

KIC 008714886

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|-----|-----|-----------------------------|-----------------|------------------------|------------------------|
| 008714886-01 | OBS | No | 0.549030 | 131.841281 | 22.3 | 2.996 | 7.8 | 6.5 | 2.40 | 15896 | 1.28 | 924430.63 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|--|
| 008714886-01 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED |

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

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

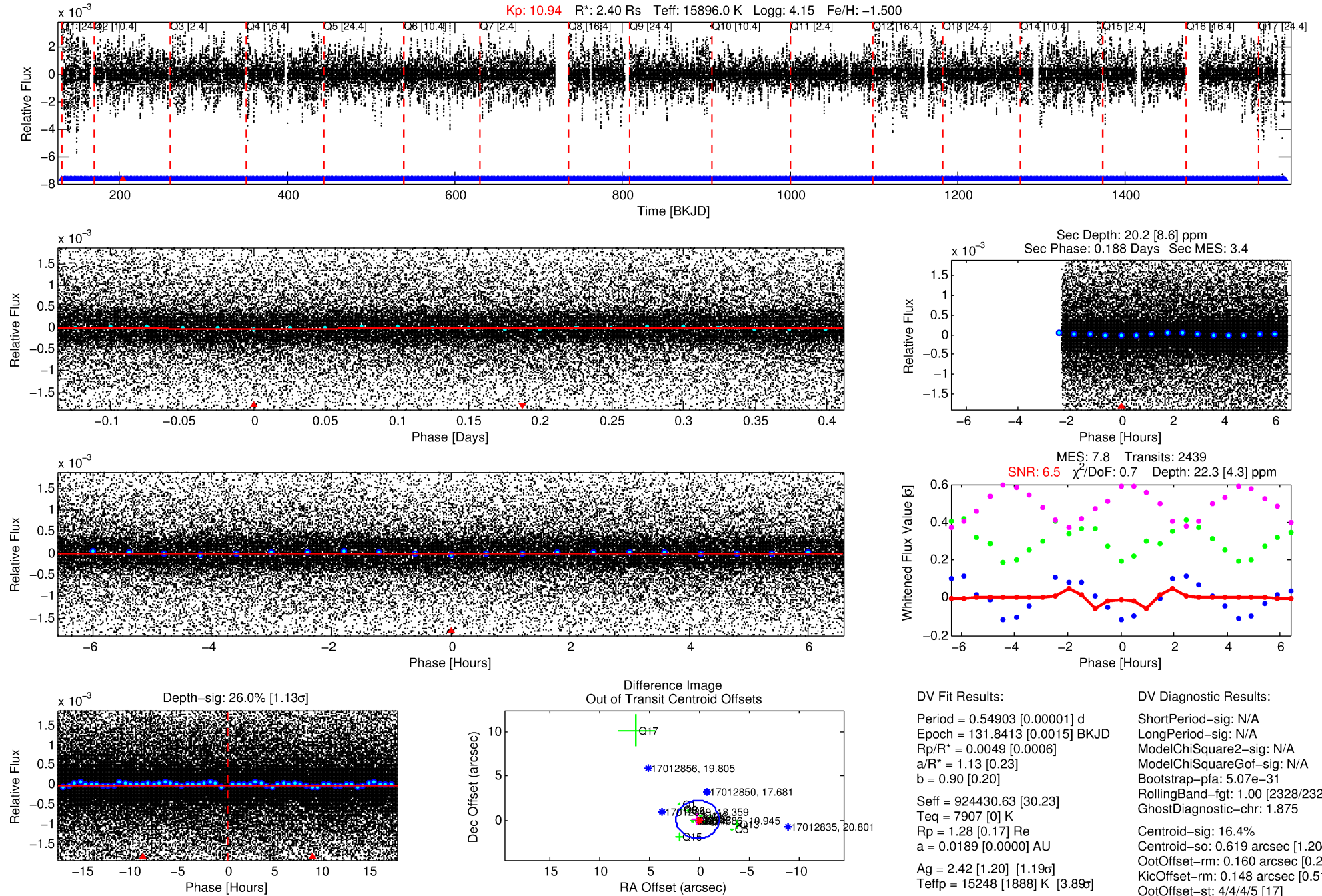
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008714886-01

No Significant Match Found

DV One-Page Summary

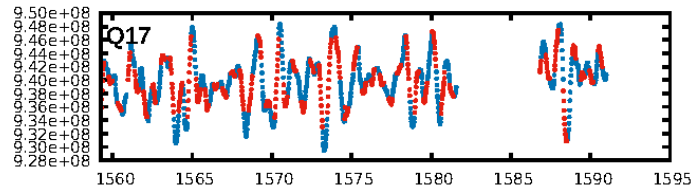
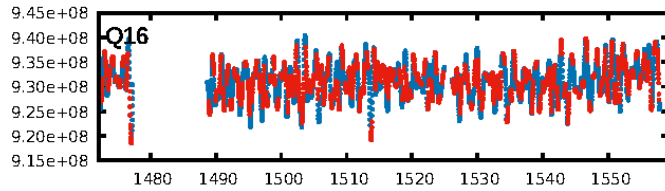
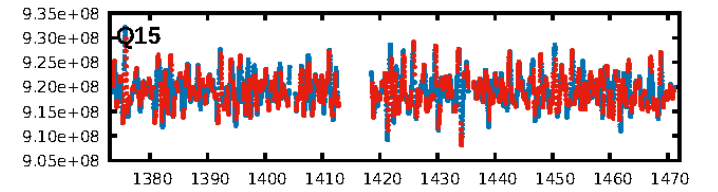
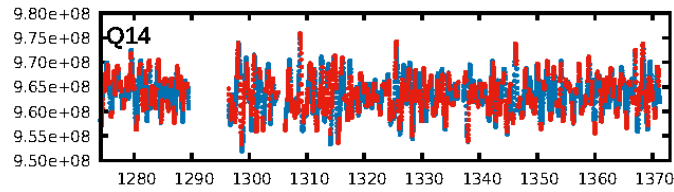
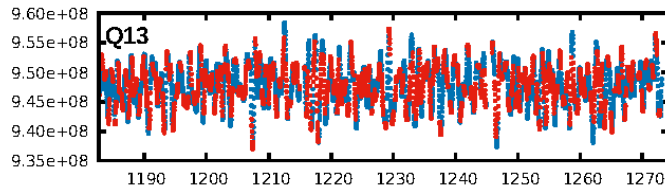
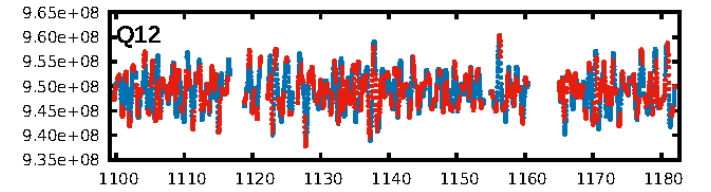
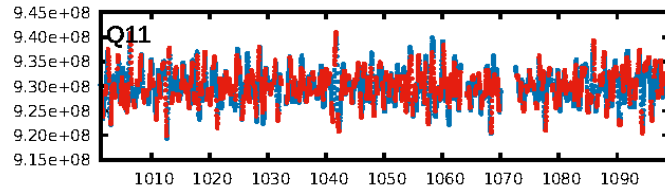
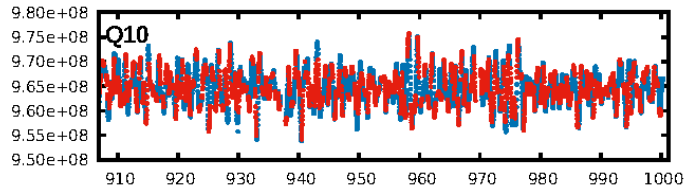
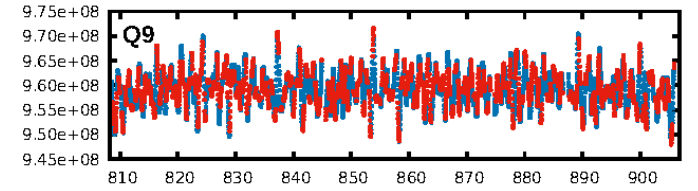
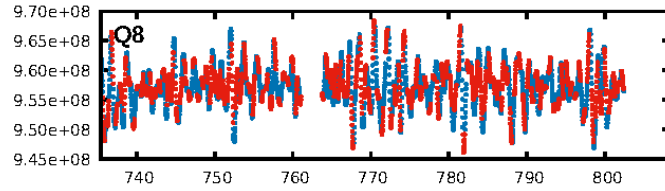
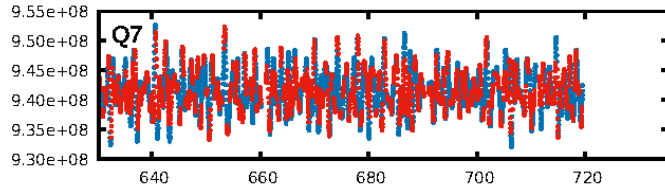
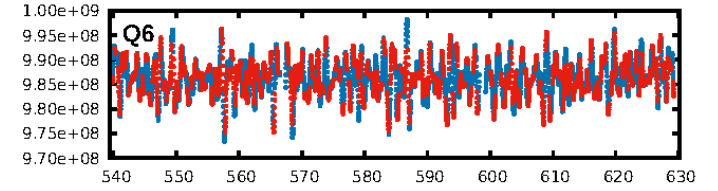
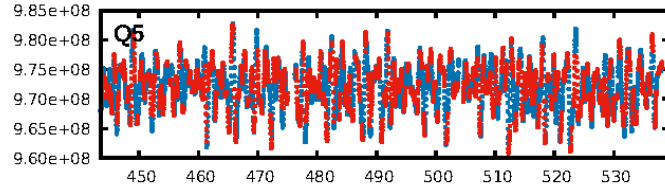
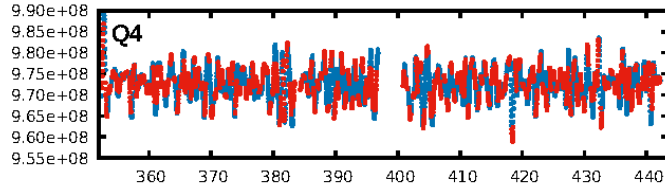
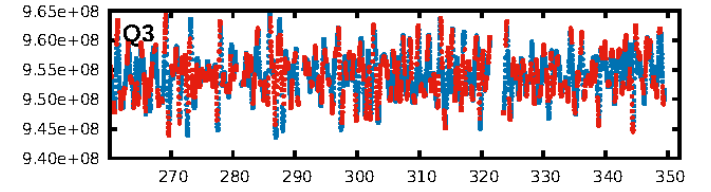
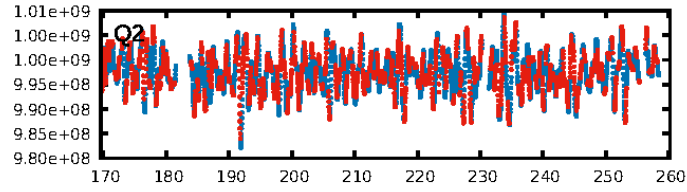
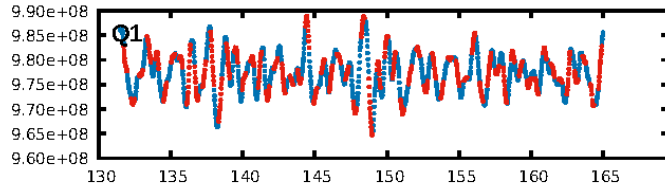
KIC: 8714886 Candidate: 1 of 1 Period: 0.549 d



