



Transit Spectroscopy with GTC

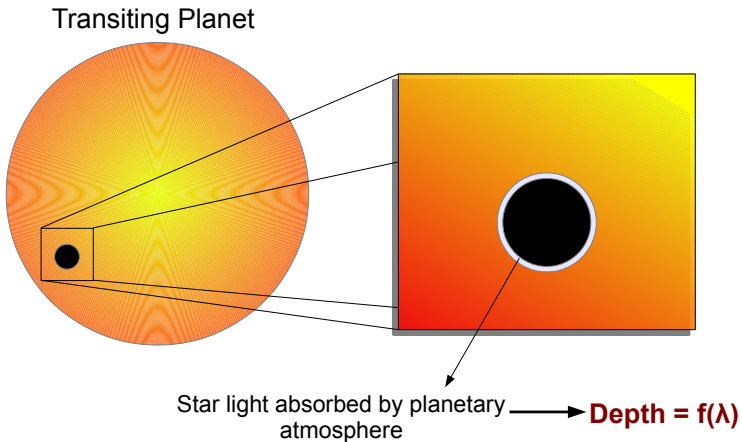
Felipe Murgas

E. Pallé & Planets and Low Mass stars group

Instituto de Astrofísica de Canarias (IAC)

RoPACS Conference, 15 November 2012

Transmission Spectroscopy

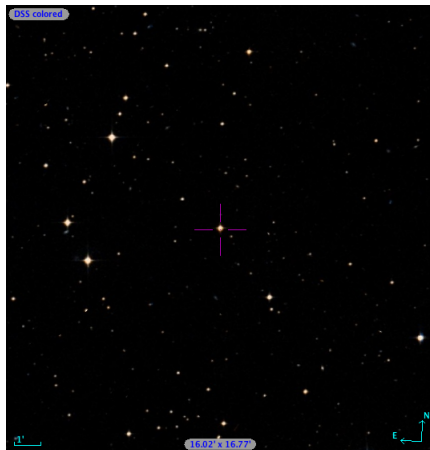


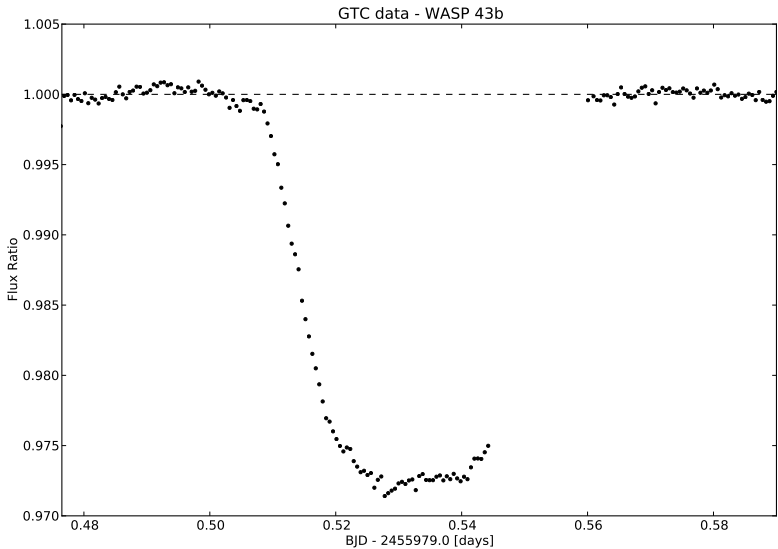
GTC: **G**ran **T**elescopio de **C**anarias, La Palma
OSIRIS: **O**ptical **S**ystem for **I**maging and low **R**esolution
Integrated **S**pectroscopy

