

KIC 006357225

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|-----|-----|-----------------------------|-----------------|------------------------|------------------------|
| 006357225-01 | OBS | No | 373.916885 | 304.432546 | 946.5 | 29.848 | 8.6 | 8.8 | 0.97 | 6061 | 3.82 | 1.07 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|---|
| 006357225-01 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_MARSHALL_SKYE—ALL_TRANS_CHASES—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.

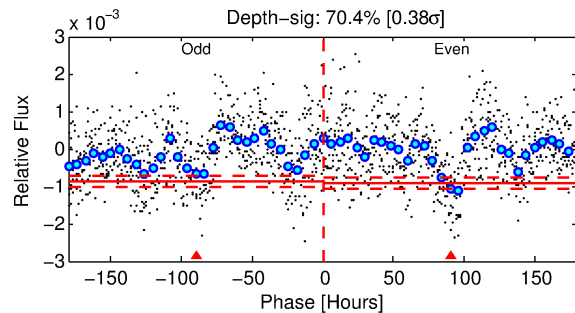
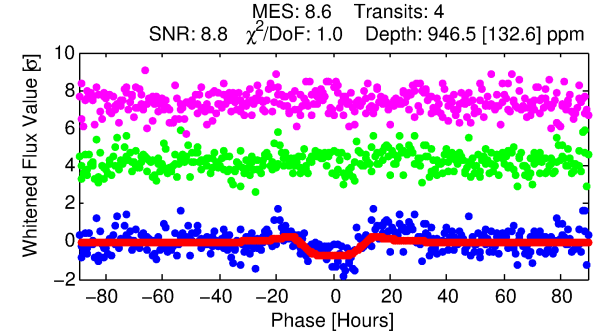
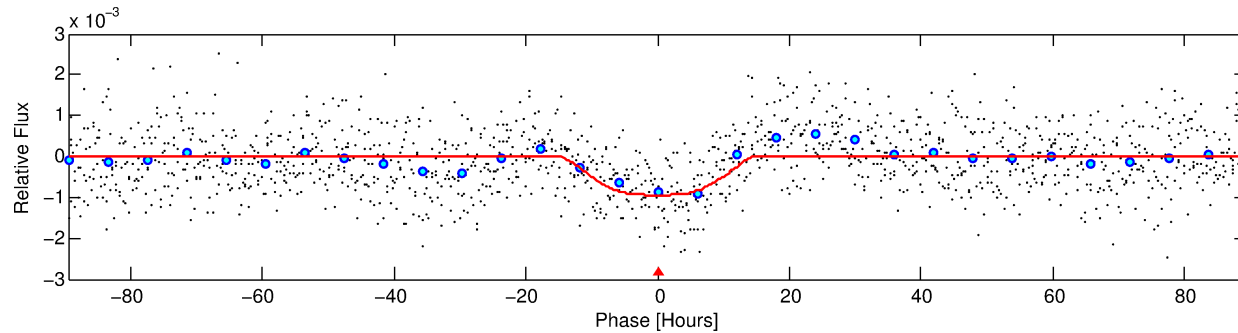
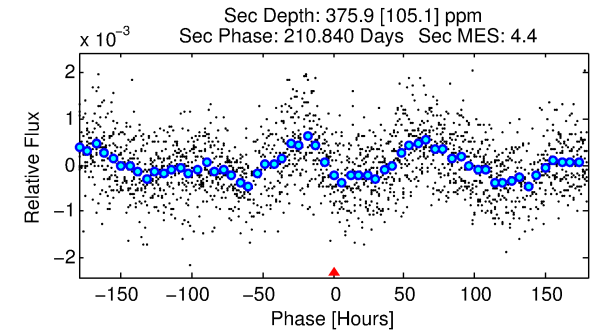
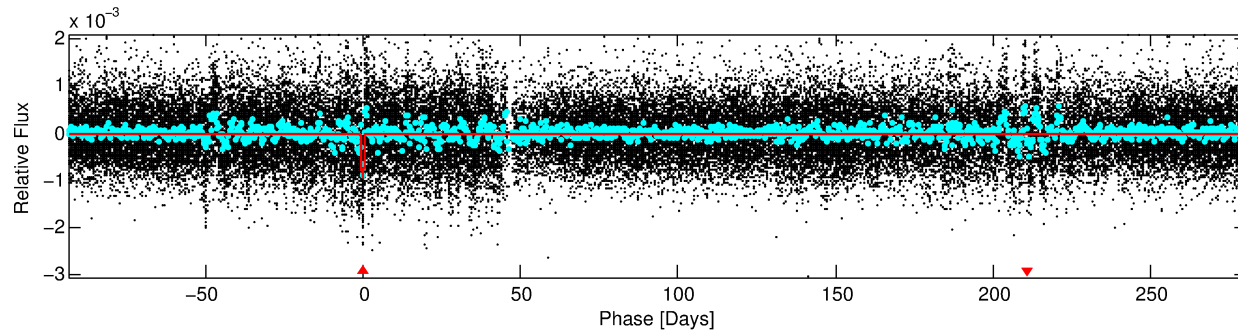
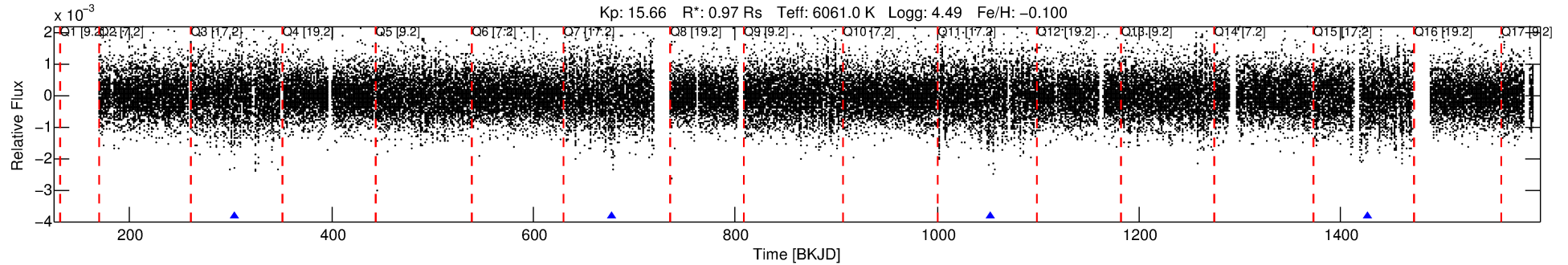
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006357225-01

No Significant Match Found

DV One-Page Summary

KIC: 6357225 Candidate: 1 of 1 Period: 373.917 d



DV Fit Results:

Period = 373.91689 [0.02797] d
Epoch = 304.4325 [0.0501] BKJD
Rp/R* = 0.0360 [0.0033]
a/R* = 37.73 [5.71]
b = 0.96 [0.02]
Seff = 1.07 [0.45]
Teq = 259 [27] K
Rp = 3.82 [1.29] Re
a = 1.0329 [0.2817] AU
Ag = 15154.54 [7837.56] [1.93σ]
Teffp = 4445 [402] K [10.38σ]

