the san jose astronomical association

Bulletin

may 1982

Ephemeris

May 1 National Astronomy Day. Rolf and Mark Strohm will set up a solar telescope at the Sunnyvale K-Mart; Steve Greenberg will do likewise at the Menlo Park Co-op. In the evening, the SJAA will have public viewing sites at the University of Santa Clara (please contact Denni Frerichs at 415-654-6796 if you'd like to help out there); in front of the Sunnyvale K-Mart (we need a coordinator); at De Anza College (Bob Fingerhut, 408-263-4455); and on Fremont Peak (Jack Zeiders, 408-246-6189).

May 7 Board Meeting at Jim van Nuland's, 3509 Calico Avenue, San Jose. (408) 371-1307 for directions. Open to all interested persons. The agenda will include the Astronomical Auction (what went well and how to improve what didn't); Bulletin evolution, philosophy, and goals; speaker selection for General Meetings; the upcoming board elections (see June General Meeting); the July picnic; the SJAA's non-profit status; and establishing a building fund for a permanent observing site. 8 pm.

May 8 General Meeting. Mark Gingerich, lecturer at the Lawrence Hall of Science planetarium, on "Stalking a Communications Satellite" (subject of a forthcoming article by him in Sky & Telescope). Room S-34, De Anza College. 8 pm.

May 15 Star Party at Fremont Peak (Coulter Group Camp). Directions: 101 south to San Juan Bautista (Hwy 156). 156 east for three miles; right at the flashing yellow light (Road G-1). Go about a quarter-mile, then take the middle fork up to the park.

May 22 Star Party at Mt. Umunhum. Directions: 17 south (towards Santa Cruz); take the Camden Avenue exit east and south. After passing Blossom Hill Road, turn right onto Hicks Road. Stay on this for six miles, past the Guadalupe Reservoir, then turn right onto Mt. Umunhum Road and go another four miles to the radar station. The gate will be locked; the combination to the SJAA lock is 4565. BE SURE TO RE-LOCK THE GATE! Continue on the road, taking a fork to the right, go around the radar building, and look for telescopes at the helipad.

May 28-31 Riverside Telescope Makers' Conference. Several SJAA members will be convoying to Big Bear Lake for this annual West Coast astronomical gathering. Call Denni for more information.

May 29 Indoor Star Party. The usual mirror-grinding and tall-tale-telling. Los Gatos Red Cross, 18011 Los Gatos-Saratoga Road. 7:30 pm.

June 5 General Meeting. Annual SJAA board elections; slides of the Riverside meeting. Last-minute board nominations may be made at this meeting. Room S-34, De Anza College (off of McClellan Road in Cupertino). 8 pm. (See Observations for more on the elections.)

June 11 Board Meeting in Outer Siberia (alias Oakland) at Denni Frerichs'. 15022 Broadway Terrace, Oakland. (415) 654-6796 for directions. Call Jim van Nuland at (408) 371-1307 for carpool coordination. 8 pm.

June 12 Indoor Star Party at the Los Gatos Red Cross. 7:30.

June 19 Star Party at Henry Coe State Park. Directions: 101 south to the Gilroy area; East Dunne Avenue east past Anderson Reservoir; up the mountain for twelve miles; past the park entrance to the old ranch buildings. A horse trough stands near the locked gate on the left that leads to the SJAA site. Combination to the lock is 4565; RE-LOCK IT AFTER YOU ENTER. You'll come to a knoll in about 100 yards where you can set up.

June 26 Indoor Star Party; Los Gatos Red Cross; 7:30 pm. Special telescope collimating class led by Frank Dibbell. Learn how to make your own collimating device; bring your 'scope to check it out.

The SJAA Bulletin is published monthly by the SAN JOSE ASTRONOMICAL ASSOCIATION, 3509 Calico Avenue, San Jose, CA 95124. Membership rates are $18/year for adults, and $12/year for children under 12; dues are pro-rated from June. Subscriptions to the Bulletin are available to non-members for $7/year.

SJAA President: Denni Frerichs, 15022 Broadway Terrace, Oakland, CA 94611; (415) 654-6796.

