

Predictions

June '79

- May 26-28 Riverside Telescope Makers' Conference, Big Bear, Ca.
- June 2 General Meeting, Rosicrucian Planetarium, Park & Naglee, San Jose'. 7:30 pm. This meeting will cover a variety of topics: election of board members, Gerry Rattley's Astronomy Day slide show (always a hit), and a Riverside conference rehash. Bring your nominations for the board and/or your recent slides.
- June 8 Board Meeting, Doug Buettner's, 6659 Mt. Pakron Dr., San Jose'. 997-1783. 5:30 pm.
- June 9 Indoor Star Party, Los Gatos Red Cross. 7:30 pm.
- June 15-16 AANC Star Party at Fremont Peak.
- June 16 Indoor Star Party, Los Gatos Red Cross, 7:30 pm.
- June 23 SJAA Star Party of Henry Coe State Park.
- June 26-30 ASP Summer Meeting, Sonoma State University. More on this inside.
- June 30 Indoor Star Party, Los Gatos Red Cross. 7:30 pm.
- July 7 Indoor Star Party, Los Gatos Red Cross. 7:30 pm.
- July 13 Board Meeting, Debbie Moore's, 5336 Harwood Rd., San Jose'. 269-7466.
- July 15 Annual SJAA Installation of Officers' Picnic at Sanborn County Park. 3:00 pm with star party starting at dusk. Reservation form for the picnic is inclosed.
- July 20 10th. anniversary of Man's first landing on the Moon.
- July 21 SJAA Star Party at Fremont Peak.
- July 28 Indoor Star Party, Los Gatos Red Cross. 7:30 pm.

"Can an area of space without a naked singularity be called a frijoles?"

Pete Manly

The San Jose Astronomical Association

Observations

This month's faint fuzzy nothing award goes to Bruce Degraff for thinking up the new temporarily permanent name for this column. The brilliant minds out there presented me with numerous, NUMEROUS names, somewhere in the range of twenty, but none seemed as appropriate as Observations. Any better ideas? The suggestion box will always be up front by the planetarium sphere housing during the general meetings for those with brainstormers.

Membership renewal cards, yellow this year, have been arriving from Sky and Telescope recently to those members due up for resubscription. \$17, plus the card, should be returned to Bobby Fingerhut, 340 Rio Verde Place, #4, Milpitas, 95035, as soon as you receive it. Bulletin subscriptions are \$5 a year.

So far everyone I have talked to in the club is planning on attending the July 15th picnic at Sanborn Canyon, but so far no one, NO ONE, has sent in the reservation form. Does that mean everyone is as lazy as me? Oh, the poor club if that's true. Well, for those of you who have just forgotten about it or have misplaced the form there's one located at the end of the bulletin for you.

The ASP Summer Meeting is going to be held at Sonoma State University, June 26-30. On Friday night from 7-10 PM an Astrophotography Workshop is going to be held. This would be a superb chance for all of the photographers in the SJAA to get together with some of the other 'experts' in the area, both professional and amateur, for an idea exchange. For reservations to the complete conference write ASP, 1290-24th Ave., San Francisco, Ca. 94122.

In June's Astronomy magazine John Gleason has four pictures printed in an article concerning the ideal film for astrophotography. Worth looking up.

Question of the Month for July:
Where were you July 20, 1969?

I know where I was—glued to a television screen in complete awe of what was happening on the moon at the time, all the while desperately thinking of a way to get involved with the space program. I knew I had years of education ahead of me (I was just out of high school) before I could really do something but I knew there had to be another way. So the next day I raided the local library of the only (old) astronomy text it had and immediately that night took to learning the northern constellations. By November I had started my first telescope. Well, I may never make it into the space program but I certainly came away from July 20, 1969 with something I hope never leaves me—a love of astronomy. So don't be surprised to get a phone call from me asking that question. It should be interesting to find out where people were ten years ago.

You've probably noticed that this bulletin is early this month. One reason: Riverside Telescope Makers' Conference. Even as I'm typing this Kevin is outside packing the van for the trip south. Anyhow, normally the bulletin should be coming out in the week before the general meeting or the week before the first full week of that month, whichever comes first. Now that I've got you all confused.....Bulletin articles for next month should be to me no later than June 24th.

The star party of April 27-28 at Fremont Peak was a success if only from the viewpoint of the number of SJAA members and friends that showed up. Over the two nights I counted at least thirty people back behind the ranger's house. Include with this telescopes and vehicles, and things were definitely cozy. People I hadn't seen for months at a star party showed up: the Rice's, the McGlaufflin's, Ron Martin, Pete & Amy Arebalo, to name just a few. It was Frank Diball's first time up to the Peak even though we've been trying to get him up there for five years. The regulars were all in attendance: Bobby Fingerhut, Gerry Rattley, Wolf Hanisch, Jeff Lo. The weather kept playing tricks with us Friday night, perfectly clear one minute, twenty foot visibility the next through the fog. When it was clear there were dark skies and those of us who weren't just plain observing were getting some photography in. John Gleason got a few shots off despite all of my inadvertently turned on chart lights right next to him.

