

KIC 006119923

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|-----|-----|-----------------------------|-----------------|------------------------|------------------------|
| 006119923-01 | OBS | No | 427.240081 | 148.519941 | 558.3 | 12.593 | 7.4 | 7.1 | 0.79 | 4891 | 2.08 | 0.31 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|--|
| 006119923-01 | OBS | FP | 0.00 | 1 | 0 | 1 | 0 | INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—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.

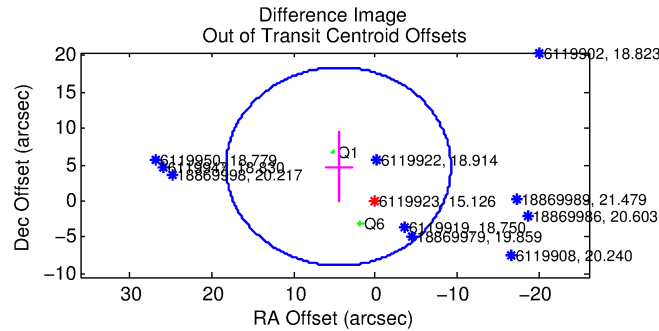
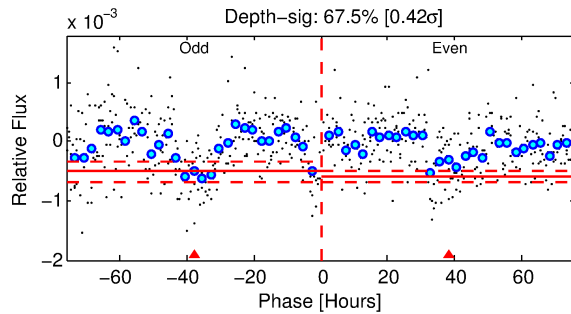
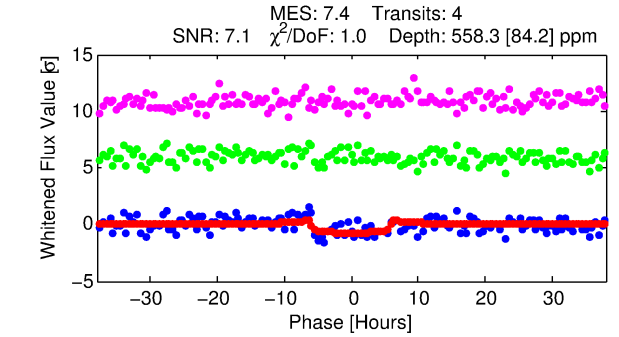
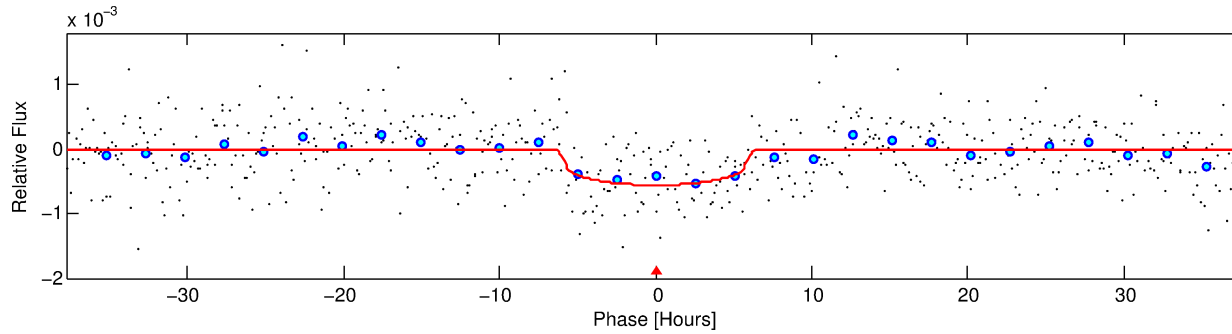
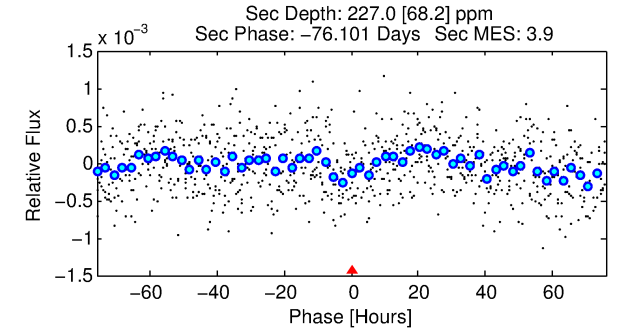
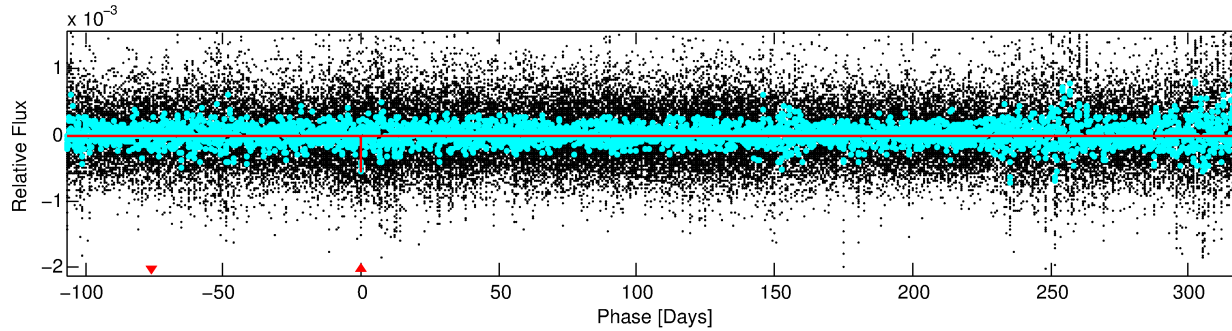
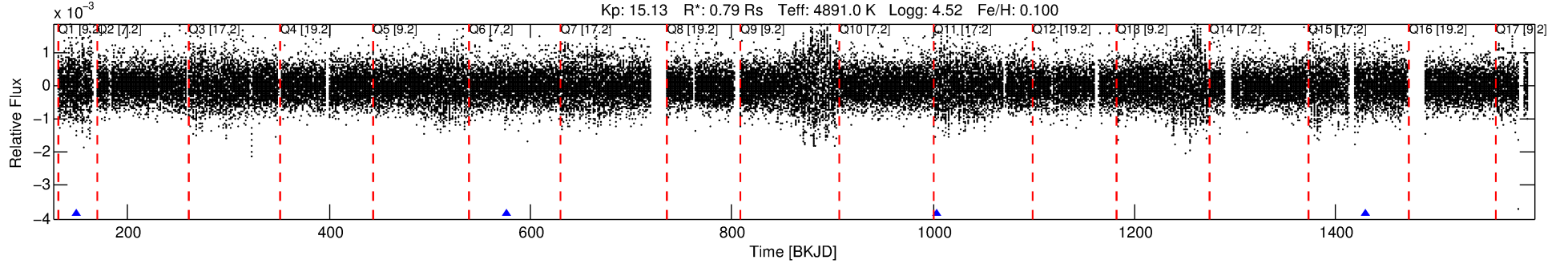
Ephemeris Match Information For 006119923-01

No Significant Match Found

DV One-Page Summary

KIC: 6119923 Candidate: 1 of 1 Period: 427.240 d
KOI: K04552 Corr: No Ephemeris Match

Kp: 15.13 R*: 0.79 Rs Teff: 4891.0 K Logg: 4.52 Fe/H: 0.100



DV Fit Results:

Period = 427.24008 [0.01163] d
Epoch = 148.5199 [0.0207] BKJD
Rp/R* = 0.0241 [0.0076]
a/R* = 170.43 [181.70]
b = 0.79 [0.53]
Seff = 0.31 [0.06]
Teq = 191 [9] K
Rp = 2.08 [0.69] Re
a = 1.0145 [0.0921] AU
Ag = 29786.37 [21221.20] [1.40σ]
Teffp = 3870 [686] K [5.36σ]

