

General Remarks for the TPC tracker detector

Comments from mini-review

Comments from Prof. Tianchi Zhao

The draft version will be sent to Prof. Tianchi Zhao by email.

All draft will be uploaded in the end of this month.

0, Physics requirements and TPC detector should be clear including some principle concepts. (80%)

Physics requirements would be referred to ILD parameters for Higgs physics.

Momentum resolution (Done)

dE/dx(Done)

r-phi resolution(Done)

Two tracks resolution (Need the results from simulation)

The specific concepts about the TPC gaseous detector should be defined in the text and the diagrams of geometry should be simplified.

The details describes texts would be added for every diagrams.

1, Every short conclusion and result should be based on the reference or R&D. (100% Done, Discussion from LC-TPC annual conference)

In general, some updated information or results would be included from LC-TPC collaboration group's simulation and experiment in 2016 and 2017.

dE/dx

r-phi resolution

N_{eff}

Critical issues would be focused on the IBF , detector module and Calibration.

2, The design of the endplate, readout pad size, readout channels, geometry and module should be given in the part. (50% Done, all information is ready!)

Layers of the endplate would be sensitive with the dE/dx.

Electronics readout channels estimated (Discussion with Dengzhi)

The number of the detector module is in the endplate.

3, The prototype , method of calibration, critical R&D should be clearly given.

How to calibrate for the drift velocity? (Need the results from simulation)

How to deign the TPC detector module and prototype? (80% Done, all information is ready!)

4. Interface of TPC detector with Vetex and ECAL should be included. (50% Done, Discussion from LC-TPC annual conference and most information will be ready.)

The specific room of the TPC detector with Vetex and ECAL should be defined as the interface.

Cooling system

Gas supply

Electronic readout cable and power

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