



# FAST - Future Aerospace Strategic Thinking

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# FAST Research Session Presentation Overview

- Future Research
  - Not an existing project.
- Aerospace Research
  - Involves aerospace personnel and facilities.
- Strategic Planning
  - FAST Presentation
  - Discussions
  - White Paper / Proposal
- Thinking about the Whole Project
  - Development of the project.



# FAST Research Session Presentation Format

- One Slide
- Need/Problem
- Concept
- Apparatus
- Objective
- Advancement
- End Users / Sponsor
- 3 Minute Presentation
- 3+ Minutes for Questions and Transition



# FAST Research Session Slide Summary

- Put everything on one slide.
- Three main sections from left to right is good.
- Somewhat similar to a conference poster.
- Include a key concept figure, if possible.
- Do not need to cover everything in 3 minute overview.
- Covers material that would be in a White Paper.



# FAST Research Session Attendee Participation

- Ask Questions after each Presentation
- Research Topic Discussions Follow-on
  - Brief Discussion following Session
  - Optional in-depth Robin Hall Atrium
- Informal Project Idea Discussion
  - **Weds., 12-1 pm, Robin Hall Atrium**
- Present at Future FAST Sessions
  - **November 12, 2025 at 12-1 pm**
  - February 12, 2026 at 12-1 pm



# Previous FAST Presentation Updates

## September 2025

**Soizik Laguette**, Developing a Biochar Initiatives for a Greener and Healthier Tomorrow (BRIGHT) framework

**Mounir Chrit**, Toward Improved UAS Flight Planning: Data Assimilation for Enhanced Weather Forecasting over North Dakota

**Preeti Nair, Space Studies**, Ablative Pulsed Plasma Thruster: Microsatellite Propulsion using Teflon Propellant

**Christian Nairy, Atmospheric Sciences**, Quantifying Electrical Influences on Ice Crystal Aggregation

## February 2025

**Jordan Christian**, Predictability of Flash Drought in Subseasonal Forecasting Systems

**Francisco Del Canto Viterale, Space Studies**, Building a Stronger North Dakota Aerospace Workforce

**Cathy Finley, Atmospheric Sciences**, Supercell Morphology Changes Associated with Seasonal Sounding Variations Yielding Equivalent Convective Parameters,

**Michael Ullrich, Aviation**, Developing a Digital-twin test-bed for UAV Swarm: From Concept to Flight

**Marcos Fernandez Tous, Space Studies**, Writing Grants/Proposals Class

- Teaching Proposal Writing Class – Fall 2025

# November 12, 2025 FAST Presentation List

## **Shawn Wagner, Atmospheric Sciences**

- A Controlled Pylon System for Accurate Airborne Cloud Ice Crystal Sampling

## **Mounir Chrit, Atmospheric Sciences**

- Adaptive Hyper Inference for Enhanced Long-Range UAS Detection

