

Planetary Transits

By

Jamie Tayar, Will Burns, and Sarai Pegram

TIP June 28, 2006

Contents

- Exosolar planets
- Observed Stars
- Graphs
- Analysis
- Conclusion



The Search for Extrasolar Planets

- ? 194 extrasolar planets are known
- ? Found through
 - Radial velocity
 - Microlensing
 - Imaging
 - And around pulsars

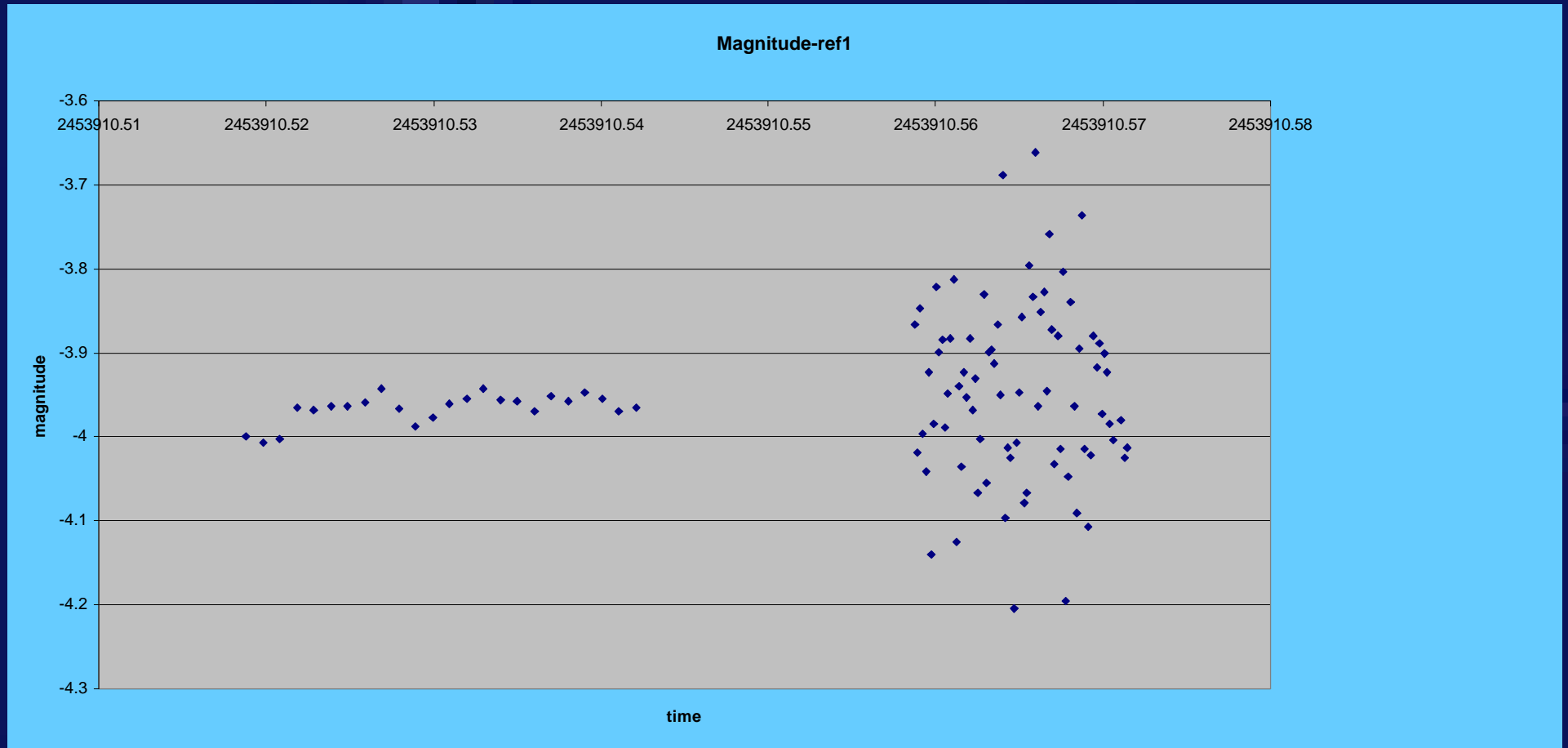
HD 168746

- G5 type star
- Magnitude of 7.95
- 3.95 billion years old
- 43.12 pc away
- One known planet- HD 168746 b

