

KIC 006060847

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|-----|-----|-----------------------------|-----------------|------------------------|------------------------|
| 006060847-01 | OBS | No | 465.906714 | 574.195385 | 116.9 | 17.414 | 7.8 | 8.0 | 1.42 | 6164 | 1.69 | 1.75 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|--|
| 006060847-01 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_SATURATED |

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

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

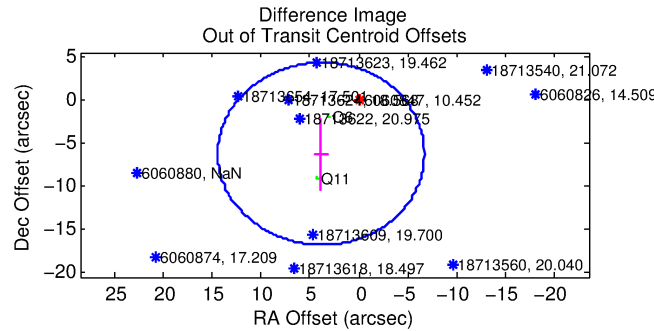
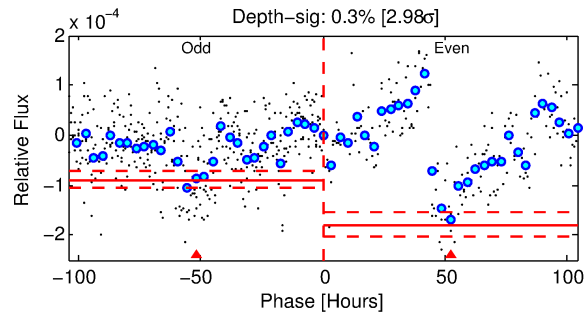
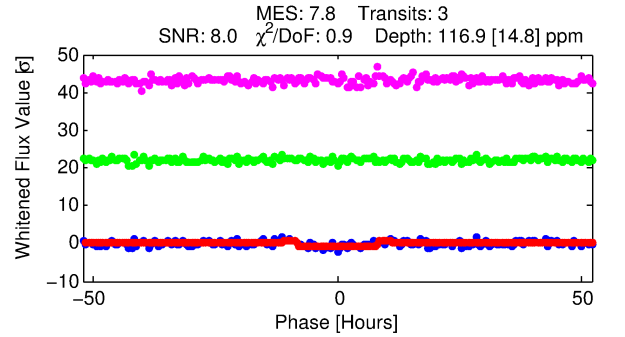
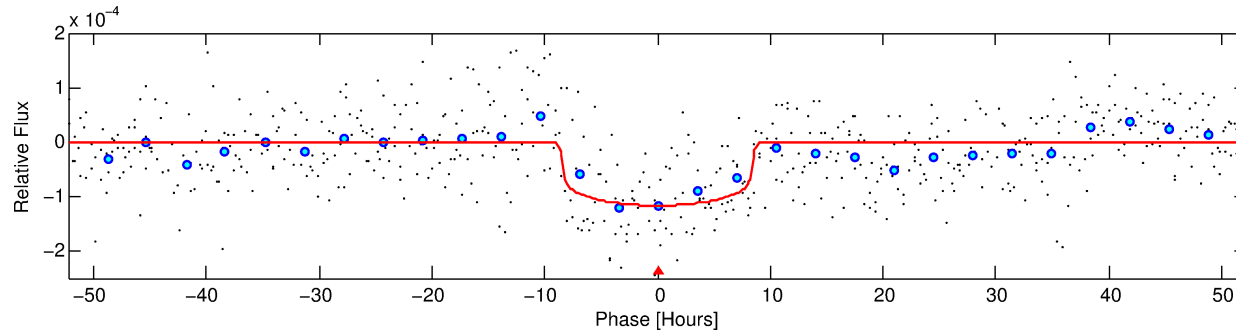
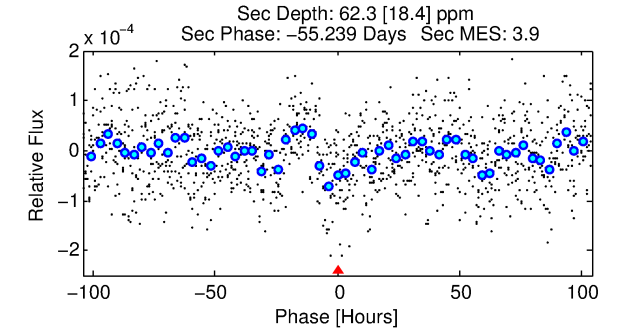
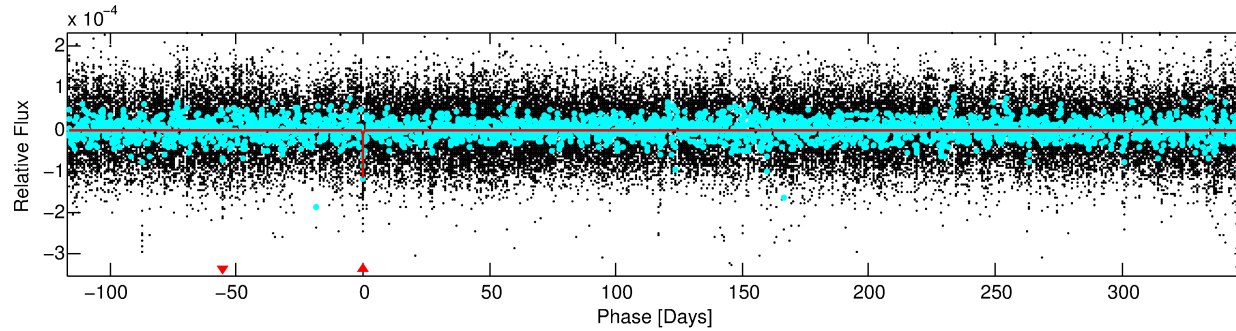
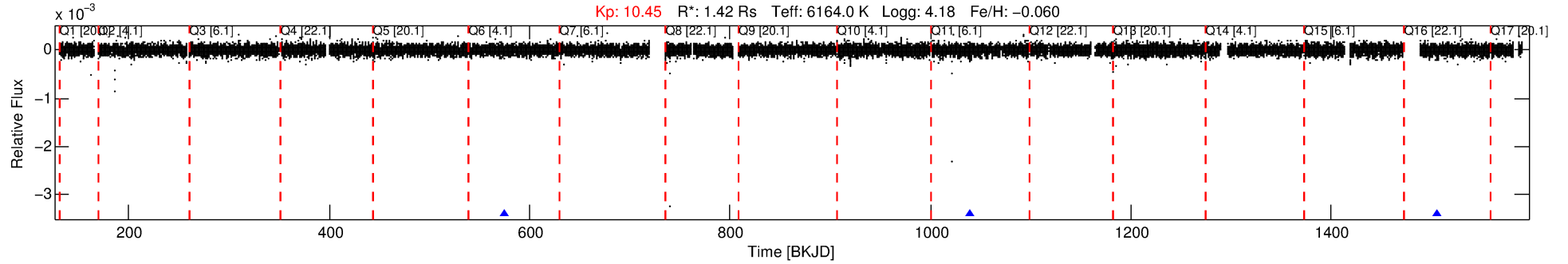
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006060847-01

No Significant Match Found

DV One-Page Summary

KIC: 6060847 Candidate: 1 of 1 Period: 465.907 d



DV Fit Results:

