

KIC 007379583

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|------|------|-----------------------------|-----------------|------------------------|------------------------|
| 007379583-01 | OBS | No | 0.863054 | 132.056218 | 84.8 | 2.241 | 10.8 | 11.6 | 0.70 | 4376 | 0.68 | 647.98 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|----------|
| 007379583-01 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | LPP_DV |

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

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

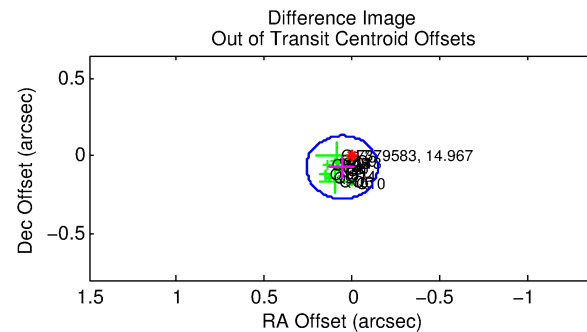
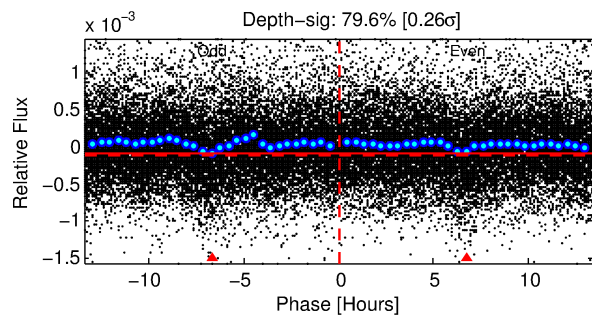
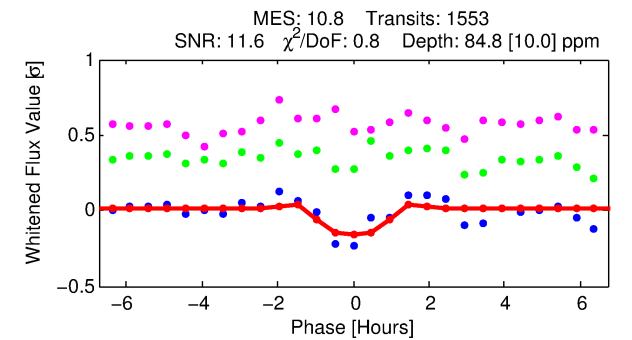
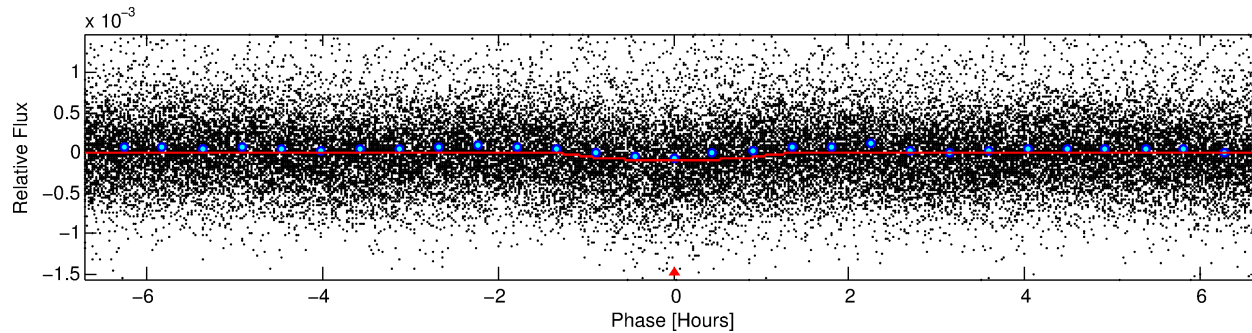
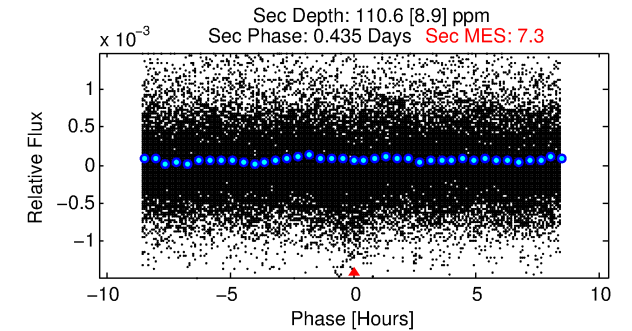
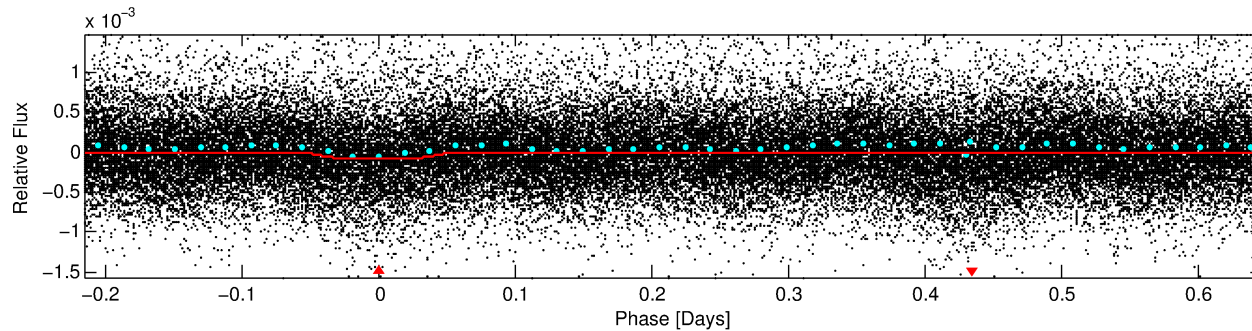
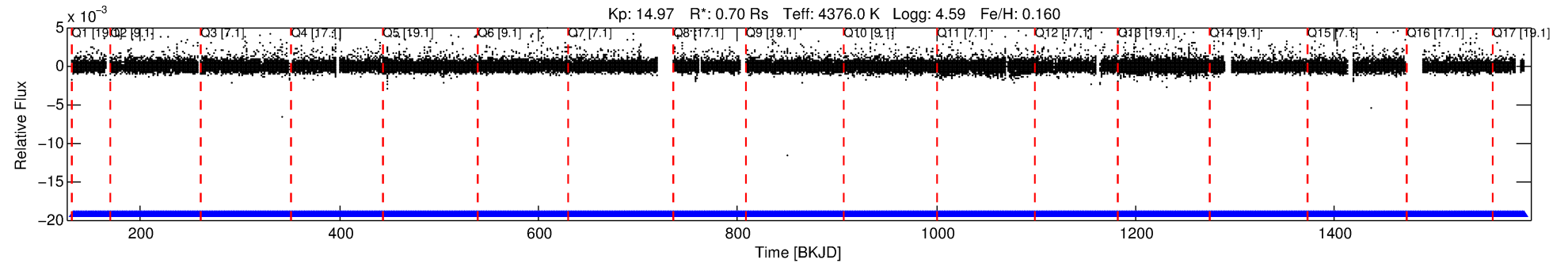
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007379583-01

No Significant Match Found

DV One-Page Summary

KIC: 7379583 Candidate: 1 of 1 Period: 0.863 d



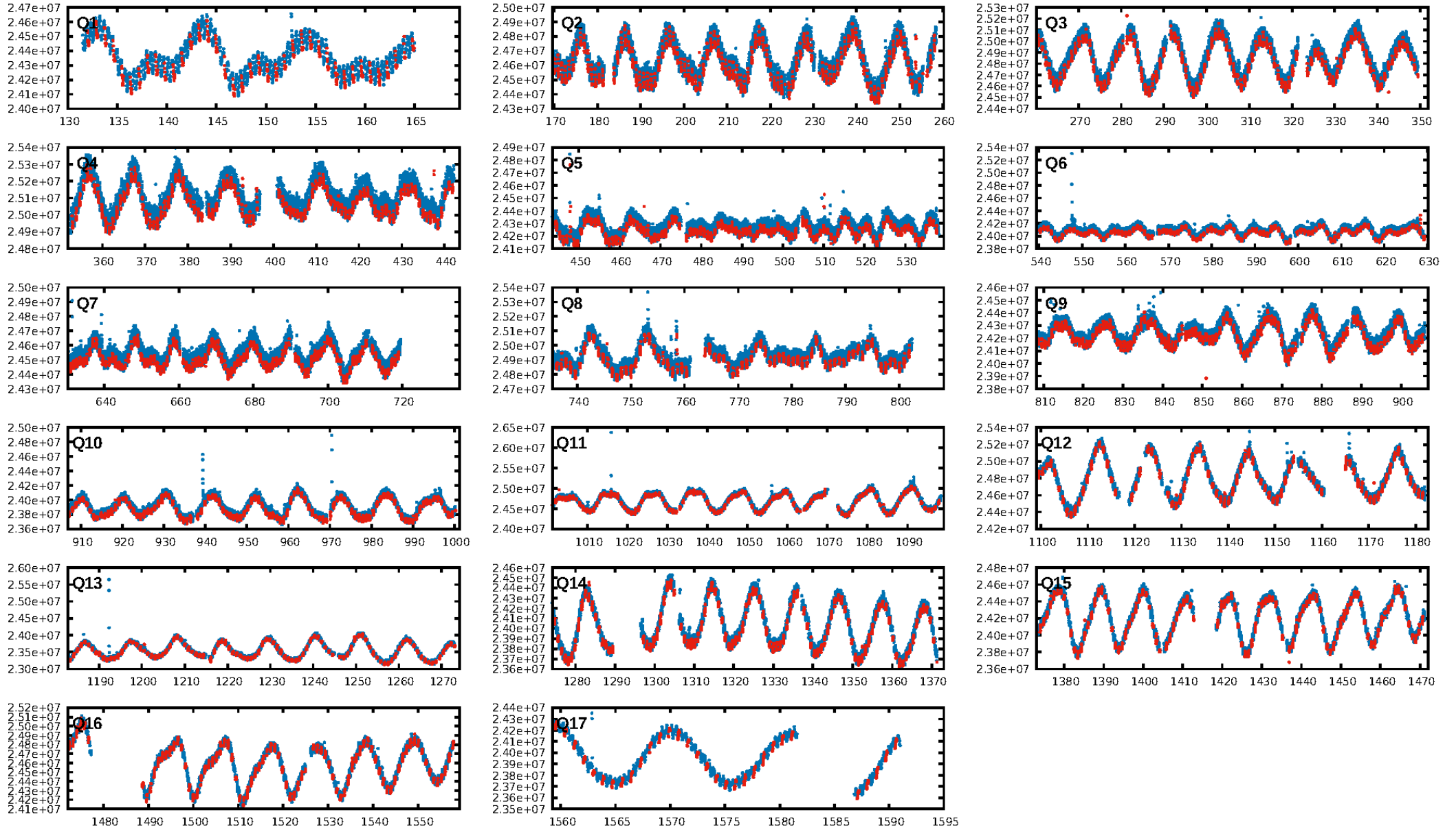
DV Fit Results:

Period = 0.86305 [0.00001] d
Epoch = 132.0562 [0.0022] BKJD
Rp/R* = 0.0089 [0.0042]
a/R* = 2.37 [2.70]
b = 0.67 [1.20]
Seff = 647.98 [100.64]
Teff = 1287 [50] K
Rp = 0.68 [0.32] Re
a = 0.0157 [0.0011] AU
Ag = 32.73 [31.01] [1.02σ]
Teffp = 4758 [1130] K [3.07σ]

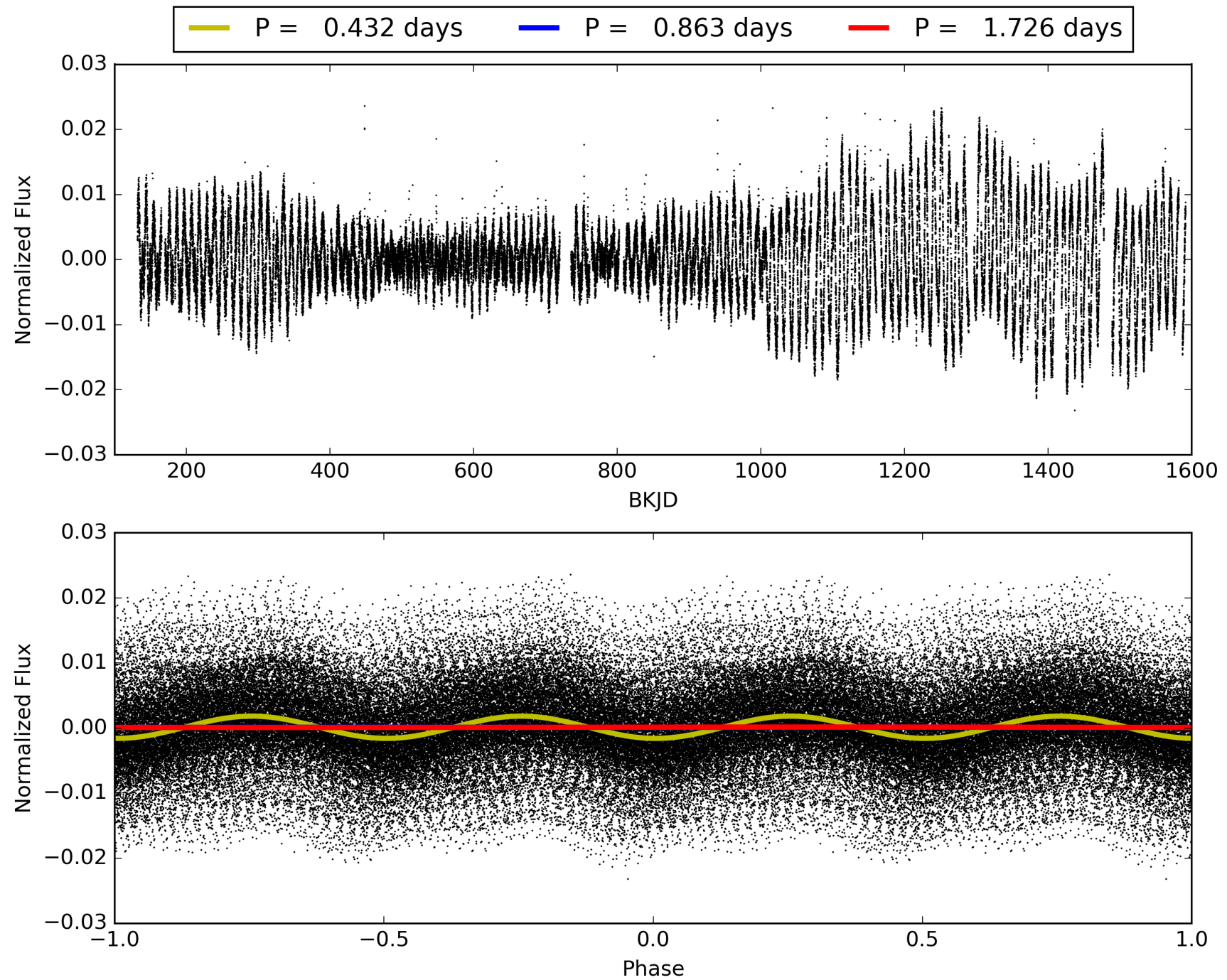
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.02e-21
RollingBand-fgt: 1.00 [1483/1483]
GhostDiagnostic-chr: 2.637
Centroid-sig: 0.0%
Centroid-so: 2.754 arcsec [3.43σ]
OotOffset-rm: 0.093 arcsec [1.38σ]
KicOffset-rm: 0.173 arcsec [2.32σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 007379583-01, PDC Light Curves