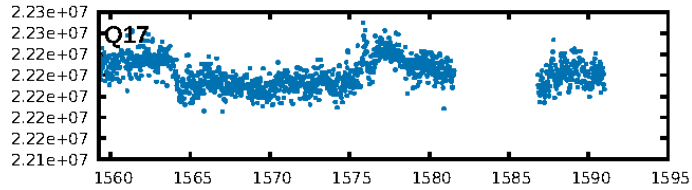
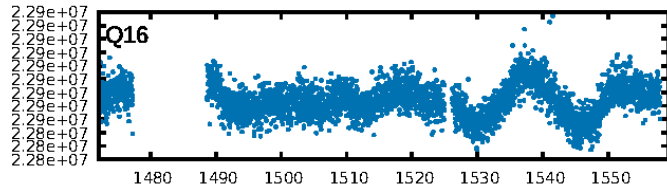
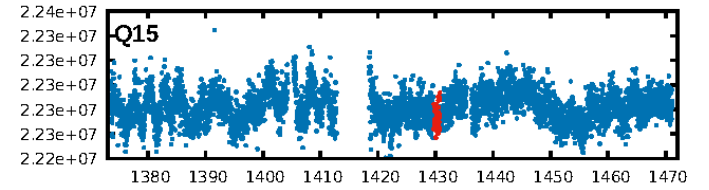
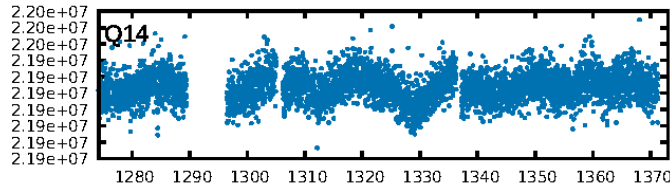
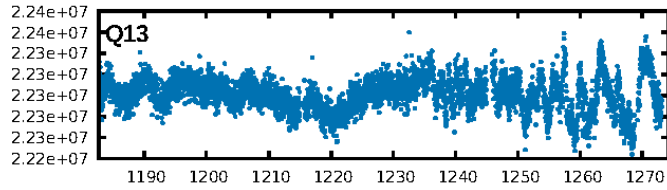
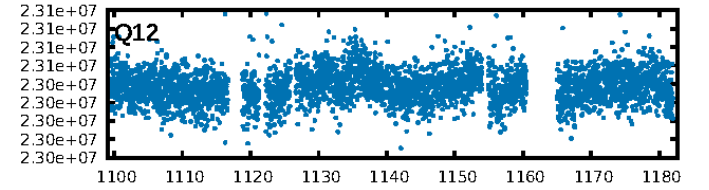
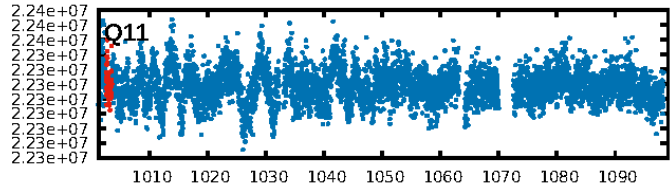
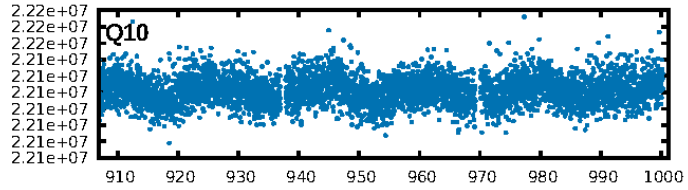
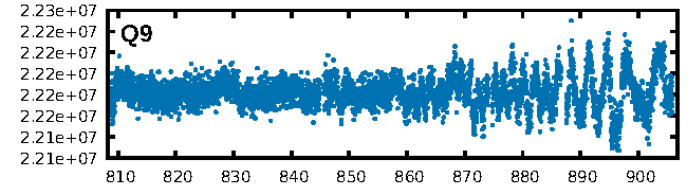
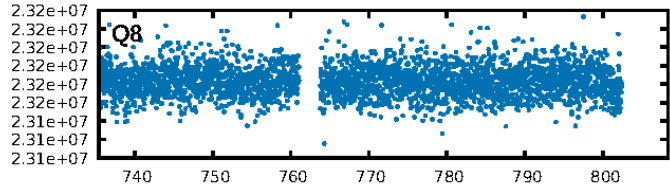
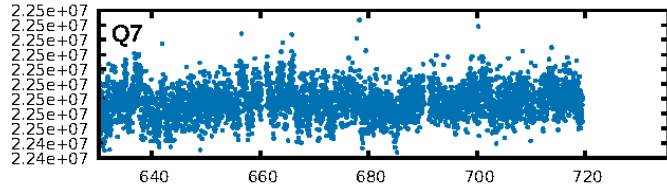
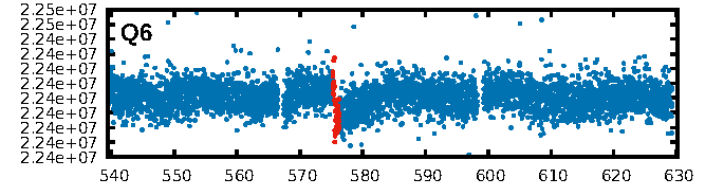
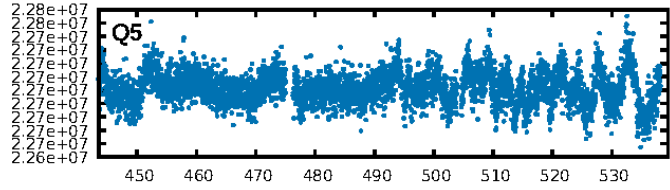
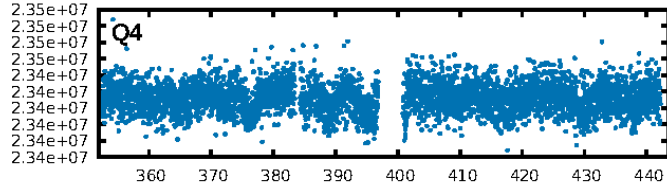
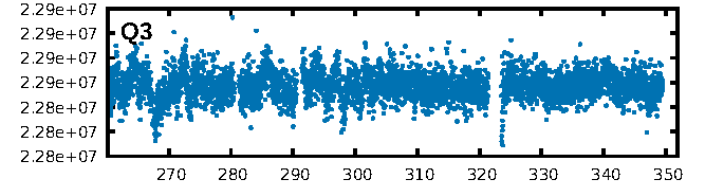
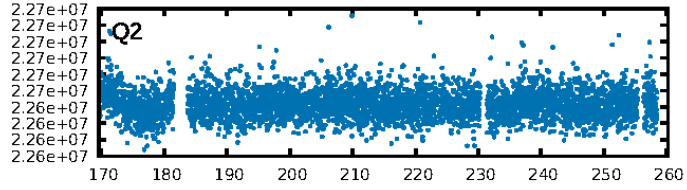
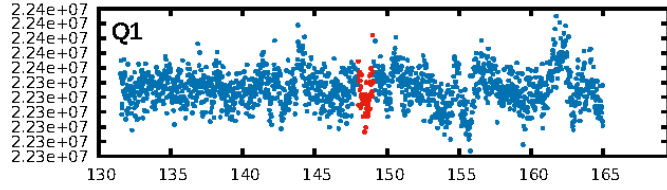
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 50.5%
ModelChiSquareGof-sig: 99.6%
Bootstrap-pfa: 5.14e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.05477
Centroid-sig: 62.6%
Centroid-so: 0.934 arcsec [0.49σ]
OotOffset-rm: 6.539 arcsec [1.43σ]
OotOffset-st: 1/0/0/1 [2]
KicOffset-rm: 6.634 arcsec [1.69σ]
KicOffset-st: 1/0/0/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

