

KIC 006126012

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|------|-----|-----------------------------|-----------------|------------------------|------------------------|
| 006126012-01 | OBS | No | 0.709922 | 132.373447 | 14.8 | 2.128 | 11.2 | 6.0 | 1.38 | 6787 | 0.62 | 12382.96 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|---|
| 006126012-01 | OBS | FP | 0.00 | 1 | 0 | 1 | 0 | INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—HALO_GHOST |

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

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

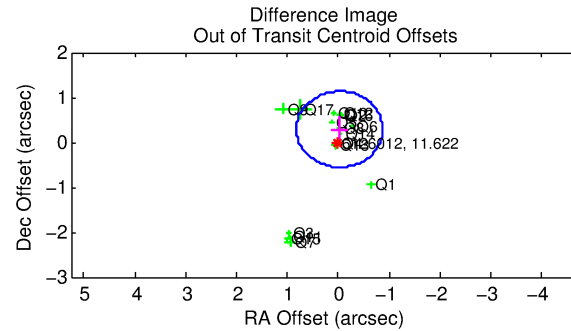
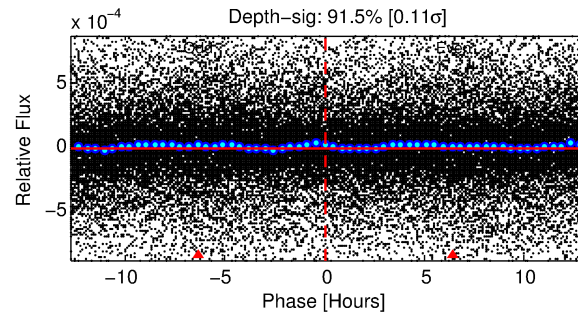
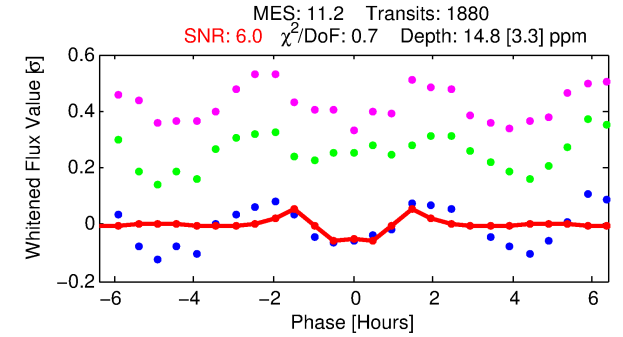
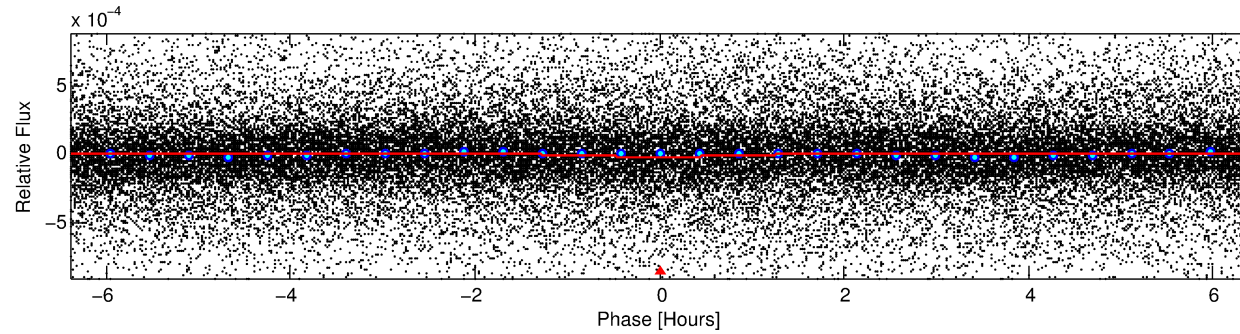
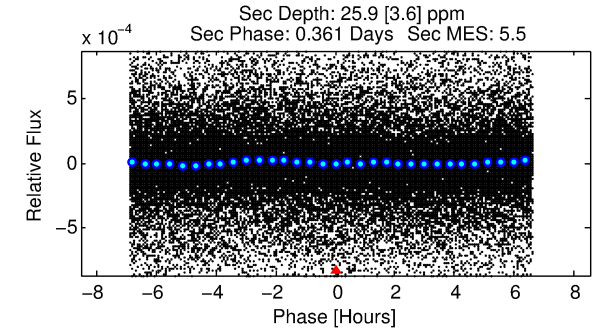
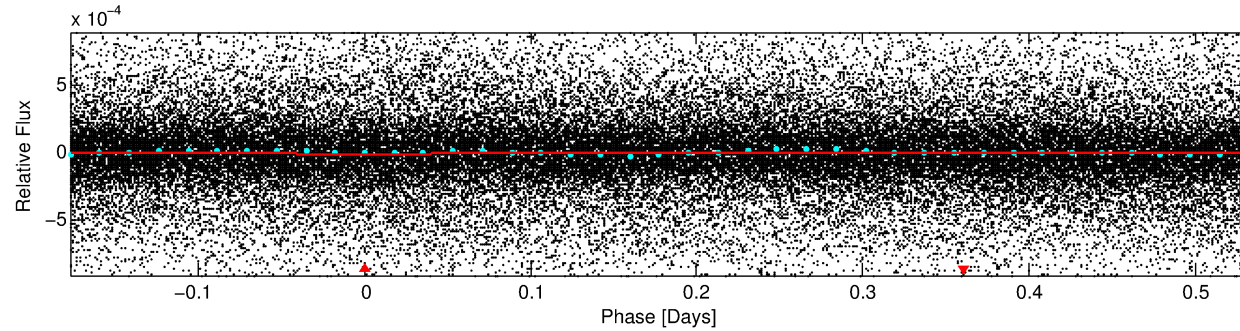
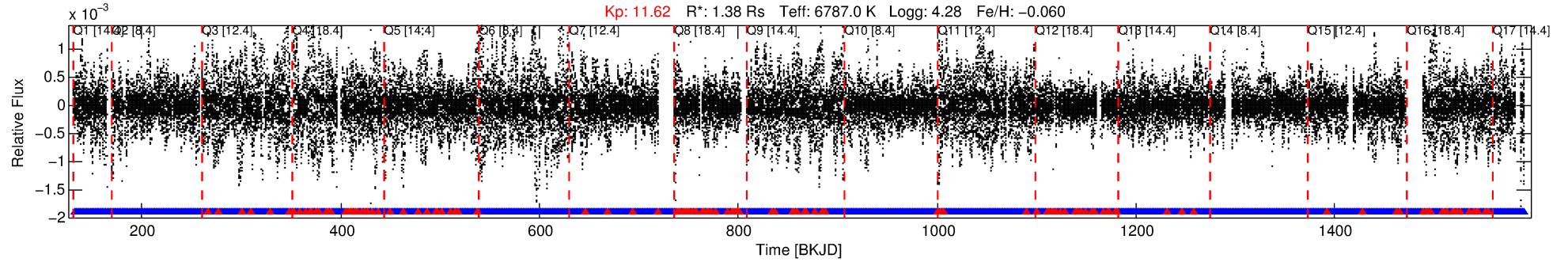
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006126012-01

No Significant Match Found

DV One-Page Summary

KIC: 6126012 Candidate: 1 of 1 Period: 0.710 d



DV Fit Results:

Period = 0.70992 [0.00002] d
Epoch = 132.3734 [0.0022] BKJD
 R_p/R^* = 0.0041 [0.0008]
 a/R^* = 1.49 [0.82]
 b = 0.90 [0.22]
 S_{eff} = 12382.96 [5068.73]
 T_{eq} = 2690 [275] K
 R_p = 0.62 [0.23] R_e
 a = 0.0171 [0.0046] AU
 A_g = 10.96 [6.27] [1.59 σ]
 T_{eff} = 7567 [831] K [5.57 σ]

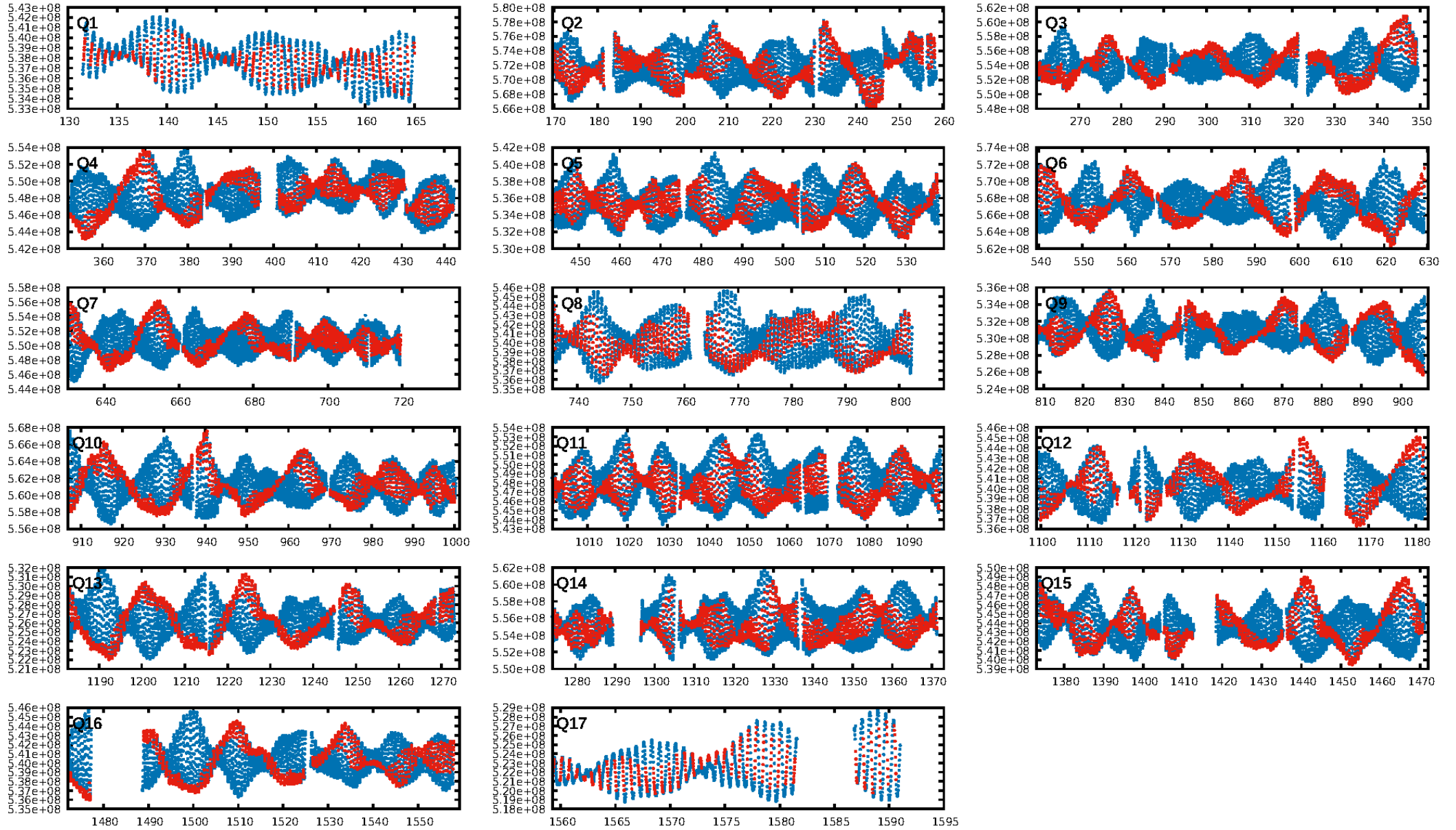
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.08e-29
RollingBand-fgt: 0.92 [1644/1794]
GhostDiagnostic-chr: 0.2054
Centroid-sig: 23.4%
Centroid-so: 0.571 arcsec [0.69 σ]
OotOffset-rm: 0.289 arcsec [1.03 σ]
KicOffset-rm: 0.233 arcsec [0.84 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.59 [10/17]
DiffImageOverlap-fno: 1.00 [17/17]

