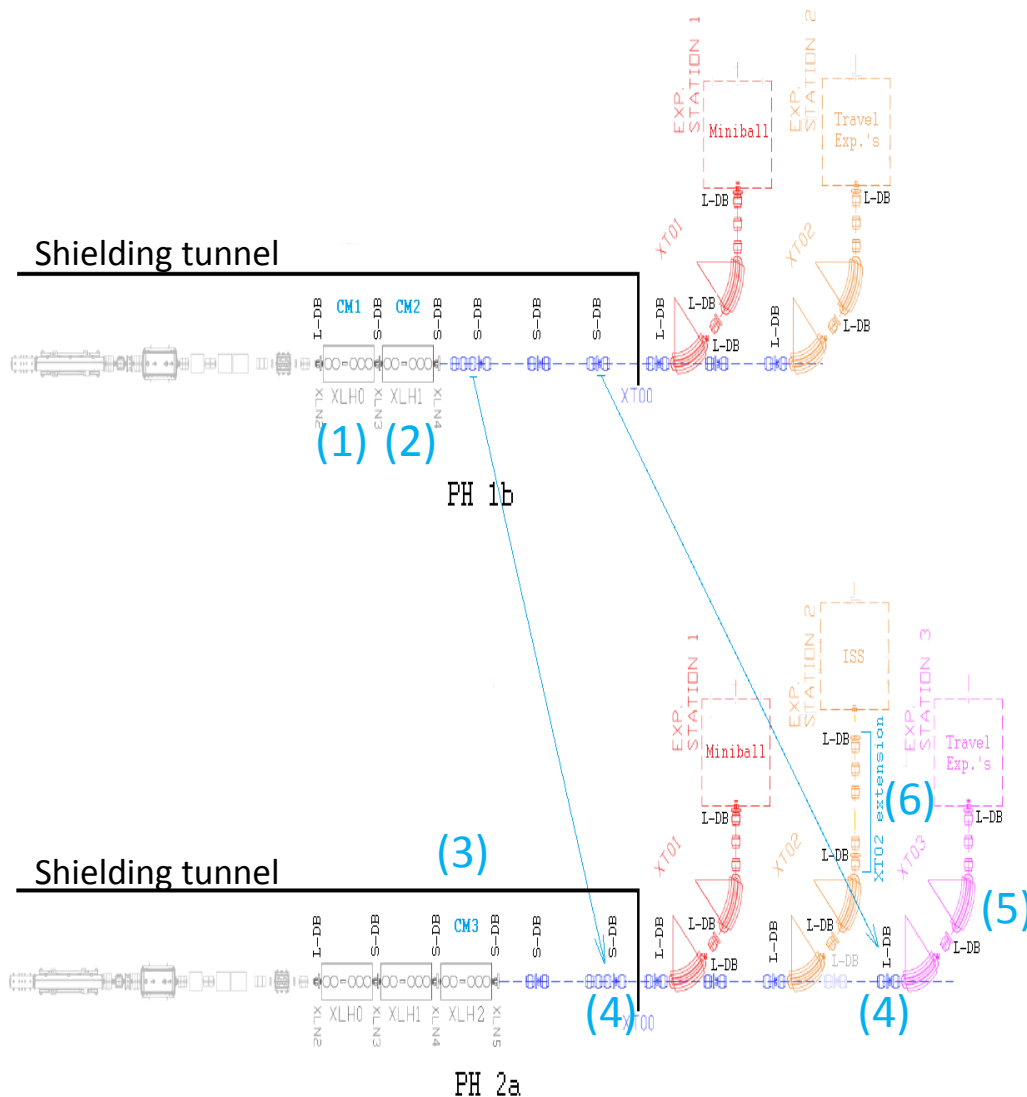




Status HIE ISOLDE installation and shutdown work

78th ISCC meeting 7 Feb 2017, CERN

Erwin Siesling, Fabio Formenti, Yacine Kadi, Olivier Pirotte



Work on the Cryomodules:

- 1) CM1
 - Field emission on cav. #1 and #5
 - Short to GND of solenoid bus bar
- 2) CM2
 - Vacuum leak
- 3) CM3
 - Installation

