FPS L1 $\rightarrow$

- Determine selection/rejection rate on realistic samples.
  $\rightarrow$(e^-,π^0,π^+,γ)+2minbias int.
- Study Occupancy/Determine rejection factor on Dijet samples.
  $\rightarrow$ p_T in [02-10],[10-20],[20,40],[40,500]GeV.
  $\rightarrow$ with 0,2,4,6,8 minbias interactions.
- Demonstrate utility of isolation criteria (feasible).
- Study η dependence of algorithm.
- Study γ trigger performance with high threshold only.

CPS L1 $\rightarrow$

- Simillar algorithm as FPS.
  $\rightarrow$ High threshold for shower.
  $\rightarrow$ CFT tag (1bit)/p_T bin.

Request:

We need the following info to be transmitted to L2 $\rightarrow$

- CPS axial cluster tagged with presence or absence of CFT track.
- CPS helical (u,v) clusters – to calculate η,ϕ of cluster and fine matching with CAL EM Trigger Tower.
- Finally, as CFT track will be tagged by p_T & ϕ – possible to have CPS candidate binned in p_T.

$\rightarrow$ We forsee NO γ trigger & NO improved rejection in CPS without these information.

We want to preserve this capability.

Input to L2PSpp $\rightarrow$

- DIGITAL info.
- Clusters with high and isolation thresholds.
  $\rightarrow$ with MIP/no MIP tag for FPS.
  $\rightarrow$ with CFT track/no track info for CPS.

At L2PSpp $\rightarrow$

- From cluster u,v – form η,ϕ (Look Up Table).
- From associated Track(CFT) or MIP(FPS) information – e^- like or γ like.
- Forward list of candidates to L2GLB.
  $\rightarrow$ Address (η,ϕ).
  $\rightarrow$ Flag (e^-/γ).

At L2GLB $\rightarrow$

- Fine matching of PS candidate with CAL trigger towers.
  $\rightarrow$ Gain additional rejection from finer matching.

Production – FPS.

- Dijet events with 0-8 minbias events are almost complete.
- Realistic single particle events with 2 minbias events are almost over.

Production – CPS.

- Production of single particles just started.

Trigger Studies.

- Efficiency, Rejection, Algorithms, Overlaps etc. are being studied – both L1 & L2 and both CPS & FPS.