

MOSAIC Calibration Module (CALEMOS) Control System

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Abstract

MOSAIC is one of two first-generation instruments in the ELT roadmap. It is intended to provide unique observational capabilities at the ELT, with multi-object observations at two spectral resolution modes (LR and HR), making use of the entire field of view available at the ELT (~ 40 arcmin²). MOSAIC has two channels fed by MOS fiber bundles: VIS (0.39 – 0.95 μ m), and NIR (0.95 to 1.8 μ m, J and H bands), each one covering the whole range at R>4 000 in a single shot. Both channels have also the HR mode (R>18 000) covering 4 windows in VIS and H band in NIR. Additionally, NIR channel has a mIFU mode with 8 Integral Field Units. The Spanish contribution to MOSAIC is led by University Complutense of Madrid (UCM). In particular, UCM is responsible for the design, manufacturing and AIT for the MOSAIC Calibration Unit. CALEMOS will provide all the calibration data for all MOSAIC observing modes and procedures. CALEMOS-CS will control the position of the MOSAIC screen to allow observations and/or calibrations, the activation of halogen or spectral lamps and the opening/closing of the corresponding lamps shutters for the VIS and NIR calibrations. CALEMOS-CS will also monitor the temperature at the level of the illumination box and of the motor(s) by means of different sensors. In this poster we show a preliminary design for the mechanisms and SW devices in CALEMOS.

My poster can be found at <https://zenodo.org/records/13996434>