

# KIC 008095275

## 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) | $R_p$ ( $R_{\oplus}$ ) | $S_p$ ( $S_{\oplus}$ ) |
|--------------|----------|------|---------------|--------------|-------------|------------------|------|------|-----------------------------|-----------------|------------------------|------------------------|
| 008095275-01 | OBS      | No   | 23.013510     | 132.528700   | 1728.7      | 56.969           | 12.3 | 25.9 | 10.12                       | 4869            | 84.17                  | 1255.77                |

## Robovetter Results

| TCE          | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|----------|
| 008095275-01 | OBS      | FP   | 0.00  | 1 | 0 | 0 | 0 | LPP_DV   |

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

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

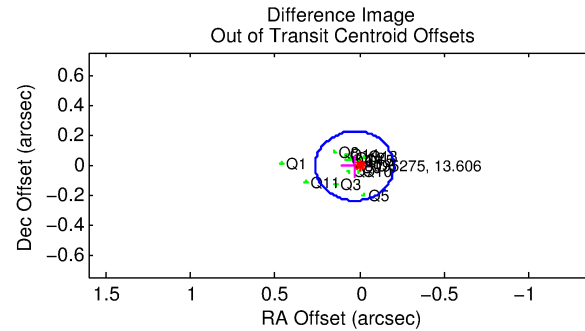
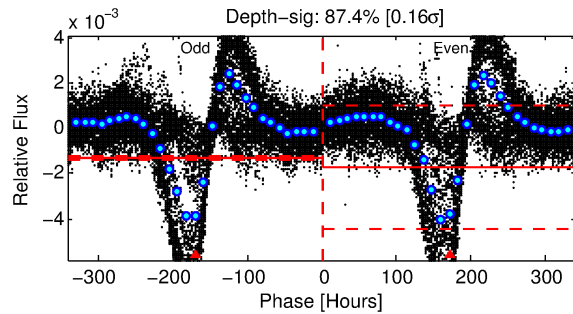
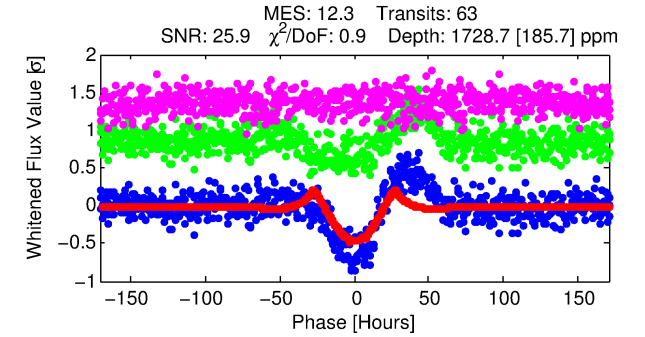
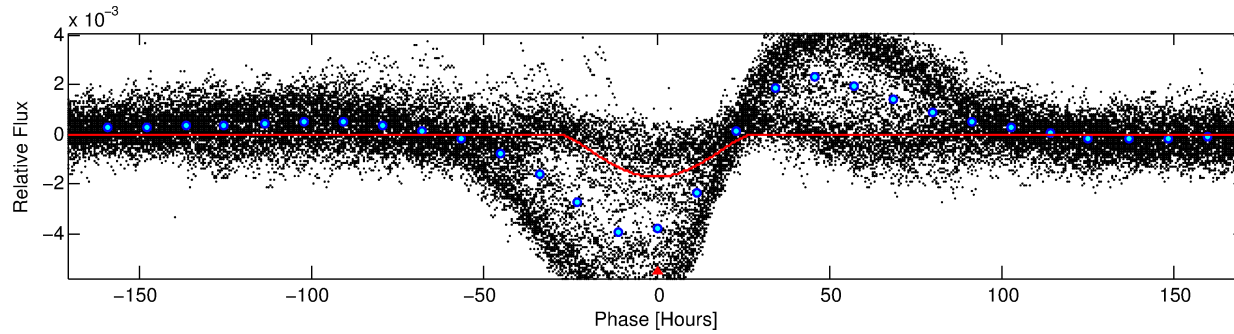
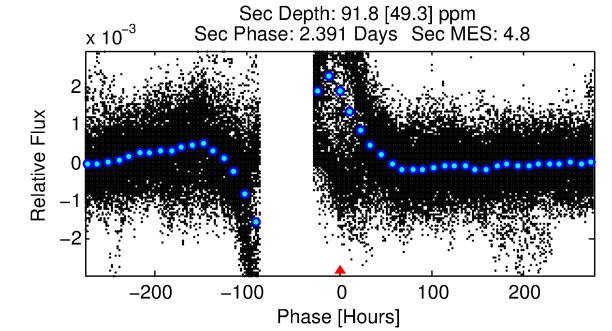
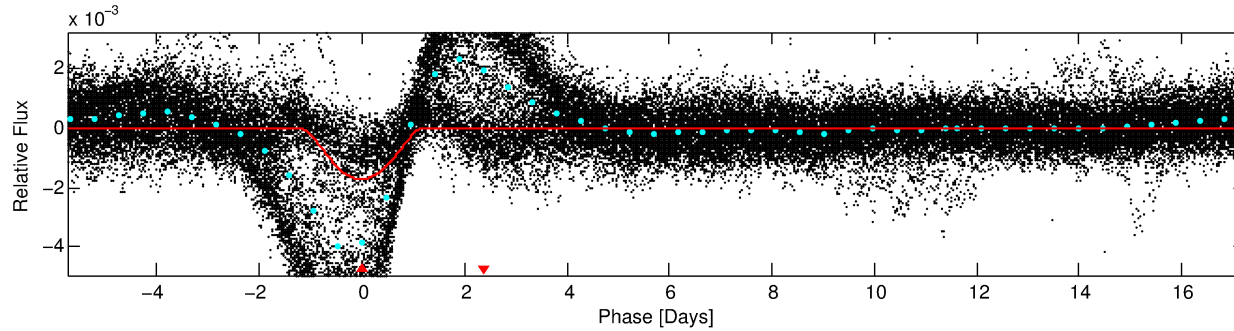
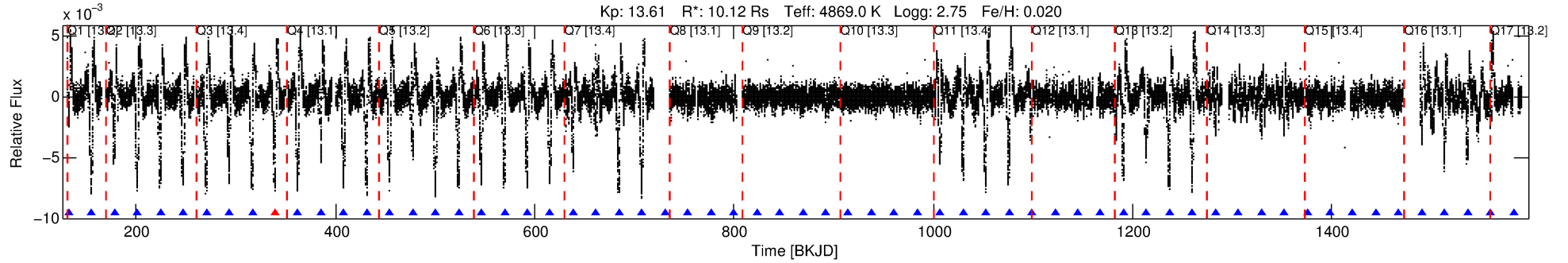
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008095275-01

No Significant Match Found

# DV One-Page Summary

KIC: 8095275 Candidate: 1 of 1 Period: 23.014 d



## DV Fit Results:

Period = 23.01351 [0.00104] d  
Epoch = 132.5287 [0.0371] BKJD  
Rp/R\* = 0.0762 [0.0488]  
a/R\* = 1.60 [0.09]  
b = 1.00 [0.07]  
Seff = 1255.77 [286.97]  
Teq = 1518 [87] K  
Rp = 84.17 [58.70] Re  
a = 0.2027 [0.0374] AU  
Ag = 0.29 [0.41] [-1.72σ]  
Teffp = 1726 [602] K [0.34σ]

