

Shuttle veterans complete Hubble servicing crew

NASA HAS NAMED two veteran astronauts and a first-time flyer to the crew that will pay an early visit to the Hubble Space Telescope this October. Four experienced space walkers already have been training for the mission, designated STS-103, a nine-day flight to service and maintain the Hubble Space Telescope.

Commander Curtis Brown, Pilot Scott Kelly and European Space Agency Astronaut Jean-François Clervoy will join space walkers Steven Smith, Michael Foale, John Grunsfeld and ESA Astronaut Claude Nicollier.

Part of the servicing mission that had been scheduled for June 2000 was moved up after three of the telescope's six gyroscopes failed. Three gyroscopes must be working to meet the telescope's very precise pointing requirements, and the telescope's flight rules dictated that NASA consider a "call-up" mission before a fourth gyroscope failed. Having fewer than three working gyroscopes would preclude science observations.

STS-103 will be Brown's sixth shuttle mission, his third as commander. Brown, a lieutenant colonel in the U.S. Air Force, commanded last year's STS-95 mission and STS-85 in 1997. He also served as pilot on STS-77 in 1996, STS-66 in 1994, and STS-47 in 1992.

Kelly, a member of the 1996 Astronaut Candidate class, will be a first-time space traveler. A lieutenant commander in the U.S. Navy, he reported to NASA in April 1996, completing two years of training to qualify for assignment as a shuttle pilot.

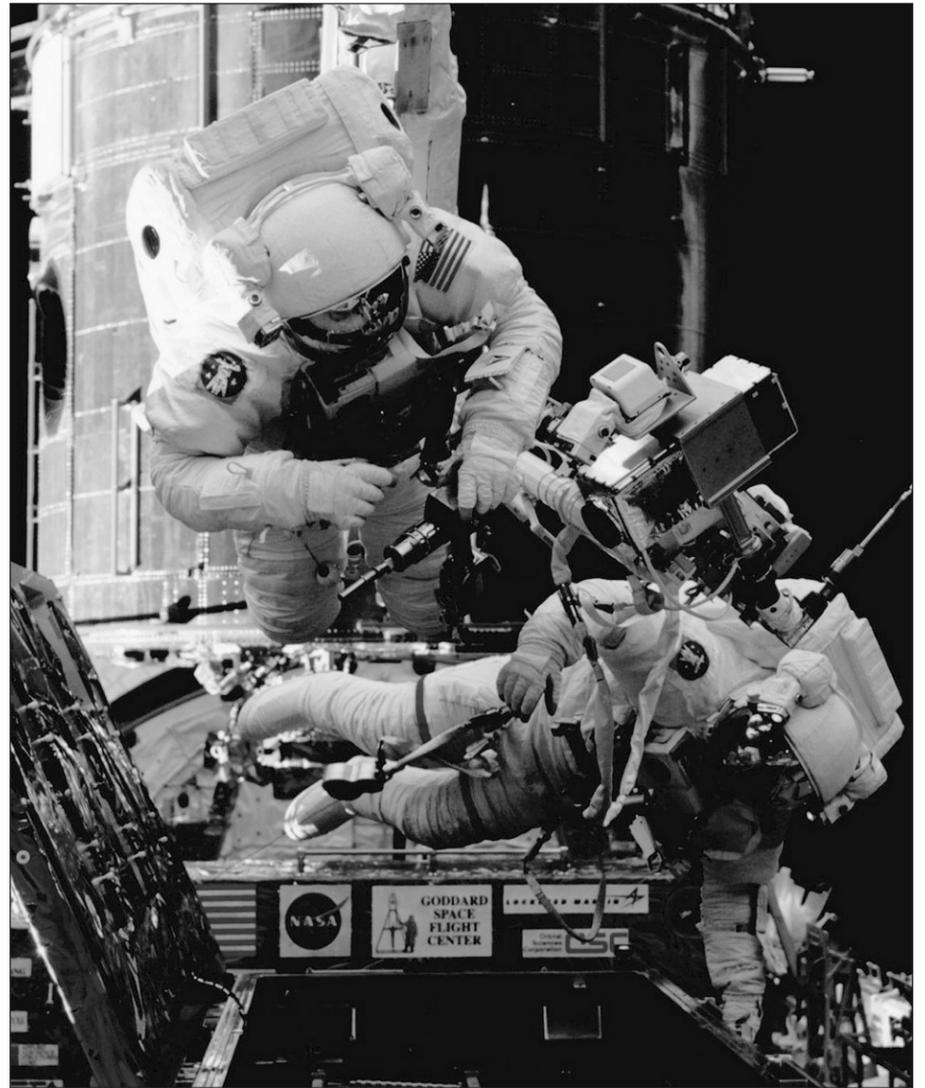
Clervoy will be making his third flight. As a mission specialist on STS-66, he used the shuttle's robot arm to deploy the CRISTA-SPAS atmospheric satellite. On STS-84 in 1997, he visited the Russian Mir Space Station.

