

KIC 006290740

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|-----|------|-----------------------------|-----------------|------------------------|------------------------|
| 006290740-01 | OBS | No | 15.145065 | 131.909283 | 67.9 | 23.704 | 8.2 | 10.0 | 3.81 | 6564 | 3.41 | 1145.93 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|----------|
| 006290740-01 | 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.

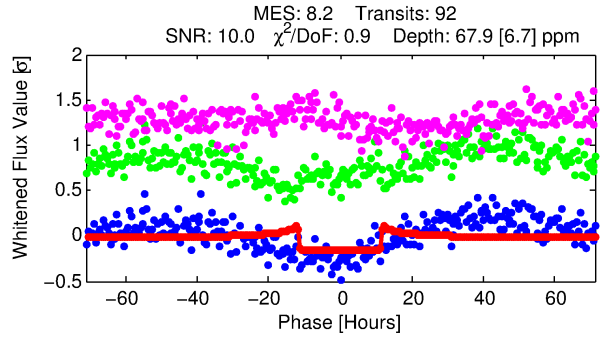
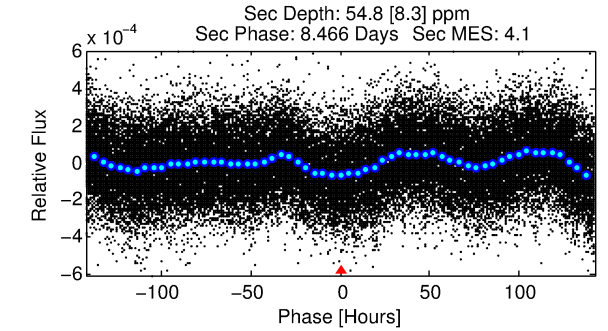
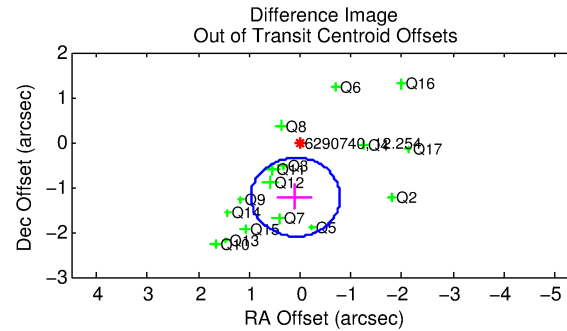
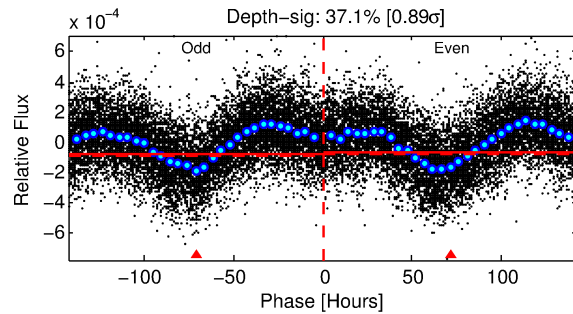
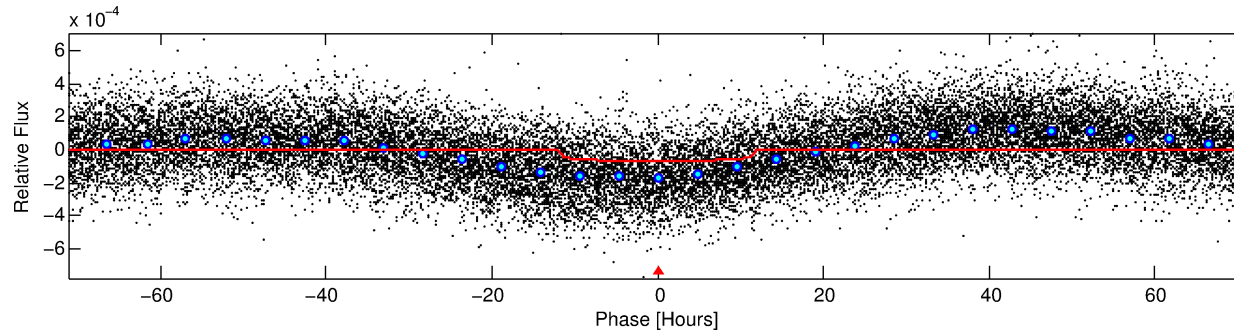
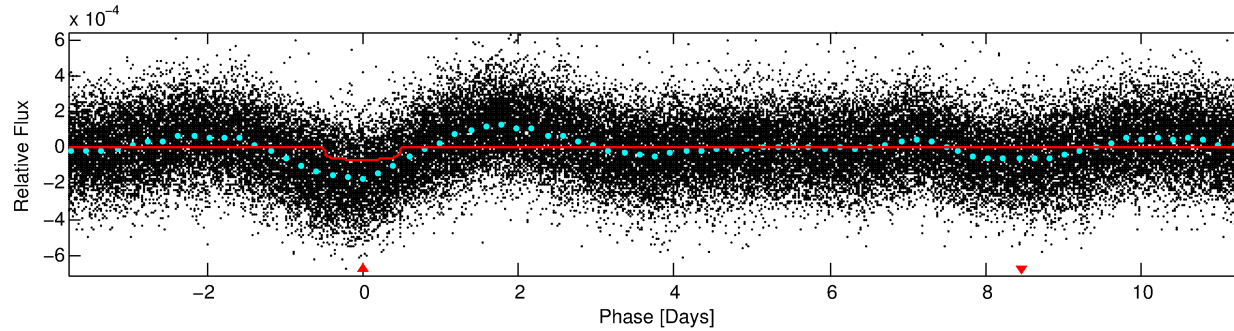
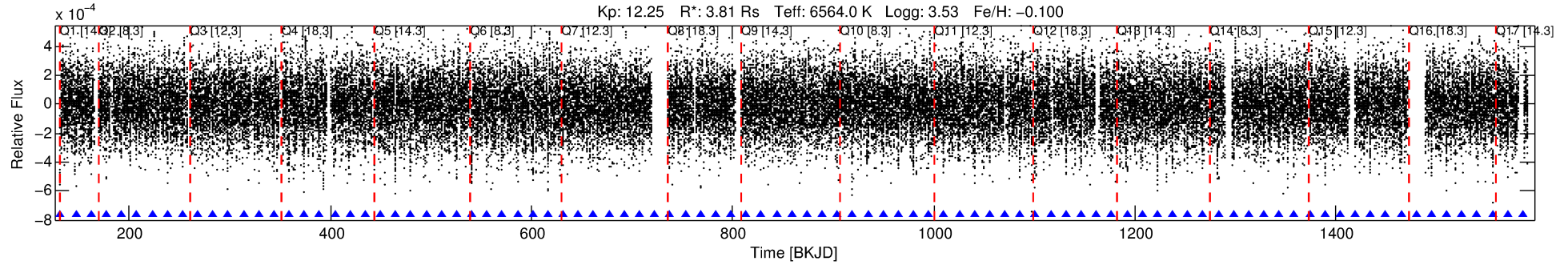
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006290740-01

No Significant Match Found

DV One-Page Summary

KIC: 6290740 Candidate: 1 of 1 Period: 15.145 d



DV Fit Results:

Period = 15.14506 [0.00022] d
Epoch = 131.9093 [0.0115] BKJD
Rp/R* = 0.0082 [0.0008]
a/R* = 3.36 [1.28]
b = 0.76 [0.24]
Seff = 1145.93 [675.91]
Teq = 1484 [219] K
Rp = 3.41 [1.36] Re
a = 0.1452 [0.0532] AU
Ag = 54.52 [34.21] [1.56 σ]
Teffp = 6233 [410] K [10.22 σ]