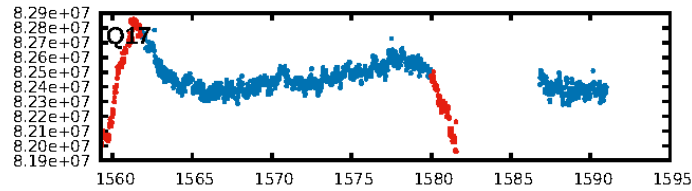
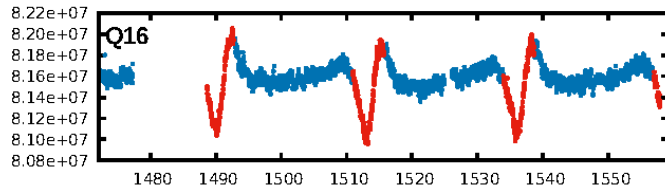
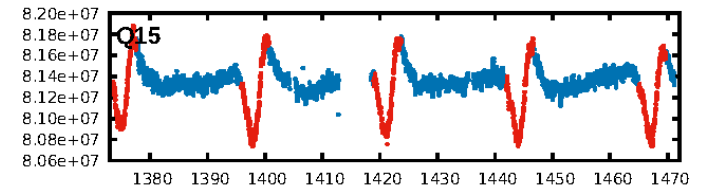
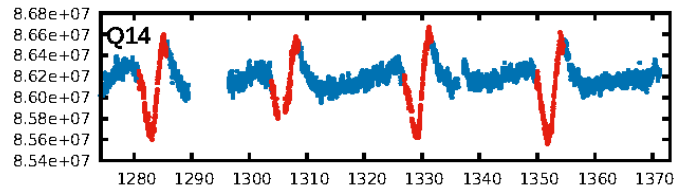
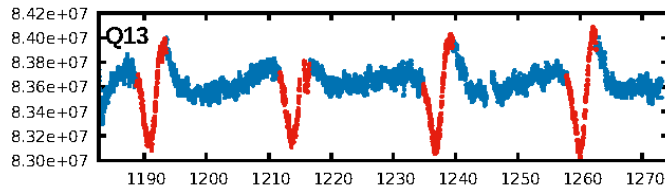
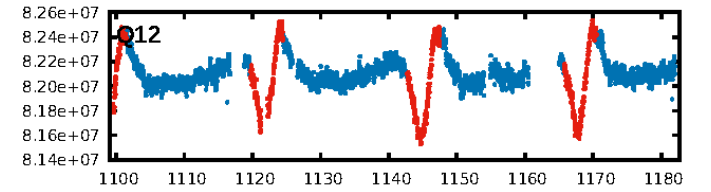
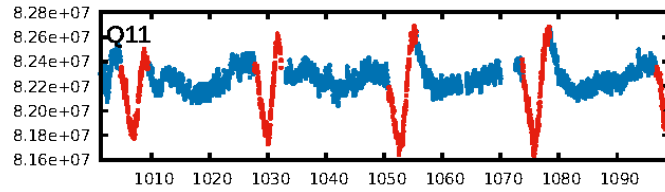
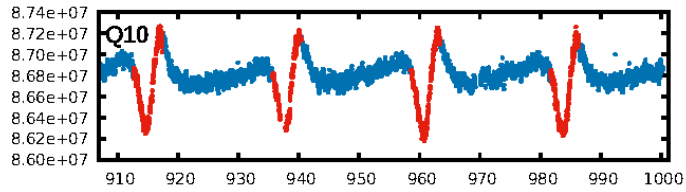
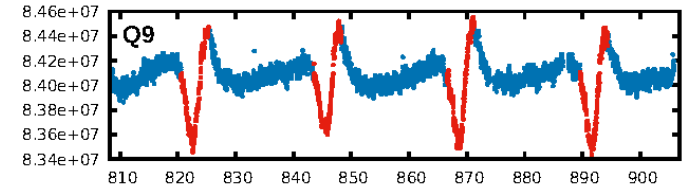
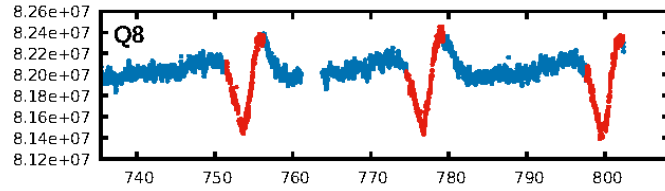
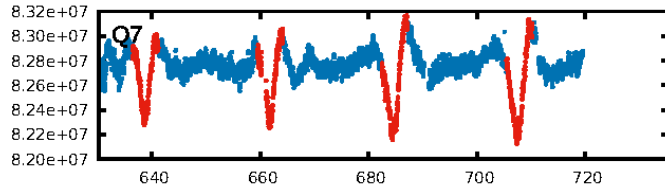
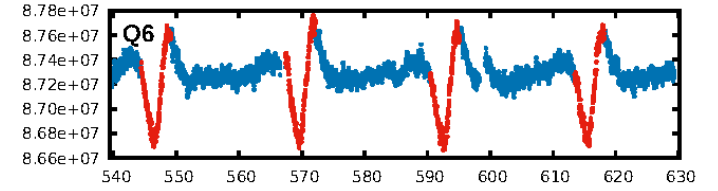
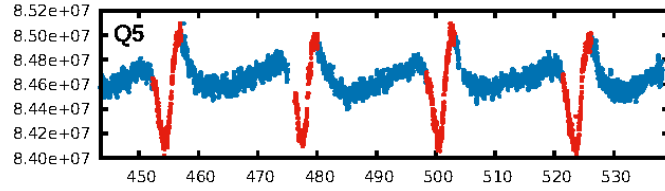
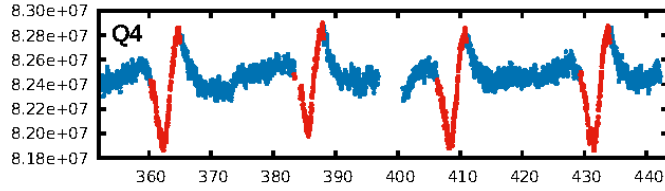
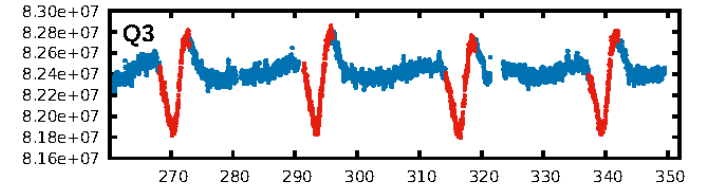
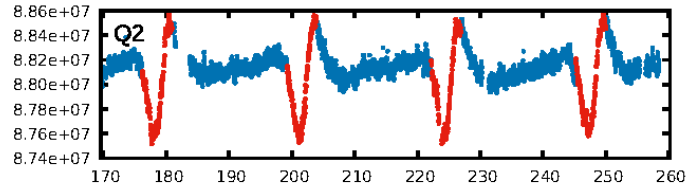
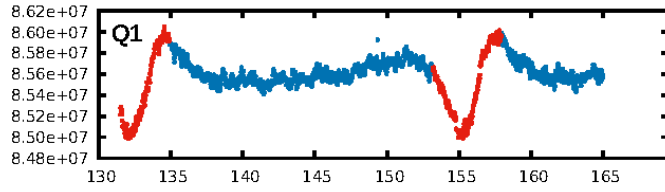
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 0.0%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: 3.70e-32  
RollingBand-fgt: 0.98 [58/59]  
GhostDiagnostic-chr: 1.199  
Centroid-sig: 0.0%  
Centroid-so: 0.166 arcsec [4.13σ]  
OotOffset-rm: 0.032 arcsec [0.41σ]  
KicOffset-rm: 0.055 arcsec [0.77σ]  
OotOffset-st: 3/4/3/4 [14]  
KicOffset-st: 3/4/3/4 [14]  
DiffImageQuality-fgm: 1.00 [14/14]  
DiffImageOverlap-fno: 1.00 [14/14]

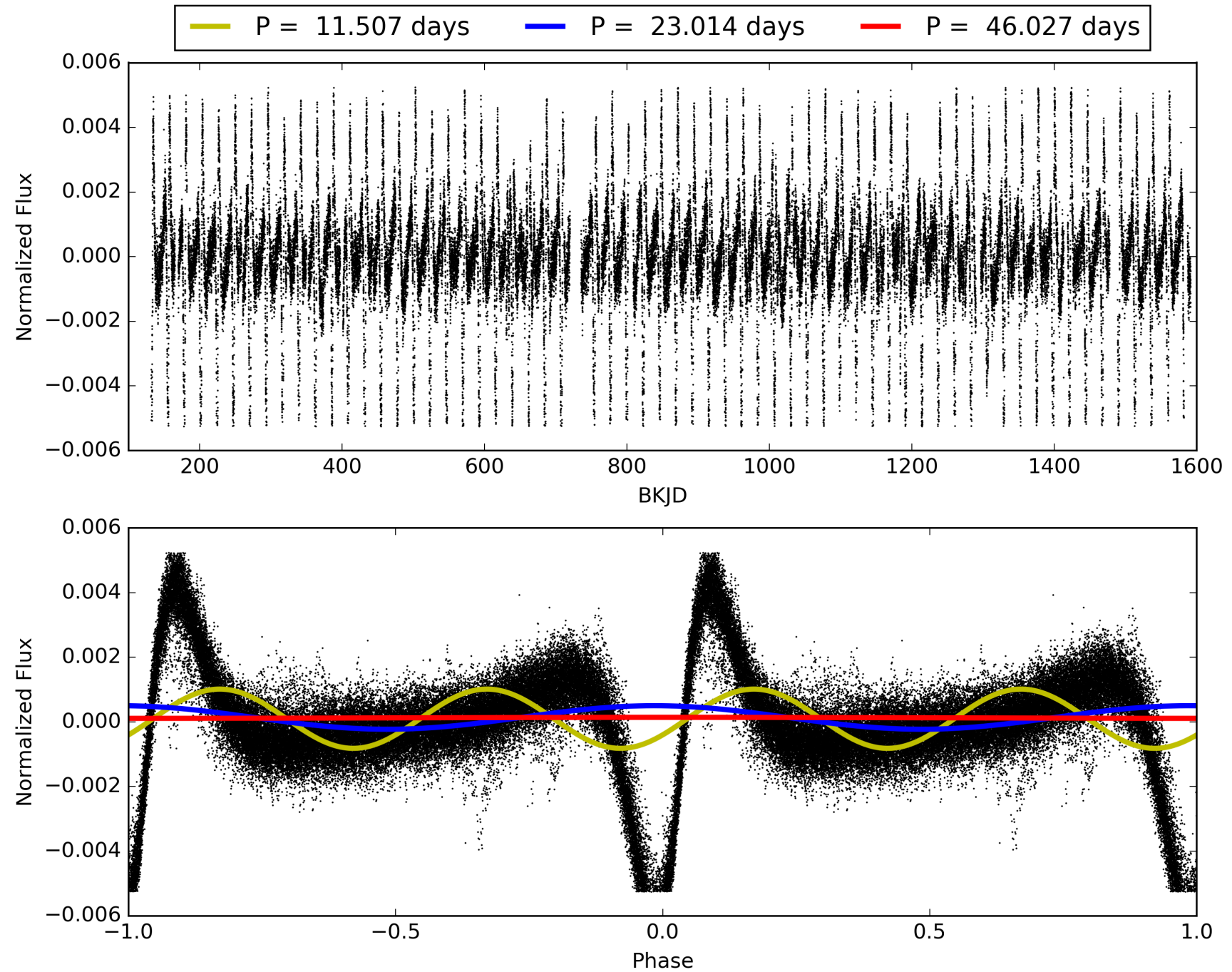
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 17:15:33 Z

