SJAA EPHEMERIS

Star-B-Que Report

Jane Houston

The 1999 FPOA/AANC Star-B-Que was a big success again this year. It was moved up a month to July 10, since the usual new moon August date competed with the total solar eclipse this year. It was also a chance for all of the FPOA members to meet and welcome our new Fremont Peak State Park ranger, Cameron Bowers. Cameron was joined by his family, too! He'll be residing at the Ranger's house on the weekends. He's already had a chance to meet some of the volunteers who run the telescope, and now he got to meet FPOA members from all over!

Festivities got under way at about 5:00 PM with the BBQ part of the Star-B-Que. Hot dogs and hamburgers and even chicken burgers were expertly grilled by FPOA members and pot luck items made up the rest of the menu. It was nice to see and meet Jack Borde from Mount Diablo Observatory Association, and several members of the Hercules Public Stargazers. There were astronomers from Monterey, Santa Cruz, San Francisco. A big group from the San Mateo club was there. The East, North and South Bay were well represented. There were non-astronomers who found the information on the internet. Astro friends brought some of their other friends, for a taste of astronomy. Some campers with a cute 6 inch homemade dob set up at the observatory and brought 6 pounds of salmon to cook and share.

Desserts and even some salads had an astronomical theme. SFAA member Dennis Tye brought a star cluster salad, complete with tomato red giants and olive black holes. SMCAS member Bob Black brought a cross-section of Mercury cantelope/strawberry salad.

The desserts entered in the Astronomical Gastronomical contest spanned the spectrum, astronomically speaking. From the ATMs were a pitch-lap pie, with channels cut into the frosting by Akkana Peck from the SJAA. "Channeling frosting is much more difficult than channeling pitch," she remarked. Dob gingerbread cookies were again made by yours truly. Bob Fingerhut's large magellanic flan was bar shaped with scalloped edges. Elisa Fanching's spiral galaxies (a.k.a. cinnamon rollups) and Patty Fanching's dirty snowballs were being consumed quickly. Mike Maiman's M-13 cake looked surprisingly like his last year entry - a spiral galaxy. This was judged by some non-voting consumers as the tastiest entry! Others liked Kathy and Annmarie Garfinkle's Chocolate "Brown Dwarfs" the best.

Taking the cake, so to speak, was the winning entry, EAS/TVS member Debbie Dyke's Apollo 11 anniversary commemorative cake. The lunatics in the crowd marvelled at the accuracy of the lunar maria

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SJAA Activities Calendar

Jim Van Nuland

August

6 Houge Park star party. Sunset 8:09 p.m., 23% moon rises 2:25 a.m.

7 Star party at Peak. Sunset 8:07 p.m., 14% moon rises 3:19 a.m.

13 Pinnacles Nat'l Monument public star party

14 Star party at Peak. Sunset 7:58 p.m., 15% moon sets 10:13 p.m.

20 Houge Park star party. Sunset 7:52 p.m., 69% moon sets 1:39 a.m.

21 Observational Astronomy class, Houge Park, 8 p.m. Topic to be announced.

28 General Meeting at Houge Park, 8 p.m. Bob Fingerhut on Eyepiece Projection.

September

3 Houge Park star party. Sunset 7:32 pm, 36% moon rises 1:13 am.

4 Star party Fremont Peak. Sunset 7:30 pm, 26% moon rises 2:09 am.

6 Labor Day

11 Star party at Henry Coe, Fremont Peak. Sunset 7:20 pm, 6% moon sets 8:42 pm.

11 Pinnacles Nat'l Monument public star party

17 Houge Park star party. Sunset 7:20 pm, 53% moon sets 0:16 am.

18 Observational Astronomy class, Houge Park, 8 pm

25 General Meeting at Houge Park, 8 pm, Slide/Equipment night

Speakers needed: Oct.23, Nov.20, Dec.18.
See inside for more information about SJAA star parties.

