

KIC 006062298

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|-----|------|-----------------------------|-----------------|------------------------|------------------------|
| 006062298-01 | OBS | No | 211.854978 | 336.144718 | 5176.5 | 32.859 | 7.7 | 10.1 | 1.00 | 5780 | 7.13 | 2.07 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|--|
| 006062298-01 | OBS | FP | 0.00 | 1 | 0 | 1 | 0 | MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST |

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 006062298-01

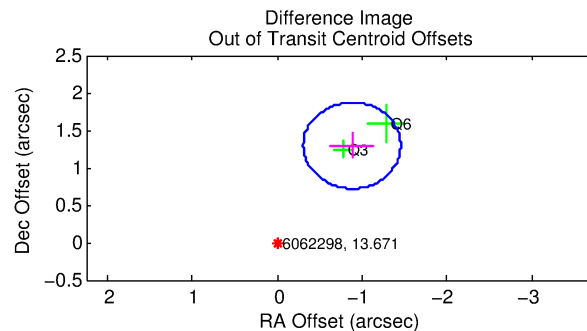
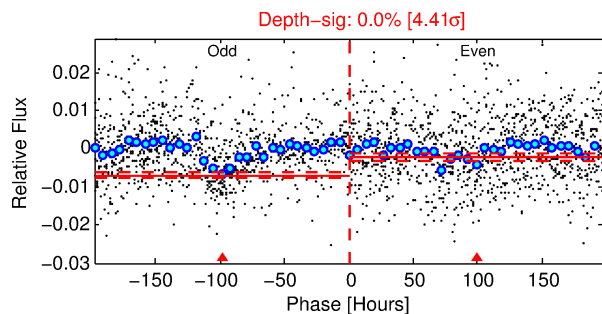
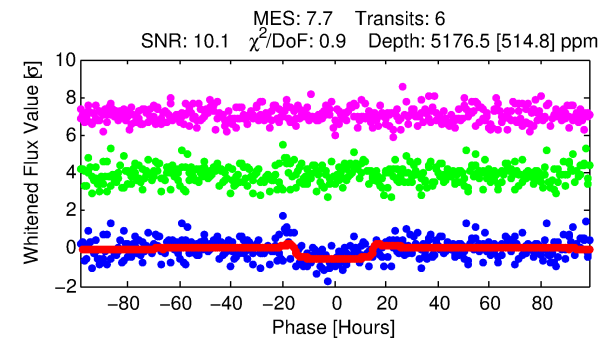
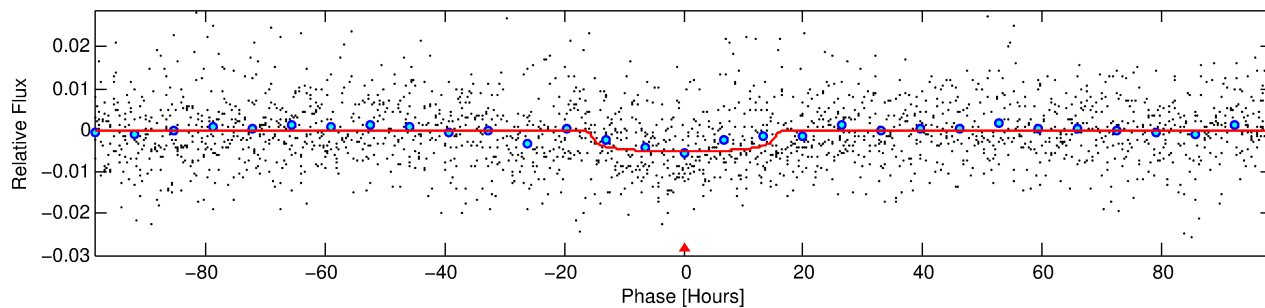
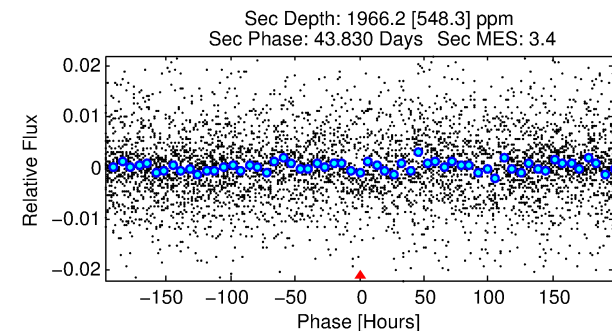
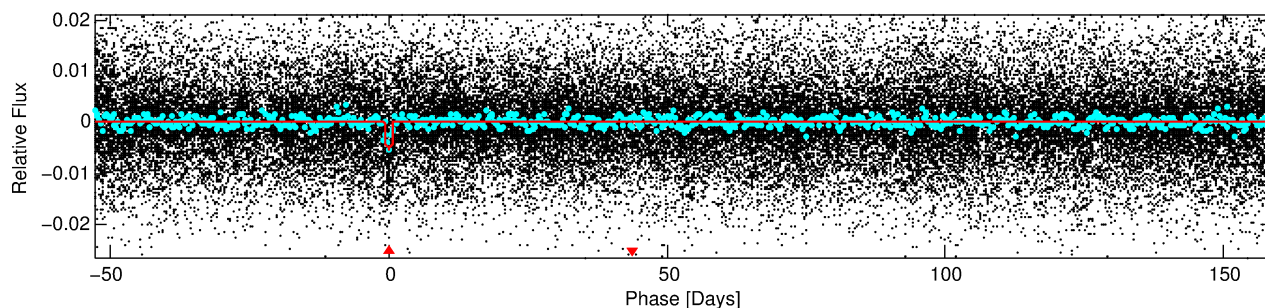
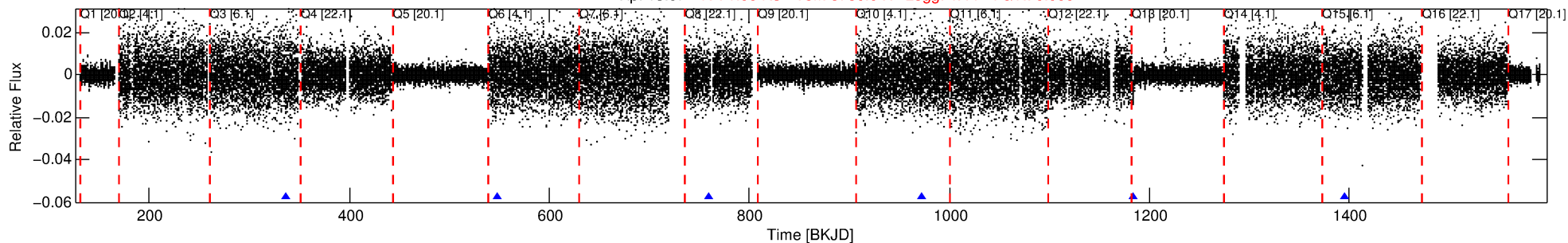
No Significant Match Found

DV One-Page Summary

KIC: 6062298 Candidate: 1 of 1 Period: 211.855 d

KOI: K05234 Corr: No Ephemeris Match

Kp: 13.67 R*: 1.00 Rs Teff: 5780.0 K Logg: 4.44 Fe/H: 0.000



DV Fit Results:

Period = 211.85498 [0.01422] d
Epoch = 336.1447 [0.0527] BKJD
Rp/R* = 0.0653 [0.0088]
a/R* = 52.12 [27.02]
b = 0.12 [4.14]
Seff = 2.07 [0.00]
Teq = 306 [0] K
Rp = 7.13 [0.96] Re
a = 0.6956 [0.0000] AU
Ag = 10300.48 [3983.99] [2.59σ]
Teffp = 4762 [460] K [9.68σ]

