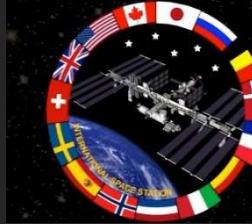


# esa HUMAN SPACEFLIGHT TODAY: THE ISS



# esa HUMAN SPACEFLIGHT TODAY: THE ISS Current ISS Crew

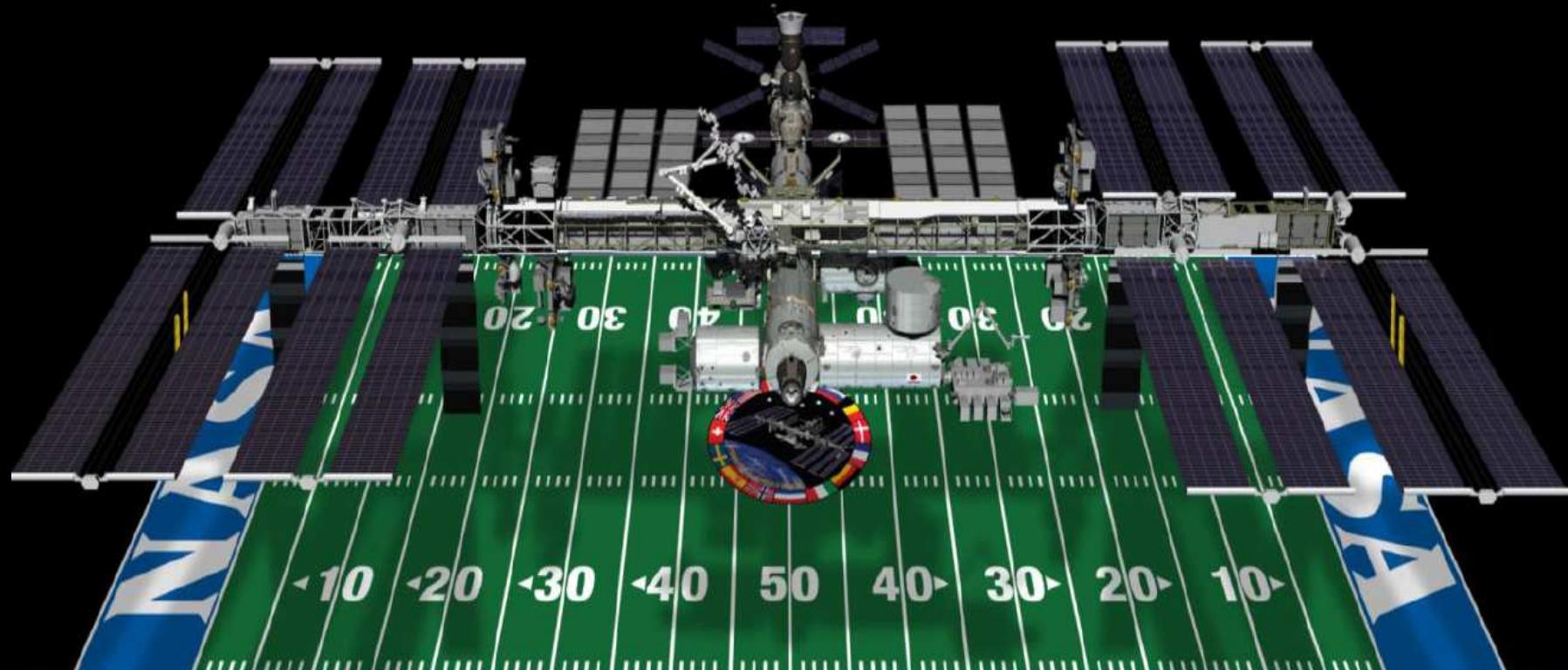


Expedition 42

