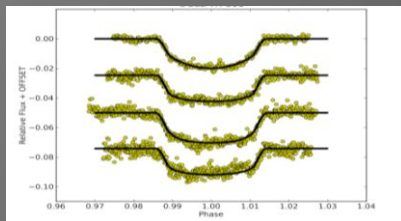
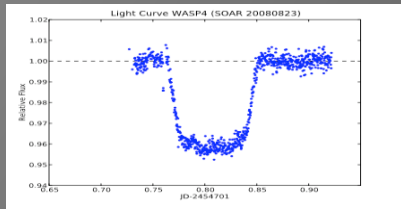
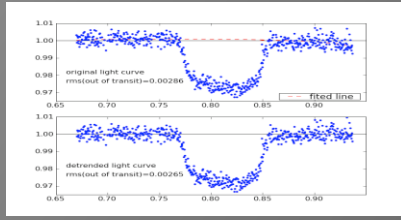


SEARCH FOR EXOPLANETS USING TTVS IN THE SOUTHERN HEMISPHERE

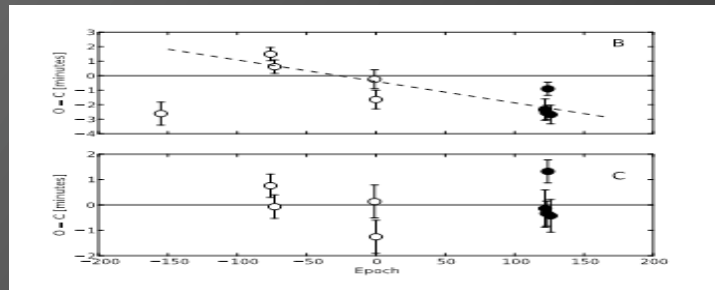
Sergio Hoyer, Patricio Rojo
Universidad de Chile. Astronomy Department.

The method of **Transit Timing Variations (TTVs)** can detect additional low-mass planets in transiting exoplanetary systems. Those low-mass planets are in principle undetectable by other methods like RVs. In 2008 we started an homogeneous monitoring of known transiting planets in the Southern Hemisphere with observations of a cadence of 20 to 50 seconds. By carefully measuring the central time we are able to detect long- and short-term variations of the primary transits, and therefore infer the presence of additional bodies in those systems.

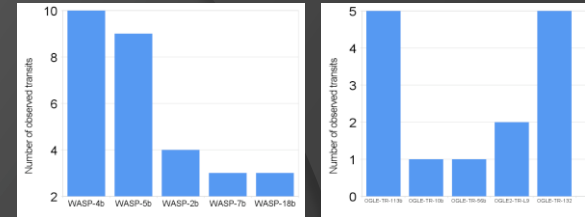


Preliminary light curves we are obtaining to measure the central time of the transits and other physical parameters.

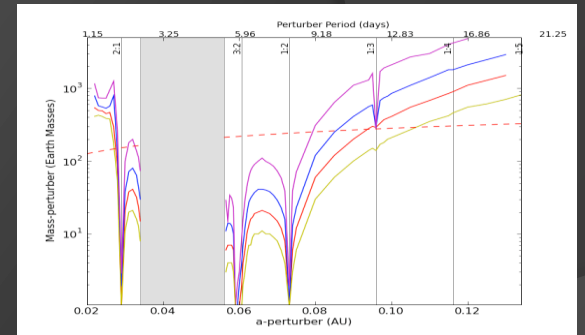
shoyer@das.uchile.cl
<http://www.das.uchile.cl/~shoyer>



Preliminary Observed *minus* Calculated diagram of the central times of the transits for OGLE-TR-111b.



Number of observed transit by our project.



Example of mass limits for an unseen orbital perturber we can obtain using information from TTVs.

We acknowledge support from FONDAPE (Project 1501003).