

KIC 008187917

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|-----|------|-----------------------------|-----------------|------------------------|------------------------|
| 008187917-01 | OBS | No | 0.801172 | 131.830935 | 17.8 | 6.161 | 9.1 | 10.3 | 1.71 | 7113 | 0.73 | 18111.97 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|-----------------------|
| 008187917-01 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | LPP_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.

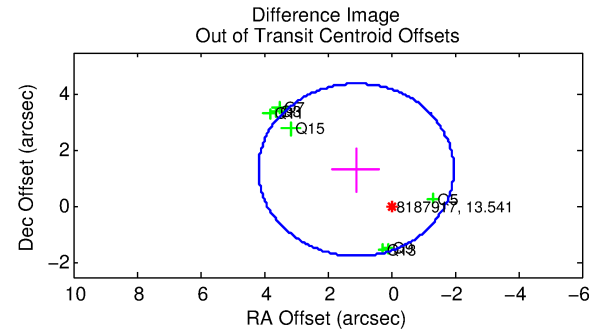
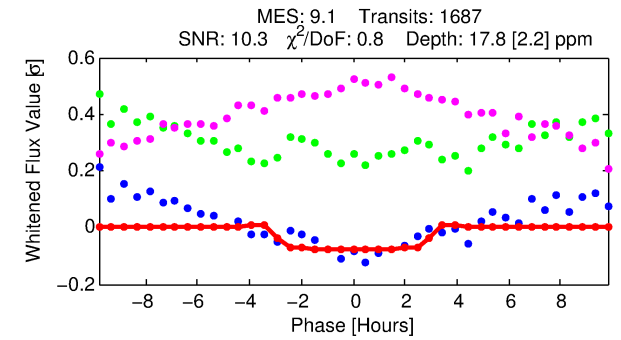
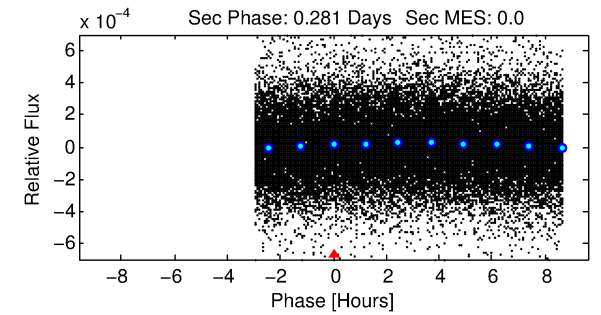
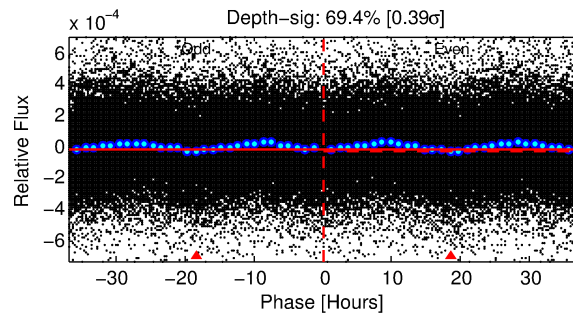
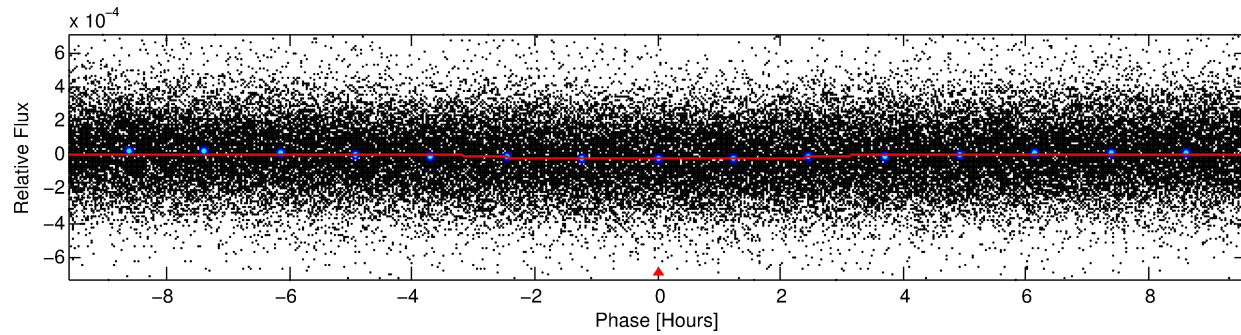
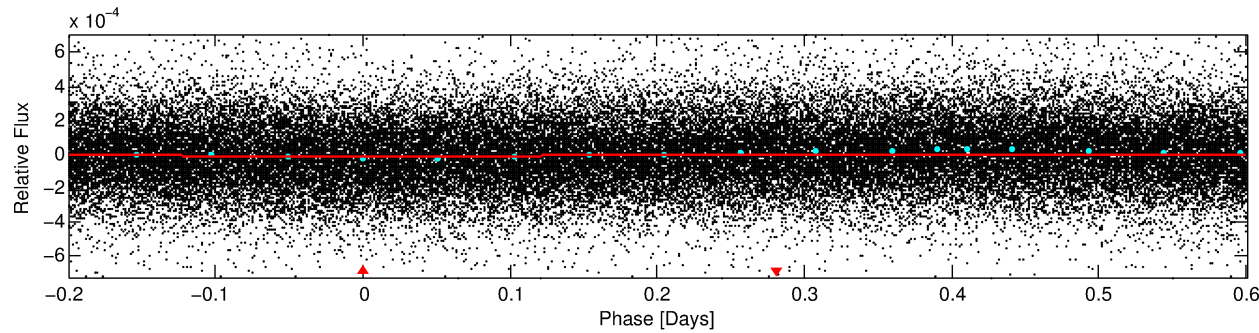
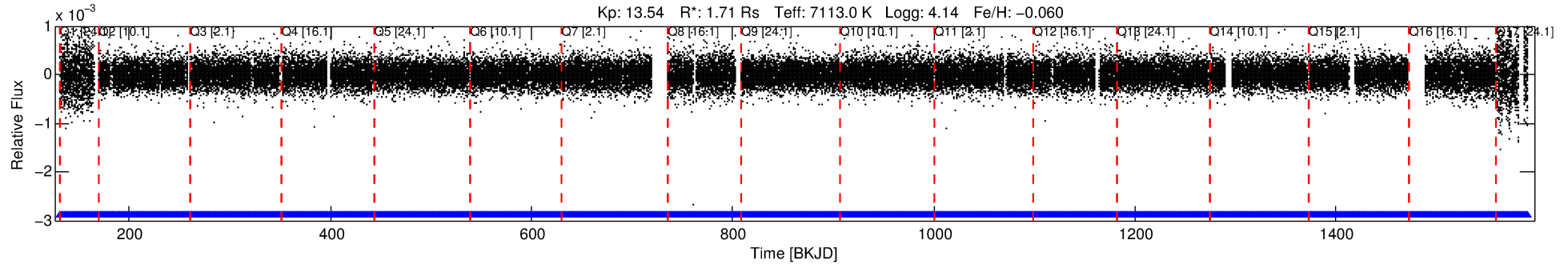
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008187917-01

No Significant Match Found

DV One-Page Summary

KIC: 8187917 Candidate: 1 of 1 Period: 0.801 d



DV Fit Results:

Period = 0.80117 [0.00001] d
Epoch = 131.8309 [0.0056] BKJD
Rp/R* = 0.0039 [0.0035]
a/R* = 1.18 [1.69]
b = 0.26 [18.43]
Seff = 18111.97 [7368.31]
Teff = 2958 [301] K
Rp = 0.73 [0.69] Re
a = 0.0192 [0.0049] AU
Ag = N/A
Teffp = N/A

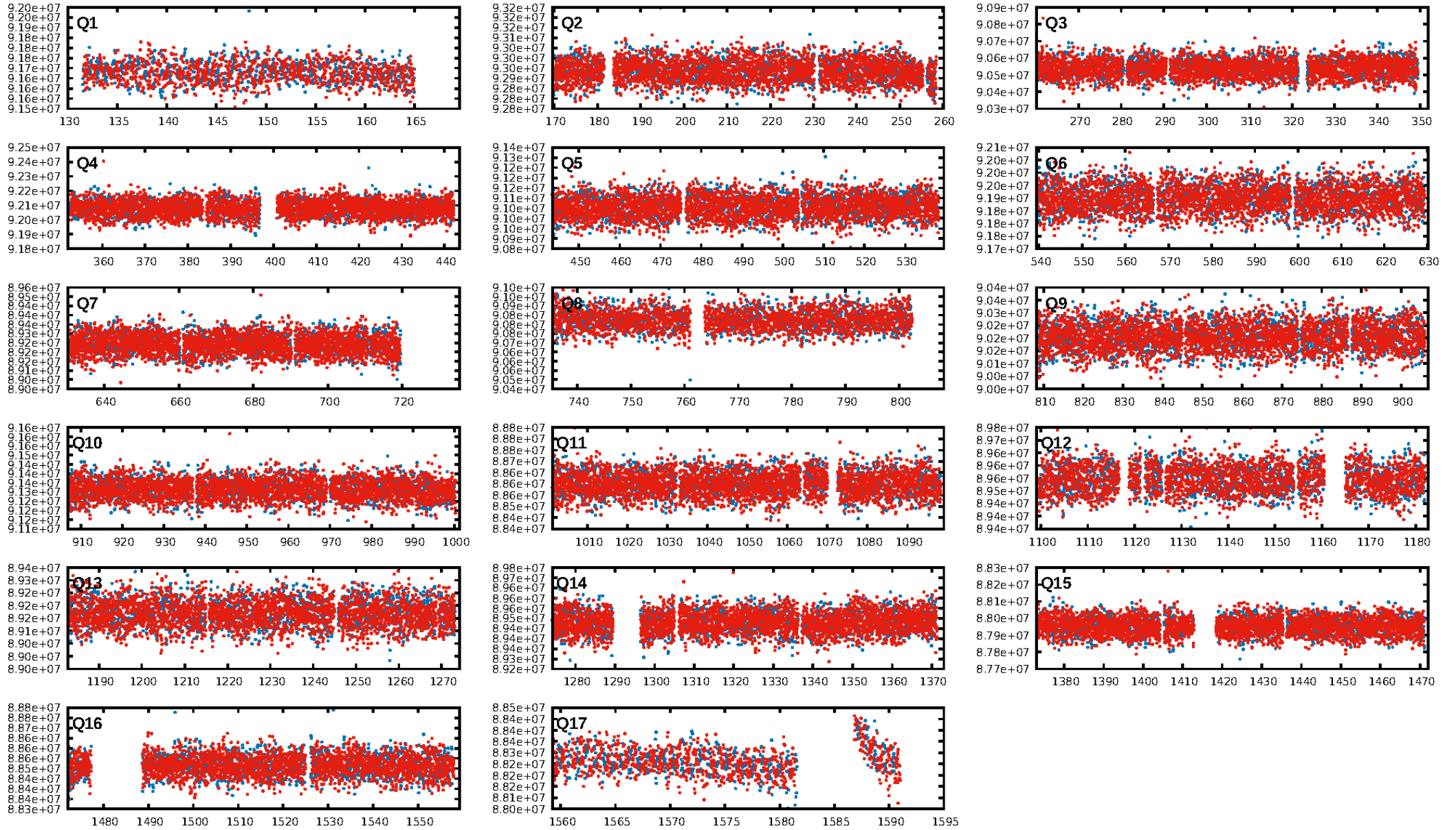
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 8.48e-34
RollingBand-fgt: 1.00 [1611/1611]
GhostDiagnostic-chr: -45.3
Centroid-sig: 4.4%
Centroid-so: 1.606 arcsec [1.54 σ]
OotOffset-rm: 1.714 arcsec [1.67 σ]
KicOffset-rm: 1.622 arcsec [1.72 σ]
OotOffset-st: 0/4/0/3 [7]
KicOffset-st: 0/4/0/3 [7]
DiffImageQuality-fgm: 0.57 [4/7]
DiffImageOverlap-fno: 1.00 [17/17]