Period = 465.90671 [0.00991] d
Epoch = 574.1954 [0.0131] BKJD
Rp/R* = 0.0109 [0.0016]
a/R* = 128.49 [82.05]
b = 0.79 [0.31]
Seff = 1.75 [0.79]
Teq = 293 [33] K
Rp = 1.69 [0.58] Re
a = 1.2166 [0.3350] AU
Ag = 17769.49 [10533.51] [1.69σ]
Teffp = 5239 [582] K [8.48σ]

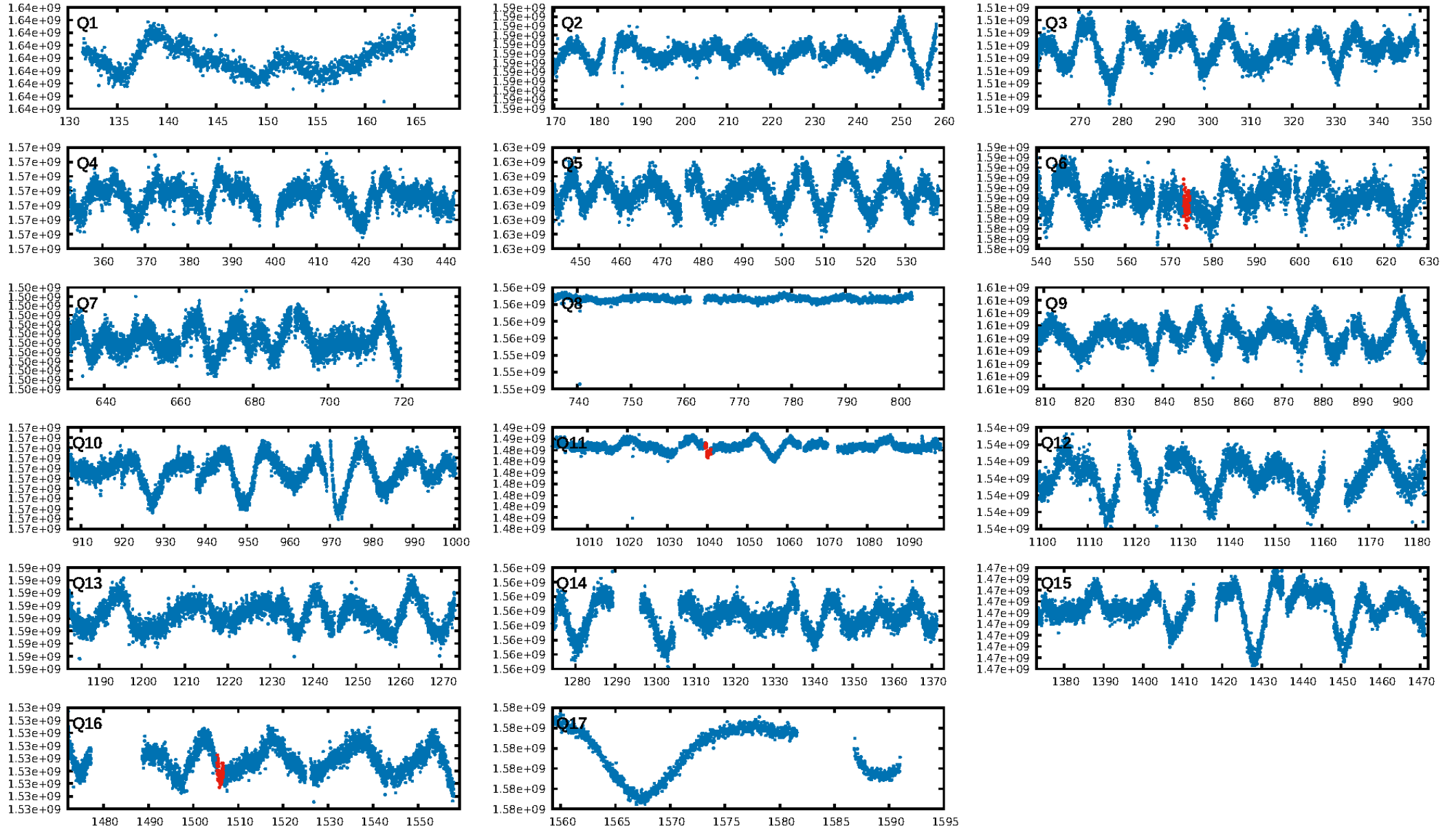
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 8.7%
ModelChiSquareGof-sig: 99.0%
Bootstrap-pfa: 2.01e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.738
Centroid-sig: 72.6%
Centroid-so: 1.648 arcsec [0.71σ]
OotOffset-rm: 7.337 arcsec [2.09σ]
OotOffset-st: 1/1/0/0 [2]
KicOffset-rm: 6.285 arcsec [1.98σ]
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [2/2]

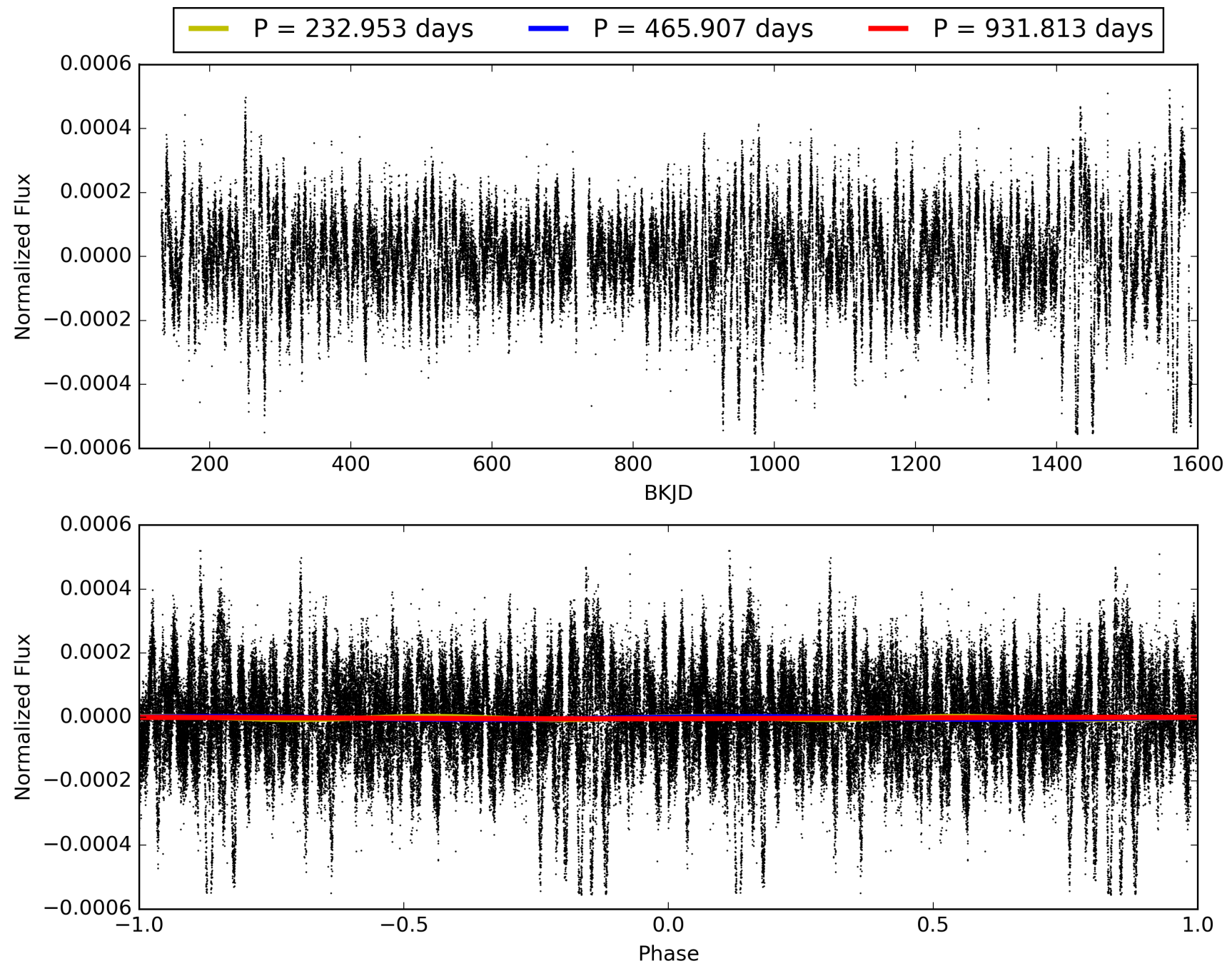
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 01:57:35 Z

