

## General Remarks for the TPC tracker detector

Comments from mini-review

Comments from Prof. Tianchi Zhao

0, Physics requirements and TPC detector should be clear including some principle concepts.

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

Momentum resolution

$dE/dx$

r-phi resolution

Two tracks resolution

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.

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.

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

Electronics readout channels estimated

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?

How to design the TPC detector module and prototype?

4. Interface of TPC detector with Vetex and ECAL should be included.

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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