

MHH2 Modular Coils

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MHH2 modular coils - smooth windings with good-sized port openings

8 coils/period (4 coil types)

@ $R=7.5$ m , $B_0=5$ T:

$$I_c = 12.42 \text{ MA,}$$

$$\Delta(c-c)=0.565 \text{ m}$$

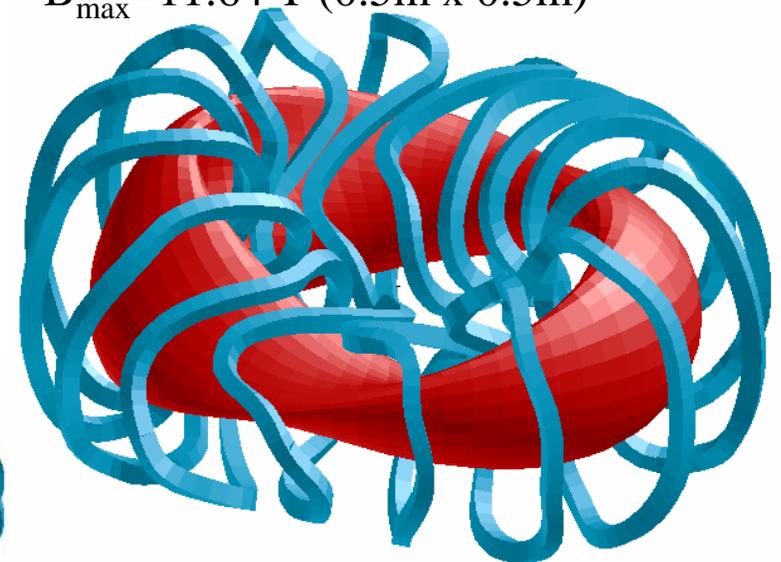
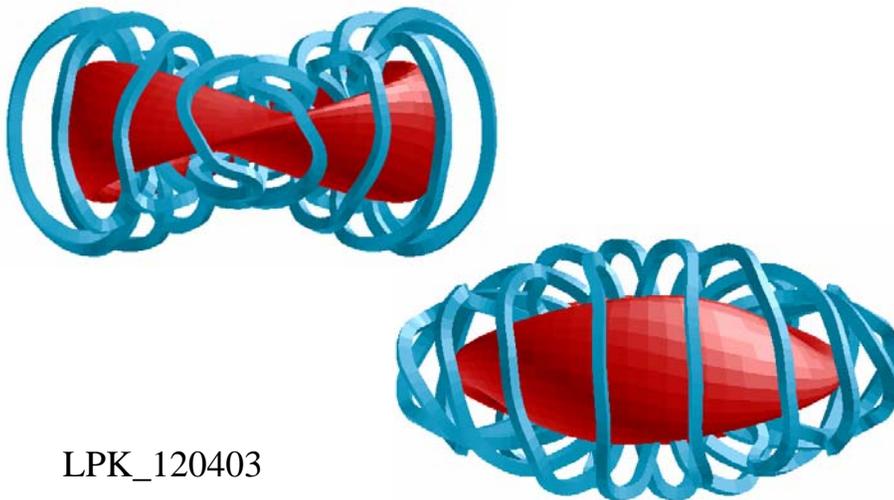
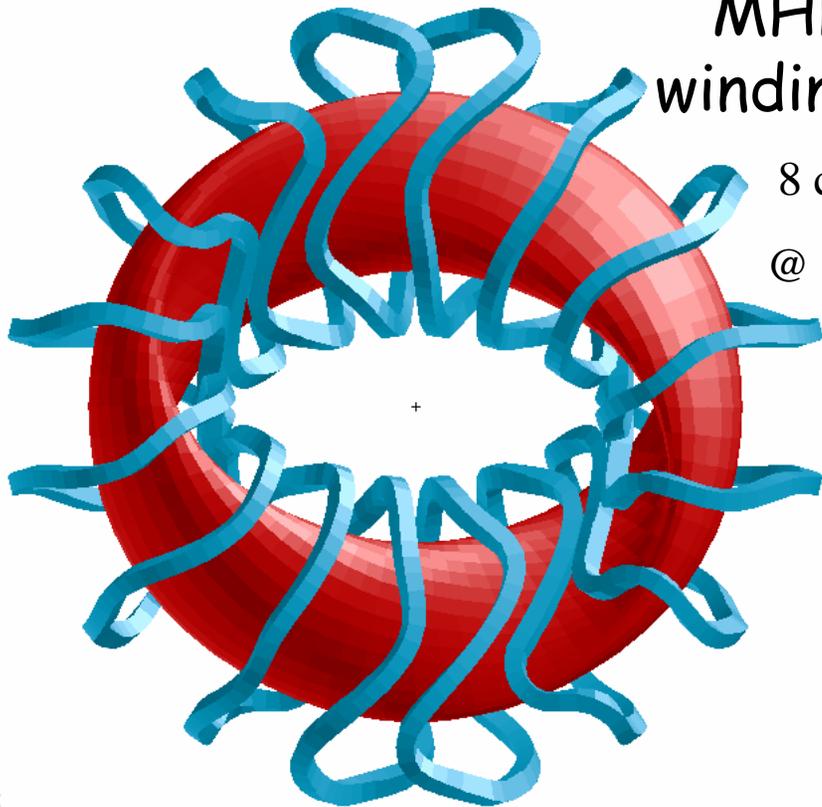
$$\Delta(c-p)=1.376 \text{ m (vacuum)}$$

