

KIC 010129755

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|-----|------|-----------------------------|-----------------|------------------------|------------------------|
| 010129755-01 | OBS | No | 8.103503 | 135.757748 | 52.8 | 42.769 | 7.5 | 11.3 | 1.17 | 6394 | 1.21 | 303.37 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|----------|
| 010129755-01 | 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.

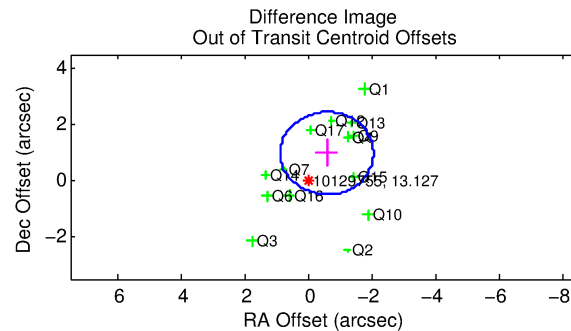
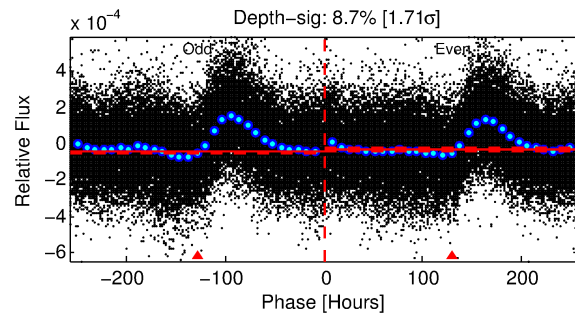
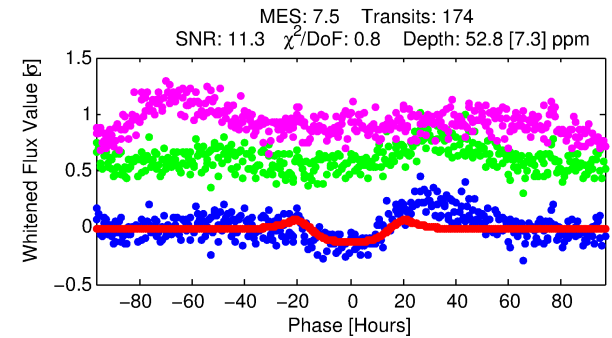
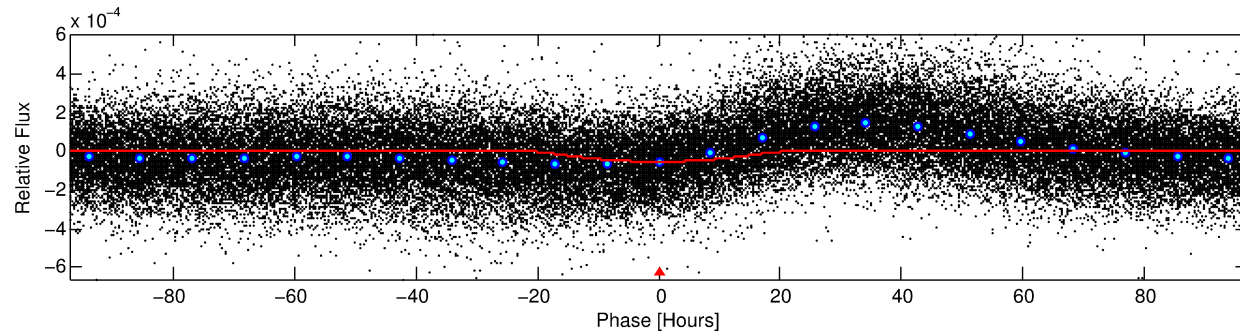
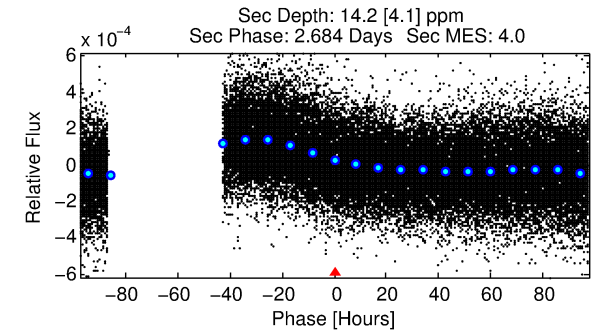
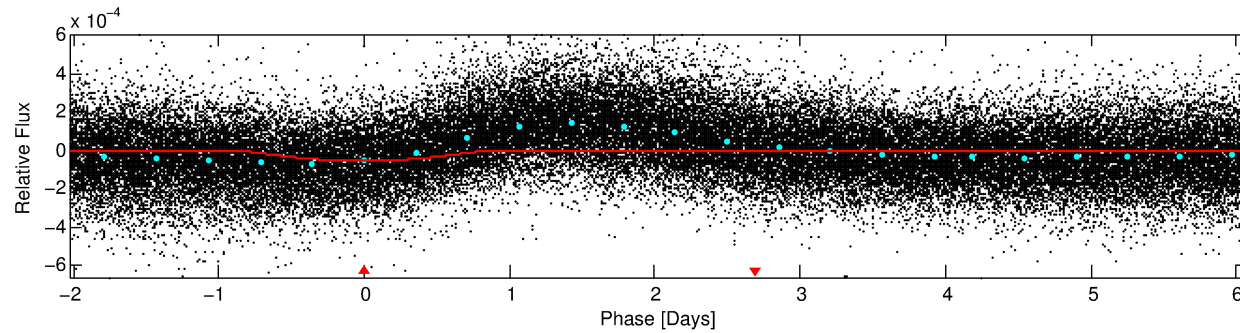
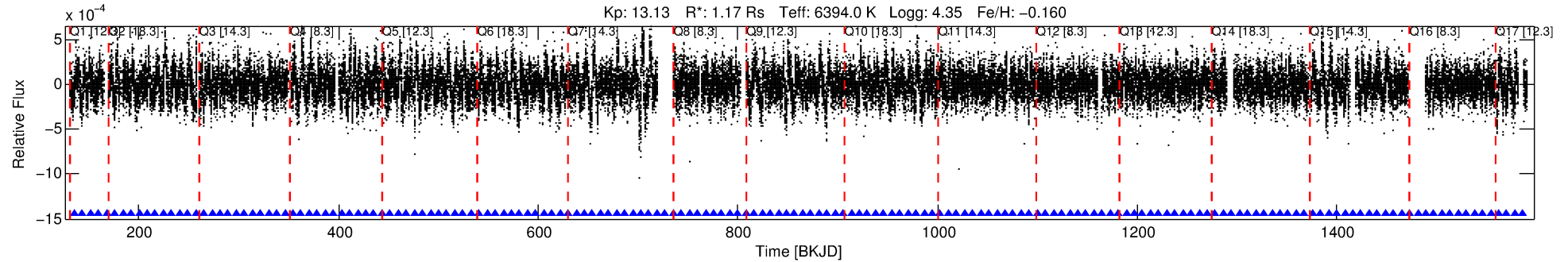
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010129755-01

No Significant Match Found

DV One-Page Summary

KIC: 10129755 Candidate: 1 of 1 Period: 8.104 d



DV Fit Results:

Period = 8.10350 [0.00055] d
Epoch = 135.7577 [0.0575] BKJD
Rp/R* = 0.0095 [0.0009]
a/R* = 1.04 [0.01]
b = 0.99 [0.00]
Seff = 303.37 [87.20]
Teff = 1064 [76] K
Rp = 1.21 [0.29] Re
a = 0.0819 [0.0152] AU
Ag = 35.73 [15.51] [2.24σ]
Teffp = 4023 [363] K [7.98σ]

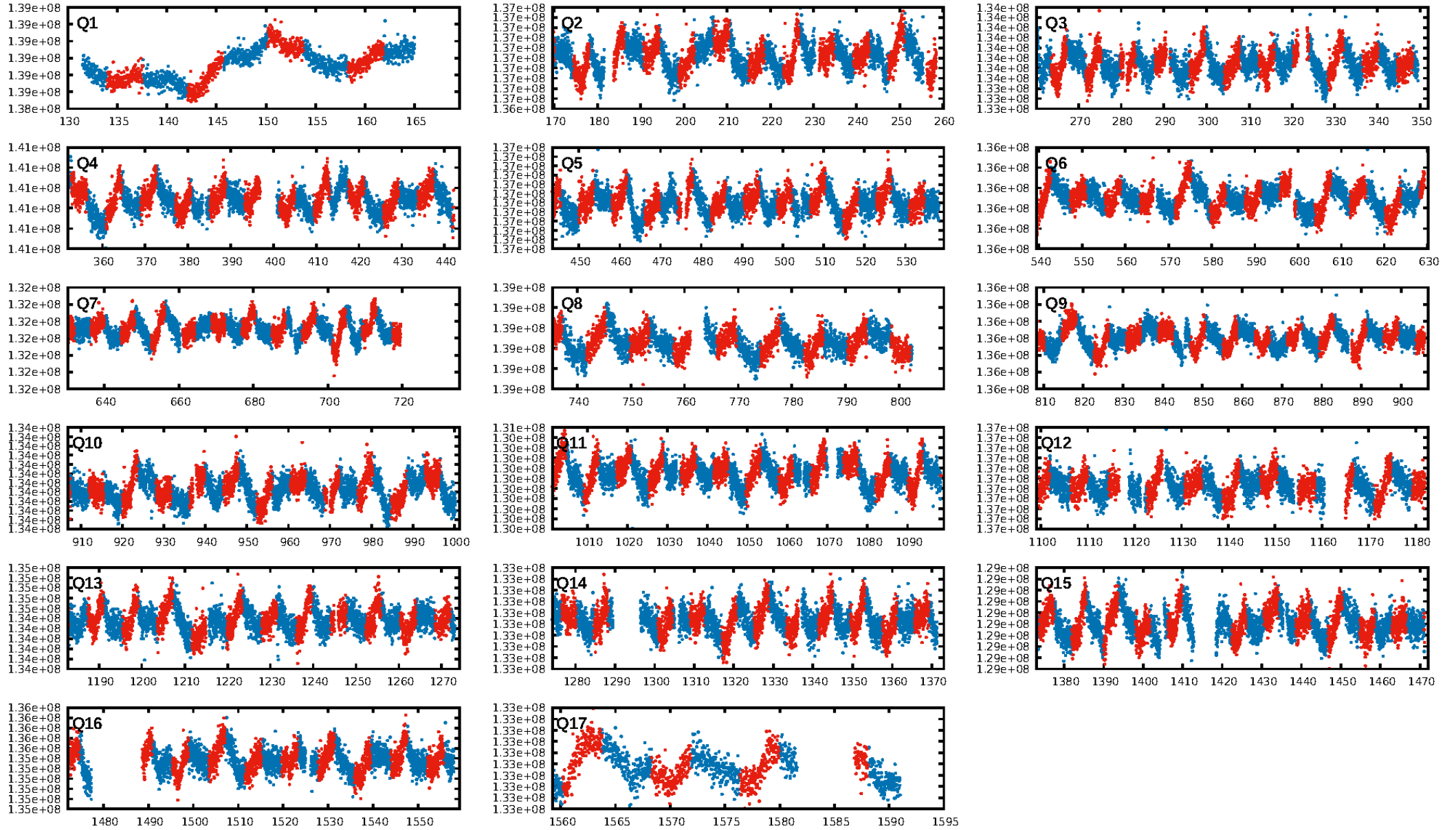
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.14e-14
RollingBand-fgt: 1.00 [166/166]
GhostDiagnostic-chr: 1.772
Centroid-sig: 0.2%
Centroid-so: 0.981 arcsec [2.37σ]
OotOffset-rm: 1.130 arcsec [2.31σ]
KicOffset-rm: 1.052 arcsec [2.28σ]
OotOffset-st: 4/3/3/4 [14]
KicOffset-st: 4/3/3/4 [14]
DiffImageQuality-fgm: 0.86 [12/14]
DiffImageOverlap-fno: 1.00 [17/17]

