

KIC 007604266

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|-----|-----|-----------------------------|-----------------|------------------------|------------------------|
| 007604266-01 | OBS | No | 0.530009 | 132.034149 | 15.3 | 1.076 | 7.5 | 5.2 | 2.89 | 7509 | 1.22 | 98744.02 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|--------------------------------|
| 007604266-01 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT |

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

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

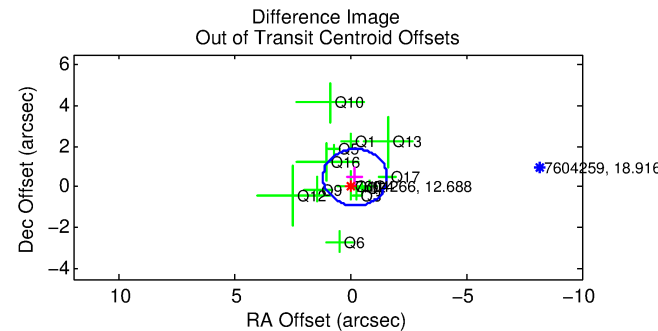
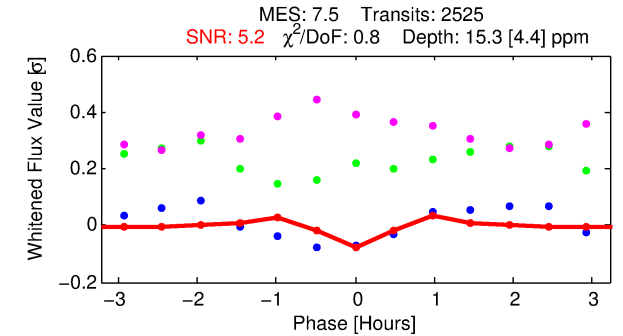
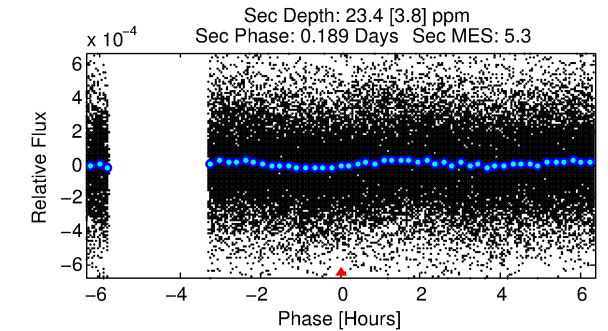
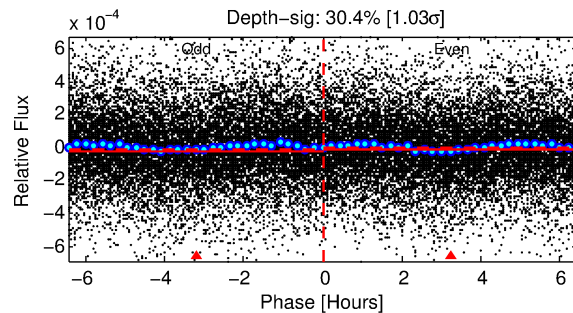
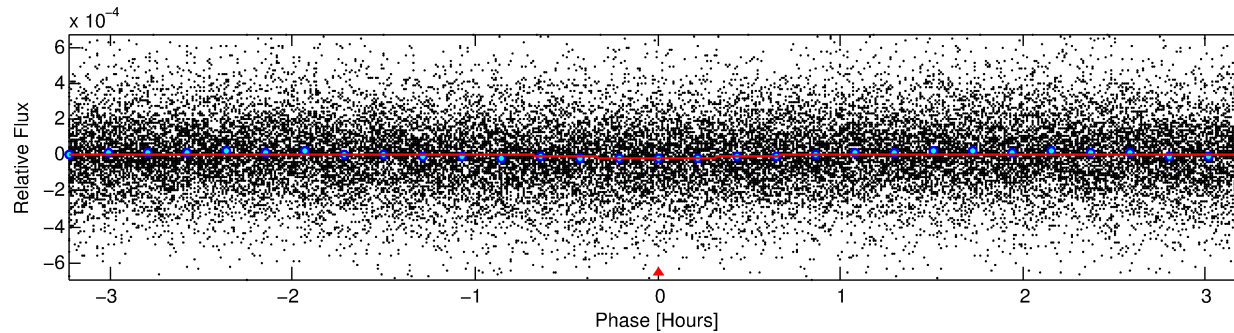
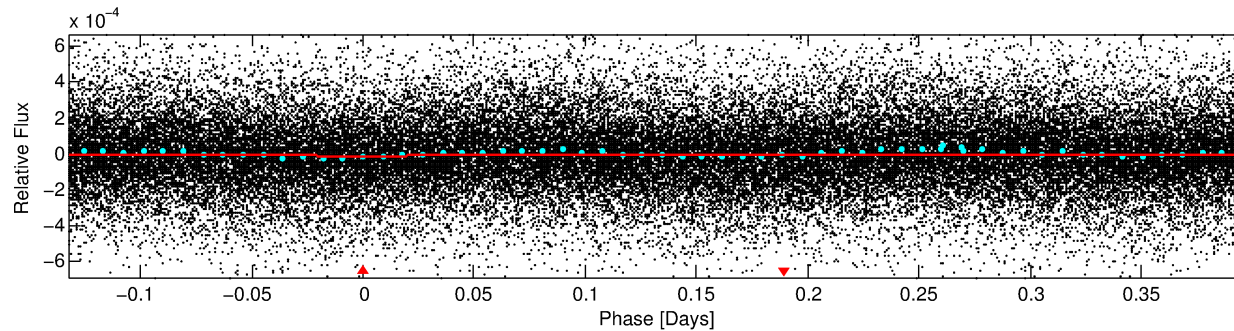
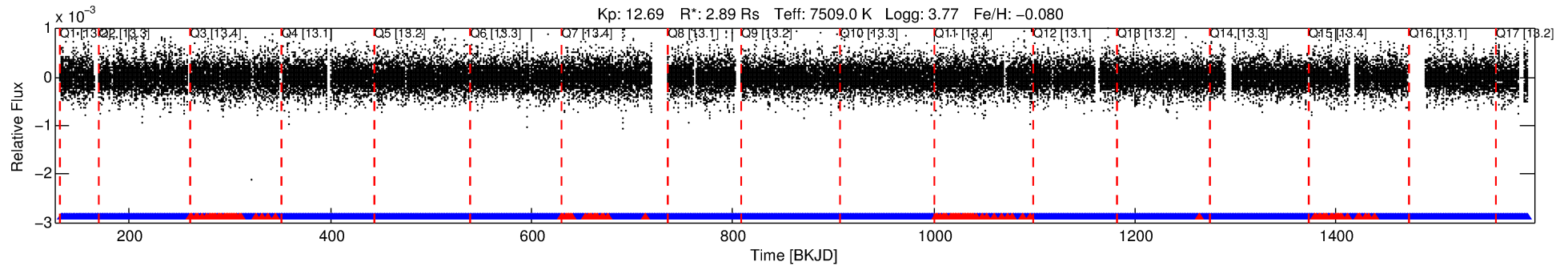
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007604266-01

No Significant Match Found

DV One-Page Summary

KIC: 7604266 Candidate: 1 of 1 Period: 0.530 d



DV Fit Results:

Period = 0.53001 [0.00002] d
Epoch = 132.0341 [0.0024] BKJD
Rp/R* = 0.0039 [0.0009]
a/R* = 2.86 [2.63]
b = 0.69 [0.80]
Seff = 98744.02 [66612.05]
Teq = 4520 [762] K
Rp = 1.22 [0.58] Re
a = 0.0155 [0.0063] AU
Ag = 2.10 [1.70] [0.65 σ]
Teffp = 8415 [1068] K [2.97 σ]

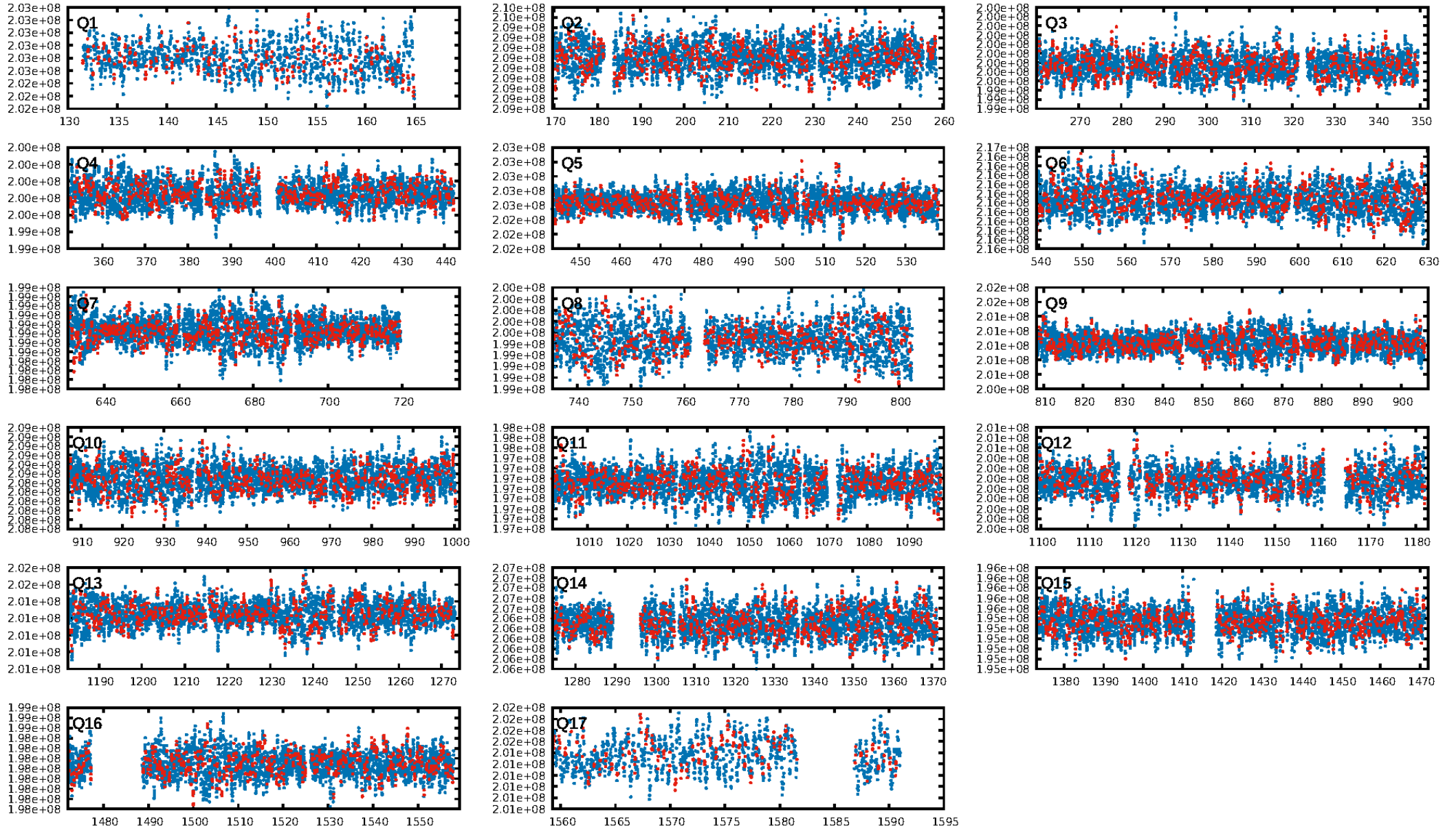
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.30e-15
RollingBand-fgt: 0.94 [2276/2410]
GhostDiagnostic-chr: -0.3413
Centroid-sig: 0.6%
Centroid-so: 2.133 arcsec [1.53 σ]
OotOffset-rm: 0.511 arcsec [1.10 σ]
KicOffset-rm: 0.482 arcsec [1.16 σ]
OotOffset-st: 2/3/3/5 [13]
KicOffset-st: 2/3/3/5 [13]
DiffImageQuality-fgm: 0.38 [5/13]
DiffImageOverlap-fno: 1.00 [17/17]

