

KIC 010675600

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|-----|-----|-----------------------------|-----------------|------------------------|------------------------|
| 010675600-01 | OBS | No | 154.175865 | 271.485702 | 1508.7 | 14.243 | 7.8 | 6.8 | 15.64 | 4750 | 70.49 | 236.48 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|--|
| 010675600-01 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_SKYE—LPP_DV—INCONSISTENT_TRANS |

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

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

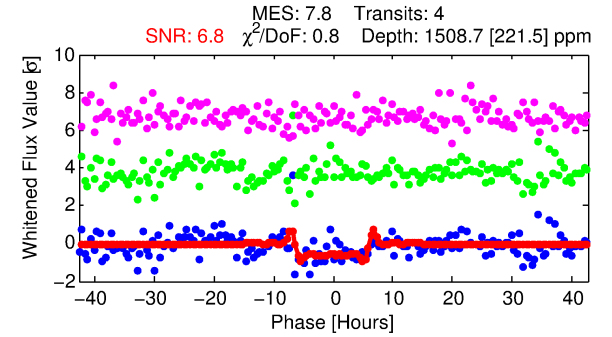
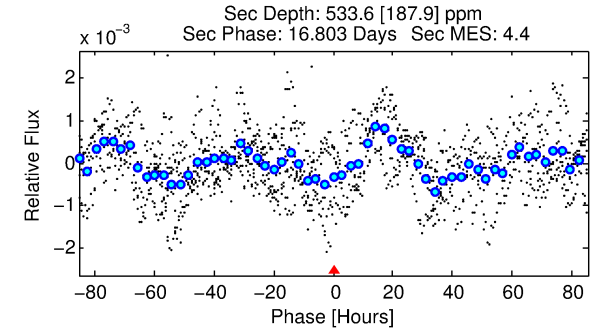
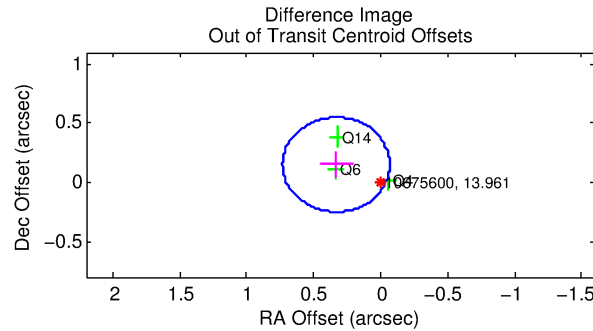
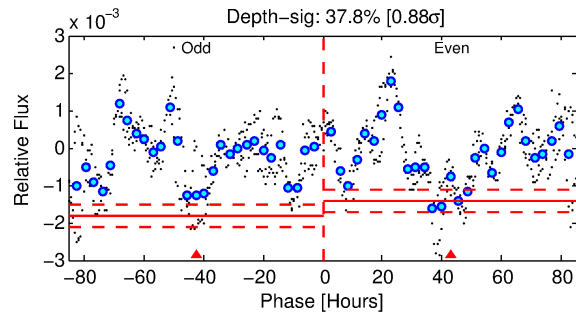
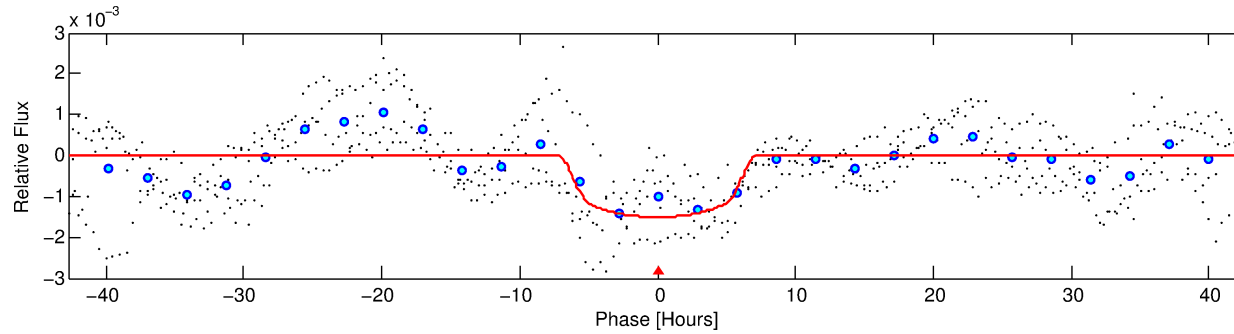
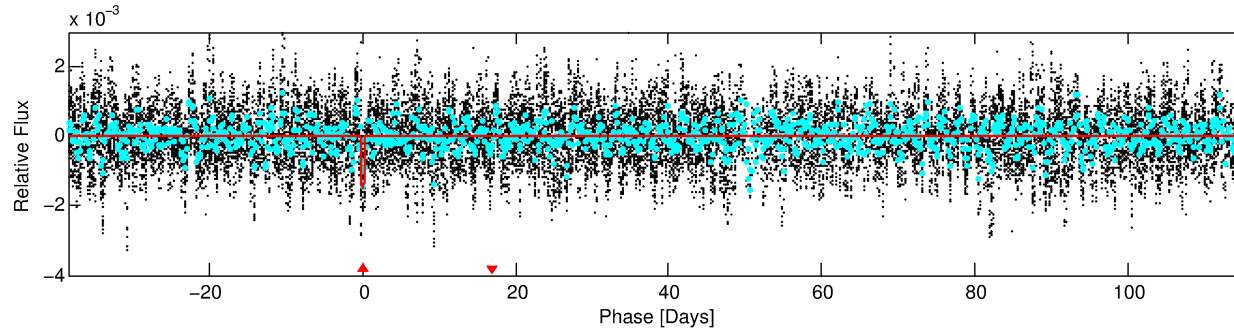
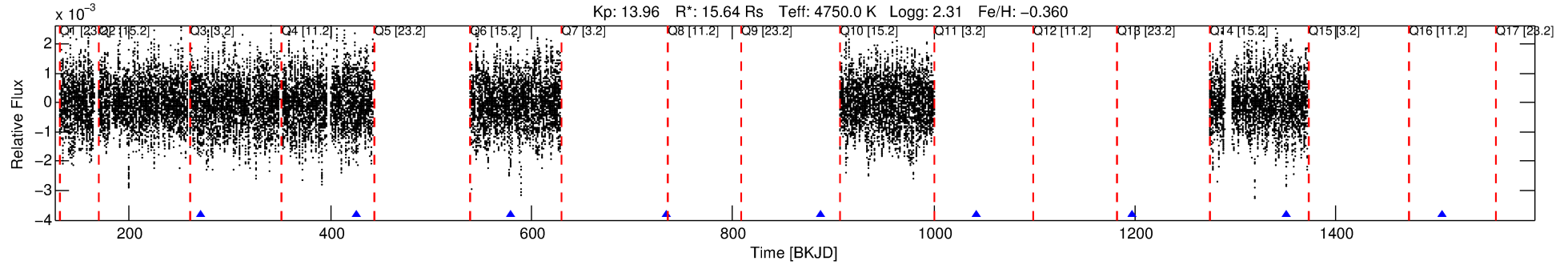
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010675600-01

No Significant Match Found

DV One-Page Summary

KIC: 10675600 Candidate: 1 of 1 Period: 154.176 d



DV Fit Results:

Period = 154.17587 [0.00224] d
Epoch = 271.4857 [0.0086] BKJD
Rp/R* = 0.0413 [0.0033]
a/R* = 49.92 [5.24]
b = 0.85 [0.04]
Seff = 236.48 [42.12]
Teq = 1000 [45] K
Rp = 70.49 [15.69] Re
a = 0.6868 [0.0965] AU
Ag = 27.87 [11.55] [2.33 σ]
Teffp = 3552 [355] K [7.12 σ]