24 Hour News and Information Hotline: (408) 559-1221
http://www.seds.org/billa/sjaa/sjaa.html

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Star-B-Que Report, 1999

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depicted in gray-blue frosting. Armstrong and Aldrin and the Lunar Module sat right on the Mare Tranquillatis, making one tiny step in the frosting nearly 30 years after the real thing, while the Command Service Module hovered above the cake. The rays of Tycho and the walls of Crisium were accurate. This cake took first prize — tasted good, too!

AANC annual awards for Amateur of the year (Denni Medlock), Commercial business of the year (Crazy Ed Erbeck), and Professional (Dr. Peter Jenniskens) were given out. FPOA member Loren Dynneson received two awards, one from Mary Pass of the State Park Service, and one from the FPOA, in gratitude for his work on urgent and continuing repairs to the observatory.

Many people bought raffle tickets and won Messier Mugs, eyepatches, software, books (Bob Garfinkle donated one of his great starhopping books!), red flashlights, and the great HB Atlas — again donated by Crazy Ed. Ed won a flashlight! Bet he really needs one. A 55mm Televue eyepiece was donated by the San Mateo club. The winner, a young boy, will be getting his very first telescope this summer. What great timing!

Fremont Peak State Park ranger Cameron Bowers

The contests were won by the following: Mike Maiman of the San Mateo County club won the trivia contest, with SJAA Mike Koop close behind. Mike's son David took the artistic award for inventing an asterism using the shape of Fremont Peak. Loren Dynneson's daughter Amy took the grand prize, children's division, of the new asterism contest by fashioning a giraffe out of the familiar star shapes of Cassiopeia, in an activity out of the Project Astro workbook. The kids entries were real interesting! Cats, flowers, snakes, houses, a rocket (with sun and earth nearby), and a sunfish (shark?) were entered. One boy turned in a dobsonian telescope asterism. These kids made asterisms that could compete with some of our constellations!

The lunatics in the crowd marvelled at the accuracy of the lunar maria depicted in gray-blue frosting.

The asterism competition for the older "children-at-heart" included EAS Don Saito's Pigletius, with an Iridium satellite eye. Also entered was an Ophiuchus coffeepot by SJAA member Morris Jones. SJAA member Mark Taylor submitted the binocular object, a football smiley in Auriga. Maria Ramos submitted "Caterpillago," a caterpillar within Virgo. Apollo 11 cake creator Debbie Dyke submitted an excellent magnifying glass fashioned from Leo. Donn Mukensnable entered his hyper-asterism, the Wizard of ID Dragon, spanning Pegasus and Andromeda, "a harbinger of the Perseids". But the crowd applauded the most for the Millineum Asterism — "two" made from the backwards question mark of Leo, followed by three zero's fashioned in Libra, "would be visible on December 31, 1999", according to winner Andrea Guilan, who selected this because she graduates in 2000.

Tables were then moved and Ernie Piini introduced SJAA member Bob Garfinkle, who gave a twilight talk and slide show about the the moon. Questions kept Bob busy afterwards 'till well after dark. Then the crowd thinned, and the telescopes pointed upwards.

Up at the observatory, there were about 5 scopes set up outside. We had a steady stream of Star-B-Que attendees, other observers and campers. The hot and cloudy afternoon did not promise much of an evening of observing, but the seeing just kept getting better, hour after hour. More than 20 telescopes were set up on telescope row, more in the overlook area, and about 6 were up at the southwest parking lot. Everyone was having a good time showing their favorite objects, chasing difficult targets, or helping the "scopeowner-next-door" with helpful hints. I enjoyed a walk around the various telescope fields and especially enjoyed the comeraderie of being so near to so many new and old friends. Every stop meant a telescopic tour by one of the Star-B-Que ambassadors to the universe. Many newbies were getting advice from their neighbor, not afraid to ask for a look through a telescope, or to ask for and get help locating a never-found-before object. There were more than one getting a first "peak" at the Veil Nebula in Cygnus on this night. A little pointing, a little star-hopping, then a lotta oohhs and ahhhs!