Jay Freeman showed up and completed his Messier Club qualifications, all with a pair of binoculars! Pete Manly reported to me that there appeared to be a victory dance over this somewhere around 3 AM. Gene Cisneros pulled in late Saturday night, delivered Gerry's new C-90 to him, and disappeared into the back of his van, never to be seen again till morning. Due to a stamping party Saturday afternoon I was able to deliver a number of bulletins to people at the peak that way. Marty McQuire, Fred Braniff, and York Gorzolla were a few that wandered in from the fog to get theirs.

Because of the fog we all had a severe dewing problem, those with Celestrons even more. I thought, with my Newtonian, I would be safe but after not being able to find anything Saturday night and after seeing the water on Gerry's 10" the next morning I now know why. According to the weather station nearby (and there were frequent trips to it) the humidity was ready somewhere around 99.9%. Drip. Many of us sat in Chris Pratt's van a lot, not so much to keep warm but to keep dry.

Editor

"I'm just sitting here enjoying naked eye astronomy, so go away!"
Gerry Rattley, explaining why he was just sitting there at the last star party.

"Do they call them frijoles because they're free of holes?"
Pete Manly, from a restaurant in San Juan Bautista

Comet Comments

No new comets have been discovered recently. However, there is one comet visible in the morning sky.

Comet Meier: this comet, discovered April 1978, is now leaving the solar system. It will be visible in the southeast just before dawn at the following positions:

date	RA	Dec	mag
May 17	23hr45m	-19.70	10.6
27	23 51	-18.8	
June 6	23 54	-18.2	10.9
11	23 55	-17.7	
26	23 55	-17.5	11.1
July 6	23 52	-17.4	

Comet Tails: The nucleus of a comet is a solid body between 1-10 miles across. As the comet approaches the sun the outer layer peels (vaporizes) off and forms the coma. Sometimes the nucleus splits. Such was the case with Ikeya-Seki in 1965 and comet West in 1976.

Don Machholz (356-7727)

Graze Notes

An attempt by Gerry Rattley, John Rhodes, Pete Manly, and myself to observe a graze on May 6-7 were met with clouds and rain. The 'expedition' to far-away Mountain View was not announced generally because there was considerable doubt that the star could be seen so close to the bright side of the moon. Hopefully, the next graze will be a good one and everybody will get to go along.

Jim van Nuland

"You're going to dig him up? Is he buried or something?"
Jack Peterson

"What a neat chair." Dave Ambrose
"It bites thumbs, too." Jim van Nuland

The Skylab is Falling! The Skylab is Falling!

Since NASA had predicted that Skylab is due down sometime during the last week of June to the first week of July, July 2nd the 'optimum' day, this brings to mind all sorts of possibilities. If we're lucky perhaps we'll see it on July 4th. If we're not so fortunate maybe it'll fall in broad daylight on the other side of the world. But who knows? With 400-500 pieces of it coming down maybe it won't matter where you are. Be the first on your block to be hit with a satellite! Or visualize this: the lead refrigerator crashing into the Capitol, or the person who signed off the last NASA budget, or the drafted red light atop Fremont Peak. The possibilities are endless, all equally tragic and all equally absurd.

Editor

New Address:
Logan Belleville
14357 Evans Lane
Saratoga, Ca. 95070
379-4989

New members:
Chris & Shea Pratt
474 Safari Dr.
San Jose, Ca.

Cathy Pinheiro
4029 Will Rogers Dr. #26
San Jose, Ca. 95117
248-0210

Jan Newland
1268 Valdosta Rd.
San Jose, Ca. 95121

Indoor Star Party of May 12, or —How to Become an Automechanic or Camera Repairman in 60 Minutes

The May 12th indoor star party started like any other. When I arrived the regulars were already munching on cookies and drinking soft drinks which Rich Page had generously provided. Because I had been having transmission trouble with my car I innocently asked Kevin Medlock to look at it. Ever obliging, Kevin immediately proceeded first to give Gerry Rattley and me a lesson in how to open (break into) a locked car without a key. He then asked for a screwdriver and wrench, and fifteen minutes later my transmission was apart—by the light of a flashlight.

By this time we had drawn a crowd. Everybody gave good advice on how to fix the transmission. If Kevin would not have been distracted by all this chatter and an occasional wail by me whenever he hit the transmission with a hammer, he would have fixed it in thirty minutes instead of the 60 it actually took.

The trouble with my transmission was that a coil spring had broken. Without replacing the part he fixed the spring—question of the month: How did he fix the broken coil spring?

After such 'brilliant' display of mechanics we all decided that every car should come with an inflatable Kevin in the trunk.

Now that Kevin was warmed up to fix things there was no stopping him. He noticed Bobby Fingerhut agonizing over a taken apart 135mm Spiraton lens. For Kevin it was just going from big gears and springs to little gears and springs. He had to get into the act and by night's end Bobby and Kevin had put the lens back into working order. While all this was going on Jack Zeiders was cutting with a saber saw big holes out of aluminum sheets. He was actually working on his 16-inch telescope. The rest of the evening was more conventional. The Riverside trip was planned and the group then adjourned to Sambo's. At 3:00 AM things finally came to an end.