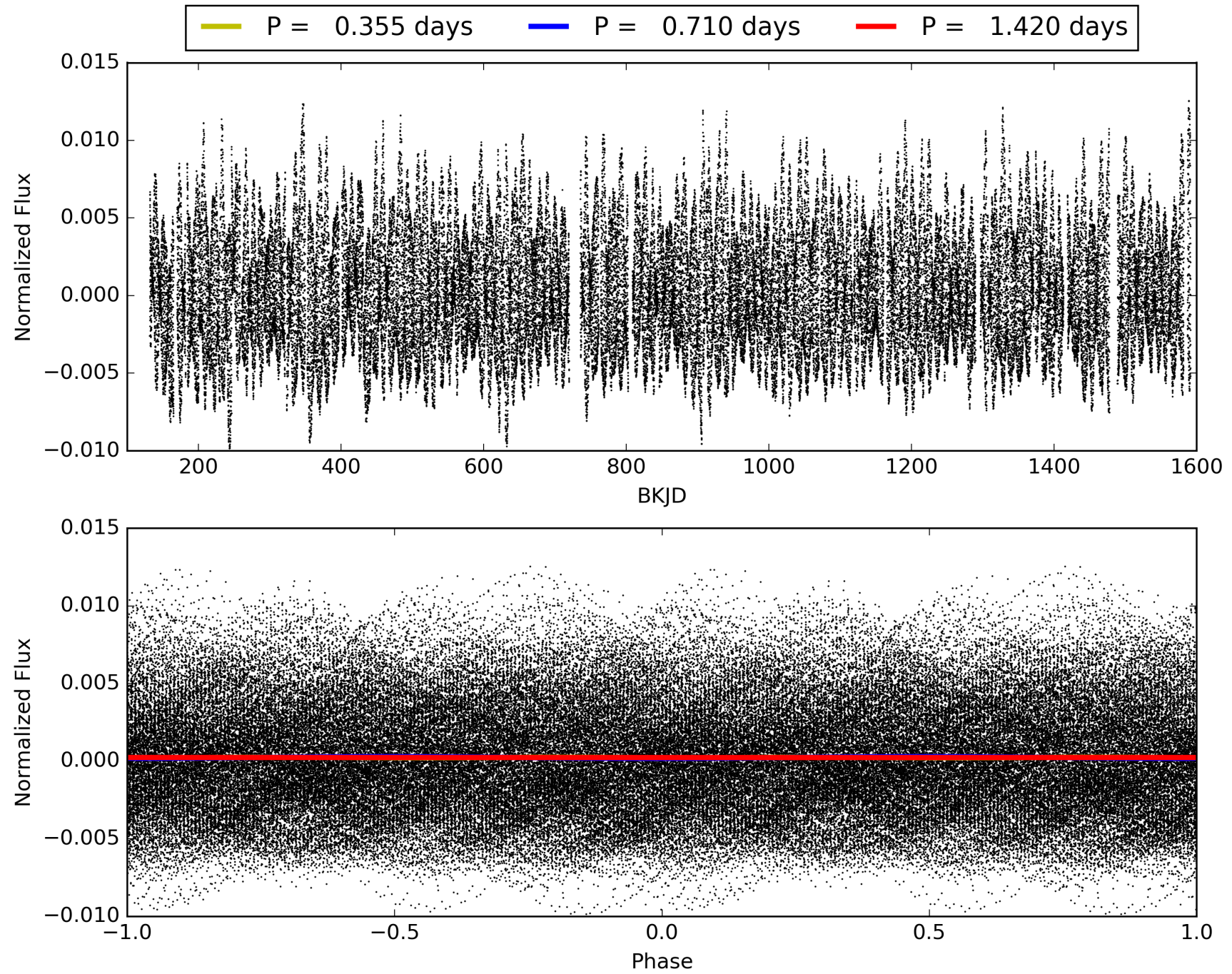
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 19:36:45 Z

