

KIC 006763884

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}) |
|--------------|----------|---------|---------------|--------------|-------------|------------------|-----|-----|-----------------------------|-----------------|------------------------|------------------------|
| 006763884-01 | OBS | 6763.01 | 2.446946 | 132.998178 | 26.2 | 0.944 | 7.3 | 9.5 | 1.03 | 5821 | 0.57 | 856.62 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|--------------|
| 006763884-01 | OBS | PC | 0.97 | 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.

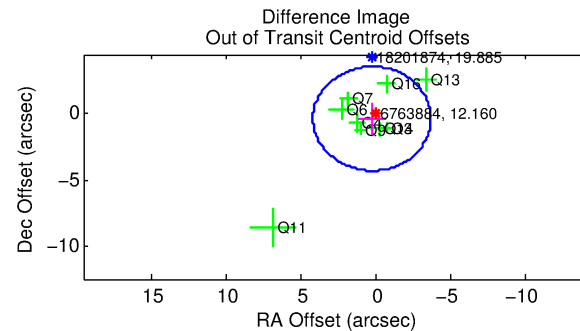
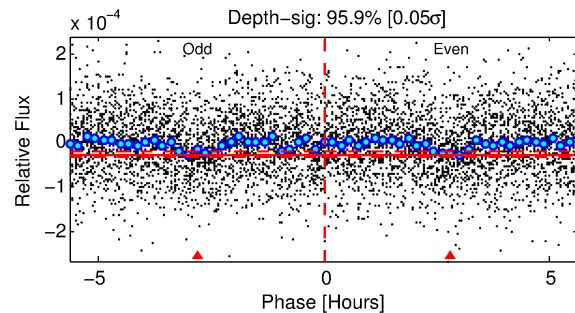
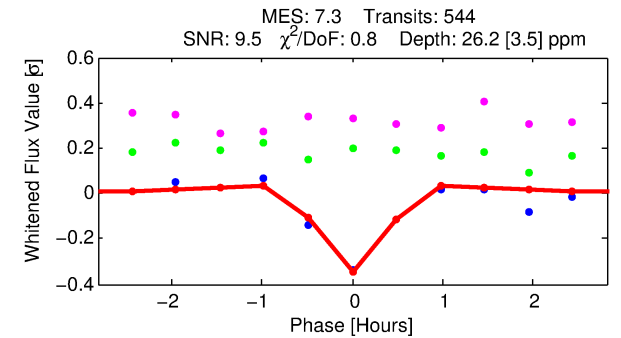
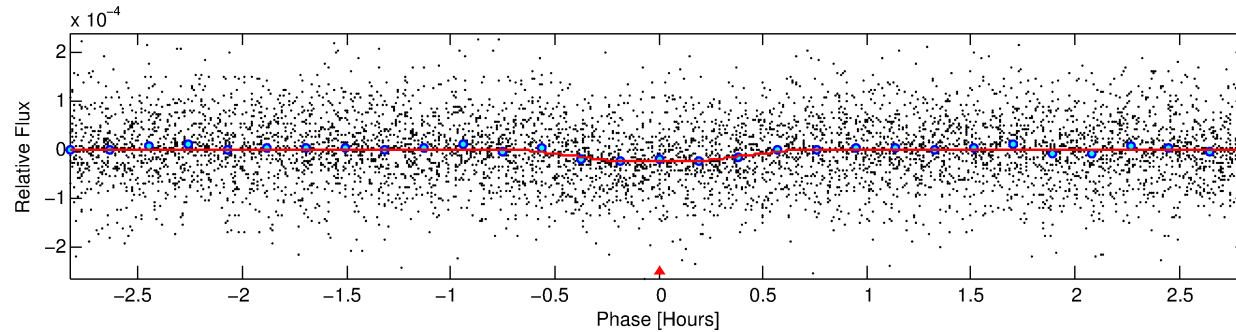
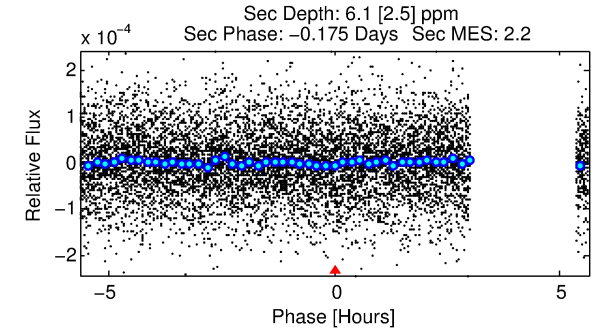
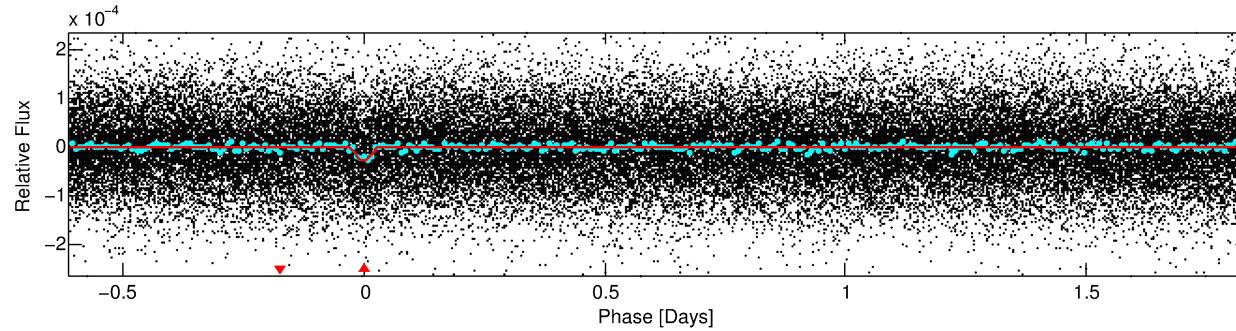
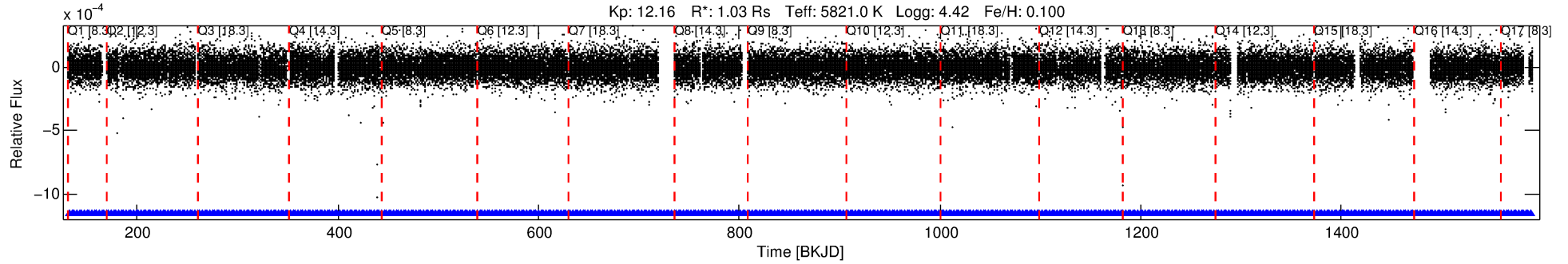
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006763884-01

No Significant Match Found

DV One-Page Summary

KIC: 6763884 Candidate: 1 of 1 Period: 2.447 d
KOI: K06763.01 Corr: 0.914



DV Fit Results:

Period = 2.44695 [0.00001] d
Epoch = 132.9982 [0.0018] BKJD
Rp/R* = 0.0051 [0.0012]
a/R* = 14.31 [15.20]
b = 0.70 [0.78]
Seff = 856.62 [183.14]
Teq = 1380 [74] K
Rp = 0.57 [0.16] Re
a = 0.0358 [0.0048] AU
Ag = 13.28 [8.87] [1.38 σ]
Teffp = 4072 [650] K [4.12 σ]

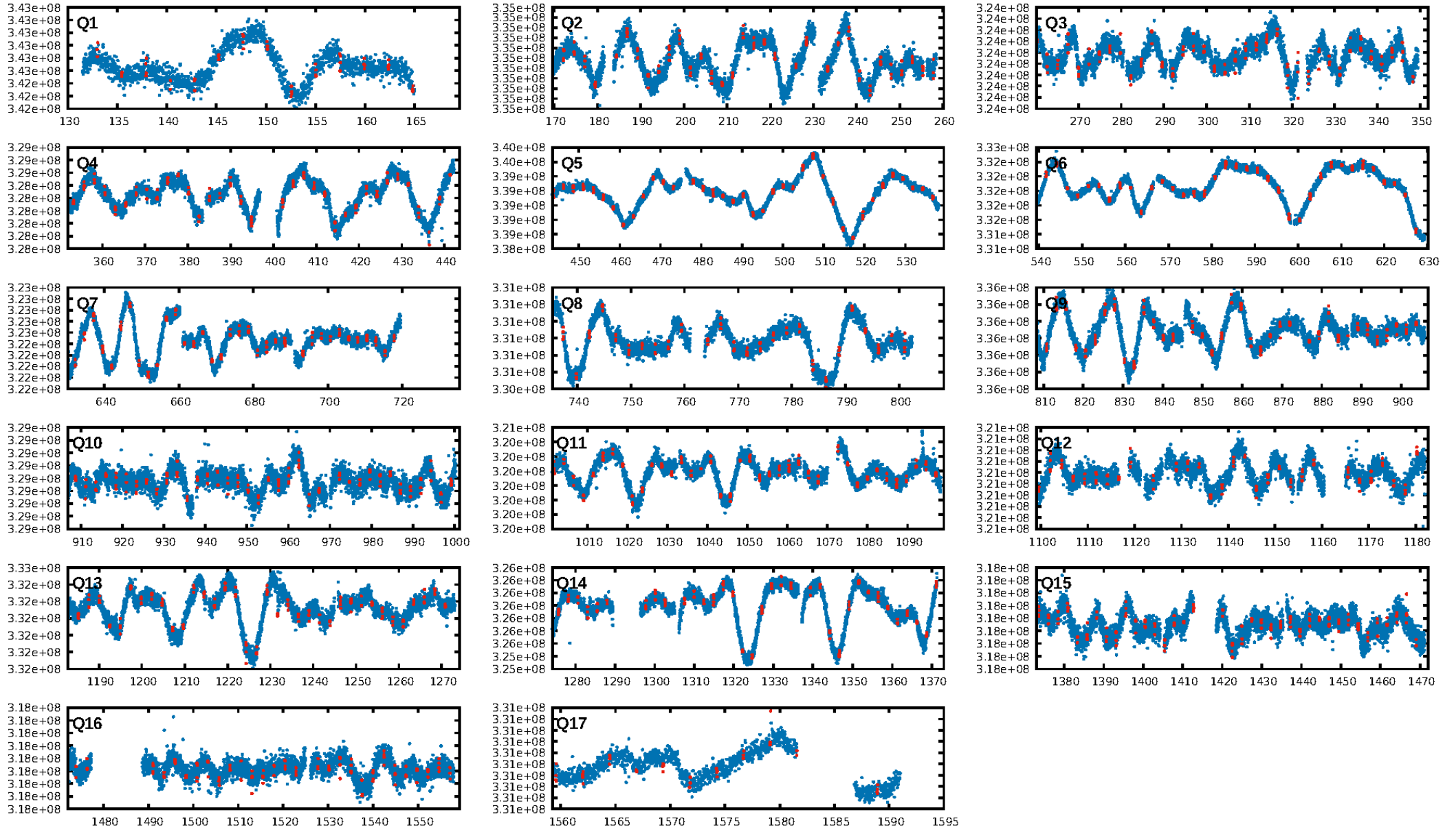
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 8.88e-13
RollingBand-fgt: 1.00 [519/519]
GhostDiagnostic-chr: -14.29
Centroid-sig: 8.0%
Centroid-so: 1.360 arcsec [1.46 σ]
OotOffset-rm: 0.426 arcsec [0.32 σ]
KicOffset-rm: 0.386 arcsec [0.33 σ]
OotOffset-st: 2/3/2/2 [9]
KicOffset-st: 2/3/2/2 [9]
DiffImageQuality-fgm: 0.67 [6/9]
DiffImageOverlap-fno: 1.00 [17/17]