Star-friendly folks were everywhere! Ron Damann and Bob Fingerhut were running the Chal-

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lenger telescope till 1:00 am when Morris Jones took over. Whenever Ron found an object in the Challenger, I tried to quickly find the same in one of my telescopes set up right out in front of the observatory. This way the guests got to see the same objects through different telescopes. Soon we were looking at the Blue Snowball in Andromeda, the Cats Eye nebula in Draco or the Magnificent cluster in Cassiopeia. NGC 7331 and Stephan's Quintet looked awesome at 370X through the Challenger. A dozen or more dark nebulae in Saggitarius and Ophiuchus were collected like members of a butterfly collection.

Of all the objects we saw and shared with the public my favorites this night were all seen through the Fremont Peak Challenger, with its 30 inches of photon-grabbing power. The Saturn Nebula, NGC 7009 in Aquarius, was stunning at 370X — the central star steady and imposing for all to see easily. The Ansae (or ears) on both sides all showed awesome detail, complex structure, and the incredible color, a greenish vein-filled envelope of stellar material. Just before we shut the observatory for the night at 5:00 a.m., we viewed Jupiter and Saturn at this same 370X through the Challenger. Jupiter's bands were more reddish in color than through the C-14 or the 17.5 inch dob outside. The south equatorial band showed blue festoons and white ovals, which I haven't seen since last year. Saturn was our last object for the morning. And our faithful camper friends left at about this time, after walking up the hill to greet the morning with a view of the crescent moon. An all night Star-B-Que — an all-star day on Fremont Peak!

Bob Garfinkle
Lunar Bright Spots and Rays on the Moon
General Meeting June 26, 1999
Jane Houston

Students of the Moon have looked up and wondered about the spoke-like features and bright spots for hundreds of years. What causes these rays and bright white spots? Galileo was one of the first to observe them and wrote in 1610 of how the light colored rays "join with neighboring regions of the spots in a gentle linkage, the boundaries mixing and mingling." As the business part of the June SJAA general meeting concluded, friendly mixing and mingling of members was the prelude to Bob's fascinating talk.

Lunar rays come in various shapes and sizes, but they have a lot in common. They all appear and disappear at about the same colongitude each lunation. Long rays are complex and may or may not be radial to the locus crater, and the crater may or may not brighten as its rays brighten. Rays can encircle a crater or be missing from some of the circumference of the crater. They cross over all types of lunar terrain, which reveals the relative ages of the features in a region. Most rays are the same width for their entire length, although many taper at the extended end.

Bob showed an image of the 1874 experiment whereby James Nasmyth and James Carpenter heated some water in sealed glass globes. The heat-cracked globes were used to "prove" that rays were the result of material that extruded up to the surface when the Moon was cracked by internal pressure. Despite the similarity to Tycho's ray pattern, this couldn't work. The lunar crust just isn't strong enough! Another interesting postulation was that the rays were stains arising from highly heated subterranean vapors. In the mid 1960's the first close-up images of the rays were taken by the Ranger spacecraft. Lunar rays are composed of a powder-like material. Tests revealed the reason the rays are light and the soil is dark — it's because the older soil has been bombarded by solar radiation for a longer period, which has blackened the older materials and the newer rays have been exposed for only 2 to 800 million years. Ray material brought back by Apollo astronauts confirmed both the sprinkling over of pre-existing surfaces and that this material is the consistency of flour!

I could go on and describe what Bob had to say about the bright spots. Well, I'll say a little: they are generally small-to-medium sized cone craters. I could talk about the bright ray system known as Cassini's Bright Spot, in the crater know as Hell. To Cassini it looked like a small cloud. I don't want to tell you everything Bob talked about. You'll just have to get a copy of his Lunar Observers' Handbook when it is published. Until then, go out and take a look at the Moon. You'll see many interesting features, and learn that all month long the Moon is a beautiful object to observe, study and sketch. On those nights when the Moon is between first and last quarter, don't despair! Take a break from the dark sky and tour our rocky neighbor. And don't forget to view the beautiful and exquisite rays emanating from craters, and the surprising bright spots. You won't be disappointed, I guarantee!