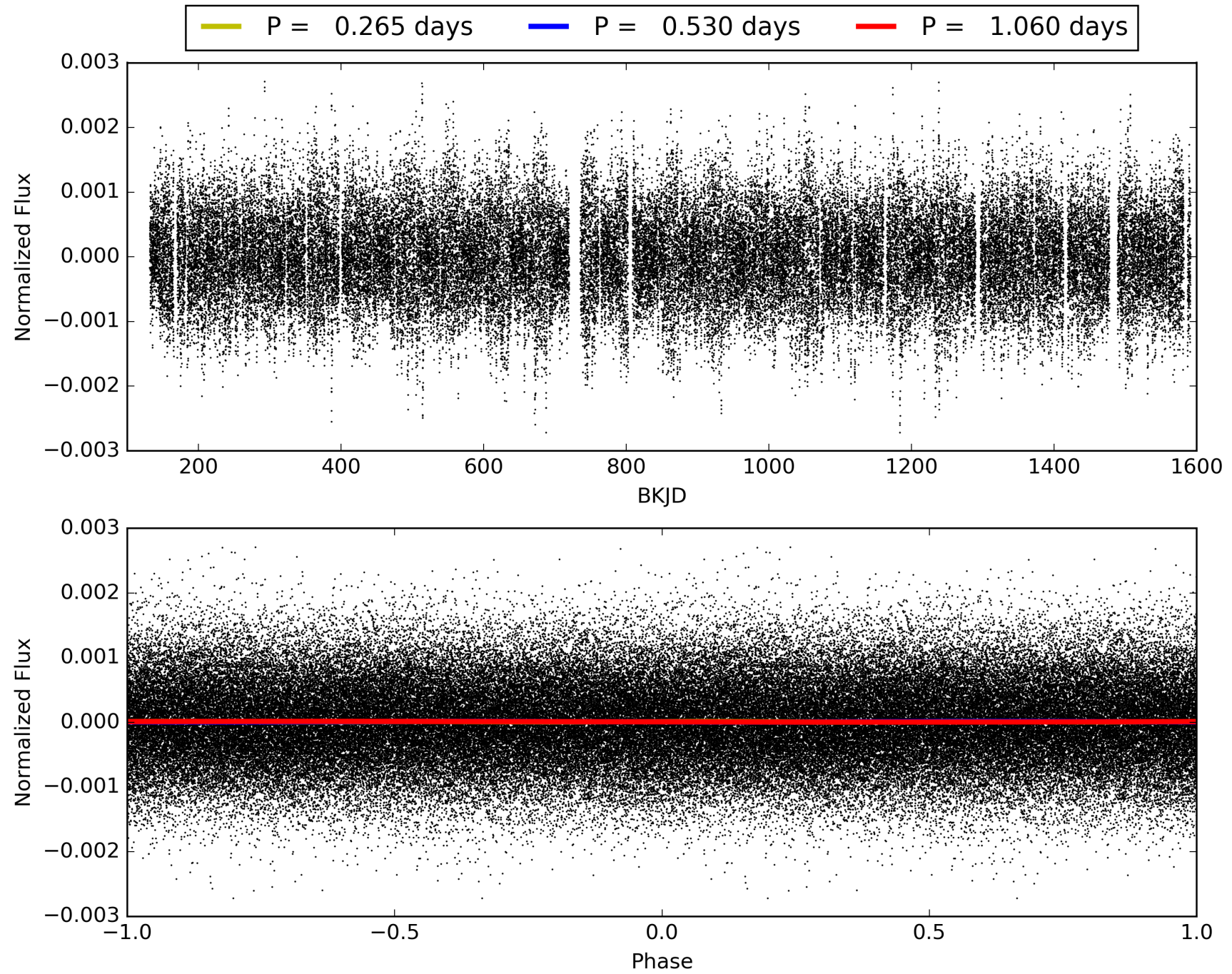
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 18:48:27 Z

