



Progress in NF Labeling Step 1c & Step 1b/c Community Meeting May 27, 2026

Alfred Wiedensohler, TROPOS, Germany
Director ACTRIS CAIS-ECAC



Conditions for the Application Labeling Step 1b/c

- For the Aerosol In Situ Component, a minimum of **five variables** must have be implemented and ACTRIS-compliant data submitted.
- Four variables are mandatory:
 - ✓ Particle number concentration (>10 nm)
 - ✓ Particle number size distribution (10–800 nm)
 - ✓ Particle light scattering and backscattering coefficients
 - ✓ Particle light absorption coefficient and equivalent black carbon (eBC)
- The fifth variable is selected from the remaining ACTRIS aerosol variables

CAIS-ECAC Performance Report

CAIS-ECAC collects information :

- ✓ Status of the instruments and analyses
- ✓ Upgrade report from the final evaluation report of labeling step 1a

CAIS-ECAC provides templates for the performance report to be filled with:

- ✓ Which instrumentation for which variable
- ✓ When quality assured by an instrument calibrated and/or participation in an inter-laboratory comparison
- ✓ Offline and NRT Data submitted (number of months and coverage)
- ✓ The data submissions must be confirmed by the DC

Conditions for Positive CAIS-ECAC Recommendation

- ✓ The instrument calibration or interlaboratory comparison must have been successfully passed.
- ✓ Data must have been submitted (ACTRIS-compliant) for at least 3 out of 5 variables for a minimum of 24 months within the last 36 months.
- ✓ NRT data must have been submitted for online instruments for at least 3 months. This applies only to instruments for which NRT software is available.
- ✓ Data submissions must reach the ACTRIS In-Situ DC well before the next GA.
- ✓ The next GA is in November; therefore, the data must be submitted by end September at the latest.
- ✓ ACTRIS data are considered compliant if levels 0 (quality flagged), 1, and 2 are submitted with at least 75% coverage.
- ✓ EBAS must confirm the submission of ACTRIS-compliant data as declared.

Positive Recommendations CAIS-ECAC & RI Com

We would also like to thank Maria Leseth Føyen and Markus Fiebig from the DC

ACTRIS National Facility - Performance Evaluation Aerosol In-Situ Observational Platform - SMEAR II (Hyytiälä), Finland

NF information

Component PI	Tuukka Petäjä (tuukka.petaja@helsinki.fi)
Date of initial acceptance	12/2022
Start date of ACTRIS compliance for the entire component	01/12/2023

Summary of the Performance Report

Performance report issued by	ACTRIS Center for Aerosol in-Situ Measurements and European Center for Aerosol Calibration & Characterization (CAIS-ECAC)
CAIS-ECAC responsible evaluator	Alfred Wiedensohler
Date of the performance report	31/03/2026
Time period covered by the report	01/12/2023 - 31/03/2026
Measurement compliance	Compliance confirmed by the final upgrade report
Data compliance (24 month)	3 out of 5 compulsory AIS variables with minimum 24 months compliant data submission during the evaluation period
NRT data compliance	5 out of 5 AIS variables with minimum 3 months compliant NRT data submission during the evaluation period
CAIS-ECAC recommendation	Recommendation to grant full label (Step1c)



ACTRIS National Facility - Performance Evaluation Aerosol In-Situ Observational Platform - Pallas Atmosphere-Ecosystem Supersite, Finland

NF information

Component PI	Eija Asmi
Date of initial acceptance	December 2022
Start date of ACTRIS compliance for the entire component	01/11/2023

Summary of the Performance Report

Performance report issued by	ACTRIS Center for Aerosol in-Situ Measurements and European Center for Aerosol Calibration & Characterization (CAIS-ECAC)
CAIS-ECAC responsible evaluator	Alfred Wiedensohler
Date of the performance report	31/03/2026
Time period covered by the report	01/11/2023 - 31/03/2026
Measurement compliance	Compliance confirmed by the final upgrade report
Data compliance (24 month)	3 out of 5 AIS variables with 24 months compliant data submission during the evaluation period
NRT data compliance	3 out of 4 AIS variables with minimum 3 months compliant NRT data submission during the evaluation period
CAIS recommendation	Recommendation to grant full label (Step1c)



ACTRIS National Facility - Performance Evaluation Aerosol In-Situ Observational Platform - Barcelona Super Site, Spain

NF information

Component PI	Andres Alastuey
Date of initial acceptance	December 2022
Start date of ACTRIS compliance for the entire component	December 2023

