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News, features & press releases

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Current, future, past missions & launch dates

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Space Station

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Research & Technology**Crews & Expeditions****International Cooperation****Launches & Landings****Ground Facilities****Images & Videos****Space to Ground****Facts & Figures****News & Media Resources****All NASA Missions****Crew Begins Week with Cargo Transfers, Redocking and Spacewalk Preps****April 21, 2014**

Expedition 39 has opened the doors to the SpaceX Dragon commercial cargo craft that arrived Sunday morning. The crew has begun unloading the nearly 2.5 tons of cargo including science hardware, a U.S. spacesuit, food and other supplies.

Read about the SpaceX-3 [launch](#) and [docking](#).

NASA astronaut Steve Swanson opened the hatches to Dragon at 4:01 a.m. EDT Monday. He wore goggles and a mask, required by safety procedures, to protect him from dust potentially floating inside the commercial freighter.

Flight Engineer Rick Mastracchio assisted Swanson with the hatch opening. He and Commander Koichi Wakata also assisted Swanson for the first day of cargo transfers. Cosmonaut and Flight Engineer Oleg Artemyev sampled the air inside Dragon before installing air ducts to the new SpaceX vehicle.

One critical experiment, T-Cell Activation in Aging, was quickly offloaded from Dragon by Mastracchio and immediately activated inside Europe's Columbus laboratory module. That study observes the depression of the immune system and other changes seen in elderly citizens on Earth and astronauts living in microgravity.

› [Read more about T-Cell Activation in Aging](#)

The crew now turns its attention to a Progress undocking early Wednesday morning and a short spacewalk a few hours later.

The ISS Progress 53 will undock from the Zvezda service module at 4:58 a.m. EDT Wednesday so Russian mission controllers can test its upgraded Kurs automated rendezvous system. The Russian cargo craft will fly no further than 311 miles from the International Space Station for two days before it re-docks Friday morning to Zvezda.

Wednesday's spacewalk is scheduled to begin at 9:20 a.m. EDT and last 2.5 hours. Swanson and Mastracchio will exit the Quest airlock to replace a failed backup computer on the station's S0 Truss.

› [Read more about Wednesday's spacewalk](#)

Also known as a Multiplexer/Demultiplexer (MDM), the backup MDM provides telemetry and commands to truss systems, solar alpha rotary joints and the Mobile Transporter rail car which rides along the truss structure.

Veteran station cosmonauts Alexander Skvortsov and Mikhail Tyurin started their morning on the ongoing Russian Bar experiment. That study researches tools and procedures to detect pressure leaks inside the space station.

› [Read more about Bar](#)

Afterward, Tyurin recharged a battery in the Seiner experiment's photo spectral system to continue photography work for the Earth observation study. He also continued more work with the radiation exposure experiment Matroshka.

› [Read more about Seiner](#)

› [Read more about Matroshka](#)



Rick Mastracchio works with the brand new experiment, T-Cell Activation in Aging, just offloaded from the Dragon cargo craft.

Image Credit: NASA TV



Steve Swanson begins work inside the just-opened Dragon cargo craft.

Image Credit: NASA TV

Skvortsov started up the Constanta experiment for before moving on to the Kulonovskiy Kristall study in the afternoon. He and Artemyev also worked to prepare the Progress 53 for its undocking.

- [› Read more about Constanta](#)
- [› Read more about Kulonovskiy Kristall](#)

[› Back To Top](#)



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- > NASA Information on the American Recovery and Reinvestment Act of 2009
- > Budgets, Strategic Plans and Accountability Reports
- > Equal Employment Opportunity Data Posted Pursuant to the No Fear Act
- > Information-Dissemination Policies and Inventories
- > Freedom of Information Act
- > Privacy Policy & Important Notices
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- > Aerospace Safety Advisory Panel
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