

KIC 011513790

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|-----|-----|-----------------------------|-----------------|------------------------|------------------------|
| 011513790-01 | OBS | No | 416.153091 | 134.687657 | 367.5 | 15.071 | 7.6 | 7.4 | 0.86 | 5632 | 1.74 | 0.58 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|--|
| 011513790-01 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_MARSHALL—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.

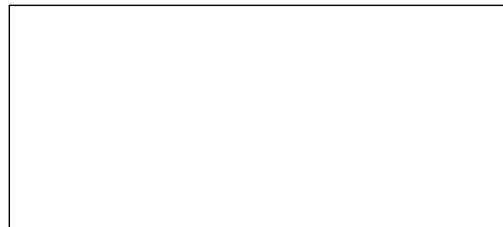
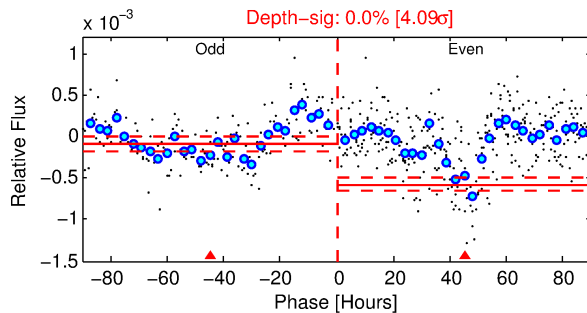
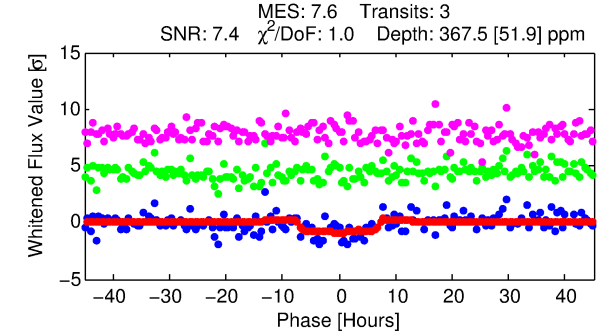
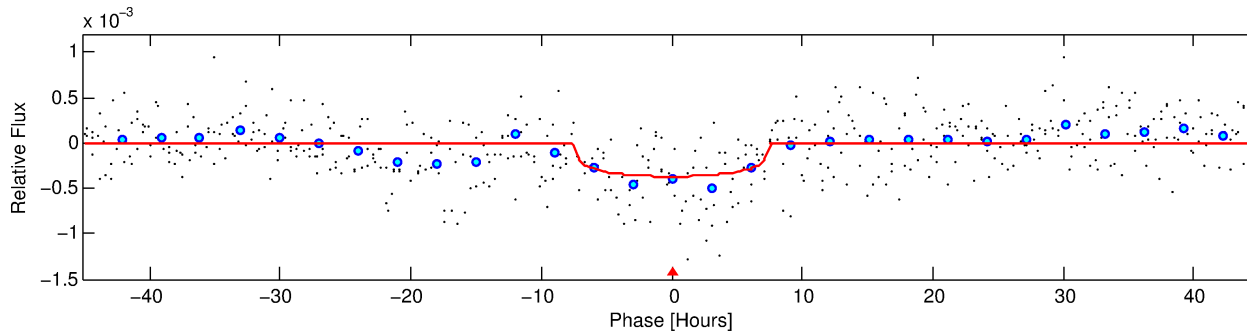
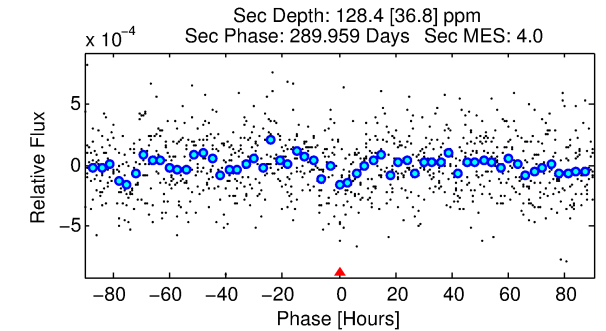
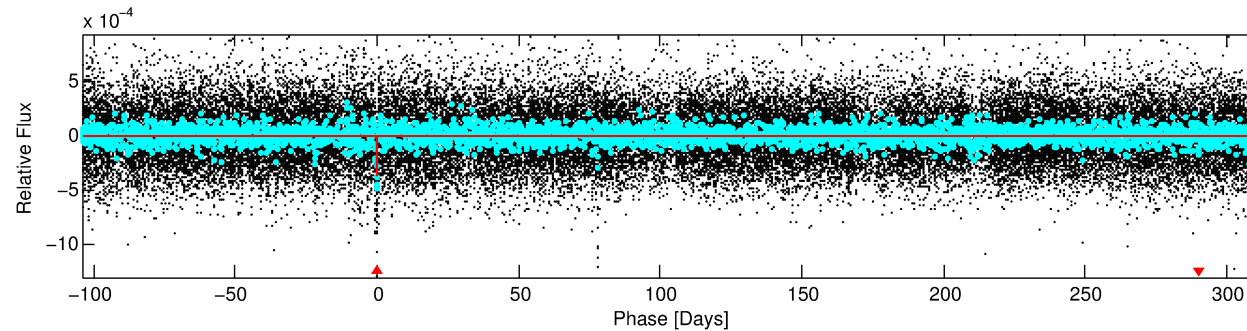
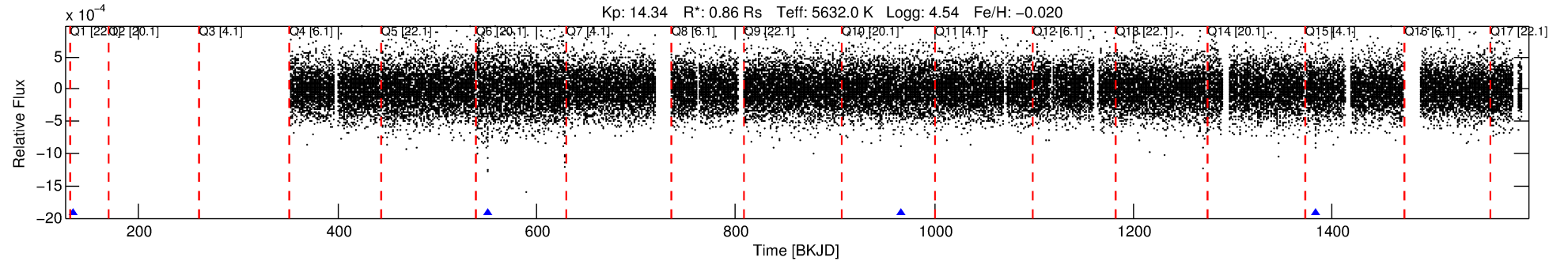
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011513790-01

No Significant Match Found

DV One-Page Summary

KIC: 11513790 Candidate: 1 of 1 Period: 416.153 d



DV Fit Results:

Period = 416.15309 [0.01647] d
Epoch = 134.6877 [0.0399] BKJD
Rp/R* = 0.0184 [0.0091]
a/R* = 166.15 [342.34]
b = 0.65 [1.87]
Seff = 0.58 [0.22]
Teq = 223 [21] K
Rp = 1.74 [0.99] Re
a = 1.0729 [0.2598] AU
Ag = 26871.11 [29107.72] [0.92σ]
Teffp = 4414 [1138] K [3.68σ]