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

TCE 006060847-01, PDC Light Curves

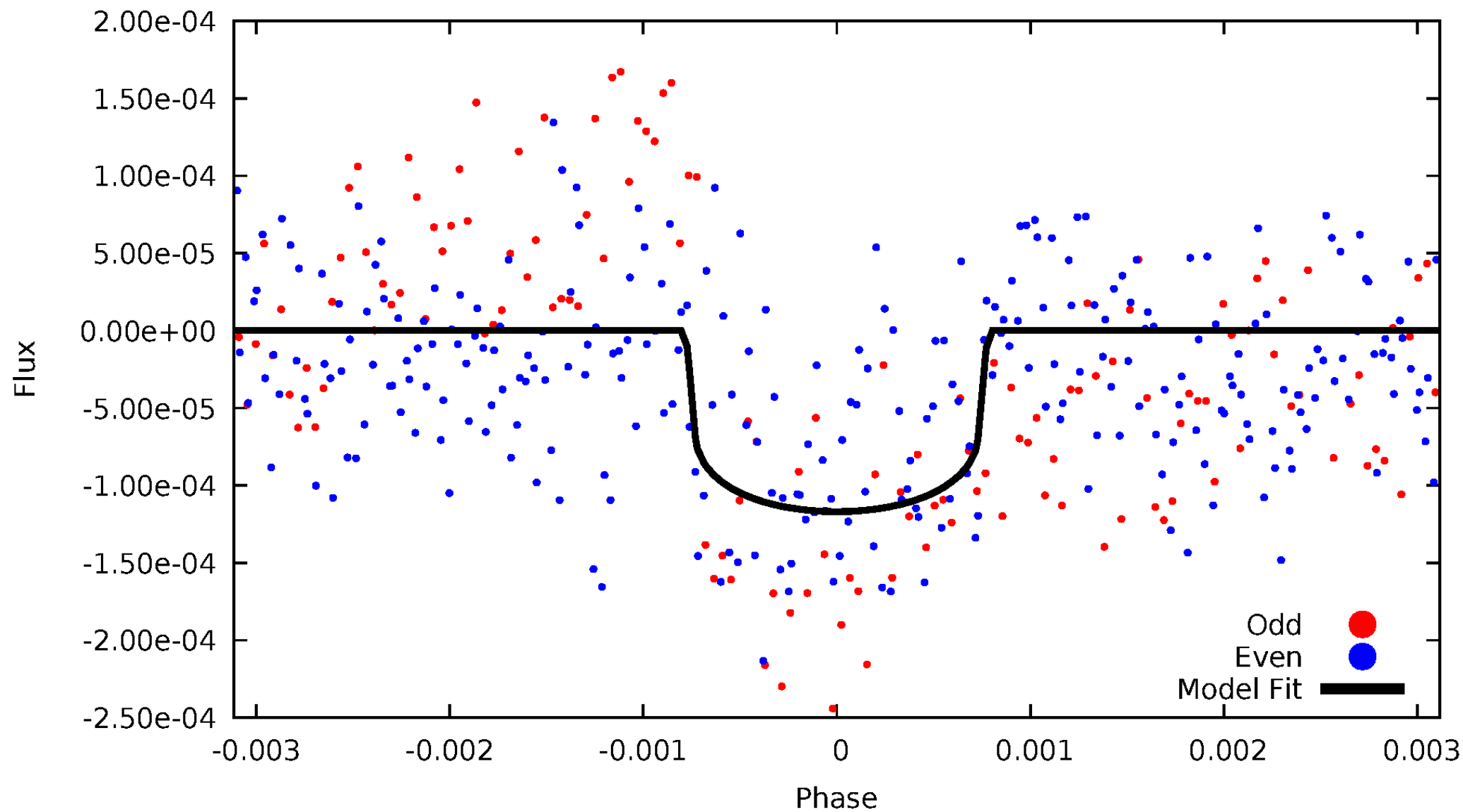


TCE 006060847-01



