

KIC 008815143

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|-----|-----|-----------------------------|-----------------|------------------------|------------------------|
| 008815143-01 | OBS | No | 484.037700 | 593.196829 | 506.1 | 9.988 | 7.6 | 8.0 | 0.76 | 5541 | 1.84 | 0.38 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|--|
| 008815143-01 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_CHASES_MARSHALL—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.

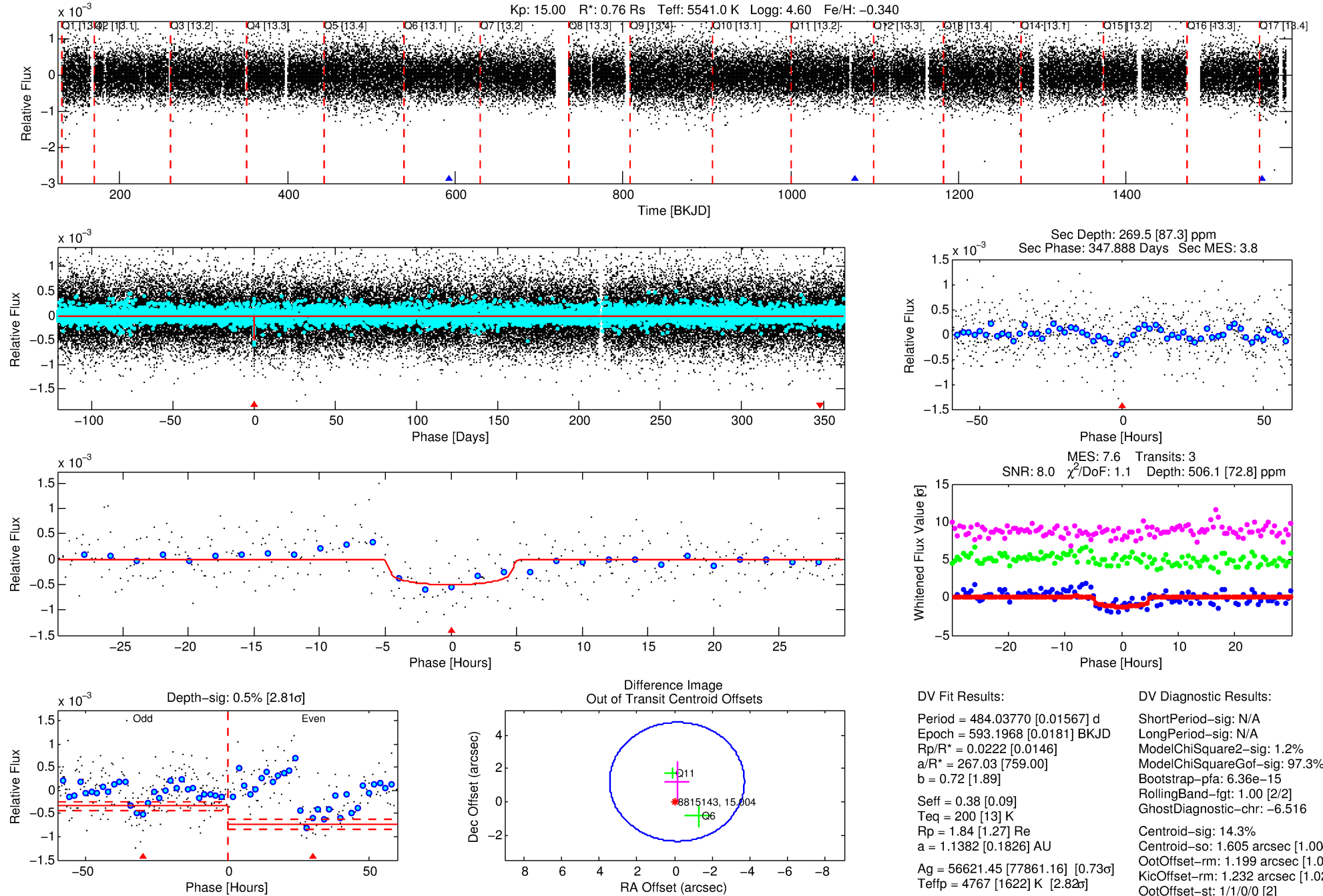
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008815143-01

No Significant Match Found

DV One-Page Summary

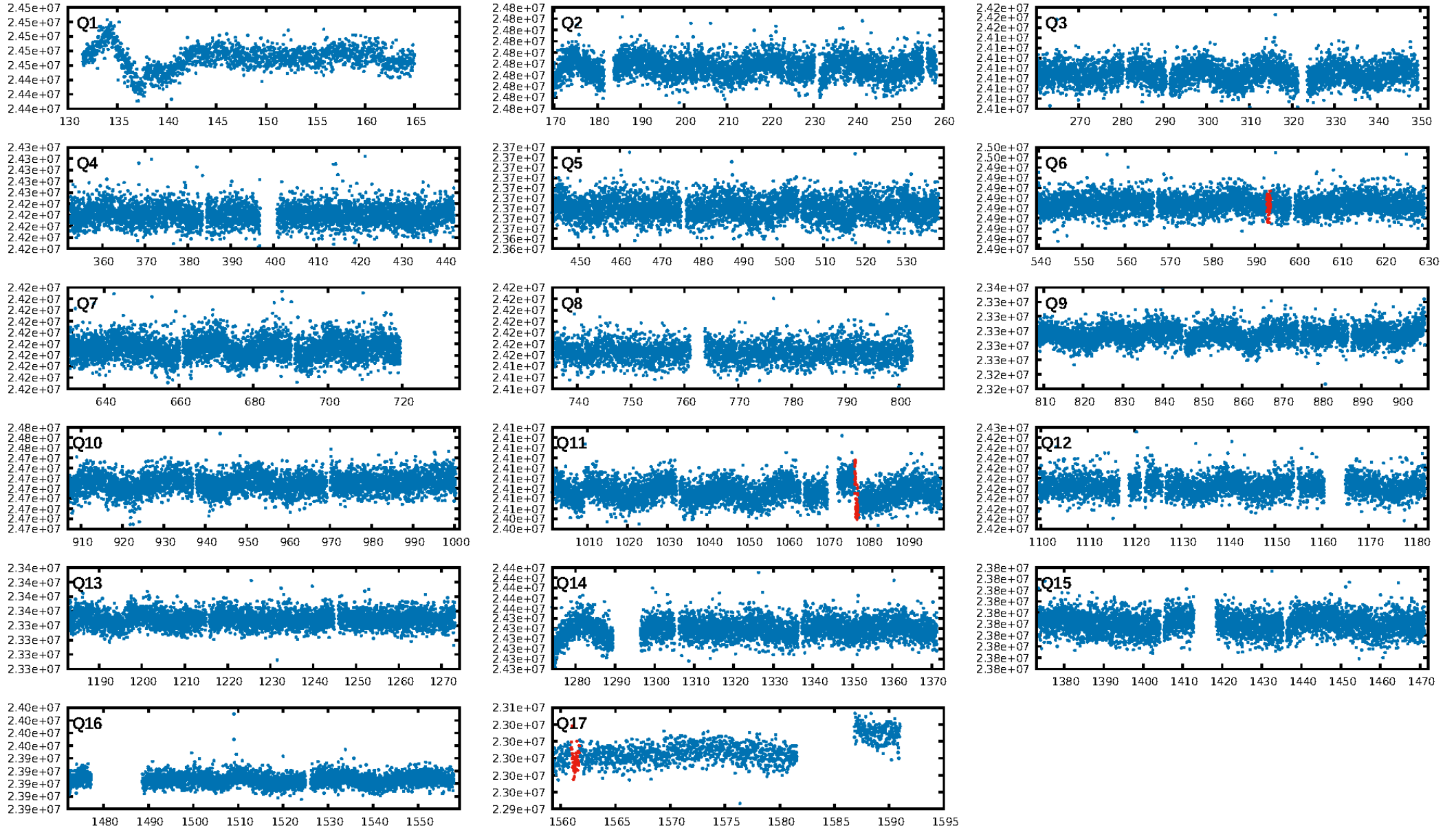
KIC: 8815143 Candidate: 1 of 1 Period: 484.038 d