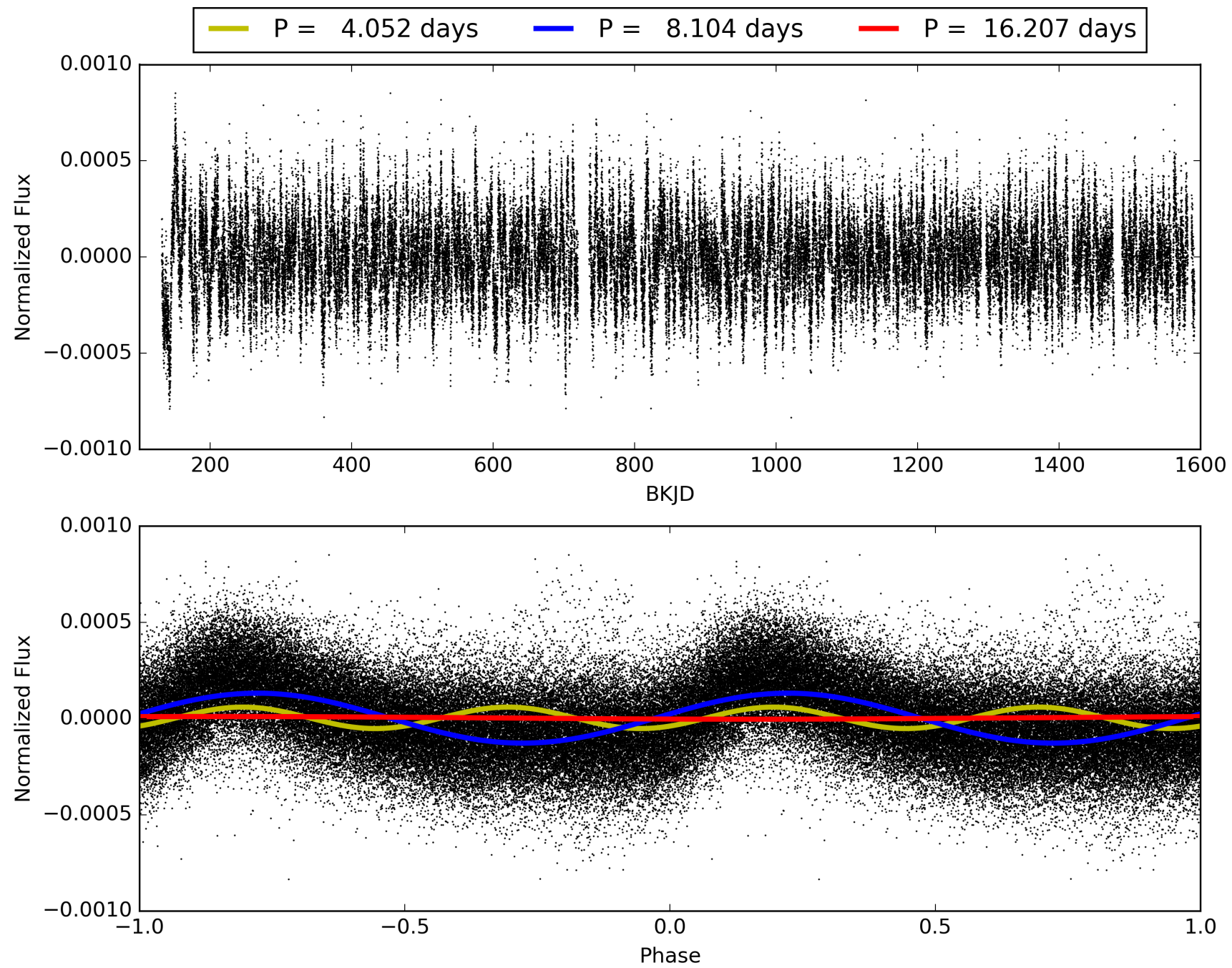
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 22:34:50 Z

