

KIC 008752670

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|------|-----|-----------------------------|-----------------|------------------------|------------------------|
| 008752670-01 | OBS | No | 366.904477 | 180.425944 | 1681.8 | 14.804 | 17.8 | 7.3 | 1.52 | 5722 | 7.47 | 2.31 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|--|
| 008752670-01 | OBS | FP | 0.01 | 1 | 0 | 0 | 0 | ALL_TRANS_CHASES—MOD_TER_DV—MOD_NONUNIQ_ALT—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.

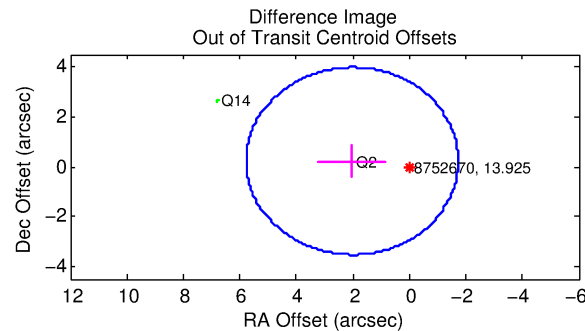
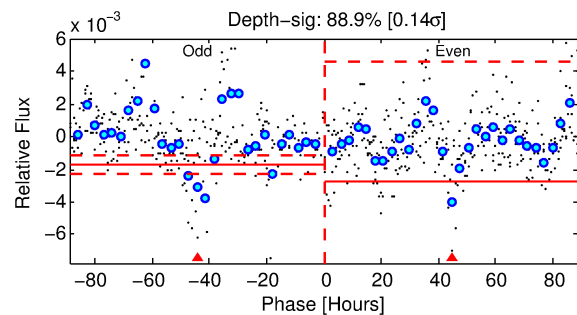
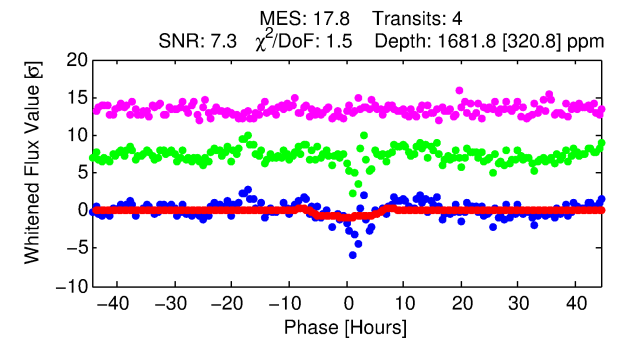
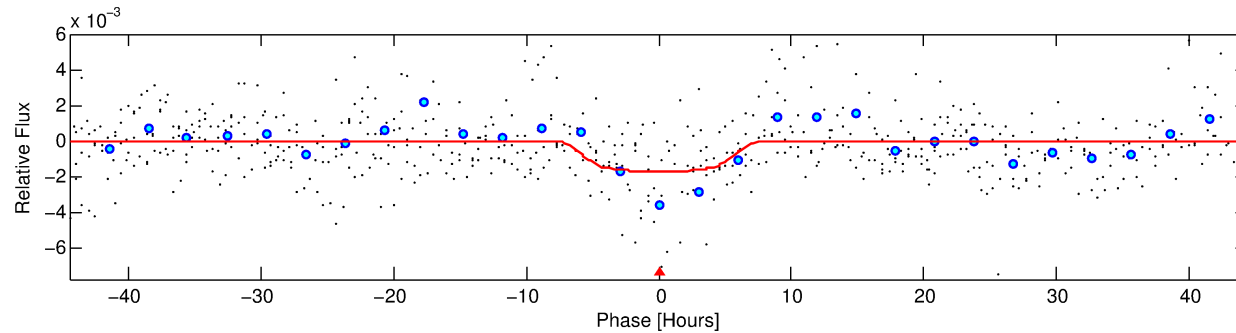
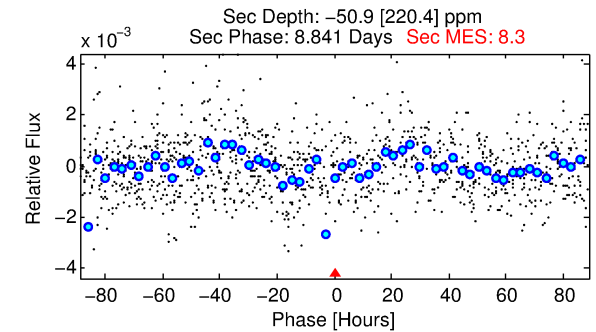
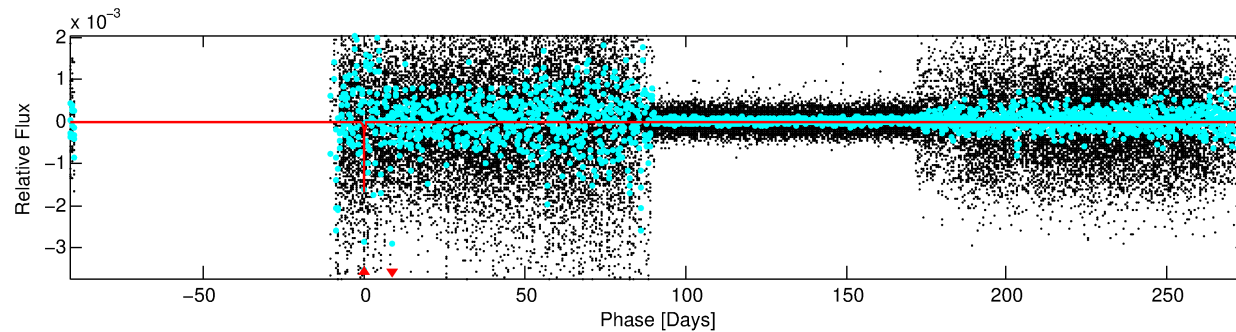
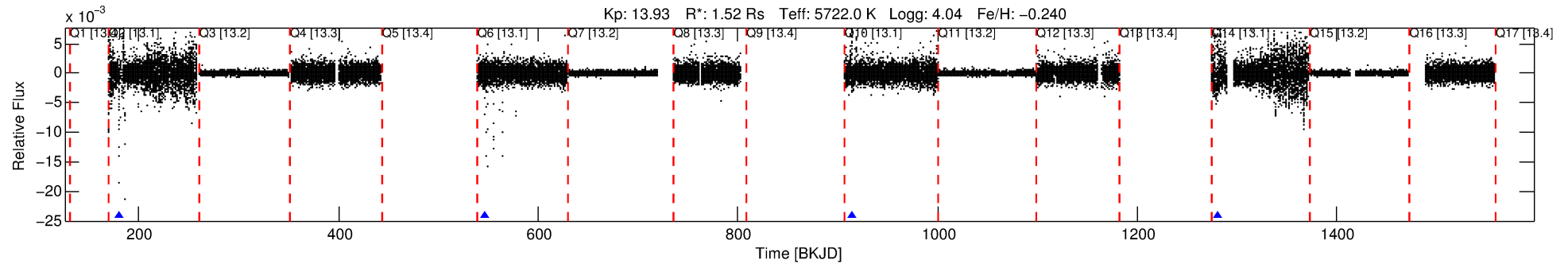
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008752670-01

No Significant Match Found

DV One-Page Summary

KIC: 8752670 Candidate: 1 of 1 Period: 366.904 d



DV Fit Results:

Period = 366.90448 [0.02625] d
Epoch = 180.4259 [0.0442] BKJD
Rp/R* = 0.0452 [0.0064]
a/R* = 97.06 [38.29]
b = 0.91 [0.08]
Seff = 2.31 [1.73]
Teq = 314 [59] K
Rp = 7.47 [3.17] Re
a = 0.9781 [0.4269] AU
Ag = N/A
Teffp = N/A

