



COLLABORATIVE DATA COLLECTION BY THE CENTRE NATIONAL D'ETUDES SPATIALES' (CNES)
COROT SATELLITE AND THE HIGH ACCURACY RADIAL VELOCITY PLANET SEARCHER (HARPS)
SPECTROGRAPH AT THE LA SILVA OBSERVATORY IN CHILE SUGGESTS THE SIZE AND SPEED OF COROT 7B,
THE FASTEST-ORBITING KNOWN EXOPLANET

The COROT satellite first observed the COROT-7B exoplanet in February 2009 as it orbited a star slightly smaller, cooler and younger than the sun residing about 500 light-years from Earth. In September 2009, CNES sought more specific information; to detect the mass and speed of COROT-7B, observational instruments must monitor for minute fluctuations in the velocity of the star, tugged just slightly by COROT-7B's gravitational pull. CNES used HARPS to acquire this information because it can perform the required tasks without encountering any signal blur, something the COROT satellite is unable to do due to its proximity to the stars' "starspot" activity. After seventy continuous hours of monitoring, HARPS provided a clear measurement of COROT-7B's mass — about five times that of Earth — and its speed — orbiting its star once every 20.4 hours.

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