Ten Million Miles in Space: A Conversation with Former Astronaut Capt. Winston Scott (USN, Ret.)

Winston Scott helped catch a 3,000-pound satellite by hand while in space. "It was like trying to catch a small car," he says.

By Olia Sileo
Contributing Editor

When Capt. Winston Scott (USN, Ret.) was an astronaut with the NASA space program, he captured a 3,000-pound satellite—in outer space, with his hands.

Selected to join NASA in 1992, Scott flew two space shuttle missions to test and evaluate equipment and techniques in preparation for assembling the International Space Station. Before leaving the program in 1999, he had made three spacewalks and traveled more than 10 million miles in space.

It took a lot of determination to attain these goals. Raised in Miami, Florida, in the 1950s, Scott's largely segregated schooling provided few outlets for his scientific curiosity, but his parents instilled in him the value of a well-rounded, higher education.

He earned a Bachelor of Arts degree in music from Florida State University in 1972, and a Master of Science degree in aeronautical engineering with avionics from the U.S. Naval Postgraduate School in 1980. In his book, *Reflections from Earth Orbit* (Apogee Books Space Series, 2005), he wrote about overcoming life's obstacles to venture beyond the earth's boundaries.

Since retiring from the U.S. Navy and NASA, Scott has served as a university vice president, an associate instructor of electrical engineering and as executive director of the Florida Space Authority. In July 2008, he was named dean of the College of Aeronautics at the Florida Institute of Technology in Melbourne. He and his family recently moved to the area.

Scott maintains a calendar of speaking engagements, among many other activities. He holds a 2nd degree black belt in Shotokan karate. He enjoys music, and played trumpet with several bands along the Cape Canaveral Space Coast. In addition, he remains an active pilot.

From his new post at the College of Aeronautics, Dean Scott gave *COMMERCE* his personal perspective on going into space—and on coming back to Earth.

COMMERCE: *Who influenced your life? Did you have mentors?*

CAPT. WINSTON SCOTT: My parents were the main influence in my life. They were not college graduates, but they insisted that all their children go to college and get a good education. They knew that education was our ticket to a better life and they saw to it that we always did the best we could in school, that we valued education.

Q. *Were you a* Star Trek *fan growing up, and did it influence you?*

A. I never watched *Star Trek* until its last year running. I suppose it may have influenced me on a subconscious level. I always enjoyed movies about space and about flying, but I never thought I would do it as a living. There were no role models in my neighborhood to encourage us to go into engineering and aviation. That was foreign to me and to the people I grew up with in the 1950s and 1960s. In those days, schools and neigh-

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borhoods were segregated. Our little school didn't have much equipment or materials. There were no engineers in the school, no physicists. There was no guidance to move me in that direction, even though I found science interesting.

Q. *How did you get to be an astronaut?*

A. That was a step in my naval career. I had been flying for the Navy for many years and had gone from operational flying to research and development, testing and evaluation. I thought the next step for me was to become an astronaut. It was a new challenge. I applied for it and was one of the fortunate ones to be selected.

Q. *Such a small number of people ever achieve that. How do you feel about having accomplished it?*

Before leaving the NASA Space Program in 1999, Winston Scott had made three spacewalks and traveled more than 10 million miles in space.

A. I wouldn't trade it for anything in the world. It's absolutely incredible and life-changing, in every respect: your experiences, how you view life, even how other people view you. It gives one a different perspective on the earth and on life on earth. It made me realize how small and fragile the earth is and, therefore, we need to take care of it. Earth is our home and we want to keep it healthy, clean and flourishing. If we don't take care of it, we could destroy it.

Q. *On your second space shuttle mission, you and a fellow crewmember from Japan captured the Spartan science satellite during an eight-hour spacewalk. How and why did you capture a satellite?*

A. We caught the satellite by hand. It was spinning, but had slowed down to where we could reach out with our gloves and catch it. We were outside the space shuttle, with our boots latched into foot restraints so we could have both hands free. The satellite weighed 3,000 pounds; it was like trying to catch a small car. What made it more risky was that there were only certain places on the satellite that we could touch because it had sharp edges—and you don't want to cut a glove in space.

Once we grabbed the satellite, we rotated it into its proper docking attitude and latched it in the shuttle's payload bay. The satellite had malfunctioned on deployment, so it never got to do its experiments. We brought it back home, where it was repaired and sent up again. It took a lot of planning and a bit of luck that we were able to get it. In fact, no one was sure we would be able to do this. It's not done often; I think this was the third time.

