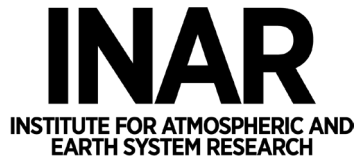




## WORKSHOP GUIDE FOR NATIONAL FACILITIES



ACTRIS Cluster Calibration  
Centre (CCC)

*Sub-10 nm particle measurements*

## WORKSHOP GUIDE

This flyer guides you through your upcoming participation to a CCC workshop. Here you will find the following:

- Workshop contacts, location, & procedures
- Participant to-do lists (shipping and equipment)
- Information on your stay in Helsinki



## PLACE TO GO

Institute for Atmospheric and Earth System  
Research (INAR), University of Helsinki  
[Gustaf Hällströmin katu 2, 00560 Helsinki](#)  
Finland

## CONTACT

[actris-ccc@helsinki.fi](mailto:actris-ccc@helsinki.fi)

## HOW TO REACH US

CCC at the Kumpula campus is located around 4 km from Helsinki city centre.

Use the [HSL Journey Planner](#) to plot your way there with public transportation.

## MORE INFORMATION



[CCC](#)

# ANNOUNCEMENT

CAIS-ECAC organizes ACTRIS calibration and intercomparison workshops for National Facilities (NFs) at the CCC throughout the year.

Workshop dates are available on the CAIS-ECAC website. Capacity is limited to 5–6 instruments per CCC workshop.

Workshops are organized for three different instrument types:

- Neutral cluster and air ion spectrometer (NAIS)
- nano-Condensation Nucleus Counter (nCNC)
- Nano-MPSS

January	February	March	April	May	June	July	August	September	October	November	December		
1 We	1 Sa	1 Tu	1 Th	1 Su	1 Tu	1 Fr	1 Mo	36	1 We	1 Sa	1 Mo	49	
2 Th	2 Su	2 We	2 Fr	2 Mo	23	2 We	2 Sa	2 Tu	2 Th	2 Su	2 Tu		
3 Fr	3 Mo	3 Th	3 Sa	3 Tu	3 Fr	3 We	3 Mo	36	3 We	3 Mo	3 We		
4 Sa	4 Tu	4 Fr	4 Sa	4 We	4 Fr	4 Mo	37	4 Th	4 Sa	4 Tu	4 Th		
5 Su	5 We	5 Sa	5 Tu	5 Fr	5 Sa	5 Tu	5 Fr	5 Sa	5 We	5 Fr	5 Fr		
6 Mo	6 Th	6 Su	6 Tu	6 Fr	6 Su	6 We	6 Sa	6 Mo	41	6 Th	6 Sa		
7 Tu	7 Fr	7 Mo	7 We	7 Sa	7 Mo	28	7 Th	7 Su	7 Tu	7 Fr	7 Su		
8 We	8 Sa	8 Tu	8 Th	8 Su	8 Tu	8 Fr	8 Mo	37	8 We	8 Sa	8 Mo	50	
9 Th	9 Su	9 We	9 Fr	9 Mo	24	9 We	9 Sa	9 Tu	9 Th	9 Su	9 Tu		
10 Fr	10 Mo									10 Mo	48	10 We	
11 Sa	11 Tu									11 Tu	49	11 Th	
12 Su	12 We									12 We	50	12 Fr	
13 Mo	3	13 Th								43	13 Th	13 Sa	
14 Tu	14 Fr									14 Fr	14 Su		
15 We	15 Sa									15 Sa	15 Mo	51	
16 Th	16 Su									16 Su	16 Tu		
17 Fr	17 Mo									17 Mo	47	17 We	
18 Sa	18 Tu									18 Tu	48	18 Th	
19 Su	19 We									19 We	49	19 Fr	
20 Mo	4	20 Th	20 Su	20 Tu	20 Fr	20 Su	20 We	20 Sa	20 Mo	43	20 Th	20 Sa	
21 Tu	21 Fr	21 Mo	21 We	21 Th	21 Sa	21 Tu	21 Fr	21 Mo	30	21 Th	21 Su	21 Tu	
22 We	22 Sa	22 Tu	22 Th	22 Fr	22 Su	22 Tu	22 Fr	22 Mo	39	22 We	22 Sa	22 Mo	52
23 Th	23 Su	23 We	23 Fr	23 Mo	23 We	23 Sa	23 Tu	23 Fr	23 Mo	23 Th	23 Su	23 Tu	
24 Fr	24 Mo	24 Th	24 Sa	24 Tu	24 Fr	24 We	24 Sa	24 Tu	24 Fr	24 Mo	48	24 We	
25 Sa	25 Tu	25 Fr	25 Sa	25 We	25 Fr	25 Mo	39	25 Th	25 Sa	25 Tu	25 Th		
26 Su	26 We	26 Sa	26 Tu	26 Fr	26 Su	26 We	26 Sa	26 Tu	26 Fr	26 Su	26 We	26 Fr	
27 Mo	5	27 Th	27 Su	27 Tu	27 Fr	27 Su	27 We	27 Sa	27 Mo	44	27 Th	27 Sa	
28 Tu	28 Fr	28 Mo	28 We	28 Th	28 Sa	28 Tu	28 Fr	28 Mo	31	28 Th	28 Su	28 Tu	
29 We	29 Sa	29 Tu	29 Th	29 Fr	29 Su	29 Tu	29 Fr	29 Mo	40	29 We	29 Sa	29 Mo	53
30 Th	30 Su	30 We	30 Fr	30 Mo	30 We	30 Sa	30 Tu	30 Fr	30 Mo	30 Th	30 Su	30 Tu	
31 Fr	31 Mo	31 We	31 Fr	31 Mo	31 Th	31 Su				31 Fr		31 We	

