

Manpower Issues for 2006

Mu Barrel Technical Board
CMS week December 6th 2005

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Activities Up to Magnet Test

| | Activity Name | Start Date | Finish Date | Jan 06 | | | | Feb 06 | | | | Mar 06 | | | | Apr 06 | | | |
|----|---|--------------------|--------------------|--------|----|----|----|--------|----|----|----|--------|----|----|----|--------|---|----|----|
| | | | | 8 | 15 | 22 | 29 | 5 | 12 | 19 | 26 | 5 | 12 | 19 | 26 | 2 | 9 | 16 | 23 |
| 1 | ISR: Alignment Calibration (17DT) | 1/10/06 | 1/20/06 | ◆ | | | | | | | | | | | | | | | |
| 2 | ISR: Chamber Dressing | 1/9/06 | 4/28/06 | ◆ | | | | | | | | | | | | ◆ | | | |
| 3 | ISR: DT cosmic, HV, ready for MC | 12/5/05 | 4/28/06 | ▬ | | | | | | | | | | | | ▾ | | | |
| 4 | ISR: Mount MC on Chambers | 1/9/06 | 2/3/06 | ▨ | | | | | | | | | | | | | | | |
| 5 | ISR: Test MC on Chambers | 1/9/06 | 2/10/06 | ■ | | | | | | | | | | | | | | | |
| 6 | ISR: Couple DT + RPCs | 1/23/06 | 3/3/06 | | | | | ◆ | | | | | | | | | | | |
| 7 | SX5: Test YB+2 Cabling (MC) | 1/9/06 2/27/06 | 1/27/06 3/24/06 | ▨ | | | | | | | | ▨ | | | | | | | |
| 8 | SX5: Prepare YB+1 for Cabling | 1/9/06 | 1/27/06 | ■ | | | | | | | | | | | | | | | |
| 9 | SX5: Test YB+1 Cabling (MC) | 1/23/06 | 3/24/06 | | | | | ▨ | | | | ▨ | | | | | | | |
| 10 | SX5: BMU Installation | 1/30/06 2/27/06 | 2/17/06 3/10/06 | | | | | ▨ | | | | ▨ | | | | | | | |
| 11 | SX5: Prepare YB0, YB- for commissioning | 2/13/06 | 3/24/06 | | | | | | | | | ■ | | | | | | | |
| 12 | SX5: Ancillary work YB0, YB-1,-2 | 1/9/06 | 3/24/06 | ▨ | | | | ▨ | | | | ▨ | | | | ▨ | | | |

■ Tecs: Sandro, Jose-Miguel, 2 Chinese

▬ Phys: Jesus, Marcos, Maria + Jose-Miguel... + 1 Phys.FTE

▨ Tecs: Vincenzo, Vittorio, Chinese Tecs

■ Phys: Franco, Marco N. + 2 Tecs (electr.)

▨ Massimo, Clemente + Sandro, + 2 => 4 Techs

▨ Gerd, Sandro, Vincenzo, Vittorio, + Mechanics

Vincenzo+Vittorio= 0.8 FTE

Franco ~0.5FTE

Marco N. ?

Aim for YB0 ready for commissioning before/after MT

Manpower Requirements

Up to Magnet Test

Manpower is particularly limited for the following tasks:

- 1) Chamber certification for MC: a Full Time Equivalent physicist and/or electronic technician is needed to reduce the load on the present team.
- 2) MC insertion and final tidying up for coupling with RPC: 0.5 to 1 FTE technician experienced in DT electric/mechanic connections.
- 3) Test of “on chamber MC” at ISR: 1 FTE physicist from commissioning teams or MC assembly
- 4) Chamber preparation for commissioning at SX5: 1FTE mechanic and 1 FTE technician experienced in DT electric/mechanic connections.
- 5) Cabling Test: 1 FTE physicist from commissioning teams or MC assembly and 1 technician experienced in DT electric/mechanic
- 6) Racks Connections: 1 FTE physicist and 1 FTE technician

Manpower Requirements

Use period before MT to expand pool of physicists and technicians working at ISR and SX5.

1 FTE = 2 or 3 people on a rotation basis

Identify availability of suitable personnel at home Institutions up to MT for SX5 activities and up to July for ISR related tasks.

Aim for a buffer of:

- 4 FTE technicians (mechanics) for installation
- 1 FTE (DT) + 2 FTE (RPC) mechanics for DT-RPC coupling during installation
- 2-3 FTE technicians (electronics) for cabling/MC work
- 2 FTE technicians (general purpose) for SX5 chamber preparation
- 2 FTE physicists for MC/cabling work at SX5
- 1 FTE physicist for ISR chamber certification

Manpower Requirements

Up to End of Magnet Test:

