



Cluster Calibration Center (CCC) status and workshops

Silja Häme & the CCC team
University of Helsinki, Finland
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Sub-10 nm particles:

- *Number concentration*
- *Size distribution*

CCC status

CCC is operational since the beginning of 2026

Data submission can start:

- NAIS and PSM data templates ready to put to ACTRIS DC/EBAS:

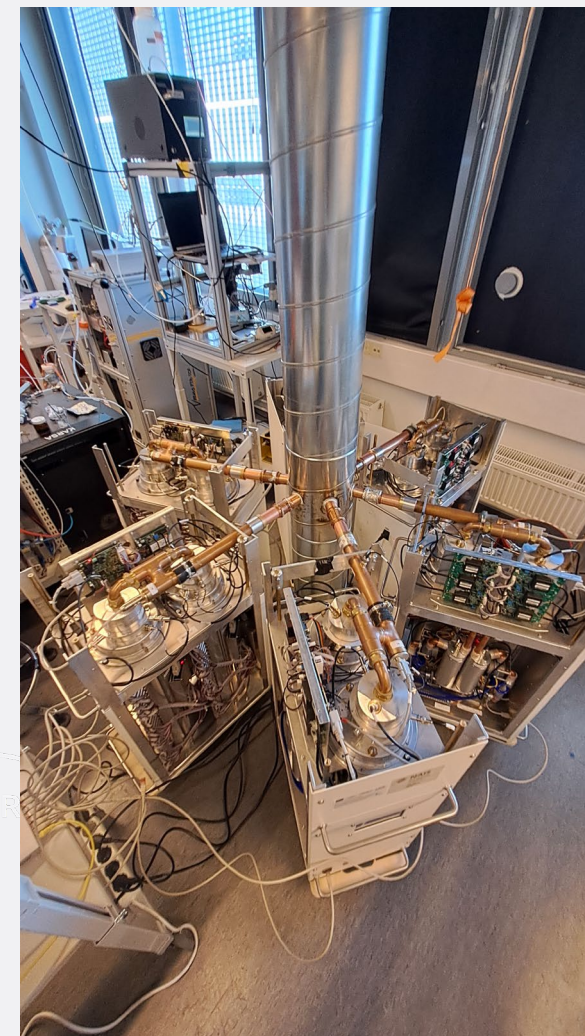
NAIS: *soon available*

PSM: <https://ebas-submit.nilu.no/templates/Nucleation-particle-size-spectrometer/lev0>

- Submission tools under development
- Piloting NAIS data submission this year

Instrument validation/calibration practices:

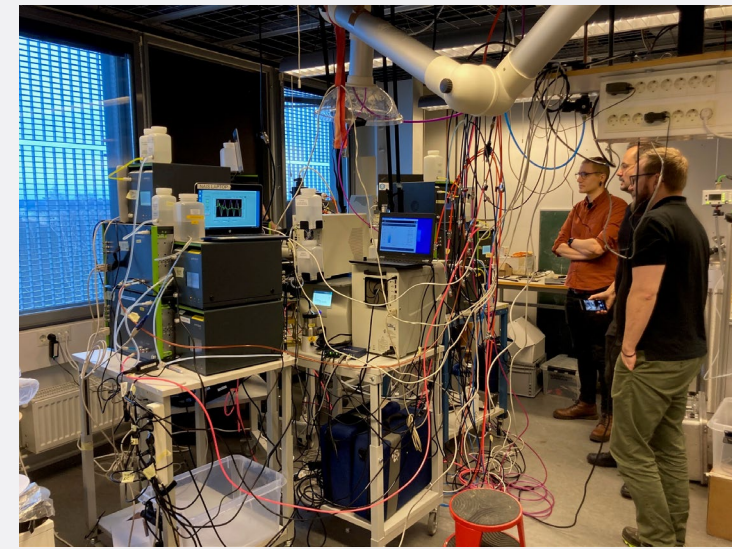
- current performance&evaluation criteria for NAIS & PSM:
<https://www.actris-ecac.eu/nano-pnsd-1-to-10nm.html#Guidelines>
- criteria will be updated when more instruments have been tested
- Nano-MPSS calibration procedures under development



