

KIC 008242674

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|-----|-----|-----------------------------|-----------------|------------------------|------------------------|
| 008242674-01 | OBS | No | 370.967483 | 230.398888 | 1716.2 | 32.012 | 7.7 | 8.6 | 0.88 | 5995 | 6.63 | 0.89 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|---|
| 008242674-01 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS |

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

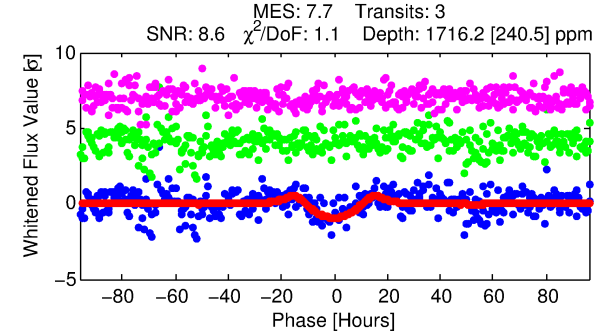
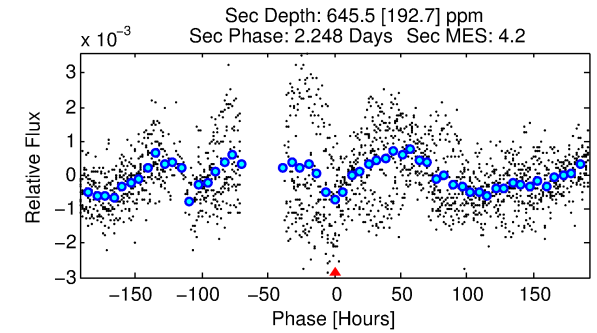
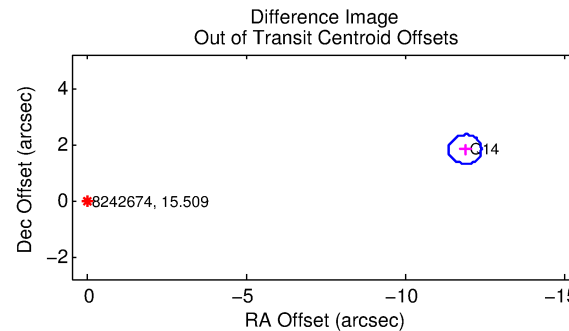
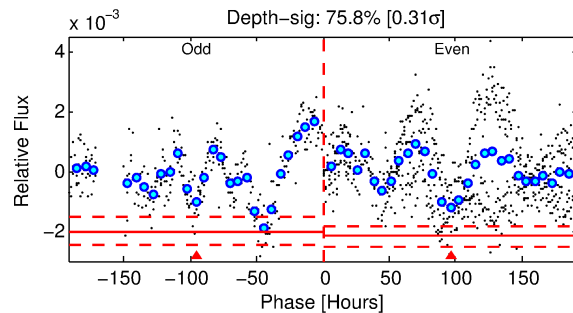
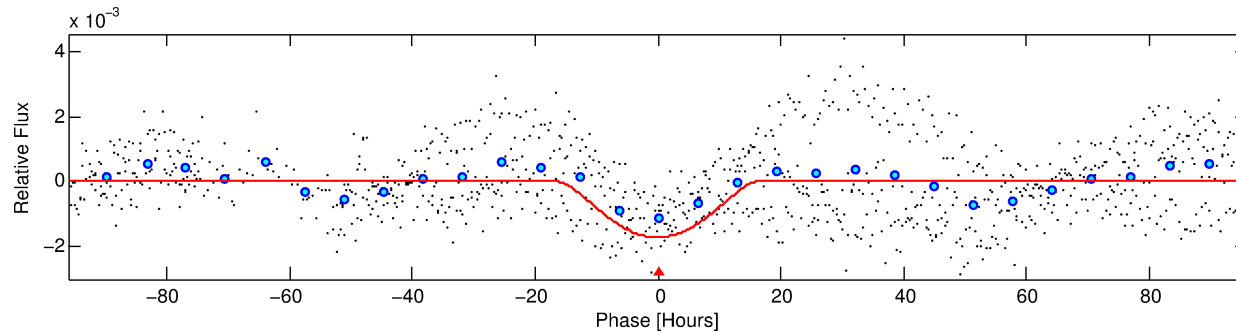
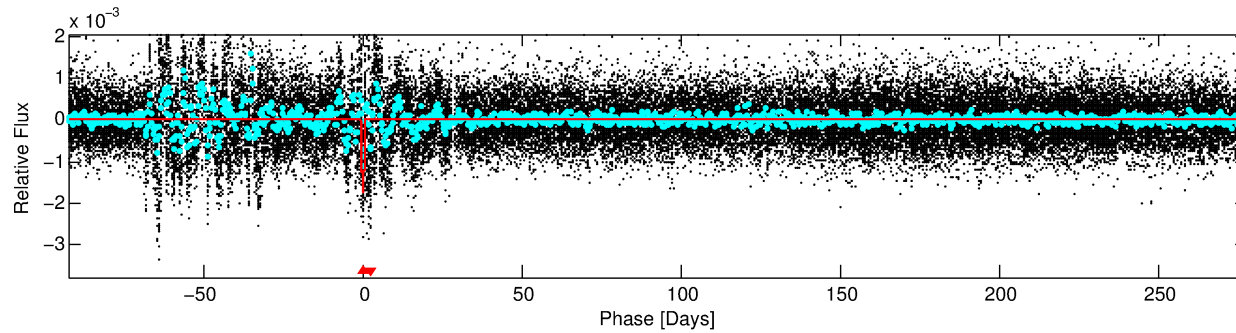
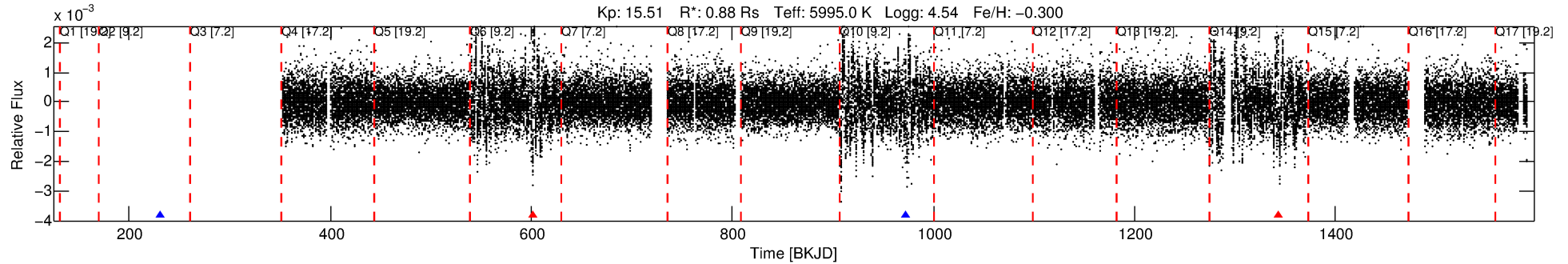
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008242674-01

No Significant Match Found

DV One-Page Summary

KIC: 8242674 Candidate: 1 of 1 Period: 370.967 d



DV Fit Results:

Period = 370.96748 [0.03691] d
Epoch = 230.3989 [0.0753] BKJD
Rp/R* = 0.0692 [0.1189]
a/R* = 34.30 [13.74]
b = 1.00 [0.18]
Seff = 0.89 [0.37]
Teq = 248 [26] K
Rp = 6.63 [11.58] Re
a = 0.9990 [0.2661] AU
Ag = 8052.43 [27929.74] [0.29 σ]
Teff = 3631 [3132] K [1.08 σ]