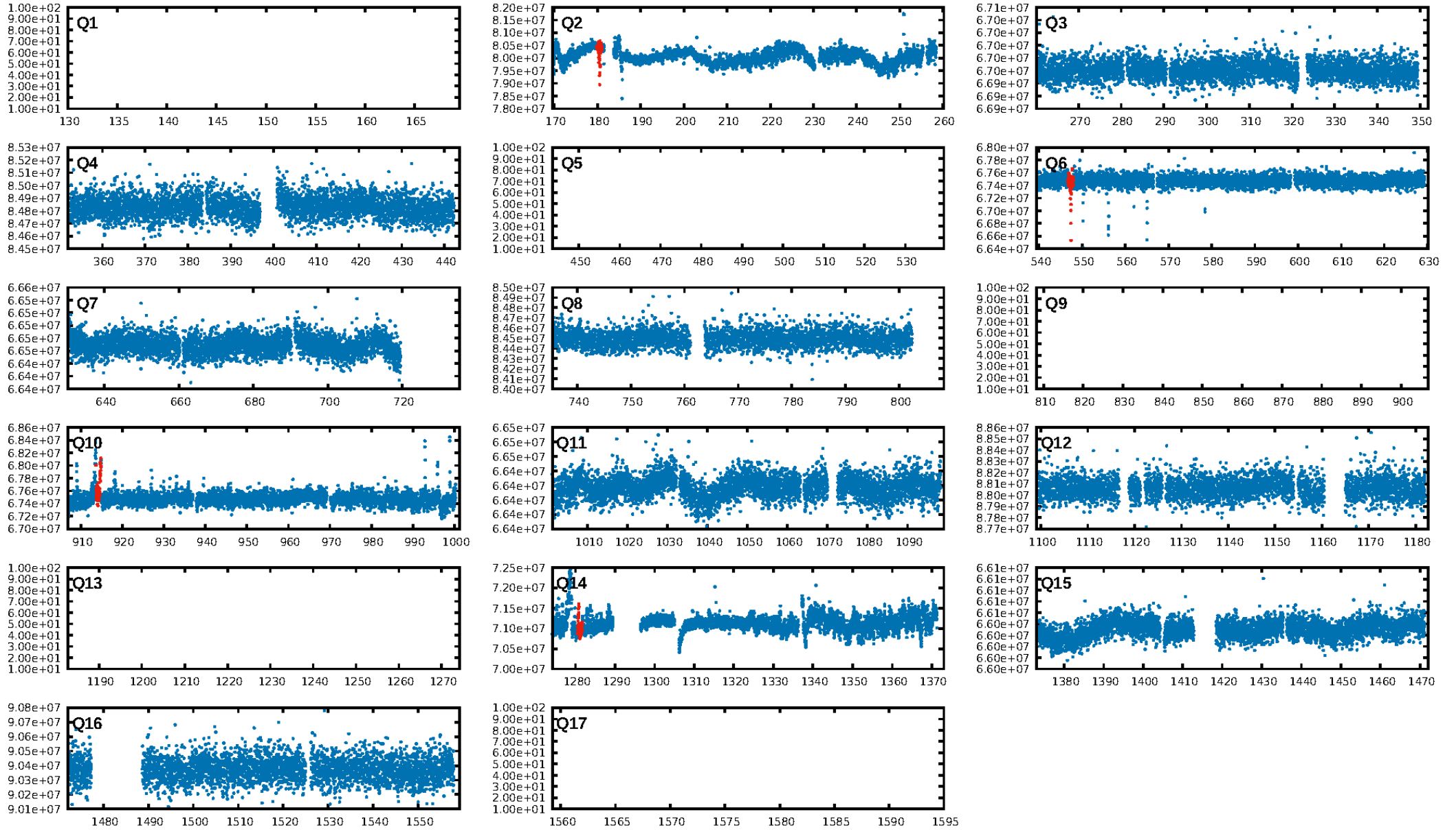
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 12.9%
ModelChiSquareGof-sig: 59.5%
Bootstrap-pfa: 9.48e-12
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -2.611
Centroid-sig: 0.0%
Centroid-so: 6.217 arcsec [4.15 σ]
OotOffset-rm: 2.039 arcsec [1.63 σ]
KicOffset-rm: 2.718 arcsec [2.07 σ]
OotOffset-st: 2/0/0/0 [2]
KicOffset-st: 2/0/0/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [4/4]

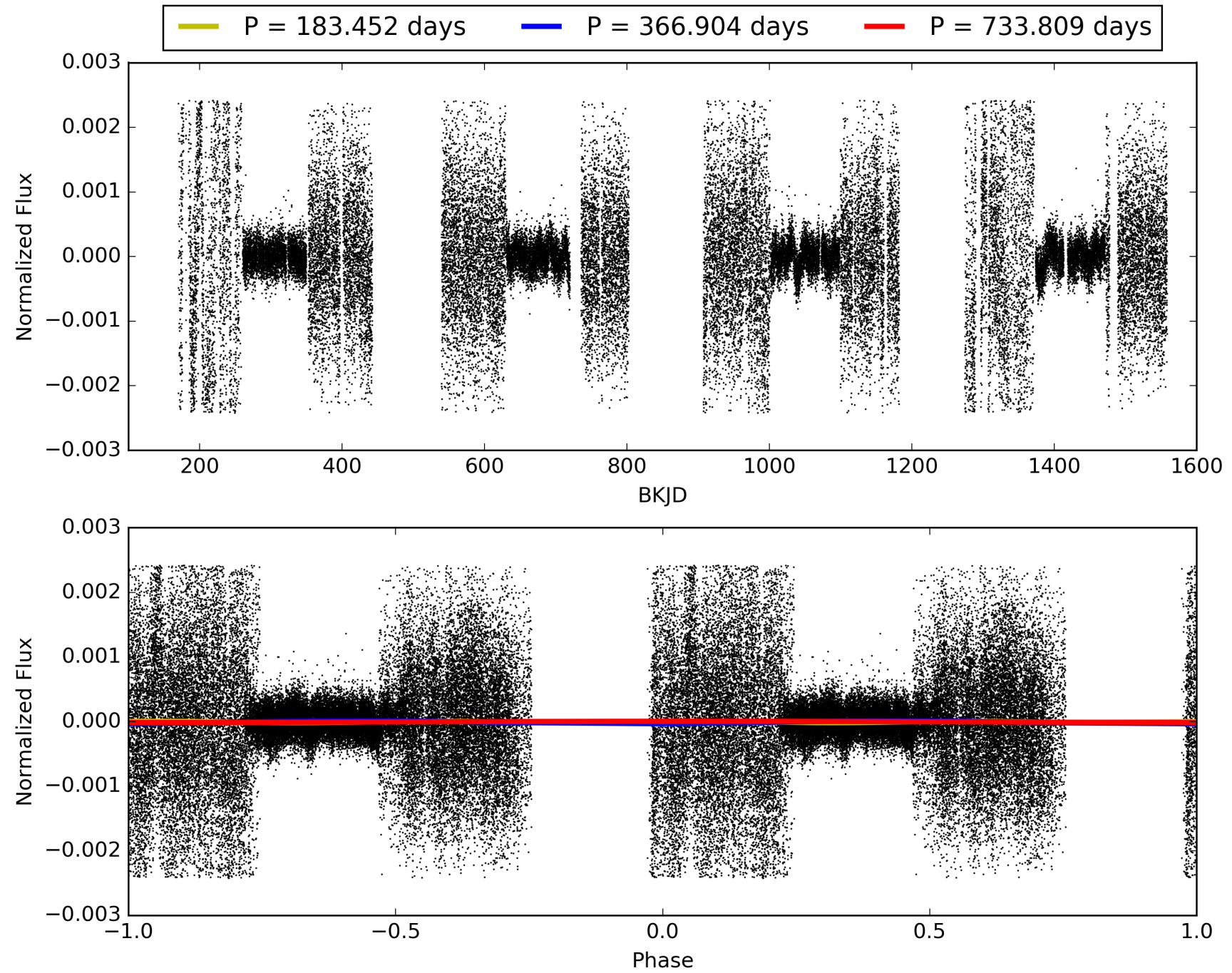
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 01:03:35 Z

