

# KIC 008243263

## Q1-17 DR25 TCE Parameters

| TCE          | Run Type | KOI?    | Period (Days) | Epoch (BKJD) | Depth (ppm) | Duration (Hours) | MES    | SNR    | $R_{\star}$ ( $R_{\odot}$ ) | $T_{\star}$ (K) | $R_p$ ( $R_{\oplus}$ ) | $S_p$ ( $S_{\oplus}$ ) |
|--------------|----------|---------|---------------|--------------|-------------|------------------|--------|--------|-----------------------------|-----------------|------------------------|------------------------|
| 008243263-01 | OBS      | 7000.01 | 1.759275      | 132.075375   | 30991.8     | 3.151            | 8612.7 | 5643.6 | 1.23                        | 6656            | 29.85                  | 2838.20                |

## Robovetter Results

| TCE          | Run Type | Disp | Score | N | S | C | E | Comments   |
|--------------|----------|------|-------|---|---|---|---|--|
| 008243263-01 | OBS      | FP   | 0.00  | 0 | 1 | 0 | 0 | DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—DEEP_V_SHAPED |

**Notes:** OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008243263-01

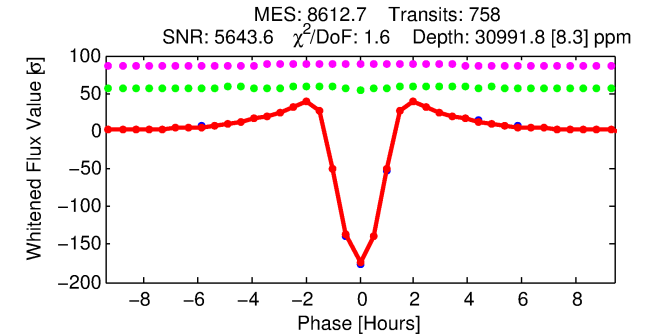
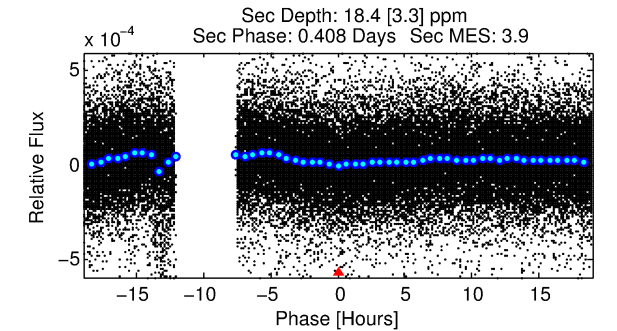
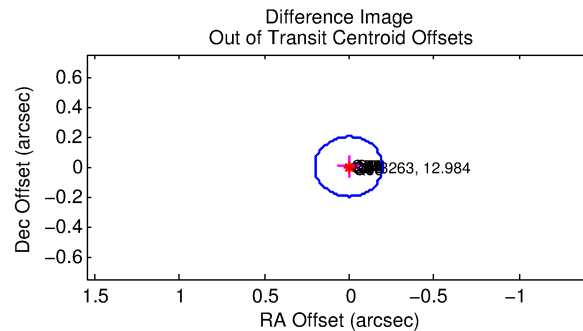
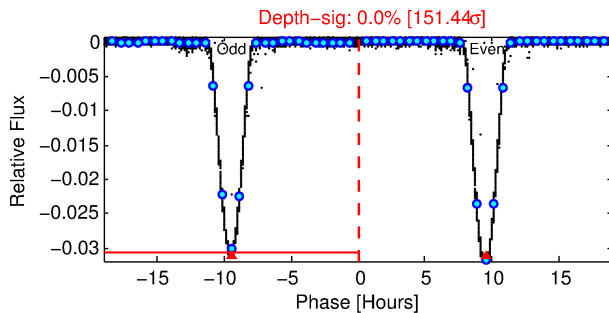
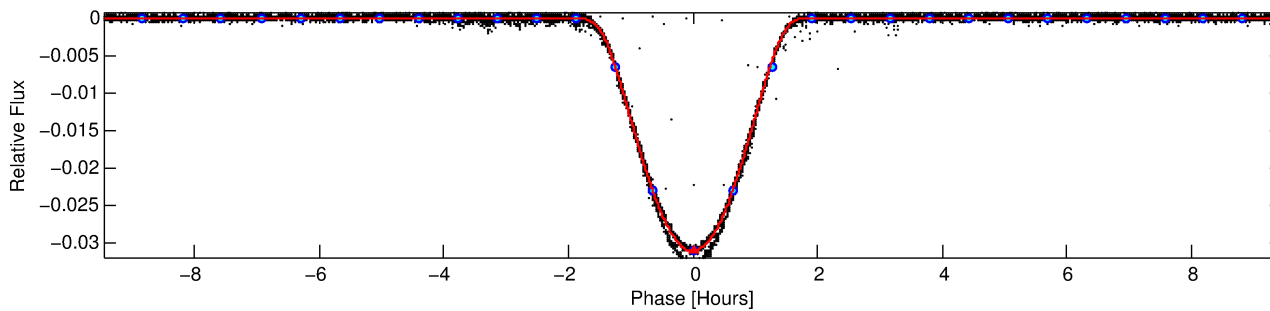
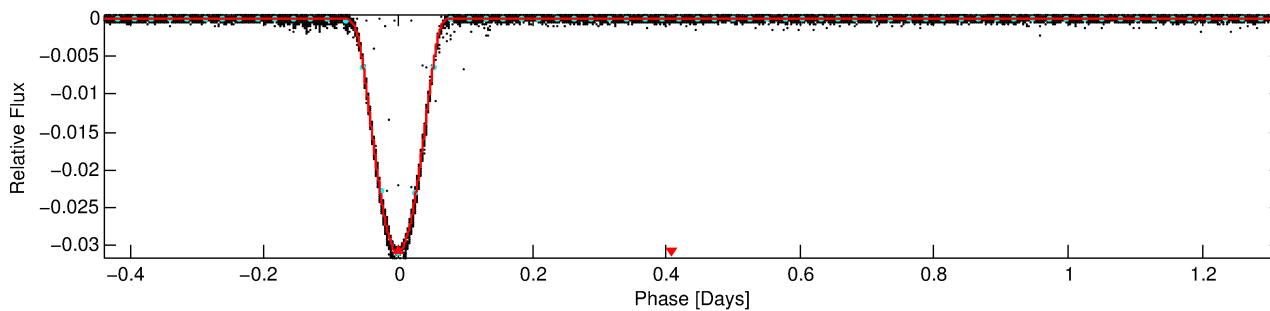
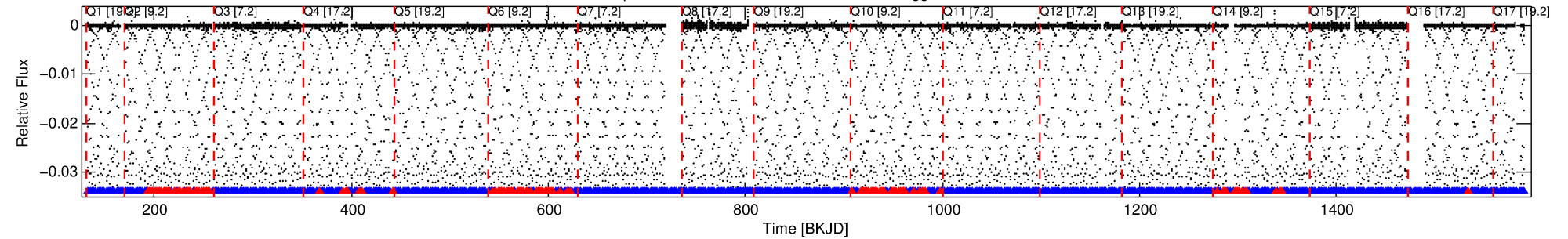
No Significant Match Found

# DV One-Page Summary

KIC: 8243263 Candidate: 1 of 1 Period: 1.759 d

KOI: K07000.01 Corr: 0.993

Kp: 12.98 R\*: 1.23 Rs Teff: 6656.0 K Logg: 4.35 Fe/H: -0.080



## DV Fit Results:

Period = 1.75928 [0.00000] d  
Epoch = 132.0754 [0.0000] BKJD  
Rp/R\* = 0.2220 [0.0010]  
a/R\* = 3.61 [0.00]  
b = 0.91 [0.00]  
Seff = 2838.20 [1246.29]  
Teff = 1861 [204] K  
Rp = 29.85 [10.69] Re  
a = 0.0307 [0.0090] AU  
Ag = 0.01 [0.00] [-202.79σ]  
Teffp = 926 [52] K [-4.44σ]

