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Analysis of a single pulse of light through a Fabry-Pérot interferometer J. BRUCE JOHNSON, KEVIN LYON, Arkansas State University, MICHAEL J. JOHNSON, Brigham Young University — We present a method of analyzing the output of a single pulse of light from a Fabry-Pérot interferometer. Together with an independent measurement of the pulsewidth the analysis enables the determination of the linewidth, time-bandwidth product, and consequently the degree of coherence of the pulses. The method presented is ideal for light pulses longer than a picosecond where analysis with a FROG is difficult. The analysis presented builds on the method presented by Marzenell, Beigang, and Wallenstein by analyzing the ring pattern of the Fabry-Pérot interferometer. S. Marzenell, R. Beigang, R. Wallenstein, *Appl. Phys. B* **71**, 185 – 191 (2000).

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