Bulletin Editor: Steve Greenberg, P.O. Box 262, Menlo Park, CA 94025; (415) 326-8614.

BULLETIN DEADLINE IS THE 15TH DAY OF THE MONTH PRECEDING PUBLICATION.

Observations

by Steve Greenberg

The SJAA's Second Annual Astronomical Auction--Saturday, April 17th. A profitable time was had by all! Our indefatigable auctioneer, Kevin Medlock, actually outlasted the 221 items that were put up for bid. The total cash flow in the auction was $3550.51, and the club earned $1,028.41; these numbers come to you courtesy of a very warm HP-85 desktop calculator and the almost superhuman efforts of Jim van Nuland (fortified by R-C Cola) and Shea Pratt--before, during, and after the auction. Many thanks for their invaluable help in setting up the auction must also go to Chris Pratt and Frank Dibbell, and to Jack Zeiders and Chris for their efficient "go-fer"ing during the auction. Denni Frerichs is to be commended for her effective publicity mailings, which netted 71 very lively bidders. The munchies and sodas brought by Rita Miram, Dave and Mary Ambrose, Bob Fingerhut, and others were very much appreciated. And, of course, thanks must also go to all those who donated auction items to the club, and to those who helped redistribute all the astro-goodies. (I would especially like to thank Bob Schalck for helping buy at least two boxes of (how shall I put it?) esoterica (?) from my library. Perhaps this is the first time in history that 45 pounds of books transformed themselves into a C-14 mirror blank.)

Astronomy Day--May 1st. Help the SJAA show off our hobby to the general public! Join us at our various locations and help explain the beauties of the universe to the ordinary person on the street. See the Ephemeris for details of locations, and whom to contact (if the post office gets this issue to you before May 1st).

Peninsula School Learning Fair--May 16th. Last call for solar telescopes and accompanying explainers. Each year, this private elementary/junior high school in Menlo Park holds a one-day fun, food, and education festival that offers hands-on experiences with everything from computers to tigers. (Since it looks like Marine World/ Africa USA must become a housing development {!} in two years, this may be your last opportunity to pet and play with some gorgeous tame "wild" animals!) For the past two years, Patty Winter and I have set up safe solar viewing for the multitudes. Stuff yourself with great food, watch the belly dancers, join in the singing and dancing, and show people what an amazing thing our nearest star really is. Call Patty or me, at (415) 326-8614, if you're interested. [SG]

SJAA Bazaar. More and more SJAA name tags are showing up at our club functions. Let people new to the club (and those with poor memories) know who you are. These beautiful black and gold emblems can be obtained through Jack Zeiders for $3.00 each. See last month's Bulletin for a sample. [SG]

Club telescopes. George Deiwert's term with the 6" is up; anyone who wants it can call him at (408) 257-6658. Jay Freeman's time with the 12" is now officially up. Anybody who would like a Dobson (with an extremely unusual color scheme) for two months: call Jay at (415) 592-9776.

Astronomical Odds and Ends Dep't. I was struck by two emotions when I read this month's Presidents column. I was amused at how we all try to categorize ourselves and others, even in our hobbies, and I was surprised that the categories were "observational vs armchair" astronomer. My impression last year was that Denni had emphasized mirror- and telescope-making more than observing, a wholly different category! Denni's connection of present interests with those of the remote past and possible future released a flood of my own memories and impressions.

I built my first telescope in 1972, to use on only one star, the one nearest to us. Perhaps this was a reaction to years of involvement with the "grand" questions of theoretical astrophysics and cosmology. Subconsciously, I probably decided to focus on only one object, to see what was known and not known about it. We have learned (and guessed) a very great amount, and we also know that much, much more remains to be understood. On the surface (pardon the pun), at the atomic and macroscopic scales, we've apparently done quite well. But, deep inside, and in less than Texas-sized chunks on the surface, we have only the vaguest ideas about what's happening.

However, my solar interests yielded a new principle (to me anyway). The first total eclipse that I observed and recorded taught me a lesson that my reading of texts and professional papers hadn't. (Although it has been expressed many times by creative scientists (and "amateurs") elsewhere.) The universe is very beautiful: beautiful beyond the power of our present descriptive concepts to encompass. Also, the direct perception of this beauty can produce a sort of "resonant" emotional supernova. I can describe this response in no other way, try as I may. Like the rest of the universe, it just seems to be there, and those who open themselves to it experience it.