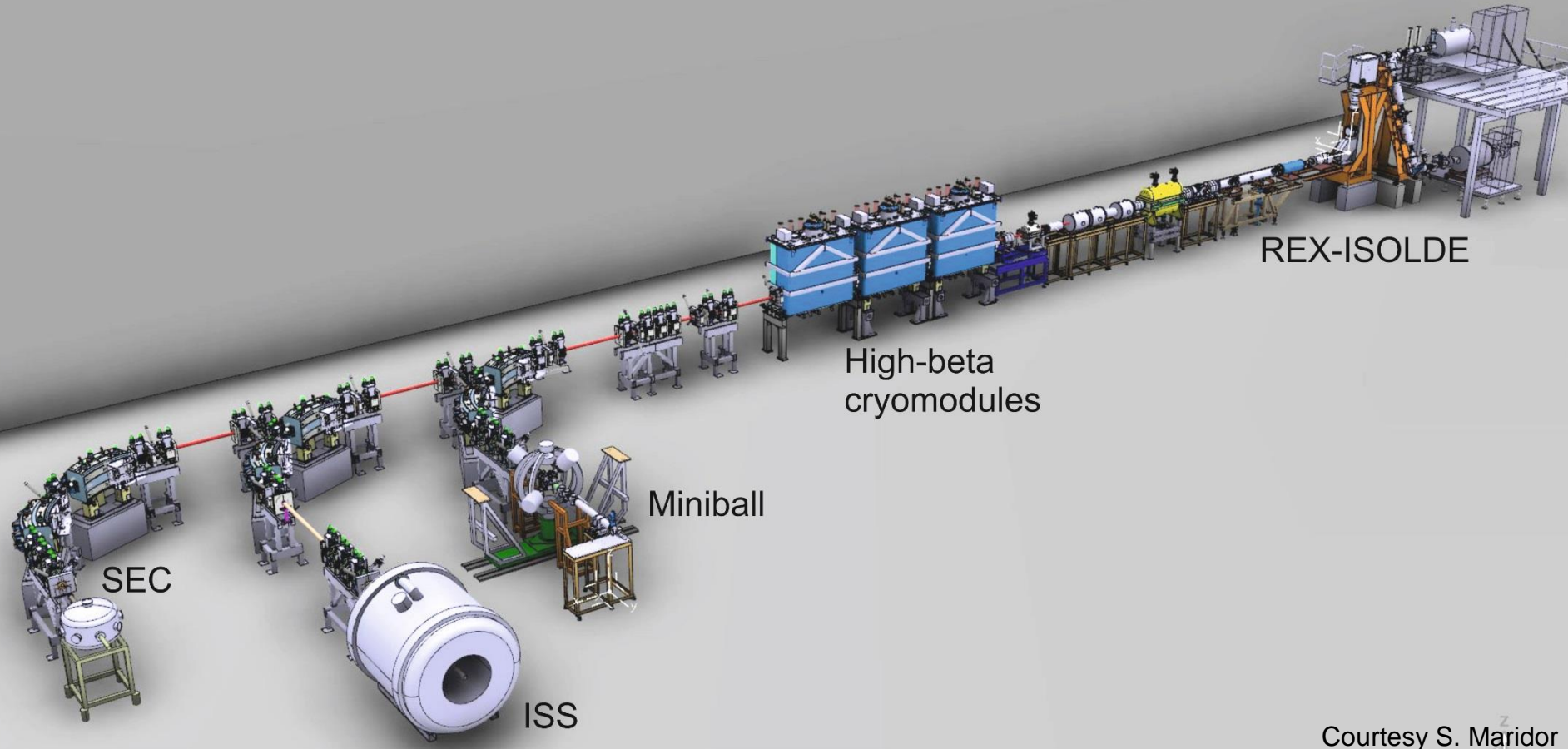
Work on the transfer lines:

- 4) Modify XT00 for installation CM3/CM4
 - Move Quadruplet to end tunnel
 - Move Doublet to XT02
- 5) Install XT03
- 6) Extend XT02 for future installation ISS

