

KIC 011255761

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}) |
|--------------|----------|---------|---------------|--------------|-------------|------------------|------|------|-----------------------------|-----------------|------------------------|------------------------|
| 011255761-01 | OBS | 0482.01 | 4.992695 | 134.605426 | 531.3 | 3.059 | 36.7 | 40.3 | 0.95 | 5724 | 3.91 | 288.43 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|--|
| 011255761-01 | OBS | FP | 0.00 | 0 | 1 | 1 | 0 | MOD_SEC_DV—MOD_SEC_ALT—CENT_UNRESOLVED_OFFSET—HALO_GHOST |

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

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

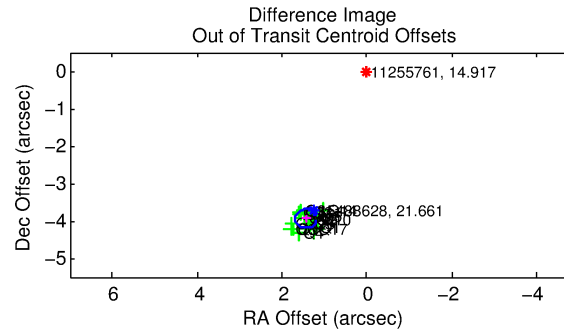
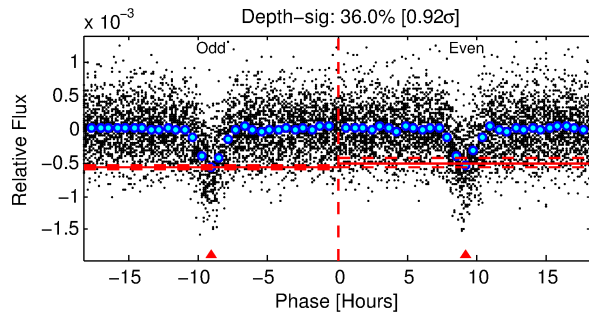
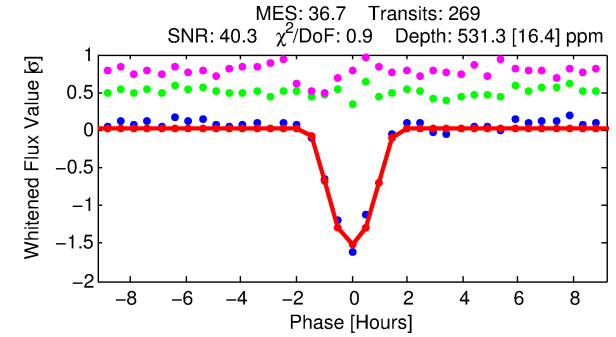
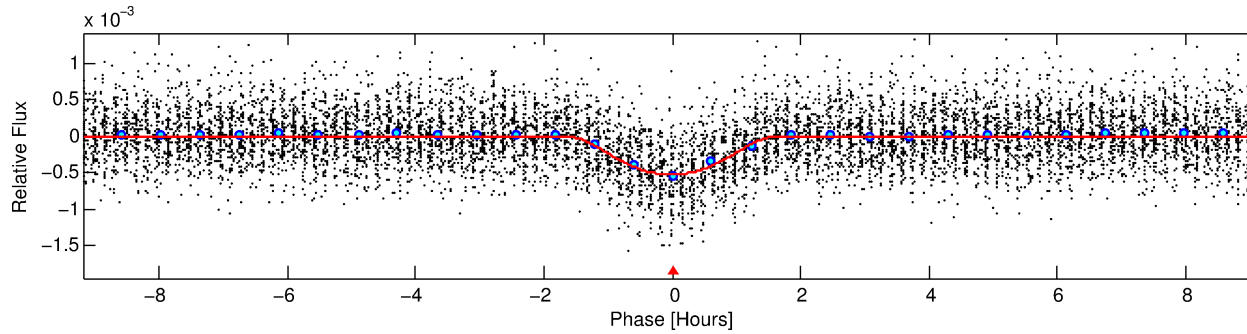
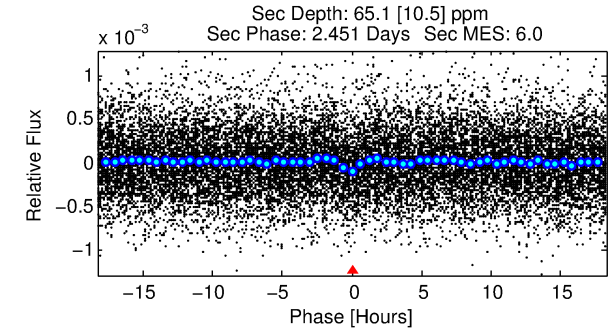
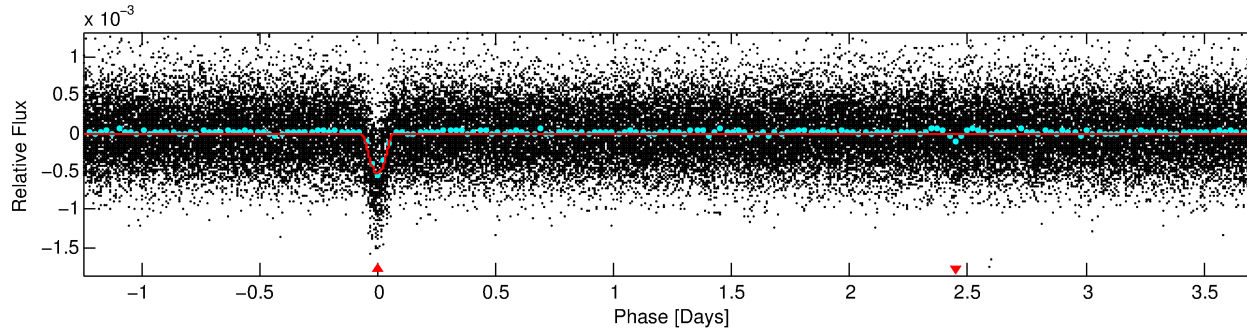
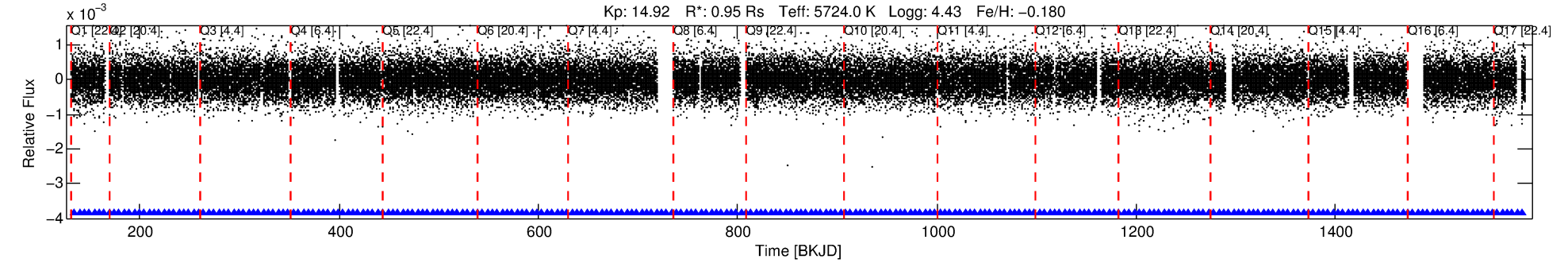
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011255761-01

No Significant Match Found

DV One-Page Summary

KIC: 11255761 Candidate: 1 of 1 Period: 4.993 d
KOI: K00482.01 Corr: 0.968



DV Fit Results:

Period = 4.99269 [0.00001] d
Epoch = 134.6054 [0.0018] BKJD
Rp/R* = 0.0377 [0.0291]
a/R* = 3.89 [0.84]
b = 0.99 [0.05]
Seff = 288.43 [102.39]
Teq = 1051 [93] K
Rp = 3.91 [3.19] Re
a = 0.0549 [0.0126] AU
Ag = 7.08 [11.24] [0.54σ]
Teffp = 2650 [1030] K [1.55σ]