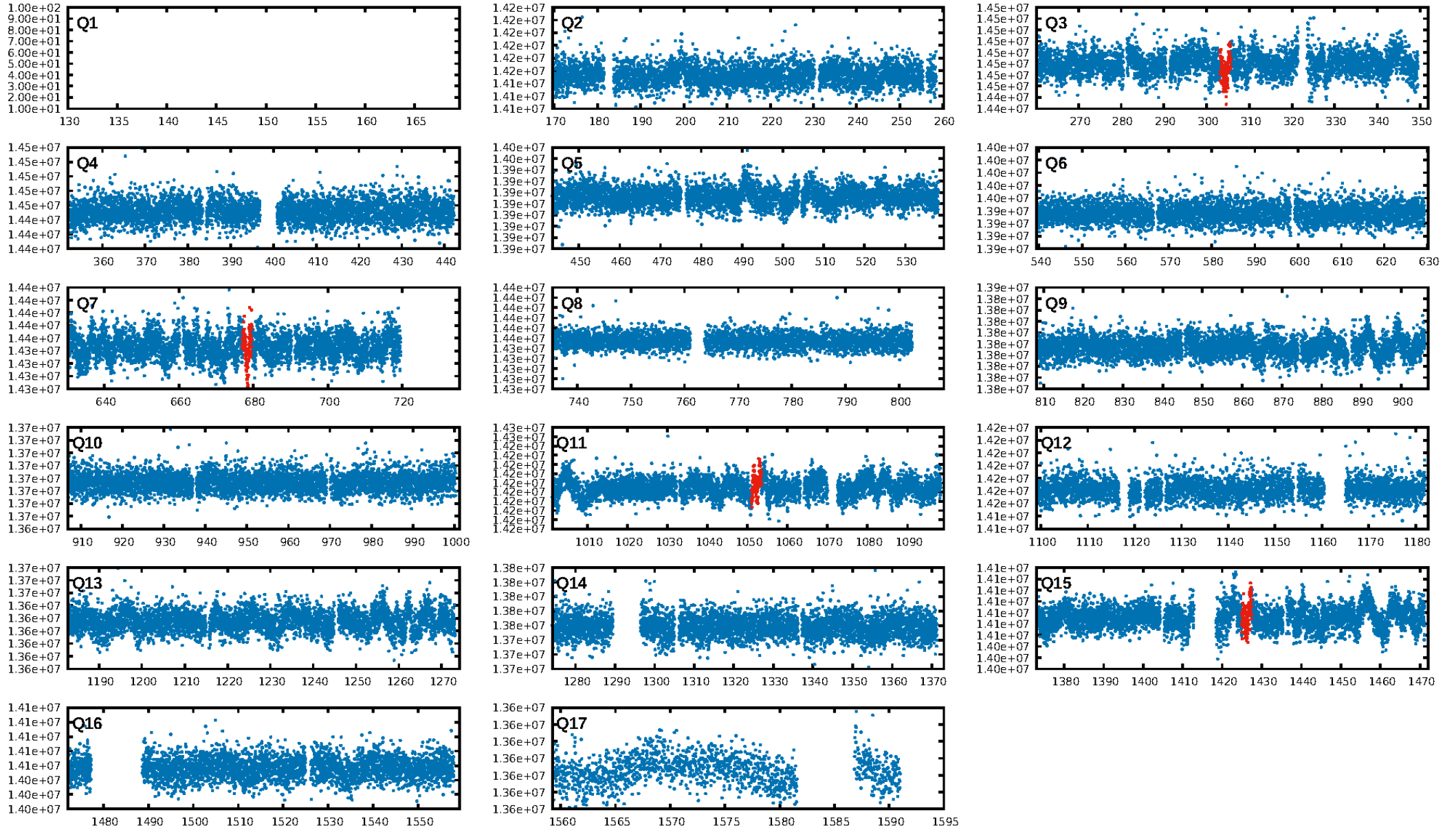
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 22.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.16e-11
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -0.7126
Centroid-sig: 76.8%
Centroid-so: 1.023 arcsec [0.57σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0 [0]
KicOffset-st: 0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [4/4]

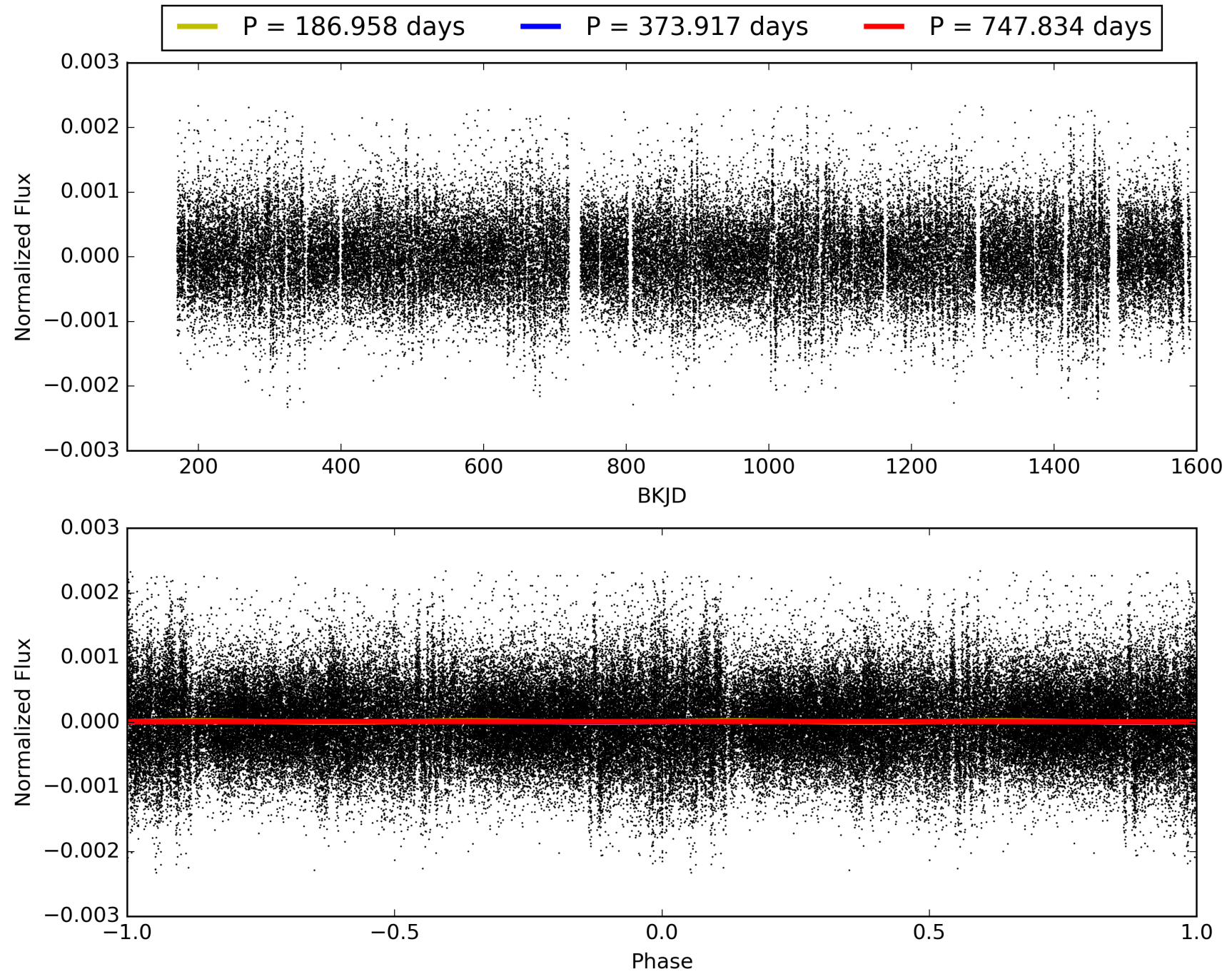
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 15:48:01 Z

