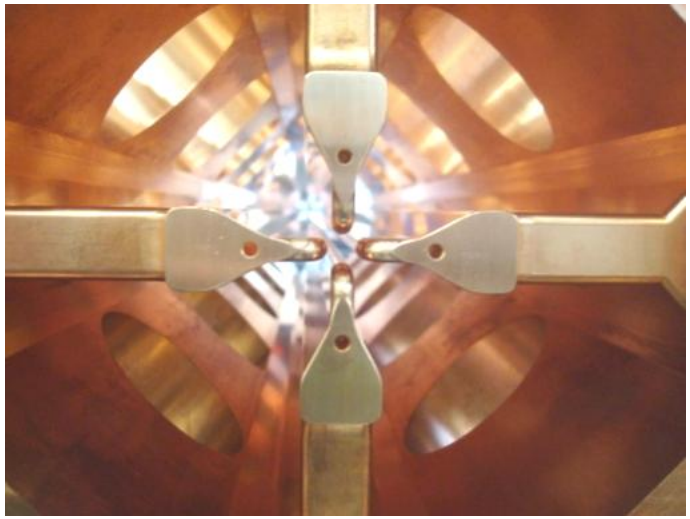
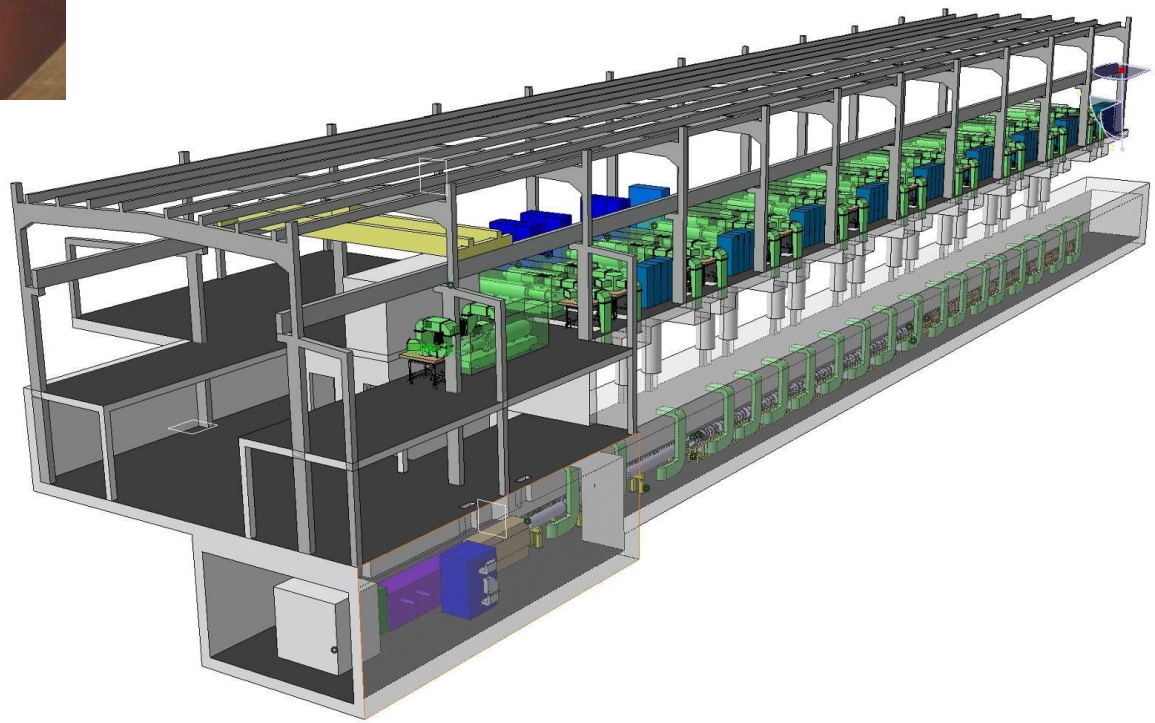
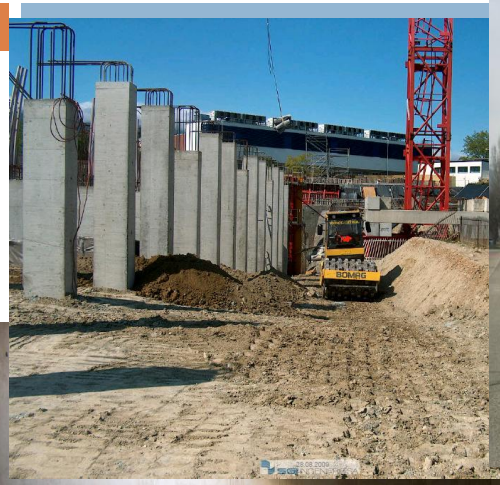


