



National Aeronautics and  
Space Administration

International Space Station  
Expedition 7 Crew

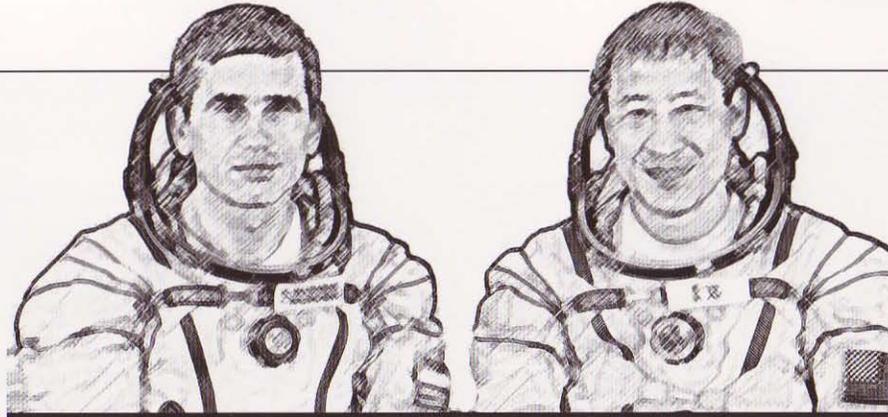




The seventh crew to live on board the International Space Station (ISS) will arrive with the Soyuz 6 launched from Baikonur, Kazakhstan. Soyuz 6 is the first manned spacecraft to launch since the STS-107 Space Shuttle *Columbia* tragedy. After the tragedy, the Space Shuttle fleet was grounded pending the results of the accident investigation. As a result, Expedition 7 is the first with a reduced crew size of two. The Station crew size was reduced to lower the demand for food, water, and other supplies.

During their stay on orbit, the crew will focus on experiments in life science, Earth science, and microgravity research. Using the human research facilities located in the U.S. Laboratory Module, *Destiny*, the crew will conduct a wide range of investigations into the adaptation of the human body to the long-duration, weightless environment. Material science experiments will also be conducted with the Microgravity Science Glovebox and the Protein Crystal Growth Facilities. These experiments will look at material formation, solidification, and crystal growth in the microgravity environment. The results of this experimental research will be valuable in the development of materials and material processes.

After a week handover of Space Station responsibilities, Expedition 7 will watch the Expedition 6 crew undock and return to Earth on the Soyuz 5 vehicle. Six weeks later, an unmanned Progress 11 resupply ship will arrive with food, water, and supplies for the Expedition 7 crew. Four months into their stay, an additional Progress vehicle will arrive with food, water, and supplies. After a handover with the Expedition 8 crew, the Expedition 7 crew will return to Earth on board the Soyuz 6 spacecraft after a six-month stay on orbit.



Malenchenko

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**Expedition Commander  
Yuri Ivanovich Malenchenko (Colonel,  
Russian Air Force)  
Test Cosmonaut of the Yu.A. Gagarin  
Cosmonaut Training Center**

Yuri Malenchenko was born in Svetlovodsk, Kirovograd Region, Ukraine. He graduated from the S.I. Gritsevets Kharkov Higher Military Aviation School where he earned a pilot-engineer's diploma, and the Zhukovsky Air Force Engineering Academy. After graduating from Military Aviation School, he served as pilot, senior pilot, and multi-ship flight lead. In 1987, he was assigned to the Yuri Gagarin Cosmonaut Training Center in Star City, Russia, and underwent a course of general space training as a test cosmonaut. Commander of the back-up crew for Mir 15 (1994), Malenchenko later served as commander of Mir 16 (1994). During this flight, he controlled the first manual docking of the Progress resupply vehicle that docked to Mir. Malenchenko has logged over 137 days in space, including 3 spacewalks totaling over 18 hours. Malenchenko flew on STS-106 in 2000.

**Flight Engineer  
Edward T. Lu (Ph.D.)  
NASA Astronaut**

Edward Lu was born in Springfield, Massachusetts, raised in Webster, New York, and, most recently, resided in Honolulu, Hawaii. He received a B.S. degree in electrical engineering from Cornell University and a Ph.D. in applied physics from Stanford University. Since receiving his Ph.D., Dr. Lu has been a research physicist working in the fields of solar physics and astrophysics. He was a visiting scientist at the High Altitude Observatory in Boulder, Colorado, with the Joint Institute for Laboratory Astrophysics at the University of Colorado, and was a postdoctoral fellow at the Institute for Astronomy in Honolulu. He has developed a number of new theoretical advances that have provided, for the first time, a basic understanding of the underlying physics of solar flares. Dr. Lu has published articles on a wide range of topics including solar flares, cosmology, solar oscillations, statistical mechanics, and plasma physics. He has given numerous

invited lectures at various universities and international conferences. He also holds a commercial pilot certificate with instrument and multiengine ratings. Dr. Lu was selected as a NASA astronaut in 1994. He flew as a mission specialist on STS-84 in 1997, NASA's sixth Shuttle mission to rendezvous and dock with the Russian Space Station Mir, and was a mission specialist and payload commander on STS-106 in 2000. Twice flown, Dr. Lu has logged over 504 hours in space, and participated in an EVA (spacewalk) totaling 6 hours and 14 minutes.



### Expedition 7 Patch Description

The International Space Station (ISS) Expedition 7 patch consists of two elliptical orbits that evoke the histories of the two space programs from which the crew is drawn. The Russian and American flags are intersecting, representing the peaceful cooperation of the many countries contributing to the ISS. There are two stars that indicate the Station's goals of contributing to life on Earth through science and commerce.