

KIC 005879796

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|-----|-----|-----------------------------|-----------------|------------------------|------------------------|
| 005879796-01 | OBS | No | 474.067223 | 137.042546 | 211.0 | 19.977 | 7.6 | 6.3 | 0.94 | 6192 | 1.44 | 0.86 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|---|
| 005879796-01 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_CHASES_MARSHALL—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.

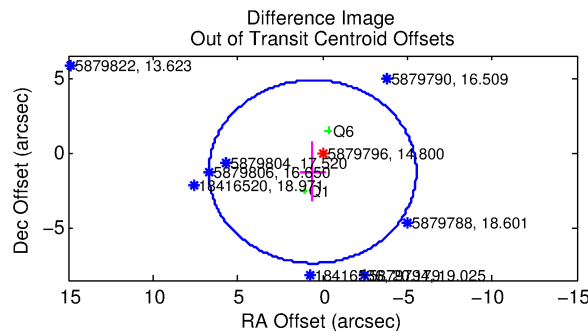
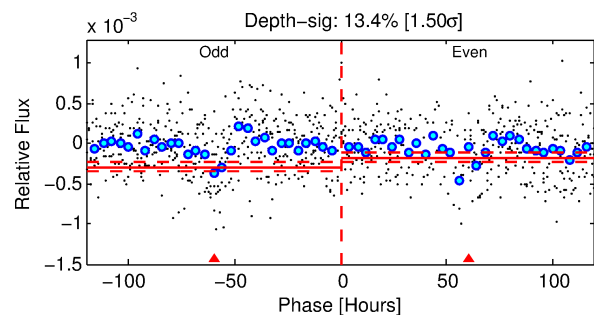
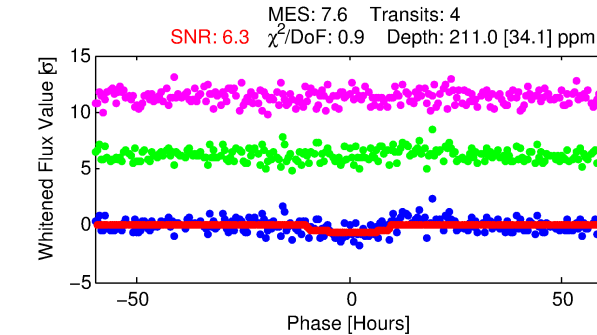
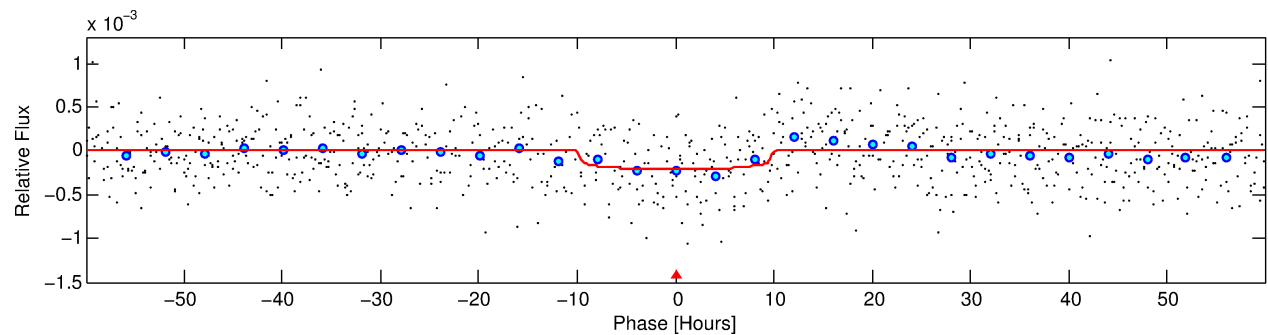
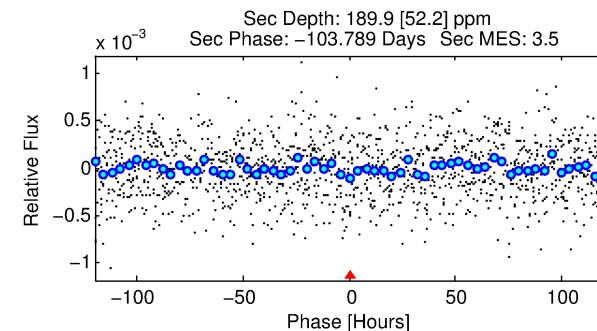
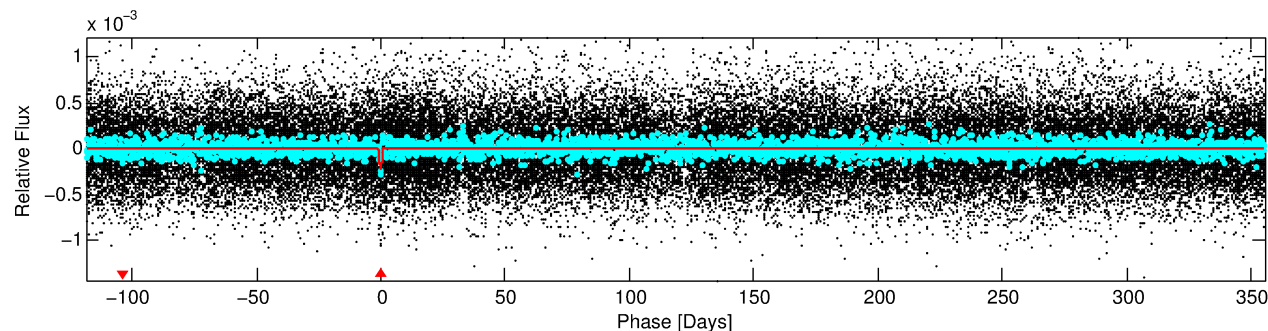
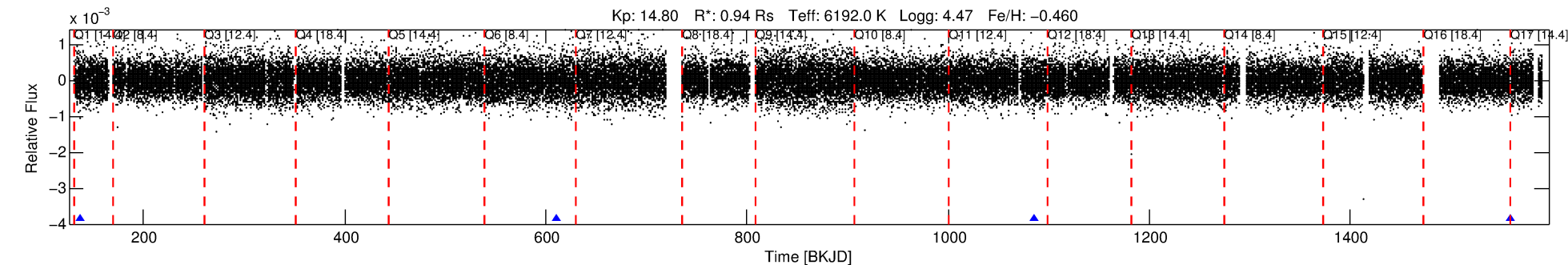
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005879796-01

No Significant Match Found

DV One-Page Summary

KIC: 5879796 Candidate: 1 of 1 Period: 474.067 d



DV Fit Results:

Period = 474.06722 [0.02319] d
Epoch = 137.0425 [0.0355] BKJD
Rp/R* = 0.0139 [0.0098]
a/R* = 147.69 [542.19]
b = 0.60 [3.88]
Seff = 0.86 [0.34]
Teq = 245 [24] K
Rp = 1.44 [1.09] Re
a = 1.1701 [0.2953] AU
Ag = 69347.65 [102338.45] [0.68 σ]
Teff = 6156 [2208] K [2.68 σ]

