

China Takes Step Toward Permanent Space Station

Sept. 29—With President Hu Jintao and other leaders of the Chinese government looking on at the Beijing mission control center, and undoubtedly many millions watching on TV, the China National Space Agency successfully launched its Tiangong-1 space module into Earth orbit today. Tiangong-1 will orbit the Earth, awaiting the arrival of the unmanned Shenzhou-8 before the end of this year, to carry out China's first rendezvous and docking tests.

Tiangong-1 is made up of two modules, rather than three in the future manned configuration. It is larger and heavier than the manned Shenzhou craft. Tiangong-1 has an experiment module, which is

where visiting astronauts will live and work on future missions. Inside, there are two sleeping bags, adjustable lighting systems for sleep, exercise equipment, and entertainment and communications equipment. Experiments will be conducted while crew members are there, and remotely controlled from the ground when they are not.

China has plans to launch follow-on Tiangong-2 and -3 modules, which will be equipped to extend the capabilities of the orbital facility, and when all linked together, will be able to accommodate crew for 20 days, and then, up to 40 days. An unmanned cargo carrier, similar to Russia's Progress, is also being developed to deliver freight to the crew.

The first test of the module will be the unmanned, then manned docking, and then the assembly of new modules. By the end of this decade, China plans to have a space station that can be permanently manned.

—*Marsha Freeman*