

KIC 005529680

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|------|------|-----------------------------|-----------------|------------------------|------------------------|
| 005529680-01 | OBS | No | 463.101112 | 404.308602 | 909.8 | 11.152 | 12.7 | 12.3 | 0.89 | 5919 | 2.73 | 0.65 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|--|
| 005529680-01 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_CHASES_MARSHALL_SKYE—INCONSISTENT_TRANS—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.

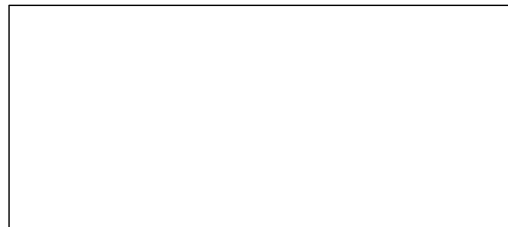
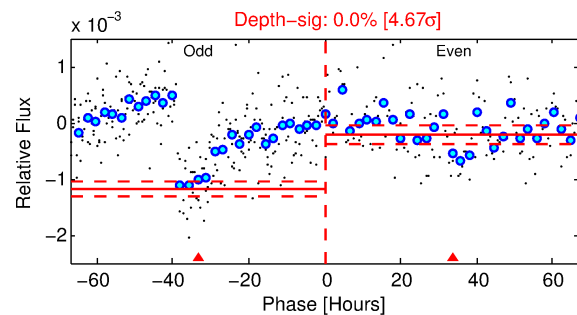
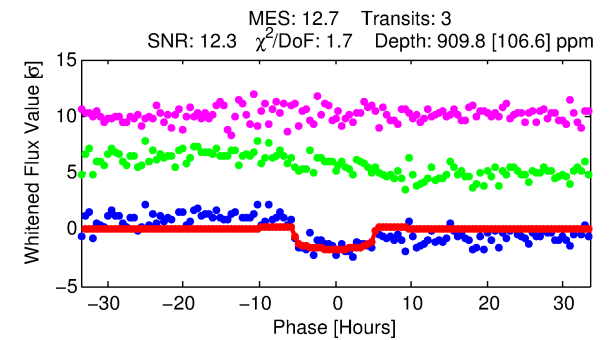
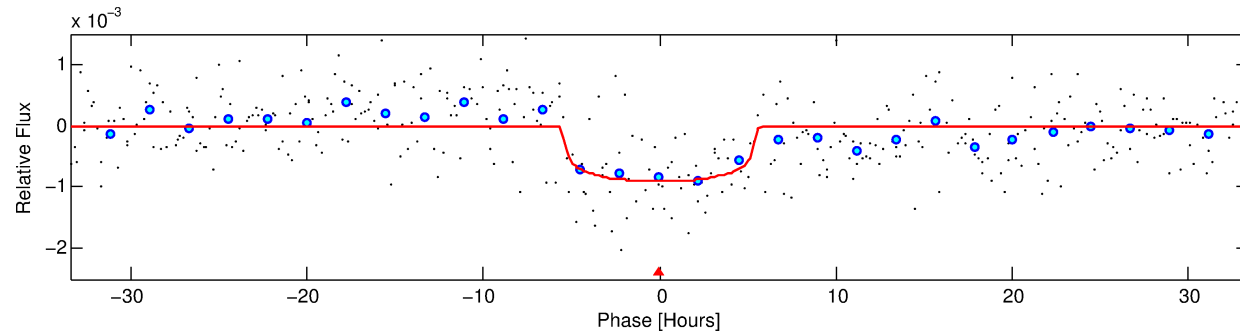
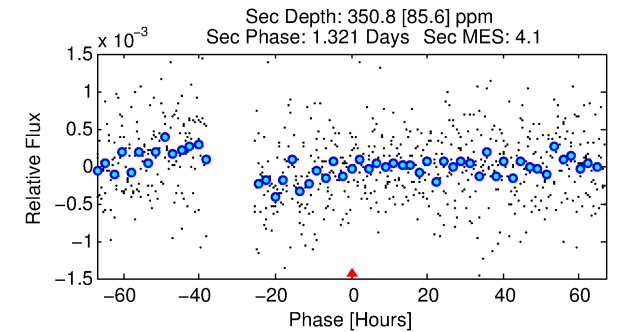
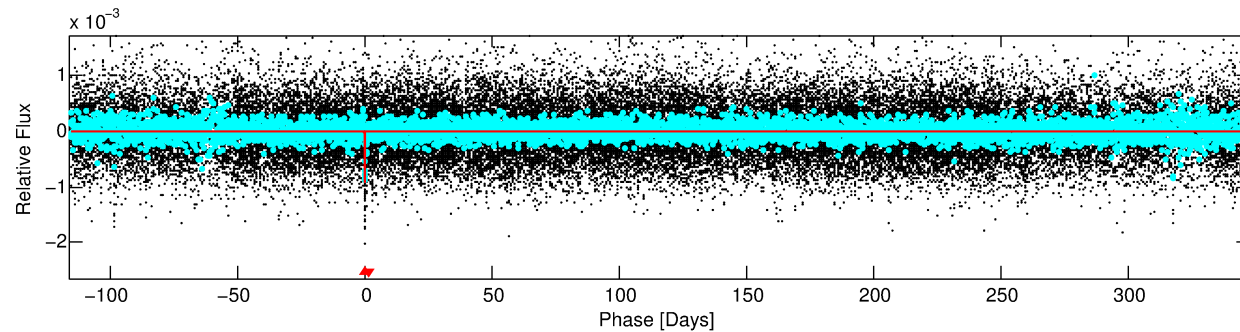
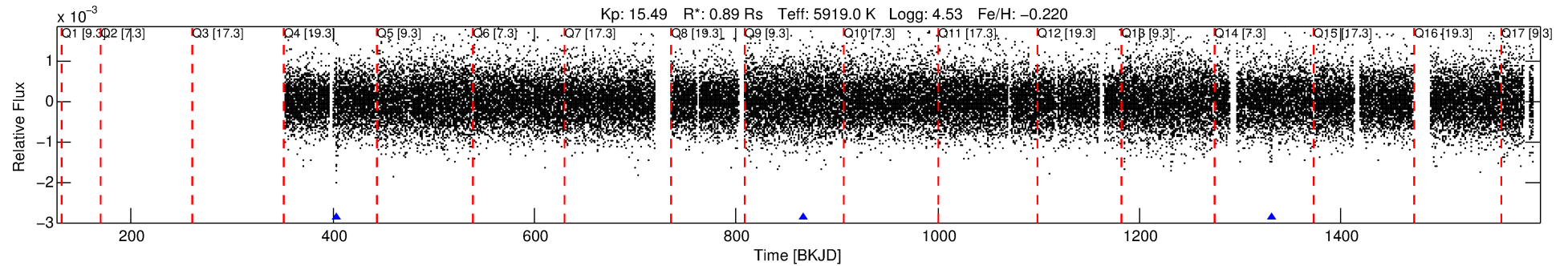
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005529680-01

No Significant Match Found

DV One-Page Summary

KIC: 5529680 Candidate: 1 of 1 Period: 463.101 d



DV Fit Results:

Period = 463.10111 [0.01260] d
Epoch = 404.3086 [0.0163] BKJD
Rp/R* = 0.0282 [0.0180]
a/R* = 292.12 [870.37]
b = 0.46 [5.18]
Seff = 0.65 [0.26]
Teq = 229 [23] K
Rp = 2.73 [1.93] Re
a = 1.1581 [0.3011] AU
Ag = 34763.65 [47015.40] [0.74σ]
Teffp = 4824 [1575] K [2.92σ]

