

Abstract Submitted
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Verdet Constant Measurements for Terbium Gallium Garnet and Potassium Terbium Fluoride MICHAEL MUELLER, SAID ELHAMRI, University of Dayton, Department of Physics, Dayton, Ohio 45469; Air Force Research Laboratory, AFRL/RXAP, Wright Patterson AFB, OH 45433, DAVID ZELMON, Materials and Manufacturing Directorate, Air Force Research Laboratory, AFRL/RXAP, 2179 12th St., Rm. 122, Wright Patterson AFB, OH 45433, KEVIN STEVENS, GREG FOUNDOS, Northrop Grumman Synoptics, 1201 Continental Blvd., Charlotte, NC 28273 — Terbium Gallium Garnet (TGG) and Potassium Terbium Fluoride (KTF) are materials used as optical isolators which prevent feedback to the pump laser via the Faraday effect. The Verdet constant is a measure of the strength of the Faraday Effect which is the rotation of the plane of polarization of light in a magnetic field. The Verdet constant was measured by exposing samples of TGG and KTF to a magnetic field as a linearly polarized He-Ne laser beam passed through the samples. To determine the Verdet constant, the change of direction of the linear polarization was measured as a function of the magnetic field and determined the Verdet coefficients of TGG and KTF.

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