

Abstract Submitted  
for the SES12 Meeting of  
The American Physical Society

**The Construction of Mississippi State Axion Search**<sup>1</sup> ADAM POWERS, DIPANGKAR DUTTA, ROBERTSEN RIEHLE, PRAJWAL MOHANMURTHY, Mississippi State University, MASS COLLABORATION — Axions have been proposed by the Peccei-Quinn theory to be the solution to the strong CP problem. A great deal of the research toward axions has been in narrowing the range of the mass and the coupling constant in which they could be observed. The Mississippi State Axion Search is an exotic particle experiment which uses a light shining through a wall (LSW) technique. The experimental setup consists of two tuned vacuum cavities placed under a very strong magnetic field and separated by a lead wall. While one of the cavities houses a strong radio source, the other (dark) cavity houses the detector systems. Currently, we are piecing together the cavity with the magnets and the wall separating the chambers. The presentation will include a run through of the construction thus far and the purpose of our setup.

<sup>1</sup>This work is supported by the Mississippi State Consortium

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Date submitted: 19 Sep 2012

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