



An Exploration of Exoplanet Detection Methods

Group 5

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Radial
Velocity

Microlensing

Transits

Astrometry

Direct
Imaging

ed to date



Methods

1

Download NASA Exoplanet Data

2

Create Various Plots

3

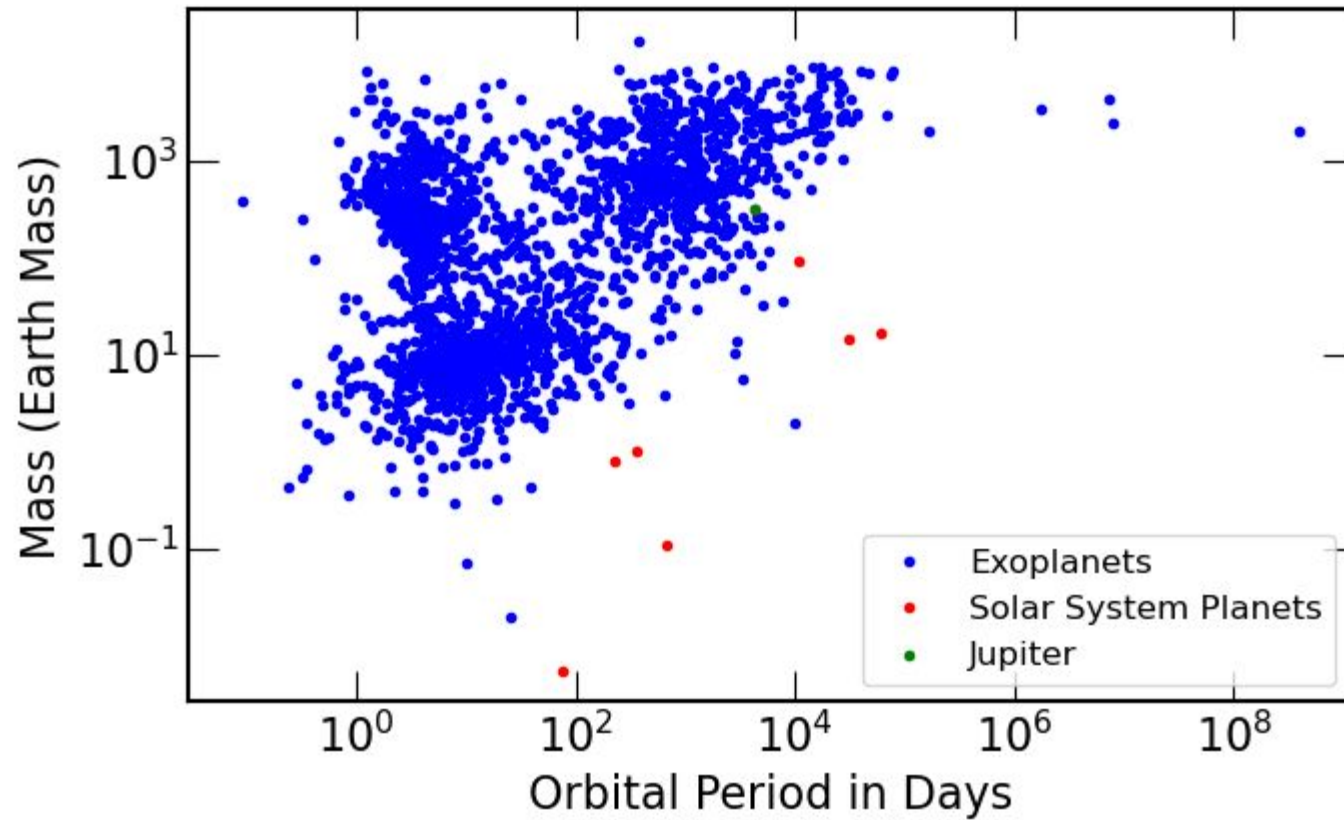
Overplot Solar System Planets

