draft

Policy for Shakeup / Shakedown Testing

Objective

- To define the process and requirements for testing hardware/software changes and verifying the operational readiness of the Observing Systems.

Process

Shakeup:

- Developers will modify code and incorporate bug fixes during the dark run so that it is ready for testing on the shakeup night. Critical fixes get checked into the branch; all other fixes get checked into the mainline.
- Software will be tagged and ready to install by noon APO time, one day prior to Shakeup. The Lead Observer will be notified with the shake request and code tag.
- Shakeup night will be devoted to testing new versions of observing software. Software that fails testing will be reworked in time for shakedown testing.

2 days prior to Shakedown:

- Revised telescope software (TCC, MCP, TPM, PLC) will be delivered and checked in to CVS by the developers, by noon APO time. Software not checked in by noon will not be used for the upcoming observing run.
- Shake requests for all observing software and tag names for telescope software will be sent to the Lead Observer by noon APO time.
- The Lead Observer will cut and install new versions of all telescope software in preparation for engineering readiness tests.

1 day prior to Shakedown:

- The engineering staff at APO will exercise the telescope to test all systems for operational readiness.
  - Telescope will be driven in all three axes by TCC and MCP-Menu.
  - Primary and secondary mirror control systems will be exercised.
  - TPM operation will be verified.
  - Fiducials will be cleaned and verified to be operational.
  - All mechanical systems will be tested.
  - The results of these tests and the operational readiness of the telescope will be noted in the apo-daylog.
- Revised operations software (xOPs, SoS, hoggPT, etc.) will be delivered and checked in to CVS by the developers, by noon APO time.
- Tag names for operations software will be sent to the Lead Observer by noon APO time.
- The observing staff will cut and install new versions of all operations software in preparation for shakedown tests.
- The swing observer will perform the monthly spectro checkout in the evening.

First Shakedown Day:

- Day staff will fix and retest any telescope or spectrograph problems found during testing.
- Day staff will collect fiducial table data.
- Day staff will verify communication and operability of engineering camera.
- The swing observer will build new fiducial tables.
- The swing observer will build a new MCP if required.
- Shakedown tests will commence by the night observing staff.
- Pointing model will be taken if weather permits.

Second Shakedown Day:

- The engineering staff and software developers will respond to problems found during shakedown testing.
- The engineering staff and swing observer will work together to test repaired systems as much as possible.
- The observers will finish shakedown testing and document results in the Shakedown Summary Report.