

# **Adaptive Optics Lucky Imager Lightweight Instrument (ALIOLI): State of the Project**

**02/12/2021 at 02:00 PM CET - Esther Soria Hernández (IAC)**

Abstract:

Adaptive optics (AO) systems correct atmospheric turbulence in real time and they are normally designed for large telescopes but not for modest ones due to their cost. In this seminar I will introduce the instrument ALIOLI (Adaptive Optics lucky Imager Lightweight Instrument) capable of being installed in different medium and small-sized telescopes. The novelty of this new instrument is the modularization of its components which allows great flexibility in the design, being possible to easily adapt the instrument to the working telescope or observing technique by adjusting each module independently. Here we present the instrument concept and a preliminary design for its installation in the Carlos Sanchez Telescope (1.5m, Teide Observatory (Canary Islands)). The Wavefront Sensor (WFS) module is intended to be used with two different WS, Shack-Hartmann and Two Pupil Plane, allowing a joint configuration for comparative studies. A comparison of the response of these sensors has been carried out by simulating the instrument in Python, and the first tests have been started both in the laboratory and in the sky.

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