**esa** HUMAN SPACEFLIGHT TODAY: THE ISS  
ISS Crew Vehicle: *Союз TMA-M*



# esa HUMAN SPACEFLIGHT TODAY: THE ISS ISS Features



**Size:** 51x109x20 m

**Volume Pressurized/Habitable:** 901 m<sup>3</sup> /387 m<sup>3</sup>

**Mass:** 419 400 Kg

**Power:** 84 kW

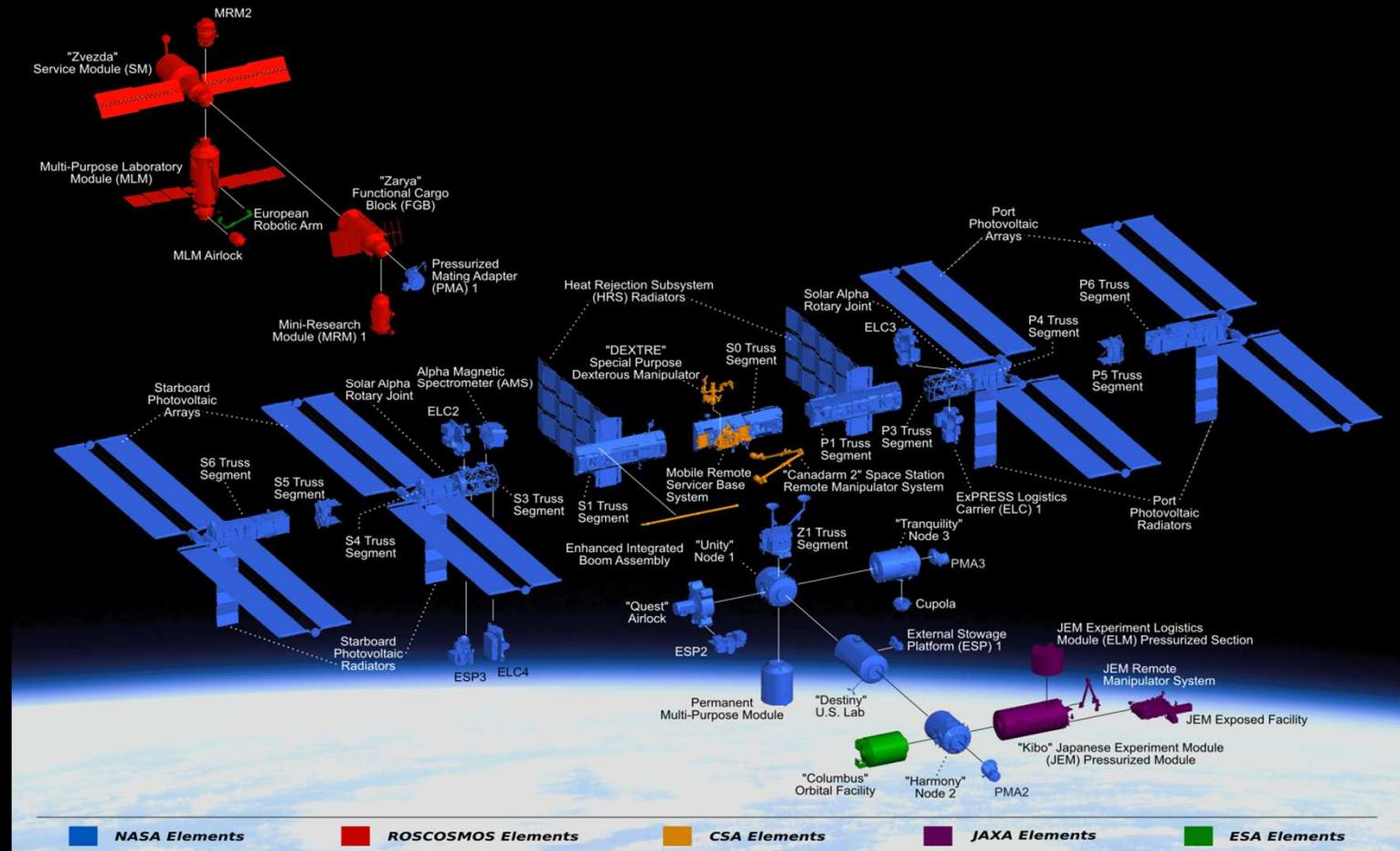
**Altitude:** 410 km +

**Velocity:** 27 600 km/h or 7.66 km/s

**Orbit Inclination:** 51.65 deg

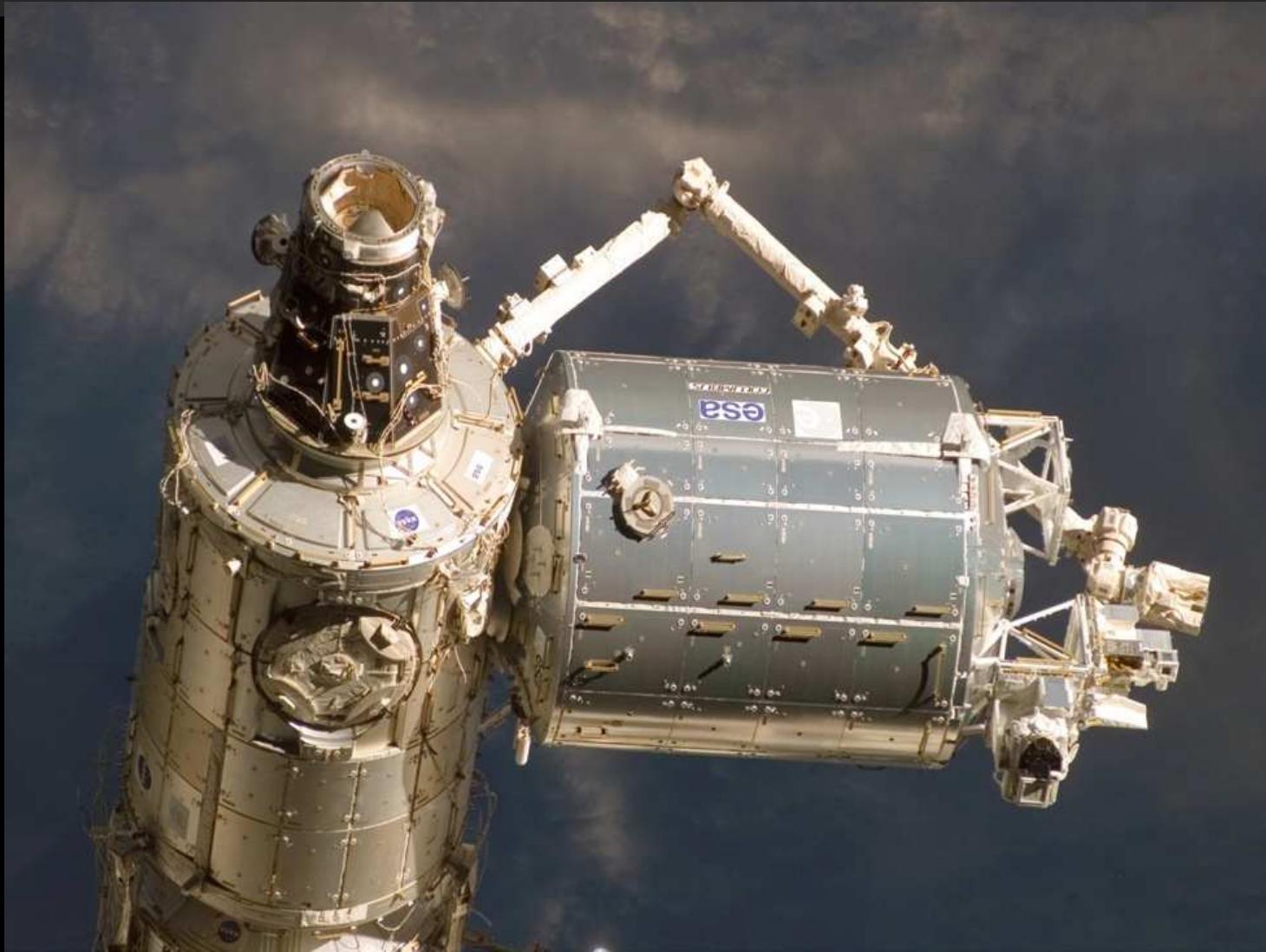
