The Mission

Space shuttle Endeavour’s STS-127 mission will carry the final two elements of the Japanese Experiment Module, called Kibo, to the International Space Station. During the 16-day mission, crew members will conduct five spacewalks to add the Japanese Experiment Module Exposed Facility, or JEM-EF, and the Japanese Experiment Logistics Module Exposed Section, or ELM-ES, to the Kibo laboratory.

The final components of Kibo will create a “front porch” on the station. The Exposed Facility and Exposed Section will provide an external platform for experiments to be directly subjected to the harsh environment of space.

STS-127 is the 29th flight to the space station, Endeavour’s 23rd mission and the 127th shuttle flight.

The Crew

Veteran space flier Mark Polansky will command Endeavour’s STS-127 mission, and Doug Hurley will serve as pilot. Mission specialists are Christopher Cassidy, Tom Marshburn, Dave Wolf, Tim Kopra and Canadian Space Agency astronaut Julie Payette.

During the mission, Kopra will transfer to the station and replace Japan Aerospace Exploration Agency astronaut Koichi Wakata as Expedition 20 flight engineer and science officer. Wakata will return to Earth aboard Endeavour.