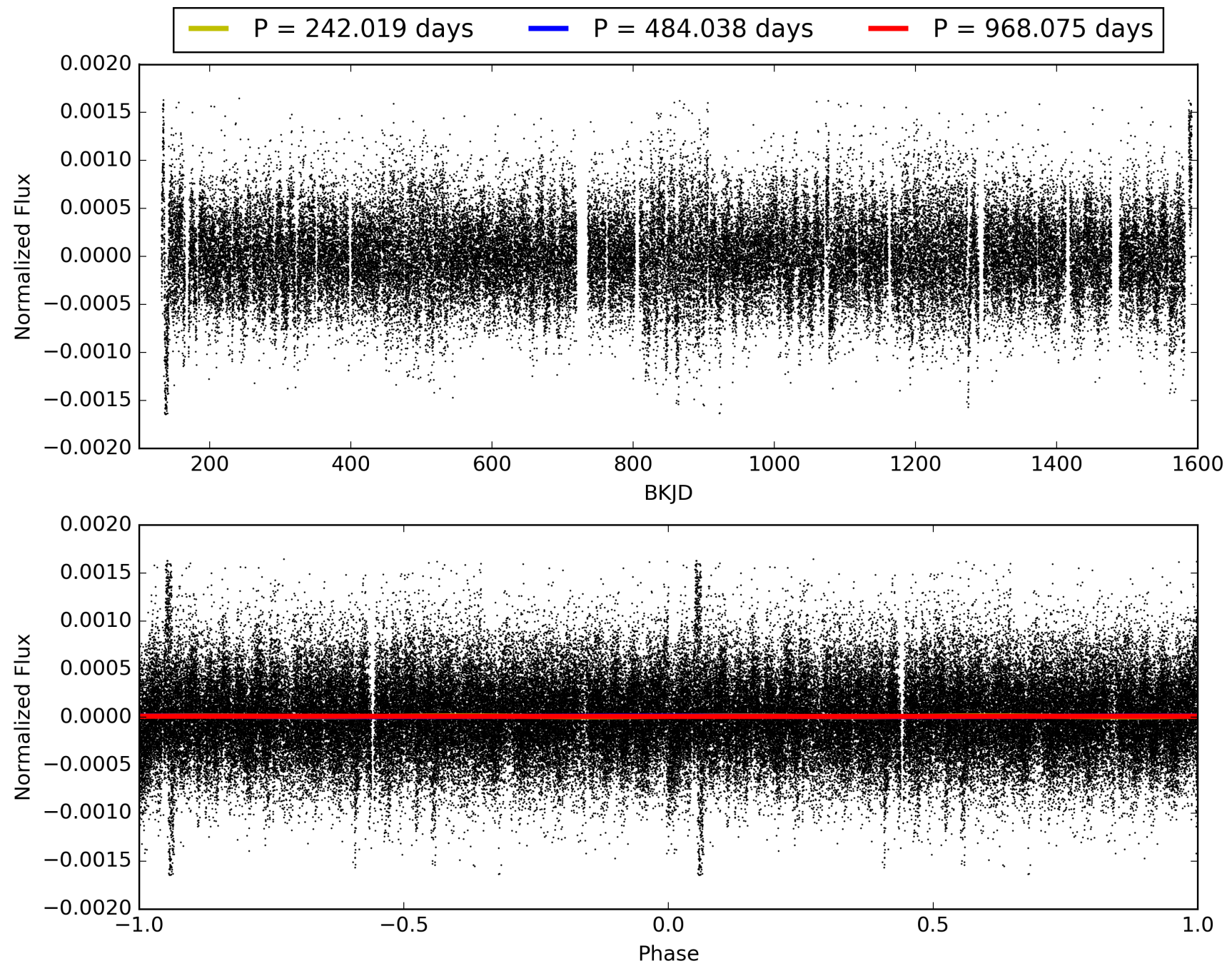
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:01:25 Z

