

KIC 006120098

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|-----|-----|-----------------------------|-----------------|------------------------|------------------------|
| 006120098-01 | OBS | No | 377.335753 | 292.992156 | 1051.1 | 11.894 | 8.4 | 8.3 | 1.16 | 6392 | 4.53 | 1.68 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|---|
| 006120098-01 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—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.

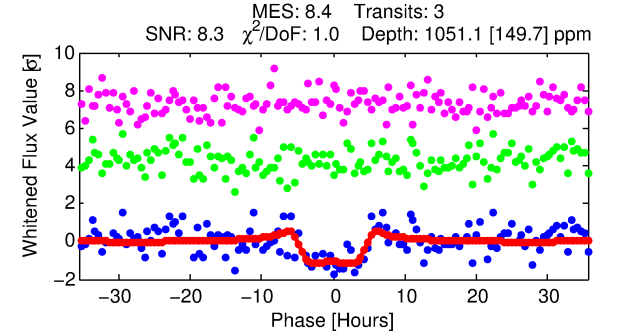
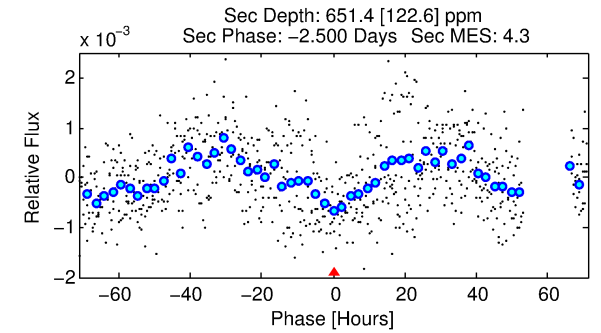
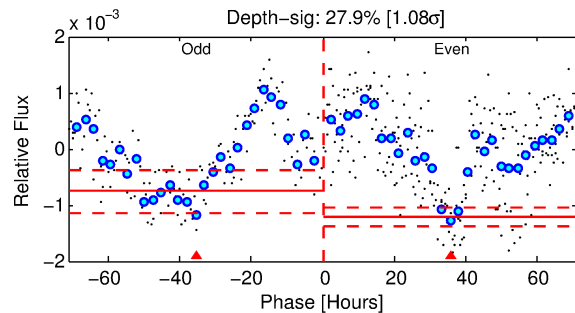
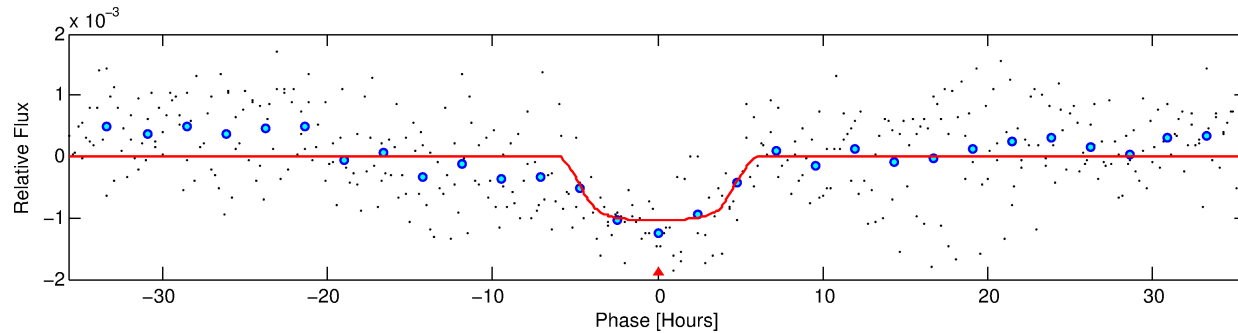
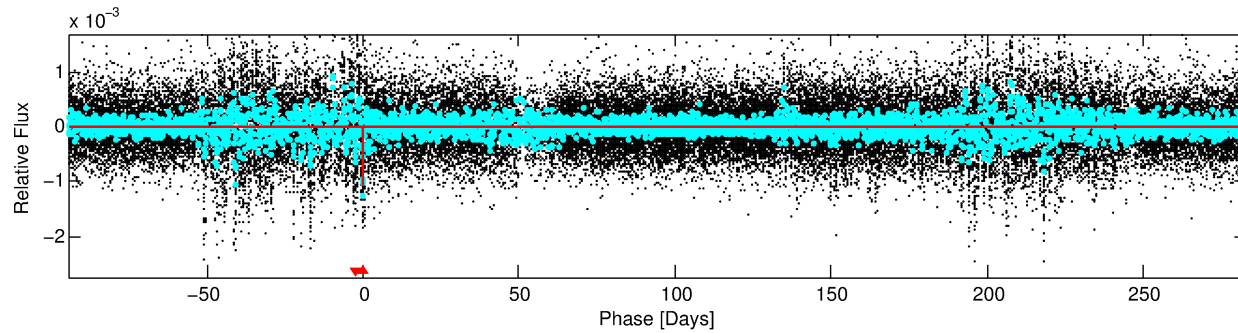
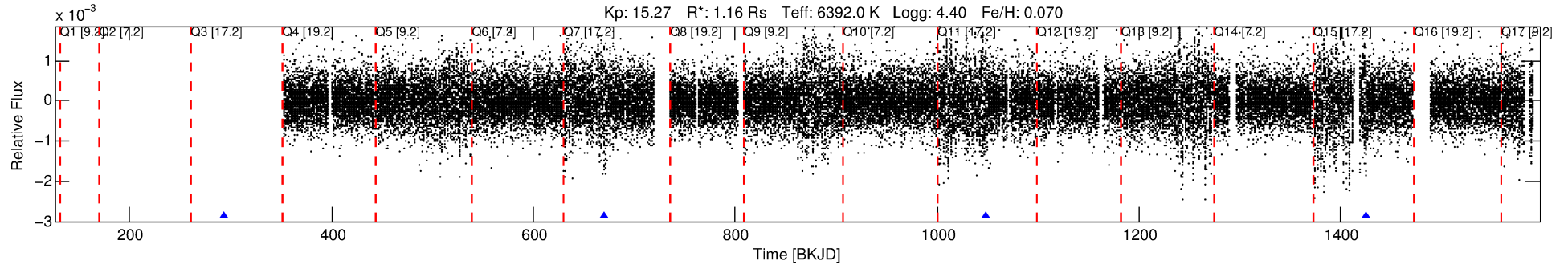
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006120098-01

No Significant Match Found

DV One-Page Summary

KIC: 6120098 Candidate: 1 of 1 Period: 377.336 d



DV Fit Results:

Period = 377.33575 [0.01585] d
Epoch = 292.9922 [0.0318] BKJD
Rp/R* = 0.0357 [0.0034]
a/R* = 112.89 [29.54]
b = 0.93 [0.04]
Seff = 1.68 [0.74]
Teq = 290 [32] K
Rp = 4.53 [1.60] Re
a = 1.0964 [0.3124] AU
Ag = 20965.80 [10302.38] [2.03 σ]
Teffp = 5401 [417] K [12.2 σ]

