

Reconnection and local alignment of .dft files

- All 216 .dft files in \$EMUL on fnbblx1 have been
 - 1) locally aligned
 - 2) reconnected
 - 3) assigned primary vertex
 - 4) assigned primary vertex tracks
- Named xxxx_xxxxx.pv.dft
- Secondary vertices have not been assigned
- All tracks refit to first three segments

June 5, 2000

1. Local alignment

- Every segment in file has been aligned.
- Reference tracks used for alignment:
 - > 4 segments in length
 - < 150 μ from segment
- Reference tracks are re-fit omitting it's segment in plate of interest
- Residual between reference track and omitted segment calculated (U,V, θ_U θ_V)
- There are usually ~20-?? reference tracks in local fit area
- Segment to be aligned is adjusted by residual value

2. Reconnection

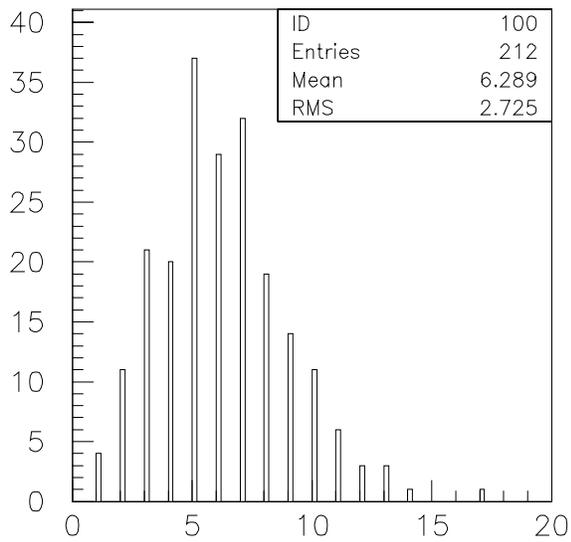
- Applied to aligned files
- Every starting and ending track is reconnected
 - 1) Ghost matches: < 1 μ and 5 mrad
 - 2) Reconnect by two segment projection
 - < 4 σ in angle OR < 10 μ pos (hard cut)
 - AND χ^2 total < 6.0Find segment with minimum χ^2
- Missing interior segments added:
- All reconnections listed (which tracks/segments merged, δ_{pos} , δ_{ang} , σ_{pos} , σ_{ang}) in xxxx_xxxx.loc.dft.lnk_log

3. Primary Vertex and Tracks

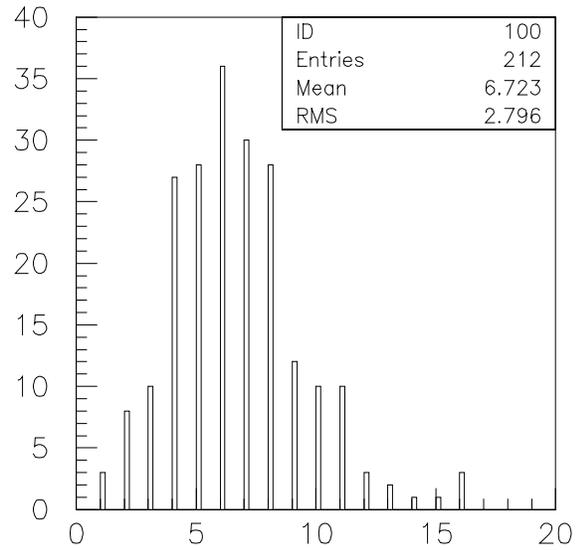
- Primary vertex taken from .dcy files in \$EMUL
- IP cut of 15μ for tracks with more than one segment
- IP cut of $3 * dz * \sigma$ angle for single segment tracks
- Passing tracks removed, backward tracks not removed
- All primary tracks as well as all list of all segments are listed in files:

xxxx_xxxx.pv.pri

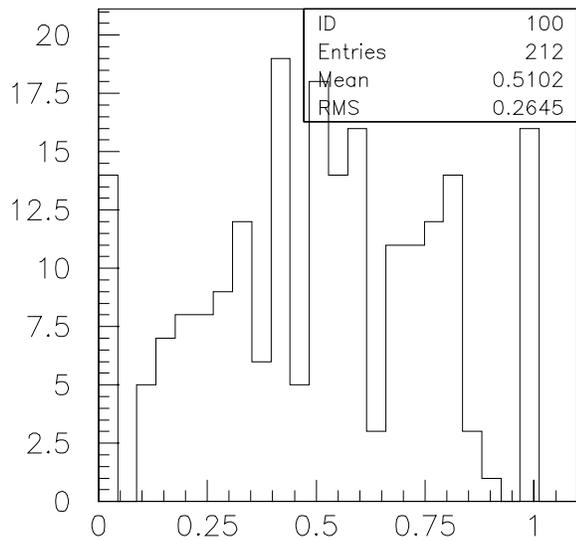
Reconnection improvement for vertex tracks



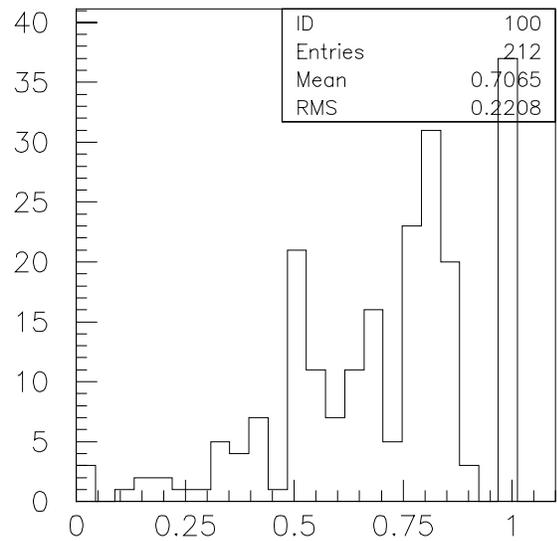
number vertex tracks



number vertex tracks



fraction exiting



fraction exiting