

# Integrating Optical Polarimetry into the VLT Survey Telescope: The VSTPOL Project

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The VSTPOL project, funded by the EU's Recovery Plan (PNRR) in the context of the CTA+ program, will upgrade the VLT Survey Telescope (VST) to enhance the Cherenkov Telescope Array Observatory (CTAO) with new capabilities in optical polarimetry. The proposed upgrade positions the VST as the first large wide-field telescope equipped for advanced polarimetric observations, and will be primarily aimed at the optical follow-up and monitoring of CTA transient sources.

The project design introduces a dual-mode operational capability that allows switching between standard imaging and polarimetric observation modes. This involves replacing the existing ADC exchange system with a new, interface-compatible mechanism and integrating a linear polarized filter into the VST's optical path. A filter wheel will be implemented to ensure polarization selection and continuous tracking of astronomical targets. Adhering to the current ESO control electronics standards for VLT, the updated system will employ a PLC-based control architecture, which also requires developing new control software to seamlessly integrate these functionalities with the VST's existing systems for pointing, image acquisition, and active optics.

This talk will outline the VSTPOL project's roadmap, discuss its current development status, and present the technical challenges as the project approaches its final implementation.

## **sessioni congresso**

Tecnologie avanzate e strumentazione

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