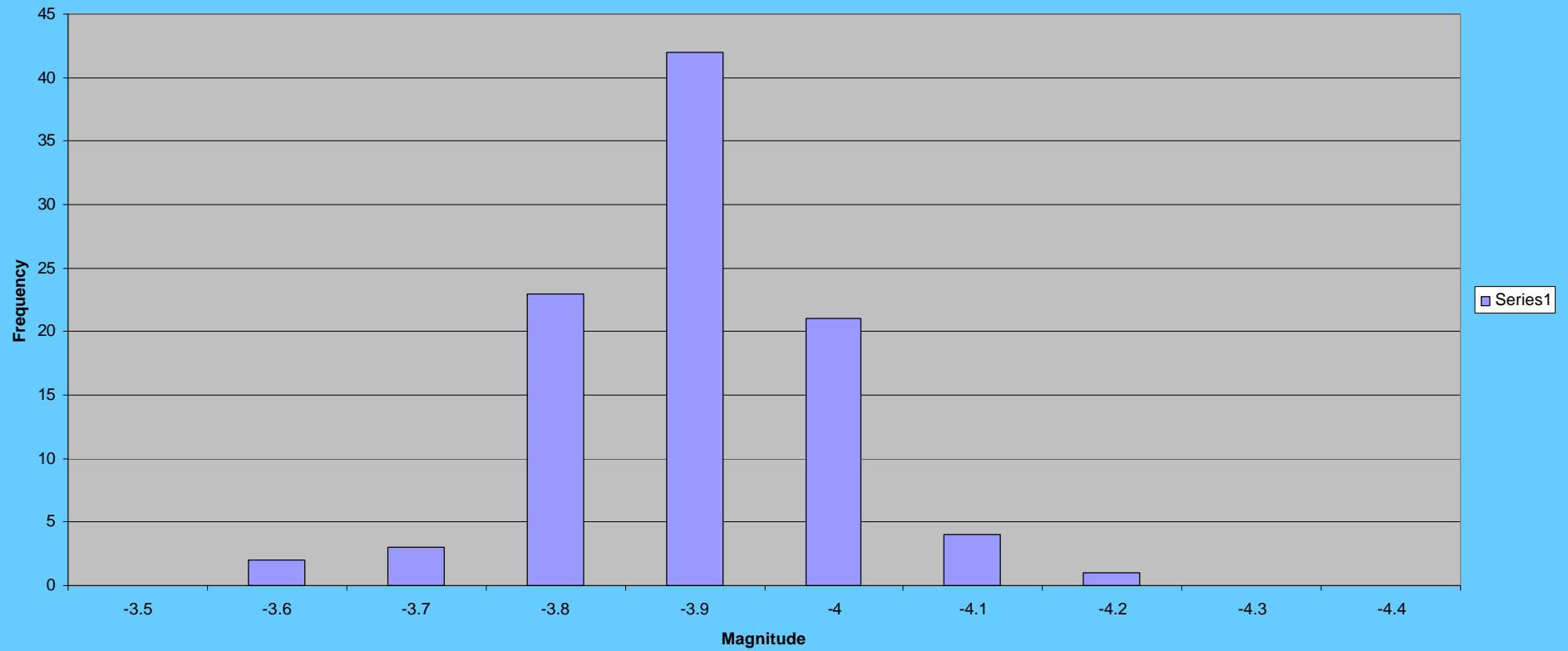
HD 168746 b

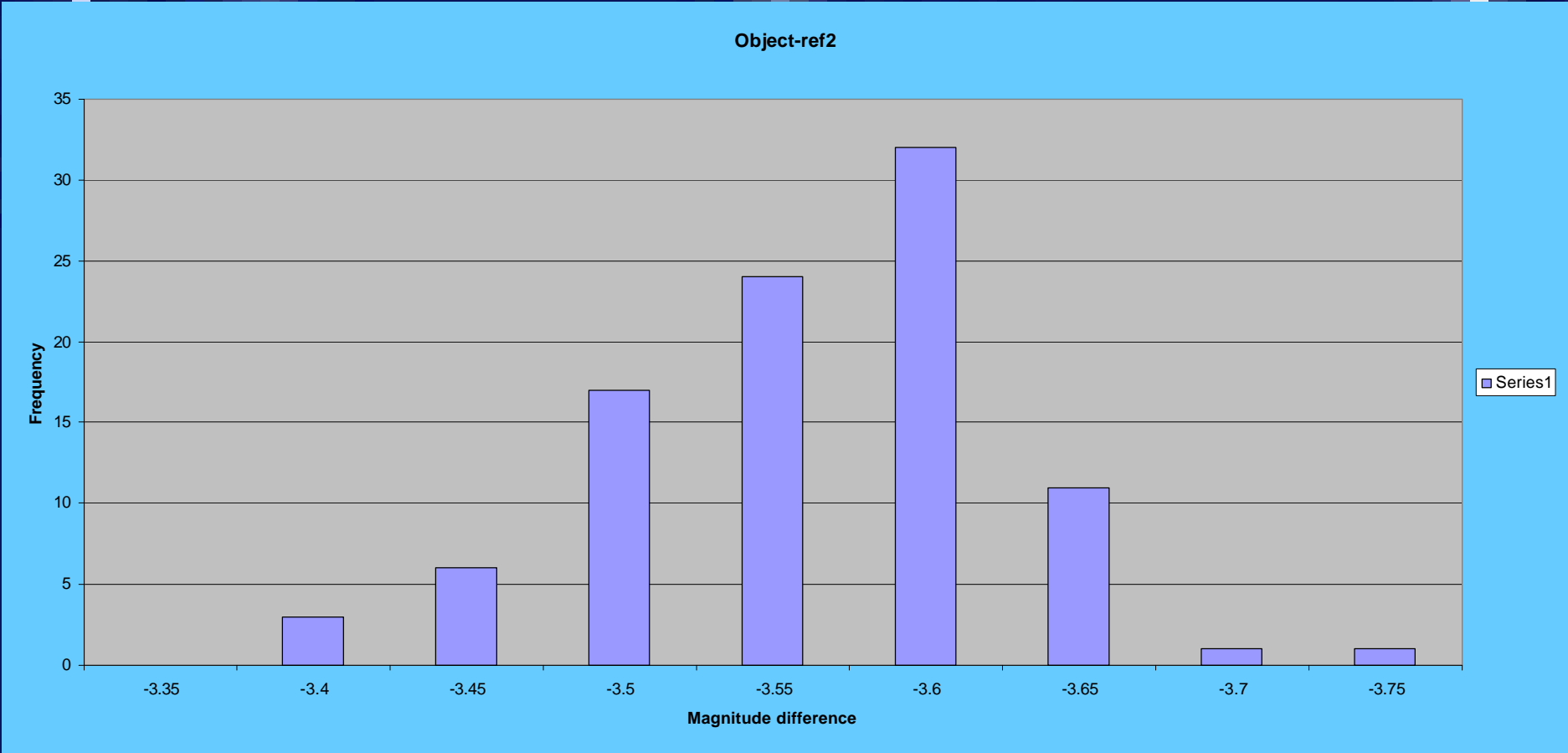
- Planet orbiting HD 168746
- Discovered in 2002
- Discovered by radial velocity
- 0.23 times the mass of Jupiter
- Orbital period of 6.403 days

