

KIC 008197544

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|-----|-----|-----------------------------|-----------------|------------------------|------------------------|
| 008197544-01 | OBS | No | 4.405659 | 132.764110 | 25.4 | 15.156 | 7.8 | 6.8 | 0.99 | 6919 | 0.53 | 696.06 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|-------------------------------|
| 008197544-01 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | LPP_DV—LPP_ALT—MOD_NONUNIQ_DV |

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

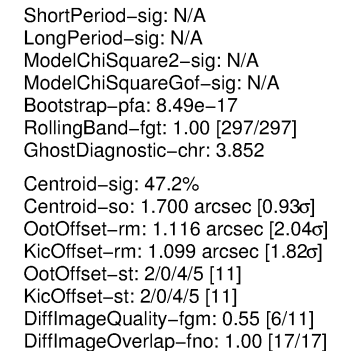
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

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

Ephemeris Match Information For 008197544-01

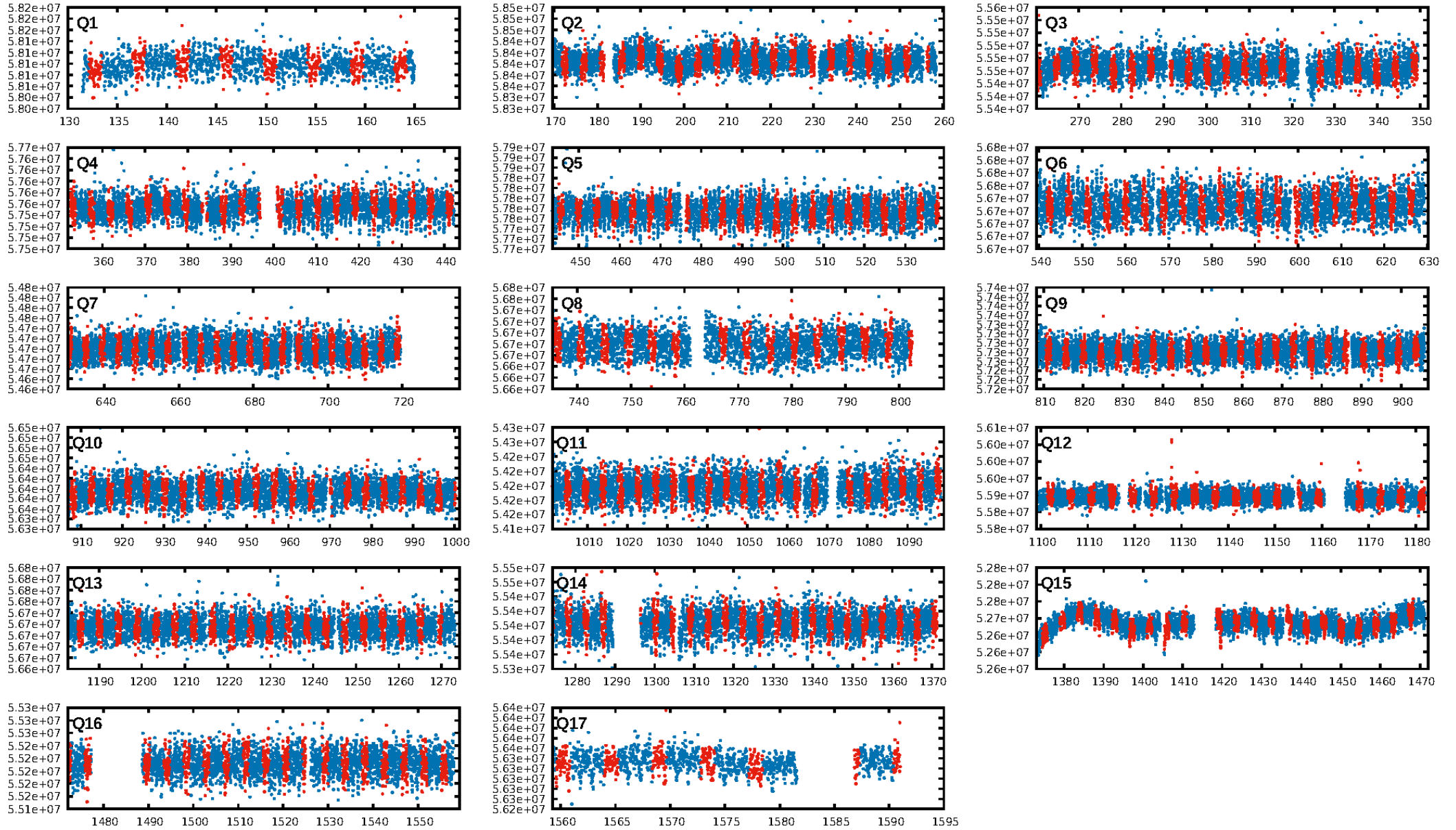
No Significant Match Found

KIC: 8197544 Candidate: 1 of 1 Period: 4.406 d

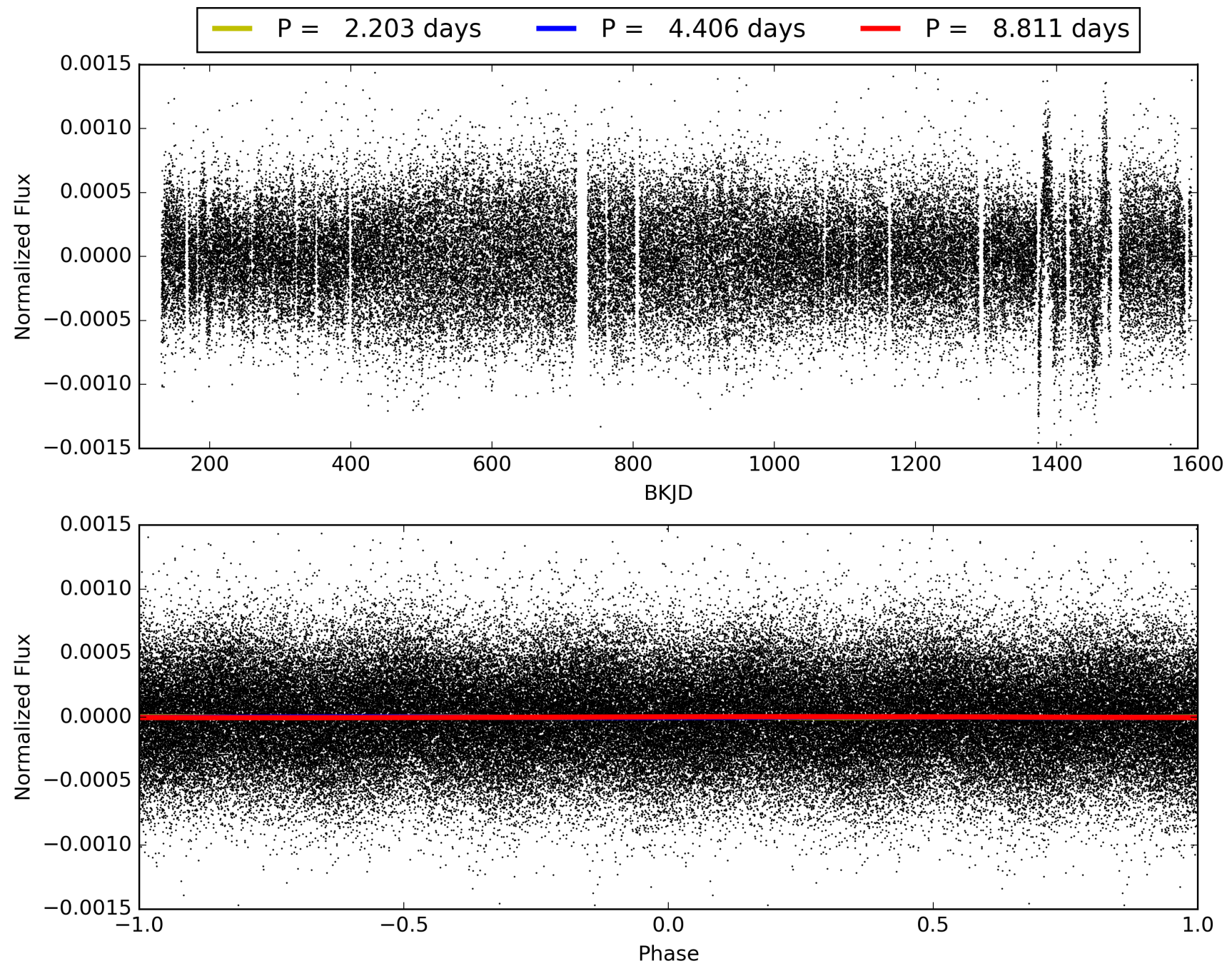


This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 008197544-01, PDC Light Curves

