

KIC 008884298

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|-----|------|-----------------------------|-----------------|------------------------|------------------------|
| 008884298-01 | OBS | No | 376.522399 | 140.358725 | 538.8 | 15.000 | 7.4 | -1.0 | 0.98 | 5984 | 2.27 | 1.01 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|--|
| 008884298-01 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS |

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

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

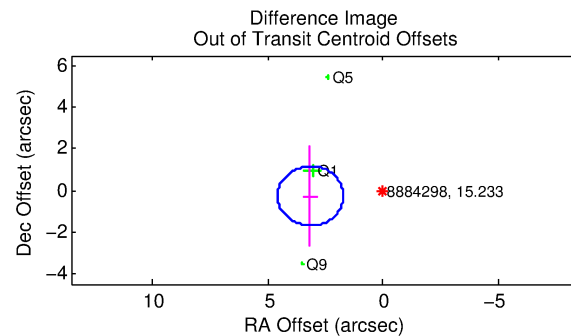
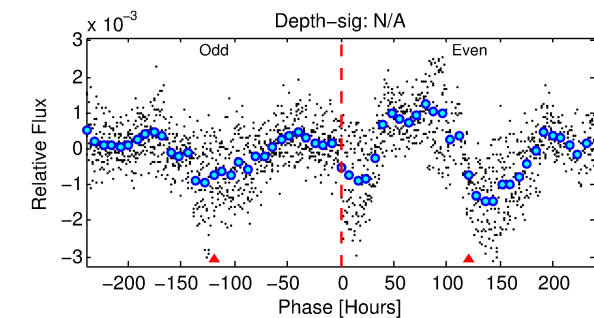
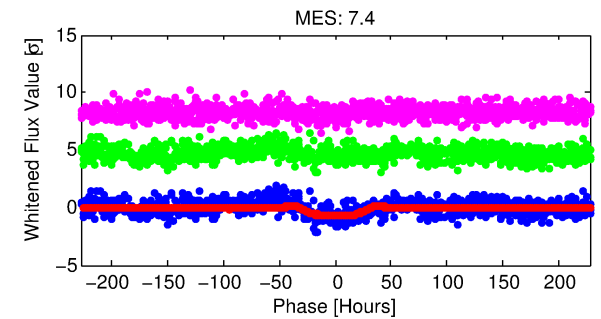
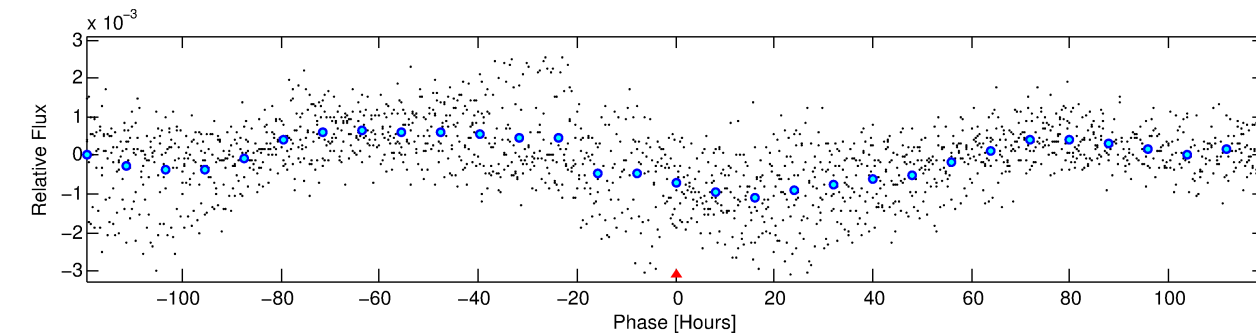
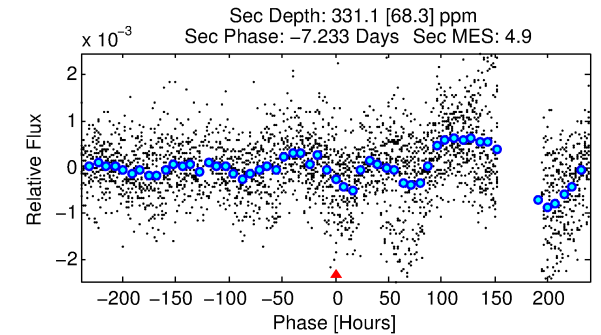
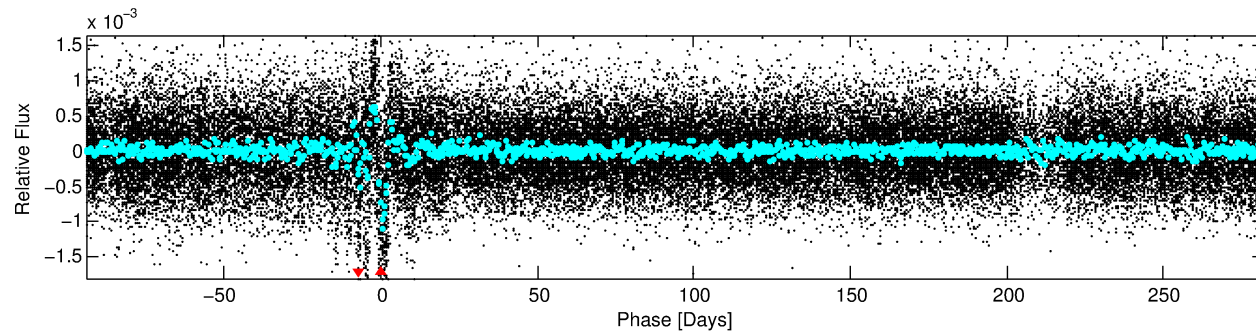
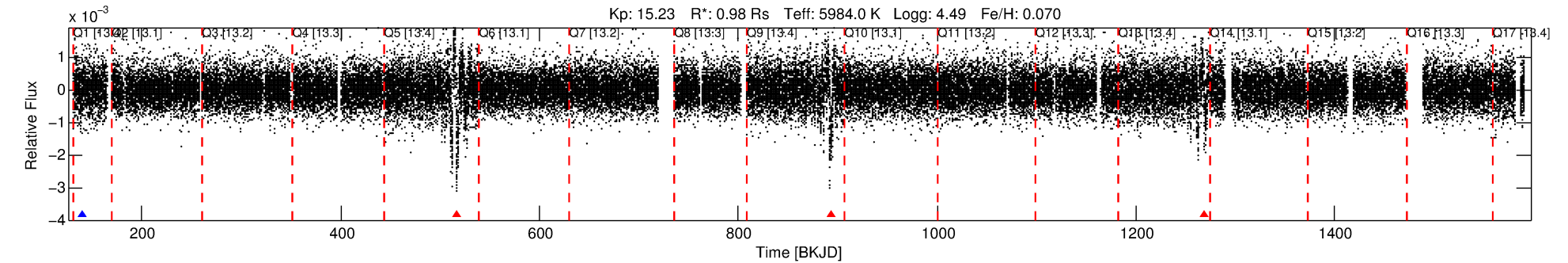
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008884298-01

No Significant Match Found

DV One-Page Summary

KIC: 8884298 Candidate: 1 of 1 Period: 376.522 d



TPS TCE Results:

Period = 376.52240 d
Epoch = 140.3587 BKJD

DV fit results are unavailable

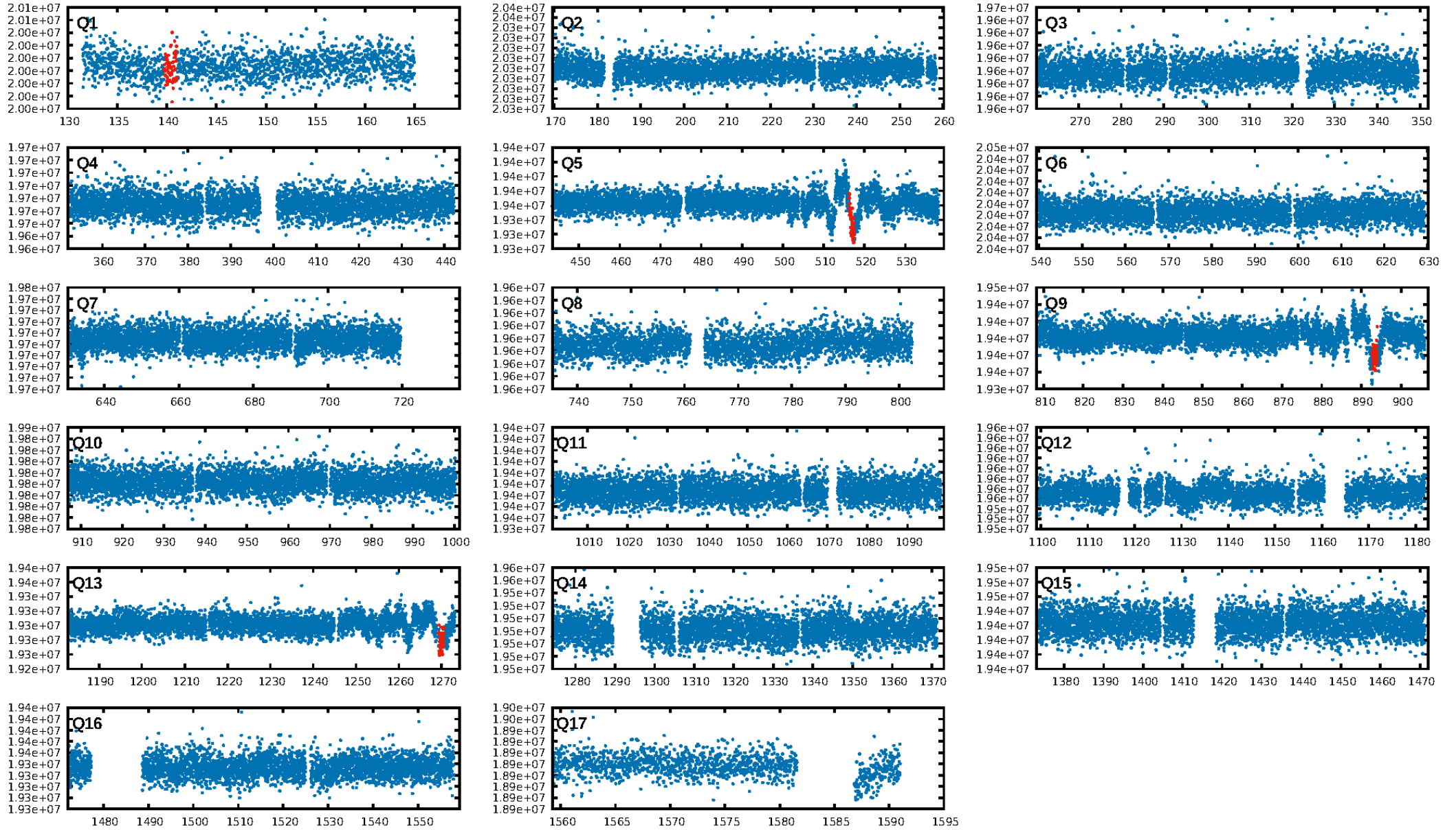
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.62e-09
RollingBand-fgt: 0.00 [0/3]
GhostDiagnostic-chr: 0.4143
Centroid-sig: 2.6%
Centroid-so: 8.485 arcsec [1.90σ]
OotOffset-rm: 3.172 arcsec [6.66σ]
KicOffset-rm: 3.069 arcsec [6.19σ]
OotOffset-st: 0/0/0/3 [3]
KicOffset-st: 0/0/0/3 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

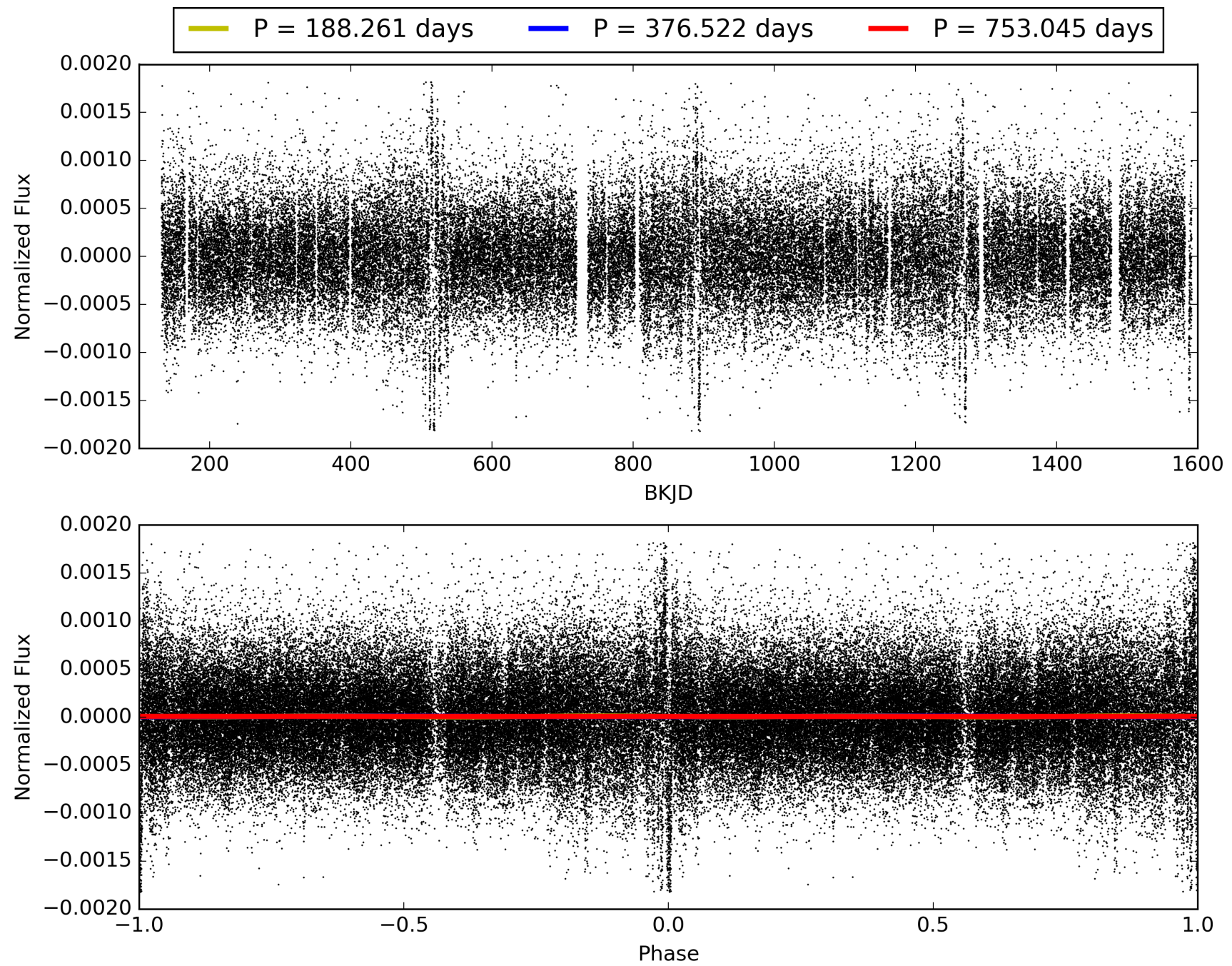
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:34:10 Z

