

What is ACTRIS?

European research infrastructure for detailed study of the atmosphere. It provides **high-quality data and information on short-lived atmospheric constituents** (aerosols, clouds, trace gases) and about processes, which affect their variability. The study of these substances and processes is carried out under **both natural and controlled conditions**.

ACTRIS **allows access to atmospheric data**, state of the art facilities for research in academia as well as the private sector.

ACTRIS provides the best research environment and expertise to support **cutting-edge science and international cooperation**.

Why ACTRIS?

The atmosphere is a complex system in which many chemical and physical processes occur simultaneously. Sophisticated models that use measurements and observations from the ACTRIS infrastructure are used to understand and predict these processes. Accurate and high-quality data is therefore essential.

ACTRIS contributes to:

- deeper understanding of the atmospheric processes
- more accurate identification of air pollutants that have negative impact on human health
- understanding of the interactions between the atmosphere and ecosystem
- understanding of the effect of atmospheric processes on climate change and prediction of future trends
- in depth understanding of deposition processes affecting removal of substances from the atmosphere
- verification of information from Earth remote sensing
- development of new technologies and algorithms for monitoring of the atmosphere, important for climate and air quality models, remote sensing and forecasting systems
- knowledge sharing across a wide community of users working in research, space agencies, services, public and private sectors



Aerosol remote sensing
Optical properties of aerosols in vertical profile



Aerosol in situ
Physical and chemical properties of aerosols



Cloud in situ
Physical and chemical properties of clouds



Cloud remote sensing
Physical and chemical properties of clouds



Reactive trace gases in situ
Physical properties of reactive gases



Reactive trace gases remote sensing
Physical properties of reactive gases

How does ACTRIS operate?

- research stations in different climate zones measure accurate, high-quality and standardized data
- research is focused on 6 specific topics
- measured data is saved in freely accessible databases

ACTRIS ERIC

The ERIC status means that ACTRIS has the legal form of a large-scale research infrastructure recognized by the European Commission as an executive body of the European Union. The headquarters for the management and coordination of ACTRIS ERIC activities is located in Finland.

The Czech Republic is one of the 17 founding member countries participating in the establishment of this infrastructure. This commitment shows that research on the atmosphere and air quality is also our national priority. Czech representatives can thus help to shape new strategies and contribute to cutting-edge research and education in atmospheric sciences.

In the Czech Republic, the objectives of ACTRIS are being pursued within a large research infrastructure ACTRIS-CZ. www.actris.cz/web/en