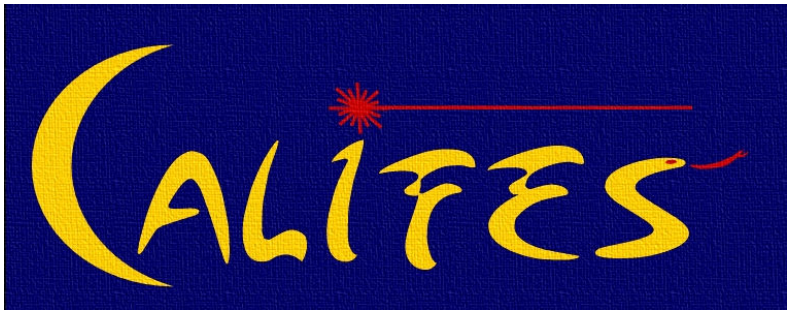



# and French contribution to CTF3

- Third commissioning period from 15th of June to 3rd of July 2009.
- Progress in Power Phase Shifter
- **Progress in 12 GHz Stand Alone station contribution**

# Resuming the Commissioning

- Great laser improvement in energy and in beam size (between 0.2 and 0.3 nC/bunch), pulse picker to be upgraded.
- Command/Control from Working Sets.
- Deflecting cavity connected.
- Calibration programs for BPM to be tested.

