

Failure type detection and predictive maintenance for the next generation of imaging atmospheric Cherenkov telescopes

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Status of the project

- Several collaborations were contacted to earn historical monitoring data. The only one interested in the project was ASTRI, which agreed to share its database of monitoring data.
- The ASTRI-Horn monitoring database is currently being analyzed. Some preliminary analyses have already been performed.
- One talk has already been given at [OLA2023](#); Two more contributions have been submitted to ADASXXXIII (talk requested but poster accepted) and SPIE2024 (talk requested). In both cases, conference proceedings are foreseen.

Reached objectives and criticalities

- The main goal of triggering the development of a Predictive Maintenance model for IACTs has already been achieved (D1, D2, and D3 delivered; D5 already planned).
- The model will be different from what was originally conceived; no reinforcement learning will be exploited (D4 will no longer be pursued); good progress on the feature engineering process (D6 completed at 30% level); D7 and D8 will be delivered at the end of the project.
- 25% of the budget already used; activities to spend another 25% already planned. The activities to spend the remaining 50% must still be planned.