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

TCE 008815143-01, PDC Light Curves

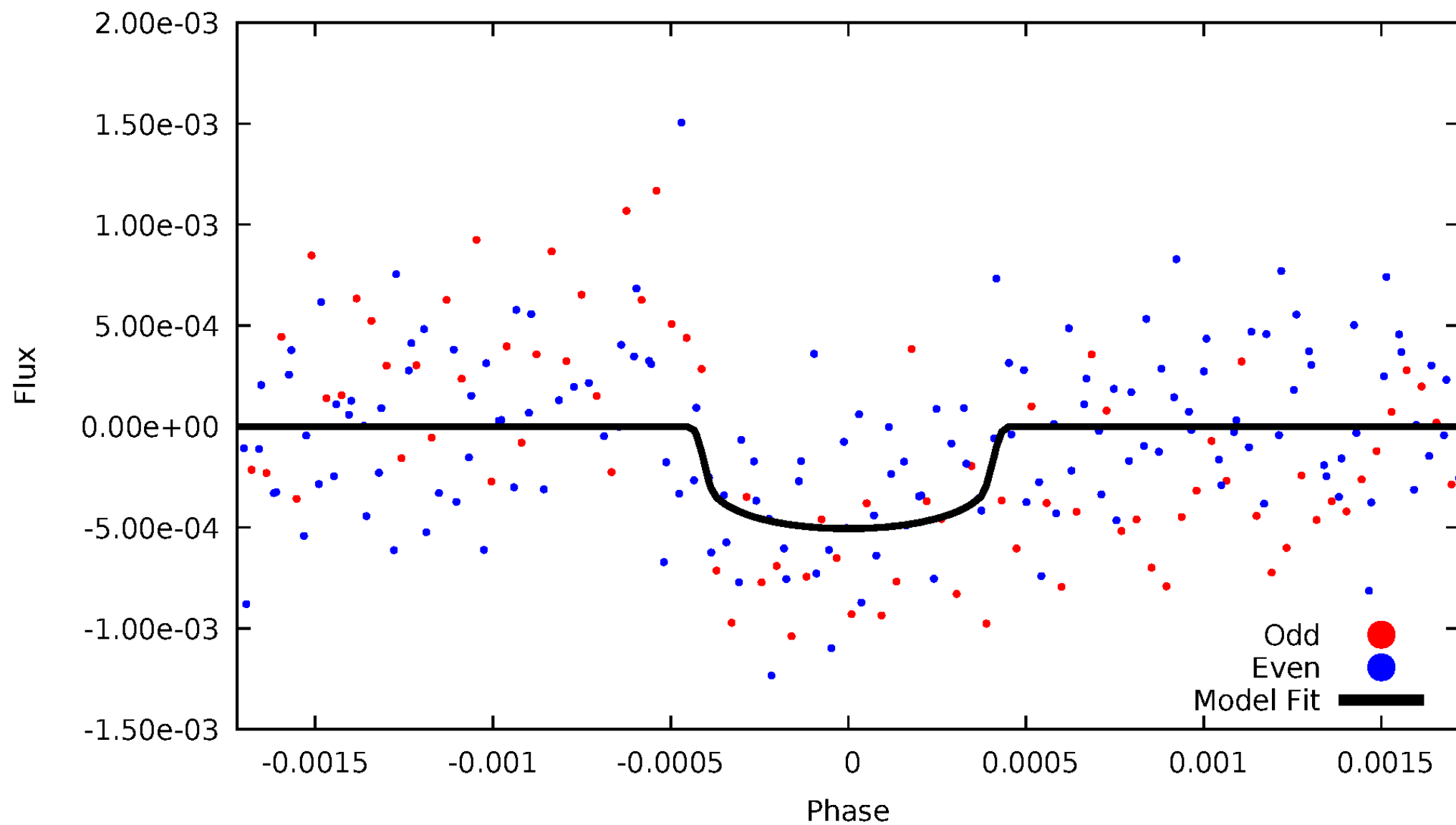


TCE 008815143-01



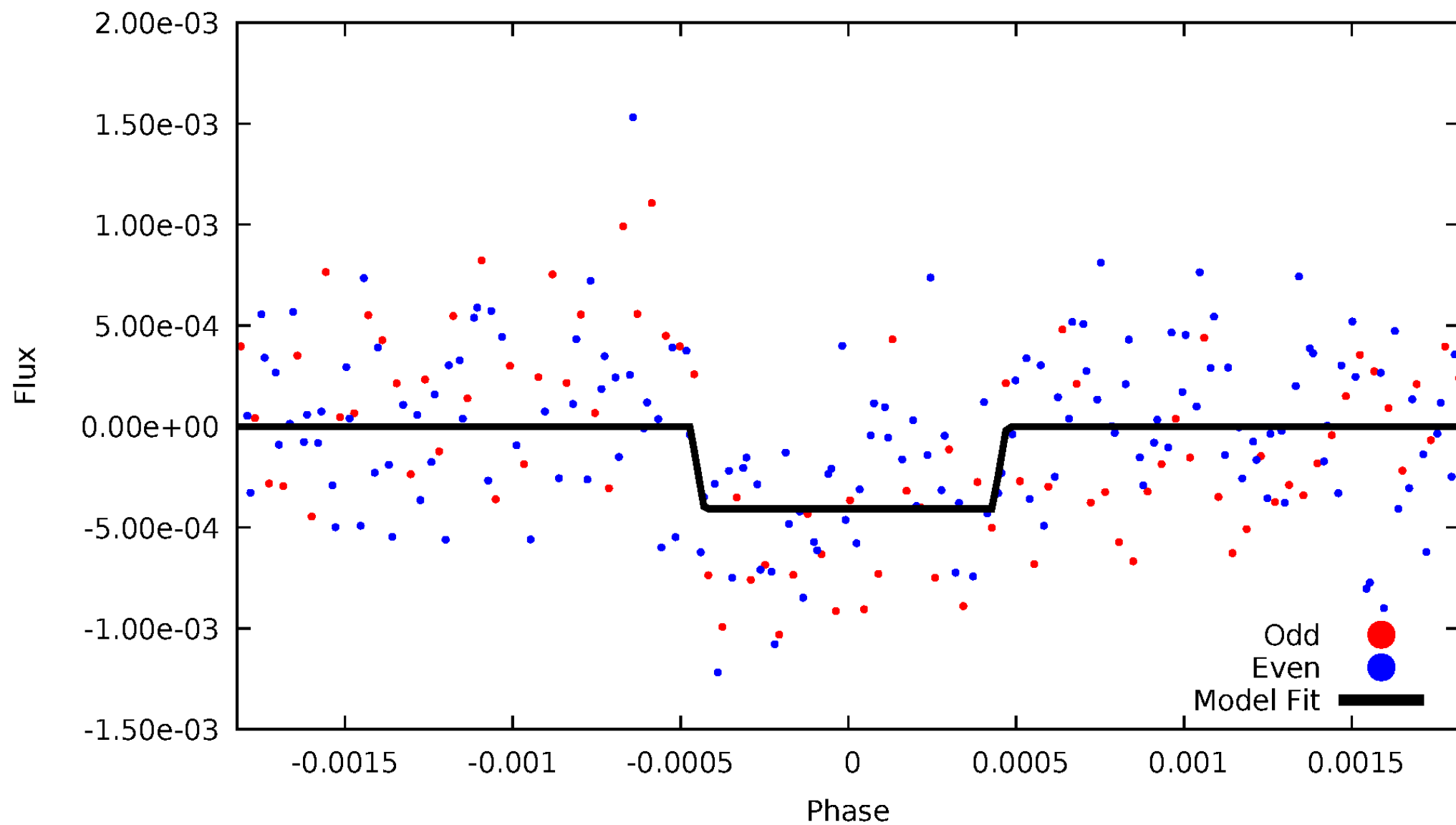
DV Odd/Even

TCE 008815143-01



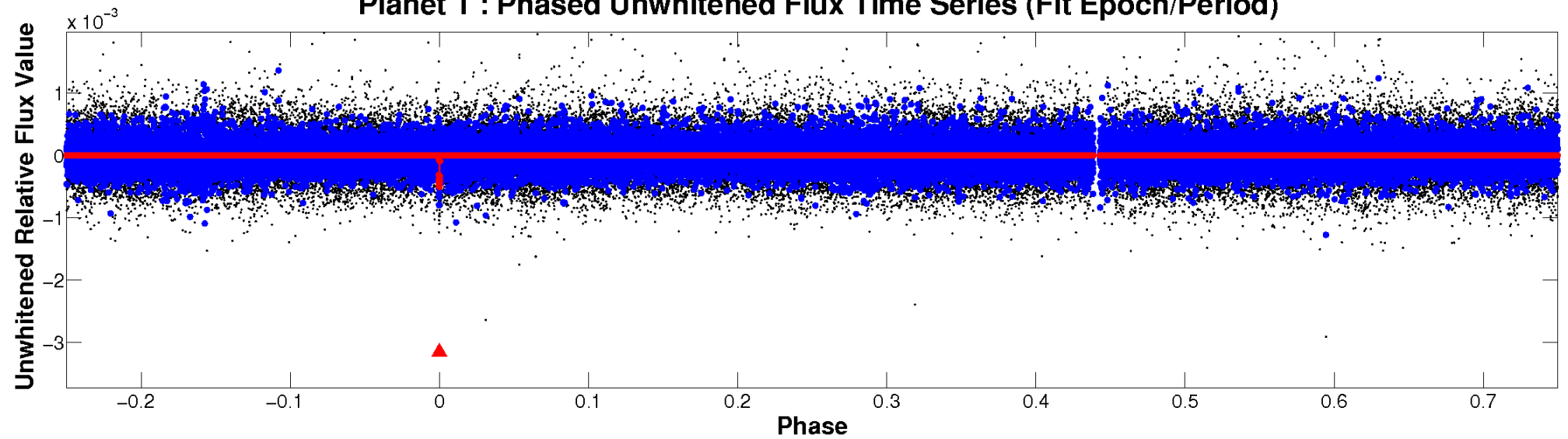
ALT Odd/Even