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

TCE 007604266-01, PDC Light Curves

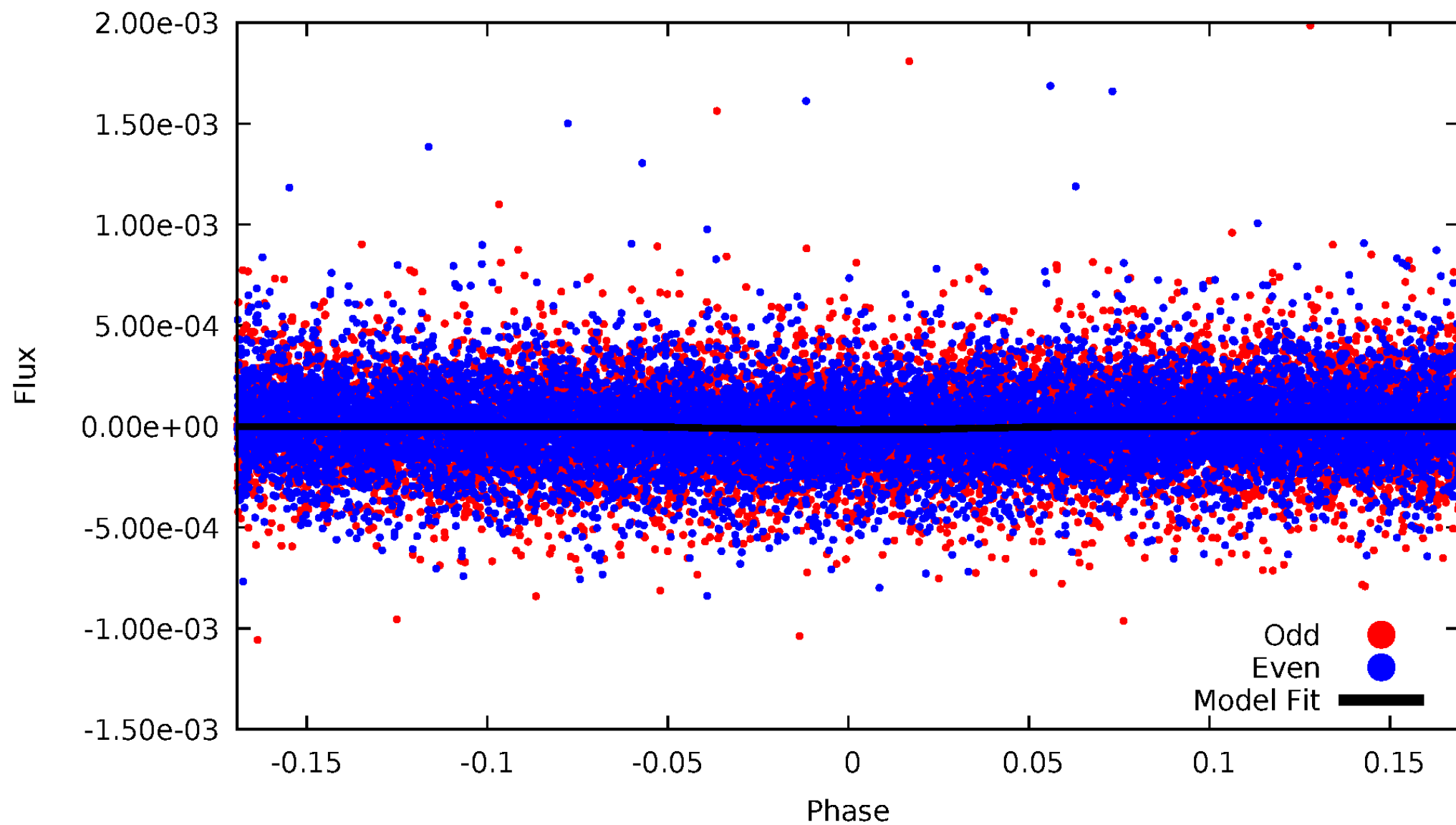


TCE 007604266-01



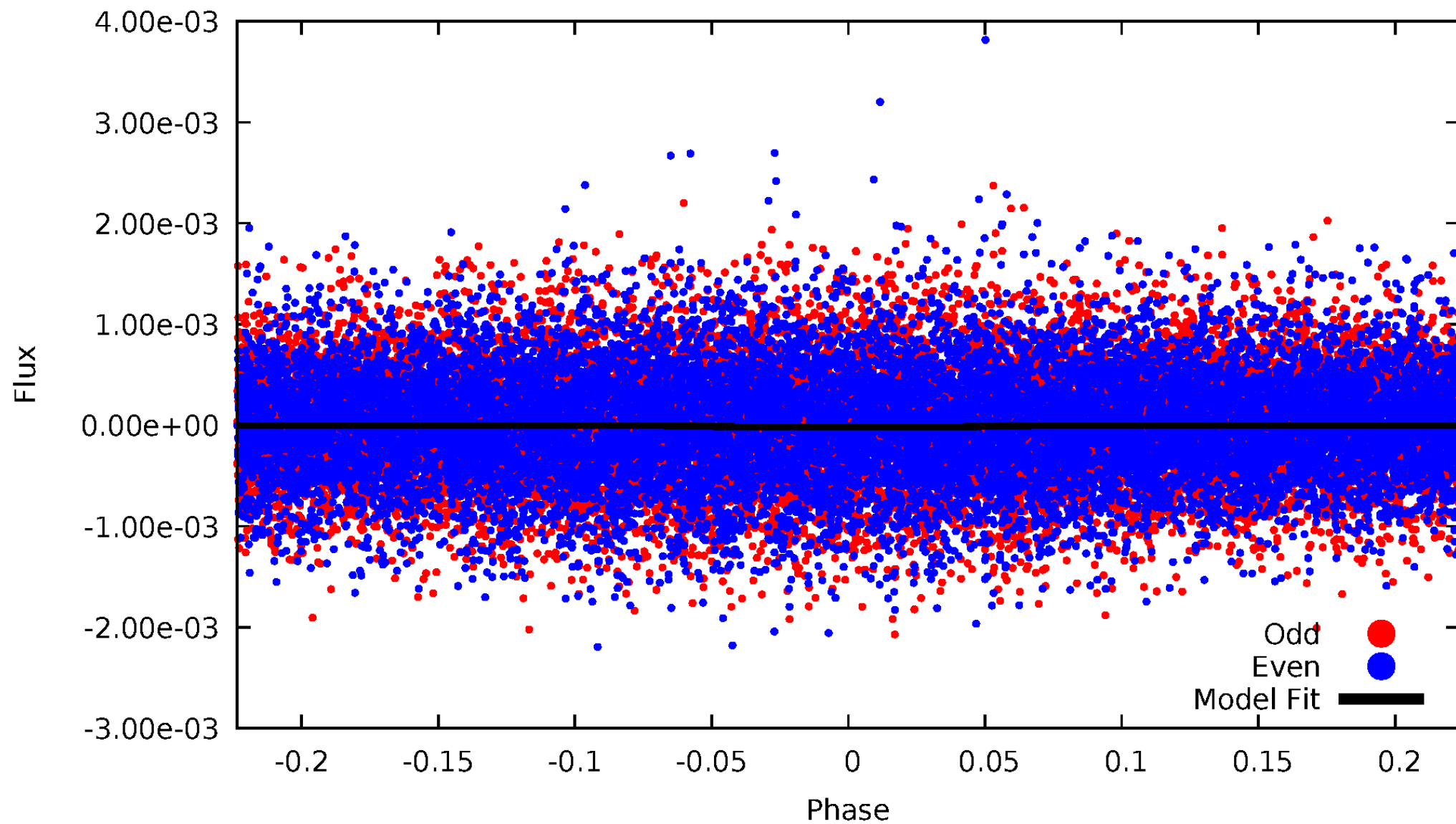
DV Odd/Even

TCE 007604266-01



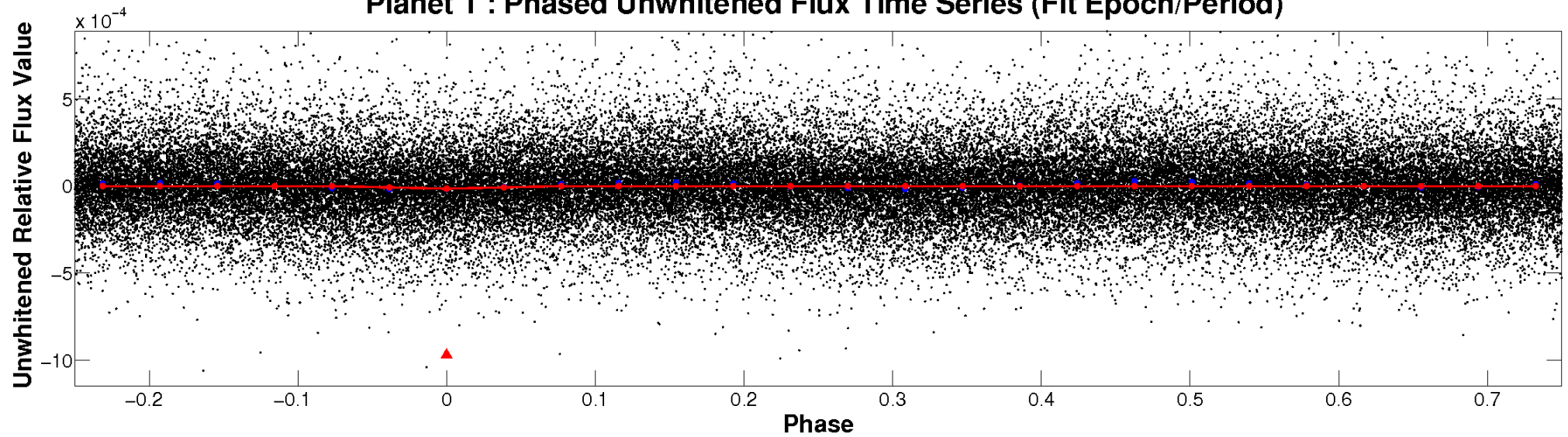
ALT Odd/Even

TCE 007604266-01

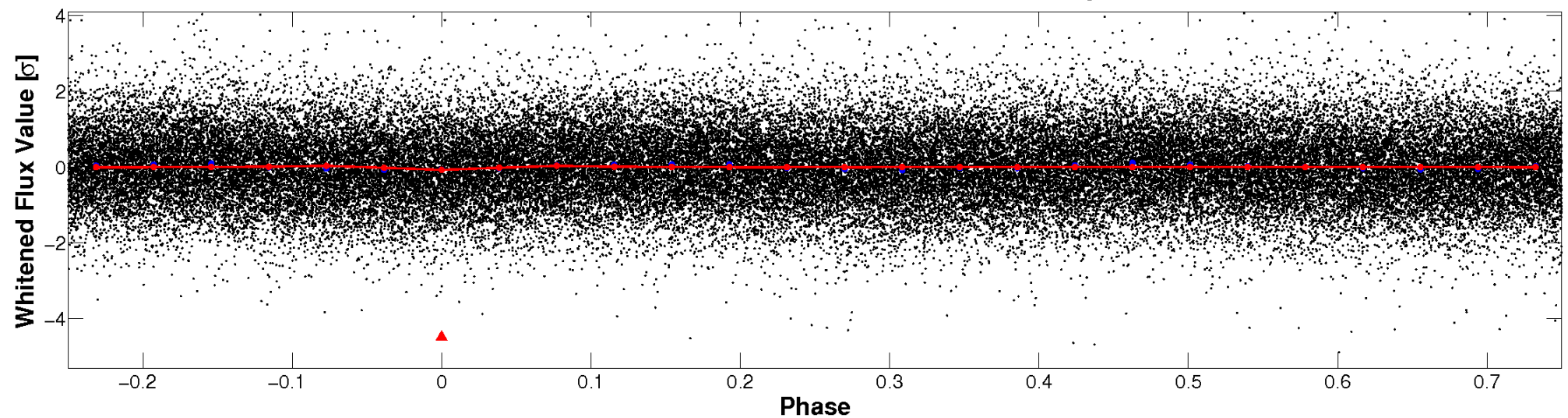


Non-Whitened Vs. Whitened Light Curve

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