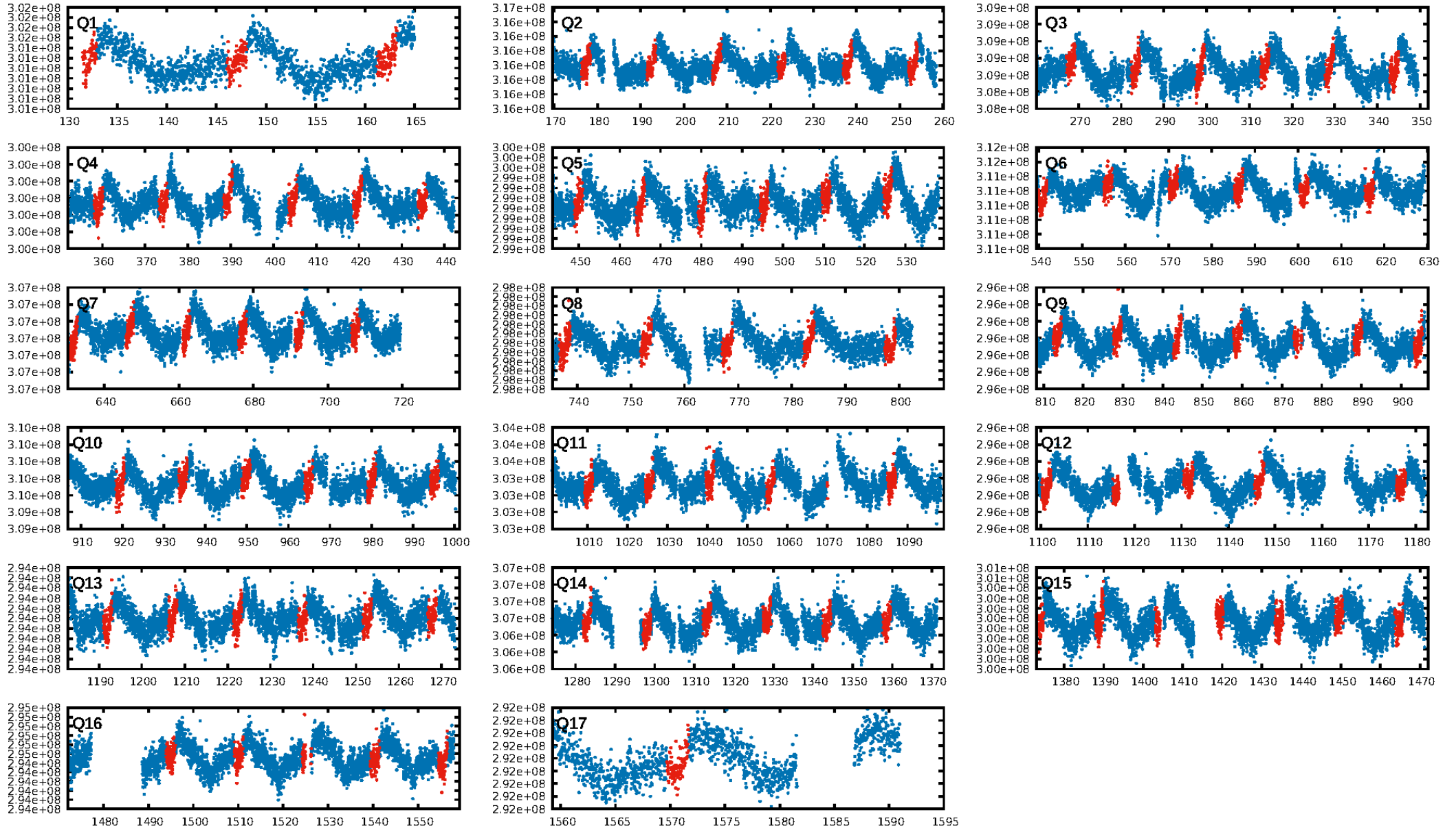
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.65e-15
RollingBand-fgt: 1.00 [88/88]
GhostDiagnostic-chr: 6.724
Centroid-sig: 53.8%
Centroid-so: 0.242 arcsec [0.75 σ]
OotOffset-rm: 1.227 arcsec [4.21 σ]
KicOffset-rm: 1.200 arcsec [3.94 σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 1.00 [16/16]
DiffImageOverlap-fno: 1.00 [17/17]

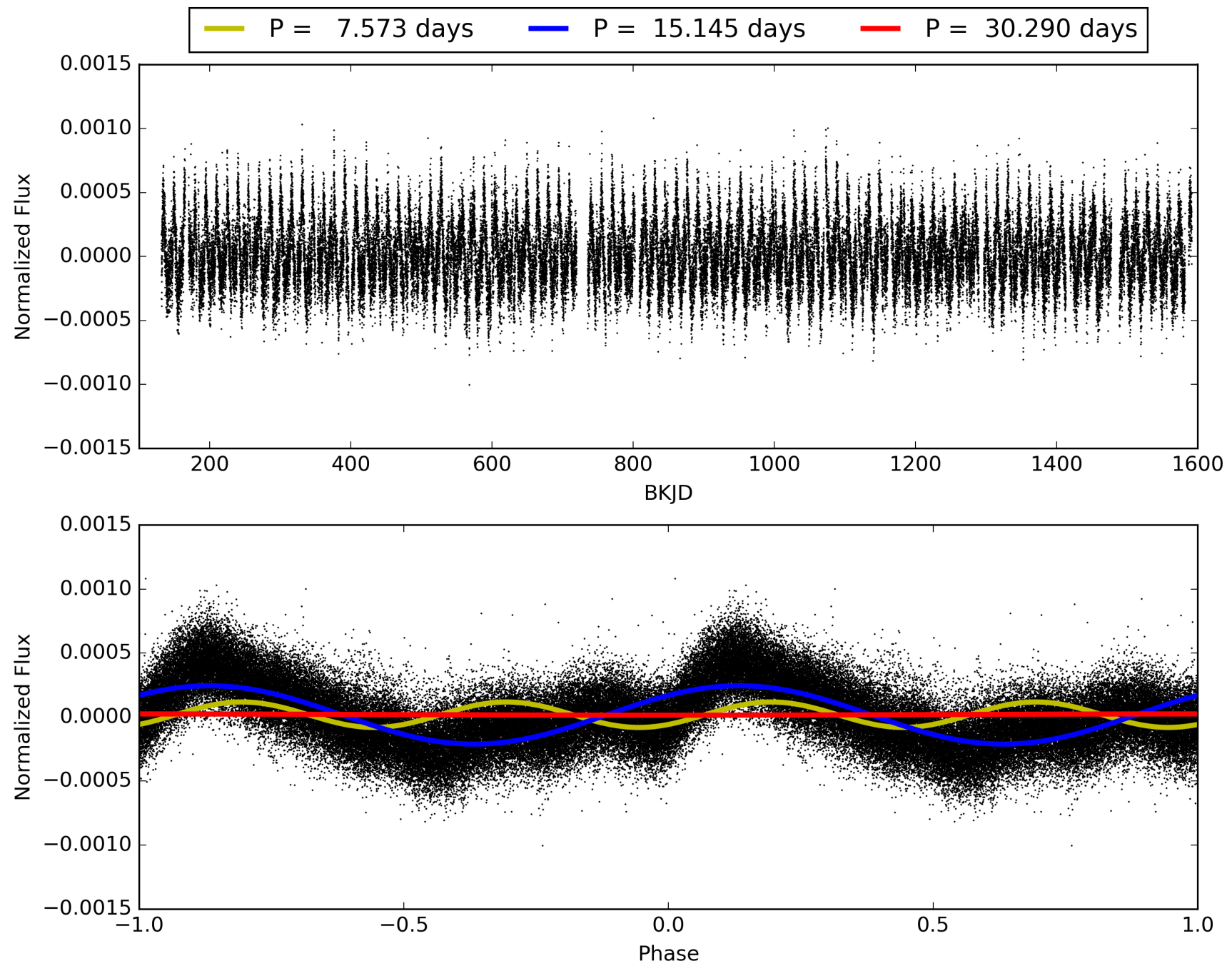
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:43:22 Z

