

Pan-Eurasian EXperiment (PEEX) – Observation, Modelling and Assessment in the Arctic-Boreal Domain

AS4.4 & Co-organized by BG1/CL2/GI4

Convener: Hanna Lappalainen | Co-conveners: Markku Kulmala, Alexander Baklanov, Alexander Mahura

[Presentations](#)

Wed, 25 May, 15:55–18:30 (CEST), Room F1

Public information:

The session "Pan-Eurasian EXperiment (PEEX) – Observation, Modelling and Assessment in the Arctic-Boreal Domain" is linked to the Pan-Eurasian EXperiment (PEEX; www.atm.helsinki.fi/peex), a multi-disciplinary, -scale and -component climate change, air quality, environment and research infrastructure and capacity building programme. It is aimed at resolving major uncertainties in Earth system science and global sustainability issues concerning the Arctic, Northern Eurasia and China regions. The session is co-organized with the Digital Belt and Road Program (DBAR).

This session aims to bring together researchers interested in (i) understanding environmental changes effecting in pristine and industrialized Pan-Eurasian environments (system understanding); (ii) determining relevant environmental, climatic, and other processes in Arctic-boreal regions (process understanding); (iii) the further development of the long-term, continuous and comprehensive ground-based, air/seaborne research infrastructures together with satellite data (observation component); (iv) to develop new datasets and archives of the continuous, comprehensive data flows in a joint manner (data component); (v) to implement validated and harmonized data products in models of appropriate spatio-temporal scales and topical focus (modeling component); (vi) to evaluate impact on society through assessment, scenarios, services, innovations and new technologies (society component).

Presentations:

15:55–16:00 - Session Introduction

16:00–16:05 - EGU22-11249

[**AASCO – Arena for gap analysis of the existing Arctic science co-operations**](#)

Hanna Lappalainen, et al.

16:05–16:10 - EGU22-9502

[**Summary of integrative and Comprehensive Understanding on Polar Environments \(iCUPE\) project results**](#)

Tuukka Petäjä and the iCUPE project team

16:10–16:15 - EGU22-10551

[**Seamless Modelling for Environmental Studies: Enviro-HIRLAM Recent Research and Development**](#)

Alexander Mahura, et al.

16:15–16:20 - EGU22-4792

[**Integrated modelling for assessment the influence of aerosol feedbacks on a regional scale as a result of accidental wildfires and land cover changes in Ukraine**](#)

Mykhailo Savenets, et al.

16:20–16:25 - EGU22-4895

[**Climate-oriented trainings in the field of Climate Services, Climate Change Adapatation and Mitigation**](#)

Valeriya Ovcharuk, et al.

16:25–16:30 - EGU22-4861

Characteristics of heat exchange between land surface and atmosphere according observations at Research Station “Ice Base Cape Baranova” in 2013 - 2021

(withdrawn)

Alexander Makshtas, et al.

16:30–16:35 - EGU22-3537

[Peculiarities of the chemical composition of size-segregated atmospheric aerosols sampled at Fonovaya Observatory, West Siberia](#)

Boris D. Belan, et al.

16:35–16:40 - EGU22-3737

[Differences in the upper tropospheric and lower stratospheric aerosol composition](#)

Mikhail Yu. Arshinov, et al.

Coffee break

17:00–17:05 - EGU22-3425

[Changes in net CO₂ uptake, photosynthesis, and ecosystem respiration and their relationships with climate and snow characteristics in central Siberia](#)

Sung-Bin Park and Sang Seo Park

17:05–17:10 - EGU22-4297

[Evaluating methane emissions between 2008 and 2019 in high northern latitudes by using inverse modeling](#)

Sophie Wittig, et al.

17:10–17:15 - EGU22-4365

[Linking the measurement data of the substance flows of the SMEAR Estonia measuring station with the place of growth](#)

Joonas Kollo, et al.

17:15–17:20 - EGU22-4945

[Assessing the impact of observation networks and data mobility for their impacts on socio-economical activities in the Arctic – Perspectives by the iCUPE project](#)

Steffen M. Noe, et al.

17:20–17:25 - EGU22-8036

[Measurement report: Disentangling methane and other trace gases sources and transport across the Russian Arctic from aircraft measurements](#)

Clement Narbaud, et al.

17:25–17:30 - EGU22-12701

[Application of New Approaches in Teaching Earth Sciences](#)

Sergiy Stepanenko, et al.

17:30–17:35 - EGU22-5714

[The Space Weather events those accompany the long-lived macrosynoptic processes](#)

Olga Stupishina and Elena Golovina

17:35–17:40 - EGU22-6436

[West-Siberian meridional carbon transect: the concept](#)

Pavel Smirnov and Andrey Tolstikov

17:40–17:45 - EGU22-6967

[Seasonal dynamics and toxicity of PM-bound PAHs in northernmost European megacity.](#)

Marina Chichaeva, et al.

17:45–17:50 - EGU22-7090

[Elucidating the impact of Siberian biomass burning aerosol on the radiative balance in the Arctic: model analysis constrained by observations](#)

Igor B. Konovalov, Nikolai A. Golovushkin, **Matthias Beekmann**, et al.

17:50–17:55 - EGU22-9011

[Validation and adaptation of WRF-Chem numerical model to simulate CO2 transport in Saint-Petersburg](#)

Georgy Nerobelov, et al.

17:55–18:00 - EGU22-9018

[Analysis of Saint-Petersburg's CO2 anthropogenic emissions estimation by differential spectroscopy method](#)

Yury Timofeyev, **Georgy Nerobelov**, and Anatoliy Poberovskiy

18:00–18:05 - EGU22-9775

[Unprecedented wildfire smoke in the Siberian Arctic in August 2021](#)

Olga Popovicheva, et al.

18:05–18:10 - EGU22-10293

[Geochemical processes in Yamal peninsula lakes under climate variation](#)

Irina Fedorova, et al.

18:10–18:15 - EGU22-10368

[Atmospheric Mercury Depletion Events: Assessment Impact of Meteorological Parameters in the Arctic Winter](#)

Fidel Pankratov, et al.

18:15–18:20 - EGU22-3947

[Aerosol pollution in the Moscow megacity environment and its impact on radiative and meteorological properties of the atmosphere](#)

Nataly Chubarova, et al.

18:20–18:25 - EGU22-12818

[Numerical simulation of the Lagrangian transport of aerosols of various genesis in urban conditions](#)

Alexander Varentsov, et al.

18:25–18:30 - Session conclusion