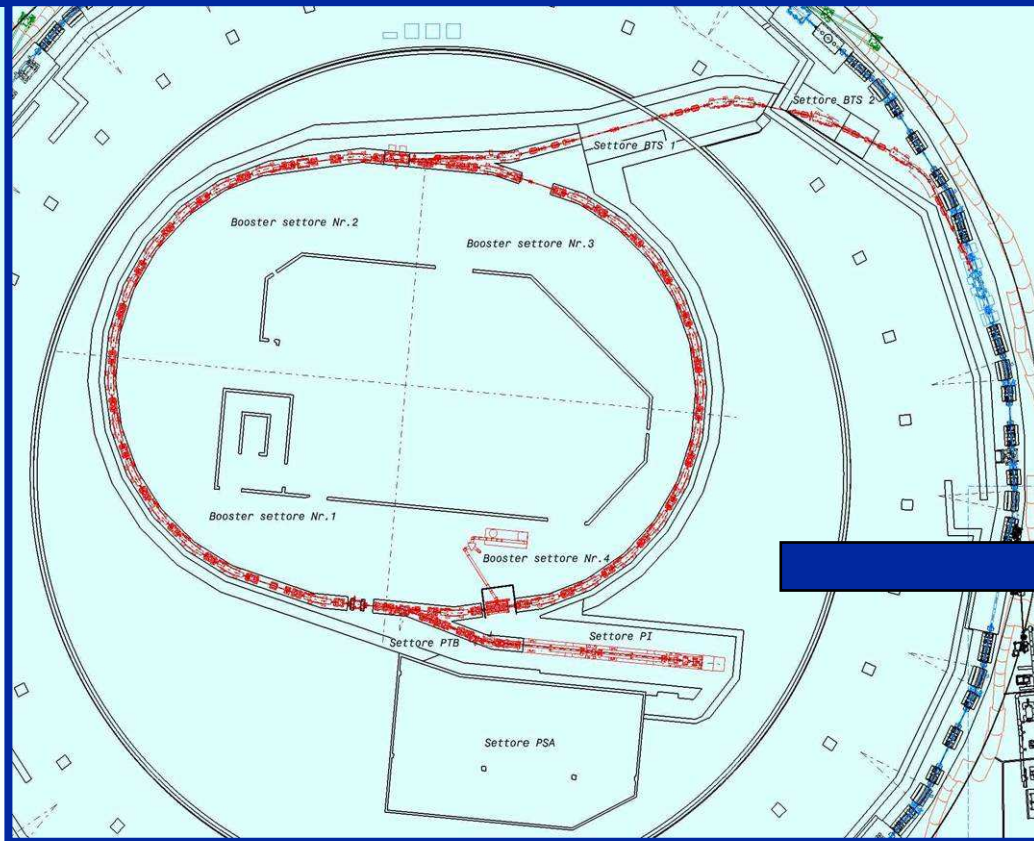


# ***Installation and Commissioning of the RF System for the New Booster Injector***

***A. Fabris on behalf of the Elettra RF Group***



# Introduction / Components / Status

## ➤ TARGET OF THE BOOSTER PROJECT:

- **REPLACE THE LINAC INJECTOR WITH A FULL ENERGY BOOSTER.**
- **ENERGY OF THE MACHINE IS 2.5 GeV.**
- **TOP-UP OPERATION SHALL BE POSSIBLE.**
- **BOOSTER IS ALLOCATED INSIDE THE EXISTING STORAGE RING BUILDING.**

## ➤ RF REQUIREMENTS

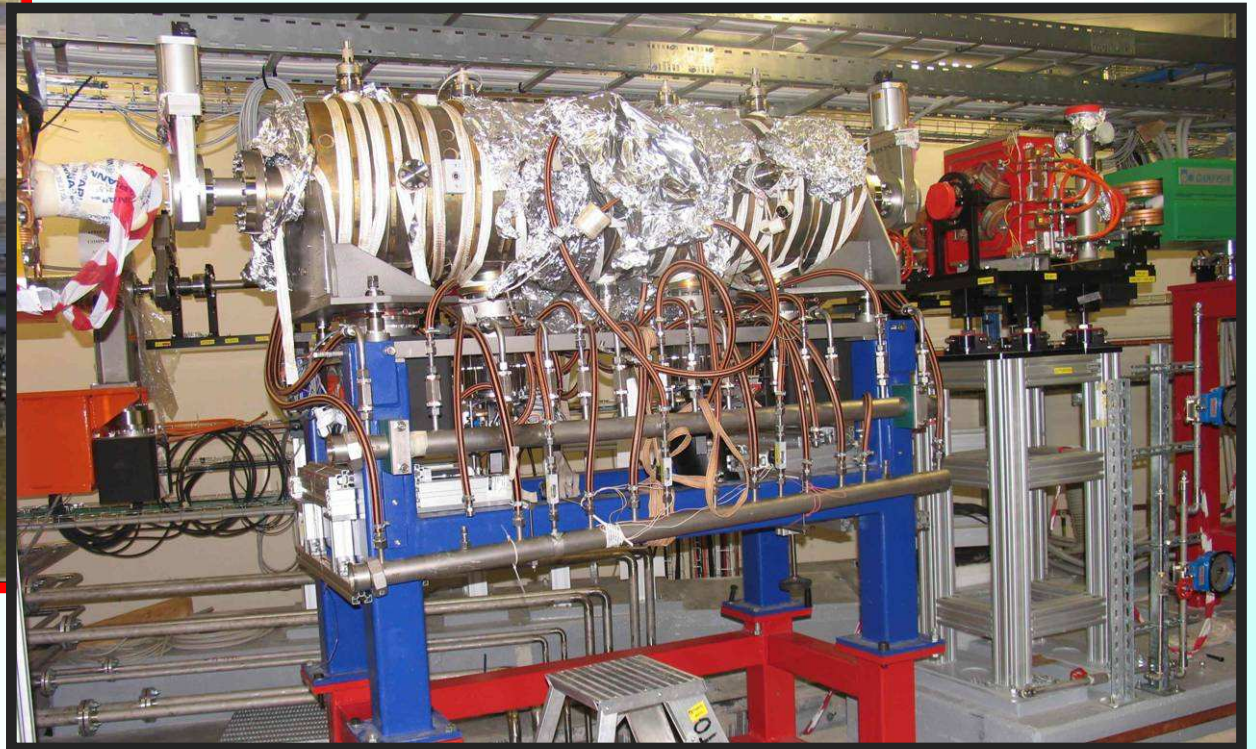
- **Frequency**                      **499.654 MHz**
- **Voltage**                              840 kV (Nominal optics)  
730 kV (Low emittance optics)
- **RF POWER:**                      30 kW (Nominal optics)  
24 kW (Low emittance optics)



## Introduction / Components / Status



- ›The RF amplifier is the one released following the RF upgrade project
- ›The cavity is a 5 cell cavity.



- ›Low Level is composed of:
  - ›Amplitude loop
  - ›Frequency and field flatness loop
  - ›Phase loop

# Introduction / Components / Status



## Introduction / Components / Status

- **INSTALLATION HAS BEEN COMPLETED.**
- **BOOSTER COMMISSIONING HAS STARTED (SEPT. 25).**
- **RF SYSTEM SWITCHED ON (SEPT. 28).**
- **BEAM WAS CAPTURED ON THE SAME DAY.**
- **COMMISSIONING IS CONTINUING TO ASSESS THE PERFORMANCES OF THE MACHINE.**
- **FIRST INJECTION TO SR IS PLANNED FOR THE FIRST RUN OF 2008.**

