Asteroseismology is the study of stellar interiors using the oscillations of stars. More specifically, using the frequencies of the normal modes of pulsating stars. These normal modes are usually called “starquakes.” In some aspects, asteroseismology is similar to the seismological studies of the interior of the Earth.

There are several mechanisms driving the oscillations in stars. Two of the most important are: the k-mechanism (related with changes in opacity) and the stochastic driving. The k-mechanism acts like an heat engine, converting thermal into mechanical energy. The stochastic driving is the main mechanism acting in sun-like stars and thus particularly important for our work. Here, the modes are driven stochastically by the turbulence of the subsurface convective zone.

The oscillation modes may be conveniently represented in terms of spherical harmonics, radial eigenfrequencies and oscillation frequencies.

We noticed a small variation in the rotation period of the star. This gives us information about the mean density of the star, and the latter is related to the age of the star.