



INTEGRATE
CARBON
OBSERVATION
SYSTEM



Air pollution & climate change are two critical atmospheric issues that have become global concerns. In this MOOC, scientists will explain their complex interconnections, highlight the importance of atmospheric research, & outline the workflow of atmospheric Research Infrastructures (RIs).

Enrol to discover how three RIs, ACTRIS, IAGOS & ICOS, take care of the future of our atmosphere

Commitment of 2.5 hours/week for 2 weeks



Course open from Nov 3 to Aug 31, 2026

Registration from Sept 15, 2025

Enrol now



FUN MOOC



By the end of the course, you will be able to:

- assess the role & interest of atmospheric research
- describe different means of monitoring the atmosphere
- summarise the goals & framework of the 3 RIs
- explain the workflow of an atmospheric RI
- access & process the 3 RIs data on your own



Prerequisites

Undergraduate level in science
Basic level in general chemistry

MOOC plan

Week 1: Air Pollution (AP) & Climate Change (CC), what is happening in our atmosphere & what should we do?

Part 1: Air pollution vs Climate change

Part 2: Aerosols & Clouds

Part 3: Trace gases & Greenhouse gases

Part 4: Atmospheric Research Infrastructures

Part 5: In-depth Questions & Answers on AP & CC

Week 2: Three Atmospheric Research Infrastructures on their way to addressing atmospheric issues

Part 1: ACTRIS (Aerosol, Clouds & Trace Gases Research Infrastructure)

Part 2: IAGOS (In-service Aircraft for a Global Observing System)

Part 3: ICOS (Integrated Carbon Observation System)

Part 4: The workflow & benefits of a coordinated approach

Part 5: MEET the Atmospheric Simulation Chambers

To go further: How to access & process the RIs data



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