

# KIC 011499192

## 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) | $R_p$ ( $R_{\oplus}$ ) | $S_p$ ( $S_{\oplus}$ ) |
|--------------|----------|---------|---------------|--------------|-------------|------------------|------|------|-----------------------------|-----------------|------------------------|------------------------|
| 011499192-01 | OBS      | 3120.01 | 4.135932      | 133.537829   | 156.7       | 2.305            | 13.0 | 14.7 | 1.15                        | 5886            | 1.72                   | 535.85                 |

## Robovetter Results

| TCE          | Run Type | Disp | Score | N | S | C | E | Comments   |
|--------------|----------|------|-------|---|---|---|---|------------|
| 011499192-01 | OBS      | PC   | 1.00  | 0 | 0 | 0 | 0 | NO_COMMENT |

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

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

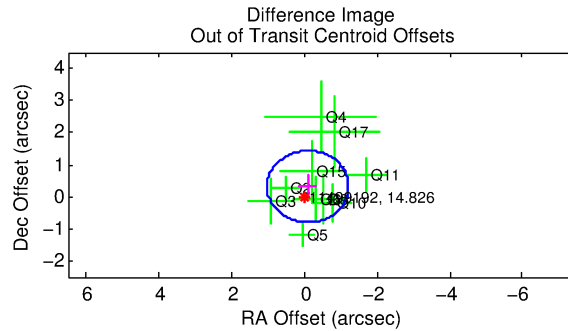
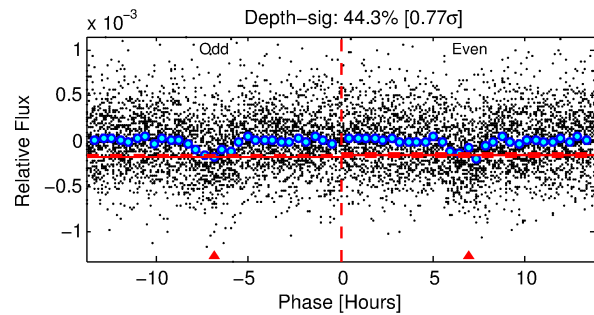
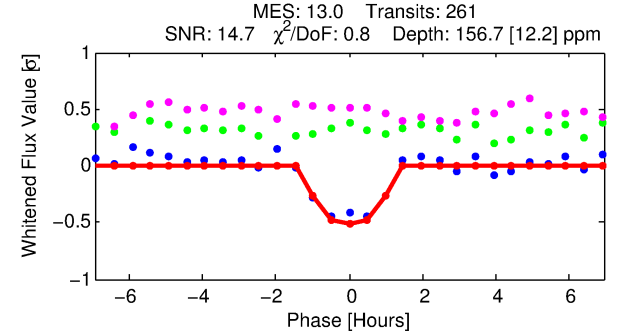
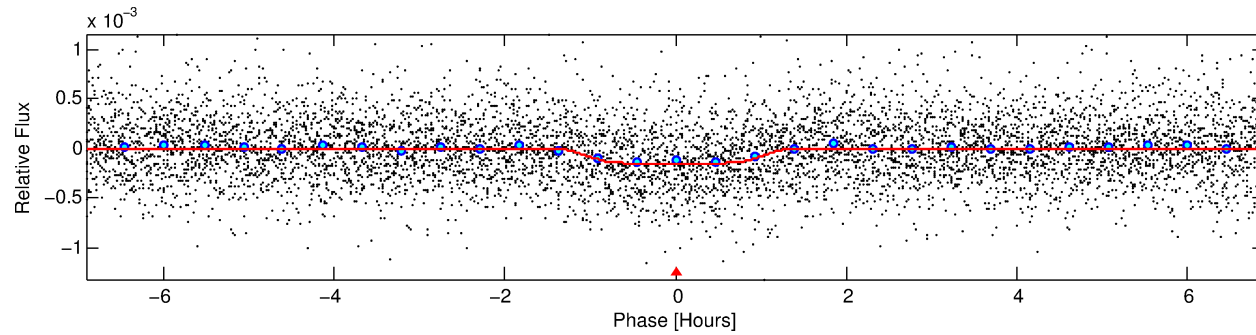
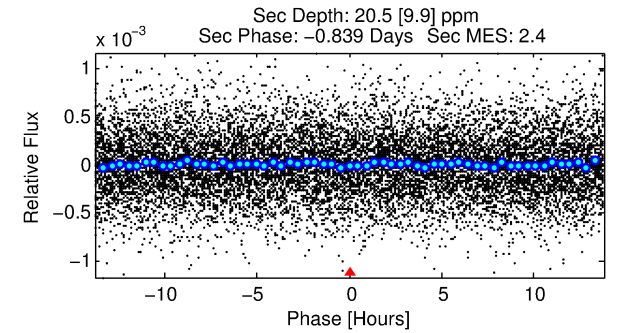
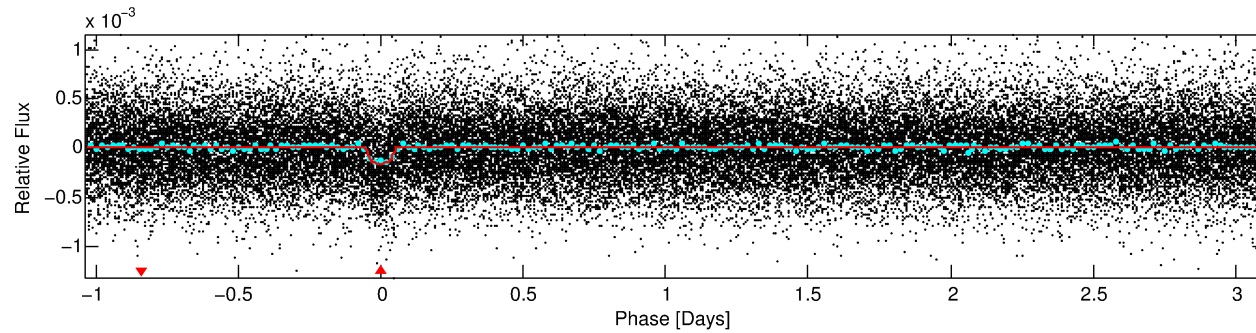
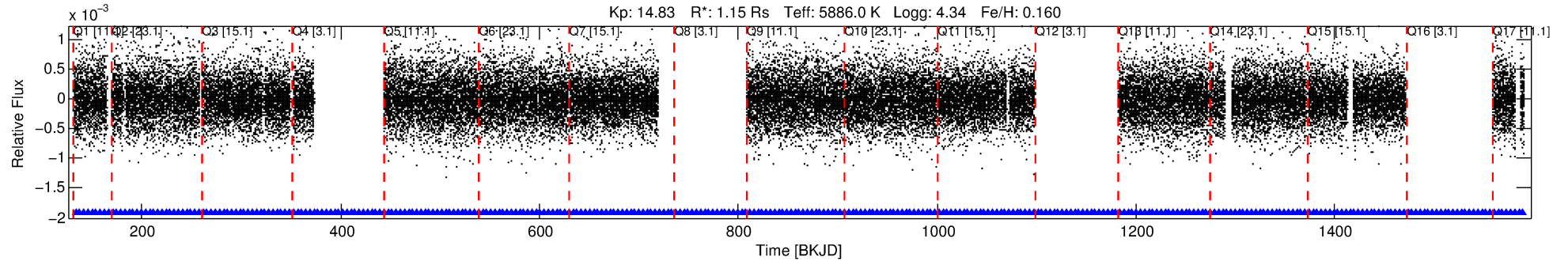
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 011499192-01

No Significant Match Found

# DV One-Page Summary

KIC: 11499192 Candidate: 1 of 1 Period: 4.136 d  
KOI: K03120.01 Corr: 0.909



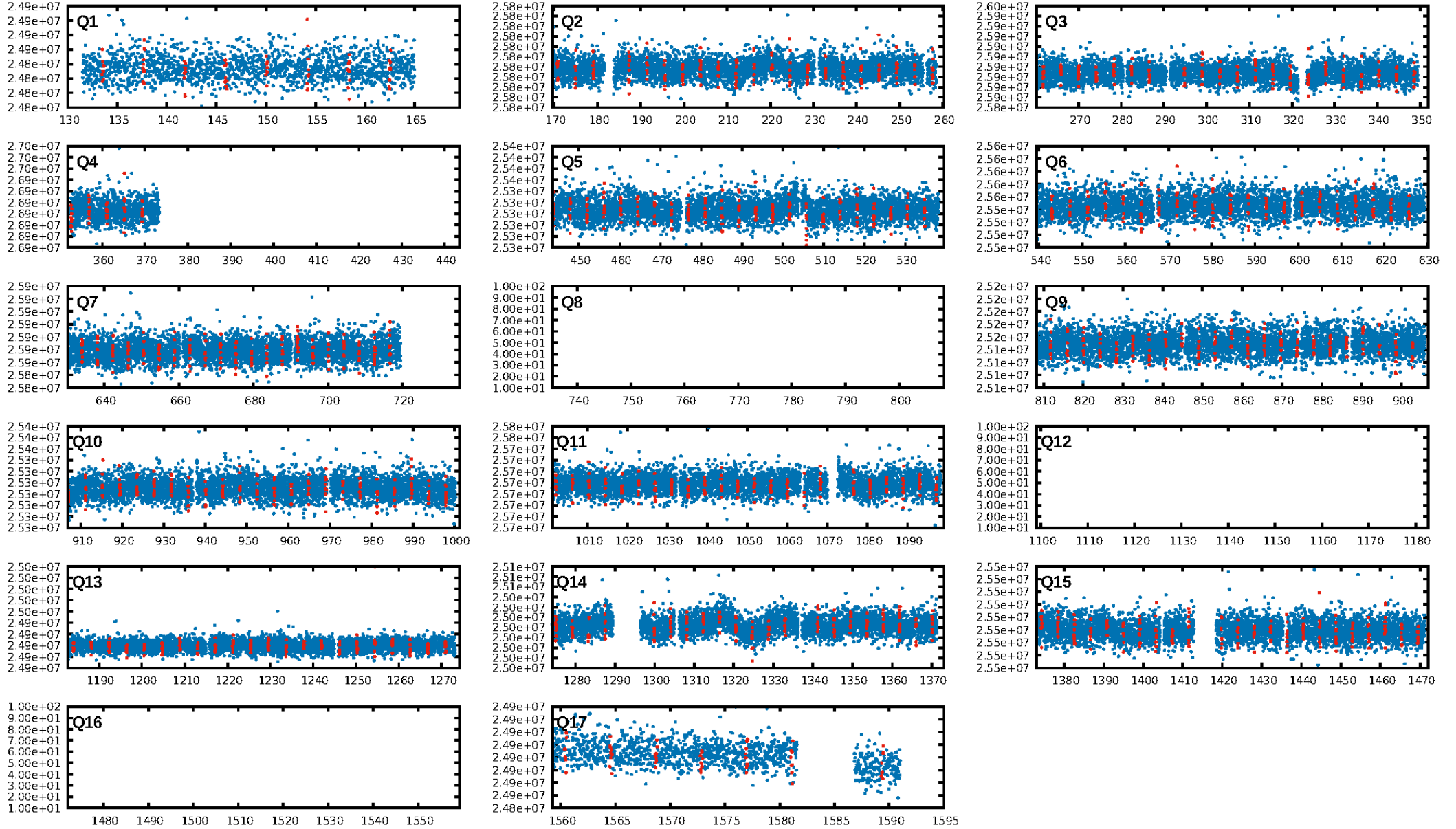
## DV Fit Results:

Period = 4.13593 [0.00002] d  
Epoch = 133.5378 [0.0029] BKJD  
Rp/R\* = 0.0137 [0.0069]  
a/R\* = 6.34 [15.23]  
b = 0.90 [0.50]  
Seff = 535.85 [122.72]  
T<sub>eq</sub> = 1227 [70] K  
Rp = 1.72 [0.92] R<sub>e</sub>  
a = 0.0516 [0.0074] AU  
Ag = 10.14 [11.59] [0.79σ]  
T<sub>effp</sub> = 3385 [951] K [2.26σ]

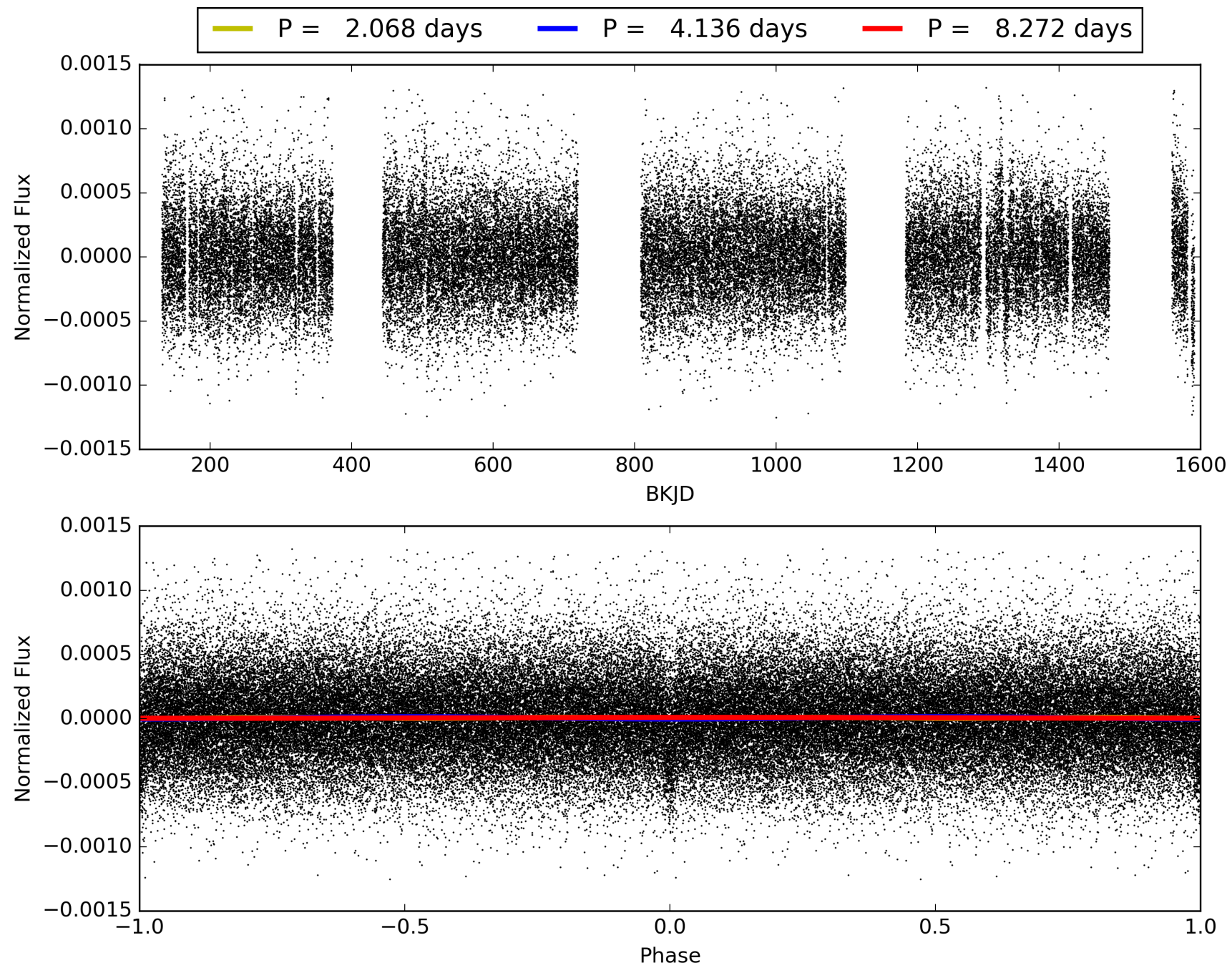
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 8.36e-39  
RollingBand-fgt: 1.00 [241/241]  
GhostDiagnostic-chr: 2.145  
Centroid-sig: 21.9%  
Centroid-so: 1.597 arcsec [1.42σ]  
OotOffset-rm: 0.331 arcsec [0.89σ]  
KicOffset-rm: 0.239 arcsec [0.74σ]  
OotOffset-st: 3/3/1/3 [10]  
KicOffset-st: 3/3/1/3 [10]  
DiffImageQuality-fgm: 0.70 [7/10]  
DiffImageOverlap-fno: 1.00 [14/14]

