

KIC 004067110

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}) |
|--------------|----------|---------|---------------|--------------|-------------|------------------|------|-----|-----------------------------|-----------------|------------------------|------------------------|
| 004067110-01 | OBS | 4026.01 | 0.735105 | 132.237124 | 2.5 | 6.106 | 17.1 | 1.3 | 7.43 | 6611 | 1.17 | 0.00 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|-----------------------------|
| 004067110-01 | OBS | FP | 0.00 | 1 | 0 | 1 | 0 | LPP_DV—CENT_RESOLVED_OFFSET |

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.

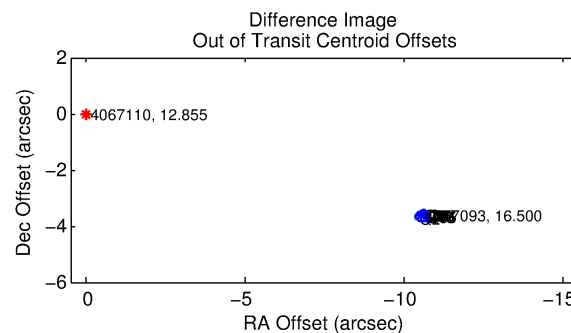
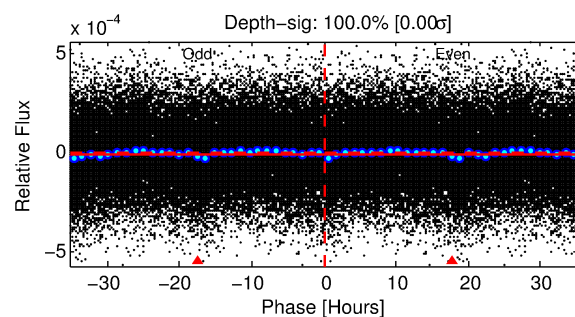
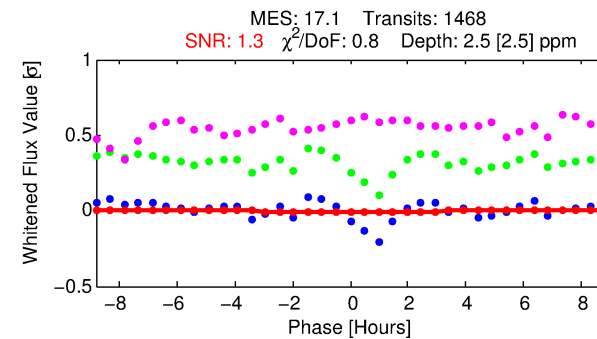
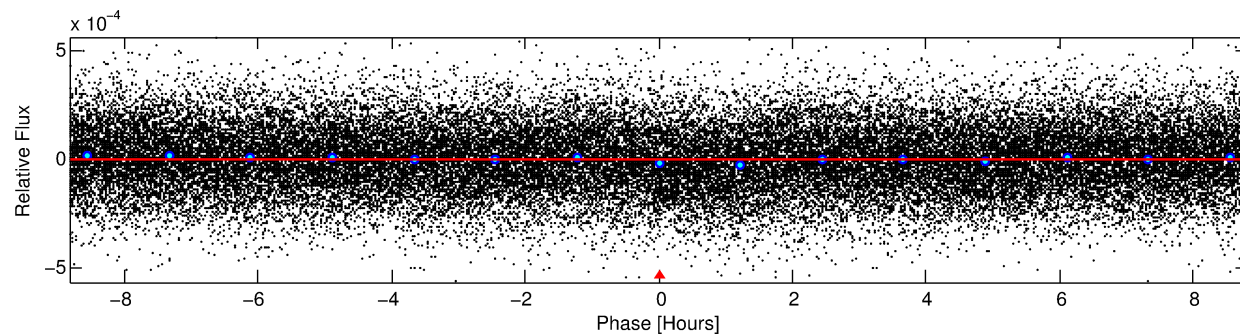
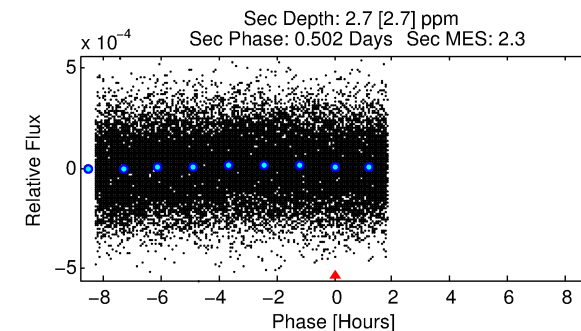
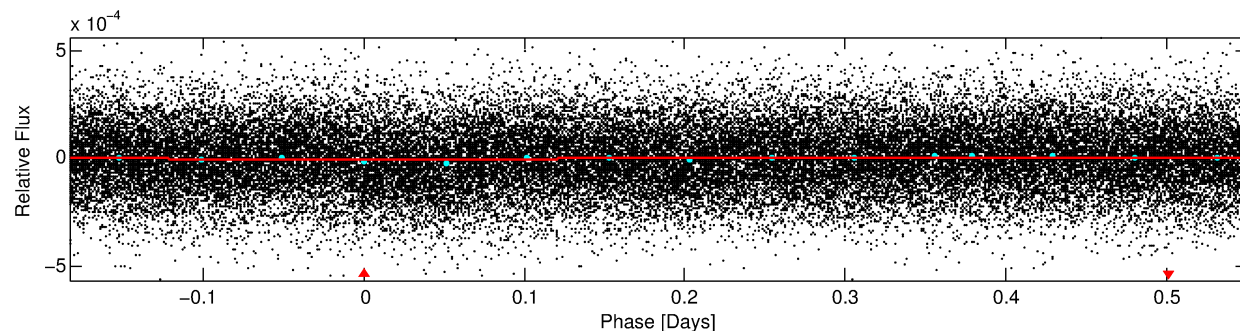
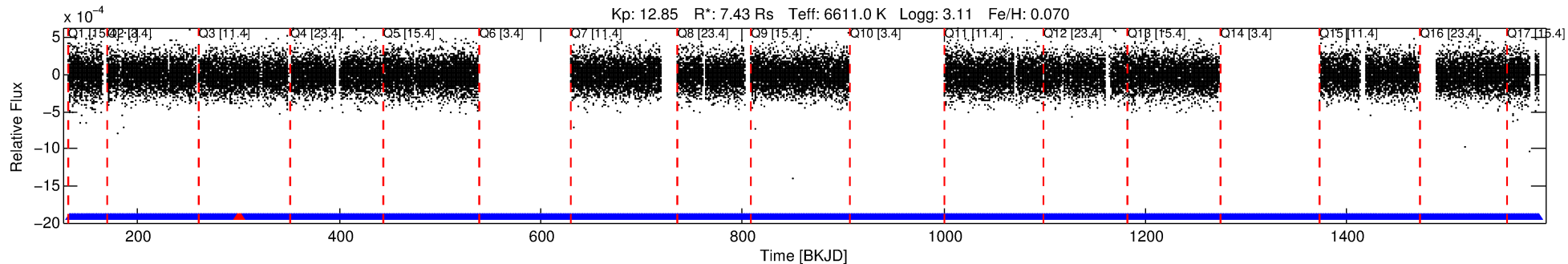
Ephemeris Match Information For 004067110-01

No Significant Match Found

DV One-Page Summary

KIC: 4067110 Candidate: 1 of 1 Period: 0.735 d
KOI: K04026.01 Corr: 0.830

Kp: 12.85 R*: 7.43 Rs Teff: 6611.0 K Logg: 3.11 Fe/H: 0.070



DV Fit Results:

Period = 0.73510 [0.00010] d
Epoch = 132.2371 [0.0329] BKJD
Rp/R* = 0.0014 [0.0067]
a/R* = 1.13 [6.15]
b = 0.10 [250.91]
Seff = N/A
Teq = N/A
Rp = 1.17 [5.49] Re
a = N/A
Ag = N/A
Teff = N/A

