

National Business Aviation Administration (NBAA)
20th Friends/Partners in Aviation Weather Forum (FPAW)

Fall Meeting November 18 - 19, 2015

Las Vegas Convention Center
Las Vegas, Nevada

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Steve Ableman*Federal Aviation Administration (FAA)*

Steve Ableman manages the Aviation Weather Research Team within the FAA's Aviation Weather Division. Aviation Weather Research Team sponsored activities include the Aviation Weather Research Program (AWRP) and the Weather Technology in the Cockpit (WTIC) portfolio. Steve is also coordinating efforts to improve and streamline the process for transition of weather research to operations and is leading FAA efforts on a multi-agency initiative to coordinate and consolidate weather research initiatives for NextGen.

Prior to his transition to the FAA in February of 2011, Steve was the "contents" lead for National Weather Service (NWS) NextGen activities. Steve was the NWS lead for development of the 4-D Weather Functional Requirements for NextGen Air Traffic Management and lead outreach activities to promote NextGen within the NWS.

Steve worked for 4 years as the Manager of Aviation Training and Standards for Weathernews in Norman, Oklahoma. Steve also worked for American Airlines as a shift meteorologist and training coordinator for nearly 15 years.

Michael Bettwy

*National Oceanic and Atmospheric Administration (NOAA)
National Weather Service (NWS)*

Mike Bettwy is currently the Warning Coordination Meteorologist for the National Weather Service Aviation Weather Center. In this role, he serves as the main liaison between the Aviation Weather Center and its customers, partners, and users of NWS aviation weather products and services. Mr. Bettwy has over 10 years of experience in operational aviation weather forecasting, research, and public affairs. Mike works closely with the aviation community both within the United States and internationally to ensure the production, dissemination and use of NWS aviation weather products and services meet user requirements and international standards, in support of safe and efficient flight. His work extends from modernizing legacy NWS aviation products, to collaboratively developing policy, procedures, and requirements for emerging information needs of NextGen.

Paul Bridge*Vaisala, Inc.*

Paul is a meteorologist specializing in commercial applications of weather, most notably in the area of surface transportation. Paul has been with Vaisala for over 10 years and is currently Director of the Transportation Business Unit for North America. Originally from the UK, but now lives in Colorado, USA. He previously spent 24 years with the UK Met Office, Ministry of Defense as an operational forecaster at both military and commercial airfields, BBC television presenter and Met Office college lecturer. Paul was instrumental in the development of meteorological applications for RWIS from the 1980s onwards.

A member of:

The American Meteorological Society

The Intelligent Transportation Systems surface weather committee

The Transportation Research Board Surface Weather committee

The National Business Aviation Administration

Frank Brody

*National Oceanic and Atmospheric Administration (NOAA)
National Weather Service (NWS)*

Frank Brody is Meteorologist-In-Charge of the National Weather Service's National Aviation Meteorology Unit (NAM) at the FAA Command Center in (NAM) at the FAA Command Center in Warrenton, VA. He leads a group of meteorologists that provide customized weather forecasts and decision support to the FAA for air traffic management throughout the United States.

From 1991 to 2014, Mr. Brody was Meteorologist in Charge of the National Weather Service Spaceflight Meteorology Group (SMG) at Johnson Space Center in Houston, Texas. SMG provides weather decision

support for NASA human space flight programs, and provides weather advisories and consultation for Johnson Space Center. He led weather support for 98 Space Shuttle missions during his tenure at SMG in Houston.

From 1989 to 1991, he worked at National Weather Service Headquarters in Silver Spring, MD, helping plan the NWS modernization and reorganization that occurred in the mid-1990s.

From 1982 to 1989, he was a forecaster at the National Weather Service's National Center for Environmental Prediction (NCEP) in Camp Springs, MD, specializing in Quantitative Precipitation Forecasting, including excessive rainfall and heavy snow

Previous assignments include weather forecaster positions at National Weather Service offices in Raleigh, North Carolina, Charleston West Virginia, and Washington DC. Mr. Brody is a member of two professional organizations: the American Meteorological Society (AMS) and the National Weather Association (NWA). He recently ended a 3 year term as an elected Councilor to the NWA.

Mr. Brody earned a B.S. in Meteorology from the Pennsylvania State University in 1977.

He is married with three grown children and one new grandson.

Tom Bond

Federal Aviation Administration (FAA)

Chief Scientific and Technical Advisor for Flight Environmental Icing Mr. Bond has 28 years of experience as an aerospace engineer specializing in aircraft icing research. He worked at NASA for 24 years, where he served most recently as the Chief of the Icing Branch. He was responsible for developing the aircraft icing research strategy as well as planning, coordinating and managing NASA's aircraft icing activities. The scope of this work included research areas in icing physics, iced aerodynamics and flight dynamics, experimental and computational engineering tools development, and icing education and training materials. Mr. Bond has worked at the FAA since June of 2007 where he advises on flight environmental icing issues for the Aircraft Certification and Flight Standards services, develops and coordinates icing weather and aircraft icing research, leads the FAA Icing Steering Committee, and is responsible for the FAA Icing Plan. Mr. Bond also serves as an advisory member on several aviation industry committees tasked with developing and recommending changes to civil aviation standards, rules and advisory material.

Michael Byham

American Airlines (AA)

Over 30 years in the industry

Worked as performance engineer for Cessna Aircraft, McDonnell Douglas, USAirways, JetBlue and now American Airlines.

Currently Director of Operations Engineering at AA.

Worked on many FAA and industry regulatory groups including: RTO safety enhancement task force, Weight & Balance aviation rule making committee, takeoff and landing performance assessment (TALPA) aviation rule making committee and the transport aircraft planning and performance (TAPP) working group. Also a member of the IATA aircraft performance task force (APTF).