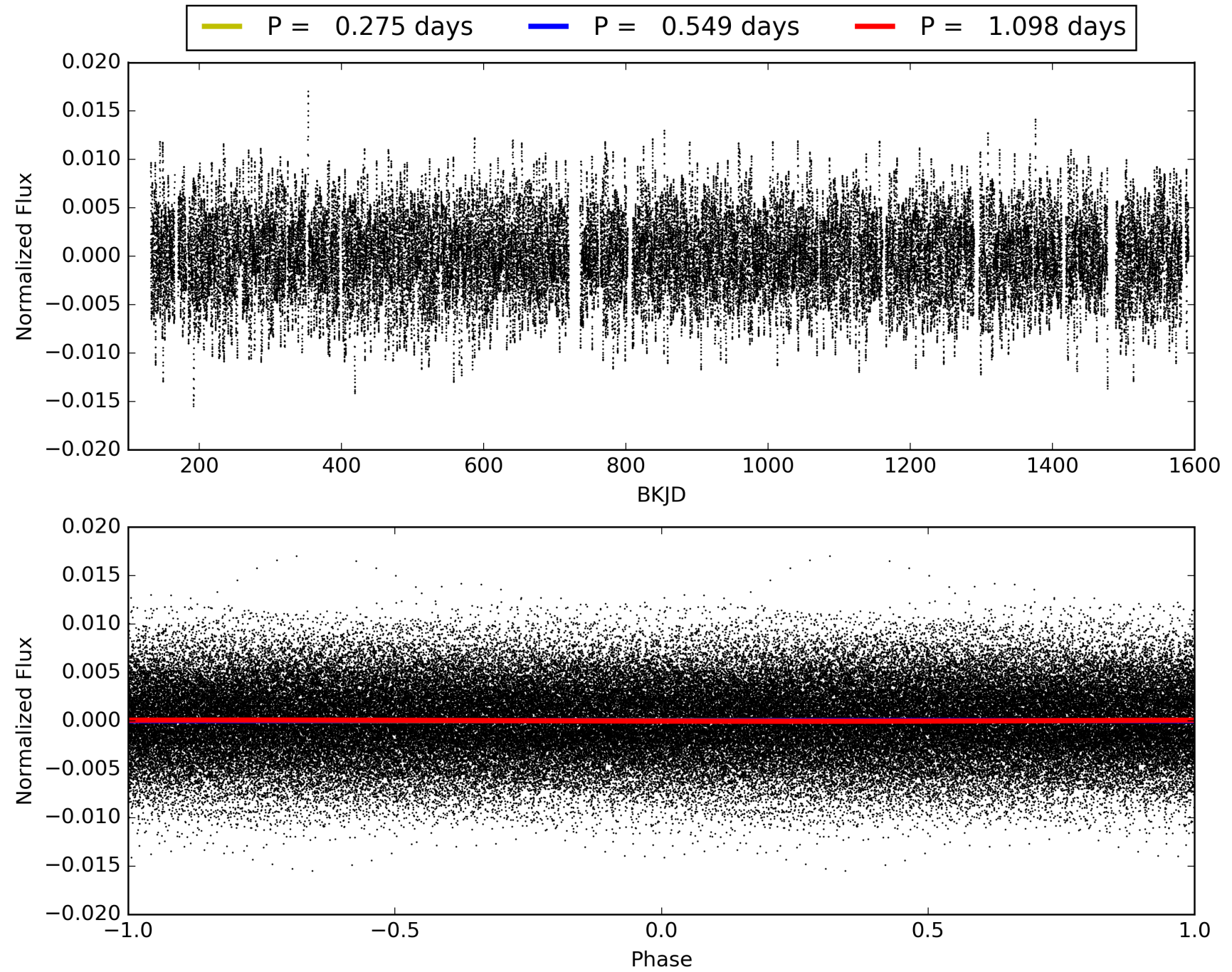
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 09:31:22 Z