# Some pictures from the elogbook

Laser spot on virtual cathode

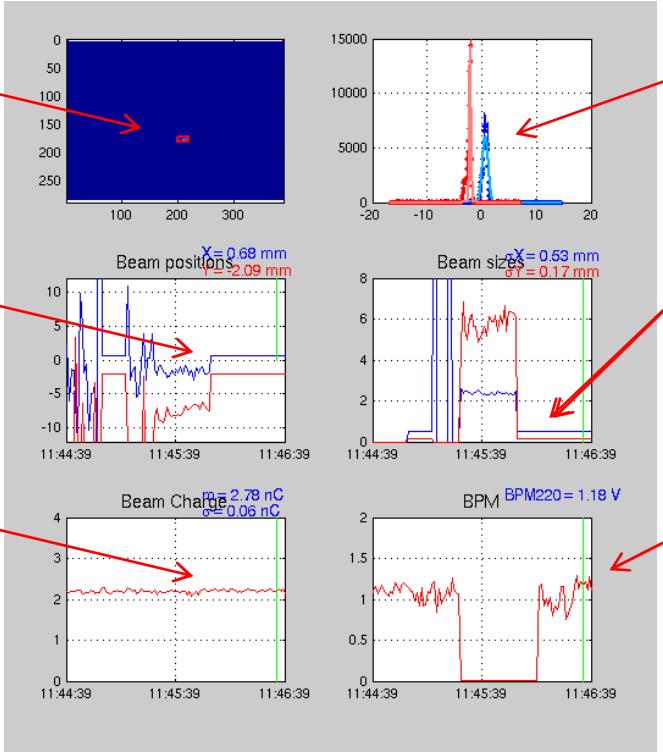
Gaussian fit

Laser spot position

Laser spot size

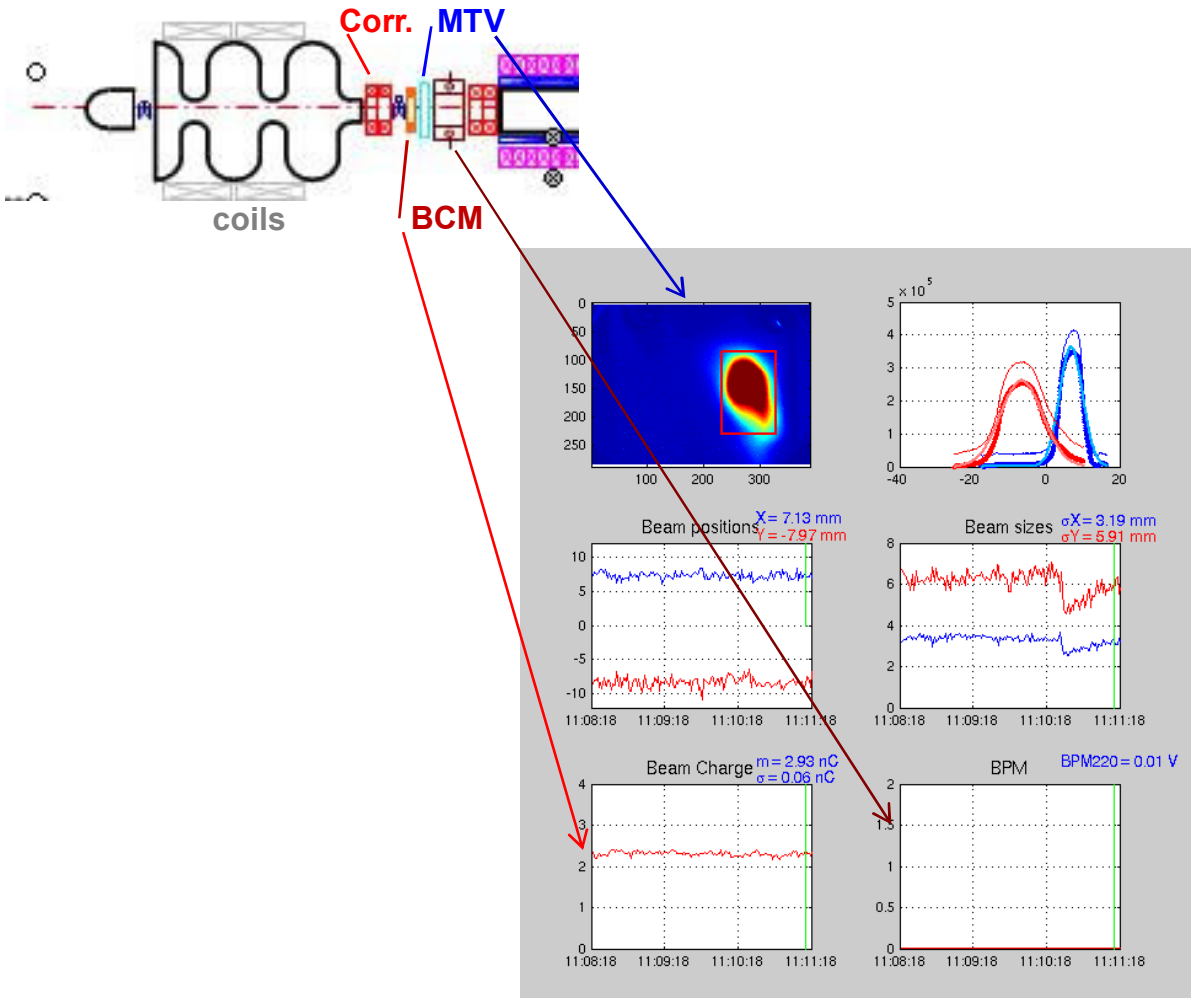
Beam charge

1st BPM sum signal




MTV 0125 picture

# Beam at the gun output




MTV 0225 picture

# Connecting the deflecting cavity

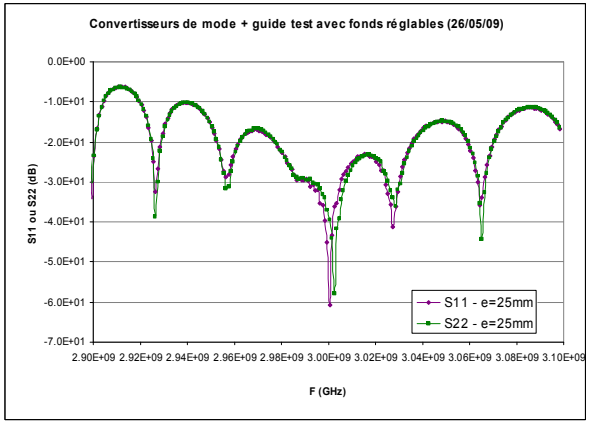

What ? Where ?