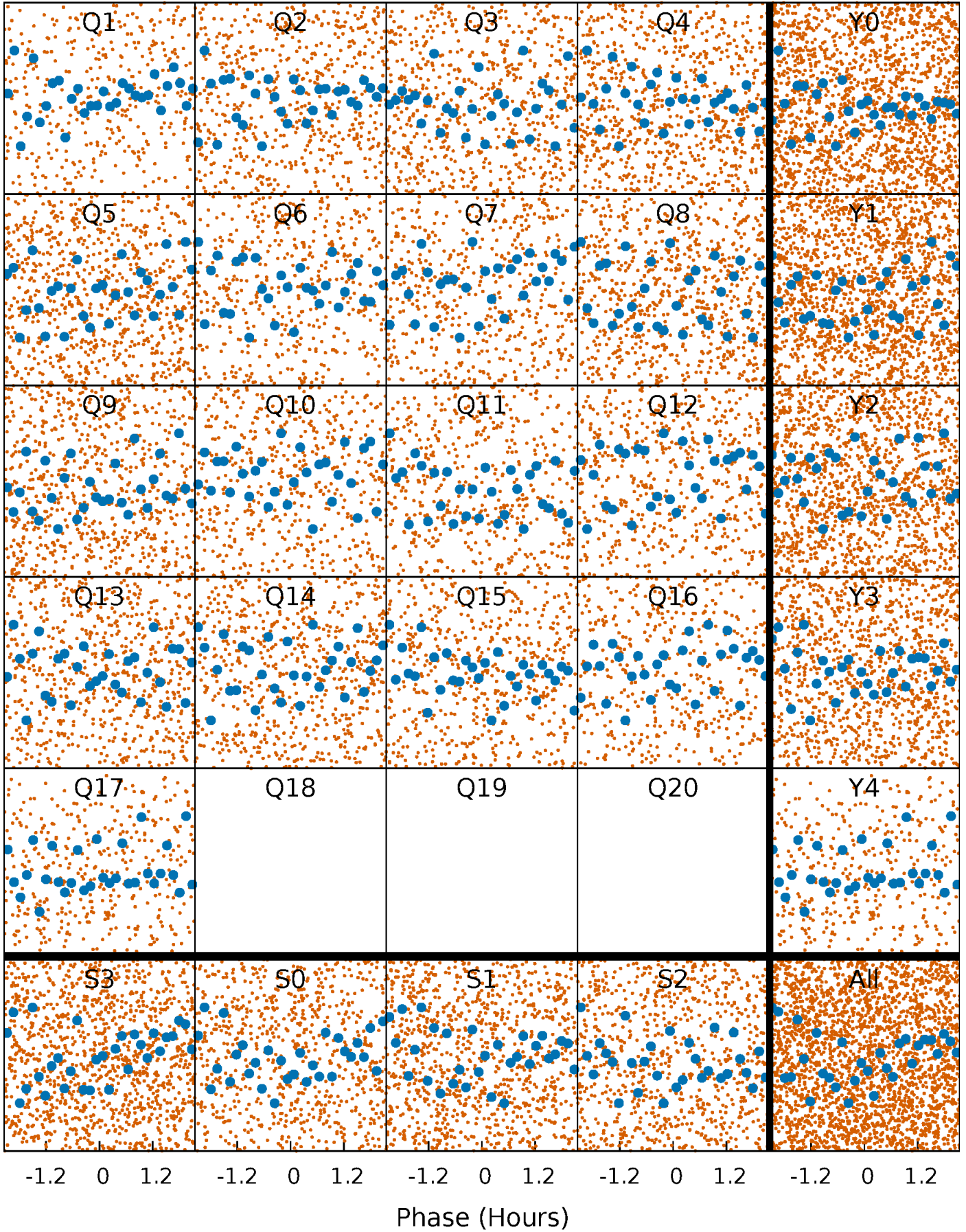


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



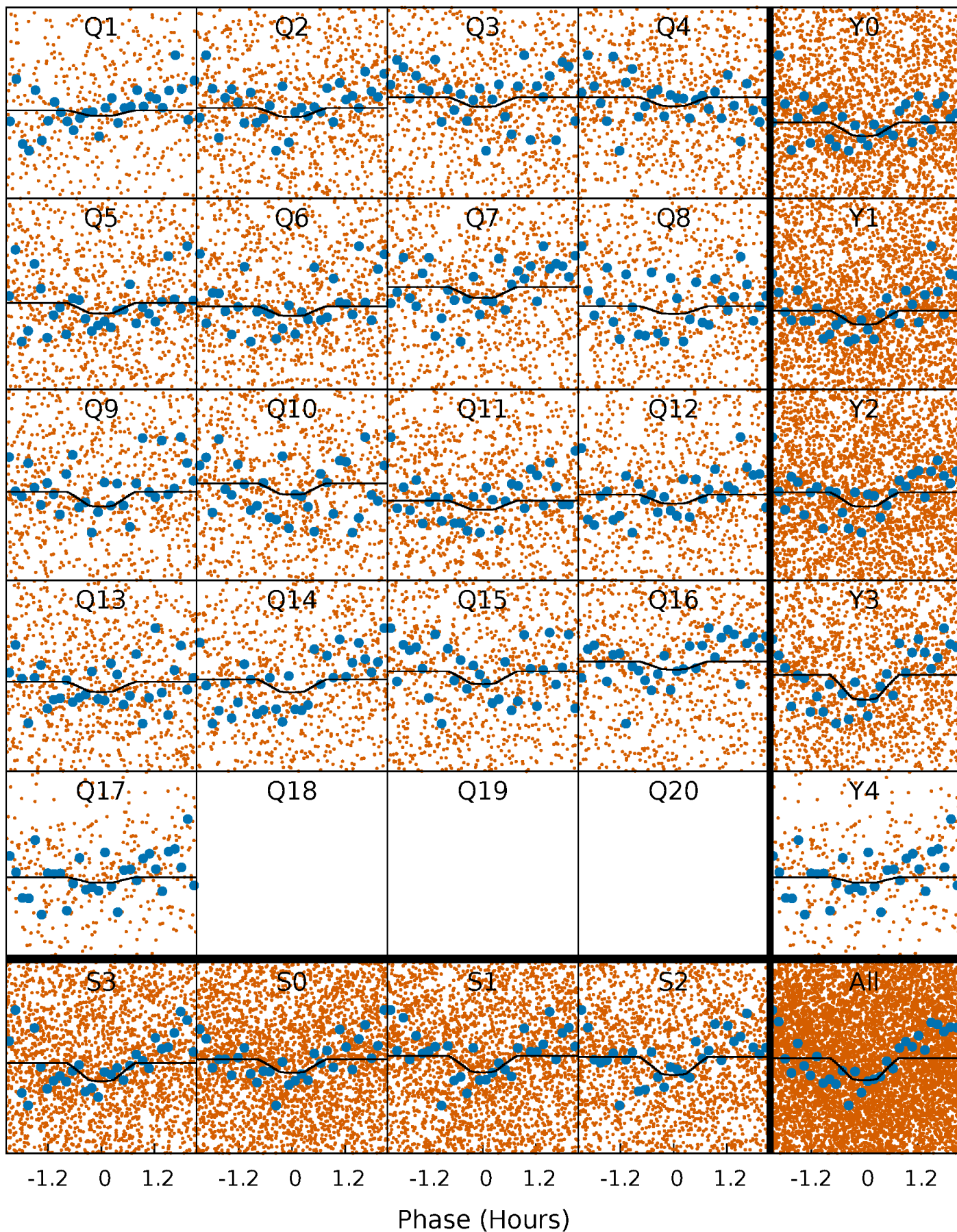
PDC Quarter-Phased Transit Curves

TCE 007604266-01 P= 0.530009 Days $T_0=132.034149$ (BKJD)



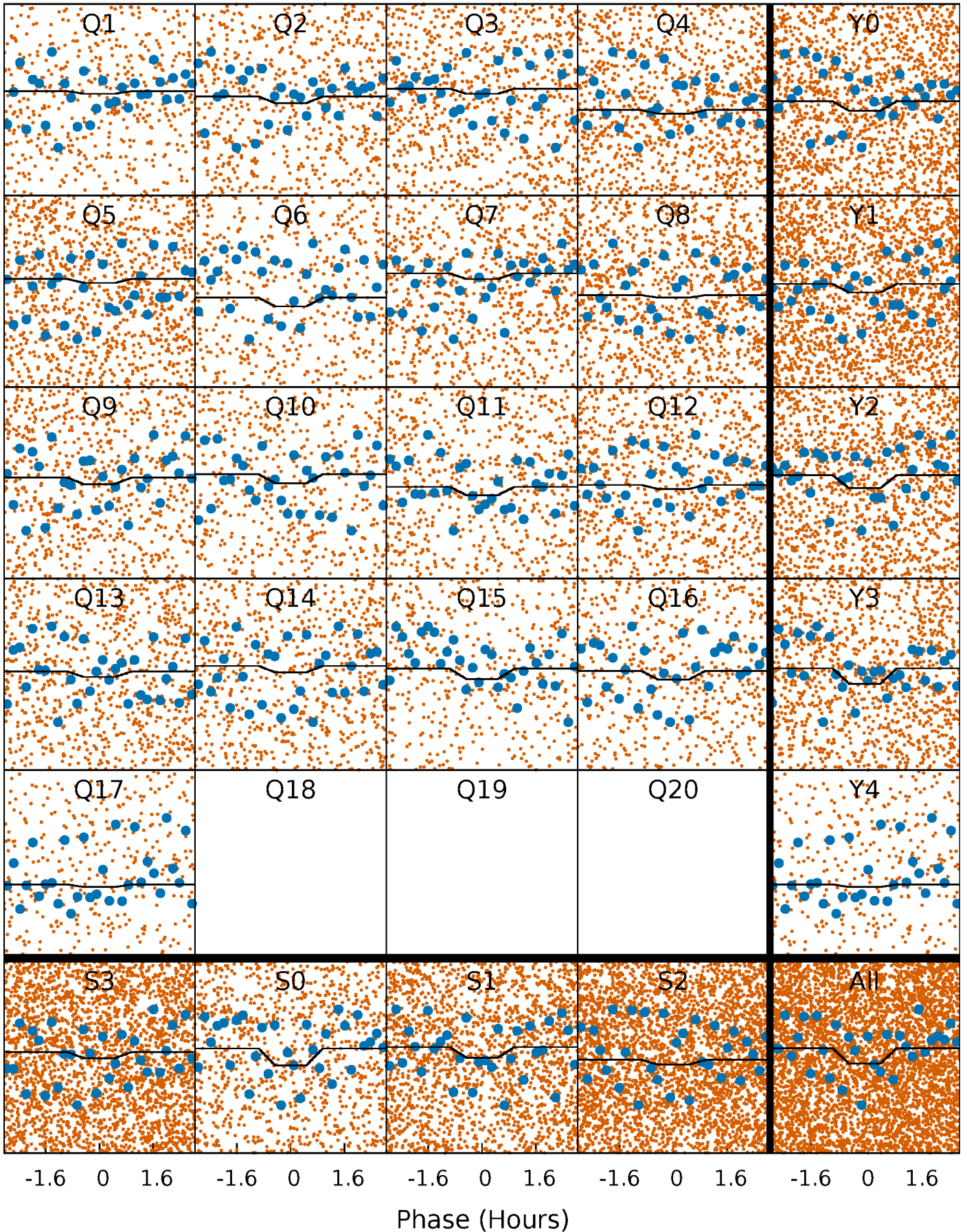
DV Quarter-Phased Transit Curves

TCE 007604266-01 P= 0.530009 Days $T_0=132.034149$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