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

TCE 008714886-01, PDC Light Curves

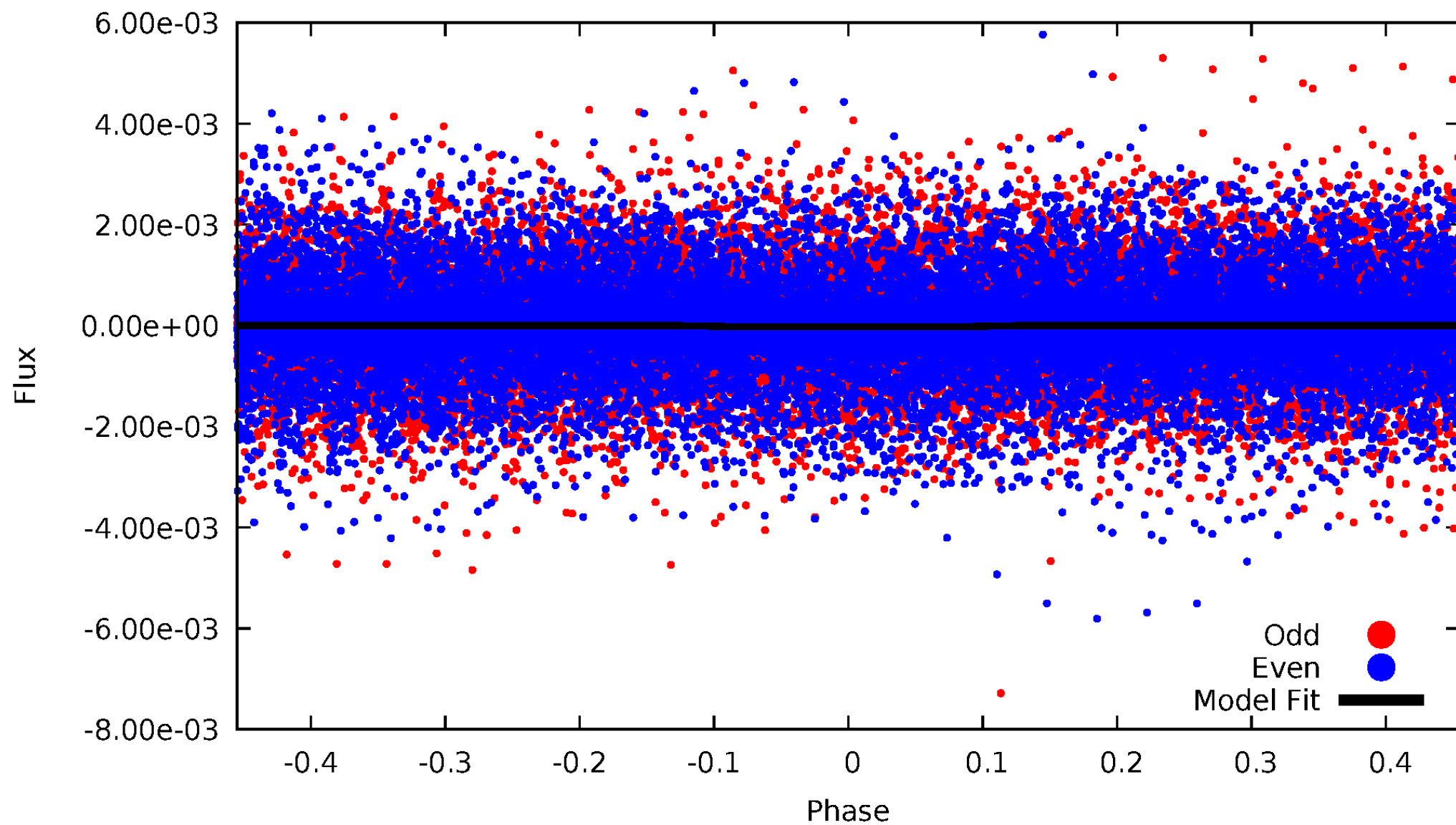


TCE 008714886-01



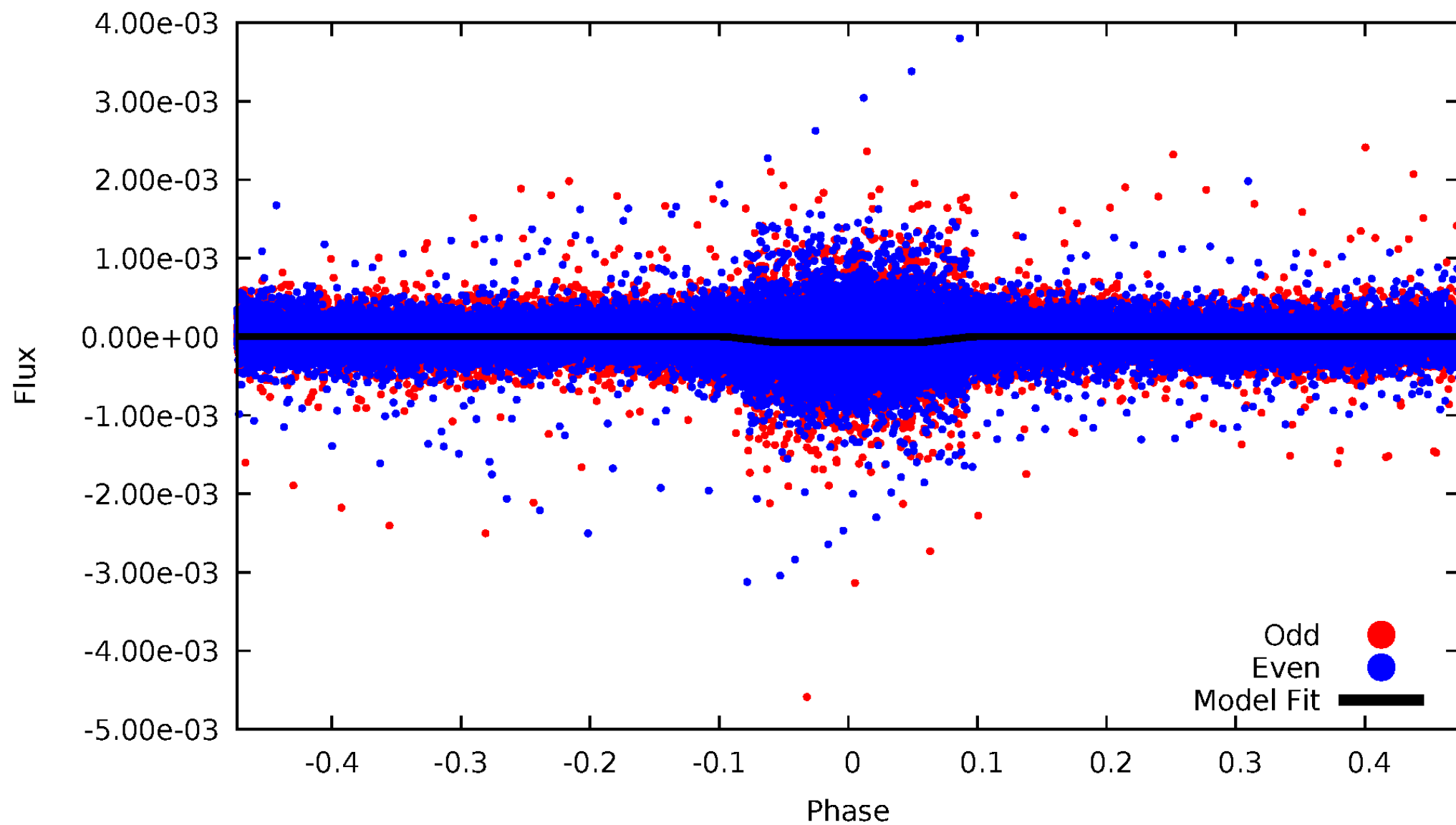
DV Odd/Even

TCE 008714886-01



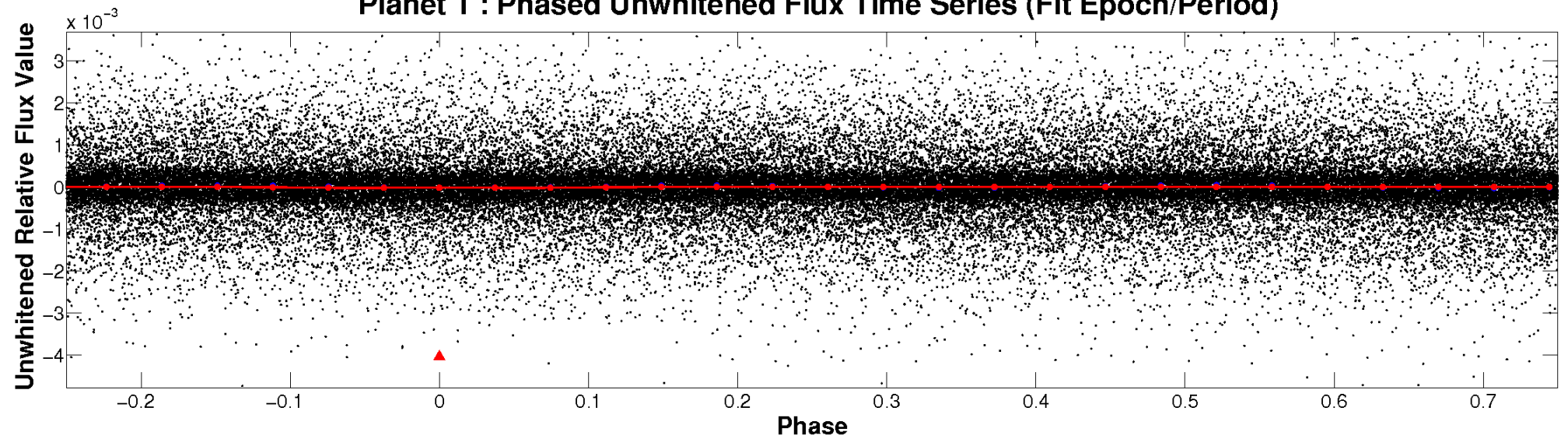
ALT Odd/Even

TCE 008714886-01

