

KIC 007612691

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}) |
|--------------|----------|---------|---------------|--------------|-------------|------------------|------|------|-----------------------------|-----------------|------------------------|------------------------|
| 007612691-01 | OBS | 3836.01 | 3.467233 | 133.898144 | 378.8 | 7.450 | 24.0 | 28.1 | 0.54 | 4969 | 1.30 | 118.54 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|--|
| 007612691-01 | OBS | FP | 0.00 | 1 | 0 | 1 | 0 | LPP_DV—CENT_RESOLVED_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 007612691-01

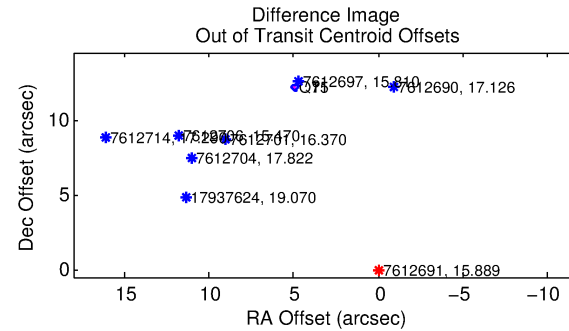
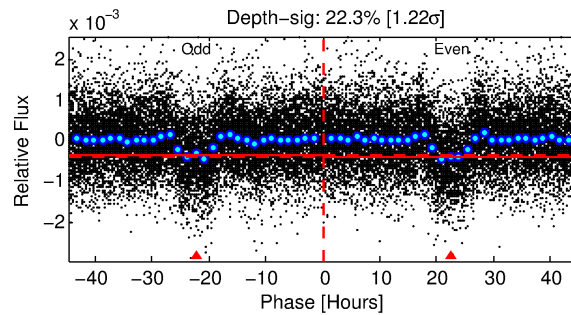
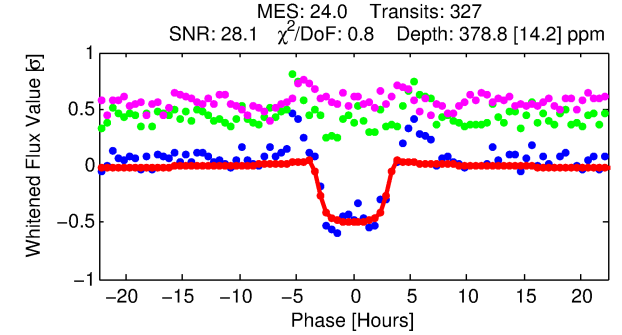
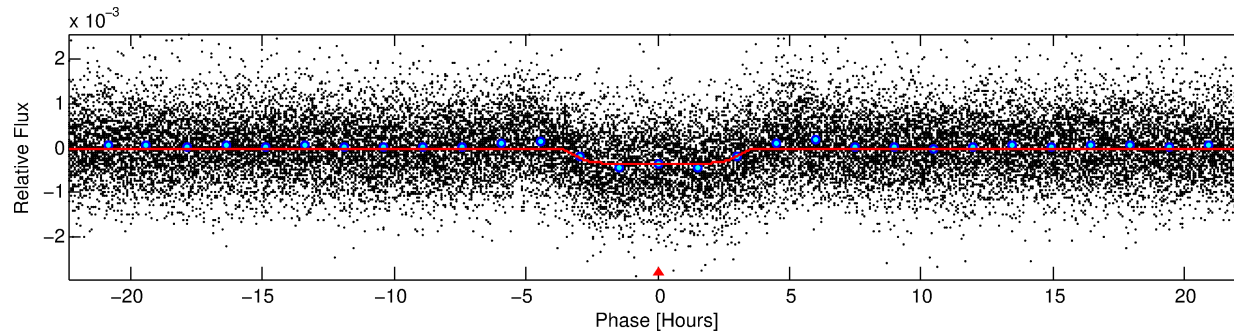
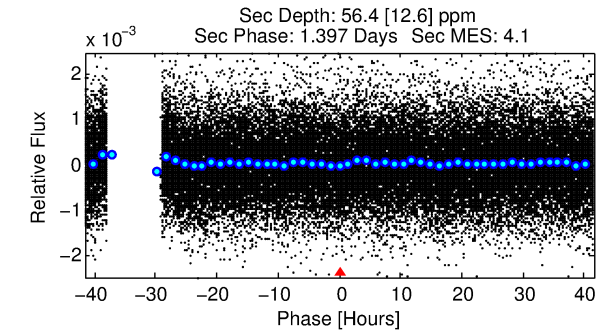
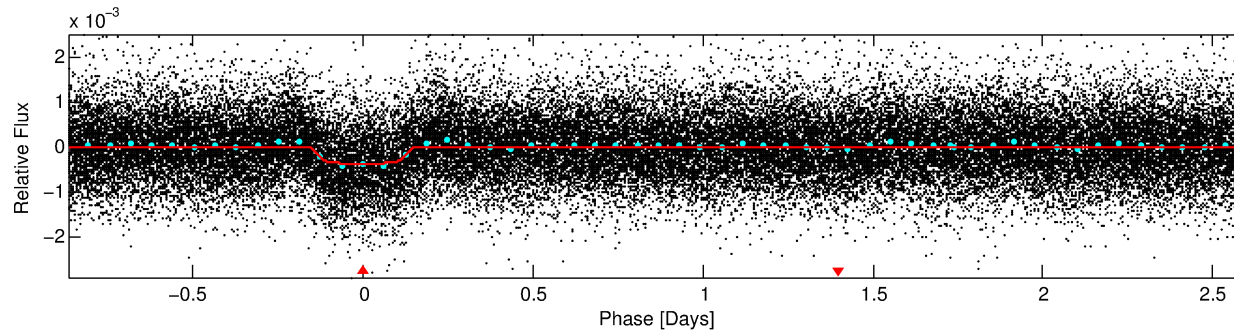
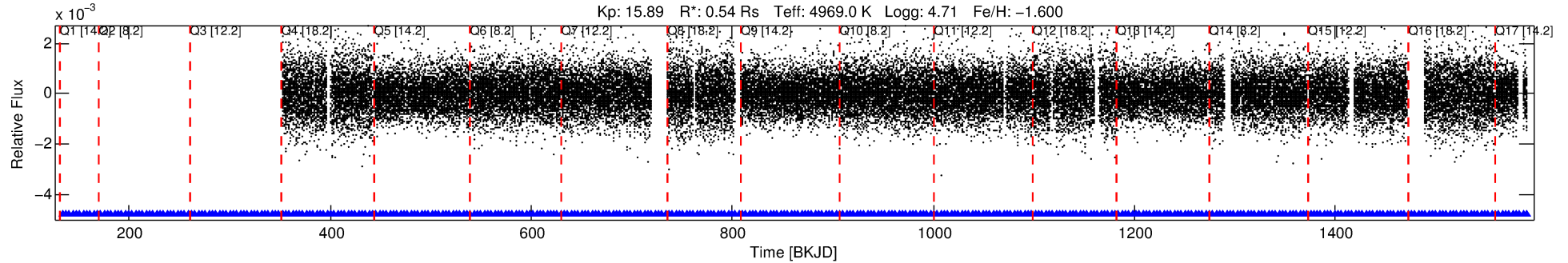
No Significant Match Found

DV One-Page Summary

KIC: 7612691 Candidate: 1 of 1 Period: 3.467 d

KOI: K03836.01 Corr: 0.843

Kp: 15.89 R*: 0.54 Rs Teff: 4969.0 K Logg: 4.71 Fe/H: -1.600



DV Fit Results:

Period = 3.46723 [0.00002] d
Epoch = 133.8981 [0.0050] BKJD
Rp/R* = 0.0219 [0.0009]
a/R* = 1.75 [0.20]
b = 0.94 [0.02]
Seff = 118.54 [19.35]
Teq = 841 [34] K
Rp = 1.30 [0.09] Re
a = 0.0369 [0.0019] AU
Ag = 24.94 [6.25] [3.83σ]
Teffp = 2907 [202] K [10.09σ]

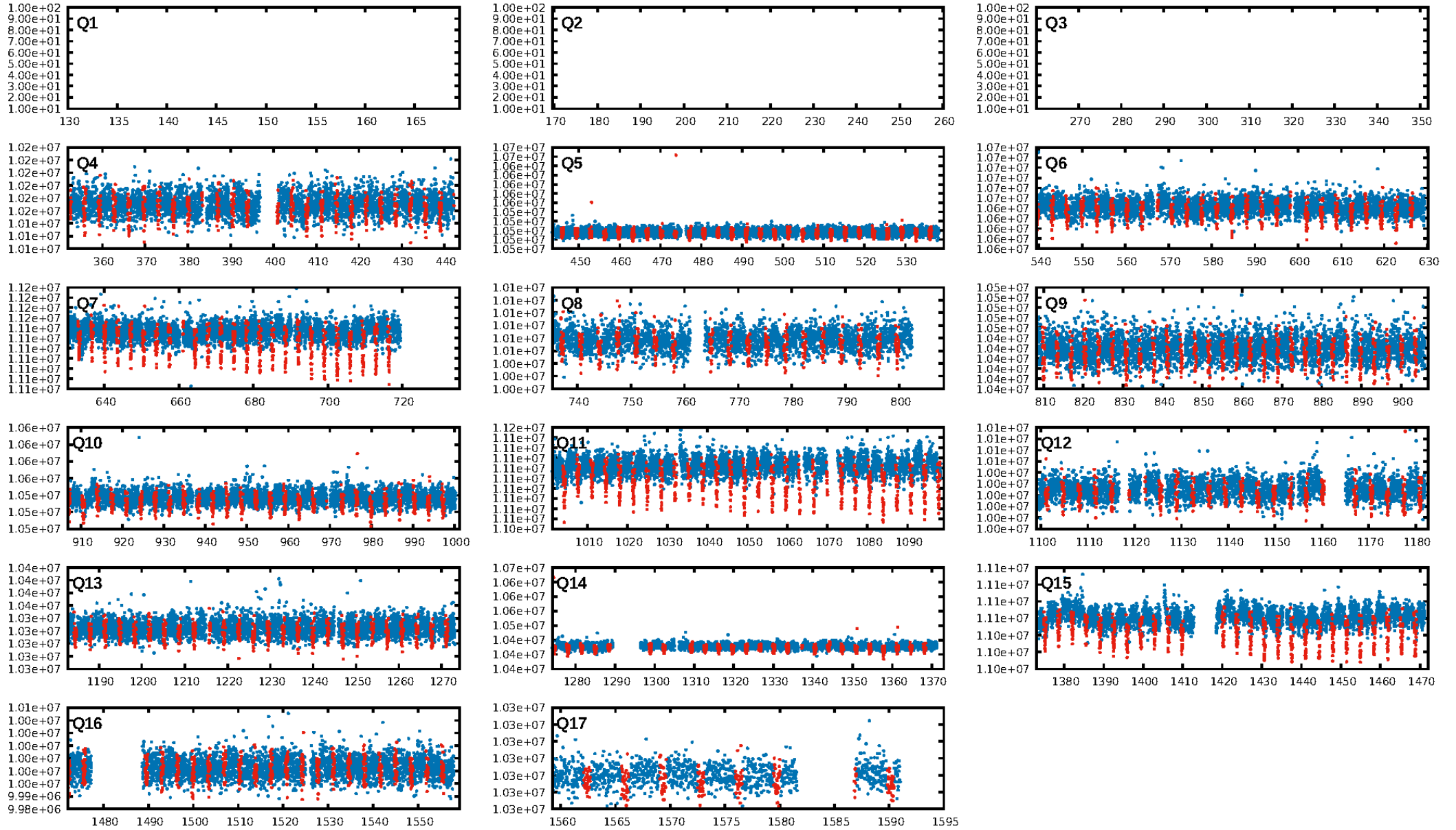
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 9.96e-114
RollingBand-fgt: 1.00 [319/319]
GhostDiagnostic-chr: -0.1462
Centroid-sig: 0.0%
Centroid-so: N/A
OotOffset-rm: 13.131 arcsec [195.88σ]
KicOffset-rm: 13.126 arcsec [191.54σ]
OotOffset-st: 0/3/0/0 [3]
KicOffset-st: 0/3/0/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [14/14]

