



The International Association of Meteorology and Atmospheric Sciences 2022 Report to SCOR (www.IAMAS.org)

IAMAS is one of the eight associations dealing with the Earth system and its environs that make up the International Union of Geodesy and Geophysics (IUGG). The scope of IAMAS includes the atmospheres of the Earth and other planets. IAMAS is made up of ten international commissions and one committee which together play a major role in implementing IAMAS's activities. The ten commissions cover *Atmospheric Chemistry and Global Pollution* (ICACGP), *Atmospheric Electricity* (ICAE), *Climate* (ICCL), *Clouds and Precipitation* (ICCP), *Dynamical Meteorology* (ICDM), the *Middle Atmosphere* (ICMA), *stratospheric Ozone* (IOC), *Planetary Atmospheres and their Evolution* (ICPAE), *Polar Meteorology* (ICPM), and *atmospheric Radiation* (IRC). The *Committee on Nucleation and Atmospheric Aerosols* (CNAA) brings together scientists covering the areas of Nucleation Theory and Experiment, Tropospheric and stratospheric aerosols, Cloud Drop and Ice Nucleation and Aerosol-Climate Interactions.

Many of these commissions play international leadership roles in their specialist areas [see <https://www.iamas.org>]. The commissions provide an important supplement and extension to the leadership and research role of the *World Meteorological Organization* (WMO), which is the governmental body with a scientific scope that is comparable to that of IAMAS.

The current Bureau of IAMAS consists of:

- President – Joyce Penner (USA)
- Secretary General – Steven Ackerman (USA)
- Vice President – John Burrows (Germany)
- Vice President – Mary Scholes (South Africa)

The organization also has five Members at Large who promote IAMAS activities:

- Prof. Michiel R. van den Broeke (Netherlands) 2019-2023
- Prof. Mu Mu (China) 2019-2023
- Dr. Lisa Alexander (Australia) 2015-2023
- Dr. Keith Alverson (USA/Japan) 2015-2023
- Dr. Iracema Cavalcanti (Brazil) 2015-2023

a) IAMAS held a successful virtual seminar series together with the Cryosphere and Physical Oceanography Associations of IUGG (IACS and IAPSO), called Virtual Atmosphere-Cryosphere-Oceanography 2021 or VACO 2021) from July 19 – 23, 2021. The series of seminars were organized around the themes of Remote Sensing, Field Observation, Coupled Changes and Variability, Modelling atmosphere, ocean and cryosphere interactions that included one speaker

from each assembly. In addition, one day was devoted to presentations by the Early Career Medal winners from each association. More than 450 registrants participated in these seminars.

b) The next meeting of IAMAS is planned to take place together with IUGG in Berlin, Germany, from July 11 – 20, 2023. The initial planning for this meeting took place at the September, 15-16, 2021 IUGG Executive Meeting. At this time it is unclear, but the local organizing team is planning on an in-person meeting.

c) IAMAS commissions hold a number of high profile conferences either alone or in conjunction with other organizations. Many meetings were postponed early in the pandemic. However, some highlights of meetings/activities that were held during the past year (or are scheduled for early this coming year) are listed below.

International Global Atmospheric Chemistry/International Commission on Atmospheric Chemistry and Global Pollution: 10-15 September 2022 virtual and in-person in Manchester, UK.

International Commission on Atmospheric Electricity: 19-24 June 2022 in Tel Aviv, Israel.

The International Commission on Climate organized a session at the 4th Congress of China Geodesy and Geophysics (CCGG) (17-18 July 2021) at Qingdao JS03: Atmosphere-Ocean-Cryosphere coupling and anthropogenic forcing/climate feedback. Two sessions at EGU (April 3-8) 2022 were also organized: “Interglacial diversity” and “Monsoon systems in a changing climate: past, present and future.”

International Commission on Clouds and Precipitation (ICCP): 2-6 August 2021 originally scheduled for Pune, India, but held virtually.