TCE 008815143-01

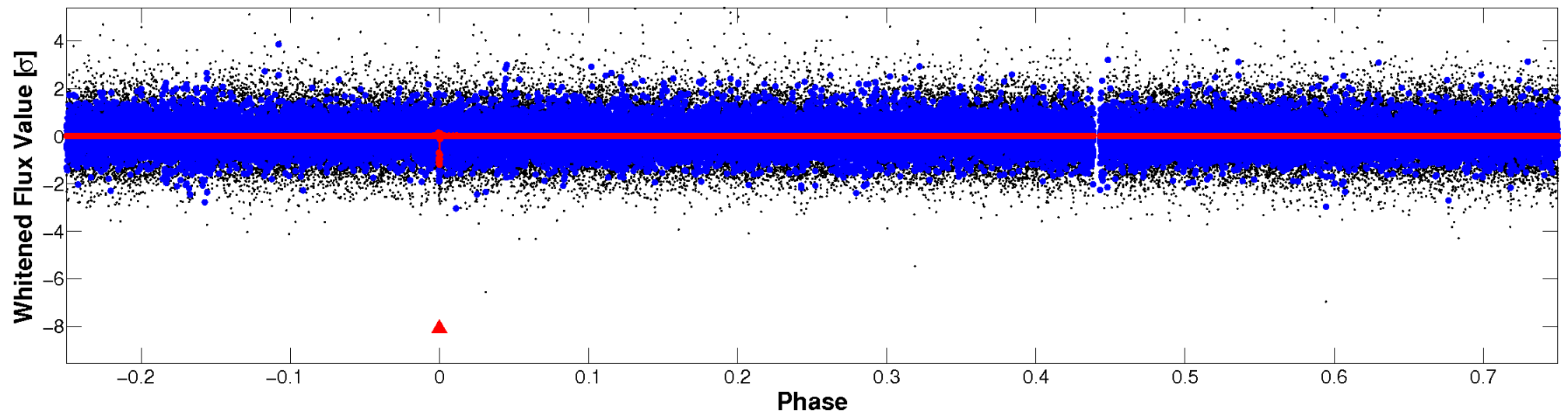


Non-Whitened Vs. Whitened Light Curve

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

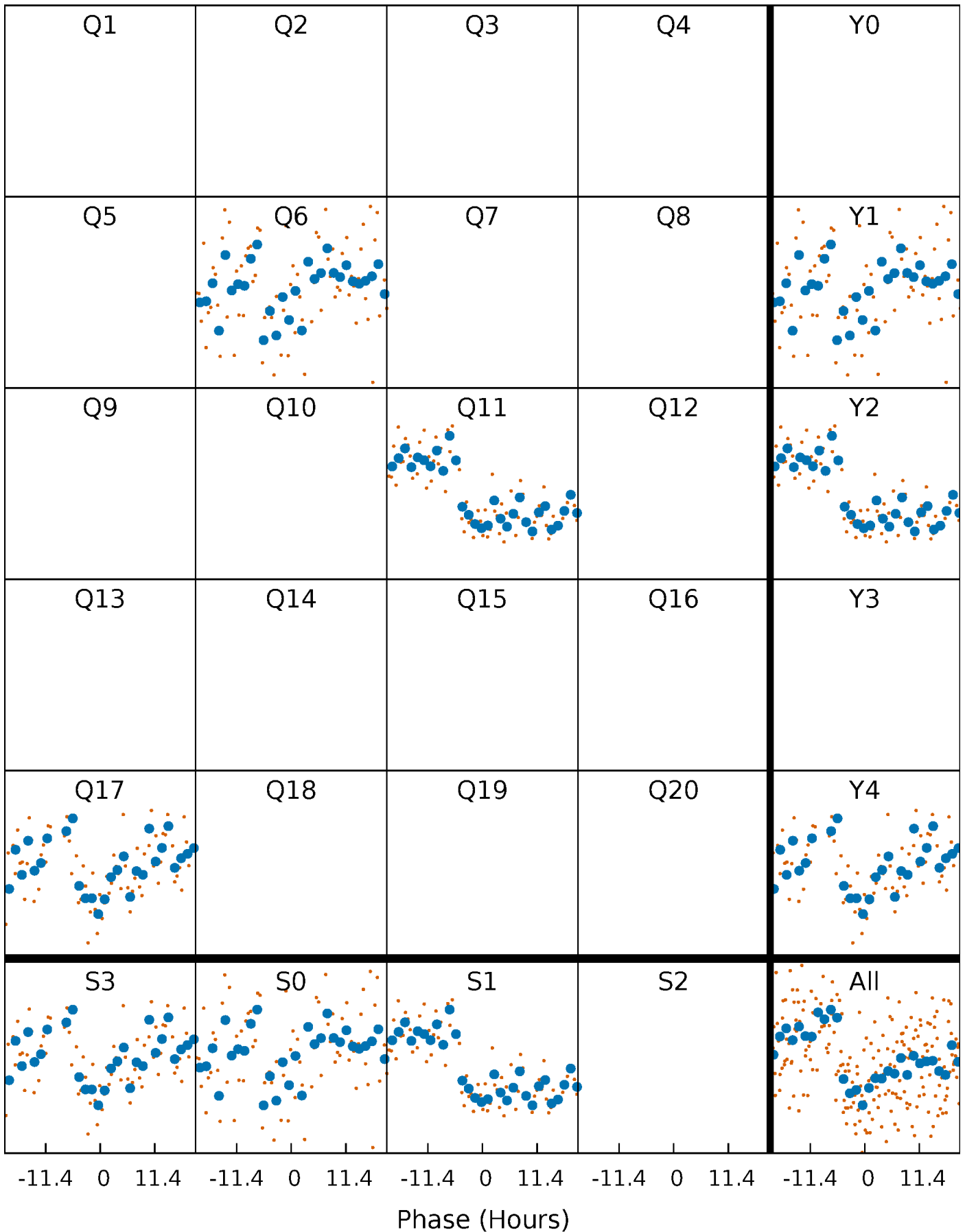


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 008815143-01 P=484.037700 