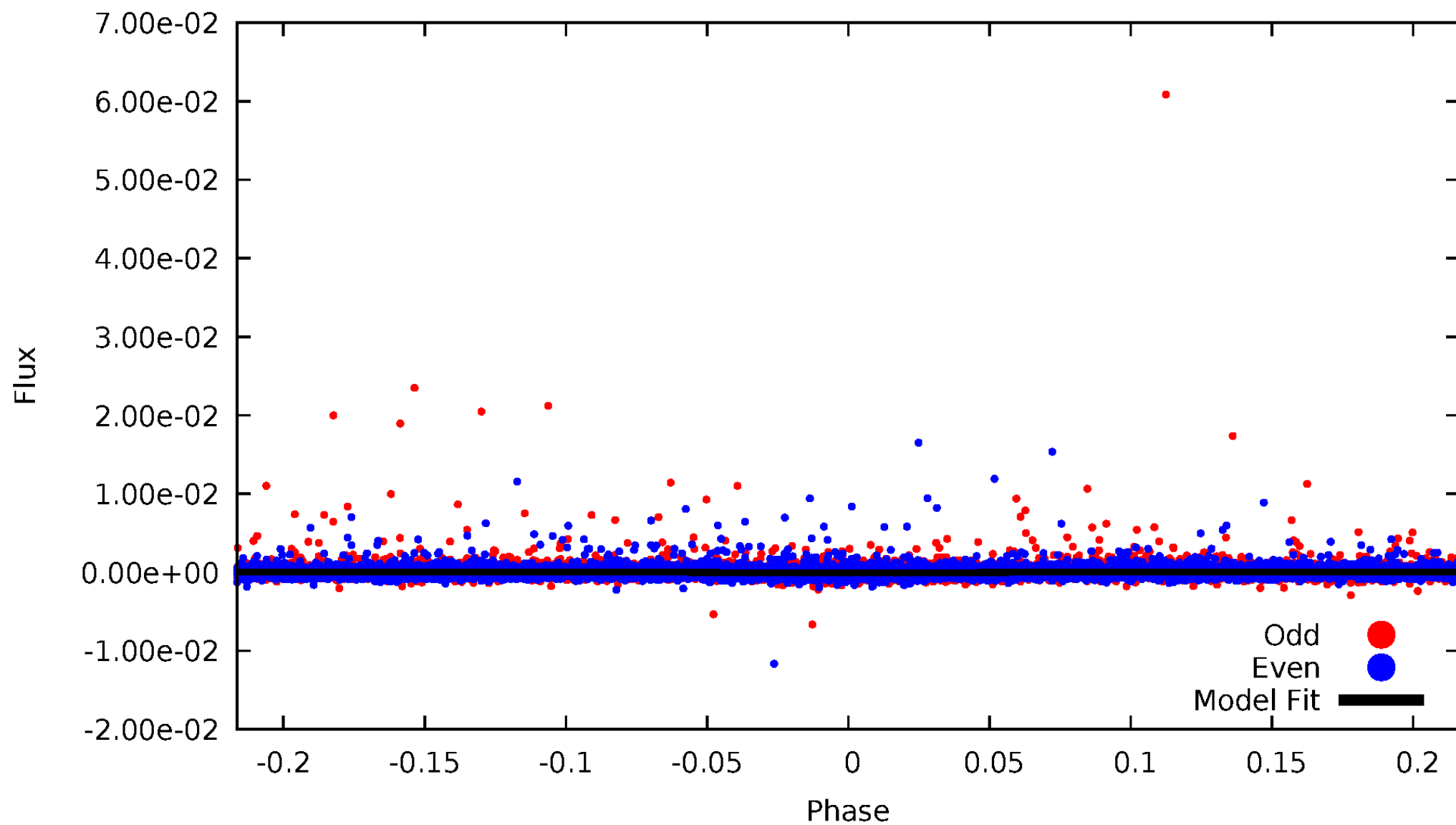


TCE 007379583-01



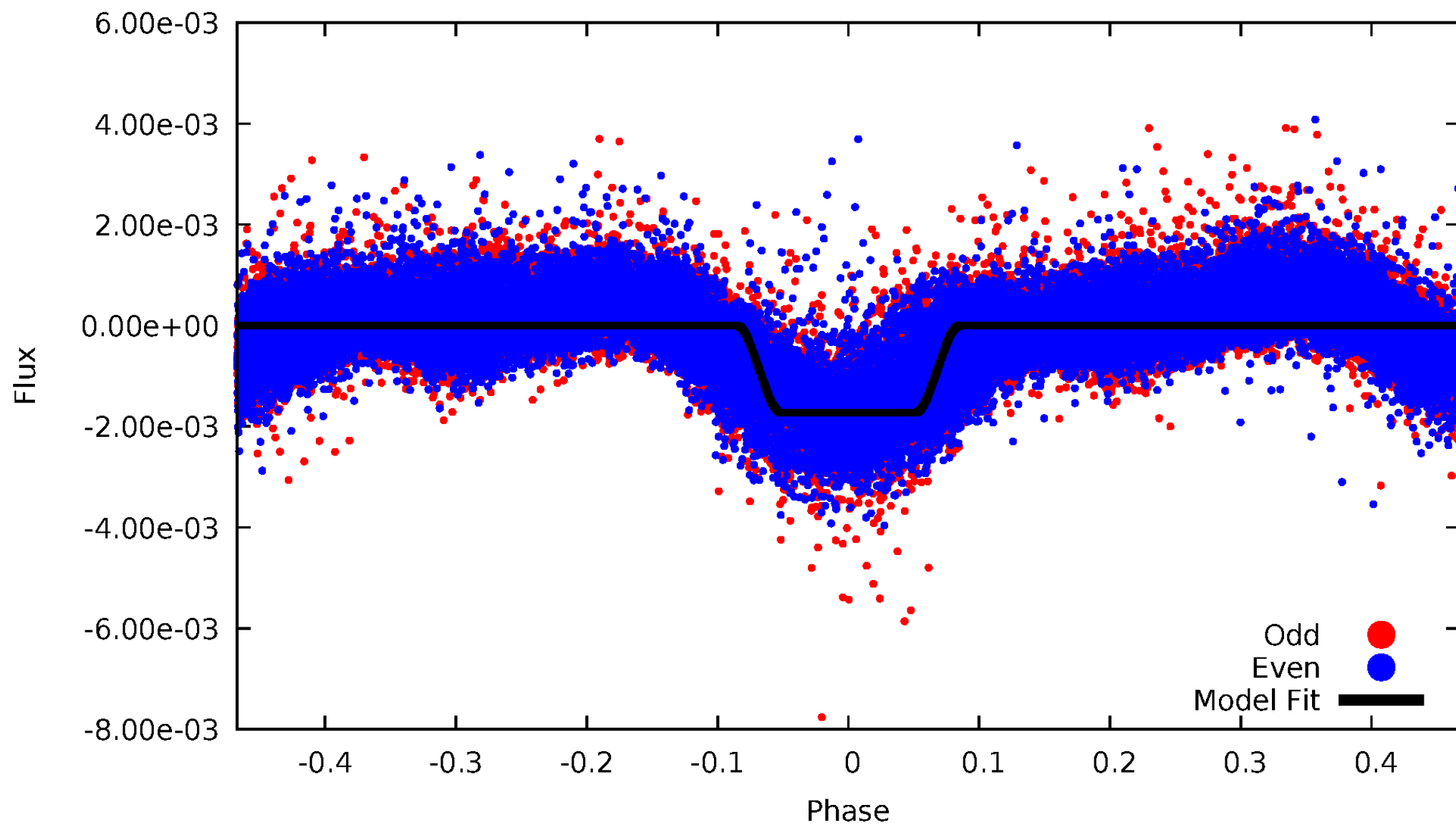
DV Odd/Even

TCE 007379583-01



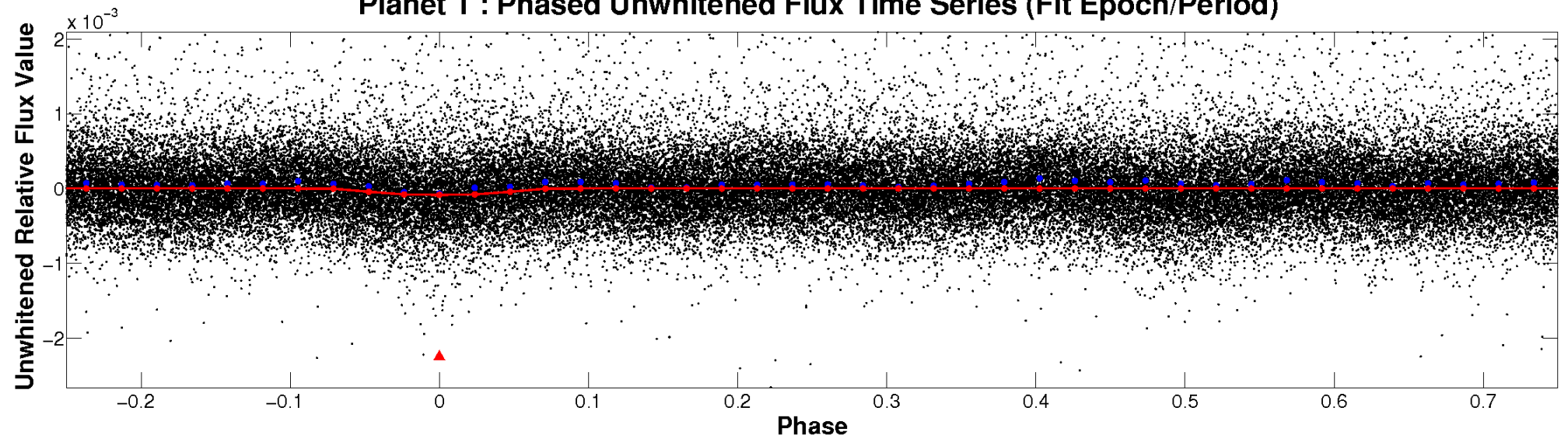
ALT Odd/Even

TCE 007379583-01

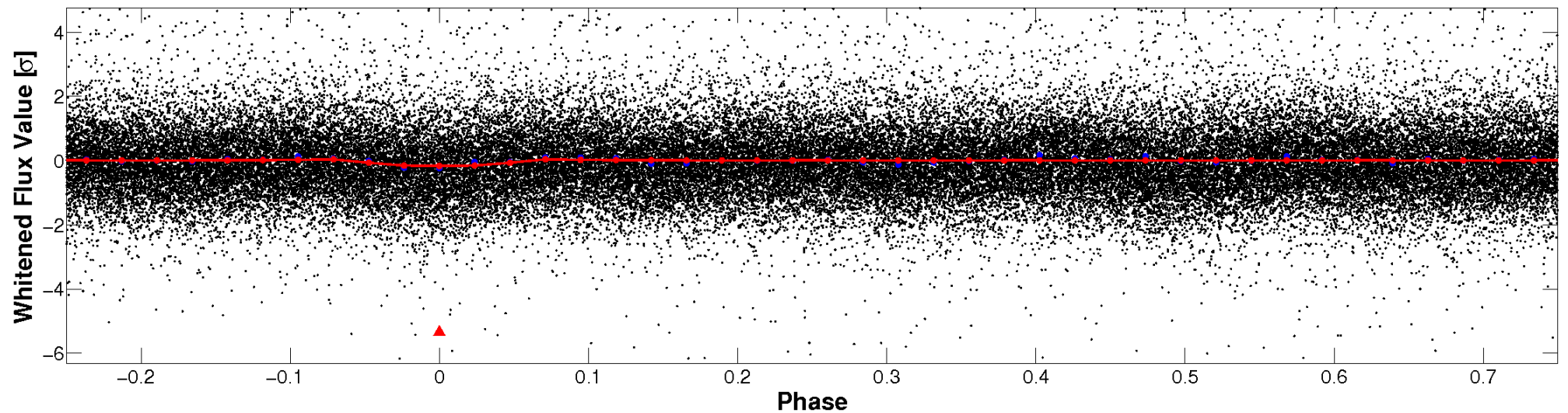


Non-Whitened Vs. Whitened Light Curve