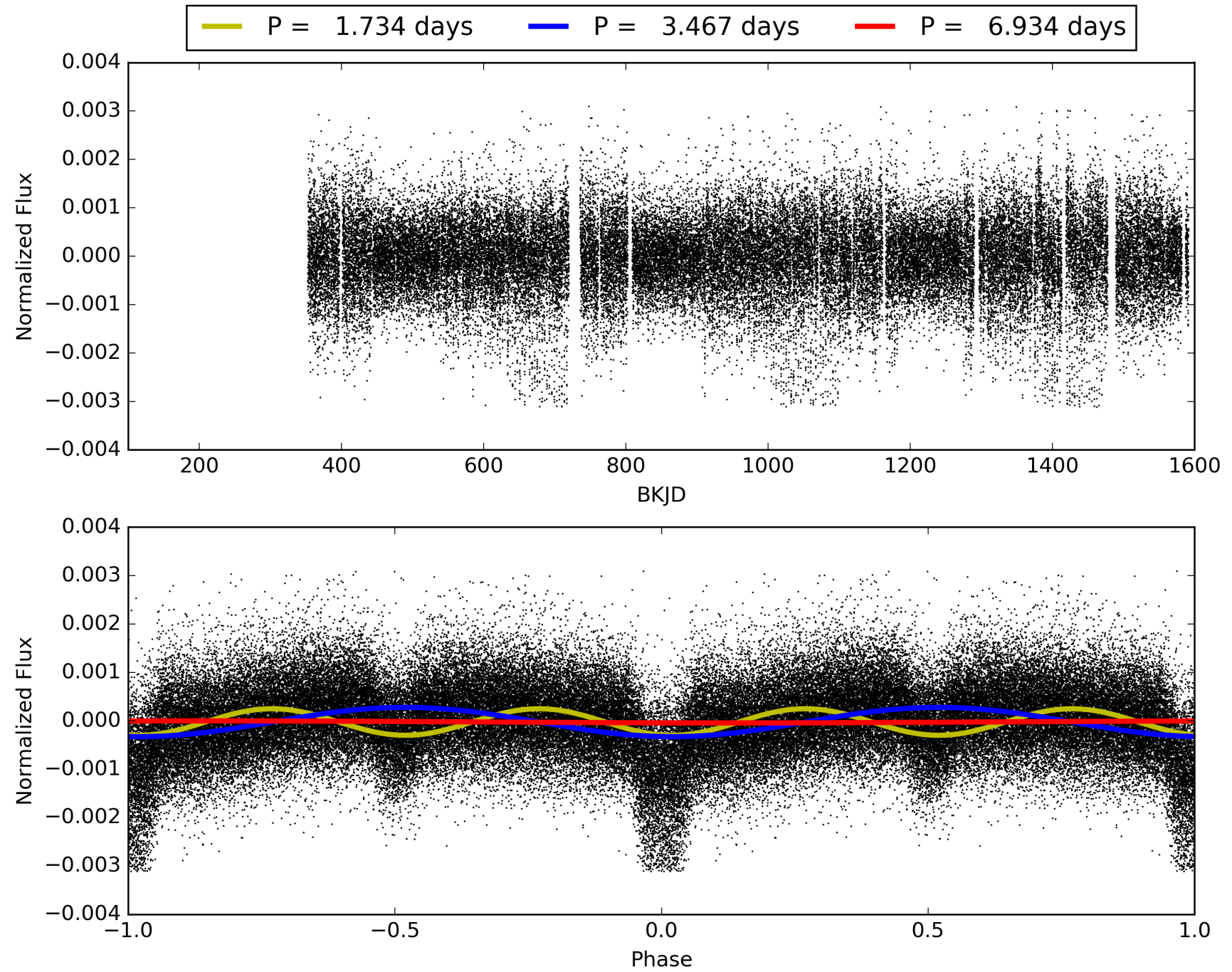
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 08:53:54 Z