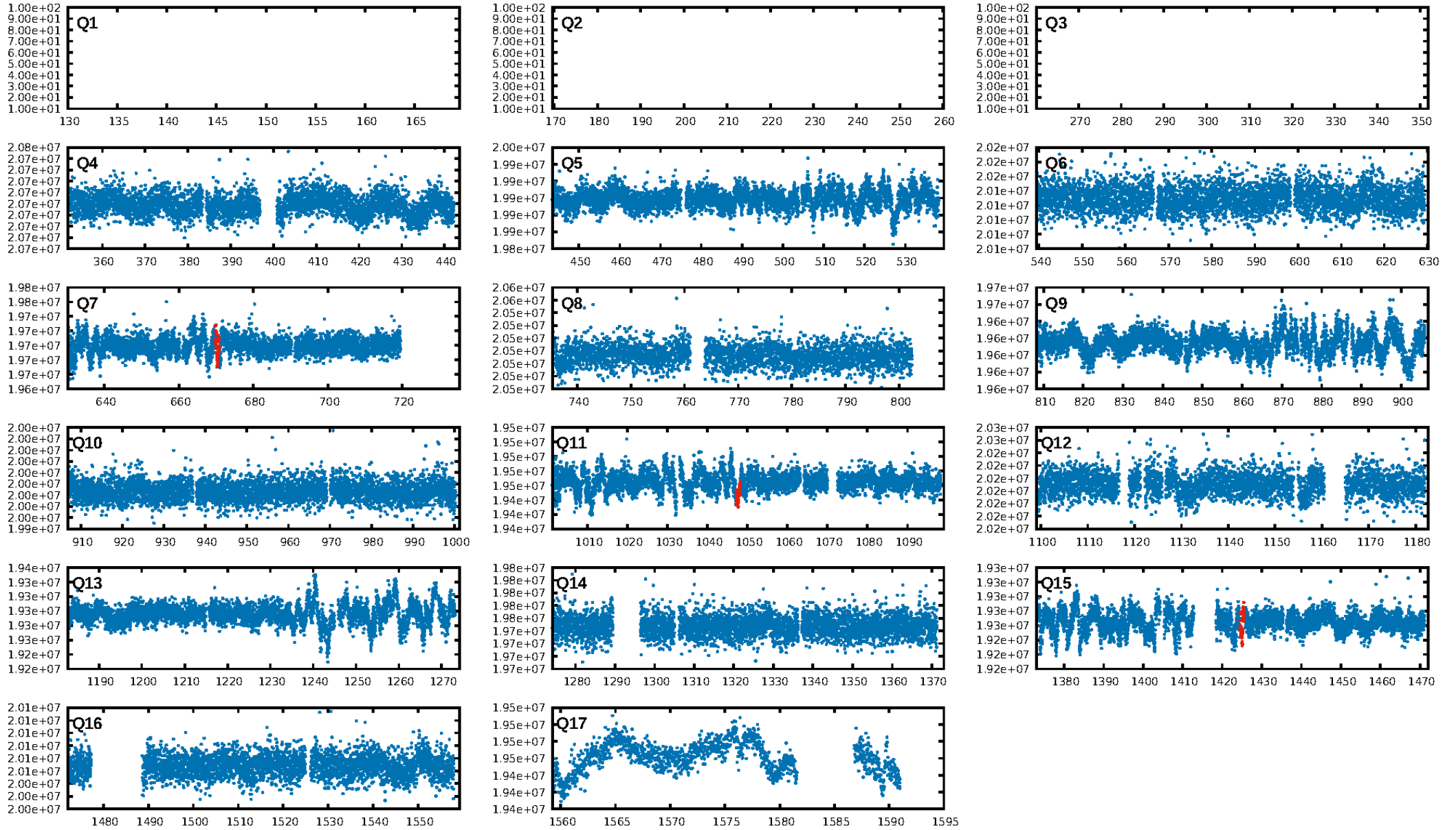
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 17.7%
ModelChiSquareGof-sig: 99.7%
Bootstrap-pfa: 1.89e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -1.524
Centroid-sig: 12.7%
Centroid-so: 2.301 arcsec [1.08 σ]
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 [3/3]

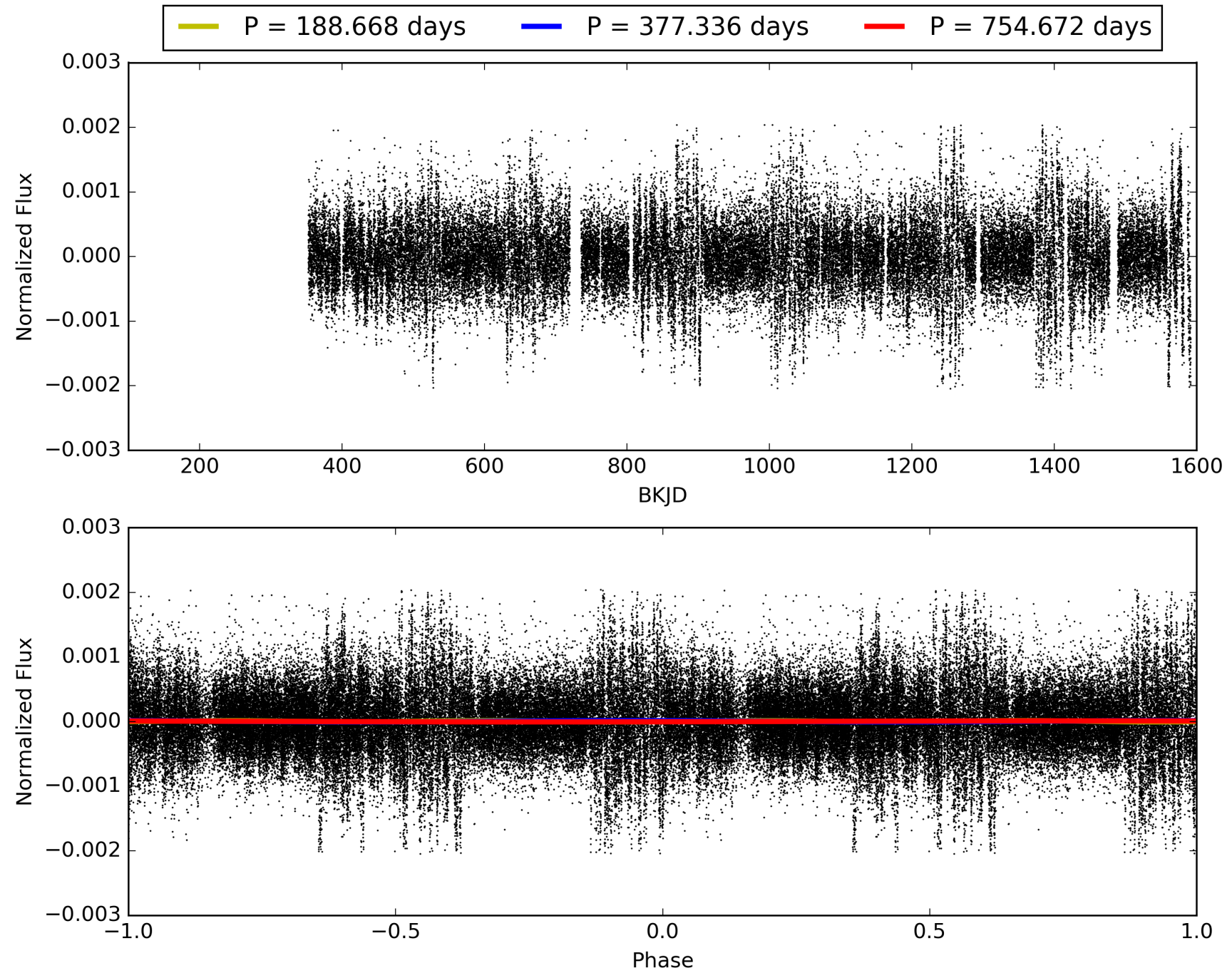
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 14:34:18 Z

