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Search for young transit planets in Trumpler 37

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Young transiting planets provide radius and mass of the planet, to test the planet formation models and scenarios. So far, no transiting exoplanets younger than hundred Myr are known. With the YETI network (Young Exoplanet Transit Initiative) we search for such planets. The targets are young open clusters up to 10 Myr, which provide a large number of young stars with similar properties, especially roughly the same age: e.g. Trumpler 37 (4 Myr), 25 Ori (7Myr), IC 348 (2 Myr), and 4 more. In the Trumpler 37 data we found already 2 transiting candidates. During follow-up observations, the first candidate turned out to be a binary star with late-type companion, while for the second candidate observation for radial velocity have still to be done.

Another candidate in 25 Ori is also visible in the YETI data. The host star is an active T Tauri star, hence the activity variation overlap the radial velocity signal caused by the planet, hence further observations are needed.

We will test planet formation models like migration and time scales.

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