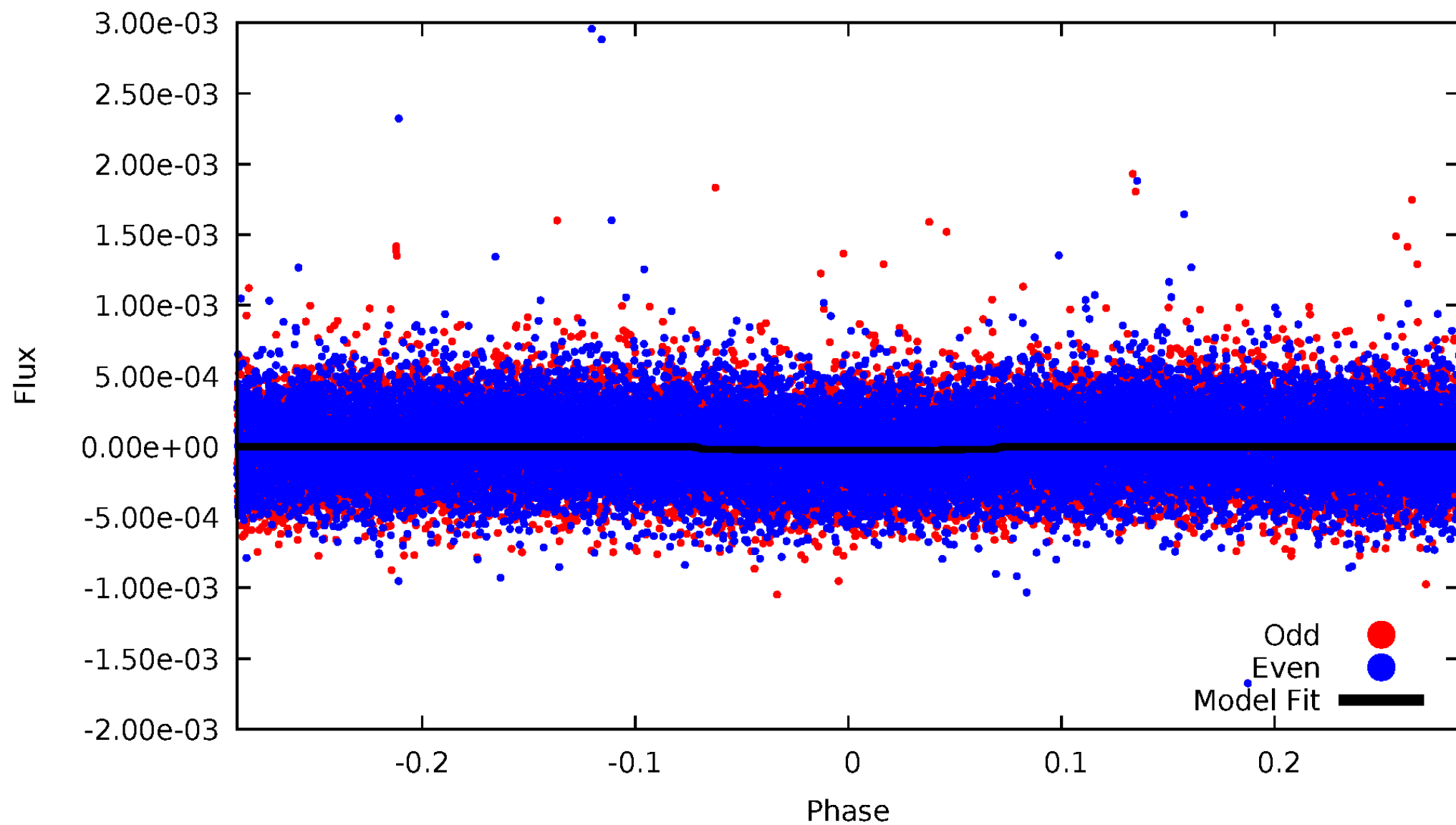


TCE 008197544-01



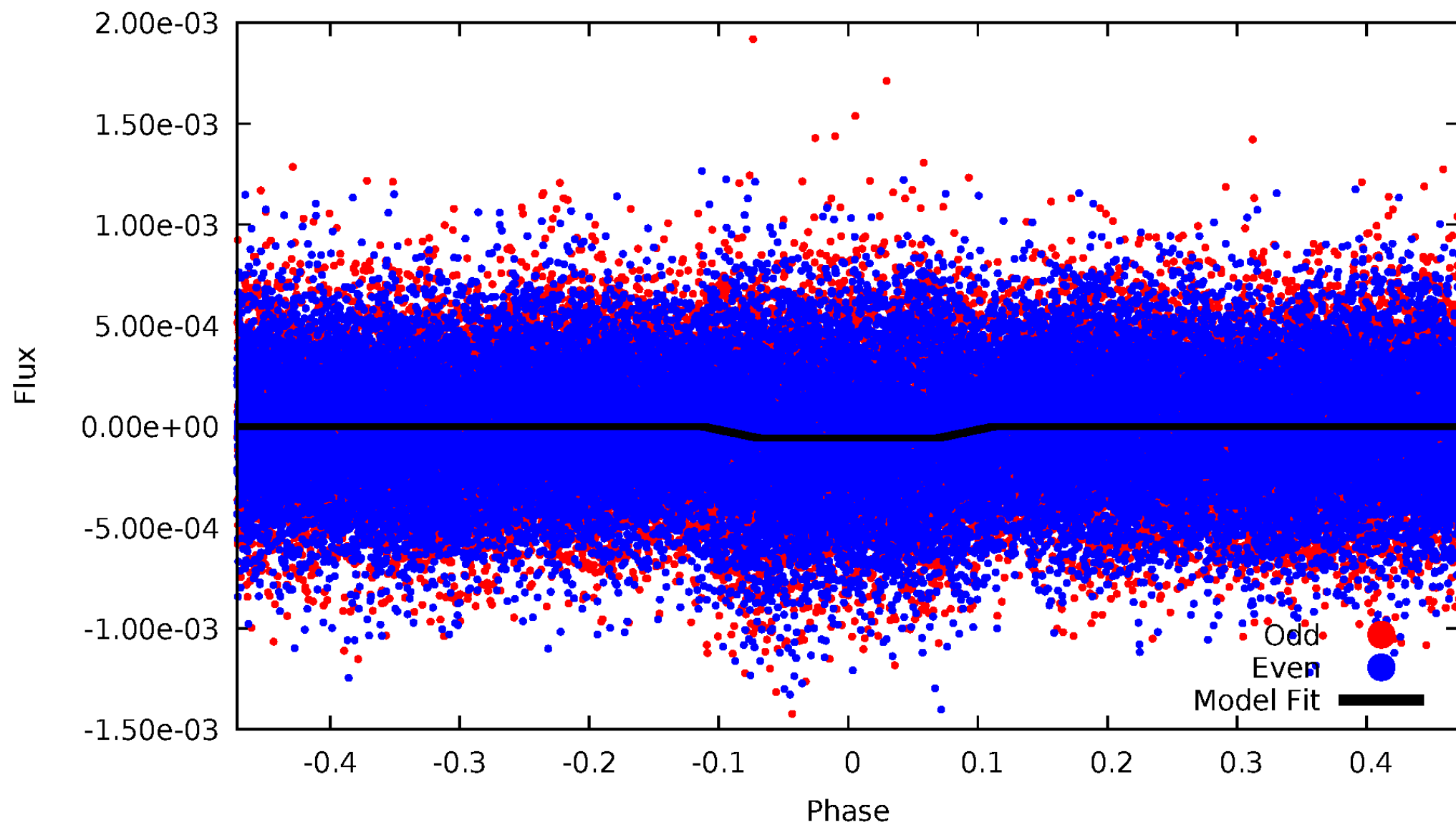
DV Odd/Even

TCE 008197544-01



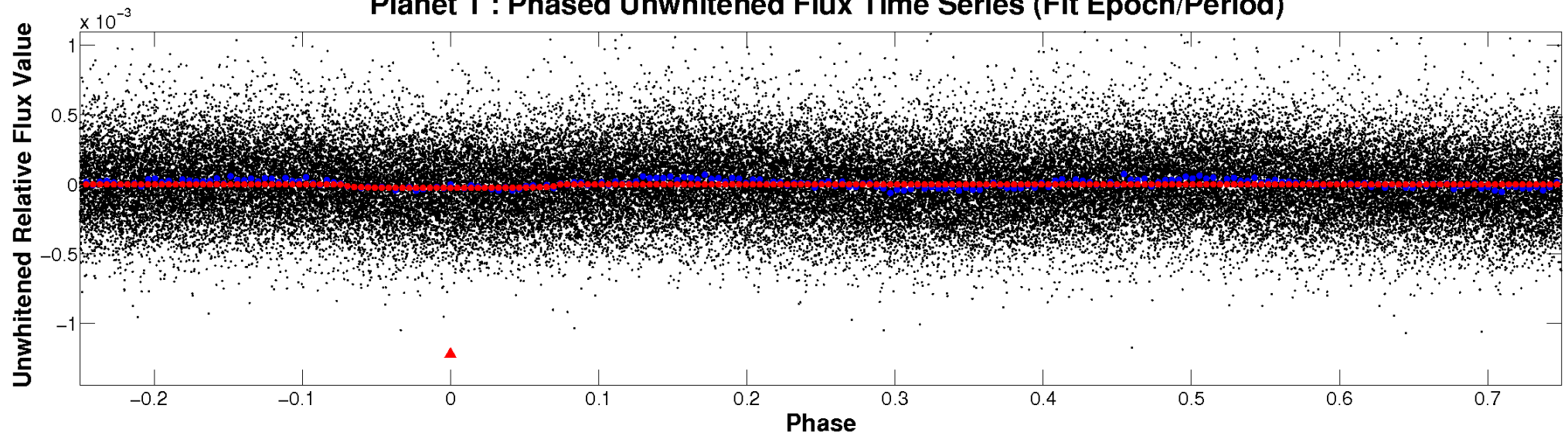
ALT Odd/Even

TCE 008197544-01

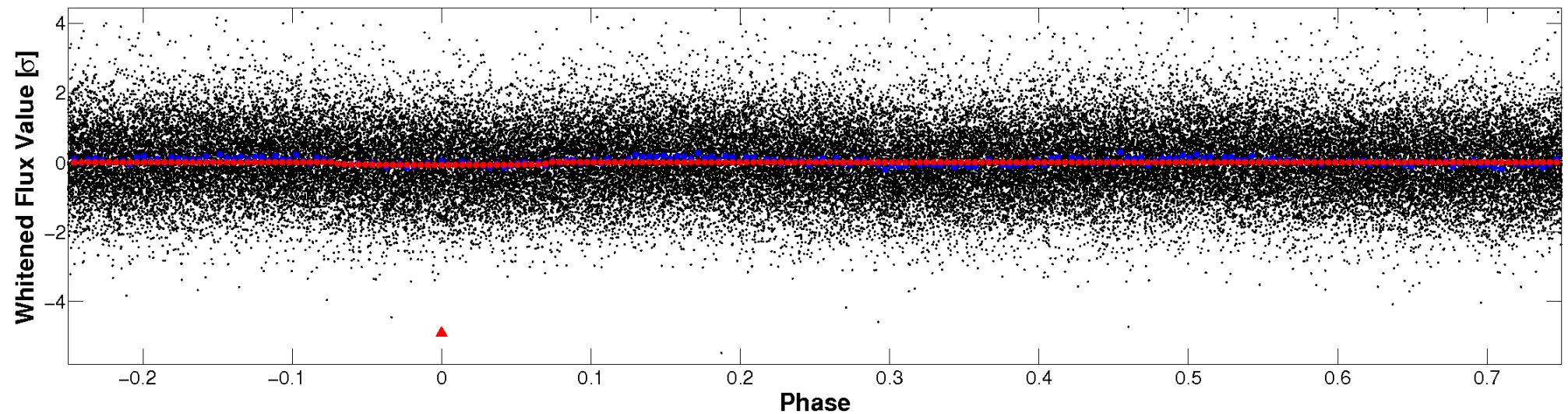


Non-Whitened Vs. Whitened Light Curve