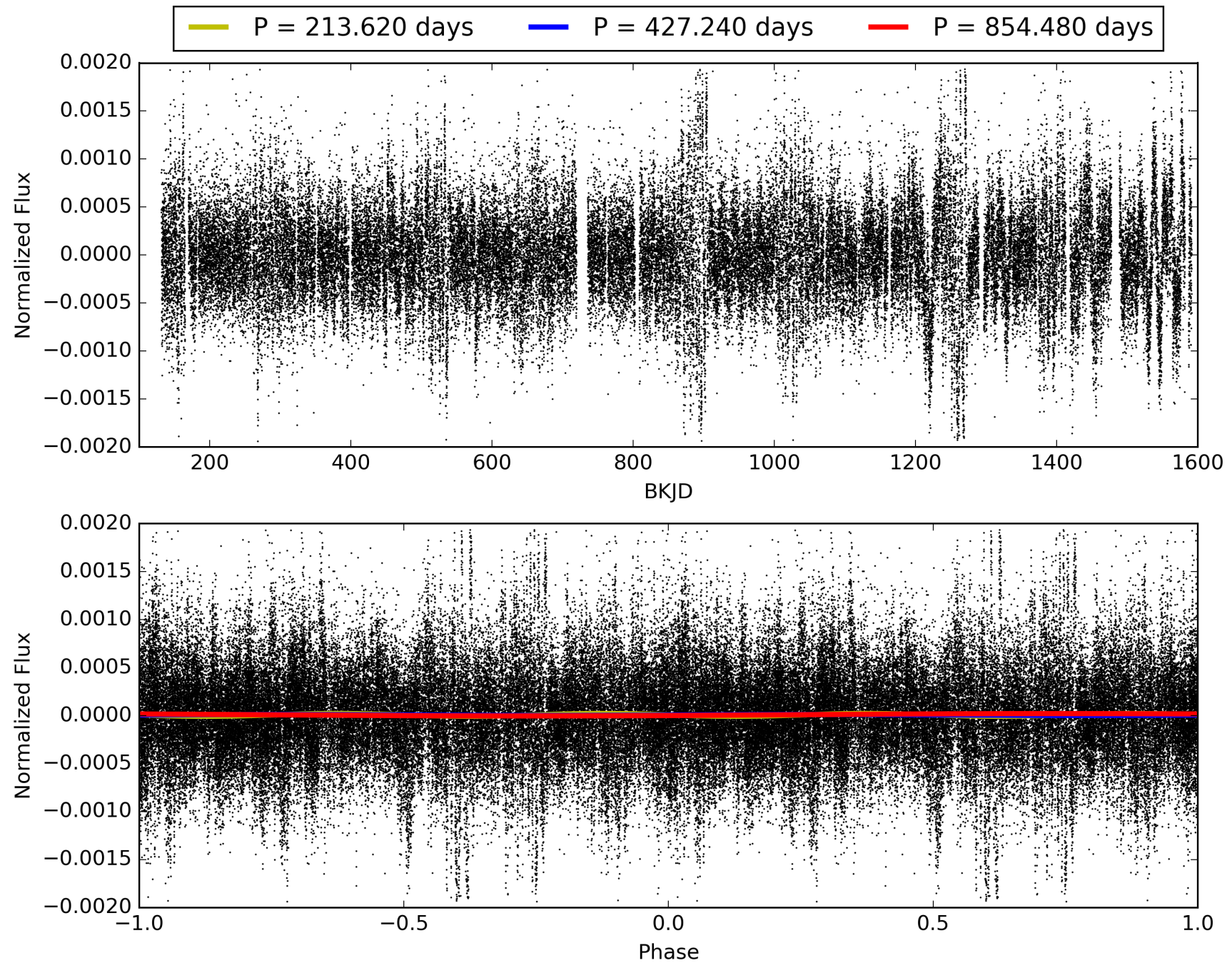
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 15:10:32 Z

