

KIC 011611275

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}) |
|--------------|----------|---------|---------------|--------------|-------------|------------------|------|------|-----------------------------|-----------------|------------------------|------------------------|
| 011611275-01 | OBS | 4234.01 | 6.942399 | 135.965047 | 160.4 | 3.425 | 13.3 | 14.0 | 1.03 | 6108 | 1.50 | 240.09 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|------------|
| 011611275-01 | OBS | PC | 1.00 | 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.

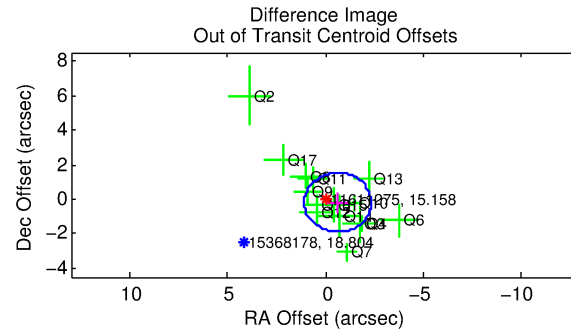
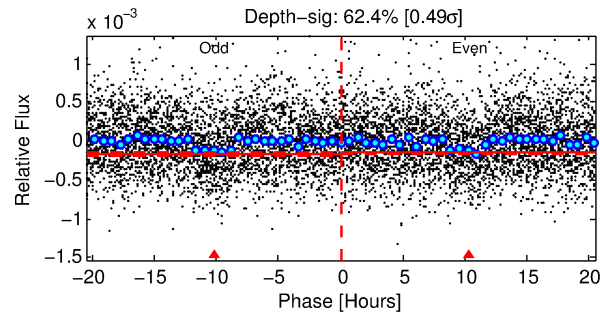
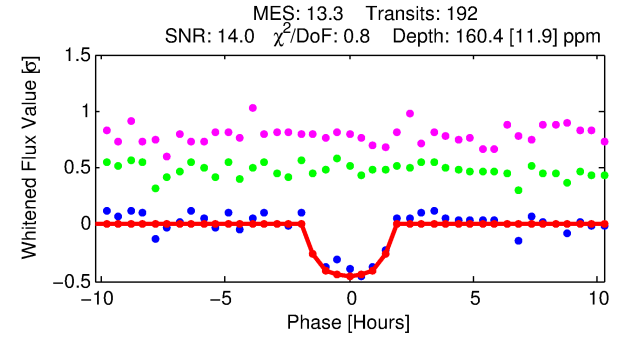
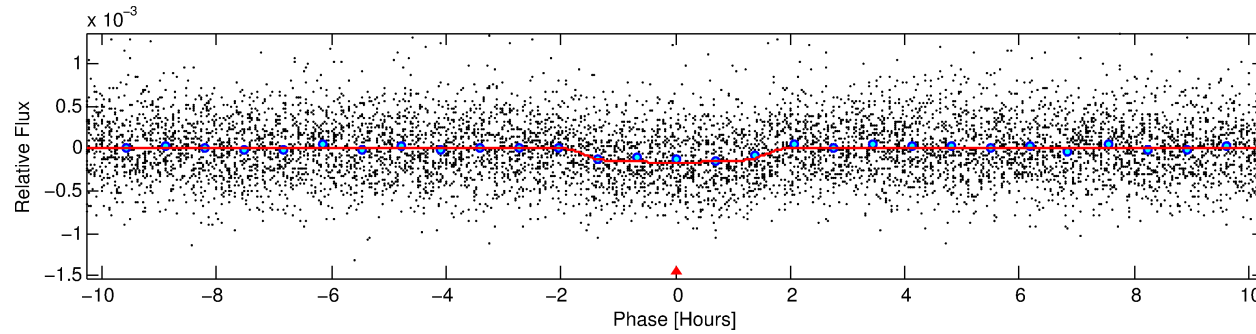
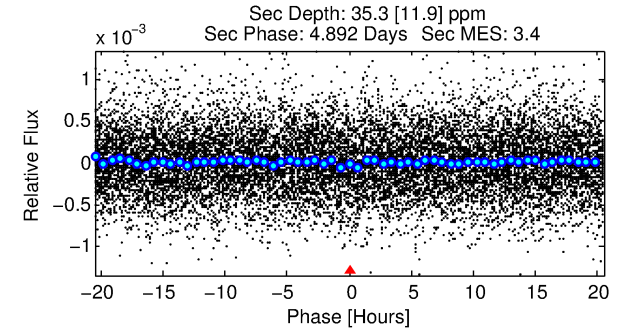
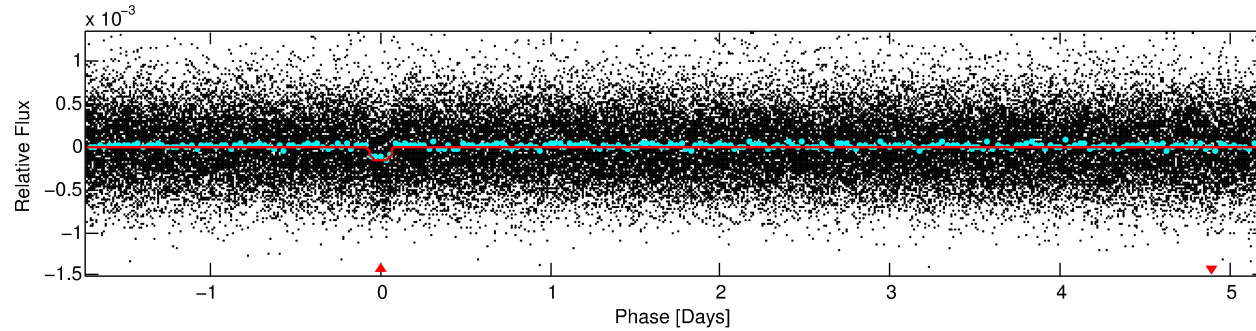
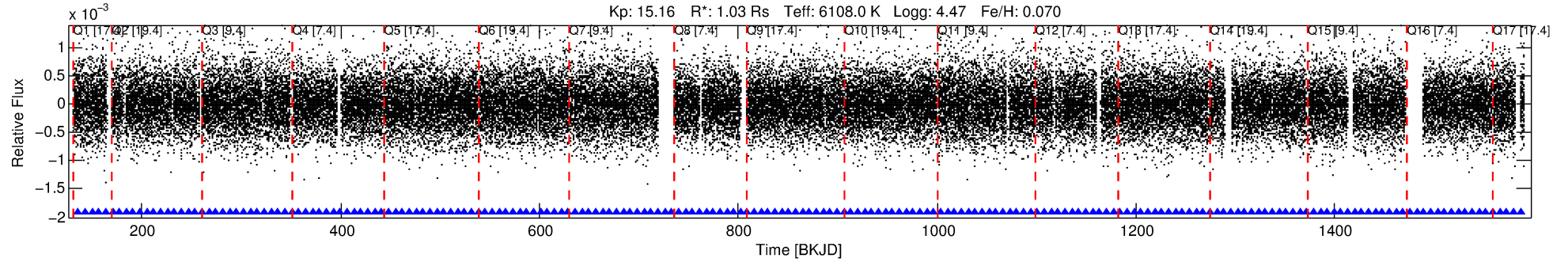
Ephemeris Match Information For 011611275-01

No Significant Match Found

DV One-Page Summary

KIC: 11611275 Candidate: 1 of 1 Period: 6.942 d

KOI: K04234.01 Corr: 0.984



DV Fit Results:

Period = 6.94240 [0.00004] d
Epoch = 135.9650 [0.0048] BKJD
Rp/R* = 0.0133 [0.0065]
a/R* = 8.24 [20.12]
b = 0.86 [0.74]
Seff = 240.09 [101.24]
Teff = 1004 [106] K
Rp = 1.50 [0.87] Re
a = 0.0742 [0.0198] AU
Ag = 47.66 [52.82] [0.88σ]
Teffp = 4078 [1068] K [2.86σ]

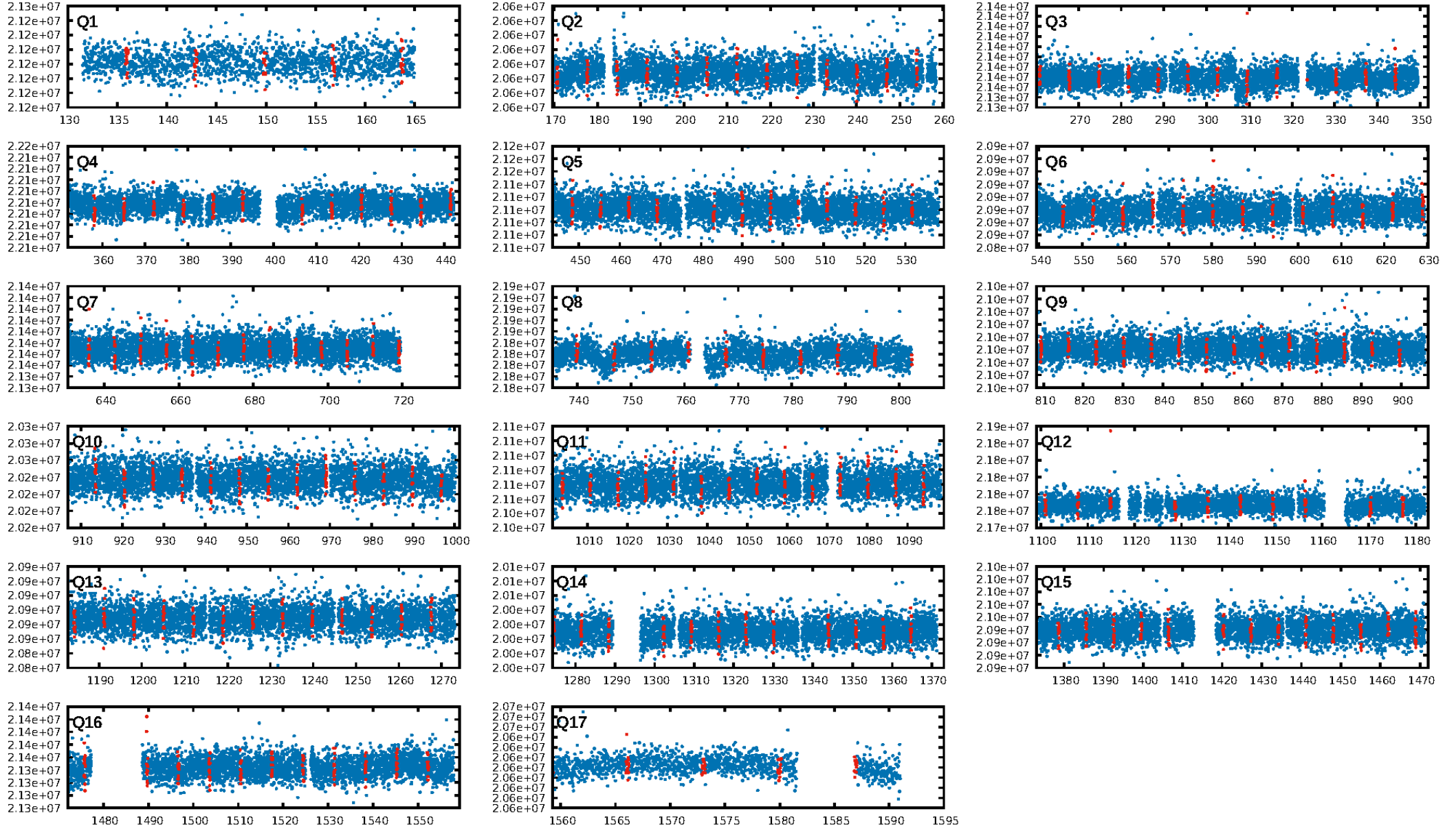
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.21e-40
RollingBand-fgt: 1.00 [183/183]
GhostDiagnostic-chr: 1.827
Centroid-sig: 34.2%
Centroid-so: 1.340 arcsec [1.33σ]
OotOffset-rm: 0.650 arcsec [1.14σ]
KicOffset-rm: 0.585 arcsec [1.10σ]
OotOffset-st: 4/4/4/3 [15]
KicOffset-st: 4/4/4/3 [15]
DiffImageQuality-fgm: 0.53 [8/15]
DiffImageOverlap-fno: 1.00 [17/17]