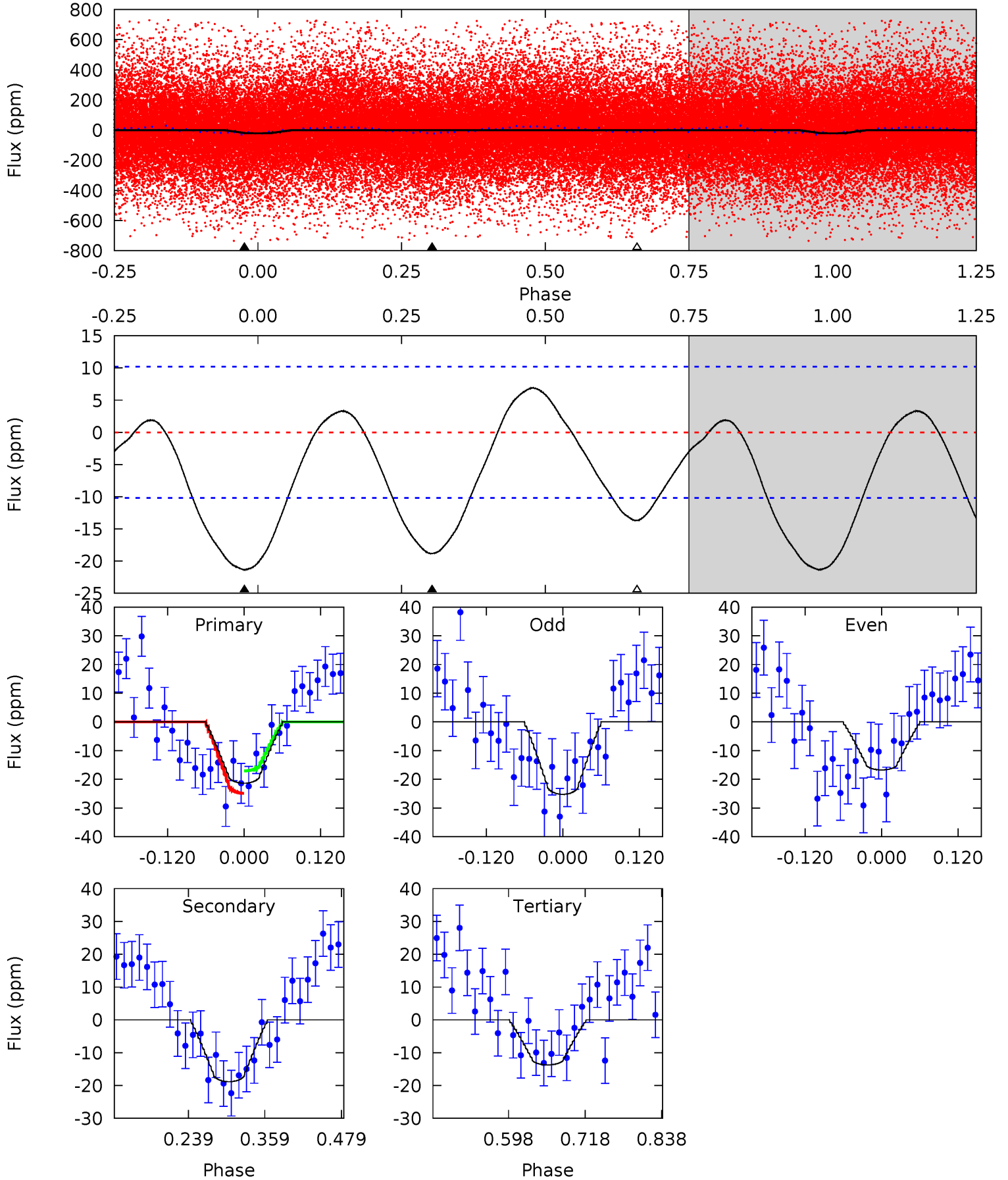
TCE 007604266-01 P= 0.530001 Days $T_0=132.033040$ (BKJD)



DV Model-Shift Uniqueness Test

007604266-01, P = 0.530009 Days, E = 131.504140 Days

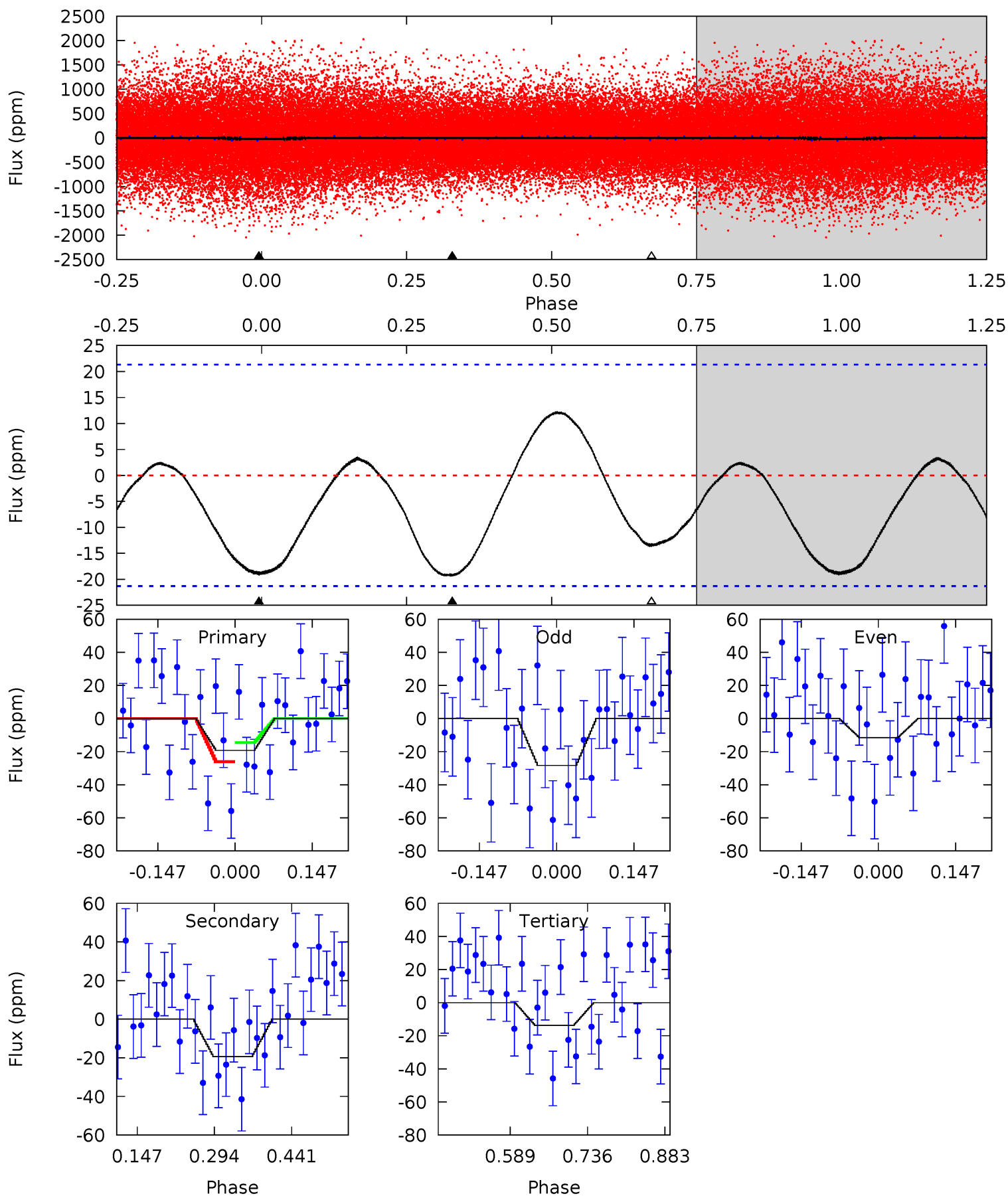
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|-----|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 9.49 | 8.38 | 6.10 | 0 | 4.53 | 1.56 | 2.70 | 3.40 | 9.49 | 2.28 | 8.38 | 1.90 | 1.08 | 0.25 | 1.76 |



Alt Model-Shift Uniqueness Test

007604266-01, P = 0.530001 Days, E = 131.503039 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|-----|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 4.04 | 4.09 | 2.89 | 0 | 4.48 | 1.45 | 1.72 | 1.16 | 4.04 | 1.20 | 4.09 | 1.66 | 1.27 | 0.39 | 1.11 |



Stellar Parameters For KIC 007604266

| | $T_{\text{eff}}(K)$ | $\log(g)$ | $[\text{Fe}/\text{H}]$ | $R (R_{\odot})$ | $M(M_{\odot})$ | $p_{\star} (\text{g}\cdot\text{cm}^{-3})$ |
|--------|----------------------|---------------------------|----------------------------|---------------------------|---------------------------|---|
| | 7509^{+209}_{-314} | $3.766^{+0.384}_{-0.096}$ | $-0.080^{+0.200}_{-0.350}$ | $2.894^{+0.408}_{-1.225}$ | $1.780^{+0.195}_{-0.363}$ | $0.103^{+0.332}_{-0.032}$ |
| | +3%/-4% | +10%/-3% | +250%/-438% | +14%/-42% | +11%/-20% | +321%/-31% |
| 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 007604266-01 / KOI

| Detrend | Depth (ppm) | $R_p (R_{\oplus})$ | $T_{\text{max}} (K)$ | $T_{\text{obs}} (K)$ | A_{obs} |
|---------|-------------|------------------------|----------------------|------------------------|---------------------------|
| DV | -19 ± 2 | $1.12^{+0.37}_{-0.33}$ | 6172^{+389}_{-631} | 7603^{+1596}_{-1085} | $1.944^{+1.935}_{-0.813}$ |
| Alt. | -19 ± 5 | $1.16^{+0.34}_{-0.31}$ | 6124^{+430}_{-626} | 7482^{+1622}_{-1132} | $1.850^{+1.747}_{-0.786}$ |

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

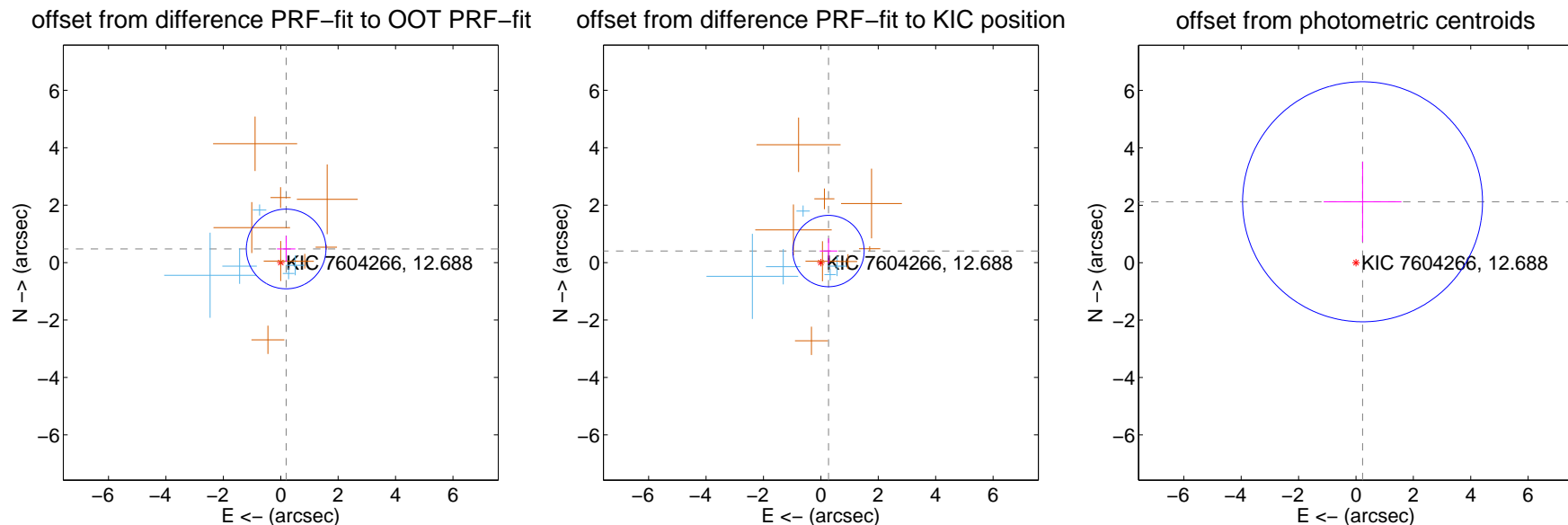
DV Centroid Data

Supplemental centroid analysis for 007604266-01. Kepler magnitude: 12.69. Transit SNR 5.18

