

KIC 003328080

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}) |
|--------------|----------|---------|---------------|--------------|-------------|------------------|------|------|-----------------------------|-----------------|------------------------|------------------------|
| 003328080-01 | OBS | 3075.01 | 4.765619 | 133.500754 | 68.5 | 2.756 | 13.6 | 15.0 | 1.12 | 5702 | 1.30 | 439.49 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|--------------|
| 003328080-01 | OBS | PC | 0.98 | 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.

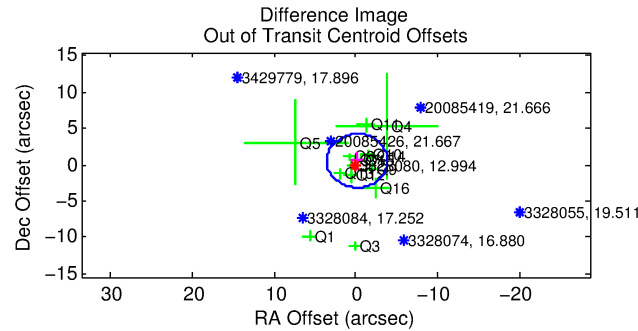
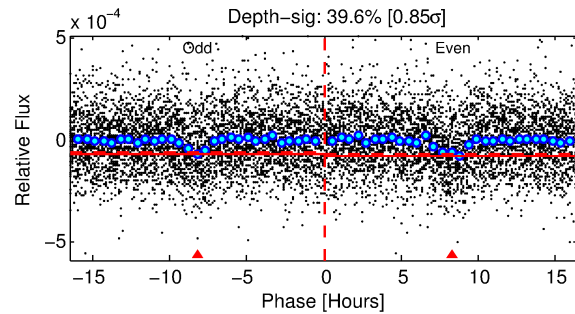
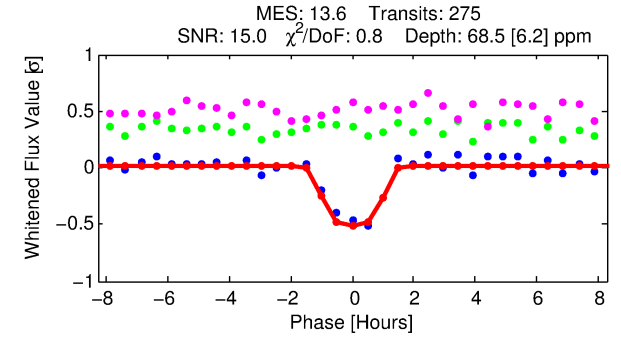
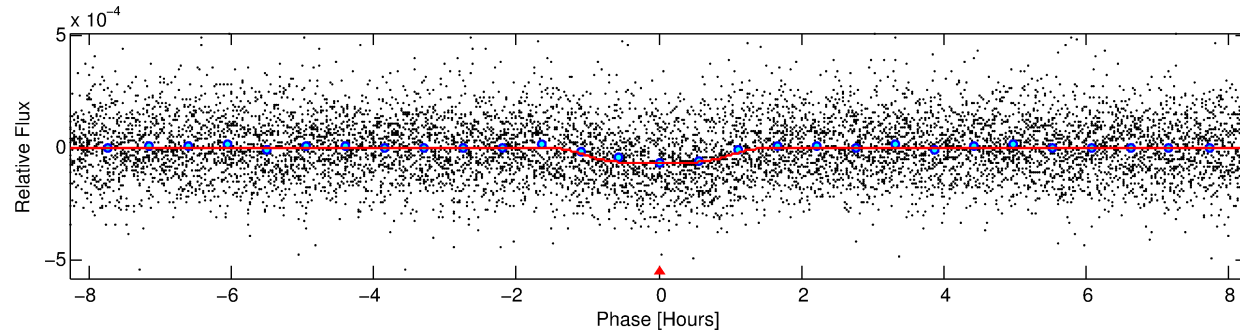
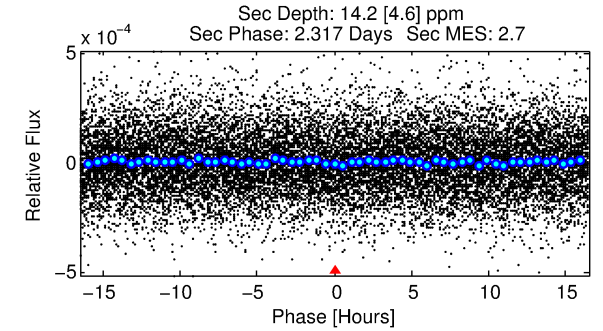
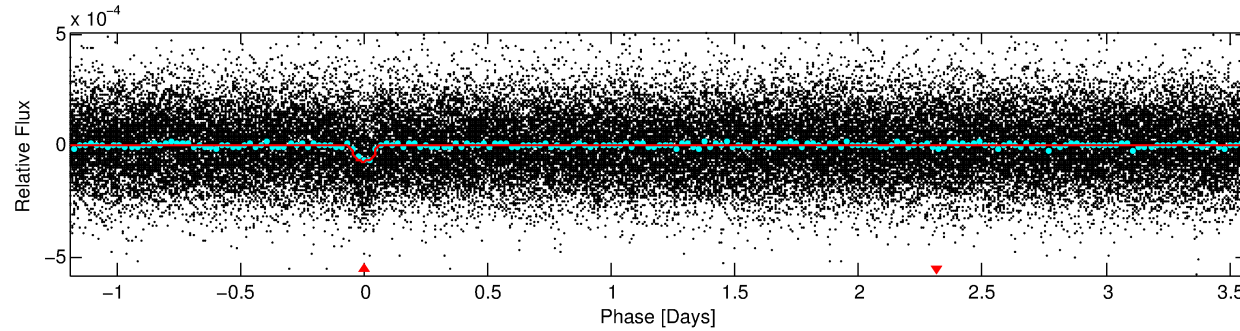
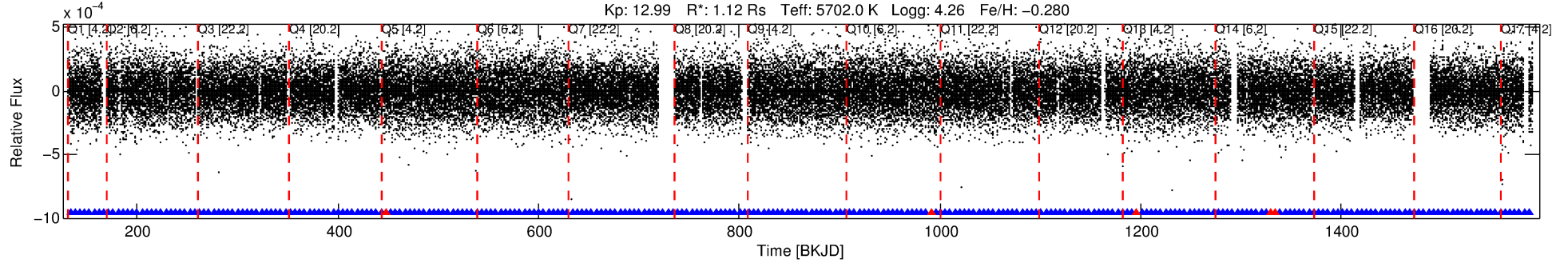
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003328080-01

No Significant Match Found

DV One-Page Summary

KIC: 3328080 Candidate: 1 of 1 Period: 4.766 d
KOI: K03075.01 Corr: 0.886



DV Fit Results:

Period = 4.76562 [0.00002] d
Epoch = 133.5008 [0.0037] BKJD
Rp/R* = 0.0106 [0.0008]
a/R* = 3.19 [0.76]
b = 0.98 [0.01]
Seff = 439.49 [201.73]
Teq = 1168 [134] K
Rp = 1.30 [0.41] Re
a = 0.0522 [0.0148] AU
Ag = 12.65 [7.12] [1.64σ]
Teffp = 3404 [320] K [6.45σ]

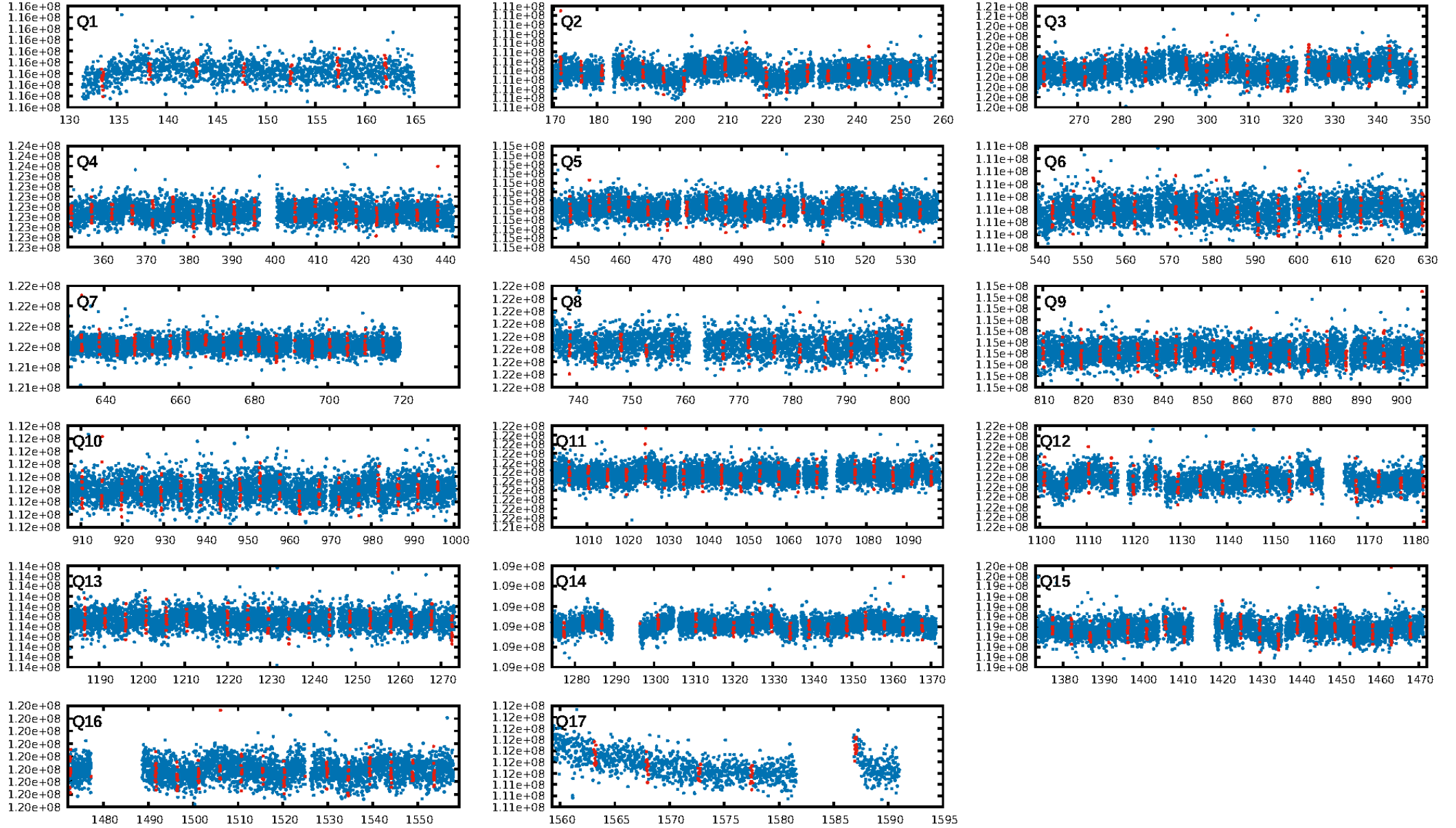
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: 1.71e-41
RollingBand-fgt: 0.98 [258/263]
GhostDiagnostic-chr: 1.814
Centroid-sig: 44.3%
Centroid-so: 0.926 arcsec [0.93σ]
OotOffset-rm: 0.546 arcsec [0.44σ]
KicOffset-rm: 0.974 arcsec [0.76σ]
OotOffset-st: 3/4/4/4 [15]
KicOffset-st: 3/4/4/4 [15]
DiffImageQuality-fgm: 0.53 [8/15]
DiffImageOverlap-fno: 1.00 [17/17]

