



## Welcome to AeroStar News!

### Women Achieving Lift Off: Pink Planes in Blue Skies



Dear AeroStar Family and Friends,

When you're a woman in a male-dominated industry, you stand out. Sometimes I'm asked if I'm lost or looking for directions, even when I show up to a meeting or when in fact, I'M THE SPEAKER OR HONOREE...

Just because you don't look like everyone else, doesn't mean you don't belong. It might be that you were sent to add a pop of color... The world belongs to women AND men. Only when this reality is acceptable will our formation of pink planes achieve sustained and controlled flight into our blue skies.

We're celebrating Women's History Month in this issue! Half of the global population is female, and in the U.S., it's a little more than half, yet in 2022, women are still fighting for economic justice and DEI (diversity, equity, inclusion) in the workplace. This spans every level, from technicians and engineers to managers and executive leadership. Let that sink in.

On January 29, 2009, President Obama signed the Lilly Ledbetter Fair Pay Act of 2009 that sought to reverse discriminatory pay practices against women. Yet, the gender gap in pay stubbornly persists. According to the [Pew Research Center](#), "In 2020, women earned 84% of what men earned... Based on this estimate, it would take an extra 42 days of work for women to earn what men did in 2020."

Inequities in education, recruiting, hiring practices, mentoring, and leadership development persist in all industries but are especially glaring in aviation and aerospace. Last year, at an FAA Task Force Subcommittee meeting discussing the current state of women in aviation, Dr. Rebecca K. Lutte from the Omaha Aviation Institute (University of Nebraska) presented the following data highlighting the scarcity of women in aviation careers:

- Maintenance technicians – 2.5%
- Airline executives (CEO, COO) – 3%



- Airline pilots – 5%
- Total certificated pilots – 7.9%
- Aerospace engineers, Dispatchers, Airport managers, Air traffic controllers, Aviation Higher Education leadership, Cybersecurity – 11-20%
- FAA employees, Aviation Higher Education faculty – 21-30%

Sisters of the Skies reports that African American women pilots represent less than one-half of 1% of the total professional pilot career field. According to the AOPA Foundation, Latina pilots comprise about 1% of certified U.S. female pilots.

### **Pink Rockets Blasting Off—Slowly But Surely**

Women, especially Blacks and Latinas, in aerospace also suffer from low representation. The Space4Women project of the United Nations Office for Outer Space Affairs cites the following dismal global statistics ([source](#)):

- Space workforce: women 20%, men 80%
- Astronauts: women 11%, men 89%
- Spacewalkers: women 6.6%, men 93.4%
- STEM researchers: women 28.8%, men 72.2%

In the field of astronomy, women of color are as invisible as stars light-years away. Astronomers are 90% White but about 1% Black and 1% Latinx ([source](#)). A fascinating study cited in the Journal of Geophysical Research found that women of color in astronomy are far more likely to feel unsafe at work because of their gender and race than other groups.

In an effort to combat one of the "worst diversity rates of any scientific field," the Banneker Institute, an initiative of Harvard University, seeks to improve DEI in astronomy by recruiting students of historically marginalized backgrounds; i.e., African American, Latinx, and Native American ([source](#)). But more must be done to achieve parity in a field that will help determine the future of the human race!

### **AeroStars in Space!**

The new NASA and Lego Education aerospace curriculum for Spring Program has officially launched! AeroStars grades 5-12 join us each Saturday at Olive-Harvey College for a journey into space led by six of our amazing instructors, in preparation for NASA's Artemis 1 Mission launch. Youth from our new program partner, the Chicago Housing Authority, are joining us for this exciting journey, and we welcome them!

### **AeroSTEM Expo 2022 Is Here!**

We are excited to give students in grades 5-12 a hands-on opportunity to learn about aviation and aerospace careers at AeroSTEM Expo 2022 on Saturday, March 26th, 9:00 am - 12:00 pm, at Illinois Tech. Thanks to all of our supporters, this event is **SOLD OUT**.

### **Support Underserved Youth This Year!**

AeroStar is gearing up for Summer Programs with a variety of incredible experiences for more than 200 students—including real-world design challenges, discovery flights, the Chicago Air and Water Show, and a trip to the world's largest air show in Oshkosh, Wisconsin. Every dollar you donate to our mission will help us train incredibly deserving students, K-Career, who are passionate about pursuing their dream jobs in the industry.

**Donate cash, in-kind services, and sponsorships [HERE](#). Collaborate and volunteer** (click [HERE](#) to volunteer). **Support AeroStar in any way you can! Please contact me today at [Tholmes@aerostarcorp.com](mailto:Tholmes@aerostarcorp.com).**

Giving Wings to Dreams!

Tammera L. Holmes  
President & CEO, AeroStar Consulting Corporation  
Founder & CEO, AeroStar Avion Institute NFP

#BoeingInspires #BoeingPartner #AeroStarAvion #WingstoDreams, #BAEDay

# AeroSTEM Expo 2022

Attention students!! Join us for a day of fun and discovery at AeroSTEM Expo 2022 on Saturday, March 26th, 9:00am-12:00pm! The event will be held at Hermann Hall, Illinois Tech. Registration is limited, so register [HERE](https://aerostem2022.eventbrite.com) today!