# TCE 011499192-01, PDC Light Curves

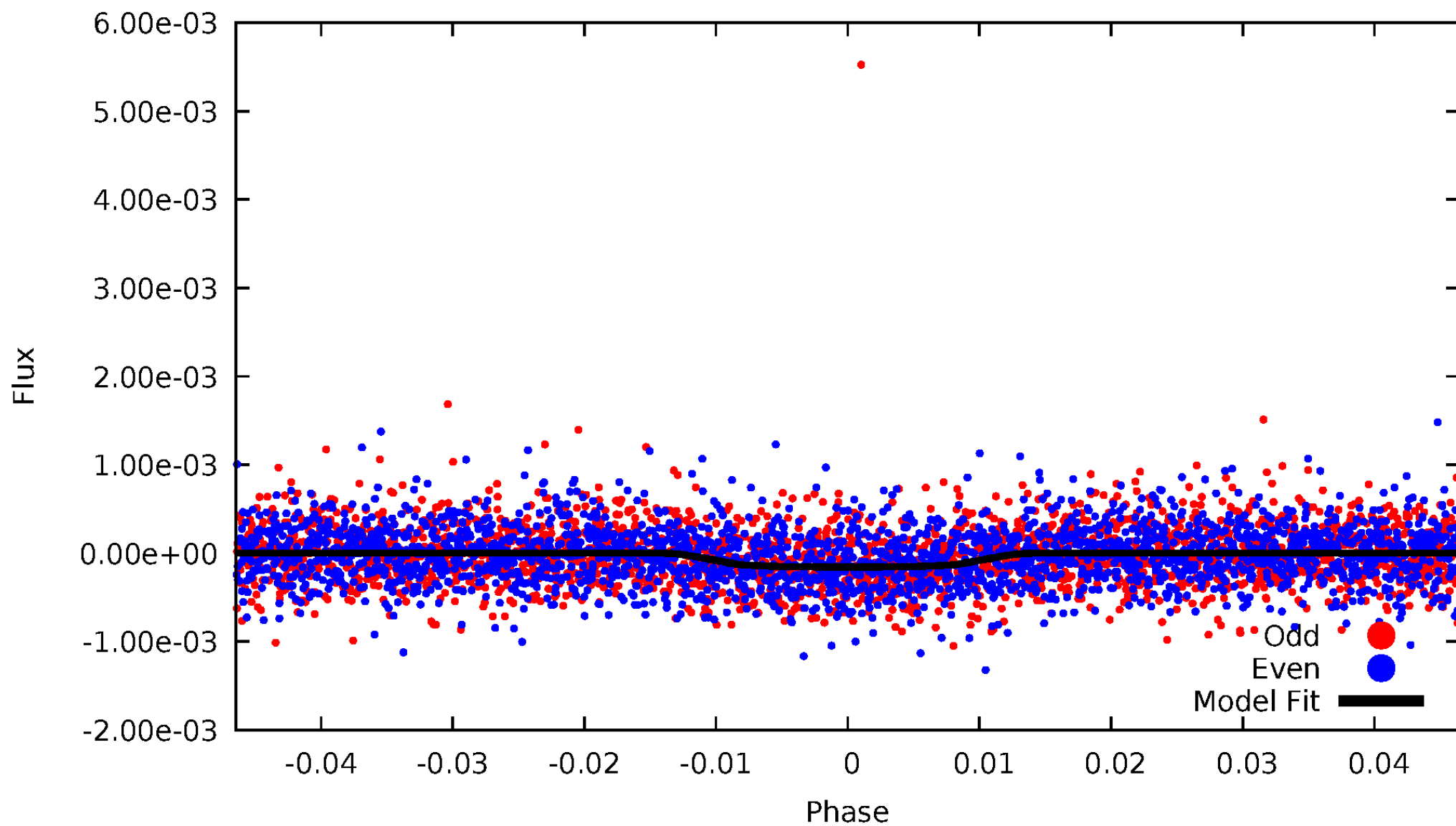


# TCE 011499192-01



# DV Odd/Even

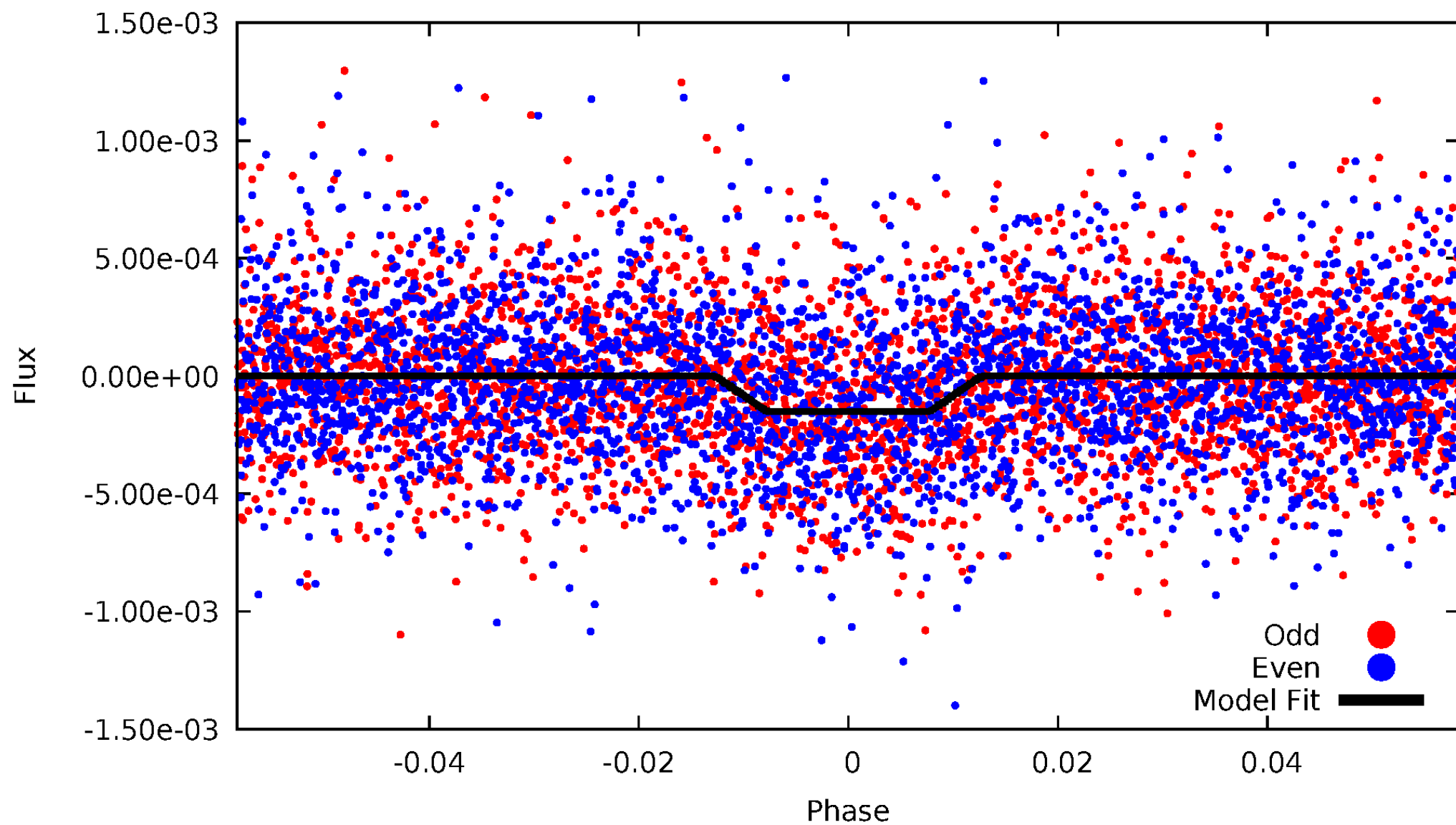
TCE 011499192-01



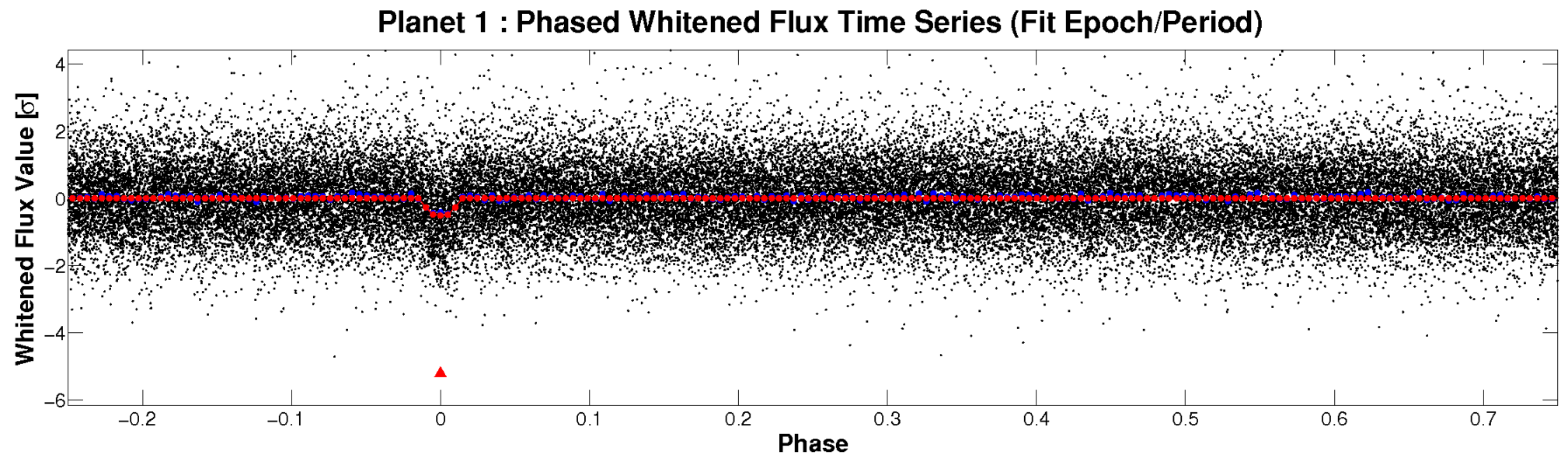
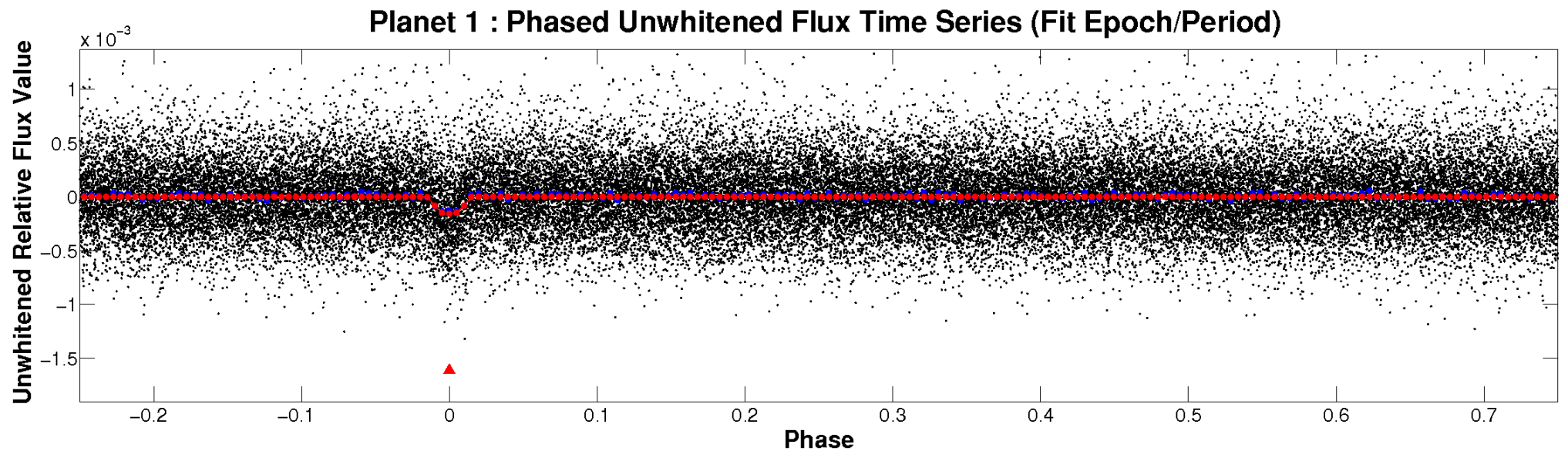


# ALT Odd/Even

TCE 011499192-01

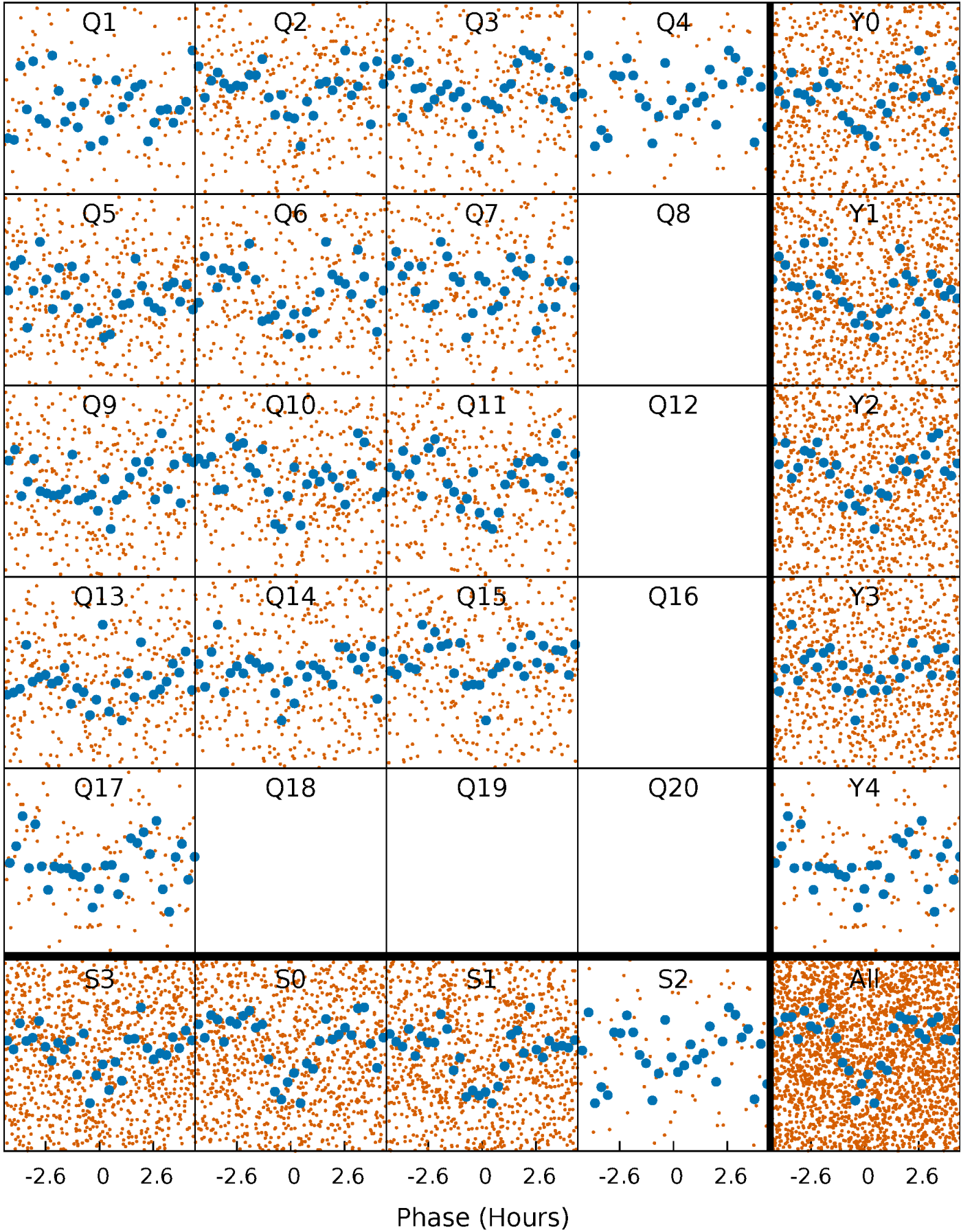


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

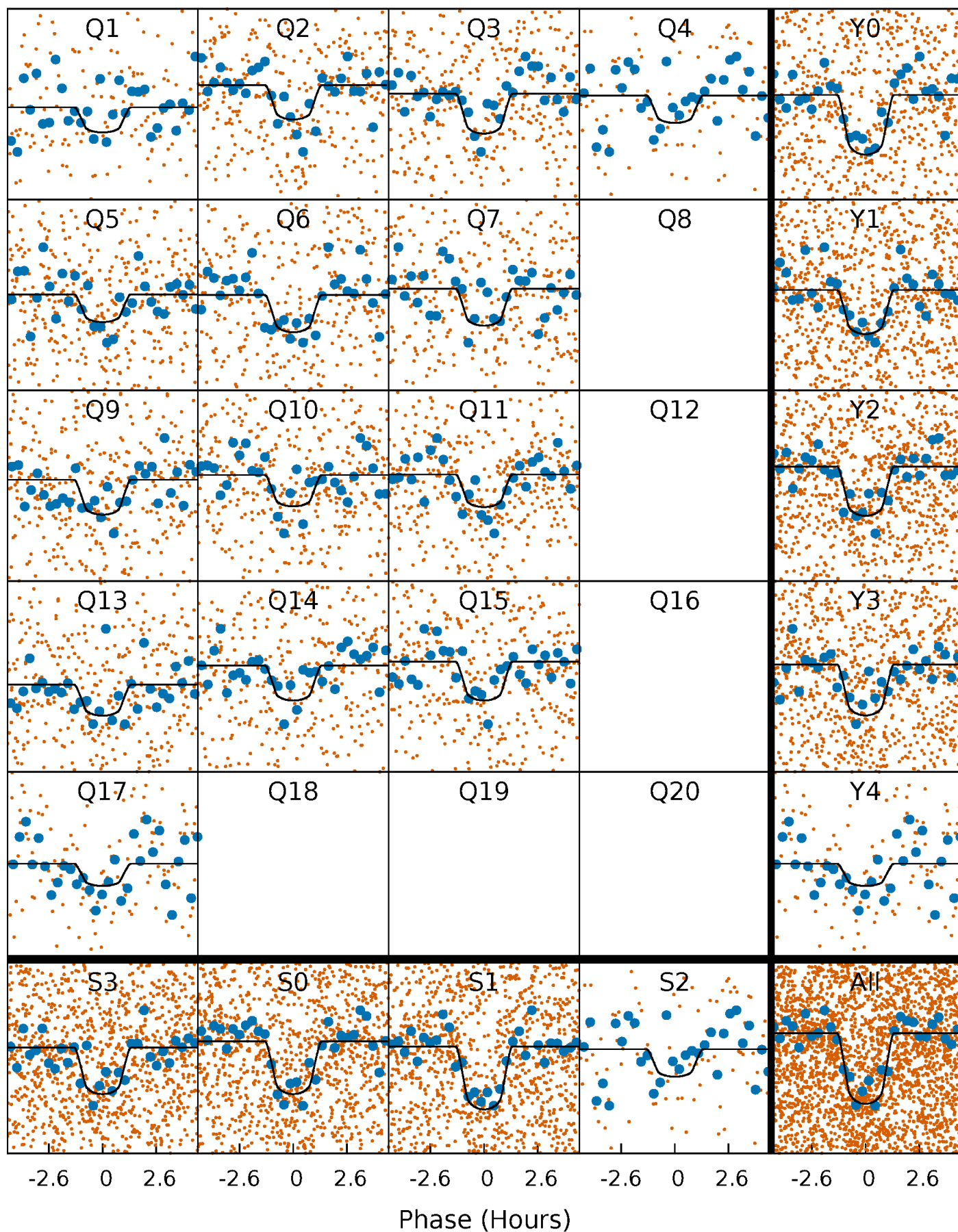
TCE 011499192-01   P= 4.135932 Days    $T_0=133.537829$  (BKJD)