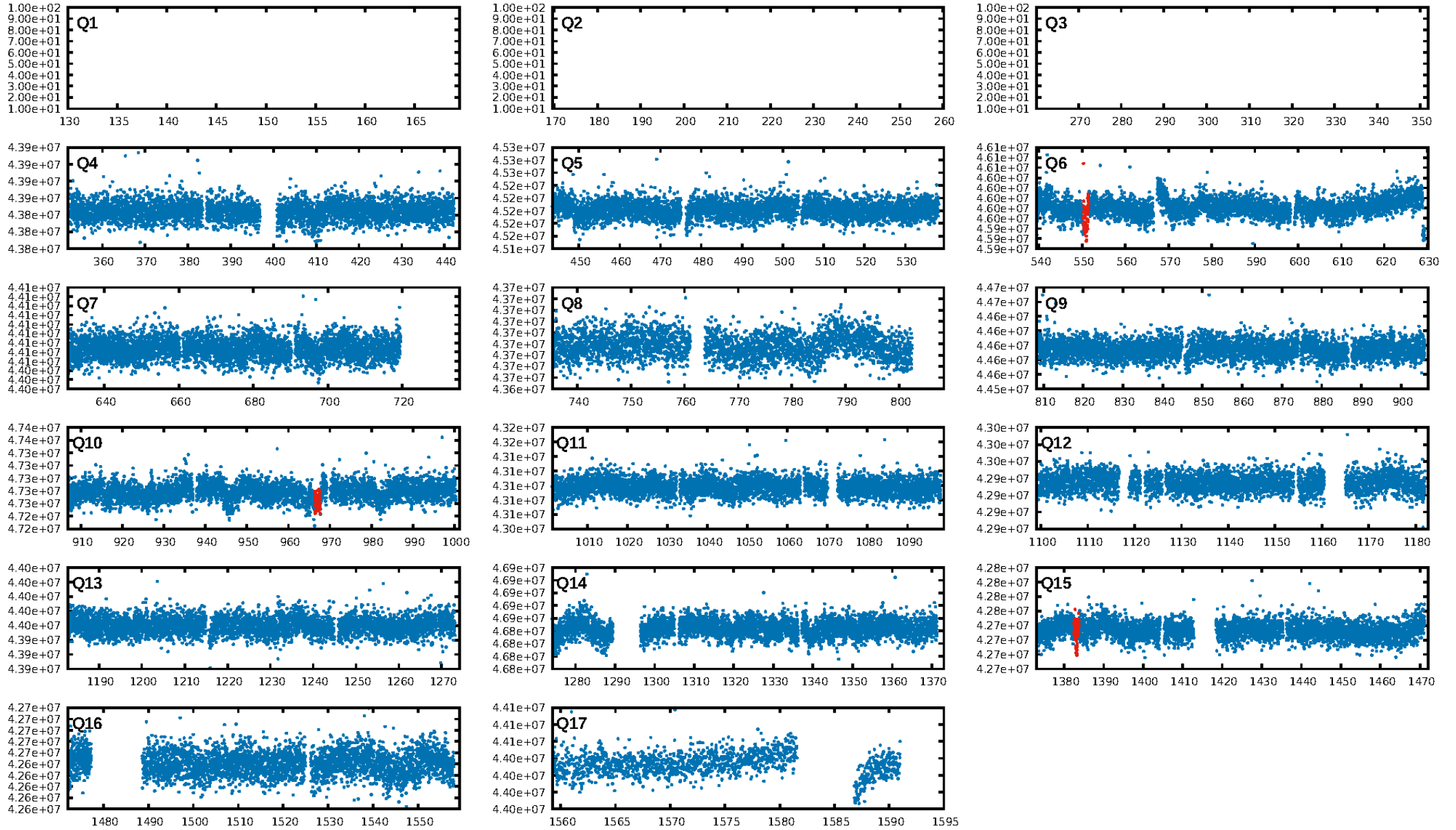
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.9%
ModelChiSquareGof-sig: 99.0%
Bootstrap-pfa: 6.06e-13
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.8165
Centroid-sig: 14.8%
Centroid-so: 2.076 arcsec [0.98σ]
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 [2/2]

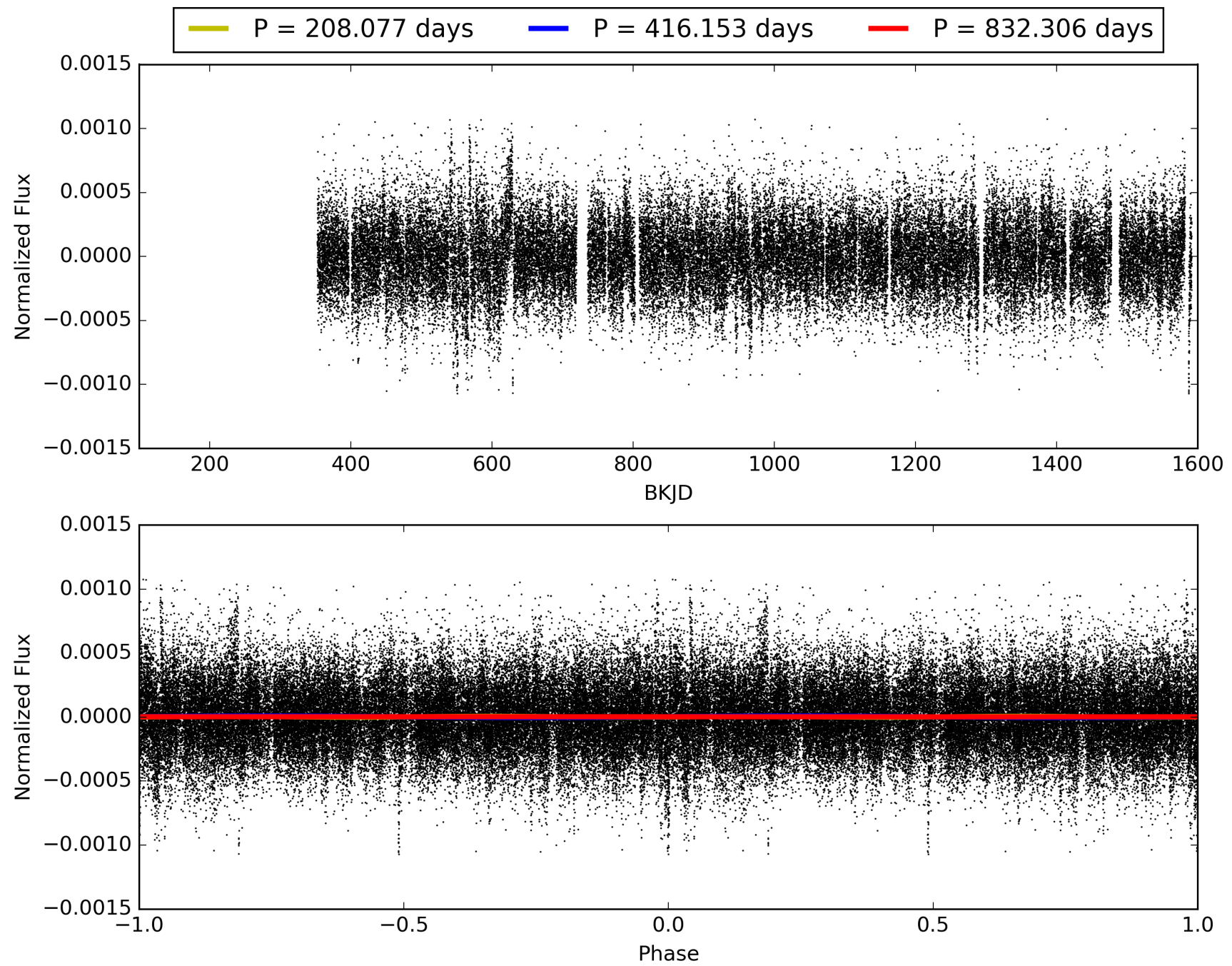
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 19:13:07 Z

