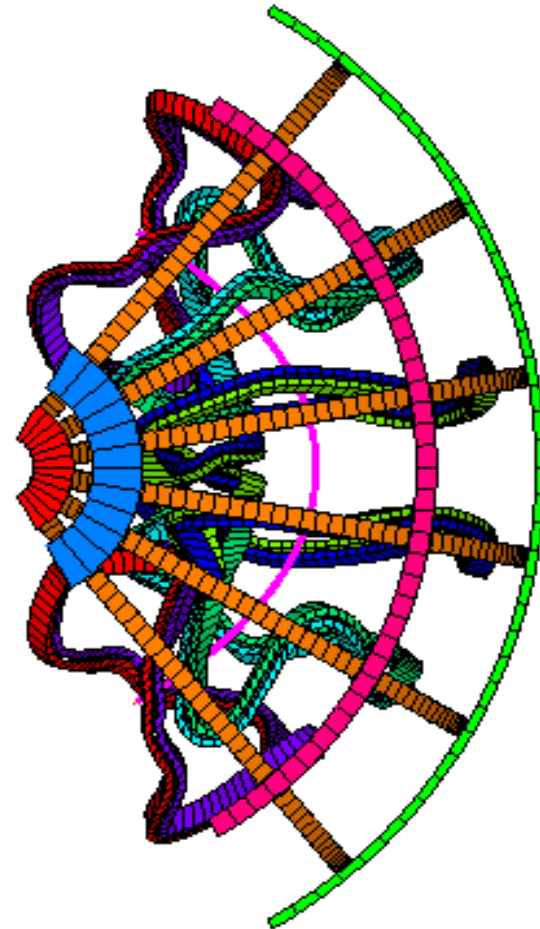
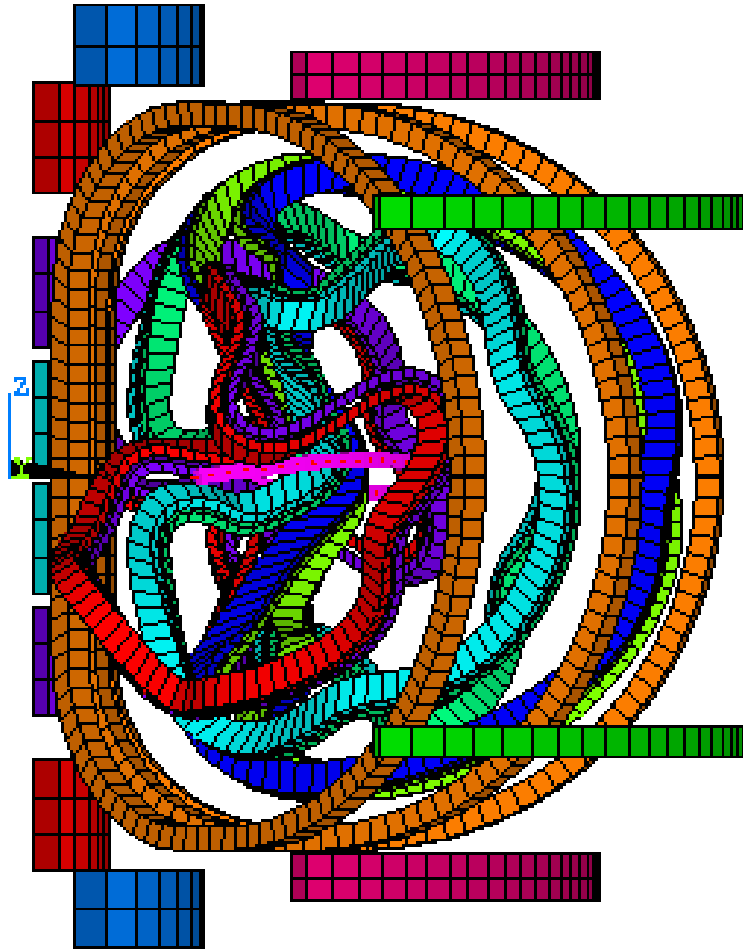
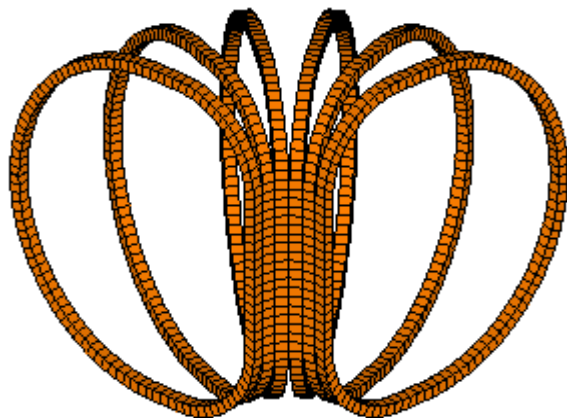