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

TCE 006357225-01, PDC Light Curves

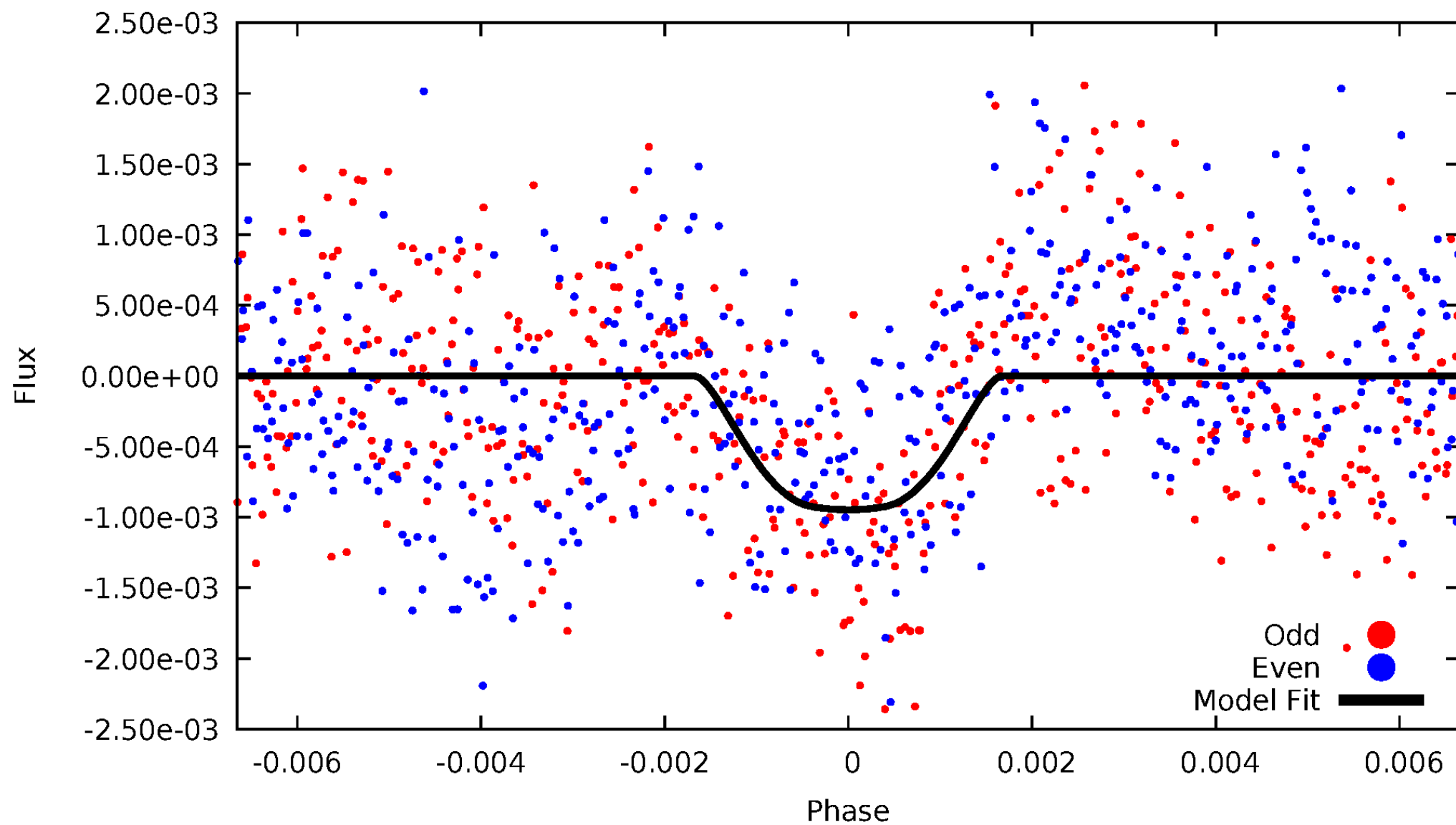


TCE 006357225-01



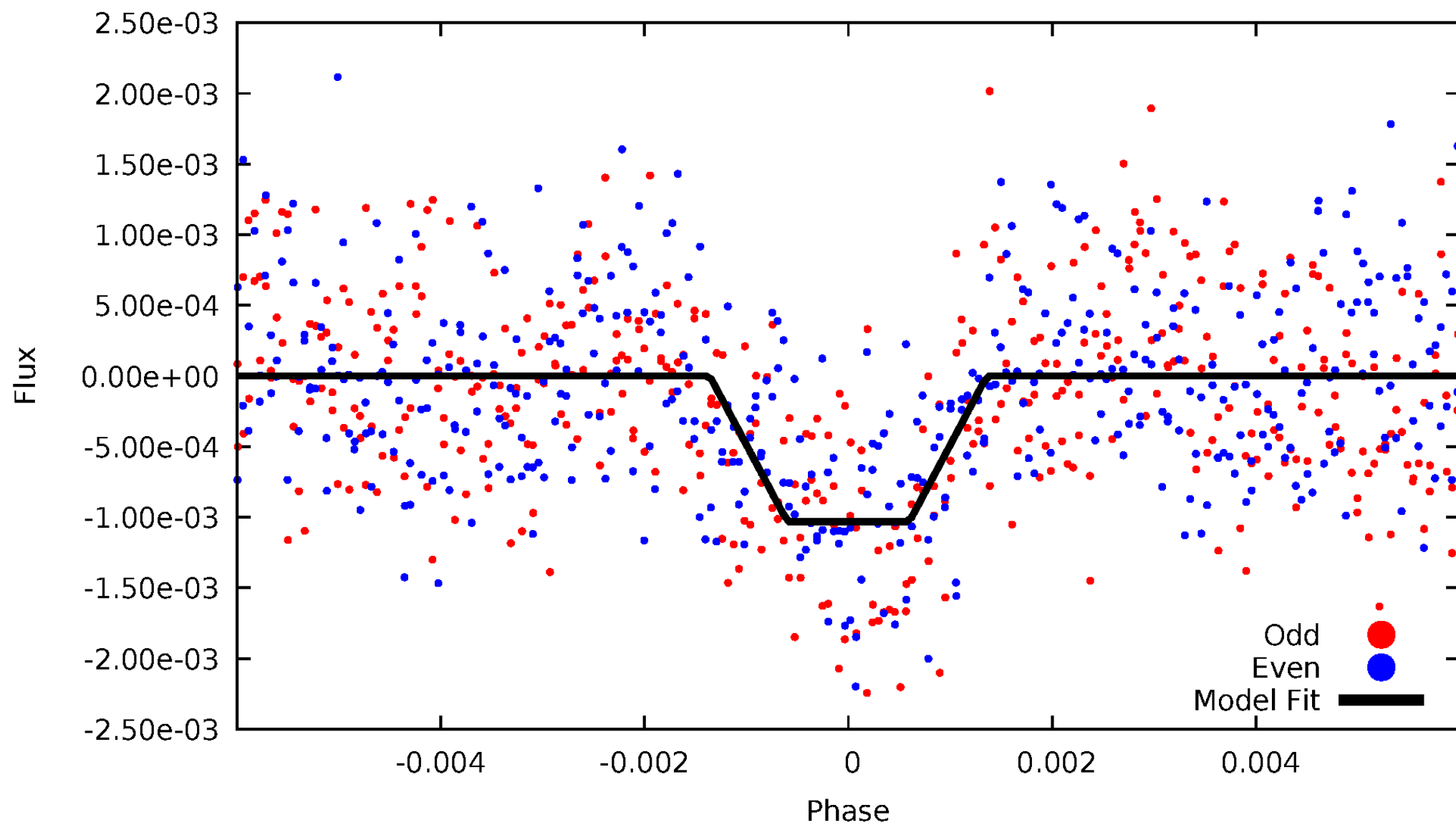
DV Odd/Even

TCE 006357225-01

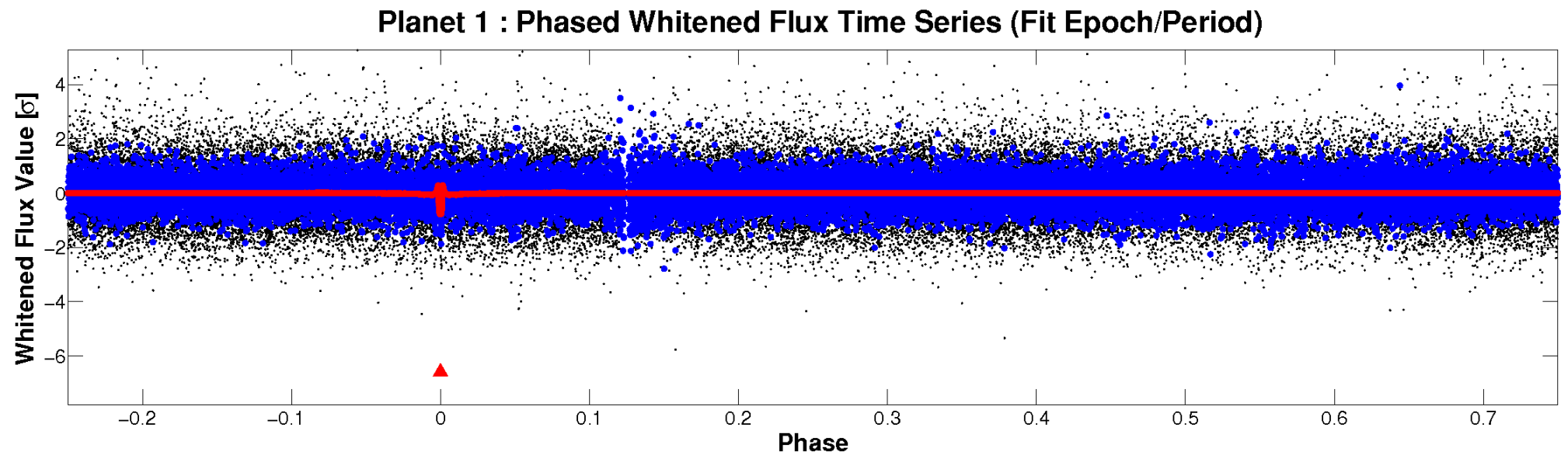
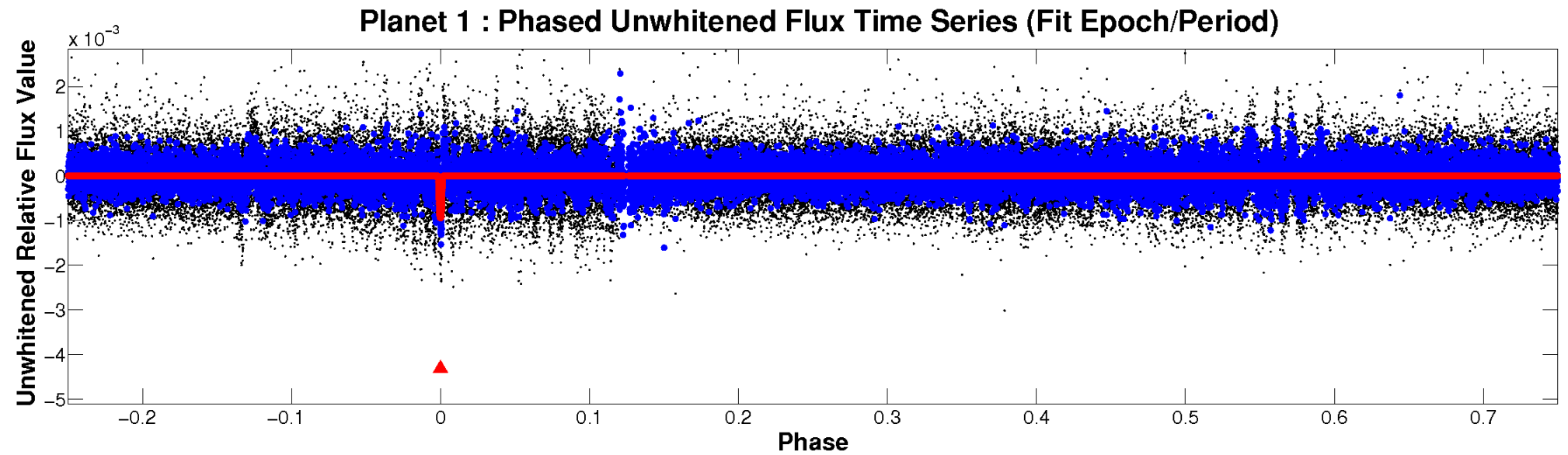