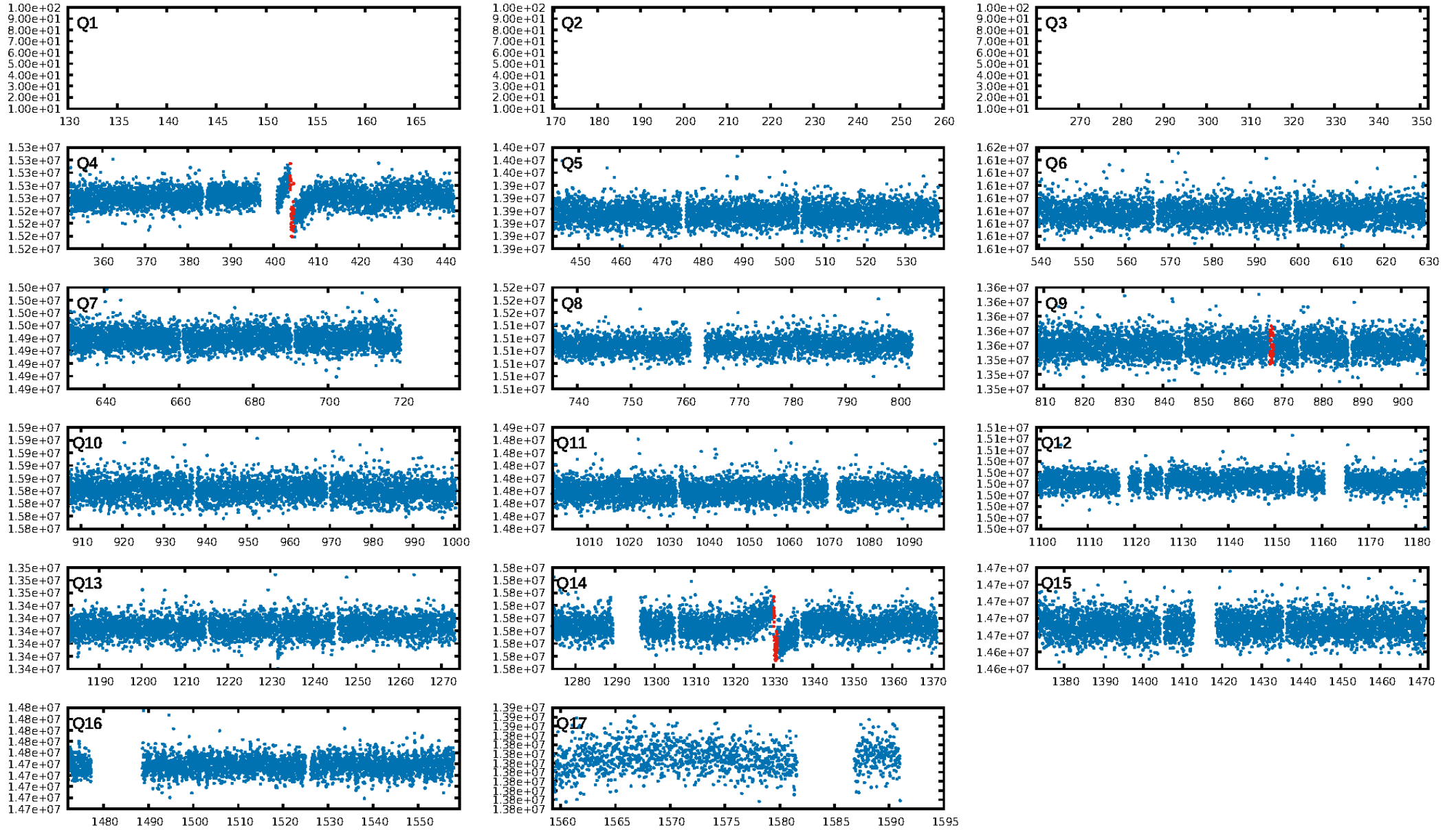
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGoF-sig: 51.2%
Bootstrap-pfa: 1.60e-18
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 36.49
Centroid-sig: 0.0%
Centroid-so: 3.828 arcsec [3.23σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [3/3]

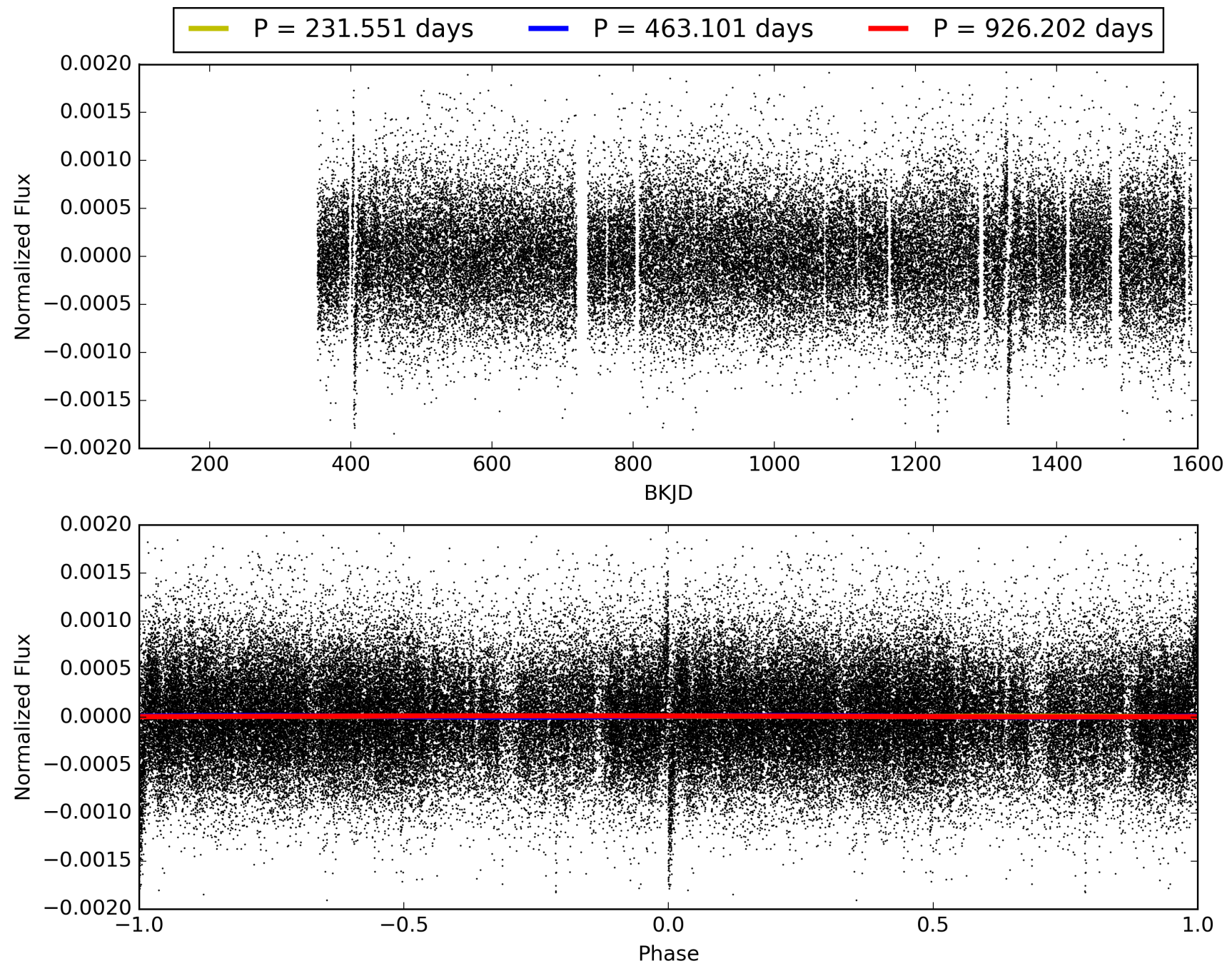
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 02:53:44 Z