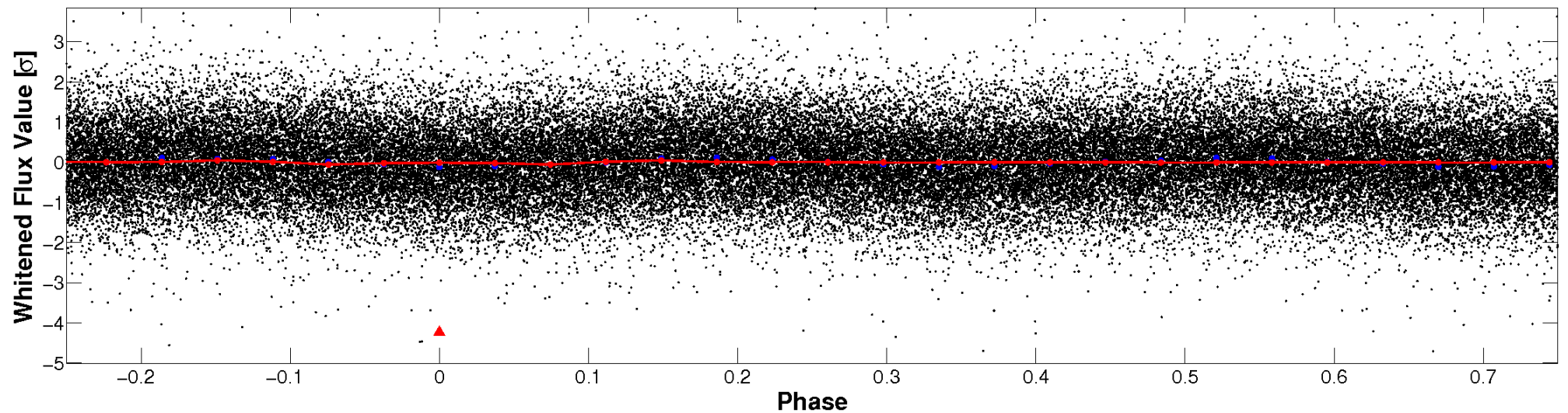


Non-Whitened Vs. Whitened Light Curve

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

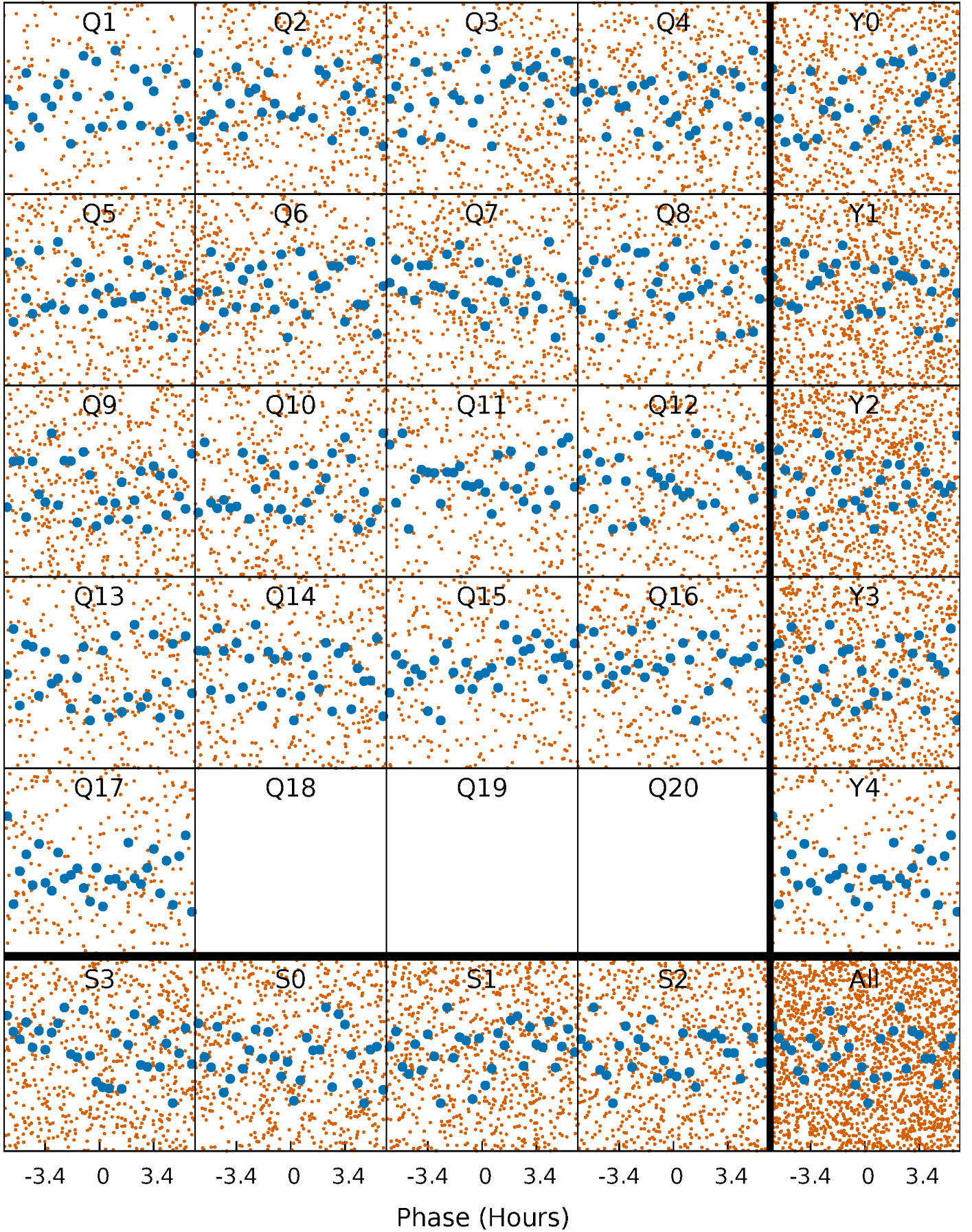


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



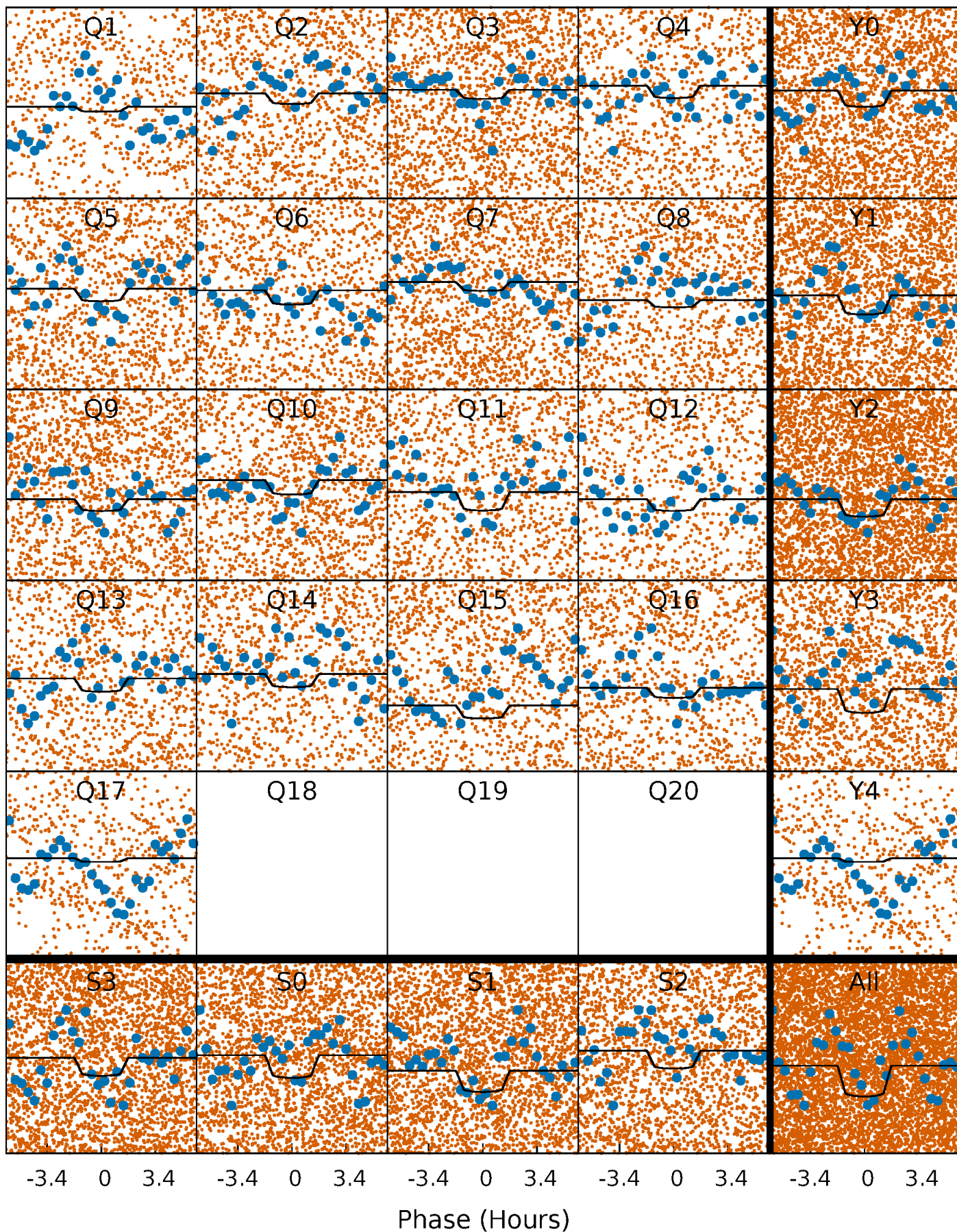
PDC Quarter-Phased Transit Curves