Wolf Hanisch

Rattley rattles

This month's Rattley Rattles is going to be devoted to a President's message. I would like to take this opportunity to discuss what the June elections of members to the club's Board of Directors means to you as a club member and why you should show up at the next monthly meeting to vote for the people you would like to see run the club! Also I would like to discuss a little about the goals and directions of the club and attempt another opinion survey.

Our, YOUR, club is getting quite large now, over a hundred members, and this, while it is something we want, can cause many problems for the leadership. Everybody's needs and desires are different and it becomes impossible to please everybody all the time, much less half the people half the time! There are many faces at the general meetings and indoor star parties and other events that I do not recognize these days. Who are you? How long have you been into astronomy? What special interests and experiences do you have? What do you want out of the club? What do you expect from the club? Do you have any ideas on what could be done to make the club more interesting and beneficial for yourself and/or for your fellow club members? These are the kinds of input I and my fellow board members need in order plan and schedule events for your participation. Why not approach me or any board member at a future event and talk for awhile. Get to know us and let us get to know you! This is your, and MY, club.

The next general meeting is YOUR meeting! It is YOUR opportunity to elect those that you would like to see run the club. The nominating committee for this years elections is John Rhodes, phone 969-2615, Phil Hermsmeyer, 252-5529, and myself, Gerry Rattley, 732-0202. If you would like to run for one of the five (5) board openings (terms of office are for two years) contact a member of the nominating committee or be present at the next general meeting to get your name on the list of those seeking office. Because we will have no scheduled speaker at the next general meeting it will give us the opportunity to have each person running for a board position a chance to campaign if he/she so desires. Let's all be present and participate and vote wisely, knowledgeably, and for the good of our club!

What does it take to be a good board member!?!? It takes someone who has an interest in doing something to help the club run and provide what the general membership wants. It takes someone with ideas or with the time and ability to get things done. It takes someone who is knowledgeable about how the club runs (in otherwords someone who has been in the club for a while) and knows something of the clubs history. The board is the governing body of the club and it is the job of the board to decide what events the club will offer, when they will take place, where they will be, and to take charge and run these events. The board makes club policies, sets the goals and directions of the club, arranges meeting content (including speakers), manages the funds, interfaces the club with the outside astronomical community, oversees the newsletter, and anything else that involves the club!

Rattley Rattles continued . . .

Because the next general meeting does not feature a speaker, it will also afford an opportunity to have a general forum open discussion on whatever you, the general member wish to have discussed. I will bring a questionnaire which we will discuss and you will have the opportunity to fill out and drop in the "Suggestion Box". This questionnaire will have general as well as specific questions for you to comment on and express your opinion on. If the board does not get response from you on what the club is doing, then they have to run the club with only indirect input as to what to do. Indirect input is things like attendance and conversations with other members (who are generally the active members or those who show up for events and talk to board members). I was going to run the questionnaire in this month's bulletin but, because of space and the fact that I don't want you to have to tear up your bulletins, I am going to bring them to all scheduled events starting with the June meeting and running for an indeterminate period of time. The last such survey run was in the September 1976 bulletin. It has not been tried or run since because that last one meet with a great deal of apathy, I only recieved one (1) response from it. Let's try to do a little better this time. The board can not run this club the way you want unless it knows what you want!

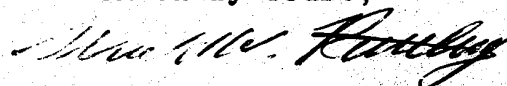
It also helps you as club members to know why certain things are done the way they are done in this club! I will not go into any detail on anything specific at this time but questions of this nature can be answered on a personal basis or in a future President's message or at next month's general meeting during the open discussion.

Other than the elections and the open discussion mentioned above, the next meeting will feature a slide night. Bring your recent, or past, astro-slides to show. Bring your Riverside slides. Bring any slides of an astronomical nature. Try to limit yourself to no more than a couple of dozen slides (don't bring 400 Riverside slides, please).

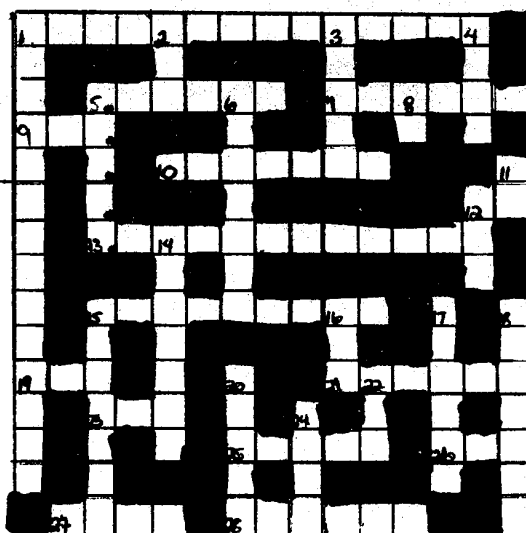
After this part of the program, if time permits, I will show my Astronomy Day slide show, which I put together for the general public at public star parties. Most club members have not seen it yet because at these public events, they have been too busy showing the sky to the public with their telescopes. After I have given the slide show, I would like comments from the general membership on it. I cannot say that I will make every change that's suggested, but I will listen and discuss ideas on how to improve this slide show. It is for the general public's benefit and is a means of Public Relations for the club. The responses I have gotten from the general public and those club members that have seen it are good to excellent. The slide show is 80 slides long and takes between 30 minutes to an hour depending on how much is said about each slide and how many questions are asked by those viewing the show. At one school showing it took about 2 hours because a lot of questions were asked.

