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EIT noise spectroscopy with a broadband laser YANHONG XIAO, DAVID PHILLIPS, CINDY HANCOX, IRINA NOVIKOVA, RONALD WALSWORTH, Harvard-Smithsonian — Laser PM-AM noise conversion is of great interest in atomic clocks based on coherent population trapping (CPT) and the related process of electromagnetically induced transparency (EIT). We report a study of the role of EIT ground state coherence on the intensity-noise spectrum using a broadband laser such as a VCSEL. We also discuss possibilities of extending the result to photon statistics.

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