

Soyuz 26 cosmonauts link with Salyut 6



Soyuz 26 flight commander Romanenko (left) and flight engineer Grechko.

Photo: Novosti

Spacecraft linkups in orbit are always tense affairs, perhaps especially so in the troubled Soviet manned flight program, and cosmonauts Georgi M. Grechko and Yuri Romanenko had yet an additional weight on their shoulders. The Soyuz 25 mission of their predecessors, Vladimir Kovalenok and Valery Ryumin, had failed at what was to have been a specially timed spectacular, a docking with the Salyut 6 space station to have the cosmonauts aboard for the 60th anniversary of the Nov. 7 Bolshevik revolution.

On Dec. 11, flying Soyuz 26, Grechko and Romanenko managed the rendezvous, subsequently transferring to the station for an unspecified period of time. Cosmonaut training chief Vladimir Shatalov, monitoring the mission from the ground, said later that he had awaited the Soyuz 26 docking "with more excitement than my own" (the 1969 coupling of Soyuz 4 and 5). He perhaps hinted at the mission's duration with the expressed hope that "the finish of the jubilee year for the Soviet astronauts will be marked with the successful fulfillment of [their] tasks...." □

HEAO raises X-ray source score

X-ray astronomy began with rocket flights that gave quick and tantalizing glimpses of parts of the sky. Astronomers were sure from the first results that if they ever got a platform from which to do sustained surveys of the sky in the X-ray part of the spectrum, the number of catalogued celestial X-ray sources would rise significantly.

Satellites that have done X-ray observing have generally lived up to that expectation. The latest of them, the first High Energy Astronomical Observatory (HEAO-1), which was put into orbit on Aug. 12, is expected to raise the ante from the present 200 to about 1,000 or 1,500, according to extrapolations from the satellite's first 100 days of observation. The useful life of the satellite appears now to be as much as three times the original estimate of six months, and observing programs are

being extended accordingly.

HEAO-1 is equipped with two experiments to determine precise locations of the X-ray sources it sees. One is precise but multivalued, providing several possible locations for a given source that are precise to 5 or 10 seconds of arc but in different parts of the sky. The second eliminates the ambiguity by providing a single rough determination that makes a choice among the candidates presented by the first.

Such determinations will help in identifying X-ray sources with objects that emit light and/or radio waves. This is especially interesting in the cases of the so-called X-ray binaries, systems in which a visible star is bound to a dark object that emits X-rays. Some astrophysicists think that there may be black holes among the dark objects. So far HEAO-1 has observed two black hole candidates, Circinus X-1 and Cygnus X-1.

HEAO-1's capabilities include very-low-energy X-rays and very high energies (gamma rays). It has already found one star, U Geminorum, that emits very-low-energy X-rays and has also recorded one of the mysterious celestial gamma-ray bursts. □

New drug laws prescribed

A bill that makes sweeping revisions of the country's pharmaceutical regulations is circulating in the Department of Health, Education and Welfare and in Congress. Drafted at the direction of FDA commissioner Donald Kennedy, the proposal attempts to simplify and strengthen all previous drug legislation.

Major goals of the proposal include speeding both the approval process for new medicines and the removal procedures for drugs found to be dangerous. Drug firms and doctors have charged that current FDA procedures keep crucial new medicines off the market for unnecessarily long periods of testing and paperwork. And consumer health groups deplore the complicated legal process, taking as long as two years, now required to get a potentially harmful drug off the market.

The proposed bill would simply require issuance of an official order describing the drug, its uses and the evidence by which the HEW secretary approved it. The secretary could then revise, suspend or revoke the order at any time as new evidence developed.

Other key proposals of the bill are:

- Safety test results would be available to the public during the approval process.
- Drug companies would be required to monitor side effects of their products.
- One drug company could use safety data submitted by another company.
- Patient-information statements would accompany most drugs. □

Managing bowhead, sperm whale hunts

Whether the Alaskan Eskimos would be allowed to continue subsistence hunting of bowhead whales has received considerable attention since the International Whaling Commission's decision in June to ban all bowhead hunts. Eskimos, environmentalists and legislators, battling over suspected biological and anthropological consequences, generally agreed that a small, carefully managed subsistence hunt would probably not hurt herd size. It seems the Eskimo contingent convinced the IWC in Tokyo last week (SN: 12/10/77, p. 389).

This week Richard Frank, U.S. commissioner to the IWC, announced a management plan for Eskimo bowhead hunts that he believes was helpful in selling the IWC on the ecological "safety" of the small (12 whales) subsistence hunt. The program, drawn up by the National Oceanic and Atmospheric Administration, which Frank heads, requires that qualified whaling captains obtain a permit to hunt, subject to approval by a panel of experienced whalers. It also sets criteria on how to catch whales and on the number of whales that each crew can legally strike (not land) or catch.

Frank also explained that the IWC's sharply revised figure for the allowable international harvest of North Pacific sperm whales — from less than 800 to more than 6,000 — resulted from new Japanese data on the effectiveness of asdic (the British equivalent of sonar), used in tracking sighted whales, and to the revised speed and efficiency of catcher vessels weighing more than 600 tons. The commission also agreed to divide the North Pacific herd into two divisions, permitting separate management quotas for each, and to prohibit hunting of males from March through June. William Aron, former U.S. IWC commissioner, said the IWC's scientific committee was "squeamish in June" about setting any sperm whale quota because the data were so weak. Hence the initial drastically reduced quota — from 7,000 in 1977 to less than 800 in 1978. □

Woodrat slights rattler venom

Even with the housing shortage as it is, few would want to room with a poisonous rattlesnake. But a common southwestern rodent, the woodrat, finds the Western diamondback rattler an acceptable burrow-mate. Researchers at Texas A&M University in Kingsville have discovered that it is the woodrat's blood chemistry, not temperament, that allows this particular cohabitation.