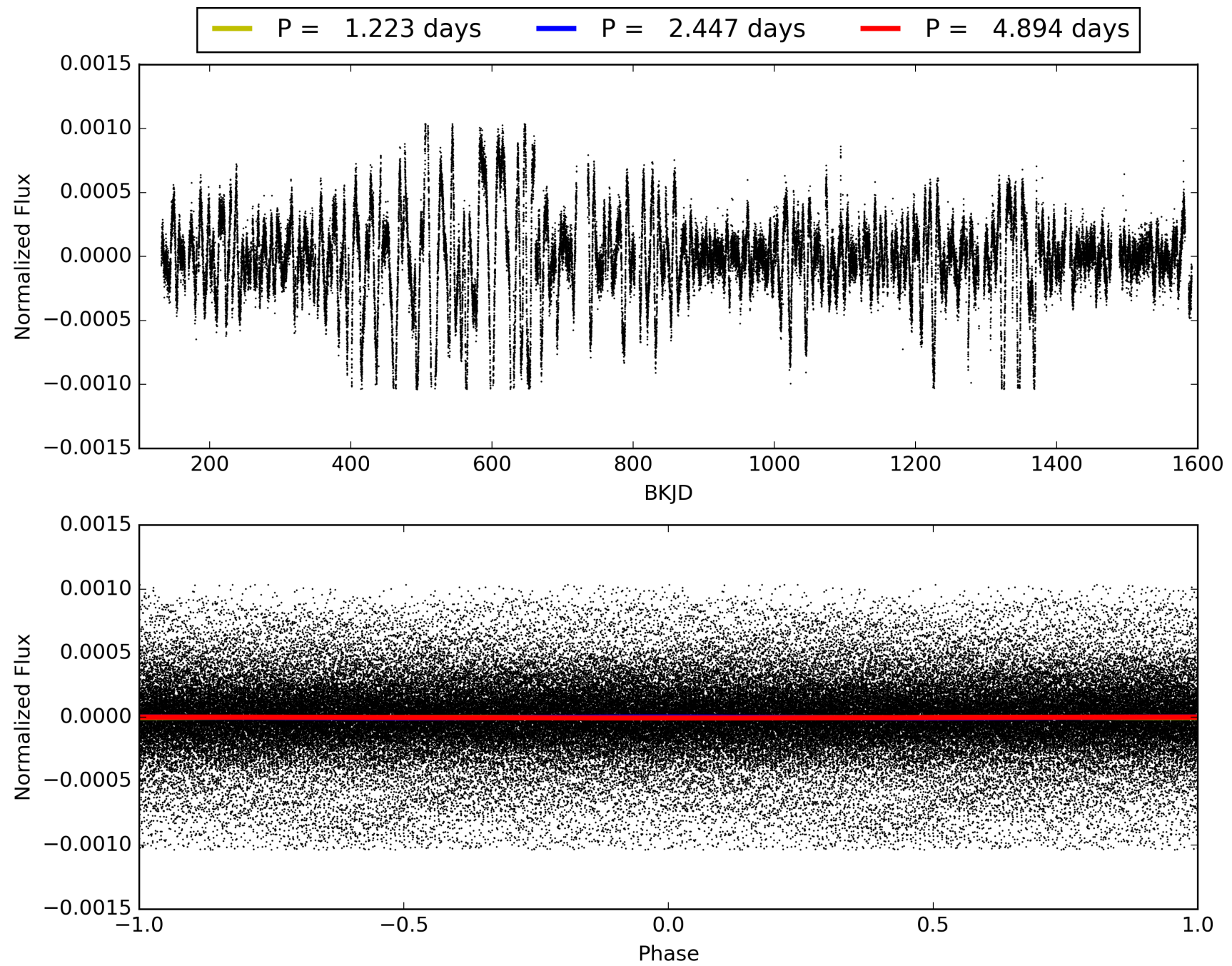
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 16:59:08 Z