Linac4 Summary



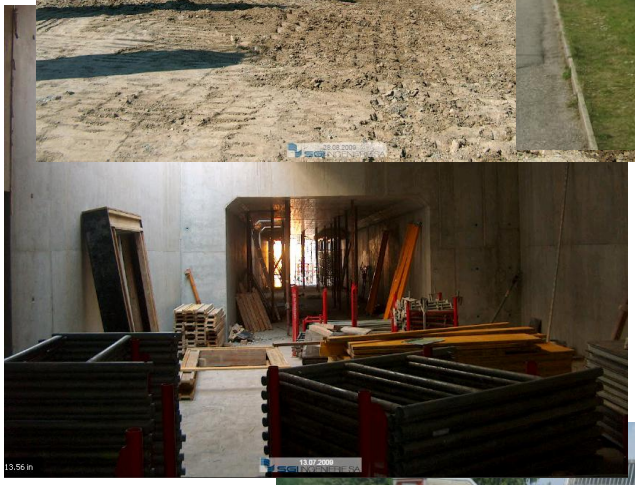
CCDTL Meeting
14.06.2010

Progress in civil engineering



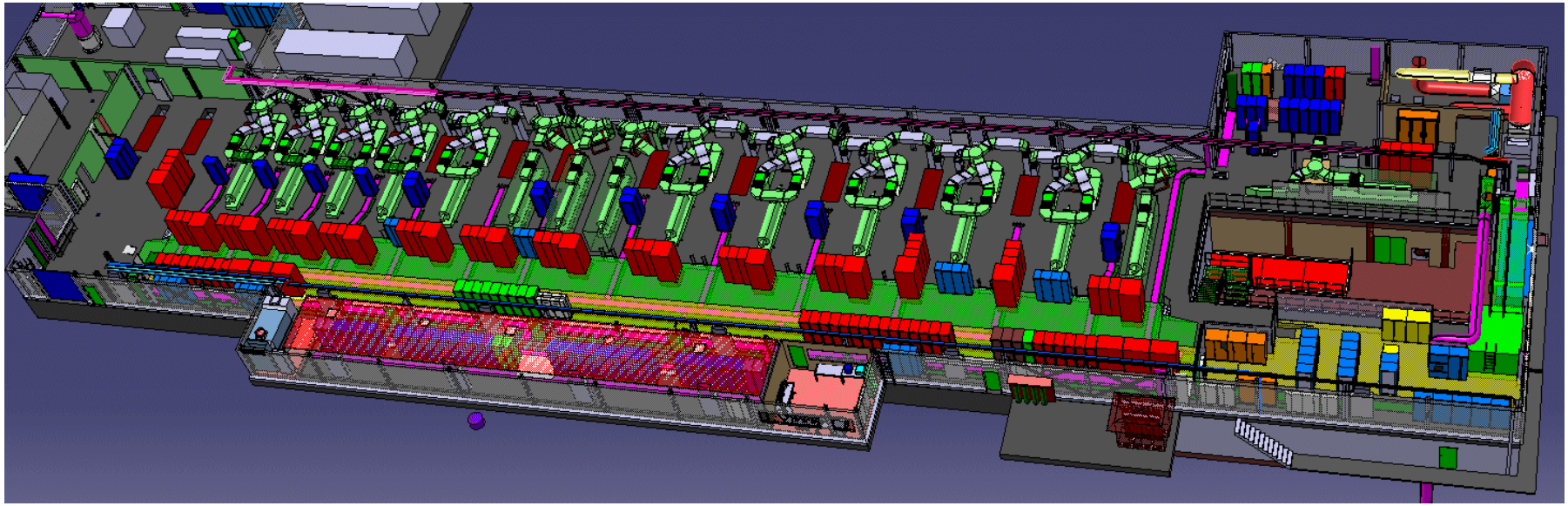
March 2010

Oct. 2008



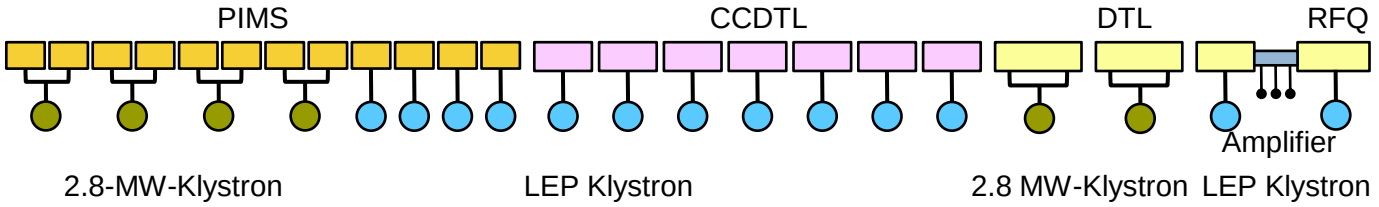
Start of work: 10/2008
Delivery foreseen: 09/2010

