Plans and Manpower for Integration and Commissioning of BOS/F MDT Chambers

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Schedule

- Schedule
- Work to do
- Work Flow
- Constraints
- Space
- Requirements
- Conclusions

Schedule

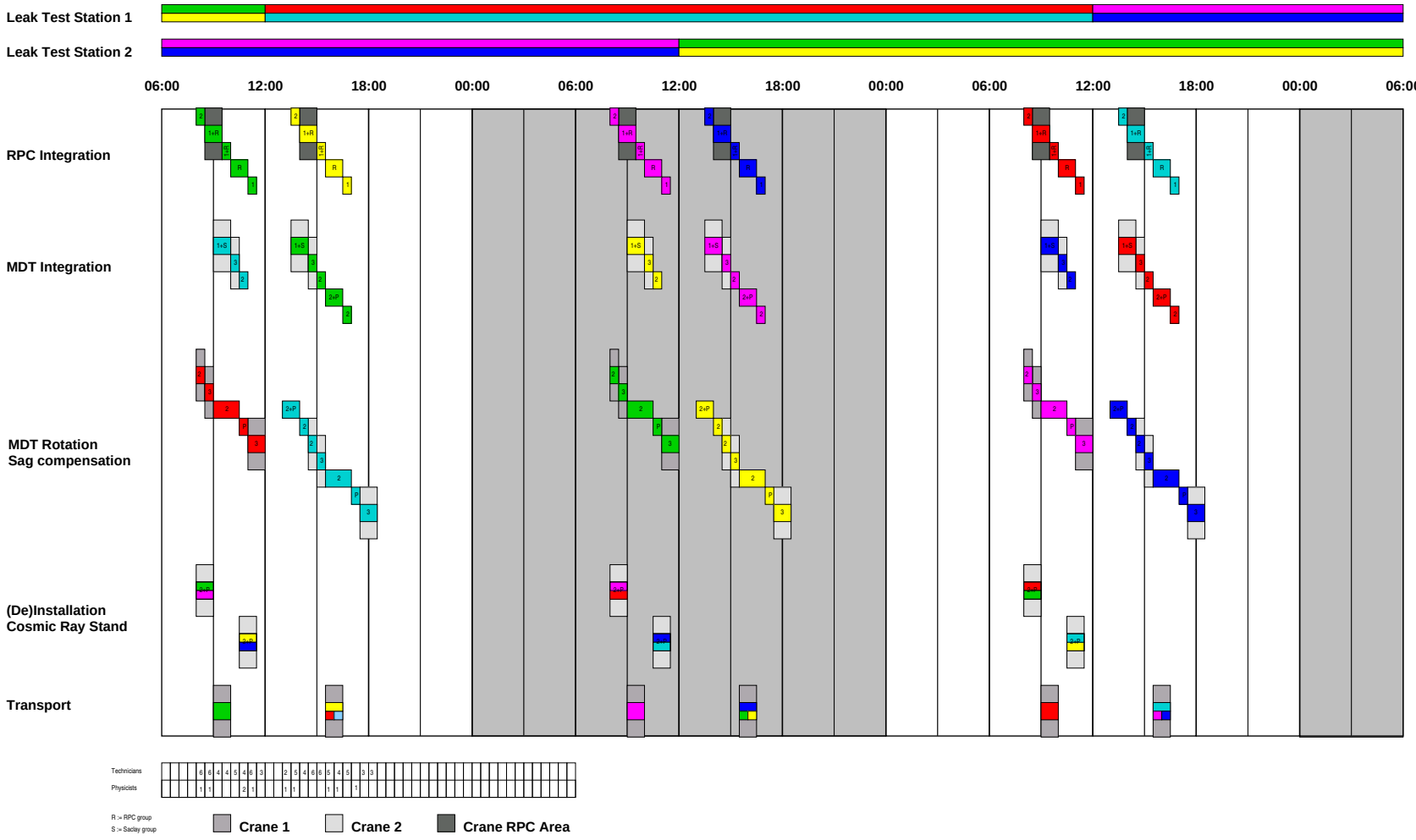
- 2nd half of July and August: Integration and Commissioning of 48 BOS MDTs of sector 2, 4, 6, and 8
- 1st half of September: Installation of sector 2, 4, 6, and 8 (BB5 used by Nikhef BOL)
- 2nd half of September: Integration and Commissioning of 12 BOF MDTs of sector 12 and 14
  Integration of 12 BOG MDTs of sector 12 and 14
- 1st half of October: Installation of sector 12 and 14 (BB5 used by Nikhef BOL)
- 2nd half of October: Integration and Commissioning of 24 BOS MDTs of sector 10 and 16
- 1st half of November: Installation of sector 10 and 16 (BB5 used by Nikhef BOL)

Need 2 chambers tested and integrated per day

Work to do

- Leak and noise test
  (physicists - parallel to integration)
- Integration MDT and RPC
  on common support (CS)
  (technicians)
- **On rotator**
  Adjustment of MDT on CS
  (technicians)
  and sag compensation
  (physicists)
- Cosmic Ray test
  (physicists - at night)

