

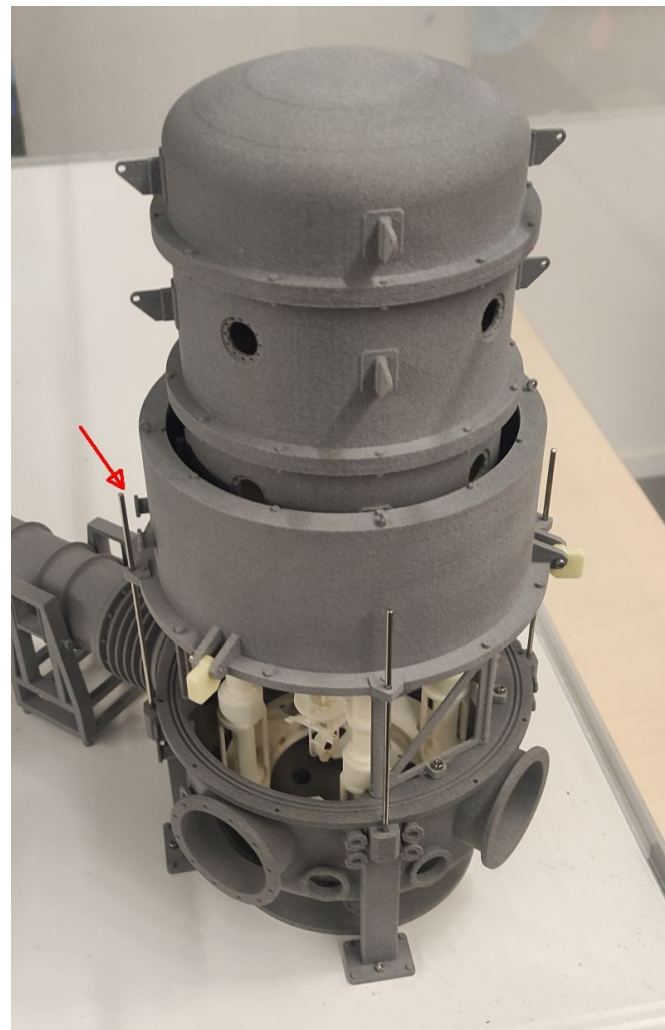


BST Mantlelifting installation



Why it is needed

- The mantle of the towers need to be lifted to give access to the internal mechanics .
- Mainly for big items.
- During the risk analysis , lifting with the crane and keep it up with the crane in place was seen as to risk full.
- So the mantle lifting system has to be in place when (bigger) items have to be placed on the platform. (and later the mirrors)
- And it is already on the model





It is not small





preparations

- Making a more detailed planning
 - ◆ Need specific skills
 - Crane operated
 - ◆ UA people from the mechanics workshop (who has worked on the proto type so have make a planning with fixed dates.
 - ◆ Review installation document
- Check actual locations (mainly control cabinet)
- Logistics
 - ◆ collect all items for one lifting system
 - Items sorted on type , not per system
 - Big items (support) are located in the external storage
 - Bring all to UM or select these => need transport firm.
 - ◆ Need a place to store the items.
- Installation mechanics :
 - ◆ Need crane , platforms mobile /fixed
 - ◆ No other people in the clean room (at least , minimize)
 - ◆ ~ 5 people in the clean room
 - ◆ Is it compatible with the tower in vacuum ?
 - ◆ Can experiments run during the installation



installation

Mechanic part

- ♦ Need crane , platforms mobile /fixed
- ♦ No other people in the clean room (at least , minimize)
- ♦ ~ 5 people in the clean room
- ♦ Is it compatible with the tower in vacuum ?
- ♦ Can experiments run during the installation ?
- ♦ One week + ?

Electrical connections :

- ♦ Attache cable trays , maybe some have to be modified
Cable tray between mantle lifting mechanics and control cabinet not yet defined
- ♦ Connect control cables to the control cabinet (extend some)
- ♦ Connect power cable (fixed connection ?)
- ♦ Test motor in combination with control cabinet
- ♦ Dry run (without load)



Commissioning

- Full commissioning : Tower on environment pressure
 - ♦ Attach the mantle to system
 - ♦ Align the system. Critical , if not done correctly the system can be damaged
 - ♦ Lift it
 - ♦ Checking end stop
 - ♦ Checking securing mechanism
- Sign off for usage by safety officer. (implies all documentation is available)

What is the best time slot to do the installation?