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

TCE 006763884-01, PDC Light Curves

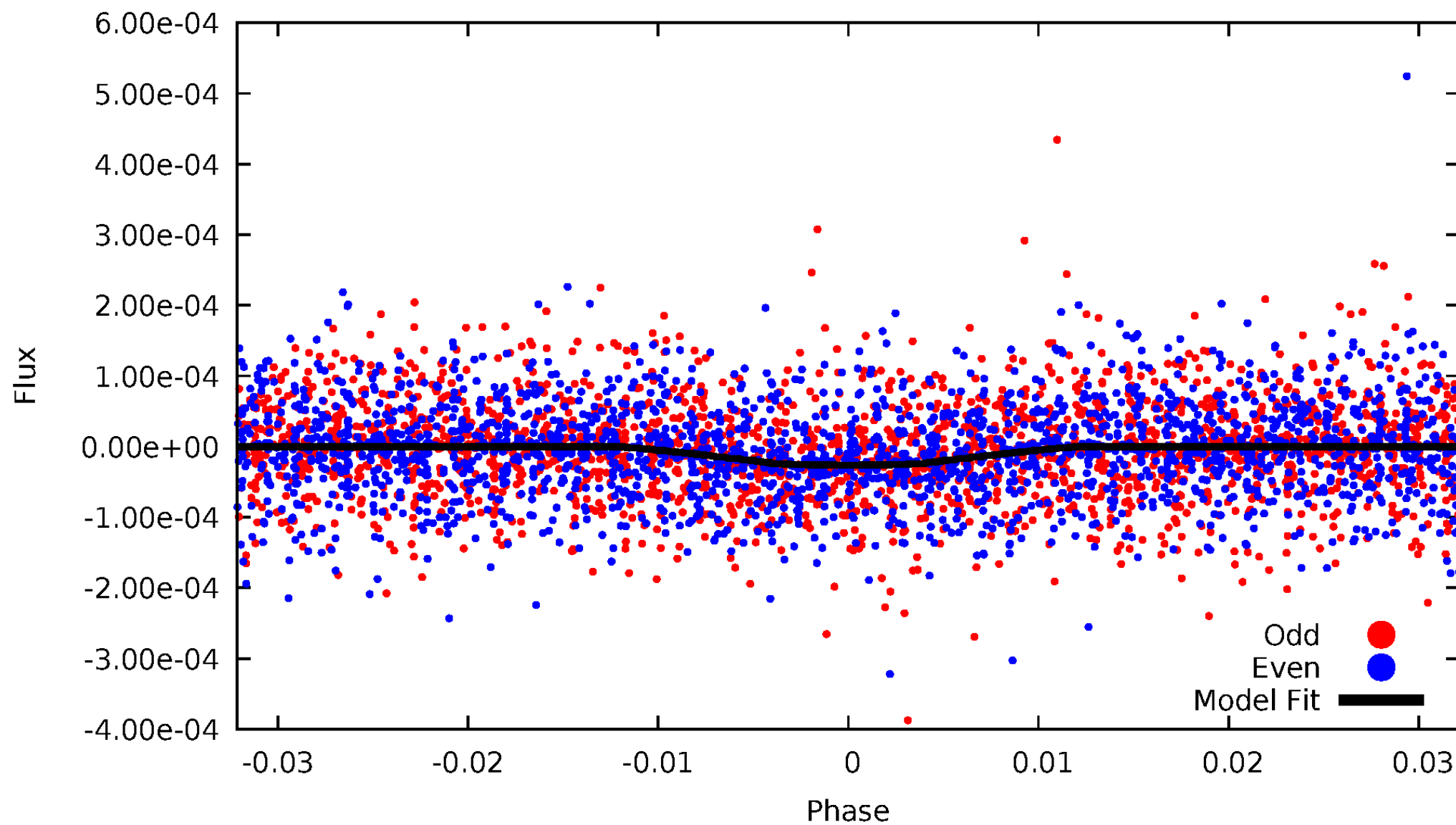


TCE 006763884-01



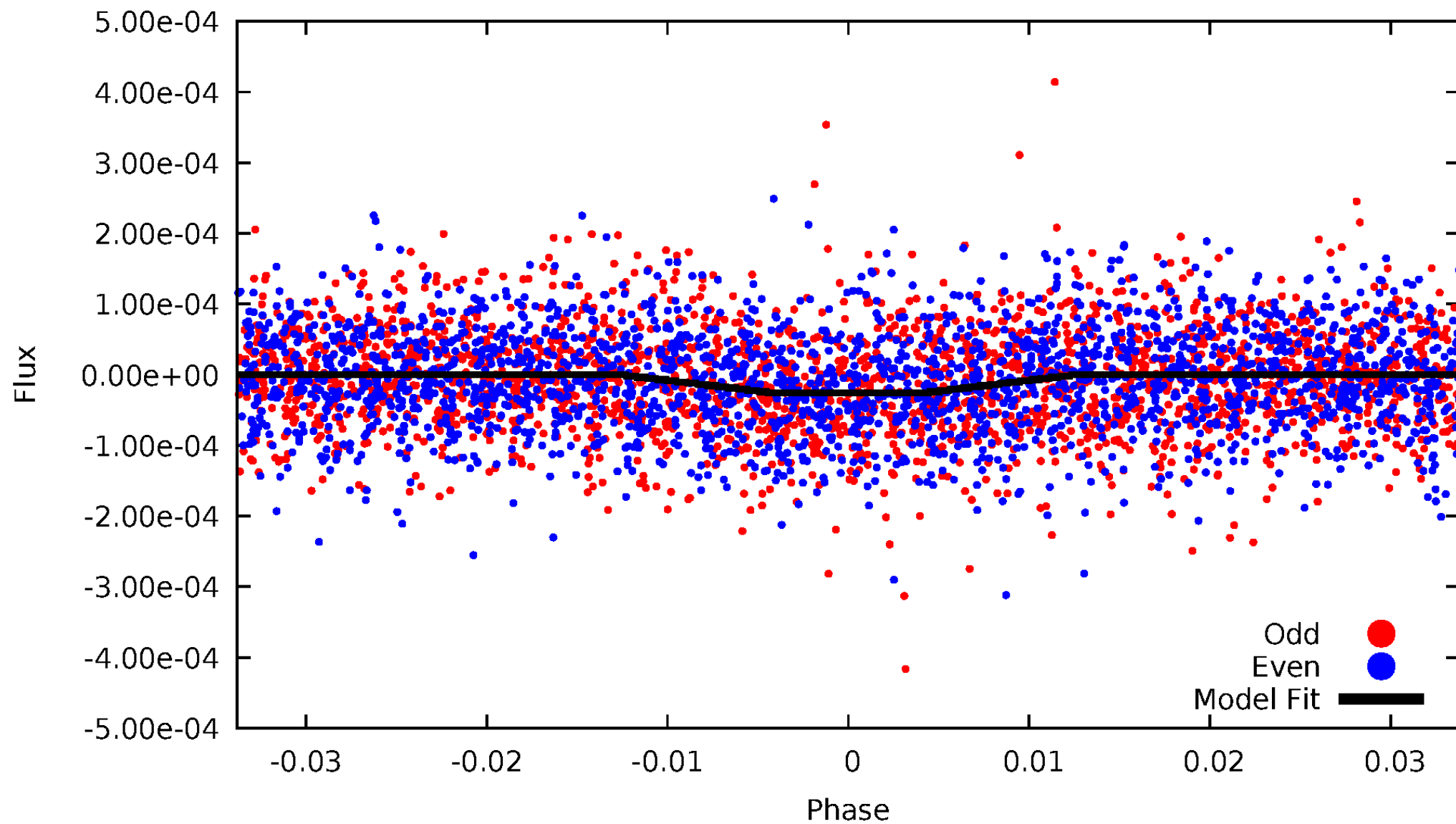
DV Odd/Even

TCE 006763884-01



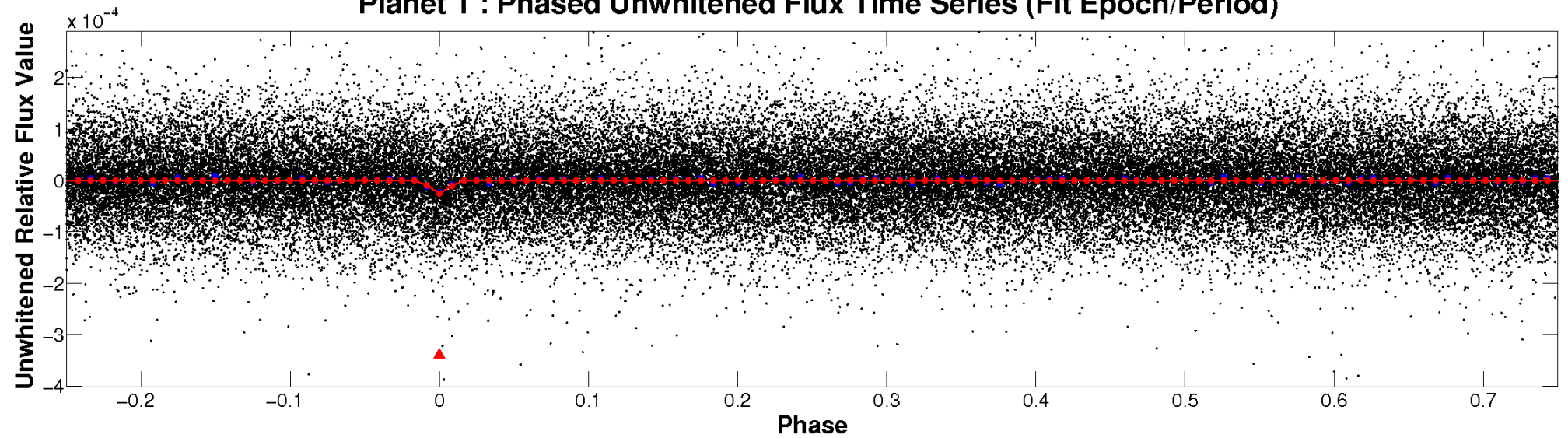
ALT Odd/Even

TCE 006763884-01

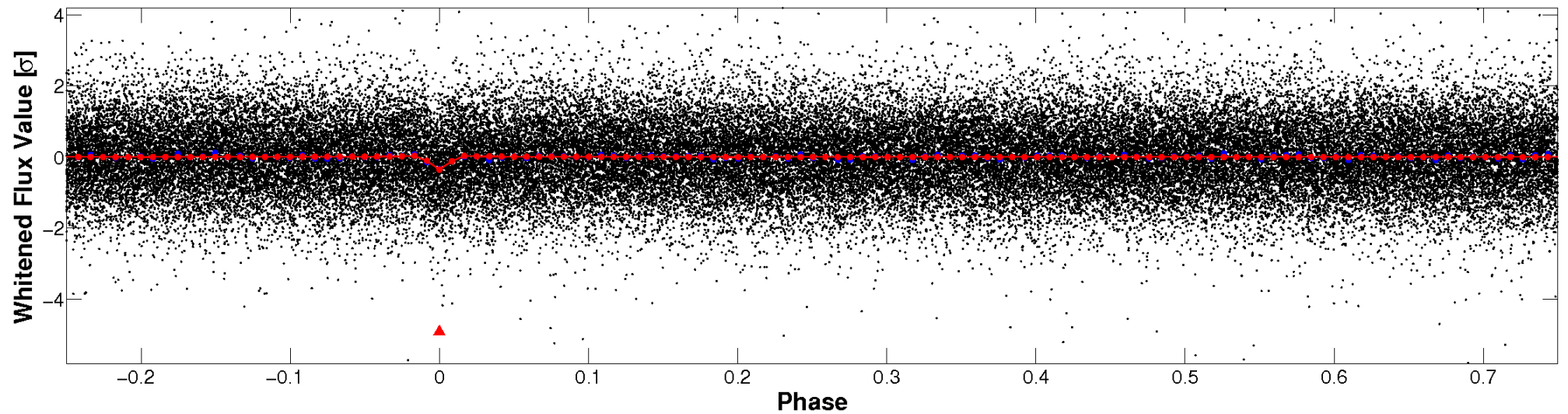


Non-Whitened Vs. Whitened Light Curve

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

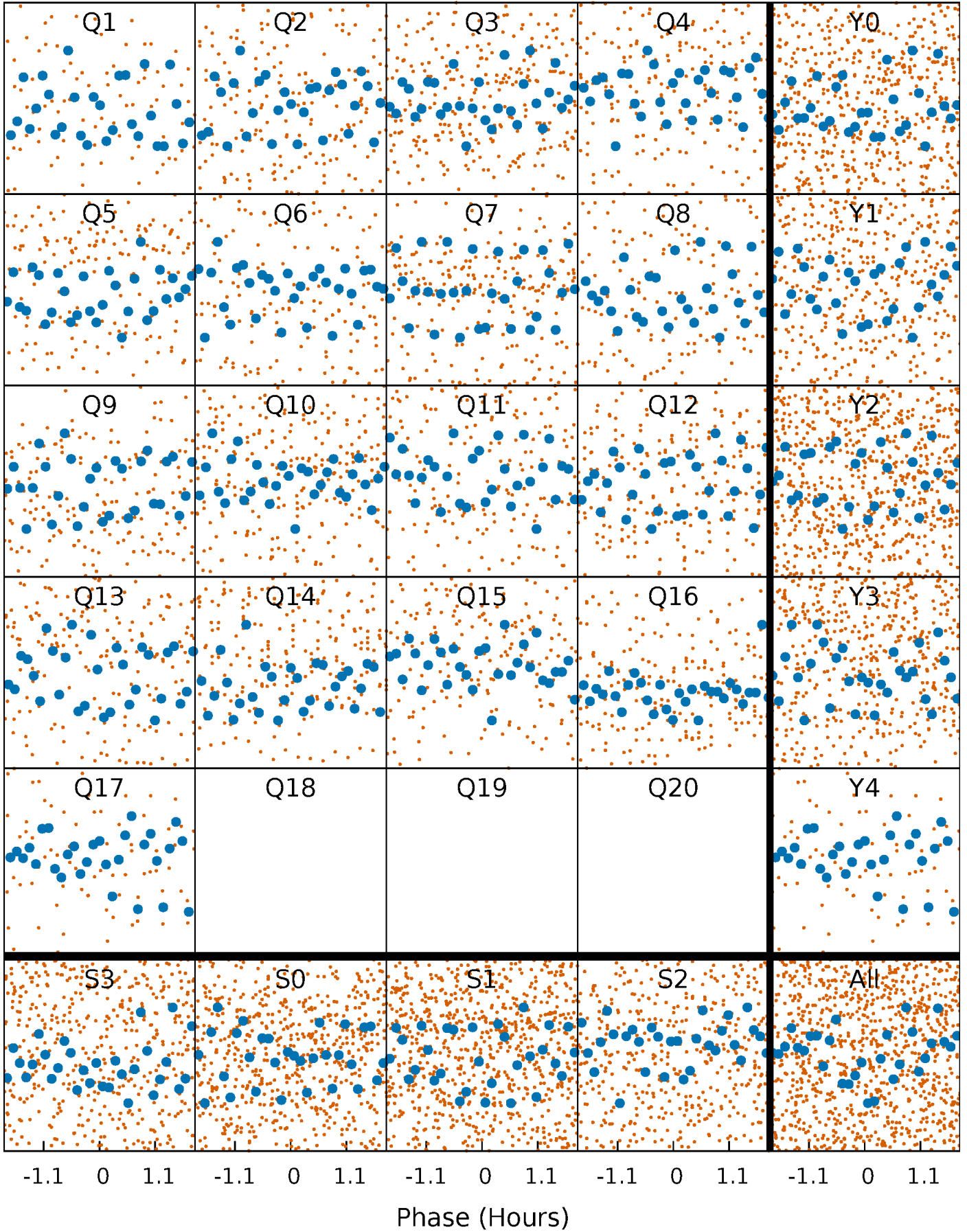


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



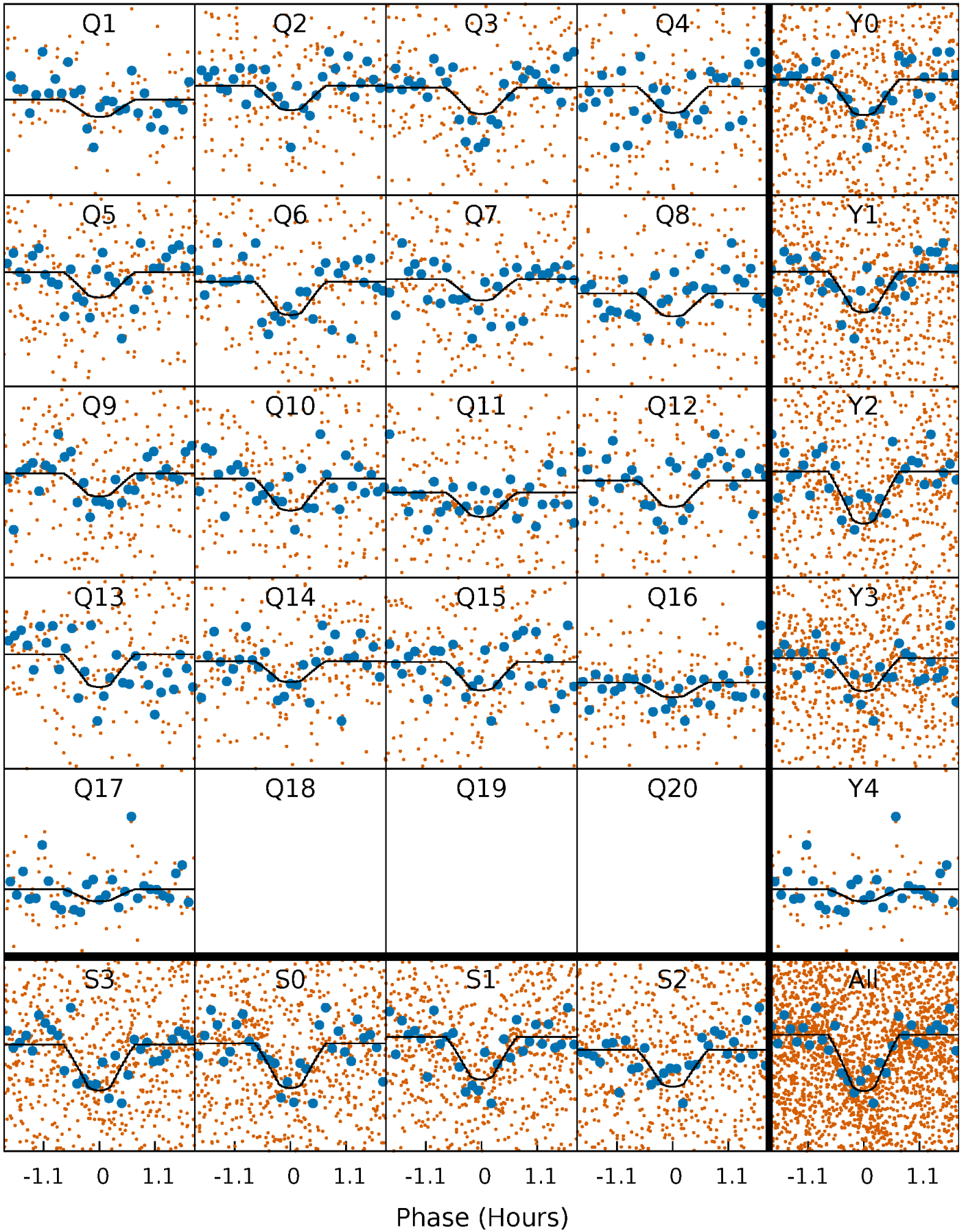
PDC Quarter-Phased Transit Curves

TCE 006763884-01 P= 2.446946 Days $T_0=132.998178$ (BKJD)