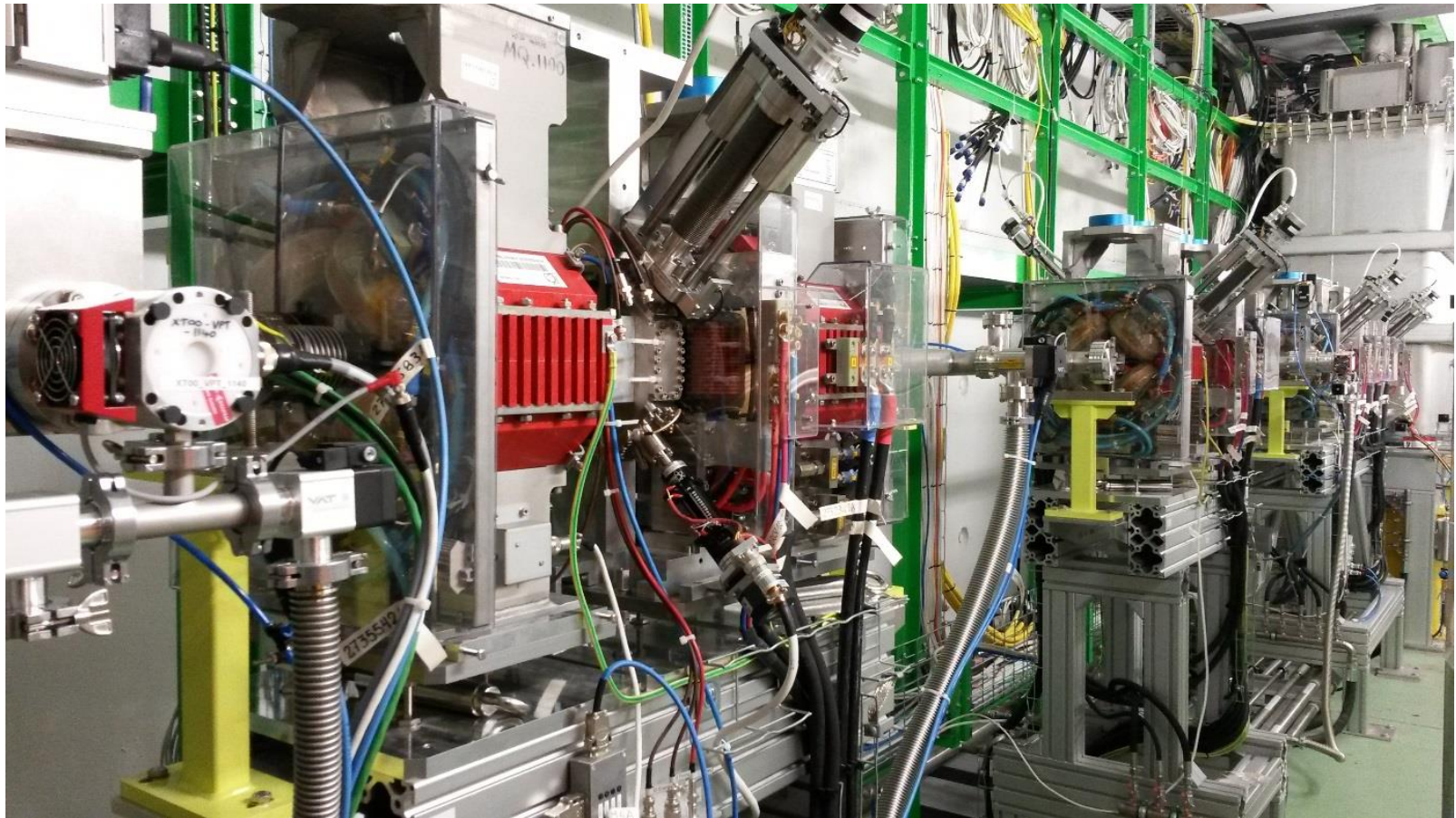
Work on services:

- 7) Cryogenic maintenance
 - Compressor/Cold box
 - Distribution lines

NOTES: All equipment available
ISS to come beginning of March



Courtesy S. Maridor

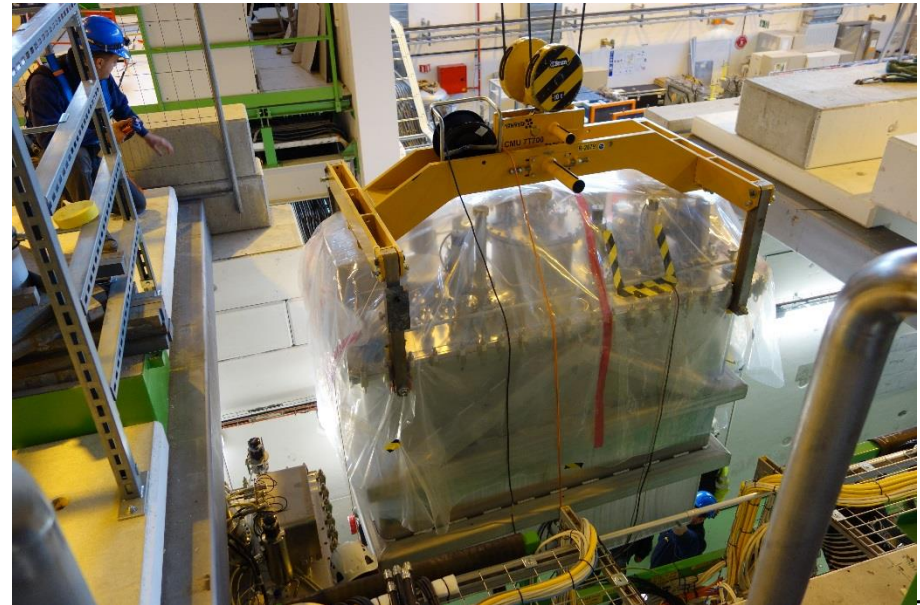




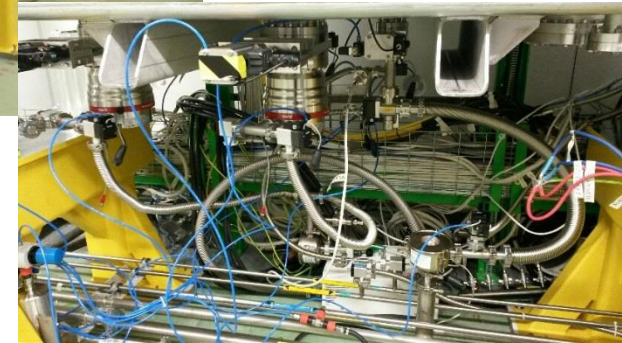
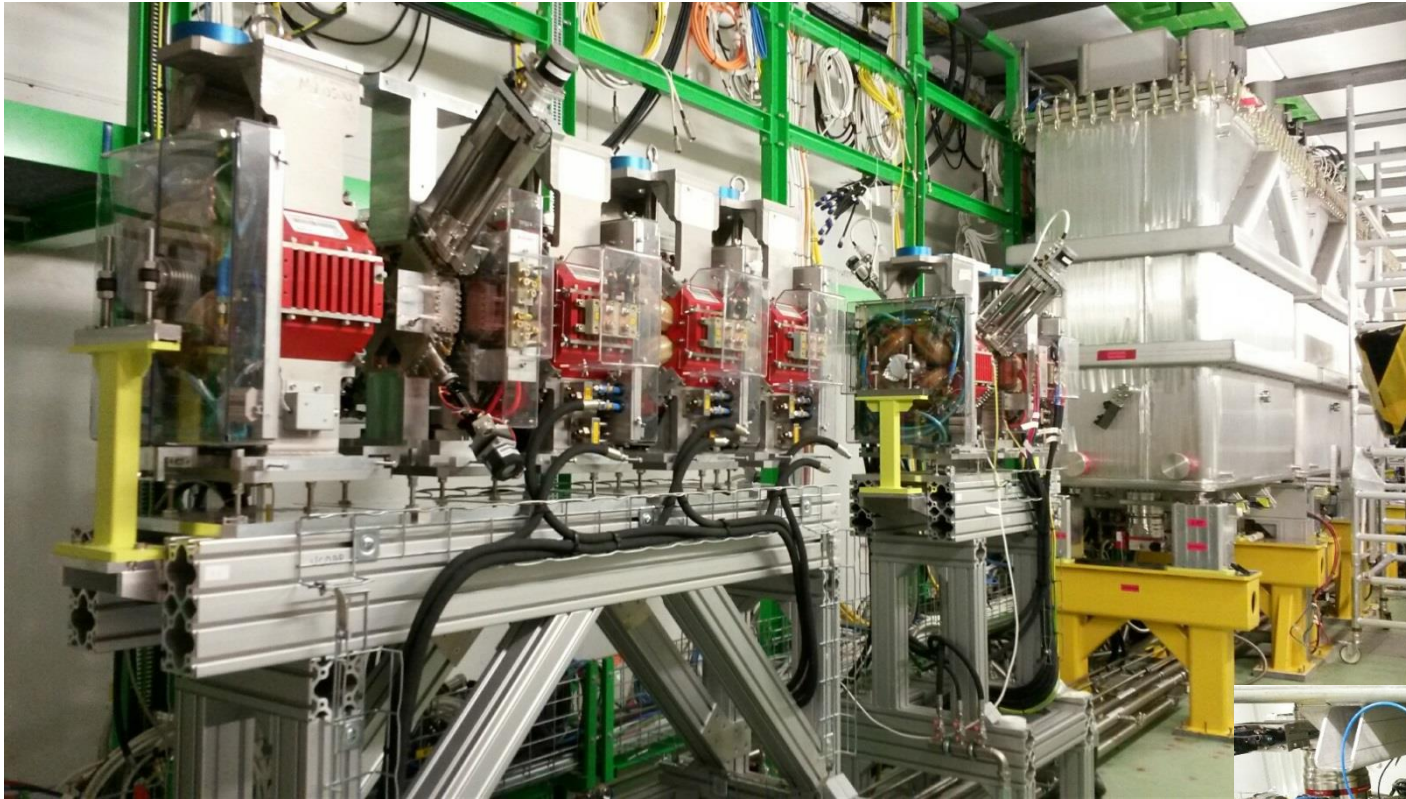
- Preparations XT00 line in the tunnel: Dismount elements and move and modification doublet and quadruplet support and intertank sectors as well as installation of CM feet
- Infrastructure dismantled on the CM2 top plate for vacuum leak tests