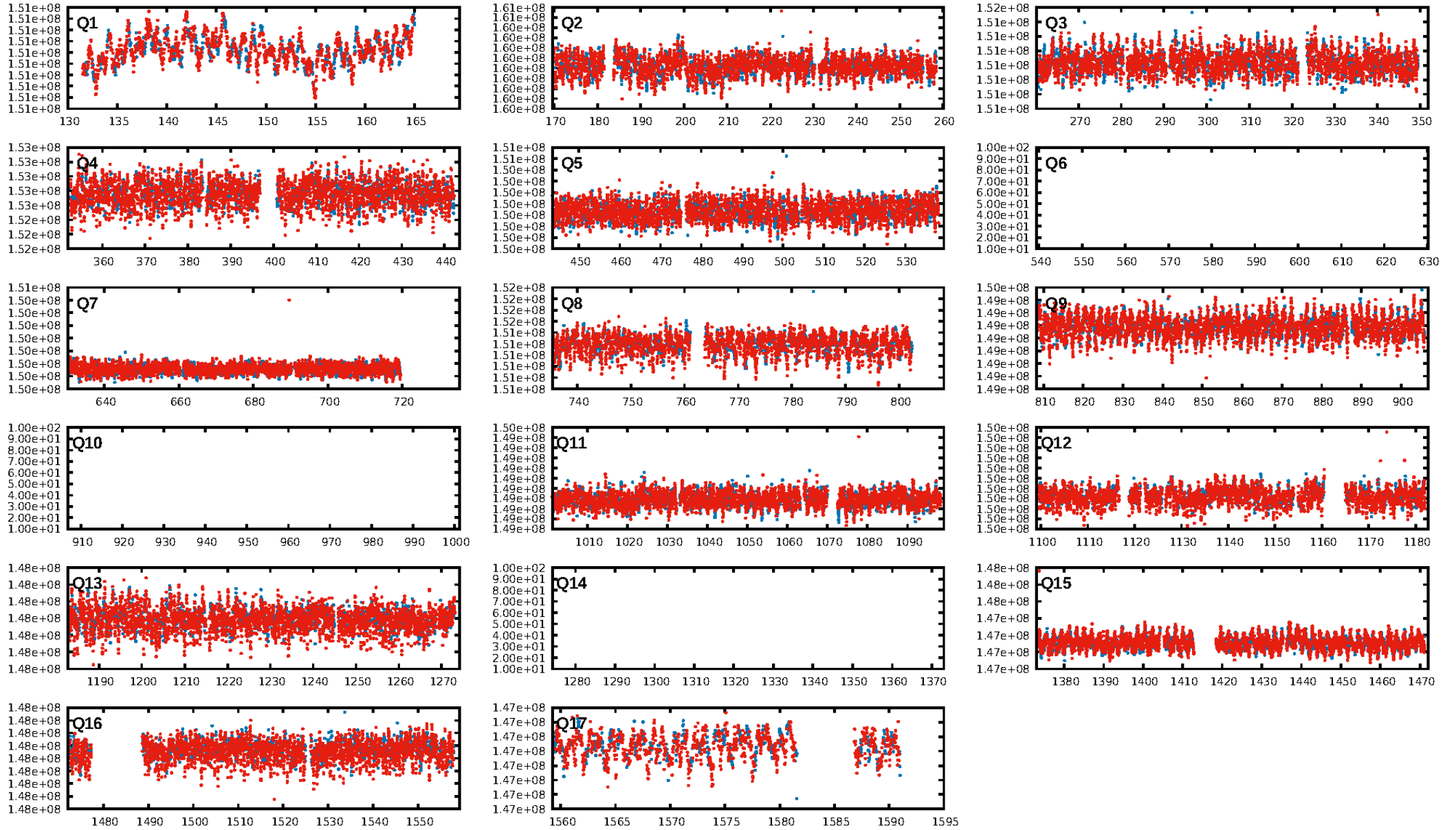
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1380/1386]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 11.190 arcsec [163.72σ]
KicOffset-rm: 11.082 arcsec [162.42σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

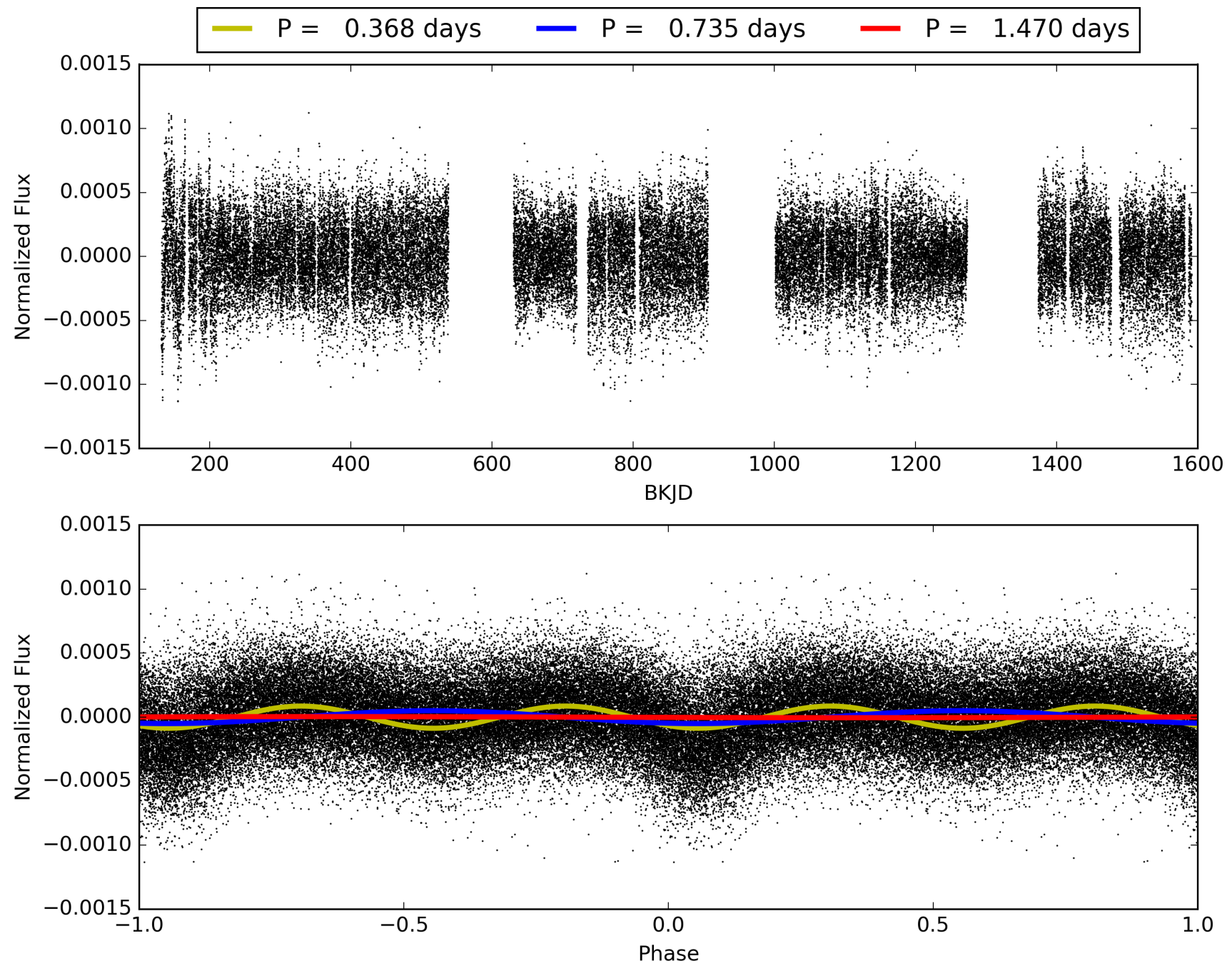
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:52:31 Z

