

SPACE SHUTTLE
STS-109/COLUMBIA



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NASA's Hubble Space Telescope (HST) will get a scheduled maintenance visit from its Earthly caretakers. Mission STS-109 is the 27th space flight for Shuttle Columbia and is designated HST Servicing Mission 3B, the fourth Hubble Space Telescope Servicing mission. The seven-member crew of Mission STS-109, along with several Hubble Servicing Mission payloads, will fly aboard Columbia and rendezvous with the HST which is orbiting at approximately 314 nautical miles above Earth. Crew members will capture the telescope using the Shuttle's robotic arm and secure it on a workstand in Columbia's payload bay. During the 11-day mission, four mission specialist will perform five scheduled spacewalks to complete system upgrades to the telescope.

THE STS-109 CREW – Veteran astronaut **Scott D. Altman** will serve as commander on Mission STS-109 on his third flight into space. He has logged 664 hours in space since his selection to the astronaut corps in 1990. Pilot **Duane "Digger" Carey** will make his first spaceflight aboard Columbia. Prior to joining NASA, he was an Air Force F-16 experimental test pilot. **John M. Grunsfeld** will serve as payload commander/Mission Specialist 1. During his last flight into space he performed two spacewalks during the 3rd Hubble Space Telescope servicing mission. A veteran of three space trips, **Nancy Jane Currie** has logged more than 737 hours in space since her selection to the astronaut program in 1990. **Richard M. Linnehan**, a veteran of two spaceflights, served as a Columbia payload commander on STS-90, a Neurolab mission. **James H. Newman**, a veteran of three space missions, has logged more than 32 days in space, including four spacewalks totaling more than 28 hours. Rookie Astronaut **Michael J. Massimino** was selected as an astronaut candidate in 1996. As a research engineer he developed laptop computer displays for the Shuttle's remote manipulator system.

THE STS-109 INSIGNIA – The mission patch depicts the Hubble Space Telescope and the Space Shuttle Columbia over the North American continent. Inside of HST's aperture is a portrayal of the spectacular Hubble Deep Field Image, representing the billions of stars and galaxies in the universe. This Deep Field Image symbolizes all the major discoveries made possible by the HST over the last ten years, and all those to come following the Hubble installation of a new high-resolution and wide-field camera by the crew of STS-109. The orbiting telescope is also shown in the patch design with the smaller, sturdier, and more efficient solar arrays that will be installed during the spacewalks of STS-109.