

Detecting asteroid lightcurves and periodograms with *TESSELLATE*.

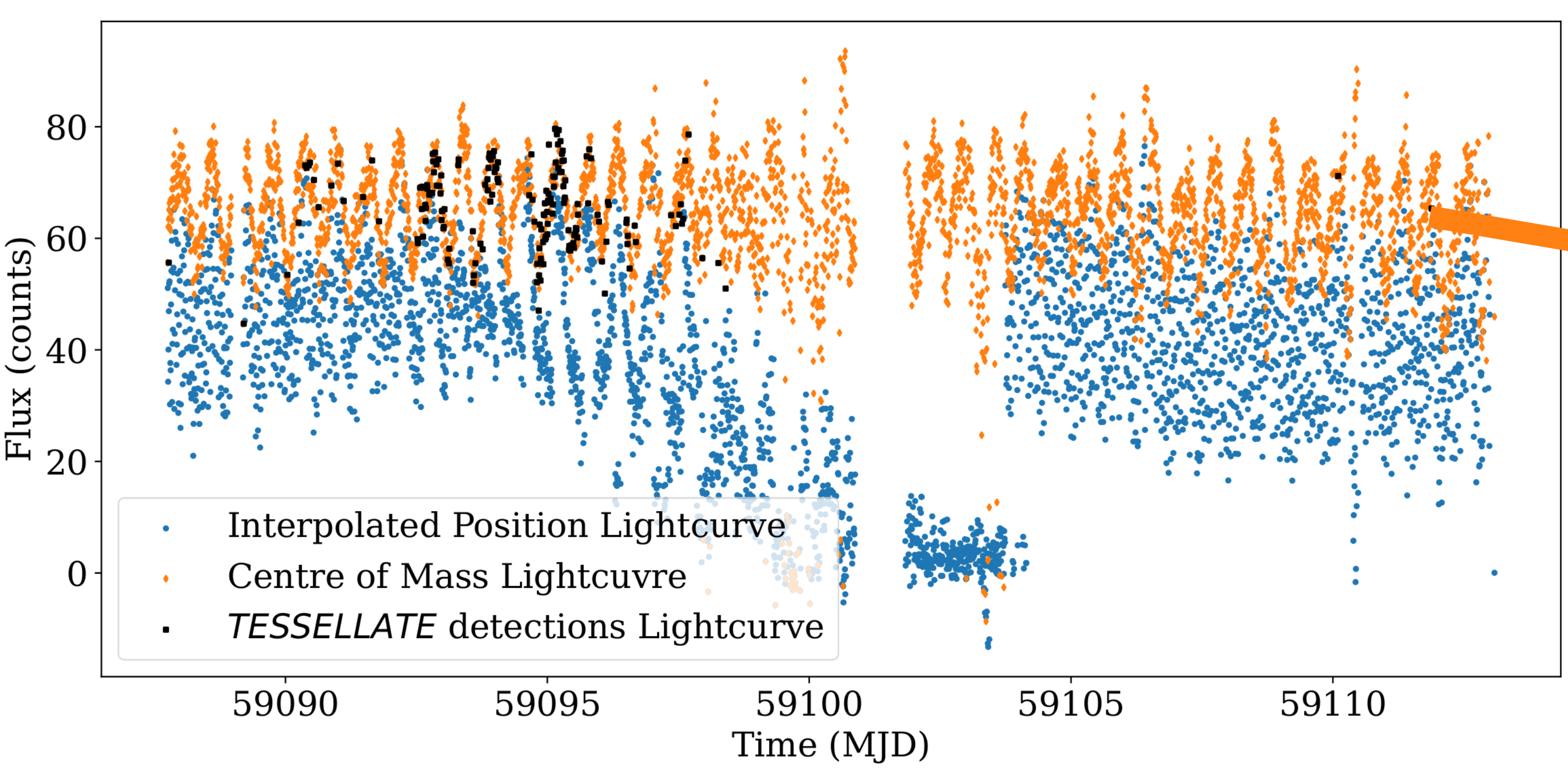


Figure 1: Lightcurves of the asteroid “Ulysses” for the interpolated positions (blue), centre of mass positions (Orange) and *TESSELLATE* detection matches (black).

