

KIC 011140629

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|-----|-----|-----------------------------|-----------------|------------------------|------------------------|
| 011140629-01 | OBS | No | 374.159273 | 462.863249 | 197.3 | 11.508 | 8.1 | 8.0 | 1.27 | 6316 | 2.04 | 2.19 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|---|
| 011140629-01 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_CHASES—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS |

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

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

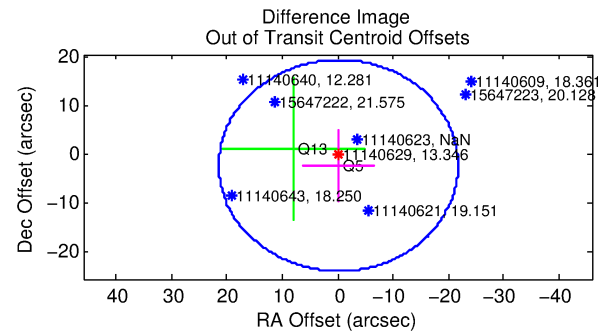
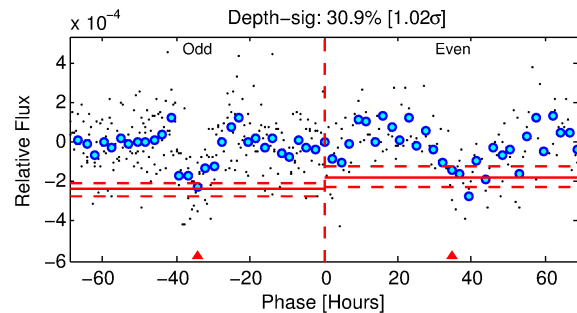
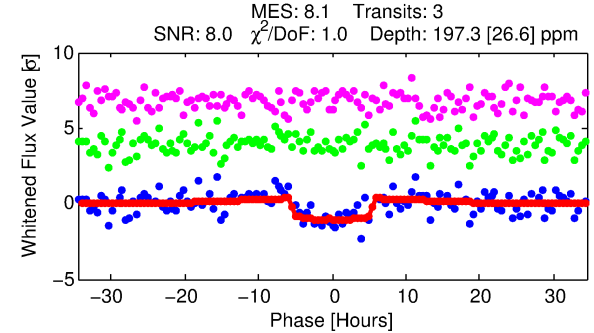
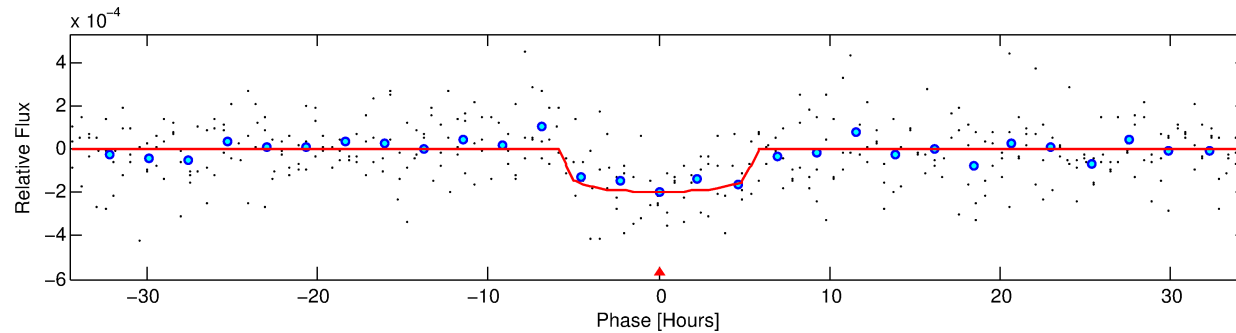
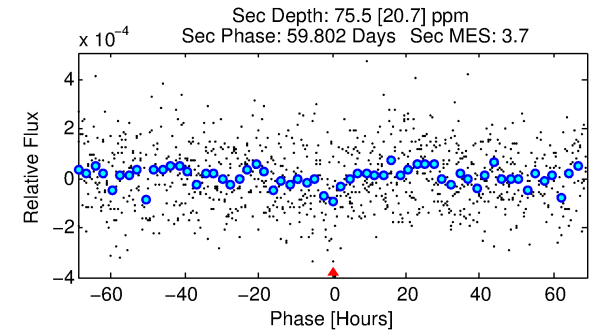
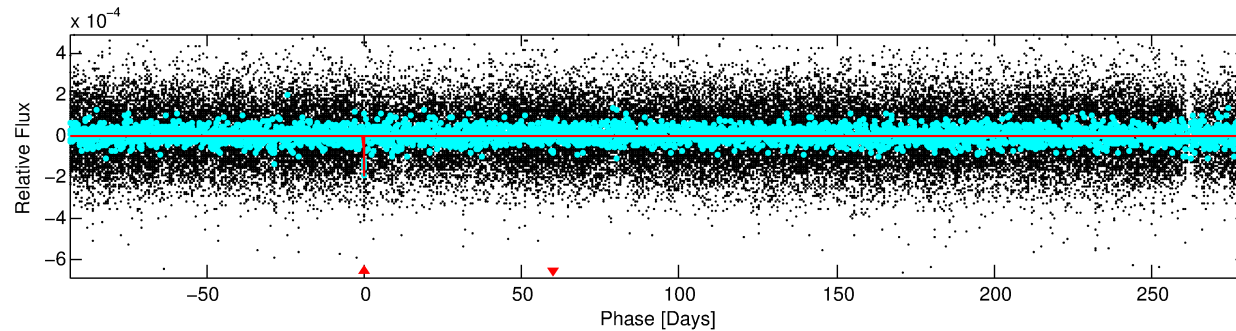
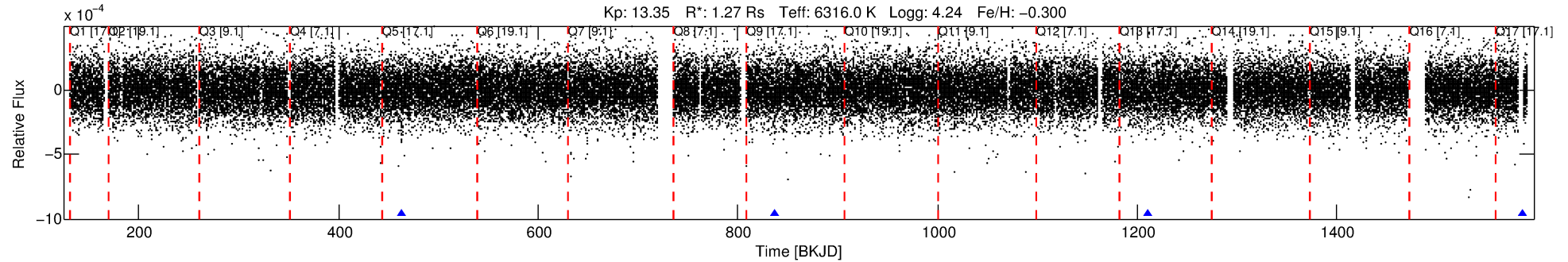
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011140629-01

No Significant Match Found

DV One-Page Summary

KIC: 11140629 Candidate: 1 of 1 Period: 374.159 d



DV Fit Results:

Period = 374.15927 [0.01112] d
Epoch = 462.8632 [0.0148] BKJD
Rp/R* = 0.0147 [0.0052]
a/R* = 131.48 [252.40]
b = 0.87 [0.56]
Seff = 2.19 [0.68]
Teq = 310 [24] K
Rp = 2.04 [0.84] Re
a = 1.0279 [0.1915] AU
Ag = 10528.96 [8579.01] [1.23σ]
Teffp = 4856 [937] K [4.85σ]