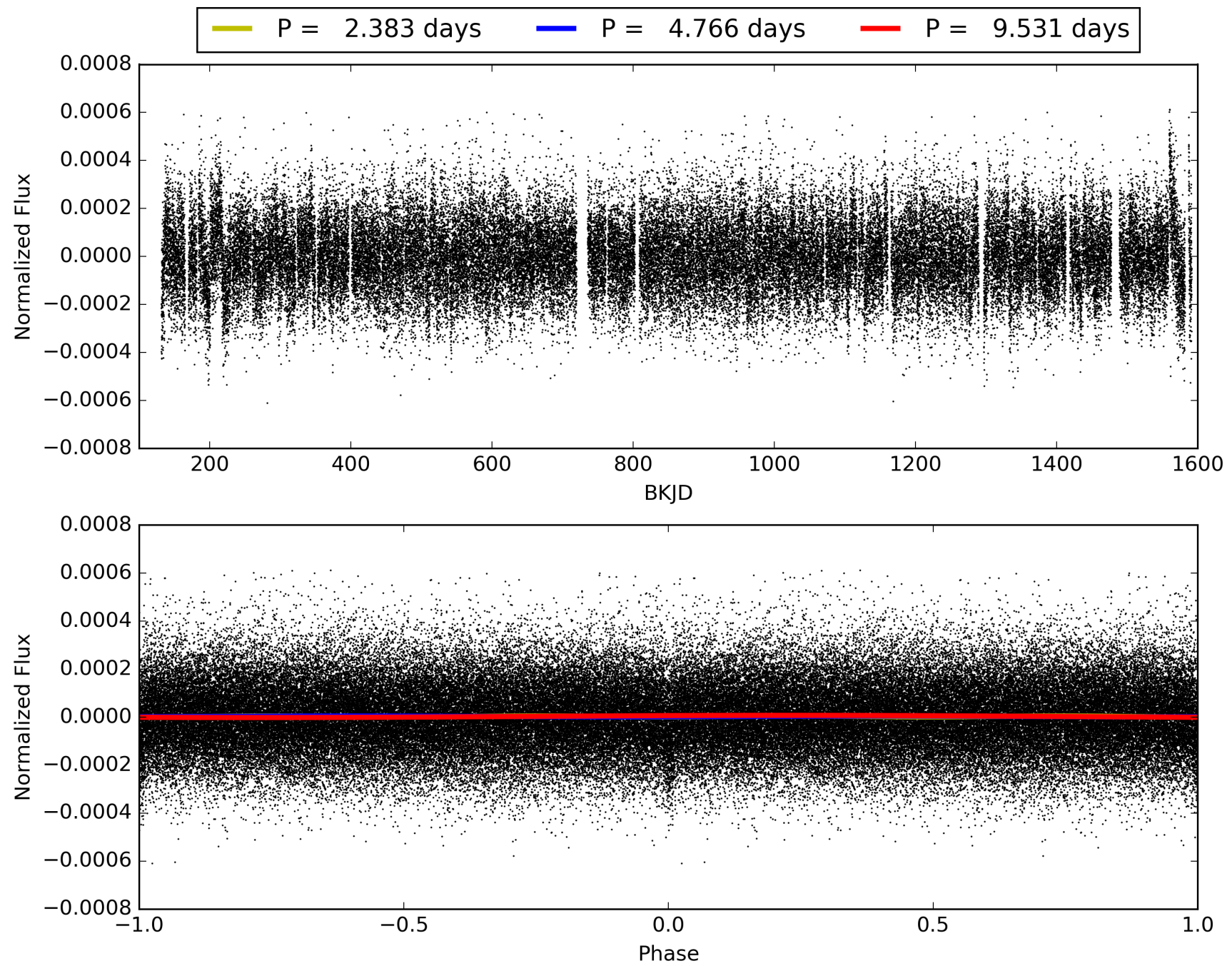
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 16:34:32 Z

