

Chiao (and Sharipov) Down!

Expedition 10 is home at last

By Catherine Borsché

Expedition 10 has completed its descent back down to Earth, and the crewmembers are now recuperating after their long but successful six-month visit to the International Space Station (ISS).

Before the mission began, Expedition 10 Commander Leroy Chiao spoke about his goals for this expedition. "Well, I'll tell you that the biggest reward for me and the biggest measure of success is if we can accomplish the goals of the flight, which are to maintain the Station and keep it healthy while also performing some of the assembly tasks and experiments."

This mission completed its objectives and further accelerated the Vision for Space Exploration with its scientific and medical studies and engineering aspects. Some experiments conducted include Pore Formation and Mobility, Protein Crystal Growth, Effect of Prolonged Spaceflight on Human Skeletal Muscle, Advanced Diagnostic Ultrasound in Microgravity and Crew Earth Observations. The crew also performed two spacewalks designed to continue the external outfitting of the Zvezda Service Module.

Chiao's crewmate, flight engineer and Soyuz Commander Salizhan Sharipov, reiterates that their mission and others are also making a profound impact on Earth. "The ISS is an international project, and the participating countries are doing a lot for the progress of humanity. The ISS is demonstrating to us how we should work and live together; this is an example of how we coexist in the future."



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Top: Back dropped by the blackness of space and airglow of Earth's horizon, the Soyuz TMA-5 spacecraft departs from the International Space Station carrying Expedition 10 Commander Leroy Chiao, Russian Federal Space Agency Flight Engineer Salizhan S. Sharipov and European Space Agency Astronaut Roberto Vittori of Italy. Undocking occurred on April 24.

Above: Astronaut Leroy Chiao (right), Expedition 10 commander and NASA ISS science officer; Cosmonaut Salizhan S. Sharipov (center), flight engineer representing Russia's Federal Space Agency; and European Space Agency Astronaut Roberto Vittori of Italy speak with members of the media following their pre-dawn landing in the Soyuz TMA-5 capsule on April 25.

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Thumbs up – way up!

The crewmembers onboard the International Space Station give a unified "thumbs up" in the Destiny laboratory following the Change-of-Command ceremony from Expedition 10 to Expedition 11. From the left are Astronaut John L. Phillips, Expedition 11 NASA ISS science officer and flight engineer; Cosmonaut Sergei K. Krikalev, Expedition 11 commander representing Russia's Federal Space Agency; Astronaut Leroy Chiao, Expedition 10 commander and NASA ISS science officer; European Space Agency Astronaut Roberto Vittori of Italy; and Cosmonaut Salizhan S. Sharipov, Expedition 10 flight engineer representing Russia's Federal Space Agency.

Explore. Discover. Understand.

June
2005
Houston, Texas

Beak sends...

A MESSAGE FROM CENTER DIRECTOR LT. GEN. JEFFERSON D. HOWELL JR.



Steady!

The title is a very meaningful command used throughout the military in dynamic or stressful situations. In an aircraft on an instrument approach or a ship on a stormy sea, this command implies "Hold your course; don't change your direction." To soldiers under attack "Steady!" is a command to hold their position and not waver. "Steady!" is used on the parade ground where it is barked out to troops who are being dressed-up on line as they prepare for inspection. As you probably guessed, in that situation it means "Don't move; stay right where you are."

In all of the above situations "Steady!" is not just a command. It is also a strong statement of reassurance. The director or leader who gives this command is indicating that "You're doing all right; stay with it." He or she is also saying "I'm with you on this thing and I'm going to help you get through this successfully." As you can imagine, "Steady!" has helped calm the nerves and bolster the confidence of many people placed in a tough spot. I can personally attest to that.

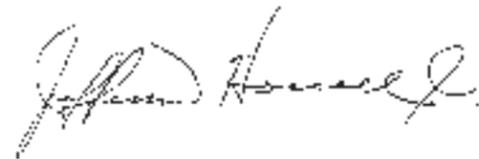
It's obvious that we are part of an institution that is going through a period of dramatic change. We have a new leader, who is bringing in fresh ideas, new organization and innovative direction to our Agency, all of which inherently create some discomfort and concern. The exploration initiatives, already the subject of a major change to NASA's traditional ways, are now getting redirected. Add proposed budget cuts, as well as the current delay in STS-114 with its corresponding technical issues, and there is plenty of grist for the anxiety mill.

My response to all of this is...STEADY!

Please remember that maintaining the viability of the International Space Station and ensuring Return to Flight is still our highest priority. We must stay focused on them and take care of the business at hand. Without the successful return to flight of the Shuttle, the entire vision for exploration will be in jeopardy.

Our administrator has a clear understanding of the exploration vision as well as a profound intent to carry it out. I am fully confident that he possesses the knowledge, ability, will and leadership to succeed. He has assured me that JSC will be a key player in returning people to the Moon and going beyond. However, he expects us to do first things first. Let's keep our eye on the prize and stay on course...Steady!

IT'S GREAT TO BE ALIVE AND IN HOUSTON!



The Rotating Service Structure is rolled back from around Space Shuttle Discovery at Launch Pad 39B for a propellant-loading test of Discovery's External Tank on April 14. During the test, the tank was filled to launch levels with ultra-cold hydrogen and oxygen propellants, known as "cryogenics." The test is designed to evaluate how the tank, orbiter, Solid Rocket Boosters and ground systems are performing under full "cryo-load." Throughout testing, engineers observed the effectiveness of key safety modifications made to the tank.

Shuttle Return to Flight

NASA announces a new window

July 13 to 31 is the new launch planning window for the Space Shuttle *Discovery* mission. The new window gives the Agency time to do additional work to ensure a safe Return to Flight for *Discovery* and its crew.

The announcement follows recent Space Shuttle Program reviews. Managers identified the need to do more work to validate engineering analyses of potential debris hazards and to make some additional modifications to the external fuel tank. NASA officials and program managers agreed to take the time to complete the work.

"This is consistent with our overall approach to the STS-114 mission, which is that we're going to return to flight, we're not going to rush to flight," NASA Administrator Michael Griffin said at a recent news conference at NASA Headquarters. "Our intent with this effort is to make certain we are as safe as we know how to be before we launch the Space Shuttle and its crew. We want it to be right."

"From the beginning we've been milestone-driven," said William Readdy, NASA associate administrator for Space Operations. "This time, the milestones on debris and ice analyses, propulsion system troubleshooting and External Tank modifications drove us to retarget for July. We've never been reluctant to adjust the dates as information becomes available."

The Return to Flight mission will take Shuttle Commander Eileen Collins and six crewmembers to the International Space Station. The mission is the first of two test flights to evaluate new thermal protection system inspection and repair techniques and to deliver supplies and equipment to the Station.