NAIS intercomparison setup

CCC workshops

- For the following instruments:
 - Neutral cluster and Air Ion Spectrometer (NAIS)
 - Particle Size Magnifier (PSM)
 - Nano-MPSS (also those part of dual-MPSS systems (this is new!))
- The workshop location: Helsinki, Finland
- The calibration and intercomparison workshops are important part of the operation support we provide to ACTRIS National Facilities
- In addition to the ACTRIS National Facilities, instrument manufacturers and other users are welcomed to join these workshops



Upcoming CCC workshops:

NAIS: 31.5. - 4.6.2027
PSM: 27.9. - 1.10.2027
nano-MPSS: 2028 (tbd)

New paper published!

Hartl H., et al. (2026): Results and insights from the first ACTRIS intercomparison workshop on sub-10 nm aerosol sizing instrumentation, Aerosol Research, <https://doi.org/10.5194/ar-4-133-2026>.

CCC workshops – dual-MPSS calibration

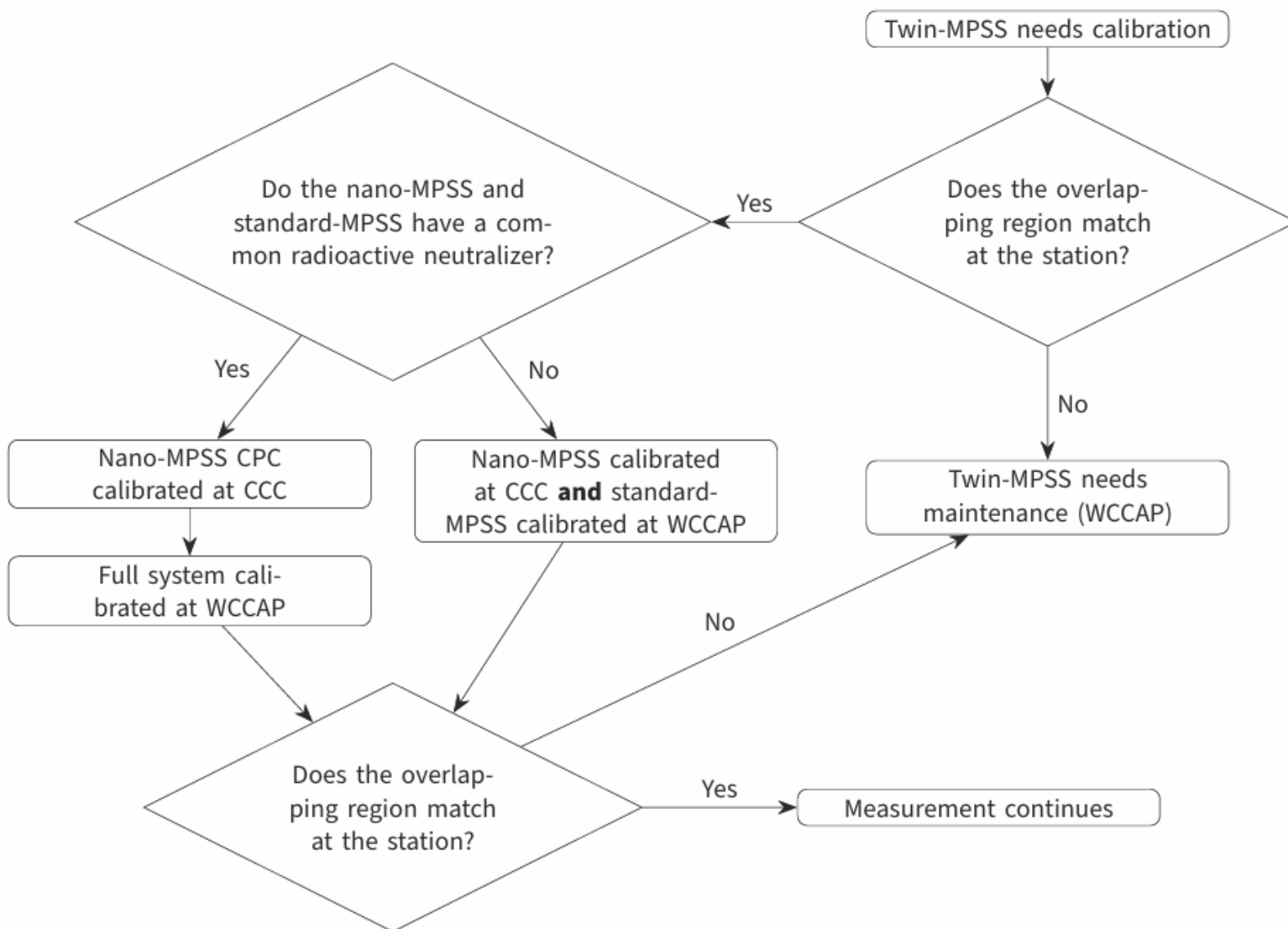
Dual-MPSS: instruments that are used both for 10-800 nm PNSD and <10 nm PNSD measurements with lower range typically >3 nm.