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

TCE 006120098-01, PDC Light Curves

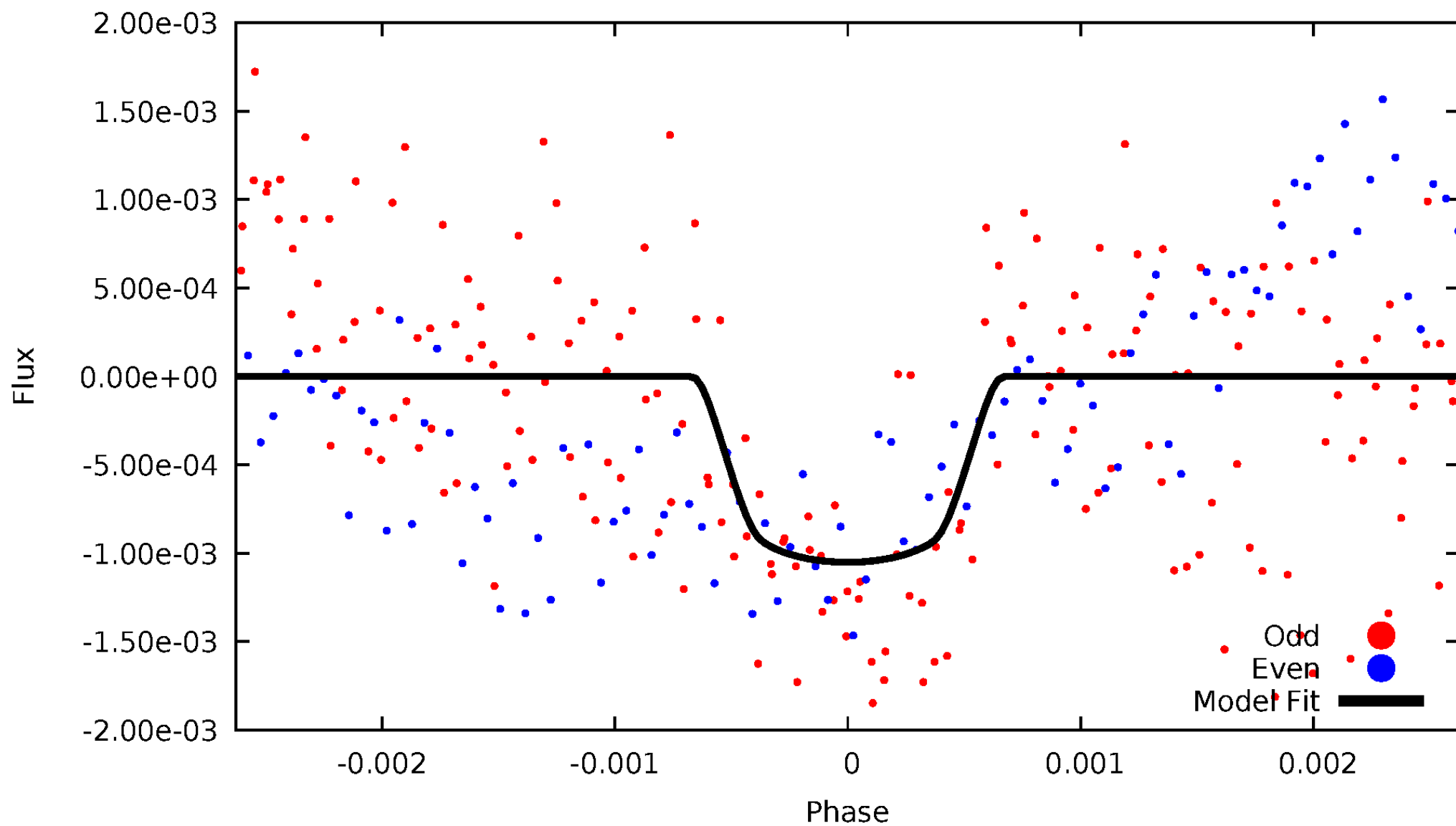


TCE 006120098-01



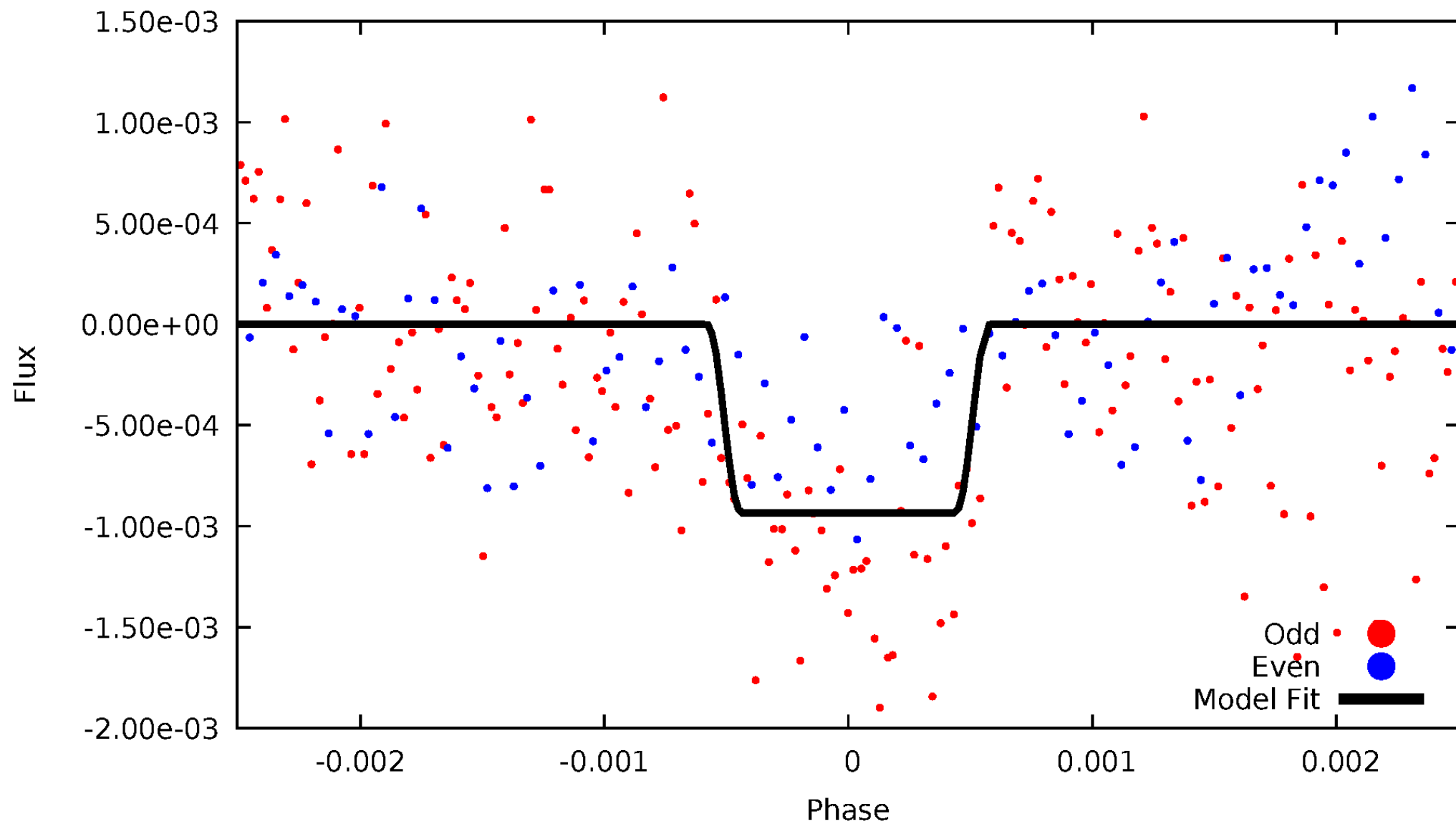
DV Odd/Even

TCE 006120098-01

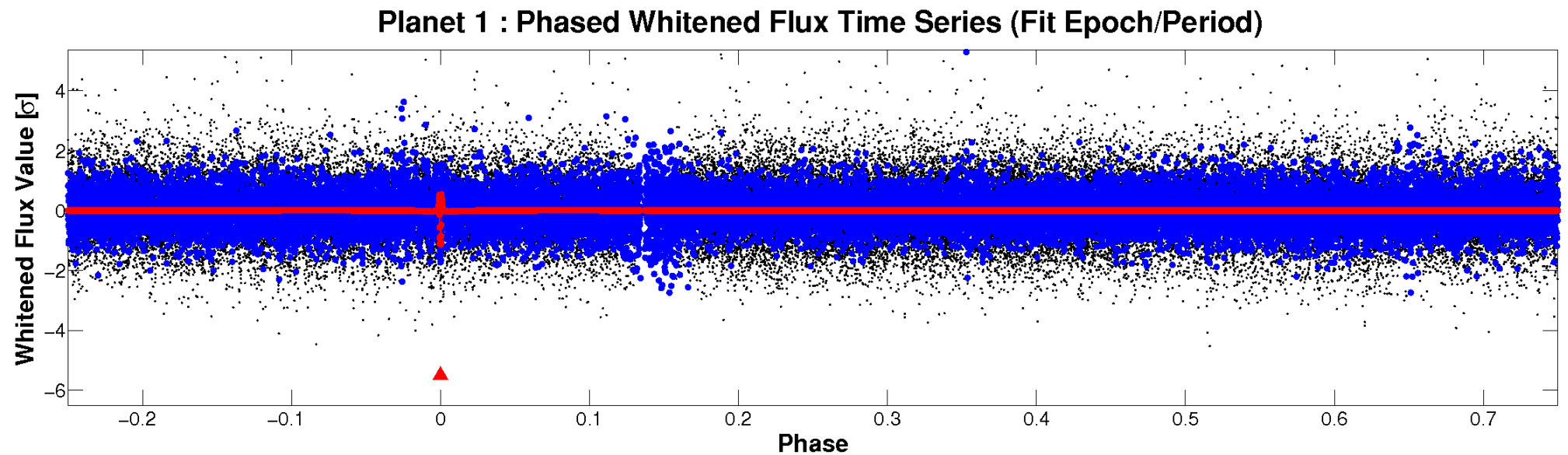
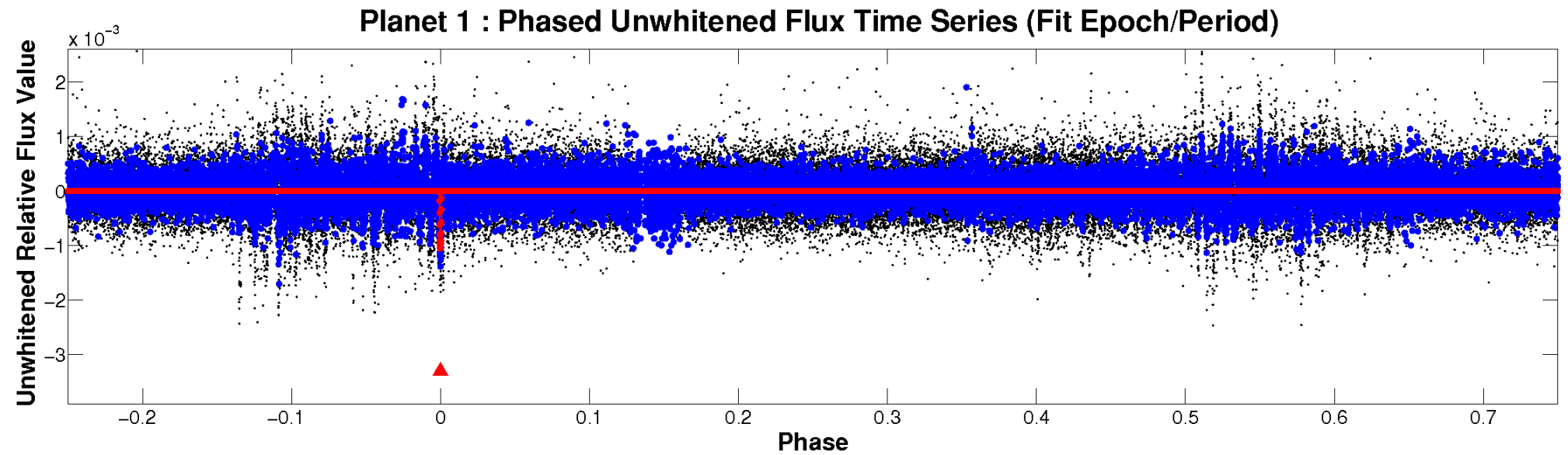


