

Hello Yang

If you are going to go back to the TOSCA model could you try a different contour on the +X face where the particles emerge from the side of the magnet? The iron is saturated at the edges of the pole and I am worried therefore about the repeatability of the field. I spoke with Dan Sober and the normal way to design a pole tip is to contour the edge to prevent saturation. I got from Dan an approximation to the Rogowski contour which is usually used to shape poles. In the figures below I have drawn the approximation I got from Dan and what this would apply to our magnet. Could you try this out in TOSCA? With this shape the iron should not be saturated and the effective field edge should be at the root of the contour.

Jim

