

SPEAR3 Final Alignment Discussion

Mapping Options
Schedule Consequences
Result Quality

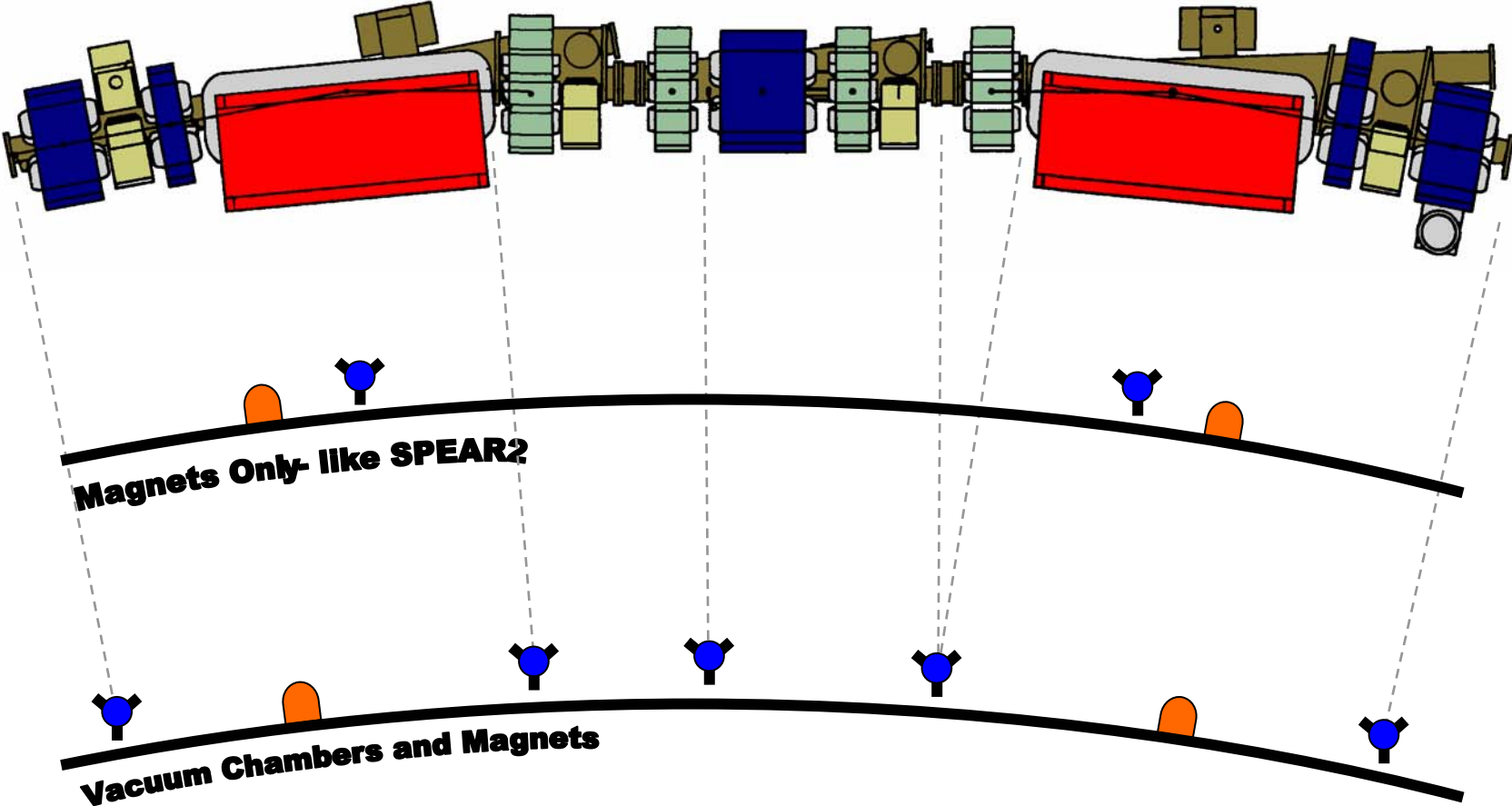
Mapping Options

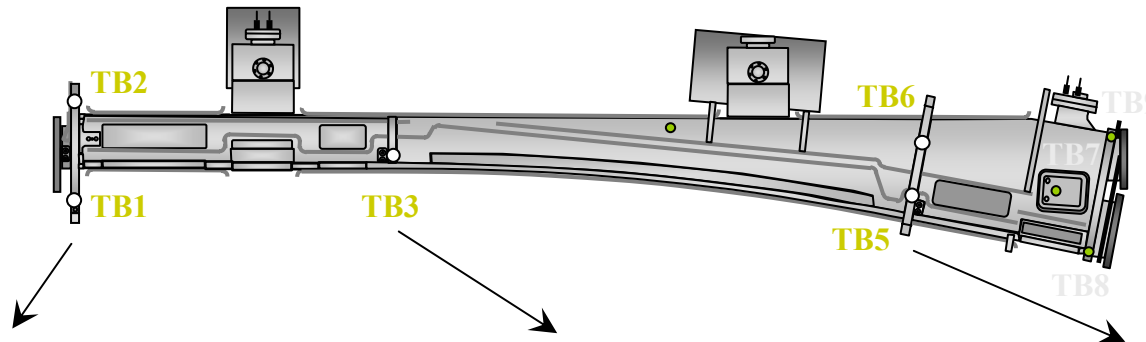
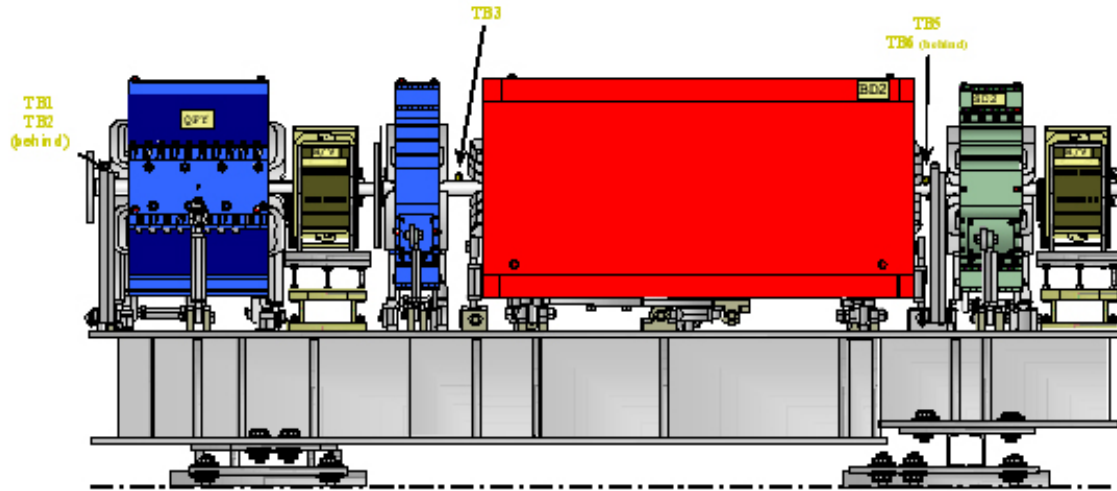
- Monuments + Magnets + Vacuum Chambers
 - 75 tracker set ups
- Monuments + Magnets
 - 40 tracker set ups
- Monuments: 38 floor, 50 wall, 32 aisle, 1 ceiling
 - 30 tracker set ups

Mapping Facts

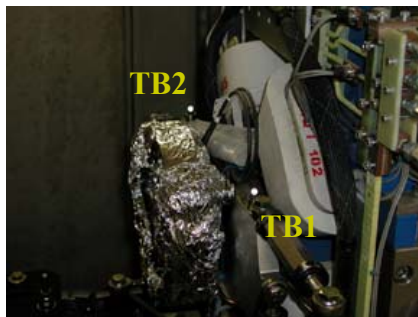
- Environment Limitations
 - Doors
 - LCW
 - Vacuum
- Surveying Characteristics: Triple coverage
 - Laser tracker
 - Precise leveling

