

**WMO OMM**

World Meteorological Organization
Organisation météorologique mondiale
Organización Meteorológica Mundial
Всемирная метеорологическая организация
المنظمة العالمية للأرصاد الجوية
世界气象组织

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Ref.: 22129/2023-1.8 S/AVI

Our ref.: 22129/2023/S/AVI/AeroMetSci-Webinar

19 October 2023

Annex: 1 (available in English only)

Subject: WMO Aeronautical Meteorology Scientific Webinar on 5 December 2023

Action required: Distribute the announcement to interested parties and ensure self-registration by participants via the webinar registration form **not later than 15 November 2023**

Dear Sir/Madam,

I am pleased to inform you that the World Meteorological Organization (WMO) Commission for Weather, Climate, Hydrological, Marine and Related Environmental Services and Applications (SERCOM) will convene a web-based seminar ("webinar") on 5 December 2023, from 06:00 to 09:00 UTC, to showcase some of the latest state-of-the-art scientific and technological advances taking place in aeronautical meteorology in WMO Regional Associations II (Asia) and V (South-West Pacific). This webinar follows the successful convening of a corresponding series of webinars in all WMO Regions in June 2022.

The theme of the webinar is: "*Scientific and technological innovation in observation and forecast of turbulence and airframe icing to enable service delivery transformation and improve aviation safety*".

The objective of the webinar will be to showcase scientific and technological advances, in particular the application of artificial intelligence (AI) and machine-learning (ML), in meteorological observations, forecasts, advisories and warnings as well as to expand the focus on the integration of meteorological information decision-support services into the global air traffic management system. The webinar will briefly cover climate research efforts that may offer insights into the potential impacts of a changing climate on aviation operations. Further information is provided in the [Concept Note](#) (English only) annexed to this announcement and on the webinar [website](#).

The webinar will comprise a blend of pre-recorded video presentations and live panel discussions. The working language of the webinar will be English. In view of the online nature of this seminar, it is essential that participants have the necessary and appropriate access to the public internet, including sufficient bandwidth capacity. Registration for the selected webinar should be done by each participant through the webinar registration form available here: <https://forms.office.com/e/LiyDfhiBwa> **not later than 15 November 2023**. Any enquiries concerning the webinar should be directed to the WMO Services for Aviation division at: aviation@wmo.int.

To: Permanent Representatives of Members of Regional Association II (Asia) and Regional Association V (South-West Pacific) (limited distribution)

I should be grateful if you could make this announcement widely known within your respective Service and other relevant organizations in your country.

Yours faithfully,



Dr Elena Manaenkova
for the Secretary-General

WMO AERONAUTICAL METEOROLOGY SCIENTIFIC WEBINARS 2023**5, 6 and 7 December 2023 (online)****CONCEPT NOTE**

Ref.: 22129/2023-1.8 S/AVI

1. BACKGROUND AND RATIONALE

- 1.1. In November 2017, an Aeronautical Meteorology Scientific Conference (AeroMetSci-2017) was convened in Toulouse, France by the World Meteorological Organization (WMO), Météo-France and other co-sponsors. The Conference addressed:
- (a) science underpinning meteorological observations, forecasts, advisories and warnings;
 - (b) integration, use cases and fit-for-purpose service delivery; and
 - (c) the impacts of climate change and variability on aviation operations and associated science requirements.
- 1.2. More than 200 participants attended AeroMetSci-2017. The overwhelmingly positive feedback clearly indicated that WMO should conduct a similar Conference within 5 years to foster early technological transfer in order for Members to be well prepared for the progressive transformation from a conventional "product-centric" approach to a modern "information-centric" approach to MET service provision, as articulated in the WMO long-term plan for aeronautical meteorology (LTP-AeM) as well as the International Civil Aviation Organization (ICAO) Global Air Navigation Plan (GANP).
- 1.3. The WMO Services Commission (SERCOM) Standing Committee on Services for Aviation (SC-AVI) had intended to convene the next (physical) AeroMetSci Conference in 2021. However, due to the unforeseen and unprecedented impact of the COVID-19 pandemic on international travel, the Conference has been postponed to 2024. This revised time frame for the physical Conference will serve as an approximate midpoint of research activities linked to Phase 2 of an Aviation Research and Development Project (AvRDP2), a joint collaboration between the Research Board (RB) World Weather Research Programme (WWRP) and SERCOM SC-AVI.
- 1.4. Given the prevailing postponement of the physical Conference and in order to maintain community interest and engagement, the SERCOM SC-AVI, with the support of the RB and Infrastructure Commission (INFCOM) as necessary, is conducting a series of web-based seminars ('webinars') to showcase some of the latest state-of-the-art scientific and technological advances taking place in aeronautical meteorology. The first round of webinars was held in June 2022 and attracted more than 250 online participants. A second round of webinars is scheduled for December 2023. These webinars, convened across all six WMO Regions, are helping to promote awareness within and stimulate collaboration across national meteorological services and others involved in the provision and use of meteorological service for international air navigation, with a particular focus on key meteorological hazards of concern to aviation such as severe convection or turbulence.