# ANSYS Model for EM Analysis



## TF coils



•Current (A/turn) – 350kA Ohmic Scenario at 0.516 seconds

M1 = 16201

M2 = 14648

M3 = 11590

PF1 = 19142

PF2 = 23443

PF3 = 6977

PF4 = 769

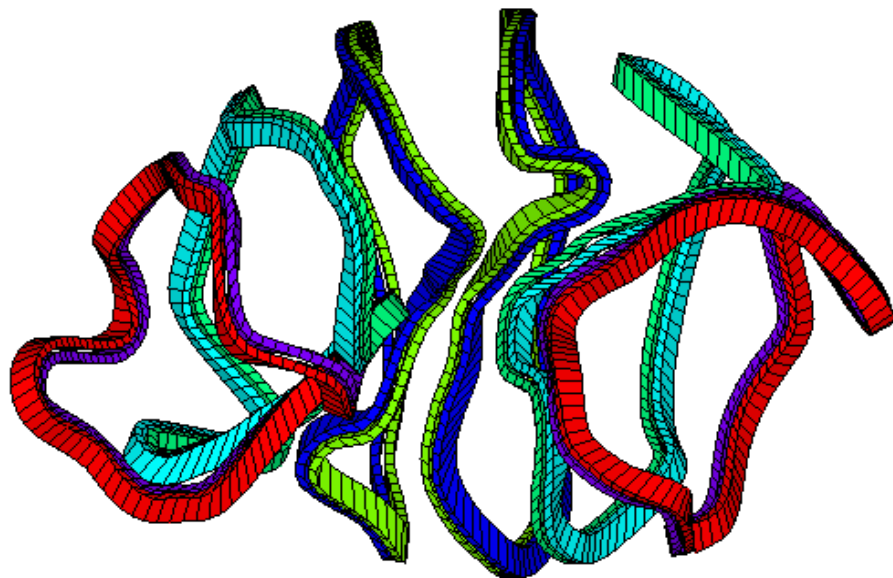
PF5 = -1882

PF6 = 8606