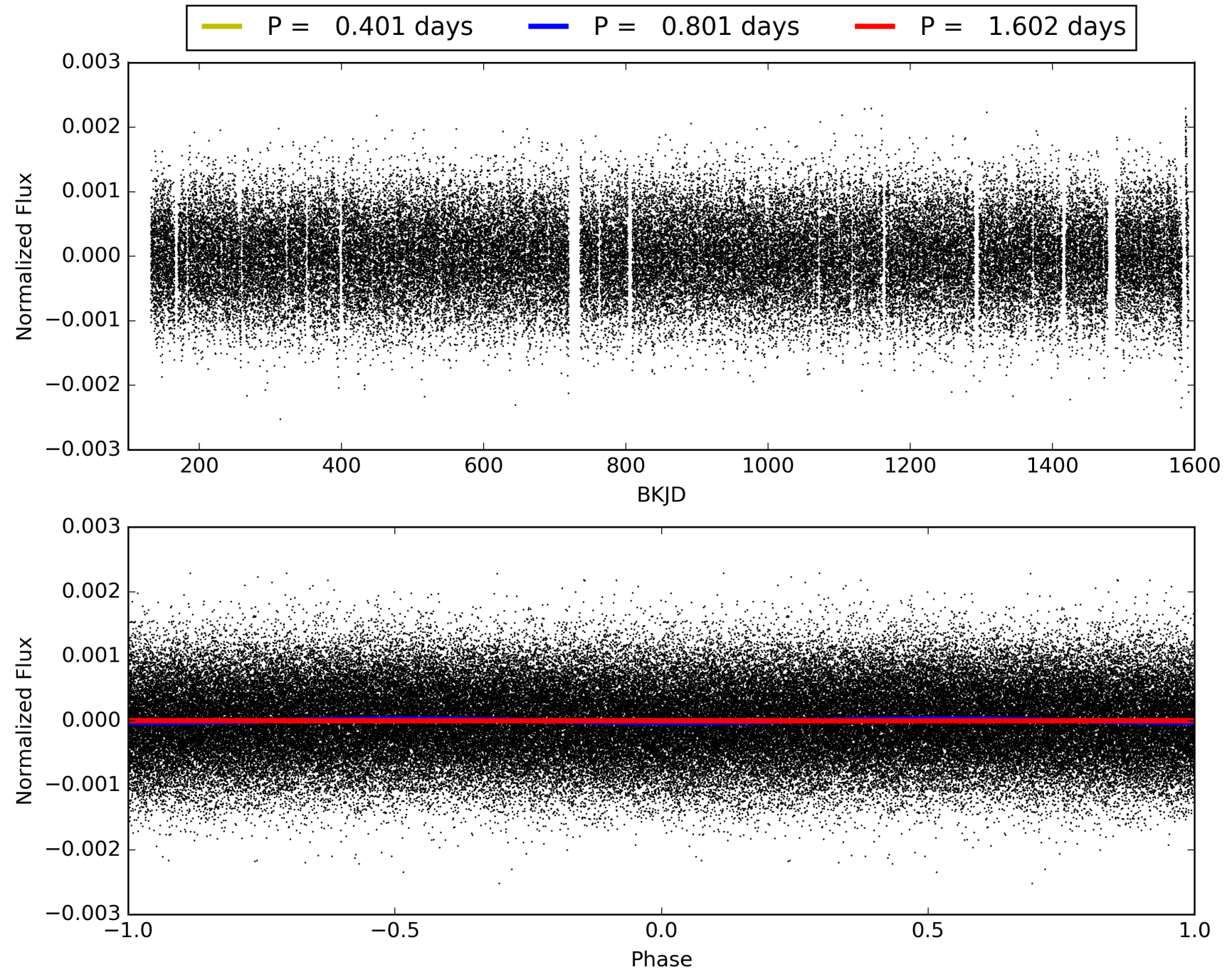
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 20:41:51 Z

