



vertical one, to allow splitting, and also to separate functionalities of heat exchanger and current leads.

SiD presentation.

In particular, mentioned that SiD is comparable to SLD. Doors are not split. Sliding support for final lenses – worked well in SLD and provided good stability. A platform may be useful in cases of leg-less detector or not rigid detector. Need more study.

In response to question about platform and alignment, mentioned that solenoid cryostat need to support tracker and vertex, and this cryostat need to be kinematically supported, so that small deformation of iron would not cause misalignment of trackers. Think that distortions of iron from magnetic field will be enormous in comparison from distortions due to moving detector.

Question asked about rigidity of the frame that connects legs, and absence of magnetic field, during move, which increases rigidity – in SLD relied on rigidity of return yoke, need more study for SiD; also, doors are held in position by ~20cm pins.

Question: how to deal with cable opening & self shielding – chicanes; due to low rate, amount of cables should be modest in comparison with LHC detectors.

Remark: when SLD was assembled, it was rotated 90 deg with respect to beamline and roller system allowed this rotation as well as translation. Also, when Argonne calorimeter was installed in off beamline position, it was made cold, and maintained cold during move into beamline position, using flexible liquid Argonne supply lines, similar to what planned for helium in push pull. Also, the endcap calorimeters were kept cold when doors moved, as well as final triplet was also kept cold with full helium when doors moved.

4<sup>th</sup> concept presentation.

In particular, mentioned that iron is omitted; dual solenoids and modular concept are used. Detector is “always open”. It was stressed the need to avoid transmitting vibration from technical devices to focusing elements. Total stored energy is 2.77GJ, largest among the concepts. Magnetic structure includes toroid to improve momentum resolution. The detector is lightweight and does not require platform.

Question and discussion about shielding, its weight and that its cost is assigned to non-self-shielding detector. What are forces between solenoids if they are misaligned – to be studied.

Concept of the platform presentations.

In particular, mentioned that part of economy from single IR need to be spend to make reliable push-pull design. Platform can be used to move large composite objects, and also provide clear interface. Convinced that reinforced concrete platform can be done even for GLD size and weight. Have example of a 2500-ton load on the CMS cover with 20 between supports and 3 mm sag. The 2.25x21x12m platform was considered and modeled in ANSYS, showing less than 0.5mm deformation.

Questions: how detector can be assembled – on the platform in garage position. Question asked about the need of cable trenches and amount of cables and services in comparison with LHC – to be continued and followed.

Update on calculation of platform rigidity presentation.

To be finished.