The EOSC-Synergy cloud services implementation for the Latin American Giant Observatory

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The Latin American Giant Observatory

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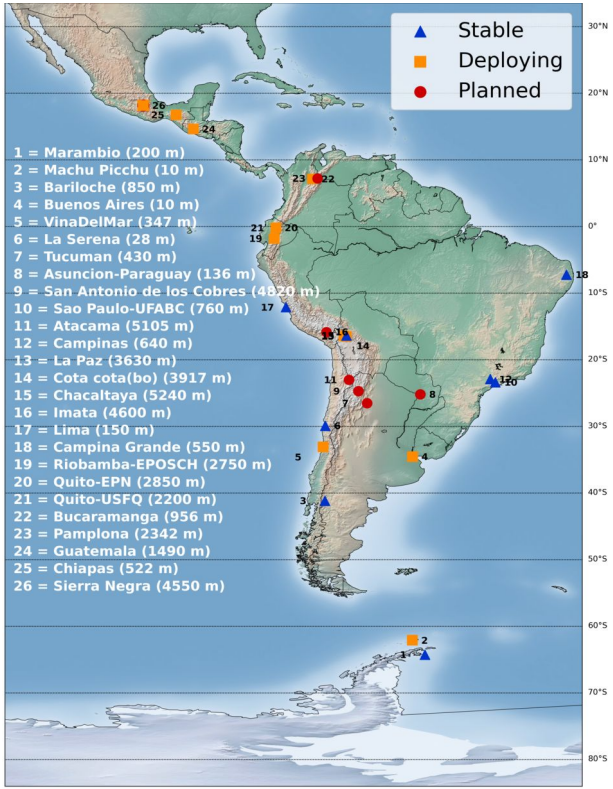

- **Extended astroparticle observatory**
- **1-10 m3 WCD** deployed at **different** altitudes and geomagnetic **coordinates**
- **Synthetic data production** is based on **LAGO-ARTI**, our **self-designed framework**
- **Synthetic signals produced by EAS** are calculated for **any detector** of **any type**, in any site **around the World** under **realistic time-evolving conditions**

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Cloud-based ARTI at EOSC-Synergy

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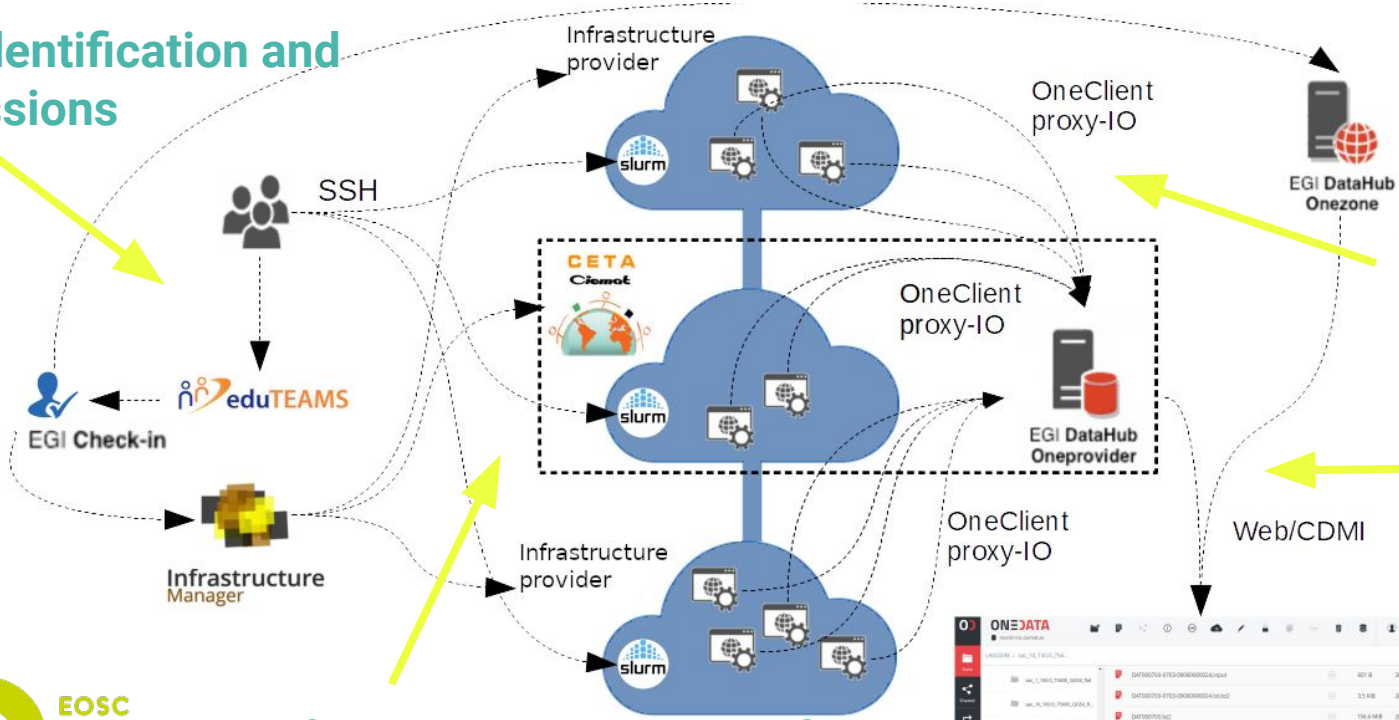
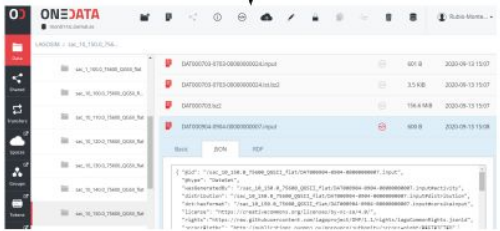
User identification and permissions



