

# Friends and Partners in Aviation Weather

## Agenda for the Spring 2021 FPAW Meetings

**Plenary Meeting:** Virtual only, Tuesday-Thursday, 27-29 April 2021, 11:00 AM – 3:30 PM daily



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**All Times Eastern Daylight Time**

### Day 1: Tuesday, 27 April 2021

#### 11:00 – 11:10 Welcome

Matt Fronzak (MITRE) and Matthias Steiner (NCAR)

#### 11:10 – 14:30 Digital Transformation of Flight Service: Human Assisted Briefing to Pilot Self-Briefings

**Leads:** James Hasemann and Janet Ford (Capital Group)

**Participants:** Jeff Black (FAA AJR-B), Joe Daniele (Leidos), Marilyn Pearson (CAE), Gary Pokodner (FAA WTIC), Frances Prott (FAA AJR-B)

This session will focus on the transformation of Flight Service from specialists providing preflight pilot weather briefings to pilots conducting preflight self-briefings using automated resources.

TIME	TOPIC
11:10 – 12:30	<ul style="list-style-type: none"><li>• Introductions and Opening Survey</li><li>• Overview of Flight Service</li><li>• From Planning to Action</li><li>• FAA Regulations, CFR 91.103, and the Development of AC 91-92 Introductions</li></ul>
12:30 – 12:45	<b>BREAK</b>
12:45 – 14:00	<ul style="list-style-type: none"><li>• Changes in the Delivery of Flight Service</li><li>• Bridging the Self-briefing Education Gap</li><li>• Research for Enhancing Weather in the Cockpit</li></ul>
14:00 – 14:15	<b>BREAK</b>
14:15 – 14:30	<ul style="list-style-type: none"><li>• Future Needs and Changes in Aviation Weather Services and Closing Survey</li></ul>

## **14:30 – 15:30 Spectrum Interference and Weather Observations**

**Lead:** Tom Fahy (Capitol Meteorologics)

**Participants:** Jordan Gerth (NOAA), Sai Kalyanaraman (Collins Aerospace)

This session will focus on current and future issues associated with weather observations and RF spectrum interference. See the links for more information:

<https://thehill.com/opinion/energy-environment/451216-mixing-5g-and-weather-satellites-could-skew-forecasts-of-next?rl=1>

<https://flightsafety.org/asw-article/rtca-sees-widespread-risks-to-aviation-in-plan-for-shared-radio-frequency-spectrum/>

[https://www.rtca.org/wp-content/uploads/2020/10/SC-239-5G-Interference-Assessment-Report\\_274-20-PMC-2073\\_accepted\\_changes.pdf](https://www.rtca.org/wp-content/uploads/2020/10/SC-239-5G-Interference-Assessment-Report_274-20-PMC-2073_accepted_changes.pdf)

TIME	TOPIC
14:30 – 15:15	<ul style="list-style-type: none"><li>• Introductions</li><li>• Weather Radar, Satellite Observations and 5G Interference</li><li>• 5G Interference with Aircraft Radar Altimeter, Radio Frequency Interference with Satellite Navigation, and Spectrum Compatibility with Aircraft Safety-of-Life Functions</li></ul>
15:15 – 15:30	<ul style="list-style-type: none"><li>• Q&amp;A with the panel</li></ul>

## **Day 2: Wednesday, 28 April 2021**

### **11:00 – 11:10 Welcome**

Matt Fronzak (MITRE) and Matthias Steiner (NCAR)

### **11:10 – 14:30 Emerging Standards and Certification Challenges for Novel Weather Observations**

**Lead:** Stephen Darr (Dynamic Aerospace)

**Participants:** Don Berchoff (TruWeather Solutions), Walter Combs (FAA AJR-B), Gary Graeff (TruWeather Solutions), Justin Hilliard (UPS Flight Forward), Jeff Massey (Amazon), Bob Maxson (NOAA NWS AWC), Gordy Rother (FAA AFS-220), Ralph Stoffer (Raytheon)

This session will explore the state-of-the-art and -practice associated with several nascent aviation weather sources and provide an opportunity for the FPAW community to discuss their potential utility alongside their possible pitfalls.

TIME	TOPIC
11:10 – 11:15	<ul style="list-style-type: none"><li>• Session Overview</li></ul>

11:15 – 12:00	<ul style="list-style-type: none"> <li>• FAA Aviation Weather Cameras- Alaska and Elsewhere</li> </ul>
12:00 – 12:45	<ul style="list-style-type: none"> <li>• ADS-B Weather Data Distribution Planning</li> </ul>
12:45 – 13:00	<b>BREAK</b>
13:00 – 13:45	<ul style="list-style-type: none"> <li>• Low-Level Operations Weather Needs Panel</li> </ul>
13:45 – 14:30	<ul style="list-style-type: none"> <li>• Technology for Remote Observations Panel</li> </ul>

**14:30 – 15:30 Updates from Ongoing Topics**

**Lead:** Tom Ryan (AvMet Applications)

**Participants:** Bill Bauman (FAA), Joshua Paurus (MSP Airport), Seth Linden (NCAR), Robinson (MITRE)

This session will provide three short updates of topics that were presented at recent FPAW meetings, along with time for Q&A after each.