ALT Odd/Even

TCE 006120098-01

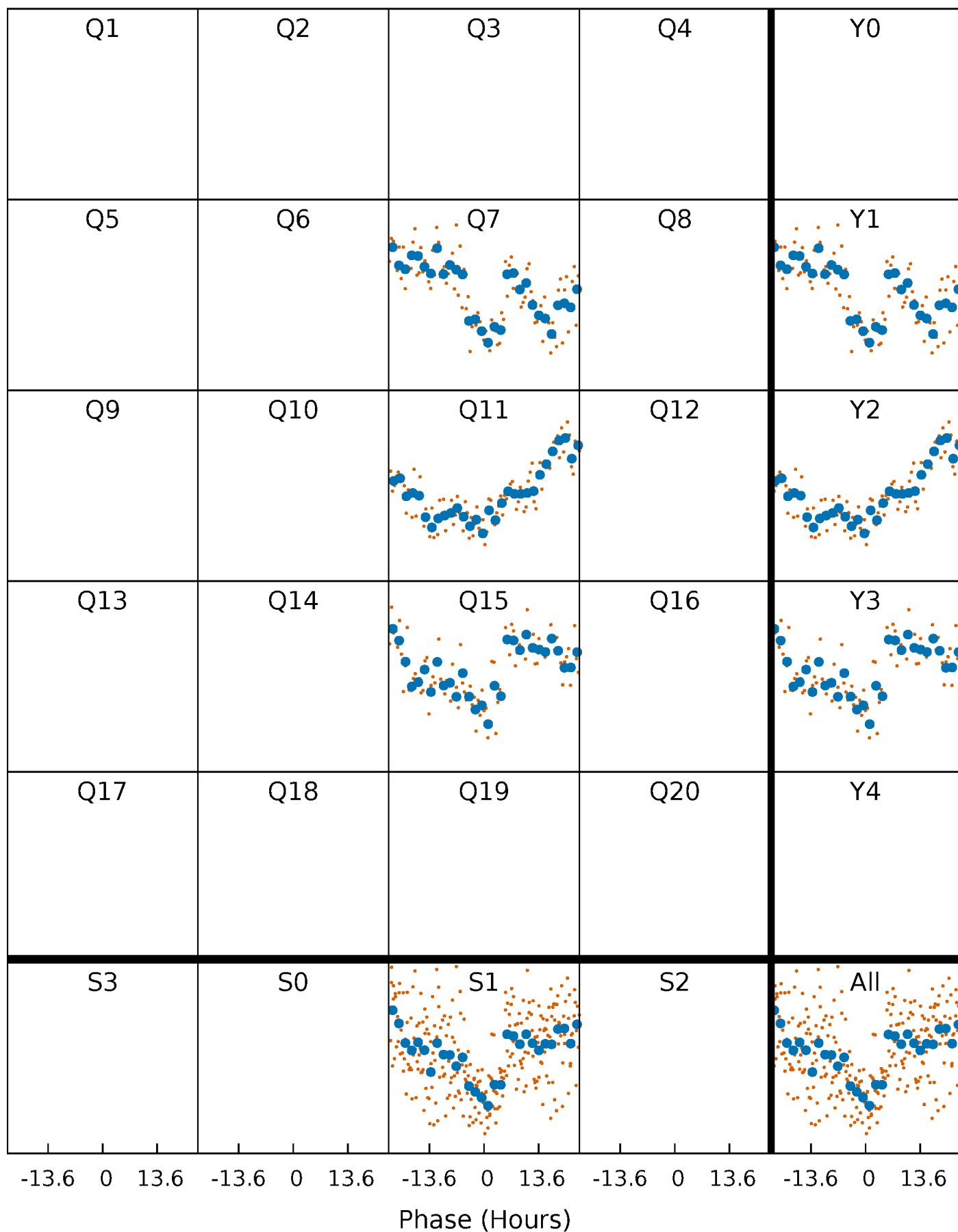


Non-Whitened Vs. Whitened Light Curve



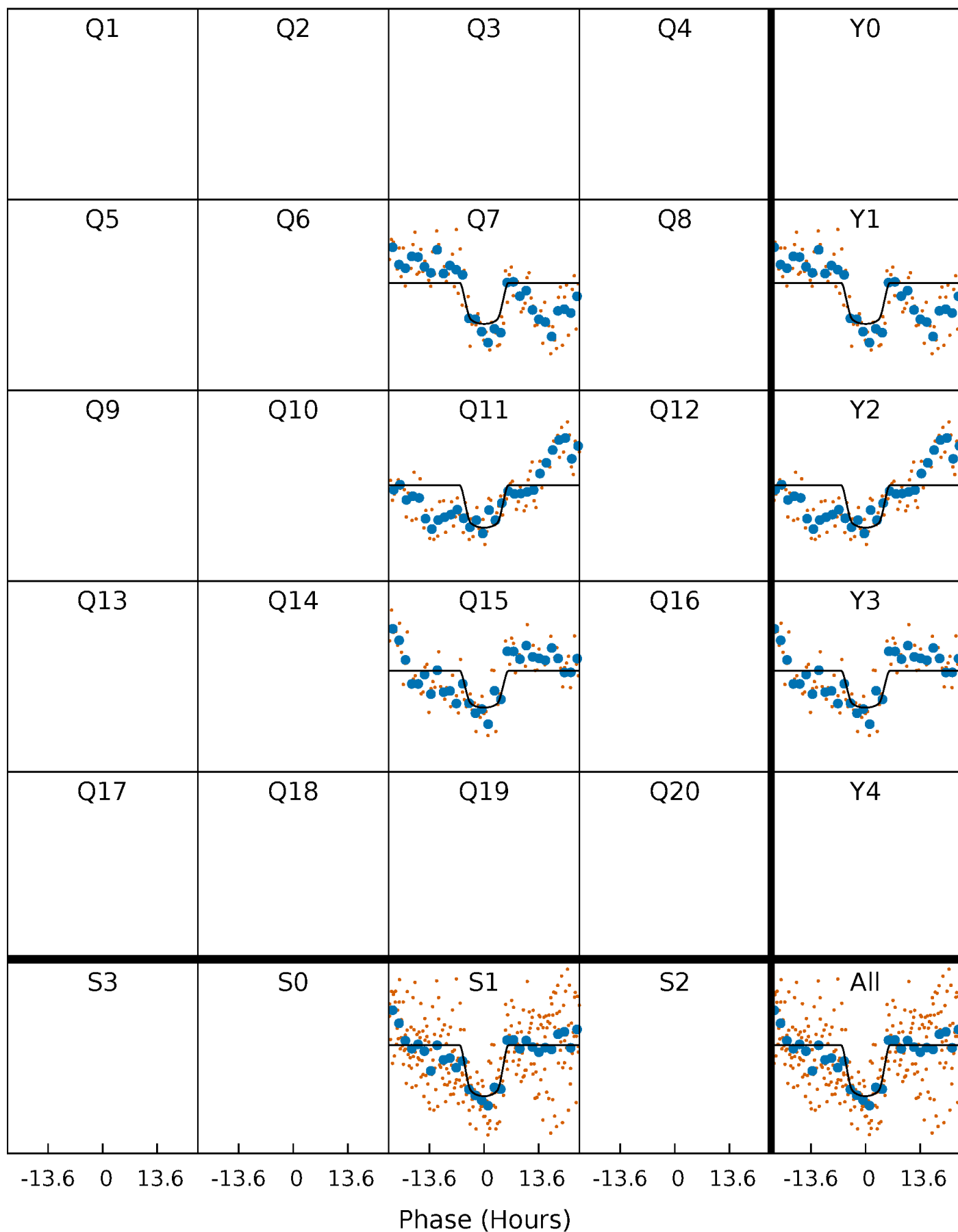
PDC Quarter-Phased Transit Curves

TCE 006120098-01 P=377.335753 Days $T_0=292.992156$ (BKJD)