**Orbital Period:** 91 mn

# esa HUMAN SPACEFLIGHT TODAY: THE ISS ISS Elements

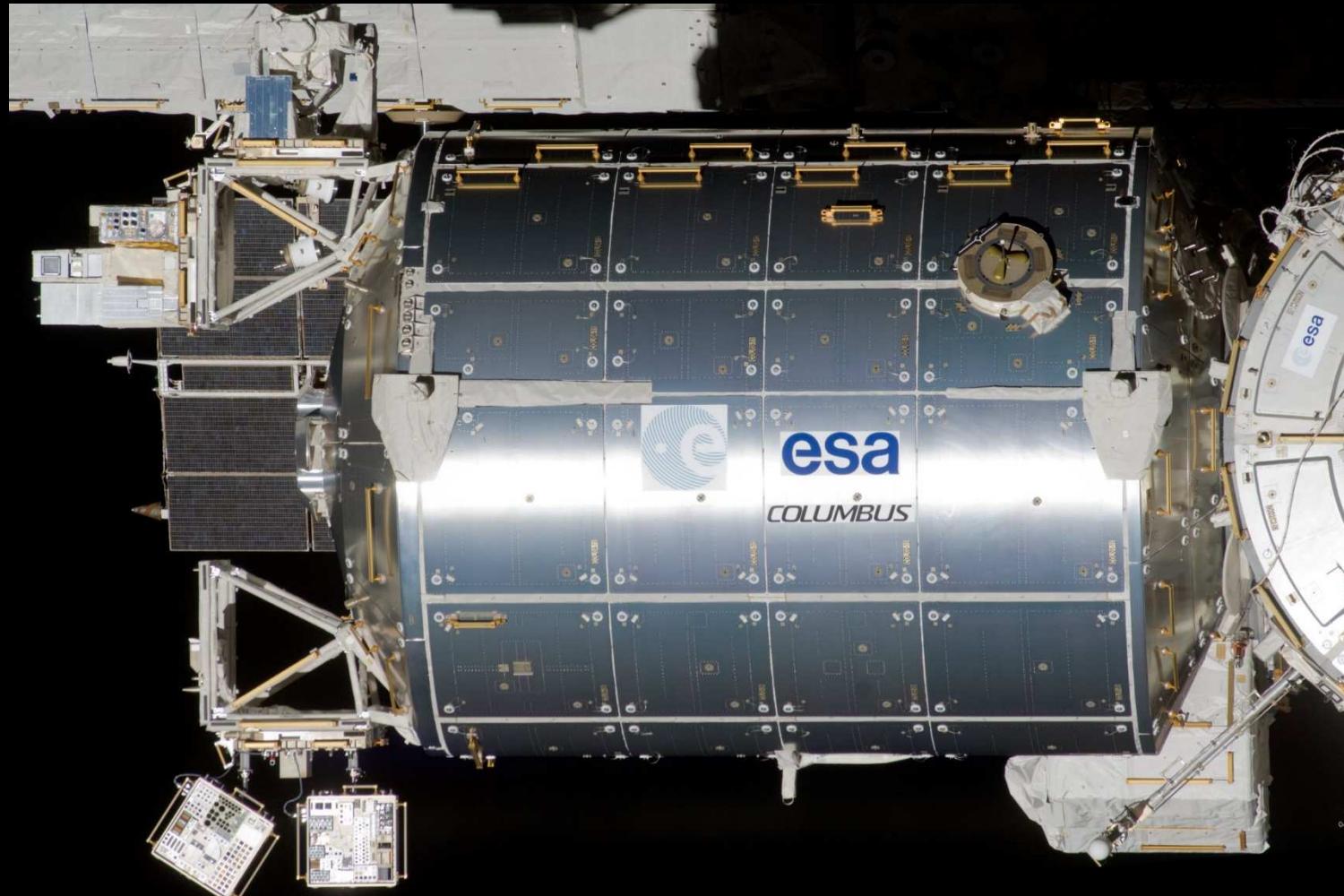


# esa HUMAN SPACEFLIGHT TODAY: THE ISS

Columbus Module Installation (Feb 2008)