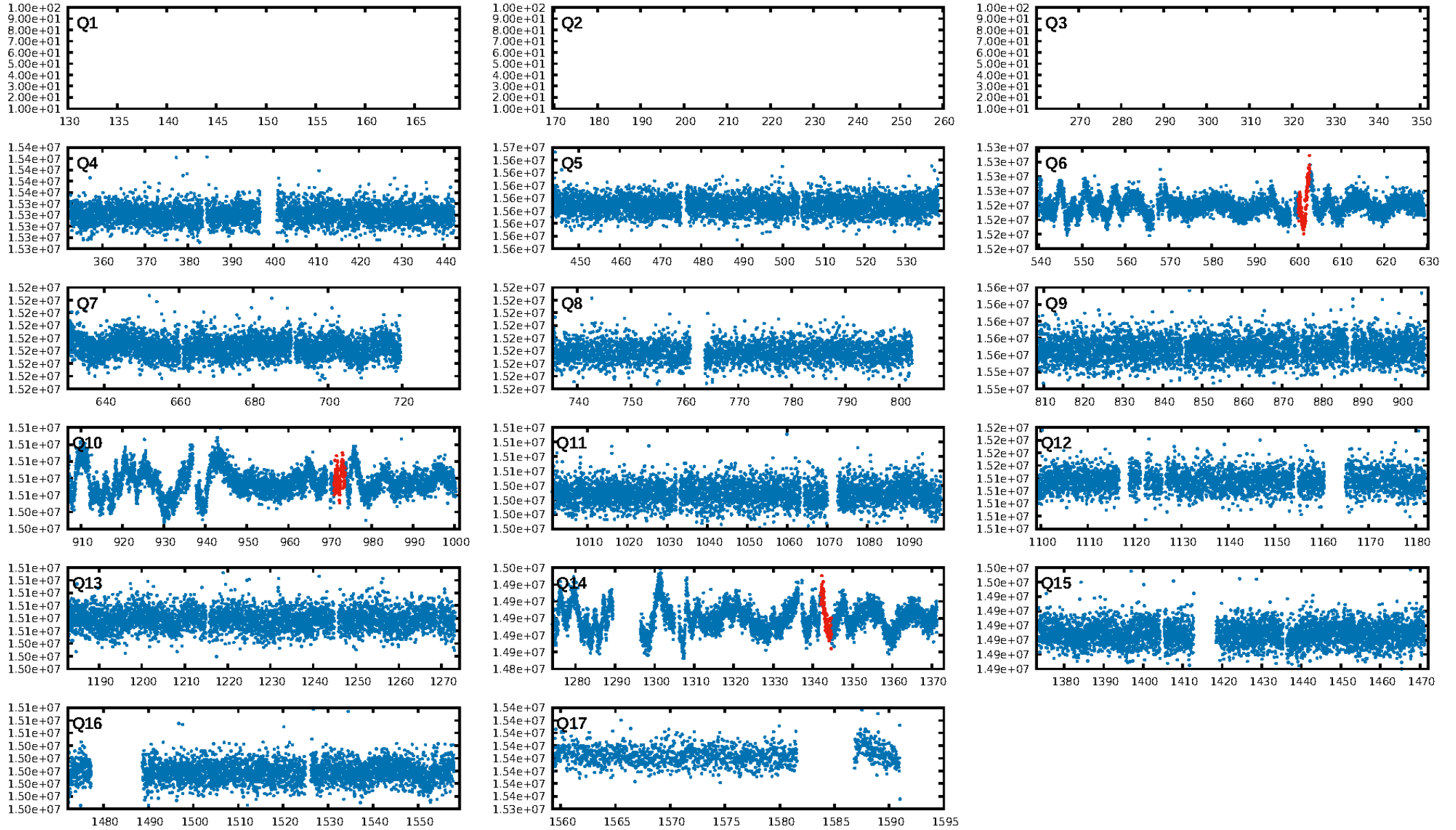
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 12.4%
ModelChiSquareGoF-sig: 100.0%
Bootstrap-pfa: 1.40e-10
RollingBand-fgt: 0.33 [1/3]
GhostDiagnostic-chr: 1.42
Centroid-sig: 0.1%
Centroid-so: 5.033 arcsec [2.74 σ]
OotOffset-rm: 12.011 arcsec [69.48 σ]
KicOffset-rm: 7.685 arcsec [44.50 σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [1/1]

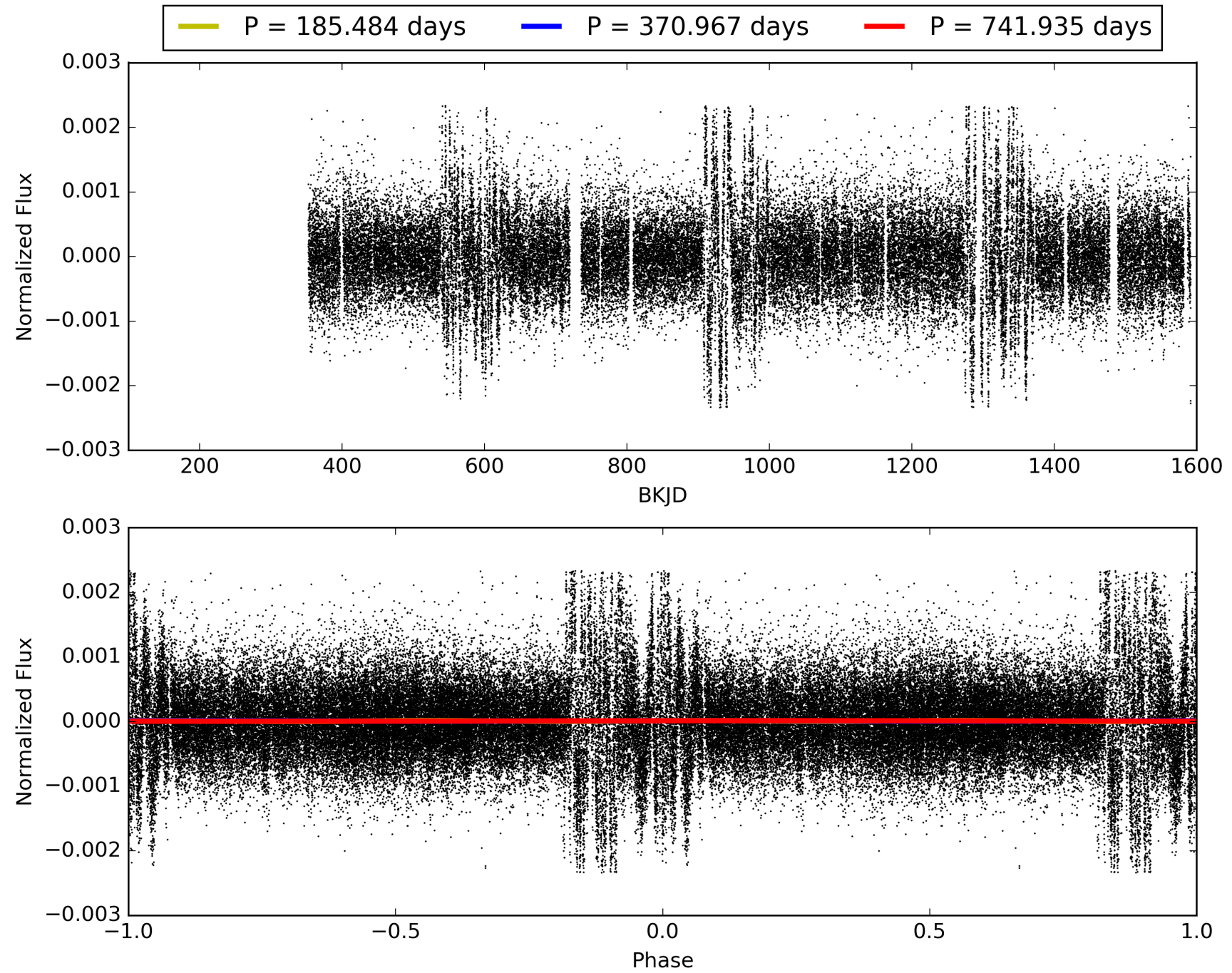
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:27:20 Z

