

KIC 009201463

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}) |
|--------------|----------|------|---------------|--------------|-------------|------------------|------|------|-----------------------------|-----------------|------------------------|------------------------|
| 009201463-01 | OBS | No | 399.367119 | 386.402627 | 485.5 | 12.000 | 12.8 | -1.0 | 0.18 | 3319 | 0.39 | 0.01 |

Robovetter Results

| TCE | Run Type | Disp | Score | N | S | C | E | Comments |
|--------------|----------|------|-------|---|---|---|---|---|
| 009201463-01 | OBS | FP | 0.00 | 1 | 0 | 0 | 0 | INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS |

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.

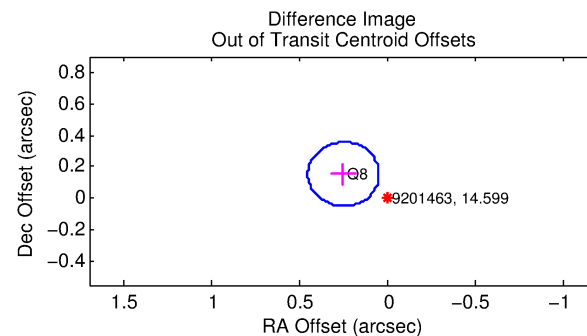
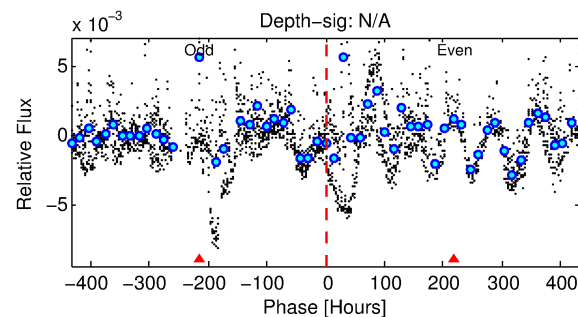
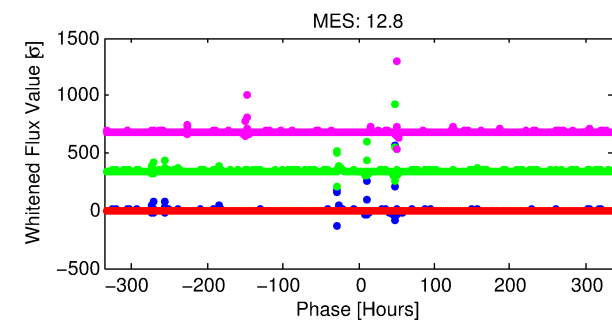
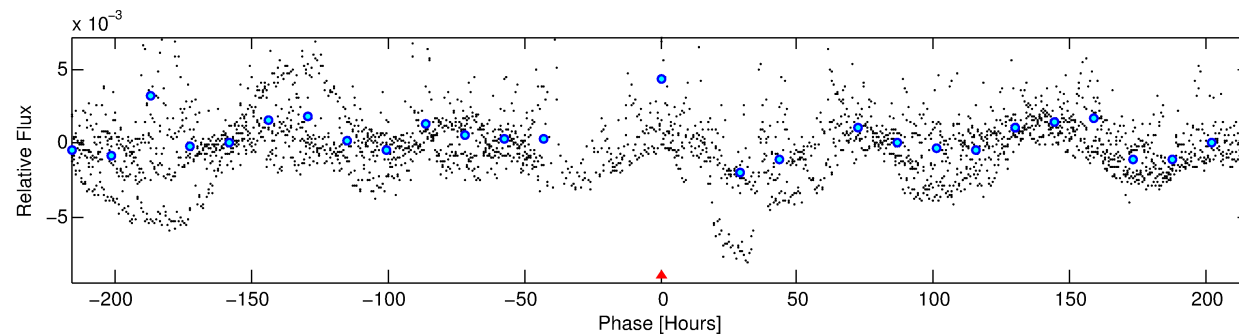
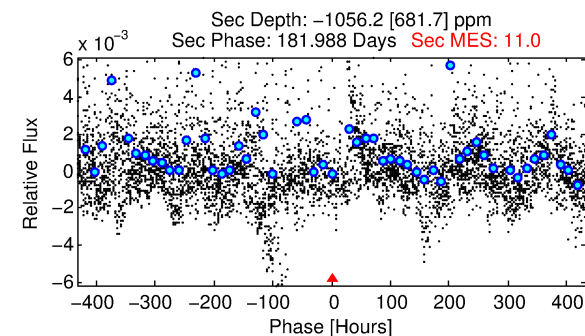
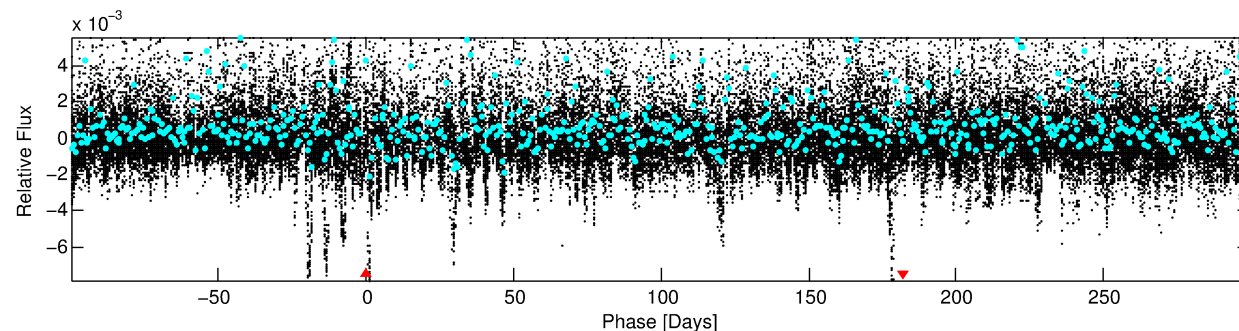
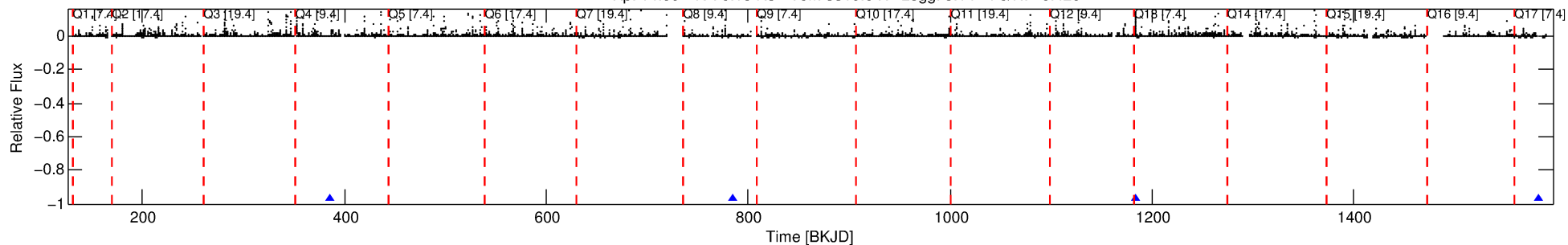
Ephemeris Match Information For 009201463-01

