



TMT Observation Workflow

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1 Introduction

1.1 Purpose of the document

The purpose of this document is to define the sequence of operations or workflow/activities that will take place before, during and after a science observation involving the following Observing Modes:

- **TMT NFIRAOS NGS AO** Observing Mode
- **TMT NFIRAOS LGS MCAO** Observing Mode
- **TMT NFIRAOS Seeing-Limited** Observing Mode
- **TMT Seeing-Limited** Observing mode

In combination of the followings subsystems:

- The Narrow Field InfraRed Adaptive Optics System (NFIRAOS), the TMT AO facility,
- The IRIS, IRMS, or WFOS science instrument.
- And/or laser guide star facility (LGSF),

Inputs to this document are the Observatory Requirements Document (ORD) (**AD1**), and the Operations Requirements Document (OPSRD) (**AD2**).

The outputs of the document are level 1 OAD requirements (**RD5**) and by consequence level 2 sub-systems requirements, the time budget for configuring AO System or instruments, the communication ICDs between the relevant systems, as well as the instrument OCDDs (**RD6**), (**RD7**), (**RD8**), (**RD9**) and NFIRAOS OCDD (**RD5**)... etc

The intended audience for this document is:

- The developers of the TMT main sequencers (ESW, TCS, AOESW)
- Telescope Control System (TCS)
- The developers of NFIRAOS and the Laser Guide Star Facility (LGSF) systems,
- The developers of the TMT instruments,
- The TMT science users