## RFX-mod2 Structure and diagnositc



RFX-mod2 has been equipped with a comprehensive set of diagnostic system among which:

- Interferometer
- Spettroscopy from X UV to visible
- Neutral Y-ray detector



Parameters of RFX-mod2:

- 2 MA Plasma max corrent
- 20 M°C Plasma max temperature
- 0,5 s Plasma time pulse
- ~ 5\*10<sup>19</sup> particles/m<sup>3</sup>



## In-Vacuum Assembly

It includes:

- The first wall made of graphite tiles in order to sustain the high power loads related to the plasma-wall interaction.
- · An in-vacuum stabilizing copper shell (3 mm thick).





(VTSS)













• 1424 Magnetic sensors, • 244 Electrostatic sensors, Pellet injectors (cryo and room temperature) Thomson scattering

It provides mechanical support to the external coils; it has the function of vacuum vessel still encompassing the conductive stabilizing shell.

VTSS will have approximately 150 ports interfaced with the RFX-mod2 machine sub-system (diagnostics, pumping and fueling). Both VTSS and the Copper shell have poloidal and toroidal gaps to allow the penetration of the vertical magnetic field for equilibrium control, and of the electric field, for the sustainment of plasma current.