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

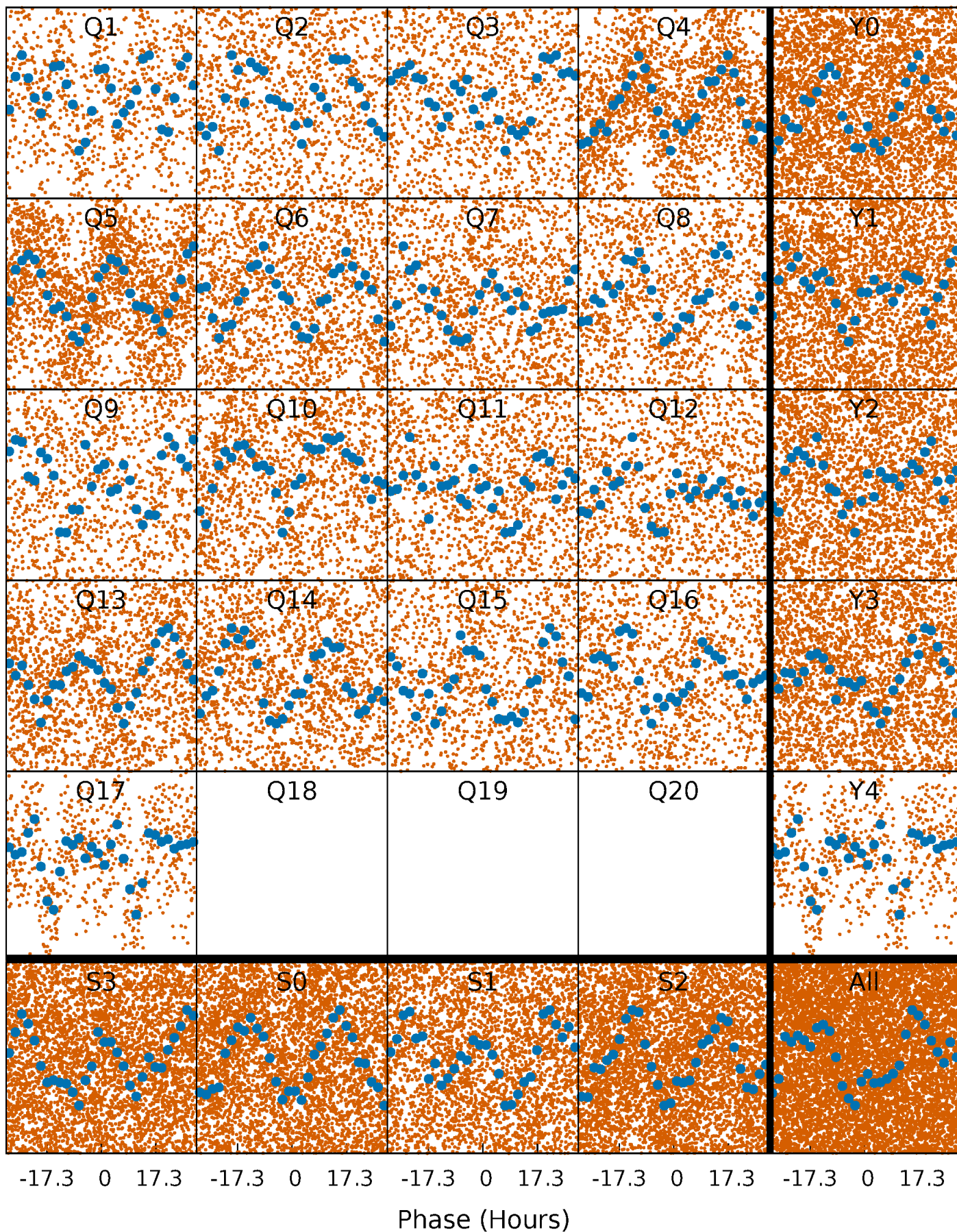


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



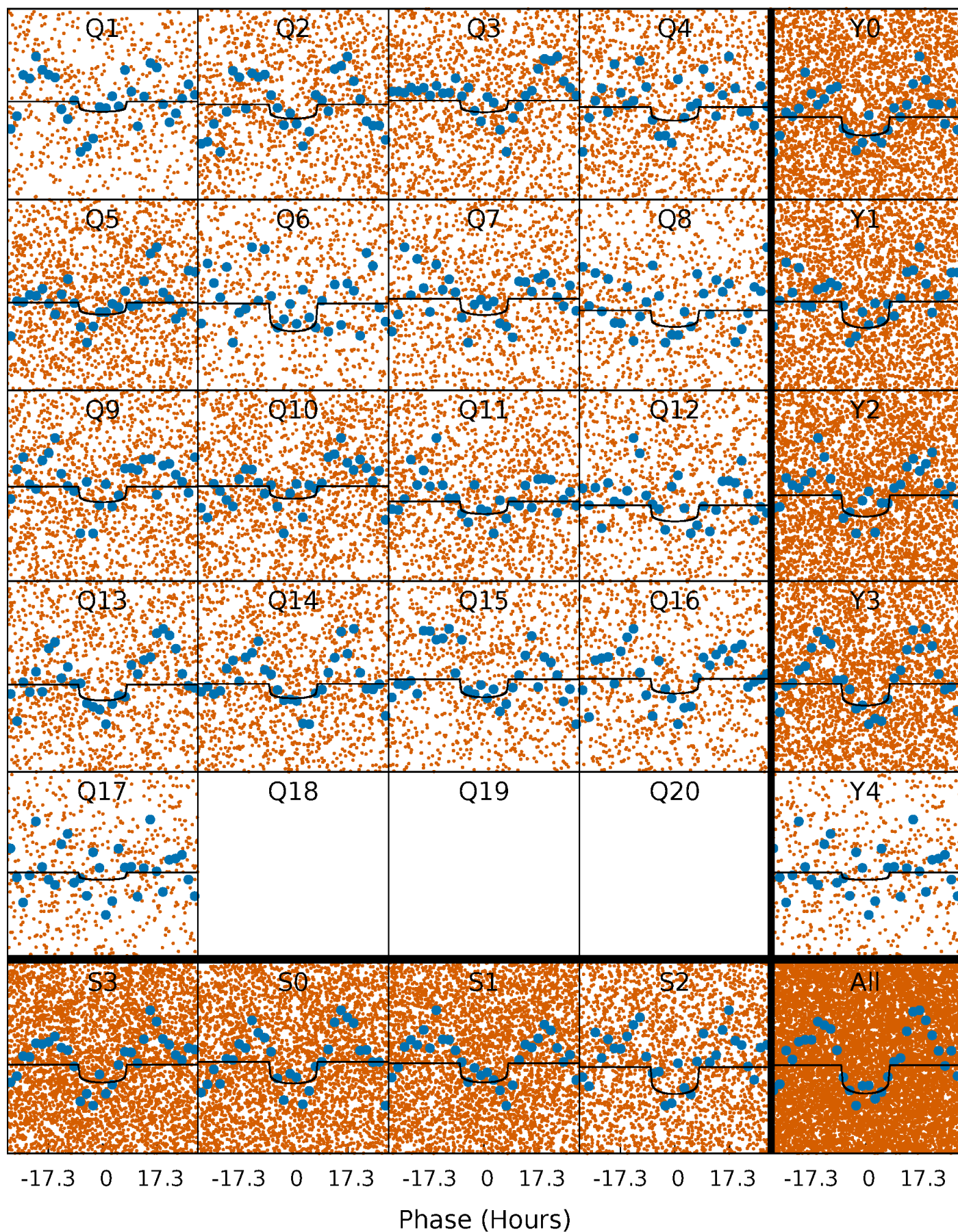
PDC Quarter-Phased Transit Curves

TCE 008197544-01 P= 4.405659 Days $T_0=132.764110$ (BKJD)



