

US, Russian, Japanese astronauts return from ISS

October 30 2016, by Dana Rysmukhamedova



Russia's Soyuz MS space capsule, carrying the ISS crew, astronauts Kate Rubins, Anatoly Ivanishin and Takuya Onishi, lands in a remote area in Kazakhstan, some 150 km south-east of Dzhezkazgan, on October 30, 2016

Three astronauts landed safely in Kazakhstan on Sunday following a 115-day mission aboard the the International Space Station, including US astronaut Kate Rubins, the first person to sequence DNA in space.

Russian mission control confirmed the touchdown of NASA's Rubins, Roscosmos' Anatoly Ivanishin and Takuya Onishi of the Japan Aerospace Exploration Agency at 0358 GMT.

The trio landed southeast of the Kazakh steppe town of Zhezkazgan in clear but frosty conditions after a flight from the orbital lab.

"Landing has taken place!" Russian mission control stated, with commentators on NASA TV noting that the Soyuz craft had landed in an upright position.

Molecular biologist Rubins and Onishi were both returning from their first missions in space, while flight commander Ivanishin undertook a five-month mission at the ISS five years ago.

Footage from the landing site on NASA television showed Rubins smiling after she was hoisted out last from the Soyuz descent module.

"Everybody is feeling wonderful," said Ivanishin, who emerged first from the craft, in comments translated from Russian.

After they are flown to the Kazakh city of Karaganda, Ivanishin will head to Star City just outside Moscow for post-mission work, while Rubins and Onishi will fly to Houston.



(From L) Members of the main crew of the International Space Station Expedition 48/49, astronauts Kate Rubins, Anatoly Ivanishin and Takuya Onishi pose for a photo after a press conference in Baikonur, on July 6, 2016

Their journey back to Earth marks the first complete mission to and from the orbital lab for a new generation of Soyuz spacecraft with upgraded features.

The trio's arrival at the ISS was delayed by two weeks as Russian space officials carried out further software tests on the modified Soyuz MS-01 vehicle.

DNA research in space

Rookie Rubins' participation in the mission generated particular excitement after NASA announced plans for the career scientist to

sequence DNA aboard the ISS in a world first.

In August Rubins successfully sequenced samples of mouse, virus and bacteria DNA using a device called MinION while Earth-based researchers simultaneously sequenced identical samples.

NASA said the biomolecule sequencer investigation could help to identify potentially dangerous microbes aboard the ISS and diagnose illnesses in space.



Russia's Soyuz MS-01 spacecraft carrying the crew to the International Space Station, Kate Rubins, Anatoly Ivanishin and Takuya Onishi, blasts off to the ISS from the Russian-leased Baikonur cosmodrome in Kazakhstan, on July 7, 2016

Rubins was also the first woman aboard the ISS since Italian Samantha

Cristoforetti returned to Earth with the record for the longest single spaceflight by a woman (199 days) in June last year.

Fellow American Peggy Whitson, 56, will blast off to join an all-male crew at the lab with French astronaut Thomas Pesquet and Russian cosmonaut Oleg Novitskiy from the Baikonur cosmodrome November 17.

The blastoff was delayed by 48 hours as Russian space officials sought better docking conditions.

Whitson is NASA's most experienced female astronaut and will command the ISS for the second time after becoming the first female commander of the station on her second space mission back in 2007.

Pesquet, 38, is a first time-flyer and the first French national to be sent to the ISS by the European Space Agency since 2008.

He said at a pre-flight press conference on Wednesday that he feared he would be "a pain for everybody" as he plans to bring his saxophone with him into space.



Orbital ATK's Cygnus cargo craft (L) is visible from the Cupola module windows aboard the International Space Station, on October 23, 2016

NASA's Shane Kimbrough and Andrei Borisenko and Sergei Ryzhikov of Roscosmos are currently aboard the orbital lab having blasted off from the Cosmodrome in another delayed launch on October 19.

Technical mishaps have complicated plans to extend the periods during which the ISS is fully staffed with six astronauts.

The space laboratory has been orbiting Earth at about 28,000 kilometres per hour (17,000 miles per hour) since 1998.

Space travel has been one of the few areas of international cooperation between Russia and the West that has not been wrecked by the Ukraine crisis.

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