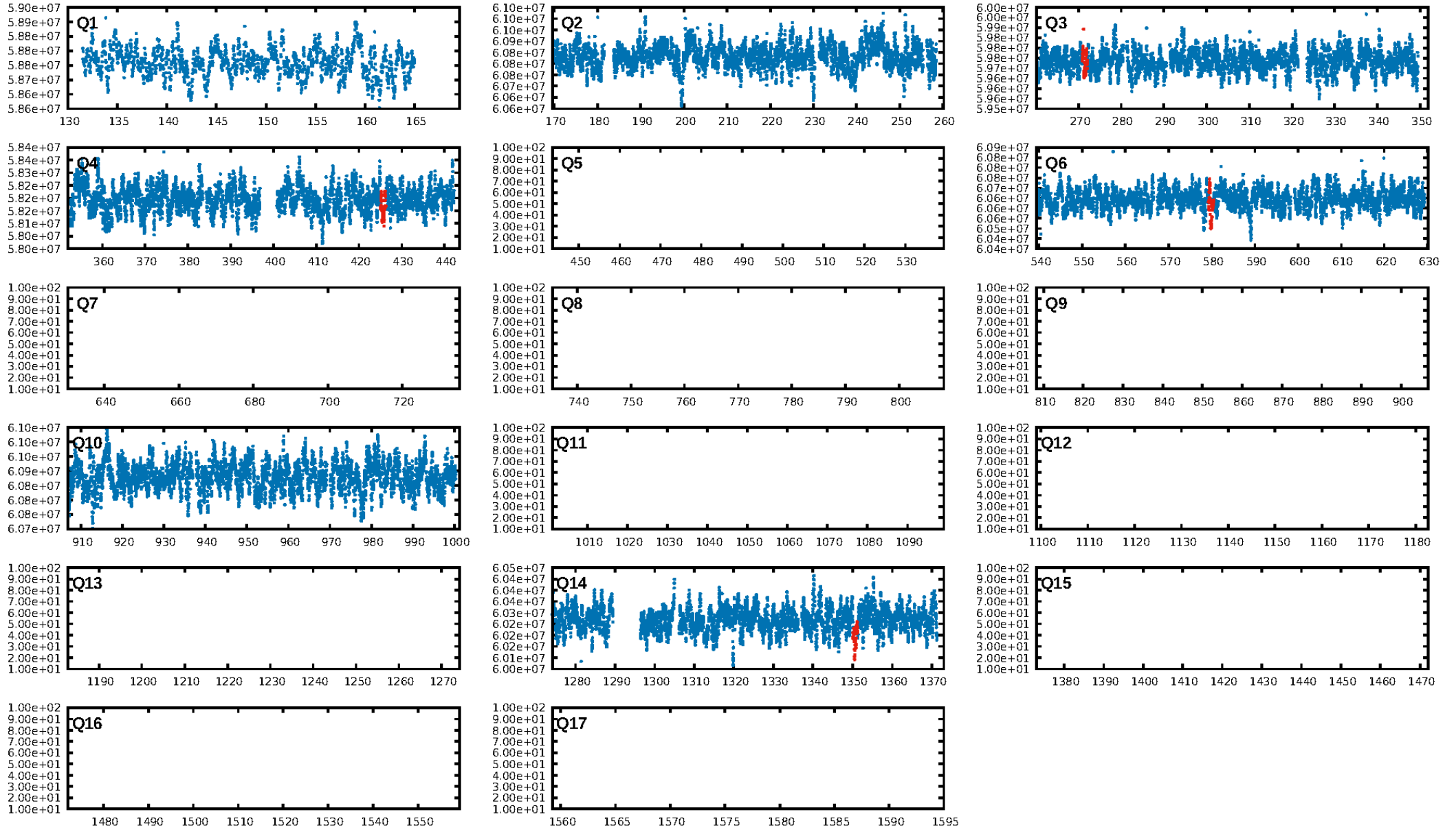
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 41.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.87e-11
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.8783
Centroid-sig: 9.3%
Centroid-so: 0.244 arcsec [1.01 σ]
OotOffset-rm: 0.365 arcsec [2.74 σ]
KicOffset-rm: 0.193 arcsec [1.03 σ]
OotOffset-st: 2/0/1/0 [3]
KicOffset-st: 2/0/1/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

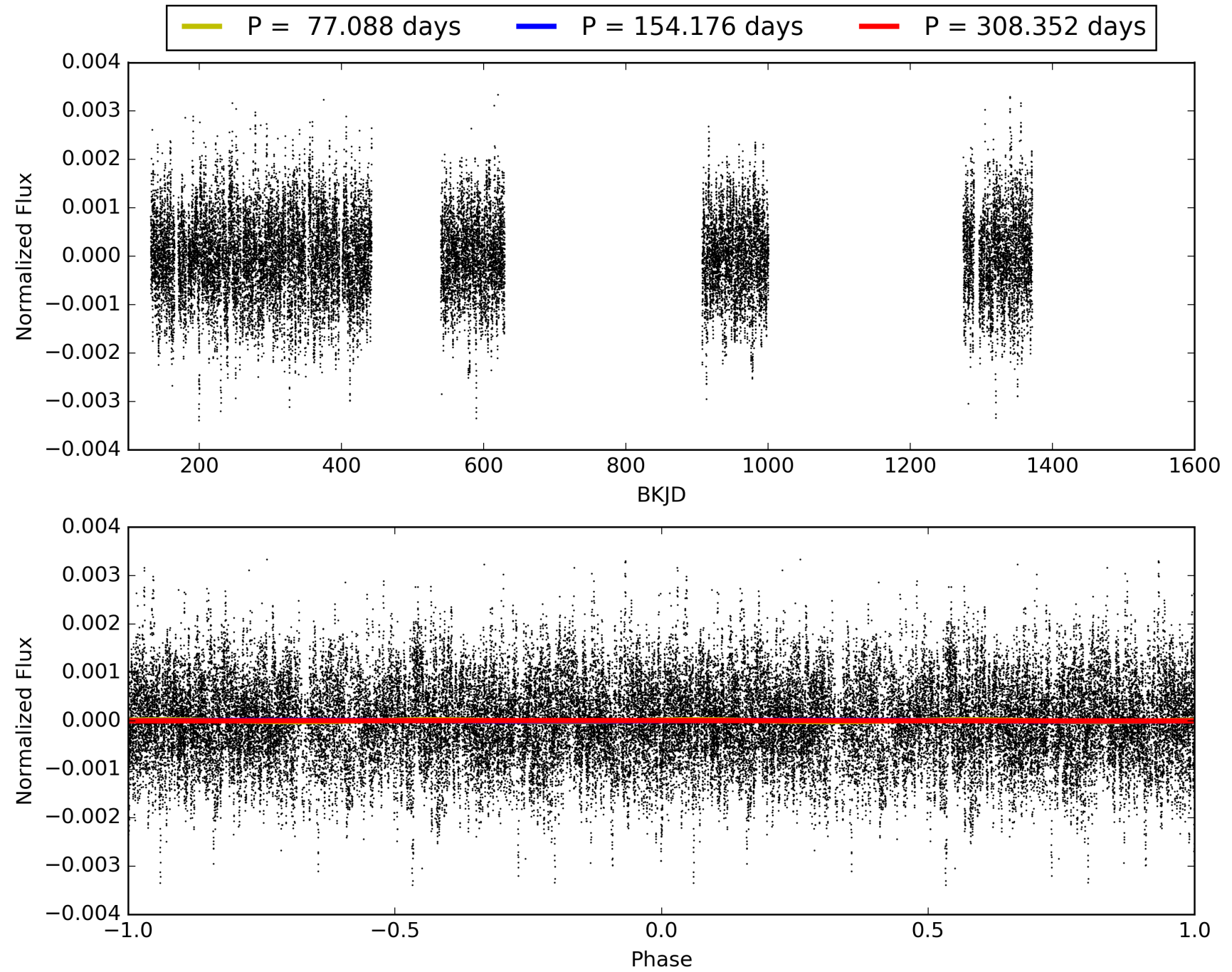
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:03:59 Z