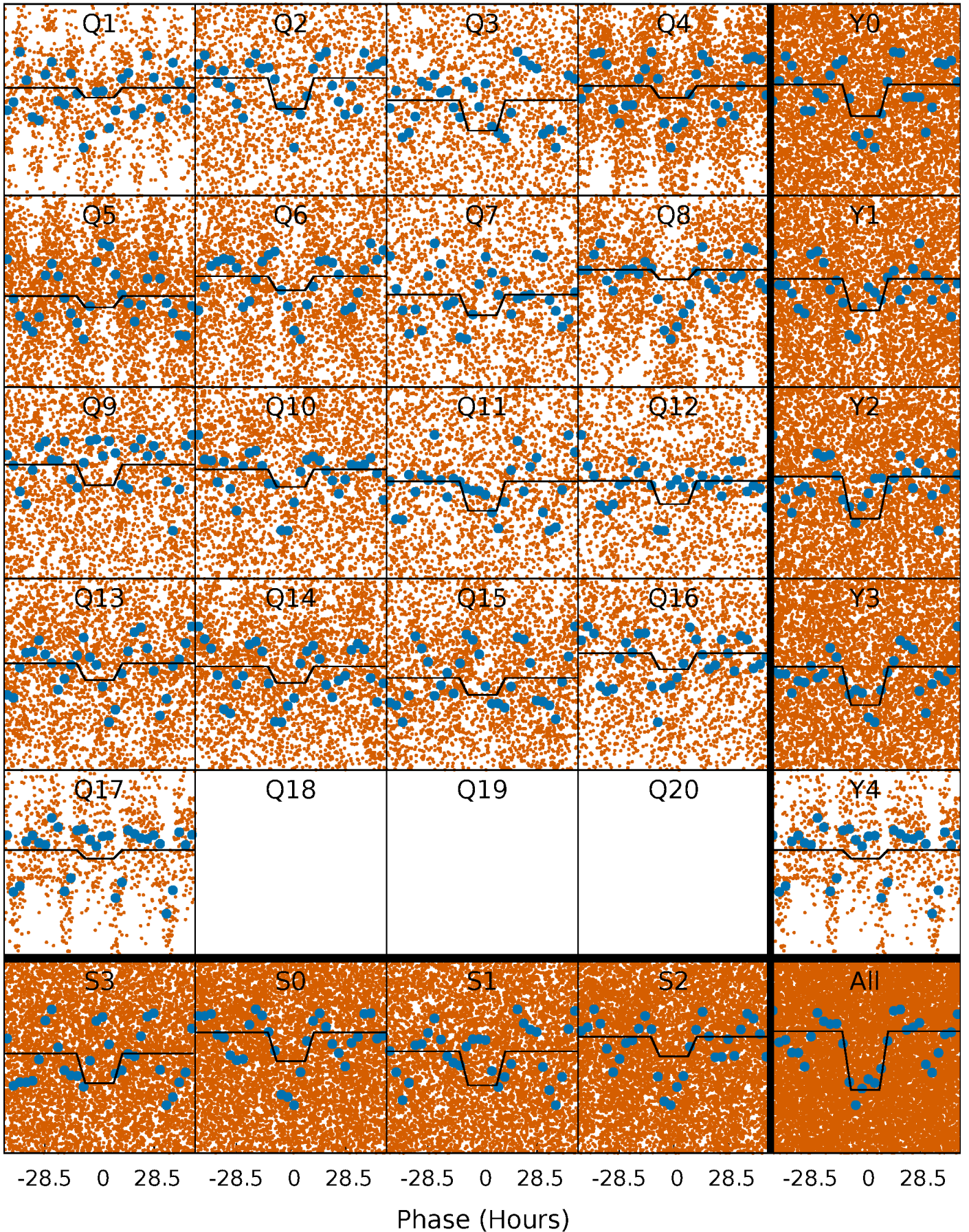
DV Quarter-Phased Transit Curves

TCE 008197544-01 P= 4.405659 Days $T_0=132.764110$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

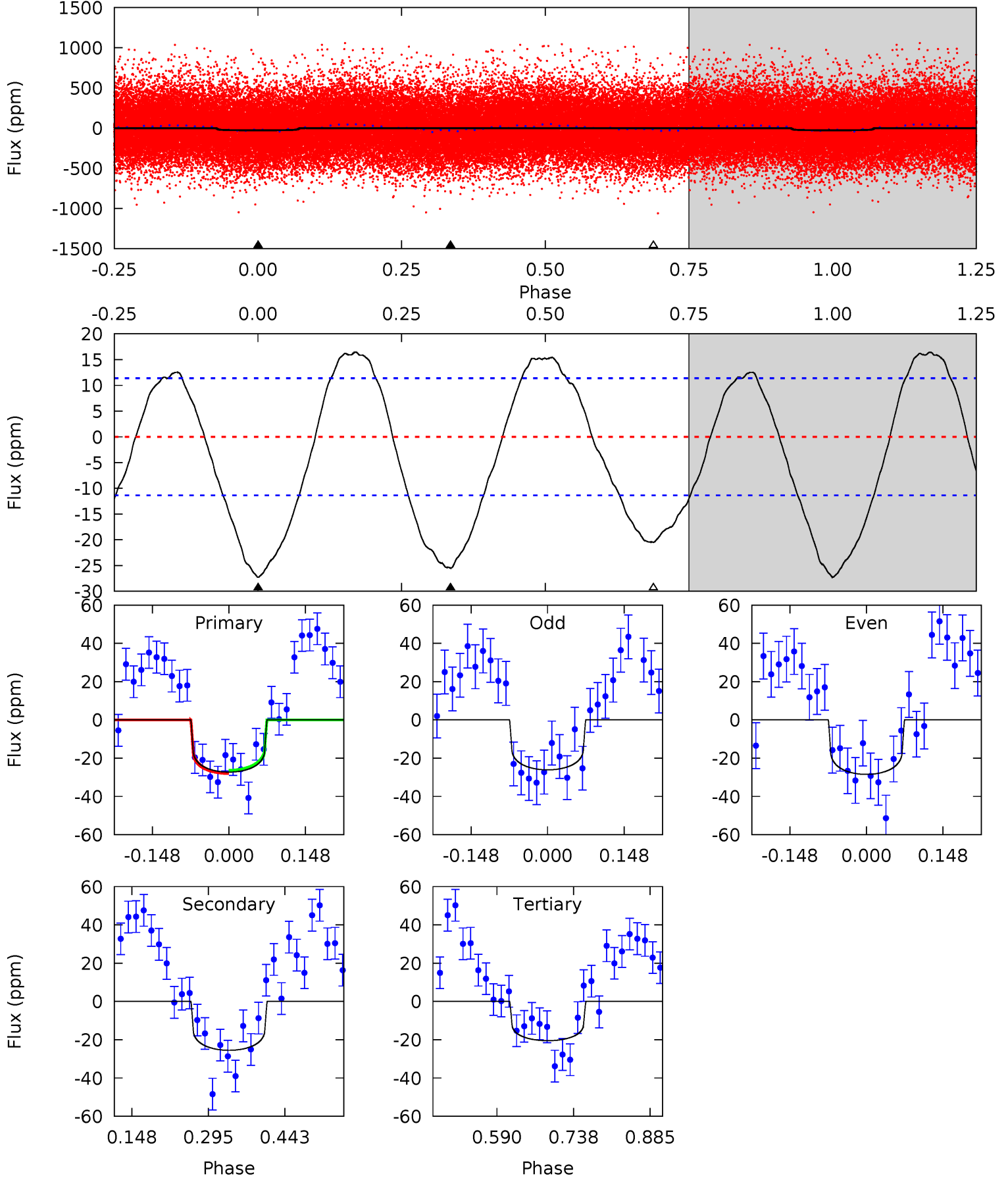
TCE 008197544-01 P= 4.405720 Days $T_0=132.799055$ (BKJD)



DV Model-Shift Uniqueness Test

008197544-01, P = 4.405659 Days, E = 128.358451 Days

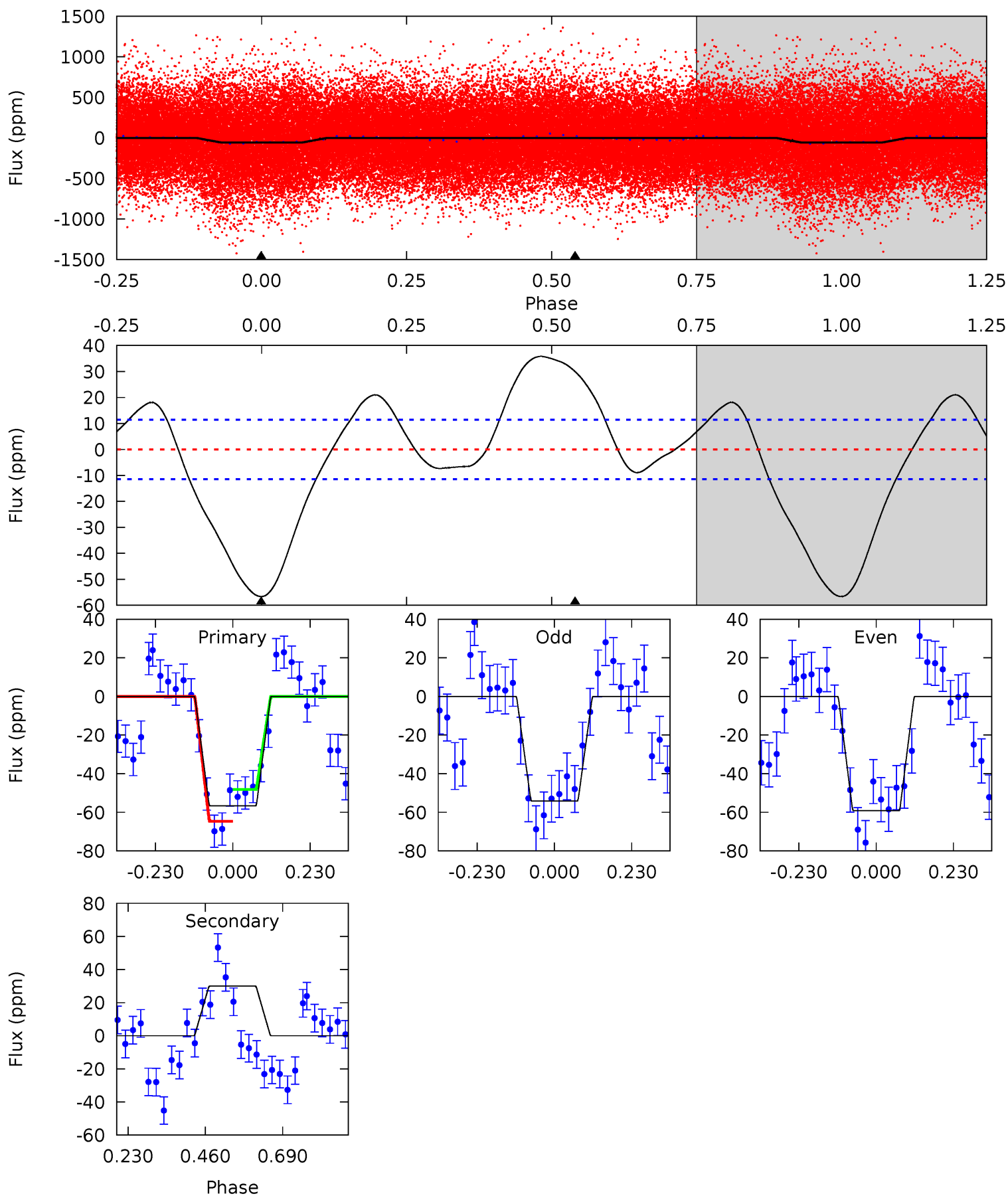
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|-----|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 10.8 | 10.1 | 8.07 | 0 | 4.48 | 1.45 | 5.14 | 2.68 | 10.8 | 1.98 | 10.1 | 0.47 | 1.12 | 0.38 | 0.32 |