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

TCE 010129755-01, PDC Light Curves

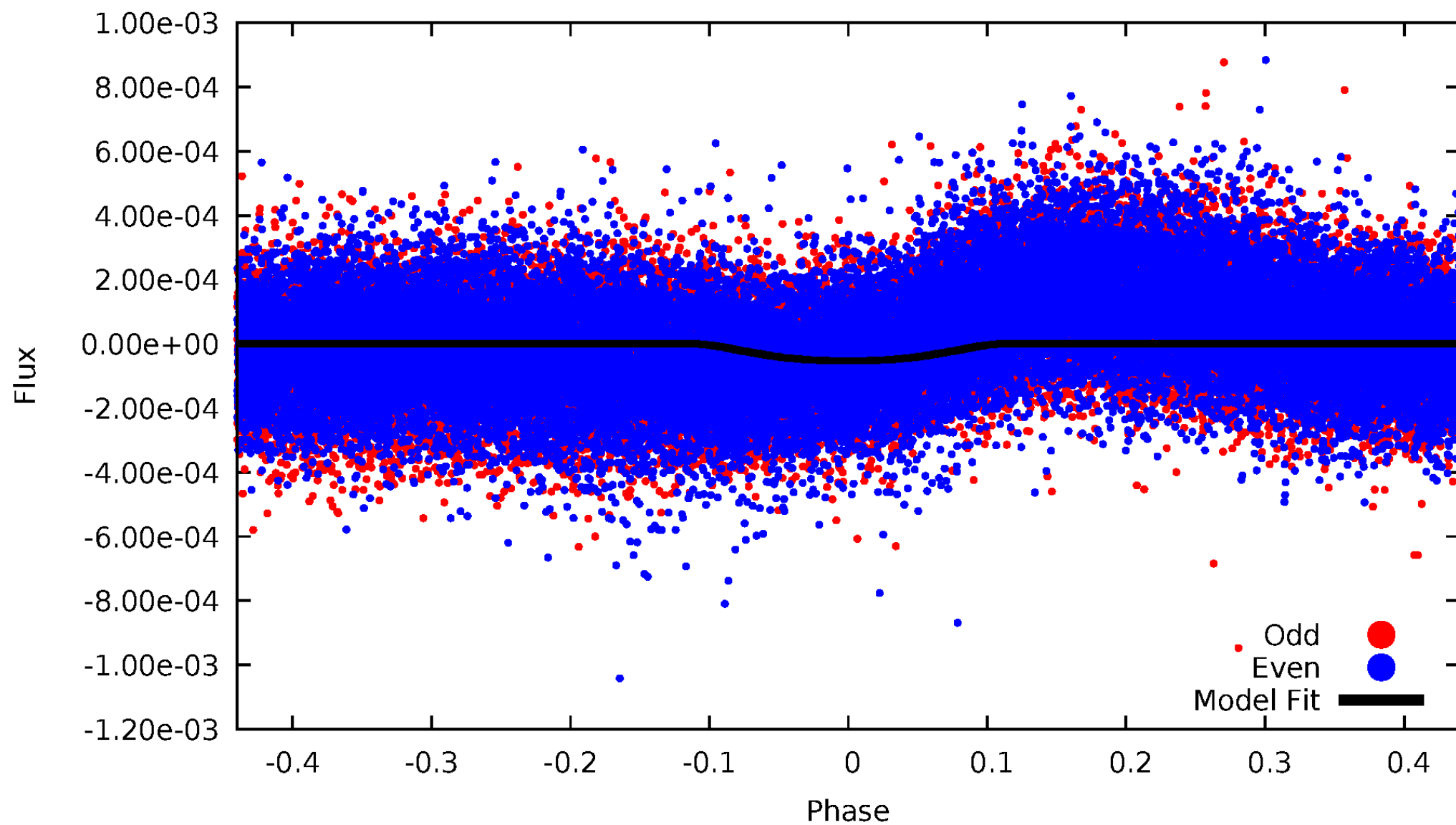


TCE 010129755-01



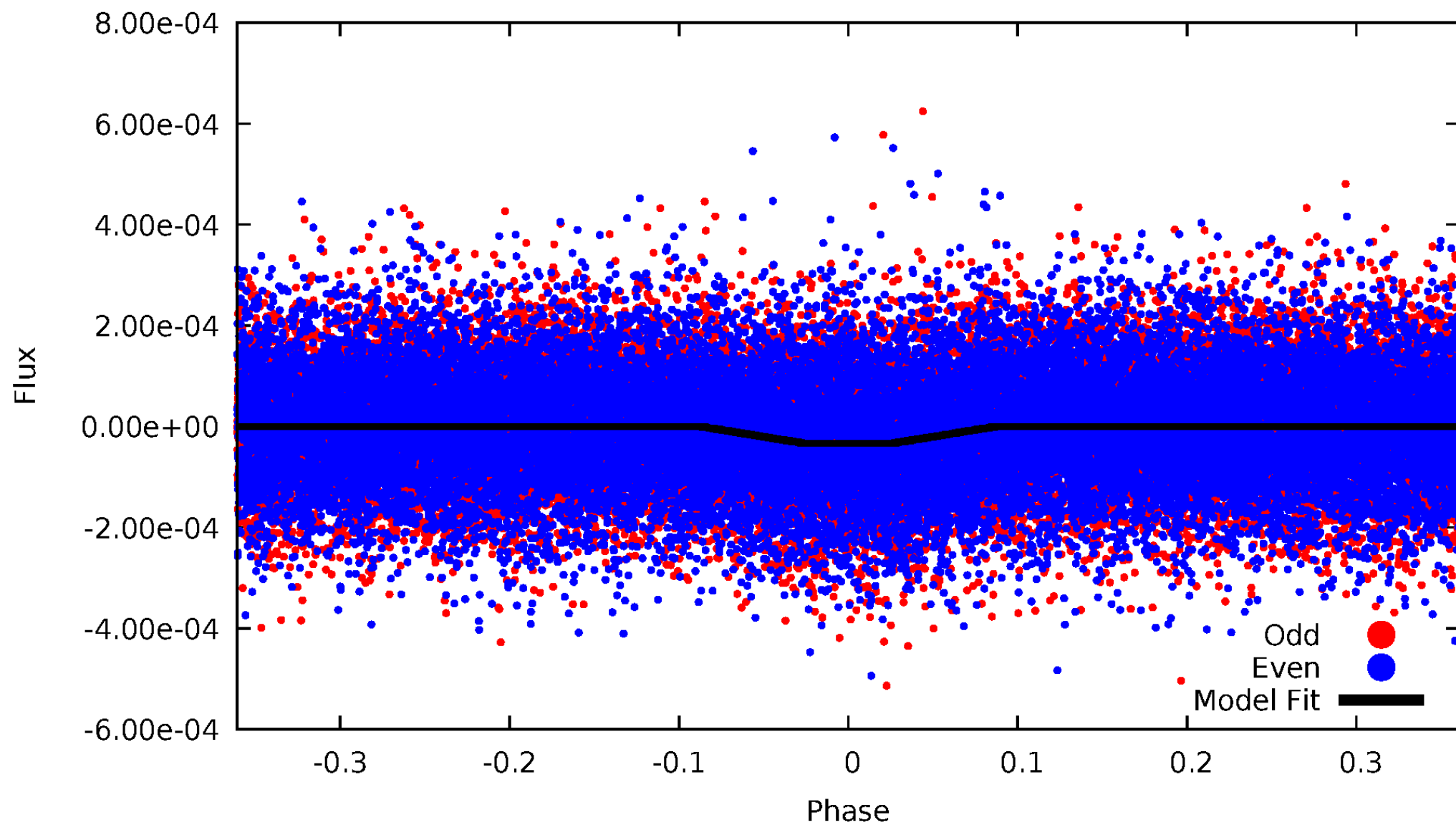
DV Odd/Even

TCE 010129755-01



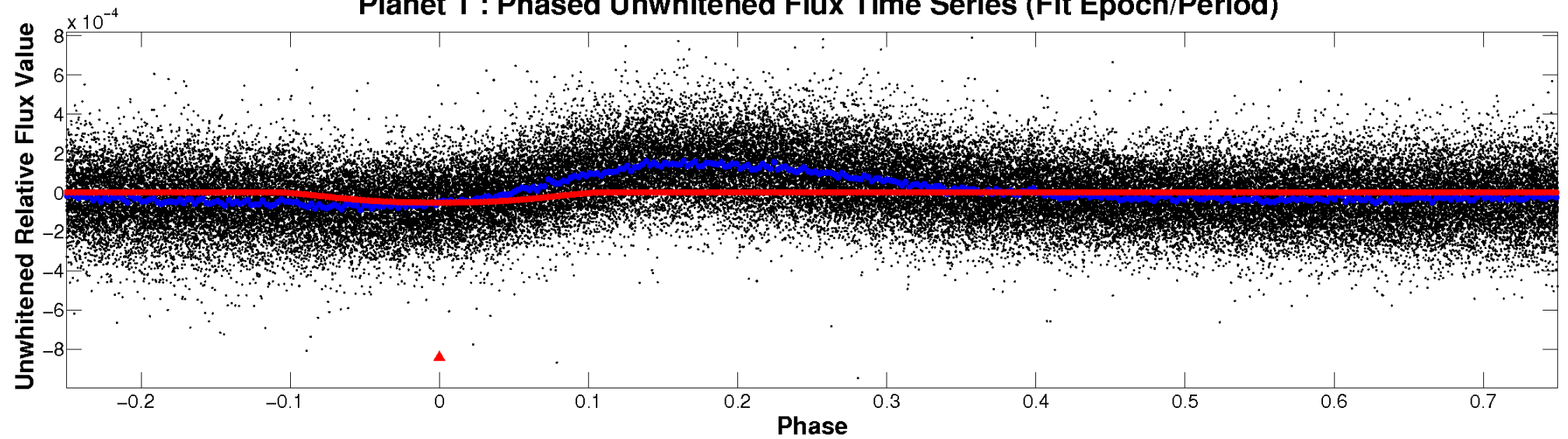
ALT Odd/Even

TCE 010129755-01

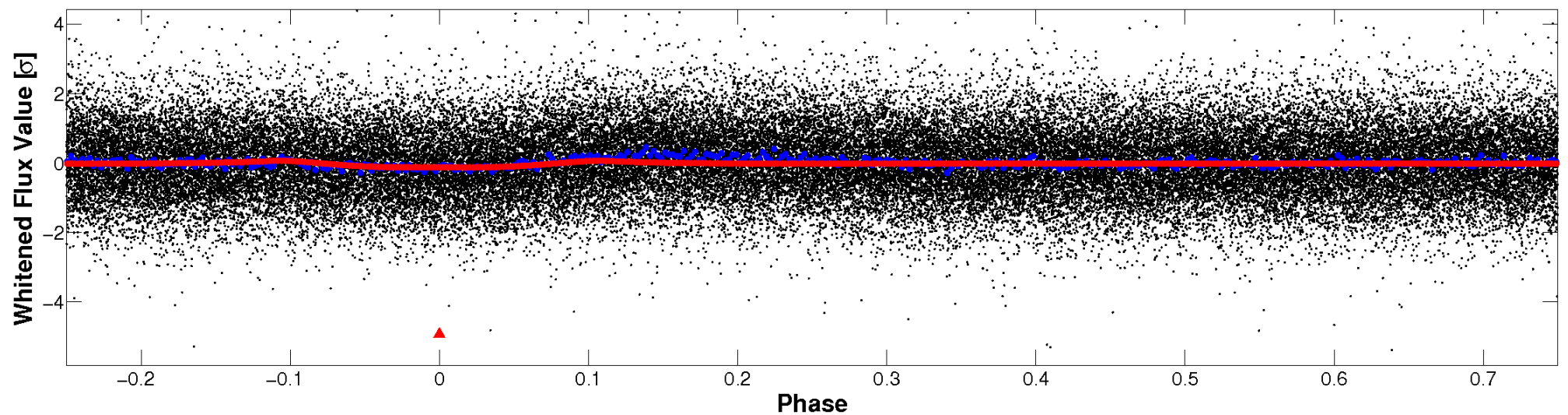


Non-Whitened Vs. Whitened Light Curve

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

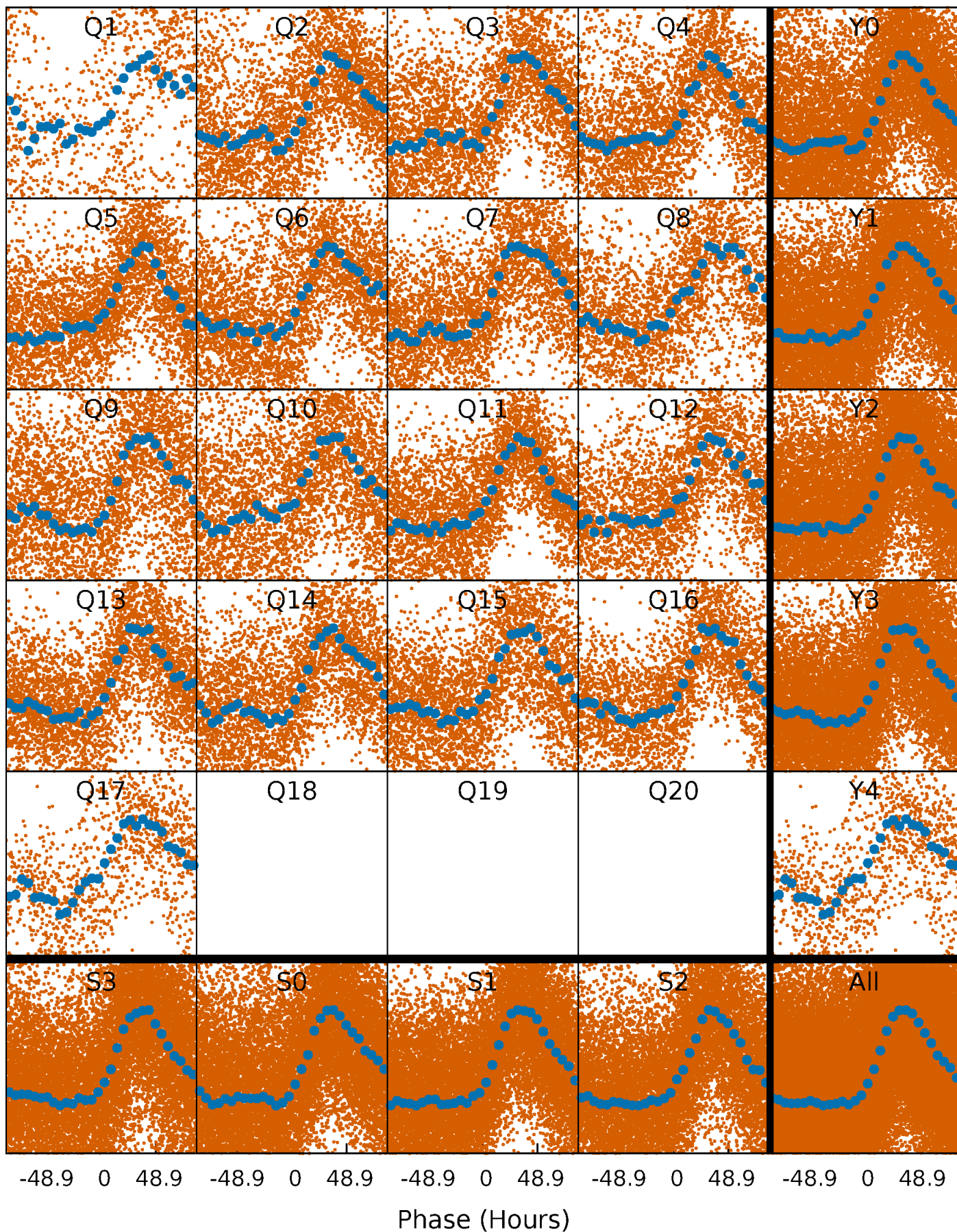