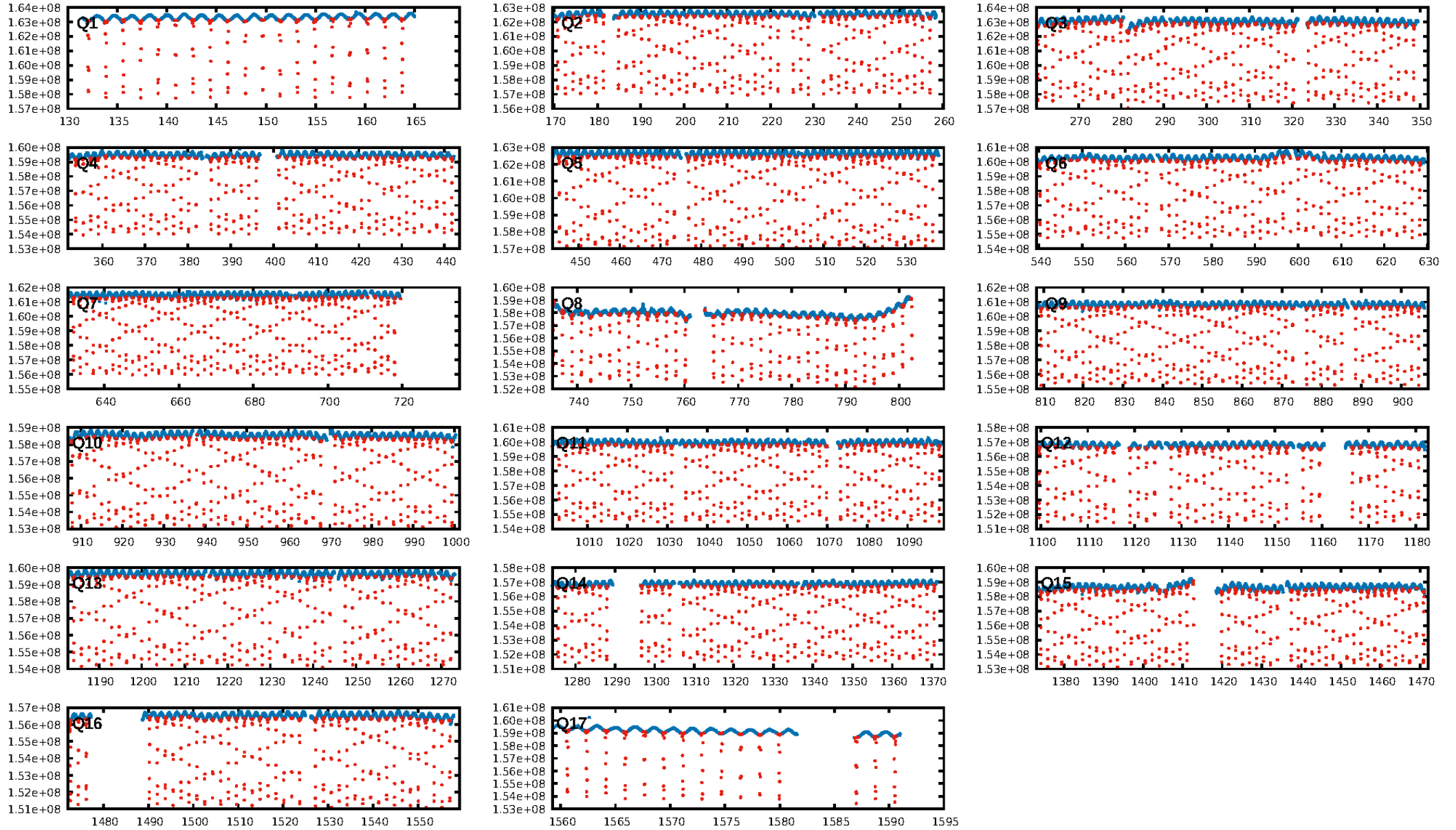
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 0.00e+00  
RollingBand-fgt: 0.83 [604/724]  
GhostDiagnostic-chr: 2.974  
Centroid-sig: 0.0%  
Centroid-so: 0.114 arcsec [115.57σ]  
OotOffset-rm: 0.004 arcsec [0.06σ]  
KicOffset-rm: 0.035 arcsec [0.52σ]  
OotOffset-st: 4/4/4/5 [17]  
KicOffset-st: 4/4/4/5 [17]  
DiffImageQuality-fgm: 1.00 [17/17]  
DiffImageOverlap-fno: 1.00 [17/17]

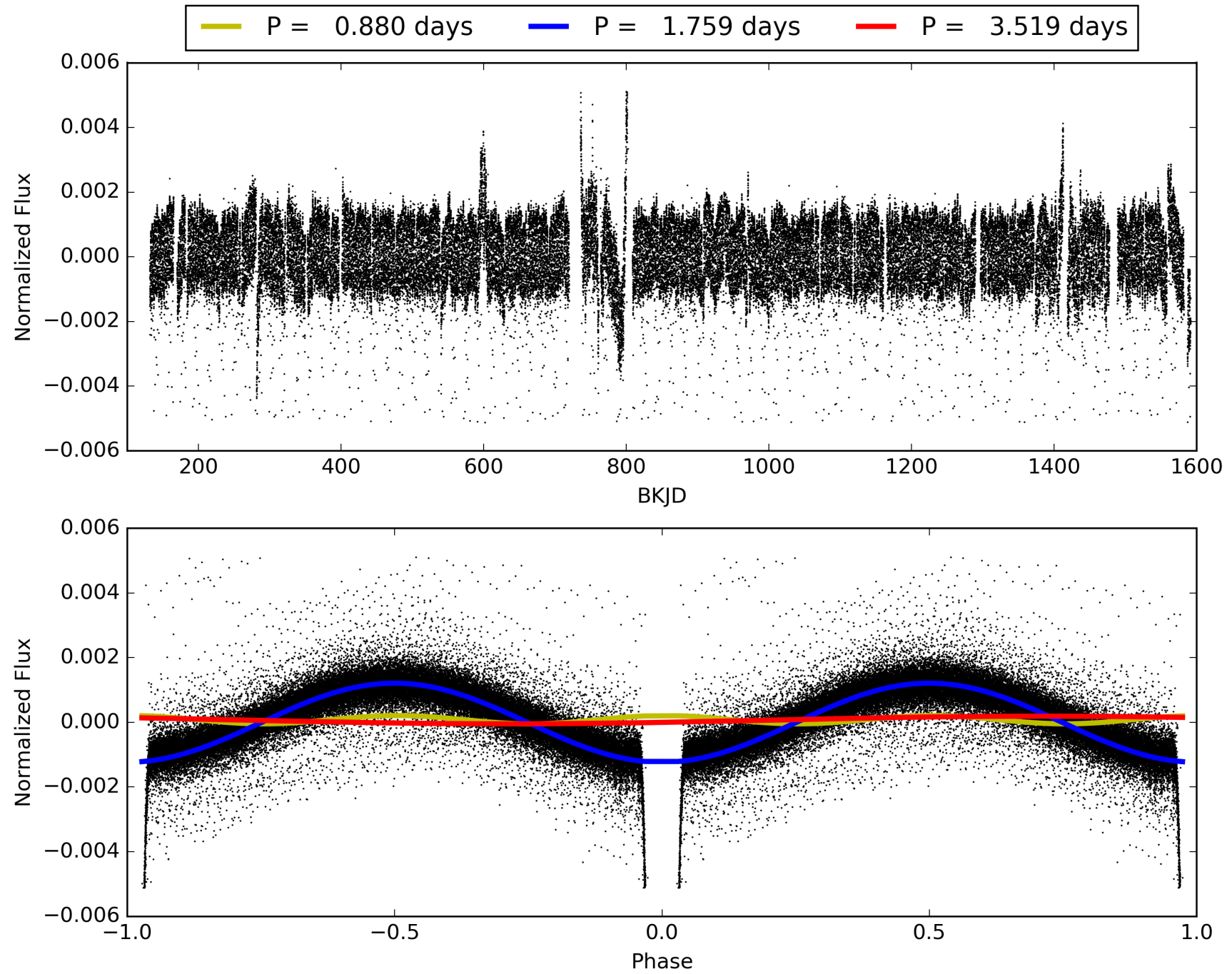
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 17:25:07 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 008243263-01, PDC Light Curves