Alt Model-Shift Uniqueness Test

008197544-01, P = 4.405720 Days, E = 128.393335 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|-------|-----|-----|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 21.7 | -11.5 | 0 | 0 | 4.39 | 1.20 | 2.92 | 21.7 | 21.7 | -11.5 | -11.5 | 0.95 | 0.91 | 0.39 | 3.16 |



Stellar Parameters For KIC 008197544

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | $R (R_{\odot})$ | $M(M_{\odot})$ | $p_{\star} (\text{g}\cdot\text{cm}^{-3})$ |
|--------|----------------------|---------------------------|----------------------------|---------------------------|---------------------------|---|
| | 6919^{+190}_{-262} | $4.477^{+0.029}_{-0.261}$ | $-0.500^{+0.300}_{-0.300}$ | $0.994^{+0.438}_{-0.049}$ | $1.139^{+0.174}_{-0.116}$ | $1.633^{+0.192}_{-1.027}$ |
| | +3%/-4% | +1%/-6% | +60%/-60% | +44%/-5% | +15%/-10% | +12%/-63% |
| 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 008197544-01 / KOI

| Detrend | Depth (ppm) | $R_p (R_{\oplus})$ | $T_{max} (K)$ | $T_{obs} (K)$ | A_{obs} |
|---------|-------------|------------------------|---------------------|------------------------|-------------------------------|
| DV | -26 ± 3 | $0.60^{+0.29}_{-0.28}$ | 1892^{+180}_{-99} | 6984^{+3493}_{-1295} | 116^{+300}_{-64} |
| Alt. | 30 ± 3 | $0.88^{+0.35}_{-0.28}$ | 1891^{+153}_{-99} | -5946^{+770}_{-1147} | $-62.255^{+30.270}_{-67.208}$ |

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 $A_{obs} \gg 1.0$

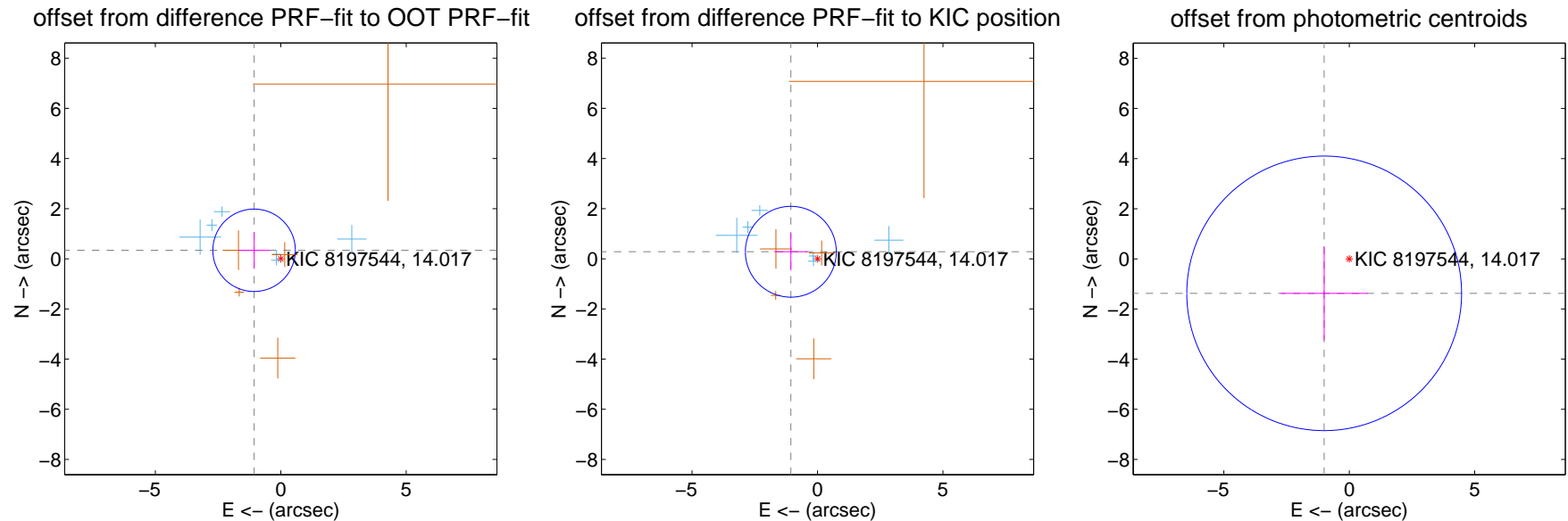
DV Centroid Data

Supplemental centroid analysis for 008197544-01. Kepler magnitude: 14.02. Transit SNR 6.80

There are 6 quarters with good PRF difference image offsets

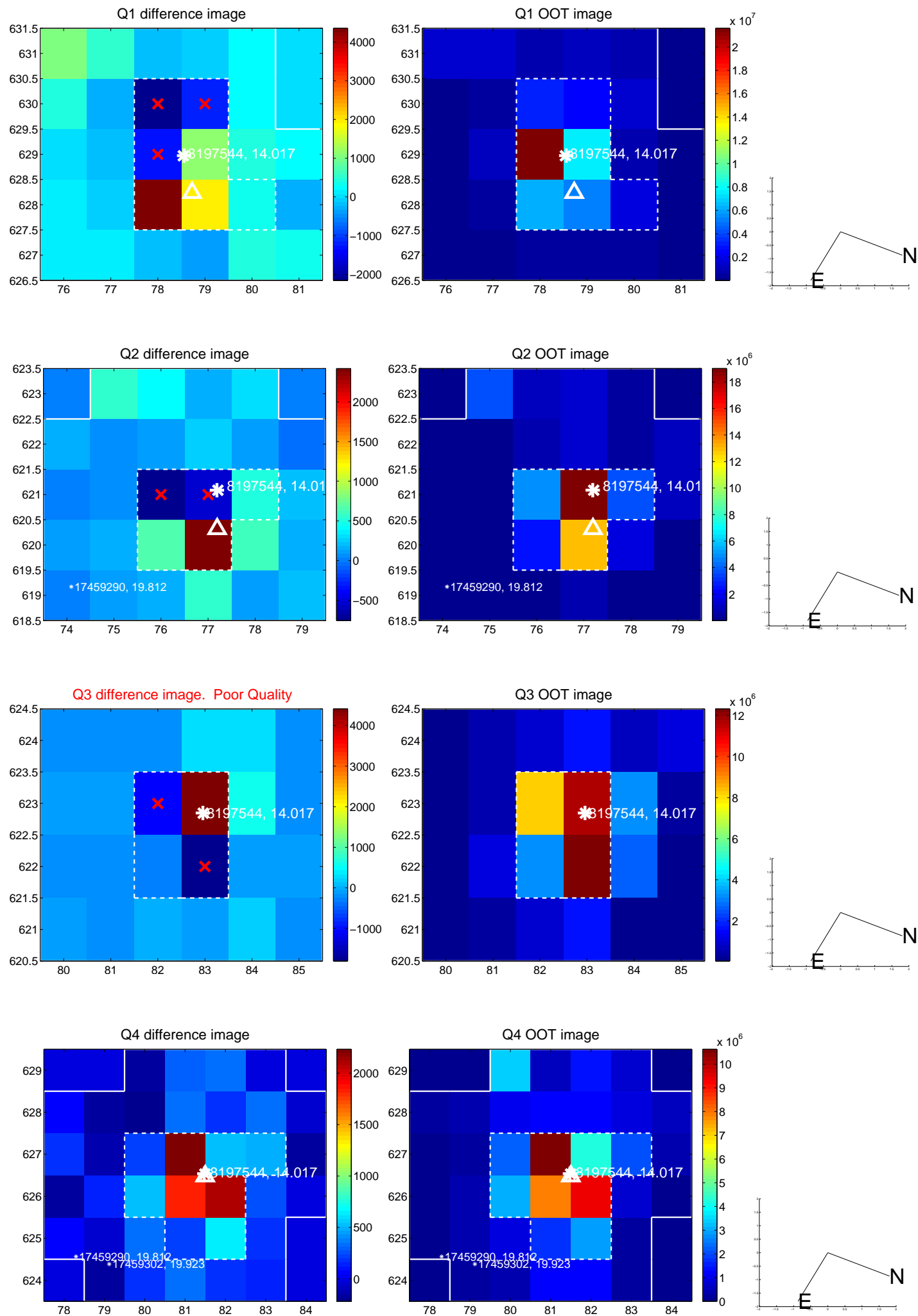
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|-------------------|-------------------|
| PRF-fit source offset from OOT | 1.116 ± 0.548 | 2.04 | 1.063 ± 0.618 | 0.340 ± 0.721 |
| PRF-fit source offset from KIC position | 1.099 ± 0.604 | 1.82 | 1.062 ± 0.666 | 0.282 ± 0.745 |
| photometric centroid source offset | 1.70 ± 1.83 | 0.93 | 1.00 ± 1.73 | -1.37 ± 1.87 |