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

TCE 008752670-01, PDC Light Curves

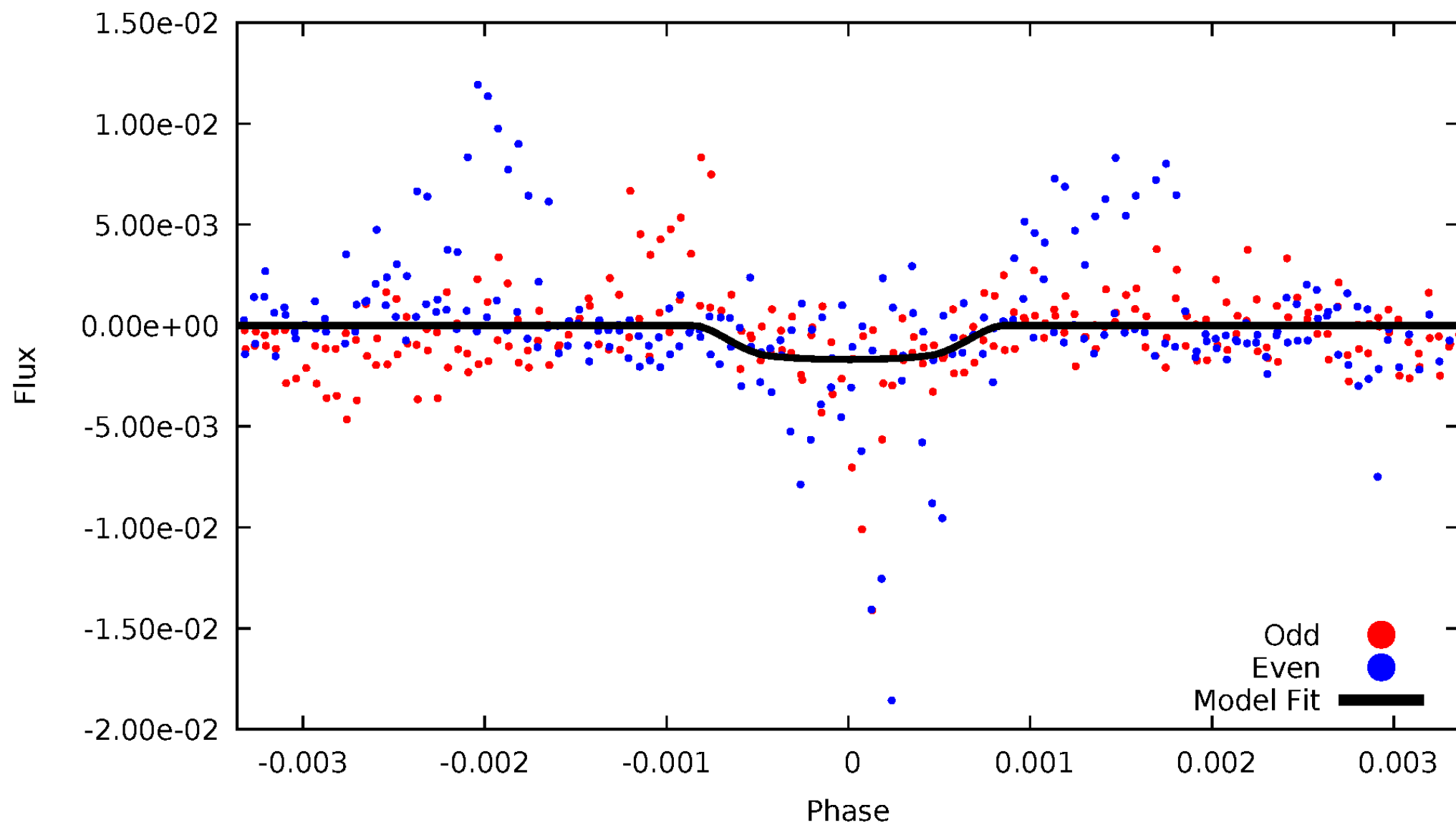


TCE 008752670-01



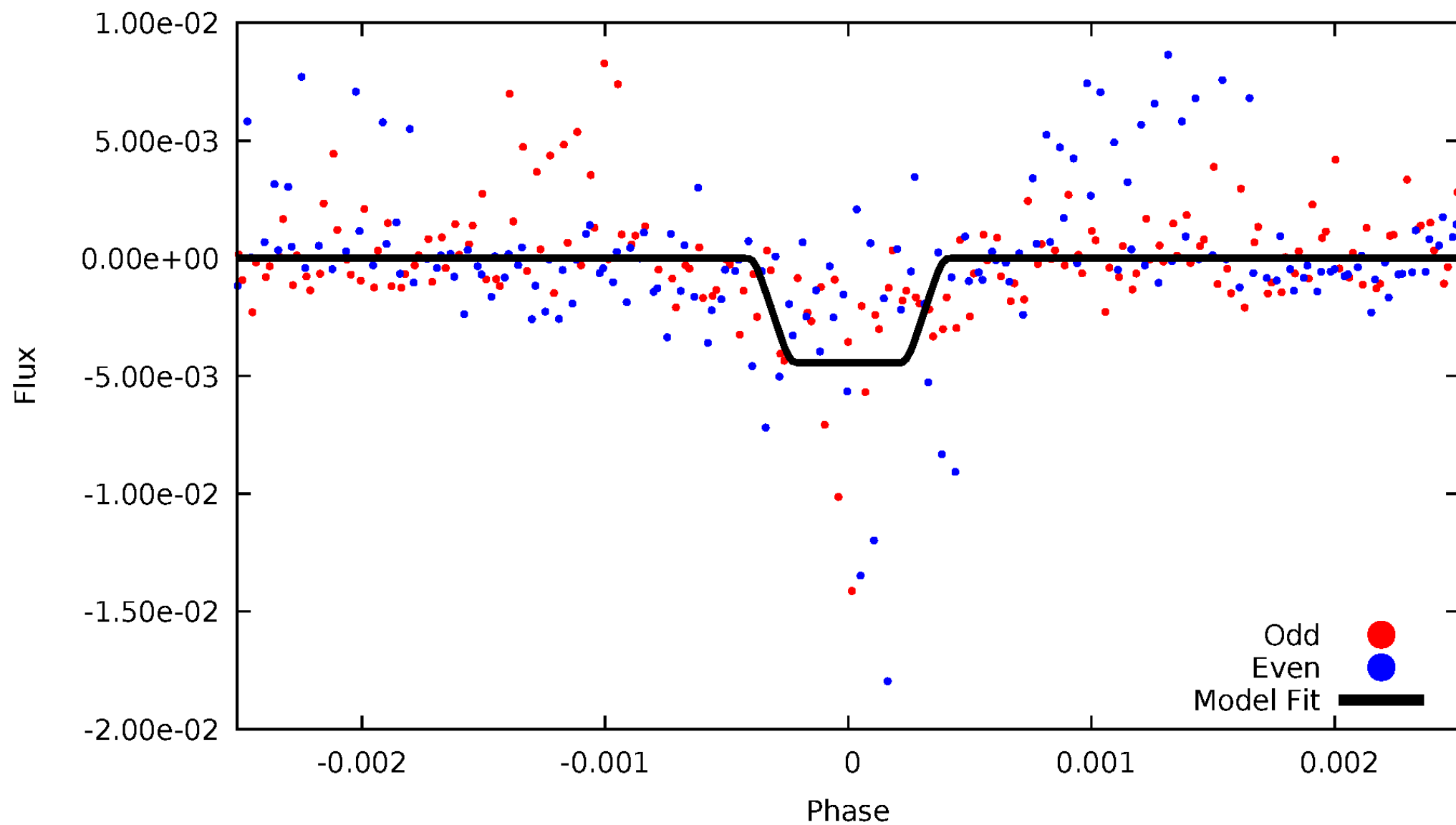
DV Odd/Even

TCE 008752670-01



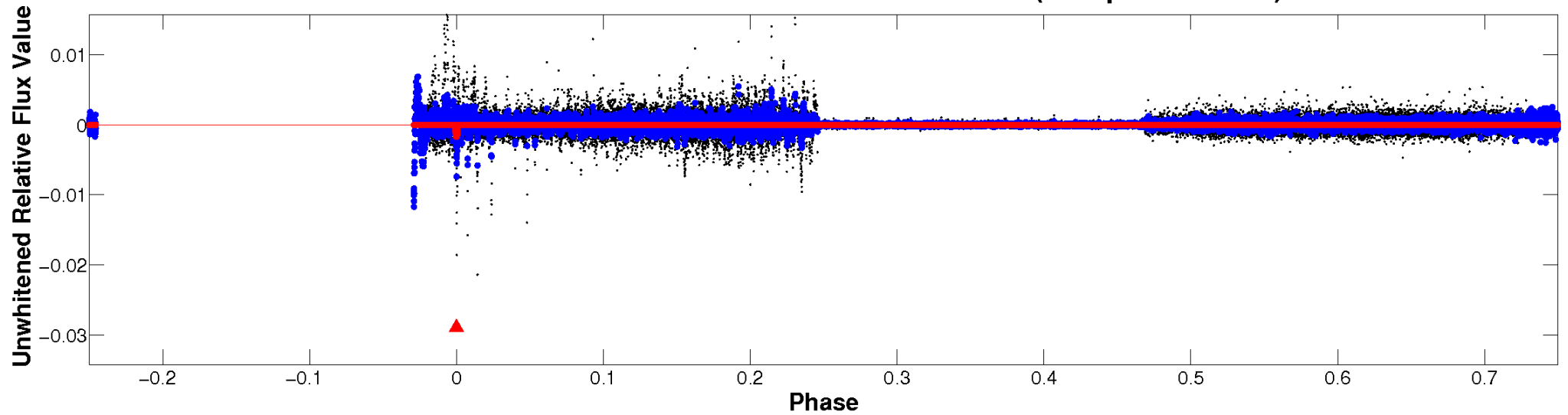
ALT Odd/Even

TCE 008752670-01

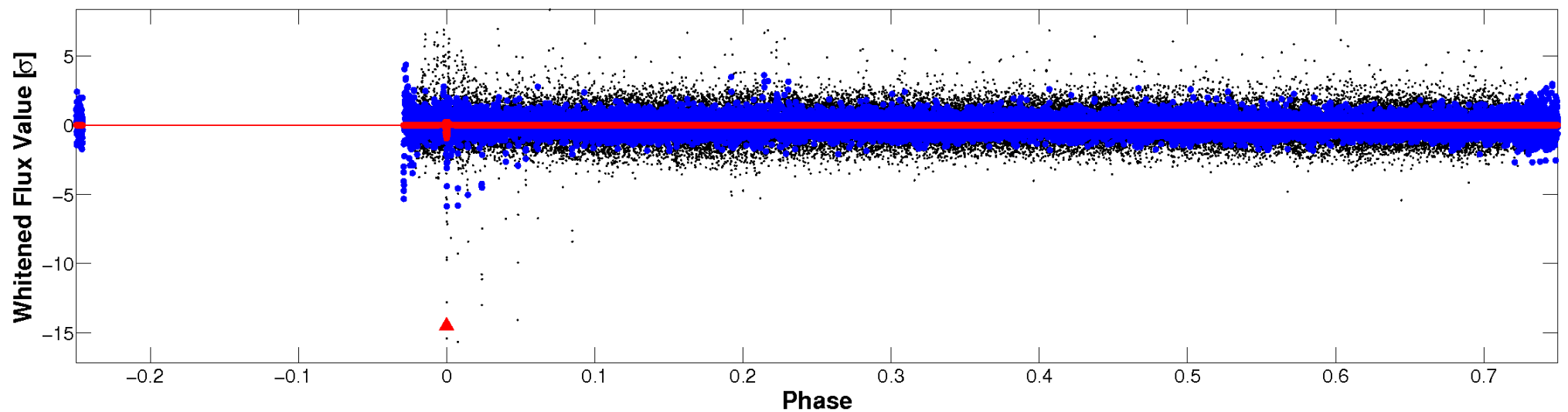


Non-Whitened Vs. Whitened Light Curve

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