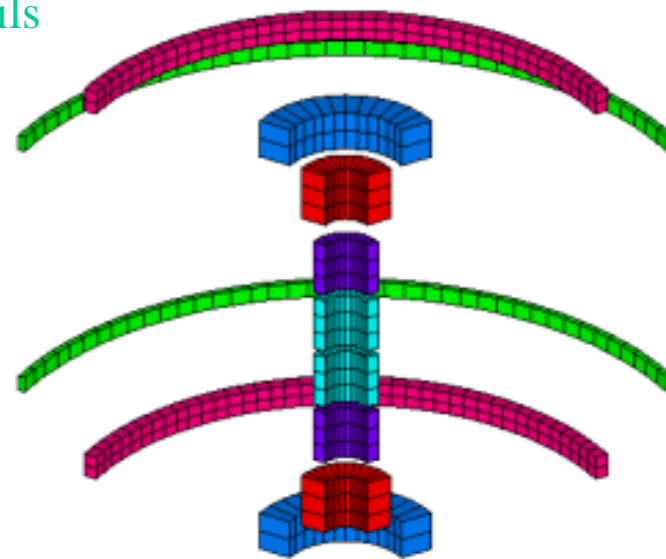
TF = 16076

Plasma = -350000

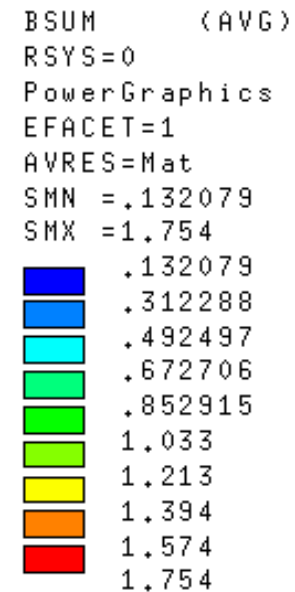
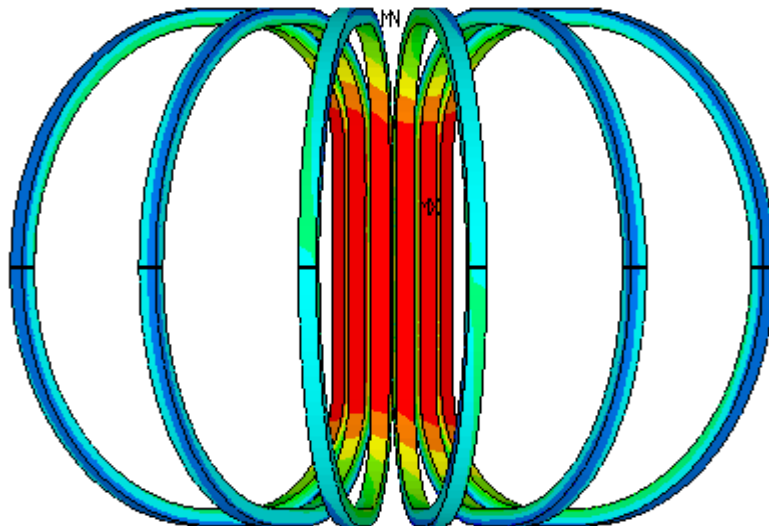
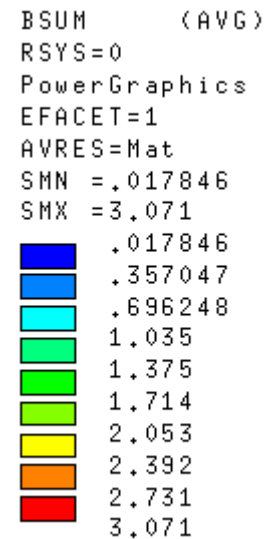
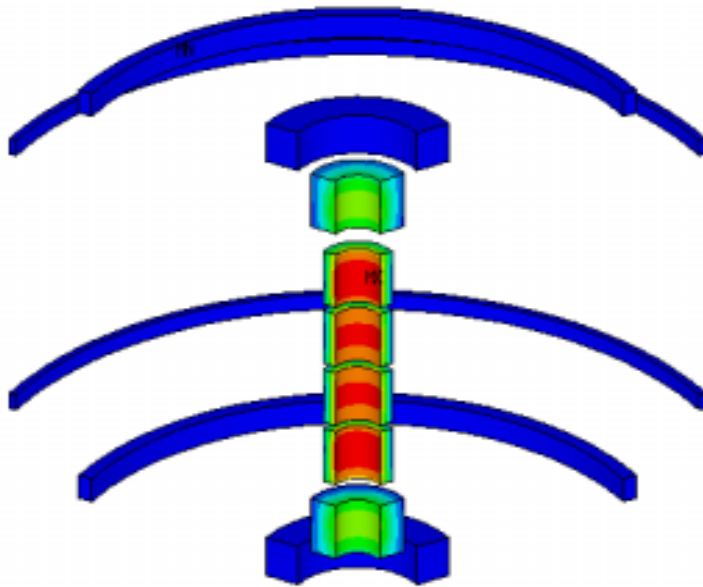
## Modular coils



