

Abstract Submitted  
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**Structure of  $^{206}\text{Radium}$** <sup>1</sup> PAUL ORLAND, A. SCHMIDT, A. HEINZ, R. WINKLER, J. QIAN, T. AHN, R. CASPERSON, G. ILIE, D. MCCARTHY, J.R. TERRY, V. WERNER, E. WILLIAMS, Yale University — Various radium isotopes have been investigated in the past in order to study the onset of collectivity below  $N=126$ . Here we present results of an investigation of  $^{206}\text{Ra}$  which has six protons above the  $Z=82$  shell closure and eight neutron holes in the  $N=126$  neutron shell closure. Though experiments on  $^{206}\text{Ra}$  have previously been performed, this is the first time prompt gamma ray transitions have been measured. Using the technique of recoil decay tagging at the gas-filled Small Angle Separator System at Yale for Evaporation Residues (SASSYER),  $^{206}\text{Ra}$  and other isotopes were identified at the focal plane and correlated to their prompt gamma rays detected at the target position. A comparison of  $^{206}\text{Ra}$  with neighboring isotopes, especially with respect to trends in collectivity, is presented.

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