Q. *What was the most challenging thing you did in outer space?*

A. The spacewalks. They are very demanding physically, and probably the most risky thing we do in space because we're outside, exposed to the elements of space…micrometeorites and so on. The shuttle routinely returns from space with damage where it's been hit by micrometeorites. We try to shield the space walkers by positioning the shuttle in such a way that it acts as a shield for them.

Q. *Were you ever sick in space and how did you handle it?*

A. Fortunately, I was not sick in the classical sense of the word, but in the general sense, everybody gets sick because we have a very broad definition of what we call "space adaptation" sickness. When you're in space, for example, all the fluids inside your body float upward because there is no gravity to keep things down. You get fluids floating up to your head, so you get headaches; your spinal column stretches out, so you get backaches. Everybody suffers from those; you deal with it. It's not miserable, just a little uncomfortable, and some things ease up after a while.

Q. *What was the most amazing thing about being in space?*

A. The most amazing thing was being there and experiencing continuous weightlessness, where you just float all the time. The other thing that's so incredible is viewing the earth and the solar system from space. When you look outside the shuttle and see the Earth beneath you, the sun, the moon and stars and other planets, it's just the most awesome thing. Incredibly beautiful pictures don't do it justice. Everything is so bright and clear

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because you're looking through no atmosphere. People on earth have never seen clarity such as that.

Q. *What did you miss most when you were in outer space?*

A. You miss your family but you get to talk to them periodically; we have the equivalent of e-mail. The physical thing you miss most is being able to take a shower. There's no gravity, so you can't take a shower; you have to sponge-bathe. When you get home, you just want to take a conventional shower where the water runs down.

Q. *What did you do when you returned from your first space flight?*

A. That's a really good question because there is a psychological let-down. You've been training for so long and you've been in space; now, all of a sudden, you're back to the routine activities on the ground. But you realize that up front; you know it's going to happen and, therefore, you can better understand it and better prevent it from happening. There are a series of activities we do as a crew when we come back. We have debriefings and reports to write; then, we spend about a month on the road, speaking to different groups about what we did. That allows you to share the experience and gradually brings you back down to your routine activities.

Q. *You played the trumpet with various bands along the Cape Canaveral Space Coast. Did you ever practice your musical skills in space?*

A. I never brought my trumpet into space; I wish I had. At the time, we were so space-limited that I didn't pursue it. But we've had a number of astronauts take instruments into space. A lot of astronauts play music. In fact, we had an astronaut band.

It's a very special thing to be able to make music. I just left Houston, where I was playing in the League City Community Concert Band and in two jazz groups, including a swing band called Brass, Rhythm and Reeds. I haven't joined a specific music group here yet, but I intend to.

Q. *How important is it to continue the space program?*

A. It's a necessity. When we look at all the benefits to humankind that we received from our space program, the list just goes on and on. Our quality and standard of living in this country is due, literally, to scientific advancements we got from the space program; for example, the miniature circuits in my laptop computer, and the fact that we can transmit tremendous amounts

As a naval aviator, Winston Scott was a fighter pilot, helicopter pilot, production test pilot, and a research and development project pilot, accumulating more than 5,000 hours of flight time in 20 different military and civilian aircraft.

of data over tremendous distances through satellites. A lot of food packaging and preservation—things like thermal-stabilizing food for our troops in the military, and freeze-drying food—came from the space program because we had to package food for astronauts to take into space. The technology in our vehicles, quieter and more fuel-efficient airliners and fire-retardant seats in airplanes all came from NASA. The new materials used in automobiles came from the aerospace industry, which was driven by NASA.

Q. *What are you doing now?*

A. I am dean of the College of Aeronautics at the Florida Institute of Technology. Many of our graduates become airline pilots, or work in corporate or military sectors; others go into the aviation industry. I'm not involved in the teaching yet, but I definitely want to be. Traditionally, students don't interact with deans much. I'd like to be different. I want the students to know me and for us to talk with each other.

Since we just arrived in the area, we are still getting settled. I'm getting involved with my musical activities as a hobby. Since my book was published three years ago, I have book signings and an active speaking schedule. I've become active in a local flying club and I plan to become active in one of our Experimental Aircraft Association (EAA) chapters.

Q. *Would you go into outer space again?*

A. Absolutely yes, if the opportunity came up and they were doing something new and different. If I had an opportunity to go to the moon, I would do it in a heartbeat. I'd love to be in the first crew going to Mars, but that's years away. ■