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

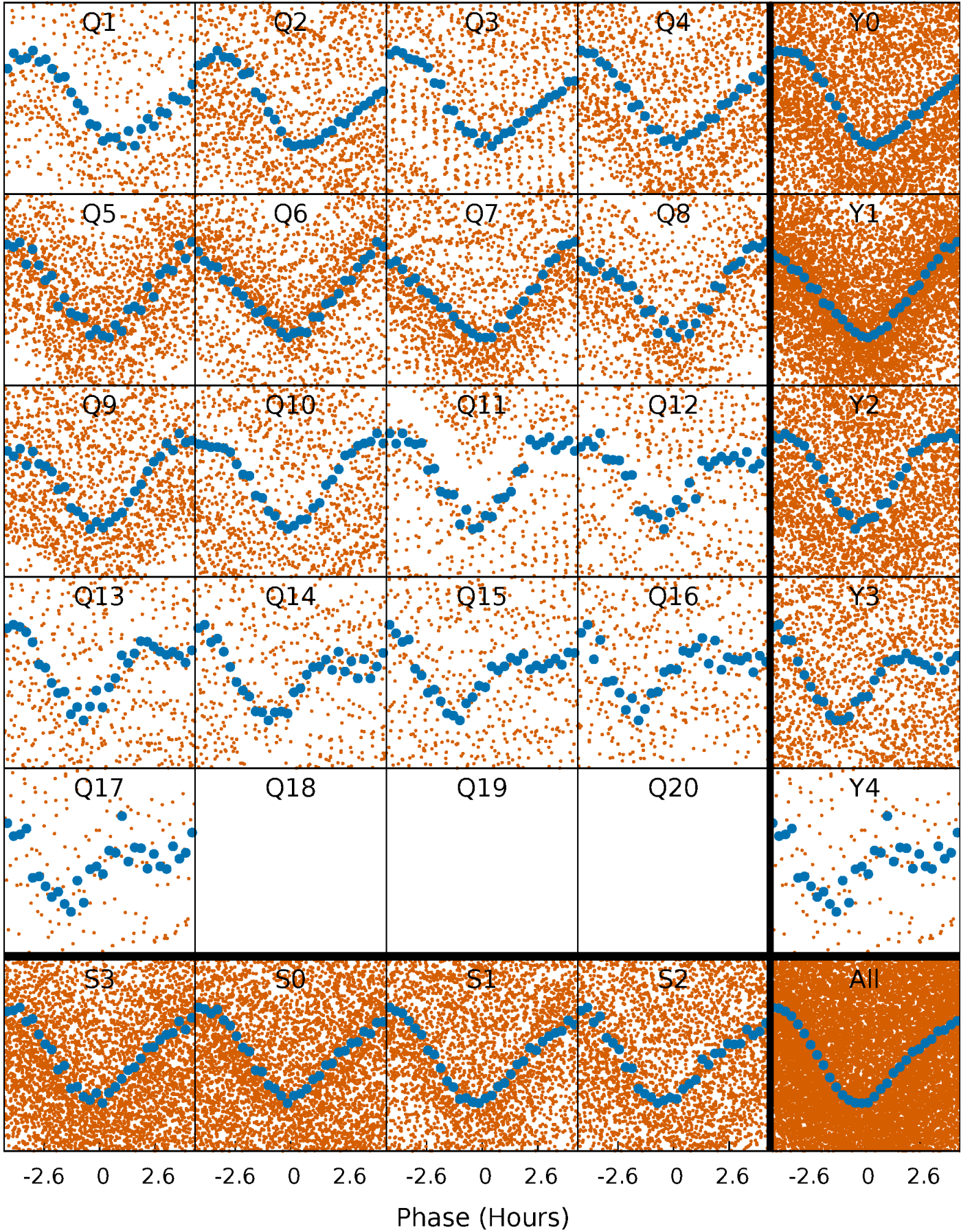


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



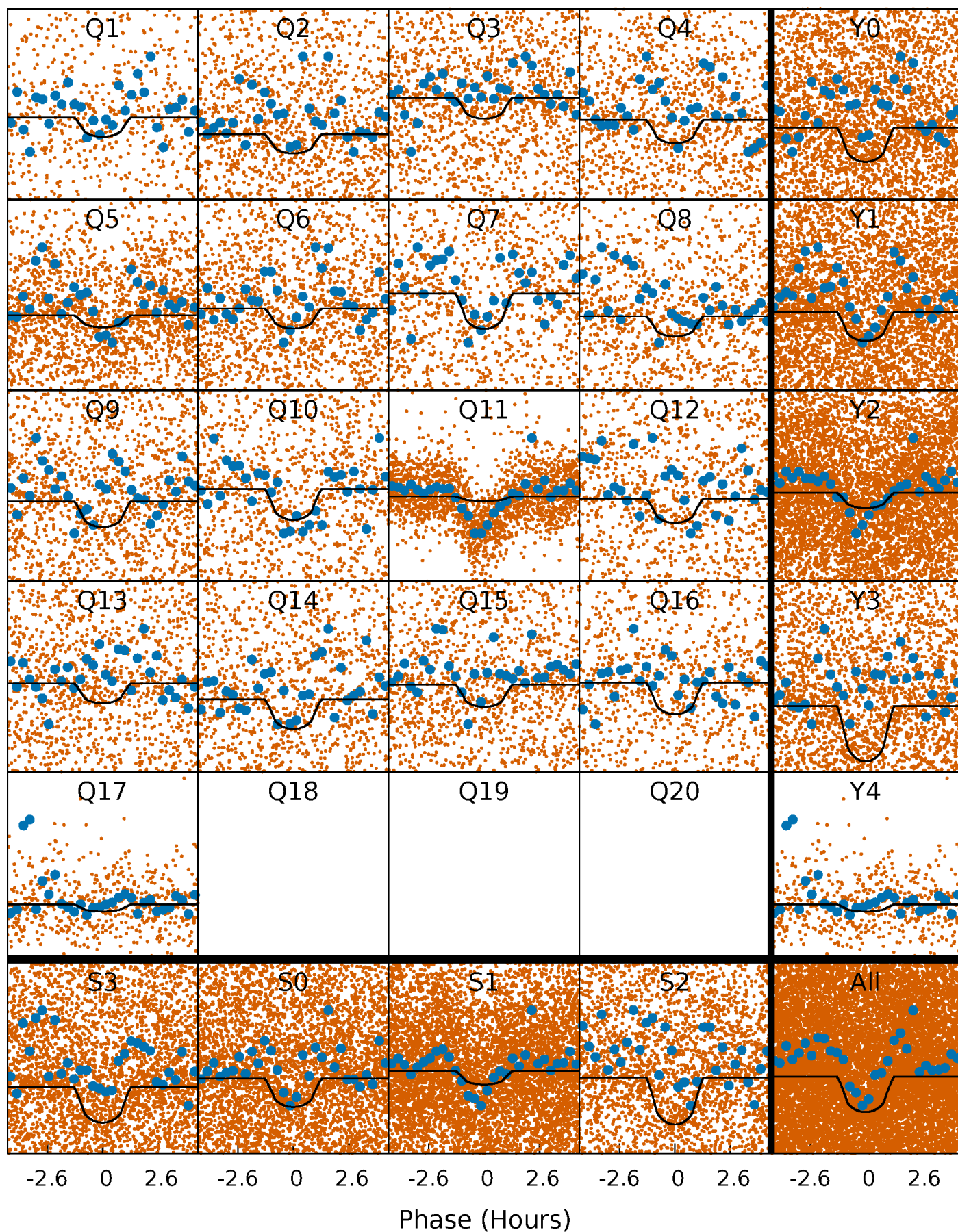
PDC Quarter-Phased Transit Curves

TCE 007379583-01 P= 0.863054 Days $T_0=132.056218$ (BKJD)