4

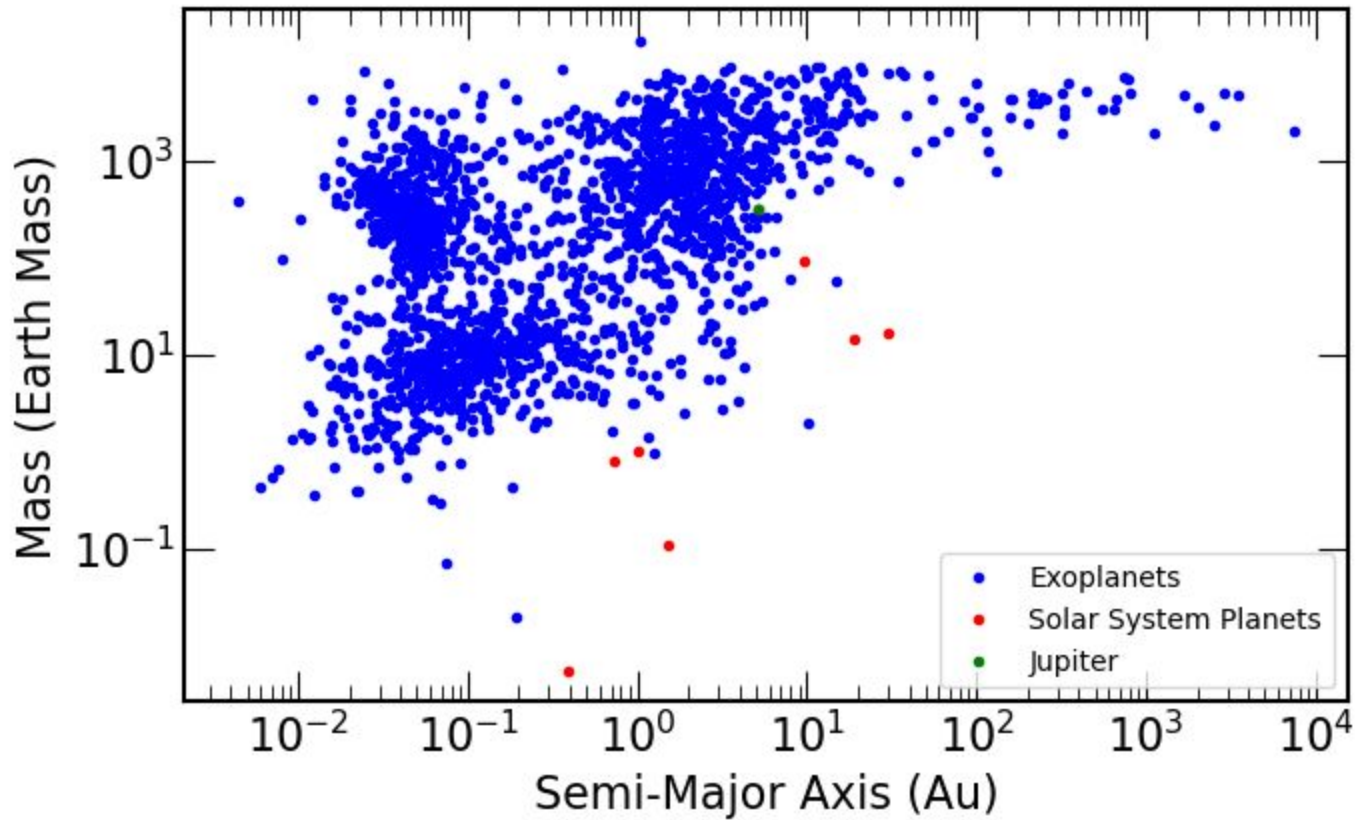
Check Sensitivities of
Detections

5

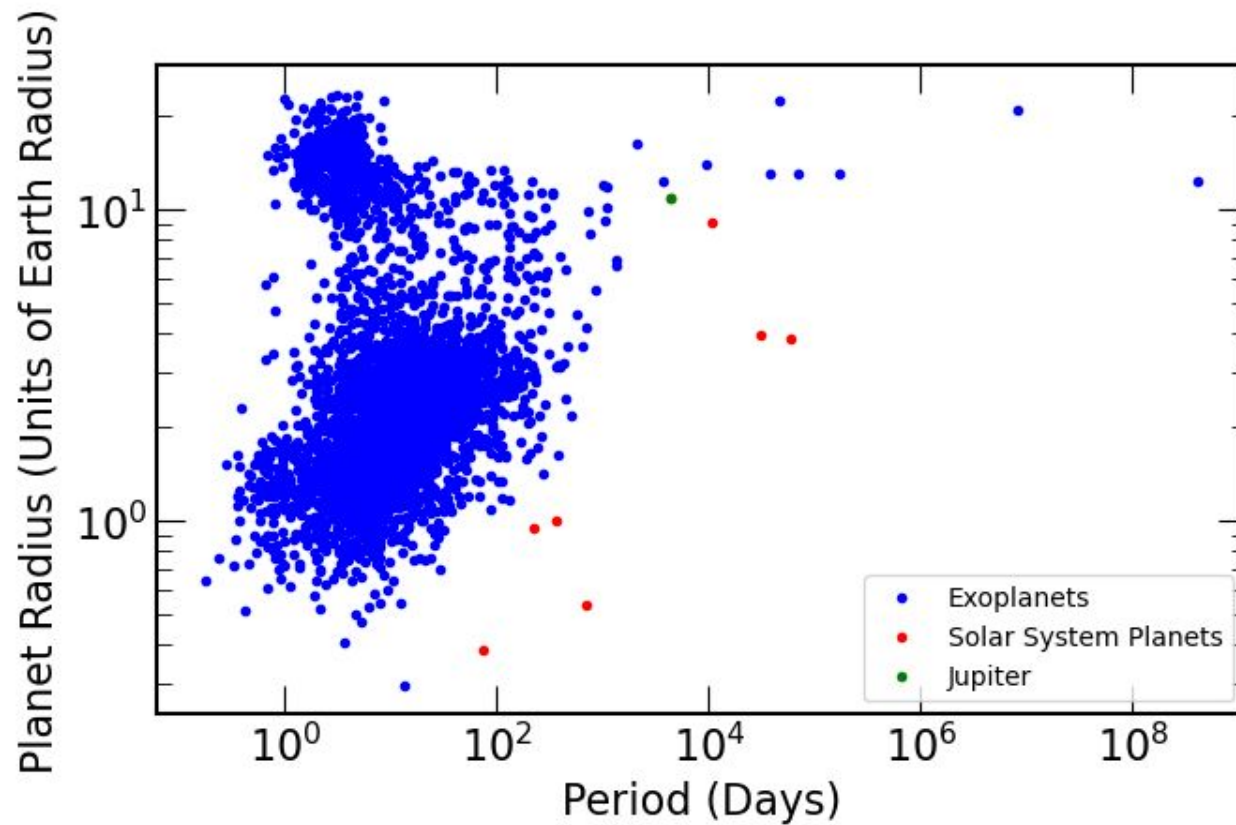
Simulate Jovian Planet Around
Sun-like Star