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

TCE 008187917-01, PDC Light Curves

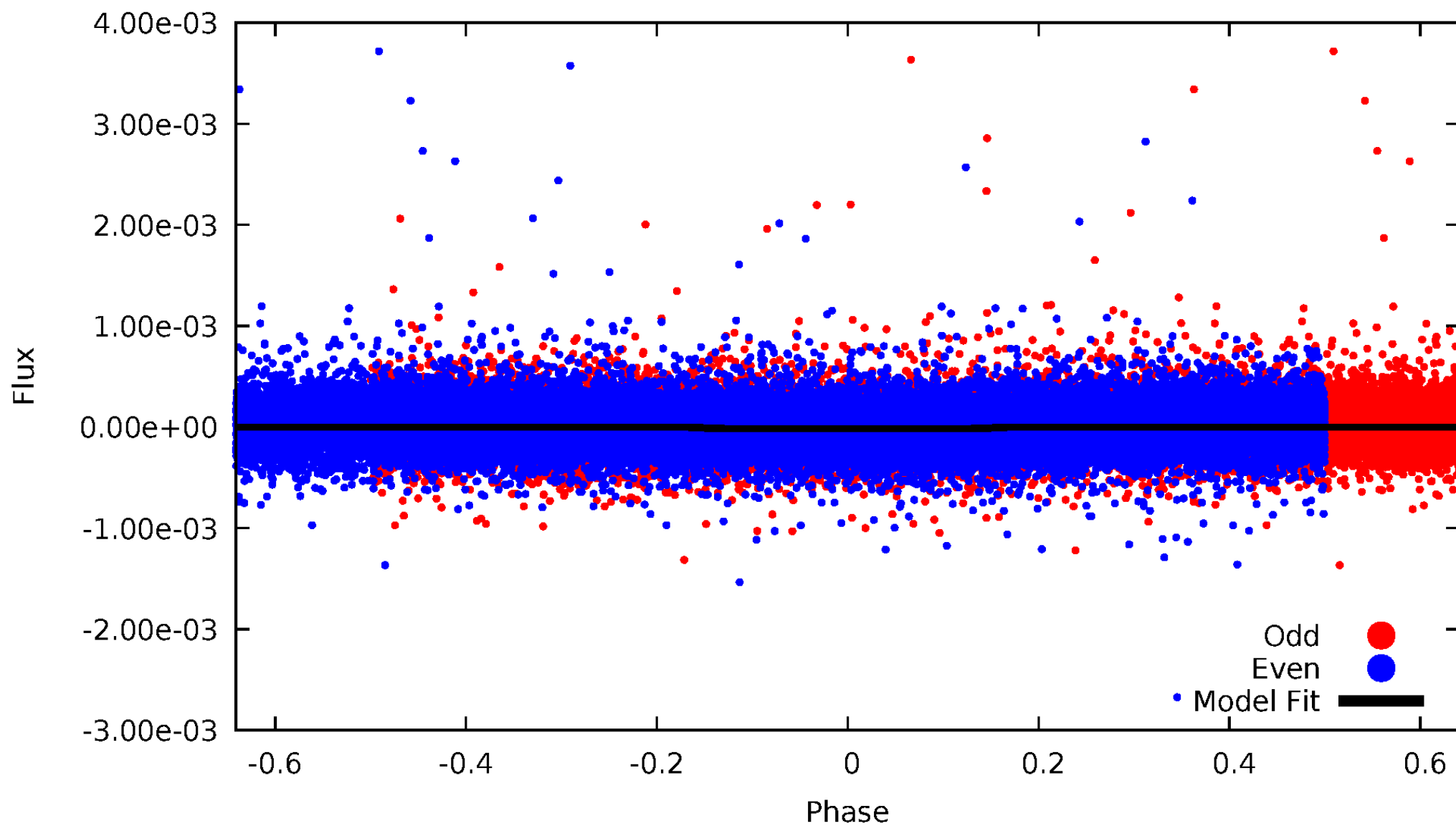


TCE 008187917-01



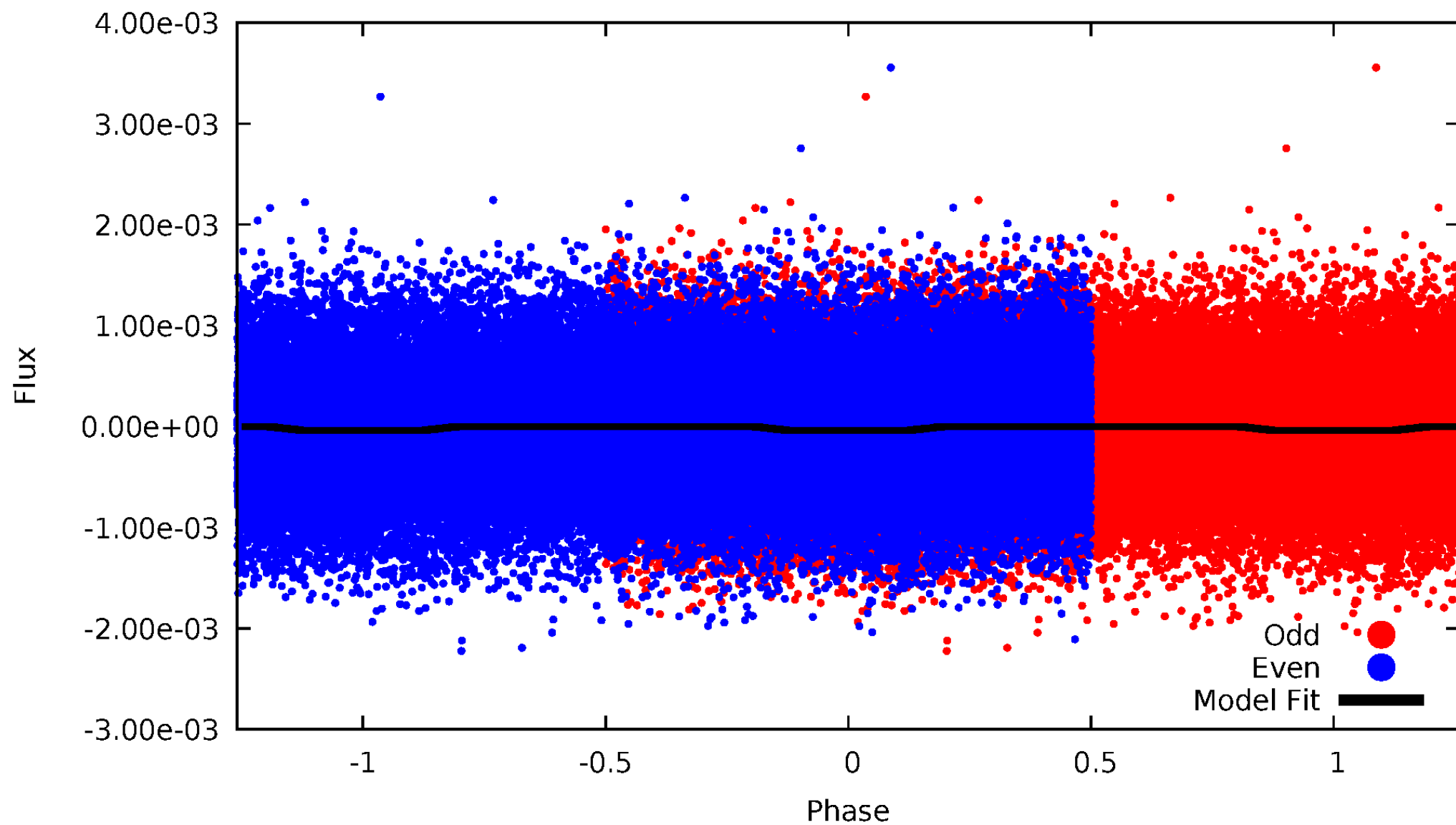
DV Odd/Even

TCE 008187917-01



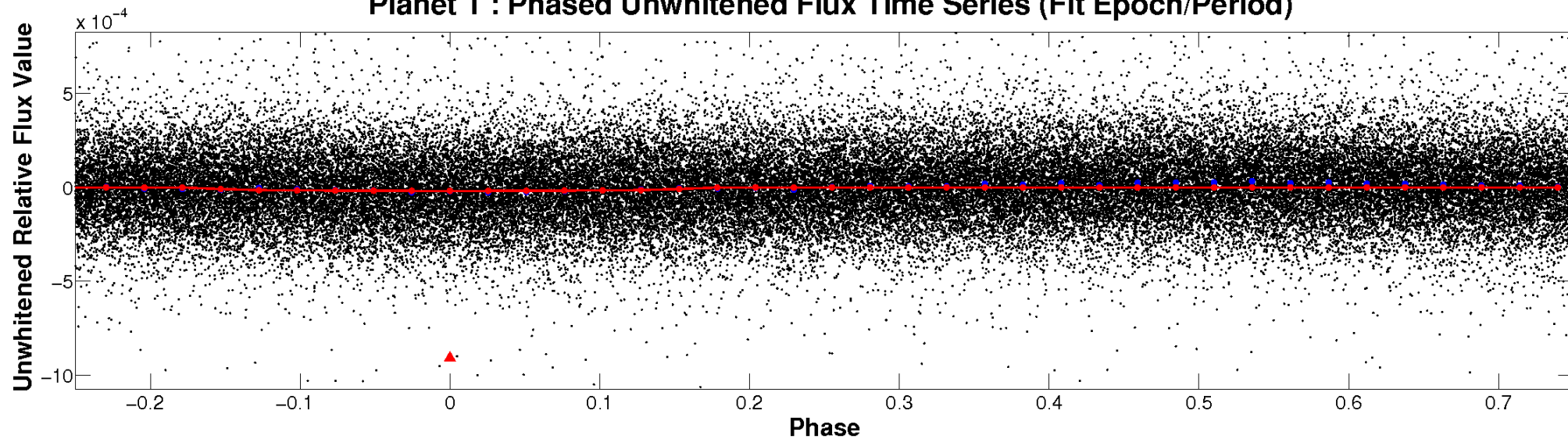
ALT Odd/Even

TCE 008187917-01

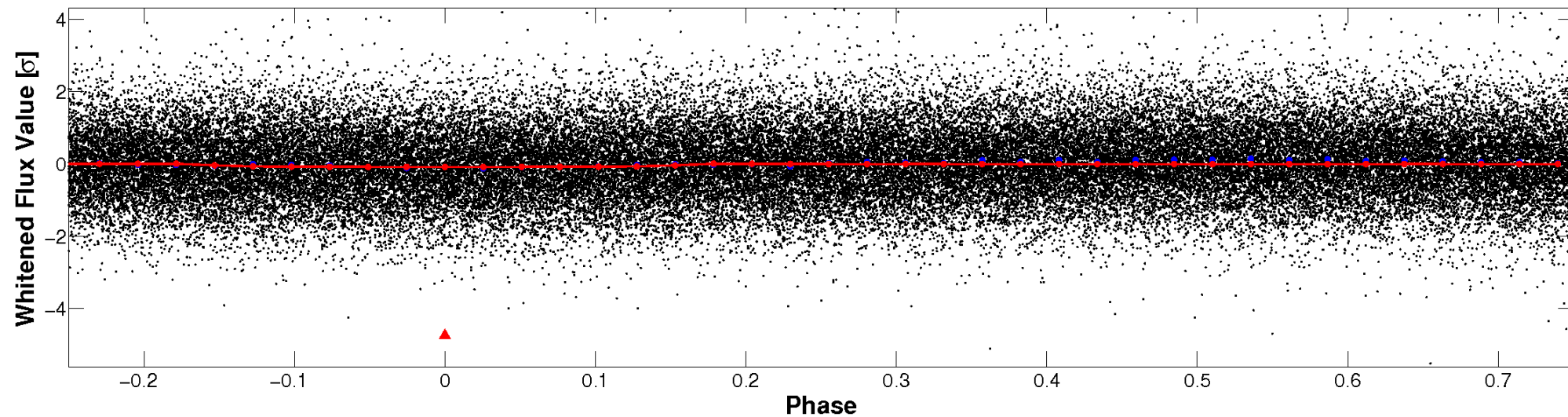


Non-Whitened Vs. Whitened Light Curve

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

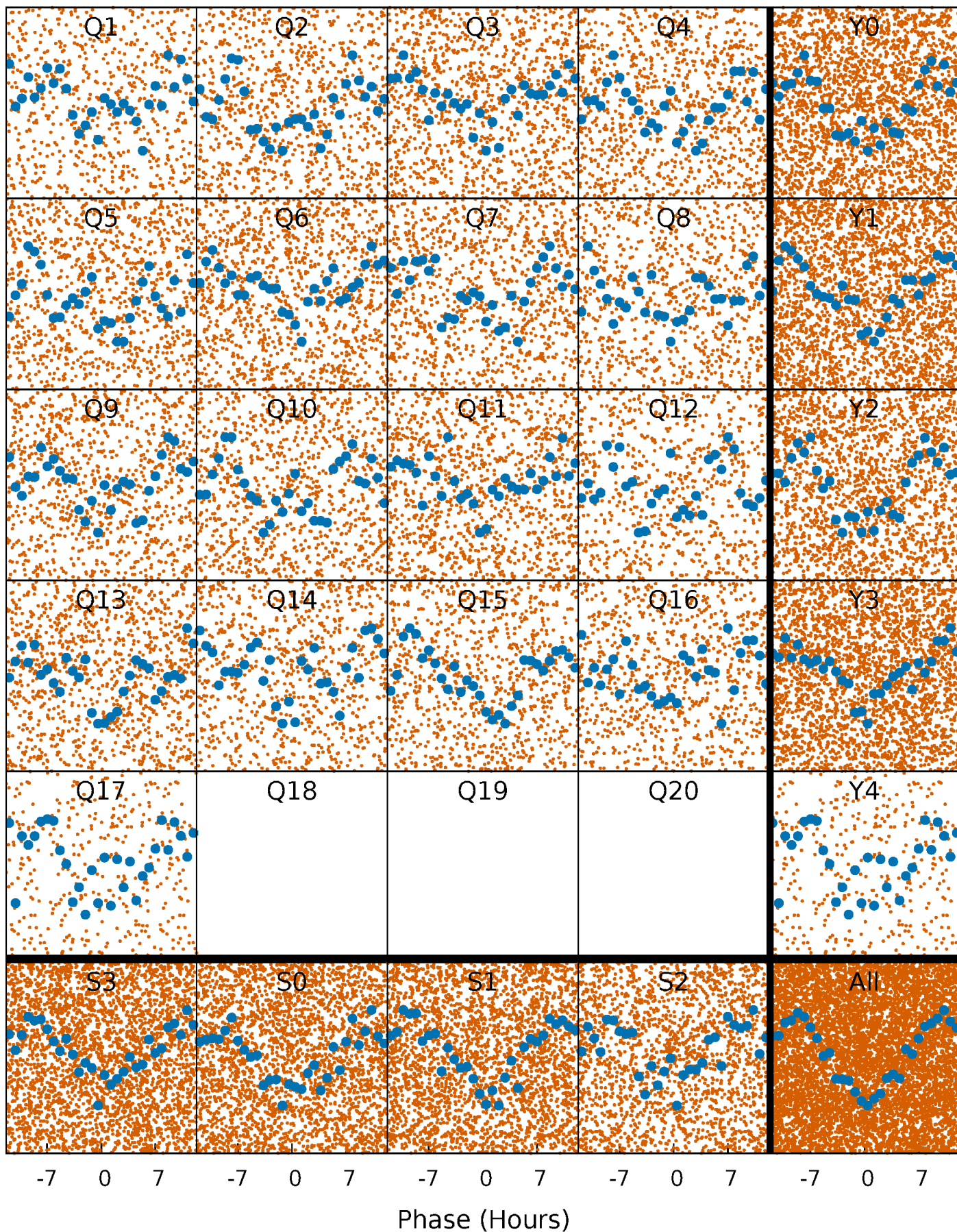