ALT Odd/Even

TCE 006357225-01

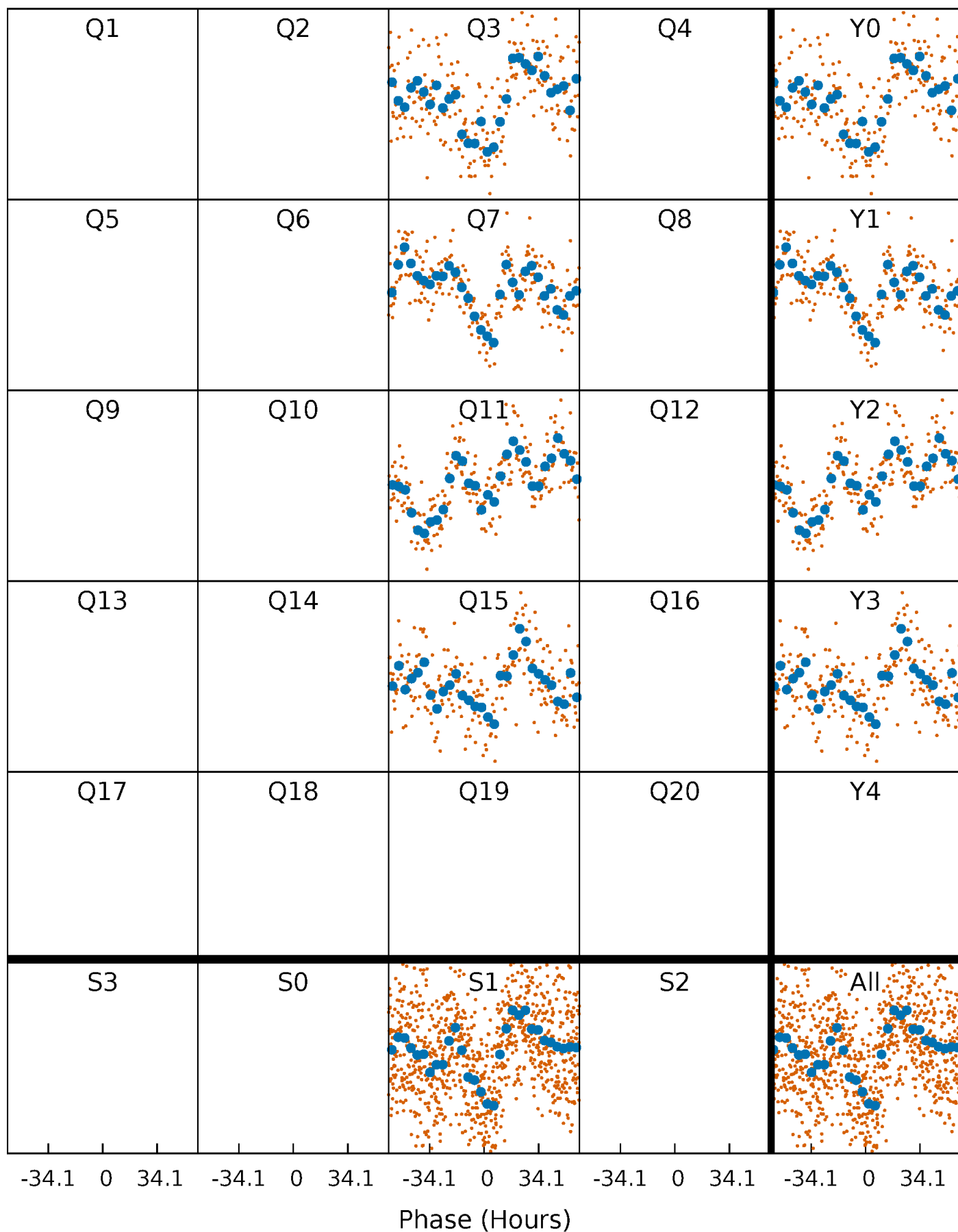


Non-Whitened Vs. Whitened Light Curve



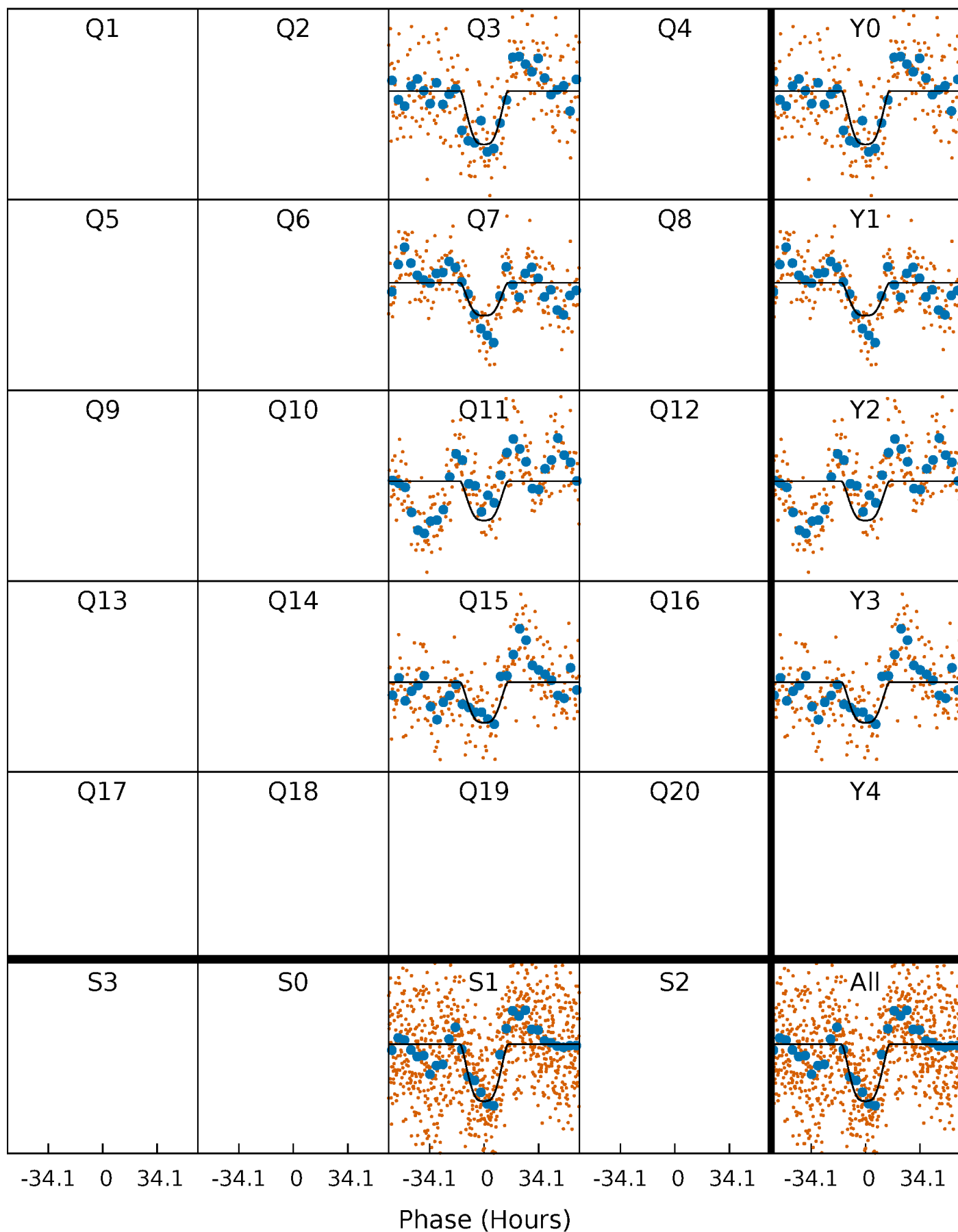
PDC Quarter-Phased Transit Curves

TCE 006357225-01 P=373.916885 Days $T_0=304.432546$ (BKJD)