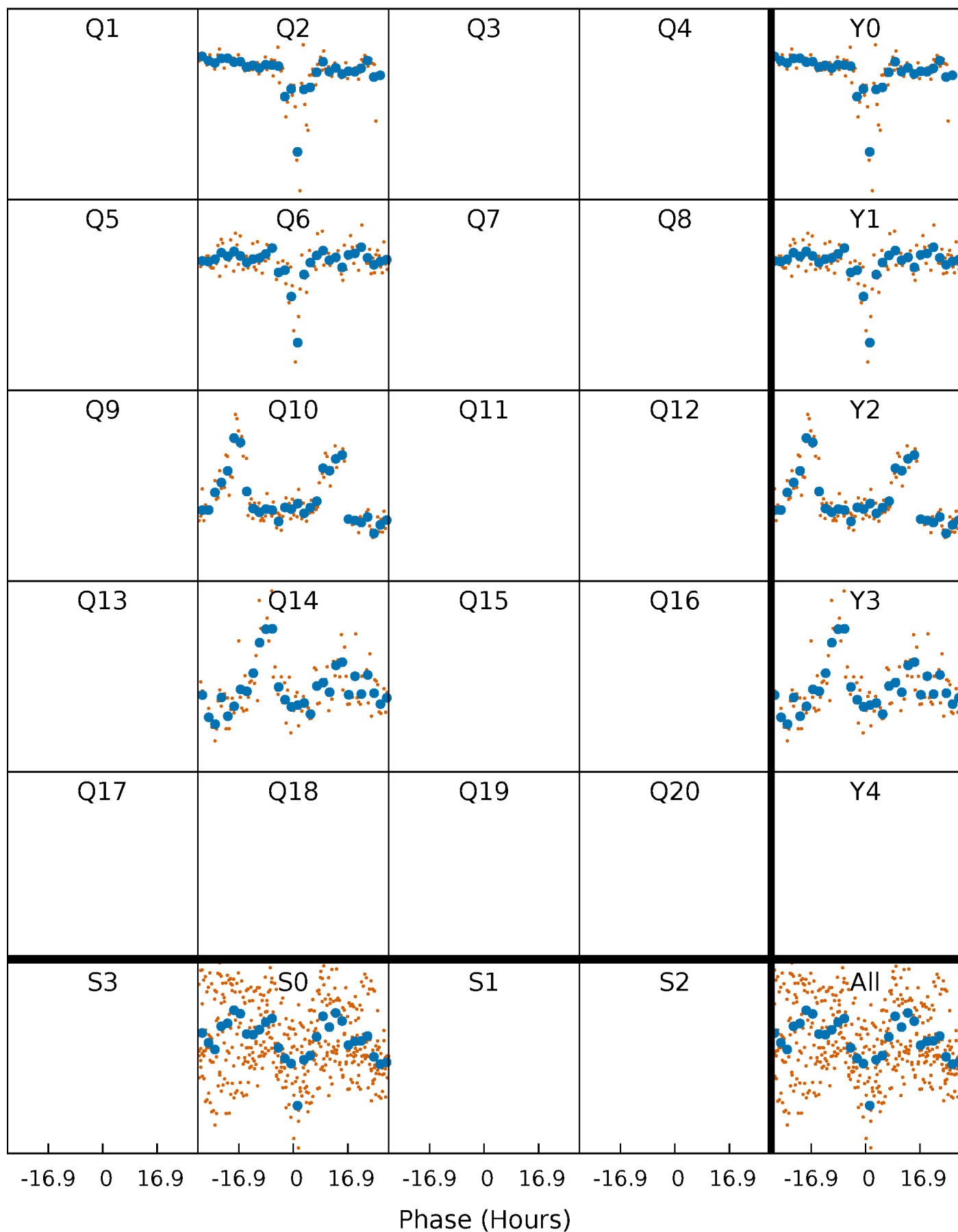


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



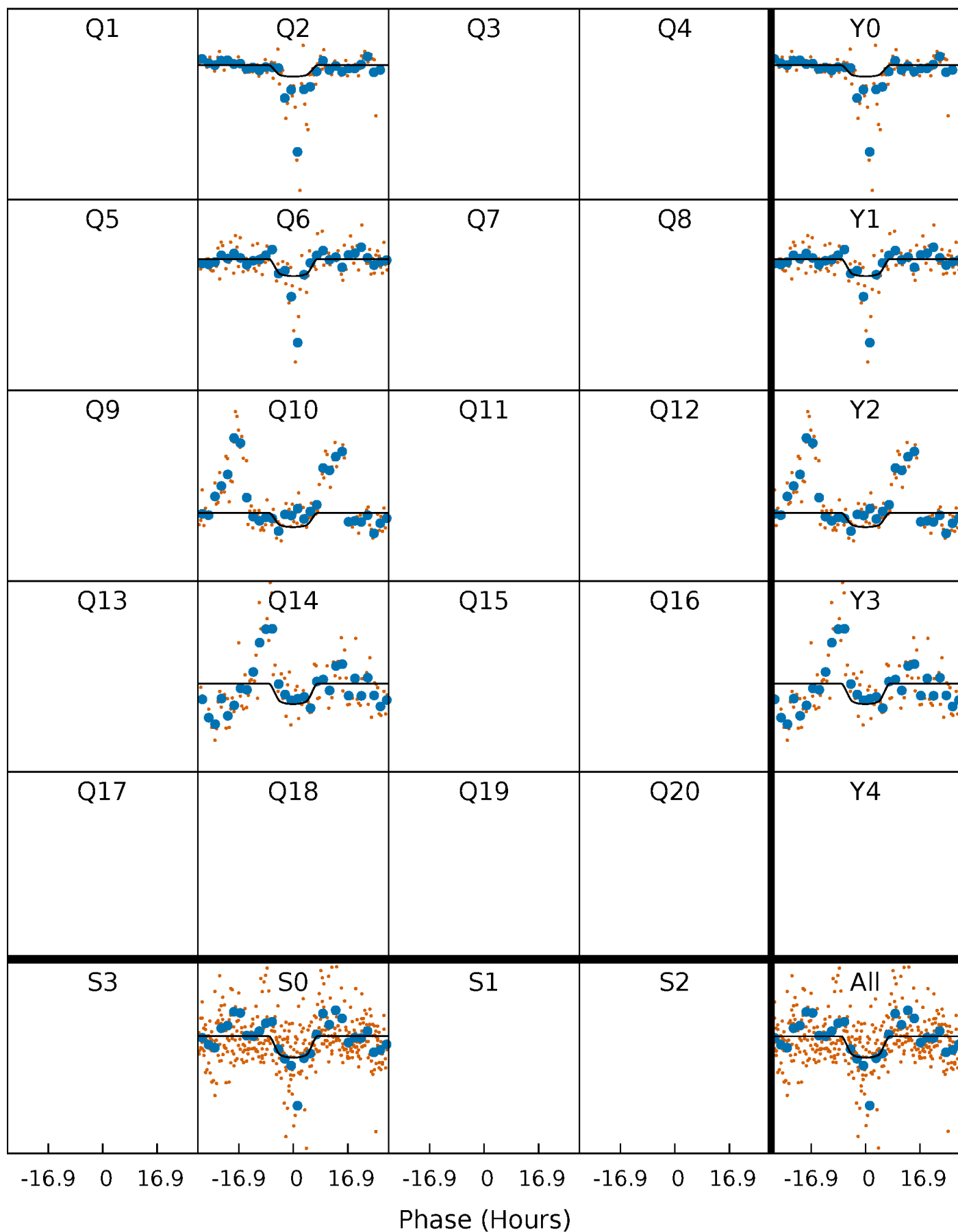
PDC Quarter-Phased Transit Curves

TCE 008752670-01 P=366.904477 Days $T_0=180.425944$ (BKJD)



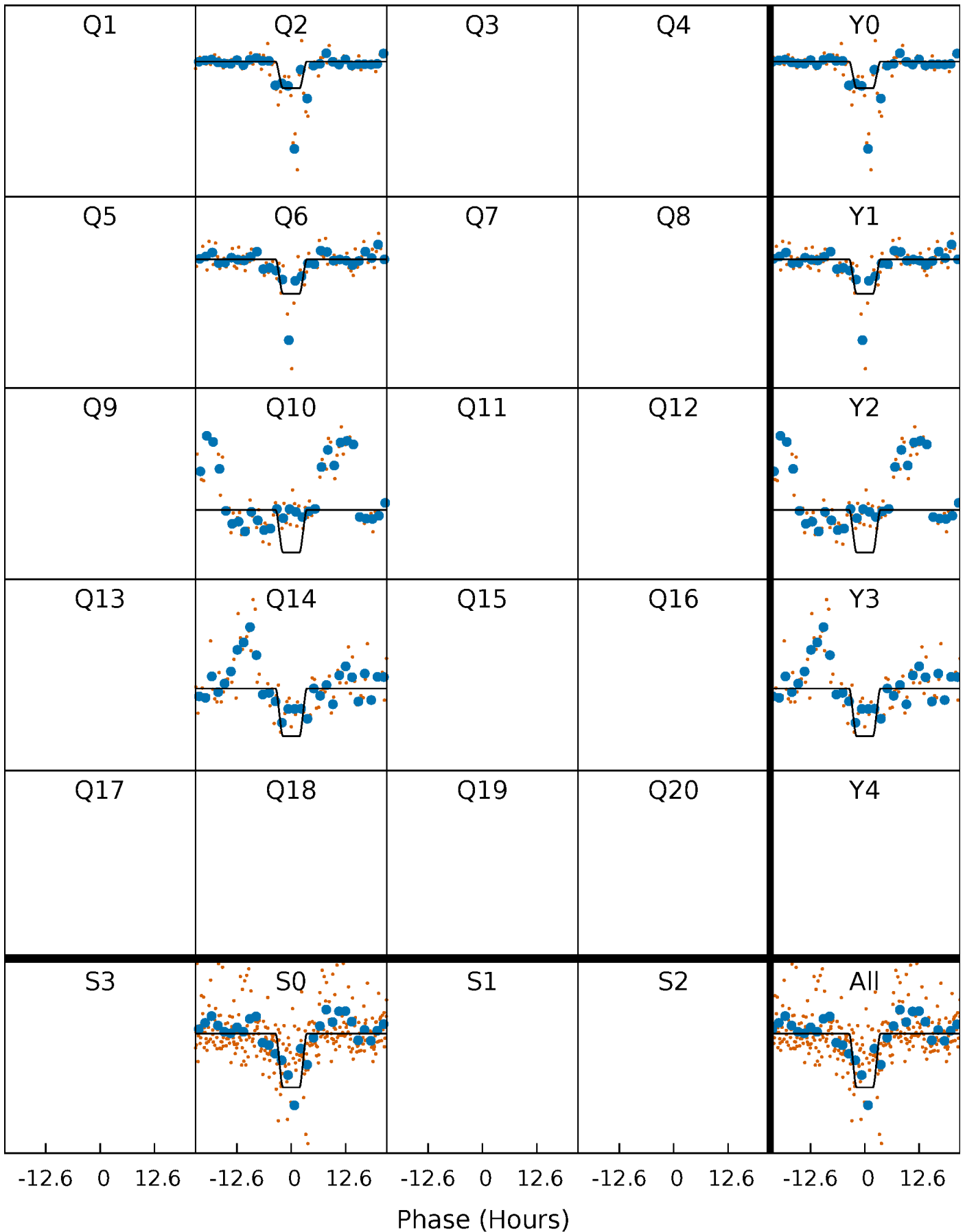
DV Quarter-Phased Transit Curves

TCE 008752670-01 P=366.904477 Days $T_0=180.425944$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

