

KIC 006543192

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}) |
|--------------|----------|---------|---------------|--------------|-------------|------------------|-----|-----|-----------------------------|-----------------|------------------------|------------------------|
| 006543192-01 | OBS | 5297.01 | 8.090693 | 136.788506 | 82.5 | 2.849 | 7.5 | 7.7 | 0.90 | 5374 | 1.04 | 102.70 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|------------|
| 006543192-01 | OBS | PC | 0.96 | 0 | 0 | 0 | 0 | NO_COMMENT |

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.

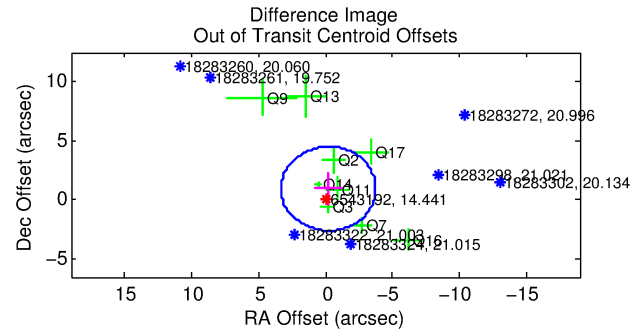
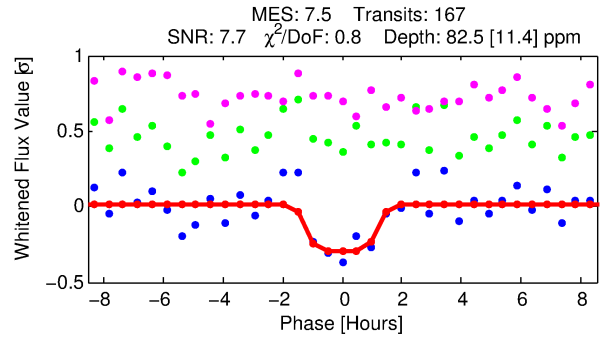
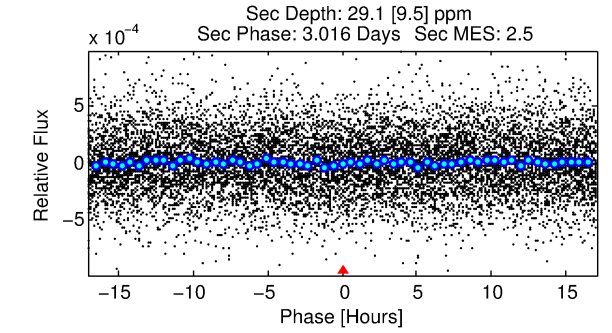
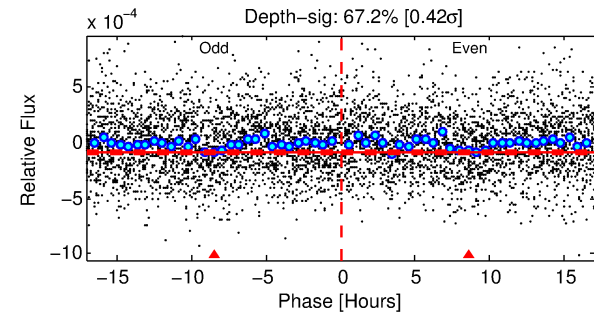
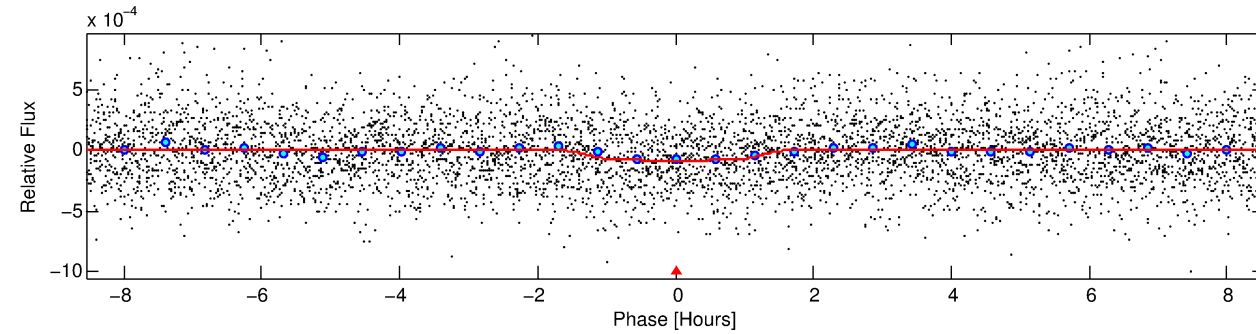
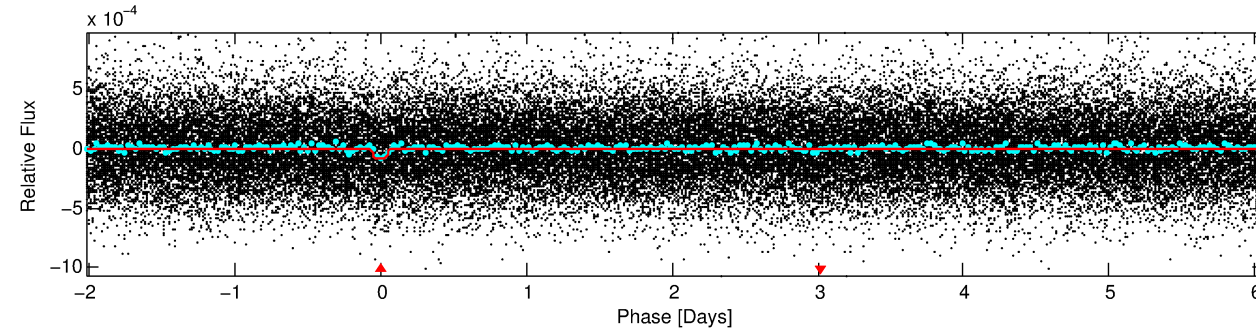
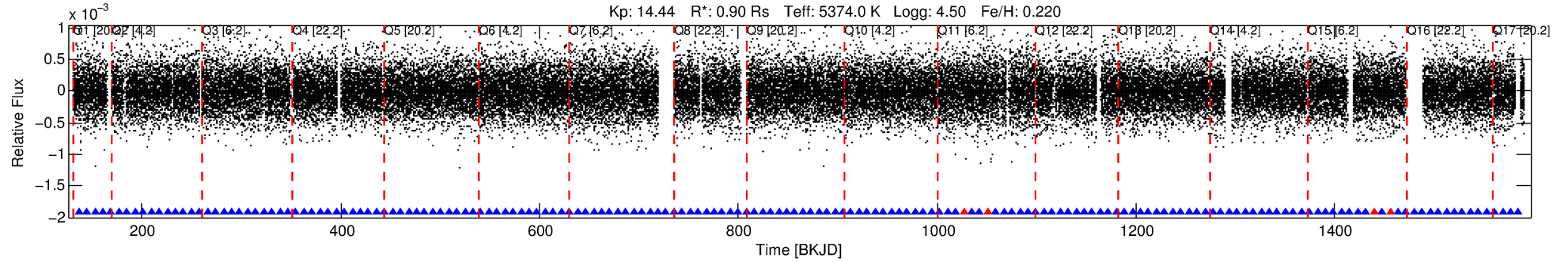
Ephemeris Match Information For 006543192-01

No Significant Match Found

DV One-Page Summary

KIC: 6543192 Candidate: 1 of 1 Period: 8.091 d

KOI: K05297.01 Corr: 0.947



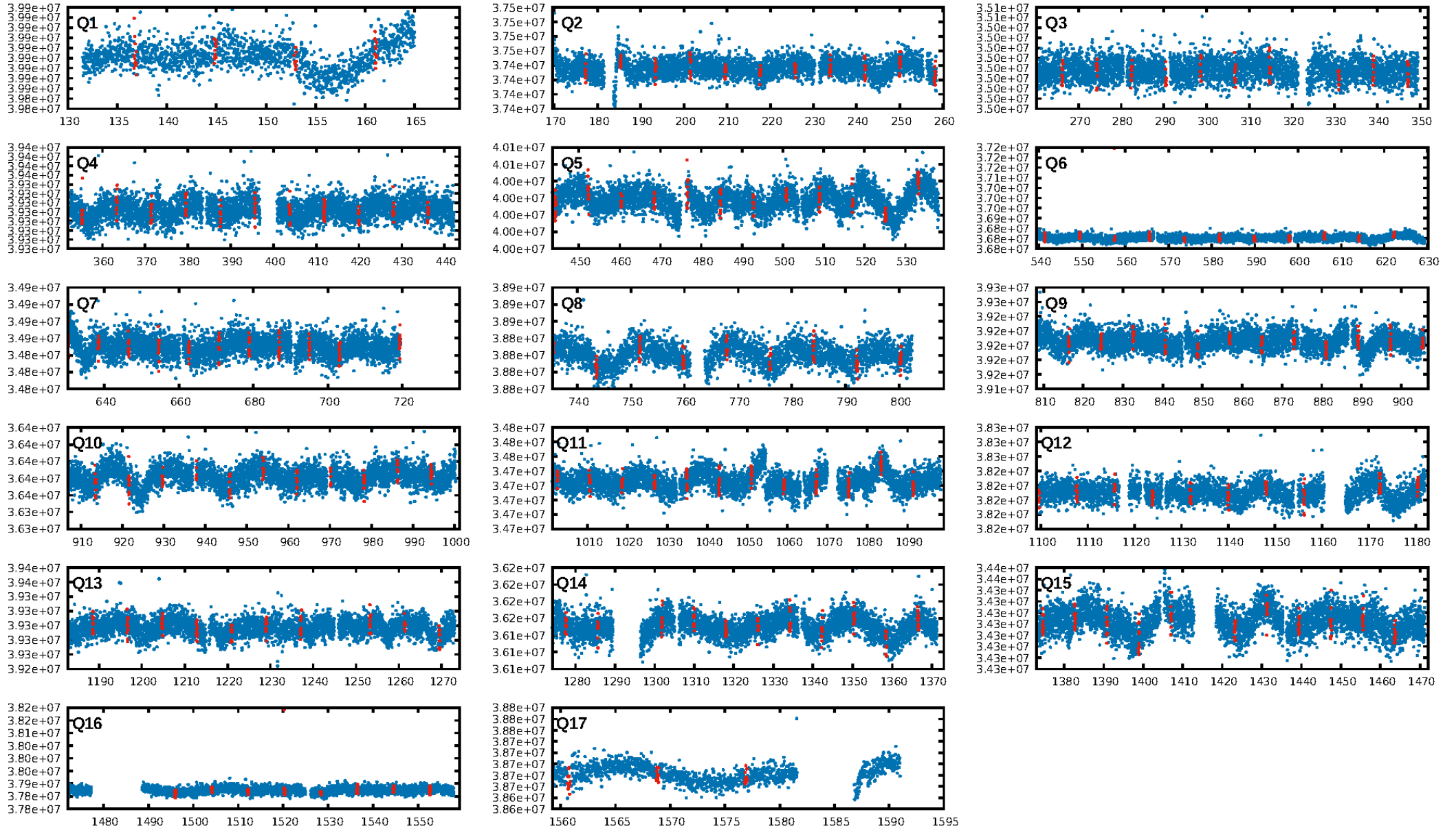
DV Fit Results:

Period = 8.09069 [0.00008] d
Epoch = 136.7885 [0.0075] BKJD
Rp/R* = 0.0105 [0.0072]
a/R* = 8.33 [25.72]
b = 0.94 [0.43]
Seff = 102.70 [17.29]
Teq = 812 [34] K
Rp = 1.04 [0.71] Re
a = 0.0769 [0.0076] AU
Ag = 88.24 [124.42] [0.70σ]
Teffp = 3847 [1349] K [2.25σ]

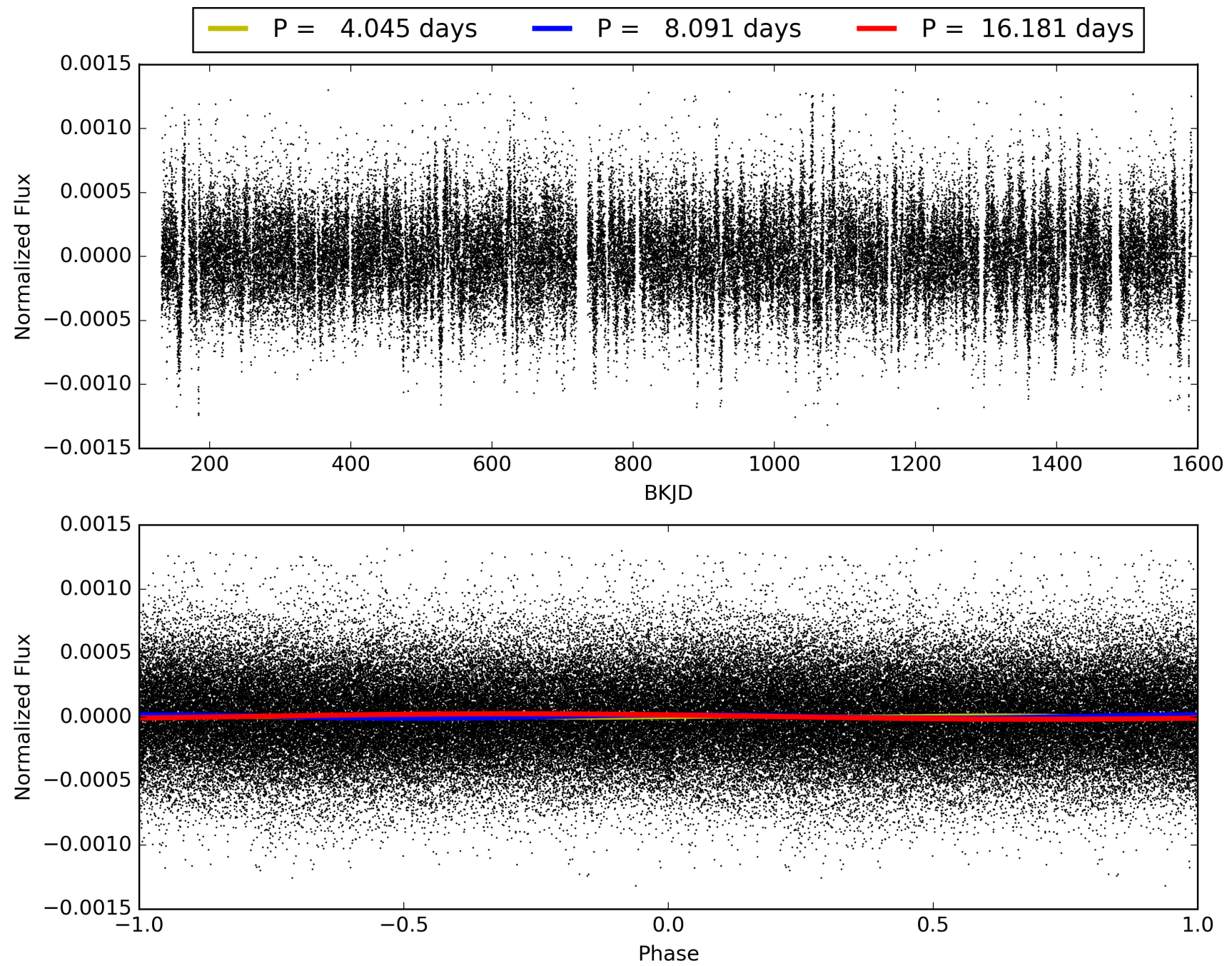
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.53e-14
RollingBand-fgt: 0.97 [156/160]
GhostDiagnostic-chr: 0.9359
Centroid-sig: 0.2%
Centroid-so: 3.246 arcsec [2.04σ]
OotOffset-rm: 0.992 arcsec [0.84σ]
KicOffset-rm: 0.981 arcsec [0.87σ]
OotOffset-st: 2/3/1/3 [9]
KicOffset-st: 2/3/1/3 [9]
DiffImageQuality-fgm: 0.44 [4/9]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 006543192-01, PDC Light Curves

