

KIC 004061149

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}) |
|--------------|----------|---------|---------------|--------------|-------------|------------------|------|------|-----------------------------|-----------------|------------------------|------------------------|
| 004061149-01 | OBS | 1201.01 | 2.757592 | 133.049047 | 521.9 | 1.356 | 16.6 | 19.7 | 0.42 | 3683 | 1.27 | 33.88 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|--------------|
| 004061149-01 | OBS | PC | 1.00 | 0 | 0 | 0 | 0 | CENT_KIC_POS |

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.

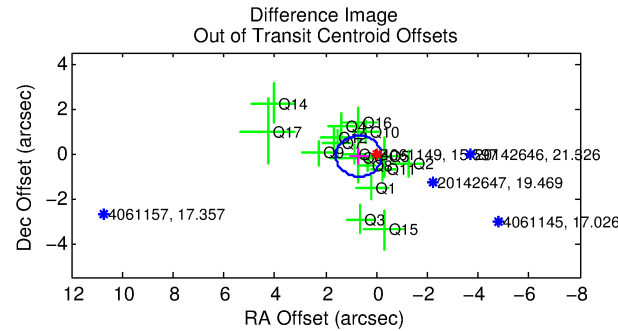
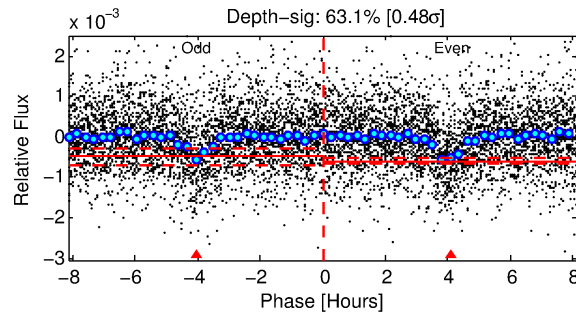
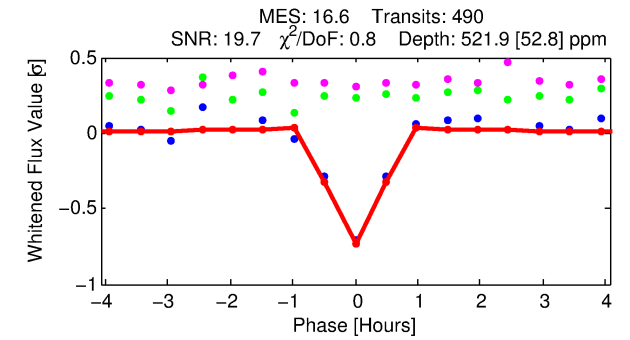
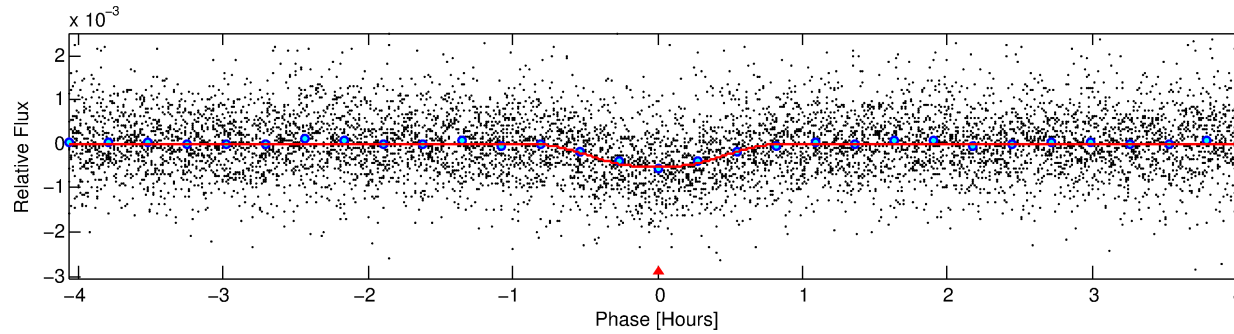
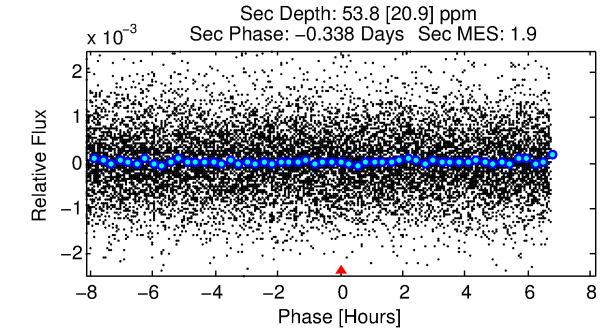
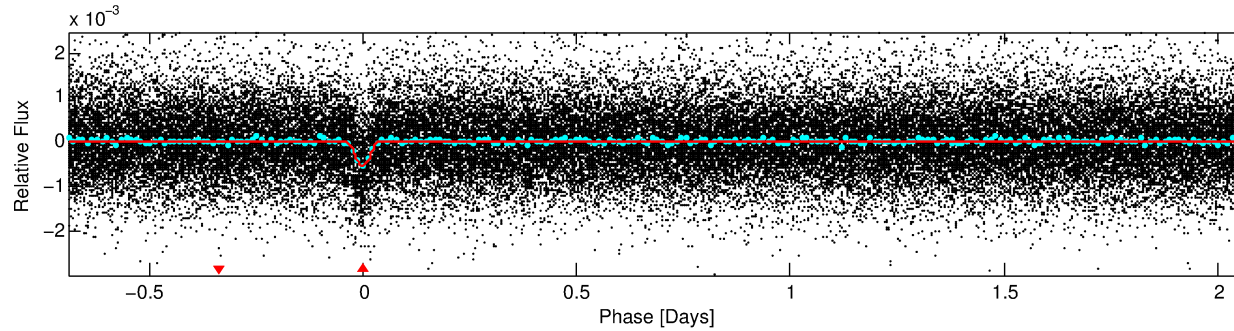
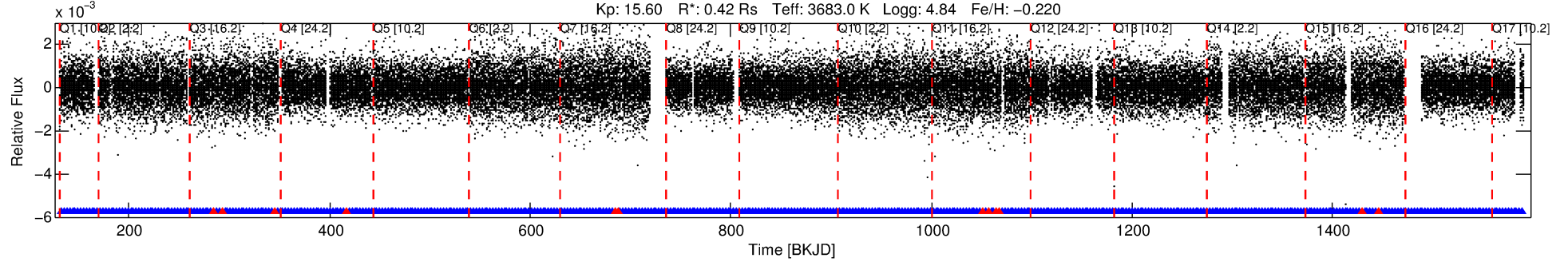
Ephemeris Match Information For 004061149-01

No Significant Match Found

DV One-Page Summary

KIC: 4061149 Candidate: 1 of 1 Period: 2.758 d
KOI: K01201.01 Corr: 0.887

Kp: 15.60 R*: 0.42 Rs Teff: 3683.0 K Logg: 4.84 Fe/H: -0.220



DV Fit Results:

Period = 2.75759 [0.00001] d
Epoch = 133.0490 [0.0010] BKJD
Rp/R* = 0.0275 [0.0035]
a/R* = 5.70 [2.07]
b = 0.96 [0.03]
Seff = 33.88 [5.22]
Teq = 615 [24] K
Rp = 1.27 [0.23] Re
a = 0.0296 [0.0028] AU
Ag = 15.98 [7.65] [1.96σ]
Teffp = 1902 [225] K [5.69σ]

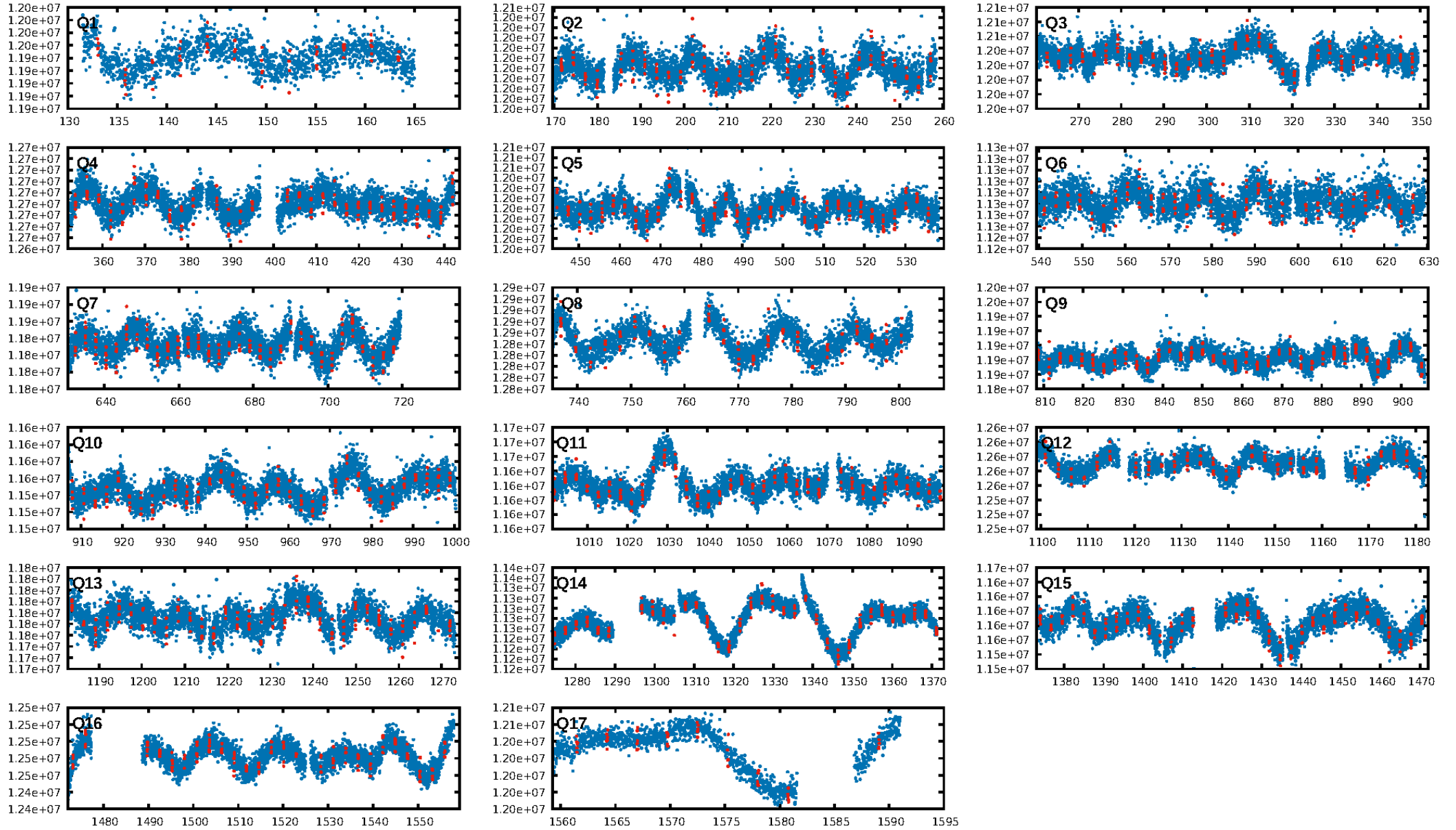
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 9.90e-60
RollingBand-fgt: 0.97 [457/469]
GhostDiagnostic-chr: 1.807
Centroid-sig: 4.5%
Centroid-so: 0.412 arcsec [0.71σ]
OotOffset-rm: 0.711 arcsec [2.36σ]
KicOffset-rm: 0.399 arcsec [1.25σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.71 [12/17]
DiffImageOverlap-fno: 1.00 [17/17]

