

Search of Exoplanets in stellar streams (SELLA).

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Abstract

In this work we search and characterize exoplanets orbiting members of stellar streams, structures in the Galaxy composed of stars with similar dynamic and chemical properties, and with galactic or extragalactic origin. With current facilities, the detection of exoplanets in extragalactic stellar streams, resulting from merger events, could be the only way to study in detail exoplanets formed outside the Milky Way. This could help to understand better the impact of the merger events in the planetary systems of these stars, and also to compare their planetary properties and statistics with the ones from the Milky Way. We used Gaia DR2 to select stellar candidates of the Arcturus stream, an over density of stars suspected to have an extragalactic origin, and we obtained their photometry from the TESS Full Frame Images. We found several transiting planetary candidates and present three of them which are being studied in detail.