STANDARD SLIDES FOR YMON

The online monitor YMON displays in real time, for every 100 events processed, a set of slides which are various histograms and phi distributions of detector hits and such, described in CDF-1796. The first 7 slides are on detector performance. Many people have pointed out that such ratty distributions as CSX or CMP phi, which include spaces for unimplemented channels, are difficult for the non expert to interpret. There have always been "standard" spews, including slides, lying around, sometimes on transparencies, but after noting the ALEPH display overlaying standards on the screen, I decided this was clearly a better idea. Although the default slide show does not (yet) overlay a standard, if you ask for a slide from a menu (Global Stuff, Pick a Slide), you will be asked OVERLAY STANDARD? [N}. If you say Yes, while the current histograms will be in blue (or white triangles), the standard histograms will show up in red. In the strip chamber plots the off red (magenta?) refers to the second (triangles) histogram. Histograms of counts such as TDCs are normalized to the same count. Note that for rotating TDCs, the overlay may actually be a different (but presumably similar) TDC; this refers to VTX and CTC. If this is too ugly perhaps I should fix it. Rate histograms may have differing amplitude as there is no relative luminosity normalization; if the standard file represents data at lower luminosity, rates (%/channel/event) will be lower. The standard is in the file DATA:SLIDES.DAT. An option to get it to reread the standard file (which perhaps the user has changed) sounds like a good idea but for now it is read at initialization. Only the sum of 30 degree sectors into 90 degrees is kept for the depth profile.

Every run of 500 or more processed events will write out the content of its slides as a file DASPY:SLnnnnn.DAT. Boy am I in deep trouble when we get 6 digit run numbers. These files are a binary write of the bin contents of the slide histograms. I note that they occupy 57 blocks, as opposed to the 2000 blocks of the postscript printing files. To make a standard, just copy the one you want to be DATA SLIDES.DAT. Thus the standard can be cosmics, min bias, all events or whatever. The files themselves will be kept around wherever I can find disk space, reasonably current ones perhaps in the DATA area at B0 and older ones on FNALD. A program VIEWER in the programs area allows the user to look at these slide files and even to take one as a default and another as a standard. It asks for the file name, whether

you want a standard, and the file name for the standard if you want one. Then it asks which slide to view with an option to quit. Note that VIEWER does not have logarithmic scales. Since VIEWER can call up its graphics anywhere (supported by DI3000), there is no hard copy provision built in.

In general, it is hard to find a real run that does not have some little thing screwed up, so I have provided a rather crude tool for editing slide files in order to make standards. The program EDSTAN (which will live in the DATA area) is meant to be run in the debugger. Run it and set break at line 13. Go and it will read whatever file you tell it. Then examine the array A. See the code in the routine SLIDES in the file SOURCE:VUHIST.FOR to see where in A to find the histogram you want to fudge. Just DEPOSIT A(n)=x as desired, then go. It will write a file DATA:NEWGUY.DAT. Rename that say to SLIDES.DAT and you are in business.