

How to find an Earth analog and a solar-system analog in the world of exoplanets

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To start astrobiology in exoplanets, we need to find Earth-like exoplanets that we can characterize. However, the current well-studied transiting or directly imaged exoplanets are far from a second Earth and even planet analogs in our solar system. In this talk, I review the current status of exoplanets toward Earth and solar planet analogs. I talk about how to find transiting planets at an AU scale similar to solar planets and the proposed nanosatellite mission to find nearby Jupiter analogs. I also talk about how to characterize Earth-like planets when direct imaging techniques achieve sufficient capability to detect them.

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