

Abstract Submitted  
for the APR14 Meeting of  
The American Physical Society

**Application of shell model with non-orthogonal basis to nuclear clustering**<sup>1</sup> KONSTANTINOS KRAVVARIS, ALEXANDER VOLYA, Florida State University — Our goal is to study nuclear structure and reactions from ab initio principles. To do so we use a no-core shell model with non-orthogonal basis and apply the framework of the Resonating Group Method. In this presentation we discuss the overlap norm kernel and study the role of the orthogonality condition for channel wavefunctions. Some simple examples will be used to illustrate the techniques and the physics behind our approach.

<sup>1</sup>This work is supported by the U.S. Department of energy under contract number: DE-SC0009883

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Date submitted: 10 Jan 2014

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