Written questions asked before the Orsay meeting

Common questions

(1) Give an outline of the plans for calibrating the energy response of your calorimeter, both from test beams or monitoring signals and *in situ* running. What level of precision is required? How is it obtained? How do you monitor and maintain it? If operation at the Z pole is part of your strategy, how much data is required?

(2) What is your plan for aligning your tracking systems. What is the precision required? Are there special operations needed for alignment after push-pull prior to data taking, and what time is required? How many degrees of freedom need to be considered after a move? How do the alignment needs affect the design of your detector? Is any real-time monitoring of the tracker alignment envisioned (e.g., related to power pulsing and long-term stability)?

(3) Repeat the recoil analysis with $Z \rightarrow \mu\mu$, ee, including the corrected ISR spectrum, and simulation of background hits.

ILD

(1) Elaborate on the meaning of the information in Fig. 4.3-4. What are the plans to mitigate the loss of track efficiency with background level? What is the sensitivity to beam halo, and at what level does it become problematic?

(2) Perform the A_{fb} analysis in the study of the t-tbar benchmark channel.

(3) Z($\rightarrow$ee) H inclusive: show the result of the analysis with and without the calorimeter.

SiD

(1) Elaborate on the robustness and redundancy of the tracking performance. In particular how would it deteriorate with a missing layer? Give the efficiency and the fake track fraction in a jet environment with full background simulation.

(2) Calibrate the template analysis for mass resolution in t-tbar and neutralino/chargino channels: study the robustness of the method by adding more comparison tables.

(3) Z($\rightarrow$ee) H inclusive: show the result of the analysis with and without the calorimeter.

Fourth

(1) We would like to see a more complete description of your baseline detector for:
   (a) the photodetectors for the BGO and fiber calorimeter
   (b) the mechanical support system for the calorimeters
   (c) the forward tracking systems

(2) What is the expected efficiency of the CluCou chamber in a 250 GeV jet and background, under the conservative assumption that for multiple occupancy in a cell the hits due to larger impact parameter are lost.

(3) Perform the chargino/neutralino benchmark analysis including (i) all background processes, (ii) beamstrahlung and bremsstrahlung, (iii) polarized beams (P_{e^-}=80%, P_{e^+}=30%), and (iv) all detector subsystems. The most important aspect in this is the analysis of background from charginos in the neutralino analysis and vice versa..

(4) Make a proper comparison of the DREAM data and the simulations (with/without BGO) to validate the simulation results.