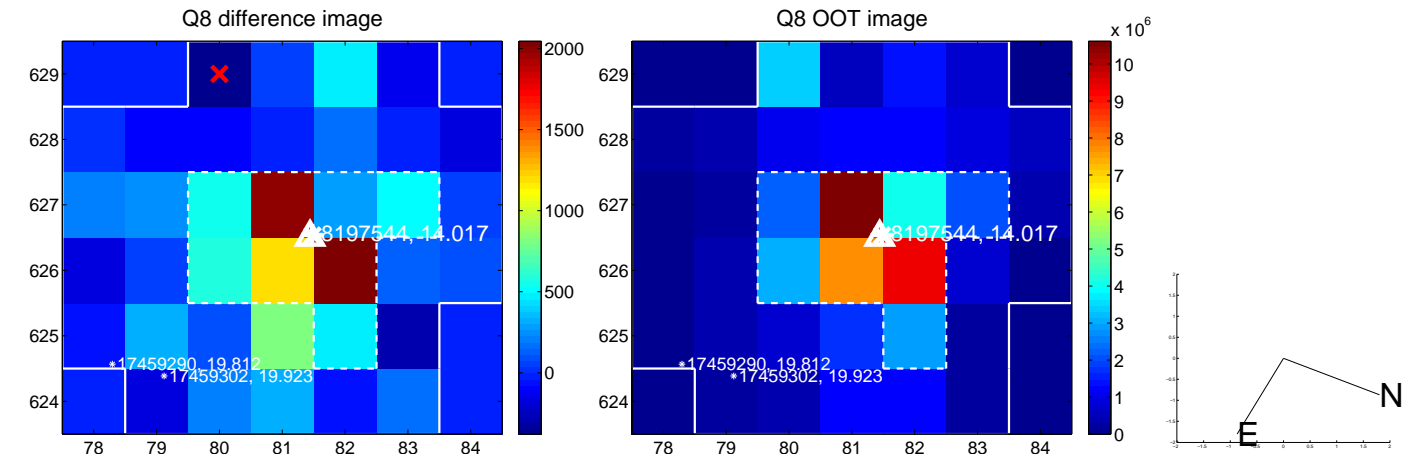
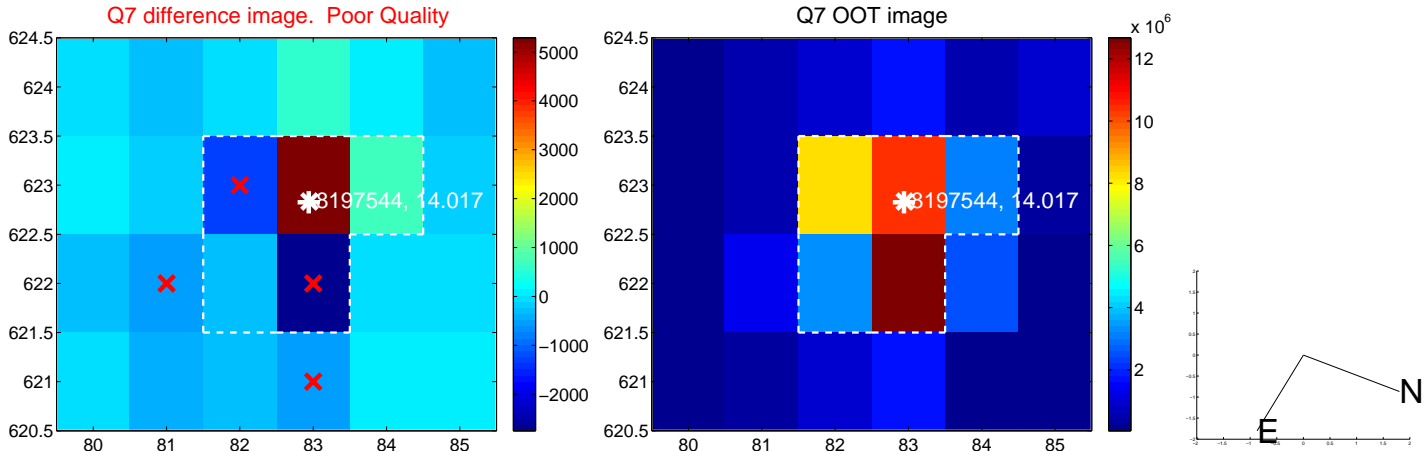
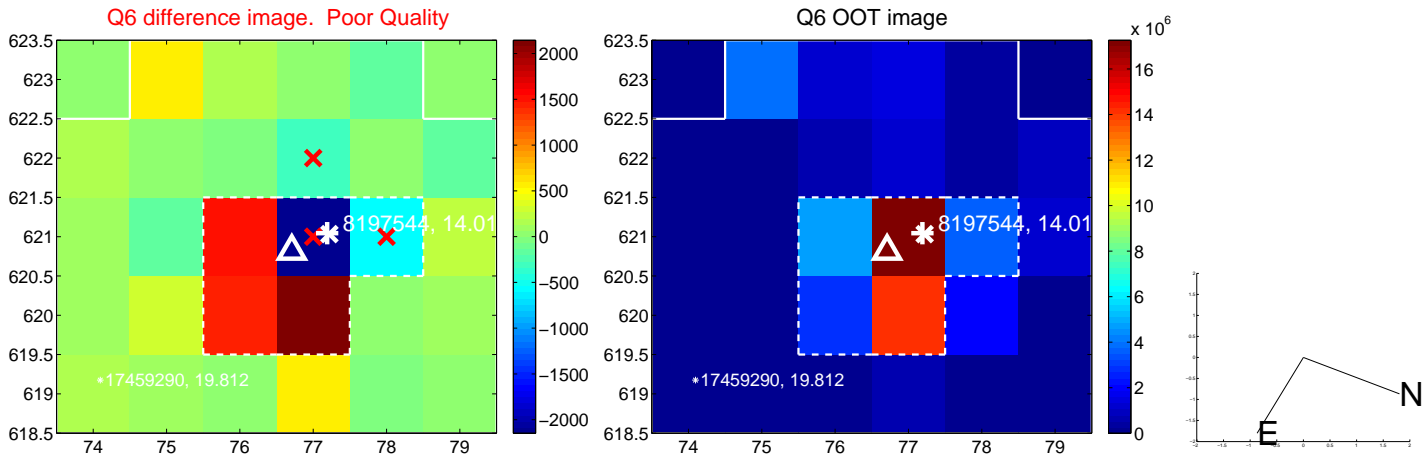
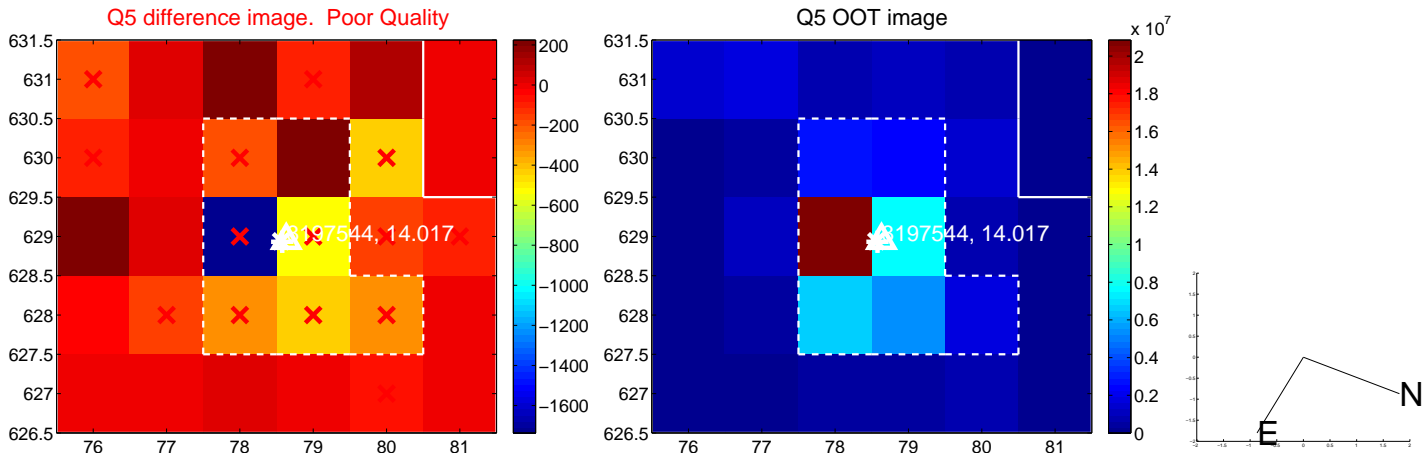