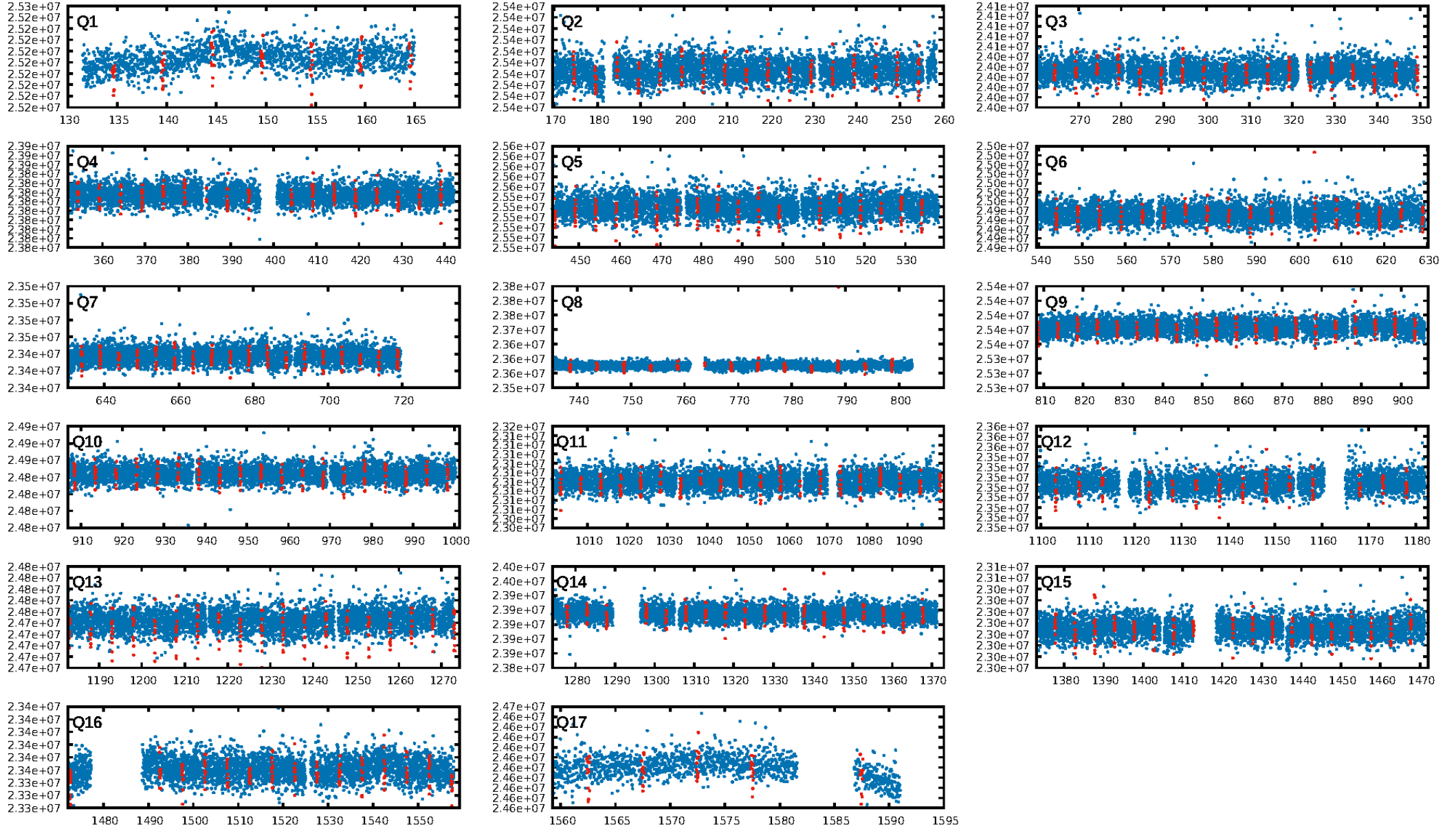
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.41e-287
RollingBand-fgt: 1.00 [257/257]
GhostDiagnostic-chr: 0.2294
Centroid-sig: 0.0%
Centroid-so: 7.077 arcsec [21.00σ]
OotOffset-rm: 4.191 arcsec [49.15σ]
KicOffset-rm: 3.945 arcsec [46.19σ]
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]

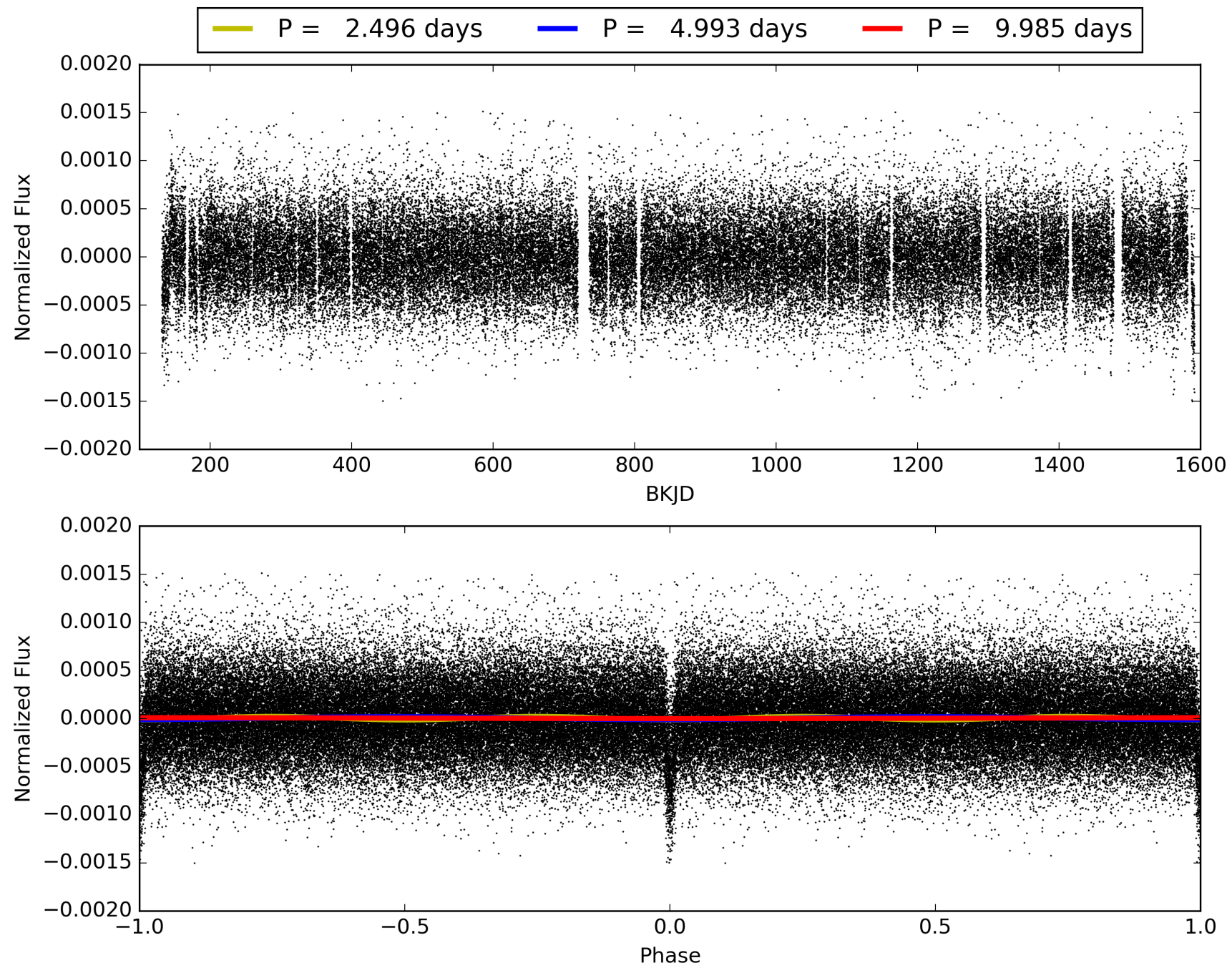
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:10:40 Z

