

# NASA's Final 4: Fate grants them farewell flight

July 3 2011, By MARCIA DUNN , AP Aerospace Writer

---



In this Wednesday, June 22, 2011 file picture, the crew of space shuttle Atlantis, from left, mission specialist Rex Walheim, mission specialist Sandy Magnus, pilot Doug Hurley and commander Chris Ferguson attend a news conference at Pad 39A during the Terminal Countdown Demonstration Test at the Kennedy Space Center in Cape Canaveral, Fla. The launch of Atlantis, the final space shuttle mission, is scheduled for July 8. (AP Photo/John Raoux)

America's longest space-flying streak ends this week with the smallest crew in decades - three men and a woman who were in high school and college when the first space shuttle soared 30 years ago.

History will remember these final four as bookending an era that began with two pilots who boldly took a [shuttle](#) for a two-day spin in 1981 without even a test flight. That adventure blasted space wide open for women, minorities, scientists, schoolteachers, politicians, even a prince.

On Friday aboard Atlantis, this last crew will make NASA's 135th and final [shuttle flight](#). It will be years before the United States sends its own spacecraft up again.

Commander Christopher Ferguson, co-pilot Douglas Hurley, Rex Walheim and Sandra Magnus are delighting in their good luck.

"We're very honored to be in this position. There are many people who could be here," said Ferguson, a retired Navy captain. "When the dice fell, our names were facing up."

NASA managers were looking for space vets when they cobbled together this minimalist crew with seven spaceflights among them, to deliver one last shuttle load of supplies to the [International Space Station](#).

They are an eloquent, colorful bunch in their 40s, accepting if not embracing the spotlight.

Ferguson is a drummer for an astronaut rock 'n' roll band. Hurley is nuts about NASCAR; his cousin is married to crew chief Greg Zipadelli. Walheim is a former shuttle flight controller; his graphic designer wife creates the mission patch every time he flies, always on Atlantis. Magnus is arguably the first out-of-this-world chef: She whipped up Christmas cookies and Super Bowl salsa aboard the space station in late 2008 and early 2009, using - as all good chefs - ingredients on hand.

They were originally recruited to be a rescue team. The idea was that back in May, if anything seriously damaged Endeavour during its final

flight, Ferguson and his team would have rushed to the space station and brought those astronauts home.

If no rescue was needed, the original plan went, Ferguson's crew simply wouldn't fly. And Atlantis would be sent to a museum along with the two other retired shuttles.

But early this year, NASA decided to add one more flight. Since Atlantis was being groomed for a potential rescue anyway, NASA reasoned, why not make a cargo run with a year's worth of food and other provisions to keep the space station well-stocked.

That added a new wrinkle: What if Atlantis were damaged? There are no more shuttles to rescue them.

The only viable option is the Russian Soyuz spacecraft. The capsules can carry a maximum three people at a time, and at least one must be Russian. That's why Atlantis' crew was capped at four, instead of the usual six or seven.

It will be NASA's first four-person shuttle crew since 1983.

Ferguson and his short-handed crew know there's a chance - about 1-in-560 - that they could be stranded at the space station because of flight damage to Atlantis.

If that happens, it will take close to a year to get the last person home. Hurley, a Marine, drew the long straw.

The travel sequence is based on robotic-arm and spacewalking skills, as well as accumulated exposure to cosmic radiation. That last factor alone prevents Magnus, a former space station resident, from spending too long a time in space.

Hurley - who is married to astronaut Karen Nyberg and has a 1-year-old son - looks at the bright side.

"If it works out that way, I get a yearlong expedition for nine months of training, so that's a pretty good return on the investment," he said. He points to Magnus, a scientist whose specialty is in cathodes and radar, who trained four years for a mere four-month station stay.

Yearlong space missions are exceedingly rare; only three Russian cosmonauts have attempted it. The longest an American has spent in space, at a stretch, is seven months.