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

TCE 008242674-01, PDC Light Curves

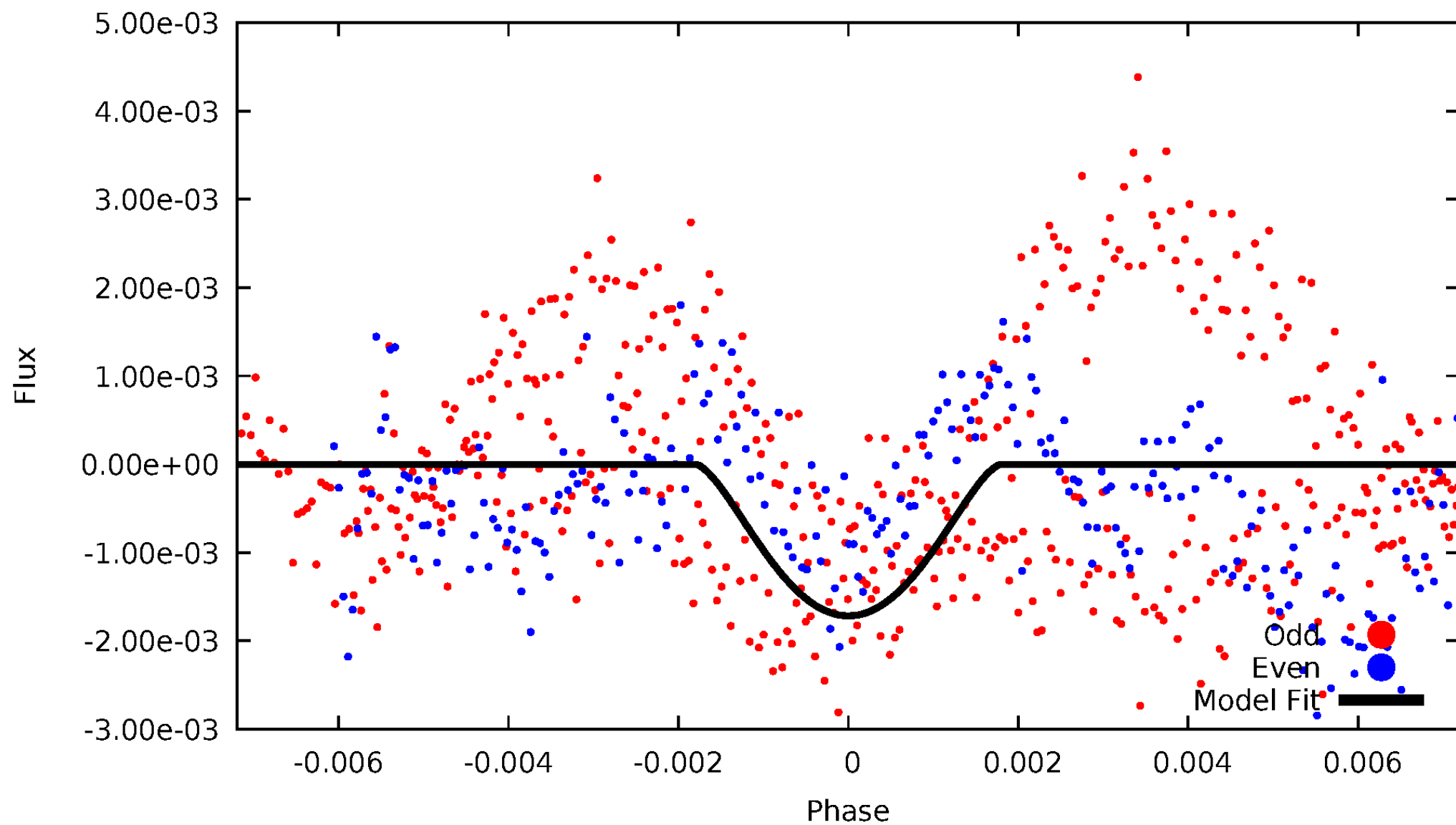


TCE 008242674-01



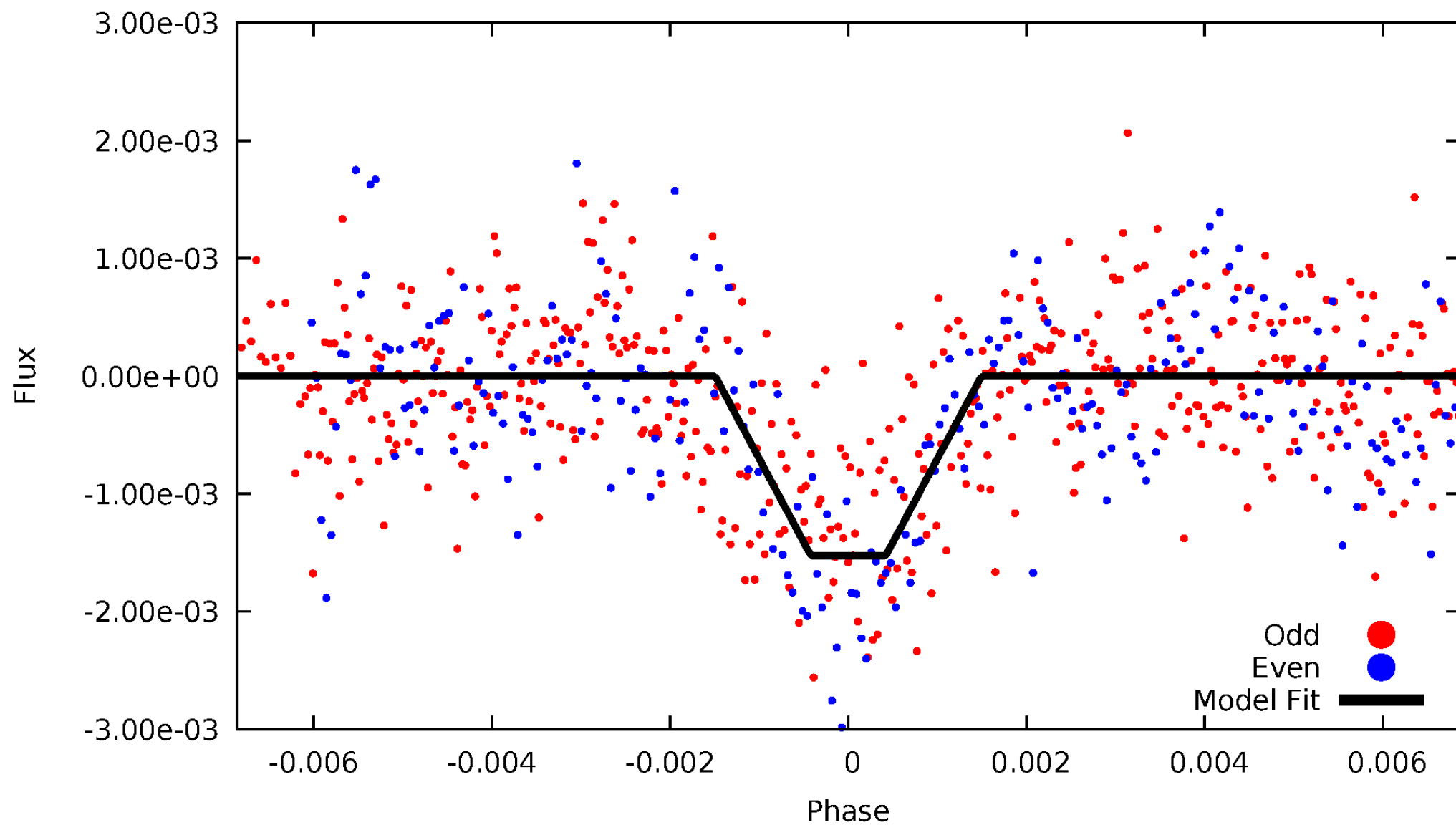
DV Odd/Even

TCE 008242674-01