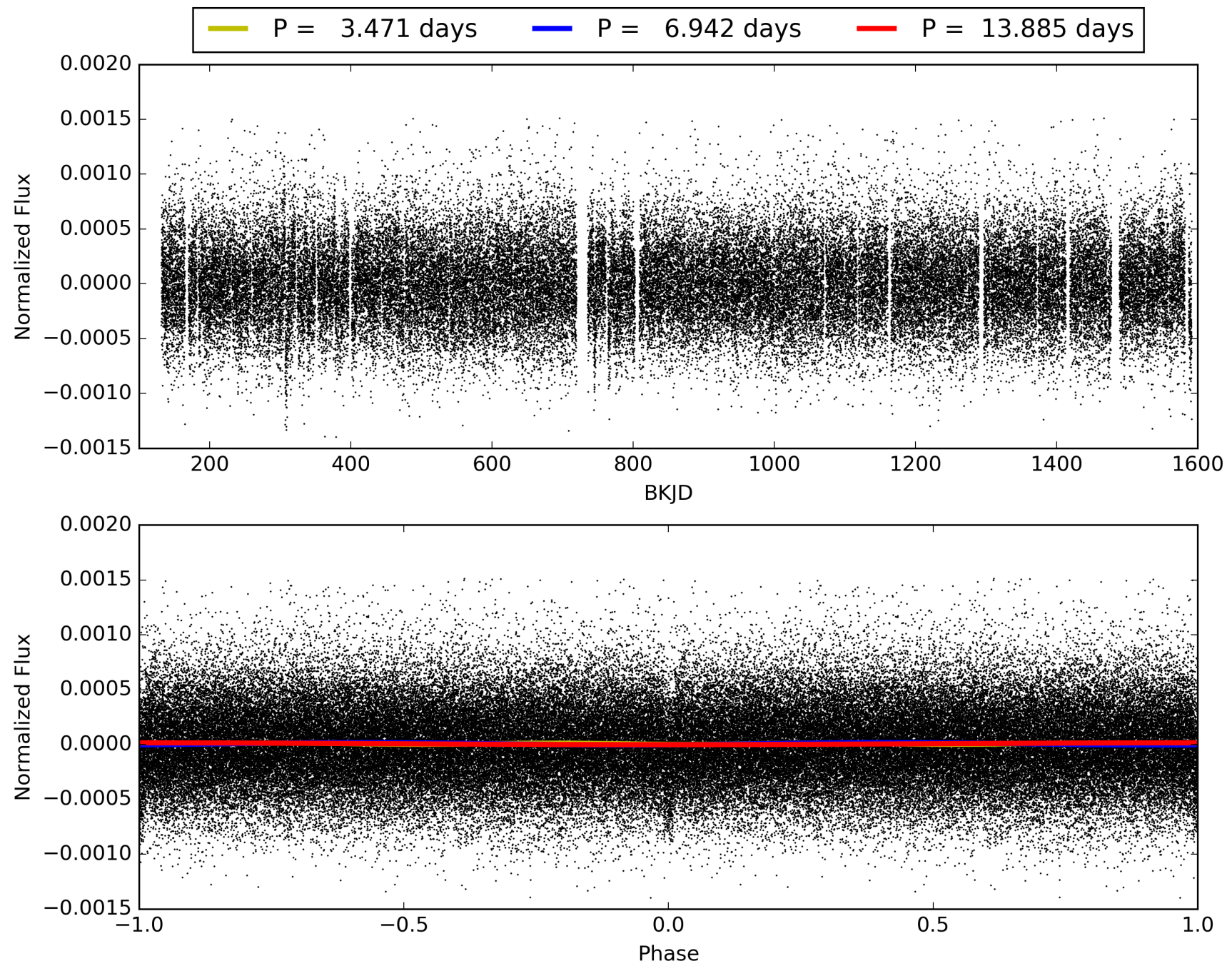
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:34:23 Z