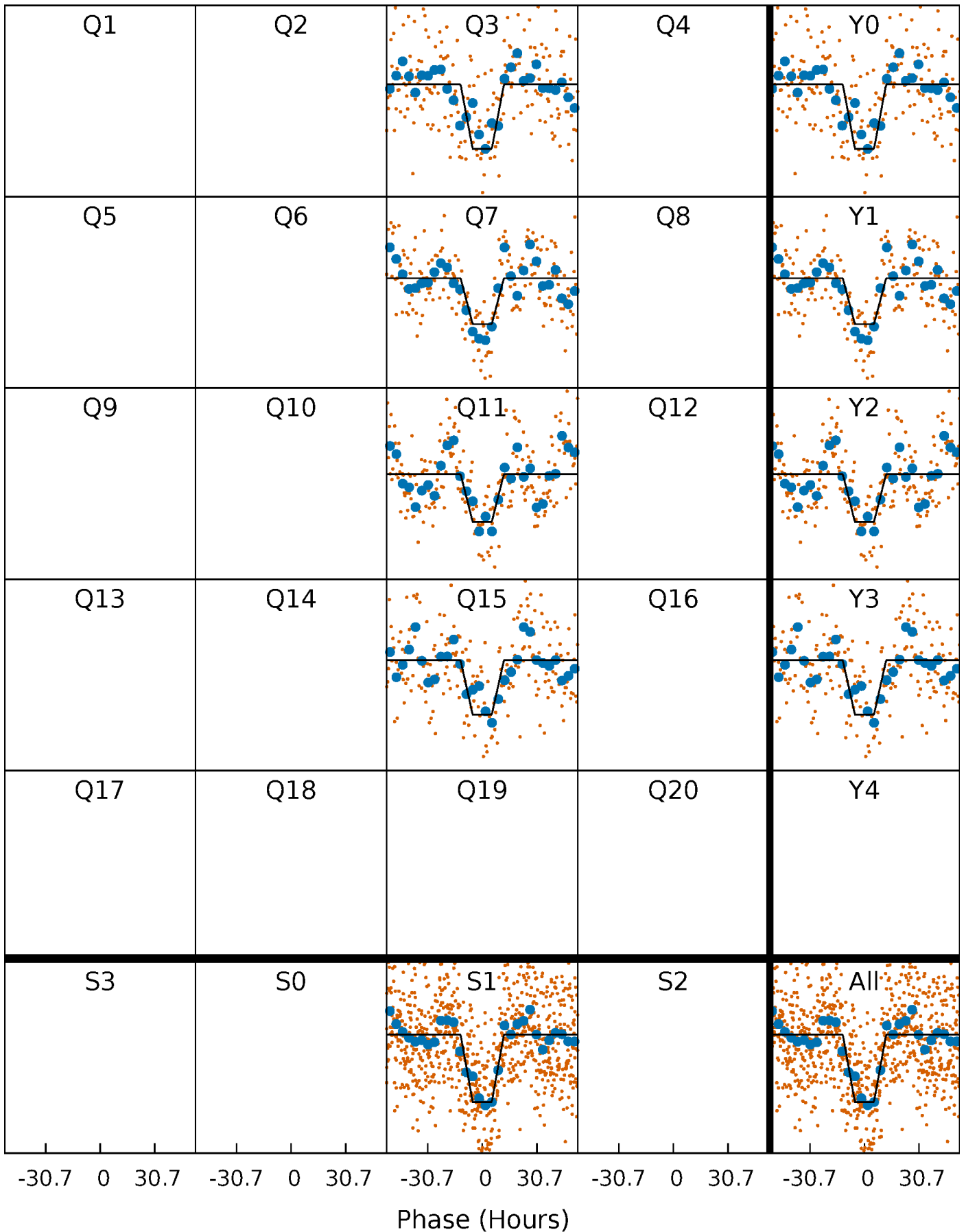
DV Quarter-Phased Transit Curves

TCE 006357225-01 P=373.916885 Days $T_0=304.432546$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

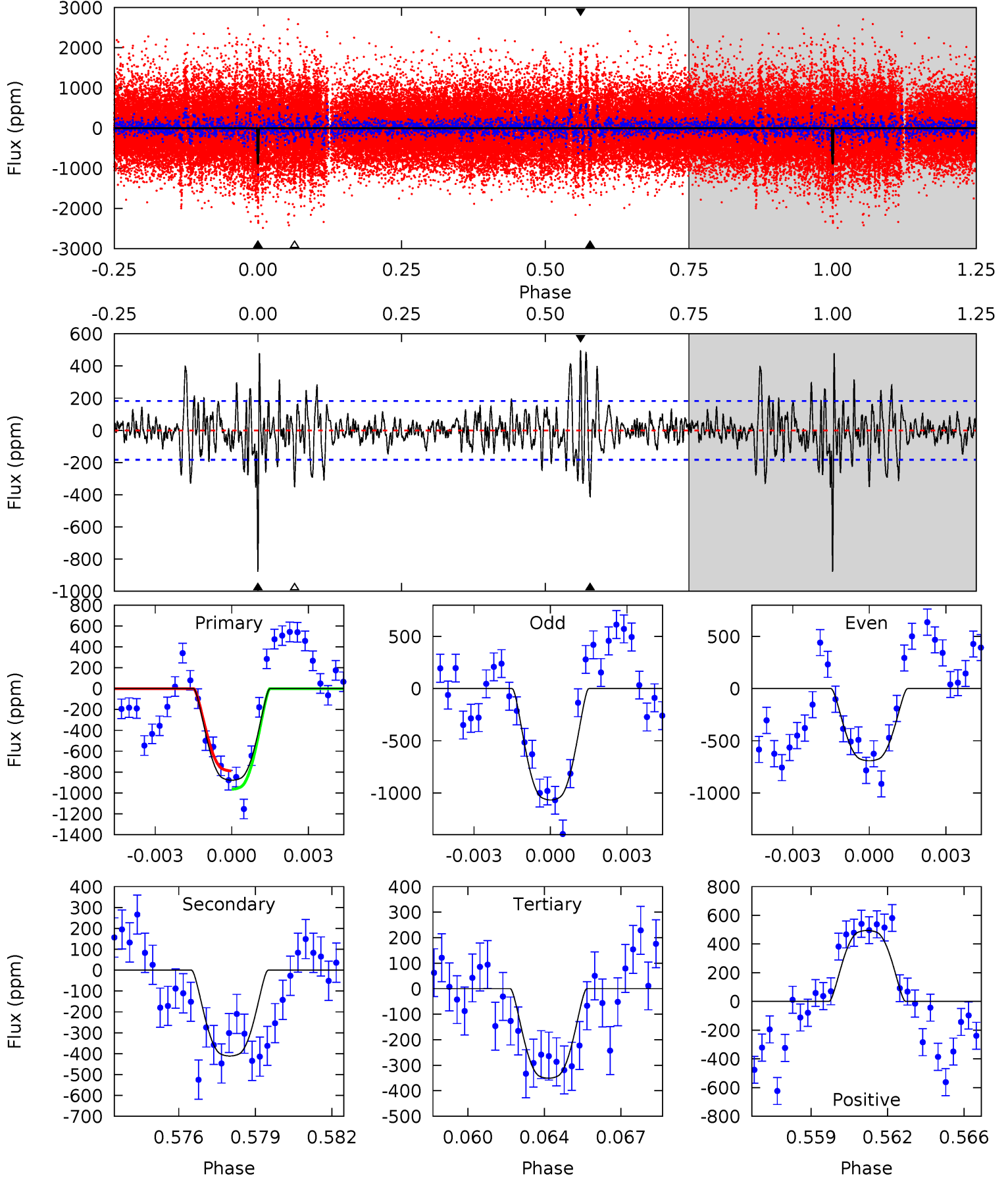
TCE 006357225-01 P=373.852414 Days $T_0=304.577554$ (BKJD)