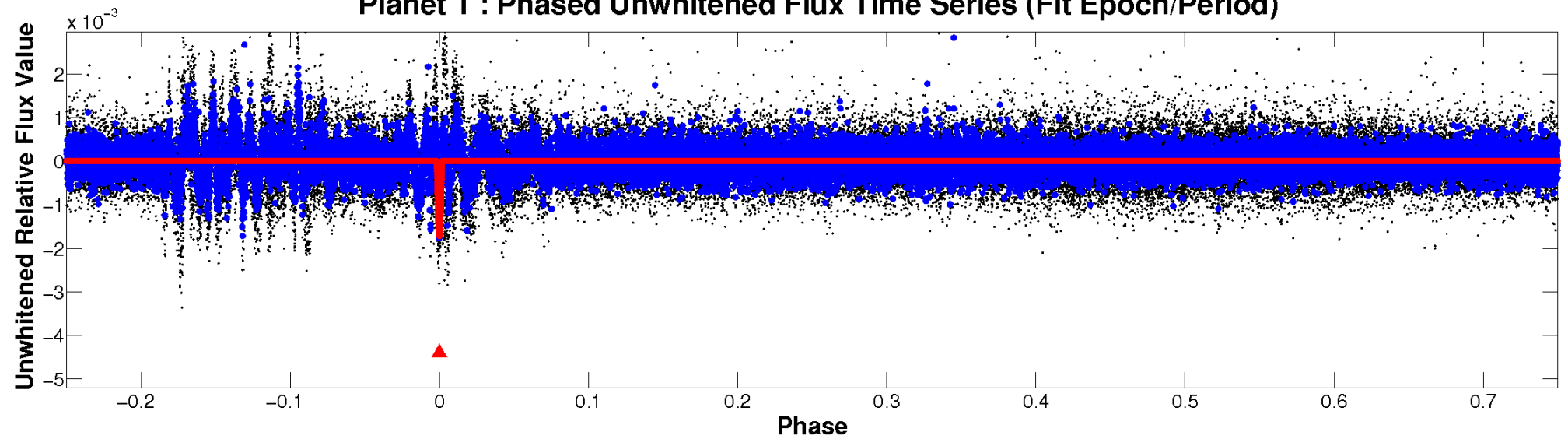
ALT Odd/Even

TCE 008242674-01

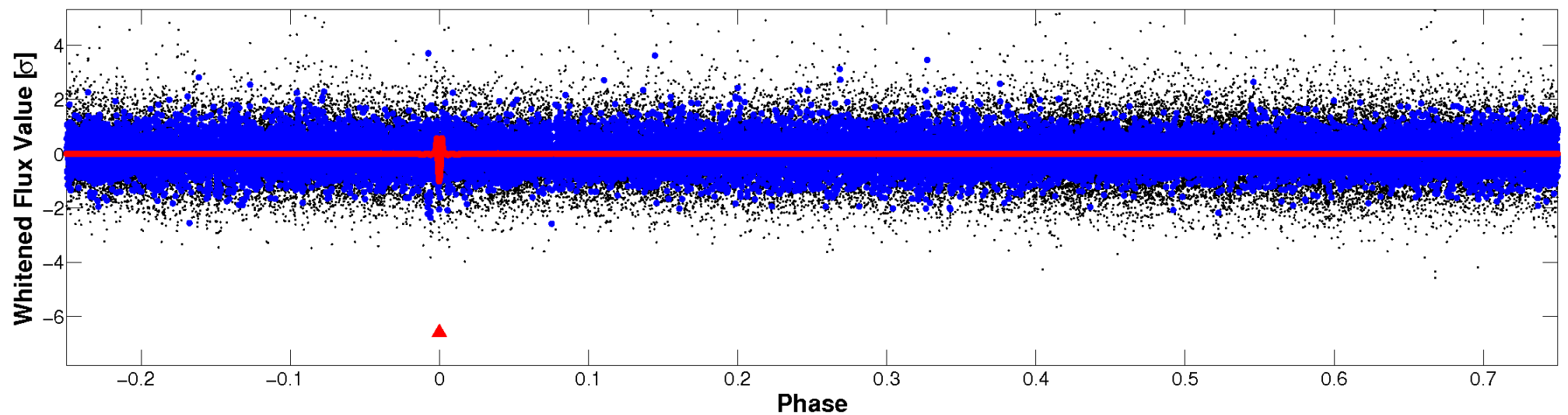


Non-Whitened Vs. Whitened Light Curve

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