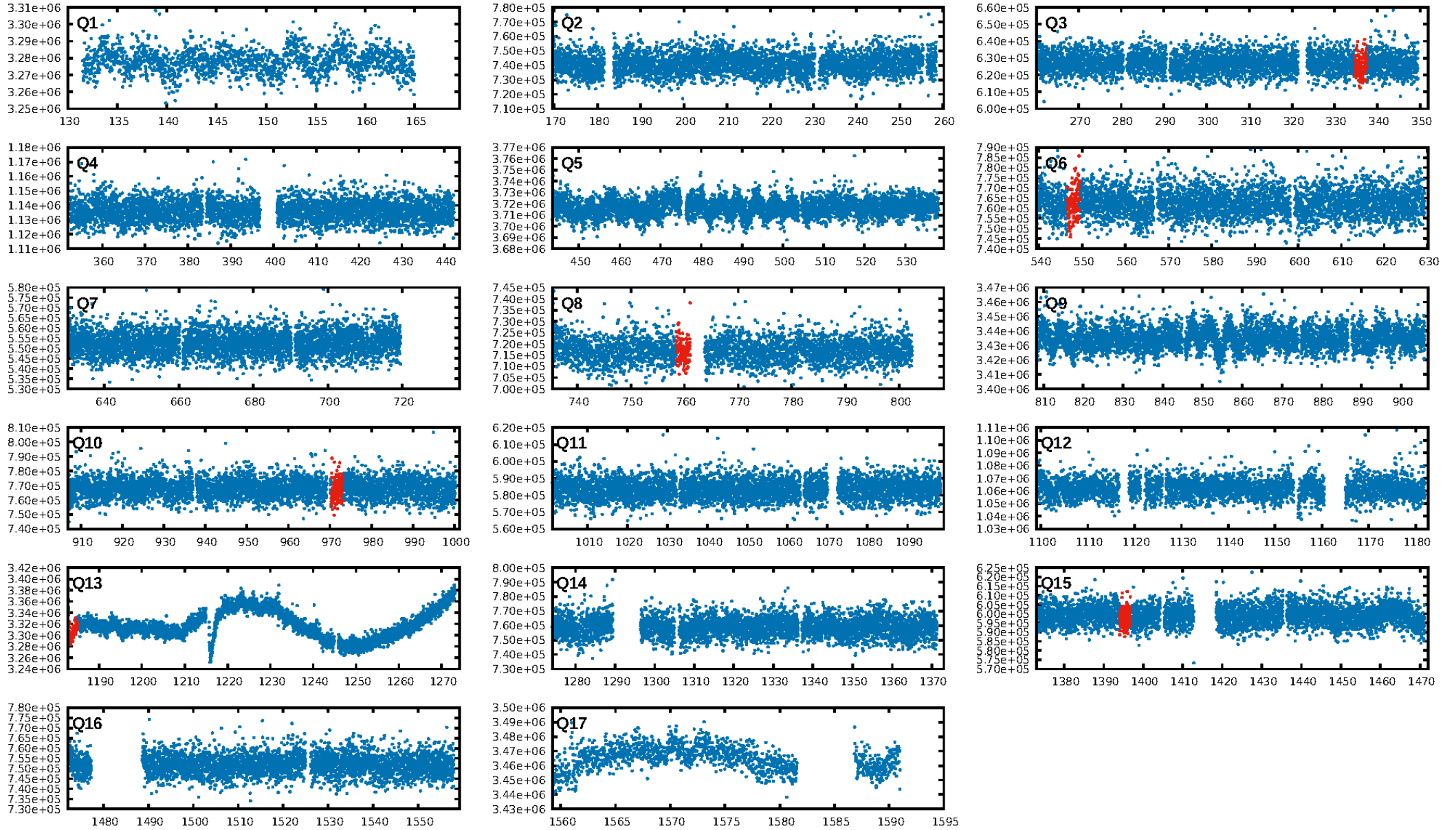
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.14e-17
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: 0.2208
Centroid-sig: 0.0%
Centroid-so: 7.189 arcsec [49.12σ]
OotOffset-rm: 1.568 arcsec [8.18σ]
KicOffset-rm: 10.016 arcsec [53.75σ]
OotOffset-st: 1/1/0/0 [2]
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

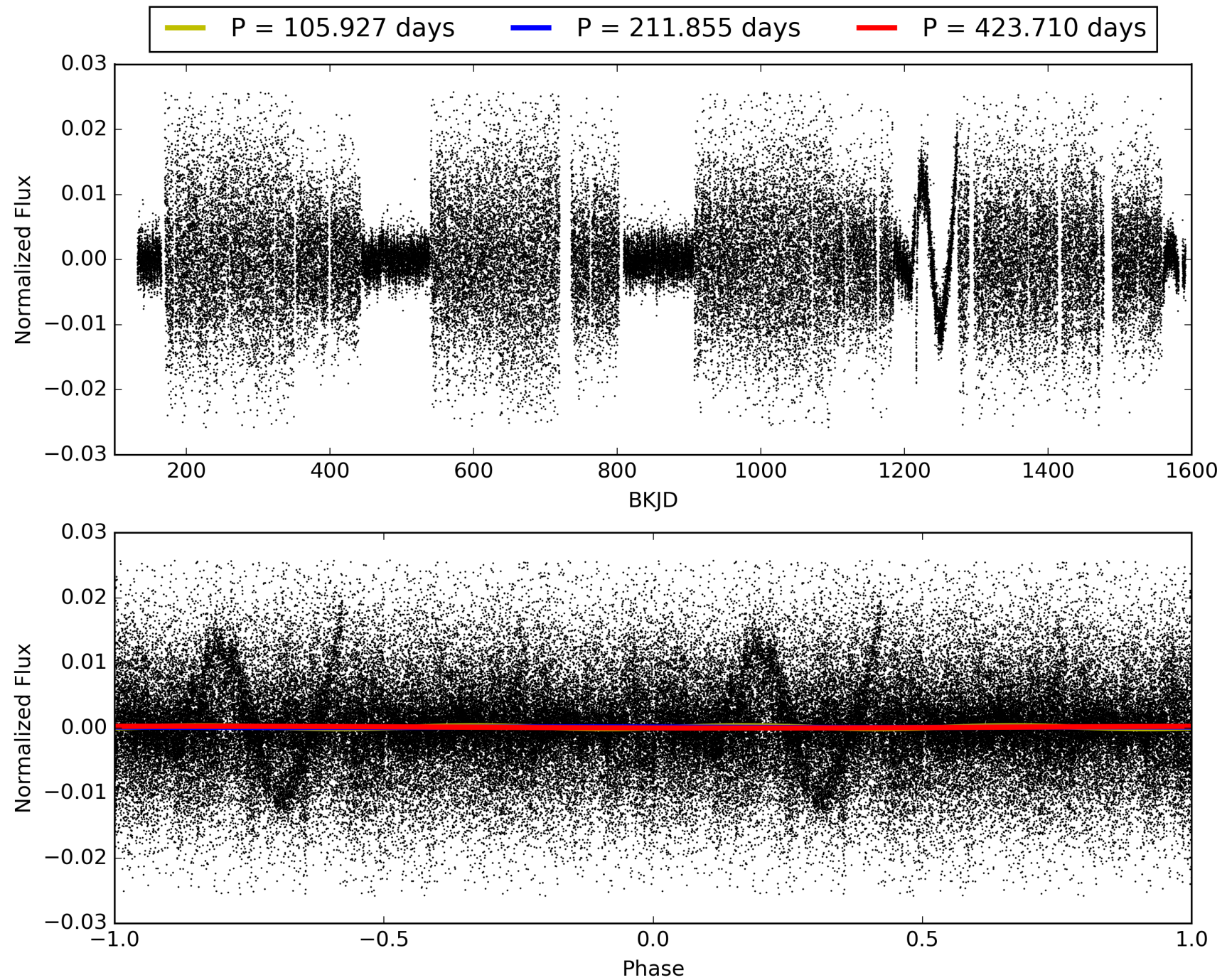
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 11:32:16 Z