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

TCE 011255761-01, PDC Light Curves

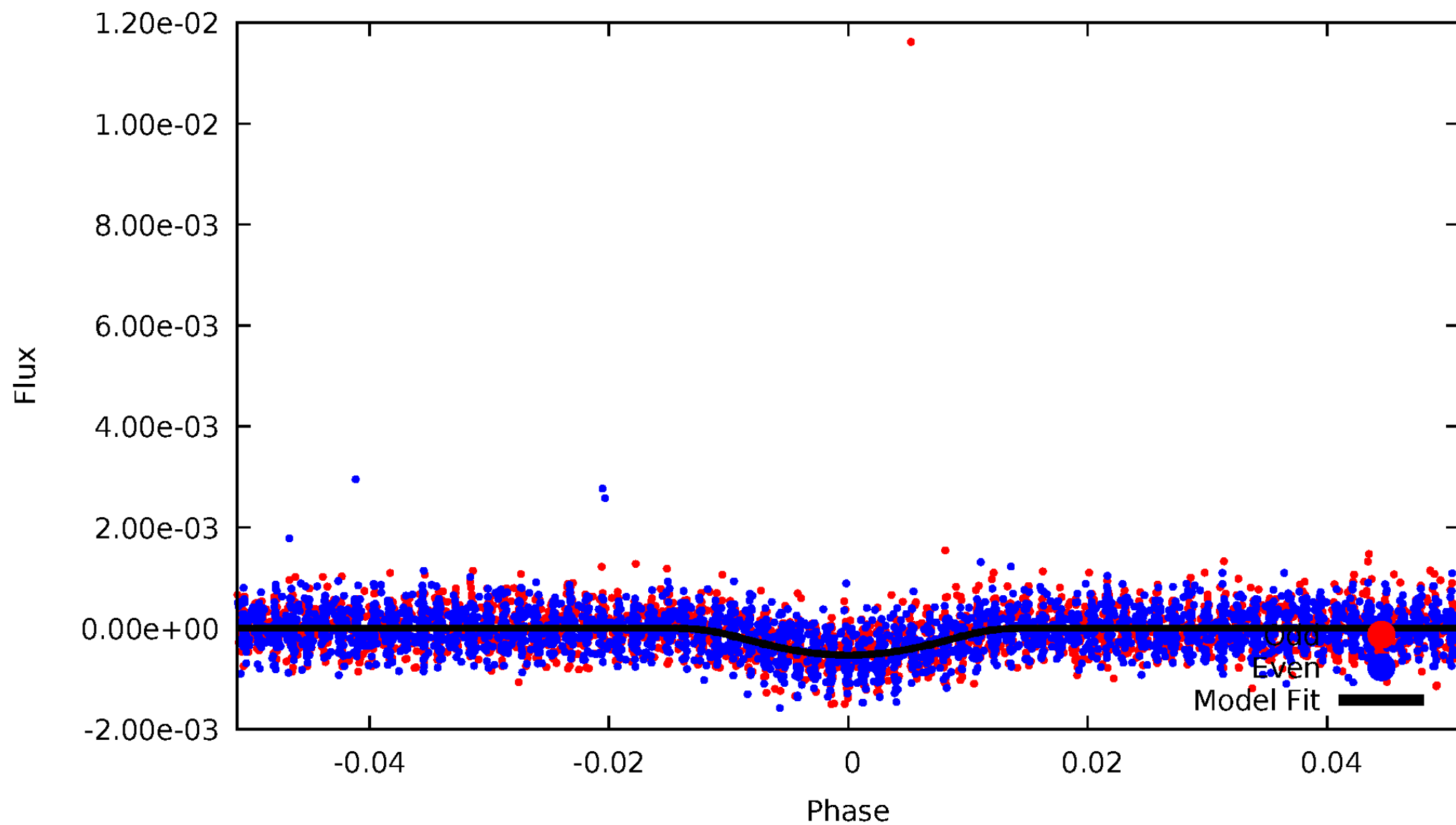


TCE 011255761-01



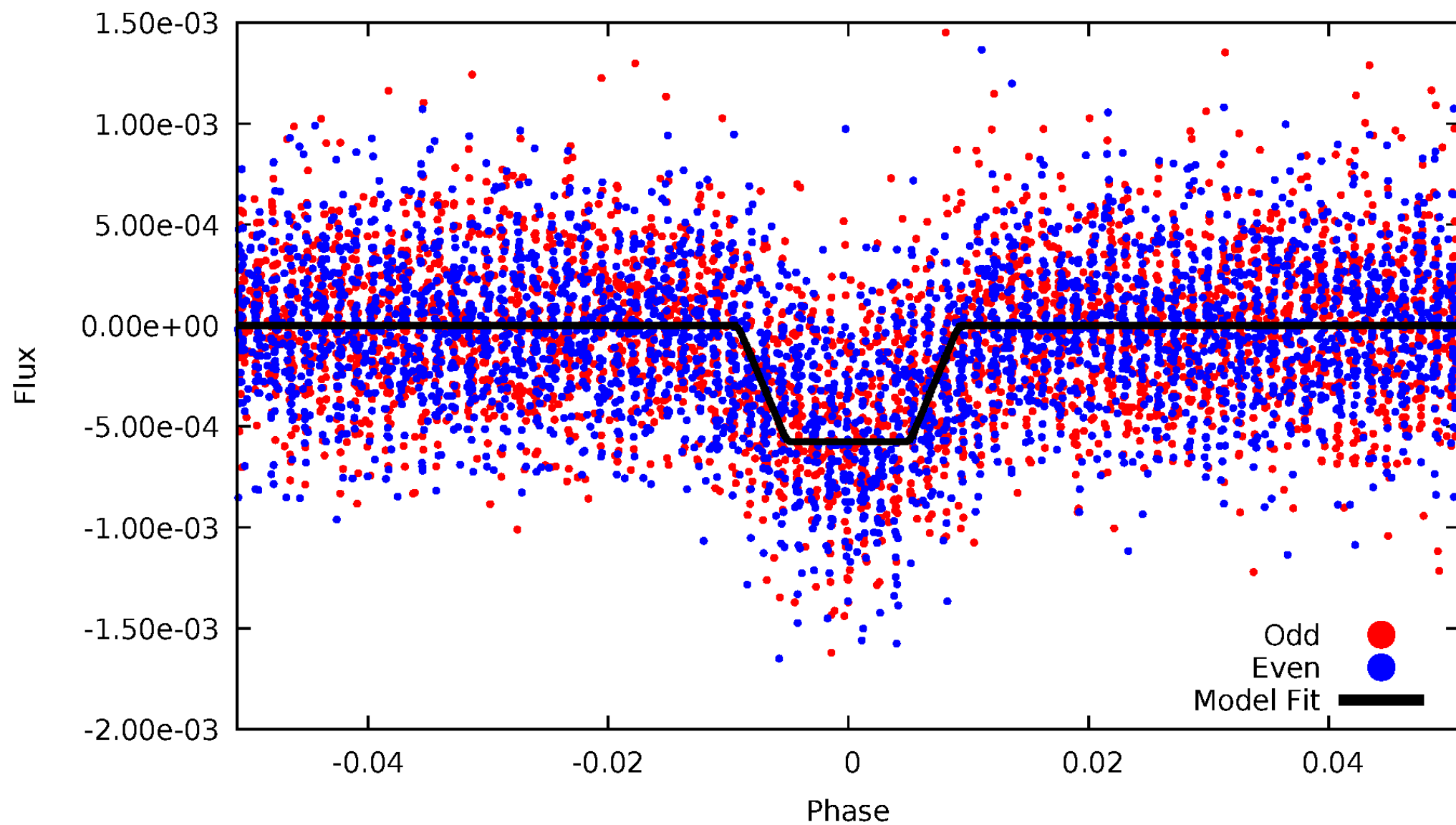
DV Odd/Even

TCE 011255761-01



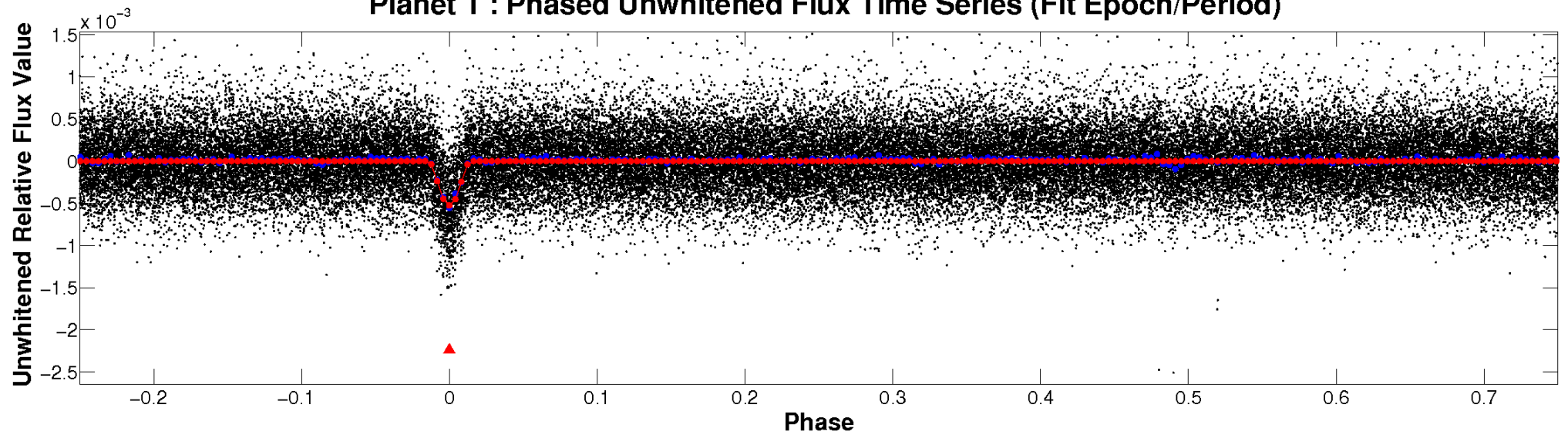
ALT Odd/Even

TCE 011255761-01

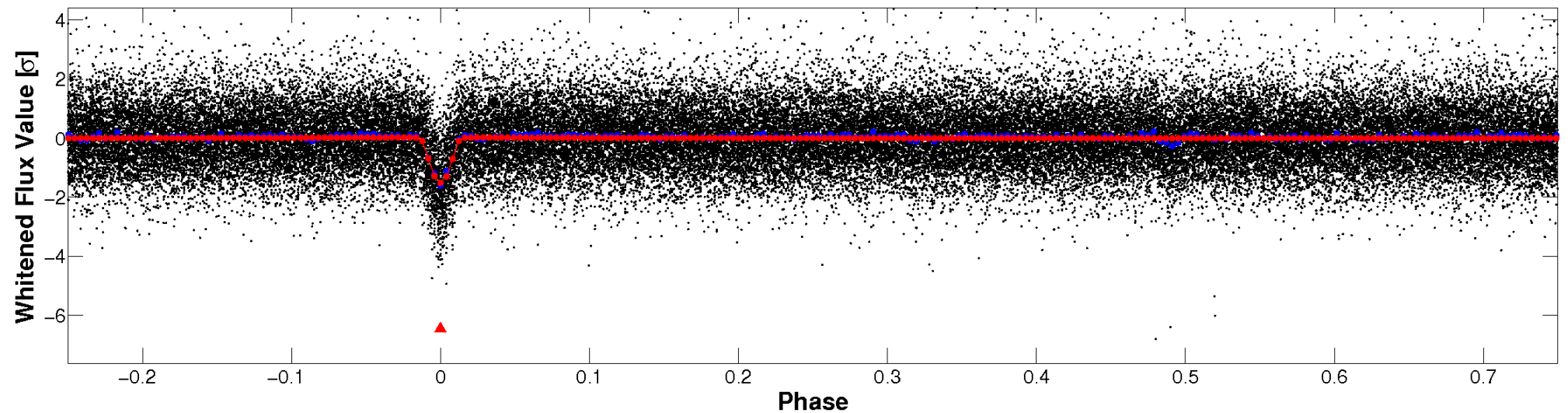