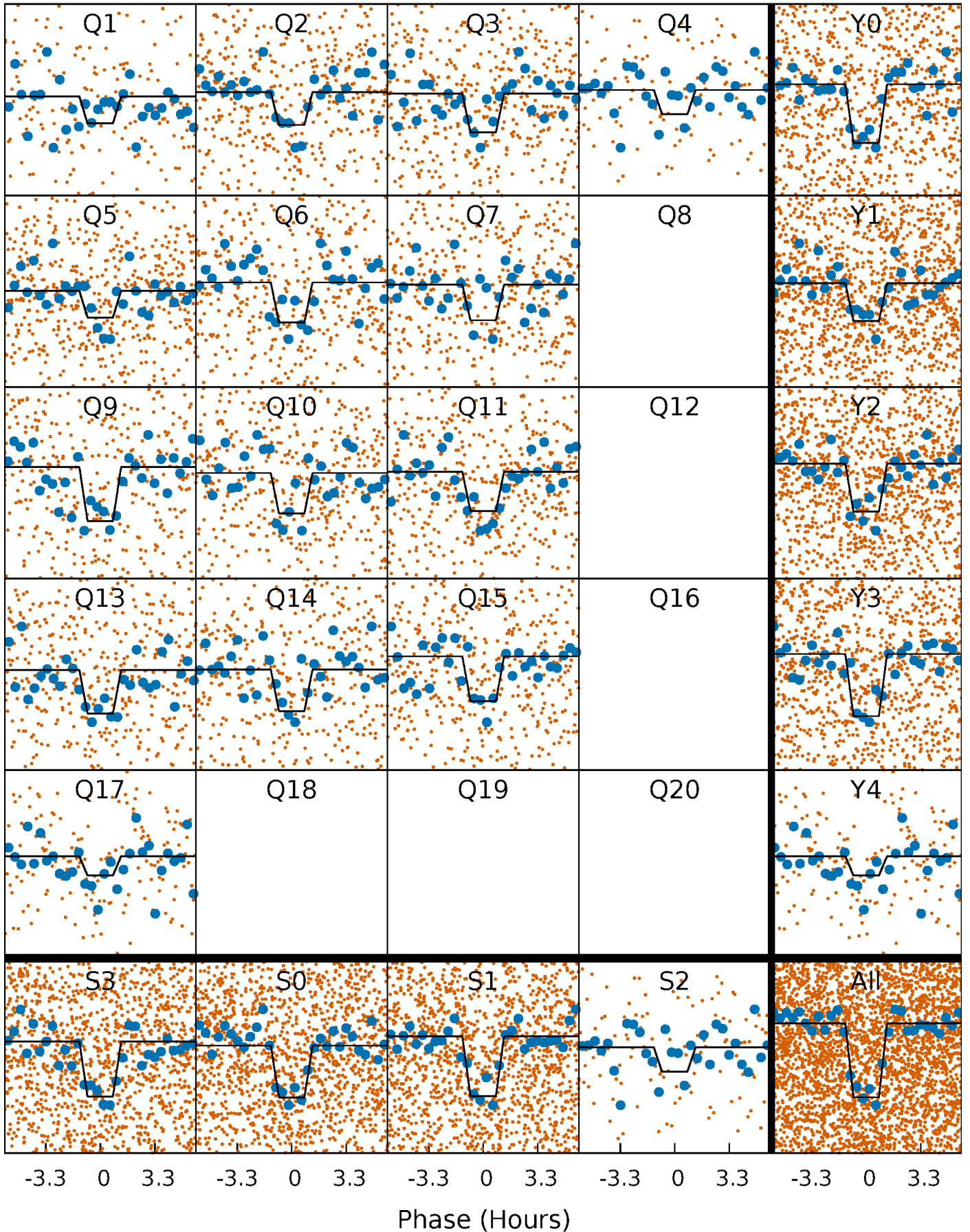
# DV Quarter-Phased Transit Curves

TCE 011499192-01 P= 4.135932 Days  $T_0=133.537829$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

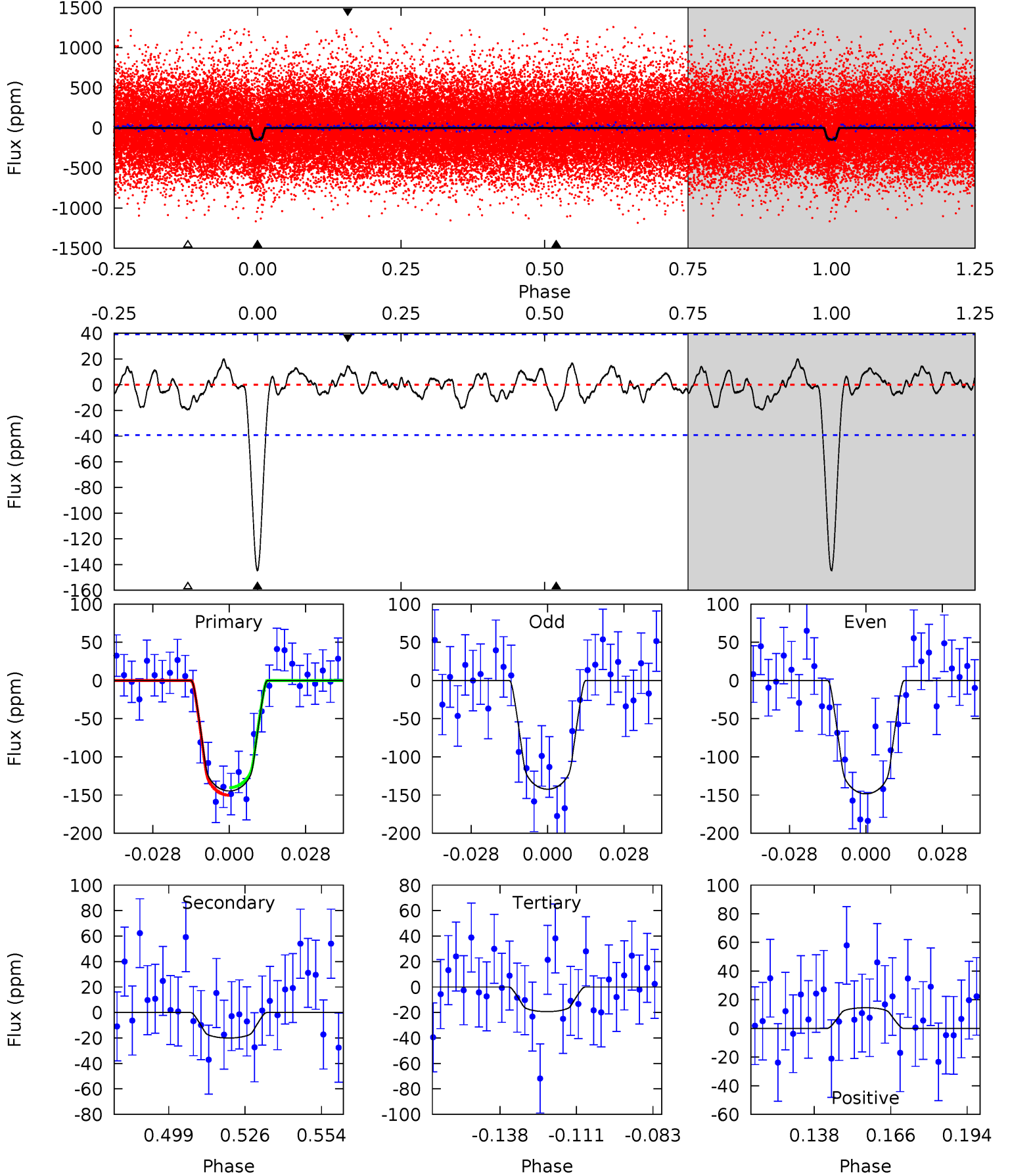
TCE 011499192-01 P= 4.135910 Days  $T_0=133.540985$  (BKJD)



# DV Model-Shift Uniqueness Test

011499192-01, P = 4.135932 Days, E = 129.401897 Days

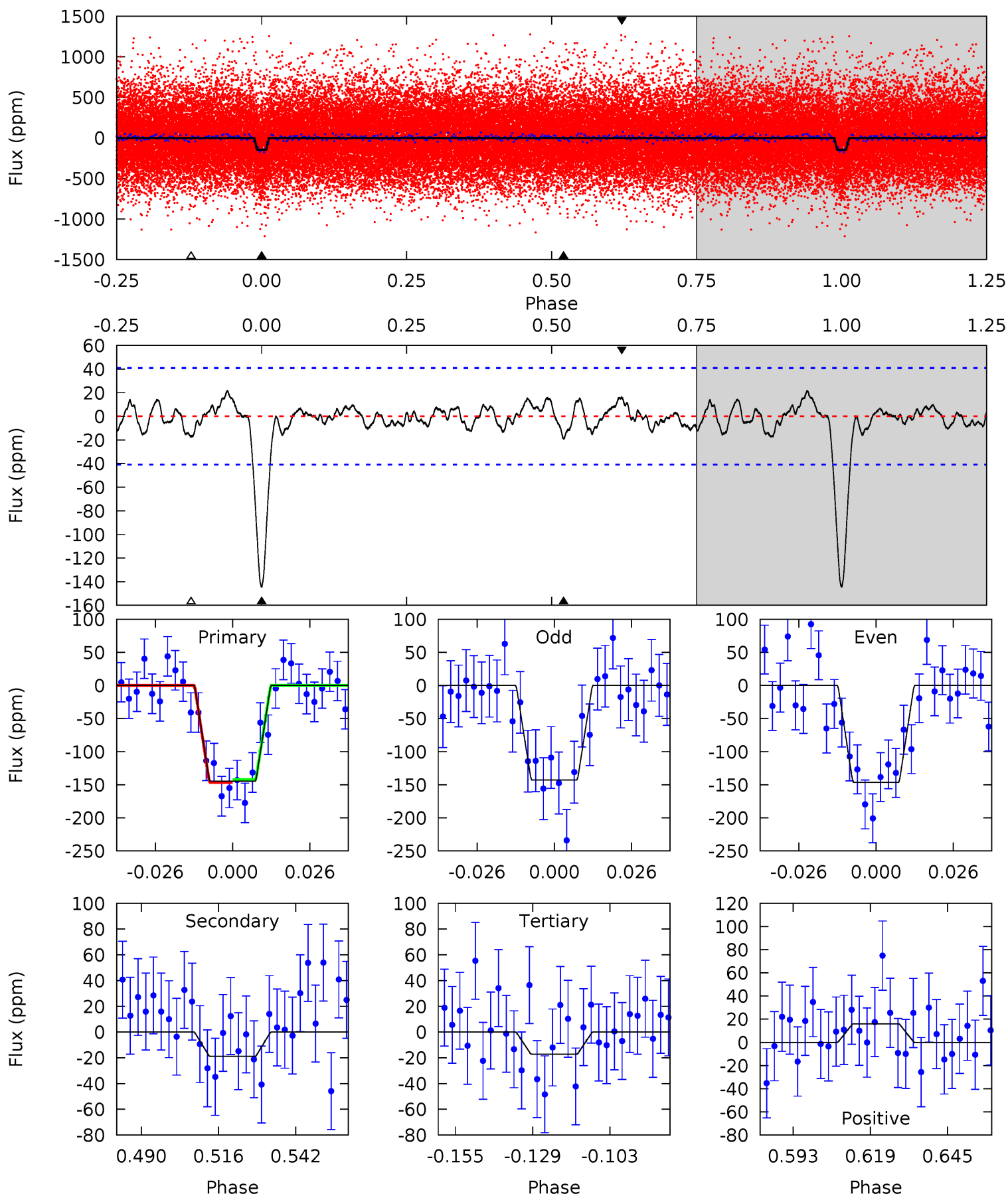
| Pri  | Sec  | Ter  | Pos  | FA <sub>1</sub> | FA <sub>2</sub> | F <sub>Red</sub> | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM  | Shape | TAT  |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 17.8 | 2.46 | 2.38 | 1.78 | 4.83            | 2.20            | 0.96             | 15.4    | 16.0    | 0.09    | 0.69    | 0.38    | 0.98 | 0.12  | 0.61 |