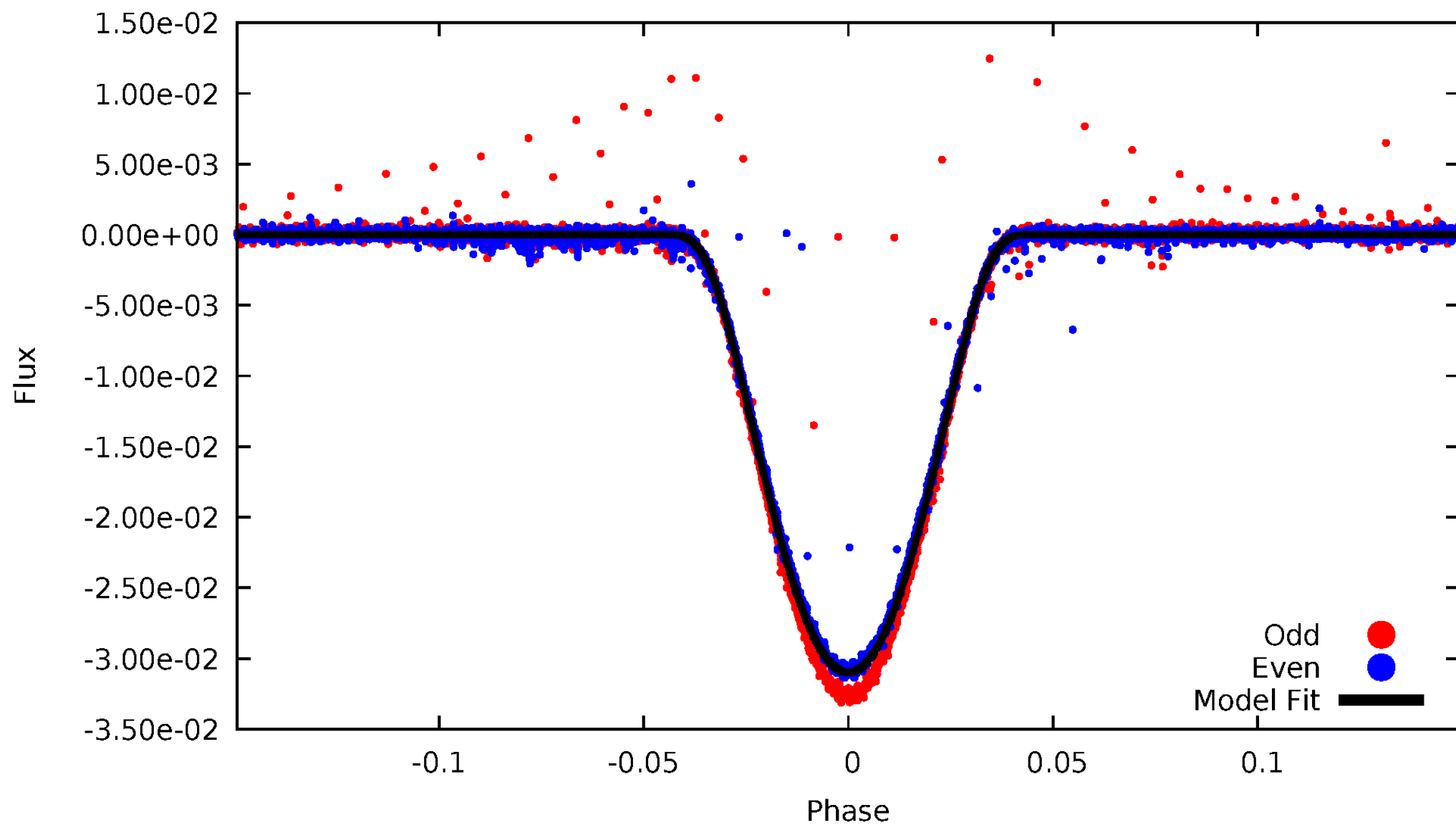


TCE 008243263-01



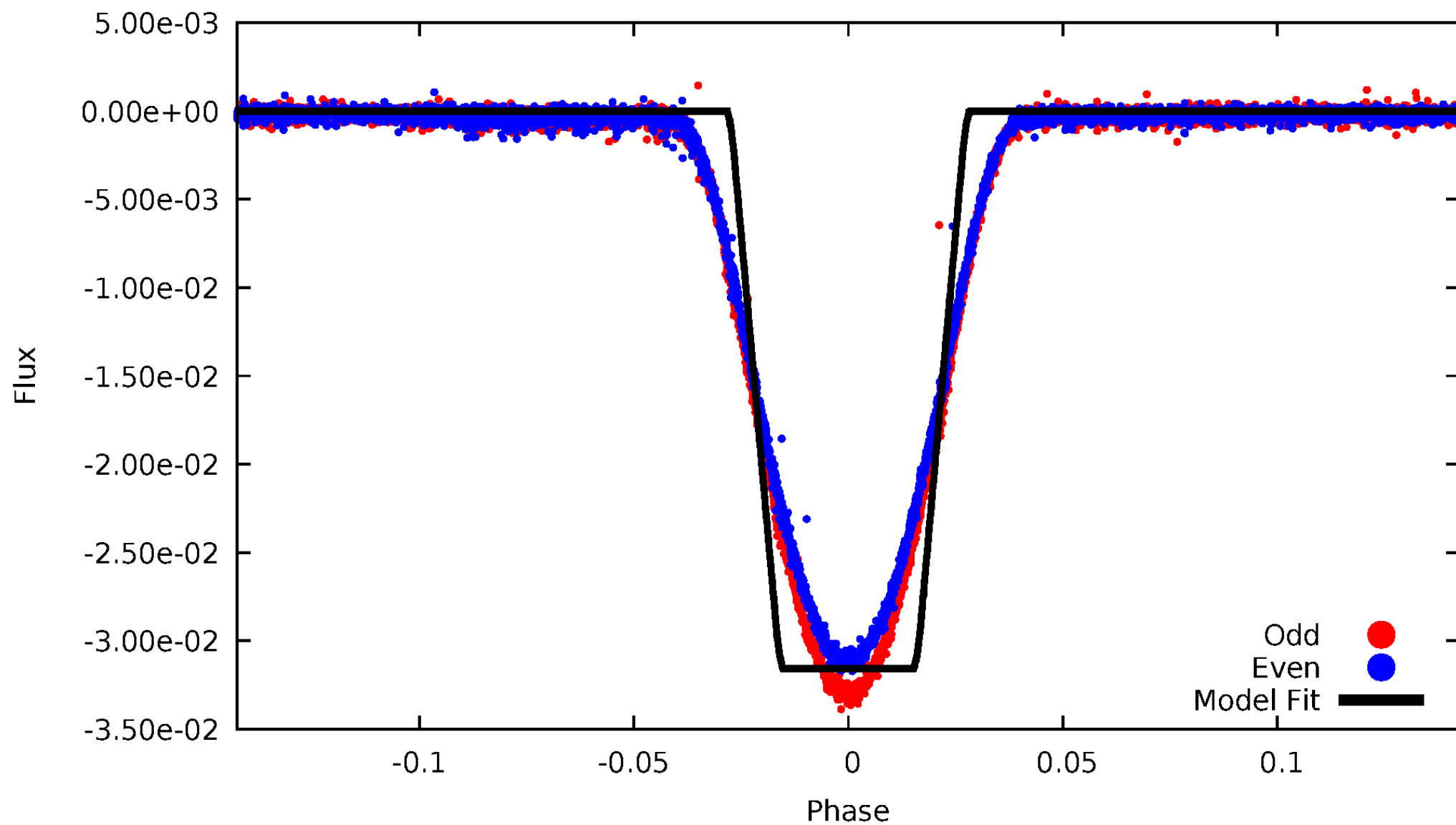
# DV Odd/Even

TCE 008243263-01



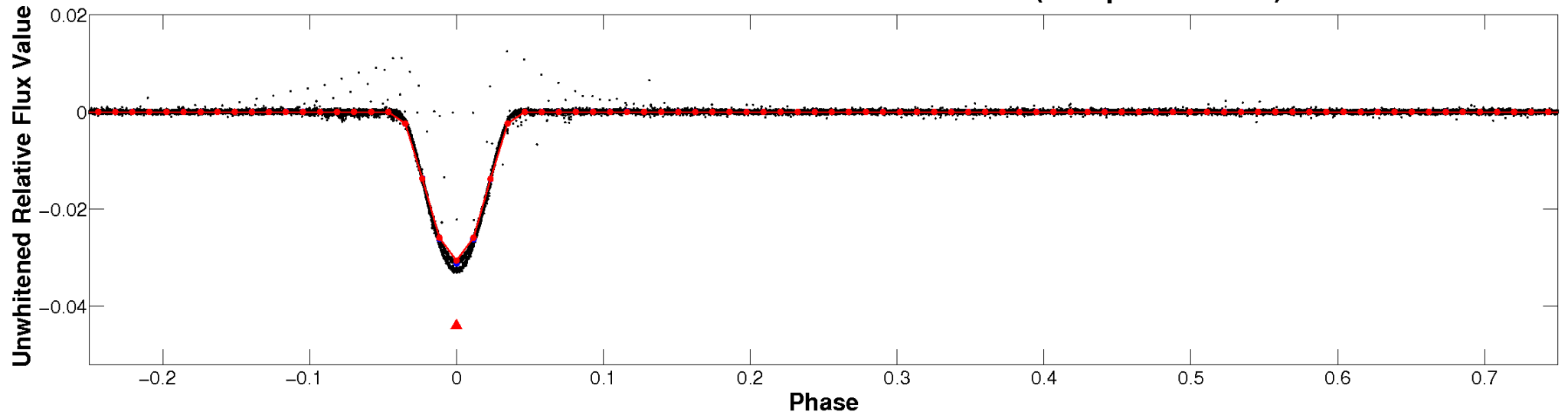
# ALT Odd/Even

TCE 008243263-01

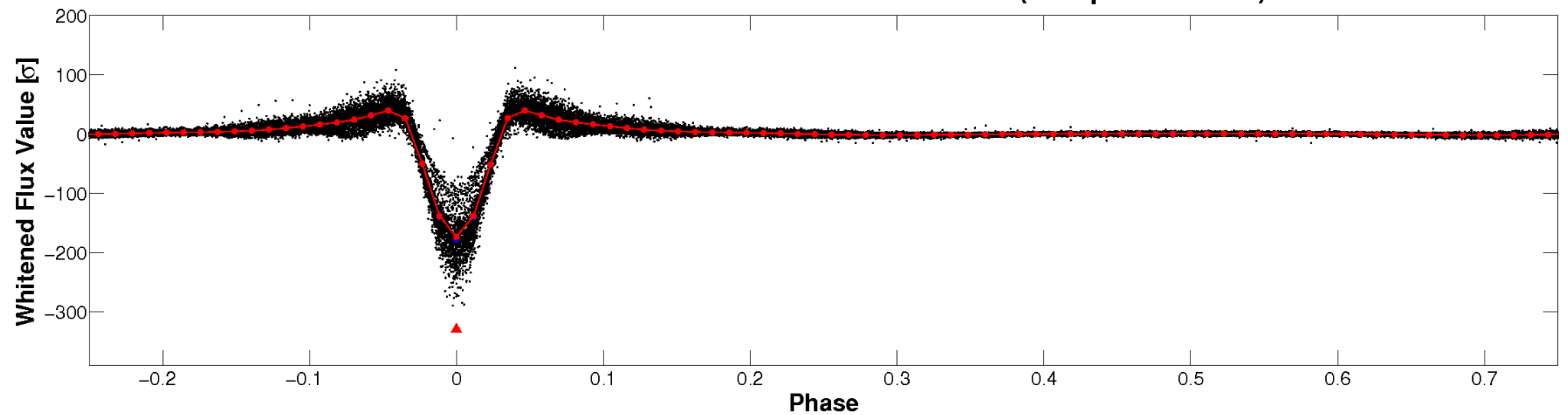


# Non-Whitened Vs. Whitened Light Curve

**Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)**

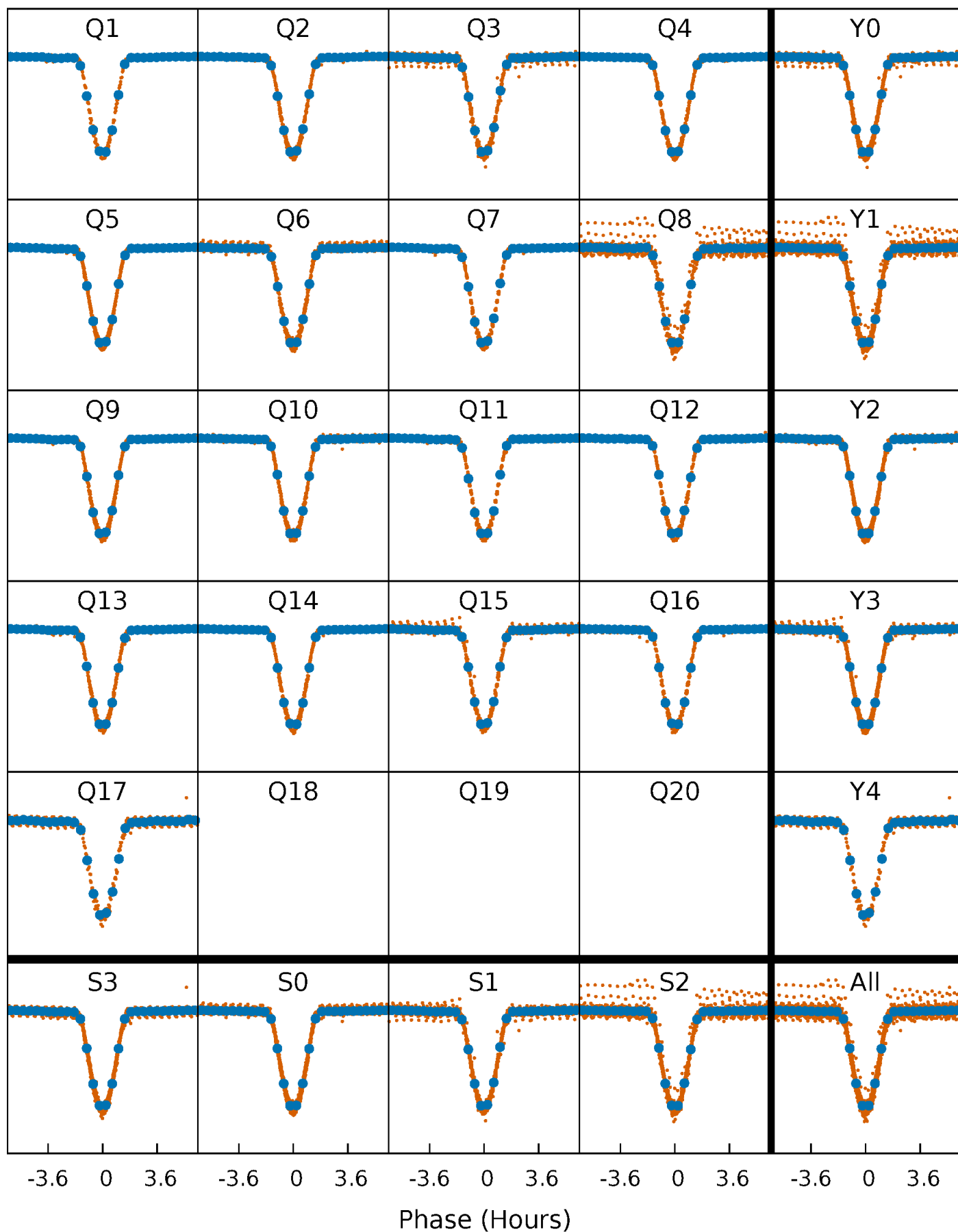