The four mission specialists already in training include Payload Commander Steve Smith, a veteran of two space flights. Smith brings extensive Hubble servicing experience to the crew, having performed three space walks on Hubble servicing mission STS-82 in 1997.

Foale is a veteran of four space flights, including a long-term stay aboard Mir, and 10.5 hours of space walking. He also serves as the assistant director, technical, of JSC.

A veteran of two flights, Grunsfeld served on STS-67 in 1995, the second shuttle flight of the Astro observatory, and STS-81 in 1997, the fifth mission to Mir.

Nicollier is another veteran of Hubble servicing, having flown on STS-61 in 1993, the first servicing mission. He flew two other shuttle missions in 1992 and 1996. ■



STS082-717-026

Astronauts Steve Smith, center, and Mark Lee, on the shuttle's robotic arm, conduct a survey of the hand rails on the Hubble Space Telescope during the STS-82 servicing mission.

Neurolab mission highlights Brain Awareness Week activities

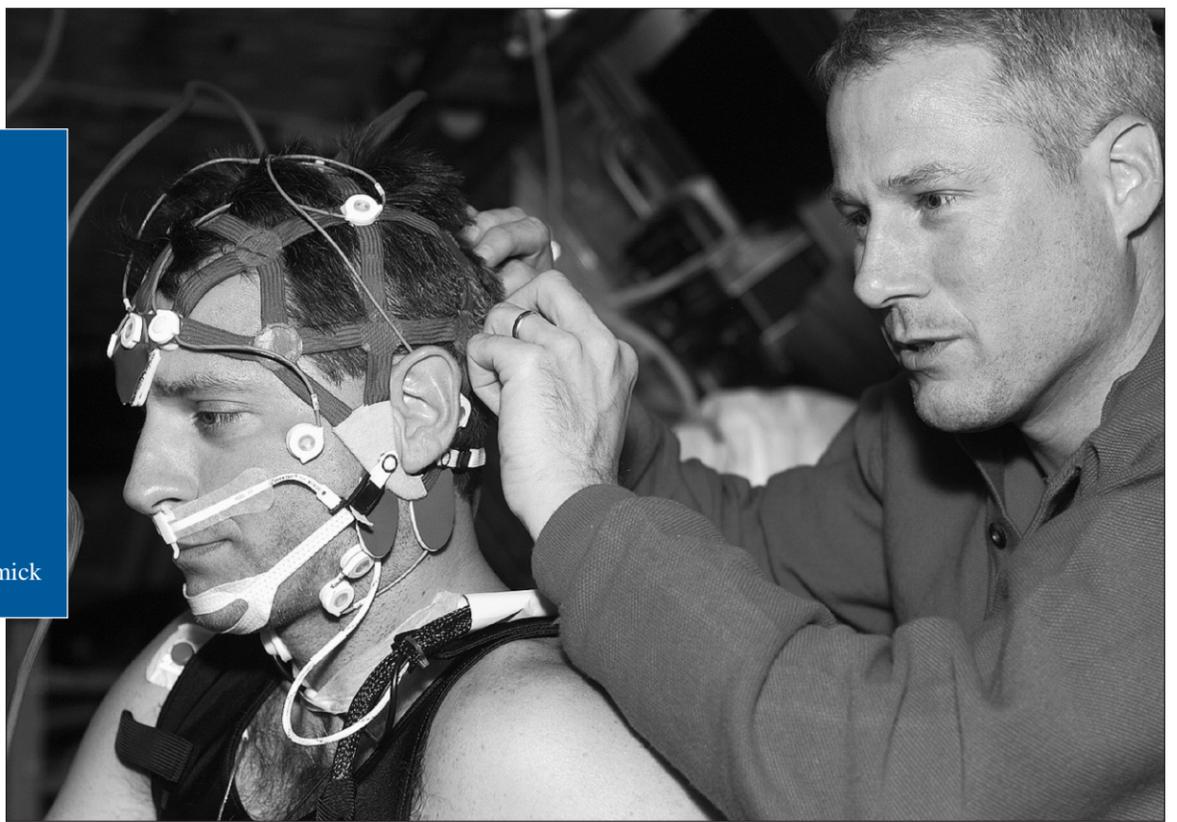
FOR 16 DAYS LAST YEAR, a crew of seven astronauts dedicated themselves to furthering our knowledge of the nervous system in an ambitious space shuttle mission called "Neurolab."