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

TCE 007612691-01, PDC Light Curves

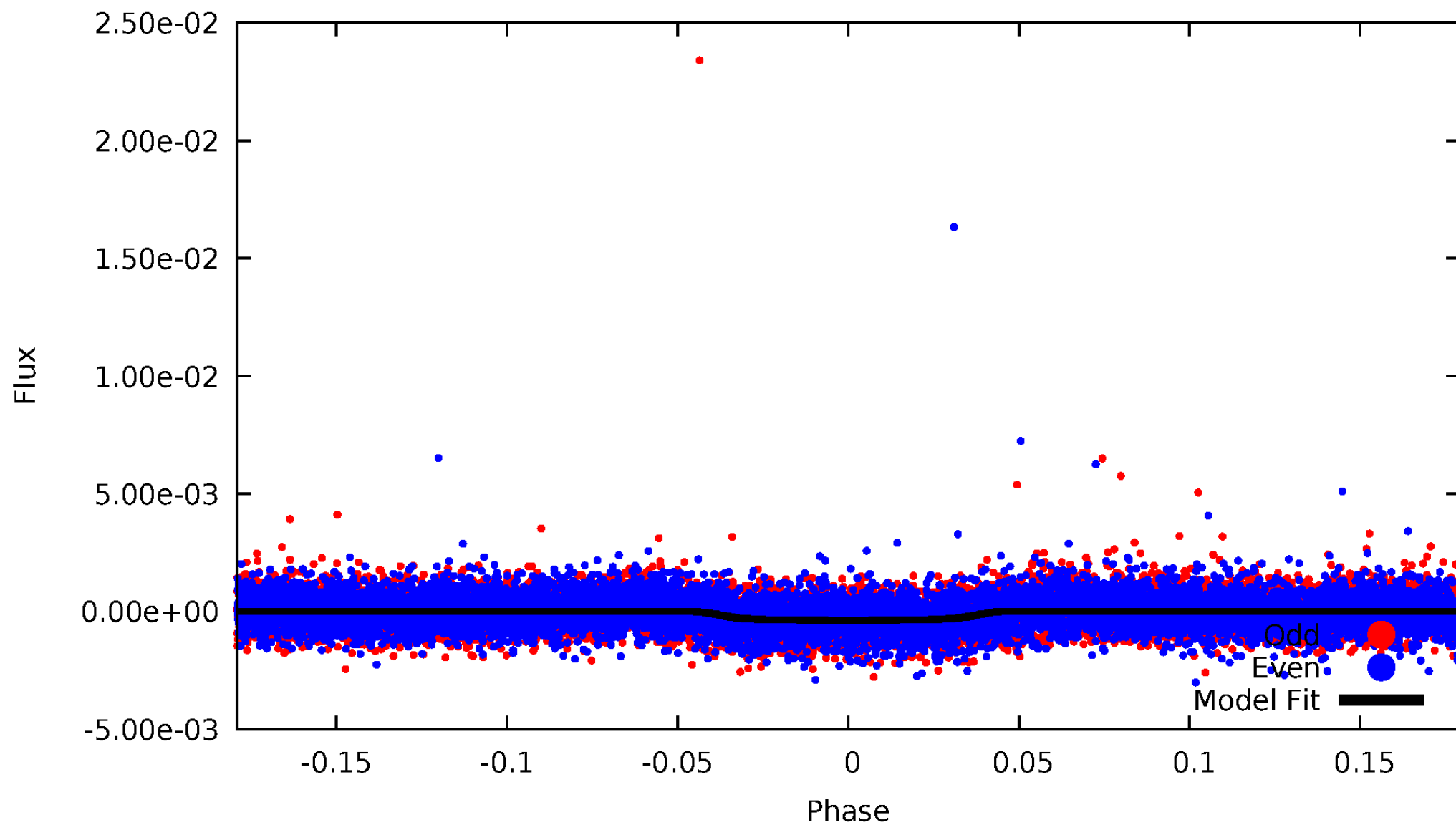


TCE 007612691-01



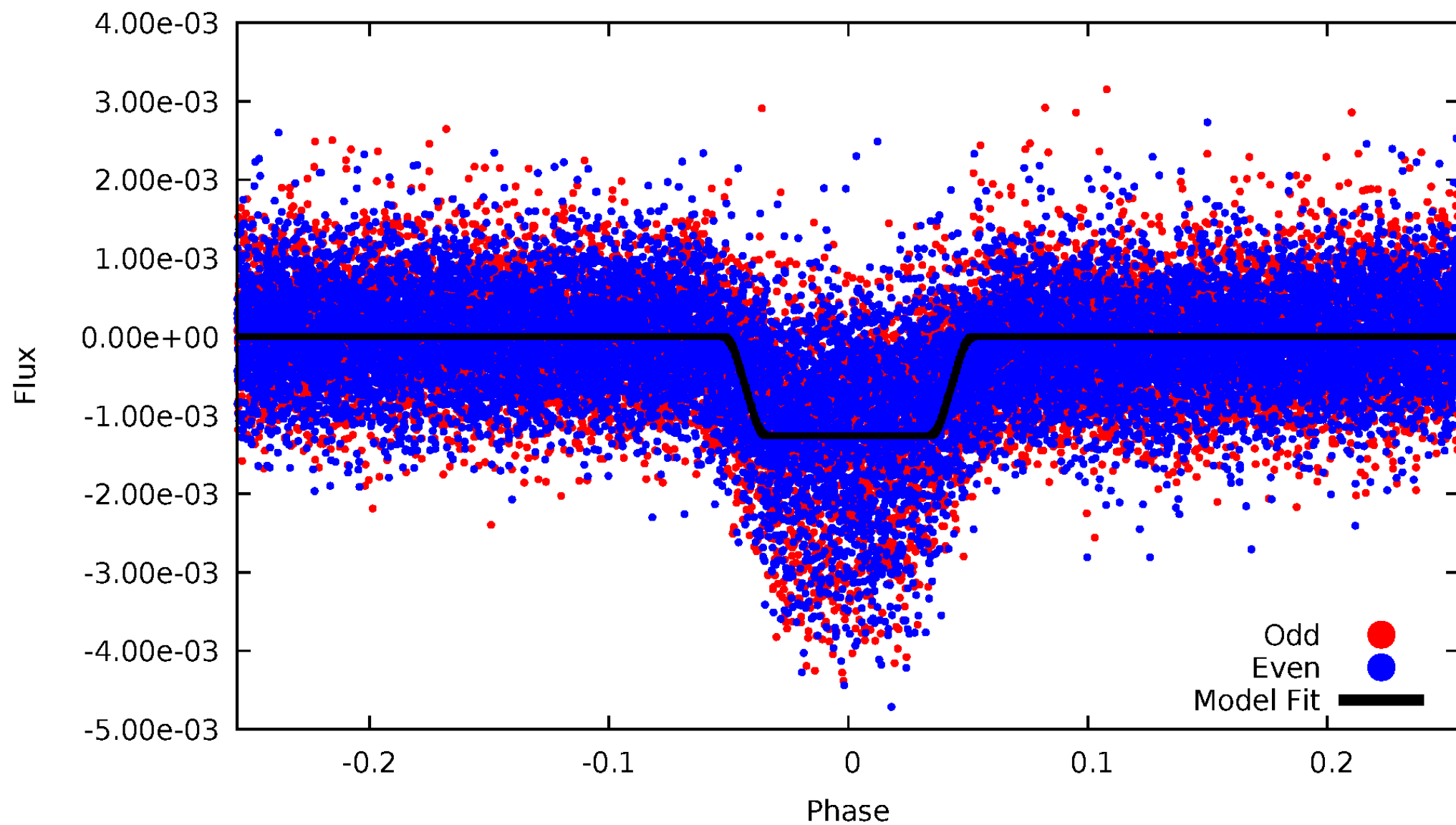
DV Odd/Even

TCE 007612691-01

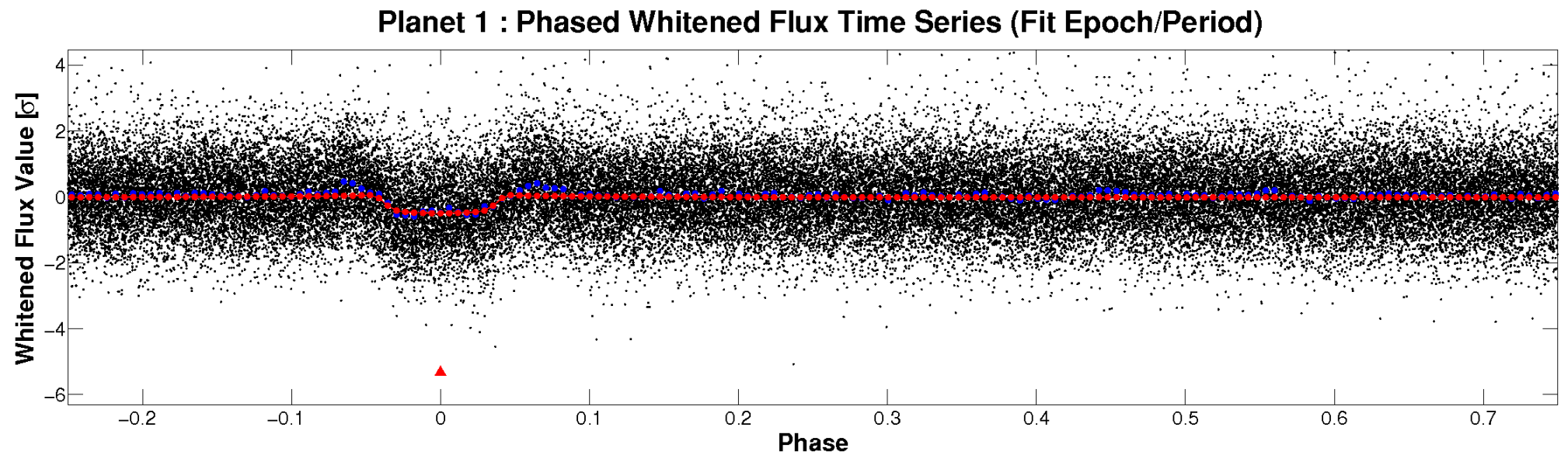
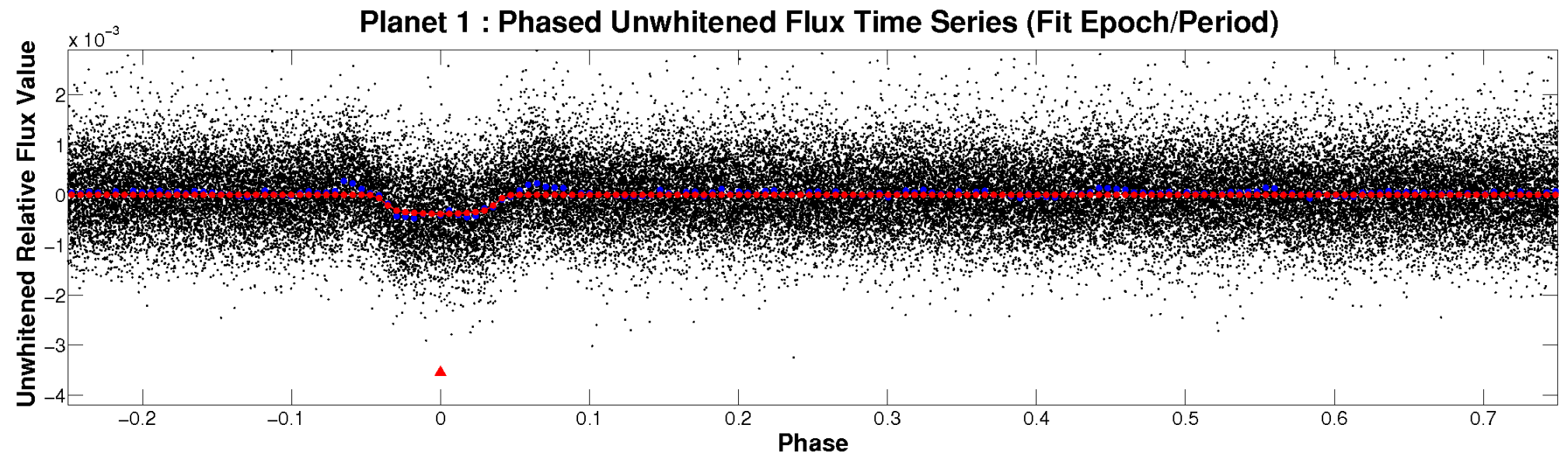