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

TCE 004067110-01, PDC Light Curves

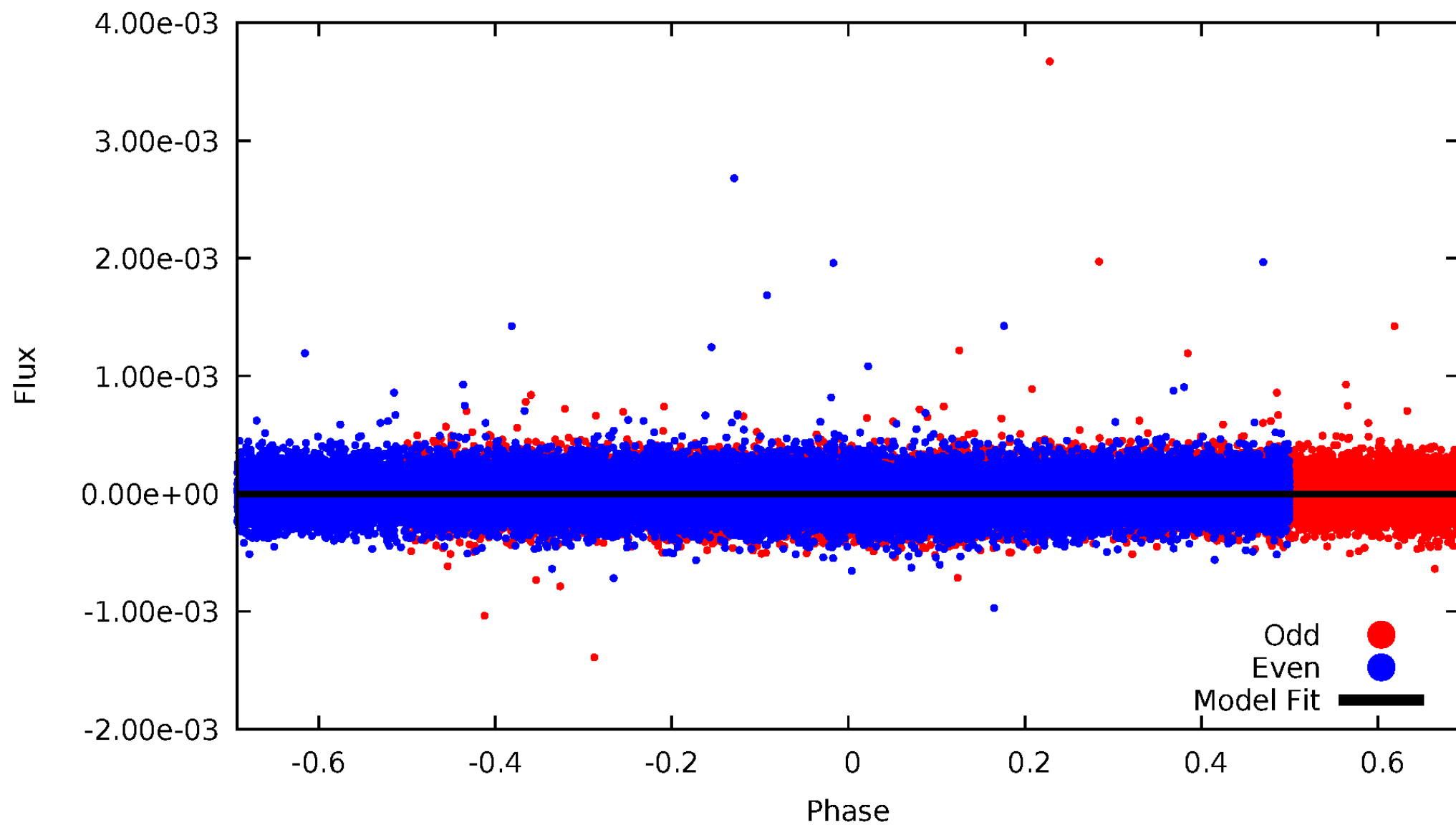


TCE 004067110-01



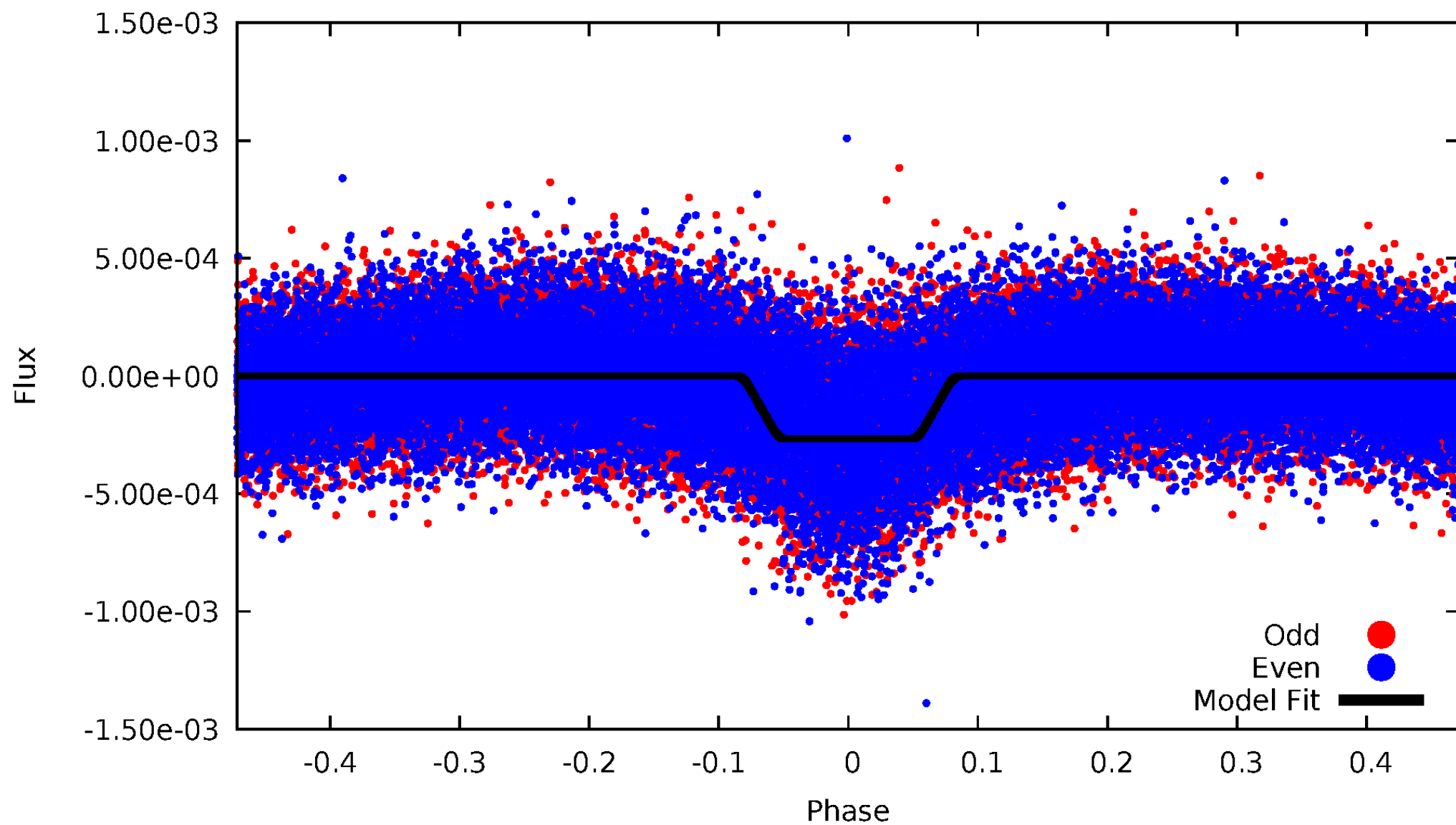
DV Odd/Even

TCE 004067110-01



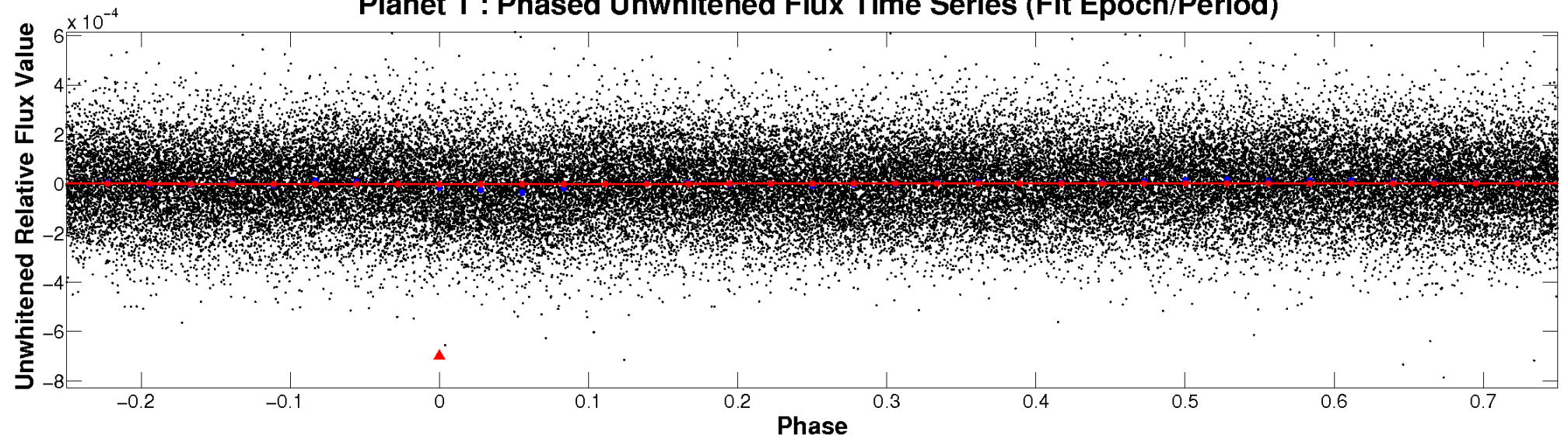
ALT Odd/Even

TCE 004067110-01

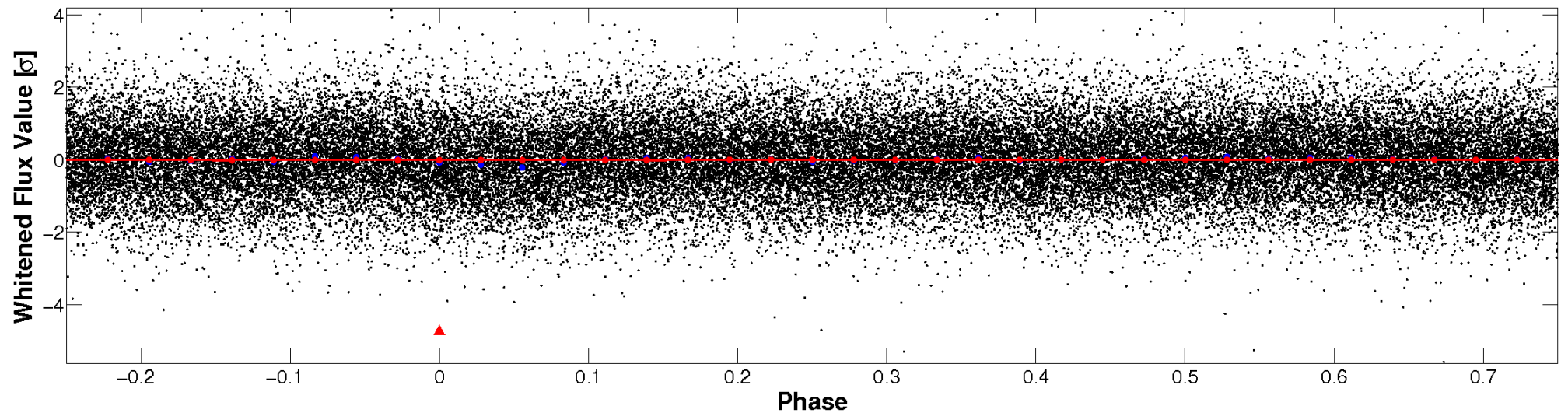


Non-Whitened Vs. Whitened Light Curve

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