I still think,"How can this or that be?" or, "Why is it this way and not another?", when I contemplate the beauty out there. And yet I still appreciate the beautiful abstractions that we have evolved as answers to these questions.

Four years ago I once again began to look carefully through other people's telescopes, and started reacquainting myself with the night sky. About a year later, I began examining the telescopes themselves, and the next year--designing them both on paper and in three dimensions. More ideas came than expected, but I hope that I will soon be able to sort the better ones out, make a few choices, and then build the instruments that I want to use to see what's out there. Perhaps one of them will be good enough to leave as a heritage to my son, so he will have a similar chance to pleasingly unify his perceptions of the external world.

Back to categories. Was/Am I a theoretician, a photographer, designer, craftsman, aesthete, world traveler, writer, bookworm, observer, or armchair

See pg. 7

President's Report

by Denni Frerichs

Lately it seems some of my acquaintances have been "accusing" me of becoming an armchair astronomer, a title that ten years ago would have caused me to react with great alarm (and some considerable anger), since it was a label I tended to put on amateurs who like to act like observational experts without the experience of knowing what end of an eyepiece to look in. My prime example has always been that of a friend, quite well-known in West Coast astronomy circles, who once set my 8" up for me--facing south!

So now, faced with this accusation, even though lightly made, I decided it was time to look at my recent observing record and see just how well the label fit. Using the typical observing year for the SJAA (Messier Marathon '81 to Messier Marathon '82), I discovered I had had my telescope out a grand total of twice. As a matter of fact, Icarus, my 8" f/7 workhorse Newtonian, had been out more times than I had. (It likes to go out and watch sunspots while I'm at work.)

This record only mildly surprises me. What surprises me most was my lack of surprise at falling so easily into a category I once disliked. Perhaps having actually felt at one time what it's like to pull all-nighters, and then watch the sun rise in some desolate place, made it easier to take. Or, perhaps it was my growing realization that a person's astronomy is as personal to them as anyone else's, and no one has the right to diminish that person's observing habits simply because they don't match their own.

Whatever it was, it made me understand that my own observing habits have evolved to a point where I need neither telescope nor armchair. A grassy hill and a clear sky seem sufficient equipment to practice my hobby with--not so very different from how the very first amateur astronomers viewed those sparkling pinpoints of light. But unlike those ancient ancestors, I have an advantage in my nighttime observing that they couldn't ever imagine: even with all the wondrous moving and stationary objects up there that they saw with their unaided eyes, I now see more with mine--though we gazed at the same sky--for satellites and aircraft have been added to the night scene! And I understand what they are, something those cave people in all their theorizing would never have understood.

I just hope that some far descendant granddaughter of mine, despite all the sophistication her civilization may have obtained by then, will also be able to find some grassy knoll on a clear night and look up, just as myriads of people before her have done. And even though she will probably understand far more about those sparkling lights than I ever will imagine, I hope she looks up out of sheer personal pleasure for the beauty out there. What more she will know than I, we cannot guess. Maybe, if we are fortunate, she will recognize and think of those pinpoints as the home systems of her friends.

Galaxy

--the Bulletin's miscellany department.

Red Spot Ephemeris
by Jim van Nuland

Here is the May ephemeris for Jupiter's Great Red Spot. The table gives times at which the Spot is in transit across the face of Jupiter, and is therefore facing directly towards Earth. You should be able to detect the Spot east of the central meridian about half an hour before the times given, and follow it to the west for a little longer afterward.

Jupiter rotates with a 9h 55m period, but the transits chosen are those for which the planet will be at least two hours up, and the sun will be at least 45 minutes down.

A recent observation showed the Spot as a bright yellow during moments of good seeing. It remains rather smaller than it was on the Voyager photos.