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

TCE 010675600-01, PDC Light Curves

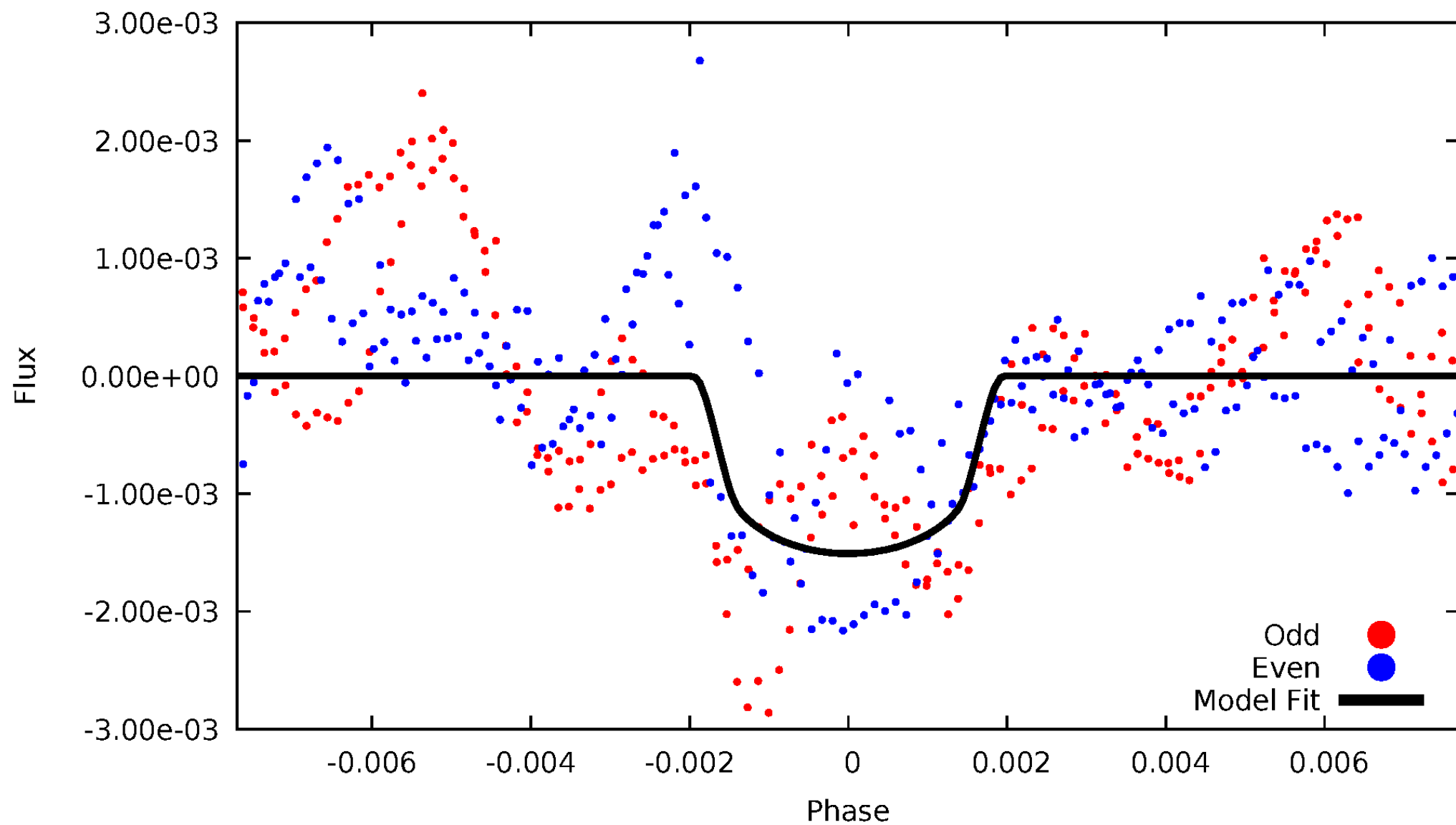


TCE 010675600-01



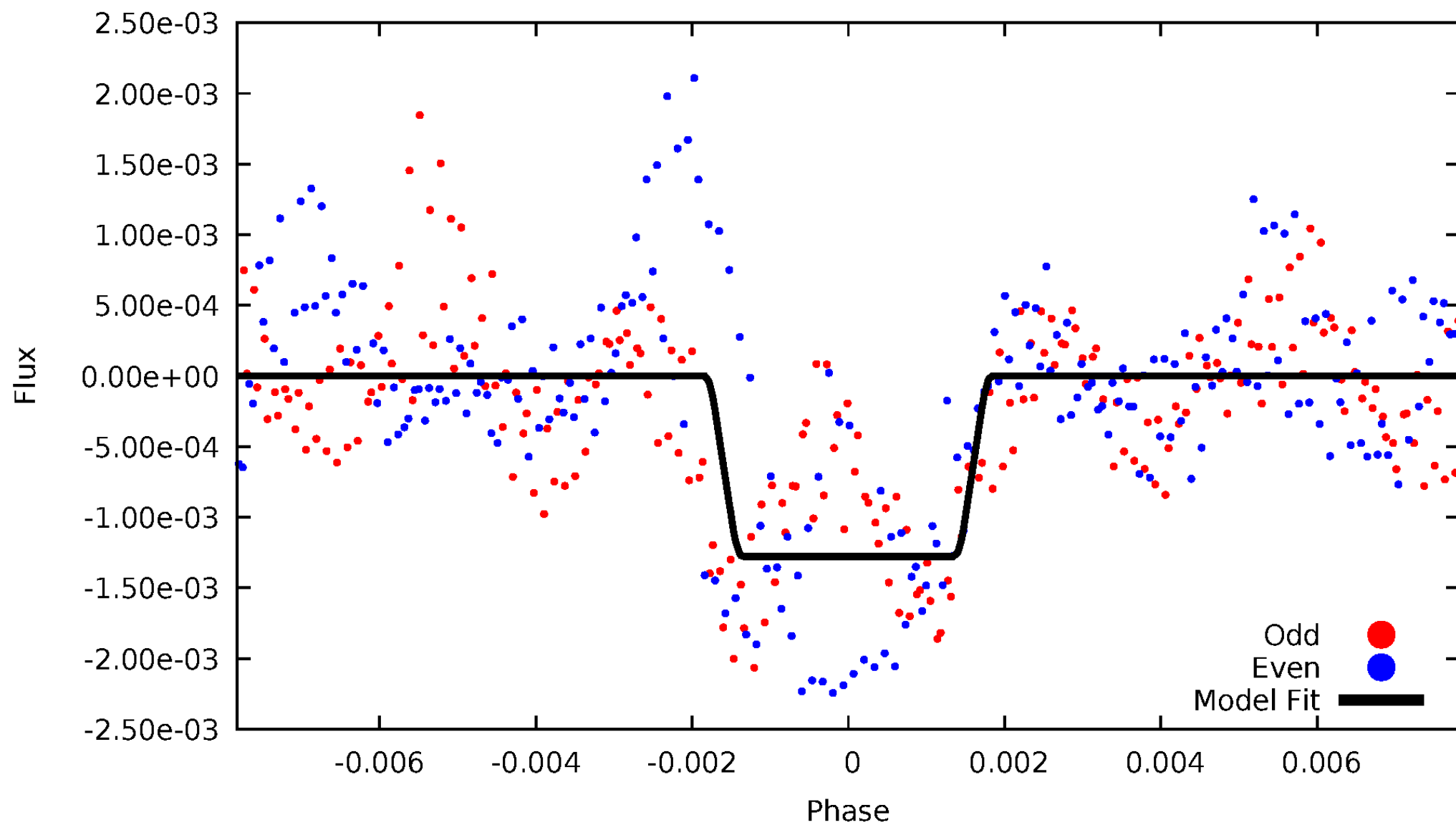
DV Odd/Even

TCE 010675600-01

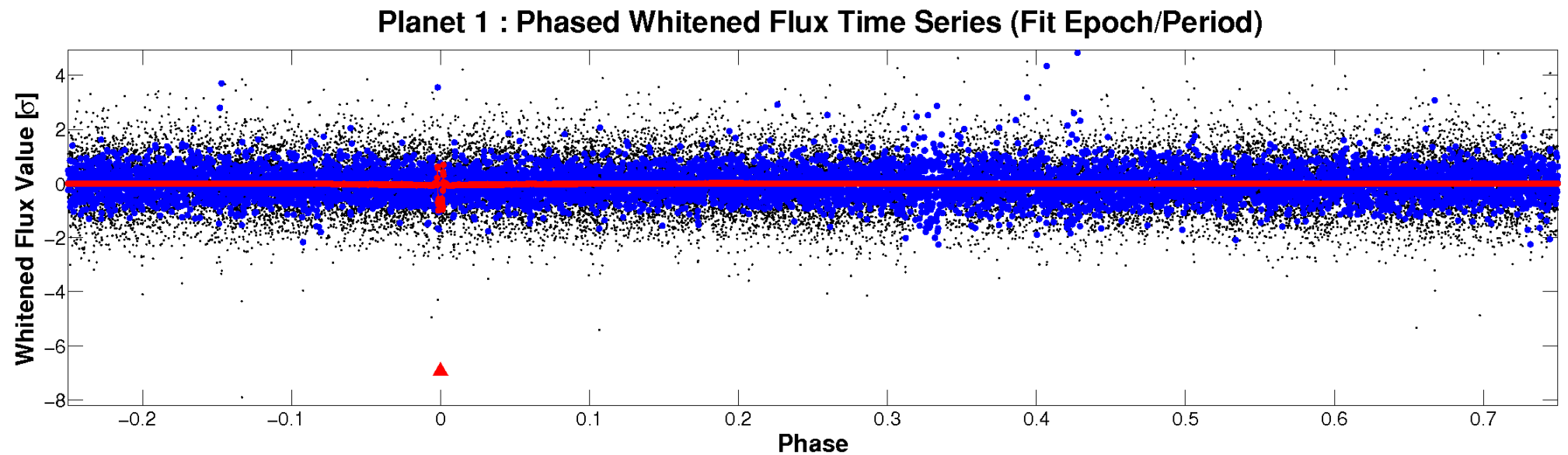
