

## **Magnetic measurement of superconducting magnets with the FAME system**

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Several projects and design studies have required tests of superconducting magnets. For the LHC high-luminosity upgrade, short models of new generation, high-field quadrupoles with large apertures (HQ and MQXC) were measured at cryogenic temperatures in CERN's vertical cryostat test station. The FCM (Fast Cycled superconducting Magnet), a super-ferric model magnet for an upgrade of the LHC injector was tested on a specific bench. The measurement requirements were addressed by exploiting the flexibility of the FAME (Fast Measurement Equipment) system, which allows resolutions of the time transient effects in the range of 1-8 Hz. We present the measurement challenges from the new magnets, the specific adaptations of the FAME system, as well as the improvements on the FFMM software framework and post-processing routines.