

According to accounts published in U.S. newspapers on October 12, 1983,⁷⁴ the Soviets announced a nearly disastrous setback when an A-2 rocket, bearing a Soyuz T and two cosmonauts, exploded on a launch pad at the Tyuratam cosmodrome. Apparently, just prior to scheduled lift-off, a fire was detected at the base of the launch vehicle, and the launch escape system was triggered, either by automatic failure detection circuitry, the blockhouse crew, or the cosmonauts themselves. The launch escape tower rocket ejected the Soyuz orbital module and the descent module carrying the cosmonauts moments before the booster exploded beneath them. Subsequently, the descent module was separated from the orbital module and parachuted to Earth. The escape rocket subjected the cosmonauts to a high velocity, high G, escape trajectory, and the landing impact velocity was substantially higher than the normal 3.3 feet per second. Both may have sustained some injuries. This two-man crew was to have made a week-long resupply visit to the two cosmonauts who have been aboard Salyut 7 since June 28, 1983.⁷⁵

This accident did not seem to have placed the crew aboard the Salyut in any great danger be-

⁷⁴ *Washington Post*, Oct. 12, 1983, p. A-9; *New York Times*, Oct. 12, 1983, p. A-7.

⁷⁵ For a thorough discussion both of the accident and of the failure aboard Salyut 7, see the article "Explosion, Leak Cripple Salyut 7 Effort," *AW&ST*, Oct. 10, 1983, pp. 23-26.

because they were resupplied by Progress 17 in mid-August and Progress 18 in October and because they were resupplied by Progress 17 in mid-August and Progress 18 in October and because their Soyuz T-9 was still capable of returning them to Earth. In addition, the Soviets have at least three other (undamaged) launch pads at Tyuratam, and almost certainly have another Soyuz T and an A-2 booster which could have been integrated and readied for launch on short notice. The degraded condition of Salyut 7, however, adds additional uncertainty for future missions. The Soviets have announced that the most recent crew of cosmonauts returned to Earth on November 23, 1983, after a mission of 150 days.

Coincidentally, NASA has had to postpone the first flight of Spacelab aboard the Shuttle because "a liner that protects the lowest part of one of the [reusable] solid-rocket engines from heat" was almost burned through during the previous Shuttle flight.⁷⁶ If the flame had burned through part of the engine in flight, the Shuttle would have become aerodynamically unstable some 2 minutes after launch; the result could have been a catastrophe.

The U.S.S.R. accident and the U.S. near-accident indisputably show that space operations are still hazardous, even with systems that have been flight-proved time after time,

⁷⁶ *The Washington Post*, Oct. 13, 1983, p. A-15.