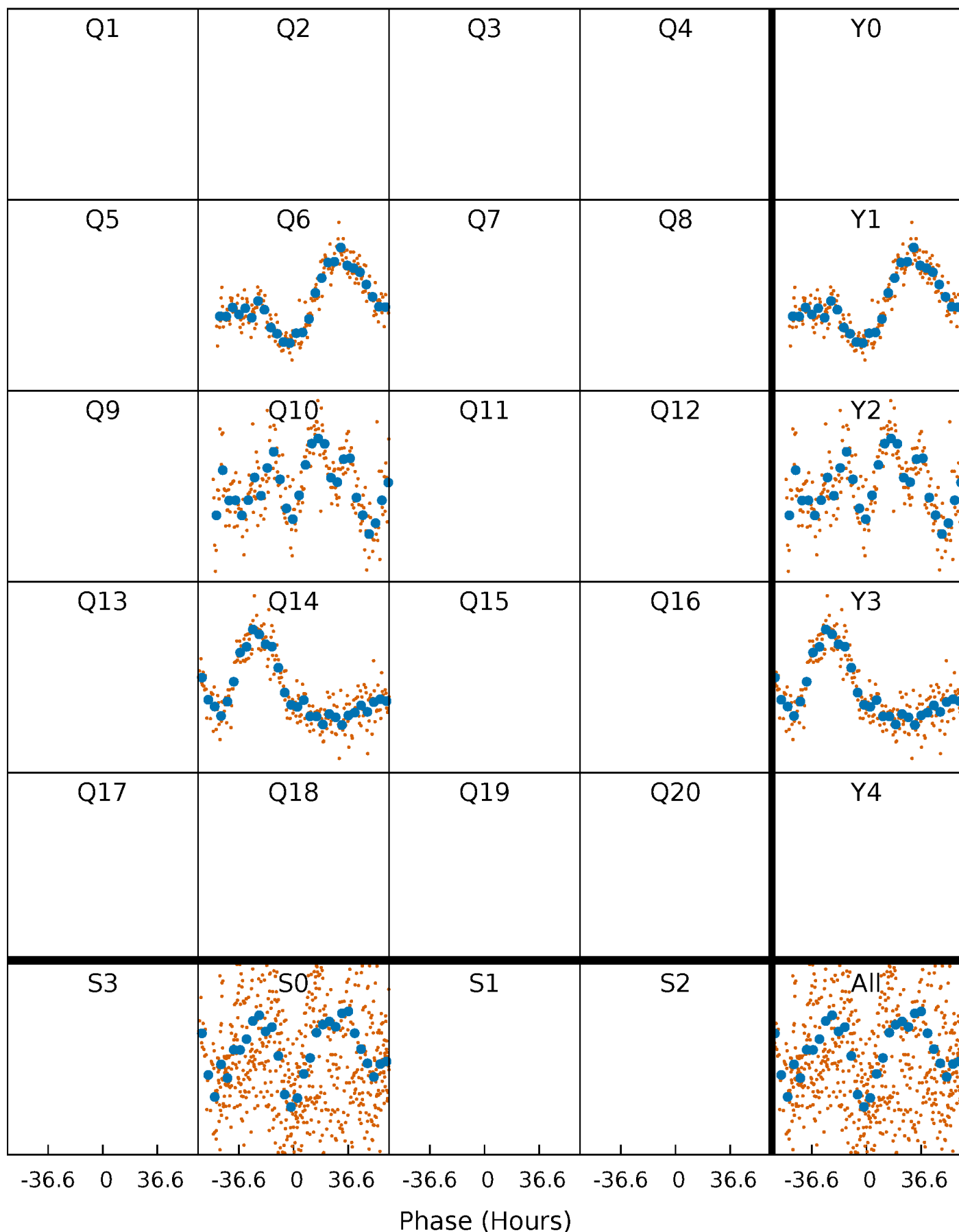


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



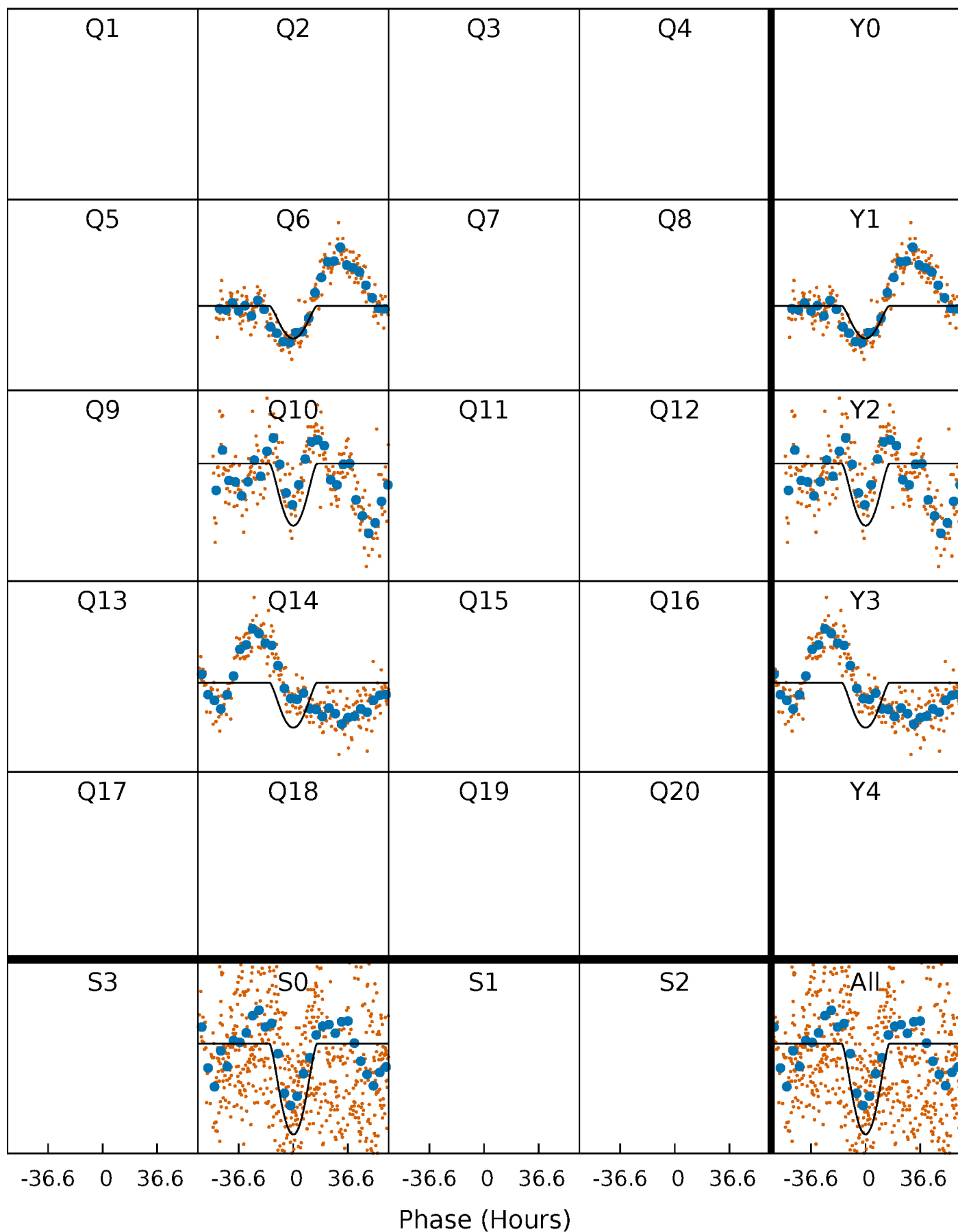
PDC Quarter-Phased Transit Curves

TCE 008242674-01 P=370.967483 Days $T_0=230.398888$ (BKJD)



