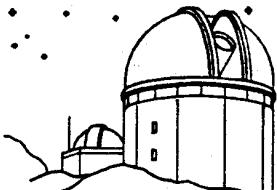


EPHEMERIS

OF THE SAN JOSE ASTRONOMICAL ASSOCIATION



AUGUST 1988

* * * * * AUGUST 6TH - 8 PM *

* DR. CHRIS MCKAY *

* SEARCHING FOR LIFE ON MARS *

AUGUST 6 GENERAL MEETING 8 PM. DR. CHRIS MCKAY PRESENTS: HOW & WHERE TO EXPLORE FOR LIFE ON MARS. THE 1976 EXPERIMENTS LEFT ROOM FOR DOUBT, SO MORE SOPHISTICATED METHODS ARE NEEDED.

AUGUST 11-12 NEW MOON AND PERSID METEOR SHOWER!!!

AUGUST 13 FIELD EXPEDITION FOR ASTRONOMICAL OBSERVATION TO FREMONT PEAK STATE PARK. DUSK TILL DAWN. SUNSET, 7:54 PM, WITH 2X MOON LOW; DARK AT 9:35 PM. MORNING TWILIGHT, 4:40 AM. OVER FIVE HOURS OF DARKNESS.

AUGUST 19-20 ANNUAL SJAA STAR PARTY AT YOSEMITE NATIONAL PARK. SUNSET, 7:40 PM. 50X MOON SET ABOUT 11 PM, MORNING TWILIGHT, 4:40 AM. OVER FIVE HOURS OF DARKNESS.

AUGUST 20 RANC PICNIC AT FREMONT PEAK. NO SJAA SCHEDULED EVENT LOCALLY THIS WEEK.

AUGUST 27 BOARD MEETING AT 6:30 WITH INTRODUCTORY ASTRONOMY CLASS AT 8:00 PM. LOS GATOS RED CROSS BUILDING.

AUGUST 27 - 28 RANC CONFERENCE AT THE LAWRENCE HALL OF SCIENCE, BERKELEY. PLEASE SEE ENCLOSED BULLETIN.

SEPT 3 SWAP MEET FROM 2 PM AT THE RED CROSS BUILDING, FOLLOWED BY THE ANNUAL SLIDE AND EQUIPMENT NIGHT AT 8 PM.

SEPT 9 SPECIAL FRIDAY NIGHT ASTRONOMY CLASS AT FREMONT PEAK STATE PARK. MEET AT THE FPOA OBSERVATORY, 8 PM.

SEPT 10 FIELD EXPEDITION FOR ASTRONOMICAL OBSERVATION TO HENRY COE STATE PARK. DUSK TILL DAWN. SUNSET, 7:17 PM. NEW MOON

SEPT 16-17 MARS WATCH, BRANHAM LANE CITY PARK, SAN JOSE. COME SHOW THE SKY TO THE PUBLIC! SUNSET 7:09 PM. 5-DAY MOON. MARS RISES AT 8:06. SATURN WELL UP.

FIELD OF VIEW BY: JOHN GLEASON YOSEMITE STAR PARTY

Jim Van Nuland tells me that our reservations for the star party at Yosemite National Park are full, but he will accept stand-bys. Those of you who are on the list, please call Jim immediately if you find that you will not be coming.

MEMBERSHIP RENEWALS

If you have not yet renewed your SJAA membership, please do so soon. Your Sky & Telescope subscription will be running out, and you will no longer get another exciting issue of the Ephemeris! Please use the handy form on the back page of the Ephemeris, and mail it directly to the address shown. Make all

checks payable to: San Jose Astronomical Association (SJAA). Everyone will have stamped on the outside of the Ephemeris this month: "Last Chance to Renew". Please disregard this message if you have already paid-up your membership. This is it. August is the cut-off month for renewals to be received if you expect to keep receiving the Ephemeris. Our many thanks for your prompt responses to our requests.

MARS WATCH - '88

The SJAA will be holding along series of star parties in the Branham Lane park, to show Mars to the public. Specific dates are in the calendar. If you have not participated in public events, you are missing one of the big kicks in astronomy. Mars will be near opposition, closer to Earth than for many years. In addition, Saturn will be prominently featured, along with other celestial treats as available. Tell your friends and co-workers!

ASTRONOMY CLASS FIELD EXPEDITION.

A special Friday evening astronomy class will be held on September 9th. Jack Zeiders is planning a special program for those students of the class. The class will have exclusive use of the FPOA 30-inch reflector this evening. Don't miss it and mark your calendars. Program to begin around 8:30 PM.

