Modules, Cables and Eta=0 (1)

Murrough Landon – 12 November 1999

Eta=0 and Other Issues

- Is Eta=0 still an unresolved issue?

- TDR concept has one PPM spanning eta=0

- RX/PPM organisation assumes no PPM spans eta=0

- FCAL and outer EMEC/HEC PPMs span more than one quadrant

- Connector granularity on PPMs?

Implications if no PPM spans eta=0

- If CPMs and JPMs do still span eta=0, the PPM connectors must allow one PPM to feed two CPM/JEMs (ie 2*16 towers).

- Do cable bundles of 2*16 pose layout problems for the CPM/JEMs? Are 4*N bundles preferred?

- If CPMs do not span eta=0, we need 14 CPMs per crate (instead of 13). Affordable from LVDS and FPGA savings?

- If JEMs do not span eta=0, the FCAL channels will (presumably?) appear as the outer channels of the two outer JEMs (instead of only in a single separate 16th JEM).

- FCAL trigger setup more complicated if FCAL is not in separate JEM?

Modules, Cables and Eta=0 (2)

Implications of PPMs covering $\geq$ 2 quadrants

- If one PPM contains two phi quadrants, we need more complex cabling to JEMs in two different crates (except in the two crate Jet/Et processor?)

- If one PPM contains the whole of phi for one FCAL end-cap, again this implies special cabling to the Jet/Et crates.

- Or all handled by PPM plugin card?

Cabling

- Check that chosen cabling setup is viable everywhere: channel ordering within PPM inputs; BC mux pairs in barrel and endcaps; cabling from PPMs to trigger processors and ordering of channels within cables, etc.

- Document it!

    - Summary of Bill Clelands TBB cabling document
    - Extend to HEC
    - Include proposal for TileCal
    - Organisation of Receiver stations and input cables
    - Cabling to PPMs and PPM layout
    - Cabling to CPM/JEMs and their layout