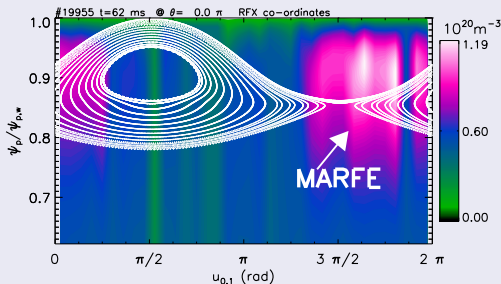


Density limit studies in the tokamak and the reversed-field pinch EX/P1-42

0/1 island and MARFE in the RFP



✓ **Background:** in the FTU tokamak the maximum core density scales with the magnetic field, $n_0 \sim B^{1.5}$

✓ In FTU and the RFX reversed-field pinch (RFP) edge density follows instead a Greenwald scaling $n_{\text{edge}} \sim 0.35 n_G$

✓ **Results:** High density is associated with the destabilization of edge resonating magnetic islands, 0/1 in the RFP and 2/1 in the tokamak

✓ **We demonstrate** that in FTU ECRH can stabilize the 2/1 mode

Perspective: with ECRH it is possible to overcome the critical edge density.