24.02.2006 Carsten Muhl ZEUS/F1

Dear colleagues.

I want to review our discussion and show you the principle placement of the PCMAG magnet inside the measurement chamber of the test beam 24 (the outer chamber). The solution depends on the statement of the Japanese partners, because the present scenario foresees the magnet running without a connection to the Dewar. The magnet has to be filled with Helium once a week and this needs an interruption for ½ day (Access to the test beam chamber with a Dewar).

There are several changes to be made for the test beam chamber:

- 1. A rearrangement of the entrance, which allows access with Dewar.
- 2. A replacement of the wall to west with thinner concrete blocks to allow a larger movement of the PCMAG magnet in the direction to this wall.
- 3. A slight movement of the wall to north in direction inside, to allows a more convenient passing outside.
- 4. A hole is needed to the tunnel underneath to get access to the "Kessler line" (Helium return line).

There are certain actions to be done:

- 1. Check, if the scenario is ok for the Japanese partners (Katsumsa Ikematsu, Tobias Haas)
- 2. Decommission the beam shutter (for safety reasons) (Uwe Laatzen)
- 3. Check, where the "Kessler line" really is (Norbert Meyners, Wolfgang von Schroeder).
- 4. Clean up the test beam area and stuff on the walls (Norbert Meyners)
- 5. Disconnect the interlock devices from the walls and remove the current door (Uwe Laatzen)
- 6. Rearrange the concrete walls to the needs (Norbert Meyners)
- 7. Place a concrete block 800 x 1600 x 3200 as secondary support for the magnet (Norbert Meyners)
- 8. Provide an adjustable secondary support, to adjust the center of the magnets with the beam line (MEA2 therefore is needed, when the magnet arrives!) (Carsten Muhl)
- 9. Set up the new interlock devices including the new door (Uwe Laatzen)
- 10. Drill a hole for a connection to the "Kessler line" (Norbert Meyners)
- 11. Because the old concrete blocks are magnetic, investigations should be made, if they disturb the magnet field quality (Ingrid-Maria Gregor)

The equipment unit (prepared by KEK) for the helium shall be placed in the hut behind the test beam chamber. The planning for the Helium supply (transport Dewar and supply line) will be done by MKS (Hermann Herzog, Holger Lierl). A spring supported siphon is needed. The valve unit (prepared by KEK) should be placed on top of the magnet.

Operations with a crane for filling the PCMAG magnet with helium should be avoided. A high stray field should be taken into account for all devices, which will be placed near the magnet!

Greetings.

Carsten