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

TCE 008884298-01, PDC Light Curves

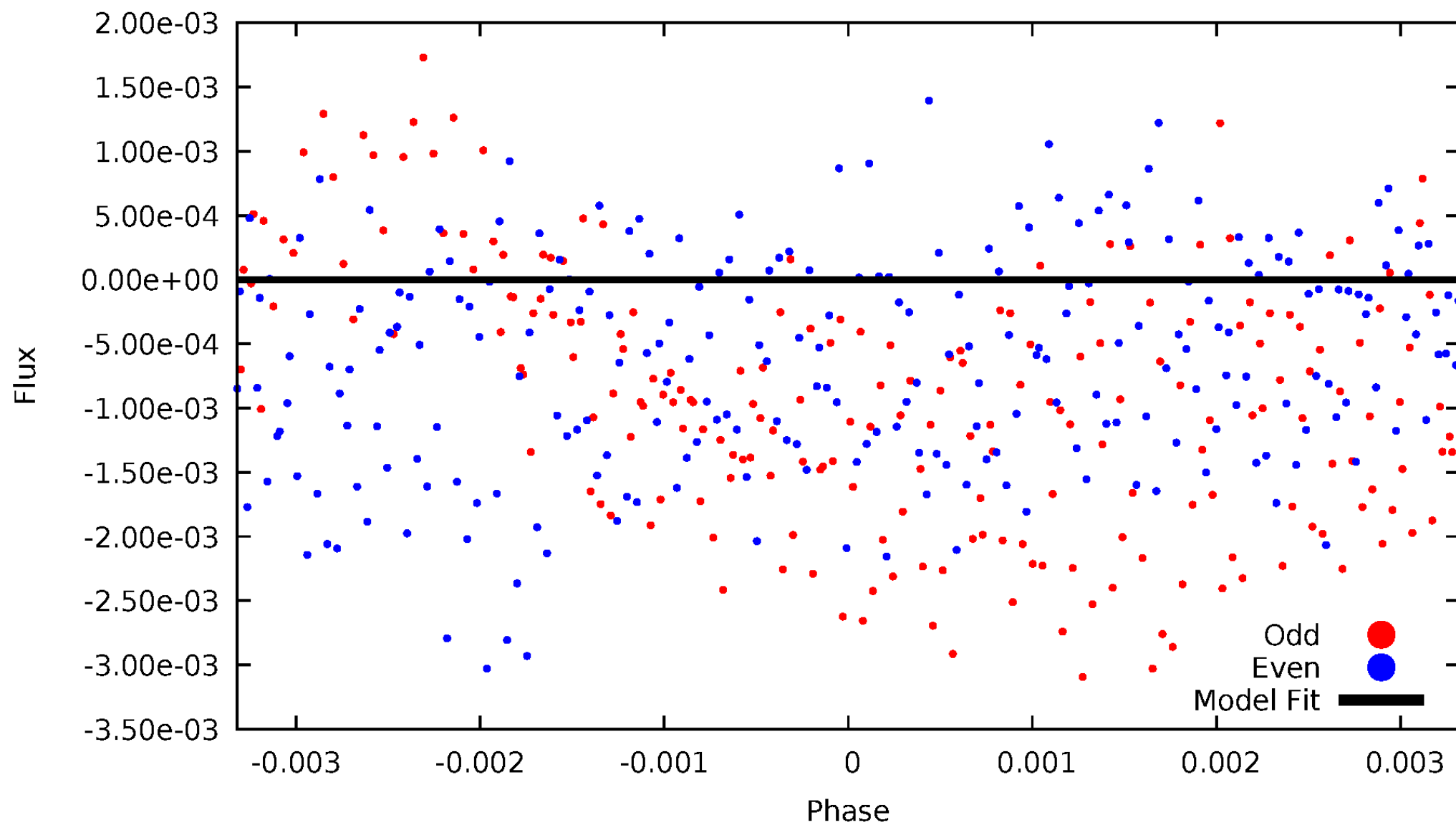


TCE 008884298-01



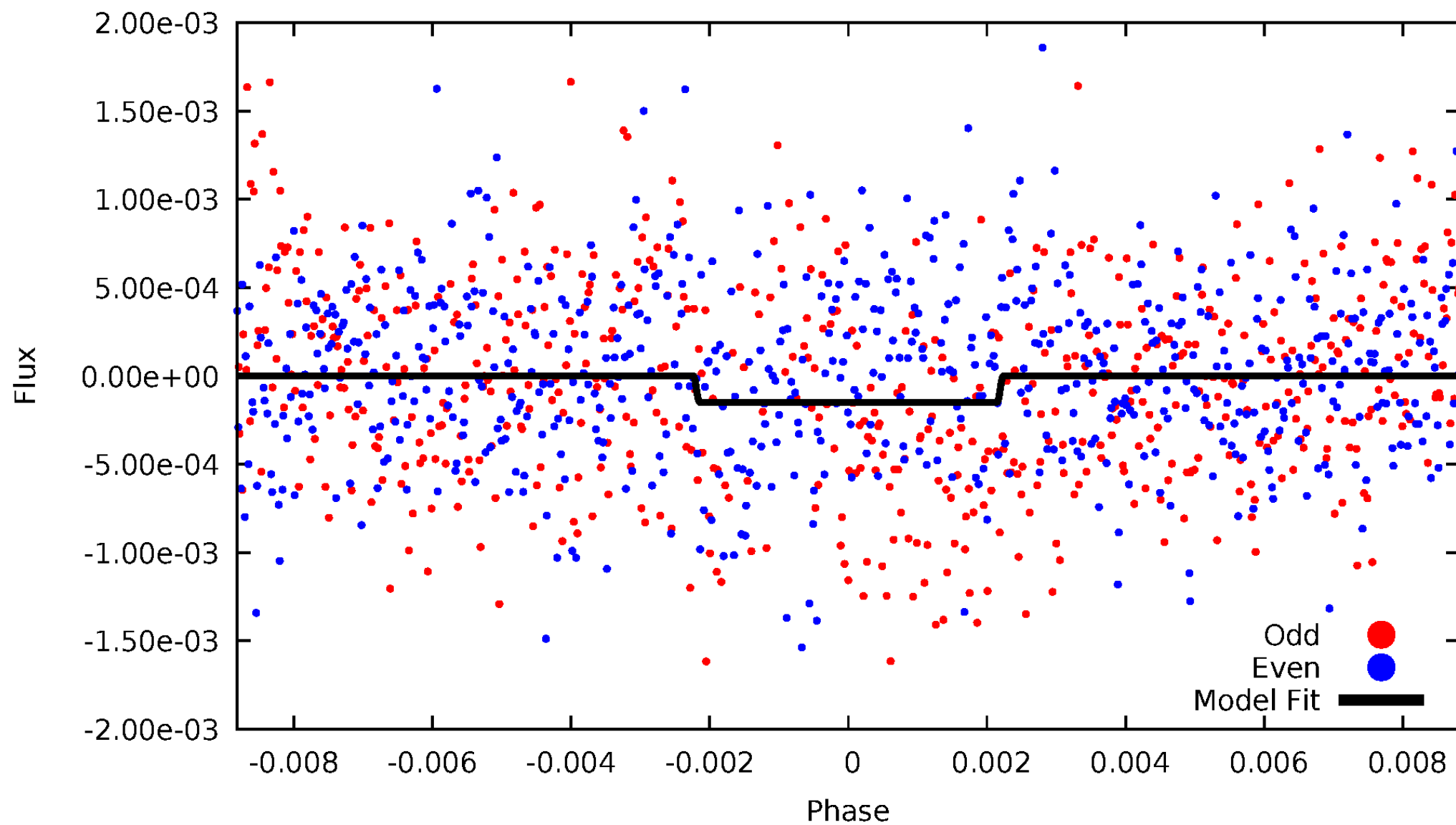
DV Odd/Even

TCE 008884298-01



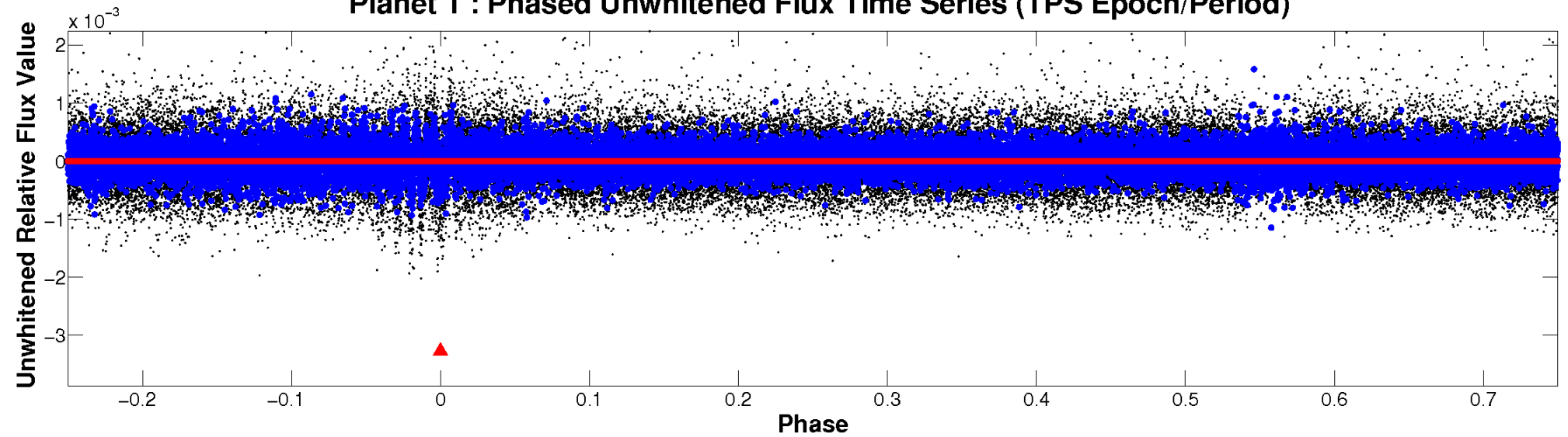
ALT Odd/Even

TCE 008884298-01