## ESA Columbus Module



**esa** HUMAN SPACEFLIGHT TODAY: THE ISS  
Inside the Columbus Module



# esa HUMAN SPACEFLIGHT TODAY: THE ISS ISS Control Centers



MCC-H (Houston)



ЦУП (Moscow)



POIC (Huntsville)



COL-CC (Munich)



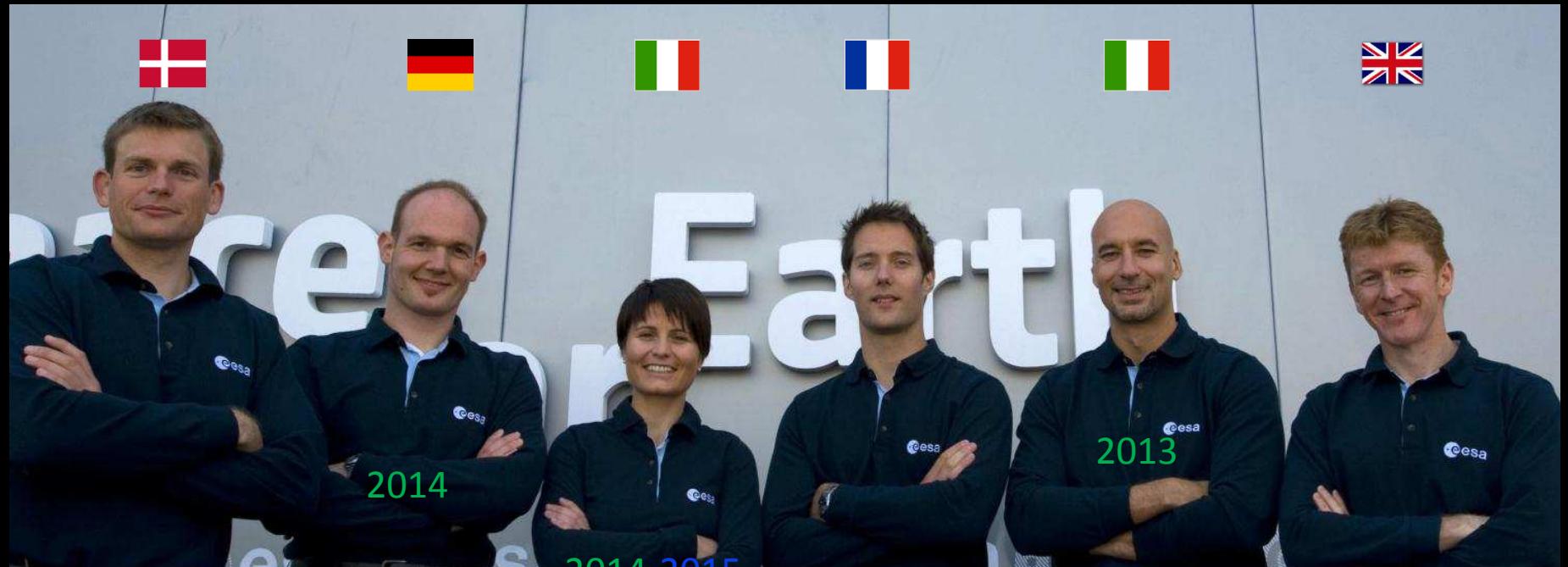
ATV-CC (Toulouse)



SSIPC (Tsukuba)



## ESA Astronaut Class 2009



2015

2014

2014-2015

2013

2016-2017

2015-2016

# esa HUMAN SPACEFLIGHT TODAY: THE ISS

## L. PARMITANO (Expedition 36-37)



- Launch:  
**28-May-2013**
  
- Return:  
**11-Nov-2013**
  
- Duration:  
**167 Days**



# esa HUMAN SPACEFLIGHT TODAY: THE ISS

## A. GERST (Exp 40-41)



- Launch:  
**28-May-2014**
  
- Return:  
**10-Nov-2014**
  
- Duration:  
**166 Days**



# esa HUMAN SPACEFLIGHT TODAY: THE ISS

## S. Cristoforetti (Expedition 42-43)



- Launch:  
**23-Nov-2014**
  
- Return:  
**11-May-2015**
  
- Duration:  
**168 Days**





## ***Andreas Mogensen***

- ISS short-duration mission
- Launch/Landing: 9/2015



## ***Timothy Peake***

- ISS long-duration mission **Expedition 46/47**
- Launch: 11/2015
- Eighth ESA astronaut long-duration mission to ISS