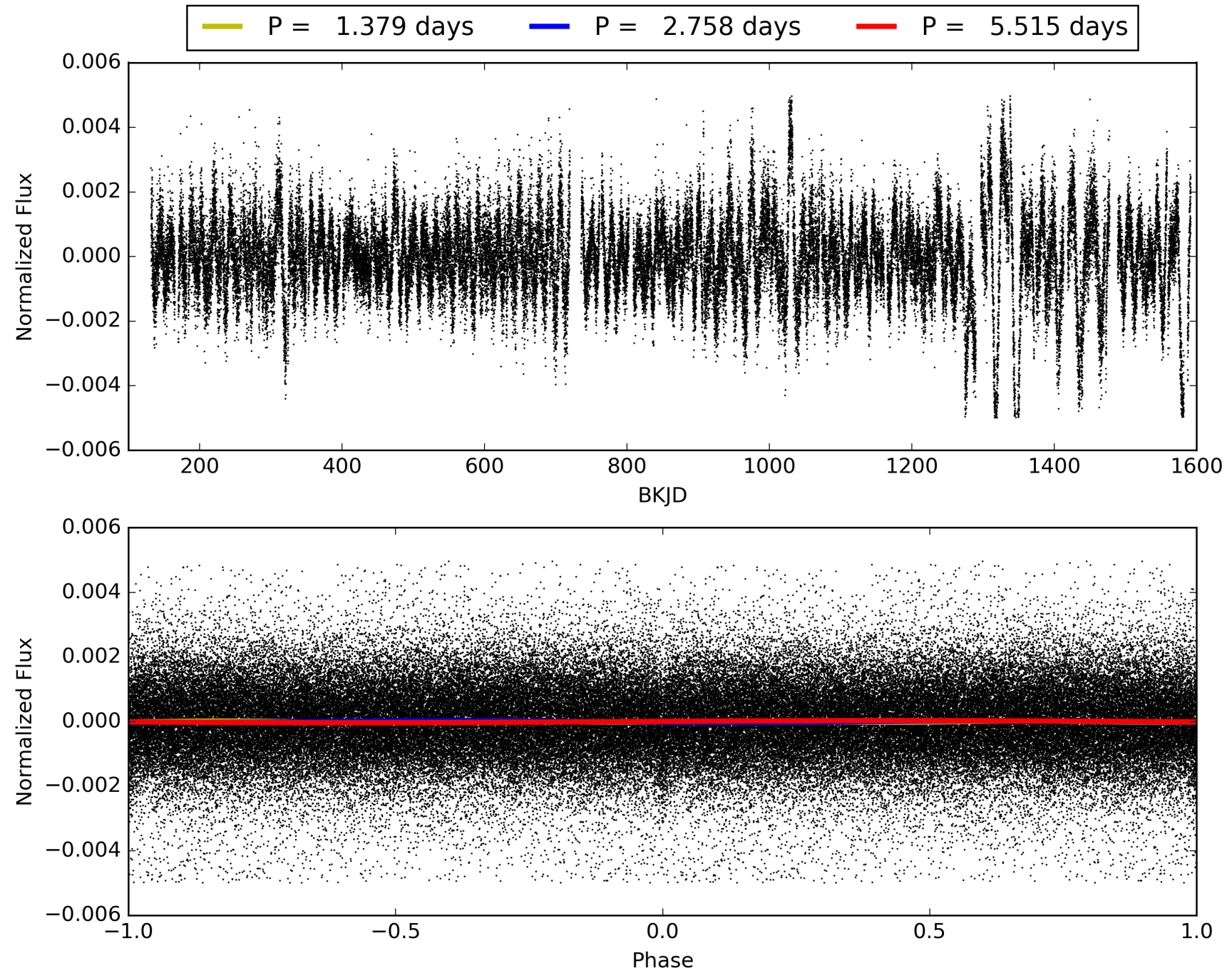
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 23:39:15 Z

