



National Aeronautics and  
Space Administration

## International Space Station: Assembly Complete





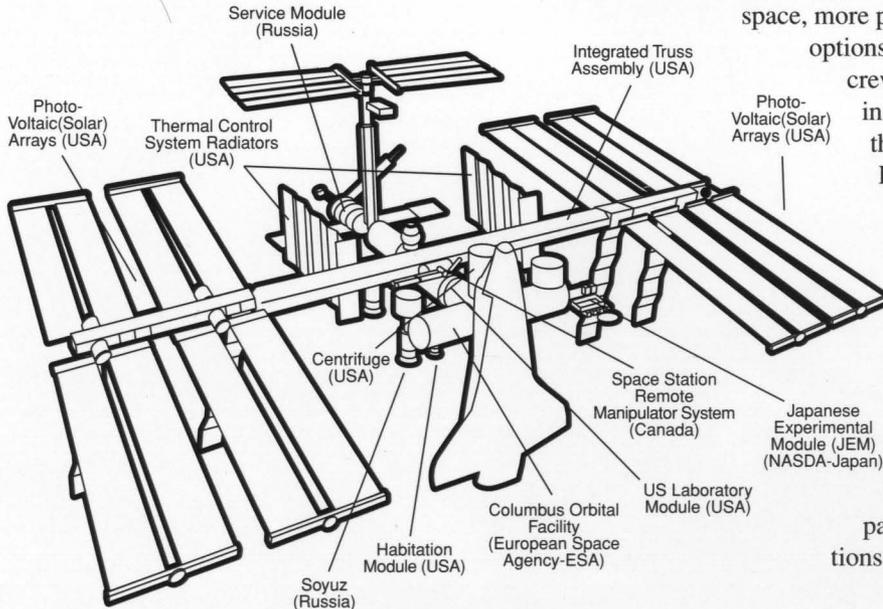
## International Space Station: Assembly Complete

Research conducted for early human spaceflight programs onboard the first US space station Skylab and on the space shuttle has greatly contributed to medical research, technology advancement and our understanding of life on Earth. However, the longest interval that any US astronaut has stayed in space equals only 115 days, not enough time to fully study the effects of space on the body or to conduct full-time science and technology research.

The international Space Station will serve as a permanent laboratory in Earth orbit, allowing astronauts and researchers from many nations

permanent access to the unique space environment. The microgravity environment in space is an unusual resource that cannot be duplicated on Earth for more than a few minutes. With its microgravity environment, the space station will serve as a testbed for technologies of the future, like robotics. The space station will become a research laboratory for new industrial materials, high-technology processes, advanced communications, and biomedical breakthroughs to name a few. On space station, researchers can produce very thin chips for advanced, high-speed electronics, grow human tissues and cells for medical studies, and develop purer protein crystals for improved medicines.

Combining the resources and scientific expertise of 13 nations, international Space Station is the largest cooperative scientific effort ever. Contributions from the international partners provide more laboratory space, more power, more logistical options and allow for a larger crew. International partners in space station include the United States, European Space Agency member nations (Belgium, Denmark, France, Germany, Italy, the Netherlands, Norway, Spain, and the United Kingdom), Russia, Japan and Canada. The diagram (left) identifies each partner's major contributions to the space station.



## Facts & Figures

<b>Wingspan</b>	
<b>End-to-End Width</b>	361 feet (110.03 meters)
<b>Length</b>	290 feet (88.39 meters)
<b>Mass (weight)</b>	924,000 pounds (419,126.4 kilograms)
<b>Operating Attitude</b>	220 miles average (407.44 kilometers)
<b>Inclination</b>	51.6 degrees to the Equator
<b>Atmosphere</b>	14.7 pounds per square inch (101.36 kilonewtons per square meter) same as Earth.
<b>Crew Size</b>	6 people at assembly complete

## Significant Dates

Date	Schedule	Payload
11/97	First Element Launch	FGB (on Proton rocket)
5/98	Capability for 3-person crew	Soyuz
11/98	US Laboratory Launched	US Lab Module
12/98	SSRMS (Canada)	Canadian Remote Manipulator System
2/99	First Utilization Flight	International Standard Payload Rack
11/99	First Russian Research Module Launch	Russian RM-1
3/2000	Japanese Lab Launch	JEM Pressurized Module
8/2001	Centrifuge Launch	Centrifuge
9/2001	European Lab Launch	Accommodation Module
		Columbus Orbital Facility on Ariane rocket
2/2002	Habitation Module Launch	US Hab Module
6/2002	Assembly Complete	Crew Transfer Vehicle
	Full 6-person crew capability	

*This illustration depicts the International Space Station in its completed and fully operational state with elements from the United States, Europe, Canada, Japan and Russia. The scene was produced by John Frassanito and Associates.*