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

TCE 011513790-01, PDC Light Curves

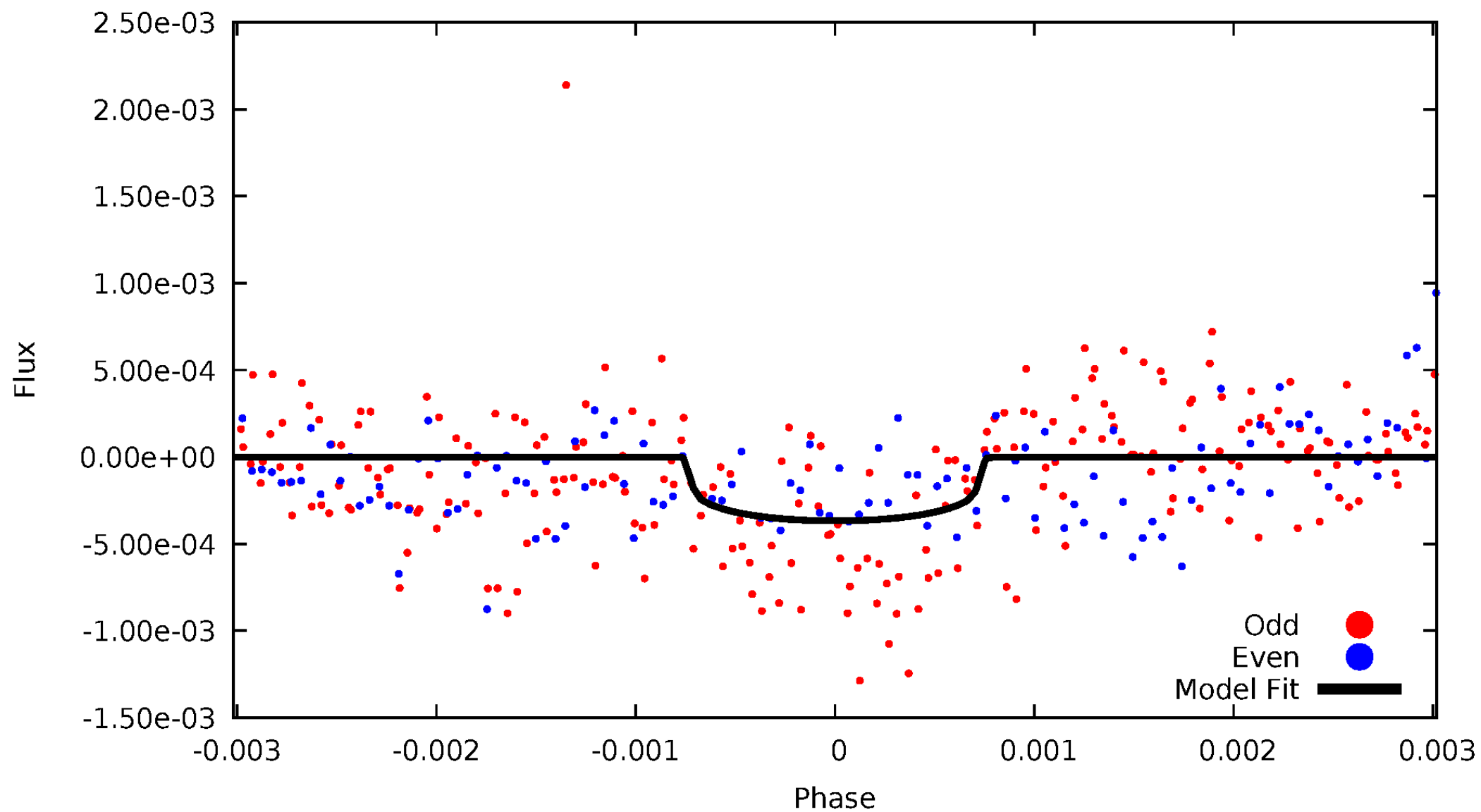


TCE 011513790-01



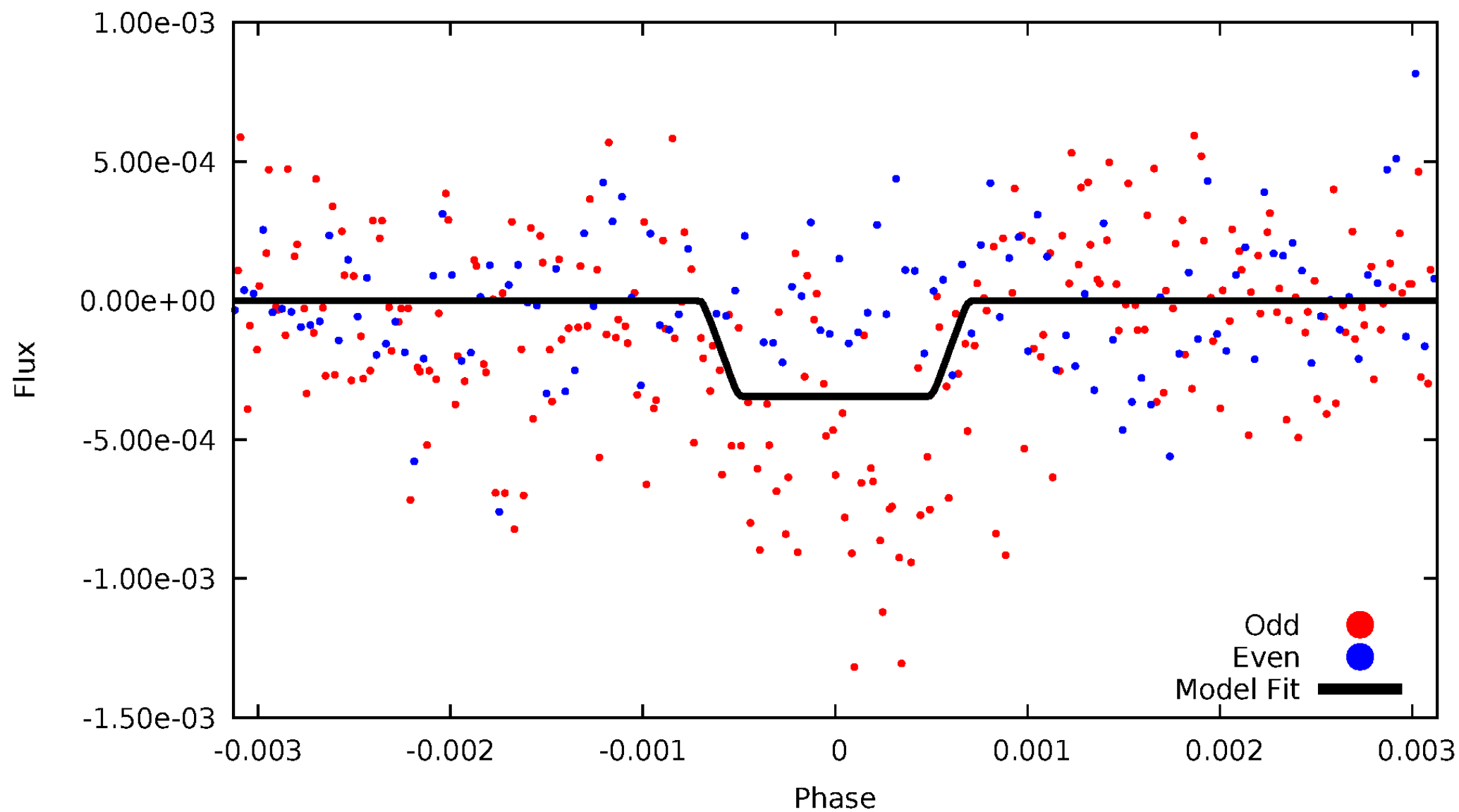
DV Odd/Even

TCE 011513790-01



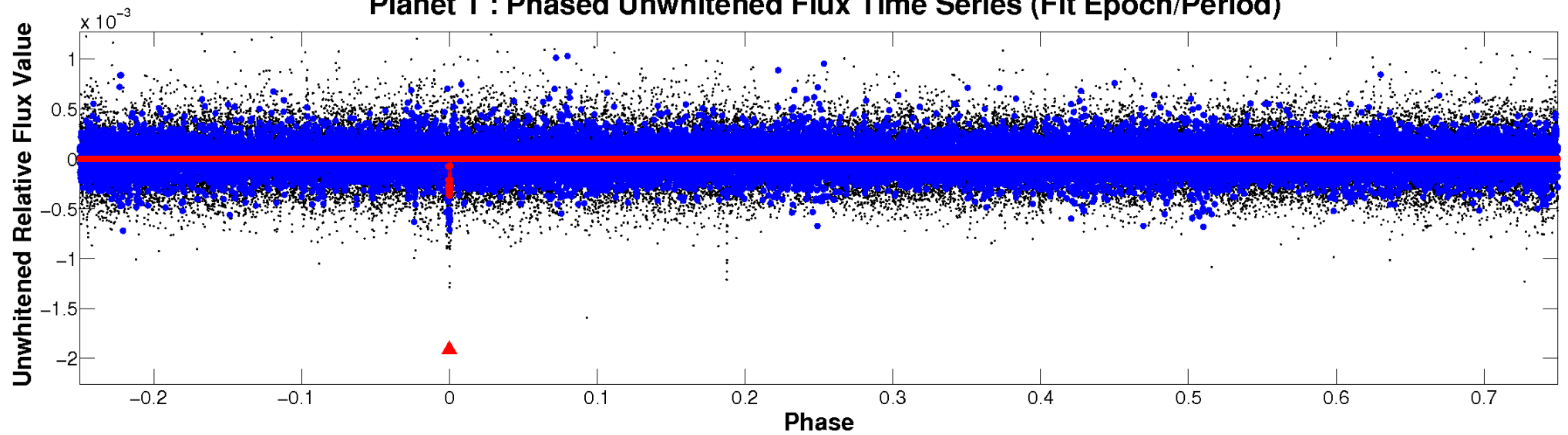