Summary performance report on ACTRIS compliant measurement and data submission

Performance report issued by	ACTRIS Center for Aerosol in-Situ Measurements and European Center for Aerosol Calibration & Characterization (CAIS-ECAC)
CAIS-ECAC responsible evaluator	Alfred Wiedensohler
Date of the performance report	31/03/2026
Time period covered by the report	1/12/2022 - 31/12/2025
Measurement compliance	Compliance confirmed by the final upgrade report
Data compliance (24 month)	5 out of 5 AIS variables with minimum 24 months compliant data submission during the evaluation period
NRT data compliance	5 out of 5 AIS variables with minimum 3 months compliant NRT data submission during the evaluation period
CF recommendation	Recommendation to grant full label (Step1c)



Potential NF Candidates for Labeling Step 1b/c

Potential NFs for Labeling Step 1b/c

NFs that possibly already qualify to receive the ACTRIS label (might be incomplete):

- ✓ ATOLL, France
- ✓ Jungfrauoch, Switzerland
- ✓ National Atmospheric Observatory Kosetice, Czechia
- ✓ Monte Cimone, Italy
- ✓ Montseny, Spain
- ✓ Zugspitze-Schneefernerhaus, Germany
- ✓ SIRTA, France
- ✓ Suchdol, Czechia
- ✓ Vielsalm, Belgium

Please, confirm if you are interested. Then we start the process.

Template for the Performance Report

Template: Performance Report for Labeling Step 1b/c



ACTRIS National Facility - Performance Evaluation Aerosol In-Situ Observational Platform - Name of the NF, Country

NF information

Component PI	
Date of initial acceptance	
Start date of ACTRIS compliance for the entire component	

Summary performance report on ACTRIS compliant measurement and data submission

Performance report issued by	ACTRIS Center for Aerosol in-Situ Measurements and European Center for Aerosol Calibration & Characterization (CAIS-ECAC)
CAIS-ECAC responsible evaluator	Alfred Wiedensohler
Date of the performance report	
Time period covered by the report	
Measurement compliance	Compliance confirmed by the final upgrade report
Data compliance (24 month)	x out of 5 AIS variables with minimum 24 months compliant data submission during the evaluation period
NRT data compliance	x out of 5 AIS variables with minimum 3 months compliant NRT data submission during the evaluation period
CF recommendation	Recommendation to grant full label (Step1c)



Template: Performance Report for Labeling Step 1b/c

Detailed report

Mandatory variables/instruments:

Variable name	Associated instrument	ACTRIS compliant	Instrument PID (if available)	Instrument landing page (link if available)	First passed QA (date)	Latest passed QA (date)	Next required QA (year)
Aerosol particle number concentration DP50 >10 nm	CPC XXX	YES/NO	N/A	N/A	XXX	XXX	XX
Aerosol particle number size distribution – mobility diameter 10-800 nm	MPSS XXX	YES/NO	N/A	N/A	XXX	XXX	XXX
Aerosol particle light scattering & backscattering coefficient – multi-wavelength	Integrating Nephelometer XXX	YES/NO	N/A	N/A	XXX	XXX	XXX
Aerosol particle light absorption coefficient	Absorption Photometer XXX	YES/NO	N/A	N/A	XXX	XXX	XXX

Mandatory variables/data:

Variable name	Start date of ACTRIS compliant measurements	No. of months of compliant data submitted to EBAS	Data coverage (% of total expected)	Data submitted in time and QC ok	Start date NRT data submission (if applicable)	No. of months of NRT data submitted to EBAS	NRT Data submitted in time and QC ok
Aerosol particle number concentration DP50 >10 nm							
Aerosol particle number size distribution – mobility diameter 10-800 nm							
Aerosol particle light scattering & backscattering coefficient – multi-wavelength							
Aerosol particle light absorption coefficient							

Template: Performance Report for Labeling Step 1b/c

Optional variables/instruments:

At least one of the following variables must be implemented and data must have been submitted.

Variable name	Associated instrument	ACTRIS compliant	Instrument PID (if available)	Instrument landing page (link if available)	First passed QA (date)	Latest passed QA (date)	Next required QA (year)
Nano-particle number concentration (DP50 < 10 nm)	Nano-PC	YES/NO	N/A	N/A			
Nano-particle number size distribution < 10 nm	Nano-PSP	YES/NO	N/A	N/A			
Particle number size distribution - aerodynamic diameter 0.8 to 10 µm	APSS	YES/NO	N/A	N/A			
Cloud condensation nuclei number concentration	CCNC	YES/NO	N/A	N/A			
Mass concentration of particulate organic tracers	Filter	YES/NO	N/A	N/A			
Mass concentration of particulate organic and elemental carbon	Filter/Online	YES/NO	N/A	N/A			
Mass concentration of non-refractory particulate organics and inorganics within PM1 fraction	AMS/ACSM	YES/NO	N/A	N/A			
Mass concentration of particulate elements	Filter/Xact	YES/NO	N/A	N/A			