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

TCE 011611275-01, PDC Light Curves

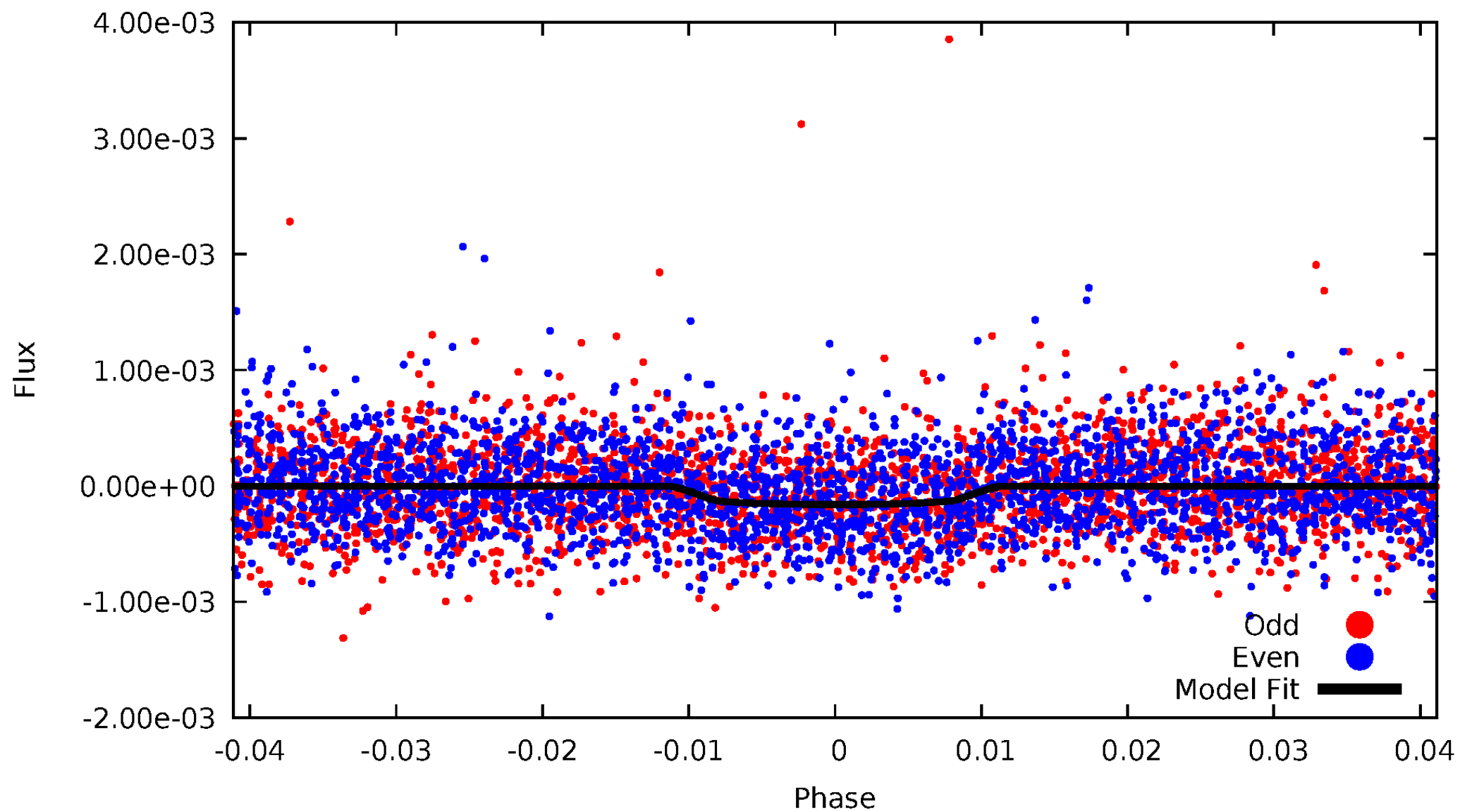


TCE 011611275-01



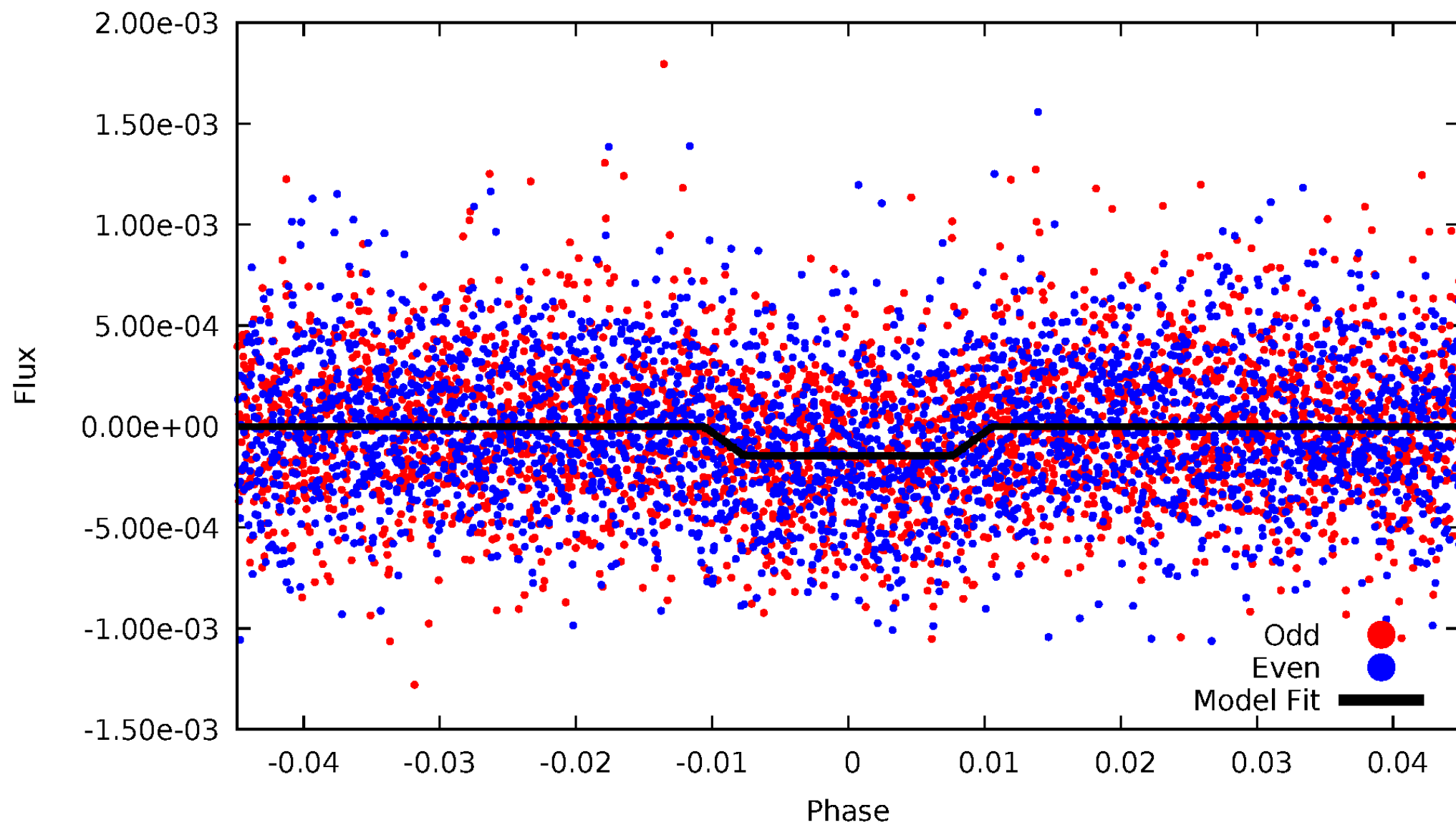
DV Odd/Even

TCE 011611275-01



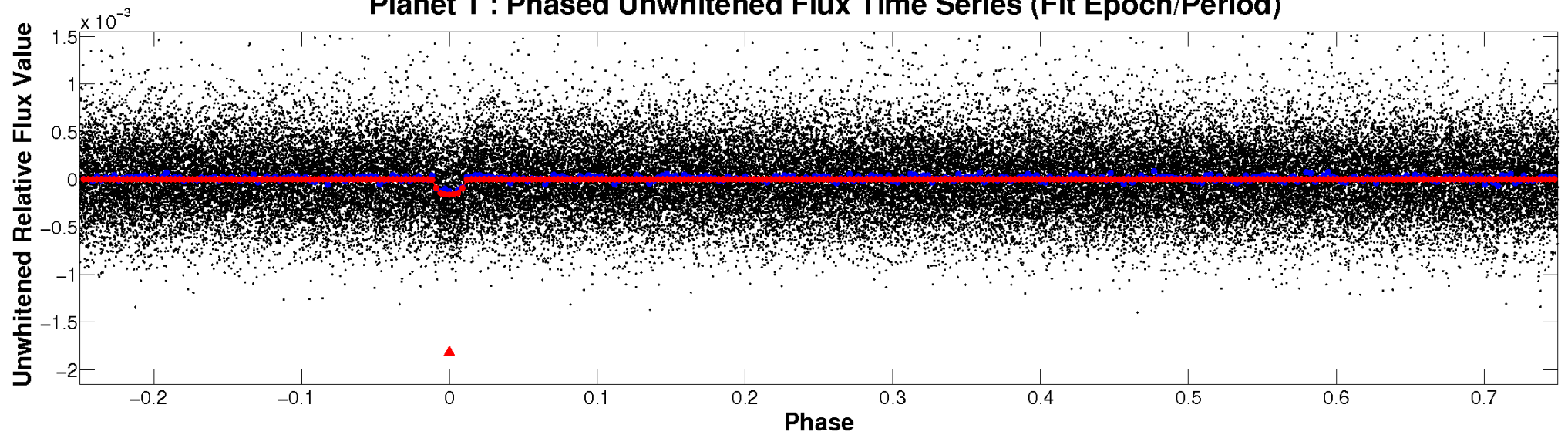
ALT Odd/Even

TCE 011611275-01

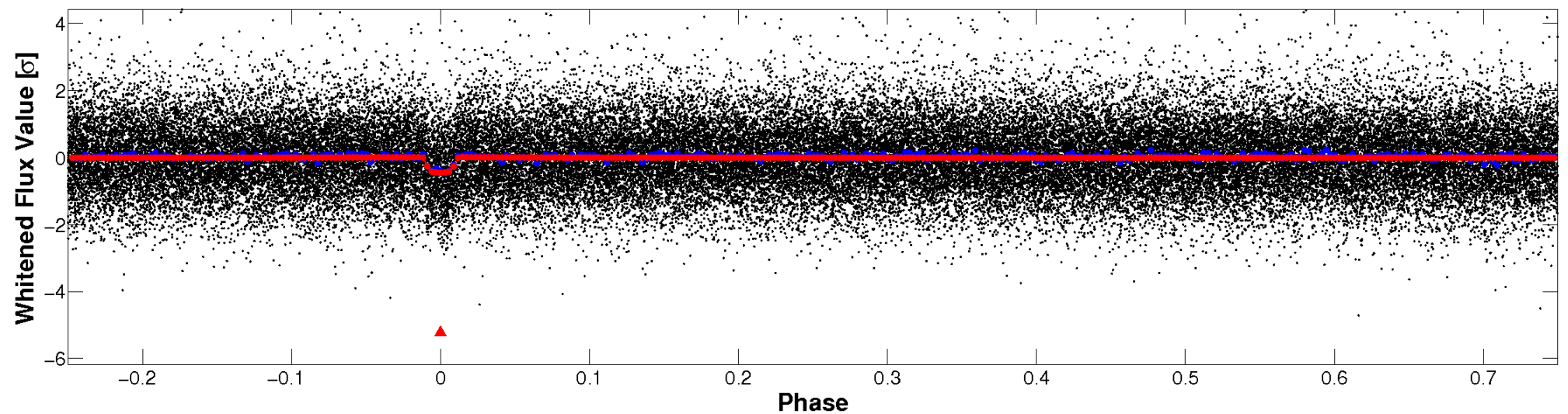


Non-Whitened Vs. Whitened Light Curve

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

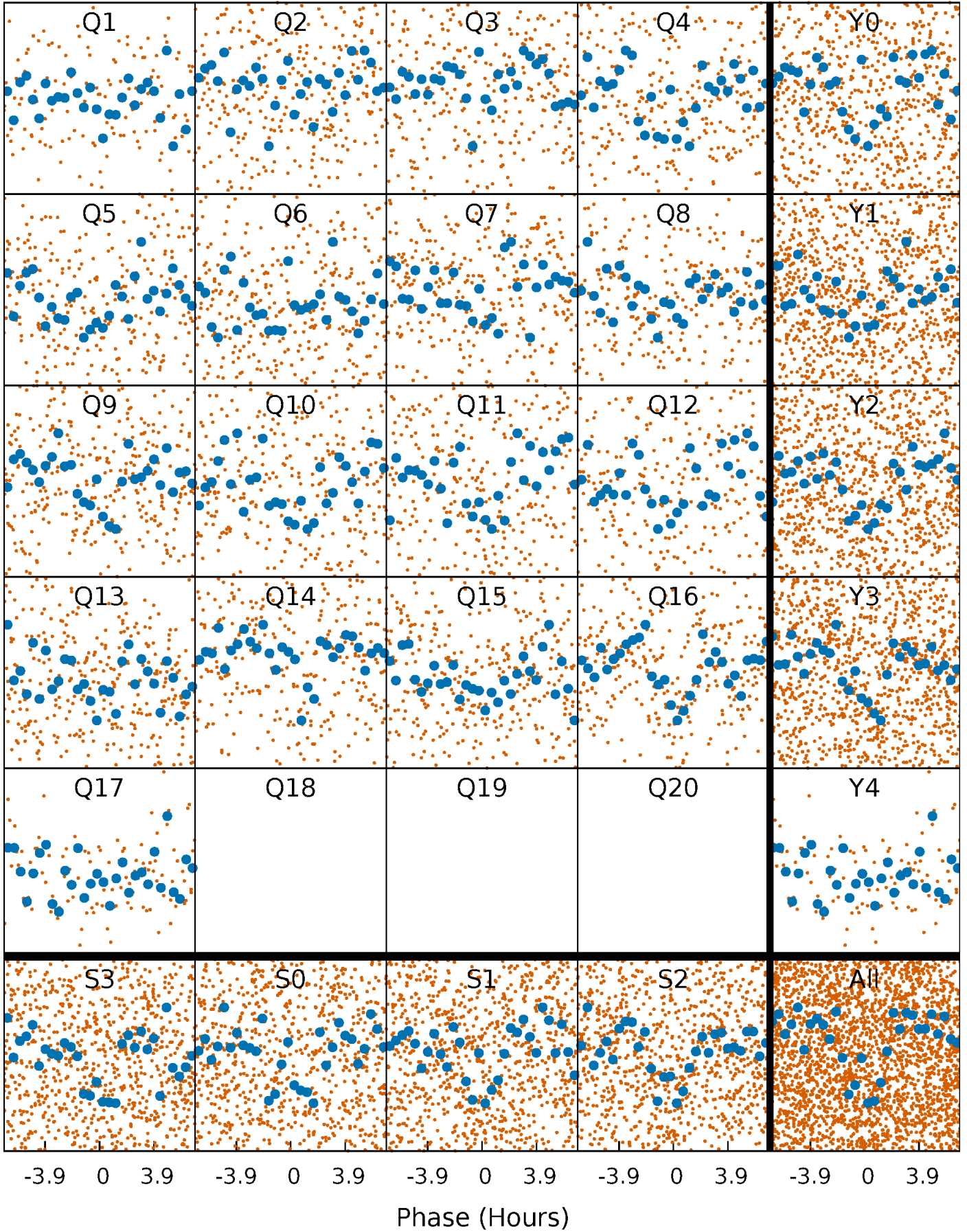


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



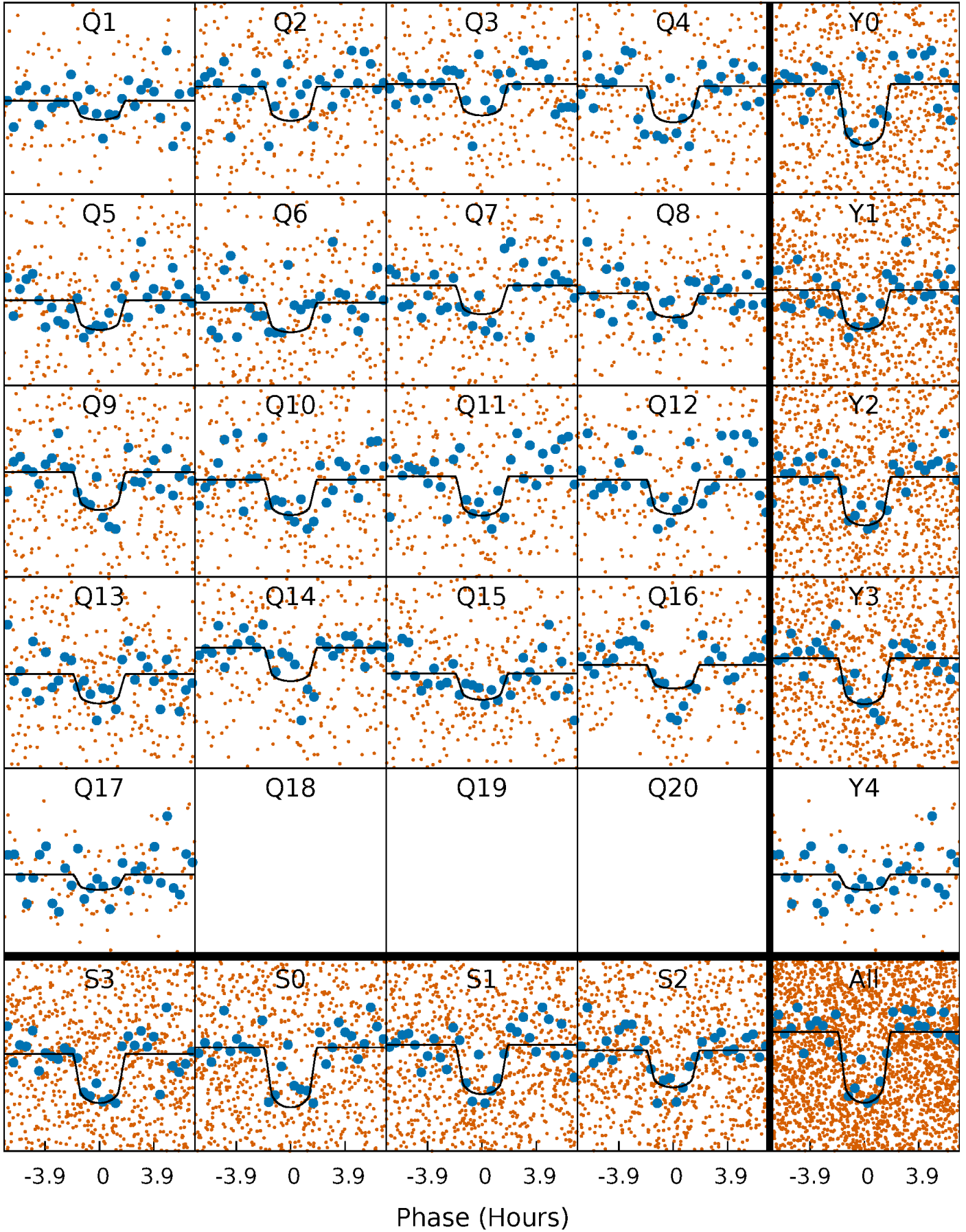
PDC Quarter-Phased Transit Curves

TCE 011611275-01 P= 6.942399 Days $T_0=135.965047$ (BKJD)