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

TCE 006290740-01, PDC Light Curves

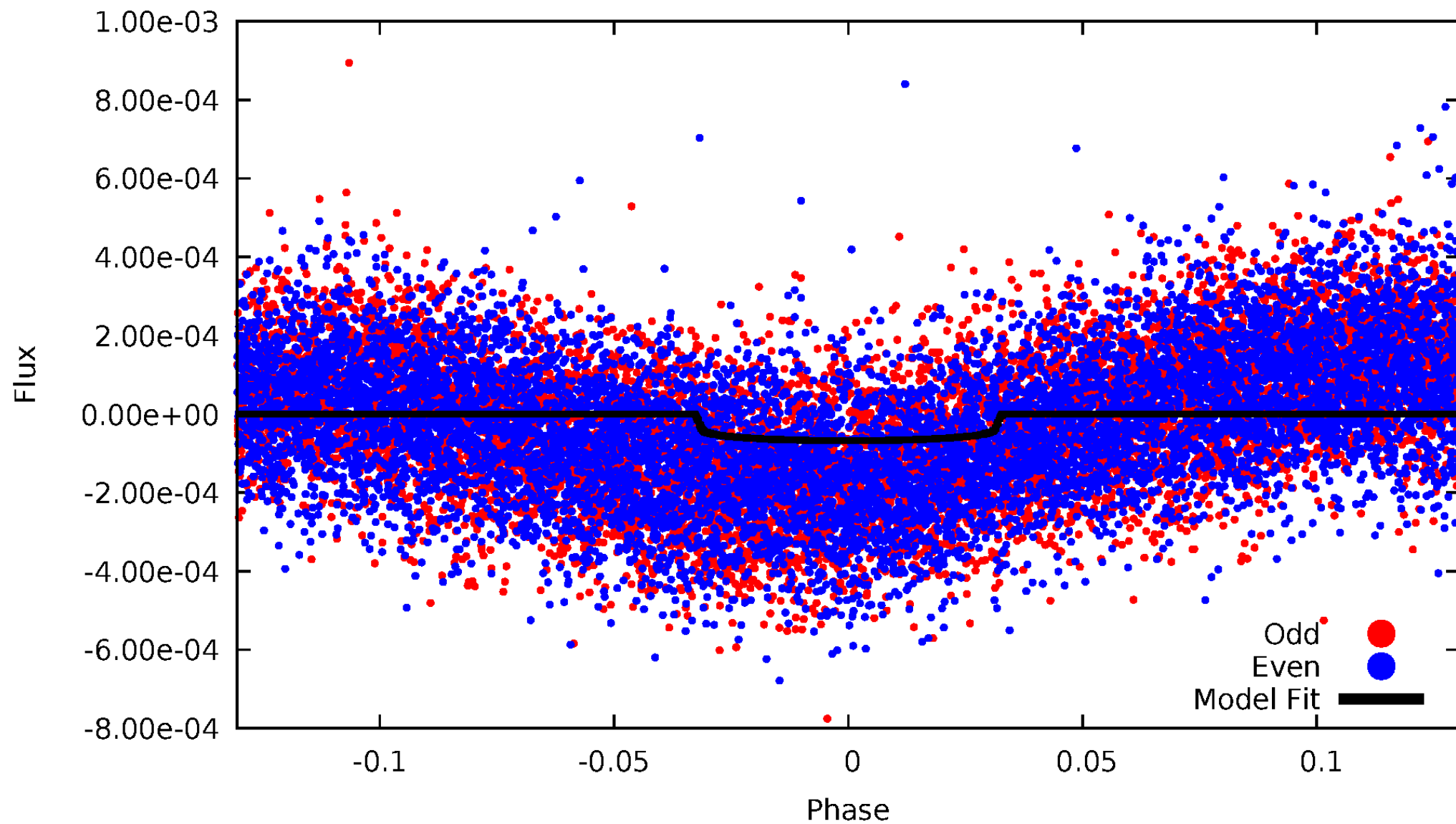


TCE 006290740-01



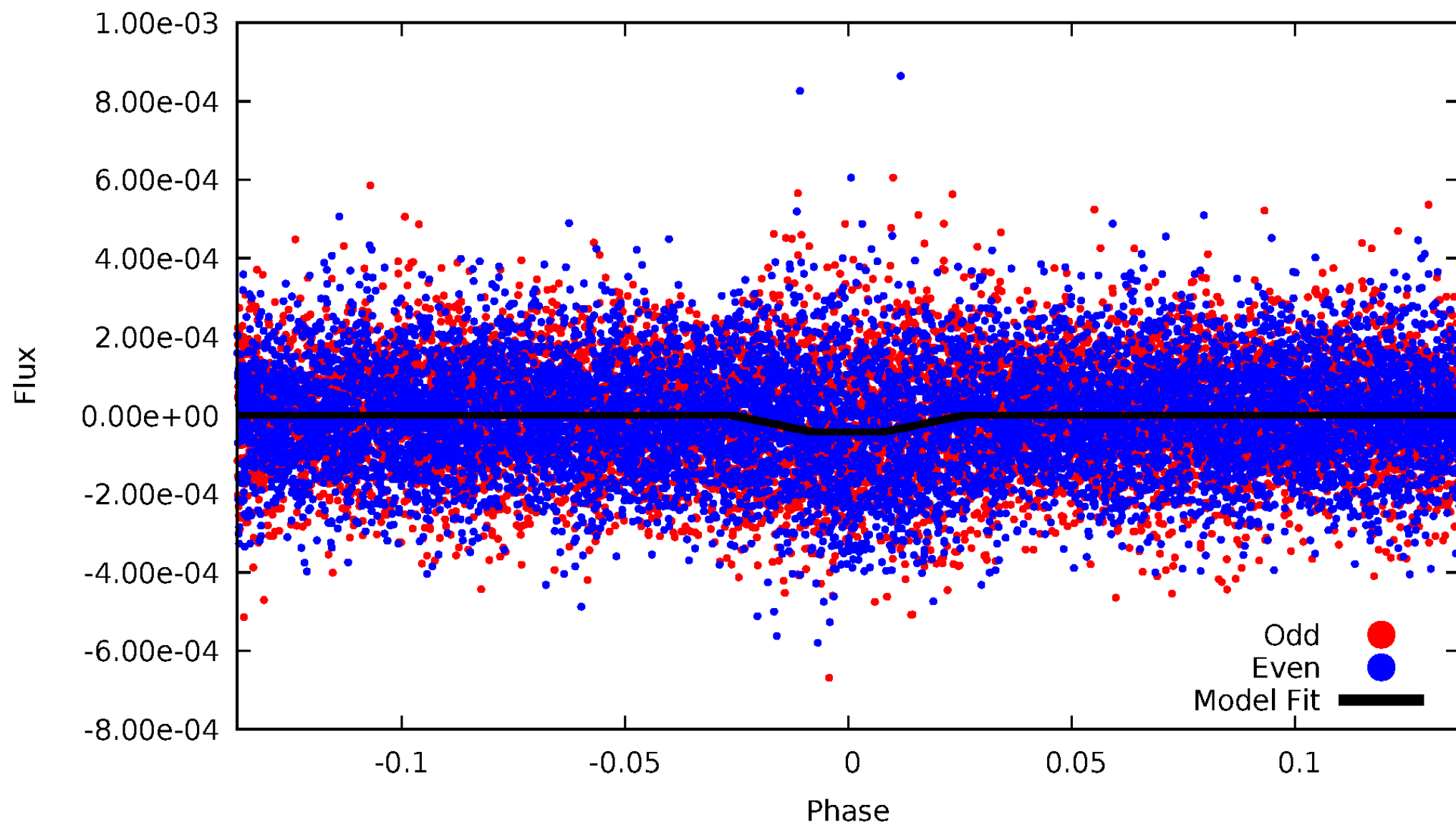
DV Odd/Even

TCE 006290740-01

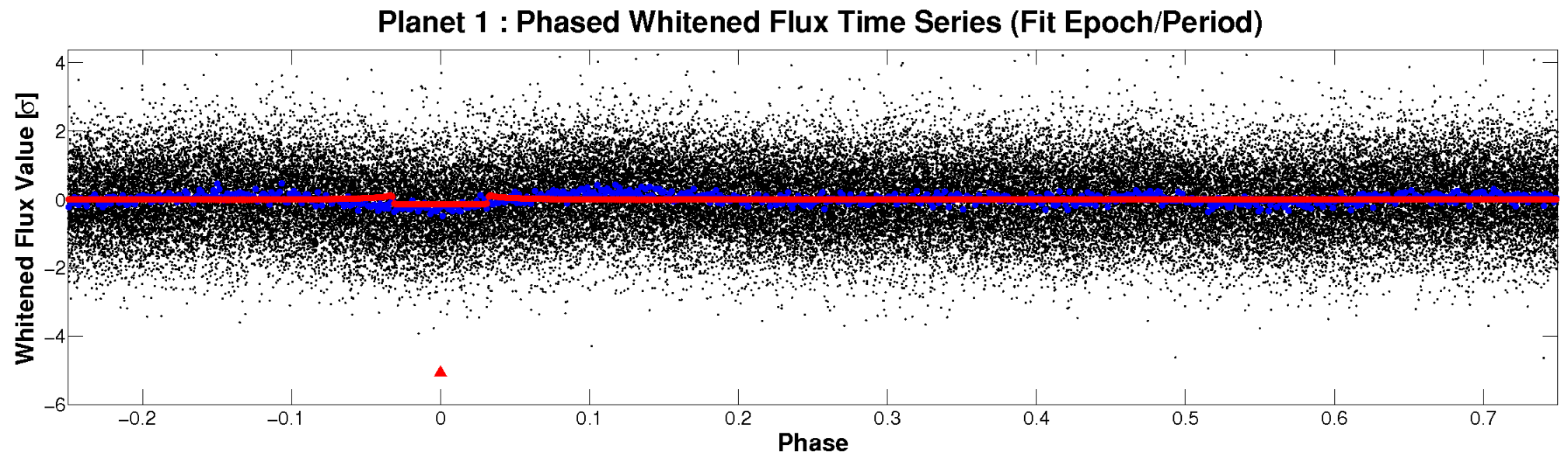
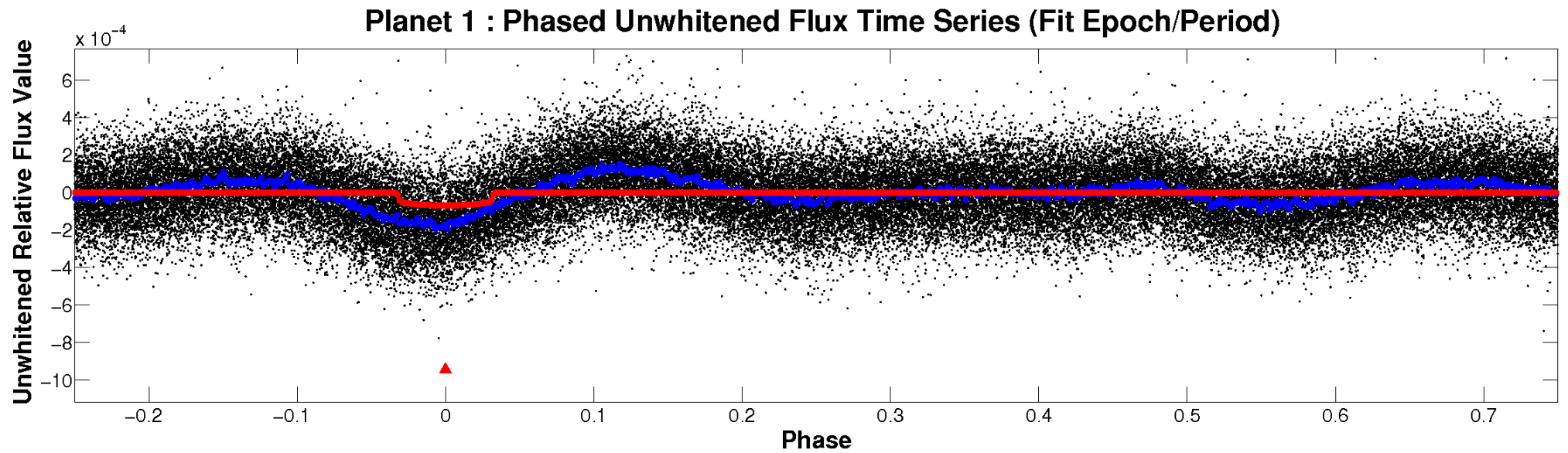