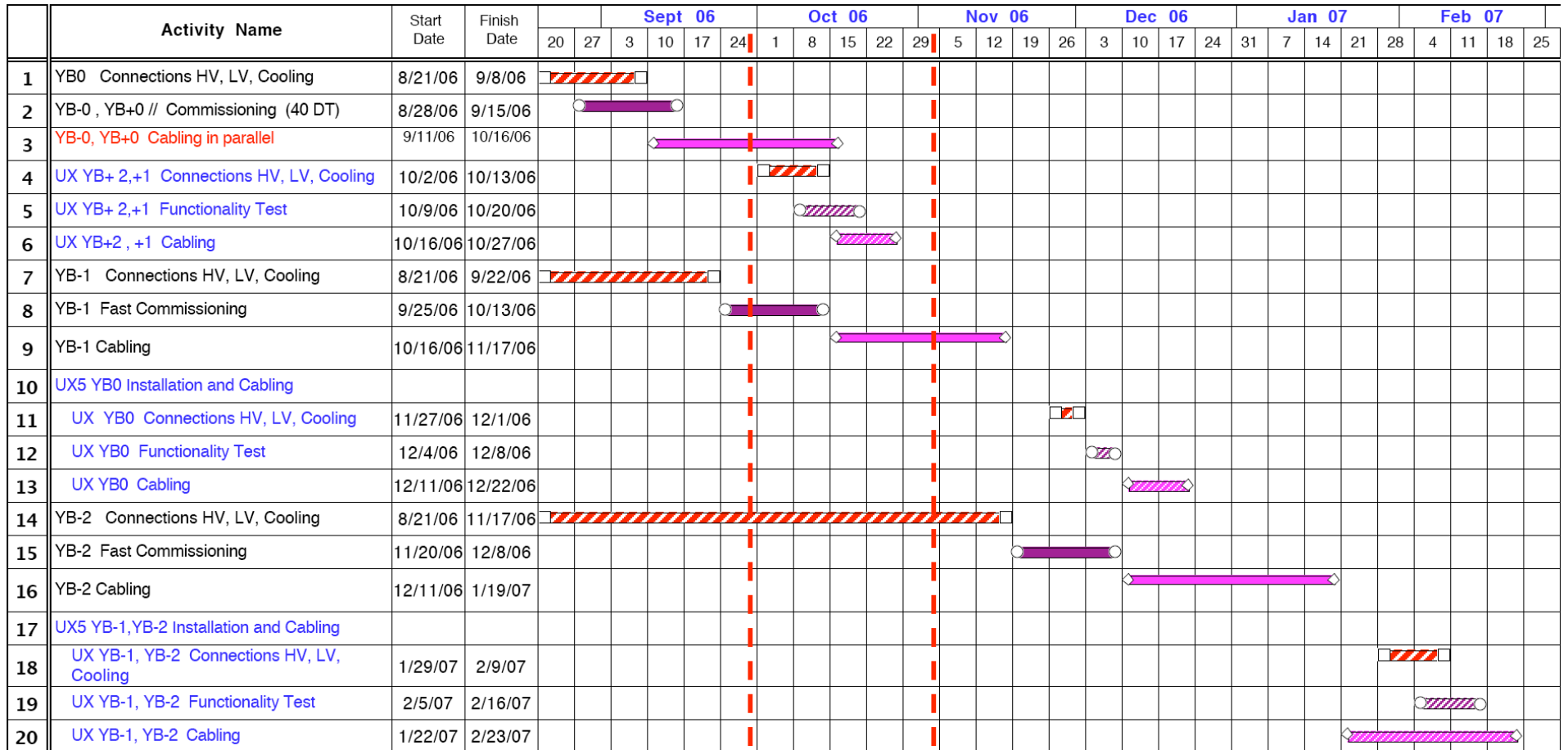
1-2 FTE physicists for chamber certification

1 FTE physicist for MC work

1 FTE technician (general purpose) for ISR work

In addition to the current level of support including the 2 technicians from IHEP. (Check availability of trained personnel for 2006 and also level of support in January February)

Tasks after MT



Activity peaks in October:
 YB0 cabling, YB-1 commissioning/cabling and YB+2, YB+1 UX cabling
 3 Independent teams (4 physicists and 2 techs) + ISR teams

Manpower Requirements

After Magnet Test:

- Installation team: 4 FTE mechanics + 2 FTE at ISR + Massimo / Clemente + 1 FTE physicist
 - Chamber Connections: Gerd, Vincenzo + 2 FTE general purpose T
 - Commissioning: 2 to 3 teams (3 - 4 FTE physicists)
 - Cabling Tests: 2 teams (2FTE physicists + 2 FTE electronic T)
 - Racks Connections: 2 teams (2FTE physicists + 2 FTE electronic T)
 - UX PP connections + hardware: 1 FTE physicists + 1 FTE electronic
 - USC Installation: 1 FTE physicists + 1 FTE electronic
- (6 mech + 8 elect) FTE techs + 11 FTE physicists in addition to increased level of ISR team

Summary

- 2006 is the most critical year for completion of the Barrel Muon system.
- Manpower will be a key element to achieve the planned schedule.
- Efficient use of available manpower depends on a realistic schedule of the access windows to the detector and on the availability of needed components (chambers, cables, supports....)
- The period before the MT is crucial to streamline the teams and operations for the huge amount of works to be done in the fall of 2006.
- Additional physicists and technicians are needed for the ISR work to relieve the load on the present team.