ALT Odd/Even

TCE 007612691-01

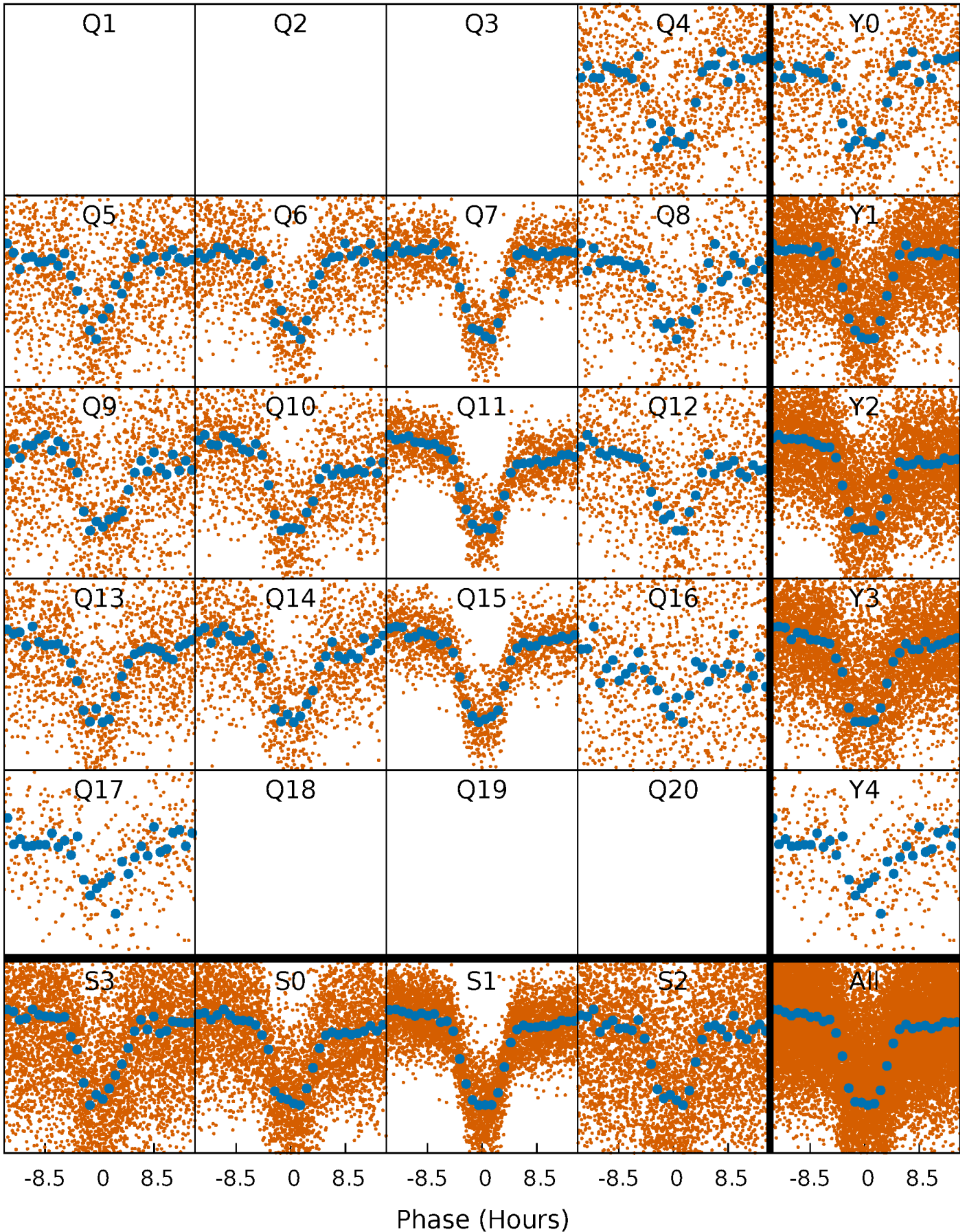


Non-Whitened Vs. Whitened Light Curve



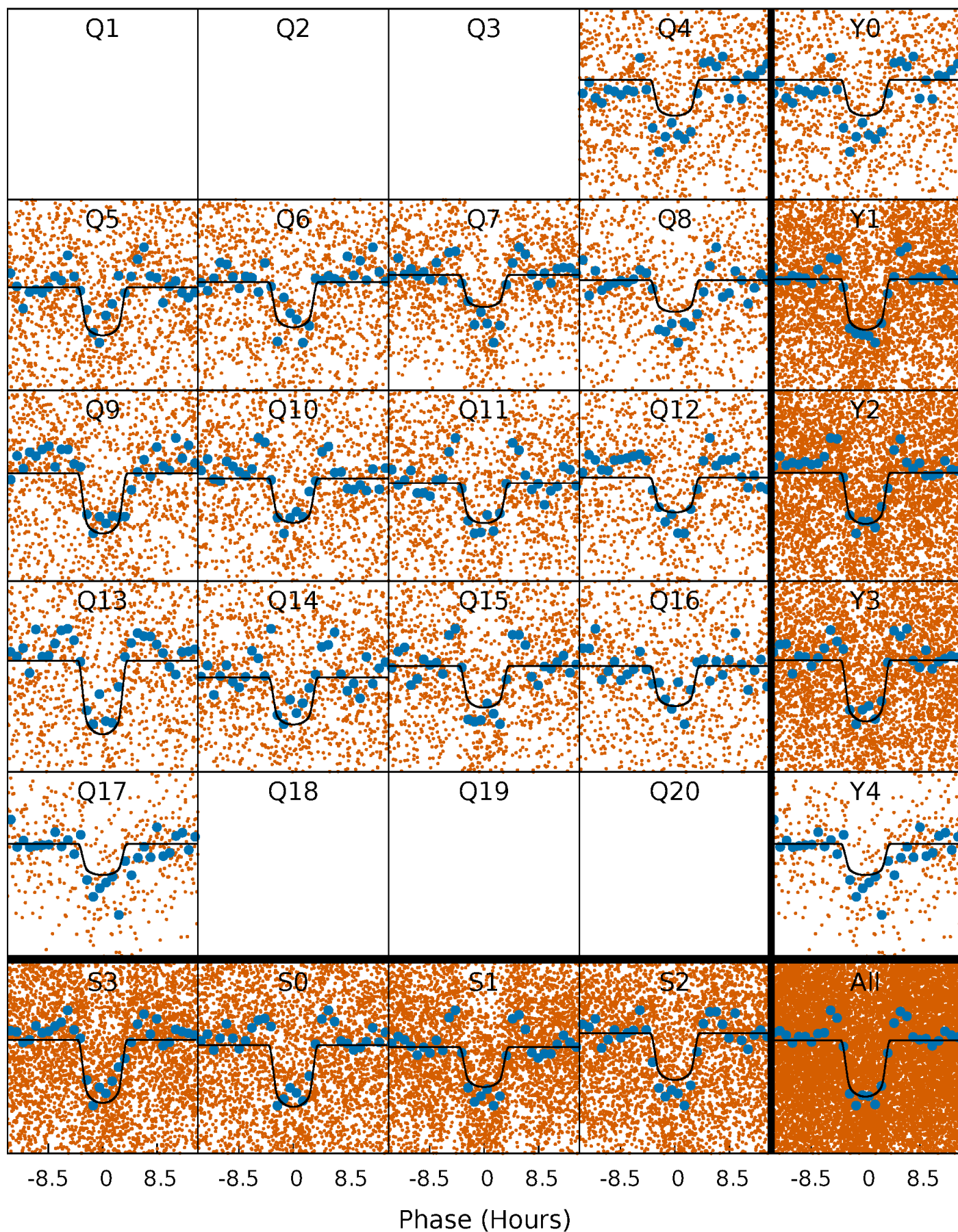
PDC Quarter-Phased Transit Curves

TCE 007612691-01 P= 3.467233 Days $T_0=133.898144$ (BKJD)



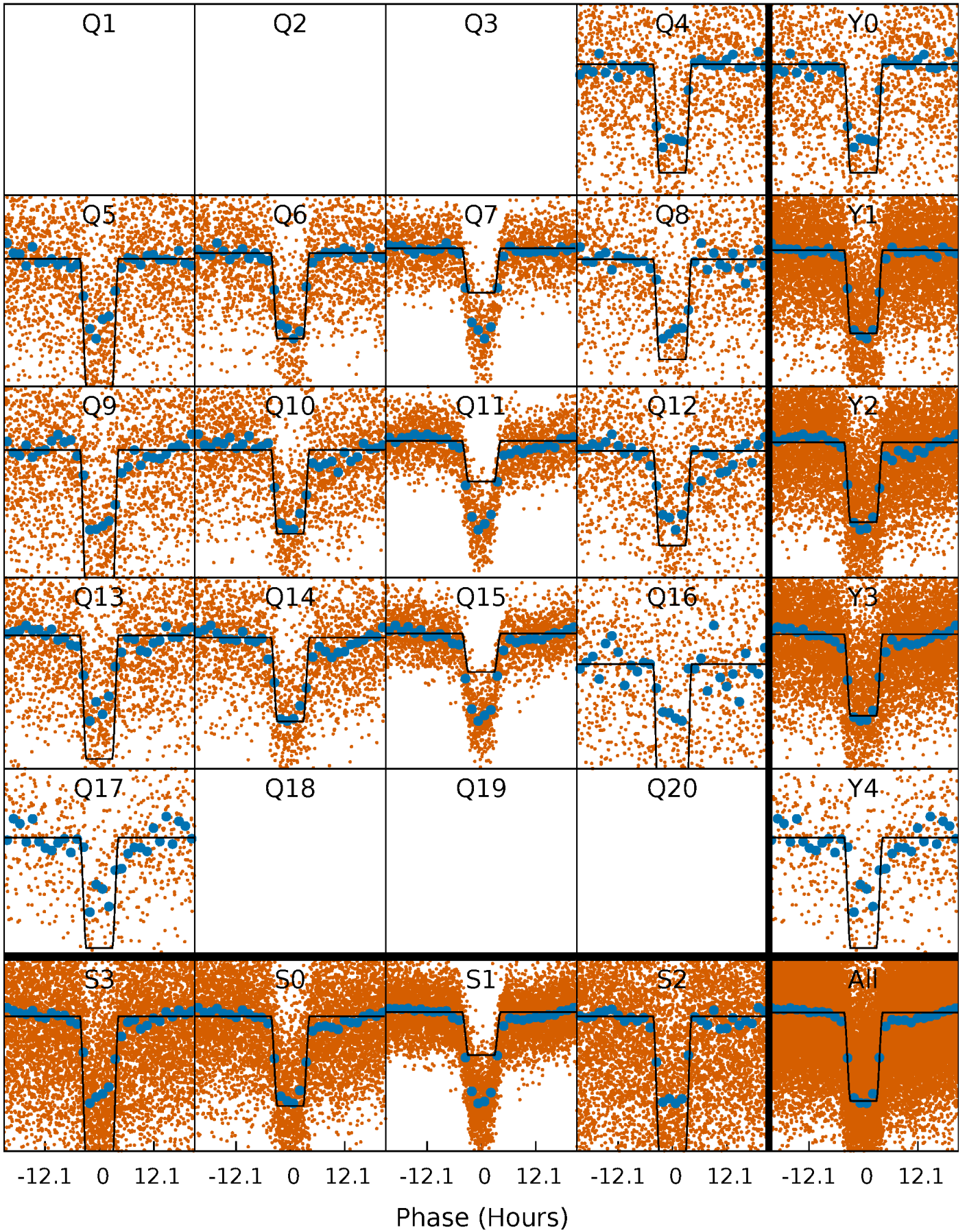
DV Quarter-Phased Transit Curves

TCE 007612691-01 P= 3.467233 Days $T_0=133.898144$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

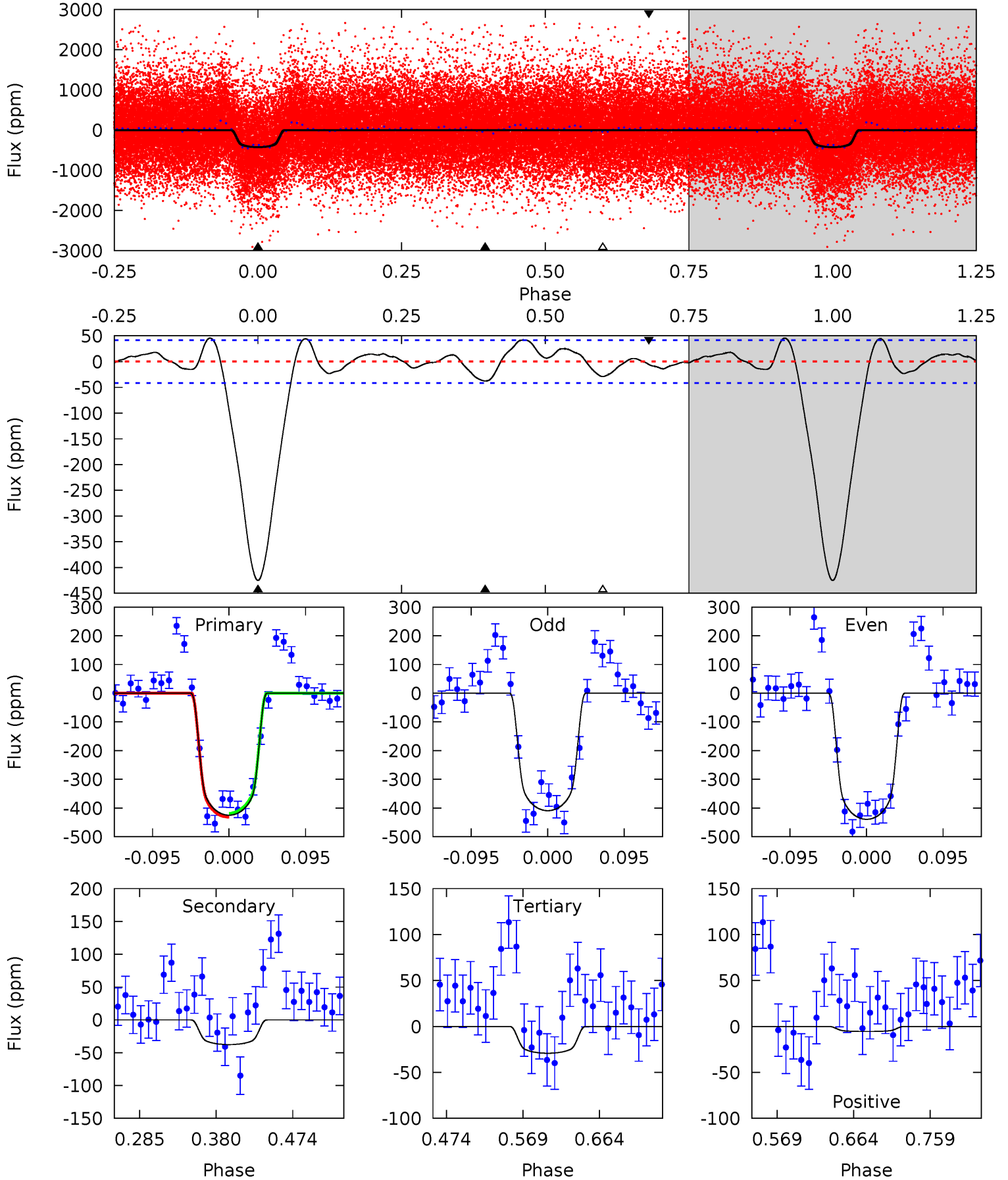
TCE 007612691-01 P= 3.467228 Days $T_0=133.906060$ (BKJD)



