

Abstract Submitted
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Atomic Ytterbium Beam Experiments at an Undergraduate Physics Laboratory RABIN PAUDEL, LUCIAN LUPINSKI, JONATHAN BARLOW, SCOTT POND, MARTIN MADSEN, Department of Physics, Wabash College, Crawfordsville, IN 47933 — We report on progress towards producing cold Ytterbium atoms in an undergraduate laboratory. We constructed a low-cost Zeeman slower designed to slow Yb atoms from 325 m/s to ~ 1 cm/s on the 1S_0 to 1P_1 atomic transition, accessible by a direct-diode laser at 398.8 nm. We propose using the spectrally-resolved spontaneous emission from a long-lived decay channel ($\tau \sim 1\mu\text{s}$) to measure the Yb beam velocity.

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