DC2 Discussion – What Next?

1) Alternatives
   - Bill's IM analysis
   - ????

2) Backing the IM Analysis into Gleam
   - Good Energy
   - PSF
   - Background Rejection

3) Recon- Mod's to Gleam
   - New tuple Variables
   - Internal review of Flux Model

4) Plan for our first 100% Run (1B Background Events)
Good Energy:

Requires 4 CTs (Ensembles) and some logic

Was Profile Method Calc.? Prob for good results

Repeated for Last Layer Tracker Param

No need to back this into the CalRecon TrkRecon Loop Benefits looked for – none found

Select Method with Highest Prob. → BestEnergy
PSF Analysis:

4 Classes: Radiator (2) x Topology (2: Vtx & 1 Tkr)

2 Cts (Ensembles)

- Tkr1FirstLayer > 5
- VtxAngle > 0 & Prob.Vtx > .5

4 Cts (Ensembles)

- 2 Cts (Ensembles)
- 6 CTs to Implement + Logic
Back Ground Rejection Analysis

2 Topologies
3 Energy Bins
8 PreFilters
7 CTs (Ensembles)

Background Rejection Nodes
What's Needed:

1) An Implementation for IM Ensemble CTs (similar to Toby's current single Tree version)

2) Code to subdivide incoming events accord to Thick/Thin, Vtx/1Tkr1, Energy Band
   - Note: Some of this already exists in Merit – Needs to be updated

3) Results: Need Summary Variables
   - BestEnergy
   - BestEnergyProb
   - BestXDir, YDir, Zdir
   - BestPSFProb
   - GammaProb

4) Implementation of new Tkr Variables (see Leon's Talk)

5) Implementation of new ACD ActiveDist Alg. (See Heather's Talk)

6) When do we try 1B Back Ground Events?
   Suggest:
   - Get update current Gleam
   - Validate with 100M - then run additional 900M