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## Fri-Mo-Po.07-09: Optimization of a 123-mm Aperture Nb<sub>3</sub>Sn Dipole Coil with Stress Management

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A 123 mm aperture Nb<sub>3</sub>Sn cos-theta (CT) dipole coil with stress management (SM) was developed at Fermilab to demonstrate and test the SM concept. Additive Manufacturing technology was used to produce the coil mandrel. Several changes were made to the SMCT coil design and technology based on the analysis of post-production and two cold tests of the first SMCT coil. This article describes the differences in coil design, fabrication steps, and final parameters of the second SMCT coil and its components.

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