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

TCE 006126012-01, PDC Light Curves

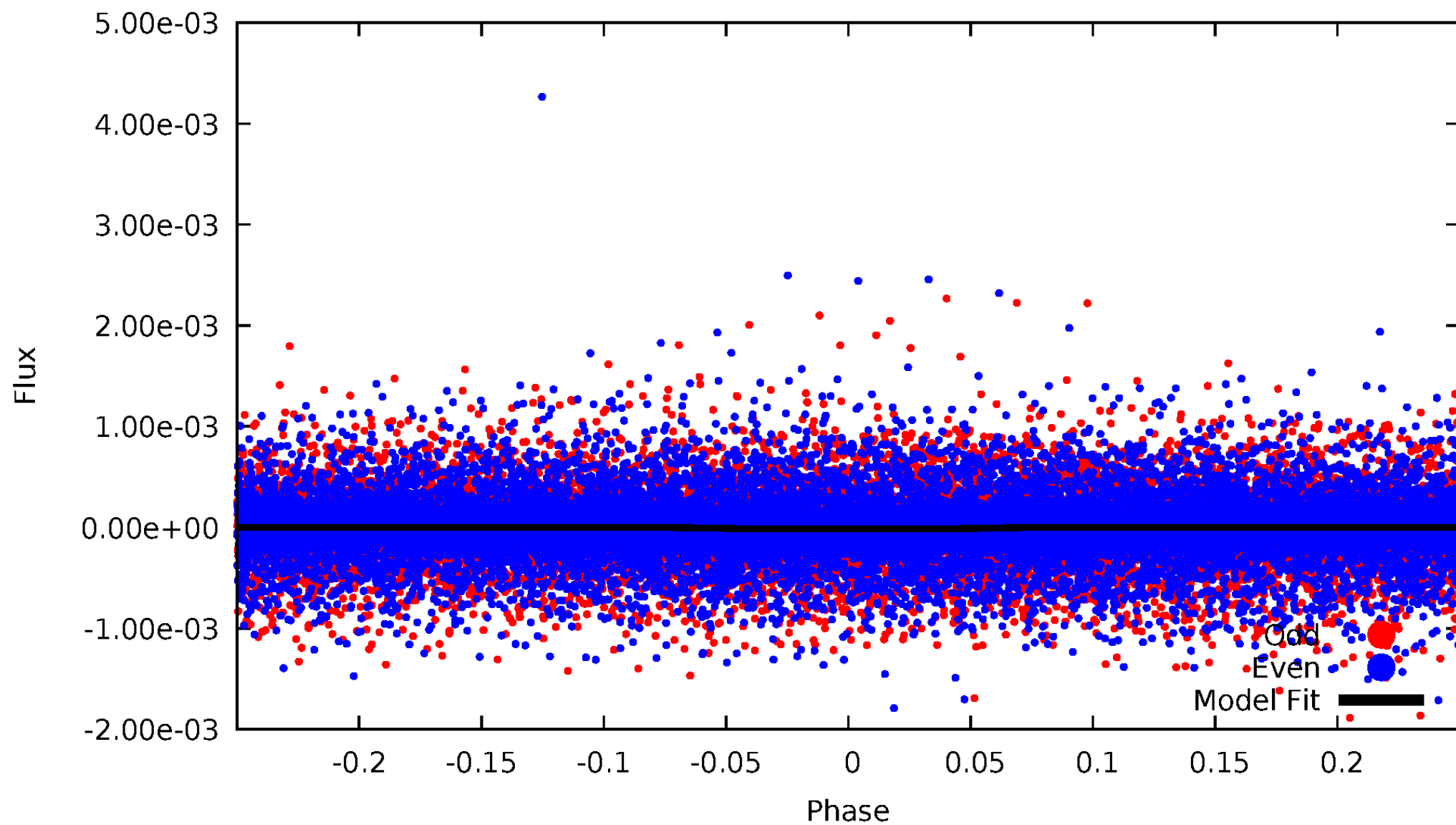


TCE 006126012-01



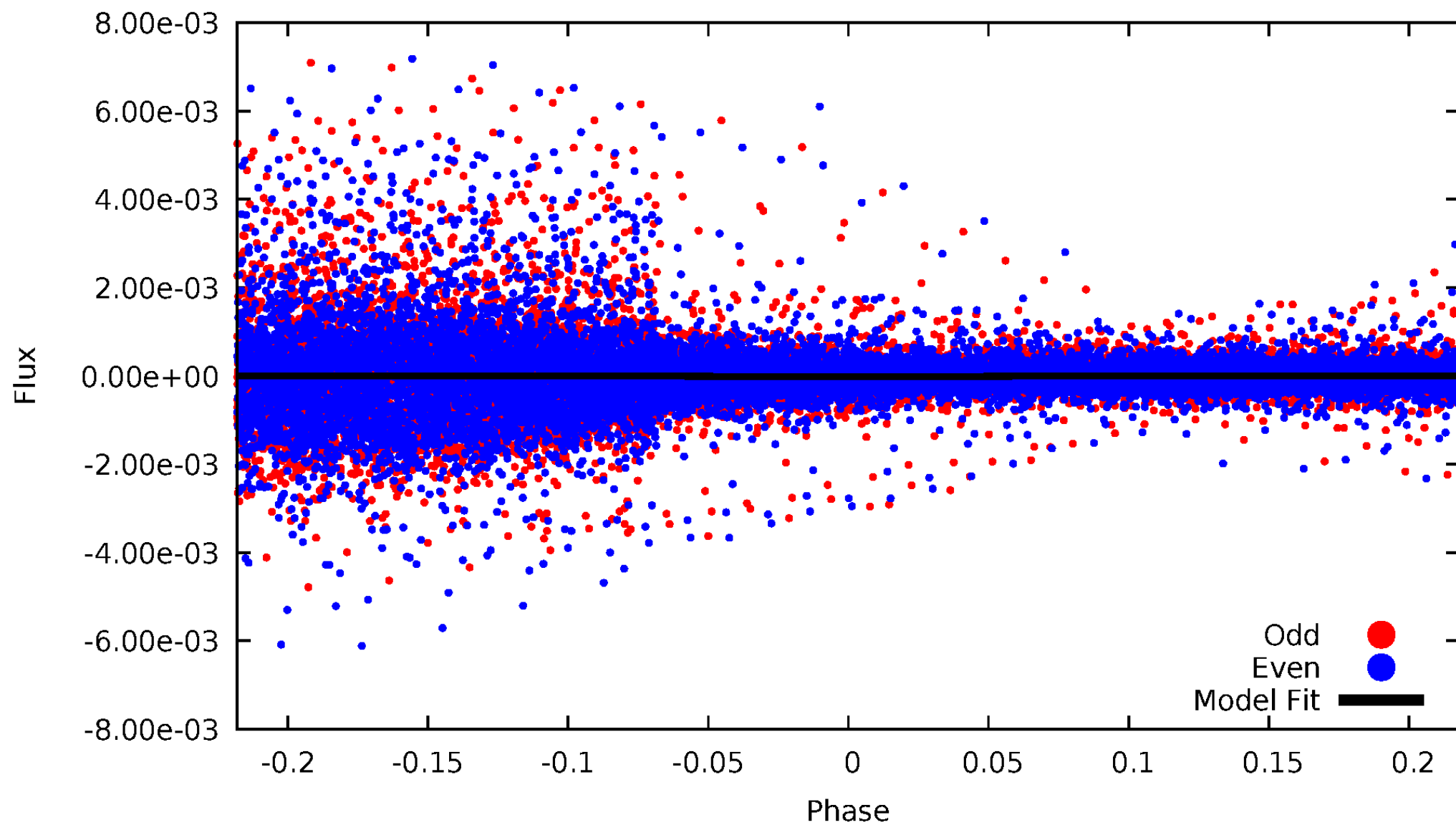
DV Odd/Even

TCE 006126012-01



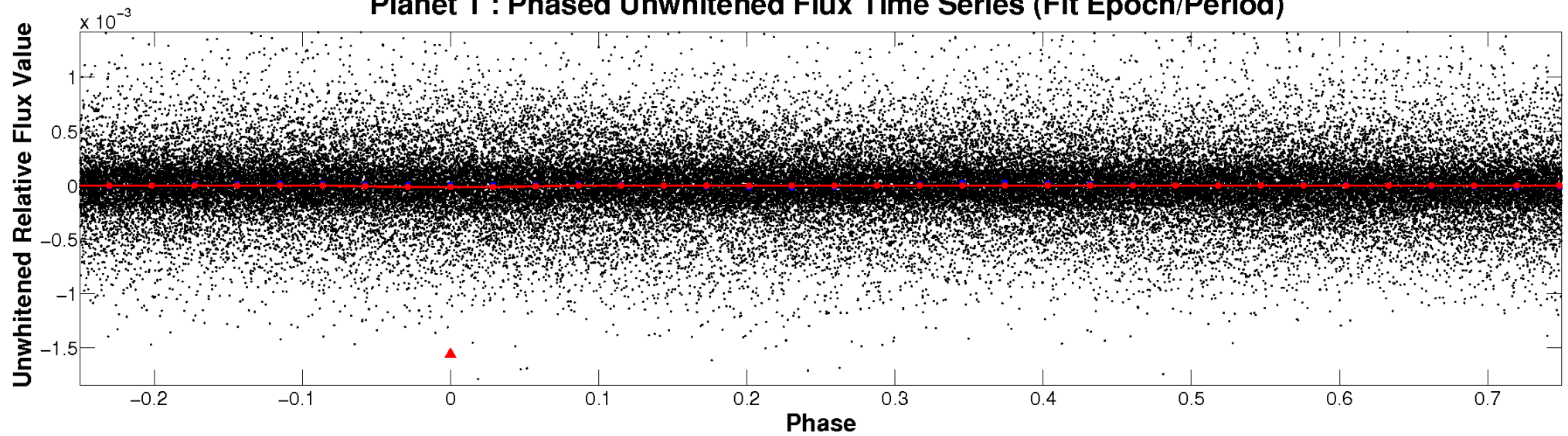
ALT Odd/Even

TCE 006126012-01

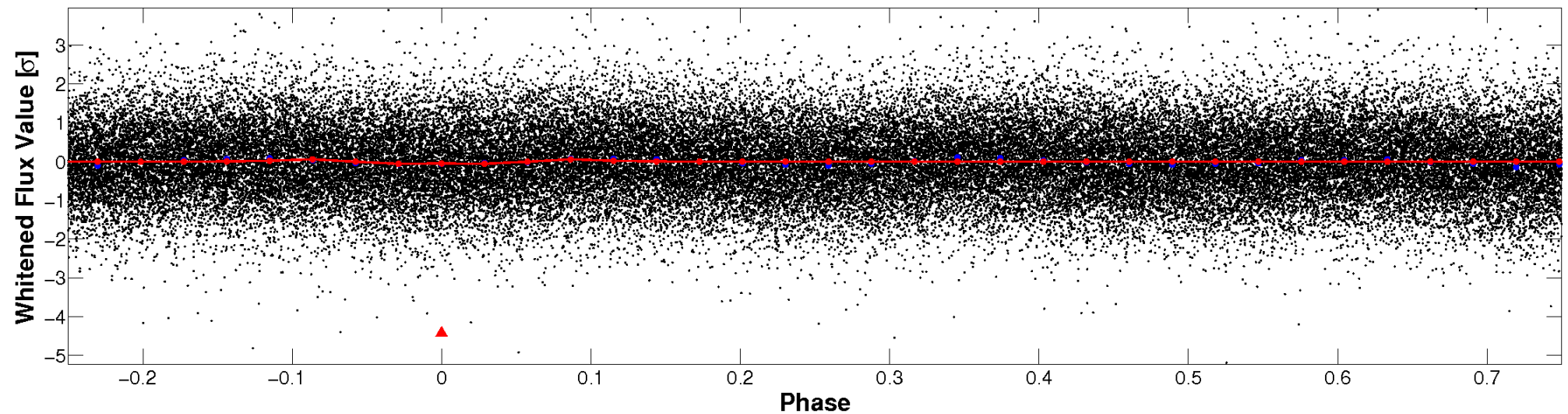


Non-Whitened Vs. Whitened Light Curve

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

