Meeting Notes April 4,2013

Attendees: Stephen Kaye, Roger Smith, Pravin Chordia, Mahesh Burse

**Minutes**

* IUCAA posted their own milestones document and it was briefly looked over
* Caltech needs some time to look over the IUCAA milestones document and will respond to it
* IUCAA will attach dates to the schedule items. These dates only need to be accurate to a 3 month time frame (i.e. quarterly). This will help to rank the items in terms of importance and define an order of completion. Also each item in milestone list will have a description of level of maturity.
* Caltech needs to identify the interconnect scheme for the controller when it is on the telescope. This interface includes wiring and harnessing and enclosure for the IUCAA boards.
* Caltech has two competing concepts for the testing. One uses external equipment to collect data concerning the bias/clock voltages and the other uses the controller ADC to collect data concerning the bias/clock voltages. The Requirements and Testing document needs to be revised to reflect the single concept of using the controller ADC to acquire data for the bias/clock voltage measurements.
* IUCAA will review the Requirements and Testing document to identify where the document suggests using external data acquisition equipment.
* Caltech needs to identify where matching resistors are necessary in differential design. A note should also be made as to whether resistors need to match or resistor ratios need to match.
* Caltech will make a single table of noise contributions for the proposed analog signal chain
* Further development of logic required after the ADC is necessary. A table of input and output schemes for programmable logic device will be made with advantages/disadvantages.
* IUCAA posed questions regarding the preamplifier
  + The gain bandwidth product of the op-amp for the preamplifier is marginal. This will be reviewed by Caltech
  + Thermal consideration for preamplifier needs to be looked into
* IUCAA suggested a faster ADC which is pin compatible to the AD7625. The 10 MSPS ADC is the AD7626 and will be reviewed by Caltech
* Bias voltages were programmed by IUCAA and were tested, but more careful testing of the loading needs to be done.
* Caltech will make improvements to the twiki

**Action Items**

**IUCAA**

* + Will provide rough dates for the milestone document.
  + Will provide a description of the level of maturity of milestone items.
  + Identify the sections in the testing document which suggest external data acquisition equipment
  + Perform more careful testing of the loading performance of the bias voltages

**Caltech**

* + Will look over IUCAA’s milestone document
  + Will develop the interconnect scheme for the controller
  + Will develop an enclosure design for the IUCAA boards
  + Identify component matching requirements in design
  + Make a single table of noise contributions in the signal chain
  + Further develop the gate array logic after the ADC in the video post processor
  + Review the op-amp used for the preamplifier and choose one which isn’t marginal
  + Improve the twiki