

## Report from Bonn by Rainer Apel

### German-Soviet cooperation in space

*Space and aerospace joint projects are moving forward, and broader cooperation is being discussed.*

On Sept. 29, days before German unification, a 20-year economic cooperation agreement was initialed by the Soviet and German governments in Bonn. It named areas of preferential industrial cooperation like machine building, development and mass production of private cars, trucks, and buses, and shipbuilding, medical, and maritime research pilot projects. Little noticed was a paragraph endorsing closer cooperation in space technology and the aerospace sector at large.

On Oct. 8, Heinz Riesenhuber, the German Minister of Research and Technology, announced at the 41st congress of the International Astronautics Federation in Dresden that two German astronauts had been selected for a role in the Soviet *Mir* space program. The two will serve with the *Mir* mission scheduled for eight days in March 1992, conducting biochemical, biophysical, and materials fatigue tests, and geophysical and astrophysical experiments.

The astronauts will learn Russian and receive training to fly and operate a *Soyuz* space vehicle, including homing-in on the *Mir* orbital station. They will be instructed by, among others, Siegmund Jaehn, the former East German Air Force pilot who served with a *Mir* mission in 1978 and was the first German in space.

The German role in the 1992 *Mir* program is the more spectacular side of an array of joint ventures presently being discussed between Moscow and Bonn. It may gain in emphasis because the future of joint projects between the German space agency (DASA) and the American National Aeronautics and Space Administra-

tion (NASA) looks dim.

West German scientists were disappointed when closed out from most aspects of the U.S. Strategic Defense Initiative (SDI) program, and worry over the ongoing debate in Congress on budget cuts in NASA. The fate of the *Space Station Freedom* project, to which a DM850 million budget of the West German *Hermes* space shuttle development has been oriented, is viewed as rather uncertain at this moment.

Against this background, the initial DM38 million German share in the Soviet *Mir* program is signaling future German-Soviet cooperation. The Soviets have declared that they would welcome a larger share of Germany in their space projects. One of the priority areas of cooperation that Moscow has suggested is in the *Buran* space shuttle project, which is falling behind schedule because of grave problems with the *Energiya* booster rocket which has been boldly designed for hydrogen fuels but isn't a safe technology yet.

The Soviets have therefore replaced the *Energiya* part in the entire program, which has the working title *Molniya*, with the AN-225, the world's biggest transport aircraft. An estimated additional DM6 billion would be required to make the *Energiya* a mature technology.

In mid-September, a team of eight senior Soviet aerospace specialists led by Prof. Gleb E. Lozino-Lozinsky, one of the chief designers of the *Buran* shuttle and the MiG jetfighter series, was in West Germany to look for partners in the German aerospace industry.

Lozino-Lozinsky and his delega-

tion emphasized the "signal" character of their visit to Germany in political terms, maintaining that the CoCom blacklist on transfers of high-tech Western products to the East is not affected because a "transfer of about 20 categories of technology from the East to the West" would be involved in projects they were discussing with the Germans.

Special materials, for example, that have been developed for the *Buran* space shuttle can also be used in high-attribution technology sectors like machine tools and medical equipment, he proposed. These programs, German experts explained to *EIR*, can run in the context of future joint projects of "reconverting military into civilian technologies" that are envisaged in the 20-year cooperation agreement.

Immediately after reunification on Oct. 3, another ranking delegation of Soviet experts began contacting German aerospace companies. The delegation was led by Soviet Airflight Minister Apolon Syzhtov, Chief Cosmonaut Yegor Volk, and included senior aerospace construction experts Viktor Zazulov from the Airflight Ministry and Leonid Sverdlov from Moscow University.

Among projects discussed were joint ventures to develop hydrogen-powered aircraft and space vessels. This is opening up the hydrogen-powered German Sanger second-generation space shuttle project—still in the conceptual stage—to Soviet participation.

Immediately, a joint project of the German *Hermes* with the Soviet *Buran* is considered feasible. Experts are now studying turning the Soviet Air Force base at Templin, near Berlin, into a space terminal for German-Soviet space shuttle missions of the the mid-1990s.