## CAIS-ECAC workshop schedule

ACTRIS- and GAW-workshop  
Please click on the workshop schedule for more details.

# INVITATION

CCC will send an invitation via email to the responsible PI of each NF, accepted in Step 1a, to participate in the announced calibration workshop.

# CONFIRMATION

After discussing a possible workshop timing and reaching mutual agreement, the workshop participation is confirmed by the NF and the CCC.

# ONLINE REGISTRATION

The participating NF (and other users) shall register online preferably three weeks before the workshop to provide the following information: name of the participants, instruments, serial numbers, status, radioactive source (if applicable) and additional information.

**Online Registration**

Information:  
If you got no invit CAIS-ECAC offic understanding.

National Facility\* **CCC**

Workshop Week (Start-Date)\*

Workshop Week (End-Date)\*

} invitation from s for your

# SHIPPING TO-DO-LIST

You are responsible for handling the shipping of the instrument to the workshop.

Using a shipping company, **the instruments should arrive the week before the workshop.**

## Shipping Address:

University of Helsinki, Institute for Atmospheric and Earth System Research, Gustaf Hällströmin katu 2, 00560 Helsinki, Finland

## Contacts for shipping:

Attn: Pekka Rantala  
mobile: +358503183963  
email: [pekka.a.rantala@helsinki.fi](mailto:pekka.a.rantala@helsinki.fi)

**Please notify Pekka Rantala via email once the instrument has been shipped to the workshop.**

Pack according to manufacturer recommendations. Whenever possible, use the original manufacturer shipping boxes with ample protective padding. The instruments should be transported and stored in an upright position. Please ensure that the instruments are completely dry before packing and shipping.

## ADDITIONAL EQUIPMENT TO SEND

As a general rule, please bring all additional equipment and materials required to run the instrument, excluding those provided by the CCC (see Equipment available at CCC).

In addition to the ACTRIS instrument, please include the following items, as applicable:

- Necessary cables, adapters, tubing and connectors.
- Computer with measurement software.
- Diethylene glycol and/or butanol fill and drain bottles
- Tube connecting the PSM to the CPC, including the drip bottle.

## EQUIPMENT AVAILABLE AT CCC

- Butanol and diethylene glycol
- Central vacuum and compressed air
- Flow meter
- Basic tools
- High-voltage voltmeter, multimeter
- Radioactive neutralizer (if required)
- HEPA filter
- Instrument cleaning supplies

## WORKSHOP SCHEDULE & PROCEDURE

The workshop spans one week and a basic schedule is provided below.

Timing	Activity
Mon	Unpacking Initial assessment
Tue-Thu	Instrument calibration, basic maintenance and training
Fri	Packing and return shipment arrangement

The instrument procedures follow the guidelines of NAIS SOP and PSM SOP.