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

TCE 006062298-01, PDC Light Curves

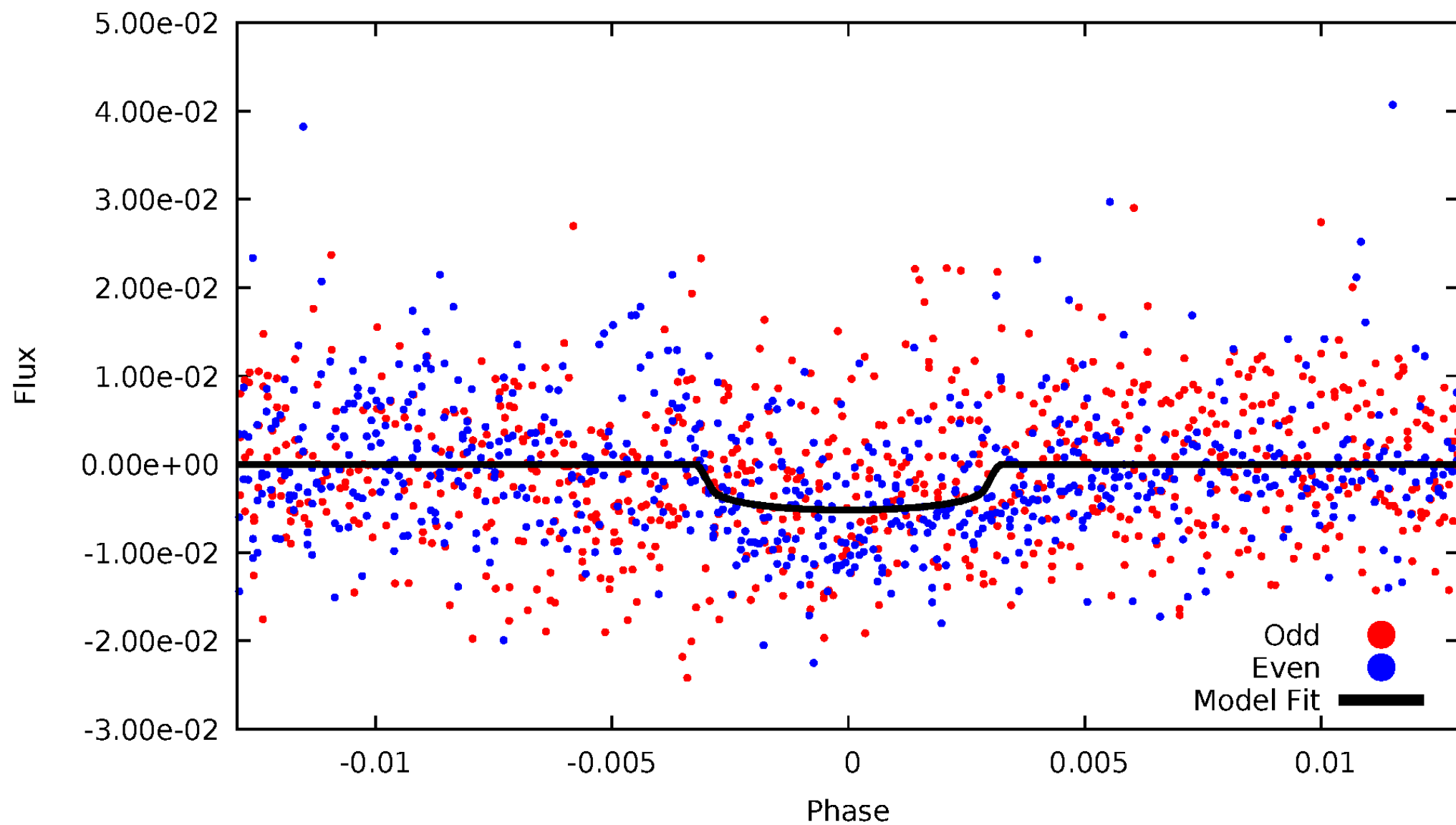


TCE 006062298-01



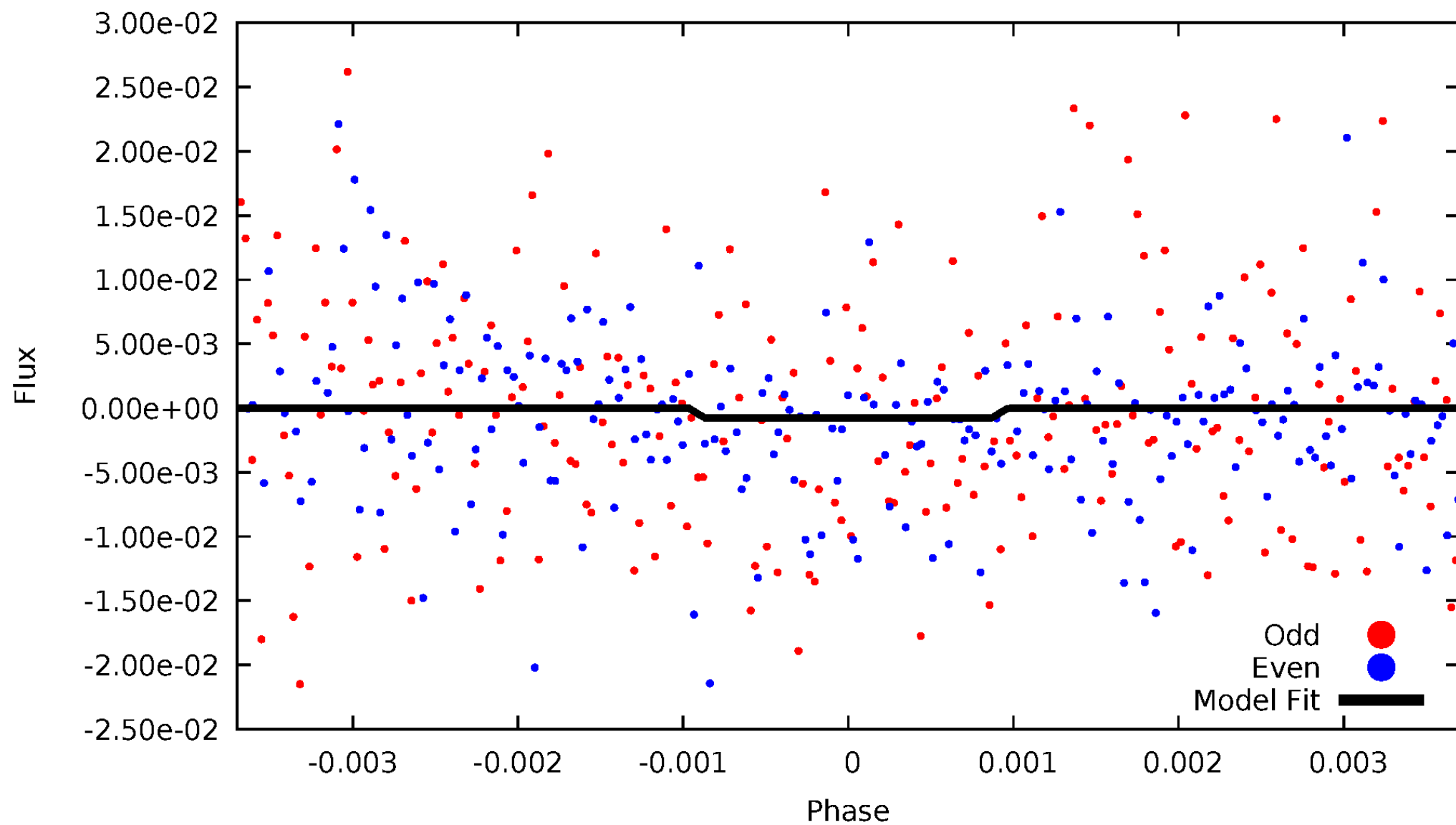
DV Odd/Even

TCE 006062298-01



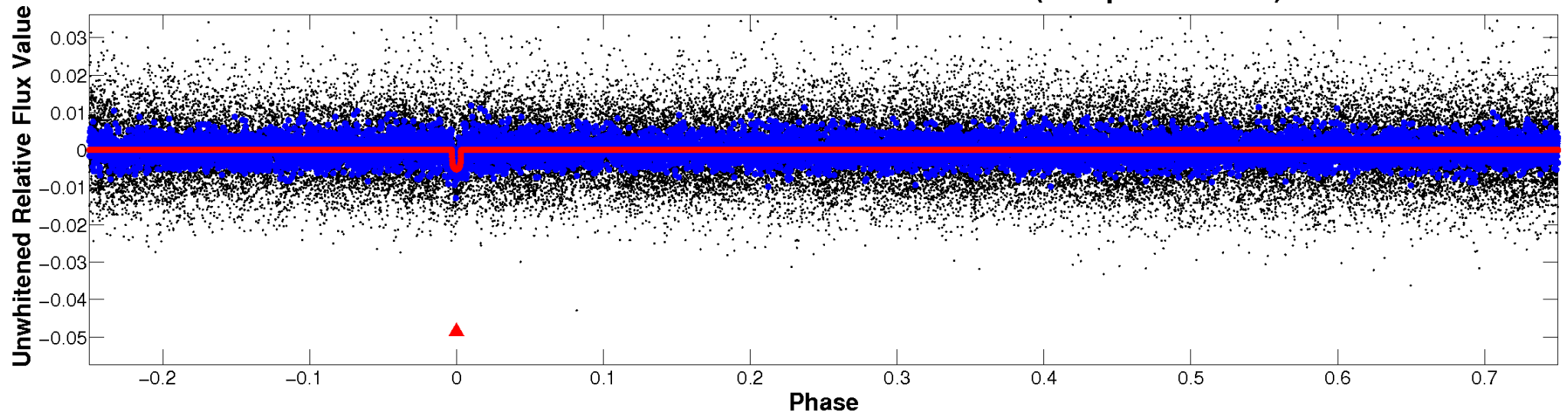
ALT Odd/Even

TCE 006062298-01

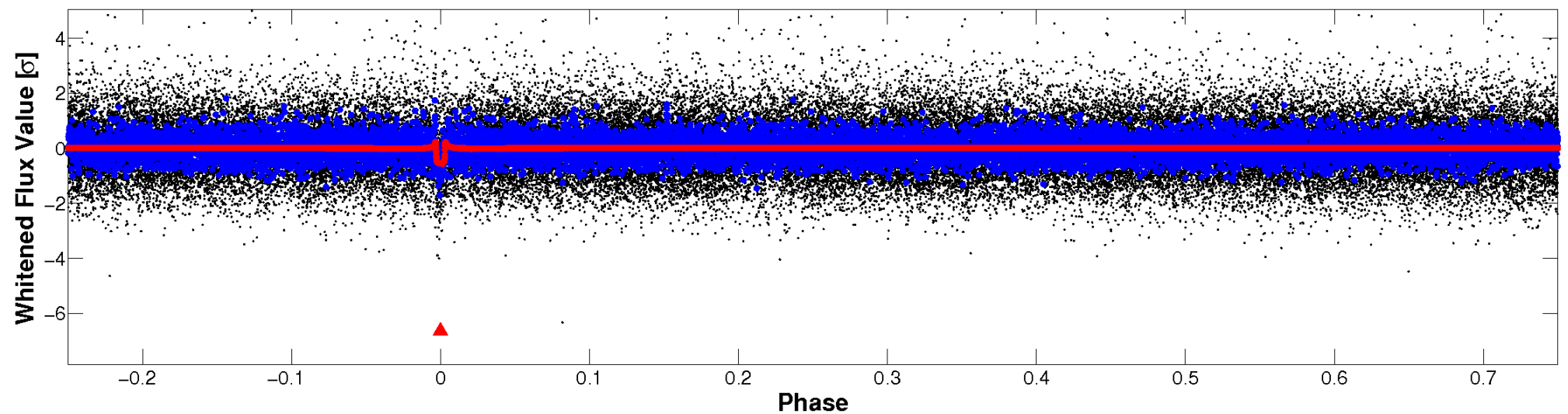


Non-Whitened Vs. Whitened Light Curve

