

KIC 007448050

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|------|-----|-----------------------------|-----------------|------------------------|------------------------|
| 007448050-01 | OBS | No | 573.086753 | 387.402958 | 229.0 | 2.798 | 22.3 | 1.2 | 1.80 | 7419 | 2.99 | 3.66 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|---|
| 007448050-01 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_CHASES_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_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.

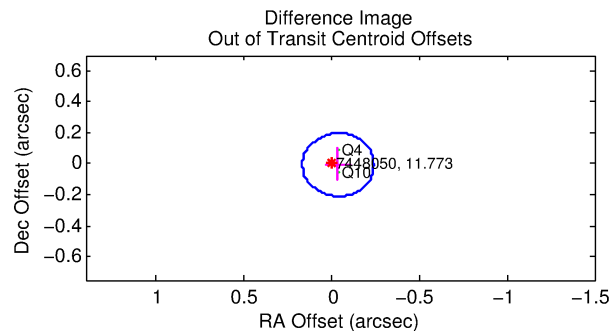
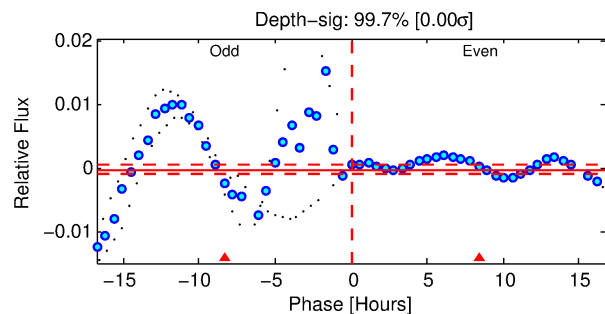
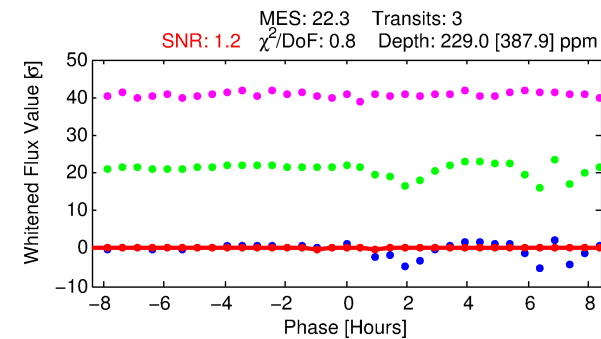
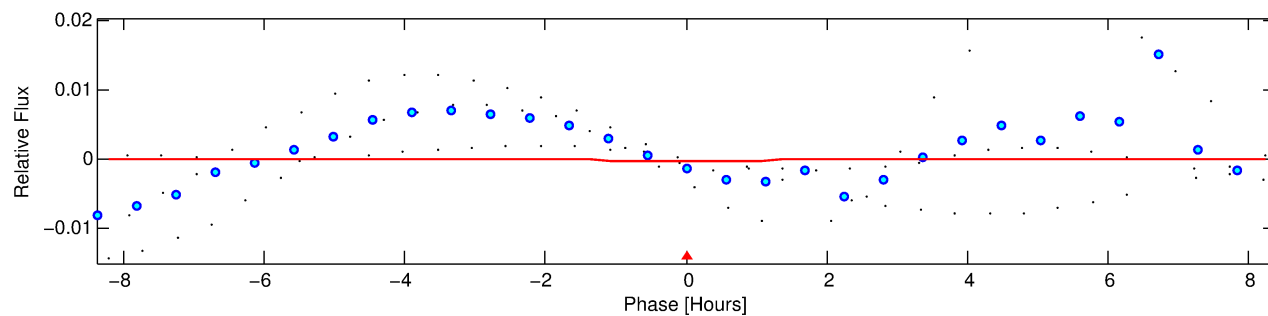
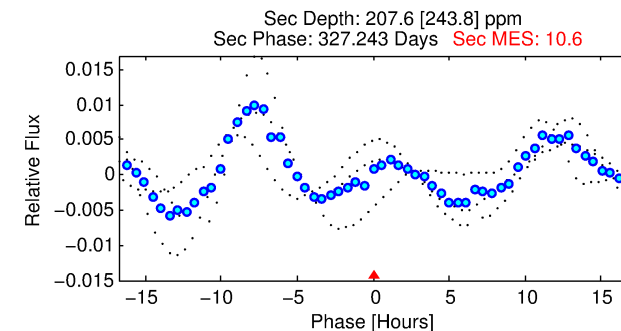
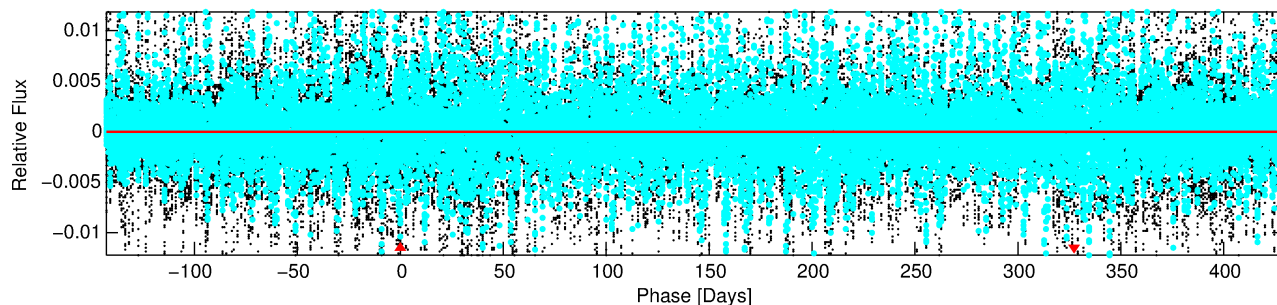
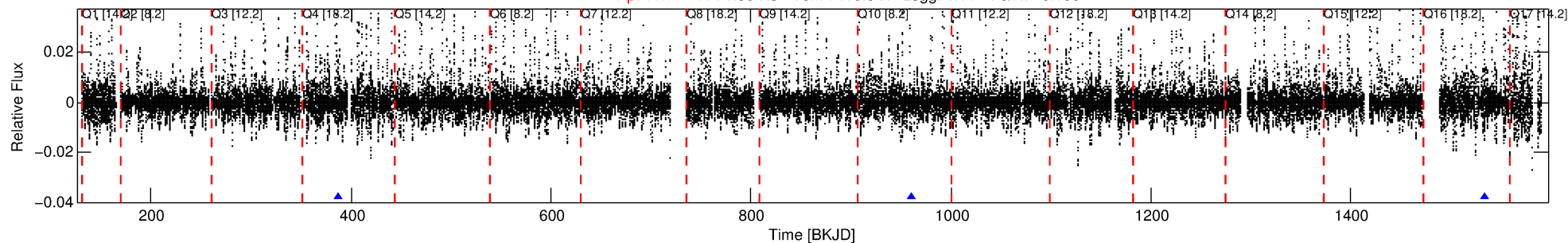
Ephemeris Match Information For 007448050-01

No Significant Match Found

DV One-Page Summary

KIC: 7448050 Candidate: 1 of 1 Period: 573.087 d

Kp: 11.77 R*: 1.80 Rs Teff: 7419.0 K Logg: 4.11 Fe/H: -0.160



DV Fit Results:

Period = 573.08675 [0.02163] d
Epoch = 387.4030 [0.0282] BKJD
Rp/R* = 0.0152 [0.0338]
a/R* = 1019.70 [10882.85]
b = 0.78 [5.39]
Seff = 3.66 [1.41]
Teq = 353 [34] K
Rp = 2.99 [6.71] Re
a = 1.5536 [0.3768] AU
Ag = 30751.30 [141729.21] [0.22σ]
Teff = 7221 [8302] K [0.83σ]

