

KIC 007026628

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|-----|-----|-----------------------------|-----------------|------------------------|------------------------|
| 007026628-01 | OBS | No | 370.681082 | 498.755956 | 932.9 | 34.111 | 7.3 | 8.2 | 0.94 | 5968 | 3.52 | 1.10 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|---|
| 007026628-01 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—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.

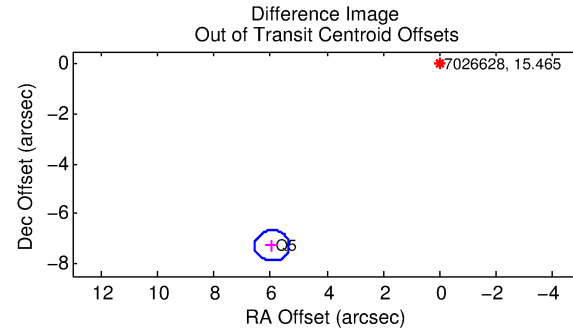
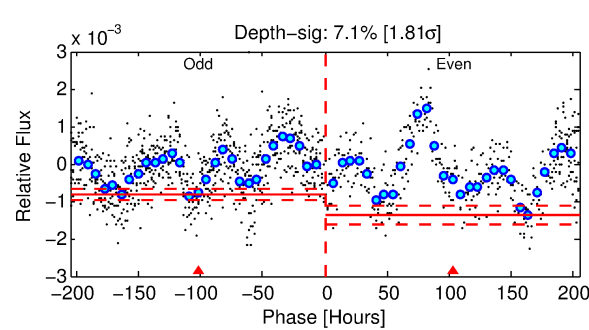
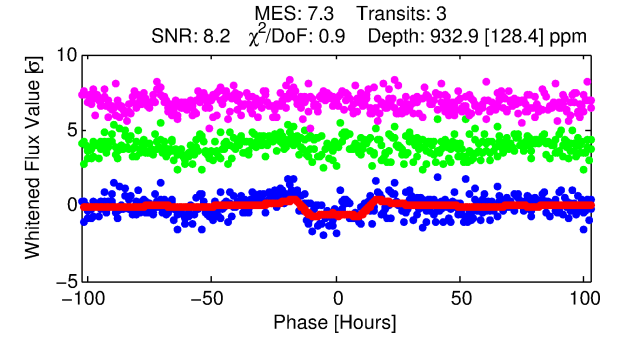
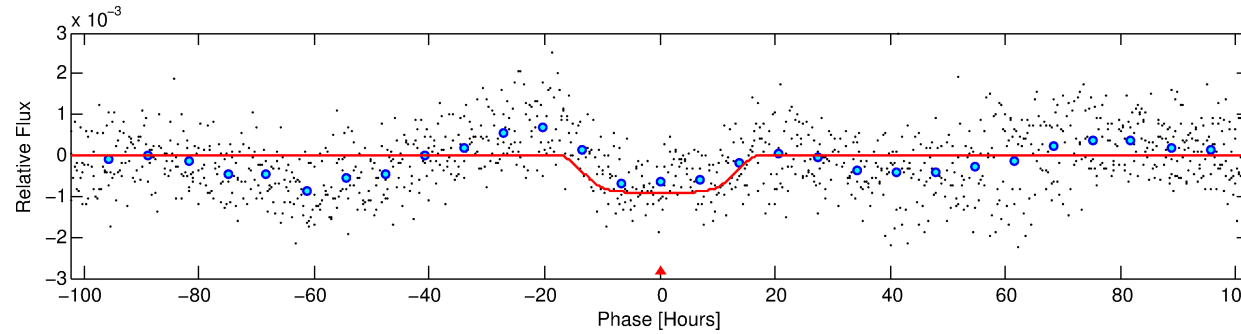
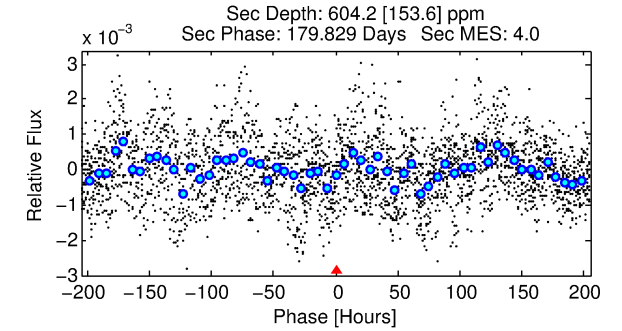
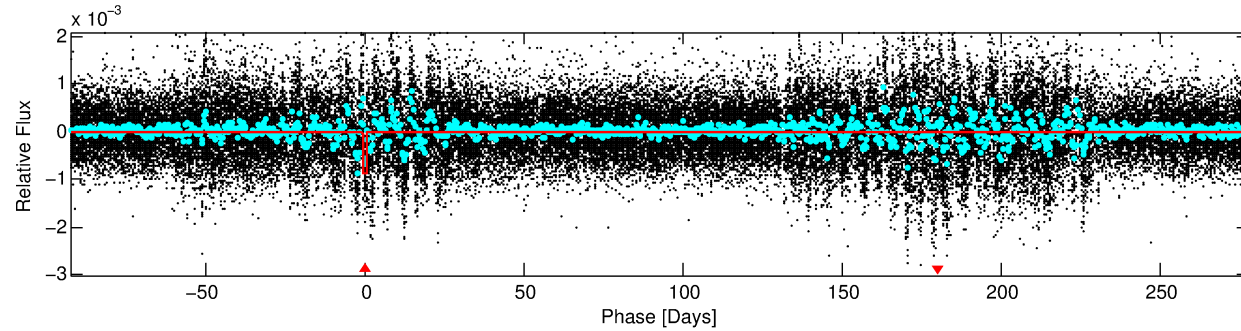
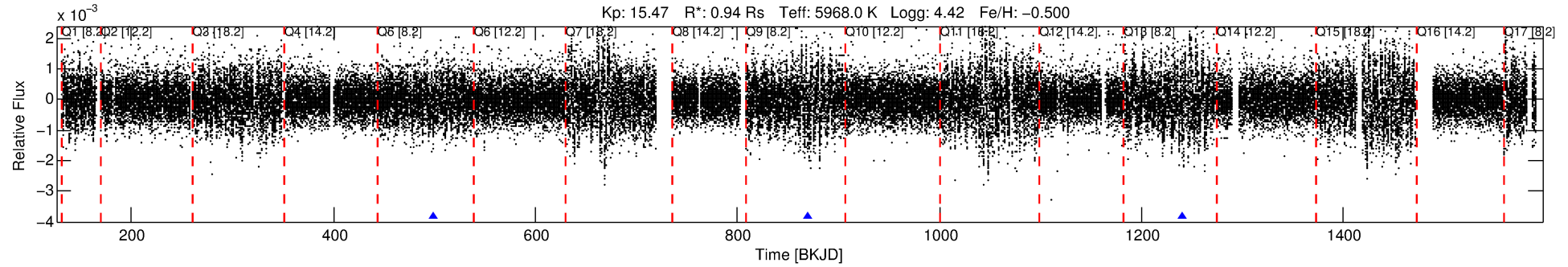
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007026628-01

No Significant Match Found

DV One-Page Summary

KIC: 7026628 Candidate: 1 of 1 Period: 370.681 d



DV Fit Results:

Period = 370.68108 [0.03689] d
Epoch = 498.7560 [0.0431] BKJD
Rp/R* = 0.0342 [0.0028]
a/R* = 36.60 [6.46]
b = 0.94 [0.02]
Seff = 1.10 [0.38]
Teq = 261 [23] K
Rp = 3.52 [0.96] Re
a = 0.9587 [0.2124] AU
Ag = 24633.96 [10978.04] [2.24σ]
Teff = 5058 [413] K [11.60σ]