DV Model-Shift Uniqueness Test

007612691-01, P = 3.467233 Days, E = 133.898144 Days

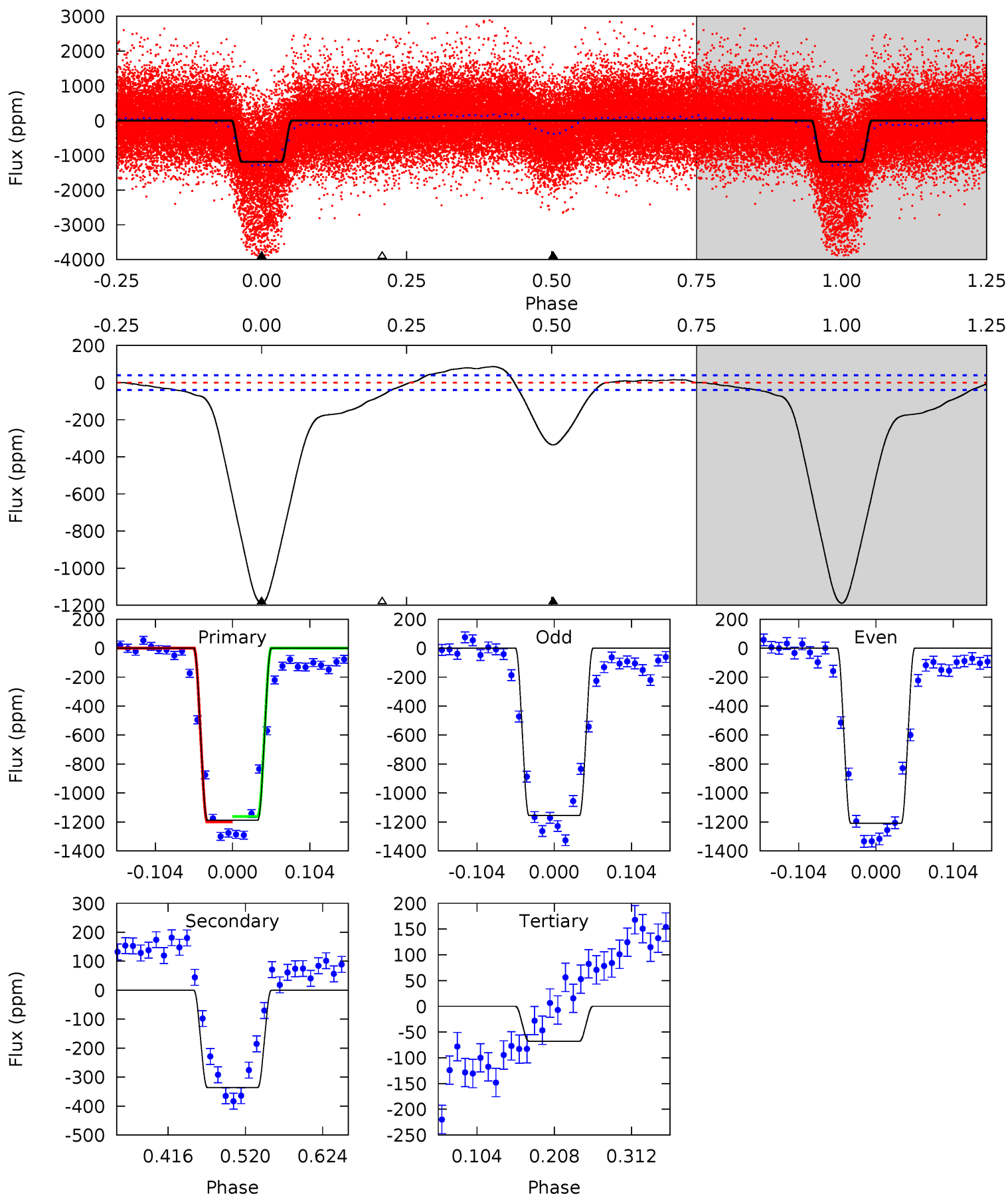
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|-------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 46.7 | 4.14 | 3.21 | -0.61 | 4.58 | 1.67 | 1.43 | 43.5 | 47.4 | 0.93 | 4.75 | 1.66 | 1.06 | 0.10 | 0.70 |



Alt Model-Shift Uniqueness Test

007612691-01, P = 3.467228 Days, E = 133.906060 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|-------|------|------|-----|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 137.3 | 38.8 | 7.83 | 0 | 4.56 | 1.63 | 7.87 | 129.5 | 137.3 | 31.0 | 38.8 | 3.12 | 1.27 | 0.07 | 2.15 |



Stellar Parameters For KIC 007612691

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | R (R_{\odot}) | $M(M_{\odot})$ | p_{\star} ($\text{g}\cdot\text{cm}^{-3}$) |
|--------|----------------------|---------------------------|----------------------------|---------------------------|---------------------------|---|
| | 4969^{+178}_{-158} | $4.713^{+0.045}_{-0.024}$ | $-1.600^{+0.300}_{-0.250}$ | $0.543^{+0.027}_{-0.030}$ | $0.556^{+0.043}_{-0.020}$ | $4.880^{+0.800}_{-0.470}$ |
| | +4%/-3% | +1%/-1% | +19%/-16% | +5%/-6% | +8%/-4% | +16%/-10% |
| Source | KIC0 | 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 007612691-01 / KOI 3836.01

| Detrend | Depth (ppm) | R_p (R_{\oplus}) | T_{max} (K) | T_{obs} (K) | A_{obs} |
|---------|--------------|------------------------|----------------------|----------------------|------------------|
| DV | -38 ± 9 | $1.30^{+0.07}_{-0.07}$ | 1169^{+44}_{-39} | 3167^{+144}_{-149} | 17^{+4}_{-5} |
| Alt. | -336 ± 9 | $2.11^{+0.08}_{-0.08}$ | 1172^{+49}_{-44} | 3860^{+127}_{-115} | 57^{+5}_{-4} |

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

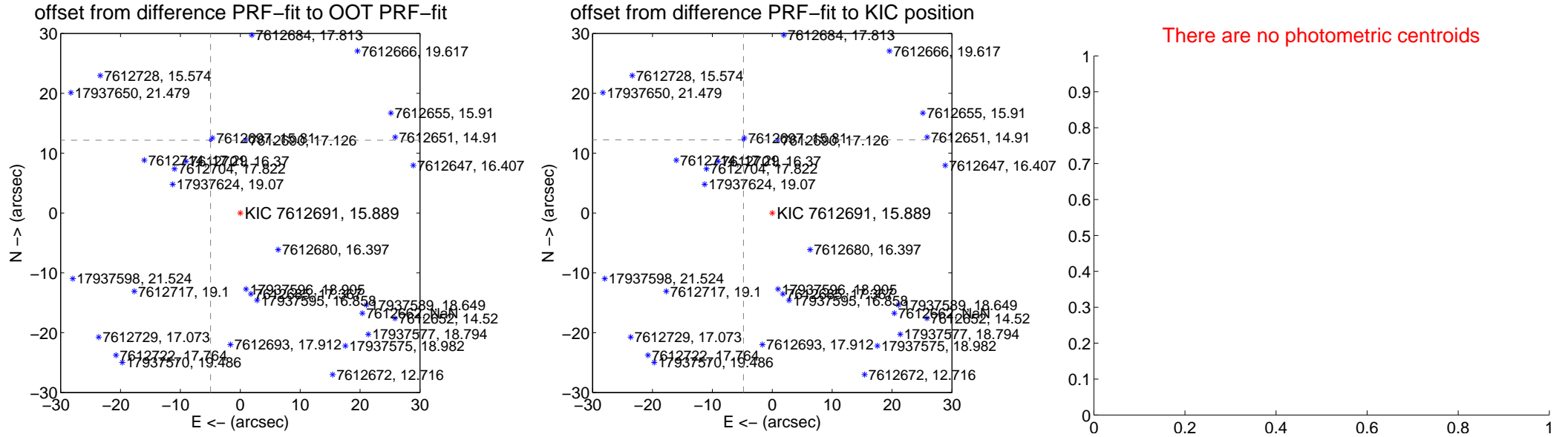
DV Centroid Data

Supplemental centroid analysis for 007612691-01. Kepler magnitude: 15.89. Transit SNR 28.07

There are 3 quarters with good PRF difference image offsets

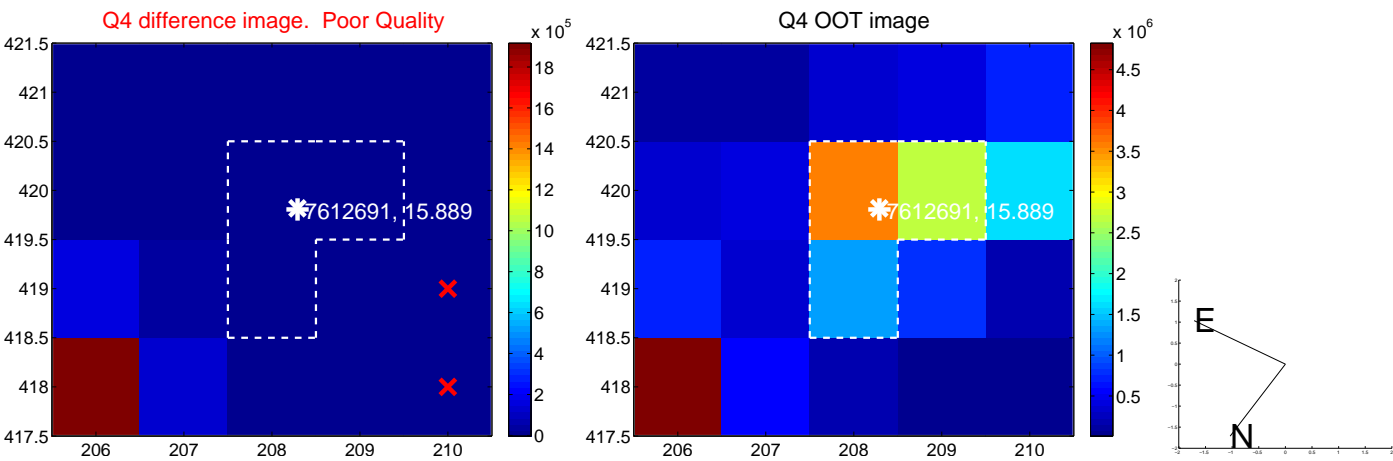
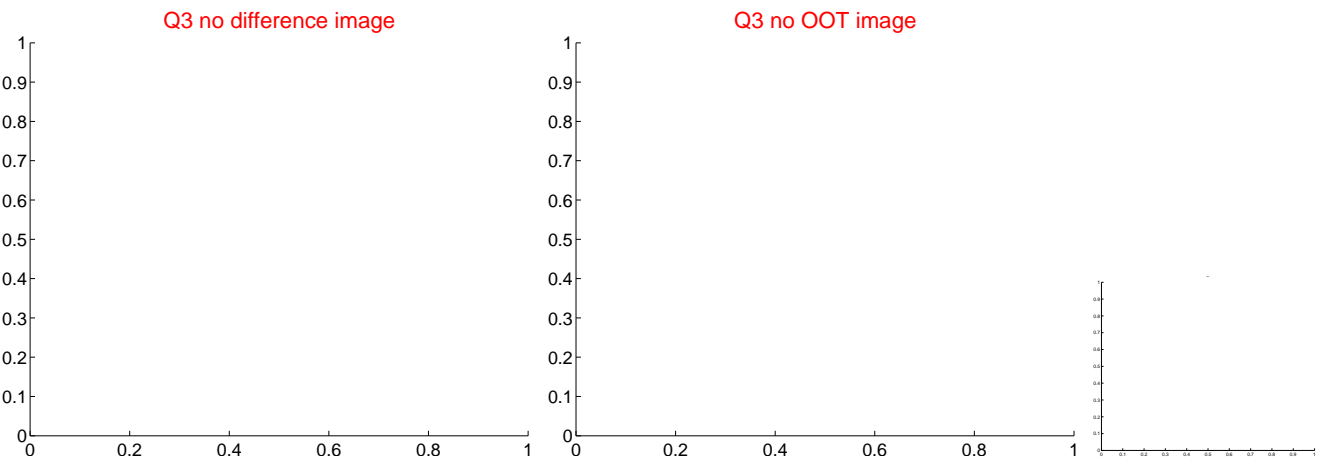
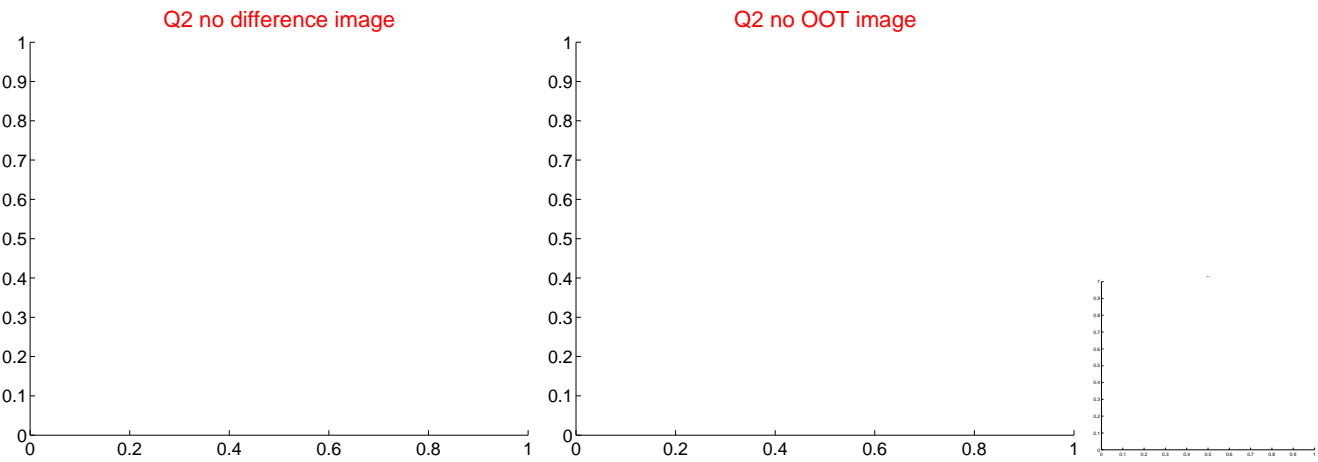
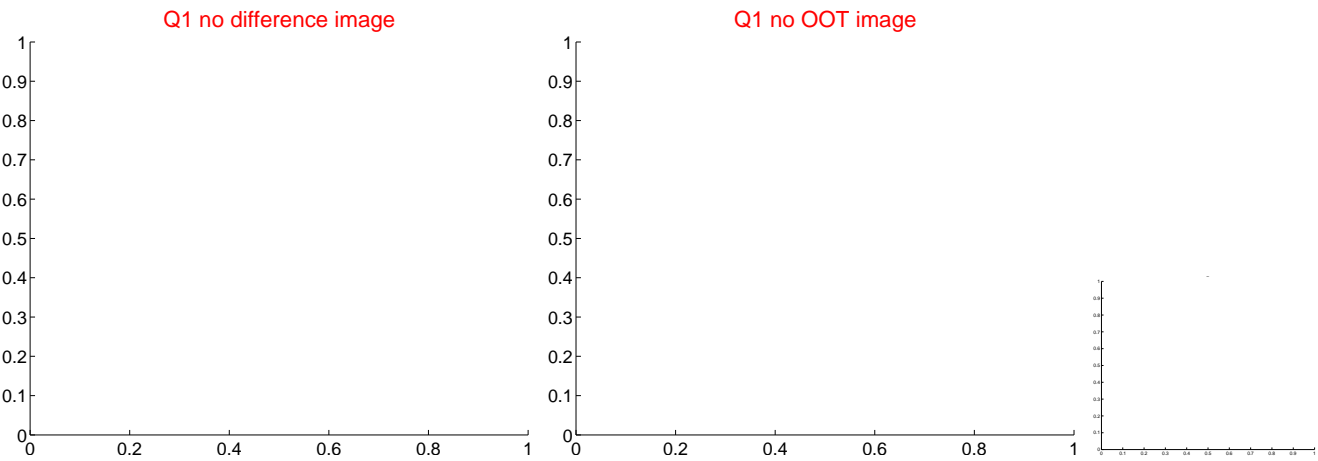
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|-------------------|--------------------|
| PRF-fit source offset from OOT | 13.131 \pm 0.067 | 195.88 | 4.964 \pm 0.067 | 12.157 \pm 0.067 |
| PRF-fit source offset from KIC position | 13.126 \pm 0.069 | 191.54 | 4.809 \pm 0.069 | 12.213 \pm 0.068 |
| photometric centroid source offset | — | — | — | — |

