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
- ☐ Products and/or Actions
  - ☐ Sean Adkins
    - ☐ 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.
    - ☐ 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)
    - ☐ Review proposed K1Upgrade plan and cost estimate developed by (Peter W.) by 8/3
    - ☐ 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.
  - ☐ 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
    - ☐ 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
  - ☐ Don Gavel
    - ☐ A short report confirming that SplitRelay can achieves LOWFS performance requirements at the Instruments (consider TTM's, Rotators, ADC, etc.)
    - ☐ 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 7/27
  - ☐ Claire Max
    - ☐ Convene the AOWG to discuss our tentative NGAO program in the context of larger strategic AO issues by 7/30
    - ☐ Add polarimetry requirements to the summary requirements spreadsheet by 8/3
    - ☐ Drop the question marks from the 30% of sky background spec by 8/3
    - ☐ Determine the parameters for NGAO NGS mode guide star (particularly object diameter) to Peter W. by 8/3
  - ☐ 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
  - ☐ Chris Neyman
    - ☐ 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
  - ☐ Peter Wizinowich
    - ☐ A convincing, specific K1Upgrade plan (with Don G. helping with cost estimate, and Sean A. to review) - send to Sean A. by 7/27
    - ☐ Organize initial pass at RankedImplementationOptions.doc (vs. funding level) by 8/15