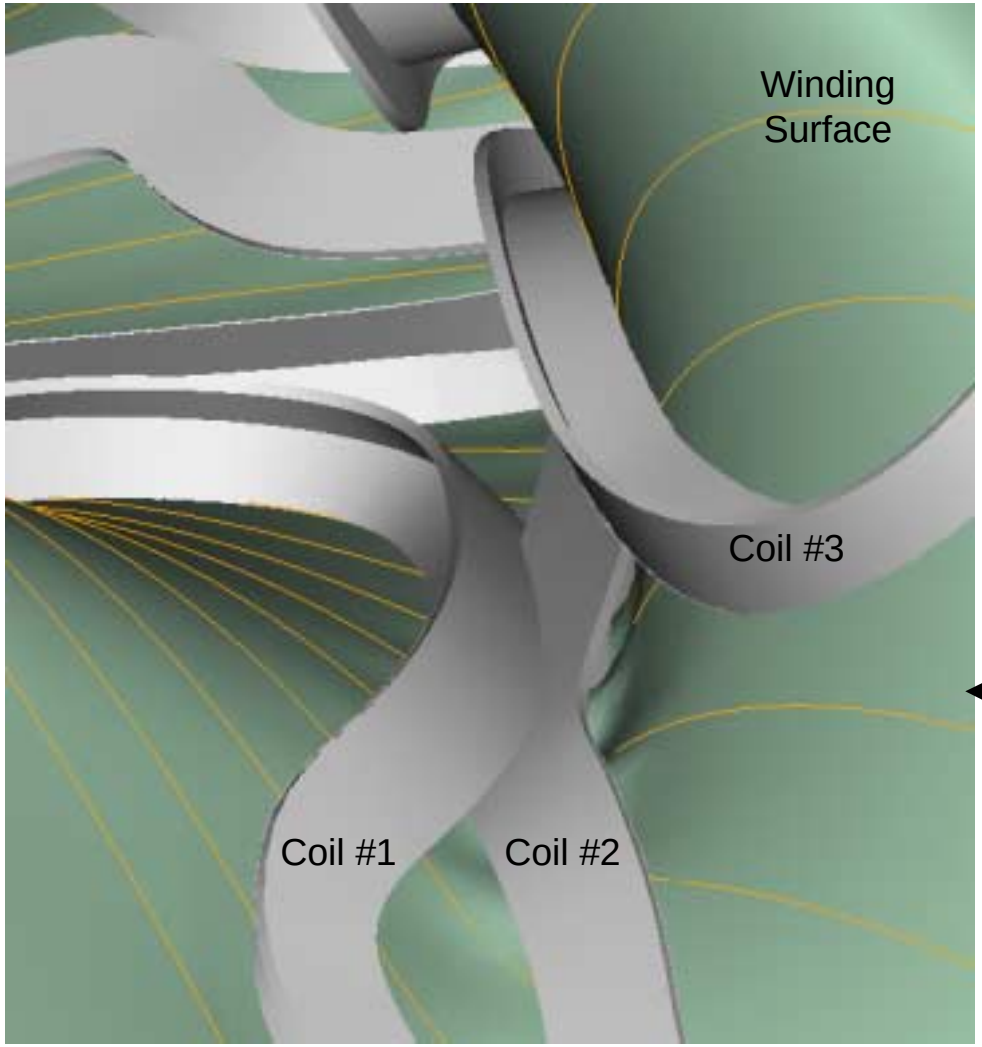
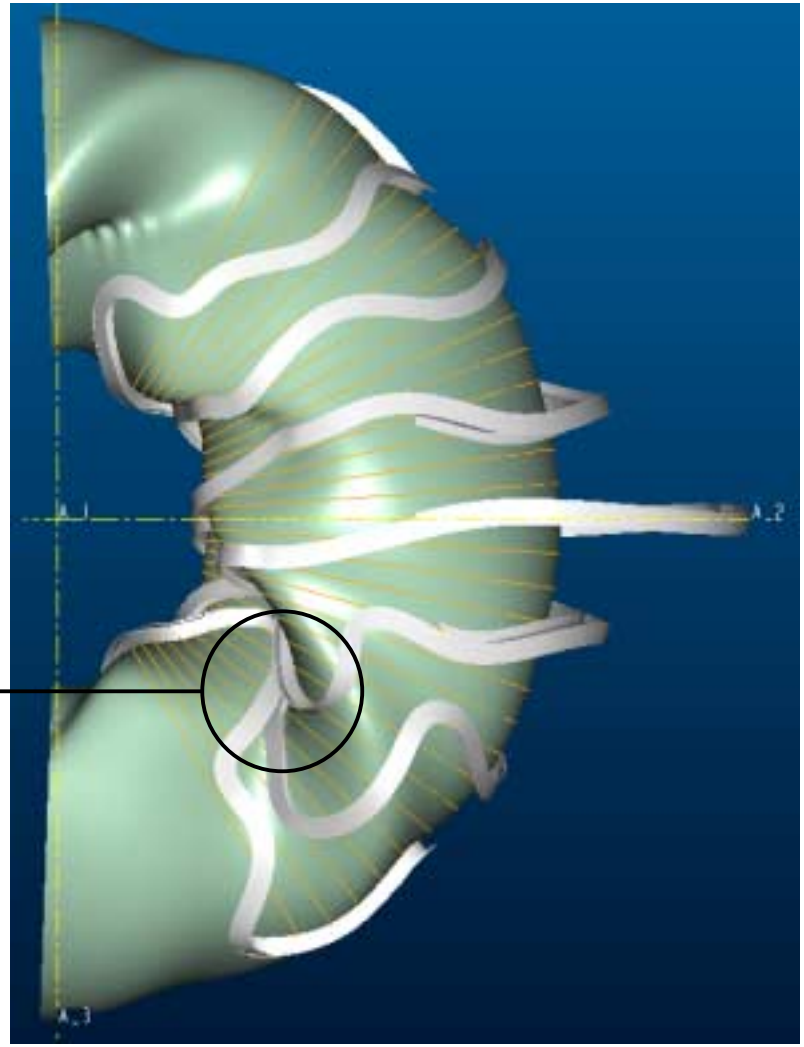
# Improvements to modular coil twist algorithm