There are 5 quarters with good PRF difference image offsets

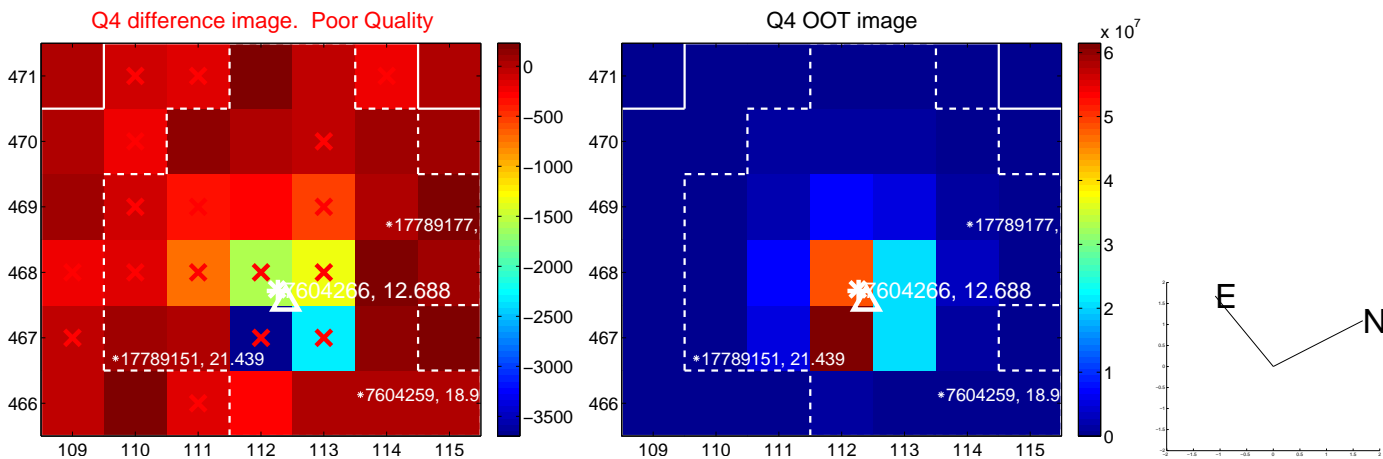
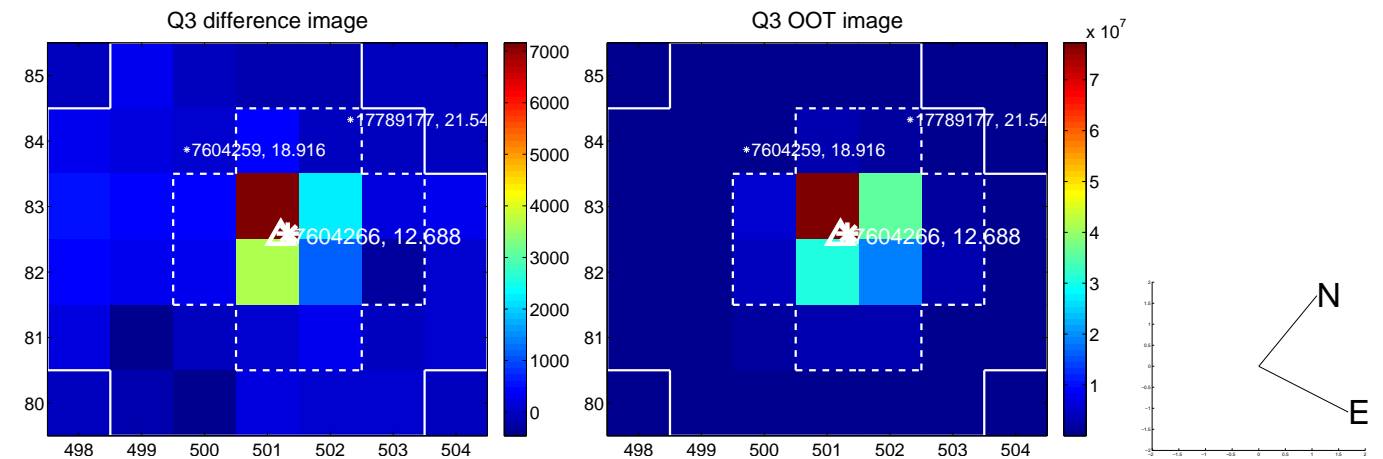
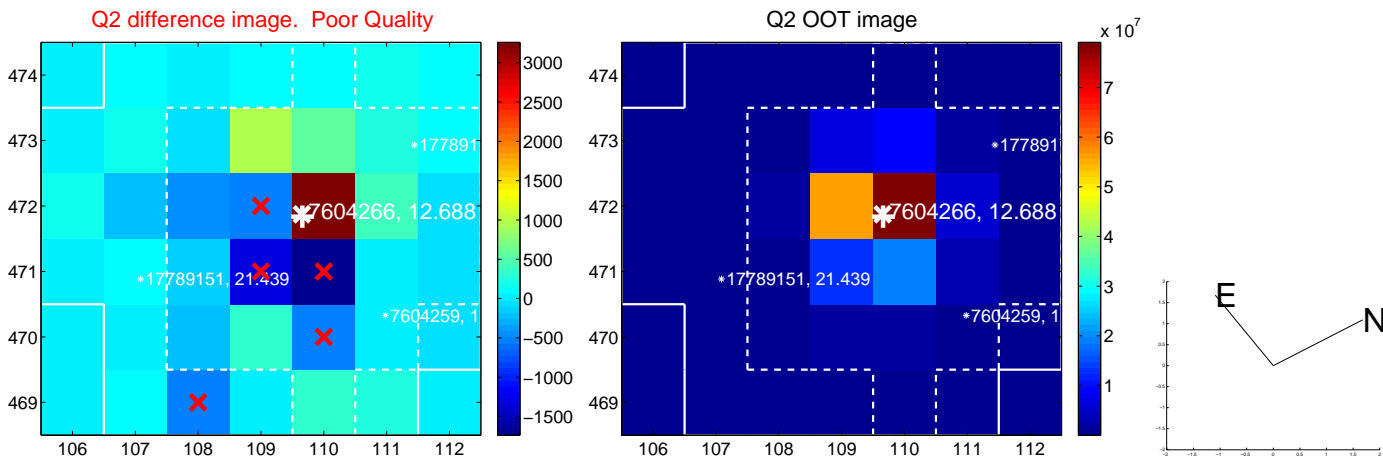
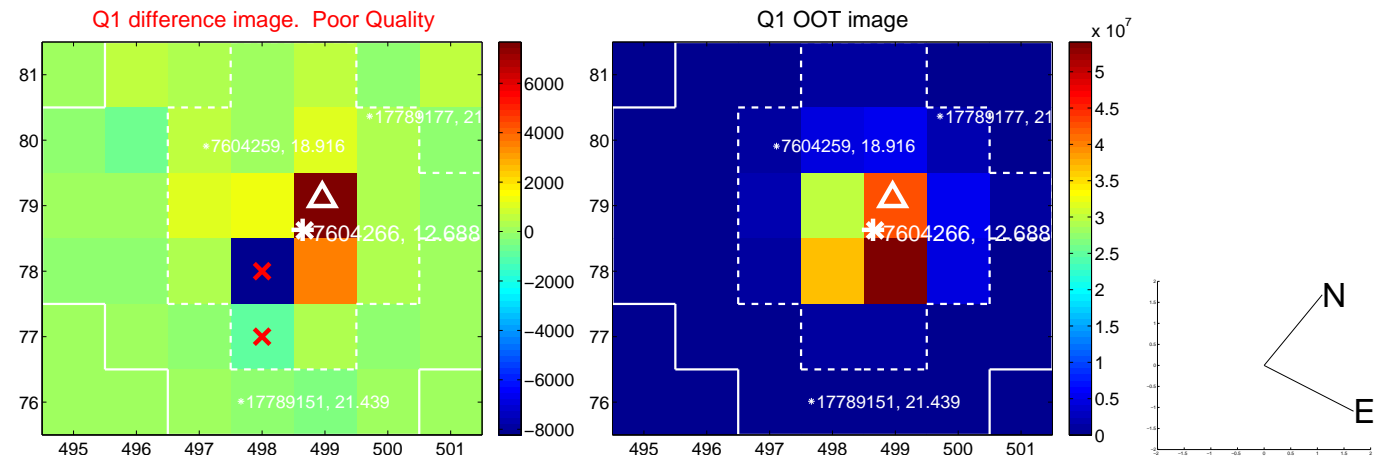
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|--------------------|-------------------|
| PRF-fit source offset from OOT | 0.511 ± 0.463 | 1.10 | -0.188 ± 0.321 | 0.475 ± 0.452 |
| PRF-fit source offset from KIC position | 0.482 ± 0.414 | 1.16 | -0.265 ± 0.308 | 0.402 ± 0.441 |
| photometric centroid source offset | 2.13 ± 1.39 | 1.53 | -0.23 ± 1.36 | 2.12 ± 1.39 |