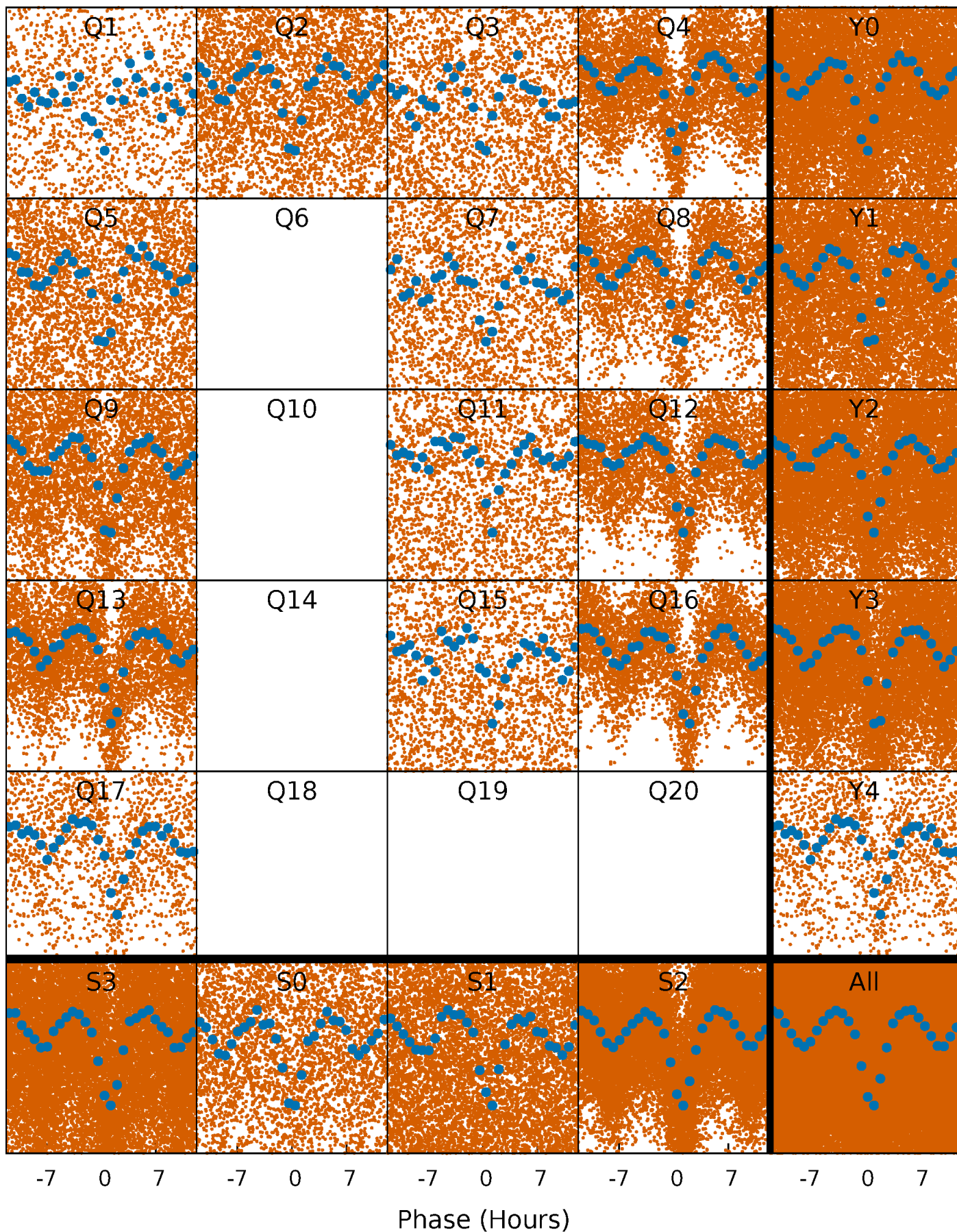


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



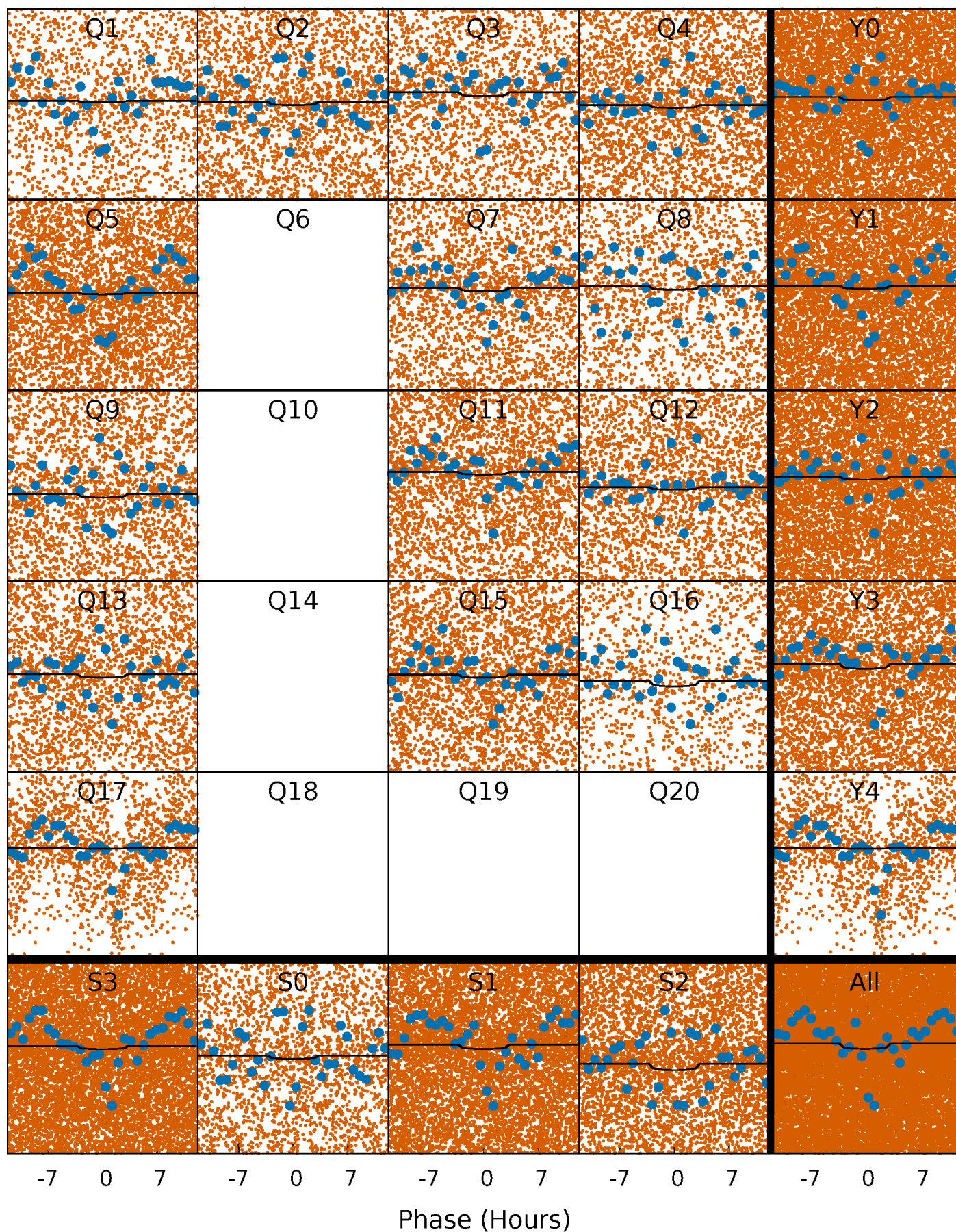
PDC Quarter-Phased Transit Curves

TCE 004067110-01 P= 0.735105 Days $T_0=132.237124$ (BKJD)



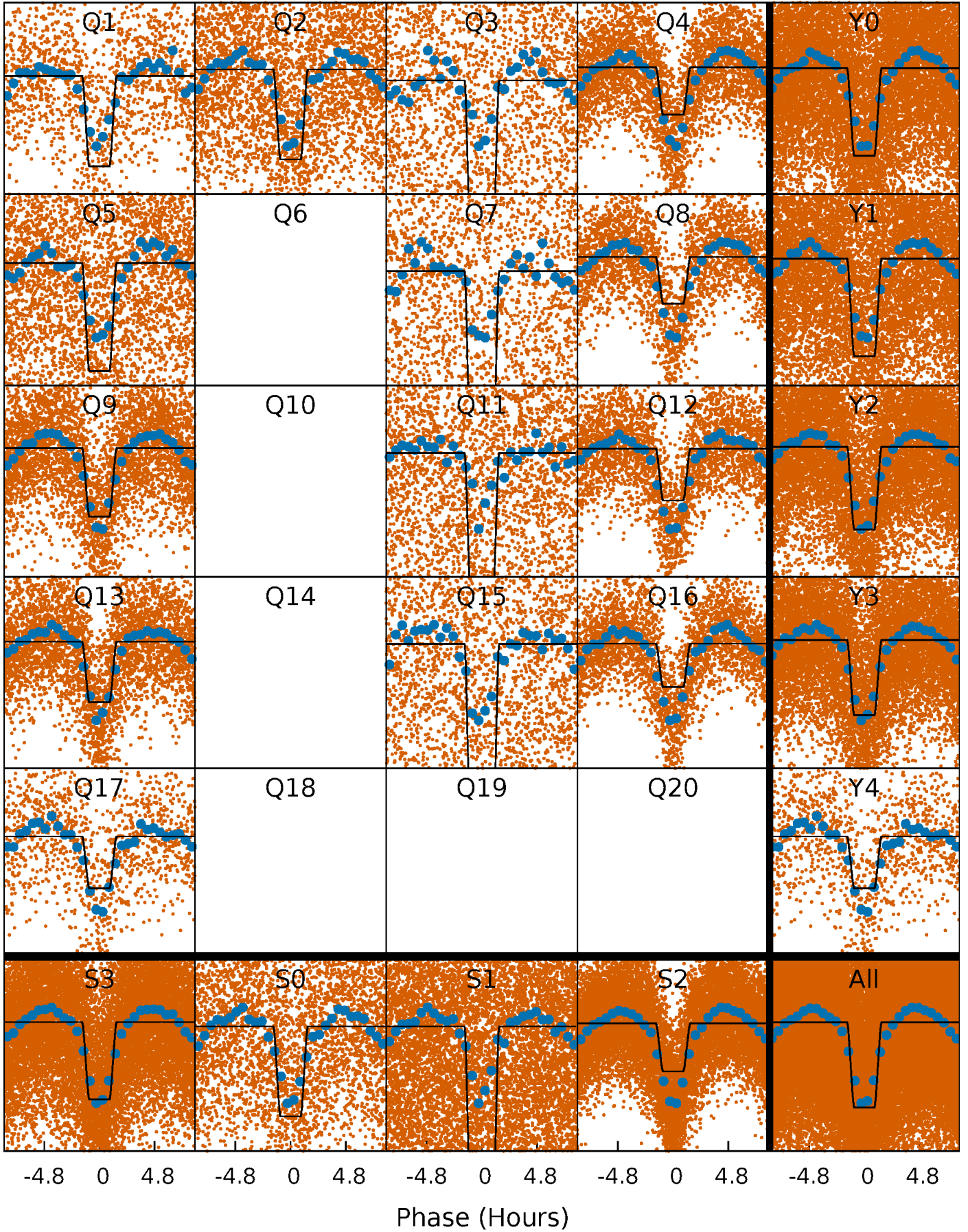
DV Quarter-Phased Transit Curves

TCE 004067110-01 P= 0.735105 Days $T_0=132.237124$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