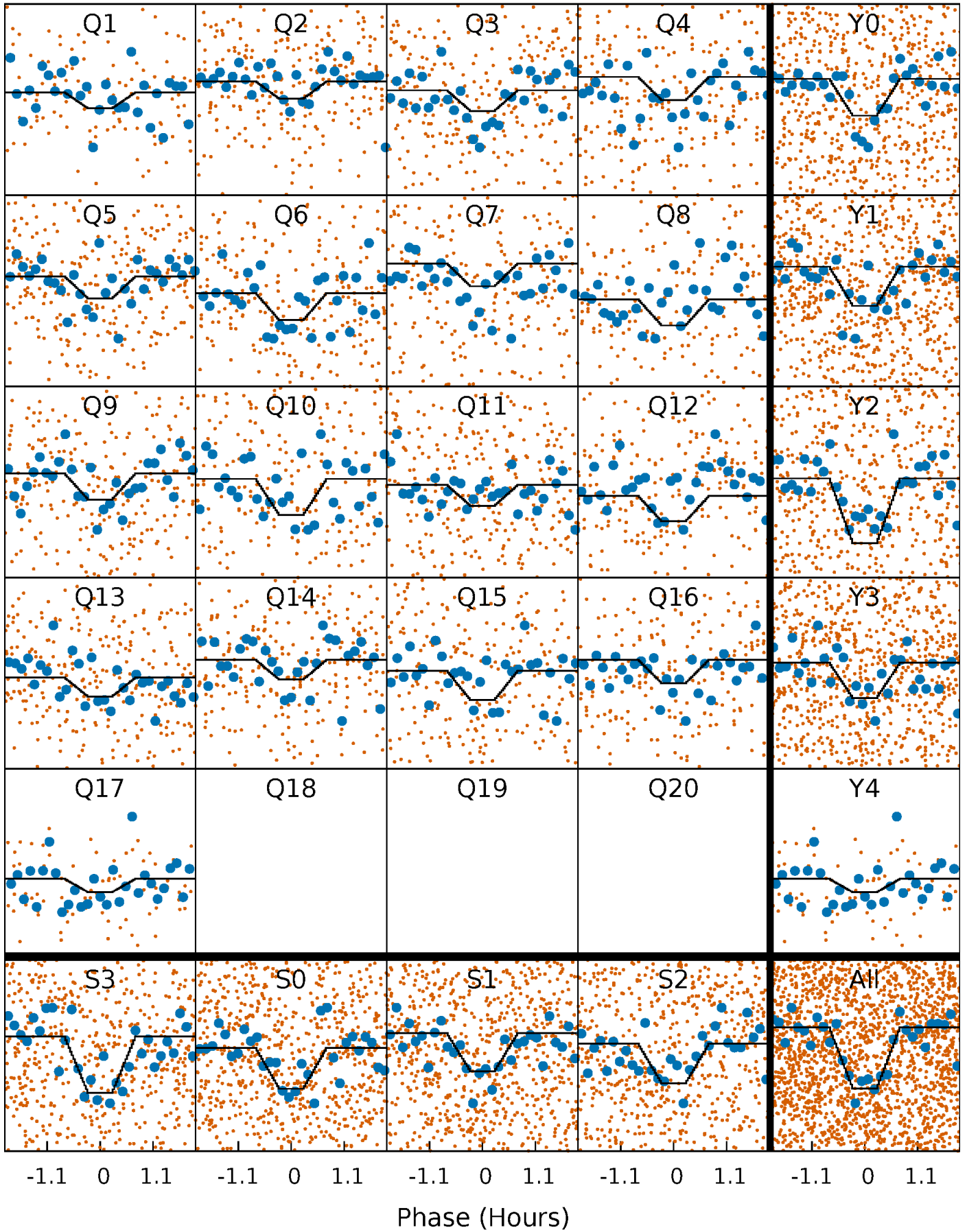
DV Quarter-Phased Transit Curves

TCE 006763884-01 P= 2.446946 Days $T_0=132.998178$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

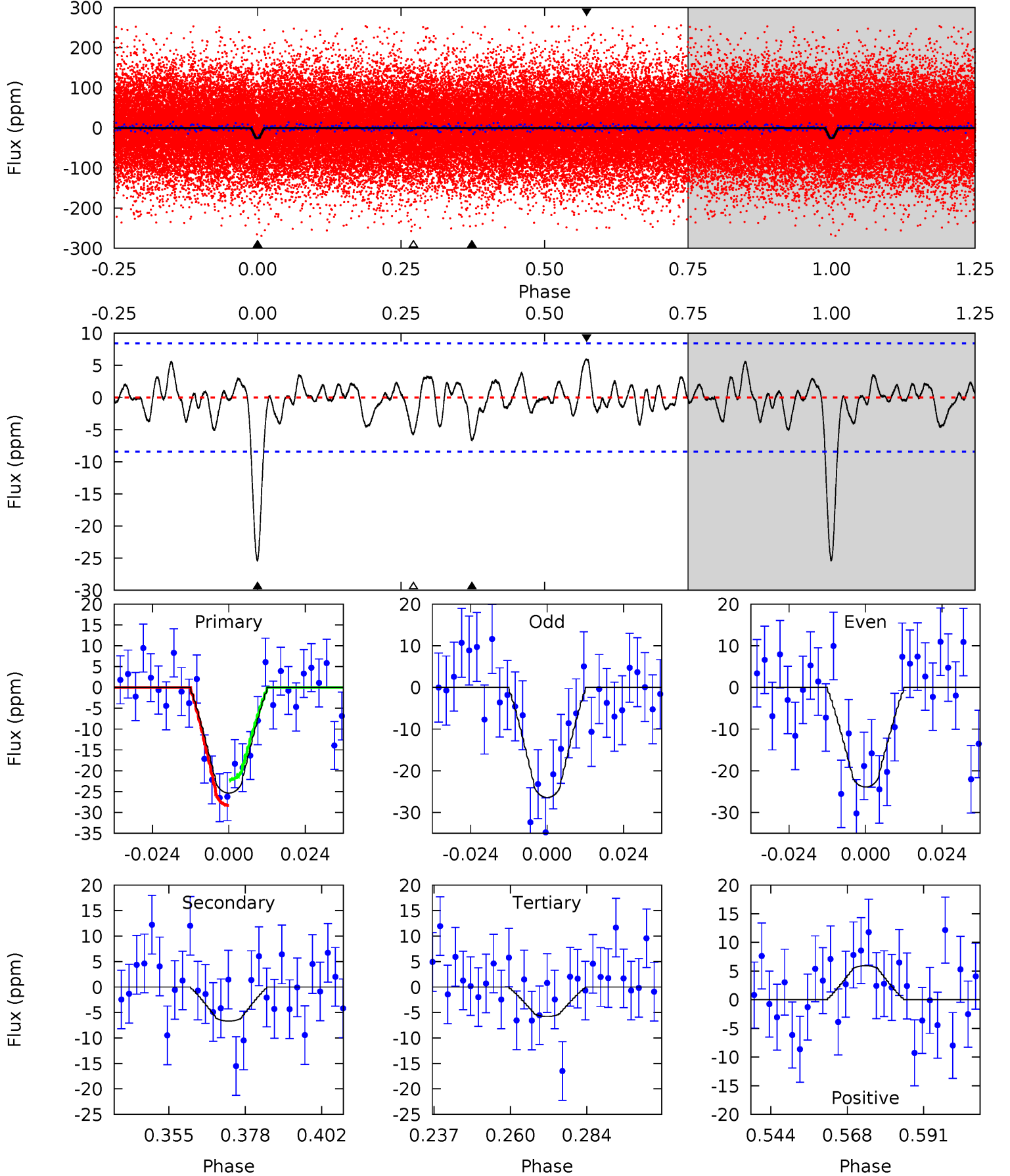
TCE 006763884-01 P= 2.446944 Days $T_0=132.998198$ (BKJD)



DV Model-Shift Uniqueness Test

006763884-01, P = 2.446946 Days, E = 130.551232 Days

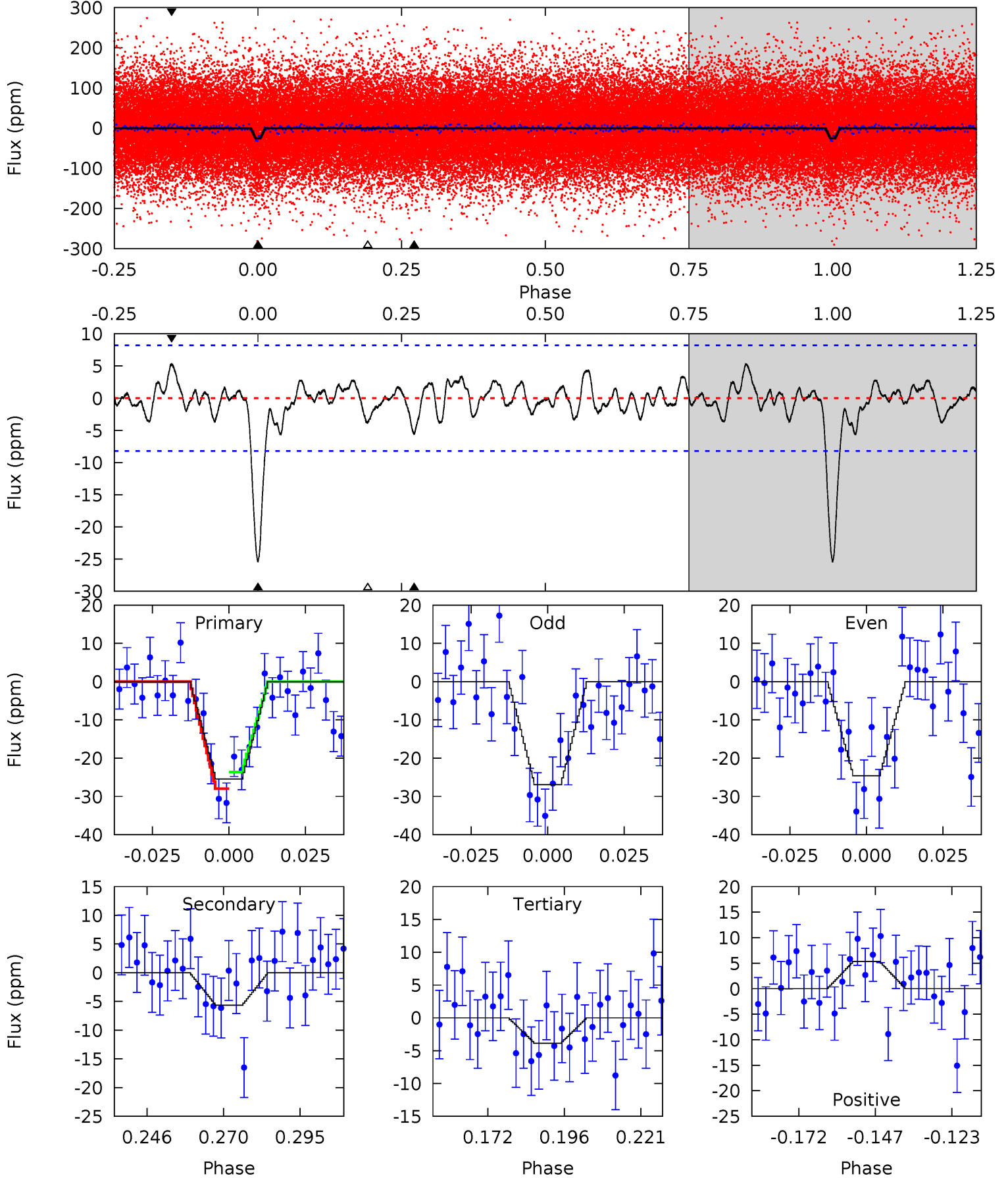
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 14.7 | 3.87 | 3.34 | 3.43 | 4.86 | 2.26 | 1.20 | 11.3 | 11.2 | 0.53 | 0.43 | 0.73 | 1.02 | 0.19 | 1.78 |