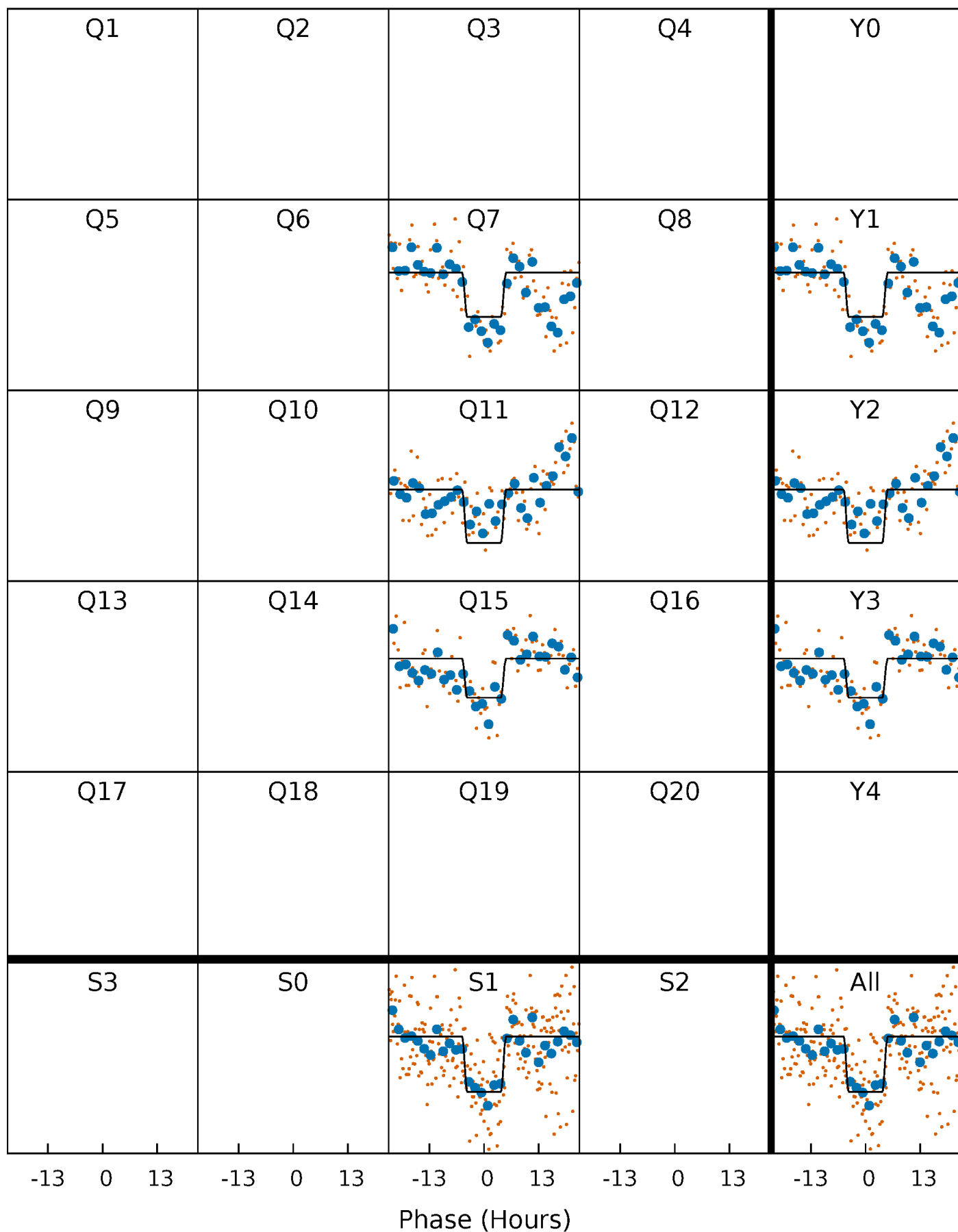
DV Quarter-Phased Transit Curves

TCE 006120098-01 P=377.335753 Days $T_0=292.992156$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

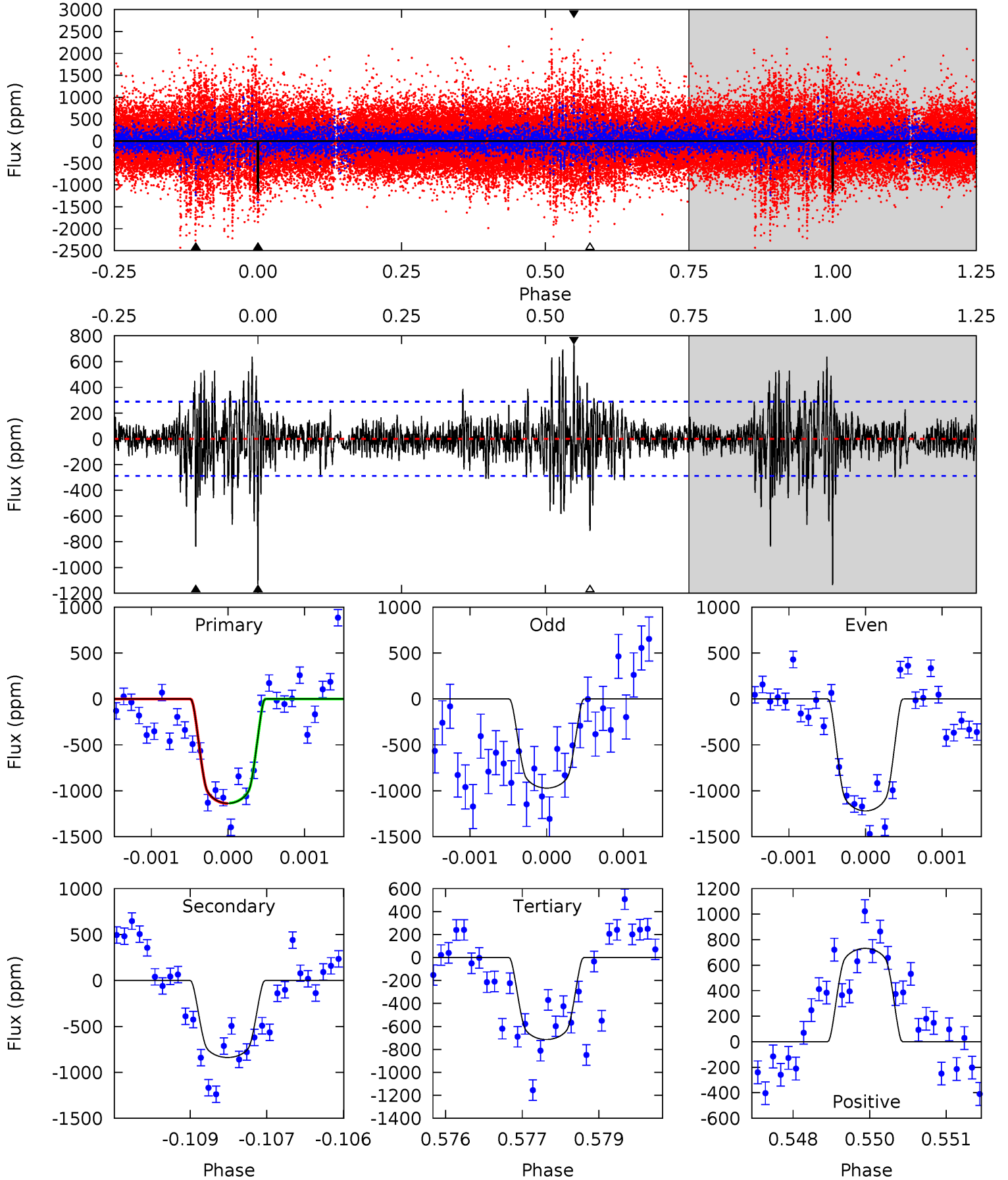
TCE 006120098-01 P=377.332930 Days $T_0=292.992957$ (BKJD)



