



# ALBA RF Status

Francis Perez

# The RF Group

Angela Salom

Michel Langlois

Paco Sanchez



Marc Cornelis  
Roberto Ranz

(support Eng. Div.)  
(support Comp. Div.)

# Status

- General
- Booster Cavity
- SR Dampy Cavity
- Transmitters
- Waveguide
- LLRF
- Next

# ALBA Schedule

The access to the building has been delayed by 9 months except for the LINAC area.

LINAC commissioning on going, SAT next week

Start installation Booster, 1st December 2008

Booster commissioning, July 2009

SR commissioning, April 2010

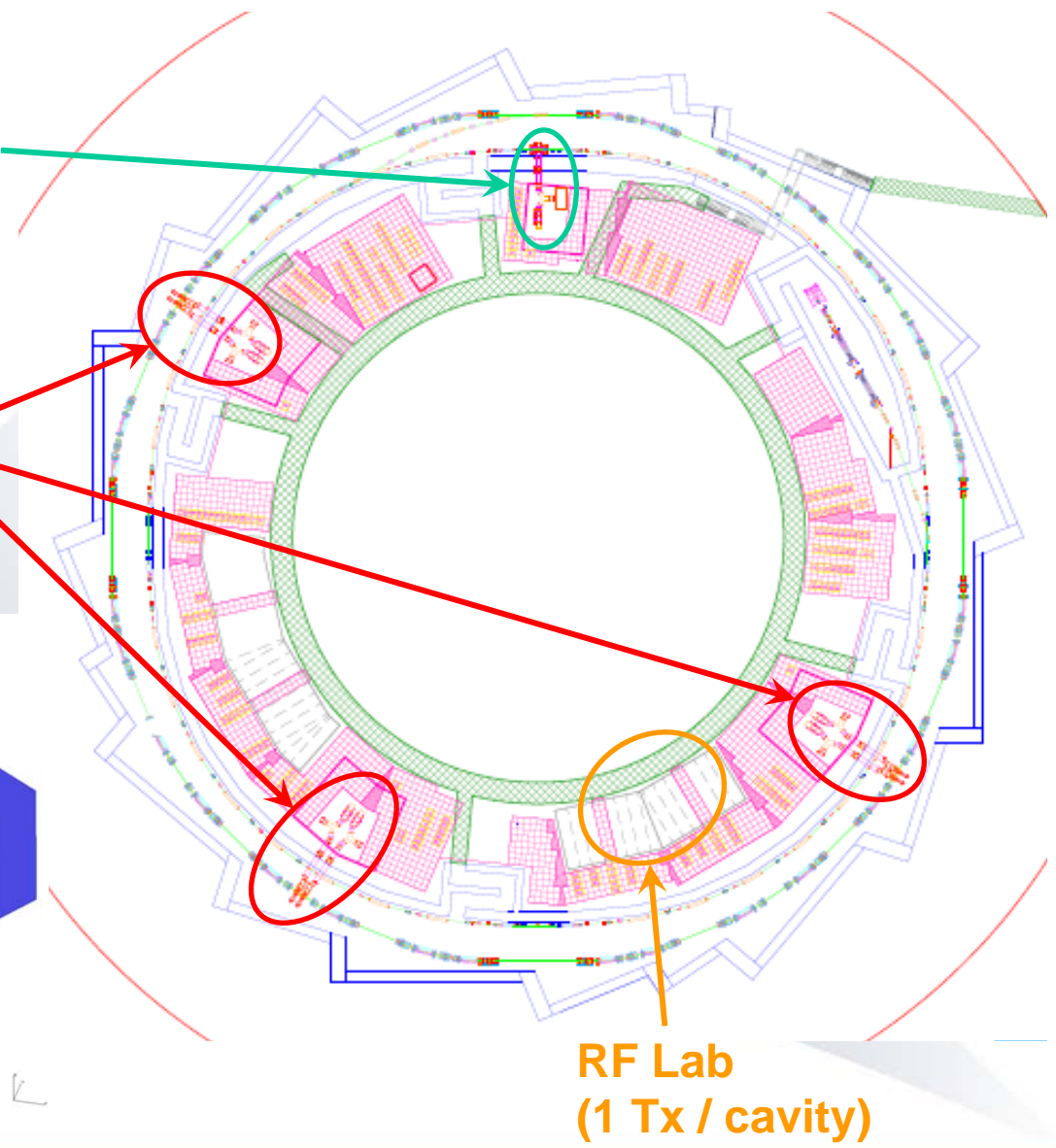
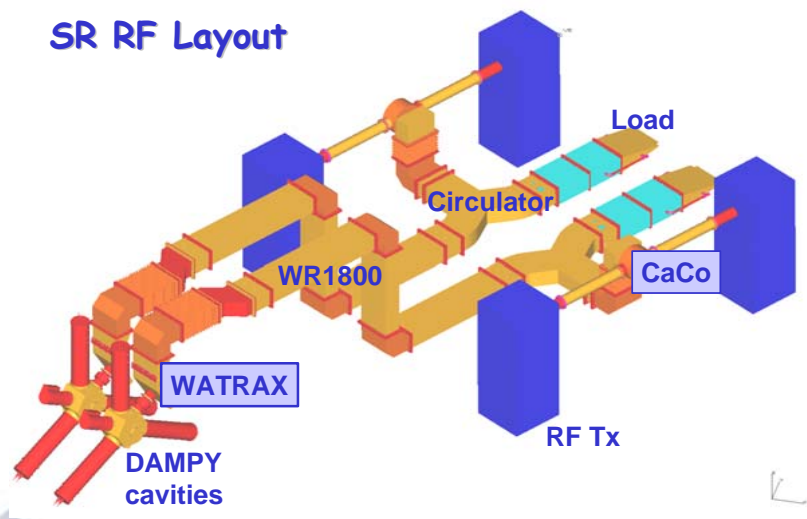
Beam for users, January 2011