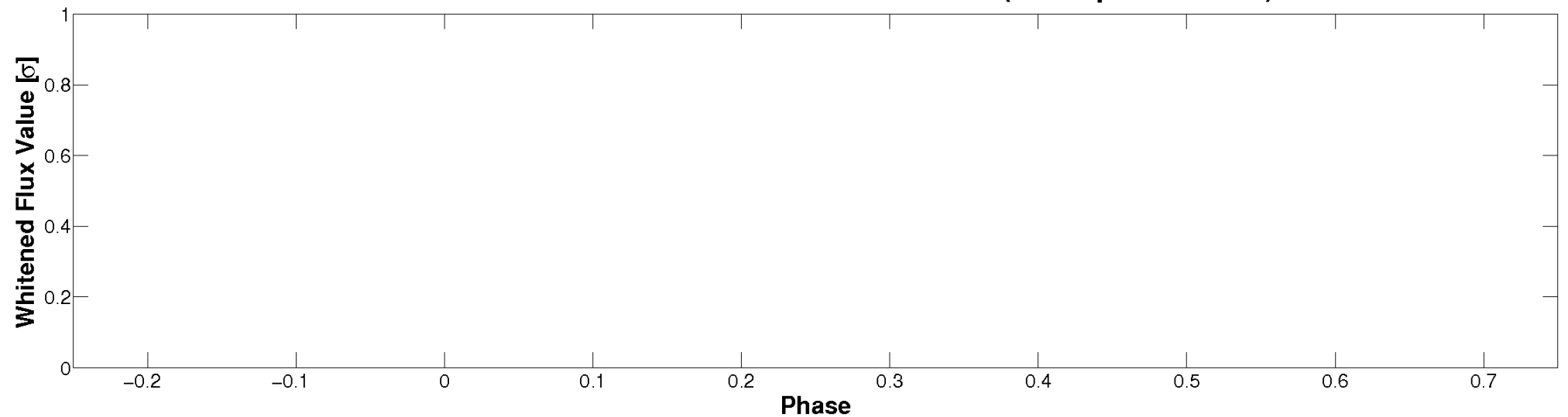


Non-Whitened Vs. Whitened Light Curve

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

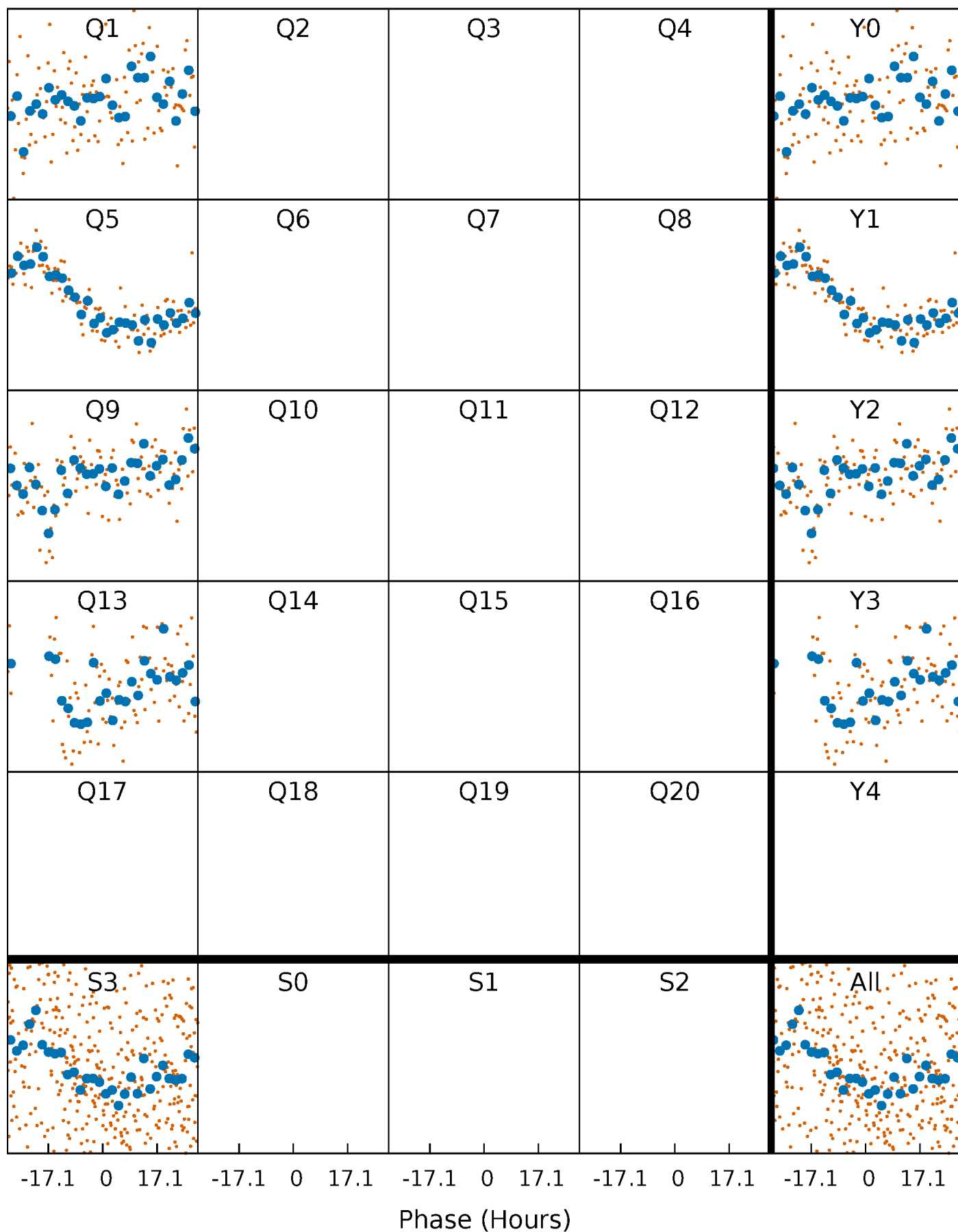


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



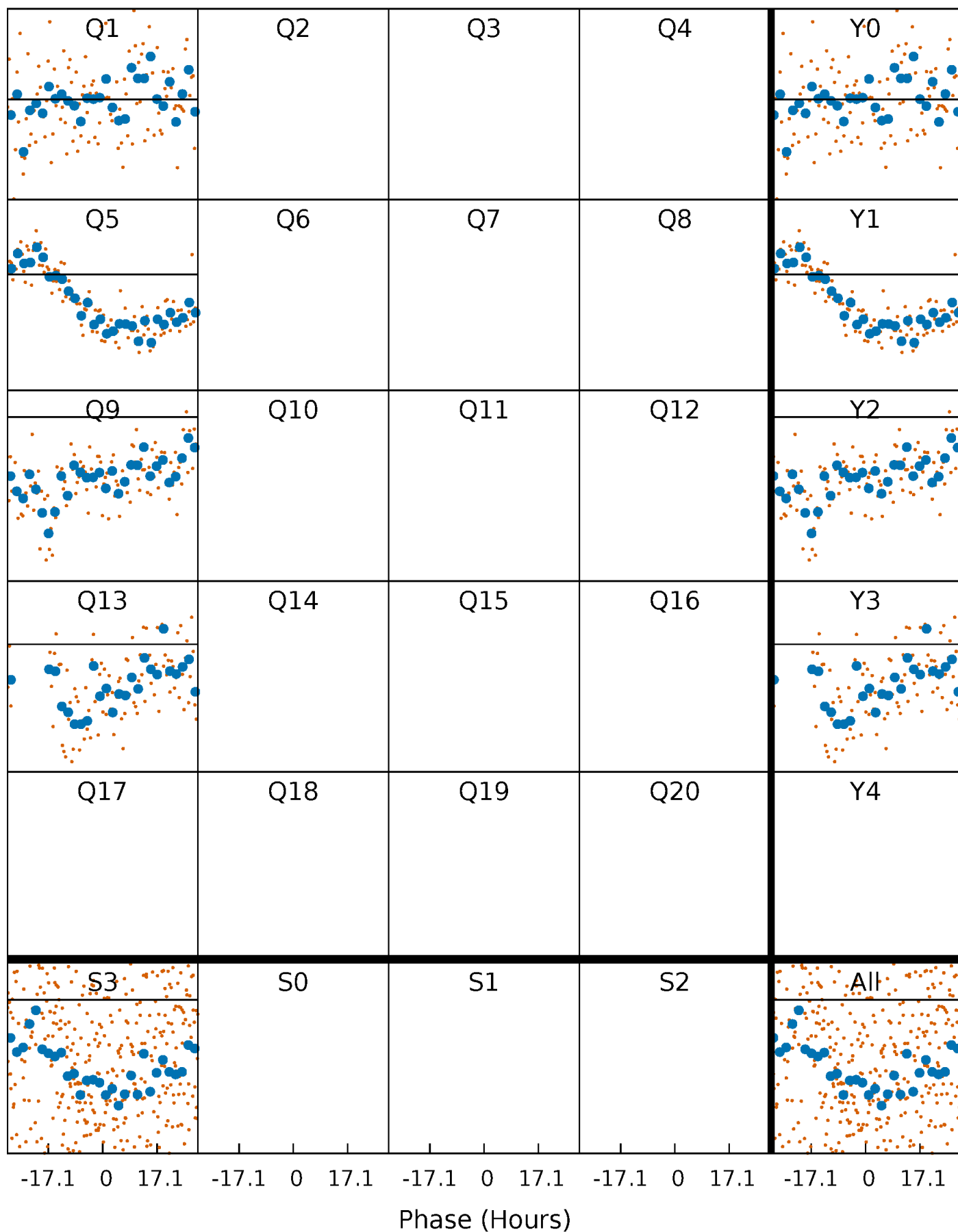
PDC Quarter-Phased Transit Curves