Well, I think I have Rattled long enough! I hope the above has been informative and not too boring. I would like to field questions and comments on any of the above discussion or anything else concerning the club, but above all I would like to see YOU at the next general meeting (bring a pencil or pen). It's YOUR club, it's your turn to help run it!!!

Astronomically Yours;



SKY WORD #3 by Fred Braniff



Across

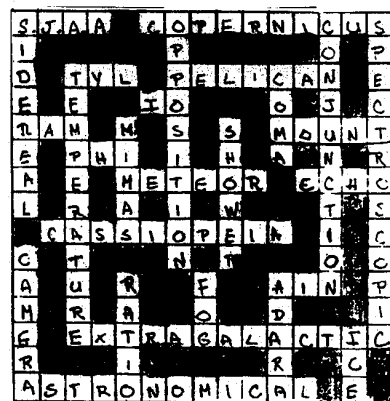
1. Heck of a neck
5. Between one across & Taurus
7. Discovered by Wm. Herschel in 1787
9. Has a smooth horizon
10. And six down 1564-1642
12. 3.14159265
15. A "star moony" does it
19. Solid water
21. Mars moon
23. P
25. Sound waves
26. Lesser lion
27. Nine across
28. M 8

Down

1. Ptolemy listed some in 150 A.D.
2. Music
3. 234000 miles from Saturn
4. It's red but not 'Stop'
5. Twinky watchers
6. See ten across
8. American, for 'What did you say?'
11. 22nd Greek letter
12. Looks like Neptune's fork
14. 18 down wrote one
15. Nebula next to the Pelican
16. 'PAM' can't find it
17. Epsilon Aquarii
18. He fell into an ice cellar in November 1781
20. Type of aberration
22. Tint
24. Nebula needed at a wedding

Answers to Sky Word

#2



HELP!!!

I am presently working on the club brochure and I am slowly getting and taking some nice pictures of the club. The one picture that would really be magnificent would be one of most club members with their instruments in front of the Rosicrucian Museum. I tried to get the shot at Astronomy Day but darkness was working against me. I have contacted club members at indoor star parties and board meetings, and many members have pledged to come to a special picture session. (You all know who you are!) We decided to take the picture prior to the June 2nd general meeting. We are going to meet on June 2nd with our instruments at 6:30 PM in front of the Museum, set up our instruments, take the picture by 7:00 PM, and start the meeting promptly at 8:30. I need your support and help to pull off this spectacular picture. Please be there with your instrument—or just your body.

Walt Henrich

AVAILABLE PUBLICATIONS

A continuation of the list of publications available through the club at substantial discounts (10%-45%) from Sky Publishing follows. They can be ordered from the club treasurer, Bob Fingerhut, at 263-4455.

HANS VEhrenberg's PUBLICATIONS

<u>ATLAS OF DEEP SKY SPLENDORS</u>	\$32.80
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<u>HANDBOOK OF THE CONSTELLATIONS</u>	14.87
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PHOTOGRAPHIC STAR ATLAS

Northern	Edition A	32.30
	Edition B	45.05

Southern	Edition A	17.85
	Edition B	25.50

ATLAS OF SELECTED AREAS

Northern	21.25
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Southern	5.10
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ATLAS STELLARUM 1950.0

North	114.30
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South	72.90
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MILKY WAY MOSAICS

Part 1 —North	5.10
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Part 2 —South	5.10
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Both	9.35
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It occurred to me as I was typing out the above list of Hans Vehrenberg's work that I don't believe he has ever been nominated for the G. Bruce Blair award the WAA gives to those who have contributed greatly to amateur astronomy. If the award is to be truly international, as it is often stated, then wouldn't Hans Vehrenberg be a logical choice? Certainly his contributions are on or above the scale of those of Patrick Moore, the 1977 Bruce Blair award recipient.

Editor

June 15 will be the cut off day for those who wish to order T-shirts that have either the Hertzsprung-Russell Diagram, or 2.7° K (donating the cosmic background) on them. The H-R diagram is in navy on orange, the cosmic background one is white on red, and they come in S,M,L, XL sizes. General price is \$5.75 ppd. but if I get more than three orders the price drops, and I'll be able to rebate. Call me if you have questions.

Editor

A Breathless Occultation of the Sun

As our charter Beech Baron climbs into the clouds above Ried-Hillview airport, just after 5:30 AM, our foremost thought is, of course, will this one cloud out? On the plane with me is my son Mike, 14; Judy Hoping of San Francisco, and our pilots, Dave Bate and Donna.

Pilot's reports from Walla Walla are mixed. Cloud tops 12-18,000 feet. Chancy. We can go that high, but.... Oh, Look! There's Venus! Barely above the horizon, it follows us, twinkling, a real UFO. Scorpius! And the Teapot!