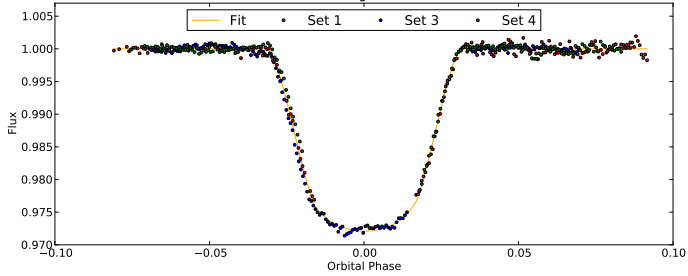
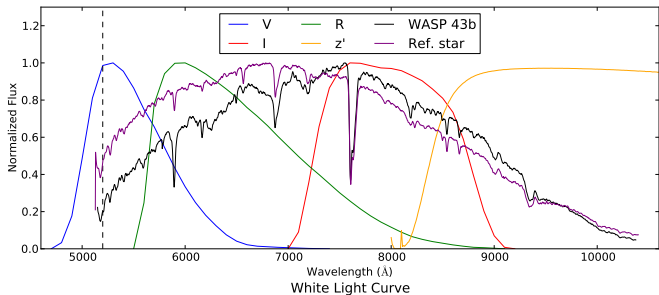
- 10.4m
- 2 CCDs, 2048 x 4096 pixels
- 7.8×7.8 arcmin FOV
- Long Slit Spectroscopic mode
- R1000R grism
- Spectral range: 523 nm-1000 nm
- Slit width: 12 arcsec



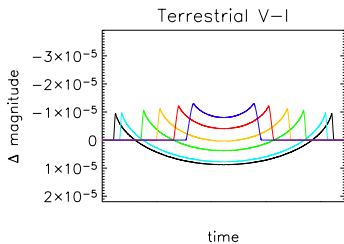
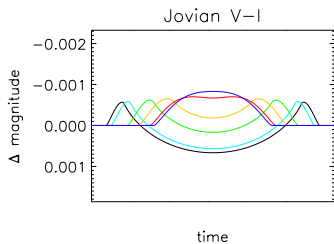
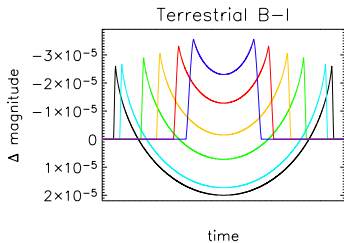
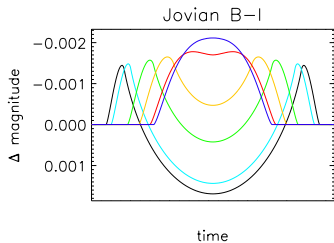
- Hellier et al 2011
- K7V
- $V = 12.4$ mag
- $P = 0.813$ days
- Duration = 69.5 min
- $M_p = 2.03 M_J$
- $R_p = 1.04 R_J$