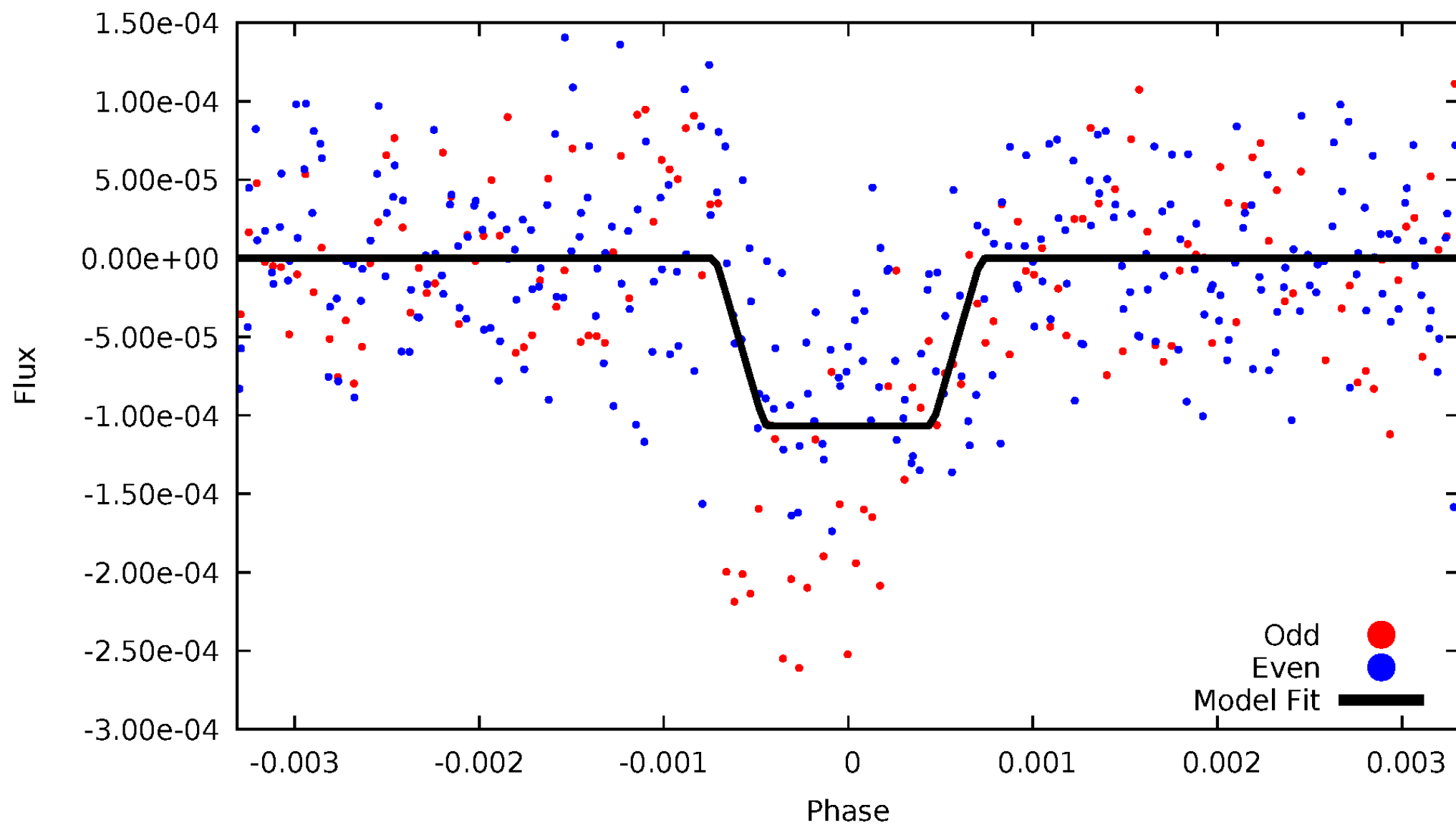
DV Odd/Even

TCE 006060847-01

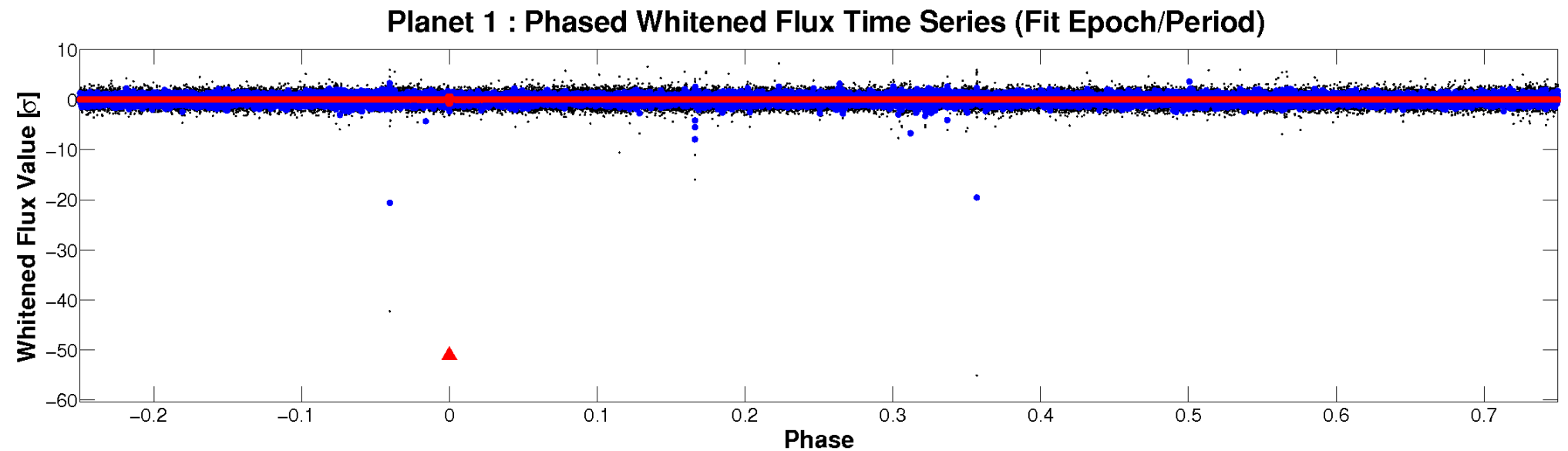
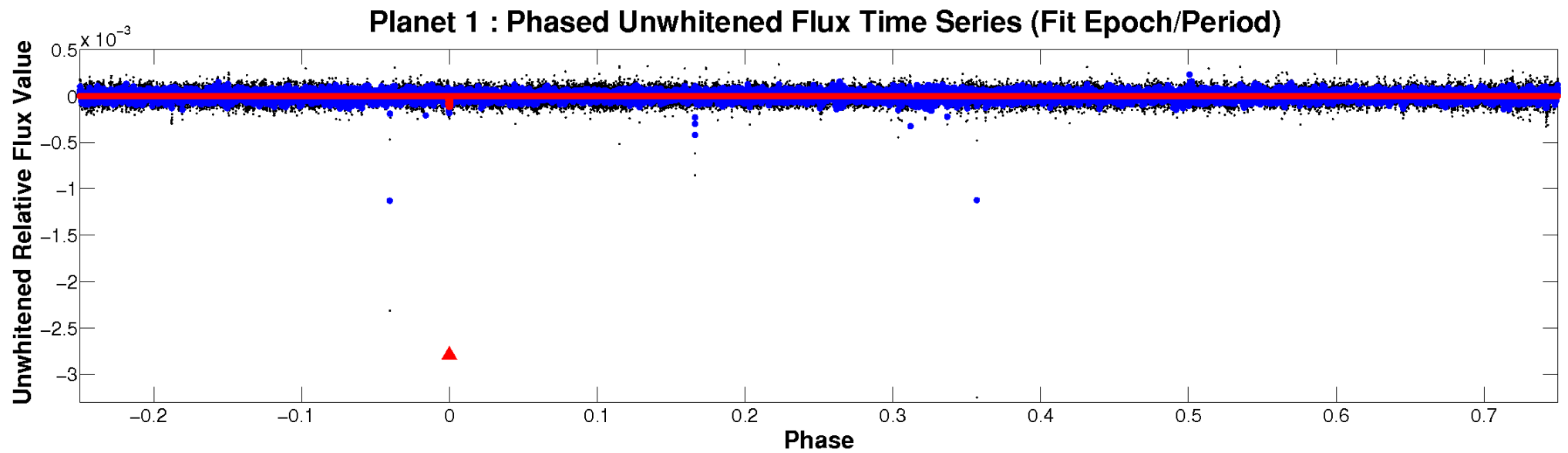