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

TCE 005529680-01, PDC Light Curves

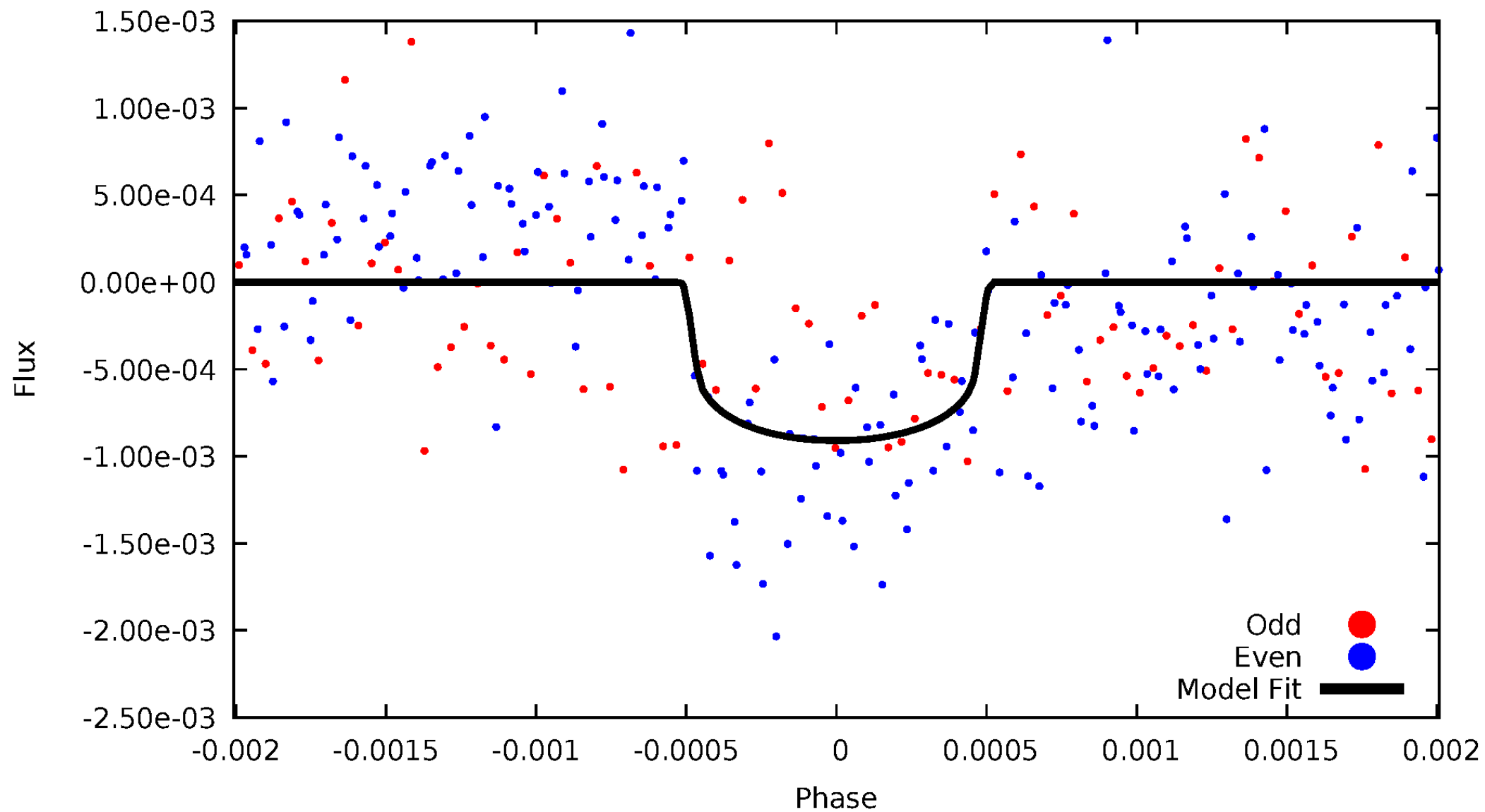


TCE 005529680-01



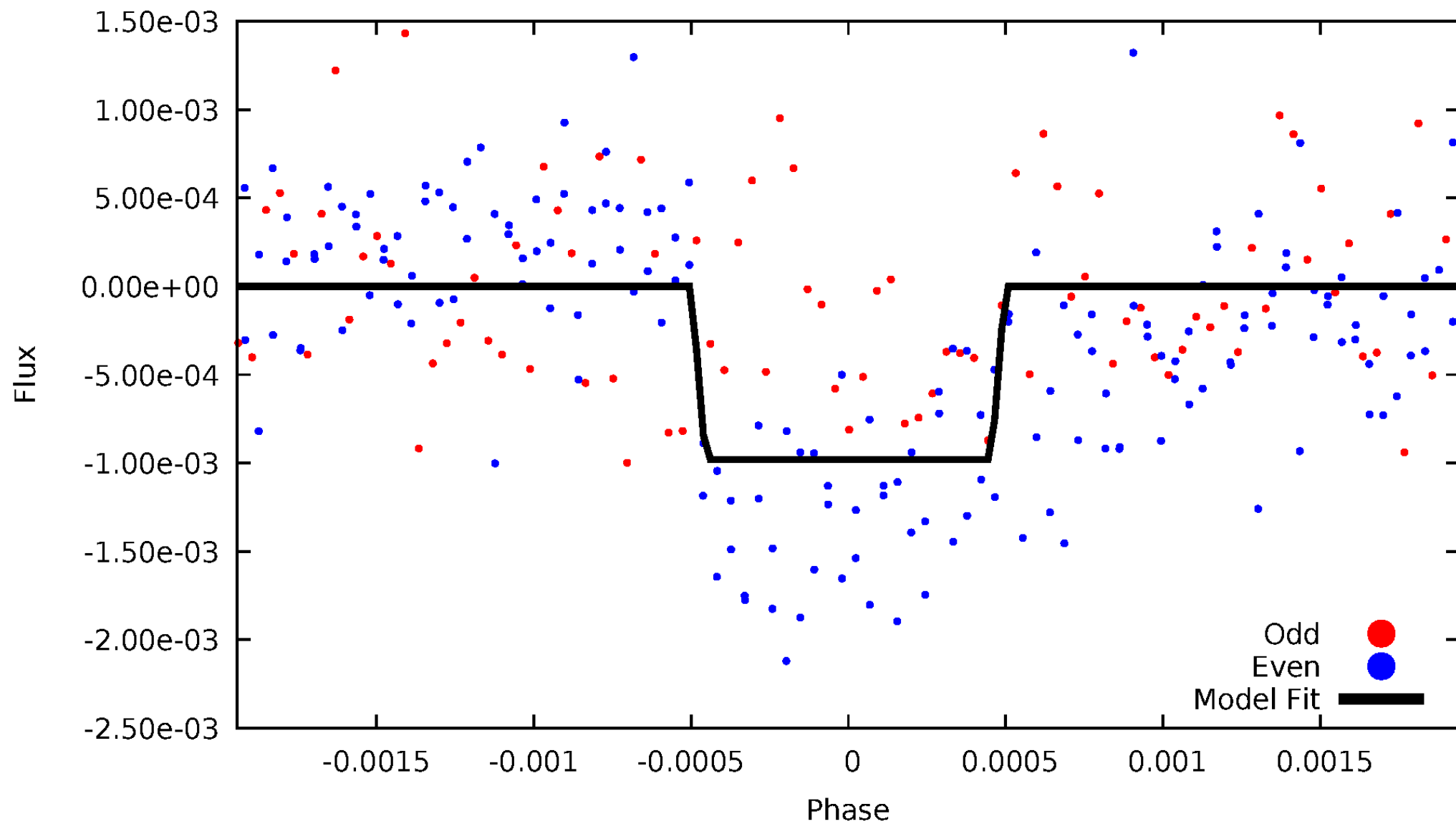
DV Odd/Even

TCE 005529680-01



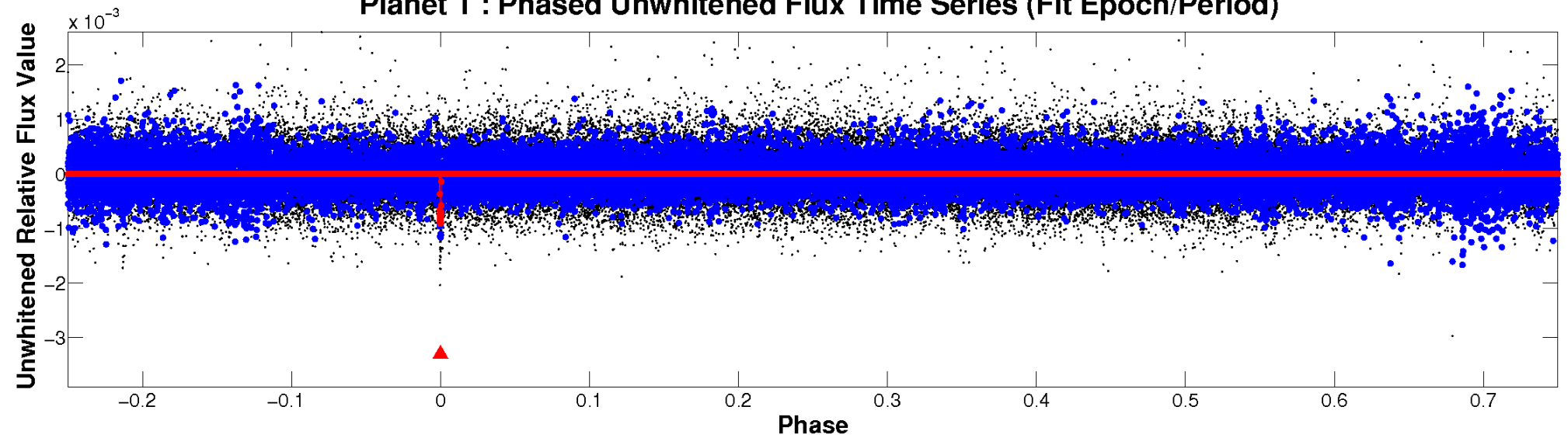
ALT Odd/Even

TCE 005529680-01