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



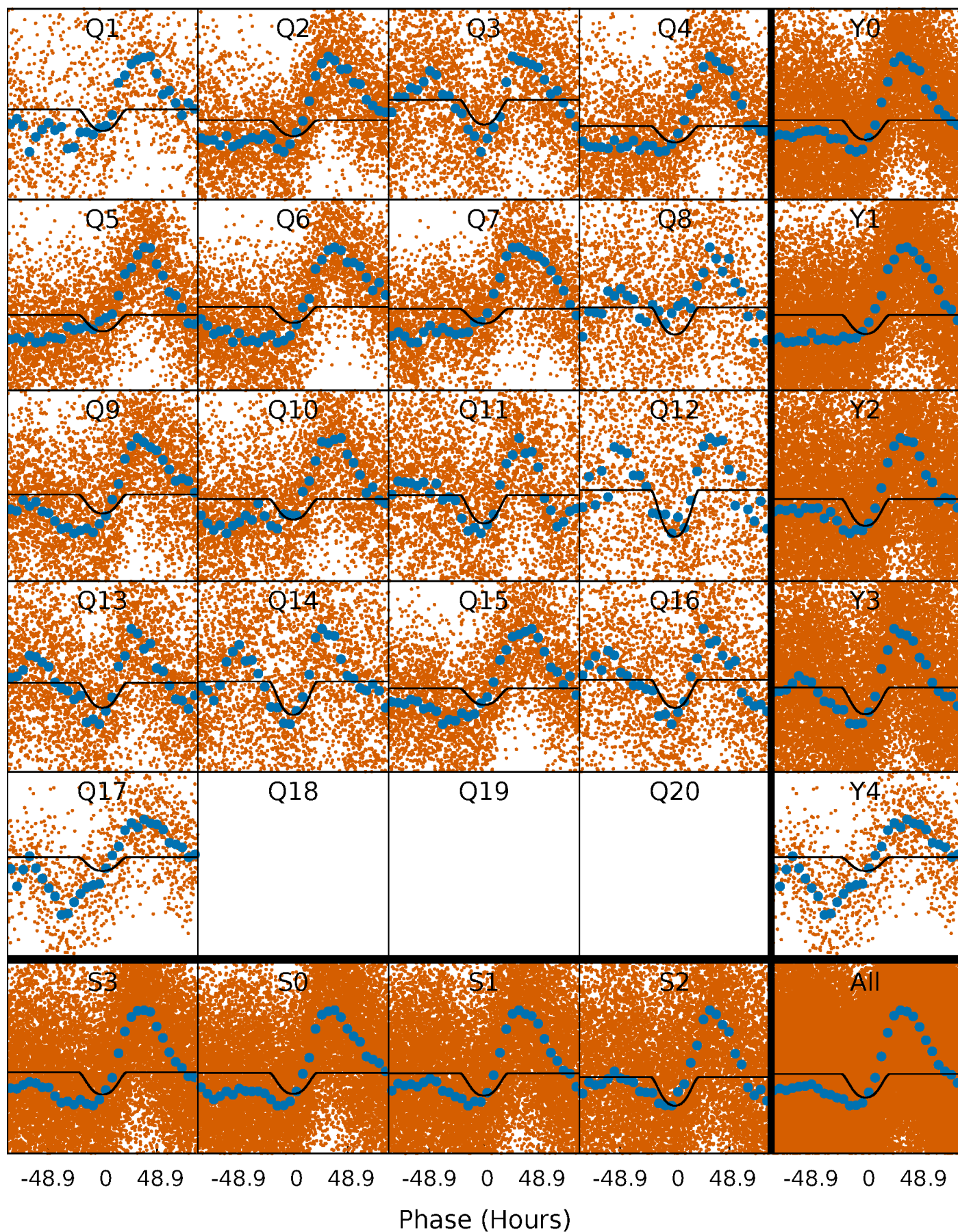
PDC Quarter-Phased Transit Curves

TCE 010129755-01 P= 8.103503 Days $T_0=135.757748$ (BKJD)



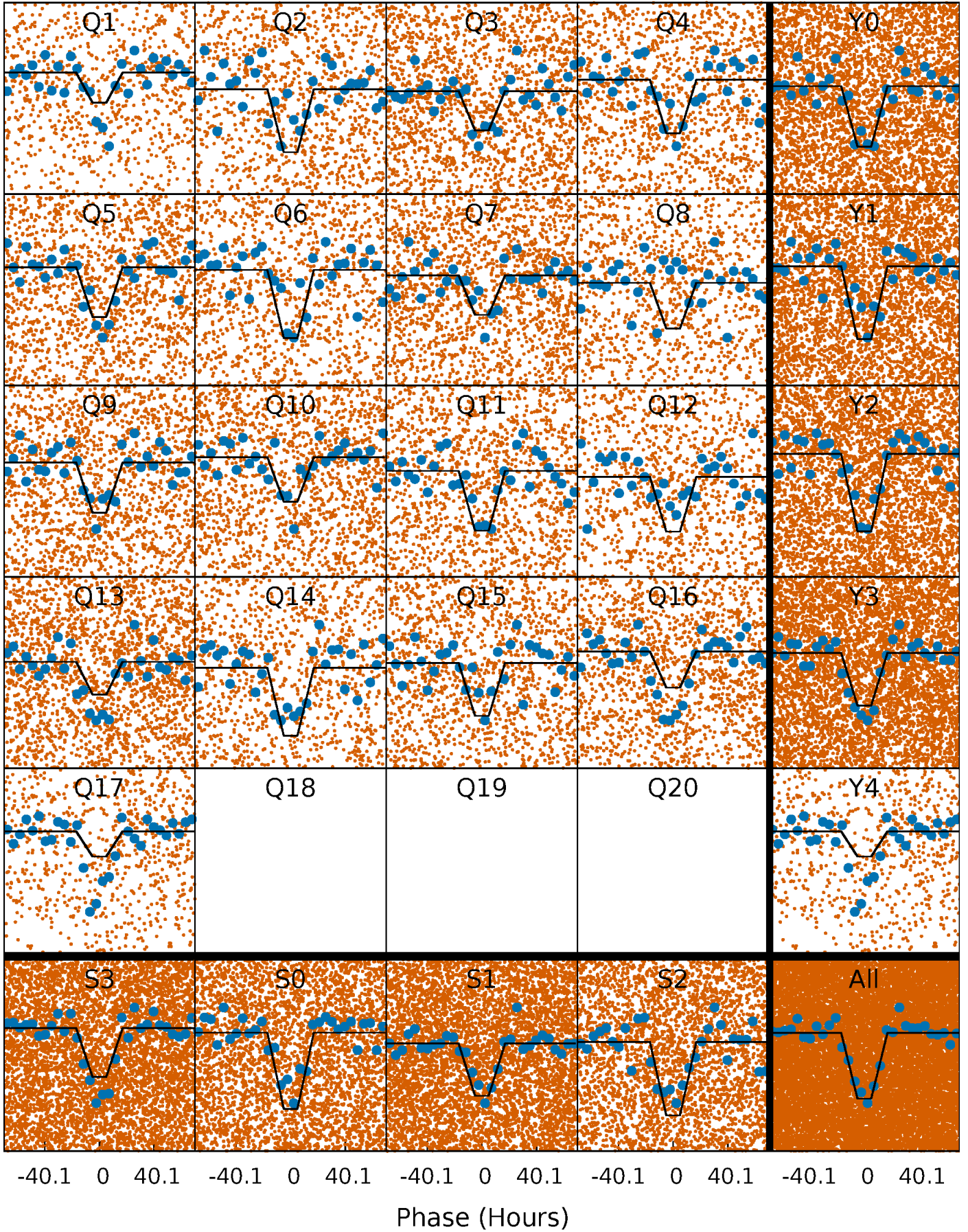
DV Quarter-Phased Transit Curves

TCE 010129755-01 P= 8.103503 Days $T_0=135.757748$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

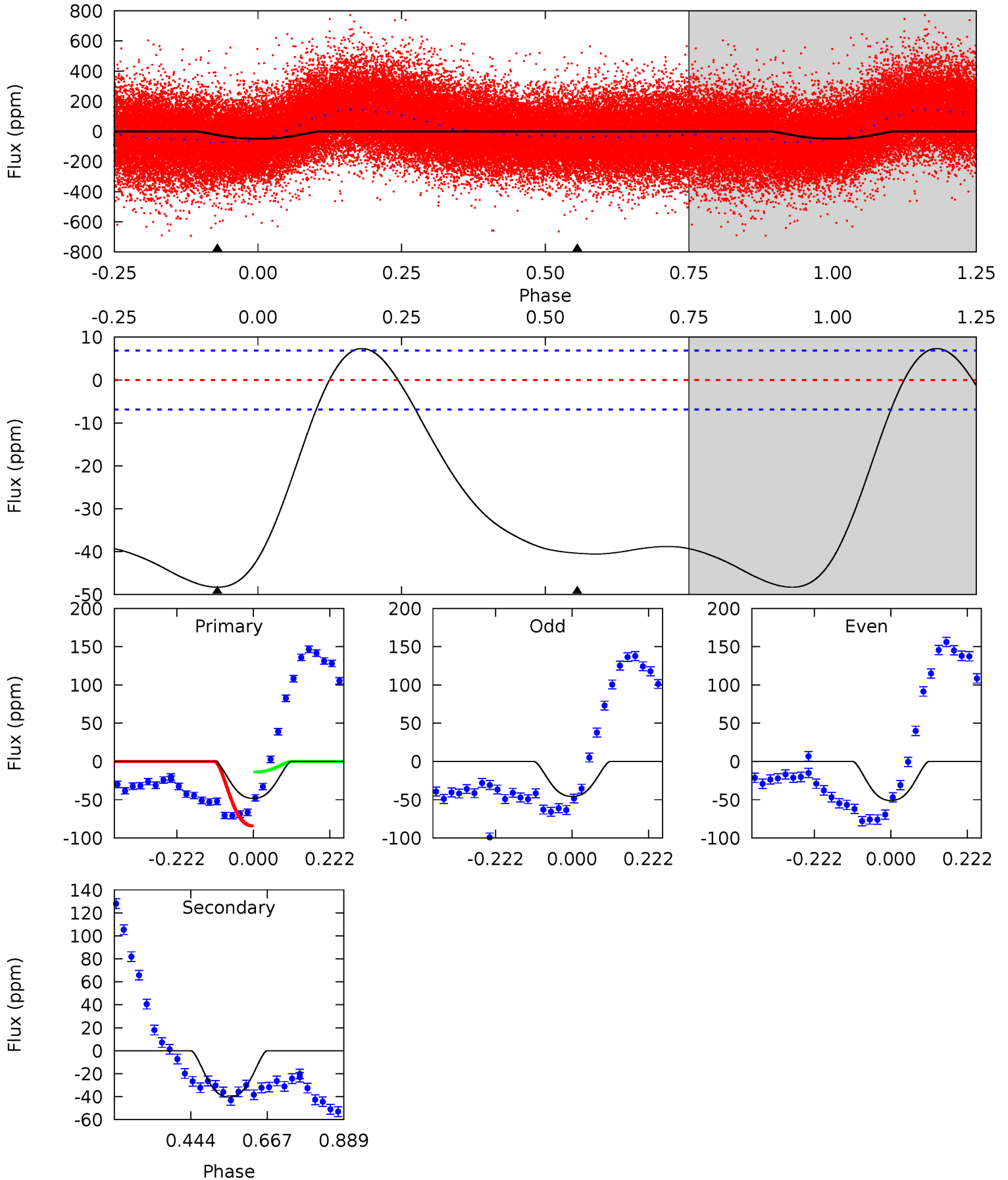
TCE 010129755-01 P= 8.103919 Days $T_0=135.813516$ (BKJD)