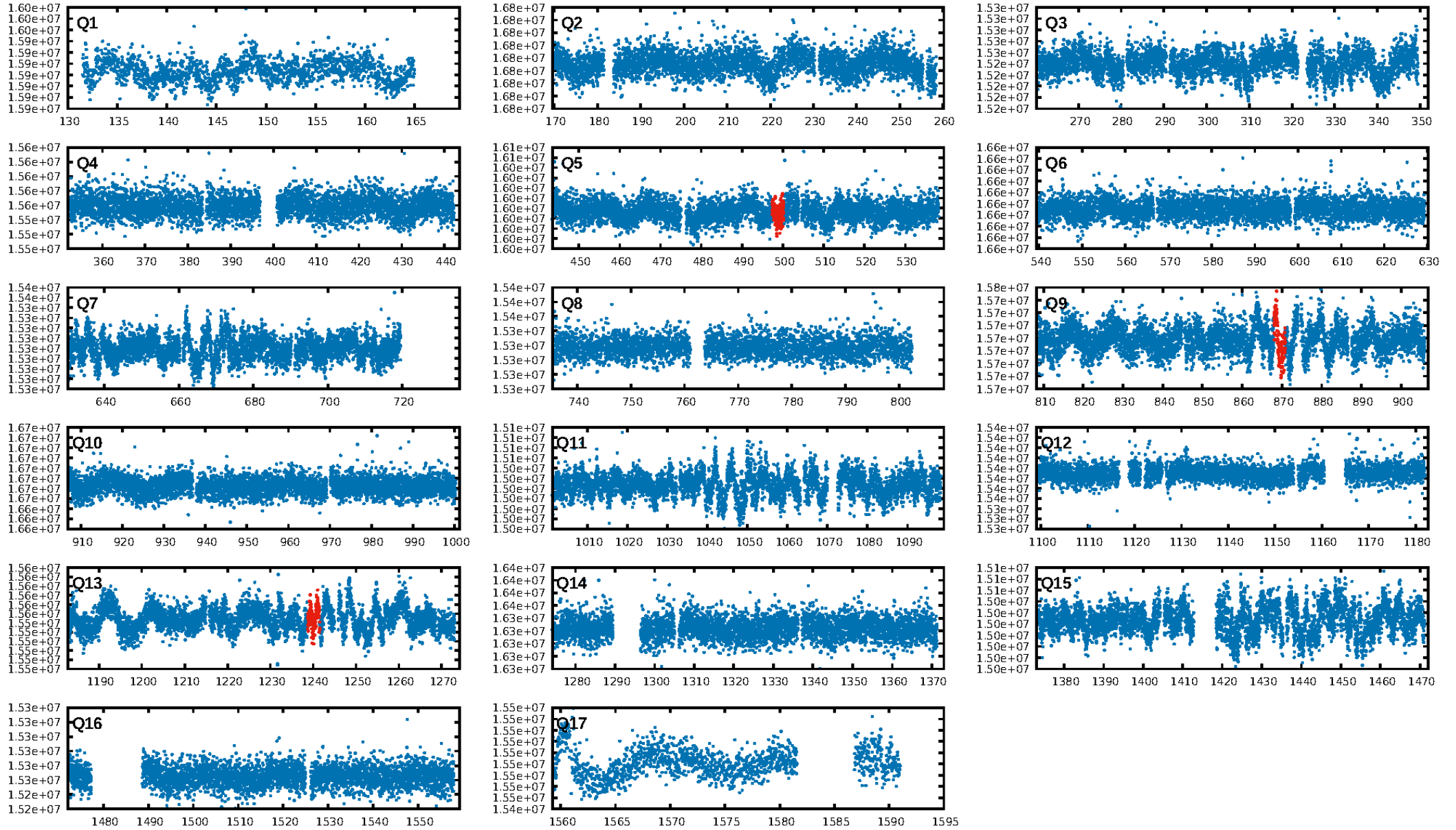
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 60.9%
ModelChiSquareGoF-sig: 100.0%
Bootstrap-pfa: 7.76e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 3.814
Centroid-sig: 26.4%
Centroid-so: 1.836 arcsec [1.13σ]
OotOffset-rm: 9.398 arcsec [46.01σ]
KicOffset-rm: 9.387 arcsec [45.95σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [2/2]

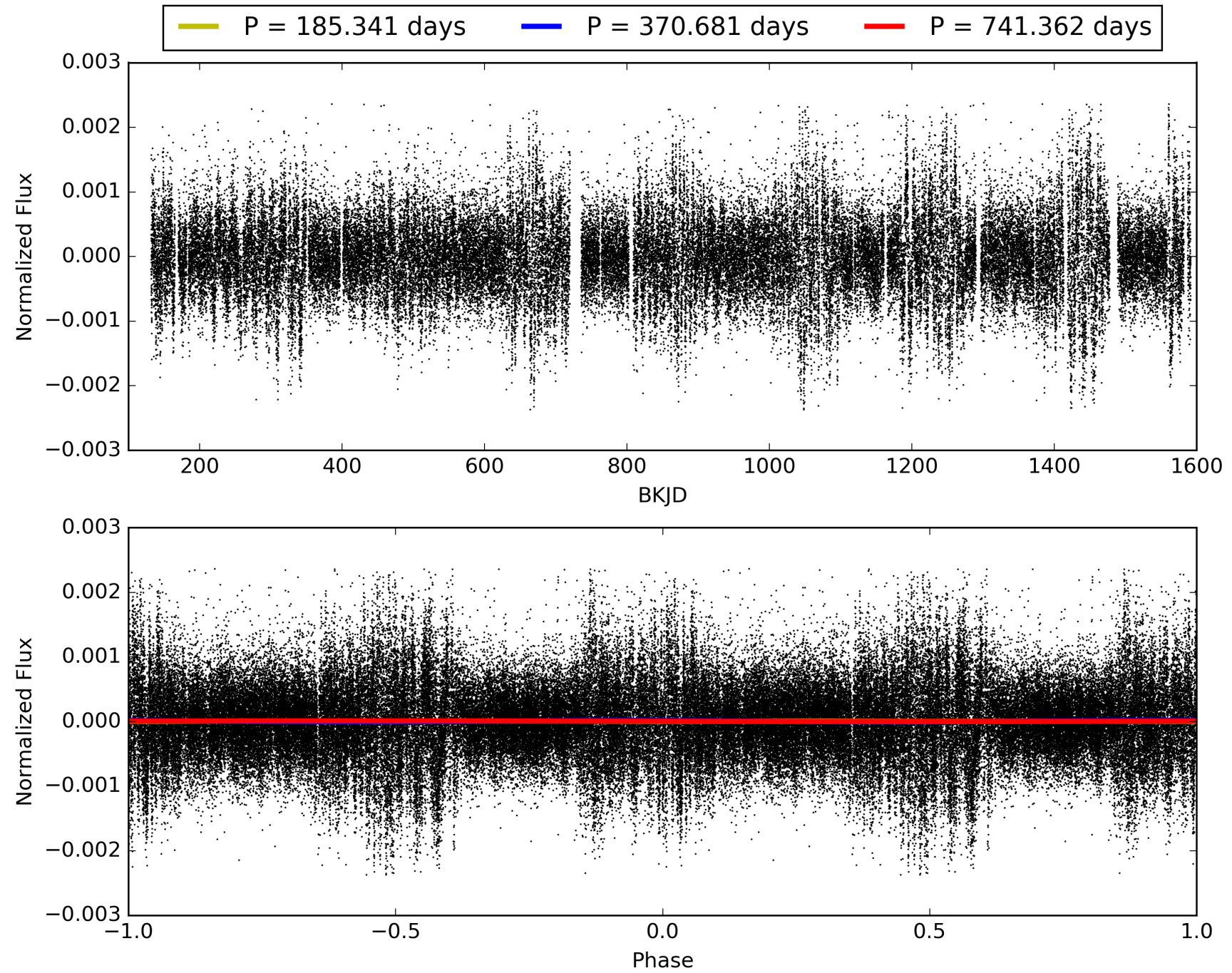
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 15:20:30 Z