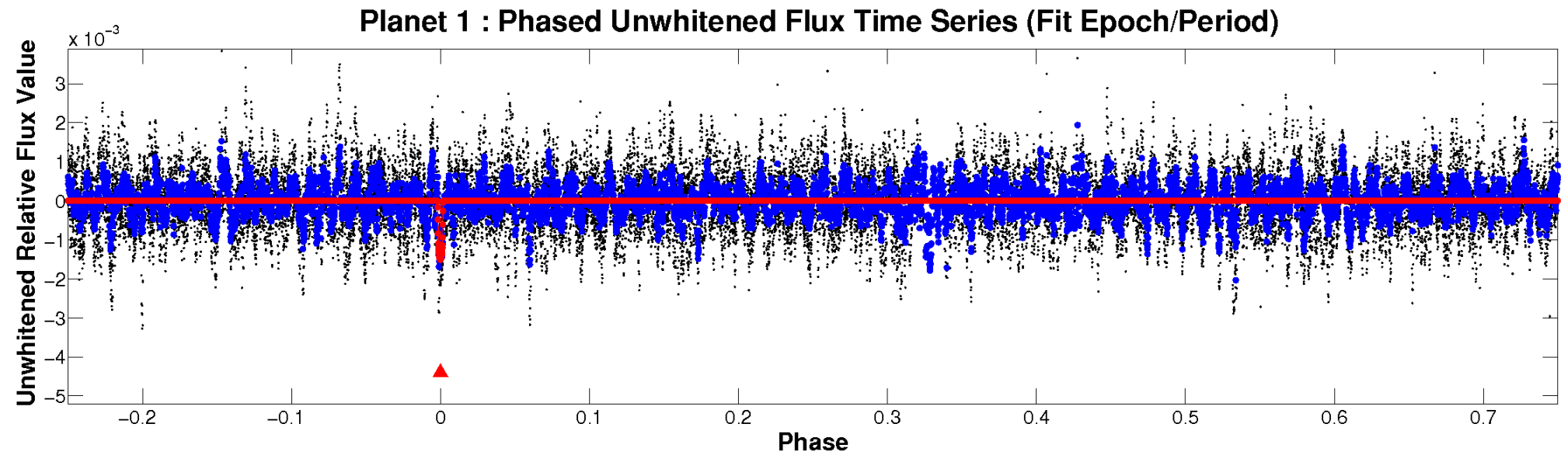


ALT Odd/Even

TCE 010675600-01



Non-Whitened Vs. Whitened Light Curve



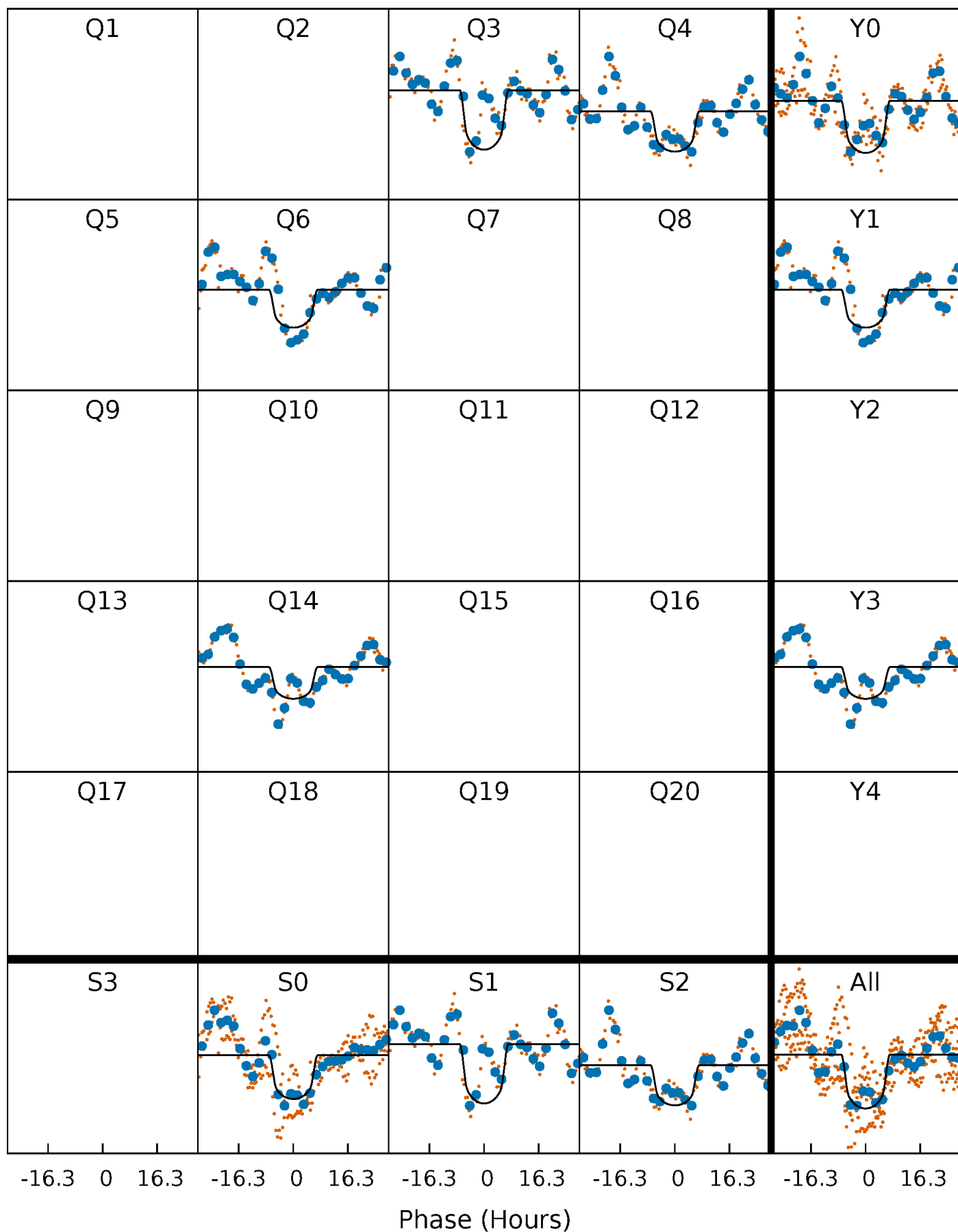
PDC Quarter-Phased Transit Curves

TCE 010675600-01 P=154.175865 Days $T_0=271.485702$ (BKJD)