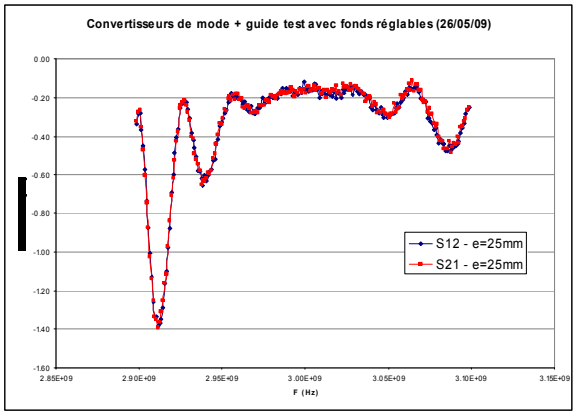
In the waveguide from MKS14 to the deflecting cavity (but where exactly ?)
Position found by pulse reflection delay

A device used in the oven of the brazing contractor.

# Power Phase Shifter

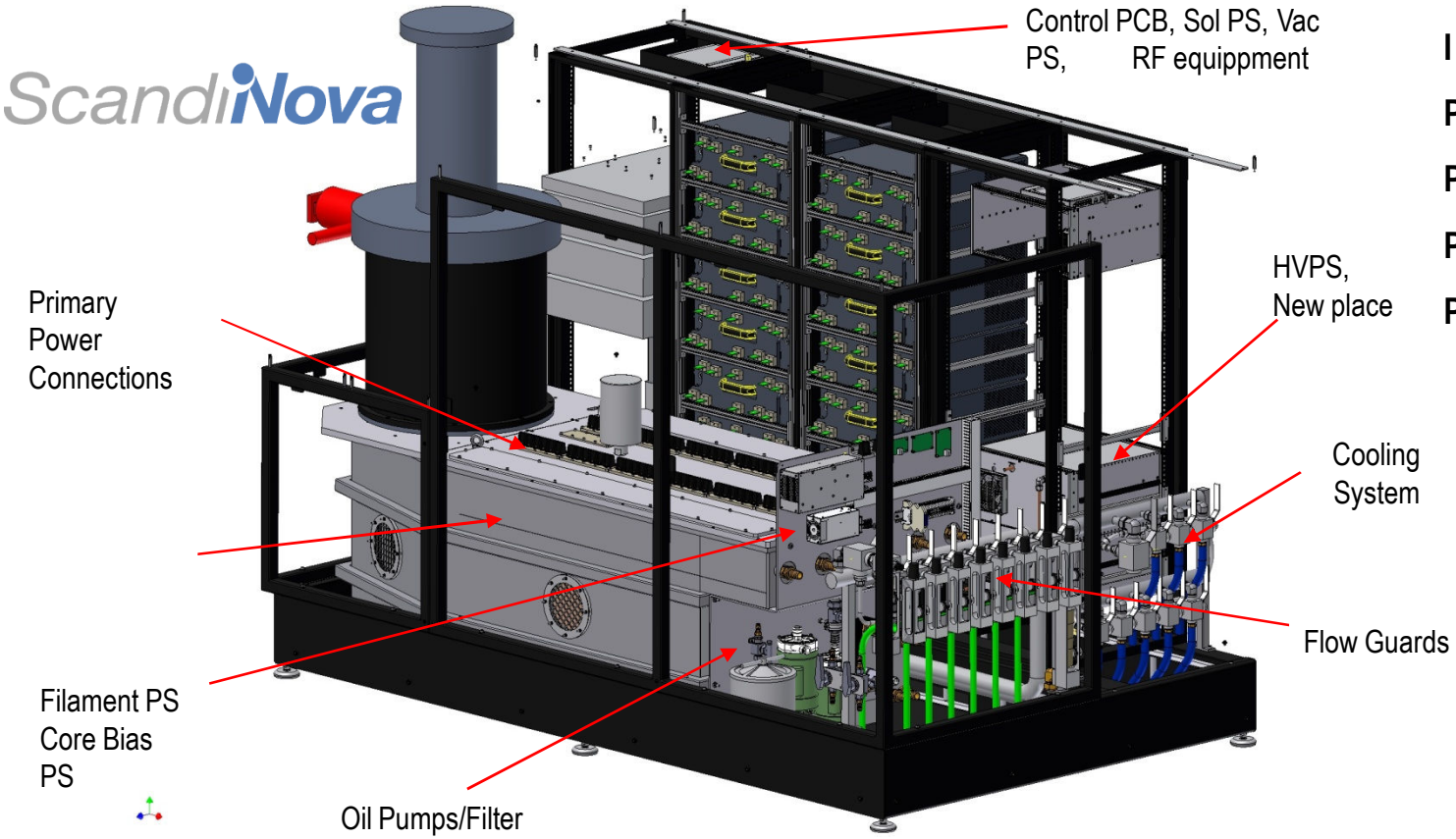
- Mode convertors received and tested at Saclay to tune the final dimensions before the 4th brazing
- Sliding circular waveguides to be received week 27.