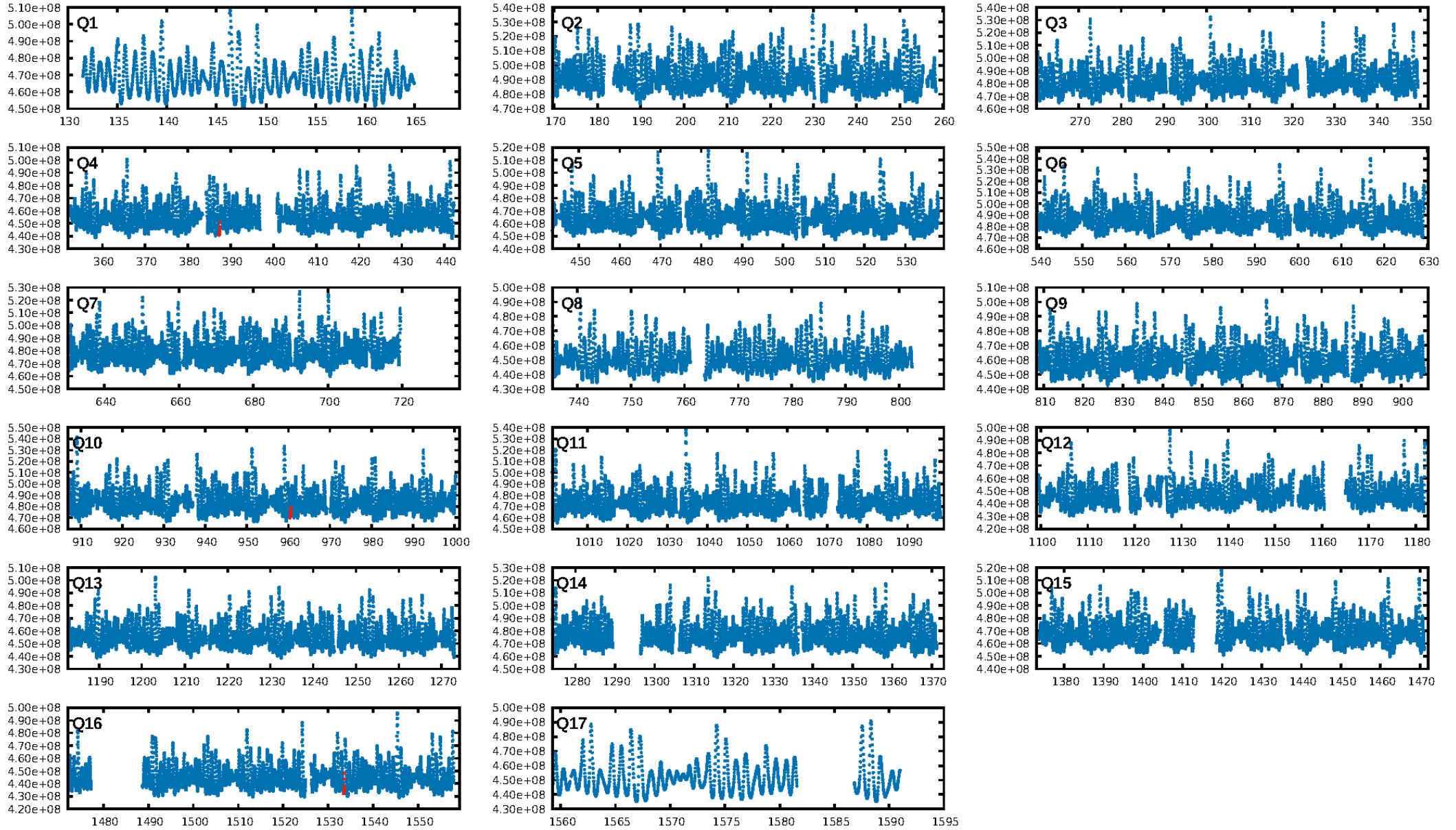
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 83.8%
ModelChiSquareGof-sig: 99.7%
Bootstrap-pfa: 1.14e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.5151
Centroid-sig: 5.6%
Centroid-so: 2.307 arcsec [1.55σ]
OotOffset-rm: 0.039 arcsec [0.57σ]
KicOffset-rm: 0.073 arcsec [0.46σ]
OotOffset-st: 1/0/1/0 [2]
KicOffset-st: 1/0/1/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

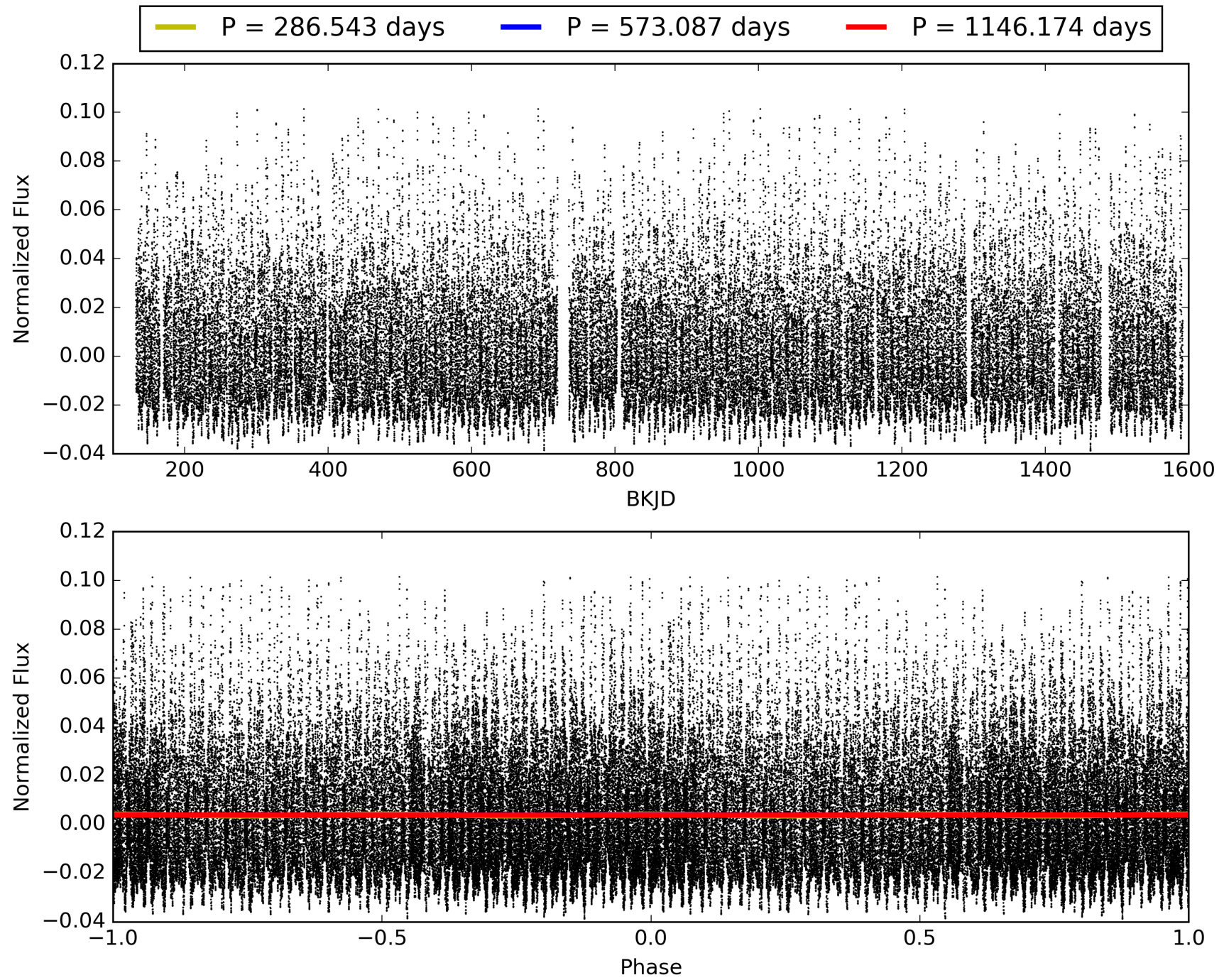
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 04:39:30 Z