Non-Whitened Vs. Whitened Light Curve

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

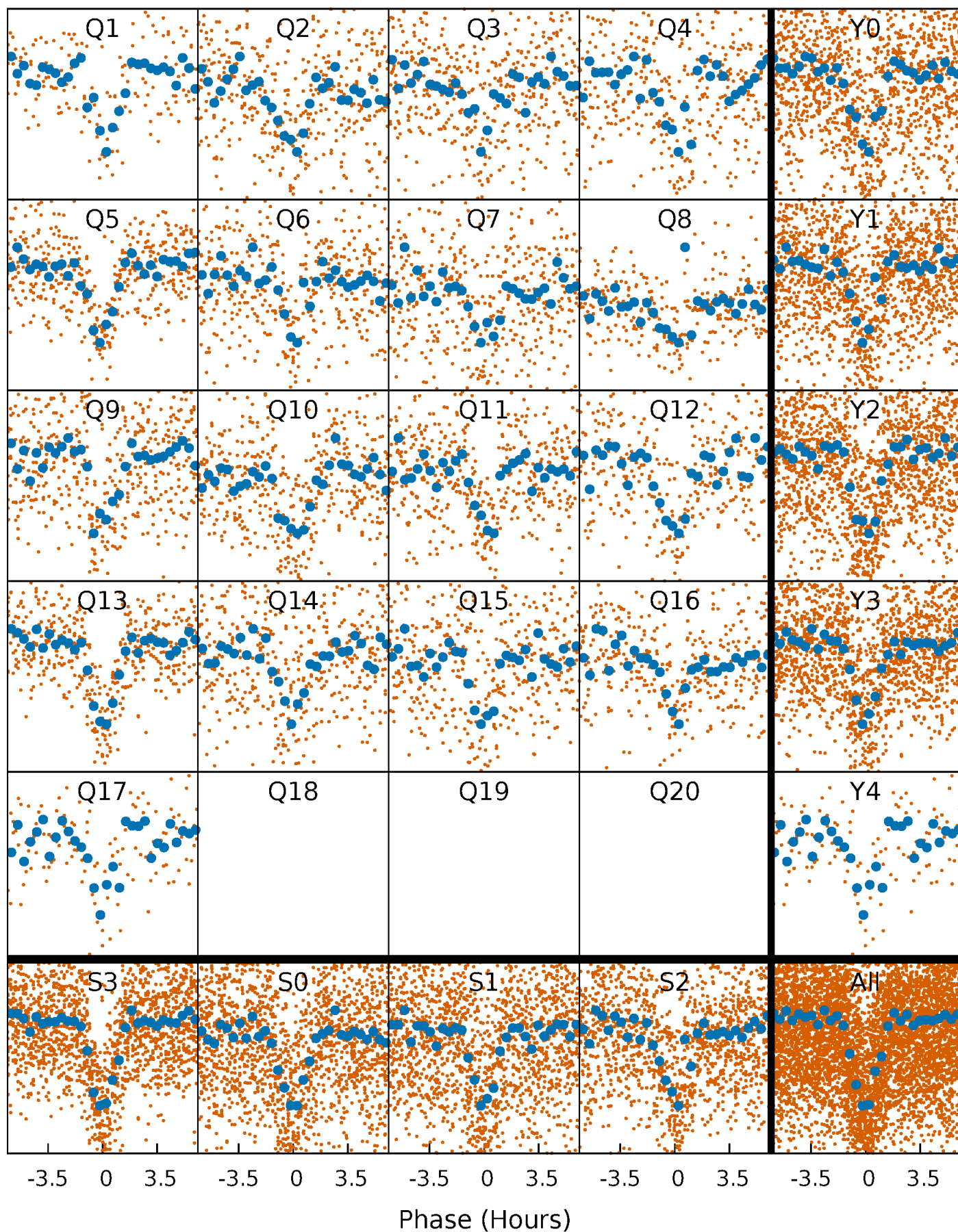


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



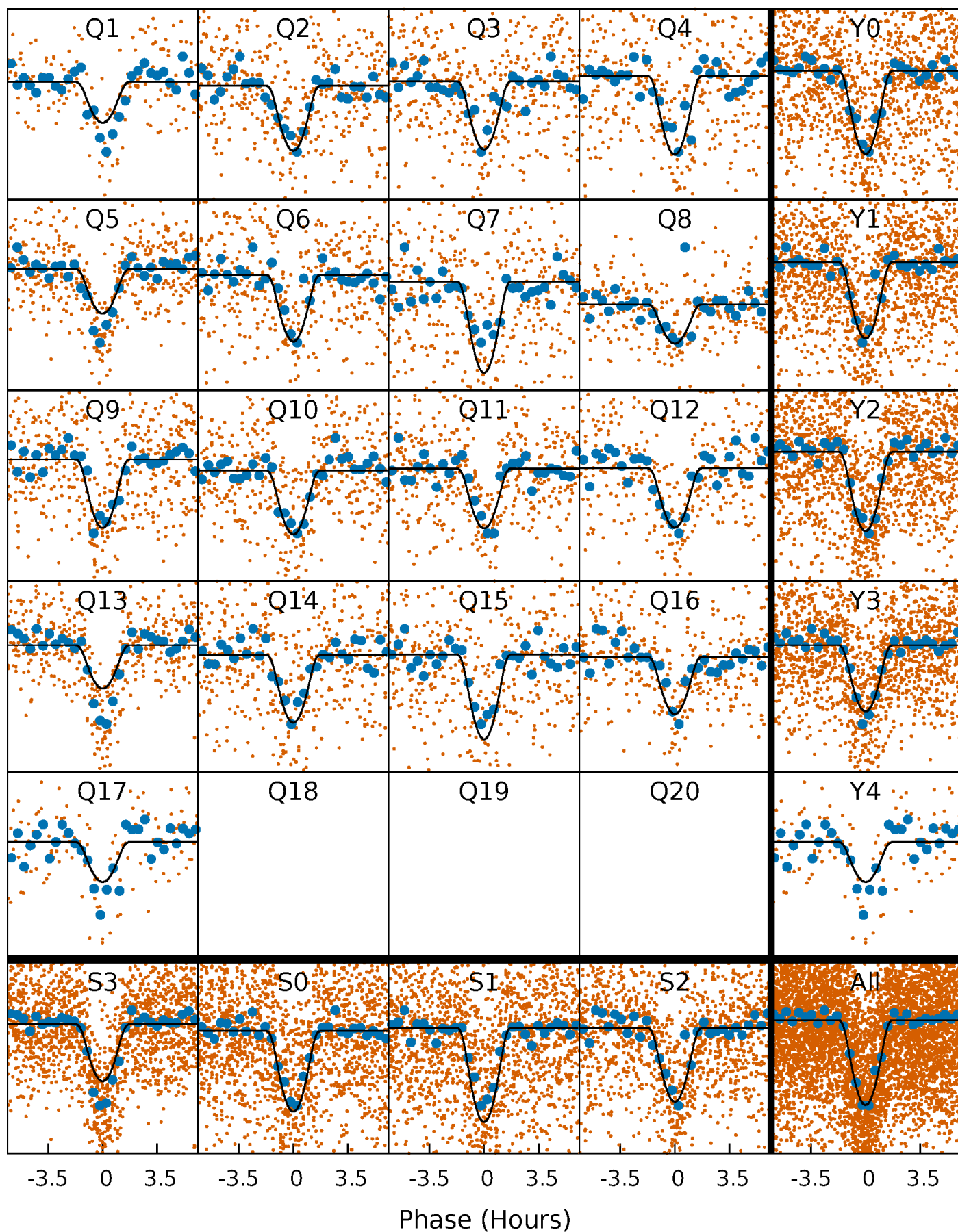
PDC Quarter-Phased Transit Curves

TCE 011255761-01 P= 4.992695 Days $T_0=134.605426$ (BKJD)



