Boeing, Khrunichev Propose Commercial Space Module

The Boeing Company and Khrunichev State Research and Production Space Center today announced a cooperative planning effort to market a commercial space module (CSM) that could attach to the International Space Station (ISS).

The CSM is a sister module to *Zarya*, which was launched in November 1998 as the first element of the ISS. The multi-purpose module can be used to deliver propellant and cargo to ISS, and when docked to the station, can provide on-orbit storage, interim crew quarters, accommodations for multimedia, scientific, and communications equipment, and waste management capabilities. External pallets can be used for Earth observation instrumentation, astrophysical research and additional external storage.

Launched aboard Russia's Proton rocket from Baikonur Cosmodrome in Kazakhstan, the CSM could be on orbit as early as mid-2002. Khrunichev is the developer and integrator for the Proton.

"The CSM provides Khrunichev and Boeing an opportunity to continue our close relationship in providing human-rated space equipment," said Brewster Shaw, Boeing ISS vice president and general manager.

"Commercial development, integration, launch and operation of the CSM is a major step in expanding global awareness about the use of space for private endeavors," said Shaw. "We are very encouraged about the potential of the CSM to complement and expand the capabilities of one of the most aggressive global engineering undertakings in the history of mankind -- the ISS."

The module could deliver up to 3,000 kilograms of wet and dry cargo and provide up to 20 cubic meters of stowage volume. Its final configuration, capabilities and module value will be determined as the team works with potential customers and investors over the next several months. Private capital will be used to fund the effort.

"Our confidence of the success of our project is based on the wide experience of more than 30 years of work by the Khrunichev Space Center, in the area of creating modules for the long-term manned orbital complexes Salyut and Mir, as well as on the joint successful work with Boeing and NASA to create the first ISS component *Zarya*," said Sergei Shaevich, Khrunichev ISS program director. "It is also based on the fact that we have a finished module analogous to the already-on-orbit *Zarya*.

"The design of the module is adaptive to modifications capable of making it commercially efficient, which will also lead to enhanced technical capabilities of the ISS as a whole. The nearly two-year experience of *Zarya* operation as part of ISS has been implemented in the commercial module creation."

The Khrunichev Space Center is one of the principal developers of modules for the Russian Segment of the ISS, such as Service Module and Universal Docking Module.

Boeing is NASA's prime contractor to design, develop, manufacture and assemble the International Space Station. The first three modules, *Zarya*, *Unity* and *Zvezda* are now on orbit, visible from Earth in the night sky.

When fully assembled in 2005, the ISS will house a crew of seven -- working in 46,000 cubic feet of pressured volume spread across six laboratories, two habitation modules, and two logistics modules.

The first astronaut crew, Expedition One, will be brought to ISS later this year for their three-month stay. The US Laboratory, Destiny, will be launched aboard Space Shuttle Atlantis in the final quarter of this year.

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