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

TCE 007448050-01, PDC Light Curves

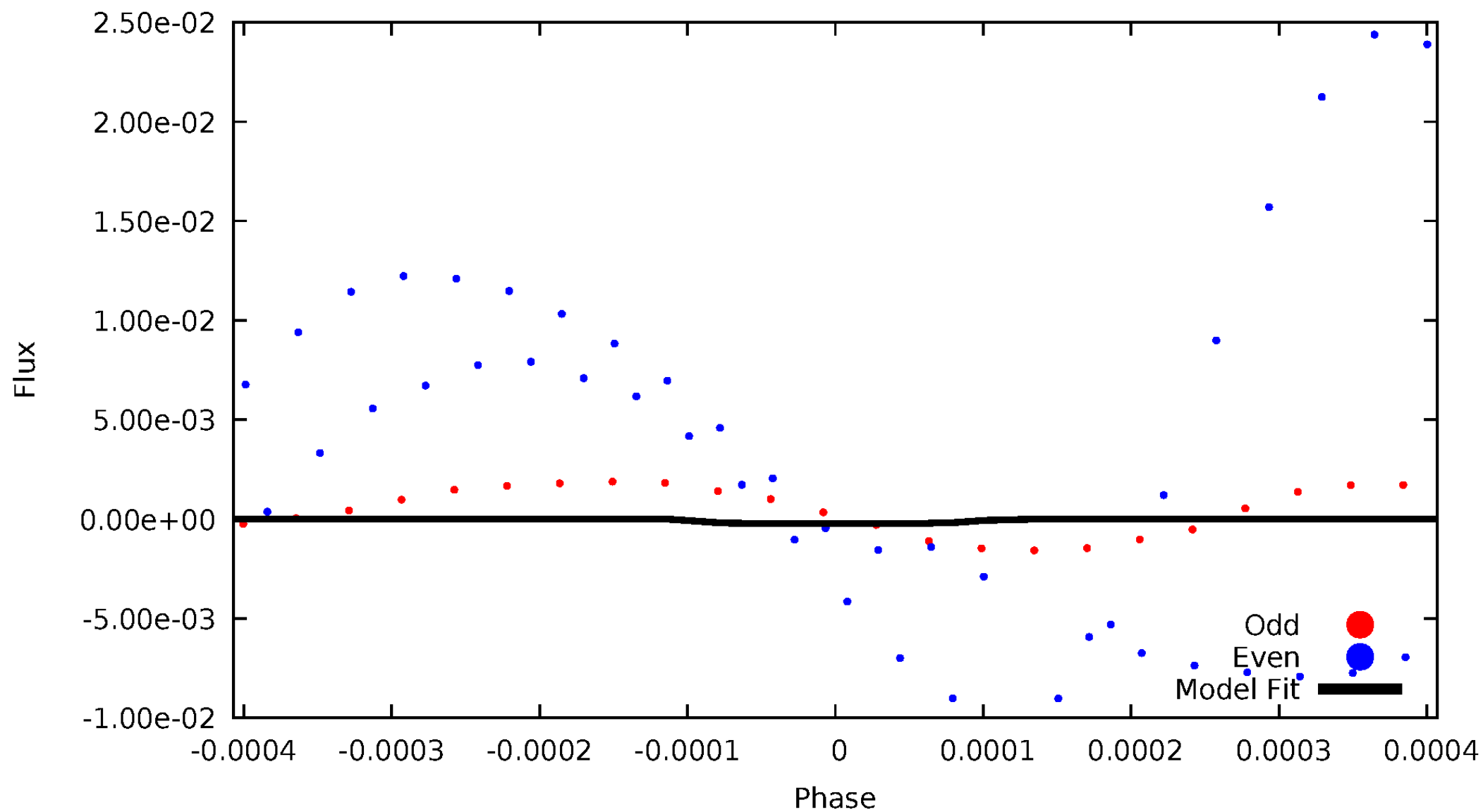


TCE 007448050-01



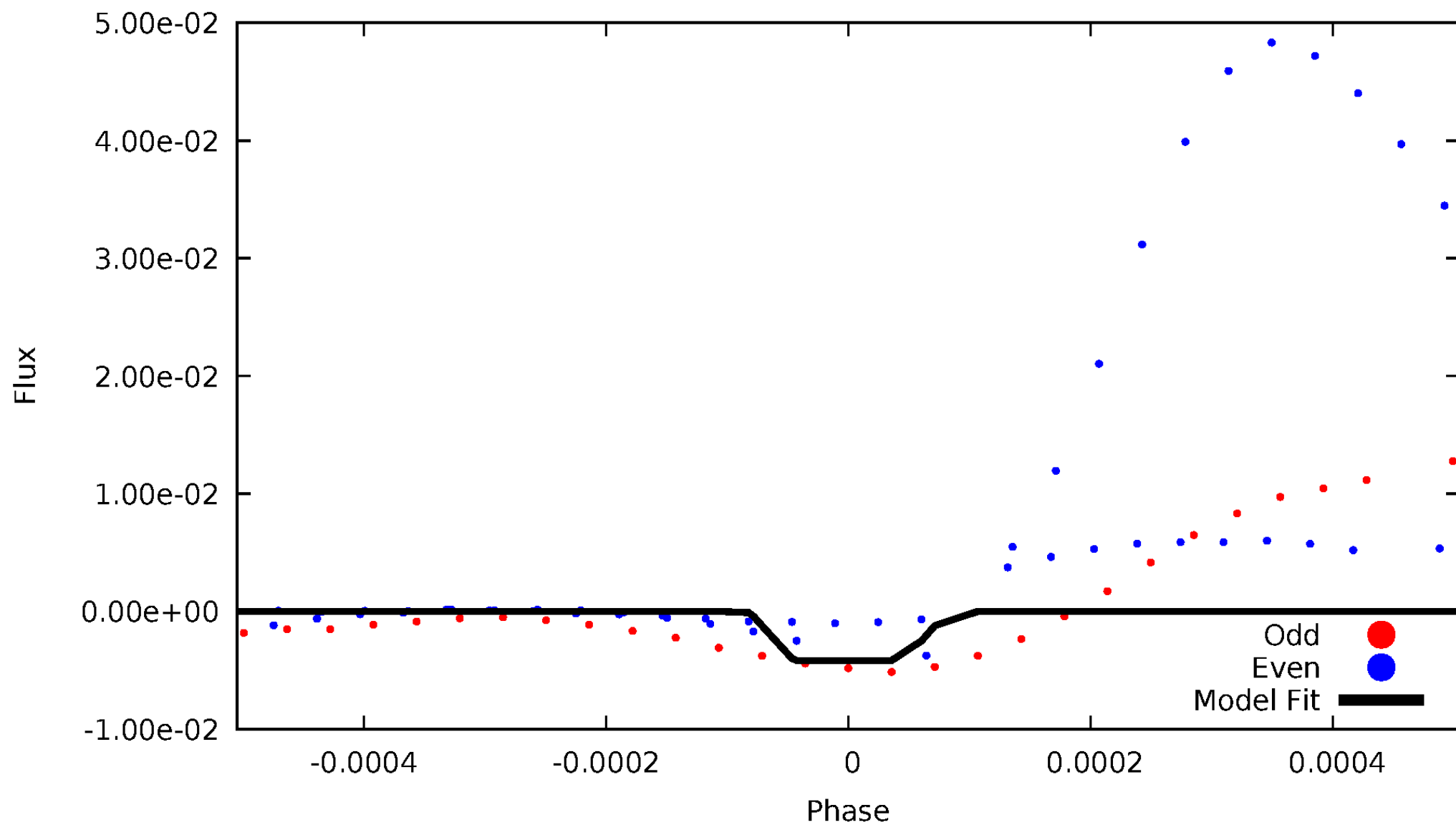
DV Odd/Even

TCE 007448050-01



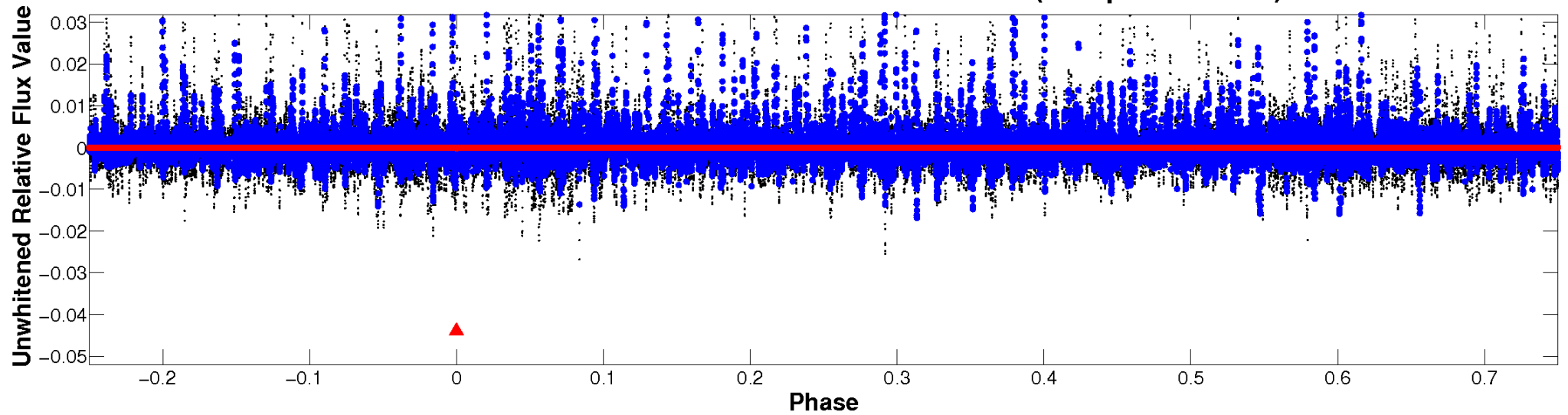
ALT Odd/Even

TCE 007448050-01