Days $T_0=593.196829$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 008815143-01 P=484.037700 Days $T_0=593.196829$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

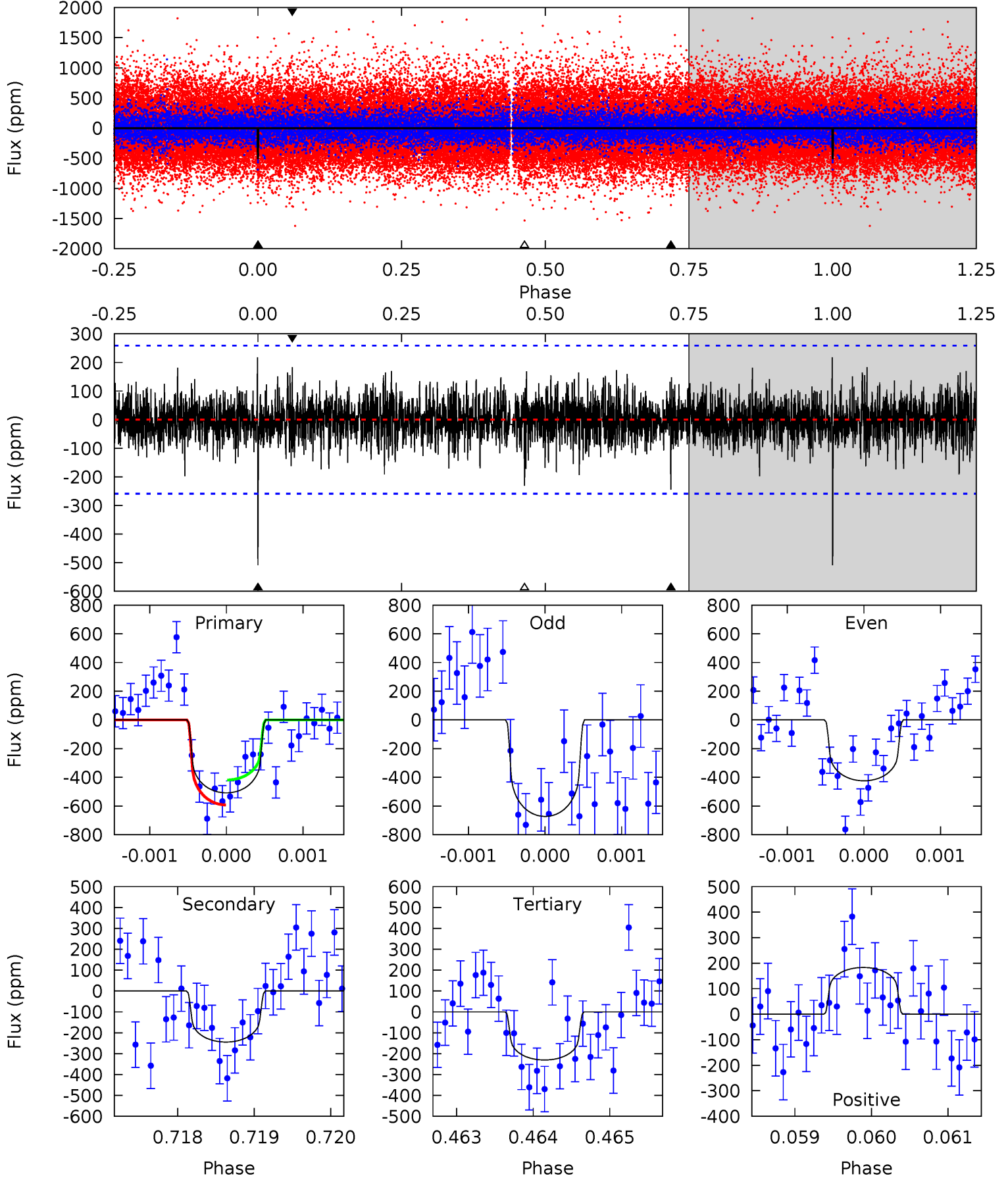
TCE 008815143-01 P=484.098281 Days $T_0=593.158685$ (BKJD)