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

TCE 006119923-01, PDC Light Curves

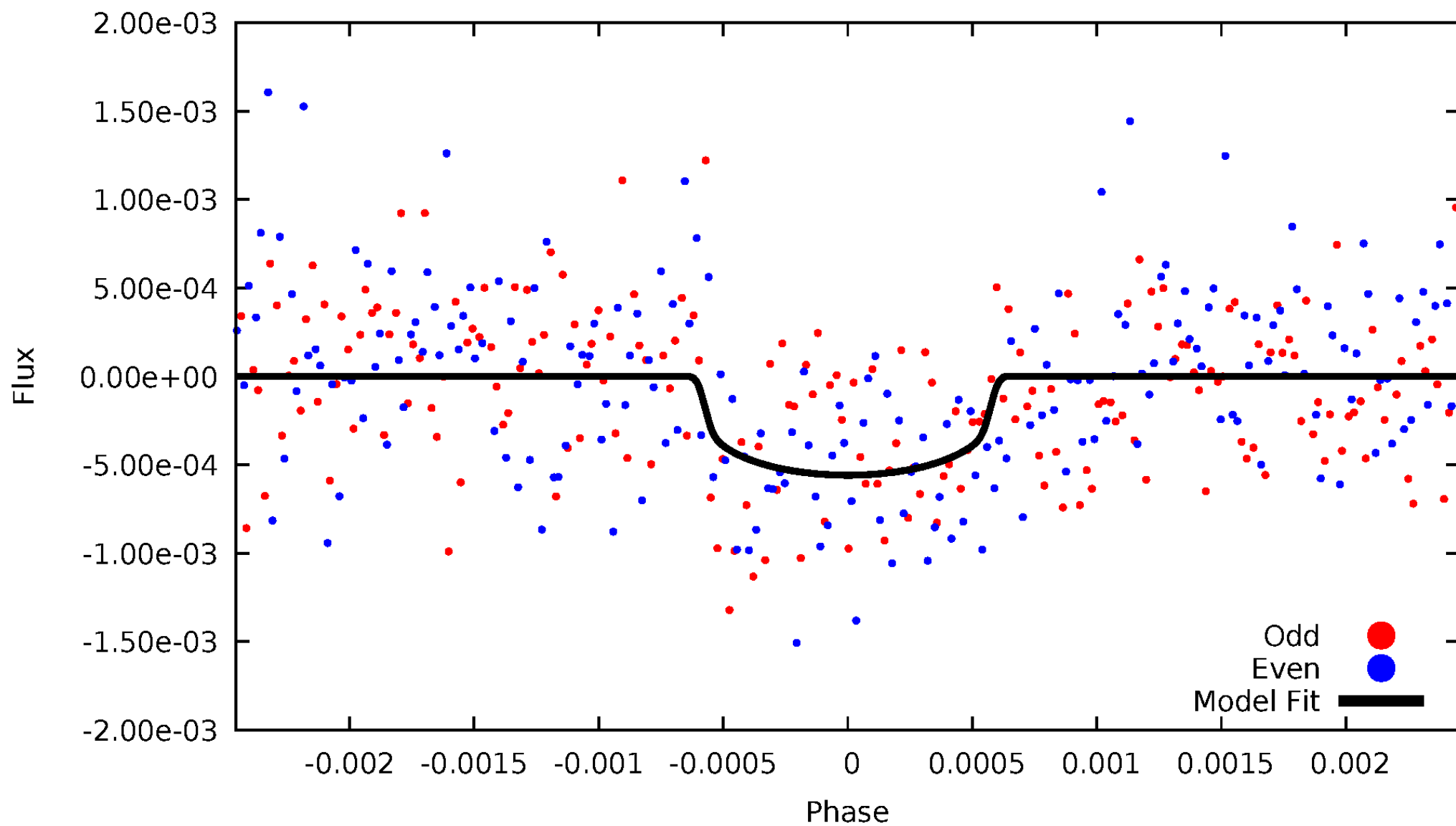


TCE 006119923-01



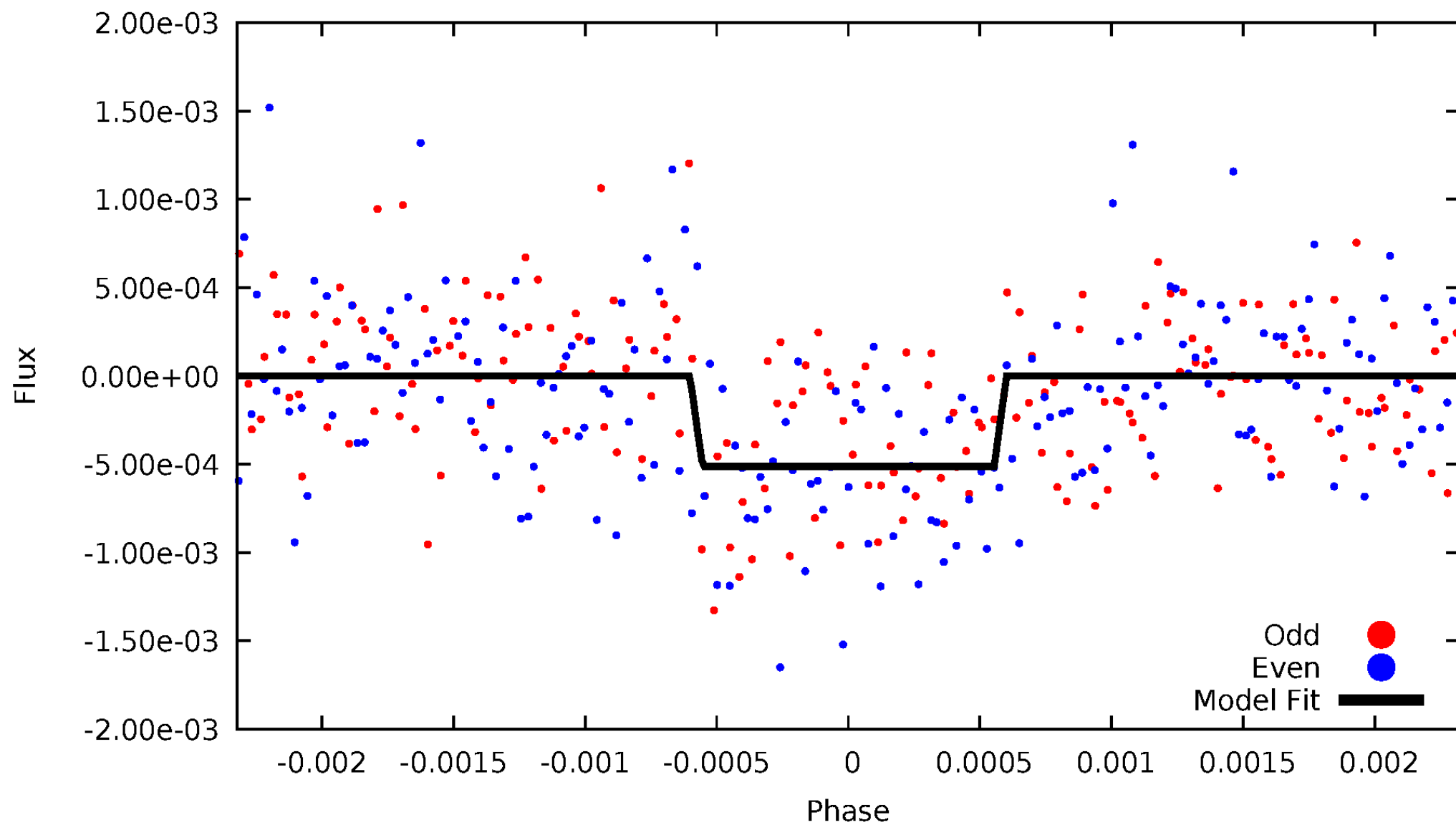
DV Odd/Even

TCE 006119923-01



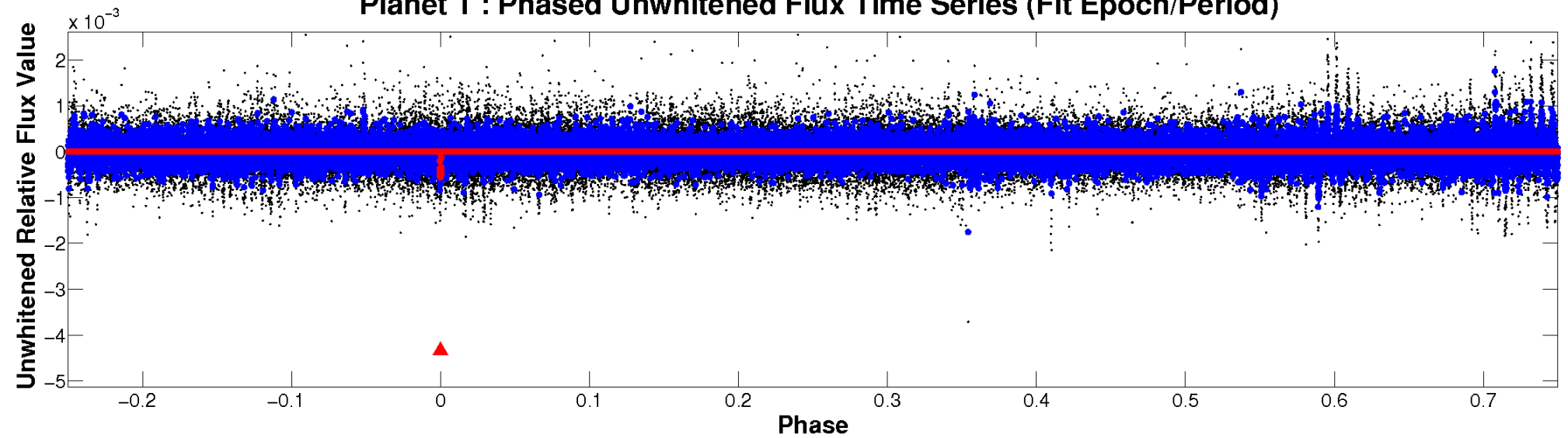
ALT Odd/Even

TCE 006119923-01

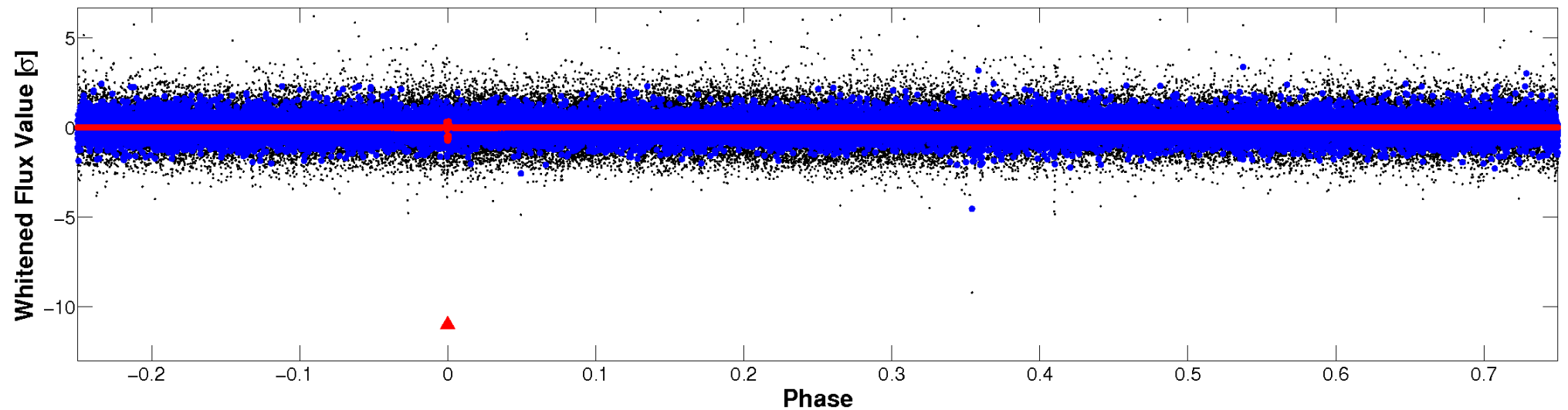


Non-Whitened Vs. Whitened Light Curve

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 006119923-01 P=427.240081 Days $T_0=148.519941$ (BKJD)