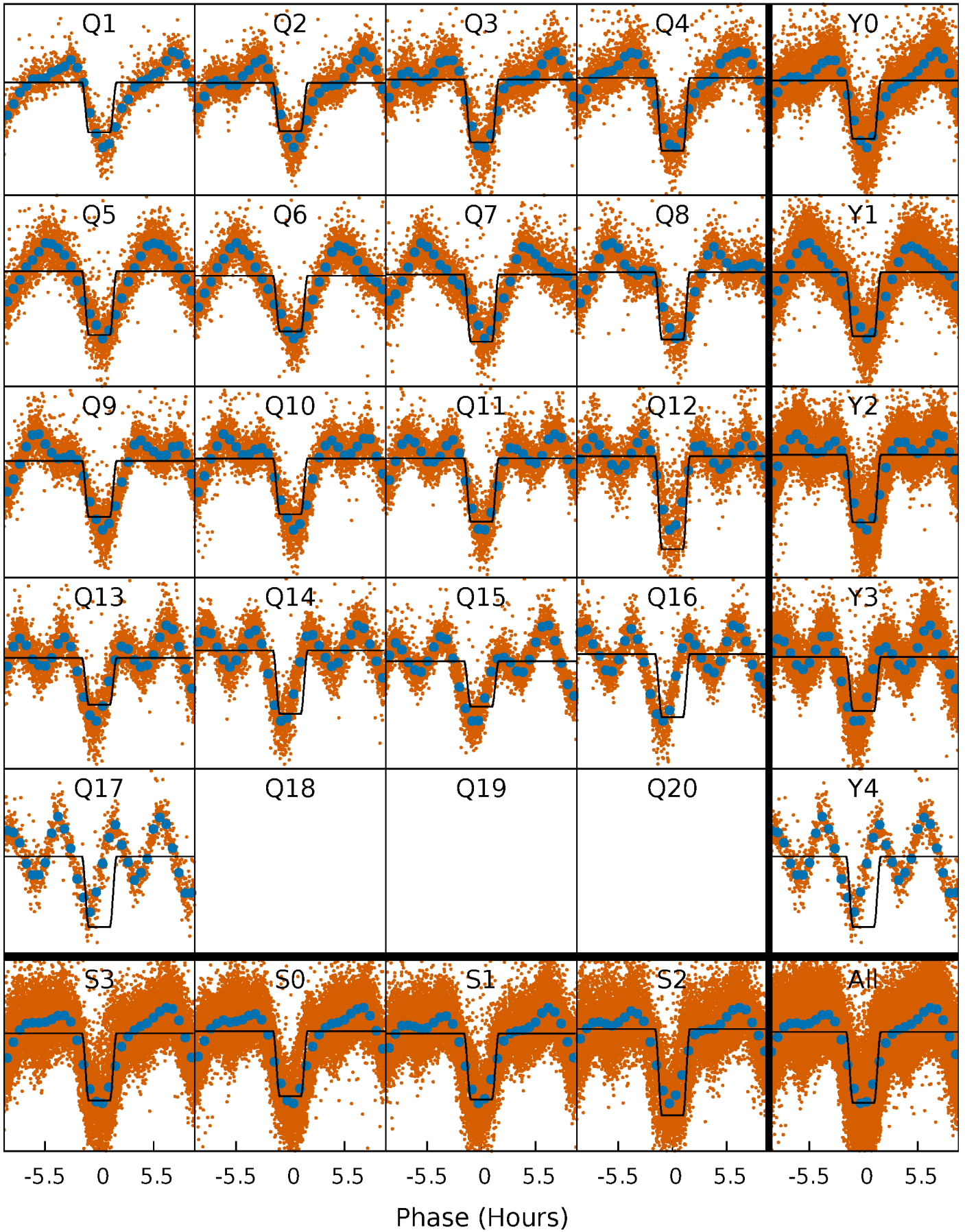
DV Quarter-Phased Transit Curves

TCE 007379583-01 P= 0.863054 Days $T_0=132.056218$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

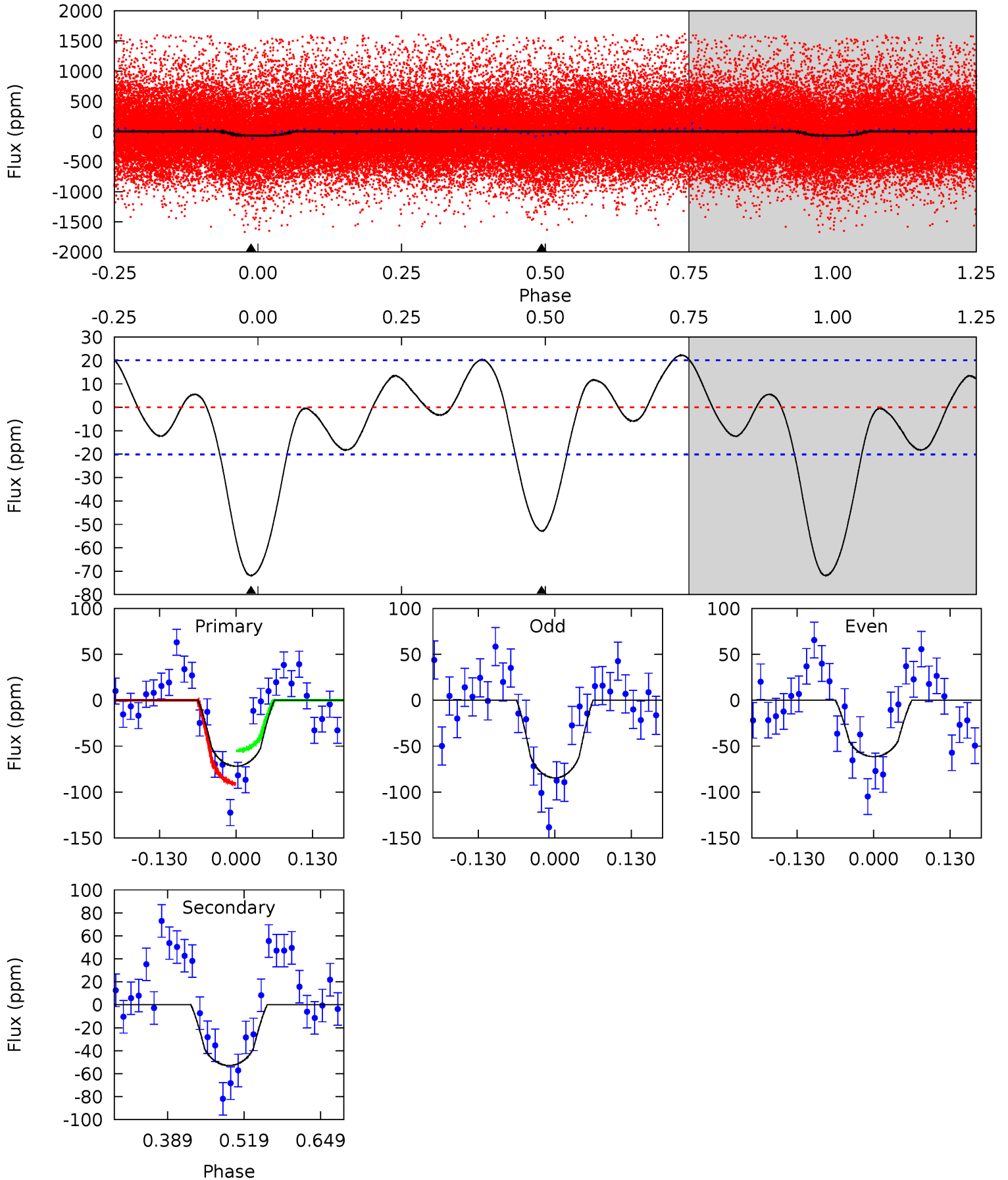
TCE 007379583-01 P= 0.863041 Days $T_0=132.052672$ (BKJD)



DV Model-Shift Uniqueness Test

007379583-01, P = 0.863054 Days, E = 131.193164 Days

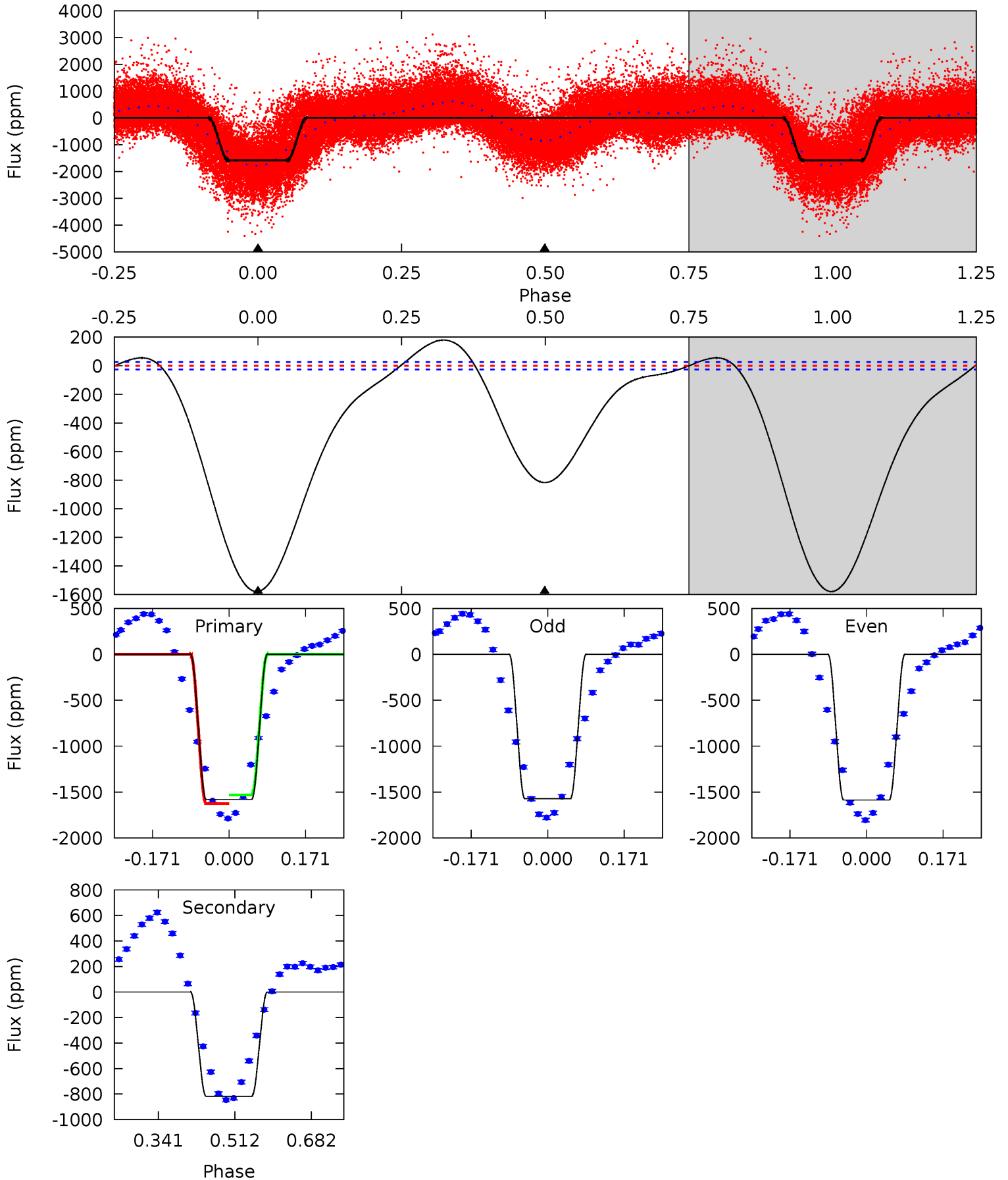
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|-----|-----|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 16.1 | 11.8 | 0 | 0 | 4.51 | 1.52 | 2.45 | 16.1 | 16.1 | 11.8 | 11.8 | 2.62 | 0.32 | 0.24 | 4.02 |