The STS-90 crew supported 26 experiments in eight disciplines, focusing on basic research in neuroscience. Crewmembers served as both subjects and operators as they carried out the experiments using a wide array of biomedical instrumentation, including some developed especially for the mission. Crewmembers included Commander Rick Searfoss, Pilot Scott Altman, Mission Specialists Kay Hire, Dr. Rick Linnehan and Dr. Dave Williams, and Payload Specialists Dr. Jay Buckley and Dr. Jim Pawelczyk.

"Neurolab, which was NASA's hallmark contribution to the 'Decade of the Brain,' has been recognized as the most scientifically sophisticated and technically complex life sciences mission ever undertaken by NASA," said mission scientist Dr. Jerry Homick of JSC. "As the result of a dedicated effort by

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—Dr. Jerry Homick



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Payload Specialists Jim Pawelczyk, above left, and Jay Buckley conduct sleep studies in the shuttle's middeck as part of the Neurolab experiments on STS-90. The Neurolab sleep studies are expected to increase understanding of the physiological effects of melatonin or the causes of sleep disruption. The studies will be applicable to many groups of individuals with a high incidence of insomnia, such as shift workers, the elderly, and people traveling across time zones. Pictured at left, Astronaut Dafydd Williams, mission specialist, serves as a test subject in the Lower Body Negative Pressure device. Also taking part in this run are Jim Pawelczyk, left, payload specialist, and Richard Linnehan, payload commander.

the entire science support team and the crew, all of the scientific objectives of the mission were met, and in some cases exceeded. The data from Neurolab will significantly increase our understanding of how the nervous system and brain develop in and adapt to microgravity spaceflight, and will provide new insights regarding the diagnosis and treatment of neurological disorders experienced by people on Earth."

Scientists will present preliminary results of the research conducted on Neurolab at a symposium in Washington, D.C. April 14-16.

Earlier this month, to commemorate NASA's support of neuroscience research, and as the one-year anniversary of Neurolab approaches, Dr. Joan Vernikos, director of the Life Sciences Division at NASA headquarters, presented a banner flown on the STS-90 Neurolab mission to David Mahoney, chair of The Dana Alliance for Brain

Initiatives. She made the presentation March 17 at a luncheon in the Russell Senate Office Building in Washington, D.C., to mark Brain Awareness Week (March 15-21).

Now in its fourth year, Brain Awareness Week unites the Society for Neuroscience with The Dana Alliance and a coalition of more than 440 science, advocacy and other health organizations that share an interest in elevating public awareness of brain and nervous system research.

Society members sponsored a variety of educational activities for the general public, including lectures, lab tours, classroom visits and exhibits to demonstrate the importance of basic neuroscience research to the health and well-being of the American public.

Also making remarks at the luncheon were several members of Congress: Senators Bill Frist and Ted Stevens, and Representatives Vernon Ehlers, Steny Hoyer and James Moran. ■



STS090-330-006