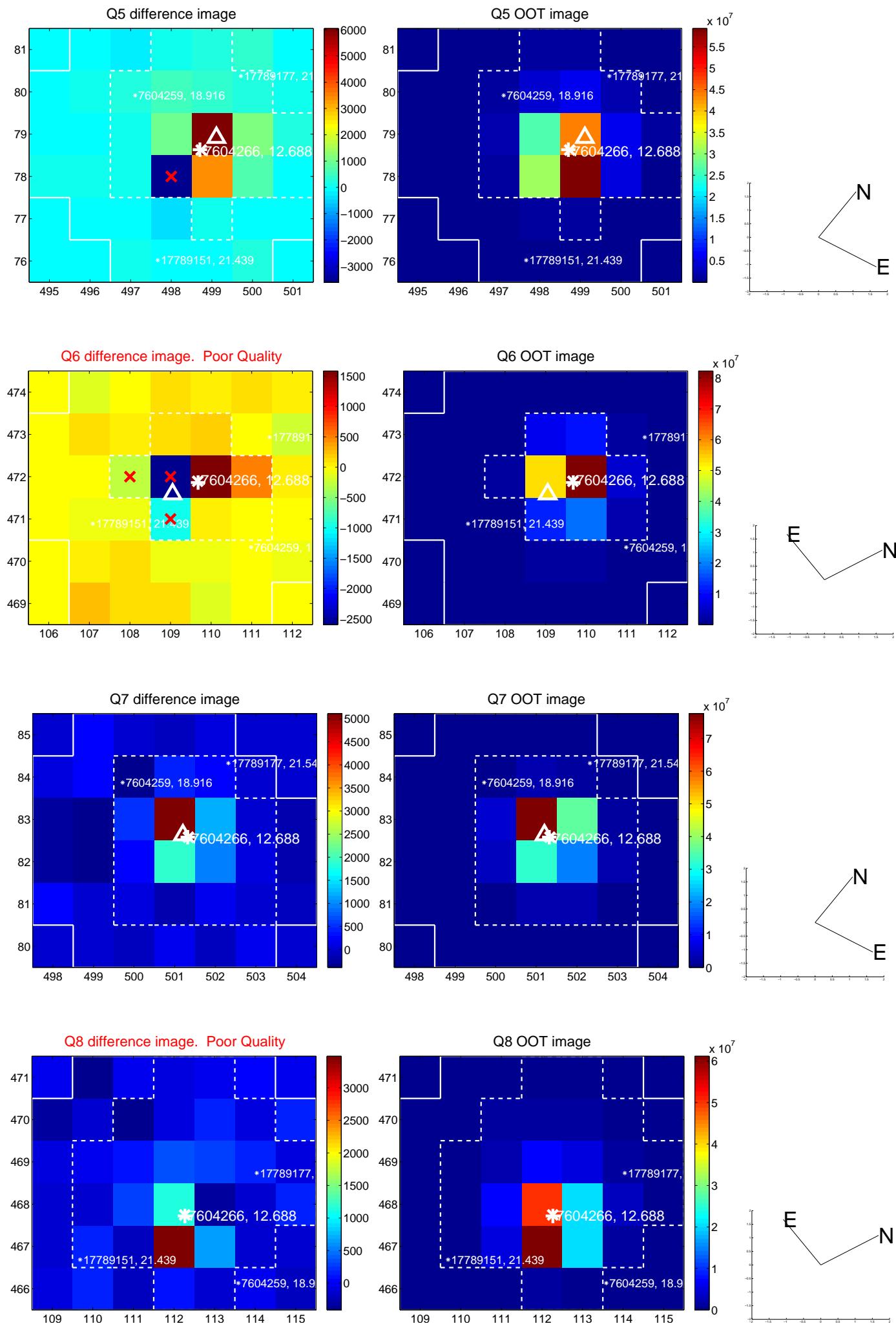


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

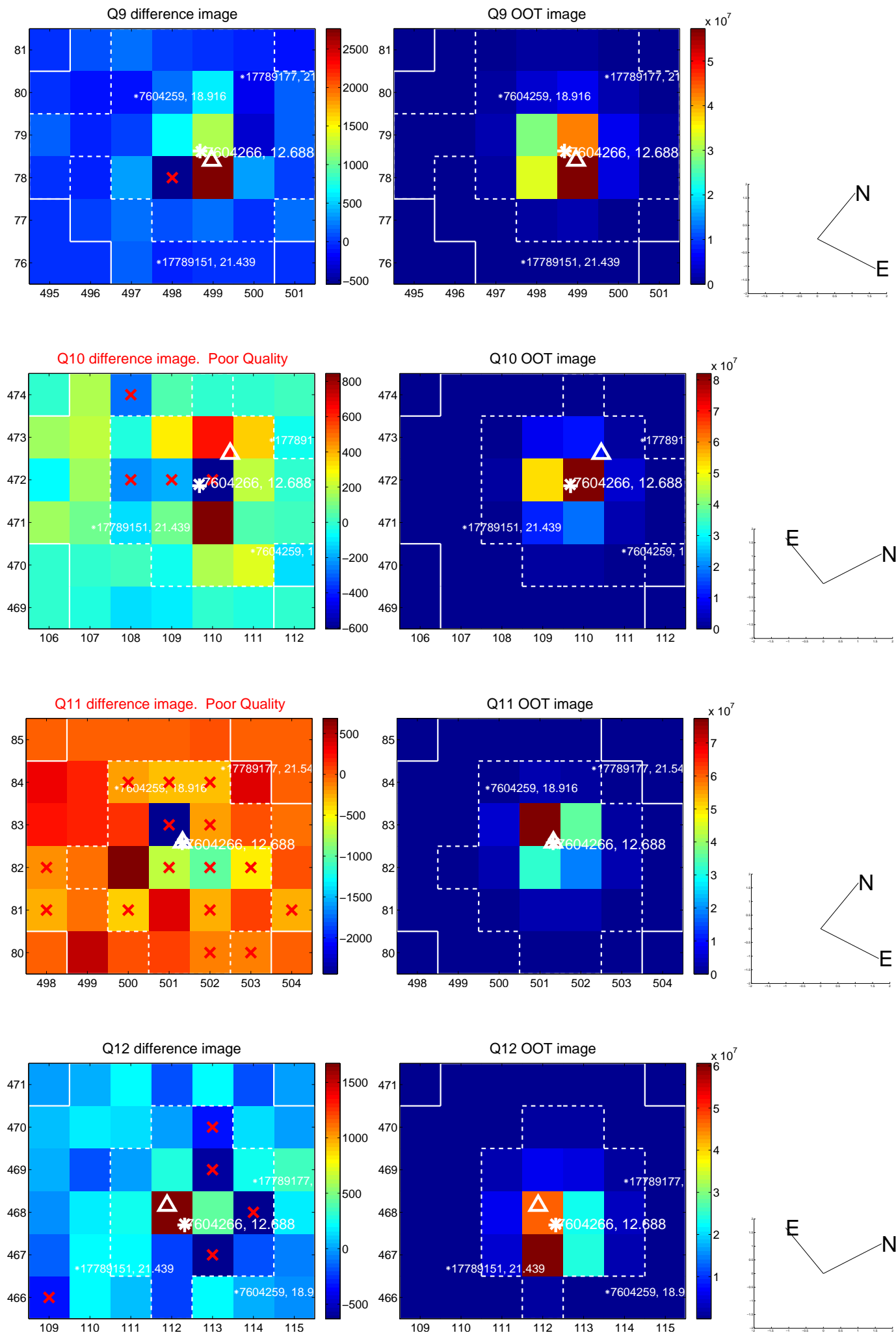
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