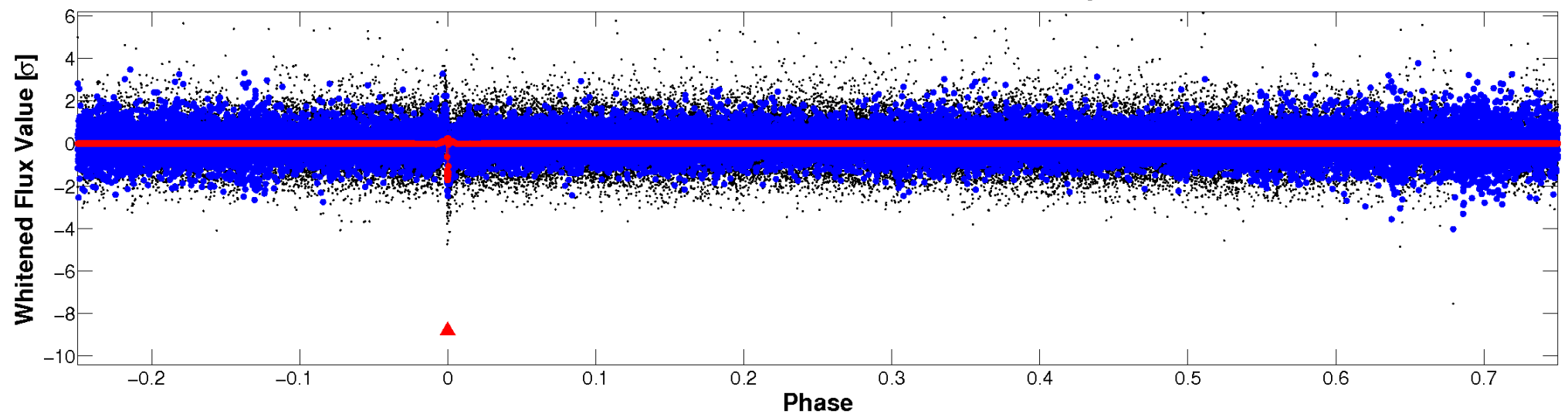


Non-Whitened Vs. Whitened Light Curve

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

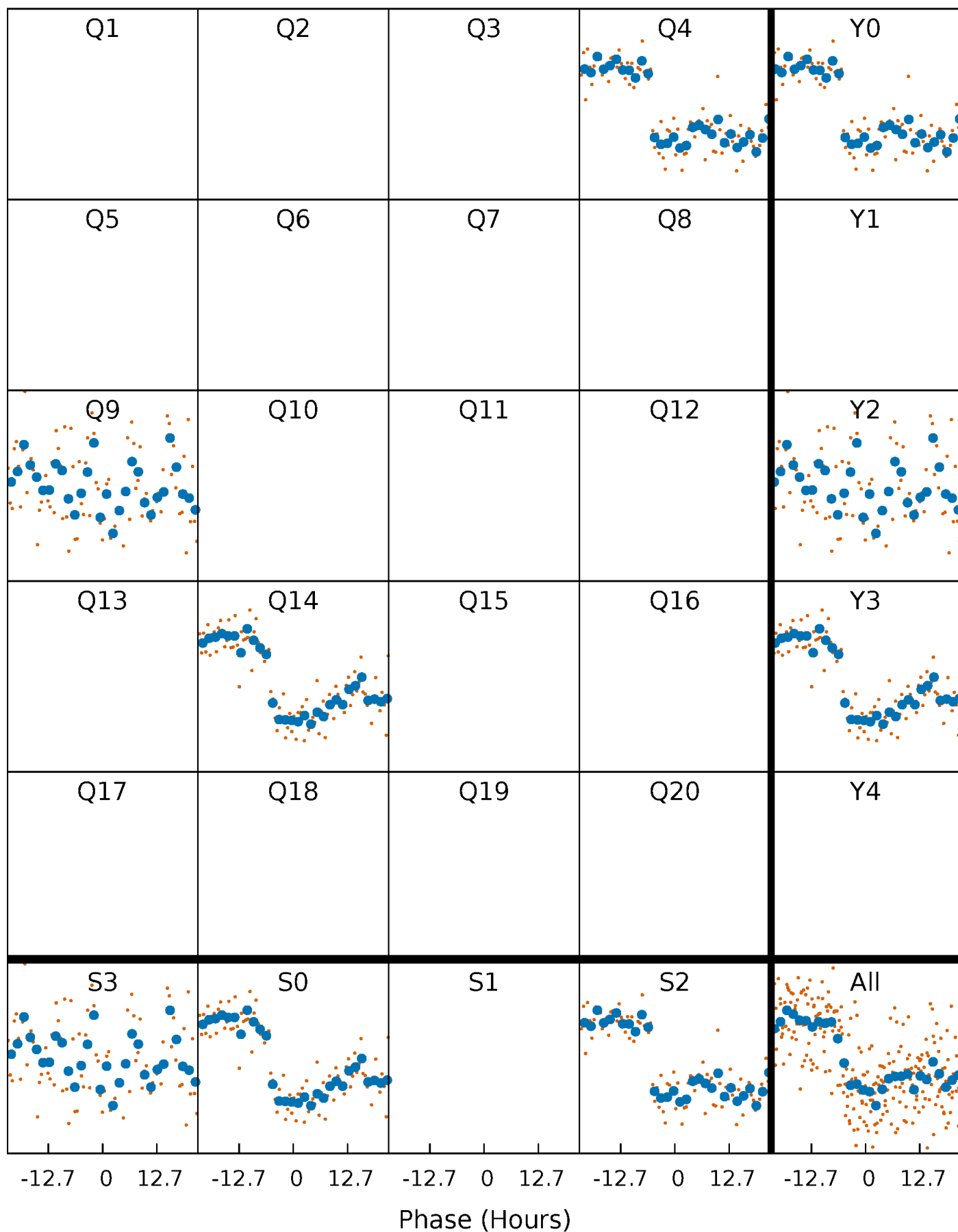


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



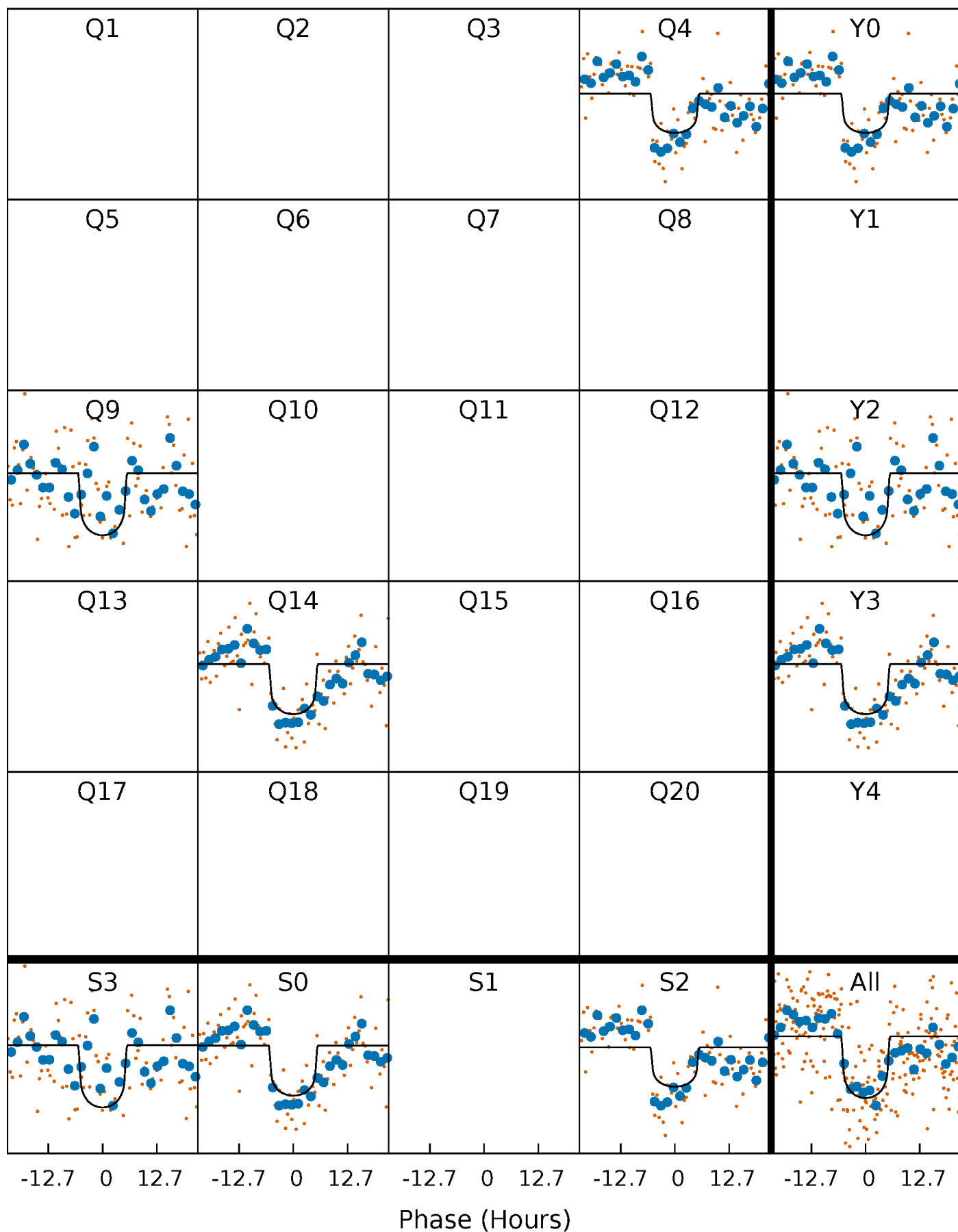
PDC Quarter-Phased Transit Curves