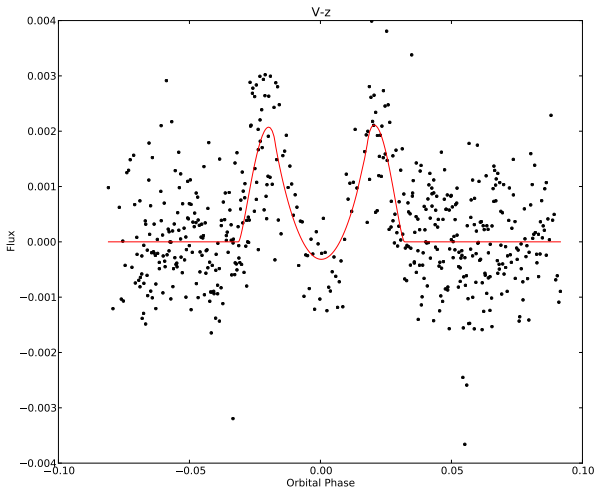






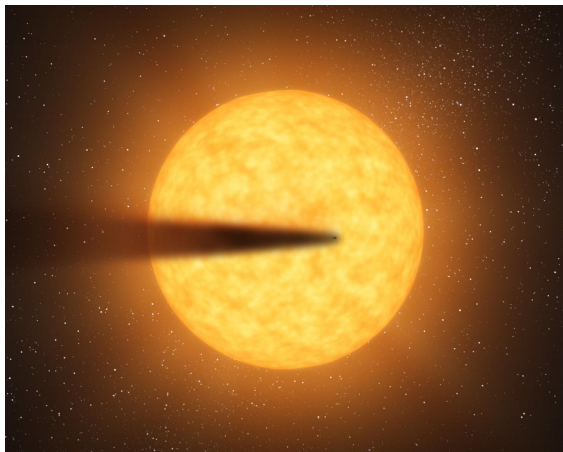
B. Tingley, A & A, 2004

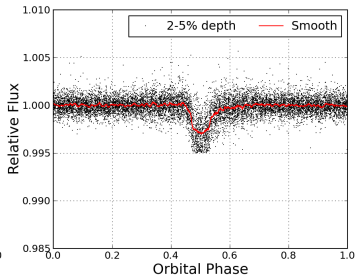
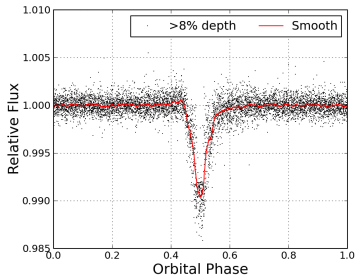
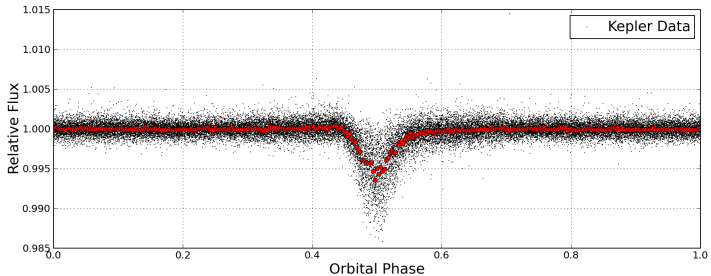




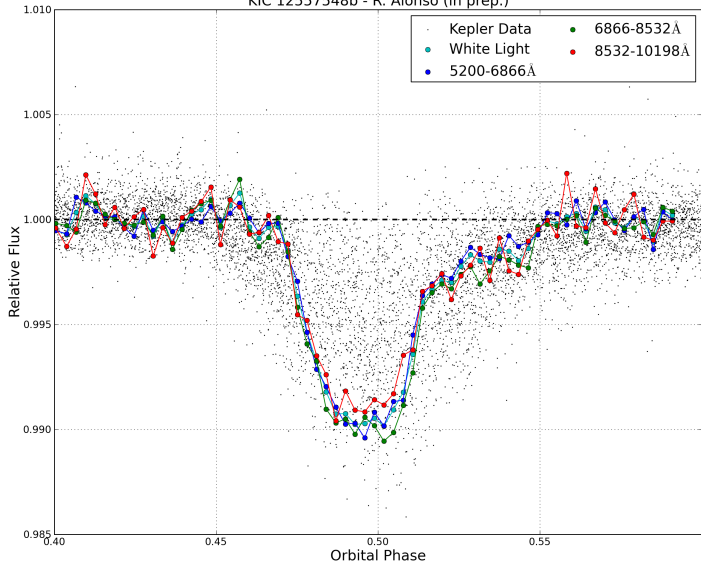
...Evaporating Planet (?)

- Rappaport et al 2012
- K dwarf
- V= 16 mag
- P= 15.69 hours
- Variable occultations

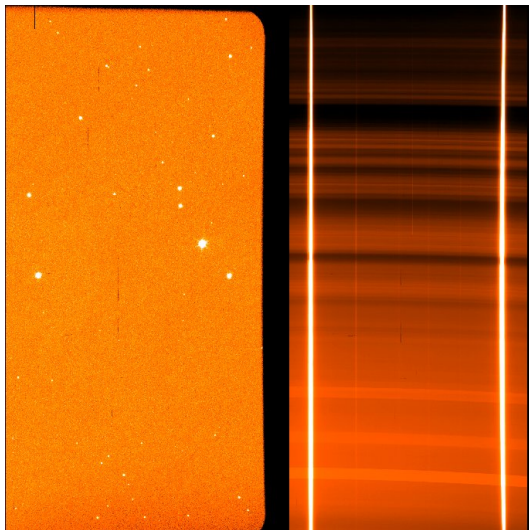




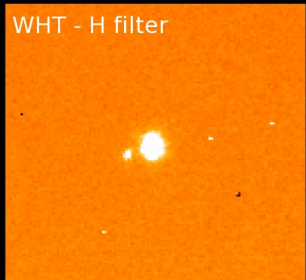
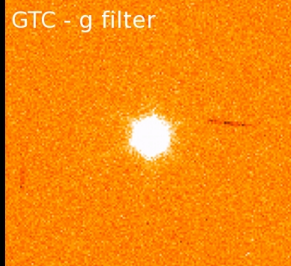
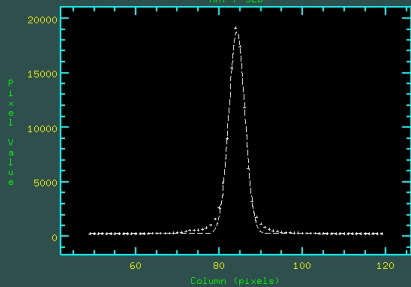
KIC 12557548b - R. Alonso (in prep.)

