

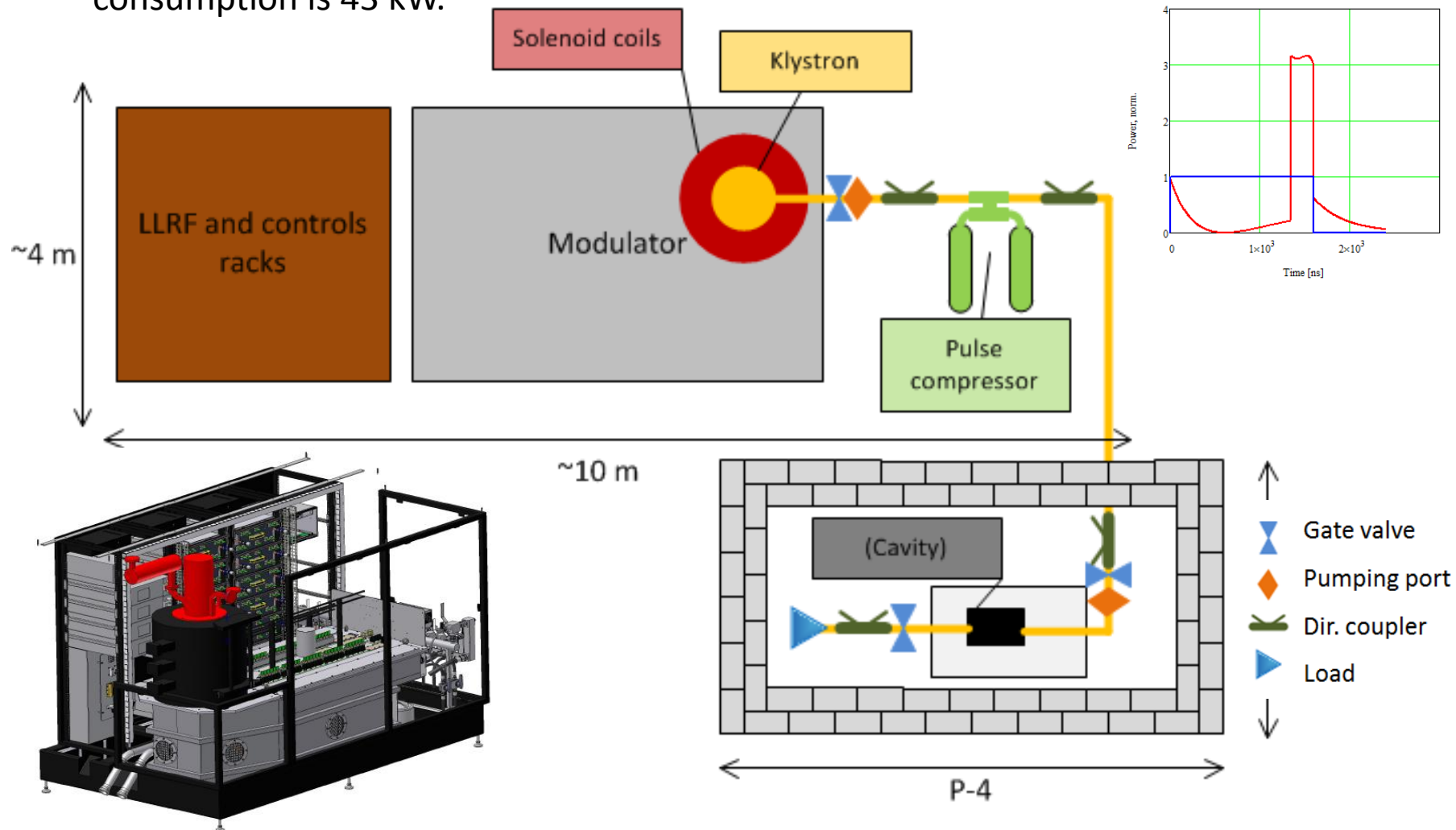
New X-band testing facility a.k.a. Xbox 2

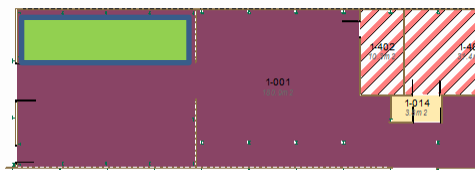
N. Catalan. Lasheras for the X-band testing areas (XTA) activity group



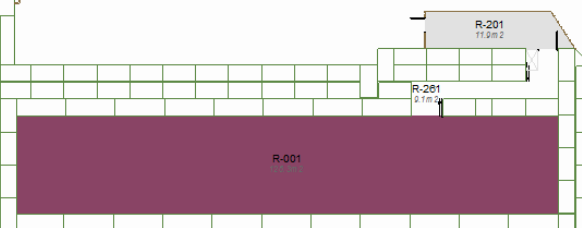
- A new test bench for testing RF structures at 12GHz above 100MV/m
 - One structure/three months testing
- 50MW klystron fed by a 50Hz, 450kV modulator
- Full time operation expected from October next year.
- Possible extension in 2014-15 (Xbox3) when Linac4 klystrons/waveguides are installed

#2 50 MW klystron (XL-5, CPI) test stand will be able to deliver to the testing area up to 130 MW x 250 ns pulses at 50 Hz repetition rate. The overall power consumption is 43 kW.