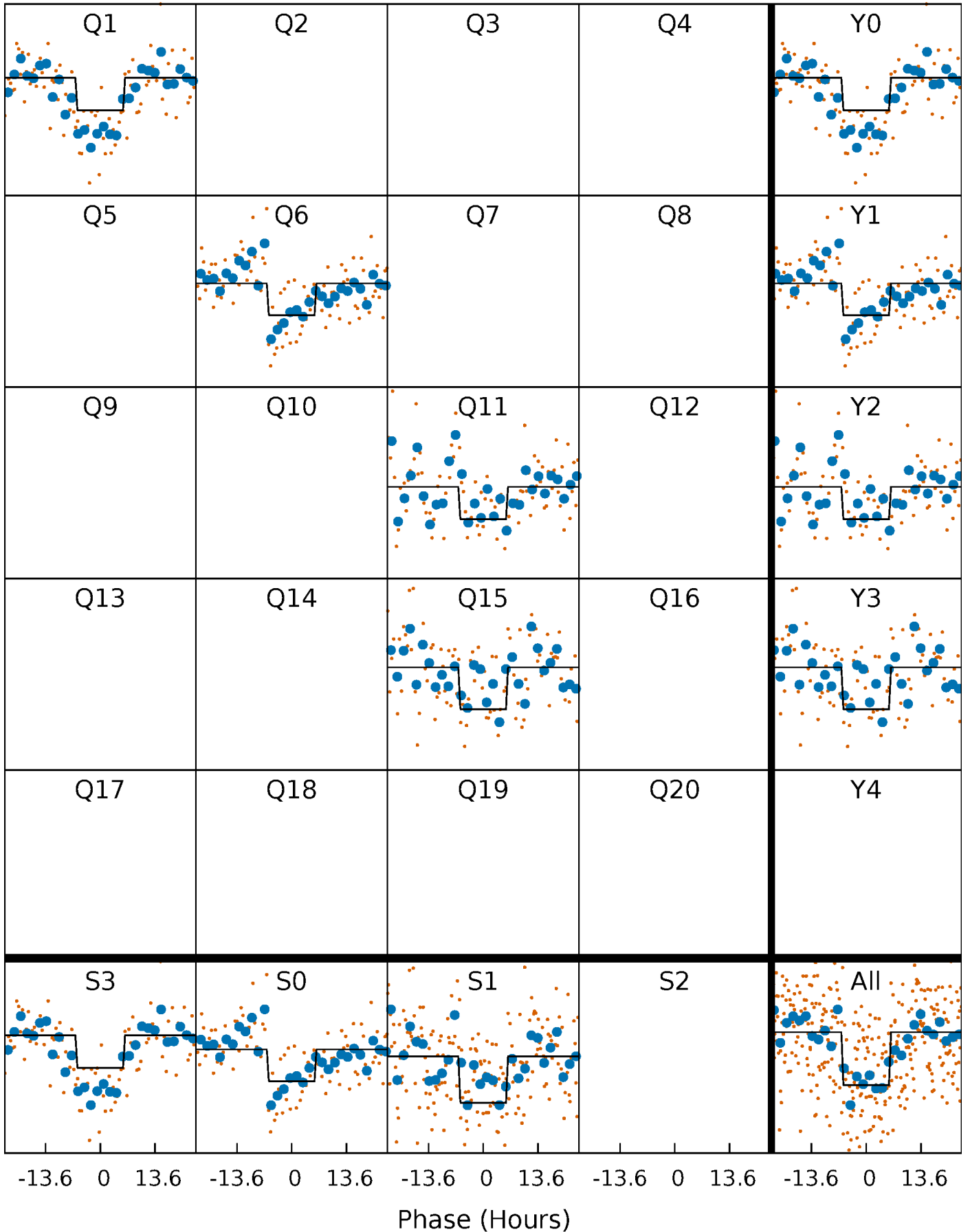
DV Quarter-Phased Transit Curves

TCE 006119923-01 P=427.240081 Days $T_0=148.519941$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

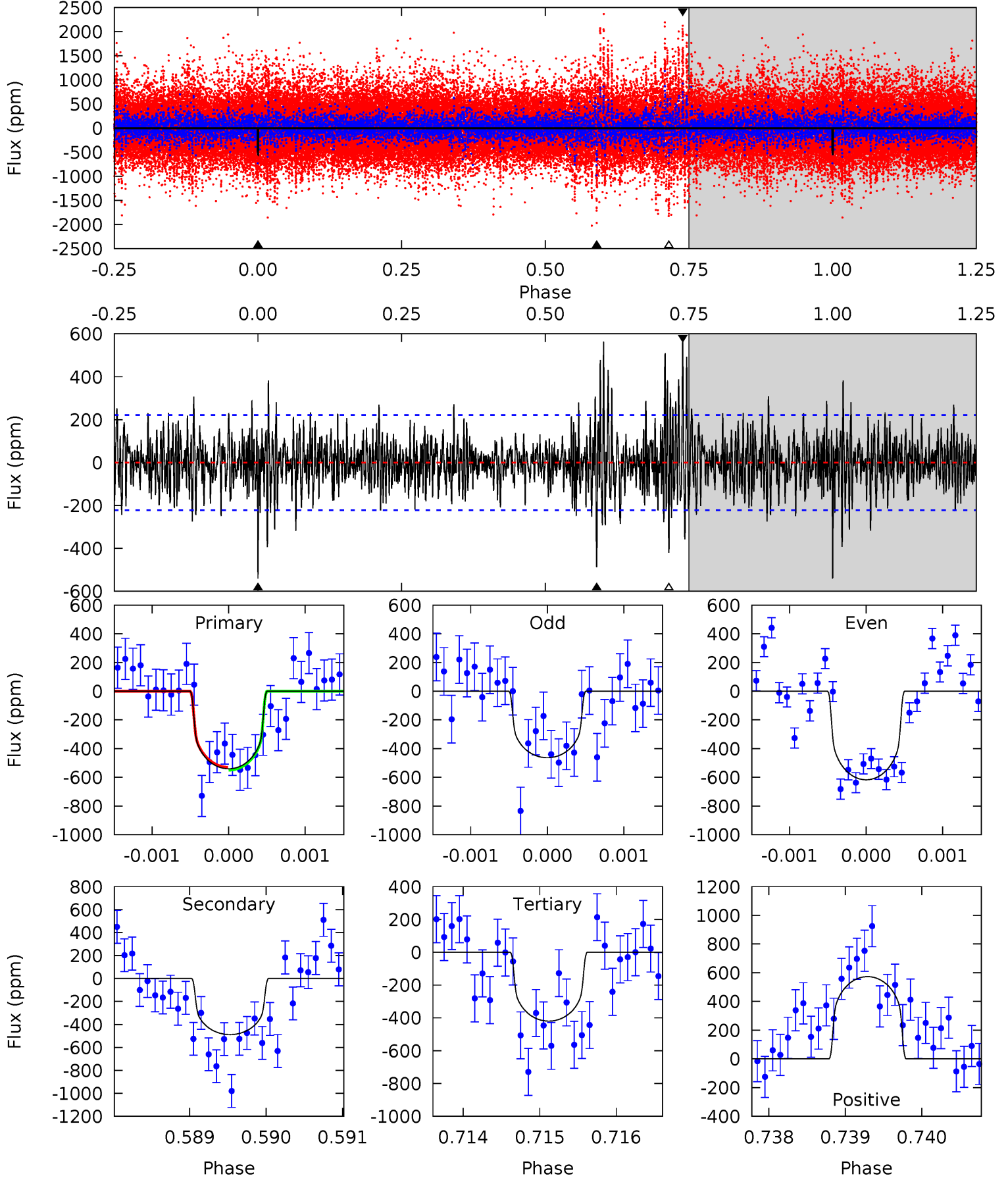
TCE 006119923-01 P=427.231684 Days $T_0=148.542975$ (BKJD)