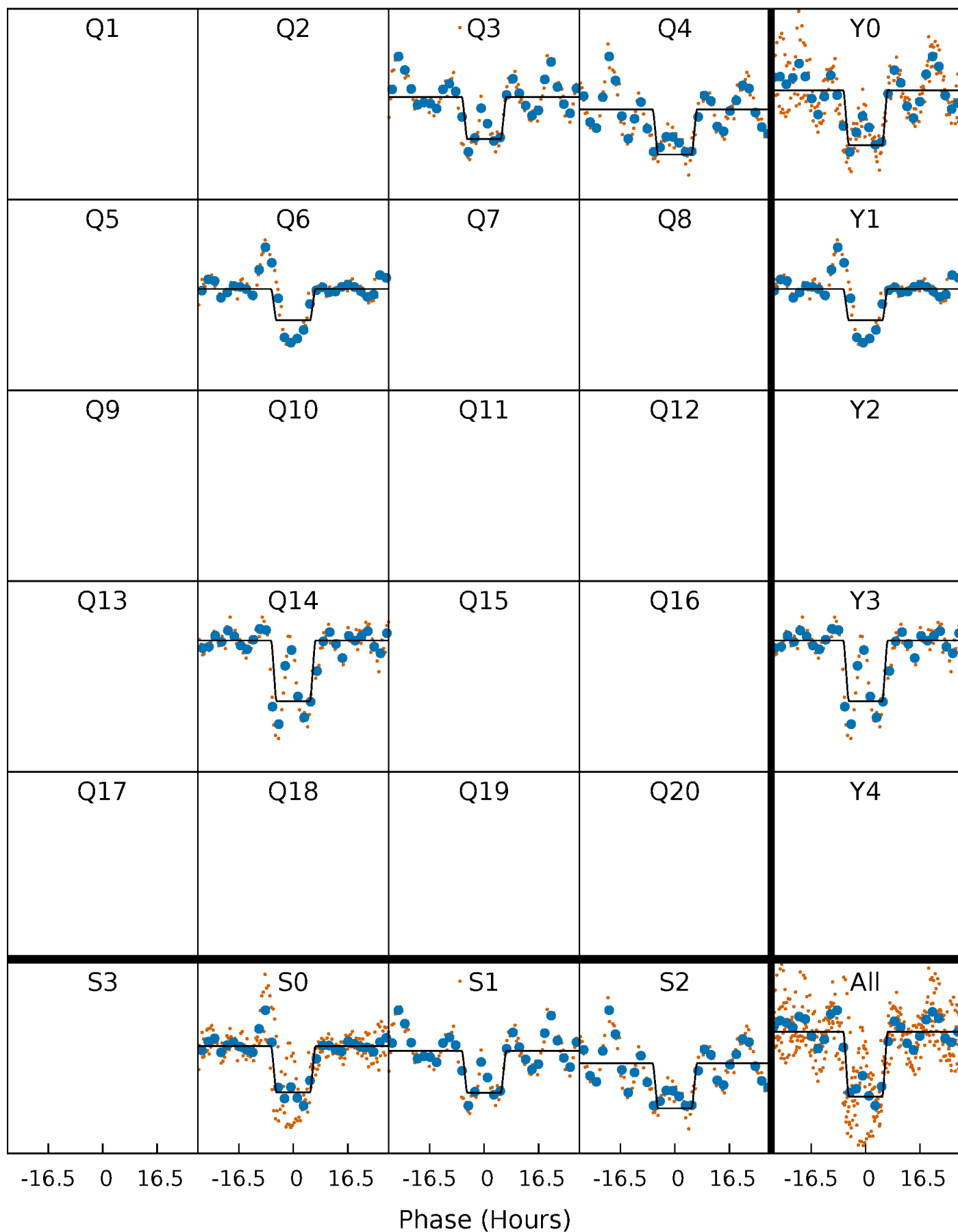
DV Quarter-Phased Transit Curves

TCE 010675600-01 P=154.175865 Days $T_0=271.485702$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

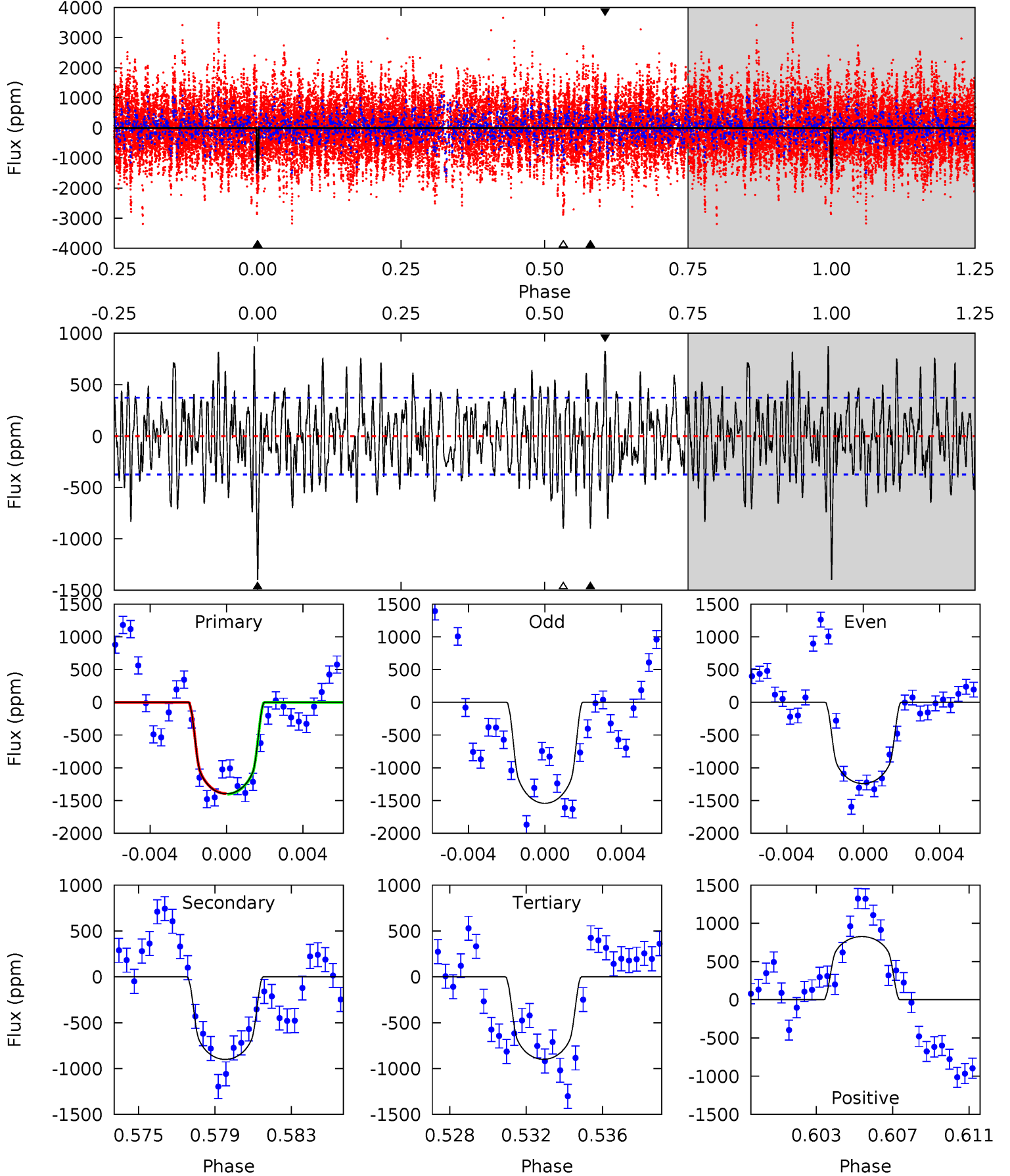
TCE 010675600-01 P=154.178021 Days $T_0=271.501438$ (BKJD)