SPEAR3 Final Mapping Instrument Position Study





Note: Tooling Balls 7, 8 and 9 are visible but no support



1X, 2Y



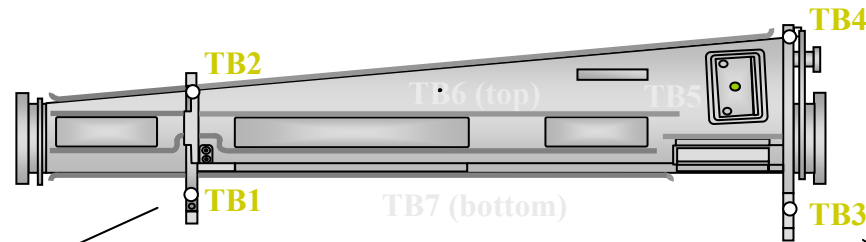
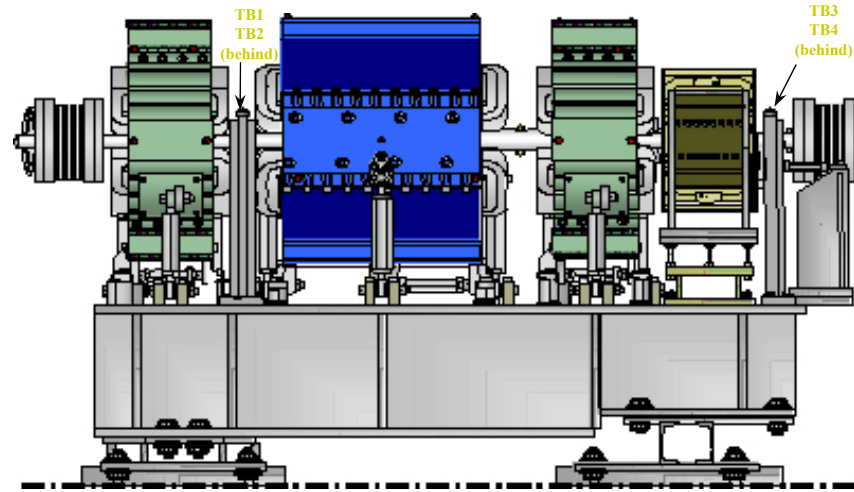
1Y



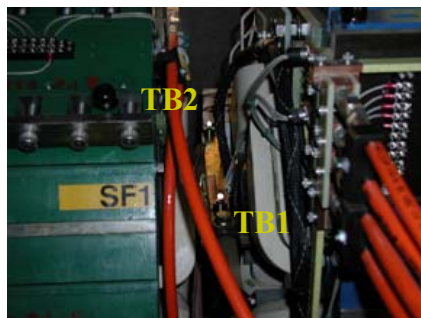
1X, 2Y

Raft QFC

QFC Chamber



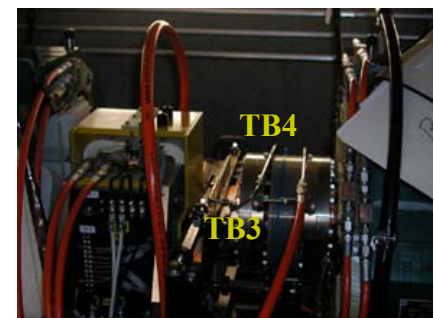
Note: Tooling Balls 5, 6 and 7 are visible but no support