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

TCE 004061149-01, PDC Light Curves

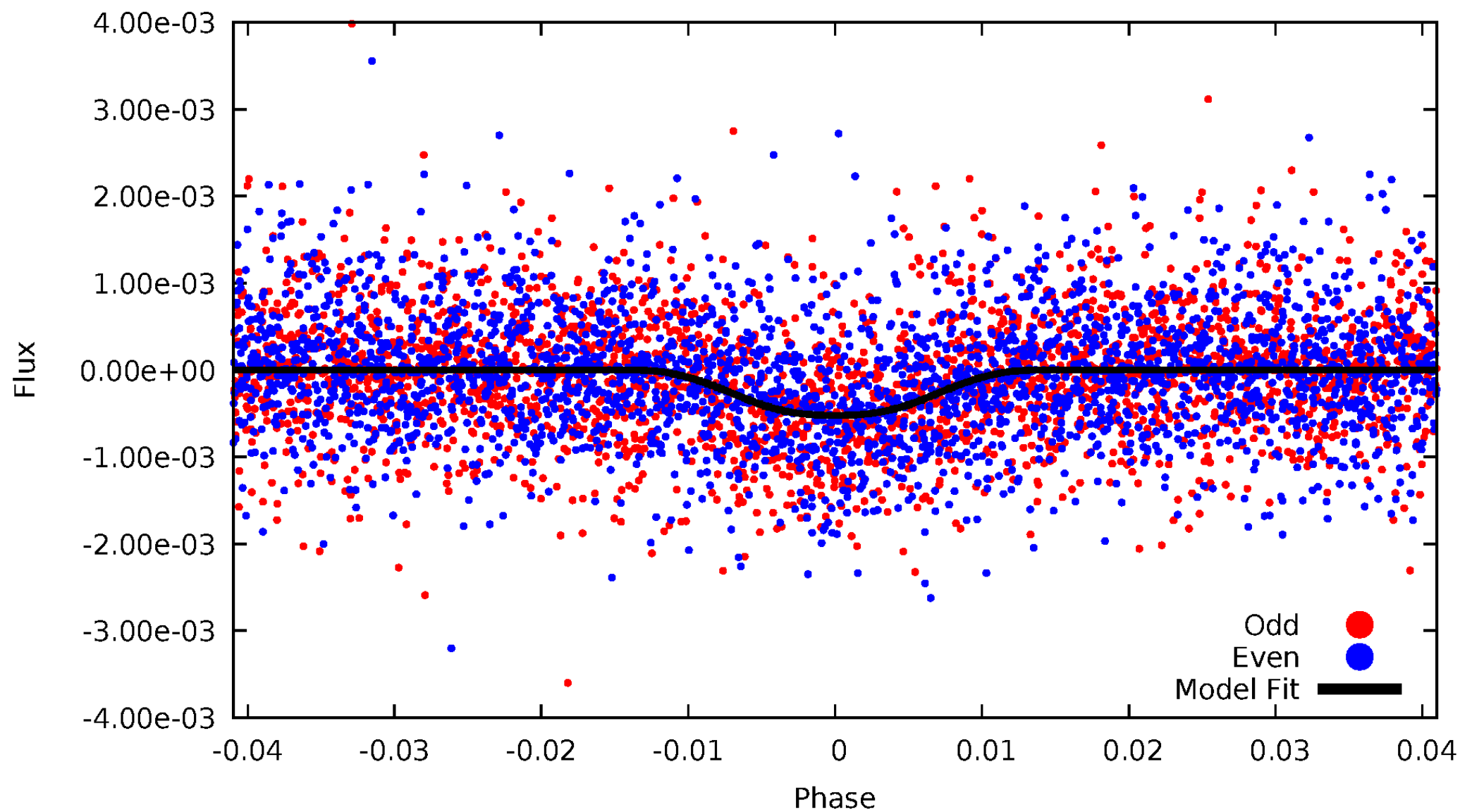


TCE 004061149-01



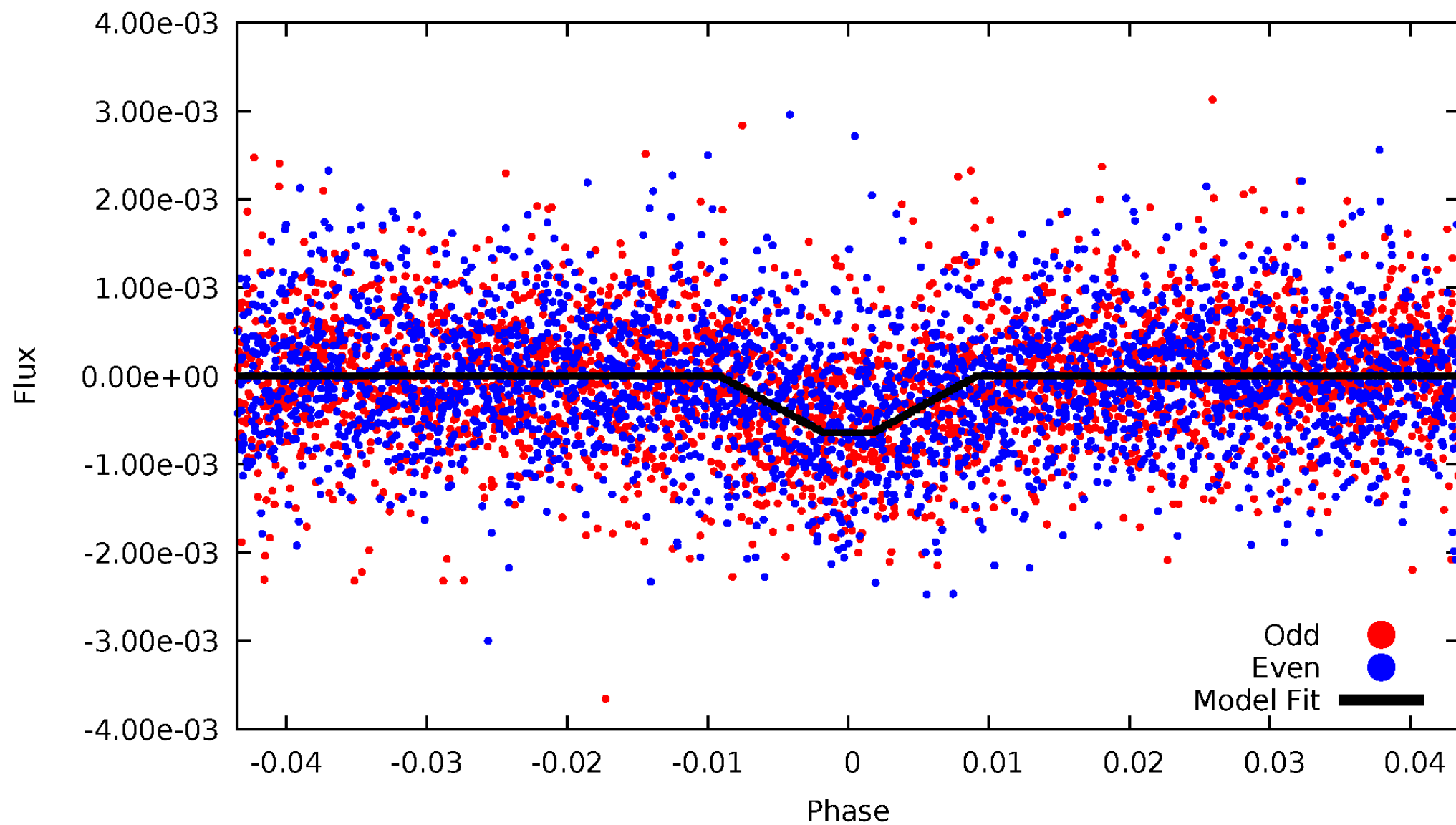
DV Odd/Even

TCE 004061149-01



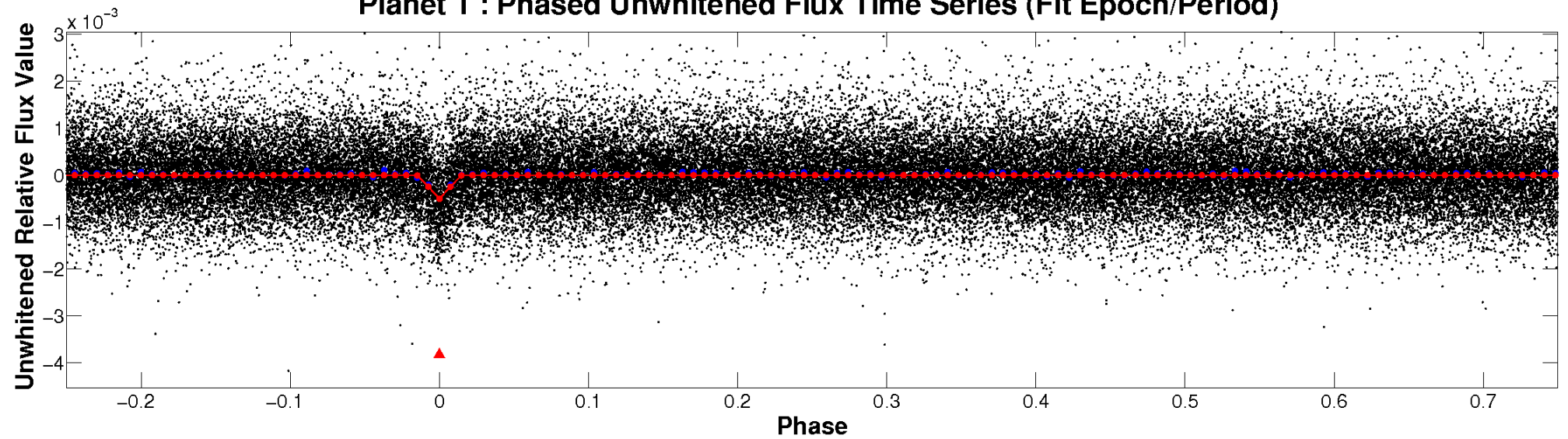
ALT Odd/Even

TCE 004061149-01

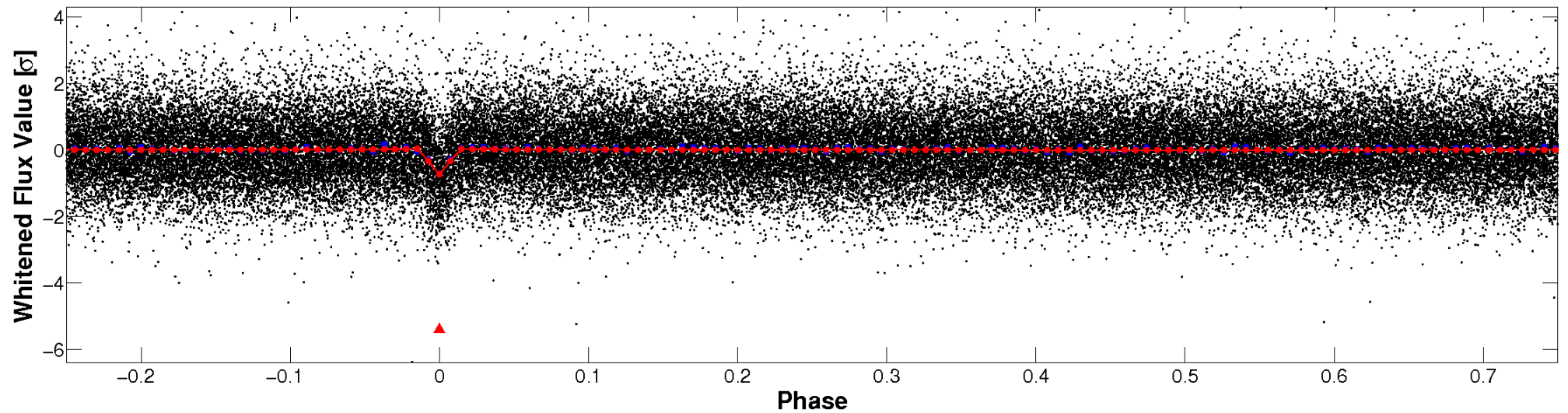


Non-Whitened Vs. Whitened Light Curve

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

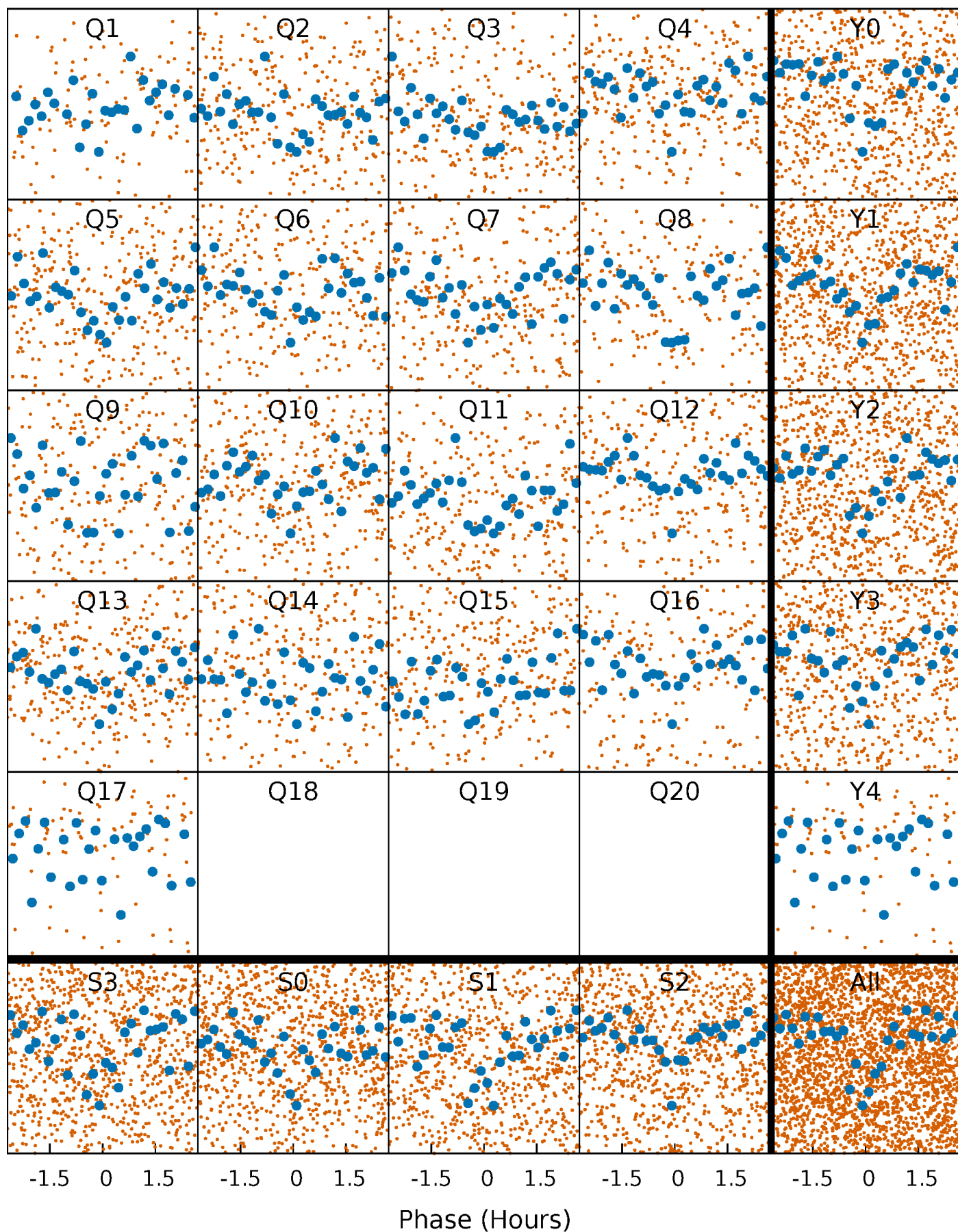