## ***Thomas Pesquet***

- ISS long-duration mission **Expedition 50/51**
- Launch: 11/2016
- Ninth ESA astronaut long-duration mission to ISS

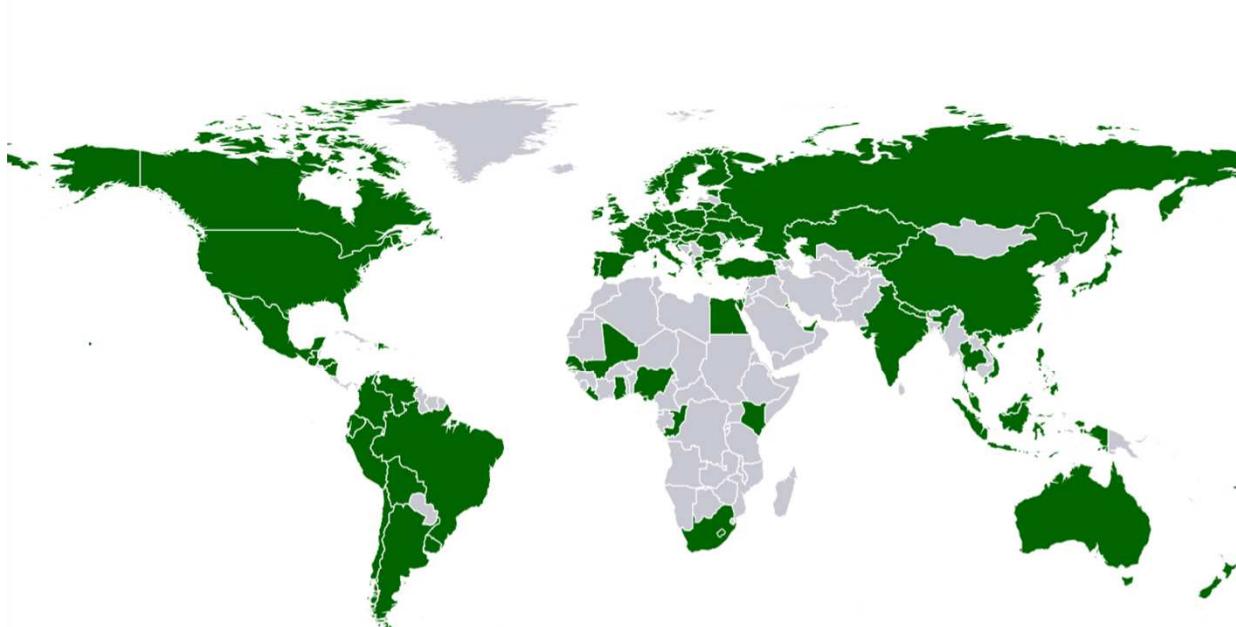


## *Countries / Areas with ISS Investigations*



Argentina  
Australia  
Austria  
Belarus  
Bermuda  
Bolivia  
Bosnia  
Brazil  
Bulgaria  
Chile  
China  
Columbia  
Croatia  
Czech Republic  
Democratic Republic of the Congo  
Dominican Republic  
Ecuador  
Egypt  
Estonia  
Fiji  
Finland  
Georgia  
Ghana  
Greece  
Guatemala  
Honduras  
Hungary  
India  
Indonesia  
Ireland  
Israel  
Kazakhstan  
Kenya