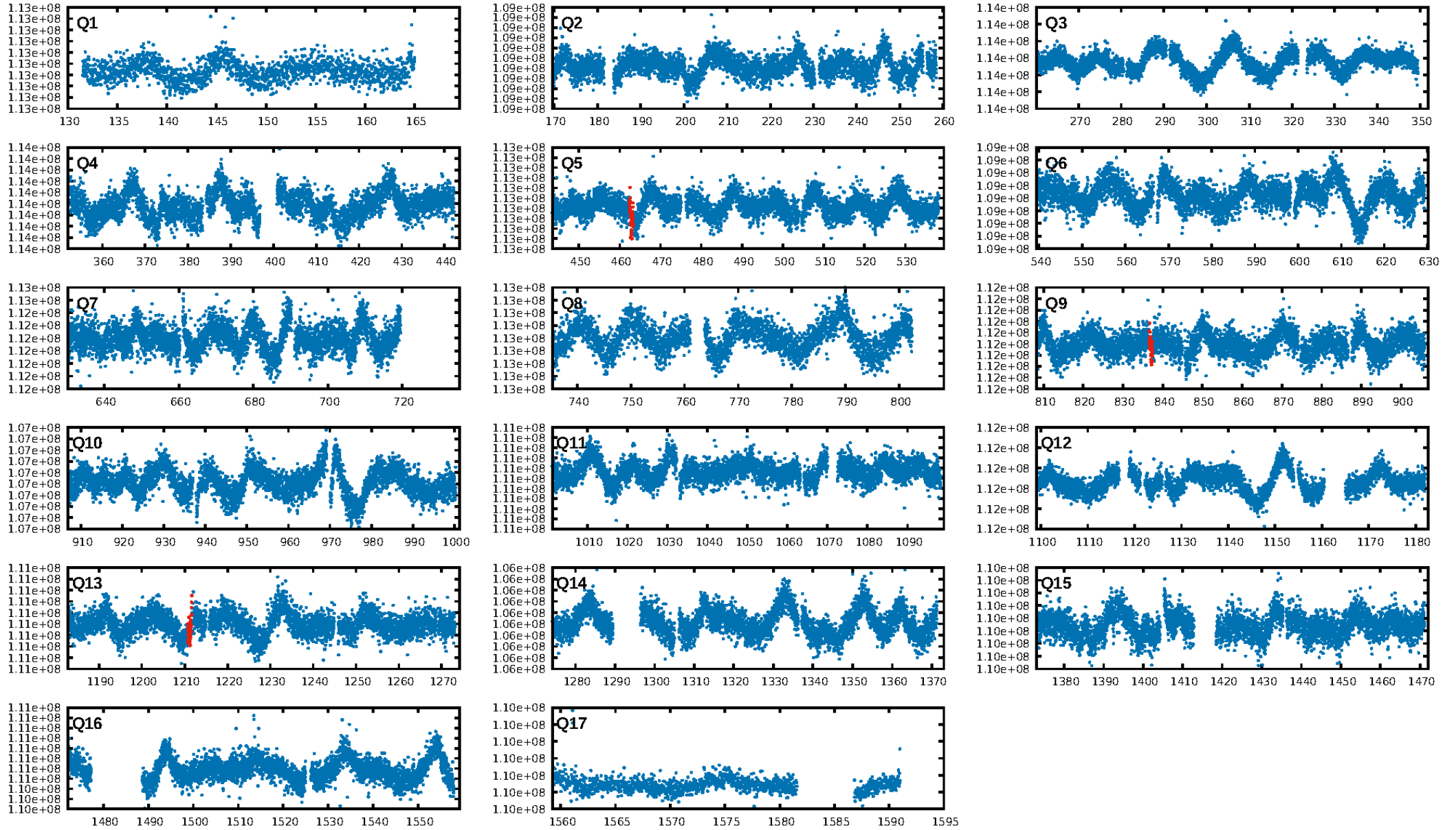
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 25.4%
ModelChiSquareGof-sig: 99.3%
Bootstrap-pfa: 3.72e-13
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -15.67
Centroid-sig: 63.6%
Centroid-so: 0.813 arcsec [0.60σ]
OotOffset-rm: 2.282 arcsec [0.32σ]
OotOffset-st: 0/0/0/2 [2]
KicOffset-rm: 2.309 arcsec [0.32σ]
KicOffset-st: 0/0/0/2 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

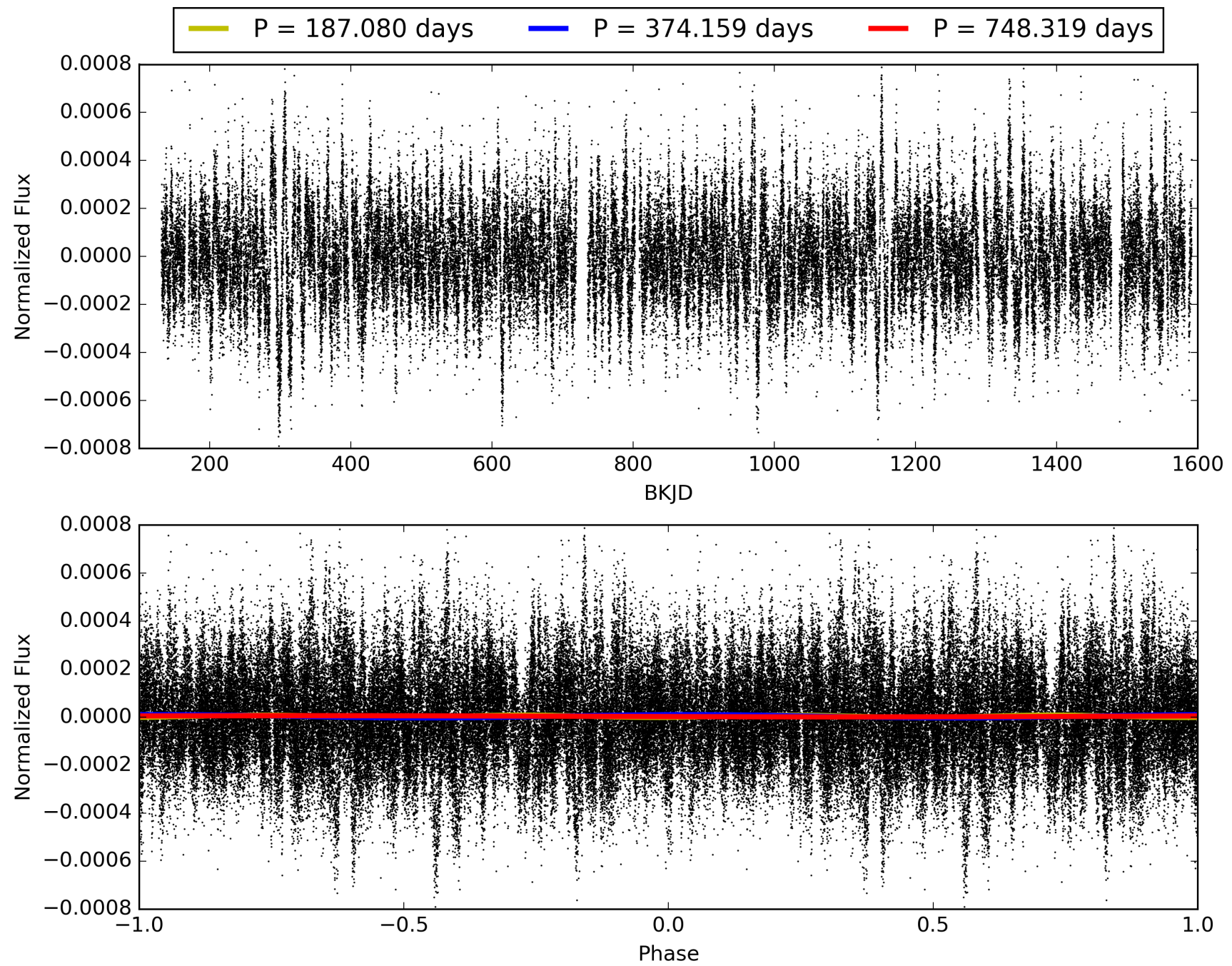
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:36:42 Z