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



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



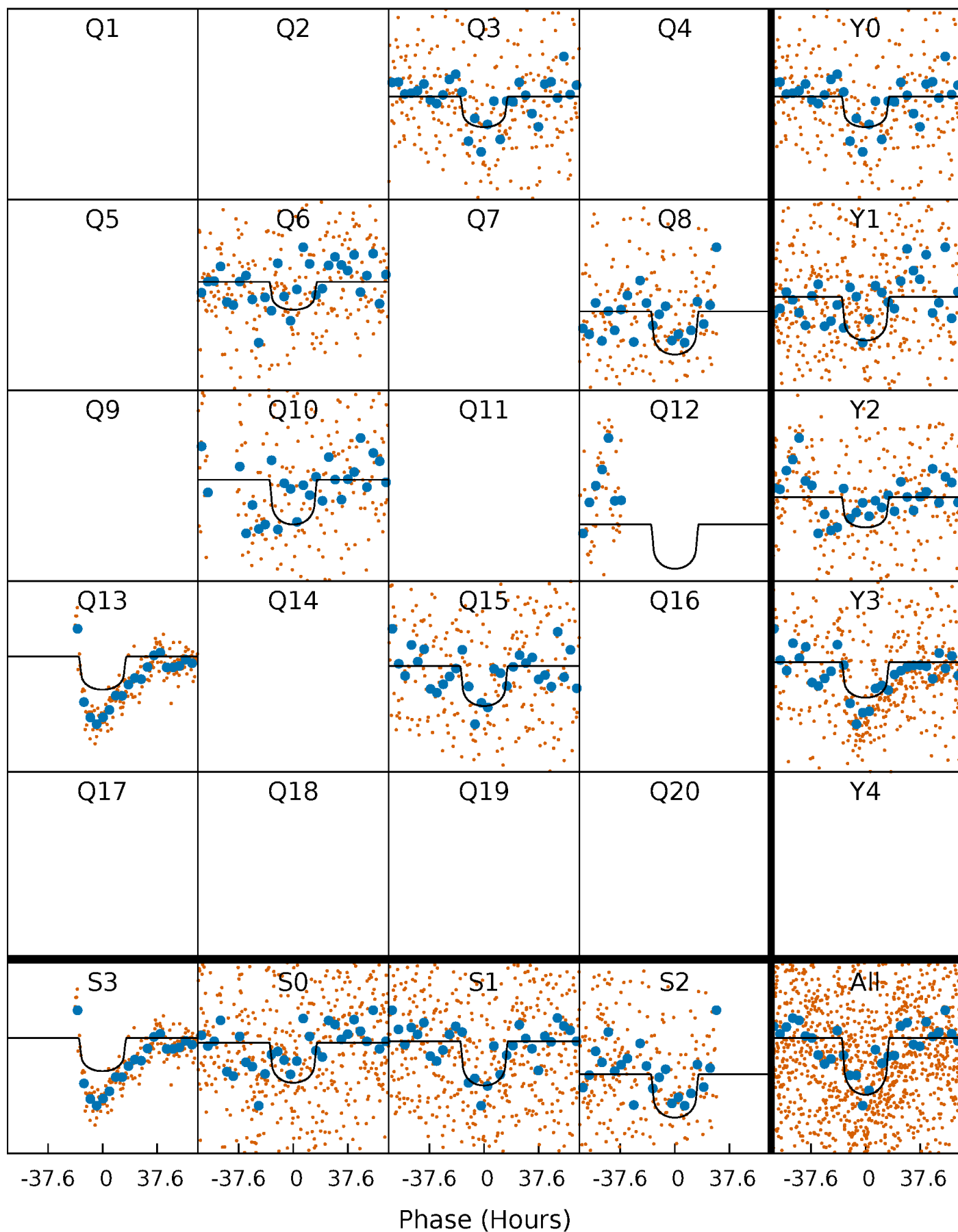
PDC Quarter-Phased Transit Curves

TCE 006062298-01 P=211.854978 Days $T_0=336.144718$ (BKJD)



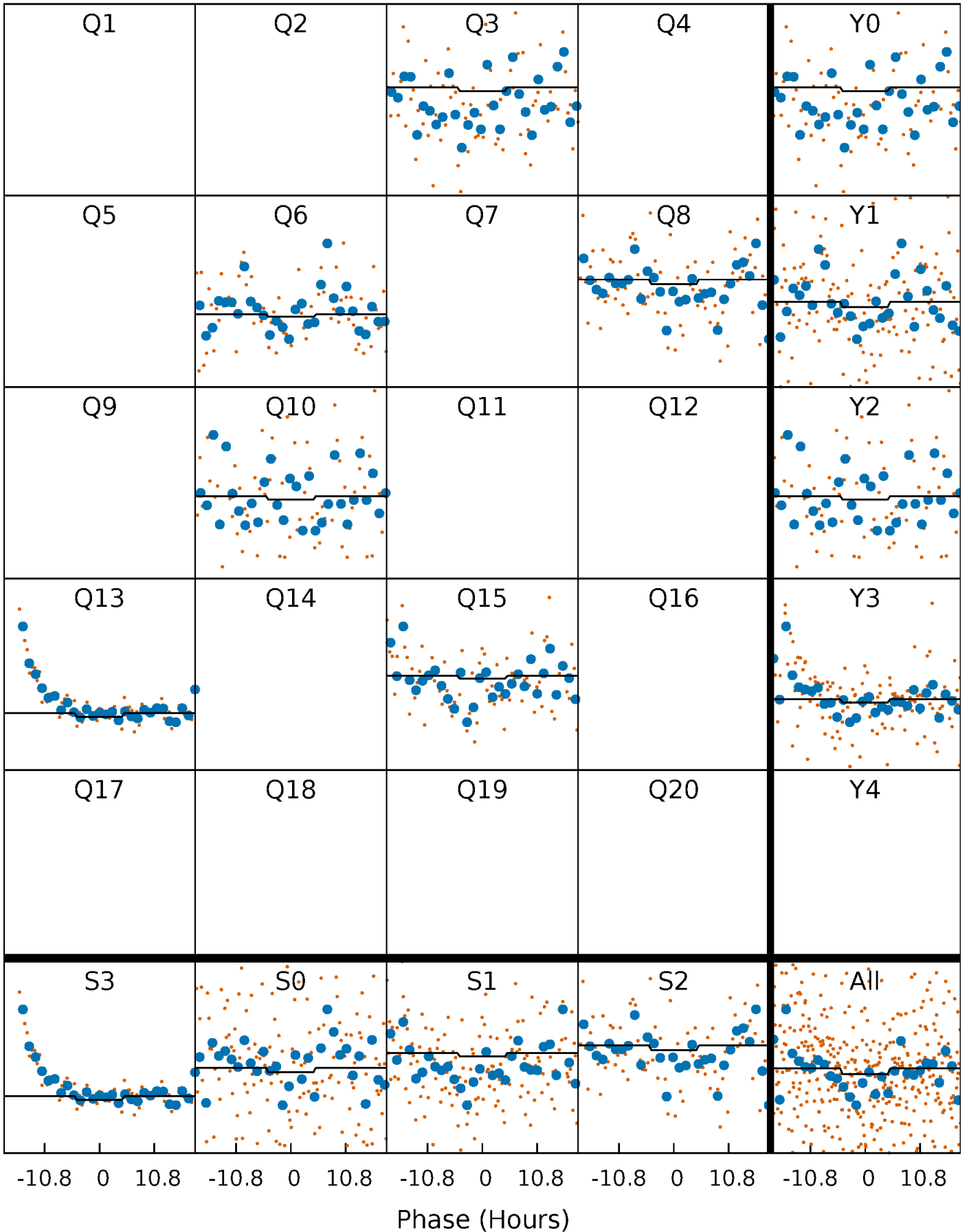
DV Quarter-Phased Transit Curves

TCE 006062298-01 P=211.854978 Days $T_0=336.144718$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