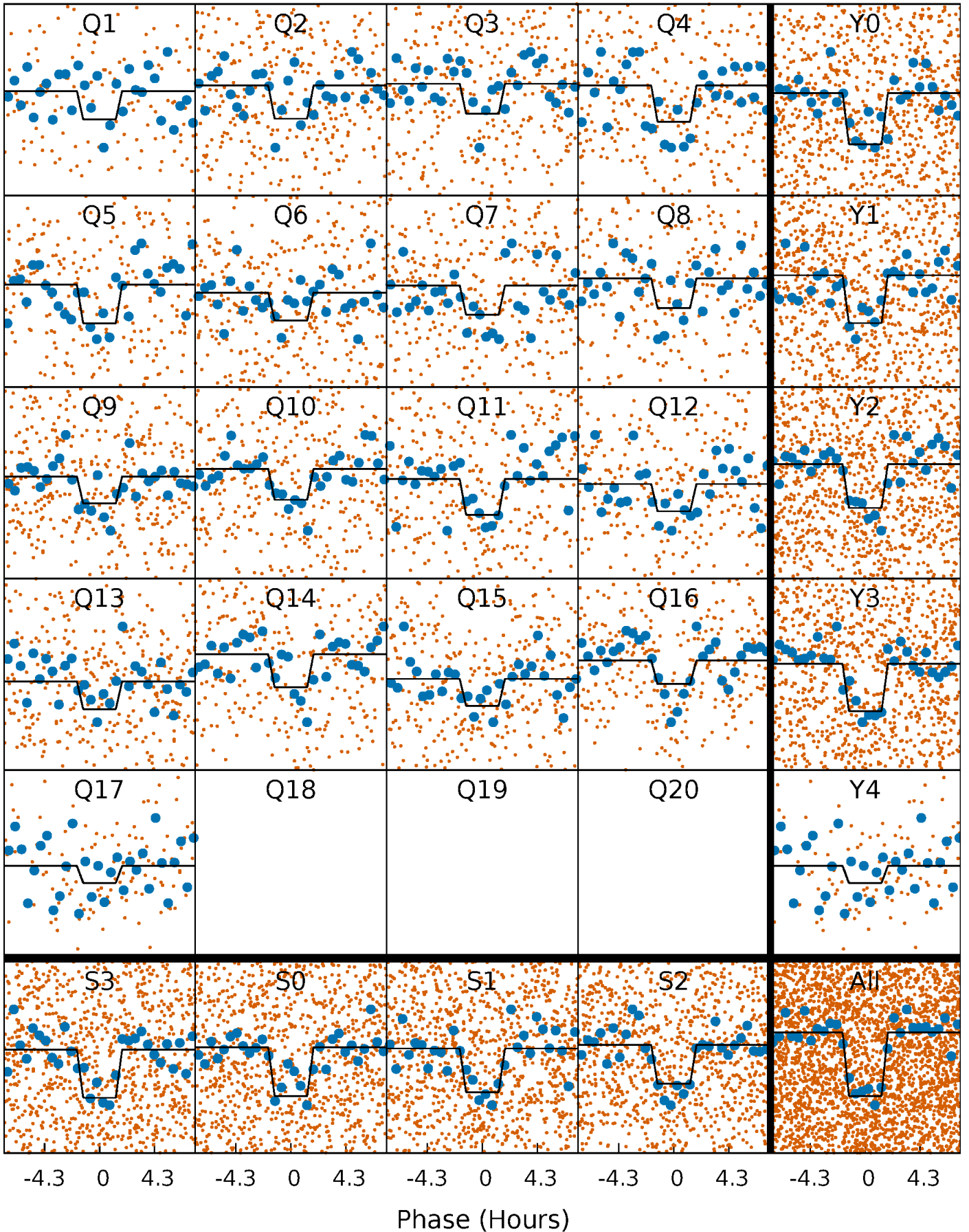
DV Quarter-Phased Transit Curves

TCE 011611275-01 P= 6.942399 Days $T_0=135.965047$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

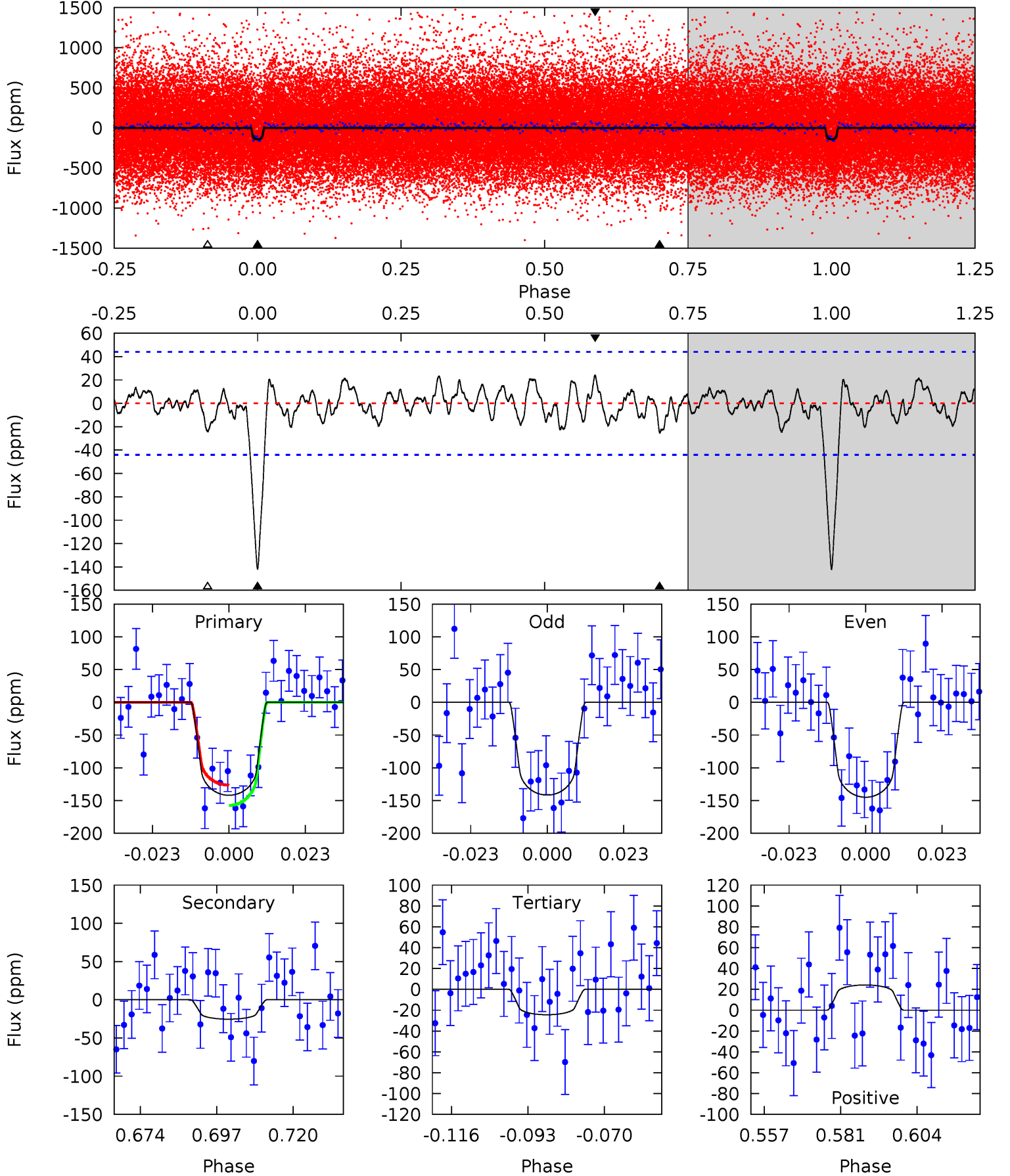
TCE 011611275-01 P= 6.942543 Days $T_0=135.947603$ (BKJD)



DV Model-Shift Uniqueness Test

011611275-01, P = 6.942399 Days, E = 129.022648 Days

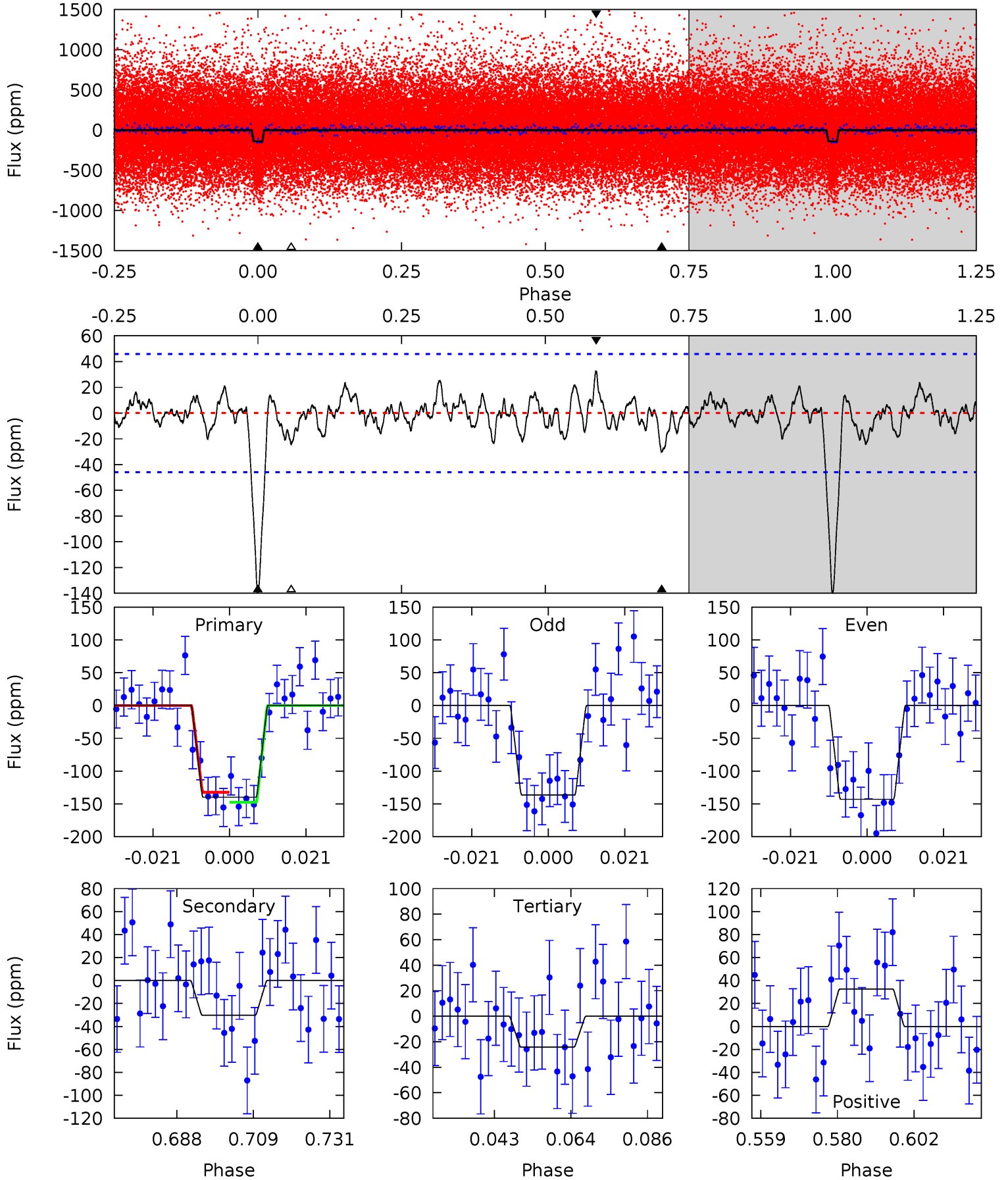
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 15.7 | 2.81 | 2.69 | 2.67 | 4.86 | 2.27 | 1.10 | 13.0 | 13.0 | 0.11 | 0.14 | 0.18 | 1.00 | 0.15 | 1.73 |