AUGUST SPEAKER

Dr. Chris McKay of NASA will be our featured speaker in August. With the grand opposition of Mars upon us, I am certain that Dr. McKay's talk will be of prime interest to the membership. The life on Mars question still remains a source of prime interest among the planetary science community. Come and join us as we learn about the process steps necessary to further the search for life on the "Angry Red Planet".

ASTRONOMY AND TELESCOPE MAKING -- RENEWALS

Jim Van Nuland does not yet have the subscription prices for Astronomy and Telescope Making magazines; to permit present independent subscribers to convert to the club rate, this notice is being run early. If your present subscription expires in 1989, you may convert it to the club rate by extending it through 1989 at the pro-rated price. To do so, Jim MUST have a mailing sticker from a recent issue. Since the subscription period will close in early November, this gives you time to save one from your next issue. Price perhaps \$15 for Astronomy and maybe \$8 for Telescope Making. That's about a 2/3 of the regular rate, so it's a good deal. Contact Jim Van Nuland at 408-371-1307 from 10 am to 11 pm.

SEPTEMBER 3RD SWAP MEET AND EQUIPMENT NIGHT

We will hold a swap meet starting at 2 pm preceding the Slide & Equipment night on Sept. 3rd. Bring the stuff you forgot to bring for the auction. Having a mid-year swap in addition to the Annual Auction is a new idea, and the Board wants to hear your opinions. Are we spreading ourselves too thin? Following the Swap Meet at 8 pm will be our annual slide and equipment show and tell by our membership. Bring your newly-acquired scopes, books, etc., and tell us about them: if you don't you'll be treated to yet another look at Jim's orange 4.25" on the funny-looking pipe mount. The slide and equipment night was at one time our most popular event. Lately, only a few people have brought equipment to share. With so many new members, I think that you are just a little shy. Please don't be! Do you have a special accessory that you have made to enhance your enjoyment of astronomy? Done any modifications to your C8? We would be most interested in hearing about it. Astrophotographers, both beginner and veteran alike are encouraged to bring in your best work. Please try and limit yourselves to 50 or 60 slides per person. Ha! Your editor might even make another of his rare guest appearances and show-off his new 6 x 30 fluorite finderscope! Mars will be especially attractive. How about a parking lot star party after the talks?

FROM THE PRESIDENT BY: TOM AHL

SJAA ANNUAL PICNIC

This years annual picnic at Grant Ranch County Park was attended by approximately 30 club members (about 10% of our membership), and a wild pig that occasionally checked us over. Unfortunately due to a problem in communications, our supplier of the necessities failed to show up. Who was to bring what was discussed by the board about 3-months ago and then forgotten. I have to accept responsibility because I did not follow up and make sure that everyone would take care of their portion. Fortunately I was able to contact

Jack Peterson before he left home and he picked up the hamburgers and hot dogs and other necessities. We were finally able to have our main course after the desert. I especially want to apologize to Gene Cisneros and his wife who "traditionally" bring the German chocolate cake; I guarantee that this "foul-up" will not happen again next year.

Frank Van Slager brought his Questar and we had some spectacular views of sunspots. Four major groups that were very large. Later that night, Frank stayed to catch a glimpse of Saturn and a few other objects before the moon rose.

VOLUNTEERS FOR THE MARCH WATCH '88 SEASON

This September and October the SJAA is holding number of public star parties at Branham Lane Park on Branham Ave. near Camden Ave. (The dates are listed in the Ephemeris)

We need volunteers to bring their telescopes and their expertise (and enthusiasm), to make this event a success. You need not be there every single time but you are quite welcome to. Also, we need volunteers to set up their own "show" locations. Hopefully with schools, and community centers. If anyone is able to do this, please contact John Gleason prior to August 12th so that he can enter the information into the Ephemeris in time for the September issue. Members with questions should feel free to contact me or any of the board members.

Let's make this event a memorable one not only for the SJAA, but also for Santa Clara County.

AN OVERVIEW OF OBSERVING SITES BY: DON MACHHOLZ AND RICH PAGE

Branham lane Park, part of the San Jose City parks and Recreation Dept., is an ideal site from which to view bright astronomical objects. A couple of years ago we showed Halley's Comet to over 2000 people on eight clear nights, this Spring we held Astronomy Day here, and this Autumn we'll be showing Mars from here.