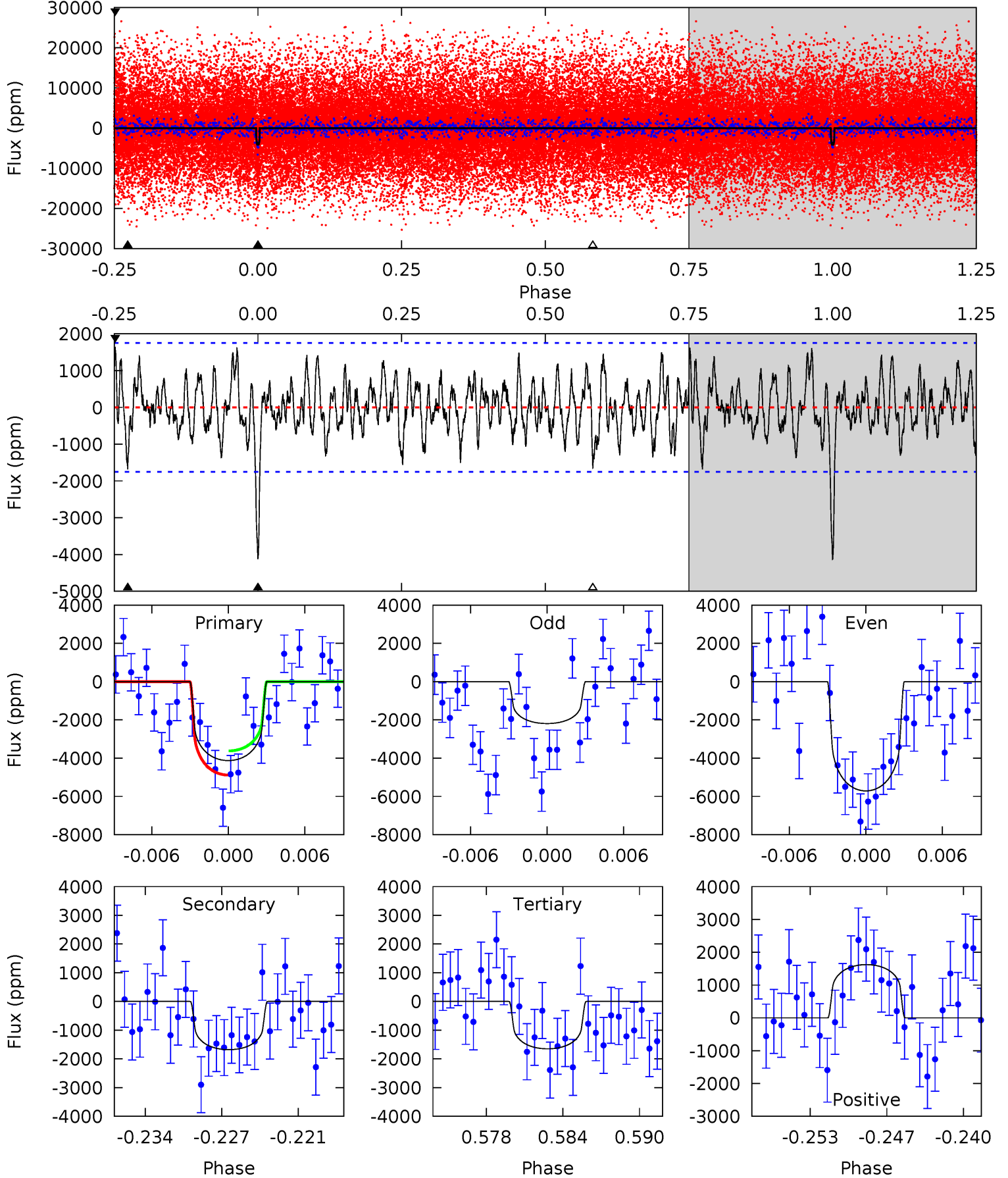
TCE 006062298-01 P=211.841528 Days $T_0=336.167315$ (BKJD)



DV Model-Shift Uniqueness Test

006062298-01, P = 211.854978 Days, E = 124.289740 Days

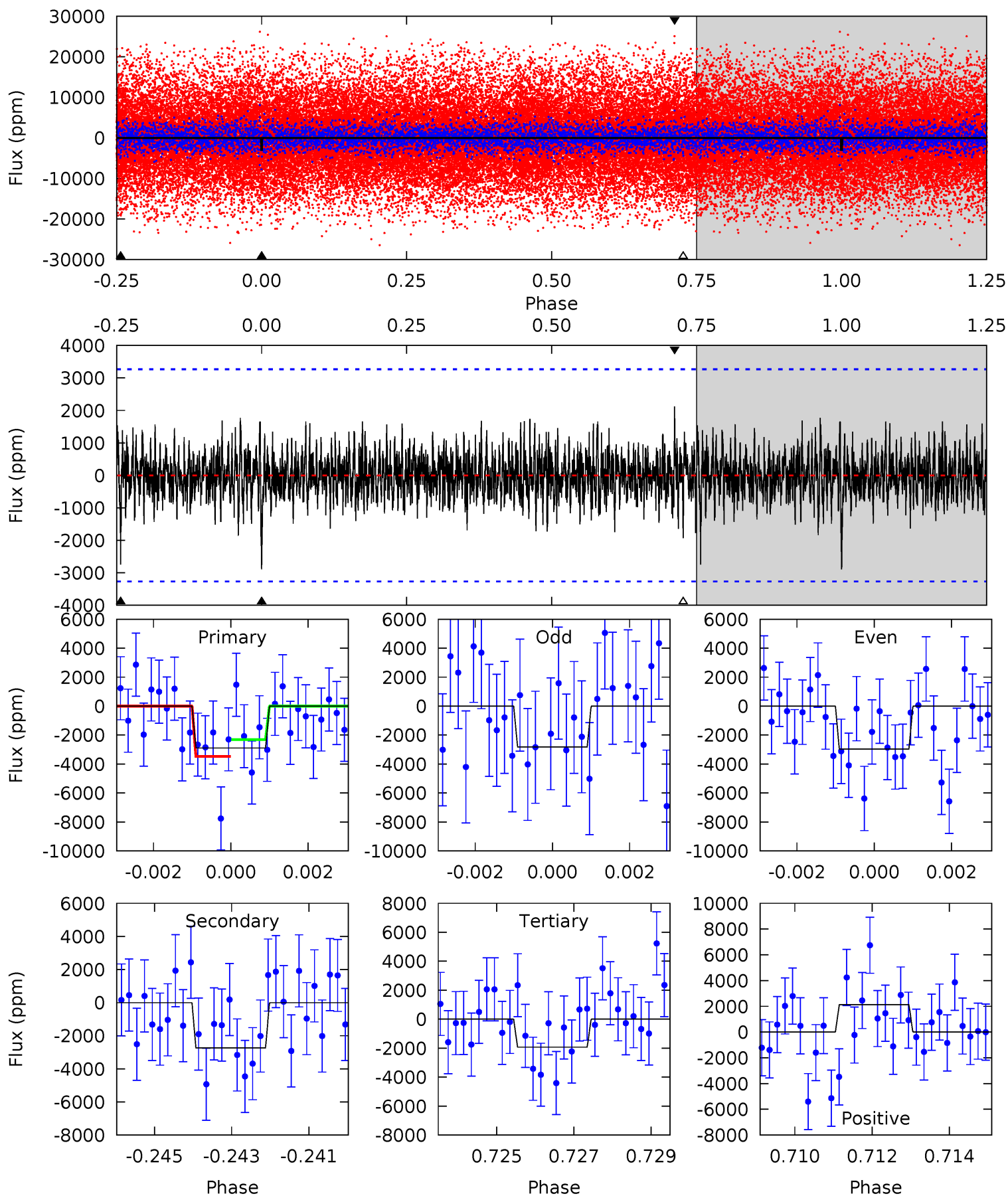
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 12.0 | 4.90 | 4.81 | 4.73 | 5.11 | 2.72 | 1.74 | 7.22 | 7.30 | 0.09 | 0.17 | 5.19 | 1.29 | 0.28 | 1.85 |



Alt Model-Shift Uniqueness Test

006062298-01, P = 211.841528 Days, E = 124.325787 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 4.72 | 4.47 | 3.14 | 3.46 | 5.33 | 3.10 | 0.91 | 1.58 | 1.26 | 1.33 | 1.01 | 0.13 | 1.14 | 0.42 | 0.95 |



Stellar Parameters For KIC 006062298

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | $R (R_{\odot})$ | $M(M_{\odot})$ | $p_{\star} (\text{g}\cdot\text{cm}^{-3})$ |
|--------|---------------------|---------------------------|---------------------------|---------------------------|----------------------------|---|
| | 5780^{+1}_{-1} | $4.438^{+1.000}_{-1.000}$ | $0.000^{+1.000}_{-1.000}$ | $1.000^{+1.000}_{-1.000}$ | $-1.000^{+1.000}_{-1.000}$ | $-1.000^{+1.000}_{-1.000}$ |
| | +0%/-0% | +23%/-23% | +inf%/-inf% | +100%/-100% | +100%/-100% | +100%/-100% |
| Source | Solar | Solar | Solar | Solar | | |

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

Secondary Eclipse Parameters for KIC 006062298-01 / KOI

| Detrend | Depth (ppm) | $R_p (R_{\oplus})$ | $T_{max} (K)$ | $T_{obs} (K)$ | A_{obs} |
|---------|-----------------|------------------------|-------------------|------------------------|---------------------------|
| DV | -1680 ± 343 | $7.15^{+1.06}_{-1.12}$ | 428^{+22}_{-21} | 4719^{+377}_{-310} | 8728^{+3992}_{-2430} |
| Alt. | -2740 ± 613 | $3.04^{+0.99}_{-0.98}$ | 427^{+21}_{-18} | 8146^{+2718}_{-1350} | 77650^{+97290}_{-35417} |