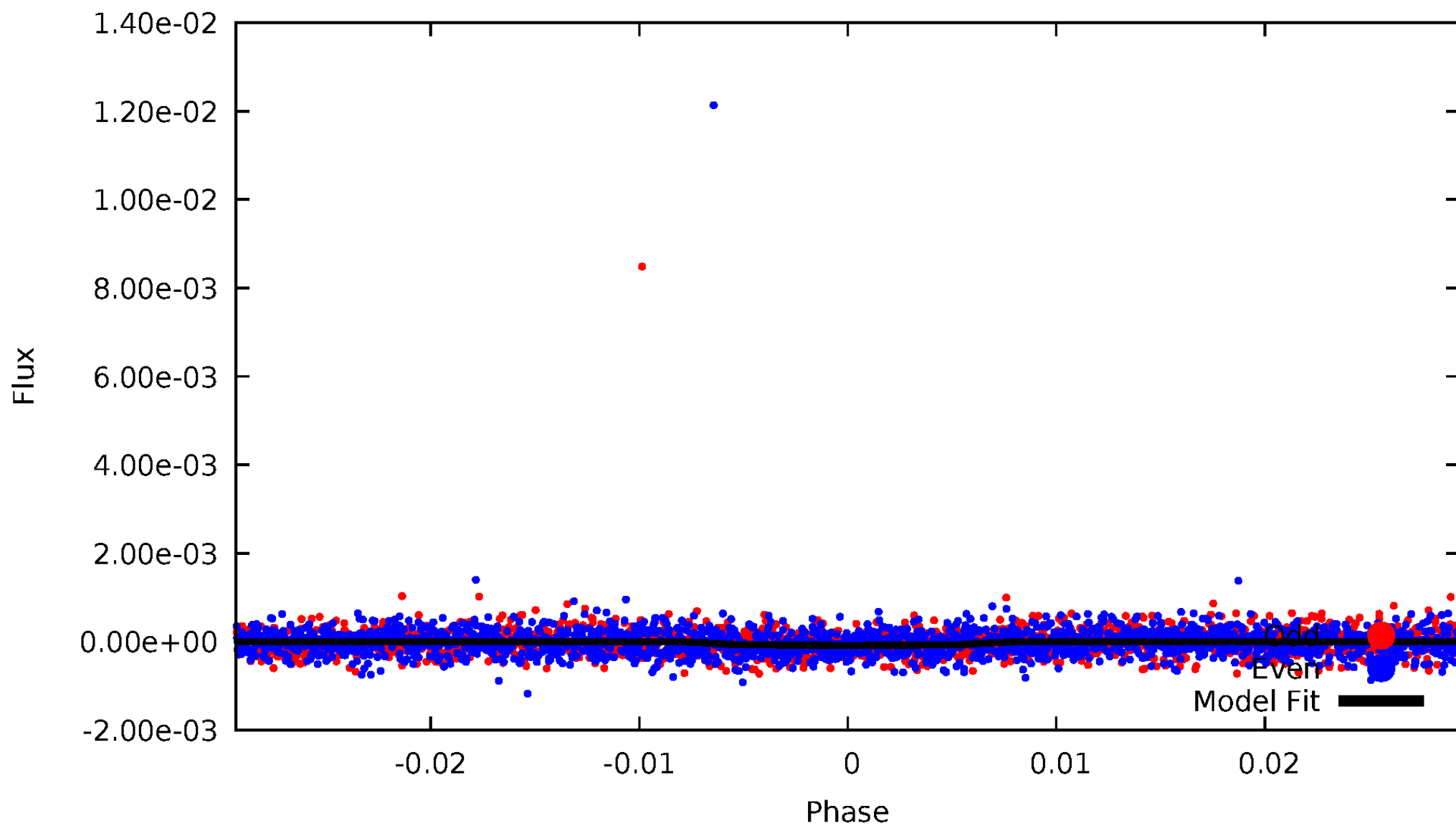


TCE 006543192-01



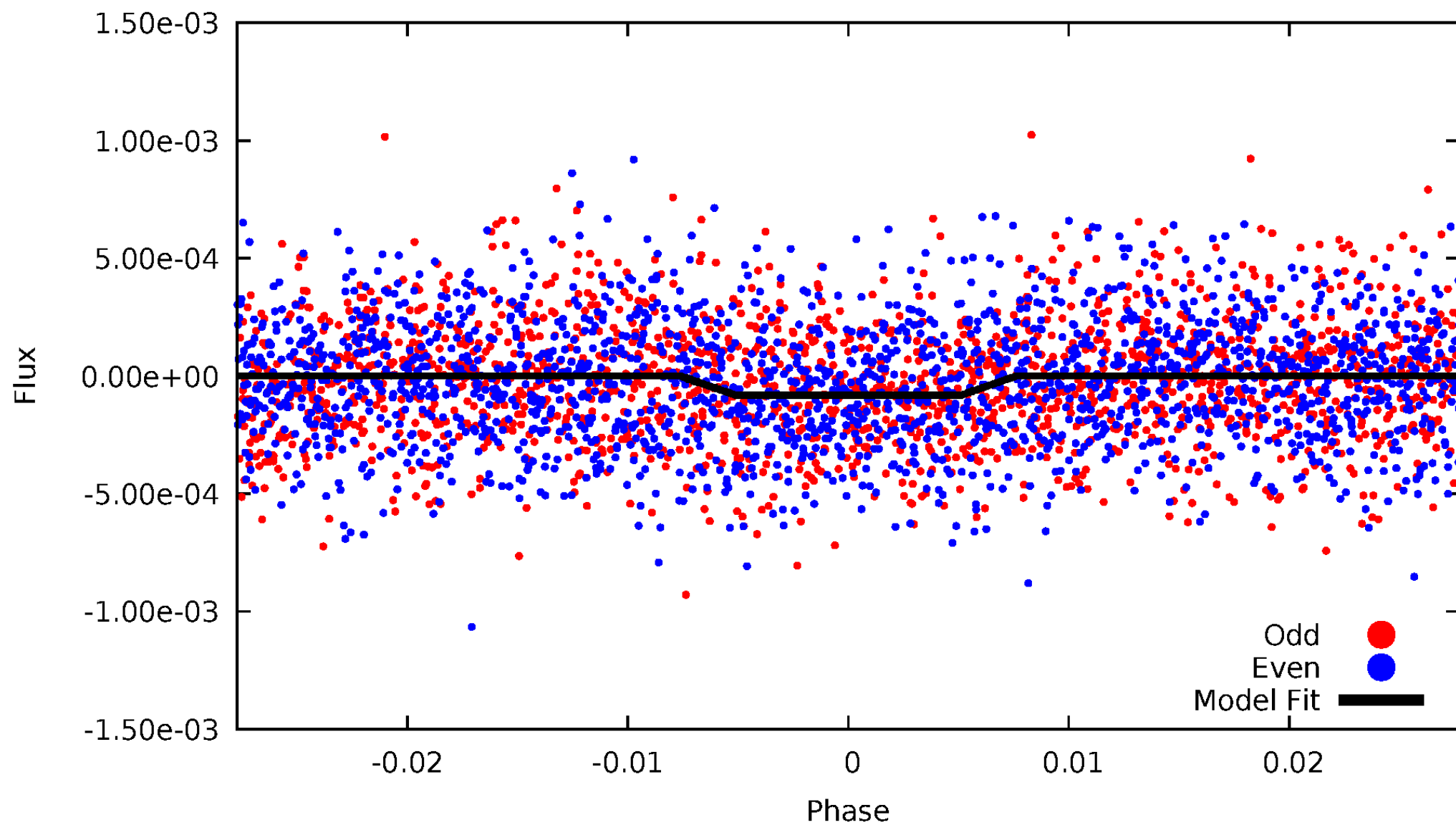
DV Odd/Even

TCE 006543192-01

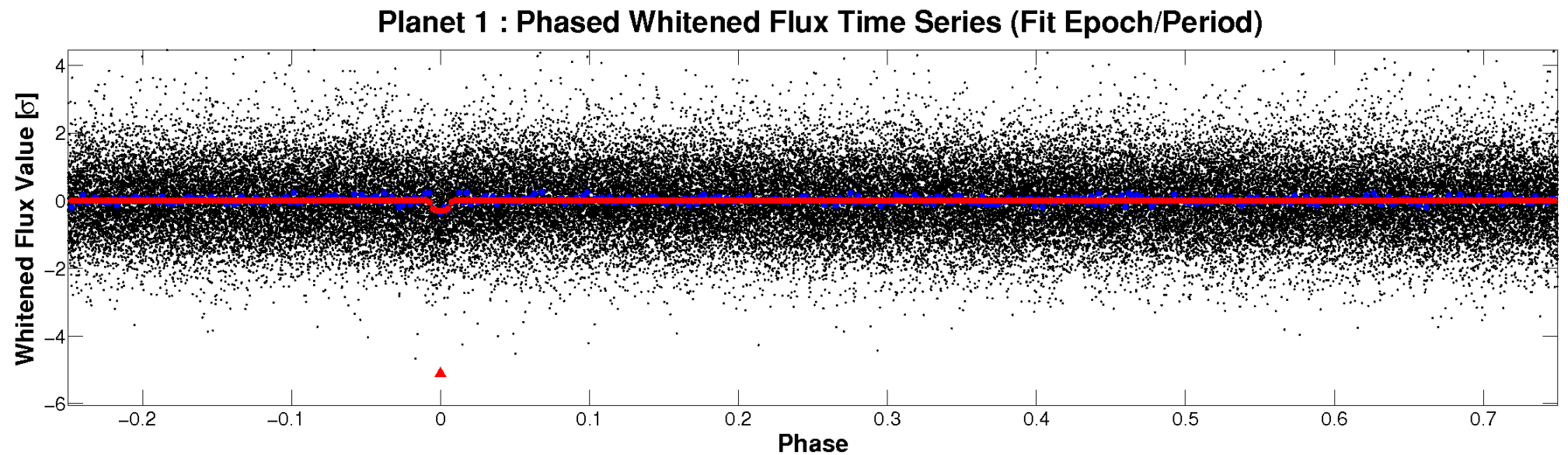
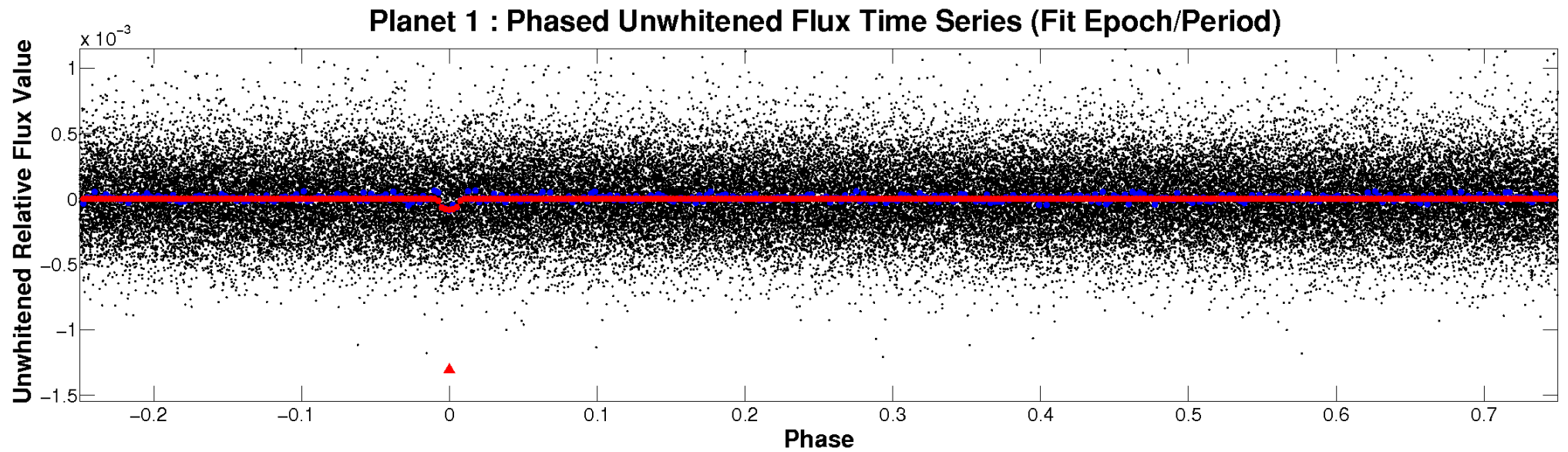