DV Model-Shift Uniqueness Test

008815143-01, P = 484.037700 Days, E = 109.159129 Days

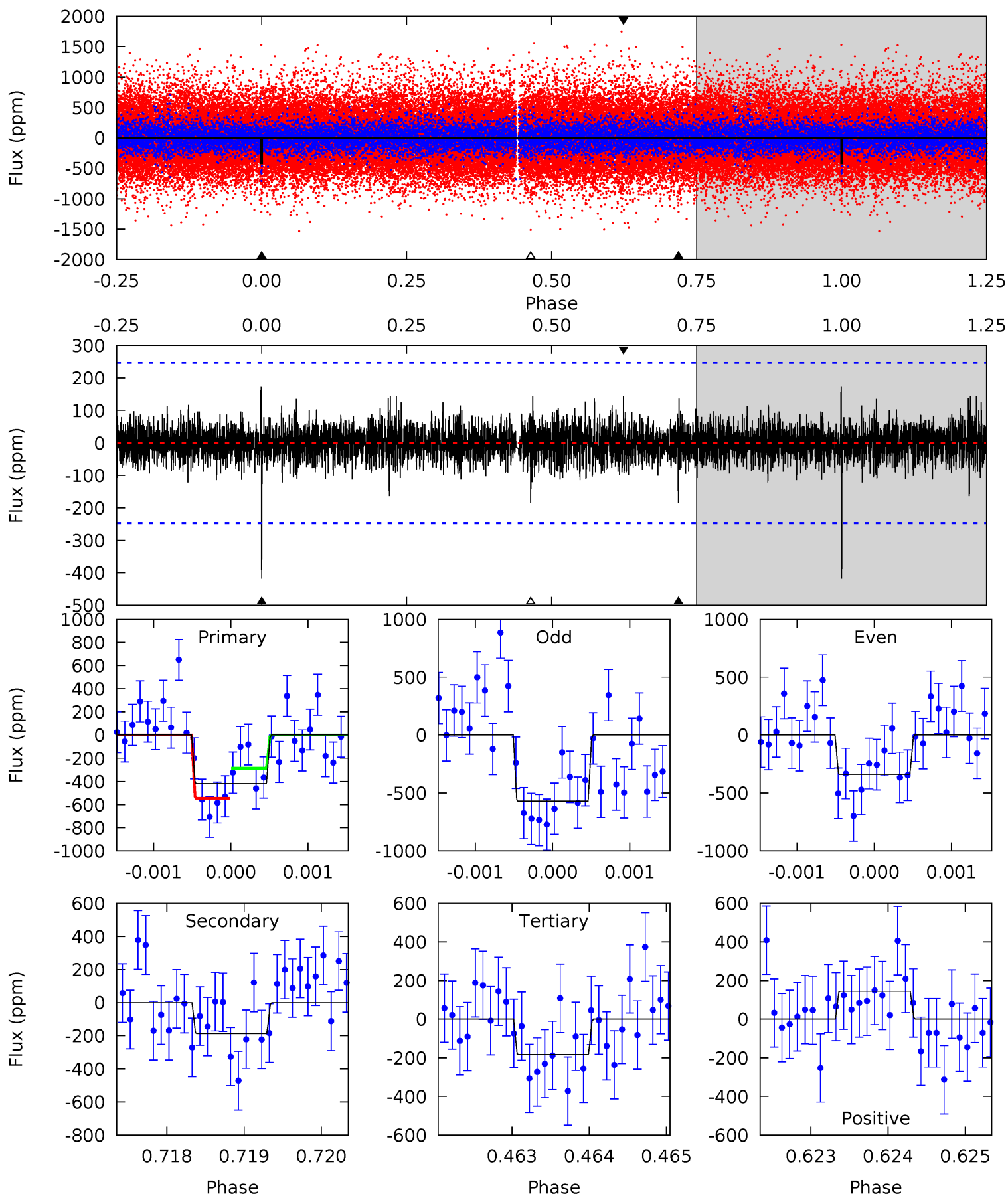
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 10.8 | 5.17 | 4.88 | 3.88 | 5.47 | 3.33 | 1.13 | 5.88 | 6.88 | 0.30 | 1.30 | 2.52 | 0.94 | 0.30 | 1.84 |



Alt Model-Shift Uniqueness Test

008815143-01, P = 484.098281 Days, E = 109.060404 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 9.25 | 4.12 | 4.06 | 3.19 | 5.46 | 3.31 | 0.84 | 5.19 | 6.06 | 0.06 | 0.93 | 2.37 | 1.01 | 0.29 | 2.86 |



Stellar Parameters For KIC 008815143

| | $T_{\text{eff}} (K)$ | $\log(g)$ | $[\text{Fe}/\text{H}]$ | $R (R_{\odot})$ | $M (M_{\odot})$ | $p_{\star} (\text{g}\cdot\text{cm}^{-3})$ |
|--------|----------------------|---------------------------|----------------------------|---------------------------|---------------------------|---|
| | 5541^{+150}_{-150} | $4.599^{+0.032}_{-0.120}$ | $-0.340^{+0.350}_{-0.300}$ | $0.761^{+0.150}_{-0.064}$ | $0.851^{+0.082}_{-0.100}$ | $2.722^{+0.460}_{-1.020}$ |
| | +3%/-3% | +1%/-3% | +103%/-88% | +20%/-8% | +10%/-12% | +17%/-37% |
| 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 008815143-01 / KOI

| Detrend | Depth (ppm) | $R_p (R_{\oplus})$ | $T_{\text{max}} (K)$ | $T_{\text{obs}} (K)$ | A_{obs} |
|---------|---------------|------------------------|----------------------|-----------------------|----------------------------|
| DV | -244 ± 47 | $2.15^{+1.11}_{-1.13}$ | 284^{+13}_{-10} | 4535^{+1811}_{-657} | $36741^{+136878}_{-21246}$ |
| Alt. | -186 ± 45 | $1.84^{+1.19}_{-1.06}$ | 284^{+14}_{-11} | 4595^{+2215}_{-819} | $38300^{+177023}_{-24600}$ |