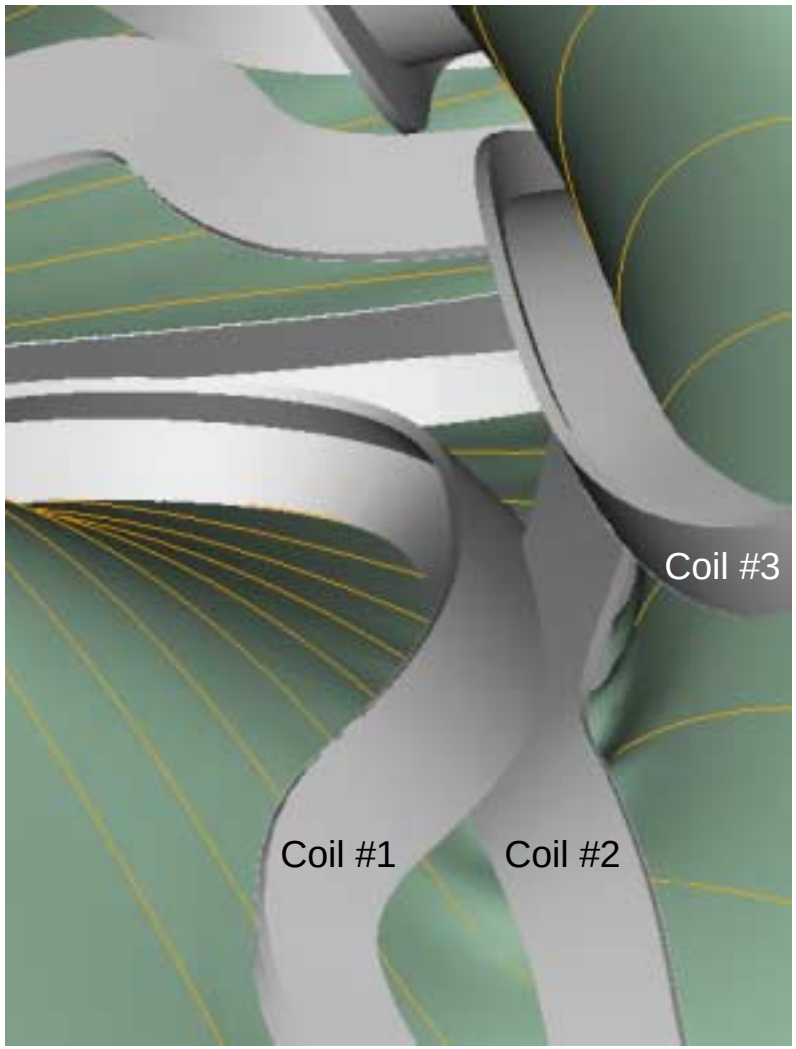
- Added 4 “key frames” where coil is made normal to winding surface
- Still some interference between coils in trough region

