

HERMOSA session plan

Harmonising Environmental Research and Monitoring of Priority Pollutants in the Svalbard Atmosphere

(all times in CET time zone / CEST time / Warsaw – Berlin – Paris – Oslo – Rome)

Tuesday October 5th

10:00 am - Greeting participants, introduction, a brief introduction to SIOS, proposing the idea of writing a SESS Report as a result of the workshop (*Christiane Hübner, SIOS Knowledge Centre, Adam Nawrot, Institute of Geophysics PAS, & Krystyna Koziol, Gdansk University of Technology*)

10:30 am – **discussion session: Laboratory analysis and in-situ measurements for atmospheric impurities** (Chair: *Juliana Souza-Kasprzyk*):

10:30-11:00 am - an introductory talk: ***Environmental challenges of laboratory and field measurements*** (*Przemysław Niedzielski*)

11:00-11:15 Coffee break

11:15 am - 1:00 pm - a discussion panel on the laboratory analytics and in-situ measurements

11:15 division into break-out rooms (BRs):

BR1 (Chair: *Catherine Larose*): Particulate impurities: microbial aerosols, aerial plankton, black carbon, microplastics, mineral dust

BR2 (Chair: *Roland Kallenborn*): Persistent and emerging organic pollutants

BR3 (Chair: *Elena Barbaro*): Inorganic water-soluble impurities: trace elements, ions, isotopes

BR4 (Chair: *Thomas Chen*): In-situ measurements in the field, including optical methods and UAVs

The proposed outcome of the discussion: an inventory of available analytical techniques, which are compatible for similarly collected samples, state of the art in analytical techniques available - and where to find an appropriate lab who does this, knowledge gaps and challenges in analytical and in-situ measurement approaches - as relevant for current Svalbard atmospheric studies

1:00 - 2:00 pm lunch break

2:00 - 4:00 pm **Impurities sampling in the field (a cross-disciplinary session)** (Chair: *Adam Nawrot*)

2:00-2:30 pm introductory lecture: ***Long-range transport and air-water/snow exchange of emerging organic contaminants in the Arctic*** (*Zhiyong Xie*)

2:30-4:00 pm breakout rooms:

BR1 (Chair: *Vladimir Nikiforov*): Direct air sampling

BR2 (Chair: *Sara Lehmann-Konera*): Sampling precipitation as atmospheric composition proxy

BR3 (Chair: *Andrea Spolaor*): Sampling surfaces in contact with atmospheric deposition

The proposed outcome of the discussion: Synergies in field sampling for cross-disciplinary projects, possibilities to harmonise and combine monitoring of various impurities, emerging sampling techniques, challenges for environmental sampling

Wednesday October 6th

10:00 – 10:30 am: SIOS data management (*Ilkka Matteredo, SIOS Knowledge Centre*)

10:30 - 12:00 am: **Wrap-up from Session Chairs from the day before: environmental problems and knowledge gaps to be solved with the harmonised protocols and combined techniques** (Session and BR Chairs)

12:00 – 13:00 pm: lunch/coffee break

13:00 – 14:00 pm (*Chair: Krystyna Koziol*): discussion session on the emerging research problems - cross-cutting, interdisciplinary issues as current challenges in atmospheric research in Svalbard (*without breakout rooms*)

14:00 – 14:30 pm - closing the workshop, setting up a schedule for continuing to write the SESS report (*Adam Nawrot, Krystyna Koziol, Christiane Hübner*)