**Methods**

We sample 1,766 single planet systems from the NASA Exoplanet Archive, classifying them by composition into Rocky, Neptune-like, and Jupiter-like. We integrate the equations of motion forward in time, incorporating the chosen tidal lag model, to obtain the moon survivability time for each planetary system.

The resulting scatter plots are shown to the right. We are especially interested in habitable zone planets that have the potential to host an exomoon for more than 1 Gyr, indicated by the rectangle formed in the upper part of the scatter plots.

**Final Results CPL**

Moon retention times using the CPL model applied to Rocky exoplanets. The symbol shape shows the composition of the planet, color represents the fate of the moon, and filled/empty are planets that have/don’t have a mass estimate.

Moon retention times using the CPL model applied to Jupiter-like planets. These planets are the least dissipative, so they are able to hold a moon for a relatively long time.

Moon retention times using the CPL model applied to Neptune-like planets. Because these planets are much less dissipative, the timescales are generally longer.

**Results & Conclusions**

We find that there are at least 36 habitable zone planets with the potential to host an exomoon for greater than 1 Gyr. This list includes Kepler-1625b, which hosts the only exomoon candidate, and it is stable for longer than a Hubble time. Our results may help provide targets for future observation and shed insight on planet structures with unknown composition.