



The Fremont Peak

OBSERVER

Promoting Public Education in Astronomy

Volume 22 Number 4 Fall 2005

The 2005 Star-B-Q



The 2005 Fremont Peak Observatory Star-B-Q was held on July 9th of this year. As in past years, the Association barbecued hamburgers and hotdogs, and the members brought the delicious side dishes. There were games for the younger up and coming astronomers, and a trivia contest for the "more mature" members.

Doug Vakoch from SETI gave an interesting talk on the search for extraterrestrial life, and posed the interesting question: "What should we say to them, if anything at all?"

The rather chilly evening was capped by group observing through the Association's 30-inch scope, and a spectacular Iridium flare of magnitude -6. Hats off to the FPOA Board for hosting another successful annual gala!

Editor's Note

With this issue, Frank Dibbell has assumed the role of Editor for the **FPOA Observer**. The FPOA Board wishes to extend its heartfelt gratitude for the wonderful job done by Chris Angelos during his tenure.

As is always the case when someone "new" takes over, the **Observer** will be undergoing a "face lift". If you have comments or suggestions on what works and what doesn't, please email them to fpoa@sbcglobal.net



What's wrong with this picture? The Editor feels this photo should receive one of the long-forgotten "Dubious Achievement Awards"!

President's Message

by Patrick Donnelly

Well it's high summer here at Fremont Peak. The bugs are back in force, and the weather has finally warmed here at the observatory. The FPOA had its annual Star-B-Que on July 9, 2005. About 60 people attended. Our speaker gave an update on the present SETI activities and where the program is headed. I want to thank all of our members that did volunteer work during the Star-B-Que, especially those that cooked the burgers and hot dogs.

I would like to note that summer is not over as yet. We still have more public program nights ahead and our Member Appreciation Night (August 6) and Rob Toebe Night (September 10). Moreover, there are several astronomical events worth noting. On August 11, 2005, the annual Perseid Meteor Shower takes place. I expect 100 or more meteors per hour at its peak. You don't need a telescope for this event. The other astronomical event of note is the Mars opposition. On November 7, 2005, Mars will reach opposition. At this time, Mars will have the largest apparent size with its surface features easiest to see. It will also be possible to see Phobos and Deimos, if the sky gods allow dry, steady night skies.

There are some changes taking place in FPOA personnel over the next few months. With some sadness I have to report that Jack Murphy will be leaving the FPOA Board. Jack has been on the board for at least 5 years, and Jack has run the solar programs for all of that time. Also, the two people most responsible for starting the FPOA and its observatory, Denni Medlock and Kevin Medlock, will be moving away from the San Francisco Bay area sometime after the beginning of 2006. Kevin has been a board member emeritus since he left the board about eight years ago, and Denni has been a continuous board member since the beginning of the FPOA. Finally, Chris Angelos will not be generating the FPOA newsletter in the future. I would like to thank each of these individuals for their dedication to the FPOA over the years and their help making this organization and its work the success it has been for almost twenty years.

Replacing these individuals will not be easy, but we have several eager (?) people to take their place. Marko Sillanpaa was elected to the FPOA Board this year and will begin his term in January 2006. Marko will replace the board position vacated by Jack Murphy. Dave Samuels has agreed to take Denni's place on the board, when she leaves for the wilderness of northeastern California. Lastly, Frank Dibbell will take over the duties of generating the FPOA newsletter. I am looking forward to working with each of these people to help continue the success of the FPOA.

Last Saturday (July 30) I had the honor of talking to the astronaut Scott Carpenter at some length. Scott Carpenter was the astronaut who orbited the earth right after John Glenn's flight in 1962. We talked about space flight and astronomy, and he liked my Venus Transit tee shirt. He is of the opinion that unless we are seriously engaged in a project of sending humans to Mars as the next step in the space program, the space program of the United States will die. He was, however, encouraged by the activities of the FPOA. Public exposure to space flight and astronomy is one of the best ways to have the American public understand what the future is about. He hoped we would continue our work at FPOA for a long time.

Star-B-Q Speaker on SETI

by Denni Medlock

Our Star B-Q speaker this year was Dr. Doug Vakoch, who holds the curiously impressive and enviable title of Director, Interstellar Message Composition, at the Institute for the Search for Extraterrestrial Intelligence (SETI). The subject of his lecture was equally intriguing. "Talking with ET" showed an attentive audience a look at what humans should consider when constructing a message that will be sent outward. What could be contained in this "cosmic calling card" and how would it be presented?

Mathematics was forwarded as the common code, using binary composition to convey universal concepts, such as prime numbers and the periodic table. These are the types of messages conceived by Carl Sagan and Frank Drake.

But Dr. Vakoch took us one step further in the research to present humanity's "face" to the galaxy by suggesting we could also mathematically code human characteristics, like emotions and behavior. One example which was put forth was the properties of altruism. Could we present an illustration depicting one person helping another? Would that picture be truly representative of mankind's normal behavior? What if we also included another picture of someone turning their back on someone in obvious need (in danger of falling off of a cliff). What would that convey to a species that had no other way to sense humanity?

