

GJ 273: Formation, dynamical evolution and habitability of one of the most interesting planetary systems.

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Abstract

The planetary system GJ 273 is one of the closest multi-planetary systems known so far at only 3.8 pc away. Recent studies showed that it harbours two Earth-like planets, one of them being in the habitable zone. In this work, still in progress, we show our latest results regarding the planetary formation and the water delivery in early times; the dynamical stability of the system as well as the dynamical environment, where we study the regions where the system may harbour minor bodies in stable orbits, i.e., Main Asteroids Belt analogues; and the effects of tides on the planets, i.e., spin-orbit alignment, pseudo-synchronization and tidal heating. All these parameters have important influence on the potential habitability of the planet located on the habitable zone, GJ 273-c. (See poster).