TIME	TOPIC
14:30 – 14:50	<ul style="list-style-type: none"> <li>• FAA Weather Community of Interest (Wx COI) Update (Bill Bauman)</li> </ul>
14:50 – 15:10	<ul style="list-style-type: none"> <li>• Winter Weather Update (Joshua Paurus)</li> </ul>
15:10 – 15:30	<ul style="list-style-type: none"> <li>• COVID-19 Pandemic: Aviation Weather Implications and Opportunities Update (Mike Robinson)</li> </ul>

**Day 3: Thursday, 29 April 2021**

**11:00 – 11:10 Welcome**

Matt Fronzak (MITRE) and Matthias Steiner (NCAR)

**11:10 – 14:30 Operational Airspace Capacity Estimation/Prediction under Convective Weather Impact**

**Co-Leads:** Le Jiang (IMSG) and Ernie Stellings (NBAA)

**Participants:** Chris Brinton (Mosaic ATM), Greg Byus (FAA AJR-13), Erin Cobbet (Delta Air Lines), Jim Evans (MIT Lincoln Laboratory), Ken Fenton (NOAA/ESRL), Dean Fulmer (CGH), Mike Matthews (MIT Lincoln Laboratory), Tim Niznik (American Airlines), Curt Rademaker (FAA AJR-13), Ernie Stellings (NBAA), Bill Tuck (Delta Air Lines)

Overview: Convective weather reduces air traffic throughput rates. Studies have found significant variability in manually derived estimates of throughput reductions. This session discusses capacity estimation challenges and the opportunity to improve the utilization of convectively constrained airspace through the potential integration of capacity estimation algorithms into a decision support tool (DST). Methodologies of airspace capacity estimation will be reviewed and discussed for their maturity and usability (constrained by the accuracy of the underlying convective weather forecast),

along with human factors in the collaborative decision making (CDM) from perspectives of ATM, airlines, and other stakeholders.

TIME	TOPIC
11:10 – 11:55	<p><b>Characteristics of Operational ATFM Decision Making Relative to Airspace Capacity, and the Need for Decision Support Tools</b></p> <ul style="list-style-type: none"> <li>• Session Introduction</li> <li>• Overview of Operational ATFM Decision Making relative to Airspace Capacity, Best Practices and Potential Enhancements</li> <li>• Operational Scenarios and Needs</li> <li>• Highlights and Recommendations for FET Whitepaper</li> </ul>
11:55 – 12:10	<ul style="list-style-type: none"> <li>• Panel Discussion and Q&amp;A</li> </ul>
12:10 – 12:30	<b>BREAK</b>
12:30 – 13:10	<p><b>Overview of Airspace Capacity Estimation Approaches</b></p> <ul style="list-style-type: none"> <li>• Mosaic ATM Approach for FCA Capacity Estimation</li> <li>• Estimation of Clear Weather Capacity</li> <li>• Flow Constraint Index Approach and Alternative Approach based on Convective Weather Forecast</li> <li>• Traffic Flow Impact (TFI) Tool</li> </ul>
13:10 – 13:20	<ul style="list-style-type: none"> <li>• Panel Discussion and Q&amp;A</li> </ul>
13:20 – 13:30	<b>BREAK</b>
13:30 – 14:00	<p><b>State of the Art, Complexity, Forecast Uncertainty, Operational Focus, and Risk Management Approaches</b></p> <ul style="list-style-type: none"> <li>• Integrating “New Entrants” into New Tools</li> <li>• Complexity and Risk Management Approach</li> </ul>
14:00 – 14:20	<ul style="list-style-type: none"> <li>• Panel Discussion and Q&amp;A</li> </ul>
14:20 – 14:30	<b>BREAK</b>

**14:30 – 15:30 FPAW Updates**

Leads: Matt Fronzak (MITRE) and Matthias Steiner (NCAR)

The FPAW Co-Chairs will provide an update on the status of FPAW, to include a discussion on the formation of an FPAW Steering Committee as outlined in the FPAW website at <https://fpaw.aero/about/organization>. We invite everyone to stay for and contribute to this very important discussion.

*15-minute breaks included*

**Planning Meeting:** Virtual-only, Wednesday, 12 May 2021, 11:00 AM – 3:00 PM



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**Wednesday, 12 May 2021**

**11:00 – 15:00 Planning of Upcoming FPAW Meetings**

Leads: Matt Fronzak (MITRE) and Matthias Steiner (NCAR)

We will identify the location, topics and session leads for the Fall 2021 FPAW Meeting and begin to look at potential locations and topics for the Spring 2022 FPAW Meeting.

Please don't forget to submit your topics of interest on the FPAW website at <https://fpaw.aero/form/submit-a-topic>. Since the FPAW leadership team does not speak fluent Russian, use of the Cyrillic alphabet is strongly discouraged.

*15-minute breaks included*