Great Red Spot
on Meridian PDT

da	mo	d	h	m	
Su	5	2	2	41	am
Su	5	2	10	35	pm
W	5	5	0	10	am
F	5	7	1	52	am
F	5	7	9	47	pm
Su	5	9	11	17	pm
W	5	12	1	1	am
F	5	14	2	41	am
F	5	14	10	29	pm
M	5	17	0	10	am
W	5	19	1	46	am
W	5	19	9	37	pm
F	5	21	11	10	pm
M	5	24	0	57	am
W	5	26	10	25	pm
Sa	5	29	0	2	am
M	5	31	1	37	am
M	5	31	9	34	pm
W	6	2	11	7	pm
Sa	6	5	0	45	am
M	6	7	10	13	pm
W	6	9	11	56	pm

The Celestial Tourist Speaks

by Jay Reynolds Freeman

May is a good month for observing galaxies. During the course of our not-too-long May evenings, the full panorama of the great Virgo Cluster of galaxies, with numerous outlying sub-clusters, passes before an observer situated in the mid-northern latitudes. In 1981, I surveyed this region extensively with my Celestron 14, which showed much detail and structure in many of the brighter and better-known galaxies, such as the Messier objects I discussed two months ago. In this column, I thought I would list some of the fainter objects that showed interesting details with the big Schmidt-Cassegrain.

To begin with, there is a little cluster of galaxies in eastern Leo, near 11h40m, 20°N, none of whose members are bright enough to appear in any of the common atlases. Nevertheless, I was able to detect 25 NGC galaxies and at least a dozen non-NGC ones in the area. It took a touch of power to bring them out--most of my observing was done at 196x. Only a very few of the galaxies were detectable with less magnification. The heart of this minicluster is about 15' south and 1° west of the star 93 Leonis, where in a single 196x field--about 1/4° wide--I could see seven or eight galaxies at once. I did mention this cluster late last spring, but probably too late for most people to look for it.

Two nice edge-on spirals lie close together in eastern Canes Venatici. These are NGC 5297 and 5301, at coordinates of 13h44.3m, 44°05'N, and 13h45.0m, 46°24'N respectively (epoch 1950). Both are about 13th magnitude. Burnham gives the dimensions of NGC 5297 as 5.2 by 0.8 arc-minutes, and indicates that NGC 5301 is a little smaller. At 71x, both of these appeared streak-like to me in the C-14.

Two slightly brighter galaxies in eastern Virgo looked streak-like through my eight-inch Dobson at 51x. These are NGC 5084 (magnitude 12.4, location 13h17.5m, 21°34'S) and NGC 5170 (magnitude 12.6, location 13h27.1m, 17°42'S). Again, the locations are from Burnham's Celestial Handbook, and the coordinates are for 1950. NGC 5170 is 7 arc-minutes long and only one-tenth as wide.

Another Virgo galaxy, NGC 4536, was elongated and curved when observed through the C-14 at 71x. This one is 11th magnitude, at 12h31.9m, 02°28'N (epoch 1950). Burnham says that this magnitude 11.0 object is a "highly tilted spiral with long curving arms", and that's how it looked.

By May, Mars will be a month past opposition, but more than a month remains before the red planet's disc diminishes below an apparent size of ten arc seconds, so there is still an opportunity for some serious observing. During breaks between storms (here on Earth), I have been using the SJAA's 12 1/2-inch Dobson for occasional looks at Mars. Despite the so-so seeing that the storms usually left in their wake, I have seen a fair amount of detail. I usually make a sketch of the planet, then go inside, calculate the central longitude (from simple tables in the Observer's Handbook of the Royal Astronomical Society of Canada), and compare the sketch with a map of Mars. They often resemble one another. This was not a very favorable opposition of Mars. Later in this decade, the maximum angular diameter of the disc during opposition will be almost twice as large as this year's diameter. And, considering that the next few oppositions will come later in the calendar year, when seeing is generally better, users of six-inch telescopes will probably be able to see as much as I saw through the 12 1/2-inch.

It used to be that every beginner who wanted a telescope also wanted a four-millimeter eyepiece and a Barlow lens, for observing at a jillion trillion power. Nothing cures this miplaced zeal as quickly as an actual look through a telescope at very high magnification. Many authors and manufacturers have made a considerable effort to prevent beginners from wasting money and experiencing disappointment; the former by writing paragraphs such as this, and the latter by not providing extremely high-power eyepieces as standard equipment with commercial telescopes.