Bob suggested that you use a number 47 violet eyepiece filter to observe the rays through. This filter makes the rays standout against a darker background.

I hope this has whetted your appetite for adding rays and bright spots to your lunar observing program.

Kindergarten Astronomy

Mark Taylor

My daughter's kindergarten class had their annual "Kindergarten Sleep Over at School" recently. What a sight - 58 sleeping bags covering almost every square inch of floor in two adjoining classrooms, including under tables and the teachers' desks!

As part of the evening's fun I had volunteered to set up my telescope so the kids could look at the Moon, Venus, and Mars. I had taken my telescope to the school one morning early in the year to show the kids the third quarter Moon, and they had asked me at that time to come back for their "camp out" at the end of the year.

So it was just me, my 8" LX-200, and 58 kindergartners (who had just made and eaten s'mores!) filtering through a well-organized line by teachers and assistants to look through the telescope.

Crazy? Perhaps. Fun? Definitely. Appreciated? Absolutely!

Who says kids can't figure out how to see through an eyepiece, or appreciate some aspect of what they are seeing at that age? Of the 58 five- and six-year-olds, there was only one child who just couldn't get an image immediately or with a little coaching, but she still saw the Moon briefly after some work.

The kids saw the 98.7% full disk of the Moon, Venus in it's quarter phase, a close-up of the Moon's terminator, and finally Mars.

The night was unfortunately one of fairly mushy and unsteady seeing, but they were nonetheless wowed with the sights. A few of the kids even described what they were seeing in the bad seeing — "it looks like it's cooking" and "it looks like water." That didn't stop them from noticing the shape of Venus or spying large craters and the rough terminator on the Moon.

It was a non-stop line of excited tykes for over two hours! The kids and teachers alike were simply thrilled with having the telescope there.

Mooning

Dave North

Of course, this month's main Moon Trick is when intrepid travellers see it in profile — new Moon, the great eclipse on August 11.

Several of our members tell me they'll be going one place or another to see it, so I'm sure we'll get some reports — but I won't be going. I'm sure I'll regret it, but maybe not several thousand dollars worth of regret...

Elevation should be very good for this one — it will be high in the sky. I hope we get some nifty images out of it.

The first thing that jumps out at me (after the eclipse) is the interesting coincidence of the western libration and full moon: August 26.

This often means a good look at the Orientale Basin, and Mare Orientale itself —as well as the amazing weird Big Mountain that appears at these times.

I tend to dwell on the hunt for Orientale, and this may not be easy to understand ...

And sure enough, that's what will happen, but unfortunately the best opportunity to view Mare Orientale (with the terminator very near the western limb) will be during daylight.

Second best may be early in the morning, but the already lowish moon will be even closer to the horizon after 2-3 am. So there's a decent shot at a good view around midnight, and I heartily encourage everyone to give it a look (that's Aug 25-26 midnight) but it looks like the July libration might have been better.

I don't trust my own numbers, though, so it's best to look. In any event, what you can see of it should be very interesting.

I tend to dwell on the hunt for Orientale, and this may not be easy for most of you to understand.

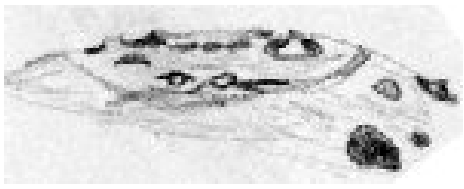
First, it's transient. You'll probably only get one or two decent opportunities a year to see something like this, and that's when you find out just how often we get clouds or some other lousy weather phenomenon in Summer. We think it's always nice this time of year, but maybe not.

