

Abstract Submitted
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Towards trapping cold molecular nitric oxide PARSHURAM DAHAL, ERIC ABRAHAM, JAMES COKER, NEIL SHAFER-RAY, JOHN FURNEAUX, The University of Oklahoma — We present a method for filtering, guiding and magnetic trapping of cold molecular nitric oxide (NO). In the filtering process, the low field electric seeking molecules interact with an inhomogeneous electrostatic field of a hexapole guide which is exploited to select the slow molecules from a cold molecular source. The resulting cold fraction in the non-magnetic $^2\Pi_{1/2}$ ground state is directed into a magnetic trap where it is optically pumped into the $^2\Pi_{3/2}$ fine structure state which is magnetically trapped. Full simulation of the procedure will be presented and progress toward experimental results will be discussed.

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