## PF coils












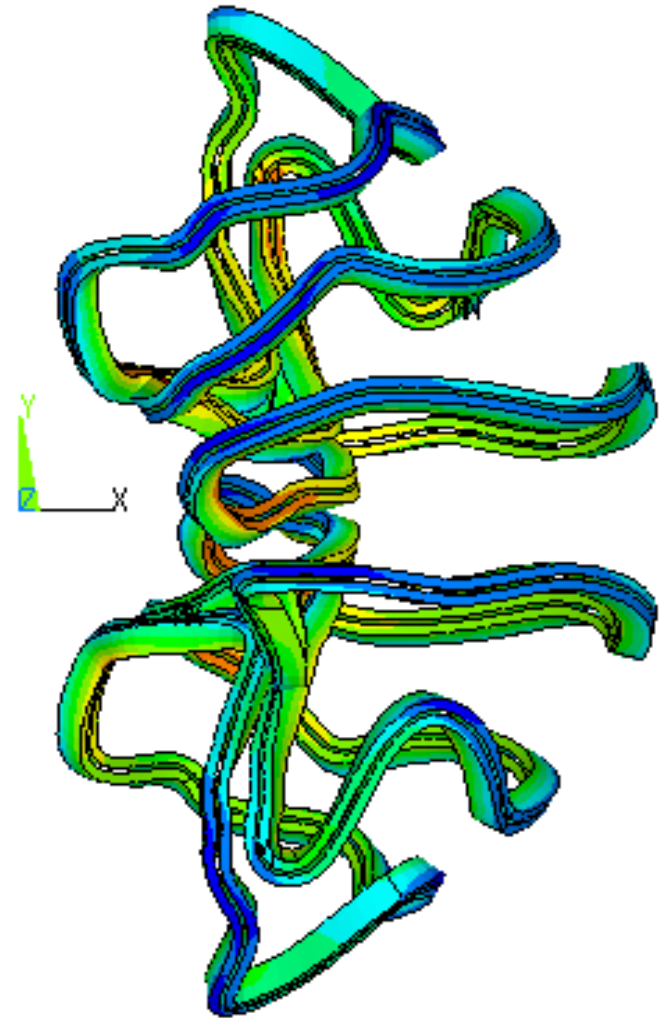
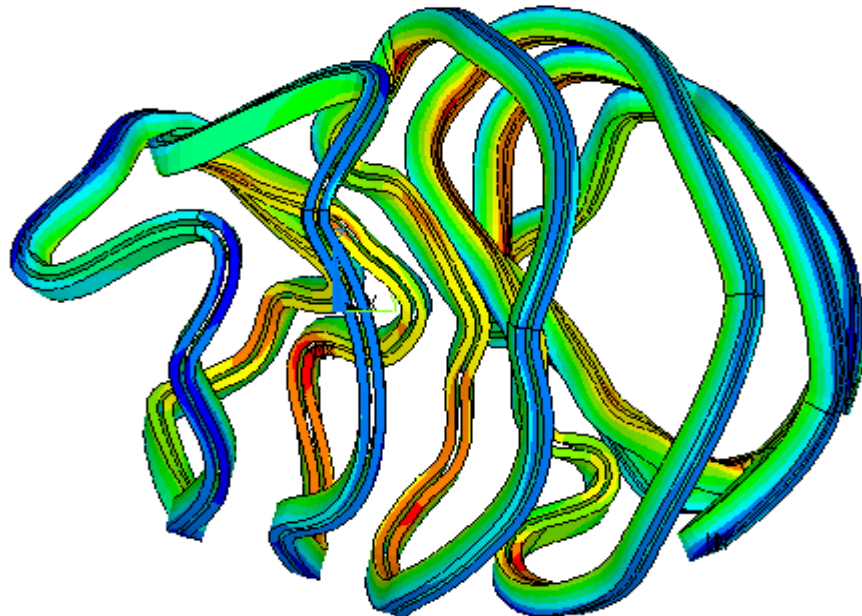
# Magnetic Flux Density for PF and TF Coils



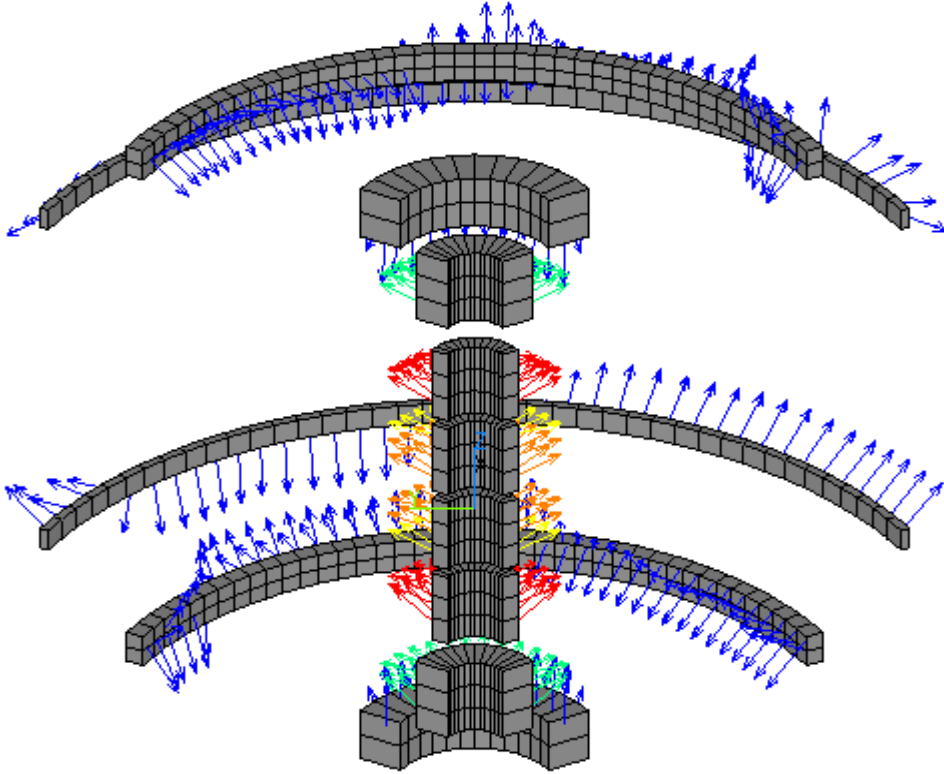
# Magnetic Flux Density for Modular Coils

