

## SCIENCE NEWS OF THE WEEK

# Women, Blacks Join Astronaut Corps

The National Aeronautics and Space Administration has named 35 new candidates for positions as astronauts aboard the space shuttle. Six of the group are the first women ever named to the U.S. astronaut program, three others are blacks (the one previous black candidate, USAF pilot Robert H. Lawrence Jr., was killed in a 1967 training accident), and one is of Japanese descent. Astronauts from this group could be in space as early as mid-1980, following a two-year training program that begins this July 1.

When NASA closed out its year-long recruiting drive last June 30, it had received 8,079 applications, of which 6,339 — including 1,259 women and 348 “minority” candidates — were deemed qualified for further evaluation. From that number, only 208 got as far as the “interview” stage, including 21 women and 15 minority candidates. Medical concerns reduced the total to 152 (with 14 women and 9 minority candidates), and of these, the NASA selection board recommended 40, including all six women and four minority candidates who subsequently ended up in the final group of 35 potential astronauts.

The candidates are divided into two groups. Fifteen of them — all male and all but one in the military services (the exception, Stanley D. Griggs, got his Bachelor of Science degree from the U.S. Naval Academy) — will be trained as pilots, charged with actually flying the rocket-cum-glider to and from its orbital positions. The preponderance of military men was largely if not entirely determined by the selection criteria, which included 1,000 hours (preferably 2,000) as “principal pilot” of jet aircraft and which leaned strongly toward candidates with test-pilot experience.

The other 20 candidates will be trained as “mission specialists,” responsible for coordinating all of the shuttle’s activities relating to its numerous planned scientific and engineering experiments. The chosen mission-specialist candidates, with a variety of scientific and engineering backgrounds, may become involved with spacewalks, payload handling and maintenance, and actual experimental operations.

All six of the selected women are in the mission-specialist category. They include Anna L. Fisher, a Los Angeles physician; Shannon W. Lucid, a postdoctoral fellow at the Oklahoma Medical Research Foundation (with more than 1,000 hours of non-jet pilot time, some of it in her own plane); Judith A. Resnik, a Ph.D. electrical engineer for Xerox Corp.; Sally K. Ride, a research assistant in physics at Stanford; Margaret R. Seddon, a resident in surgery at City of Memphis Hospital, and Kathryn D. Sullivan,

### MISSION SPECIALISTS

NAME/current position	RESIDENCE
Guion S. Bluford Jr. . . . .	Dayton, OH aeronautical eng.
James F. Buchli . . . . .	Lexington Park, MD engineering student
John M. Fabian . . . . .	Colorado Springs, CO aeronautics professor
Anna L. Fisher* . . . . .	Rancho Palos Verdes, CA physician
Dale A. Gardner . . . . .	Camarillo, CA flight officer
Terry J. Hart* . . . . .	Long Valley, NJ mechanical eng.
Steven A. Hawley* . . . . .	Santa Cruz, CA astronomer
Jeffrey A. Hoffman* . . . . .	Weston, MA astrophysicist
Shannon W. Lucid* . . . . .	Oklahoma City, OK biochemist
Ronald E. McNair* . . . . .	Marina Del Rey, CA optical physicist
Richard M. Mullane . . . . .	Fort Walton Beach, FL flight test eng.
George D. Nelson* . . . . .	Seattle, WA astronomer
Ellison S. Onizuka . . . . .	Edwards AFB, CA aerospace eng.
Judith A. Resnik* . . . . .	Redondo Beach, CA electrical eng.
Sally K. Ride* . . . . .	Stanford, CA physics researcher
Margaret R. Seddon* . . . . .	Memphis, TN surgery resident
Robert L. Stewart . . . . .	Edwards, CA test pilot
Kathryn D. Sullivan* . . . . .	Halifax, N.S., Canada geologist
Norman E. Thagard* . . . . .	James Island, SC physician
James D. van Hoften* . . . . .	Houston, TX civil eng. prof.

### PILOTS

NAME	RESIDENCE
Daniel C. Brandenstein . . . . .	Oak Harbor, WA
Michael L. Coats . . . . .	Great Mills, MD
Richard O. Covey . . . . .	Fort Walton Beach, FL
John O. Creighton . . . . .	Lexington Park, MD
Robert L. Gibson . . . . .	Leonardtown, MD
Frederick D. Gregory . . . . .	Hampton, VA
Stanley D. Griggs* . . . . .	Seabrook, TX
Frederick H. Hauck . . . . .	Oak Harbor, WA
Jon A. McBride . . . . .	Point Mugu, CA
Steven R. Nagel . . . . .	Edwards, CA
Francis R. Scobee . . . . .	Edwards AFB, CA
Brewster H. Shaw Jr. . . . .	Edwards, CA
Loren J. Shriver . . . . .	Edwards AFB, CA
David M. Walker . . . . .	Virginia Beach, VA
Donald E. Williams . . . . .	Lemoore, CA

\*civilian

van, a geologist whose Ph.D. was awarded this year by Dalhousie University in Canada. Of the six, only Fisher and Lucid are married, the latter with three children.

Two of the black candidates are also in the mission-specialist category: Guion S. Bluford, a Ph.D. in aerospace engineering and a branch chief at the Dynamics Laboratory at Wright-Patterson AFB in Ohio, and Ronald E. McNair, an MIT Ph.D. employed by the optical physics department

of Hughes Research Laboratories in Malibu, Calif. Frederick D. Gregory, an Air Force major at the Armed Forces Staff College in Norfolk, Va., is in the pilots group. The other person identified by NASA as a minority-group member is candidate mission specialist Ellison S. Onizuka, a Hawaiian of Japanese descent who is a section chief at the Air Force Test Pilot School at Edwards AFB in California.

The astronauts-to-be will first report to Johnson Space Center in Houston at the end of this month for a two-day orientation meeting, returning to JSC on July 1 for two years of training beginning with several months of classroom work, followed by the nuts-and-bolts phase of learning the shuttle’s complex systems. The first shuttle orbital flight is being aimed at March of 1979, but that and several subsequent ones will be manned by some of the 28 astronauts (including one now on leave) currently on the rolls.

Meanwhile, another group of space-shuttle riders is in the final selection process, as U.S. and European scientists evaluate candidates to become “payload specialists” for the Spacelab research module that will ride the shuttle repeatedly in the 1980s. Six U.S. candidates (including one woman) and four Europeans will be weeded down to about half that number, with final selection in the hands of the Spacelab researchers themselves, rather than the NASA astronaut office. □

## Two Cosmonaut crews share Salyut 6

In a series of space firsts, two Soviet cosmonauts aboard the Soyuz 27 spacecraft last week joined their Soyuz 26 colleagues aboard the Salyut 6 space station, shared the premises for five days, swapped spacecraft and returned to earth. Vladimir Dzhanibekov and Soyuz 12 veteran Oleg Makarov were launched on Jan. 10 and docked with Salyut 6 a day later, where Yuri Romanenko and Georgi Grechko had been since their own docking on Dec. 11 (SN: 12/17/77, p. 406). On Jan. 15, Dzhanibekov and Makarov boarded their predecessors’ craft, uncoupled from the Salyut and left orbit, bringing with them film and experimental data and presumably leaving new supplies of food, film and other gear behind for the original occupants. Last October, Soyuz 25 had failed to dock with the station’s primary collar, so Soyuz 26 used the secondary one, later conducting an 88-minute spacewalk (the first by Soviet spacemen since 1969) to see if the main collar was actually usable. □