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Title: Open Source Software Development for Transit Detection using Cloud Computing
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Abstract: Abstract: We describe the beginning stages of development for an open-source software suite designed to detect exoplanet transits using cloud computing. The goal of this project is to enable more collaboration of programmers from around the world in developing algorithms and codes related to detection of transit-like events, especially in Kepler data. We also hope that such software may be useful when TESS data are available. Our work extends the work of Berriman et al. (2012, arXiv:1211.4055; 2010, arXiv:1010.4813) in a few particular ways. We describe our use of the Amazon EC2 cloud to search for aperiodic transit-like events in Kepler light curves. Such events may be caused by circumbinary planets or very long-period transiting bodies, either planets or stars.