

Abstract Submitted  
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**High Resolution Magneto-Optic Measurements in GaAs using a Sagnac Interferometer** ALEXANDER FRIED, AHARON KAPITULNIK, Stanford University — The Sagnac Interferometer is a tool which measures the Polar Kerr effect—a direct indicator of magnetism. Using 820 nm light from a superluminescent diode, we probe GaAs structures and measure the Kerr angle with sub-microradian resolution. By utilizing diffraction limited optics and a piezoelectric scanner, we also achieve high spatial resolution. Our measurements are performed at cryogenic temperatures and offer a way to measure the Spin Hall Effect in the DC regime along with other forms of magnetic order.

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