

Abstract Submitted  
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**The Verdet constant of undoped  $\text{Y}_3\text{Al}_5\text{O}_{12}$  in the near infrared at a fixed temperature** RONALD W. STITES, KENNETH M. O'HARA, The Pennsylvania State University — The optical activity of an undoped  $\text{Y}_3\text{Al}_5\text{O}_{12}$  (YAG) crystal in a magnetic field is measured in the near infrared at a fixed temperature. By knowing the integrated field strength along the optical axis of the crystal, the Verdet constant is determined for wavelengths from 1300 nm to 1350 nm as well as at 1064 nm and compared to theory. For the 1300 nm range, the Verdet constant is found to be of the order 0.84 rad/T·m while at 1064 nm it is 1.86 rad/T·m.

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