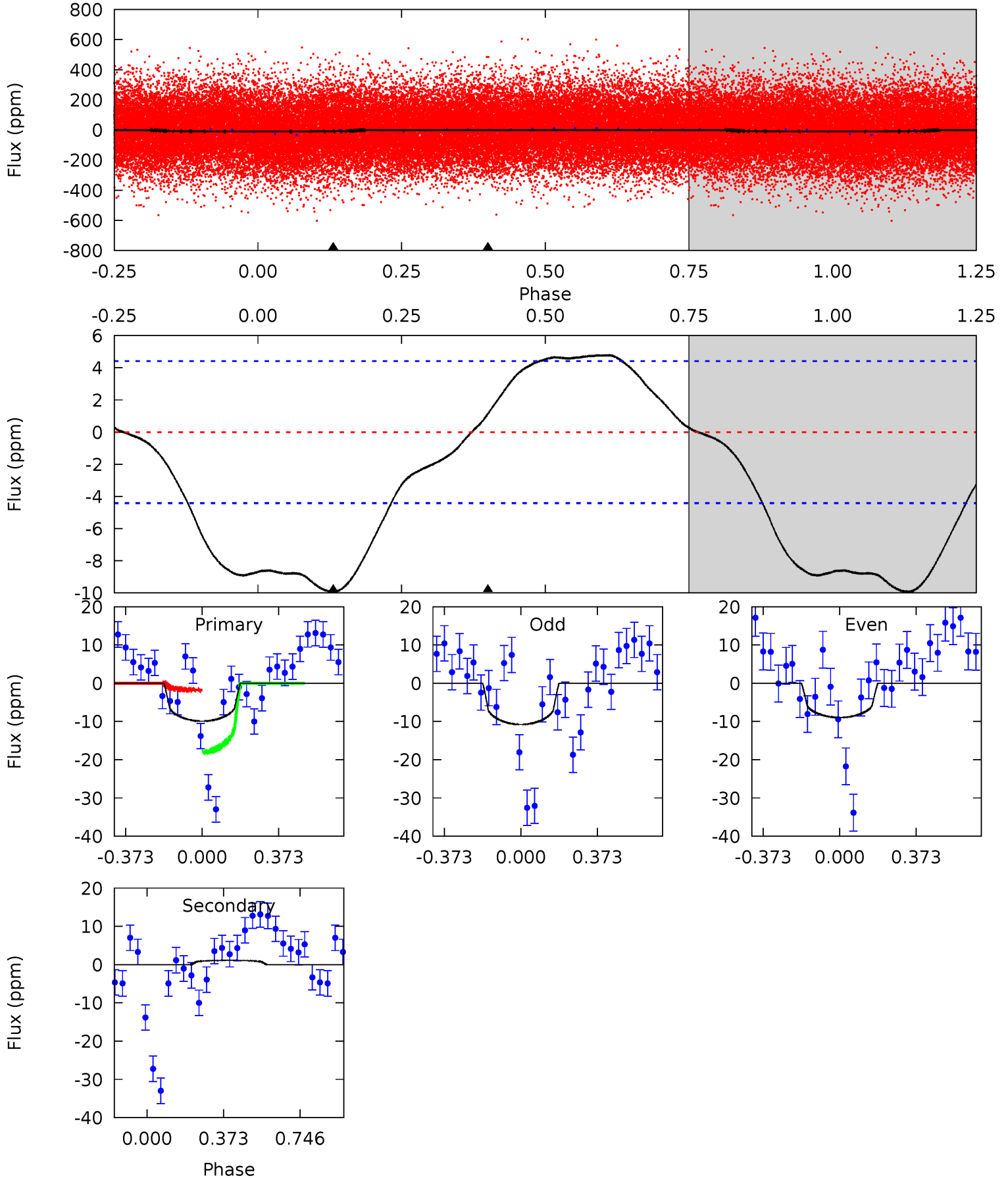
TCE 004067110-01 P= 0.735148 Days $T_0=132.232969$ (BKJD)



DV Model-Shift Uniqueness Test

004067110-01, P = 0.735105 Days, E = 131.502019 Days

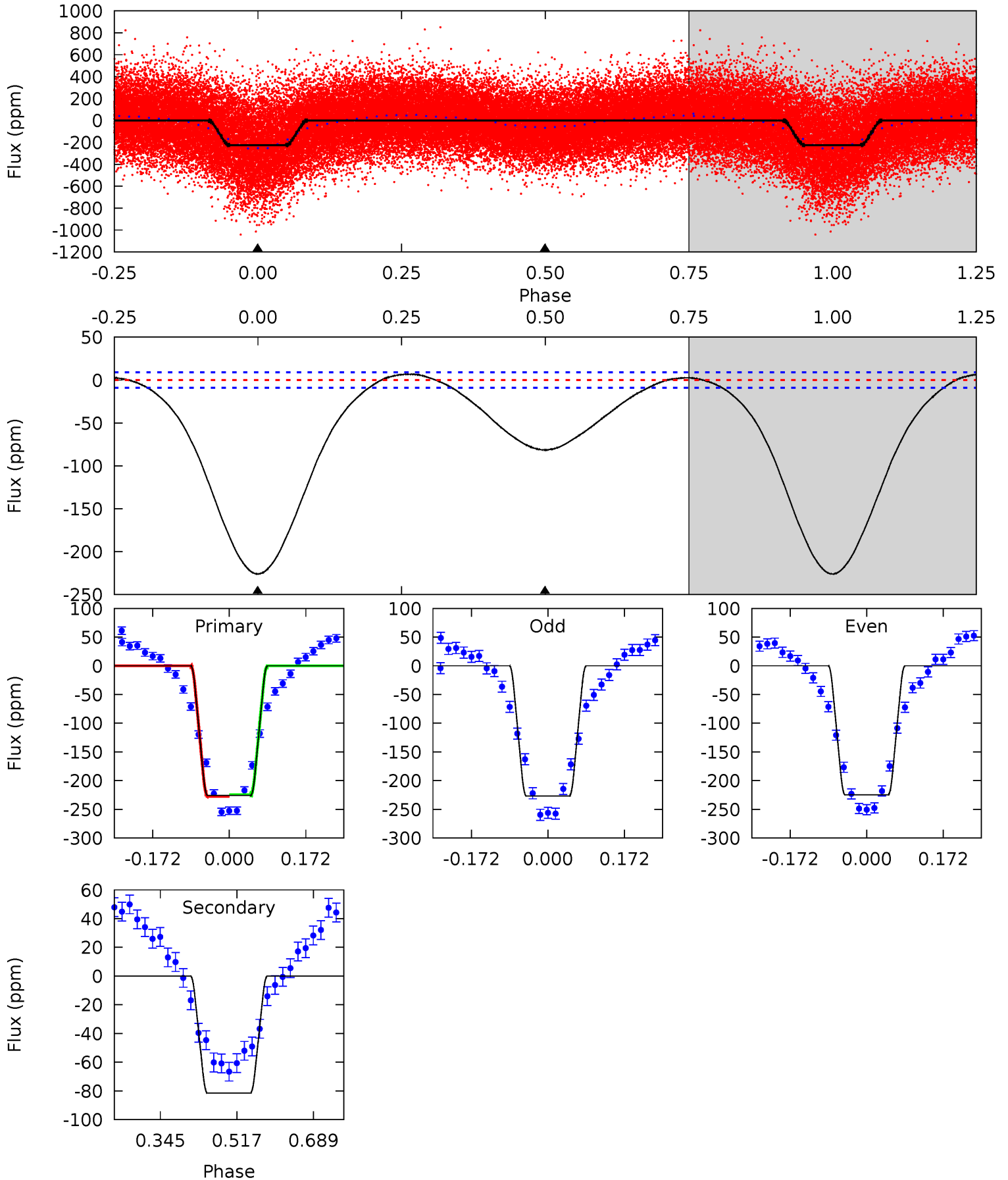
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|-------|-----|-----|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 9.63 | -1.09 | 0 | 0 | 4.28 | 0.89 | 0.57 | 9.63 | 9.63 | -1.09 | -1.09 | 0.87 | 0.93 | 0.33 | 7.67 |



Alt Model-Shift Uniqueness Test

004067110-01, P = 0.735148 Days, E = 131.497821 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|-------|------|-----|-----|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 111.8 | 40.3 | 0 | 0 | 4.45 | 1.36 | 3.24 | 111.8 | 111.8 | 40.3 | 40.3 | 0.51 | 0.97 | 0.03 | 0.68 |



Stellar Parameters For KIC 004067110

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | R (R_{\odot}) | $M(M_{\odot})$ | p_{\star} ($\text{g}\cdot\text{cm}^{-3}$) |
|--------|----------------------|---------------------------|---------------------------|---------------------------|---------------------------|-----------------------------------------------|
| | 6611^{+180}_{-180} | $3.112^{+0.536}_{-0.134}$ | $0.070^{+0.250}_{-0.250}$ | $7.435^{+1.714}_{-4.285}$ | $2.610^{+0.256}_{-0.768}$ | $0.009^{+0.061}_{-0.004}$ |
| | +3%/-3% | +17%/-4% | +357%/-357% | +23%/-58% | +10%/-29% | +681%/-41% |
| 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 004067110-01 / KOI 4026.01

| Detrend | Depth (ppm) | R_p (R_{\oplus}) | T_{max} (K) | T_{obs} (K) | A_{obs} |
|---------|-------------|-------------------------|-----------------------|------------------------|----------------------------|
| DV | 1 ± 1 | $3.63^{+3.96}_{-2.60}$ | 7344^{+586}_{-978} | -6174^{+786}_{-771} | $-0.016^{+0.015}_{-0.189}$ |
| Alt. | -81 ± 2 | $11.53^{+6.67}_{-4.90}$ | 7321^{+611}_{-1038} | -4881^{+9623}_{-989} | $0.155^{+0.306}_{-0.088}$ |