Second, it's incredible. Orientale is probably the youngest of the Monster Basins (like Nectaris, Humorum, etc.) and shows its shock rings better than any other (Nectaris is second) and the ejecta marks are pretty good too (though not as spectacular as Imbrium). There's no mistaking it when you see it, and quite a shock it can be the first time.

Third, it has a neat sounding name.

Fourth, the Weird Big Mountain. I don't understand what this apparition is (there has been much speculation) but if you see it, you'll know what I mean.

Some time back, when I twisted Akkana's arm to indulge this sport for the first time (looking at the full moon?) she was inspired to draw it, and has been tracking the phenomenon since. With some arm twisting, I can perhaps get her to include one of her drawings and some comments for the column this month.



Orientale by Akkana Peck

Showtime For Meteors, Part 1

David North

August is the Perseids, the most popular shower of the year due to high rates and fair weather.

Any meteor seen during August stands a good chance of being a Perseid. Most activity is on August 11-13.

Since 1991, a second peak began with zenithal hourly rates over 100. This new peak occurs prior to the traditional peak. For 1999, the first peak is expected around 4 pm Aug 12/13 (not much good for us) and the traditional peak around 10 that night... which is not a favorable time for us, though we should see good activity between then and 4 a.m.

Rates at max may average 50 - 75/hour, and1999's activity will occur two days after a New Moon.

The brighter members of this shower are often colorful and produce long lasting trains.

The Perseids are associated with Comet P/Swift-Tuttle that visited the inner solar system in late 1992.

Just as the last of the Perseid meteors are seen, the Alpha Aurigids become active.

Rates are usually low for this shower except for a period of about one hour on the morning of Aug. 31/ Sep 1.

If you are situated in dark morning skies when this sharp maximum occurs, you may see up to 50 shower members radiating from the Pentagon of Auriga.

This year a Last Quarter moon will be rising near midnight and thus provide moderate moonlit skies as the radiant rises. 1999 Peak should occur at midnight, giving us an opportunity to witness increased activity..?

Shower members seen during this peak of activity are often bright and leave long lasting trains. Notable displays were seen in 1935, 1986, and 1994.

The Shallow Sky

Akkana Peck

August, alas, is a relatively quiet month for planet watchers. Mars is still up in the early evening, but it's dim and small compared to its opposition glory. Determined Mars observers should still be able to make out some detail, though, and it should appear very noticeably gibbous. It reaches quadrature on August 7th.

Uranus and Neptune are close together in Capricornus, and August is a good time to track them down. Uranus, at magnitude 5.7, reaches opposition on the 7th and is just barely visible with the naked eye, fairly easy in binoculars. In a small telescope it shows a noticeably green disk. Neptune, which passed opposition late last month, is a slightly more difficult target at magnitude 7.8, but its small blue disk is still within easy reach of small telescopes.

Pluto is high in the sky, in Ophiuchus. This is a good time to try to find the farthest planet from the sun. Use a good chart — the one in the Royal Astronomical Society of Canada's "Observer's Handbook" is very reliable — along with reasonable aperture and dark skies to identify the elusive 13.8th magnitude planet. Following Pluto over successive days to track how much it moves against the background stars; even this far-away planet moves enough in one night that its motion should be obvious to the telescopic observer.

The August planet lineup is better for early morning risers. Jupiter and Saturn are both visible in the predawn hours, and should show a wealth of detail to the telescope user, with Saturn showing its maximum ring tilt for the year, 21 degrees, late this month; binocular users can follow the dance of Jupiter's moons. Mercury also moves into the dawn sky in early August, followed, at the end of the month, by the brilliant Venus.

About SJAA Star Parties

Houge Park: This is the star party recommended for first time SJAA visitors. The Houge Park star parties, near Campbell and Los Gatos, always draw a good variety of astronomers and telescopes. The skies at Houge Park are better than you would expect for a mid-city location. Houge Park star parties are scheduled twice a month —once during first quarter Moon when excellent lunar views are available, and once during third quarter Moon for more deep sky observing.

