

Abstract Submitted
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The search for nuclear molecules in isobaric analog states of ^{10}B ¹ ANTHONY KUCHERA, GRIGORY ROGACHEV, Florida State University, VLADILEN GOLDBERG, Texas A&M University, ERIC JOHNSON, LANIECE MILLER, Florida State University, SILVIO CHERUBINI, MARISA GULINO, Istituto Nazionale Fisica Nucleare Laboratori Nazionali del Sud, JOHN HARDY, Texas A&M University, MARCO LA COGNATA, MARCELLO LATTUADA, ROSARIO GIANLUCA PIZZONE, STEFANO ROMANO, CLAUDIO SPITALERI, Istituto Nazionale Fisica Nucleare Laboratori Nazionali del Sud, ROBERT TRIBBLE, Texas A&M University, WLADEK TRZASKA, University of Jyväskylä, AURORA TUMINO, Istituto Nazionale Fisica Nucleare Laboratori Nazionali del Sud — The highly deformed rotational band in ^{10}Be with molecular like $\alpha:2n:\alpha$ structure was suggested by [1]. In the work presented here, a search for similar structures in T=1 isobaric analog states in ^{10}B was performed. The excitation energy range of 8.5 -12.1 MeV was probed using the $^9\text{Be}(p,\alpha)^6\text{Li}(T=1, 3.56 \text{ MeV}, 0^+)$ reaction. An R-matrix analysis was performed which allowed spin-parities and partial widths of the observed states to be determined. The cluster properties of the observed states are discussed.

[1] M. Freer et al, Phys. Rev. Lett. 96, 042501 (2006).

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