Committee on Nucleation and Atmospheric Aerosols (iCNAA): postponed until 26-30 June 2023, to be held in Brisbane, Australia.

International Commission on the Middle Atmosphere (ICDM): held a workshop on 30 May-3 June 2022 on Long-term Changes and Trends in the Atmosphere in Helsinki, Finland; as well as a hybrid workshop on 11-15 July 2022 on Vertical Coupling in the Atmosphere-Ionosphere System in Sopron, Hungary.

International Commission on Planetary Atmospheres and their Evolution (ICPAE): Initiated a monthly webinar series.

The International Commission on Polar Meteorology (ICPM) has initiated a set of monthly webinars: <https://www.iamas.org/icpm/resources/>. In addition, the ICPM-endorsed 17th WAMC will be a hybrid meeting hosted by the University of Wisconsin-Madison, August 4 and 5, 2022.

International Ozone Commission (IOC) hosted the Quadrennial Ozone Symposium 3-9 October 2021 virtually from Daejeon, South Korea.

International Radiation Commission (IRS):

The Quadrennial Symposium of the International Radiation Commission was held 4-8 July 2022 in Thessalonika, Greece.

After two postponements due to the COVID-19 pandemic, the quadrennial International Radiation Symposium (IRS 2022) was held in Thessaloniki, Greece, from 4-8 July 2022. By all accounts, it was a major success. IRS 2022 was organized by the Laboratory of Atmospheric Physics of the Aristotle University of Thessaloniki in partnership with the International Radiation Commission (IRC) of the International Association of Meteorology and Atmospheric Sciences (IAMAS). IRS 2022 was held at the Thessaloniki Concert Hall Convention and Cultural Center. Over 360 scientists from 29 countries participated in the fully in-person symposium, with over 250 oral and 150 poster presentations.

IRS 2022 provided a comprehensive international forum for presenting and discussing recent research achievements and technological developments in atmospheric radiation and related disciplines in the following ten sessions: Topical Union Session: Current Problems in Atmospheric Radiation; Radiative Transfer Theory and Modeling; Particle Radiative Properties; General Remote Sensing; Ground-based Measurements and Field Observations; Radiation Budget and Forcing; Weather, Climate and Environment Applications; Solar UV Radiation; Ocean Optics; and Climate Change in the Mediterranean and Radiative Impacts of a Changing Environment. Internationally recognized senior scientists, young scientists, and students had a unique opportunity to discuss the most current scientific issues, exchange new ideas and establish far-reaching collaborations.

The first three days of IRS 2022 kicked off with keynote addresses presented in the topical union session. On Thursday, the topical union addresses were given by Gold Medal Award recipient Bill Smith (Professor Emeritus, University of Wisconsin-Madison) and Young Scientist Award recipient, Seung-Hee Ham (NASA Langley Research Center). Professor Smith and Dr. Ham were presented their awards at the IRS 2022 Banquet held the previous evening.

f) The work of the IAMAS Bureau this past year continued to advance the IAMAS Strategic Plan, which was adopted at the Montreal 2019 meeting. In particular, we:

- i) The IAMAS Early Career Scientist Committee, has initiated a set of monthly webinars:
<https://www.youtube.com/channel/UCacNFbyJf3O7jyukKS6BKoQ>.
- ii) IAMAS has received a 5013c which will allow it tax-exempt (not-for-profit) status in the U.S. We are thus working towards a more stable financial status so that several Bureau officers will have access to our funds.
- iii) IAMAS has set up several joint sessions with other Associations at the IUGG meeting in Berlin for 11-20 July 2023. In addition, many of our Commissions are organizing their own sessions.
- iv) The IAMAS Bureau continues to have regular monthly meetings for planning purposes. In addition we are continuing to track our performance on our Strategic Plan initiatives and are making good progress.

For more information on IAMAS please contact :

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Submitted by Joyce Penner, IUGG/IAMAS representative to SCOR, 4 August 2022.