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Testing a New Method of Detecting RR Lyrae Variable Stars W. LEE POWELL JR., TALITHA MUEHLBRAD, Texas Lutheran University, RONALD WILHELM, University of Kentucky, DYLAN GINN, University of Texas at San Antonio, ANDREW JASTRAM, Texas A&M University — We have submitted for publication a new method of selecting candidate RR Lyrae stars using out-of-phase single epoch photometric and spectroscopic observations contained in SDSS Data Release 6 (DR6). The technique detects variability by exploiting the large disparity between the (g - r) color and the strength of the Hydrogen Balmer lines when the two observations are made at random phase. The SDSS Stripe 82 allowed us to show that our method has a discovery efficiency of ~85%. This technique has yielded over 1,000 candidates fainter than g = 14.5. We present the results of observators, with 10 of 11 confirmed as variable and one labeled as a likely RRc. We also examine the use of clumping in the suspected variables to probe galactic structure, both known and new.

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