

**WMO OMM**

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

Secrétariat

7 bis, avenue de la Paix – Case postale 2300
CH 1211 Genève 2 – Suisse
Tél.: +41 (0) 22 730 81 11
Fax: +41 (0) 22 730 81 81
wmo@wmo.int – public.wmo.int

Ref.: 02451/2024.1.9 IOMM

Our ref.: 02451/2024/I/WIGOS/ONM/MQC/TECO-2024

7 March 2024

Annex: 1 (available in English only)

Subject: Announcement and call for abstracts for the 2024 WMO Technical Conference on Meteorological and Environmental Instruments and Methods of Observation (TECO-2024)

Action required: To distribute the announcement to interested parties, and to submit abstracts of papers via the WMO website as soon as possible, but not later than **30 April 2024**

Dear Sir/Madam,

The World Meteorological Organization (WMO) is organizing the 2024 WMO Technical Conference on Meteorological and Environmental Instruments and Methods of Observation (TECO-2024) with the theme: "Measurements and new technologies for WMO priority initiatives".

TECO-2024 will be held in Vienna, Austria, at the Messe Wien Exhibition & Congress Centre from 23 to 26 September 2024, in hybrid format. The Conference will take place in conjunction with the Meteorological Technology World Expo organized by UKi Media & Events. It will also include the presentation of the 2024 Professor Vilho Väisälä Awards.

This event is for all those involved with instruments and methods of observation from National Meteorological and Hydrological Services (NMHSs), environmental agencies, other national and international organizations dealing with measurements, research institutes and academia, the private sector (especially instrument manufacturers and measurement providers) and other interested individuals.

The Conference aims at strengthening the WMO Integrated Global Observing System (WIGOS) measurement community by enhancing knowledge of observing and measurement techniques, methodologies and related quality procedures for Earth system observations, sharing information on the latest developments in instrumentation and measurement techniques, promoting the environmentally sustainable observing systems and methods. It will also be an opportunity for fostering collaboration among WIGOS stakeholders, including NMHSs, public and private agencies, manufacturers, research institutions and academia. The Conference will consider in particular measurement practices and technologies relevant to WMO priority initiatives, such as Early Warnings for All (EA4ALL), Global Basic Observing Network (GBON), and Global Greenhouse Gas Watch (GGGW).

To: Permanent Representatives of Members with WMO

cc: Hydrological Advisers
Presidents and vice-presidents of technical commissions
Presidents of regional associations
Chair and vice-chair of the Research Board
Director General, ASECNA
Executive Secretary, HMEI

An International Programme Committee (IPC), chaired by Dr Jane Warne, the Chair of the Standing Committee on Measurements, Instrumentation and Traceability (SC-MINT) of the WMO Infrastructure Commission, will oversee the Conference and will be responsible for the selection of papers for oral presentations or poster displays.

The purpose of this letter is to announce the Conference and to invite the submission of abstracts. Those wishing to present an oral or poster presentation at TECO-2024 are kindly requested to follow the instructions provided in the [annex](#) or on the [Conference website](#).

For technical reasons, consideration can only be given to abstracts, in English, of less than 300 words, which are submitted online **before 30 April 2024**.

Lead authors of papers selected by IPC will be advised in June 2024 with further instructions concerning the format and submission deadline for papers or posters for publication in the Conference proceedings. Limited financial support may be available for selected participants from lesser developed countries, who are presenting papers.

I should be grateful if you would make this announcement widely known within your respective Service and beyond.

Yours faithfully,



Prof. Celeste Saulo
Secretary-General



The World Meteorological Organization is pleased to announce:

THE 2024 WMO TECHNICAL CONFERENCE ON METEOROLOGICAL AND ENVIRONMENTAL INSTRUMENTS AND METHODS OF OBSERVATION (TECO-2024)

Vienna, Austria, 23–26 September 2024

Conference Theme: Measurements and new technologies for WMO priority initiatives

The following main topics will be addressed at the Conference:

1. New measurement technologies and innovative integrated approaches

- New developments and innovations in instruments, methods, techniques and technologies for sustainable measurements to support the WMO strategic priorities
- Newly developed or improved algorithms
- Cost-effective sensors technologies
- New and innovative integrated initiatives for measurements
- Opportunities and challenges with artificial intelligence, big data and crowd sourcing (internet of things)
- Best practices for data exchange and data formats

2. Environmental sustainability of observing systems

- Innovations in measurement technologies and methods reducing environmental impact
- Life-cycle assessments of instruments and observing systems
- Regulations, guidance, and incentives for environmentally sustainable approaches
- Use of environmentally-friendly materials
- Best practices related the procurement, management and operations of observing systems

3. Characterization and testing of instruments and methods

- Characterization of instruments and measurement methods
- Testing procedures

- Verifying instrument performance
- Outcomes of instrument intercomparisons
- Performance of instruments under harsh environments and in extreme weather conditions

4. Traceability of measurements to recognized standards

- Mechanisms to ensure measurement traceability to recognized standards
- Development and maintenance of standards and standard procedures
- Field inspection and verification methods and procedures
- Best practices for ensuring measurement traceability
- Traceability and calibration of remote sensing observing systems
- Methods and procedures for laboratory and field calibration
- Assessment of laboratory, field and overall measurement uncertainty
- Adoption and implementation of ISO 17025 in calibration laboratories
- Collaboration between NMHSs and the metrology community (Regional Instrument Centres, National Metrology Institutes, ...)
- Protocols for, and experiences and results from interlaboratory comparisons

5. Quality assurance and maintenance of the observing systems

- Experience with the siting and measurement quality classification schemes
- Quality control procedures
- Observing system operation and maintenance strategies
- Preventive and corrective maintenance activities for improving the availability and quality of the observations
- Best practices for managing calibration results and their implementation in operational systems
- Spare parts and consumables management practices

6. Capacity development for sustainable and quality measurements

- Experience with personnel competences related to requirements identification, installation, operations, maintenance and calibration of equipment
- Experiences with training activities and outreach material including e-learning tools and platforms
- Modernization of observing systems and related infrastructure

- Best practices for tendering processes and purchasing of measurements related systems and instruments
- Experiences with capacity development projects, including with donors and funding agencies

TECO-2024 will be conducted in English only. All information concerning the Conference, including the Abstract Submission Form, is available on the [WMO website](#).

The deadline for submission of the extended abstracts and posters in their required format will be provided in the acceptance letter to be sent to authors of selected abstracts, in June 2024. Papers accepted for presentation will be published in their original form (without editing) in the WMO Instruments and Observing Methods Report series.

Abstracts of proposed papers, not exceeding 300 words, in English only, should be submitted, using the electronic version of the submission form, via the above-mentioned web links, not later than **30 April 2024**.

For any further information, please contact the WMO Secretariat:

Mr Ercan Buyukbas

World Meteorological Organization

Geneva, Switzerland

Tel.: +41 22 730 8248

Fax: +41 22 730 8021

ebuyukbas@wmo.int