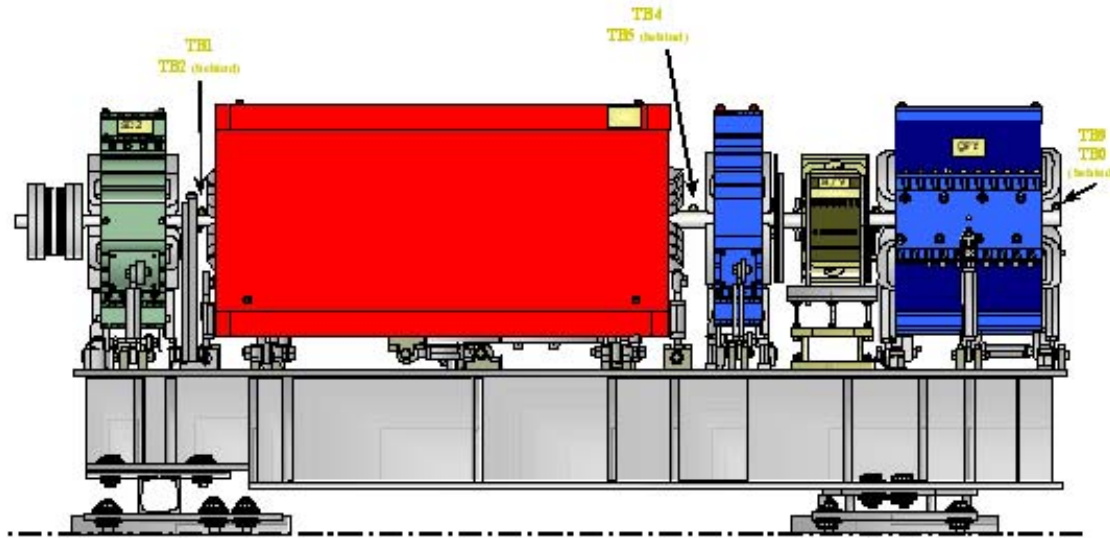
1X, 2Y



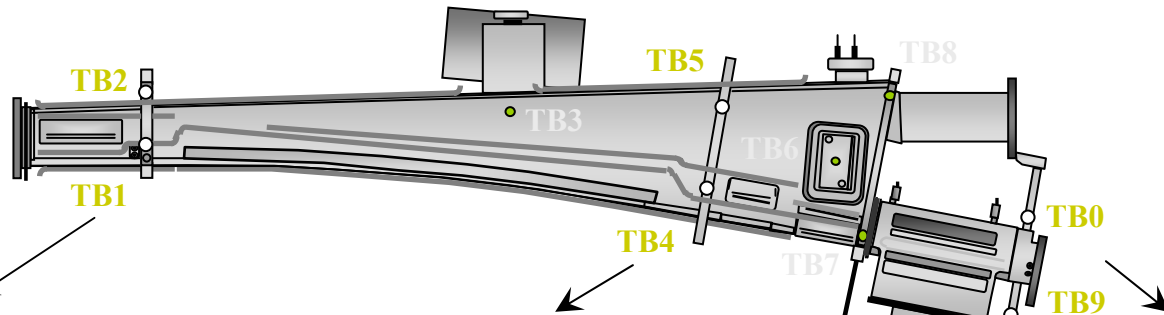
Alignment Engineering Group



1X, 2Y



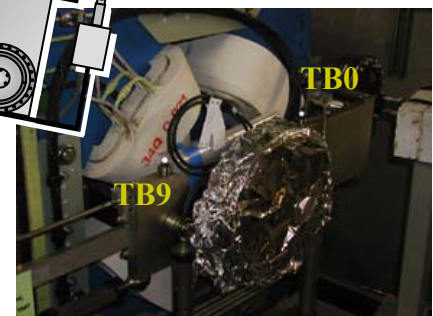
Note: Tooling Balls 6, 7 and 8 are visible but no support. TB6 is also blocked by corrector



