

NGAO Architecture Retreat Action Items

- Reference materials
 - MondayNoteCN.doc (Day 1 minutes by Chris N.)
 - Architecture_comparison_concensus.xls (sic) (action items that may affect candidate architecture rankings)
 - Claire's MondayNotes.txt, TuesdayNotes.txt, WednesdayNotes.txt, ThursNotes.txt
 - Rich's Notes throughout the week
 - End of the Day discussion (incl. Peter's notes)
- Products and/or Actions
 - Sean Adkins
 - Review proposed K1Upgrade plan and cost estimate developed by (Peter W.) by 8/7
 - Convene the Instrument Working Group to provide initial volume estimates for d-NIRI (first priority) and all instruments (2nd priority) under zeroth order assumptions of being lenslet-based or slicer-based. As much detail delivered as possible by 8/15 will inform the baseline architecture selection.
 - Review tolerable allocation of WFE (on-axis and across FoV), for current instrument suite. Rich D. is carrying 30 nm rms WFE over a edge of 10" diameter field for all narrow-field instruments by 8/22
 - A short report describing the potential benefit to MOSFIRE science to be gained by an adaptive secondary mirror architecture (assume a GLAO implementation can provide 0.2" FWHM for K-band, 0.35" FWHM for J-band, over 6 arcmin FoV) by 8/22 to influence this process
 - Brian Bauman
 - A feasible optical layout of CascadedRelay architecture by 7/27
 - Rich Dekany
 - Edit the system architecture process documentation started by Anna and Liz (final product by 8/22)
 - Work with Antonin to ensure completion of transmission/emissivity trade study by 7/20
 - Determine and document minimum TFoR for LOWFS to meet sky coverage requirements by 8/3
 - Document rationale for selecting 30" unvignetted FoV for narrow-field instruments (w/ Claire M.) by 8/3
 - Extrapolate performance vs. sky coverage for different TFoV between 120" diam. and 180" diam. by 8/10
 - Upgrade WFE budget tool to handle the following models
 - Variable inner v. outer asterism (for on-axis precision tomography and lower-precision LOWFS star sharpening) by 8/30
 - "Point-and-shoot" model for one or more parallel LOWFS-sharpening AO systems (incl. Rayleigh beacon analysis) by 9/30
 - Model how well single bright NGS can determine null-modes (refer to KAON 470) by 10/30
 - Don Gavel
 - A short report confirming that SplitRelay can achieves LOWFS performance requirements at the Instruments (consider TTM's, Rotators, ADC, etc. in a TT error budget to show plausibility of satisfying TT requirements (15mas or 3mas rms over 30% sky)) by 7/27
 - ROM estimate of DM cost for LargeRelay based on vendor discussion by 7/27
 - ROM estimate confirmation for 64x64 and 32x32 MEMS DM's based on new vendor discussion by 7/27
 - Help Peter W. with K1Upgrade plan cost estimate - send to Sean A. by 8/6
 - Claire Max
 - Document rationale for selecting 30" unvignetted FoV for narrow-field instruments (w/ Rich D.) by 8/3
 - Revised the 'rainbow' requirements chart, incorporate mods (and complete) into SRD tables and complete release 2.0 of the ScRD by 8/10
 - Document performance requirements (and basis) vs. differing sky coverage based on Rich D.'s performance estimates (e.g. start with the estimate that NGAO can deliver 140 nm over 1% sky, 170 nm over 30% sky, and XXX over 80% sky) by 8/10
 - Add polarimetry requirements to the summary requirements spreadsheet by 8/10
 - Liz McGrath
 - Respond to questions from the engineering team pertinent to FRD development (thru FRD release 2.0)
 - Anna Moore
 - Complete OSM pickoff trade study according to original schedule (7/27)
 - Chris Neyman
 - FRD v1.0 draft (w/ Viswa V.) by 8/30
 - A report describing the feasibility for LargeRelay and CascadedRelay meeting the optical needs of KI (IF split off after 1st relay for CascadedRelay) by 7/27
 - Viswa Velur
 - Documented surface counts for each of the 5 architectures by 7/20
 - An illustrative SolidWorks model for packaging of SplitRelay architecture by 7/27
 - Generate schematic, if not raytrace, layouts of LargeRelay 8/13
 - FRD v1.0 draft (w/ Chris N.) by 8/30
 - Peter Wizinowich
 - A convincing, specific K1Upgrade plan by 8/6
 - More careful analysis of reengineering costs (with Don G.) - get Keck AO team review; get Sean A. review by 8/10
 - Organize initial pass at RankedImplementationOptions.doc (vs. funding level) by 8/15
 - Convene the AOWG to discuss our tentative NGAO program in the context of larger strategic AO issues by 8/16
 - Initial outline of SDM by 8/30