## Pushing the Limits of JWST to Study our Nearest Sun-Like Star

## Worlds Next Door: A Candidate Giant Planet Imaged in the Habitable Zone of $\alpha$ Centauri A. I. Observations, Orbital and Physical Properties, and Exozodi Upper Limits

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Worlds Next Door: A Candidate Giant Planet Imaged in the Habitable Zone of  $\alpha$  Centauri A. II. Binary Star Modeling, Planet and Exozodi Search, and Sensitivity Analysis

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## JWST/MIRI F1550C Observations of lpha Centauri AB







