



EPSC Abstracts

Vol. 15, EPSC2021-632, 2021

<https://doi.org/10.5194/epsc2021-632>

Europlanet Science Congress 2021

© Author(s) 2021. This work is distributed under the Creative Commons Attribution 4.0 License.



Searching for exoplanets around M-dwarfs with ExTrA

Marion Cointepas, Xavier Bonfils, and Jose Almenara

Institut de Planétologie et d'Astrophysique de Grenoble, France (marion.cointepas@univ-grenoble-alpes.fr)

ExTrA (Exoplanets in Transits and their Atmospheres - Bonfils et al. 2015) is a new instrument composed of an array of three 60-cm telescopes capable of infrared photometry and located in La Silla, Chile. This instrument relies on a new approach that involves combining optical photometry with spectroscopic information in order to mitigate the disruptive effect of Earth's atmosphere, as well as effects introduced by instruments and detectors. ExTrA is currently being used to confirm TESS planet detections around M-dwarfs, refine transit parameters, and search for additional exoplanets in the same systems. ExTrA obtains a better precision for the planetary radius and for the transit timings for late M-type stars with one or a few TESS transits. This work already led to the confirmation of a mini-Neptune around the M-dwarf TOI-269 (Cointepas et al. 2021). ExTrA will also work in tandem with NIRPS, a near-infrared spectrograph that will join HARPS (High Accuracy Radial velocity Planet Searcher) on the 3.6m ESO telescope to conduct a comprehensive radial-velocity survey on M dwarfs.