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Flux epulsion experiments with a 704 MHz elliptical cavity

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Initial investigations on magnetic flux expulsion in the CERN vertical test cryostats are discussed, with measurements taken on a bulk Nb 704 MHz 5-cell elliptical cavity. Cool down procedure is assessed in terms of both magnetic field flux expulsion and thermal currents, and the implication to RF performance is discussed. In addition, mapping of magnetic field inside the cryostat is addressed in an effort to correlate with ambient magnetic field simulations and expected flux expulsion.
Measurements show a high degree of flux trapping and clear signs of thermal currents, which is discussed in relation to the cavity preparation and cool down.

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