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

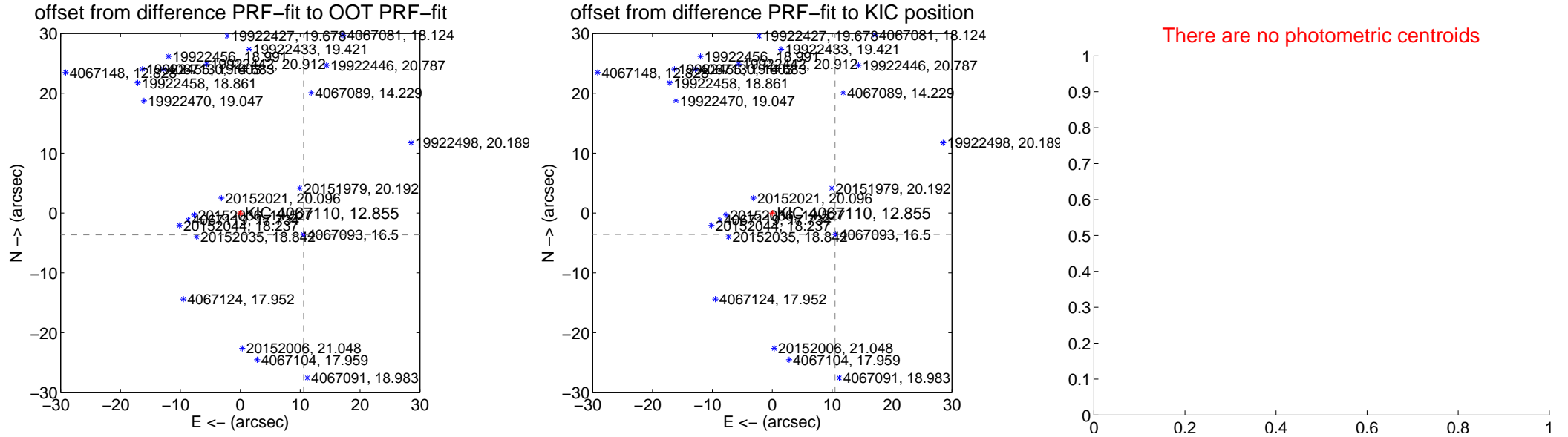
DV Centroid Data

Supplemental centroid analysis for 004067110-01. Kepler magnitude: 12.86. Transit SNR 1.29

There are 14 quarters with good PRF difference image offsets

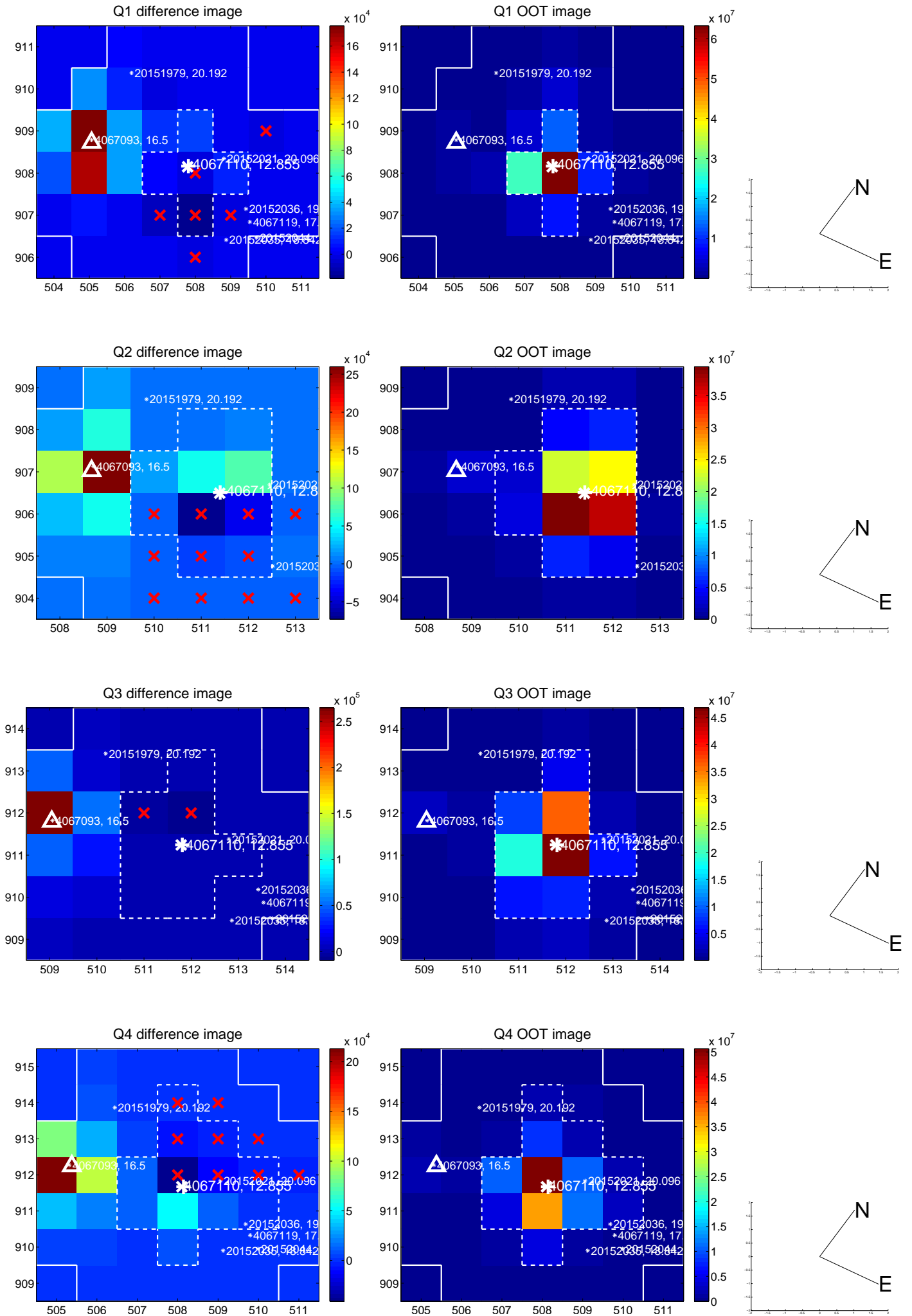
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|-----------------------------------------|--------------------|---------------------|---------------------|--------------------|
| PRF-fit source offset from OOT | 11.190 \pm 0.068 | 163.72 | -10.574 \pm 0.069 | -3.660 \pm 0.068 |
| PRF-fit source offset from KIC position | 11.082 \pm 0.068 | 162.42 | -10.488 \pm 0.068 | -3.581 \pm 0.068 |
| photometric centroid source offset | — | — | — | — |