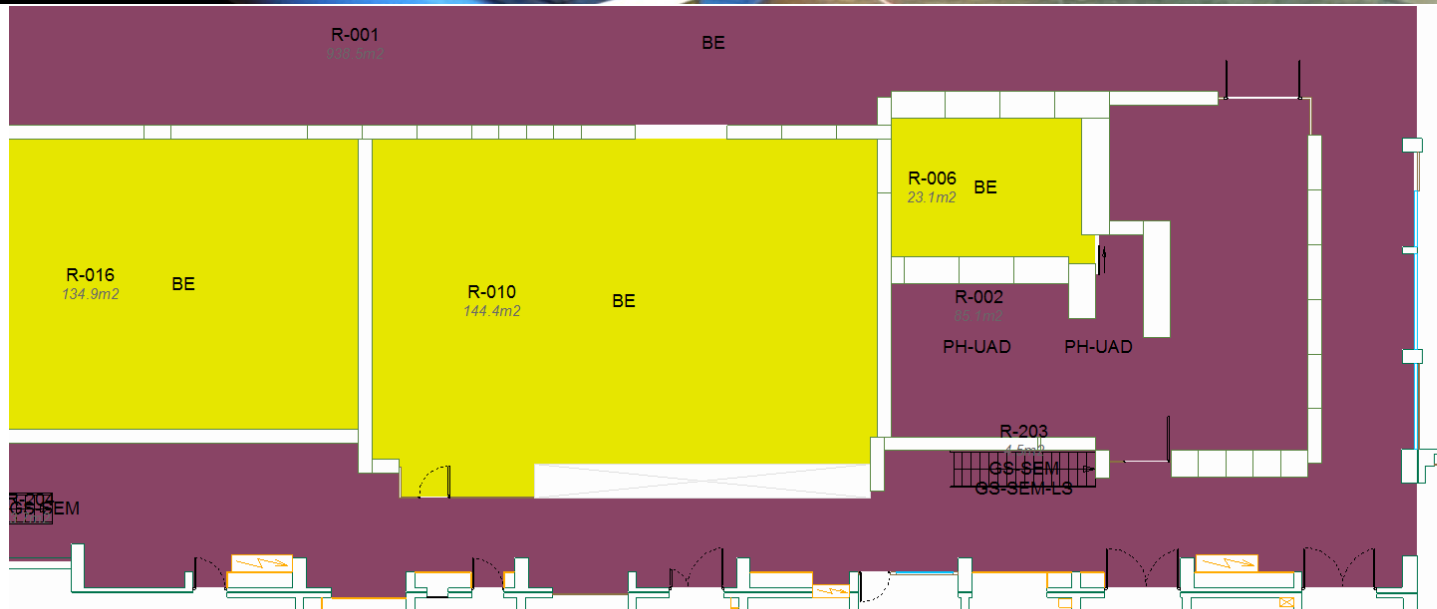


CTF3 klystron gallery



CTF2

Building 150. 352 MHz test stand

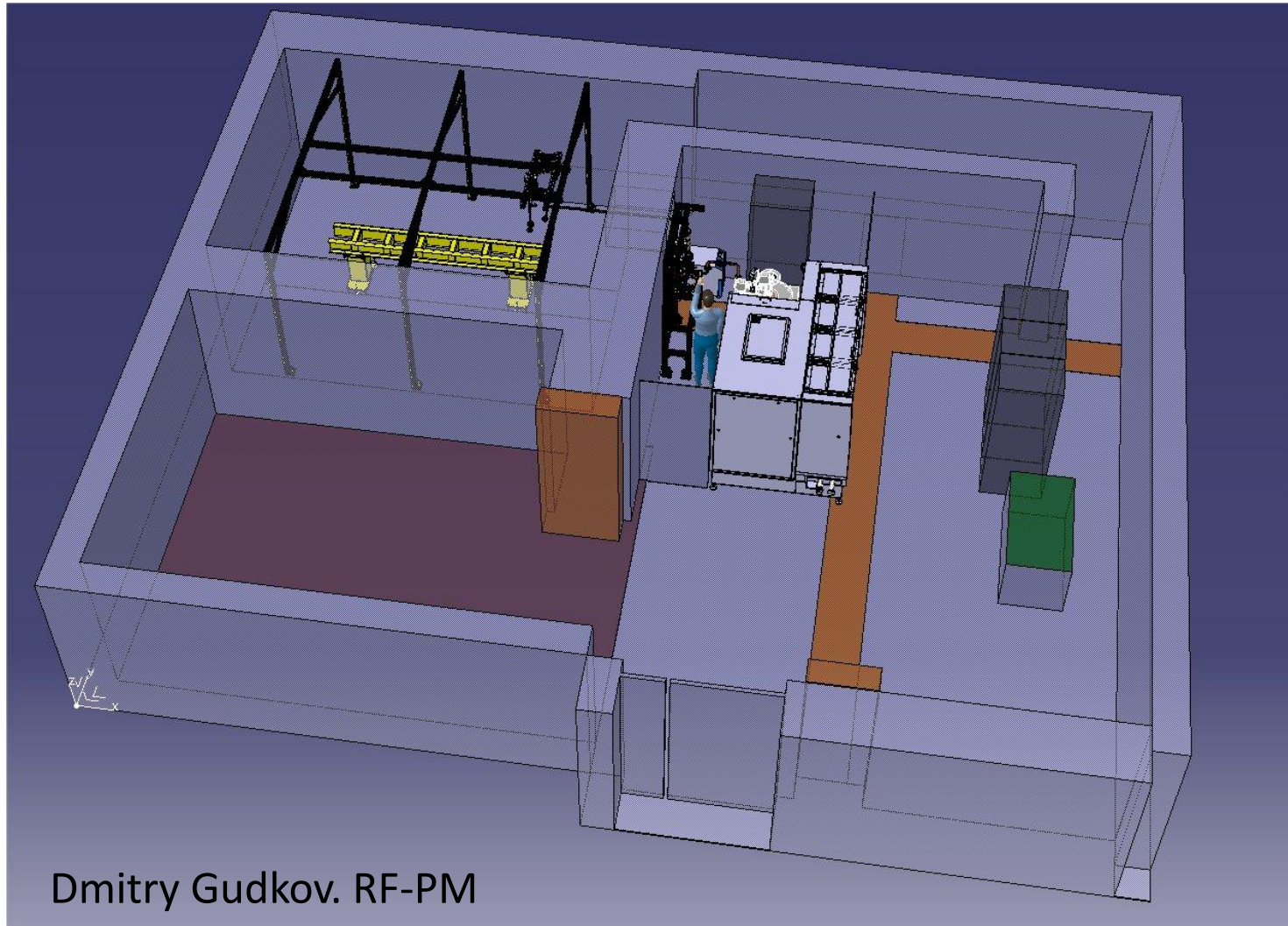