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

TCE 003328080-01, PDC Light Curves

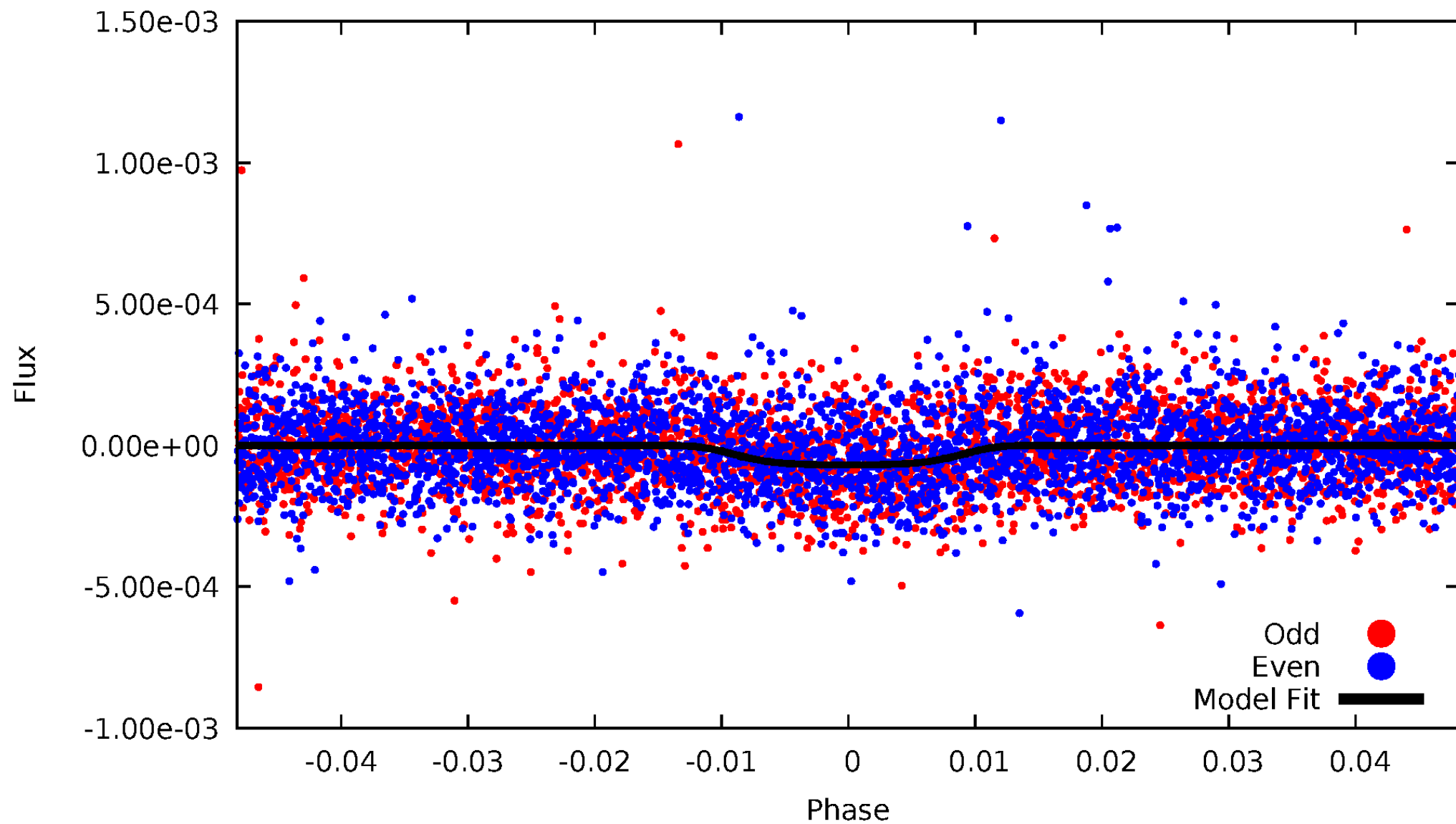


TCE 003328080-01



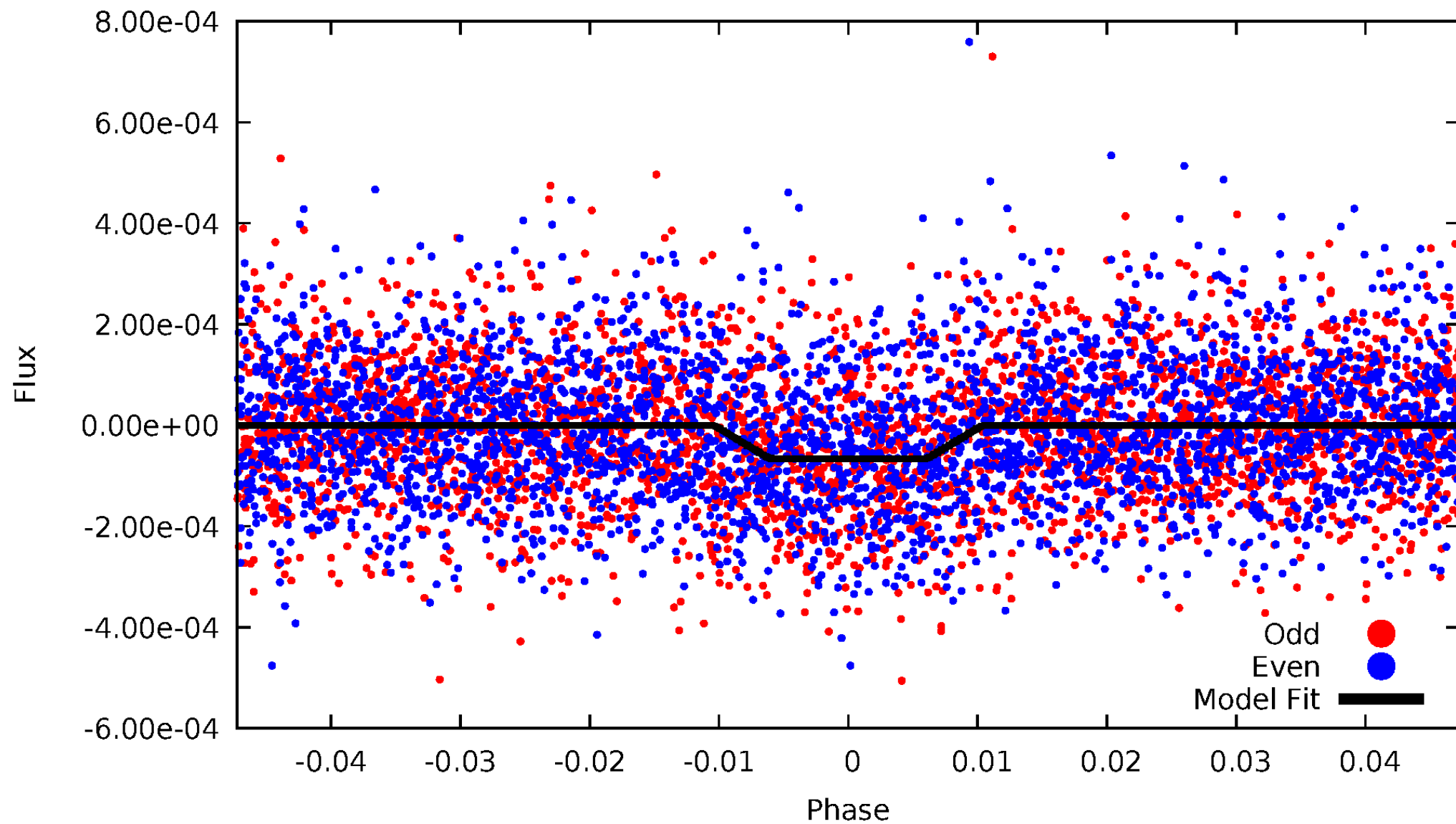
DV Odd/Even

TCE 003328080-01



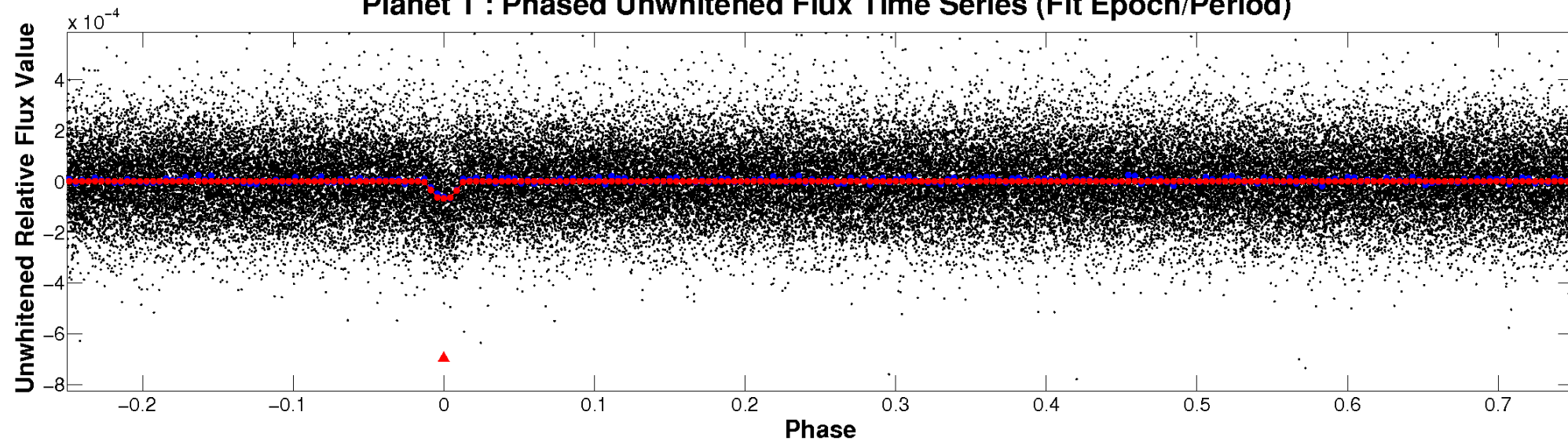
ALT Odd/Even

TCE 003328080-01

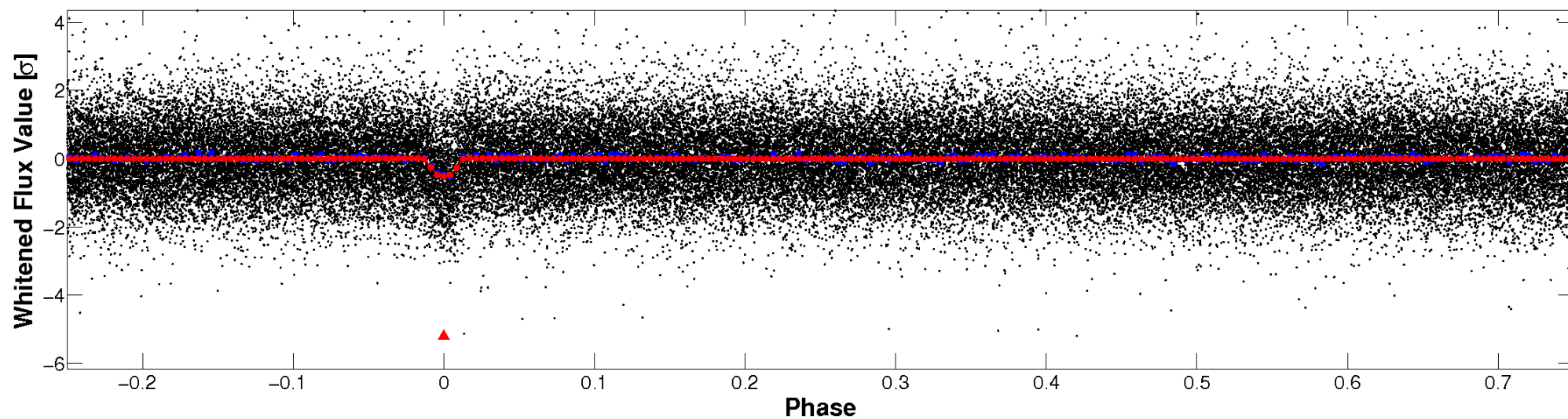


Non-Whitened Vs. Whitened Light Curve

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

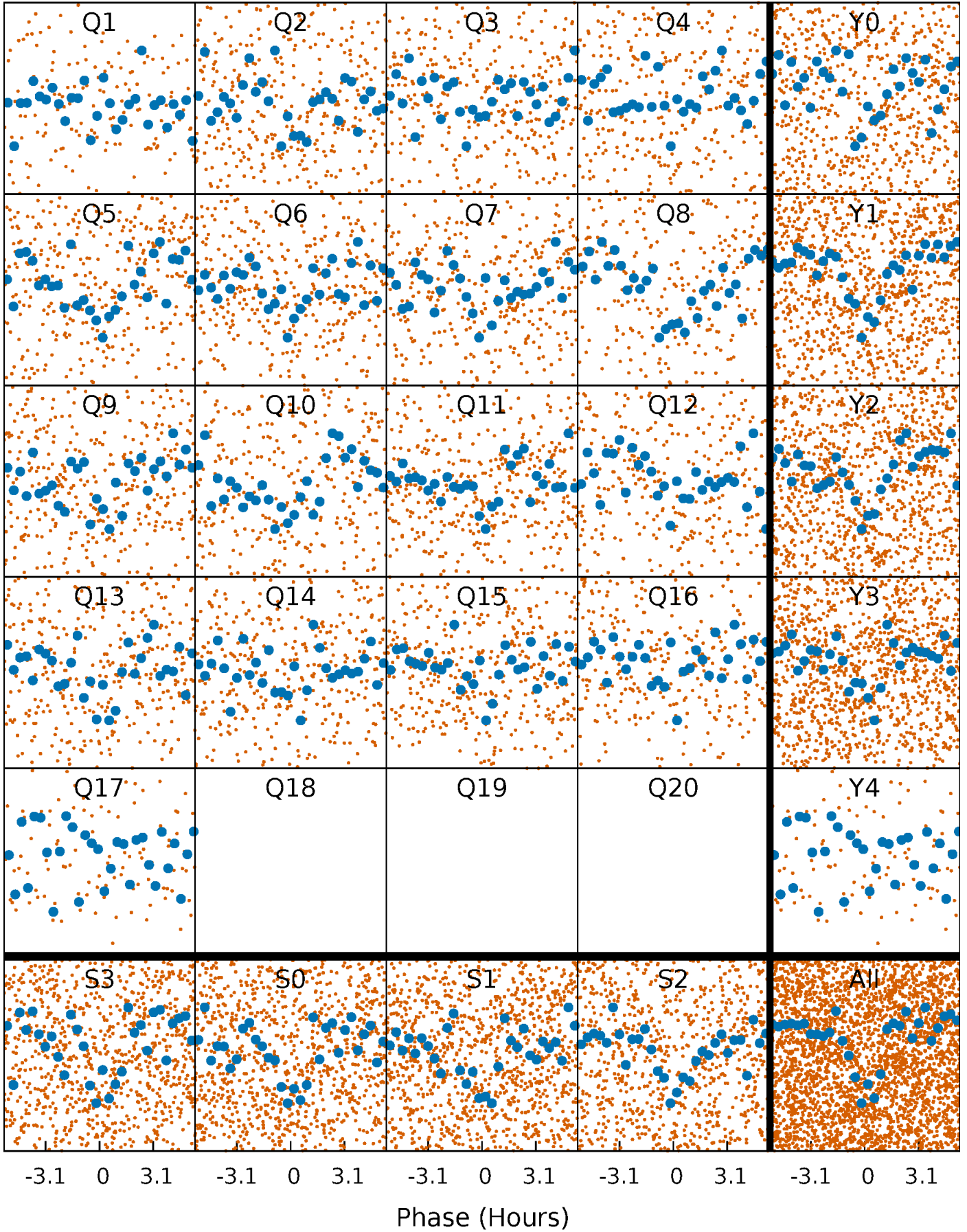


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



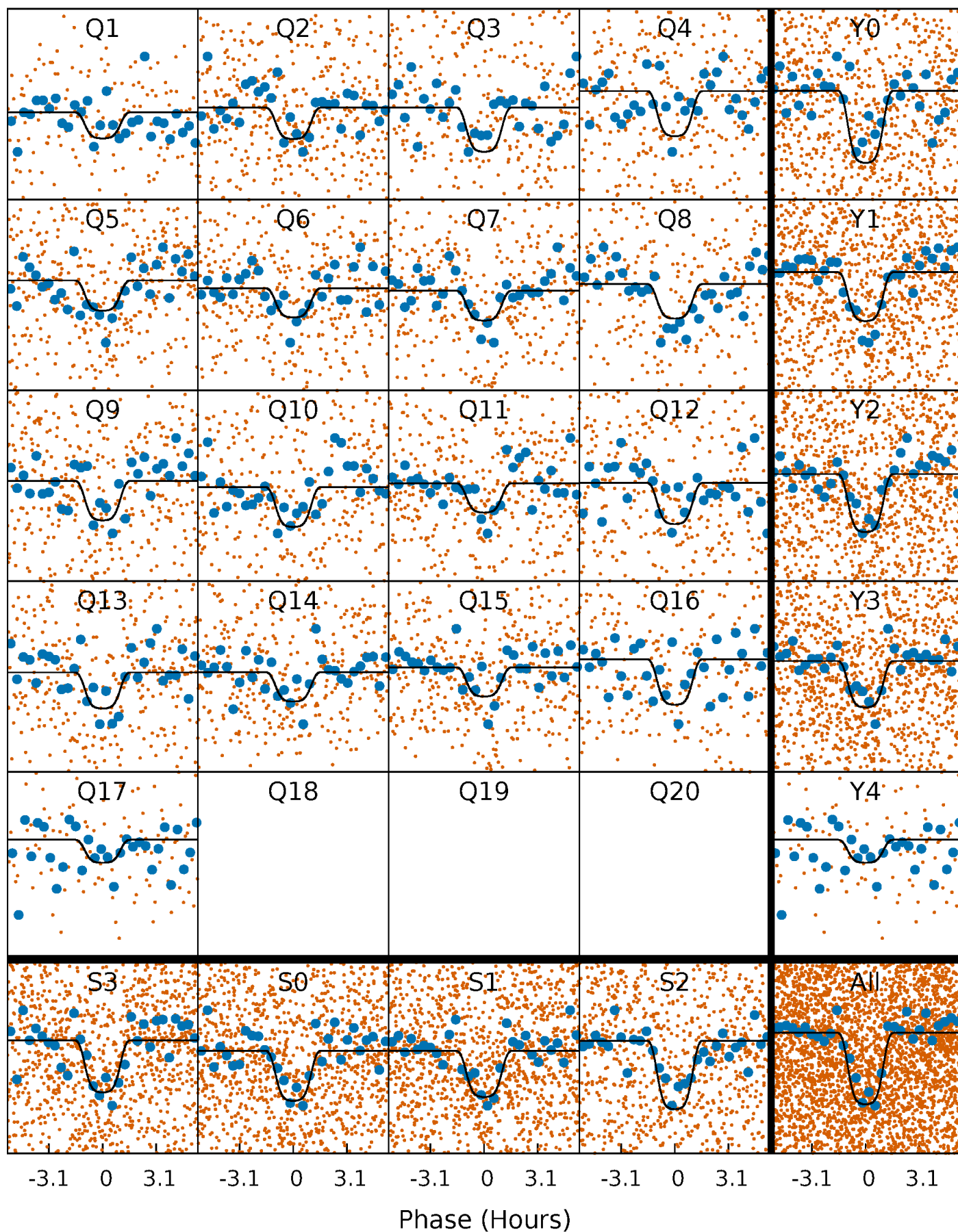
PDC Quarter-Phased Transit Curves

TCE 003328080-01 P= 4.765619 Days $T_0=133.500754$ (BKJD)