TCE 008884298-01 $P=376.522399$ Days $T_0=140.358725$ (BKJD)



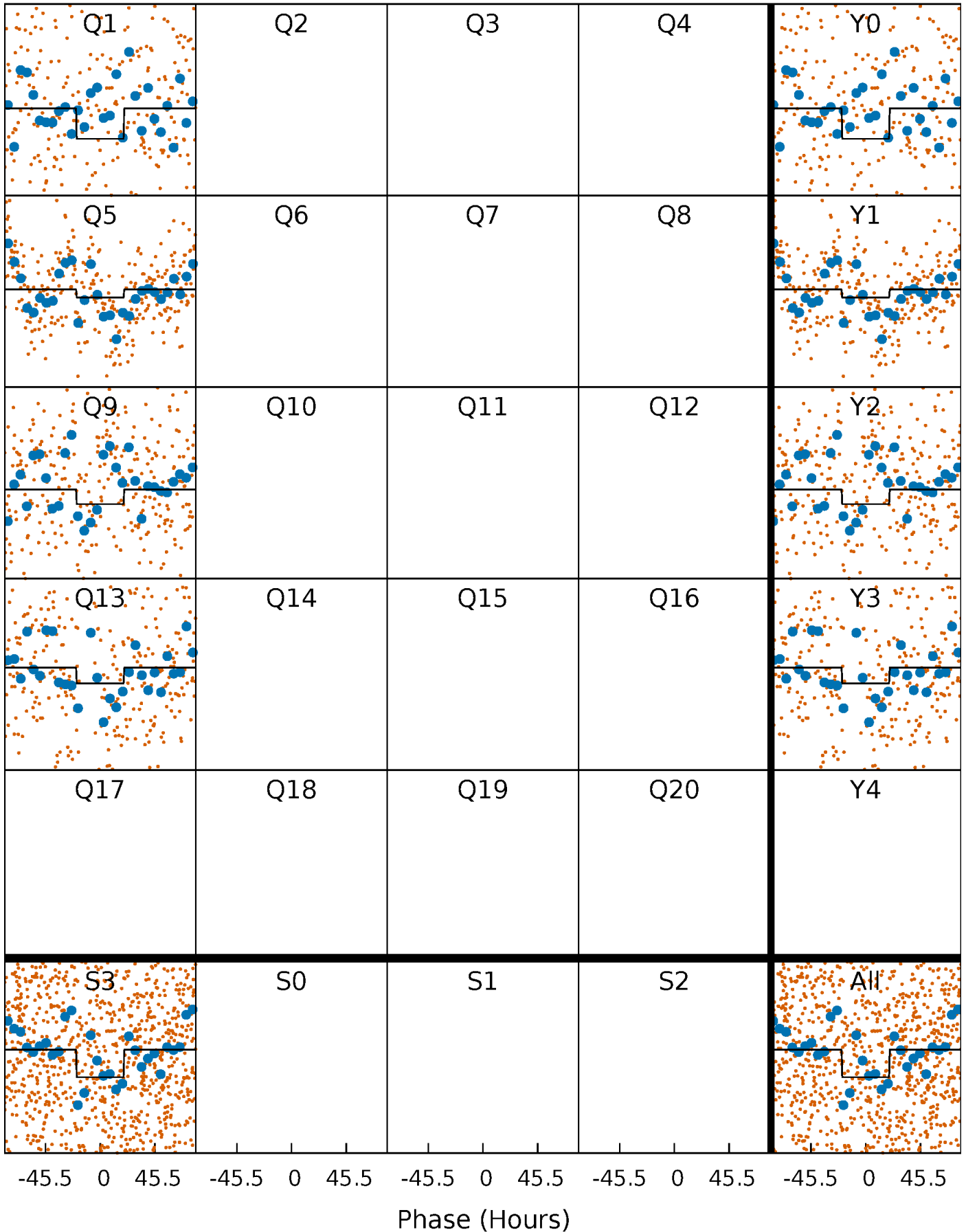
DV Quarter-Phased Transit Curves

TCE 008884298-01 $P=376.522399$ Days $T_0=140.358725$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

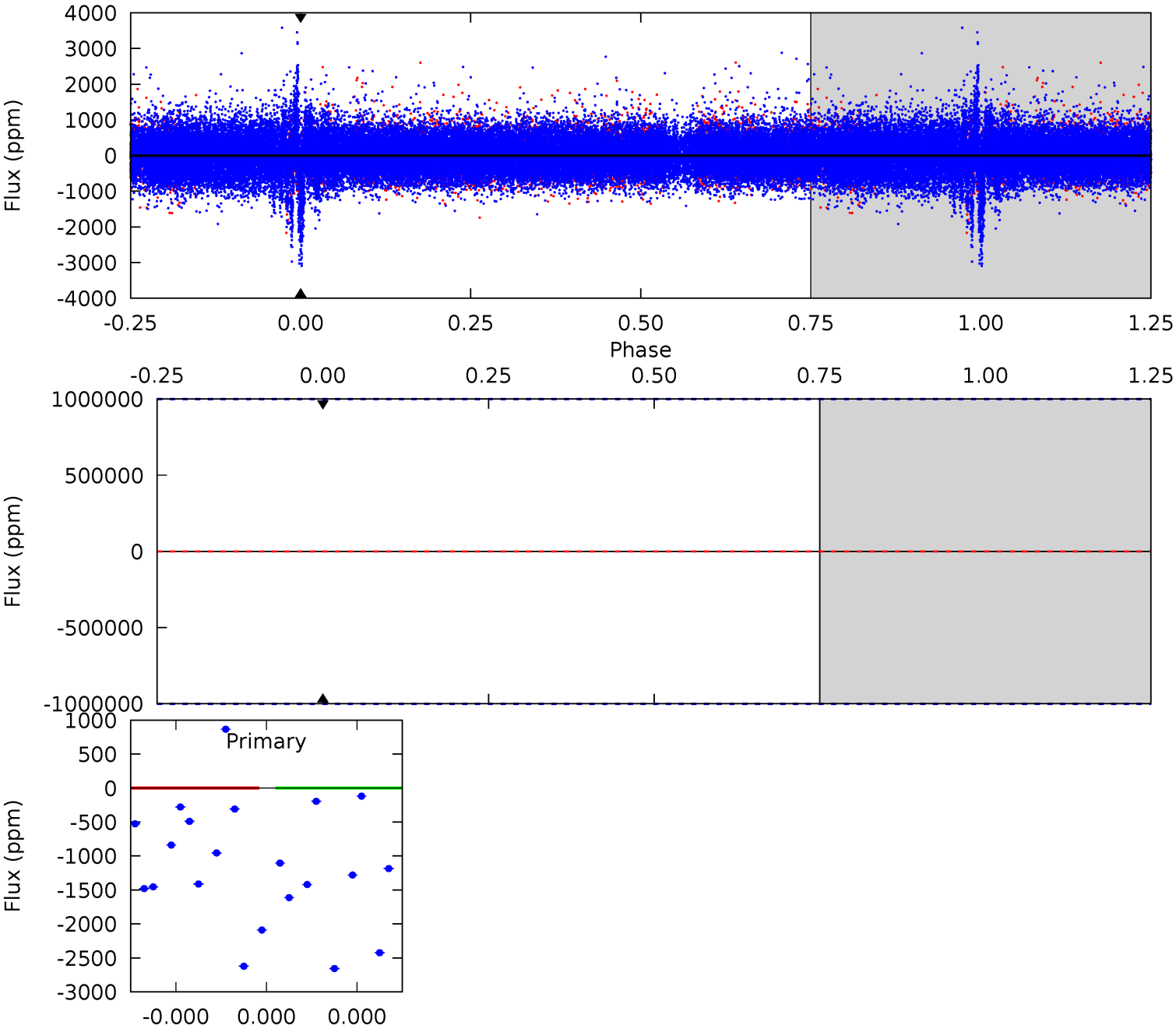
TCE 008884298-01 P=376.522399 Days $T_0=139.872659$ (BKJD)