ALT Odd/Even

TCE 011513790-01

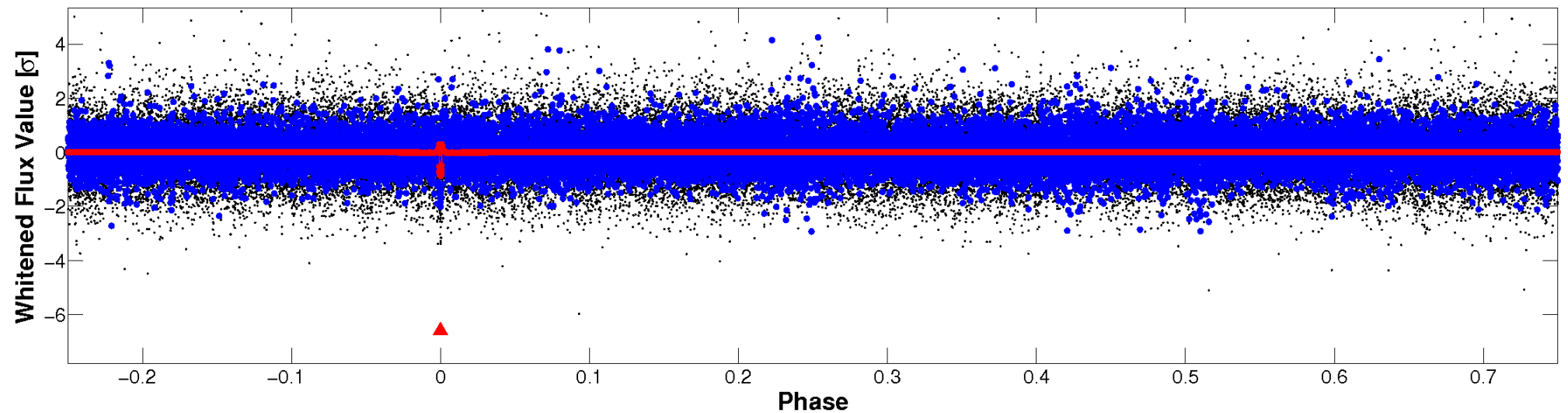


Non-Whitened Vs. Whitened Light Curve

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

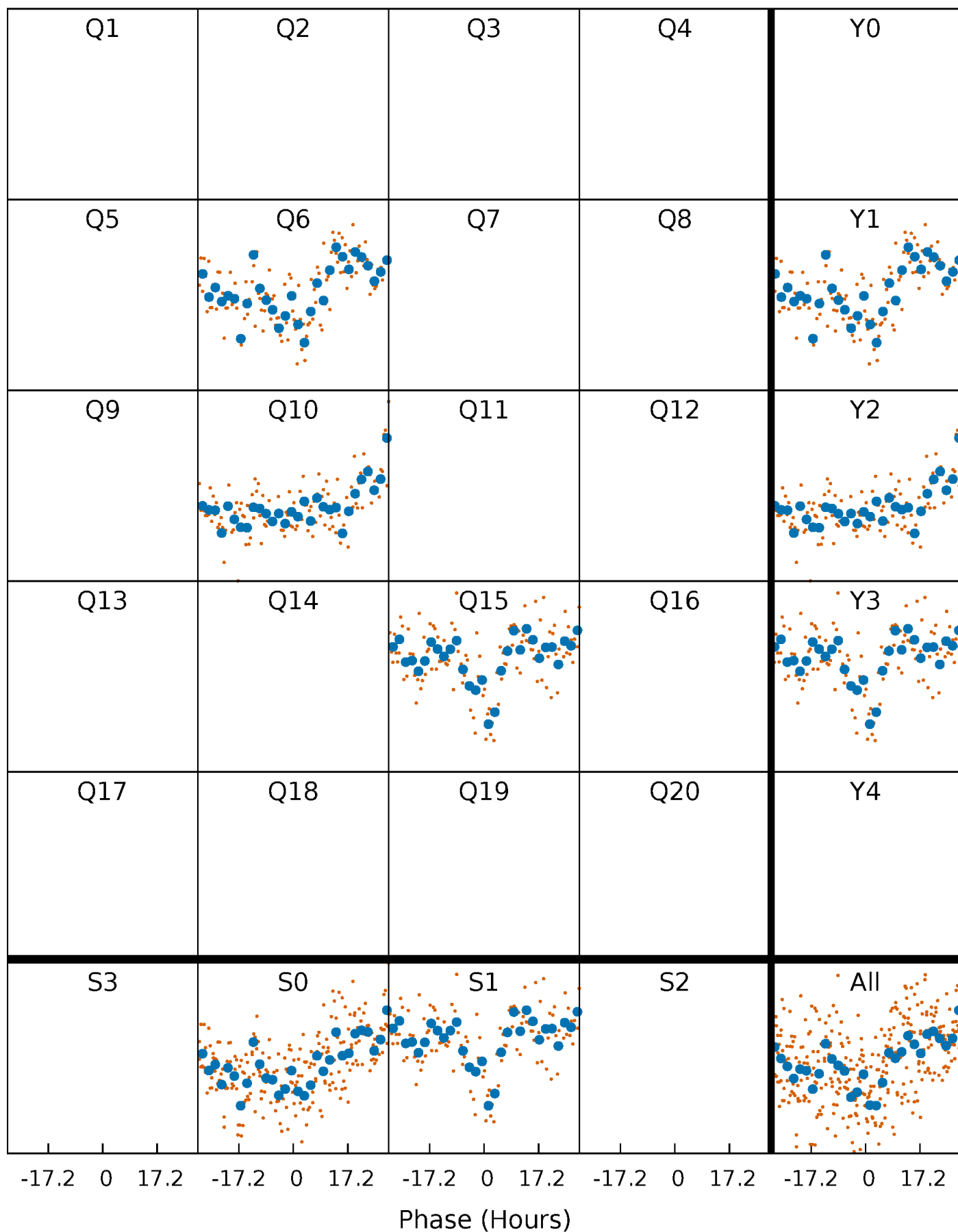


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



