

Minutes from Science Cases Team Meeting.

Date: June 25, 2008

Attendee: Keck: C. Neyman, P. Wizinowich, D. Le Mignant  
UCSC: D. Gavel, C. Max and E. McGrath

The meeting agenda is posted at:

[http://www.oir.caltech.edu/twiki\\_oir/bin/view/Keck/NGAO/080125\\_Remote\\_NGAO\\_Meeting\\_13](http://www.oir.caltech.edu/twiki_oir/bin/view/Keck/NGAO/080125_Remote_NGAO_Meeting_13)

Claire and Liz presented their slides (Max\_SCRD\_v3.ppt) on the new release (release 2) of the SCRD.

[http://www.oir.caltech.edu/twiki\\_oir/bin/view/Keck/NGAO/NGAOSRDDrafts](http://www.oir.caltech.edu/twiki_oir/bin/view/Keck/NGAO/NGAOSRDDrafts)

Key points:

- **SCRD release 2** is ready for distribution (*end of next week? As there were changes requested during the meeting*). More work on formatting and minor changes by Liz, David and Claire next week.
- See slide 3 for SCRD changes overview

Here are the few questions during the presentation:

- On the Key Science Drivers “Planets around low-mass stars”. **Claire** needs to check that the contrast requirements are consistent with Ralf Flicker’s report on NGAO high-contrast and planet sensitivity budget.
- On the slide about “galaxies lensed by galaxy cluster”, they are some questions about the observing strategy:
  - where will the imaging survey to detect the likely-high-z lensed galaxies be done? With NGAO, MOSFIRE or elsewhere?
  - How close do you have to pack the IFU (and their pickoff)? This should be an instrument-derived requirement for the d-IFS
- NGS backup
  - Requirement on faint NGS for backup science?
    - How many subap on the NGS WFS. Could there be a -say- 14x14 subap lenslet that would allow to close on R=16 mag stars (meaning R=14 mag with 2 mag of extinction)?
    - Can we use the LOWFS w/ NGS WFS (same or different NGS on LOWFS + NGS on WFS)?
    - If NGS WFS provides a 14x14 subap, can it be used for narrow field truth sensor?
  - Seeing limited:
    - Can use LOWFS correction with (NIR) large fov acq camera?
    - If acq camera is large fov NIR camera, does it need a pupil stop for NIR background emission? Maybe it could only use J and H band to limit the cost?
- Review of the Rainbow Chart
  - **David** to convert it into KAON 548 and post it on Twiki (done)
  - **Rich**: seeing assumptions needs to be updated to reflect latest changes.
  - Reminder: field of view for NGS: 150”, field of view for LGS: 175”

- **Liz:** Check value for differential tracking for gas giant and asteroid (which one is the real driver)
- **Claire:** check background values for d-IFS (20 or 30%??)
- Various things:
  - Requirements for PSF simulation, estimation, reconstruction, subtraction require more work. Should be included in the PD and DD phase. Should benefit from on-going work with CfAO project with Ralf.
- Further work on SCRD, SRD;
  - Format SCRD (and include observing scenarios)
  - Update NGS backup section with information above (**David**).
  - Needs to check SRD tables and includes into contour db (**Chris?**).
  - **David and Liz** to check system configuration (did not have time to cover this topic).