

Friends & Partners in Aviation Weather

Planning for Spring 2021 & Fall 2021 Meetings



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28 October 2020 Virtual Meeting

FPAW Planning

2021 FPAW Spring Meeting

- Dates: tbd (avoid major meeting conflicts)
- Location: virtual

2021 FPAW Fall Meeting

- Dates: tbd, late October or early November
- Location: NSSL in Norman, OK

General Meeting Format

- Two or three days?
- Approximately 4-5 hours each day
- One primary topic per day plus maybe smaller updates
- Need more breaks in between

<https://fpaw.aero>

List major meetings on FPAW website?

- AMS
- AIAA
- ATCA
- AUVSI
- VFS
- CDM
- IEEE
- REDAC
- NCF
- Sun 'n Fun
- GAMA Events

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 & use of data & information

Weather in cockpit

- CDM in cockpit
- Bring in pilots to solicit their concerns & 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

List of Newly Submitted Topics

Operational airspace capacity estimation/prediction [submitted by Le Jiang, IMSG]

- Basic approach
- Constraints
- Consideration for en-route and TRACON capacities, and for strategic planning versus tactical adjustment needs
- Relevance to Airport Capacity

Need to limit scope to weather-related aspects

Communication of weather data [submitted by Rich Mamrosh, NWS]

- Would it be feasible for short duration (say less than an hour) airline and air freight flights to buffer AMDAR data and then download via WIFI (or similar) while parked at the gate? It would help reduce download communications costs for existing partners, and possible increase interest by regional air carriers who have many short duration flights and do not wish to incur any inflight downlink costs.

5G network [submitted by Tom Fahy, NWS]

- Ligado Networks to build an L-band ground-based 5G cellular network
- Concerns about potential for its signals to disrupt GPS devices

Pilot self briefing [submitted by Janet Ford, Capitol Meteorologics]

- The FAA Stakeholder Engagement Project to encourage pilots to conduct preflight self-briefings using automation.

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List of Previously Considered Topics

Aviation weather activities across federal agencies

- Overview & highlight of agency activities
 - organizational overview (like FAA's Weather COI)
 - roadmaps, research & operations
- Panel discussion on coordination & collaboration opportunities

FAA, NOAA/NWS, FEMA, Navy, USAF, NASA, USGS, Army, DOT, etc.

State/future of forecasting science & benefits on decisions

- _____

Weather observations from ground to space

- _____

Public private partnerships facilitating new entrants

- _____

Look ahead of UAS/UTM/UAM & Wx standard

- _____

- _____

? = To Be Confirmed

Topic #1

- Primary: Filling the Pilot Briefing Weather Gap
 - Janet Ford & Jim Haseman (Capital Group DC)
 - Gary Pokodner (FAA)
 - Marilyn Pearson (FAA)?
- Secondary: Ongoing FPAW Topics Review
 - Tom Ryan (AvMet Applications)

Topic #2

- Primary: Non-Traditional Weather Observation Sources and Standards
 - Steve Darr (Dynamic Aerospace)??
 - Don Berchoff (TruWeather Solutions)?
 - Gordy Rother (FAA)?
 - Walter Combs (FAA)?
 - Justin Hilliard (UPS Flight Forward)?
 - Matt Wandishin (NOAA GSL)
- Secondary A: FAA Weather Handbook (if out of Legal)
 - John Steventon (FAA)?
- Secondary B : 5G Network Build Out and Impact to Weather and Navigation Systems
 - TBD?

Topic #3

- Primary: Operational Airspace Capacity Estimation/Prediction
 - Le Jiang (IMSG)
 - Ernie Stelling (NBAA)?
 - Anne Marie Taggio (FAA)?
 - Greg Byus (FAA)?
- Secondary: FPAW Organizational Updates
 - Matthias Steiner (NCAR) and Matt Fronzak (MITRE)

Topic

Government (Federal?) (Federal and State?) Agency Weather Review

- NM recommends State-level participation
- MS suggests that State-level work could be covered by Federal attendees (NASA?)

Format/Timing

- Three full days
- In person
- MITRE McLean
- October 2021

Session POCs

- Randy Bass / FAA
- Dave Chorney / OFCM
- Nancy Mendonca / NASA