- Modified Quadruplet support reinstalled and tables levelled, Quadrupoles, Dbox and Steerer remounted and realigned.
- CM3 pre-aligned and CM3 vacuum equipment all mounted.
- Cryogenics start working on the cryo piping on the top plate.

Apart from the intertank installation which has a delay due to support issues all is on schedule.



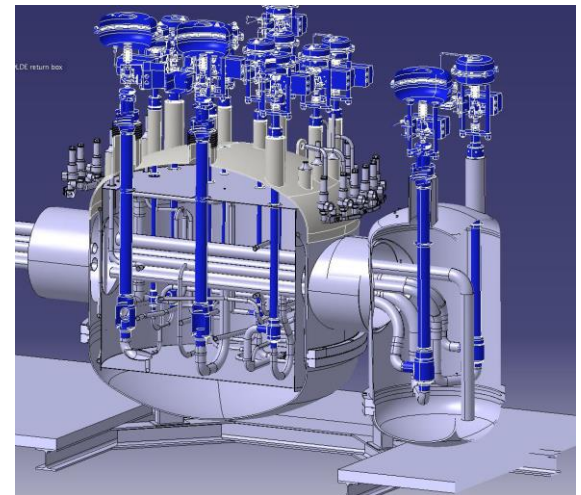
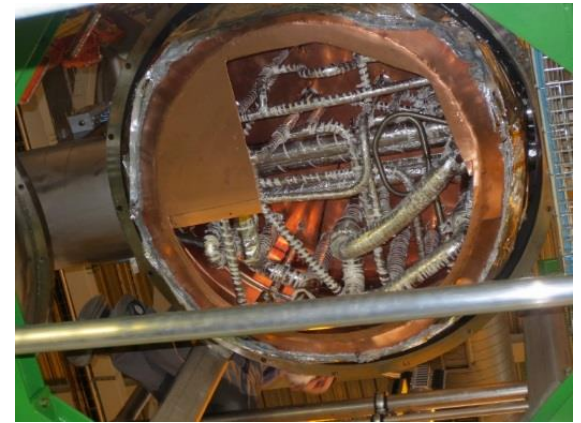
- Cryogenics working on the modification on the jumper-boxes and starting work on the cryo tubing for CM3.
 - Shielding chimneys and modifications for CM3 all in place.
- Work going according to schedule.

