

Abstract Submitted
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The dynamics of cosmological models using CosmoEJS¹ JACOB MOLDENHAUER, ANDREW CHANG, University of Dallas — From results we obtain on comparing dark energy and modified gravity cosmological models to some of the latest observational data sets, we present dynamical plots of the model's evolutionary history simulated with CosmoEJS. The CosmoEJS packages allow for interactive simultaneous plotting and comparing of different cosmological models to actual observational data sets. We use the dynamical plots to investigate why some cosmological models do not fit well to low or high redshift data points, depending on the precision. We use various combinations of data sets including supernovae type Ia, baryon acoustic oscillations, strong lensing, cosmic chronometers, redshift space distortions, and the Hubble Constant. While some modified gravity models are excluded by these data sets, others including dark energy models are competitive to the popular flat- Λ CDM model, especially when attempting to relieve certain tensions.

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Jacob Moldenhauer
University of Dallas

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