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

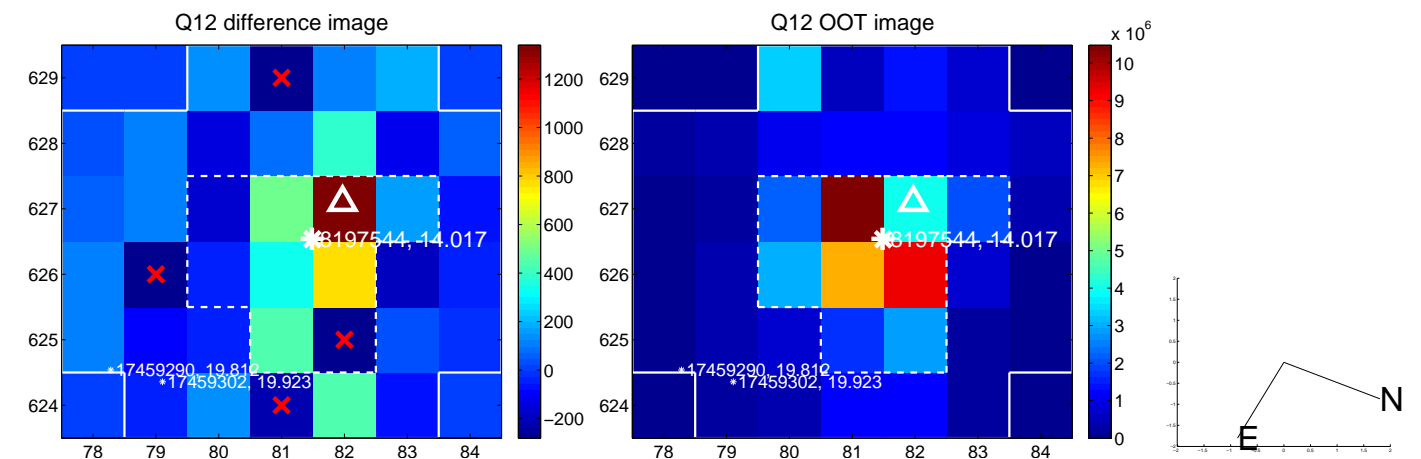
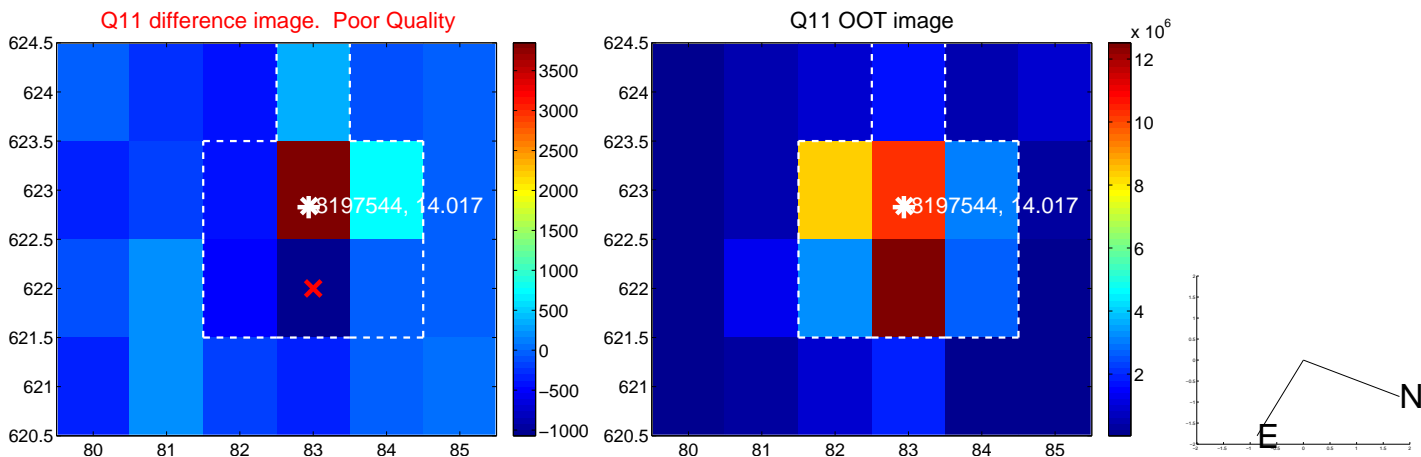
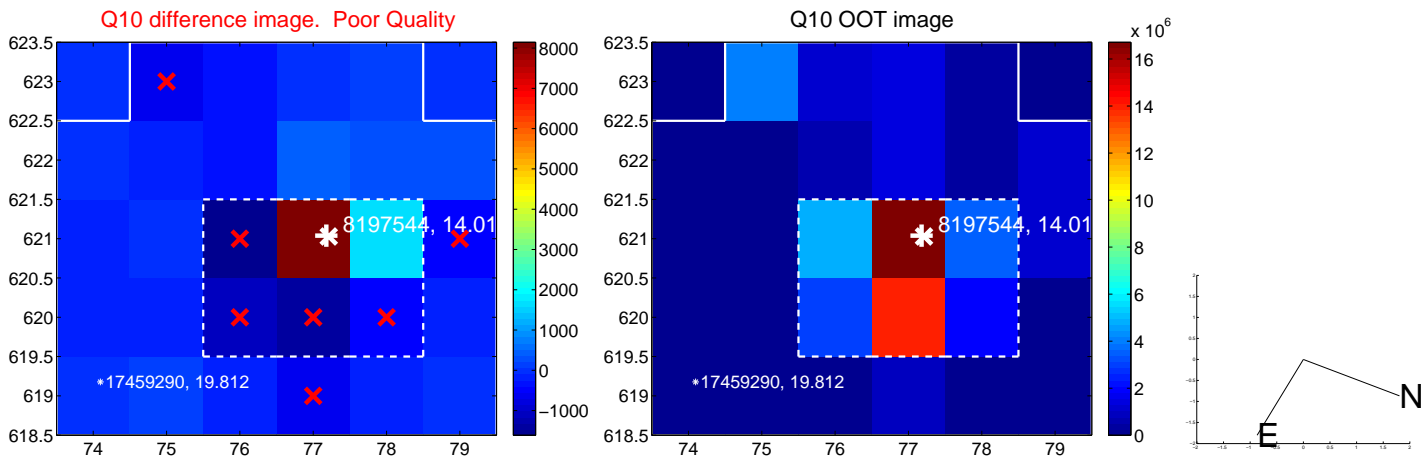
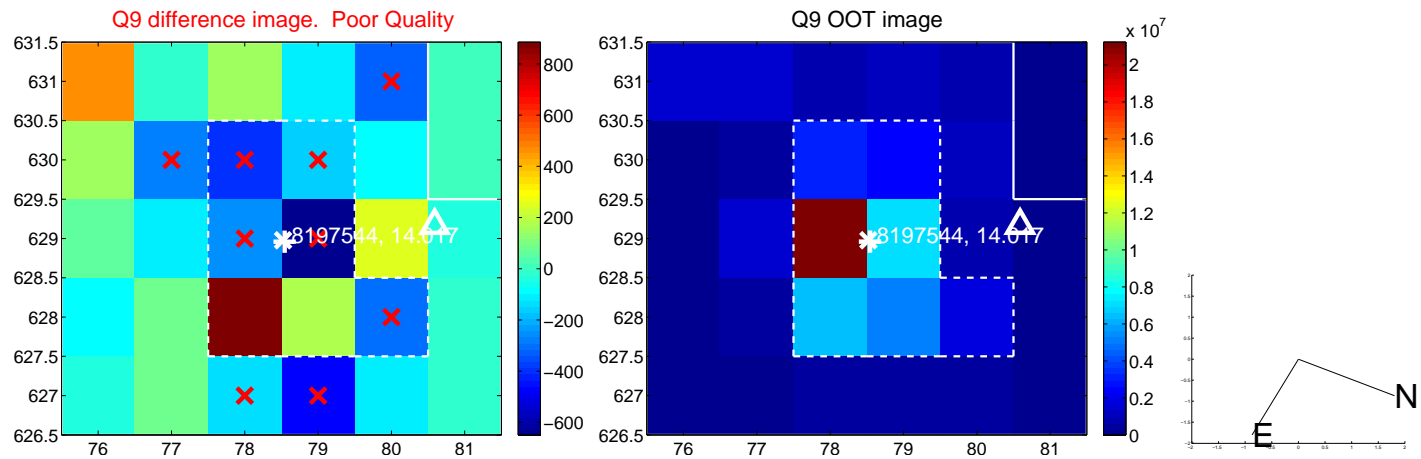
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