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



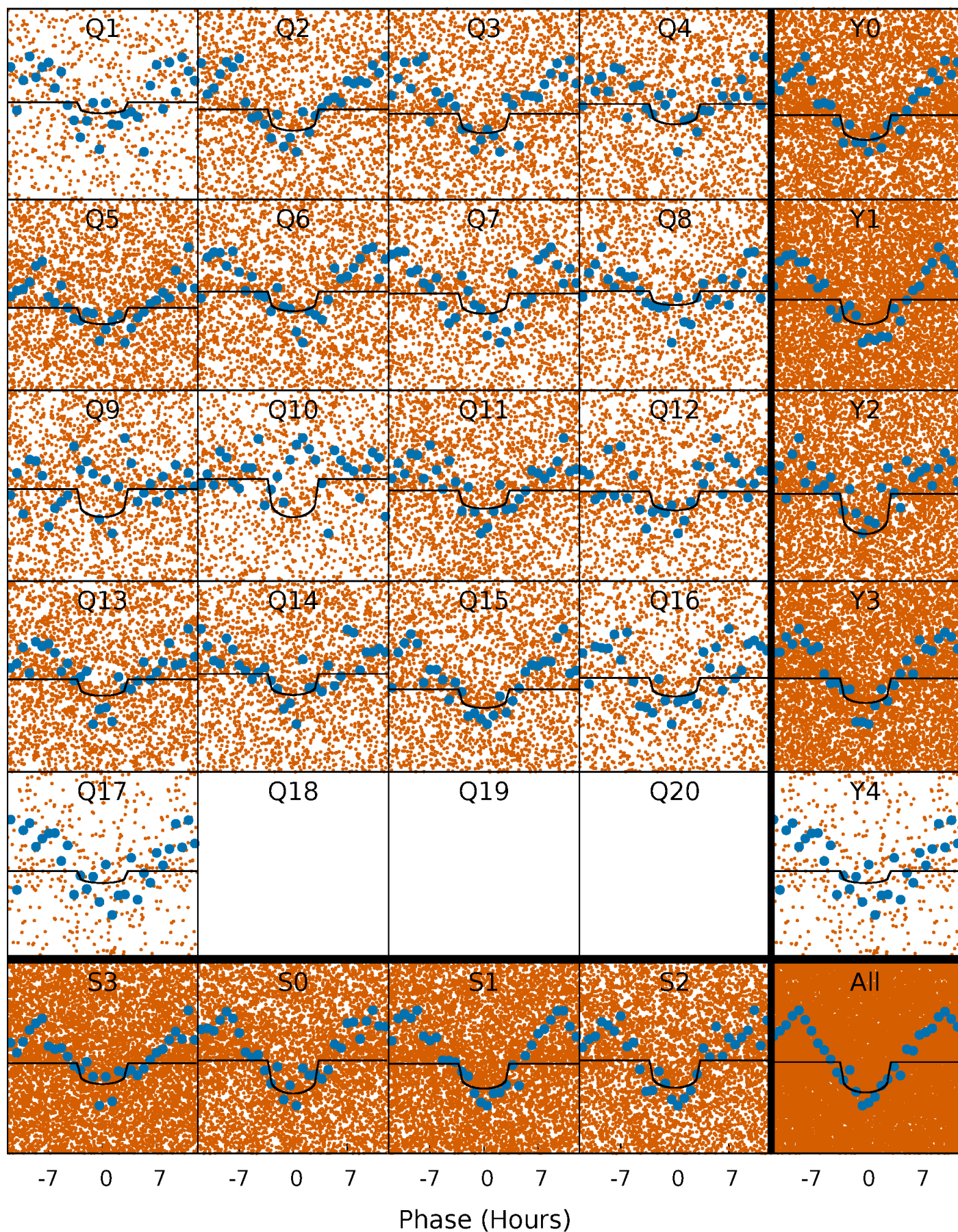
PDC Quarter-Phased Transit Curves

TCE 008187917-01 P= 0.801172 Days $T_0=131.830935$ (BKJD)



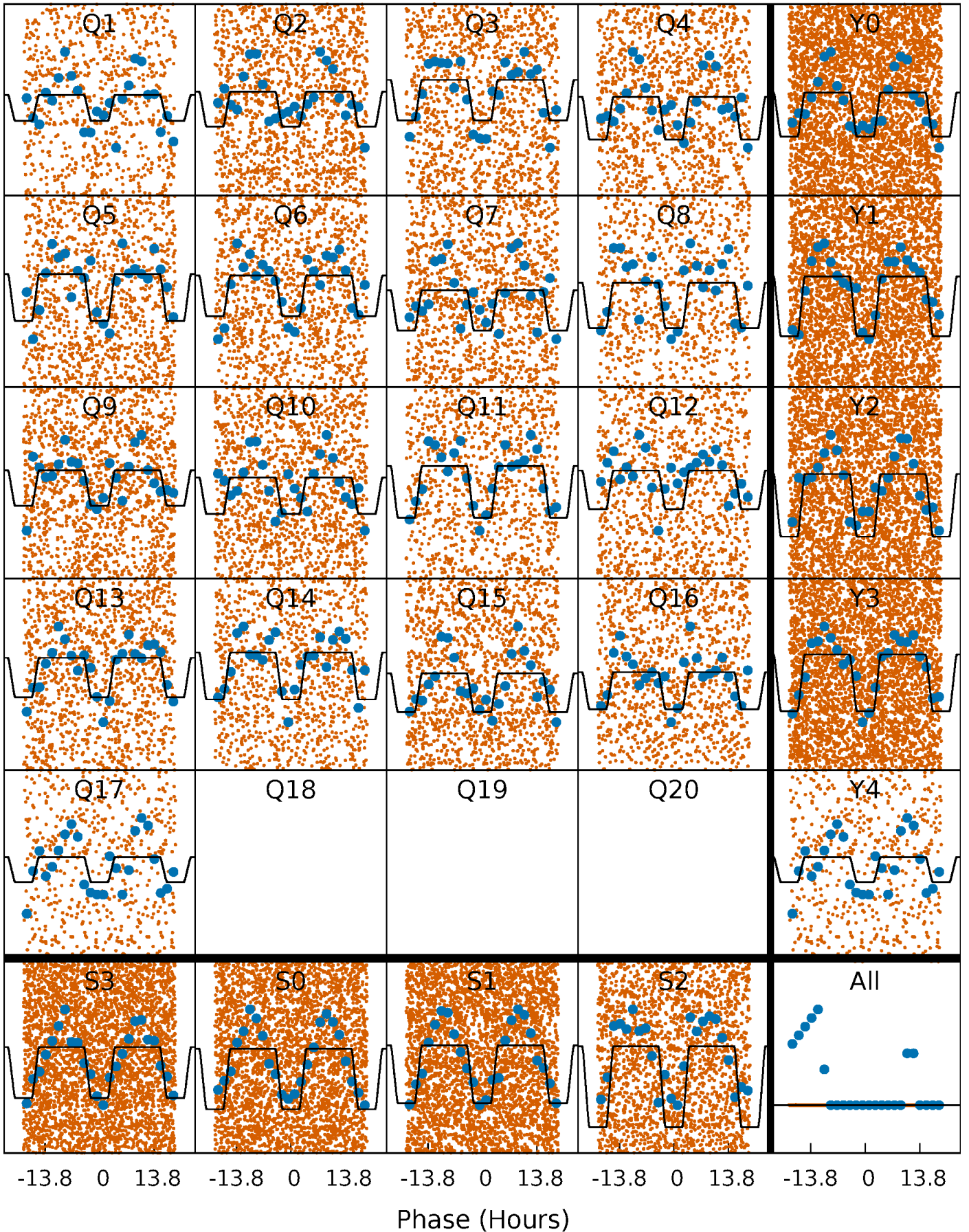
DV Quarter-Phased Transit Curves

TCE 008187917-01 P= 0.801172 Days $T_0=131.830935$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

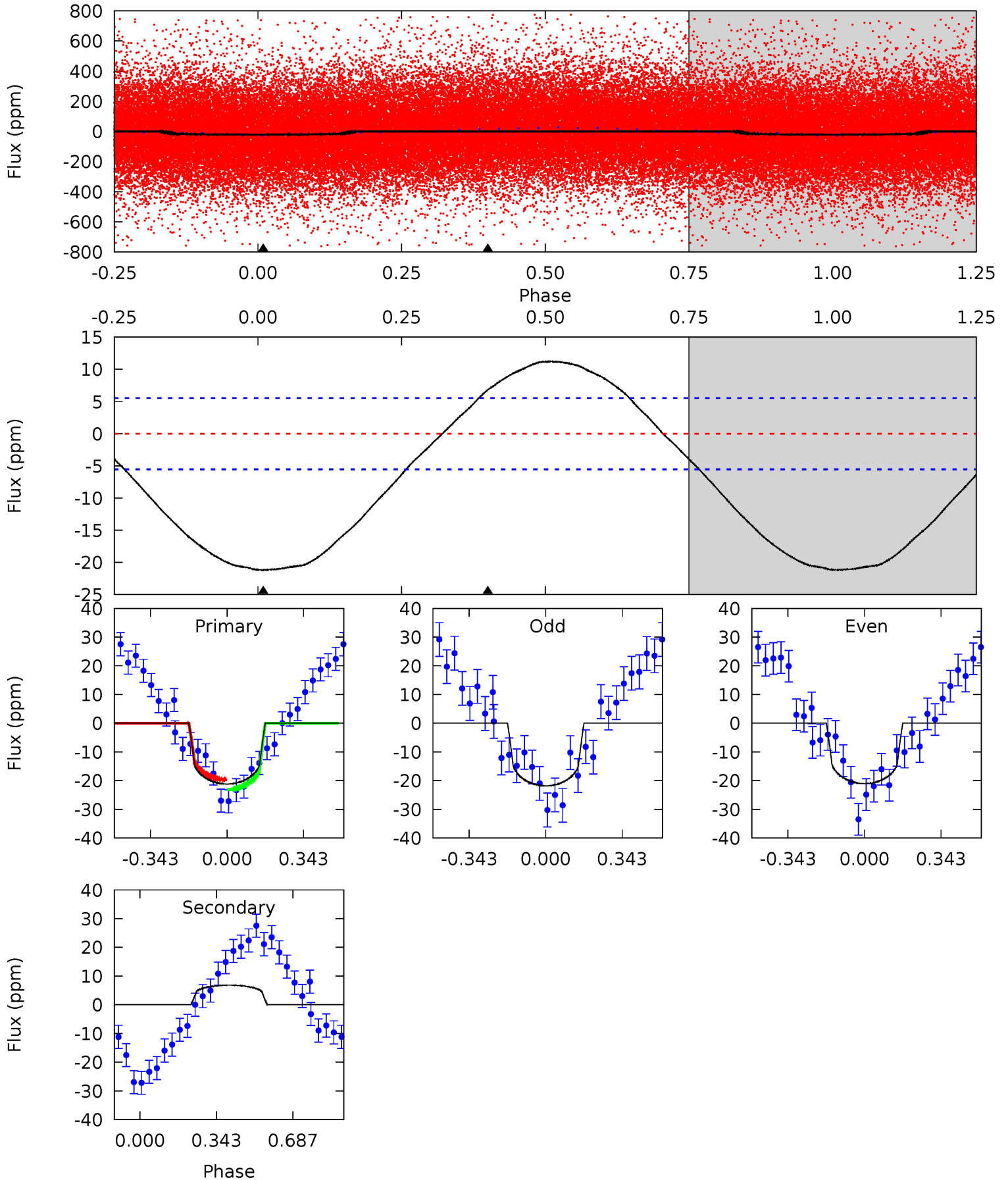
TCE 008187917-01 P= 0.801166 Days $T_0=131.861662$ (BKJD)



