



Contribution ID: 84

Type: **not specified**

## PIC's Big Data Analysis Facility

*Friday 4 April 2025 11:15 (15 minutes)*

The Port d'Informació Científica (PIC) provides advanced data analysis services to a diverse range of scientific communities.

This talk will detail the status and evolution of PIC's Big Data Analysis Facility, centered around its Hadoop platform. We will describe the architecture of the Hadoop cluster and the services running on top, including CosmoHub, a web application that exemplifies the FAIR principles for interactive exploration of large astronomical catalogs, and

Scipic, a pipeline to generate mock galaxy catalogs.

We will explain how the Hadoop platform integrates with other PIC services, such as HTCondor for backfilling and JupyterHub for interactive computing and data analysis.

Furthermore, the talk will cover PIC's roadmap for these services, including plans to federate with external identity providers (e.g., eduGAIN), enhance CosmoHub with an IVOA TAP endpoint for improved data accessibility and interoperability, and ongoing efforts to support multi-messenger astronomy through CosmoHub extensions.

### Desired slot length

15

### Speaker release

Yes

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**Session Classification:** Miscellaneous

**Track Classification:** Miscellaneous