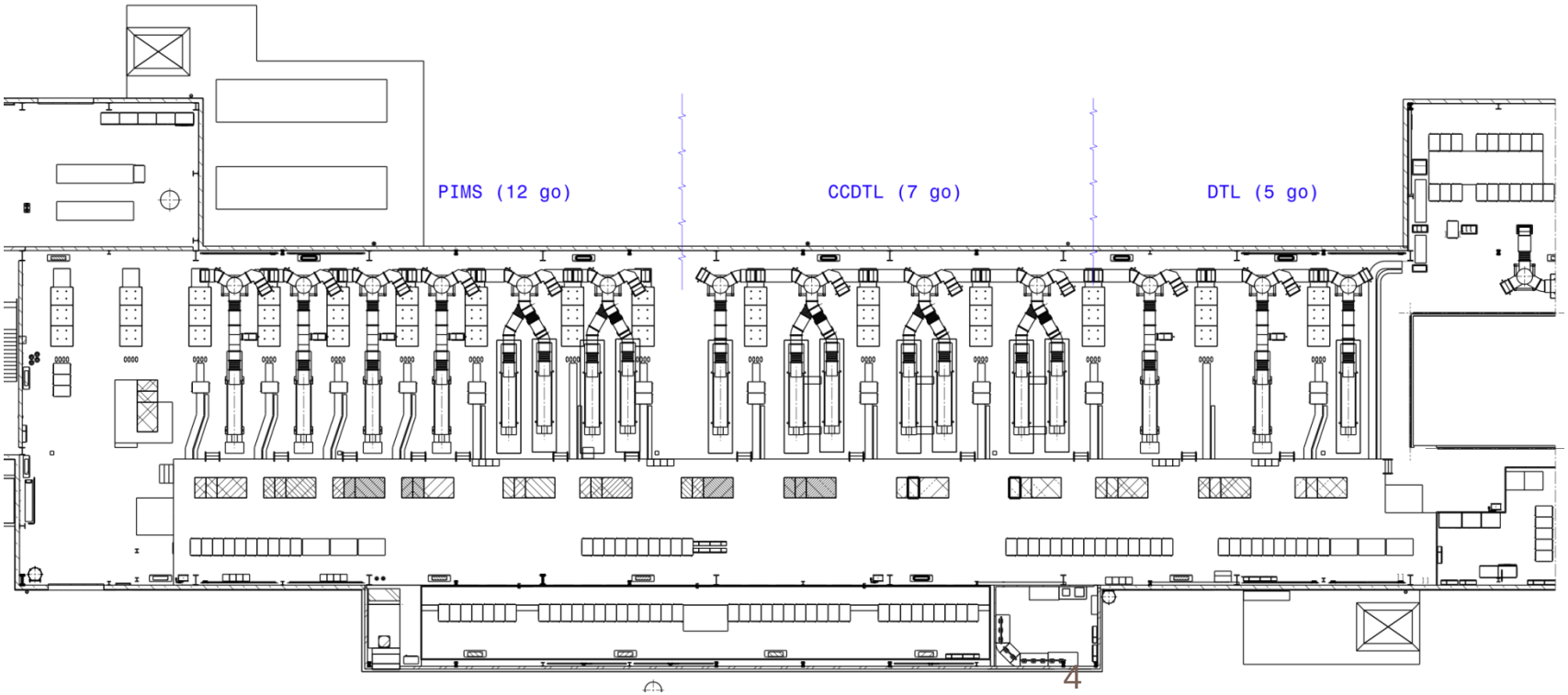
Linac4 – RF and equipment



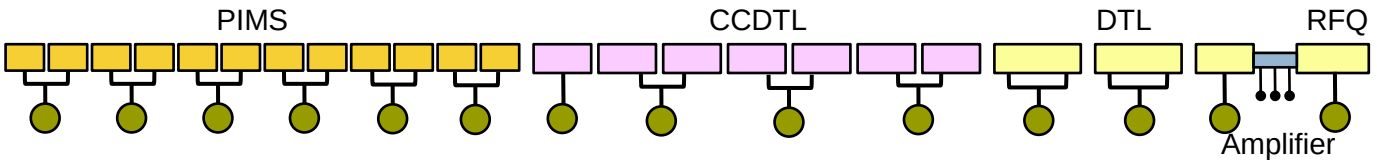
Integration almost completed:
- Defined RF distribution layout (still open which CCDTL will remain on a single klystron)
- In the tunnel, added water manifolds and RF reference line.
- being finalised position of emergency equipment (emergency stops, smoke detectors, fire extinguishers, etc.)