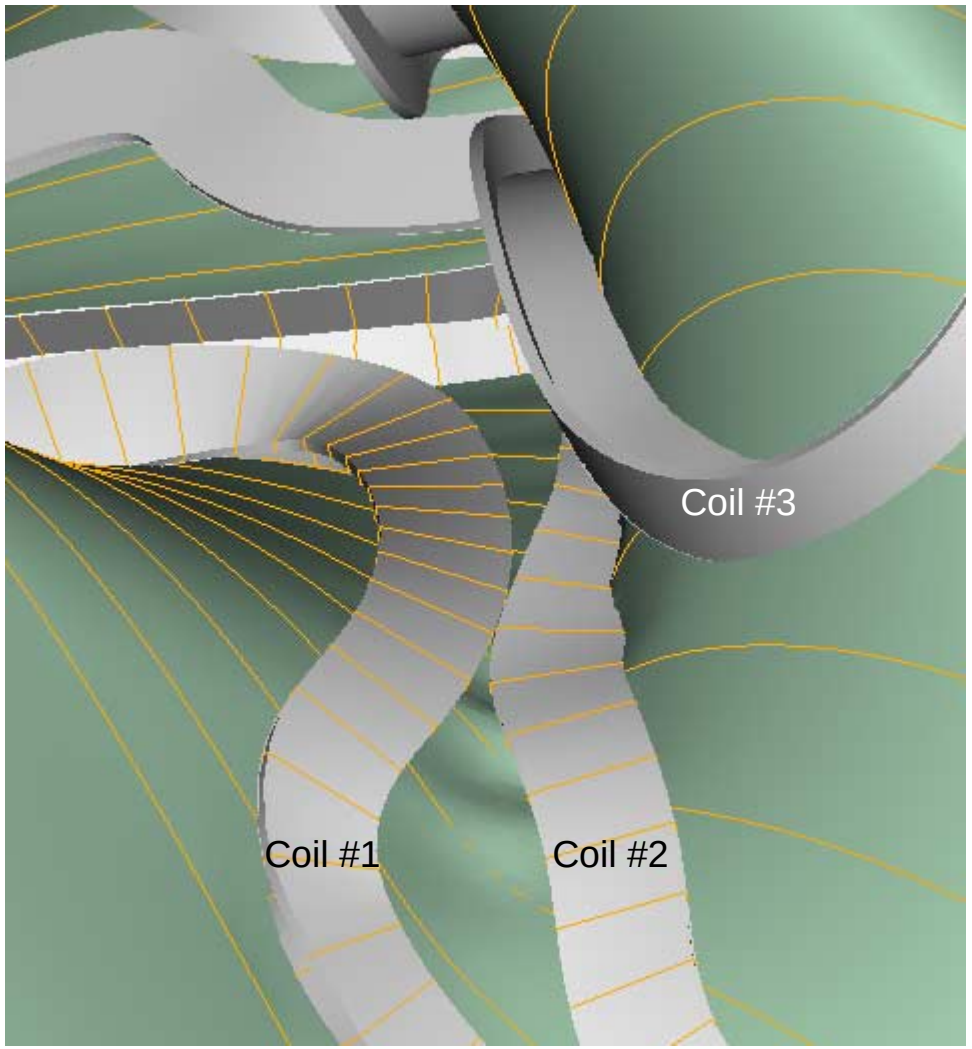


# Case 1013, option #1 for removing interference