DV Model-Shift Uniqueness Test

008884298-01, P = 376.522399 Days, E = 140.358725 Days

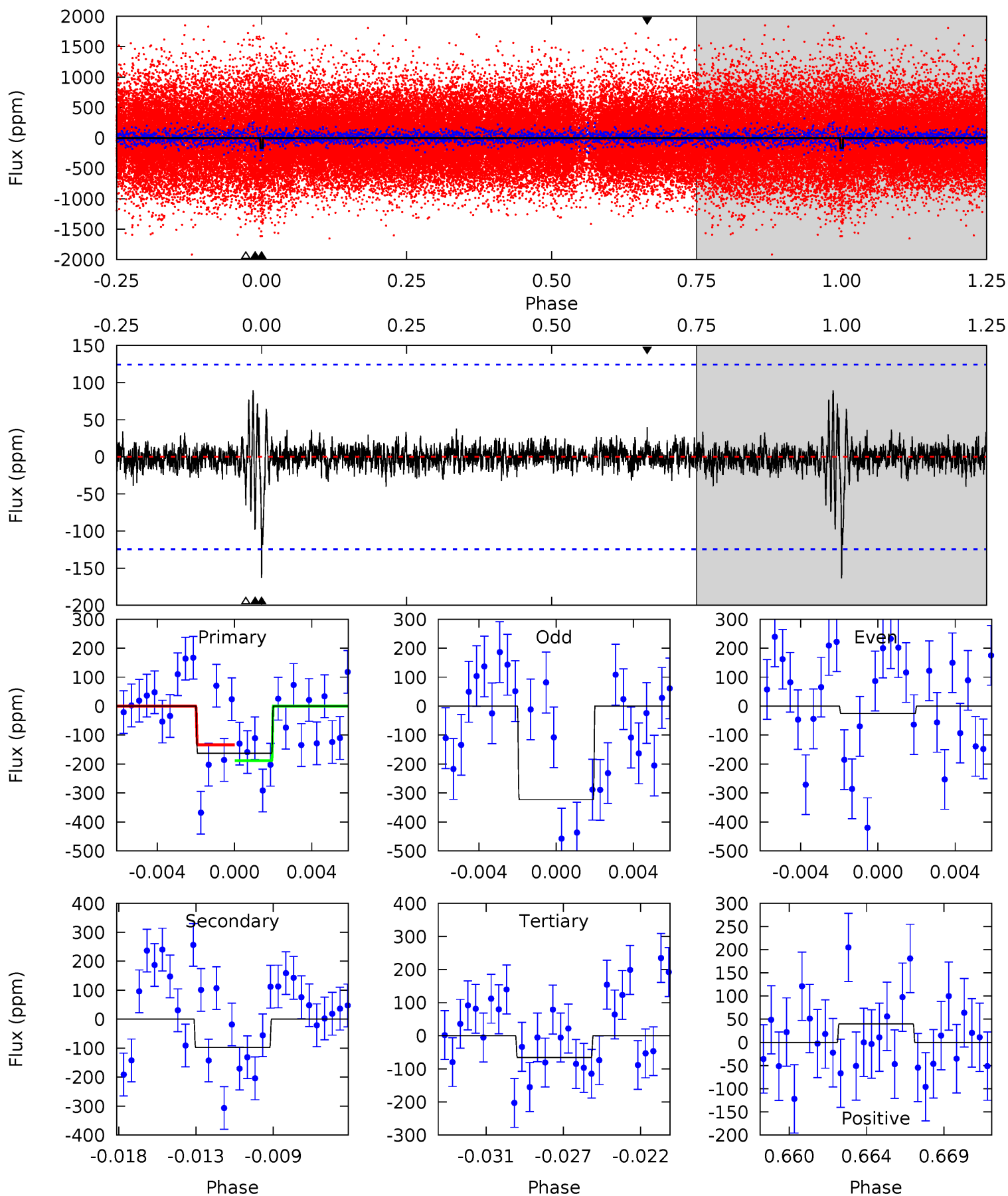
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|-----|-----|-----|-----|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|-----|-------|-----|
| 0 | 0 | 0 | 0 | 1.00 | 1.00 | 1.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



Alt Model-Shift Uniqueness Test

008884298-01, P = 376.522399 Days, E = 139.872659 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 6.79 | 4.07 | 2.72 | 1.65 | 5.18 | 2.84 | 0.49 | 4.07 | 5.13 | 1.35 | 2.41 | 6.18 | 0.97 | 0.35 | 1.13 |



Stellar Parameters For KIC 008884298

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | $R (R_{\odot})$ | $M(M_{\odot})$ | $p_{\star} (\text{g}\cdot\text{cm}^{-3})$ |
|--------|----------------------|---------------------------|---------------------------|---------------------------|---------------------------|---|
| | 5984^{+177}_{-195} | $4.490^{+0.048}_{-0.192}$ | $0.070^{+0.250}_{-0.350}$ | $0.984^{+0.284}_{-0.095}$ | $1.090^{+0.116}_{-0.155}$ | $1.613^{+0.409}_{-0.797}$ |
| | +3%/-3% | +1%/-4% | +357%/-500% | +29%/-10% | +11%/-14% | +25%/-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 008884298-01 / KOI

| Detrend | Depth (ppm) | $R_p (R_{\oplus})$ | $T_{max} (K)$ | $T_{obs} (K)$ | A_{obs} |
|---------|-----------------|------------------------|-------------------|--------------------------|-------------------------------|
| DV | 0 ± 1000000 | $8.93^{+9.34}_{-6.23}$ | 364^{+24}_{-17} | 4676^{+17517}_{-23477} | $15560^{+1303023}_{-1152075}$ |
| Alt. | -98 ± 24 | $8.15^{+9.10}_{-5.83}$ | 365^{+25}_{-18} | 2883^{+1386}_{-478} | 805^{+9659}_{-609} |