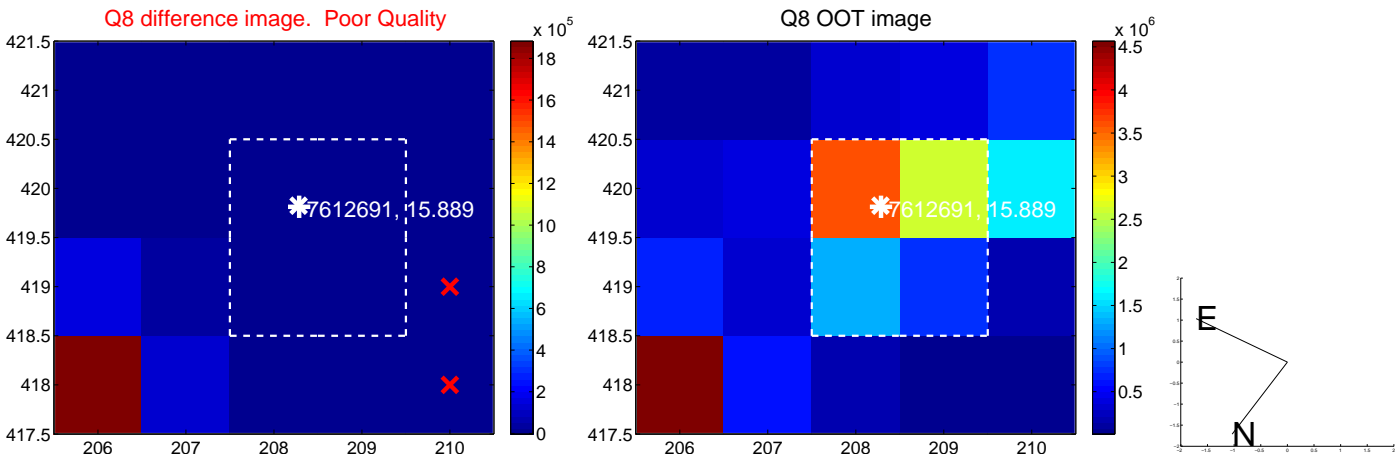
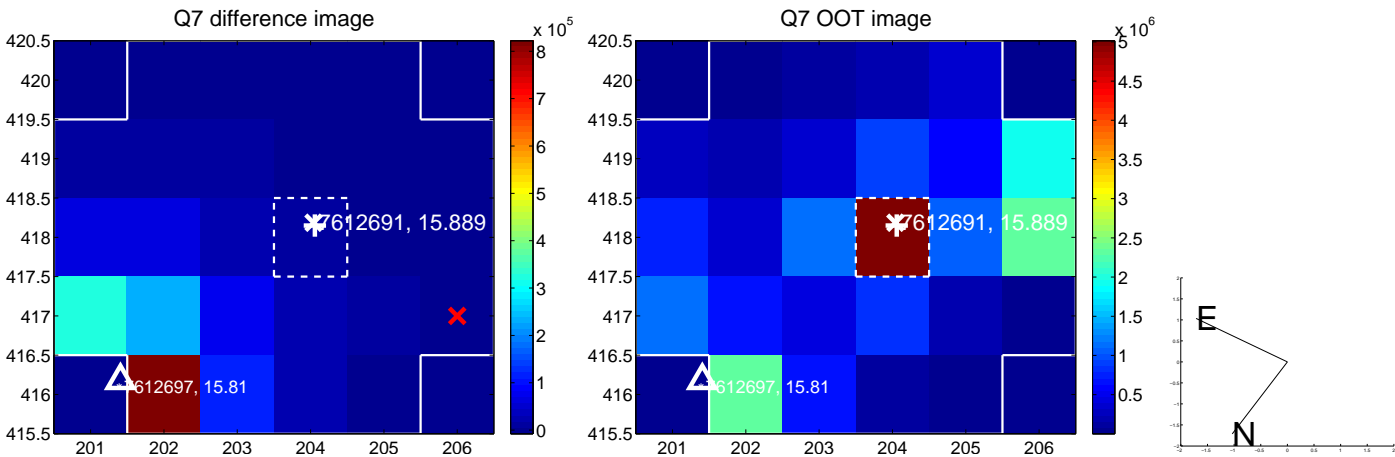
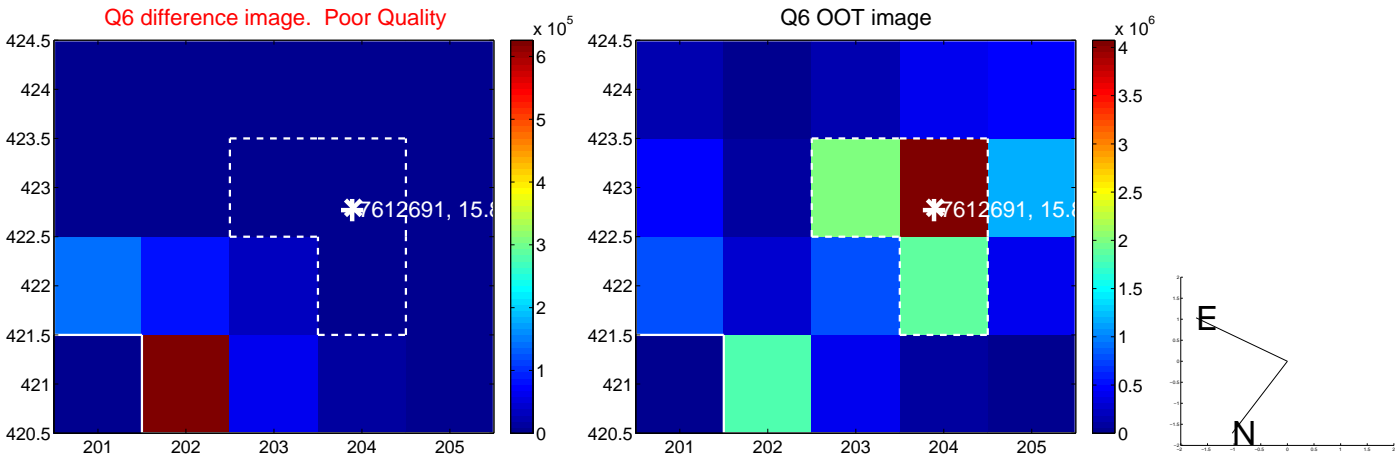
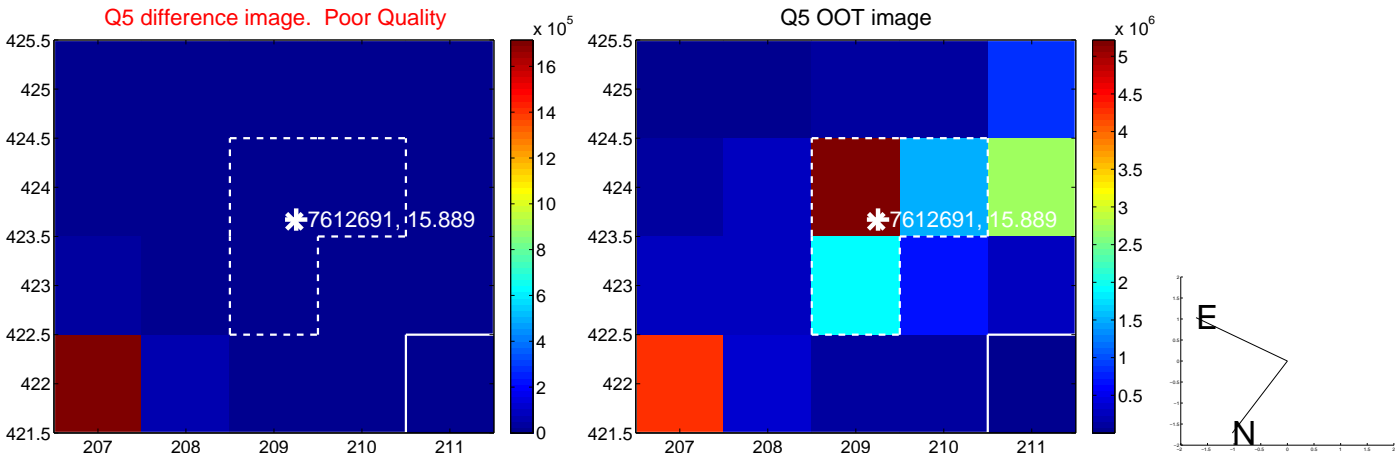