With some trepidation, I would like to suggest that the avoidance of high powers has been over-stressed. There are people, even experienced observers, who believe that only low powers are good for anything; and that is simply not true. There is certainly more of a knack to successful observing at moderate-to-high magnifications than there is at low magnification, but it seems to me that beginning amateurs would be better served if they were encouraged to develop that knack, so that it would be available for those objects and atmospheric conditions that warrant higher power.

If I were allowed to have only one eyepiece for observing with a particular telescope, I would certainly want it to be a low-power eyepiece, perhaps one giving a magnification of four to six times the telescope's aperture in inches. That would be 32 to 48 power for an eight-inch telescope. But, if I were allowed two eyepieces, my second one would give much more power than the first, perhaps 20 to 30 per inch of aperture--perhaps 160 to 240 for an eight-inch. These preferences are based on experience, and about half my observing experience is with telescopes having apertures greater than twelve inches. Myth would have it that for such large apertures, seeing conditions almost always prohibit effective use of any but low powers, but in my experience, this myth is false. I frequently use from 20 to 30 power per inch with my C-14, for resolving globular clusters or compact galactic clusters, for seeking fine detail and faint central stars in planetary nebulae, for looking at double stars, and for observing the Moon and the planets.

If I were allowed yet a third eyepiece, it would be a toss-up whether it should be for a power intermediate between the two just mentioned, or for an even higher power--perhaps 40 or 50 per inch of aperture.

Most commercial Newtonians and Schmidt-Cassegrains come with two or more eyepieces, but rarely does any eyepiece provide as much as 25 power per inch of aperture. Most buyers of these telescopes will never know what they are missing.

Comet Comments

by Don Machholz

As the weather begins to clear up and observers dry off their telescopes and turn them heavenward, they will find a few faint comets to be observed.

Comet Bowell remains visible in Sagittarius, Periodic Comet Grigg-Skjellerup moves from Canis Minor to Leo, and Periodic Comet Du Toit-Hartley (1982c: the brighter part) moves through Scorpius. Meanwhile, a periodic comet has been recovered, but it is not expected to get too bright.

Periodic Comet Tempel 2 (1982d): recovered by J. Gibson on February 3rd, with the 48" Schmidt telescope at Palomar, this comet is still 14 months from its closest approach to the sun. It is now at 20th magnitude in Leo, and is not expected to get within reach of amateur telescopes this year.

For extensive and detailed raw data on comet and minor planet positions, orbital elements and ephemerides, you can subscribe to the "Minor Planet Circulars/Minor Planets and Comets", a bundle of 50 to 90 circulars published each month (at full moon) by the Smithsonian Astrophysical Observatory. The cost is eight cents per circular, so each month's group could cost between $4.00 and $7.20. Subscribers generally send in around $80.00 for 1000 issues, which will last from 12 to 20 months. These circulars, which should not be confused with the IAU circulars (see the February Bulletin), concentrate mainly on the minor planets. Since the MPC/MPC circulars also list cometary positions and long-range ephemerides, they might be helpful to the comet enthusiast. They are available from:

Minor Planet Center
Smithsonian Astrophysical Observatory
Cambridge, MA 02138.

Great Comets. Comet Mrkos (1957V): discovered by Anton Mrkos, a Czech, on July 29, 1957, this was a second magnitude comet when first sighted near Castor and Pollux. A naked-eye discovery, it is one of the 11 comets bearing Mrkos's name. Its closest approach to the sun (0.35 AU) occurred on August 1st, and it remained a naked eye object for several weeks. It will return in several thousand years.

Comet Bowell (1980b)

DATE (UT)	R. A.	DEC.	MAG.
05-01	18h 18.1m	-22°13'	10.9
05-11	18h 19.7m	-22°14'	10.9
05-21	18h 19.6m	-22°16'	10.9
05-31	18h 17.8m	-22°20'	10.9
06-10	18h 14.7m	-22°25'	10.9

The magnitude estimates for Comet Bowell have been revised to reflect its present condition. Its size should be small: about 1 to 2 arc minutes across. It is not far from M 20 and M28.