ALT Odd/Even

TCE 006060847-01

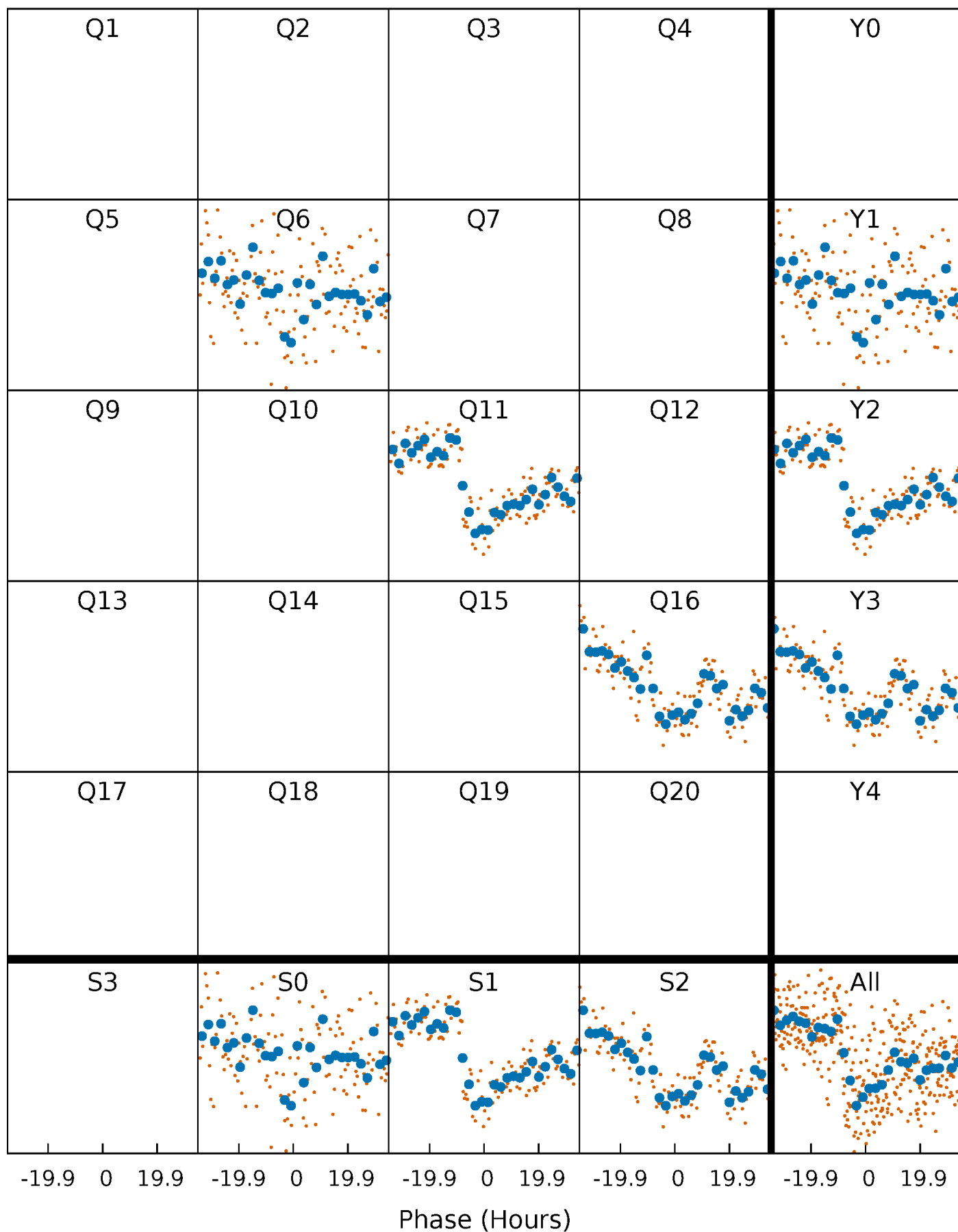


Non-Whitened Vs. Whitened Light Curve



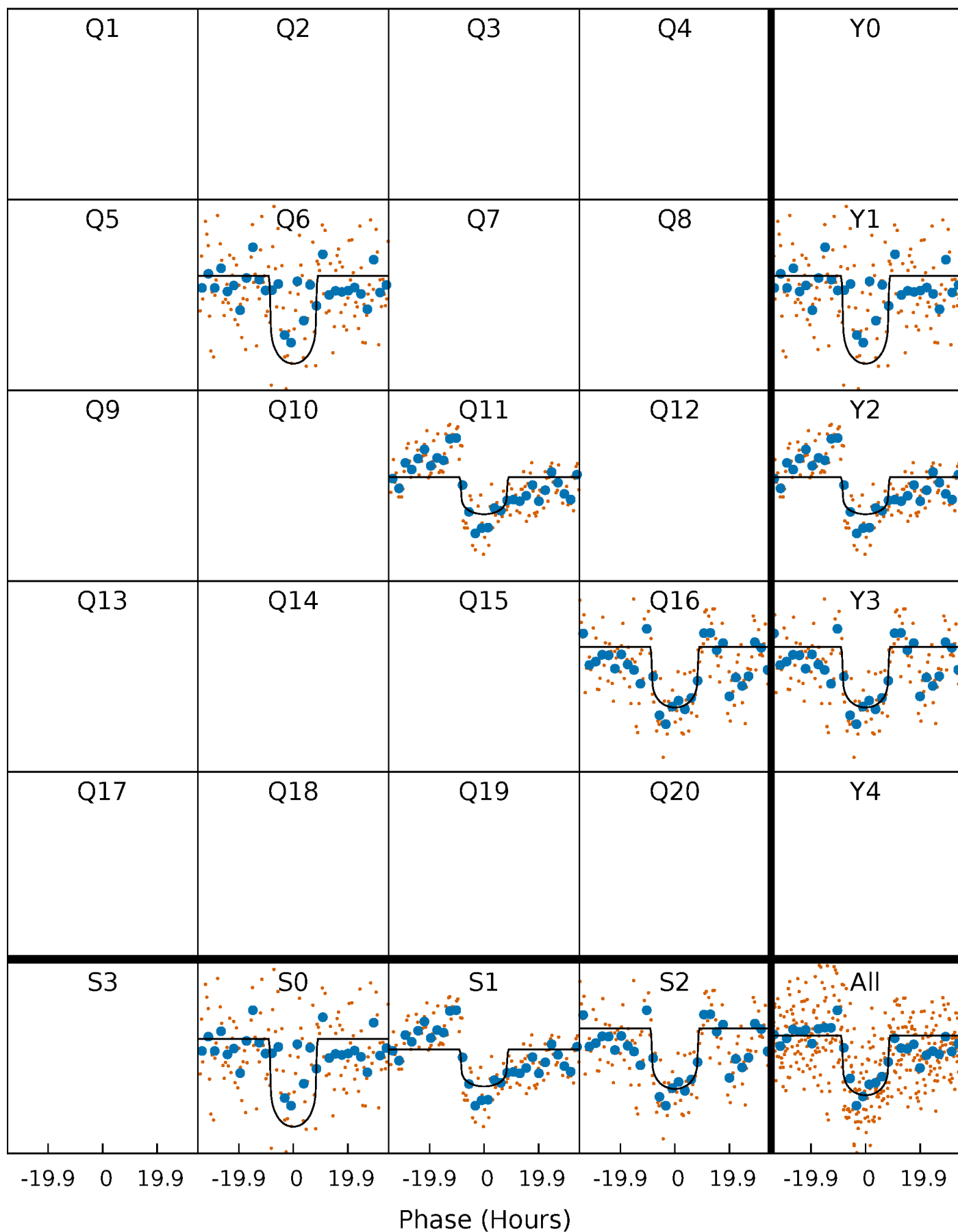
PDC Quarter-Phased Transit Curves

TCE 006060847-01 P=465.906714 Days $T_0=574.195385$ (BKJD)