# Alt Model-Shift Uniqueness Test

011499192-01, P = 4.135910 Days, E = 129.405075 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  |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 17.1 | 2.24 | 2.04 | 1.90 | 4.84            | 2.23            | 0.91             | 15.1    | 15.2    | 0.20    | 0.34    | 0.22    | 1.05 | 0.13  | 0.25 |



### Stellar Parameters For KIC 011499192

|        | $T_{\text{eff}}(K)$ | $\log(g)$                 | [Fe/H]                    | $R$ ( $R_{\odot}$ )       | $M(M_{\odot})$            | $p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ ) |
|--------|---------------------|---------------------------|---------------------------|---------------------------|---------------------------|---|
|        | $5886^{+70}_{-88}$  | $4.345^{+0.084}_{-0.126}$ | $0.160^{+0.150}_{-0.150}$ | $1.152^{+0.185}_{-0.118}$ | $1.072^{+0.070}_{-0.070}$ | $0.988^{+0.357}_{-0.343}$                     |
|        | +1%/-1%             | +2%/-3%                   | +94%/-94%                 | +16%/-10%                 | +7%/-7%                   | +36%/-35%                                     |
| Source | SPE90               | SPE90                     | SPE90                     | DSEP                      |                           |   |

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

### Secondary Eclipse Parameters for KIC 011499192-01 / KOI 3120.01

| Detrend | Depth (ppm) | $R_p$ ( $R_{\oplus}$ ) | $T_{\text{max}}$ (K) | $T_{\text{obs}}$ (K)  | $A_{\text{obs}}$           |
|---------|-------------|------------------------|----------------------|-----------------------|----------------------------|
| DV      | $-20 \pm 8$ | $1.77^{+0.90}_{-0.83}$ | $1719^{+73}_{-61}$   | $3700^{+968}_{-540}$  | $9.228^{+22.788}_{-5.698}$ |
| Alt.    | $-19 \pm 8$ | $1.52^{+0.96}_{-0.77}$ | $1719^{+74}_{-58}$   | $3828^{+1243}_{-580}$ | $11^{+39}_{-7}$            |

$T_{\text{max}}$  = 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  $A_{\text{obs}} \gg 1.0$



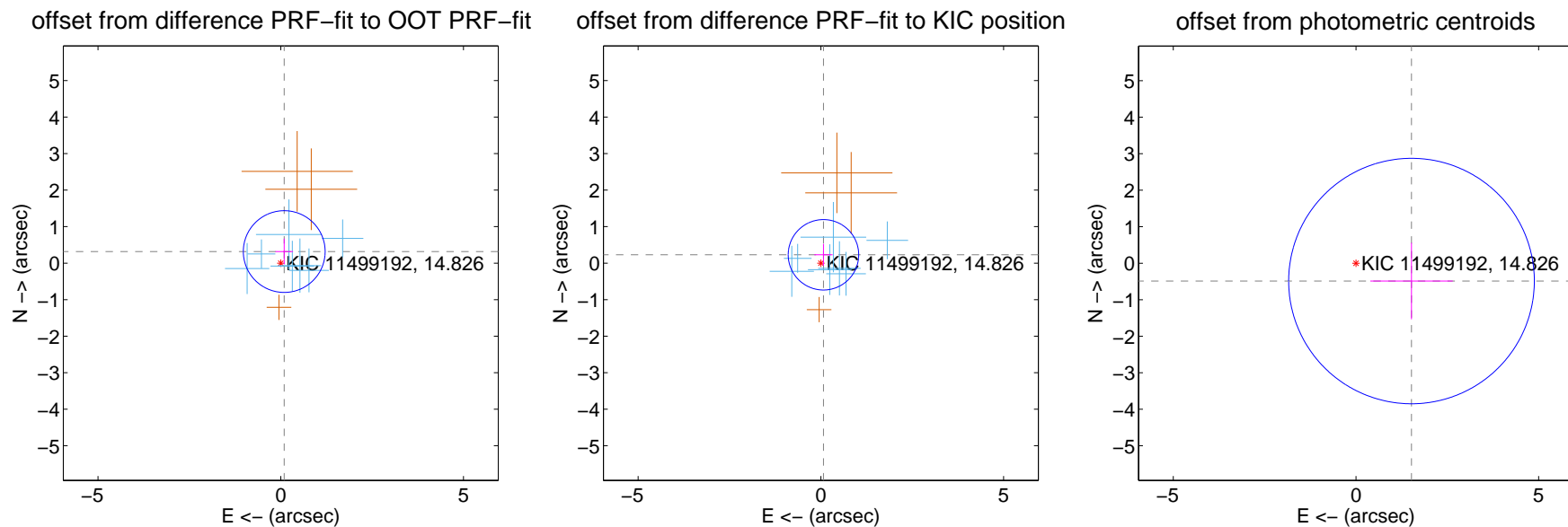
## DV Centroid Data

Supplemental centroid analysis for 011499192-01. Kepler magnitude: 14.83. Transit SNR 14.68

There are 7 quarters with good PRF difference image offsets

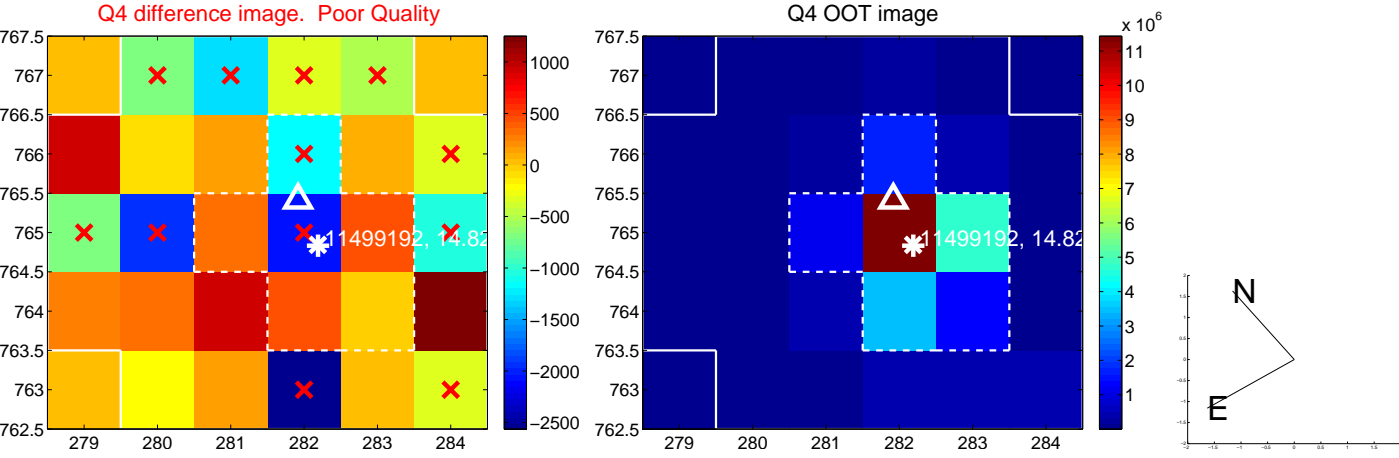
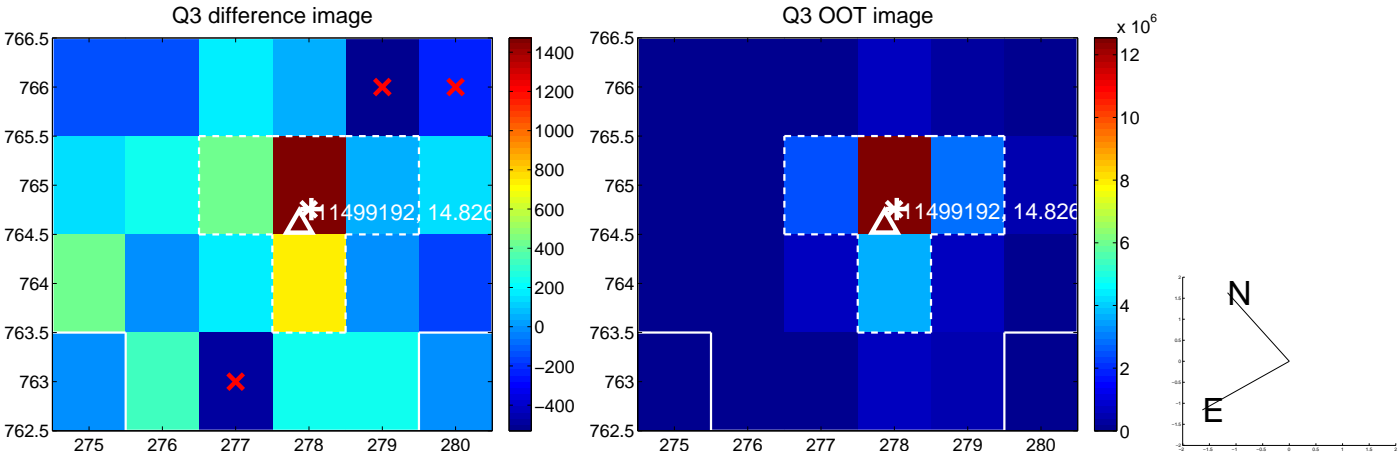
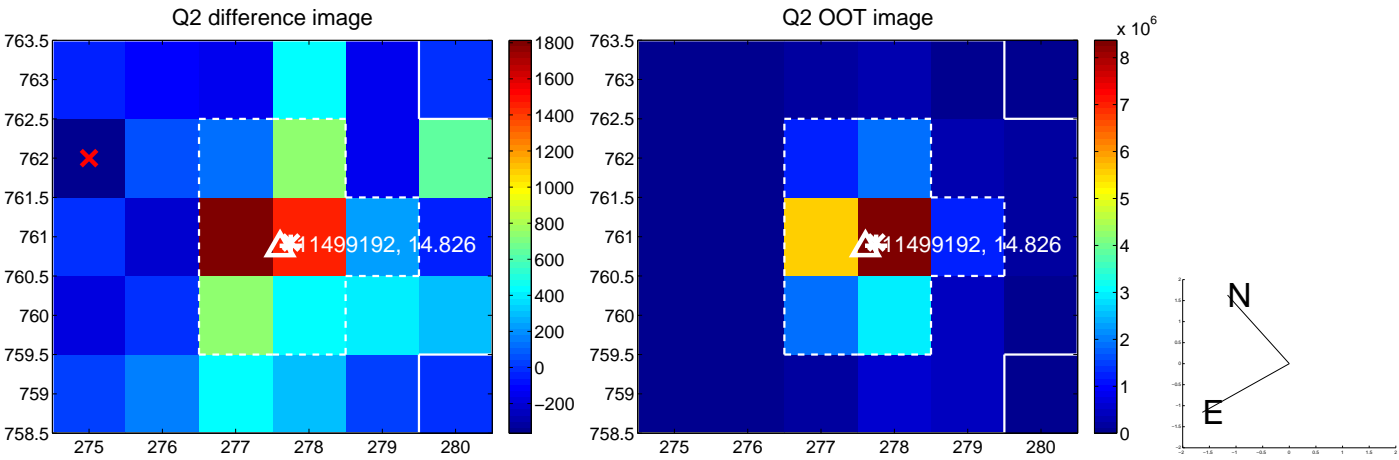
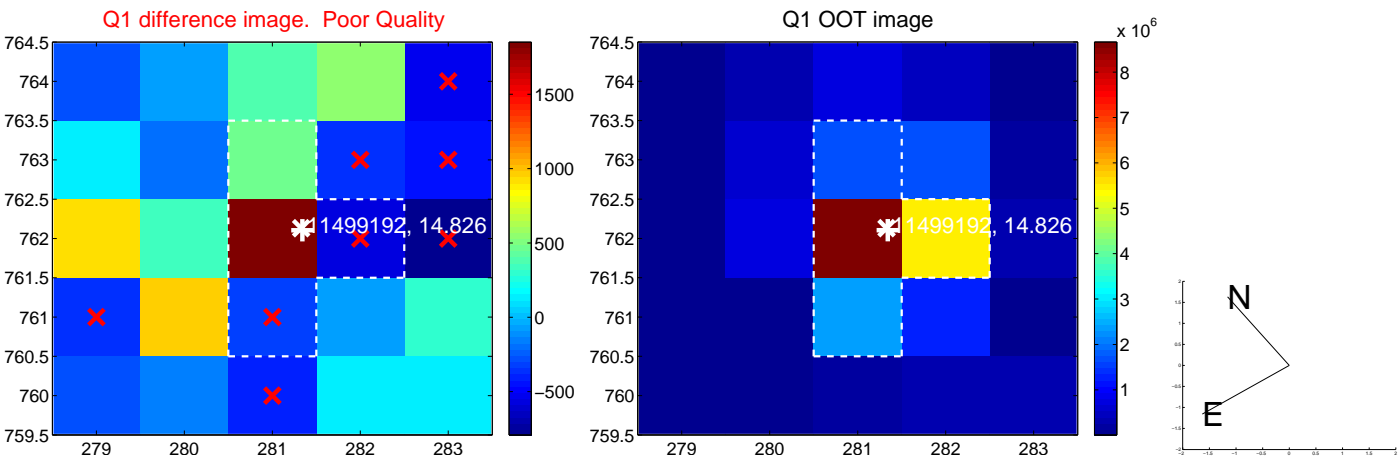
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