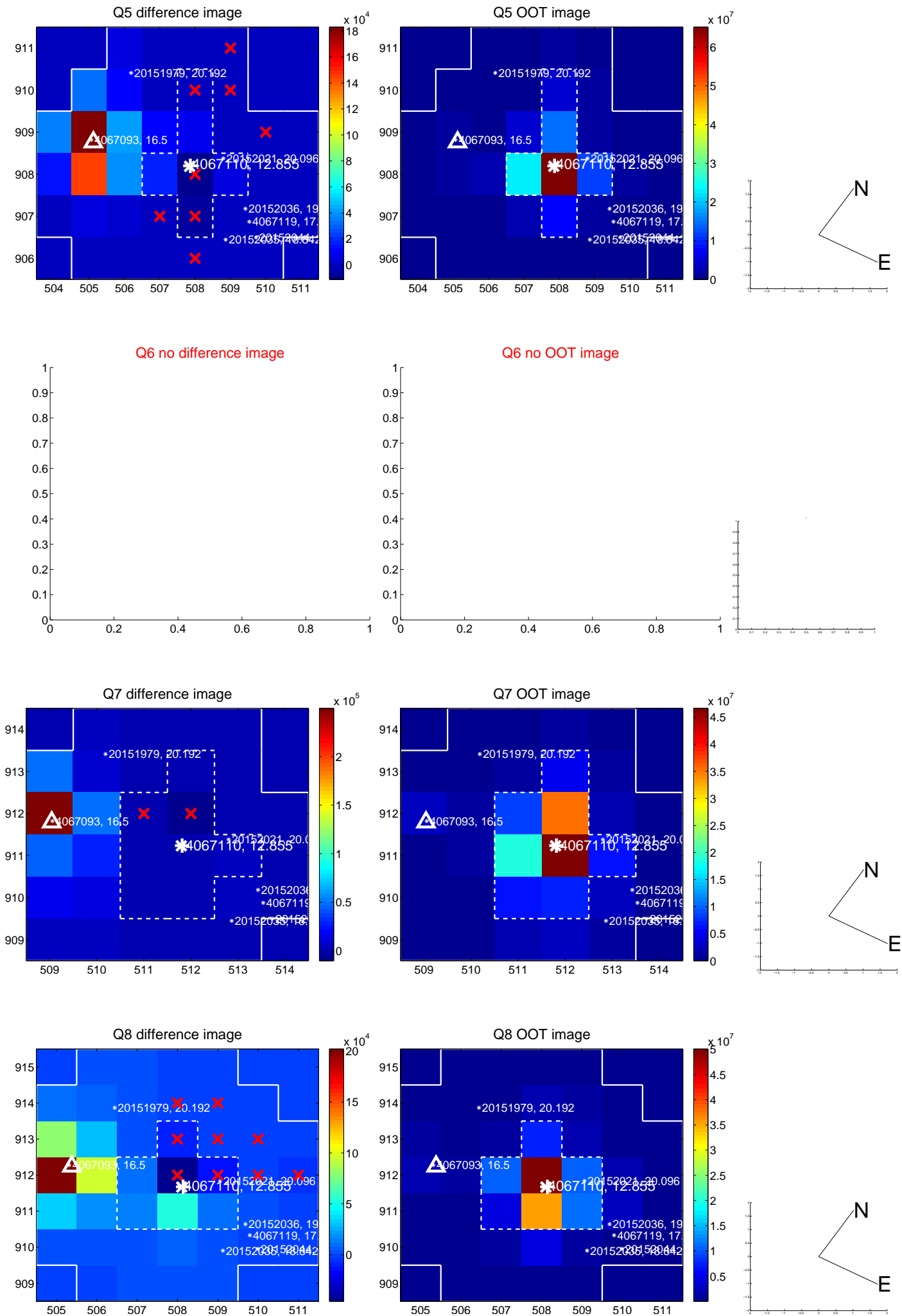


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

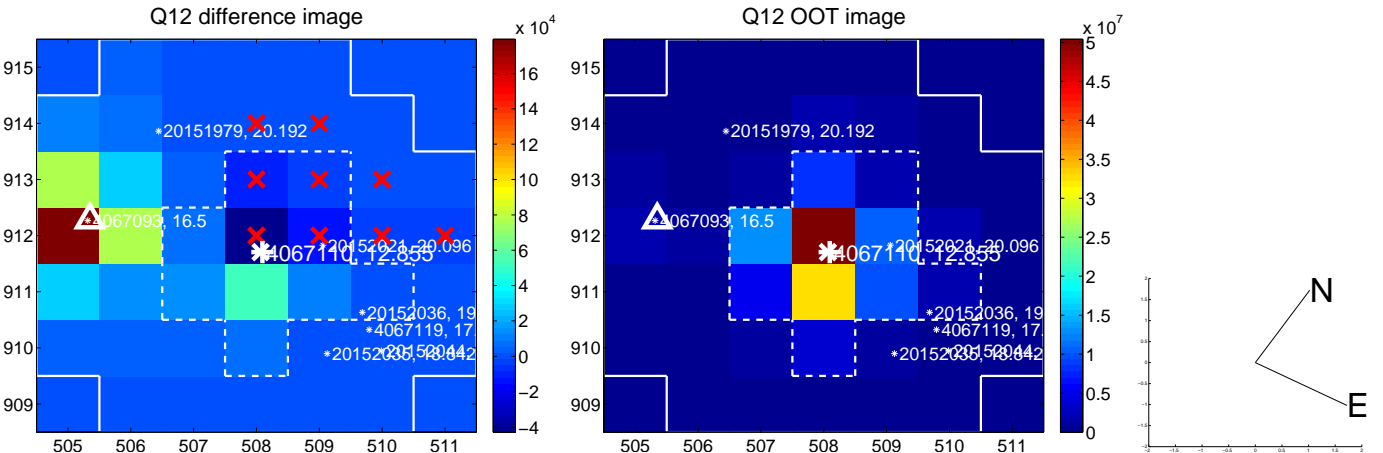
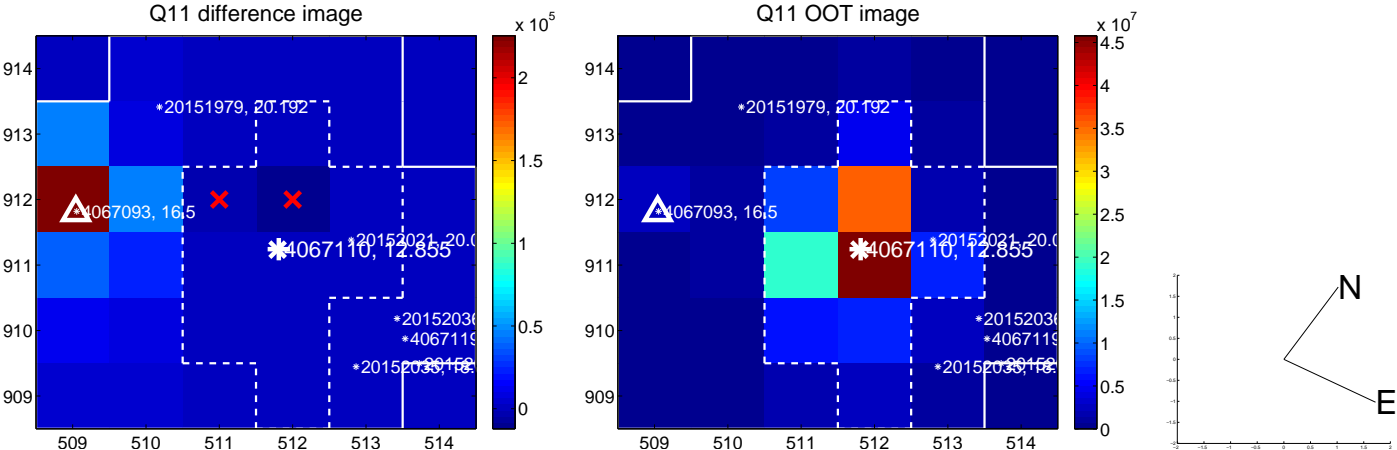
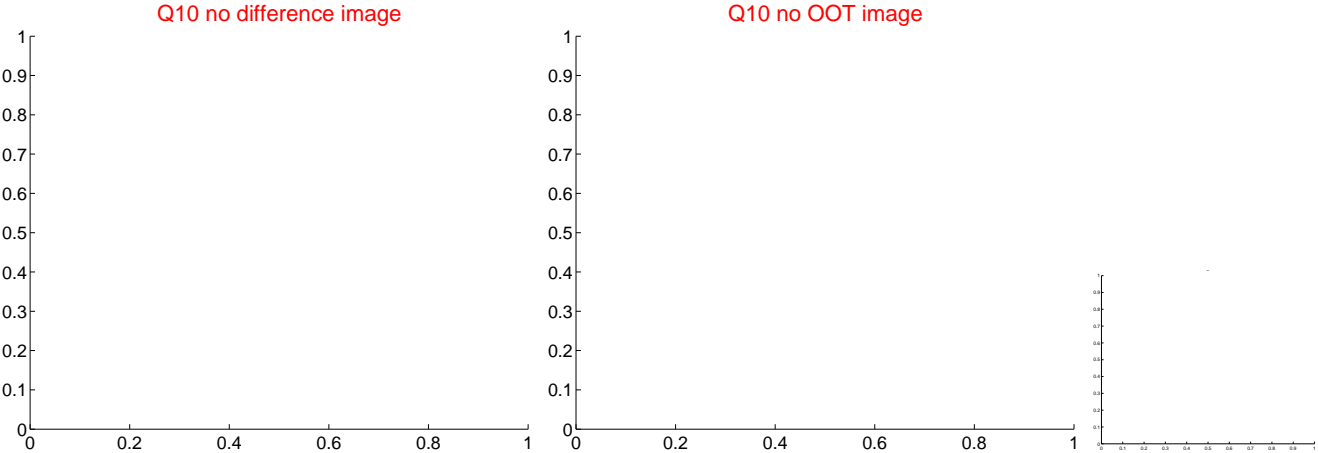
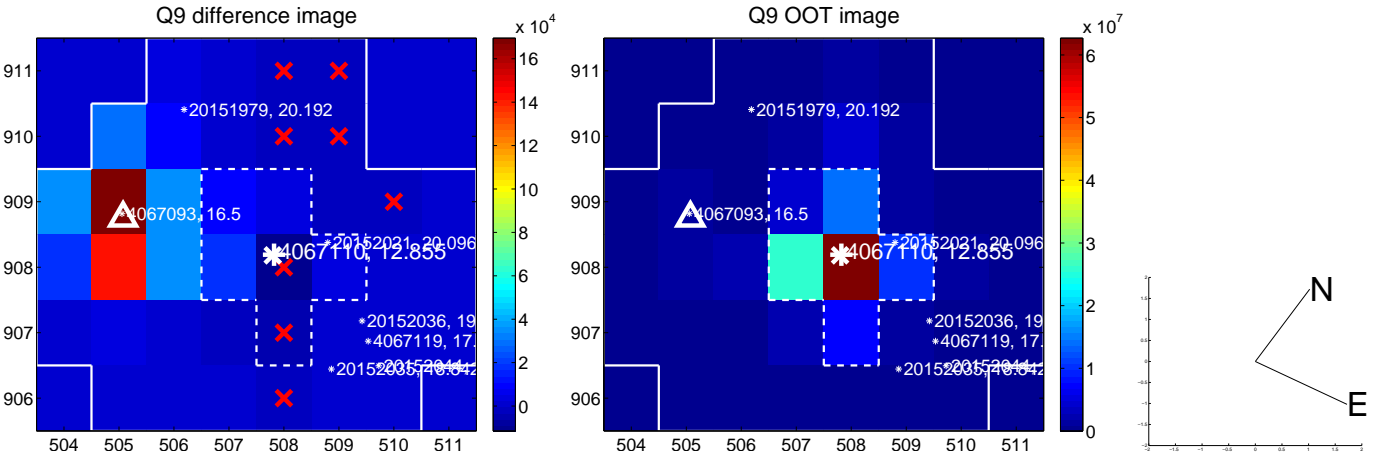
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



