Abstract Submitted
for the DAMOP07 Meeting of
The American Physical Society

A dual-stage laser ablation source for cold atoms? WILLIAM FARMER, MICHAEL AMONSON, SCOTT BERGESON, Brigham Young University — A recent publication reports a low velocity, low divergence atomic beam generated by laser ablation [RSI 76, 113302 (2005)]. The reported velocities of 40 m/s and divergences of 20 mrad seem physically impossible for ablation sources. They were determined indirectly by measuring the index of refraction using a far-off-resonance laser. We report our efforts to reproduce this experiment and to measure the atomic density and velocity directly using laser induced fluorescence in an ablated calcium beam.

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Date submitted: 01 Feb 2007 Electronic form version 1.4