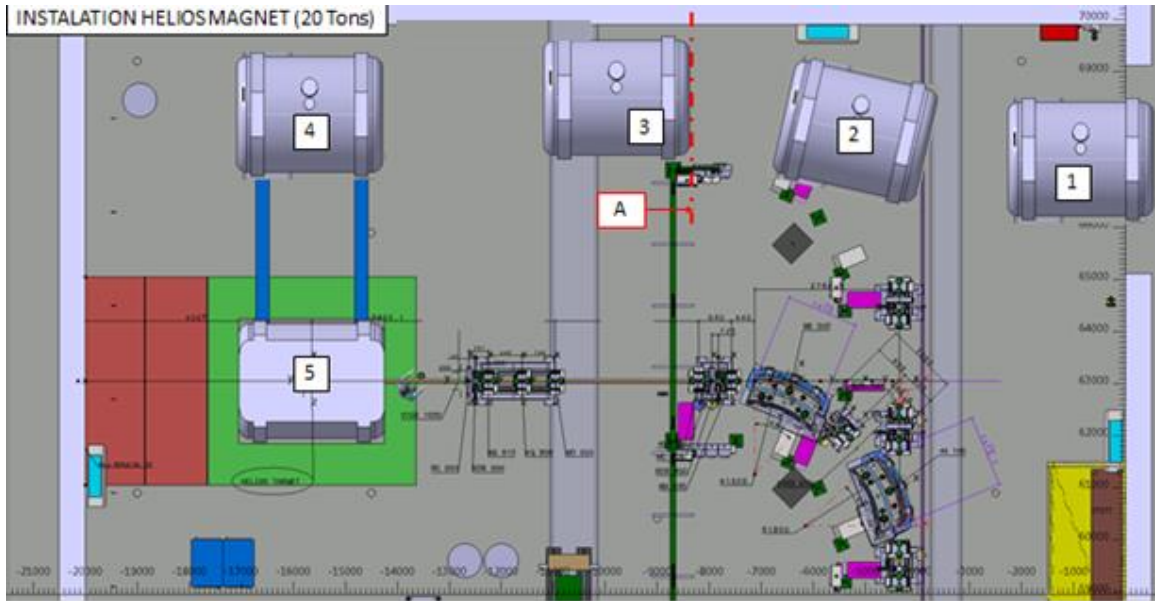
Compressor station and Refrigerator

- Preventive and corrective maintenance (10'000 h);
- Calibration check & consolidations to improve operation -> instrumentation, review of safety chains and logic (ctrl system)

Cryo Distribution System (CDS)

- Completion of the full installation to allow operation of all JB's and cooling of all shields;
- Calibration check of all instrumentation (CV, PT, PDT, TT)
- Installation of CM3 requires the opening of JB4 -> hardware investigation of the inner parts and installation of additional instrumentation (TTs);
- Opening of the Return Box for investigation and installation of additional instrumentation





to
test
part



- XT02 experimental setup dismantled and removed.
- ISS feet holes and XT02 triplet extension holes drilled and inserts done.
- All necessary XT03 supports and concrete dipole block removed. Cables rolled back. Main preparations done. CV and EL work to be finished.