BSUM (AVG)  
RSYS=0  
PowerGraphics  
EFACET=1  
AVRES=Mat  
SMN = .099209  
SMX = 3.675

|                                                                                   |         |
|-----------------------------------------------------------------------------------|---------|
|  | .099209 |
|  | .496477 |
|  | .893746 |
|  | 1.291   |
|  | 1.688   |
|  | 2.086   |
|  | 2.483   |
|  | 2.88    |
|  | 3.277   |

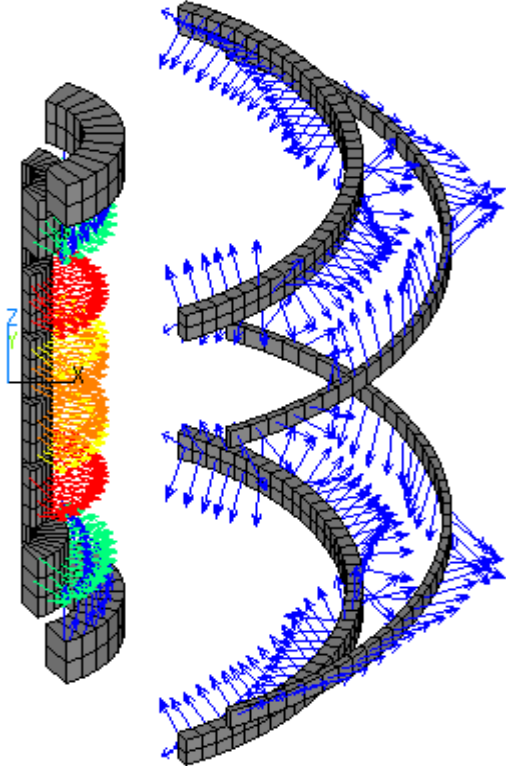