Alt Model-Shift Uniqueness Test

007379583-01, P = 0.863041 Days, E = 131.189631 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|-------|-------|-----|-----|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 269.6 | 139.5 | 0 | 0 | 4.45 | 1.37 | 16.7 | 269.6 | 269.6 | 139.5 | 139.5 | 1.19 | 0.99 | 0.10 | 8.06 |



Stellar Parameters For KIC 007379583

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | $R (R_{\odot})$ | $M(M_{\odot})$ | $p_{\star} (\text{g}\cdot\text{cm}^{-3})$ |
|--------|----------------------|---------------------------|---------------------------|---------------------------|---------------------------|---|
| | 4376^{+119}_{-132} | $4.591^{+0.052}_{-0.017}$ | $0.160^{+0.250}_{-0.300}$ | $0.696^{+0.029}_{-0.059}$ | $0.689^{+0.048}_{-0.054}$ | $2.875^{+0.665}_{-0.230}$ |
| | +3%/-3% | +1%/-0% | +156%/-188% | +4%/-8% | +7%/-8% | +23%/-8% |
| 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 007379583-01 / KOI

| Detrend | Depth (ppm) | $R_p (R_{\oplus})$ | $T_{max} (K)$ | $T_{obs} (K)$ | A_{obs} |
|---------|--------------|------------------------|--------------------|-----------------------|------------------|
| DV | -53 ± 4 | $0.64^{+0.34}_{-0.30}$ | 1782^{+54}_{-58} | 4099^{+1213}_{-575} | 17^{+45}_{-10} |
| Alt. | -817 ± 6 | $3.14^{+0.34}_{-0.37}$ | 1783^{+55}_{-59} | 3801^{+176}_{-157} | 11^{+3}_{-2} |

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

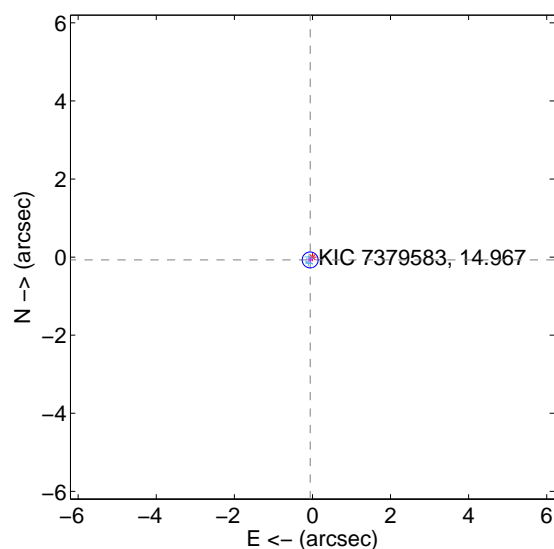
Supplemental centroid analysis for 007379583-01. Kepler magnitude: 14.97. Transit SNR 11.60

There are 17 quarters with good PRF difference image offsets

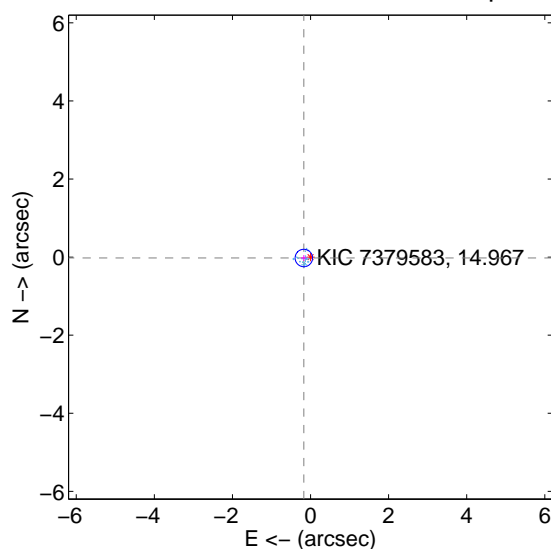
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|-------------------|--------------------|
| PRF-fit source offset from OOT | 0.093 ± 0.068 | 1.38 | 0.058 ± 0.068 | -0.073 ± 0.068 |
| PRF-fit source offset from KIC position | 0.173 ± 0.074 | 2.32 | 0.171 ± 0.074 | -0.023 ± 0.074 |
| photometric centroid source offset | 2.75 ± 0.80 | 3.43 | 1.63 ± 0.77 | -2.22 ± 0.82 |

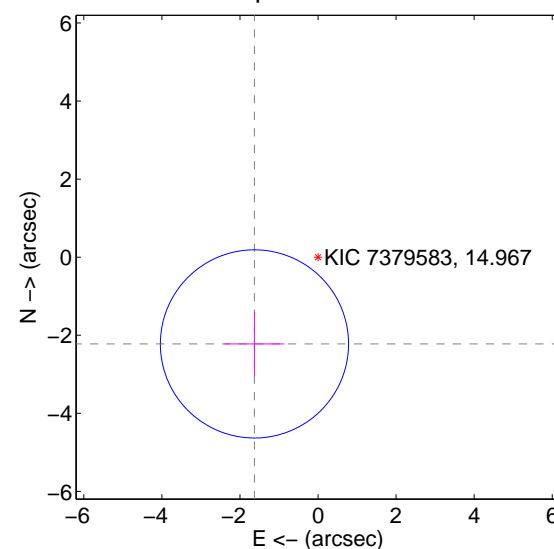
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

