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## Low field MgB<sub>2</sub> and NbTi fast ramped coils: temperature behaviours empirical comparison.

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As is well known all types of superconductors are affected by AC losses.

Those losses occur when a time varying current flows in a superconductor or when it's subjected to a variable magnetic field.

The main effect of these losses on the conductor is temperature rise due to the energy dissipation within the superconductor. Many methods were previously studied in order to reduce the magnitude of this loss.

The main task of superconductor manufacturers is to optimize the design of the wire in order to reduce AC losses according to the magnet requirements.

This paper presents experimental results of an empiric experiment designed to demonstrate the theoretical benefit of MgB<sub>2</sub>, with respect to standard NbTi, in low-field/fast-ramped applications.

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