn with 5 moons, Titan, Rhea, Dione, Thethys, Enceladus, then Iapetus and Hyperion.

Jupiter — Europa shadow transit, 4 moons visible after Europa came out of transit.

Asteroids: 37 Fides in Leo; 19 Fortuna in Leo; 97 Klotho in Leo; 24 Themis in Virgo; 22 Kalliope in Coma Berenices

May 30, 2003

Soft seeing, limiting magnitude 6.2. 15 guests from the San Francisco Amateur Astronomers, telescope operator Morris Jones.

M104, NGC 4762 (round) and 4754 (edge-on), the first two galaxies on the Virgo starhop from Vindemiatrix, NGC 4567, M87, M82 and 81, M84-86. Omega Centauri in Binos. NGC 4565, M51, M101, M97, then starhop to Hickson 50 at 400x. Hickson 55, M3, Pluto, M13, M27

Submit an article for the next Fremont Peak Observer

The Fremont Peak Observer is published four times a year by the Fremont Peak Observatory Association, on or near the first of February, April, July, and October.

The submission deadline for each issue is the 15th of the preceding month, i.e., January 15, March 15, June 15, and September 15.

Please submit all articles in plain text format (no word processor files please!) by email to editor@fpoa.net.

Observatory schedule, 2003

Saturday evening public programs:

July 5, 19, 26
August 2, 16, 23, 30
September 6, 20, 27
October 4, 18, 25

For all evening programs, a slide talk is offered in the observatory classroom at 8 p.m. or after sunset, whichever is later. Weather permitting, the 30-inch Challenger telescope will be open for public viewing after the slide program until at least 11 p.m.

Solar (daytime) public programs:

July 5
August 2
September 6
October 4

Solar observing programs are offered outside the observatory from noon until about 3 p.m., weather permitting.

Board of Directors meetings:

July 26
August 23
September 27
October 25

Special events:

Star-B-Q, July 26
Member appreciation night, August 23

Members-only password changing

Make note of the new user name and password for the members-only section of the FPOA website. The previous password will stop working on July 1, and will not appear elsewhere on the web site (including archived newsletters).

Please make note of the new password, provided on this page.

FPOA on the internet

Home page:

<http://www.fpoa.net>

Members information page:

<http://members.fpoa.net>

Username: xxxx

Password: xxxx

Observatory reservation and event calendar:

<http://members.fpoa.net/ical.html>

Members email list signup:

<http://www.fpoa.net/mailman/listinfo/fpoa-members>

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