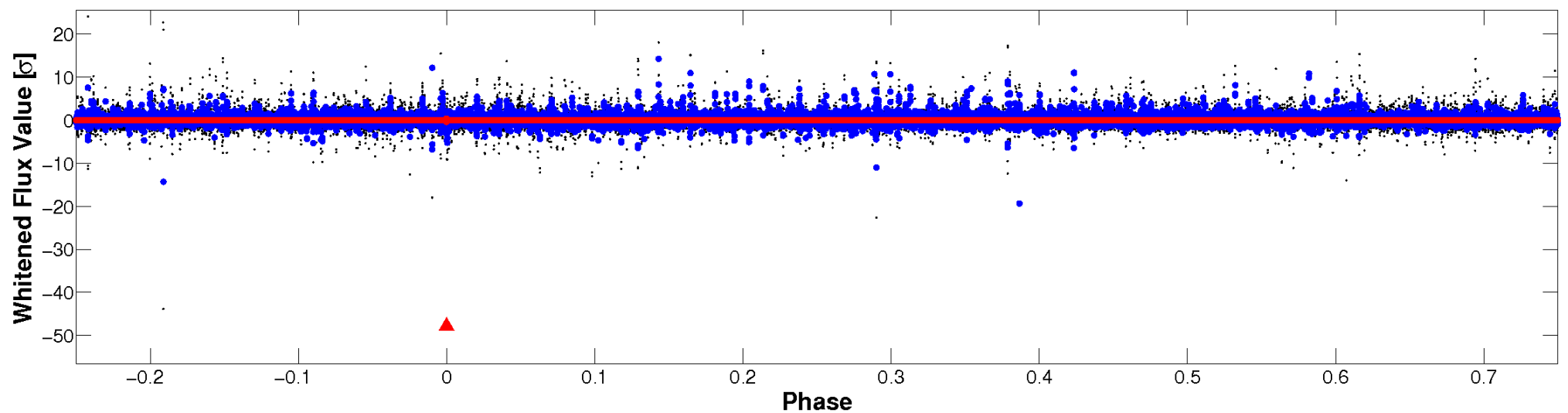


Non-Whitened Vs. Whitened Light Curve

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

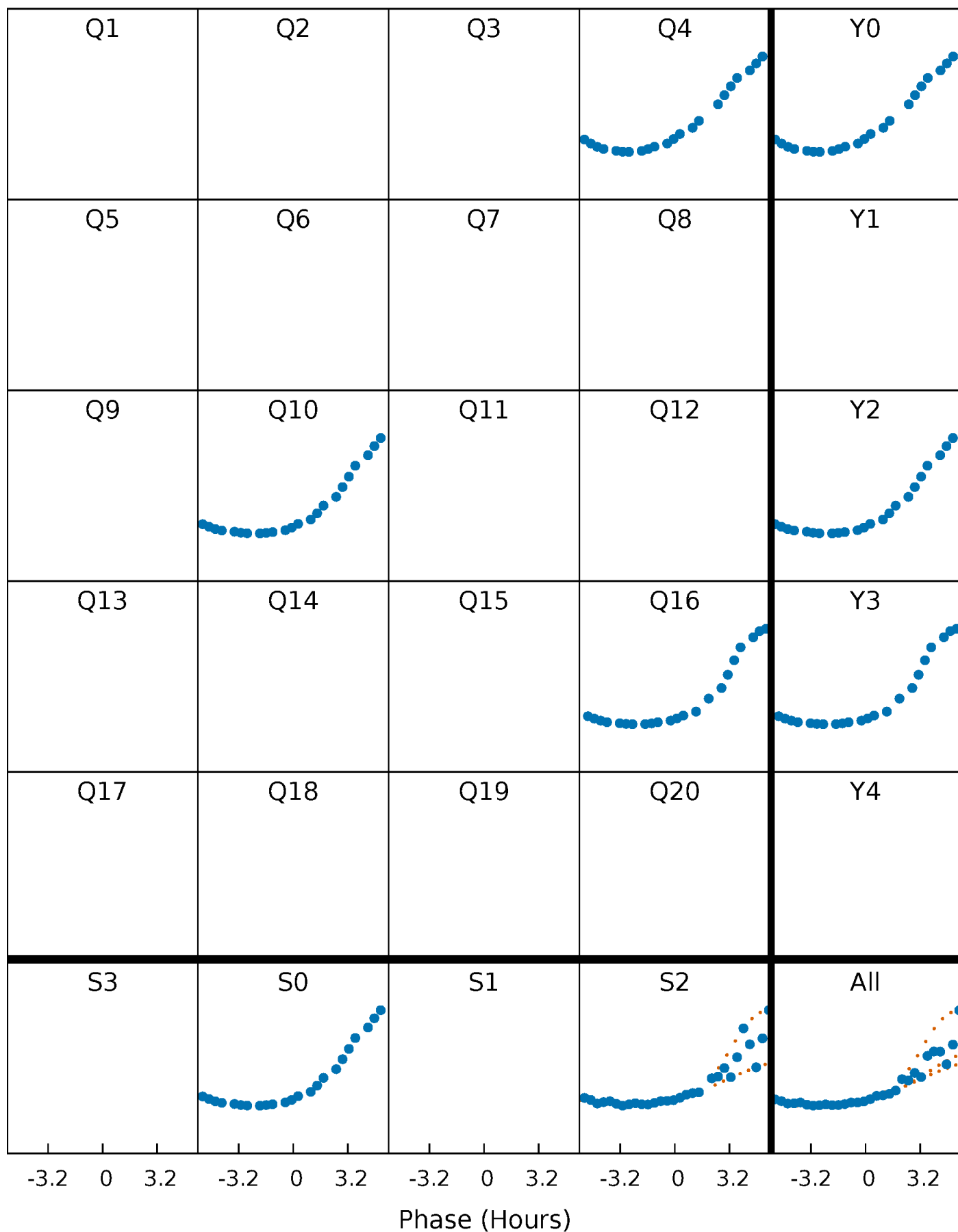


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



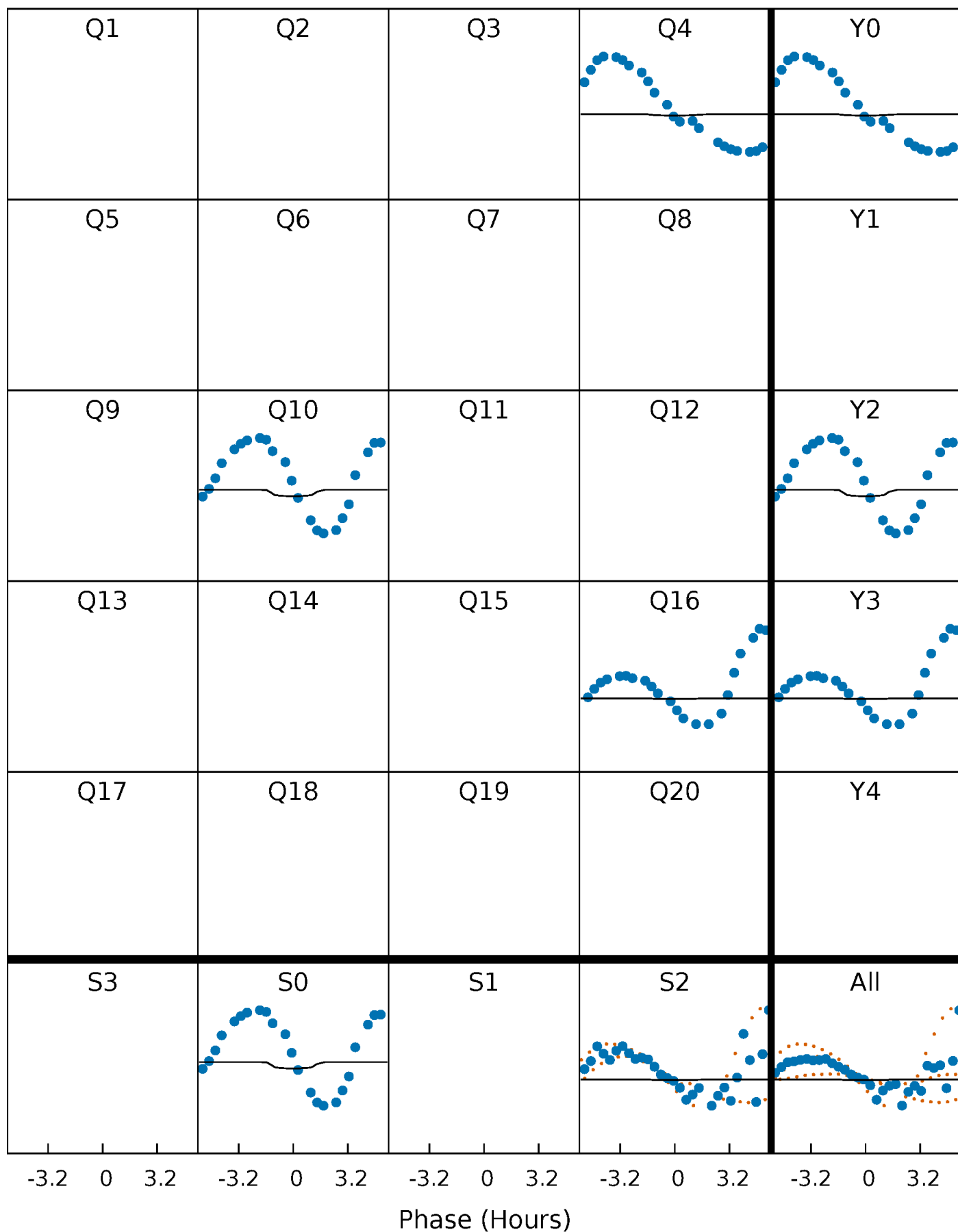
PDC Quarter-Phased Transit Curves