# General Layout

**Booster RF Plant**  
(1 Tx / cavity)

**Storage Ring RF Plants**  
(2 Tx / cavity)

**SR RF Layout**

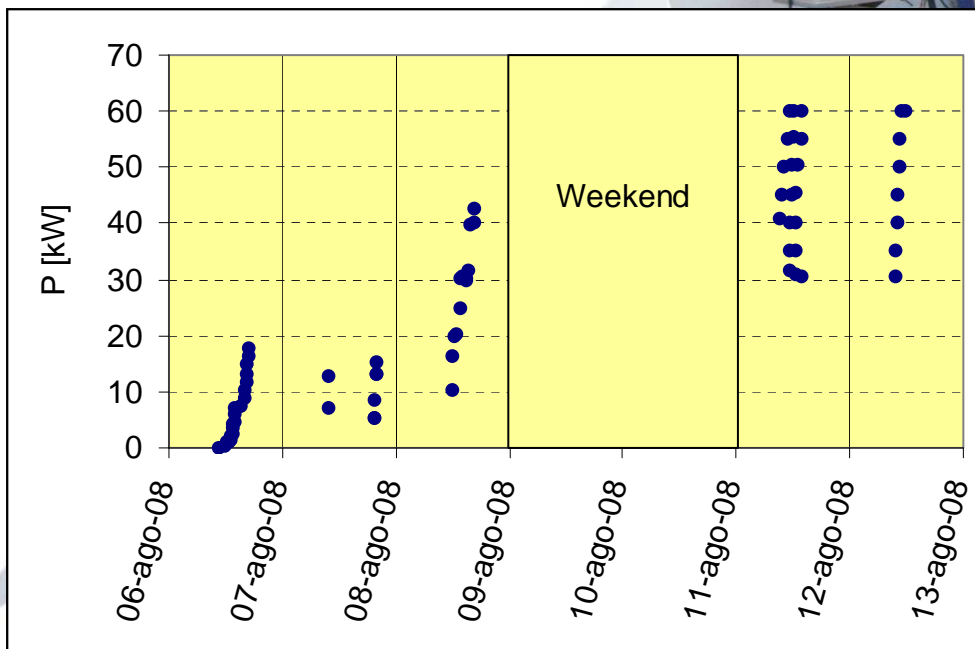
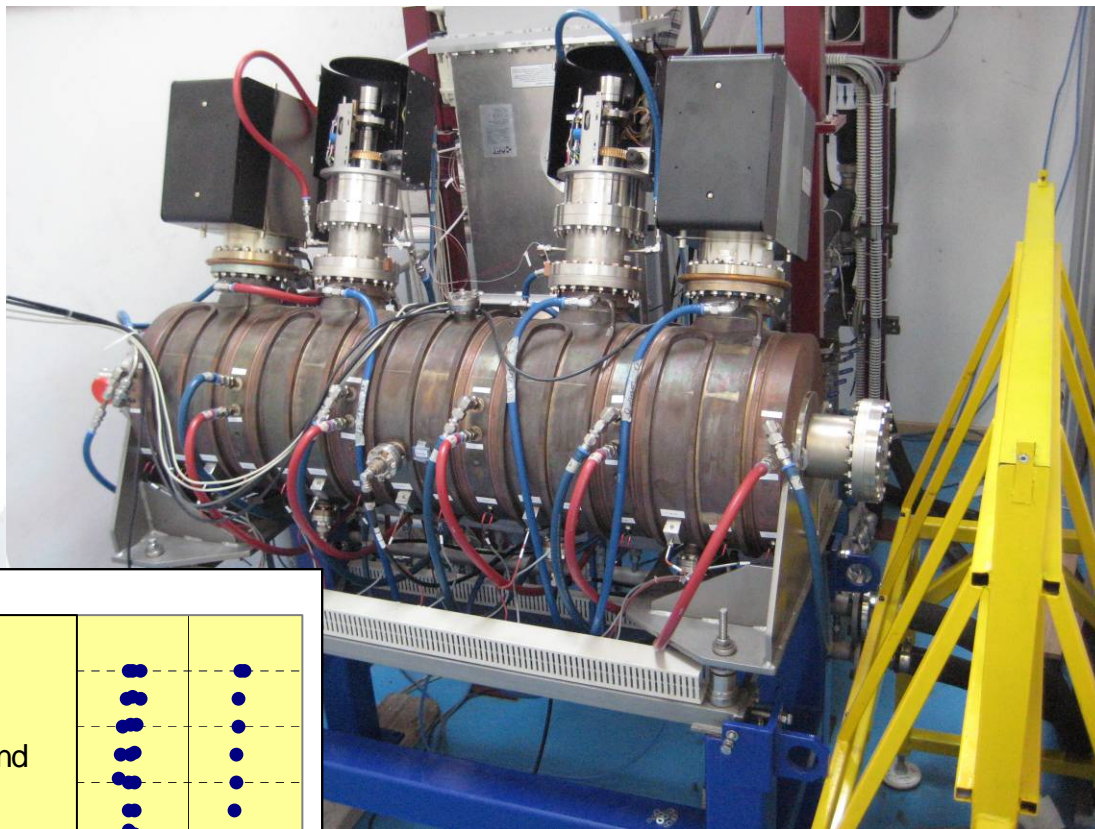


**RF Lab**  
(1 Tx / cavity)

# Booster Cavity

5-cell Petra type cavity

Conditioned up to 60 kW  
without problems.