DV Model-Shift Uniqueness Test

006119923-01, P = 427.240081 Days, E = 148.519941 Days

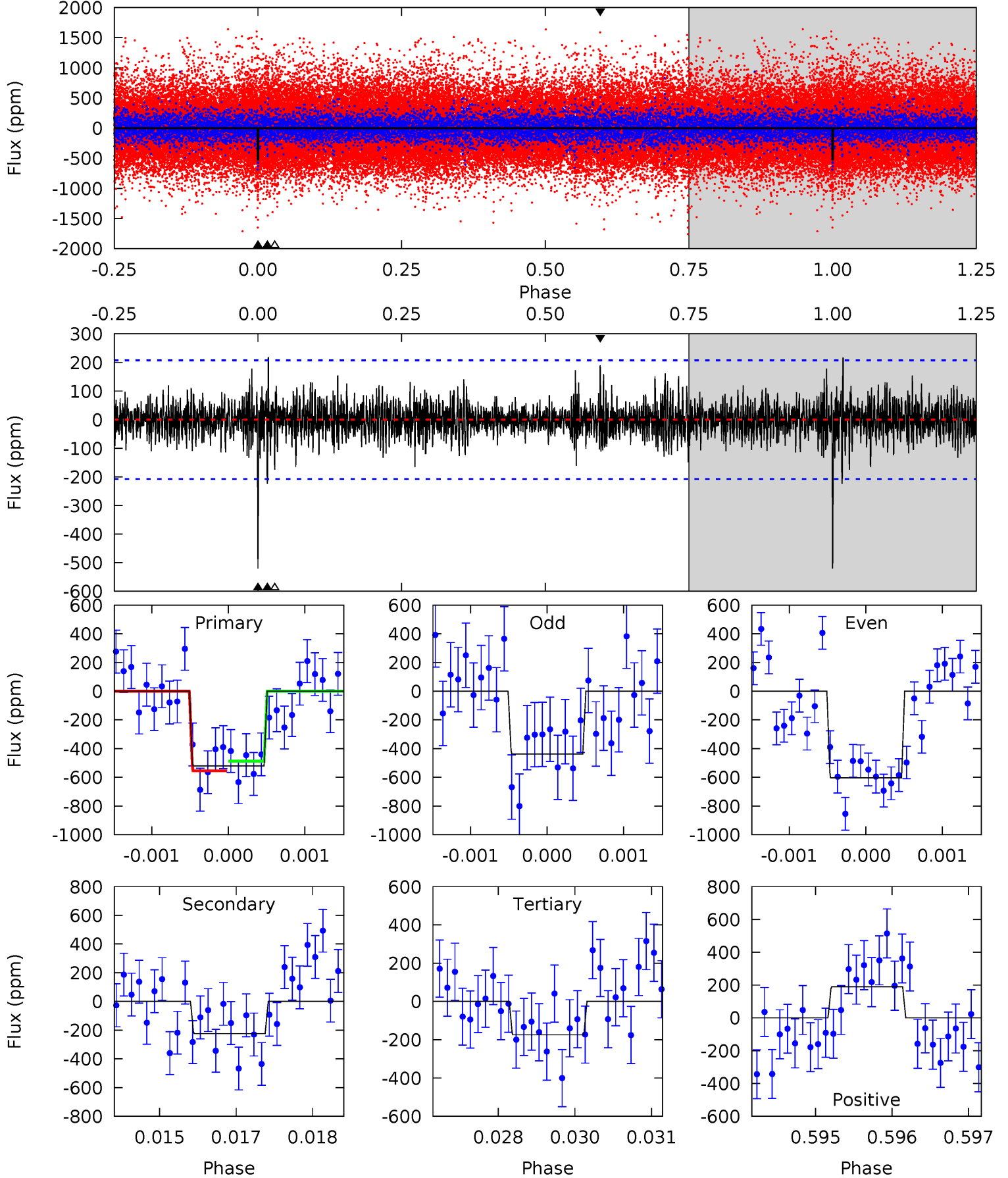
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 13.2 | 11.9 | 10.2 | 14.0 | 5.41 | 3.22 | 2.59 | 2.94 | -0.79 | 1.67 | -2.06 | 1.88 | 1.06 | 0.51 | 0.24 |



Alt Model-Shift Uniqueness Test

006119923-01, P = 427.231684 Days, E = 148.542975 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 13.6 | 5.85 | 4.57 | 4.94 | 5.42 | 3.24 | 1.16 | 9.04 | 8.67 | 1.29 | 0.91 | 2.17 | 1.17 | 0.29 | 0.88 |



Stellar Parameters For KIC 006119923

| | $T_{\text{eff}} (K)$ | $\log(g)$ | $[\text{Fe}/\text{H}]$ | $R (R_{\odot})$ | $M (M_{\odot})$ | $p_{\star} (\text{g}\cdot\text{cm}^{-3})$ |
|--------|----------------------|---------------------------|---------------------------|---------------------------|---------------------------|---|
| | 4891^{+145}_{-145} | $4.524^{+0.078}_{-0.045}$ | $0.100^{+0.250}_{-0.300}$ | $0.791^{+0.056}_{-0.081}$ | $0.764^{+0.076}_{-0.055}$ | $2.172^{+0.709}_{-0.306}$ |
| | +3%/-3% | +2%/-1% | +250%/-300% | +7%/-10% | +10%/-7% | +33%/-14% |
| 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 006119923-01 / KOI

| Detrend | Depth (ppm) | $R_p (R_{\oplus})$ | $T_{\text{max}} (K)$ | $T_{\text{obs}} (K)$ | A_{obs} |
|---------|---------------|------------------------|----------------------|----------------------|---------------------------|
| DV | -488 ± 41 | $2.08^{+0.62}_{-0.71}$ | 265^{+9}_{-9} | 4725^{+921}_{-466} | 65275^{+84682}_{-27285} |
| Alt. | -224 ± 38 | $1.93^{+0.66}_{-0.61}$ | 265^{+10}_{-10} | 4167^{+684}_{-432} | 34922^{+39421}_{-16413} |

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

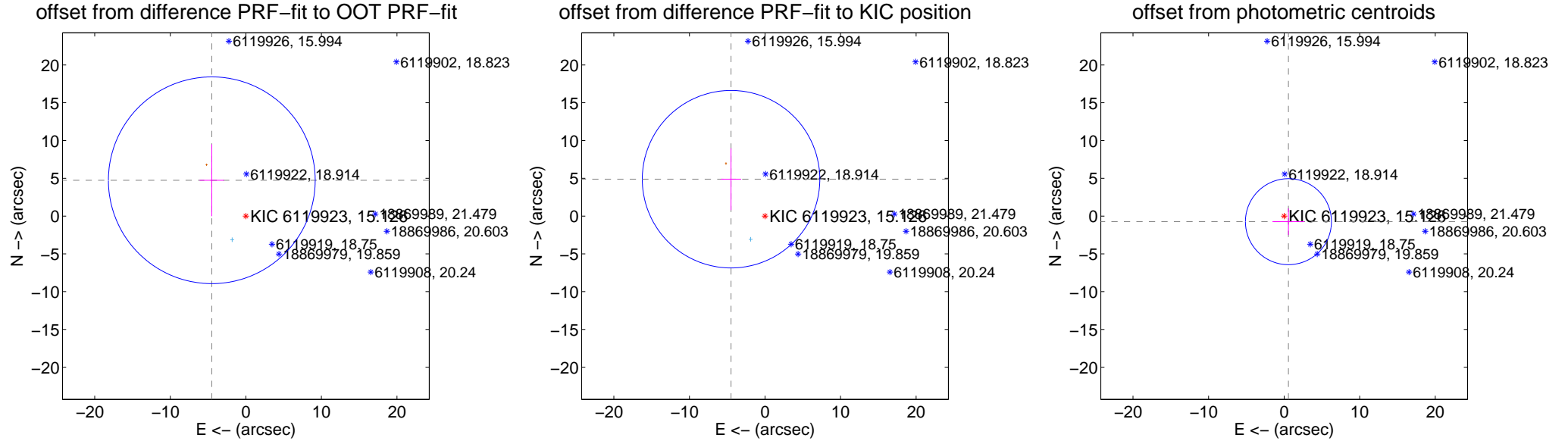
DV Centroid Data

Supplemental centroid analysis for 006119923-01. Kepler magnitude: 15.13. Transit SNR 7.13