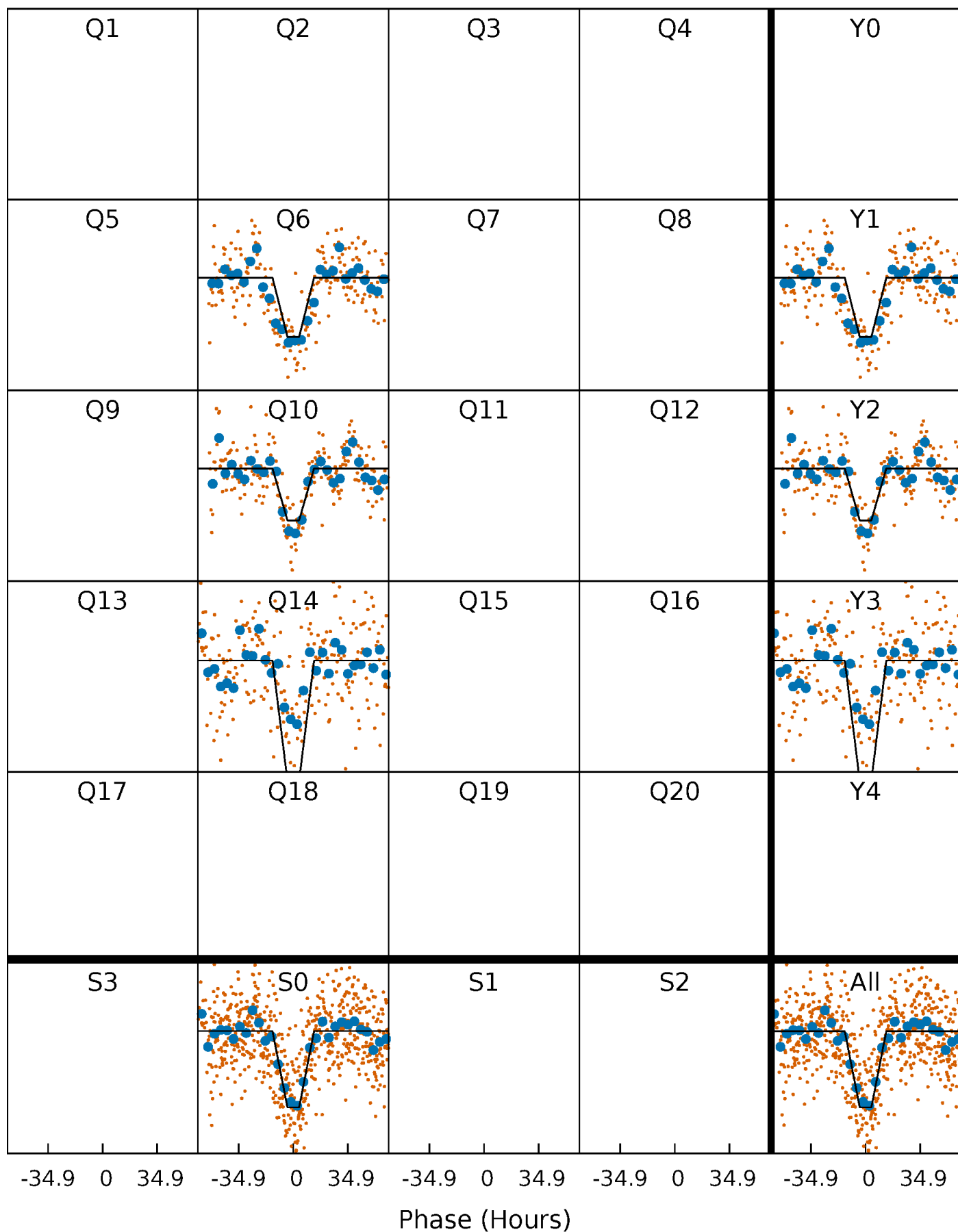
DV Quarter-Phased Transit Curves

TCE 008242674-01 P=370.967483 Days $T_0=230.398888$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

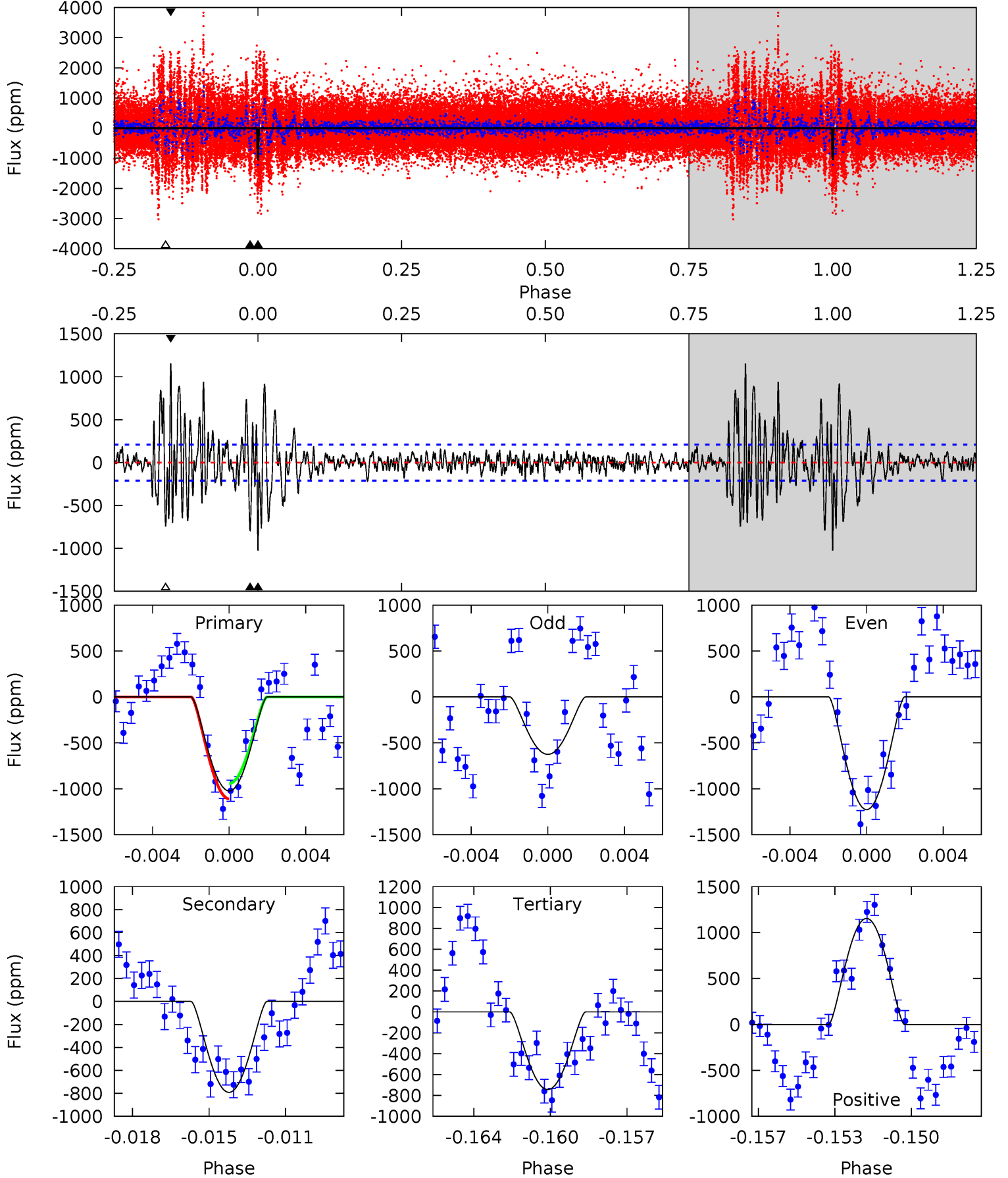
TCE 008242674-01 P=370.855492 Days $T_0=230.612133$ (BKJD)