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

TCE 007026628-01, PDC Light Curves

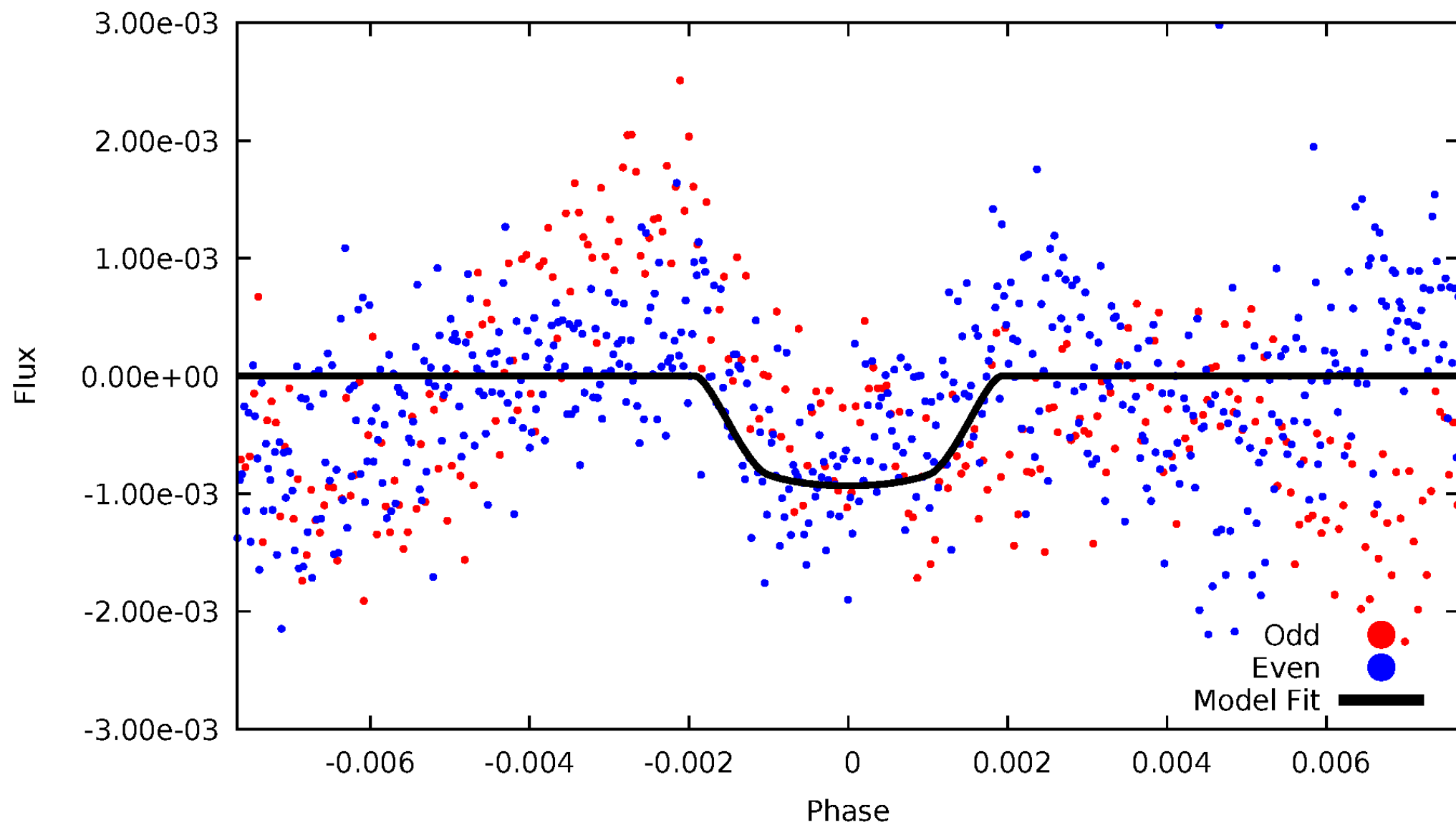


TCE 007026628-01



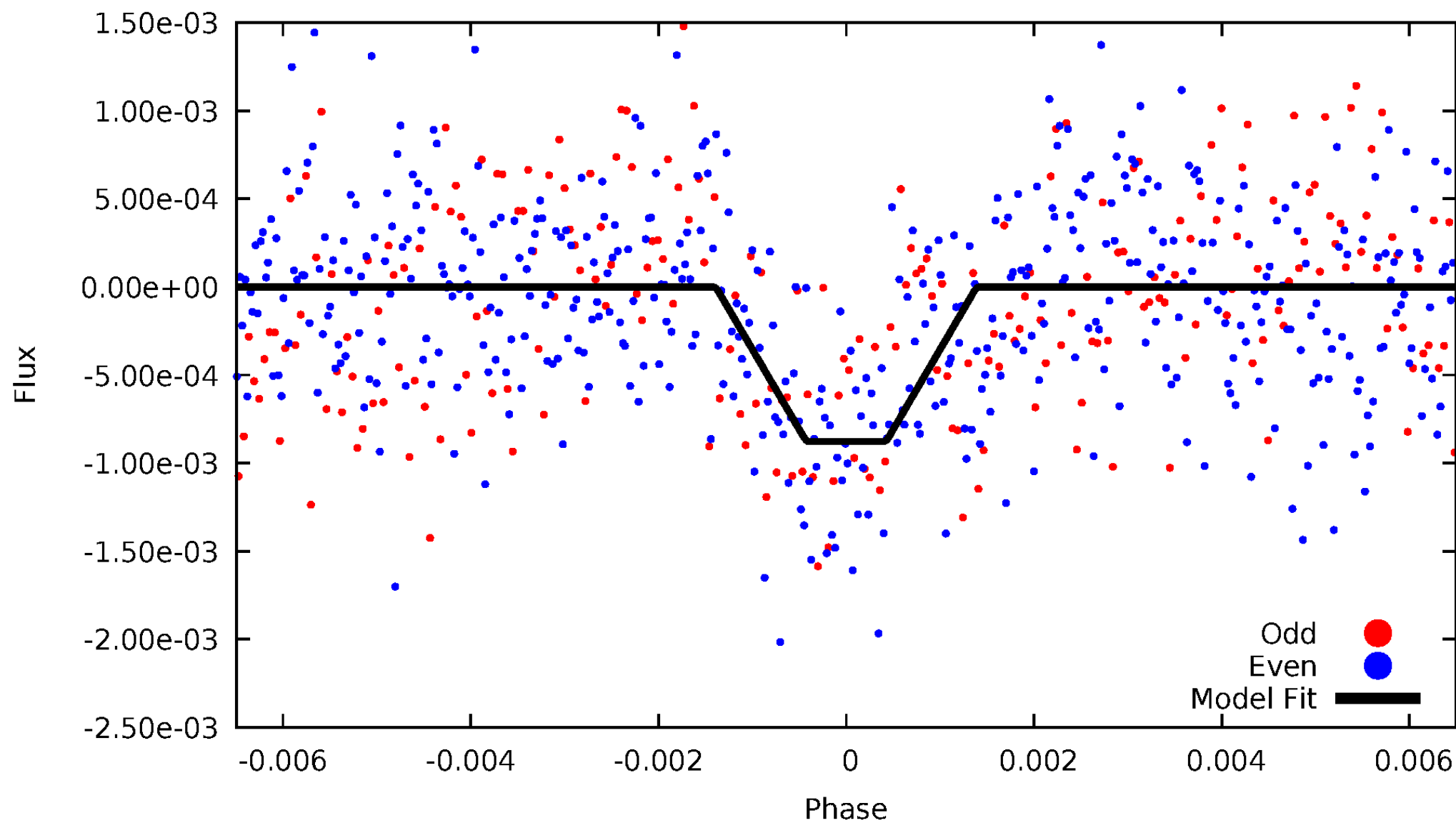
DV Odd/Even

TCE 007026628-01