Currently serving as president of the Society of Aircraft Performance and Operations Engineers (SAPOE) after serving as treasurer for 6 years.

Captain Joseph D. Burns

Sensurion Aerospace

Captain Joseph D. Burns is the Chief Executive Officer of Sensurion Aerospace. He most recently left United Airlines as the Managing Director of Technology and Flight Test and served as the Sr. Technical Advisor for NextGen Programs for the carrier. While at United, he also held positions as Managing Director – Flight Standards, FAA Certificate Director of Operations, Director – Flight Standards, Director – Technology, Chief Pilot – FFDO Program, Manager – Automation Systems, Pilot Instructor, and ALPA LEC Safety

Chairman. He recently served as International Captain on the Boeing 767, 757. He is type-rated in B767, B757, A320, A319, B-727, DHC-8, BE-1900 and BE300 aircraft. Previous to United, Joe was the Director of Operations and Chief Pilot for USAir Express/Stateswest Airlines, a BAE-146 Pilot for USAir, B-727 Instructor and Pilot for Braniff Airlines, and Pilot for Air Midwest. His engineering experience includes CEO positions at Sensurion Aerospace, Xcelar, Inertia Technology, Chief Pilot and systems engineer for Coffeen, Fricke, and Associates, Chief Systems Engineer for Ericsson, Inc.'s Fiber Optic Division, and Engineering Manager for Sprint. He is currently on the Executive Branch Advisory Board for Position, Navigation, and Time (GPS); Board Member for Aspen Avionics; Board Member for Sensurion, Inc.; Member of the NextGen Advisory Council Subcommittee; Board Member Emeritus for EMS Technologies (NASDAQ:ELMG); Board Member and CEO Emeritus of ATN Systems, Inc.; Advisory Board Member Emeritus for the National Center for Atmospheric Research (NCAR/UCAR); Chairman Emeritus for the ATA Air Traffic Control Council, Chairman Emeritus of the ATA Airline Operations Committee; former Vice-Chairman of the Airborne Internet Consortium; and former Board Member of the FAA's Free Flight Steering Committee; Optical Detection Systems, Inc.; and AirDat, LLC. Joe holds an M.B.A. in Management from the Miami University distinguished Farmer School of Business and a B.S. in Aeronautics/Aeronautical Engineering from Miami University. He also holds multiple patents in Communications, Security, and Sensor Technology.

Bruce Carmichael

*National Center for Atmospheric Research (NCAR)
Research Applications Laboratory (RAL)*

Dr. Carmichael holds a M.S. from Northwestern University in Applied Mathematics and a Ph.D. from the University of Maryland in Computer Science. He has 40 years of experience spanning a number of activities including university teaching, commercial research, government service, consulting, and academic research. His past 29 years have been involved with the aviation industry in automation of maintenance processes, air traffic control, and weather information. He has been involved in system engineering of improved FAA systems to deliver weather information to users. For the past eighteen years he has been at the National Center for Atmospheric Research, where he has acted as the Director of the Aviation Applications Program. This program is working to improve weather information for pilots, dispatchers, and controllers, particularly related to the hazards of thunderstorms, turbulence, and icing. Dr. Carmichael is also an active commercial instrument-rated pilot.

Robert A. Carson

Harris Corporation

Experience: Over 18 years of systems engineering experience with large multi-layered system development over the entire program. 10+ years as a Chief Systems Engineer (CSE), and 7 years as an Engineering Group Leader. CSS-Wx CSE: Senior technical authority, point of contact and customer interface while providing program technical leadership, management of complex technical challenges, oversight and guidance for the engineering and the configuration management teams. Systems architect for large ECP efforts to include CSS-Wx and the WMSS II ECP 02 (Enhanced WINS Dissemination.) Systems engineering and leadership experience for WARP Stage 1, Stage 0 and OASIS first article development efforts to include performing as deputy CSE for 2 years on the WARP program. Principal systems engineer for system performance analysis efforts in support of the Space and Naval Warfare Systems Command (SPAWAR). System level performance modeling and analysis expert having performed modeling and analysis for WMSS I & II, Next Generation Air-Ground Communications (NEXCOM), Long Haul Communication (LHC), part of National Missile Defense (NMD) initiative, WARP and OASIS.

Robert L. Culver

Delta Air lines

B757/767 Chief Line Check Pilot

Operational Experience - Military

USAF 1982-1987

C-141B Flight Examiner Aircraft Commander. Last served as the 63 Military Airlift Wing Assistant Chief of Combat Tactics and Techniques. Responsible for establishing policy, maintaining flight standards, and supervising training for over 250 flight crew-members conducting special operations low level, aerial refueling, formation, and aerial delivery. Past duties:

Assistant Chief of Squadron Standardization and Evaluation, Chief of Squadron Training, Squadron Lead Scheduler, Examiner Pilot, Instructor Pilot, and Aircraft Commander.

Total Flying Time: 3050
 Pilot In Command: 1470
 Instructor/Evaluator: 451

Operational Experience - Delta Air Lines

Delta Air Lines Atlanta, GA Aug 1987 - Present

<u>Equipment</u>	<u>Captain</u>	<u>First Officer</u>	<u>Total</u>
B757/767	7702	1158	8860
MD88	3852	3042	6894
B737	708	42	750
B727	0	1978	1978
Total	12,262	6,221	18,482

757/767 LLCP 2009-Present
 757/767 LCP 2006-2008
 757/767 Maintenance SME
 Chairman's Club Nominee 2009-2012

Special Projects - Delta Air Lines

FAA EDR Benefits Analysis Study
 B757/767 FRM Revision
 RNP-4 FCB
 Combined Performance/Taxi Checklist Validation

