



GATEWAYS TO  
**BLUESKIES**

# AgAir | Aviation Solutions For Agriculture Competition

May 20-21, 2025  
Palmdale, CA





# SPONSOR WELCOME MESSAGE



**Koushik Datta**

Ames Research Center (ARC)  
Project Manager, University  
Innovation Project

Congratulations, competitors! We are excited to welcome you to the fourth annual Gateways to Blues Skies Forum, held this year in the beautiful city of Palmdale, CA. It's going to be an amazing two days filled with engaging presentations, networking, and tours of NASA's Armstrong Flight Research Center — one of NASA's premier sites for aeronautical research. Located in the Mojave Desert, NASA Armstrong has a long history of aviation firsts, including supporting the first crewed airplane to exceed the speed of sound in level flight (Bell X-1) and reaching the highest speed by a crewed, powered aircraft (North American X-15). While immersing yourself in all the moments this Forum has to offer, please take some time to recognize and appreciate how hard you worked to get here! We received record-breaking interest in this year's topic, and your innovative ideas were chosen as the best by an esteemed panel of NASA and industry experts. We are eager to hear your ideas for *"Aviation Solutions for Agriculture" over the next two days*. Your suggested technologies hold great potential as we explore innovative solutions in this vital field. The forum offers a chance to highlight your skills and cultivate your passion for the aviation and agriculture industries. Take full *advantage of it and enjoy the journey!*



## FORUM GUIDELINES

**Participation:** Please review the Forum Agenda and be on time for all sessions. Participation in all Gateways to Blue Skies Competition Forum events is mandatory.

**Personal Responsibility:** You are responsible for your actions, and accountable to your school policies. During your free time, please be respectful of the hotel property and guests (i.e., no loud parties in your rooms). Any complaints may result in disqualification of the team and immediate dismissal from the competition. While there is plenty of opportunity to have fun at the Forum, we must be representative of NASA and NIA while attending the Forum.

**Emergencies:** For medical emergencies, call 911.

- Nearest Hospital: Palmdale Regional Medical Center at 38600 Medical Center Dr., Palmdale, CA 93551
- Nearest Urgent Care: Palmdale Urgent Care at 2270 E Palmdale Blvd. Suite F, Palmdale, CA 93550

## NIA PROGRAM TEAM

**Stacy Dees**  
Program Manager  
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**Amy McCluskey**  
Program Coordinator  
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**Shelley Spears**  
Program Director  
757-325-6999



# NASA's 2025 Gateways to Blue Skies Agenda

## AGENDA LEGEND

Events restricted to Judges & Staff are **GREEN**.  
 Events restricted to Paid Registrants (teams, judges, staff) are **BLUE**.  
 Events restricted to Embassy Suites Hotel Guests are **Orange**.

### Monday, May 19, 2025

**6:30 – 8:30 PM** **Finalist Team Check-in**  
 Embassy Suites, Palmdale - Antelope Valley C  
 39375 5th St. W, Palmdale, CA 93551

### Tuesday, May 20, 2025

#### The Embassy Suites Palmdale

**6:00 – 8:00 AM** **Breakfast\***  
 Embassy Suites - Breakfast Area  
 \*Breakfast is available starting at 6 am for Embassy Suites hotel guests

**8:00 – 8:30 AM** **Judges Pre-Forum Meeting**  
 Embassy Suites - Palmdale Board Room

**8:00 – 8:40 AM** **Onsite AV Checks and Late Check-in**  
 Embassy Suites - Antelope Valley Ballroom

**8:45 – 9:00 AM** **Welcome and Introductions**  
 Embassy Suites - Antelope Valley Ballroom

**9:00 – 9:30 AM** **ARMD Keynote Presentation**

**9:35 – 10:20 AM** **Boston University**  
*PLAANT: Precision Land Analysis and Aerial Nitrogen Treatment*  
 Advisor: James Geiger