Alt Model-Shift Uniqueness Test

011611275-01, P = 6.942543 Days, E = 129.005060 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 14.9 | 3.22 | 2.57 | 3.46 | 4.88 | 2.30 | 1.04 | 12.3 | 11.4 | 0.64 | -0.25 | 0.34 | 0.98 | 0.19 | 0.81 |



Stellar Parameters For KIC 011611275

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | $R (R_{\odot})$ | $M(M_{\odot})$ | $p_{\star} (\text{g}\cdot\text{cm}^{-3})$ |
|--------|----------------------|---------------------------|---------------------------|---------------------------|---------------------------|---|
| | 6108^{+193}_{-236} | $4.466^{+0.054}_{-0.216}$ | $0.070^{+0.250}_{-0.300}$ | $1.030^{+0.324}_{-0.108}$ | $1.132^{+0.135}_{-0.166}$ | $1.457^{+0.413}_{-0.805}$ |
| | +3%/-4% | +1%/-5% | +357%/-429% | +31%/-10% | +12%/-15% | +28%/-55% |
| 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 011611275-01 / KOI 4234.01

| Detrend | Depth (ppm) | $R_p (R_{\oplus})$ | $T_{\text{max}} (K)$ | $T_{\text{obs}} (K)$ | A_{obs} |
|---------|-------------|------------------------|----------------------|-----------------------|-------------------|
| DV | -25 ± 9 | $1.58^{+0.77}_{-0.73}$ | 1440^{+109}_{-82} | 3996^{+1178}_{-514} | 29^{+76}_{-16} |
| Alt. | -30 ± 9 | $1.47^{+0.80}_{-0.75}$ | 1436^{+95}_{-68} | 4314^{+1458}_{-704} | 42^{+129}_{-27} |

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

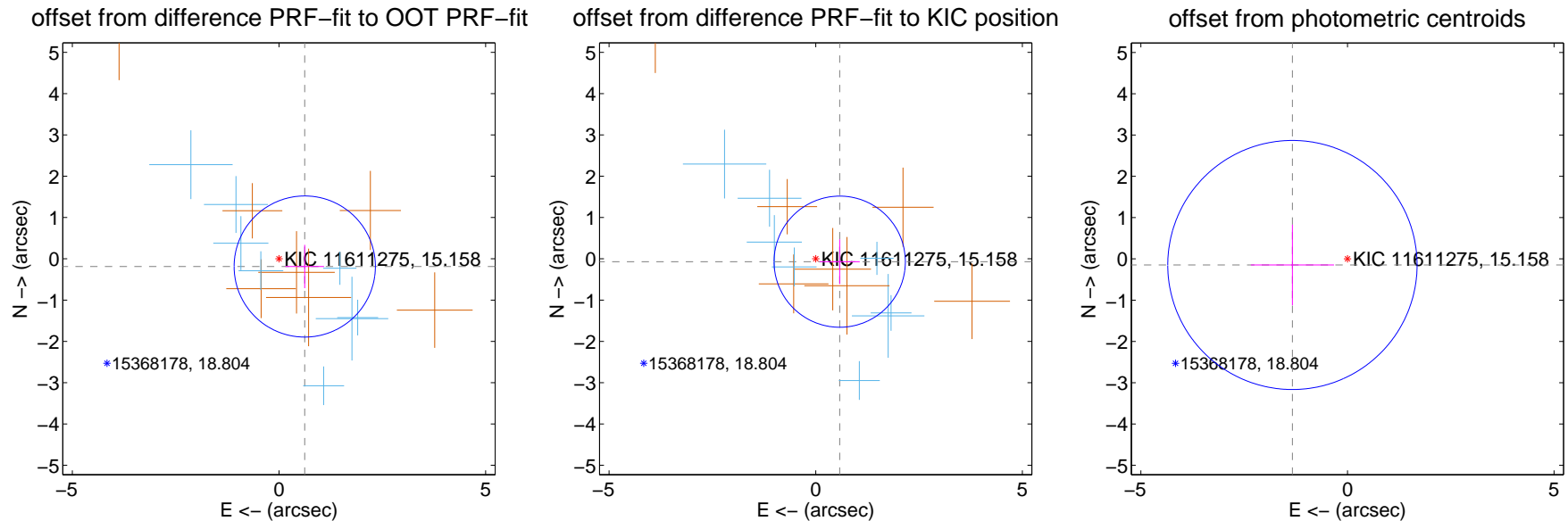
DV Centroid Data

Supplemental centroid analysis for 011611275-01. Kepler magnitude: 15.16. Transit SNR 13.96

There are 8 quarters with good PRF difference image offsets

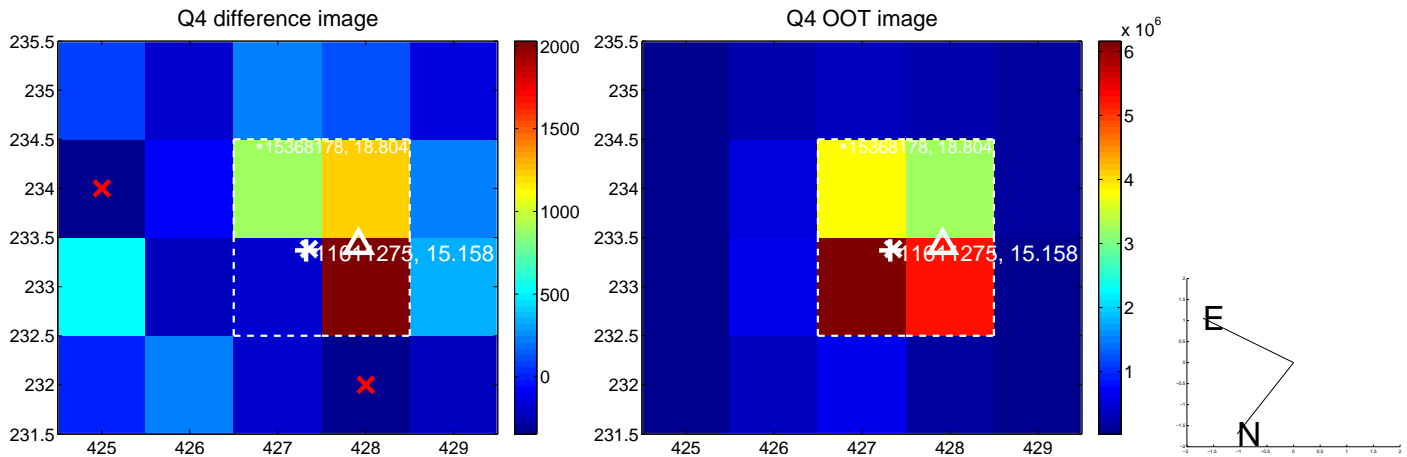
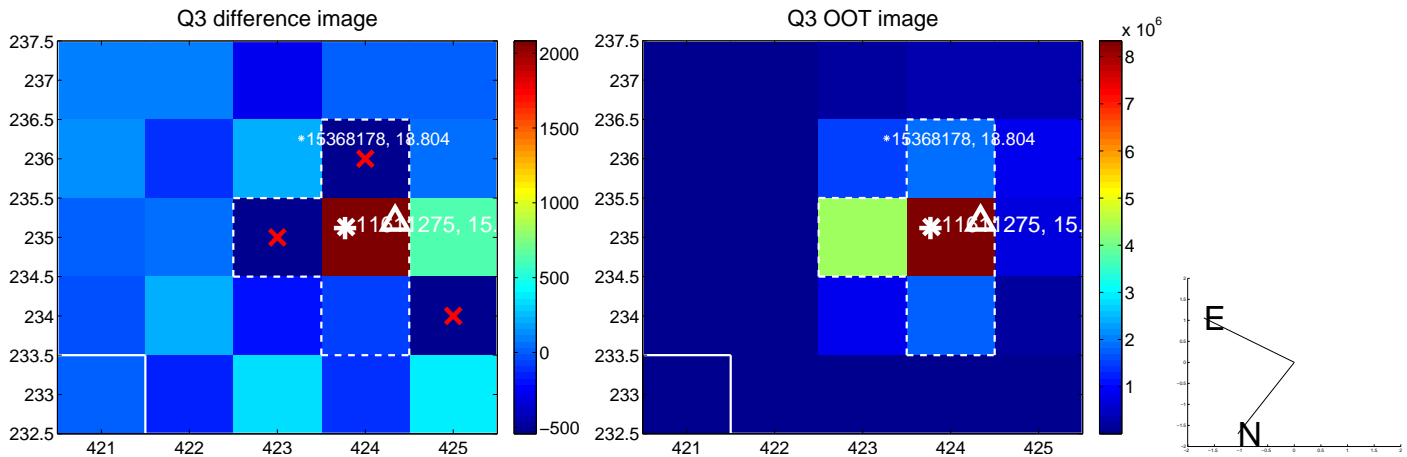
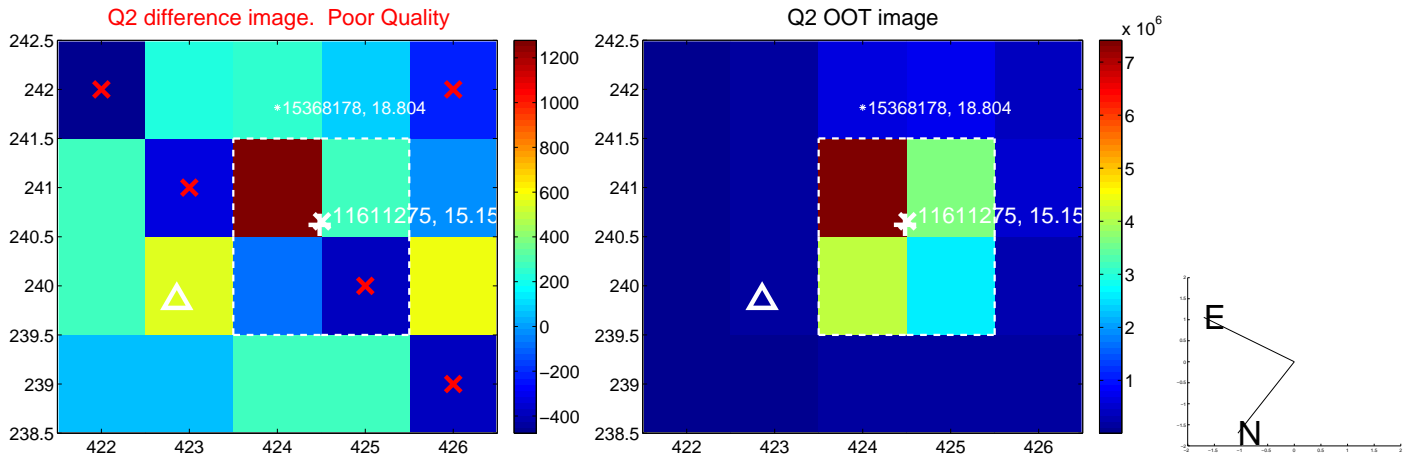
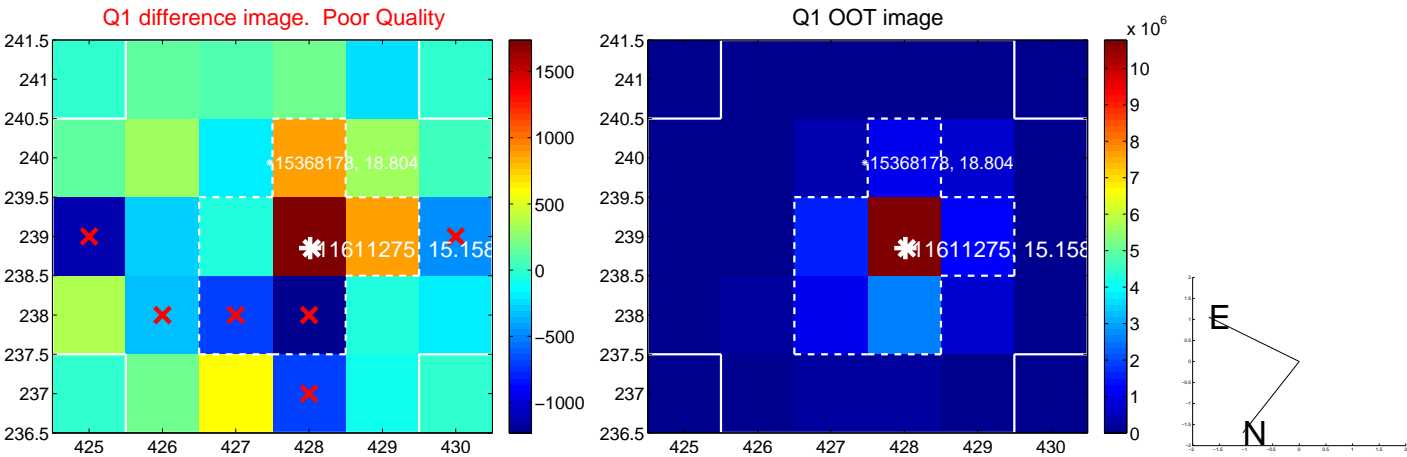
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|--------------------|--------------------|
| PRF-fit source offset from OOT | 0.650 ± 0.570 | 1.14 | -0.623 ± 0.467 | -0.187 ± 0.525 |
| PRF-fit source offset from KIC position | 0.585 ± 0.529 | 1.10 | -0.580 ± 0.486 | -0.070 ± 0.543 |
| photometric centroid source offset | 1.34 ± 1.01 | 1.33 | 1.33 ± 1.01 | -0.15 ± 0.98 |