From the corner of Camden Ave. and Blossom Hill Road it is 3 minutes and 1.4 miles away. It might not be on some maps, but it is on the north side of Branham Lane, with Ross Ave. (and shopping center with a Safeway) to the west and Kirk Rd. to the east. Put another way, it is 0.4 miles east of the Camden Ave./Branham lane intersection.

This neighborhood park is open to the public during daylight hours; to reserve it for night use you need to make advance arrangements. This can be done by calling the Kirk Community Center- 408-723-1571 and asking for Chris. He welcomes astronomical use of this park and will reserve it (free) for club/public activities.

There are 23 marked parking spaces here, additional parking is along the semi-circle at the north end of the parkway. You may also park along the east side of the parkway, as long as you don't impede traffic. Don't park on the grass. Most of the telescopes are set up on the wide sidewalk running along the west and north sides of the drive; this is convenient since you can park your vehicle right next to the telescope. The 40' x 40' paved square is useful for telescopes or a literature table, as is the 150' x 50' dirt area west of the parking spaces. Even further west and around to the north is a large grassy area, the western section is a bit far from the public for astronomical use, the northern grass lot is often used.

Except for a few small trees which you can work around, the horizons are very low. The highest point is the mountain range in the SW, it's about seven degrees high. The city illuminates the sky quite well, but with clear air the Milky Way is visible to the naked eye. Four low-pressure Sodium lights are in the park, they are on stands some 18 feet high and point downward. The Parks Dept. allows us to cover these with plastic bags while we're observing.

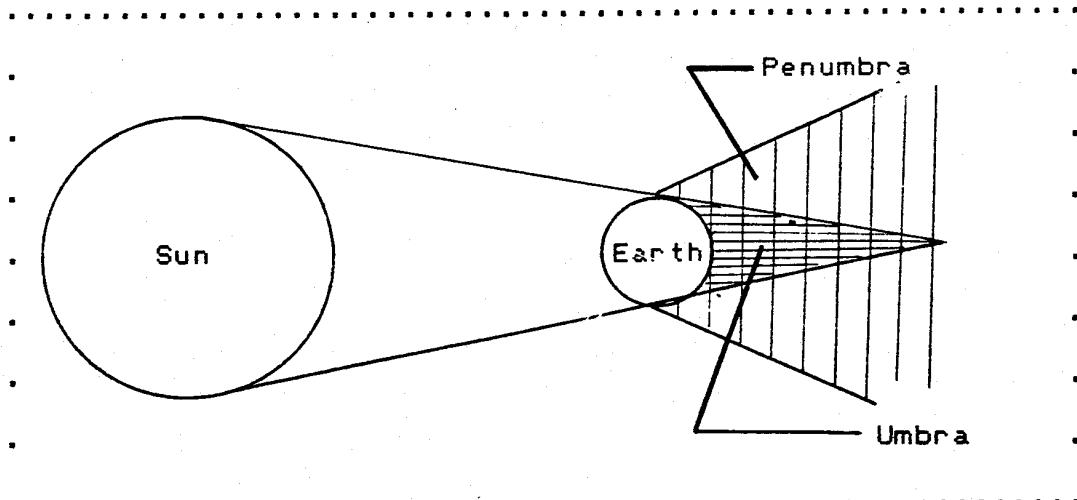
There are no restrooms here, the only running water being the water fountain. No electricity is available. Despite the in-city location, this is a good place from which to show the stars.

AUGUST STARRY NIGHTS BY: RICHARD STANTON

METEORS - It would seem that August this year is going to be near "hog heaven" for our meteor aficionados. One major and four minor showers achieve maximum this month. That's right, count'em, five meteor events. On August 5th the South Iota Aquarids come to maximum; a minor shower. On August 12th we have the North Delta Aquarids, another minor shower. Also on August the 12th, the major Persids hit maximum and these "little balls of fire" are fast. They scoot along at about 60 kilometers a second. Let's see, that's mmmmmm, 133,920 miles an hour, give or take a tad. (By the way, hogs can only run about 11 mph; thought you might need to know that.) The single observer count rate runs as high as 50 meteors per hour. Even better, the really good news is that these showers occur on a Friday night and even more mind-boggling, a New Moon night. Wait, let's think for a minute. Two showers on Friday, moonless night ... Saturn and mars in all their seasonal glory, maybe we should get off our duffs and show off the world of amateur astronomy to the public or at least to ourselves.

Continuing on ... August the 18th brings us the maximum of the Kappa Cygnids and August the 20th we have the top of the North Iota Aquarids. Speaking of meteors, I read somewhere that it is estimated that one meteorite, weighing at least 4,000 tons, falls to earth once every 100 years. And that one weighing at least 40,000 tons falls to earth about once every 1,000 years. Nine pounders fall darn near every day. Anybody want to calculate the odds for August?