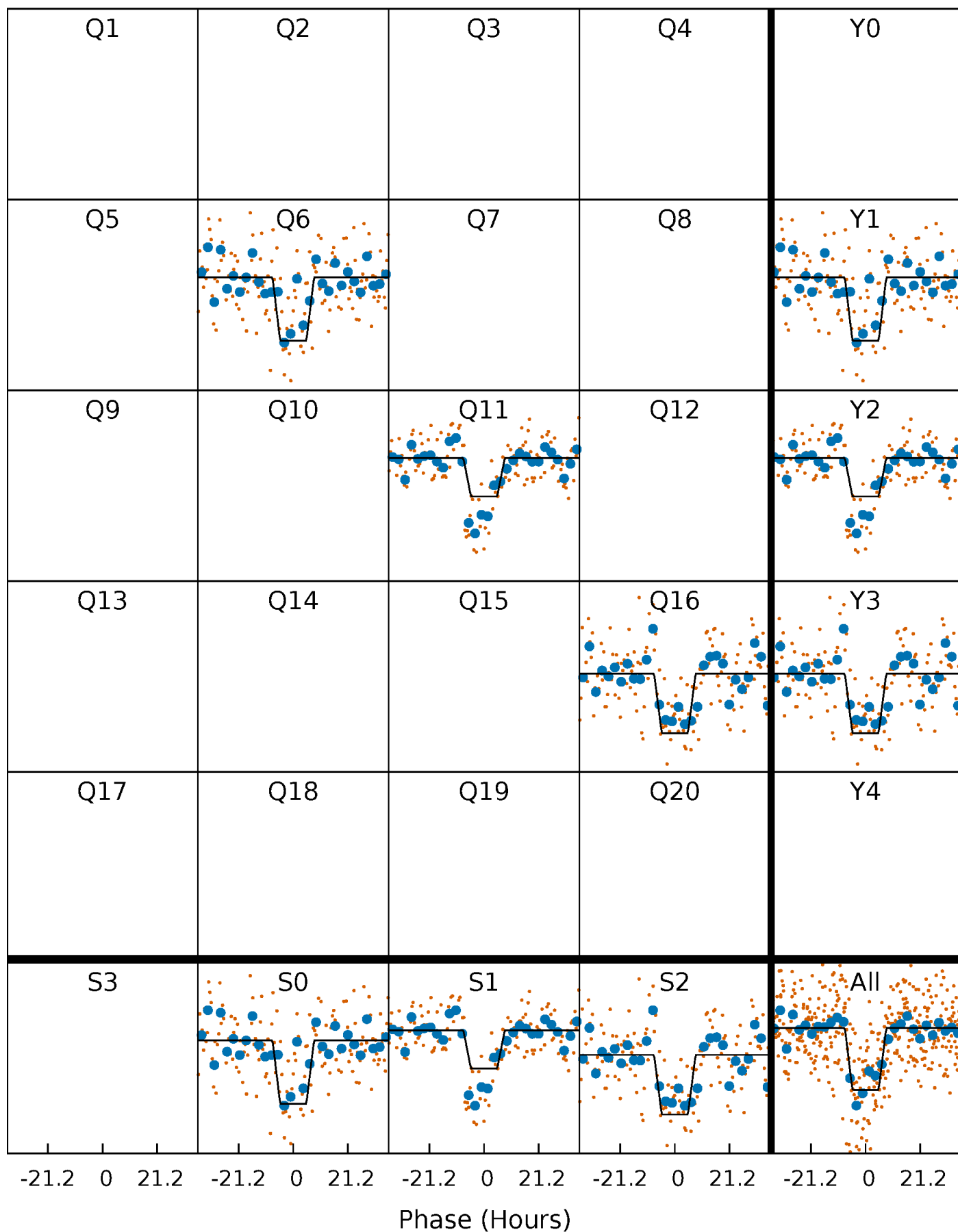
DV Quarter-Phased Transit Curves

TCE 006060847-01 P=465.906714 Days $T_0=574.195385$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

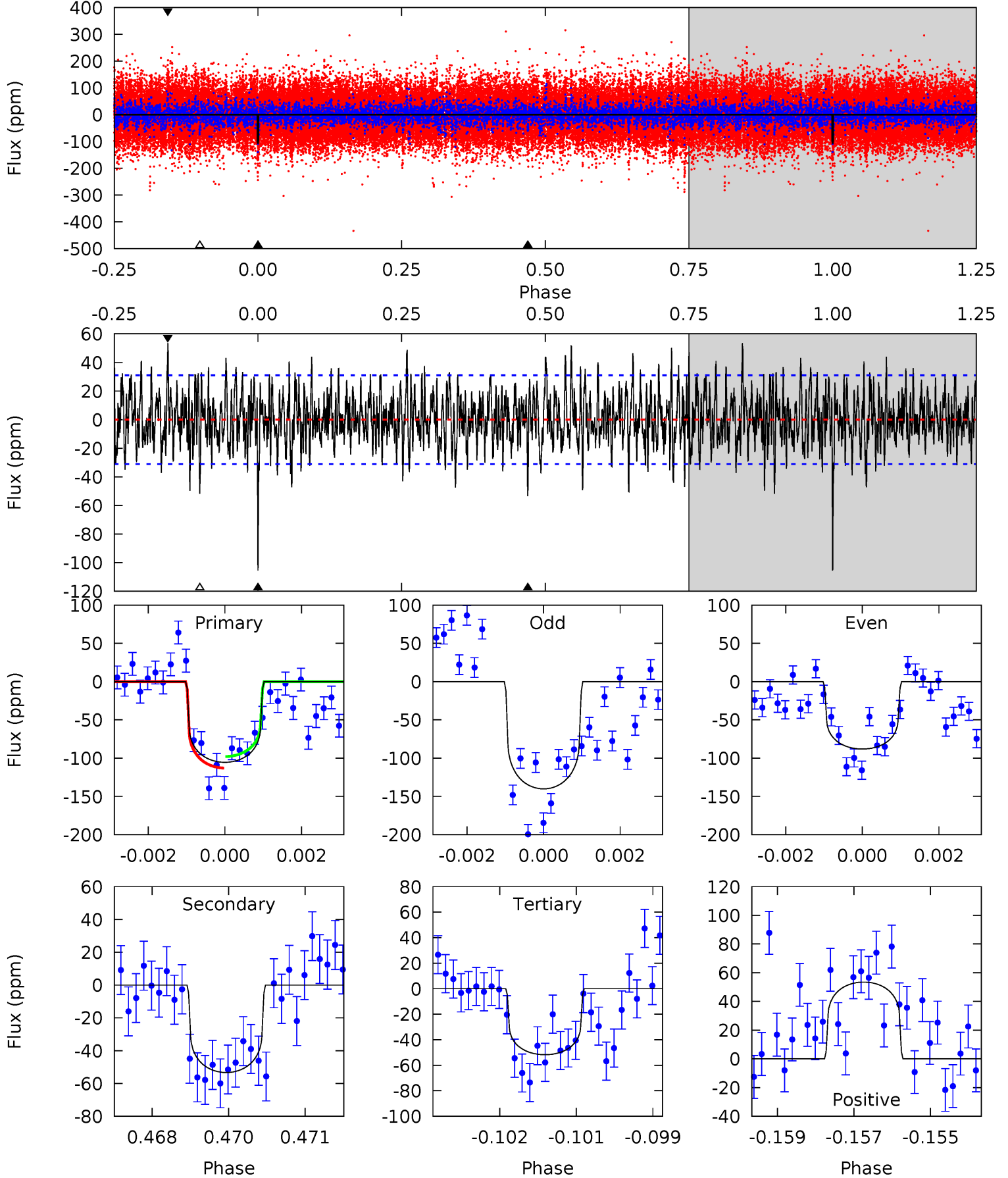
TCE 006060847-01 P=465.864734 Days $T_0=574.229293$ (BKJD)