2. OBJECTIVE AND THEME

- 2.1. Building on the success of AeroMetSci-2017 and taking into account the current and foreseen modernization of meteorological service for international air navigation in line with ICAO GANP and WMO LTP-AeM, the objective of the webinars is to further showcase scientific and technological advances, for instance the application of

artificial intelligence (AI) and machine-learning (ML), in meteorological observations, forecasts, advisories and warnings as well as expand focus on the integration of meteorological information decision-support services into the global air traffic management system. The webinars also briefly cover climate research efforts that may offer insights into the potential impacts of a changing climate on aviation operations.

2.2. The theme of the 2023 webinars series will be:

"Scientific and technological innovation in observation and forecast of turbulence and airframe icing to enable service delivery transformation and improve aviation safety"

3. EXPECTED OUTCOME AND OUTPUTS

3.1. The webinars will serve to help WMO refine a common vision for scientific and technological research and development, increase visibility of AvRDP2, and allow for a more objective assessment of the current and expected operational capability of aeronautical meteorological service providers in the next 5 to 10 years. In addition, the webinars will help inform WMO's advice to ICAO, for example in respect of the hazardous weather information service (HWIS) concept and industry efforts to mitigate the effects of and adapt to a changing climate.

3.2. Outputs of the webinars will include a final report comprising an overview of the presentations and a summary of the panel discussions as well as recommendations to help guide or direct future work and preparations for a physical AeroMetSci Conference.

4. STAKEHOLDERS AND PARTNERS

4.1. A broad array of internationally recognized scientific research partners, aviation stakeholders and other parties are expected to express interest in the webinars, including:

- (a) WMO Member States and Territories, technical commissions, regional associations and other bodies;
- (b) Scientific research institutes, universities and other academia;
- (c) International aviation organizations/associations such as ICAO, IATA, IFALPA, IFATCA, ACI and CANSO and others from the international aviation industry;
- (d) National or regional air traffic management modernization programmes such as SESAR (Europe), NextGen (USA) and CARATS (Japan);
- (e) Meteorological instrumentation systems, data processing and display providers, including associate members of HMEI, and
- (f) Public and private meteorological service providers serving international civil aviation.

5. FORMAT AND RESPONSIBILITIES

5.1. The webinars will comprise a blend of pre-recorded video presentations and live panel discussions involving renowned experts and agencies from across the aeronautical meteorology community.

5.2. The webinars will be conducted across multiple WMO Regions (multiple time zones) in order to reach a global audience, provisionally as follows:

UTC	Tuesday 5 December 2023	Wednesday 6 December 2023	Thursday 7 December 2023
0600– 0900	RA II (Asia) and RA V (South-West Pacific)		
1100– 1400		RA I (Africa) and RA VI (Europe)	
1700– 2000			RA III (South America) and RA IV (North America, Central America and the Caribbean)

- 5.3. The SC-AVI, through its Expert Team on Weather and Climate Science for Aviation Applications (ET-WCS) and with the support of others as necessary, will be responsible for leading the planning, preparation and conducting of the webinars and for reporting on the outcomes to SERCOM and others concerned.
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