DV Model-Shift Uniqueness Test

006357225-01, P = 373.916885 Days, E = 304.432546 Days

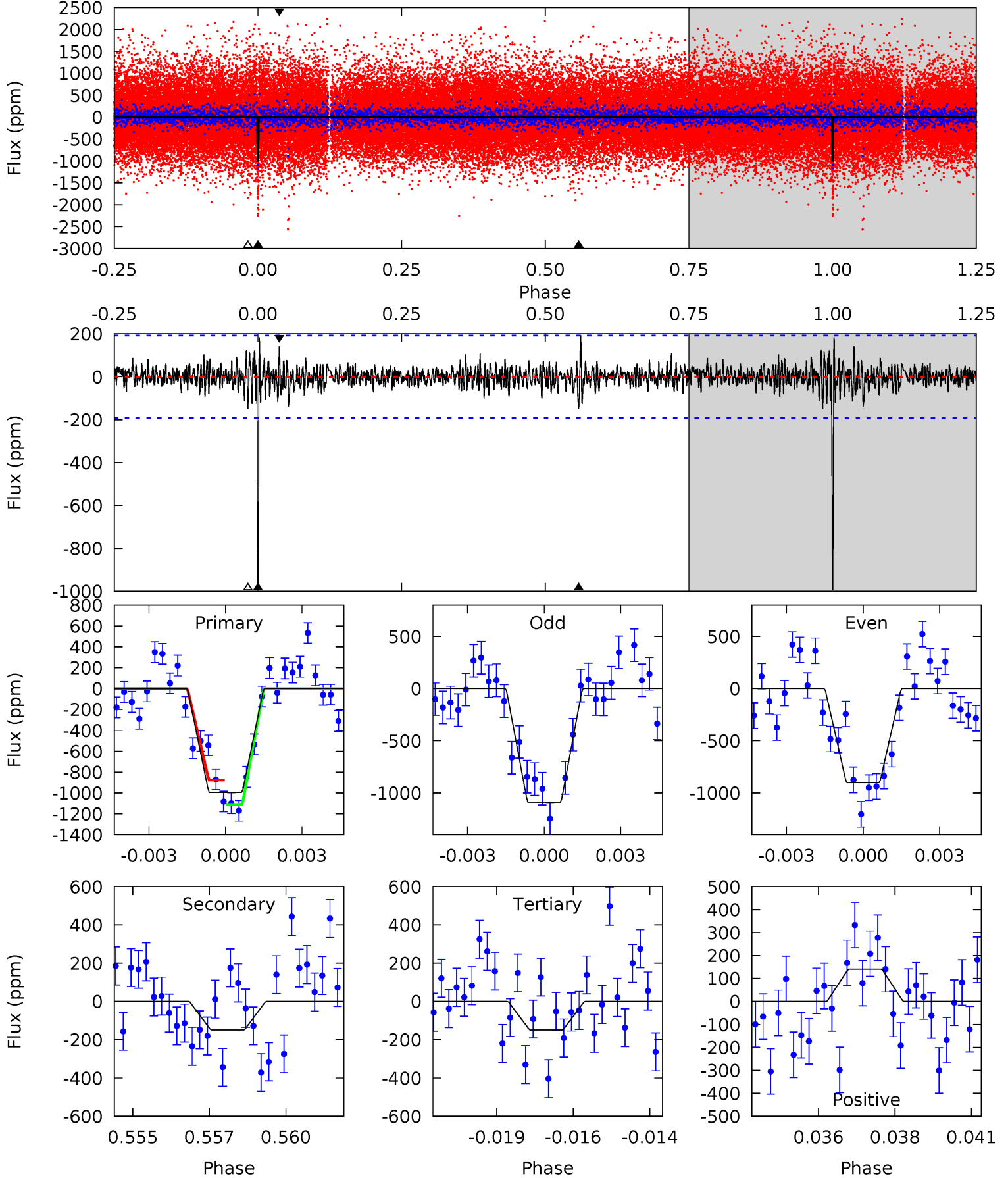
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 25.1 | 11.8 | 10.0 | 14.1 | 5.23 | 2.93 | 2.99 | 15.1 | 11.0 | 1.73 | -2.37 | 5.39 | 0.98 | 0.36 | 2.51 |



Alt Model-Shift Uniqueness Test

006357225-01, P = 373.852414 Days, E = 304.577554 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 27.3 | 4.09 | 4.07 | 3.87 | 5.27 | 3.00 | 0.99 | 23.3 | 23.5 | 0.02 | 0.22 | 2.63 | 1.04 | 0.16 | 3.21 |



Stellar Parameters For KIC 006357225

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | $R (R_{\odot})$ | $M(M_{\odot})$ | $p_{\star} (\text{g}\cdot\text{cm}^{-3})$ |
|--------|----------------------|---------------------------|----------------------------|---------------------------|---------------------------|---|
| | 6061^{+198}_{-217} | $4.486^{+0.054}_{-0.216}$ | $-0.100^{+0.300}_{-0.300}$ | $0.970^{+0.315}_{-0.105}$ | $1.050^{+0.150}_{-0.135}$ | $1.620^{+0.370}_{-0.915}$ |
| | +3%/-4% | +1%/-5% | +300%/-300% | +32%/-11% | +14%/-13% | +23%/-56% |
| 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 006357225-01 / KOI

| Detrend | Depth (ppm) | $R_p (R_{\oplus})$ | $T_{max} (K)$ | $T_{obs} (K)$ | A_{obs} |
|---------|---------------|------------------------|-------------------|----------------------|-------------------------|
| DV | -411 ± 35 | $4.00^{+0.79}_{-0.51}$ | 372^{+28}_{-22} | 4678^{+225}_{-230} | 14743^{+4519}_{-4147} |
| Alt. | -149 ± 36 | $3.53^{+0.64}_{-0.47}$ | 369^{+26}_{-19} | 4020^{+260}_{-243} | 6641^{+2777}_{-2313} |

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 $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

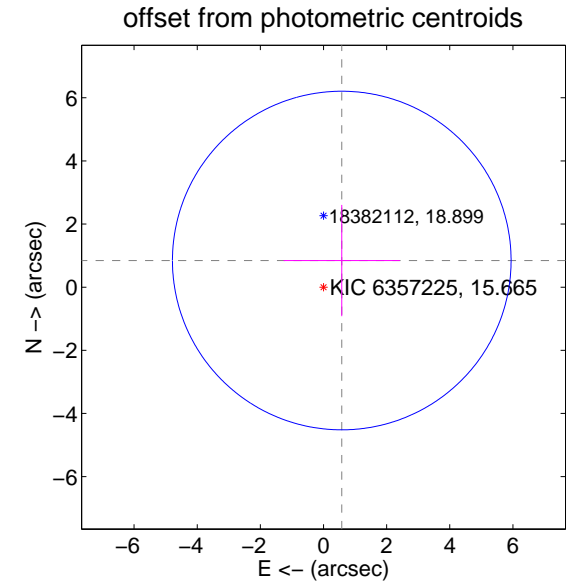
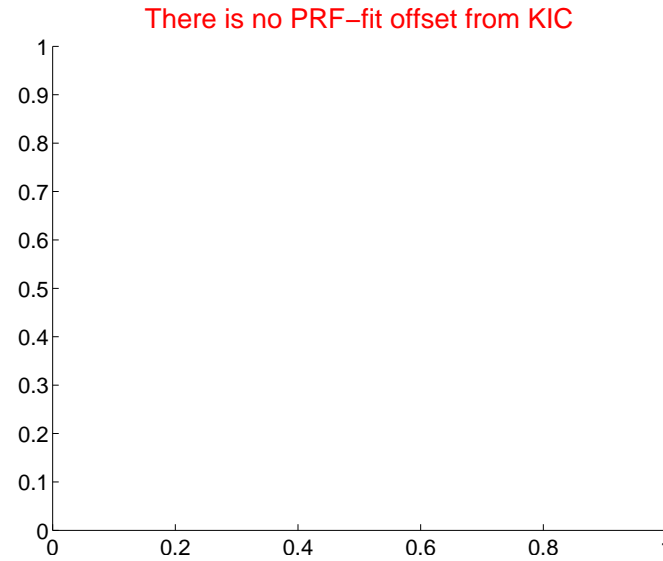
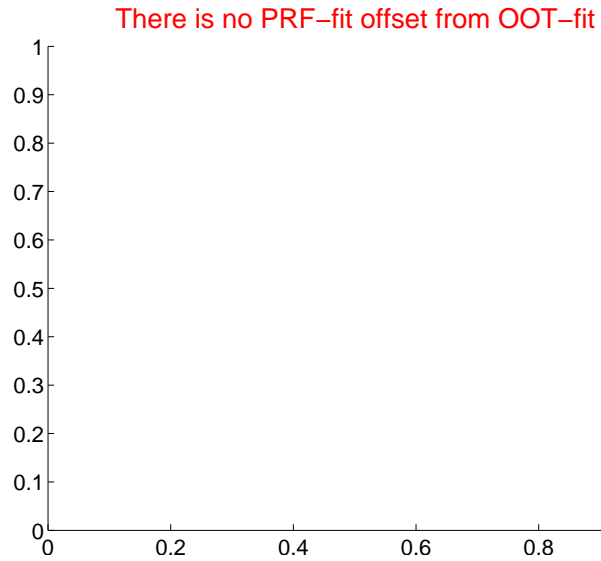
DV Centroid Data

Supplemental centroid analysis for 006357225-01. Kepler magnitude: 15.66. Transit SNR 8.81

