

TSS16-2016-020040

Abstract for an Invited Paper  
for the TSS16 Meeting of  
the American Physical Society

**New superconducting magnet technology can make OpenMRI screening for breast cancer affordable and save womens lives**  
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A novel approach to the design of superconducting magnets makes it possible to project a homogeneous region of magnetic field outside the structure of the magnet. This might appear to be impossible from Amperes Law considerations magnetic field diverges outside a magnet as it returns upon itself, so how could one make it homogeneous for MRI? We have succeeded in doing that by configuring a pattern of reverse currents to create flux jets that cancel the divergence. Forty thousand women die from breast cancer each year in the US. Early detection offers 98