**SOLD OUT**

**FREE**

**ILLINOIS  
TECH**

**AEROSTEM  
EXPO**

**March 26, 2022**  
9:00 am to 12:00 pm • Grades 5-12

Illinois Tech  
Hermann Hall  
3241 South Federal Street  
Chicago, IL 60616

**Join us for a day of fun and discovery!**

- simulators
- space activities
- drones
- meet Aviation professionals
- mentoring
- community STEM resources

Register today at [aerostem2022.eventbrite.com](https://aerostem2022.eventbrite.com)





# Pioneers and Trailblazers (part 3): Women's Contributions to Aerospace

In this special Women's History Month issue of AeroStar News, we continue our Pioneers and Trailblazers series with a salute to women in aerospace.

---

## NASA's Hidden Figures



**Katherine Johnson**



**Dorothy Vaughan**



**Mary Jackson**

The inspiration for *Hidden Figures*, the blockbuster movie, mathematicians **Katherine Johnson**, **Dorothy Vaughan**, and **Mary Jackson** were the first African Americans to serve behind the scenes at NASA during the space race of the mid-20th century.

---



The first African American woman astronaut, **Dr. Mae Jemison** was selected for the NASA astronaut program in June 1987. On her first flight, she served as the science mission specialist on STS-47 Spacelab-J. The mission, which was a cooperative one between the U.S. and Japan, included 44 life science and materials processing experiments. Jemison was a co-investigator on the bone cell research experiment flown on the mission.

In this image, Dr. Jemison looks out the aft flight deck ports on Space Shuttle Endeavour's STS-47 mission in 1992. Photo: [NASA](#)

---



Stephanie Diana Wilson is an engineer and a NASA astronaut. She flew to space onboard three Space Shuttle missions, and is the second African American woman to go into space, after Mae Jemison. (Source)



Joan Elizabeth Higginbotham is an electrical engineer and a former NASA astronaut. She flew aboard Space Shuttle Discovery mission STS-116 as a mission specialist and is the third African American woman to go into space, after Mae Jemison and Stephanie Wilson. (Source)



Born in the Dominican Republic, **Scarlin Hernández** is a Spacecraft Engineer for NASA's James Webb Space Telescope at the Space Telescope Science Institute in Baltimore, MD. She tests and verifies the ground systems that will be used to command and control the telescope once it's in space. The telescope will be used to discover new planets and the first stars after the dark ages. (Source: [NASA](#) on YouTube)



**Sunita Lyn Williams** is a NASA astronaut and United States Navy officer who formerly held the records for most spacewalks by a woman and most spacewalk time for a woman (50 hours, 40 minutes). Williams was assigned to the International Space Station as a member of Expedition 14 and Expedition 15. In 2012, she served as a flight engineer on Expedition 32 and then commander of Expedition 33. (Source: [NASA](#))

Ellen Ochoa is an American engineer, former astronaut and former director of the Johnson Space Center. In 1993, Ochoa became the first Latina woman to go to space when she served on a nine-day mission aboard the Space Shuttle *Discovery*. Ochoa became the first Latina and the second female director of Johnson Space Center. (Source: [Photo](#))



**Dr. Sian Proctor** was the fourth African American woman astronaut in history and the first to pilot a spacecraft, Inspiration4, the first all-civilian mission to orbit (SpaceX). Dr. Proctor is an artist, pilot, educator, geoscientist, explorer, and science communication specialist.

The Inspiration4 flight was the achievement of a childhood dream. "I have dreamed about going to space my entire life," she said.



**Jessica Watkins**, NASA Astronaut, will be the first African American woman to complete a long-term mission aboard the ISS for the forthcoming SpaceX Crew-4 launch (April 2022). This will be Watkins' first voyage. (Source: Smithsonian Magazine)

**Did You Know...**





Named after astronomer Edwin Hubble, the Hubble Space Telescope is a space-based observatory. Since its launch in 1990, Hubble has made more than 1.5 million observations!

---

## AeroStar's Spring Program — *A Journey to Space!*



During our Spring Program lift-off at Olive-Harvey College, AeroStar students learned about the Artemis 1 Mission to the Moon! This program season, our students are engaging in the Build To Launch Series curriculum created by LEGO Education and NASA as the Artemis 1 Mission prepares for launch this month! We are excited students will be joining us for this journey and will witness history in the making as the Artemis program will land the first person of color—and the first woman—on the moon!

---

## After School Matters Spring Program

If you are a CPS high school student,

you can participate in AeroStar programs while also earning money! Students participating in our After School Matters program will also be engaging in the LEGO Education Build to Launch Series curriculum via a virtually remote format.

Click [HERE](#) to apply or scan the QR code on the flyer.



**Join an After School Matters Spring 2022 Program!**  
Earn money. Learn new skills. Gain friends.

Apply to a **free** After School Matters program and thrive!