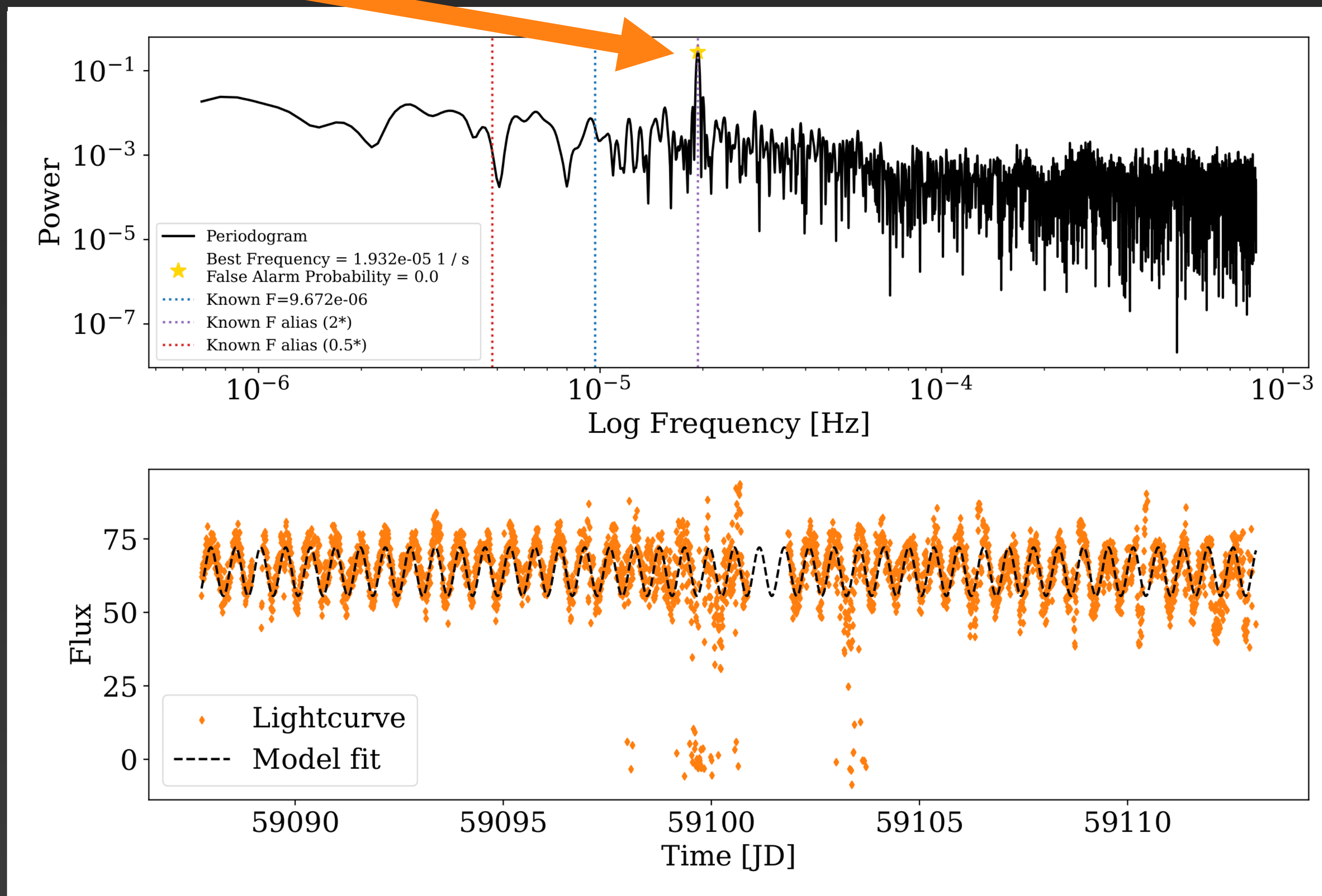


Figure 2: Upper Panel: An example periodogram of the same asteroid. Lower Panel: The model fit to the lightcurve.

TESS can give accurate asteroid rotation periods.

