Camera Image Visualization meeting with IPAC

Dates: September 20-21 2016
Location: SLAC,

Tuesday: Tulara Conference Room, Bldg 53, Room 4006
Wednesday: Napa Conference Room, Bldg 41, Room 1158

Possible conflicts

- 10am Wednesday, CCB (Gregory)
- 11am Wednesday, TS8 meeting (Stuart, Tony)
- 1pm Wednesday, Tiger Team meeting (Tony, Gregory) – can be skipped

Tentative agenda for Wednesday::

10am: Initial discussion of image data flow API
11am: Stuart and Tony at TS8 meeting
1pm: Python binding/services/diagnostic cluster
3pm: Follow up on image data flow API
3:45pm: Summary and follow up actions

4pm: IPAC team leaves for airport

Action Items

- ☐ Make gliffy diagram of "yellow box" architecture including I&T diagnostic cluster Stuart Marshall Gregory Dubois-Felsmann
- ☐ Con Ops for the display – how/who/when for the camera visualization display Jon Thaler (TBC) Stuart Marshall
- ☐ Initial "yellow box" interface, and implementation using existing fits file reader Trey Roby. This would them become a proposal for further discussion
- ☐ Minor fixes to build process, generate pure war, workaround duplicate nom.tam.fits classes, etc Loi Ly
- ☐ Proposal for support of "cropped image staging" for more efficient image passing to python Trey Roby
- ☐ Needs to be some way to tell firefly which "yellow box interface" to use to fetch image (can be handled via a request object)
- ☐ Once implementation of channels/request object/user defined actions is complete, provide demo/example Trey Roby Tatiana Goldina
- ☐ Add "back" button in addition to pause/resume immediate data interface so that can go back to previous image (in case you pushed the pause button just too late). Firefly already keeps a cache, so just going back to the previous URL should work.
- ☐ Expose ability to plot pre-binned histogram data, and add demo Tatiana Goldina
- ☐ At some point in the future generate a proposed timeline for delivery of new functionality Xiuqin Wu

Possible topics:

- Current plans for visualization/diagnostic cluster for I&T, including data flow
- Demo of integration of firefly with Camera functionality
- List of camera requirements
    - Front end
        - display cross multiple panels, layout of the image
            - one browser across multiple panels, one browser for each panel
        - speed of image refreshment
            - 15 seconds? Data is delivered in 2 seconds, so being able to display image in similar time should be goal
        - control image display (zoom, pan, stretch ...), on a monitor or iPAD
            - where to display the action icons, only on minitor/iPAD?
        - Raft, CCD, segment outline overlay on image
        - drill down from raft, to CCD, to segment
        - over-scan display
    - server side
        - stitch segments into CCD, CCDs into raft, parallel reading of 3 REBs?

- data flow from camera to Firefly server, EDF and raw data
- over-scan representation
- API for direct delivery of data to firefly (no FITS file)
- Distributed backend
- Smoother integration with python backend
- Issues with existing (old) Firefly
- Overview of new Firefly functionality
- Future directions for server