# Magnetic Forces for PF Coils

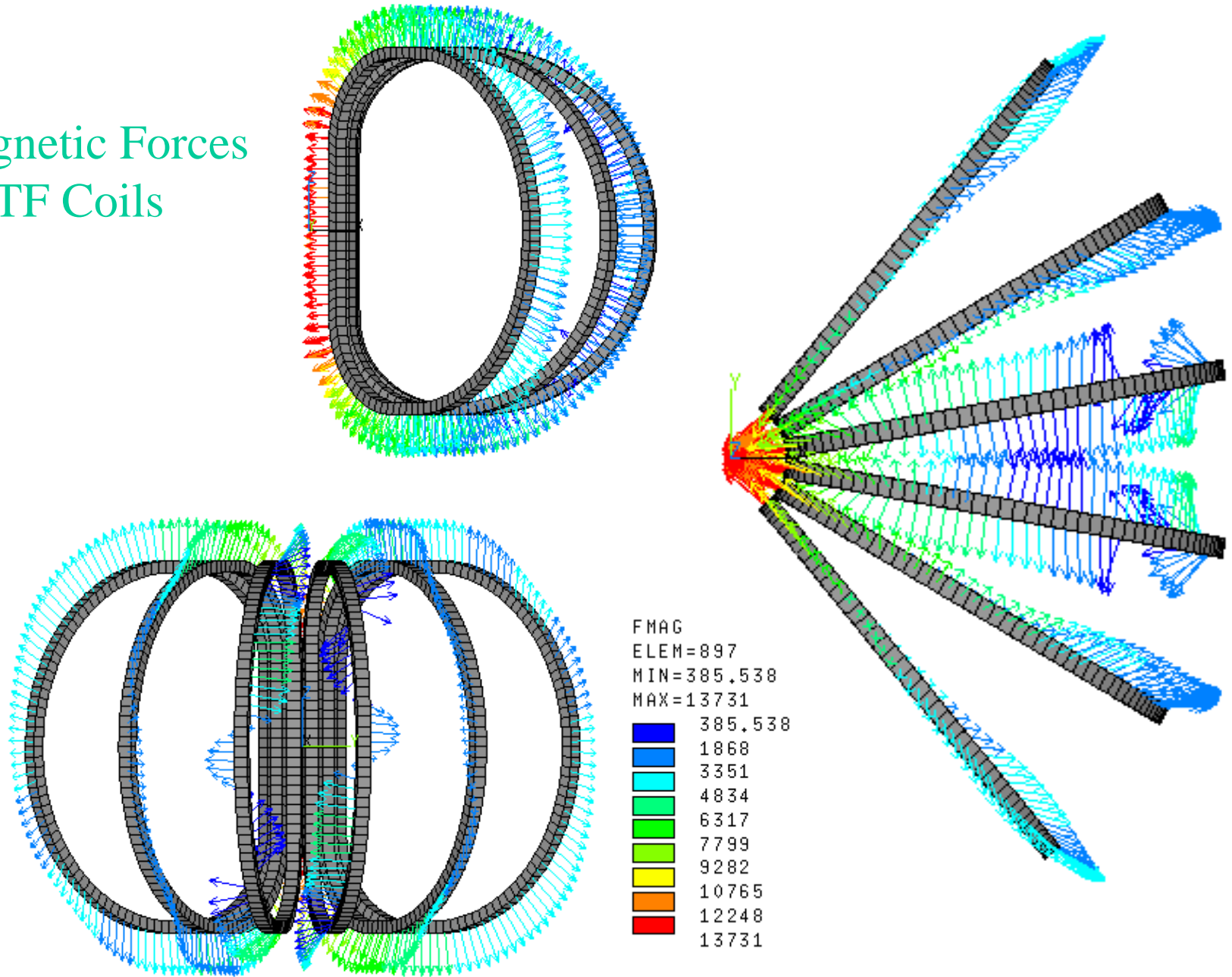


FMAG  
ELEM=53  
MIN=21.321  
MAX=24315

|             |        |
|-------------|--------|
| Blue        | 21.321 |
| Light Blue  | 2721   |
| Cyan        | 5420   |
| Green       | 8119   |
| Light Green | 10818  |
| Yellow      | 13518  |
| Orange      | 16217  |
| Red-Orange  | 18916  |
| Red         | 21616  |
| Dark Red    | 24315  |



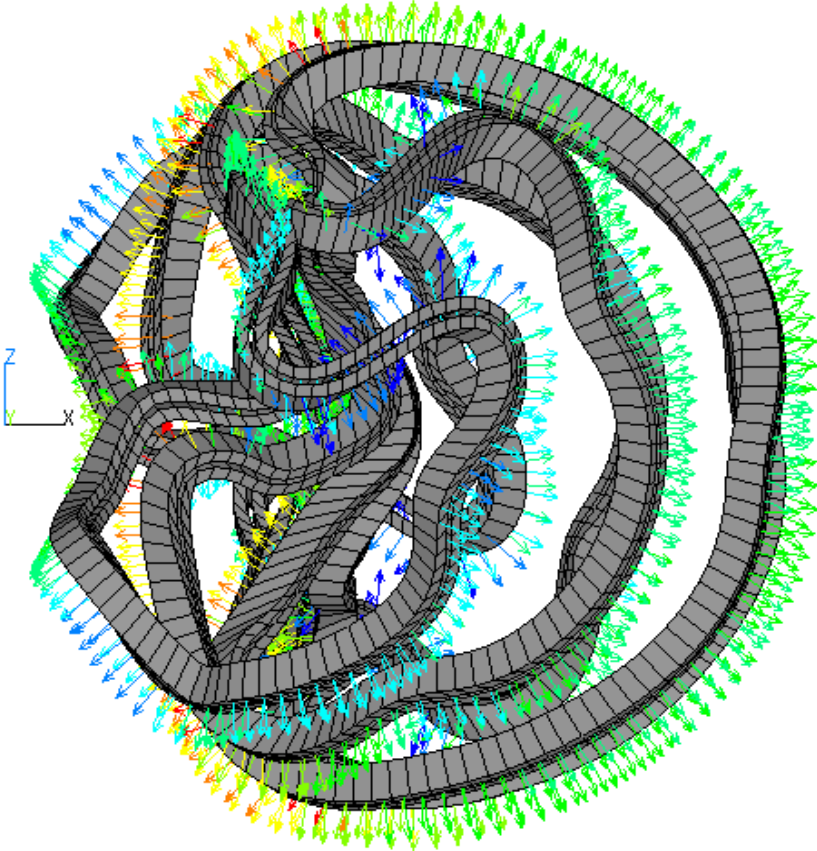
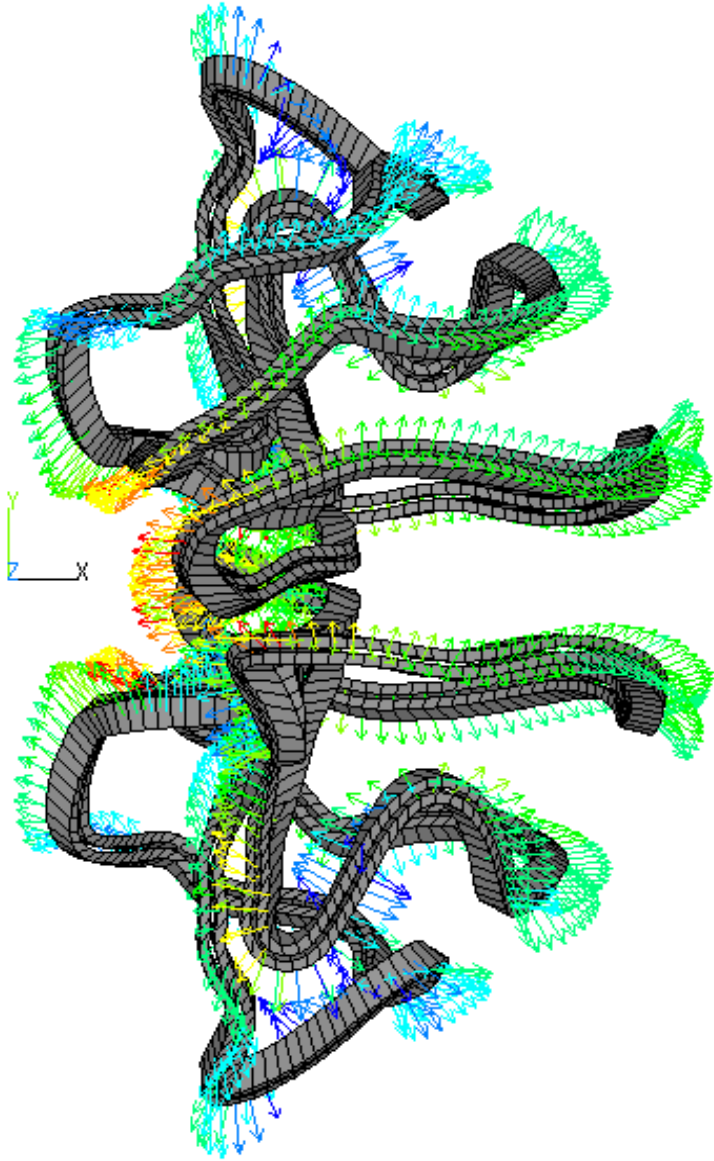
# Magnetic Forces for TF Coils