# 12 GHz test stand contribution

- Authorization to buy this modulator in Sweden




**U = 410 kV**

**I = 262 A**

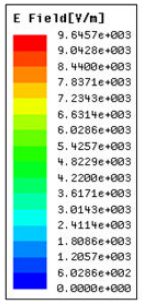
**P top = 107,4 MW**

**P av = 25,42 kW**

**PW top = 1 us**

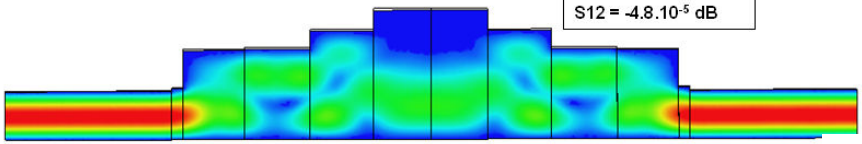
**PRF = 10-100 Hz**

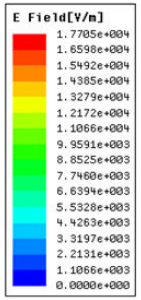
# 12 GHz Vacuum valve




At 11.424 GHz, with SLAC drawings:

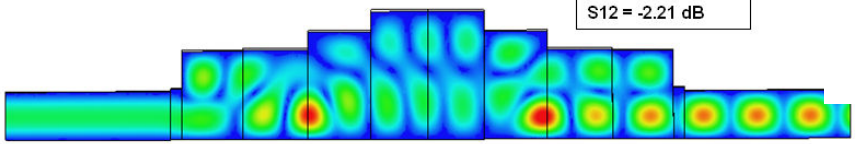
Fc = 9.603 GHz
S11 = -49.6 dB
S12 = $-4.8.10^{-5}$ dB

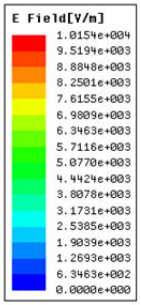





At 11.9942 GHz, with SLAC drawings:

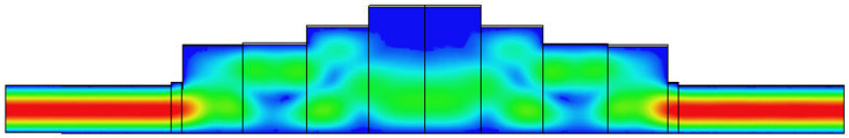
S11 = -3.99 dB
S12 = -2.21 dB

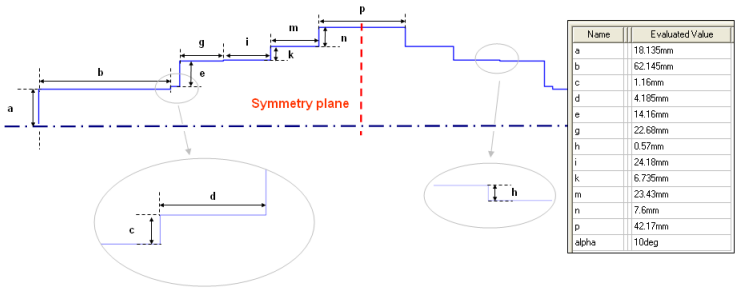




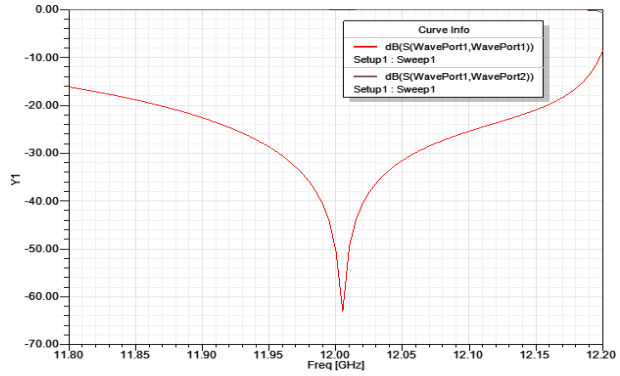

At 11.9942 GHz, after scaling:

S11 = -44.2 dB
S12 = $-1.65.10^{-4}$ dB





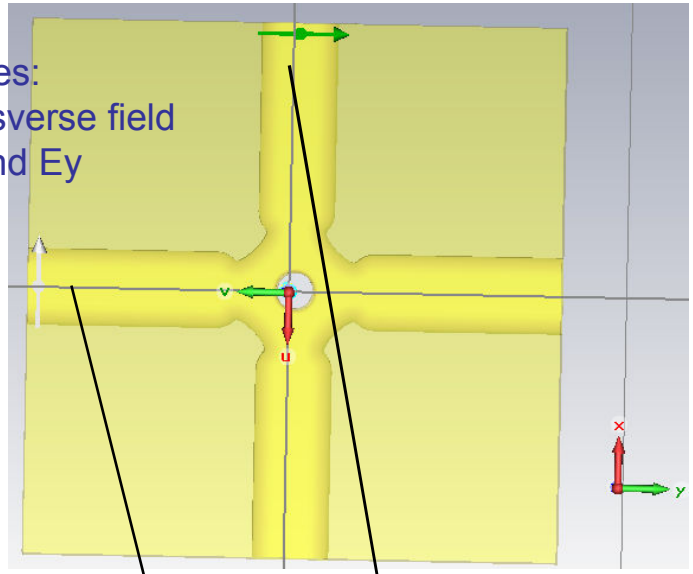

| Name | Evaluated Value |
|---|---|
| a | 18.135mm |
| b | 62.145mm |
| c | 1.16mm |
| d | 4.185mm |
| e | 14.16mm |
| g | 22.68mm |
| h | 0.57mm |
| i | 24.18mm |
| k | 6.735mm |
| m | 23.43mm |
| n | 7.6mm |
| p | 42.17mm |
| alpha | 10deg |