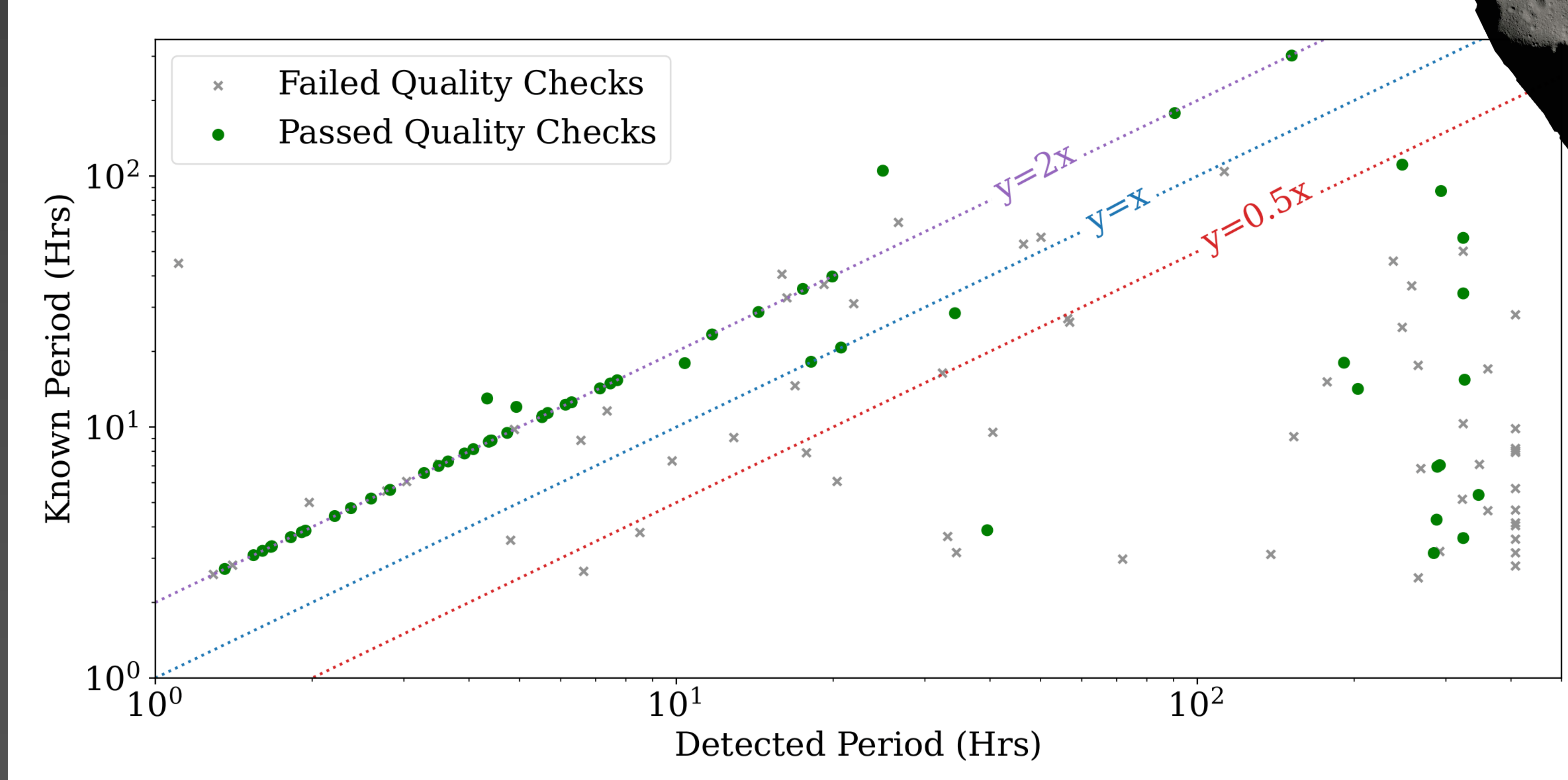


Figure 3: Comparison of detected period and known period for all the asteroids in the field and the Lightcuvre Database (LCDB [3]) (grey), and those that passed the quality checks (green).

