

Abstract Submitted  
for the OSS17 Meeting of  
The American Physical Society

**The Search for Type Ia Supernova Near Ultra-Violet (NUV) Sub-classes** JAKE MILLER, DAVID CINABRO, Wayne State University, RICHARD KESSLER, DAN SCOLNIC, ASHLEY LI, University of Chicago — Type Ia Supernovas (SNIa) are very bright standardizable candles that can be used to measure cosmological parameters. A recent observation by Milne and collaborators claims that there are two classes of SNIa distinguished by their peak brightness in the ultraviolet, and that cosmological parameters measured with SNIa are severely biased unless the two classes are treated separately. We search for evidence for two classes of SNIa in archived SNIa data from the Sloan Digital Sky Survey (SDSS) and the SuperNova Legacy Survey (SNLS) comparing to a model of the Milne claim and a model with a single, broad distribution of SNIa peak ultraviolet brightnesses. The SNLS data supports a single class of SNIa while the SDSS data is unable to distinguish between the two models. We see no evidence in support of the Milne and collaborators claim for two classes of SNIa.

Jake Miller  
Wayne State University

Date submitted: 02 Apr 2017

Electronic form version 1.4