

This is truly the last-minute chance for DBD contributions. The TPC chapter is currently under heavy review, and these are the plots that are considered for inclusion.

- Please take a look at each figure and its caption.
- If it's your plot, acclaim if you are not OK with the inclusion, the caption or anything else.
- If you have a better plot, or would like to change something; do it today and send the plot/description. Tomorrow is too late!
- If nothing is said or heard about a plot, this is taken as a confirmation to use it.

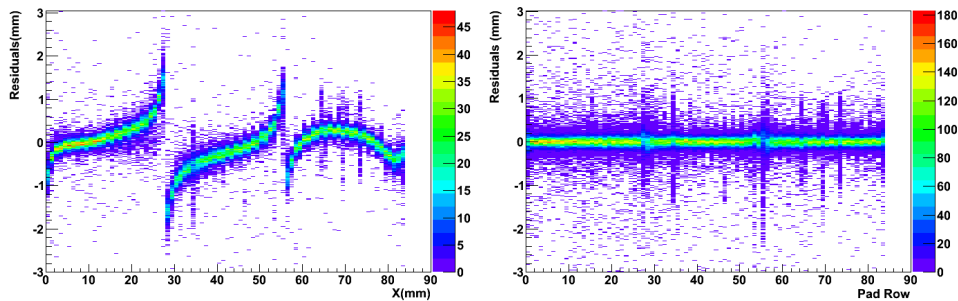


Figure 1: (a) Distribution of residuals versus the position of points along the track. A structure of three double GEM modules (each about 29 cm high) can be clearly identified. The deviations of the residual distribution from a flat line, most pronounced at the module edges, are an effect of electrostatic distortions in combination with the magnetic field. (b) The same residuals after the application of a correction algorithm. The modules now appear as a unit with barely visible borders.

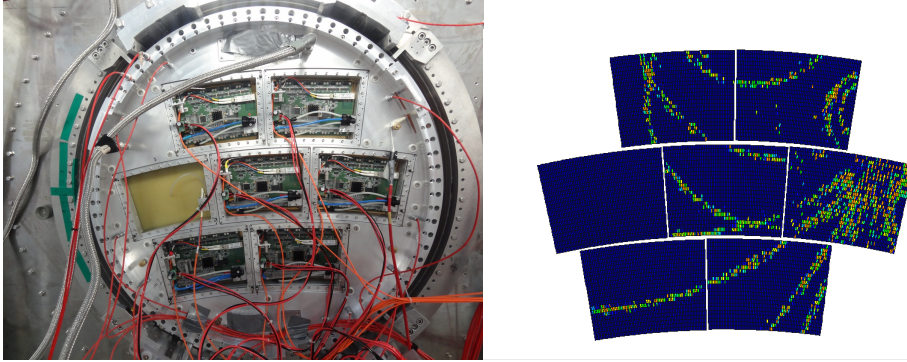


Figure 2: (a) A picture of six micromegas mounted on the Large Prototype endplate. They are equipped with highly integrated electronics and completely connected for operation. (b) An example event display of a cosmic muon shower, as recorded by the Large Prototype equipped with these six modules.

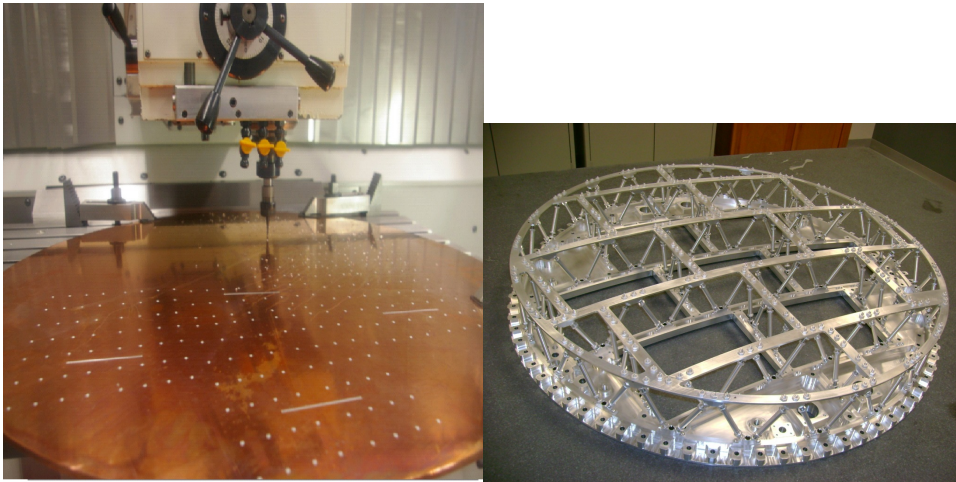


Figure 3: (a) A photo of the copper removal procedure on the Large Prototype cathode, revealing an aluminum photodot pattern. When illuminated by UV light, these dots release electrons, which can be recorded by the readout modules and in turn used to extract field distortions along the drift path. (b) An updated anode version for the Large Prototype, which fulfills the requirements of material budget and stability when extrapolated to ILD TPC dimensions.