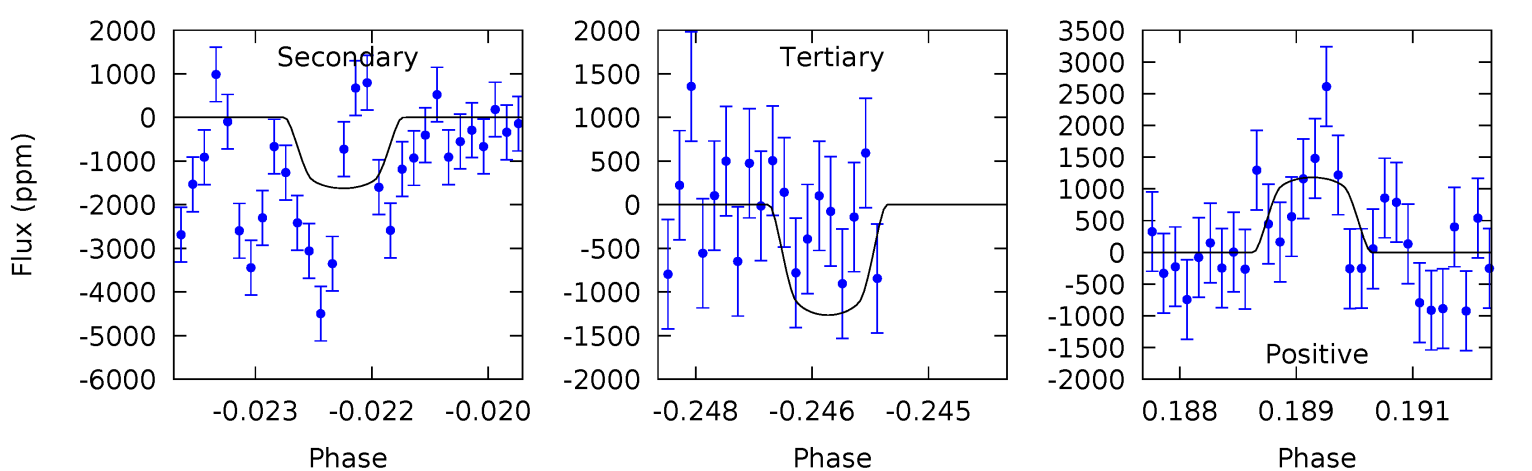
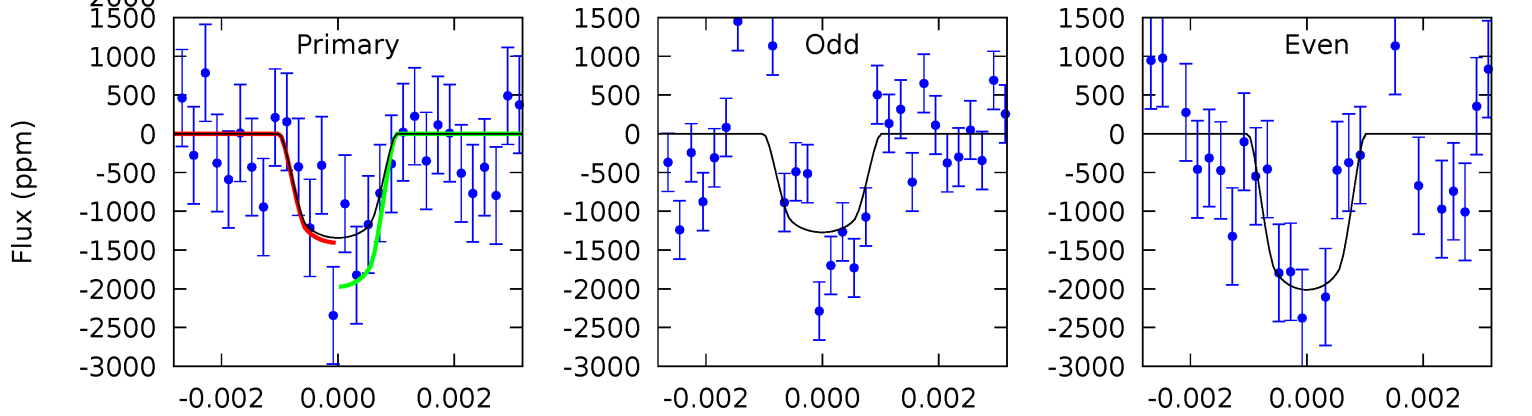
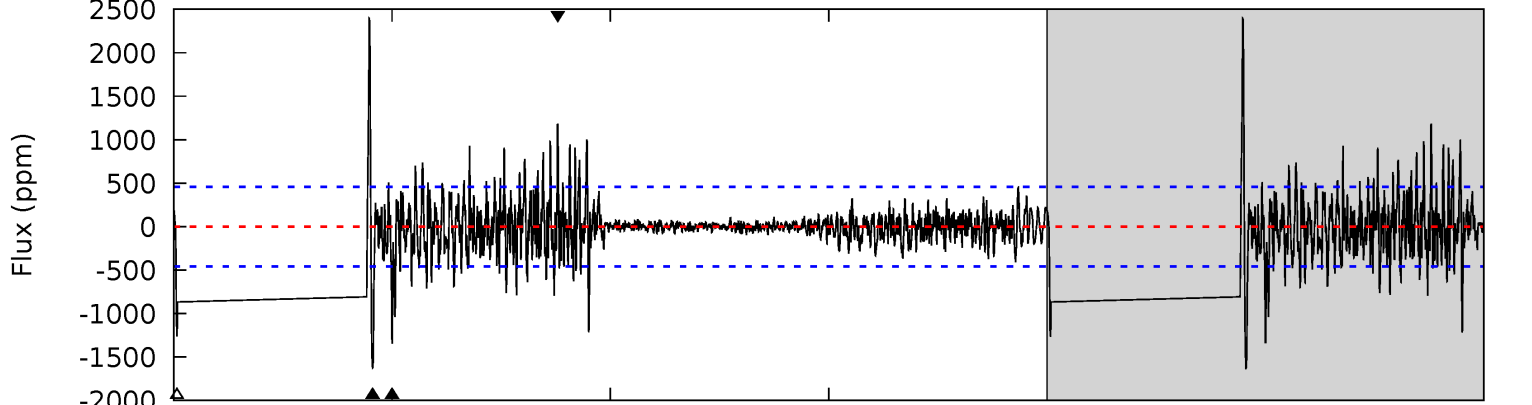
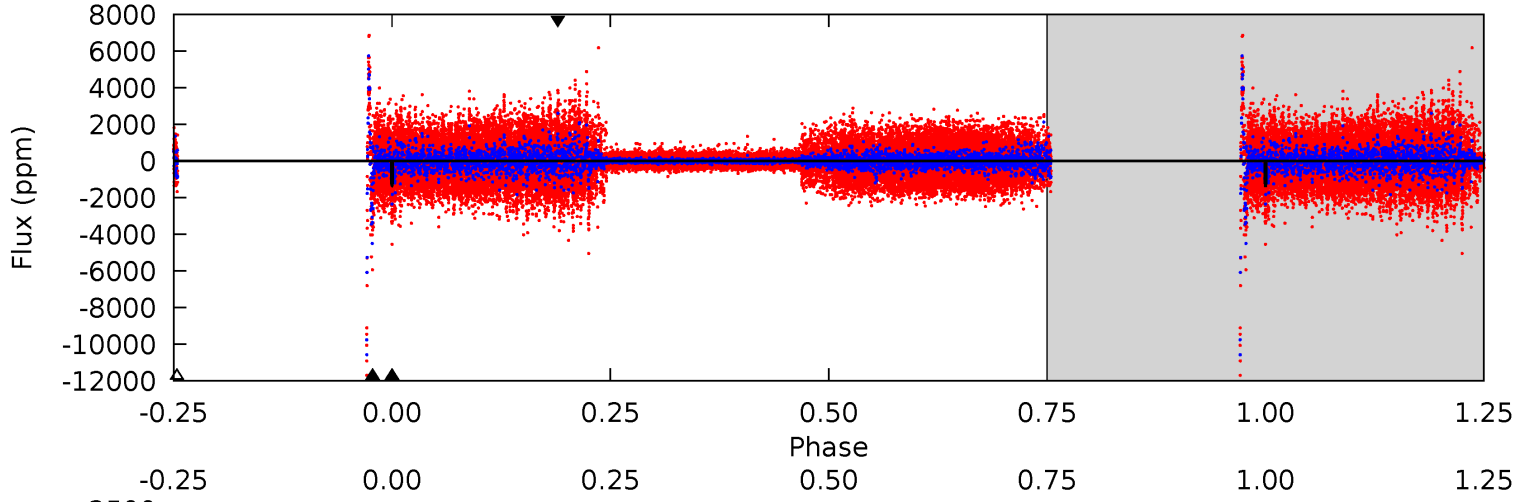
TCE 008752670-01 P=366.918626 Days $T_0=180.454327$ (BKJD)