Klystron-Gallery: LEP Klystrons

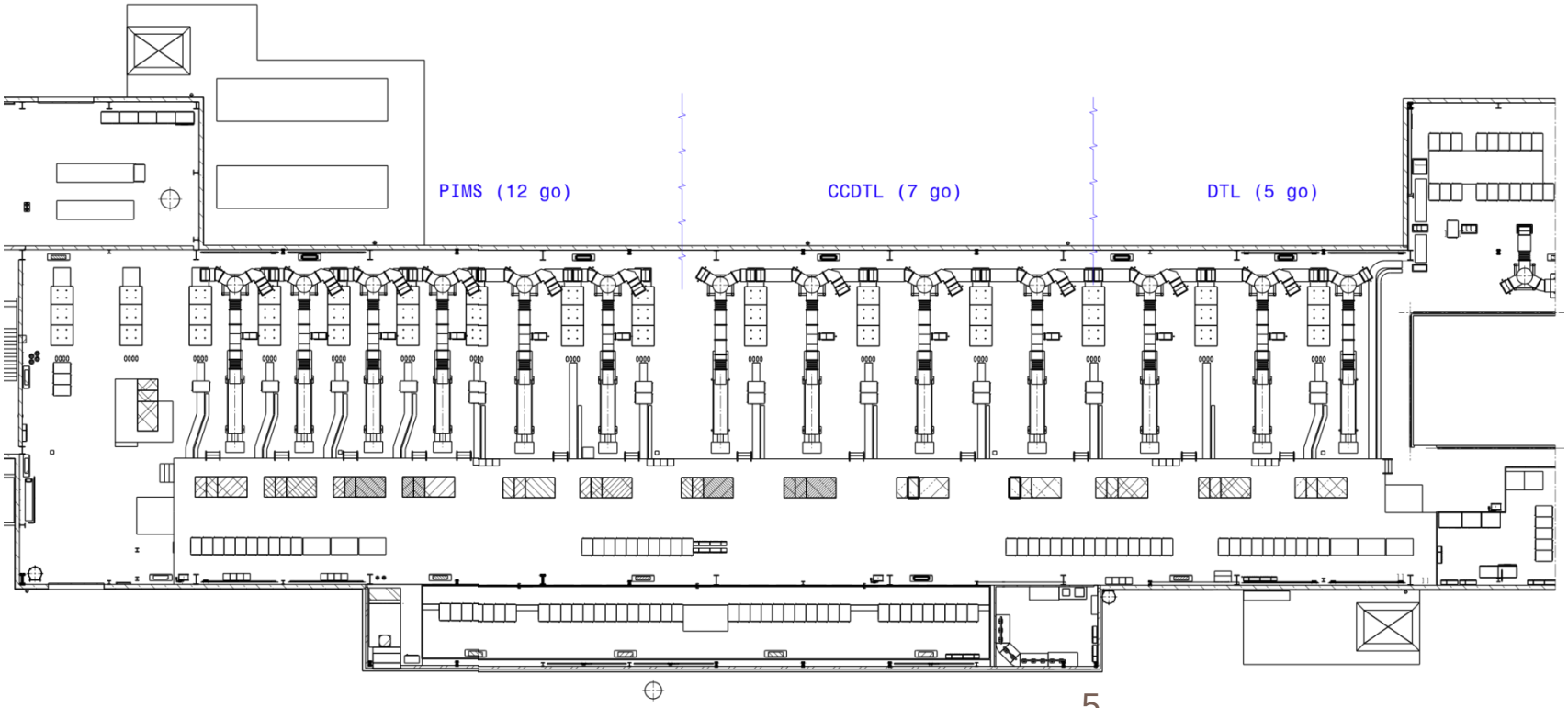




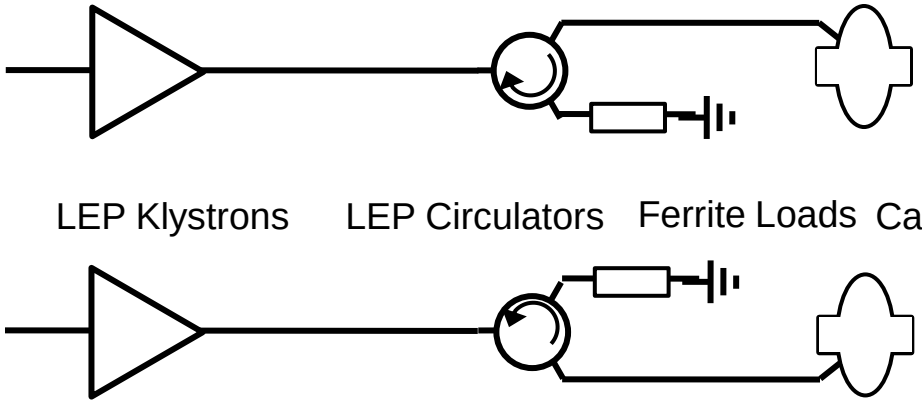
Klystron-Gallery: Final Version



2.8 MW-Klystron