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

# TCE 008095275-01, PDC Light Curves

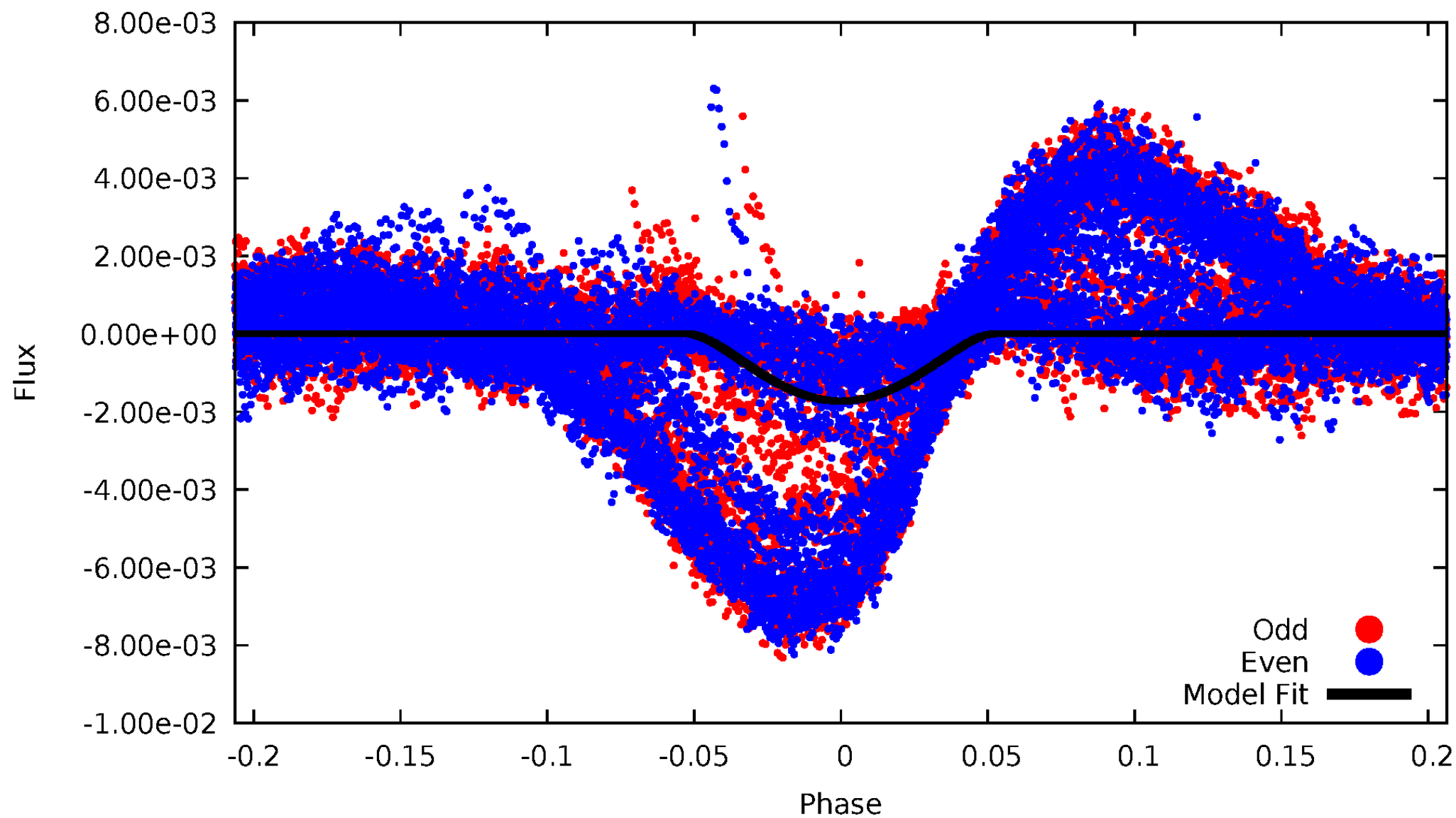


TCE 008095275-01



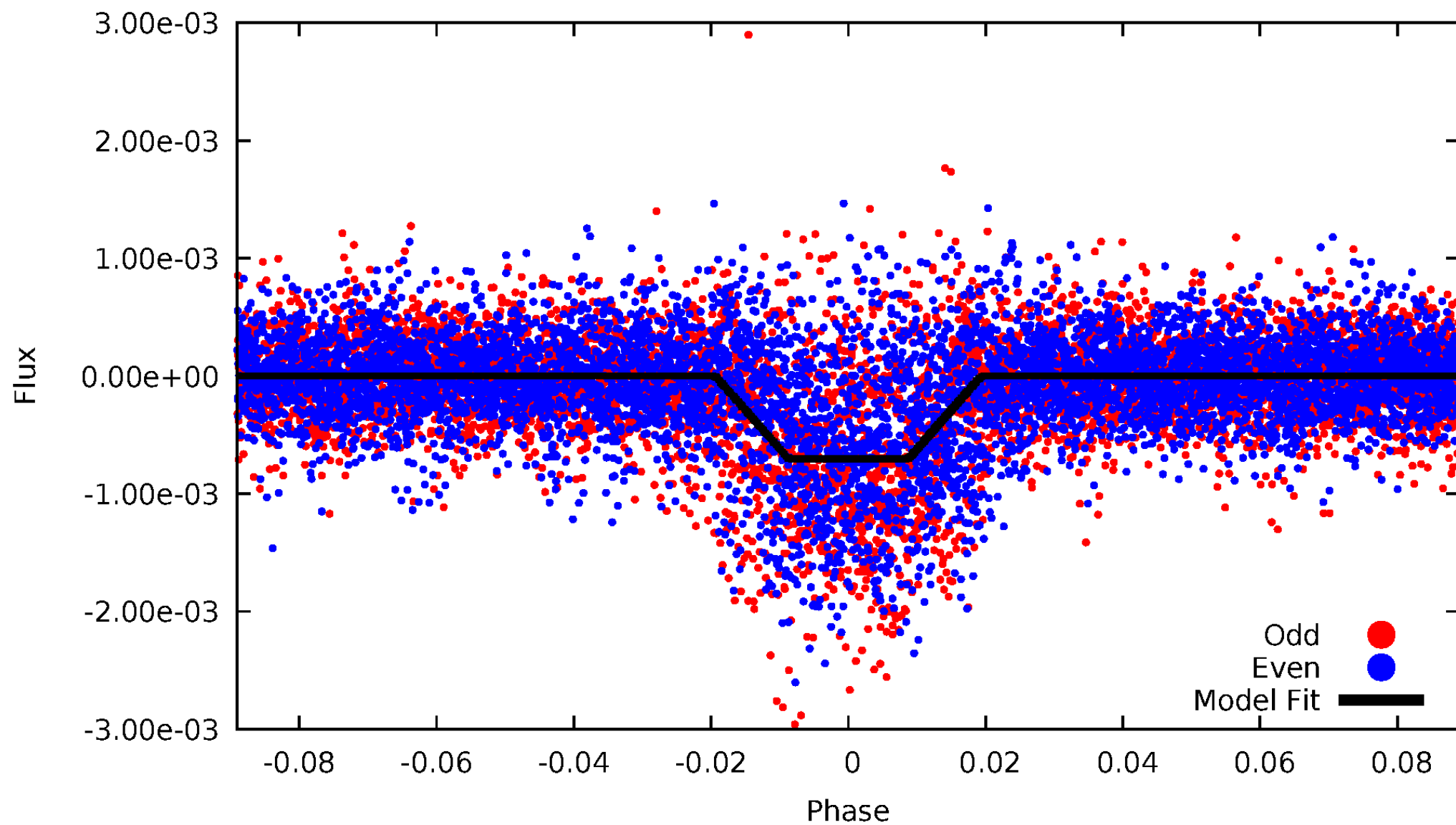
# DV Odd/Even

TCE 008095275-01



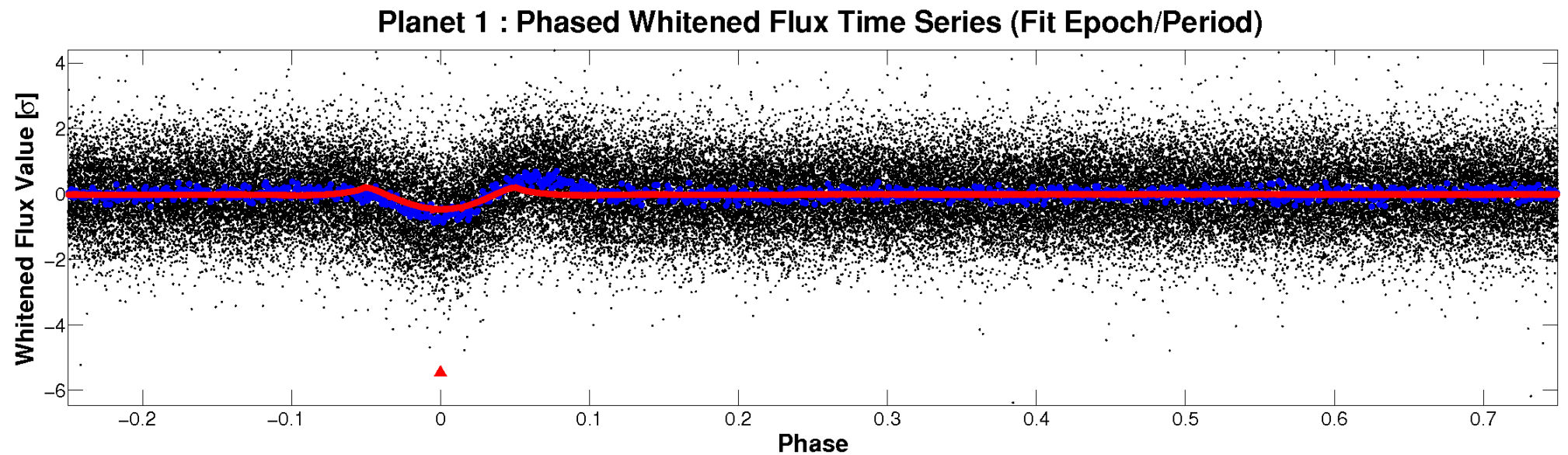
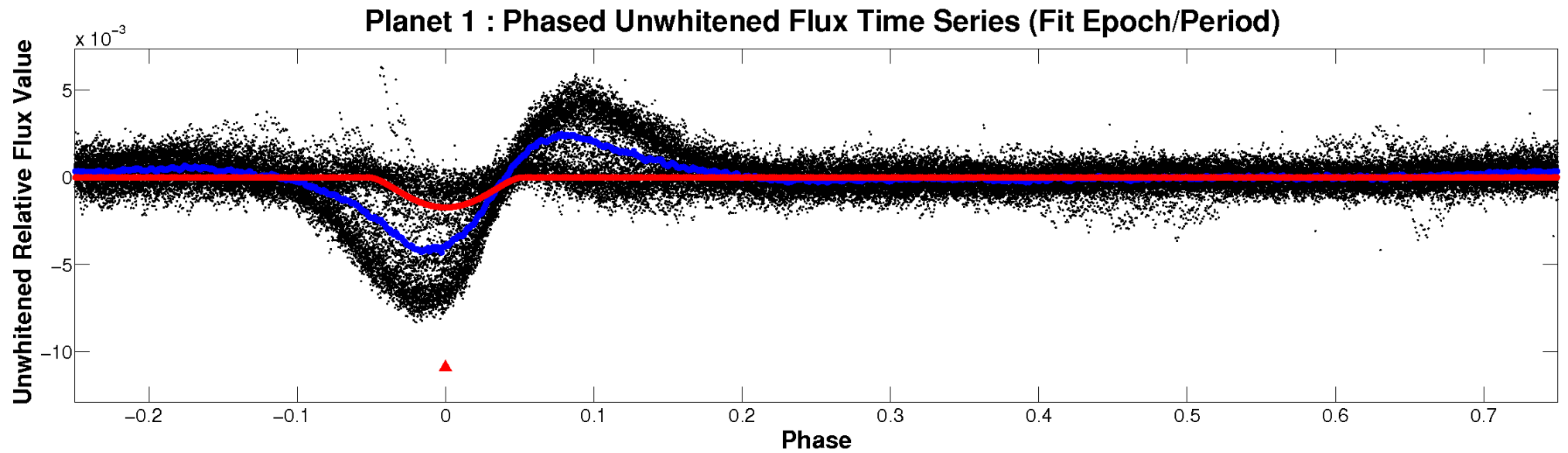
# ALT Odd/Even