**10:20 – 10:35 AM** **Morning Coffee Break**  
 Embassy Suites - Ballroom Foyer

**10:35 – 11:20 AM** **Columbia University**  
*PH-LORA: Pheromonal Localized Overpopulation Regulation Aircraft*  
 Advisor: Mike Massimino

**11:30 AM – 12:15 PM** **Houston Community College**  
*Hog Aerial Mitigation System (H.A.M.S.)*  
 Advisor: Robert Frederick

**12:15 – 1:15 PM** **Lunch**  
 Embassy Suites - Lobby Dining Area

**1:15 – 2:00 PM** **University of Tulsa**  
*CattleLog Cattle Management System*  
 Advisors: Marie Moran, William LePage

**2:10 – 2:55 PM** **University of California, Davis**  
*RoboBees*  
 Advisor: Zhaodan Kong

**3:00 – 3:15 PM** **Group Photo**

**3:15 – 3:30 PM** **Afternoon Snack Break**  
 Embassy Suites - Ballroom Foyer

### Tuesday, May 20, 2025 (cont'd)

**3:35 – 5:00 PM** **Poster Session – Day 1 Teams**  
 Embassy Suites - Ballroom Foyer

**3:20 – 4:05 PM** **Networking & Light Dinner**  
 Embassy Suites - Fourteen

### Wednesday, May 21, 2025

#### Embassy Suites & NASA Armstrong & Rio

**6:00 – 8:00 AM** **Breakfast\***  
 Embassy Suites - Breakfast Area  
 \*Breakfast is available starting at 6 am for Embassy Suites hotel guests

**8:00 – 8:45 AM** **Embry-Riddle Aeronautical University**  
*Sky Shepherd: Autonomous Aerial Cattle Monitoring*  
 Advisor: Claudia Ehringer Lucas

**8:50 – 9:35 AM** **Auburn University**  
*Proactive Resource Efficiency via Coordinated Imaging and Sprayer Execution (PRECISE System)*  
 Advisors: Tanzeel Rehman, Jeremy Pickens

**9:40 – 10:25 AM** **South Dakota State University**  
*Soil Testing and Plant Leaf Extraction Drone (STaPLE)*  
 Advisor: Todd Lechter

**10:30 – 11:15 AM** **Poster Session – Day 2 Teams**  
 Embassy Suites - Ballroom Foyer

**11:15 AM – 12:15 PM** **Lunch**  
 Embassy Suites - Lobby Dining Area

**12:15 – 12:20 PM** **Load Tour Bus**  
 Meet buses outside Embassy Suites Front Entry

**12:20 – 1:35 PM** **Bus Transportation to NASA Armstrong**

**1:40 – 4:30 PM** **Teams Tour NASA Armstrong**

**NLT 1:15 PM** **Judges Deliver Finalized Scores**

**1:30 – 3:30 PM** **Judges' Deliberation**  
 Embassy Suites - Palmdale Board Room

**1:30 – 3:30 PM** **Bus Transportation back to Hotel**  
 Meet bus outside AFRC Cafeteria

#### Awards Dinner, Rio Brazilian Grill

**6:45 – 8:30 PM** **Awards Dinner**  
 Rio Brazilian Grill  
 630 W Lancaster Blvd. #628, Lancaster, CA  
 Awards Ceremony to start ~ 7:45 PM

## LIVESTREAM INFORMATION

A Livestream of the presentations can be viewed at: <https://vimeo.com/showcase/blueskies>





**STEVEN HOLZ**

Blue Skies Co-Chair & Sponsor  
NASA Langley Research Center



**BRAD DOORN**

Blue Skies Co-Chair  
NASA Headquarters



**GEORGE BURBA**

LI-COR  
Science & Strategy Fellow



**SHAWN ENGELLAND**

NASA Ames  
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**CJ BIXBY**

NASA Armstrong Flight  
Research Center



**DAN MARTIN**

United States Department of Agriculture  
Retired



**CRAIG NICKOL**

NASA Langley Research Center

The Gateways to Blue Skies Competition is sponsored by NASA's  
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<https://blueskies.nianet.org>