DV Model-Shift Uniqueness Test

010675600-01, P = 154.175865 Days, E = 117.309837 Days

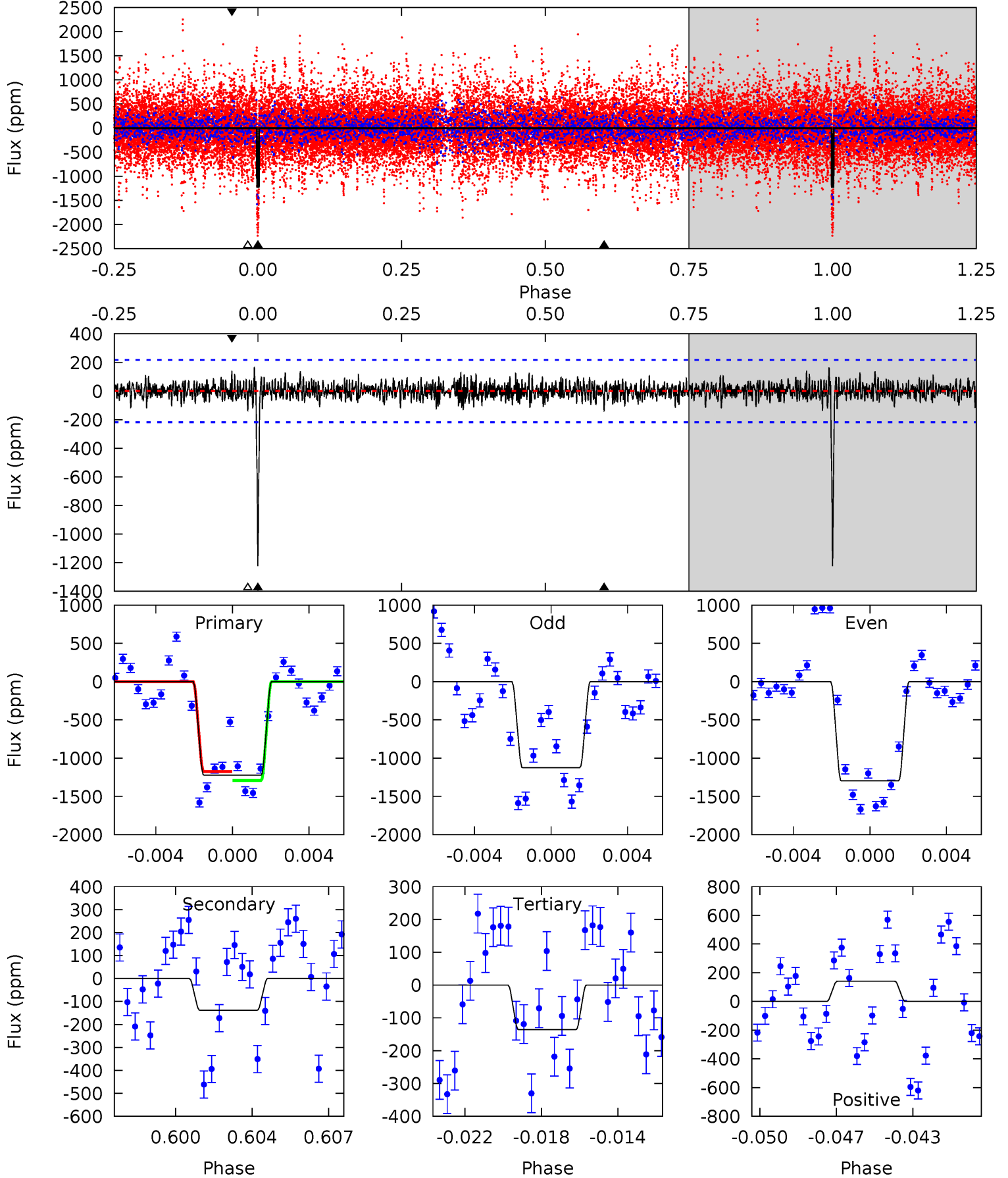
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 19.5 | 12.5 | 12.5 | 11.5 | 5.20 | 2.88 | 4.04 | 6.93 | 7.94 | 0.01 | 1.02 | 2.11 | 0.99 | 0.38 | 0.06 |



Alt Model-Shift Uniqueness Test

010675600-01, P = 154.178021 Days, E = 117.323417 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 29.3 | 3.31 | 3.26 | 3.37 | 5.22 | 2.91 | 1.01 | 26.0 | 25.9 | 0.05 | -0.06 | 2.10 | 1.01 | 0.12 | 1.39 |



Stellar Parameters For KIC 010675600

| | $T_{\text{eff}}(K)$ | $\log(g)$ | $[\text{Fe}/\text{H}]$ | $R (R_{\odot})$ | $M(M_{\odot})$ | $p_{\star} (\text{g}\cdot\text{cm}^{-3})$ |
|--------|---------------------|---------------------------|----------------------------|----------------------------|---------------------------|---|
| | 4750^{+71}_{-119} | $2.309^{+0.033}_{-0.027}$ | $-0.360^{+0.200}_{-0.250}$ | $15.639^{+0.865}_{-3.243}$ | $1.818^{+0.211}_{-0.676}$ | $0.001^{+0.000}_{-0.000}$ |
| | +1%/-3% | +1%/-1% | +56%/-69% | +6%/-21% | +12%/-37% | +29%/-11% |
| Source | PHO1 | AST9 | 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 010675600-01 / KOI

| Detrend | Depth (ppm) | $R_p (R_{\oplus})$ | $T_{\text{max}} (K)$ | $T_{\text{obs}} (K)$ | A_{obs} |
|---------|---------------|-------------------------|----------------------|----------------------|---------------------------|
| DV | -900 ± 72 | $71.10^{+7.00}_{-7.79}$ | 1396^{+30}_{-40} | 4186^{+170}_{-155} | 47^{+11}_{-8} |
| Alt. | -138 ± 42 | $62.18^{+6.94}_{-8.21}$ | 1395^{+32}_{-41} | 3206^{+171}_{-190} | $9.460^{+4.077}_{-3.043}$ |

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

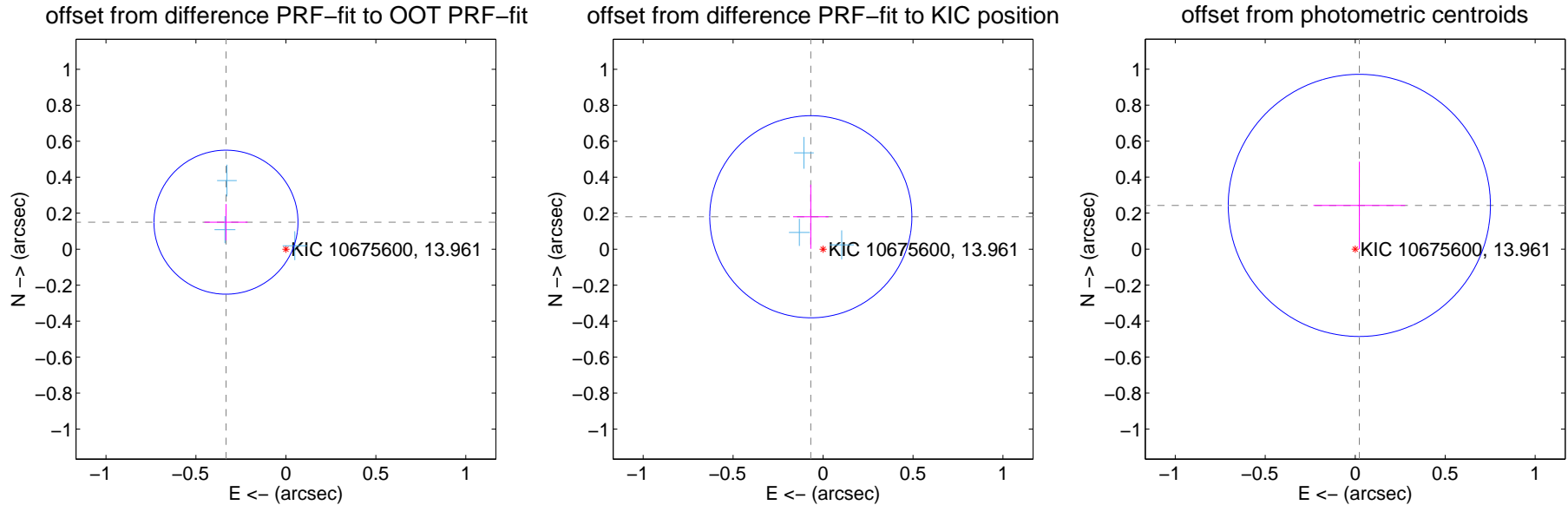
DV Centroid Data

Supplemental centroid analysis for 010675600-01. Kepler magnitude: 13.96. Transit SNR 6.82