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



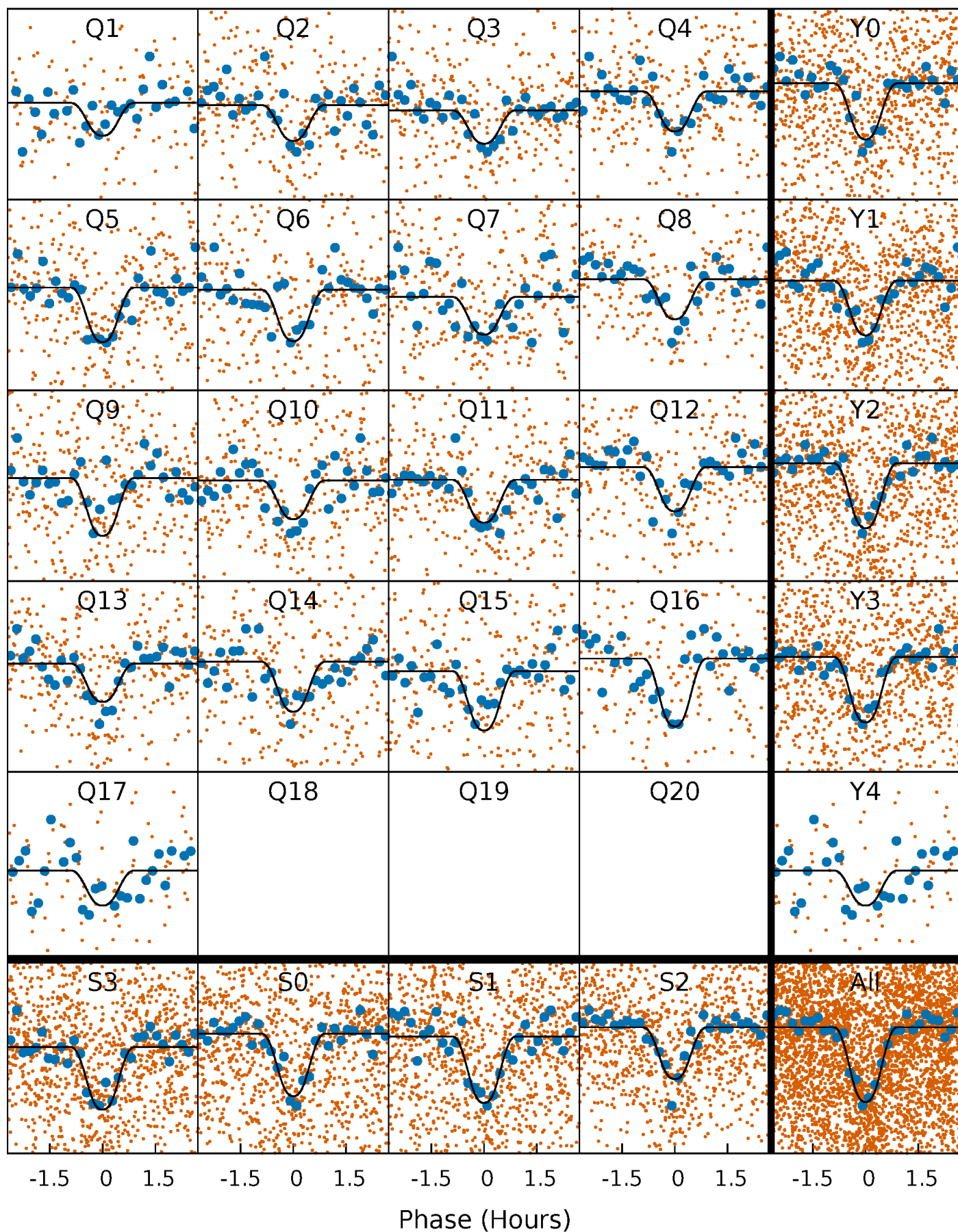
PDC Quarter-Phased Transit Curves

TCE 004061149-01 P= 2.757592 Days $T_0=133.049047$ (BKJD)



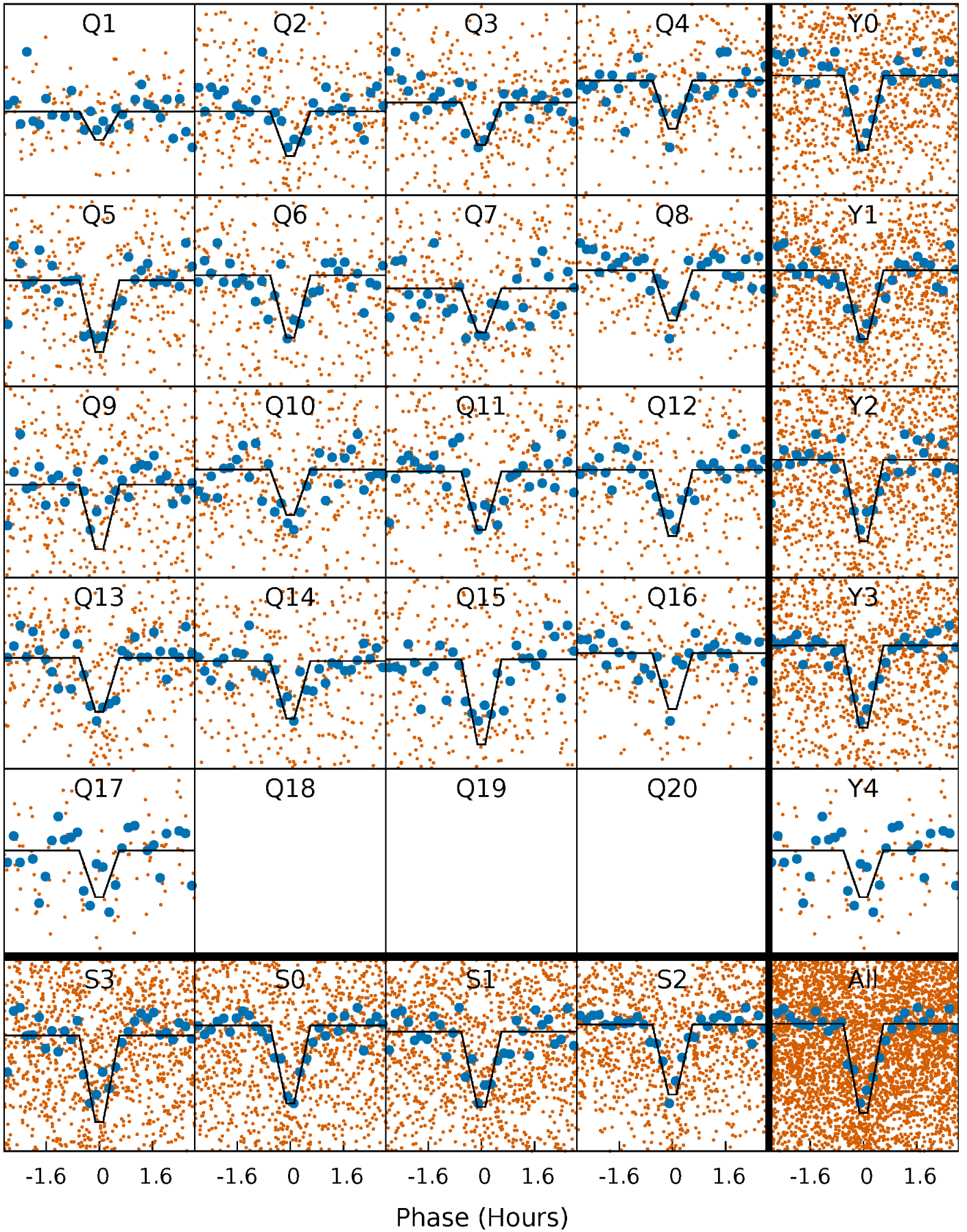
DV Quarter-Phased Transit Curves

TCE 004061149-01 P= 2.757592 Days $T_0=133.049047$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

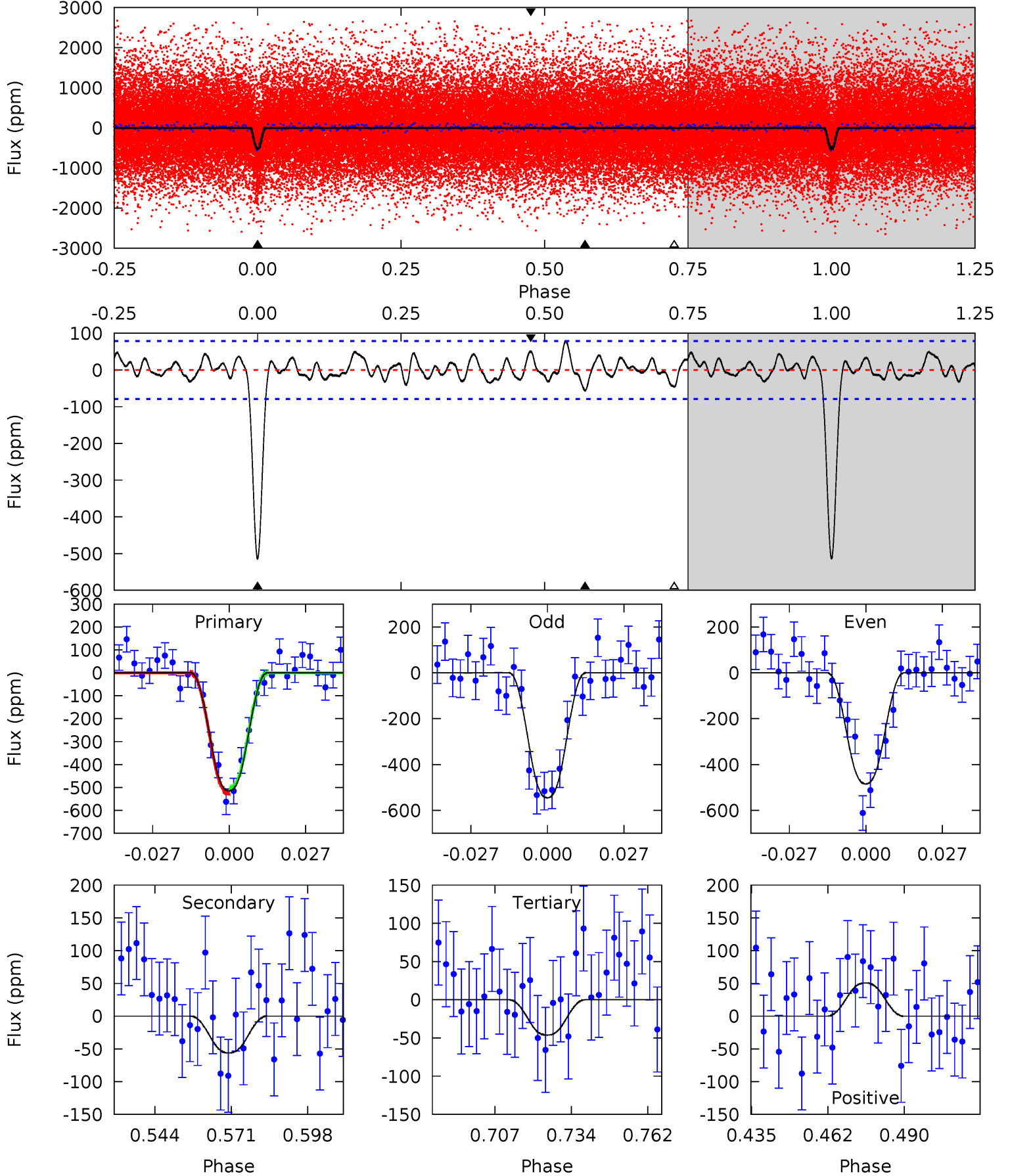
TCE 004061149-01 P= 2.757581 Days $T_0=133.051009$ (BKJD)