TCE 005529680-01 P=463.101112 Days $T_0=404.308602$ (BKJD)



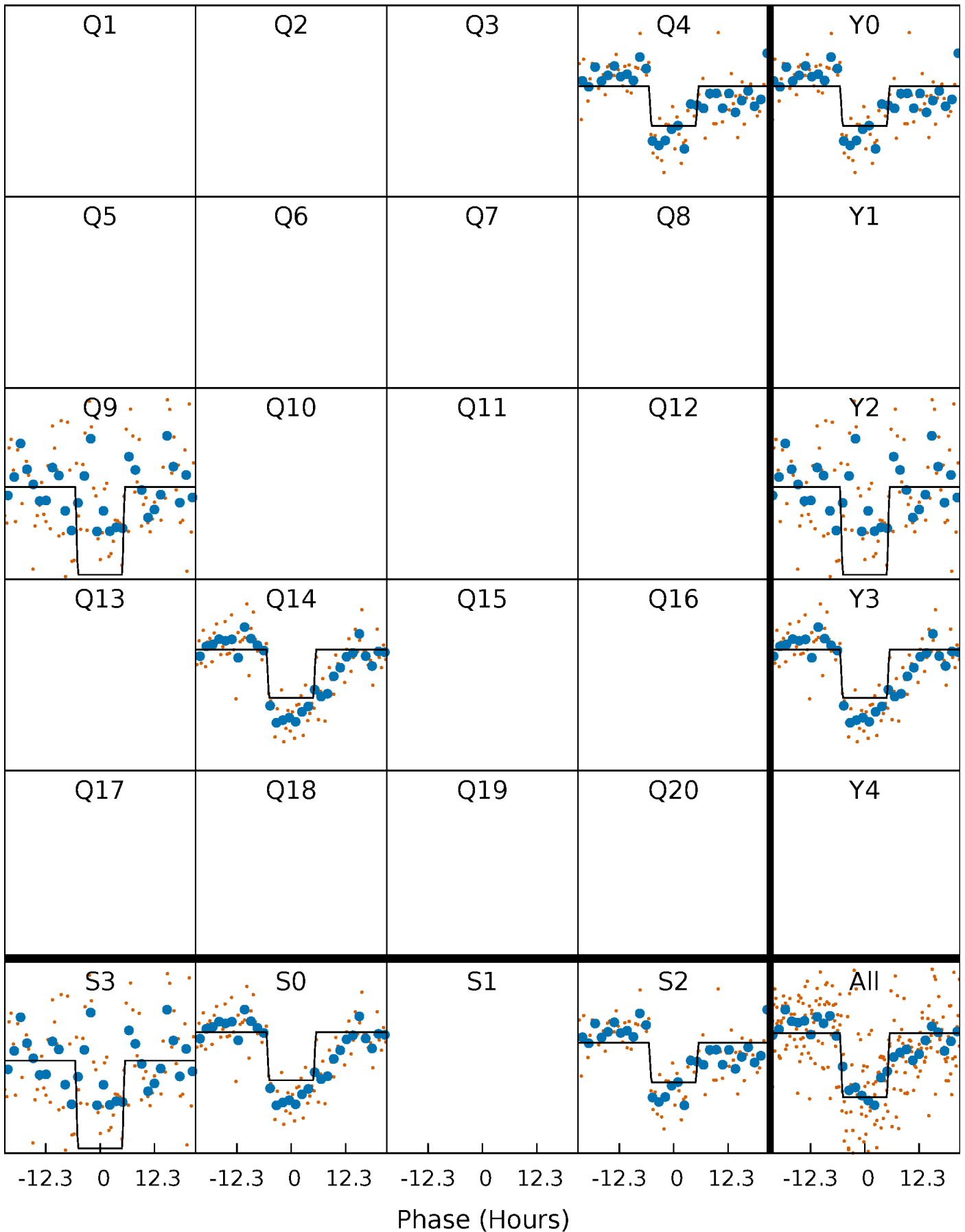
DV Quarter-Phased Transit Curves

TCE 005529680-01 P=463.101112 Days $T_0=404.308602$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

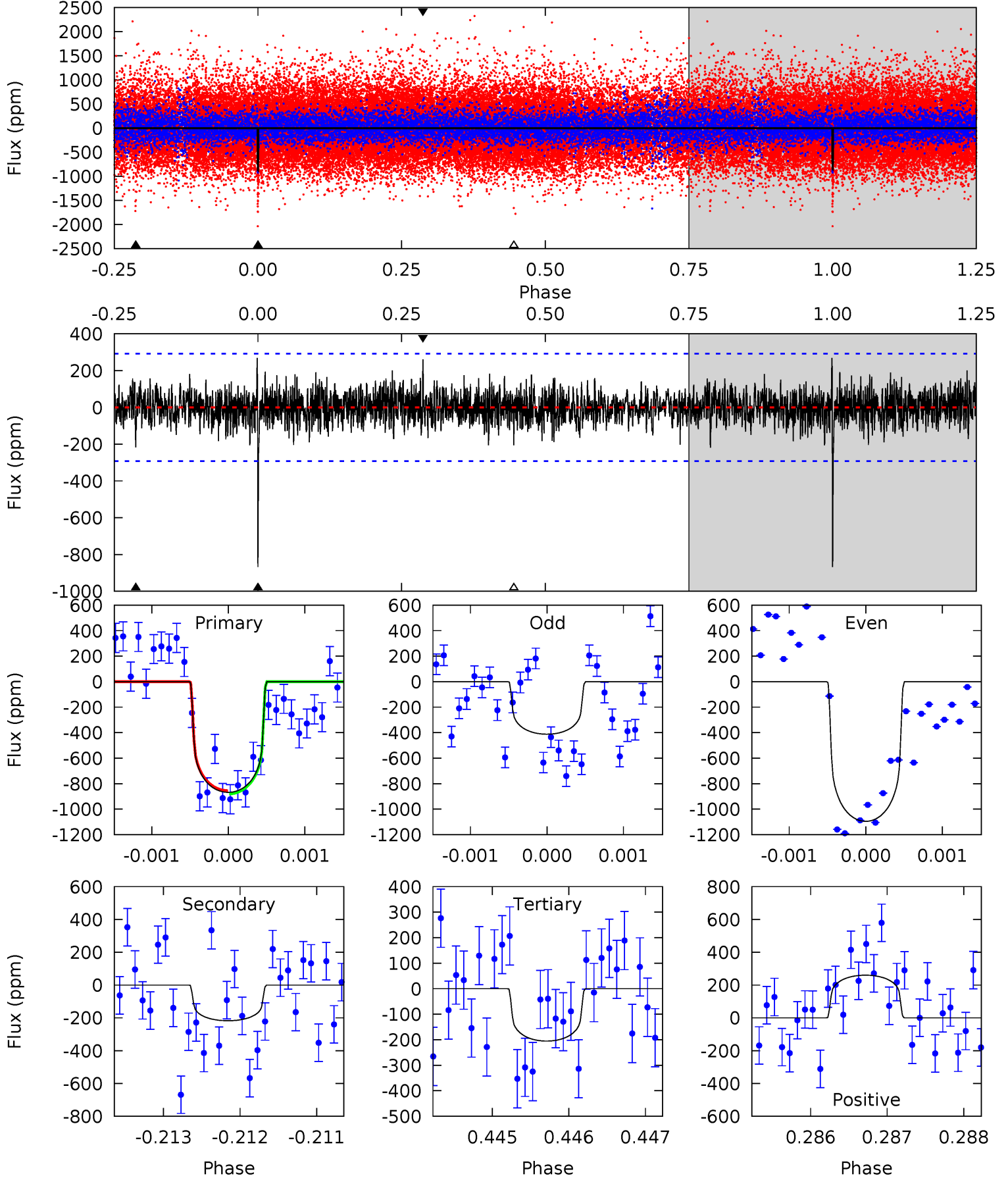
TCE 005529680-01 P=463.099393 Days $T_0=404.307245$ (BKJD)