LUNAR ECLIPSE - This year during August there will be a partial lunar eclipse and the entire event will be observable from our area for a change. On August 27th, a Saturday night, the 14.5 day old moon (full) will find itself being eclipsed by the shadow of the Earth. The event will in the majority be a Penumbral rather than an Umbral eclipse even though a small portion of the moon's disc will enter the umbra. The penumbral shadow produces a shallower darkening than does the umbral shadow as is shown by the illustration below.



CIRCUMSTANCES OF THE LUNAR ECLIPSE

MOON ENTERS PENUMBRA	U.T. 08H 51M
MOON ENTERS UMBRA	10H 07M
MIDDLE OF ECLIPSE	11H 04M
MOON LEAVES UMBRA	12H 01M
MOON LEAVES PENUMBRA	13H 17M
(Deduct seven hours to obtain PD time)	

All of our seasoned members who can help our newer members name the craters seen through their telescopes please raise their hand.....thought so. Maybe this is a good time for all of us to not only view a lunar eclipse but to get to know the moon a little more intimately.

MINOR PLANETS - August is a very special month for us. An asteroid discovered by Lick Observatory is coming to visit with us. The Apollo class asteroid (that's an asteroid that crosses the orbit of the Earth and could potentially

stop for an attention getting visit), 1685 TORO, will have it's closest approach to Earth since 1972 on August 7th. This time around it is only supposed to get within 0.18 A.U. (16,700,000 miles) of us. I have it on good authority that the Intergalactic Space patrol suspects that it may have been a member of this same family that paid us a call some 65 million years ago. That was such a big party that every living thing weighing over 50 pounds got wiped out ... permanently! Don't know about you but I'll probably carry a rather substantial umbrella that day.

COMET COMMENTS BY: DON MACHHOLZ

Periodic Comet Temple 2 remains visible to us, but it is still a bit fainter than expected as it heads south in our evening sky. Meanwhile, a faint comet has been recently discovered.

"Comet Comments" is now ten years old. This began as a listing of bright comet positions for the San Jose Astronomical Association Newsletter. Before the year was out it had developed to the present format: introduction, comet discoveries and recoveries, ephemerides of comets brighter than mag. 11, and a final section featuring a specific topic. In those early days the length of this column ranged from two paragraphs to three pages, in recent years I've made it a practice to keep it to two pages.

"Comet Comments" is now printed in a half-dozen astronomy club newsletters in the U.S. and sent to several foreign countries. Writing and mailing this takes six to eight hours each month. There is no financial award and very little feedback from most of the readers, but I've enjoyed writing this and expect to continue for some time.

Comet Shoemaker-Holt-Rodriquez (1988h): Eugene Shoemaker reports that his wife Carolyn discovered this comet on a plate taken by Henry E. Holt, his son Henry R., and graduate student Tim Rodriques. This is the 14th comet bearing the Shoemaker name. Carolyn (credited singly for two "Shoemaker" comets, her husband assisted in the rest), now has more than half the record of 26 comets named after Pons. She is also the living astronomer with the greatest number of named comets.

When found, this comet was in the morning sky, not far from M27, and a faint magnitude 14. An early orbit computation suggests the comet will be closest the sun next June at 2.5 AU. By then it might brighten to magnitude 10 in the deep southern morning sky.

Periodic Comet Tempel 2 (1987g)

DATE	R.A. (1950)	DEC	ELONG	MAG	NOTES
07-23	15h 31.1m	-07°27'	112°	9.4	This object begins to
07-28	15h 36.0m	-09°14'	109°	9.4	pick up speed as it
08-02	15h 42.0m	-11°04'	106°	9.3	travels into Scorpius
08-07	15h 49.3m	-12°56'	104°	9.2	and the Milky Way.
08-12	15h 57.7m	-14°48'	101°	9.2	This comet has been
08-17	16h 07.3m	-16°40'	99°	9.1	slow to brighten,
08-22	16h 18.0m	-18°30'	97°	9.1	but it has the habit
08-27	16h 29.9m	-20°18'	96°	9.1	of remaining bright
09-01	16h 42.8m	-22°01'	94°	9.0	past perihelion.
09-06	16h 56.7m	-23°38'	92°	9.1	

SEEKING COMETS

Some years provide many comet discoveries while during other years we see very few comets. Is this caused by comet hunter habits, or do more comets indeed reach perihelion (their point closest to the sun) in some years than in others? Here I list the yearly comet finds by amateurs and by professionals. (The IRAS and SOLWIND satellite finds are placed in the professional discovery category with the exception of the bright Comet IRAS-ARAKI-ALCOCK, which is in the amateur column). This is followed by total discoveries and the ratio of amateur to professional finds. Finally, I list the number of newly -found comets reaching perihelion each year.