TCE 007448050-01 P=573.086753 Days $T_0=387.402958$ (BKJD)



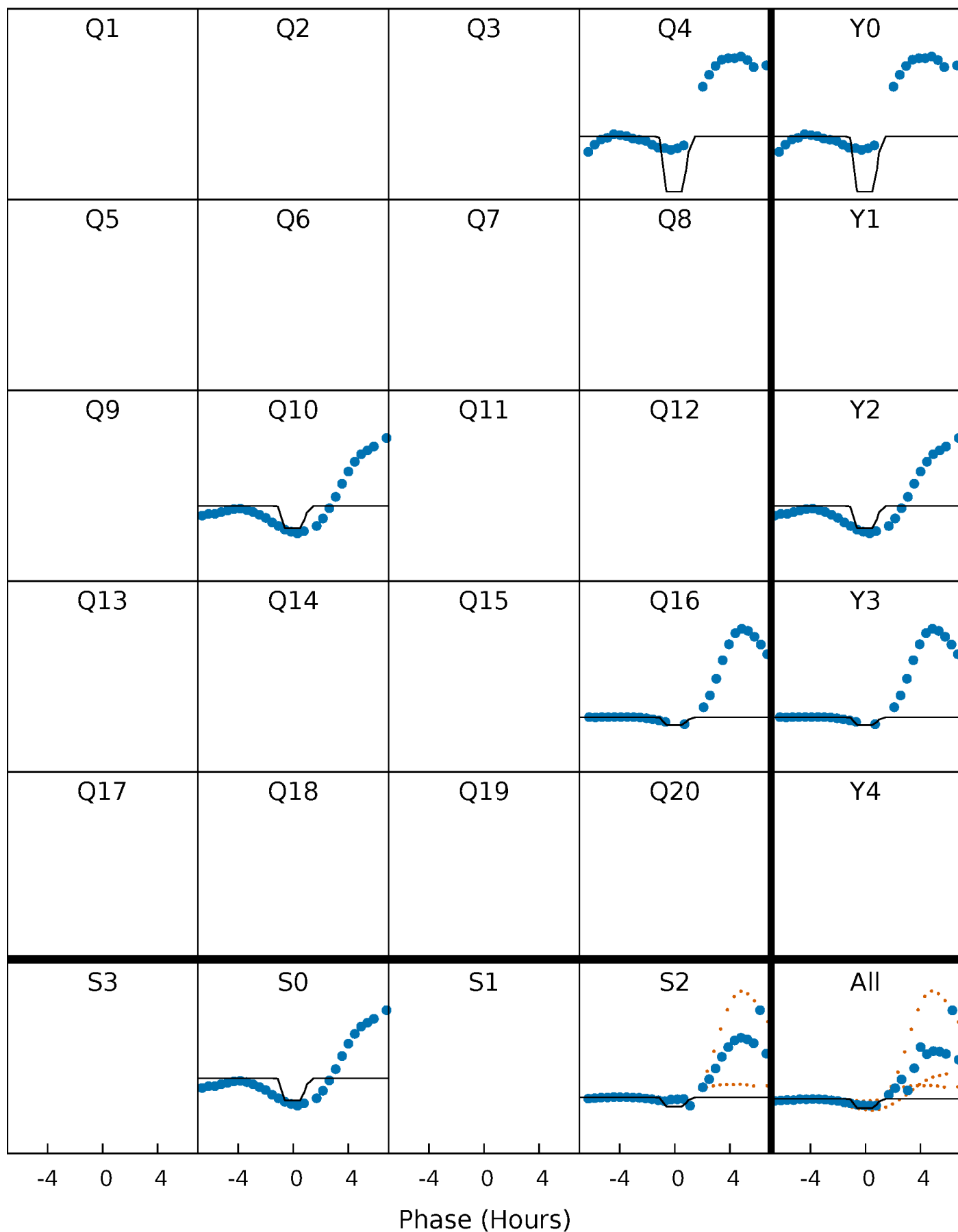
DV Quarter-Phased Transit Curves

TCE 007448050-01 P=573.086753 Days $T_0=387.402958$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

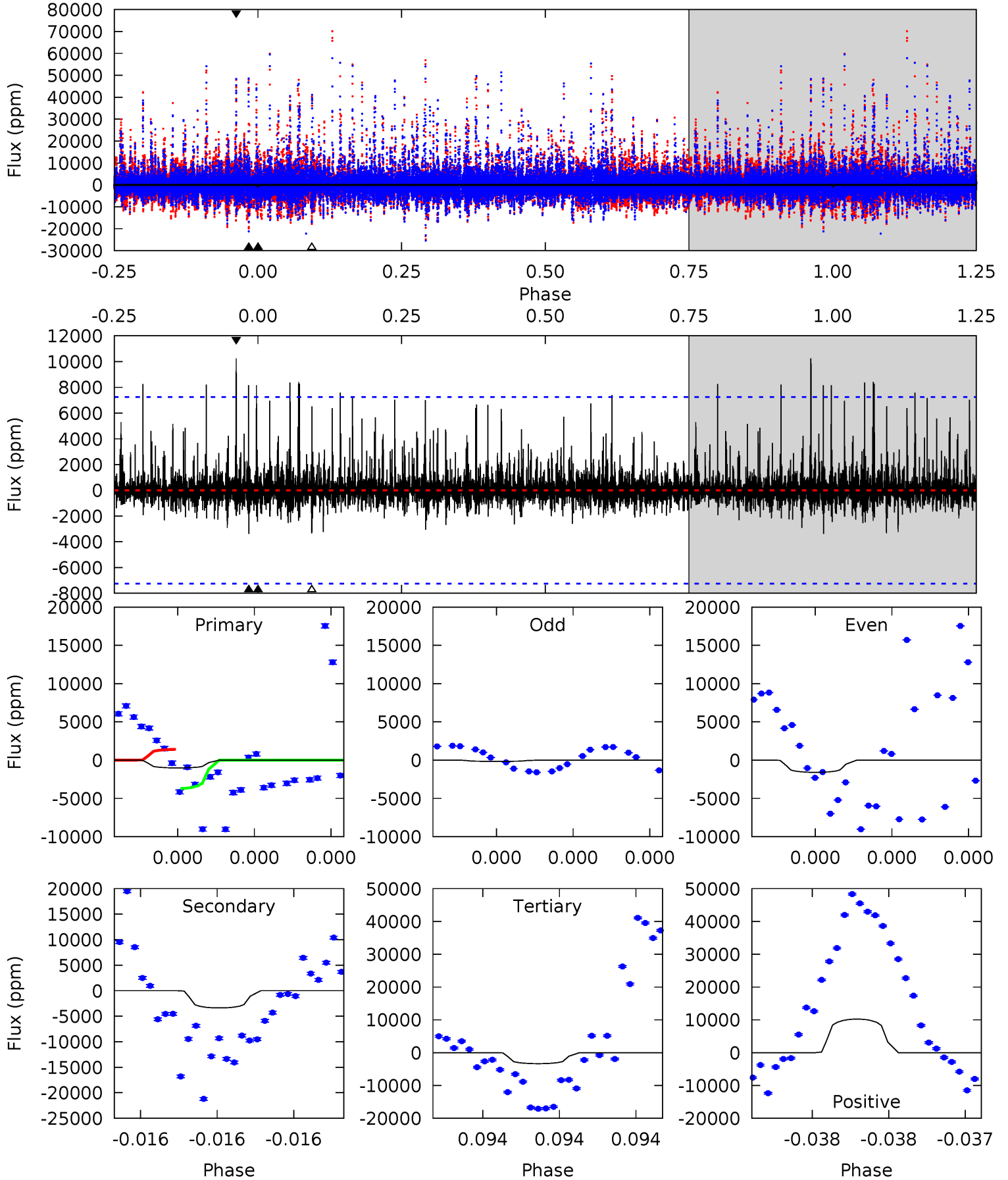
TCE 007448050-01 P=573.079624 Days $T_0=387.425860$ (BKJD)



