HOMEWORK #7: *KEPLER* PHOTOMETRY
Due date: Nov 11, 2020

Feel like hunting for treasure? There is no better loot than finding planets and other gems in the *Kepler* data!

a) If you haven't done so already, download the core files from the course webpage. Import them into `kephem.py` and play around with them. Describe the basic properties of each provided light curve.

b) Determine the ephemerides for each system. If you cannot determine the ephemeris for any given system, discuss why.

c) Interpret the nature of the object that produces the light curve. Provide one paragraph per object that discusses the physical reason for its light curve variability.

d) Look up the objects in the literature (ADS is your friend). Are there any surprises?

e) Extend the time base by downloading additional quarters of data. Does that help the ephemeris? Can you find the super-Earth?

f) *Extra credit:* Download additional *Kepler* data for other variability types and discuss them in your report.