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To: Ties Behnke (ILD), John Jaros (SID), John Hauptman (4TH)
From: Nobu Toge
Cc: IDAG, Sakue Yamada, Francois Richard, Jim Brau, Hitoshi Yamamoto
Subject: Questions for LoI Groups on MDI-related Issues from IDAG

I am transmitting you on behalf of the IDAG, in particular its MDI subgroup, a set of questions concerning the MDI-related descriptions of your LoIs. The question list below is common for all LoI groups and is primarily for helping IDAG's fact collection activities. I'd appreciate if you could provide us with your response electronically by June 12. Our hope is that it does not incur you any excessive effort to respond, besides what has been already done for preparing your LoI. Let us know, please, in case you find any ambiguities on the questions or have difficulties answering any of them very quickly.

Q1 - Numerics: Please, check the summary table (MDIsummary.xls) and correct any factual errors, or provide the missing numbers, in particular, for the items that follow –

Q2 - Footprint: Please, indicate the envelope (or footprint) that the detector has to occupy during the maintenance period in the offline position.

Q3 - Shield blocks: Please, provide the rough size of additional shield blocks to use and their schematics (if they exist), when the detector is in the online position. The objects to consider include: pacmen, shield walls, others.

Q4 - Platform and height: Please, indicate the assumed height of the platform beneath the detector, its size, its weight, and the assumed beamline height relative to the detector hall floor.

Q5 - Gross weight: Please, indicate the gross total sum of the weight of your detector system, including the barrel, endcaps, platforms (if any), and shield blocks.

Q6 - QD0: Please, indicate the Z locations of your QD0 (Zmin and Zmax) and their radius R to occupy.

Q7- Cryogenics: Please, indicate if your QD0 and the solenoids are to operate at 2K or 4K.

Q8 - Push-pull motion:

- a) Please, indicate the preferred method of push-pull motion mechanics that is currently under consideration.
- b) Please, identify the hardware components (beamline elements, shield blocks, and utilities) that need to be disconnected/disassembled and reconnected/reassembled during your detector push/pull. Please, estimate how long this relocation / reassembly work will take.
- c) Assuming that the accelerator (including QF1) is in a good alignment condition, how long would it take to complete your detector "push", and complete the alignment of the detector components. Explain how you will do this realignment; i.e. what kind of measurement and mover systems.

- d) How long would it take to complete your detector “pull” and to make the interaction region and the BDS ready for the other detector?
- e) During the upcoming Technical Design Phase, what type of resources do you plan to allocate for the conceptual and engineering work on MDI-related issues, and how you intend to operate them? Also, do you have any requests for assistance to the RD management or to the MDI group, in terms of resource sharing or in terms of interactions on technical matters?

END