

Weekly Update: June 25th to July 1st 2014

Nichin Sreekantaswamy

WORK PLAN:

- 1) Get transimpedance measurements for AS55 PD manually by taking measurements using Network analyzer and RF cables that come out of Demodulator output PD RF MON in rack 1Y2.

2 Hours inside the lab

Independent but in-lab work, occupies the Network analyzer.

For the above measurement, further steps needed are:

- a. Making sure AS55 is properly illuminated. AS55 is sitting on the AS table.
Requires presence of expert
 - b. DC measurements for AS55 (using multimeter) that is sitting on the AS table.
Requires presence of expert
 - c. Turning on power supply for REF DET and making sure REF DET is properly illuminated. The reference PD is sitting on the POY table.
Requires presence of expert
 - d. Plotting results.
Independent work
- 2) Take the same readings wirelessly sitting at the control room computer.
0.5 - 2 Hours at the control room computer (Depending on how well the last year's code works)
Requires presence of expert INITIALLY. Later Independent work, But occupies the computer, the PD that I am testing and the Network analyzer.
 - 3) Making sure each PD is illuminated properly. Total of 8 PDs are included in the automated frequency response measurement system.
Requires presence of expert
 - 4) Taking DC readings of each PD to create a database for all the PDs
2 - 3 Hours inside the lab
Requires presence of expert
 - 5) Work on the python GUI for the system
Independent work
 - 6) (MAYBE NEXT WEEK) Integrate the GUI and the code present to collect data wirelessly to get the data wirelessly using the GUI.
Independent work. Occupies the control room computer, all the PDs , RF switch and the Network analyzer.

EQUIPMENT REQUIREMENTS:

RF Cables for replacing the not so good ones (mainly bad soldering) between demodulator (1Y2) and RF switch (1Y1). A length of about 5.5m is found ideal for these.

Status: **Not yet ordered.**

Nos: 8 (not very sure about this)

Eric G and I had ordered RG405 coaxial cables (Steve suggested they had superior shielding) from Pasternak, with pre-soldered SMA ends. They arrived on Tuesday, but unfortunately RG405 is semi-rigid and is not suitable for our setup. The superior shielding due to copper outer conductor resulted in loss of flexibility. **Hence a good and flexible RF cable needs to be selected and ordered.**