ALT Odd/Even

TCE 006290740-01

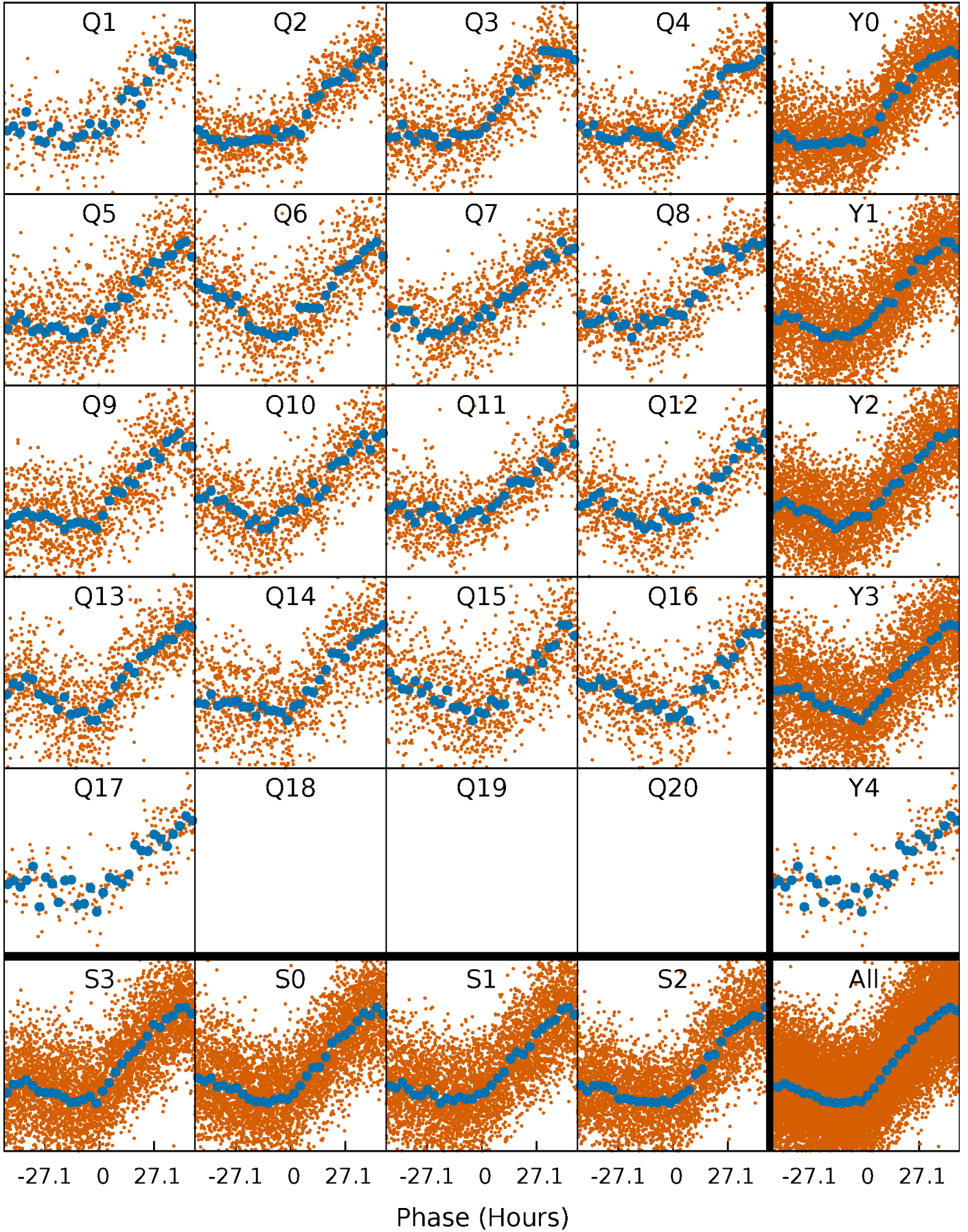


Non-Whitened Vs. Whitened Light Curve



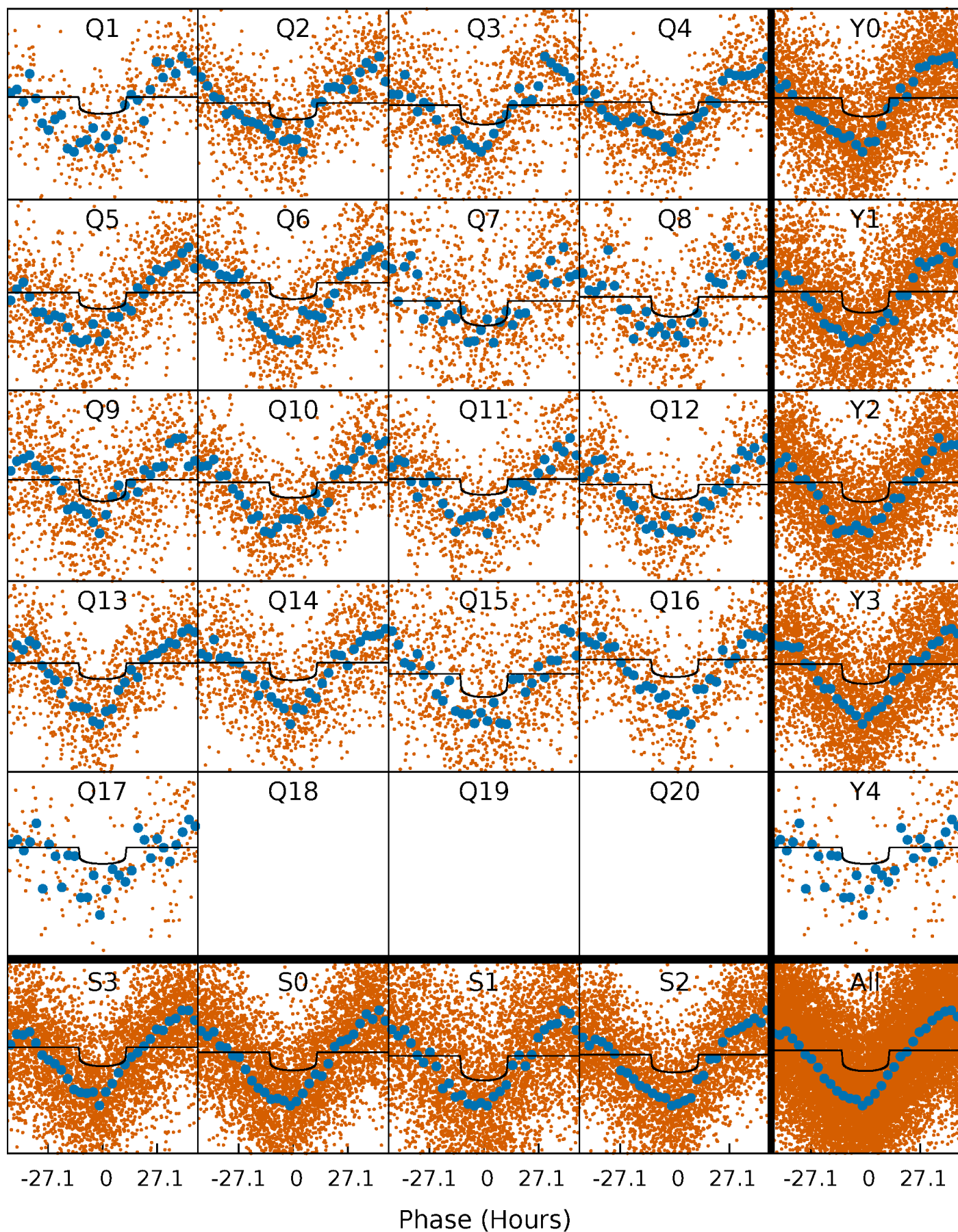
PDC Quarter-Phased Transit Curves

TCE 006290740-01 P= 15.145065 Days $T_0=131.909283$ (BKJD)