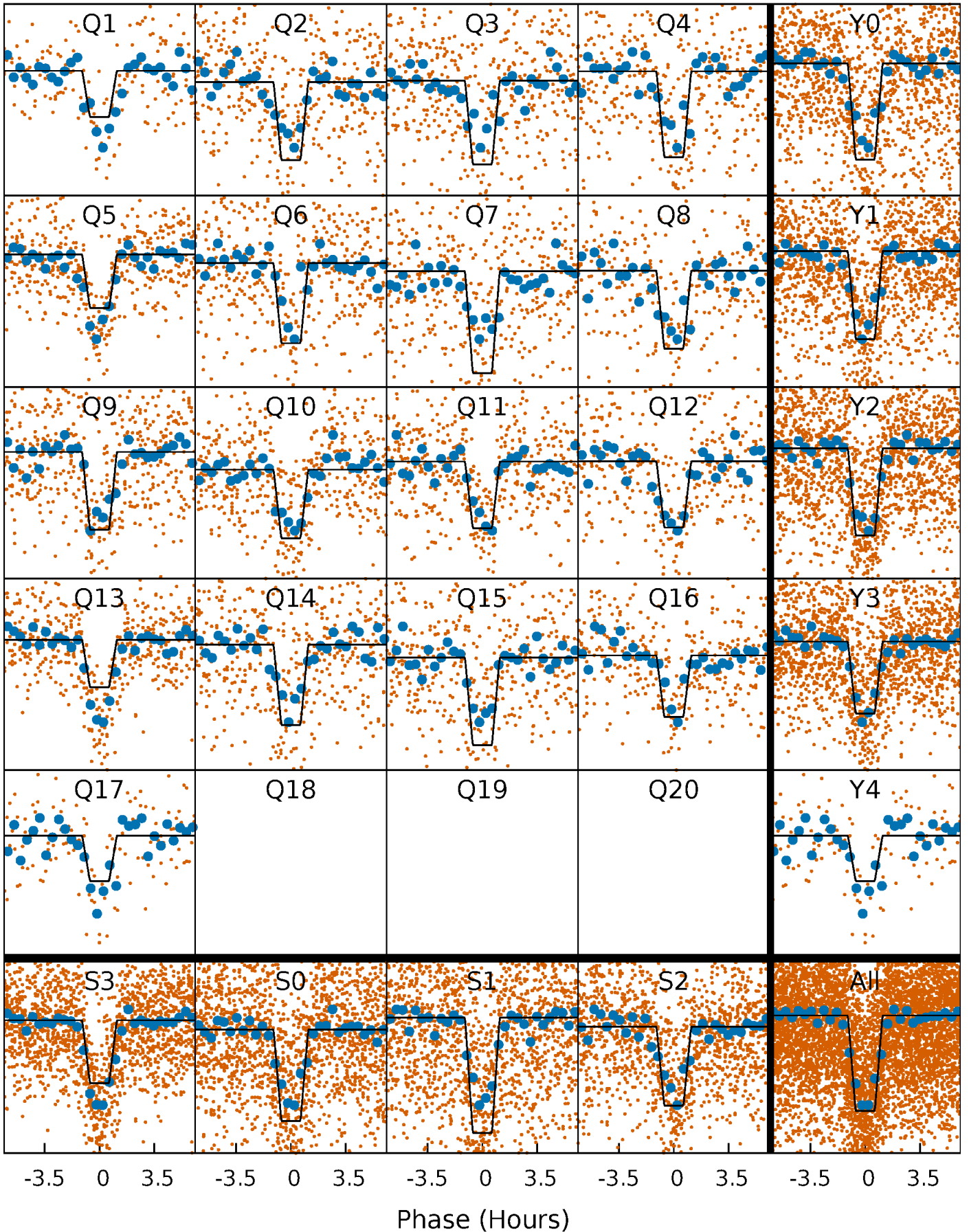
DV Quarter-Phased Transit Curves

TCE 011255761-01 P= 4.992695 Days $T_0=134.605426$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

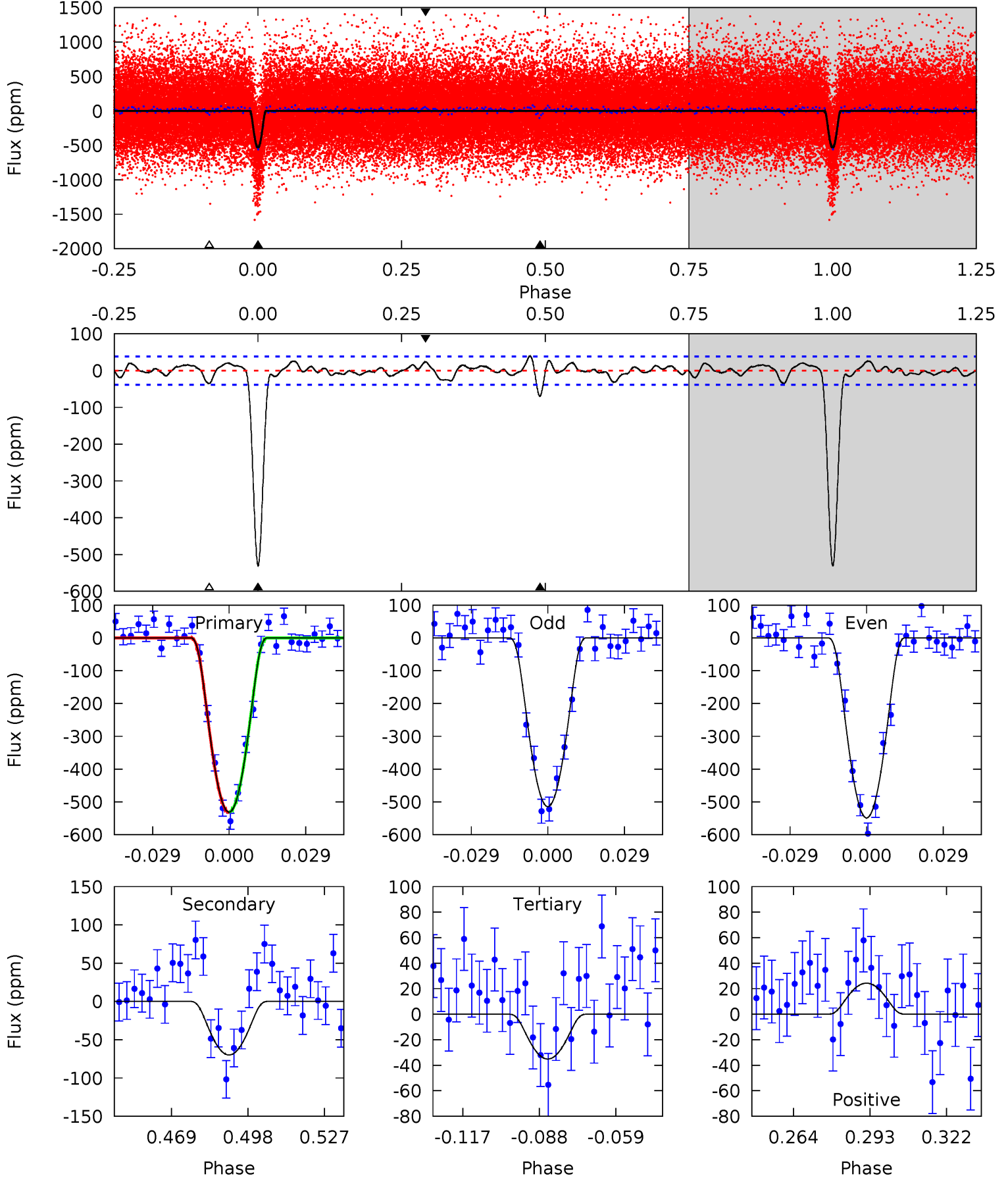
TCE 011255761-01 P= 4.992693 Days $T_0=134.605696$ (BKJD)



DV Model-Shift Uniqueness Test

011255761-01, P = 4.992695 Days, E = 129.612731 Days

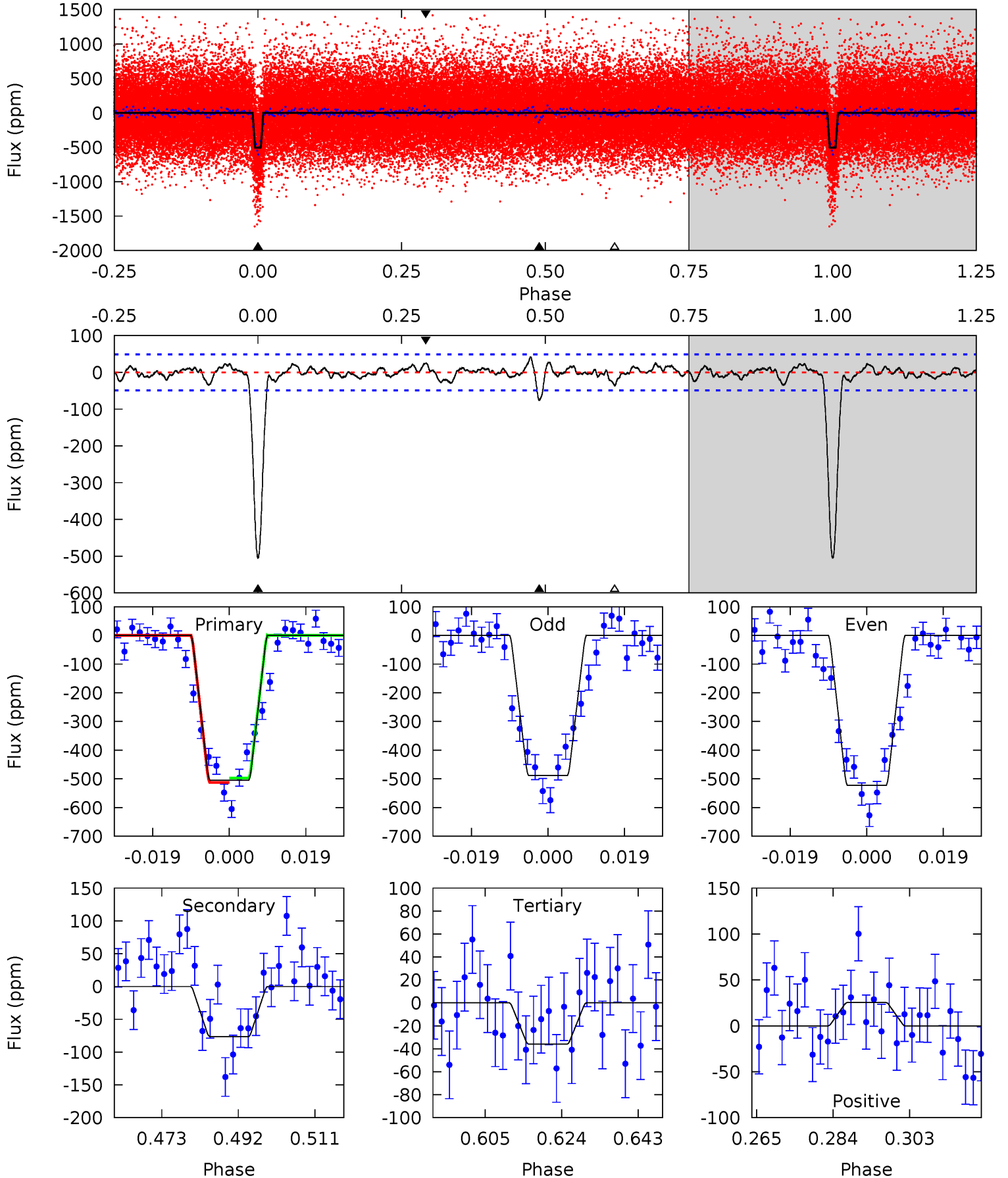
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 66.4 | 8.74 | 4.39 | 3.04 | 4.82 | 2.18 | 1.47 | 62.0 | 63.4 | 4.35 | 5.70 | 2.16 | 1.01 | 0.07 | 0.14 |