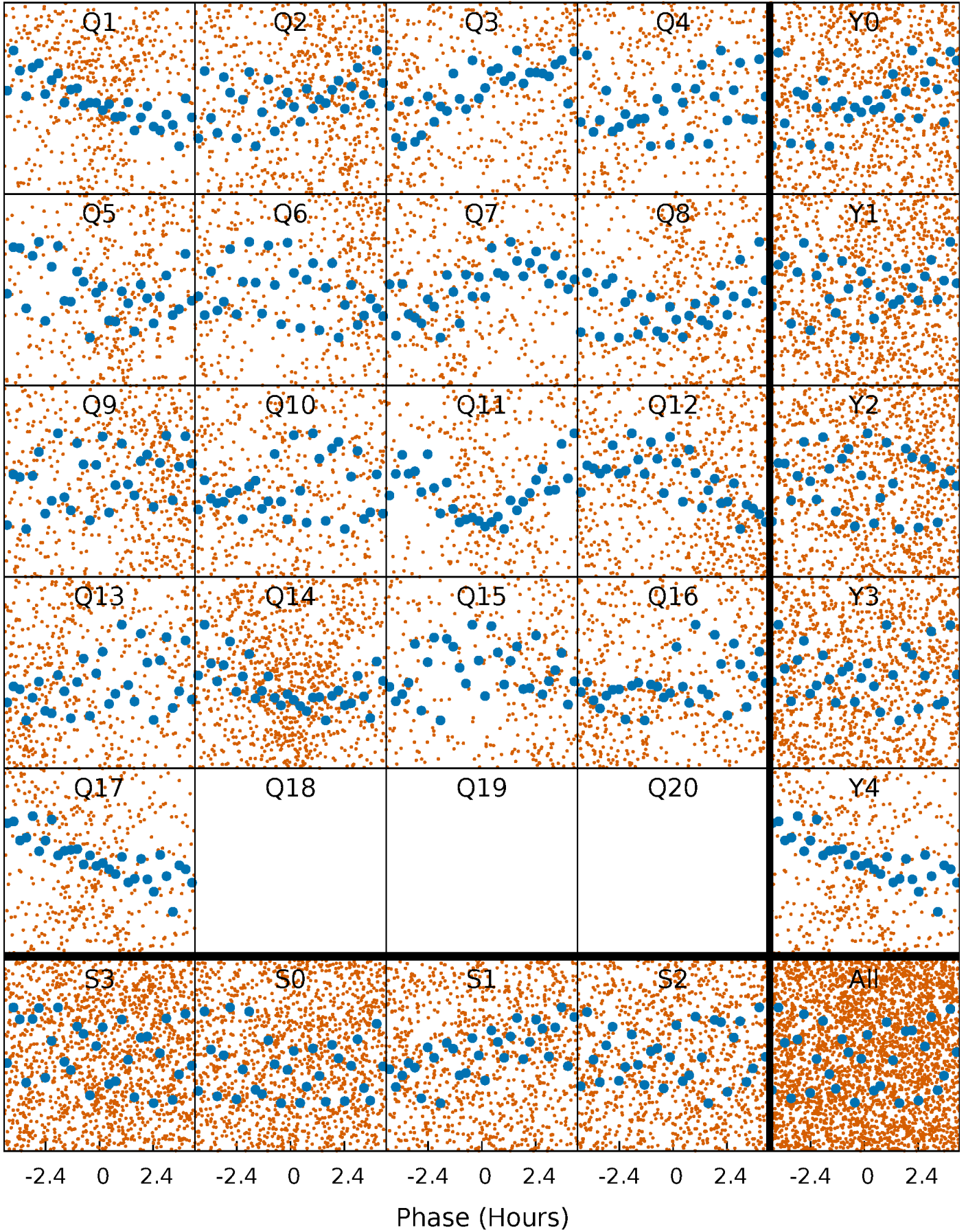


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



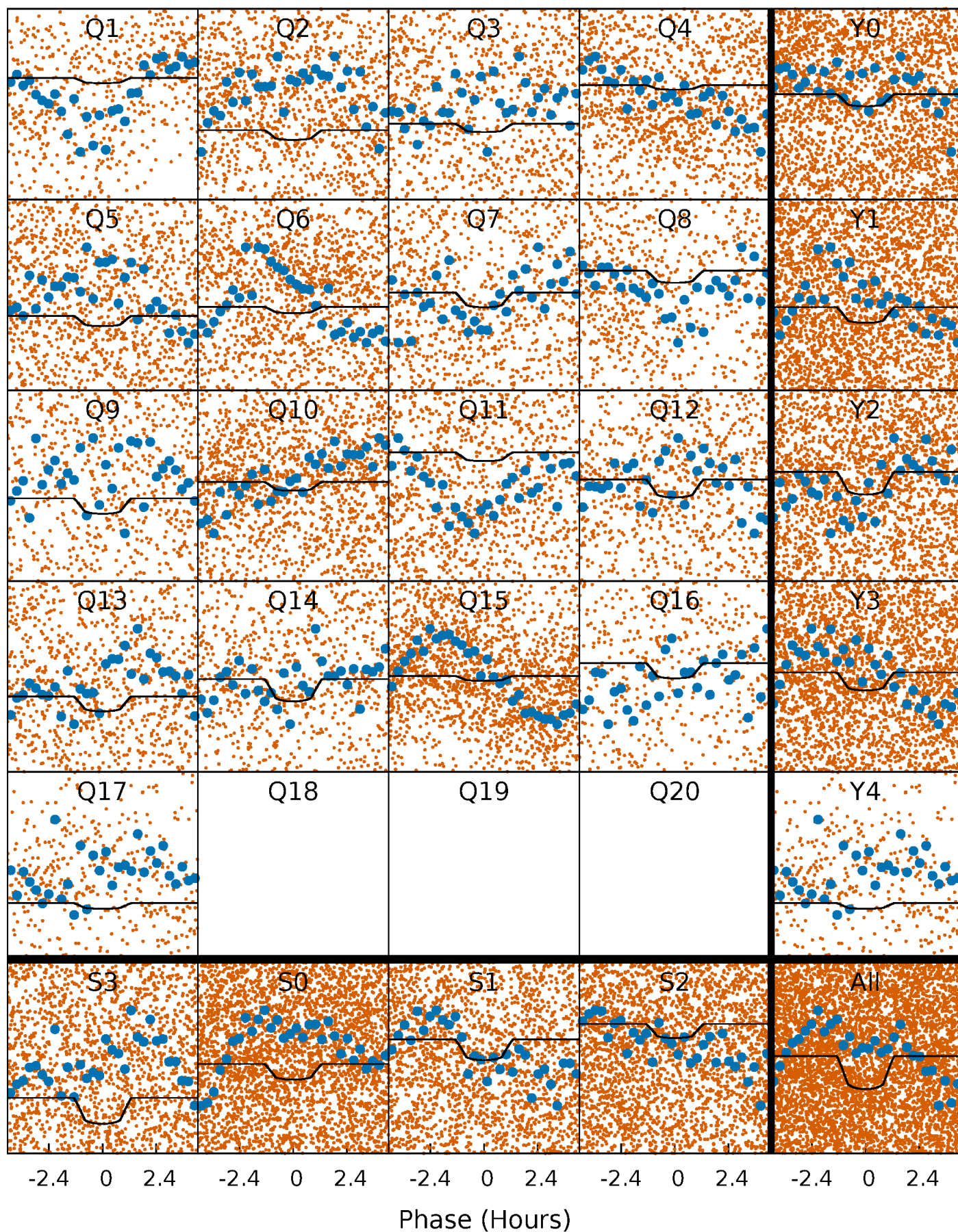
PDC Quarter-Phased Transit Curves

TCE 006126012-01 P= 0.709922 Days $T_0=132.373447$ (BKJD)



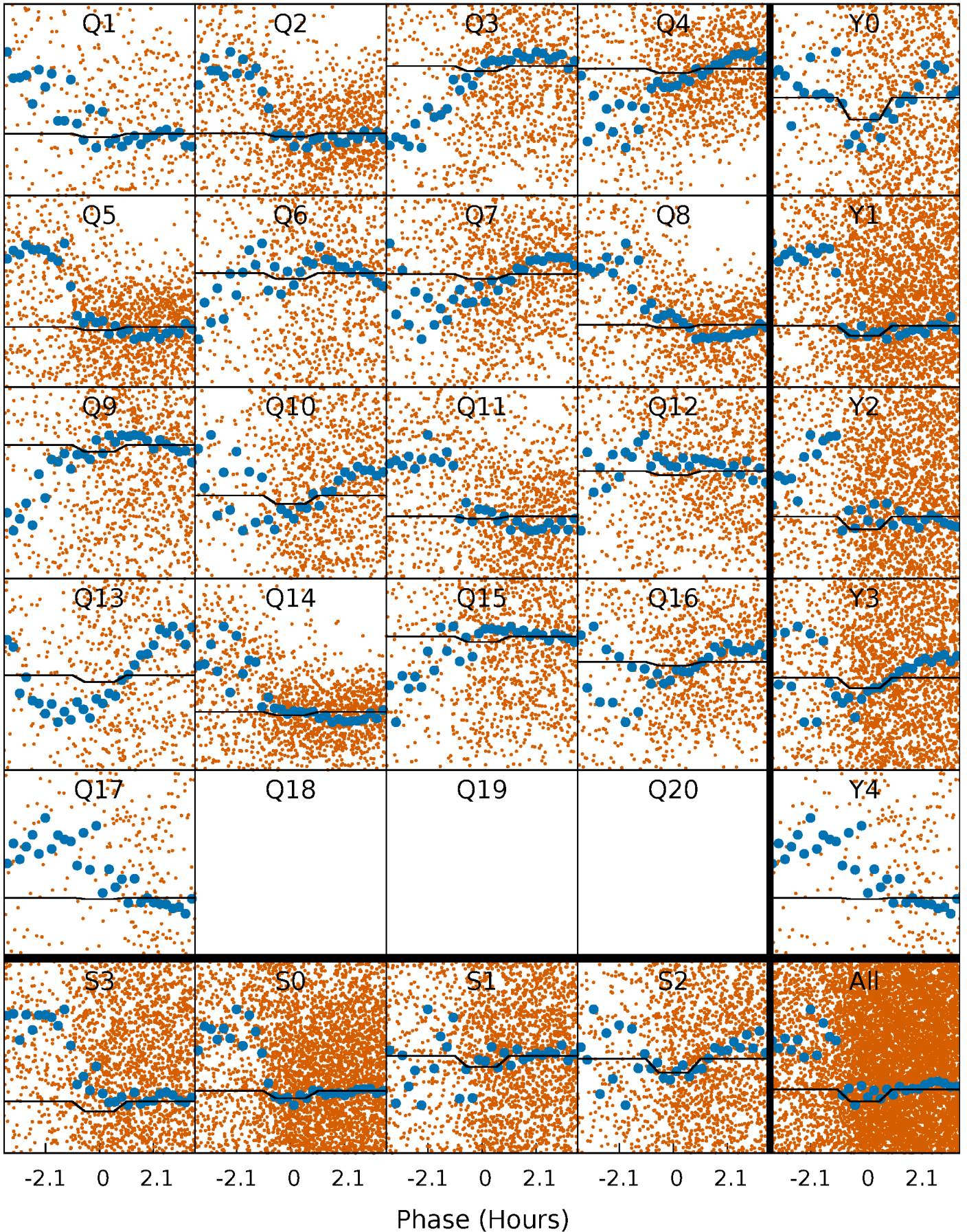
DV Quarter-Phased Transit Curves

TCE 006126012-01 P= 0.709922 Days $T_0=132.373447$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