Education

Colorado State University Fort Collins, Colorado 1974-1977
 B.S., Economics

Stephen Darr
Dynamic Aerospace

Mr. Darr has experience developing and implementing advanced analytical methods and aviation technology in the areas of safety and capacity, recently leading the technical development and implementation of a future safety risk assessment methodology for the Commercial Aviation Safety Team (CAST). He is currently leading the development of Minimum Aviation System Performance Standards for RTCA Special Committee 206, Aeronautical Information Services and Meteorological Data Link Services, in addition to other tasks. He has planned, conducted, and directed research for the FAA, NASA, airports, and commercial clients in safety and systems analysis, operations research, concept of operations development, investment decision-making, and strategic planning. He has experience in the development and implementation of advanced aviation technologies, and in aircraft design, construction, and operation. A commercial and military instrument-rated helicopter pilot with single and multiengine airplane ratings, Mr. Darr has extensive flight operations experience, including with human-powered aircraft and as a pilot in NASA and commercial technology trials. He was a member of the NASA cohort of the ADS-B Team that won the 2007 Collier Trophy. Mr. Darr retired from military service with significant command and staff experience in addition to aviation maintenance management experience.

Matt de Ris
Panasonic Avionics Corporation

Since 2013 I have worked for Panasonic Avionics Corporation. I work in the Panasonic Weather Solutions group where I manage aircraft installations, product development and directly support business development.

I have been involved with the aviation industry since 1988 in a variety of capacities. These include aircraft maintenance; transport pilot-in-command, pilot training management, concept development, product development, and installations.

In addition to my leadership in the Radio Technical Commission for Aeronautics that I provided on DO-349 -- Architecture Recommendations for Aeronautical Information (AI) and Meteorological (MET) Data Link Services, I have participated in SC-206 since 2010 and have contributed to DO-324, DO-339, DO-340, and the DO-252A update. I have also assisted in the leadership on the current development of the AIS and MET data link services MASPS. While the majority of my RTCA work has been with SC-206 I have participated, mostly remotely, in SC-214, SC-186, and SC-222.

I am also active in groups in EUROCAE, ICAO, ITU, and the ARINC AEEC standards development effort.

Matt de Ris, PMP
Manager - Aviation Programs and Strategic Partnerships
Panasonic Weather Solutions
Panasonic Avionics Corporation

Nick Demetriades

Vaisala Inc.

Nick Demetriades received his B.S. in Meteorology from the State University of New York at Oswego and later received his Master's Degree in Meteorology from Texas A&M University. He has been the lead or co-author on numerous conferences and refereed papers on lightning. He has given presentations at many international conferences, including several at the American Meteorological Society Annual Meeting.

Nick is currently the Head of Airports for Vaisala Transportation. His areas of expertise include aviation meteorology and lightning applications in the fields of meteorology and human safety. Nick is responsible for managing Vaisala's global airport business, including defining and evolving Vaisala's product and service offerings to help the aviation industry improve weather-impacted operations throughout the world.

Stephanie DiVito

Federal Aviation Administration (FAA)

Stephanie DiVito received a Bachelor of Science in Meteorology from Rutgers, The State University of New Jersey. She is a research meteorologist for the Federal Aviation Administration (FAA) under the Aircraft Icing Research Program at the William J. Hughes Technical Center in Atlantic City, New Jersey.

Ms. DiVito previously worked on the NextGen project titled Weather Observation Improvements (WOI), a project that is addressing terminal ground-based observing shortfalls. While on the project, she supported and assisted in creating winter weather evaluation efforts.

She also analyzed surface observation data and reviewed high resolution video data of winter weather events to determine the precipitation types present throughout the event.

Currently, she is the FAA technical lead for the Terminal Area Icing Weather Information for NextGen (TAIWIN) project, a project whose goals include development of a capability within the terminal area to address informational requirements sufficient to comply with the new certification rule for Supercooled Large Drops (SLD). She is also the FAA technical lead for the Algorithm for Predicting High Ice Water Content Areas (ALPHA) research, which is part of the NextGen High Ice Water Content (HIWC) ice crystal project. ALPHA is intended to diagnose and nowcast high ice water content ice crystal conditions at high altitudes potentially hazardous to aircraft engines.

Patricia H. Doherty

Boston College (BC)

Director and Senior Scientist Institute for Scientific Research Boston College Patricia H. Doherty is the Director and a Senior Scientist of the Institute for Scientific Research (ISR) at Boston College (BC). As director of the Institute, she oversees the activities of staff members working on a variety of innovative research projects. These projects include studies of space physics, space weather, ionospheric and atmospheric effects on space-based systems, ionospheric measurement techniques, chemical reactions in space and magnetospheric physics. As a scientist, Patricia's own research interests are centered on space weather and ionospheric effects on Global Navigation Satellite Systems (GNSS) and its relevant applications. In addition,

Patricia has been very active in promoting research and education in the science of navigation in developing countries.

Since the late 1990s, Patricia has worked in support of ionospheric research for the FAA's Wide Area Augmentation System (WAAS). She continues this effort as the chair of an international Satellite Based Augmentation Systems working group, comprised of ionospheric experts who jointly assess ionospheric issues for the worldwide development of SBAS systems. Patricia also supports space weather research under contracts for the Air Force Research Laboratory, the National Science Foundation and NASA. She has authored or co-authored over 50 papers on navigation research in refereed literature.

As a member of the Boston College University Research Council, Patricia joins faculty members in advising the Provost's office on issues that affect the research success of the BC community. She is an Associate Editor of the Radio Science Journal, a member of the American Geophysical Union (AGU), the immediate Past-president of the Institute of Navigation (ION), the Vice-Chair of the International Union of Radio Scientists (URSI) Commission G, the Boston College representative to the Universities Space Research Association (USRA) and a member of the USRA Issues and Program Committee. She is the recipient of numerous awards for Navigation research including the ION Burka Award, the ION Weems Award and the ION Distinguished Service Award. She is a Fellow of the Institute of Navigation and a Fellow of the African Geospace Society.