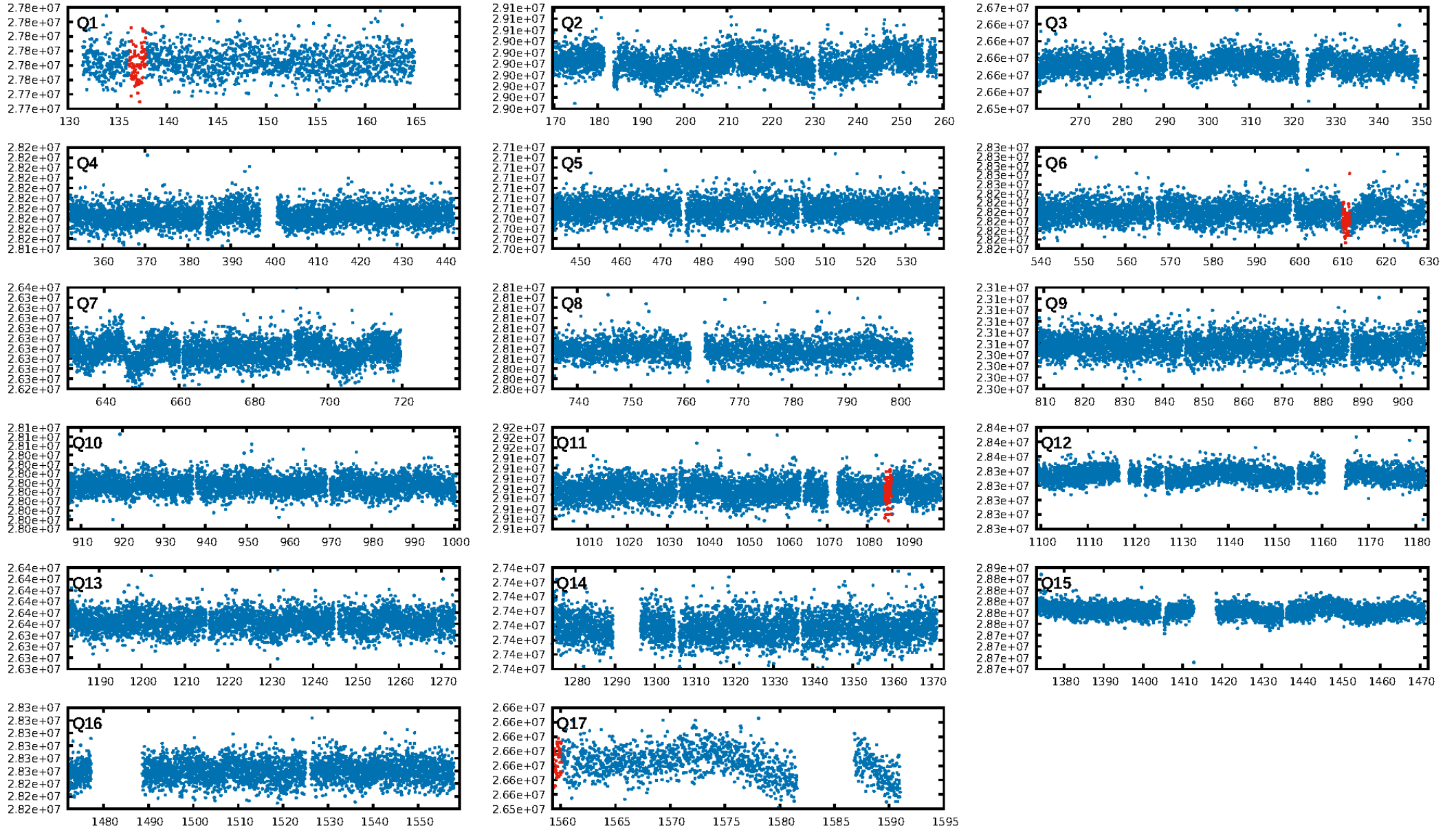
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 1.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.70e-13
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 1.584
Centroid-sig: 43.9%
Centroid-so: 2.022 arcsec [1.07 σ]
OotOffset-rm: 1.398 arcsec [0.69 σ]
KicOffset-rm: 1.526 arcsec [0.78 σ]
OotOffset-st: 1/0/0/1 [2]
KicOffset-st: 1/0/0/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

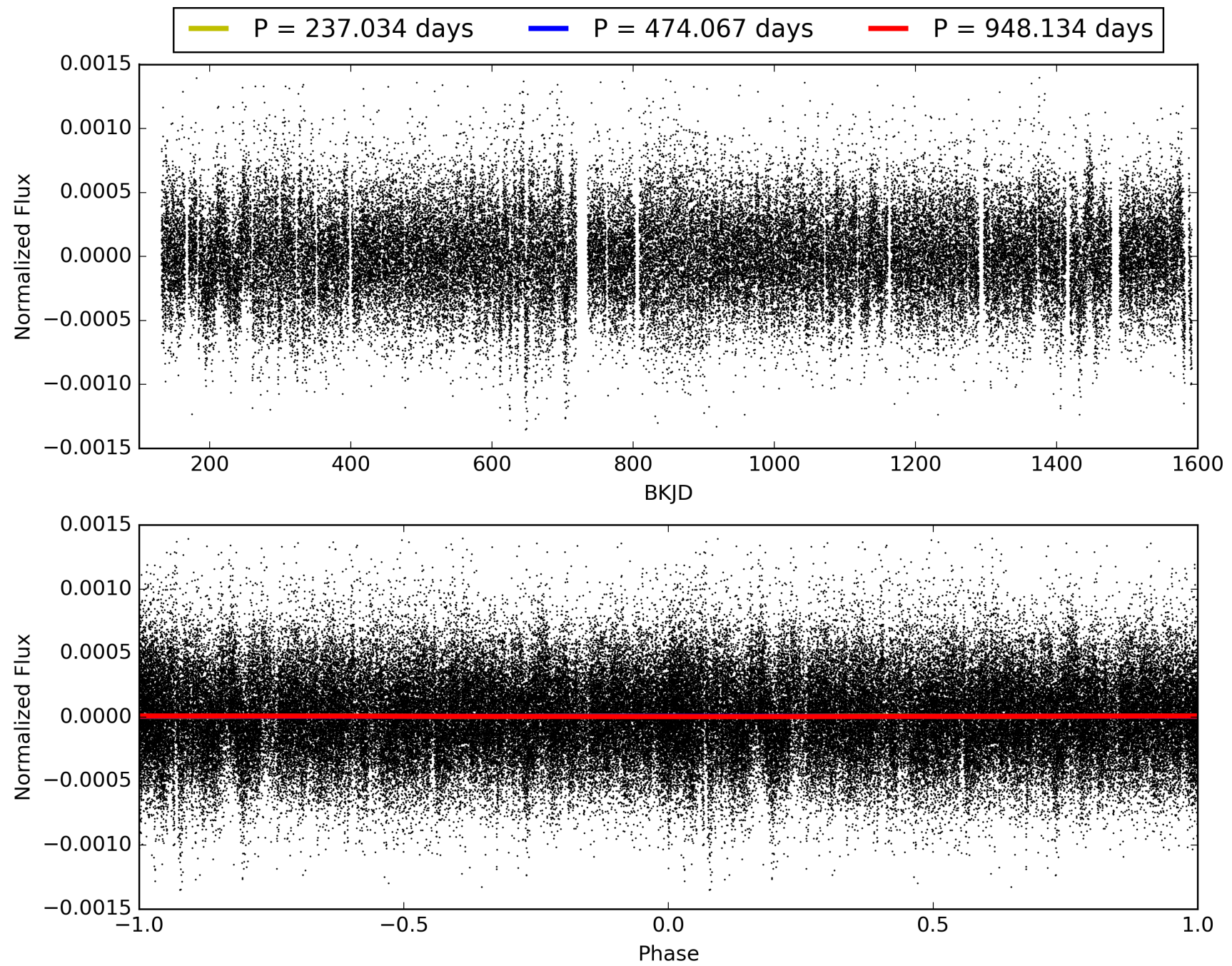
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:47:20 Z