$$L=30.97 \text{ m, } 30.53 \text{ m, } 29.77 \text{ m, } 29.86 \text{ m}$$

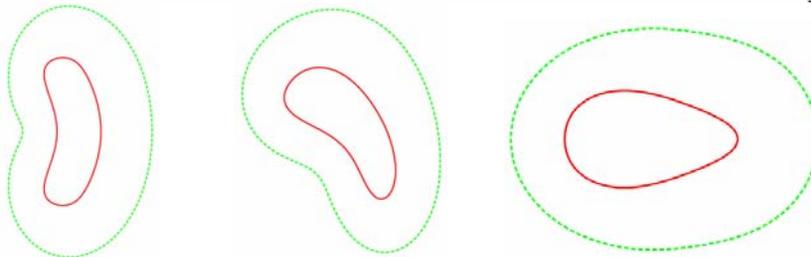
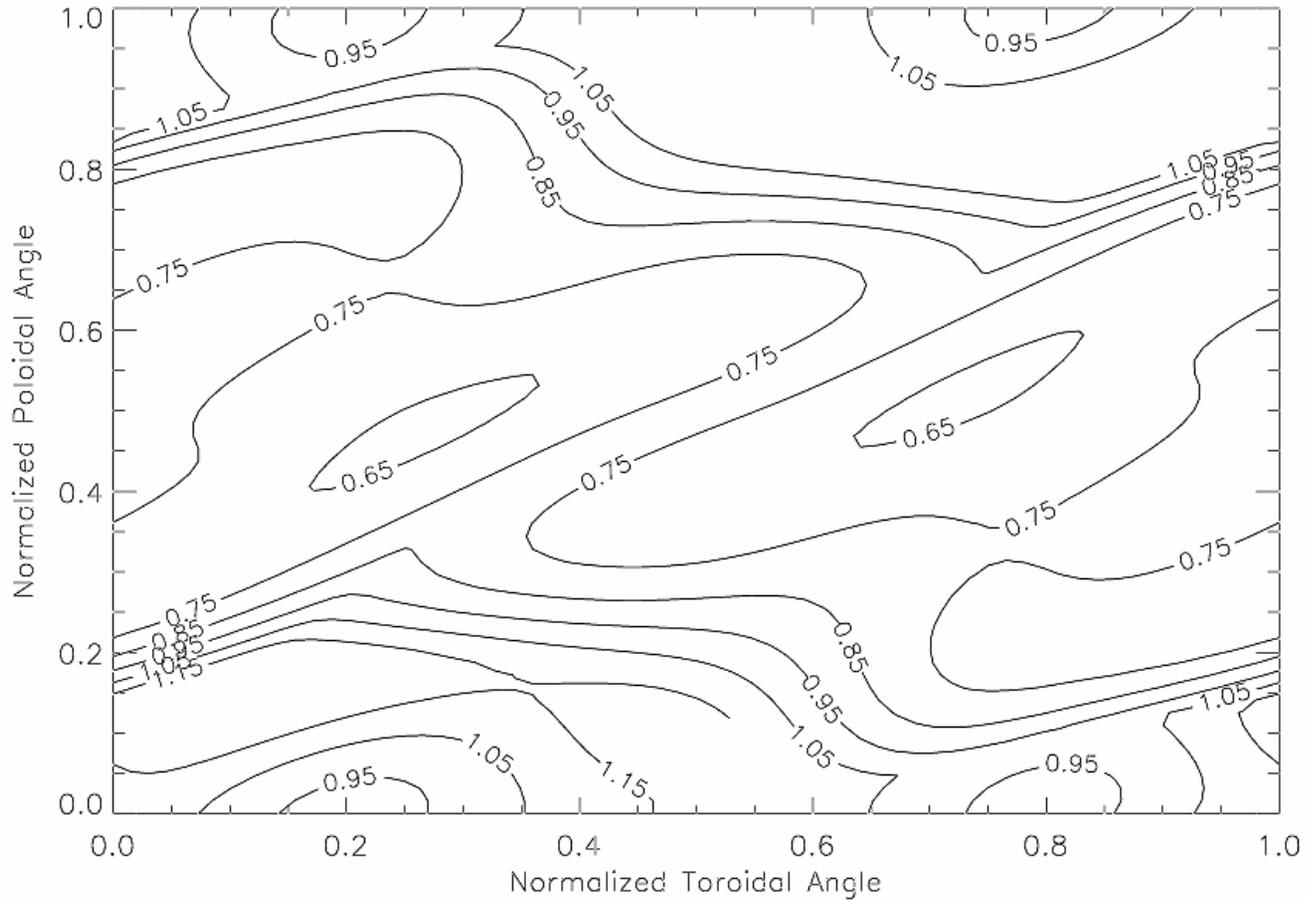
$$B_{\max}=17.60 \text{ T (0.3m x 0.3m)}$$

$$B_{\max}=13.85 \text{ T (0.4m x 0.4m)}$$

$$B_{\max}=11.64 \text{ T (0.5m x 0.5m)}$$



Distance between plasma and coil winding surface viewed on the plane of the normalized toroidal and poloidal angles for R=3.5 m.



Comparison of LCMS: originally designed (green-dash) versus reconstructed from coils with the free-boundary VMEC (red-solid)
– magnetic fields from coils capture the essence of the MHH2 structure.