DV Model-Shift Uniqueness Test

006120098-01, P = 377.335753 Days, E = 292.992156 Days

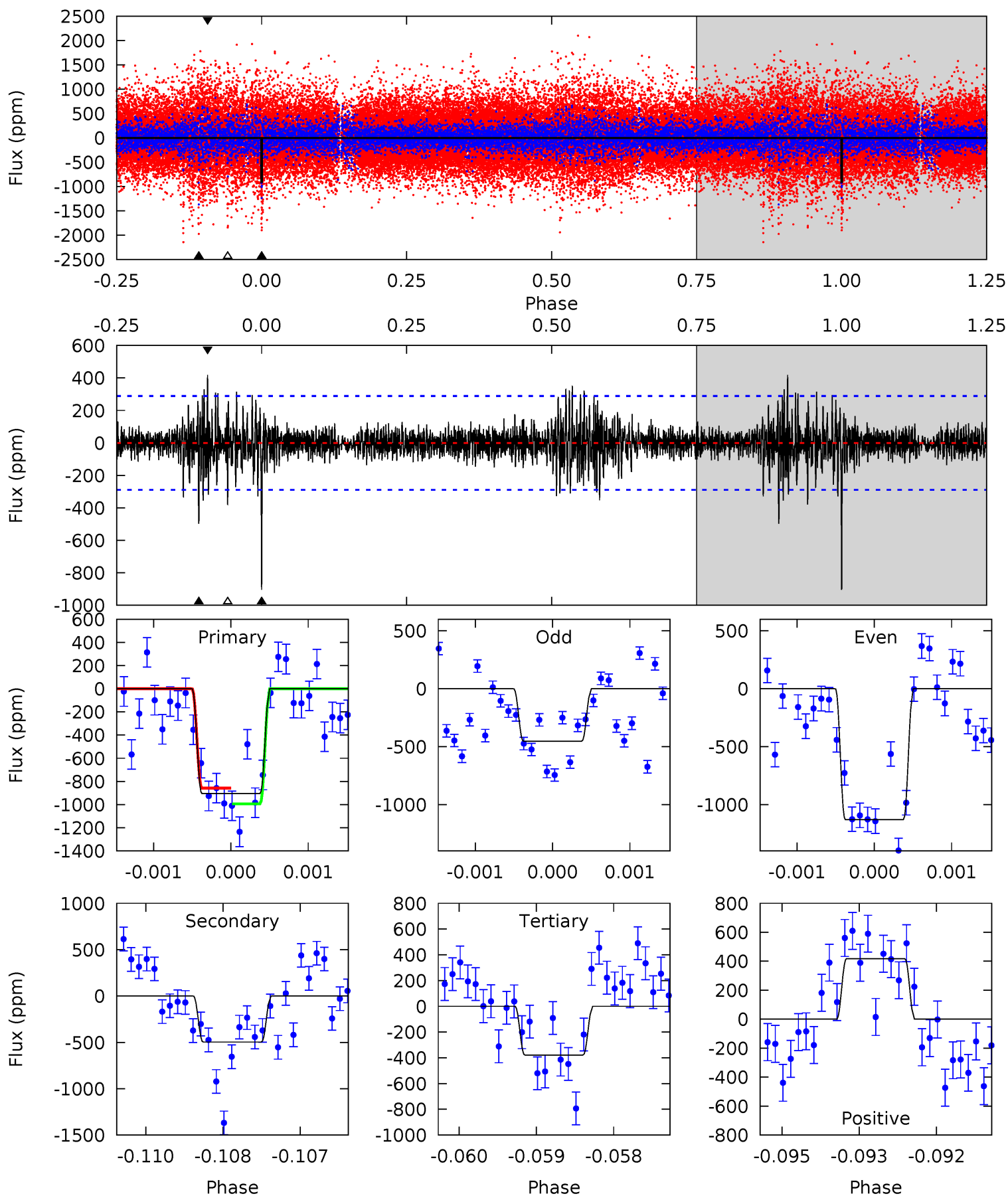
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 21.2 | 15.6 | 13.3 | 13.7 | 5.39 | 3.20 | 2.64 | 7.89 | 7.56 | 2.31 | 1.99 | 2.21 | 1.01 | 0.39 | 0.03 |



Alt Model-Shift Uniqueness Test

006120098-01, P = 377.332930 Days, E = 292.992957 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 17.0 | 9.34 | 7.11 | 7.85 | 5.43 | 3.25 | 1.43 | 9.89 | 9.15 | 2.22 | 1.49 | 6.08 | 0.86 | 0.32 | 1.26 |



Stellar Parameters For KIC 006120098

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | $R (R_{\odot})$ | $M(M_{\odot})$ | $p_{\star} (\text{g}\cdot\text{cm}^{-3})$ |
|--------|----------------------|---------------------------|---------------------------|---------------------------|---------------------------|---|
| | 6392^{+179}_{-246} | $4.399^{+0.056}_{-0.224}$ | $0.070^{+0.250}_{-0.350}$ | $1.162^{+0.396}_{-0.132}$ | $1.232^{+0.167}_{-0.184}$ | $1.107^{+0.321}_{-0.586}$ |
| | +3%/-4% | +1%/-5% | +357%/-500% | +34%/-11% | +14%/-15% | +29%/-53% |
| Source | KIC0 | 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 006120098-01 / KOI

| Detrend | Depth (ppm) | $R_p (R_{\oplus})$ | $T_{\text{max}} (K)$ | $T_{\text{obs}} (K)$ | A_{obs} |
|---------|---------------|------------------------|----------------------|----------------------|-------------------------|
| DV | -838 ± 54 | $4.69^{+0.94}_{-0.65}$ | 413^{+31}_{-22} | 5751^{+319}_{-319} | 24566^{+7437}_{-6883} |
| Alt. | -497 ± 53 | $4.04^{+0.81}_{-0.59}$ | 415^{+33}_{-23} | 5470^{+360}_{-326} | 19502^{+7737}_{-5940} |

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

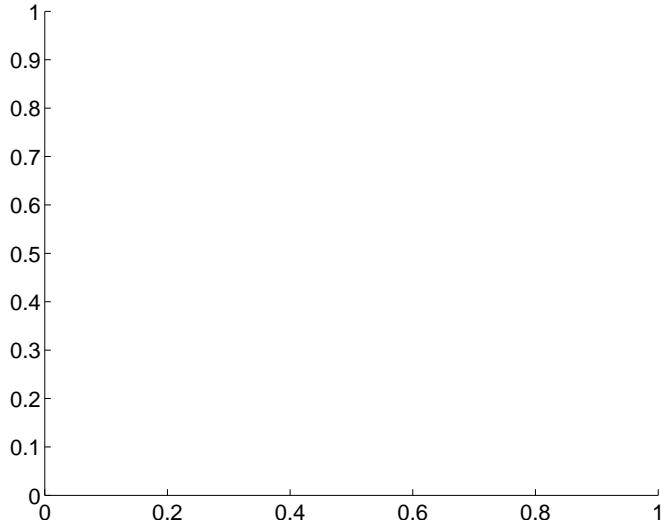
Supplemental centroid analysis for 006120098-01. Kepler magnitude: 15.27. Transit SNR 8.27