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

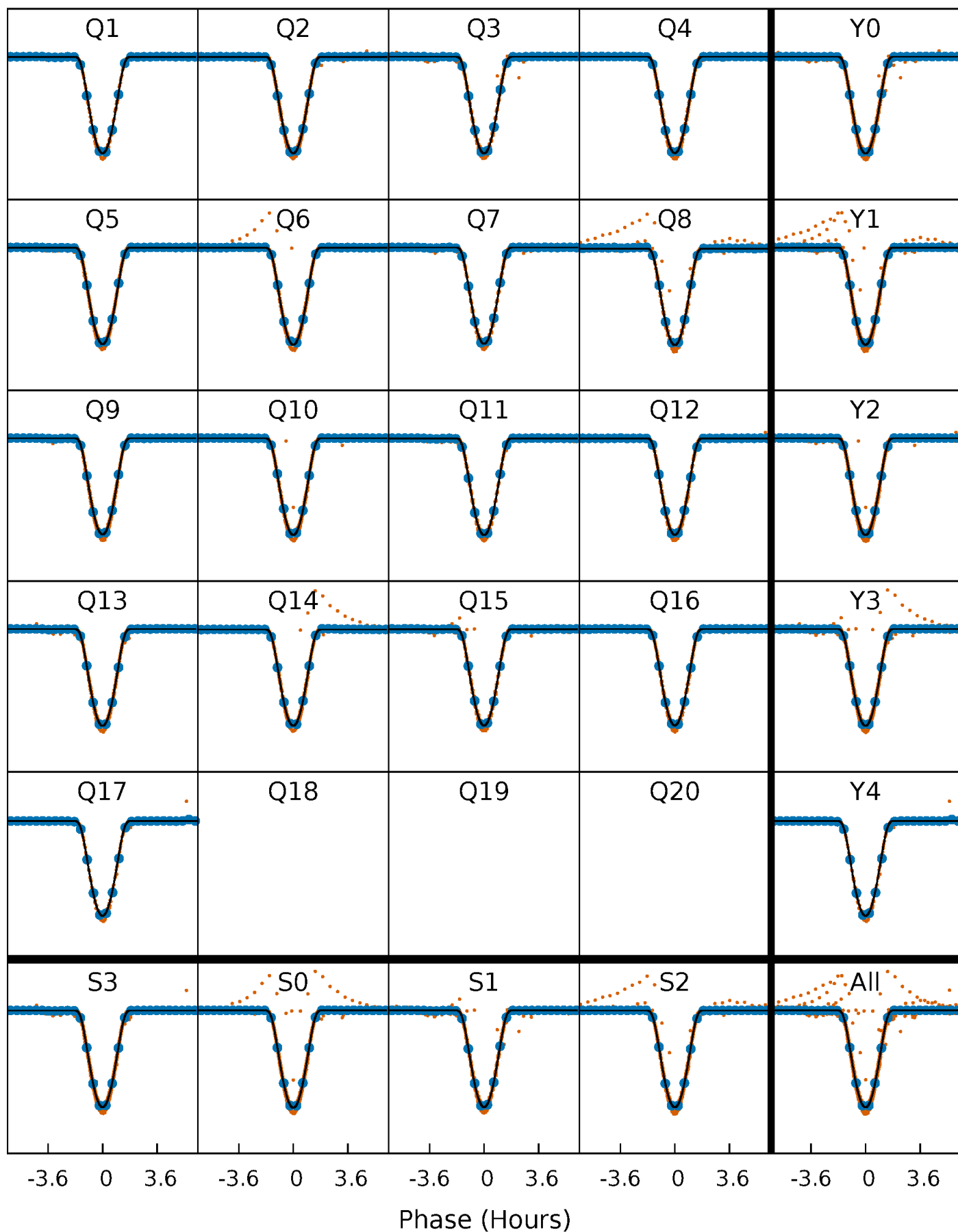
TCE 008243263-01 P= 1.759275 Days  $T_0=132.075375$  (BKJD)





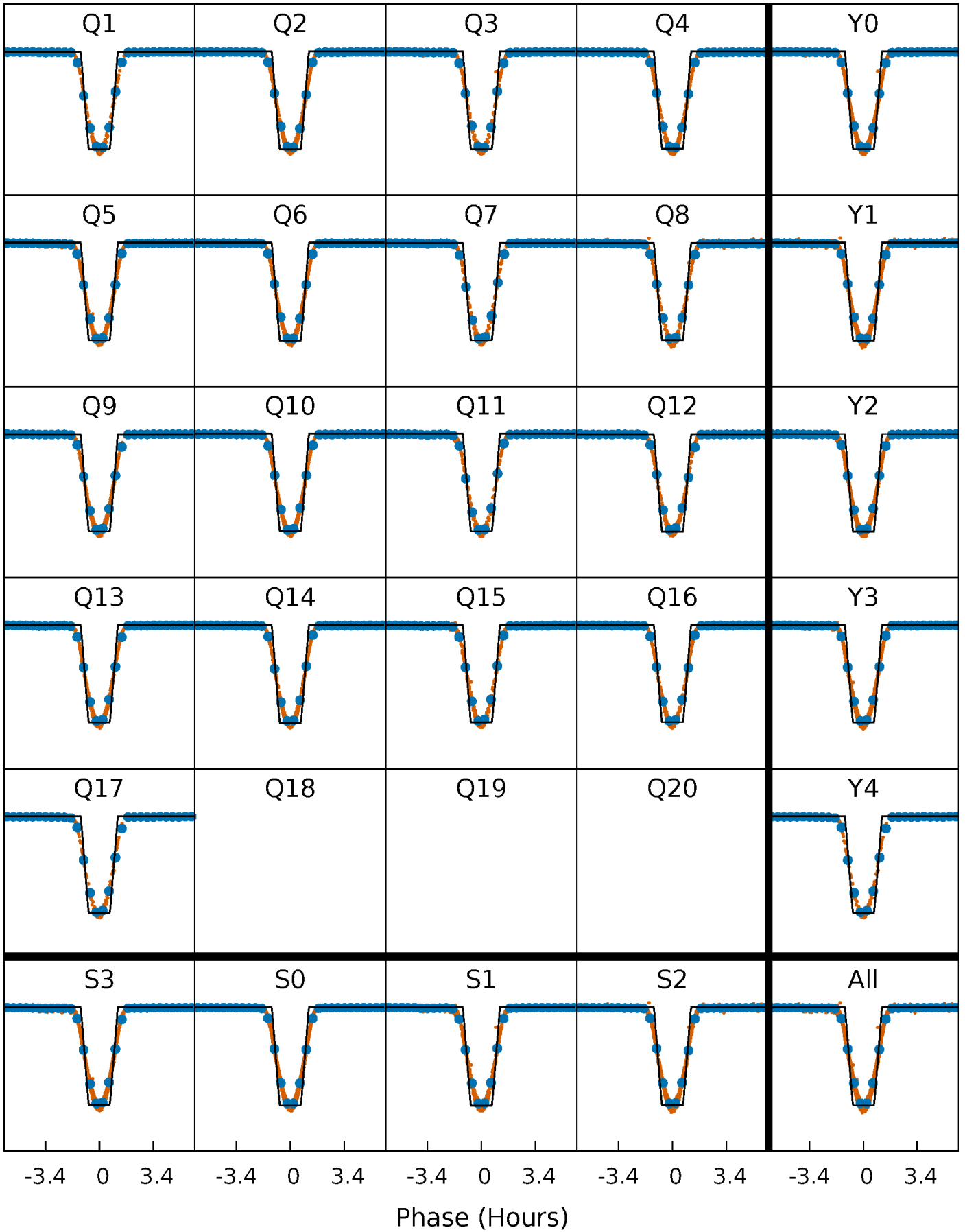
# DV Quarter-Phased Transit Curves

TCE 008243263-01 P= 1.759275 Days  $T_0=132.075375$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