Patricia is a life-long resident of Massachusetts. She received her B.S. from the University of Massachusetts at Amherst and a M.S. from Boston College. She currently lives in Wakefield, Massachusetts with her husband Charlie.

Thomas H Doyle
Raytheon Company

Tom Doyle is the Chief Engineer for Nextgen Weather at Raytheon's Integrated Defense Systems division. He has direct responsibility for weather programs in the Northeast region, including the Nextgen Weather Processor. This includes technical oversight for all aspects of system development and customer technical engagement.

Mr. Doyle specializes in system architecture including Concept of Operations, capture of business rules and their application to system design. He has over 35 years of experience in the architecture, design, implementation and test of hardware, software, networks and systems. This includes weather product generation; agile beam steering for multi-function phased array radars; Air Traffic Control, Vessel Traffic Control, Perimeter Intrusion Detection, WiFi in the public safety bands, DoD Command and Control; Naval radio room automation; satellite, line of sight radio and submarine acoustic communications.

Mr. Doyle has a BS in Electrical Engineering from the University of Tennessee.

Tom Fahy
Capitol Meteorologics

Tom Fahy lobbies on behalf of weather information/technology companies and commercial weather data satellite companies. He is one of a few lobbyists that advocates on weather issues before Congress. Recent successful lobbying efforts have been on HR 2413, the Weather Forecasting Improvement Act of 2014 and on its successor, HR 1561, the Weather Research and Forecasting Innovation Act of 2015.

Both bills passed the House and include specific references to aircraft based weather observations from commercial weather data providers.

The U.S. Dept. of Justice and the National Center for Missing & Exploited Children have recognized Tom for his contributions and service for his work on the National AMBER Alert Plan. In 2005 the National Weather Service presented him with its "Mark Trail Award" for his intergovernmental advocacy efforts to improve emergency warning capabilities for NOAA Weather Radio and for strengthening NOAA's ties with the broadcast industry to improve public warnings. In 2007 NOAA again recognized his efforts after he produced public service announcements about the societal benefits of Global Earth Observations.

Tom is a member of two boards for American Meteorological Society - the Board for Enterprise & Economic Development that organizes the Washington Forum; and the Board on Enterprise Communications that organizes the Summer Community Meeting. He regularly attends the bi-annual Geosciences Congressional Visits Day. Tom served as session Co-Chair in 2013 at the AMS Summer Community Meeting that examined the needs for greater weather support to the aviation community.

Tom Fahey
Delta Air Lines

Tom has an M.S. Meteorology degree from University Wisconsin, Madison & began his Aviation Meteorology career at Northwest Airlines in 1977. His responsibilities have included: forecasting, training, developing products & procedures as well as producing revenue via weather product sales. Most recently some areas of focus have included Ice Crystal Icing risk mitigation as well as access to and use of Automated Aircraft Weather Reports, Tom has also worked as a consultant and is currently Manager Meteorology at Delta Air Lines in Atlanta where he practices servant leadership with a team of 25 forecasters who cover the entire world, using Delta's FAA approved Enhanced Weather Information System (EWINS).

Alan Fraser
Raytheon Company

Alan Fraser has worked for the Raytheon Company for 29 years and has worked Air Traffic Control, Radars and Weather Programs, recently specializing in Raytheon Aviation Weather Programs (Terminal Doppler Weather Radar (TDWR), Integrated Terminal Weather System (ITWS) and NextGen Weather Processor (NWP)). He has a Bachelors degree from North Staffordshire University, UK, and worked for companies such Marconi Radar and Plessey Displays in the UK, Germany and Austria.

Brad Gersey
Prairie View A&M University

Dr. Brad 'Buddy' Gersey is the Lead Research Scientist at the NASA Center for Radiation Engineering and Science for Space Exploration (CRESSE) at Prairie View A&M University. Dr. Brad 'Buddy' Gersey is considered an expert in the field of micro-dosimetry and interacts with all major academic and governmental groups in this field. He has taken micro-dosimetry measurements in radiation facilities all over the world, including the NASA Space Radiation Laboratory at Brookhaven National Labs, the Los Alamos Neutron Science Center and the Heavy Ion Medical Accelerator facility in Chiba, Japan. He has included underrepresented STEM students in his research, including work at all these facilities. He has also advised (and accompanied) students during micro-dosimetry experiments on the NASA "Weightless Wonder" micro-gravity vehicle. The results obtained by the students were presented at an international conference on space dosimetry on the International Space Station. He has also performed radiation micro-dosimetry measurements aboard a variety of other flight platforms including the ER-2, Deep Space Test Bed, and commercial aircraft.

Kory Gempler
FedEx

Kory studied meteorology at Northland College (WI) and started his career at Kavouras, Inc. in 1993. After 5 years of extensive forecasting with focus on aviation meteorology, he accepted a position in the FedEx Flight Department as an aviation weather forecaster. In 2013, he accepted the position as Manager of the FedEx Meteorology department.

Over the last 6 years, he has served on the CDM-WET, Vice Chairman of the A4A Meteorology Work Group (2014), and Chairman of the MWG (2015).