DV Model-Shift Uniqueness Test

008752670-01, P = 366.904477 Days, E = 180.425944 Days

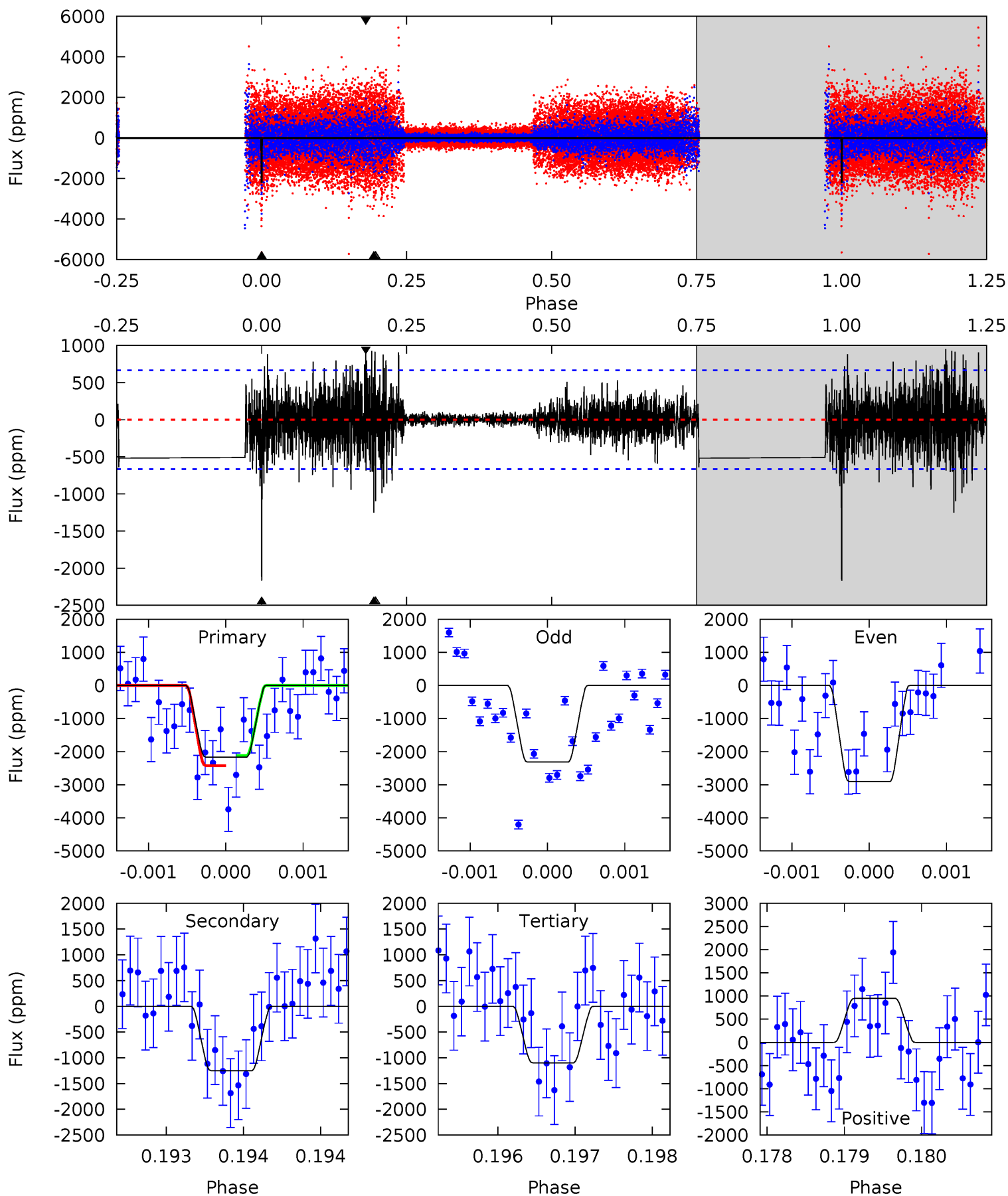
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|-----|
| 15.7 | 19.0 | 14.8 | 13.8 | 5.36 | 3.14 | 2.46 | 0.90 | 1.90 | 4.19 | 5.18 | 3.88 | 1.21 | 0.60 | 0 |



Alt Model-Shift Uniqueness Test

008752670-01, P = 366.918626 Days, E = 180.454327 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 17.9 | 10.3 | 9.04 | 7.83 | 5.49 | 3.35 | 1.59 | 8.82 | 10.0 | 1.26 | 2.47 | 2.17 | 1.00 | 0.30 | 1.24 |



Stellar Parameters For KIC 008752670

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | R (R_{\odot}) | $M(M_{\odot})$ | ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$) |
|--------|----------------------|---------------------------|----------------------------|---------------------------|---------------------------|--|
| | 5722^{+155}_{-155} | $4.043^{+0.450}_{-0.150}$ | $-0.240^{+0.300}_{-0.250}$ | $1.517^{+0.405}_{-0.607}$ | $0.928^{+0.120}_{-0.109}$ | $0.374^{+1.339}_{-0.185}$ |
| | +3%/-3% | +11%/-4% | +125%/-104% | +27%/-40% | +13%/-12% | +358%/-49% |
| Source | PHO1 | 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 008752670-01 / KOI

| Detrend | Depth (ppm) | R_p (R_{\oplus}) | T_{max} (K) | T_{obs} (K) | A_{obs} |
|---------|-----------------|-------------------------|----------------------|----------------------|--------------------------|
| DV | -1623 ± 86 | $6.98^{+1.84}_{-1.66}$ | 428^{+38}_{-51} | 5412^{+424}_{-345} | 17534^{+12488}_{-6413} |
| Alt. | -1250 ± 121 | $10.50^{+2.07}_{-2.49}$ | 431^{+32}_{-51} | 4391^{+223}_{-211} | 6092^{+4211}_{-1945} |

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

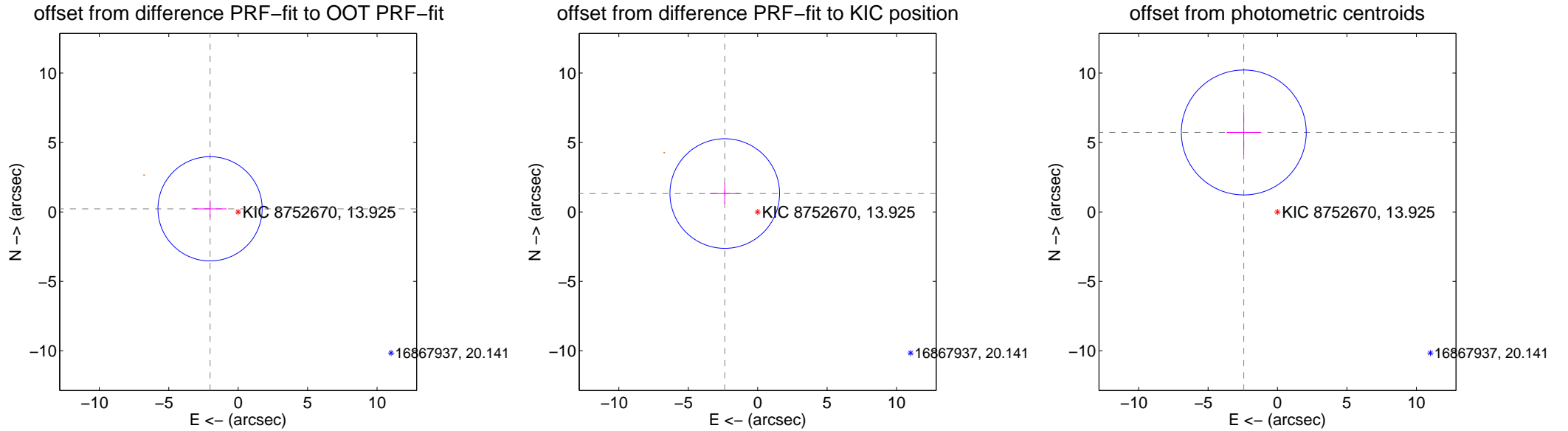
DV Centroid Data

Supplemental centroid analysis for 008752670-01. Kepler magnitude: 13.93. Transit SNR 7.31

