



DPS-FEX Mapping Status

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- Overview
- Reminders
- To Do List



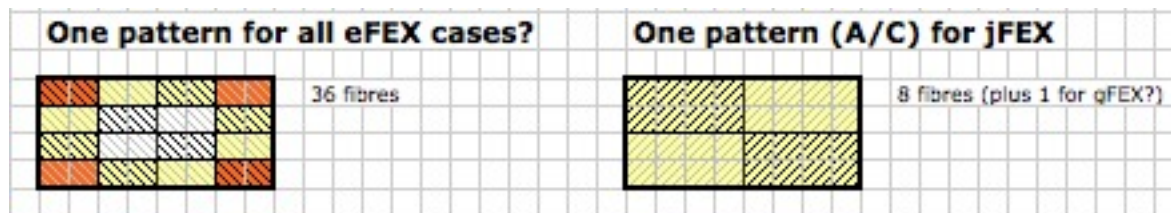
Overview

- Not much development since this time last year
 - Addition of gFEX fibres
 - Very recent new 6.4 Gb/s baseline jFEX needing more fanout
- Existing work
 - My spreadsheets: visual mappings and fanout requirements
 - Exploration of options at 6.4 and ~10 Gb/s link speeds
 - Various people counting total numbers of fibres
- Meanwhile..
 - Some FEX PDRs already passed
 - "FOX" (Calo-L1Calo optical plant) PDR coming soon
 - DPS AMC now by LAPP
 - Previous discussions were all with BNL/Stonybrook
 - We should check our assumptions are still OK
 - Meanwhile link speed choice is still a year away...



Recap: DPS-eFEX @ 6.4 (1)

- DPS AMC: 0.8×0.4 in $\eta \times \phi$, 48 output fibres
- Barrel and Standard Endcaps
 - 36 fibres to eFEX (not all used at any given η, ϕ)
 - One, two or four fanout copies in various patterns
 - Aim for single superset pattern, disable unused outputs
 - Originally 8 to jFEX (now would like 12)
 - 1 for gFEX
- New jFEX proposal: too many outputs needed
 - Could be done with two different DPS firmware builds
 - gFEX fibre in place of one unused eFEX output
 - Need different FW loads in different DPS AMCs - OK?

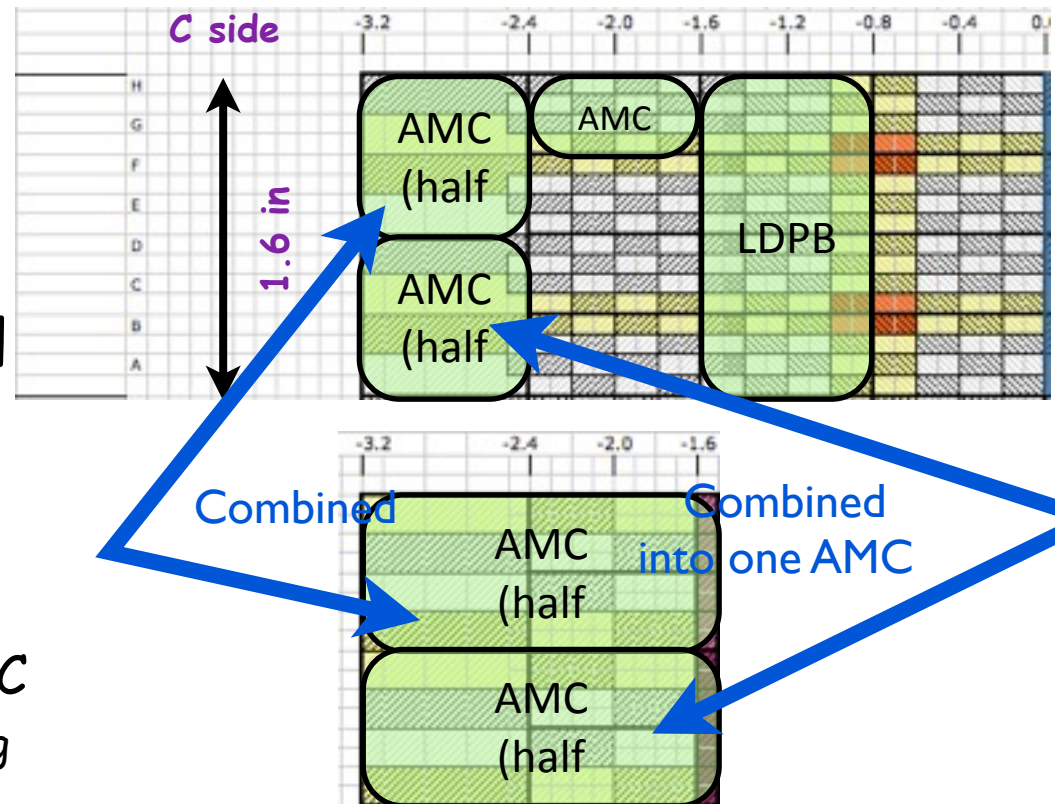




Recap: DPS-eFEX @ 6.4 (2)

• Forward Endcaps & HEC

- Low input granularity but comparatively large output requirement: multiple fanout of HEC towers to all FEXes
- Two schemes
 - SS: combine Fwd & Std EMEC
 - ML: combine Fwd EMEC with HEC
 - Could do some EM+hadronic presumming for gFEX
 - This scheme minimises need for optical splitting (esp at high link speed)





To Do List

- Really need to work through mapping in detail
 - Work out realistic scheme for the optical plant (FOX)
 - Both for 6.4 and ~10 Gb/s options



Miscellaneous

• Rack Space?

- Reinhard estimates whole rack needed for optical plant?!
- Reminder: four racks are available in total
 - Assume two for DPS and two for FEXes
 - DPS has three crates: ~1.5 racks
 - FEXes have three full crates + mini gFEX crate: > 1.5 racks
- New suggestion for DPS-FEX optical plant
 - Can it go at the end of the row of racks? Entirely passive
 - Would add a small amount to latency (<1 BC)
- Both rack space and latency are tight: keep an eye on both!