Steven Green
Federal Aviation Administration (FAA) Contractor

Steven D. Green holds a B.S. in Aviation from Louisiana Tech University; He also holds an Airline Transport Pilot license from the FAA with type ratings for the Boeing 767, 757, MD-80 and the Fairchild SA-227, as well as a Flight Engineer license with a turbojet limitation. He has flown professionally for 35 years, operating at all levels of the industry including Part 135 commuter operations, Part 121 supplemental operations and

Part 121 flag operations. Beginning in 1986, he has participated in numerous aircraft accident inquiries and investigations as a representative of the Air Line Pilots Association including TWA 800, TWA 843, Business Express N811BA, Simmons 4184, Comair 3272, AVAir 3378 and AVAir 3464. He received his formal accident investigation training from the Transportation Safety Institute in Oklahoma City in 1993. For two years, he taught two segments of the Air Line Pilots Association's Basic Accident Investigator Course. He also participated in the FAA Commercial Airplane Certification Process Study in 2001-2002, and wrote several segments of the final report. Association with the 1994 Roselawn accident involving Simmons 4184 led to work with ALPA's Inflight Icing Certification Project, which included participation on the Ice Protection Harmonization Working Group ARAC. Since 1994, he has been actively involved with icing issues, and has written a number of papers on the topic and delivered several oral presentations. Since 2004, he has actively consulted for both NASA and the FAA on the subject of airframe icing. He is currently an MD-80 captain.

Erick Hall

Boeing

Erick Hall is the Lead Flight Dispatcher for Boeing's Test and Evaluation group in Seattle, WA. Erick oversees a team of seven dispatchers supporting various commercial and flight test programs throughout the enterprise. When not executing daily flight support duties, Erick consults and participates in training among industry partners. He has also served as a Military Mission Planner with Jeppesen – A Boeing Company, in Englewood, CO. Prior to joining Boeing, Erick held various positions with several major carriers, including Manager, Systems Operations Control for Frontier Airlines from 2006-2008. Erick is a member of Boeing's Project Management Community of Excellence and is currently a student at Stanford University in Advanced Project Management.

Haig Iskenderian

Massachusetts Institute of Technology (MIT)

Lincoln Laboratory (LL)

Dr. Iskenderian is a Technical Staff member in the Air Traffic Control Systems Group at the Massachusetts Institute of Technology Lincoln Laboratory in Lexington, Massachusetts. He leads Lincoln Laboratory's convective weather research and development group, which focuses on developing weather forecasts and applications of the forecasts for aviation. He is also involved in demonstrations of the CoSPA 0-8 hour aviation weather forecast system, which provides users with radar-forward forecasts of precipitation and Echo Tops out to 8 hours. CoSPA is a collaborative effort among the FAA, Lincoln Laboratory, the National Center for Atmospheric Research, and the National Oceanic and Atmospheric Administration.

Prior to his employment at Lincoln Laboratory, Haig worked at TASC, Inc. on developing remote sensing algorithms and on weather modeling and simulation.

He has also worked at Atmospheric and Environmental Research, Inc. in the area of diagnosing climate variability. Haig has a B.S., M.S., and Ph.D. in atmospheric science from the State University of New York at Albany.

Jamey Jacob

Oklahoma State University

Jamey D. Jacob is the John Hendrix Chair of Mechanical & Aerospace Engineering at Oklahoma State University. Main research interests include unmanned aircraft integration and configuration, civilian applications of unmanned aircraft, low speed aerodynamics, micro- and nano-air vehicles, deployable wing technology, active flow control, wind tunnel and flight testing. He received his B.S. in Aerospace Engineering from the University of Oklahoma in 1990 and his M.S and Ph.D. in Mechanical Engineering from the University of California at Berkeley in 1992 and 1995, respectively. He was a National Research Council Faculty Fellow in the Air Force Research Laboratory at WPAFB. He currently serves the governor of the State of Oklahoma on the UAS Council and as the president of the AUVSI chapter Unmanned Systems Alliance of Oklahoma. Recent activities include the NSF funded effort CLOUD MAP: Collaboration Leading the Operational UAS Development for Meteorology and Atmospheric Physics.

Kevin Johnston*Federal Aviation Administration (FAA)*

Kevin Johnston is the Chief Meteorologist for the Director of the Federal Aviation Administration's (FAA) System Operations. As such, he advises the Director on weather related issues associated with Air Traffic Flow Management Decision Making activities. He is also the Contract Officer Technical Representative for the Center Weather Service Unit Operation at each of the FAA's Air Route Traffic Control Centers. Mr Johnston moved into this position in November of 2008 after leaving the National Weather Service where he was the Aviation Services Branch Chief and NOAA Aviation Weather Program Manager from 2004-2008.

Mr Johnston is a retired Air Force Lieutenant Colonel where he served over 21 years as a Weather Officer providing weather decision assistance information to various Joint, Air Force, Army and Special Operations missions.

Mr Johnston has a Bachelor Degree in Meteorology from the Pennsylvania State University. Mr Johnston is married to the former Ms Jenny Jepson and they have three boys, William Patrick, Daniel Joseph and Thomas Michael.

Pascal Joly*Airbus Americas, Inc.*

Pascal Joly began his career as an avionics engineer (he worked for Honeywell in Phoenix in the early '80's). Prior to joining Airbus Americas in 2006, he worked first at Airbus in Toulouse during about twenty years providing engineering support to sales campaign and design change definition in the domains of Autopilot, Flight Management System and Fly by Wire System.

He then moved to flight test engineering, having the position of Head of Department for flight test Research and Technology in the Airbus Test facilities of Toulouse. During these years, he has been involved on a number of aircraft programs like ATR (Regional aircraft) BELUGA (the Airbus Transport aircraft) the Long Range A340-600 and finally the A380.

With Airbus Americas, Pascal serves as Director, Flight Safety and Technical Affairs. He works in direct support of engineering organization for the home company and is involved in specific projects or safety issues, interfacing with the FAA for Airbus related matters. He also represents Airbus at various government/industry fora, including RTCA, Equip2020 and CAST (Commercial Aviation Safety Team).

He is member of the SAE Technical Standard Board and chair the Executive Board of AVSI, a Research Institute hosted by Texas A&M University.

Pascal graduated in 1977 from SupAero in Toulouse with a Master of Science and holds an additional degree in Air Transportation Law.