Docker images of ARTI deployed at virtual clusters

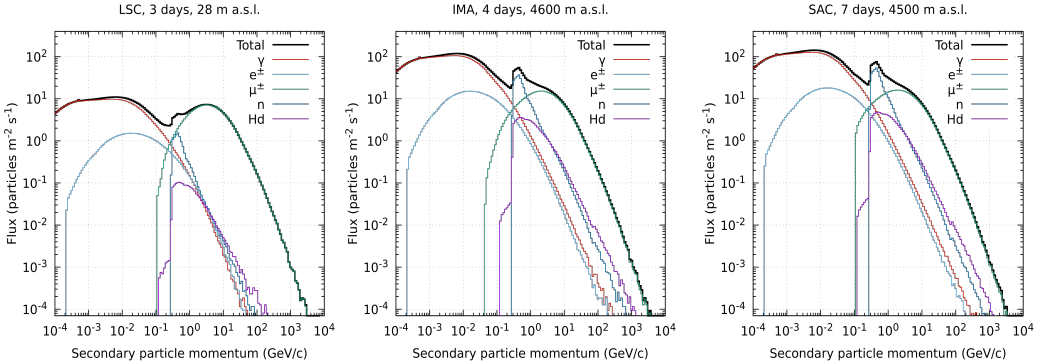
FAIR compliant data and metadata stored at cloud servers



Infrastructure managers for deployment of virtual clusters

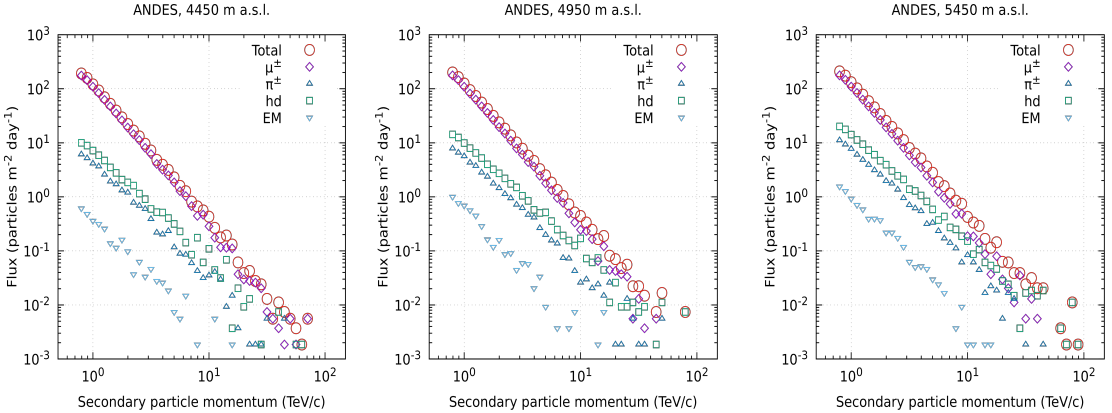
EOSC SYNERGY

1st run: >10^{11} sim EAS in 150 kh·proc



- **Detailed flux of of secondary particles** at detector level for all LAGO sites and other locations **around the World.**
- **New detectors, integrated dose and better shieldings**

- **One-year averaged flux of high-energy secondary particles at ground (p_S > 800 GeV/c)**
- **Reference muon flux for underground laboratories and muography studies**



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