# Air and Space this Week Item of the Week

## **GUION HAD A DREAM, TOO**

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Dr. Martin Luther King Jr.'s famous "I Have a Dream" speech was delivered to a huge audience ringing the National Mall's Reflecting Pool on August 28, 1963. You will no doubt be reminded of this event in the local and national news that date!

On August 30, 1983, almost exactly twenty years later, Colonel Guion Stewart Bluford Jr. became the first African-American astronaut to fly in Space. I hope he is mentioned at the same time the newsies cover the Dream speech anniversary, but...

The coincidence between the 60<sup>th</sup> anniversary of the former and the 40<sup>th</sup> of the latter is too good for me to overlook!

### "I HAVE A DREAM"

The Civil Rights movement of the early 1960s was set in a turbulent era where the racially-restrictive Jim Crow laws were yielding, sometimes violently sometimes not, to the realities of the need for racial justice. One of the most iconic events of that time was the "I Have a Dream" speech delivered by Dr. Martin Luther King Jr. on the National Mall on August 28, 1963.

National political will for increasing civil rights had been building in the late 1950s and early 1960s. President Kennedy was pushing national civil rights legislation early in his term, but its passage was being met with considerable resistance. A. Philip Randolph and Bayard Rustin organized a mass demonstration called the "March on Washington" to advocate for civil and economic rights denied to African-Americans. A quarter-million people went to DC and lined the Reflecting Pool on the National Mall to hear a number of speakers call for equal treatment of all Americans under the law.

Martin Luther King spoke last.

Standing on the steps in front of the Lincoln Memorial, King spoke passionately about the Emancipation Proclamation, then 100 years old, and the lack of equality still remaining in America. He often used a reference to dreams of black people in his preaching and public appearances, and he departed from his planned remarks at the end of his speech in order to shift to that theme. He started with "I have a dream," to which Mahalia Jackson, there to sing to the assembled crowd, yelled, "Tell them about the dream, Martin!"

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And he did.

The speech went down in history, and led directly to the Civil Rights Act of 1964 and the Voting Rights Act of 1965 (catalyzed in large part by "Bloody Sunday" at the Edmund Pettis Bridge in Selma, Alabama). King became *Time Magazine*'s Man of the Year for 1963, and he won the Nobel Peace Prize in 1964. The Martin Luther King Jr. Memorial next to the Tidal Basin in DC was dedicated in 2011. Thousands gathered on the National Mall to commemorate the 50<sup>th</sup> anniversary of the speech, including Presidents Obama, Carter, and Clinton, and a number of MLK's family.

The Smithsonian Institution's newest unit, the <u>National Museum of African American History and Culture</u>, was opened on September 24, 2016. A film was commissioned for the event, entitled, "August 28: A Day in the Life of a People," which focused on six events significant to the civil rights movement took place. Of course, "I Have a Dream" batted clean-up.

Dr. King's birthday became a Federal Holiday on November 2, 1983, and was first observed on January 20, 1986.

#### **GUION STEWART BLUFORD JR.**

Guion Bluford Jr. was born on November 22, 1942, in Philadelphia. He did well in primary and secondary school, and developed a strong interest in aviation as a boy. He no doubt dreamed of being a pilot someday, and perhaps even becoming an astronaut. He earned a B.S. from Penn State in aerospace engineering in 1964 and was in PSU's Air Force ROTC program. His first Air Force assignment was pilot training at Luke AFB in Arizona, after which he flew 144 combat sorties in Vietnam.

After his service in SE Asia, Bluford enrolled at the Air Force Institute of Technology, earning both an M.S. and a Ph.D. in aerospace engineering, all while serving as development engineer and then Branch Chief at the Air Force Flight Dynamics Lab at Wright-Patterson AFB in Dayton, Ohio. He published several papers on computational fluid dynamics, and logged over 5,200 hours of flight time on a variety of aircraft, including 1,300 hours as a T-38 instructor pilot.

Bluford applied to NASA to be part of their Astronaut Group 8, along with about 10,000 other astronaut hopefuls. He became an Astronaut in August, 1979, along with 34 others in the Group. His technical skills were in great demand for Shuttle operations, and he would serve as Mission Specialist on STS-8, STS-61-A, STS-39, and STS-53.

His first trip to Space was his dream come true. The third flight of the Space Shuttle *Challenger* (STS-8) launched on August 30, 1983, twenty years and two days after MLK's "I Have a Dream" speech. *And he, Guion Bluford Jr., was aboard, the first black American astronaut to go into Space.* 

STS-8's primary mission was to deploy the *Indian National Satellite* (*INSAT-1B*) into low Earth orbit. Other mission objectives included a field test of the then new Canadarm and a number of other experiments.