ALT Odd/Even

TCE 006543192-01

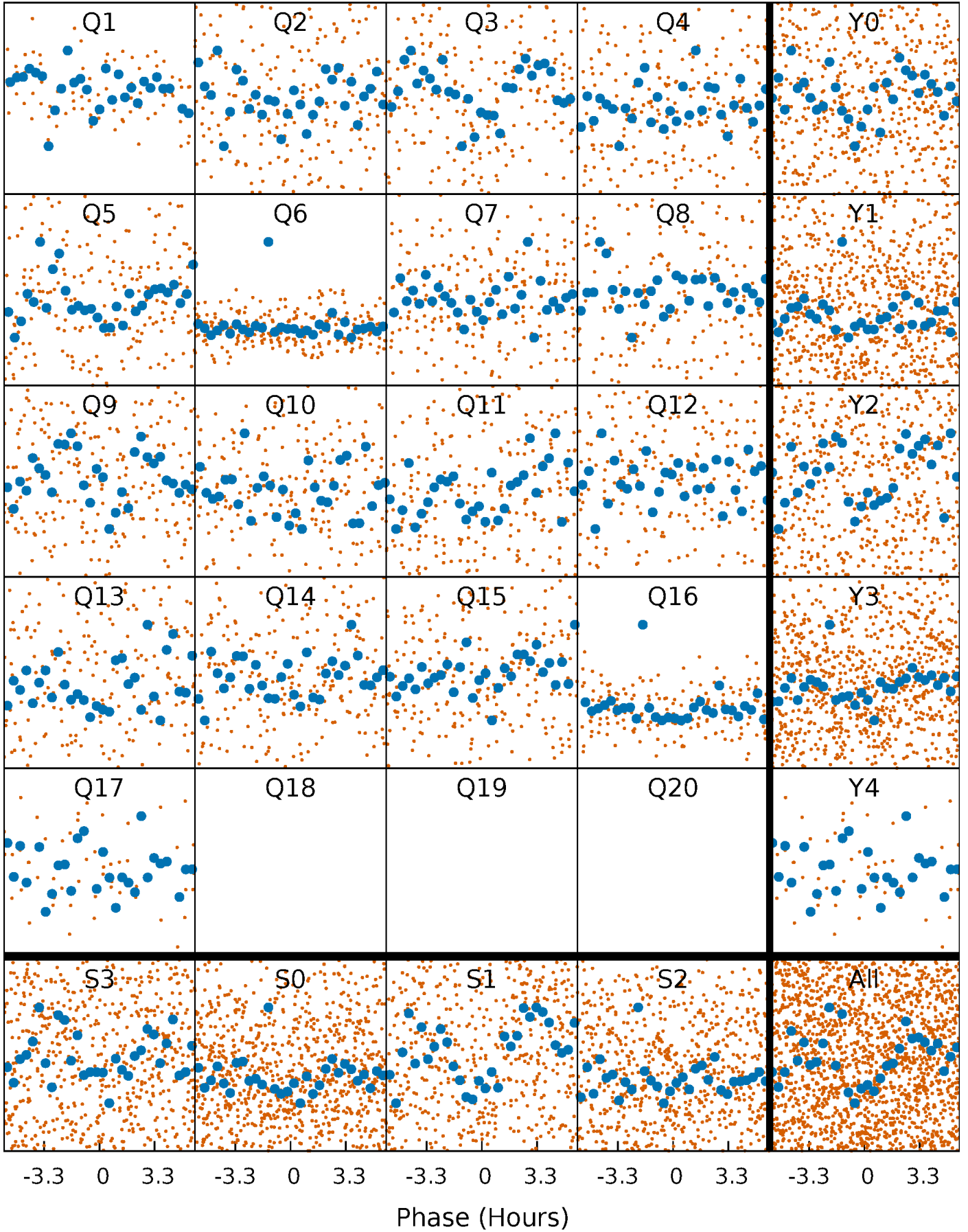


Non-Whitened Vs. Whitened Light Curve



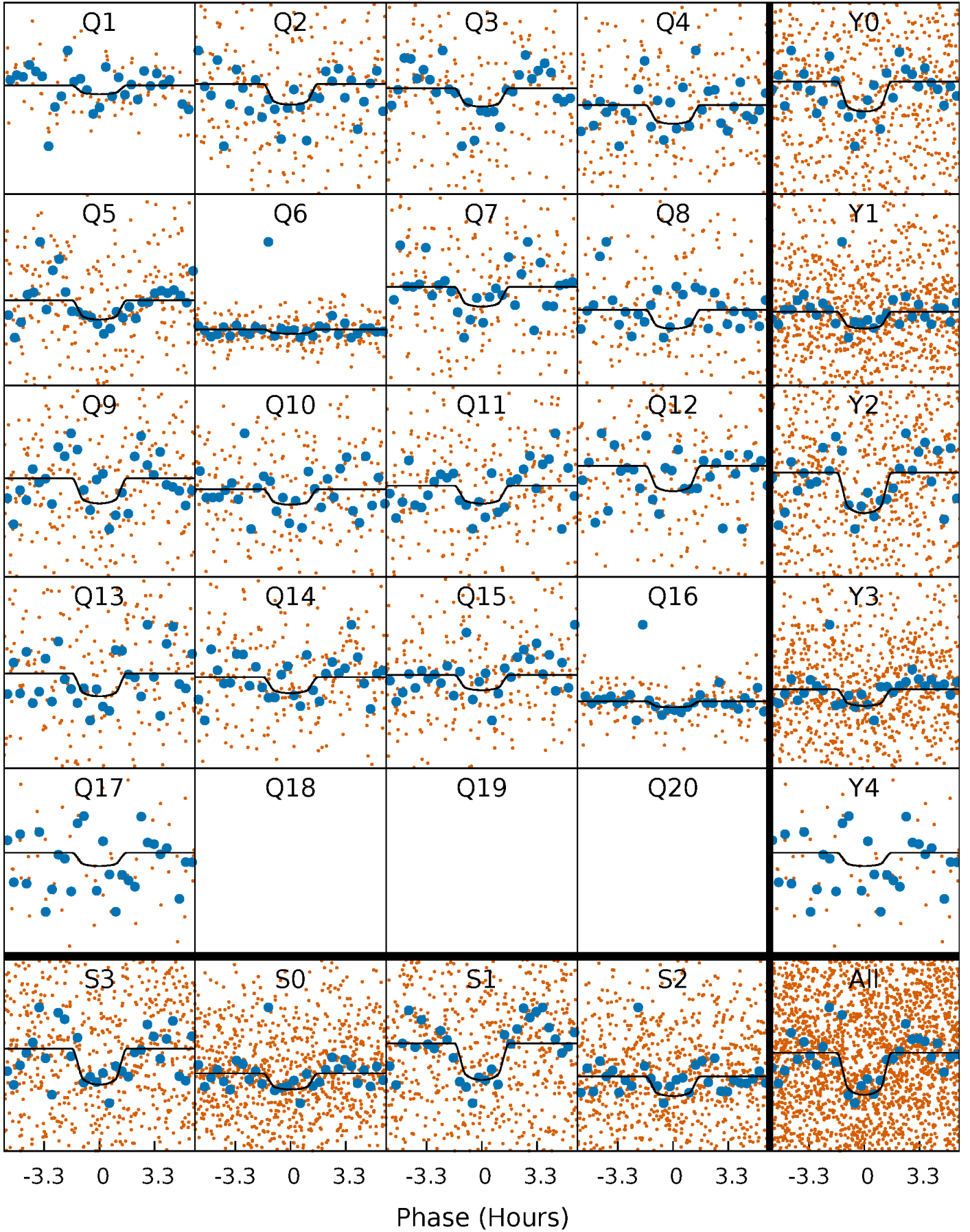
PDC Quarter-Phased Transit Curves

TCE 006543192-01 P= 8.090693 Days $T_0=136.788506$ (BKJD)