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

TCE 011140629-01, PDC Light Curves

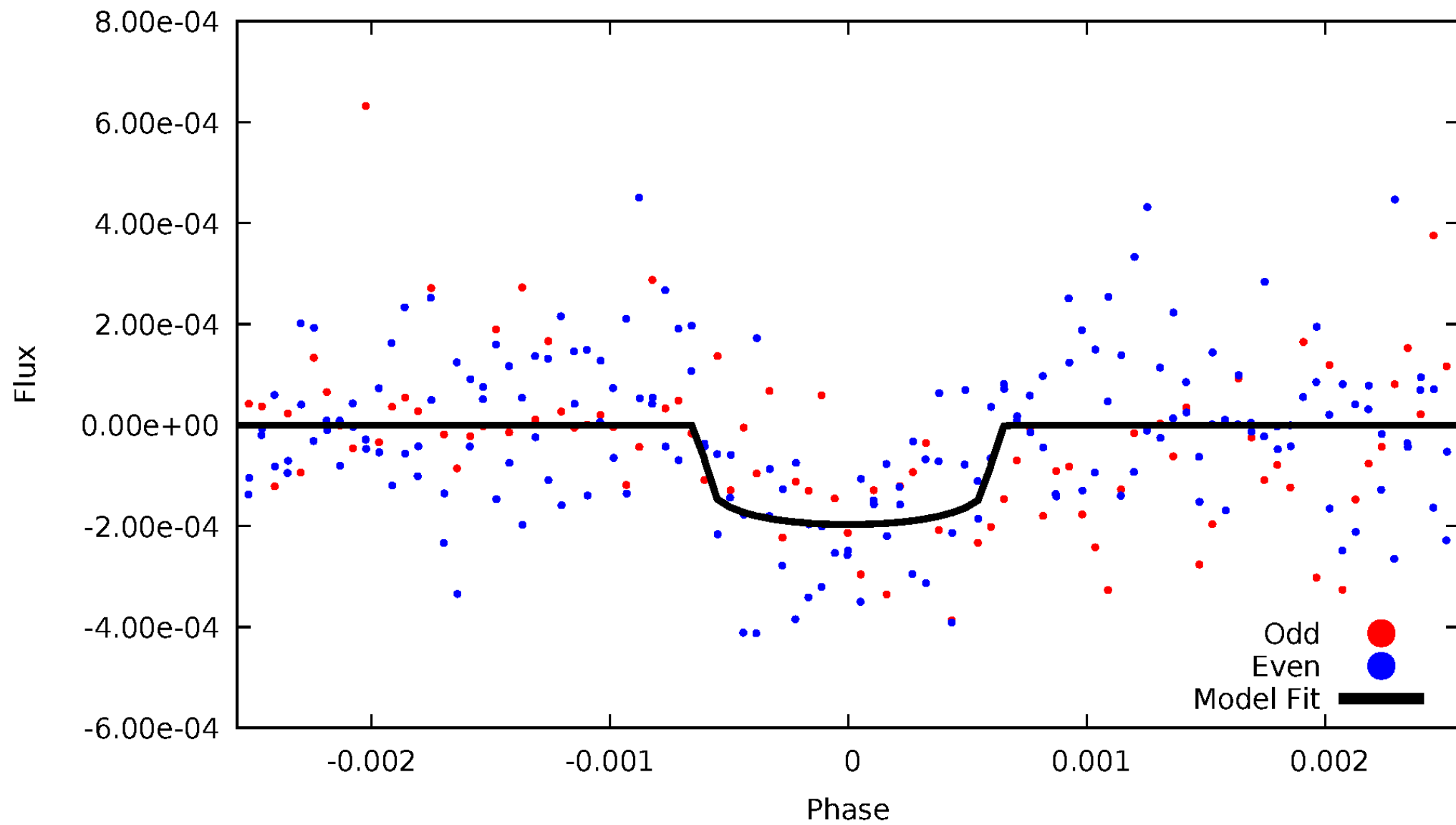


TCE 011140629-01