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

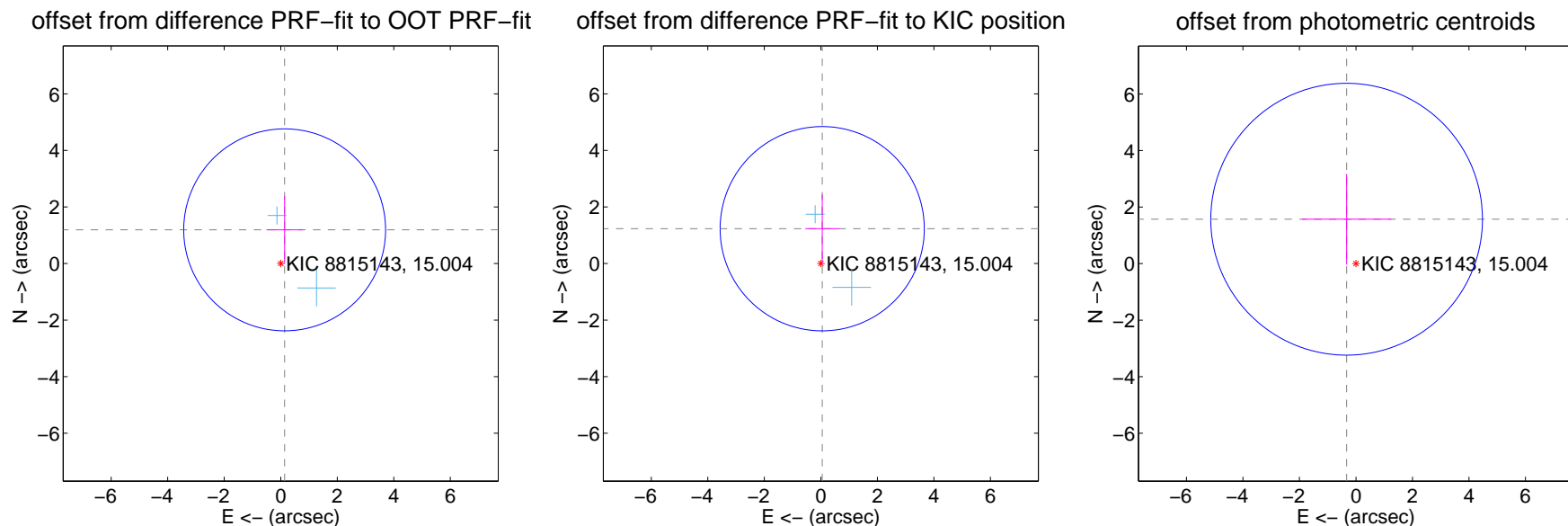
DV Centroid Data

Supplemental centroid analysis for 008815143-01. Kepler magnitude: 15.00. Transit SNR 8.05

There are 2 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 | 1.199 ± 1.190 | 1.01 | -0.138 ± 0.647 | 1.191 ± 1.196 |
| PRF-fit source offset from KIC position | 1.232 ± 1.204 | 1.02 | -0.048 ± 0.599 | 1.231 ± 1.205 |
| photometric centroid source offset | 1.60 ± 1.60 | 1.00 | 0.33 ± 1.58 | 1.57 ± 1.60 |



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.



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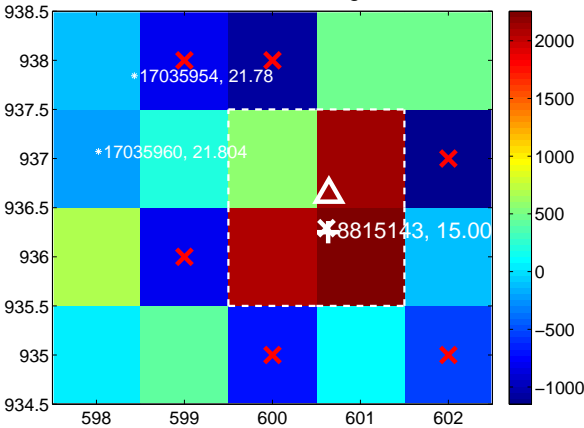
Q5 no difference image



