Redshifts and locally measured velocities in spacetimes with spherical symmetry TEHANI FINCH, GRIFFEN ADAMS, PARKER NGUYEN, James Madison Univ — A number of spherically symmetric spacetimes enjoy enough symmetry to constitute exact explicit solutions of General Relativity. Thus many facets of these geometries have been able to be explored analytically, giving useful insight about various planetary and astrophysical systems. However, certain quantities, including locally measured velocity of a freely-falling object and redshift of signals received from a great distance, have mostly been treated in the basic case of a pure Schwarzschild geometry. In this work, we expand these calculations to other spherically symmetric spacetimes, with particular focus on the Schwarzschild-de Sitter solution.

Tehani Finch
James Madison Univ

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