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

TCE 005879796-01, PDC Light Curves

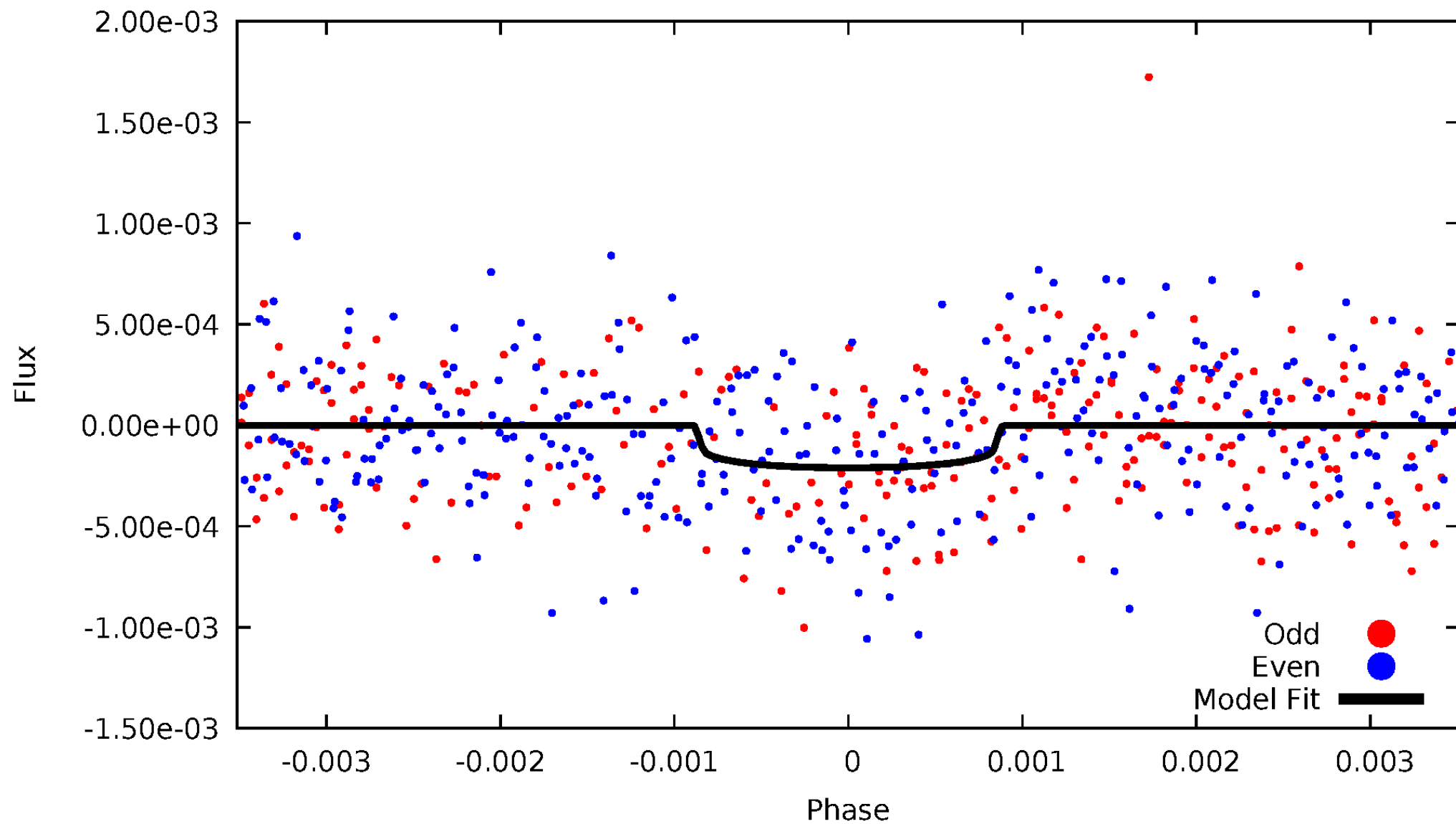


TCE 005879796-01



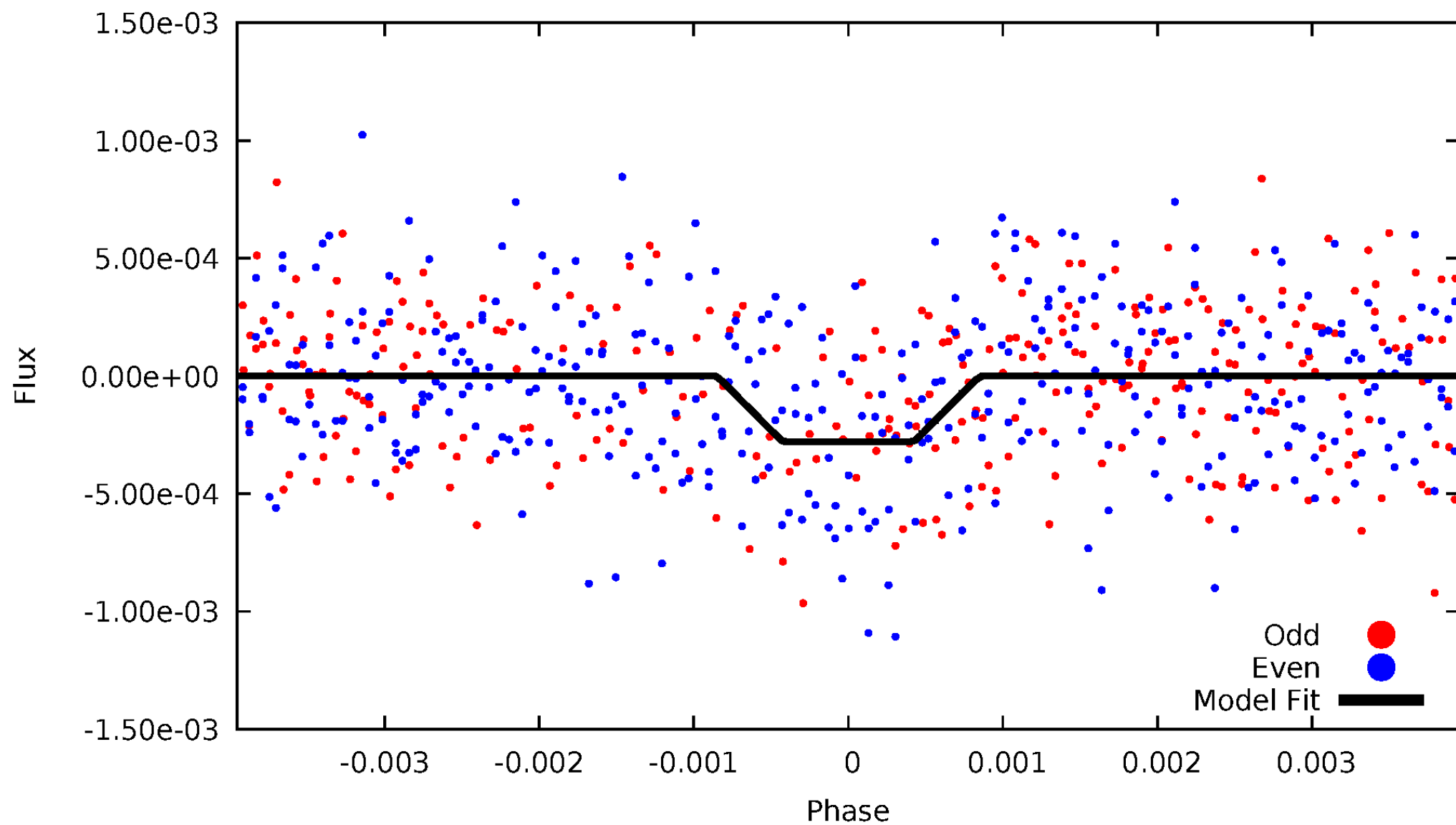
DV Odd/Even

TCE 005879796-01



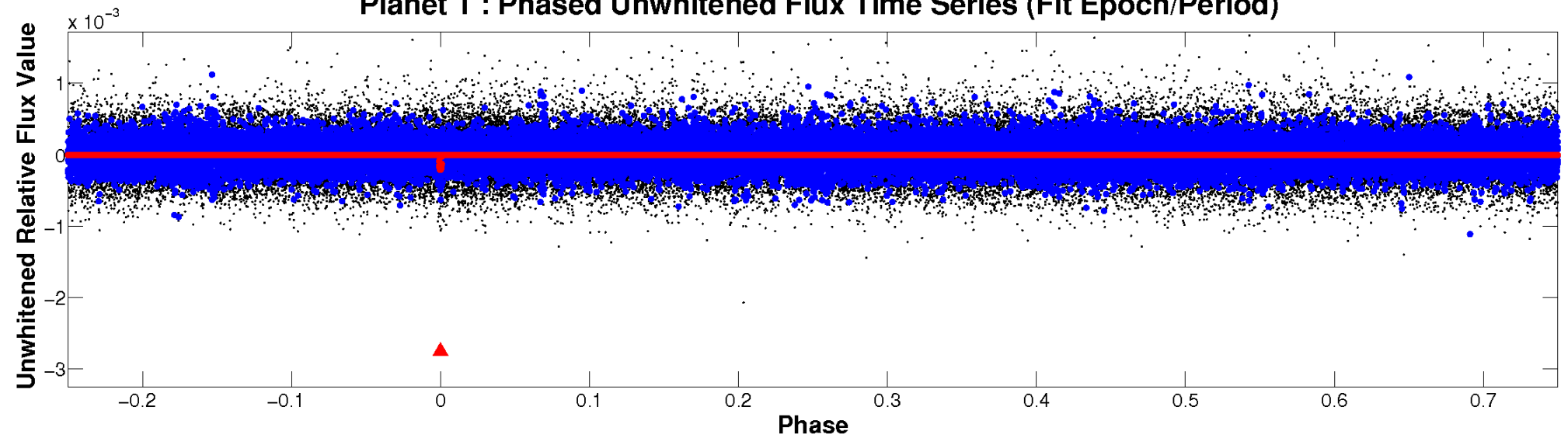
ALT Odd/Even

TCE 005879796-01

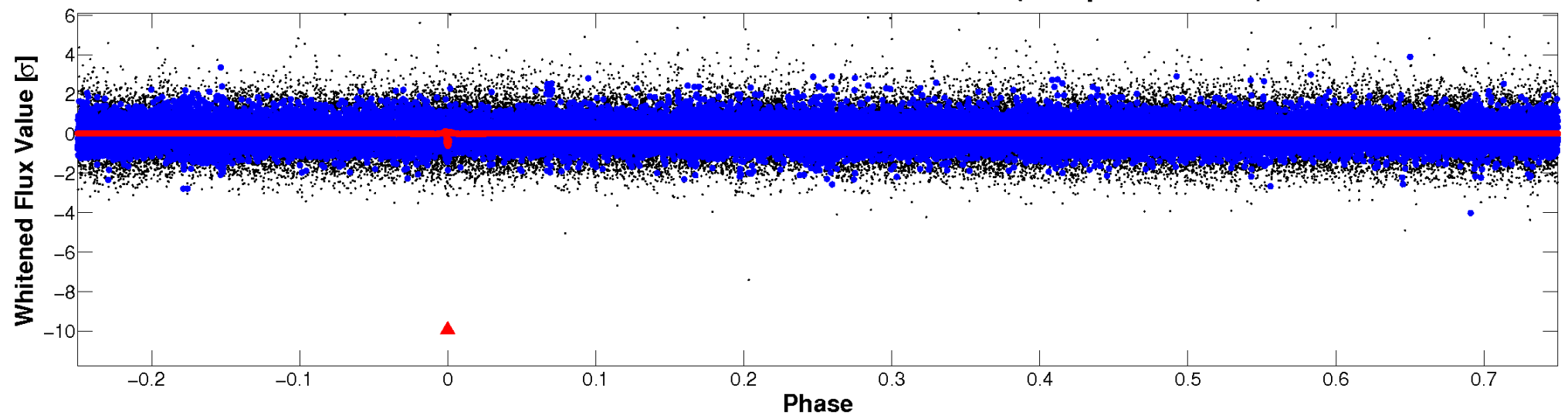


