

Contribution to Yasuhiro's Discussion

Email 20150413 that Takeshi forwarded to Jochen:

Dear colleagues,

design of facilities at the main campus and the satellite campus is discussed in ILC Infrastructure and Planning Working Group, chaired by Sakue Yamada. Assembly scenario of each sub-detector has to be clarified to make the design of facilities, because we have to know how much space and equipment on site we need for final assembly and test of each sub-detector.

I will make a presentation in the Vertex/Si tracker session of ALCW2015 in the morning on Tuesday (9:00-10:30) to show the status of the site design and a possible scenario for ILD silicon tracker assembly to trigger the discussion.

We would like to invite a few TPC and calorimeter people to discuss this issue together. If someone in your group can present your assembly scenario for your detector, we could make whole 1.5h session as a joint session. Could you think about this possibility?

Best regards,

Yasuhiro Sugimoto

The way it happened with the Aleph TPC

- We had a big building in CERN for assembly and testing (Bldg 129 with $\sim 200\text{m}^2$ space)
- The sectors (modules) were tested and calibrated at an outside lab (MPI), shipped to CERN bldg 129 where they were installed and tested again. The electronics was being installed and tested there also.
- This whole process in Bldg 129 took a couple of years (I forget exactly how long).
- The assembled TPC was then transported (separately from the electronics) to Pit4 at LEP where it was installed, cabled, etc.

- The distance from CERN to Pit4 was about 20km.
- At Pit4, there was $\sim 100\text{m}^2$ of space, where the whole detector was being put together.
- One thing we should remember is that before the TPC is put mechanically into ILD, we want to measure the B-field. It would be best to do this after the Ecal has been installed, but when this happens depends on the overall planning for ILD.

- So the suggestion is:
 - Initial assembly and testing of the TPC at the main lab where there is plenty of space and time (need a few years for this).
 - Final B-field measurement and TPC assembly/testing at the IR (hopefully can be done in a few months).
- Yasuhiro also asked about the equipment. I don't know the answer to this, but it will be a lot.