DV Model-Shift Uniqueness Test

008242674-01, P = 370.967483 Days, E = 230.398888 Days

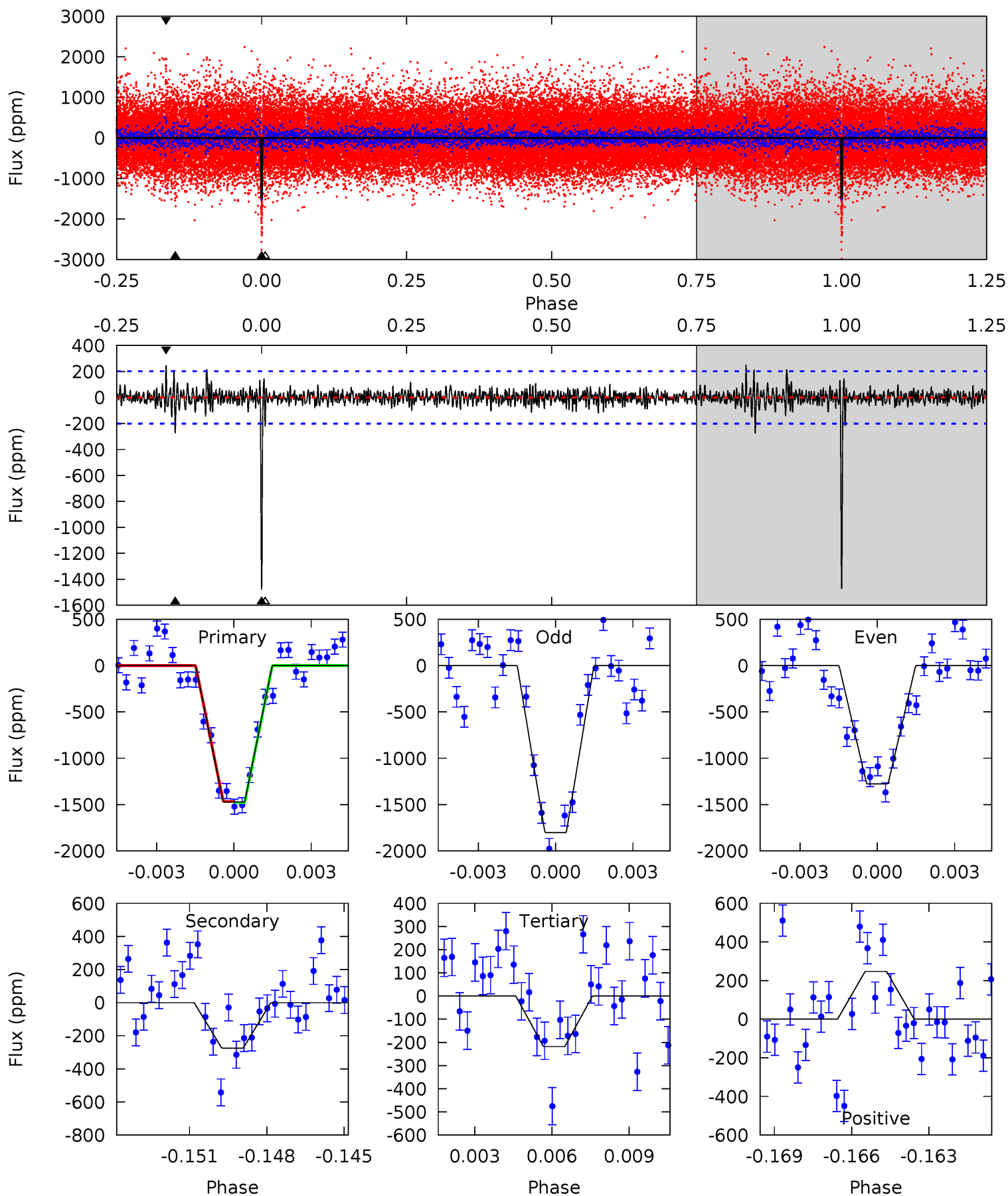
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 25.4 | 19.6 | 18.4 | 28.6 | 5.22 | 2.91 | 4.60 | 6.93 | -3.23 | 1.18 | -8.98 | 7.12 | 1.64 | 0.53 | 2.08 |



Alt Model-Shift Uniqueness Test

008242674-01, P = 370.855492 Days, E = 230.612133 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 38.3 | 7.15 | 5.67 | 6.43 | 5.25 | 2.97 | 1.05 | 32.7 | 31.9 | 1.48 | 0.72 | 6.52 | 0.80 | 0.14 | 0.18 |



Stellar Parameters For KIC 008242674

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | $R (R_{\odot})$ | $M(M_{\odot})$ | $\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$ |
|--------|----------------------|---------------------------|----------------------------|---------------------------|---------------------------|--|
| | 5995^{+190}_{-211} | $4.536^{+0.037}_{-0.213}$ | $-0.300^{+0.300}_{-0.300}$ | $0.878^{+0.277}_{-0.092}$ | $0.964^{+0.120}_{-0.120}$ | $2.009^{+0.420}_{-1.071}$ |
| | +3%/-4% | +1%/-5% | +100%/-100% | +32%/-10% | +12%/-12% | +21%/-53% |
| 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 008242674-01 / KOI

| Detrend | Depth (ppm) | $R_p (R_{\oplus})$ | $T_{max} (K)$ | $T_{obs} (K)$ | A_{obs} |
|---------|---------------|--------------------------|-------------------|-----------------------|-------------------------|
| DV | -792 ± 40 | $11.29^{+10.96}_{-7.22}$ | 357^{+25}_{-19} | 3512^{+1591}_{-625} | 3402^{+22613}_{-2537} |
| Alt. | -275 ± 38 | $9.96^{+10.05}_{-7.02}$ | 356^{+27}_{-17} | 3093^{+1582}_{-513} | 1508^{+14924}_{-1136} |

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 $A_{obs} \gg 1.0$

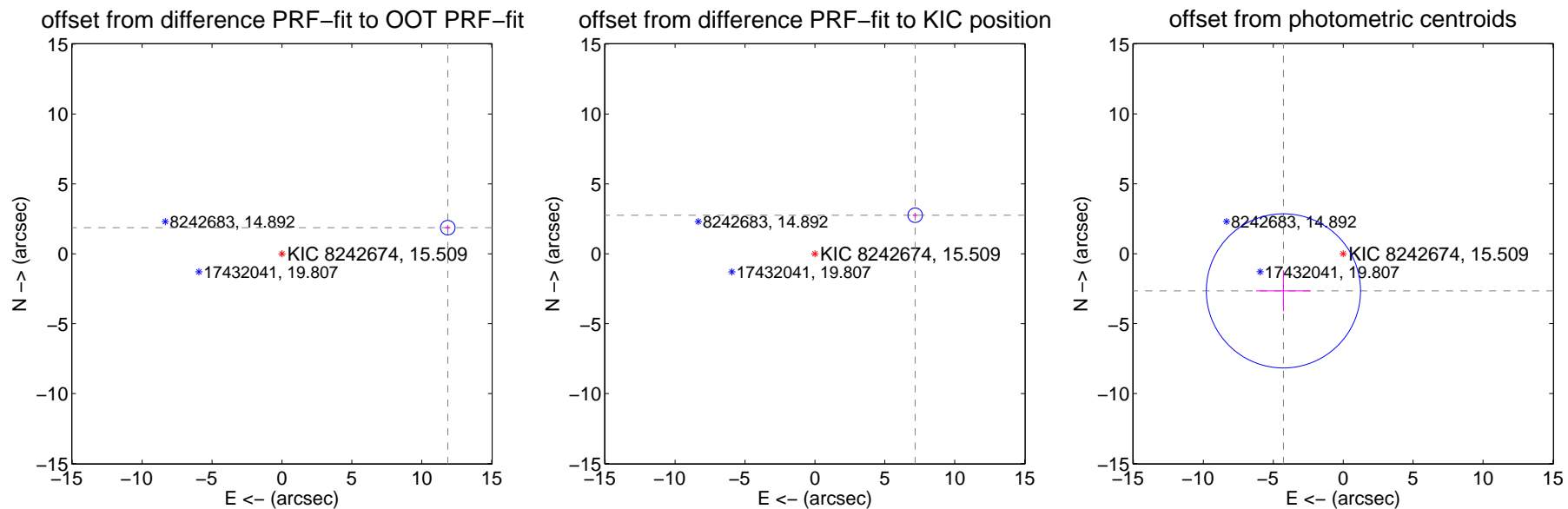
DV Centroid Data

Supplemental centroid analysis for 008242674-01. Kepler magnitude: 15.51. Transit SNR 8.64

There are 0 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 4.78 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|---------------------|-------------------|
| PRF-fit source offset from OOT | 12.011 ± 0.173 | 69.48 | -11.865 ± 0.173 | 1.868 ± 0.171 |
| PRF-fit source offset from KIC position | 7.685 ± 0.173 | 44.50 | -7.172 ± 0.173 | 2.759 ± 0.171 |
| photometric centroid source offset | 5.03 ± 1.84 | 2.74 | 4.27 ± 1.96 | -2.66 ± 1.46 |



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.



