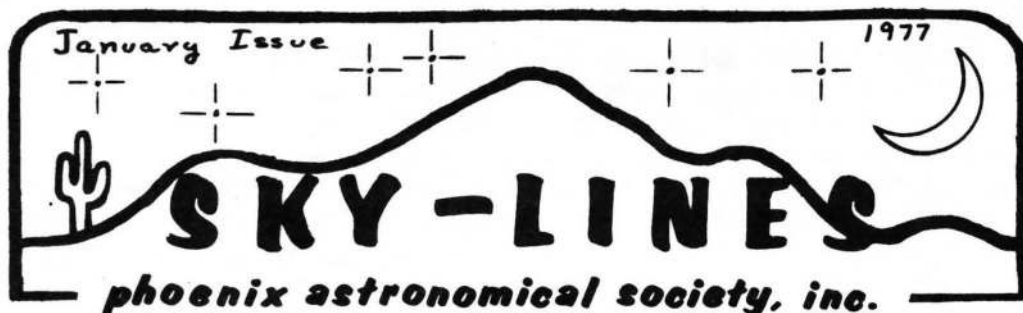




"SPACE SHUTTLE" TALK DUE JAN 28

The January meeting will be not only good but somewhat eyeopening. Many have heard of the space shuttle, but not many know of the details which in some cases are somewhat scary. As a speaker for the meeting, we will have Professor Ed Wallace from Arizona State University talk of some of the finer features of the shuttle. He is well qualified to do so as he was a consultant for part of the engineering phase of the craft. The time is 8:00 PM (that is 0300 hours UTC) January 28 in room C-102 (the nursing science building) on the Phoenix College Campus.

Coming up soon will be a discussion of the fate of the 24" project. Lady Luck seems to be rather capricious in her handling of the events of recent times. Likely in the April meeting a number of items relating to the scope will be debated. If you all would think of arguments, points, observations, suggestions, or whatever, please bring them to the April meeting.

I might be jumping the gun with Florence Bosse about the article, but if you can get a copy of the January 1977 issue of the National Geographic, there is an excellent article about the Viking project in it. In their typical fashion, the writers for the magazine have done a great job of detailing a fantastic venture.

Here's hoping that we see you at the January meeting.

Bill Anderson

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Halley's Comet Mission Study Planned

NASA plans to determine science payoffs and technology requirements for launching an unmanned spacecraft on a rendezvous mission with Halley's comet, possibly as early as October, 1981.

Advanced solar electric propulsion or solar sailing techniques would be required for the mission. Feasibility of solar sailing, possibly with a solar sail as large as 800 X 800 meters (2,625 ft. Sq.) will be an element in the study efforts, which are scheduled to get under way by early January '77.

Options include a launching in October '81, that would approach the comet at zero encounter velocity, one A.U. from the sun. Another pure rendezvous could be achieved by a '82 launch, but the closest approach would take place 2.5 A.U. from the sun.

A 1982 mission could be conducted with a spacecraft/comet encounter at 1 A.U. if a 5 km/sec (11,100 mph) flyby speed could be tolerated.

Imaging hardware is a strong science payload possibility for the spacecraft which would be launched by a space shuttle and upper stage.

"Av. Wk. & Spc. Tech. --Dec. 13 issue "

* * * * MASER BREAKTHROUGH SPURS NEW RADIO TELESCOPE DEVELOPMENT * * *

Near Amherst, N.J. a recent gathering of scientific leaders met for the dedication of America's newest radio observatory and the most accurate of its size in the world.

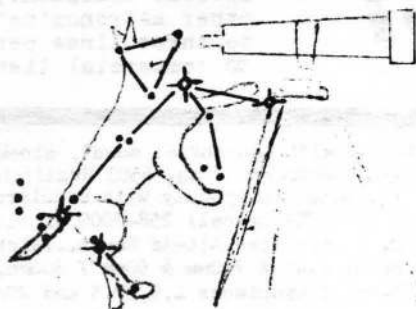
This new listening post will tune in to the universe at frequencies as high as 240 GHz, a great improvement over the nation's second largest at Kitt Peak.

Between 35 and 40 new interstellar molecules have been discovered and most of them have their strongest radiation at these millimeter wavelengths.

The high sensitivity of this new instrument is due to the world's first 3-millimeter traveling wave maser. Typically maser receiver systems are a factor of two quieter than their nearest rival, the cooled parametric amplifier. A factor of two improvement in noise temperature translates into a reduction of observation time by a factor of four.

When fully operational the telescope will become part of the Five College Radio Astronomy Observatory (FCRAO).

" Microwaves Dec issue "



CANIS MAJOR
6^h 09 - 7^h 26, -11° - 33°



DocTOR WHAT'S

"FROM MY LITTLE BLACK BOOK" - - - - - Helen Lines

NGC 1023 2^h 37.2^m -38° 52'

This long skinny galaxy in Perseus has a very bright center and it seemed to have another bright spot just beyond the center.

-----Could be a foreground star -----

NGC 1097 2^h 44.3^m -30° 29'

A barred spiral in Fornax that also has a bright center. Both of these galaxies are of the unusual type which is the kind I like to photograph -----



No Formal Star-Party Planned!

Time & Location to be discussed at the

January Meeting -----

SKY - LINES



SKY-ADS

P.A.S. members may list telescopes, optical equipment, books, charts, & other astronomical material FREE up to three lines per issue. Sorry, NO commercial listings accepted.

For sale: Dynascope, 6" complete with equatorial mount, clock drive, 7 eyepieces, 6 X 30 finder, \$200.00. Contact John Westrich, 6501 Rustic Drive, Mesa, Ariz. 1-985-4004.

***** For sale: CAVE 8" Neu, f-7..Delux heavy-duty with oculars, clock-drive and Camera mount...Can be seen at AD ASTRA or call 258-3009 or Bill Catlin 942-7088 *****

\$\$\$ For sale: 12" RFT -54" FL, 3 Eyepieces, Alt-Az Mount...Dick Reynolds 949-1930

\$\$\$ For sale: Reflecting 'scopes, 2.4" X 700mm & 50mm X 800mm, Both with spoters. Good guide scopes, tripod Alt-Az, 4 eyepieces 4,9,12.5 and 20mm..\$95 John Adair 971-2614

\$\$\$ For sale: Classical Charts of the Moon and Mars. Unique collector copies of originals from professional astronomer collection either decoupage or framed in tasteful ol' wood. For living-room, den, or observatory. Historic brief for each.

Any and all requests appreciated; send stamped-addressed-envelope for list.

C. Capen, 223 W. Silver Spruce, Flagstaff, AZ. 86001

NO STAR PARTY THIS MONTH (too--warm)

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