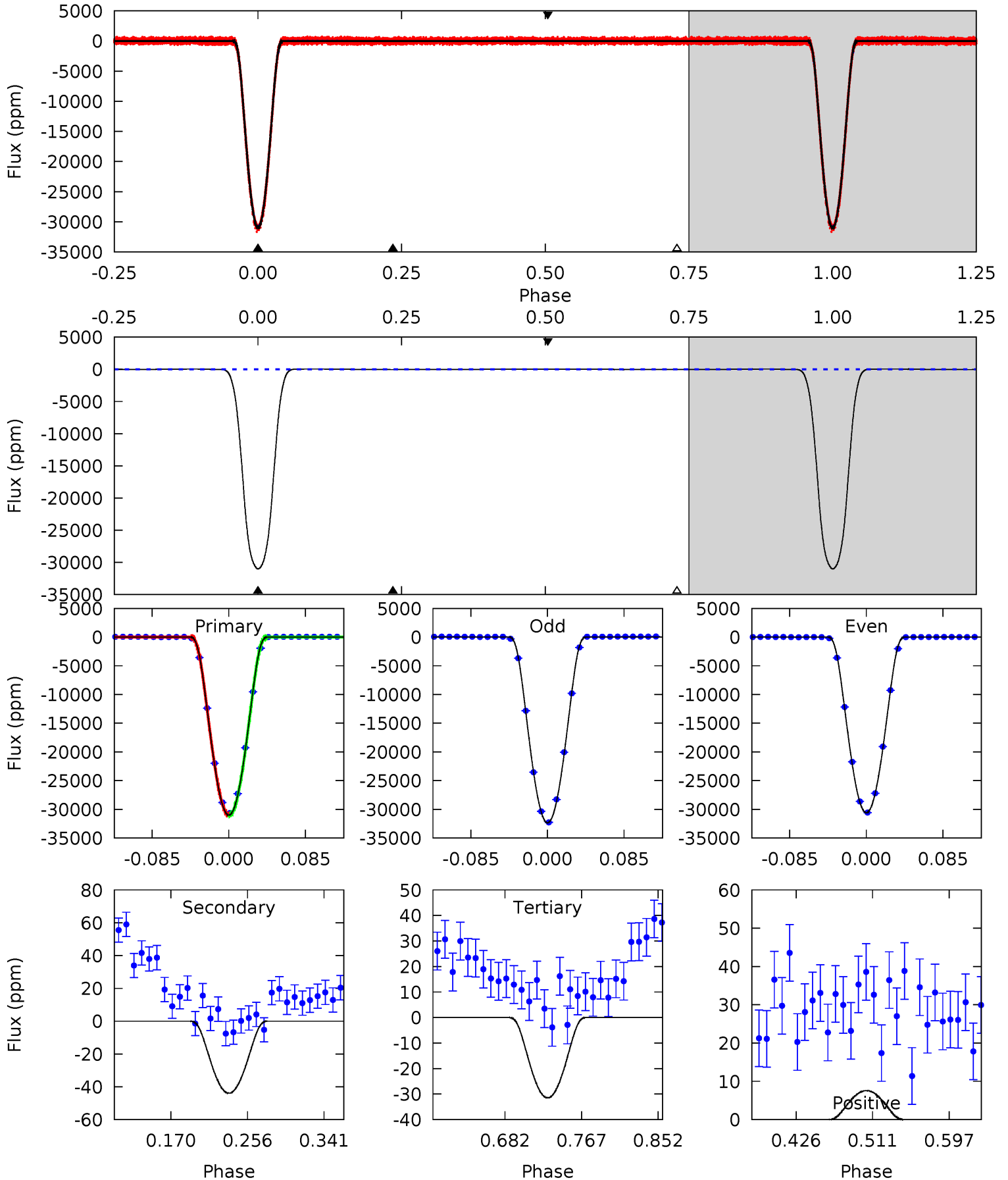
TCE 008243263-01   P= 1.759278 Days    $T_0=132.074514$  (BKJD)



# DV Model-Shift Uniqueness Test

008243263-01, P = 1.759275 Days, E = 130.316100 Days

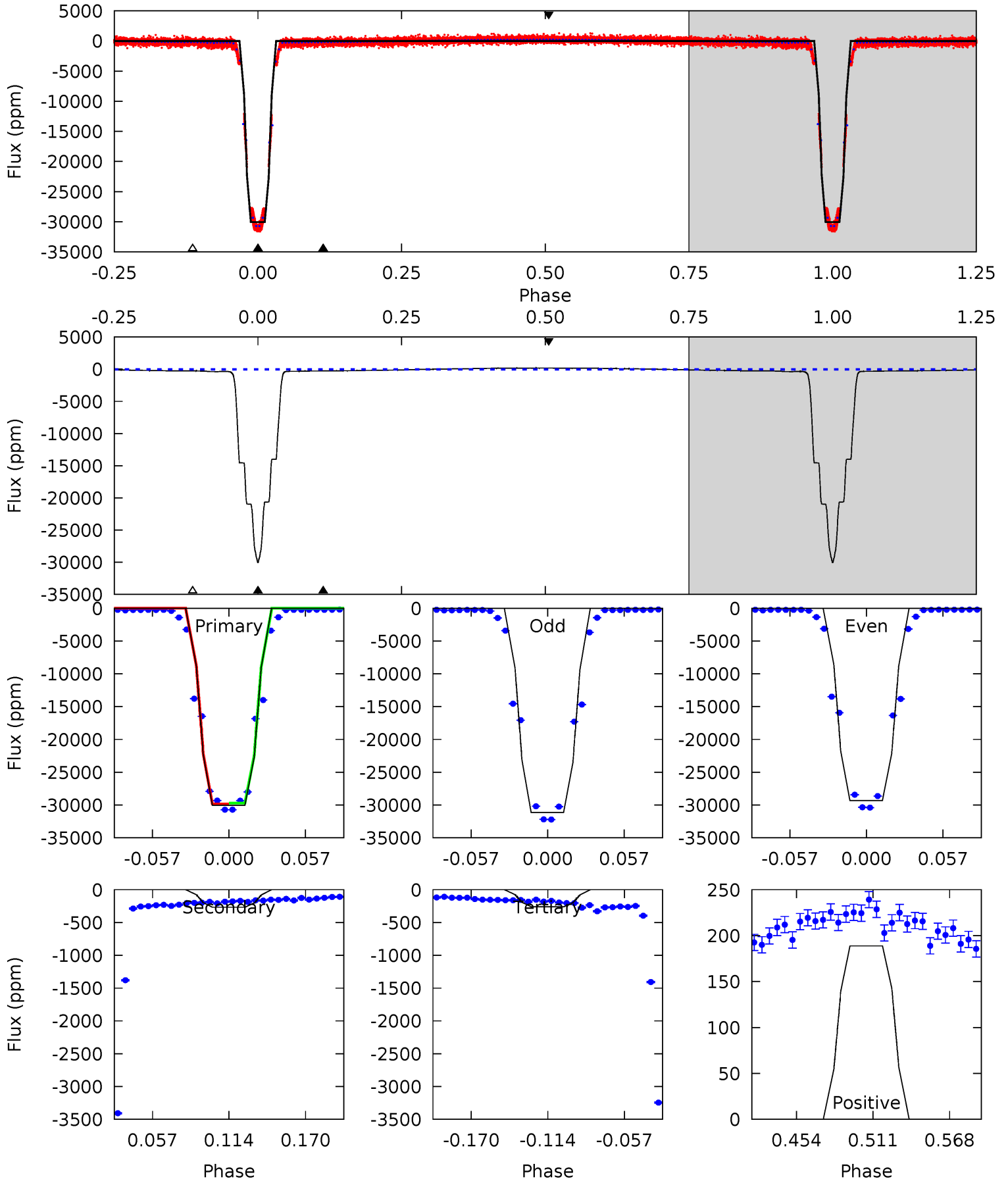
| Pri   | Sec  | Ter  | Pos  | FA <sub>1</sub> | FA <sub>2</sub> | F <sub>Red</sub> | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM  | Shape | TAT |
|-------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|-----|
| 11692 | 16.6 | 11.9 | 2.85 | 4.60            | 1.72            | 7.15             | 11680   | 11689   | 4.69    | 13.7    | 377.3   | 1.01 | 0.00  | 0   |



# Alt Model-Shift Uniqueness Test

008243263-01, P = 1.759278 Days, E = 130.315236 Days

| Pri  | Sec  | Ter  | Pos  | FA <sub>1</sub> | FA <sub>2</sub> | F <sub>Red</sub> | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM  | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|-----|
| 4547 | 40.5 | 39.4 | 28.6 | 4.68            | 1.91            | 24.5             | 4507    | 4518    | 1.10    | 11.9    | 147.1   | 1.00 | 0.01  | 0   |



### Stellar Parameters For KIC 008243263

|        | $T_{\text{eff}}(K)$  | $\log(g)$                 | [Fe/H]                     | $R (R_{\odot})$           | $M(M_{\odot})$            | $p_{\star} (\text{g}\cdot\text{cm}^{-3})$ |
|--------|----------------------|---------------------------|----------------------------|---------------------------|---------------------------|---|
|        | $6656^{+161}_{-221}$ | $4.351^{+0.056}_{-0.224}$ | $-0.080^{+0.250}_{-0.300}$ | $1.232^{+0.441}_{-0.147}$ | $1.248^{+0.191}_{-0.174}$ | $0.941^{+0.285}_{-0.515}$                 |
|        | +2%/-3%              | +1%/-5%                   | +312%/-375%                | +36%/-12%                 | +15%/-14%                 | +30%/-55%                                 |
| Source | PHO1                 | KIC0                      | KIC0                       | DSEP                      |                           |   |

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology  
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