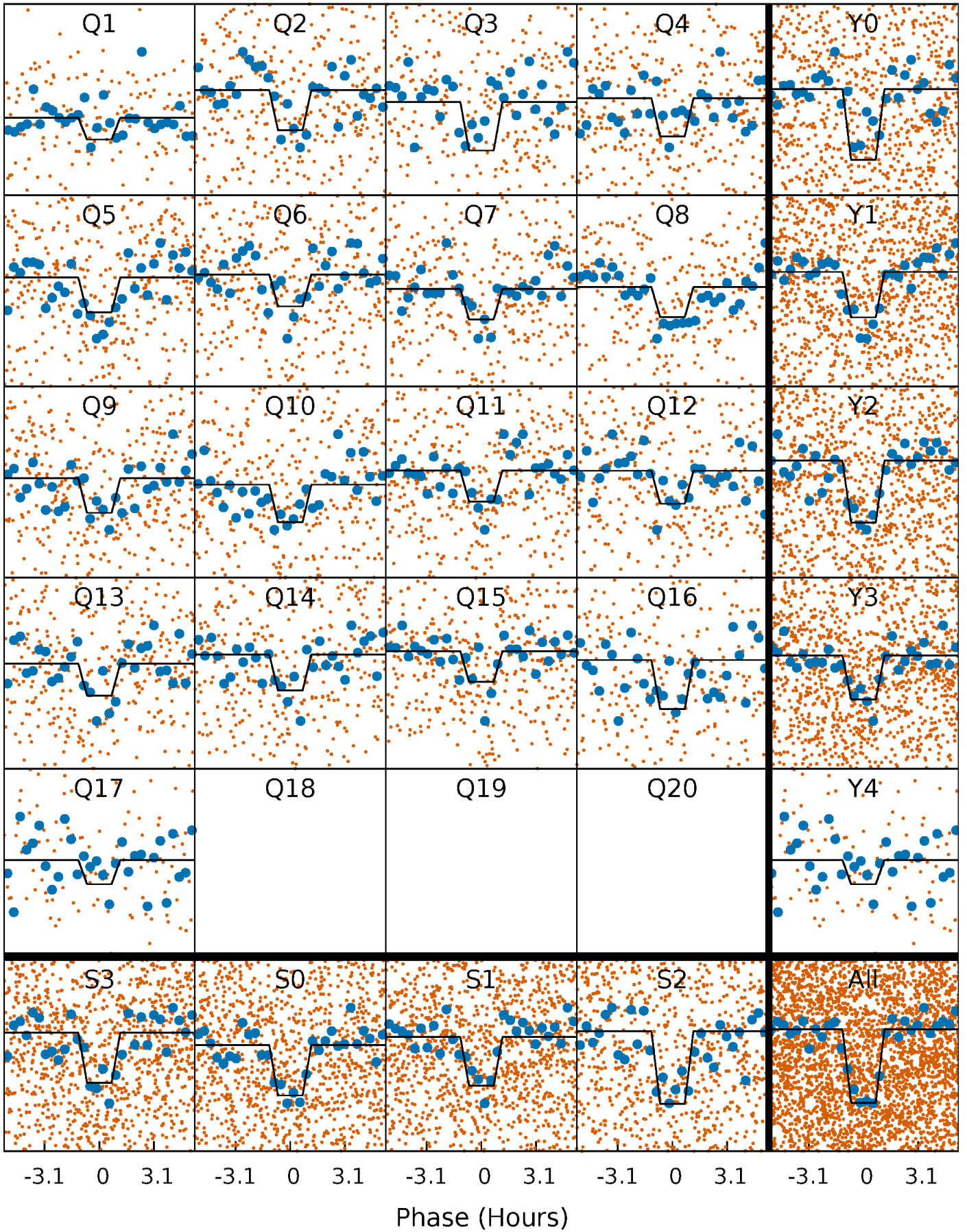
DV Quarter-Phased Transit Curves

TCE 003328080-01 P= 4.765619 Days $T_0=133.500754$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

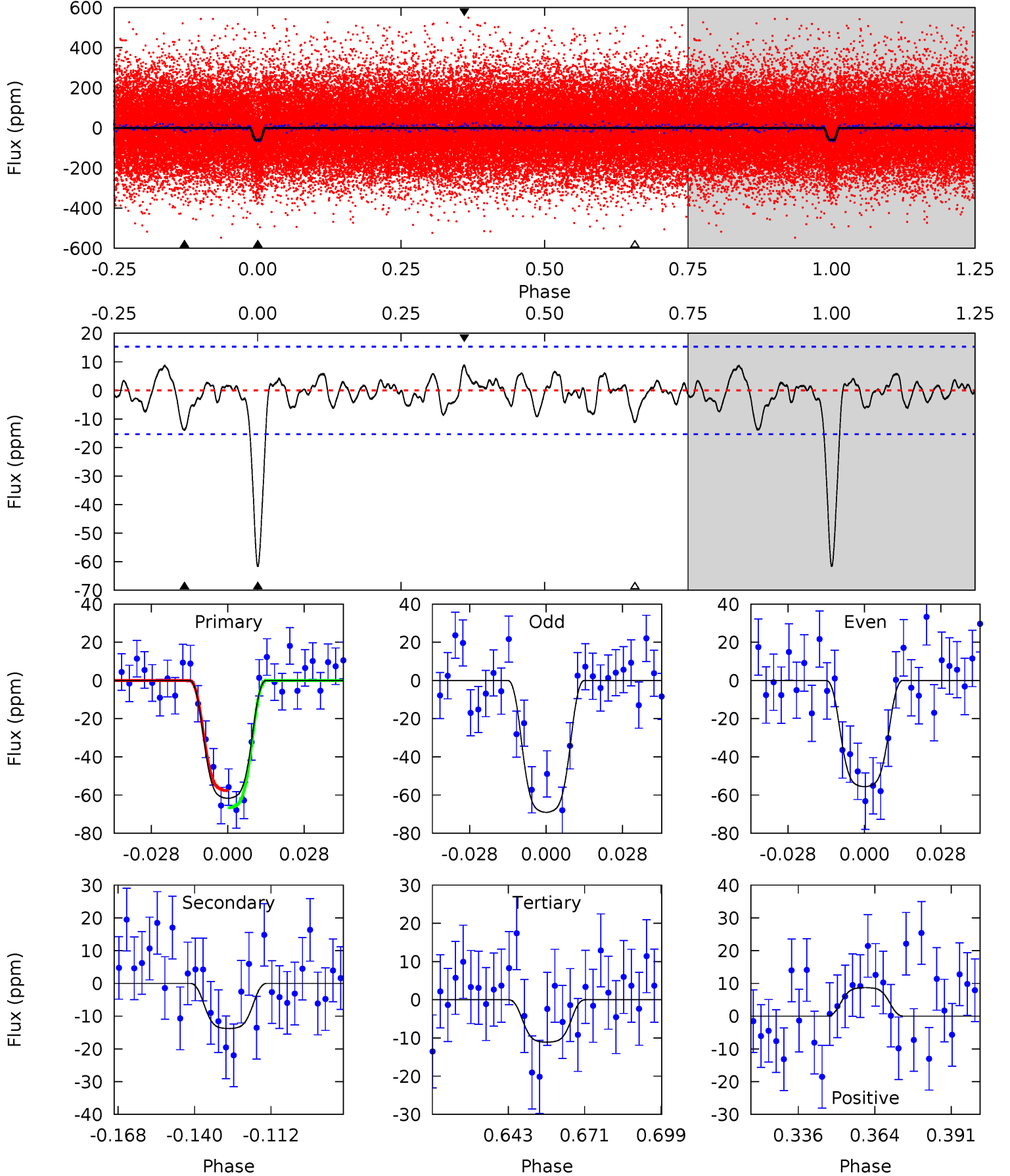
TCE 003328080-01 P= 4.765632 Days $T_0=133.500160$ (BKJD)



DV Model-Shift Uniqueness Test

003328080-01, P = 4.765619 Days, E = 128.735135 Days

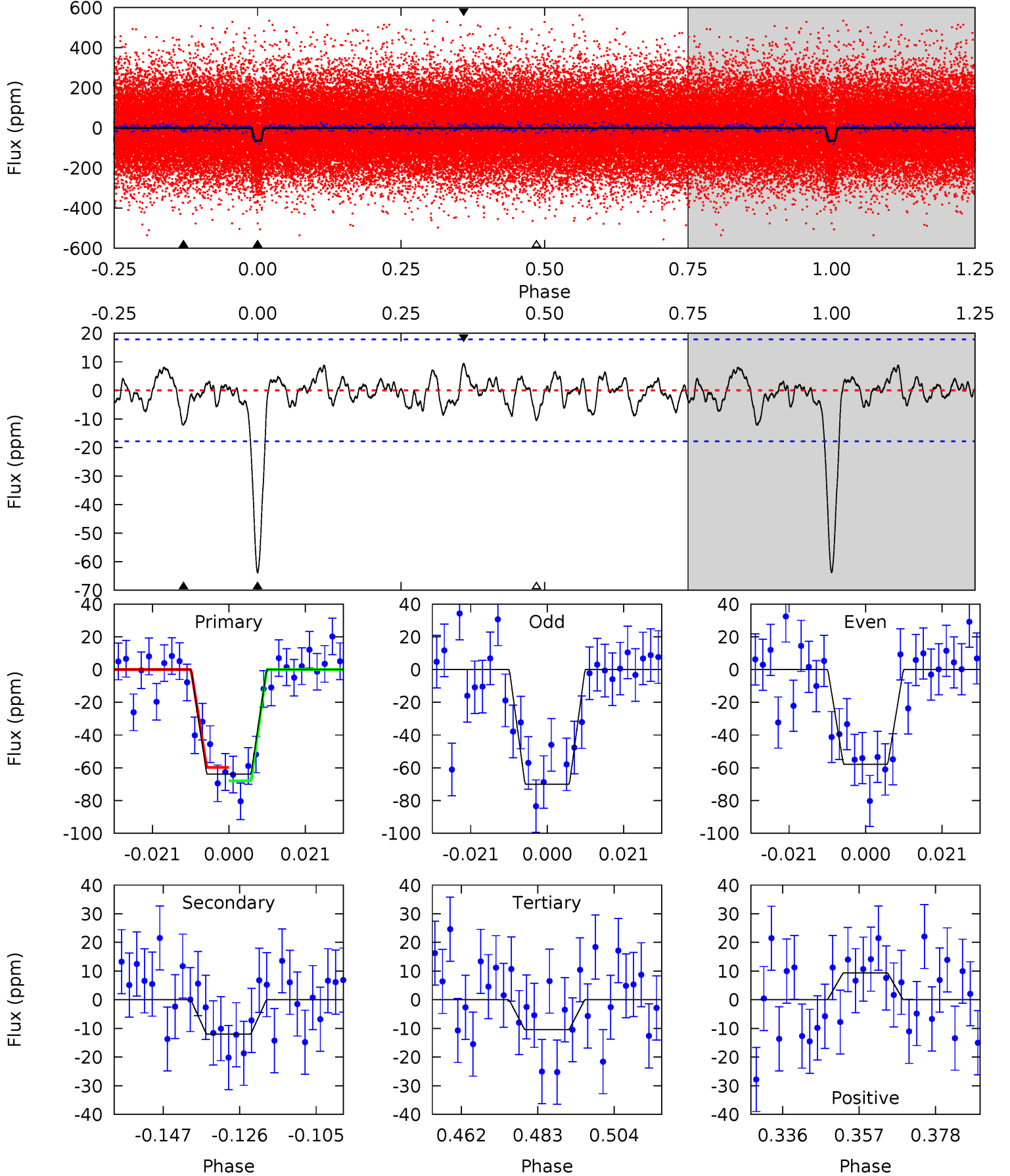
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 19.4 | 4.34 | 3.49 | 2.74 | 4.83 | 2.20 | 1.18 | 15.9 | 16.7 | 0.85 | 1.60 | 2.11 | 1.03 | 0.12 | 1.41 |