|   | Distance in arcsec | Distance / $\sigma$ | $\Delta$ RA        | $\Delta$ Dec      |
|---|--------------------|---------------------|--------------------|-------------------|
| PRF-fit source offset from OOT          | $0.331 \pm 0.373$  | 0.89                | $-0.095 \pm 0.241$ | $0.317 \pm 0.354$ |
| PRF-fit source offset from KIC position | $0.239 \pm 0.321$  | 0.74                | $-0.071 \pm 0.250$ | $0.228 \pm 0.301$ |
| photometric centroid source offset      | $1.60 \pm 1.12$    | 1.42                | $-1.52 \pm 1.13$   | $-0.49 \pm 1.05$  |

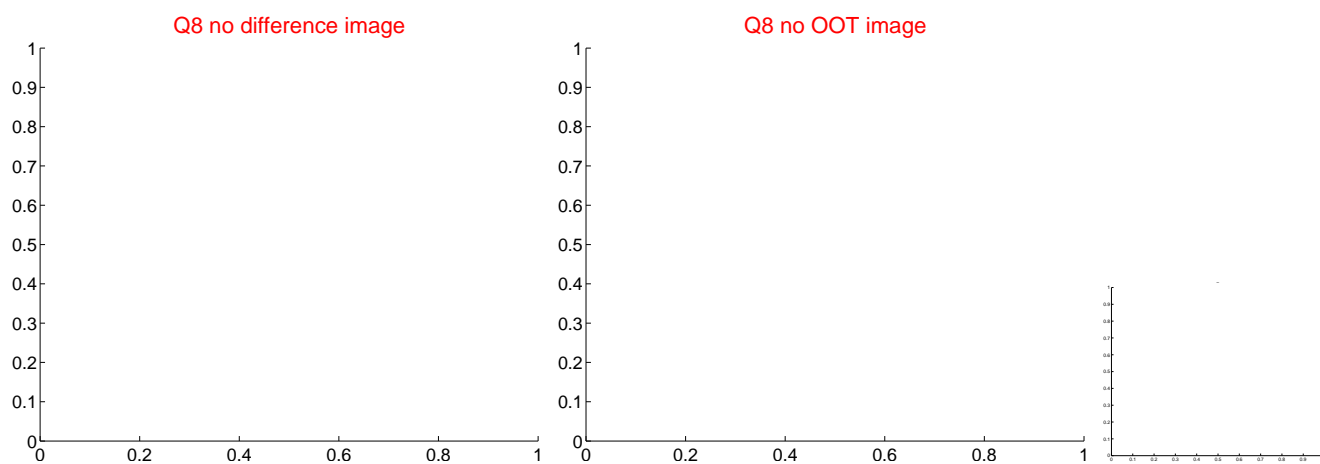
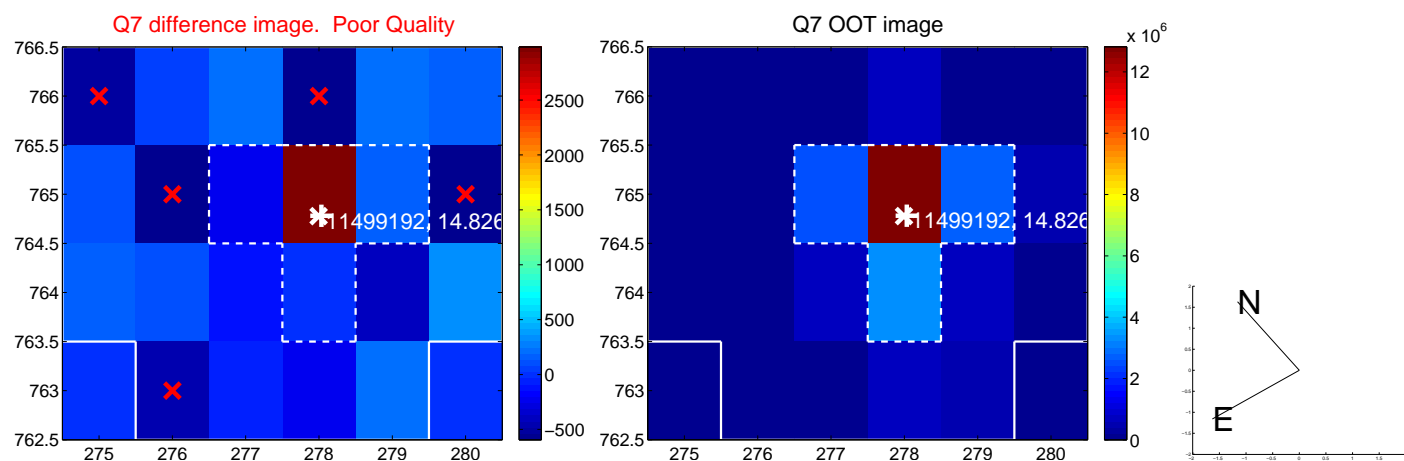
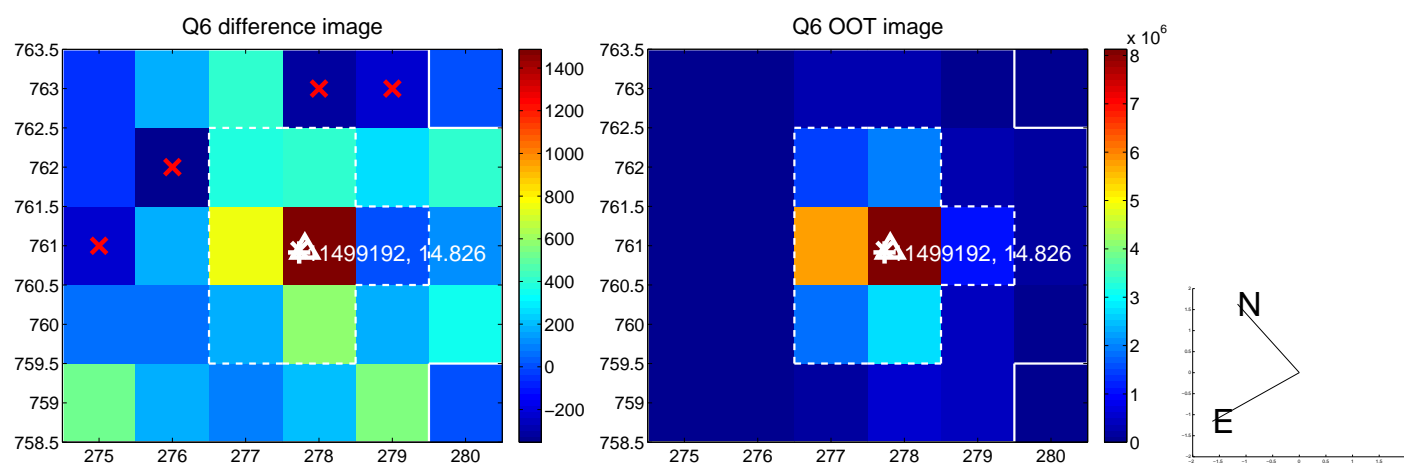
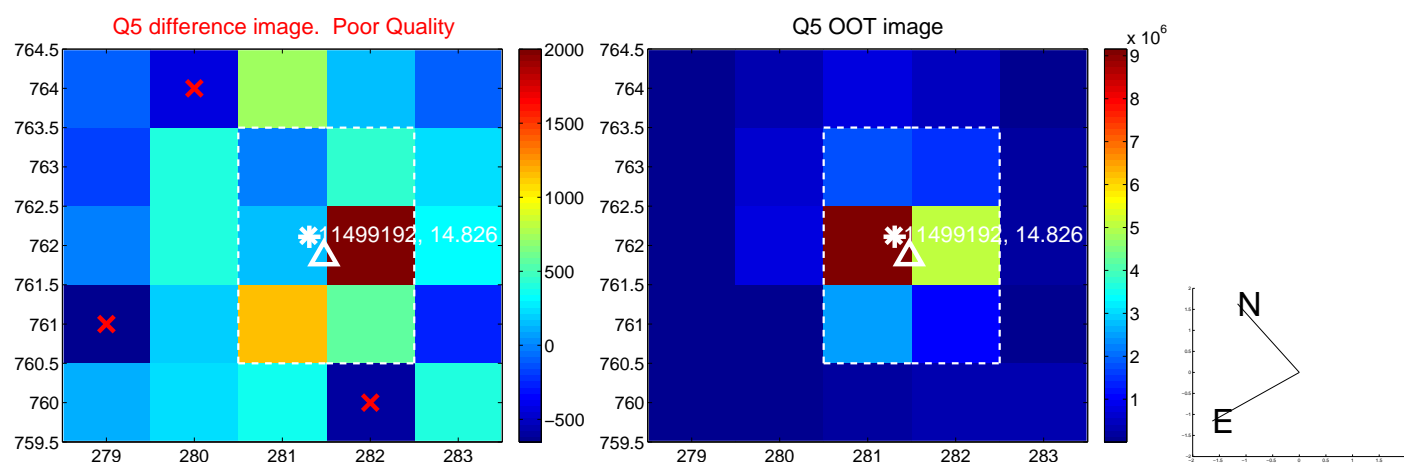