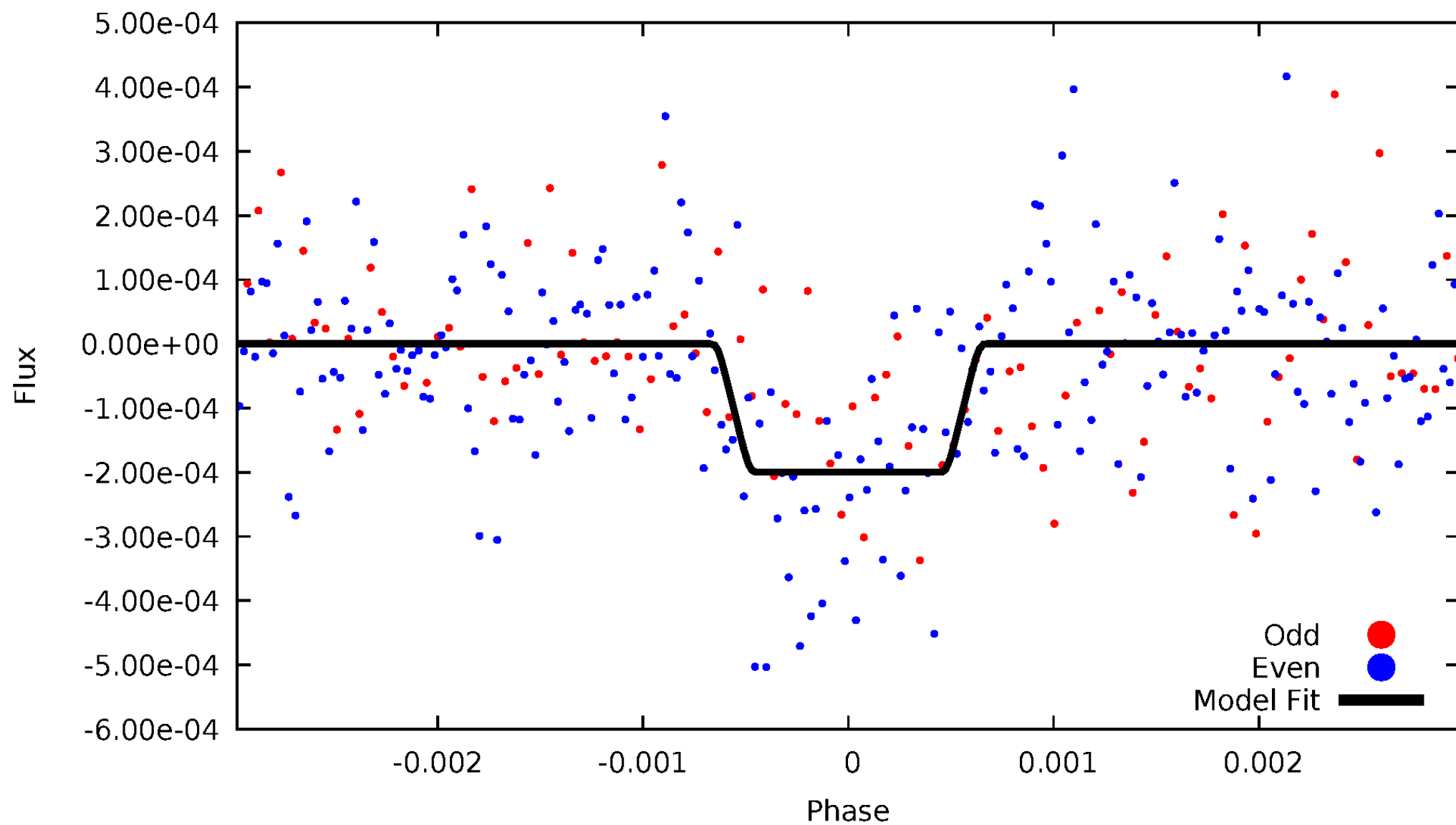
DV Odd/Even

TCE 011140629-01

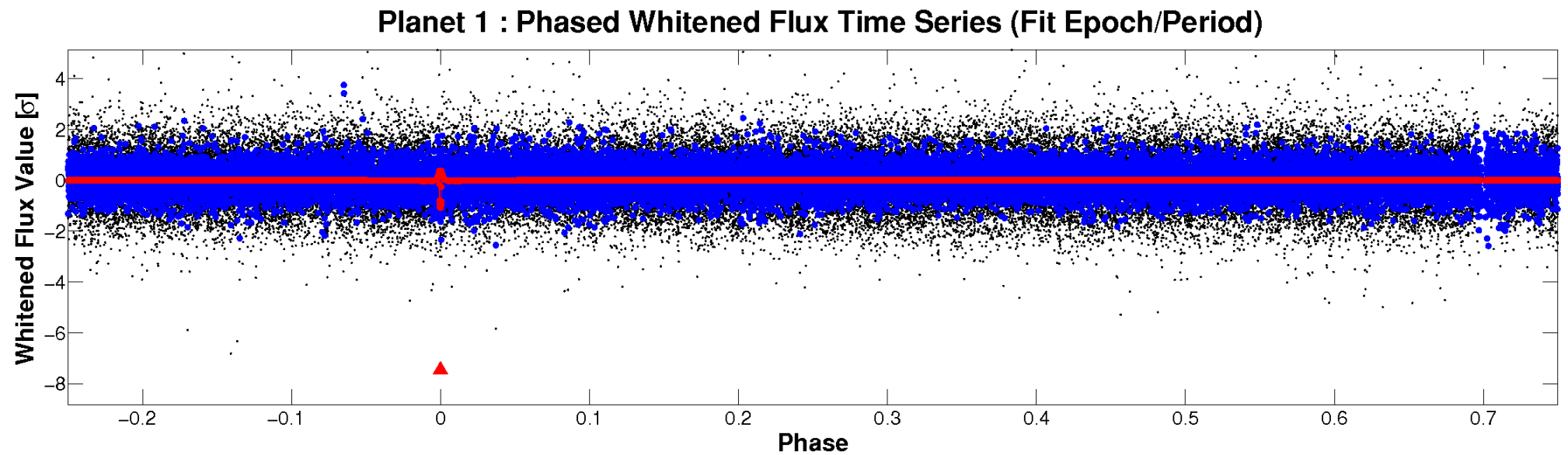
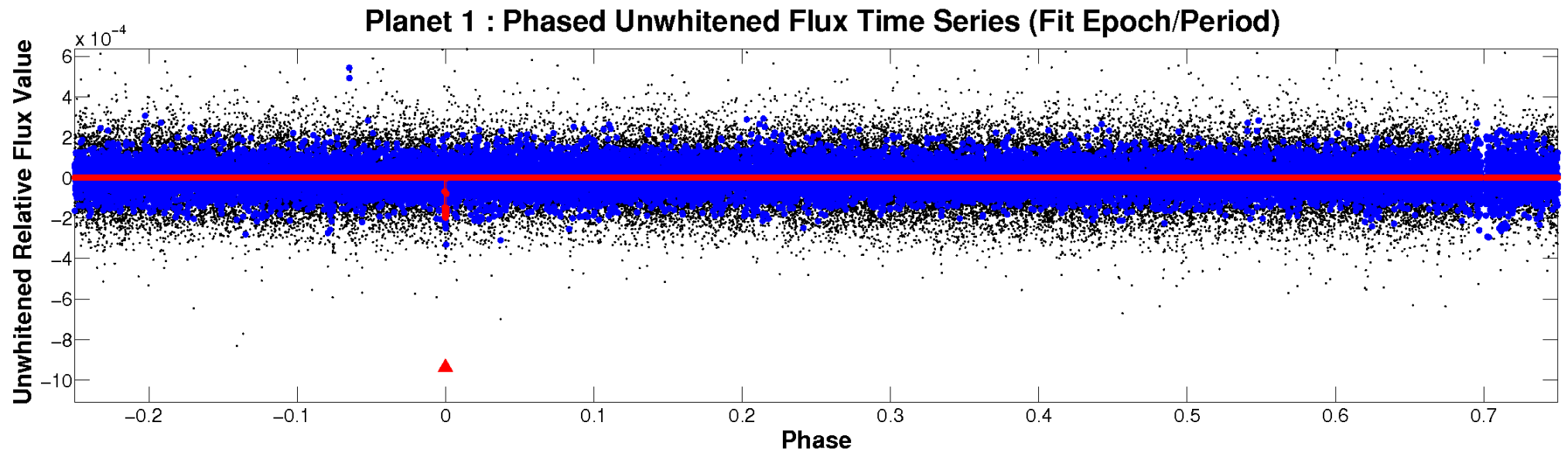