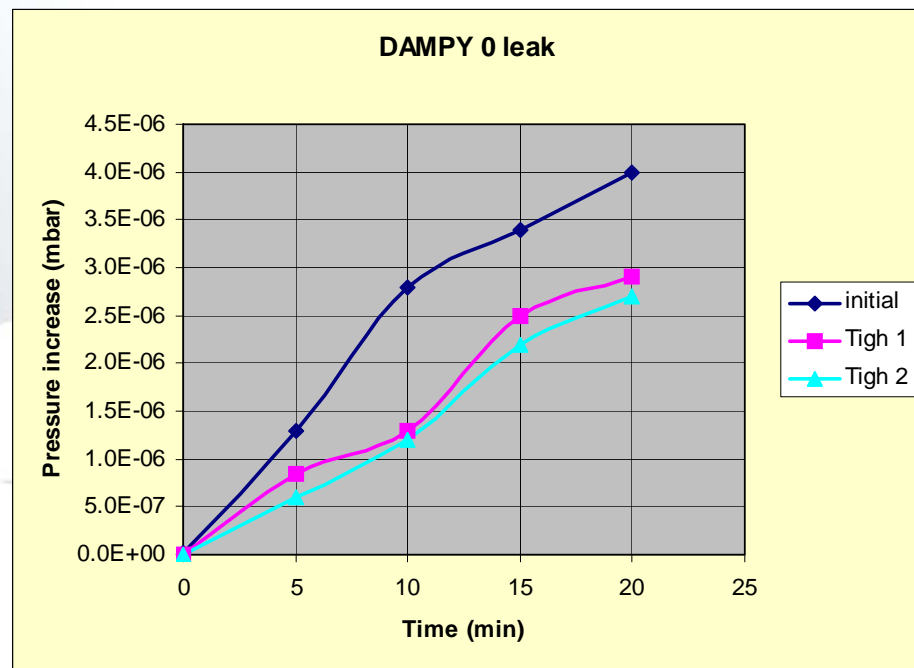
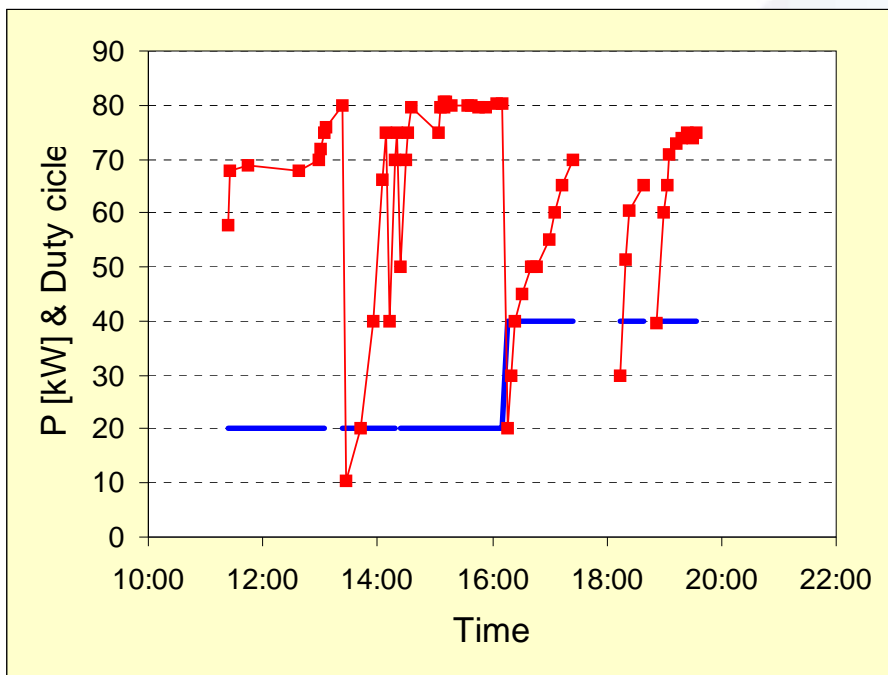


Ready to be installed.