Bat.152

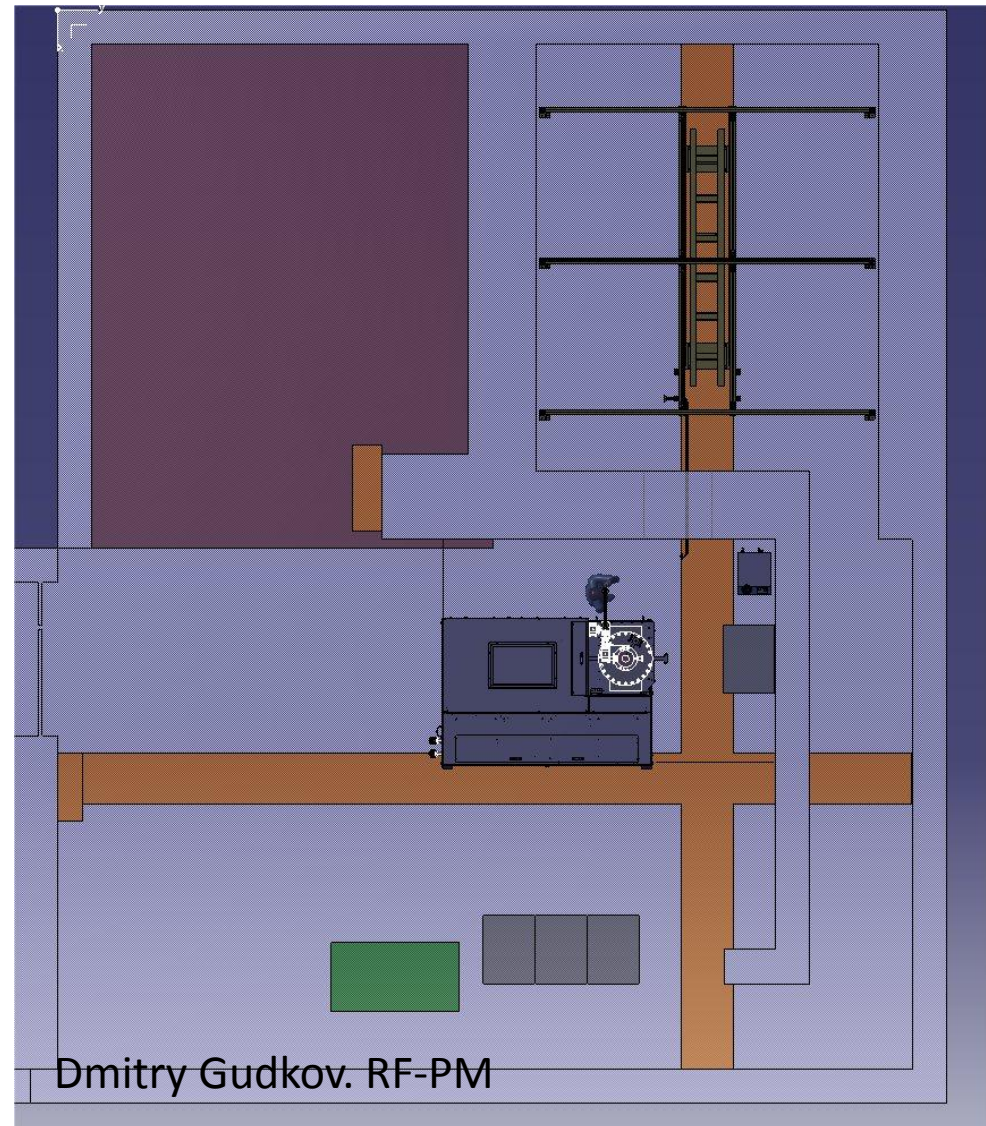
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