Alt Model-Shift Uniqueness Test

006763884-01, P = 2.446944 Days, E = 130.551254 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 15.0 | 3.35 | 2.29 | 3.15 | 4.85 | 2.25 | 1.11 | 12.8 | 11.9 | 1.07 | 0.20 | 0.68 | 0.92 | 0.17 | 1.29 |



Stellar Parameters For KIC 006763884

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | $R (R_{\odot})$ | $M(M_{\odot})$ | $p_{\star} (\text{g}\cdot\text{cm}^{-3})$ |
|--------|---------------------|---------------------------|---------------------------|---------------------------|---------------------------|---|
| | 5821^{+69}_{-87} | $4.419^{+0.063}_{-0.117}$ | $0.100^{+0.150}_{-0.150}$ | $1.033^{+0.154}_{-0.083}$ | $1.022^{+0.069}_{-0.063}$ | $1.304^{+0.327}_{-0.442}$ |
| | +1%/-1% | +1%/-3% | +150%/-150% | +15%/-8% | +7%/-6% | +25%/-34% |
| 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 006763884-01 / KOI 6763.01

| Detrend | Depth (ppm) | $R_p (R_{\oplus})$ | $T_{max} (K)$ | $T_{obs} (K)$ | A_{obs} |
|---------|-------------|------------------------|--------------------|----------------------|-----------------|
| DV | -7 ± 2 | $0.57^{+0.16}_{-0.14}$ | 1933^{+83}_{-58} | 4316^{+594}_{-370} | 14^{+13}_{-6} |
| Alt. | -6 ± 2 | $0.57^{+0.15}_{-0.13}$ | 1936^{+77}_{-57} | 4213^{+508}_{-412} | 12^{+10}_{-5} |

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 $A_{obs} \gg 1.0$

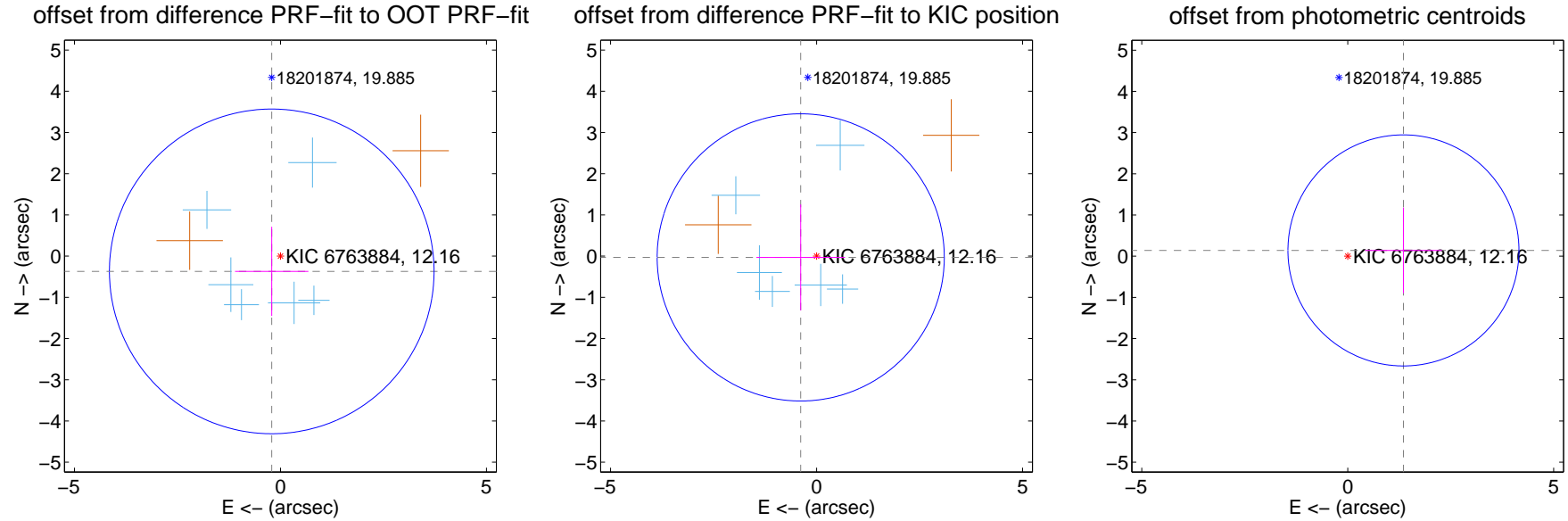
DV Centroid Data

Supplemental centroid analysis for 006763884-01. Kepler magnitude: 12.16. Transit SNR 9.46

There are 6 quarters with good PRF difference image offsets

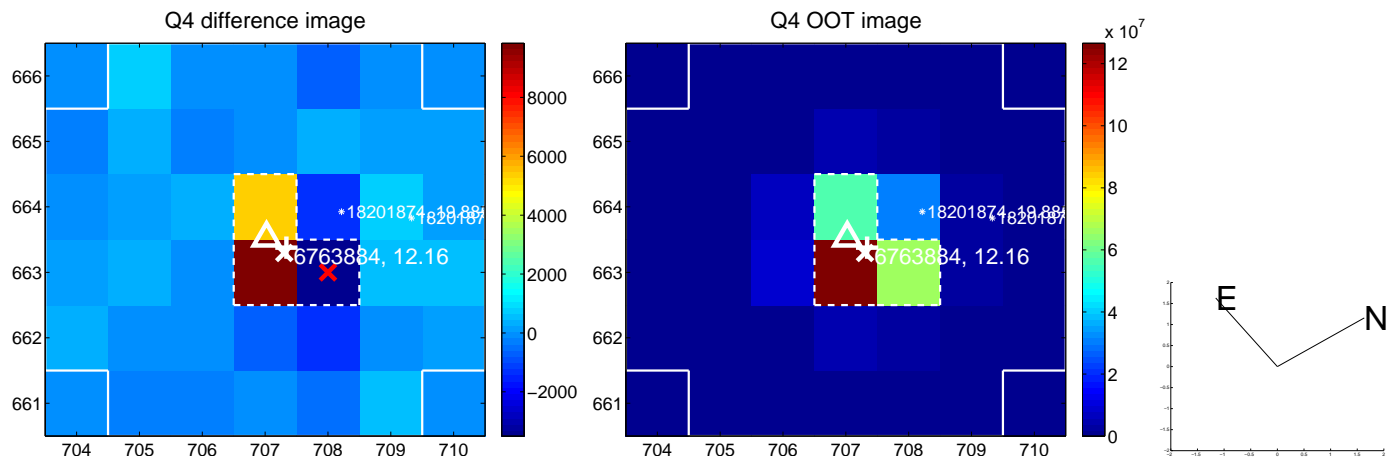
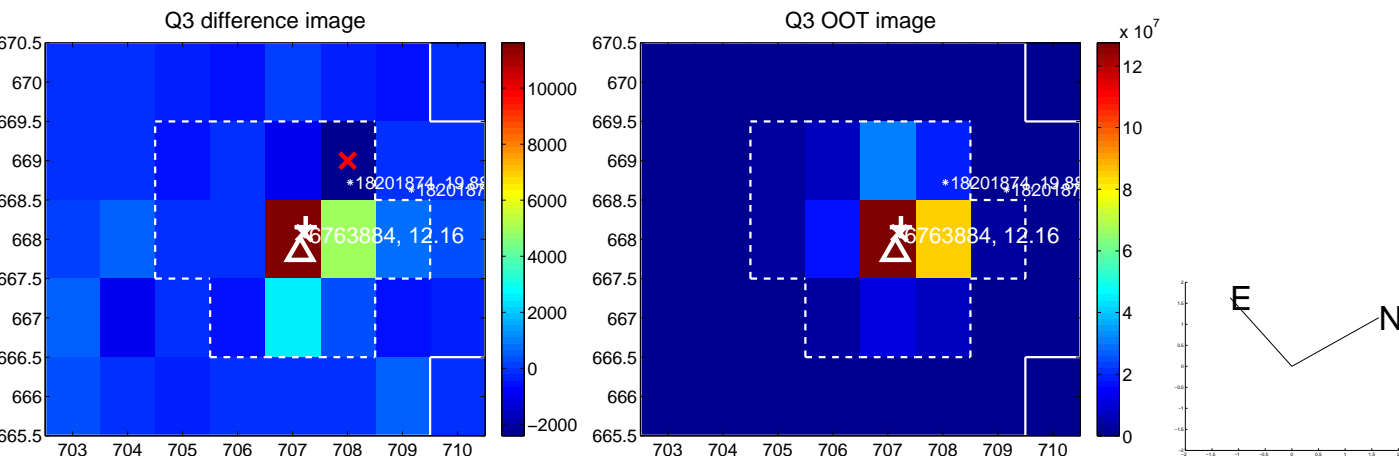
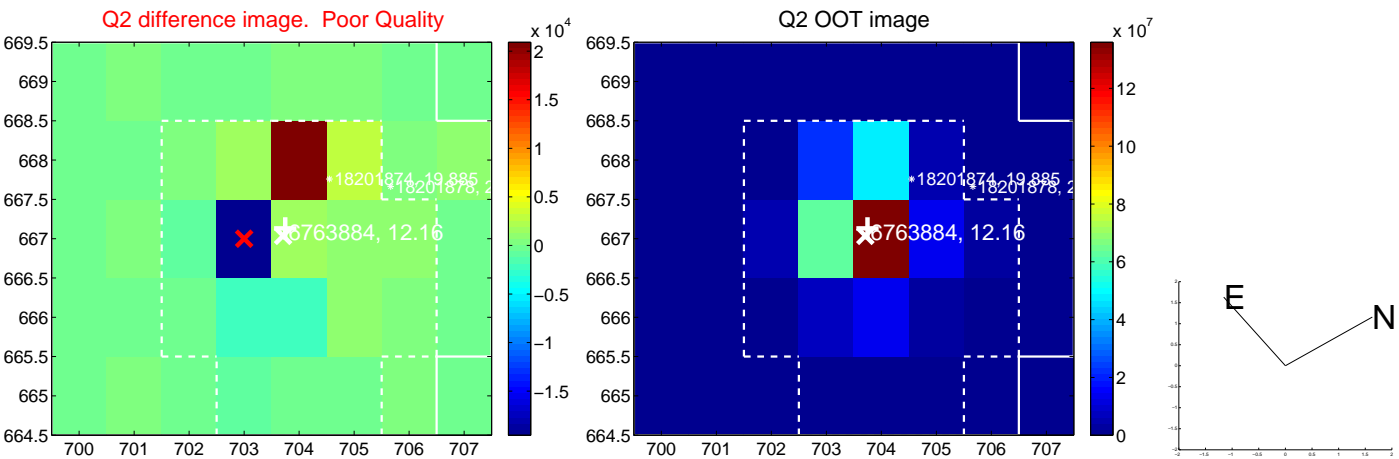
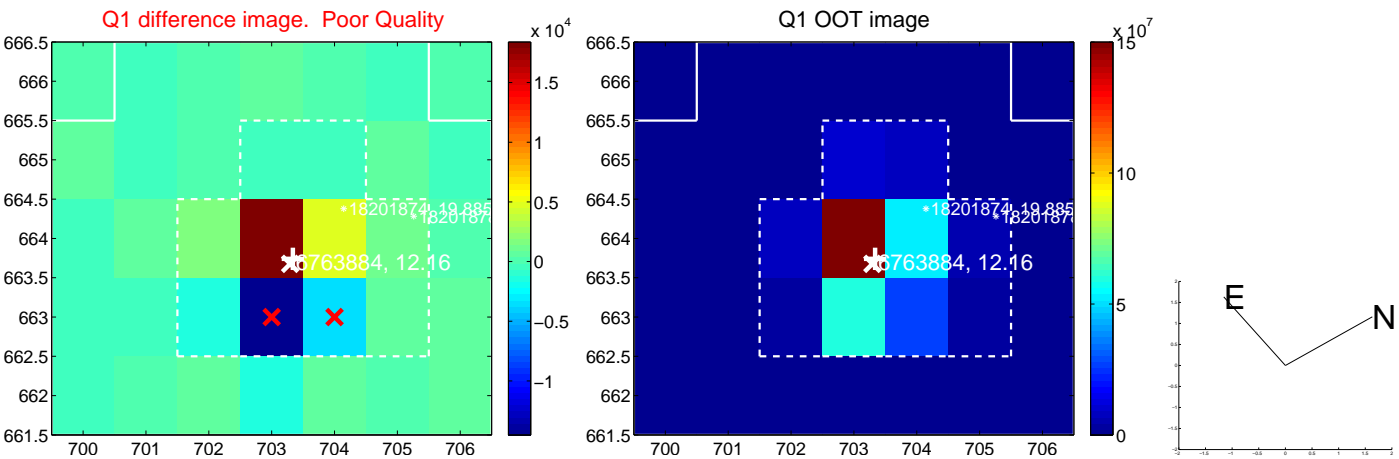
The direct PRF centroid is offset from the target star catalog position by about 0.46 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|-------------------|--------------------|
| PRF-fit source offset from OOT | 0.426 ± 1.313 | 0.32 | 0.211 ± 0.890 | -0.370 ± 1.082 |
| PRF-fit source offset from KIC position | 0.386 ± 1.161 | 0.33 | 0.385 ± 1.076 | -0.031 ± 1.284 |
| photometric centroid source offset | 1.36 ± 0.93 | 1.46 | -1.35 ± 0.93 | 0.14 ± 1.04 |