John Kosak*National Business Aviation Association (NBAA)*

John Kosak received his Private Pilot's license in early 1991 while attending the Flight Program at Northwestern Michigan College in Traverse City Michigan where he also received his associate's degree. Flying within the Great Lakes region is how John first gained a healthy respect for, and growing interest in aviation weather.

While John's life veered from aviation for a short period, he used the time to acquire his Aircraft Dispatcher License in early 1999 and later that year he joined a fractional aircraft company that was growing exponentially. John worked in numerous aspects of the business including logistics, dispatch, flight planning, operations training and operations management. As one of the first FAA licensed dispatchers working at Flight Options, John became the ad hoc weather specialist. Working in the Flight Options Operations Control Center gave him an appreciation for how weather impacts everything from a single flight to the entire operation.

After seven years at Flight Options, John joined the National Business Aviation Association's Air Traffic Services at the FAA's Air Traffic Control System Command Center, now located in Warrenton, VA. As an Air Traffic Management Specialist working for NBAA members, John helps business and general aviation aircraft navigate the complex National Airspace System (NAS) and serves as a general aviation advocate during daily planning conference calls attended by Centers, TRACONS, Towers, and other operators throughout the NAS. In addition to daily duties at the desk, John also writes documents for the weekly NBAA Update e-newsletter and stories for the "Business Aviation Insider," the official Member magazine of the NBAA. He facilitates presentations about weather and traffic management at the annual NBAA Business Aviation Convention & Exhibition, the Schedulers and Dispatchers and the Business Aviation Regional Forums, and in online webinars. John also assisted with the concept and implementation of a national program called File Smart, aimed at helping pilots understand the benefits of filing early, filing accurately, and checking the NAS—including weather forecasts—before flying.

While completing Penn State University's Weather Certificate course, John became the NBAA general aviation representative on the FAA's Collaborative Decision Making Weather Evaluation Team (WET) in 2008. He began participating in the Friends and Partners of Aviation Weather (FPAW) meetings in the summer of 2010. Both of these groups work with government, industry, academic, and private sector companies to design better weather products as well as systems for delivering them to operators. John was one of the driving forces behind the NBAA implementation of a weather specific committee that will pursue the organization's members' interests while working with the FAA and the National Weather Service as well as the FPAW and WET groups. Recently he was promoted to Program Manager, Weather, for NBAA's Air Traffic Services.

When he is not working, John can be found giving tours of the National Air and Space Museum's Steven F. Udvar-Hazy Center where he is a Docent, photographing the action at air shows throughout the eastern US, or when he is not on the ice himself, photographing his favorite sport, ice hockey.

Kevin Kronfeld
Rockwell Collins

Kevin Kronfeld is a Principal Systems Engineer at Rockwell Collins. He has 20 years of experience in the Avionics industry focused on flight deck technologies, including design and development of Airborne Radar Surveillance Systems. In addition to airborne radar he has experience with integrated threat avoidance technologies, Datalink Communications, Navigation, and airline operations support. He has participated in domestic and international programs related to aviation, interacting with industry, aviation authorities, and universities in North America and Europe.

Most recently he led the development of weather threat assessment algorithms for the award winning Multiscan Threat Track Radar System. He is currently developing technologies for weather threat avoidance on the flight deck and for ground dispatch operations.

Bruce Landsberg
Aircraft Owners and Pilots Association (AOPA)

Bruce Landsberg is the former President of the AOPA Foundation and the Air Safety Institute and led those activities for more than 22 years. During his tenure, the organization was nationally recognized with numerous awards for aviation safety leadership and educational program excellence. The Foundation assists AOPA to preserve the freedom of flight including safety programs, preserving airports, improving the image of general aviation, and growing the pilot population.

Bruce has semi-retired as Senior Safety Advisor to AOPA and the Air Safety Institute, writing the monthly "Safety Pilot" column in *AOPA Pilot* magazine, as well as a popular blog in AOPA ePilot. He also continues liaison duties the FAA, NTSB, NATCA, National Weather Service, and various industry groups.

A former U.S. Air Force officer, he holds a bachelor's degree in psychology and a master's degree in industrial technology from the University of Maryland. Prior to coming to AOPA, he held management positions with Cessna Aircraft Company and FlightSafety International.

Bruce has logged more than 6,000 hours as an Airline Transport Pilot (ATP) and holds gold seal flight

instructor certificates for Airplane – single/multi engine and Instruments. He has been an AOPA member for more than 40 years and is an aircraft owner of a well-loved A36 Bonanza.

He has been advocating the use of Pireps to validate Airmets for more than 15 years.

Scott Landolt

*National Center for Atmospheric Research (NCAR)
Research Applications Laboratory (RAL)*

In 1996, after choosing to pursue a degree in meteorology at the Metropolitan State University of Denver, I was hired on as a student at the National Center for Atmospheric Research (NCAR) to assist in the development of some of the early dual-polarization hydrometeor classification algorithms. I soon transitioned to the winter weather group, where my primary focus became snow measurement techniques. In 1999, I graduated with a B.S. in Meteorology and was hired on as an Associate Scientist at NCAR. I began collaborative work on improving snowfall measurements, automated detection of freezing drizzle, improvements to aircraft anti-icing procedures and improved detection of icing conditions aloft to name a few. In 2008, I graduated from the University of Colorado with a M.S. in Atmospheric, Oceanic and Astrophysical Sciences and am working on my dissertation for my doctorate degree. I am currently the lead of three Federal Aviation Administration (FAA) Product Development Teams (PDTs) on the NCAR side, leading the Snow Machine research efforts for improving testing of anti-icing fluids, the NextGen Surface Observing Capability (NSOC) Weather Observation Improvements (WOI) efforts to highlight the capabilities of the latest present weather sensing technologies and the new Terminal Area Icing Weather Information for NextGen efforts. I am also an active participant in the World Meteorological Organization (WMO) Solid Precipitation Intercomparison Experiment (SPICE) and teach part-time at the Metropolitan State University of Denver in the meteorology department.