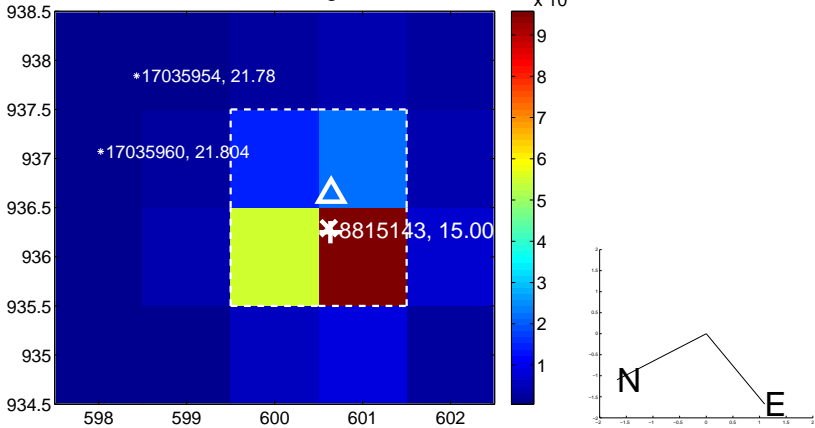
Q5 no OOT image



Q6 difference image



Q6 OOT image



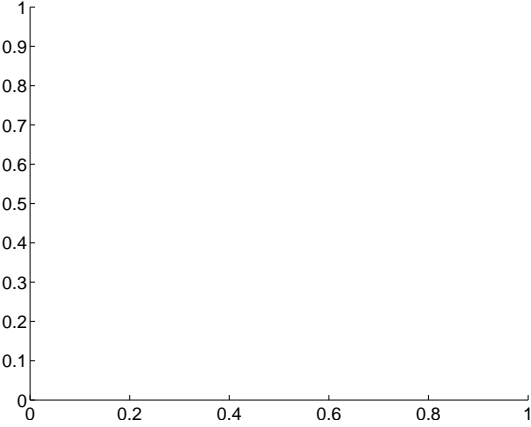
Q7 no difference image



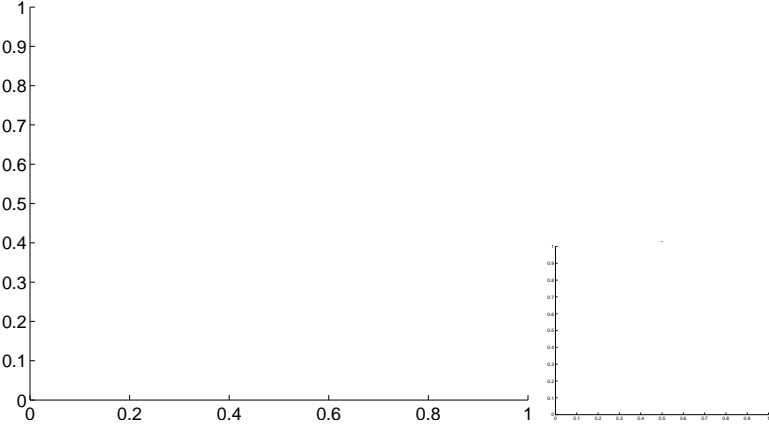
Q7 no OOT image



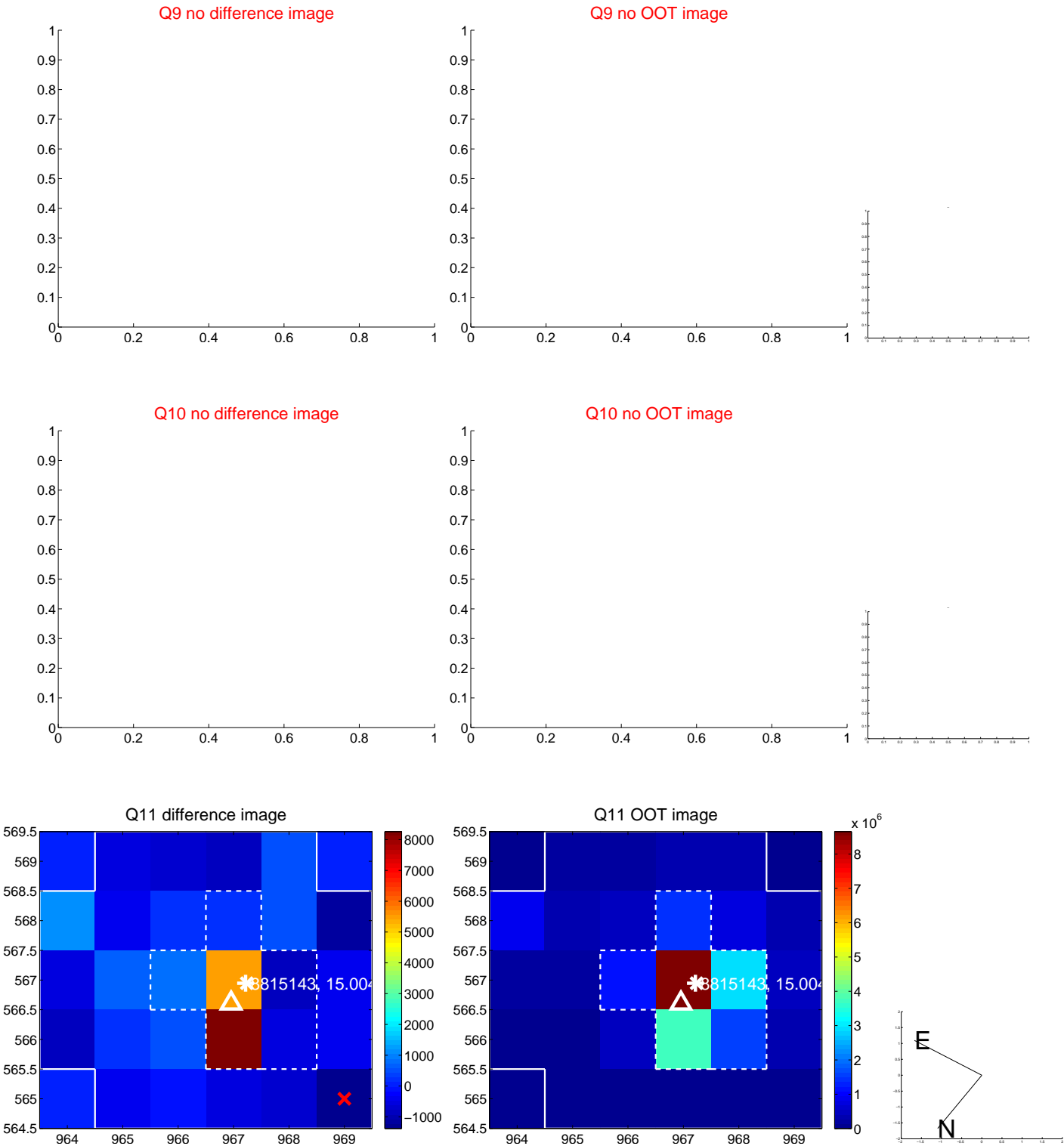
Q8 no difference image



Q8 no OOT image



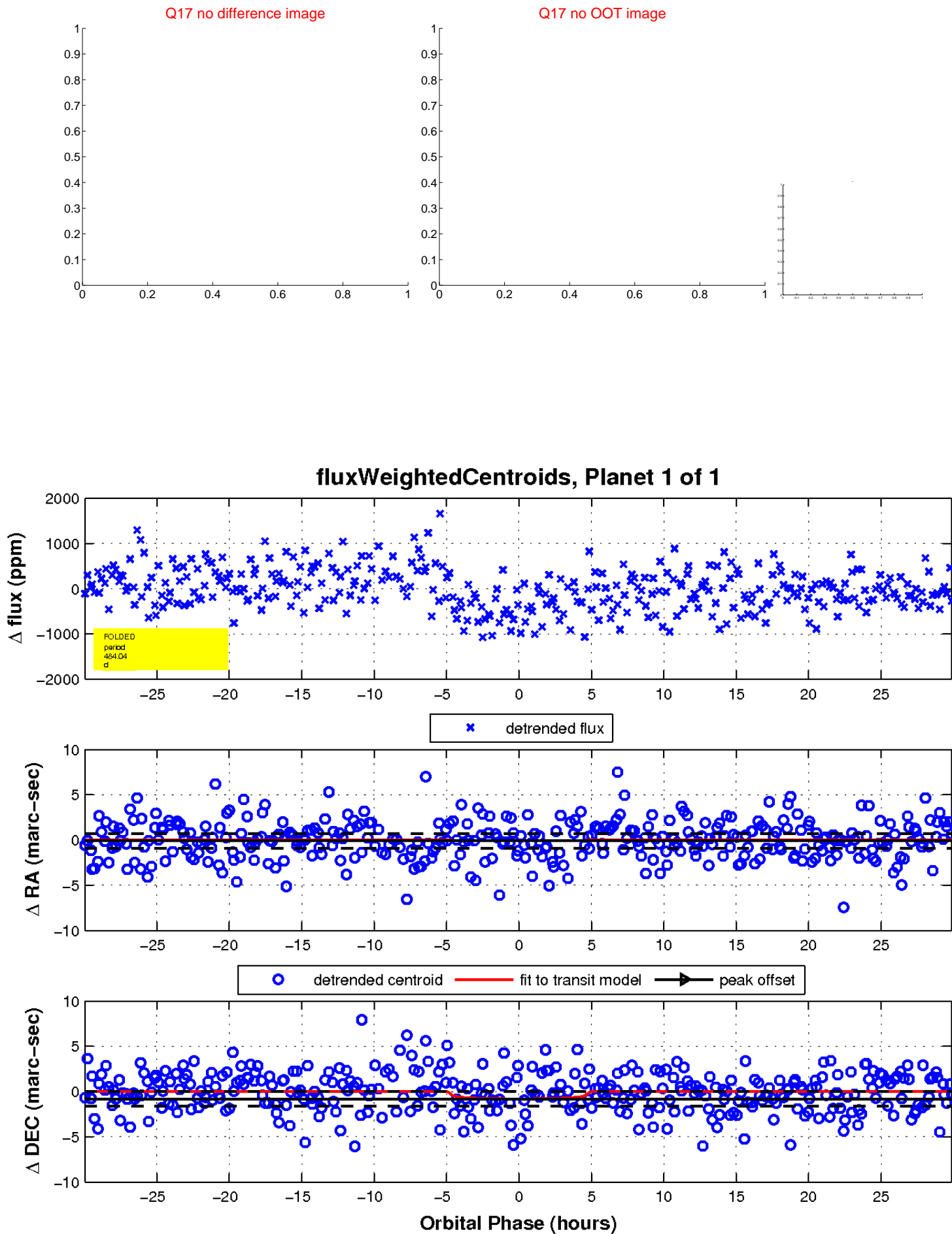
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

