

## Primary Data Analysis Steps

- 1. Set Reference time cuts.** These cuts are necessary to select the proper reference time (trigger) associated with the event. After setting these cuts, the data **MUST** be replayed first, before moving to step 2. This way, the correct ref. Time would have been chosen beforehand.
  - 2. Set the detector ADC/TDC Time Windows.** These leafs usually are named along the Lines ‘..GoodAdcTdcDiffTime..’ For hodoscopes/calorimeter/cherenkovs, they are set on a PMT basis. For the drift chambers, they are set on a chamber plane basis. These go by the name, e.g. ‘P.dc.1u1.rawtdc’  
The purpose of these cuts are to eliminate possible out-of-time events by placing a cut around the main peak (adc-tdc) time peak. Most importantly are the chamber Time cuts, are these seem to be sensitive to good events shifting out, or into the main W peak, for example. (BE CAREFUL WITH PUTTING TIGHT CUTS.)
  - 3. Do detector calibrations.** Hodoscopes/Drift chambers should be done first, as these are the main detectors used for triggering/tracking. Then, any other detector that Will be used as PID should be calibrated.
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## **Secondary Data Analysis Steps (Setting Up the REPORT\_FILES)**

- 1. Calibrate the BCMs scaler read using Sangwa's BCM Current module. The end result will be a new leaf variable, e.g. 'P.bcm.CurrentFlag'. A cut on this flag will select events for which the beam Current for the selected BCM > bcm\_current\_threhsold. This is important, for example, when counting EDTM events to calculate the total live time.**
  - 2. Check the definitions of Tracking Efficiencies / Live Time / BCM Charge. Make sure these make sense and have reasonable cuts on them. There is no step-by-step to do this. Common sense, and a bit of thought have to be used.**  
**\*\*VERY IMPORTANT\*\*:** Use only '..ScalerCuts..' variables in the REPORT file, to ensure only Scaler events with a beam current > threshold are selected.
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**NOTE:** The steps listed here are just a guide to do the analysis in the right order. In reality, each step mentioned here is very involved, and will take some time to complete.