TCE 008095275-01



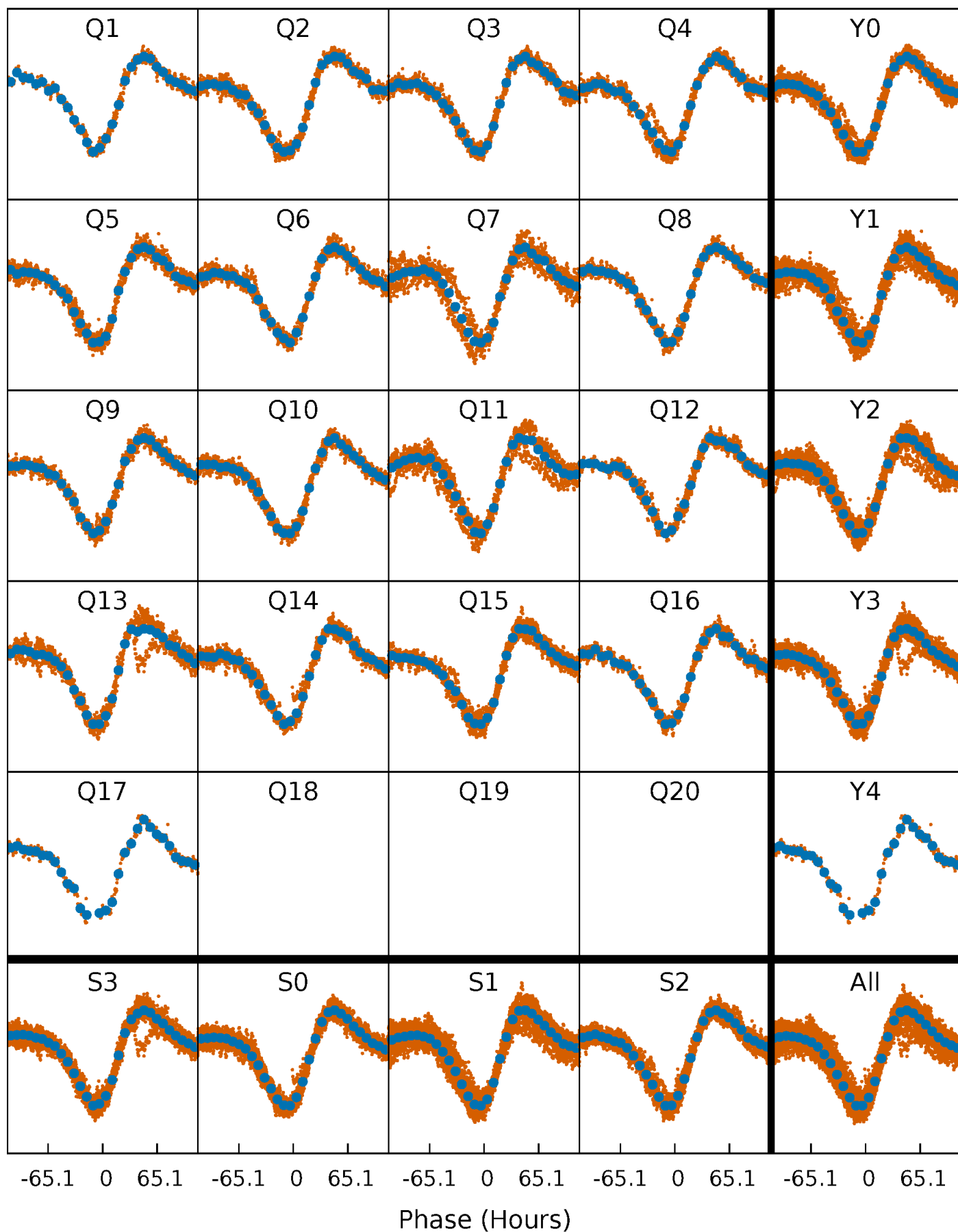


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

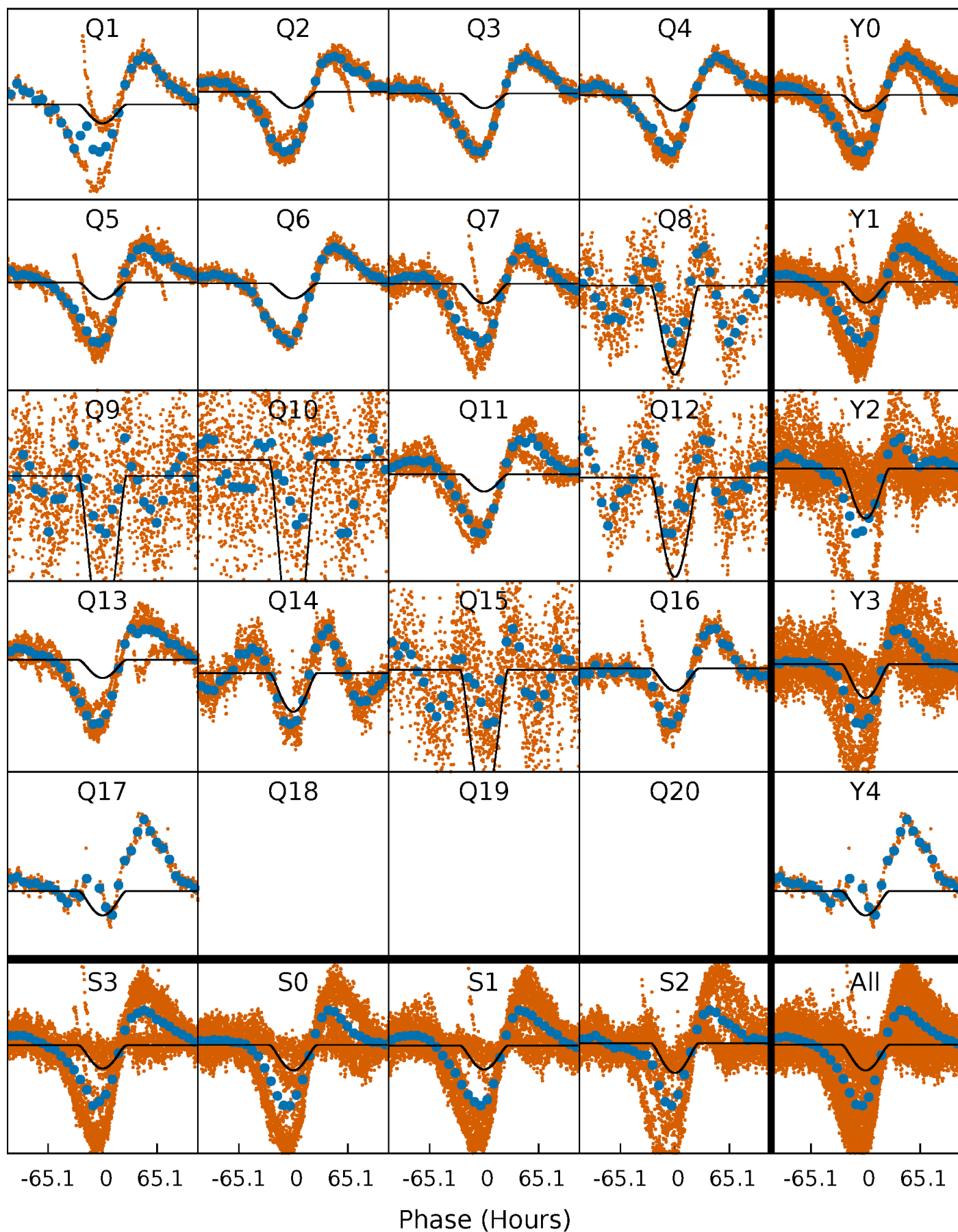
TCE 008095275-01 P= 23.013510 Days  $T_0=132.528700$  (BKJD)





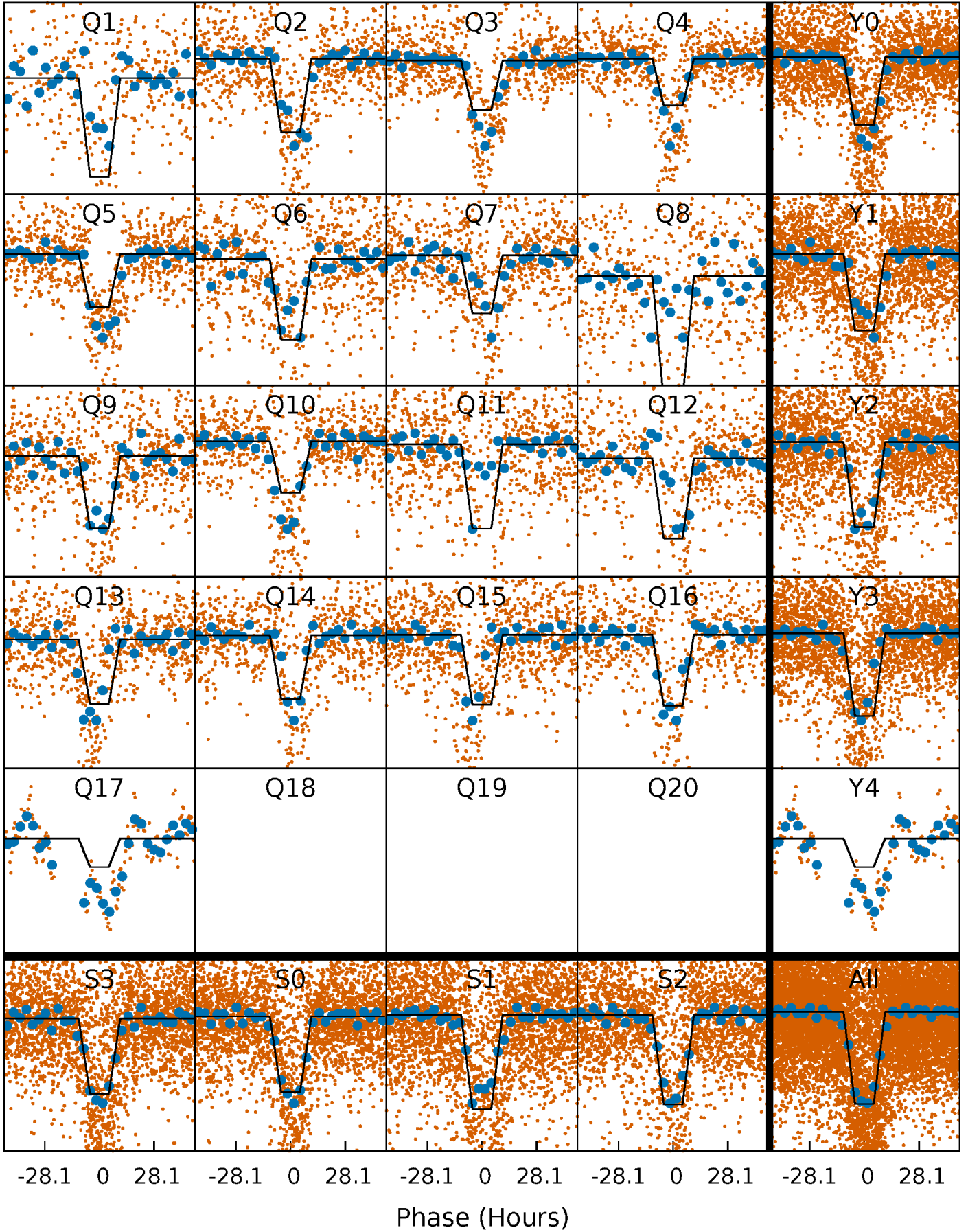
# DV Quarter-Phased Transit Curves

TCE 008095275-01 P= 23.013510 Days  $T_0=132.528700$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