Richard Mamrosh

*National Oceanic and Atmospheric Administration (NOAA)
National Weather Service (NWS)*

Rich Mamrosh is a Senior Forecaster for the National Weather Service in Green bay. He has collaborated with airlines, national meteorological centers, the FAA, NASA, universities and the WMO to increase and improve aircraft based meteorological data for the past 25 years. He was a participant in the National Weather Service's ACARS Assessment in the 1990s, which introduced aircraft data to NWS forecasters, helped design the NASA TAMDAR Great Lakes Fleet Experiment, and is currently working with the University of Wisconsin to improve the display of aircraft based observations to forecasters.

Bill Murtagh

*National Oceanic and Atmospheric Administration (NOAA)
Space Weather Prediction Center (SWPC)*

Bill Murtagh currently serves in the White House Office of Science and Technology Policy as the Assistant Director for Space Weather, Energy and Environment Division. In his position at OSTP he is overseeing the development of a national strategy on space weather. Bill is on detail from the National Oceanic and Atmospheric Administration (NOAA) where he is the Program Coordinator for the NOAA Space Weather Prediction Center (SWPC) in Boulder, Colorado.

Bill is NOAA's space weather lead in coordinating preparedness and response efforts with industry, emergency managers, and government officials around the world. He regularly briefs the White House, Congress, and government leadership on vulnerabilities of critical infrastructure to space weather storms. Bill is also a key contributor in U.S. government efforts to advance international cooperation in space weather-related activities.

He is a regular guest speaker at universities, government agencies, and national and international conferences. Bill has provided numerous interviews to major media outlets and is featured in several documentaries on space weather.

Before joining NOAA, Bill was a weather forecaster in the United States Air Force. He coordinated and provided meteorological support for national security interests around the world. Bill transferred to the SWPC in 1997 as a space weather forecaster and liaison between NOAA and the U.S. Air Force. He joined NOAA in 2003 after retiring from the Air Force with 23 years of military service.

Alfred Moosakhanian

Federal Aviation Administration (FAA)

Alfred is the Manager of NextGen Weather Systems in the Program Management Organization (PMO). He is a PMP and FAA Senior Level Certified Program Manager. He currently manages Common Support services Weather (CSS-Wx) and NextGen Weather Processor (NWP) programs. He manages the development of the advanced weather platforms for the NAS as well as the development of Weather Information Exchange Model (WXXM) and the International Civil Aviation Organization (ICAO) IWXXM for international adoption.

Previously, he served as the En-route Weather programs manager that included FIS Data Link (FISDL), Corridor Integrated Weather System (CIWS), and Weather and Radar Processor (WARP). He has over 30 years of engineering and management experience in the Industry and FAA working on numerous programs involving advanced Communications, Weather, and Automation technologies, from concepts to full scale development and system operation.

Alfred has MS in Electrical Engineering, MS in Engineering Management, and BS in Electrical Engineering.

Joshua Paurus

Minneapolis-St. Paul International Airport (MSP)

As a Duty Manager at the Minneapolis-St. Paul International Airport (MSP), Josh manages the day-to-day activities of the Metropolitan Airport Commission's (MAC) Airside Operations staff and is responsible for the implementation of MSP's operational programs including Airport Inspection and Certification, Wildlife Hazard Management, Emergency Management, Runway Safety and Winter Operations.

Josh has 20+ years of experience at three airports in the field of airport operations. The past 15 years have been with the Airside Operations department at the Minneapolis/St. Paul International Airport. He is a graduate of the University of North Dakota with degrees in Airport Administration and Business Management. Josh is a licensed pilot and a Certified Emergency Manager.

Gary Pokodner

Federal Aviation Administration (FAA)

Since graduating from Lehigh University as an electrical engineer, Gary Pokodner has worked in design, reliability, development, test, and acquisition of avionics. Gary came to the FAA in January 2011 after working for ARINC for 25 years on military avionics acquisition programs. Gary is the FAA's Weather Technology in the Cockpit (WTIC) Program Manager. In this role, Gary has been working to identify new research efforts related to bringing weather information into the cockpit to address near term needs and to enable various mid and far term NextGen concepts.

Nick Powell

Raytheon

(Not available at press time)

Robert W. Schunk

Utah State University

Robert W. Schunk is a Professor of Physics and the Director of the Center for Atmospheric and Space Sciences at Utah State University (USU). He received his B. S. degree in Aeronautical Engineering from New York University in 1965 and his Ph.D. in Physics of Fluids and Plasmas from Yale University in 1970. He is a co-founder and the President of Space Environment Corporation, a small high-tech company in Logan, Utah. He is also a founding member, and Executive Committee member, of the American Commercial Space Weather Association (ACSWA). He has been a Principal Investigator (PI) on numerous NASA, NSF, Air

Force and Navy grants, including 29 years as PI of the pre-eminent NASA Theory Program, PI of an Air Force Center of Excellence, PI of a USTAR program funded by the State of Utah to create a Space Weather Center; and PI of a DoD Multi-Disciplinary University Research Initiative (MURI). The MURI Program produced an operational data assimilation model of the Earth's ionosphere called Global Assimilation of Ionospheric Measurements (USU-GAIM).

With colleagues, Prof. Schunk developed 3-D time-dependent models of the ionosphere, polar wind, plasmasphere, exosphere, thermosphere, plasma cloud expansions, ionosphere/high voltage sphere interactions, and ionosphere/solar cell interactions. He also studied basic plasma physics phenomena, including plasma transport, contact potentials, electron-beam plasma interactions, shocks, and wave-particle coupling. Recently, his research has focused on the development of data assimilation models of the upper atmosphere and ionosphere using Kalman filters, and on the effect that tropospheric waves have on the ionosphere-thermosphere system. He has co-authored a book entitled 'Ionospheres', co-edited three books, authored or co-authored more than 420 scientific publications, and gave or contributed to more than 800 presentations at scientific meetings.