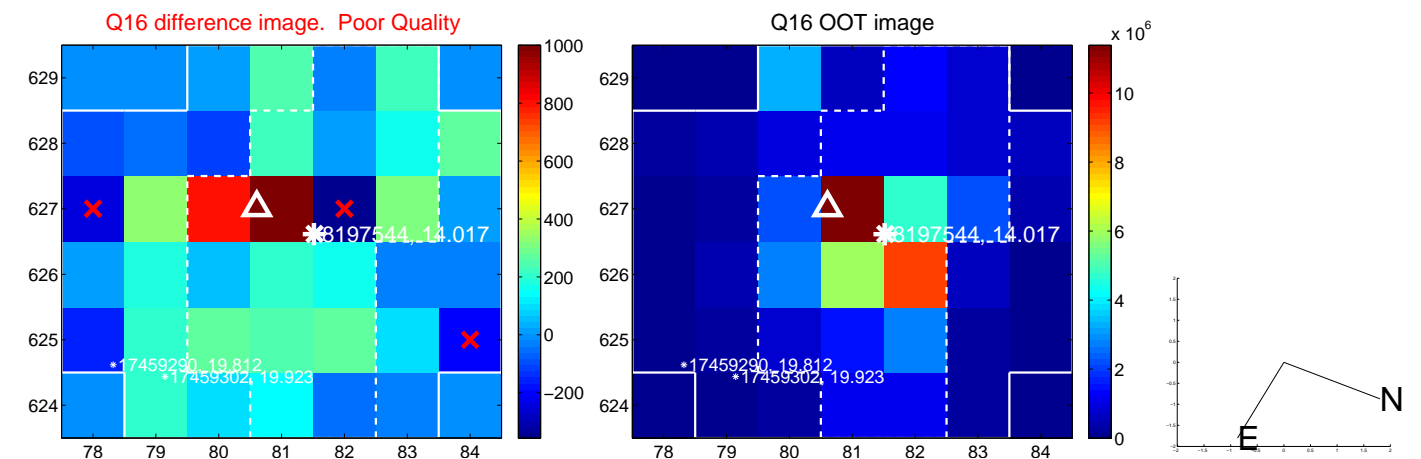
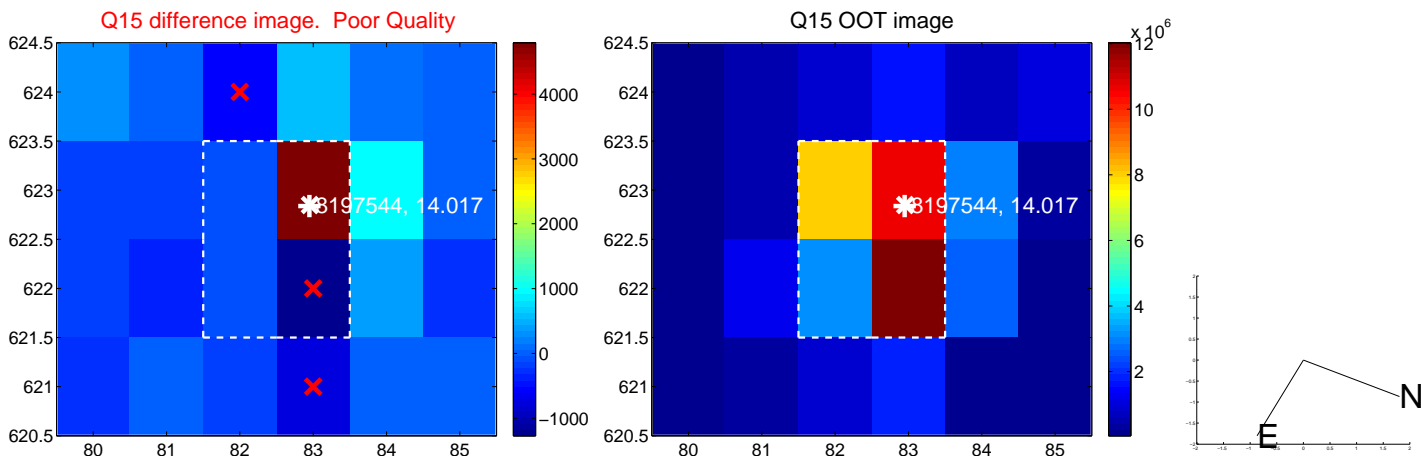
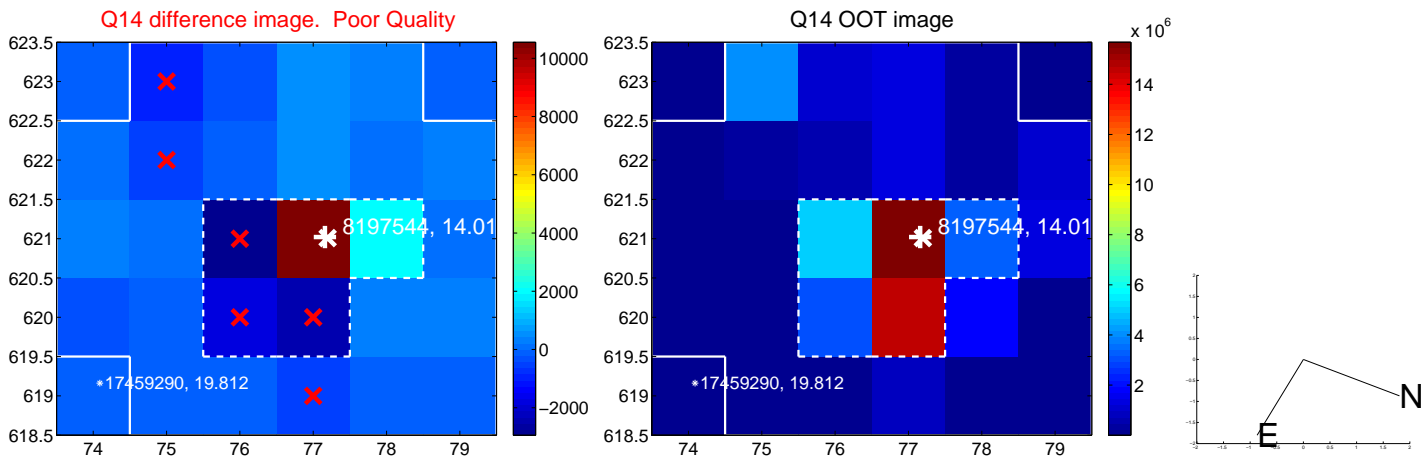
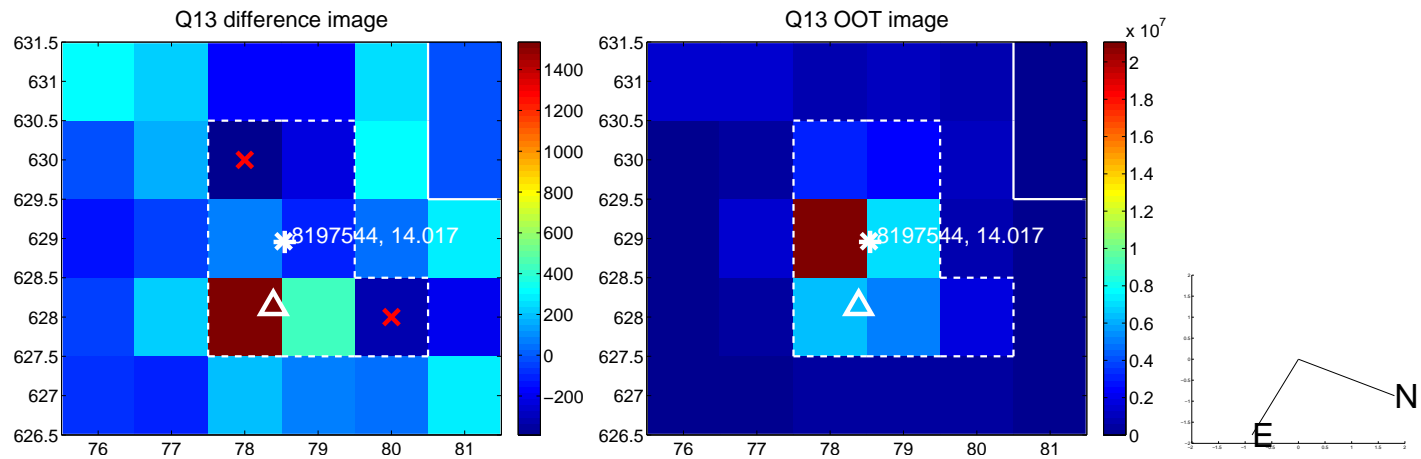
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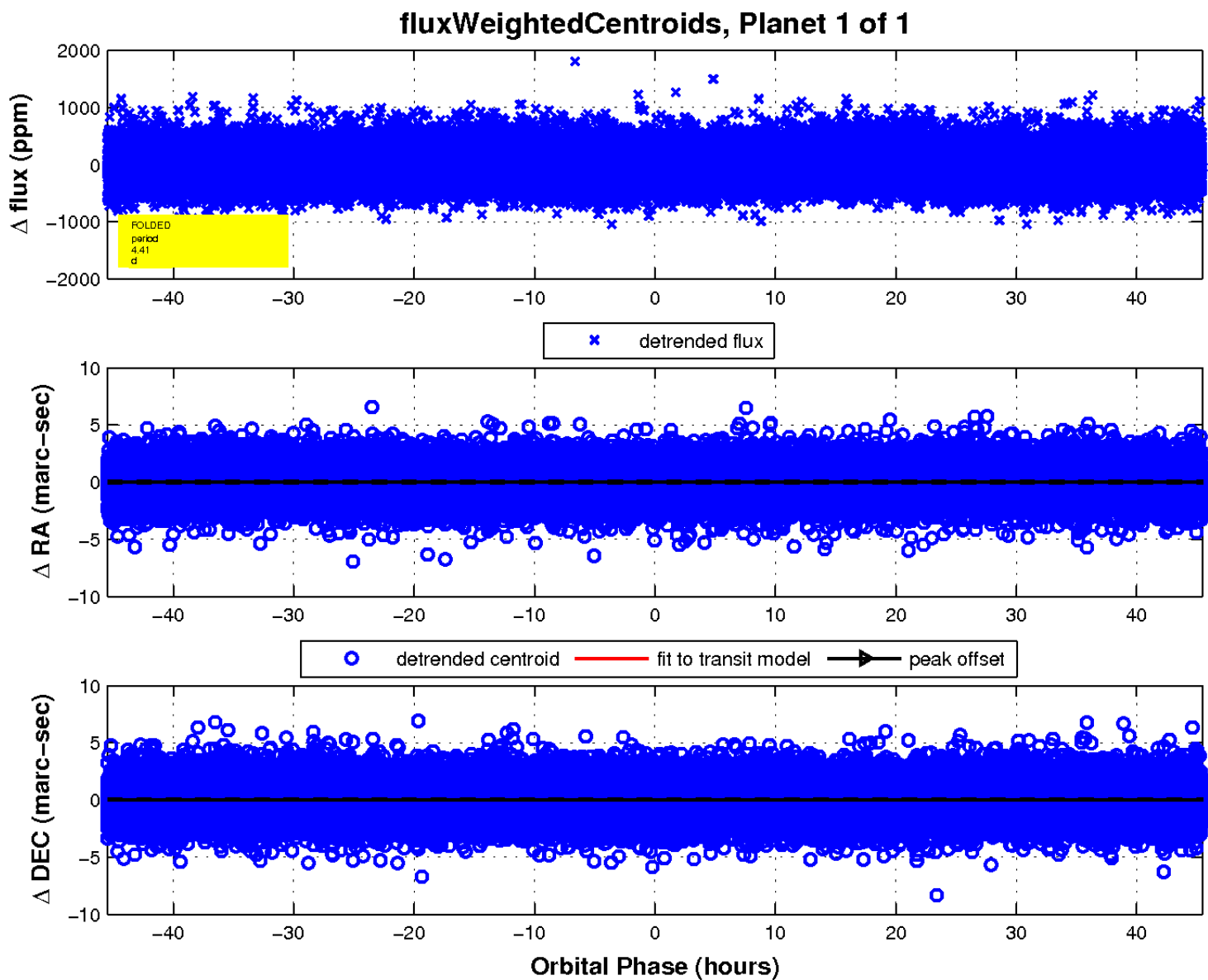
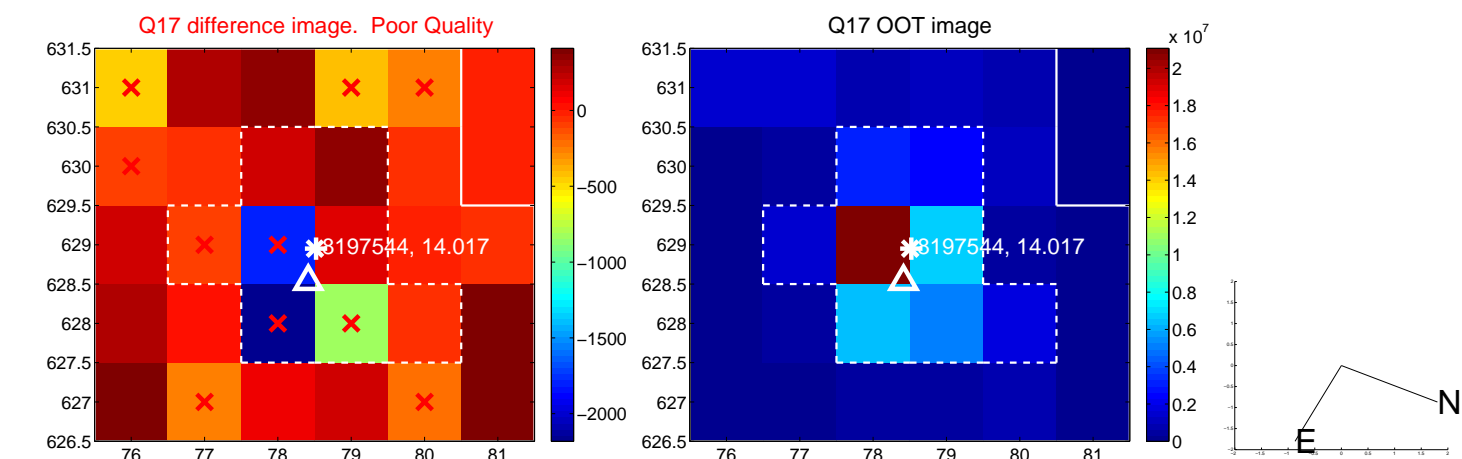
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UKIRT Image

Declination