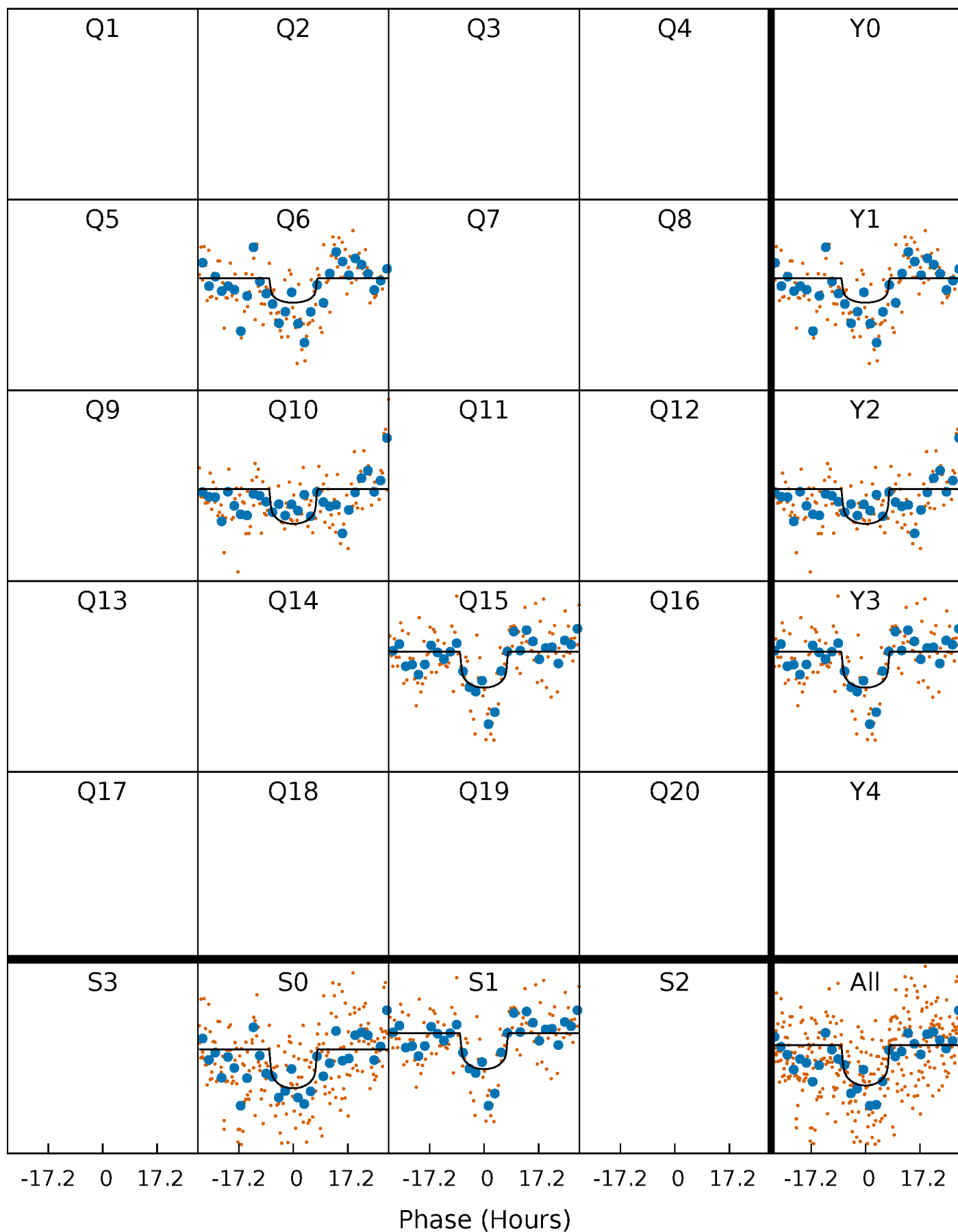
PDC Quarter-Phased Transit Curves

TCE 011513790-01 P=416.153091 Days $T_0=134.687657$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 011513790-01 P=416.153091 Days $T_0=134.687657$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