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

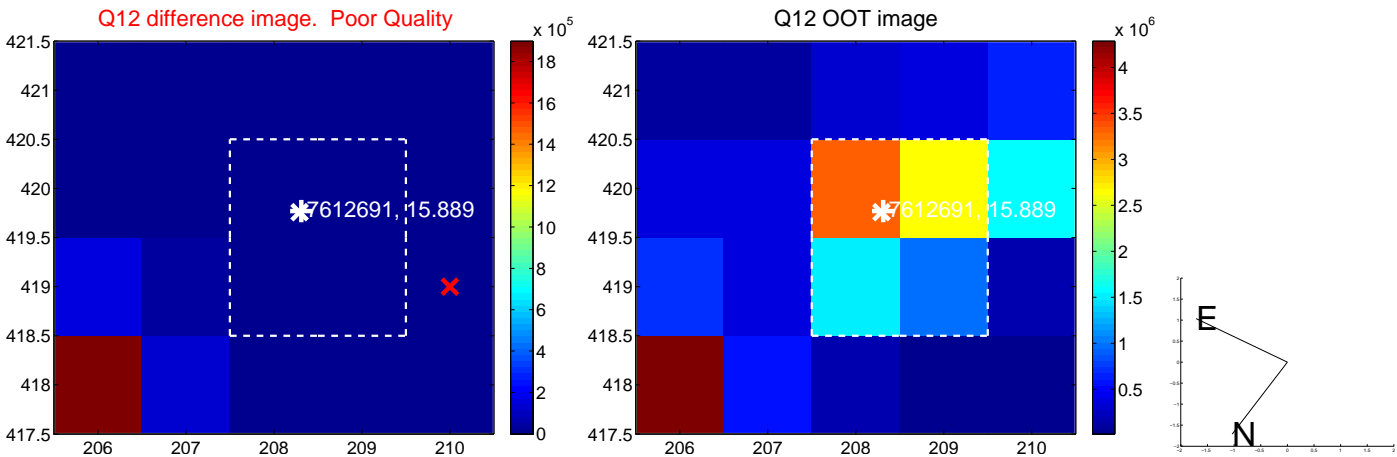
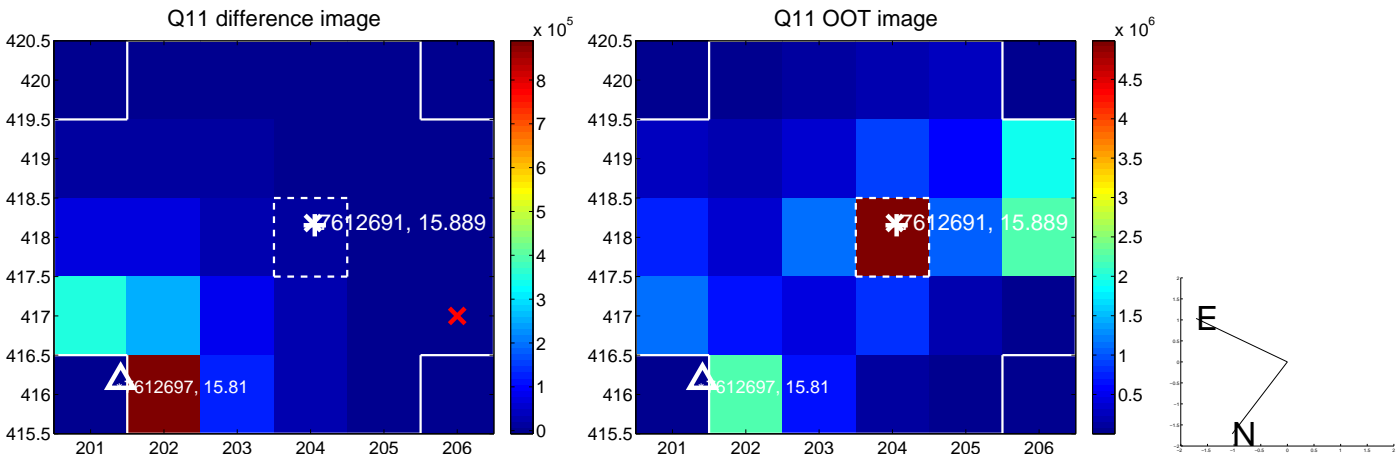
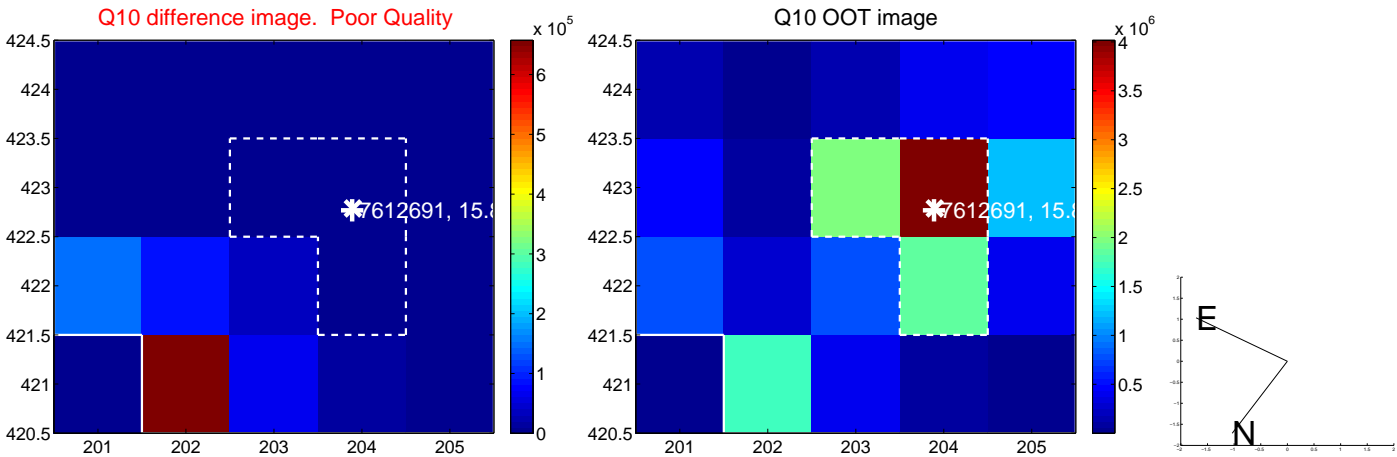
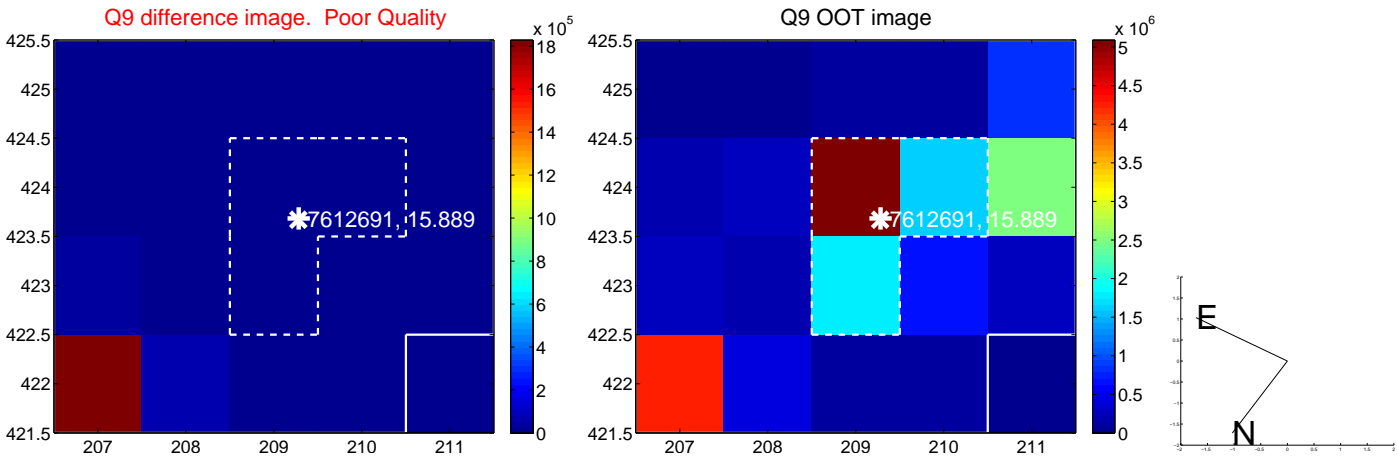
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