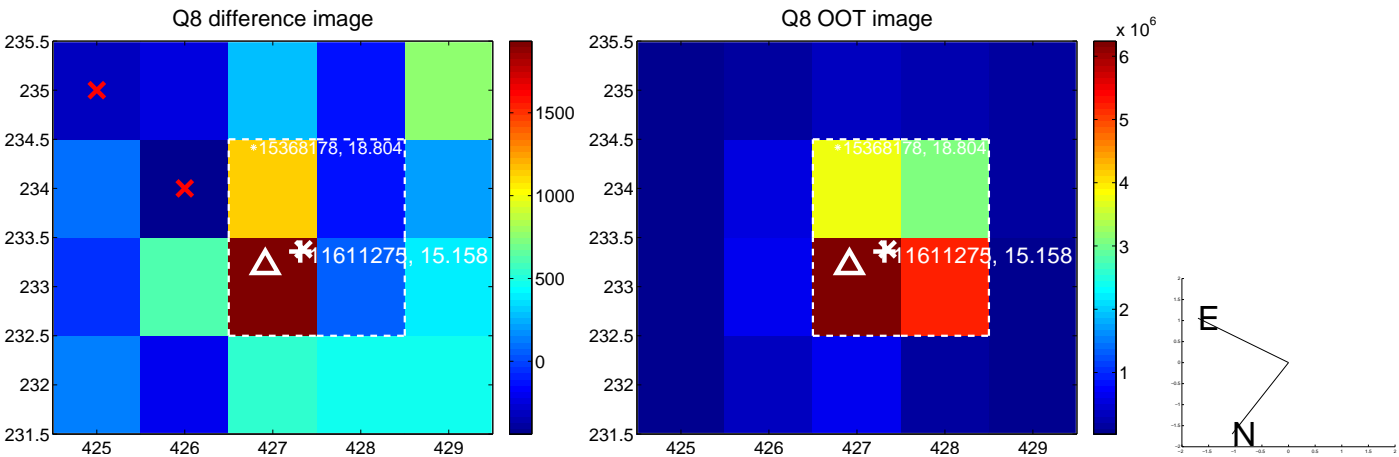
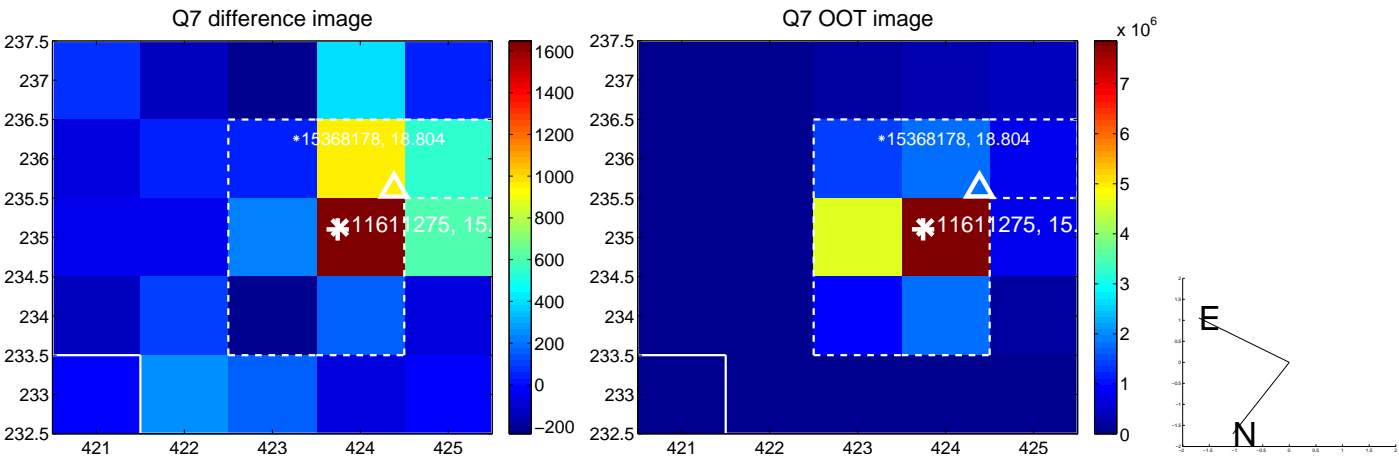
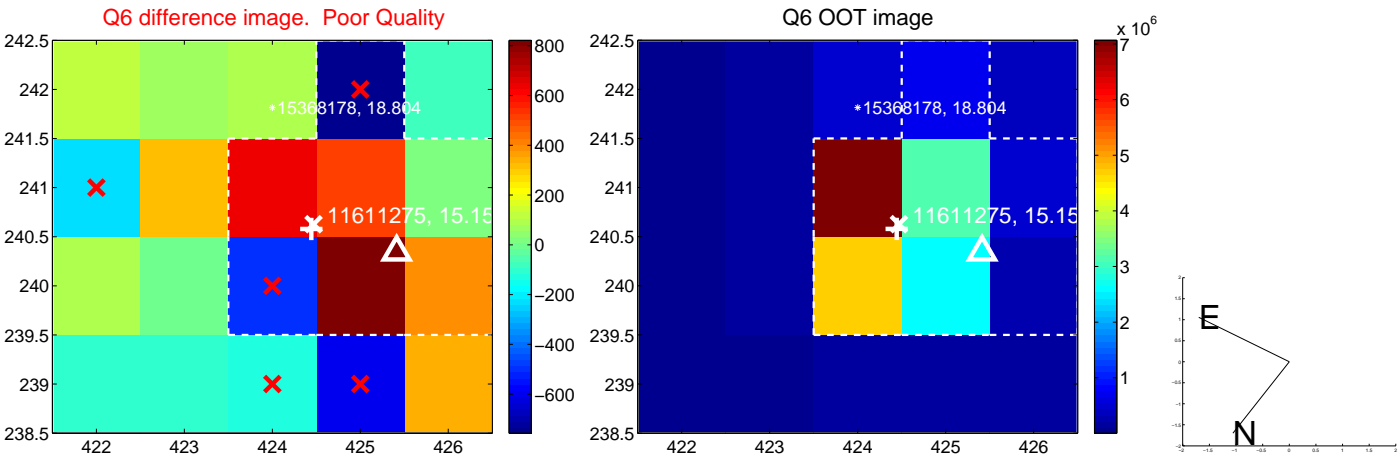
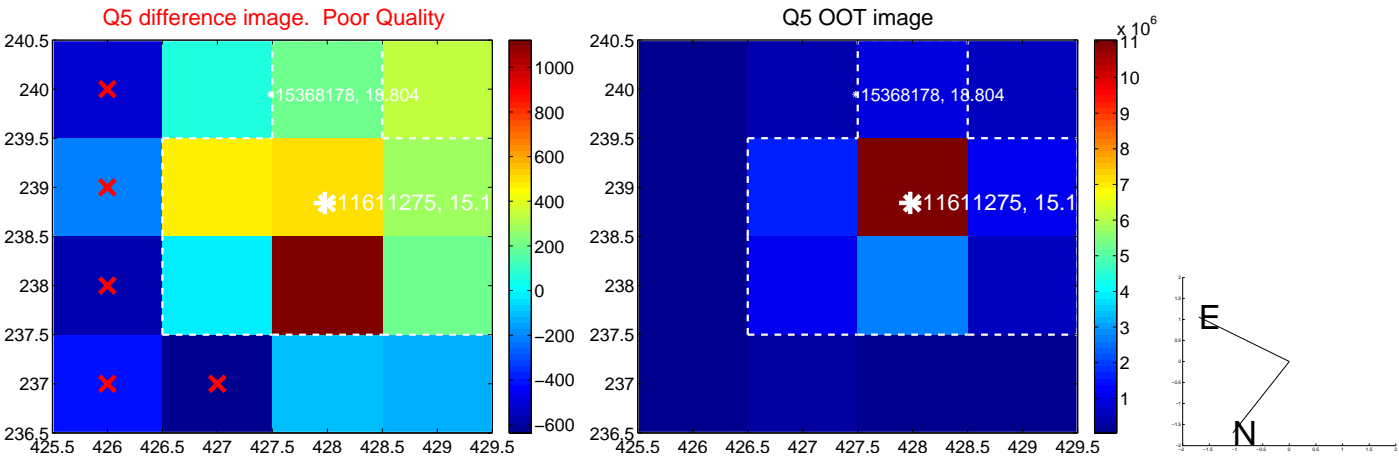