At the end of this compelling talk Dr. Vakoch incorporated answers to a survey passed out earlier which included the questions, "Do you think we should try to contact other races?" and "What should we ask them?" Not surprisingly for a group of amateur astronomers gathered at a mountain top observatory most believed we should continue the attempt to send outward messages, but there were those in the crowd who considered it safer if we didn't!

As for what to ask our newly contacted alien neighbors, the answers varied from, "Got milk?" to "Don't hurt me!"

Whatever the beliefs regarding it, Doug Vakoch presented a talk that not only intrigued its audience but sparked our imaginations, making us wonder how one does define humanity.



No, not a "flying saucer" coming to listen to the lecture on SETI, just the sun filtered through hamburger smoke from the barbecue!

DEEP IMPACT

By Steve Loos

I arrived at the peak around 5pm on Sunday evening. The weather was warm, and there were already a number of people setting up for the evening. I had planned an early departure, so I set up my equipment next to the restrooms in the lower area. The day was rather warm and dry, and promised a good evening of viewing.

I knew comet Tempel was going to be rather dim on the evening of Deep Impact, so I began practicing finding and imaging the comet a month before impact. I used software such as TheSky to locate the comets current position. Technology is a great time saver; these astronomy programs search the web and display very current information. I have searched for dim comets and planets such as Pluto by glancing from eyepiece to laptop screen. The accuracy of these programs in displaying stars amazes me; star hopping has become a "oh yeah, that's it" activity!

I setup to image through a 4" Meade Apochromatic refractor on a LX650 GEM, used a Meade DSI-Pro to image the comet, and control the camera and telescope through a laptop computer. I also brought a 12" dobsonian reflector to assist me in finding the comet. As twilight turned to darkness, many of us began to look for the comet. None of the folks down on the lower pad could visualize the comet through the 12" dob, and there was no hope of seeing it through the 4" scope. I centered the telescope on Spica, and synced the scope to that location (this tells the software where the scope is pointing.) I then told the software to slew the telescope to the comet. I took a quick 15 second image with the DSI, and the comet was in the center of the image; I love it when a plan comes together!

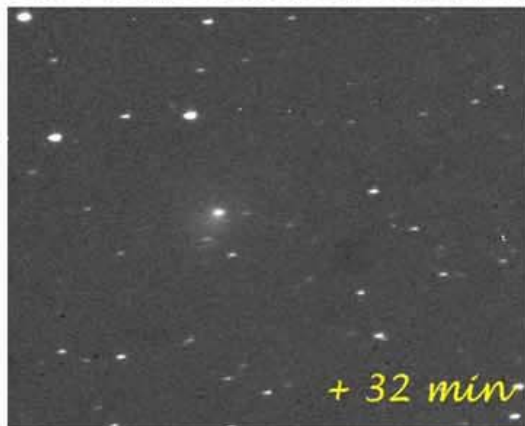
I set the software to take continuous 42 second images from 15 minutes before impact to 60 minutes after impact. A small group of people gathered around the laptop screen as impact time (10:52pm PST) neared. After impact, the brightening of comet Tempel was very gradual, and we did not notice it at first. About 20 minutes after impact, I thought the image of the comet had brightened so I took a look through the 12" reflector. I was amazed to see what had been a very dim visual object was now bright and easy to see comet! The comet soon set behind the mountain, but needless to say I was thrilled the setup had worked so well.

A number of people packed up and left around 11:30pm, but I stayed on, enjoying the warm dry evening. I soon found myself alone on the lower pad; I imaged the supernova in M51 and spent the rest of the time observing with the 12" reflector. It was so warm I did not put a coat on until after midnight. Around 2am, as I began to pack up my equipment, and a large owl flew into the trees behind the restroom. You can't hear these birds fly; the owl made his first "hoot" as I was standing under the tree in pitch blackness! I am not sure, but my pace at loading equipment seemed to quicken.

This was a fun weekend enjoying the 4th of July with family and friends, and enjoying the night skies with fellow astronomers!



Comet Tempel 8 minutes before impact



Comet Tempel 24 minutes after impact. The brightening is subtle.

Fall SkyWatch

by Denni Medlock

September opens with a dance between Venus and Jupiter, while a lunar interloper tries to break up the pair. Venus and Jupiter are in appulse (closest together) on the southwestern horizon after sunset on September 1, only about a degree apart. Use a 25mm eyepiece to verify Jupiter appears almost twice the size of its smaller companion. By September 6 & 7 the crescent moon joins the dance while Spica looks on from the background sky. This celestial whirl comes to a climax when the Moon, leaving the planets behind, nearly occults Antares on the early evening of September 10.