Periodic Comet Grigg-Skjellerup (1982a)

DATE (UT)	R. A.	DEC.	MAGNITUDE (ESTS.)	
05-01	07h 44.0m	+05°56'	10.8	11.8
05-11	08h 26.1m	+13°42'	10.4	11.0
05-21	09h 22.8m	+22°56'	10.2	10.3
05-31	10h 38.0m	+31°59'	10.2	9.8
06-10	12h 07.1m	+37°47'	10.4	9.9

Fast moving, because it's near the earth. I've included two magnitude estimates (in some years the comet has followed the first; in others, the second.) These estimates were supplied by John Bortle.

Periodic Comet Du Toit-Hartley (1982c)

DATE (UT)	R. A.	DEC.	MAG.
05-01	17h 23.6m	-34°47'	
05-11	17h 32.7m	-34°07'	
05-21	17h 34.0m	-33°06'	
05-31	17h 30.4m	-31°49'	
06-10	17h 25.0m	-30°26'	

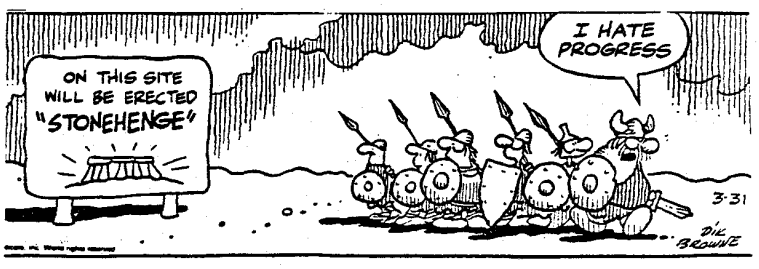
The magnitude of this comet will be from about 11.5 to 13.0, judging from recent estimates and trends. It is now slowly moving away from both the earth and the sun.

Ads

FOR SALE: 12 1/2" f/6 Cave reflector, on a Star Liner Mount; rotating tube, rack and pinion/helical focusser rotates 360 degrees and has a 1 1/4" adaptor, motor drive, setting circles, 8 x 50 finder; $1300. Also, 6" f/4 RFT reflector on Edmund equatorial mount; electric drive, setting circles, 1 1/4" helical focusser; $250. Both 'scopes may be purchased for $1400 (negotiable). Contact Tony Bueno; work (408) 277-5357; home (408) 378-4716.

FOR SALE: 6" Newtonian reflector. f/7.6; 1/8-wave mirror. Excellent condition. Edmund equatorial mount on metal tripod; extruded aluminum tube; 26mm, 18mm, and 9mm Meade eyepieces. Constructed by Kevin Medlock. $400 or best offer. Aaron Haws, (408) 378-8222.

TIRION ATLASES: Field and desk editions available from the SJAA at a good discount. Contact Shea Pratt, (408) 629-2994.



Space Program Update

by Bob Fingerhut

Columbia Back Home. The space shuttle orbiter Columbia is in the orbiter processing facility at Kennedy Space Center being readied for its fourth flight on June 27. The STS-4 mission will carry a Department of Defense payload. Shuttle hardware that will be reused on this flight includes rate-gyro panels, and the separation instrument package from STS-1.

STS-3 Experiments. Instruments in the Office of Space Science (OSS-1) payload indicates that in space, the orbiter flys inside a sheath of ionized particles, generated by sunlight striking the vehicle. This "plasma" is due to the outgassing of materials on the orbiter, which creates an ionized gas cloud much thicker than the naturally-occurring space plasma. (The spacecraft-generated sheath dissipates when the orbiter is in the earth's shadow, allowing measurement of the natural plasma through half of each orbit.)

The experiments that separated blood and kidney cells by electrophoresis were an almost total loss due to a freezer failure at Johnson Space Center after the flight. The samples had been frozen in solution after separation to preserve their distribution, but re-mixed when the solution thawed back on earth. The only data obtained were from photographs taken by the shuttle astronauts of the red blood cell processing experiment.