DV Model-Shift Uniqueness Test

008187917-01, P = 0.801172 Days, E = 131.029763 Days

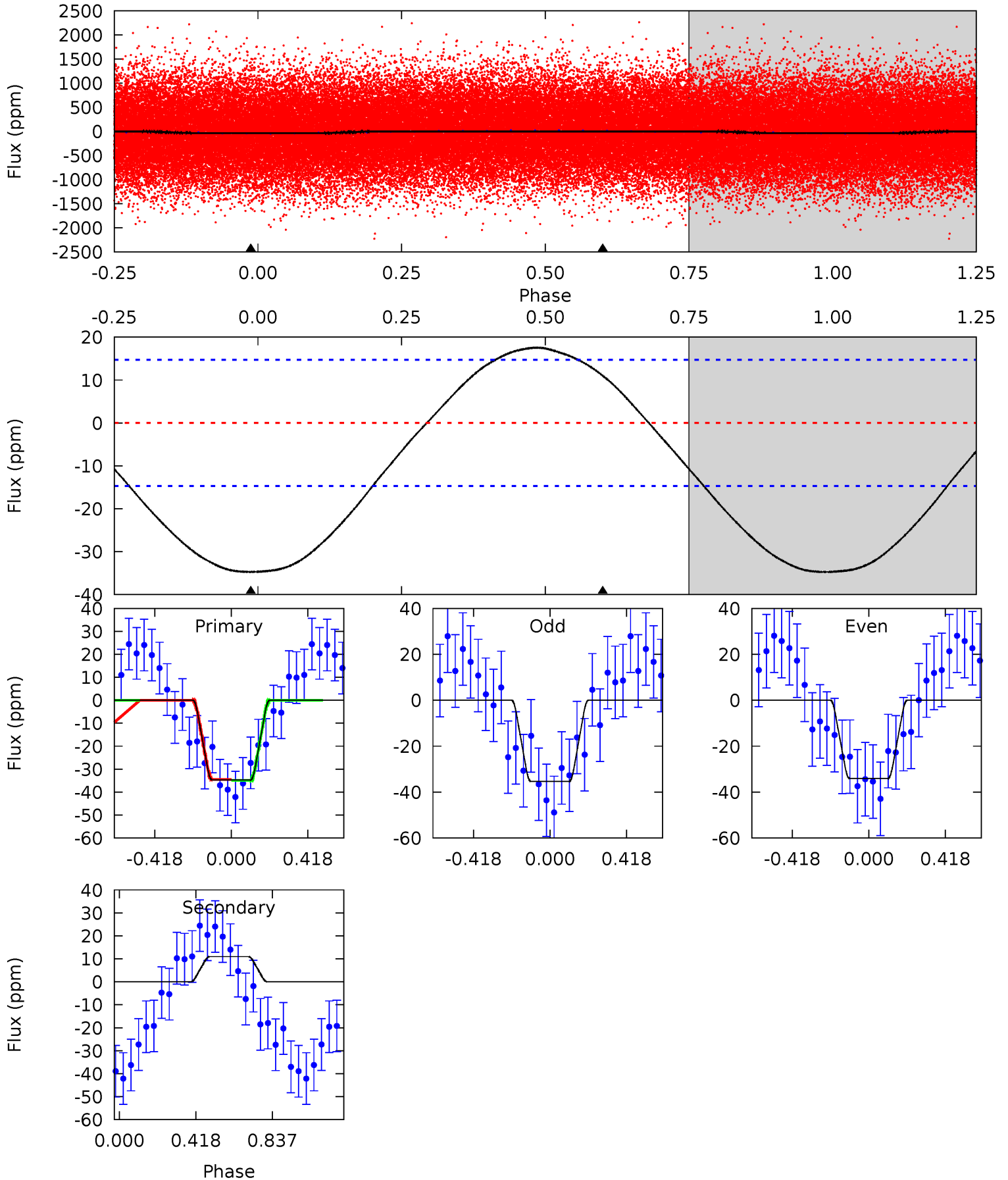
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|-------|-----|-----|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 16.5 | -5.30 | 0 | 0 | 4.30 | 0.95 | 2.07 | 16.5 | 16.5 | -5.30 | -5.30 | 0.30 | 1.02 | 0.35 | 1.33 |



Alt Model-Shift Uniqueness Test

008187917-01, P = 0.801166 Days, E = 131.060496 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|-------|-----|-----|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 10.0 | -3.18 | 0 | 0 | 4.25 | 0.81 | 1.25 | 10.0 | 10.0 | -3.18 | -3.18 | 0.18 | 0.89 | 0.34 | 0.06 |



Stellar Parameters For KIC 008187917

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | R (R_{\odot}) | $M(M_{\odot})$ | p_{\star} ($\text{g}\cdot\text{cm}^{-3}$) |
|--------|----------------------|---------------------------|----------------------------|---------------------------|---------------------------|---|
| | 7113^{+200}_{-314} | $4.142^{+0.132}_{-0.198}$ | $-0.060^{+0.250}_{-0.350}$ | $1.709^{+0.525}_{-0.394}$ | $1.477^{+0.209}_{-0.255}$ | $0.417^{+0.316}_{-0.206}$ |
| | +3%/-4% | +3%/-5% | +417%/-583% | +31%/-23% | +14%/-17% | +76%/-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 008187917-01 / KOI

| Detrend | Depth (ppm) | R_p (R_{\oplus}) | T_{max} (K) | T_{obs} (K) | A_{obs} |
|---------|-------------|------------------------|----------------------|------------------------|-----------------------------|
| DV | 7 ± 1 | $0.85^{+0.63}_{-0.52}$ | 4156^{+307}_{-284} | -5564^{+903}_{-3528} | $-1.882^{+1.266}_{-10.536}$ |
| Alt. | 11 ± 3 | $1.22^{+0.73}_{-0.61}$ | 4159^{+311}_{-269} | -5250^{+708}_{-1890} | $-1.372^{+0.862}_{-4.275}$ |

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

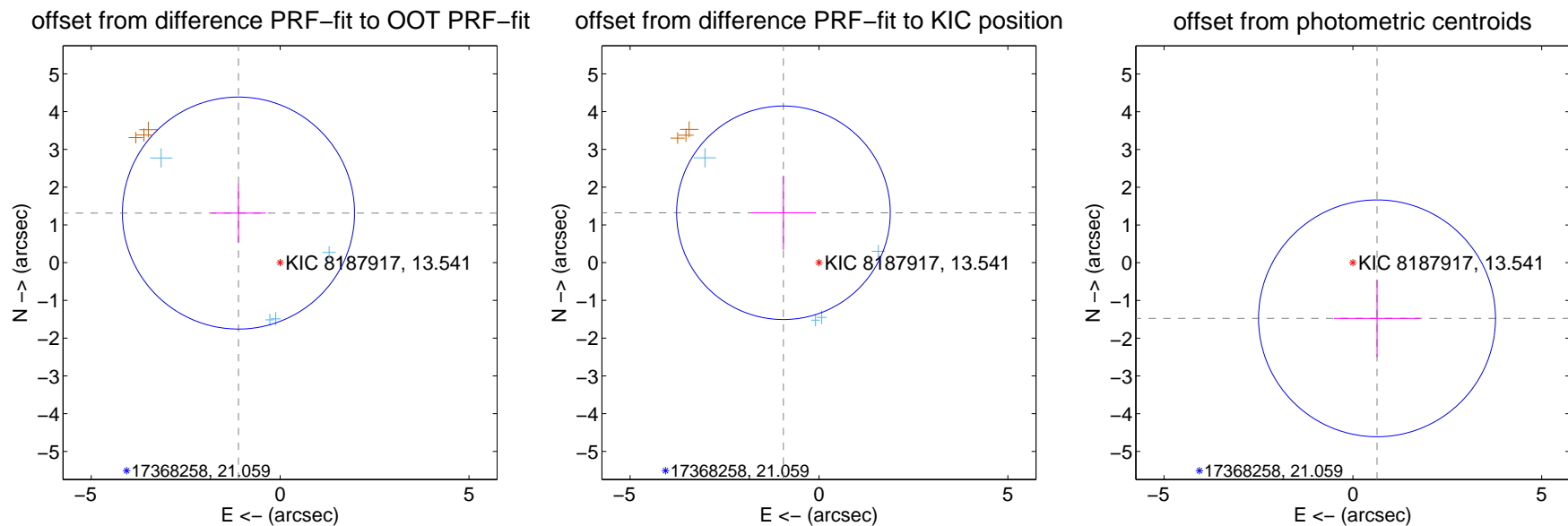
DV Centroid Data

Supplemental centroid analysis for 008187917-01. Kepler magnitude: 13.54. Transit SNR 10.31