There are 1 quarters with good PRF difference image offsets

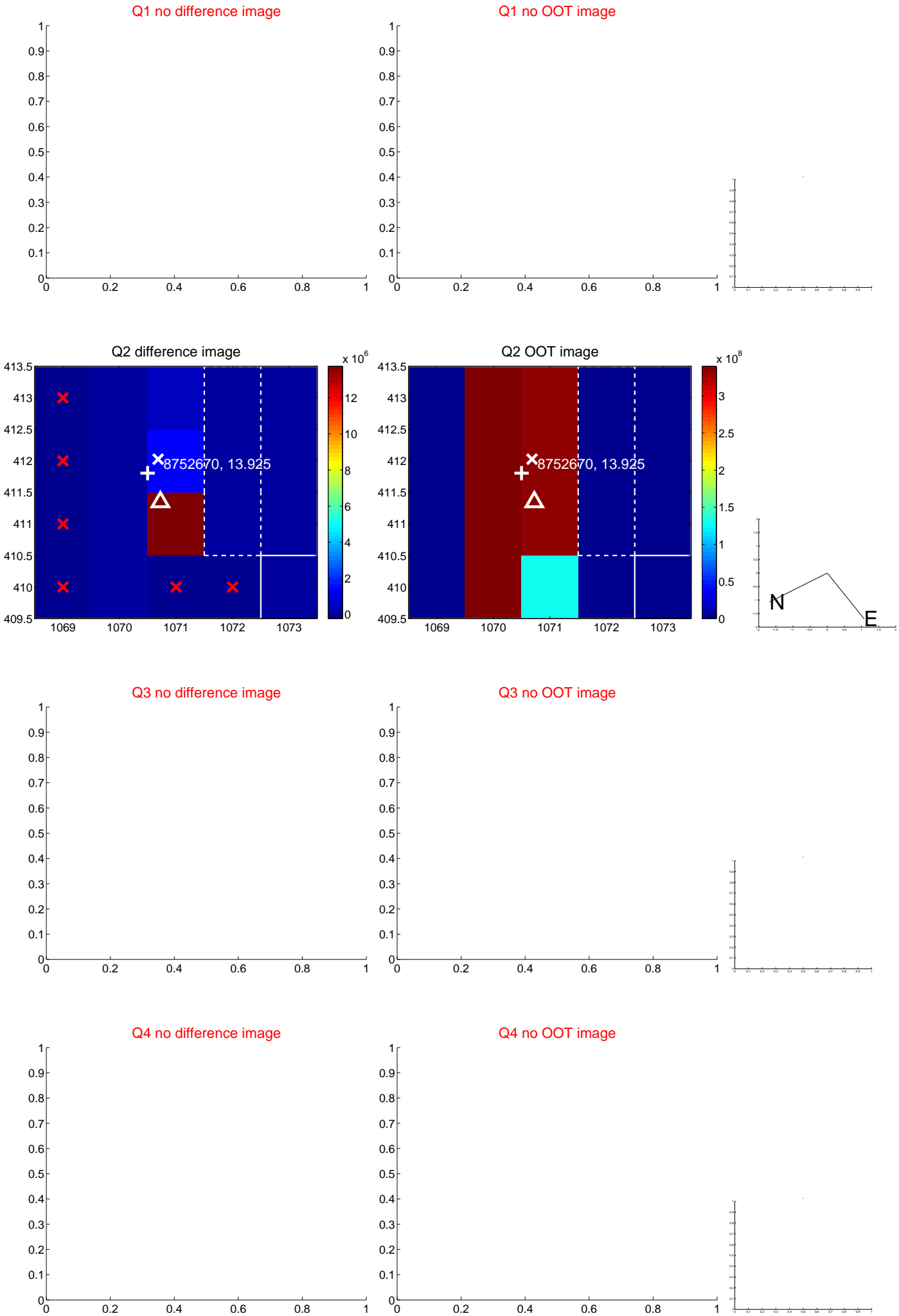
The direct PRF centroid is offset from the target star catalog position by about 1.61 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|-------------------|-------------------|
| PRF-fit source offset from OOT | 2.039 ± 1.251 | 1.63 | 2.026 ± 1.191 | 0.224 ± 0.614 |
| PRF-fit source offset from KIC position | 2.718 ± 1.316 | 2.07 | 2.374 ± 1.094 | 1.324 ± 0.742 |
| photometric centroid source offset | 6.22 ± 1.50 | 4.15 | 2.43 ± 1.24 | 5.72 ± 1.54 |

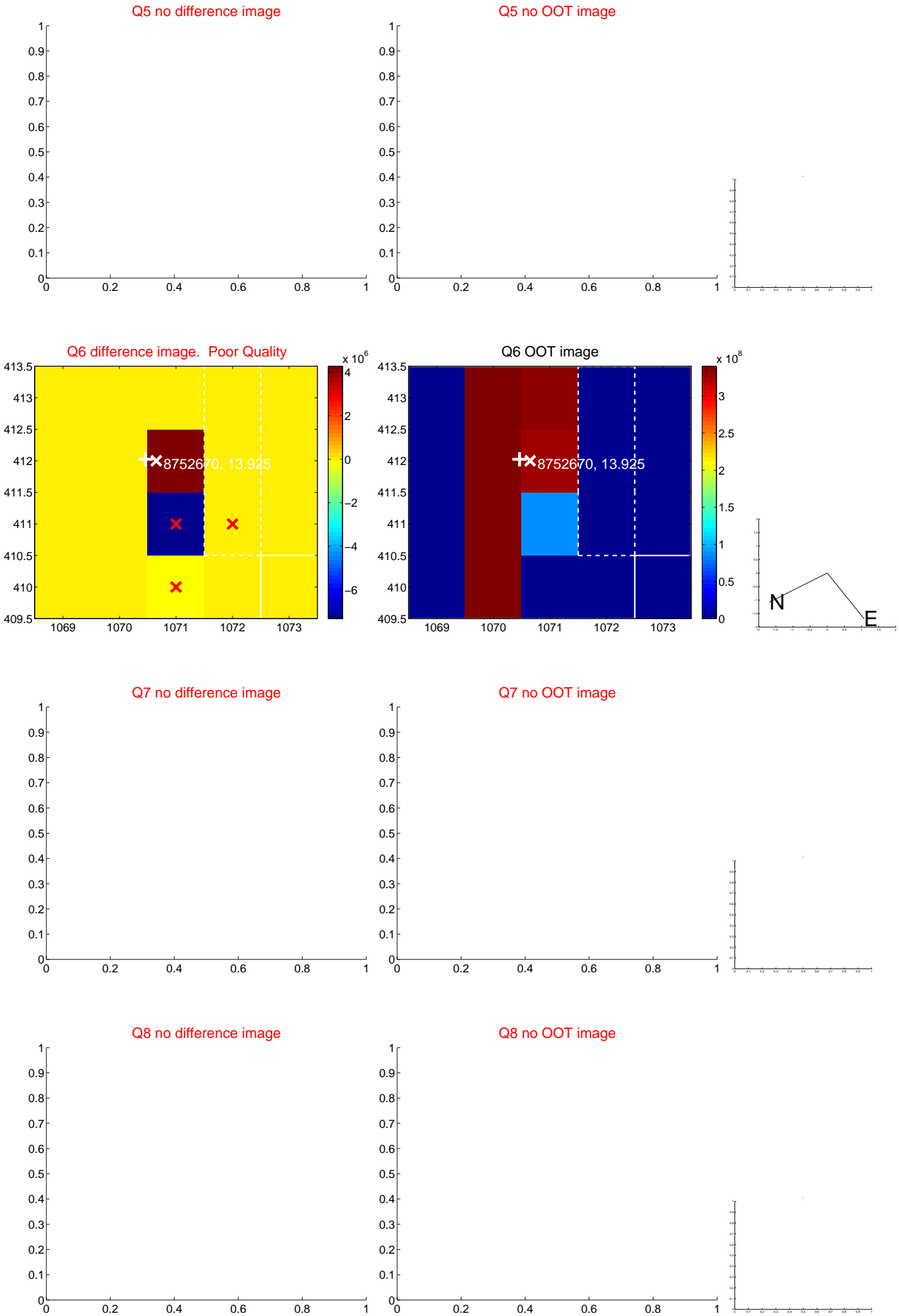


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

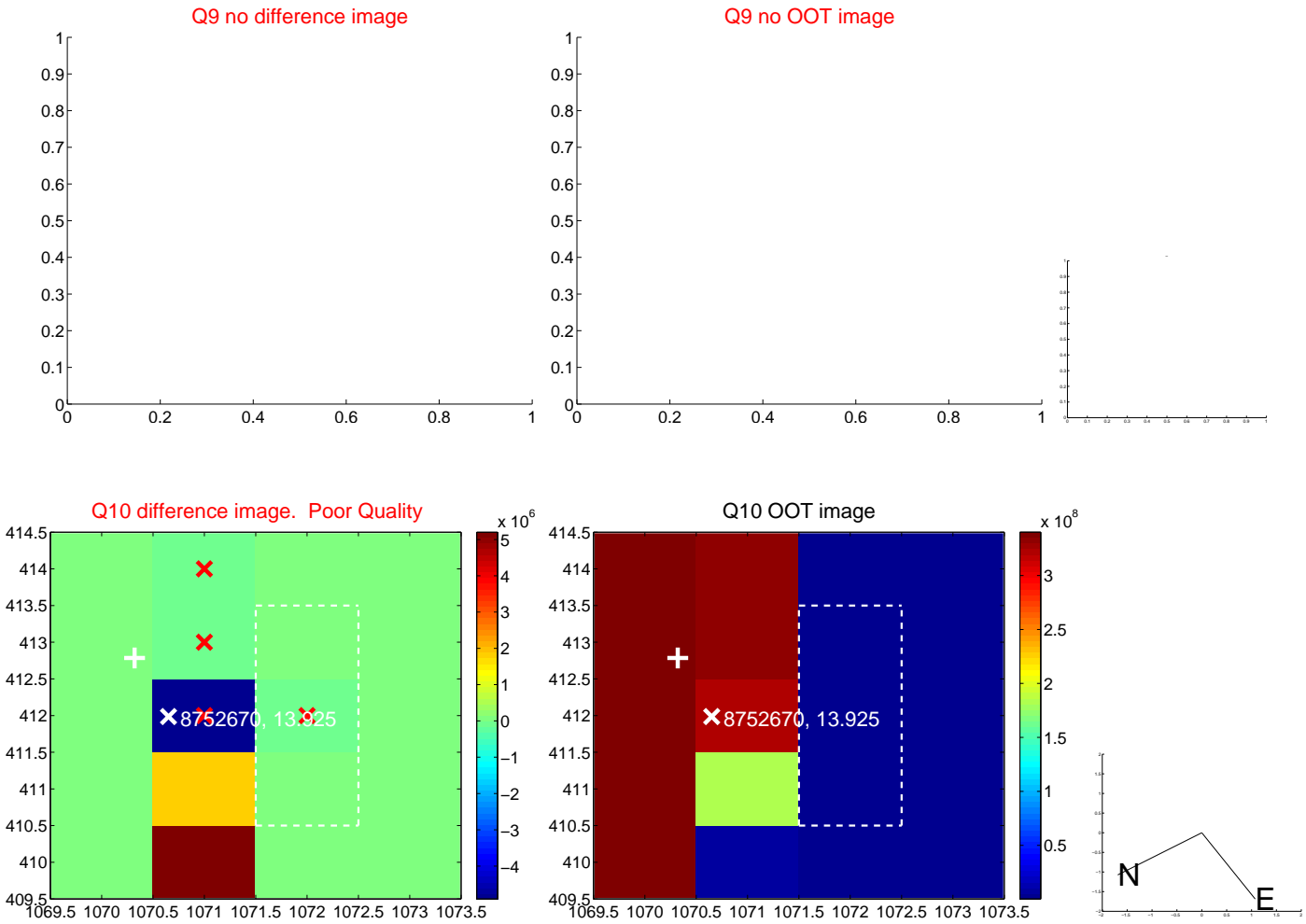
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