DV Model-Shift Uniqueness Test

005529680-01, P = 463.101112 Days, E = 404.308602 Days

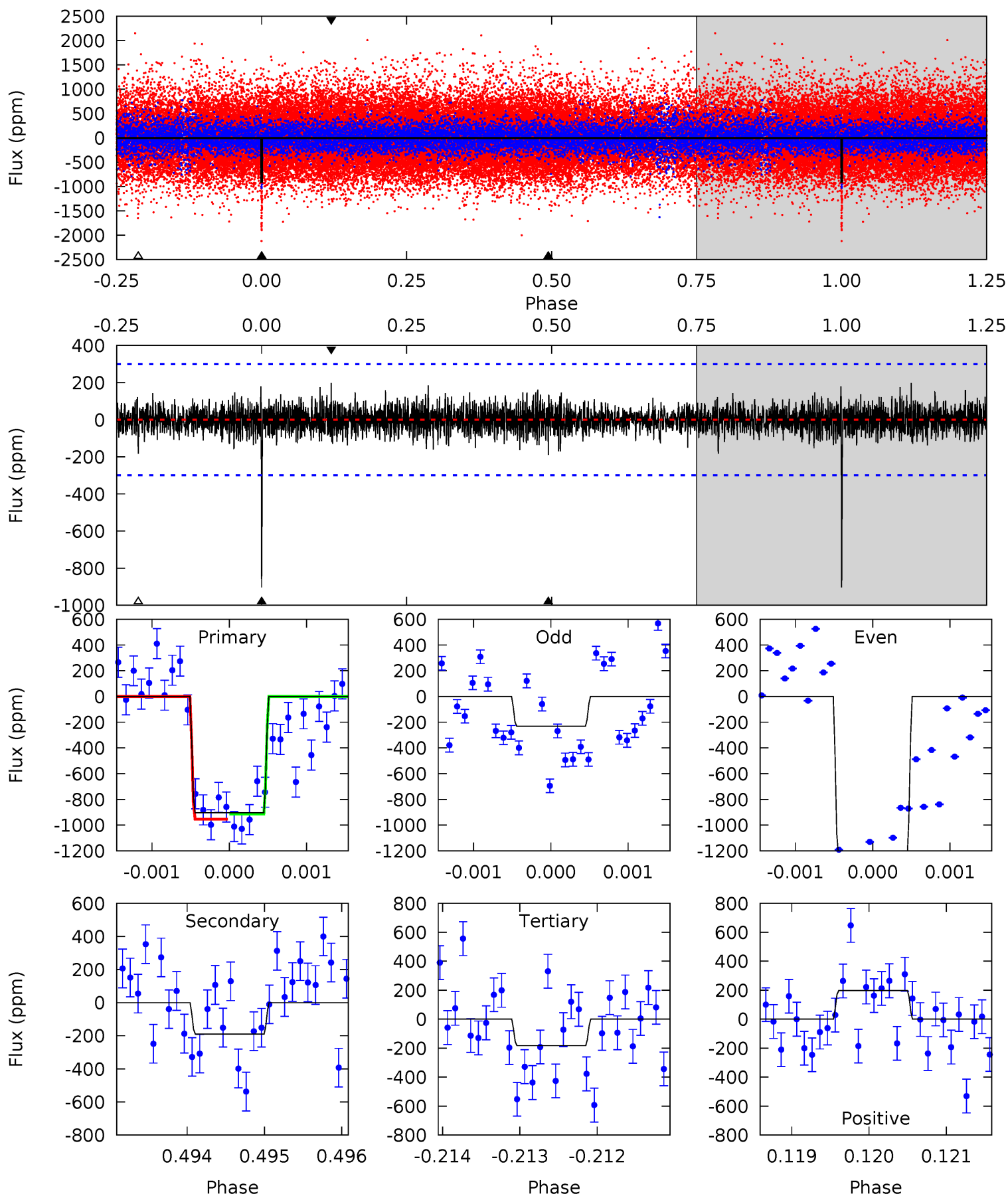
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 16.2 | 4.05 | 3.83 | 4.85 | 5.44 | 3.28 | 1.17 | 12.3 | 11.3 | 0.23 | -0.79 | 5.97 | 0.80 | 0.24 | 0.24 |



Alt Model-Shift Uniqueness Test

005529680-01, P = 463.099393 Days, E = 404.307245 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 16.4 | 3.45 | 3.33 | 3.60 | 5.45 | 3.29 | 0.89 | 13.1 | 12.8 | 0.12 | -0.15 | 8.67 | 0.79 | 0.18 | 0.37 |



Stellar Parameters For KIC 005529680

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | $R (R_{\odot})$ | $M(M_{\odot})$ | $p_{\star} (\text{g}\cdot\text{cm}^{-3})$ |
|--------|----------------------|---------------------------|----------------------------|---------------------------|---------------------------|---|
| | 5919^{+187}_{-207} | $4.527^{+0.039}_{-0.208}$ | $-0.220^{+0.300}_{-0.300}$ | $0.887^{+0.273}_{-0.091}$ | $0.966^{+0.119}_{-0.119}$ | $1.950^{+0.415}_{-1.058}$ |
| | +3%/-3% | +1%/-5% | +136%/-136% | +31%/-10% | +12%/-12% | +21%/-54% |
| 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 005529680-01 / KOI

| Detrend | Depth (ppm) | $R_p (R_{\oplus})$ | $T_{max} (K)$ | $T_{obs} (K)$ | A_{obs} |
|---------|---------------|------------------------|-------------------|-----------------------|--------------------------|
| DV | -218 ± 54 | $3.20^{+1.78}_{-1.76}$ | 329^{+24}_{-17} | 4313^{+1729}_{-641} | 15631^{+59402}_{-9419} |
| Alt. | -189 ± 55 | $3.21^{+1.90}_{-1.73}$ | 328^{+23}_{-16} | 4136^{+1585}_{-618} | 12666^{+47330}_{-7950} |