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

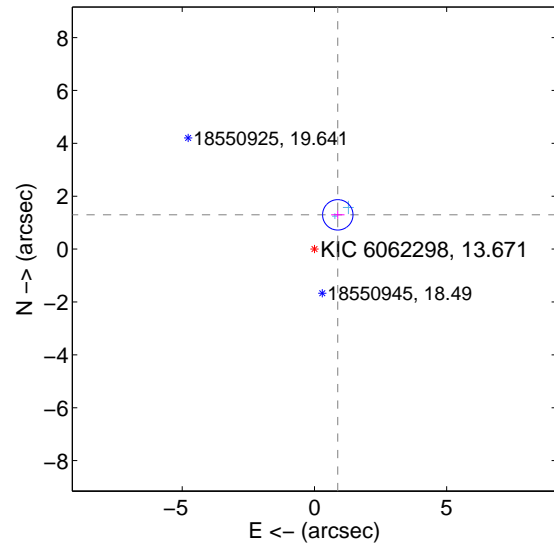
Supplemental centroid analysis for 006062298-01. Kepler magnitude: 13.67. Transit SNR 10.10

There are 2 quarters with good PRF difference image offsets

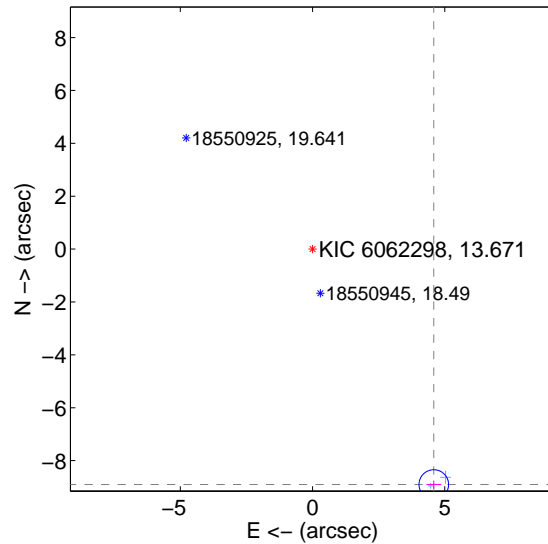
The OOT PRF centroid is offset from the target star catalog position by about 10.87 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|--------------------|--------------------|
| PRF-fit source offset from OOT | 1.568 ± 0.192 | 8.18 | -0.883 ± 0.253 | 1.296 ± 0.155 |
| PRF-fit source offset from KIC position | 10.016 ± 0.186 | 53.75 | -4.587 ± 0.278 | -8.904 ± 0.153 |
| photometric centroid source offset | 7.19 ± 0.15 | 49.12 | -1.94 ± 0.08 | -6.92 ± 0.15 |

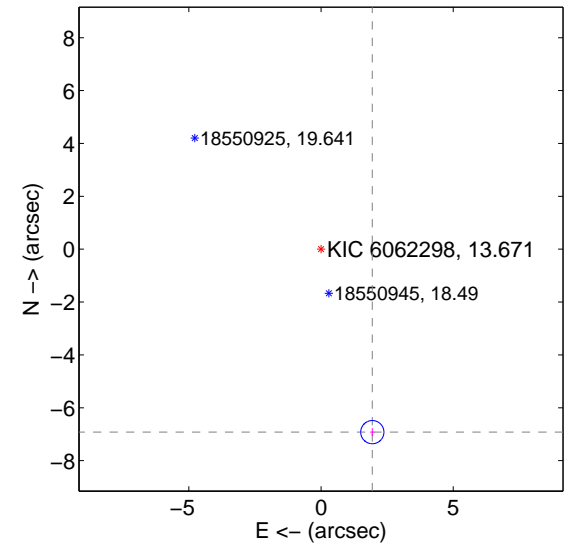
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids



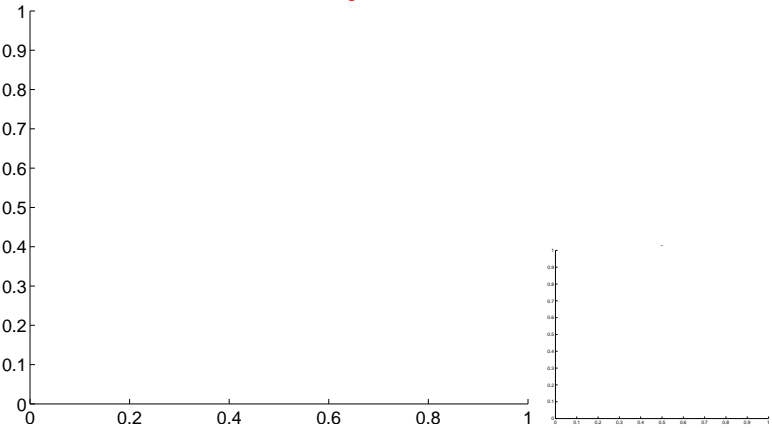
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

Q1 no difference image



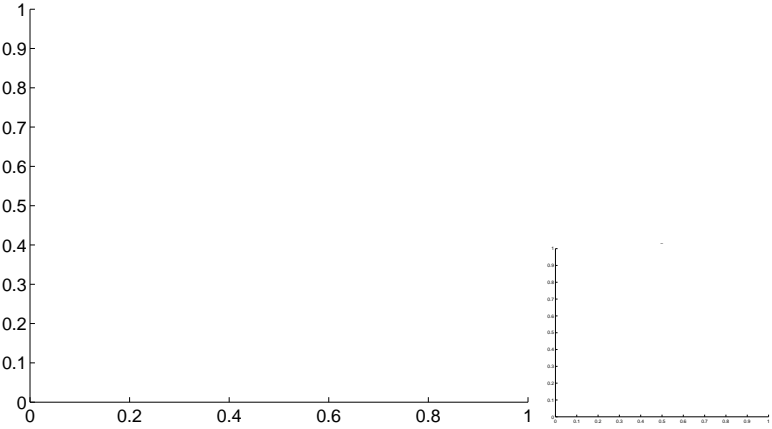
Q1 no OOT image



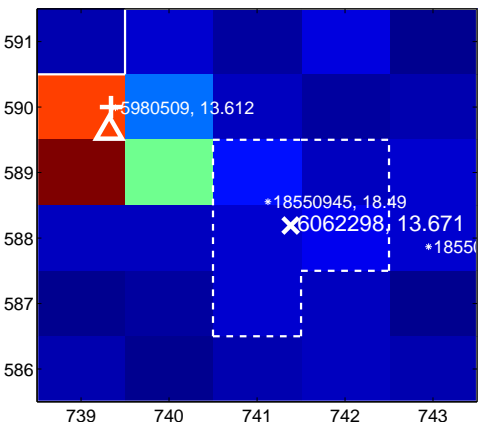
Q2 no difference image



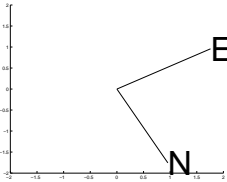
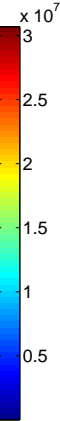
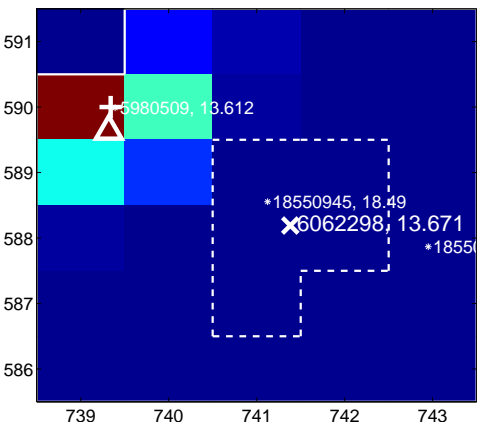
Q2 no OOT image