Alt Model-Shift Uniqueness Test

003328080-01, P = 4.765632 Days, E = 128.734528 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 17.4 | 3.28 | 2.86 | 2.56 | 4.88 | 2.31 | 1.05 | 14.6 | 14.9 | 0.43 | 0.72 | 1.67 | 1.02 | 0.13 | 1.12 |



Stellar Parameters For KIC 003328080

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | R (R_{\odot}) | M (M_{\odot}) | p_{\star} ($\text{g}\cdot\text{cm}^{-3}$) |
|--------|----------------------|---------------------------|----------------------------|---------------------------|---------------------------|---|
| | 5702^{+189}_{-172} | $4.258^{+0.253}_{-0.207}$ | $-0.280^{+0.300}_{-0.300}$ | $1.125^{+0.347}_{-0.284}$ | $0.837^{+0.130}_{-0.070}$ | $0.829^{+1.163}_{-0.415}$ |
| | +3%/-3% | +6%/-5% | +107%/-107% | +31%/-25% | +16%/-8% | +140%/-50% |
| Source | PHO54 | PHO54 | PHO54 | DSEP | | |

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

Secondary Eclipse Parameters for KIC 003328080-01 / KOI 3075.01

| Detrend | Depth (ppm) | R_p (R_{\oplus}) | T_{max} (K) | T_{obs} (K) | A_{obs} |
|---------|-------------|------------------------|----------------------|----------------------|------------------|
| DV | -14 ± 3 | $1.29^{+0.26}_{-0.21}$ | 1622^{+148}_{-128} | 3754^{+209}_{-190} | 13^{+6}_{-4} |
| Alt. | -12 ± 4 | $1.00^{+0.20}_{-0.17}$ | 1637^{+128}_{-130} | 4012^{+272}_{-300} | 18^{+10}_{-7} |

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

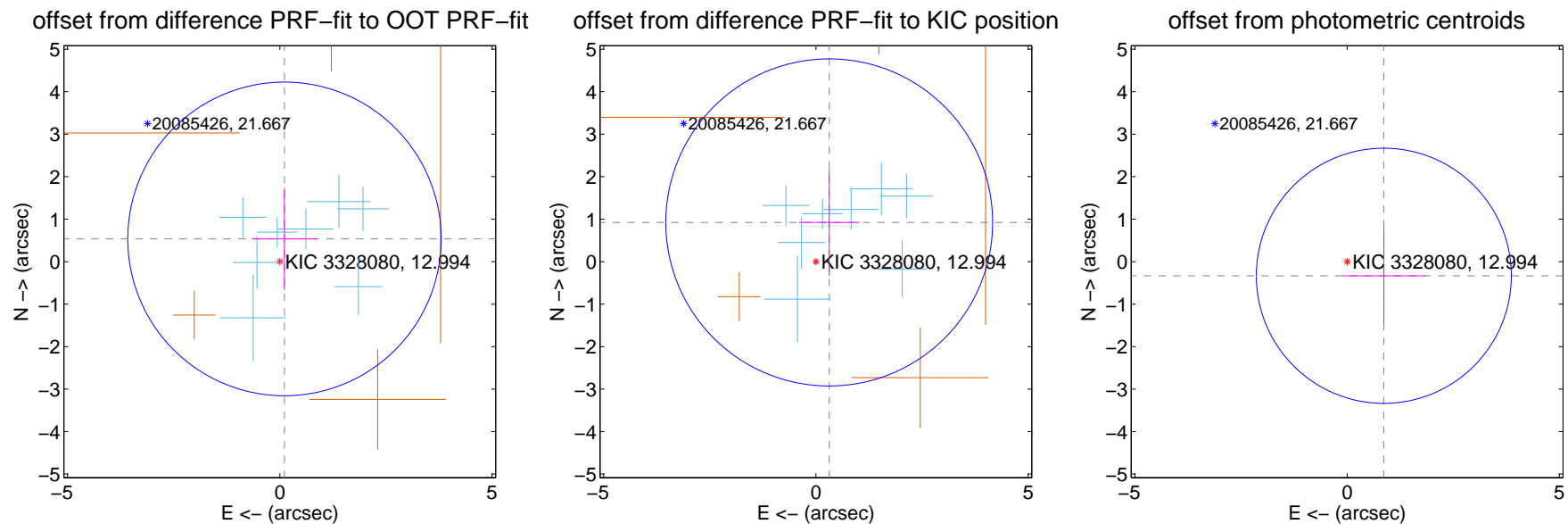
DV Centroid Data

Supplemental centroid analysis for 003328080-01. Kepler magnitude: 12.99. Transit SNR 14.96

There are 8 quarters with good PRF difference image offsets

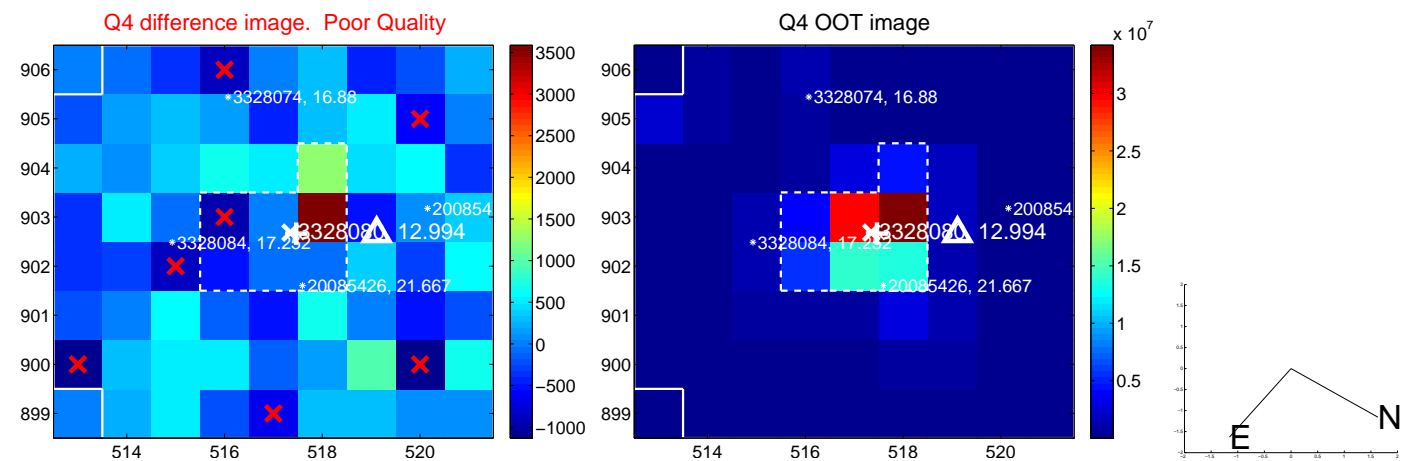
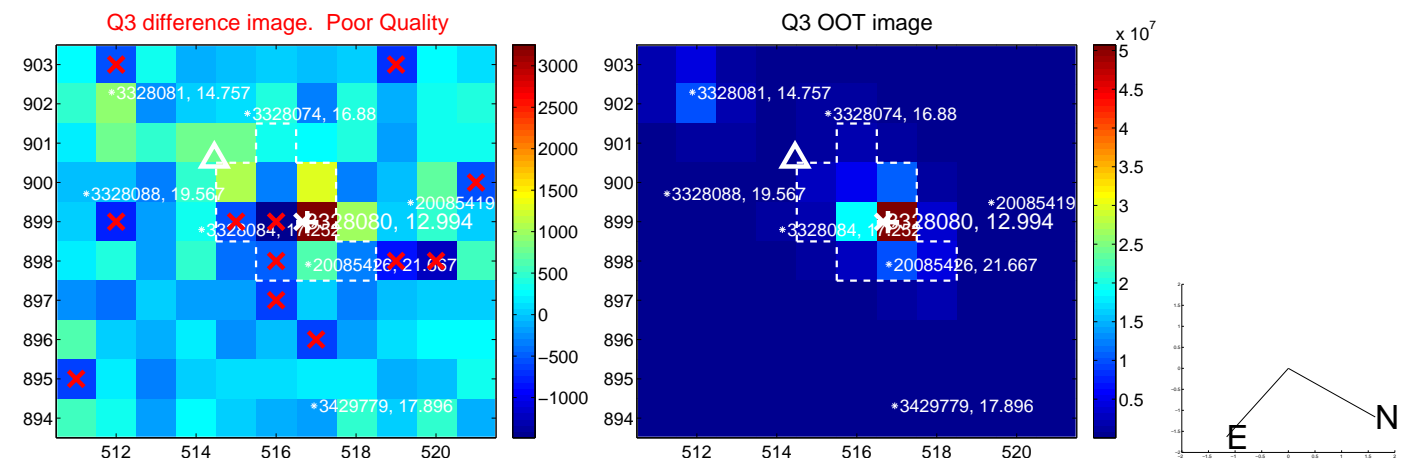
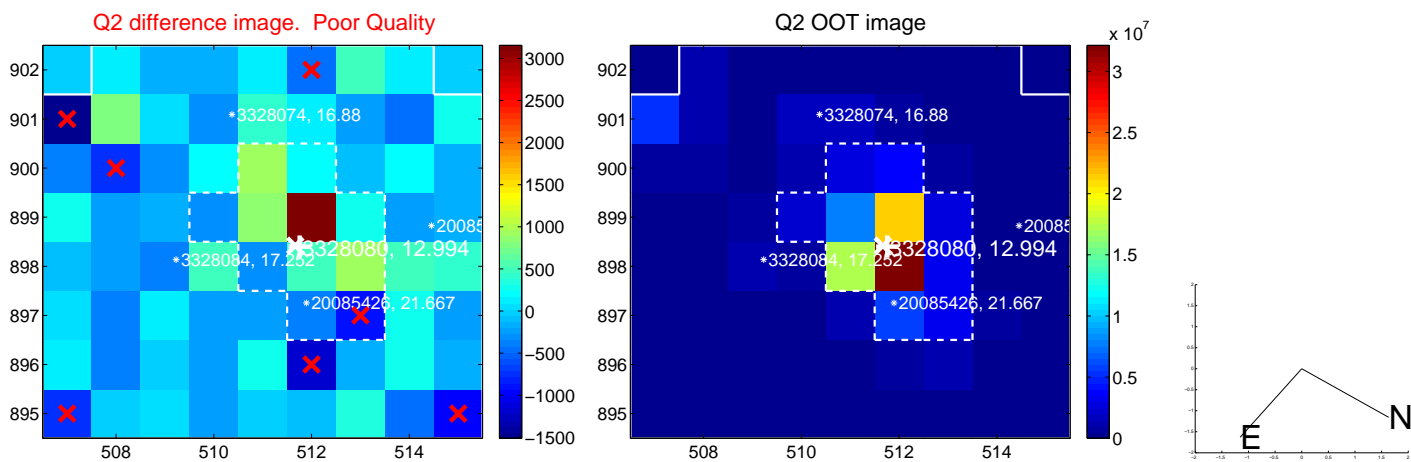
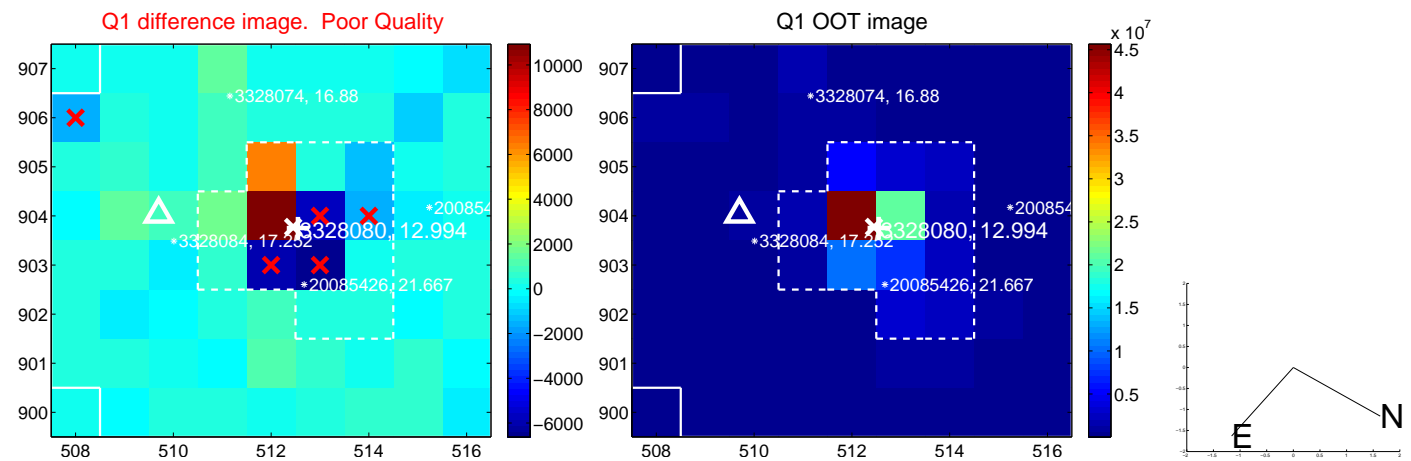
The direct PRF centroid is offset from the target star catalog position by about 0.54 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|--------------------|-------------------|
| PRF-fit source offset from OOT | 0.546 ± 1.230 | 0.44 | -0.110 ± 0.768 | 0.535 ± 1.198 |
| PRF-fit source offset from KIC position | 0.974 ± 1.283 | 0.76 | -0.313 ± 0.717 | 0.923 ± 1.258 |
| photometric centroid source offset | 0.93 ± 1.00 | 0.93 | -0.86 ± 0.98 | -0.33 ± 1.15 |