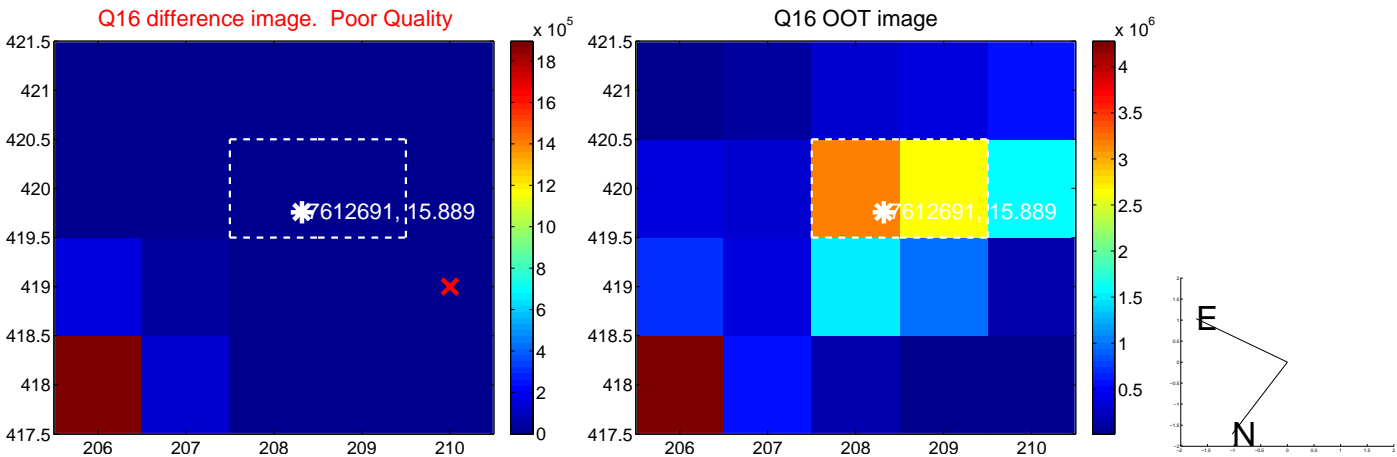
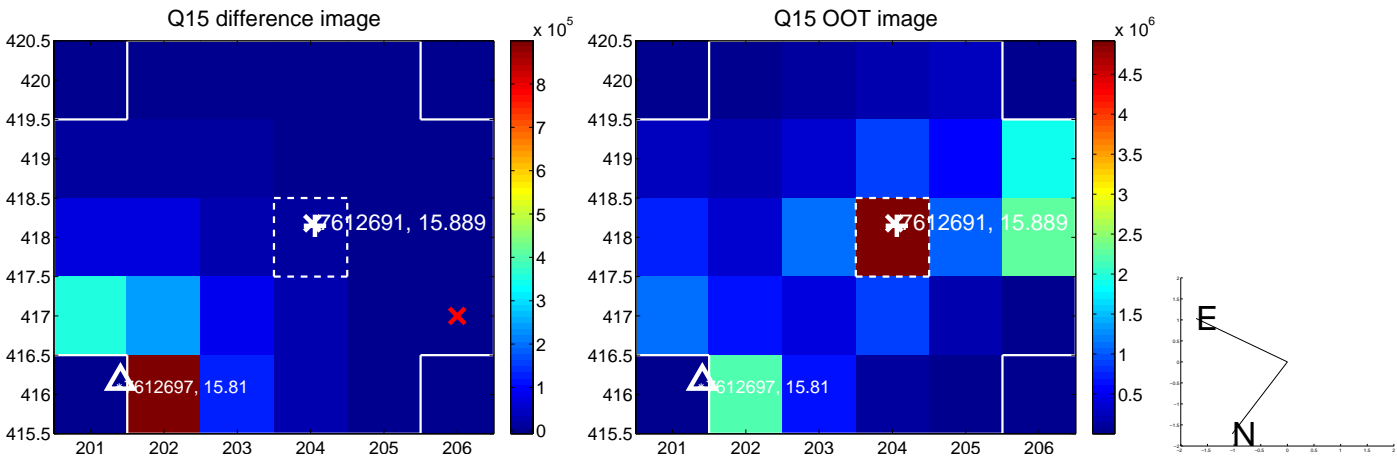
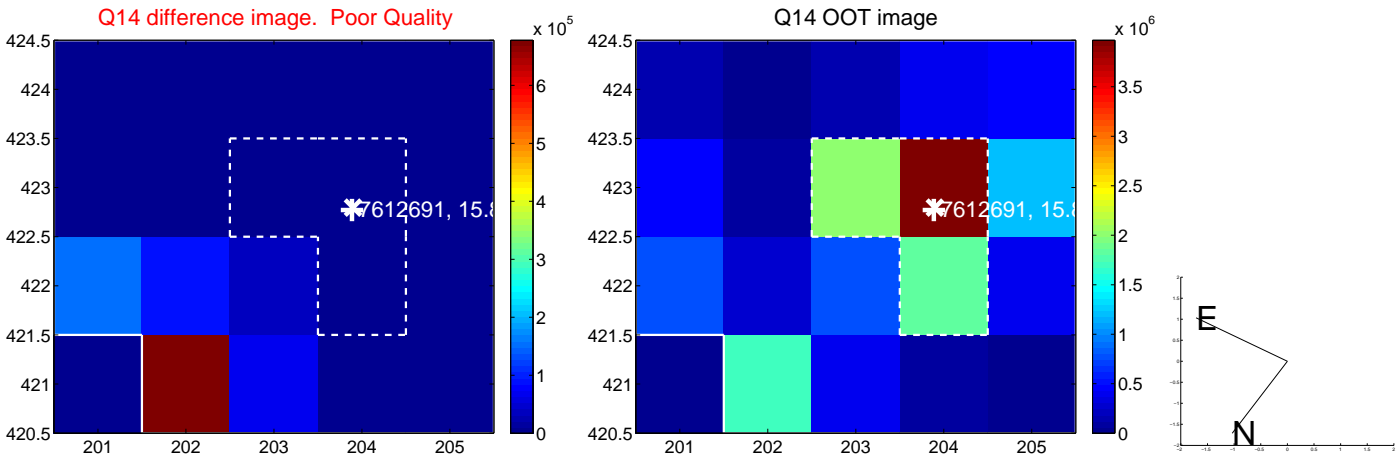
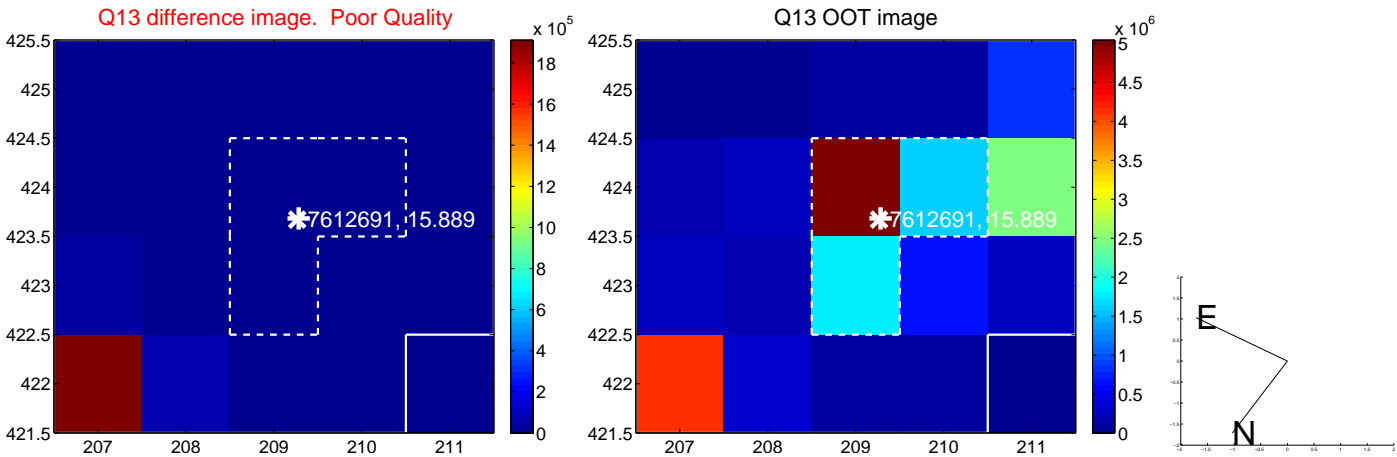
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



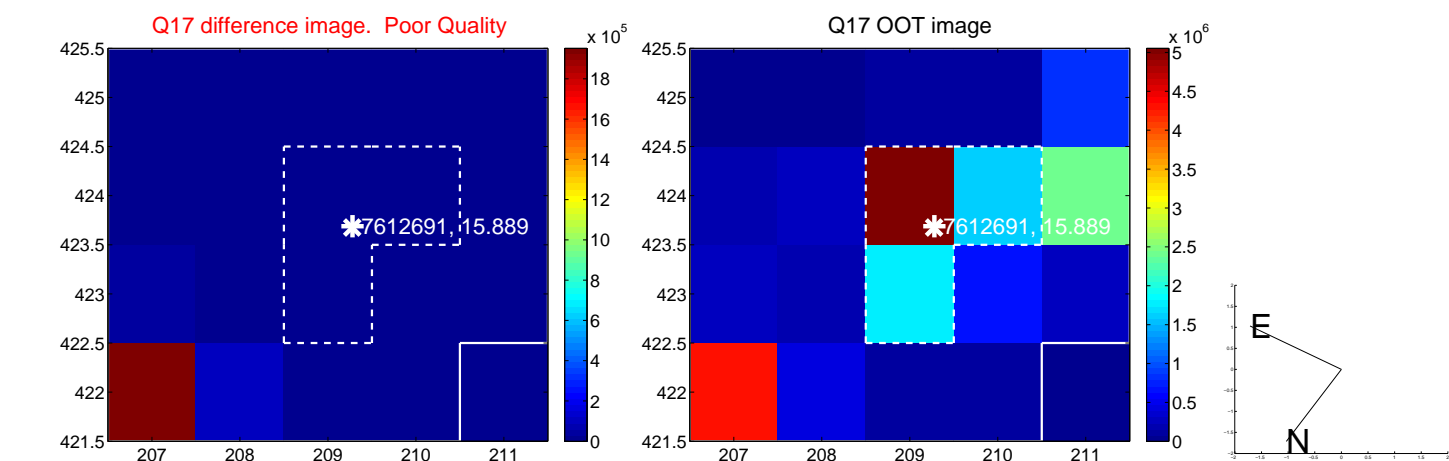
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



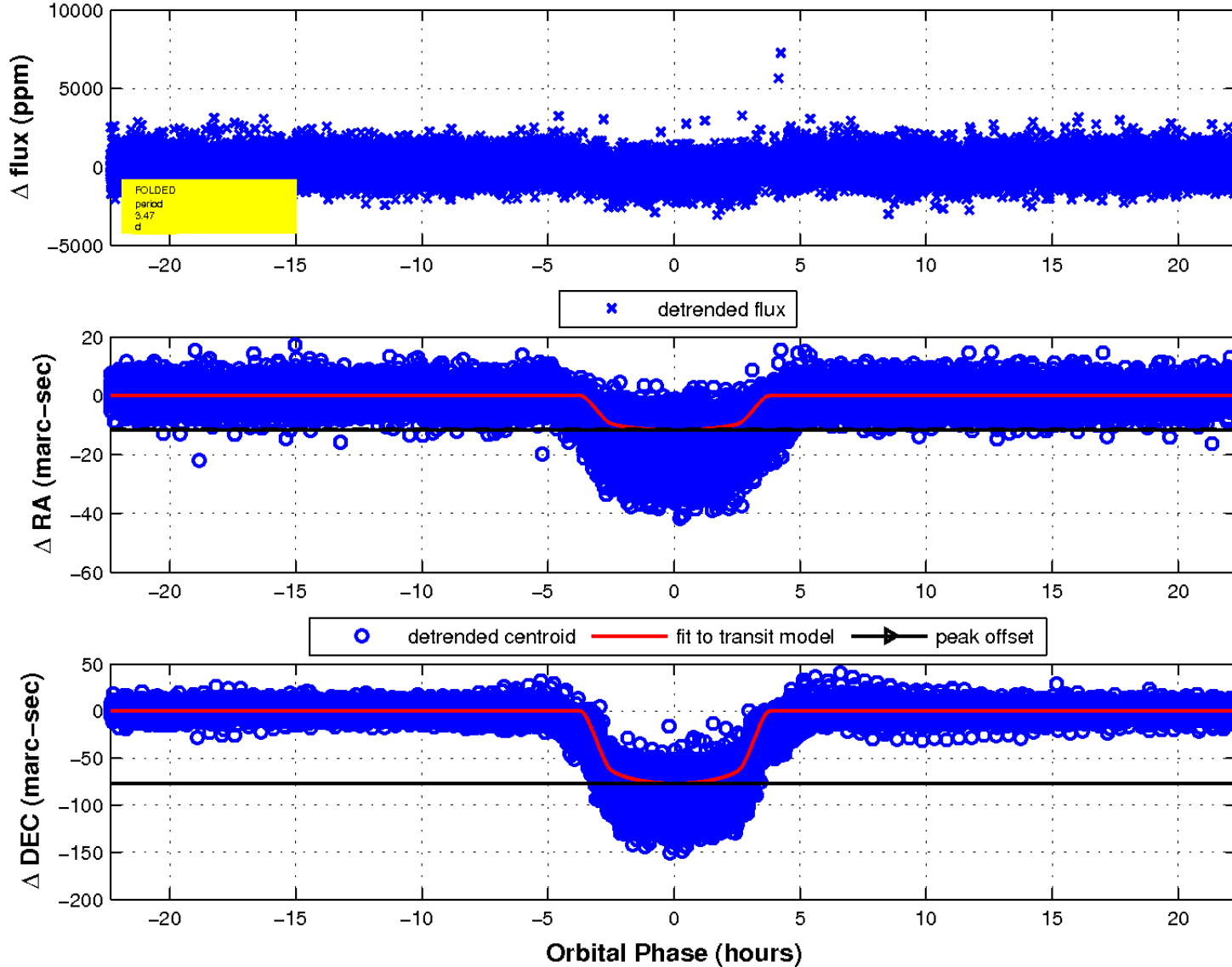
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