Of course, the talk of all the heavenly bodies (and earth-bound ones, as well) is the October-November opposition of Mars. For months astronomers have been watching the Red Planet rise earlier and earlier, making its presence seen on the eastern horizon while brightening considerably. In September Mars increases in magnitude from -1.0 to 1.7 while in October it shines at -2.3 as it grows to a maximum of 20.2". This is the largest Mars will get for 13 years, though about 5" smaller than 2003's closest approach. Look for receding polar caps and the possibility of dust storms as summer arrives on our red neighbor. Closest approach is Oct. 29 – an ideal cause for a Martian Hallowe'en party!

(Continued on Page 4)

Fall SkyWatch (from Page 3)

For those who favor meteor showers, this year's Draconids on the early morning of October 9 may make for interesting observing. This shower is known to have outbursts from its normally low ZHR's during years its parent comet Giacobini-Zinner reaches perihelion, which it did earlier this year in July. A waxing crescent Moon shouldn't bother those observing the circumpolar radiant. Unfortunately, the Orionids, one of the year's best showers, is strongly hindered by a bright gibbous Moon during their peak on Oct. 21.

Likewise, November's Leonids look to be just a minor ghost of their 2001 selves, with predicted rates around 15 for their Nov. 17 peak, which, unfortunately, falls one day after Full Moon.

Much better to continue observing Mars, as this planet's opposition occurs Nov. 7. Dark Syrtis Major remains near the central meridian and completely observable through moderate to large-sized telescopes – that is, if dust storms don't play havoc with our views. Look for Mars to dim and be near Sirius' brightness by month's end.

November skies give us clear views out of the southern pole of our galaxy. Without the obscuring dust plane of the Milky Way blocking inbound light we can now see the neighborhood: Andromeda and Triangulum shine brightly in a region sparsely populated by nearer stars.

Planet-wise, look for Venus to outshine waning Mars, and Saturn returns to our evening sky once again, rising well before midnight to enhance the night's viewing. Saturn will appear to brighten as its rings begin opening up once again.

At The Eyepiece

by Patrick Donnelly

The Challenger Telescope has had plenty of work for the last two months. There were two special events that occurred in the last couple of months that were ready made for the 30" telescope. It was especially gratifying since many members of the public were also able to observe these astro-nomical treats.

First of these is the recent supernova in M51. In late June or early July 2005, a supernova exploded in one of the spiral arms of NGC 5194, the larger spiral galaxy. The magnitude of the supernova was approximately +13 at its brightest, and it was comparable to two other field stars in front of NGC 5194. Since M51 is approximately 30 million light years from the earth, the supernova actually exploded long before there were any people on earth. Most members of the public were able to identify the supernova, a feat, which was aided by the picture of M51 in the lecture room at the observatory.

The second object of interest is Comet Tempel 1. Comet Tempel 1 is important because this comet was hit by the Deep Impact Probe. The comet was found several weeks before the impact in the constellation Virgo at a magnitude of approximately +10. Finding the comet was difficult since it was in the middle of a large field of galaxies. Several times a galaxy was in the same eyepiece field as the comet. This resulted in a real headache for identifying the comet. After the space probe impact some brightening of the comet was noted. Most members of the public were also able to see the comet.

Fremont Peak Observatory Association Officers and Directors

President	Pat Donnelly <i>kungfugina@aol.com</i>	408-778-2741
Vice President	Doug Brown <i>dnabrown@ix.netcom.com</i>	408-223-0615
Secretary	Rick Morales <i>rickmorales@charter.net</i>	831-623-4081
Treasurer	Denni Medlock <i>epoch@major.net</i>	510-339-9224
Directors	Donn Mukensnabe <i>dmuk@comcast.net</i>	925-462-4602
	Loren Dynneson <i>dynneson@hollinet.com</i>	831-636-3062
	Jack Murphy <i>jsmurphy@sbcglobal.net</i>	831-636-2772
	Steve Loos <i>sloos@garlic.com</i>	831-636-8815
Director of Instruments	Ron Dammann <i>ron.dammann@lmco.com</i>	408-255-1863
Newsletter	Frank Dibbell <i>fpoa@sbcglobal.net</i>	916-933-2414
Director Emeritus	Kevin Medlock <i>epoch@major.net</i>	510-339-9224

The **Fremont Peak Observer** is published four times a year (Winter, Spring, Summer and Fall). Articles from members are encouraged, and should be emailed to fpoa@sbcglobal.net. Articles should be either in plain text or MS Word format. Deadlines are Feb 1, May 1, Aug 1, and Nov 1 respectively. The Observatory's phone number is 831-623-2465.

FPOA on the Internet

Website: www.fpoa.net
Reservations and events: members.fpoa.net/ical.html
Members Only Page: members.fpoa.net
Username: fpoa
Password: 30f48
Members email list signup: fpoa.net/mailman/listinfo/fpoa-members
For Observatory scheduling and access, email: schedule@fpoa.net

FPOA Programs: 2005

Saturday Evening Programs

September: 3rd, 10th, and 24th
October: 1st, 8th, 22nd and 29th

The observatory is open to the public on these evenings

Solar Programs

September: 3rd
October: 1st

Solar observing is offered at the Observatory during the after noon on these dates.

□

Special Events

September: Rob Toebe Night (10th)