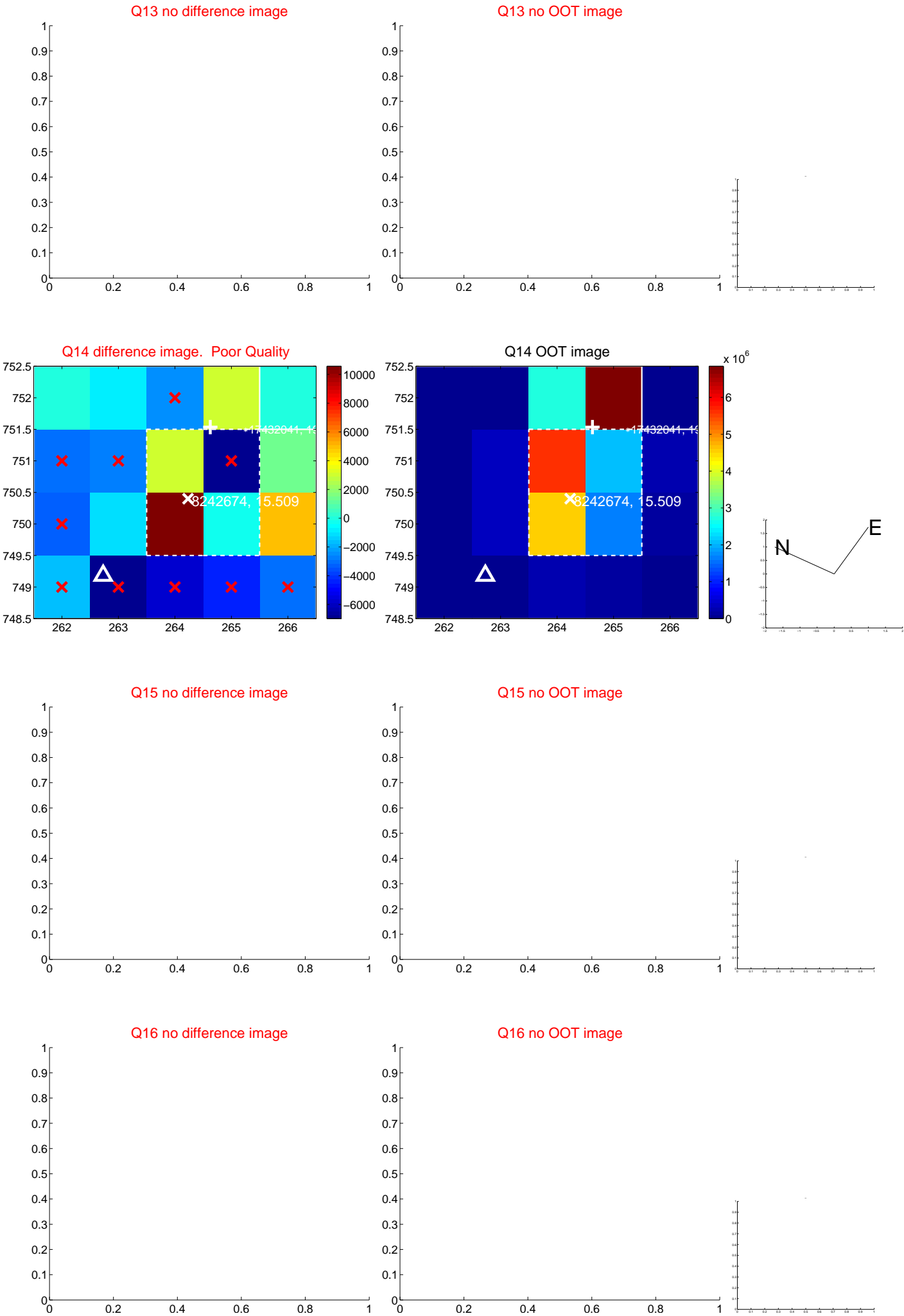
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



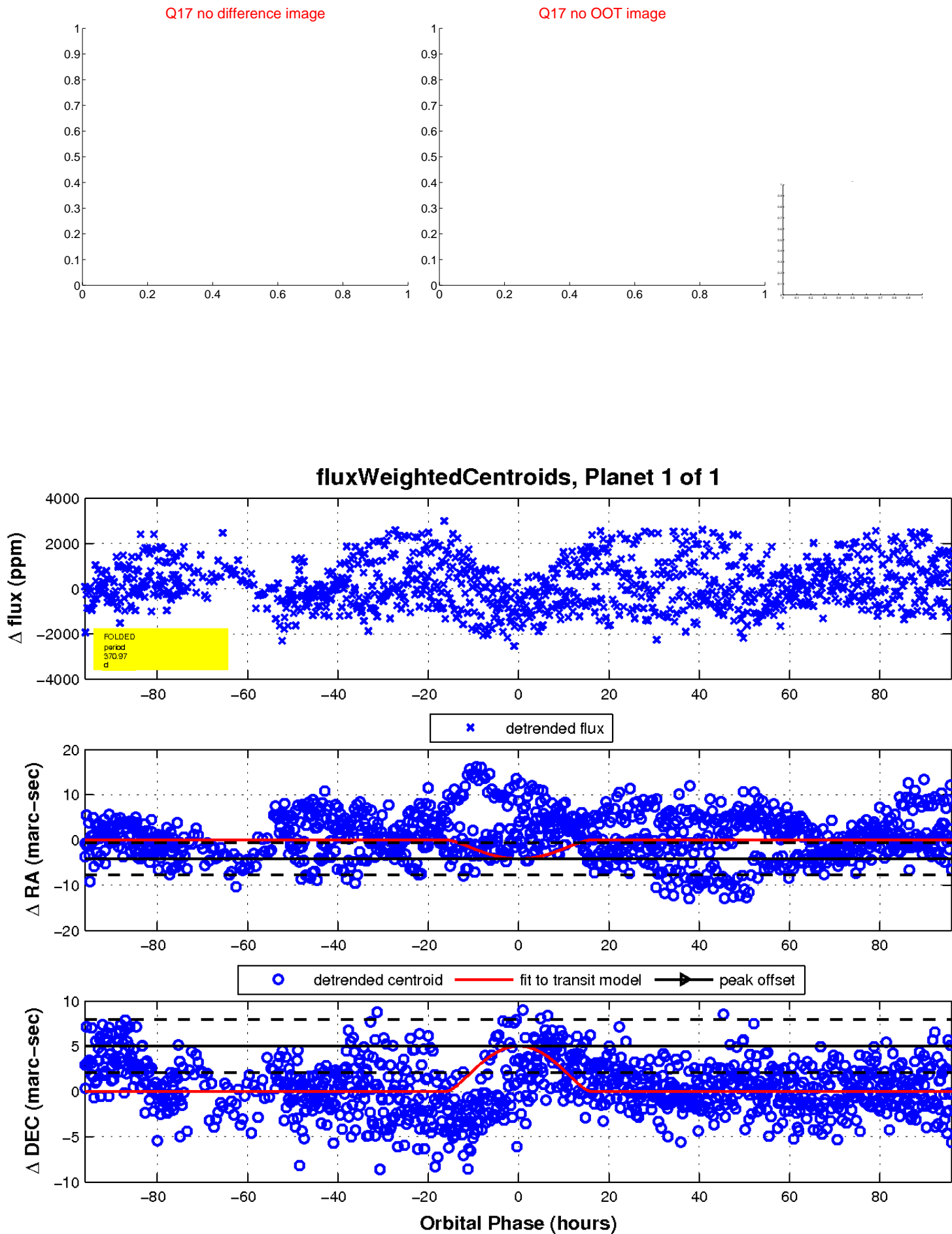
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