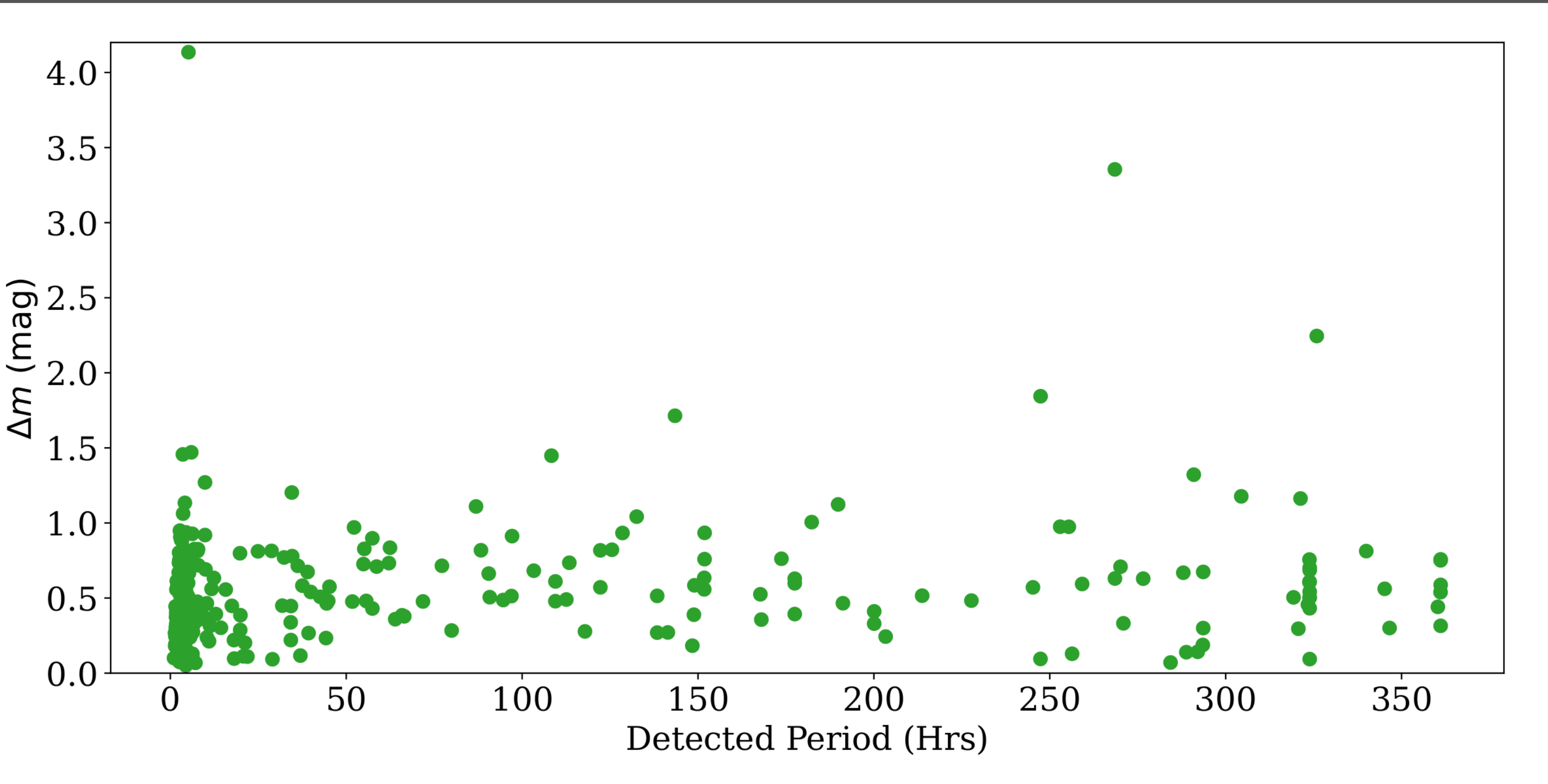


Figure 4: Detected periods against the amplitude variation of all the asteroids that pass the quality checks.

The amplitude of variation is constant with rotation period.