DV Model-Shift Uniqueness Test

010129755-01, P = 8.103503 Days, E = 127.654245 Days

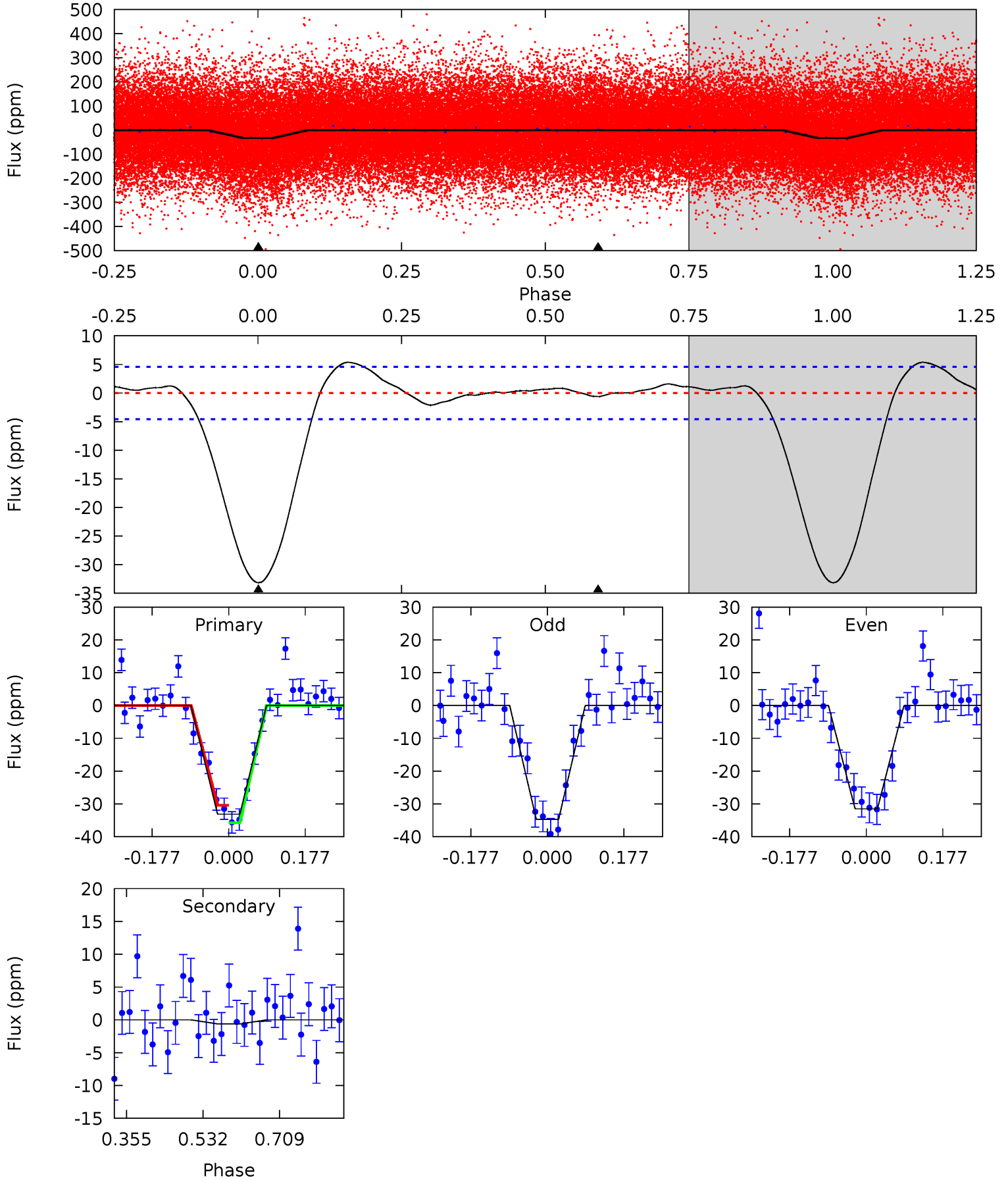
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|-----|-----|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 30.9 | 25.8 | 0 | 0 | 4.39 | 1.22 | 5.84 | 30.9 | 30.9 | 25.8 | 25.8 | 1.68 | 1.43 | 0.13 | 25.4 |



Alt Model-Shift Uniqueness Test

010129755-01, P = 8.103919 Days, E = 127.709597 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|-----|-----|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 32.1 | 0.60 | 0 | 0 | 4.44 | 1.35 | 1.64 | 32.1 | 32.1 | 0.60 | 0.60 | 1.57 | 1.02 | 0.14 | 2.58 |



Stellar Parameters For KIC 010129755

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | $R (R_{\odot})$ | $M(M_{\odot})$ | $p_{\star} (\text{g}\cdot\text{cm}^{-3})$ |
|--------|----------------------|---------------------------|----------------------------|---------------------------|---------------------------|---|
| | 6394^{+144}_{-176} | $4.352^{+0.077}_{-0.143}$ | $-0.160^{+0.250}_{-0.300}$ | $1.165^{+0.261}_{-0.140}$ | $1.110^{+0.139}_{-0.139}$ | $0.990^{+0.394}_{-0.388}$ |
| | +2%/-3% | +2%/-3% | +156%/-188% | +22%/-12% | +13%/-13% | +40%/-39% |
| Source | PHO1 | FLK73 | 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 010129755-01 / KOI

| Detrend | Depth (ppm) | $R_p (R_{\oplus})$ | $T_{max} (K)$ | $T_{obs} (K)$ | A_{obs} |
|---------|-------------|------------------------|--------------------|-----------------------|---------------------------|
| DV | -40 ± 2 | $1.22^{+0.20}_{-0.15}$ | 1496^{+86}_{-71} | 5251^{+266}_{-232} | 98^{+28}_{-22} |
| Alt. | -1 ± 1 | $0.75^{+0.15}_{-0.13}$ | 1497^{+78}_{-65} | 2909^{+616}_{-5861} | $3.372^{+8.326}_{-6.605}$ |

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 $A_{obs} \gg 1.0$

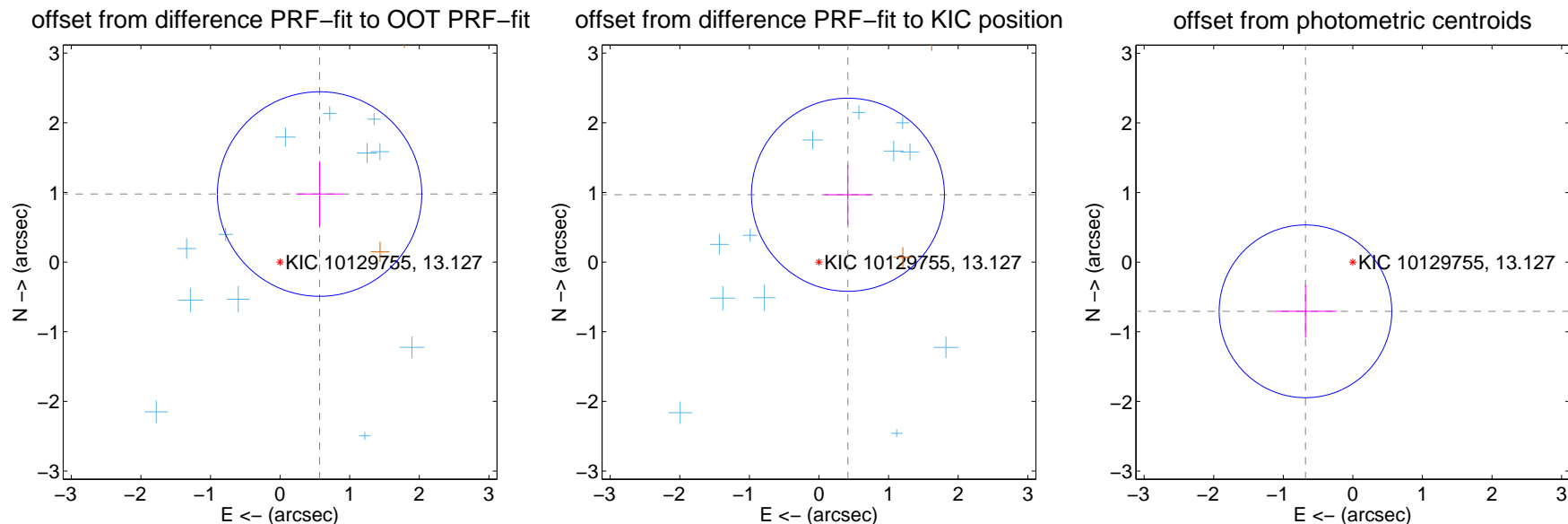
DV Centroid Data

Supplemental centroid analysis for 010129755-01. Kepler magnitude: 13.13. Transit SNR 11.33