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

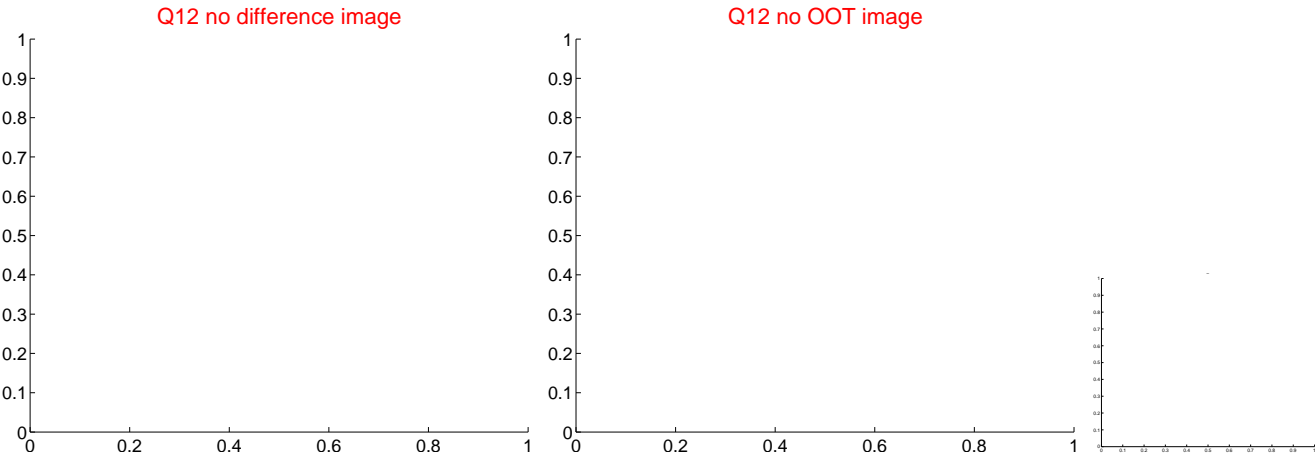
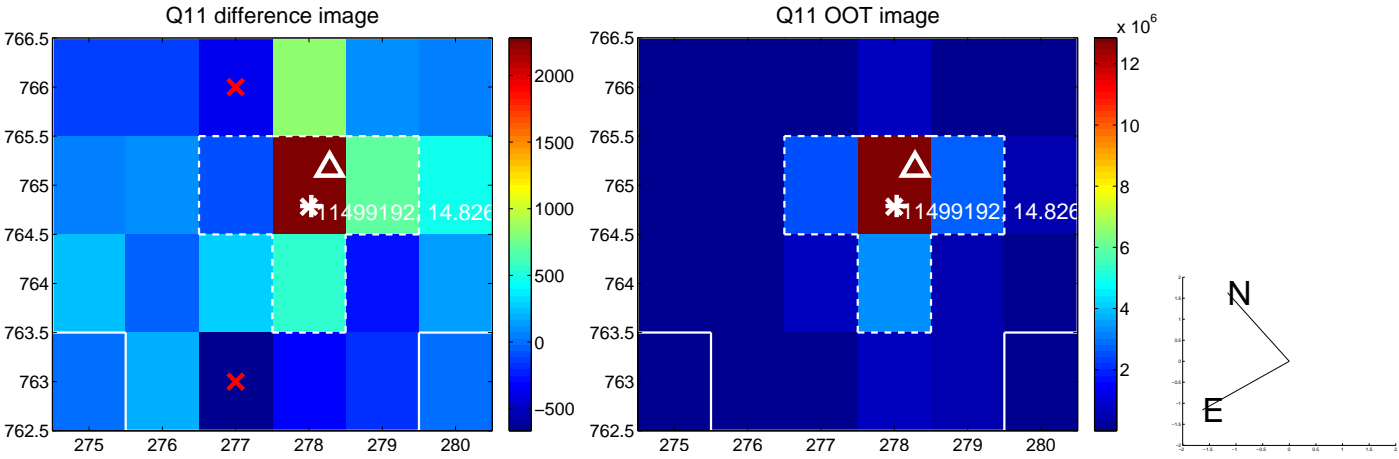
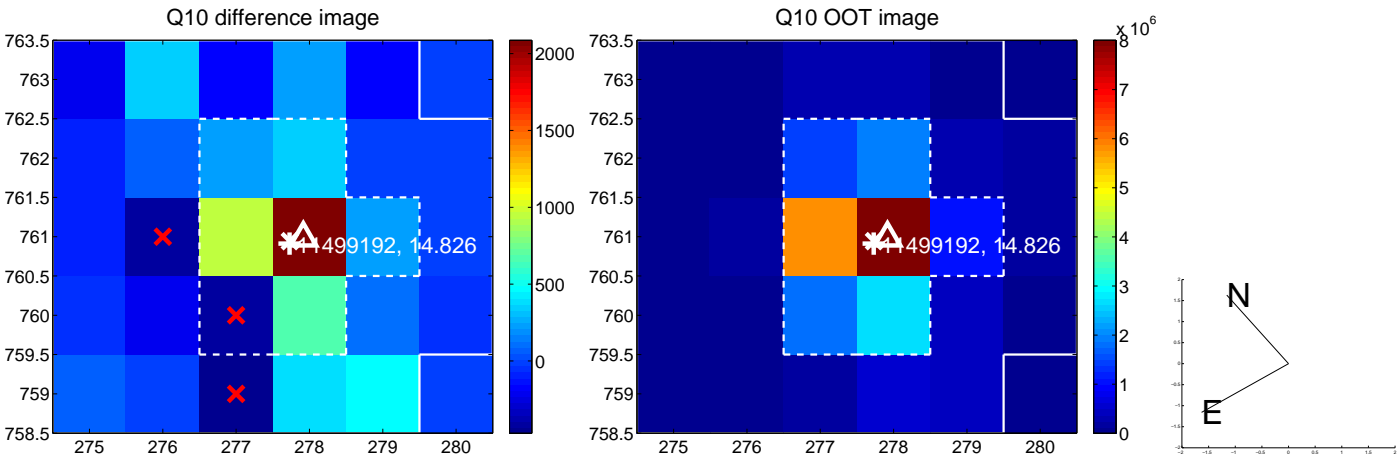
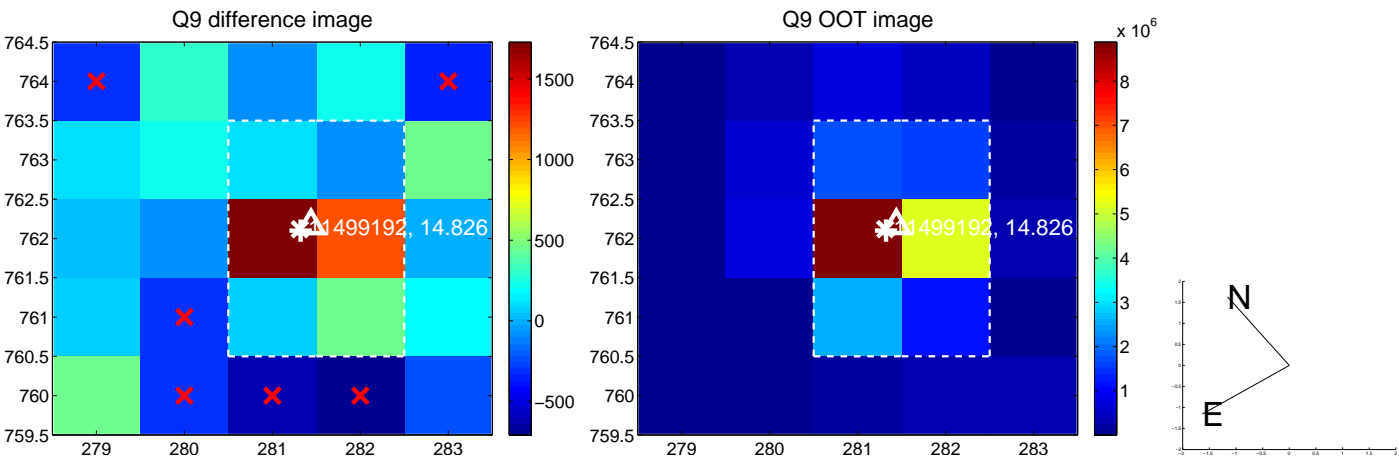
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