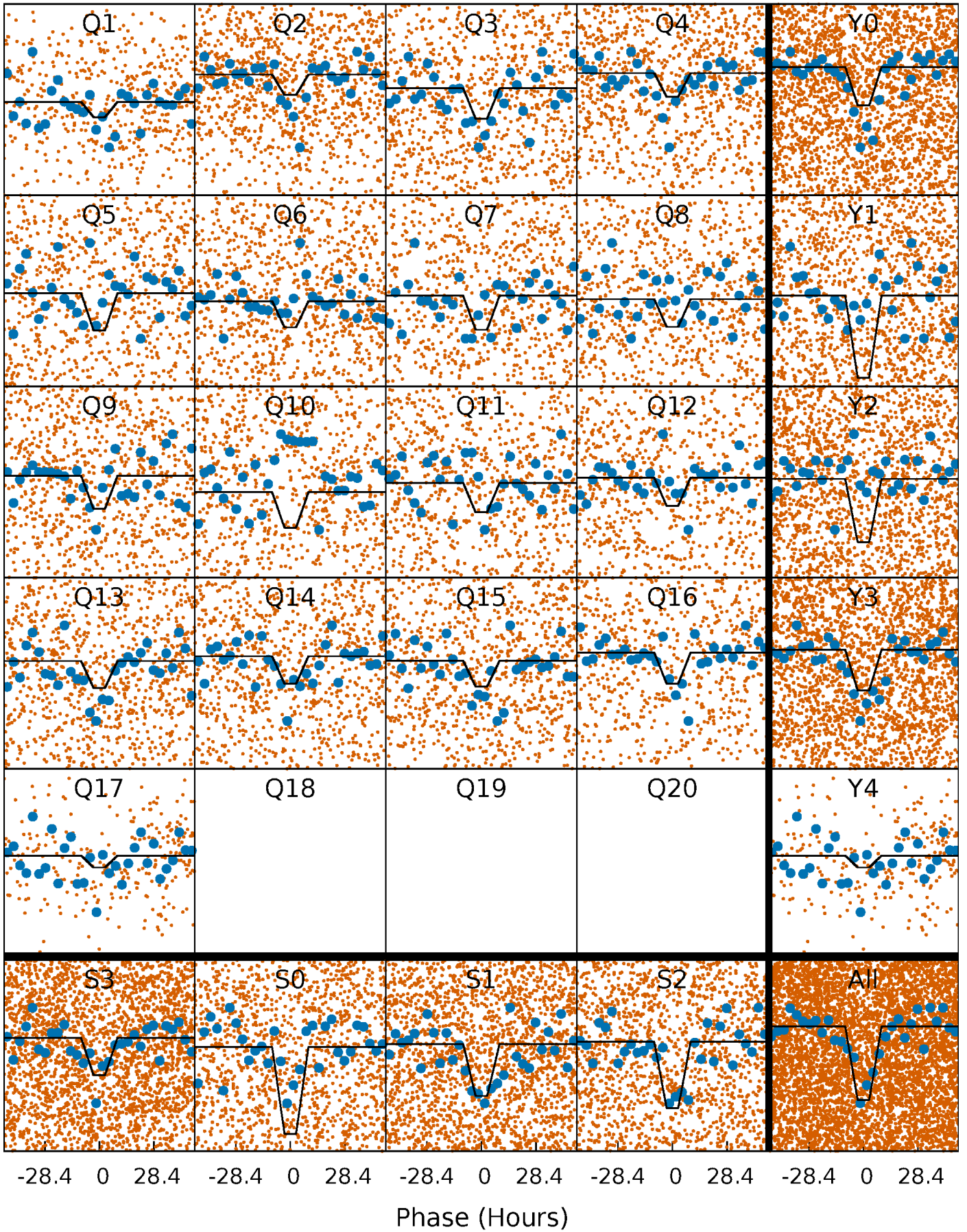
DV Quarter-Phased Transit Curves

TCE 006290740-01 P= 15.145065 Days $T_0=131.909283$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

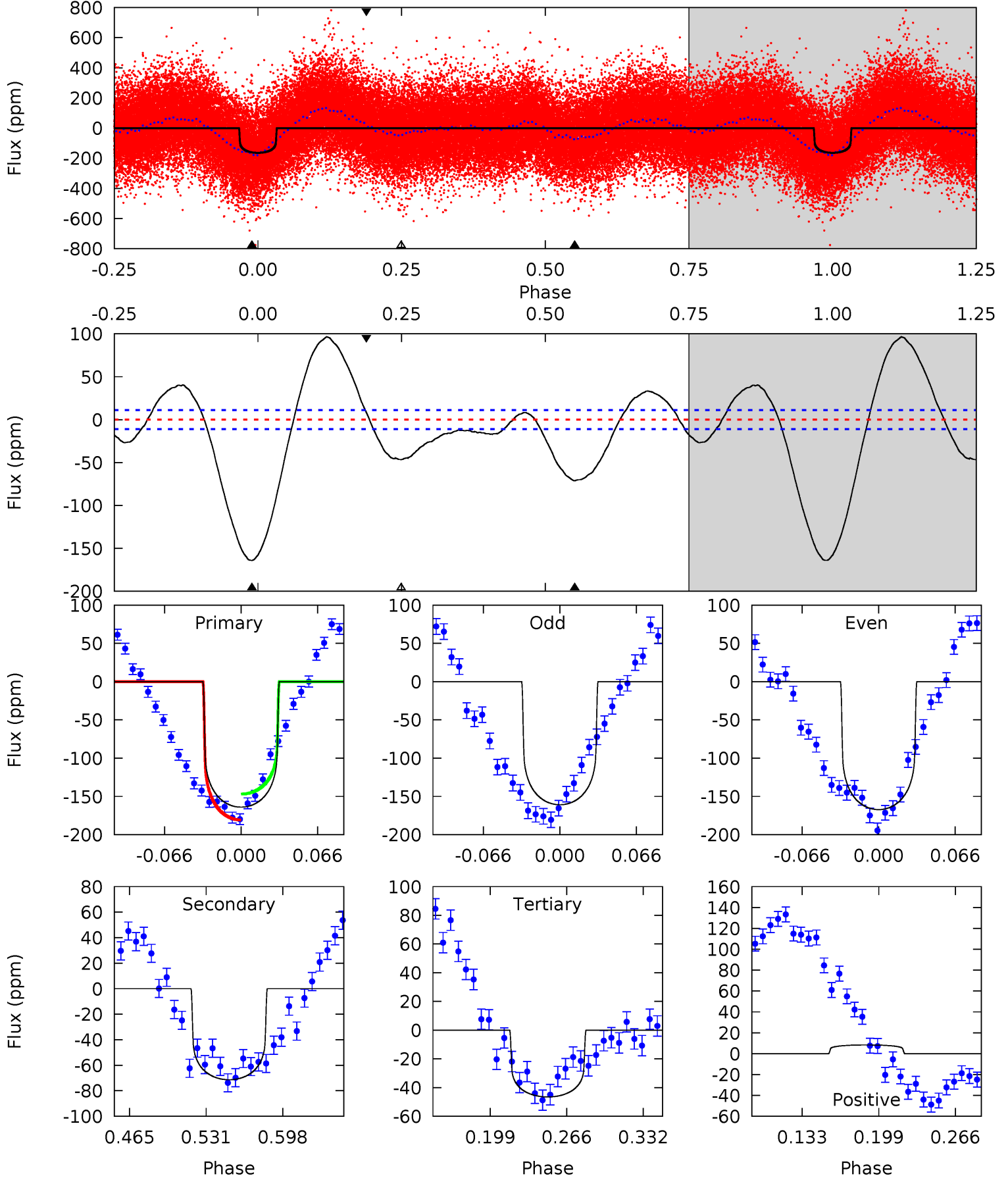
TCE 006290740-01 P= 15.145361 Days $T_0=131.902117$ (BKJD)



DV Model-Shift Uniqueness Test

006290740-01, P = 15.145065 Days, E = 116.764218 Days

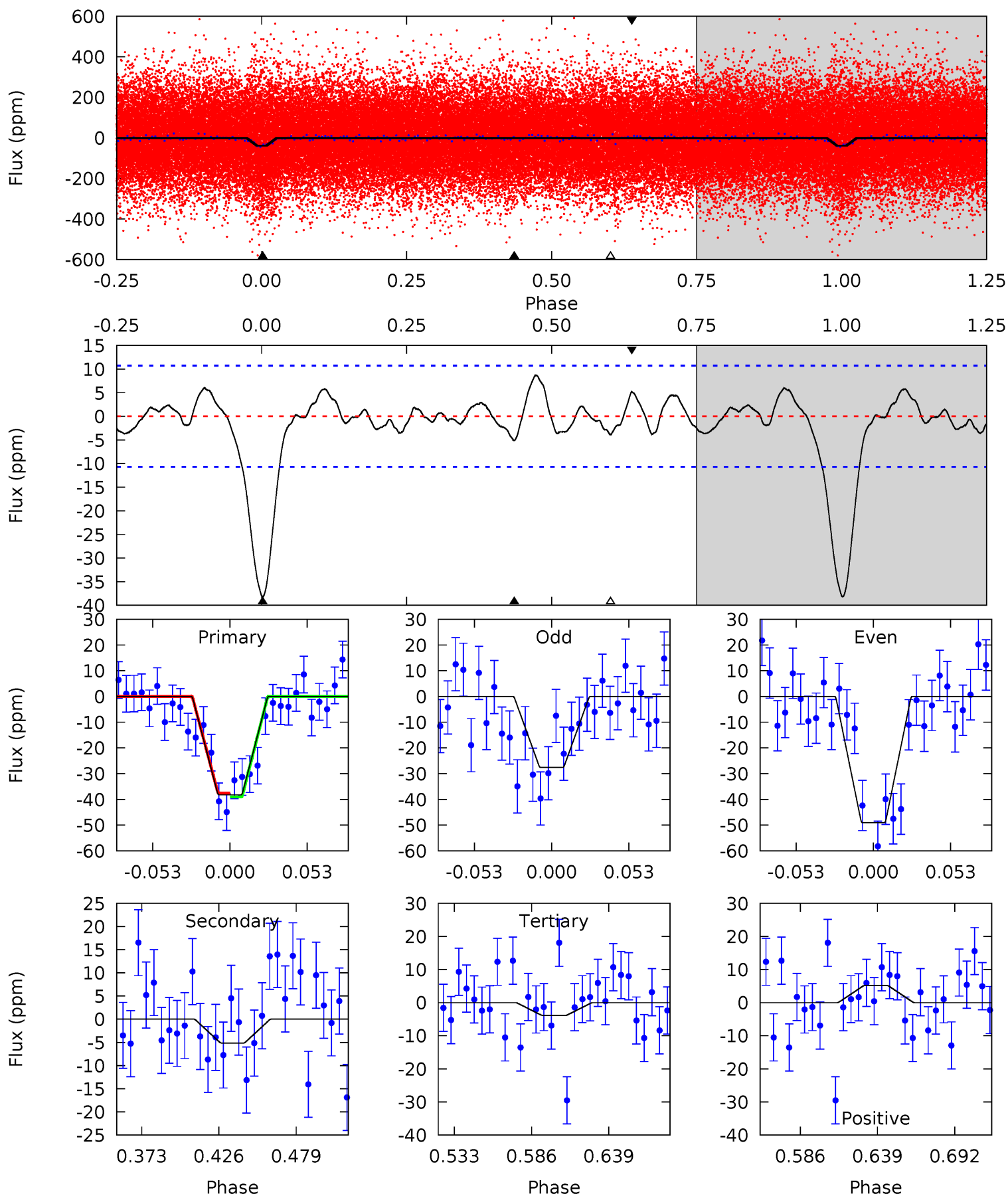
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 68.8 | 29.9 | 19.5 | 3.50 | 4.65 | 1.84 | 14.7 | 49.3 | 65.3 | 10.4 | 26.4 | 1.33 | 0.97 | 0.37 | 7.06 |