Non-Whitened Vs. Whitened Light Curve

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

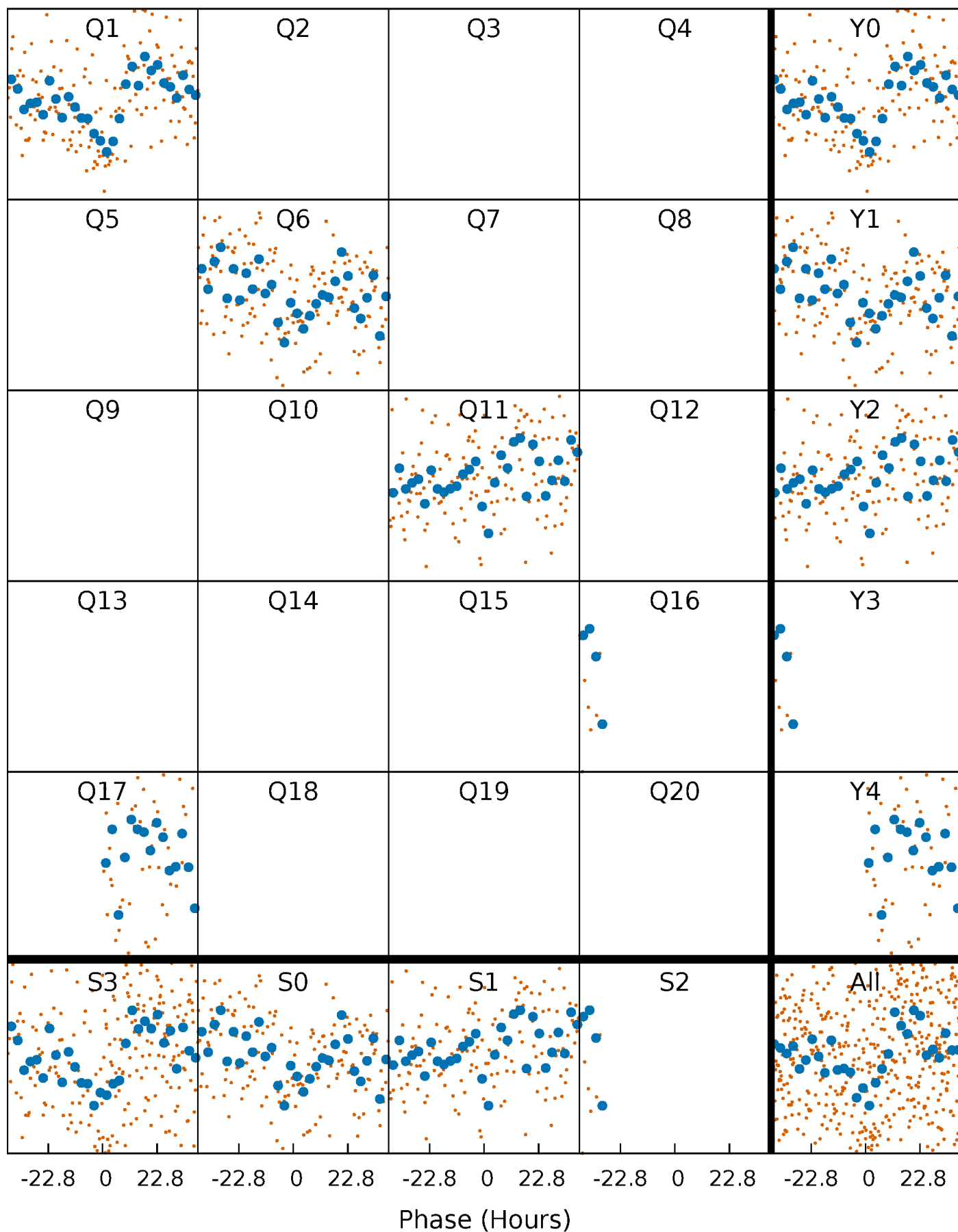


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



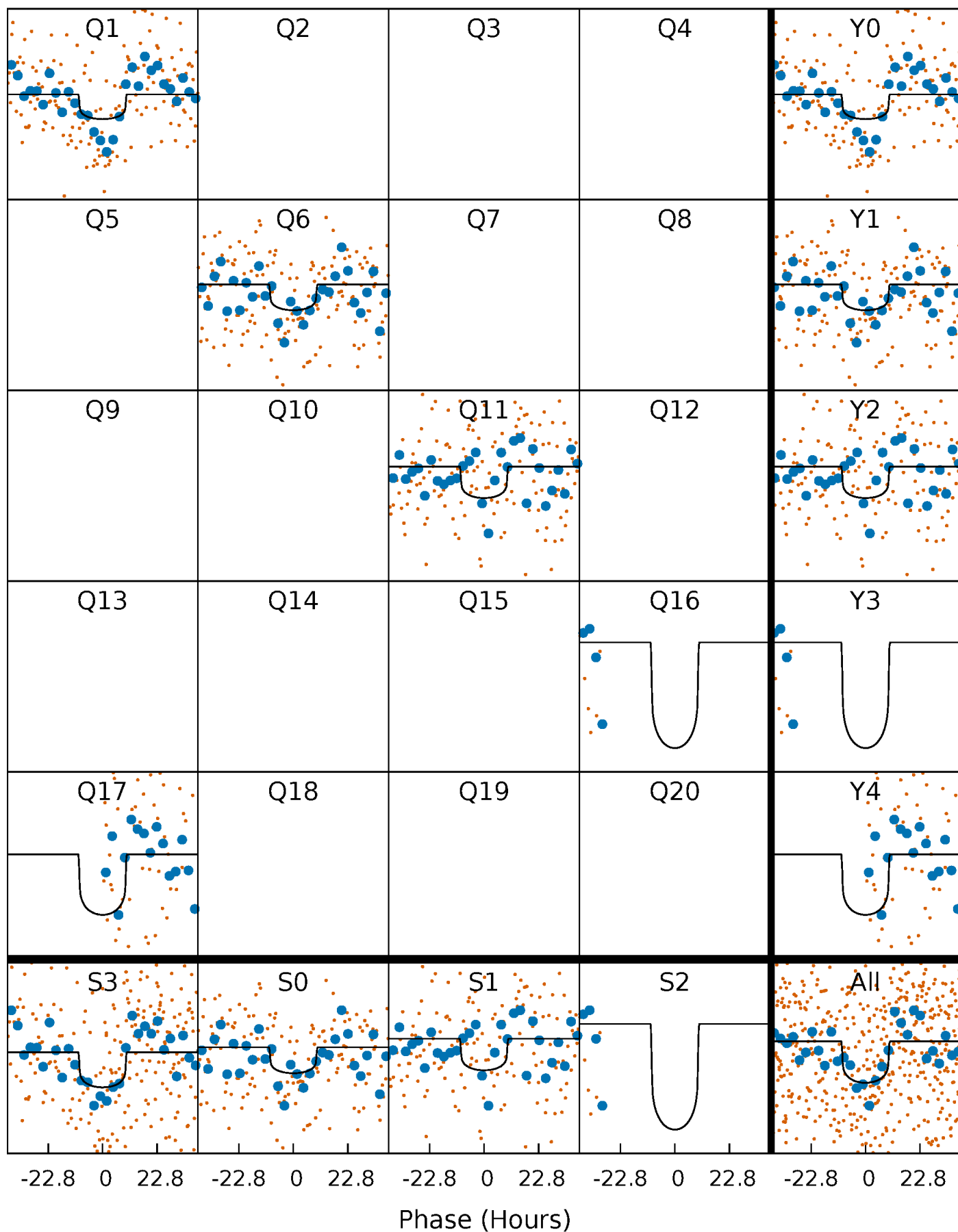
PDC Quarter-Phased Transit Curves

TCE 005879796-01 $P=474.067223$ Days $T_0=137.042546$ (BKJD)