There are 1 quarters with good PRF difference image offsets

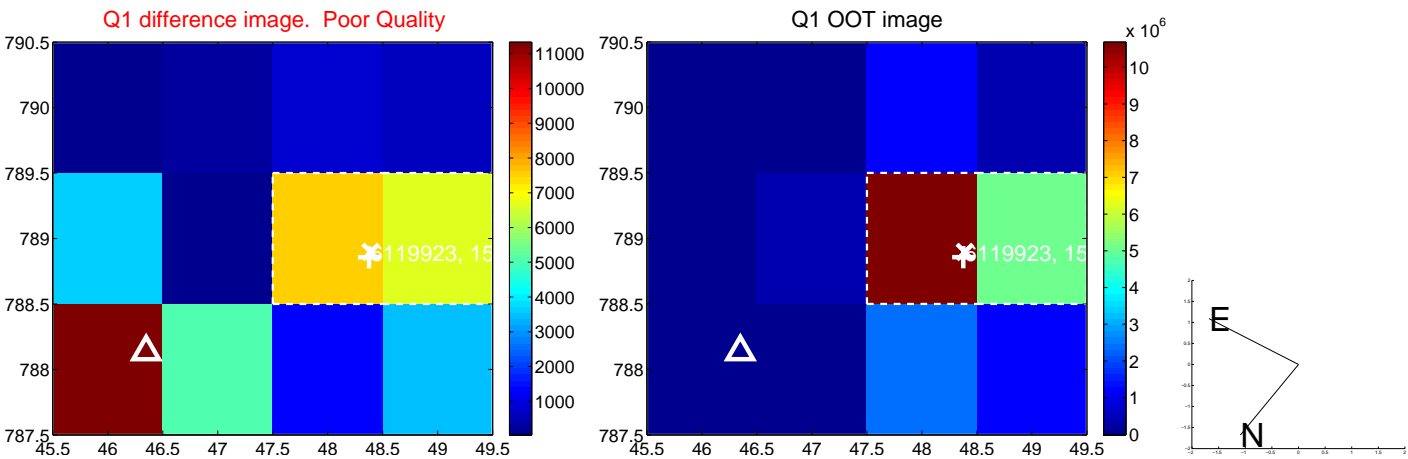
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|-------------------|-------------------|
| PRF-fit source offset from OOT | 6.539 ± 4.561 | 1.43 | 4.505 ± 1.622 | 4.740 ± 4.752 |
| PRF-fit source offset from KIC position | 6.634 ± 3.915 | 1.69 | 4.492 ± 1.334 | 4.881 ± 4.094 |
| photometric centroid source offset | 0.93 ± 1.90 | 0.49 | -0.57 ± 2.11 | -0.74 ± 1.76 |



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.

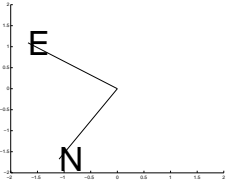
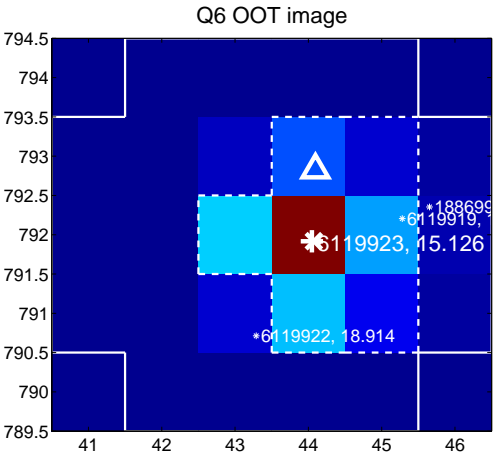
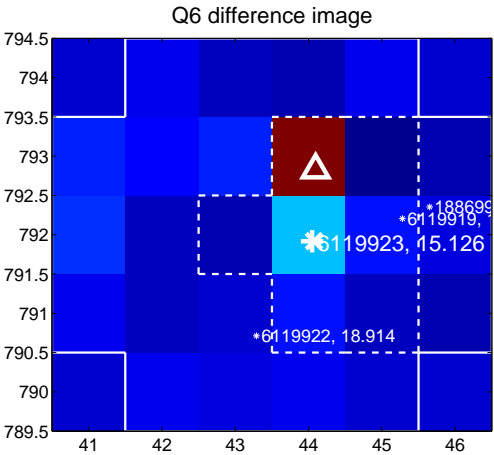


