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SPACE SHUTTLE (STS-135 / ATLANTIS)

The final space shuttle voyage, approved by the NASA Authorization Act of 2010, directs the space agency to conduct the STS-135 mission with a crew of 4 astronauts aboard Space Shuttle Atlantis. The 12-day mission will be the 37th flight to the International Space Station (ISS), the 33rd for Atlantis, and will end the shuttle program with 135 flown missions since 1981. Atlantis will carry the Italian-built Raffaello multi-purpose logistics module with a full load of supplies, experiments, and spare parts packed inside for delivery to the space station. Also aboard Atlantis is a cross-bay support truss with an in-space refueling experiment for the ISS. The refueling experiment is designed to demonstrate and test the tools, technologies, and techniques needed to robotically refuel satellites in space. The crew also will return an ammonia pump that recently failed on the station so that engineers can understand what caused the failure mechanism and improve designs for future spacecraft.

THE STS-135 CREW — Veteran astronaut **Christopher J. Ferguson** will command the final Atlantis crew of STS-135. Twice flown, he has logged more than 28 days in space since his selection to the astronaut corps in 1998. Second-time space flier **Douglas G. Hurley** will pilot Atlantis. An astronaut since 2000, he has logged over 376 hours in space as a shuttle pilot in 2009. Two-time shuttle veteran **Sandra H. Magnus**, a mission specialist astronaut since 1996, spent 4.5 months aboard the ISS and returned to Earth with the crew of STS-119 in 2009. Another member of the astronaut class of 1996, **Rex J. Walheim**, will be making his third space voyage as a mission specialist. He has logged over 565 hours in space, including 5 spacewalks with over 36 hours working in space.

THE STS-135 CREW INSIGNIA — The STS-135 patch represents the space shuttle embarking on its mission to resupply the orbiting space station. Shuttle Atlantis is centered over elements of the NASA emblem depicting how the shuttle fleet has been at the heart of the nation's space agency for the last 30 years. The crew patch also pays tribute to the entire NASA and contractor team that made possible all the incredible accomplishments of the shuttle program. Omega, the last letter in the Greek alphabet, signifies that STS-135 is the last flight of the space shuttle program.