There are 0 quarters with good PRF difference image offsets

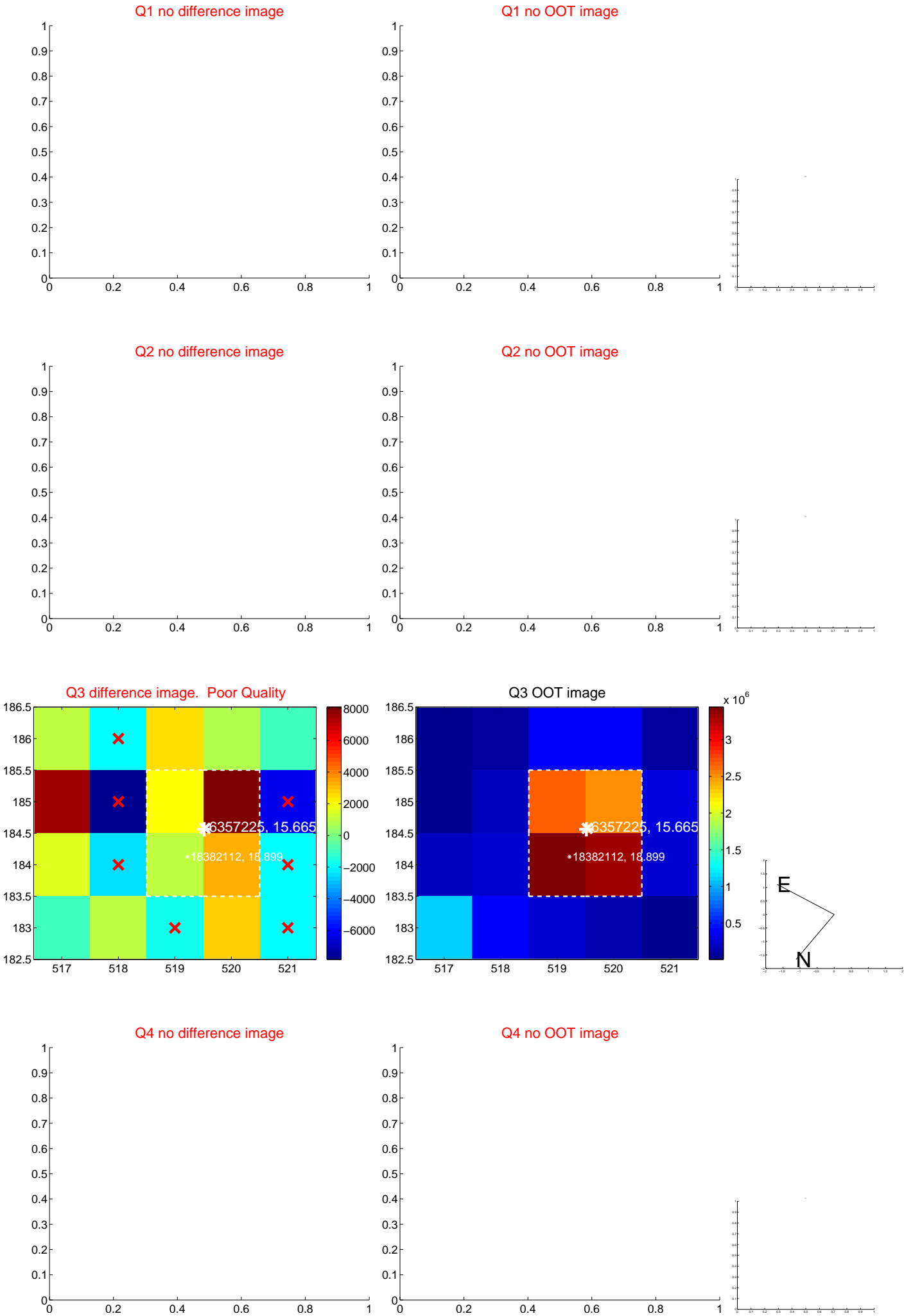
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|------------------|-----------------|
| PRF-fit source offset from OOT | — | — | — | — |
| PRF-fit source offset from KIC position | — | — | — | — |
| photometric centroid source offset | 1.02 ± 1.79 | 0.57 | -0.58 ± 1.84 | 0.84 ± 1.76 |

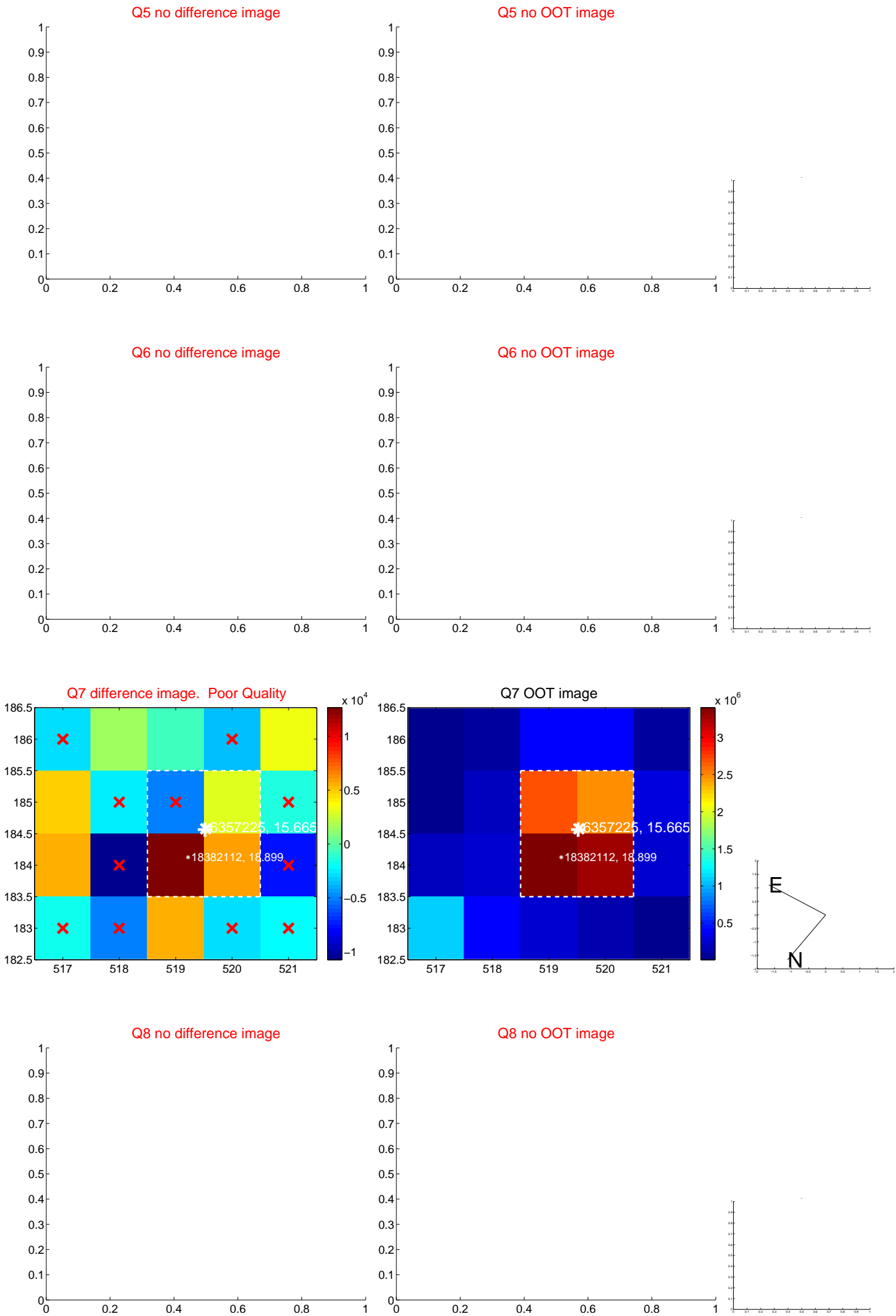


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

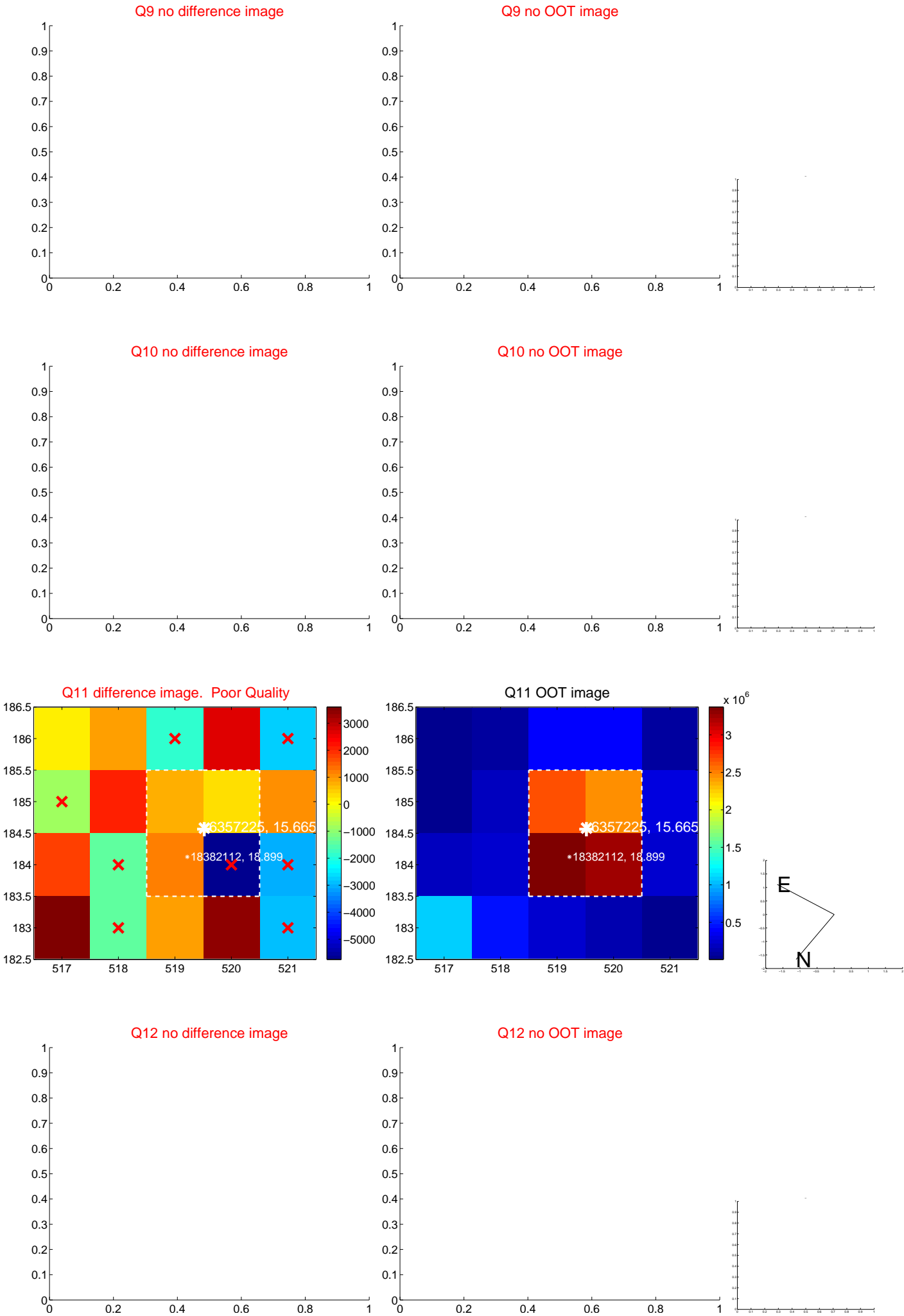
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