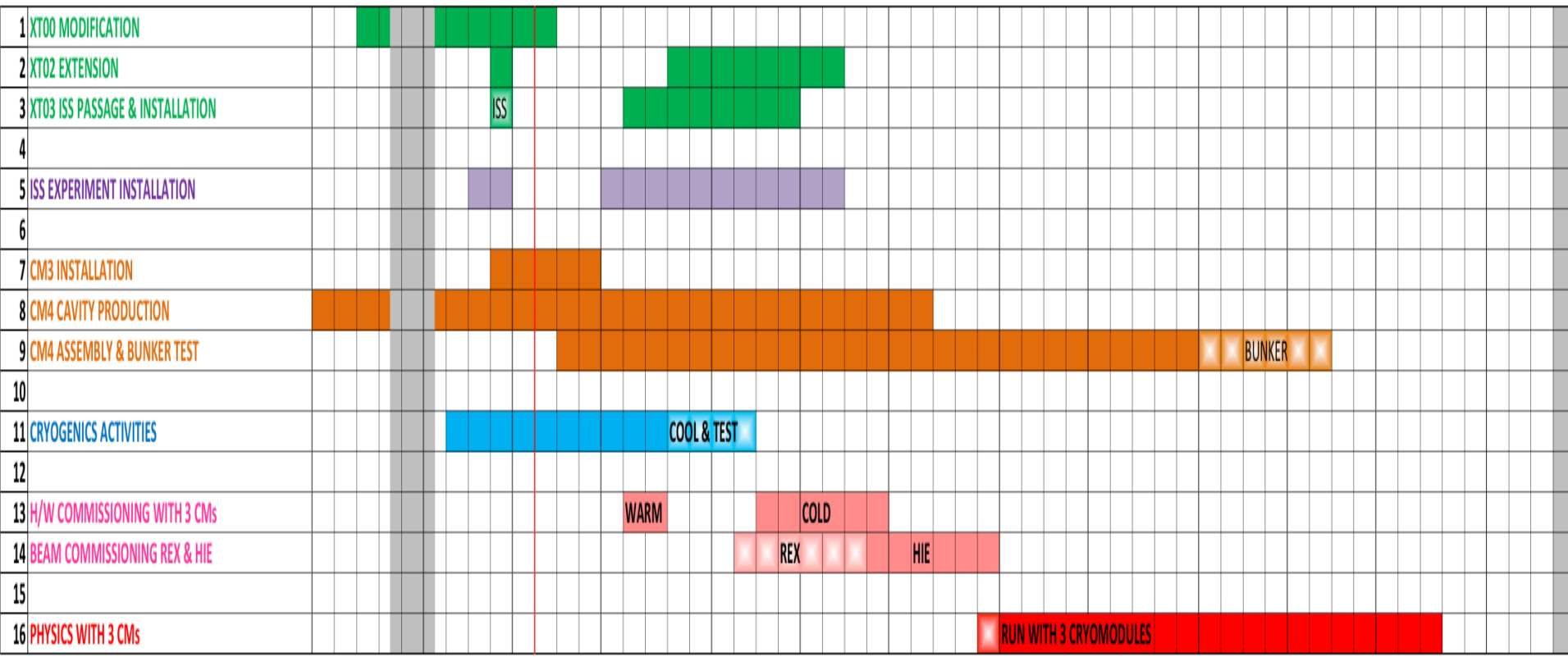


2017 Overall Planning

WEEKS	Dec-16				Jan-17				Feb-17				Mar-17				Apr-17				May-17				Jun-17				Jul-17				Aug-17				Sep-17				Oct-17				Nov-17				Dec-17							
	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51

Shut down 2016-2017 BASELINE

TODAY



Installation on schedule

- CM3 is installed and aligned
- Infrastructure CM3 being installed: Vacuum installed, Cryo ongoing
- XT00 modification ongoing: Quadruplet reinstalled and realigned ready for re-cabling. Intertank sectors supports need attention (non-critical delay)
- Dismounting 3rd beam line XT03 supports and infrastructure well advanced, ready for arrival of the ISS magnet on XT02 (latest 3 March)
- Cryogenics maintenance & consolidation ongoing

Upcoming:

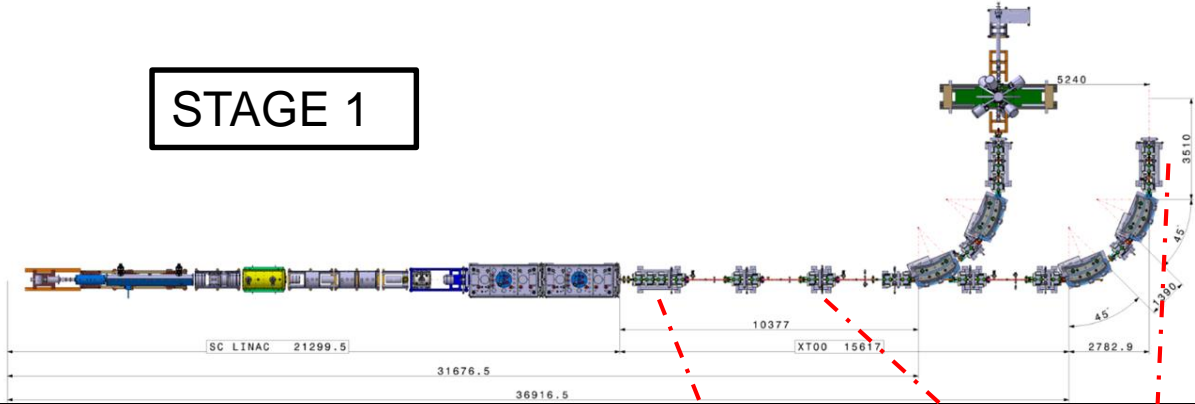
- XT00 intertank units, vacuum lines, DC, BI, Vac and water connections
- CM3 infrastructure together with CM2 top-plate recabling: Cryogenic connections & instrumentation, RF cabling, motor control cabling and vacuum controls
- ISS magnet arrival (3 March)
- Extension XT02 line, (re-)installation XT03 infrastructure, supports, elements, alignment, DC, BI, Vac, water connections