DV Model-Shift Uniqueness Test

004061149-01, P = 2.757592 Days, E = 130.291455 Days

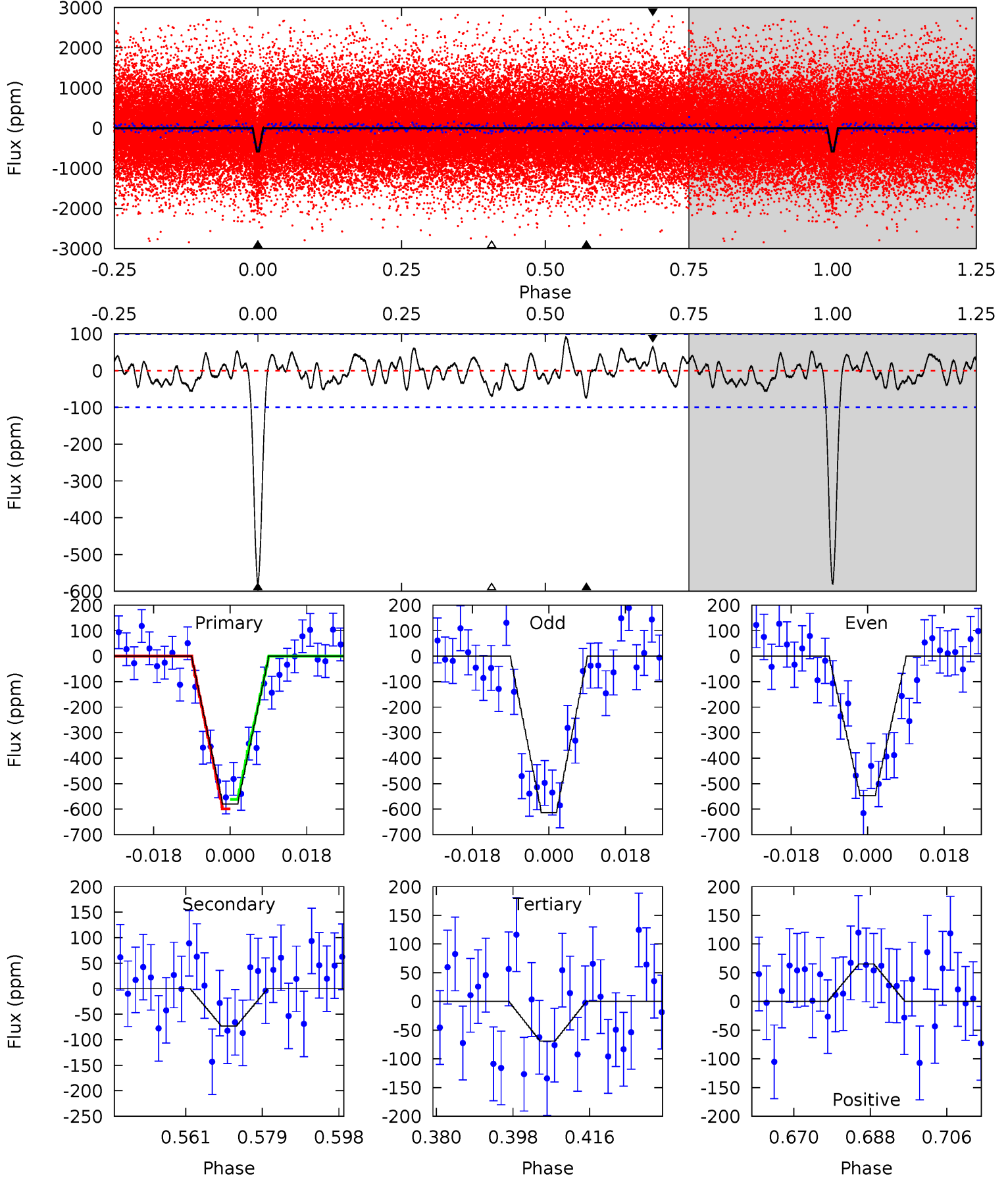
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 31.5 | 3.43 | 2.83 | 3.09 | 4.83 | 2.21 | 1.36 | 28.7 | 28.4 | 0.60 | 0.34 | 1.86 | 1.00 | 0.13 | 0.59 |



Alt Model-Shift Uniqueness Test

004061149-01, P = 2.757581 Days, E = 130.293428 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 28.6 | 3.62 | 3.41 | 3.22 | 4.91 | 2.36 | 1.44 | 25.2 | 25.4 | 0.21 | 0.40 | 1.62 | 0.93 | 0.14 | 0.93 |



Stellar Parameters For KIC 004061149

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | R (R_{\odot}) | $M(M_{\odot})$ | p_{\star} ($\text{g}\cdot\text{cm}^{-3}$) |
|--------|---------------------|---------------------------|----------------------------|---------------------------|---------------------------|---|
| | 3683^{+73}_{-88} | $4.840^{+0.050}_{-0.055}$ | $-0.220^{+0.150}_{-0.150}$ | $0.424^{+0.045}_{-0.055}$ | $0.454^{+0.037}_{-0.064}$ | $8.392^{+2.553}_{-1.799}$ |
| | +2%/-2% | +1%/-1% | +68%/-68% | +11%/-13% | +8%/-14% | +30%/-21% |
| Source | SPE70 | SPE60 | SPE70 | DSEP | | |

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

Secondary Eclipse Parameters for KIC 004061149-01 / KOI 1201.01

| Detrend | Depth (ppm) | R_p (R_{\oplus}) | T_{max} (K) | T_{obs} (K) | A_{obs} |
|---------|--------------|------------------------|-------------------|----------------------|-----------------|
| DV | -56 ± 16 | $1.27^{+0.19}_{-0.19}$ | 859^{+29}_{-26} | 2535^{+131}_{-142} | 17^{+8}_{-6} |
| Alt. | -73 ± 20 | $1.17^{+0.18}_{-0.16}$ | 859^{+26}_{-27} | 2673^{+144}_{-135} | 25^{+13}_{-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 $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

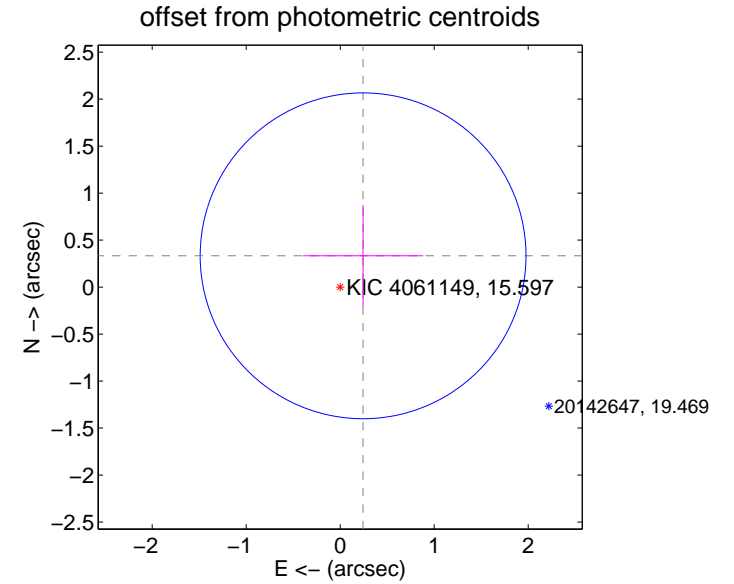
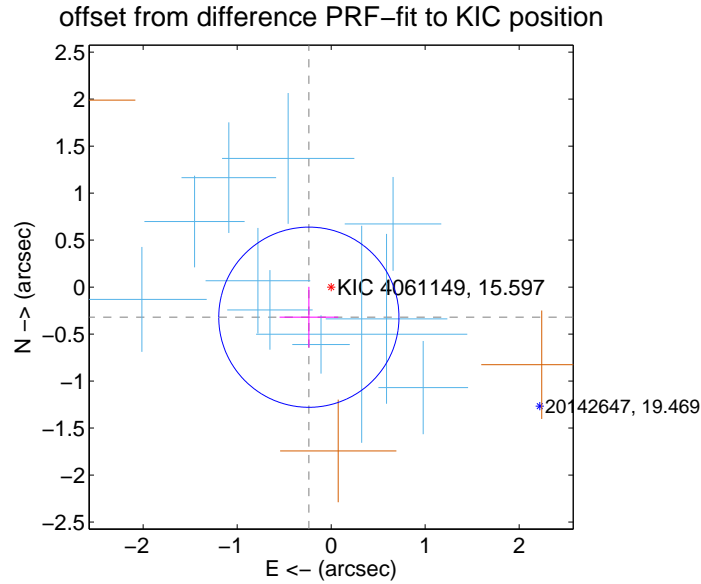
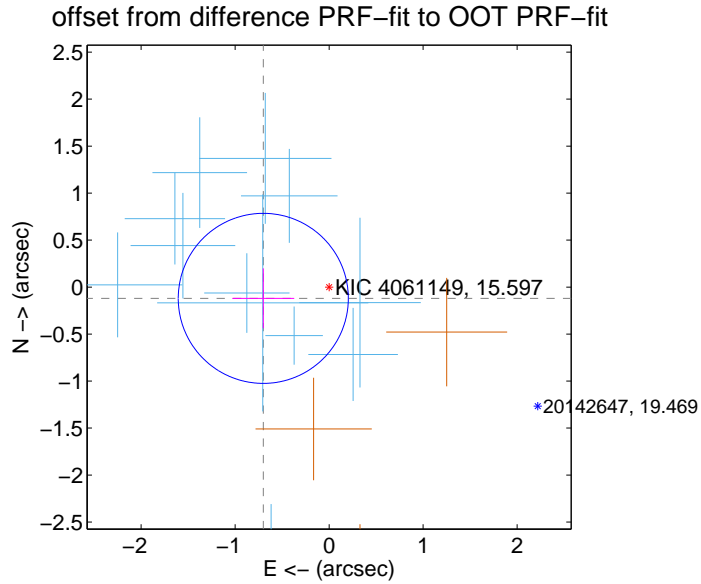
DV Centroid Data