There are 12 quarters with good PRF difference image offsets

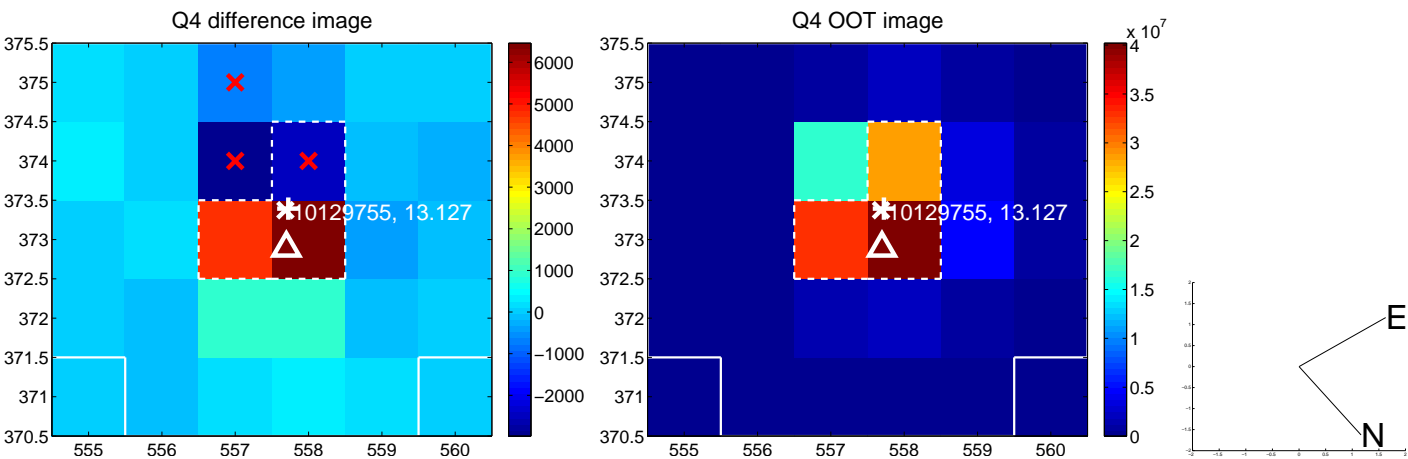
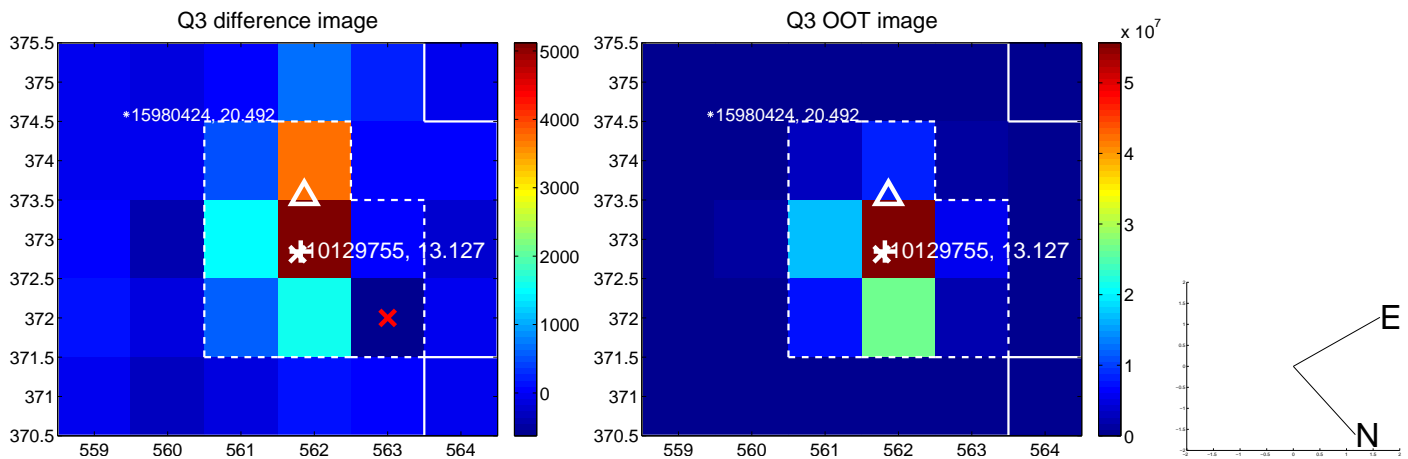
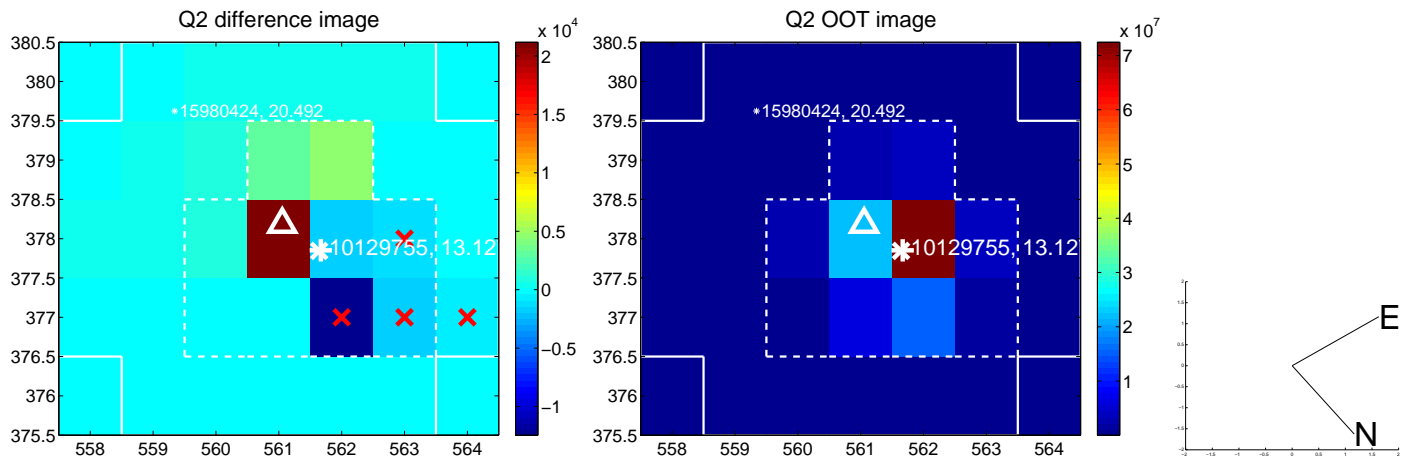
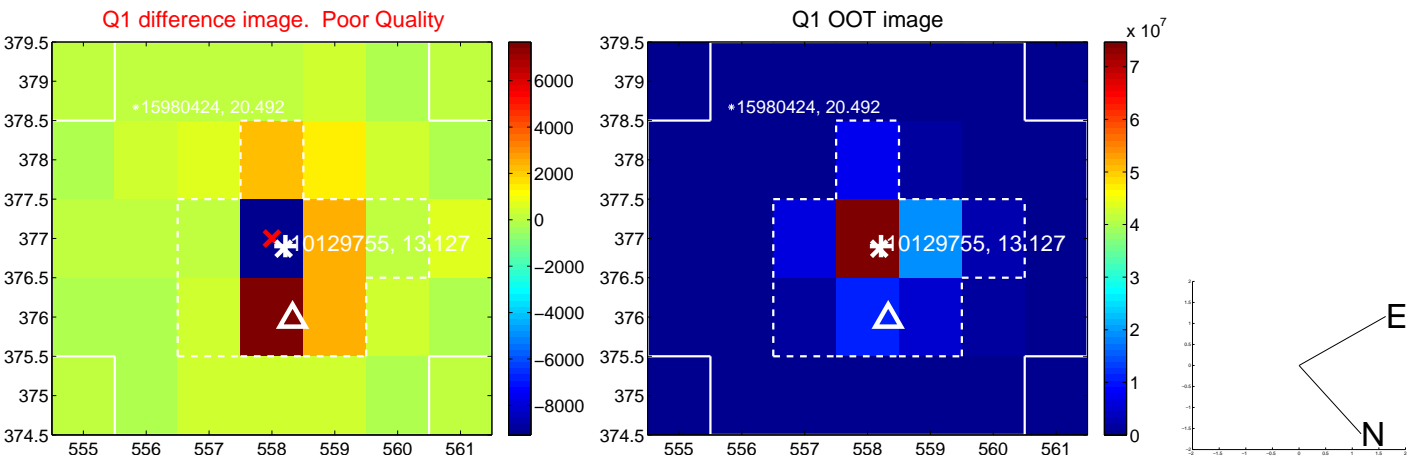
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|--------------------|-------------------|
| PRF-fit source offset from OOT | 1.130 ± 0.489 | 2.31 | -0.567 ± 0.335 | 0.977 ± 0.463 |
| PRF-fit source offset from KIC position | 1.052 ± 0.462 | 2.28 | -0.416 ± 0.338 | 0.967 ± 0.428 |
| photometric centroid source offset | 0.98 ± 0.41 | 2.37 | 0.68 ± 0.45 | -0.71 ± 0.38 |