DV Model-Shift Uniqueness Test

006060847-01, P = 465.906714 Days, E = 108.288671 Days

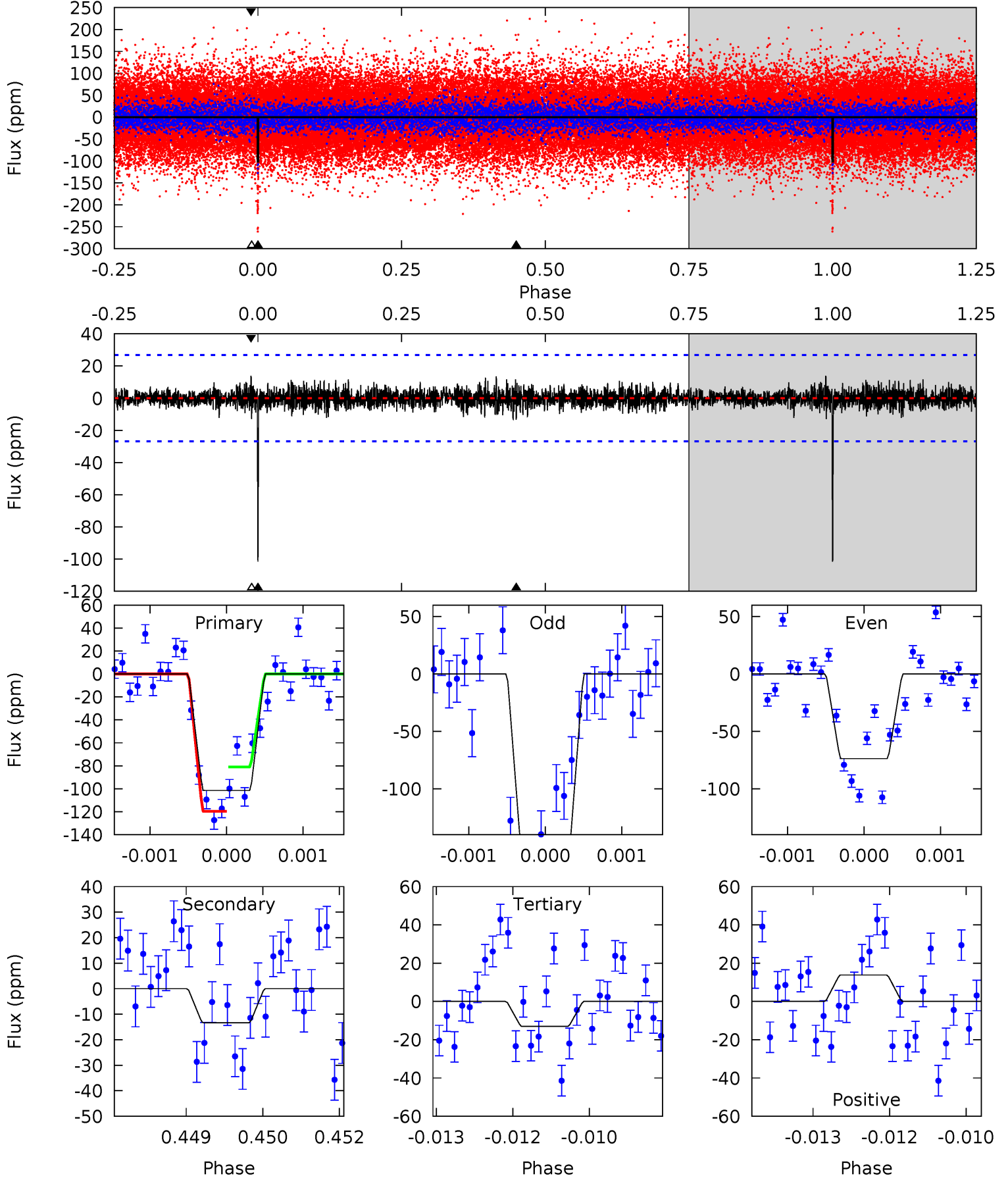
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 18.2 | 9.22 | 8.94 | 9.25 | 5.37 | 3.16 | 2.74 | 9.28 | 8.97 | 0.27 | -0.03 | 4.23 | 0.83 | 0.34 | 1.30 |



Alt Model-Shift Uniqueness Test

006060847-01, P = 465.864734 Days, E = 108.364559 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 20.3 | 2.67 | 2.60 | 2.77 | 5.39 | 3.19 | 0.70 | 17.7 | 17.6 | 0.07 | -0.10 | 7.84 | 1.22 | 0.12 | 3.87 |



Stellar Parameters For KIC 006060847

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | $R (R_{\odot})$ | $M(M_{\odot})$ | $p_{\star} (\text{g}\cdot\text{cm}^{-3})$ |
|--------|----------------------|---------------------------|----------------------------|---------------------------|---------------------------|---|
| | 6164^{+194}_{-237} | $4.179^{+0.240}_{-0.180}$ | $-0.060^{+0.250}_{-0.300}$ | $1.417^{+0.435}_{-0.356}$ | $1.104^{+0.176}_{-0.158}$ | $0.547^{+0.717}_{-0.275}$ |
| | +3%/-4% | +6%/-4% | +417%/-500% | +31%/-25% | +16%/-14% | +131%/-50% |
| Source | PHO54 | PHO54 | PHO54 | DSEP | | |

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 006060847-01 / KOI

| Detrend | Depth (ppm) | $R_p (R_{\oplus})$ | $T_{\text{max}} (K)$ | $T_{\text{obs}} (K)$ | A_{obs} |
|---------|-------------|------------------------|----------------------|----------------------|-------------------------|
| DV | -53 ± 6 | $1.67^{+0.38}_{-0.33}$ | 406^{+34}_{-30} | 5101^{+422}_{-332} | 15489^{+8465}_{-5027} |
| Alt. | -13 ± 5 | $1.55^{+0.41}_{-0.33}$ | 407^{+34}_{-34} | 4002^{+354}_{-386} | 4479^{+3268}_{-2149} |

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

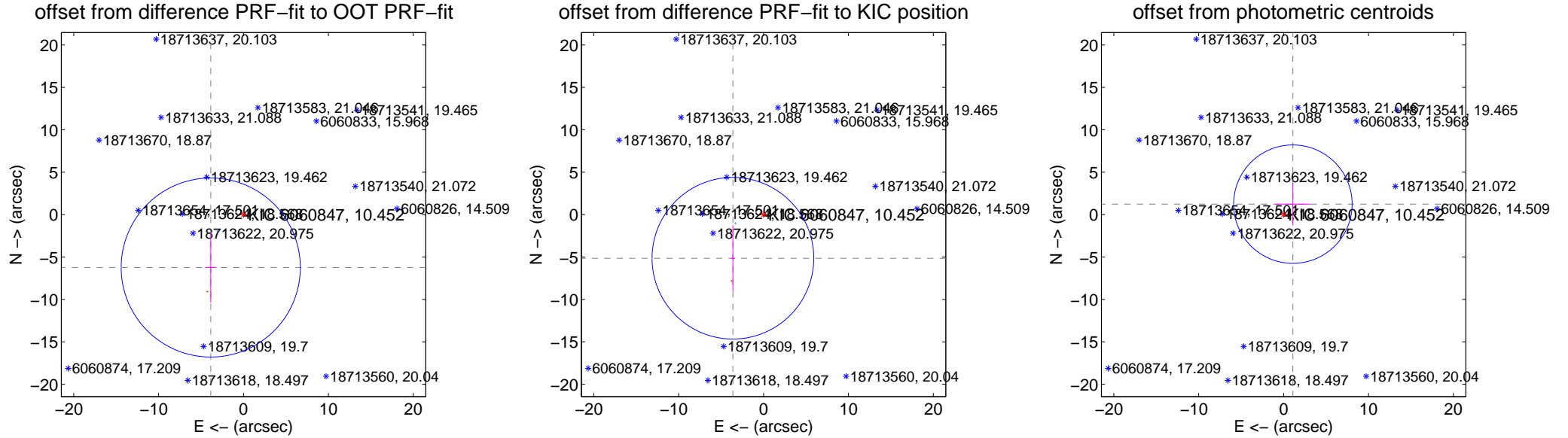
DV Centroid Data

Supplemental centroid analysis for 006060847-01. **Kepler magnitude: 10.45.** Transit SNR 7.99

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 1.36 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|-------------------|--------------------|
| PRF-fit source offset from OOT | 7.337 ± 3.519 | 2.09 | 3.861 ± 0.663 | -6.239 ± 4.117 |
| PRF-fit source offset from KIC position | 6.285 ± 3.176 | 1.98 | 3.610 ± 0.257 | -5.145 ± 3.876 |
| photometric centroid source offset | 1.65 ± 2.33 | 0.71 | -1.09 ± 2.10 | 1.23 ± 2.49 |



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.

