*Weekly AT-TPC meeting*

Thursday, April 8, 2010

9:30-10:30 am EST at Nuclear Conference Room

Attendees: D. Bazin, Z. Chajecki, M. Ford, A. Fritsch, M. Holten, W. Mittig, W. Lynch, H. Pommier, J. Sharath, D. Suzuki, N. Usher, J. Yurkon

* CoBo status (Nathan)

Nathan reported his visit at CEA-Saclay, France for the discussion on the board CoBo.

Nathan presented the concept of the CoBo, and the reduced Cobo that he has made as a prototype of the CoBo. The slide is available at [the eDoc server](https://project-actar-get.cea.fr/Groups/100_todolist/400_wp4_data_acquisi/slides_-_presentatio/workgroup_contents).

Below is the related information:

* Nathan is redoing the memory controller of the reduced CoBo based on the discussion at Saclay.
* Nathan will work on μTCA with Gilles in summer 2010.
* The design of the ASIC “AGET” has been almost finished, and should be submitted soon.
* Video conference on the status update of AGET is scheduled on Thursday, April 15, 2010.
* Individual bias circuit / Insertion test kit (Mike)

Mike designed an individual bias circuit and an insertion test kit for Micromegas.

* The individual bias circuit

This circuit provides us a capability of putting different voltages on the individual anode strips. This feature is important to realize different gains for different strips. On the circuit, three different voltages, a ground and two finite voltages, are selectable for individual channels by using a jumper. Each channel integrates a decoupling capacitance with the T2K electronics and a load resistance for the HV voltage. The circuit is designed for the use with the current test chamber at the N1 vault.

* Insertion test kit

This tool aims to test, from a mechanical point of view, the insertion of Micromegas to the endplate for the AT-TPC. In the AT-TPC, a Micromegas has a large active area of about 20 x 20 cm2 with about 1,000 anode segments. The large number of channels requires high-density connectors in a limitted surface, inducing a large insertion force, while the front surface is made of a fragile mesh not to be touched. Our plan is to use self-sealing screws to pull down the Micromegas towards the endplate by accessing the backplane only.

The test kit consists of a metal plate and a PCB, which simulate the endplate and the Micromegas of the AT-TPC, respectively. On the PCB, four rows of a 60-pin connector and two 100-pin connectors are integrated on a 20 x 20 cm2 surface. Threaded stand-offs for the screws will be put. The metal plate has four narrow PCB with mating connectors, which corresponds to the feed through. Through holes for the self sealing screws will also be made.