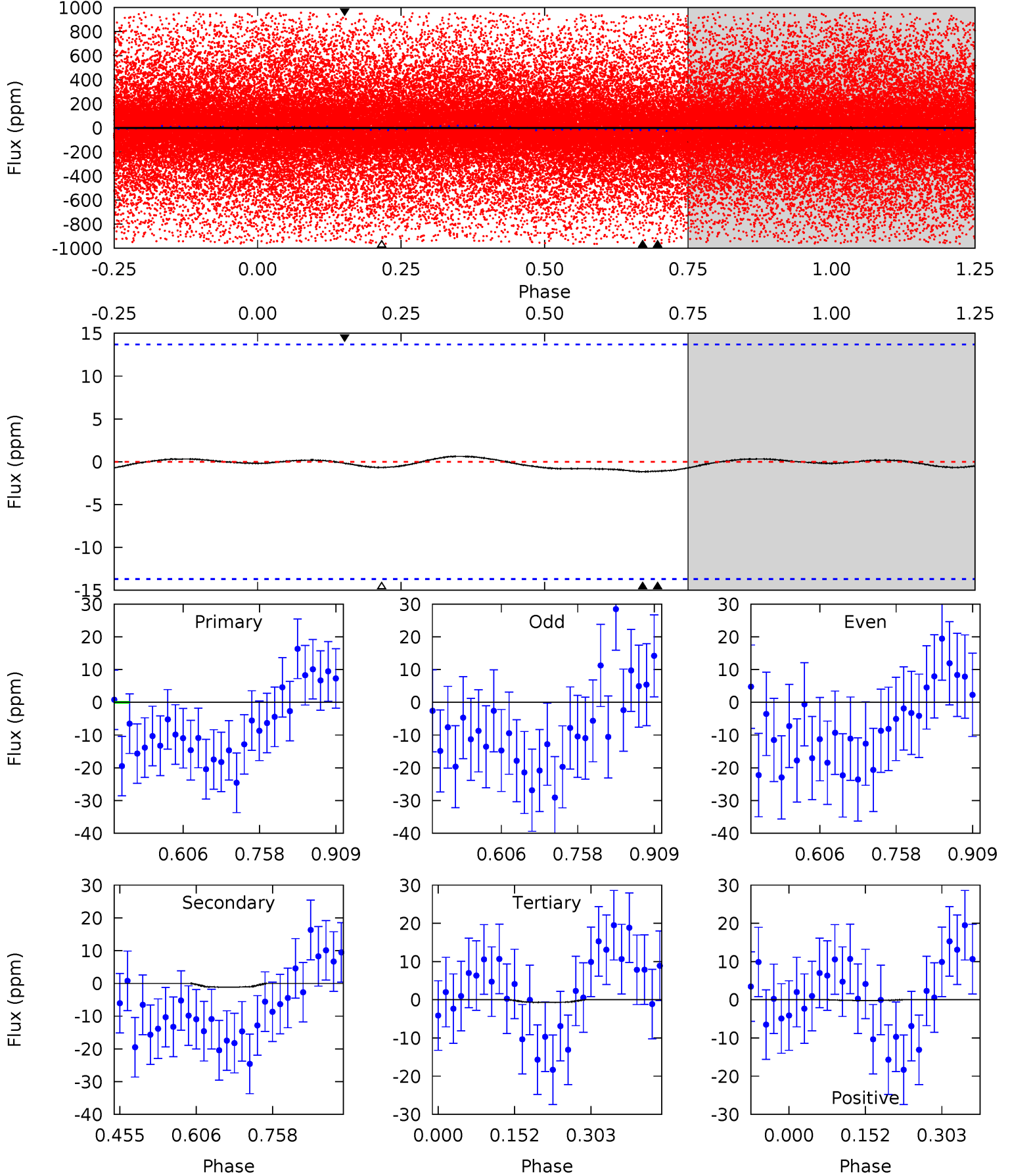
TCE 006126012-01 P= 0.709891 Days $T_0=132.354549$ (BKJD)



DV Model-Shift Uniqueness Test

006126012-01, P = 0.709922 Days, E = 130.953603 Days

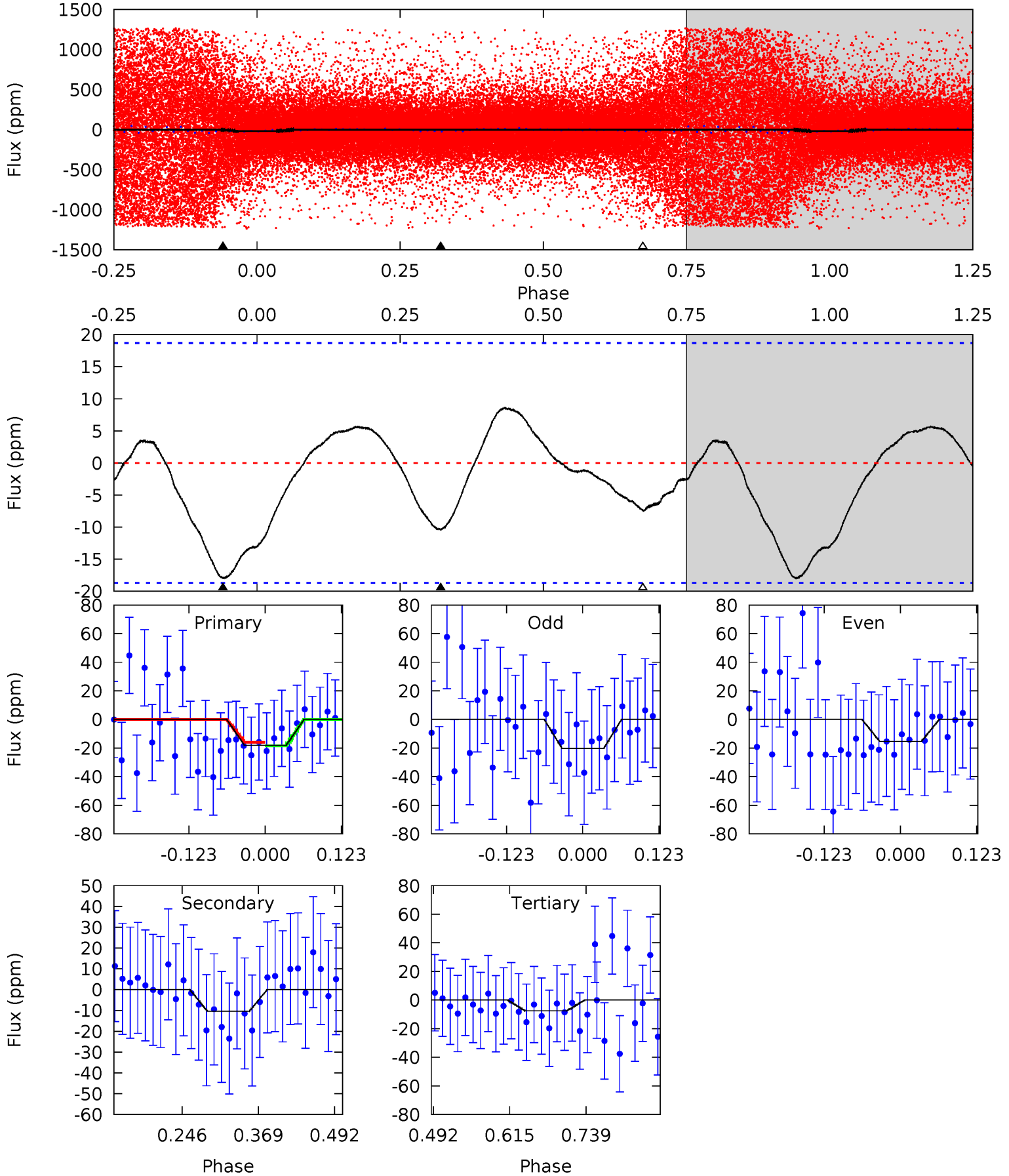
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|-------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 0.36 | 0.38 | 0.22 | -0.05 | 4.48 | 1.43 | 0.12 | 0.14 | 0.41 | 0.16 | 0.43 | 0.24 | 0.88 | 0.36 | 0.12 |



Alt Model-Shift Uniqueness Test

006126012-01, P = 0.709891 Days, E = 130.934767 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|-----|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 4.37 | 2.52 | 1.81 | 0 | 4.52 | 1.54 | 1.02 | 2.56 | 4.37 | 0.70 | 2.52 | 0.60 | 0.58 | 0.32 | 0.42 |



Stellar Parameters For KIC 006126012

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | $R (R_{\odot})$ | $M(M_{\odot})$ | $p_{\star} (\text{g}\cdot\text{cm}^{-3})$ |
|--------|----------------------|---------------------------|----------------------------|---------------------------|---------------------------|---|
| | 6787^{+151}_{-219} | $4.279^{+0.084}_{-0.210}$ | $-0.060^{+0.250}_{-0.350}$ | $1.378^{+0.448}_{-0.192}$ | $1.322^{+0.190}_{-0.190}$ | $0.711^{+0.272}_{-0.377}$ |
| | +2%/-3% | +2%/-5% | +417%/-583% | +33%/-14% | +14%/-14% | +38%/-53% |
| 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 006126012-01 / KOI

| Detrend | Depth (ppm) | $R_p (R_{\oplus})$ | $T_{max} (K)$ | $T_{obs} (K)$ | A_{obs} |
|---------|-------------|------------------------|----------------------|------------------------|---------------------------|
| DV | -1 ± 3 | $0.64^{+0.17}_{-0.14}$ | 3809^{+305}_{-198} | 3183^{+1593}_{-7644} | $0.429^{+1.318}_{-1.175}$ |
| Alt. | -10 ± 4 | $0.61^{+0.18}_{-0.14}$ | 3801^{+289}_{-206} | 5942^{+1085}_{-849} | $4.205^{+3.975}_{-2.101}$ |

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 $A_{obs} \gg 1.0$

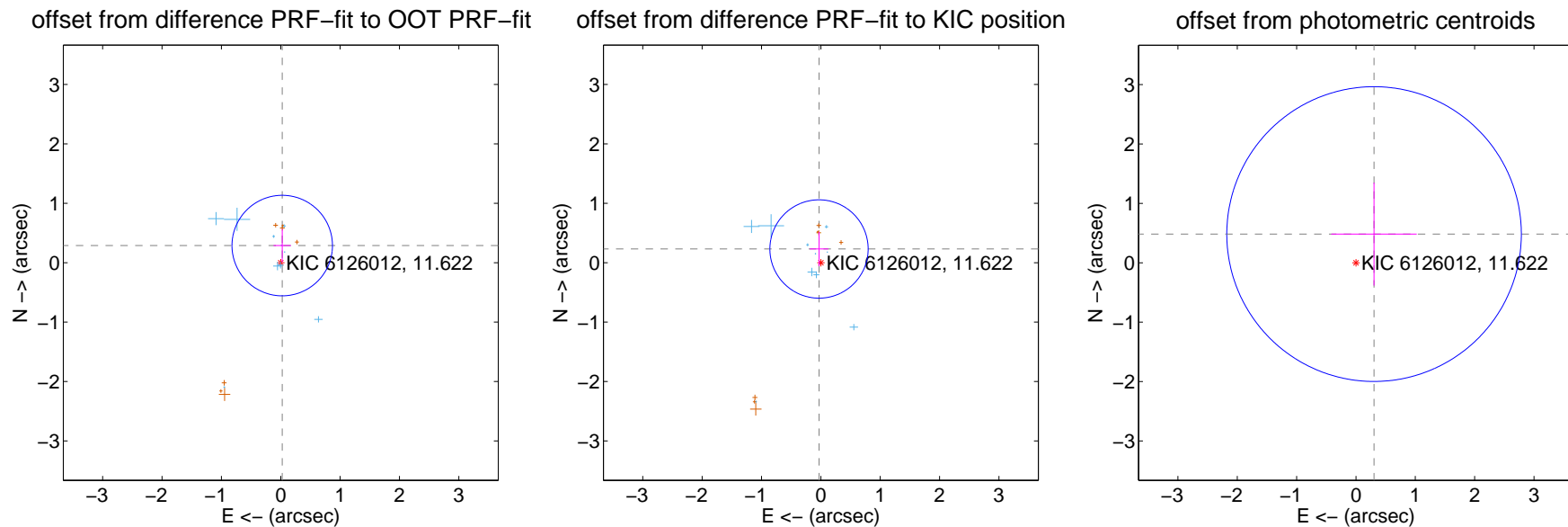
DV Centroid Data

Supplemental centroid analysis for 006126012-01. **Kepler magnitude: 11.62.** Transit SNR 6.00