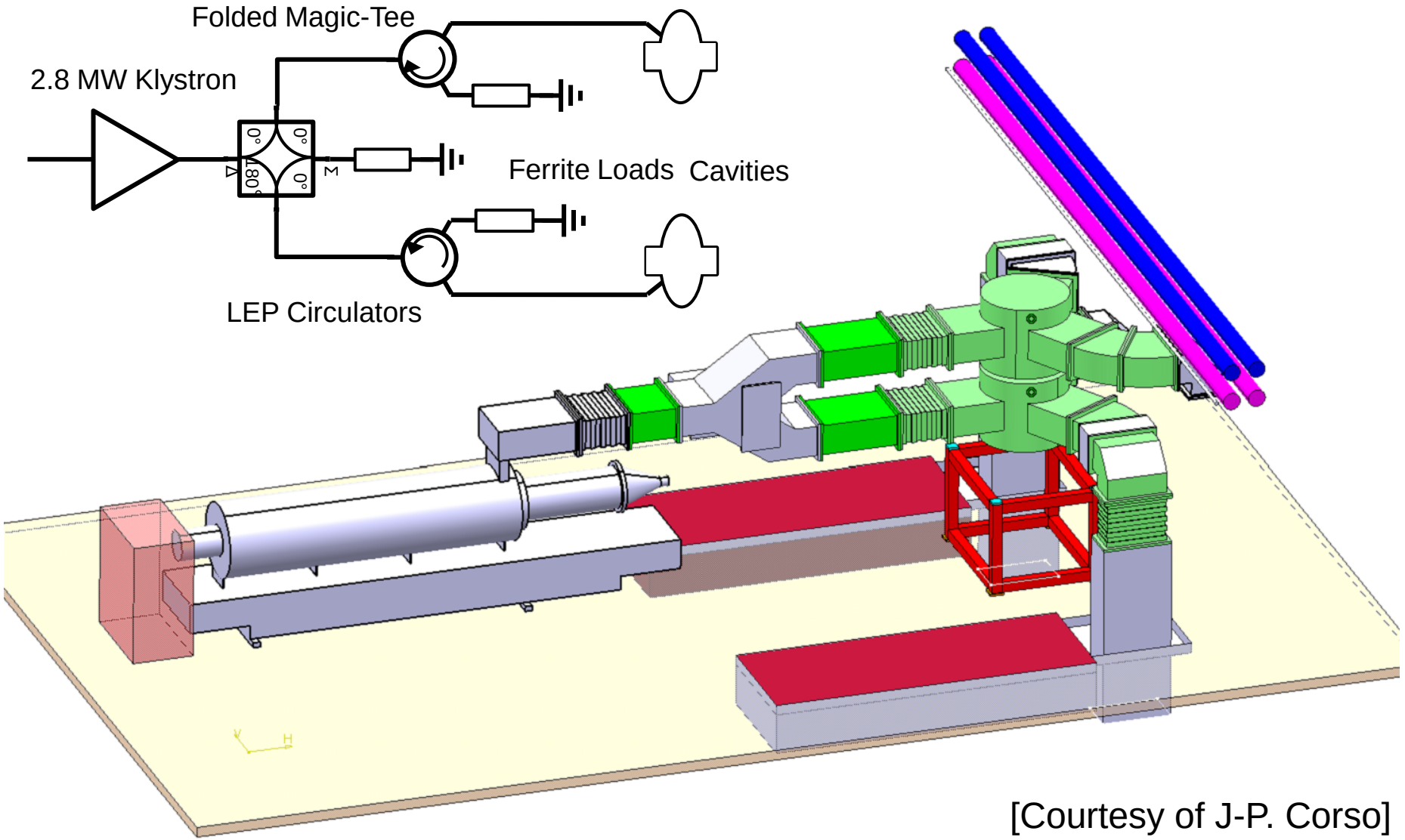


Power Distribution Scheme – LEP Klystrons



[Courtesy of J-P. Corso]

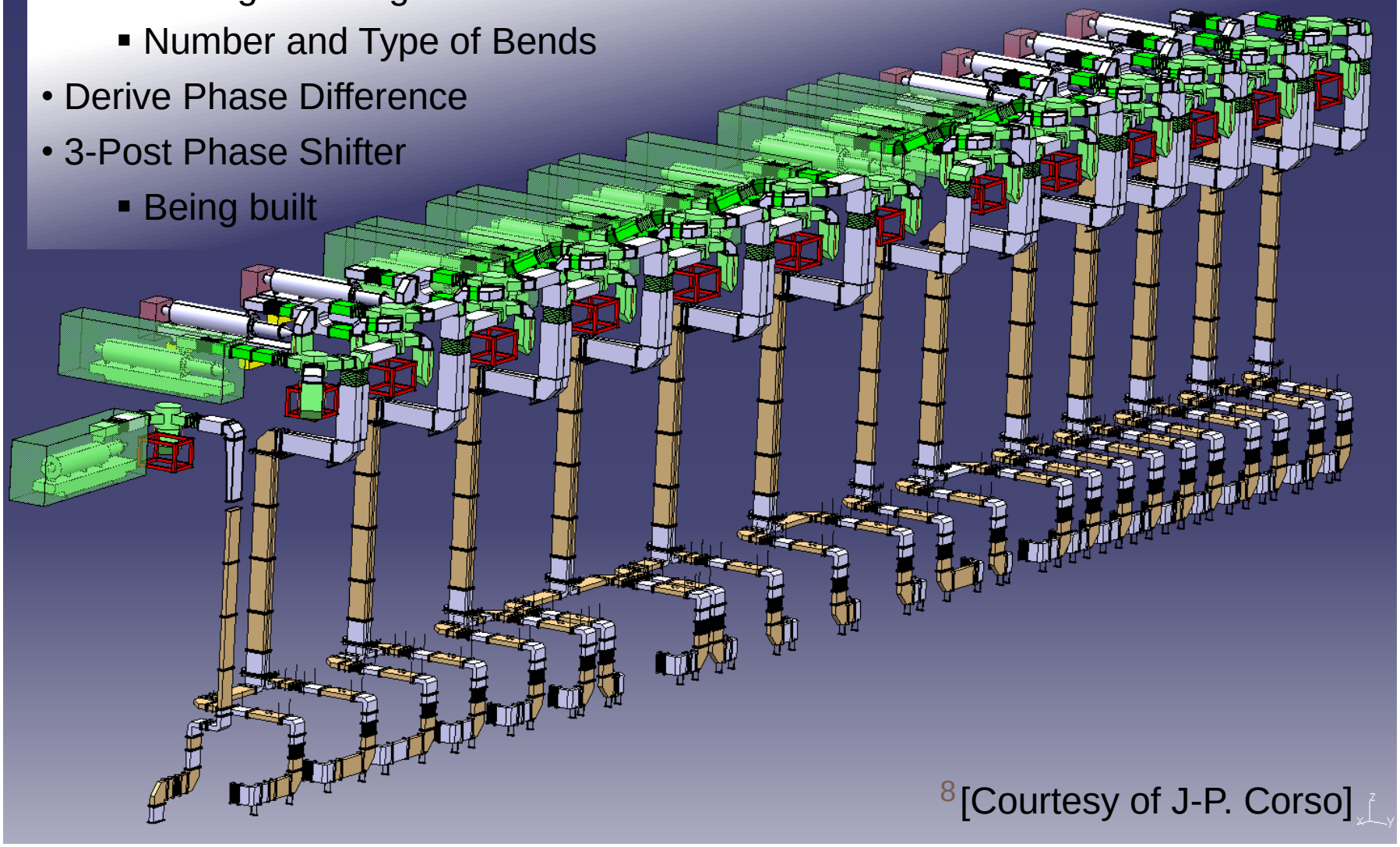
Power Distribution Scheme – 2.8 MW Klystron



