

SPACE SCIENCES

Next Ariane launch expected in June

The European Space Agency's Ariane rocket, potentially significant competition for some of the U.S. space shuttle's launch business, suffered a setback last May on its second flight, when its first-stage engines shut down prematurely and dumped the rocket and its two satellite payloads into the Atlantic (SN: 5/31/80, p. 341). The third flight was originally scheduled for this past September, but tracking down and correcting the causes of the failure has delayed the launching to what ESA officials now say will "very probably" be June 1981. The fourth flight, last of the planned test launches, was to have taken place this month but is now envisioned for next autumn.

The June date of the third mission represents an additional slippage from what at one point was to have been the latter part of March, which could conceivably have placed the Ariane test head-to-head with the first orbital flight of the U.S. shuttle. Even with the further delay, however, ESA says that the timetable "remains compatible with the commitments entered into to place in orbit scientific and telecommunications satellites in late 1981 and in 1982." Furthermore, the agency maintains, the costs resulting from the mishap are covered by contingency funding built into "the overall financial envelope fixed at the start of the program."

Cosmonaut trio returns to earth

Leonid Kizim, Oleg Makarov and Gennadiy Strekalov, the first three-man crew of Soviet cosmonauts in nearly a decade, returned safely to earth on Dec. 10, following a two-week repair-and-refurbishment mission aboard the heavily trafficked Salyut 6 space station. The last Soviet space trio died in 1971 during reentry of their Soyuz 11 spacecraft, when a faulty pressure seal let the air out of their cabin.

Following the Soyuz 11 tragedy, cosmonauts were required to wear pressurized spacesuits, which left room for only two occupants at a time in the existing Soyuz design. A year ago, a redesigned Soyuz "T" was tested in an unmanned flight to Salyut 6, followed six months later by Soyuz T-2 with two spacesuited crewmen aboard. The just-returned trio rode Soyuz T-3, launched Nov. 27 (SN: 12/6/80, p. 357).

Soyuz T-3 was the 10th spacecraft to visit Salyut 6 this year, and the 28th since the station was placed in orbit on Sept. 29, 1977. Of that number, 15 carried crews, all but two of which successfully docked with and occupied the station. (The first craft to visit Salyut 6, Soyuz 25, was obliged to return to earth because limited battery power would not allow a second hard-docking attempt after an initial failure. The Soyuz 33 mission was aborted during final approach because of an engine malfunction.) Eleven of the crewless craft were in the Progress series of unmanned resupply vehicles. The others were Soyuz 34, launched unmanned as a return vehicle for two cosmonauts already in orbit, and the initial test of the modified Soyuz T.

The book of Voyager's Jupiter

Voyage to Jupiter, a lavishly illustrated, 199-page account of last year's visits to the giant planet and its spectacular Galilean satellites by the Voyager 1 and 2 spacecraft, has been produced by the National Aeronautics and Space Administration. Besides many of the color and black-and-white photos taken by the two probes, the softbound volume includes maps of the satellites, summaries of the scientific results and a detailed, day-by-day description of the mission itself. Cost is \$7.50. Order stock #033-000-00797-3 from Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. (Do not order from SCIENCE NEWS.)

BIOMEDICINE

Women's reactions to breast cancer

According to a recent National Cancer Institute survey, women in the United States consider cancer, and especially breast cancer, the most serious health problem facing them. This attitude pretty well reflects the facts: Cancer is the second-leading disease killer in the United States, and breast cancer is the leading cancer killer of women.

The survey also revealed that 40 percent of U.S. women examine their breasts at least monthly for breast cancer, whereas only 30 percent did so in 1973, and that 77 percent of women examined their breasts for cancer at least once during the past year. The statistics are encouraging because studies show that women who practice breast self-examination detect breast cancer earlier than it would otherwise be detected, and the earlier it is detected, the greater a chance for a cure.

Continued success for acne drug

Although vitamin A acid (Retin A) is commercially available for treating milder cases of acne, it cannot heal more serious cases. However, there is growing evidence that a vitamin A derivative called 13-*cis*-retinoic acid (an experimental drug being developed by Hoffmann-LaRoche, Inc.) can do so.

Last year a group of National Cancer Institute and University of Iowa College of Medicine dermatologists, headed by Gary L. Peck, reported that 13-*cis*-retinoic acid completely cleared 13 patients of severe acne and considerably helped a fourteenth (SN:2/24/79, p. 118). Now 26 more patients with severe acne have been helped by the drug, according to a report in the December JOURNAL OF THE AMERICAN ACADEMY OF DERMATOLOGY by Lawrence Farrell and colleagues at the University of Iowa College of Medicine and in the Nov. 15 LANCET by H. Jones and co-workers at St. James's (University) Hospital in Leeds, England.

Ultrasound can benefit preemies

A large number of premature babies, perhaps 45,000 a year, suffer bleeding inside their brains that can lead to water on the brain, retardation and other damage. Ultrasound has now been found to compare favorably with CT scans in diagnosing such bleeding and its complications, Edward Grant and colleagues at Georgetown University Medical Center in Washington report in the November AMERICAN JOURNAL OF NEURORADIOLOGY.

Grant and co-workers examined 162 preemies over a 14-month period with both ultrasound and CT scans and found that the two modalities were comparable in detecting cerebral hemorrhaging and complications. So it is now possible to screen preemies routinely for cerebral bleeding and complications, the researchers conclude, because ultrasound can be used. Ultrasound, they explain, is safer than CT scans because it uses sound waves instead of X-rays, and it is also more economical, costing one-fourth what CT scans do.

Computer aids for handicapped sought

Do you have any good ideas for computer aids for the blind, deaf, mentally retarded, persons with learning disabilities, patients with neurological or neuromuscular conditions or for the orthopedically handicapped? If so, you might like to enter your ideas in a computer aid-to-the-handicapped contest being sponsored by Johns Hopkins University's Applied Physics Laboratory, the National Science Foundation and Radio Shack. One hundred awards will be made, including a \$10,000 grand prize.

For entry applications and more information, write: Personal Computing to Aid the Handicapped, Johns Hopkins University, P.O. Box 670, Laurel, Md. 20810.