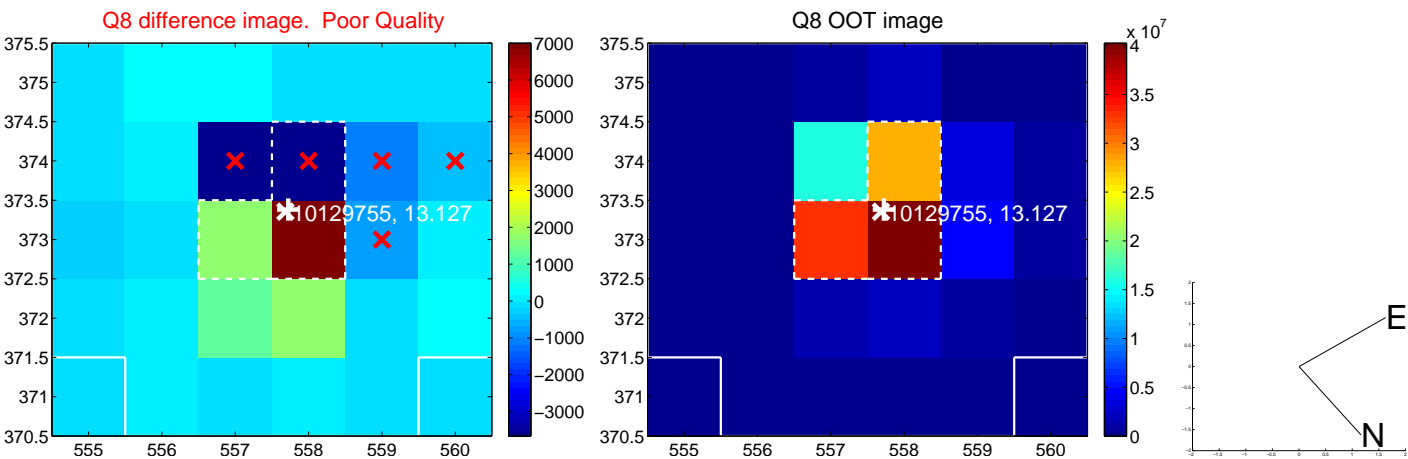
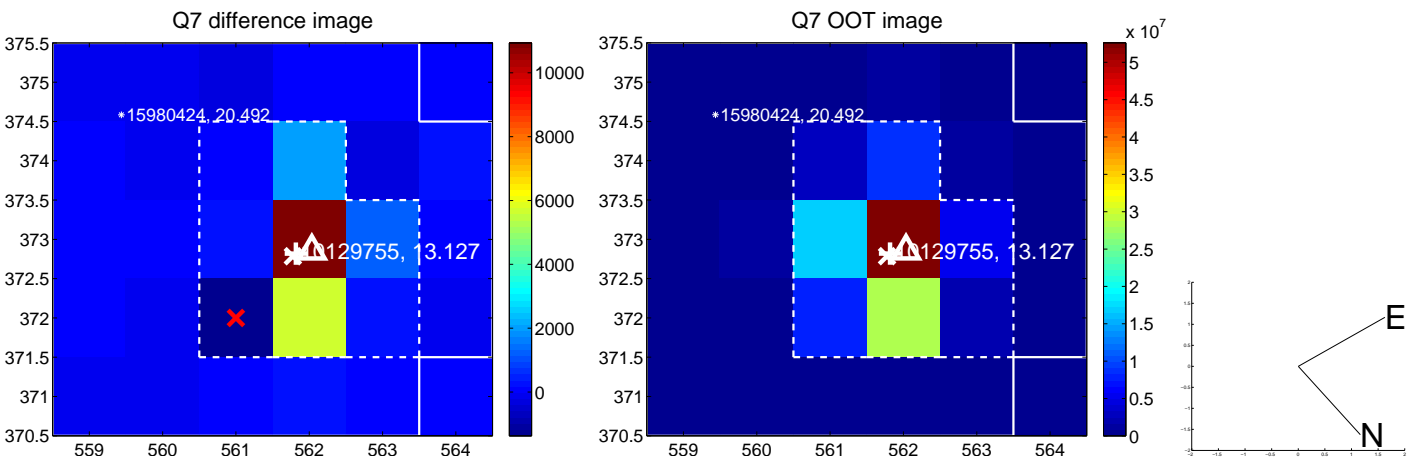
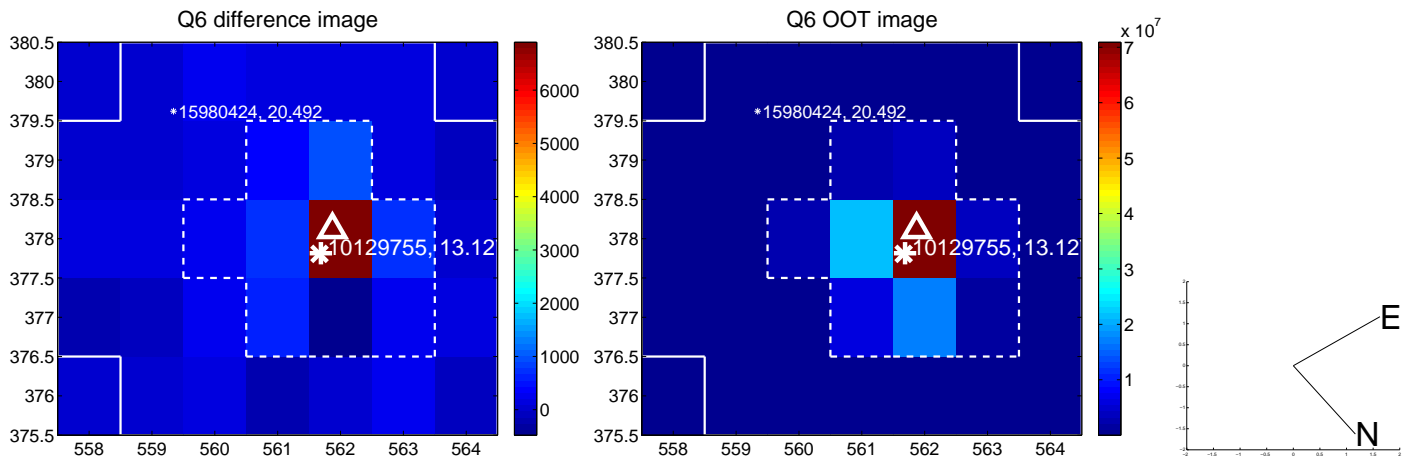
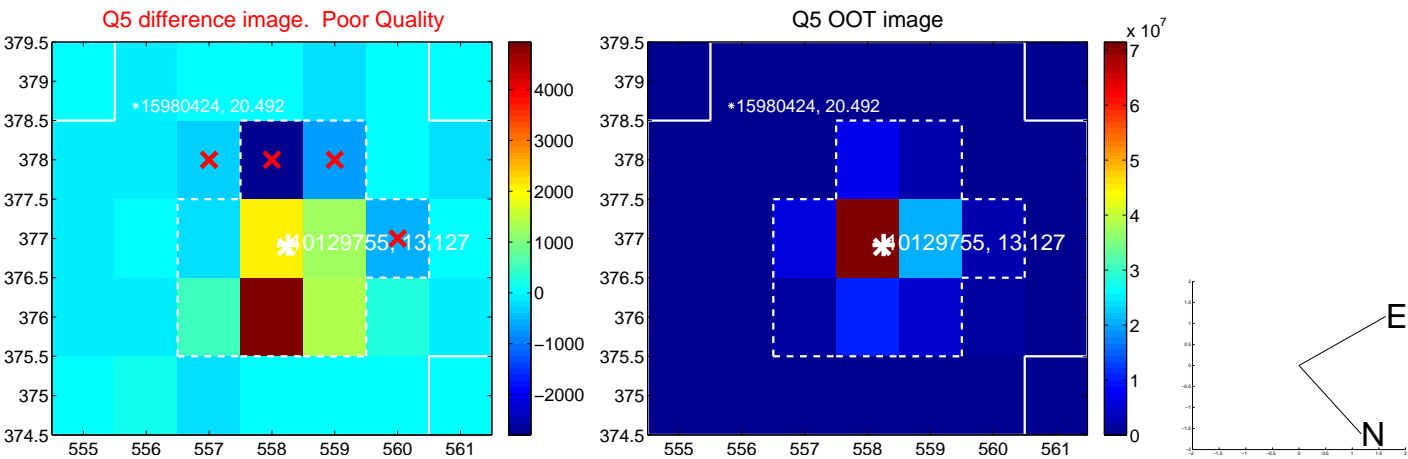


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

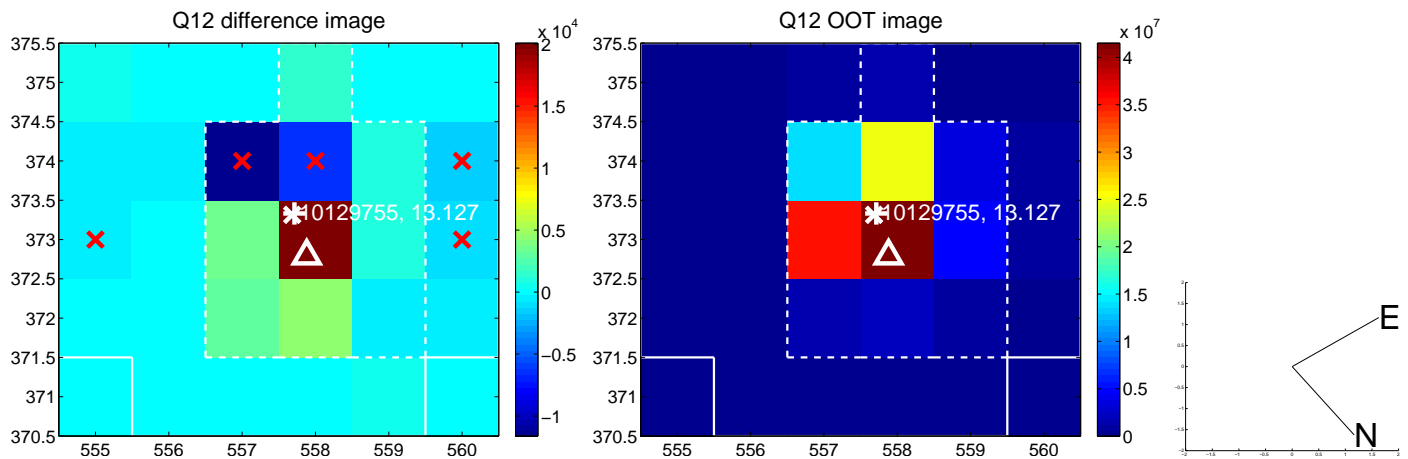
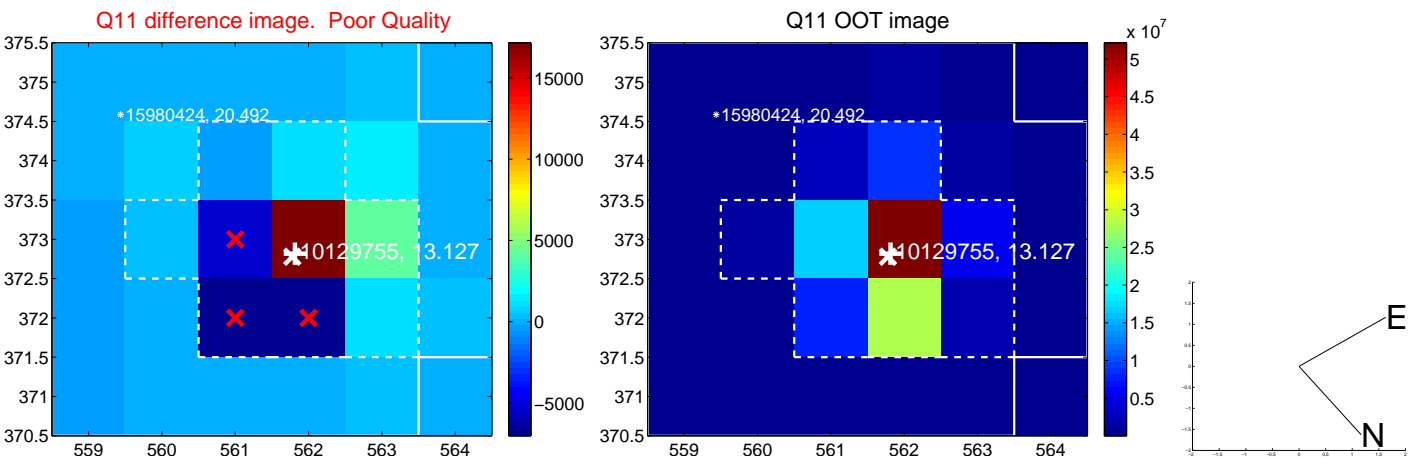
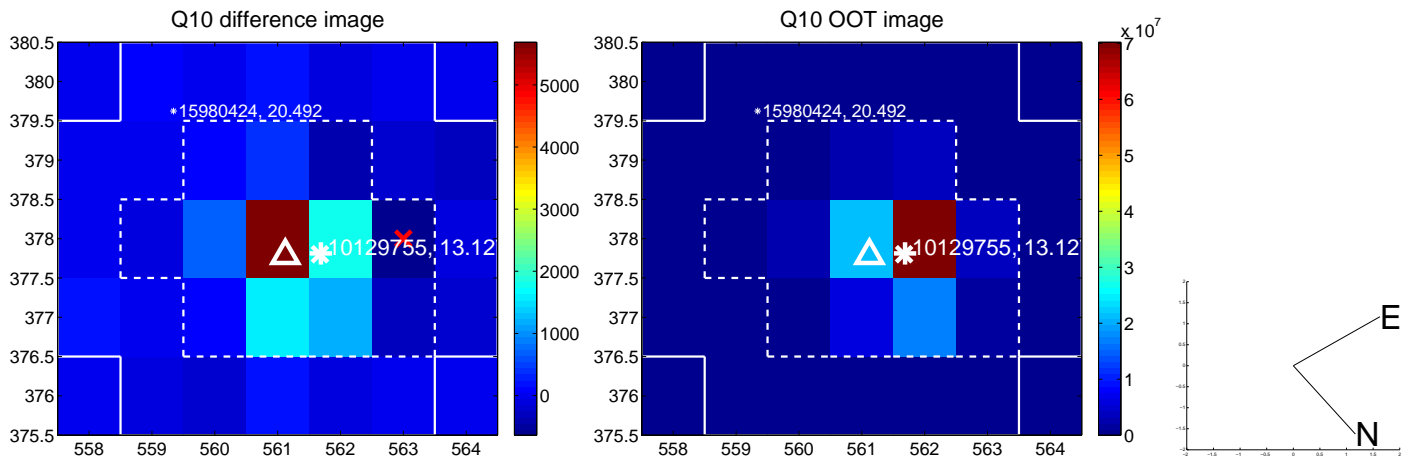
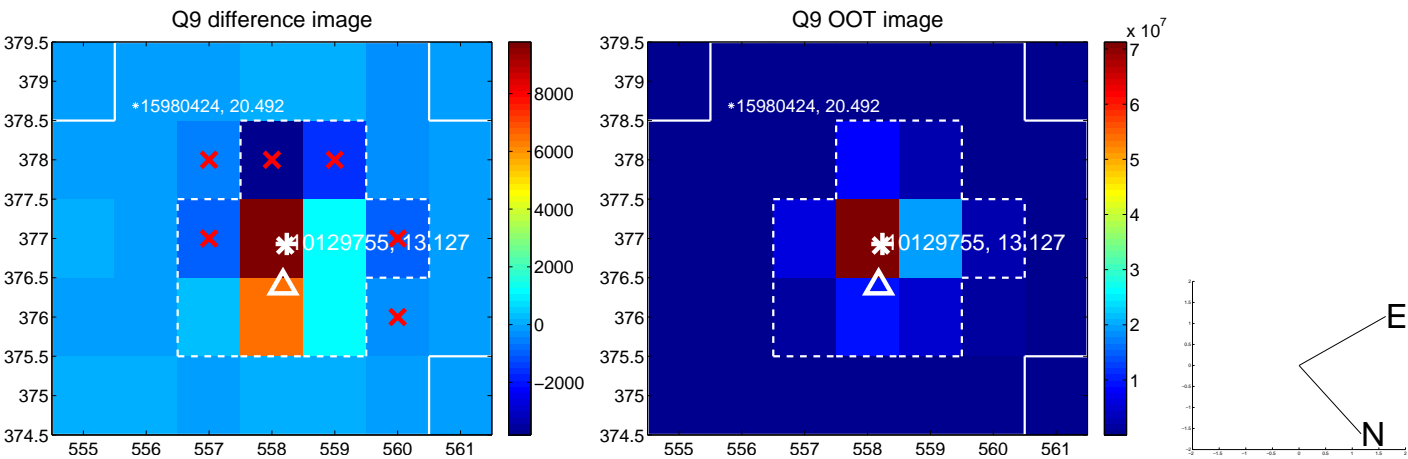
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



