RFQ magnet study

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Dan and Ray, I did make a 3D model of the RFQ magnet. I used a hot samarium cobalt, Hci of 30 kOersteads. I calculated 1.3 kiloGauss in the center of the gap. I suspect that you have two problems. First the Hci of the magnets you have is not that high. It can range from 30 to 12 kOersteads and you may have something on the low end. Second the back leg is saturated. The field is over 20 kiloGauss. Making the back leg thicker and using 1006 or 1008 carbon steel will help. Vanadium permendor or Hiperco would be even better since that material saturates at 24 kiloGauss. Below are a few pictures I made from TOSCA.