There are 10 quarters with good PRF difference image offsets

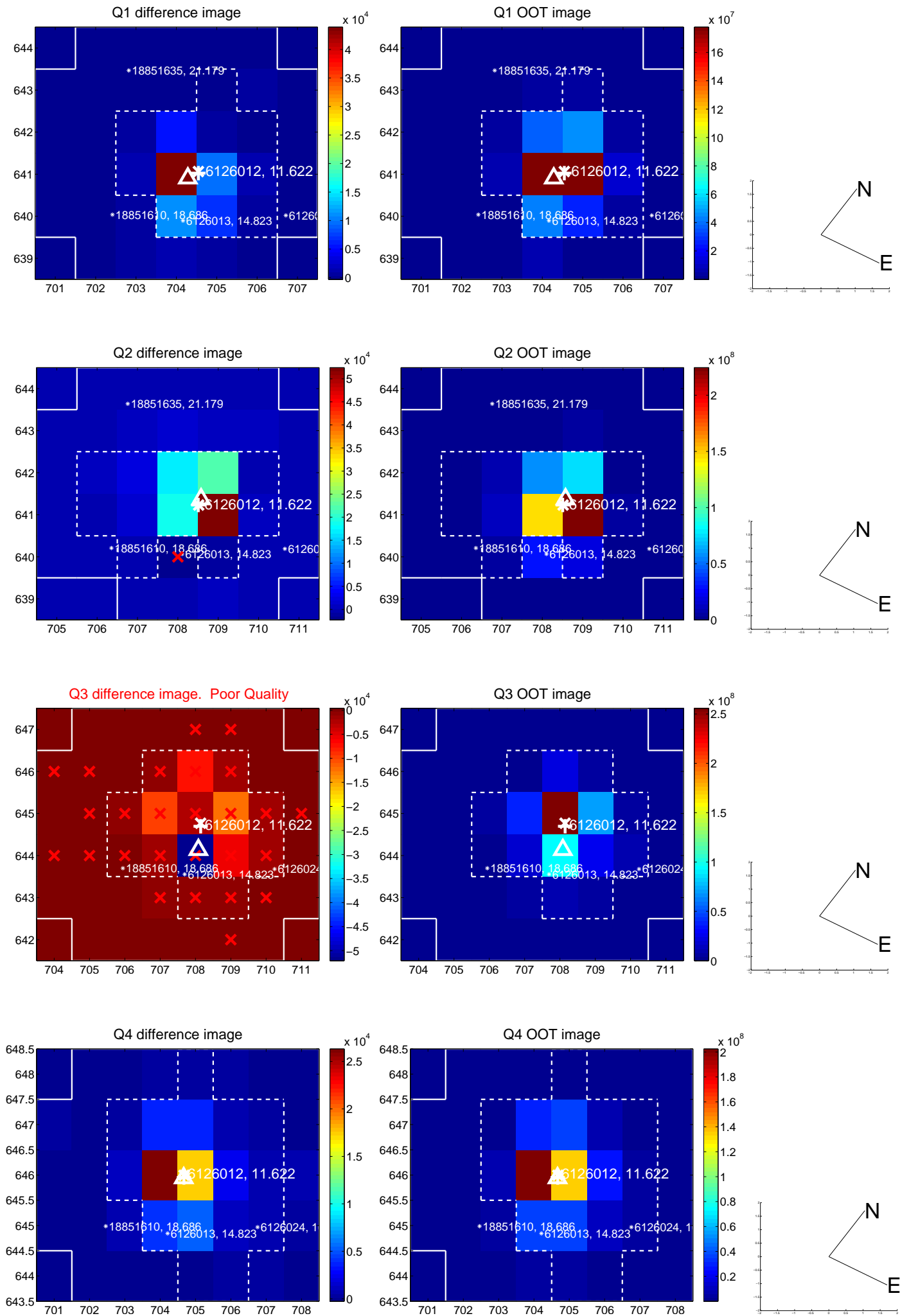
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|--------------------|-------------------|
| PRF-fit source offset from OOT | 0.289 ± 0.282 | 1.03 | -0.025 ± 0.145 | 0.288 ± 0.278 |
| PRF-fit source offset from KIC position | 0.233 ± 0.276 | 0.84 | 0.031 ± 0.156 | 0.231 ± 0.289 |
| photometric centroid source offset | 0.57 ± 0.83 | 0.69 | -0.31 ± 0.72 | 0.48 ± 0.87 |