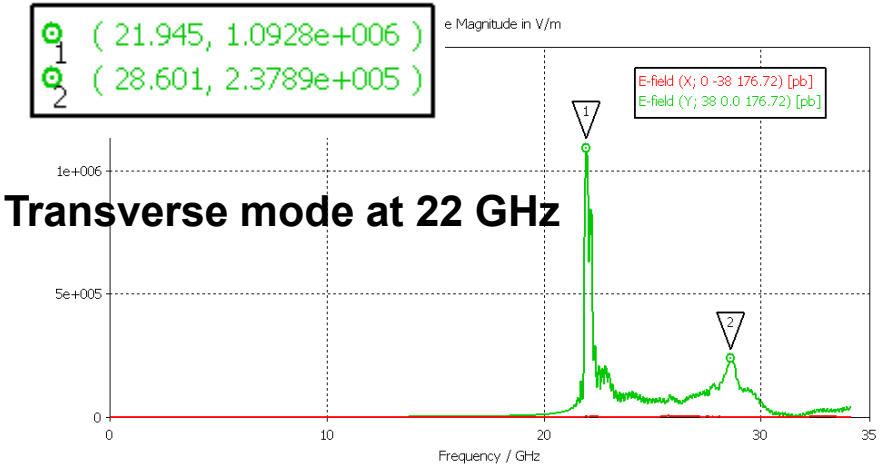

Courtesy of Franck Peauger

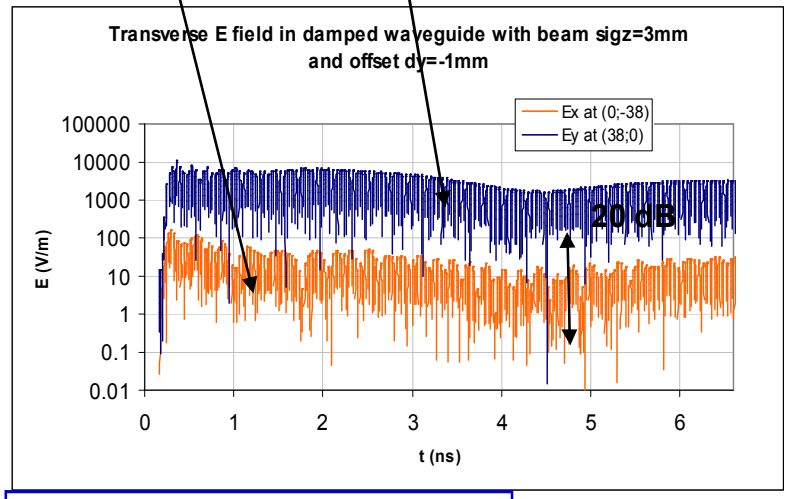
# Wakefield monitors studies

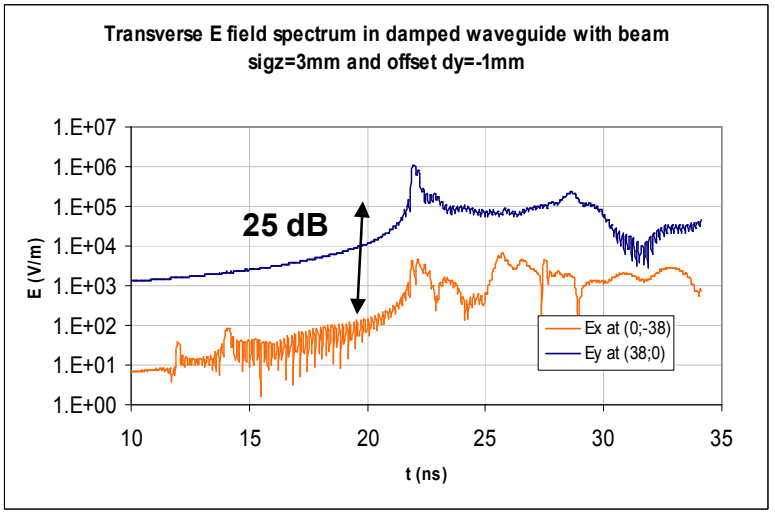
Probes:
Transverse field
Ex and Ey



sigma z = 3mm , off axis beam dy=-1mm




Courtesy of Franck Peauger