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

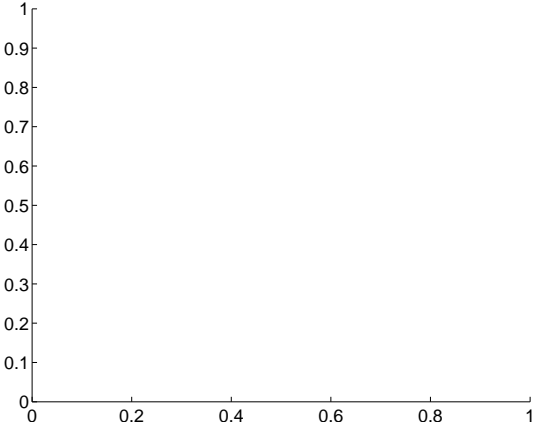
Q5 no difference image



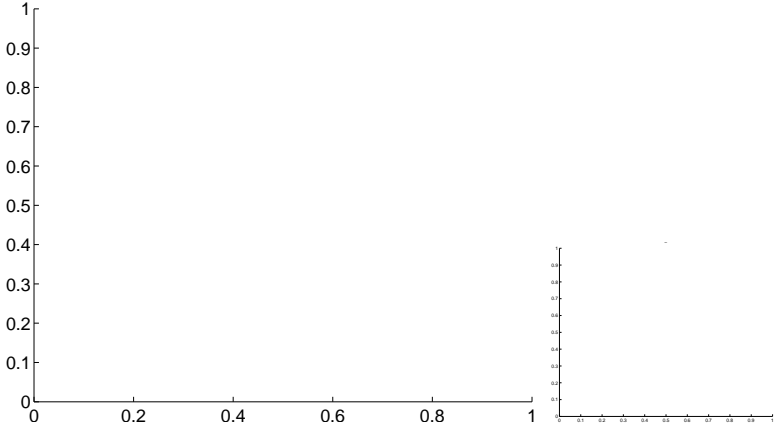
Q5 no OOT image



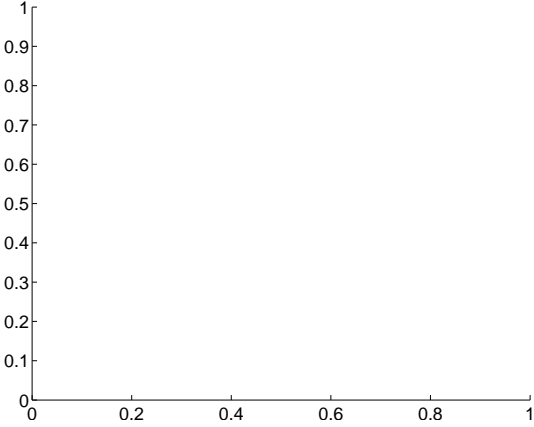
Q7 no difference image



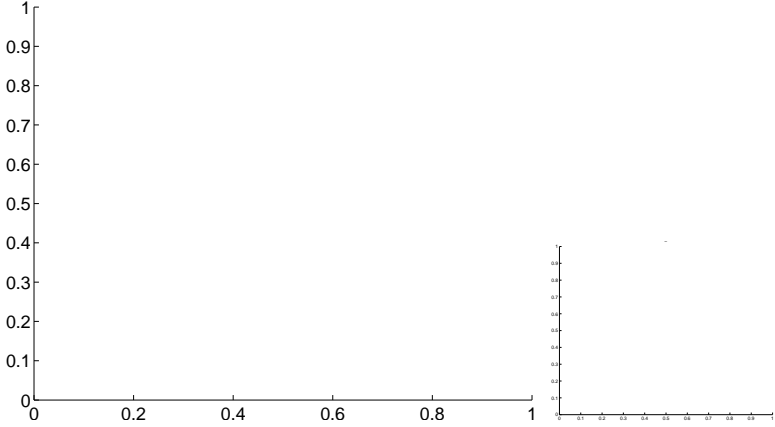
Q7 no OOT image



Q8 no difference image



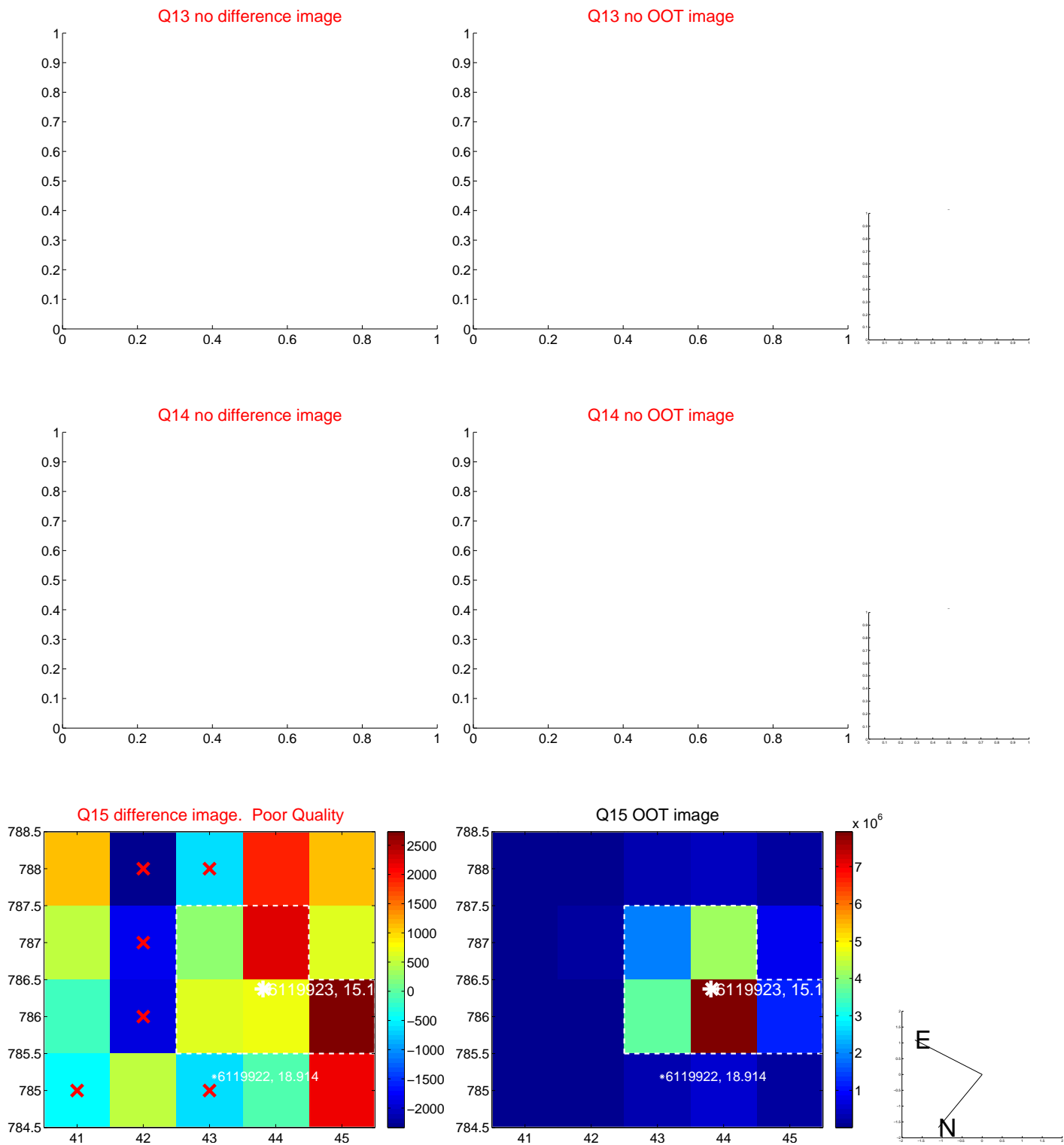
Q8 no OOT image



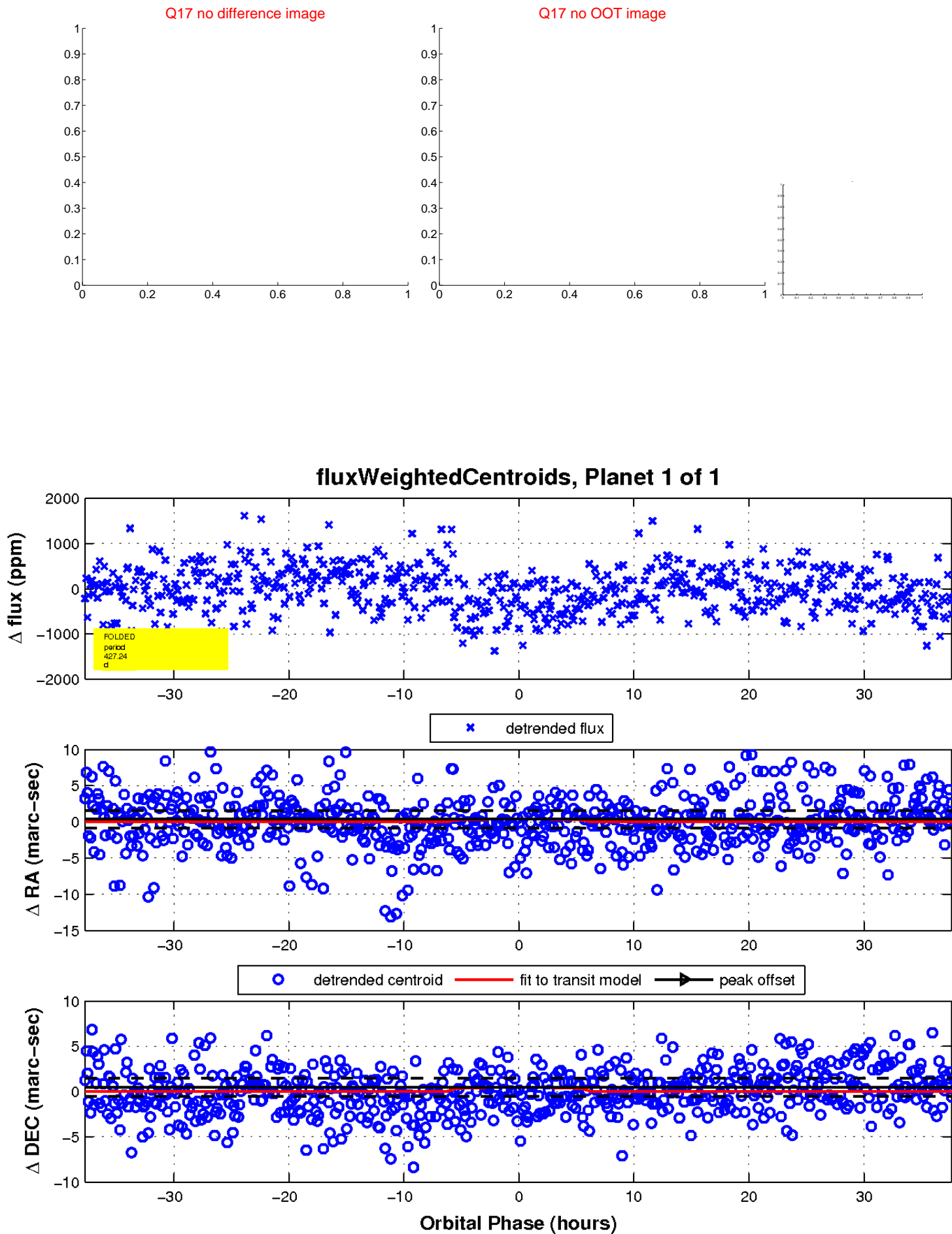
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