There are 4 quarters with good PRF difference image offsets

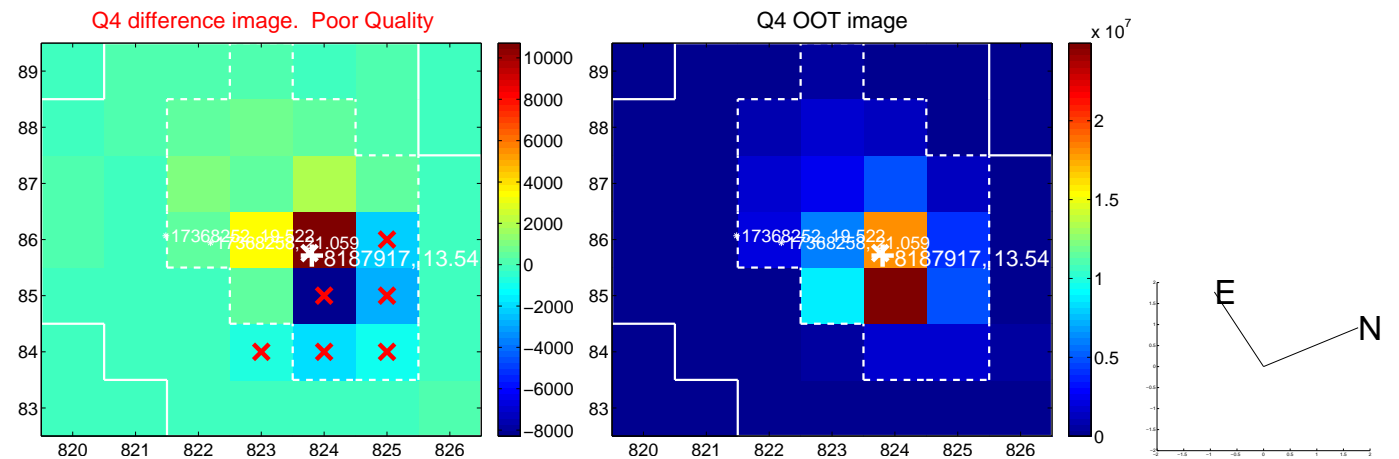
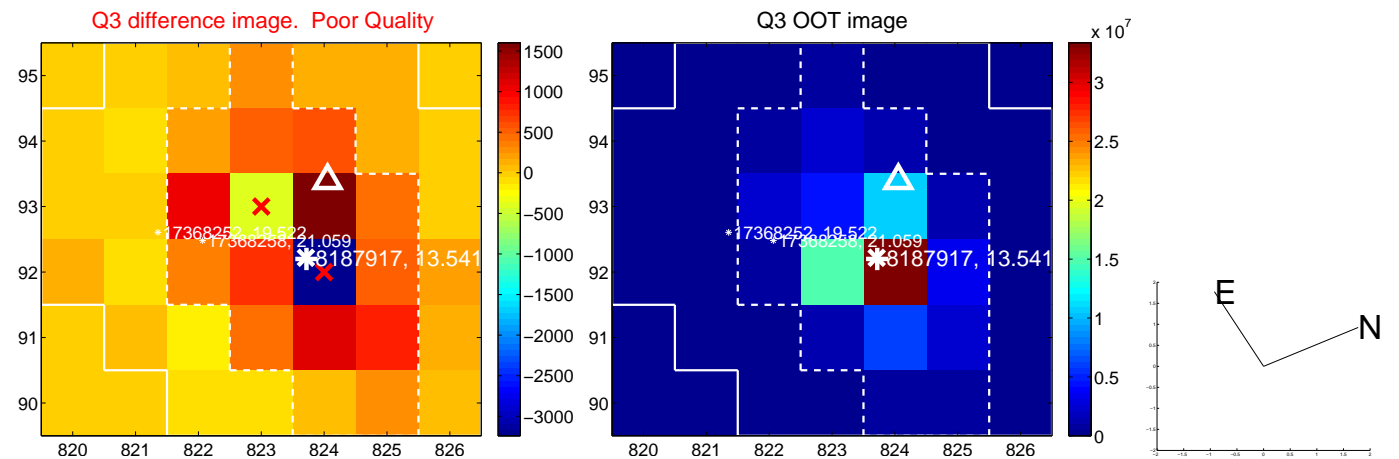
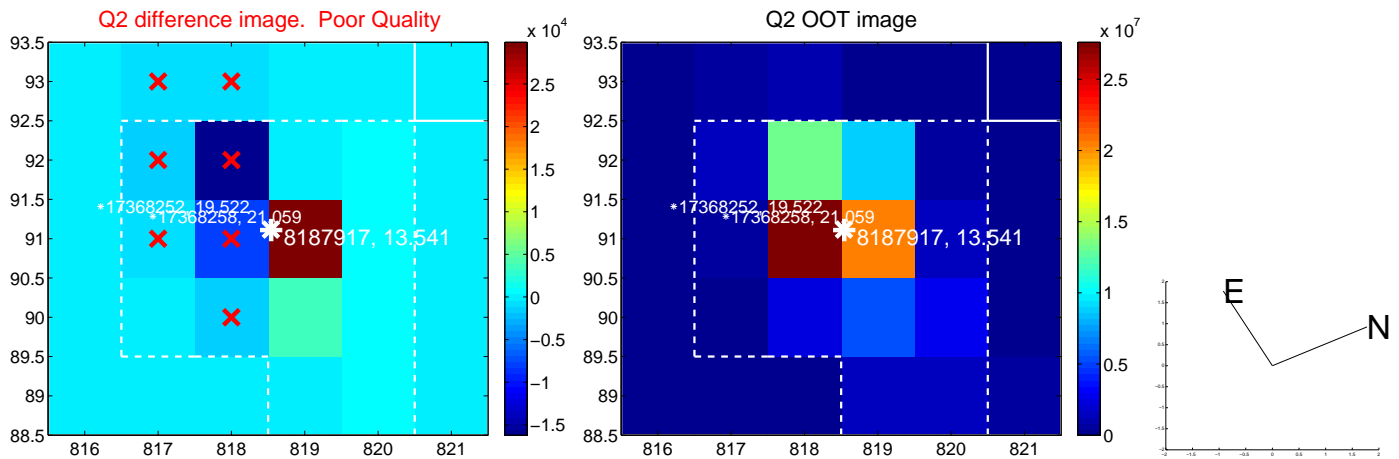
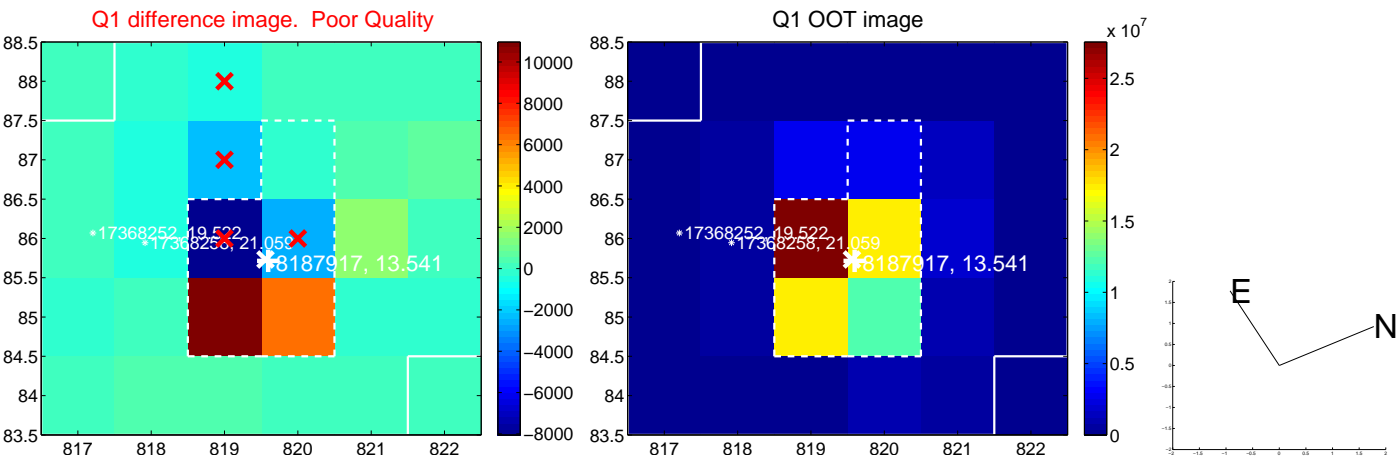
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|-------------------|-------------------|
| PRF-fit source offset from OOT | 1.714 ± 1.024 | 1.67 | 1.102 ± 0.726 | 1.313 ± 0.776 |
| PRF-fit source offset from KIC position | 1.622 ± 0.943 | 1.72 | 0.941 ± 0.861 | 1.321 ± 0.981 |
| photometric centroid source offset | 1.61 ± 1.05 | 1.54 | -0.64 ± 1.14 | -1.47 ± 1.03 |

