

EXPOSURE SYNCHRONIZATION IN THE OBSERVATION CONTROL SOFTWARE FRAMEWORK AT ESO

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Abstract

The Observation Software (OS) of astronomical instruments, which lie directly beneath the instructions of astronomers, carrying out exposures and calibrations is the supervisor of the multi-process and multi-layer instrument software package. The main responsibility of the OS is the synchronization of the subsystems (detectors and groups of mechanical devices) and the telescope during exposures. The complexity of new instruments, their performance requirements, increasing image file size and file numbers increases the complexity of the OS synchronization required for the optimized exposure sequence on multiple detectors. At ESO a software framework Base Observation Software Stub (BOSS) takes care of the common functionalities of all OS of various instruments at the various sites VLT, VLTI, La Silla and Vista. While for numerous instruments this framework satisfies all requirements (configuration, monitoring, exposure image and error handling) for others it ensures the plug in of instrument specific properties using design patterns.

**CONTRIBUTION NOT
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