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 $A_{obs} \gg 1.0$

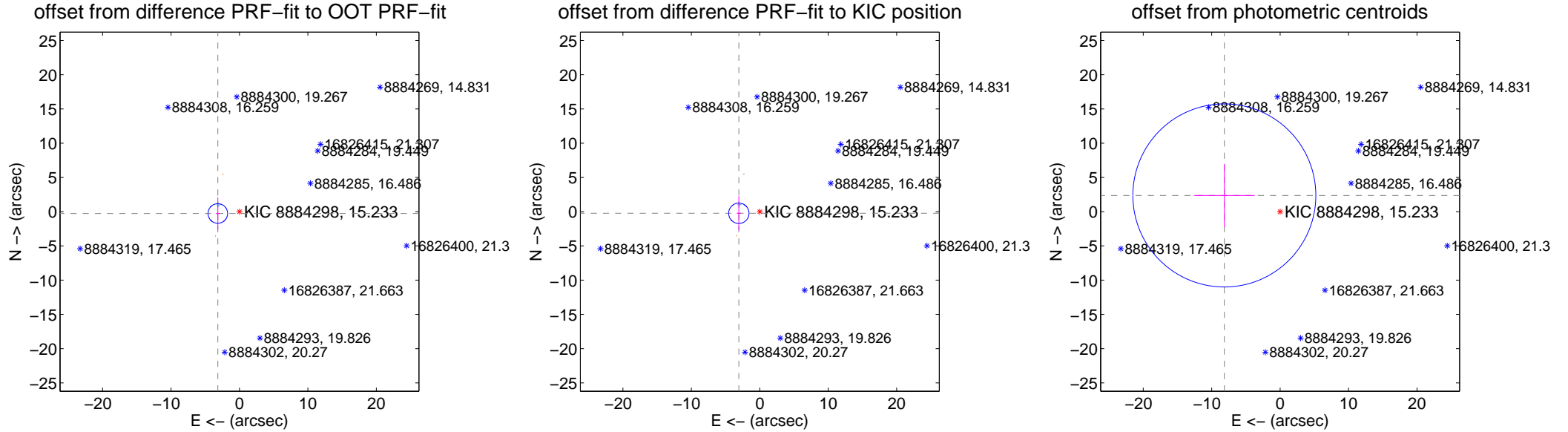
DV Centroid Data

Supplemental centroid analysis for 008884298-01. Kepler magnitude: 15.23. Transit SNR -1.00

There are 1 quarters with good PRF difference image offsets

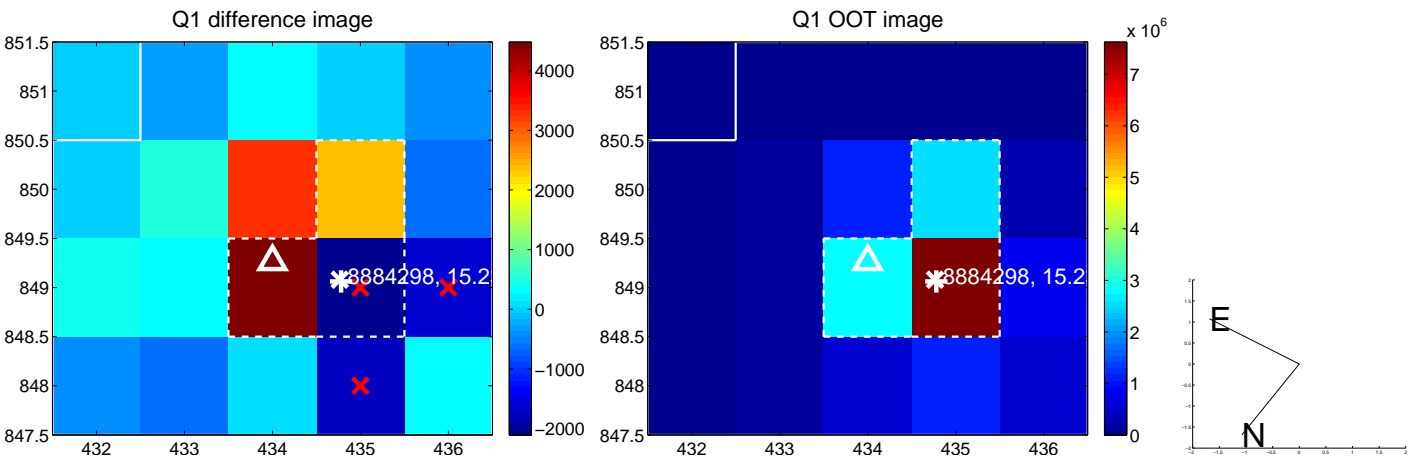
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|-------------------|--------------------|
| PRF-fit source offset from OOT | 3.172 ± 0.476 | 6.66 | 3.161 ± 0.285 | -0.264 ± 2.351 |
| PRF-fit source offset from KIC position | 3.069 ± 0.496 | 6.19 | 3.060 ± 0.309 | -0.234 ± 2.504 |
| photometric centroid source offset | 8.49 ± 4.46 | 1.90 | 8.15 ± 4.44 | 2.37 ± 4.61 |