Henry Coe State Park: This location has good dark skies and sometimes better weather than Fremont Peak, but is much less frequently visited these days by SJAA observers. The observing area is on a grassy knoll behind a gate near the visitor center. Come before sunset if you can, and you may find some observers setting up their gear. They'll be happy to escort you behind the gate and share views through the telescopes.

Fremont Peak State Park: Just south of San Juan Bautista at Fremont Peak State Park you'll find some of the darkest skies within 100 miles of San Jose. Finding the park down county road G1 could mean making a wrong turn if you're not careful at the bottom of the hill by the San Juan Inn, but once you've made your way to the top, you've arrived at the local mecca for amateur observing. On warm new moon weekends, it's not uncommon to find forty or fifty amateur telescopes set up at several locations. If you don't plan to stay the night, you'll want to park where you can depart without headlights. To find the SJAA star party host, walk by the ranger's house to the well-marked Fremont Peak Observatory, and ask the presiding volunteer interpreter.

For directions to SJAA star party locations, call our hotline at (408) 559-1221.

Comet Comments

Don Machholz

Comet Lee travels north of the sun and into the morning sky. Meanwhile, Comet LINEAR (1998 T1) and Periodic Comet Tempel 2 are in our evening southern sky.

The SOHO satellite discovered eight sungrazer comets this month, all were headed into the sun. The LINEAR program in New Mexico has found three more faint comets while the Sloan Digital Sky Survey has found one faint comet.

Comet Hunting Notes: Fifty-two of the 80 comets discovered by amateurs over the past 24 years have perihelion distances of less than 1.0 Astronomical Unit (AU). At the extremes we have a minimum distance of 0.11 AU for a comet found by me in 1985, and a maximum distance of 3.32 AU for a comet found by K. Cernis in 1983. Now contrast that to the SOHO satellite whose discoveries have perihelion distances of under .01 AU and to LINEAR, which is finding many comets with perihelion distances of greater than 3.0 AU.

Ephemerides

C/1999 H1 (Lee)

Date(00UT)	R.A. (2000)	Dec	El	Sky	Mag
07-06	08h02.3m	+26d42'	15d	E	6.7
07-11	07h56.7m	+28d52'	11d	E	6.7
07-16	07h50.6m	+30d55'	10d	E	6.7
07-21	07h44.2m	+32d52'	13d	M	6.9
07-26	07h37.6m	+34d44'	18d	M	7.0
07-31	07h30.6m	+36d33'	24d	M	7.2
08-05	07h23.3m	+38d23'	30d	M	7.4
08-10	07h15.4m	+40d16'	36d	M	7.6
08-15	07h06.5m	+42d15'	42d	M	7.8
08-20	06h56.0m	+44d23'	50d	M	8.0
08-25	06h43.1m	+46d43'	57d	M	8.1
08-30	06h26.5m	+49d17'	65d	M	8.2
09-04	06h04.2m	+52d05'	73d	M	8.3
09-09	05h33.4m	+54d58'	82d	M	8.4

C/1998 T1 (LINEAR)

Date(00UT)	R.A. (2000)	Dec	El	Sky	Mag
07-06	17h54.3m	-47d47'	152d	E	9.0
07-11	16h12.9m	-43d42'	136d	E	8.3
07-16	15h13.5m	-37d47'	121d	E	8.8
07-21	14h40.0m	-32d51'	109d	E	9.2
07-26	14h20.0m	-29d10'	100d	E	9.7
07-31	14h07.5m	-26d28'	91d	E	10.0
08-05	13h59.4m	-24d28'	84d	E	10.4
08-10	13h54.0m	-22d58'	78d	E	10.7
08-15	13h50.5m	-21d49'	72d	E	11.0
08-20	13h48.4m	-20d57'	66d	E	11.3
08-25	13h47.1m	-20d16'	61d	E	11.6
08-30	13h46.6m	-19d45'	56d	E	11.8
09-04	13h46.6m	-19d21'	51d	E	12.0
09-09	13h47.0m	-19d03'	46d	E	12.3