Alt Model-Shift Uniqueness Test

011255761-01, P = 4.992693 Days, E = 129.613003 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 50.8 | 7.68 | 3.61 | 2.55 | 4.90 | 2.35 | 1.18 | 47.2 | 48.3 | 4.08 | 5.13 | 1.74 | 1.02 | 0.08 | 0.76 |



Stellar Parameters For KIC 011255761

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | $R (R_{\odot})$ | $M(M_{\odot})$ | $p_{\star} (\text{g}\cdot\text{cm}^{-3})$ |
|--------|----------------------|---------------------------|----------------------------|---------------------------|---------------------------|---|
| | 5724^{+152}_{-152} | $4.429^{+0.101}_{-0.188}$ | $-0.180^{+0.300}_{-0.300}$ | $0.951^{+0.253}_{-0.136}$ | $0.887^{+0.122}_{-0.082}$ | $1.453^{+0.661}_{-0.733}$ |
| | +3%/-3% | +2%/-4% | +167%/-167% | +27%/-14% | +14%/-9% | +46%/-50% |
| 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 011255761-01 / KOI 0482.01

| Detrend | Depth (ppm) | $R_p (R_{\oplus})$ | $T_{\text{max}} (K)$ | $T_{\text{obs}} (K)$ | A_{obs} |
|---------|--------------|------------------------|----------------------|-----------------------|----------------------------|
| DV | -70 ± 8 | $4.46^{+3.07}_{-2.55}$ | 1490^{+112}_{-80} | 3141^{+1013}_{-444} | $5.726^{+25.781}_{-3.628}$ |
| Alt. | -76 ± 10 | $3.27^{+2.95}_{-2.01}$ | 1488^{+105}_{-77} | 3491^{+1540}_{-608} | 11^{+75}_{-8} |

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

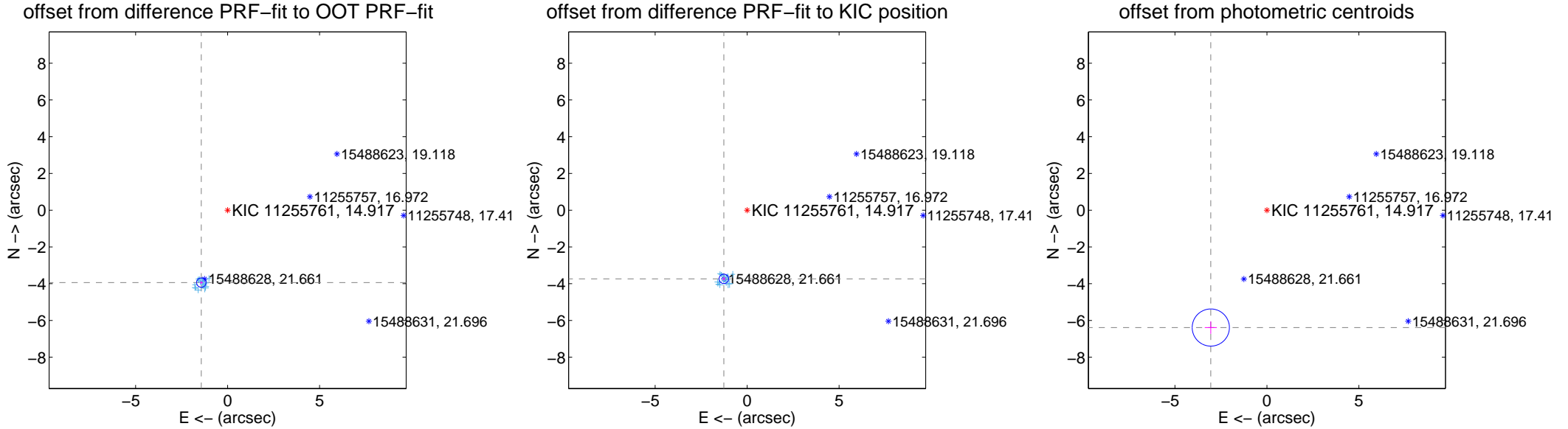
DV Centroid Data

Supplemental centroid analysis for 011255761-01. Kepler magnitude: 14.92. Transit SNR 40.28

There are 17 quarters with good PRF difference image offsets

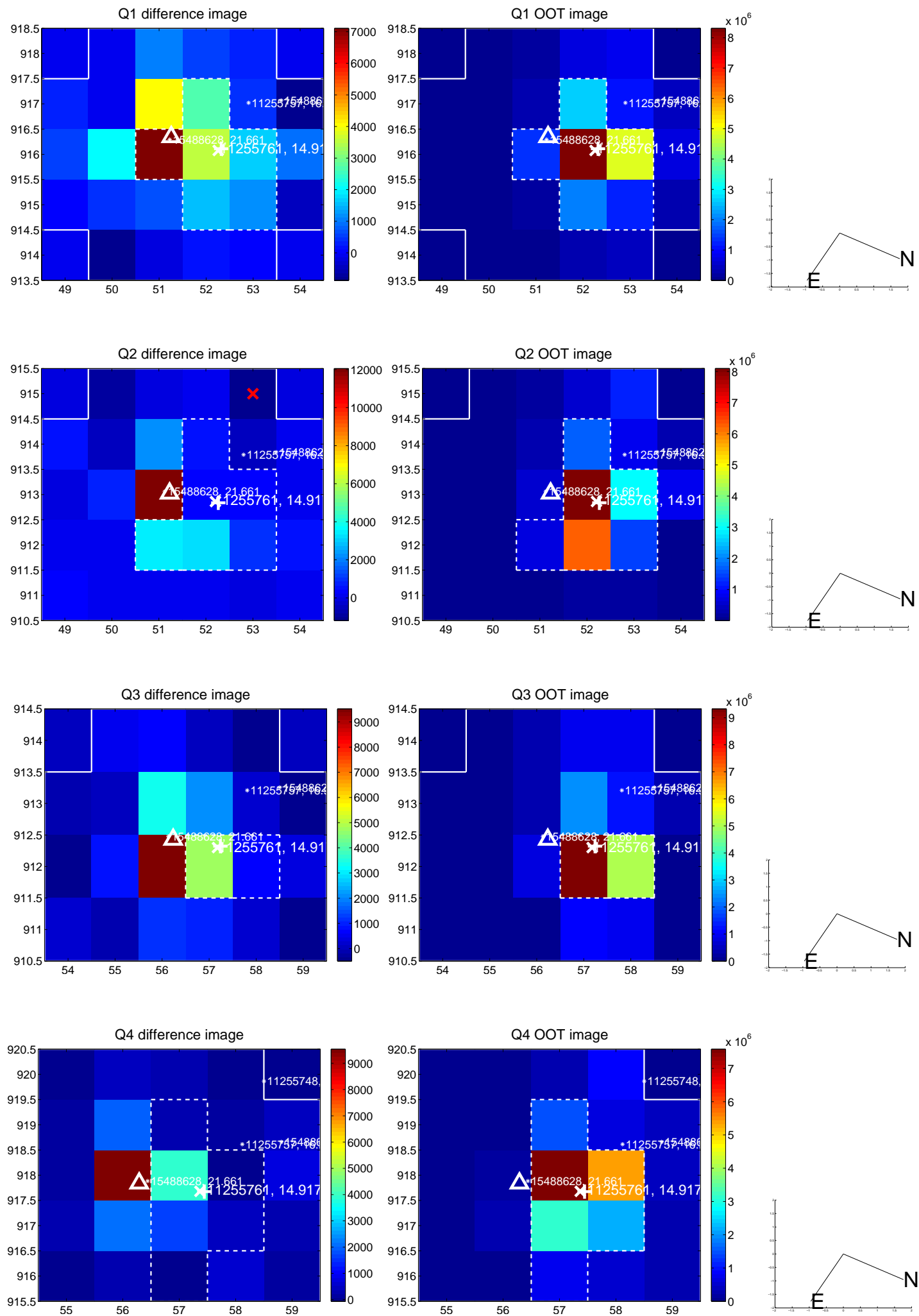
The direct PRF centroid is offset from the target star catalog position by about 0.31 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|-------------------|--------------------|
| PRF-fit source offset from OOT | 4.191 \pm 0.085 | 49.15 | 1.429 \pm 0.088 | -3.940 \pm 0.085 |
| PRF-fit source offset from KIC position | 3.945 \pm 0.085 | 46.19 | 1.265 \pm 0.087 | -3.736 \pm 0.085 |
| photometric centroid source offset | 7.08 \pm 0.34 | 21.00 | 3.05 \pm 0.33 | -6.39 \pm 0.34 |