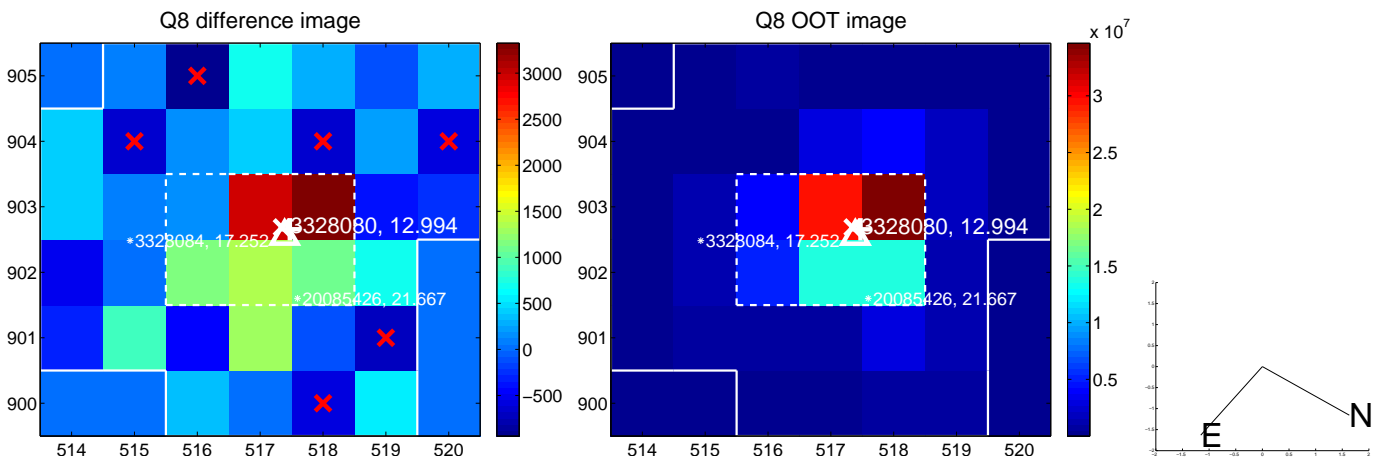
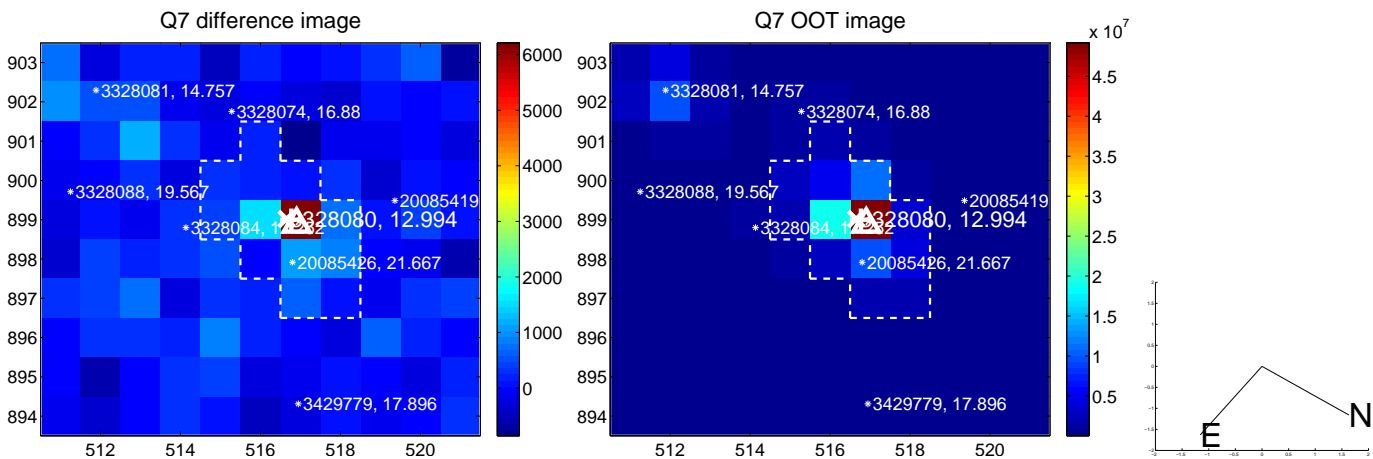
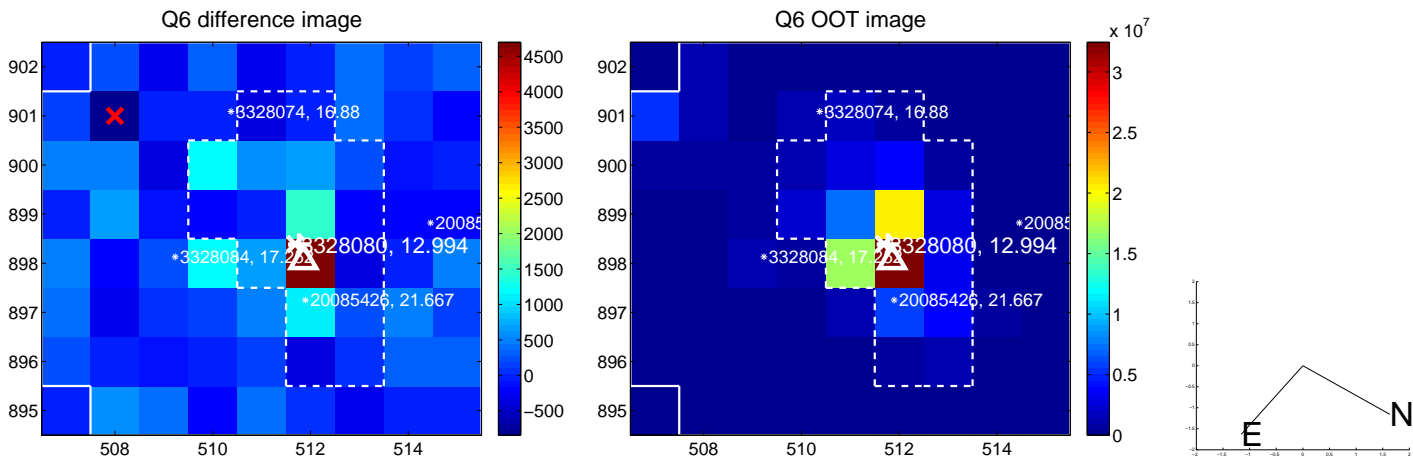
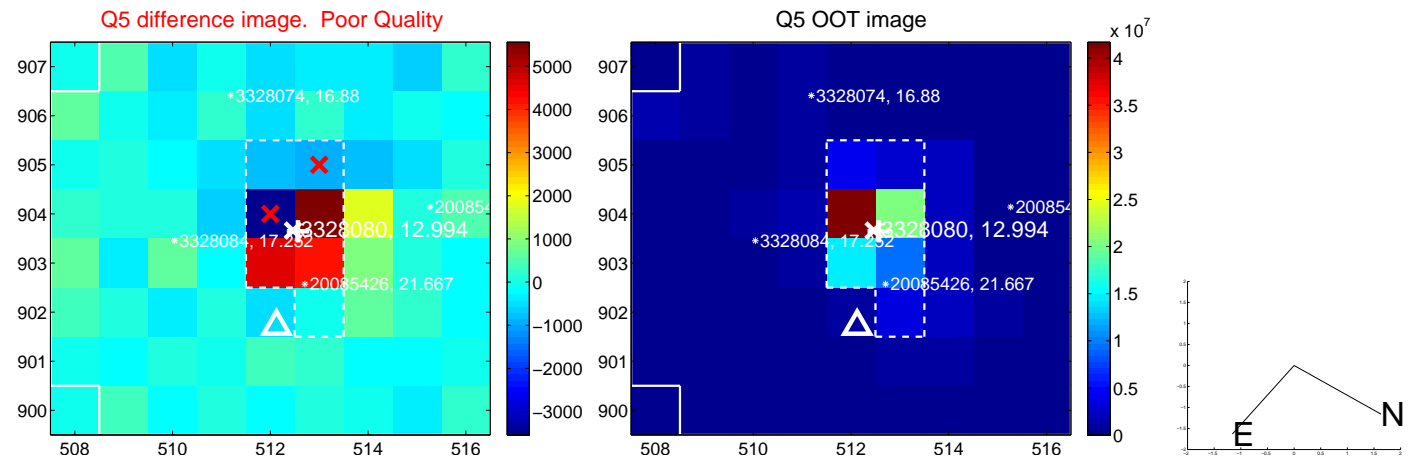