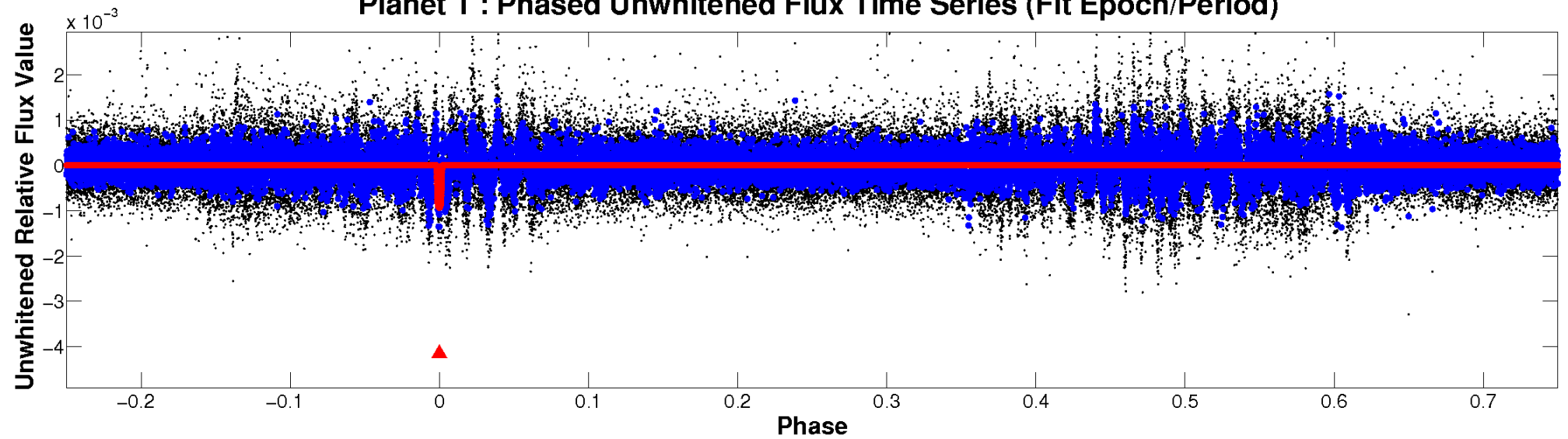
ALT Odd/Even

TCE 007026628-01

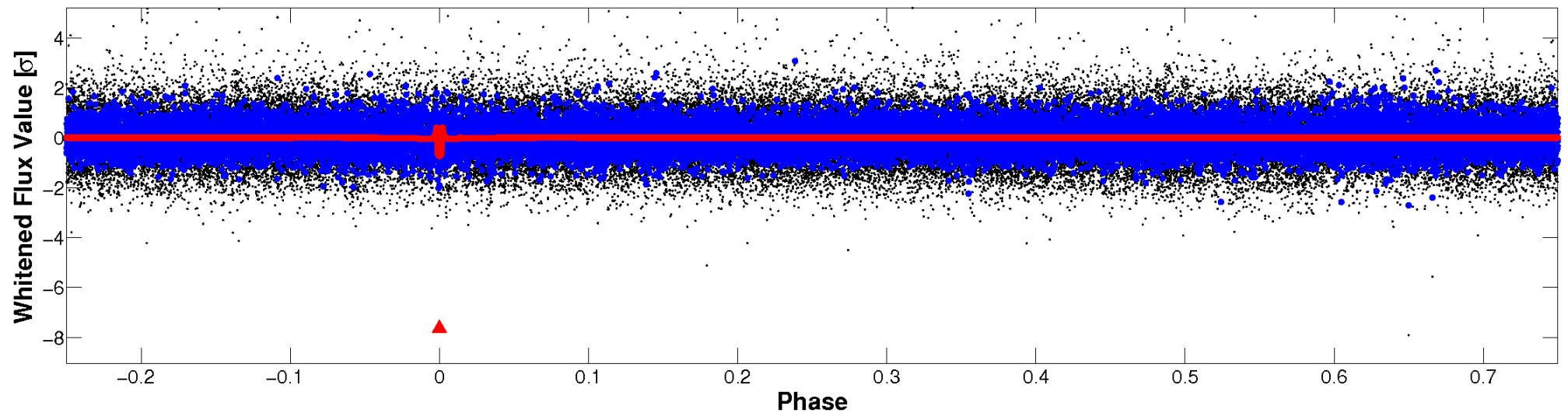


Non-Whitened Vs. Whitened Light Curve

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

