



Mission Objectives

Italian ESA astronaut Roberto Vittori will fly into space in the framework of the Italian Soyuz mission ENEIDE. His 10-day flight will include 8 days on the International Space Station.

The mission is being sponsored by the Italian region of Lazio and the Italian Ministry of Defence within the framework of an agreement between ESA and Roscosmos, the Russian Federal Space Agency.

The principle objectives of the mission are:

To carry out a full programme of scientific experiments, technology demonstrations and educational activities. The mission consists of an important set of scientific and technological experiments, developed within Europe to a great degree by Italian researchers and built predominantly by Italian industry and research institutions.

The mission also has an educational focus and Roberto Vittori will spend time carrying out activities with the objective of stimulating primary and secondary school pupils, and university students of technology and space. This will help to bring the European human spaceflight programme and research performed in space to a wider public.



Soyuz TMA-4 spacecraft docked on the nadir port of the Russian Zarya module of the ISS on 29 April 2004 during the DELTA mission with ESA astronaut André Kuipers. (Image: NASA)

To increase operational experience aboard the ISS. From a European perspective the Italian Soyuz mission is important because it increases ESA's astronaut experience ahead of the launch of Columbus, Europe's own Space Station laboratory. Roberto Vittori will also be gaining valuable experience in the operation and utilisation of ISS modules.

To exchange the Station lifeboat: the Soyuz TMA-5, for the Soyuz TMA-6. The Soyuz TMA spacecraft act as a lifeboat for the ISS for use in emergency situations. These are exchanged every six months to maintain the integrity of the on-board systems of the ISS lifeboat.

The Soyuz TMA-5 spacecraft, which brought the ISS Expedition 10 crew to the International Space Station in October 2004, will be exchanged for the Soyuz TMA-6, which will bring Roberto Vittori and the ISS Expedition 11 Crew to the ISS. The Soyuz TMA-5 spacecraft will return with Roberto Vittori and the Expedition 10 crew.



ISS Expedition 10 Crew, cosmonaut Salizhan Sharipov, ISS Flight Engineer (Roscosmos) and ISS Commander Leroy Chiao (NASA) (Image: NASA)

To exchange the current ISS Expedition 10 crew for the ISS Expedition 11 crew. In light of the Columbia accident in February 2003, the Soyuz TMA spacecraft are currently acting as the crew exchange vehicles for the ISS permanent crews.

The current Expedition 10 crew of Salizhan Sharipov and Leroy Chiao arrived on the ISS on 16 October 2004 (along with Russian cosmonaut Yuri Shargin who returned with the Expedition 9 Crew eight days later). The Expedition 10 Crew will return with ESA astronaut Roberto Vittori at the end of his stay on the ISS. The Expedition 11 crew will be stationed on the ISS for approximately 6 months before returning.



Mission Overview

Mission Key Reference Data

CREWS:

Ascent Flight (Flight ISS-10S):

Soyuz Commander:

Soyuz Flight Engineer:

2nd Soyuz Flight Engineer:

Sergei Krikalev (Roscosmos)

Roberto Vittori (ESA)

John L. Phillips (NASA)

Backup Soyuz Commander:

Backup Soyuz Flight Engineer:

Backup 2nd Soyuz Flight Engineer:

Mikhail Tyurin (Roscosmos)

Robert Thirsk (CSA)

Dan Tani (NASA)

Return Phase (Flight ISS-9S):

Soyuz Commander:

Soyuz Flight Engineer:

2nd Soyuz Flight Engineer:

Salizhan Sharipov (Roscosmos)

Roberto Vittori (ESA) Backup R.Thirsk (CSA)

Leroy Chiao (NASA)

SPACECRAFT:

Launcher:

Launch Spacecraft:

Return Spacecraft:

Soyuz FG

Soyuz TMA-6

Soyuz TMA-5

LAUNCH and LANDING SITES:

Launch Site:

Landing Sites:

Baikonur Cosmodrome, Kazakhstan

Near town of Arkalyk or Dzhezkazgan in Kazakhstan

MISSION PARAMETERS:

Launch Date:

Time to ISS:

Docking:

Altitude:

Inclination:

15 April 2005 02:45 Central European Time

~2 days 1 hour 25 minutes

17 April 2005 04:10 Central European Time

~400km

51.6°

Undocking:

Return Duration:

Landing:

24 April 2005 20:38 Central European Time

~3 hours 22 minutes

25 April 2005 00:00 Central European Time