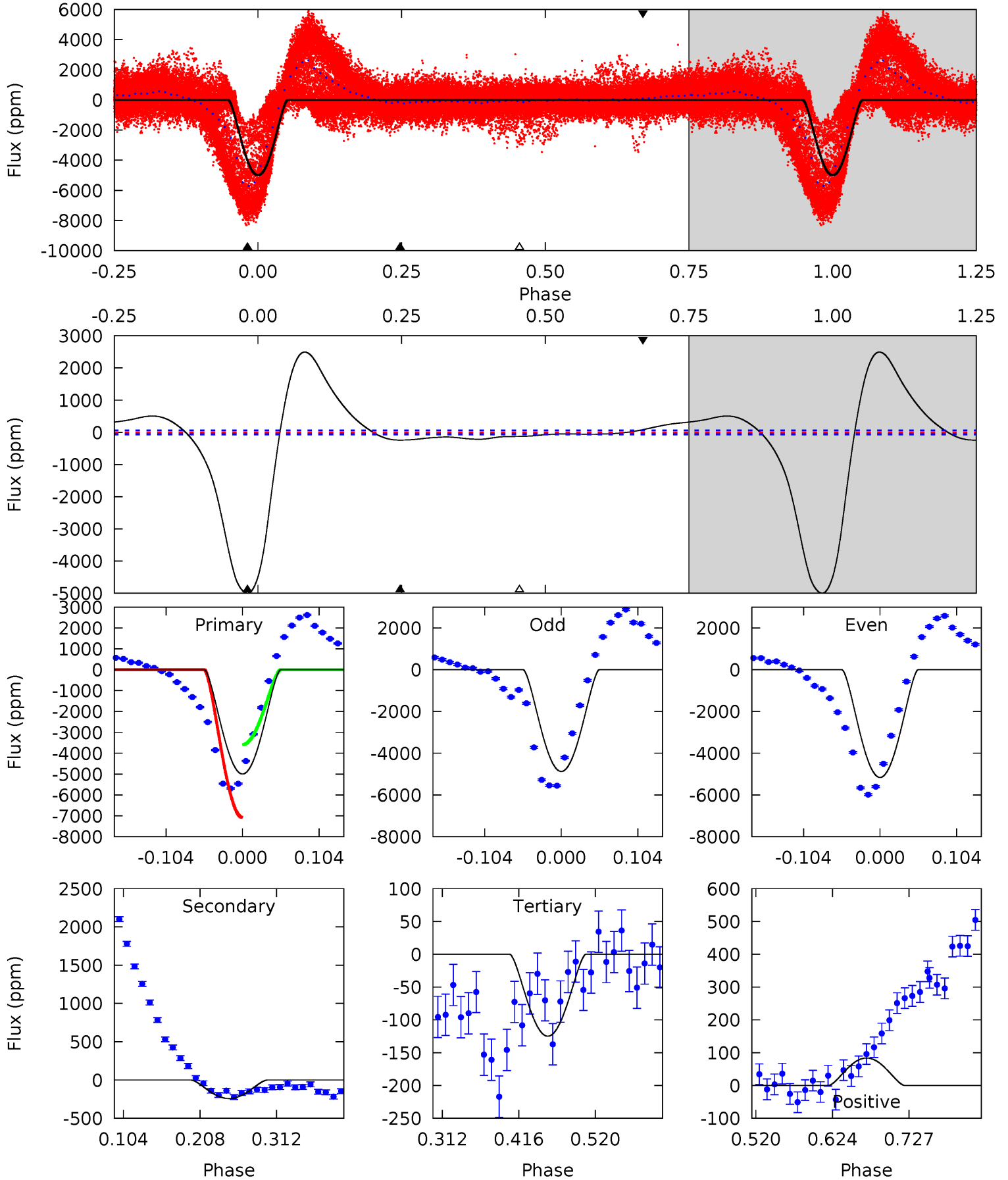
TCE 008095275-01 P= 23.014118 Days  $T_0=132.667697$  (BKJD)



# DV Model-Shift Uniqueness Test

008095275-01, P = 23.013510 Days, E = 109.515190 Days

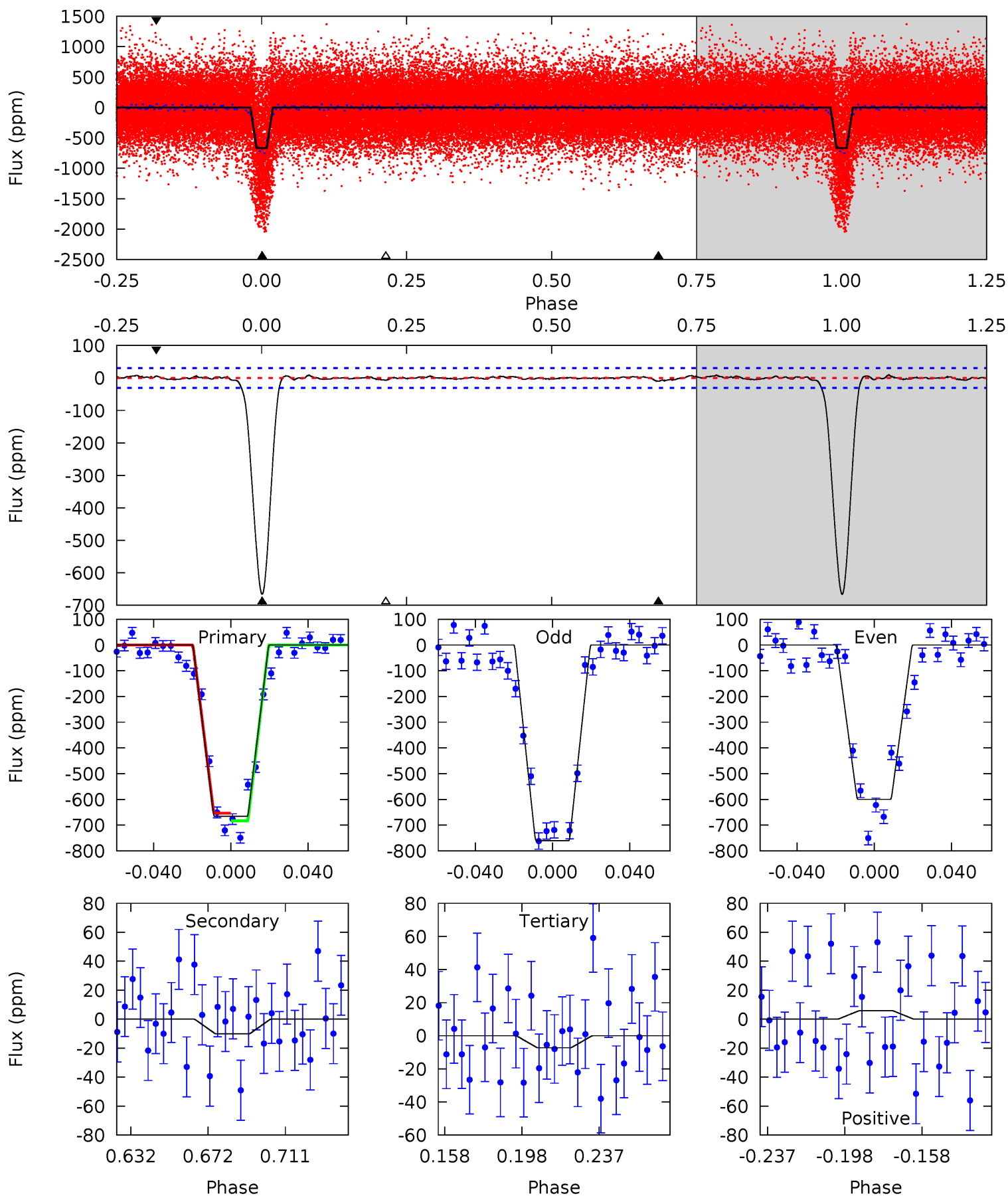
| Pri   | Sec  | Ter  | Pos  | FA <sub>1</sub> | FA <sub>2</sub> | F <sub>Red</sub> | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM  | Shape | TAT |
|-------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|-----|
| 366.9 | 17.8 | 9.17 | 6.14 | 4.56            | 1.63            | 42.0             | 357.8   | 360.8   | 8.59    | 11.6    | 10.5    | 0.88 | 0.33  | 0   |



# Alt Model-Shift Uniqueness Test

008095275-01, P = 23.014118 Days, E = 109.653579 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  |
|-------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 103.9 | 1.58 | 1.13 | 0.91 | 4.76            | 2.06            | 0.48             | 102.8   | 103.0   | 0.46    | 0.68    | 12.5    | 0.90 | 0.01  | 2.34 |



### Stellar Parameters For KIC 008095275

|        | $T_{\text{eff}}(K)$ | $\log(g)$                 | [Fe/H]                    | $R$ ( $R_{\odot}$ )        | $M(M_{\odot})$            | $p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ ) |
|--------|---------------------|---------------------------|---------------------------|----------------------------|---------------------------|---|
|        | $4869^{+83}_{-155}$ | $2.749^{+0.033}_{-0.027}$ | $0.020^{+0.200}_{-0.350}$ | $10.124^{+1.495}_{-2.777}$ | $2.098^{+0.623}_{-0.935}$ | $0.003^{+0.001}_{-0.000}$                     |
|        | +2%/-3%             | +1%/-1%                   | +1000%/-1750%             | +15%/-27%                  | +30%/-45%                 | +38%/-13%                                     |
| Source | PHO1                | AST9                      | 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 008095275-01 / KOI

| Detrend | Depth (ppm)   | $R_p$ ( $R_{\oplus}$ )    | $T_{max}$ (K)      | $T_{obs}$ (K)          | $A_{obs}$                 |
|---------|---------------|---------------------------|--------------------|------------------------|---------------------------|
| DV      | $-242 \pm 14$ | $89.89^{+62.26}_{-47.35}$ | $2120^{+62}_{-81}$ | $2631^{+841}_{-4684}$  | $0.711^{+2.367}_{-0.456}$ |
| Alt.    | $-10 \pm 6$   | $50.66^{+46.59}_{-35.11}$ | $2120^{+69}_{-81}$ | $-2421^{+5155}_{-117}$ | $0.079^{+0.761}_{-0.063}$ |

$T_{max}$  = Theoretical Maximum Planetary Temperature  
 $T_{obs}$  = Observed Planetary Temperature (Assuming  $A=0.3$ )  
 $A_{obs}$  = Observed Albedo (Assuming  $T=0$ )