No Significant Match Found

DV One-Page Summary

KIC: 9201463 Candidate: 1 of 1 Period: 399.367 d

Kp: 14.60 R*: 0.18 Rs Teff: 3319.0 K Logg: 5.14 Fe/H: -0.420



TPS TCE Results:

Period = 399.36712 d
Epoch = 386.4026 BKJD

DV fit results are unavailable

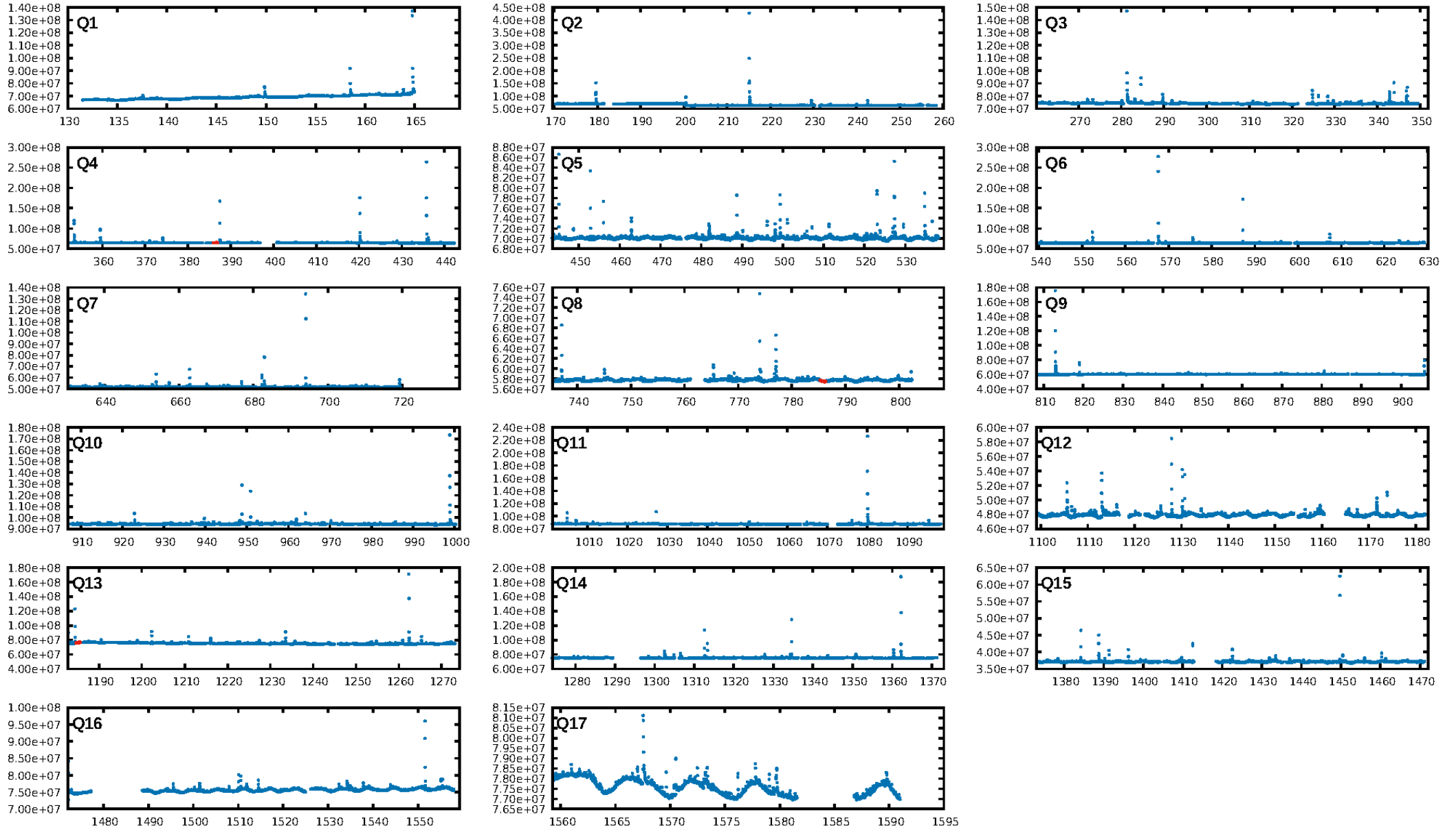
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.49e-05
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.96
Centroid-sig: N/A
Centroid-so: 3.726 arcsec [17.27σ]
OotOffset-rm: 0.294 arcsec [4.35σ]
KicOffset-rm: 4.032 arcsec [59.55σ]
OotOffset-st: 0/0/1/0 [1]
KicOffset-st: 0/0/1/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [1/1]

