P0D Reconstruction Systematic Error Estimation (Update)

June 15, 2011
Recon Systematics Section of Note

- Added brief description of the overall plan for shower and track systematics estimation (including a table of parameters being evaluated)
- I didn’t add in a description of these parameters. It would be ideal to have a PODRecon tech note available to refer to – is there any chance of this happening before the NCPi0 note is completed?

Computing bottleneck

- Due to the computationally intensive nature of running the reconstruction on the MCP4 and data we are not as far along as I would have liked.
- We are still spinning on the data – hopefully we will have those results in a day or so...
- Because of the computing issues I don’t believe we will be able to handle the PID systematics here. I am hoping that someone else can pick this up or at least work with us on it.
Results on MCP4 so far

Determining the sensitivity on the recon output to variations (50% level) to the reconstruction outputs (number vertices, showers, particle charge)

While we see some slight variations in # events and means of these histograms, there seems to be no major shifts in MC. We have run into a few issues with running on data and are currently trying to get results.

One question remains. If we see little variation in the reconstruction algorithm output variable (above) is it reasonable to adjust the parameters by this same amount and look at the output of the full analysis? We don’t really have anything else to guide us on the parameter variation.

I am leaving for vacation (planned months ago) so Fahmida, Eric, and David may questions for Clark, Ian, and Glenn on this work over the next couple of weeks.