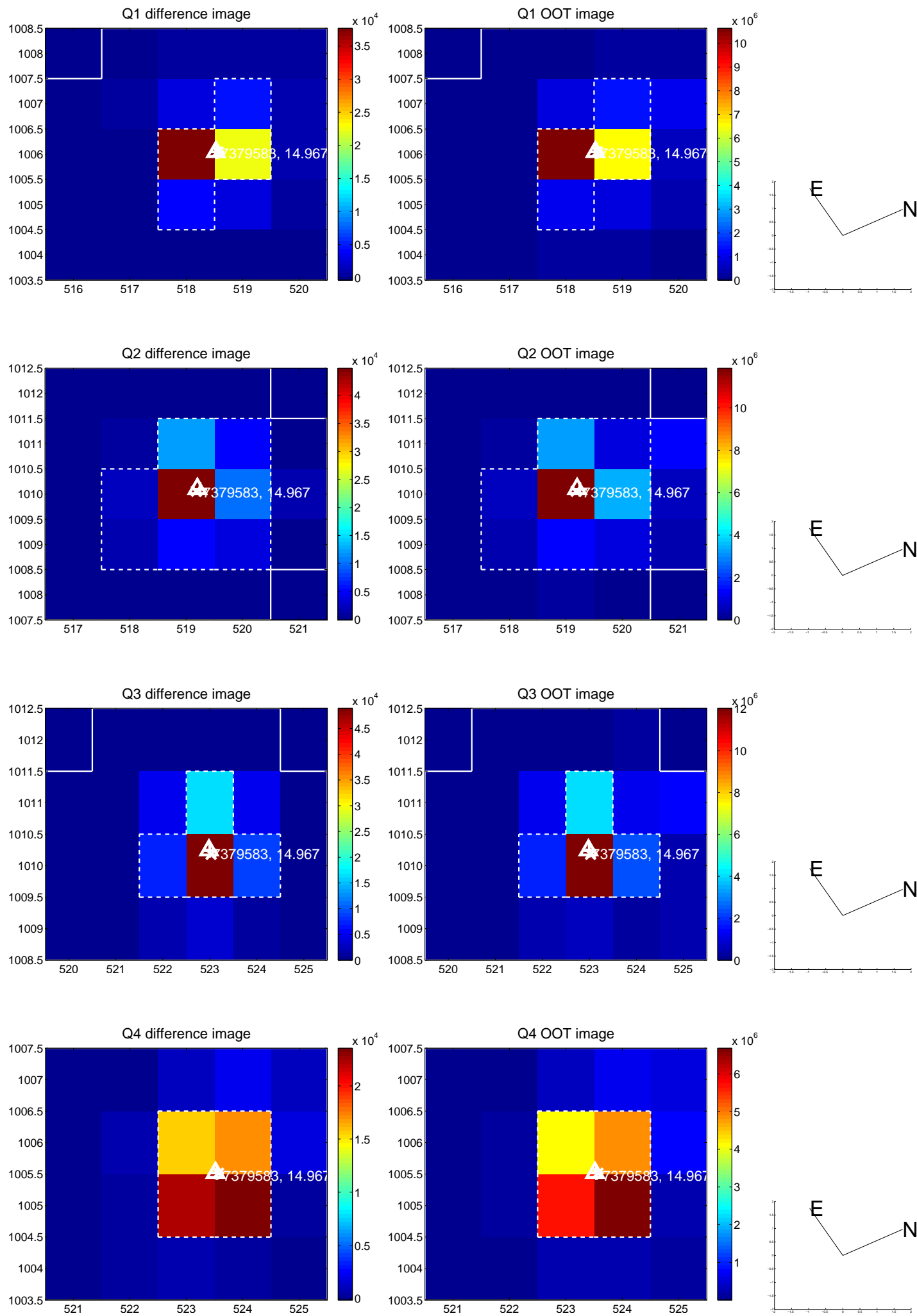


offset from photometric centroids

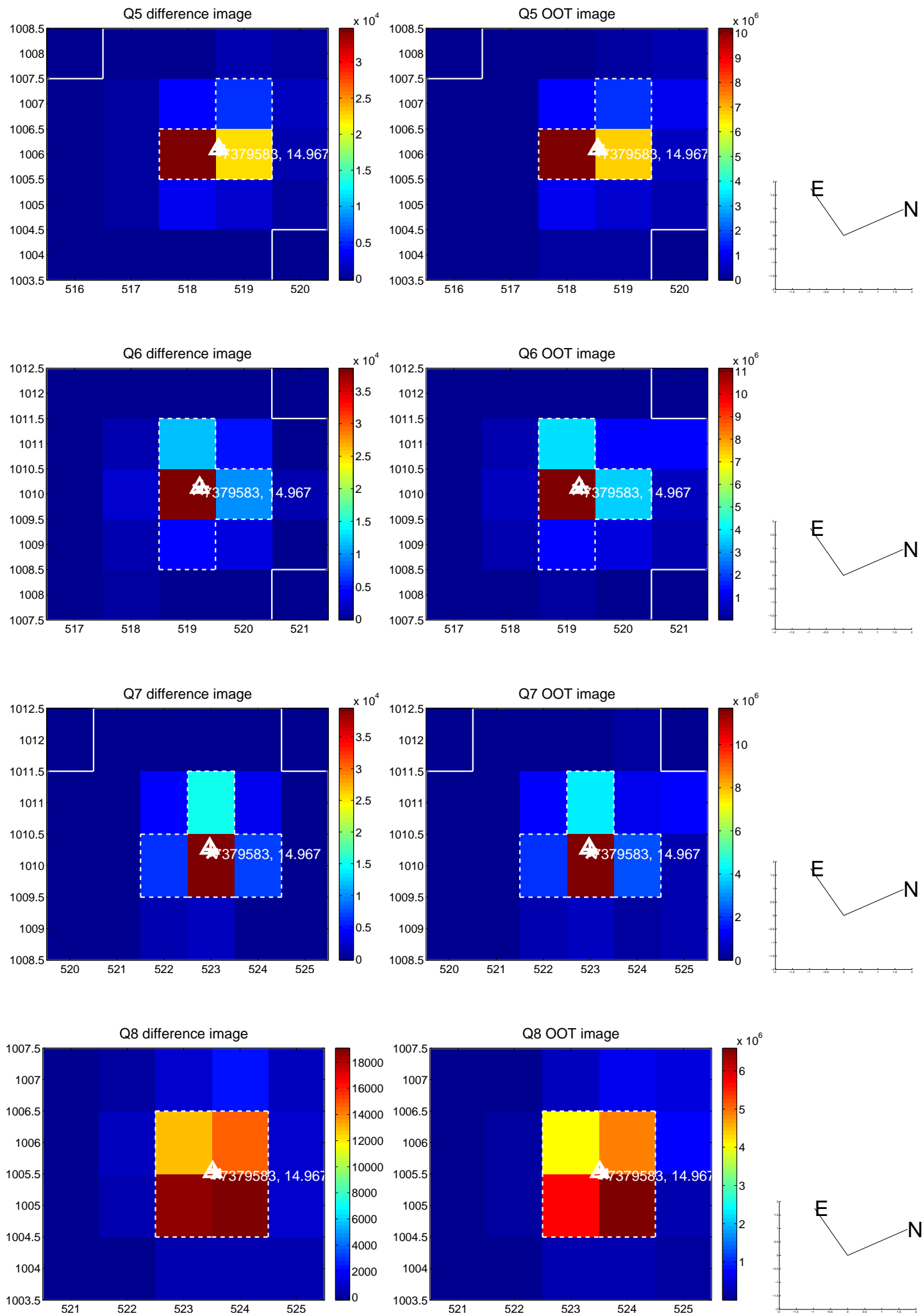


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

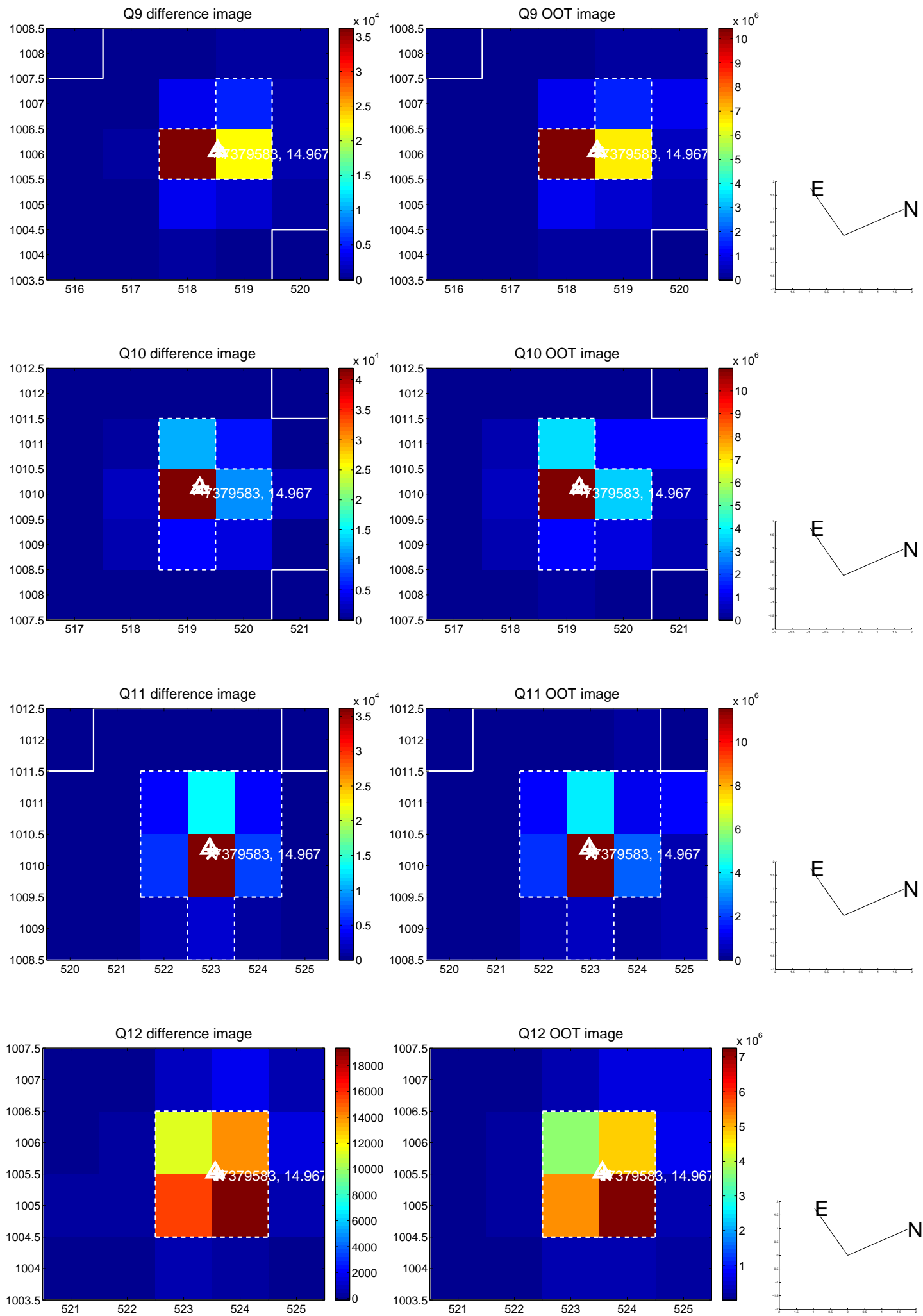
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