Re-entry heating of the underside of Columbia was observed (Ed.-on the third try) by NASA's Kuiper Airborne Observatory, which was flying at 41,000 feet at the time. The experiment--called "IRIS", for "Infra Red Imagery of Shuttle"--used the Kuiper's thirty-inch telescope. Researchers determined that the temperatures along the wind leading edges of the shuttle were lower than expected, but that there were unexpectedly hot spots under the wing, body flap, and fuselage.

First Shuttle Spacewalk? The first operational shuttle mission, STS-5, may have two astronauts taking a 3-1/2 hour walk in space. This will also be the first flight to land on the special shuttle runway at Kennedy Space Center. STS-5 is scheduled to fly from November 11 to 16, 1982.

Last HEAO Spacecraft Re-entry. The High Energy Astronomical Observatory, HEAO-2, re-entered the earth's atmosphere March 25, burning up over the South Pacific. It had delivered data for 29 months, despite a designed operational lifetime of only twelve months.

Recent and Upcoming Launches. On March 1, Westar 4, the latest Western Union communications satellite, was directed into a geosynchronous orbit going over 79°W longitude. It will slowly drift to its permanent position of 99°W longitude.

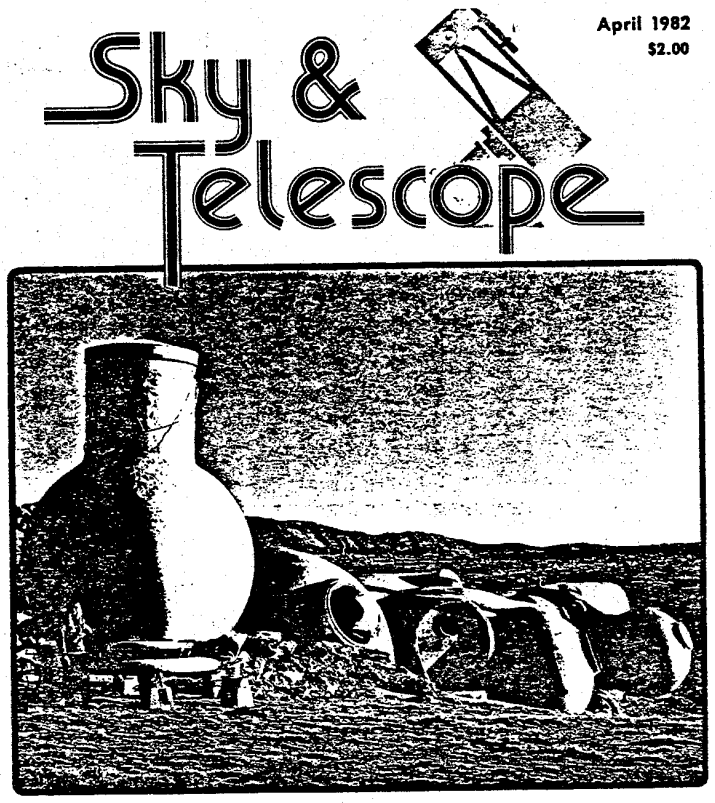
India's INSAT-1A was launched on April 9. It successfully achieved orbit, but the main antenna has not yet been fully deployed.

Intelsat F-5 is scheduled for an Atlas-Centaur launch in May. A U.S. Navy Transit Navigation satellite is scheduled for a Scout launch in June.

Solar Maximum Repair Mission Axed? The House Science and Technology subcommittee on space science and applications has recommended termination of the Solar Max rescue, scheduled for December 1983. The subcommittee wants to use the money saved for a variety of purposes, including continuing operation of Pioneers 10 and 11 and Pioneer Venus, which were due to be turned off; and initiating a flight demonstration of the 30/20 GHz communications satellite.

End of the Centaur Saga? The Air Force intends to develop a new high-energy upper-stage for the space shuttle that can carry 10,000 pounds into synchronous orbit. (This is the same capability as NASA's scuttled Centaur project.) The Air Force will fund competitive industry studies starting late this year, and choose a winner and begin development in early 1984. The new stage will have initial operational capability in Fiscal Year 1987.

Cosmic Humor



FRENCH SOLUTION TO ASTRONOMY BUDGET CUTS: April Sky & Tel features cover photo of world's largest Astroscan.