From now on WCCAP/PACC and CCC will share the calibration of dual MPSSs.

In practise: If nano-MPSS can be separated as an individual instrument → nano-MPSS to CCC for nano-MPSS workshop & similarly MPSS to Tropos for MPSS workshop.

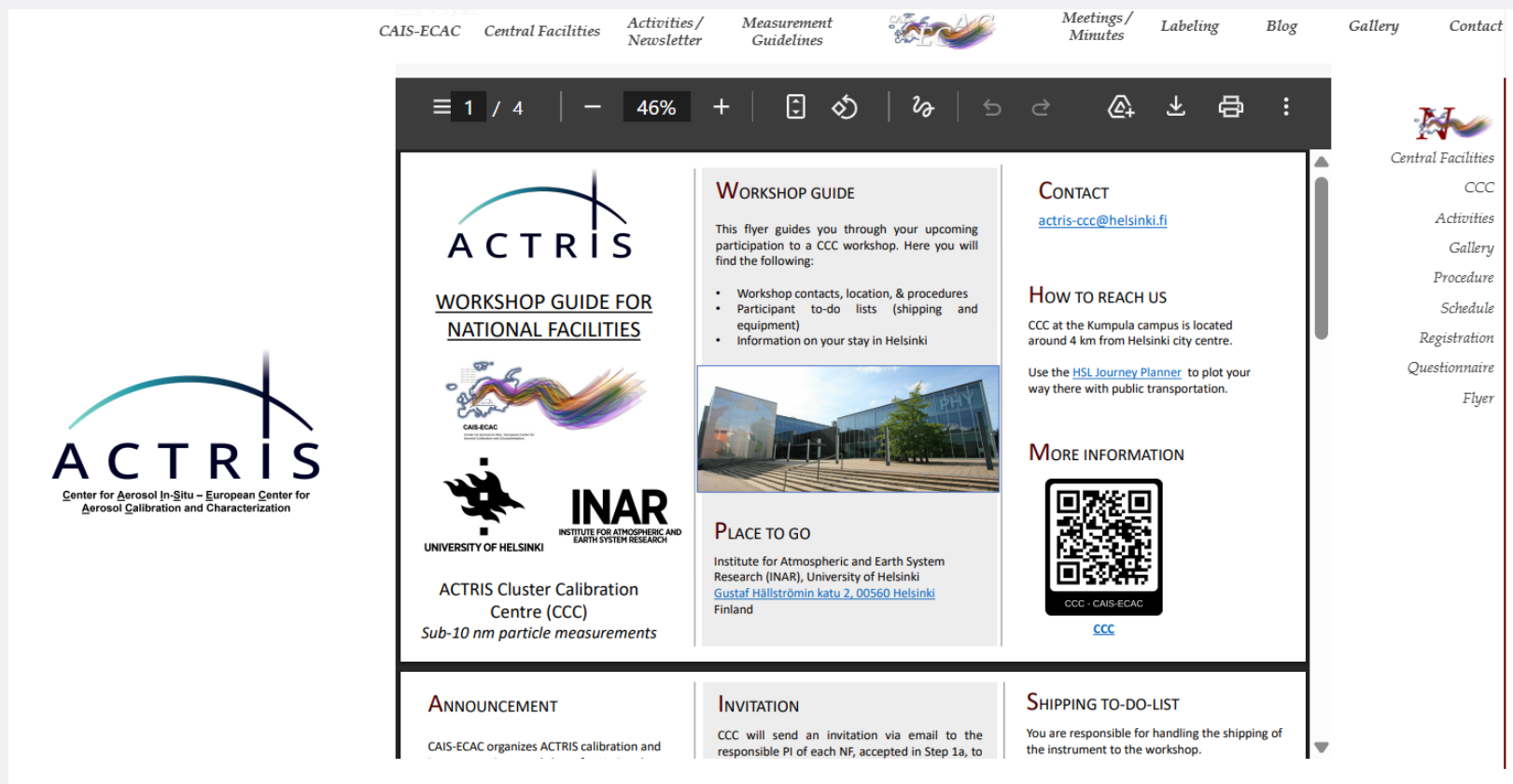
In 2027, correspondence of calibration setups of WCCAP and CCC will be tested.