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

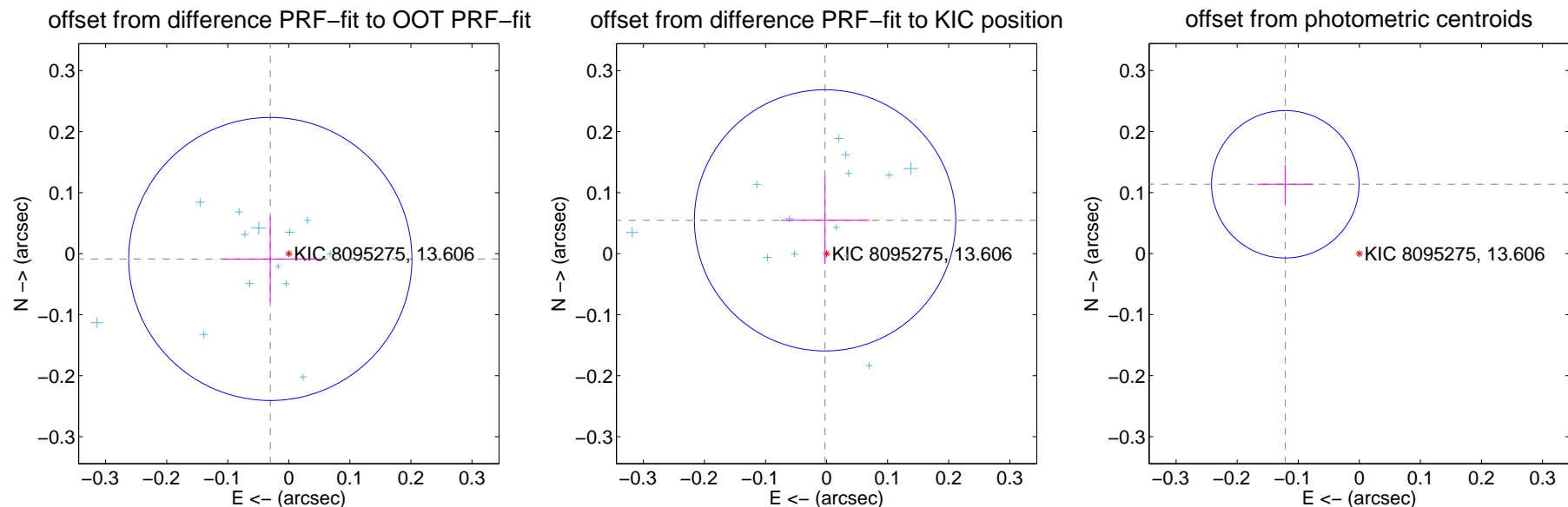
## DV Centroid Data

Supplemental centroid analysis for 008095275-01. Kepler magnitude: 13.61. Transit SNR 25.88

There are 14 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

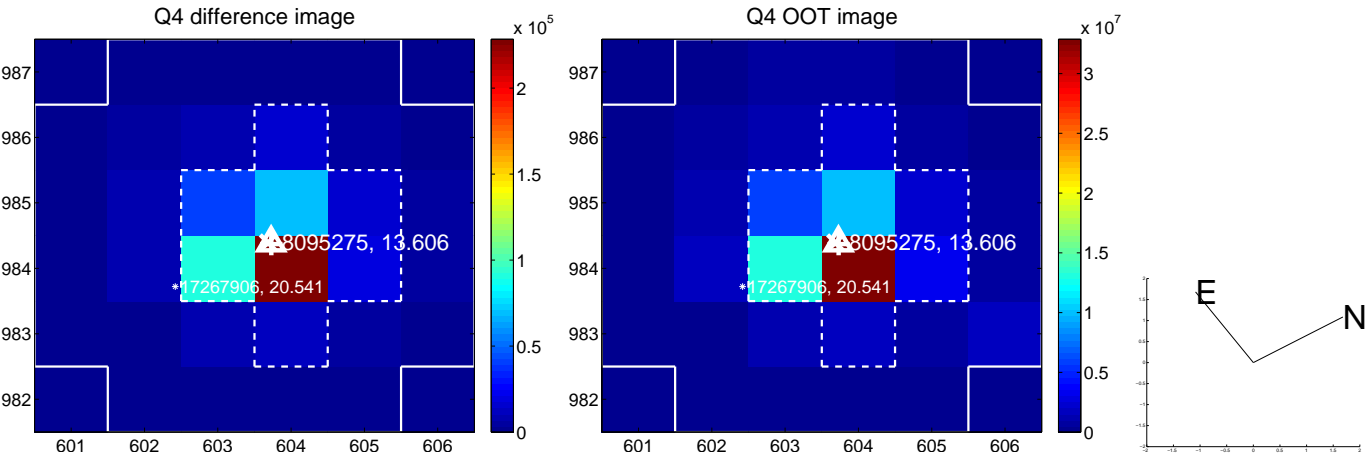
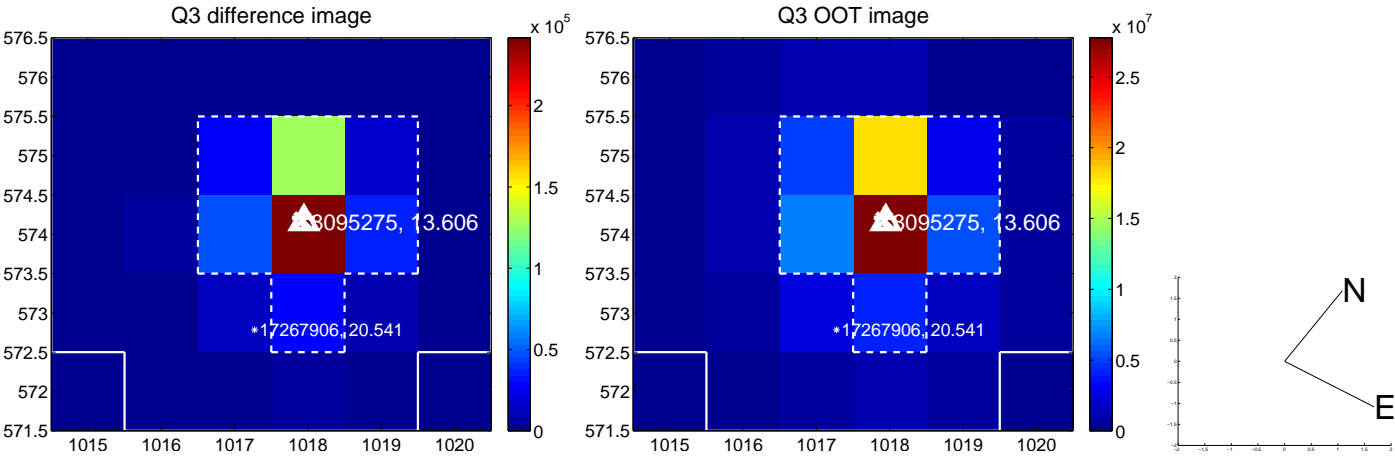
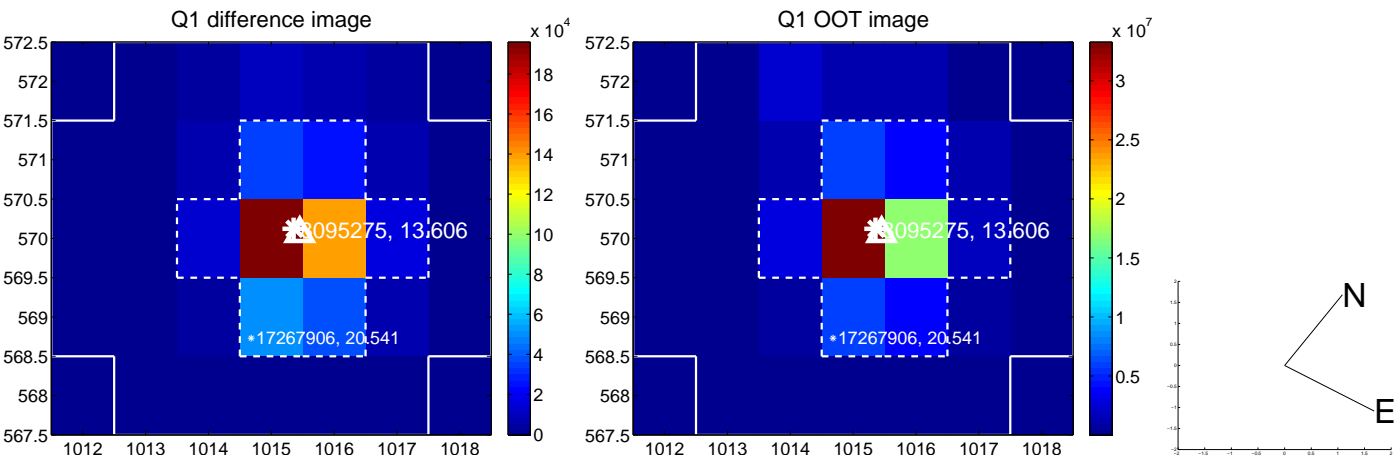
|   | Distance in arcsec | Distance / $\sigma$ | $\Delta$ RA       | $\Delta$ Dec       |
|---|--------------------|---------------------|-------------------|--------------------|
| PRF-fit source offset from OOT          | $0.032 \pm 0.077$  | 0.41                | $0.030 \pm 0.078$ | $-0.009 \pm 0.070$ |
| PRF-fit source offset from KIC position | $0.055 \pm 0.071$  | 0.77                | $0.002 \pm 0.073$ | $0.055 \pm 0.071$  |
| photometric centroid source offset      | $0.17 \pm 0.04$    | 4.13                | $0.12 \pm 0.05$   | $0.11 \pm 0.03$    |



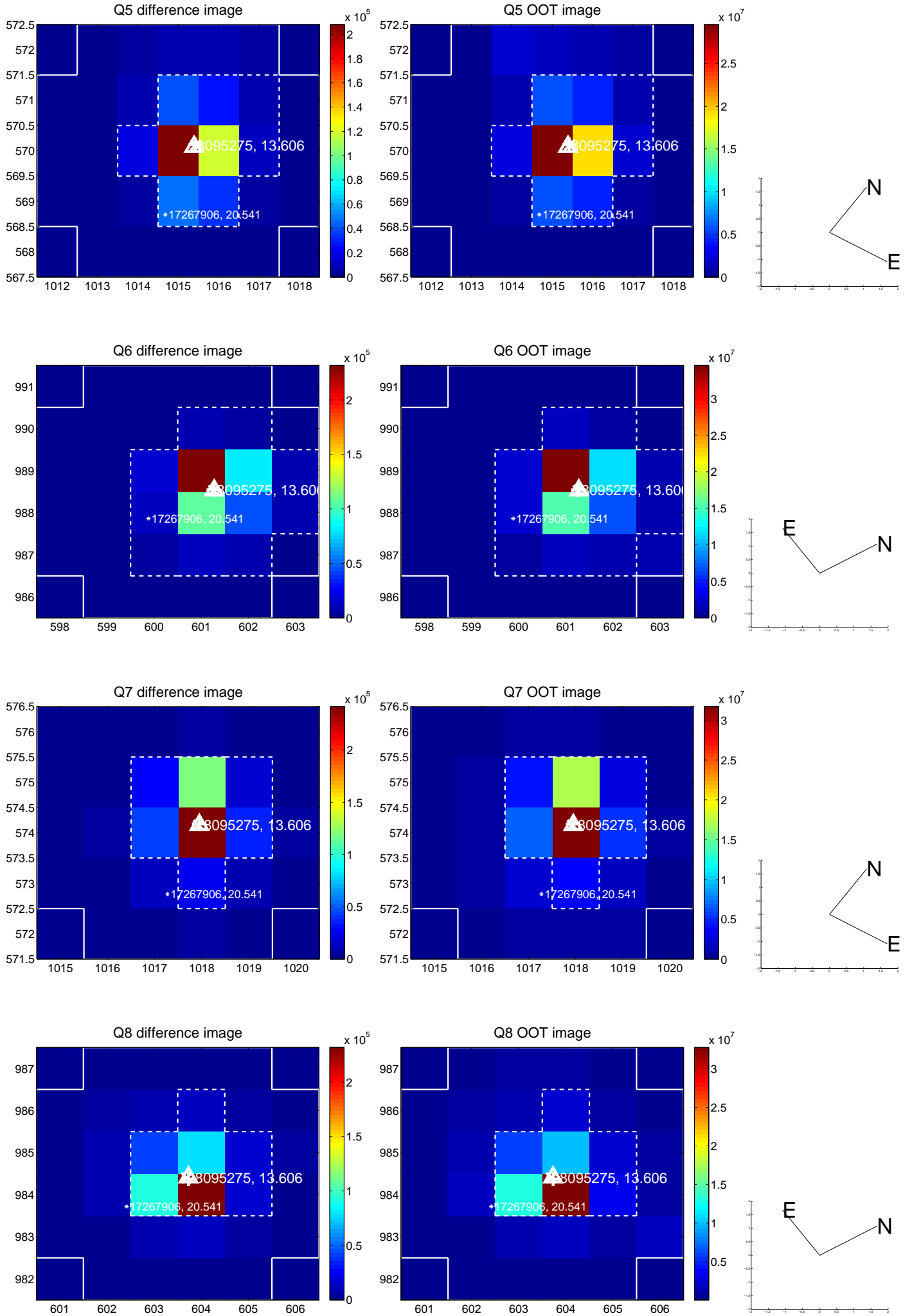
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: 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.