From pg. 2

astronomer? Or, just an average, greater than the sum of its parts, human being?

Categories certainly have their uses. But, it strikes me that actually becoming one doesn't. Perhaps this is a lesson that our remote descendants will still be teaching one another, when time ends.

The Riverside Telescope Makers' Conference--May 29th, 30th, and 31st. Last reminder about this annual event held near beautiful Big Bear Lake. (There really is a small lake on the conference campgrounds, just the right size for swimming, canoeing, and jogging around.) See the March Bulletin for a registration form, or contact any of the SJAA board members, for more information about the conference, transportation, or convoying down to Camp Oakes with other club members.

Plea for More Writers. Uncle editor wants you! I have the suspicion that many club members are talented beyond their wildest dreams, and they can write (or learn to) quite well. Please send me your written thoughts on "stuff" that's interesting to you, so that it can appear in the Bulletin. (I'll even consult with you (for free) over the phone, if you can't face seeing a wild editor in its native habitat, picking pieces of authors from its teeth with a quill pen).

Space Program Upsets. Recently released data from STS-1 showed that temperatures of about 1800°F were reached in the elevon cove area, a spot designed to withstand only half that. The Nomex felt insulation was therefore replaced, since it was designed to withstand only the predicted 900°F. A more effective (but experimental) glass-fiber mat (developed at NASA Ames) was installed for the second mission. Note the order of events: hot spots were detected on STS-1; an unannounced fix was on STS-2; an independent experimental group from the Kuiper announces what the temperatures actually were during the STS-3 re-entry. My feeling is that those guys with the "right stuff" were flying closer to the thin edge than anyone was (and perhaps still is) willing to publicly admit!

However, I was able to get even hotter under the collar when I read two other, seemingly unrelated press releases.

The first one said that the $40 million Solar Max satellite was going to be scuttled in order to "save" $55 million on a shuttle mission that is going to fly anyway to put up another satellite (which won't even replace Solar Max). The mental midgets in charge of bean counting at NASA and the Office of Management and Budget have continually come to the conclusion that money spent by the taxpayer in the past doesn't matter as much as money that they will spend in the future. As I understand it, they are equating a $40 million satellite and a $55 million rescue against another satellite of unknown cost and its launch, plus one of two alternatives.

If we have to replace Solar Max with another satellite in the future, that launch and satellite will probably, in these inflationary times, cost much more than the original. In addition, they're going to run the repair mission anyway (without the repair). Perhaps they'll try to convince us that the money is coming from somewhere besides the taxpayer. The second alternative is to completely throw away the knowledge that Solar Max was designed to give us.

When these alternatives are added together with the subject of the second press release, which detailed the Air Force's desire to develop a new launch vehicle (meeting perhaps two more wishes on its Christmas wish list than does the NASA Centaur project) at four times Centaur's cost, it seems to me that now is the time for all good taxpayers to come to the aid of sanity. If the Air Force can get taxpayer funding for this beaut, then that money should be given to NASA, in toto, to allow Centaur development for the Air Force, a Solar Max rescue mission, and the continuation of the various Pioneer Venus projects. (These latter are included because OMB told NASA that there were funds available either for Solar Max or for the Pioneers Venus. Well, judging from what I've pieced together, I don't think that that's so.)

If you agree with me, I will once again ask you to write to your Congressional Representatives and Senators. I think that as taxpayers, it's your right to demand the most for your tax money. Don't watch it burn up in the air like Skylab. I know of an instance where six well-written letters on a particular education bill swung a critical vote, because the Representative (rightly) believed that each of those letters represented thousands of his constituents' thoughts.

If you give Bob Fingerhut, (408) 263-4465, a call before writing, he can give you all the information that you need for a truly effective note.

SJAA Board Members

Frank Dibbell		(Unlisted)
Denni Frerichs	(President)	415-654-6796
Steve Greenberg		415-326-8614
Chris Pratt	(V. Pres.)	408-629-2994
Shea Pratt	(Treasurer)	408-629-2994
Gerry Rattley		408-732-0202
Rolf Strohm		408-984-6624
Jim Van Nuland	(Secretary)	408-371-1307
Jack Zeiders		408-246-6189