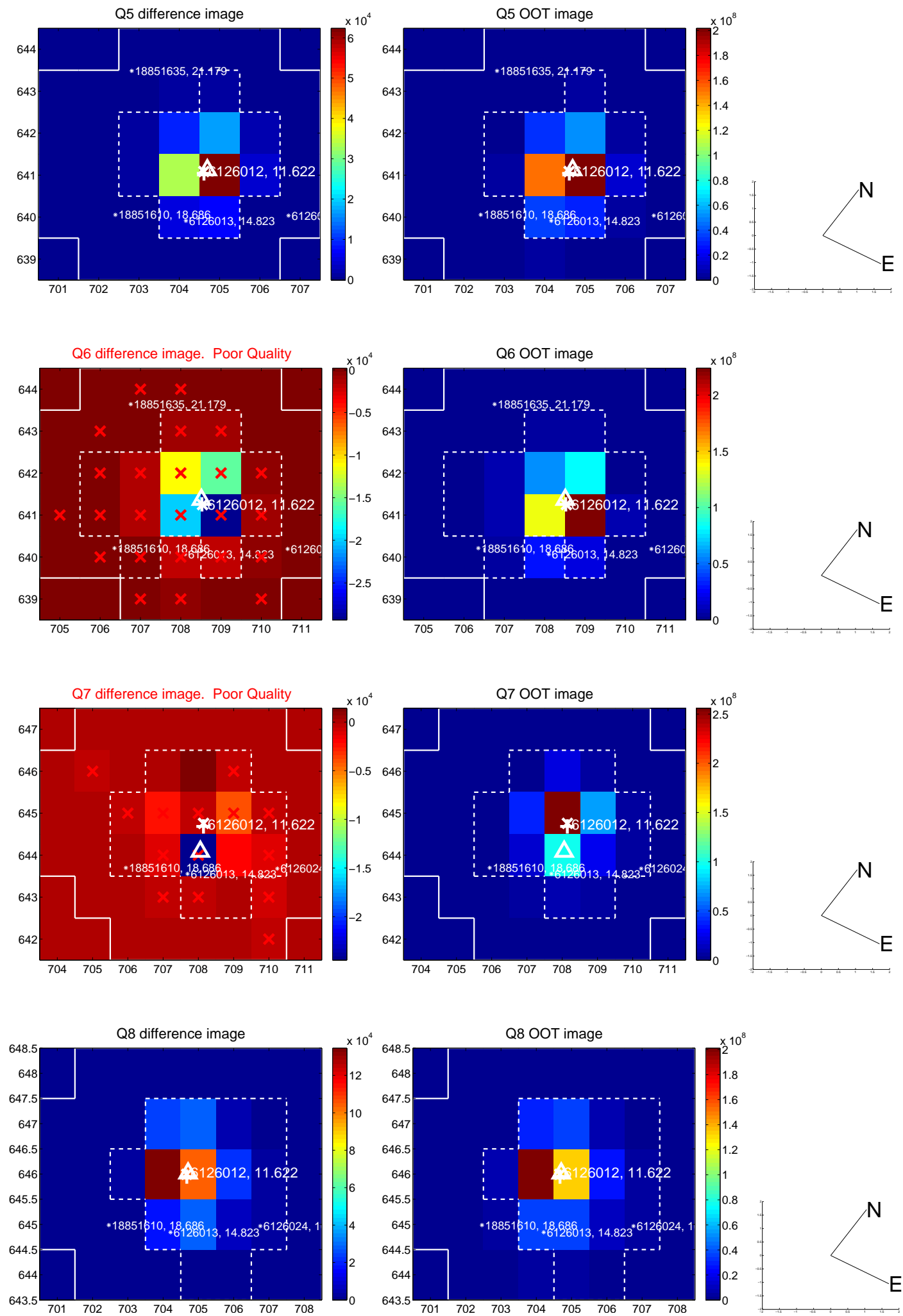


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

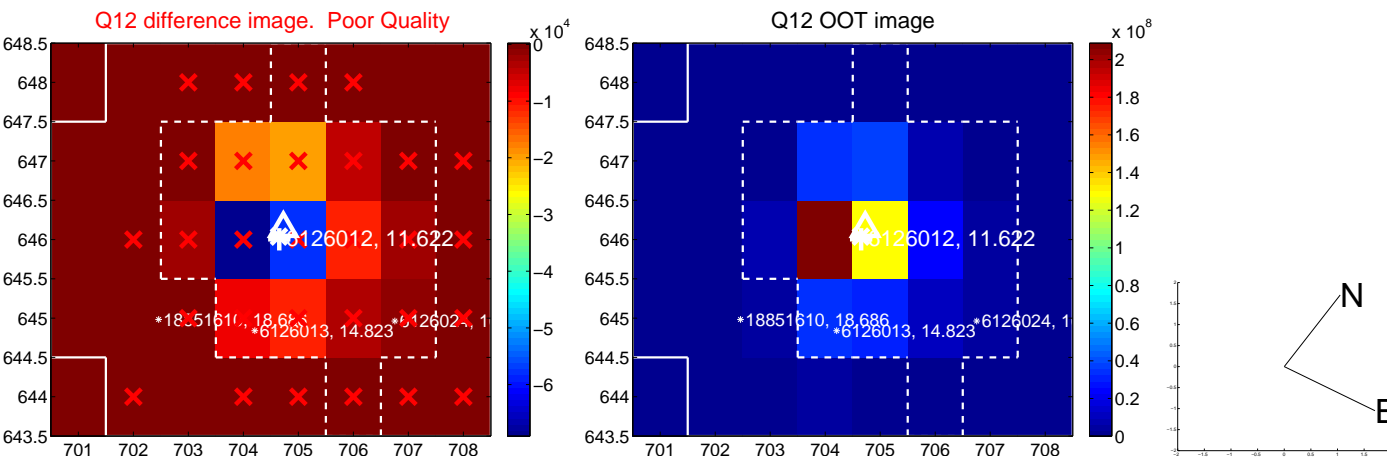
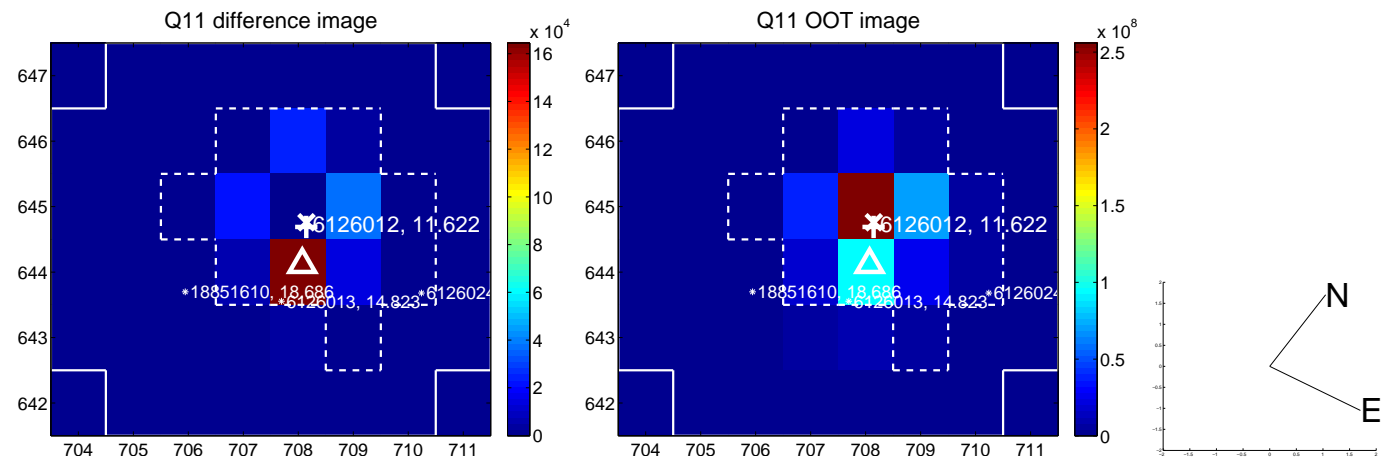
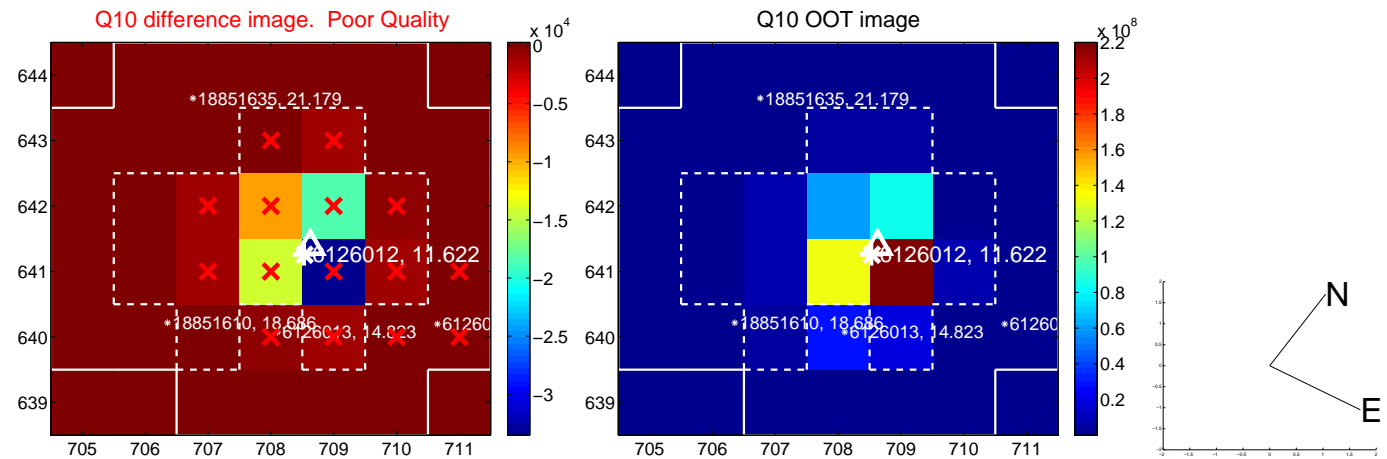
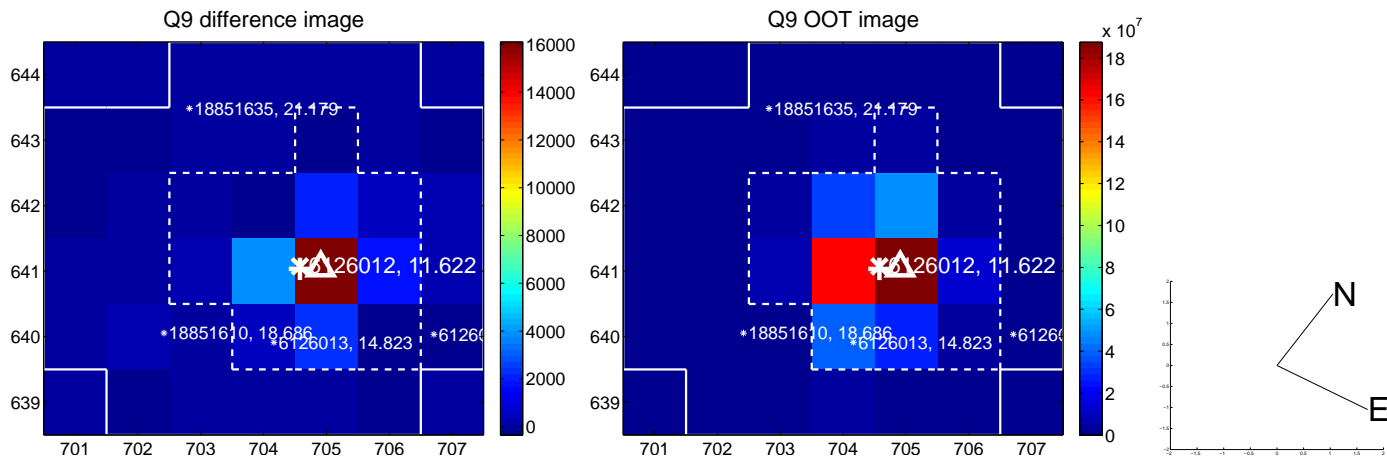
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