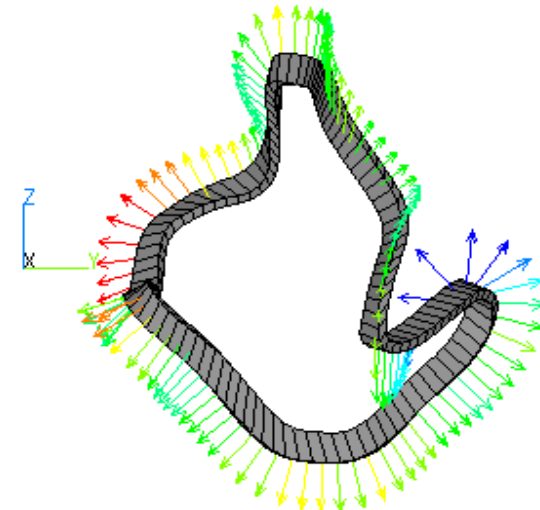
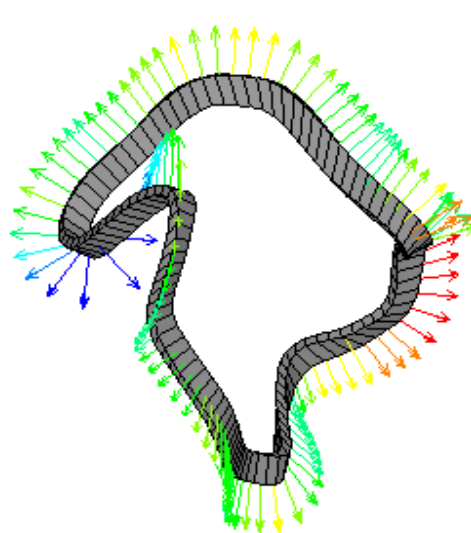
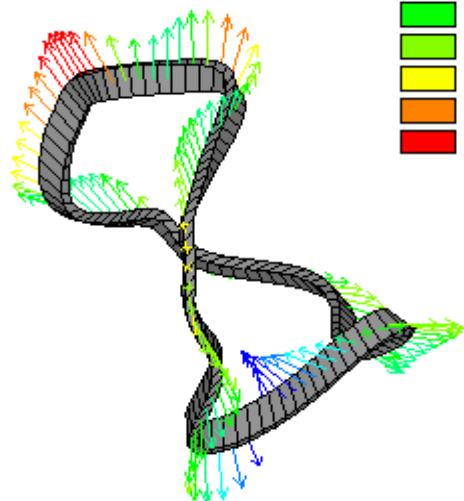
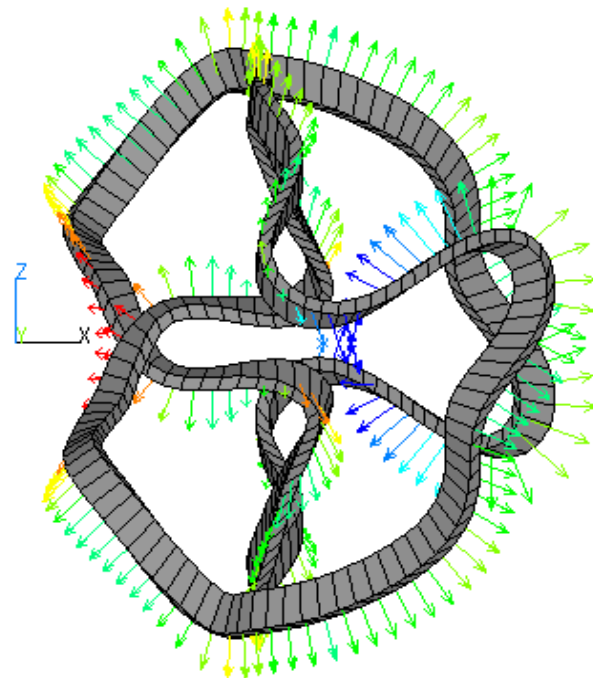
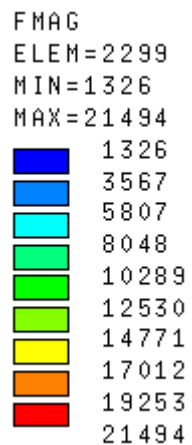
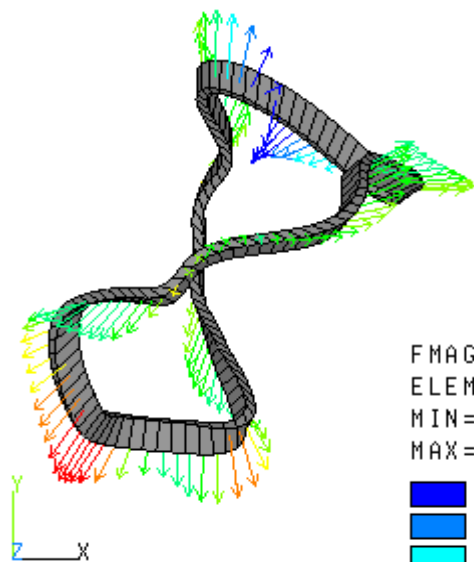
# Magnetic Forces for Modular Coils