There are 3 quarters with good PRF difference image offsets

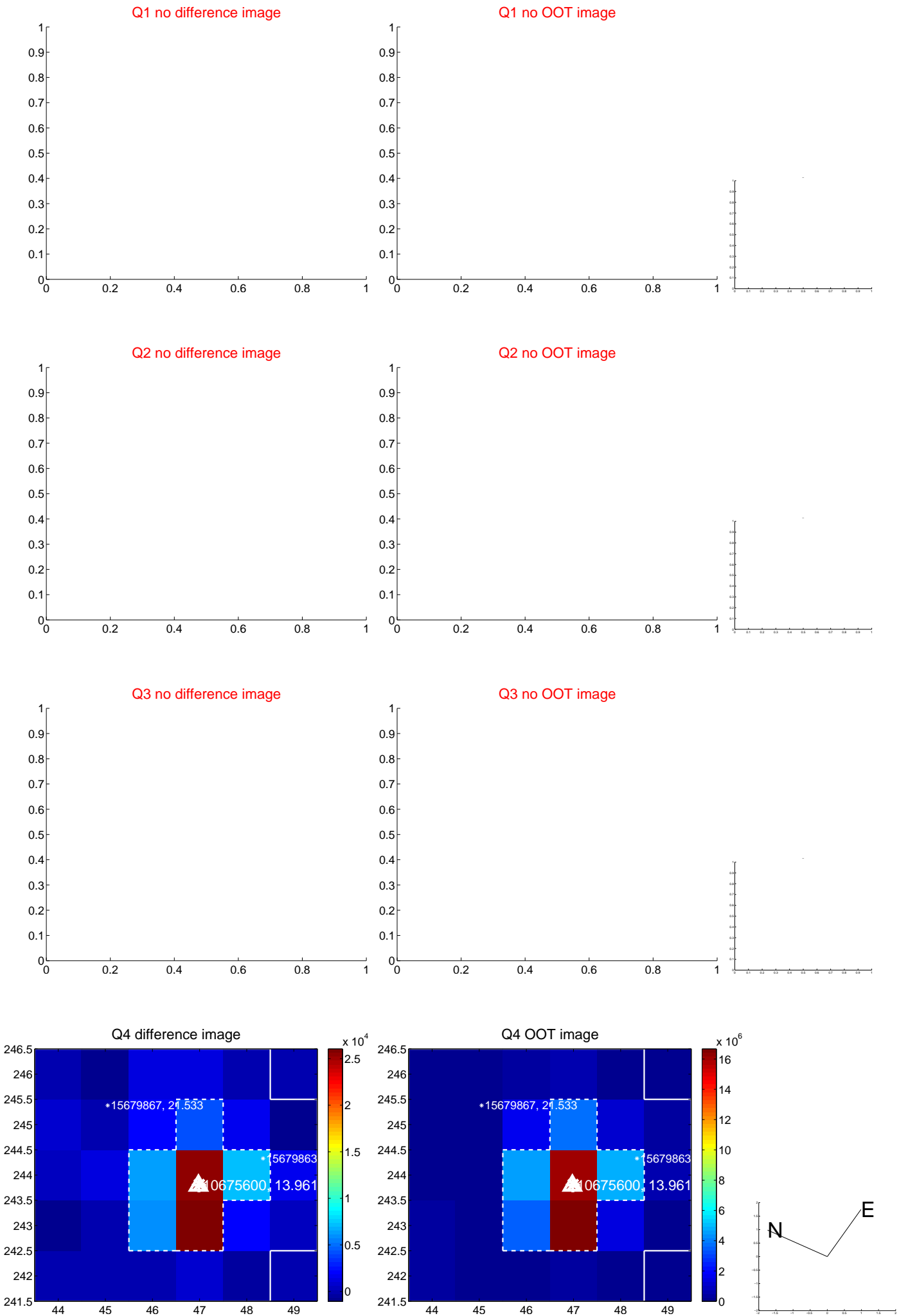
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|-------------------|-------------------|
| PRF-fit source offset from OOT | 0.365 ± 0.133 | 2.74 | 0.333 ± 0.120 | 0.150 ± 0.101 |
| PRF-fit source offset from KIC position | 0.193 ± 0.187 | 1.03 | 0.068 ± 0.098 | 0.180 ± 0.178 |
| photometric centroid source offset | 0.24 ± 0.24 | 1.01 | -0.02 ± 0.26 | 0.24 ± 0.24 |