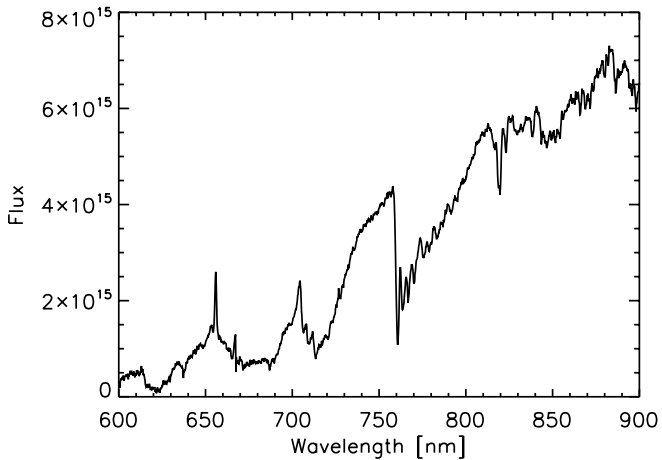


- Late F, early G
- $V = 11.3$ mag
- $P = 2.15$ days
- $M_p = 0.86\text{-}0.94 M_J$
- $R_p = 1.79\text{-}2.04 R_J$
- Preliminary Results!

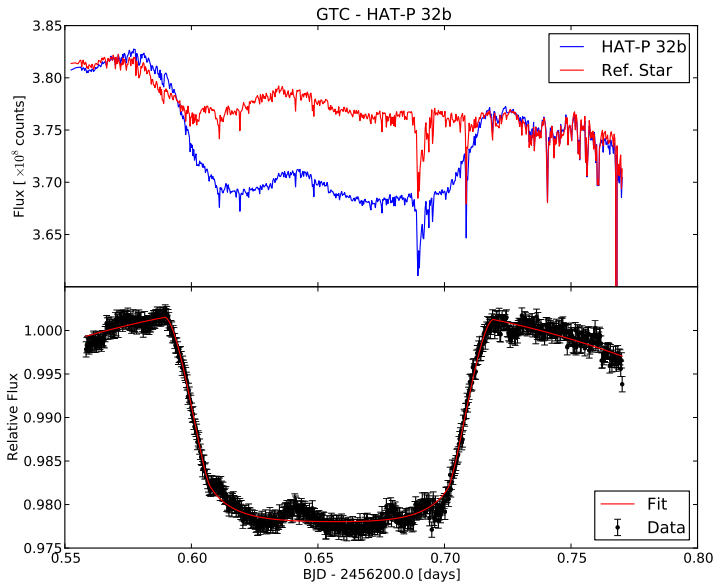


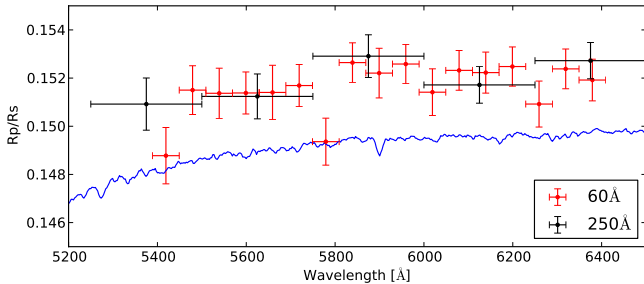
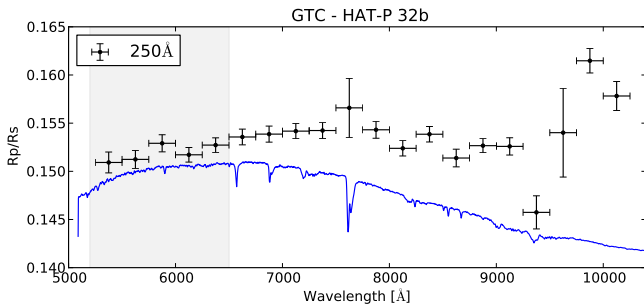
NORD/IRAF V2.14.1 murgas@tango Tue 11:19:53 06-Nov-2012
Spec_Median_Fits: Lines 997-1001
HRT-P-32b





credit: L. Nortmann





Thank You