ALT Odd/Even

TCE 011140629-01

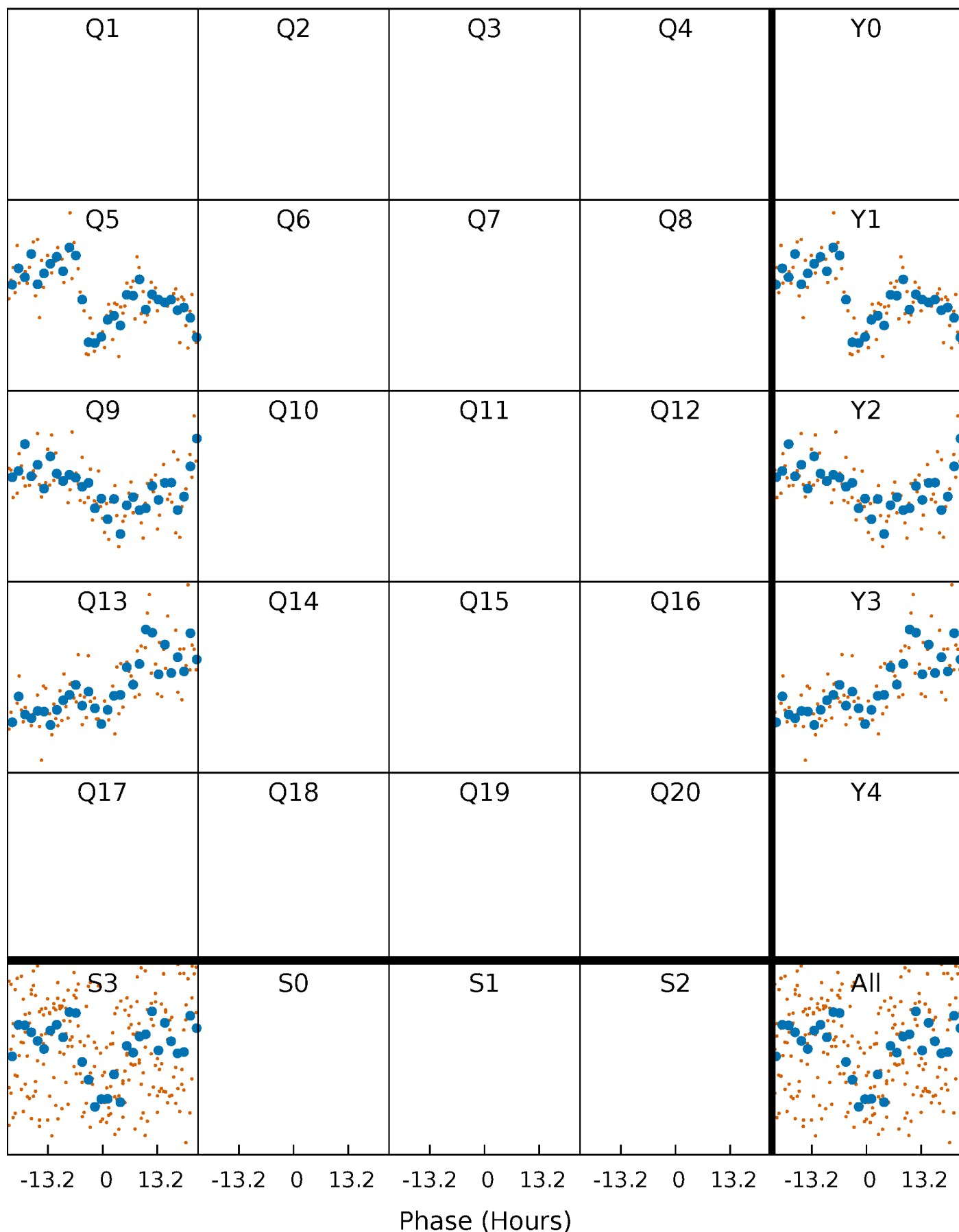


Non-Whitened Vs. Whitened Light Curve



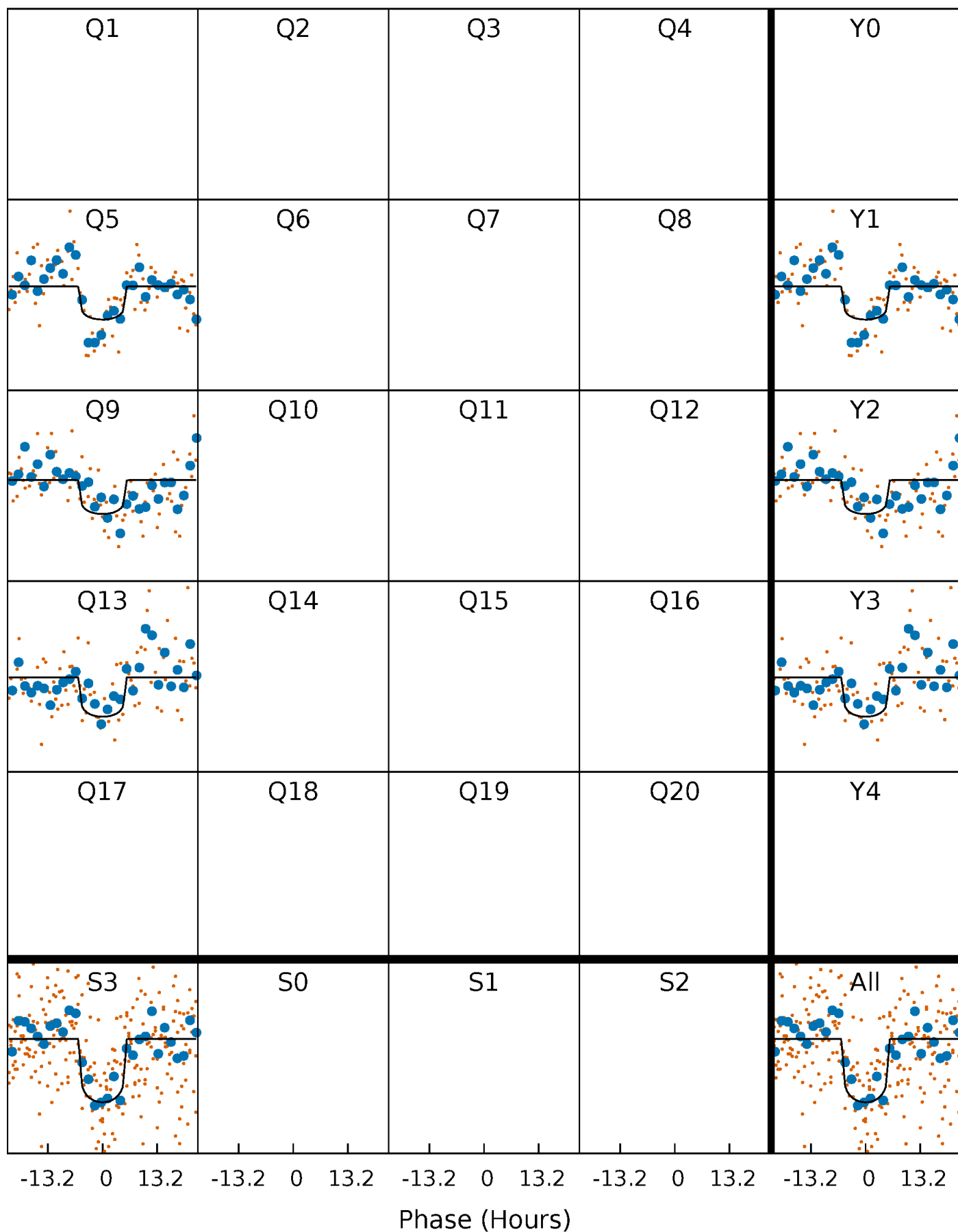
PDC Quarter-Phased Transit Curves

TCE 011140629-01 P=374.159273 Days $T_0=462.863249$ (BKJD)



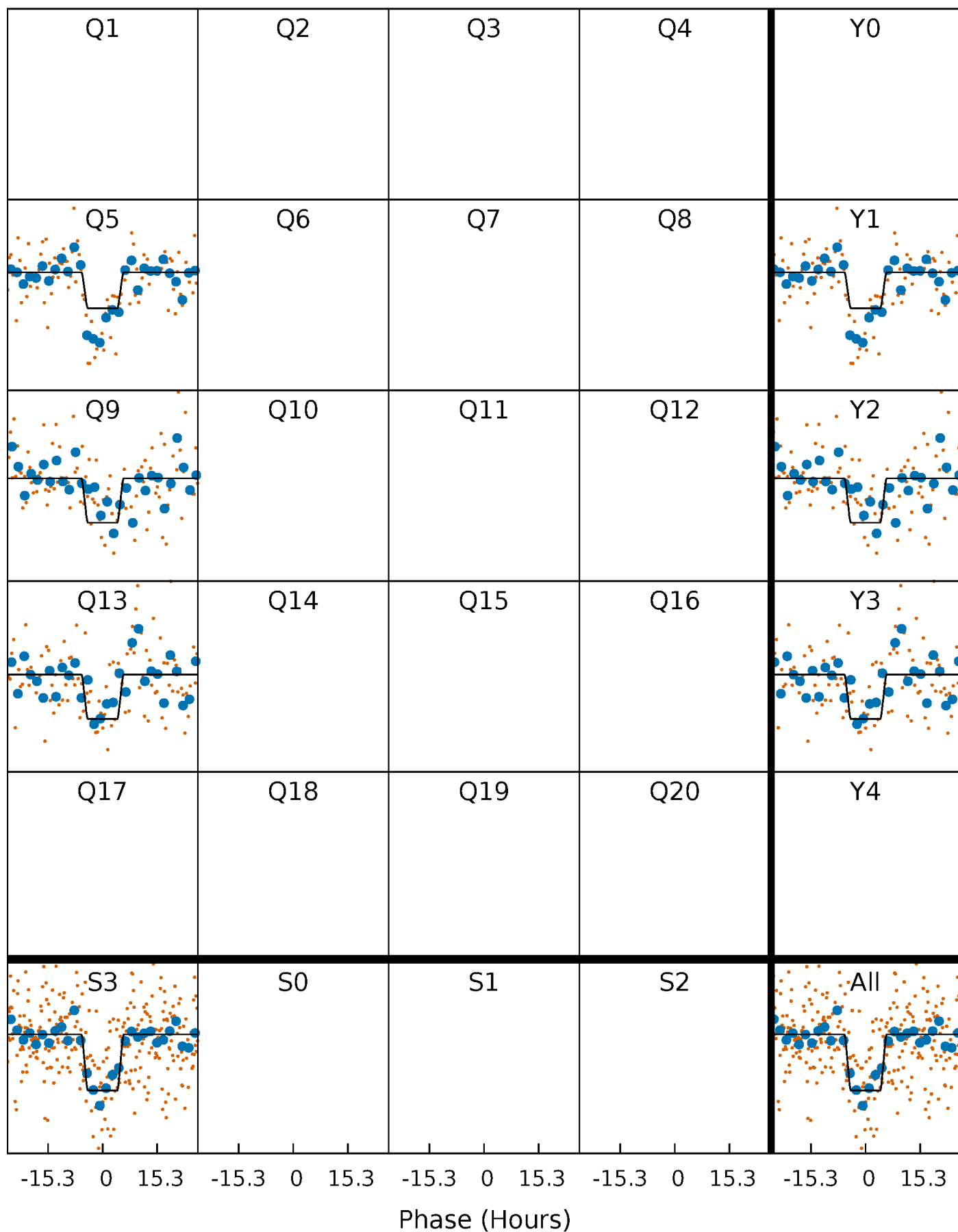
DV Quarter-Phased Transit Curves

TCE 011140629-01 P=374.159273 Days $T_0=462.863249$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