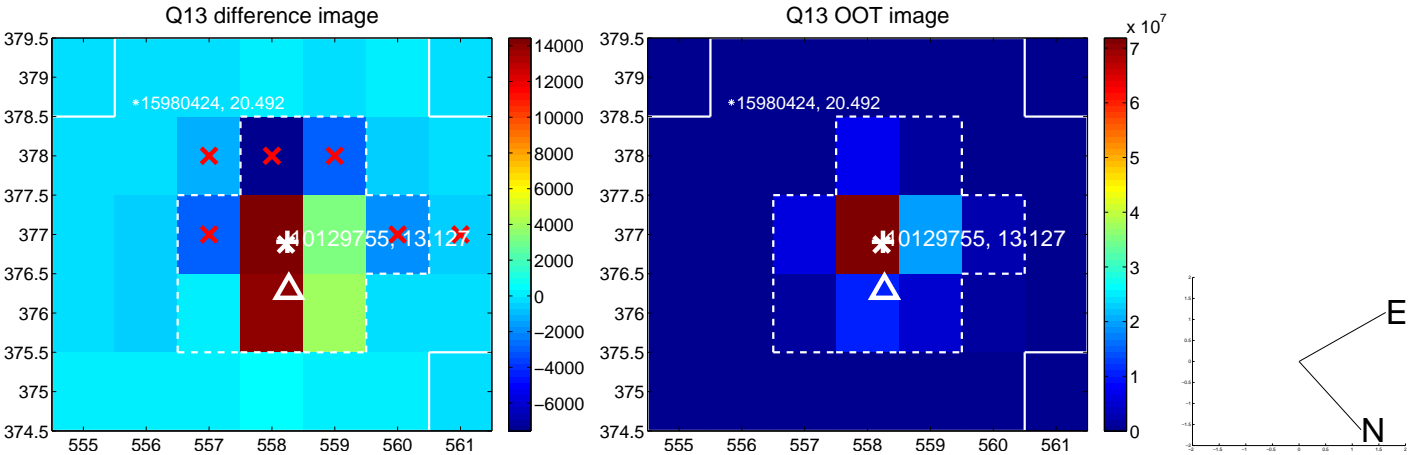
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



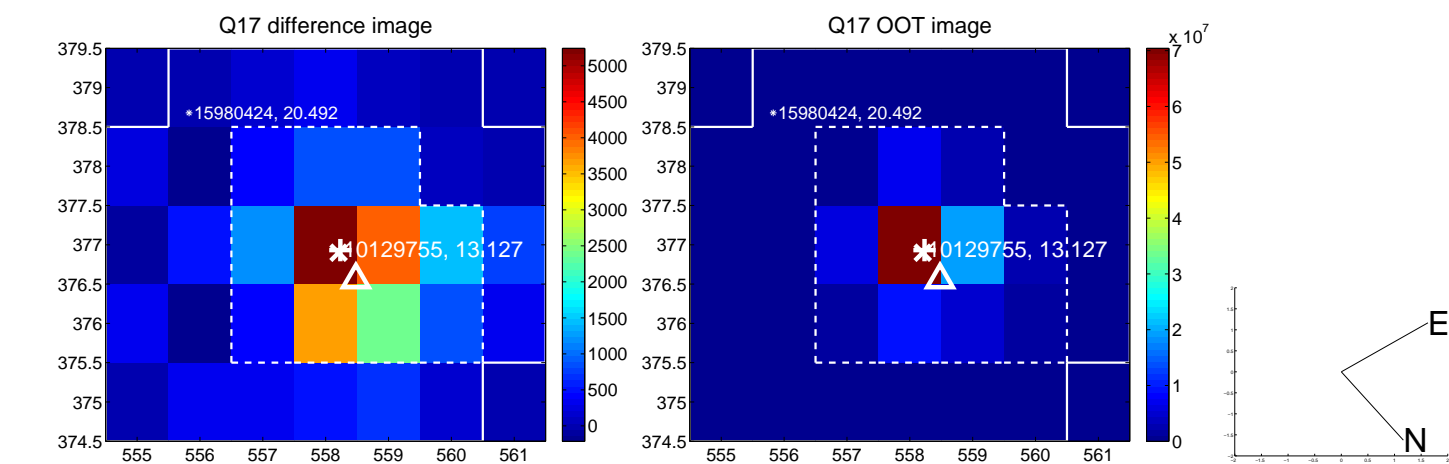
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



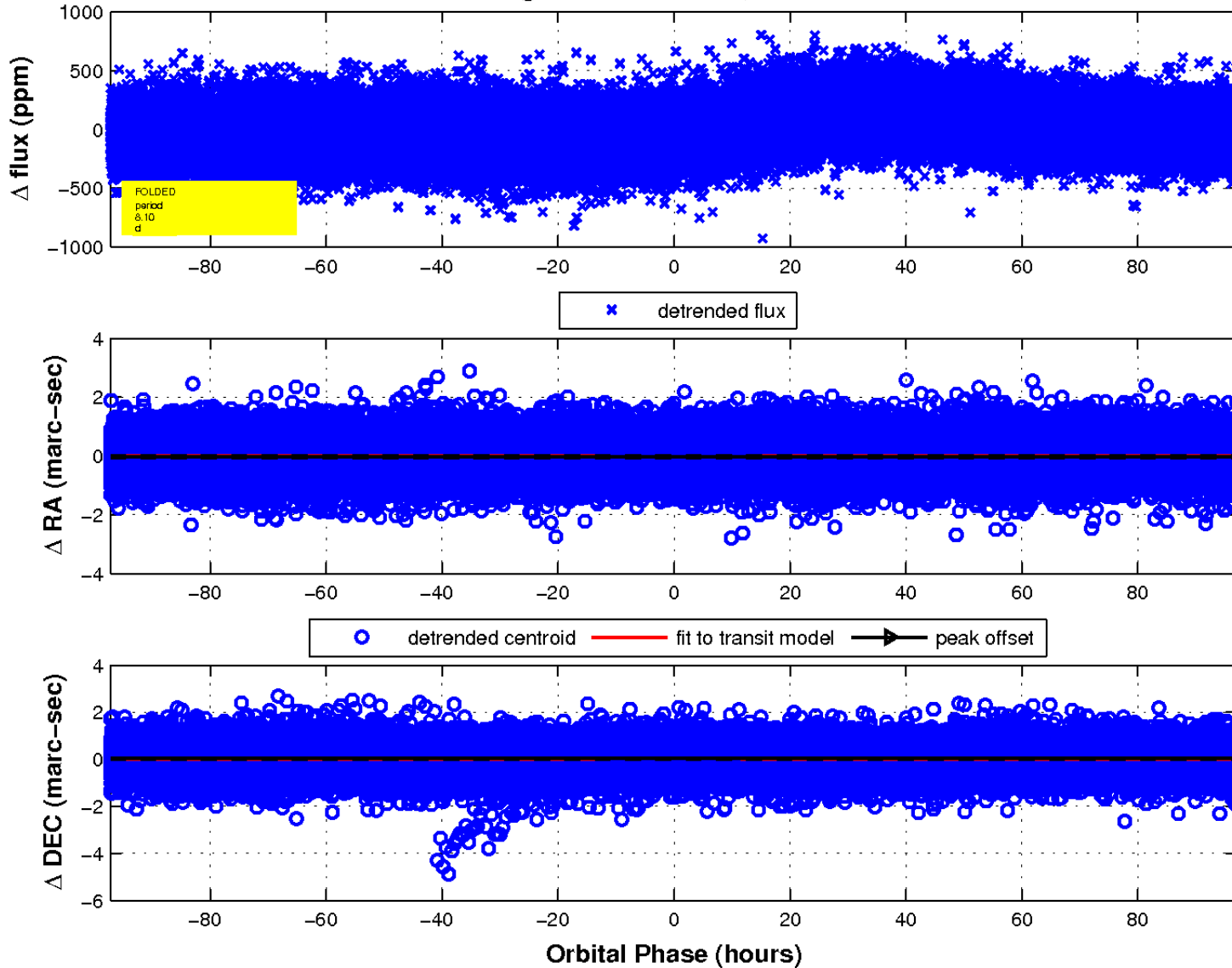
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