Supplemental centroid analysis for 004061149-01. Kepler magnitude: 15.60. Transit SNR 19.72

There are 12 quarters with good PRF difference image offsets

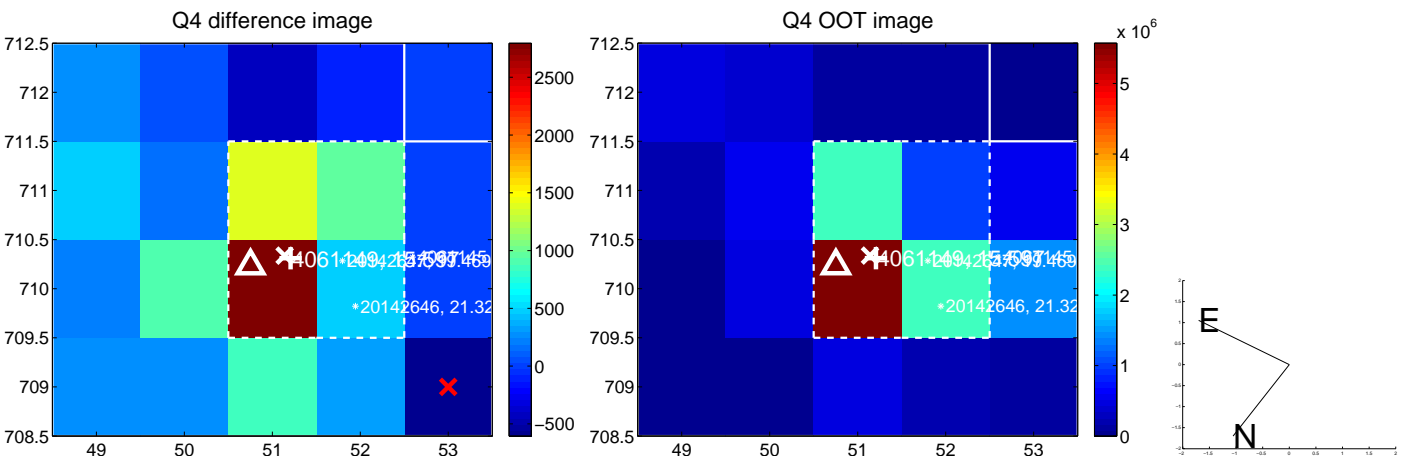
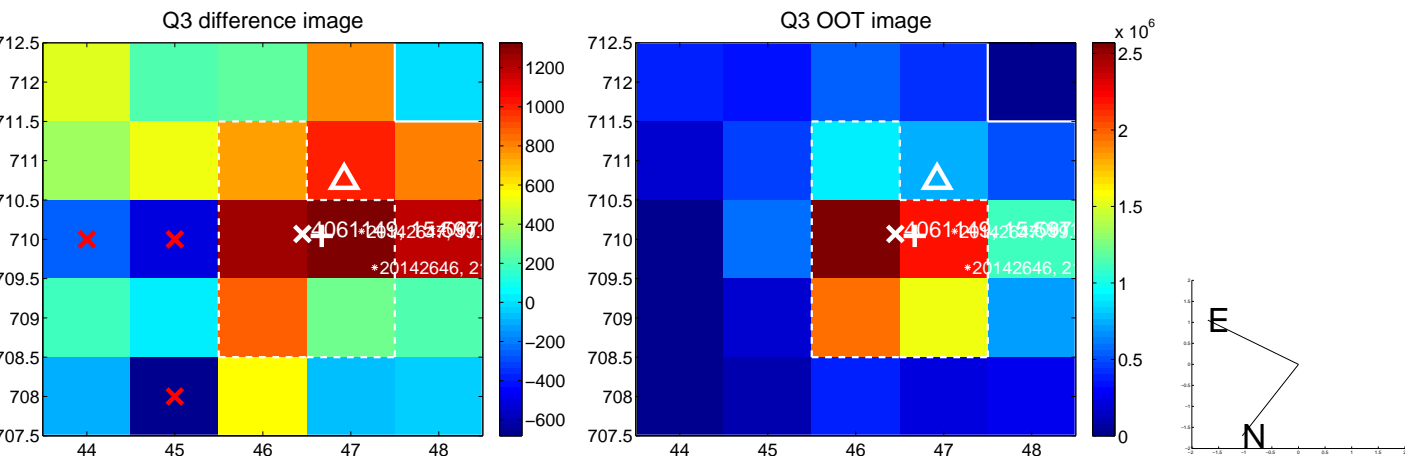
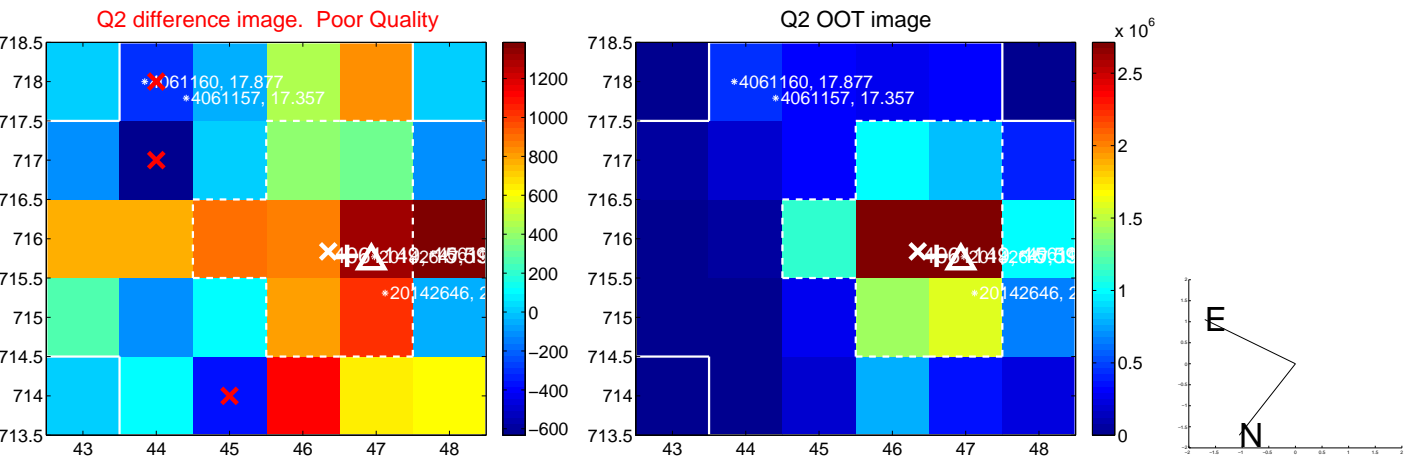
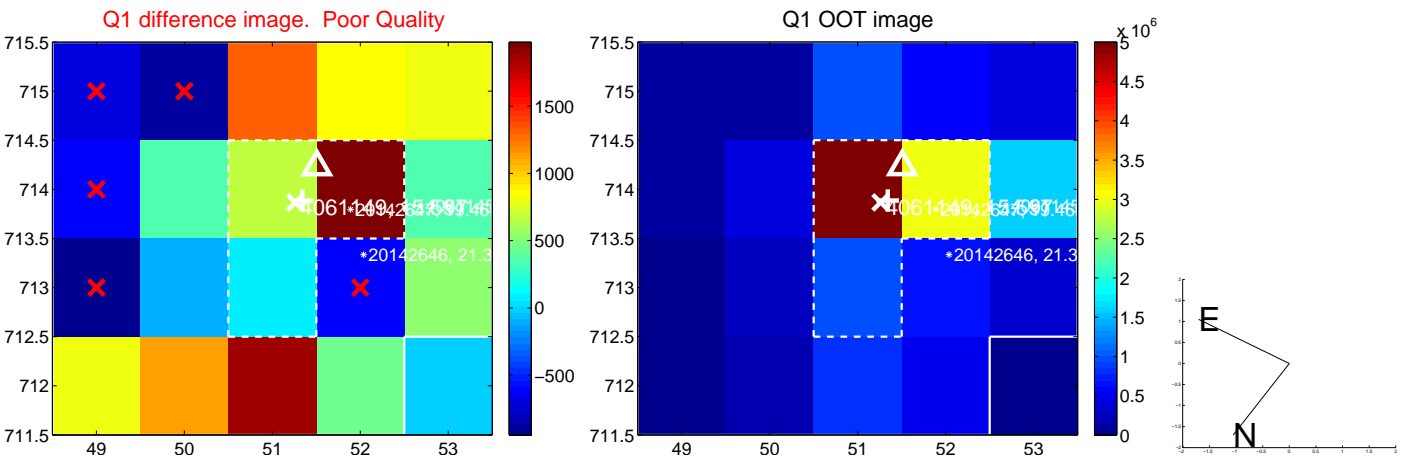
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|-------------------|--------------------|
| PRF-fit source offset from OOT | 0.711 ± 0.302 | 2.36 | 0.701 ± 0.330 | -0.120 ± 0.319 |
| PRF-fit source offset from KIC position | 0.399 ± 0.320 | 1.25 | 0.237 ± 0.312 | -0.320 ± 0.324 |
| photometric centroid source offset | 0.41 ± 0.58 | 0.71 | -0.24 ± 0.64 | 0.33 ± 0.54 |