Professor Schunk received the D. Wynne Thorne Research Award from USU in 1983, gave the 73rd Faculty Honor Lecture at USU in 1986, received the Governor's Medal for Science & Technology from the State of Utah in 1988, became a Fellow of the American Geophysical Union (AGU) in 1997, gave the AGU Nicolet Lecture in 2002, was inducted into the International Academy of Astronautics in 2006, and became an Associate Fellow of the American Institute of Aeronautics and Astronautics in 2014.

He has been the Chair or member of many national committees and review panels serving NASA, the National Science Foundation, and the National Academy of Sciences (NAS) - National Research Council, including the first NAS Decadal Survey for Solar and Space Physics (2000). He also has been a Chair or member of numerous international scientific organizations, including the AGU, EGU, COSPAR, URSI, and IAGA.

Kevin L. Stone

*National Oceanic and Atmospheric Administration (NOAA)
National Weather Service (NWS)*

Kevin L. Stone is a meteorologist in the Aviation Services Branch of the Office of Climate, Water and Weather Services at National Weather Service Headquarters. He joined NWS in 2011 as the lead for the Traffic Flow Management Weather Requirements Working Group, a joint effort between NWS and the Federal Aviation Administration to develop and implement solutions to meet current and emerging weather requirements in support of the FAA's management of the National Airspace System. Prior to joining NWS, he served 27 years in the United States Air Force in various roles from weather observer to deputy group commander.

Mr. Stone holds a Master of Science degree in Meteorology from the Naval Postgraduate School and a Bachelor of Science degree in Meteorology from the University of Massachusetts-Lowell.

Kent Tobiska

Utah State University

Dr. Tobiska is the Director of the Utah State University Space Weather Center (SWC), President and Chief Scientist of Space Environment Technologies (SET), and President of Q-up, LLC. His long-term research focus has been the analysis of solar XUV to FUV data that has led to the creation of an internationally distributed hybrid solar irradiance platform (SIP). He invented the world's first operational computer code for solar irradiance forecast while serving as a senior scientist at Northrop Grumman/Logicon. At SET, he extended this expertise as a PI into operational space weather systems producing solar irradiances, geomagnetic indices, and radiation environment dose rates. At SWC, he has led the effort to disseminate operational information layers in HF communications and GPS accuracies into broader technology systems. At Q-up, he has organized the activity to commercialize ionospheric communications and navigation products. Through his career at NOAA Space Environment Laboratory, UC Berkeley Space Sciences Laboratory, Jet Propulsion Laboratory, Northrop Grumman, SET, SWC, and Q-up, he has been a USAF and a NASA Principal Investigator (PI) in the LWS, SOHO, JSDAP, and UARS programs, a Co-Investigator (Co-I) on the NASA TIMED, Galileo, and ESA component of the International Space Station (ISS) SOL-ACES

instruments. He has been the COSPAR C1 Sub-Commission (Thermosphere & Ionosphere) Chair, the COSPAR International Reference Atmosphere (CIRA) Task Force Chair, and is a Session Organizer for 2002, 2004, 2006, 2008, 2010, 2012, and 2014 COSPAR scientific sessions. He serves as lead U.S. delegate to ISO for the space environment and developed the ISO solar irradiance standard; he is the AIAA Atmospheric and Space Environment Technical Committee (ASETC) Committee on Standards (CoS) chair. He actively participates on the AMS annual Space Weather Symposium organizing committee and on the Research-to-Operations Working Group for the National Research Council Decadal Survey. He has authored/co-authored over 165 peer-review scientific papers as well as 10 books and major technical publications. Dr.

Tobiska is an Associate Fellow of the American Institute of Aeronautics and Astronautics and a member of American Geophysical Union, Committee on Space Research, American Meteorological Society, and U.S. Technical Advisory Group for ISO TC20/SC14.

Joe Vickers

Aviation Safety Technologies

Helping airlines and airports improve their Operational Control Processes through data analysis and recommending initiatives to enhance safety, increase efficiency and achieve better operational reliability.

Joe is experienced in Operations Control, process design, change management, IT program implementation, IT prioritization, control center design and construction, control center relocation, mergers of major airline operations, labor relations, program management, regulatory compliance and other areas.

A retired Managing Director for United Airlines where he oversaw development of consolidated business processes at United Airlines Network Operations Control Center and was responsible for day to day Operations Control activities of United's pre-merger OCC. Joe also held leadership positions in control centers for medium and small regional airlines.

Joe is a general aviation enthusiast who is a Certified Flight Instructor holding Instrument Pilot and Multi-Engine ratings. Passionate about teaching and personal development, Joe has served the FAA as a Designated Examiner for Aircraft Dispatchers since 1995. He has overseen the development of training, standards and QA/QC processes. Additionally, Joe develops, encourages and participates in formal and informal information sharing forums amongst industry peers.

Michael Wiltberger

*National Center for Atmospheric Research (NCAR)
High Altitude Observatory (HAO)*

Dr. Wiltberger works as research scientist within the High Altitude Observatory, whose main area of research is the modeling of the space weather impacts, including the effects on HF communication, GPS systems, and electric power grid. This work focuses on efforts to develop new models, analysis of model results, and dissemination of research results through peer review journals and presentations at meetings. He has served as a panelist on numerous NASA and NSF review panels, as Chair of the NSF Geospace Environmental Modeling Steering Committee and as Vice Chair of the Solar Wind-Magnetosphere Interactions Panel of the 2010 NRC Decadal Survey for Solar and Space Physics. He is the author or co-author of over 100 publications in refereed scientific journals.