One might ask: "Does comet hunting activity vary as much as these discovery figures indicate? Looking at the amateur finds, some years have had no new comets, while one year had nine finds. This appears to be due to more comets entering the solar vicinity, especially the brighter ones since the amateurs find these. As for the professional discoveries, the Shoemaker program has

made a difference in recent years, but again we can suspect a variance in the number of comets.

The Amat/Pro ratio numbers give us some indication of bright vs. faint comets. There are exceptions through, some amateur finds are faint and some professional comets become very bright. Generally, however, some years produce bright comets in great supply while other years see few. This should not surprise us, as a random distribution of comets does not mean they are uniformly distributed.

We see that more new comets come to perihelion some years than during other years. Again this should not disturb us, they need not be uniform in order to be random.

Comets continue to come to the inner solar system at any time and from any direction, this makes predictions of new comets rather difficult. We have still not found a pattern or trend that allows us to forecast what the comet activity will be in future years. This is just another way in which comets are considered so unpredictable.

YEAR	AMATEUR	PRO	TOTAL	AMAT/PRO	COMETS AT PERI.
1975	7	6	13	1.16	11
1976	2	3	5	0.67	8
1977	1	7	13	0.14	8
1978	7	4	11	1.75	11
1979	3	5	8	0.60	8
1980	4	6	10	0.67	7
1981	0	8	8	0.00	10
1982	1	2	3	0.50	5
1983	3	10	13	0.30	12
1984	5	9	14	0.56	11
1985	1	5	6	0.20	11
1986	3	7	10	0.43	10
1987	9	7	16	1.29	10+

ASTRO ADS

FOR SALE - Celestron SP-C6 complete with Celestron Dual Axis drive, 26mm, 13mm, and 6mm eyepieces. Also, Parks 2x barlow and Cannon T-adapter, carrying cases (2) - \$875 or best offer. Celestron 10 X 50 binoculars - \$80. Contact Jim at P.O. Box 988, Pittsburg, CA. 94565 or 415-625-2832. 8/88

EMPLOYMENT OPPORTUNITY - Finial Technology is a start-up company developing the first Laser Turntable. They are seeking an optical systems engineer with 5+ years of experience in the design and development of optical systems. Ideally, you have had hands-on experience with the development of laser diode based optical systems and understand how to specify, mount, and align standard optical components. They are looking for a self starter who can take a lead role in the current product as well as future products. Please send your resume to: Finial Technology, Inc. 707 East Evelyn Ave. Sunnyvale, CA. 94086 8/88

WANTED -- Celestron C14 tripod. (Not over \$100.) 3-inch Cassegrain telephoto/spotter w/tripod, \$100. Contact: Nick Doukas 408-462-0209 7/88

C-90 SPOTTING SCOPE with multi-coated corrector - 1 month old. All standard accessories plus dew cap, large accessory ring, and 1.25" star diagonal. Perfect optical and mechanical condition. Velbon camera tripod with spring loaded pan head, like new. All for \$430. Eyepieces! 28mm Erfle \$30, 40mm Kelner \$15, 9mm Ortho \$25, 7mm Ortho \$22, 40mm Meade Super Plossl \$60. All eyepieces in perfect condition. Contact: Jim Molinari, 255-7030 or 727-2438

CELESTRON 8 with tripod and wedge. Accutrack 3119 Drive Control, dec motor, 8 X 40 finderscope, piggy back mount, dew cap, weights, star diagonal, 9mm, 18mm, 20mm eyepieces, fine tune latitude adjuster, star bright coating. \$1250 or best offer. Contact: Robert Scott (408) 265-6101. 6/88

SPACE PROGRAM UPDATE BY: BOB FINGERHUT

SPACE SHUTTLE DISCOVERY IS ON THE LAUNCH PAD

Discovery was rolled out to launch pad 39B on July 4th. Launch date is currently scheduled for Sept. 6th but will be adjusted after flight readiness firing. Milestones that need to be accomplished prior to launch include: cavity purge test to calibrate gas leakage in the seals between the orbiter and external tank. Simulation runs of the software changes. Flight readiness firing- operation of liquid propellant engines on the pad for 19.6 seconds. This test is scheduled for July 26th. Installation of the Tracking and Data Relay Satellite payload is scheduled for August 1st. Terminal countdown demonstration planned for Aug. 17th. One more solid booster test is also required. This test was scheduled for July 30th, but could be delayed due to a low pressure seal test that was accidentally conducted at 1000 psi instead of 100 psi. (Fuel leakage, apparently from the orbit maneuvering engines pose a major problem. Shuttle may need to be rolled back into the Vertical Assembly Building for repair. The result could be a delay of several months. - ed.)