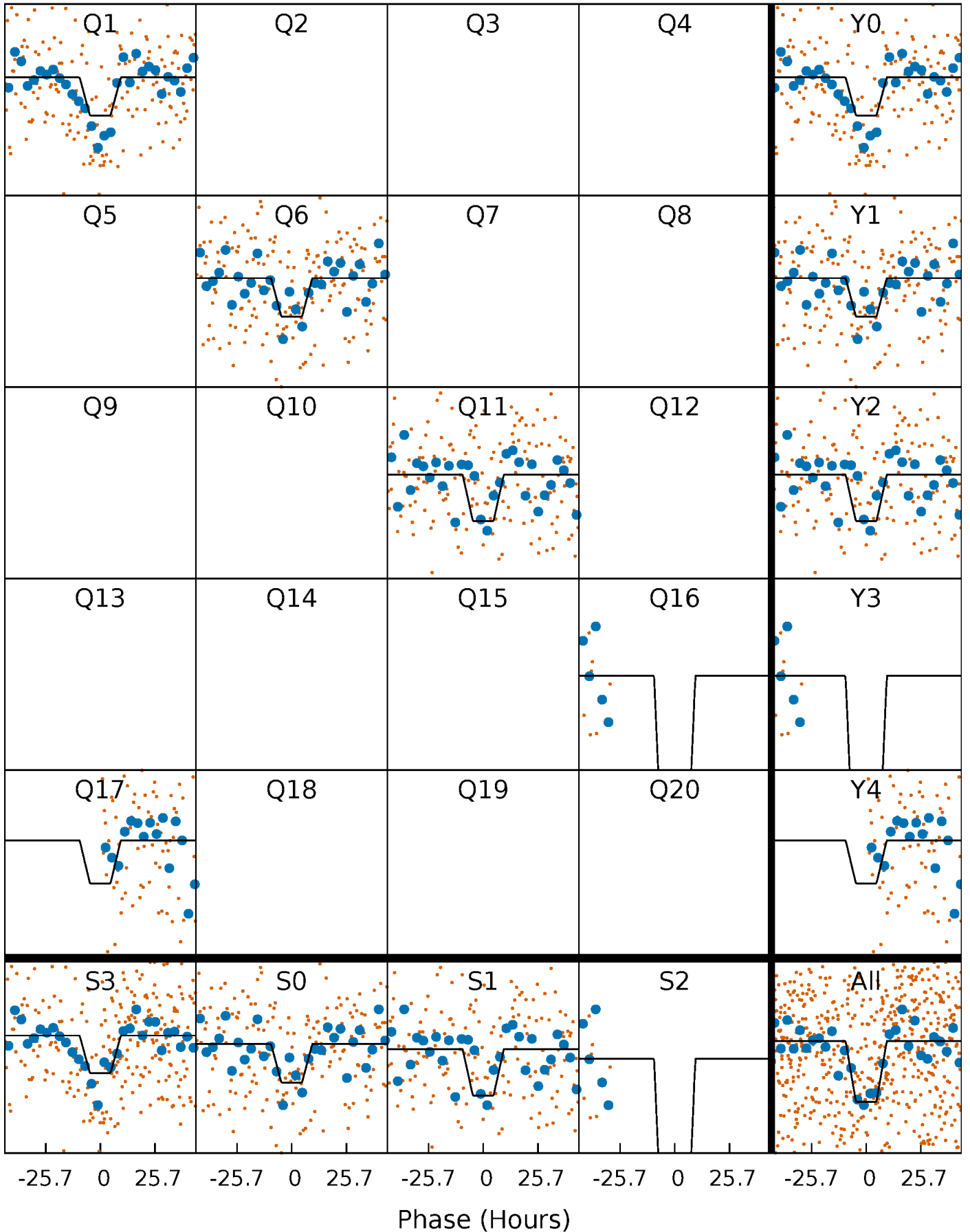
DV Quarter-Phased Transit Curves

TCE 005879796-01 P=474.067223 Days $T_0=137.042546$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

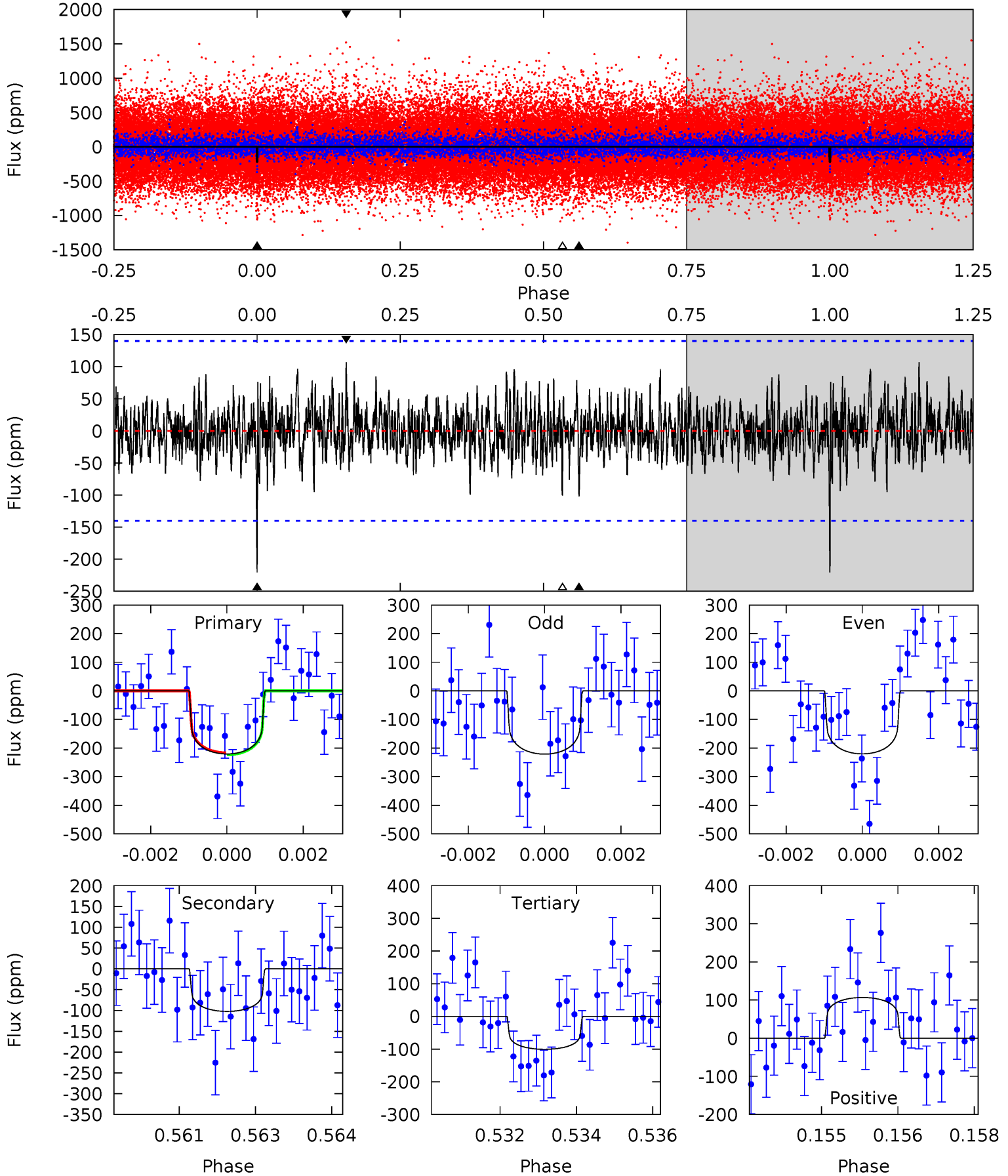
TCE 005879796-01 P=474.038158 Days $T_0=137.089573$ (BKJD)