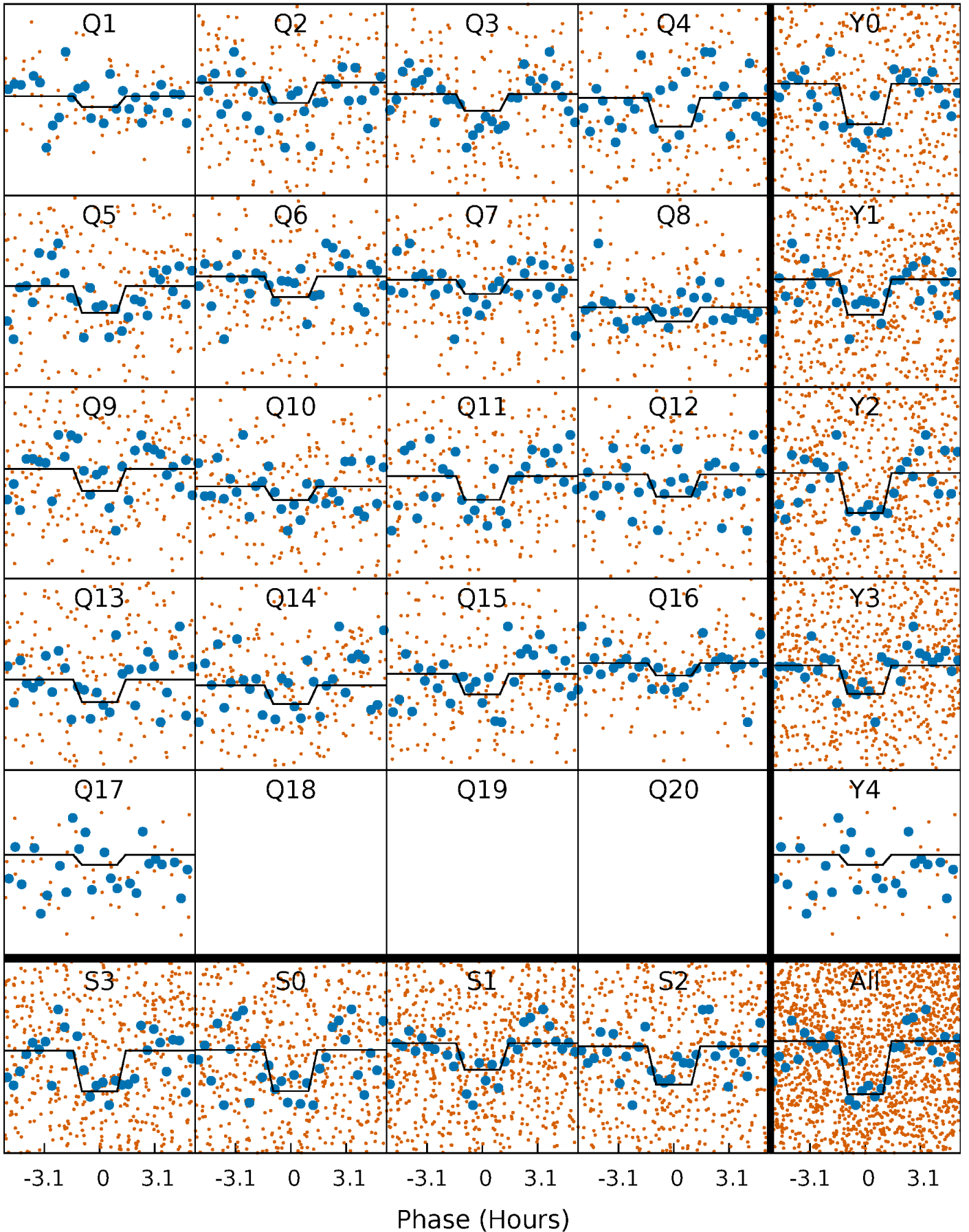
DV Quarter-Phased Transit Curves

TCE 006543192-01 P= 8.090693 Days $T_0=136.788506$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

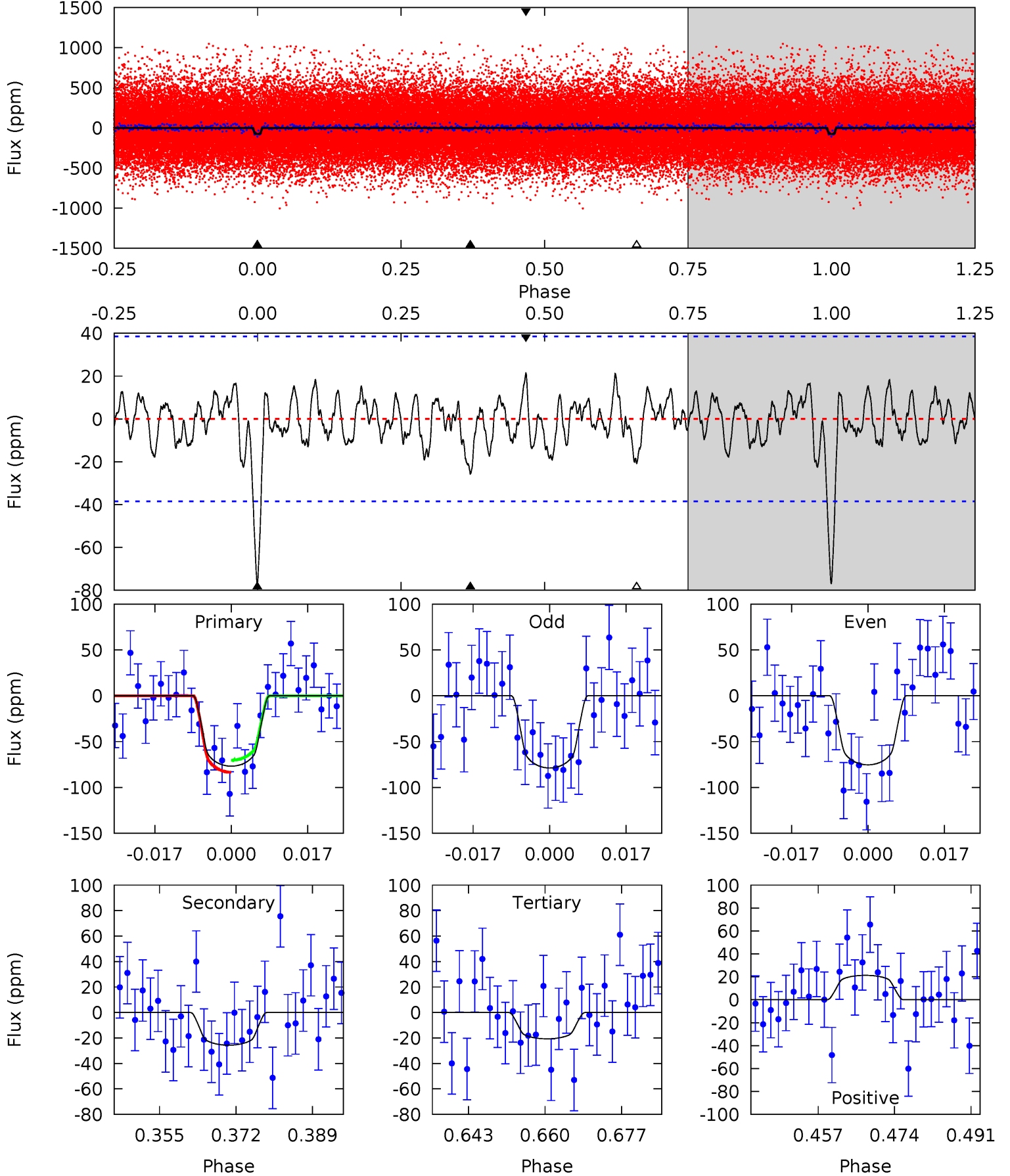
TCE 006543192-01 P= 8.090750 Days $T_0=136.781211$ (BKJD)



DV Model-Shift Uniqueness Test

006543192-01, P = 8.090693 Days, E = 128.697813 Days

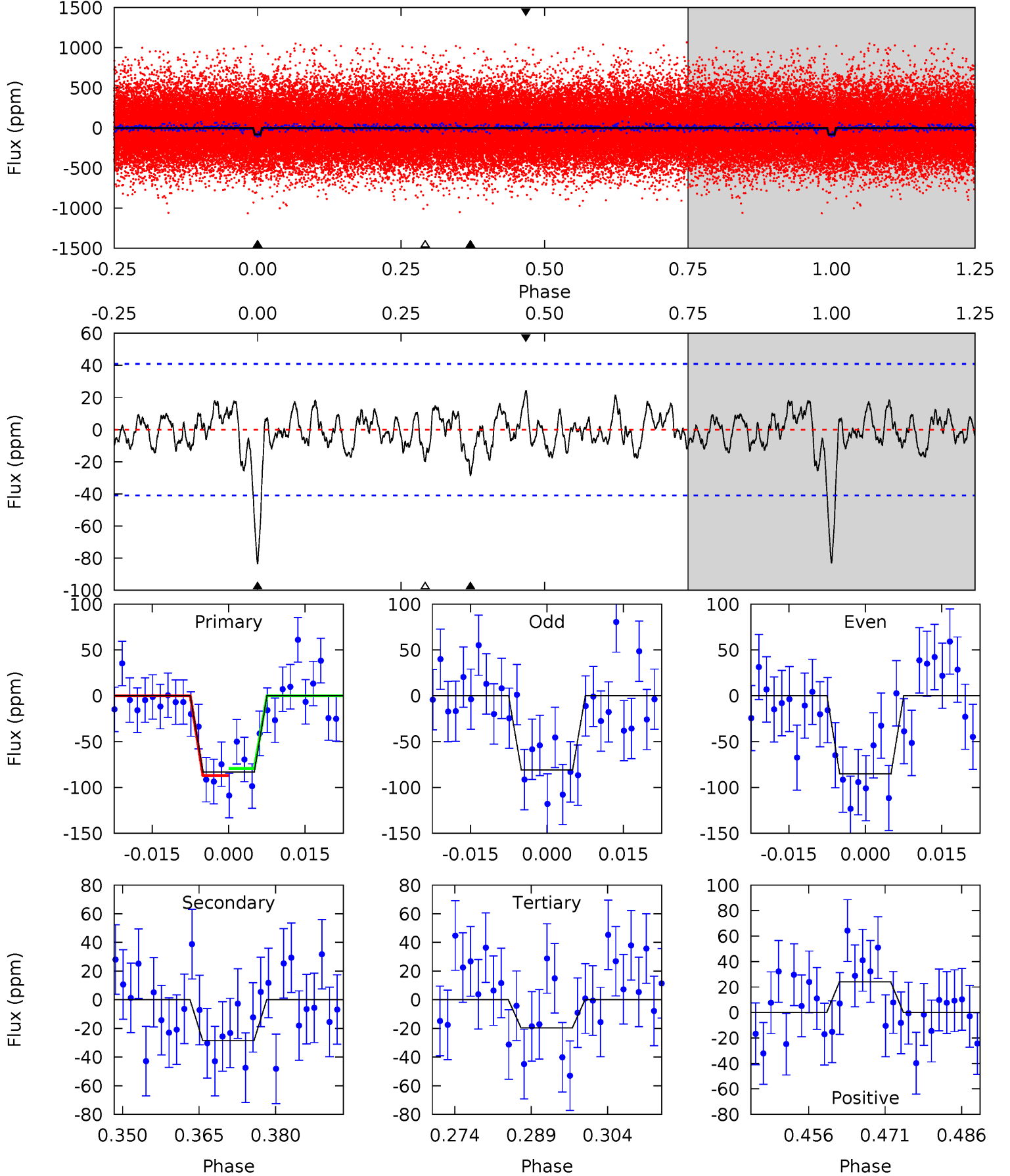
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 9.82 | 3.28 | 2.64 | 2.72 | 4.92 | 2.39 | 1.10 | 7.18 | 7.10 | 0.64 | 0.55 | 0.22 | 0.85 | 0.22 | 0.84 |