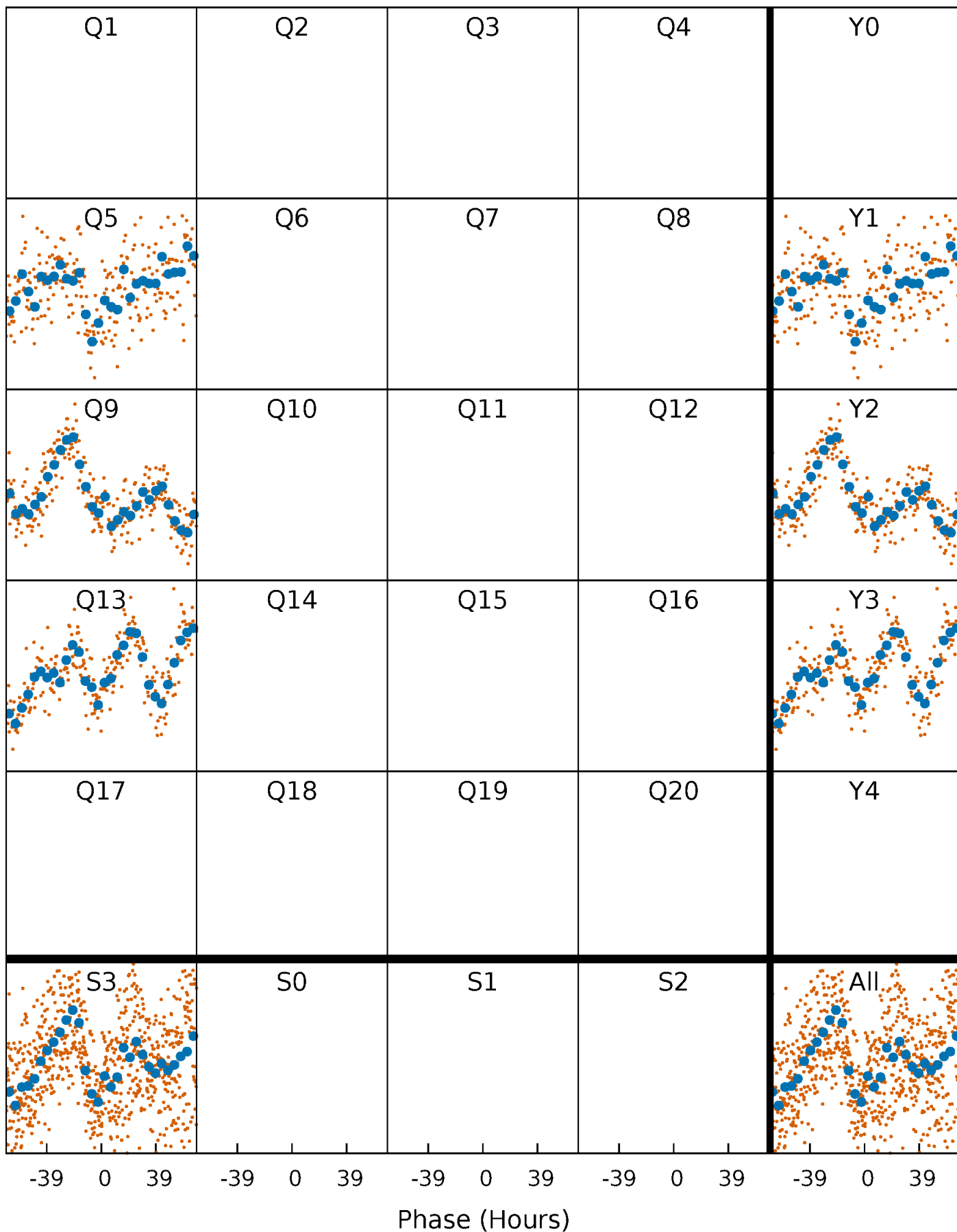


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



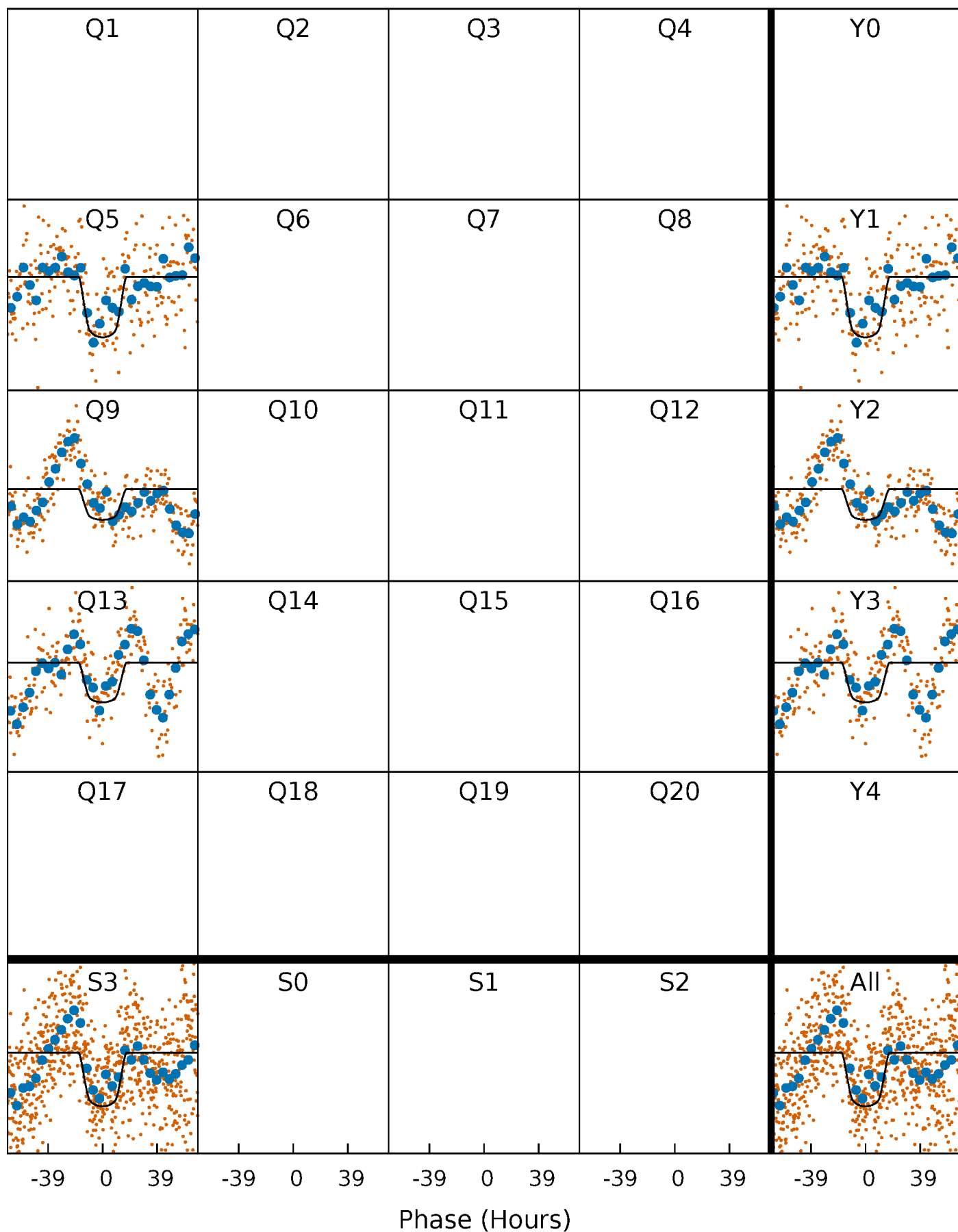
PDC Quarter-Phased Transit Curves

TCE 007026628-01 P=370.681082 Days $T_0=498.755956$ (BKJD)