There are 0 quarters with good PRF difference image offsets

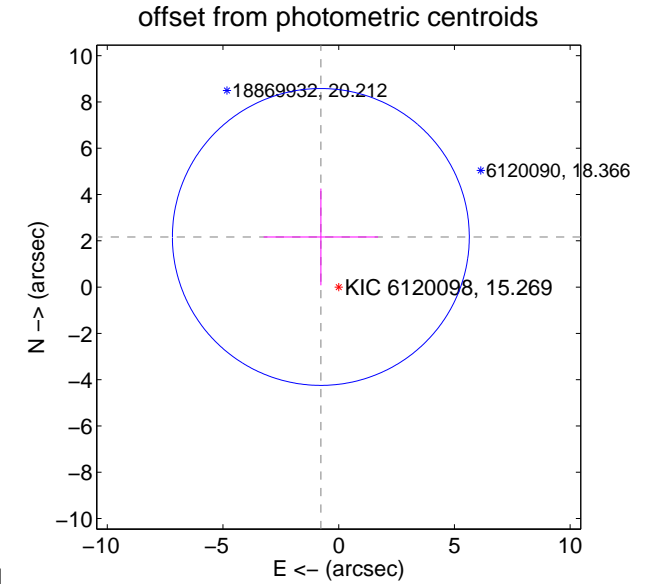
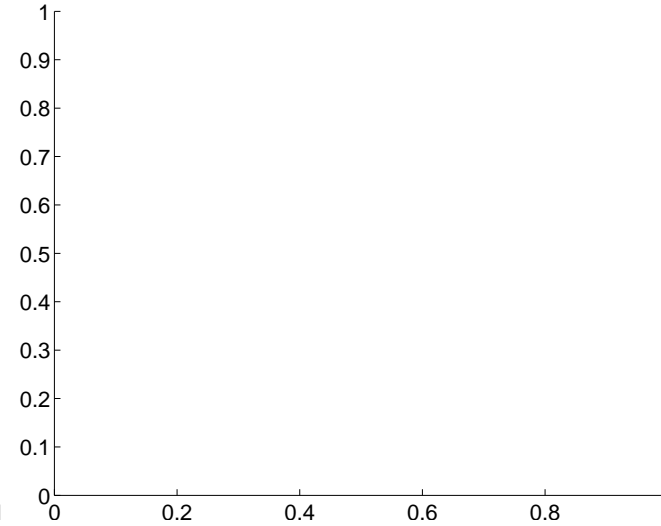
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

| | 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 | 2.30 ± 2.14 | 1.08 | 0.77 ± 2.47 | 2.17 ± 2.09 |

There is no PRF-fit offset from OOT-fit



There is no PRF-fit offset from KIC

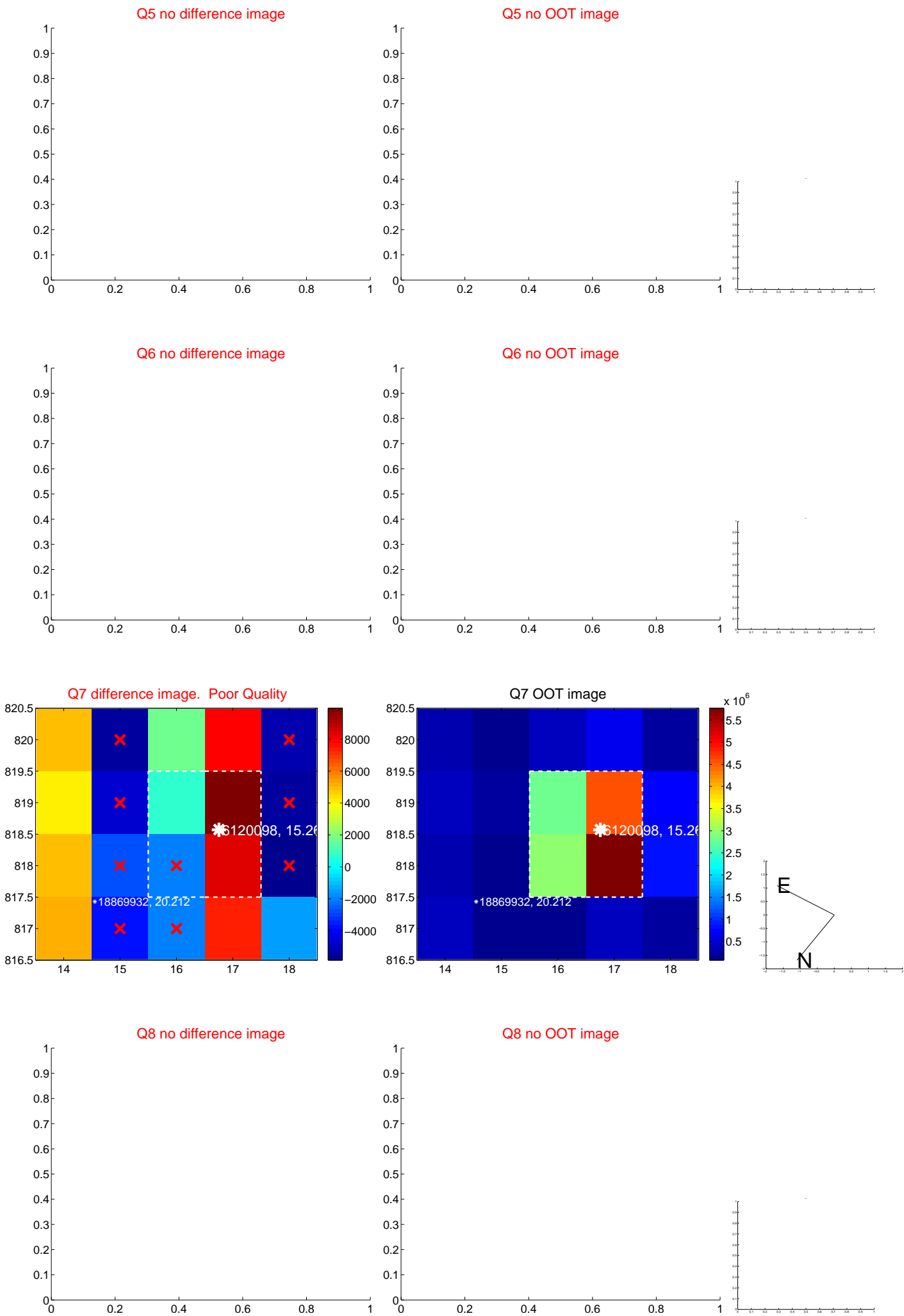


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

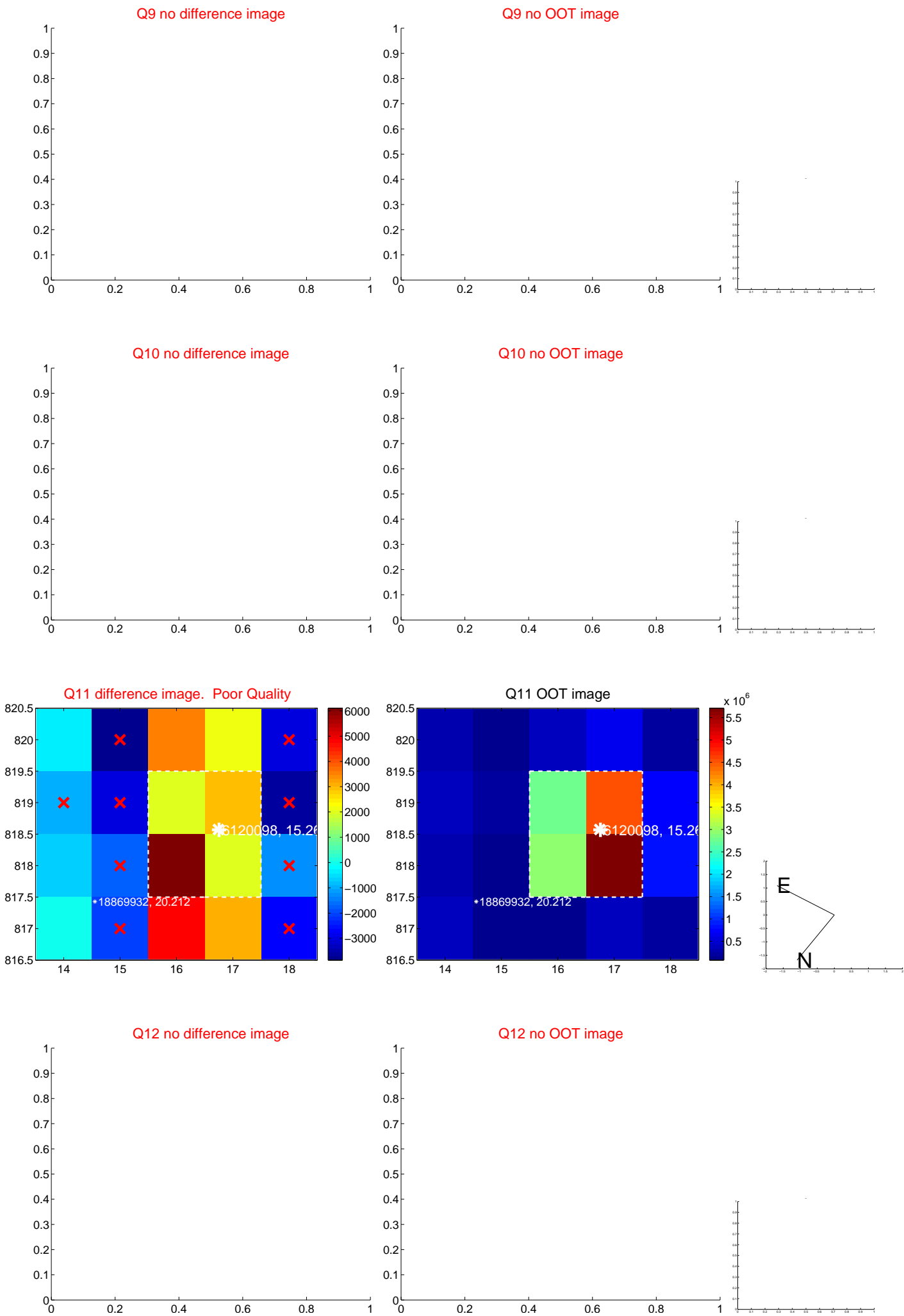
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