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 $A_{obs} \gg 1.0$

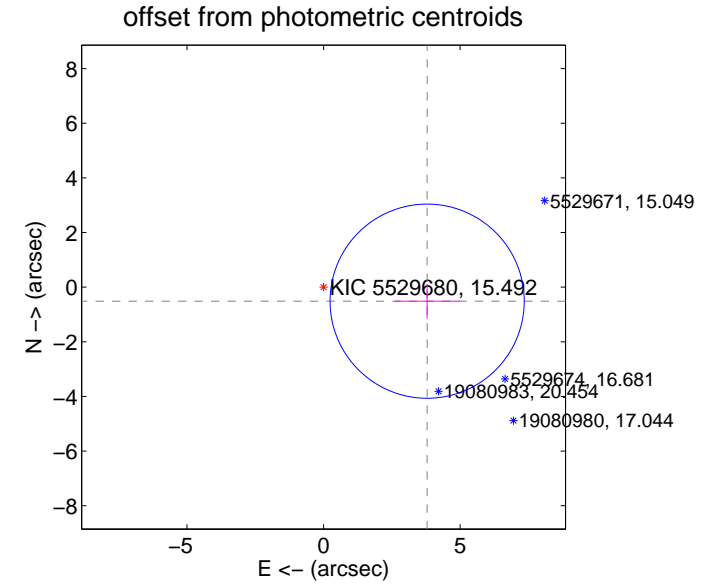
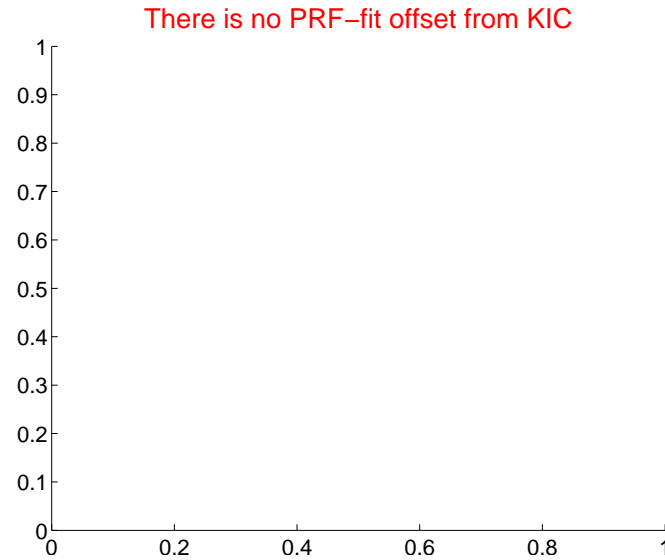
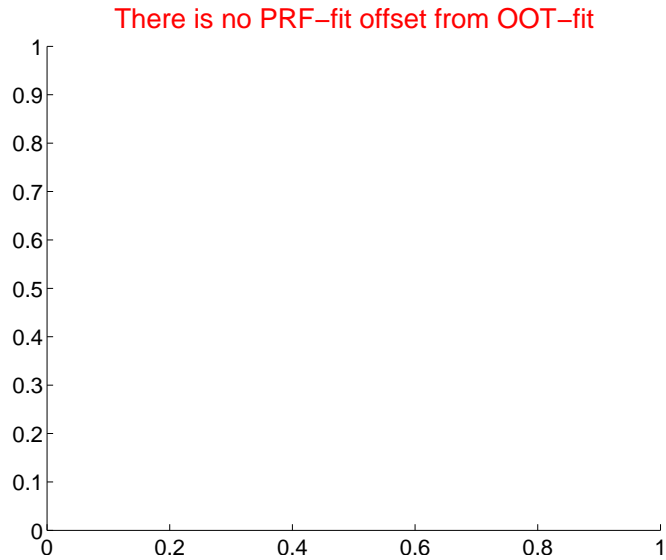
DV Centroid Data

Supplemental centroid analysis for 005529680-01. Kepler magnitude: 15.49. Transit SNR 12.33

There are 0 quarters with good PRF difference image offsets

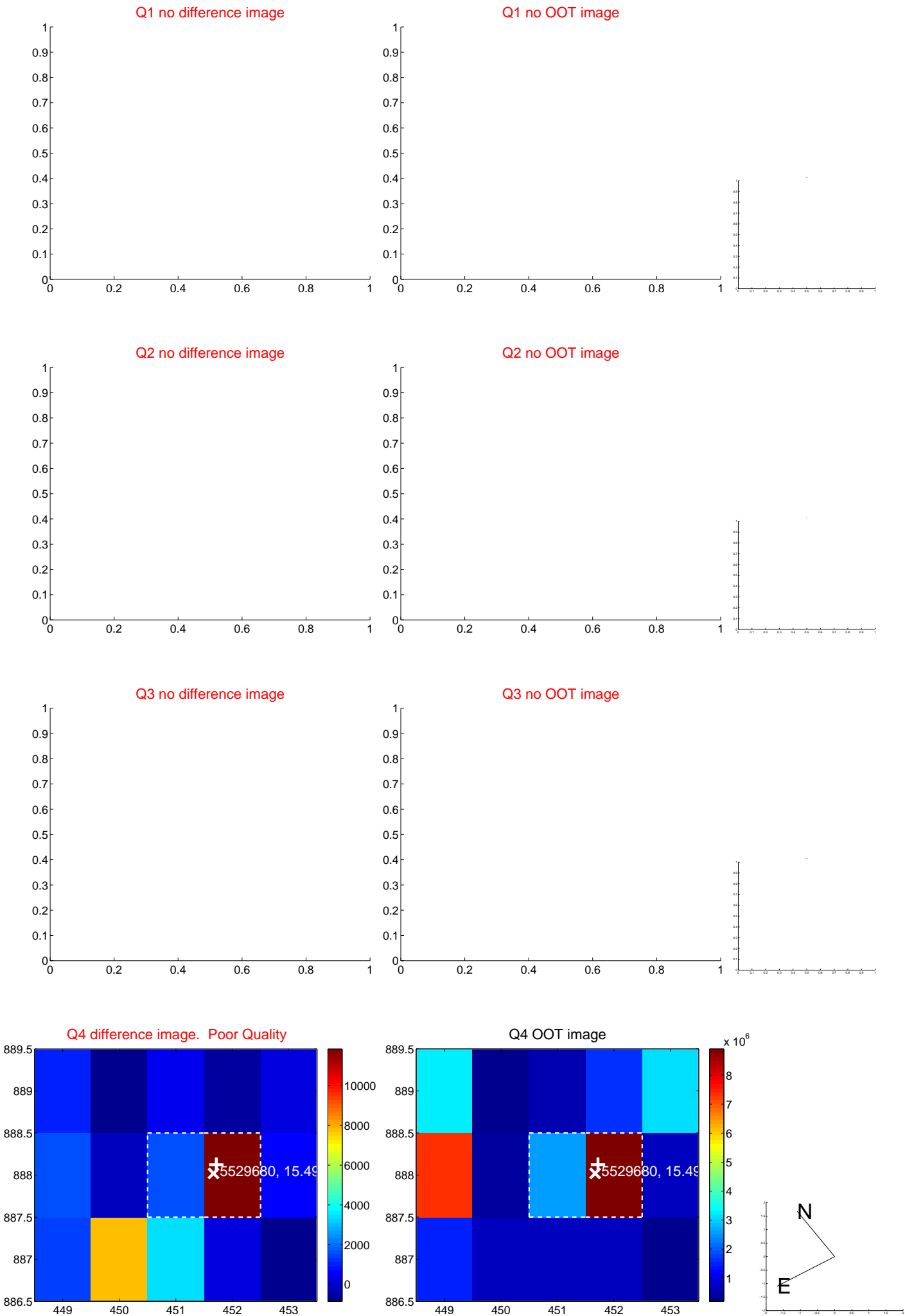
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|------------------|------------------|
| PRF-fit source offset from OOT | — | — | — | — |
| PRF-fit source offset from KIC position | — | — | — | — |
| photometric centroid source offset | 3.83 ± 1.18 | 3.23 | -3.79 ± 1.19 | -0.51 ± 0.64 |



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.

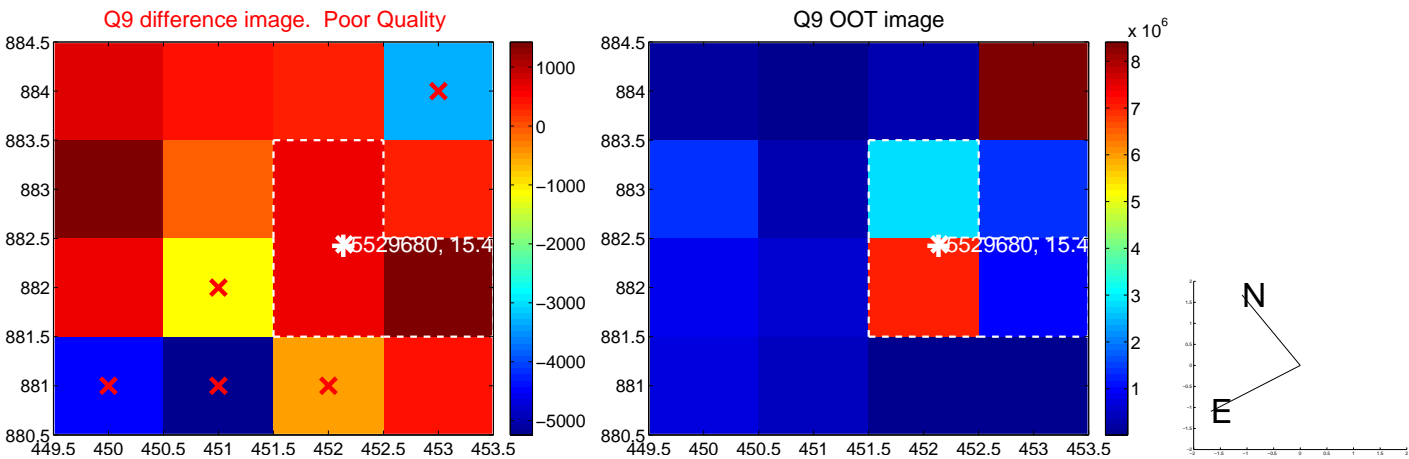
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



