

Abstract Submitted  
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**Alternative Gravity Explorations for the Bottema et al. 2015 and Carignan et al 2013 Surveys** JAMES O'BRIEN, Springfield College, THOMAS CHIARELLI, None — In the last few years, alternative gravity theories have seen increased interest due to the lack of observational evidence of dark matter. Further, new empirical patterns found in rotation curve data such as the Radial Acceleration Rule (RAR) have given new testable features for gravitational theories. In this talk, we revisit a two very popular surveys of galaxies (Carignan et al 2013 and Bottema et al 2015) which when published were shown to be problematic for alternative gravity. Here, we apply the most recent observational parameters to the surveys and provide fits of Conformal Gravity, and MOND and show how these theories can apply to the system. We also provide the fits to the RAR and Tully Fisher relation for each theory and discuss how the RAR may allow for some confining of parameters in the fitting procedure.

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