Alt Model-Shift Uniqueness Test

006543192-01, P = 8.090750 Days, E = 128.690461 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 | 3.44 | 2.37 | 2.90 | 4.95 | 2.43 | 1.07 | 7.68 | 7.15 | 1.07 | 0.54 | 0.26 | 0.96 | 0.22 | 0.47 |



Stellar Parameters For KIC 006543192

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | R (R_{\odot}) | $M(M_{\odot})$ | p_{\star} ($\text{g}\cdot\text{cm}^{-3}$) |
|--------|---------------------|---------------------------|---------------------------|---------------------------|---------------------------|---|
| | 5374^{+75}_{-85} | $4.495^{+0.049}_{-0.091}$ | $0.220^{+0.150}_{-0.150}$ | $0.902^{+0.094}_{-0.055}$ | $0.928^{+0.043}_{-0.048}$ | $1.779^{+0.308}_{-0.456}$ |
| | +1%/-2% | +1%/-2% | +68%/-68% | +10%/-6% | +5%/-5% | +17%/-26% |
| Source | SPE90 | SPE90 | SPE90 | DSEP | | |

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

Secondary Eclipse Parameters for KIC 006543192-01 / KOI 5297.01

| Detrend | Depth (ppm) | R_p (R_{\oplus}) | T_{max} (K) | T_{obs} (K) | A_{obs} |
|---------|-------------|------------------------|----------------------|-----------------------|-------------------|
| DV | -26 ± 8 | $1.11^{+0.70}_{-0.65}$ | 1138^{+35}_{-29} | 3916^{+1495}_{-603} | 68^{+276}_{-44} |
| Alt. | -28 ± 8 | $1.03^{+0.73}_{-0.65}$ | 1139^{+37}_{-29} | 4093^{+2138}_{-666} | 85^{+558}_{-57} |

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

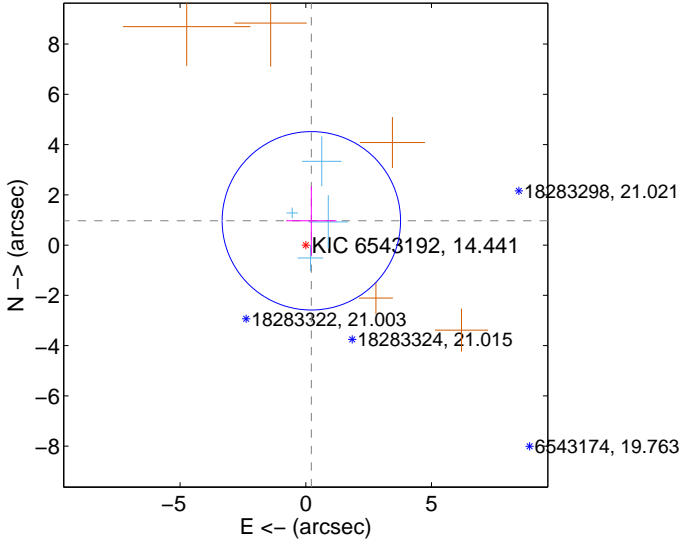
Supplemental centroid analysis for 006543192-01. Kepler magnitude: 14.44. Transit SNR 7.71

There are 4 quarters with good PRF difference image offsets

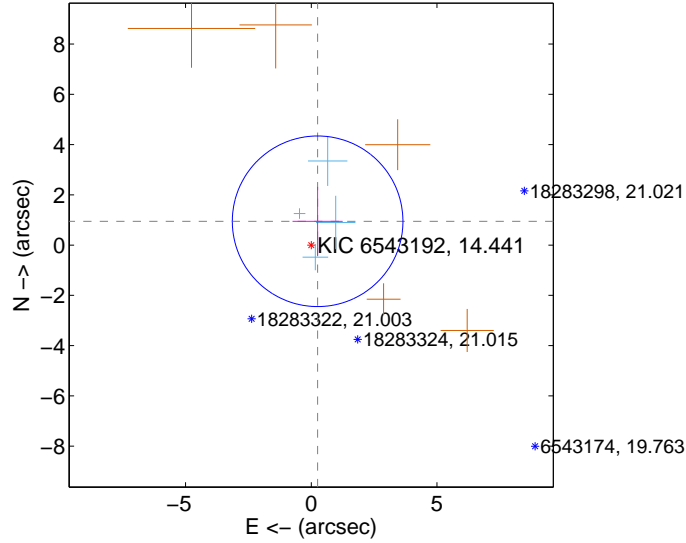
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|--------------------|-------------------|
| PRF-fit source offset from OOT | 0.992 ± 1.183 | 0.84 | -0.222 ± 0.999 | 0.966 ± 1.375 |
| PRF-fit source offset from KIC position | 0.981 ± 1.131 | 0.87 | -0.253 ± 0.997 | 0.947 ± 1.368 |
| photometric centroid source offset | 3.25 ± 1.59 | 2.04 | -0.65 ± 1.96 | 3.18 ± 1.58 |

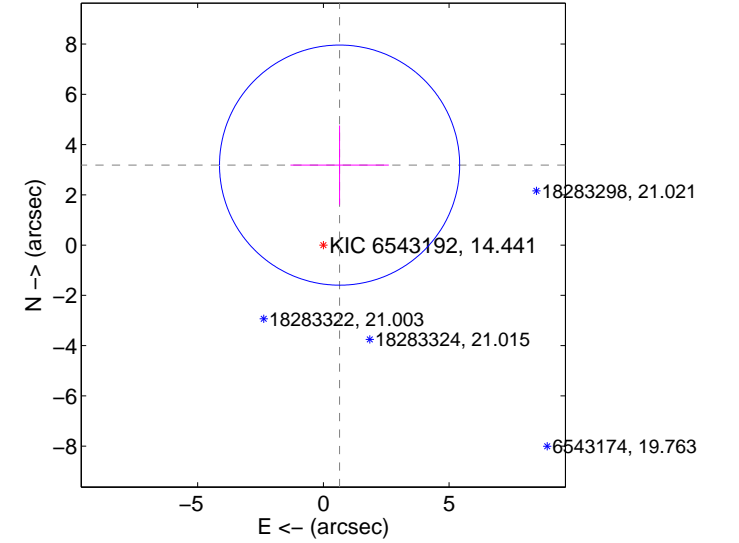
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