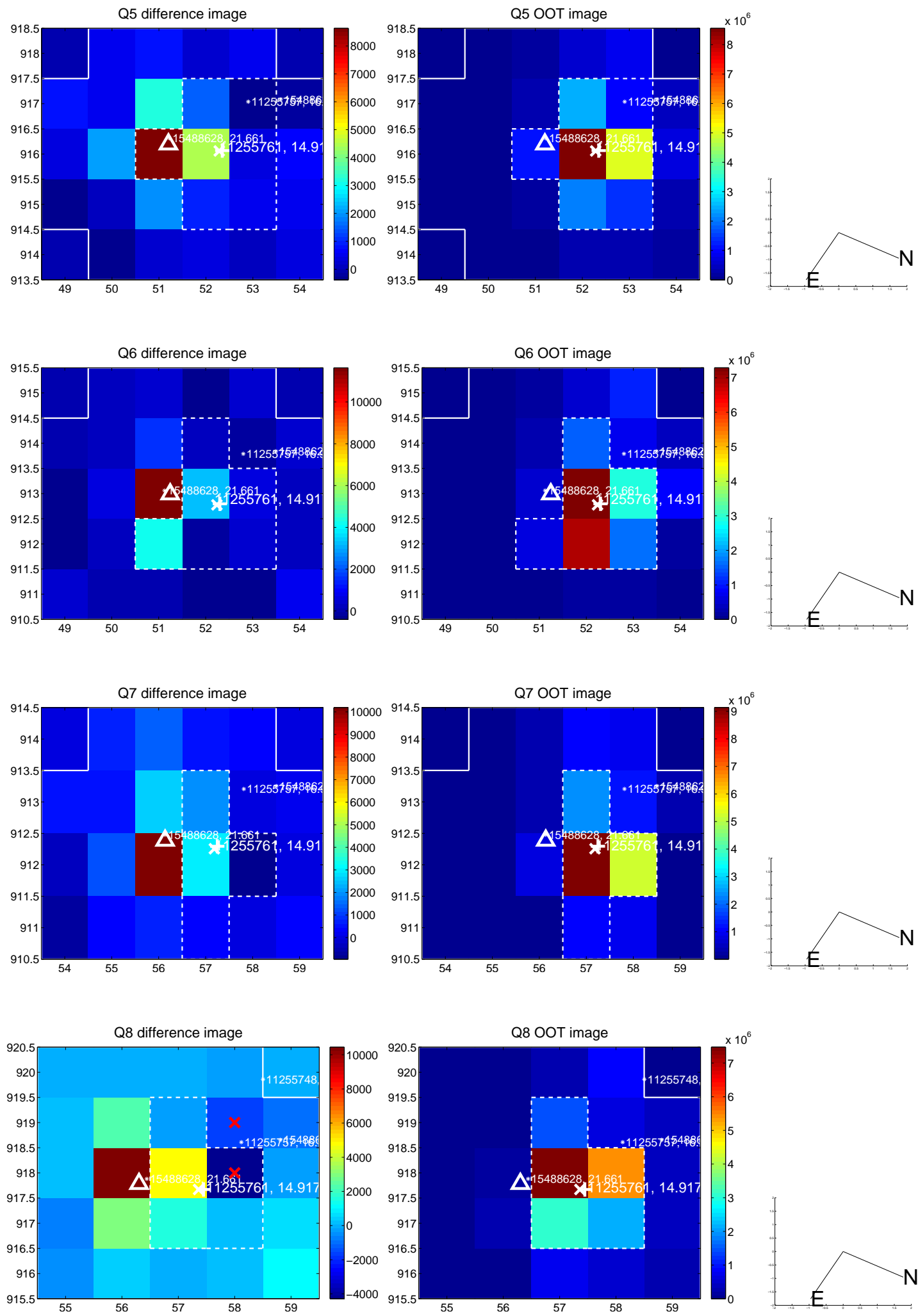


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

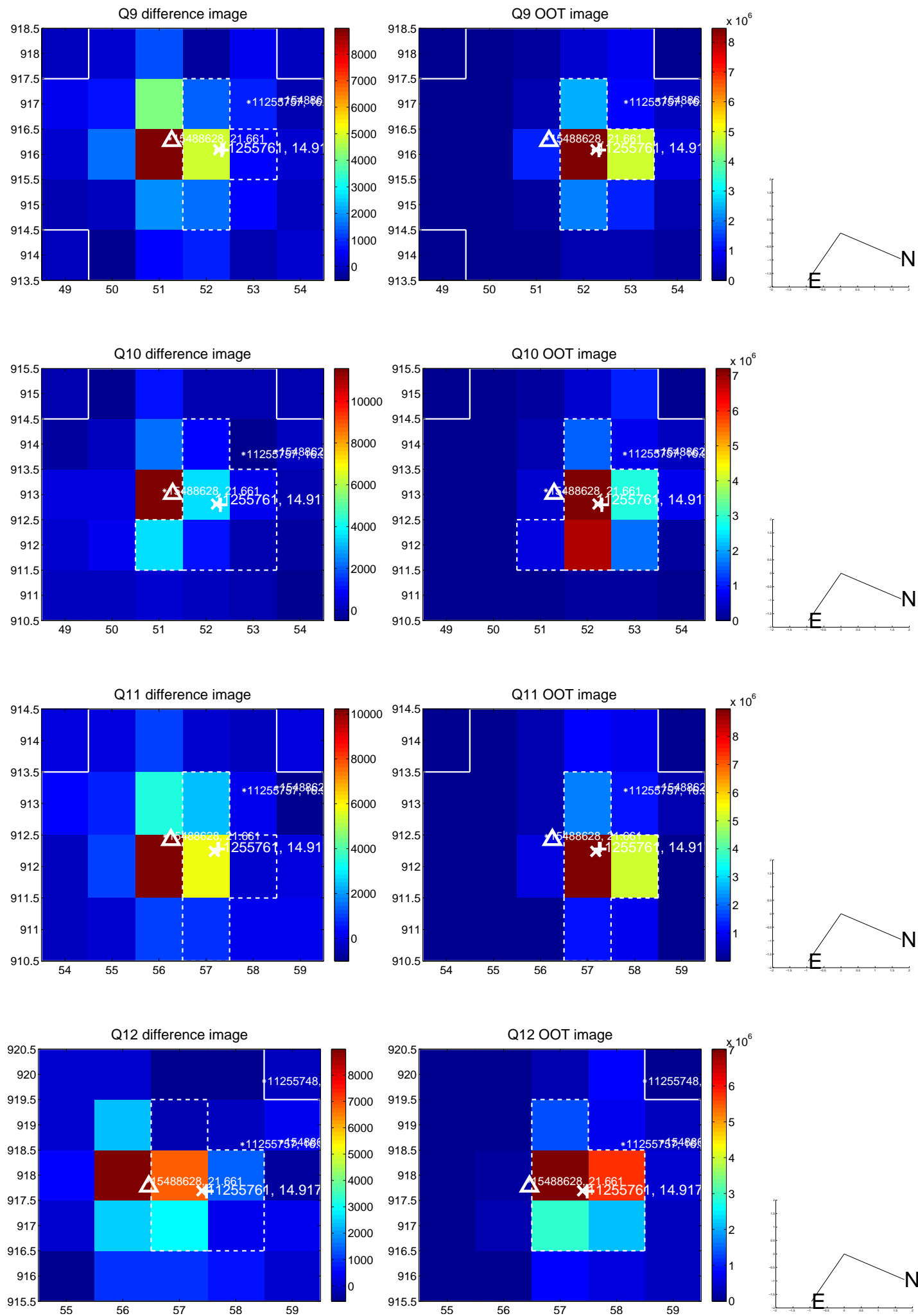
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



