

Abstract Submitted  
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**Parallel Quantum Magnetism Analysis**<sup>1</sup> SCOTT GARLAND,  
LARRY ENGELHARDT, Francis Marion University — We present a study of the  
quantum magnetism simulations within ALPS (Algorithms and Libraries for Physics  
Simulations) using Francis Marion University's new Patriot Cluster. Supercomput-  
ing has become an essential tool for studying a wide variety of phenomena. By  
pairing ALPS and Python on a parallel machine, many parameter sets for quantum  
magnetism simulations can be tested simultaneously, allowing a variety results to  
be obtained rapidly. This project is supported by the NSF EPSCoR RII Track 1  
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