Straw Tube Tracker

Requirements:

1. 150 um position resolution on hit straws (giving a 1mr angular resolution with 2 chambers).
2. At least 95% efficiency (giving better than 99.999% efficiency for 3 out of 5).
3. Time resolution not critical.
4. Position repeatability of the chamber to within 10-20um (Ron – what do you think?)

Steps taken to ensure this

Resolution:

* Test individual straws with a radioactive source.
* Test multiple planes with source.
* Test chambers at PSI with GEM tracking.

Efficiency:

* Test straws/planes with cosmics.
* Online testing at PSI.

Repeatability:

* Tests at PSI with GEMs/Frames.

SciFi Detector

Requirements:

1. Timing resolution better then 1ns per fiber (becomes better than ~700ps when demanding 2 planes).
2. Position resolution – Fiber size 2mm.
3. Efficiency better then 95%/plane (better than 99% when demanding 2/3 planes).

Steps taken to ensure this

Resolution and timing:

* Cosmics tests at TAU.
* Beam tests at PSI.

Efficiency:

* Cosmics tests at TAU.
* Online testing at PSI.