CONGRESSIONAL SUBCOMMITTEES VOTE TO KILL SPACE STATION

The Senate subcommittee voted to reduce funding to \$200 million to be used for termination of existing contracts. The House voted \$387 million for use through April 1989 and then \$65 million for termination costs. Both houses put in a provision that their actions would be rescinded if the next president submits a special message to the Congress indicating that he intends to proceed with the space station program. The full committees and full House and Senate still need to consider the Fy 89 NASA appropriation. The picture could change.

SOVIETS LAUNCH MISSION TO PHOBOS

The Soviets have launched two spacecraft to Mars including one that will rendezvous with the moon Phobos and attempt to analyze material that it will vaporize from the surface.

MIR REPAIR UNSUCCESSFUL

Soviet cosmonauts performed an EVA to repair a British/Dutch X-ray telescope on the Kvant astrophysics module that is docked to the MIR space station. It failed when a wrench broke while the astronaut was trying to pry-off a brass clamp. Another attempt to complete the repair will be made after a new wrench is delivered.

ARIANE 4 LAUNCHED SUCCESSFULLY

The first European Ariane 4 was launched on June 15th, injecting three geosynchronous satellites into transfer orbits.

PLUTO'S ATMOSPHERE OBSERVED

An astronomy team from MIT, flying in the Kuiper Airborne Observatory, has made the first direct observation of Pluto's atmosphere. The observation was made by observing the light from a 12th magnitude star as it passed near and then behind the planet. The same technique was used to detect the rings of Uranus in 1977.

INTERVIEW WITH DENISE HUTSON BY: SJAA STAFF REPORTER DON GRABSKI

This month we are going to publish an interview held with Denise Hutson, member of the SJAA and author of the now famous letter published in the June issue of Sky & Telescope magazine.

When asked if she would consent to being interviewed for the Ephemeris, Denise graciously accepted and invited me to her home to do the interview. Denise lives in a beautiful home overlooking San Jose on Mt. Pleasant Road. (A great observing site!) Denise is an attractive, outgoing, vivacious person, married, with one child.

I arrived 20 minutes late but was greeted like a long lost friend. Asked to come in, I was given the best seat in the house in front of the TV with the Star Trek IV movie already in progress and offered some liquid refreshment. WHAT A LIFE!!!!

If the interview seems somewhat disjointed, it was interrupted by the usual things in a busy household: telephone, introduction to a Husband, a three year old son, etc. A very charming family indeed!

SJAA: How did you acquire your interest in astronomy?

DENISE: I think my dad probably had a lot to do with it. He was with Lockheed for 17 years working as an aeronautical engineer. Some of his work involved the space program when they were sending chimps into space. He used to bring home the banana pellets they would send up with the chimps for me to much on. They were really good. My dad's a pilot and designs a builds his own aircraft in his garage. He's won diamond scoring pins and he's got pieces in the scoring hall of fame in Elmira, New York, and a piece in the Flying Lady restaurant in Morgan Hill. It was fun stuff growing up around that. I used to go flying almost every weekend. My Mom, my brother, and I were my Dad's pit crew on a lot of his cross-country flights, picking him out of the cow fields. That was really a lot of fun. I love flying needless to say. My dad had a lot to do with me getting into astronomy, even though it was subdued. Little girls at that time in the world weren't supposed to grow up to study Astrophysics. I don't know, you want to always encourage your child in whatever interest they show and that wasn't the case because I don't think it was the little girl thing to do. You know, it's ballet and tap. But any interest I might have shown in astronomy wasn't really encouraged, so it lie dormant for a few years until I met my husband.

SJAA: Have you ever taken any courses in astronomy, and if so, at what level?

DENISE: I only went to one in my whole life and that's when Halley's Comet was coming in and heard Andrew Fraknoy at U.C. Berkeley. Other than that, no. I really taught myself I guess. I have a lot of books and I read a lot and observe a lot, and I'm just kinda doing it my own way. Now that I'm not working, I want to go back to school, and actually would like to go for a degree in something along those lines. I was in Marketing for 10 years so this would be a big switch.

