

Ed Wetherall's commentary:

i was looking at the posted documents on the design of the LGS WFS. i'm curious about the actuated stages required. As far as i can tell, a lot of the stages that were suggested at the SDR are no longer required. What i see is:

*1x assembly focus, linear – controlled by Supervisory computer (with RTC being able to send offset commands at some pre-specified rate).*

*3x PnS pickoff, 2degrees of rotational (6 rotation stages) – Supervisory control computer positions these stages.*

*7x PnS T/T, PI S-330 (2 axis/ stage; each WFS channel needs its own downlink TT mirror as we are not stabilizing the laser beacons on sky). These stages will be controlled by the RTC.*

*3x PnS slow T/T, PI S-330 (not originally identified) – the LGS WFS output from the NGAO optical relay is not telecentric (we need to register the LODM to the lenslet as a function of position in the 120" FoR). This may change if Reni can provide an output that is telecentric. Supervisory computer positions these stages.*

i wanted to verify that actuated stages for aligning the lenslet arrays, detector focus, unit focus and PnS unit rotation are no longer required.

*True.*

Also, with the exception of the 7 fast T/T stages, will these all be controlled by the non-RTC motion control system?

*Yes.*