

# Friends & Partners in Aviation Weather

## Planning for the Spring 2022 and Fall 2022 Meetings



# PLANNING



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*20 October 2021 Virtual Meeting*

# So – Where are We?

# 2022 FPAW Planning – General

## Spring 2022 FPAW Meeting

- Location: TBD in the Washington, DC area (NTSB, MITRE, ALPA, others?)
- Potential Dates: Week of 07MAR / Week of 14MAR / Week of 18APR / Week of 02MAY  
(Avoid NASA imagineAviation 01-03MAR, Cherry Blossom Festival 20MAR-17APR, AUVSI XPONENTIAL 25-28APR, ICAO Met Operations Group (MOG) Meeting TBD APR, VFS Forum 10-12MAY)

## Fall 2022 FPAW Meeting

- Location: National Severe Storms Laboratory (NSSL), Norman, OK
- Potential Dates: October/November  
(TBD, avoiding major events, including NC fishing trips)

## Default 2022 Meeting Formats

- In person + virtual: two consecutive days, eight hours/day (0800-1700L), ½ day Planning meeting on Day 1 followed by 1 ½ day Plenary meeting
- Virtual only: Four “half days,” three consecutive half days Plenary meeting, one subsequent half day Planning meeting, 4-5 hours/half day (~1130E-1600E)
- One primary topic per Plenary half day, plus one short(er) topic/update
- Ensure ample time for discussion and breaks in between

## FPAW Website

- <https://fpaw.aero>

# Tentative Agenda – 2022 FPAW Spring Meeting (In-Person + Virtual)

## Based on last Spring’s Planning Meeting

### Topic #1

- Primary: **Low Altitude Weather (including ABO Wx Benefits?)**
  - Ralph Stoffler, Don Berchoff, Bryce Ford, Janet Ford/Jim Hasemann, Marilyn Pearson
- Secondary: **Ongoing FPAW Topics Review**
  - Tom Ryan (AvMet Applications) Topics TBD

### Topic #2

- Primary: **NextGen Weather Status Update**
  - Le Jiang, Bill Bauman, Don Berchoff,
- Secondary: **The Role of Weather in Enhancing Aviation Efficiency and Reducing Carbon Emissions**
  - Gary Pokodner, Daniel Fuka, Nancy Mendonca

### Topic #3

- Primary (Spring 2022 Only): **Weather Concerns for Space Launch and Landing**
  - Matthias Steiner, Ralph Stoffler
- Secondary: **FPAW Organizational Updates**
  - Matthias Steiner (NCAR) and Matt Fronzak (MITRE)

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# List of General Topics

## Emerging modes of transportation

- Unmanned aerial systems, urban air mobility
- Supersonic flight, commercial space launch (space weather)

## Weather forecasts

- Trajectory-based operation, flight planning, optimization, etc.
- Uncertainty characterization of weather, traffic, etc.

## Weather information integration

- Decision-making under uncertainty
- Weather, human factors, automation
- Data standardization (see notes)

## Weather observations

- PIREPs, ADS-B, webcam (VWOS)
- Augmentation of surface observations
- Mandate to equip aircraft & share weather observations
- Visualization, and the use of data and information

## Weather in cockpit

- CDM in cockpit
- Bring in pilots to solicit their concerns and what they would benefit from

## Climate change impacts on infrastructure

- Increased temperatures, sea level rise, etc.
- Changing storms, more turbulence, lightning, etc.

## General updates

- Research & development from labs, industry, etc.
- Policy, procedures, Weather Community of Interest/Practice, gathering of requirements
- Funding challenges

# Previously Submitted Topics Not on the Tentative Agenda

## **Spectrum interference concerns** [submitted by Tom Fahy]

- Request consideration for an expanded session of Spectrum and 5G Interference issues for Aviation Safety.

## **Mixed-phase precipitation** [submitted by Matthias Steiner]

- On behalf of the FAA, Scott Landolt has investigated issues surrounding the automated measurement of mixed-phase precipitation and how those issues may have holdover time application concerns. It might be worth giving the FPAW community an update on these matters.

## Newly Submitted Topics (slide 1 of 2)

### Recent ASTM Standards published pertaining to using aircraft data to measure braking action (ABAR) [submitted by Joe Vickers, 9-13-21]

- E3188 – 19 Standard Terminology for Aircraft Braking Performance
- E3266 – 20 Standard Guide for Friction-Limited Aircraft Braking Measurements and Reporting: Aircraft data derived braking performance that complies to a uniform standard that can be transmitted in line with the RCAM/GRF

These standards are in response to NTSB recommendations to the FAA

- A-16-23: “... develop the technology to outfit transport-category airplanes with equipment and procedures to routinely calculate, record, and convey the airplane braking ability required and/or available to slow or stop the airplane during the landing roll.”
- A-16-24: “... work with operators and the system manufacturers to develop procedures that ensure that airplane-based braking ability results can be readily conveyed to, and easily interpreted by, arriving flight crews, airport operators, air traffic control personnel, and others with a safety need for this information.”

Canada is the first to introduce these concepts as regulatory guidance for operators during recent presentations to Canadian operators, FAA, EASA, ICAO and IATA during a recent Transport Canada Advisory Circular presentation.

Use of ABAR from perspectives of pilots, ATCs, airport operators, dispatchers



## Newly Submitted Topics (slide 2 of 2)

### **Translating weather information for both crewed and uncrewed operations**

[submitted by Joel Siegel, 10-13-21]

- We continue to see issues and accidents relating to pilots and flight operators not understanding the weather impacts on their operation. This is going to be even more true as we get into uncrewed operations since part 107 literature does not focus heavily on weather unlike the Part 61 requirements for crewed pilot certifications.

### **Approved Weather Sources for Helicopter Air Ambulance Operators in Rural Mississippi**

[submitted by Wayne Fry, 6-29-21]

- In rural areas of Mississippi there are few FAA approved weather sources. This lack of weather reporting prevents helicopter air ambulance operators from making 100s of life-saving flights each year. These Part 135 operators cannot file instrument flight plans without approved weather services. Installation and upkeep of approved weather sources is prohibitively expensive, so we need either cheaper weather sources or find some way to use the many weather sources that already exist. Rural populations deserve the same level of medical attention as their urban counterparts.

### **Cold Climate Weather Topics**

[submitted by Ismail Gultepe, 5-12-21]

- Low visibility condition in Arctic
- UAV applications for cold climates

## Task at Hand

- **Determine Spring 2022 Meeting Dates and Location (assume In-Person + Virtual)**
- **Determine Spring 2022 Agenda and Session Leads**
- **Tentatively determine Fall 2022 Meeting Dates and Location (assume In-Person + Virtual)**
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