
CoRoT-32b, the youngest aligned exoplanet

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Abstract

We announce the discovery of CoRoT-32b, the youngest aligned transiting planet ever found. CoRoT-32b is a Jupiter like planet in a 20-day orbit around an F4 dwarf. The host star is a member of the 25-million-year-old cluster NGC 2232. Using spectra from FIES@NOT, we find that the orbital plane of the planet is parallel to the equatorial plane of the star. CoRoT-32b is therefore a "Rosetta stone" discovery in exoplanetary science, as the measured alignment is basically equal to the primordial one, allowing us to strongly constrain - for the first time - the migration mechanism of a hot Jupiter.

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