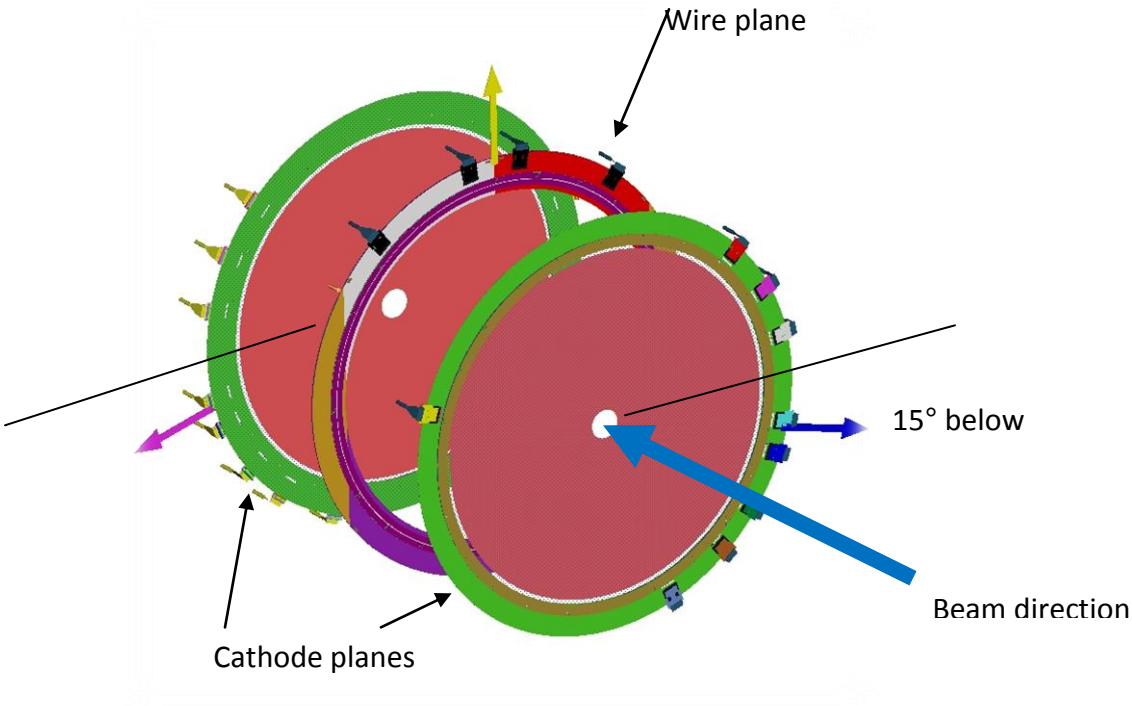
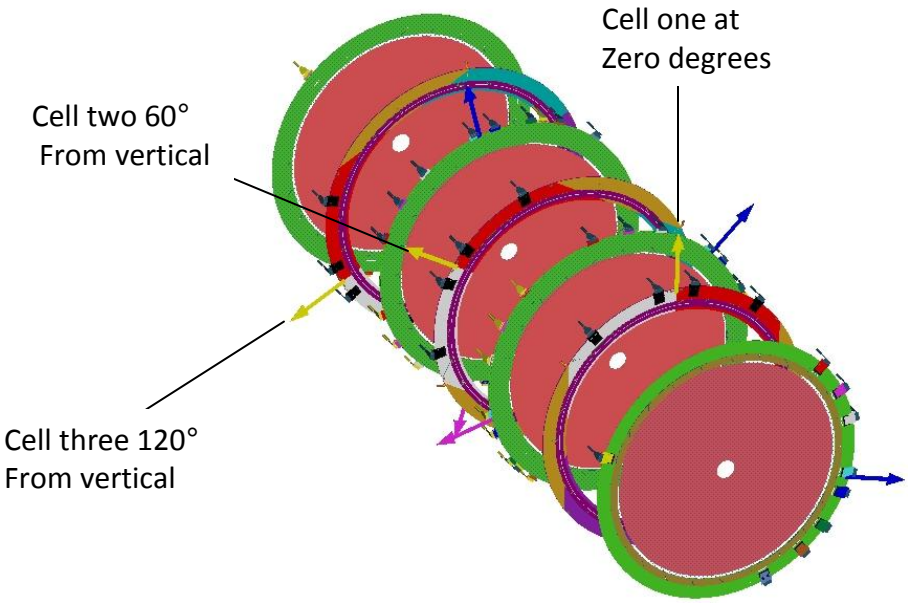
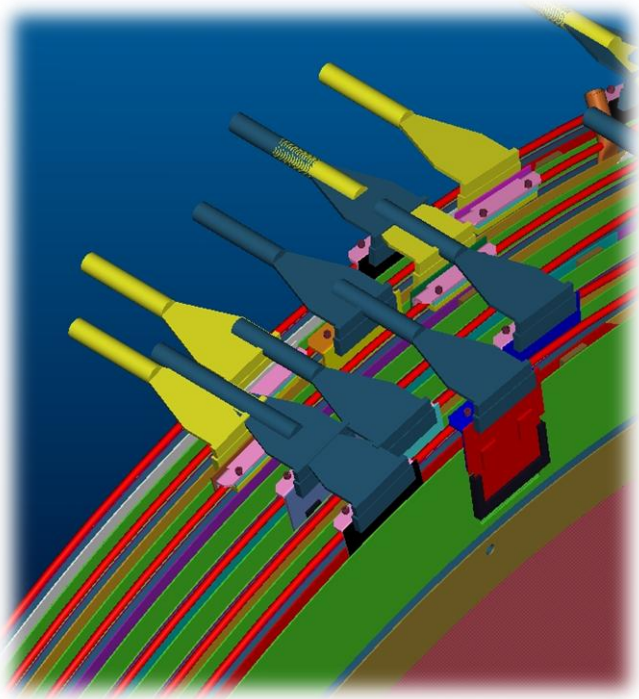
As currently planned, each of the four segments is composed of six drift cells as shown in exploded state in the picture below. The arrows on the planes are shown to assist in visualization:



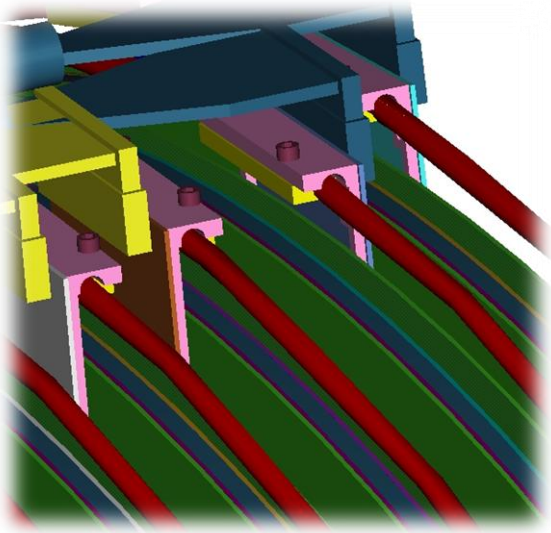
The drift cells within a segment are rotated 60° in a counter-clockwise direction with respect to the preceding cell. The Picture below shows the first three cells in the segment:



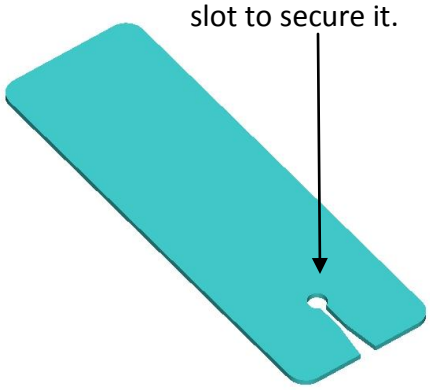
Each drift cell has its own 4.06mm O.D copper cooling tube (2.79mm I.D.) The diameter of the cooling loop is 1.2 meters. Each tube will weigh approximately 230 grams, and the Fluorinert (coolant produced by 3M) within the lines should weigh 40 grams.



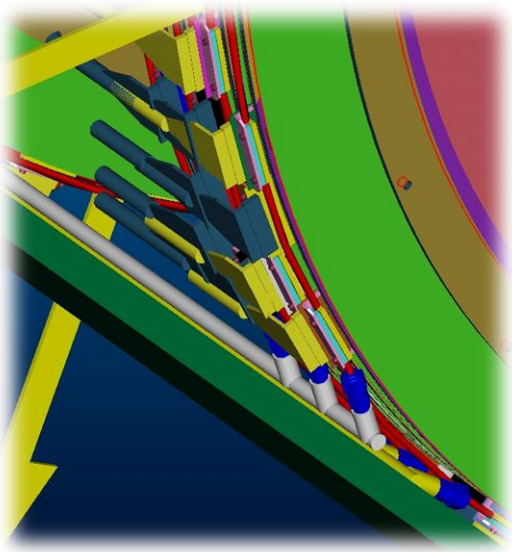
The picture below shows a close-up of the cooling clamp arrangement. The lower clamp piece (shown in yellow) will be permanently attached to the copper tube with epoxy. The upper part is a bracket attached to the pre-amp. Replacing pre-amp cards requires removal of the electrical connector, as well as removal of the two brass 2-56 socket head screws. A small piece of polyethylene sheet can be used as a tool to securely hold the screws during removal.

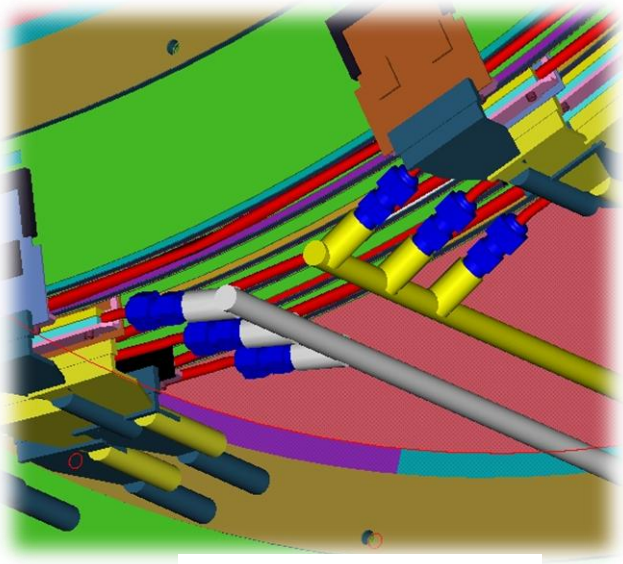


Back the screw out several turns, and then force the screw into the slot to secure it.



The six cooling loops attach to header tubes which are located adjacent the rails. There are two input headers and two output headers currently planned.





Rail removed for clarity