DV Model-Shift Uniqueness Test

007448050-01, P = 573.086753 Days, E = 387.402958 Days

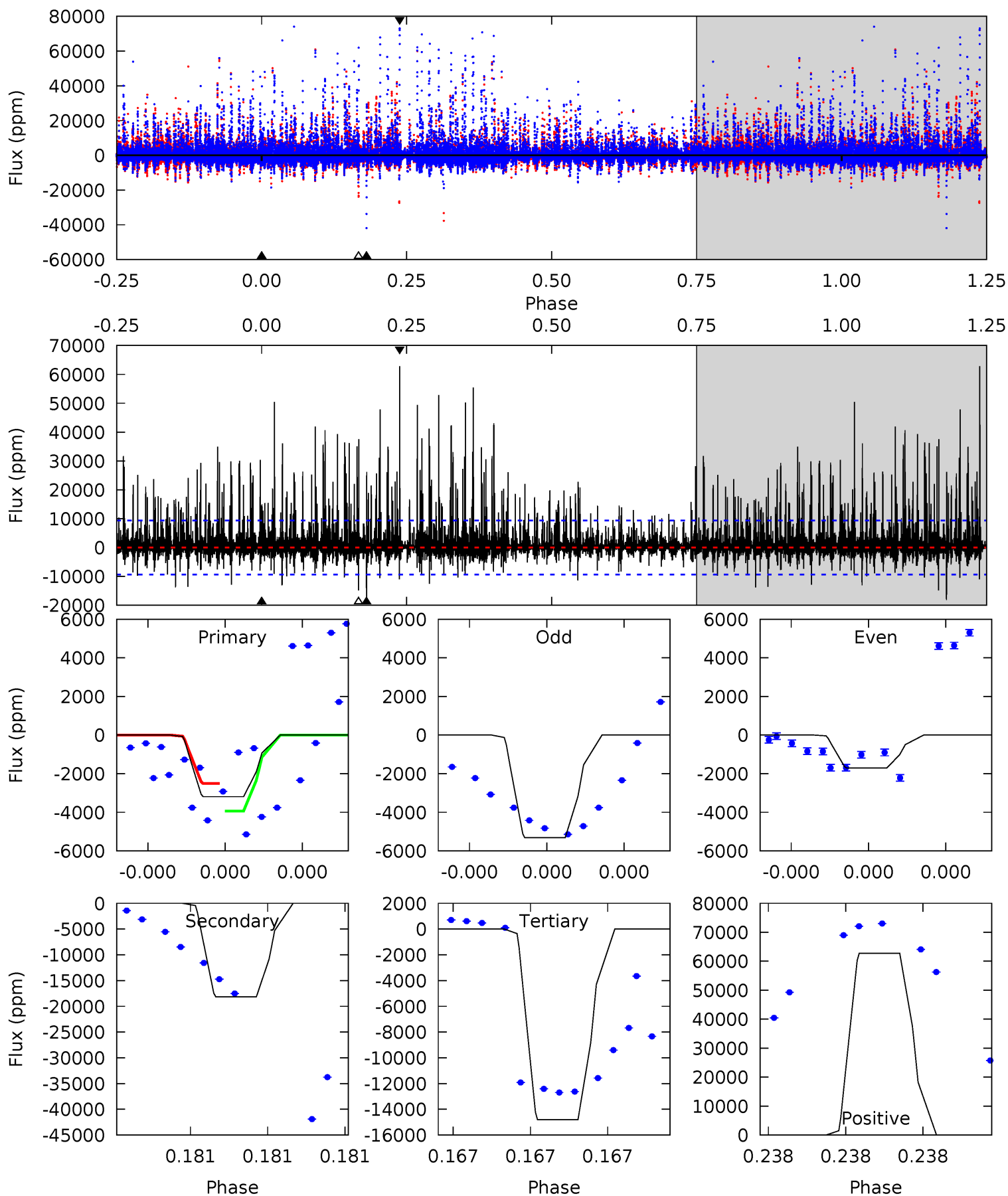
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|-------|-------|------|
| 0.79 | 2.65 | 2.63 | 8.04 | 5.69 | 3.66 | 0.76 | -1.83 | -7.25 | 0.03 | -5.39 | 0.51 | -6.74 | 0.75 | 0.91 |



Alt Model-Shift Uniqueness Test

007448050-01, P = 573.079624 Days, E = 387.425860 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 1.97 | 11.2 | 9.15 | 38.8 | 5.78 | 3.79 | 2.81 | -7.18 | -36.8 | 2.08 | -27.5 | 0.83 | 0.92 | 0.78 | 0.43 |



Stellar Parameters For KIC 007448050

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | $R (R_{\odot})$ | $M(M_{\odot})$ | $p_{\star} (\text{g}\cdot\text{cm}^{-3})$ |
|--------|----------------------|---------------------------|----------------------------|---------------------------|---------------------------|---|
| | 7419^{+232}_{-310} | $4.108^{+0.153}_{-0.187}$ | $-0.160^{+0.250}_{-0.350}$ | $1.804^{+0.529}_{-0.433}$ | $1.522^{+0.230}_{-0.253}$ | $0.365^{+0.320}_{-0.182}$ |
| | +3%/-4% | +4%/-5% | +156%/-219% | +29%/-24% | +15%/-17% | +88%/-50% |
| 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 007448050-01 / KOI

| Detrend | Depth (ppm) | $R_p (R_{\oplus})$ | $T_{\text{max}} (K)$ | $T_{\text{obs}} (K)$ | A_{obs} |
|---------|-------------------|-------------------------|----------------------|--------------------------|-----------------------------|
| DV | -3379 ± 1273 | $5.97^{+6.20}_{-4.01}$ | 496^{+40}_{-37} | 11312^{+28152}_{-4408} | $116518^{+959872}_{-90028}$ |
| Alt. | -18177 ± 1619 | $12.75^{+7.00}_{-6.36}$ | 495^{+35}_{-34} | 12472^{+13883}_{-3393} | $149271^{+466510}_{-86236}$ |

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

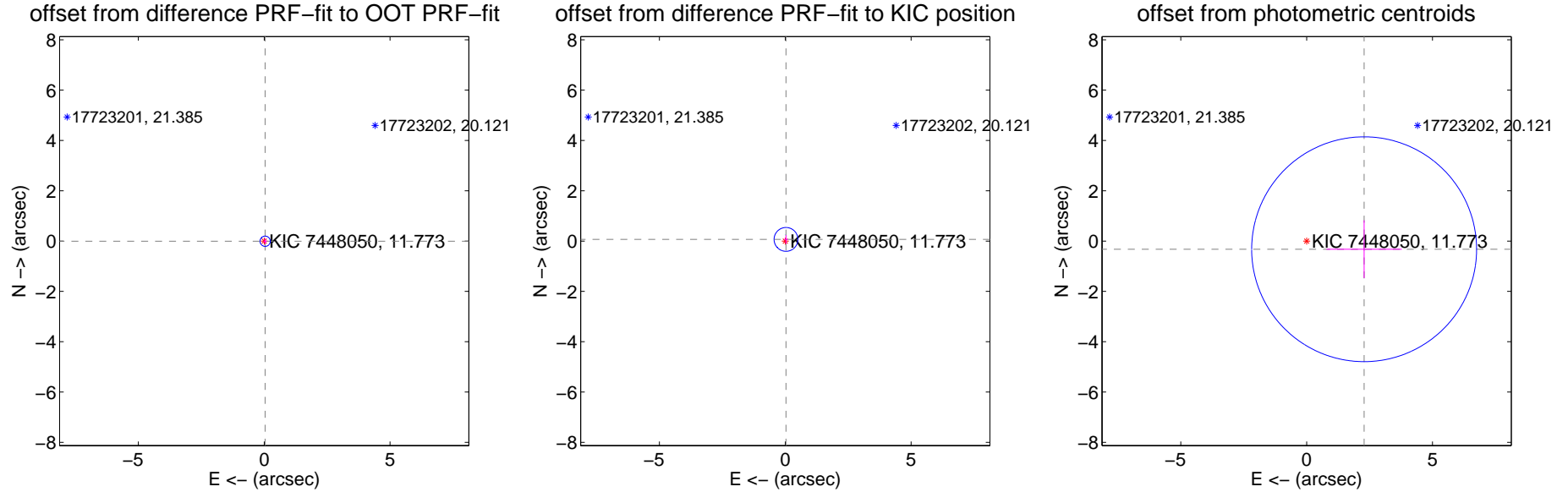
DV Centroid Data

Supplemental centroid analysis for 007448050-01. **Kepler magnitude: 11.77.** Transit SNR 1.22