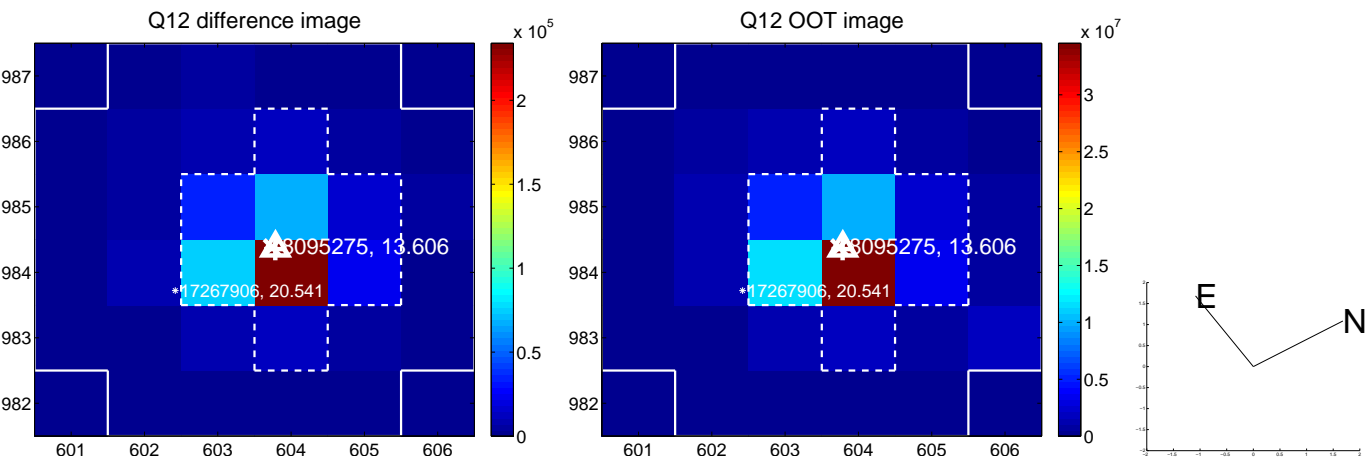
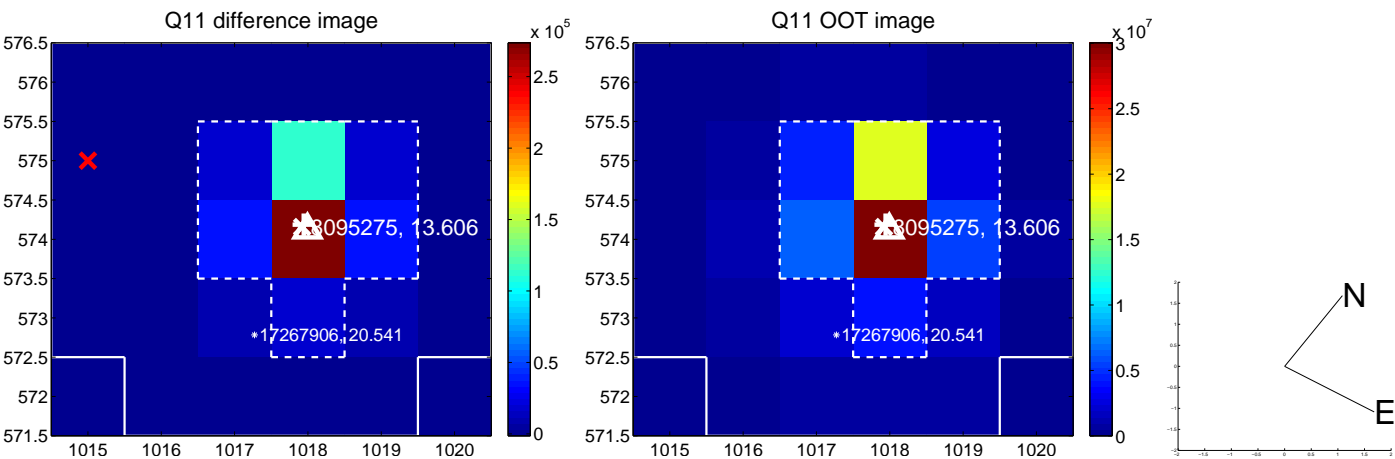
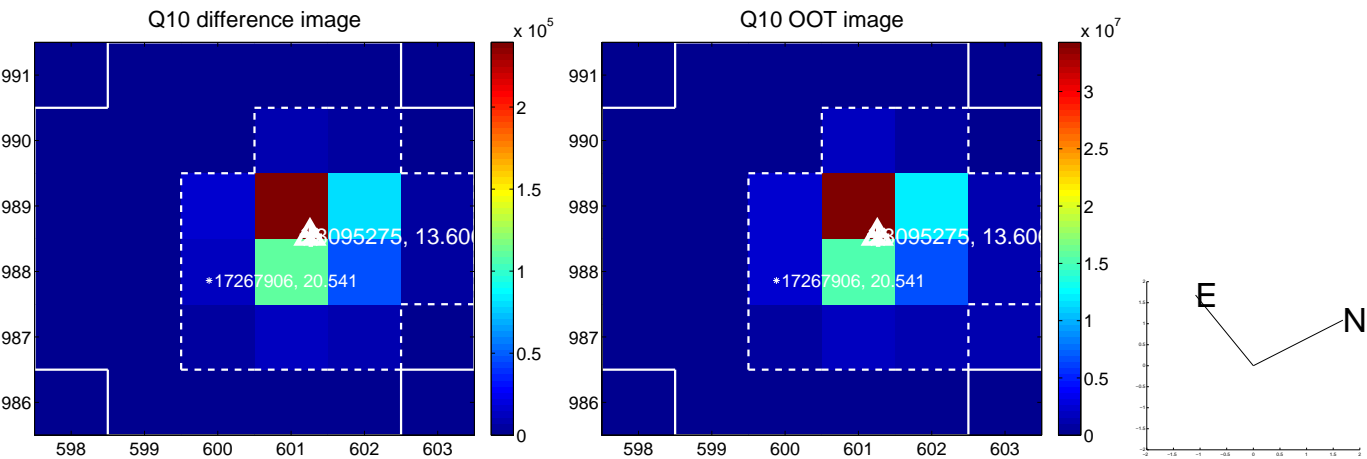
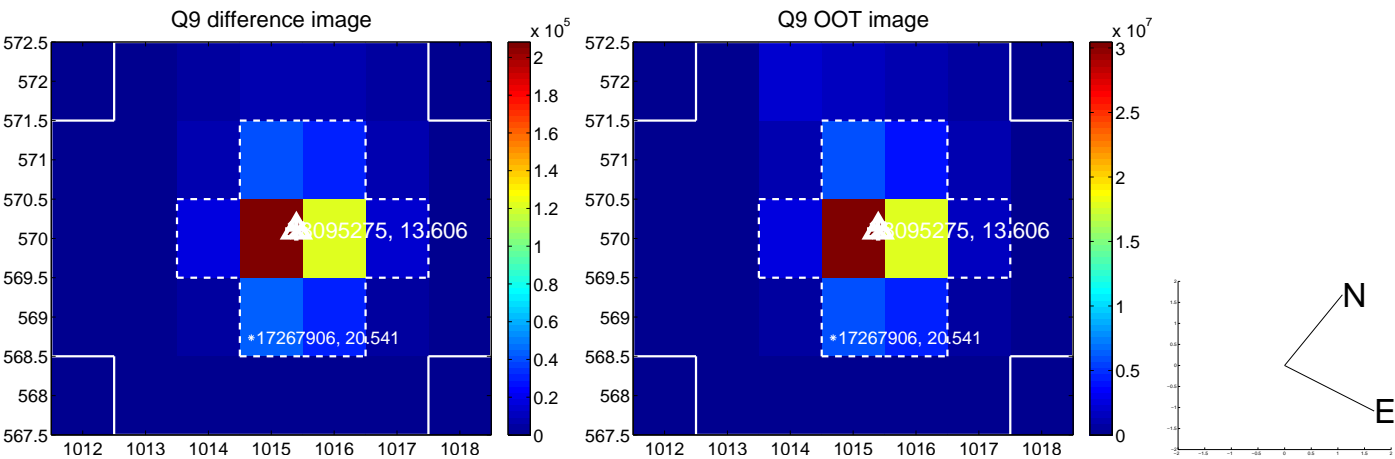
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