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- DSG/RP : JOACHIM VOLLAIRE, ALEXANDRE DORSIVAL
- TE/ABT/ MPE : BRENNAN GODDARD, MATTHEW FRASE, RICHARD MOMPO
- TE/VSC : JOSE SOMOZA, GUILLERMO FERNANDEZ, ABEL GUTIERREZ, PAUL DEMAREST, ANTHONY HARRISON
- BE/BI : ENRICO BRAVIN, WILLIAM ANDREAZZA, SERGEI SADOVICH
- EN/MME : ANTTI KOLEHMAINEN, MARC TIMMINS

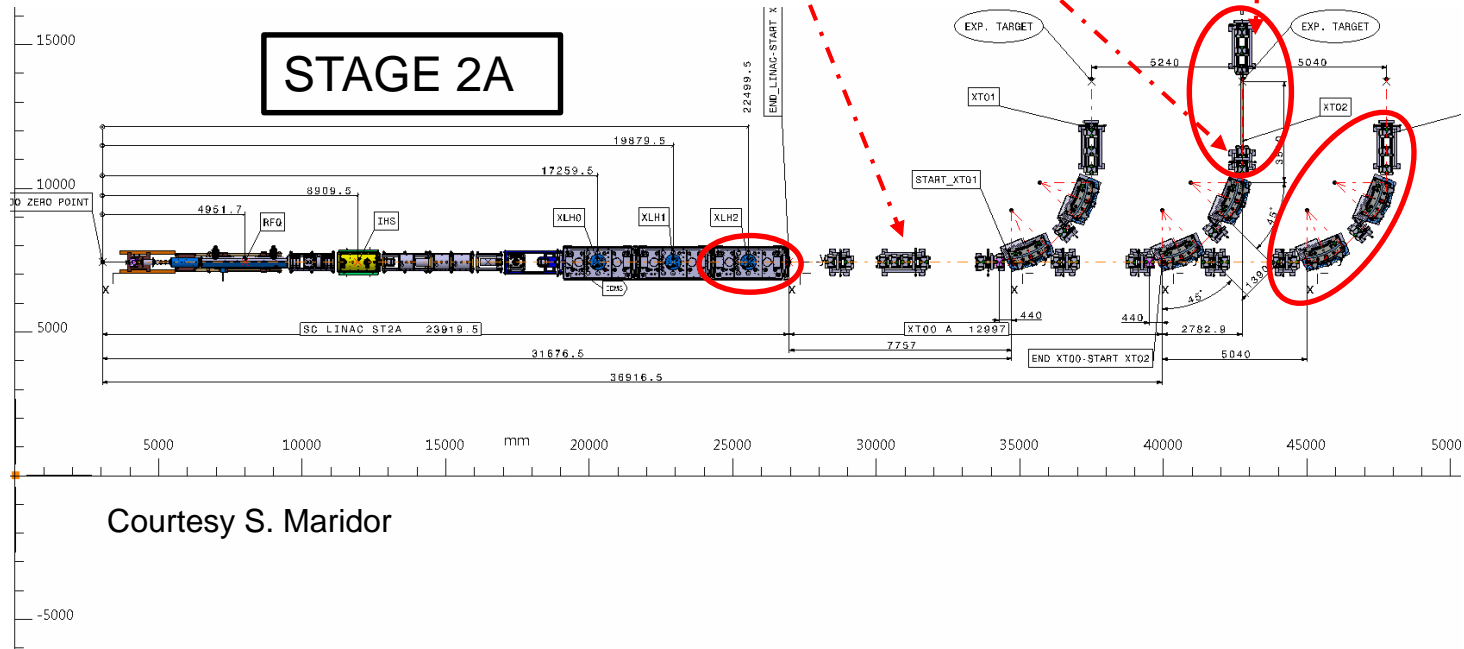
extra slides

Transition Stage 1 to 2a

STAGE 1



STAGE 2A



Courtesy S. Maridor

Actions plan for EYETS – Cryo Tests/Commissioning

- Recommissioning of the cryo-plant (compressor station and refrigerator) including a capacity test
- Commissioning of the Cryo Distribution System (CDS) :
 - Shield cooling
 - Heat load evaluation
- Commissioning of the CDS with 3 CMs and the dewar :
 - Cooling and filling of the 3 CMs and dewar
 - Capacity test with maximum heating power in the 3 CMs
 - => will allow to assess the operation with a 4th module or help to draft a necessary consolidation plan

Cyo detailed planning