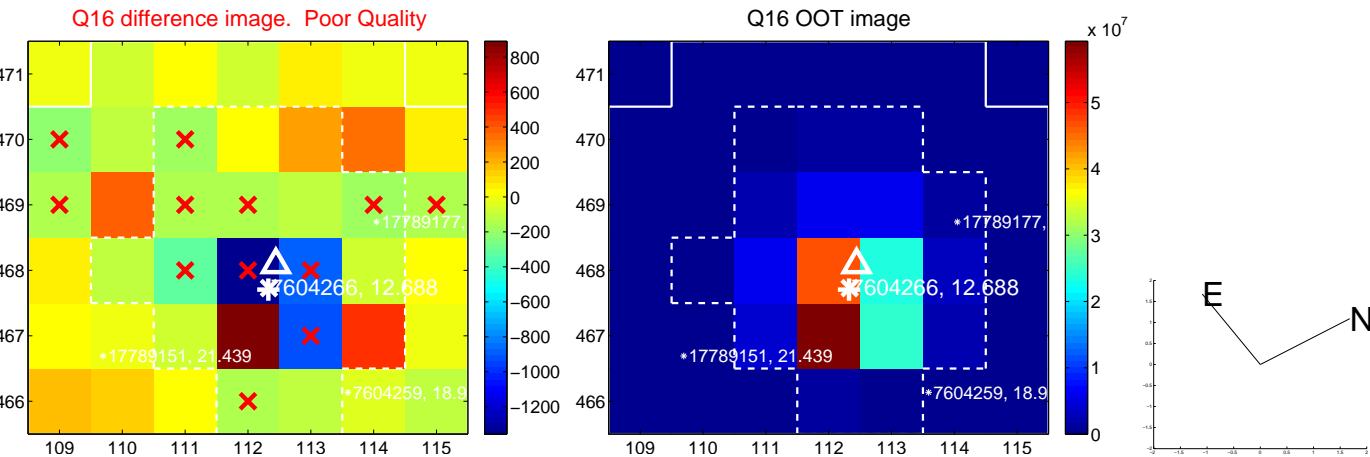
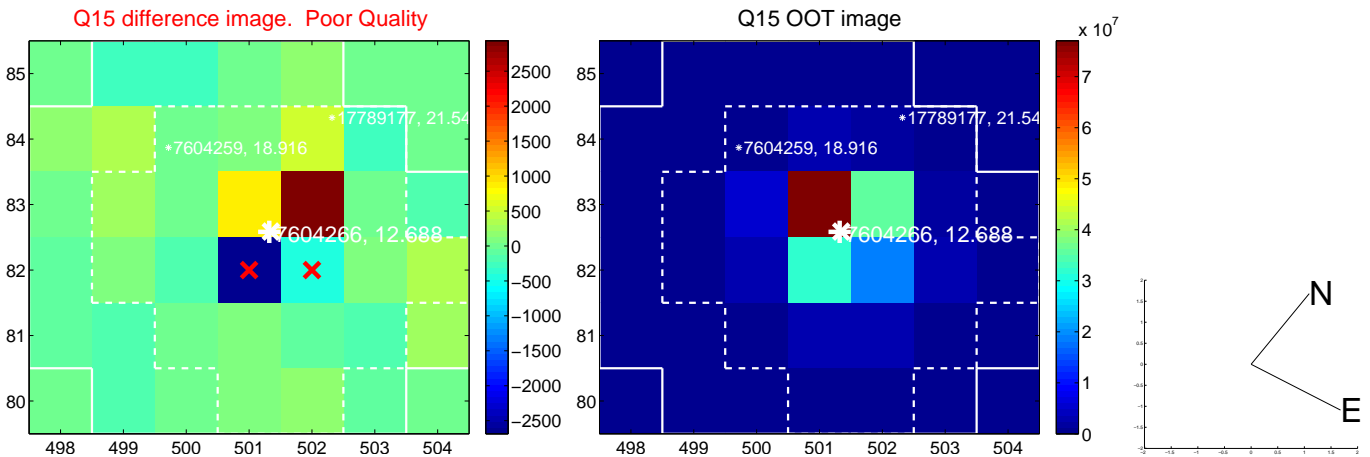
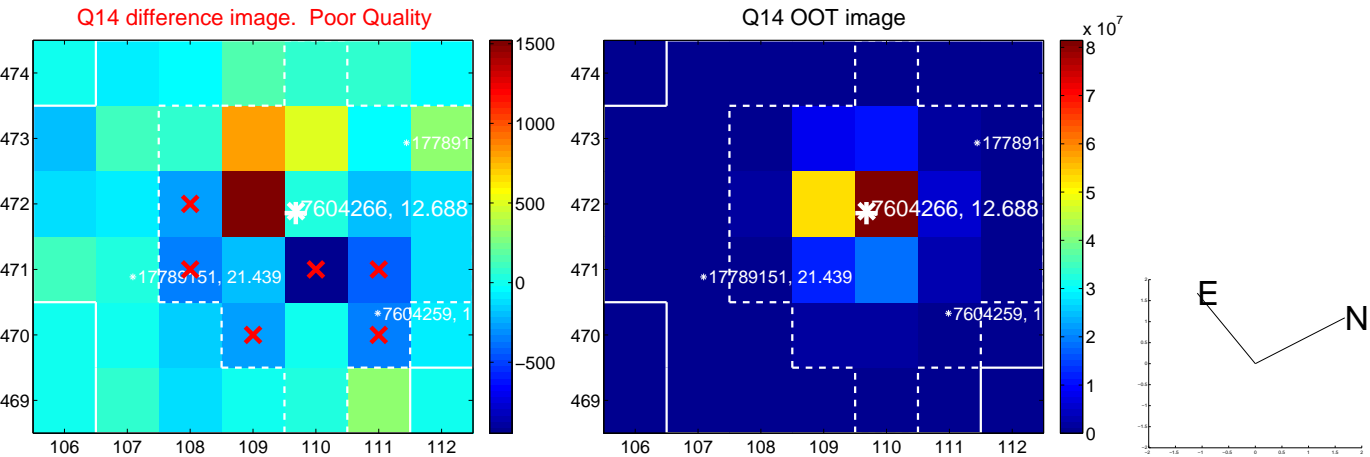
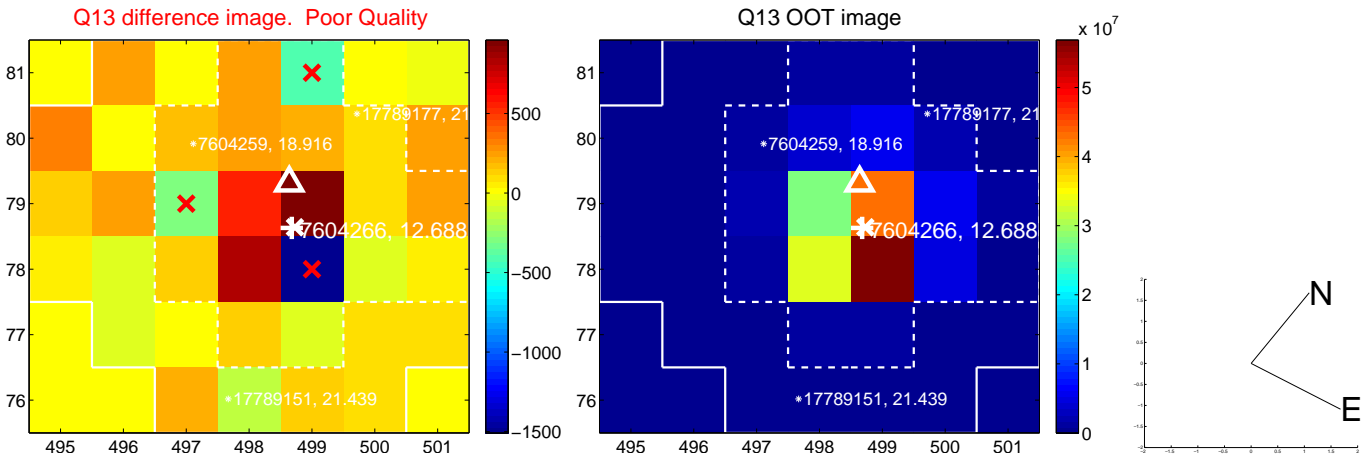
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



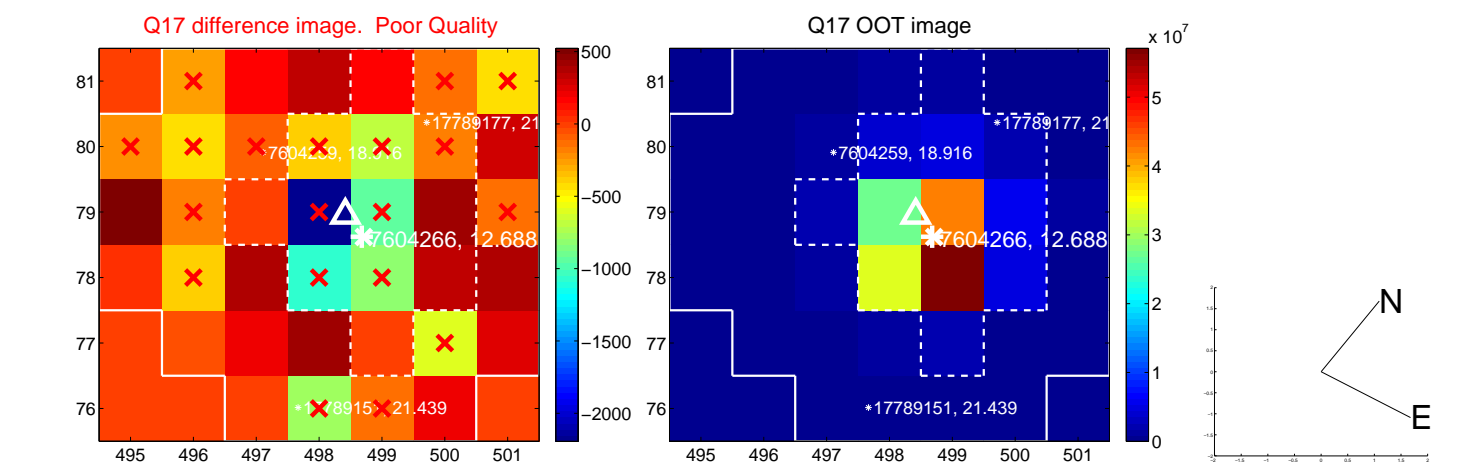
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



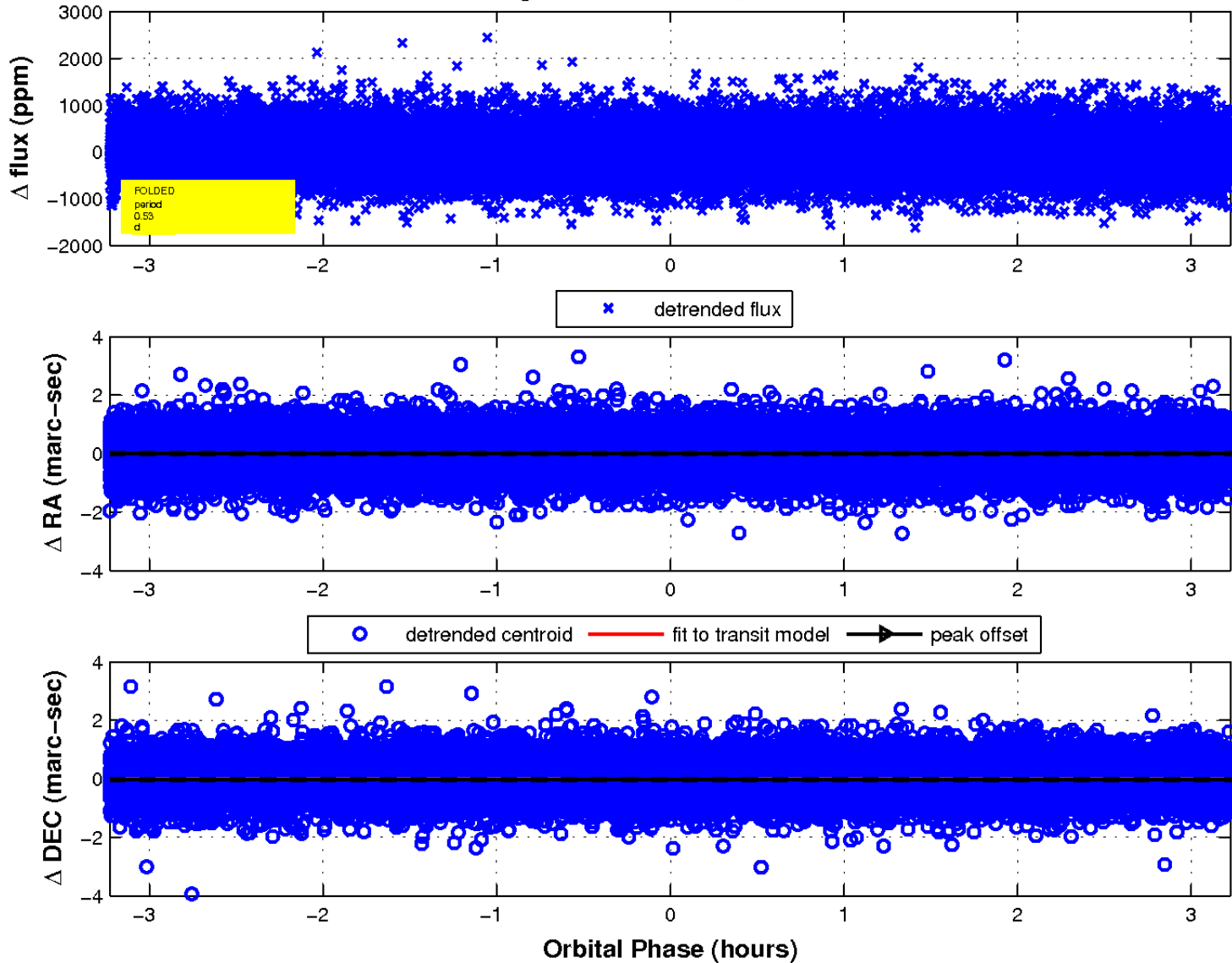
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