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

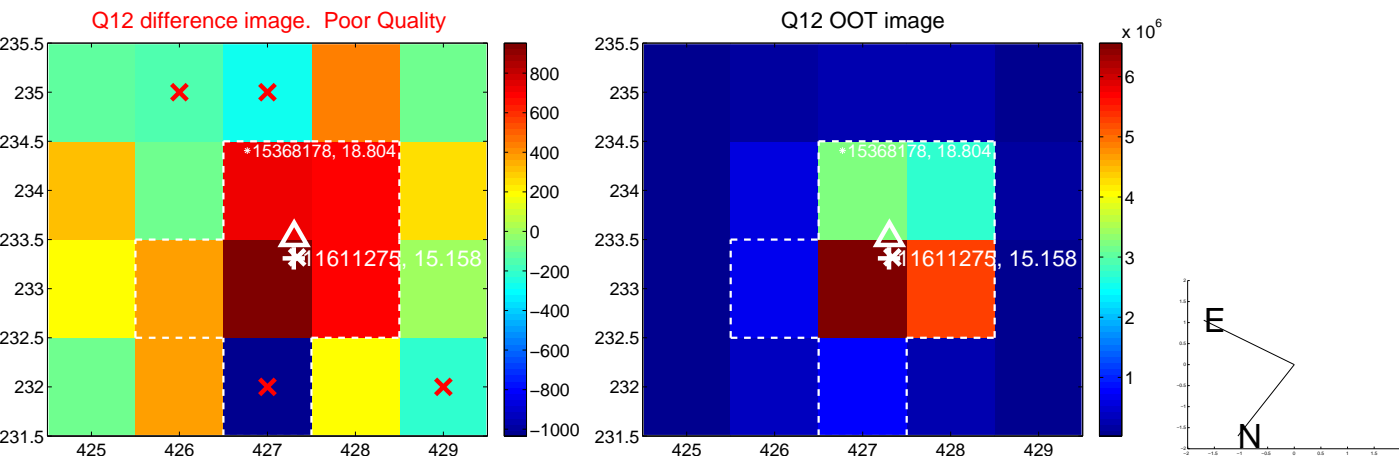
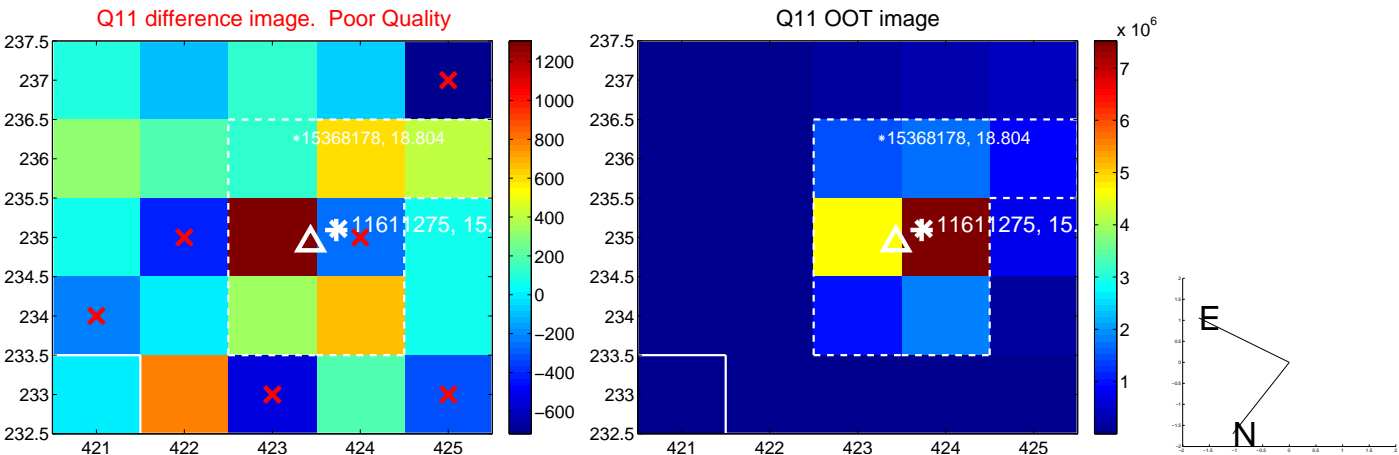
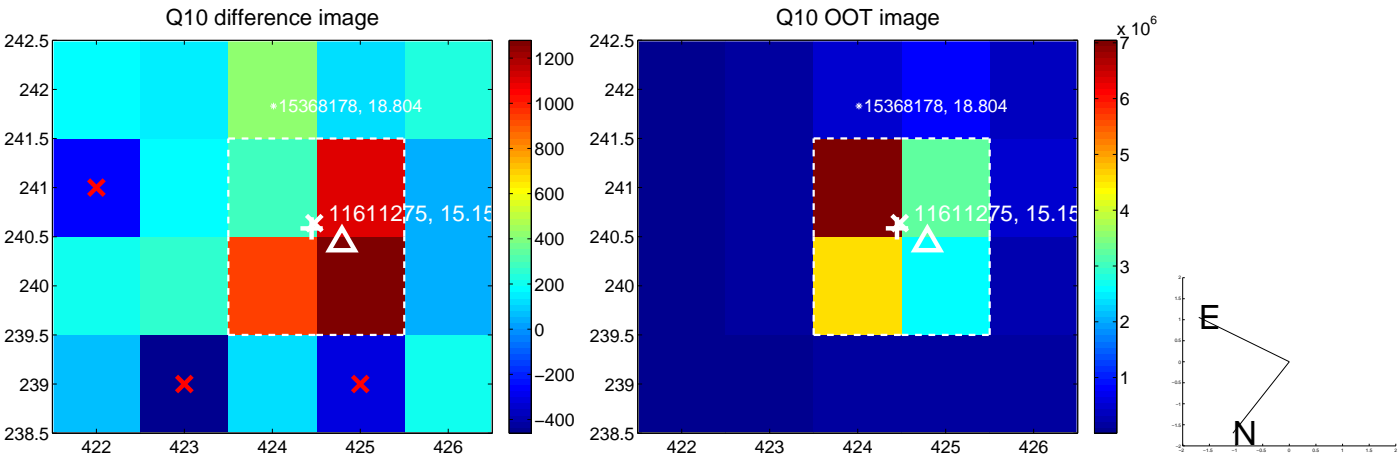
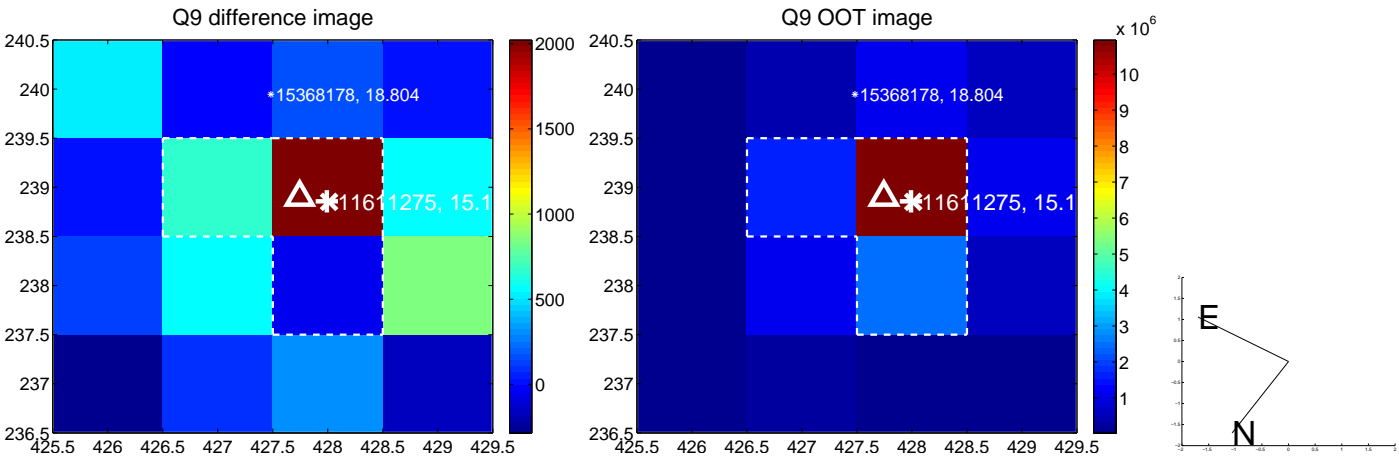
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