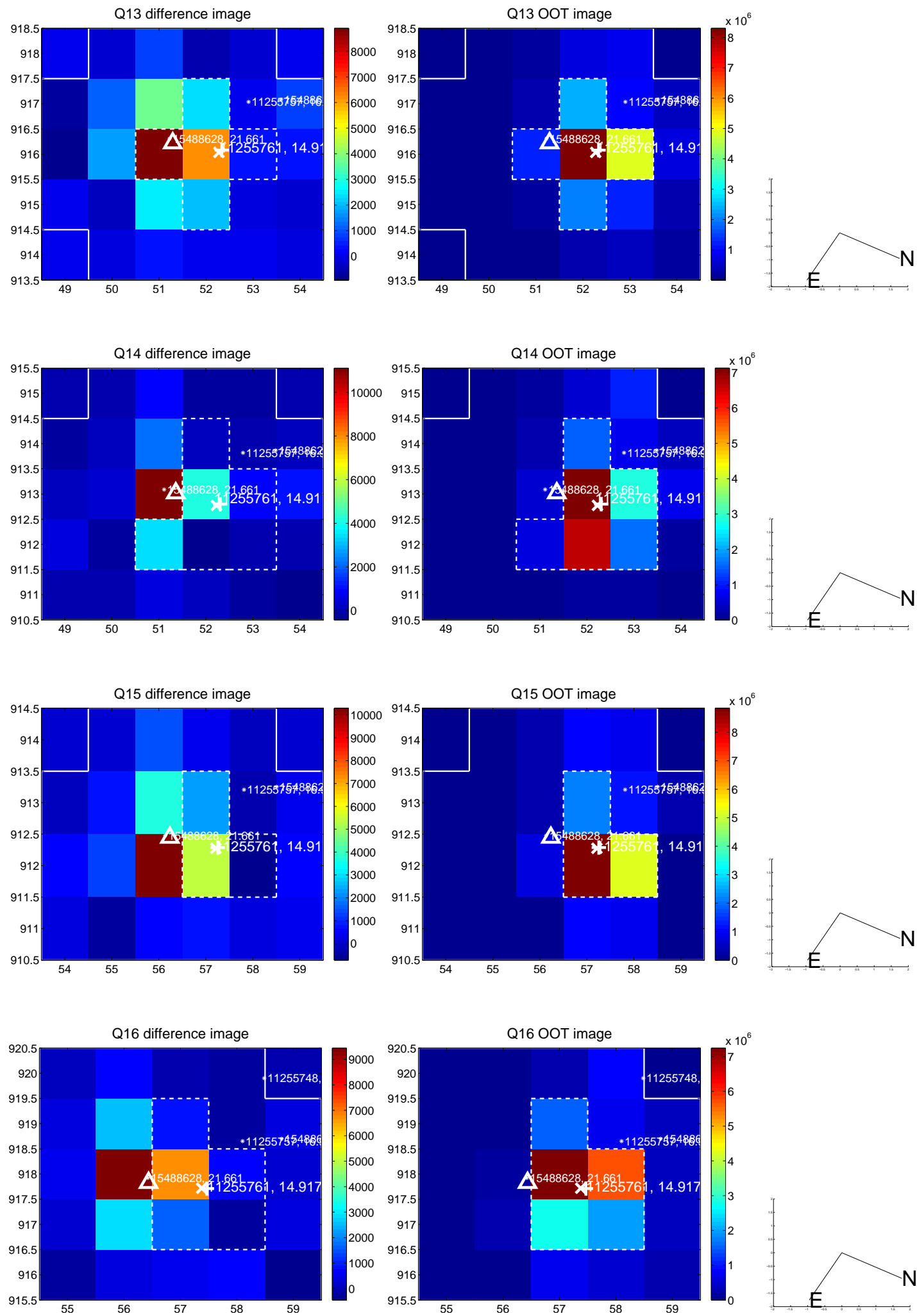
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



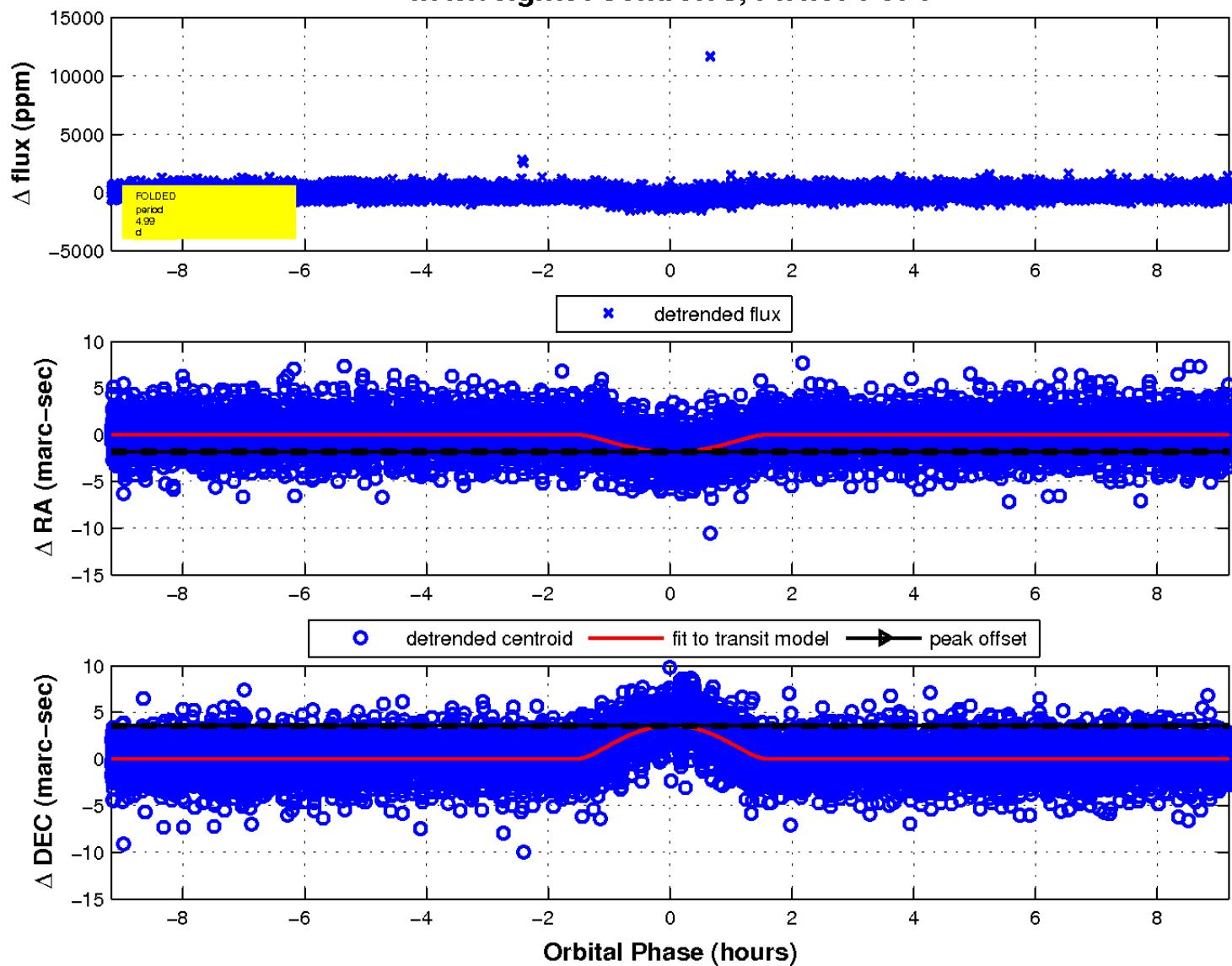
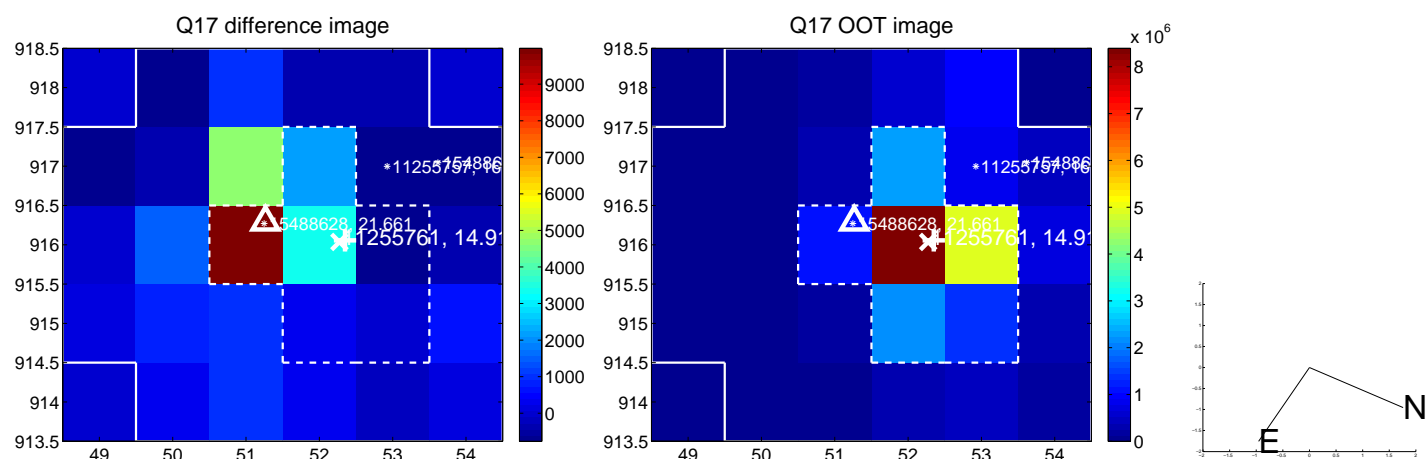
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white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