Alt Model-Shift Uniqueness Test

006290740-01, P = 15.145361 Days, E = 116.756756 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 16.7 | 2.25 | 1.71 | 2.26 | 4.70 | 1.93 | 1.07 | 15.0 | 14.5 | 0.54 | -0.01 | 4.69 | 0.86 | 0.19 | 0.33 |



Stellar Parameters For KIC 006290740

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | R (R_{\odot}) | $M(M_{\odot})$ | p_{\star} ($\text{g}\cdot\text{cm}^{-3}$) |
|--------|----------------------|---------------------------|----------------------------|---------------------------|---------------------------|---|
| | 6564^{+158}_{-177} | $3.526^{+0.338}_{-0.090}$ | $-0.100^{+0.300}_{-0.250}$ | $3.810^{+0.370}_{-1.480}$ | $1.775^{+0.162}_{-0.379}$ | $0.045^{+0.127}_{-0.012}$ |
| | +2%/-3% | +10%/-3% | +300%/-250% | +10%/-39% | +9%/-21% | +281%/-27% |
| Source | PHO1 | FLK73 | 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 006290740-01 / KOI

| Detrend | Depth (ppm) | R_p (R_{\oplus}) | T_{max} (K) | T_{obs} (K) | A_{obs} |
|---------|-------------|------------------------|----------------------|----------------------|---------------------------|
| DV | -71 ± 2 | $3.31^{+0.50}_{-0.67}$ | 2045^{+105}_{-182} | 6660^{+420}_{-365} | 75^{+39}_{-17} |
| Alt. | -5 ± 2 | $2.56^{+0.47}_{-0.53}$ | 2043^{+106}_{-191} | 4115^{+404}_{-447} | $9.105^{+7.395}_{-4.506}$ |

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 $A_{\text{obs}} \gg 1.0$

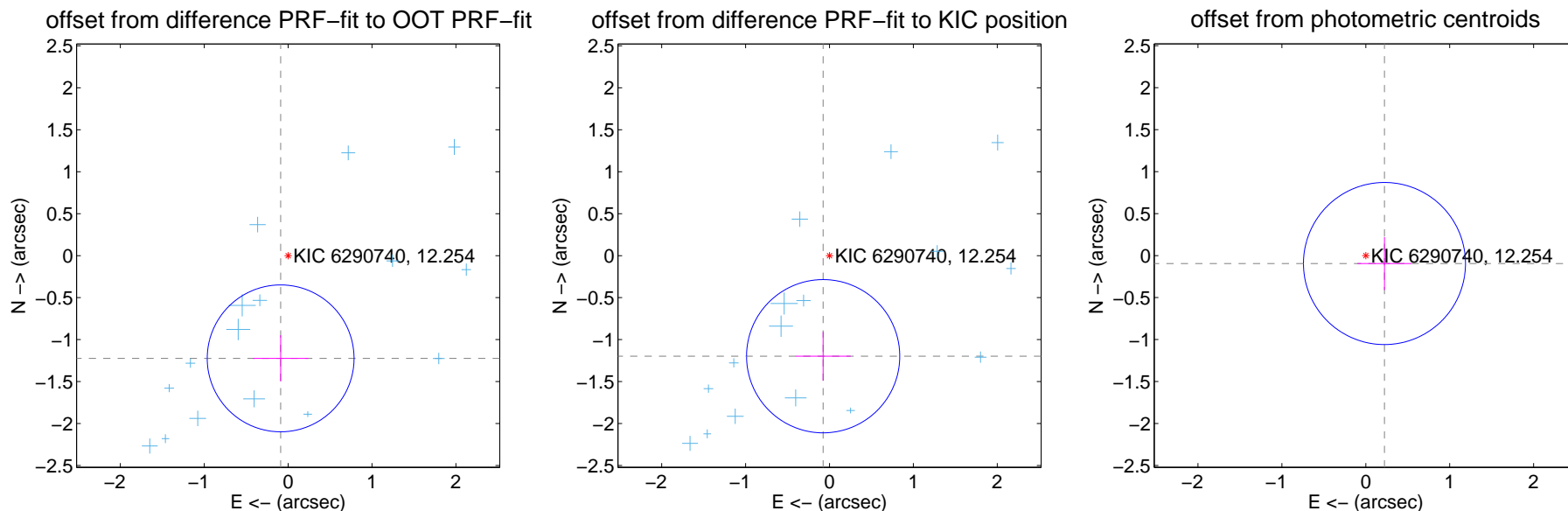
DV Centroid Data

Supplemental centroid analysis for 006290740-01. Kepler magnitude: 12.25. Transit SNR 9.96

There are 16 quarters with good PRF difference image offsets

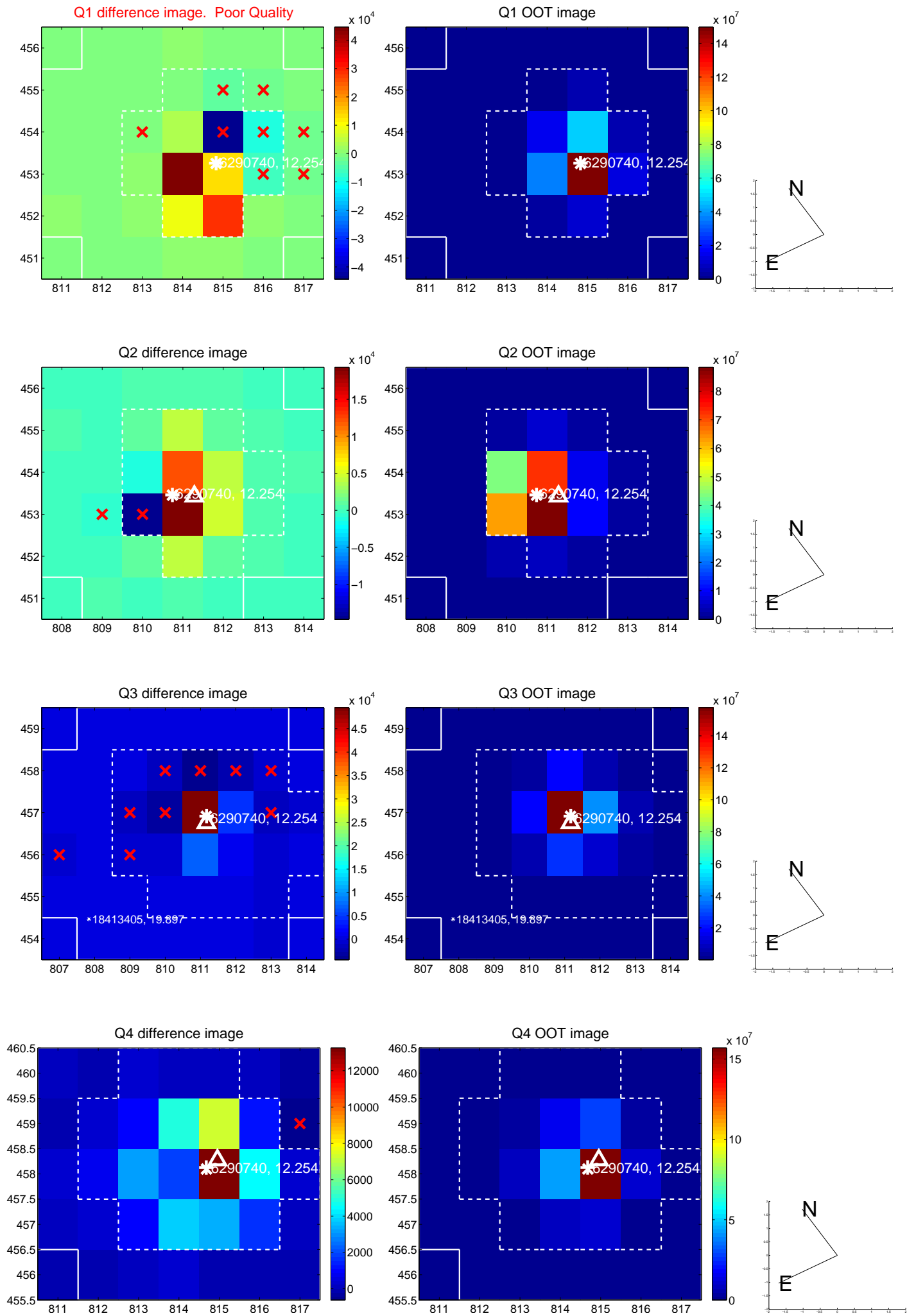
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|-------------------|--------------------|
| PRF-fit source offset from OOT | 1.227 ± 0.292 | 4.21 | 0.089 ± 0.330 | -1.223 ± 0.275 |
| PRF-fit source offset from KIC position | 1.200 ± 0.304 | 3.94 | 0.075 ± 0.328 | -1.198 ± 0.290 |
| photometric centroid source offset | 0.24 ± 0.32 | 0.75 | -0.22 ± 0.32 | -0.09 ± 0.32 |