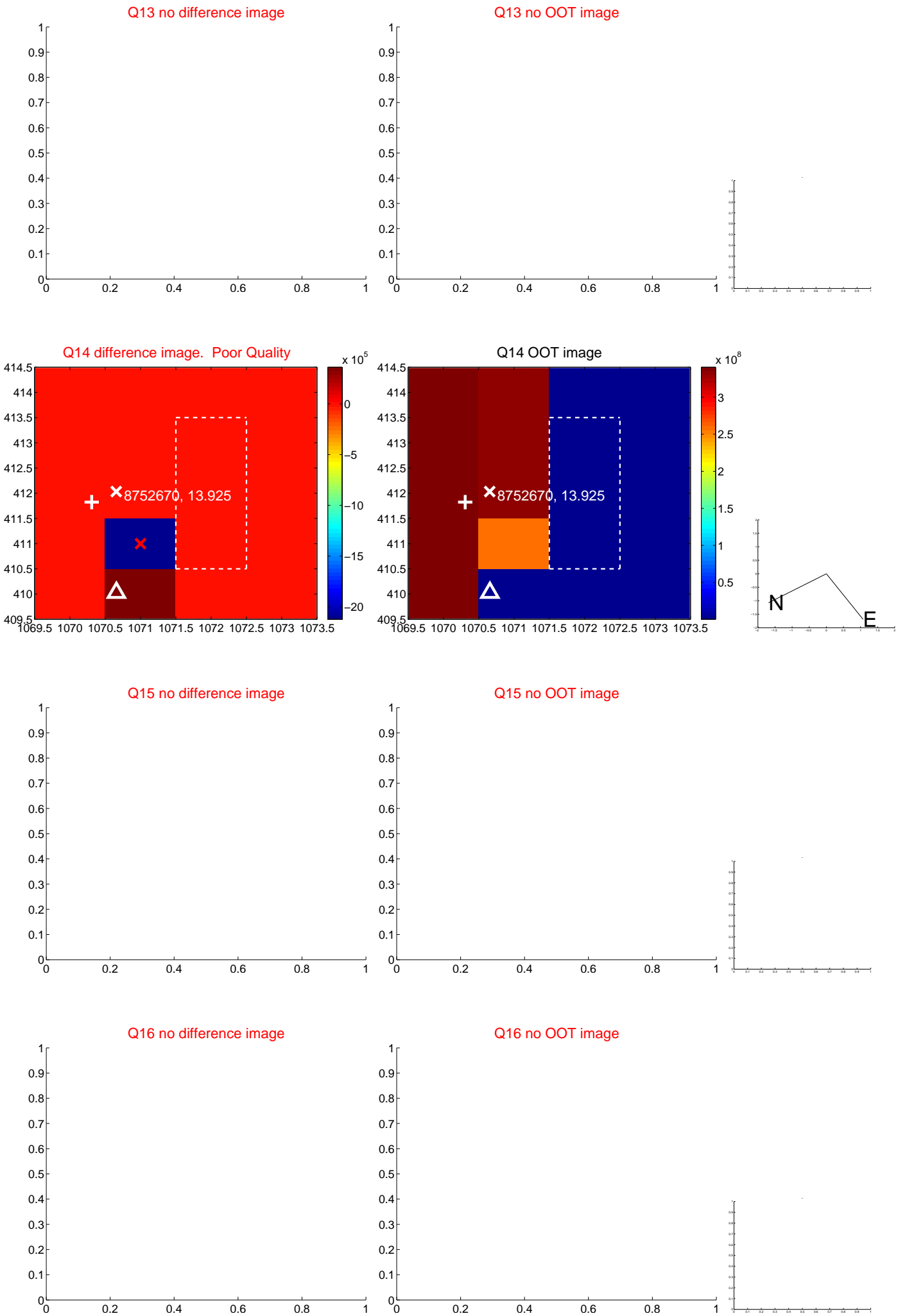
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



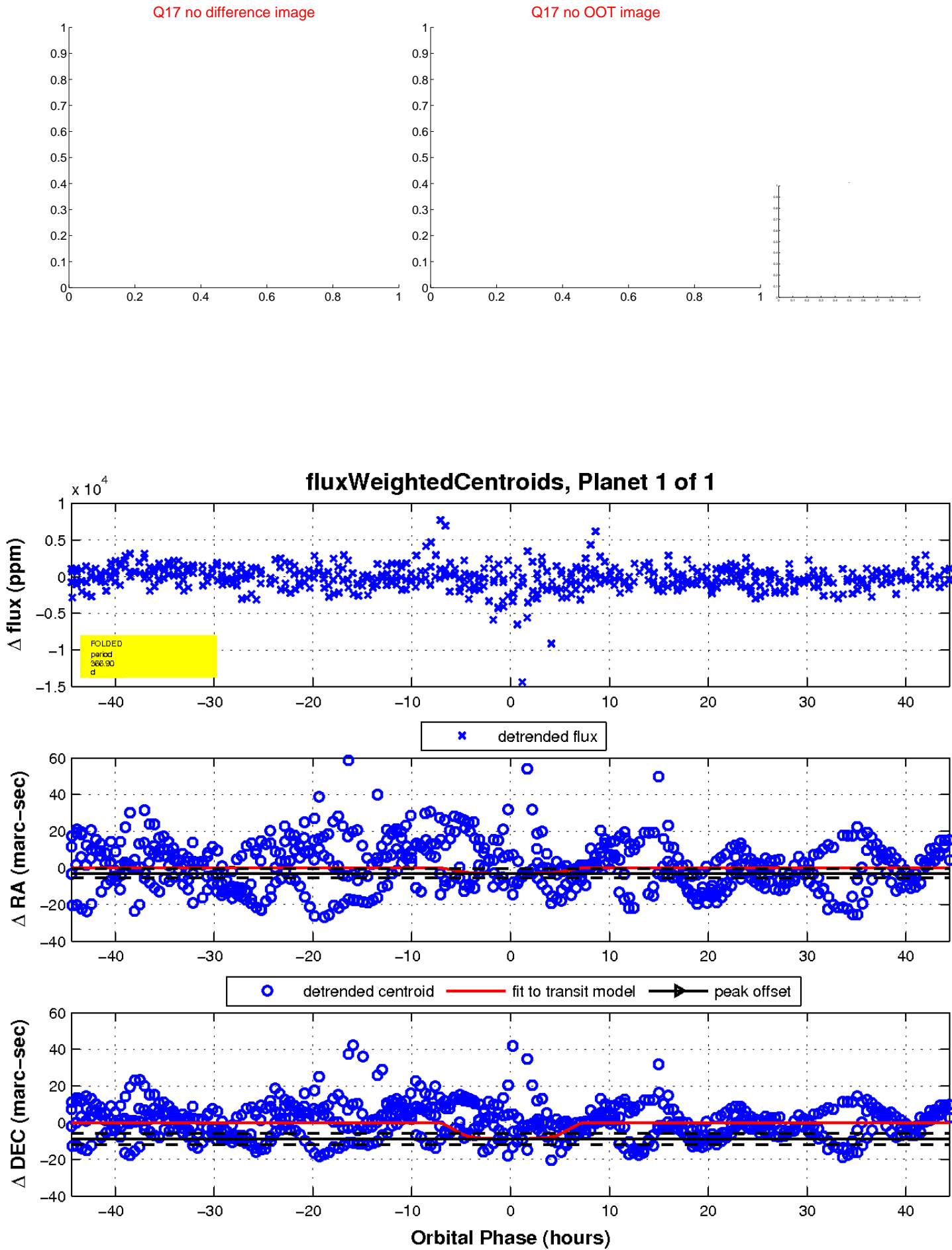
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: 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.



UKIRT Image

Declination