SJAA: How extensive is your astronomical library?

DENISE: Well, I know it takes up the top of the china cabinet, and the top of the dresser in the bedroom. I don't know, just a little bit of everything. It's growing. Like how many books maybe? Probably 30.

SJAA: Which one is your favorite book?

DENISE: Oh, here it is, the one I always seem to keep referring to. It's the Universe Guide to the Stars and Planets by Ian Redpath & Will Tirion. It's, got just absolutely everything. It's a good outside tool when I'm observing. When I want to study something, I get every book I own in front of me at some point. Oh, I know what book that's in, and get it out. I have a friend that I've recently, shall I say suckered into the world of astronomy. It makes me feel really good. It's like I snagged one. Every time they come over, it's his wife on one side of the room with all of our other friends and then him and me are on the other side with the telescope, binoculars and the books.

SJAA: What star atlas do you use most?

DENISE: Hum, I don't have any of the probably more popular ones. This has one that works. (refers to Universe Guide to the Stars and Planets) It divides it up by constellations. I've come close to ordering some more.

SJAA: What kind of telescope(s) do you have?

DENISE: Okay.... I've got the Celestron C-8, and my 7 x 50 binoculars, and a little 30X refractor that my brother handed down to me, but that's all right now. I'm about to buy one now for critical focus purposes.

SJAA: If you had your druthers, what kind of telescope would you like to have?

DENISE: A big one! Ha, Ha, Ha! Well, I've seen the C-14. There's something about the Schmidt-Cassegrain design that I prefer. I don't know, I've seen the big Newtonians out at the star parties and they don't have motor drives, is that correct?

SJAA: They can be motor driven but it takes quite a bit to get them to that point.

DENISE: It has to be something I can hook a camera up to, because that is my ultimate fun and my ultimate frustration.

SJAA: Do you "star hop" or use setting circles?

DENISE: I star hop, I'm struggling with my setting circles.

SJAA: What does your husband think about your hobby?

DENISE: He thinks it's neat. His whole thing while I'm outside, is to keep Chad from turning on the lights or coming out there and jumping around and causing vibrations or anything like that. He's really supportive, and when I come up with a really good photo or something, he's really proud of it. I'd like to see him get more interested in it, but he's supportive enough as it is to let me spend the kind of money I do. This is an expensive hobby!

SJAA: Being a wife and mother, how do you find the time for your hobby?

DENISE: It's difficult sometimes, because Chad doesn't have a bed time. He doesn't really adhere to any kind of schedule and he goes to bed when we go to bed. So if I'm out there, I don't know, it's fortunate I can do it at night. That's only when the stars come out. But, as he is getting older, it's getting easier. (Chad interrupts) What did I say about it getting easier? Ha! It's not finding the time, but making the time. It's something I love and I need to spend time with it. It's my release from the world, I guess. So, finding the time isn't really a problem. I get everything done during the day like anybody else would, now that I'm not working, that helps. When I was working, I wasn't as involved in it as I am now. Gosh, I'd come home from work and the last thing I'd want to do is laundry or cleaning, it all piled up for the weekend. So by the time evening came, I was pooped. But even still, I would drag myself out there on a new moon, if it was real clear. But it's easier now. I can do observing swings on a Tuesday night or a Wednesday night, which is real nice. I've done a couple of 2:00 a.m. routines in the middle of the week and he's (Richard), pretty forgiving of it. He'll get up in the morning and change clothes and come in here and put a movie in the VCR. Sometimes, I have a little set of plastic binoculars for Chad and I let him use that little 30x. It's so old and beat up, I don't care if he should happen to kill it or something. But, it's neat for him. He wants to come out there and look at the stars. He knows Venus and the Moon and Jupiter. We used to go out night after night and "look Mom, there's Jupiter" or "Benus" (intentional TYPO). He carries one of my little star books around in his purse, he loves the stars. I'm bringing him up right. Starting him early...so I think that another part of finding the time, is making it fun for him too, to come out there with me so it's not a hardship on me too.

SJAA: What were your thoughts when you saw your letter in the magazines?

DENISE: Oh, I was thrilled! First off, I wanted to see what kind of company I was in because they will always print letters to the editor that are on the same subject. The lady that wrote the first, wrote some horrible things, and I thought, Ooh, I didn't know you could say stuff like that and have it printed. So, my article on my thoughts on a woman in astronomy? I didn't expect to see something so 180, but it felt neat to be included with women in authority. You know, some of them work for their astronomers, they teach at Universities and that's kind of neat. And then getting letters from people. I got 3 letters or 4 from people who have read my letter in Sky & Telescope and I'm still writing to them. One of them sent me a picture of Halley's comet that he took. And there's one lady that wrote me a letter, so we have kind of a special tie here, you know. It felt really good.