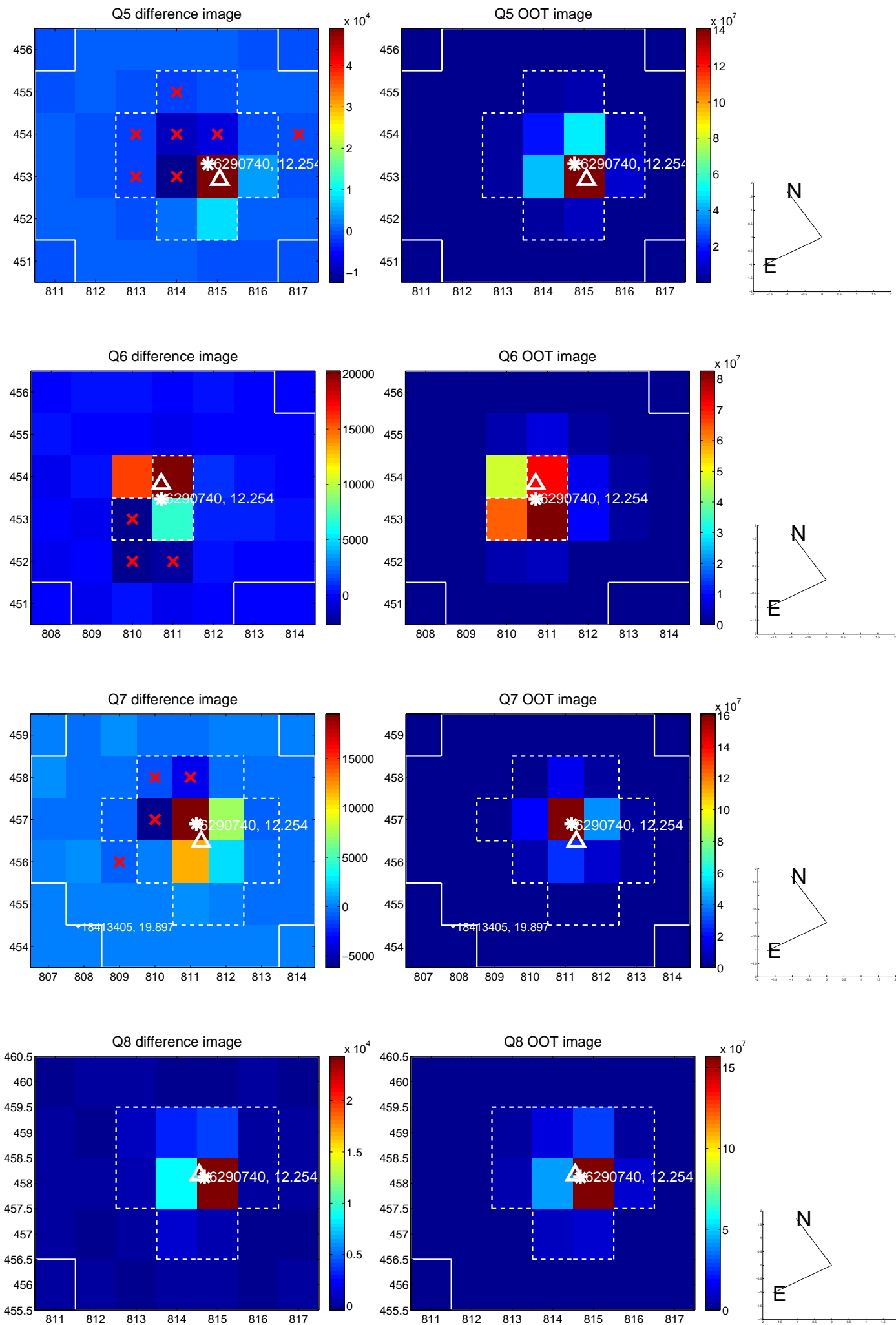


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

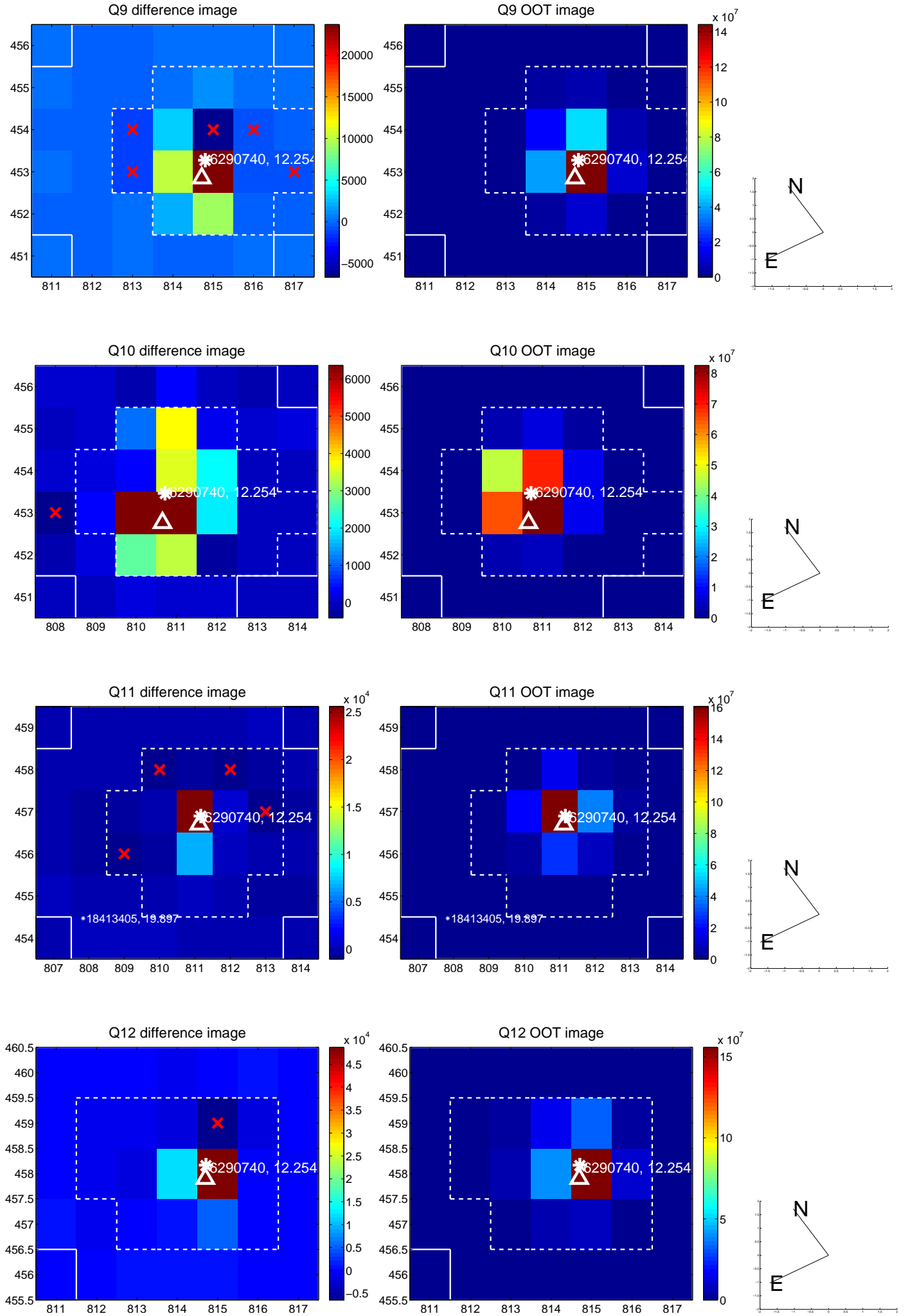
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