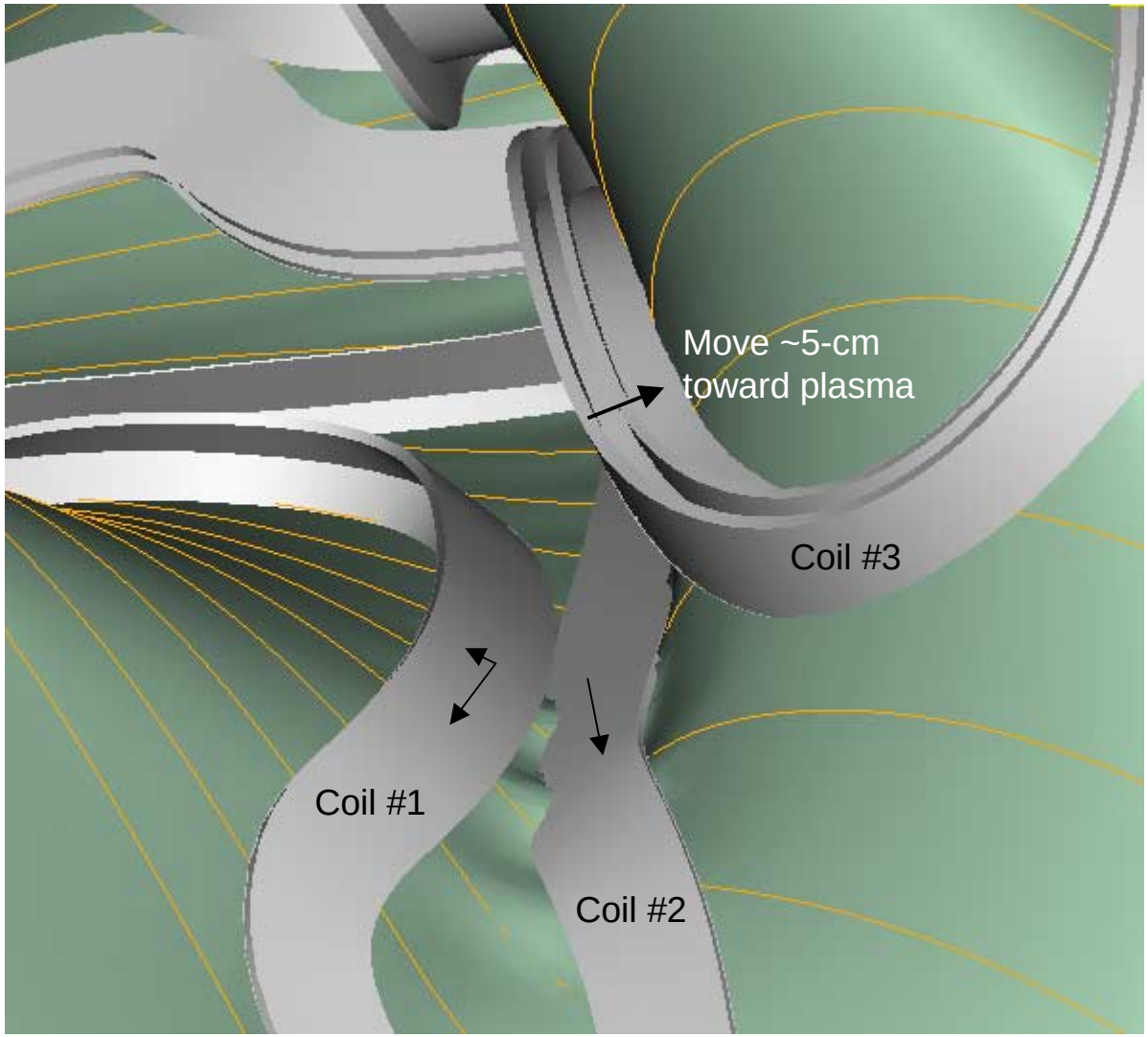
- Change coil orientation using local twist angle adjustments