STS-61A (10/30/1985) was Col. Bluford's next flight, the last for *Challenger* before its tragic loss. Its primary objective was to launch the German D-1 Spacelab facility. This was the first time a Shuttle launched with eight astronauts on board; the crew included three German Mission Specialists to handle the 76-odd Spacelab experiments.

Col. Bluford's next Shuttle mission was <u>STS-39</u>, which launched on April 28, 1991. Shuttle *Discovery* carried a number of experiments, including a classified payload for the DoD. Everything worked as planned.

<u>STS-53</u> was Col. Bluford's fourth and final Shuttle flight. This was a completely DoD mission; the five-person crew deployed payload DoD-1 and performed several Military-Man-in-Space experiments.

All told, Guion Bluford spent 688 hours in Earth orbit.

After NASA, Col. Bluford served in several senior positions in the aerospace industry. He was inducted into the International Space Hall of Fame in 1997, the U.S. Astronaut Hall of Fame in 2010, and into the National Aviation Hall of Fame in 2919. He serves on many corporate boards and has honors and awards that would require more than a single-spaced page to relate. He has 14 honorary doctorate degrees, and has a building at Penn State named for him. He even had a musical composition, <u>Hold Fast to Dreams</u>, written in his honor by composer Nolan Williams Jr., performed first in 2017 by the Philadelphia Orchestra.

#### **LEGACY**

Guion Bluford was one of several African-Americans recruited to apply to NASA by *Star Trek* actress <u>Nichelle Nichols</u>, as part of NASA's effort to be more inclusive of minorities and women in astronaut selection. She also was the driving force behind Mae Jemison applying to the Astronaut Corps and Mae's becoming the first black female Astronaut to fly to Space. Nichelle, Guion, and Mae have long been proponents of greater inclusivity in NASA and other organizations, and have been role models for young people studying STEM subjects and starting on technical careers. A cadre of thus-inspired talented people from the diverse pool that is America are now in the middle of highly-productive careers, thanks to the inspiration of Nichelle, Guion, and Mae!

#### CODA

Guion Bluford Jr. was the first African-American astronaut to fly in Space, but he was not the first African-American picked for NASA's Astronaut Corps. That distinction belongs to Robert Henry Lawrence Jr., who had been selected for Astronaut Group 7 in June, 1967.

Lawrence's background and academic credentials were similar to Col. Bluford's. He was born in Chicago, graduated high school at 16, and graduated from Bradley University in 1956 with a B.S. in Chemistry. He was in the Air Force ROTC program at Bradley, and was Cadet Commander his senior year.

After graduation, Lt. Lawrence took flight training at Malden AFB in Missouri, got married, and served as an instructor pilot for T-33 training for the German Air Force. More academic work followed, with a Ph.D. in Physical Chemistry from The Ohio State University.

Promotions followed as Lawrence racked up flight time to over 2,500 hours, with over 2,000 hours in high-performance jets, including a lot of test flights in the F-104 Starfighter (aka the "Widow Maker"). The F-104 test program included a lot of glide tests to acquire data used in planning the flight characteristics and flight profiles for the X-15 and for the future Space Shuttle.

Maj. Lawrence completed the U.S. Air Force Test Pilot School at Edwards AFB successfully in June, 1967, and was selected by the Air Force to be an Astronaut (Group 7) in their Manned Orbital Laboratory program. He remained at Edwards in the meantime, serving as a training pilot for the F-104.

On December 8, 1967, he was in the backseat of an F-104, checking out the piloting of flight test trainee Maj. Harvey Royer during steep-descent approaches. Royer flared too late on final, and hit the ground hard enough to collapse the Starfighter's landing gear. Both men ejected on impact. Royer's seat went straight up; he suffered serious injuries, but survived. Lawrence's seat had a very short delay built into it, designed to keep the two ejections from colliding, but it was enough of a time delay to allow the aircraft to roll a bit. A very gruesome ending followed, best left to your imagination.

The Air Force's Manned Orbital Laboratory program was cancelled, but all of the Group 7 astronauts training for it ended up as Shuttle crew. One of them, Michael Adams, died in the only X-15 flight fatality, on November 15, 1967.

If you have never seen the Space Mirror Memorial outside the Kennedy Space Center, you should. It holds all the names of the brave men and women who have lost their lives in Space exploration or its pursuits. Of course, Gus Grissom, Edward White, and the crews of the lost *Challenger* and *Columbia* are there, but there are a number of Astronauts who died in service of NASA but not during spaceflight. They include: Theodore Freeman (Group 3, lost in a T-38 crash), Eliot See and Charles Bassett, the original *Gemini 9* crew lost in a T-38 crash), Roger Chaffee (a victim of the Apollo 1 fire along with Grissom and White), C.C. Williams (a T-38 crash), Adams (an X-15 astronaut), Lawrence, and Sonny Carter (died on a commercial flight while on NASA business).

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