

Solar System Sim ReadMe

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1 Overview

This is an interactive simulation of a solar system with multiple planets, the properties of which are able to be adjusted and set by the user. It generates a video of the planets' animated orbits and a model of the star's lightcurve, where transits from the planets appear.

2 Files & Organization

1. `SolarSystemSim_Final.ipynb` : run this for the simulation. You'll see sliders and checkboxes and other options for interacting with it in the notebook, as you run the cells; just make sure that's done and set before you run the animation cell
2. `videos_generated` : the outputs from the simulation drop here. They're all MP4's and it's automatically numbered based on what else is in the folder. To view them you can run the last cell in `SolarSystemSim_Final.ipynb` (this will display the video with full playback controls within the notebook) if you're fancy, or you could just play them normally, but what's the fun in that
3. `orbit_test_final.mp4` : what a simulation with all 5 planets enabled looks like, transits and all
4. `earth`, `jupiter`, `mars`, `neptune`, `venus`, and `space` are all images used by the simulation, keep them in the same folder as the sim notebook