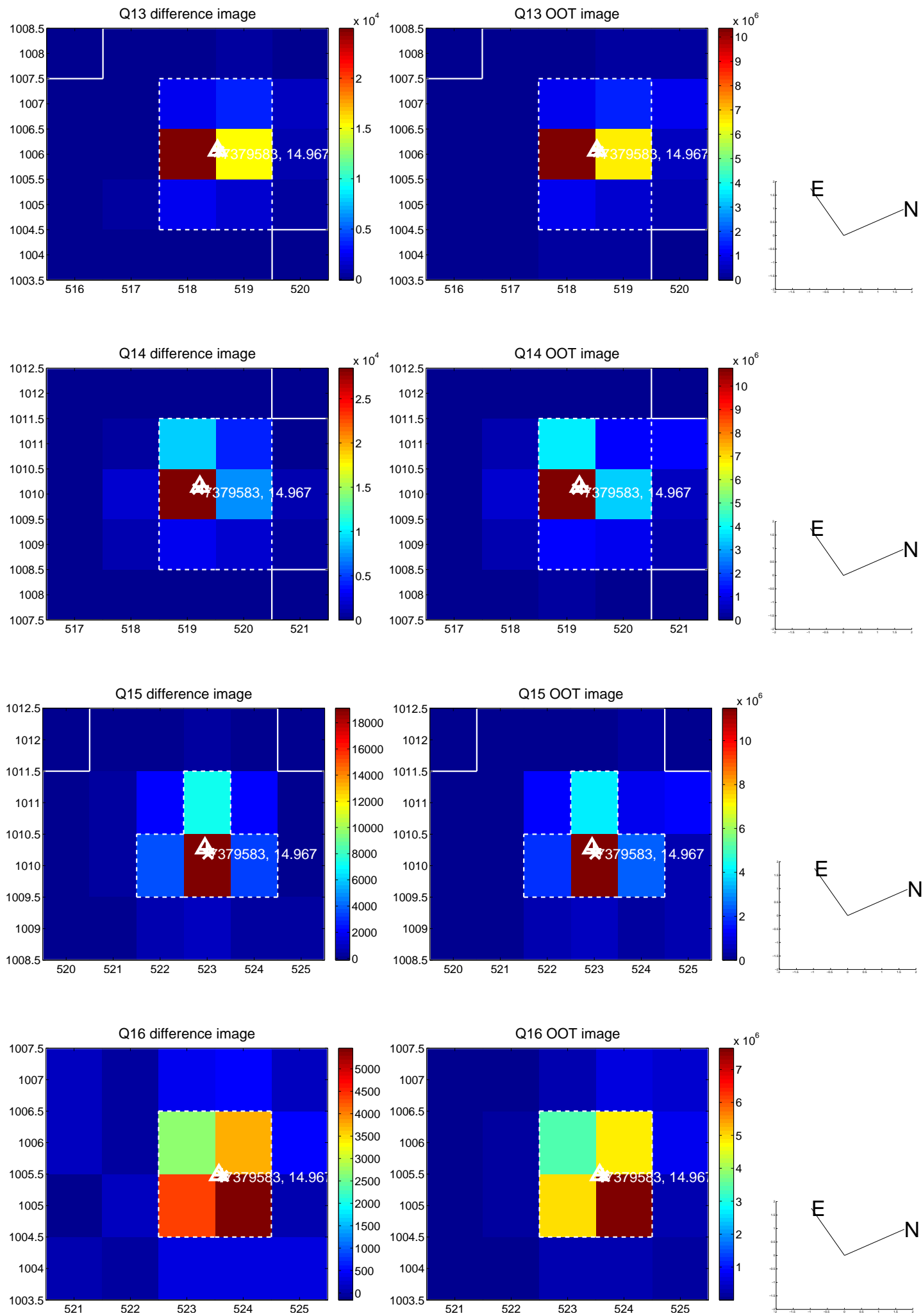
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



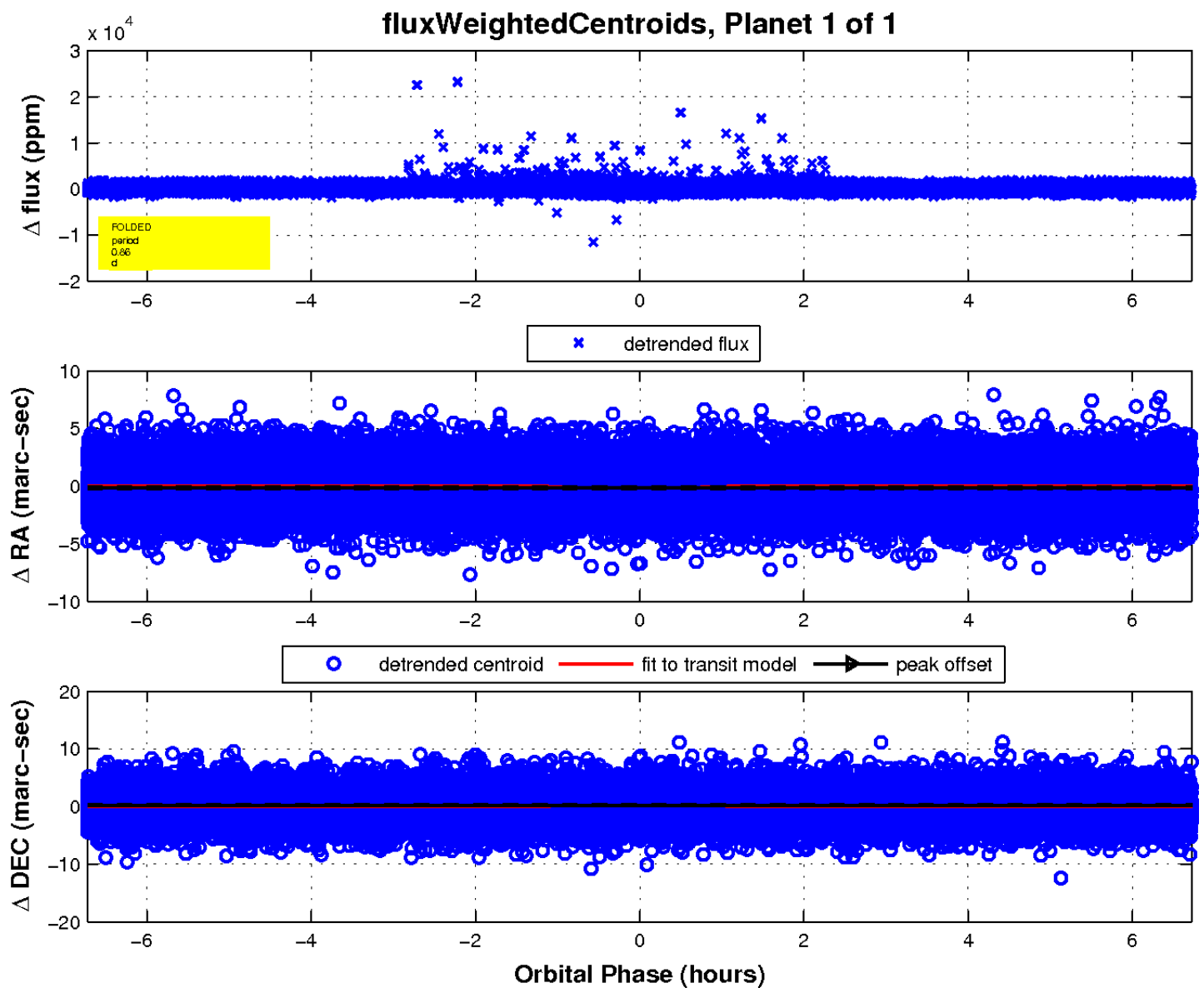
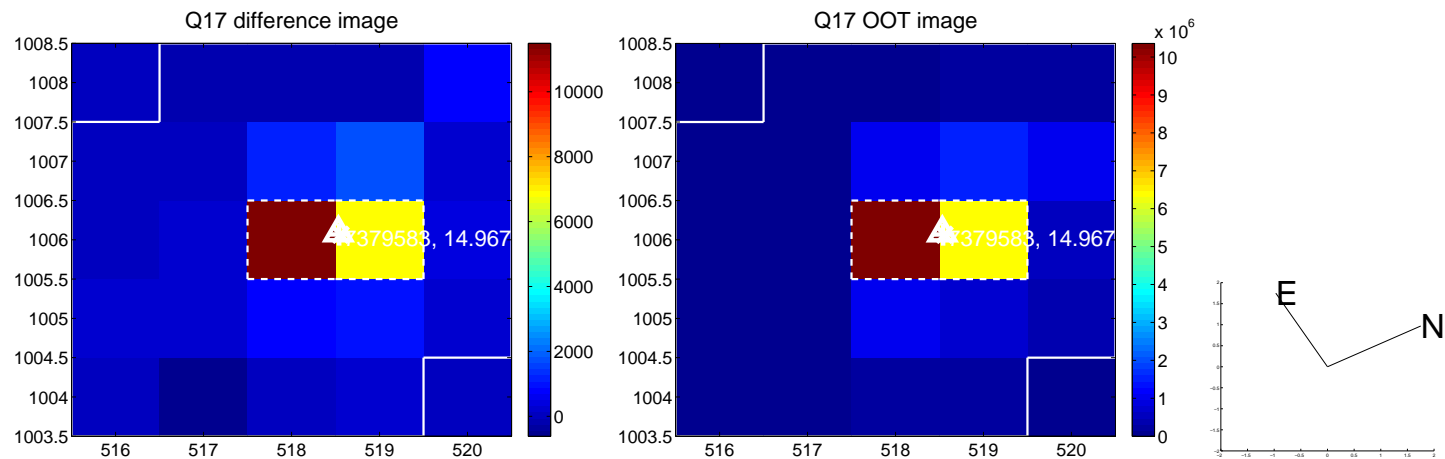
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

Declination