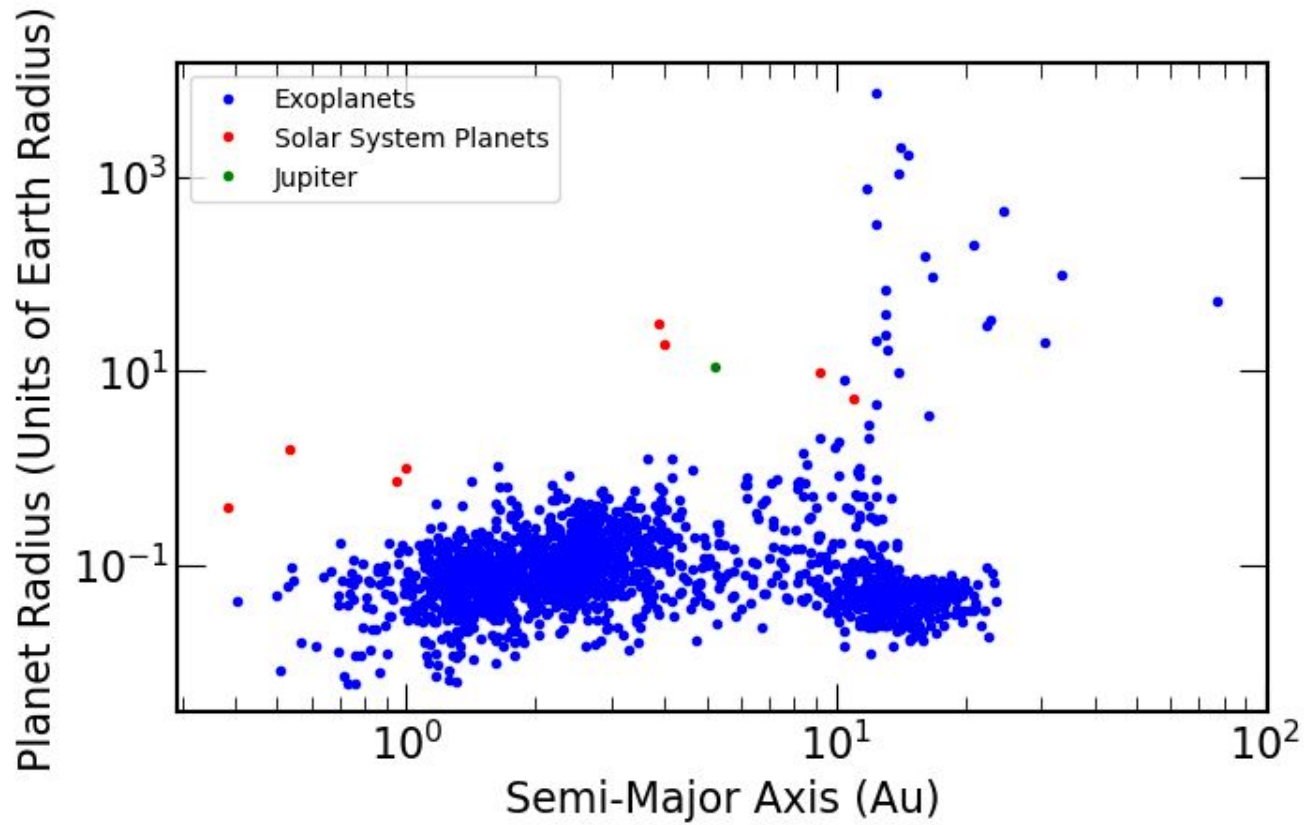
Plot 1: Mass v. Period



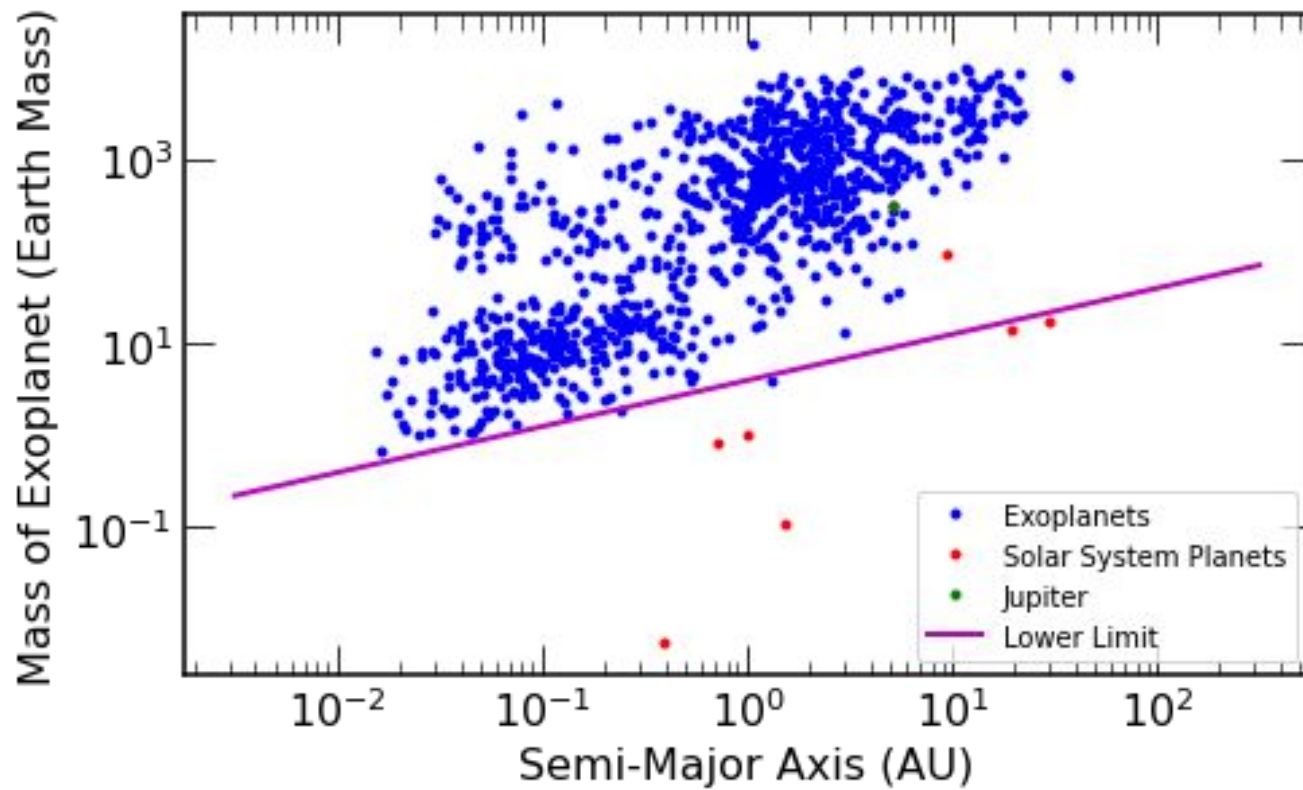
Plot 2: Mass vs. Semi-Major Axis