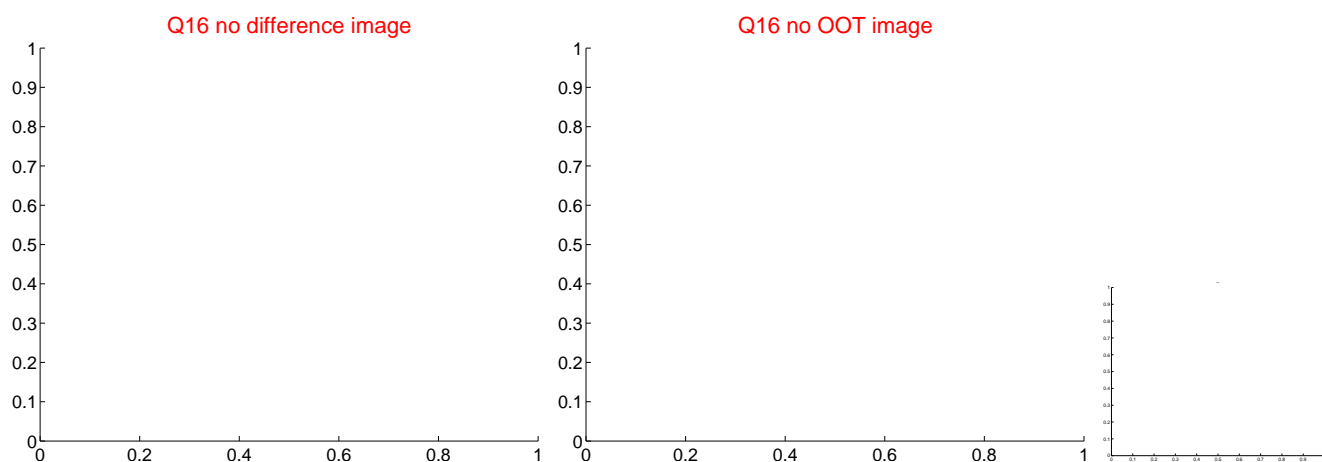
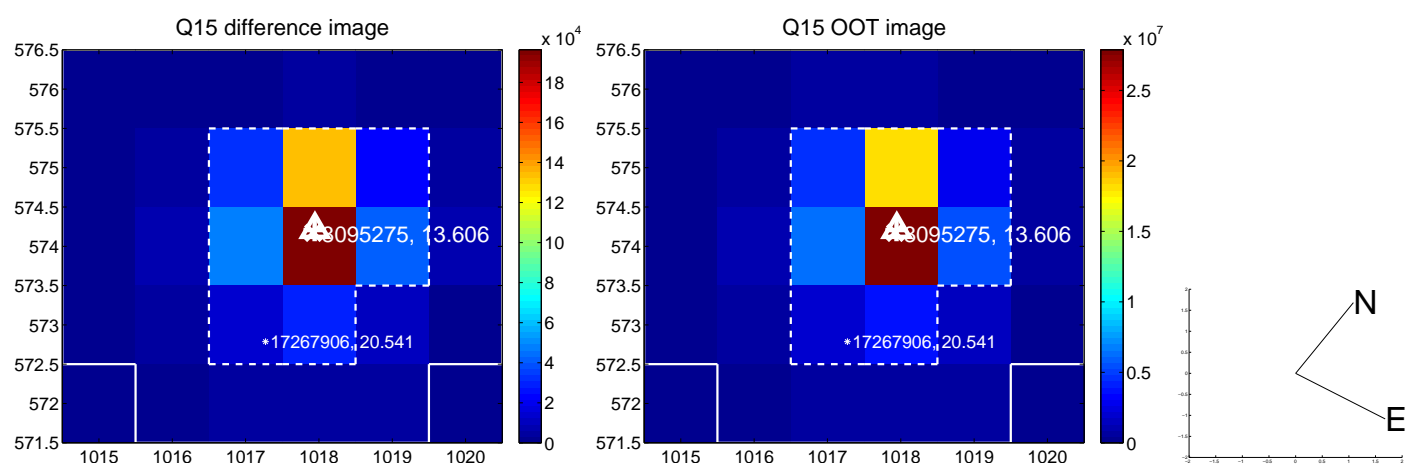
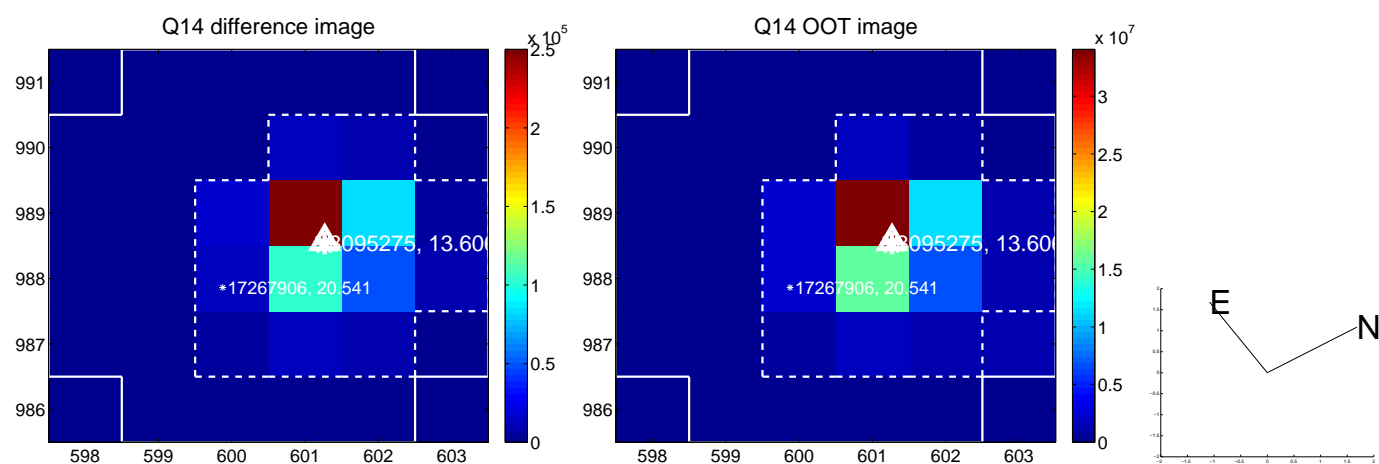
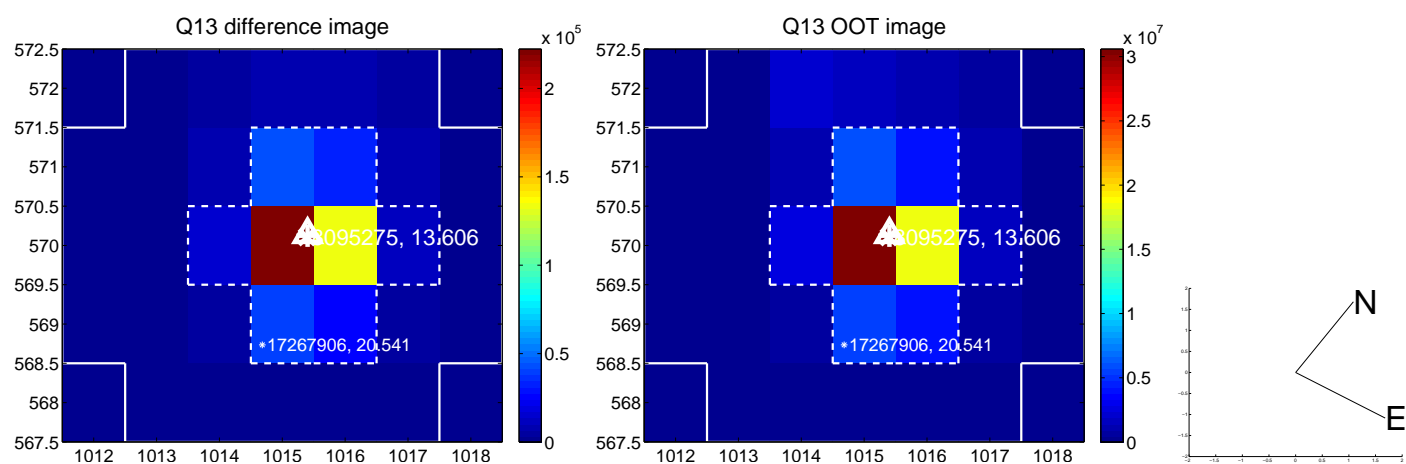
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



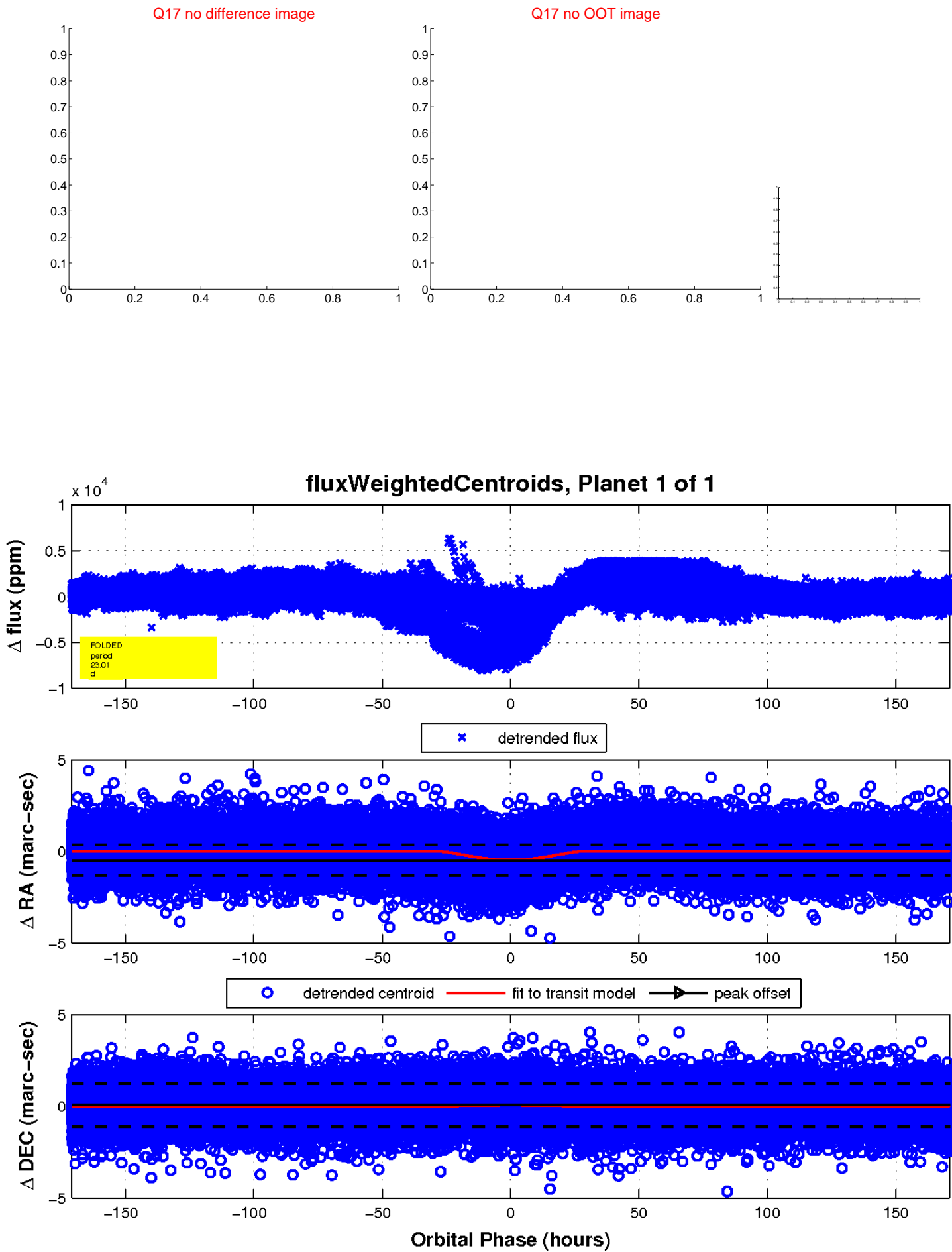
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



UKIRT Image

Declination

