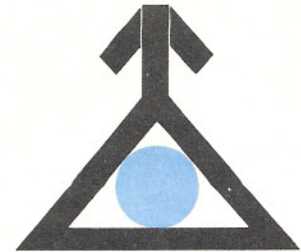


LUNAR LANDMARKS



HUGHES AIRCRAFT COMPANY
SPACE SYSTEMS DIVISION

PUBLISHED FOR MEMBERS OF THE SURVEYOR TEAM

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WOW

...the Hughes-JPL Team, supported by its own cheering section, scored a resounding victory at last Sunday's Open House, preview to the "Moon Bowl Game" next fall. Some 5000 persons, ranging from toddlers to septuagenarians, got right down on the sidelines to get close-up views of much of the Surveyor Program--from components to spacecraft themselves. Mothers and Fathers proudly pointed out where they work; kids proudly wore stickers proclaiming "My Father Works on Surveyor" or "My Mother Works on Surveyor." In some cases, they wore both. All left with beautiful lithographs of a moonscape with Surveyor safely soft-landed on the moon. A great day for a great show for a fine group. The last two pages of this issue have photos of the big day.

BOW

...to those among the scores who helped in staging Open House. The following were particularly cited by Surveyor Program Manager Bob Roderick: Ken Brown, Public Relations and Advertising, General Office, movies; Jack Thatcher, Ed Simpson, Val Zimmer, and George McNeill, all El Segundo Division, manufacturing plant arrangements; Hugh Winesett, ES Division, Clean Room arrangements; Surveyor Program people Shel Shallon, project coordination; Bob Glover and Tony Taibe, hardware exhibits; Frank Adler, safety; Don Brewer and Joe Scheffel, quality assurance; Don Marriage, system test area arrangements; Ed Kline, factory host arrangements. Space Systems Division's Merritt Barker and Pete Ekstrom, division coordination; Mike Campbell, special services; Gil Mendelsohn and Stoney Stone, film projection; Ed Taylor and Chet Smith, spacecraft final assembly area preparation and hardware handling; and Al Stephenson, Bill Sturgis, and Jack Yamashiro, all for Bldg. 365 SESL arrangements. The hosts and hardware suppliers were excellent. As they say in the services, "a job well done."

NOW

...the big job ahead, meeting key milestones spelled out at Surveyor Day. There's progress to report:

SC-1, first flight spacecraft, went into systems test Jan. 4. Group tests, subsystem testing with electrical power, are under way ON SCHEDULE with completion due Feb. 5. Next phase, ISCO (Initial System Checkout) with emphasis on checking one or more subsystems with telecommunications system. John Chamberlain, head of SC-1 Test Operations, and Test Conductor Vince Scalingi are maintaining two-shift operation.

SC-2, second flight spacecraft, now in system test although not all subsystems installed. The two spacecraft transmitters are in, and electrical power system has been checked out and testing of power-TV systems, working together, has started. Group testing continues until mid-March.

T-21 will have first date with thermal vacuum solar chamber next week. Assembly of T-21 on chamber end-bell was completed Jan. 6. Connections between spacecraft and System Test Equipment have been completed, and "dry run" of test procedure is on tap just before chamber is closed prior to pumpdown. Three-shift operation is on board for this critical spacecraft testing phase.

Five-man launch team, headed by Test Conductor Dave Newlands, leaves this week for Cape Kennedy to perform launch operations on SD-1, first Surveyor dynamic model. SD-1 will be launched soon on Atlas-Centaur for evaluation of spacecraft environment during boost.

Bill Dawson will oversee firing of two main retro engines at Elkton, N.J., facilities of Thiokol on Feb. 3 and 10. Engines first will have undergone sequential environmental exposure, including vibration, drops, humidity, and cycling between extreme temperatures.

Thermal analysis recently completed on Survey and Approach camera for SC-1 indicates changes in heater capacity and thermal paint patterns will be necessary. Pete Taylor and Fred Charles, both in R&D Division, and Sam Flateau, SSD, were principals in study. Design improvements already are under way.

VOW

...to continue to meet milestone deadlines. On SC-1, systems test milestone, first, on schedule. One down, four to go. Next big milestone—March 23, start of first mission sequence test.

HOW

...by championship performance from the entire team.



PRESIDENTIAL ADVISER STRONG SURVEYOR SUPPORTER

Dr. Donald F. Hornig, special assistant to the President for Science and Technology, in a recent interview clearly established his position on manned vs. unmanned space exploration and put in a strong plug for Surveyor.

Dr. Hornig said that he feels "very strongly that man ought to be backed up and preceded by more instruments so he could do the most possible." He said that is why he pressed hard for the Ranger flights and is strongly backing the Surveyor program which would land a vehicle on the moon to explore its surface and send the data back to earth.

"One shouldn't risk the life of man on things you can do with instrumented things," he said.

Asked if he approved of the present mix of unmanned and manned missions in the space program, Dr. Hornig said:

"I would have wished that by now we would have a little more in the way of instruments. But at the moment I think the program is well balanced, providing we can really get Surveyor down with a useful load. I would feel unhappy if we had to proceed (with the Apollo manned lunar landing) without Surveyor data."

OUR TASK IS VITAL TO THE NATION AND THE COMPANY...
and the Aug. 2 shipping date draws nearer

