

Abstract Submitted
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Case Studies of the Restricted Three Body Problem¹ JASON EBERLE, MANFRED CUNTZ, ZDZISLAW MUSIELAK, University of Texas at Arlington — Are we alone in the universe? Nobody can give an answer yet. However, one step on the way to find out is to inquire how many planets in the universe could harbor life. An important feature a planet should have for life to exist is that the planet shouldn't crash into the star or fly off into interstellar space. In regard to our own solar system this is a non-issue as all planets are known to have orbited the Sun for billions of years. The unfortunate truth is that most planets don't have it as nice as Earth does. In fact, about half of all known stellar systems harbor two or more stars, thus affecting orbital stability of any planets in the systems. It is found that when a system harbors two stars, the planet may orbit one or both stars, depending on the physical conditions, or may even be kicked out of the neighborhood of the stars completely, and lost in space forever. In this poster, we provide detailed case studies for planets in binary systems.

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