Work Flow



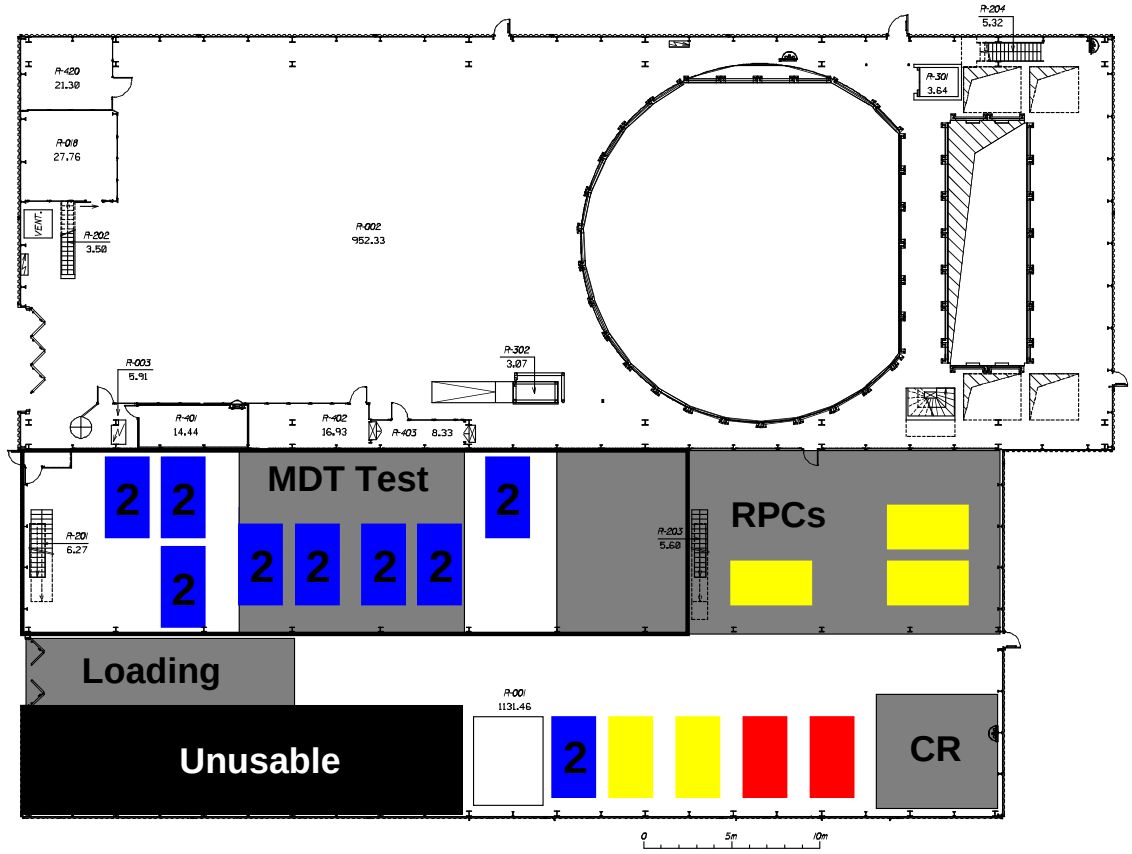
Manpower: 5-6 technicians, 2-3 physicists

Constraints

- Constraints for rotator
  - Reinforced flat floor
  - Volume: 5 m $\times$ 4 m $\times$ 6 m with crane access
- Constraints for storage
  - Maximum of 3 MDTs stacked in transport frame
  - Maximum of 2 integrated muon stations (no wheels, need crane to be moved)
- Constraints for transport
  - Maximum of 2 MDTs in transport frame
  - Maximum of 1 integrated muon station

Minimum of 3 transports per day needed

Space



MDT in transport frame

CS with RPC

Integrated Station

Need all of BB5 hall

Requirements

10 stations per week only possible if. . .

- Second bridge crane available
  (installation planned: mid of May)
- Second leak test stand available (end of June (?))
- 2 (working) RPCs per day

  Maximum assembly rate so far: 10 RPCs per week ✔
  Maximum pre-test rate so far: 6 RPCs per week ✘

  (Note: Early BOF installation: 75% failure rate without pre-test)
- 3 transports per day at defined times
  So far: about 2 hours uncertainty ✘
- Reliable read-out of 2 stations in Cosmic Ray Test stand
  So far: no reliable readout ✘

Conclusions

- 10 MDT integrated and tested per week possible
  (Maximum rate reached so far at BB5: 7, normal 3)
- Manpower
  - Minimum of 5-6 technicians
    - Working hours: 08:00-18:30 (3 people)
      08:00-17:00 (rest)
  - Minimum of 2-3 physicists

if and only if. . .

- No problems with our chambers
- Other involved groups deliver as planned

Additional Slides

Comparison of Scenarios

MDT per week	Technicians	Working hours	Work on Sat.	add. Drawback	TC Sched. kept
15	5	08:00-17:30 08:00-18:00 (2)	—	no adjust./sag	no
10	**6**	**08:00-17:00** **08:00-18:30 (3)**	**—**	**—**	**yes**
10	5	08:00-18:30 08:00-18:00 (3)	—	only 5 adjust./sag	no
10	4	08:00-17:00 08:00-17:30 (2)	—	no adjust./sag	no
8	4	08:00-19:00 08:00-20:00 (2)	x	—	no
6	4	08:00-18:30 08:00-19:00 (2)	x	—	no