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## Orbital Parameters of Planets

Several centuries ago, astronomers “figured out” the celestial dynamics of planets, using equipment that by today’s standards would be considered primitive. The goal of this project will be to re-derive these known parameters using modern tools like Stellarium<sup>1</sup> to get positional data points for various planets and attempt to re-calculate the orbital periods of some planets from scratch.

So you are basically getting an unlimited number of measurements for the positions of the planets using Stellarium and must be able to use these coordinates to recalculate their periods. The exact method is left to your discretion, but you will have to show the precision obtained using different number of points in the orbits.

At the end of this project, you should be able to present your results and how they compare to the older results, and give a summary of how this is / was done.

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<sup>1</sup> <https://stellarium.org/>