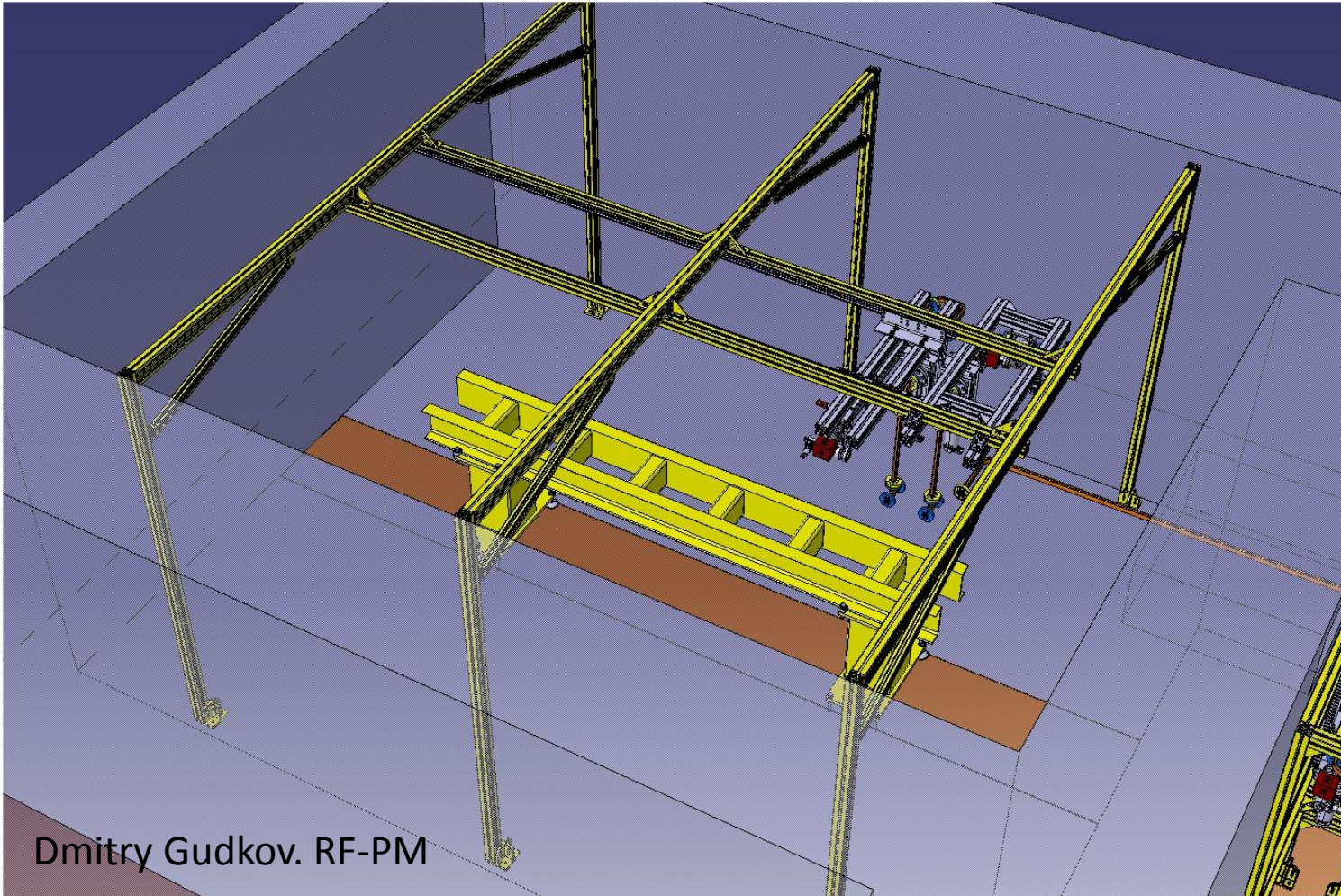
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Proposed layout for Xbox2 in buidling 150