Periodic Comet Tempel 2 (P/55)

Date(00UT)	R.A. (2000)	Dec	El	Sky	Mag
07-06	17h03.1m	-09d50'	150d	E	10.7
07-11	17h01.1m	-11d15'	145d	E	10.6
07-16	17h00.2m	-12d46'	141d	E	10.6
07-21	17h00.3m	-14d22'	137d	E	10.5
07-26	17h01.7m	-16d00'	133d	E	10.5
07-31	17h04.3m	-17d40'	129d	E	10.5
08-05	17h08.3m	-19d20'	125d	E	10.5
08-10	17h13.7m	-20d59'	122d	E	10.5
08-15	17h20.3m	-22d34'	119d	E	10.5
08-20	17h28.3m	-24d05'	116d	E	10.5
08-25	17h37.5m	-25d30'	114d	E	10.6
08-30	17h47.9m	-26d48'	111d	E	10.6
09-04	17h59.3m	-27d59'	109d	E	10.7
09-09	18h11.8m	-29d01'	107d	E	10.7

Elements

Object: Lee

Peri. Date:	1999 07 11.1657
Peri. Dist (AU):	0.708308 AU
Arg/Peri (2000):	040.6689 deg.
Asc. Node (2000):	162.6375 deg.
Incl (2000):	149.3558 deg.
Eccen:	1.00
Orbital Period:	Long Period
Ref:	MPC 34421
Epoch:	1999 07 11
Absol. Mag/"n":	7.0/4.0

Object: LINEAR (T1)

Peri. Date:	1999 06 25.2578
Peri. Dist (AU):	1.468118 AU
Arg/Peri (2000):	226.3361 deg.
Asc. Node (2000):	153.3540 deg.
Incl (2000):	170.1601 deg.
Eccen:	0.99915
Orbital Period:	71,000 years
Ref:	MPC 33451
Epoch:	1999 01 22
Absol. Mag/"n":	8.8/4.0

Object: P/Tempel 2

Peri. Date:	1999 09 08.41663
Peri. Dist (AU):	1.481683 AU
Arg/Peri (2000):	195.02016 deg.
Asc. Node (2000):	118.21147 deg.
Incl (2000):	011.97662 deg.
Eccen:	0.5228125
Orbital Period:	5.47 years
Ref:	NK640
Epoch:	1999 08 10
Absol. Mag/"n":	9.0/5.0

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Celestial Calendar
August 1999

Richard Stanton

(Times are Pacific Daylight)

Lunar Phases:

		Dt.	Rise	Trans	Set
LQ	10:27	04	00:15	06:54	13:41
NM	04:08	11	06:32	13:35	20:30
FQ	18:47	18	18:59	18:36	00:11
FM	16:48	26	19:55	00:40	06:09

Nearer Planets:

Dt.	Rise	Trans	Set	R. A.	Dec.
Mercury - 0.97 A.U., Mag. -2.4					
07	05:05	12:05	19:06	08:00.5	+17:20
17	04:53	11:59	19:04	08:31.1	+18:27
27	05:32	12:27	19:21	09:37.8	+15:37
Venus - 0.28 A.U., Mag. -3.8					
07	08:00	14:17	20:34	10:14.1	+04:31
17	07:00	13:17	19:34	09:53.7	+04:31
27	05:53	12:15	18:36	09:30.4	+05:58
Mars - 1.10 A.U., Mag. -0.2					
07	13:46	18:51	23:57	14:46.6	-17:47
17	13:34	18:34	23:34	15:08.7	-19:25
27	13:25	18:19	23:13	15:32.9	-20:58
Jupiter - 4.52 A.U., Mag. -2.7					
07	23:32	06:16	12:57	02:10.7	+11:45
17	22:54	05:38	12:19	02:12.4	+11:51
27	22:15	04:59	11:40	02:12.8	+11:50
Saturn - 9.03 A.U., Mag. +0.7					
07	00:15	07:05	13:55	02:59.9	+14:33
17	23:33	06:27	13:17	03:01.2	+14:36
27	22:43	05:48	12:38	03:01.8	+14:36

SOL Star Type G2V

Intelligent Life in System ?