10,000 feet. Wow! Lots of stars! More clouds. 12,000 feet. Nobody can sleep. Cygnus is splendid. 7x50's can't find the North American, though.

Soon the sun struggles to rise above the cloud bank. Judy first detects the onset of the eclipse. Relief; at least we're certain it's the right day. Sun filters are passed out. Only one for both pilots; somebody has to drive.

16,000 feet. On oxygen now. Whew, that's better! Still broken clouds; climbing again. Snow, tress visible. patches of sunlight on the ground. I hope the grounded observers get to see something.

18,000 feet -- hey, we're above it! An ocean of white below. Sun's 3/4 gone! Morray! We're going to see it! Trying 4 1/4 at 21x; too shaky. Back to the sun filter. Sure is narrow! Sun looks like a three-day moon.

But what is that gray area ahead?? CLOUD, as far as the eye can see. The densest, darkest, grayest, awfulest cloud ever seen! We climb sharply. 20,000, 21,000, glimpse of the sun. Ohhhh, how narrow! More oxygen needed. Plane climbing, clawing the thin air, slowly as we rise. The sun becomes a hazy outline, hope! hope! we're winning!

22,000 feet, hey, there's shadow on the other wing, we gotta be above it. So why is the view so hazy? Halo visible around the sun, is this an ice crystal cloud? Hey, it's the window, frosted up. Quick the old warm cloth on the objective trick. I shout instructions. Frantically, we warm hankchiefs in the heater, hold to glass, back to the heater. The ice reforms. The sun loses all reality as the crescent becomes a curved line. Again the warm cloth, quickly, quickly...there, take a look---!! Diamond Ring!!! Unearthly! Istare, screaming, "Don't stare!" Then, in a thunderous silence, TOTALITY!!!! Awesome! How incredibly beautiful! Somehow I remember to breathe. Judy is a rag doll. "Take deep breaths!" "Slowly!" She revives.

Back to the incredible view outside. No photograph ever did it justice. Promenences prominent at 10 and 2 o' clock. Corona, pink, out to about a solar radius. I gawk, telescope, binoculars, camera, all forgotten. Judy is awake, looking, mouth agape. I struggle to breathe without fogging up the window. Mike stares, eyes big as the binoculars forgotten in his hands. Nobody has noticed how dark it has become.

Suddenly it's light again. The Diamond is on the other side! We've passed centrally through the shadow. Everybody is laughing and crying. Altimeter blurry, struggling to read....23,500 feet! I look again at the widening crescent. How quickly it's growing! I tell the pilot to take it down, and collapse into the seat. We drop into the cloud and it's over. Later we will learn that we've set altitude records for the pilot, plane, and flying club.

We land at Lewiston, Idaho, through broken clouds, about 9:30. They'd had rain. We wobble into the terminal amid curious stares. Someone asks, how was it? We cannot answer, there are no words. Co-pilot manages a groan. We struggle up an inter-terminal flight of three steps to the restaurant. We eat slowly, saying little. Gradually, the reality begins to catch up. We SAW it! We DID it! I ask Judy if it was worth it. All she says is OHHHHHH! Mike munches pancakes, unnaturally quiet. He manages two stacks. Plus eggs.

The pilot has filed the return flight plan, so we struggle back to the bird, also refeeled and waiting for us. Our return trip along the Snake River Canyon passes over some spectacular mountain scenery, though the clouds obscure part of the view. We fly along at 9-12,000 feet, skimming the clouds, still contemplating all that we have seen and felt. But the fatigue, excitement, and altitude have taken their toll, and the passengers sleep much of the way back. We are awakened by the bumpy air as we descend into Santa Clara Valley, and soon the co-pilot is settling down, taxiing, maneuvering...The engines are cut. 2:25 PM. The grand adventure is over. We pick ourselves together and find our way home. It's all a memory now--but what a memory! A day to be remembered the rest of our lives.

Jin Van Nuland

Coffee, Tea, or Eclipse....?

"Clang, clang," went to cowbell at 4:30 AM on the morning of February 26 as I soundly slept in my motel room in Walla Walla, Washington. My first reaction was 'what on the -- is that for!' until I remembered what day it was. Later that morning, at approximately 8:20 AM, a total eclipse of the sun was going to occur and I was one of about 20-30 people from the Bay Area astronomy clubs who had traveled to Walla Walla to see if we could see the total eclipse ourselves.