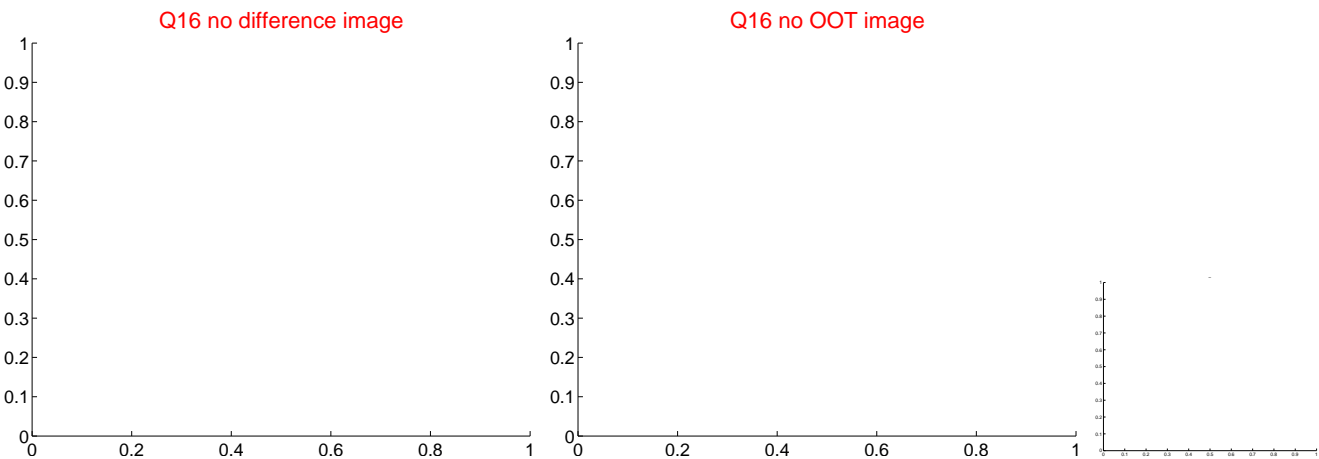
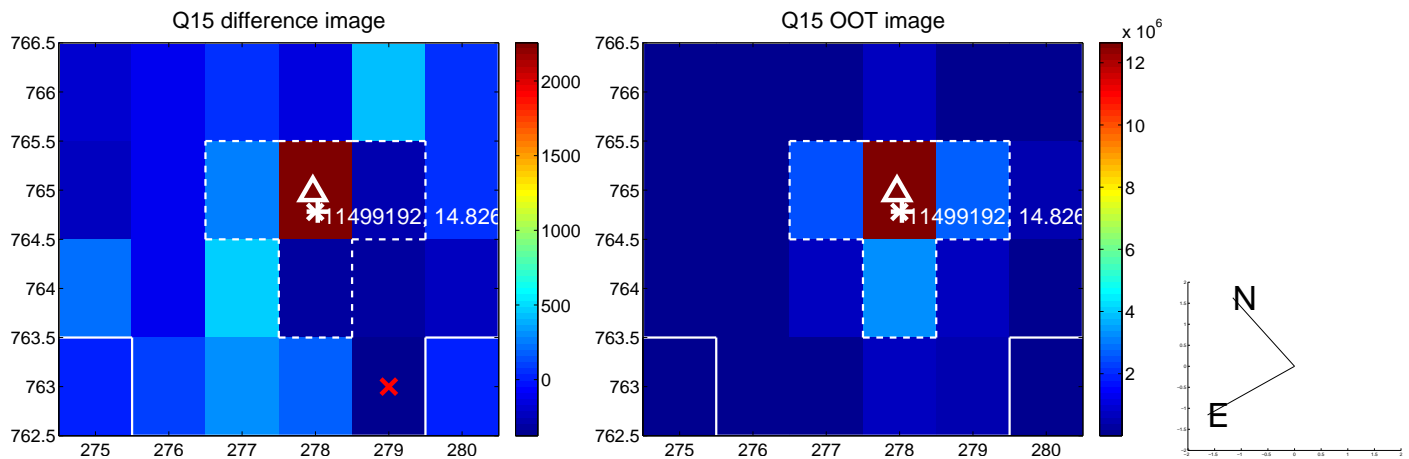
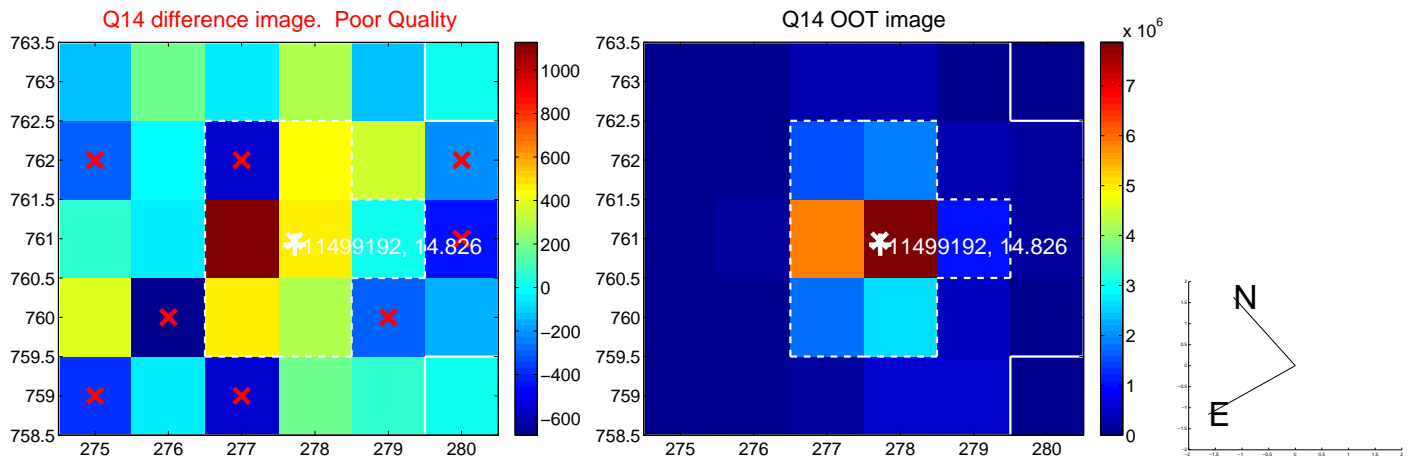
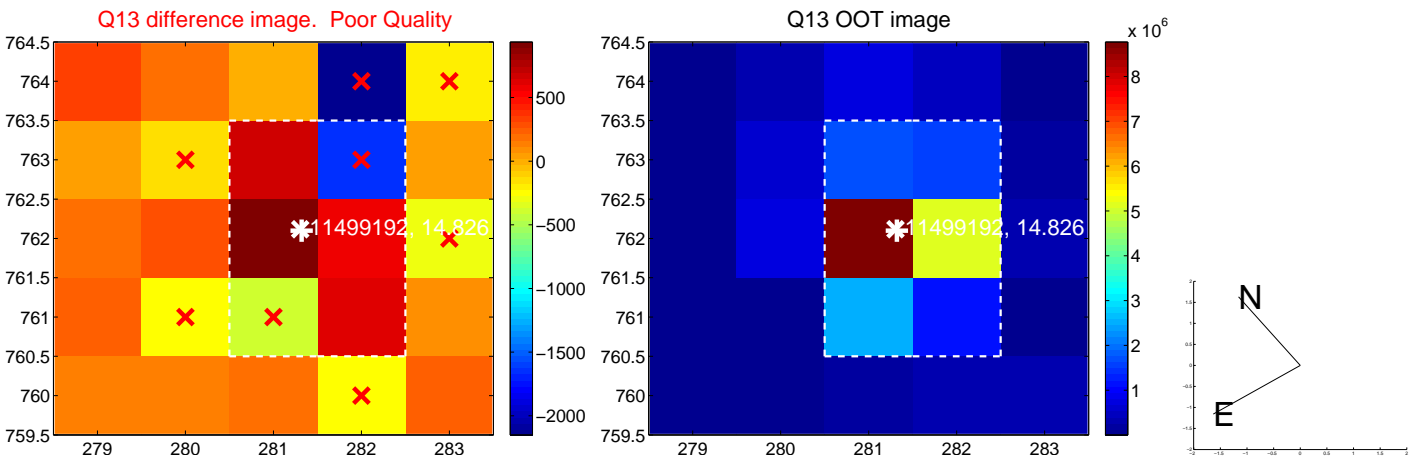
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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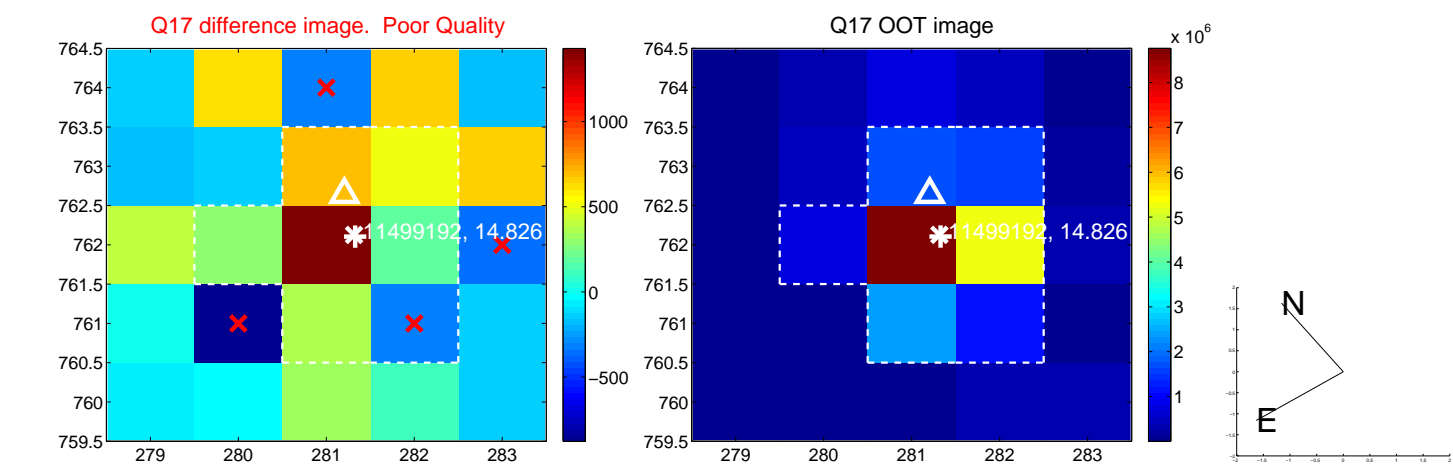


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

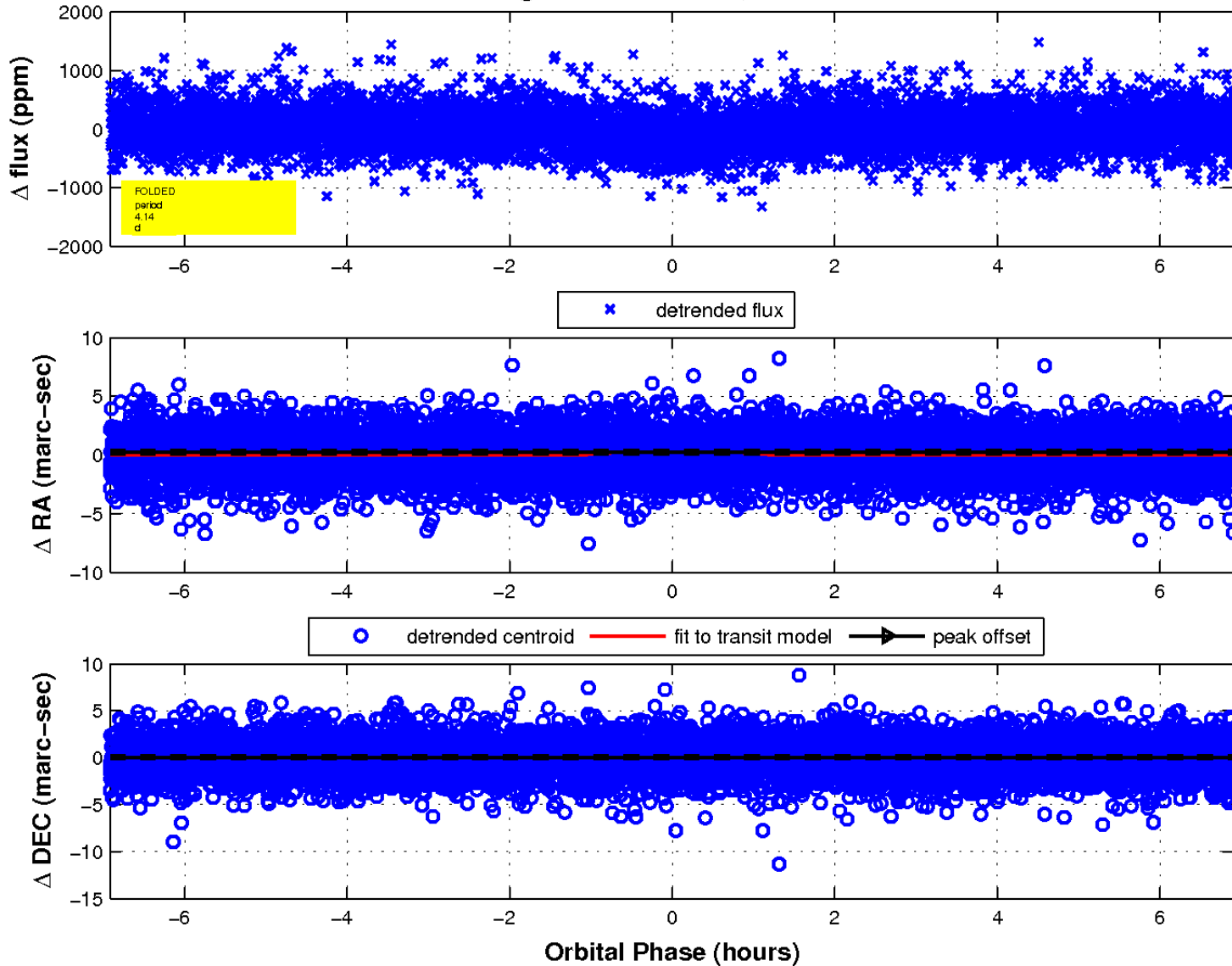




white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