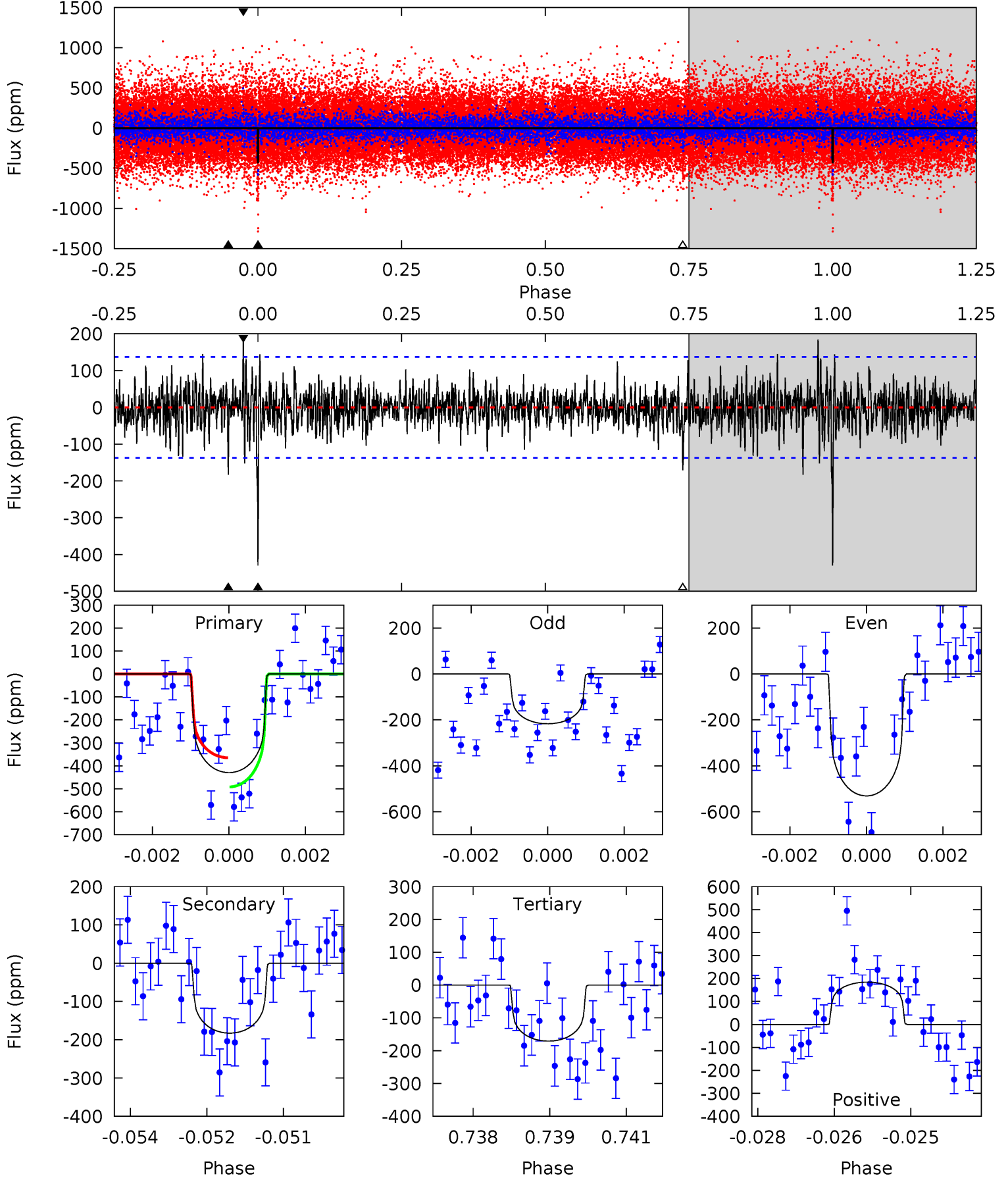
TCE 011513790-01 P=416.143072 Days $T_0=134.708206$ (BKJD)



DV Model-Shift Uniqueness Test

011513790-01, P = 416.153091 Days, E = 134.687657 Days

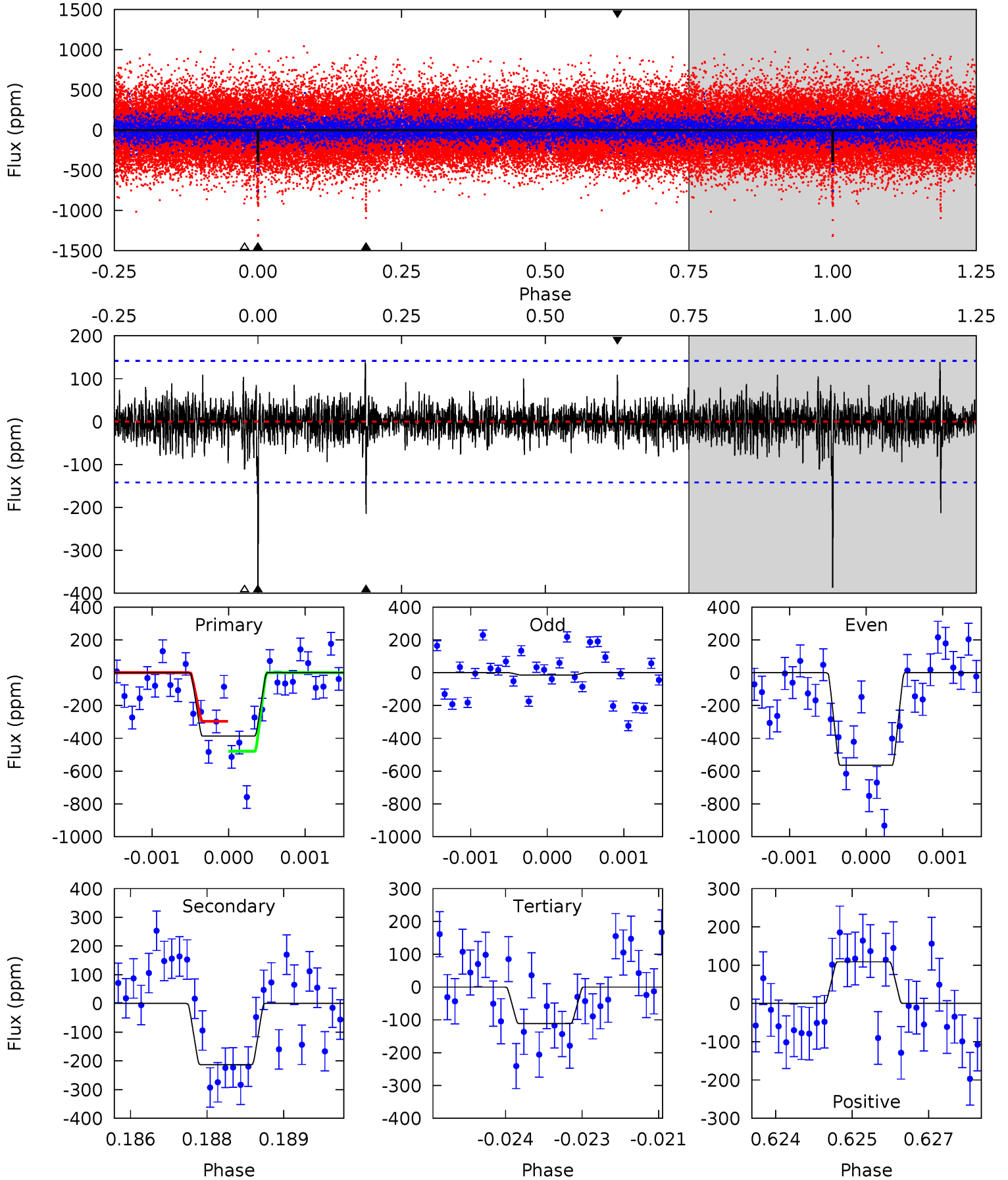
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 16.8 | 7.16 | 6.69 | 7.22 | 5.37 | 3.17 | 1.52 | 10.1 | 9.61 | 0.47 | -0.06 | 5.86 | 0.96 | 0.30 | 2.49 |



Alt Model-Shift Uniqueness Test

011513790-01, P = 416.143072 Days, E = 134.708206 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 14.7 | 8.10 | 4.24 | 4.14 | 5.39 | 3.19 | 1.05 | 10.5 | 10.6 | 3.86 | 3.96 | 10.1 | 0.80 | 0.26 | 3.46 |



