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Exploring the consequences of parameter values in cosmological models with CosmoEJS, an interactive package of cosmology Java simulations

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It is not only important to constrain the parameters of cosmological models with the most recent and precise observations, but it is also crucial to understand the physical consequences of those parameters for the different, but complimentary observations involved. CosmoEJS is an interactive Java package of simulations that allow the user to explore the ramifications of choosing various values for the cosmological parameters of a particular model. These simulations now include observations of the growth of structures of galaxies, as well as, the expansion history of the universe. Users can visually inspect the plotted theoretical values of their model, compare numerical fitting using χ^2 values, calculate derived cosmological values, and finally plot the expansion trajectory of their models as they evolve in time.

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