### Secondary Eclipse Parameters for KIC 008243263-01 / KOI 7000.01

| Detrend | Depth (ppm)  | $R_p (R_{\oplus})$      | $T_{\text{max}} (K)$ | $T_{\text{obs}} (K)$  | $A_{\text{obs}}$          |
|---------|--------------|-------------------------|----------------------|-----------------------|---------------------------|
| DV      | $-44 \pm 3$  | $30.70^{+5.94}_{-2.49}$ | $2653^{+203}_{-128}$ | $-2849^{+75}_{-130}$  | $0.024^{+0.004}_{-0.006}$ |
| Alt.    | $-268 \pm 7$ | $24.94^{+4.81}_{-2.28}$ | $2659^{+220}_{-134}$ | $-2418^{+216}_{-290}$ | $0.223^{+0.037}_{-0.061}$ |

$T_{\text{max}}$  = Theoretical Maximum Planetary Temperature

$T_{\text{obs}}$  = Observed Planetary Temperature (Assuming A=0.3)

$A_{\text{obs}}$  = Observed Albedo (Assuming T=0)

If a secondary eclipse is present, the system is likely an EB if  $T_{\text{obs}} \gg T_{\text{max}}$  AND  $A_{\text{obs}} \gg 1.0$

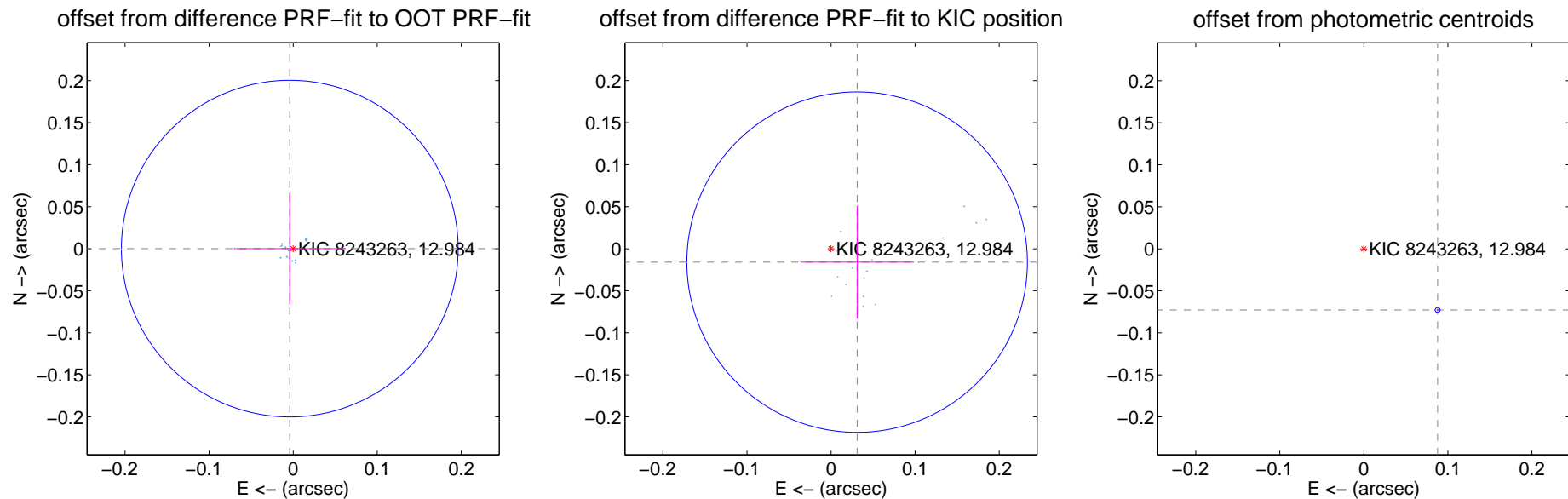
## DV Centroid Data

Supplemental centroid analysis for 008243263-01. Kepler magnitude: 12.98. Transit SNR 5643.64

There are 17 quarters with good PRF difference image offsets

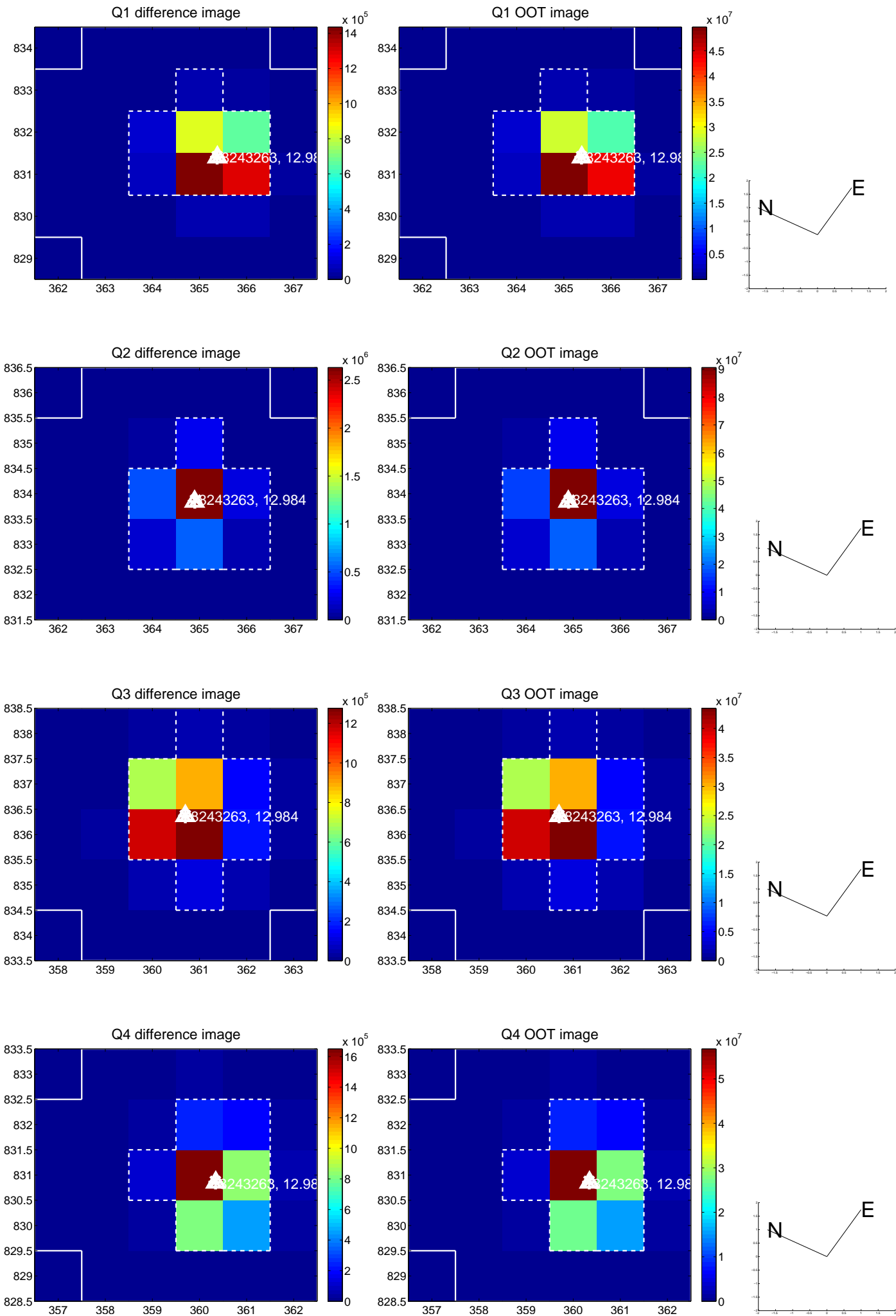
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

|   | Distance in arcsec | Distance / $\sigma$ | $\Delta$ RA        | $\Delta$ Dec       |
|---|--------------------|---------------------|--------------------|--------------------|
| PRF-fit source offset from OOT          | $0.004 \pm 0.067$  | 0.06                | $0.004 \pm 0.067$  | $0.000 \pm 0.067$  |
| PRF-fit source offset from KIC position | $0.035 \pm 0.068$  | 0.52                | $-0.031 \pm 0.068$ | $-0.016 \pm 0.067$ |
| photometric centroid source offset      | $0.11 \pm 0.00$    | 115.57              | $-0.09 \pm 0.00$   | $-0.07 \pm 0.00$   |

