NLC 8-Pack Low Level RF Design Review Follow-Up

Steve Smith
Jan. 9, 2002
• Finalize signal count

• Get the number and location of couplers to finalize cable routing
  – I believe this is largely done, but Ponce may not yet have it.

• Establish which signals need absolute calibration.

• Determine the minimum pulse length
  – needed/required/possible/sensible?

• (Can/should/will?) the PDU’s be controlled through EPICs?

• Need to evaluate the need for shielded rack space

• Need to get the budget into compliance

• Order long lead items
LLERF

Action items:

Need finalize the signal count, and get the number and location of couplers to get the cable routing finalized.

I believe this is largely done, but Ponce may not yet have it.

Need to establish which signals need absolute calibration.

Determine the minimum pulse length (needed/required/possible/sensible?)

(Can/should/will?) the PDU’s be controlled through EPICs?

Need to evaluate the need for shielded rack space

Need to get the budget into compliance and order long lead items
Actions

- Finalize signal count
  - 40 (MR, JF)

- Get the number and location of couplers to finalize cable routing
  - I believe this is largely done, but Ponce may not yet have it.
  - Joe will get his hands on a drawing

- Establish which signals need absolute calibration.
  - In progress
    - Klystron outputs at windows (4 in phase 1)
    - Klystron combiner outputs (2 in phase 1)
    - Cross-potent outputs (?)
  - Calibration scheme not yet designed(!)
• Determine the minimum pulse length
  – needed/required/possible/sensible?
  – One PDU tick (8.4 ns) is adequate

• (Can/should/will?) the PDU’s be controlled through EPICs?
  – No

• Need to evaluate the need for shielded rack space
  – TBD (cost? impact on installation?)
• Defer programmable RF Source until FY ’03
  – $30K deferral
  – Additional $8K amplifier cost (probably needed anyway)
  – Net savings $22K
• Coax cost reduction
  – Budget $50K
    • 3/8” Heliax
    • double-counted in LLRF & cable-plant
  – Chose Andrew LDF-1 ¼” Heliax
    • $90/ terminated cable + installation
    • Plus installation
  – Net savings ~$85K
• VME DAC’s
  – Buy only two now
  – Saves $9K in FY ’02
• Total budget reduction ~$118K