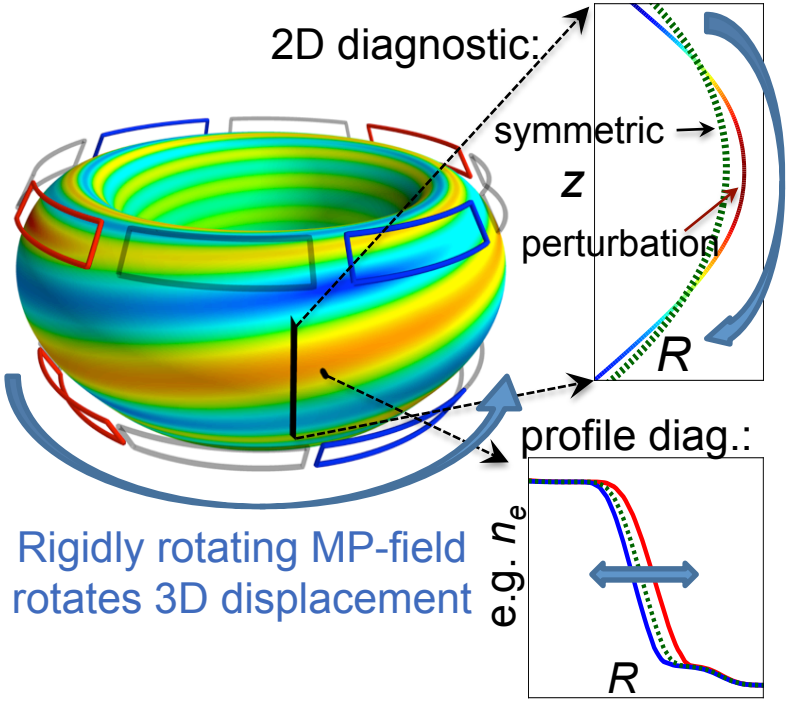
Plasma response from MPs in comparison to 3D ideal MHD

Measuring **3D** displacement:



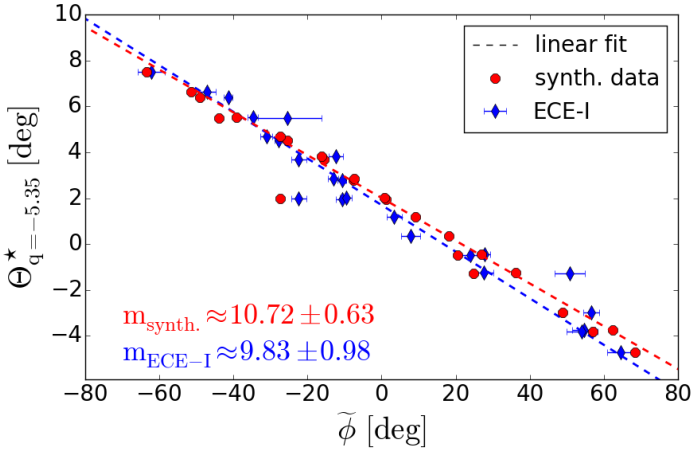
Rigidly rotating MP-field rotates 3D displacement

Poloidal mode structure from ECE-I:

$m_{pitch} \approx$ **10.7**

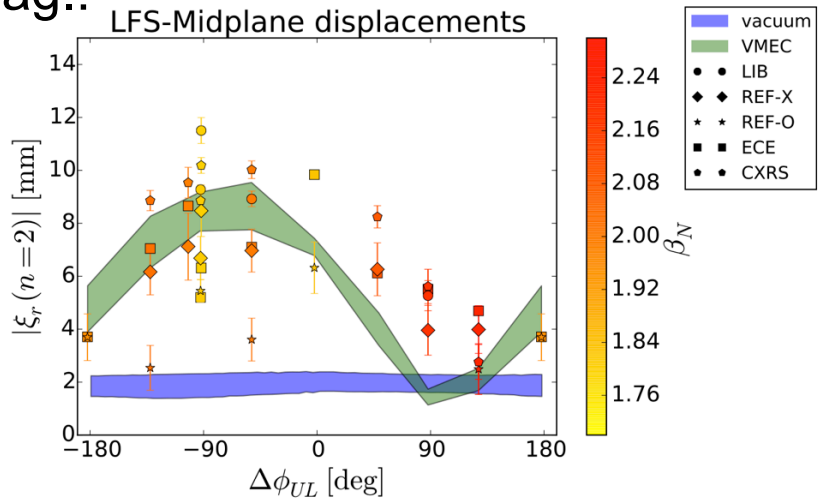
$m_{ECE\text{-}I} \approx$ **9.8**

$m_{VMEC} \approx$ **10.72**



- ECE-I agrees with VMEC
- 3D displacement is pitch-aligned

Amplitude of the 3D displacement from profile diag.:



- **3D displacement** clearly **exceeds vacuum field** approx. when ideal stable kink modes are excited ($\Delta\phi_{UL} \approx$ -90°).
- **3D** displacement is **pitch-aligned.**
- General, **good** agreement between **ideal 3D MHD** (VMEC) and **measurements**.

M. Willensdorfer et al., PPCF 2016