

Minutes of the phone meeting of WG-D conveners (Accelerator and particle physics requirements) in preparation to IRENG07 (ILC Interaction Region Engineering Design Workshop), July 11, 2007.

Present:

WG-D conveners: Deepa Angal-Kalinin (STFC), Nikolai Mokhov (FNAL), Mike Sullivan (SLAC), Hitoshi Yamamoto (Tohoku Univ.);
Andrei Seryi; Clay Corvin

List of questions to be studied (posted) was discussed. Several items were suggested to be added to this list: 1) database for optics & geometry of BDS and MDI components; 2) muon spoilers or doughnuts inasmuch as they influence detector design and/or operation conditions at IR hall; 3) benchmarking (of detector tolerances, e.g.).

We then discussed the need, for a next meeting, to create list of interface parameters (or preferences) that we would like to define, or would like to be defined in interactions with other groups. For example, magnetic field tolerances, field quality, solid angles of detectors, field outside of detectors (50Gs is used in BABAR), stray fields from FD, beam pipe (size, water cooling requirements, whether vibration is an issue), alignment – range of correction, vibration tolerance range (e.g. 100nm at FD?), how does it translate to the floor, FD support inside the detector and what conditions to impose on the detector, stability, how well the FD returns to its position after a move, range of position adjustments, temperature stability in the tunnel, vacuum, RF & HOMs (e.g. would 100W in IR be a problem, how to absorb (stainless steel chambers or special absorbers), penetration of power to VTX, how to prevent power to get into the areas that we do not want, should the IR conical vacuum chamber has steep step or be smoothed), what is the preference on the door splitting or not, shielding, etc.

It was agreed to start producing such document, and have a first draft before the next meeting with WG-C, which will be on Tuesday July 17.