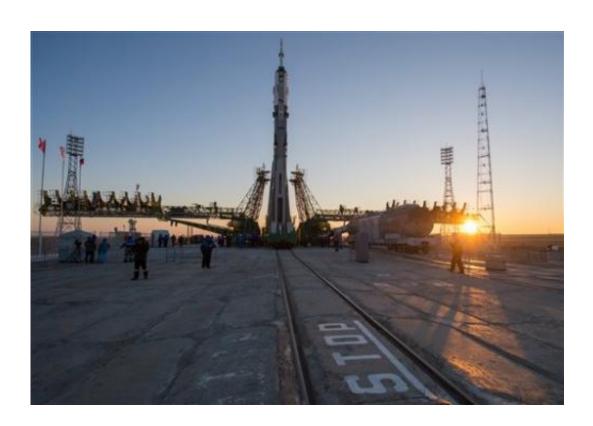


Soyuz put in place for mission to space station

December 17 2012, by Peter Leonard



In this photo provided by NASA, the Soyuz rocket is erected into position after being rolled out to the launch pad by train at the Baikonur Cosmodrome in Kazakhstan, Monday, Dec. 17, 2012. The Soyuz spacecraft atop a towering rocket was placed into launch position Monday at Russia's manned-space facility in the freezing, windswept steppes of Kazakhstan ahead of a five-month mission for three astronauts to the International Space Station. The launch of the Soyuz rocket is scheduled for Dec. 19, 2012. (AP Photo /NASA, Carla Cioffi)



A Soyuz spacecraft atop a towering rocket was placed into launch position Monday at Russia's manned-space facility in the freezing, windswept steppes of Kazakhstan ahead of a five-month mission for three astronauts to the International Space Station.

The craft was rolled out of its hangar on a flatbed train at exactly 7 a.m. in strict accordance with tradition and crawled for two hours at a walking pace to the <u>launch</u> pad. Colleagues, friends and relatives of the astronauts withstood temperatures as low as minus-30 C (minus-22 F), worsened by wind, to watch the procedure.

NASA's Tom Marshburn, Russian Roman Romanenko, and the Canadian Space Agency's Chris Hadfield will blast off Wednesday and travel for two days before reaching three other astronauts working at the orbiting laboratory.

Although the temperature was lower in other parts of Kazakhstan—it was minus-42 C (minus -44 F) in the capital, Astana—locals assert with a hint of pride that the exposed steppe makes it far more uncomfortable in Baikonur.

But officials say the glacial conditions have little effect on the Soyuz.

There are very few weather requirements or restrictions for the launch of the Soyuz vehicle," veteran NASA astronaut Mike Fossum said. "We launch a couple of days from now in similar conditions and we are without any concerns."

The current Soyuz craft is a variation on the vehicle that has been in constant use by the Soviet and then Russian manned space programs since 1967.

The three-man crew, which has been in Baikonur for almost two weeks



making final preparations, took a tour Sunday of the hangar where the craft was being kept.

"Incredibly impressive to see the final assembly of the rocket that will throw us into orbit. This is one excited crew!" Marshburn wrote on his Twitter account.

Marshburn, 52, is making his second trip to space. During his maiden voyage in 2009, he logged more than 376 hours in space, which included 19 hours of extravehicular activity over the course of three spacewalks.

In the remaining time before the launch, which takes place Wednesday at 6:12 p.m. (1212 GMT), more checks will be carried out and the booster rockets will be fueled.

The launch marks a return to use of the <u>launch pad</u> known as Gagarin's Start, where Soviet astronaut Yuri Gagarin blasted off in 1961 for the first human orbital space flight. Site No. 1. Another launch site was used for the previous mission, which set off in October.

The need for a back-up launch site became particularly acute with the decommissioning of the U.S. shuttle fleet. The Soyuz now is the only vehicle able to carry astronauts to the space station.

Although the Soyuz has proven dependable, recurrent problems with the unmanned version of the craft have sown anxiety over NASA's excessive reliance on the Russian space program.

NASA announced last week that it was making progress toward the first test of its new generation Orion spacecraft in 2014.

Orion is a part of NASA's growing ambitions to extend its reach into space. NASA says it is being designed travel more than 3,600 miles



(5,800 kilometers) above Earth's surface and return at a speeds almost 5,000 miles (8,050 kilometers) per hour faster than any current human spacecraft.

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