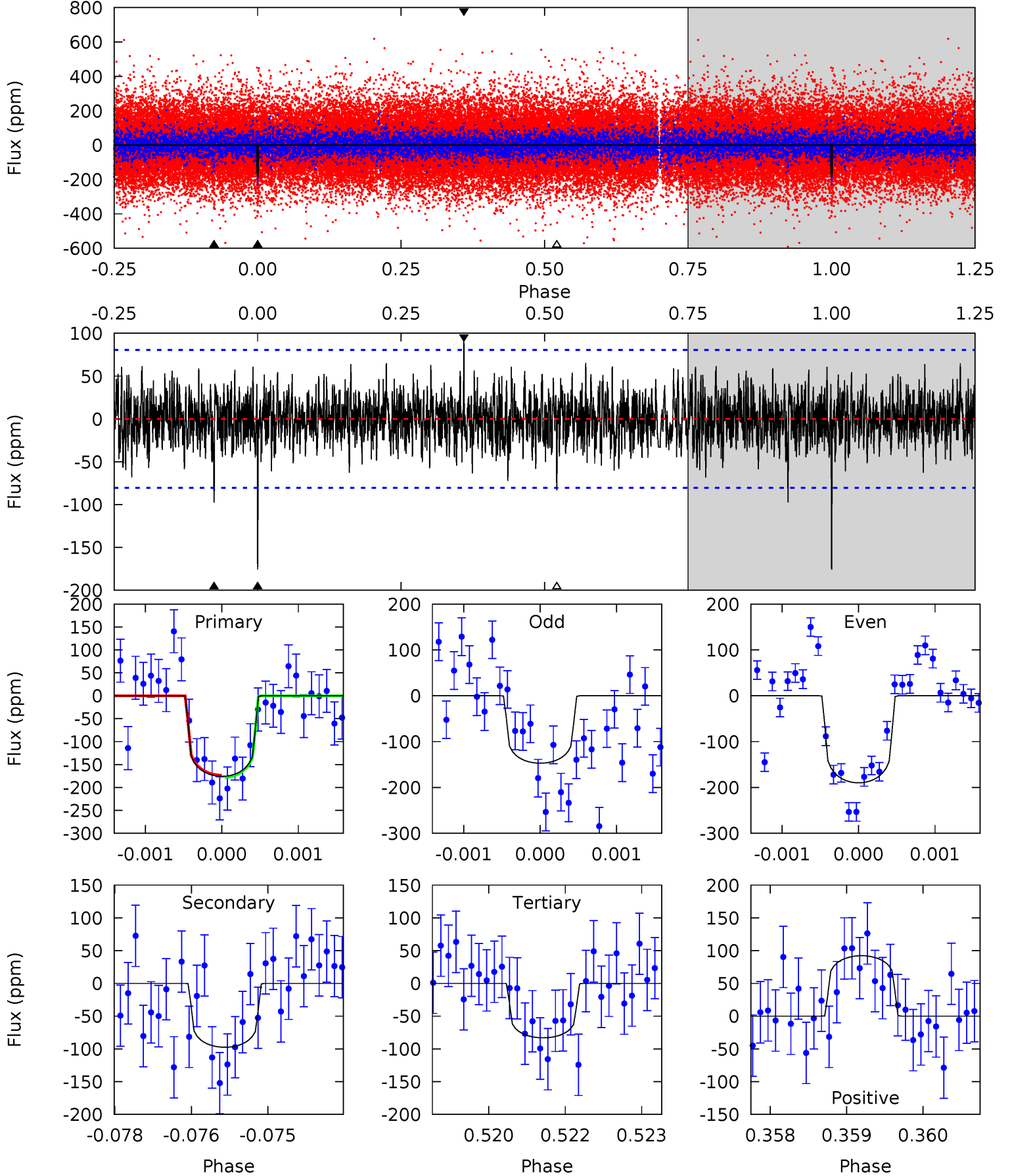
TCE 011140629-01 P=374.186162 Days $T_0=462.868407$ (BKJD)



DV Model-Shift Uniqueness Test

011140629-01, P = 374.159273 Days, E = 88.703976 Days

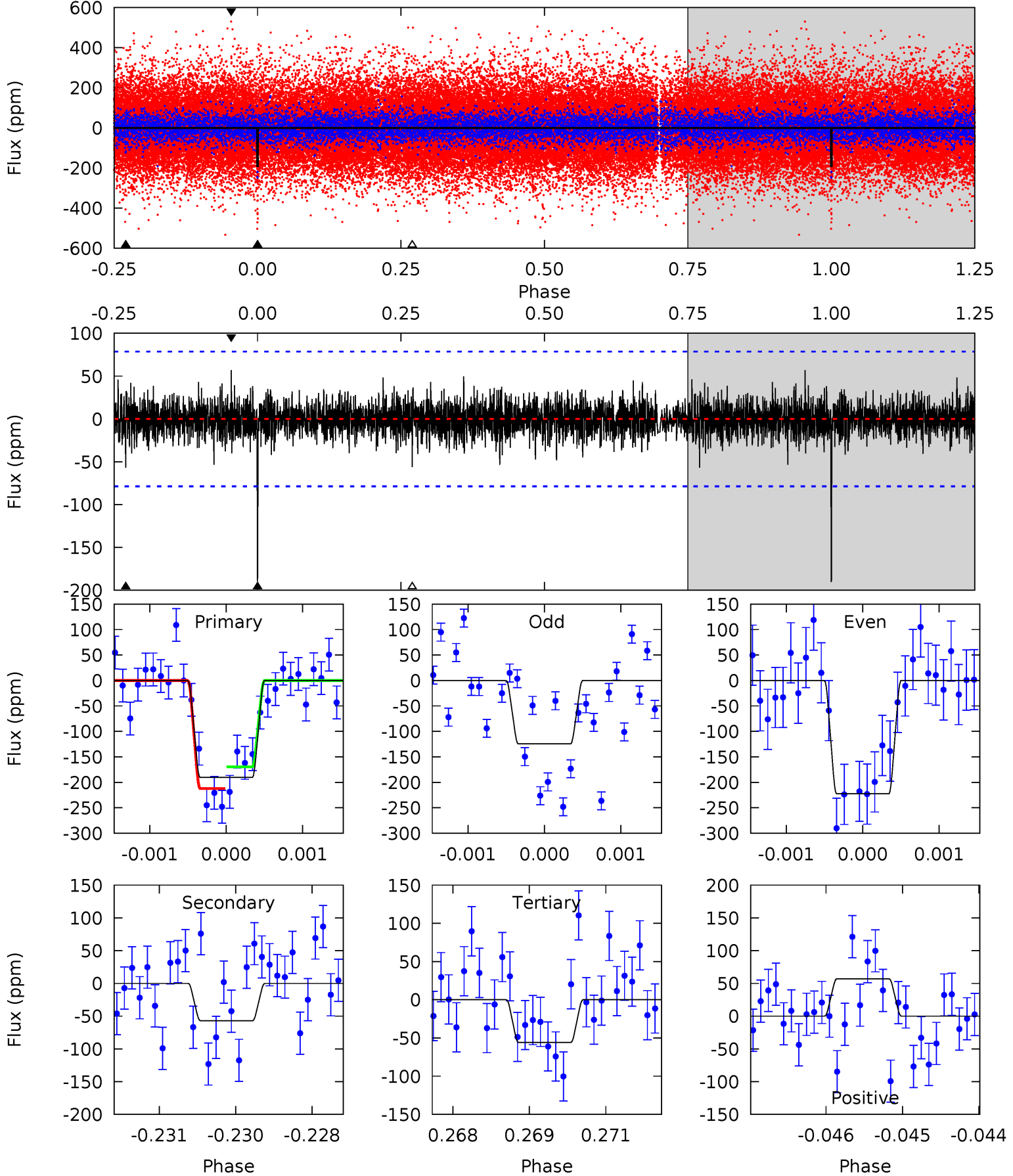
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 11.8 | 6.54 | 5.57 | 6.19 | 5.40 | 3.20 | 1.44 | 6.22 | 5.61 | 0.97 | 0.35 | 1.36 | 1.20 | 0.34 | 0.17 |