[Courtesy of J-P. Corso]

Waveguide Connections

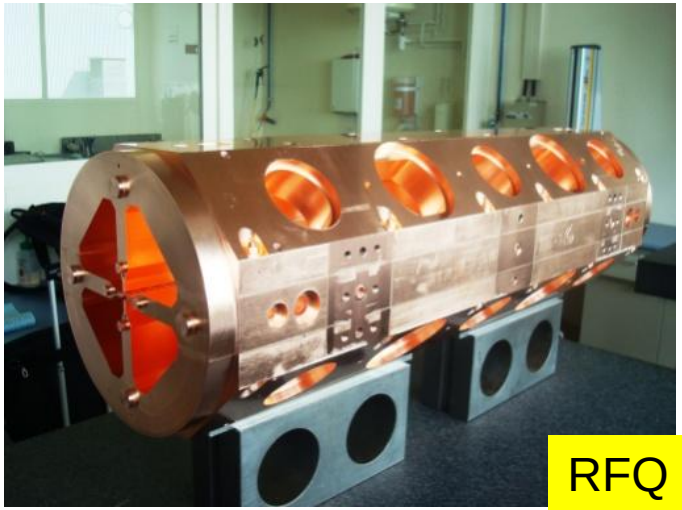
- Determine:
  - Waveguide length to Cavities
  - Number and Type of Bends
- Derive Phase Difference
- 3-Post Phase Shifter
  - Being built

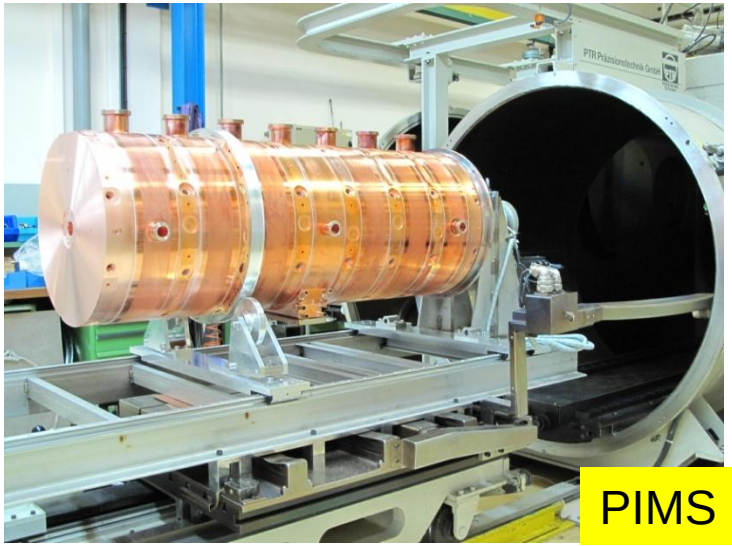


[Courtesy of J-P. Corso]

Linac 4 – Status April 2010

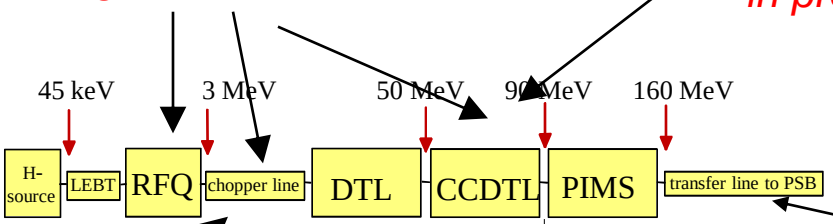
- Ion source assembled, improving intensity.
- RFQ in construction, 1st module (of 3) brazed.
- DTL prototype tested, machining of Drift Tubes will start this month in Spain. Tanks will be machined in industry from September.
- CCDTL …
- PIMS prototype completed, being measured. High power tests in summer. Construction agreement with Poland-Germany being prepared.
- Design of dump, measurement lines and transfer line completed.
- Klystron contract signed (Thales + CPI).
- Orders for major components placed or in preparation.


