



Photo: Elizabeth Weissinger / NASA

Beyond the Glass Ceiling: Why NASA Must Continue to Launch a Diverse Astronaut Corps

BY Thomas G. Roberts

If an American astronaut wants to go to outer space, they have to go through Russia to get there. And so far, an African American has never been launched on a Russian rocket. Last month's launch was supposed to change that.

SINCE THE SPACE SHUTTLE's retirement in 2011, NASA has been left without an American rocket to ferry astronauts to the International Space Station (ISS). The only way for American astronauts to get to space is by hitching a ride aboard the Soyuz rocket—a smaller, Russian-operated launch system that dates back to 1966—for \$82 million per ticket. With only three seats tightly squeezed inside the Soyuz crew cabin, the number of American astronauts flying to space each

year pales in comparison to the Shuttle-era in the United States. While upwards of 40 NASA astronauts were launched annually in the 1980s and 1990s, now no more than five Americans make it to space per year aboard the Soyuz. That means that American astronauts are getting fewer chances to fly than ever before. This shortage of opportunity is not distributed evenly among the NASA astronaut corps. The most affected group? African Americans. No African American astronaut has

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NASA Astronaut Jeanette Epps was originally scheduled to fly to the International Space Station in June 2018 as a part of Expedition 56. The Soyuz MS-09 launched without her on June 6 from Baikonur Cosmodrome. Photo: Joel Kowsky / NASA

flown since 2011, and none have ever flown aboard a Russian rocket.

By design, the NASA astronaut corps represents an elite fraction of the United States' population. Candidates must have the right education, a proven track record of success, and specialized training in order to be eligible for launch. Fewer than 350

Americans have flown to space.

For the first two decades of human spaceflight, the astronaut corps reflected the inequities of American society, favoring white male candidates over women and people of color. But over the past 40 years, NASA has remarkably counteracted these issues by fielding classes of astronauts that look more like the country they represent.

African Americans have been included in NASA's astronaut corps since 1978, when the agency selected three African American men to train for flight aboard the Space Shuttle. Since then, NASA has selected 15 more

African American astronauts, including three after the end of the Shuttle-era, destined to fly on a Russian system or a future American rocket. But being selected and trained for astronaut service at NASA does not guarantee a trip to space.

When flight assignments for the Russian Soyuz rocket are announced in the months or years before a space launch, NASA astronauts are selected from the **active astronaut roster**—NASA's group of trained astronauts eligible for space missions and awaiting flight assignments. African Americans have been on the list every year since the first class of Space Shuttle astronauts was selected in 1978, on average representing just over five percent of the roster.

While Americans have been flying aboard the Soyuz **since 1995**, an African American was not selected for a seat aboard the Russian rocket until January 2017, when NASA announced that Jeanette Epps would be flown on this summer's launch to the ISS. The news made headlines as Epps would be the first African American on a long-duration expedition to the International Space

Station (other African Americans stayed onboard for shorter trips during the Shuttle-era).

But a year later in January 2018, Epps was inexplicably pulled from the launch. NASA **announced** that she would be replaced by Serena Auñón-Chancellor, the only other American in Epps' 2009 astronaut class who had not yet flown.

Although it's **not uncommon** for

NASA to reassign astronauts before their flights due to recently discovered health concerns or issues that arose during the training process, Epps said in **an email to the Washington Post** that she was not removed from the launch for medical or training reasons—stoking claims that perhaps her race was part of the consideration.

No African American astronaut has flown since 2011, and none have ever flown aboard a Russian rocket.

We don't know why Jeanette Epps was pulled from her flight. Epps herself **doesn't know either**. But the numbers tell a troubling story. NASA has passed over African American astronauts for launch aboard the Soyuz rocket 55 times since 1995. If American astronauts were selected at random for flight—a far cry from the true selection process administered by NASA—there would be more than a 95% chance that at least one African American would have flown or been scheduled to fly on a Soyuz launch. Russia has been flying American astronauts for 23 years, and none of them have been African American.

If NASA is truly committed to diversity and equal opportunity for all astronauts, regardless of race, it needs to fully and publicly address why Jeanette Epps was not flown on last month's launch. Moreover, why—despite almost 25 years of launching Americans on Russian rockets—have African Americans never flown on a Russian launch? A diverse U.S. astronaut corps should not mean selecting African American astronauts for training and then leaving them grounded.

Although NASA claims that Epps is still eligible for future space missions, she has not been named to another Soyuz launch, despite four more being scheduled for this year and next. All four of the upcoming Soyuz flights include American astronauts added to the active astronaut roster after her. Soon, Epps will become the only astronaut left from her class who has not flown to space.

Rarely do astronauts go their whole career at NASA without flying to space; those who don't most often died before their assigned mission or were deemed unfit to fly for health or training reasons.

But Epps' class of astronauts was the first to be specifically selected for flight aboard the Soyuz, and she's still looking forward to getting her chance to do so. "I really am very hopeful that something can be worked out where I can fly with the Russians" said Epps in a recent interview for **Moonstruck** podcast. "It's my hope that I fly in the Soyuz because I actually finished all of the work and all of the training."

Not only did Epps complete all her Soyuz training before her removal, she also finished additional specialist training in Germany and Japan, making her one of the most trained mission specialists available on the active astronaut roster.

Thankfully, NASA's reliance on Russia to launch astronauts is temporary. NASA is looking forward to its Commercial Crew Program—a public-private partnership between NASA and two American space companies, Boeing and SpaceX, to launch a crewed spacecraft in 2019 or 2020.

NASA must respond to why Jeanette Epps was pulled from last month's Soyuz launch.

But Jeanette Epps should not have to wait until the United States builds its own launch system in order to fly to space. NASA must respond to why she was pulled from last month's Soyuz launch. As the country's space agency, NASA represents the United States outside of Earth's atmosphere. It must answer to why the astronauts it is sending to space do not look like the diverse nation on the ground. ➤

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