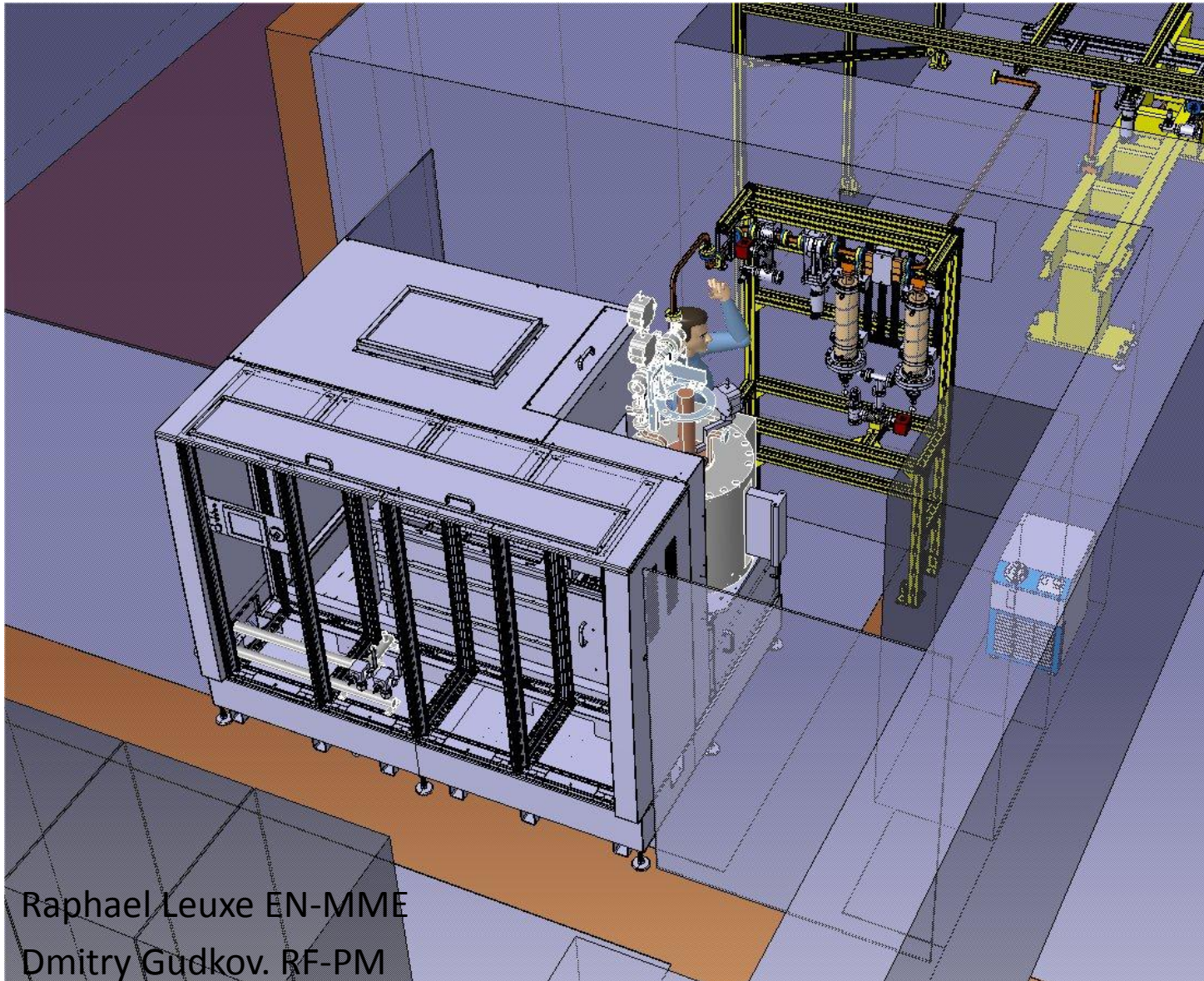
- Reusing:
 - Shielding blocks. More will be needed (25 in stock)
 - Demineralized Water (150l/min $P < 8-10$ bars)
 - Electrical capacity (50kW)
- Top-left area used by the EBIS source tests at least until the end of 2013 (TBC)