Stellar Parameters For KIC 011513790

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | R (R_{\odot}) | $M(M_{\odot})$ | p_{\star} ($\text{g}\cdot\text{cm}^{-3}$) |
|--------|----------------------|---------------------------|----------------------------|---------------------------|---------------------------|---|
| | 5632^{+169}_{-186} | $4.543^{+0.035}_{-0.196}$ | $-0.020^{+0.300}_{-0.300}$ | $0.864^{+0.246}_{-0.082}$ | $0.951^{+0.094}_{-0.104}$ | $2.075^{+0.485}_{-1.009}$ |
| | +3%/-3% | +1%/-4% | +1500%/-1500% | +28%/-9% | +10%/-11% | +23%/-49% |
| 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 011513790-01 / KOI

| Detrend | Depth (ppm) | R_p (R_{\oplus}) | T_{max} (K) | T_{obs} (K) | A_{obs} |
|---------|---------------|------------------------|----------------------|-----------------------|---------------------------|
| DV | -183 ± 26 | $1.94^{+0.87}_{-0.87}$ | 319^{+22}_{-15} | 4827^{+1391}_{-645} | 30074^{+68506}_{-16159} |
| Alt. | -213 ± 26 | $1.82^{+0.97}_{-0.81}$ | 319^{+21}_{-14} | 5085^{+1633}_{-795} | 39936^{+88710}_{-22810} |

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

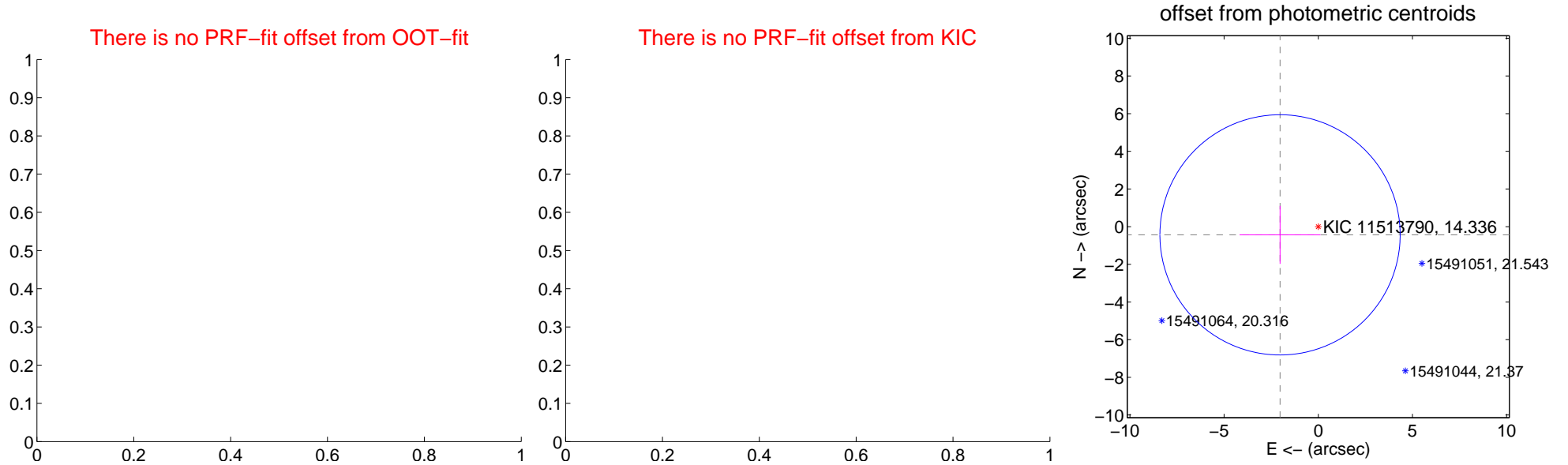
DV Centroid Data

Supplemental centroid analysis for 011513790-01. Kepler magnitude: 14.34. Transit SNR 7.40

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 | 2.08 ± 2.13 | 0.98 | 2.03 ± 2.15 | -0.44 ± 1.54 |