We had decided upon Walla Walla in the south-eastern corner of Washington as a gathering spot along the path of totality, but on 'the morning' as we all rose from our sound sleep (thanks to Ed's cowbell), we discovered a slight problem-- it was raining! Luckily we had arranged for Paul Zurakowski to be in Richland, west of Walla Walla, and to call him on that morning at 5 AM to see how the weather conditions were out his way. When we did call, we learned that it was clear out his way. At that bit of news we all hastily packed our things and jumped into our cars heading frantically for any clear spot that we could find. I was with a group of six people (Phil Hermesmyer, Debbie Moore, Doug Berger, Bob Schalek, Rob Vorderbruggen, and Mary Jahnke) and we proceeded to back out of the motel parking lot, Doug backing into a corvette. After taking a few minutes for him to leave the car owner's his name and address, we started on our way again, this time only to get lost a few times before finally finding the right route out of town. At last it seemed we were on our way, until Phil discovered his car was almost marking empty, so we then had to take time in order for him to find a gas station. When it seemed that we were finally on our way the clouds appeared to get no better in the direction we were travelling, so about 7 AM we stopped at a small cafe' to have a cup of coffee or tea, thinking to ourselves that it was probably useless for us to see the eclipse. However, when we came out of the cafe' 20-30 minutes later, it was clearing to the west! We all then once again jumped into our cars and started out towards the west, hoping to find a clear spot among the clouds. We continued down Hwy 80 along the Columbian River until almost 20 minutes before totality was to occur, so we decided that we should take any side exit we could find before getting down too deep into the Columbian gorge. The road we chose took us up to a mud covered site on the top of a hill, where we all stood in a marvelous awe for even though there were clouds and we were unable to see the actual eclipse of the sun occur, we were very much aware of the darkness that occurred as the clouds all around us turned darker and darker, until at last we were left in total darkness. As fast as it happened, it seemed, totality was over and light once again began to appear. As I said, we were unable to see the sun itself becoming eclipsed, but we were still very much aware of its effects, and for me that was enough! The trip was not a total loss for us, though, because afterwards we went to a ski resort in Bend, Oregon to enjoy a marvelous four days of skiing.

Cathy Pinheiro

Partial Eclipse

On Monday morning, February 26, 1979, there was a total eclipse of the sun in the Northwest United States, and would be the last of the century seen from this location. Although it was to be partial here, my friend Doug Weiman, also a SJAA member, and myself had been looking forward to it for some time.

On February 24, the Saturday before the eclipse, we heard it was going to be rainy. We weren't about to let it go by with an, "Oh well, so I missed. Big Deal," attitude. We wanted to be above the weather, so we chartered a light plane which would take us up for an hour to see the eclipse.

The plane was a 182, four seater (pilot and three passengers), and we had an empty seat. This was filled by my boyfriend, Mike Thomas, a non-SJAA member who is getting started in Astronomy. So we split the cost three way, which wasn't much. (It wasn't much to begin with.)

We got to the airport at 7:28, and left right away to the plane. All of this time, the sun would appear momentarily from the clouds, and we would look at it through aluminized mylar, which our kind president Gerry Rattley supplied me with. We had it on our cameras as filters, too. I took one photo when the sun appeared while we waited for clearance to take off.

We got our clearance and took off about 7:40 for our flight above the clouds. We flew through them about seven minutes later and then we began marveling at the partial, and taking pictures like mad. At that time it was about 70% eclipsed.

During the peak, nothing but the plane's engine and camera's clicking could be heard.

The sun looked like a two day old moon. It was really strange to glance at the sun without aid as is sometimes done, because it looked like something was wrong with it. It peaked about 8:02 and then we watched it grow again.

The pilot had forgotten his camera, much to his disgust, so we let him look through our mylar quite a bit.

No stars were visible that I could see. I kept looking for Venus which I have seen during the day a few times but I didn't even see it.

We kept watching the sun through our cameras which had run out of film shortly after the peak. (36 exposure roll) Then I noticed how much lighter it was getting. It was lighter than it was before, very much!

Marian Crespo

Due to the high probability of clouds during the 26 Feb. '79 total solar eclipse, several of us elected to view the event from an aircraft high above the clouds rather than take our telescopes to Washington to get washed. Although this observing base has the disadvantage of being an unstable platform lacking a firm vertical reference, it has the dual advantage of being a moving base allowing longer times in totality and the assurance of no possible cloud interference. The higher altitude should also produce darker skies during totality but more about that later.

After many trials and tribulations lasting several months, an aircraft was finally located that was both available and within our budget limitations. Six of us (seven, counting a very young observer) contracted with Aviation Methods, Inc. based at the San Francisco Airport for the use of a Cessna Citation twin engine low wing jet. The aircraft normally seats eight counting the pilot and copilot. The observers were myself, Jerry Rattley, John Cincotta, George Hollis and Ralph, Sue and Jeremy Lowd.

Jerry and Sue were looking for shadow bands, Ralph was looking at polarizing effects, John (machine gun) Cincotta was interested in shooting 10⁶ pictures per minute with a wide variety of cameras, George was also taking pictures and volunteered to keep track of contact times and I attempted to photograph the flash spectrum. Jeremy Lowd was keeping mum as to his observing experiments and in fact would talk to nobody until finally being coaxed into making an appearance a mere seven weeks prior to the flight.

Astronomical observations from an aircraft are considerably different from ground observations. A major consideration is that even the best autopilot cannot hold an aircraft level to within better than about a degree. Typically, the aircraft is continually climbing, diving and rolling from side to side slightly. While such minor motions are not noticeable to most airline passengers, a telescope of moderate resolution cannot be used with the aircraft as a hard mount. This implies that the instruments must be either hand held or gyroscopically stabilized with respect to the aircraft. Gyroscopic stabilization systems such as that used on the C-141 Kuiper Airborne Observatory operated by NASA/Ames are large, heavy, complex and expensive. As in any aircraft, space and weight are at a premium so no automatic stabilization was attempted. We did try to construct a simple mechanical stabilization aid but the device was plagued by vibration problems and development was abandoned before the flight. It may be of use later if anybody should care to take the project up. We therefore resorted to hand held instruments which limited us to a maximum focal length of about 400mm.