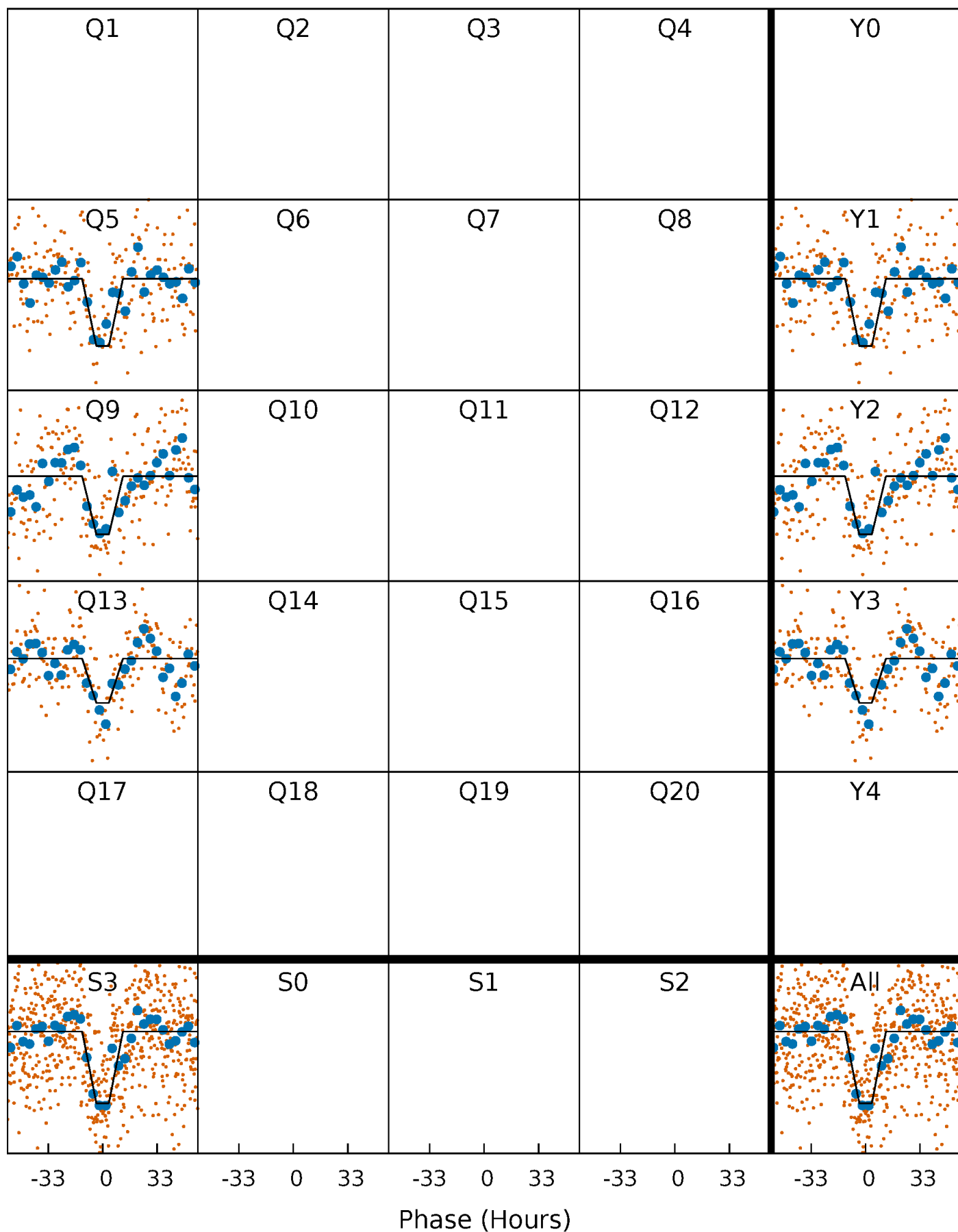
DV Quarter-Phased Transit Curves

TCE 007026628-01 P=370.681082 Days $T_0=498.755956$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

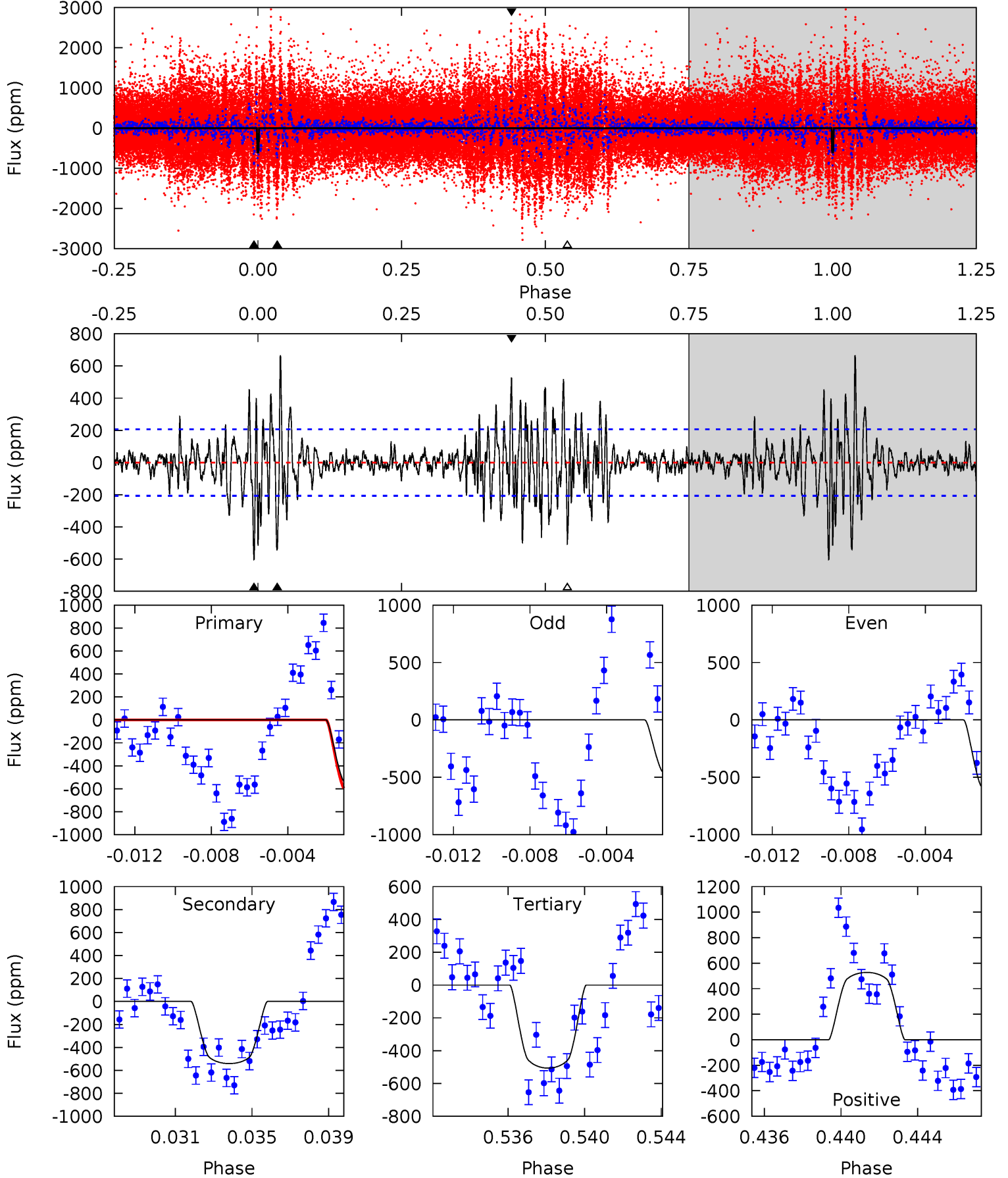
TCE 007026628-01 P=370.692023 Days $T_0=498.605108$ (BKJD)