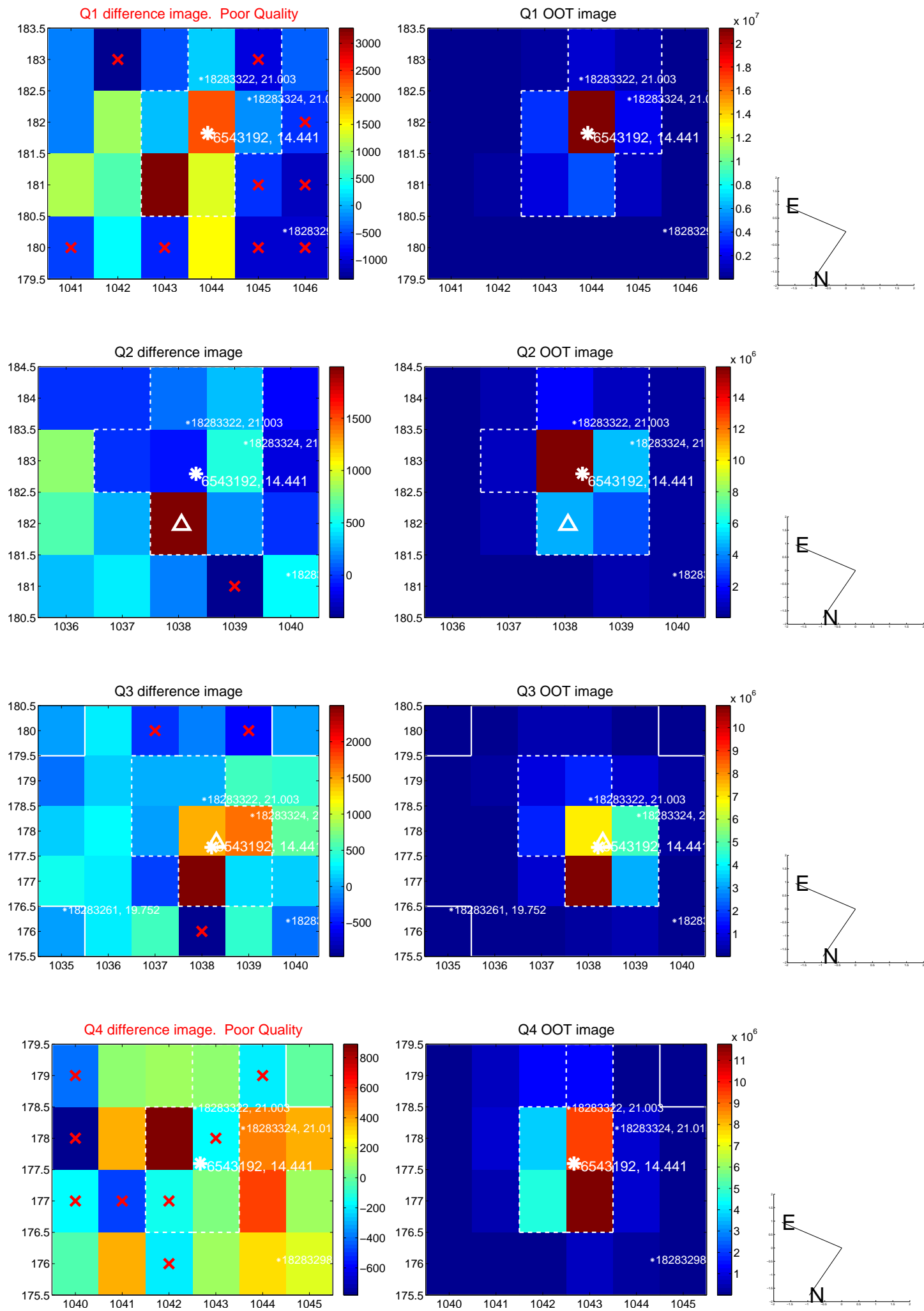


offset from photometric centroids

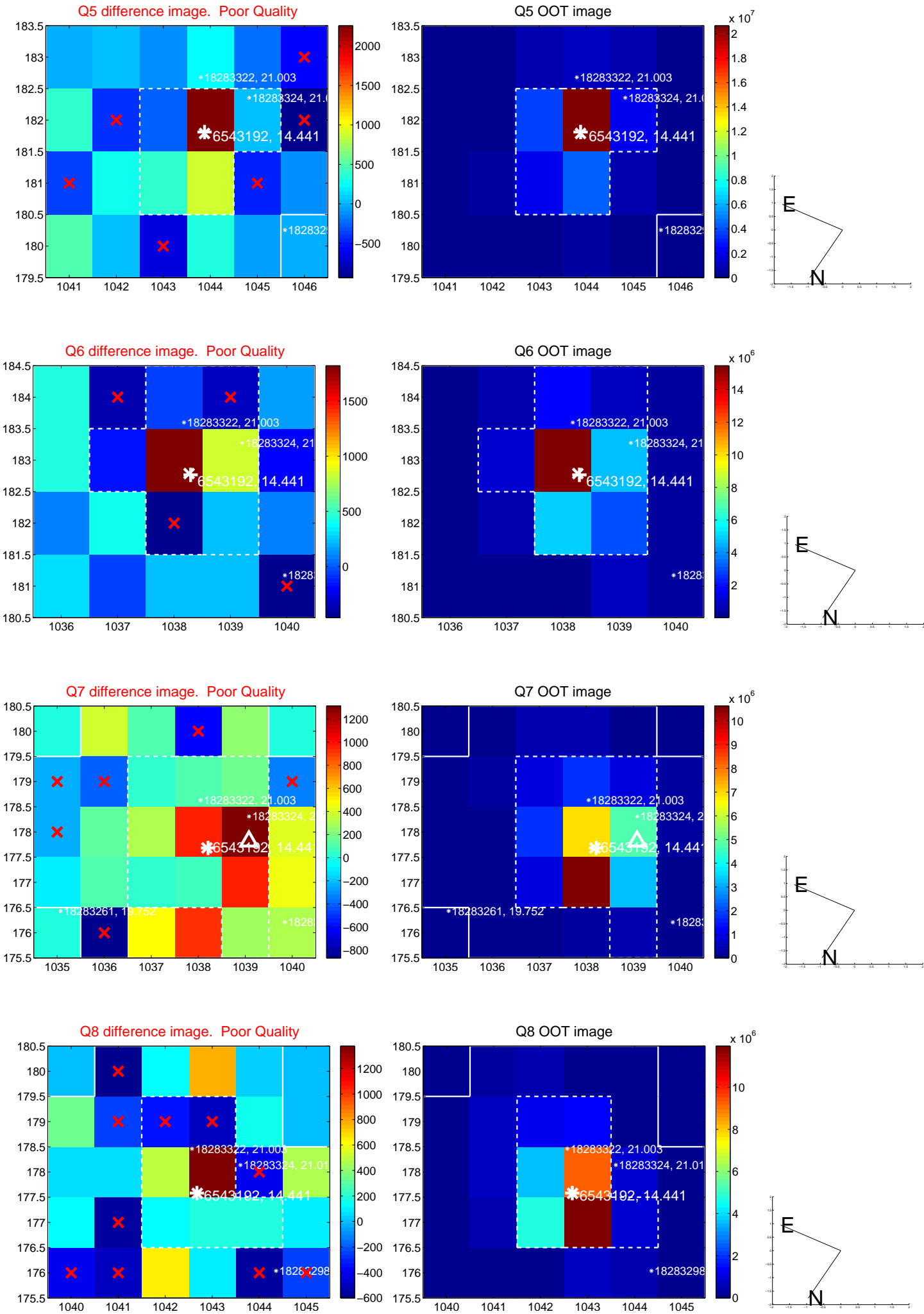


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

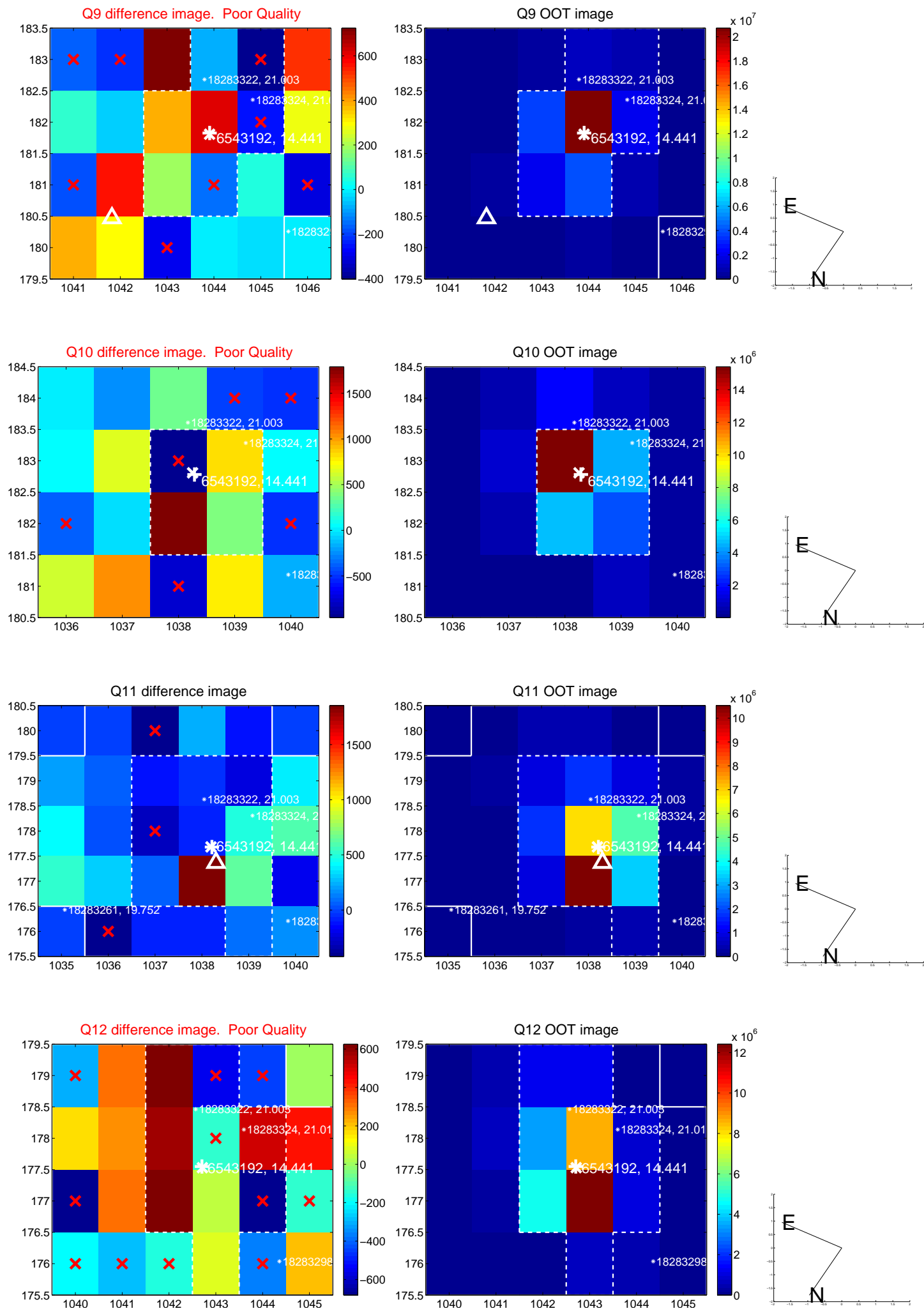
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