# SR Dampy Cavity

Conditioned up to

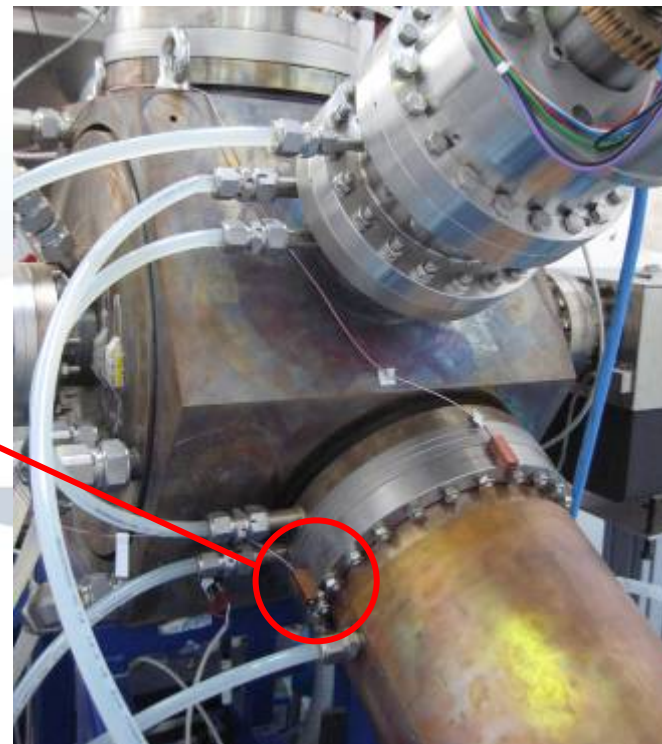
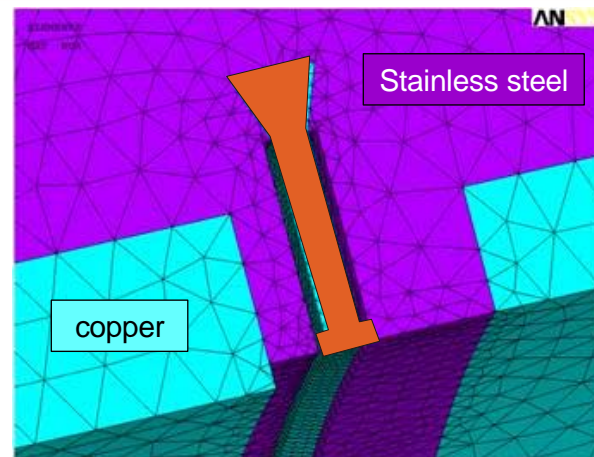
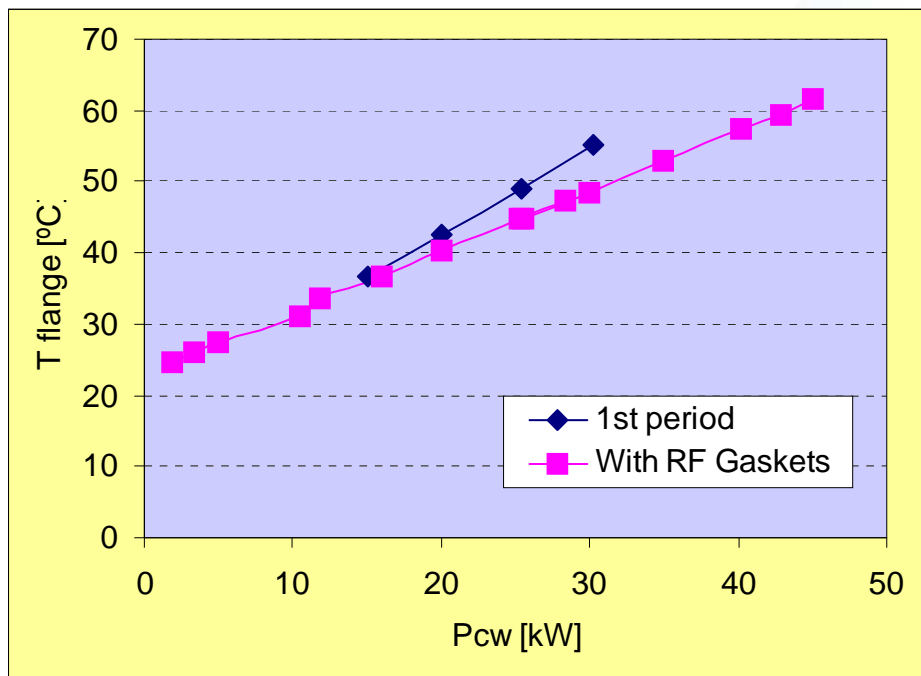
80 kW and 40% duty cycle → Leak at flange  
& 30 kW & 45 kW cw



# SR Dampy Cavity

Flange overheating in the cavity:

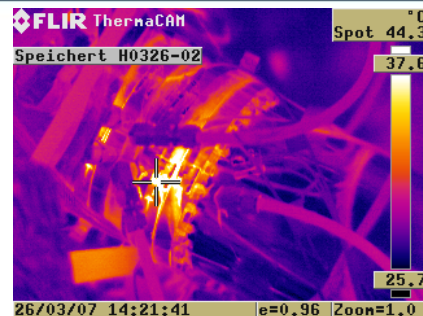
1) *RF Gasket* to short cut the RF path





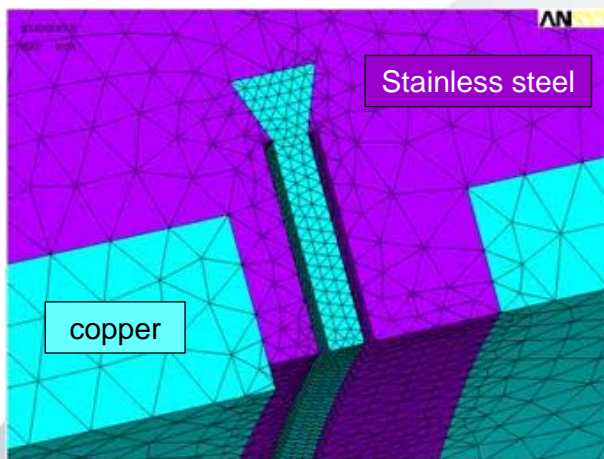
# SR Dampy Cavity

Flange overheating in the cavity:

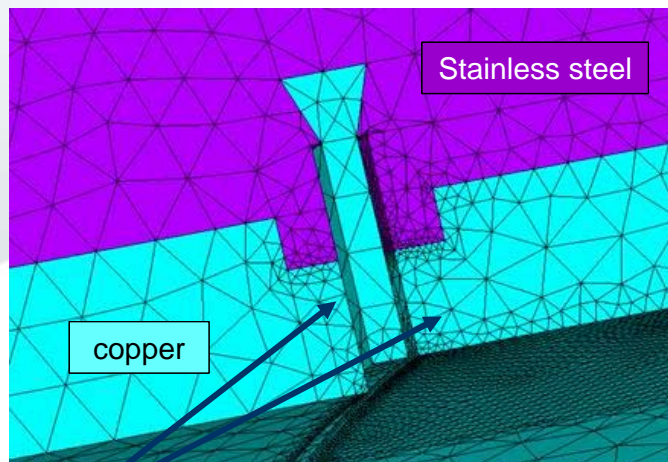


2) *Flange modification is implemented in the series production*

original design



modified design



Added copper to better dissipate the heat

# SR Dampy Cavity

Cavity 01 & 02 delivered September 2008



Power test in few weeks

# Transmitters (TX)

TX01 delivered 6th August 2007

TX02 – TX06 delivered in July 2008

TX07 – TX14 will be delivered in October 2008



Paco will talk about the new 90 kW IOT in them

# Waveguide

Standard Comp. (MEGA)  
Dummy Loads (AFT)  
Circulators (Ferrite Inc.)

Delivered in April 08  
Delivered in May 08  
Problems with the  
permanent magnets  
To be delivered October 08

Watrax (AFT & MCI)

MCI ones delivered  
AFT ones to be delivered Nov 08

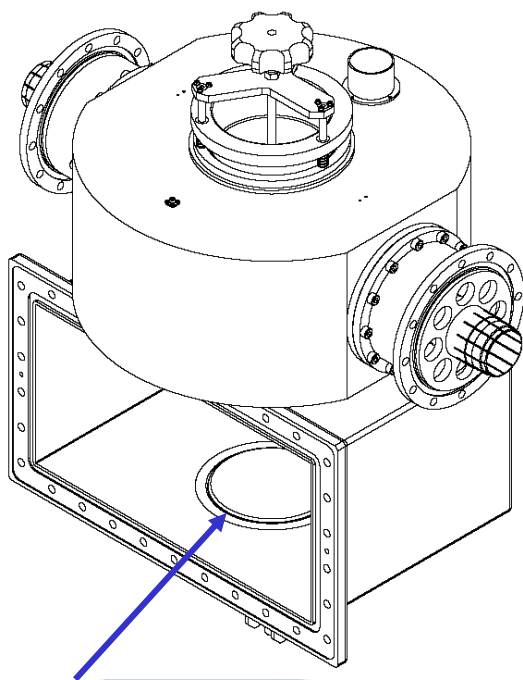
CaCo (Rymosa - MCI)