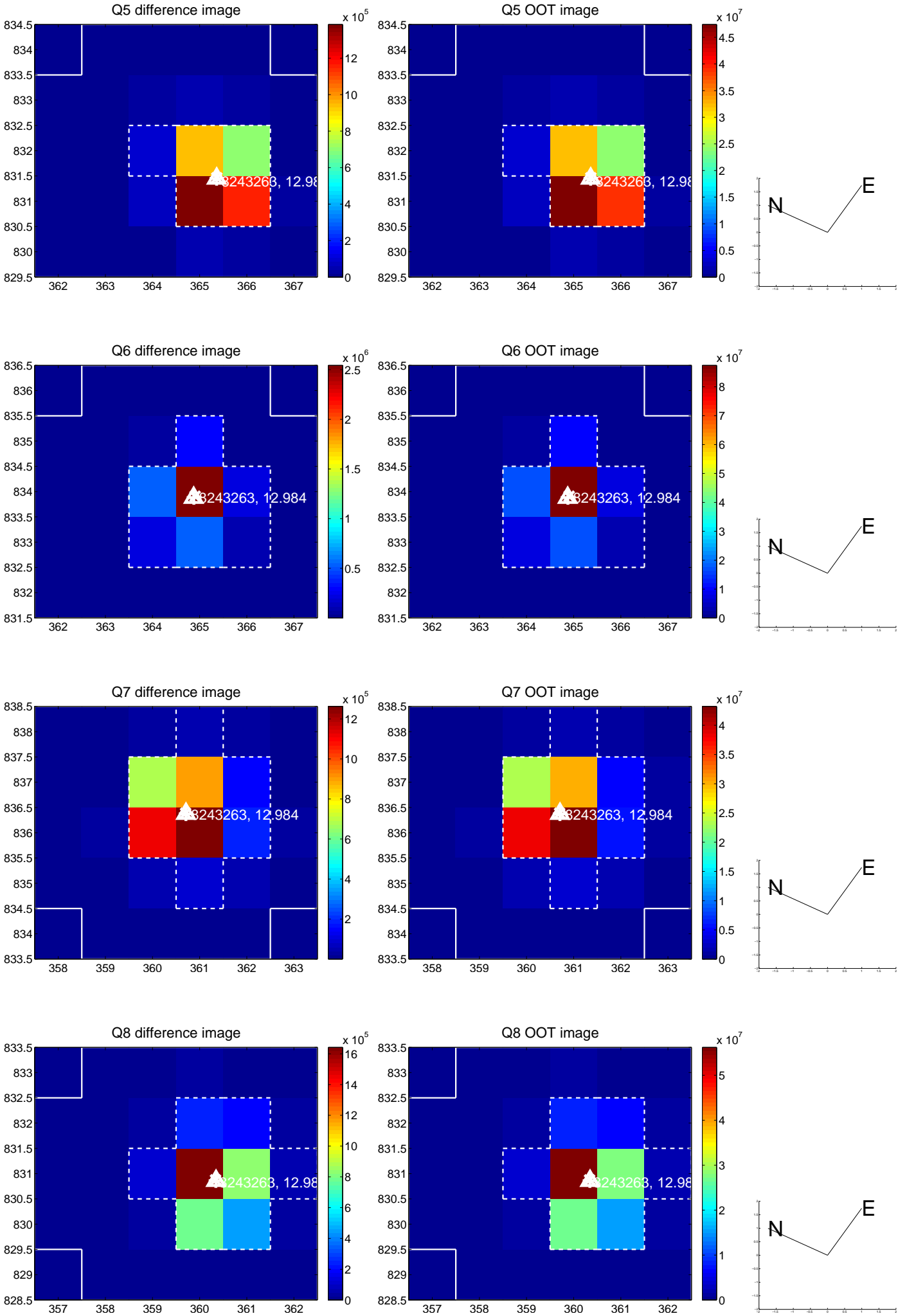


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three- $\sigma$ . Red \*: target star. Blue \*: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

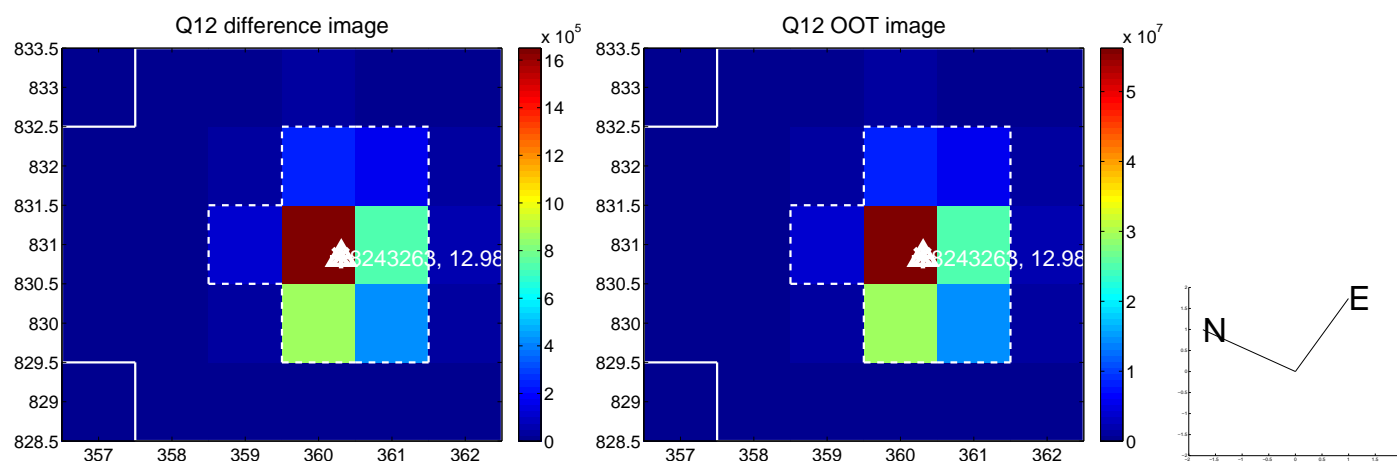
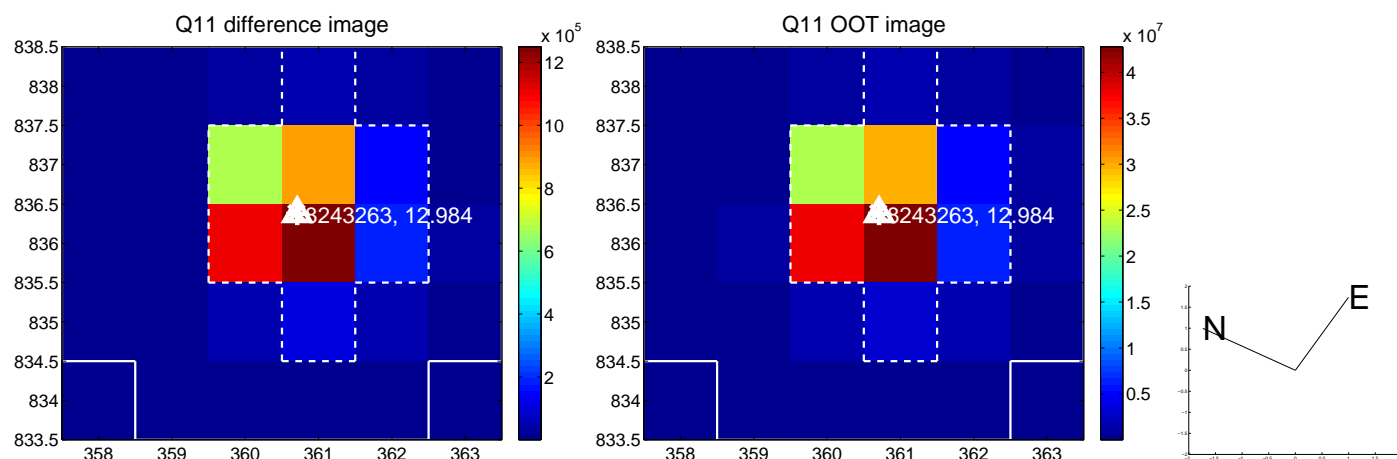
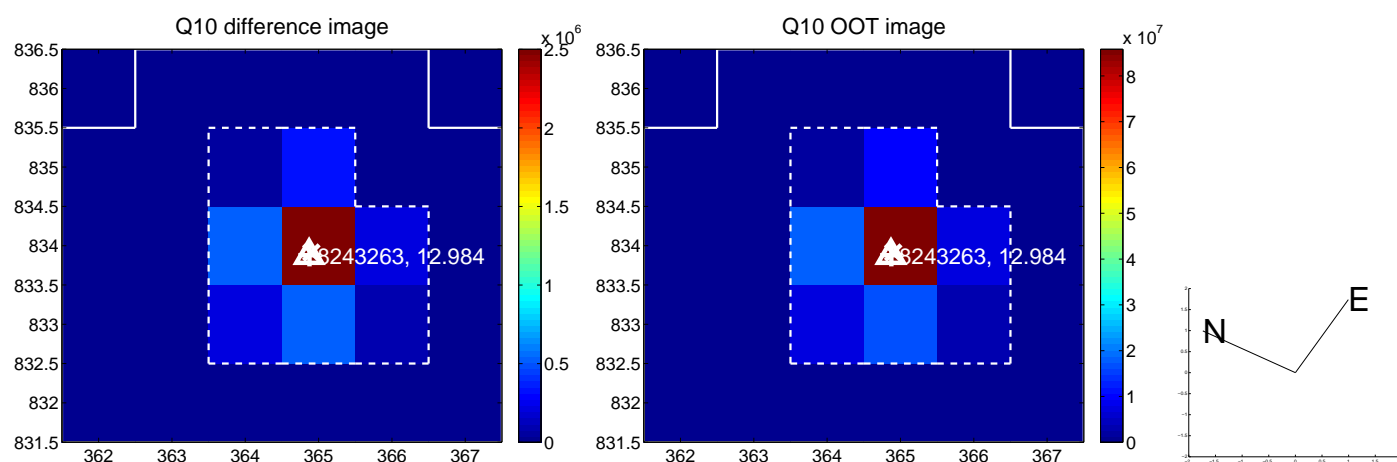
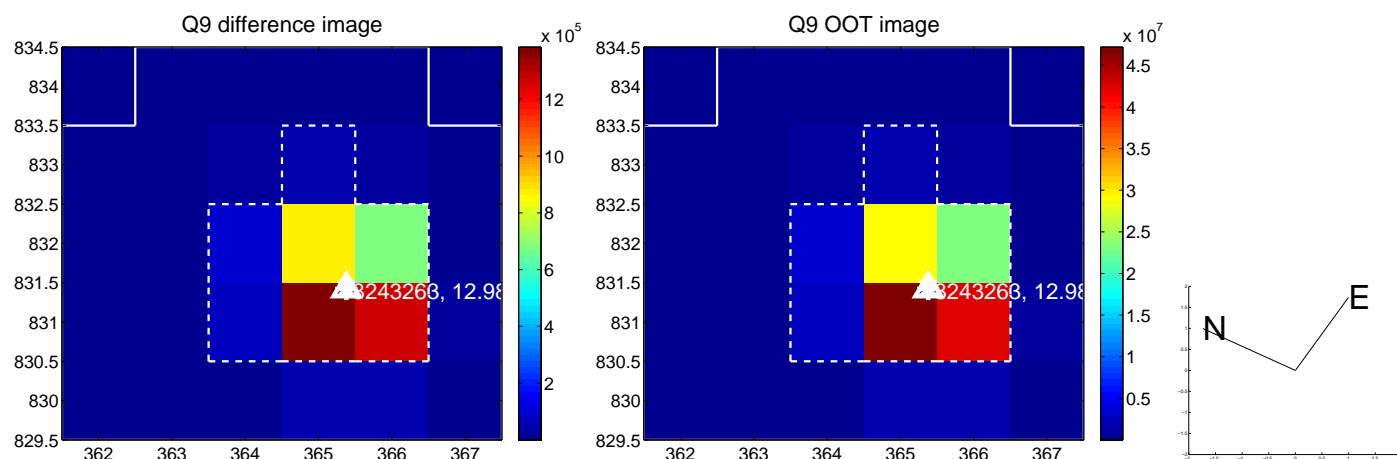