DV Model-Shift Uniqueness Test

007026628-01, P = 370.681082 Days, E = 128.074874 Days

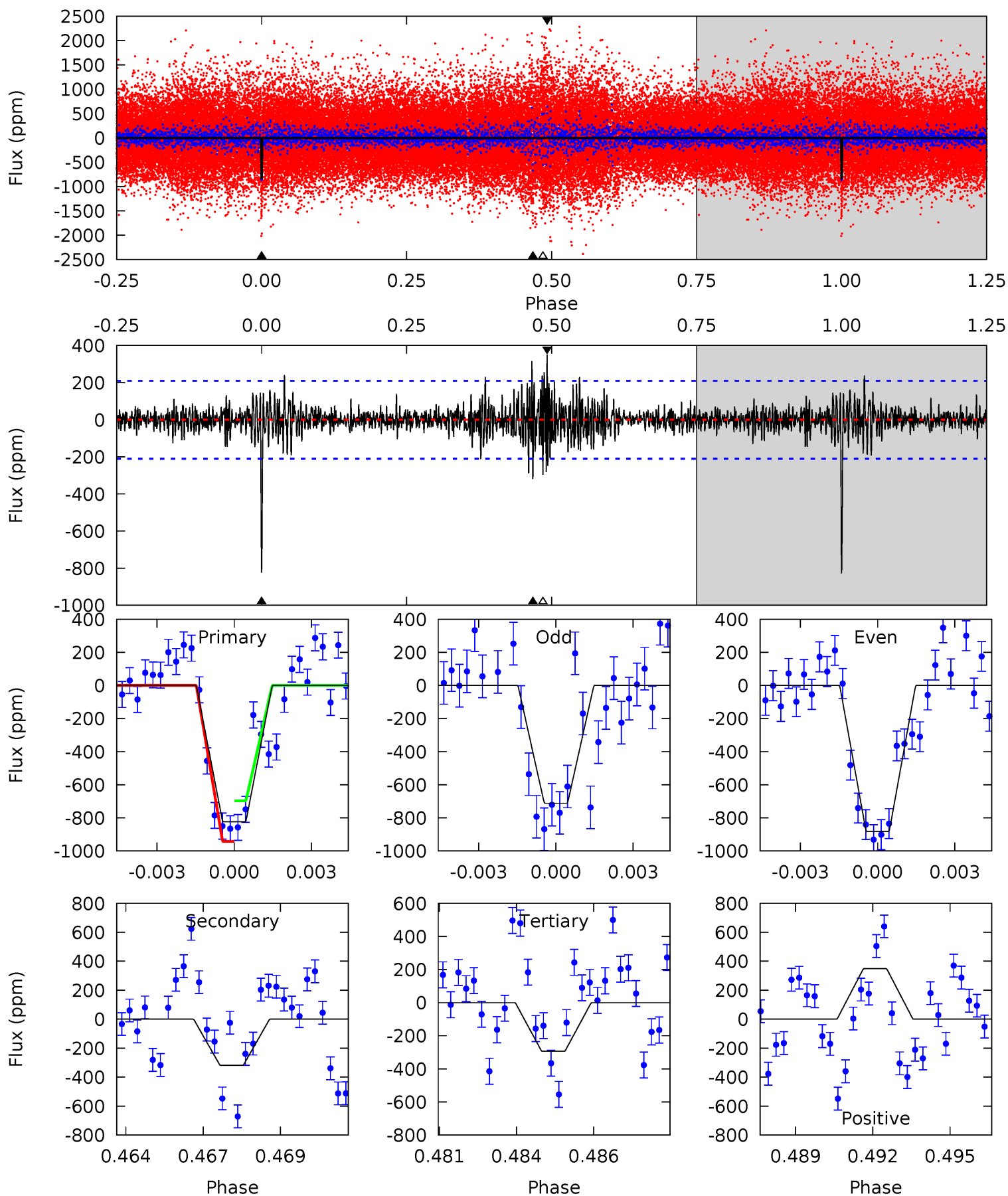
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 15.2 | 13.6 | 12.7 | 13.3 | 5.21 | 2.89 | 3.34 | 2.43 | 1.89 | 0.88 | 0.34 | 1.70 | 0.99 | 0.52 | 1.68 |



Alt Model-Shift Uniqueness Test

007026628-01, P = 370.692023 Days, E = 127.913085 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 20.7 | 8.00 | 7.38 | 8.75 | 5.26 | 2.99 | 1.48 | 13.3 | 11.9 | 0.62 | -0.75 | 2.00 | 1.16 | 0.30 | 3.07 |



Stellar Parameters For KIC 007026628

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | $R (R_{\odot})$ | $M(M_{\odot})$ | $p_{\star} (\text{g}\cdot\text{cm}^{-3})$ |
|--------|----------------------|---------------------------|----------------------------|---------------------------|---------------------------|---|
| | 5968^{+179}_{-179} | $4.421^{+0.120}_{-0.180}$ | $-0.500^{+0.300}_{-0.300}$ | $0.943^{+0.245}_{-0.132}$ | $0.856^{+0.108}_{-0.072}$ | $1.437^{+0.794}_{-0.693}$ |
| | +3%/-3% | +3%/-4% | +60%/-60% | +26%/-14% | +13%/-8% | +55%/-48% |
| 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 007026628-01 / KOI

| Detrend | Depth (ppm) | $R_p (R_{\oplus})$ | $T_{max} (K)$ | $T_{obs} (K)$ | A_{obs} |
|---------|---------------|------------------------|-------------------|----------------------|-------------------------|
| DV | -541 ± 40 | $3.57^{+0.56}_{-0.45}$ | 366^{+24}_{-20} | 5005^{+243}_{-213} | 21665^{+6758}_{-5707} |
| Alt. | -319 ± 40 | $3.09^{+0.49}_{-0.41}$ | 366^{+25}_{-19} | 4748^{+277}_{-233} | 16835^{+5936}_{-4652} |

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 $A_{obs} \gg 1.0$

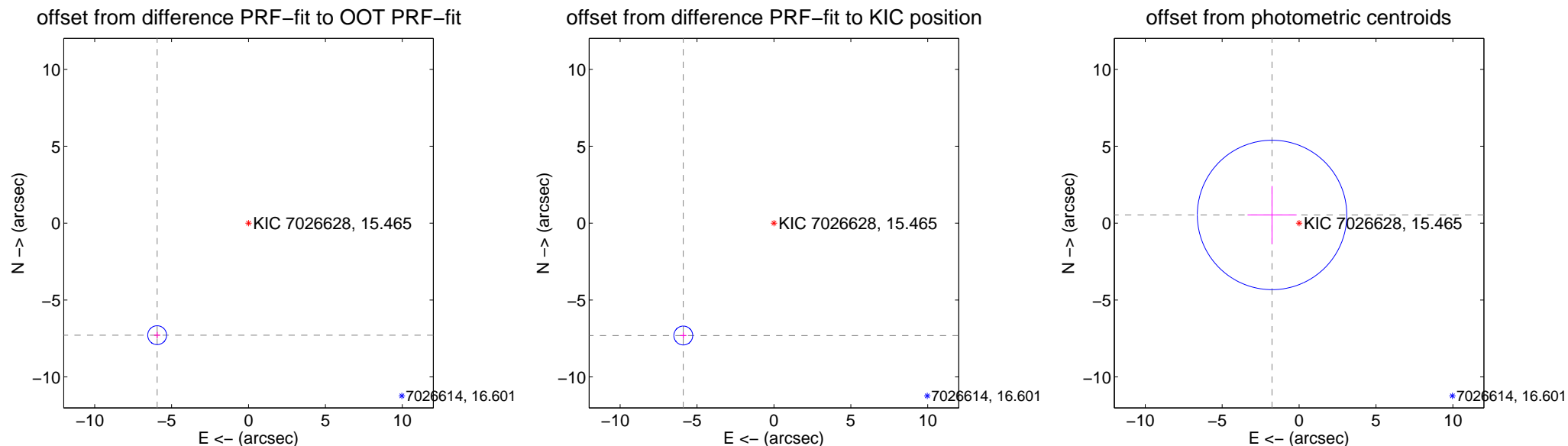
DV Centroid Data

Supplemental centroid analysis for 007026628-01. Kepler magnitude: 15.46. Transit SNR 8.19

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|-------------------|--------------------|
| PRF-fit source offset from OOT | 9.398 ± 0.204 | 46.01 | 5.938 ± 0.201 | -7.285 ± 0.207 |
| PRF-fit source offset from KIC position | 9.387 ± 0.204 | 45.95 | 5.892 ± 0.201 | -7.308 ± 0.207 |
| photometric centroid source offset | 1.84 ± 1.62 | 1.13 | 1.76 ± 1.59 | 0.53 ± 1.88 |