Dmitry Gudkov. RF-PM

Proposed layout for Xbox2 in buidling 150



Raphael Leuxe EN-MME
Dmitry Gudkov. RF-PM

Preparation of the site

- Final layout of the test stand. End 2012
- Cleaning-up the area. End 2012
- Safety file preparation
- Shielding blocks transport
- Water system modification
- Electricity modification?
- Cabling, Ethernet

Before LS1!!

Installation

- Modulator and klystron procurement. End of March 2013
- RF network and components. End of March 2013
- Vacuum network, pumps and valves. LLRF and controls

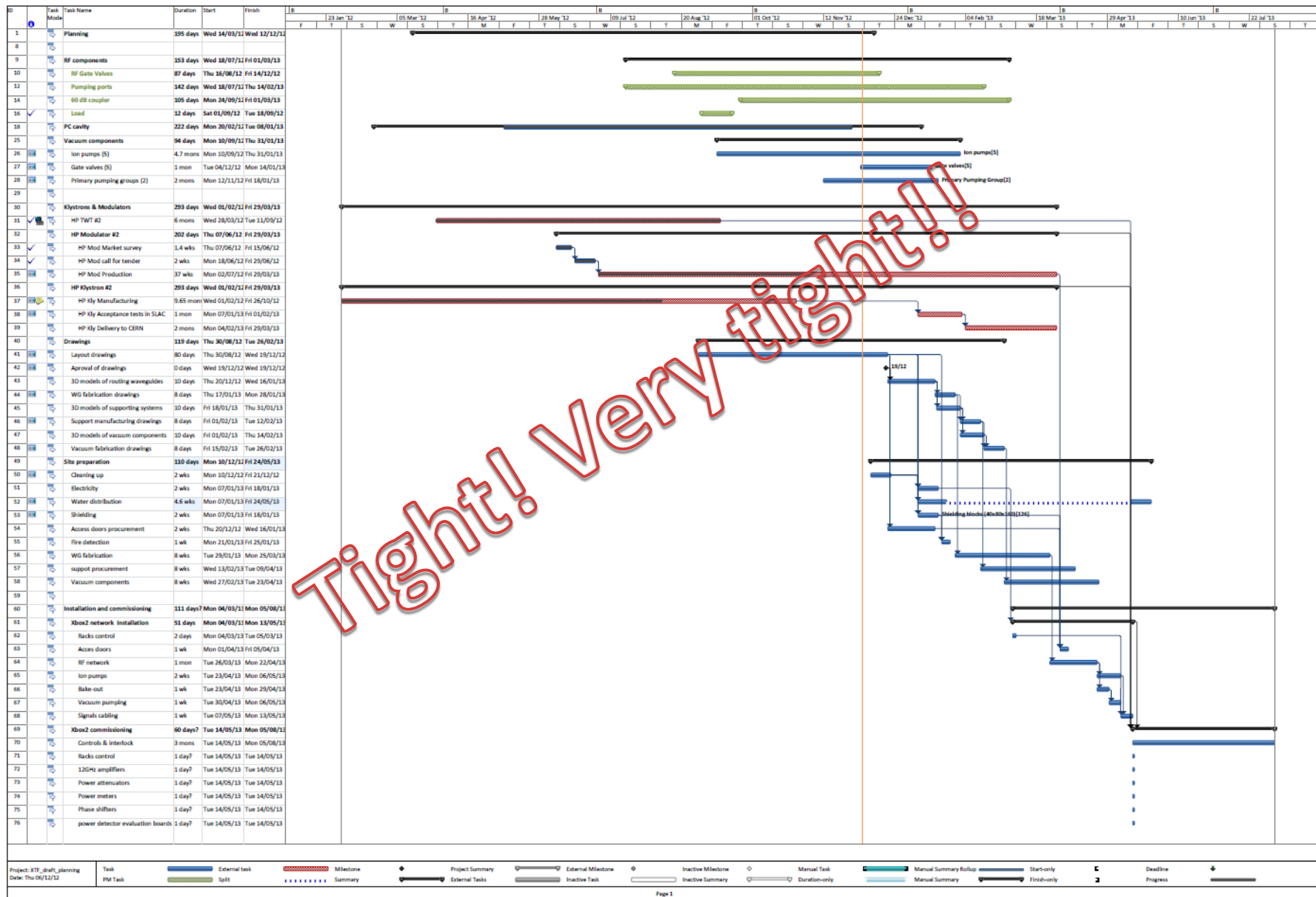
End of April 2013

Commissioning

- Modulator/klystron unit April-May 2013
- Water cut due to LS1 from mid-may
- Conditioning of RF network August-October 2013