RFQ


PIMS

Linac4 – External Contributions

Network of agreements to support Linac4 construction



RFQ RF design, RF amplifiers, modulator construction from French Special Contribution. *agreed and started.*

Prototype modulator, RF tuners, couplers, waveguides from India, *in progress*

Agreement with DESY to access drawings of H-source *completed*

Transfer line vacuum chambers and supports from Pakistan, *agreed*

Chopper line built in a EU Joint Research Activity *completed*

Participation of ESS-Bilbao in DTL construction, *in preparation*

Construction of CCDTL in Russia, via an ISTC Project *agreed and started*

Collaboration agreement with Soltan Institute (Poland) and FZ Julich (D) for PIMS construction, *in preparation.*

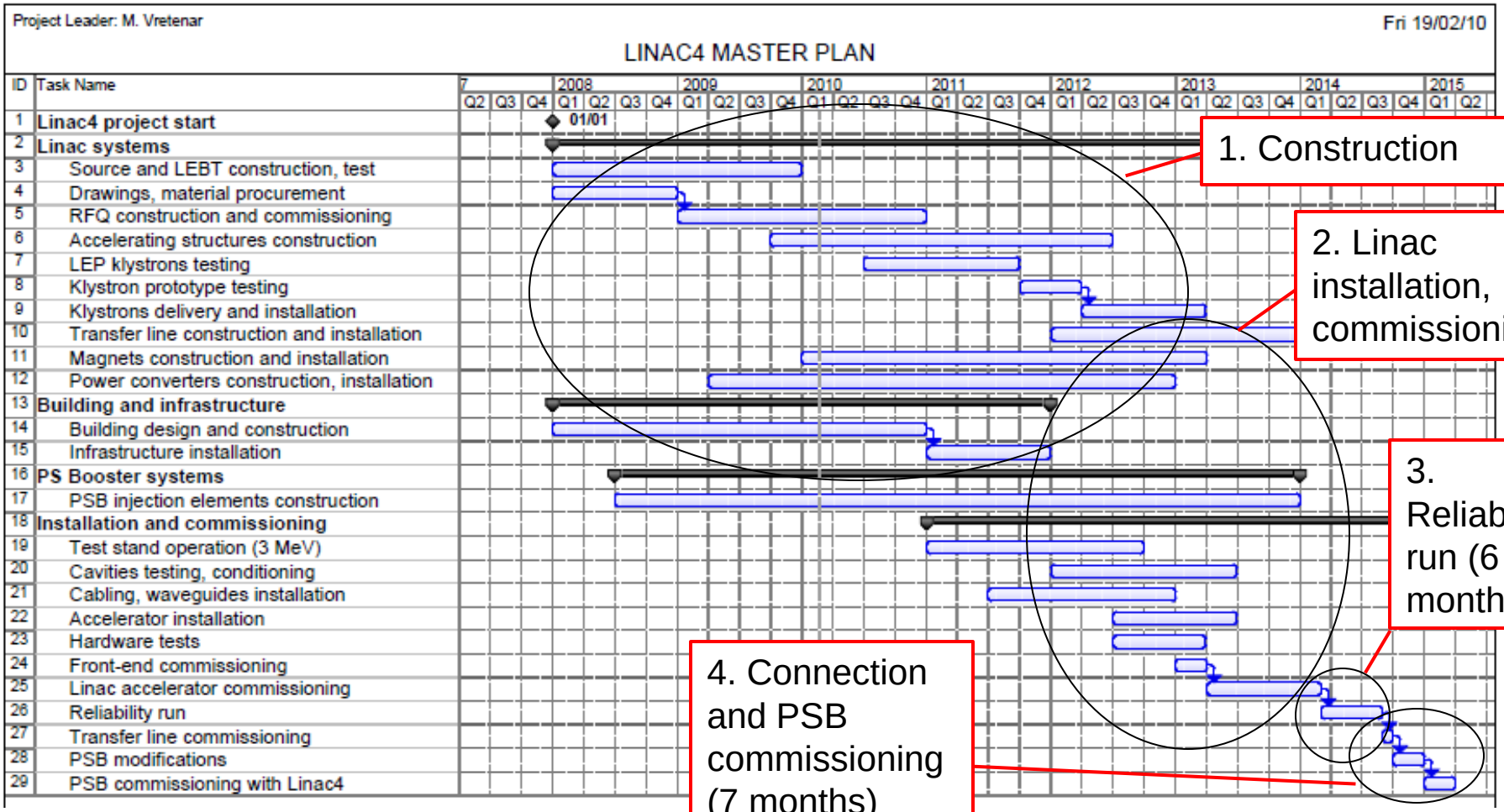
Linac4 master plan – 2010

Project Leader: M. Vretenar

Fri 19/02/10

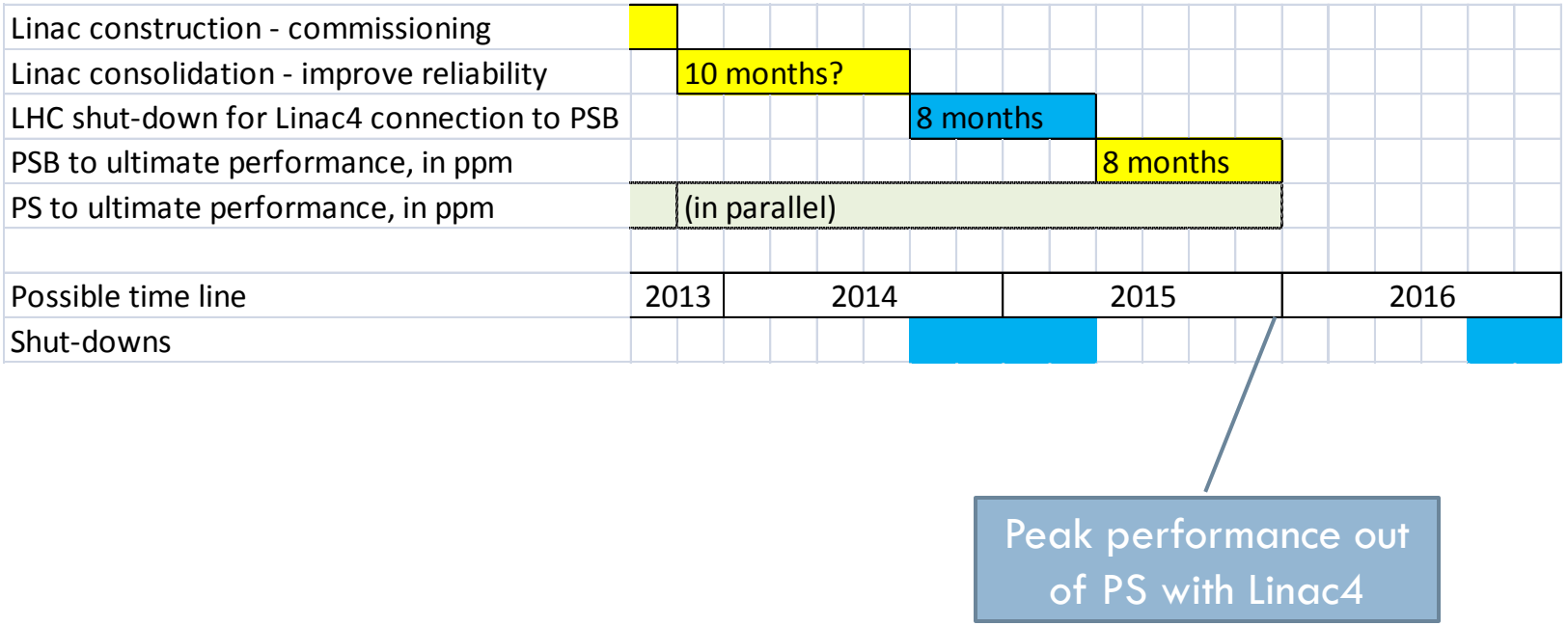
LINAC4 MASTER PLAN

ID	Task Name
1	**Linac4 project start**
2	**Linac systems**
3	Source and LEBT construction, test
4	Drawings, material procurement
5	RFQ construction and commissioning
6	Accelerating structures construction
7	LEP klystrons testing
8	Klystron prototype testing
9	Klystrons delivery and installation
10	Transfer line construction and installation
11	Magnets construction and installation
12	Power converters construction, installation
13	**Building and infrastructure**
14	Building design and construction
15	Infrastructure installation
16	**PS Booster systems**
17	PSB injection elements construction
18	**Installation and commissioning**
19	Test stand operation (3 MeV)
20	Cavities testing, conditioning
21	Cabling, waveguides installation
22	Accelerator installation
23	Hardware tests
24	Front-end commissioning
25	Linac accelerator commissioning
26	Reliability run
27	Transfer line commissioning
28	PSB modifications
29	PSB commissioning with Linac4



GOAL: all usual beams available in the PSB at start-up 2015

Tentative time line



Other projects

- LP-SPL and PS2 studies will stop at end 2011.
- HP-SPL will continue as a study aimed at neutrino physics. Material resources have been allocated, more problems for the manpower. Collaboration with ESS well established.
- Energy upgrade of the PS Booster to 2 GeV is now in the official CERN plan, as well as the SPS improvements for higher intensity.
- The CERN Council this Friday 18.6 will have to approve the new CERN plan…