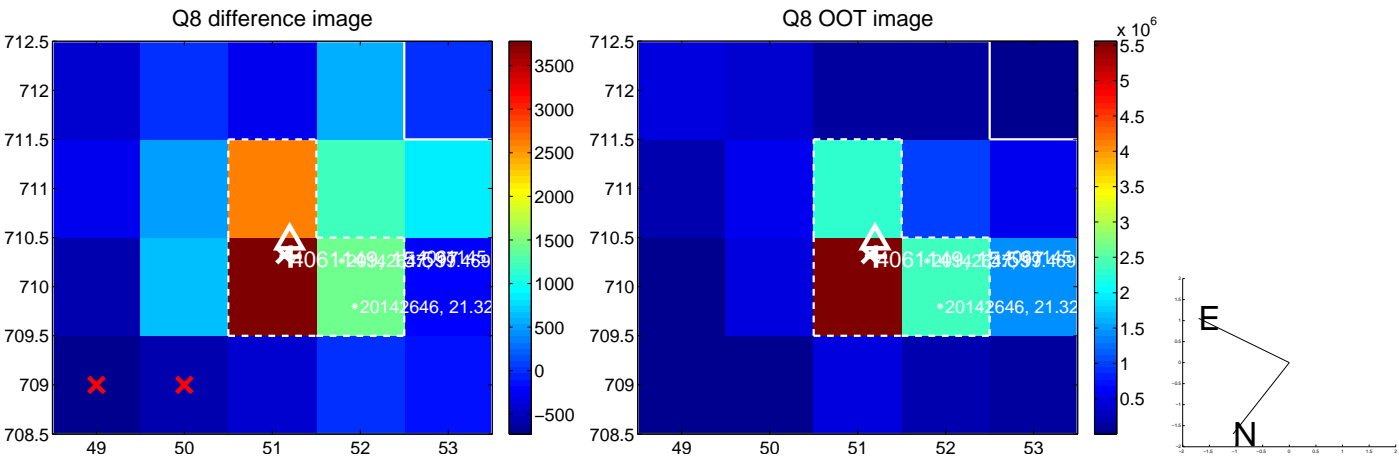
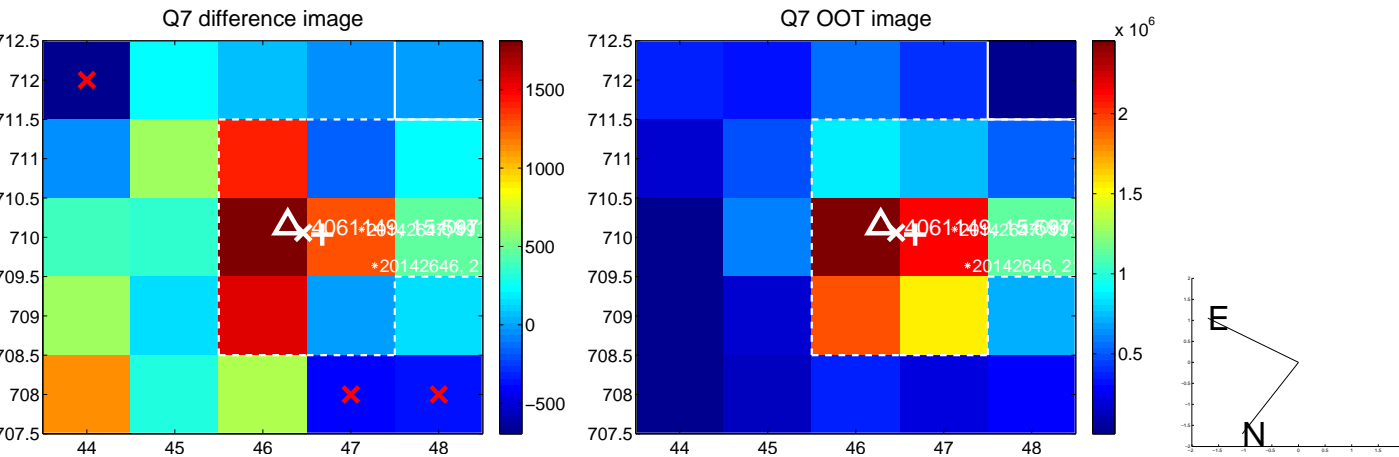
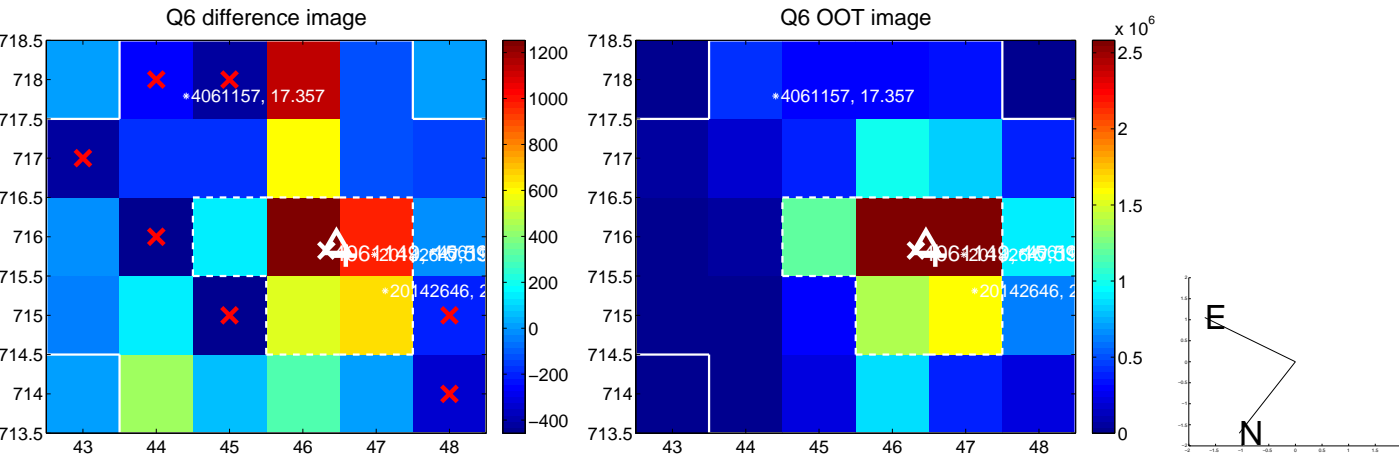
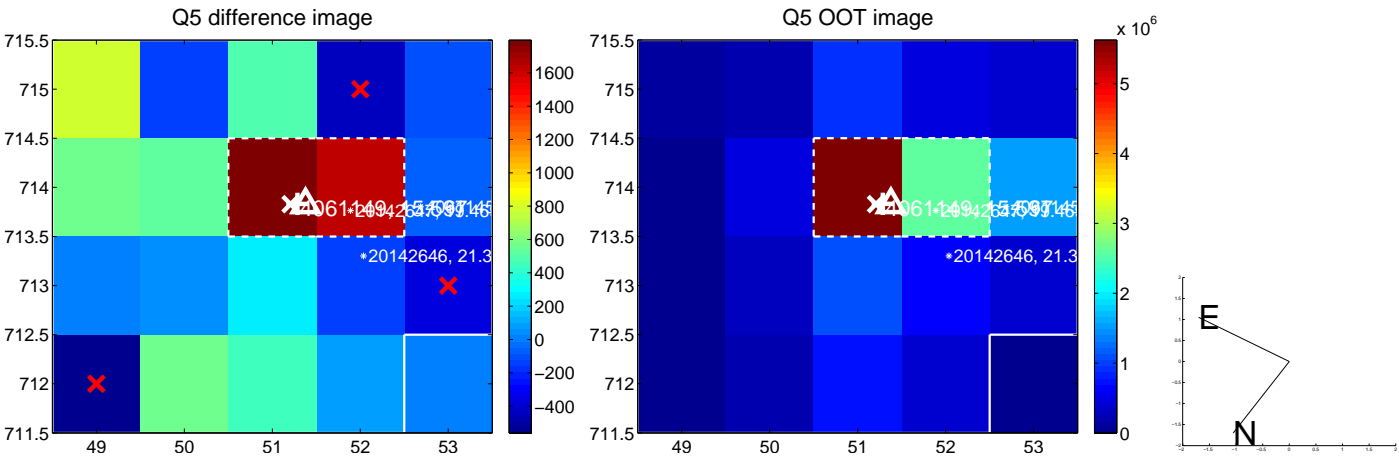


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

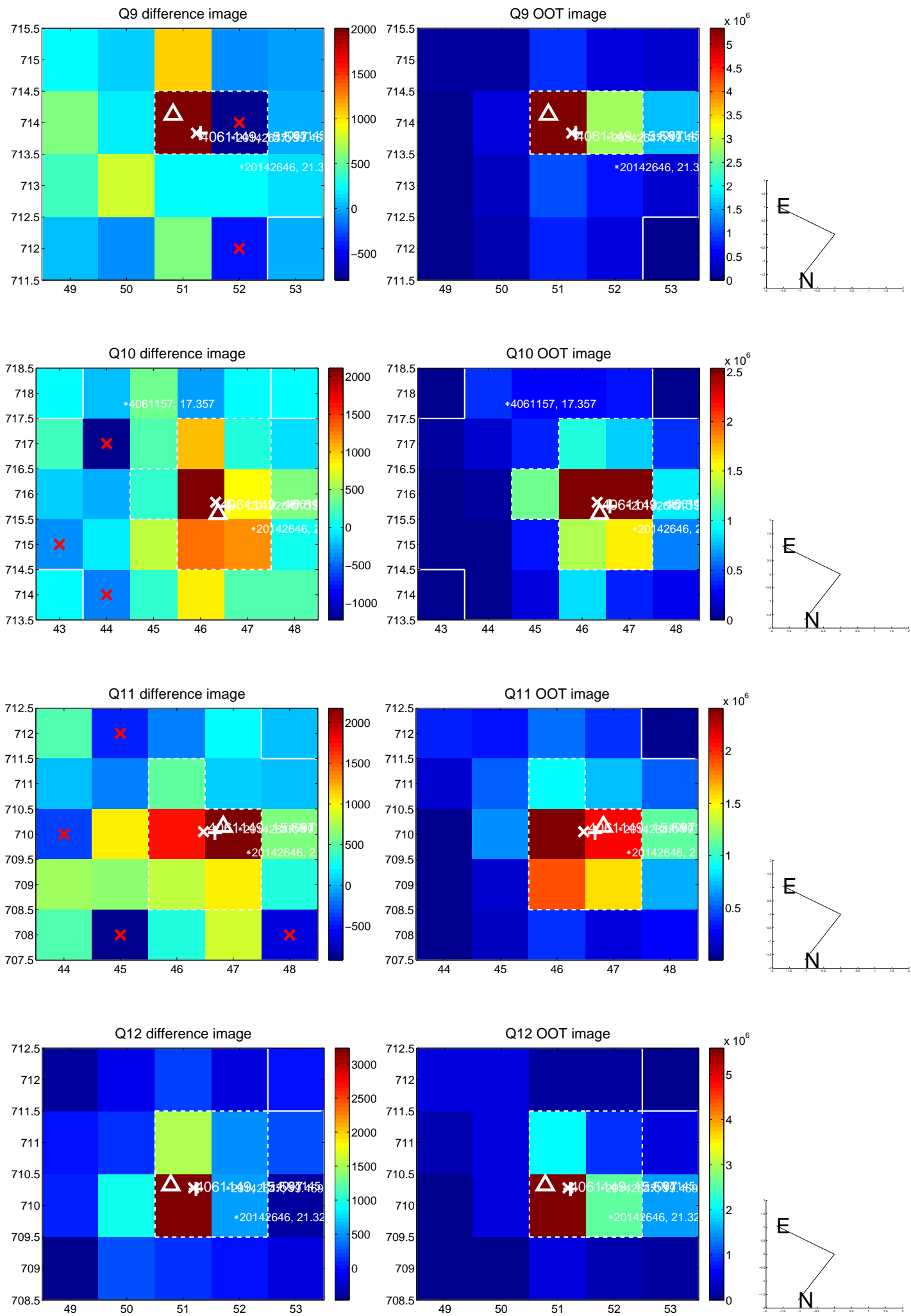
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



