

A composite background image showing the International Space Station (ISS) in orbit over Earth, a large orange planet (Mars), and the Moon. An astronaut in a white suit is visible on the left side of the frame.

Practicing for Mars: The International Space Station (ISS) as a Testbed

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What are we doing on ISS?

Technology Demos & Critical Systems Maturation

Long Duration Clothing

Fluid Physics

Robotics and Tele-robotics

Combustion Technology

Life Support Systems

Delay Tolerant Networks & Advanced communications

Human Health and Performance

Operations Simulations and Techniques

Voice Cmd/Tlm

Video Data Text

plans

Procedures

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Exploration testing plans

- Exploration prep testing on ISS has been ongoing since 2012
 - Number of tests increasing with each ISS expedition
- One Year Crew Expedition starting in Spring 2015
 - ROSCOSMOS and NASA are partnering on the Participating Crew are Mikhail Kornienko and Scott Kelly
 - Majority of testing is an extension of current Human Biomedical Research investigations
 - Plan for extending & expanding upon current operations techniques and tech demo studies
- ESA 10 Day Mission in Fall 2015
 - ESA astronaut focus on testing exploration technologies
- Many more opportunities throughout the life of ISS!



NASA HRP Pre-flight Milestones for One-Year Mission
Corresponding FSA, JAXA, ESA, CSA milestones to be provided through MHRPE

18 July 2013

Year	Month	Event	Status
2012	30 Nov	L28	✓
	February		L
	March		L
	June		L
2013	August		L
	September		L
	November		L
	December		L
	January		L
	February		L
	March		L
	early April		L
	April		L
	May		L
	June		L
2015	30 Mar		L

US and Russian Candidate Investigations for One-Year Mission

International Partner Candidate Investigations for One-Year Mission

Partner	PI	Title	Possible Match	
			NASA	Roscosmos
JAXA	Mukai	Biological Rhythms – 48 hours	ActiWatch	Pilot-T
	Mukai	ICP – 1 year	Ocular Health	(Medical mandatory)
	Mukai	Myco	Microbiome	(Under review)
ESA	Blanc	Energy	Fluid Shifts (under review)	Chibis
	Chouker	Immuno-2 (co-investigator)	Biochemical Profile, Surveillance	Immuno-2