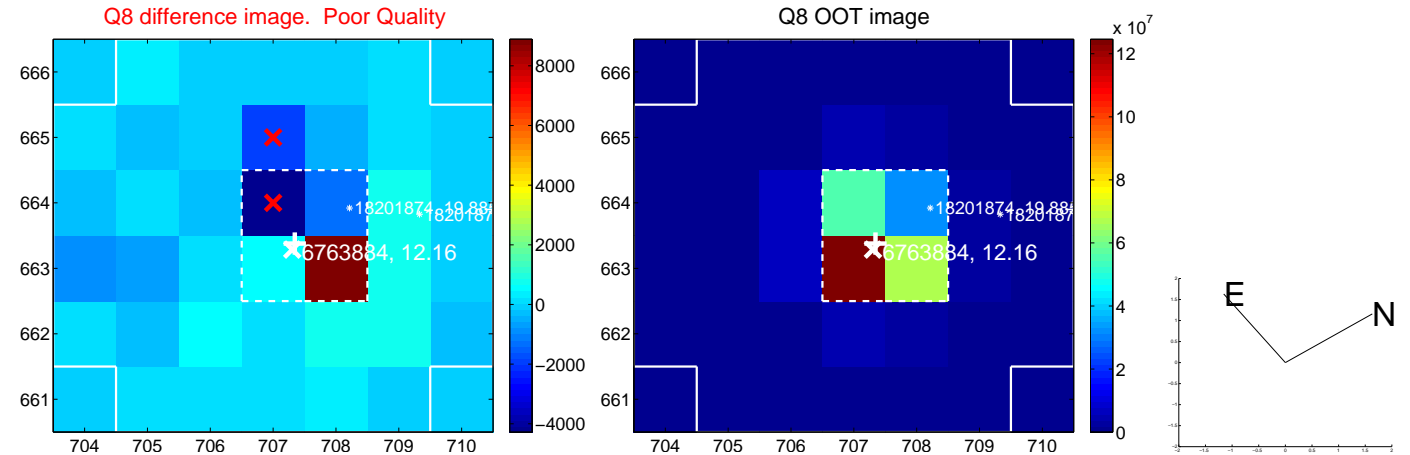
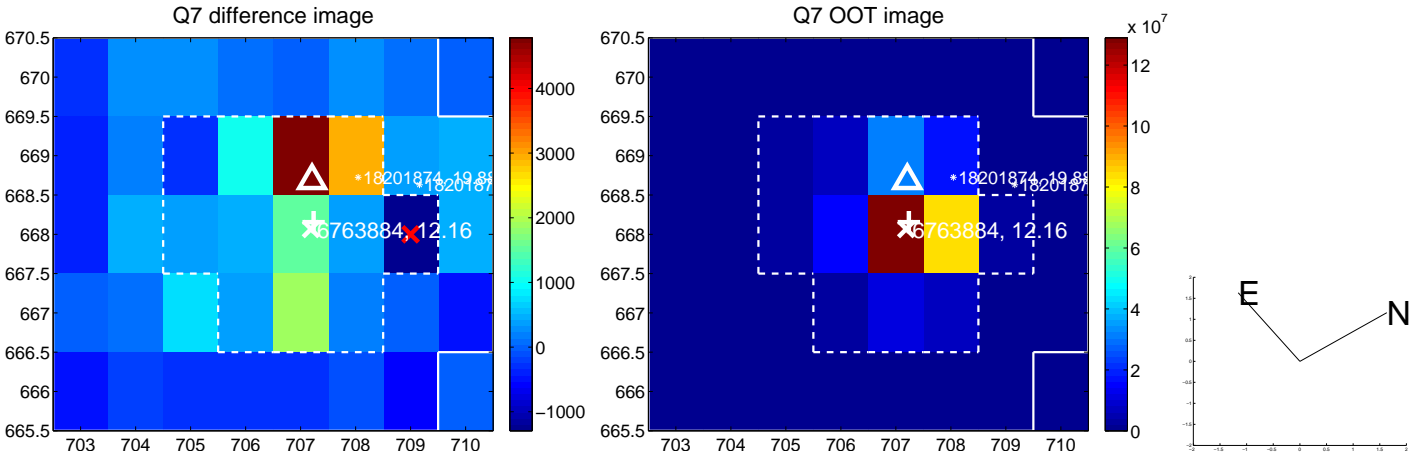
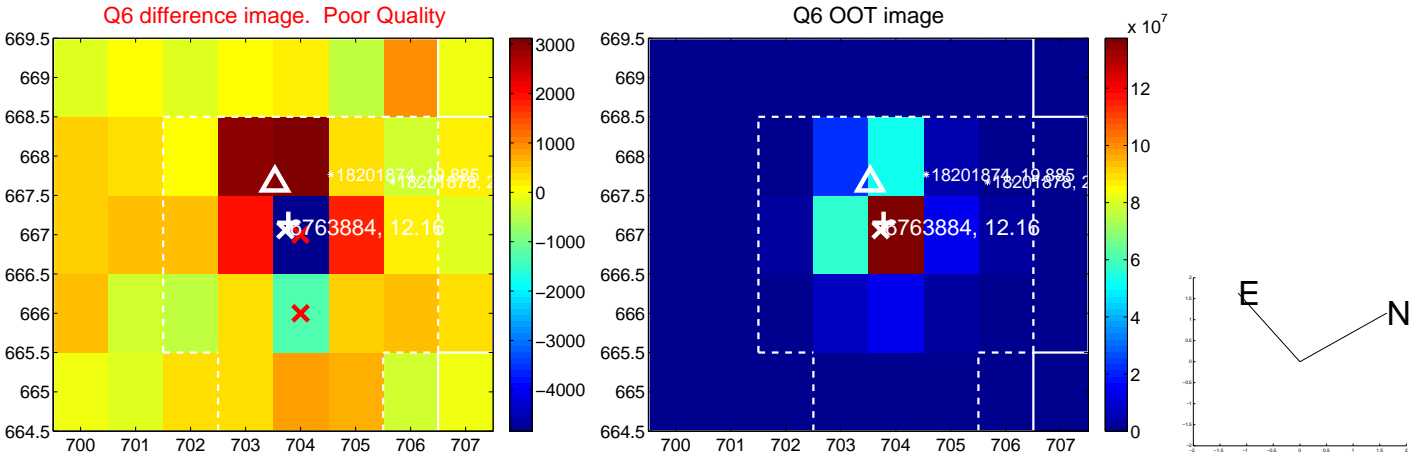
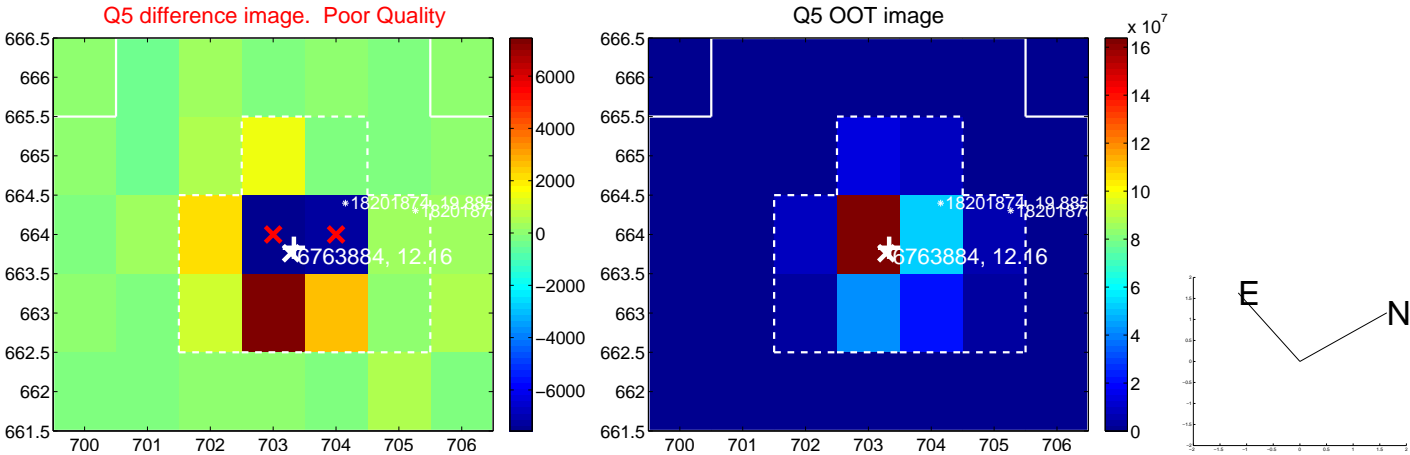