83 countries and areas



Belgium  
Canada  
Denmark  
France  
Germany

Italy  
Japan  
Netherlands  
Norway  
Russia

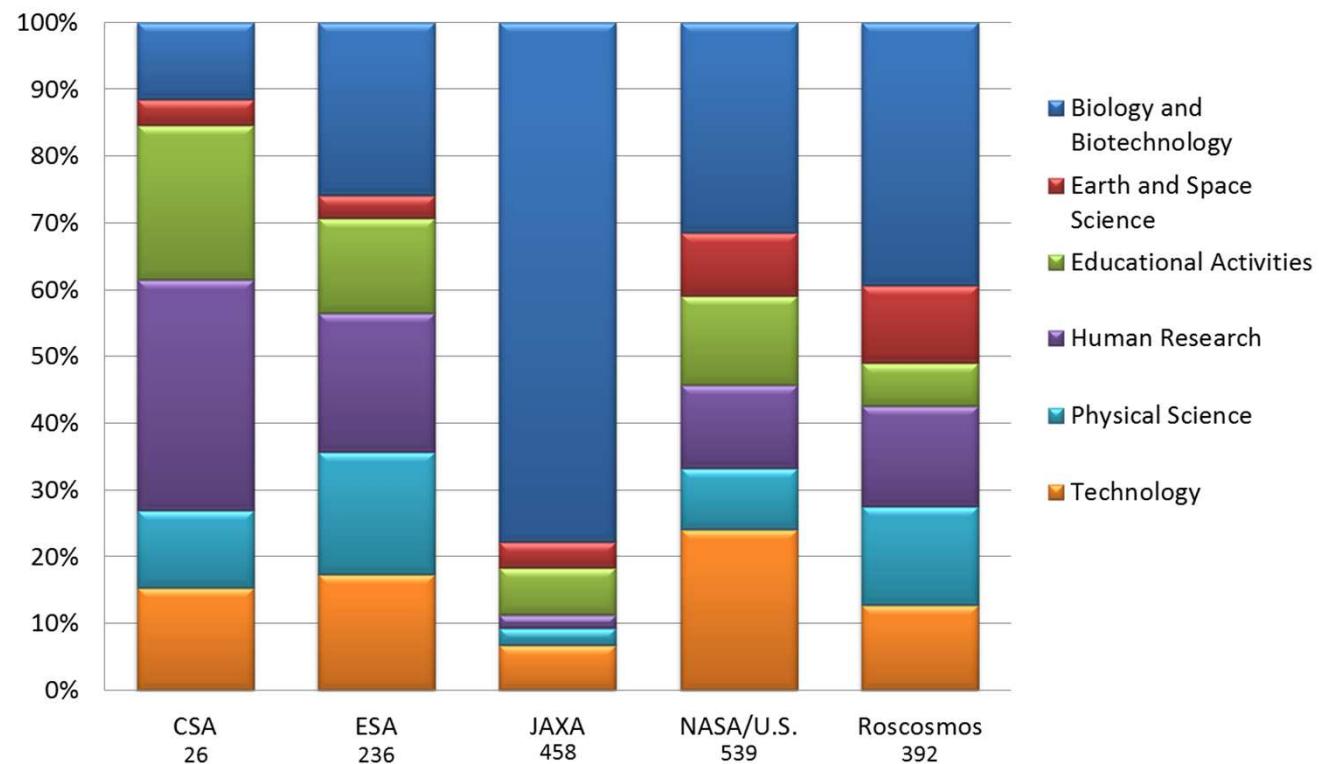
Spain  
Sweden  
Switzerland  
United Kingdom  
United States

Kuwait  
Kyrgyzstan  
Lebanon  
Liberia  
Lithuania  
Luxembourg  
Macedonia  
Malaysia  
Mali  
Mexico  
Montenegro  
Nepal  
New Zealand  
Nicaragua  
Nigeria  
Peru  
Philippines  
Poland  
Portugal  
Republic of Korea  
Republic of South Africa  
Romania  
Senegal  
Slovakia  
Slovenia  
Taiwan  
Thailand  
Trinidad and Tobago  
Turkey  
Ukraine  
United Arab Emirates  
Uruguay  
Vatican City  
Venezuela  
Vietnam

# esa HUMAN SPACEFLIGHT TODAY: THE ISS ISS Research Disciplines



**Research Discipline of ISS Investigations By Partner Agency:  
Expeditions 0-38  
December 1998 - March 2014**





Questions...