DV Model-Shift Uniqueness Test

005879796-01, $P = 474.067223$ Days, $E = 137.042546$ Days

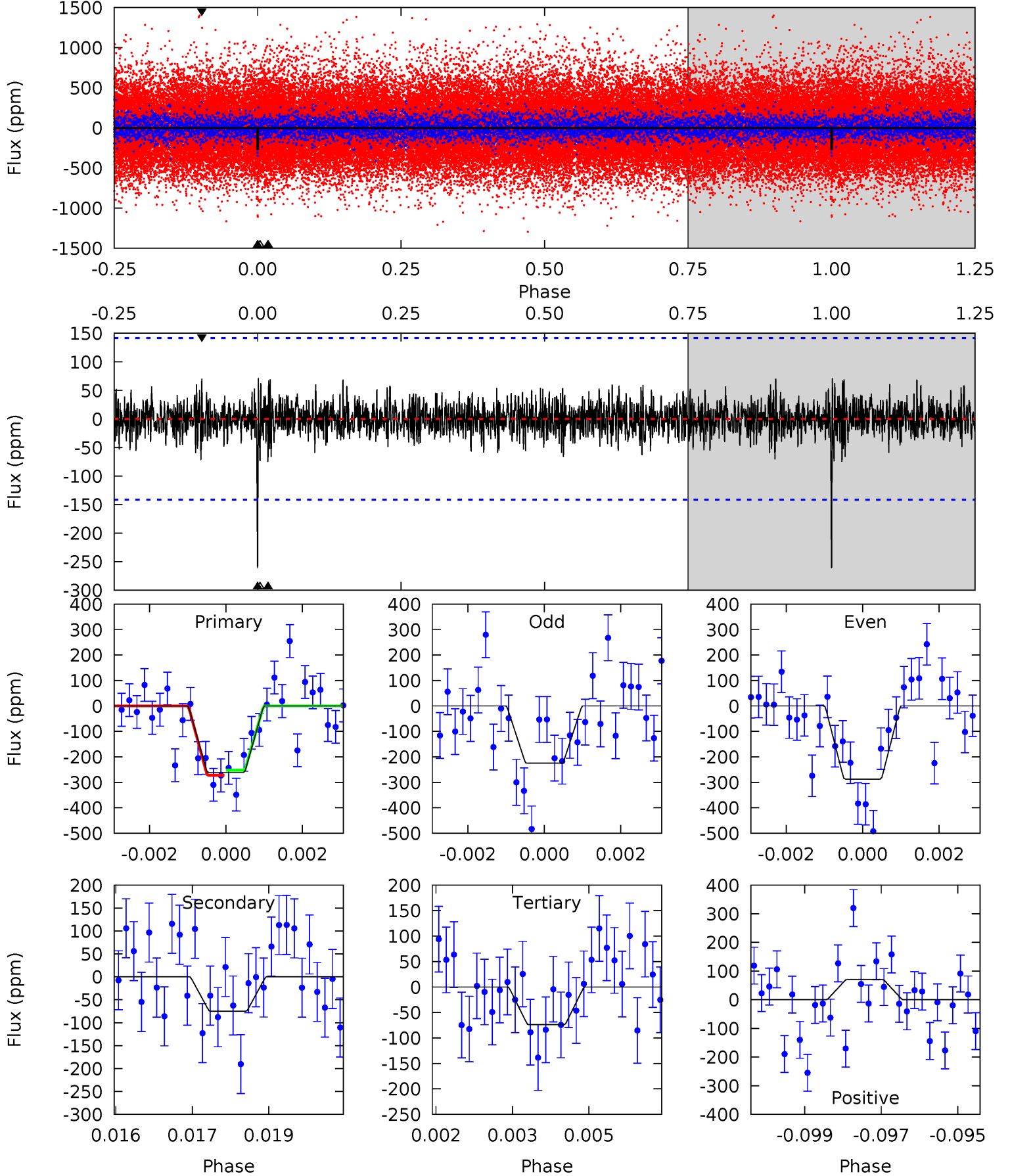
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 8.41 | 3.90 | 3.83 | 4.07 | 5.35 | 3.12 | 1.15 | 4.58 | 4.35 | 0.06 | -0.17 | 0.02 | 1.06 | 0.33 | 0.13 |



Alt Model-Shift Uniqueness Test

005879796-01, P = 474.038158 Days, E = 137.089573 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 9.88 | 2.84 | 2.80 | 2.67 | 5.35 | 3.13 | 0.79 | 7.08 | 7.21 | 0.04 | 0.17 | 1.17 | 1.06 | 0.21 | 0.37 |



Stellar Parameters For KIC 005879796

| | $T_{\text{eff}} (K)$ | $\log(g)$ | $[\text{Fe}/\text{H}]$ | $R (R_{\odot})$ | $M (M_{\odot})$ | $p_{\star} (\text{g}\cdot\text{cm}^{-3})$ |
|--------|----------------------|---------------------------|----------------------------|---------------------------|---------------------------|---|
| | 6192^{+185}_{-203} | $4.466^{+0.081}_{-0.202}$ | $-0.460^{+0.300}_{-0.300}$ | $0.944^{+0.282}_{-0.113}$ | $0.949^{+0.127}_{-0.104}$ | $1.591^{+0.545}_{-0.787}$ |
| | +3%/-3% | +2%/-5% | +65%/-65% | +30%/-12% | +13%/-11% | +34%/-49% |
| 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 005879796-01 / KOI

| Detrend | Depth (ppm) | $R_p (R_{\oplus})$ | $T_{max} (K)$ | $T_{obs} (K)$ | A_{obs} |
|---------|---------------|------------------------|-------------------|------------------------|----------------------------|
| DV | -102 ± 26 | $1.55^{+1.06}_{-0.86}$ | 349^{+26}_{-20} | 5212^{+2840}_{-1033} | $31509^{+138626}_{-21218}$ |
| Alt. | -75 ± 26 | $1.82^{+1.07}_{-0.94}$ | 348^{+23}_{-18} | 4583^{+1646}_{-779} | 16576^{+50362}_{-10479} |

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

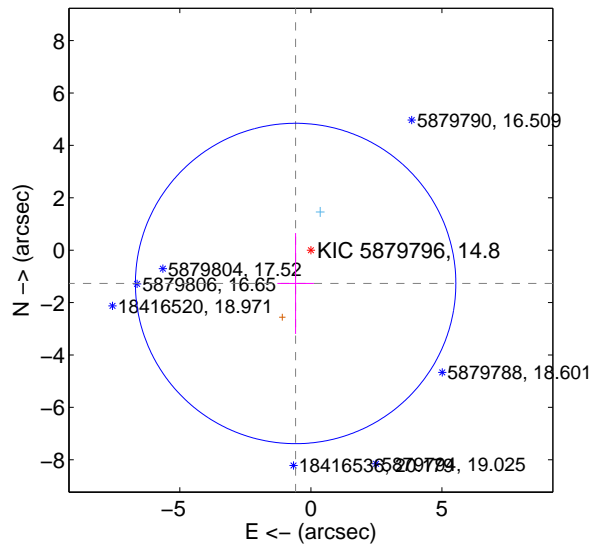
Supplemental centroid analysis for 005879796-01. Kepler magnitude: 14.80. Transit SNR 6.27

There are 1 quarters with good PRF difference image offsets

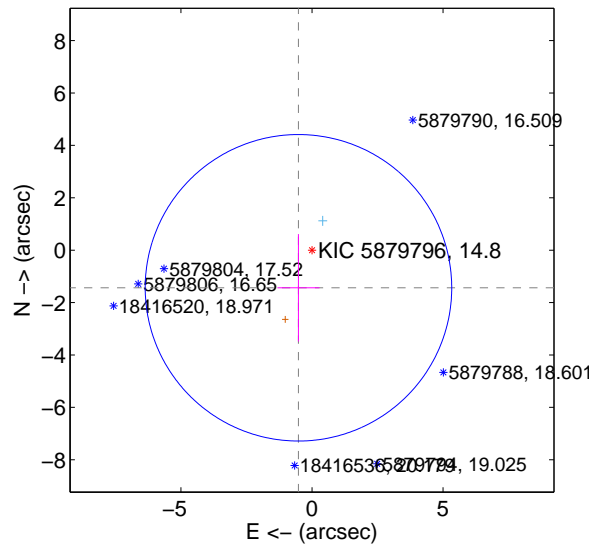
The direct PRF centroid is offset from the target star catalog position by about 0.34 arcsec