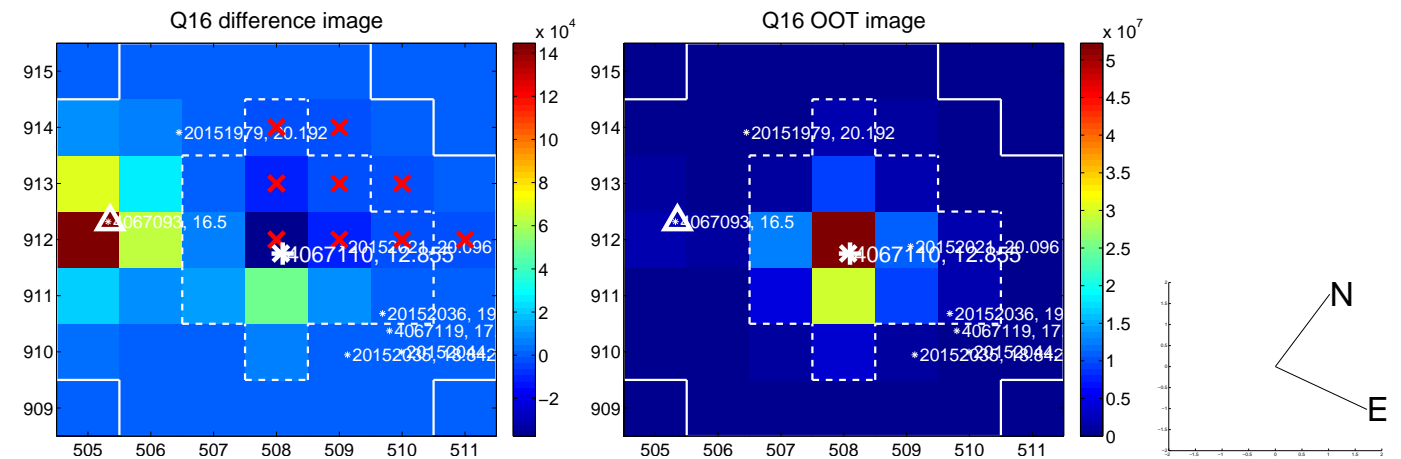
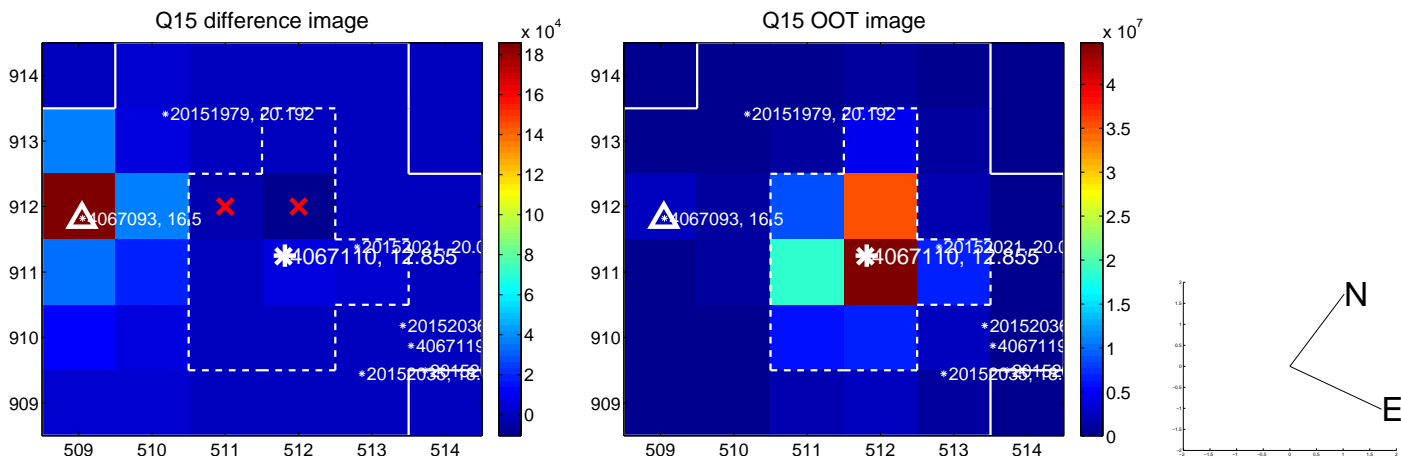
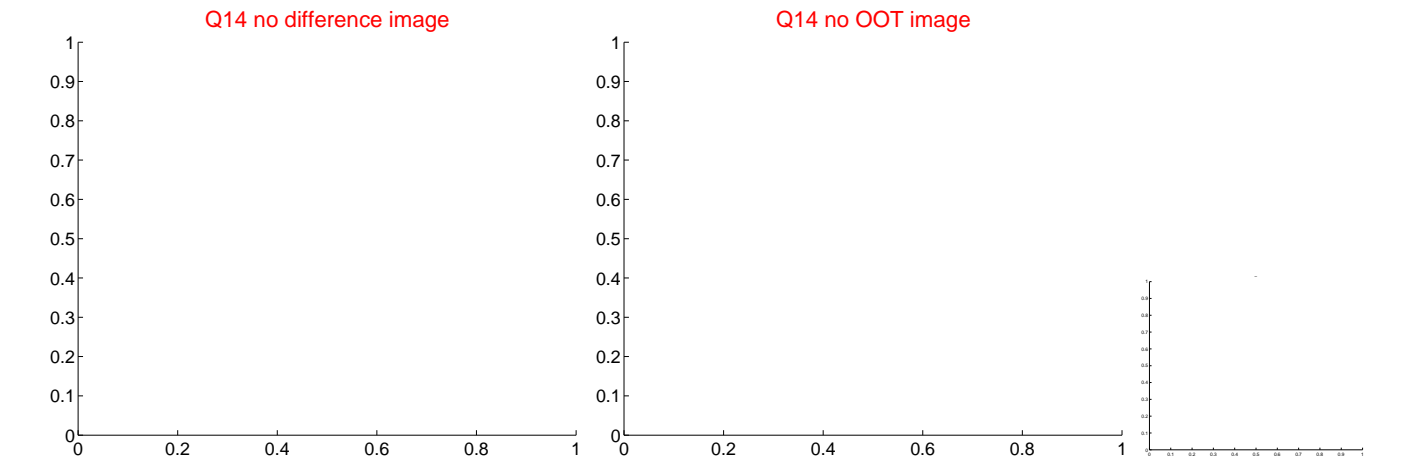
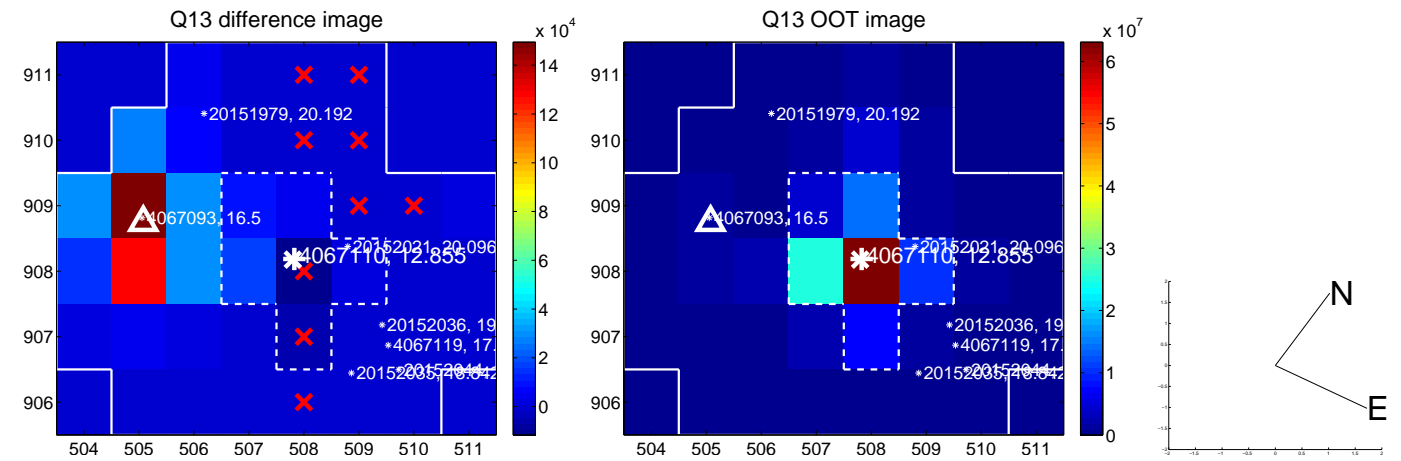
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



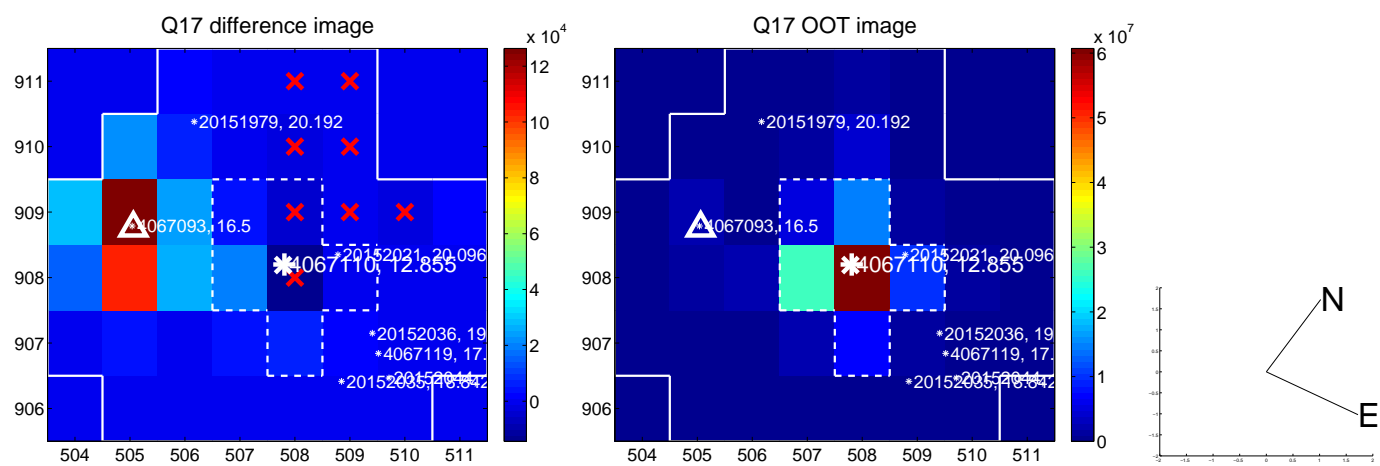
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



folded centroid time series figure for this object.

UKIRT Image