F<sub>MAG</sub>  
ELEM=1427  
MIN=809.073  
MAX=36058

|             |         |
|-------------|---------|
| Blue        | 809.073 |
| Light Blue  | 4726    |
| Cyan        | 8642    |
| Green       | 12559   |
| Light Green | 16475   |
| Yellow      | 20392   |
| Orange      | 24308   |
| Red         | 28225   |
| Dark Red    | 32142   |
| Red         | 36058   |

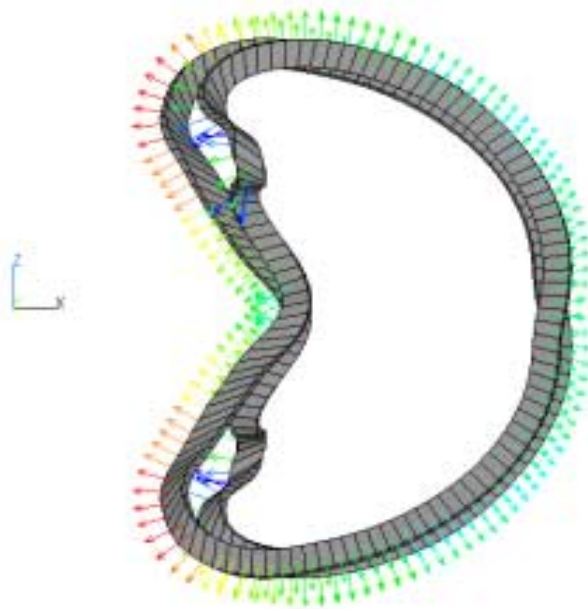


# Magnetic Forces for Modular Coils





# Magnetic Forces for Modular Coils



F<sub>MAG</sub>  
ELEM=1963  
MIN=6698  
MAX=33599

|              |       |
|--------------|-------|
| Blue         | 6698  |
| Light Blue   | 9687  |
| Cyan         | 12676 |
| Green        | 15665 |
| Light Green  | 18654 |
| Yellow-Green | 21643 |
| Yellow       | 24632 |
| Orange       | 27621 |
| Red-Orange   | 30610 |
| Red          | 33599 |

