Three tests for investigation of WHT oscillations

Please, do this tests as early as possible during run of S/D nights to allow follow-up observations later.

- The 3 tests can be done with the same target. The selected star for the tests must fulfill the following conditions:
  - It should be selected to have v∼7-8 mag (good spectral types: late B - A).
  - The target should be reasonably high during the tests but should not pass close to Zenith during the test, to avoid fast changes in the rotator (20≤declination≤25 to observe it up to one hour and a half before culmination or one hour and a half after culmination). Target PA should vary as little as possible during the tests).
  - The selected star should preferable have a guide star as close as possible to theta=90000 or 180000 (ask the OSA).
- Point the telescope to the selected target.
- Set the rotator to the parallactic angle for the middle of the time used for the tests 1 and 2 below (which is about 1.00 hour ahead).

1. ACAM IMAGING & AUTOGUIDER LOGS (∼30 min)

   ***** Record the times and run numbers for each test *****
   ***** Try to make ACAM image cycle ≤ 8 sec *****

   - Telescope tracking.
   - Select a guide star (optimally one with theta=90000 or 180000).

   PART 1: Autoguider: Guide loop 'OPEN'

   - Log the autoguider signal while the telescope tracks (∼15 min). Command LOG AUTO ON xx / LOG AUTO OFF (where 'xx' is the number of minutes, e.g. 15).
   - Simultaneously, observe with ACAM: exp time ∼1 sec, 100×100 window, rspeed fast, filter T6565 (or any suitable narrow band filter, preferable red for best seeing, in the ACAM filter wheel for which the star does not saturate).

PART 2 Autoguider: Guide loop 'CLOSE'

- Repeat the same as before (during ∼15 min as well).

2. ACQUISITION SLIT-VIEW CAMERA (∼30 min)

***** Record the tests' times *****

- Set the target on the acq. slit-view display (the star should be as close as possible to the rotator center, but still at safe distance from the slit (∼20 pixels).

  PART 1: guiding is off
  Press the 'guide' button on acq. slit-view camera and leave the **guide loop open**. Ask TO to check that **guiding is off** (use the command "auto off" if not).
  Wait for ∼15 minutes. The logs will be automatically saved on whtdas18.

  PART 2: guiding
  Press the 'guide' button on acq. slit-view camera and leave the **guide loop open**. Select a guide star in the autoguider camera (theta=180000 or 90000) and **start guiding**. Log the autoguider signal while the **telescope is guiding** for ∼15 min. Command LOG AUTO ON xx / LOG AUTO OFF (where xx is the number of minutes, e.g. 15).

3. ISIS (∼ 60 min)

***** Try to make image cycle ≤ 8 sec *****
Slit width: 3-5″, binning depending on the seeing: 1 2 for seeing ≤ 1″ and 2 2 for seeing > 1″, window Red [1000:1100,1:4200] Blue[1037:1137,1:4200], rspeed fast.
Observe the target while guiding (exp. time ∼ 1 sec):

- ∼20 min, PA=parallactic
- ∼20 min, PA=parallactic + 90
- ∼20 min, PA=parallactic + 45

NOTE

To find the autoguider data, in a window on the autoguider machine:

grep -i "serial packet" /var/log/talker/talker.debug

Same on TV machine. Format is:

Aug 3 13:23:59 localhost SDSUAutoguider: DEBUG: TCS: Serial Packet: 0000.00 0000.00 -0014.50#015

Where first number is x centroid, second is y and last is the time to next packet. (A negative value means low signal). You'll need to record the times of the tests in order to extract the relevant data.

Log are kept 10 days, compressed in same directory.