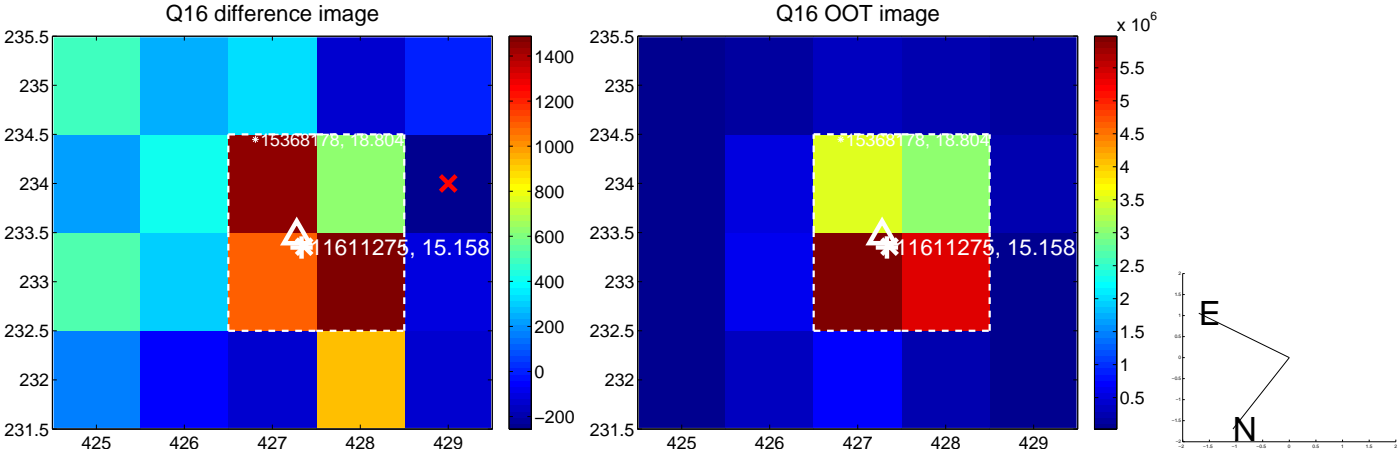
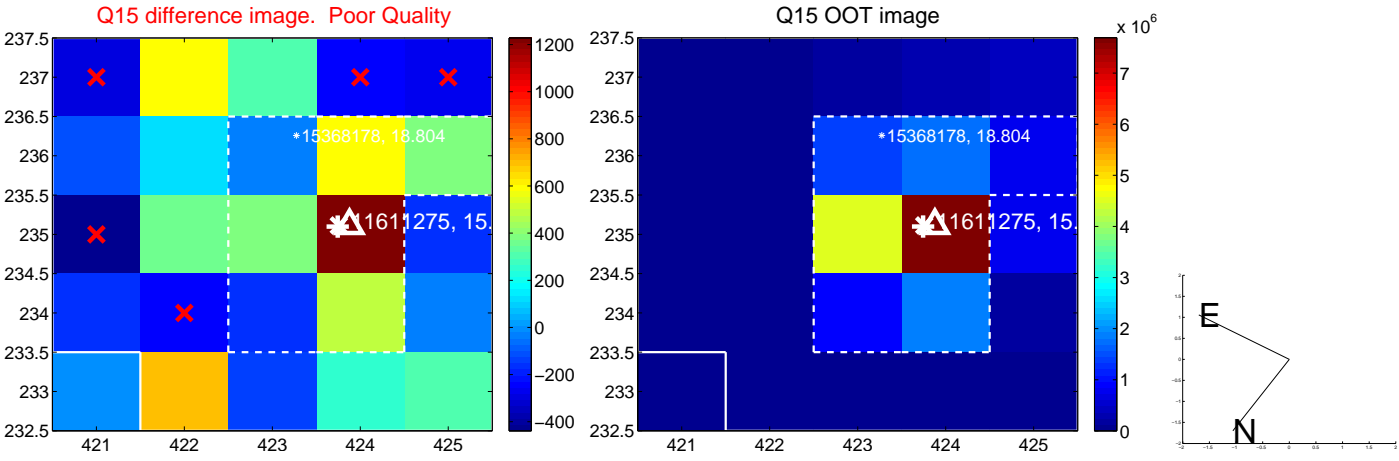
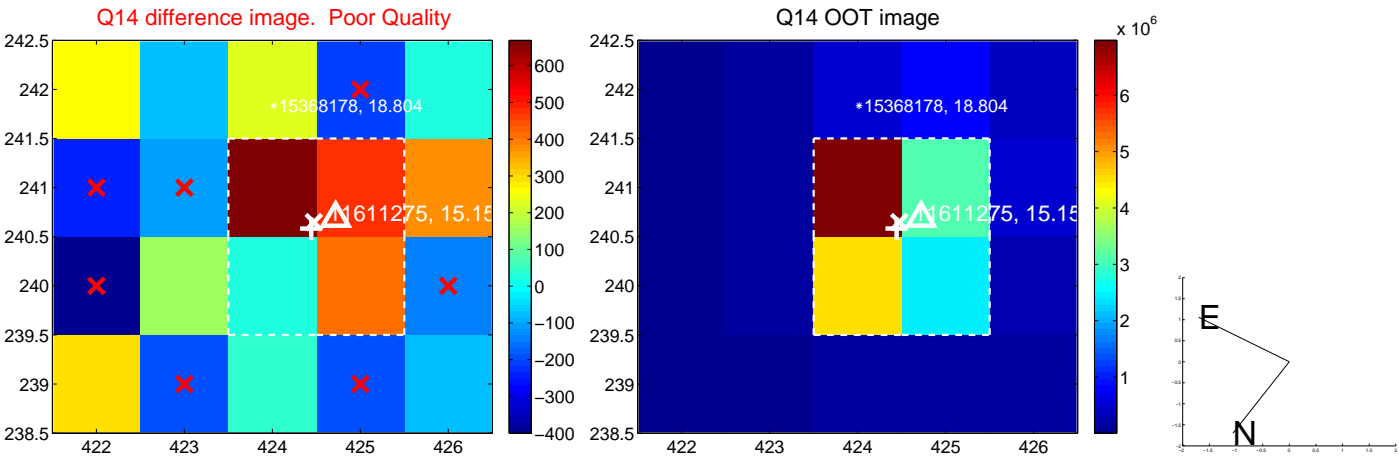
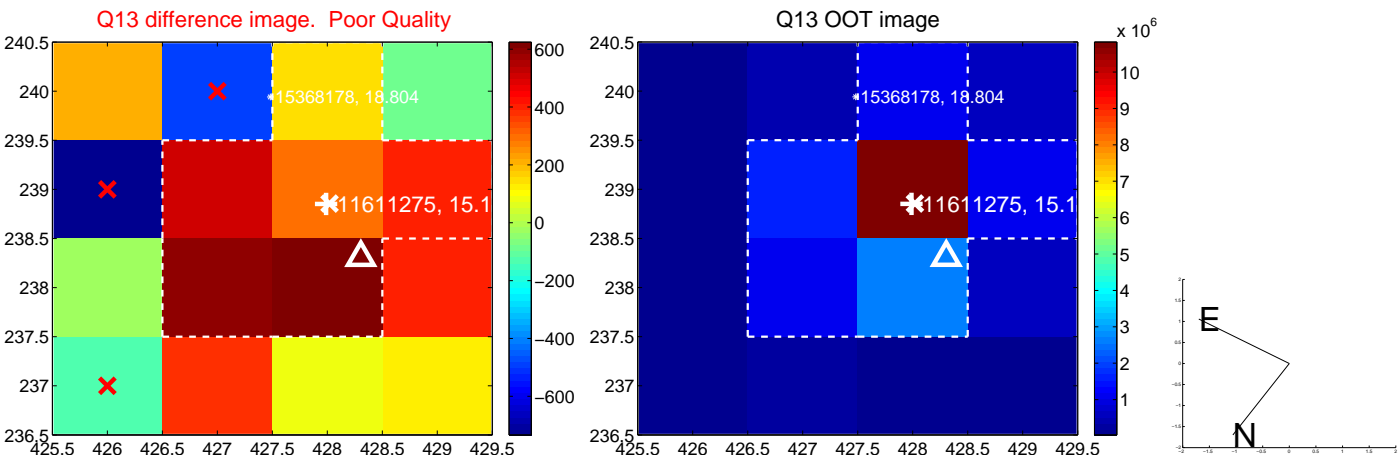
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



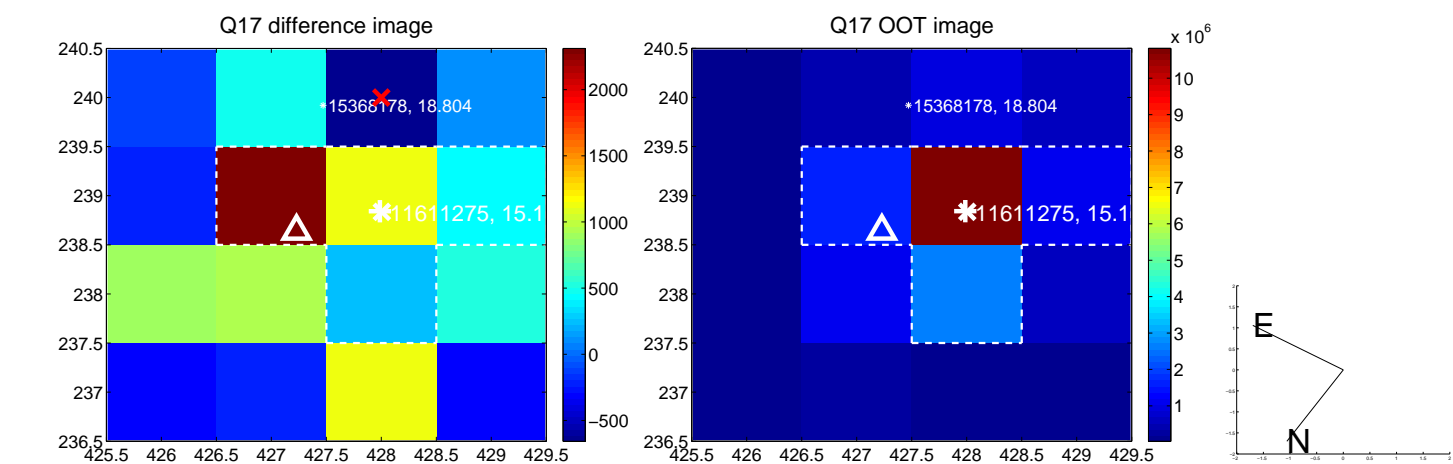
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



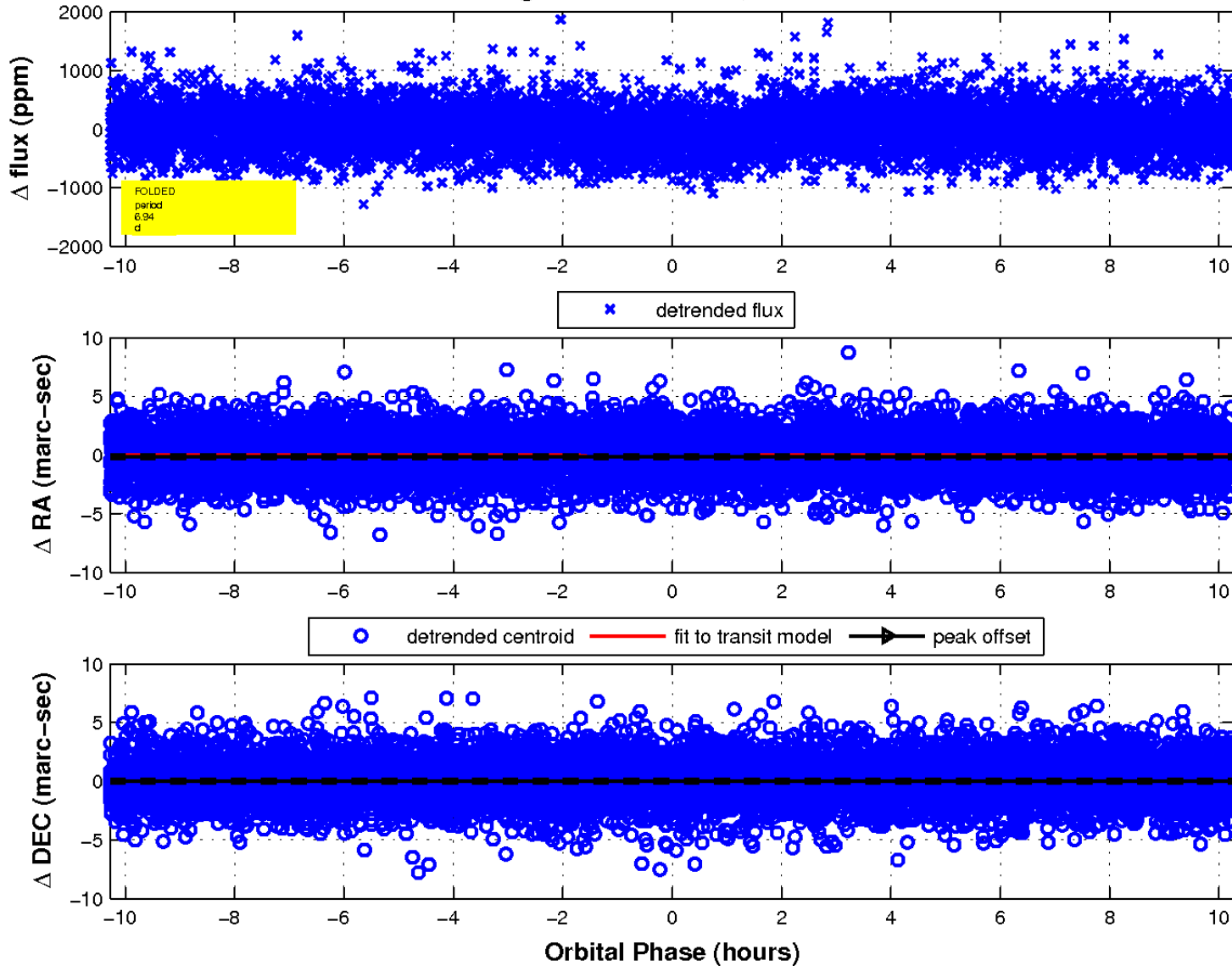
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