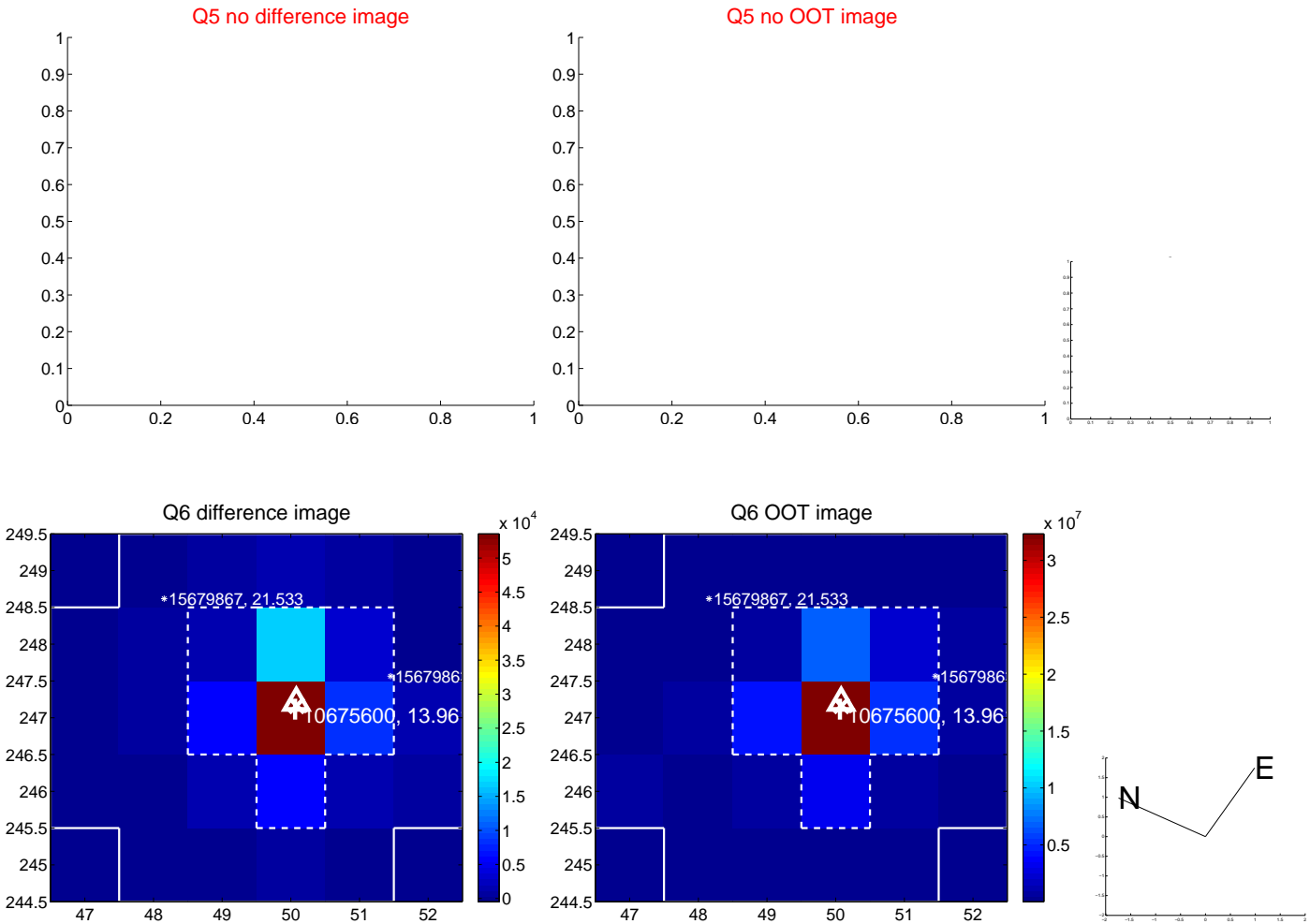


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



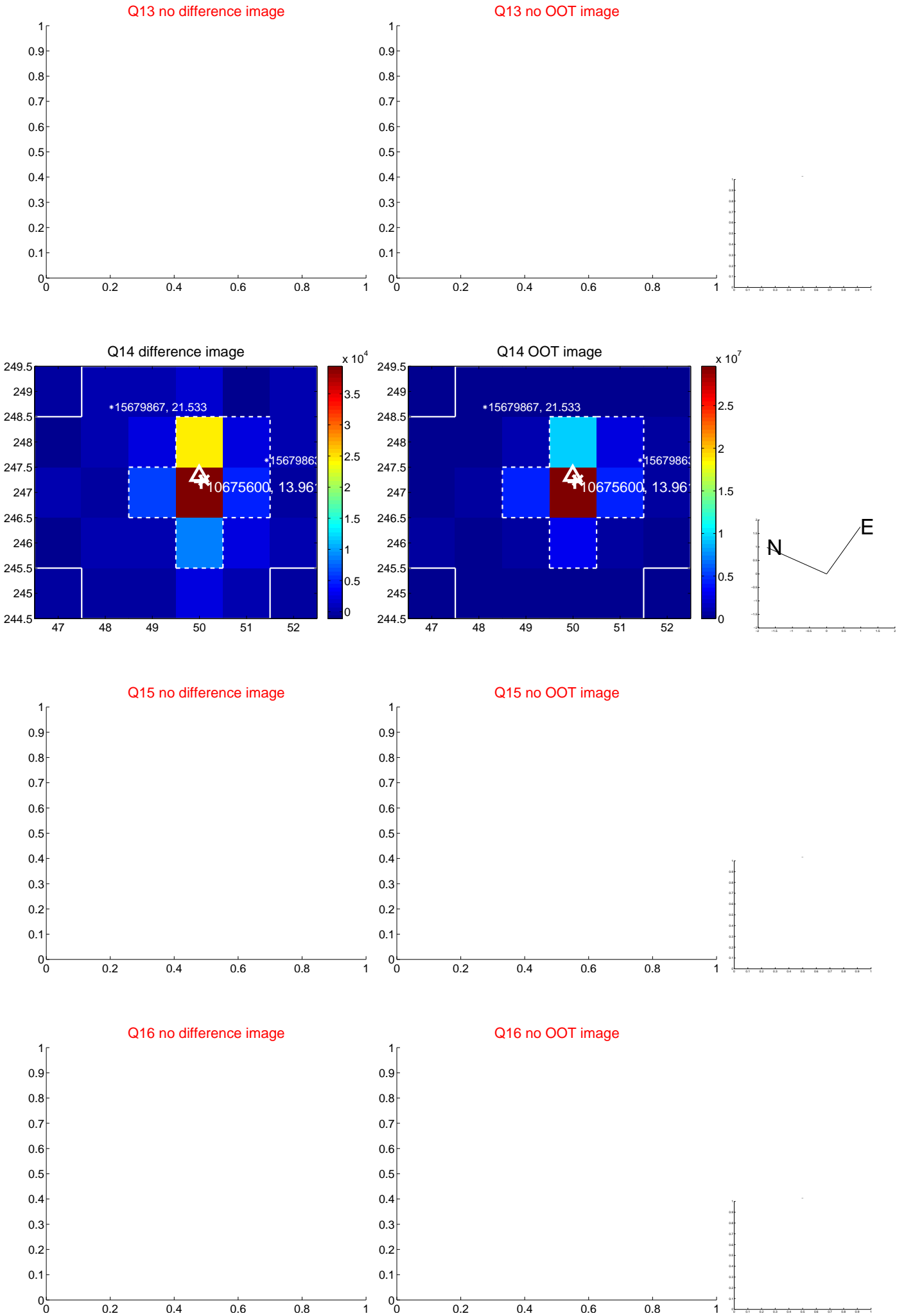
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



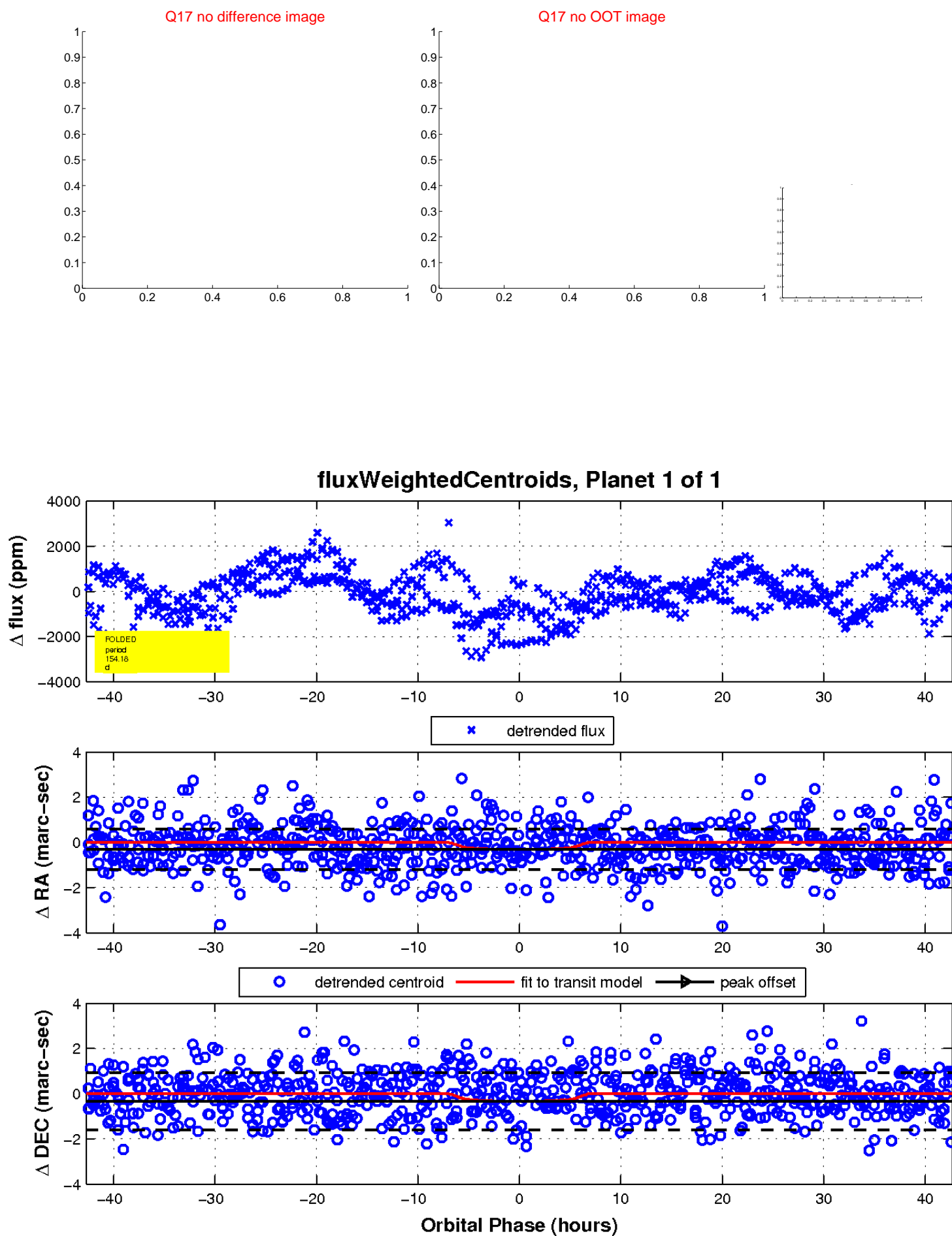
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: 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.



UKIRT Image

Declination