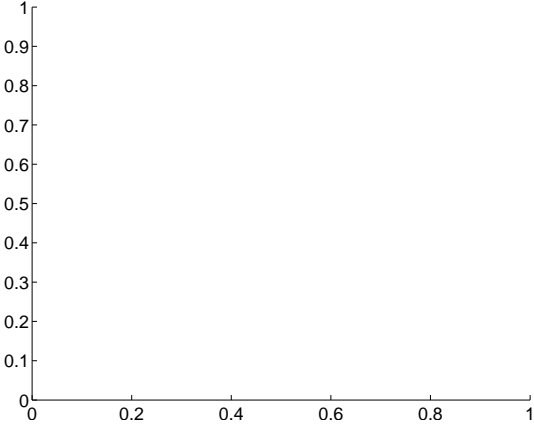
Q3 difference image



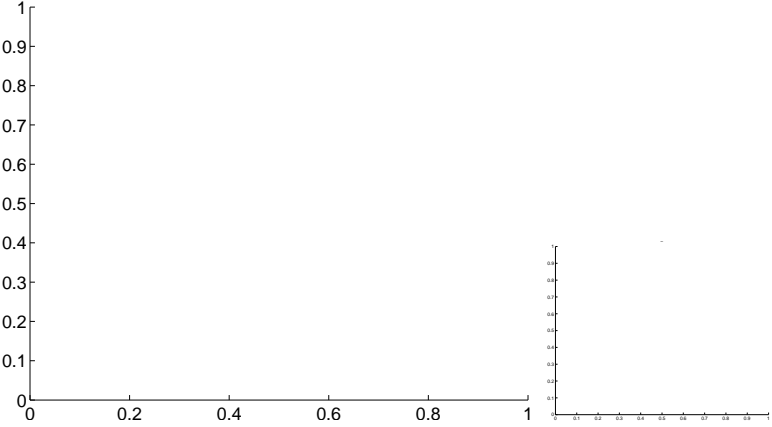
Q3 OOT image



Q4 no difference image



Q4 no OOT image

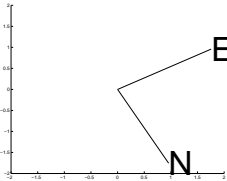
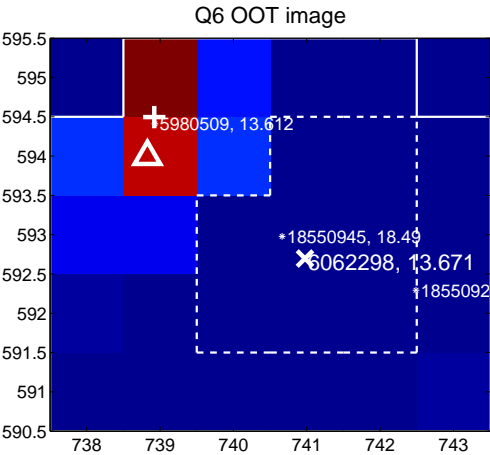
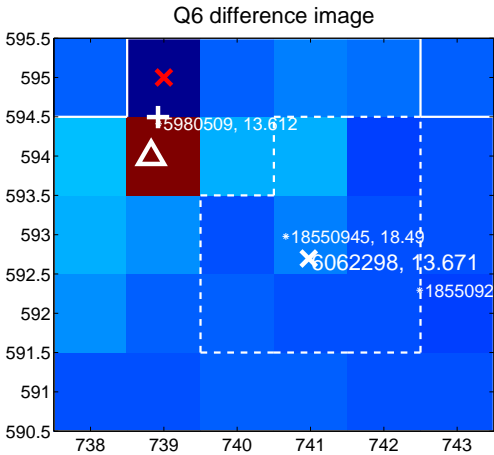