Optional variables/data:

Variable name	Start date of ACTRIS compliant measurements	No. of months of compliant data submitted to EBAS	Data coverage (% of total expected)	Data submitted in time and QC OK	Start date NRT data submission (if applicable)	No. of months of NRT data submitted to EBAS	NRT Data submitted in time and QC OK
Nano-particle number concentration (DP50 < 10 nm)							
Nano-particle number size distribution < 10 nm							
Particle number size distribution - aerodynamic diameter 0.8 to 10 µm							
Cloud condensation nuclei number concentration							
Mass concentration of particulate organic tracers							
Mass concentration of particulate organic and elemental carbon							
Mass concentration of non-refractory particulate organics and inorganics within PM1 fraction							
Mass concentration of particulate elements							

Template: Performance Report for Labeling Step 1b/c

QA/QC of the Aerosol In-Situ Measurements

The implementation of the microphysical, optical, and chemical instruments have been done according to the ACTRIS standard procedures for aerosol in-situ measurements, and following the final evaluation report by CAIS-ECAC. The measurements of the different aerosol in-situ variables have been quality-assured by the CAIS-ECAC units. The certificates of the calibration workshops and/or interlaboratory intercomparison are currently only available under the protected area of the CAIS-ECAC server:

Following certificates have been issued:

CPC:

Certificate acronym(s)

X person attended the calibration workshop & and the hand-on training

MPSS:

Certificate acronym(s)

X people attended the calibration workshop & and the hand-on training in 2022.

IN:

Certificate acronym(s)

X person attended the calibration workshop & and the hand-on training

AP:

Certificate acronym(s)

X person attended the calibration workshop & and the hand-on training

Nano-CPC:

The CPC 3756 has not been sent yet to a calibration workshop

Others:

Certificate acronym(s)

X person attended the calibration workshop & and the hand-on training

Template: Performance Report for Labeling Step 1b/c

Challenges During the Reporting Period

- Details

General Remarks

The team of the - institution of the NF - is very experienced to perform the measurements as well as to evaluate and submit compliant data.

There are no relevant concerns from CAIS-ECAC.

Confirmation of ACTRIS-Compliant Measurements

The PI of - NF name - provided a final upgrade report confirming ACTRIS-compliant measurements of the reporting aerosol in-situ variables (see appendix).

Confirmation of Data Submission

The number of months of ACTRIS compliant data submitted to EBAS and the number of months of NRT data submission are confirmed by the ACTRIS DC.

References

N/A

Appendix

1. Final upgrade report based on the final elevation report (labeling step 1a)

NFs (Observatories) for Labeling Step 1a Already Audited

NFs Possibly Ready for Labeling Step 1a

- ✓ Vienna, Austria (portal is open)
- ✓ Ukkel, Belgium
- ✓ BEO Mousalla, Bulgaria
- ✓ Risö, Denmark (portal is open)
- ✓ Villum Research Station, Denmark
- ✓ Marambio, Finland (portal is open)
- ✓ Zeppelin, Sweden & Norway
- ✓ Trollhaugen, Norway
- ✓ Madrid, Spain (portal is open)
- ✓ El Arenosillo, Spain
- ✓ Helmos, Greece
- ✓ Finokalia, Greece
- ✓ National Observatory Athens, Greece
- ✓ Athens-Demokritos, Greece

Please, confirm if you are ready. Then we start the process.

NFs (Observatories) to be Audited

NFs still to be Audited

- ✓ Schmücke (Summit & 2 substations), Germany
- ✓ Cape Verde Observatory, Germany
- ✓ Pangea, Greece
- ✓ Naples, Italy
- ✓ Belsk, Poland
- ✓ Norunda, Sweden(October 2026)
- ✓ Svartberget, Sweden (October 2026)
- ✓ Östergarnsholm, Sweden

Please, inform us when you are ready for an audit.

Chamber Community

Information from the Chamber Community

Hendrik Fuchs informed me:

- ✓ All remaining chamber NFs would like to start the labelling step 1a this year.
- ✓ Documents will be prepared between May and November.
- ✓ Most of them will start between summer and fall.
- ✓ Most of them have aerosol instrumentation.

→ Request to the Chamber NFs:

- ✓ Inform CAIS-ECAC that the questionnaire can be provided.