Abstract Submitted
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Magnet Construction for Neutron Interferometry[1] ROB MILBURN, CHRIS CRAWFORD, University of Kentucky — The study of neutron interferometry highlights some of the essential components of quantum mechanics allowing us to study the wave-like nature of the neutron. The spin of polarized monochromatic neutrons in an interferometer can be flipped by passing through a static B-field perpendicular to the holding field. Constraints on such a magnet are that the field must be constant within a cylindrical volume, but zero everywhere outside the coil. A double cosine theta coil has been designed and is currently undergoing construction. A comparison of the prototype's results to simulation results will be presented.

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