TCE 008714886-01 P= 0.549030 Days $T_0=131.841281$ (BKJD)



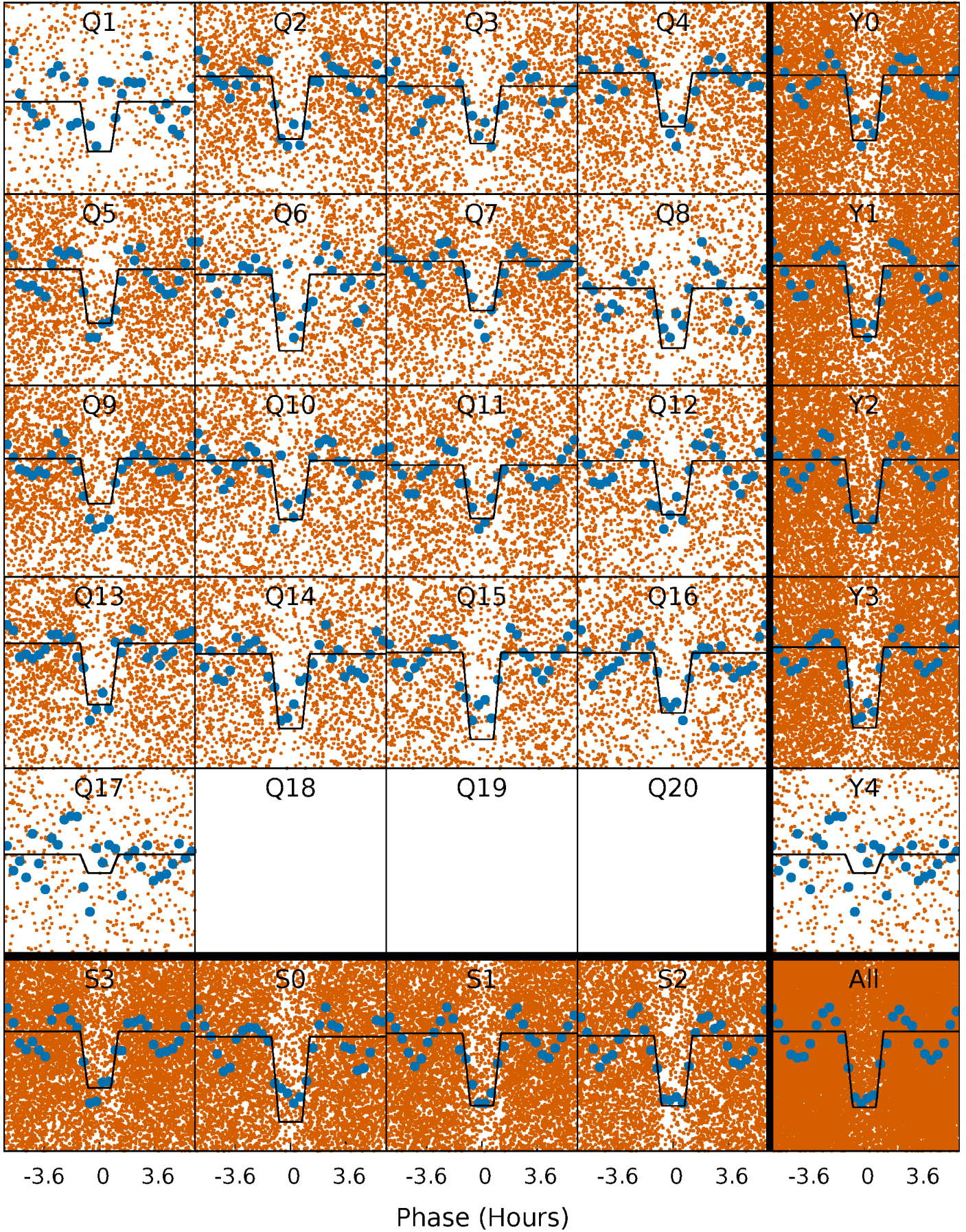
DV Quarter-Phased Transit Curves

TCE 008714886-01 P= 0.549030 Days $T_0=131.841281$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

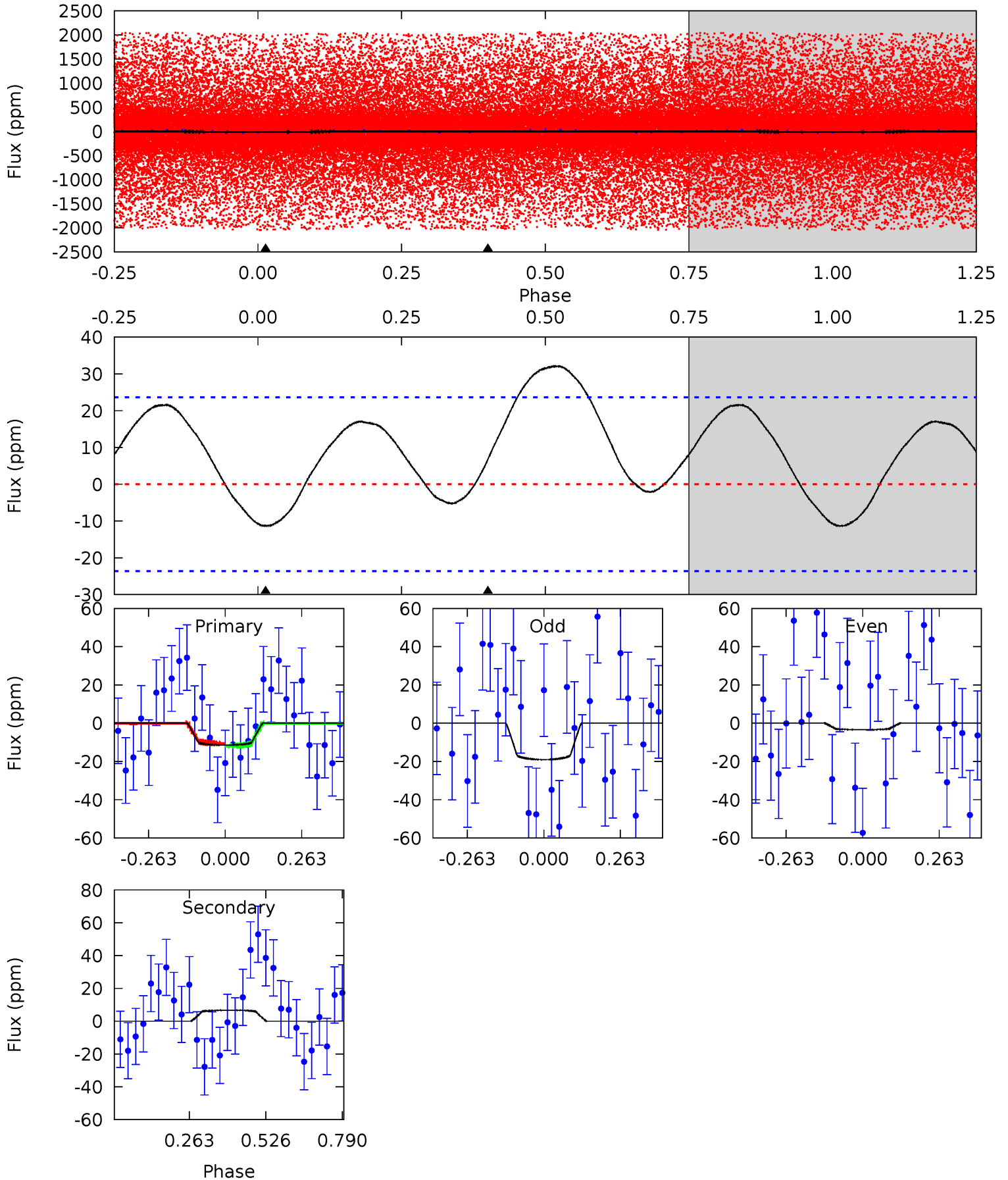
TCE 008714886-01 P= 0.549042 Days $T_0=131.835127$ (BKJD)