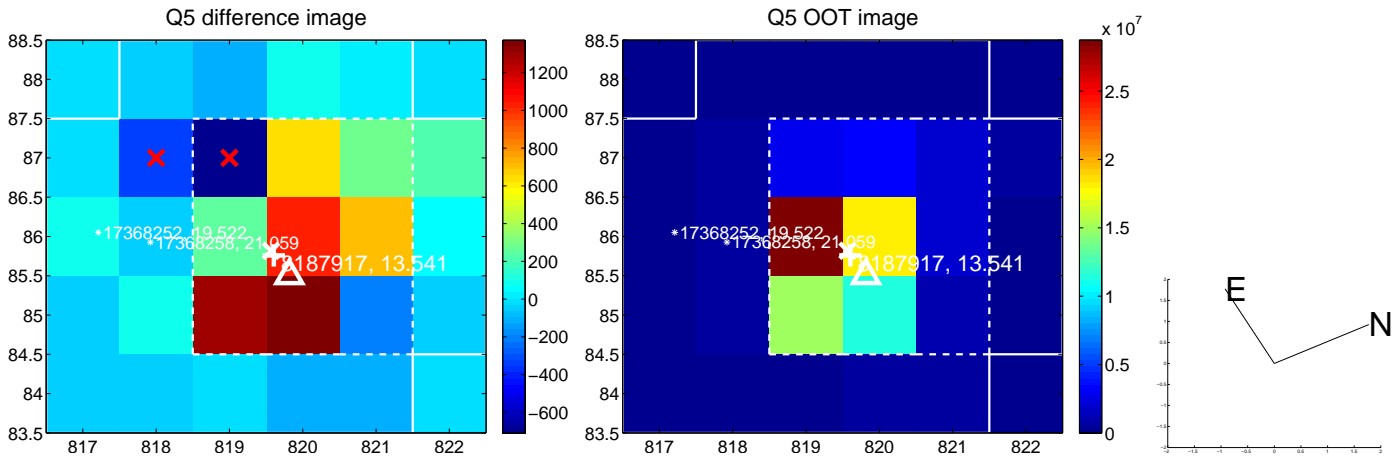


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

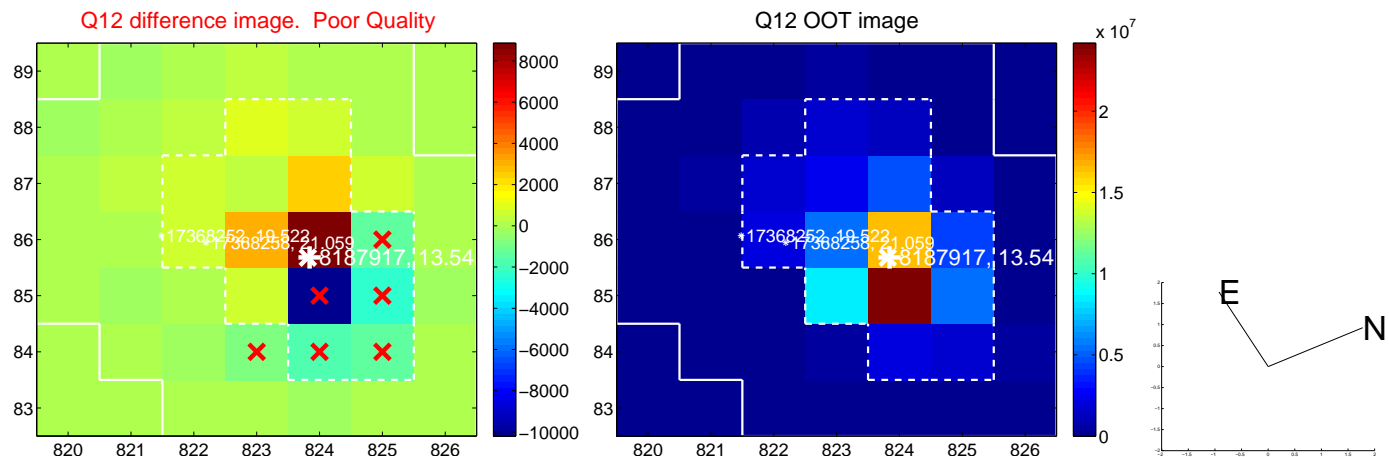
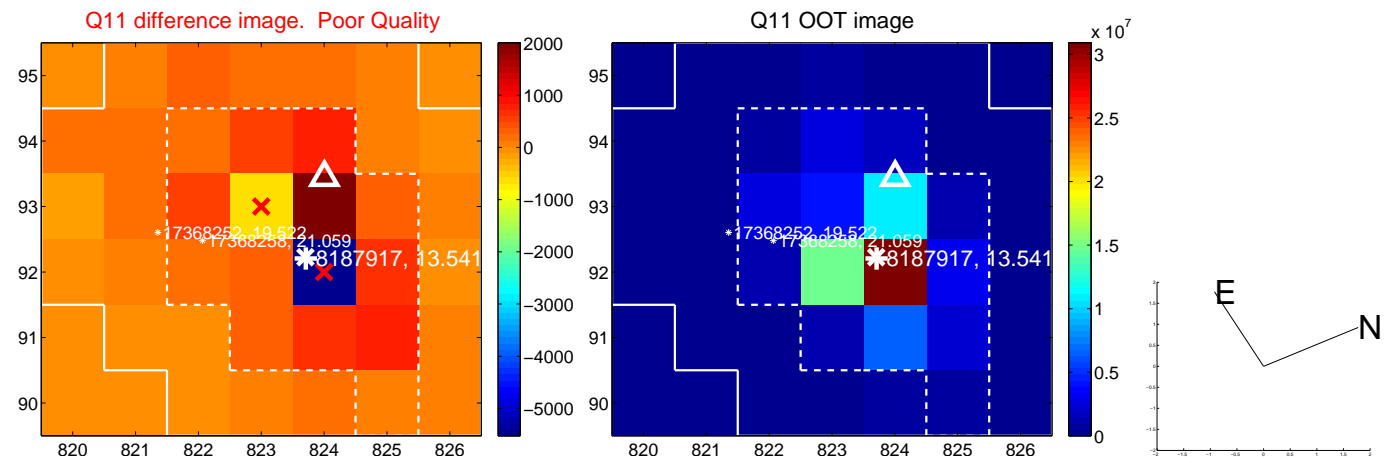
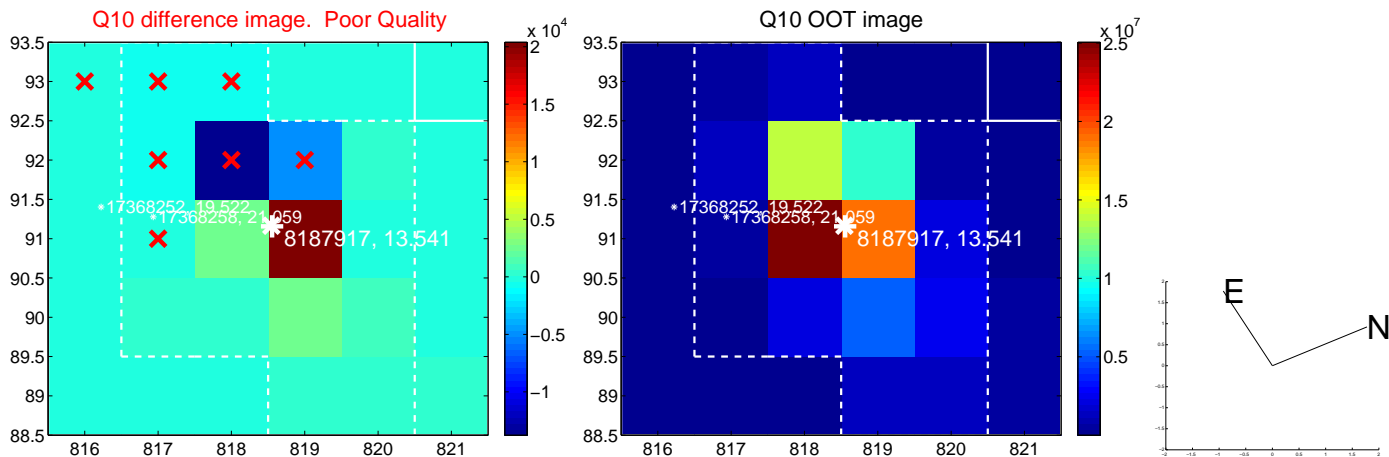
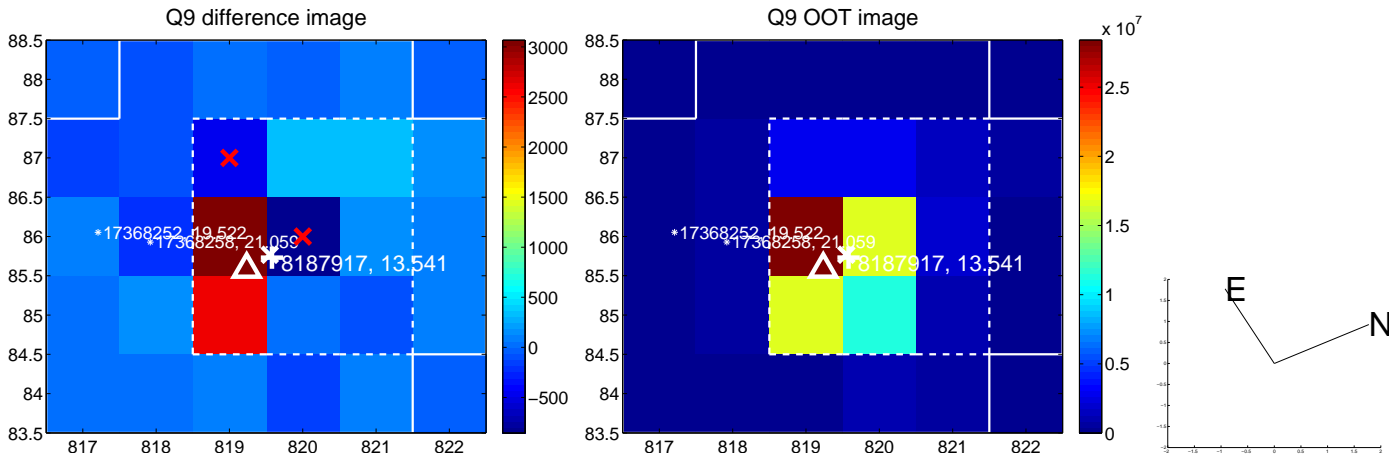
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