Hours of Darkness

Dt.	Rise	Transit	Set	R.A.	Dec.
06:43 07	06:14	13:13	20:12	09:07.3	+16:31
07:12 17	06:23	13:12	20:00	09:45.1	+13:32
07:41 27	06:32	13:09	19:46	10:22.0	+10:11

Astronomical Twilight:

		Begin	End
JD 2,451,397	07	04:34	21:51
407	17	04:47	21:35
417	27	04:59	21:18

Sidereal Time:

Transit Right Ascension at Local Midnight

07 00:00 = 19:53
17 00:00 = 20:33
27 00:00 = 21:12

Darkest Saturday Night: 07-Aug-1999

Sunset	20:12
Twilight End	21:51
Moon Rise	02:22
Dawn Begin	04:34
Hours Dark	06:43

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P.O. Box 110566
Campbell, CA 95011-0566

SJAA Loaner Scope Status

All scopes are available to any SJAA member; contact Mike Koop by email (koopm@best.com) or by phone at work (408) 473-6315 or home (408) 446-0310 (Leave message).

Stored Scopes

These are scopes that are available for immediate loan, stored at other SJAA members homes. If you are interested in borrowing one of these scopes, please contact Mike Koop for a scope pick up at any of the listed SJAA events.

#	Scope Description	Stored by
1	4.5" Newt/P.mount	Darryl Lambert
3	4" Quantum S/C	Manoj Khambete
18	8" Newt/P Mount	Darryl Lambert
30	7" f/9 Newt/Pipe Mount	Mike Koop

Current Scope Loans

These are scopes that have been recently loaned out. If you are interested in borrowing one of these scopes, you will be placed on the waiting list till the scope becomes available after the due date.

#	Scope Description	Borrower	Due Date
7	12.5" Dobson	Mike Rupe	06/27/99
8	14" Dobson	Darryl Lambert	09/04/99
15	8" Dobson	Phil Robba	06/27/99
16	Solar Scope	Bill Maney	08/23/99
19	6" Newt/P Mount	Hsin I Huang	08/21/99
21	10" Dobson	Ralph Seguin	09/04/99
23	6" Newtonian	Glenn Yamasaki	09/04/99
24	60mm Refractor	Scott McGrew	09/04/99
26	11" Dobson	Nilesh Shah	08/01/99
28	13" Dobson	Bill Sweeney	07/25/99
29	C8, Astrophotography	Dean Sala	09/04/99
31	8"/f8 Dobson	John Templeton	04/30/99

Extended Scope Loans

These are scopes that have had their loan period extended. If you are interested in borrowing one of these scopes, we will contact the current borrower and try to work out a reasonable transfer time for both parties.

#	Scope Description	Borrower	Due Date	Notes
2	6" f/9 Dob	John Paul De Silva	?	
4	60mm Refractor	Del Johnson	Indefinite	
6	8" Celestron S/C	Slone Wiktorowicz	07/30/99	
9	C-11 Compustar	Paul Barton	Indefinite	
27	13" Dobson	Bud Wittlin	8/1/99	

Waiting List:

#	Scope Description	Borrower

Empty at the moment!

Submit

Members are encouraged to submit articles for publication in the SJAA Ephemeris. Send articles to the editors via e-mail to ephemeris@whiteoaks.com.

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Sky and Telescope - add $30 to membership
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Make checks payable to “SJAA”

Bring this form to any SJAA Meeting or send (along with your check) to

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