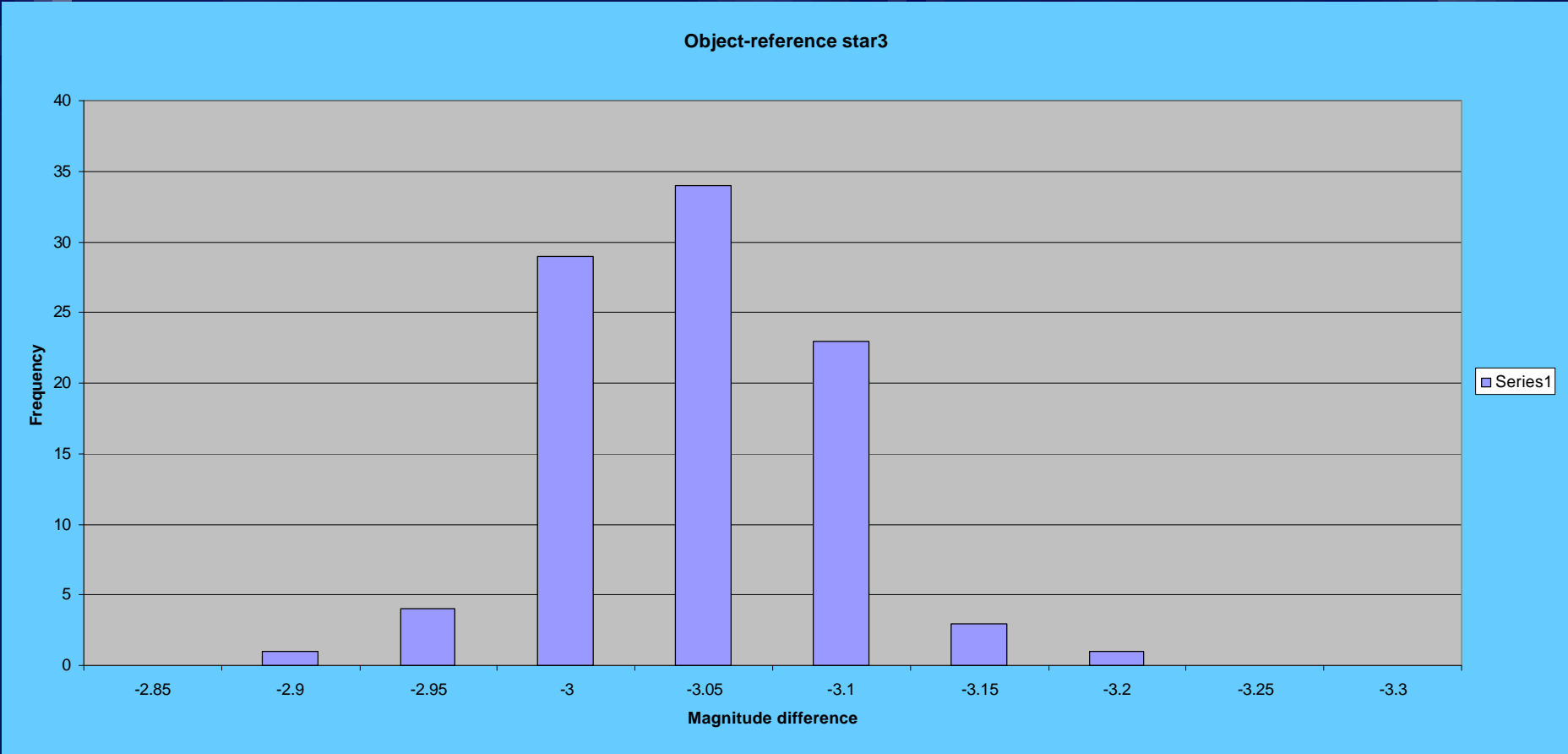
The Data



Object-reference 1







Conclusion

- ? We were able to use PROMPT telescopes in South America to observe the transit
- ? The drop in magnitude means that there is a planet orbiting the star HD168746.
- ? The published parameters of the planet are accurate

References

- ? "Interactive Extra-Solar Planets Catalog." The Extrasolar Planets Encyclopaedia. Feb. 1995. Paris Observatory. 23 June 2006 <<http://exoplanet.eu/catalog-control.php>>.
- ? Laughlin, Greg. "Transitsearch Candidates Site." Transit Search. 23 June 2006 <<http://www.ucolick.org/~laugh/>>.
- ? Schneider, Jean. "Interactive Extra-Solar Planets Catalog." The Extrasolar Planets Encyclopaedia. Feb. 1995. Paris Observatory. 23 June 2006 <<http://exoplanet.eu/catalog-control.php>>.
- ? "SIMBAD Astronomical Database." SIMBAD Astronomical Database. Centre de Données astronomiques de Strasbourg. 23 June 2006 <<http://simbad.u-strasbg.fr/>>.