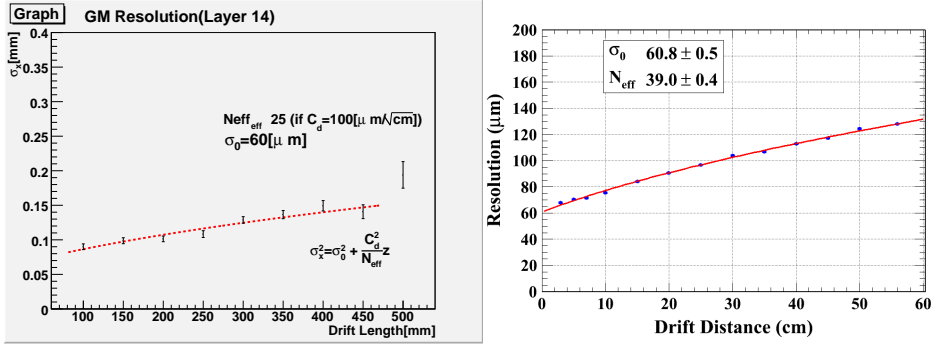


Figure 4: The figures show the transverse resolution versus the drift length of data recorded in the Large Prototype filled with T2K gas at a magnetic field of 1 T. In both cases the fit to the expected functional dependency is also drawn as red line. (a) Shows data recorded with a double GEM module, (b) shows data recorded with a micromegas module. Both types of modules are in excellent agreement with each other, as well as with the theoretical expectation.

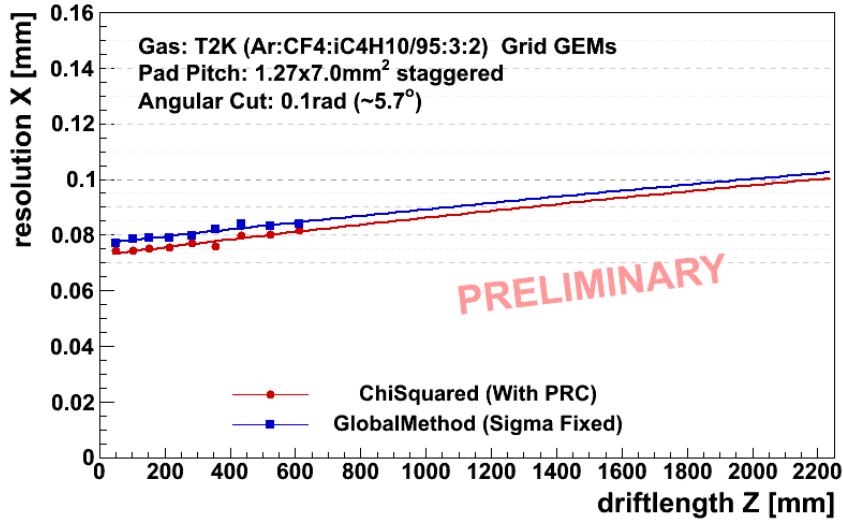


Figure 5: The resolution of data taken with a triple GEM stack at a magnetic field of 4 T; recorded in a smaller TPC prototype filled with T2K gas. Two different fit methods were implemented to check the consistency of the data and the extrapolation. The chamber was limited to 66 cm drift length, but the extrapolation indicates the feasibility to reach the envisioned single point resolution in the ILD TPC.

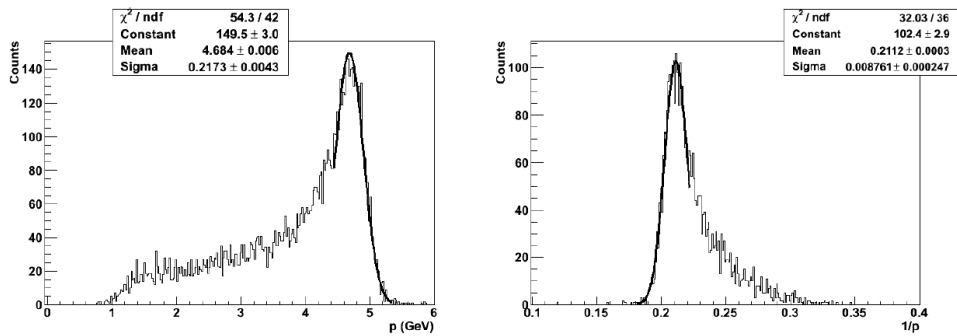


Figure 6: (a) The momentum distribution of a three (double GEM) module setup mounted on the Large Prototype, recorded at a drift length of 15 cm at the DESY-II test beam facility. (b) The obtained momentum resolution with this setup. The extrapolation to the full ILD TPC shows that this is within 30% of the envisioned goal.