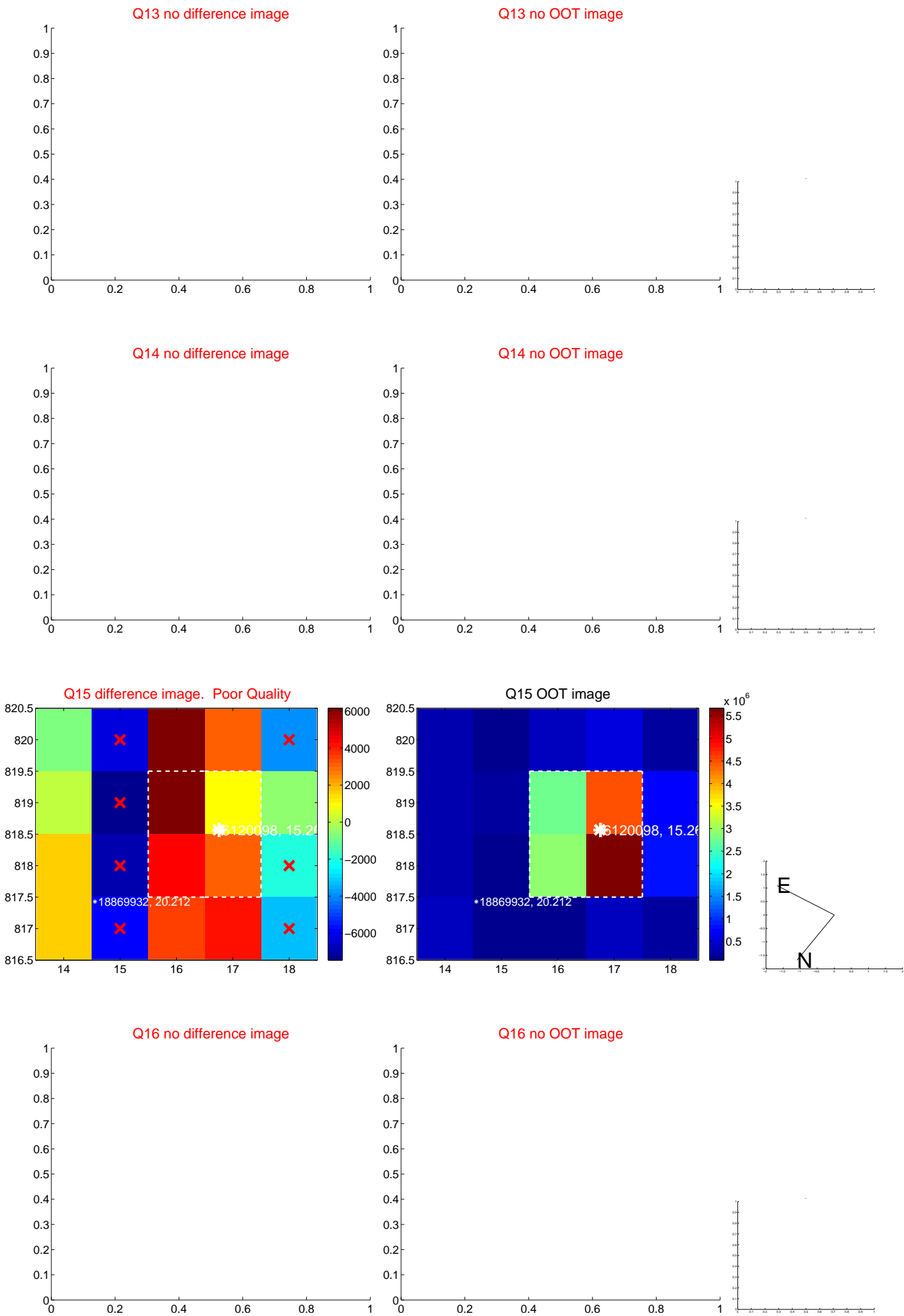
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



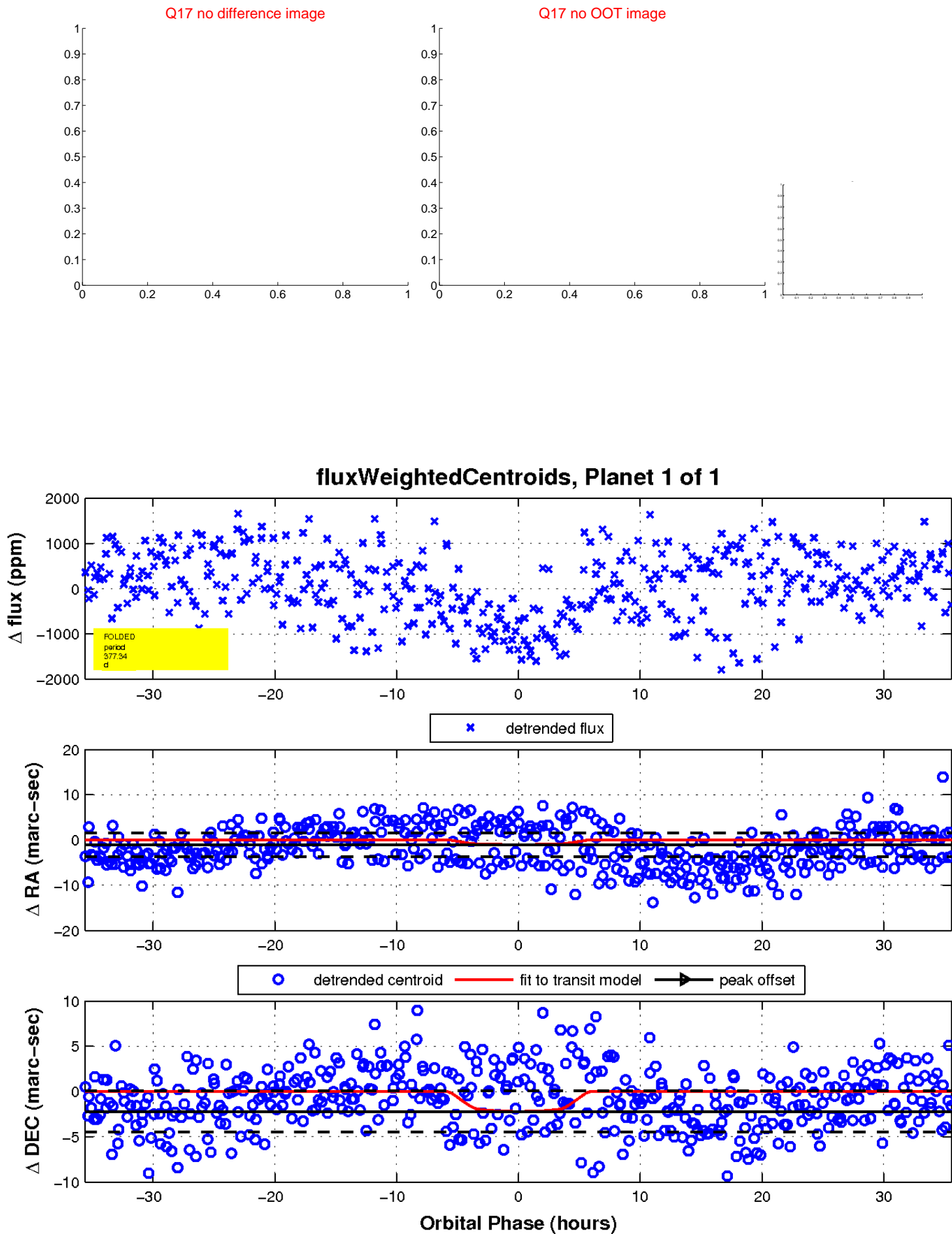
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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



UKIRT Image

Declination