DV Model-Shift Uniqueness Test

008714886-01, P = 0.549030 Days, E = 131.292251 Days

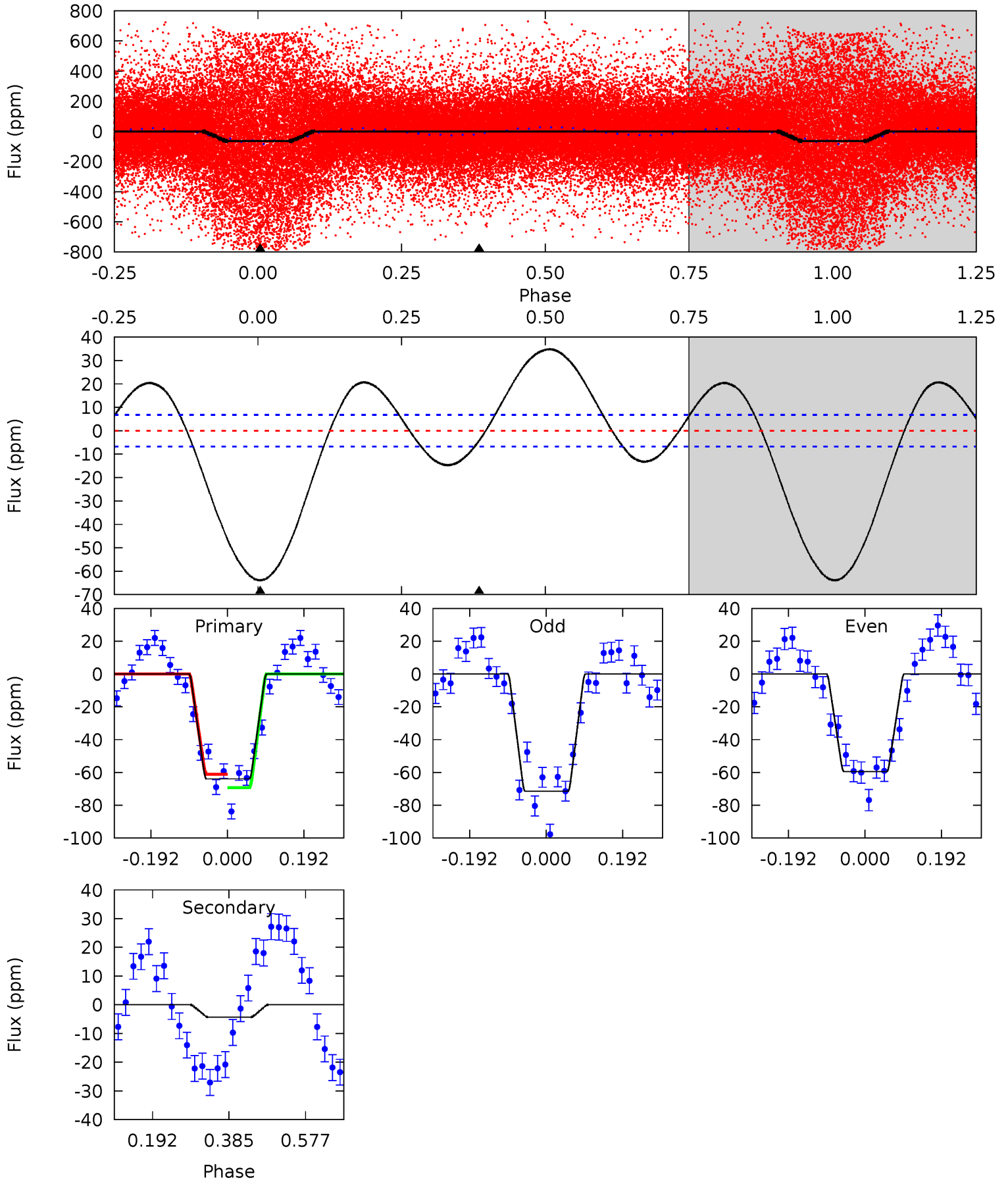
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|-------|-----|-----|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 2.11 | -1.23 | 0 | 0 | 4.36 | 1.12 | 0.66 | 2.11 | 2.11 | -1.23 | -1.23 | 1.48 | 3.19 | 0.74 | 0.13 |



Alt Model-Shift Uniqueness Test

008714886-01, P = 0.549042 Days, E = 131.286085 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|-----|-----|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 41.7 | 2.80 | 0 | 0 | 4.43 | 1.30 | 7.29 | 41.7 | 41.7 | 2.80 | 2.80 | 3.91 | 0.97 | 0.35 | 2.71 |



Stellar Parameters For KIC 008714886

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | $R (R_{\odot})$ | $M(M_{\odot})$ | $p_{\star} (\text{g}\cdot\text{cm}^{-3})$ |
|--------|---------------------|---------------------------|----------------------------|---------------------------|---------------------------|---|
| | 15896^{+1}_{-1} | $4.152^{+1.000}_{-1.000}$ | $-1.500^{+1.000}_{-1.000}$ | $2.404^{+1.000}_{-1.000}$ | $2.995^{+1.000}_{-1.000}$ | $0.304^{+1.000}_{-1.000}$ |
| | +0%/-0% | +24%/-24% | +67%/-67% | +42%/-42% | +33%/-33% | +329%/-329% |
| Source | SPE4 | SPE4 | SPE4 | DSEP | | |

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

Secondary Eclipse Parameters for KIC 008714886-01 / KOI

| Detrend | Depth (ppm) | $R_p (R_{\oplus})$ | $T_{\text{max}} (K)$ | $T_{\text{obs}} (K)$ | A_{obs} |
|---------|-------------|------------------------|-----------------------|--------------------------|----------------------------|
| DV | 7 ± 5 | $1.27^{+0.18}_{-0.17}$ | 11055^{+231}_{-252} | -10407^{+2489}_{-2254} | $-0.776^{+0.587}_{-0.678}$ |
| Alt. | -4 ± 2 | $2.20^{+0.18}_{-0.17}$ | 11035^{+277}_{-262} | -5582^{+1015}_{-626} | $0.172^{+0.076}_{-0.064}$ |

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

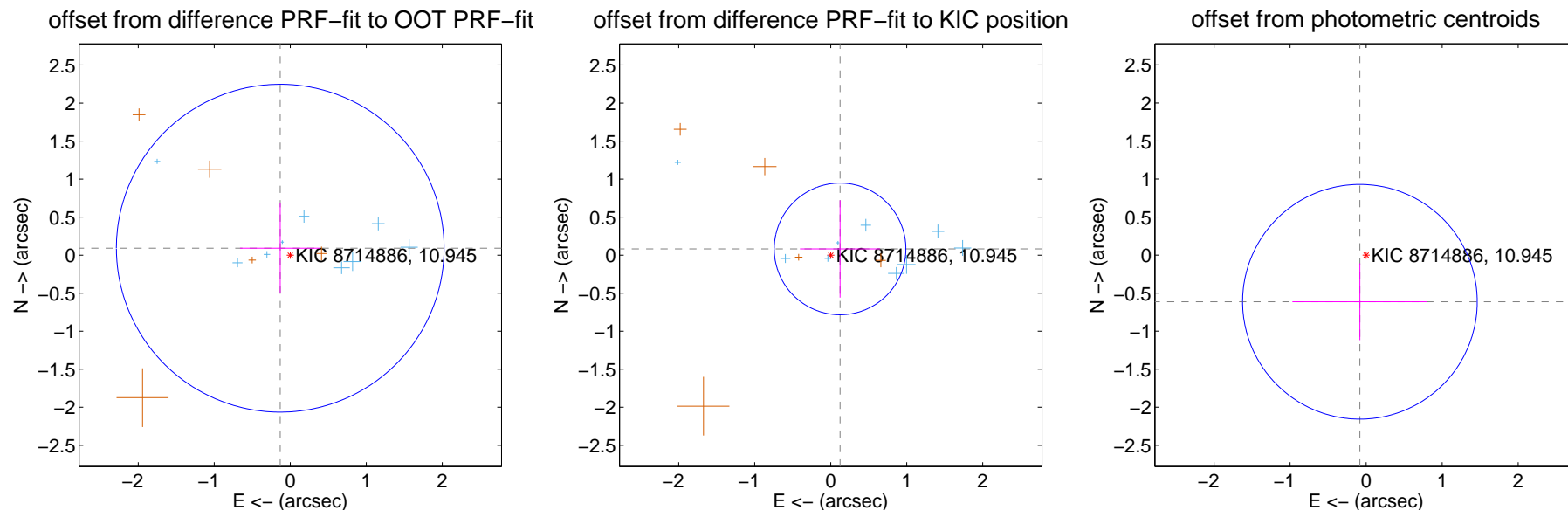
DV Centroid Data

Supplemental centroid analysis for 008714886-01. **Kepler magnitude: 10.95.** Transit SNR 6.51