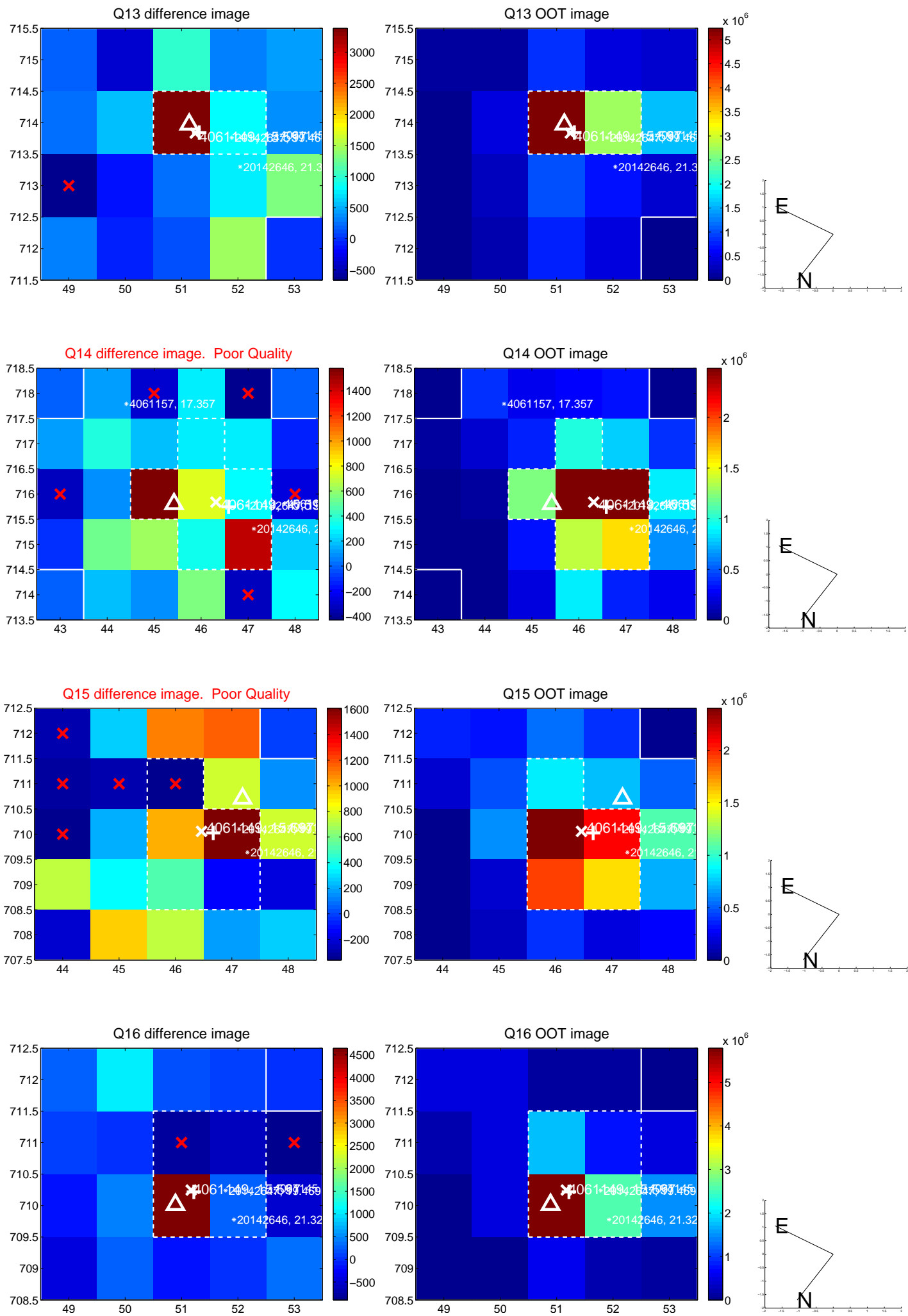
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



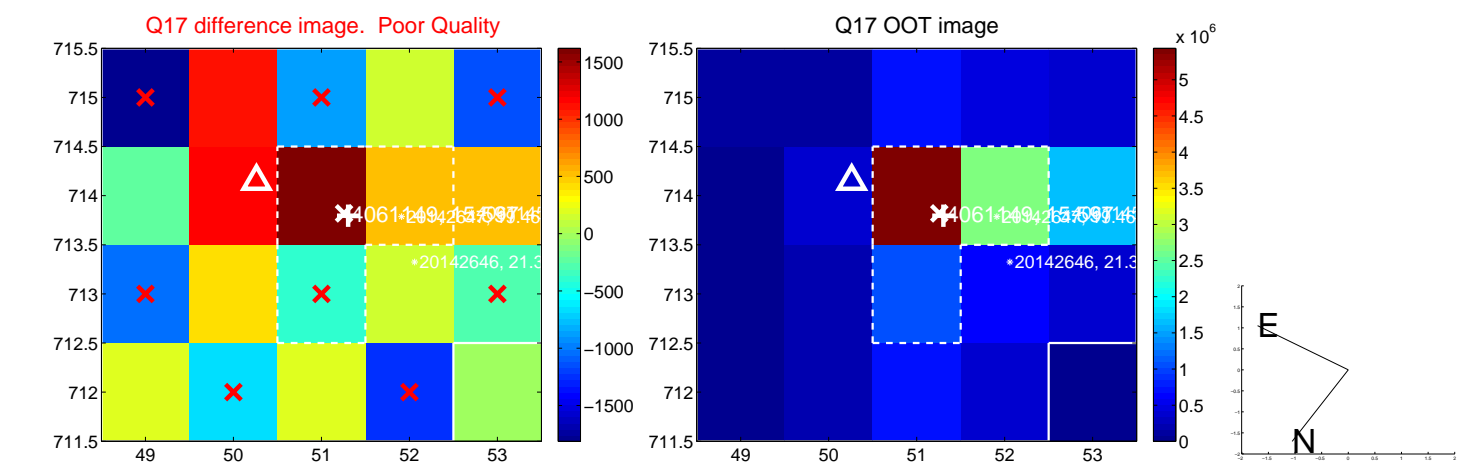
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



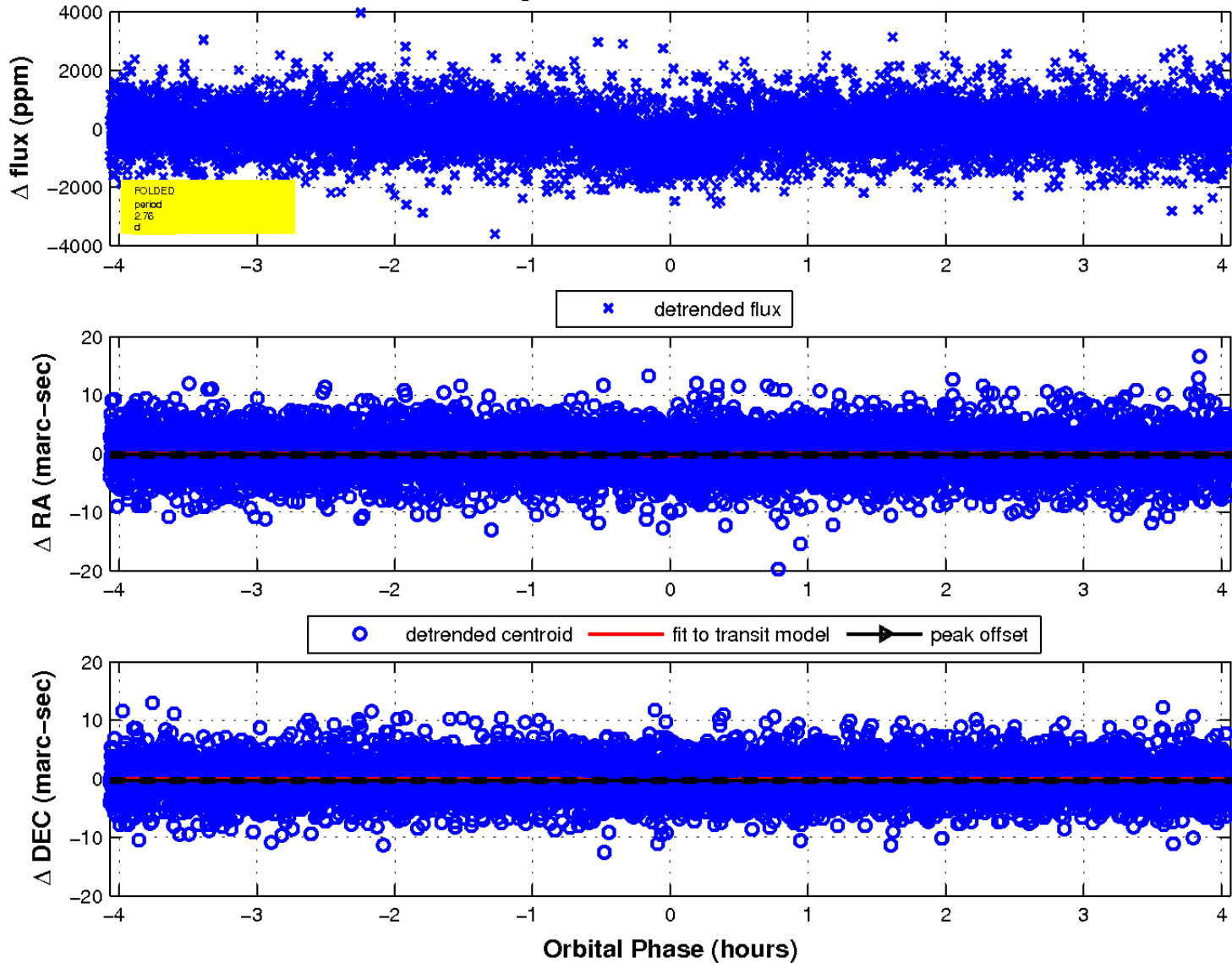
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

