

Abstract Submitted
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Toward single Ba or Ba⁺ detection on a fiberoptic tip SHON COOK, Colorado State University — In progressing toward Ba and Ba⁺ single atom tagging in solid Xe, an efficient laser delivery and fluorescence detection system is needed. One method is the use of an optical fiber for delivery of the laser beam and the same or a different fiber for collection of the fluorescence. Various designs and requirements for accomplishing single atom or ion detection are discussed and initial measurements of scattered light in the fiber(s) are presented. Single atom detection is a reasonable expectation.

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