

Abstract Submitted
for the DAMOP16 Meeting of
The American Physical Society

Operating experience with a zinc oven¹ NATHAN CLAYBURN,
EVAN BRUNKOW, TIMOTHY GAY, Univ of Nebraska - Lincoln — A zinc oven
has been constructed and tested. Atomic zinc emitted from this resistively heated
oven is subsequently excited by a polarized electron beam in crossed-beam geometry.
Light emitted in the decay of the $(4s5s)^3S_1$ state to the $(4s4p)^3P_J$ final state, where
 $J = 0, 1, 2$, is then detected by a photomultiplier tube for polarization analysis. The
zinc oven apparatus and operating experience with the oven are described in detail.
Measures to assure that the oven produces a stable, localized beam which does not
adhere to essential components of the apparatus are addressed. Estimates of the
zinc density are made. The importance of magnetic field control in the apparatus
will be discussed.

¹Funded by NSF PHY-1505794

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Date submitted: 28 Jan 2016

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