

## Atmospheric Data Management at ICOS Atmospheric Thematic Center: Collection, Processing, Archiving and Access

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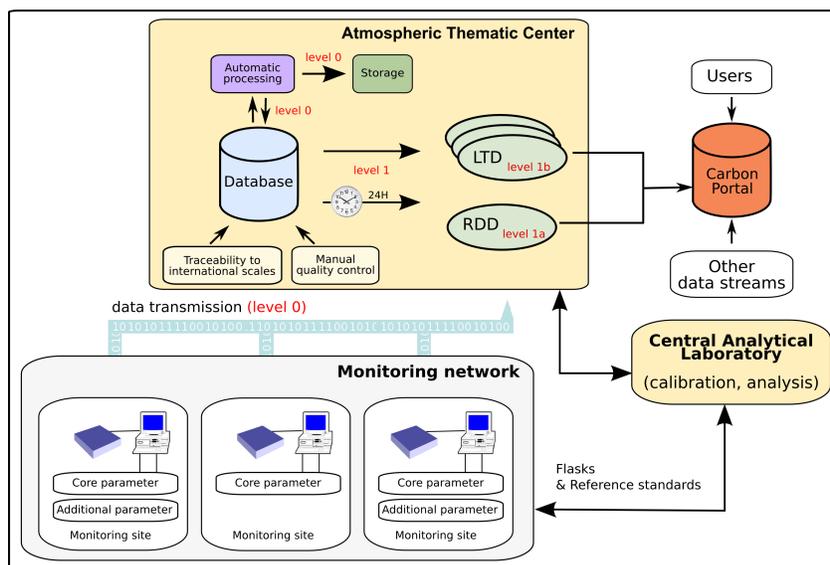
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ICOS (Integrated Carbon Observation System) is a new European research infrastructure for quantifying and understanding the Greenhouse Gas (GHG) balance of the European continent and adjacent regions. It consists of an harmonized and standardized network of long-term observation sites coordinated through a set of four central facilities including, for the atmospheric components, an Atmospheric Thematic Center (ATC) and a Central Analytic Laboratory (CAL). The aim of this infrastructure is to provide the long-term atmospheric and flux observations required to understand the present state and predict future behavior of the global carbon cycle and GHG emissions. ICOS is currently in its preparatory phase (ICOS PP, until March 2013).

The need of an ATC operating at the European level in ICOS is justified by the distributed nature of this infrastructure, with stations managed by different countries. A central facility is needed to ensure that: 1) all data collected at the atmospheric stations are processed with the same algorithms and properly archived for the long term, 2) the atmospheric stations can receive permanent and timely support for optimal operation during their lifetime, and 3) that technology watch on measurement techniques will allow efficient new sensors to be used in the network in the future. The ATC will also be responsible to link the ICOS atmospheric data collection program with international monitoring programmes.

The poster presents the different steps of the data management done at the ATC, from data collection to web broadcasting. A focus is done on data processing and access to measurements and elaborated data product.

References: ICOS infrastructure: <http://www.icos-infrastructure.eu/> and ICOS ATC demonstration: <https://icos-atc-demo.lsce.ipsl.fr/>



**Figure 1.** Data processing at ICOS ATC. Also presented is the relation between ATC and CAL central facilities.