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

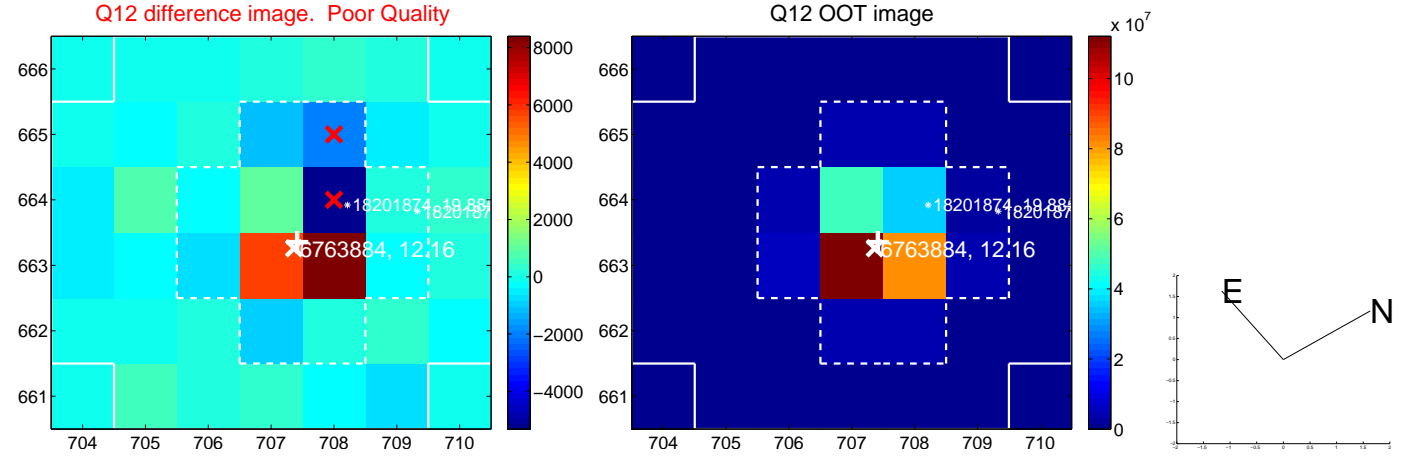
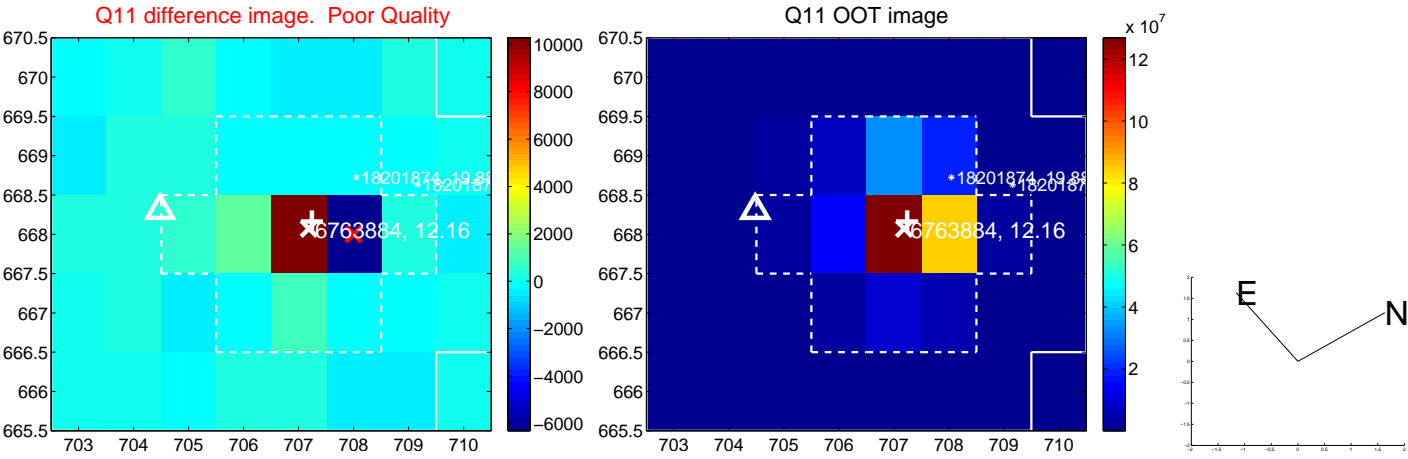
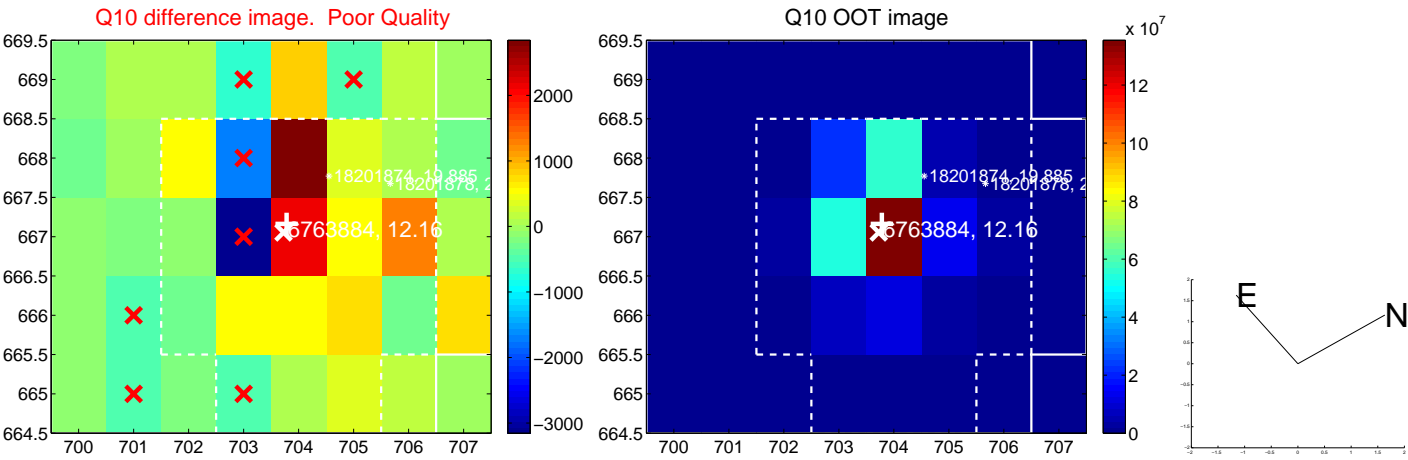
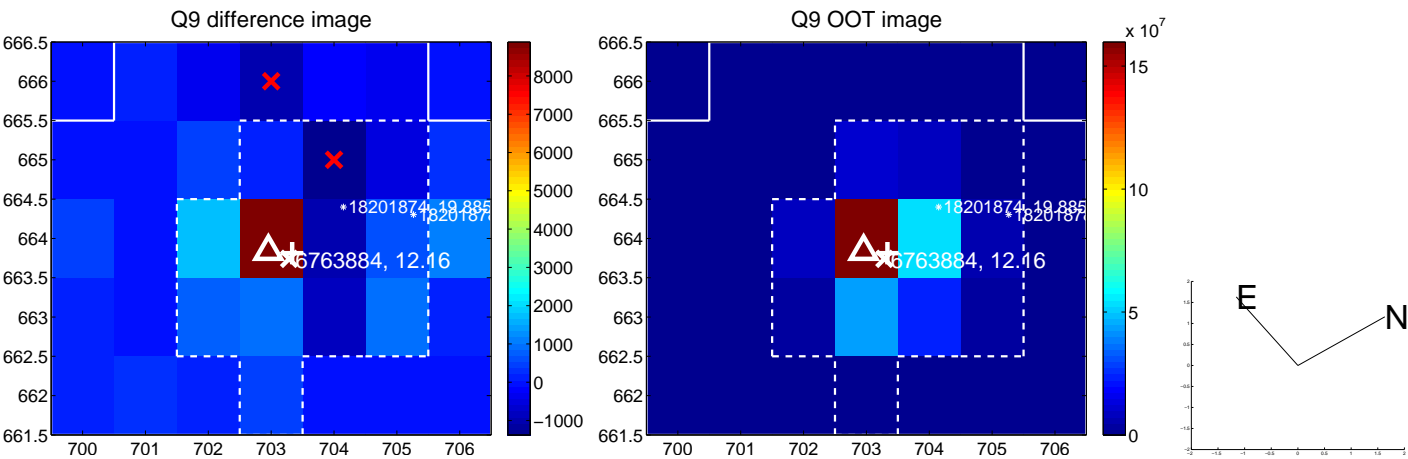
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



