

Abstract Submitted
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Multifarious apparatus for dynamic measurements in intense magnetic fields¹ FEDOR BALAKIREV, Los Alamos Natl Lab — We describe a versatile apparatus which implements multiple types of measurement techniques suitable for intense magnetic field environment. Our approach capitalizes on recent advances in hardware/software co-design solutions to realize dynamic mapping and tracking of field-dependent phenomena in typically short time frame of pulsed measurements. The apparatus is capable of carrying out simultaneous dissimilar measurements such as resistivity, current-voltage characteristics, magnetic torque etc., both in pulse and continuous mode. The control logic can track and respond to changes in sample properties, such as onset of dissipation or changes in high-frequency oscillatory response, in sub- microsecond timescale.

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