The fact that the observing site is in motion is both a blessing and a liability. The observer can position himself at will (subject to aircraft performance limitations, restricted areas and FAA Controllers) but it is difficult to determine exactly where he is at a given time to better than a couple of kilometers. In addition, the observer cannot remain stationary or his observing platform comes out of the sky rapidly (much like a man made meteor, which was not the objective of this mission).

We spent about half of our eclipse preparation time simply doing navigation problems. Jim Van Nuland and John Rhodes aided this task by independently checking our calculations. For this eclipse the shadow formed a tube intersecting the surface of the Earth at a shallow angle. The intersection of the shadow and the surface of the Earth formed an ellipse with the long end pointing toward the Sun in the Southeast. The published figures for the centerline position referred to the ground position of the shadow. These figures had to be corrected for the fact that the observing point was at an altitude of 10.7 Km. This amounted to a shift to the Southeast of 39.8 Km for the position of the centerline. Next, a suitable observing position along the line had to be selected. This was a compromise between flying Eastward to obtain a higher Sun angle and cutting the flight time to a minimum (figure \$10.00/min to run a jet). We also wanted to stay away from military restricted areas and major airline routes which could be littered with contrails. We chose as area between Pendleton, Oregon and Walla Walla, Washington for observing since there were sufficient navigation aids (VORTACs) to get a good position fix. Although the aircraft was equipped with area navigation equipment we assumed that it would fail in the air and we would be limited to the simplest of instruments. Since we took such precautions, the equipment worked flawlessly and Murphy decided to operate elsewhere. Finally, a heading was selected to maximize time in totality and allow the best view from the aircraft windows. The best heading was not along the centerline as it would appear when first considering the problem. Since the ellipse of shadow was skewed with respect to the centerline, extra time in totality could be obtained by starting South of the centerline, crossing the centerline at midpoint of totality and ending North of the centerline.

Armed with a variety of cameras and tape recorders, we drove through the wet streets early on the morning of the eclipse to San Francisco International, arriving at 04:00. The copilot and aircraft were ready but alas - no pilot. Waiting for him to arrive contained more dread than sitting in the office of a dentist who does not believe in novocaine. Finally at 05:30 the copilot announced that he had good news and bad news. The bad news was that the pilot couldn't make it. The good news was that they would fly us in a larger and faster aircraft at no extra charge. I realize that Aviation Methods probably did not make a large profit with this arrangement but I get a warm feeling when I find a business that bends over backwards to deliver. There followed a hurried unloading of the Cessna and a loading of the Fan Jet Falcon. We quickly briefed the new pilot on the mysteries of aerial astronomy, eclipses, instant night flying and the vagaries of astronomers (well, not all of the vagaries of astronomers - we didn't want to scare him off).

The pilots (three piece suit corporate types) cast a hairy eyeball at our motley crew (three beards, one guy in an old Air Force flight suit, a lady with a baby and one clown in an electric blue jump suit). I considered telling them that Jeremy, age 7 weeks, was the expedition leader but was afraid that if I did they'd go re-examine the checks we gave them and miss the takeoff.

The aircraft itself was much roomier than expected and, to be technical, was simply plush. There were refreshments, coffee,

food, stereo music and a telephone to the cockpit (an unlisted number). In addition to being larger and faster the aircraft had more windows and was equipped with a precision Omega Navigation System.

We departed SFO at 14:13 UT (06:13 Pacific), about a half hour after our scheduled takeoff. The high performance of the aircraft was impressive in acceleration and rate of climb. Sue Lowd began her program of making Jeremy eat to clear his ears. The trip to the eclipse area was uneventful (which in flying is the correct way to do things) and filled with the preparation of cameras, checking and rechecking checklists and trying to catch the green flash at sunrise (no show). Sipping coffee ten kilometers in the air is definitely the way to go to an eclipse. We all sat on plush seats and couches with John and George in the back (full fare coach?) savoring excellent food (excellent food is defined as that class of junk food that I like).

Since the Fan Jet Falcon was faster than the Citation we arrived at our initial point a half hour early and circled South of the eclipse centerline. We looked at the solid under-cast and thought of our poor friends below, not knowing that they had left the Walla Walla area for clearer skies. The pilots checked in with the Seattle FAA Center whose controllers were overloaded with the number of aircraft in the area. Most of the traffic was below us, being prop planes. Nevertheless, it took them a while to sort out the twenty or so nearby aircraft at our altitude. Since the aircraft had an Omega Navigation System, we were able to locate ourselves in the sky very accurately.

