Astrophysical false positives in the PLATO LOP fields.

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Abstract

While it is recognised that eclipsing background binary systems in the LOPS and LOPN fields will cause false positive signals, the scale of the problem is not well understood. In this presentation we summarize our paper published in November 2022 in Monthly Notices of the Royal Astronomical Society (MNRAS), in which we utilise the Binary Stellar Evolution and Population Synthesis (BiSEPS) code, to create a complete synthetic stellar and planetary population for the proposed southern LOP field (LOPS0), as well as for a representative portion of the northern LOP field (LOPN-sub), and analyse these areas for astrophysical false positives.
We also update progress on our work on summarising the properties of the binary systems generating the false positives to better understand what types of binaries are most likely to cause false positives, especially in the Earth-like radius range.

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