There are 9 quarters with good PRF difference image offsets

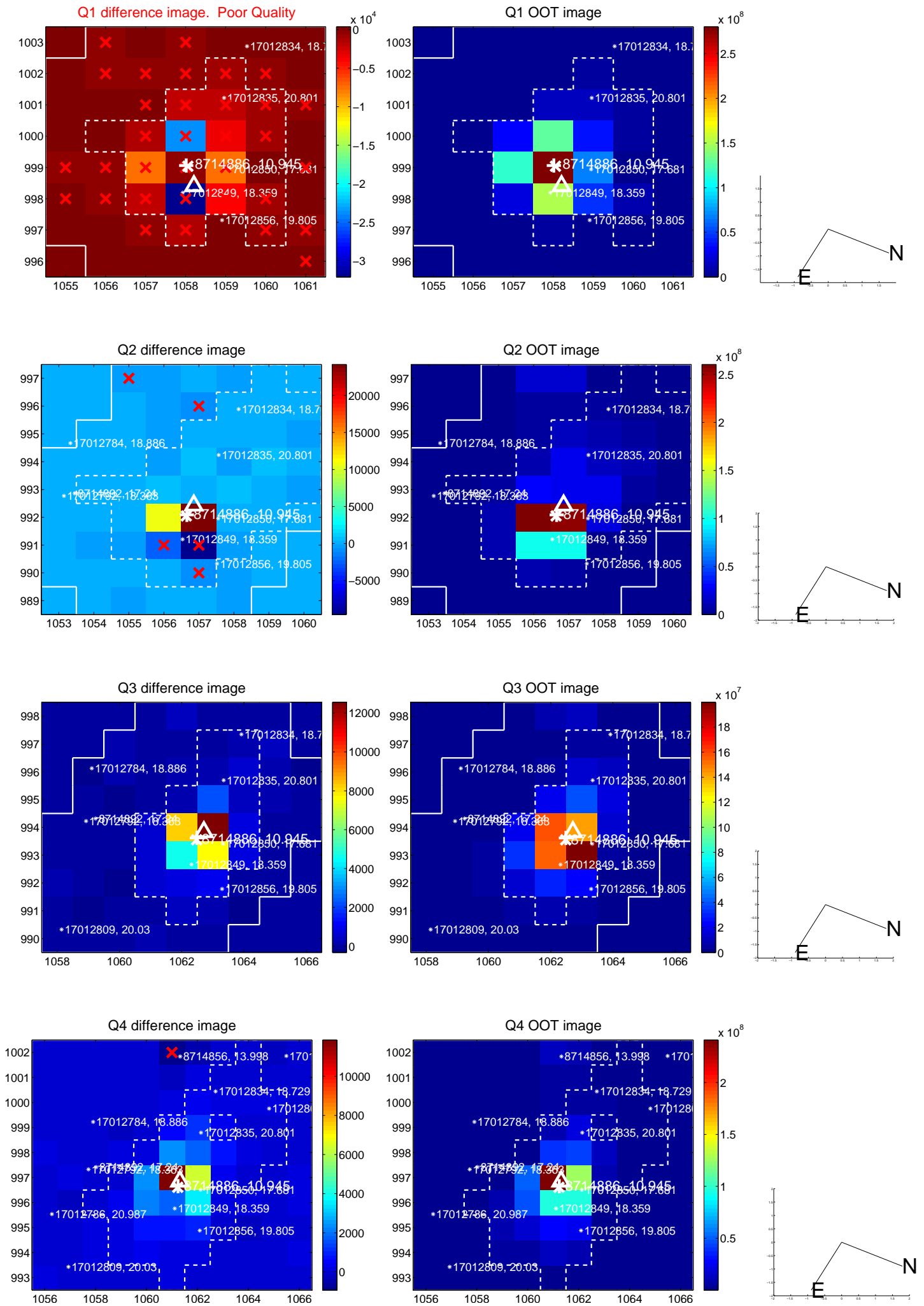
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|--------------------|-------------------|
| PRF-fit source offset from OOT | 0.160 ± 0.718 | 0.22 | 0.132 ± 0.529 | 0.091 ± 0.594 |
| PRF-fit source offset from KIC position | 0.148 ± 0.289 | 0.51 | -0.123 ± 0.527 | 0.082 ± 0.640 |
| photometric centroid source offset | 0.62 ± 0.51 | 1.20 | 0.08 ± 0.89 | -0.61 ± 0.51 |