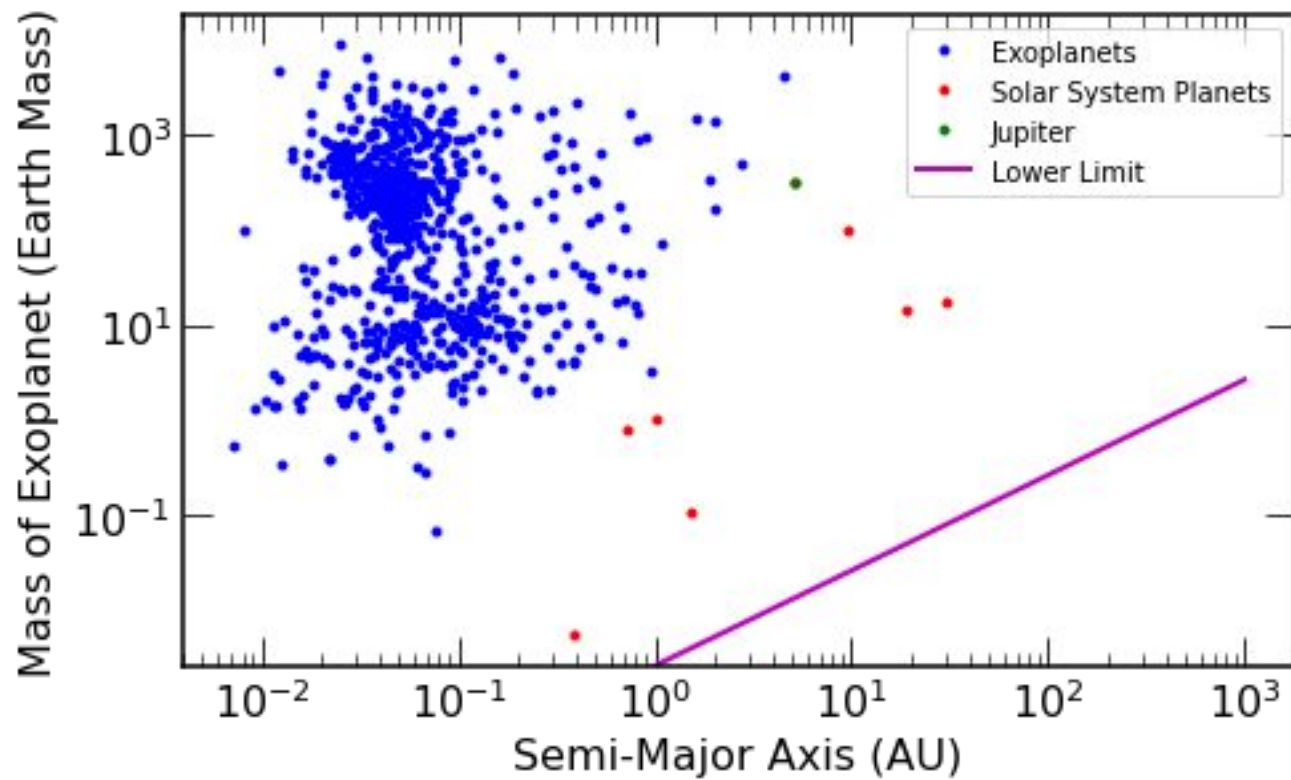
Plot 3: Radius vs. Period



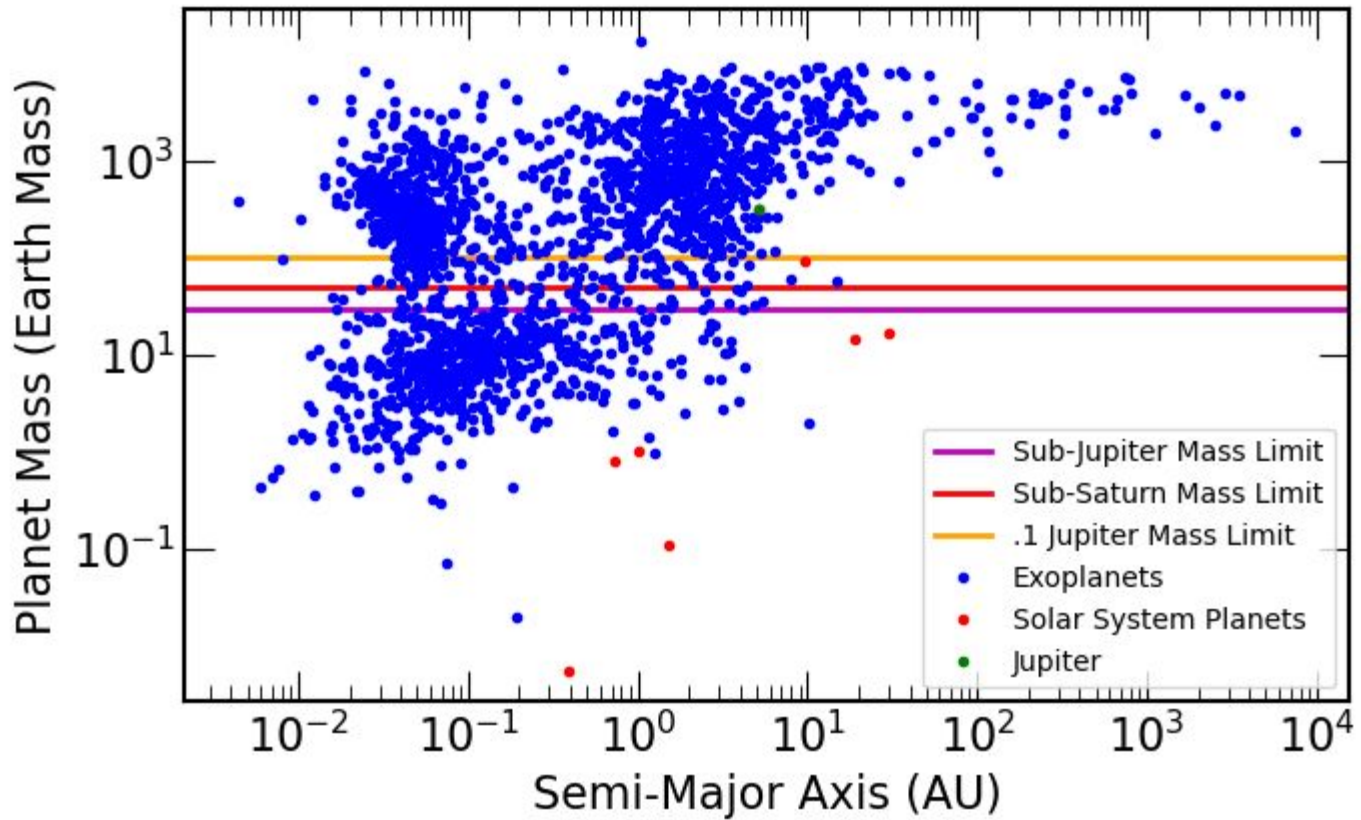
Plot 4: Radius vs. Semi-Major Axis



Radial Velocity Sensitivity



Transit Sensitivity



Direct Imaging Sensitivity



Conclusion

- Strengths vs. Weaknesses
- Confirmation Bias
- Occurence Rate Method