There are 2 quarters with good PRF difference image offsets

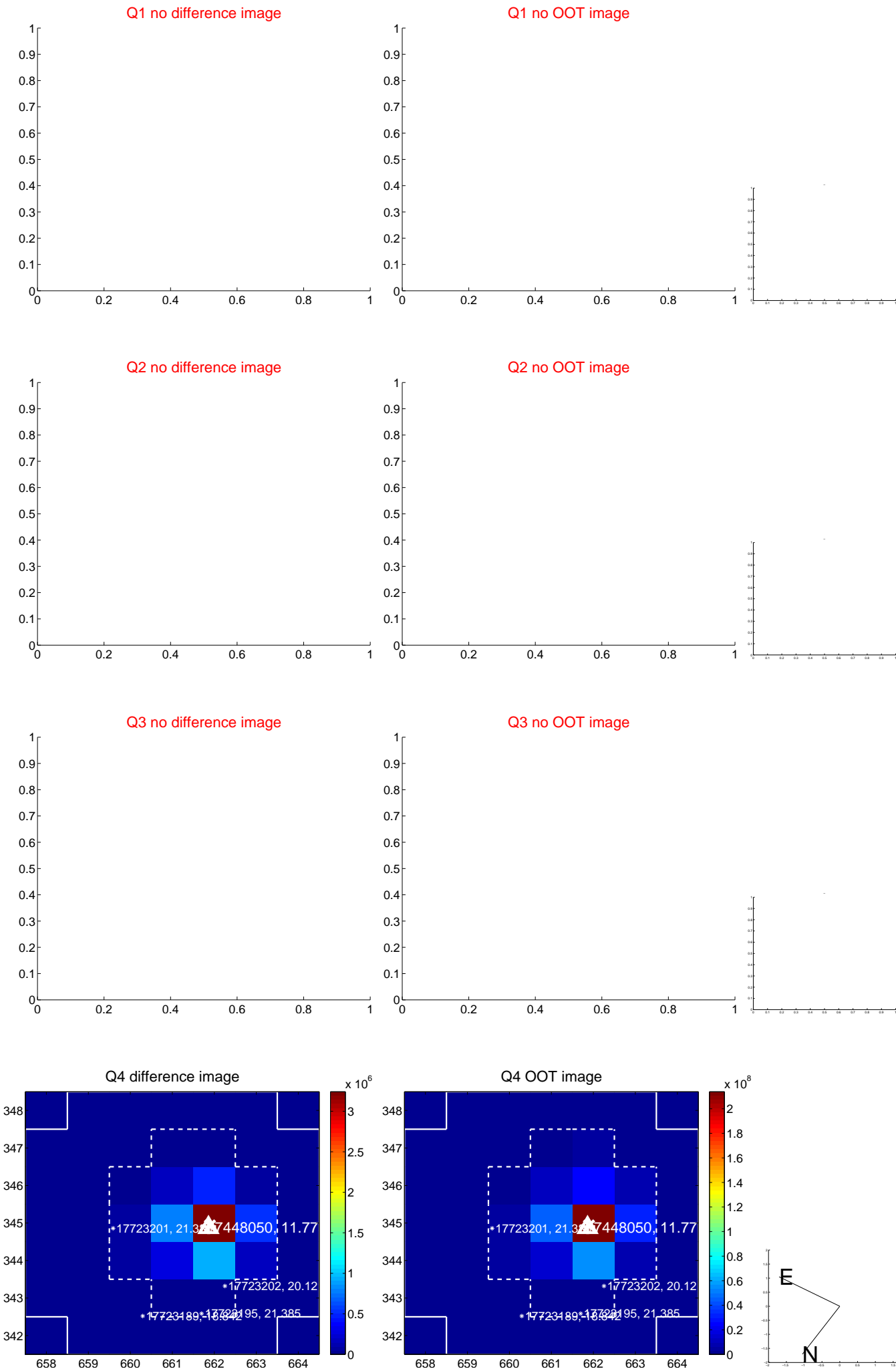
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|--------------------|--------------------|
| PRF-fit source offset from OOT | 0.039 ± 0.068 | 0.57 | -0.038 ± 0.067 | -0.006 ± 0.103 |
| PRF-fit source offset from KIC position | 0.073 ± 0.158 | 0.46 | -0.029 ± 0.071 | 0.067 ± 0.169 |
| photometric centroid source offset | 2.31 ± 1.49 | 1.55 | -2.28 ± 1.50 | -0.32 ± 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.