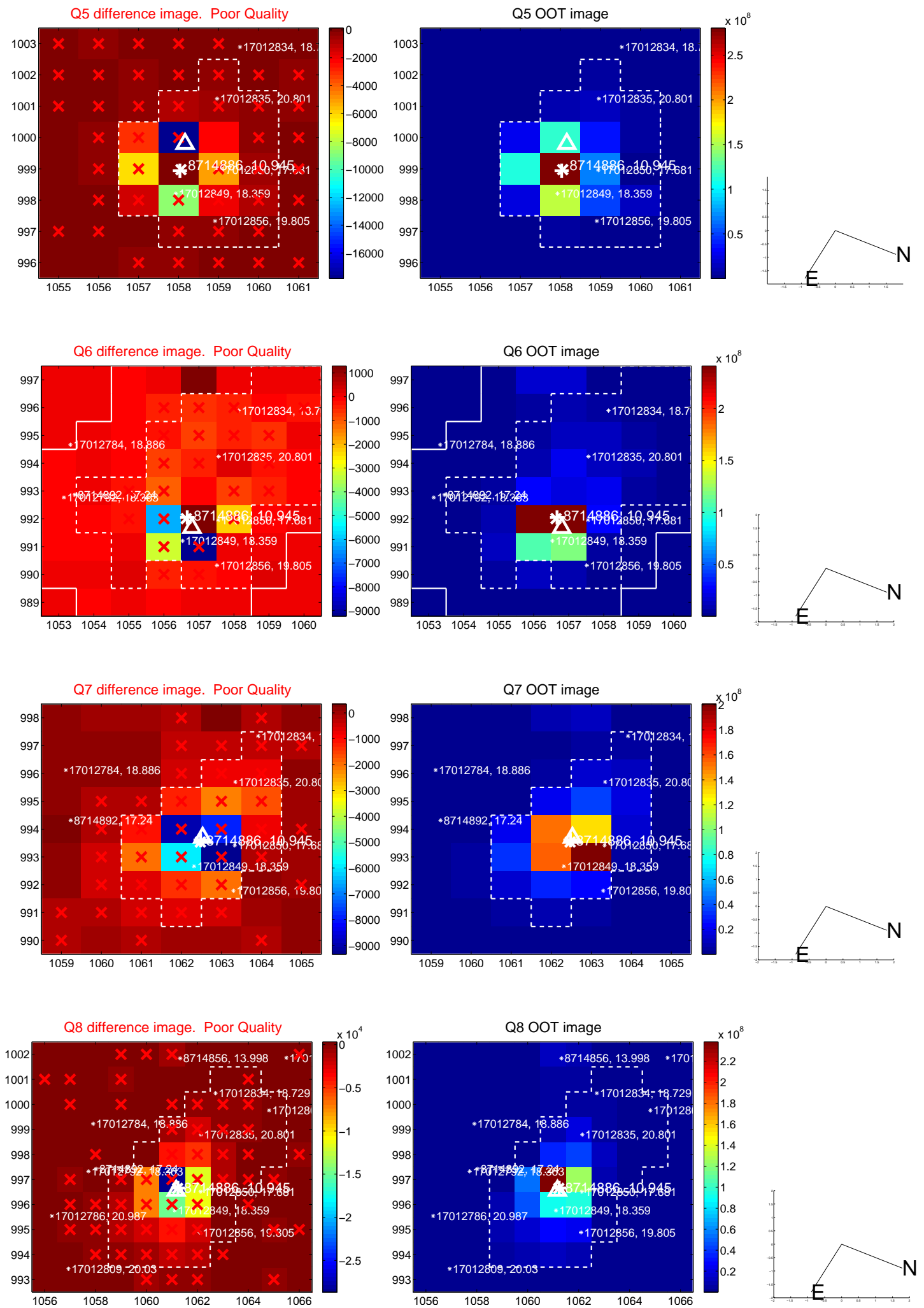


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

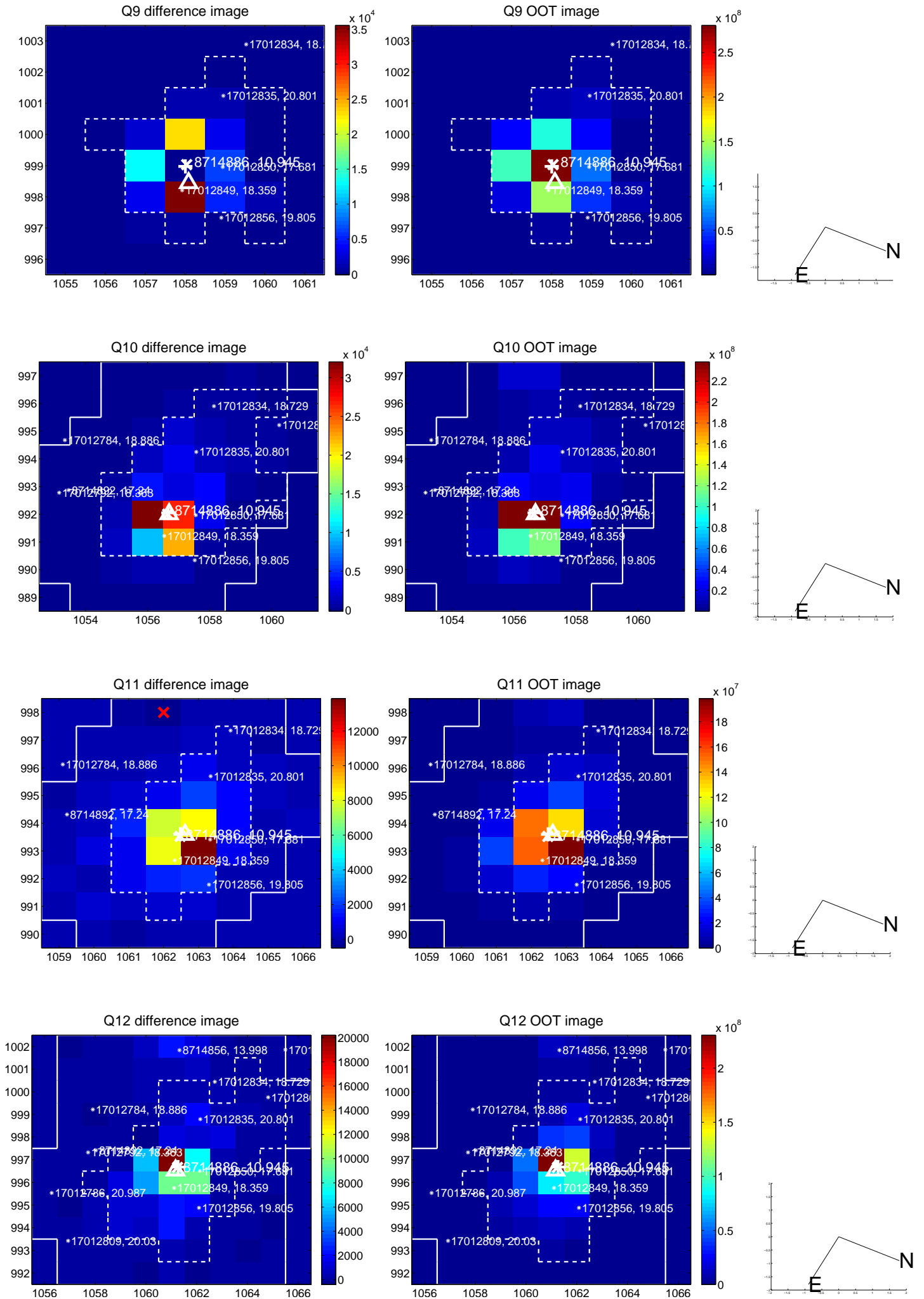
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



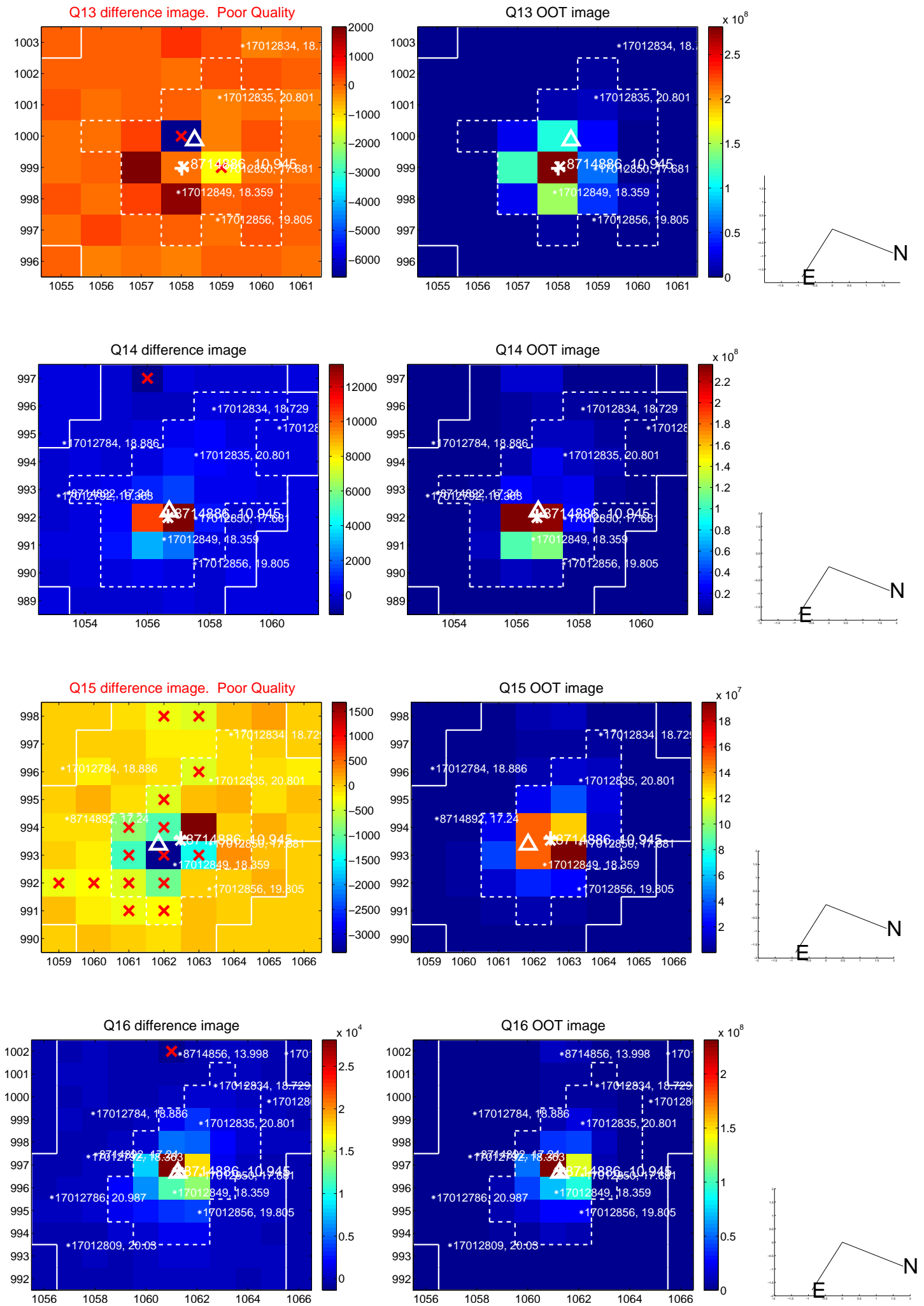
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