**Air Force Academy**

This spring session, apply to:

- AeroStars Aviation Exploration @ Air Force Academy

For more information please contact  
Ms. Logan  
sjlogan1@cps.edu



Earn up to \$425!  
[www.afterschoolmatters.org](http://www.afterschoolmatters.org)


 afterschoolmatters
  After School Matters
  afterschoolmatters
  After School Matters

## Aviation Job Opportunities

If you have an aviation background and are looking for work, there are two immediate job openings waiting to be filled. Apply at the links below.

### Aviation Program Manager

Full-Time  
Chicago, IL

The primary role of the AeroStar Avion Institute's Program Manager is to manage and coordinate programs that align with AAI's mission and strategic goals; for example, program implementation, recruitment, fundraising, program operations, partnership development, and assisting with the planning of outreach strategies. The Program Manager works alongside the Executive Director/CEO to accomplish these goals. The ideal candidate will be an excellent leader and will have experience in managing staff of different disciplines to produce results in a timely manner. They will be able to develop efficient strategies and tactics. The goal is to ensure that all programs deliver the desirable outcome to our organization.

#### QUALIFICATIONS

- Bachelor of Science in Aviation preferred
- 2-5 years of related professional work experience
- Demonstrated success implementing, delivering, and evaluating programs
- Experience with working with youth preferred
- Experience supervising staff/team

### Aviation Flight Program Instructor

Full-Time  
Gary, IN

The Aviation Instructor will be the primary instructor for students to receive FAA certified level training provided they successfully complete the program. The instructor accomplishes this by providing students with a program of study that teaches required program skills, develops employability skills, and reinforces academic skills through the use of rigorous curricula. The Instructor will also handle all responsibilities associated with the High Tech Flight Simulator Laboratory, including program coordination, school-wide integration/collaboration, and special events/workshops/classes. The instructor will also handle coordination of flight simulator hardware and software routine maintenance, repairs, and updates.

#### QUALIFICATIONS

- CFI or CFII
- Be 18 years of age.
- Hold either a commercial pilot certificate or airline transport pilot certificate and an instrument rating.
- Have logged at least 250 hours of flight time.
- Hold a valid FAA 3rd Class Medical Certificate (or higher)
- Bachelor's degree from an accredited college or university AND 2,000+ hours of department-approved, aviation



related work experience, OR; No degree and 8,000 hours of department-approved, aviation related work experience

- Complete Work-based learning Instructor requirements as directed by Indiana Department of Education: for selected candidate, certificate will be applied for by Gary Community Schools

## Student Internship Opportunities

**Southwest Airlines** is offering a paid eight-week high school internship program in several cities – including Chicago – during the summer. The hands-on program exposes students to the world of work and emphasizes the importance of education and opportunities beyond a diploma or degree.

Application dates: March 6-13, 2022

Internship dates: June 13-August 5, 2022

Register for the internship info and prep session [HERE](#).

---

The **Chicago Transit Authority** (CTA), in collaboration with the City of Chicago's One Summer Chicago (OSC) Program, will provide 200 high school students with a seven-week paid internship. Interns will participate in a robust hybrid experience that includes an innovative approach to CTA's hallmark program model of work experience, professional development, and mentorship from transportation industry leaders. Students will earn \$15/hour and free CTA transportation. Space is limited, so apply early!

Application is due by April 29, 2022.

Internship dates: June 27-August 12, 2022.

Apply [HERE](#).

## Donate Today!

One person *can* make a difference. Your generosity will help the AeroStar Avion Institute train and prepare students—K-12, college, and beyond—to pursue the aviation and aerospace careers of their dreams!

**Please donate!**

We're fired up about our mission to train and employ youth in this exciting industry, and we need your help more than ever before. To give, click [HERE](#). Your donation is tax deductible, and 100% of your gift goes toward training the next generation of aviation and aerospace professionals.

***Invest in the passion ... the mission ... [DONATE NOW!](#)***

Give Wings to Dreams!

## Book Teaches Kids to Fly Through Fear

What if you were afraid to fly? Authors Kenyatta Scott and Tammera L. Holmes join forces to show girls and boys how to face their fears!

**Tammera L. Holmes Teaches Violet**

# Violet Takes Flight



By: Bernadette Scott  
Illustrated By: Michelle Valente



## How to Fly Through Fear!

Follow along as ***Violet Takes Flight*** for the first time! Daddy teaches her and her brother Derek the true meaning of "doing it afraid." Follow along as Pilot Holmes makes her literary debut as Violet's flight teacher!

30% of all book sales support AeroStar Avion Institute, NFP, a female, minority owned NFP that teaches underrepresented youth in underserved neighborhoods about aviation STEM careers.

Buy your copy of ***Violet Takes Flight*** [HERE](#) today!

#thevioletbookseries  
#wingstodreams

## ON THE RADAR

During Women's History Month, AeroStar celebrates the contributions women of all races, nationalities, and ethnicities have made to aerospace—in particular, women of color. To learn more about the fearless women below who have taken NASA to infinity and beyond, visit [HERE](#)!



## CREDITS



Publisher: Team AeroStar

Editor: Donna M. Williams

Social Media Coordinator: Alexis Brownlow

Consultant: Kristy Farrakhan