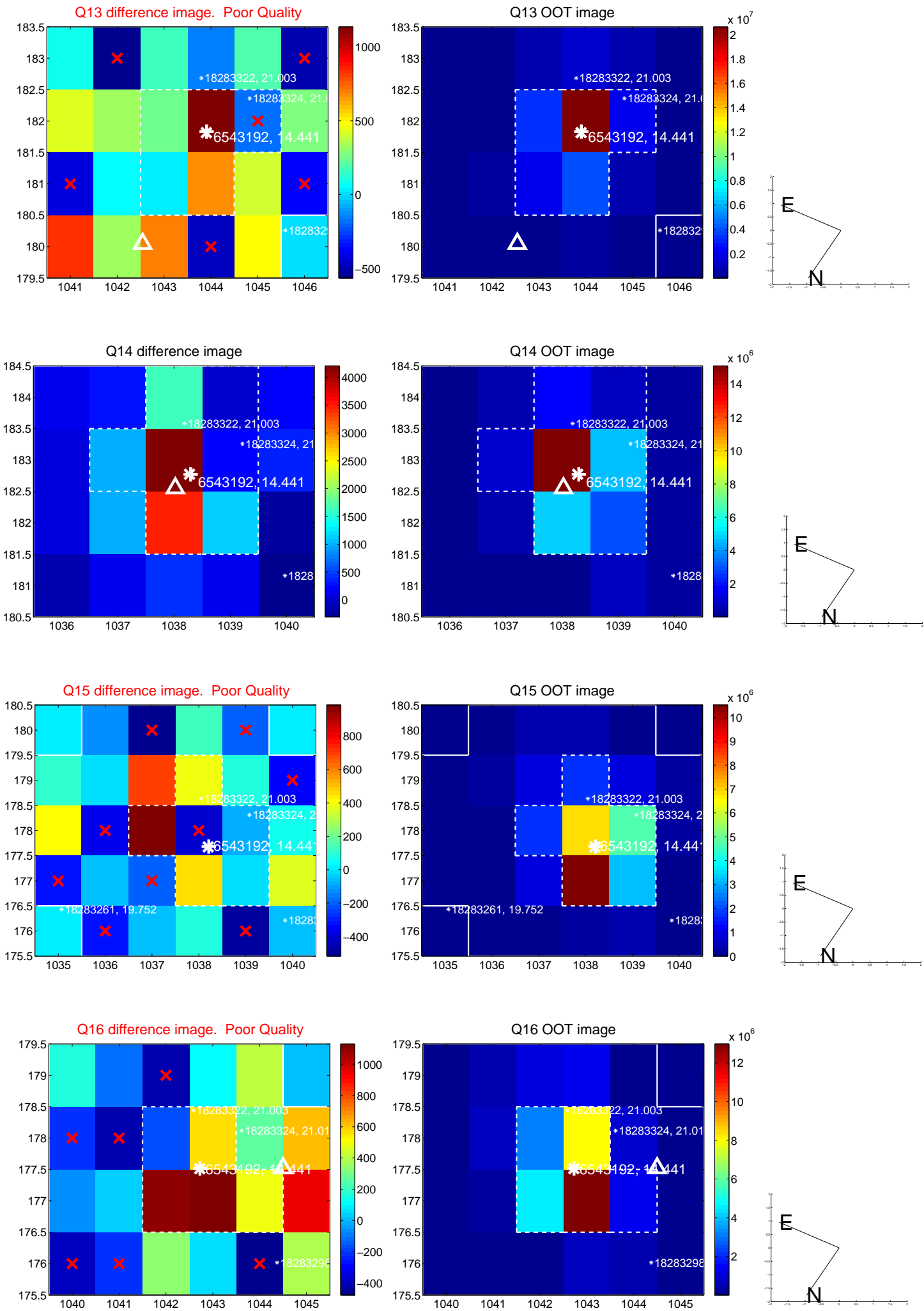
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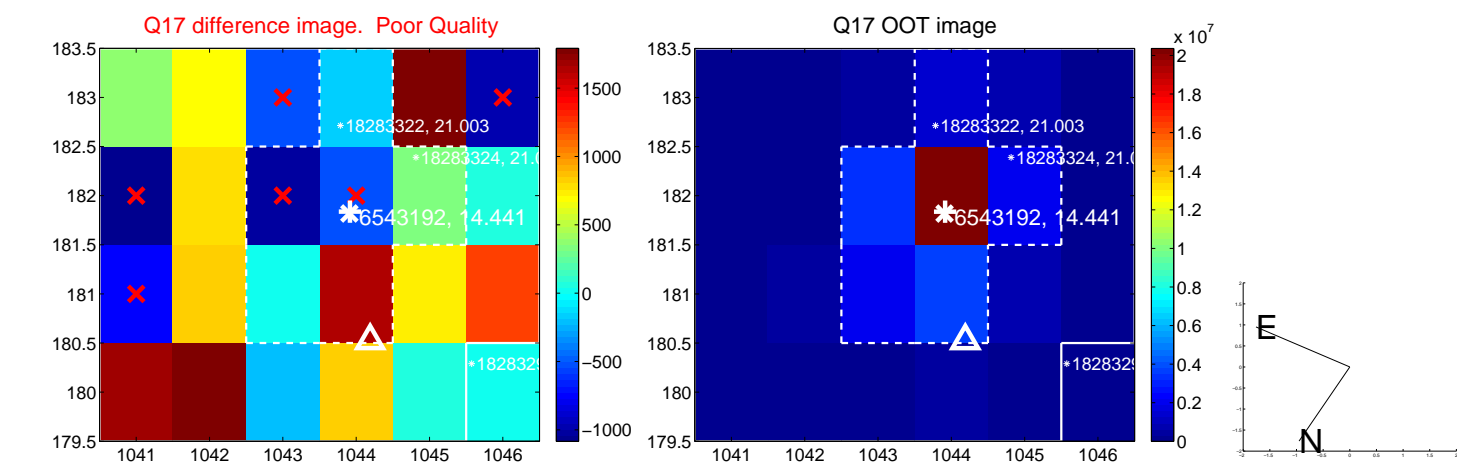
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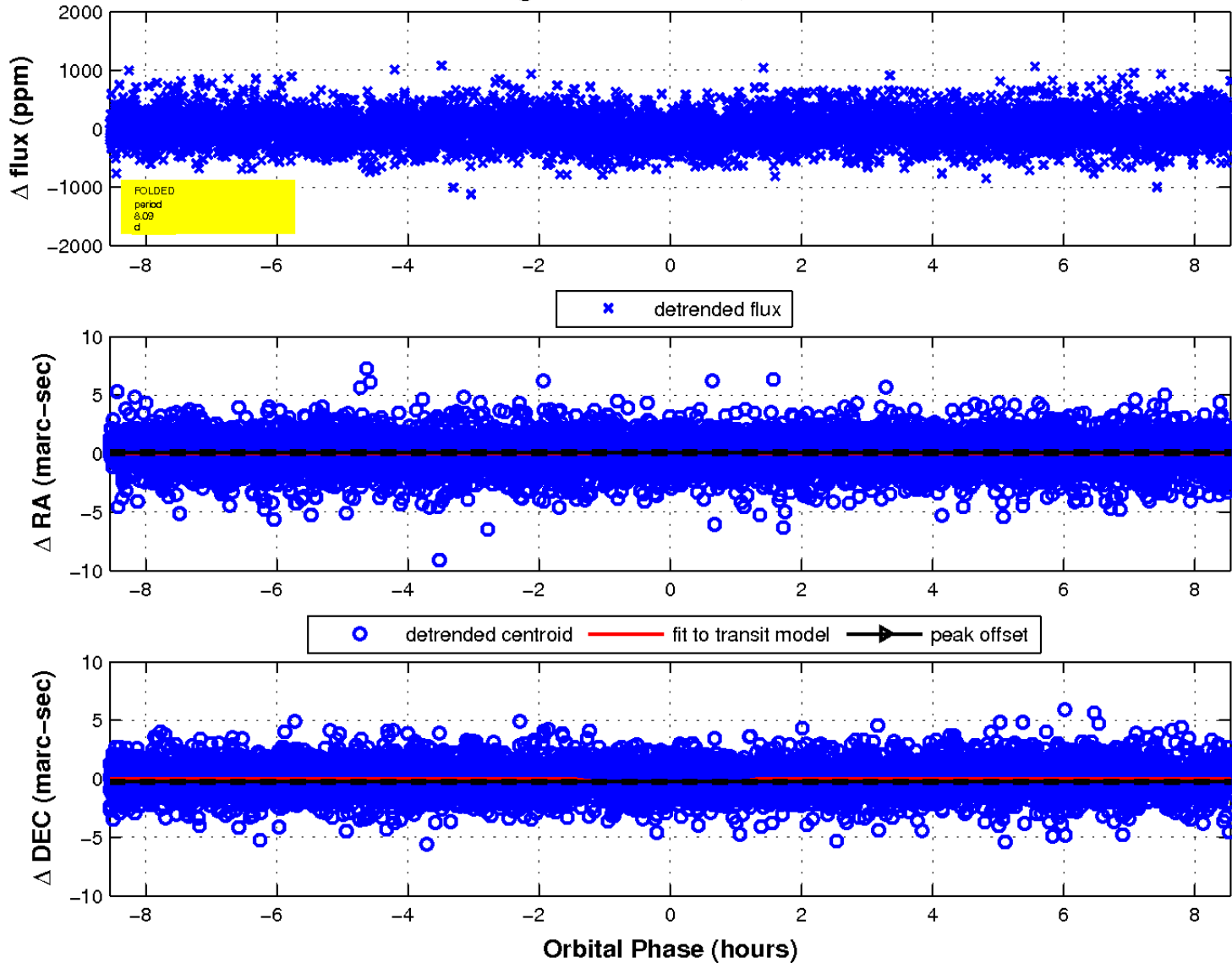
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