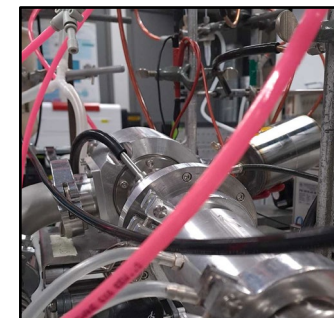
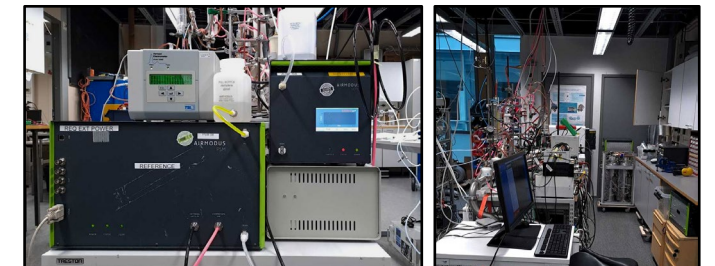
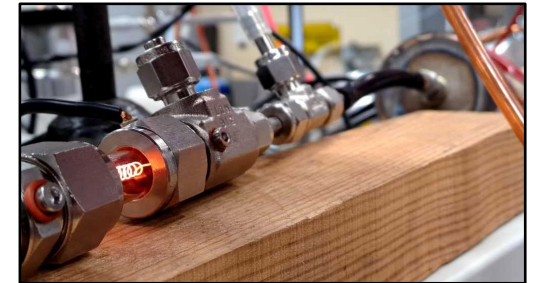
The SOPs and the ACTRIS instrument evaluation and performance criteria for NAIS and PSM can be found here:

<https://www.actris-ecac.eu/nano-pnsd-1-to-10nm.html>

*Note: Development for instrument evaluation and performance criteria for Nano-MPSS (optimized for sub-10 nm particles) is ongoing.*

## WORKSHOP

- The workshop is held in the CCC laboratory, located on the second floor of the Physicum building.
- The programme includes opportunities for discussion and training in instrument operation and data evaluation.



## Online CAIS-ECAC Server

CAIS-ECAC hosts an online server where each NF has their own folder. Please use this folder for any documentations, workshop or station related activities connected to the NF and CF. Please contact your NF PI or CAIS-ECAC office ([wccap@tropos.de](mailto:wccap@tropos.de)) for access.

Please check in your NF folder for the PID document. This needs to be filled out and sent back to CCC preferably before the workshop starts.

## SUGGESTIONS FOR ACCOMODATION

Hotel suggestions in Helsinki city centre (around 20-30 min bus/tram trip to Kumpula campus)

- [Scandic Kaisaniemi](#)
- [Hotel Arthur](#)
- [Solo Sokos Hotel Helsinki](#)
- [GLO Hotel Kluuvi](#)
- [The Töölö Towers](#)

For more information regarding your visit to Helsinki, please see:

<https://www.helsinki.fi/en/about-us/campuses/guide-visitors>

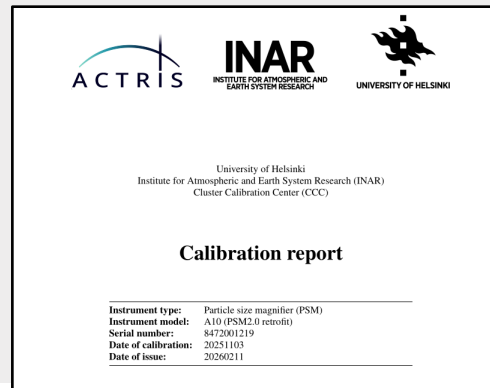
## QUESTIONNAIRE

We would be grateful if you could fill out the online questionnaire after the ACTRIS workshop week. This questionnaire has been generated to evaluate the operation support / service you received from CAIS-ECAC. It will help us to improve the operation and make it more user-oriented.

Please go under CF-CCC to “Questionnaire” to fill in your feedback.

## WORKSHOP RESULTS

CCC provides calibration reports for each instrument latest 2 months after the workshop. The reports are uploaded on the CAIS-ECAC Server under your NF in corresponding calibration workshop folder.



## ACKNOWLEDGEMENTS

The operation of CCC as part of ACTRIS Finland is funded by the hosting organization University of Helsinki and Research Council of Finland.



## WE THANK YOU

very much for your cooperation in advance. If you have any additional question or problem, please let us know.

We are looking forward to welcome you in Helsinki at the CCC.

See you soon.

All the Best,  
The CCC team