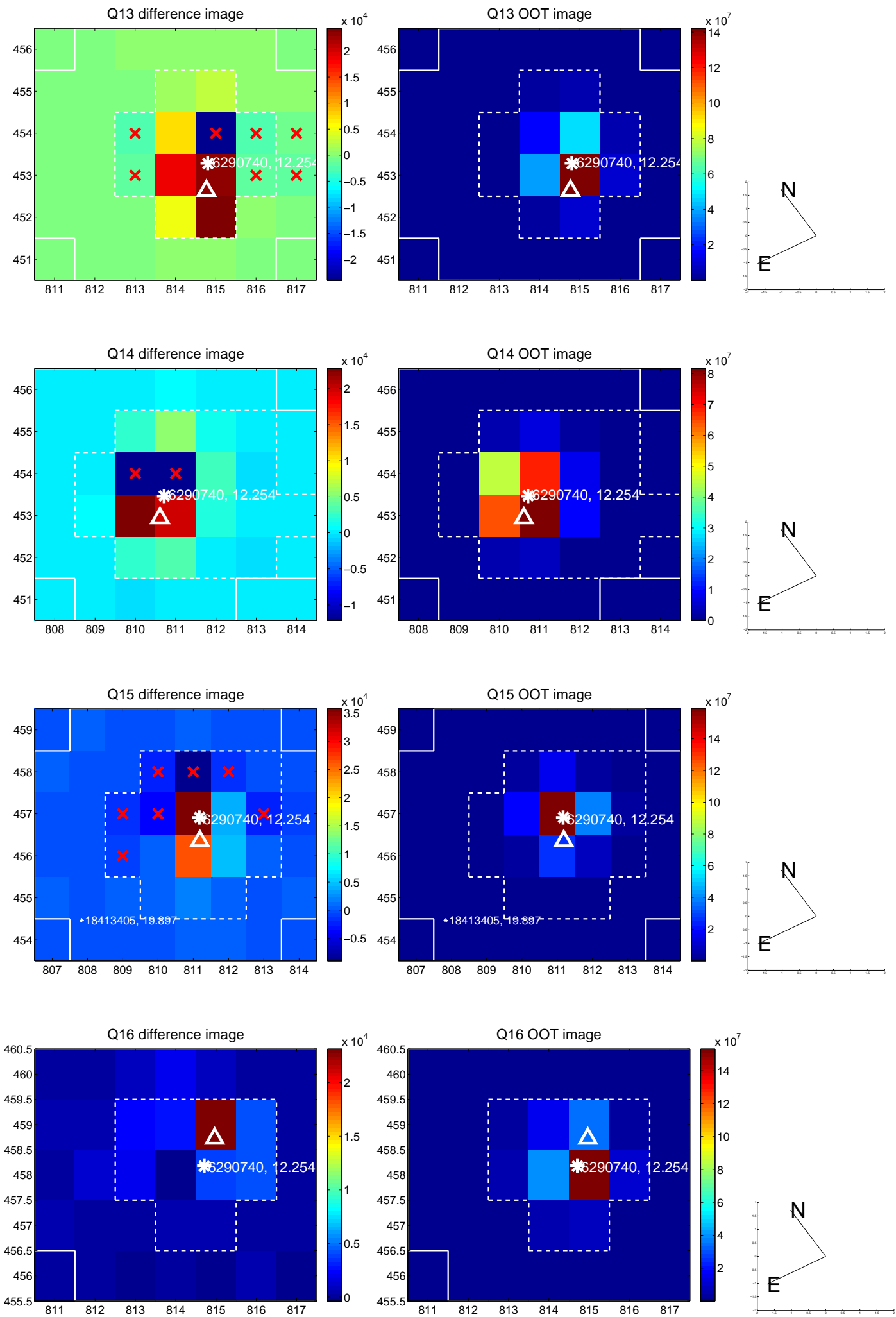
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



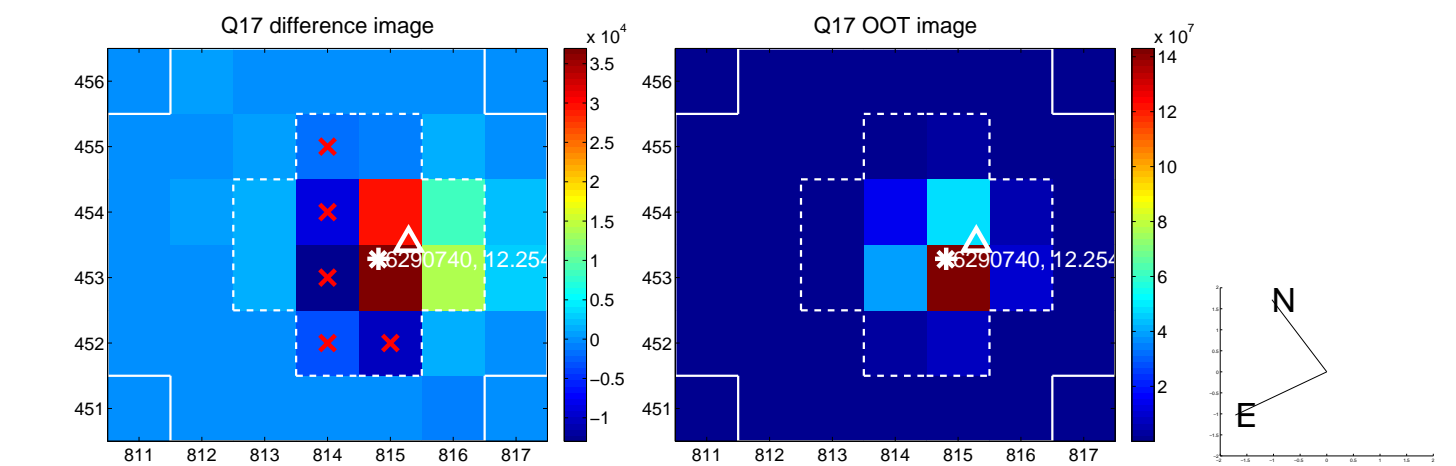
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



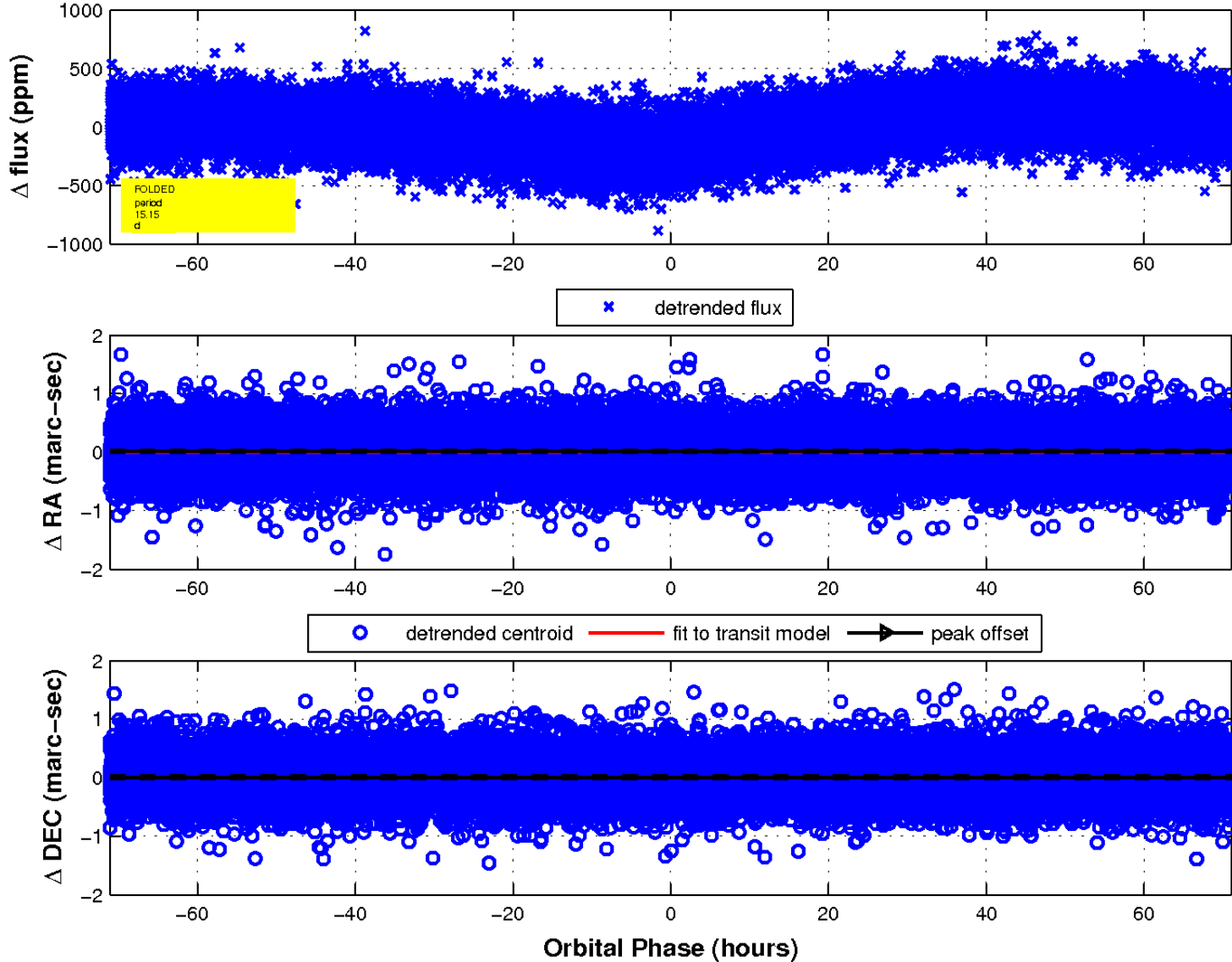
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