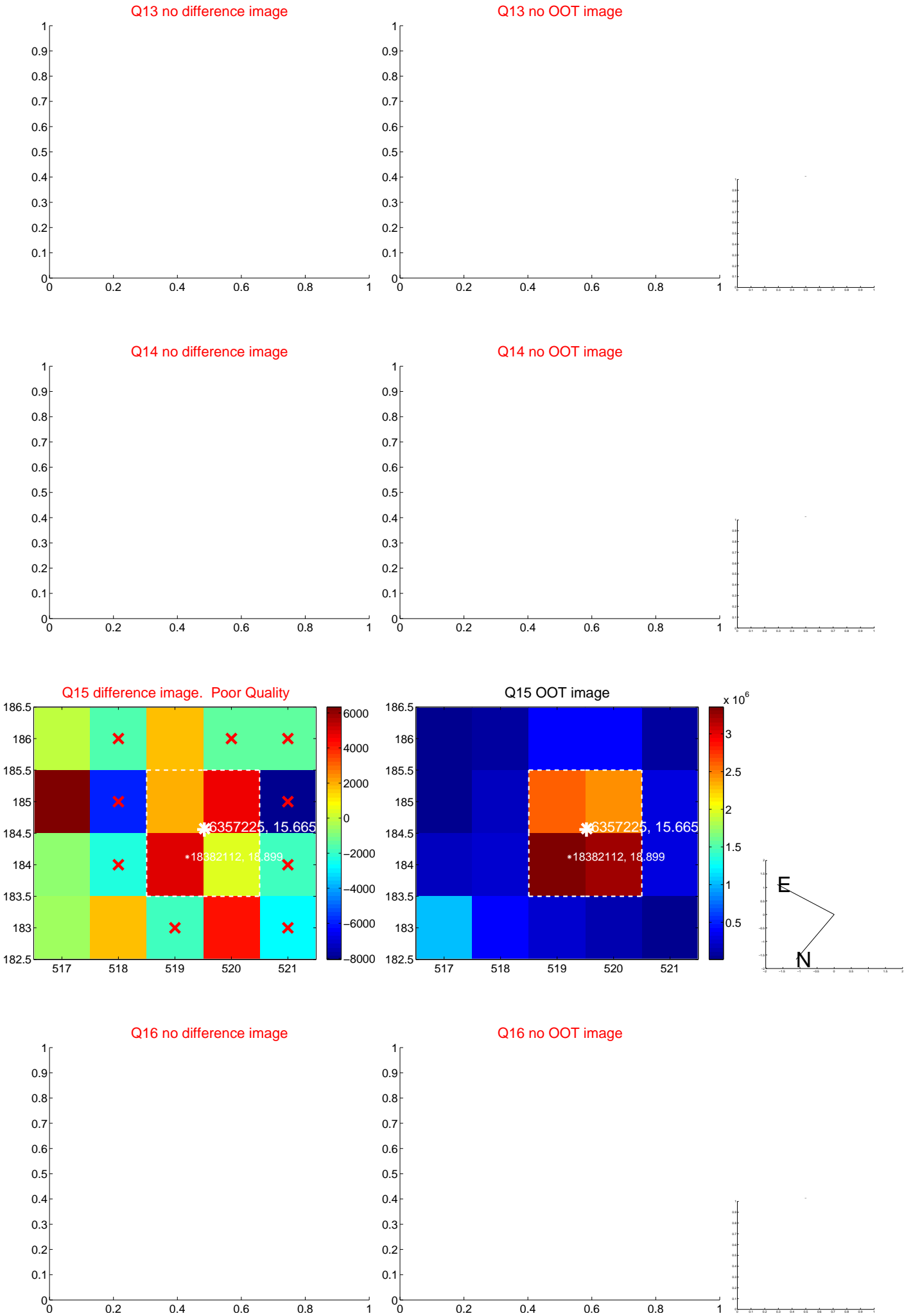
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



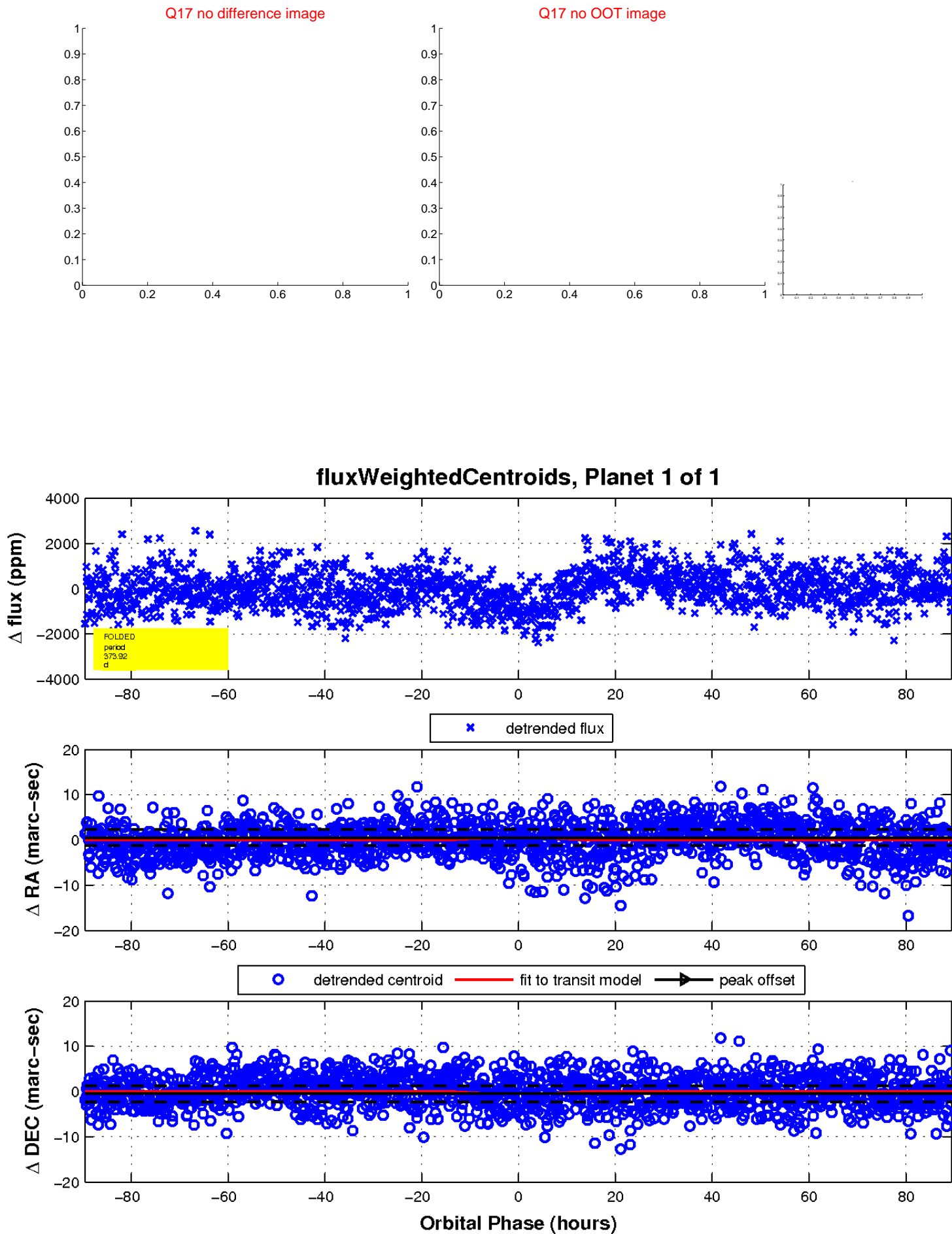
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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