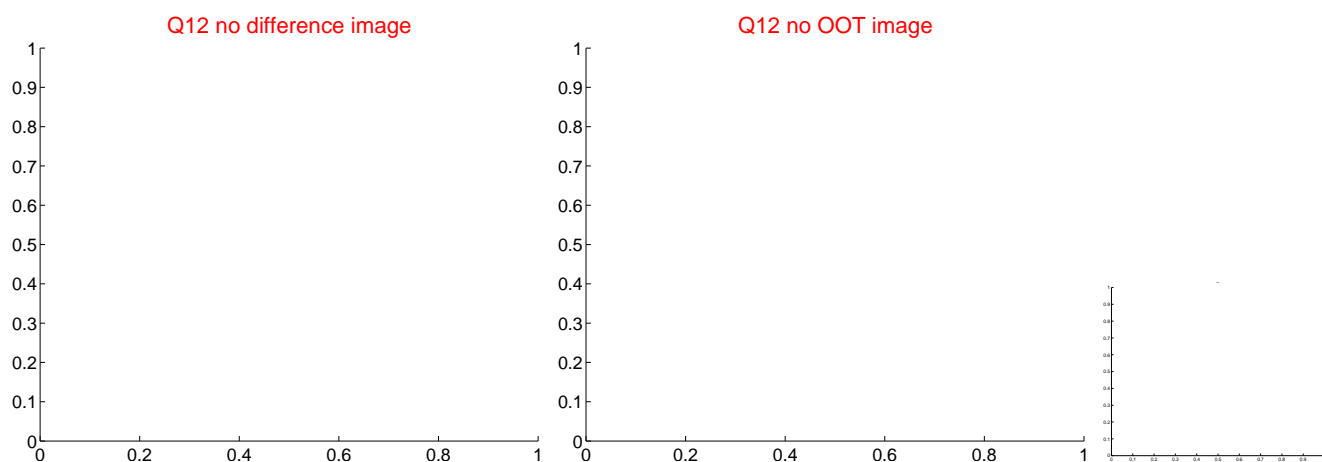
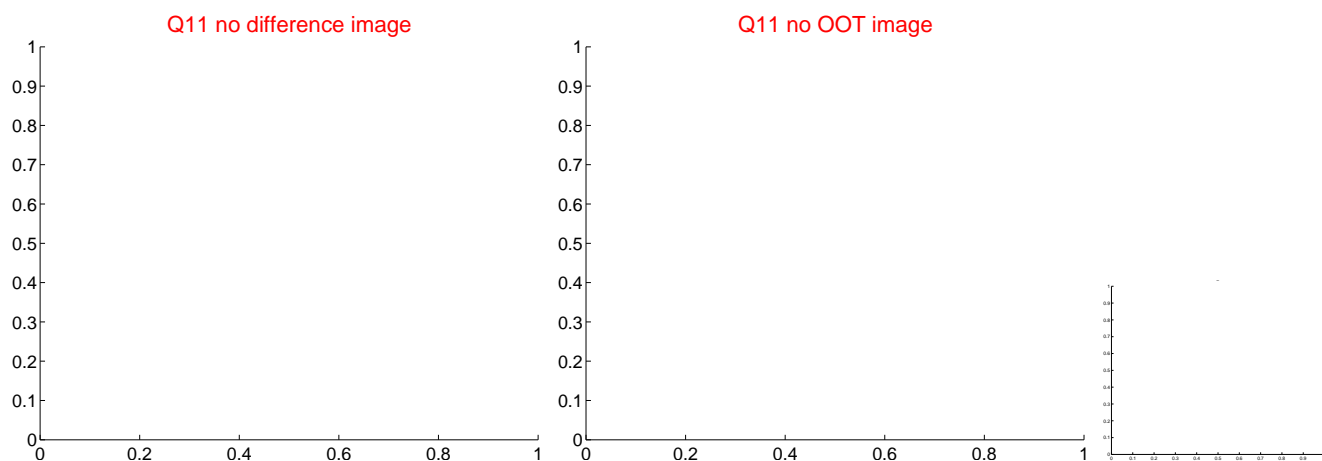
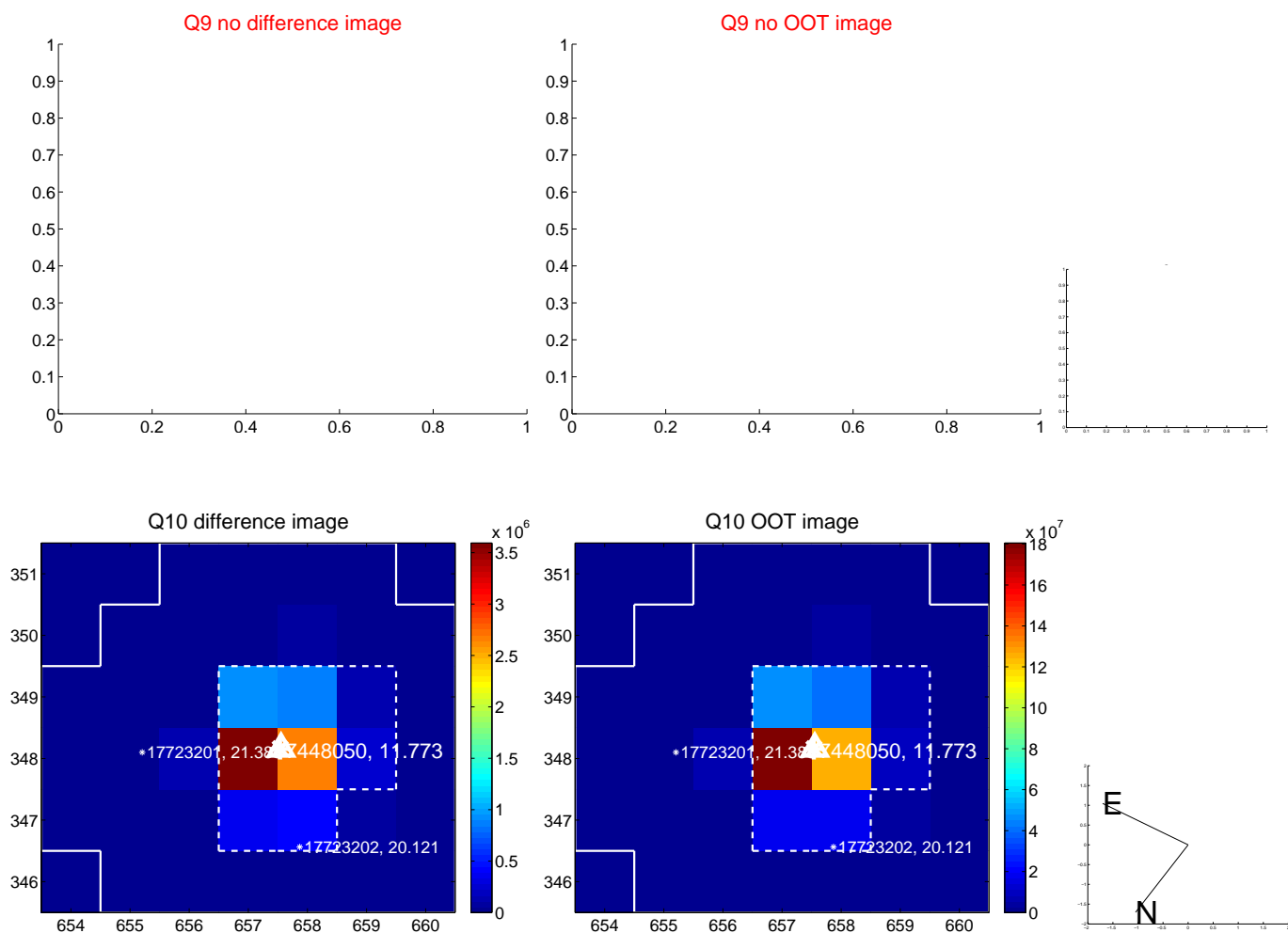
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



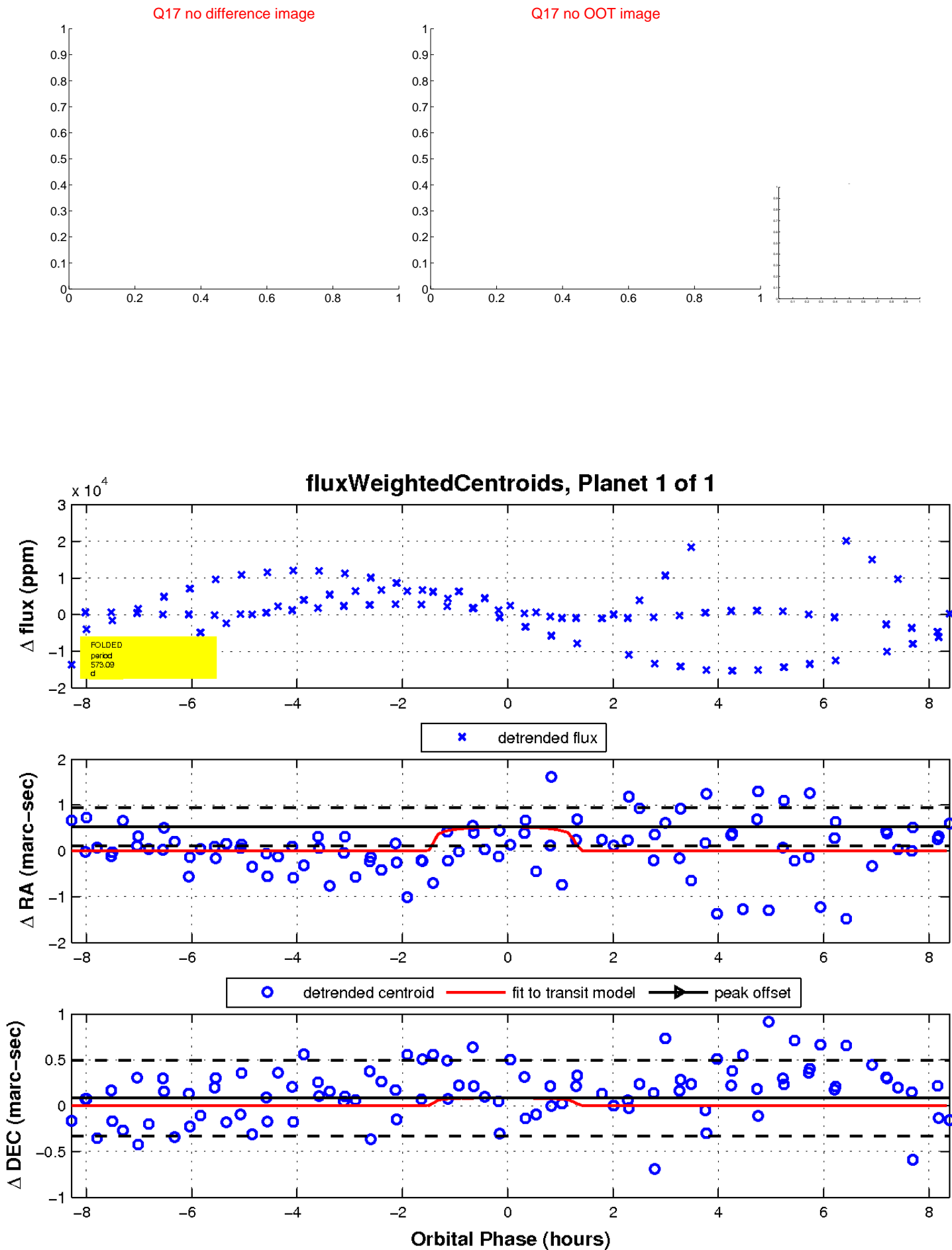
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