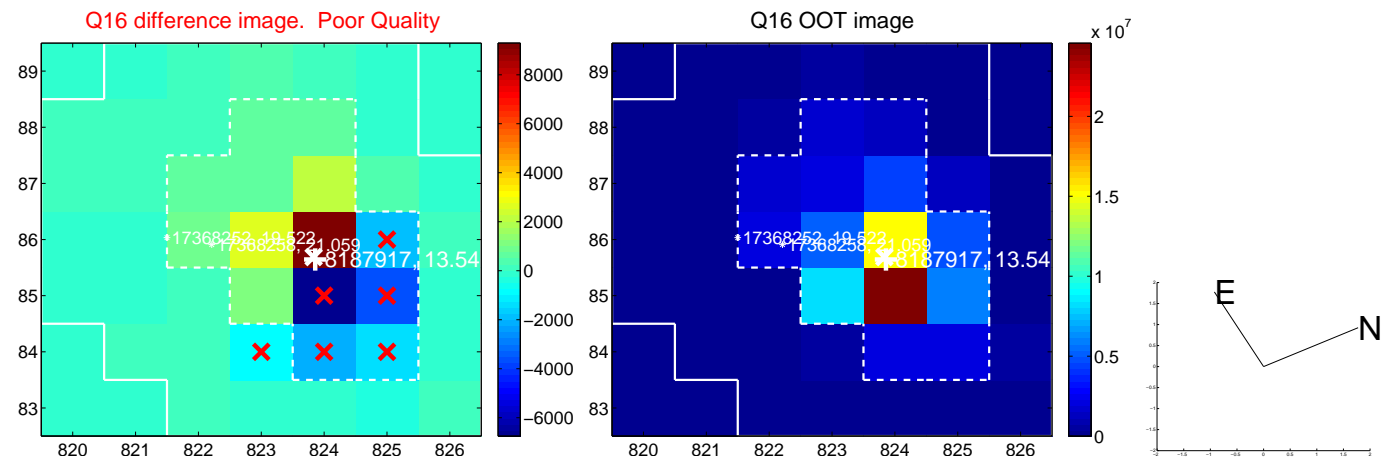
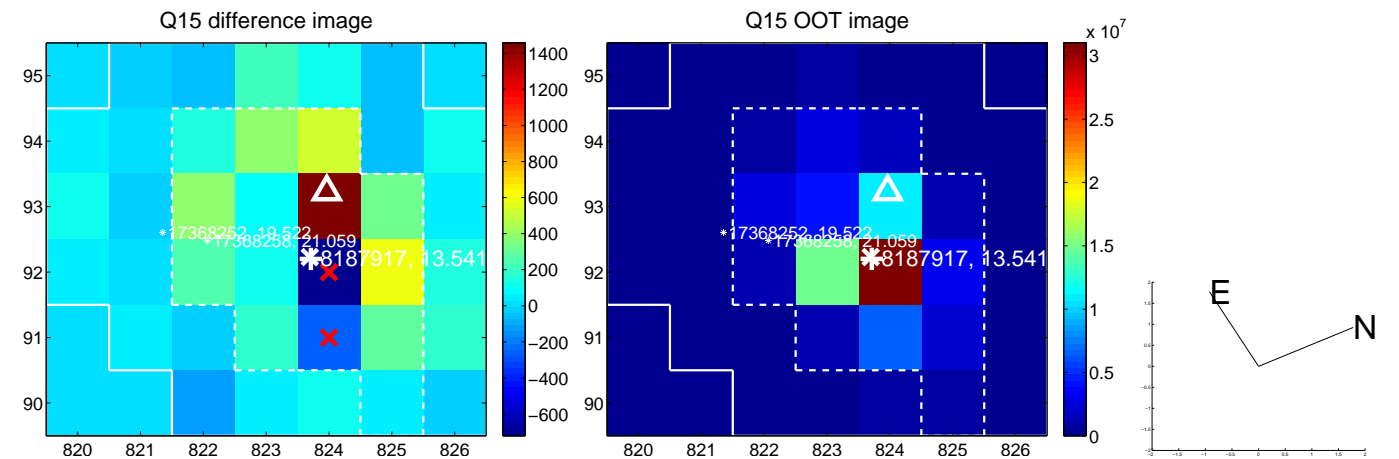
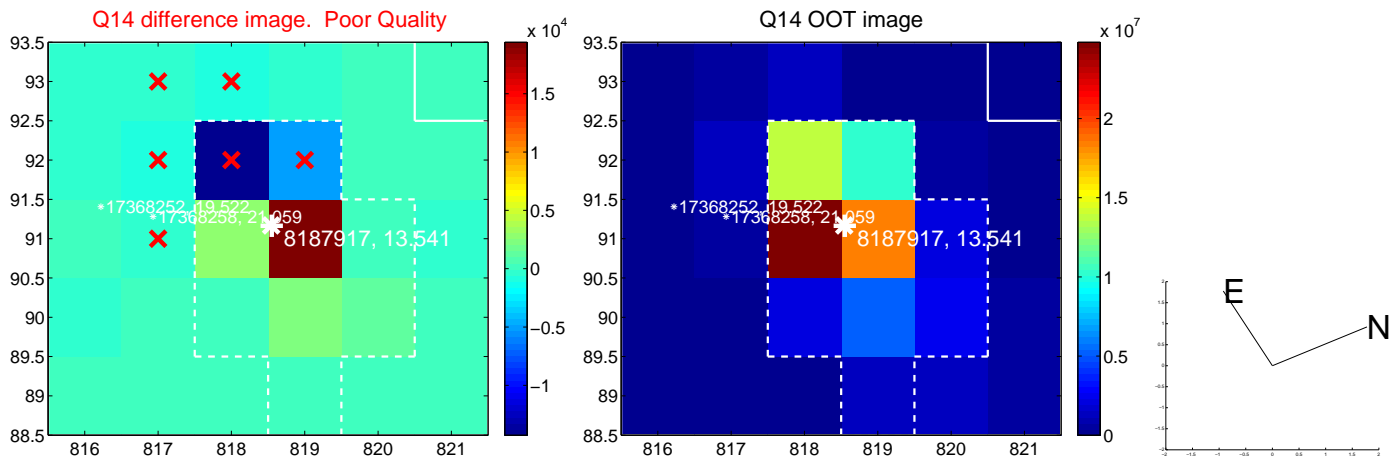
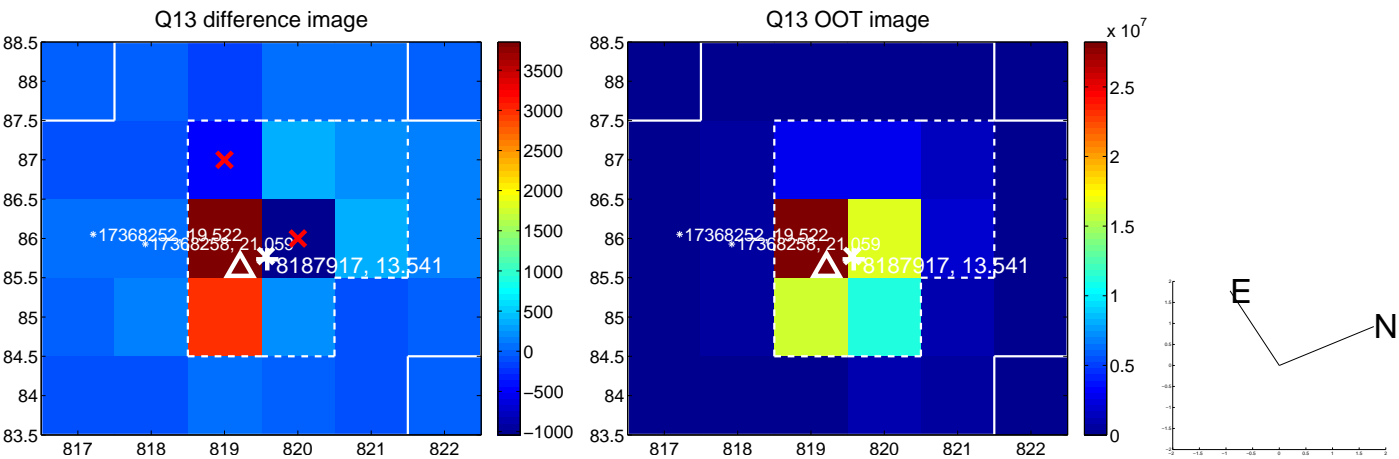
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



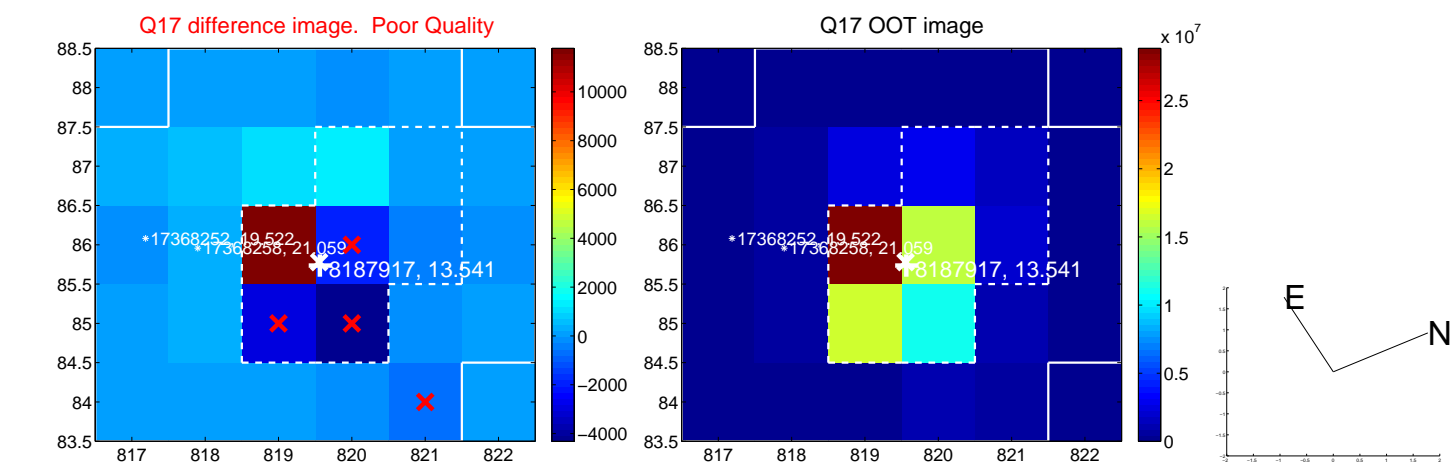
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



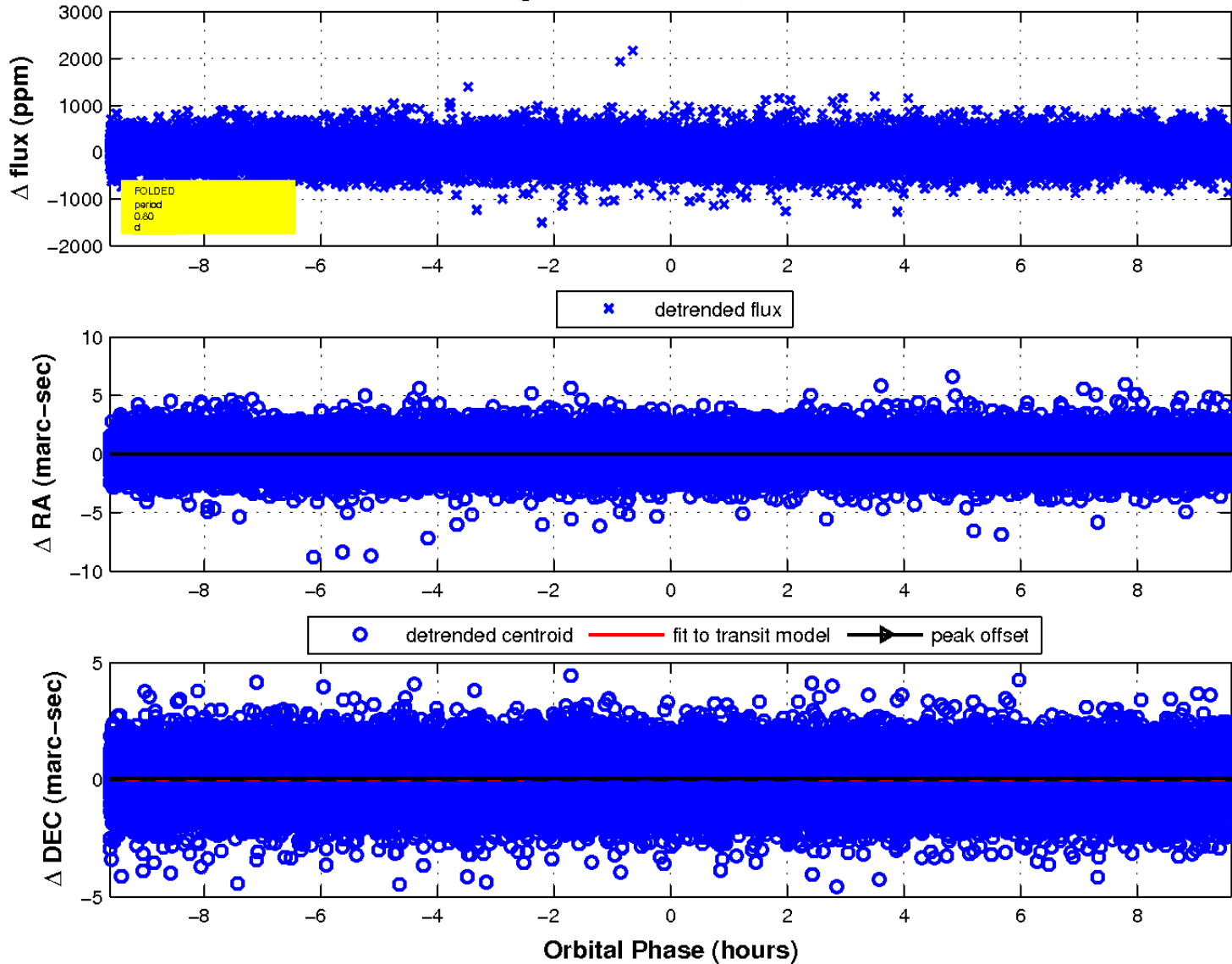
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