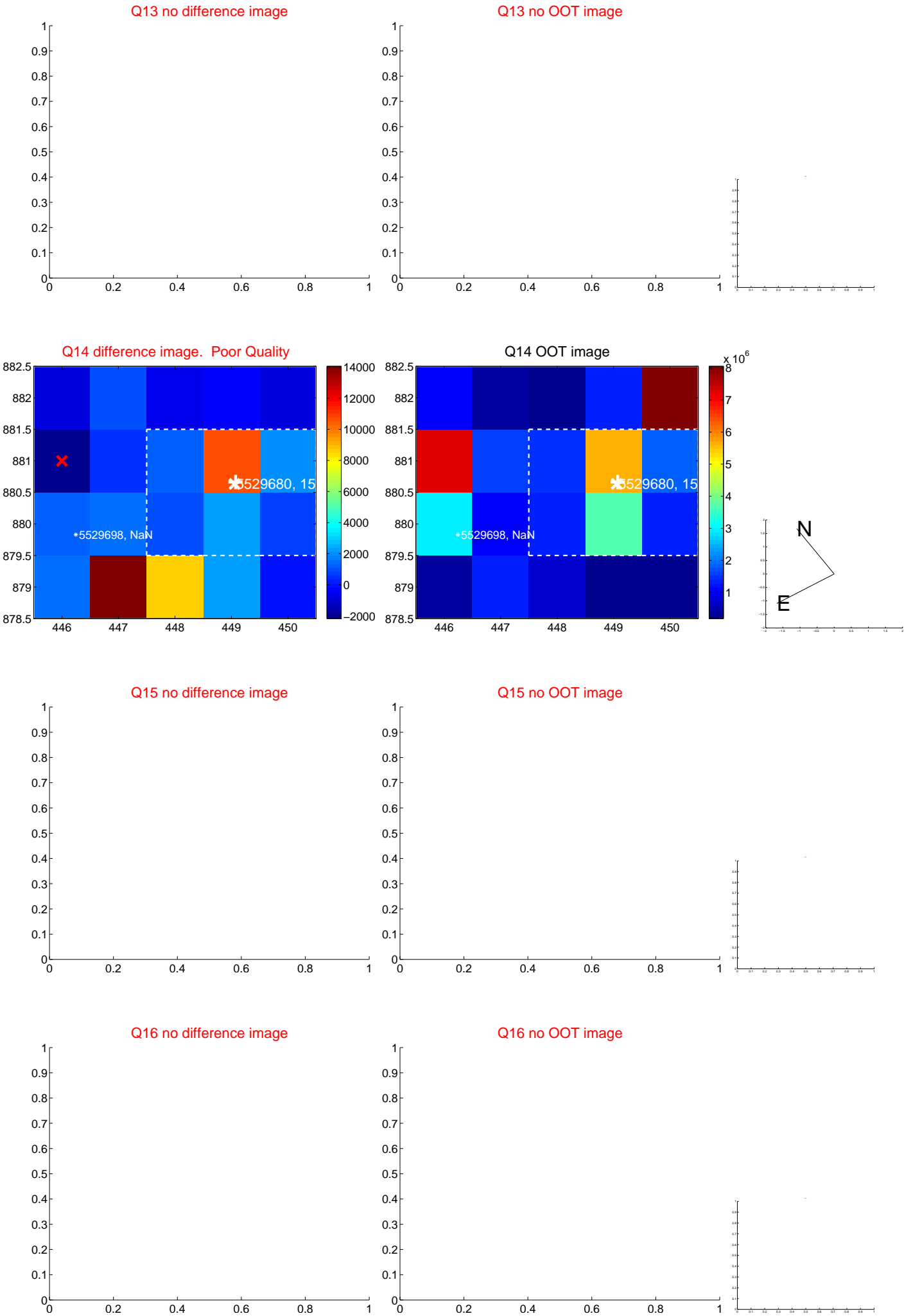
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



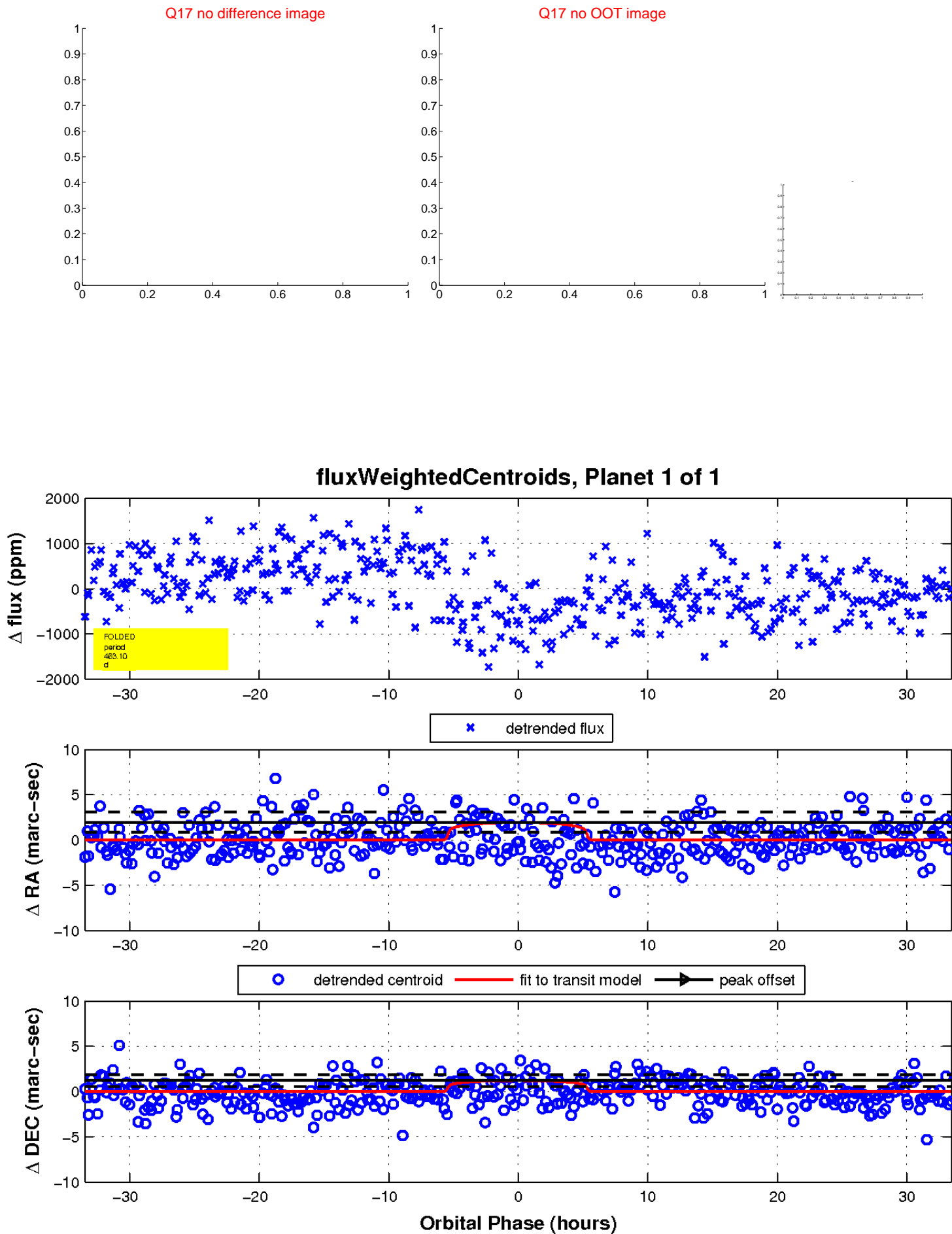
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



white ×: 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.



UKIRT Image

Declination