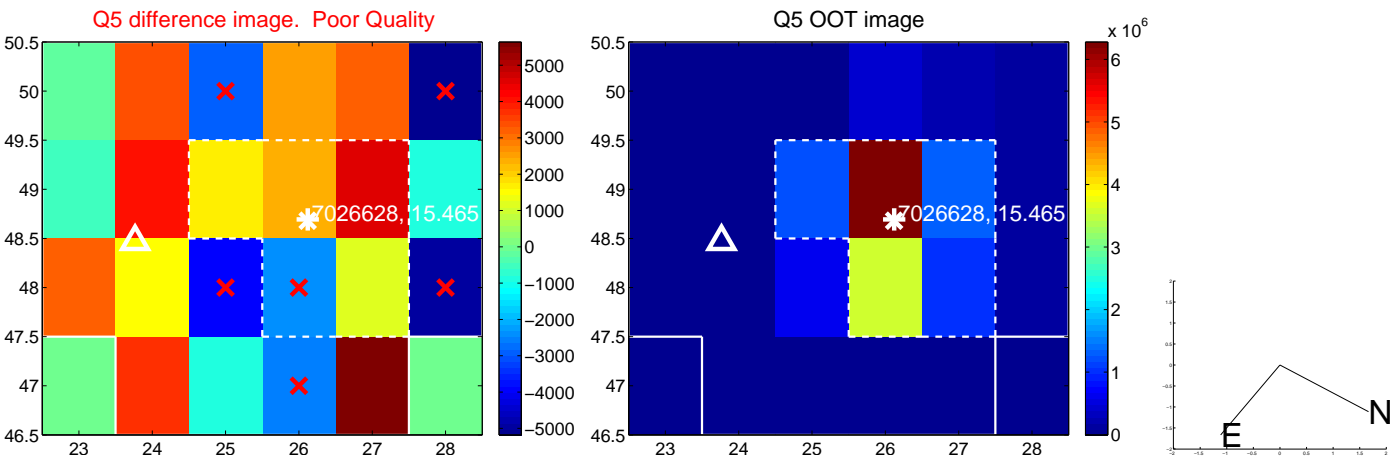


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

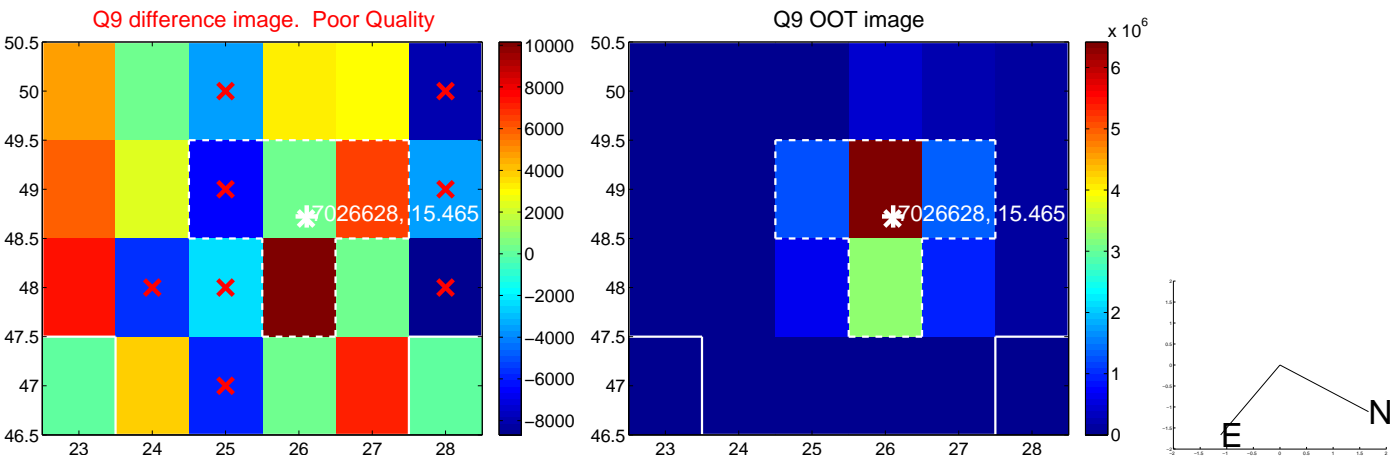
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



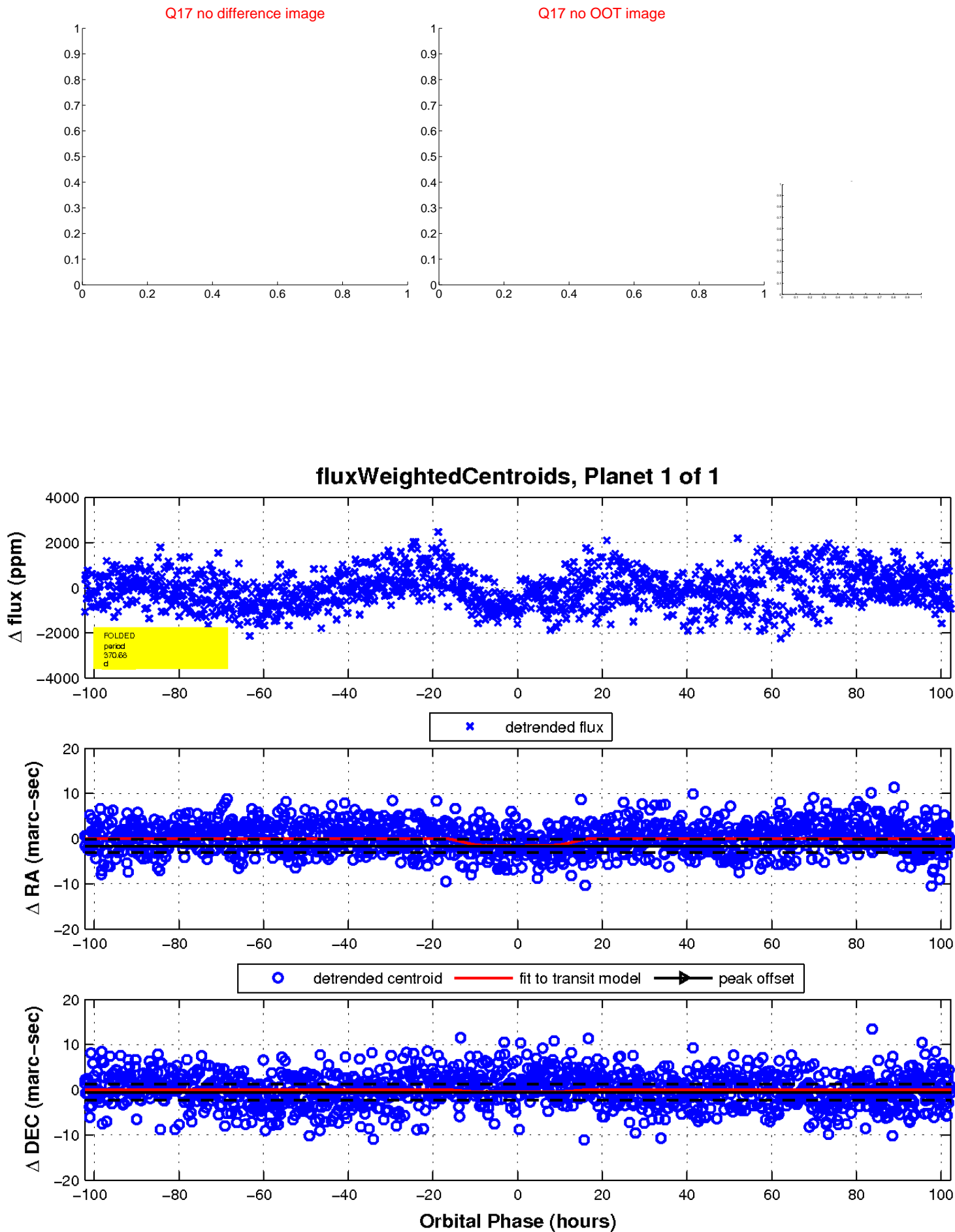
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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.



UKIRT Image

Declination

