Observations of ExoPlanets at the MMO

J. Williams, G. Walker, & V. Strelnitski
RET attempting to blend in with REUs
Transit Observations
HD189733, 2008.08.08, Iz-band, Williams (MMO)

Differential Magnitude vs. UT

Ap = 13 px
Differential Photometry

HD189733 R-Band

Differential Magnitude

JD - 2454698

HD189733
9-Pt Moving Average
Bruce Gary’s Spreadsheet
http://brucegary.net

HD 189733, 2008.08.20, R-band, Williams (MMO)
JD: 2454698

Differential Magnitude

UT

Ap = 14 px
Sysrem (Tamuz et al. 2005)
Sysrem, a technique for removal of systematic errors from large sets of light curves, was created (Tamuz et al. 2005) and widely used in photometric surveys for transiting exoplanets.

In principle, each run of Sysrem can find and remove one significant systematic effect.

Sysrem requires a limiting factor to avoid removing the transit itself.
MMO’s (potential) solution to the halting problem:

1. Separate target from comp stars
2. Run Sysrem on comp stars ONLY
3. Apply average correction to target
Research continues…

HD189733 R-Band

HD189733, 2008.08.20, R-band, Williams/MMO
JD: 2454608

O - C
UT
Ap = 14 px

HD189733