Alt Model-Shift Uniqueness Test

011140629-01, $P = 374.186162$ Days, $E = 88.682245$ Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 13.1 | 3.91 | 3.84 | 3.91 | 5.40 | 3.21 | 0.95 | 9.23 | 9.16 | 0.06 | -0.01 | 3.15 | 1.48 | 0.23 | 1.46 |



Stellar Parameters For KIC 011140629

| | $T_{\text{eff}}(K)$ | $\log(g)$ | $[\text{Fe}/\text{H}]$ | $R (R_{\odot})$ | $M(M_{\odot})$ | $p_{\star} (\text{g}\cdot\text{cm}^{-3})$ |
|--------|----------------------|---------------------------|----------------------------|---------------------------|---------------------------|---|
| | 6316^{+169}_{-188} | $4.243^{+0.165}_{-0.135}$ | $-0.300^{+0.250}_{-0.300}$ | $1.273^{+0.261}_{-0.235}$ | $1.032^{+0.158}_{-0.115}$ | $0.705^{+0.574}_{-0.272}$ |
| | +3%/-3% | +4%/-3% | +83%/-100% | +21%/-18% | +15%/-11% | +81%/-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 011140629-01 / KOI

| Detrend | Depth (ppm) | $R_p (R_{\oplus})$ | $T_{\text{max}} (K)$ | $T_{\text{obs}} (K)$ | A_{obs} |
|---------|--------------|------------------------|----------------------|-----------------------|--------------------------|
| DV | -98 ± 15 | $2.00^{+0.84}_{-0.74}$ | 434^{+25}_{-29} | 5246^{+1285}_{-669} | 14282^{+21157}_{-7407} |
| Alt. | -57 ± 15 | $1.95^{+0.91}_{-0.75}$ | 434^{+24}_{-27} | 4718^{+1140}_{-615} | 8543^{+15045}_{-4668} |

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

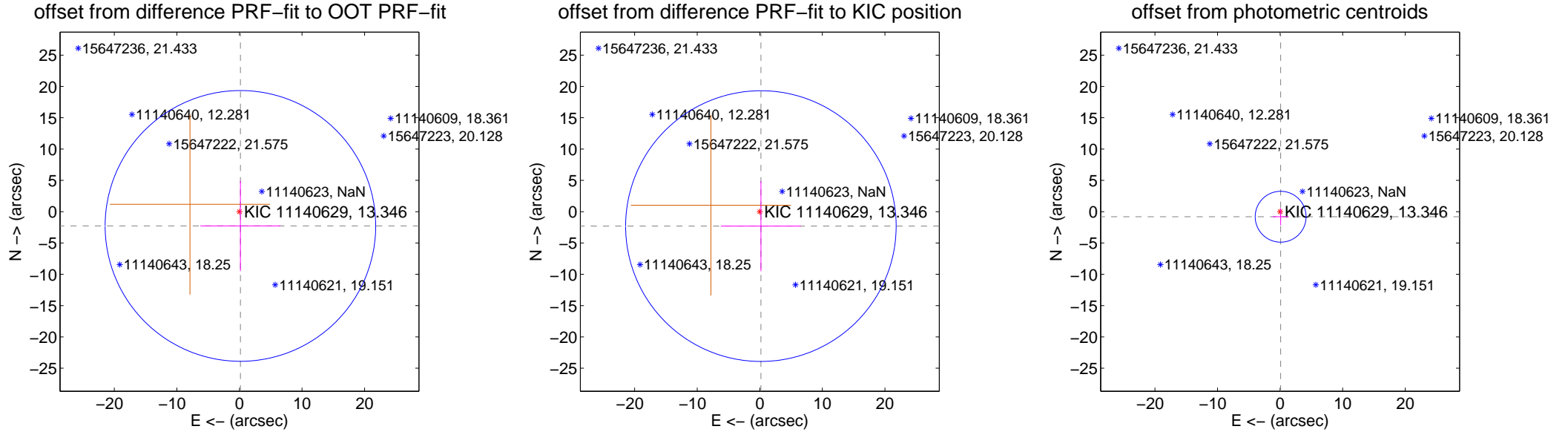
DV Centroid Data

Supplemental centroid analysis for 011140629-01. Kepler magnitude: 13.35. Transit SNR 7.99

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|--------------------|--------------------|
| PRF-fit source offset from OOT | 2.282 ± 7.206 | 0.32 | -0.153 ± 6.392 | -2.276 ± 7.210 |
| PRF-fit source offset from KIC position | 2.309 ± 7.205 | 0.32 | -0.177 ± 6.392 | -2.303 ± 7.210 |
| photometric centroid source offset | 0.81 ± 1.35 | 0.60 | -0.08 ± 1.28 | -0.81 ± 1.36 |