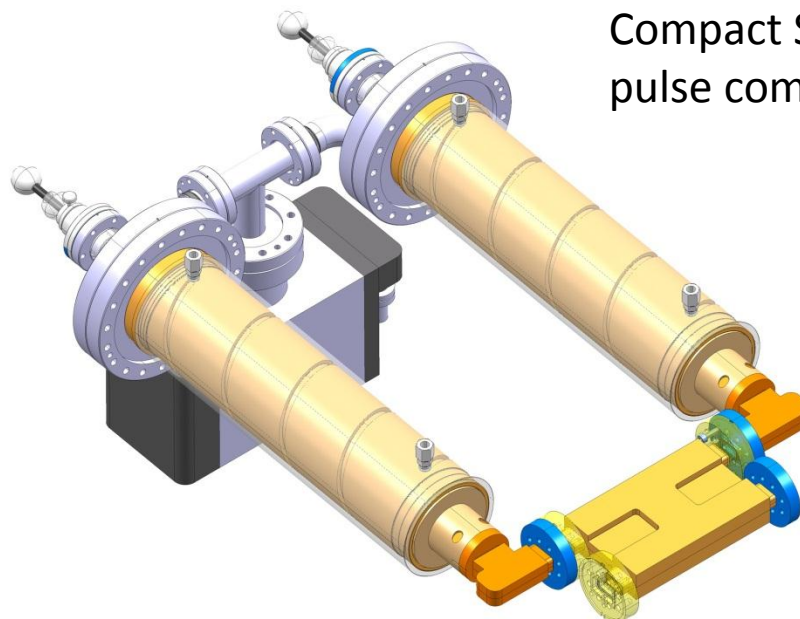
Planning





RF components procurement

-  Gate valve : 16
-  Pumping port : 20
-  Dir. coupler : 20
-  Load : 6
-  Pulse compressor : 5
-  3dB hybrid : 5

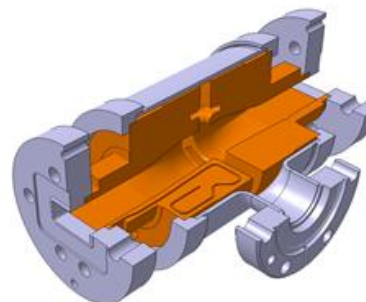
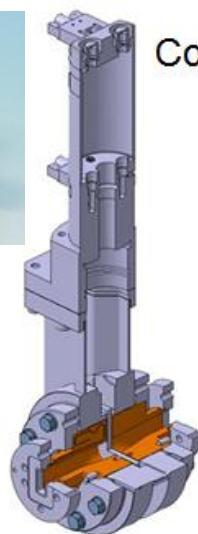
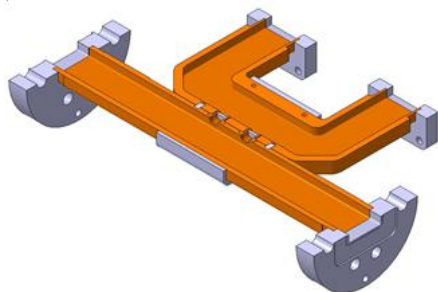