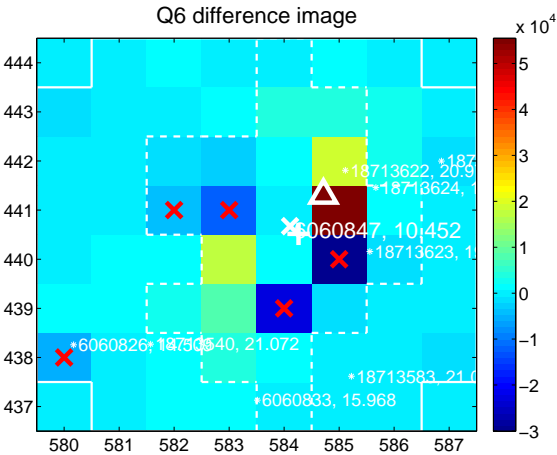
Q5 no difference image



Q5 no OOT image



Q6 difference image



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

Q9 no difference image



Q9 no OOT image



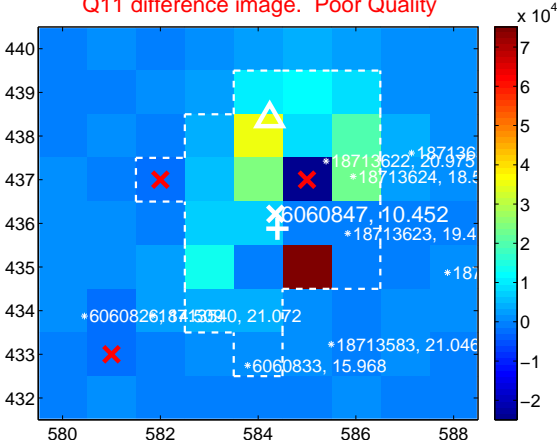
Q10 no difference image



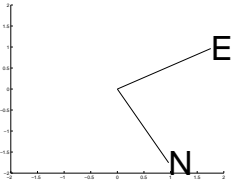
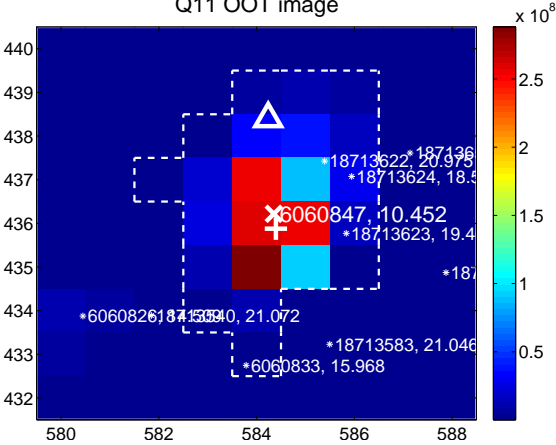
Q10 no OOT image



Q11 difference image. Poor Quality



Q11 OOT image



Q12 no difference image



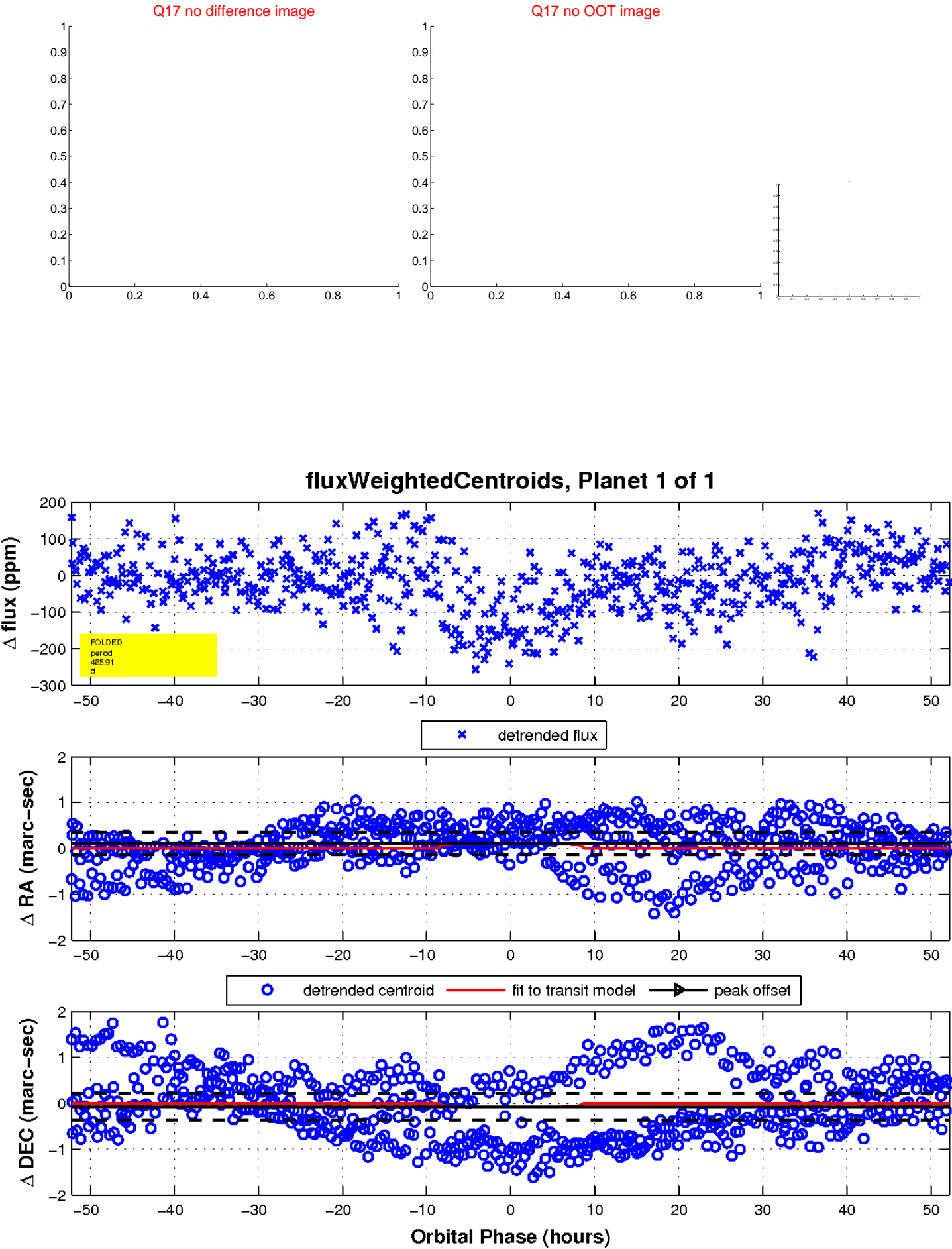
Q12 no OOT image



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.



UKIRT Image

Declination

