Meeting minutes from UITF RF overview January 15, 2015

Attending;

Evelyn Akers, Curt Hovator, Kevin Jordan, Ron Lauze’, Bill Merz, Matt Poelker, Tomasz Plawski, David Siedman

Discussion:

There are a total of 6 RF systems required for the UITF project:

Drive Laser, Buncher, 2 for the Chopper cavities, 2 for the Quarter Cryomodule.

The drive laser can run at 1497MHz or (/2) 750MHz. The buncher could be a **new** 1497 MHz system (cavity) or the FEL 750 MHz system. The chopper cavities are the old 1497 MHz cavities powered by new solid state amplifiers. The quarter cryomoule will be powered by 2 CEBAF spare klystrons.

The current thinking is if we could use the 750 MHz buncher then we would not have to build (pay for) a new buncher cavity and a third klystron assembly at this point. When the 750 MHz system goes into the FEL we could use the old cavity and install the third klystron. Aside from the cost & effort to fabricate the 1497 MHz buncher cavity & the klystron rack there are precious few klystron spares available to use. However there may be a conflict in schedule for using the FEL buncher – this is being worked…

Our hope is that in the next year or two CEBAF will find the money to procure a number of klyston spares. Our plan is to purchase a new cathode power supply that can support 3 klystrons, this would be ~13.6 kV @ 4 Amps. There are no power supplies of test stands on site or in storage that can support these requirements. The interfacing of a new power supply will also be much easier as well as incorporating technology making it much higher efficiency.

The timing for the procurement of the 6 LLRF systems is very good because we can ride along on the LCLSII purchase (I believe they are getting 8).

The schedule begins first beam studies (low energy) in the fall and quarter commissioning in Nov/Dec. HDIce will be installed in February, and operations begin in Q3 FY2016.