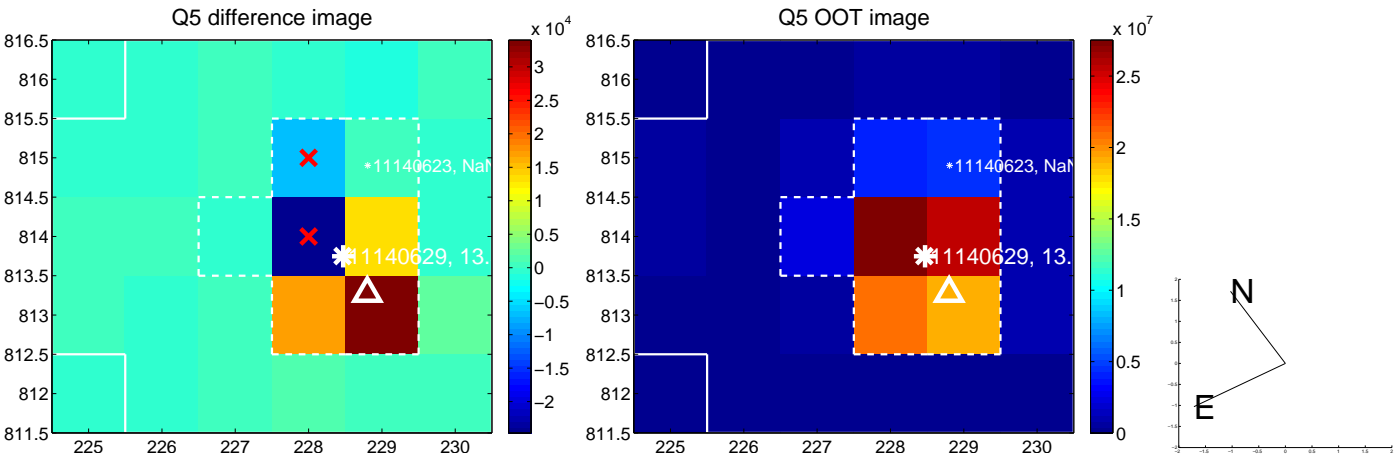


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

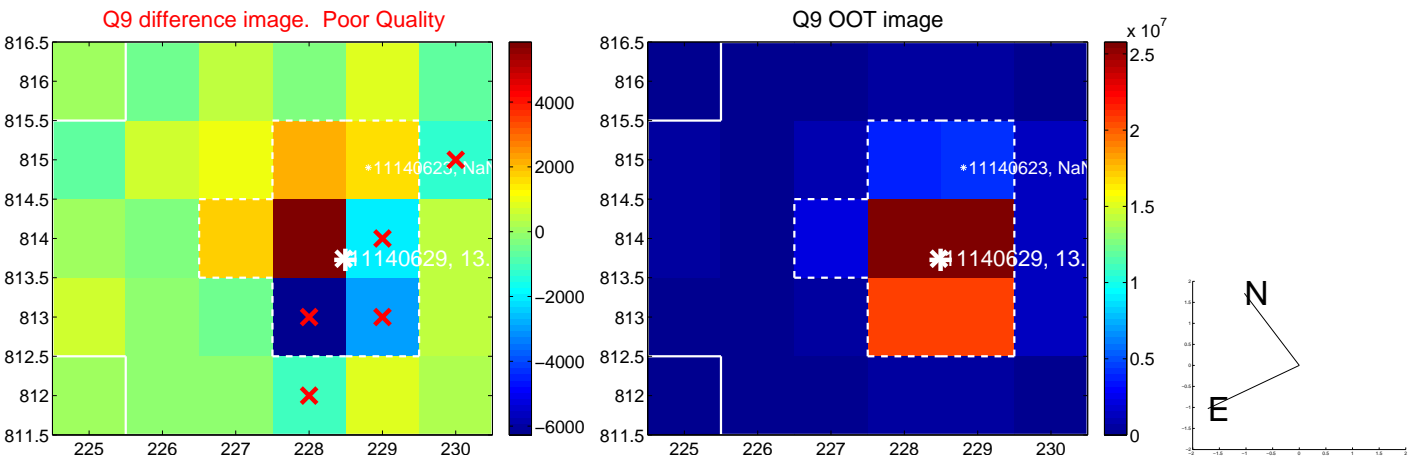
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



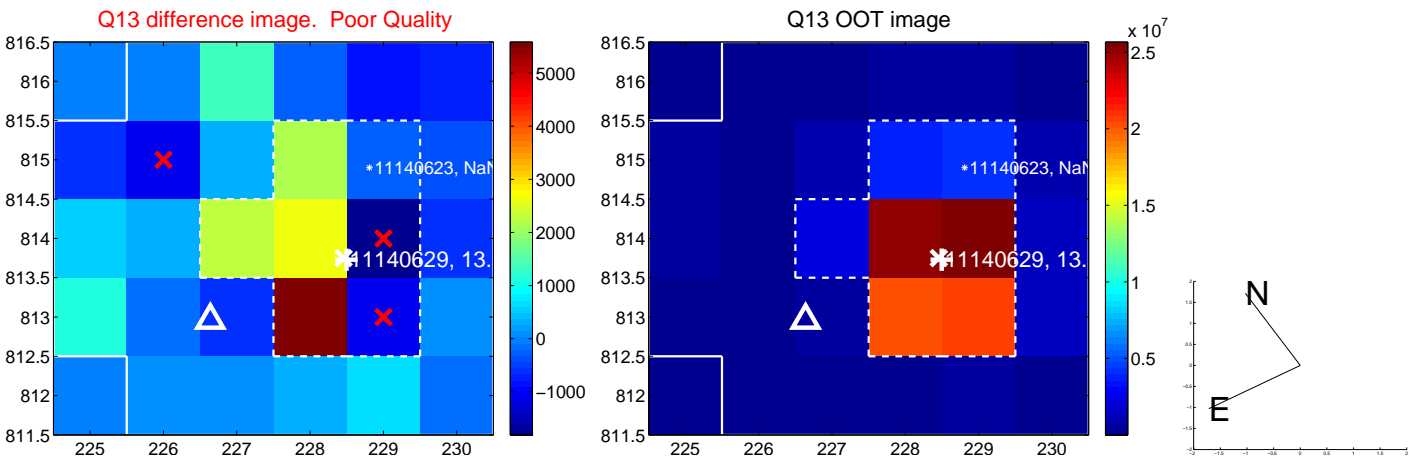
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



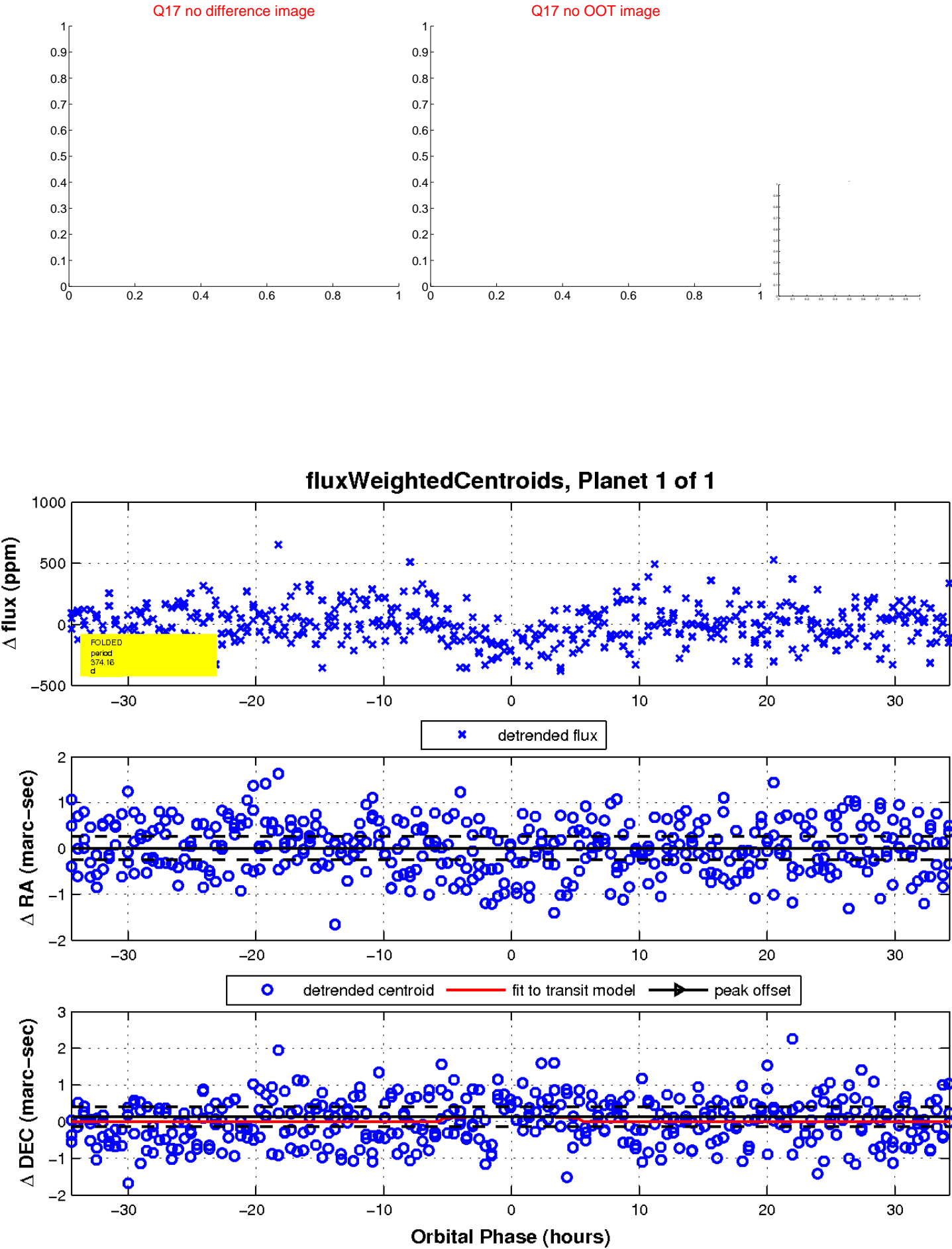
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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