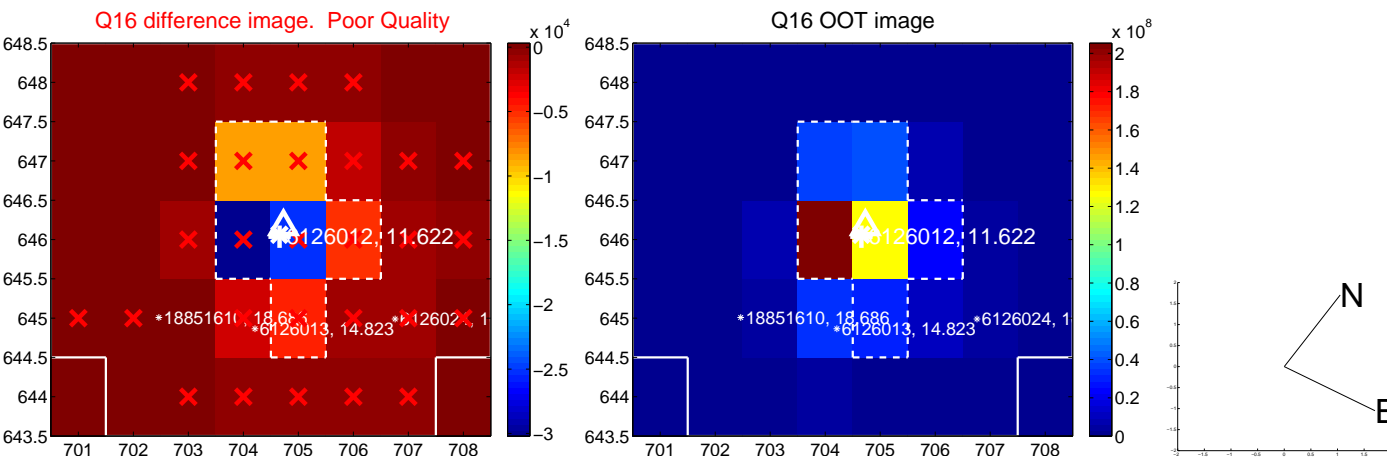
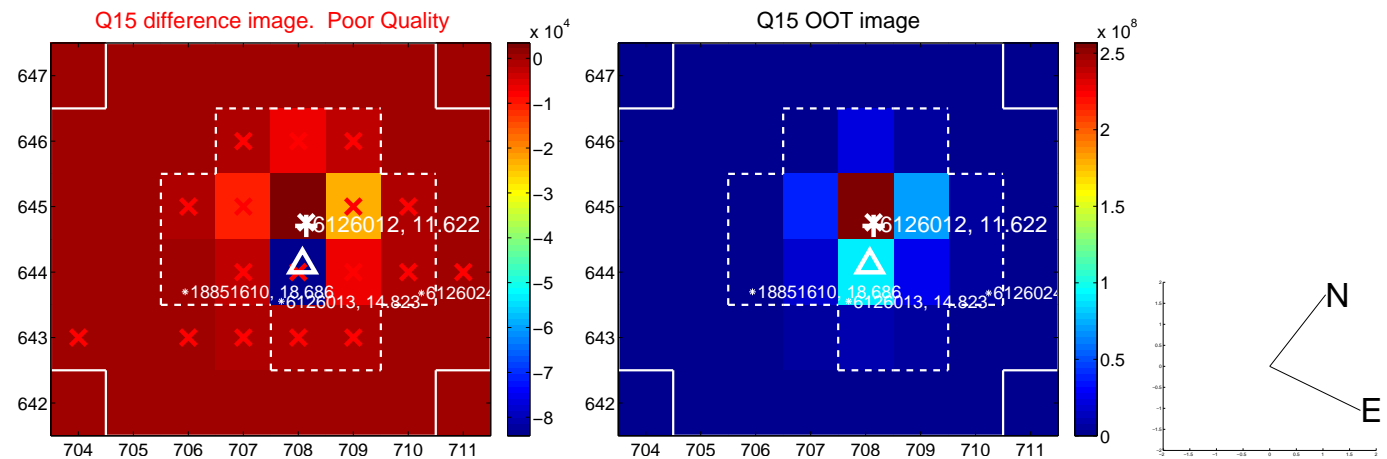
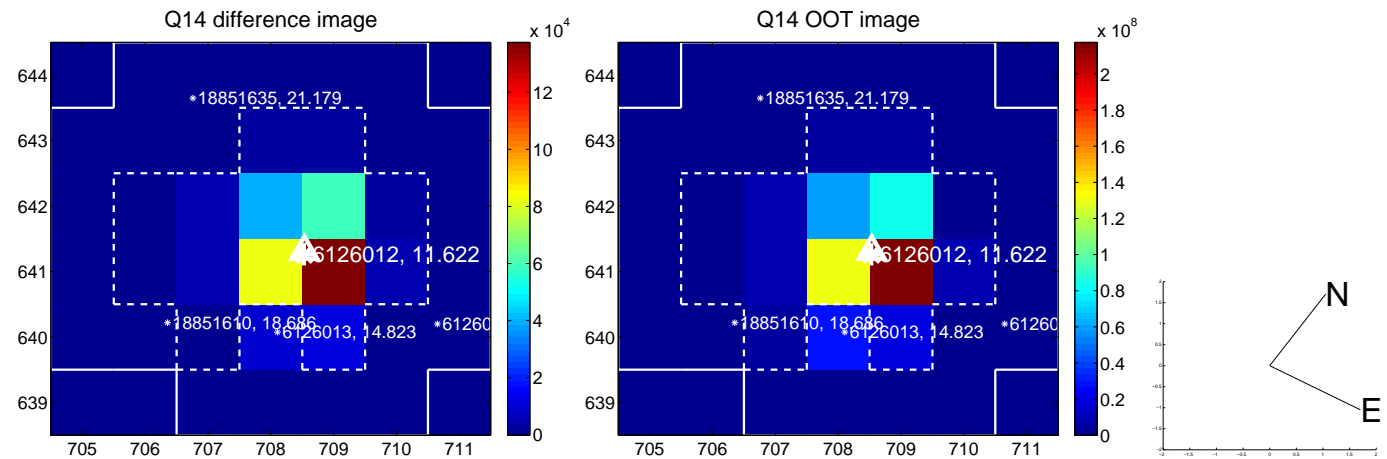
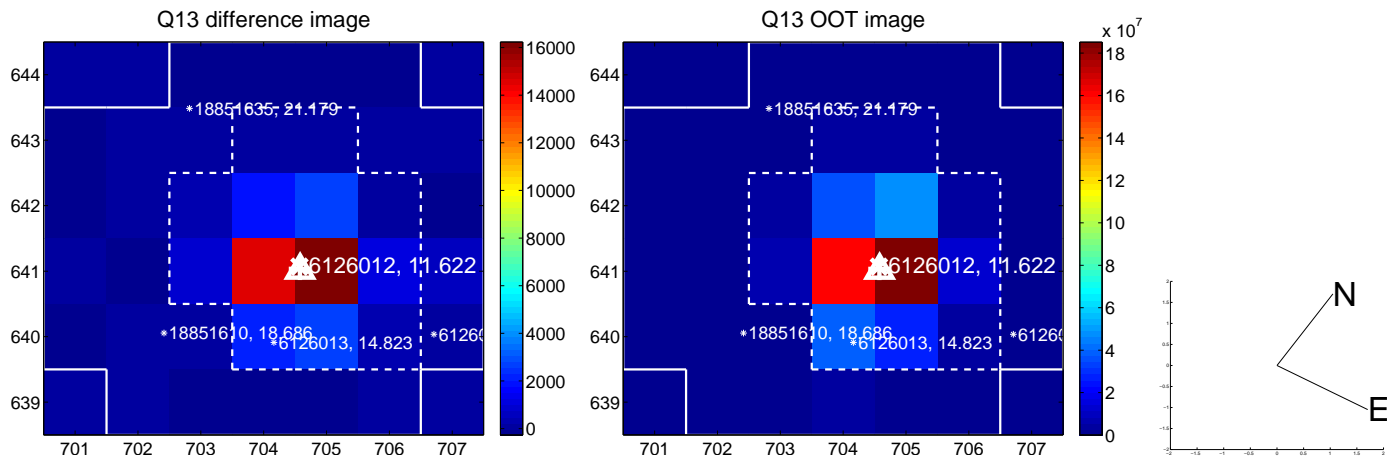
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



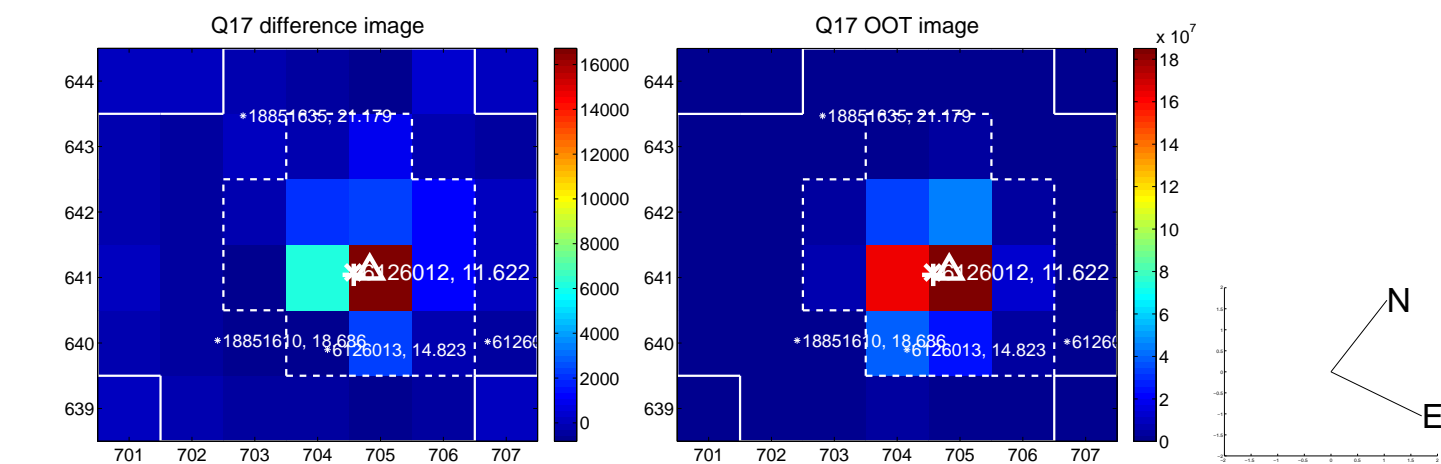
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



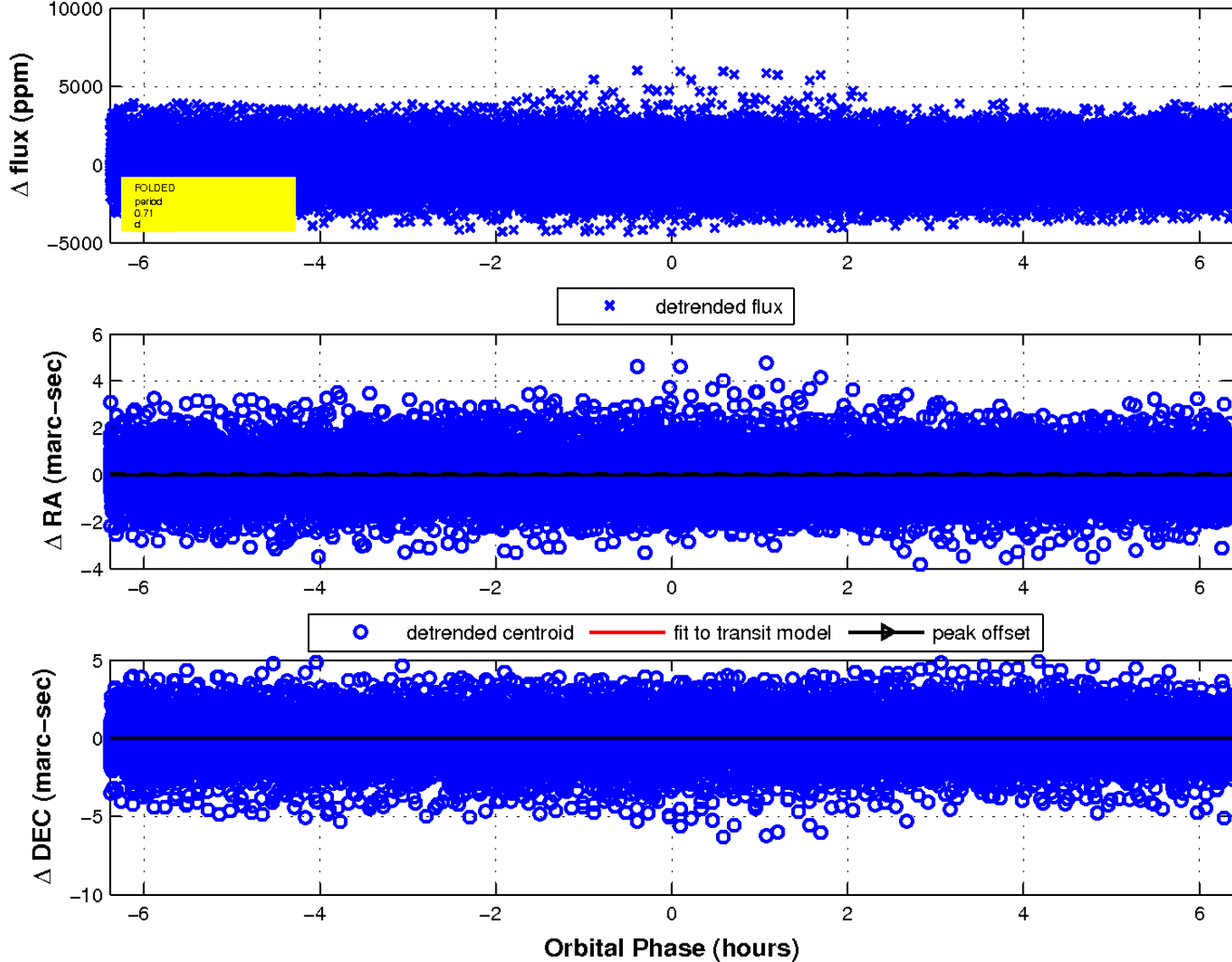
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

