

Abstract Submitted  
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**Metastable Composite Vortices in Spinor Condensates** ARI  
TURNER, Harvard University, EUGENE DEMLER — The ground states of con-  
densates of atoms with spin have a variety of symmetries leading to many types  
of vortices. The quadratic Zeeman effect produces composite metastable vortices,  
which are configurations of vortices held together by a force resulting from the Zee-  
man effect as we explain. If the component vortices were to combine together and  
react to form a different set of components, then the composite vortex could break  
up. However, this is prevented by short-range repulsions. Our analysis focuses on  
the cyclic phase, where the chemistry of the vortices is regulated by the symmetry  
group of a tetrahedron.

Ari Turner  
Harvard University

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