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|-------------------|--------------------|
| PRF-fit source offset from OOT | 1.398 ± 2.038 | 0.69 | 0.582 ± 0.696 | -1.271 ± 1.925 |
| PRF-fit source offset from KIC position | 1.526 ± 1.950 | 0.78 | 0.516 ± 0.801 | -1.436 ± 2.052 |
| photometric centroid source offset | 2.02 ± 1.89 | 1.07 | -2.02 ± 1.89 | -0.04 ± 1.64 |

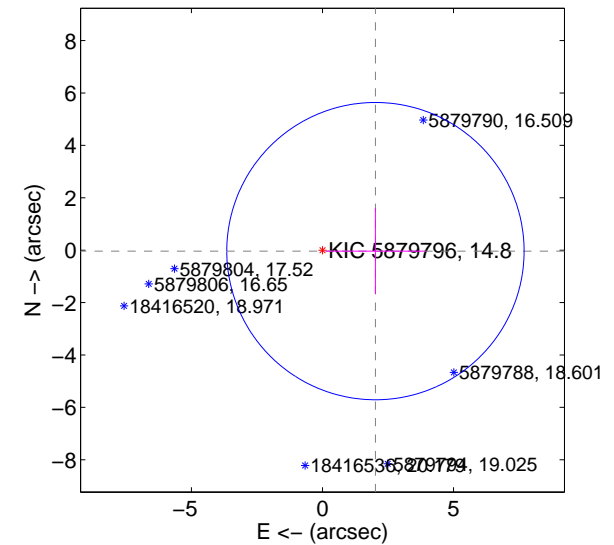
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

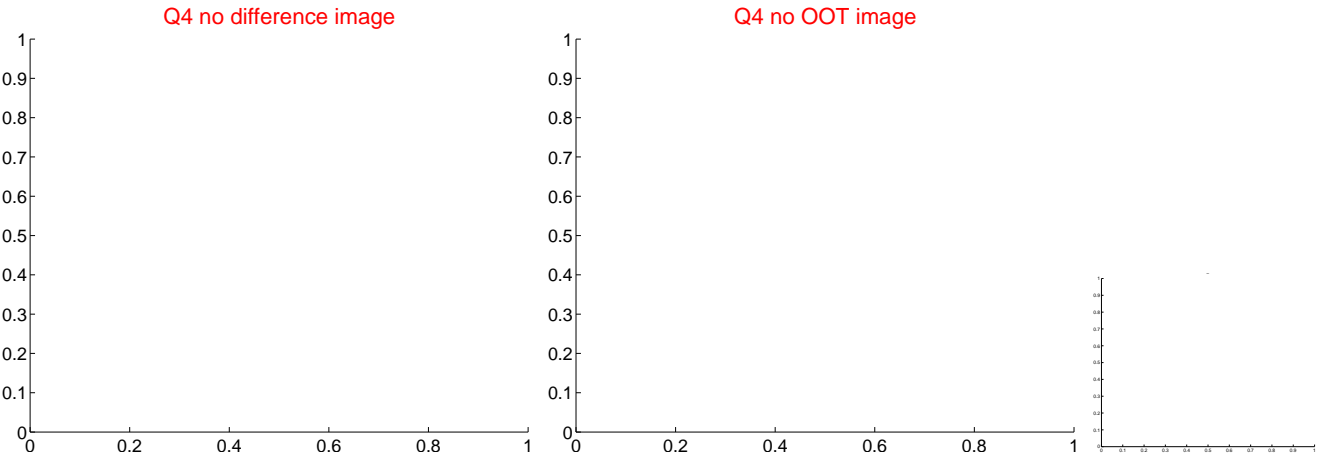
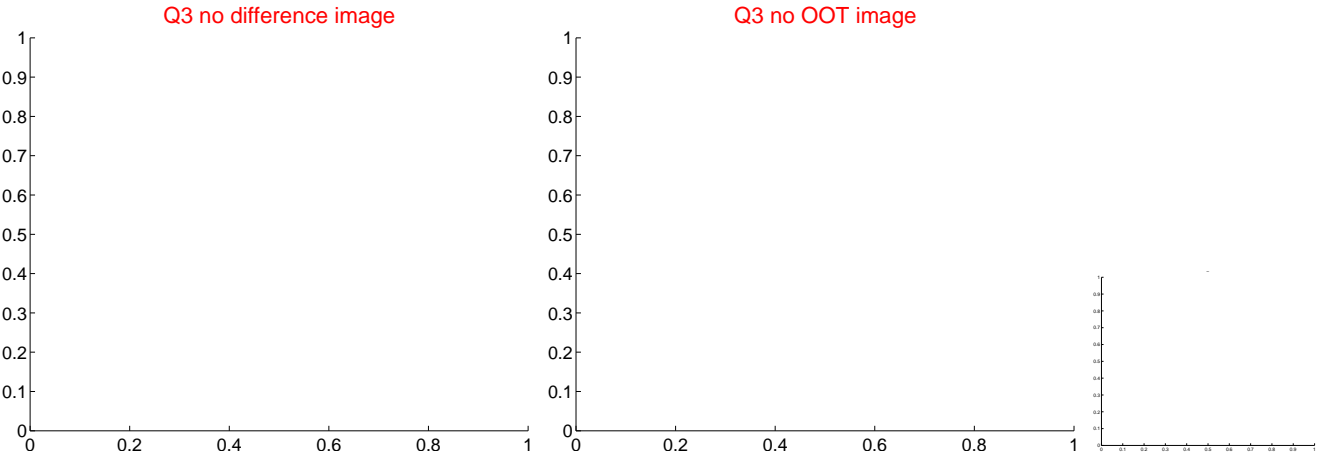
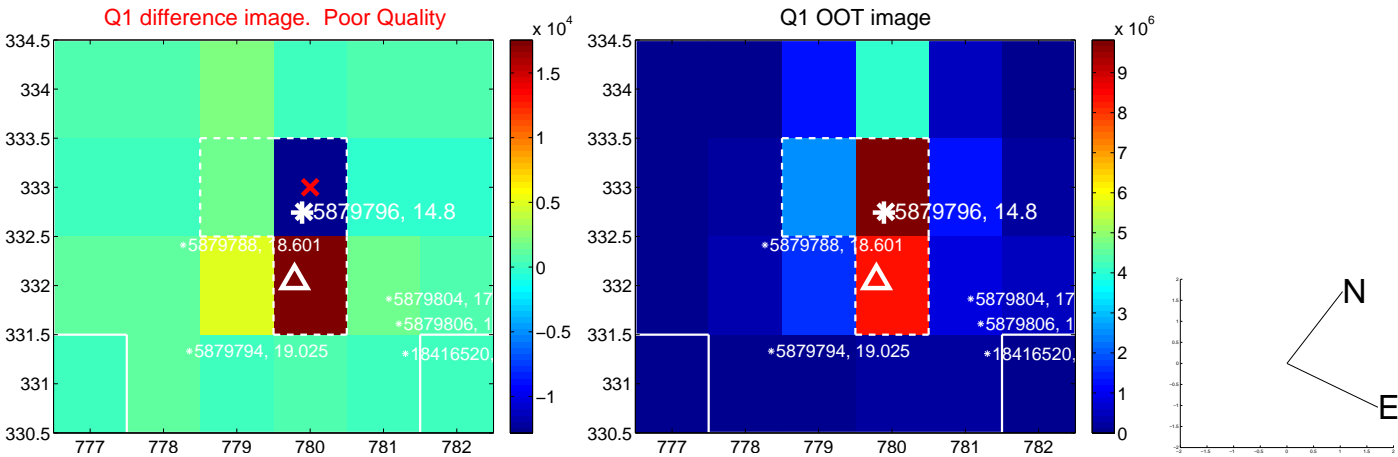


offset from photometric centroids



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.