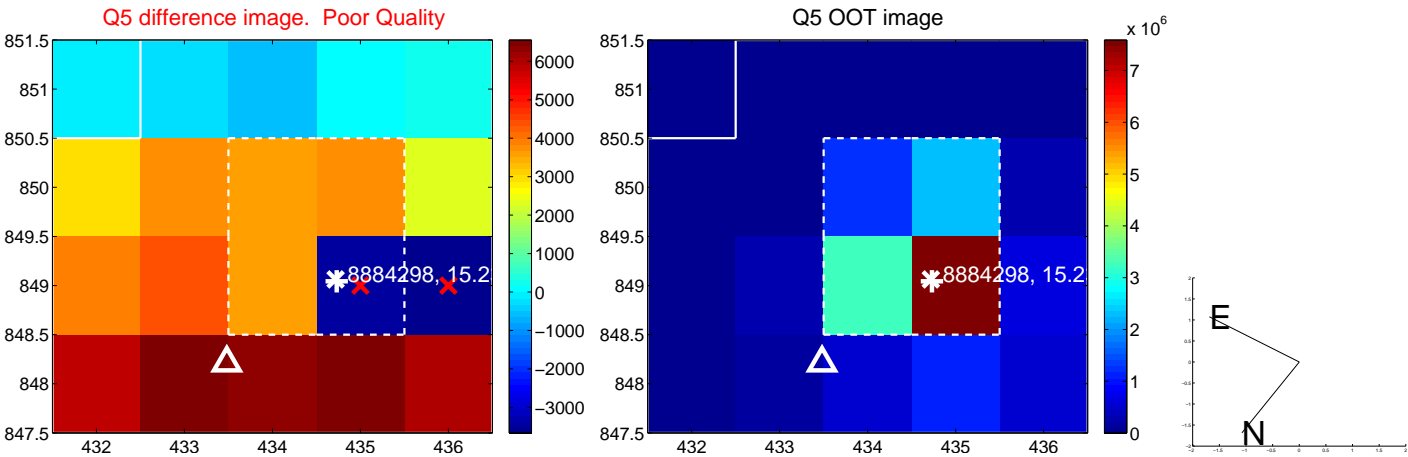


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

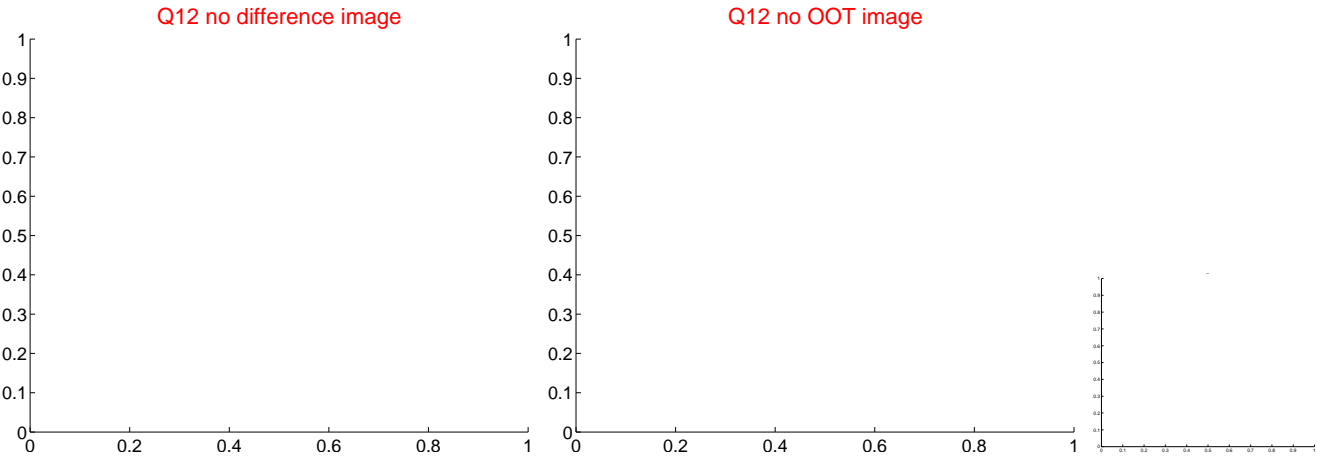
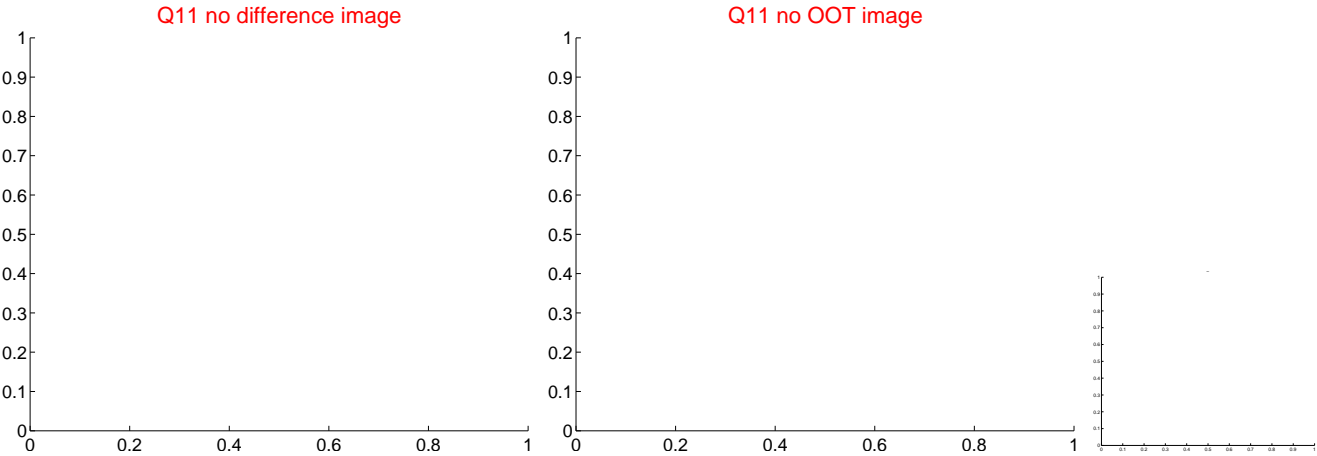
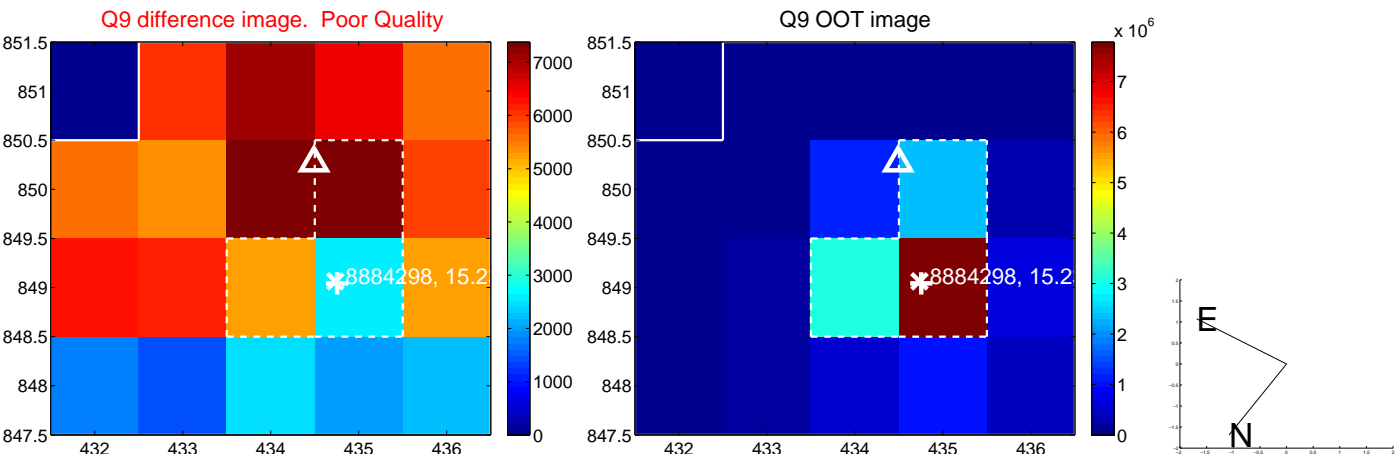
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



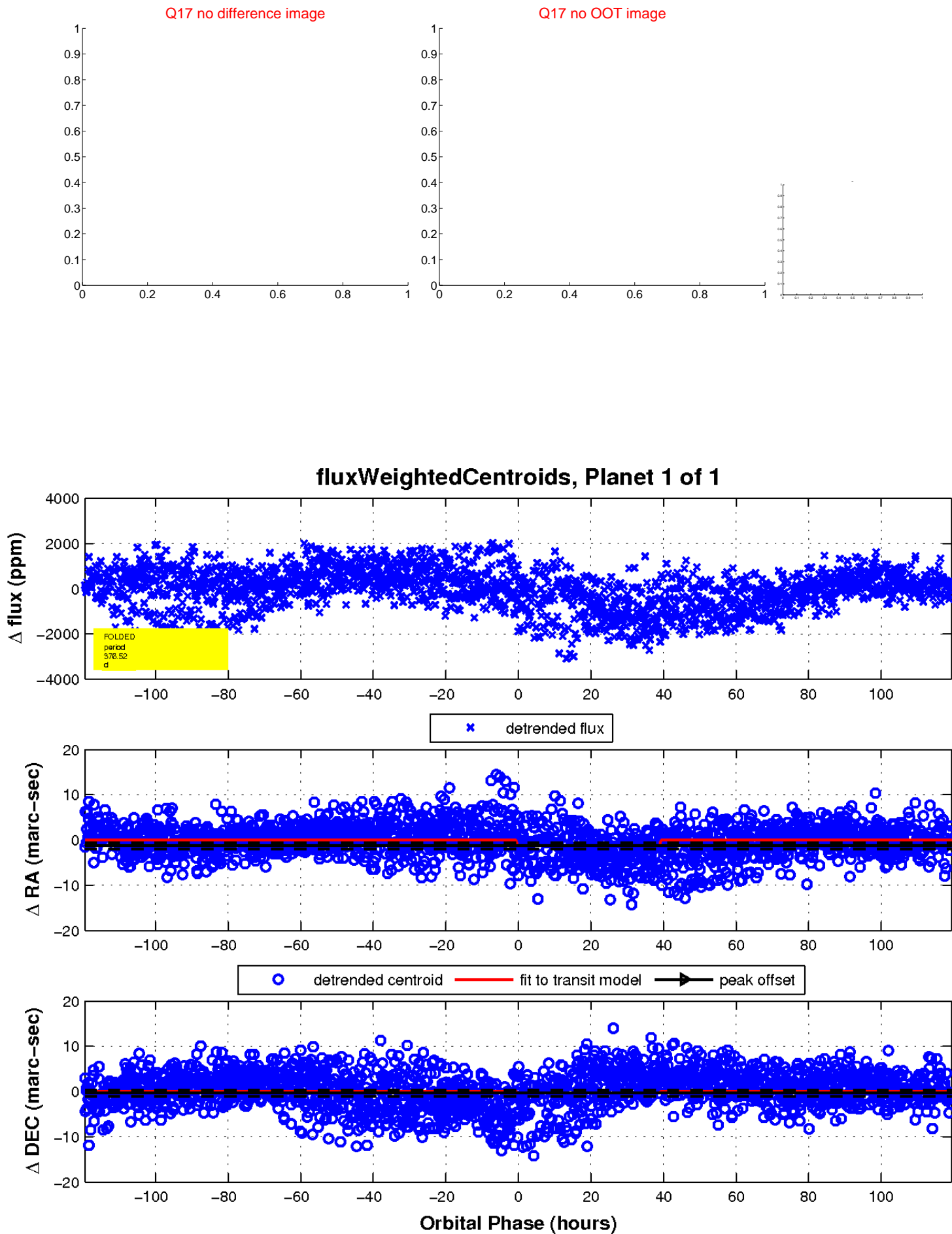
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

