

# **/V Arctic Metrology Workshop**

**A Ny-Ålesund Atmosphere Flagship event associated to the  
Svalbard Science Conference**

**2019 November 7, 09:00 – 17:30**

**Scandic Fornebu, Martin Linges vei 2  
Fornebu**

To improve measurements accuracy of the climate variable in the Arctic.

Multitudes of measurements are needed to understand the environment and its evolution. In the Arctic, dedicated efforts are motivated by the higher accuracy required to quickly capture faster trends, the extreme range and conditions of sensors exposure, a robust comparability asked by the different measurement networks, the need of special calibration procedures, the logistical problems associated with remote locations. Metrology, the science of measurement, can bring a unique contribution in establishing traceability, enforcing comparability and reducing uncertainties in data records. Arctic stations measurements, integrated projects and networks as well as scientific infrastructures, can benefit from the availability of dedicated measurements and calibration procedures, together with the opportunity to perform on site instruments validations. The scope of the session is to promote a discussion board for planning common activities between the metrology community and the scientific research communities operating in the Arctic, to improve data quality.

The **Svalbard** research community and infrastructures offer a unique opportunity to establish a fruitful cooperation with the metrology community, to improve data quality.



Following the previous three editions in Torino (Italy), Oslo (Norway), and Ny-Ålesund, the IV Arctic Metrology Workshop is proposed:

to address metrology experience and activities on the arctic environmental measurements and research.

to report on previous metrology activities and campaigns in the Arctic;

to present the expertise of European metrology Institutes to the scientific communities operating in the Arctic.



To report the project and ongoing activities plan to implement the **permanent common metrology laboratory and infrastructure in Ny-Ålesund**

As part of the Ny-Ålesund scientific community will be involved in the observation programs of MOSAIC campaign, the workshop will represent an important opportunity to promote the achievements of full reliability and comparability in space and time of the measured records, traceability of the data and uncertainty evaluations. These metrological aspects will be discussed with experts to improve data reliability in the Arctic.

A round table is also proposed to close the event, to address the metrology laboratory activities towards the requirements of the scientific community operating in Ny-Ålesund and in the Svalbard.

Promoted by the MeteoMet project consortium, JV, INRiM and ISAC CNR



## Draft agenda and topics

9.00 Opening and introduction of the workshop: Angelo Viola ISP-CNR

9.10 The Arctic Metrology workshops series and associated events: Graziano Coppa – INRiM and ISP-CNR

9.20 EURAMET, The metrology for environment in Europe and for the Arctic (Hans Arne Frøystein /Åge Andreas Falnes Olsen – EURAMET Chair)

9.40 Metrology outreach and impact on Polar initiatives: Vito Vitale ISP- CNR

9.50 The 2014 - 2019 Metrology campaigns in Ny-Ålesund: Graziano Coppa – INRiM

10.00 The metrology lab in Ny-Ålesund: a common infrastructure for data quality. Mauro Mazzola ISP-CNR

10.20 Coffee break

10.40 The Climate Change Tower measurements, improving the accuracy of temperature profiles and measurements by accurate calibrations: Angelo Viola – ISP-CNR.

11.00 Metrology for CO<sub>2</sub> content in water: Michela Sega – INRiM

11.20 Measurement of surface variables: issues and uncertainties: Mareile Astrid Wolf – Met Office

11.40 EDIE facility for remote sites calibrations – Graziano Coppa - INRiM

12.00 Lunch

13.30 Roundtable – Implementing a permanent metrology infrastructure in the Svalbard.

17.00 Future plans and conclusion