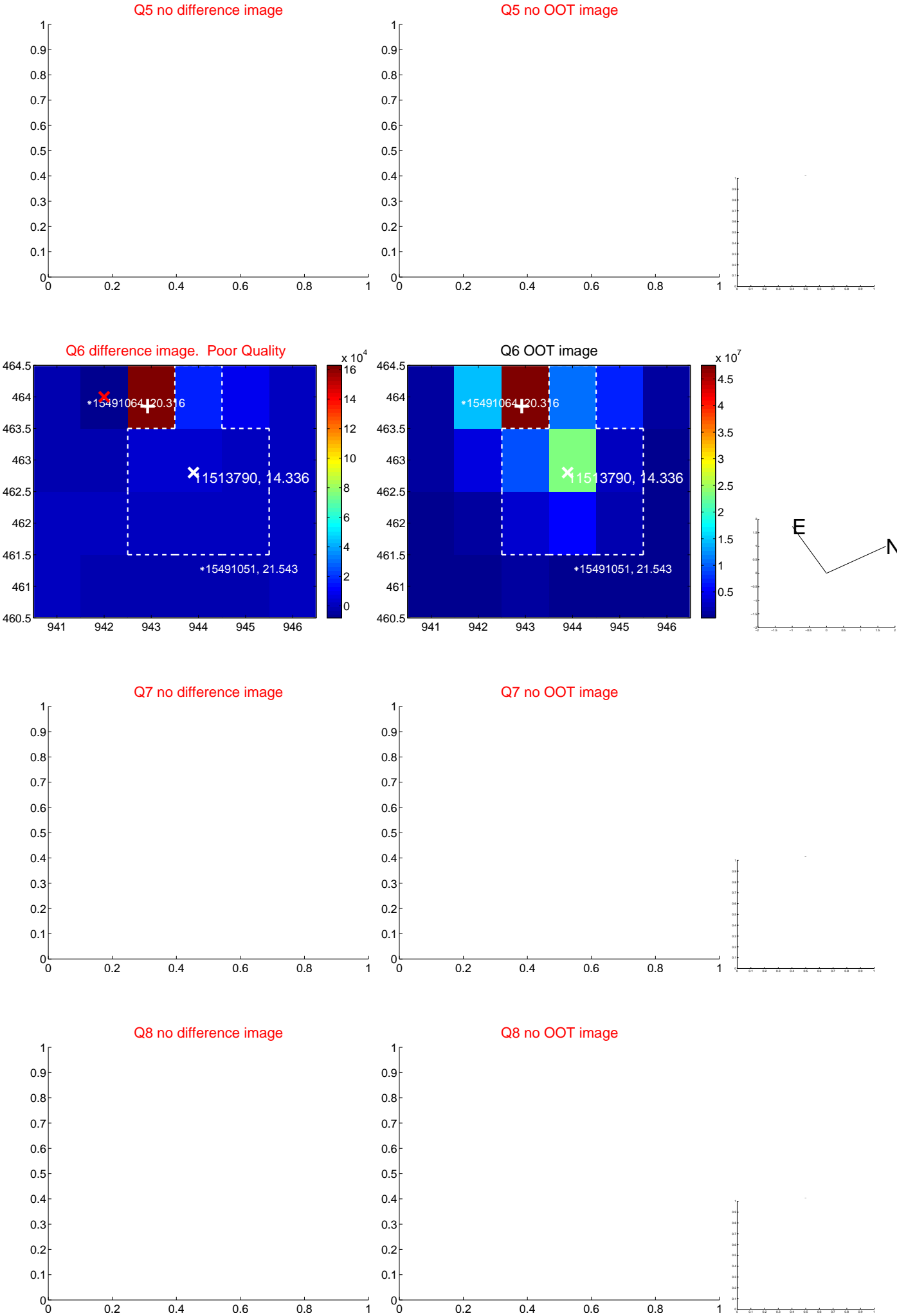


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



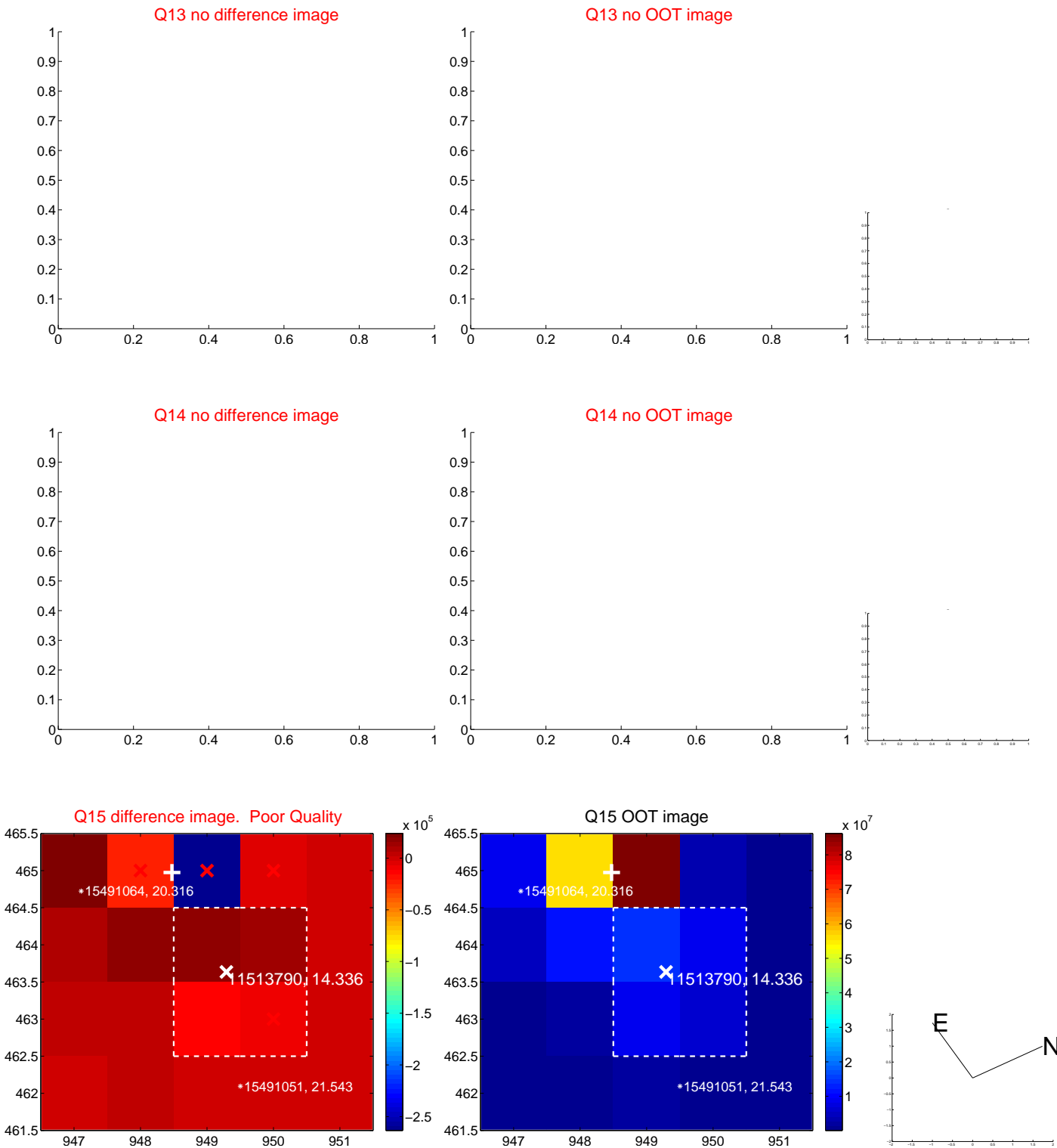
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



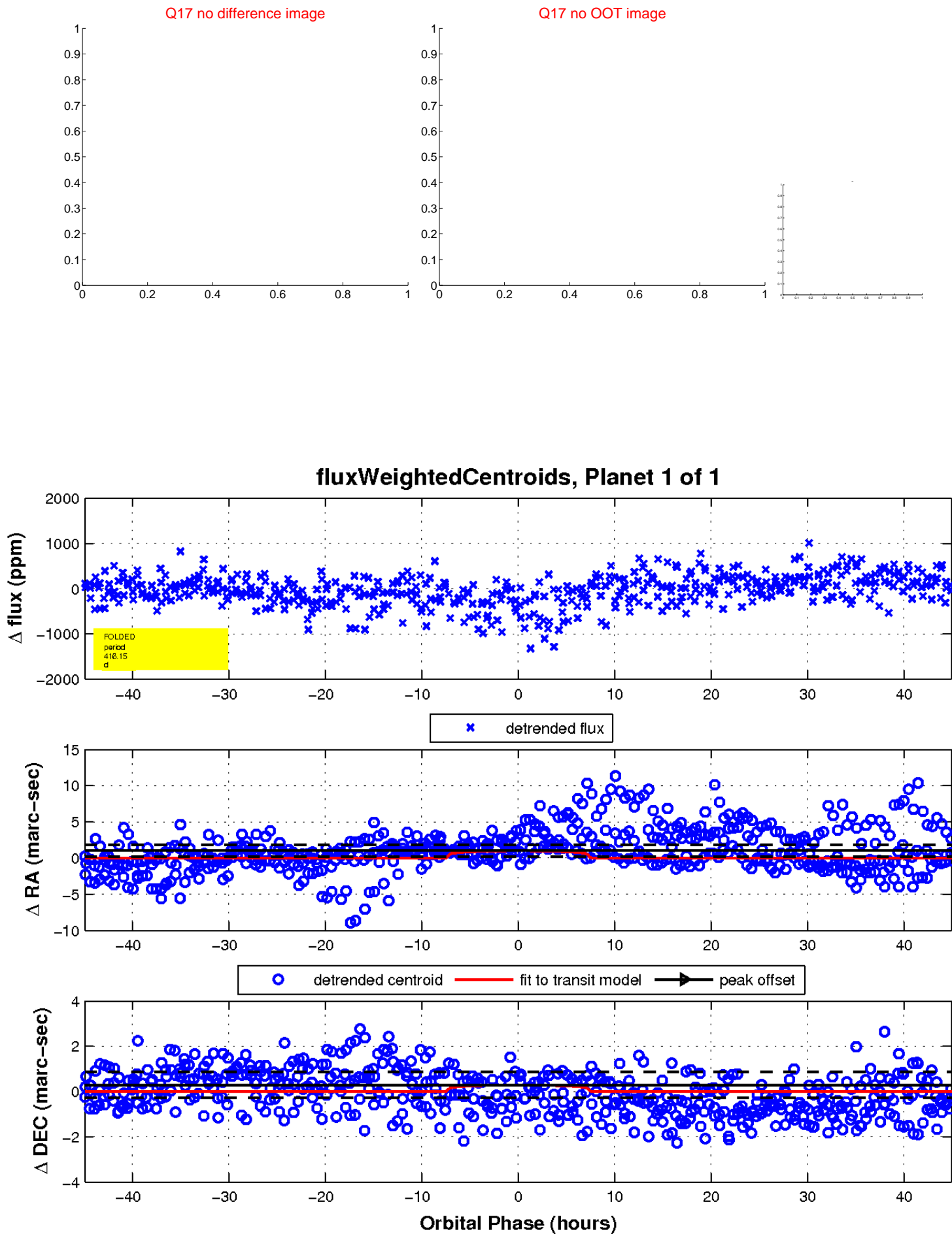
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