That's how far NASA's astronauts are willing to go, these days, for a shot at space.

Until private companies get piloted spacecraft flying - an estimated three to 10 years out - NASA will have to stick with the pricey Russian Soyuz to get U.S. astronauts to and from the space station.

For Americans, that means just a handful of flying opportunities a year. Compare that with the 35 to 50 seats that the shuttles typically provided each year.

Little wonder, then, that NASA's astronaut corps has shrunk to 61 active members. Only the youngest and most patient are willing to wait out these conflicted, money-tight times.

Few people, it seems, can agree on where NASA should aim next. The moon, an asteroid, Mars? And how best to get there?

As the debate and uncertainty drag on, Ferguson said he's seen no ill feeling toward [NASA](#) by those still toiling in the shuttle program. Thousands more layoffs are coming as soon as Atlantis lands, on top of

the thousands of jobs already lost.

Ferguson rejects suggestions the U.S. space program is headed downhill with the shuttle's retirement. "Hopefully, we'll see 10 years of good quality science out of the space station," he said. "We still have a vibrant program going on."

Despite two horrific accidents that killed 14 astronauts and destroyed two spacecraft, the shuttle program has carried more people than any other space fleet - 355 people from 16 countries. That includes Saudi Arabia, which flew a prince aboard Discovery in 1985.

Space miles logged by the five shuttles: 537 million, with 4 million more to come this mission.

"There is not an American who doesn't look upon an ascending shuttle with a certain sense of American pride, hair on the back of your neck, chills, call it what you will," Ferguson said.

The space shuttle is "a quintessential American vehicle," said Walheim, a retired Air Force colonel who will serve as the flight engineer. "You point to that and people know it's from the United States, so I think we're losing that piece of identity."

The four astronauts feel the extra burden of putting "the best possible face forward for the last go-around of this," as Ferguson describes it.

This should not be a time of mourning, these astronauts say, or for second-guessing the shuttle retirement decision made seven years ago by President George W. Bush in the wake of the Columbia disaster.

Ferguson and his crew want this final flight to be a celebration. They point to the Hubble Space Telescope, which was launched and repaired

by shuttle crews, as well as the International Space Station. Nearly one-third of the 135 shuttle flights were spent building or supplying the nearly 1 million-pound orbiting laboratory.

For now, Atlantis' astronauts are focused on the upcoming cargo mission, humble as it is.

They'll provide robotic-arm support for a spacewalk by two [space station](#) astronauts. But most of the work involves hauling supplies from Atlantis into the station, and carting out broken equipment and junk for disposal back on Earth.

One thing Ferguson didn't count on, when mapping out the training flow months ago, was all the emotional conversation that has added to the crew's already long workdays. Almost every shuttle worker they encounter wants to share a story: How long they've worked at Kennedy Space Center and what the shuttle program means to them.

"At the end of the day ... we're like, wow, there's a lot of emotion here," Ferguson said. "But they're all stories that we want to hear."

Ferguson expects "the enormity of it to hit us" at wheels-stop on landing day - July 20, the 42nd anniversary of man's first steps on the moon, if the schedule holds.

The astronauts say they will have to be pried from the cockpit. Magnus expects to shed tears as she sits on the runway, "contemplating 30 years of a spectacular program."

"We are blessed to have been a part of it. All of us, not just perhaps the chosen few who are lucky enough to fly it, but as a country," Ferguson said.

Until then, he said, "We're just trying to savor the moment. We want to be able to say, 'We remember when. We remember when there was a space shuttle.'"

**More information:** NASA's Atlantis mission: <http://1.usa.gov/9JytXV>

©2011 The Associated Press. All rights reserved. This material may not be published, broadcast, rewritten or redistributed.

Citation: NASA's Final 4: Fate grants them farewell flight (2011, July 3) retrieved 26 April 2024 from <https://phys.org/news/2011-07-nasa-fate-grants-farewell-flight.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.