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

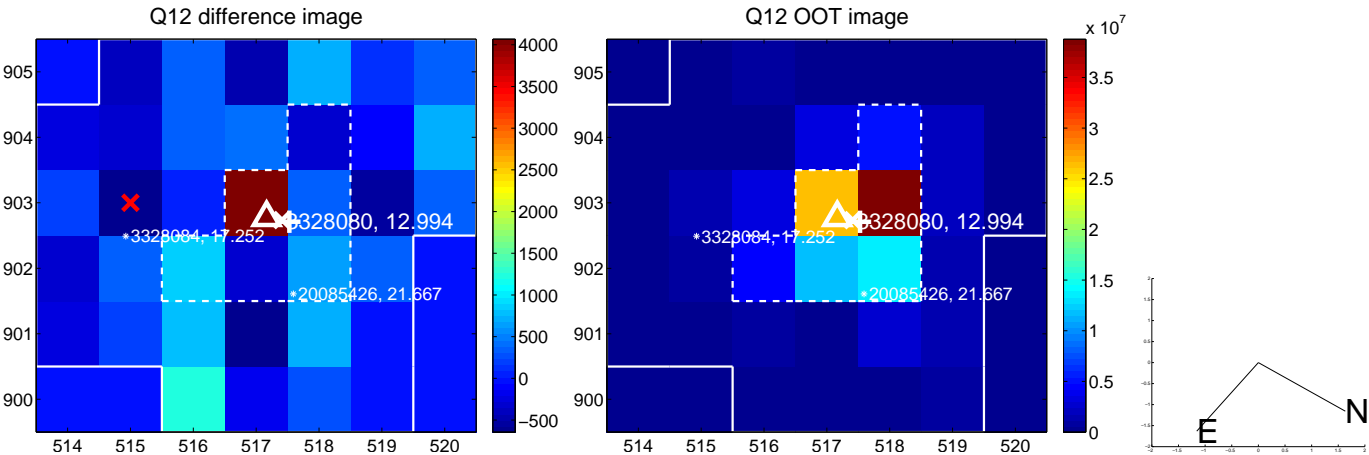
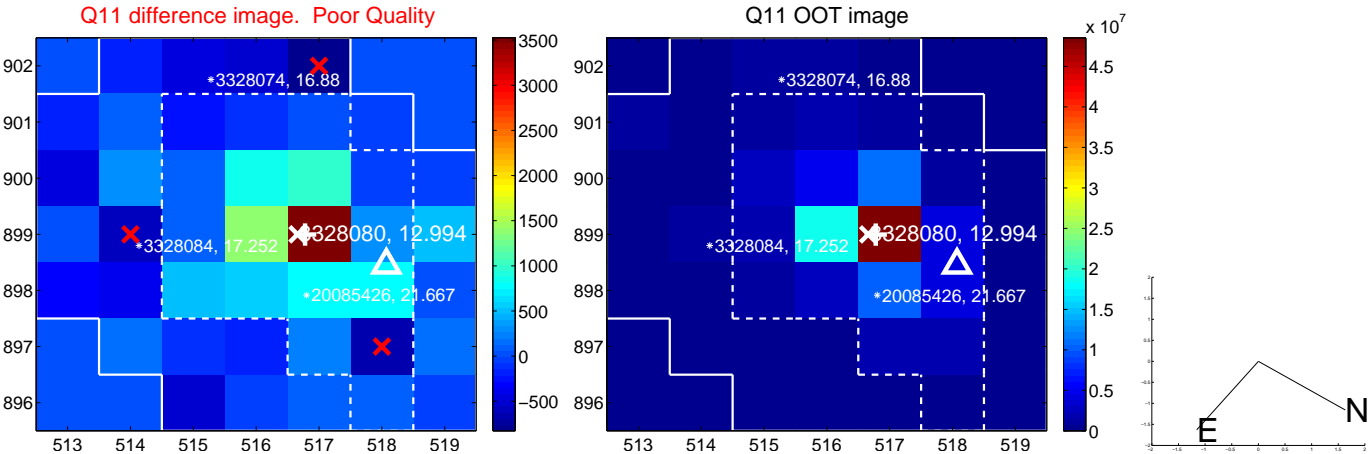
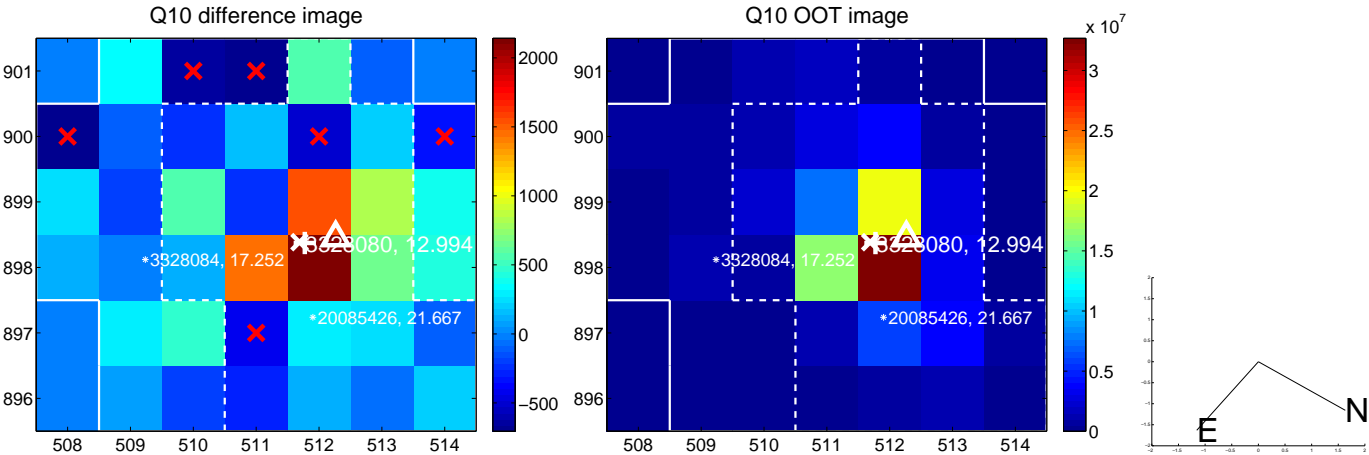
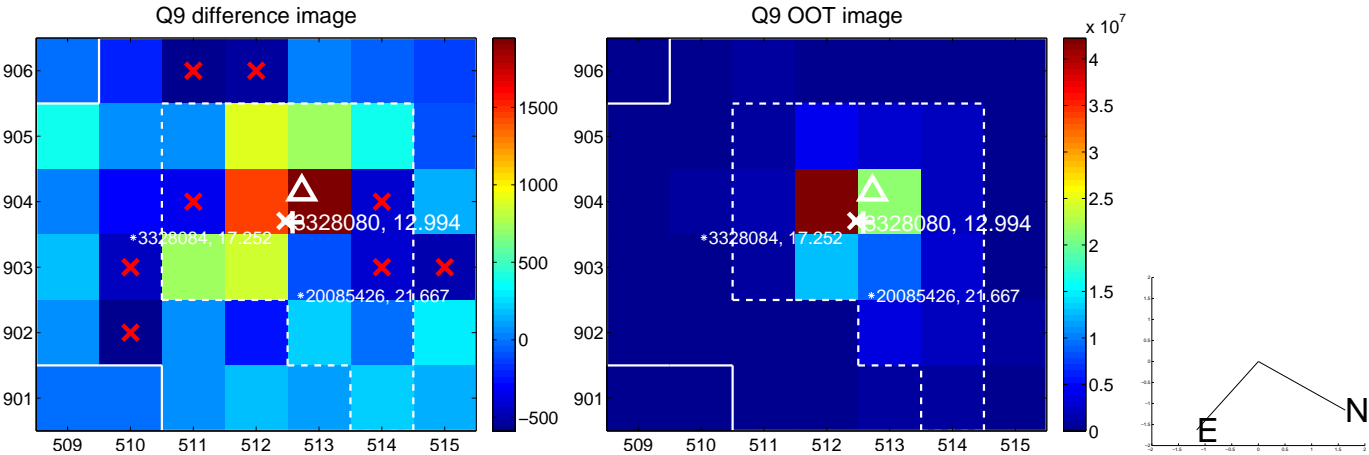
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