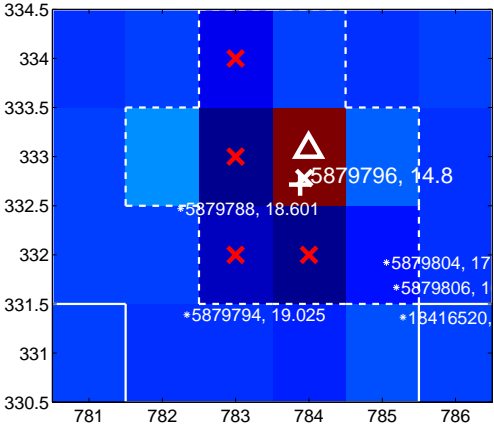
Q5 no difference image



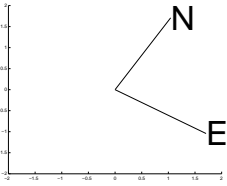
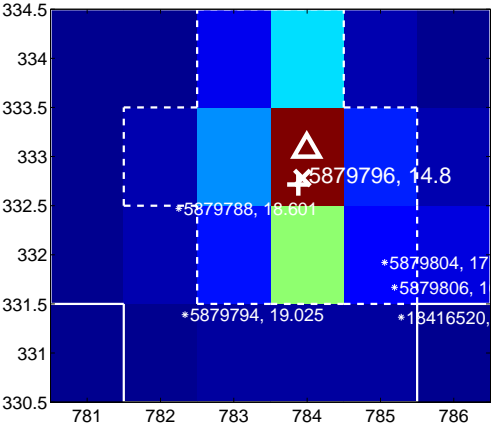
Q5 no OOT image



Q6 difference image



Q6 OOT image



Q7 no difference image



Q7 no OOT image



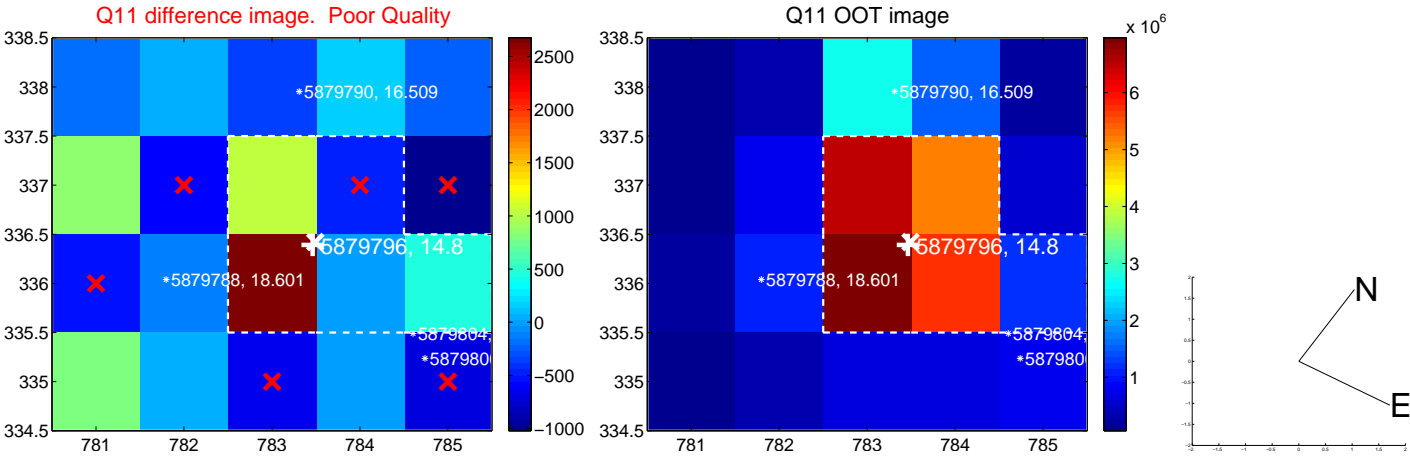
Q8 no difference image



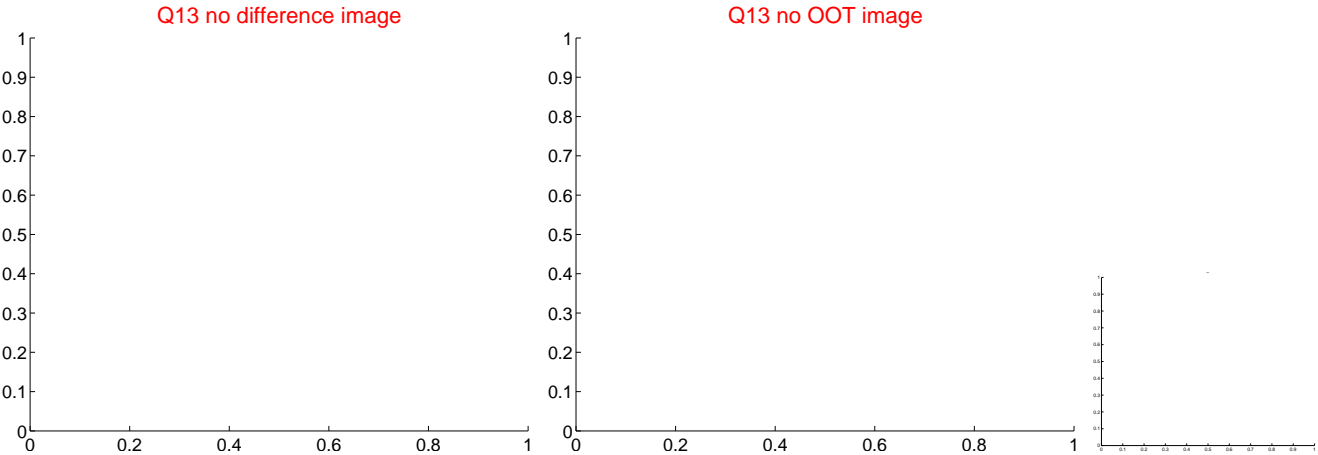
Q8 no OOT image



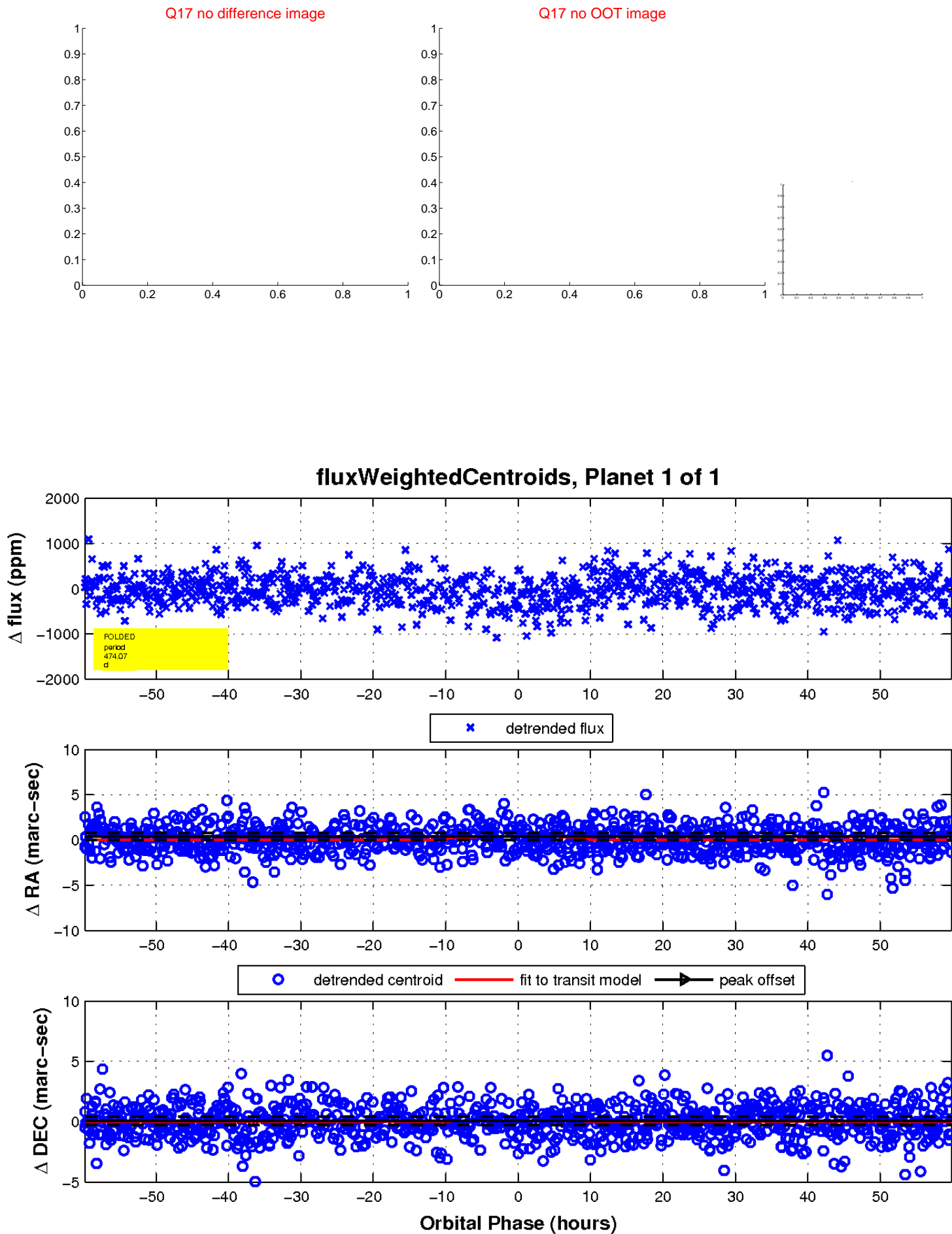
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