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

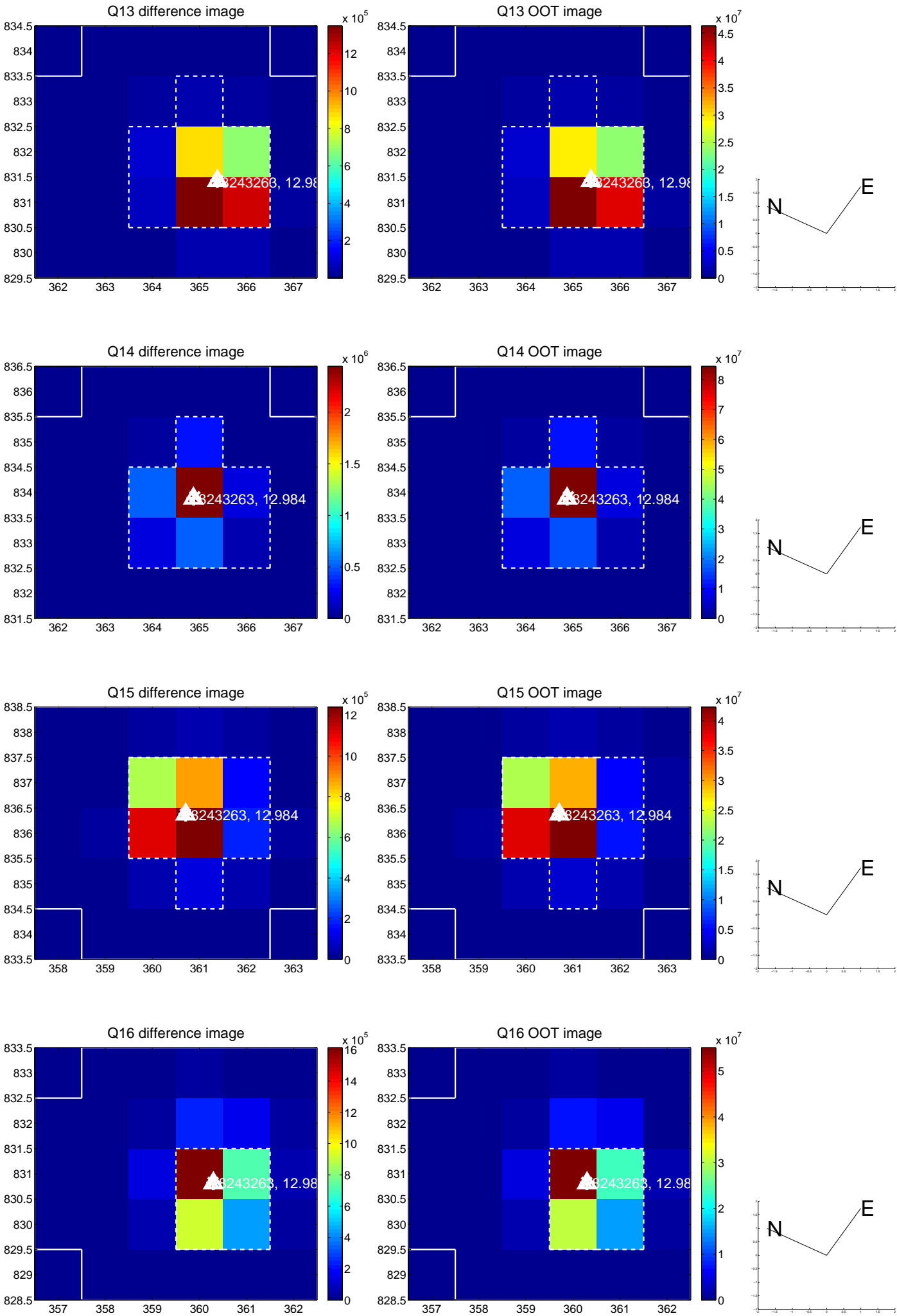




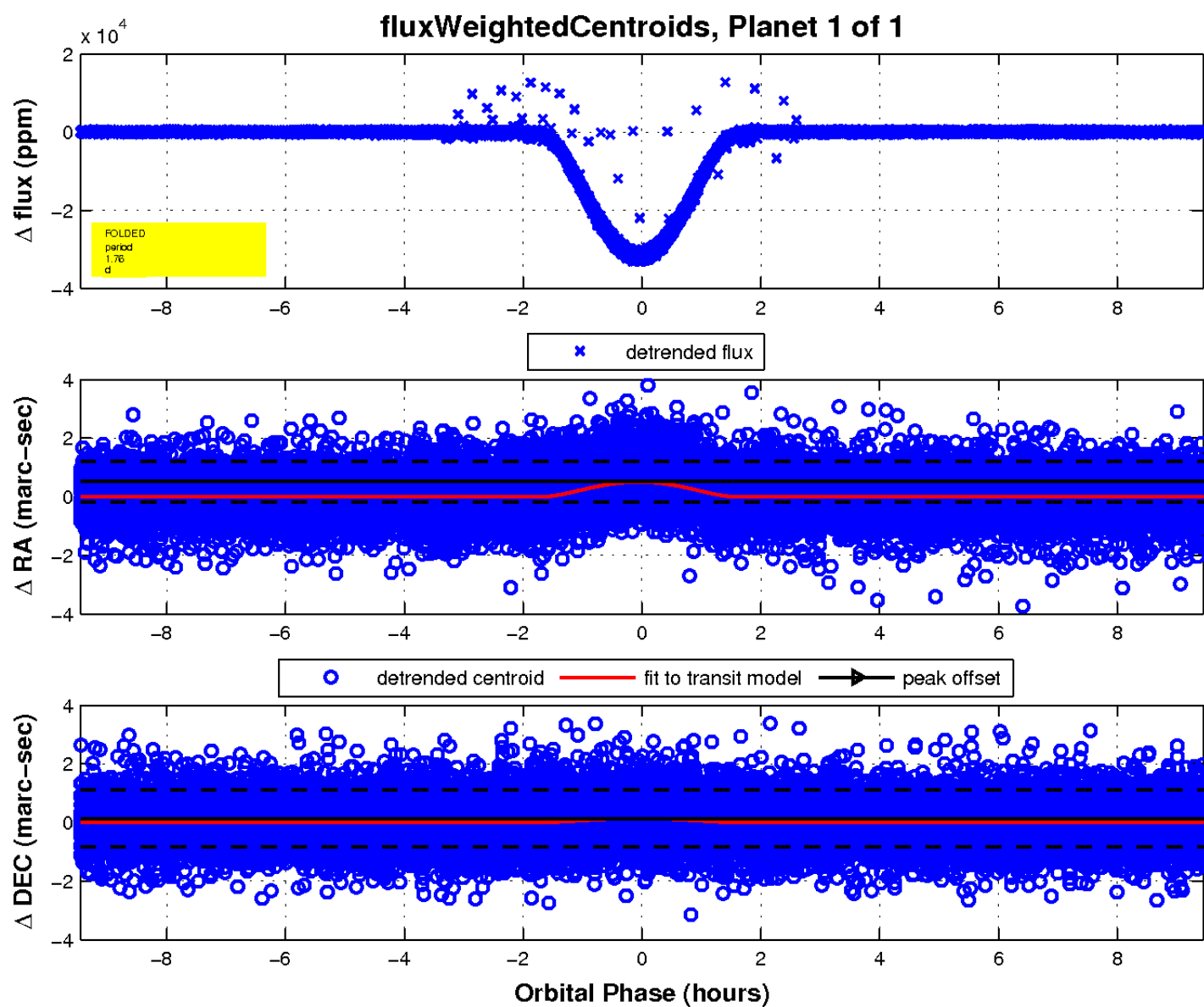
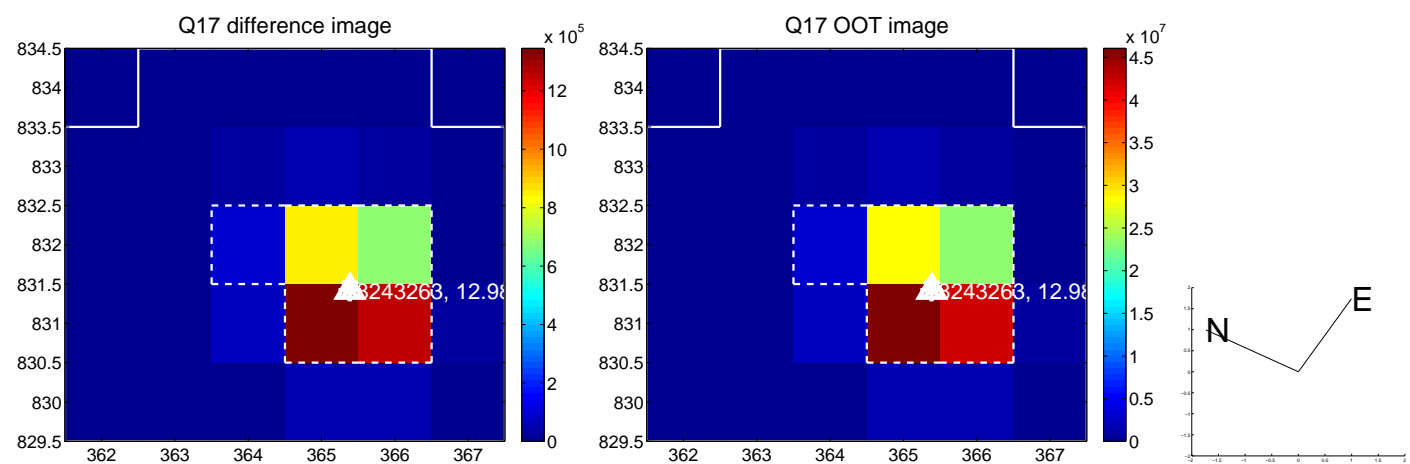
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination

