

## E36FindPeds macro users manual

The purpose of this code is to determine the position of the ADC cut to remove the pedestal. It also determines the position of the TDC upper and lower cuts. The Monitor Code requires the output from this routine so it must be run before the Monitor Code is used.

NOTE: it is hardwired to look for Run\*\*\*\*MS.root files!!  
{The path to these files and to the Results and RootFiles (see blow) are defined in CommonParameters.h}

To use start root,

Then:

```
root> .L E36FindPeds.C+
```

```
root> GetPeds(runnum)
```

The results are two files, PedestalsTrunnum.dat and PedestalsFrunnum.dat, the first for the target and the second for the SFT. These are kept in the Results/ subdirectory of offline. In addition the histograms generated are saved in the RootFiles/ subdirectory as PedestalsrunnumOut.root. The Monitor code searches for the two .dat files and loads the values contained there for analysis of the run(s) in question.

The code uses “preliminary” cuts whose purpose is to limit the region in which the code searches for the peaks in question. For example the adc pedestals are “always” below ~1000 so the pedestal search is limited to below this as well as above very low values ~100. The cut at 1000 also serves to limit the tdc peak search to those events in which there is a “valid” high gain adc. A short explanation of each of these cuts follows, if not clear please ask!

NOTE: These cuts are all hardwired to the values shown but can be overwritten (see below).

HGcutT = 1000; High Gain Target cut

    If adc above this collect tdc values,

    If adc less than this and greater than MinCutT collect adc pedestal data

MinCutT = 100; Eliminate possible low “noise” from adc pedestal data.

LGcutT = 1000; Low Gain Target cut

    If adc less than this and greater than MinCutT collect adc pedestal data

HGcutF = 1000; High Gain Fibre(SFT) cut

    Same use as HGcutT.

LGcutF = 1000; Gain Fibre(SFT) cut

    Same use as LGcutT.

NPsig = 3; Multiply RMS of pedestals peak by this to set cut.

NTsig = 3; Multiply RMS of tdc peak by this to set upper and lower time cuts.

These hardwired values can be overwritten using the Cuts command:

Cuts(HGcutT, LGcutT, MinCutT, HGcutF, LGcutF, MincutF, NPsig, Ntsig)

You must enter a value for all parameters even if it is the same as hardwired value !!!!