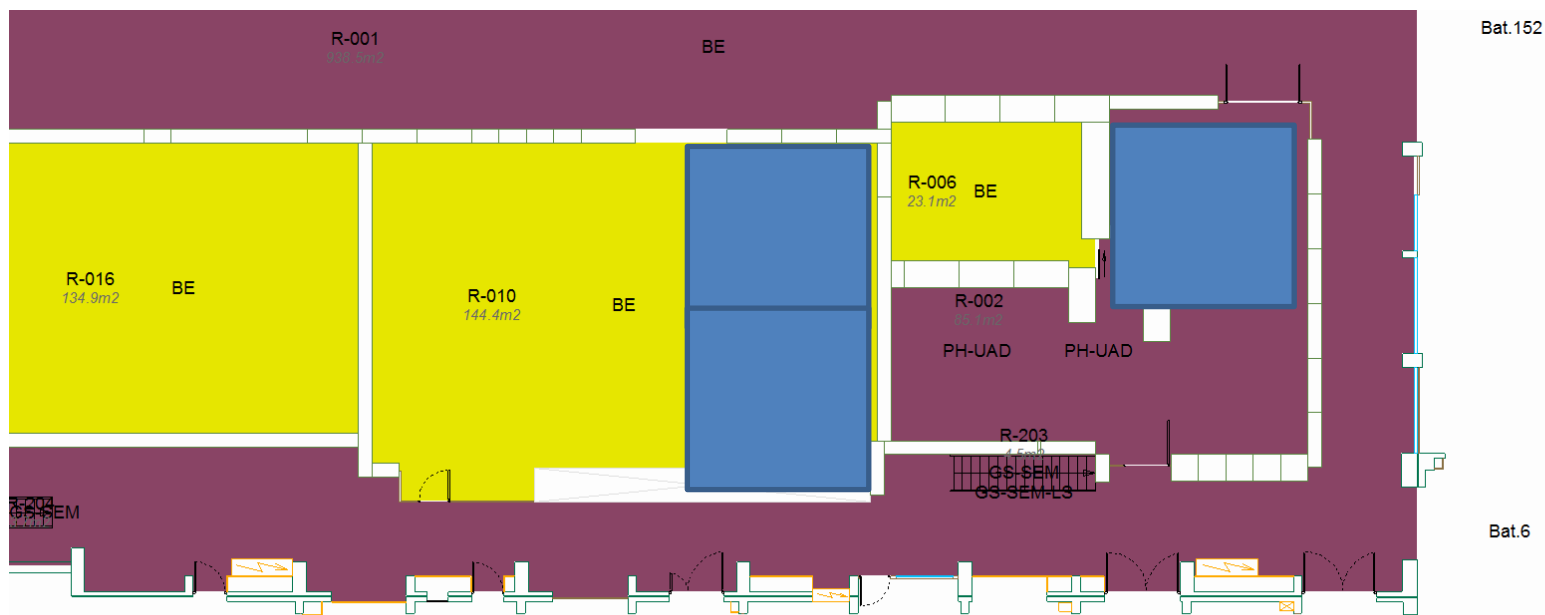
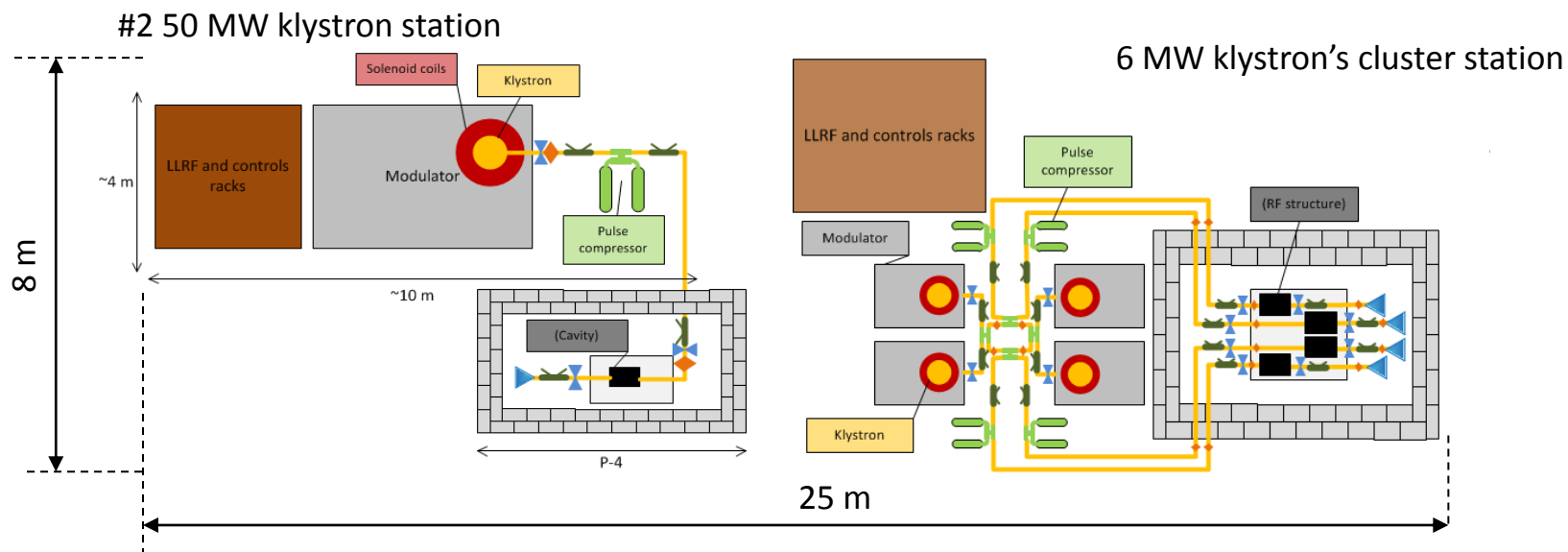
Compact SLED type pulse compressor.



Compact RF/vacuum gate valve and vacuum pumping port.

"Simple" -60 dB directional coupler.





Thanks for your attention!!