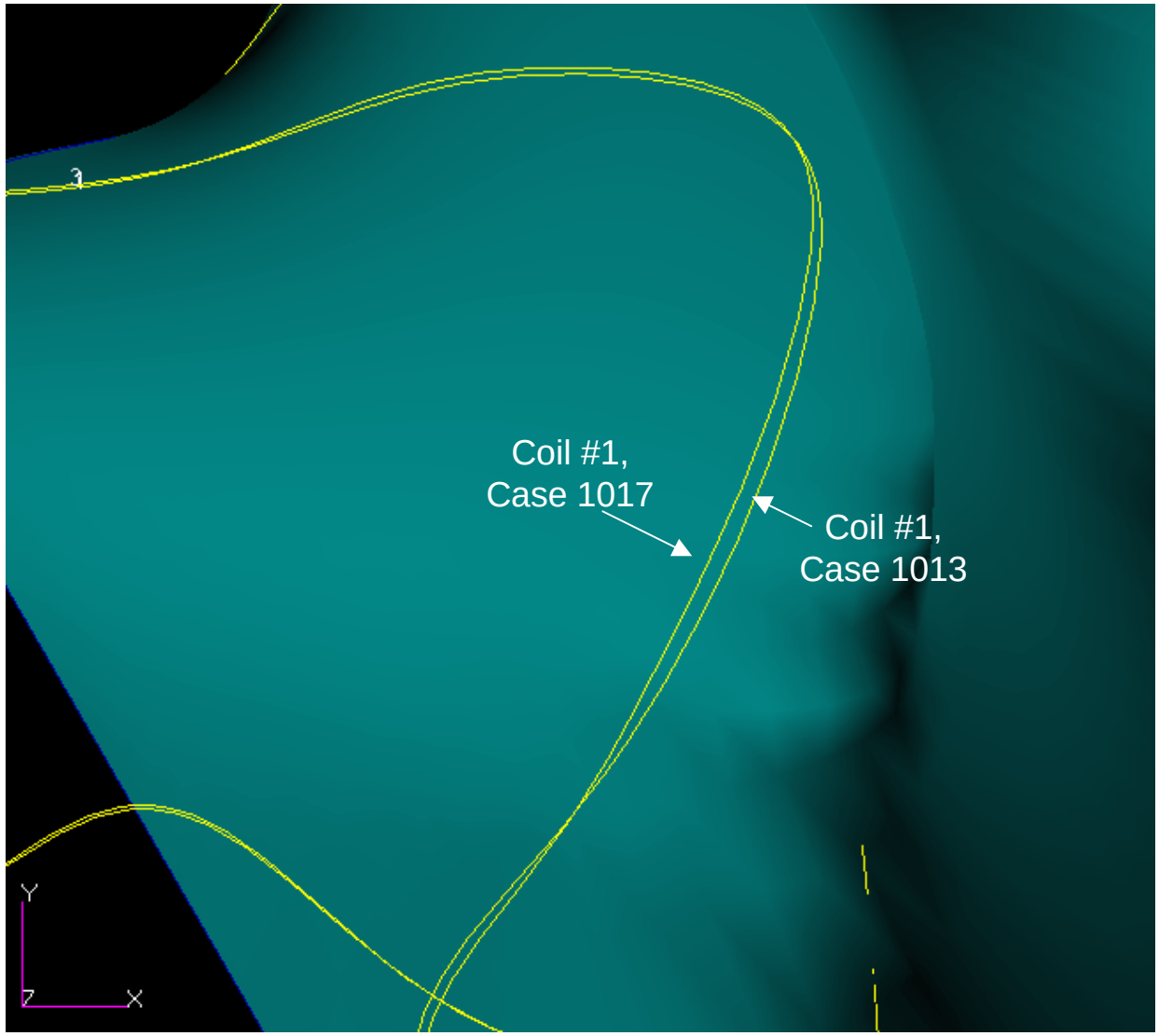
# Case 1013, option #2 for removing interference

- Change location of cross-section w.r.t. winding surface (ie, move surface in)
- In this case, coil size is increased to 12x19-cm (~20%)



# Case 1017, coil-to-coil spacing increased by ~2-cm

- Length constraint modified for coil #1 (D.Strickler)
- Coil cross-section is centered on winding surface, size = 12x16-cm



# Conclusions

Cases 1013 and 1017 can accommodate a 12x16-cm coil cross-section without coil-to-coil interference.

Case 1017 is preferred because it increases the spacing between coils #1, #2.

Moving the winding surface closer to the plasma would also remove interferences in the trough region. It appears that the coil depth could be increased by about 20%. Coil-to-coil spacing would need to be maintained.