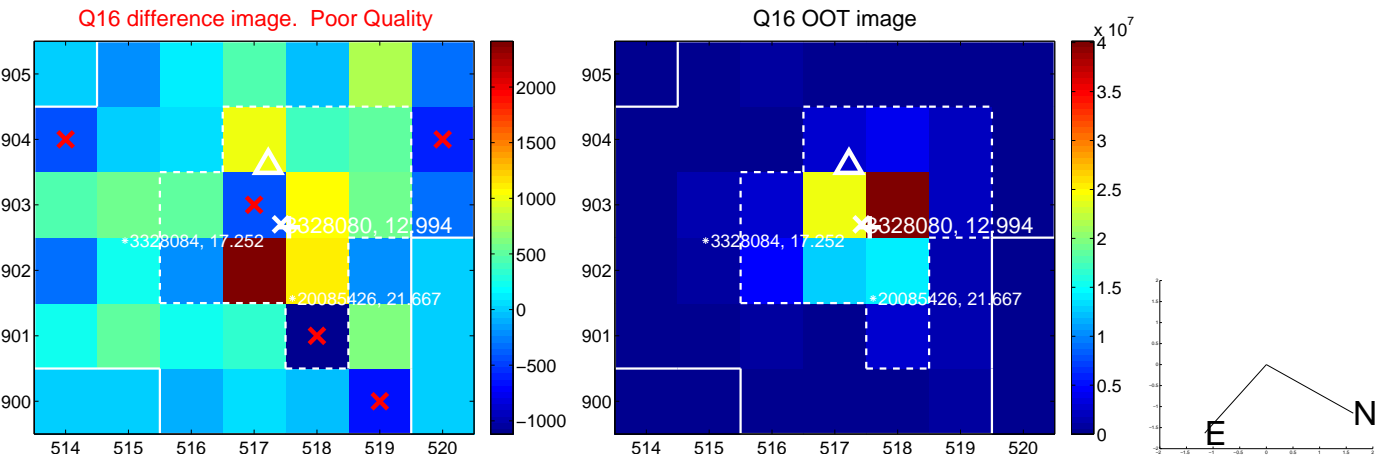
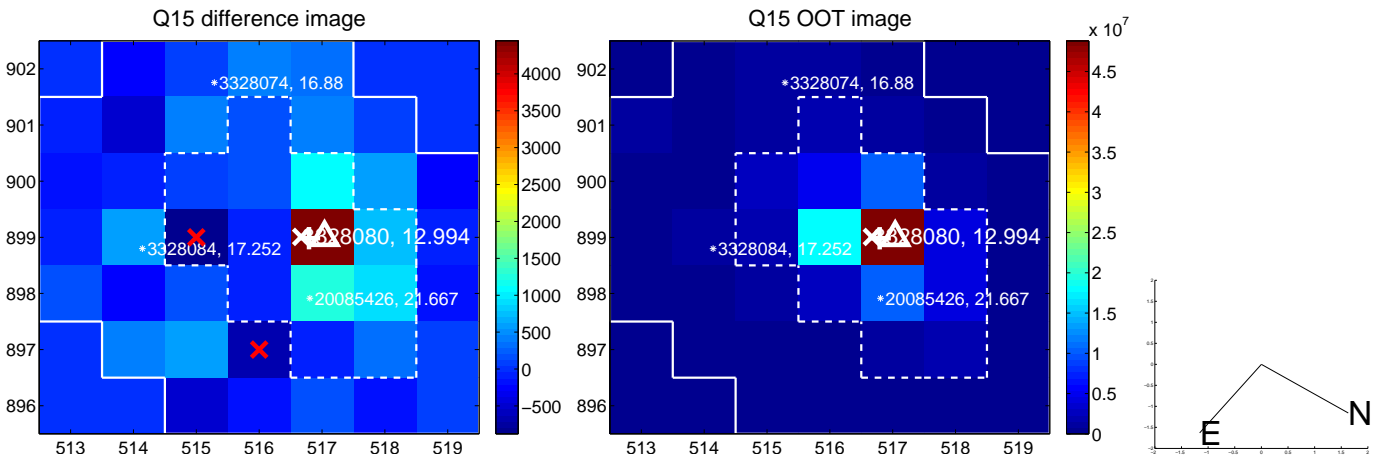
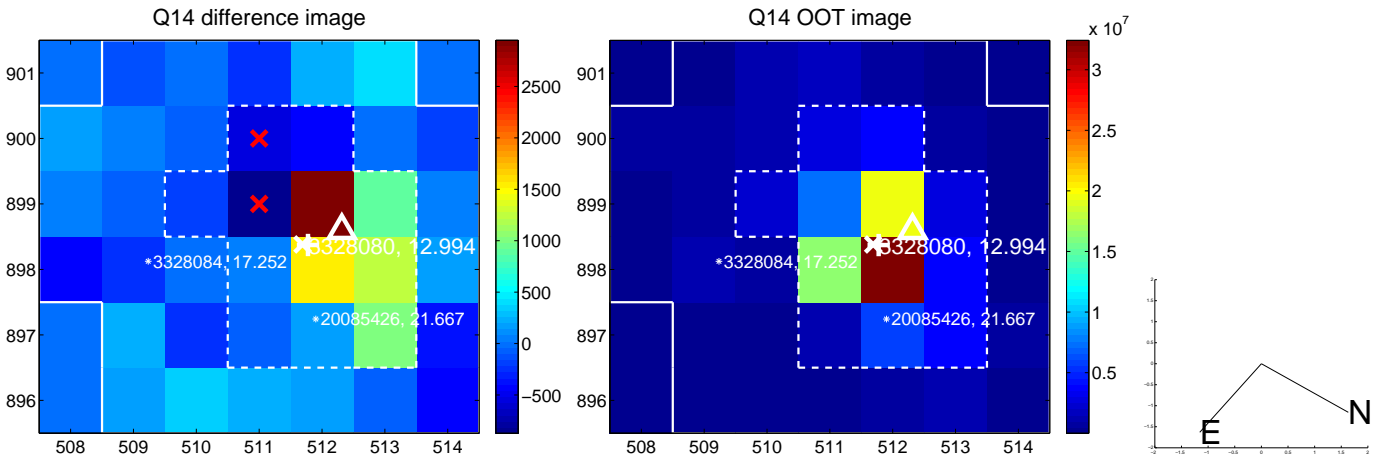
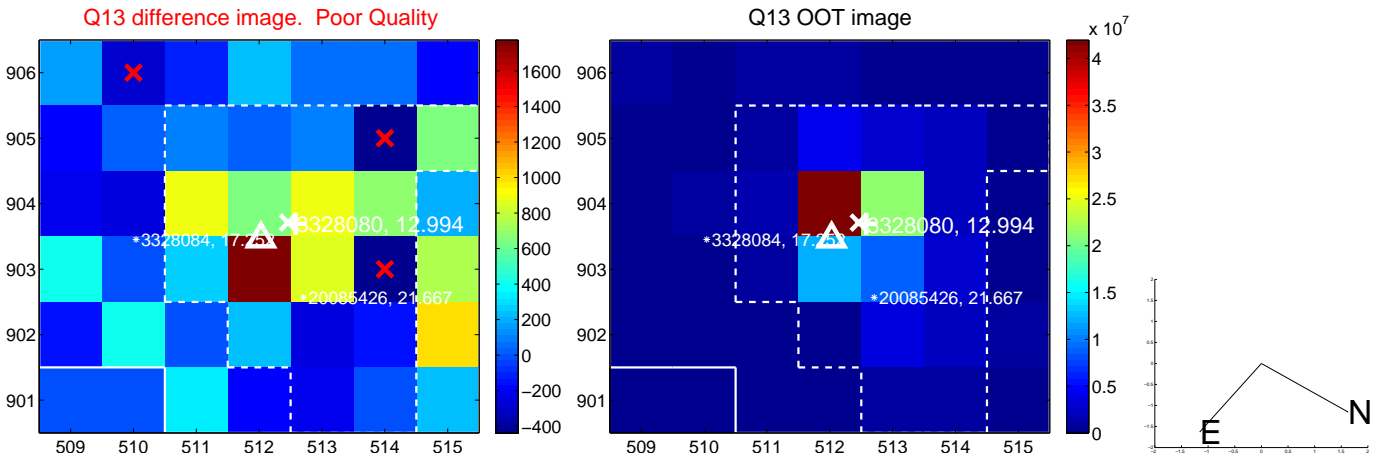
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



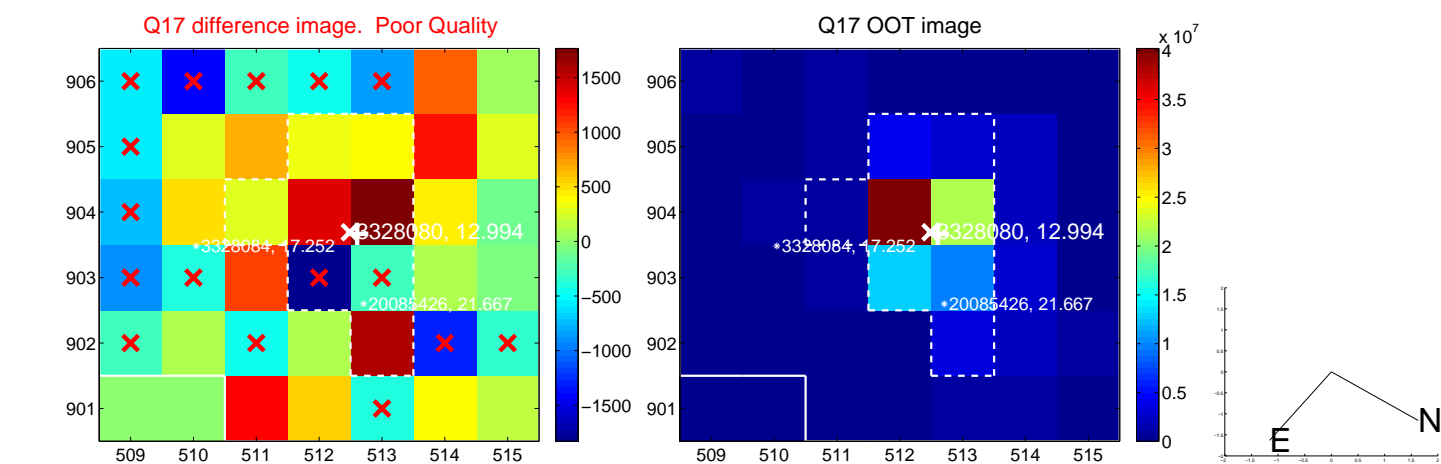
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



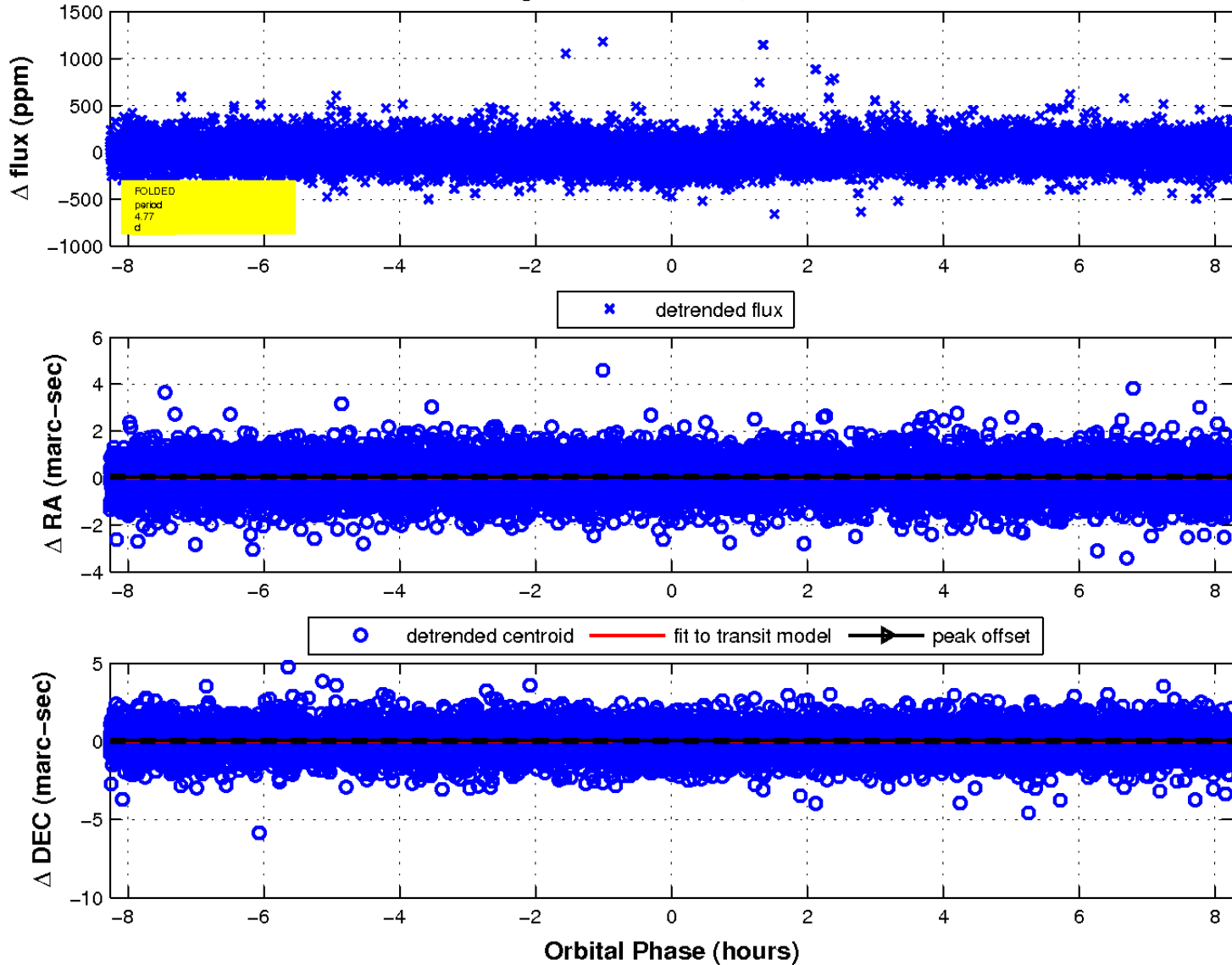
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

