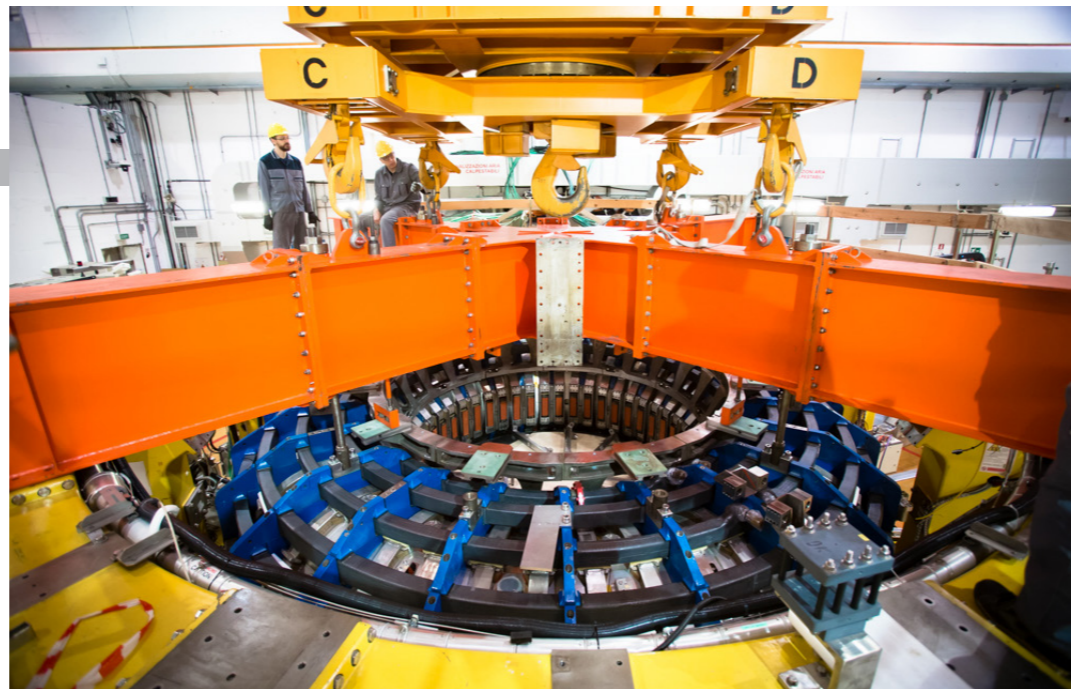
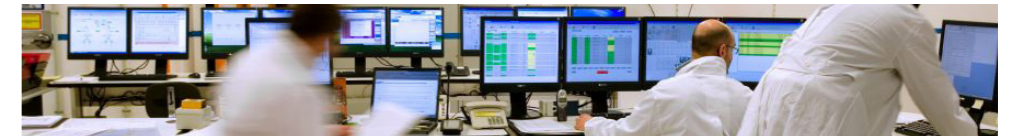


RFX-mod

the purpose



RFX-mod2 is a medium size device for the confinement of toroidal plasma, exploiting the Reversed Field Pinch (RFP) magnetic configuration. In the RFP configuration, the toroidal and poloidal magnetic fields have comparable amplitude and the toroidal field reverses its sign at the edge.

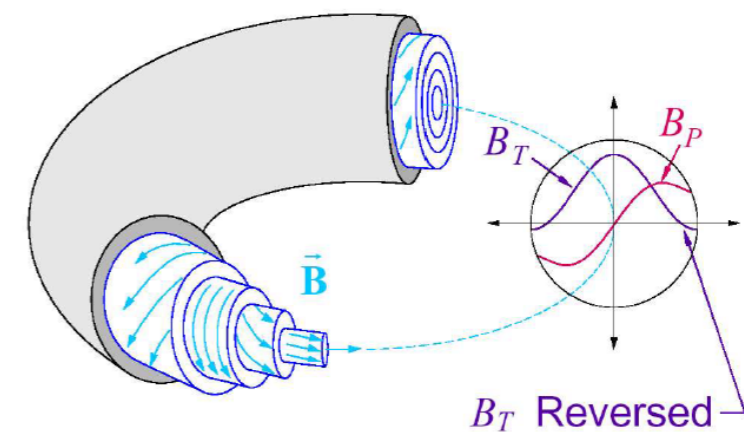
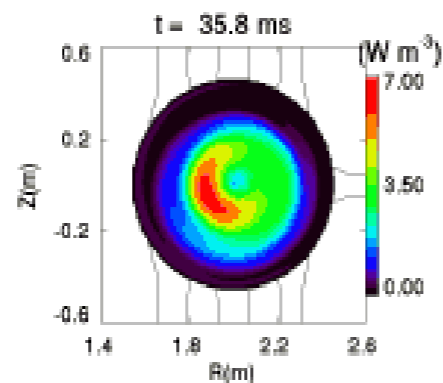
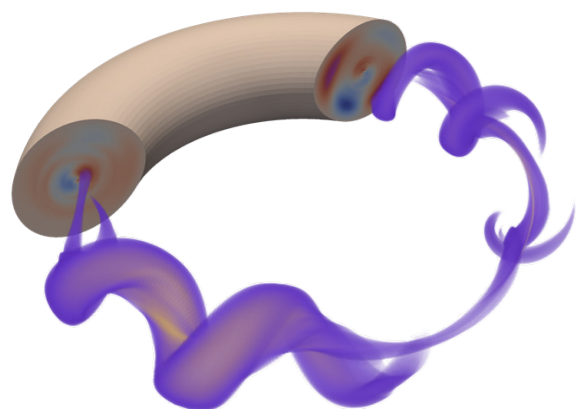


THE PURPOSE:

- Studying the potentialities of the RFP configuration in producing fusion plasmas.
- Understanding of RFP plasma physics.
- Exploring of improved confinement regions in the RFP.
- Advancing the active control of MHD instabilities.

POTENTIAL ADVANTAGES OF THE RFP:

1. No intrinsic limit on plasma current - high ohmic heating, sufficient to reach fusion condition (no need of additional heating system).
2. Self generated internal toroidal magnetic field (dynamo mechanism) - No need of superconductors for the toroidal field coils.
3. Operation without disruption (fast uncontrolled termination of plasma current).



Improved helical plasma region in RFX-mod

WEAKNESS OF RFP:

1. The configuration is characterized by several Magneto-Hydro-Dynamic instabilities.
2. At present, low energy confinement time.