In 2028, Nano-MPSS workshop in Helsinki (TBD).



CCC workshop practicalities

<https://www.actris-ecac.eu/ccc.html#CCC>



The screenshot displays the ACTRIS website's 'Workshop Guide for National Facilities' page. The header includes navigation links: CAIS-ECAC, Central Facilities, Activities / Newsletter, Measurement Guidelines, Meetings / Minutes, Labeling, Blog, Gallery, and Contact. The main content area is divided into several sections:

- ACTRIS WORKSHOP GUIDE FOR NATIONAL FACILITIES:** Includes the ACTRIS logo and a description of the ACTRIS Cluster Calibration Centre (CCC) for sub-10 nm particle measurements.
- WORKSHOP GUIDE:** A brief introduction stating the flyer guides participation to a CCC workshop.
- CONTACT:** Provides the email actris-ccc@helsinki.fi.
- HOW TO REACH US:** States the CCC is at the Kumpula campus, 4 km from Helsinki city centre, and suggests using the [HSL Journey Planner](#).
- PLACE TO GO:** Identifies the location as the Institute for Atmospheric and Earth System Research (INAR) at the University of Helsinki, with the address [Gustaf Hållströmin katu 2, 00560 Helsinki](#).
- ANNOUNCEMENT:** Notes that CAIS-ECAC organizes ACTRIS calibration.
- INVITATION:** States that CCC will send an invitation via email to the responsible PI of each NF.
- SHIPPING TO-DO-LIST:** States that participants are responsible for handling the shipping of instruments.

A sidebar on the right lists various facilities: Kosetice (CZ), CAO (CY), Taunus Observatory (DE), SMEAR I (FI), SMEAR II (FI), SMEAR III (FI), TAU Atmo-Lab (FI), Pallas (FI), ATOLL (FR), Finokalia (GR), Lecce (IT), Monte Cimone (IT), Zeppelin (SE), and Norunda (SE).

ACTRIS NFs supported:

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CAO (CY)
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Lecce (IT)
Monte Cimone (IT)
Zeppelin (SE)
Norunda (SE)

CCC will invite ACTRIS NFs to join the workshops.

If you have recently started or will soon start nanoparticle measurements as ACTRIS measurements, please contact us.

CCC contact information

Contact us: actris-ccc@helsinki.fi



Unit Head
Silja Häme
silja.hame@helsinki.fi



Deputy Unit Head
Katrianne Lehtipalo
katrianne.lehtipalo@helsinki.fi



Expert Scientist
Janne Lampilahti
janne.lampilahti@helsinki.fi



Laboratory Engineer
Tommy Chan
tommy.chan@helsinki.fi



Contact us: actris-ccc@helsinki.fi