SJAA: How do you feel about being interviewed for the SJAA Ephemeris?

DENISE: I guess I can't understand why. Why me? That was Tom's idea, huh? In fact, I went up to him and asked, "Was this your idea?". I think I was a little bit embarrassed because it's taken me a long time to come around and even join a club for one and to get attention almost immediately. It's kind of...Oh! overwhelming.

SJAA: What advice if any, do you have for other female amateur astronomers?

DENISE: I like to see a lot more of them be more active in the club. I mean, it's hard for me. I'm always the only one. I've only met a very few. I mean there's the wives of everybody, but, Richard is almost like the Wife in this case because I'm the one that's involved. So, I'd just like to seem more of them come to star parties and I'd like to get to know some of them, because I think there could be a real camaraderie. How many members does the club have? About 350, and Tom told me only about 30% were active and out of that 30%, are there any other women? I think I just need to try and get to more of them. It's weird though, because I'm in a weird position.

Maybe that's why I told you that you wouldn't like some of the things that I would say in something like this, because the roles are just reversed. For you to go to a club meeting, it's probably a very natural thing, but for me... can I go have a meeting with the boys? Ha! Ha! I want to go sit down with 300

men and me and talk stars, really! Trust me, really, it's just stars! But it's almost like, well, o.k. I'll cook you a nice dinner and I'll go rent you movies and you sit here and be happy and I'll go. I want to enjoy my hobby with other people too. I think I'm missing out on a lot by just studying on my own and going out in my backyard. Just the interaction with other people has taught me a lot of things that I didn't know. I think that would be the one thing that I would say to other women. Don't be afraid, I finally did it. It took me 7 years! But, boy the stuff to be gained is incredible.

And those little things that upset me at the telescope. I took a picture. A couple of planetary shots of Saturn and Jupiter and some of the people down at Orion wanted to know how I did it. They figured I couldn't do it the way I said that I had done it. I didn't know I couldn't! See, that's the whole thing, I didn't know I couldn't! I think I do a lot of things that shouldn't or couldn't be done because I just don't know better. Just for the advancement of my own enjoyment in the hobby, to be able to talk to other people about it, really, really helps. So, I don't know, it's a male dominated hobby, and that really shouldn't be the case. I can't understand why more women don't, my God, the stuff that's up there, it's just incredible! The more I learn, it gets worse. It just get worse and worse, and I got more time now than I did before. So my study of it has been more concentrated than it was before, and still it's worse and worse. Each answer I get causes me to ask 10 more questions. That's why I'm saying I want to go back, Boy! I want to go to college. I want to get a degree, Astrophysics, or something like that. Evergreen, anyway, as one thing. You can get college credit for watching Project Universe. Gee, I watch that anyway! San Jose City is a little better, I don't know exactly what direction I want to take. I know I want to learn more, there's a lot of things I don't understand. There is something telling me I need to understand it, I don't know why? They'll never launch me up in the shuttle!

SJAA: Do you have any comments or anything you want to say that you want to see printed to in the Ephemeris? Anything at all?

DENISE: Maybe, just one thing I've noticed about these meetings when I do go to them. It is the only time I can go to a public function of any kind and not see a line at the ladies room!

SJAA: My personal thanks to Denise Hutson for sitting through this ordeal!
D.G.

(1) CERES, diameter 1003 Km., magnitude 7.9

Aug. 07 R.A. 00:26 Dec. -12:51

17	00:23	-13:48
27	0019	-14:51

(2) PALLAS, diameter 608 Km., magnitude 9.5

Aug. 07	20:09	+15:27
17	20:02	+13:50
27	19:56	+11:57

(18) MELPOMENE, diam. 150 Km., magnitude 7.9

Aug. 07	23:02	-05:43
17	23:00	-07:35
27	22:54	-09:50



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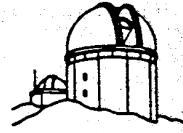
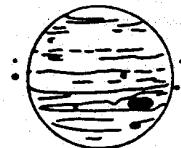
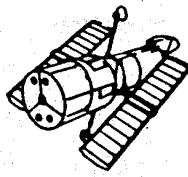
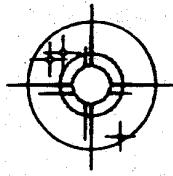
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