At 16:11 UT we rolled out on track and crossed our initial point 5 minutes from totality. Many contrails from other aircraft could be seen below but we appeared to be the highest aircraft in the area. With tape recorders running, cameras clicking and Jerry and Sue looking for shadow bands on the wings (none were seen) we flew toward the North Northeast at 630 Km/hr. The shadow could be seen to the West, racing toward us at about 5000 Km/hr to intersect our flight path near Pendleton, Oregon. Second contact was exactly as predicted at 16:16 UT due to the precision flying of our pilots, Duncan Higgins and Jeff Weber. The shutter clicks became a buzz as John Cincotta attempted to take fifty exposures at 1/30 shutter speed. The darkness, always more intense due to the lack of dark adaptation, seemed even deeper to Ralph who forgot to remove his sun glasses. George, sitting in the cockpit, was recording contact times and aircraft positions into a tape recorder that was out of tape. Jerry, doing his Long John Silver imitation, was struggling with his eyepatch and I was shooting with one of my cameras focused at three feet. Sue either hasn't discovered her grand error or is unwilling to admit to it. Jeremy, seeing the lights go out, promptly went to sleep, a fact that nobody noticed until after third contact. In spite of these foibles, a great deal of successful photography and gawking was accomplished.

The sight of totality never fails to amaze the viewer. This apparition differed from ones I had seen on the ground in that the sky was totally cloudless above. The background appeared to be the deepest blue with the corona brilliant - more brilliant than in previous views. The darker sky and more brilliant corona are attributed to the lack of a thick atmosphere above. The general light level was much higher in the aircraft than I remembered from ground eclipses. This was probably due to the well lit horizon. At 10.7 Km altitude our local horizon fell well outside the shadow area, as opposed to ground observations where the local horizon is within the shadow. It was still too dark to read camera settings so a flashlight was necessary.

Jerry called out planets visible in the indigo sky as our eyes adjusted and the silvery corona became more distinct. Most of us alternated between creative gawking and photography. The mesmerizing effect of such a spectacular, almost unreal sight hindered most of us in trying to remember well rehearsed sequences of camera settings. Features in the corona and prominences were exclaimed as we tried to drink it all in and commit it to memory before it went away.

I checked my watch and was astonished to discover that more than two and a half minutes had passed. On the ground, the eclipse would have been over but the motion of the aircraft kept us within the shadow longer. Hurried preparations were made for third contact and long before we were ready the diamond ring appeared.

A last burst of photos and it was over - the fastest three minutes of my life. For the next two minutes there was muted conversation, the observers being in partial shock. Jeremy awakened and requested - no, he demanded attention concerning private matters. At 16:21 UT the pilot made a turn for home which seemed to awaken everybody from the spell. A few last shots were made of the shadow which could be seen from end to end on the clouds below.

On past eclipses I have noted a marked depression in my fellow observers following third contact. Some have even wept at being yanked back into reality. As we flew back home and refreshments were passed out I noticed none of this. A tape of classical music (Also Sprach Zarathustra, Blue Danube and other Sci Fi themes) was played on the aircraft sound system, adding to the mellow mood. Ralph Lowd showed us an example of "high technology" on the way back by forming a pinhole projector with his hands alone. He should write an article titled "I am a telescope".

After a stop at Sacramento for fuel, we arrived at SFO about 10:27 local time. In retrospect, this is certainly the best way to go to an eclipse. No long hours of driving, no crowds, no searching for a hole in the clouds and best of all, a longer time in totality. It costs a bit more (\$2.68/second during totality) but the experience was well worth it.

For those who are interested in such statistics, the following is submitted:

Observing Site:	Fan Jet Falcon N777XX	
	Second Contact	Third Contact
Latitude	45° 58.4' N	45° 53.0' N
Longitude	118° 58.7' W	118° 46.5' W
Time (UT)	16:16:05	16:19:06
Altitude	10.67 Km	
Temperature	-49° F	
Duration of Totality	- 3 min 01 sec.	

Pete Manly

Handles

In response to "popular demand" I have Compiled this list of CB handles of the club members and bulletin subscribers. If I have omitted anyone please call me at 629-2994 and I will amend this list in a later bulletin. The list is as follows:

Dave Ambrose	Gandalf
Doug Berger	Starry Night
Doug Buehner	Cal Kid or Moving Violation
Gene Cisneros	Optron Man
Bruce DeGraff	Blue Wart
Wolf Hanisch	Banana Slug
Phil Hermesmeyer	Dimples
Pete Manly	Orion
Denni Medlock	Icarus
Kevin Medlock	Spirit
Debbie Moore	Star Shine
Jack Petersen	Pumpkin
Chris Pratt	Genesis
Shea Pratt	Dove
Gerry Rattley	Super Novae
John Rhodes	Red Spot
Bob Schalck	The Mole
Florence VanNuland	Sunflower
Jim VanNuland	Sunspot
Jack Zeiders	Betelgeuse or Flying Dutchman

Group handle for grazes
and occultations

Graze Chasers

Unofficial handle for
groups to Freemont Peak

Freaky Peakers

The channels frequented by the club are 14 and 20. The graze chasers use channel 14. Star party groups use channel 14 or 20.

Chris Pratt

CAP:plm

Picnic Reservation Form

Send money and reservations to Bobby Fingerhut
340 Rio Verde Pl. #4
Milpitas, Ca. 9535

Name: _____
of steak dinners @ \$4.00 ea. _____ #hot dog dinners @ \$1.50 _____
extra steaks @ \$3.00 ea. _____ #extra hot dogs @ \$.75 _____
total amount enclosed: _____