AIR Centre Earth Observation Data Offer *Flash Talk*

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Resumo

The Atlantic International Research Centre (AIR Centre) has a new infrastructure to serve near real-time Earth Observation data to the scientific community. The system was deployed in Terceira Island in the Azores in 2022 for the collection and storage of satellite-based and *in situ* data. The infrastructure consists of a Direct Receiving Station (DRS), which receives and processes satellite data in real-time, a LoRaWAN (low cost, long range, low bandwidth) communication network, which receives sensor data, and a data centre, in which all data is processed and stored.
The satellite data is ingested, processed (L0, L1 and L2), catalogued, stored in a high-availability cluster, and made available to the scientific community via API (Application Programming Interface). The data is received from the following polar-orbiting satellites: Terra (EOS/AM-1), Aqua (EOS/PM-1), Sumoi-NPP (NPP), NOAA-20 (JPSS-1) and FengYun-3. The full catalogue of sensors per satellite, and the dozens of data products that are produced by National Aeronautics and Space Administration's (NASA) IPOPP software in near real-time (e.g. Normalized Difference Vegetation index - NDVI, Sea Surface Temperature - SST, Top of Cloud Temperature – TCT, among many others) and made available can be found at: https://aircentre.io/app/apis/. Data is collected in real-time during the passage of the satellites over Terceira Island, and immediately processed. The area covered consists of a sky window with approximately 3000 (East - West) by 5000 km (North - South).
In situ data evolves frequently and now consists mostly of meteorological data (e.g., atmospheric temperature and humidity, solar radiation, wind speed and direction), but contains other variables such as water volume in local streams.

Palavras-chave: Earth observation, satellite, data, in situ, meteorology.

Designação do projeto/infraestrutura/iniciativa

Atlantic International Research Centre (AIR Centre); AIR Data Centre, DRS station and LoRaWAN network.

Público-alvo

Investigadores, gestores de repositórios e data centers, gestores de ciência, bibliotecários, curadores de dados, especialistas de informática.

Ligações web úteis

https://aircentre.io/app/apis/
https://aircentre.org/