Pre-series accepted in September 08  
Start series production

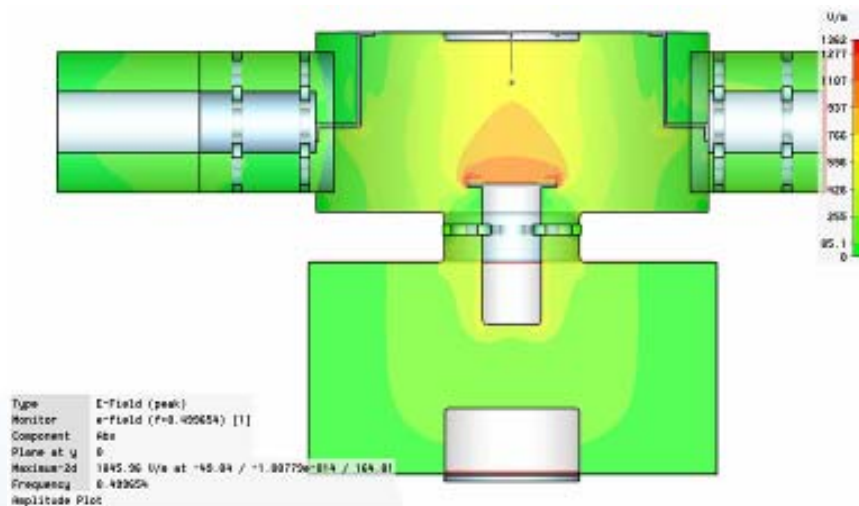


# CaCo

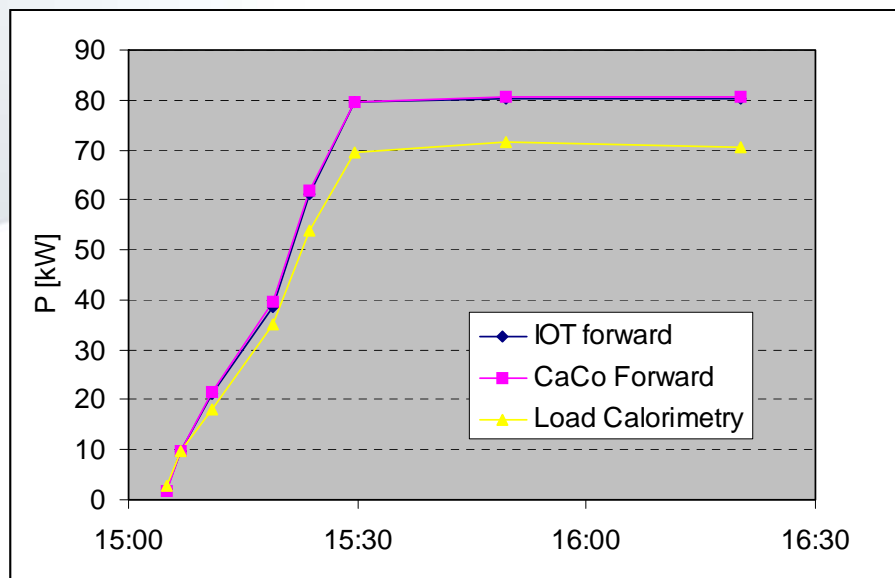
## Cavity Combiner



Plunger for single IOT operation  
(actuated with a piston)



80 kW operation in single IOT



# Digital LLRF

See Angela's presentation





Next

LLRF pre-assembly	July 08 – November 08
RF plants installation	December 08 – July 09
RF plants commissioning	March 09 – October 09
Booster commissioning	July 09
SR commissioning start	April 10