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

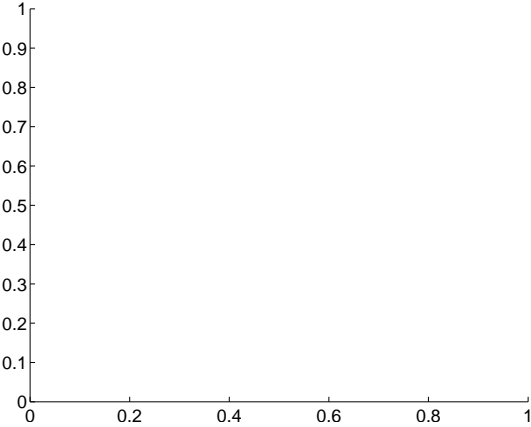
Q5 no difference image



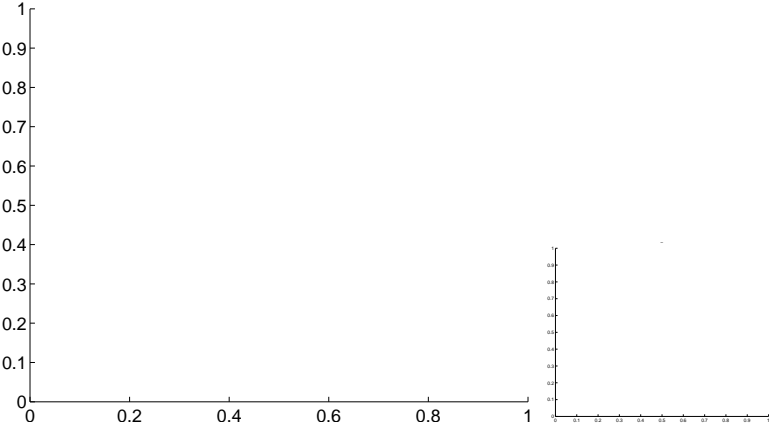
Q5 no OOT image



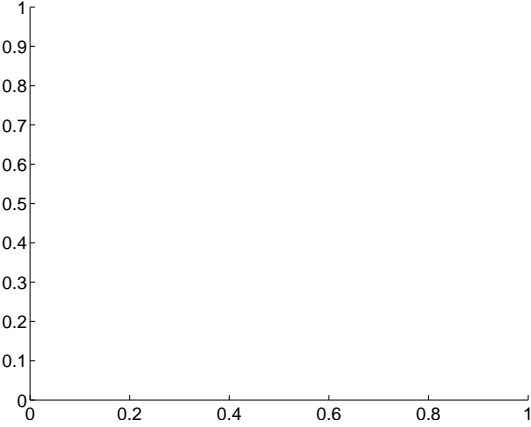
Q7 no difference image



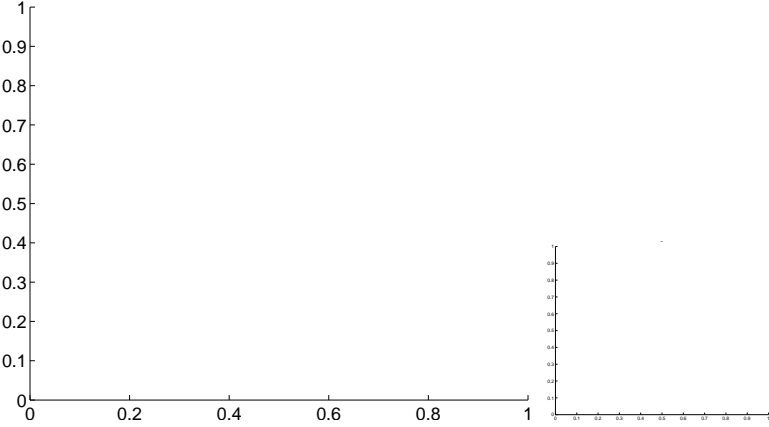
Q7 no OOT image



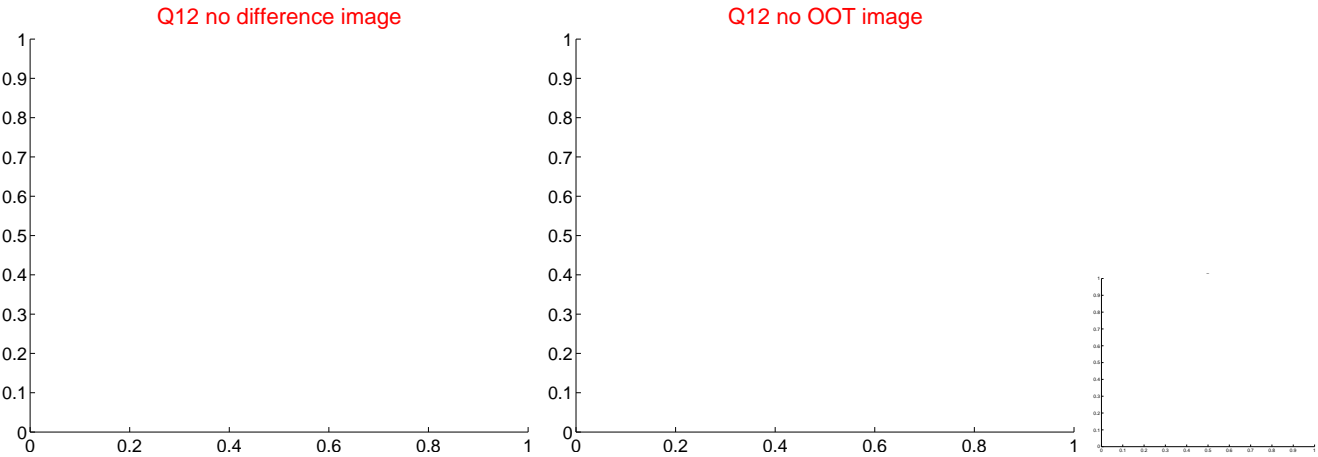
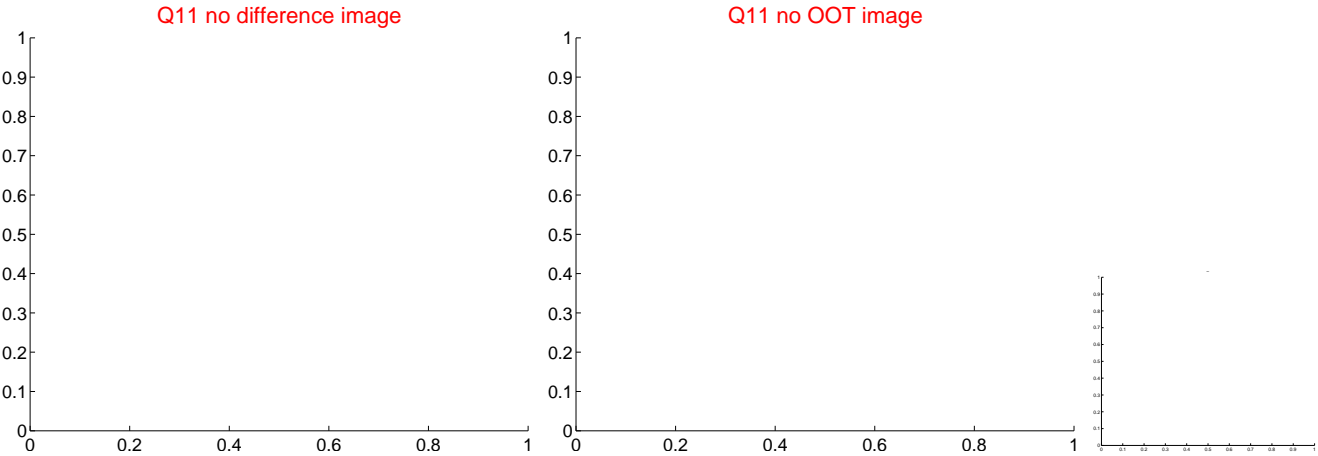
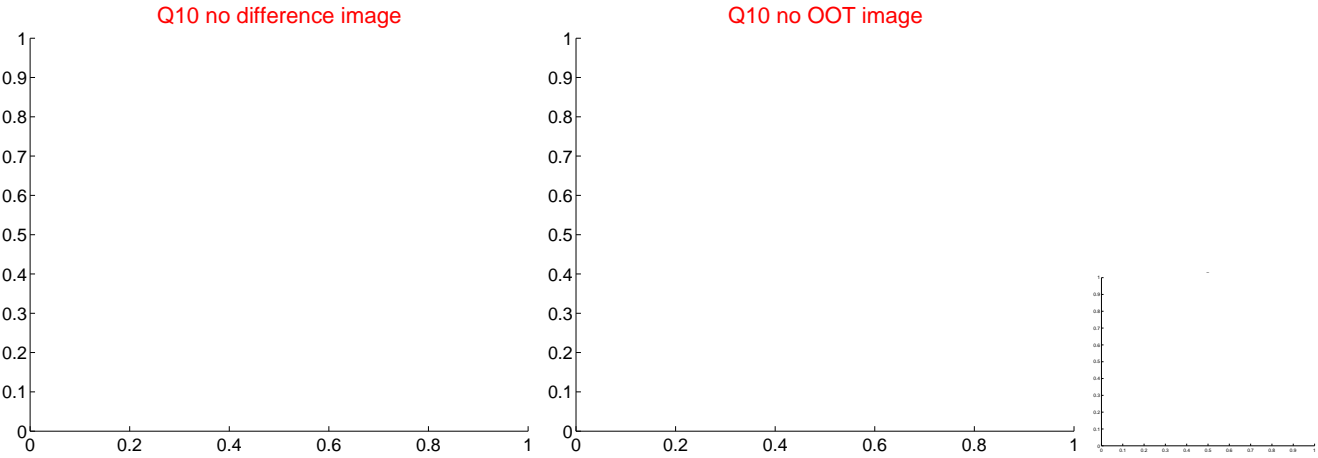
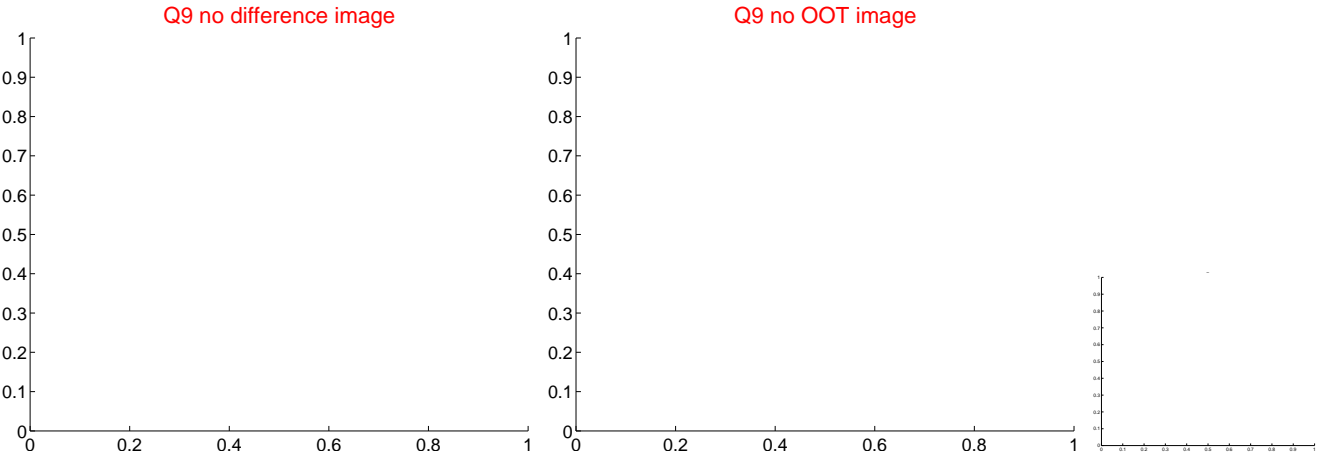
Q8 no difference image



Q8 no OOT image



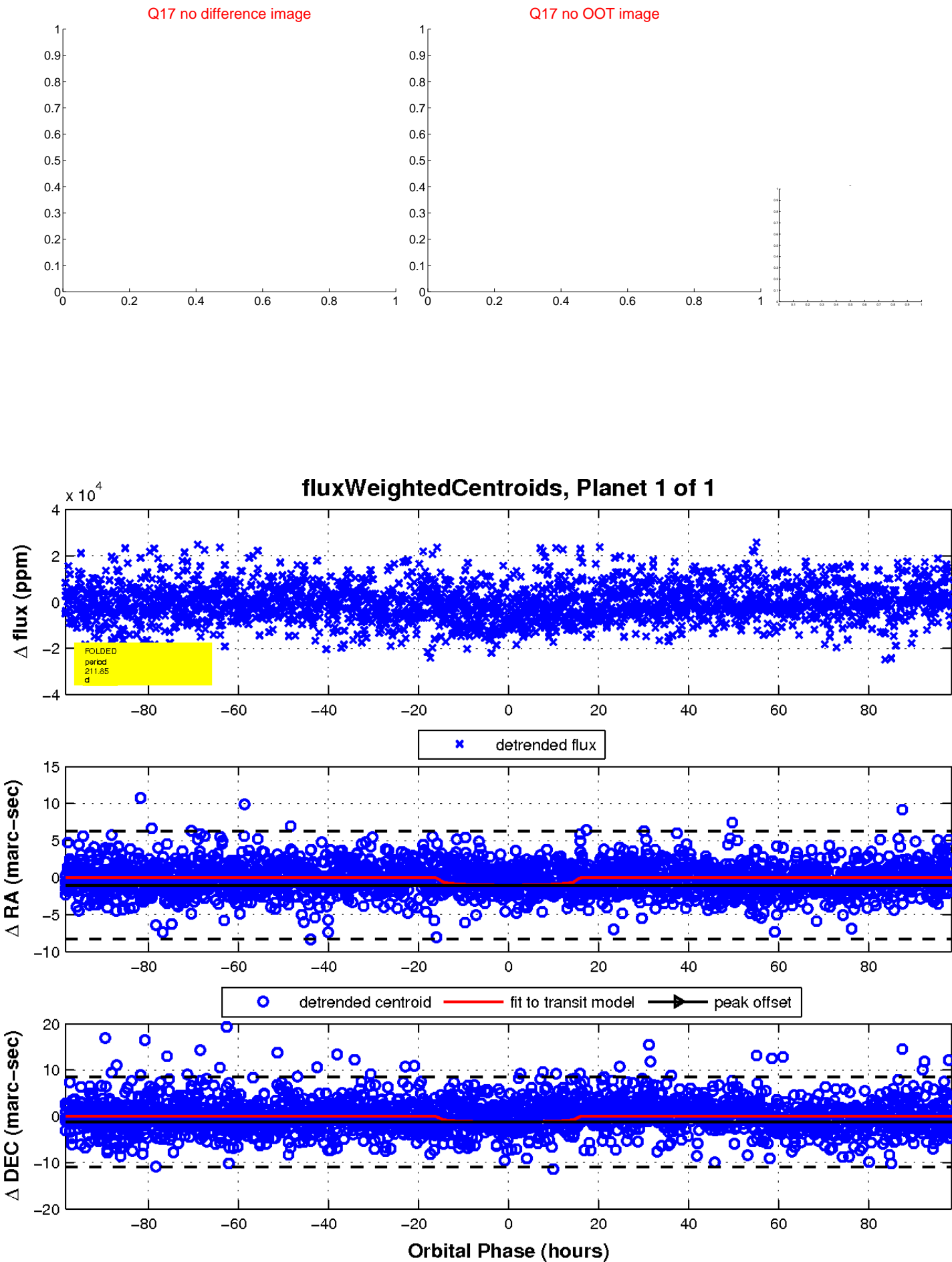
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