1X, 2Y



2Y

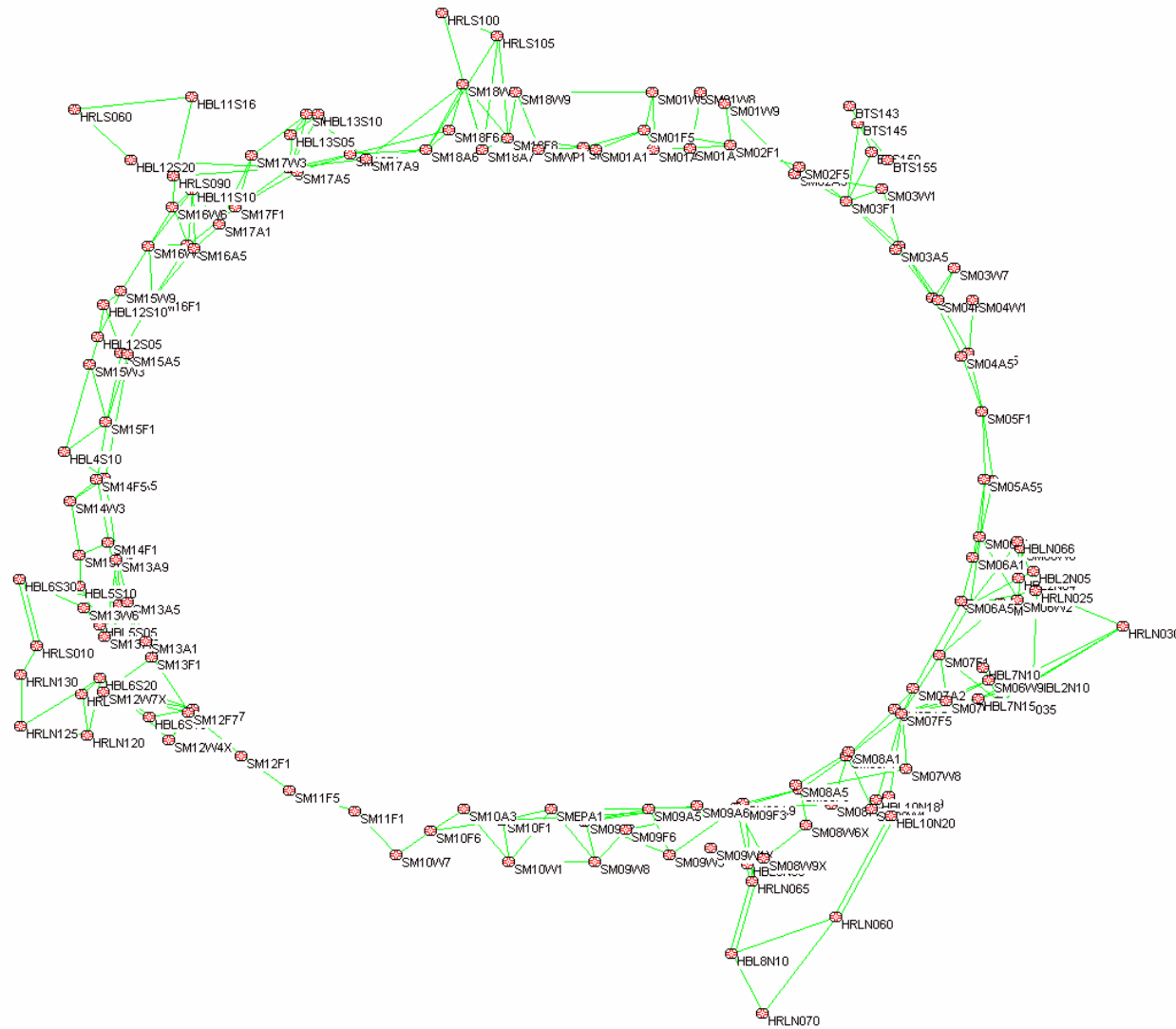


1X, 2Y

Setting Facts

- Monument network
 - 4 or 5 for resection
 - 2 or 3 for HI
- Instruments choice
 - Total stations
 - Sight levels
 - Extension

Leveling Status



Conclusion

- Pre-Alignment:
 - Pins in assembly building
 - Component setting
 - Pins in SPEAR ring
 - Final Alignment:
 - Mapping
- Moving
└─ Mapping