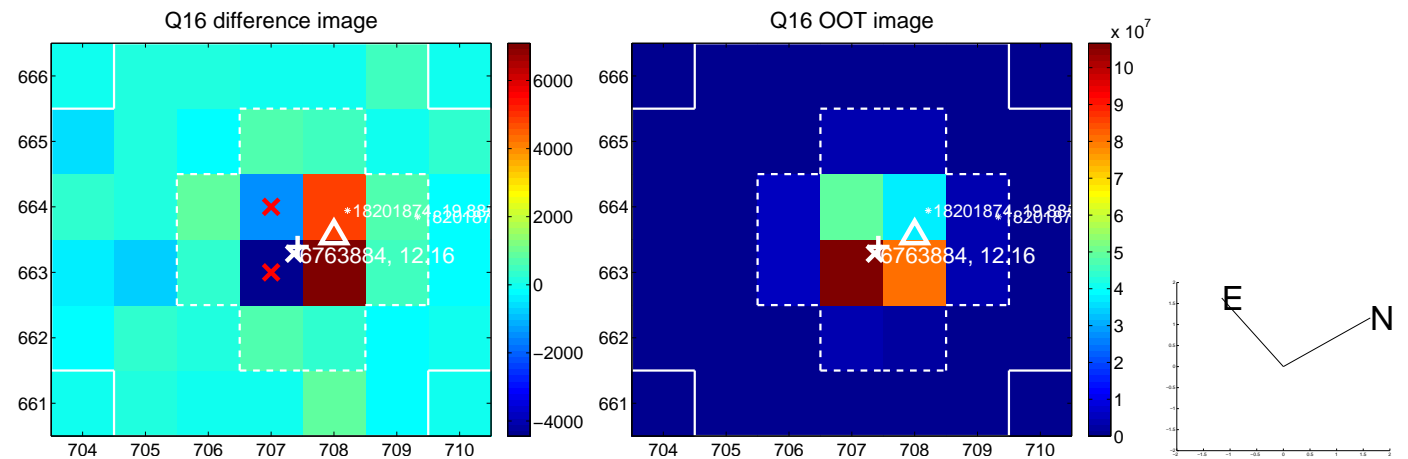
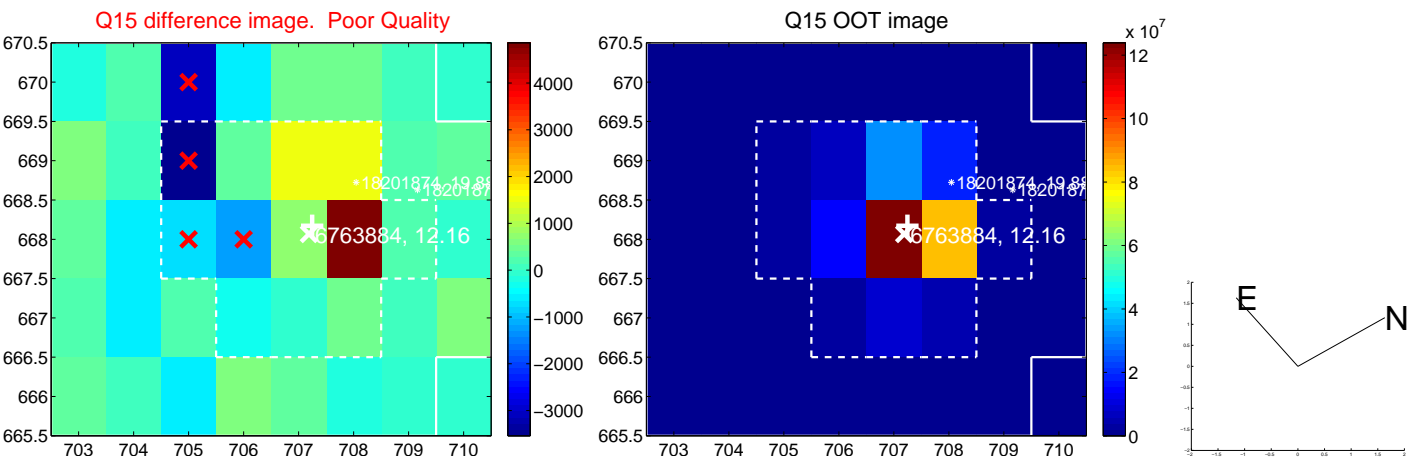
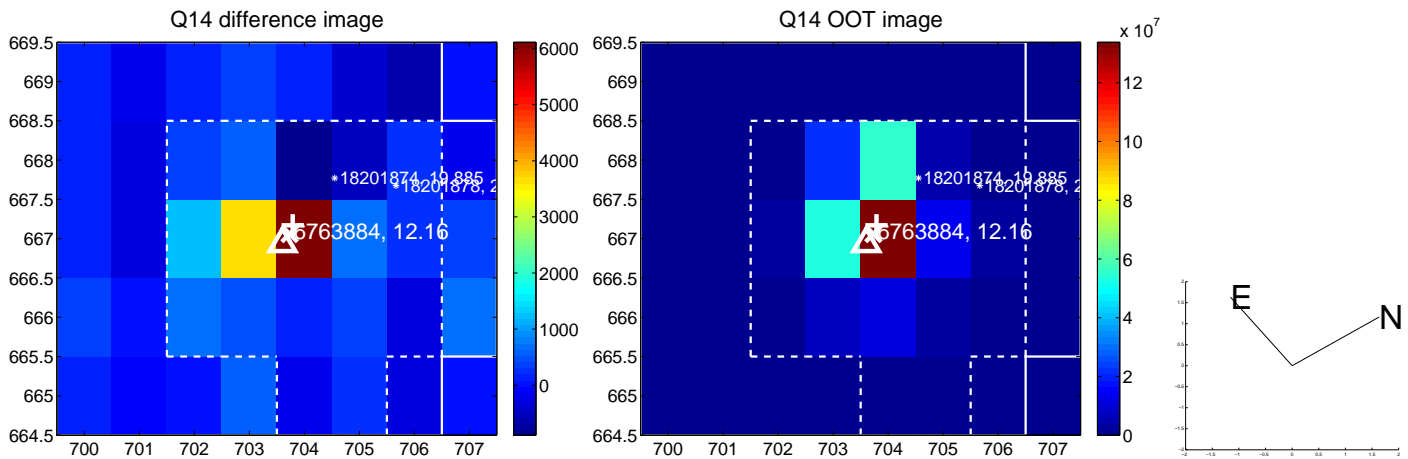
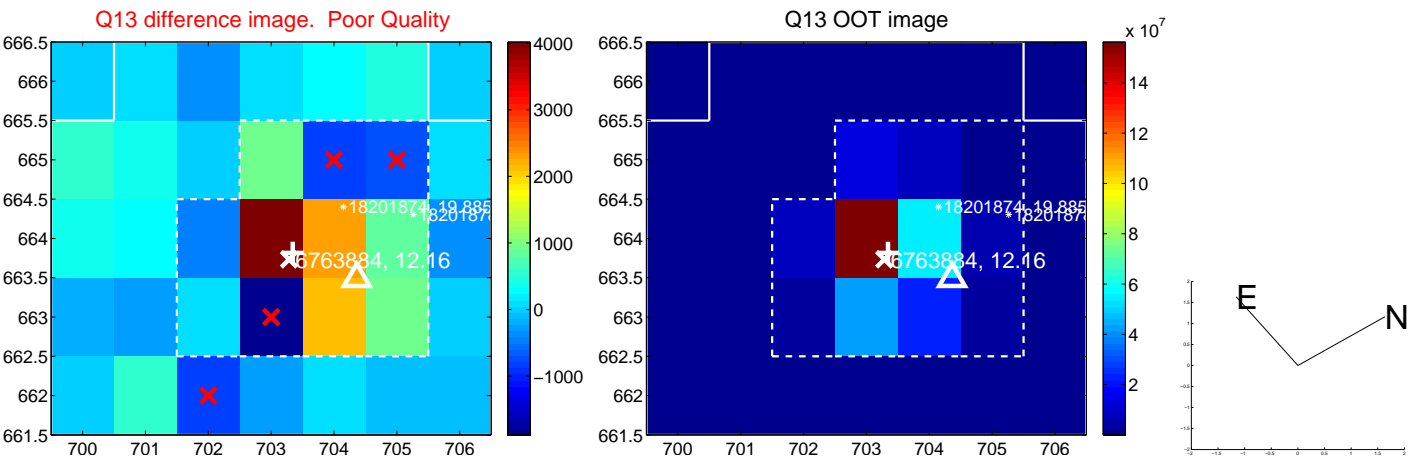
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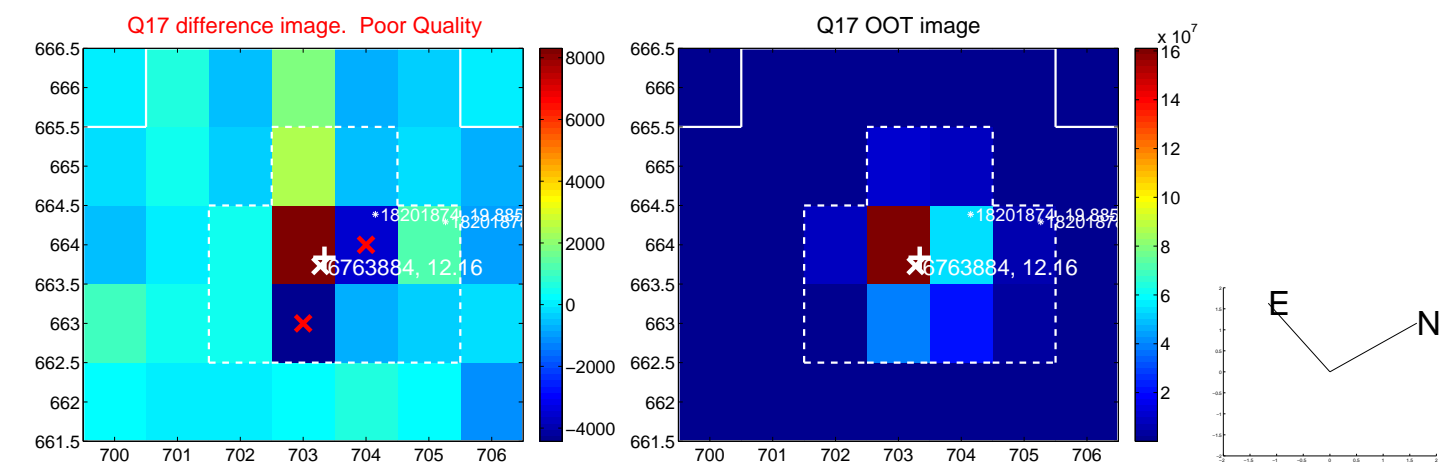
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



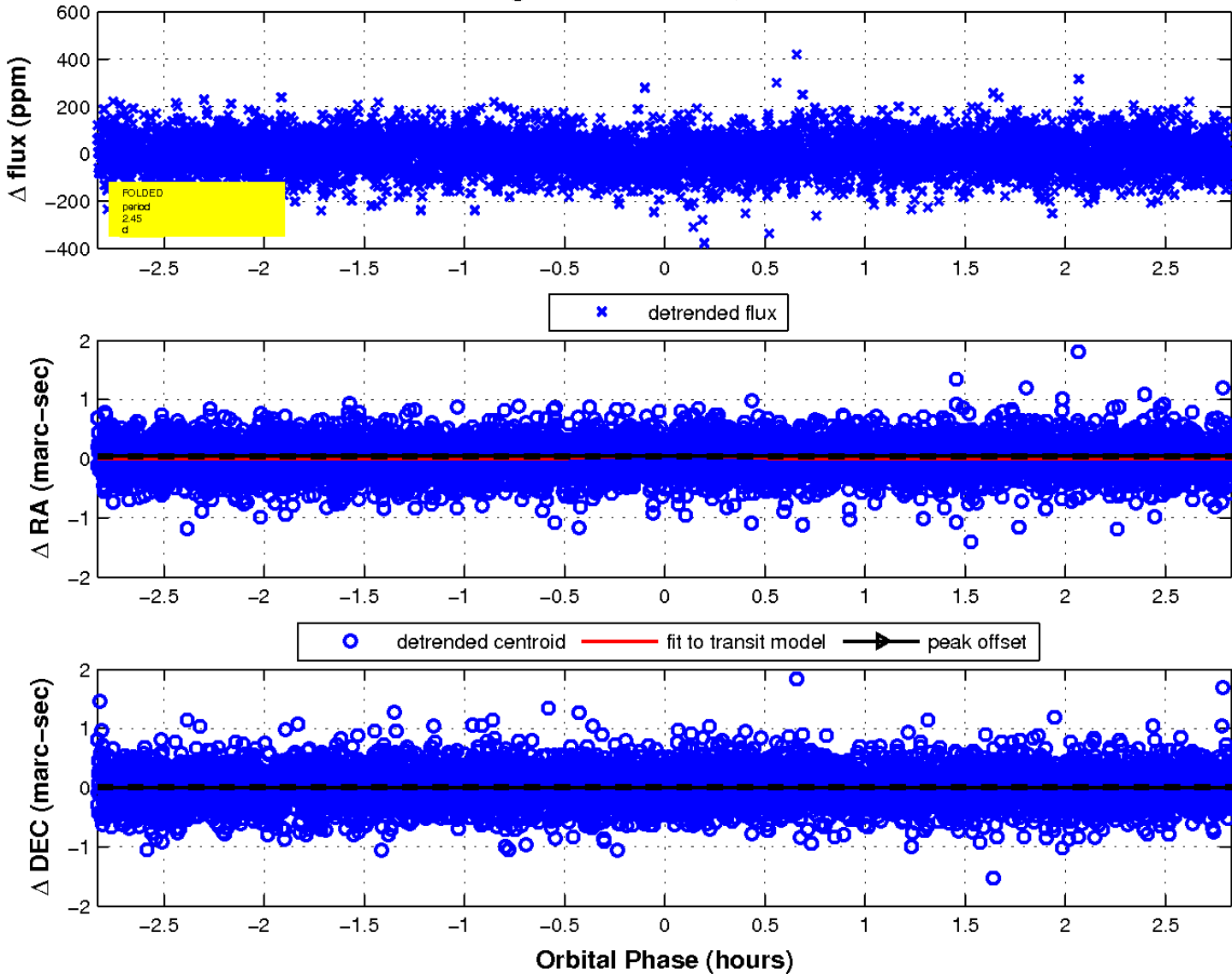
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

