MOA-2011-BLG-293

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in collaboration with
OGLE, MOA, MicroFUN

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MOA-2011-BLG-293

OGLE
MOA
Wise

I (mag)

5747.0  5747.5  5748.0
HJD-2,450,000

Residuals

-0.10  0.05  0.10
What Makes a Planet Detectable?
What Makes a Planet Detectable?

All Events

Possible Planets

Planets
What Makes a Planet Detectable?

- All Events
  - Possible Planets
  - Planets

- All Events
  - Any event someone thought was interesting
  - Events for which the community agrees the analysis shows a planet
What Makes a Planet Detectable?

All Events → Possible Planets → Planets

All Events → Any event someone thought was interesting

All Events → Events for which the community agrees the analysis shows a planet

Final Analysis gives $\Delta \chi^2 = 500$

$\Delta \chi^2 = 200$ for Raw Data
What Makes a Planet Detectable?

- Can distinguish between planet and stellar mass ratios
- Can distinguish between microlensing and systematics
- $\Delta \chi^2$
- Corroboration from other data
- Clear microlensing features
MOA-2010-BLG-523

~7 hours
What Makes a Planet Detectable?

- Can distinguish between planet and stellar mass ratios
- Can distinguish between microlensing and systematics
- $\Delta \chi^2$
- Corroboration from other data
- Clear microlensing features
- Other statistics