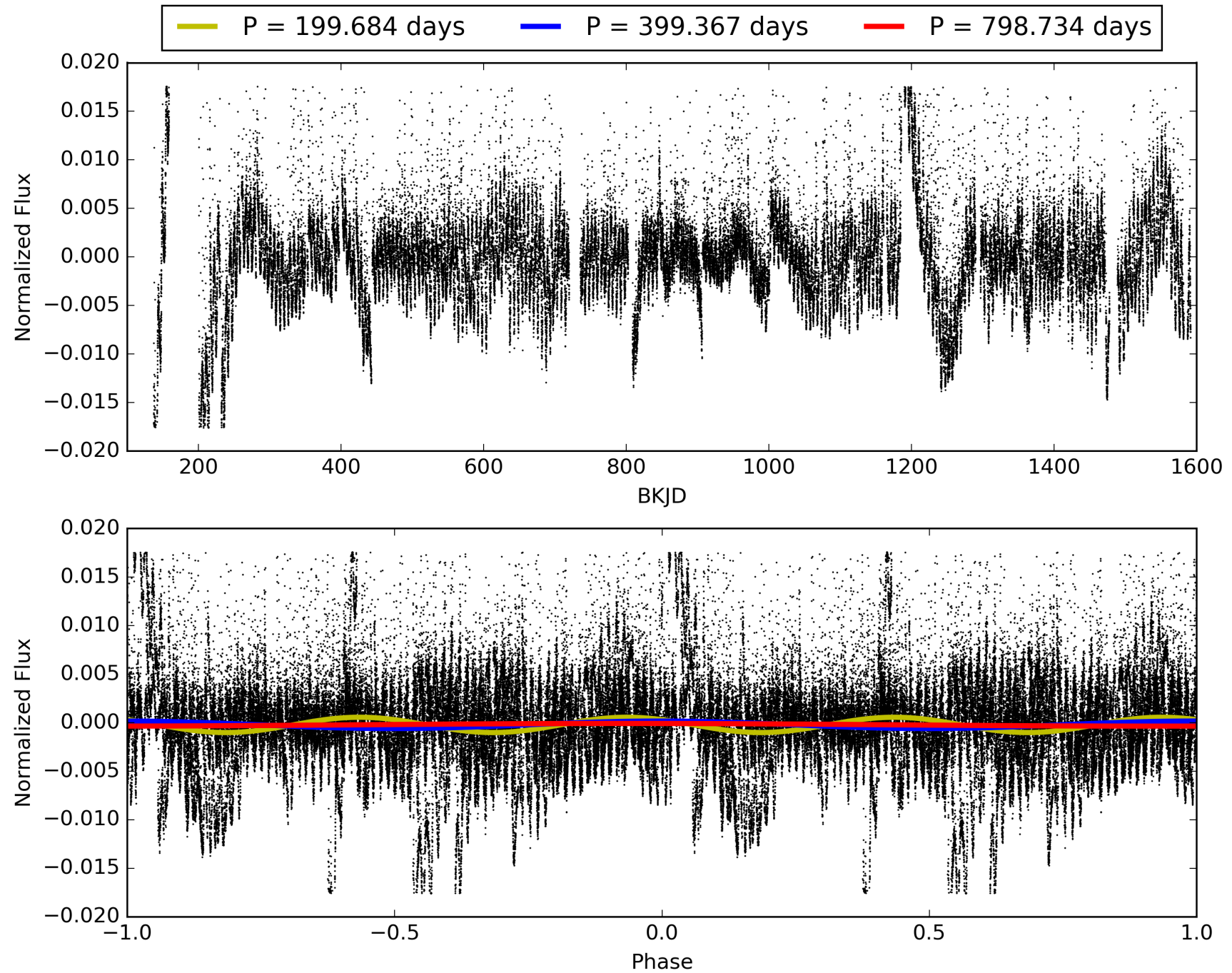
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 01:52:55 Z

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

TCE 009201463-01, PDC Light Curves

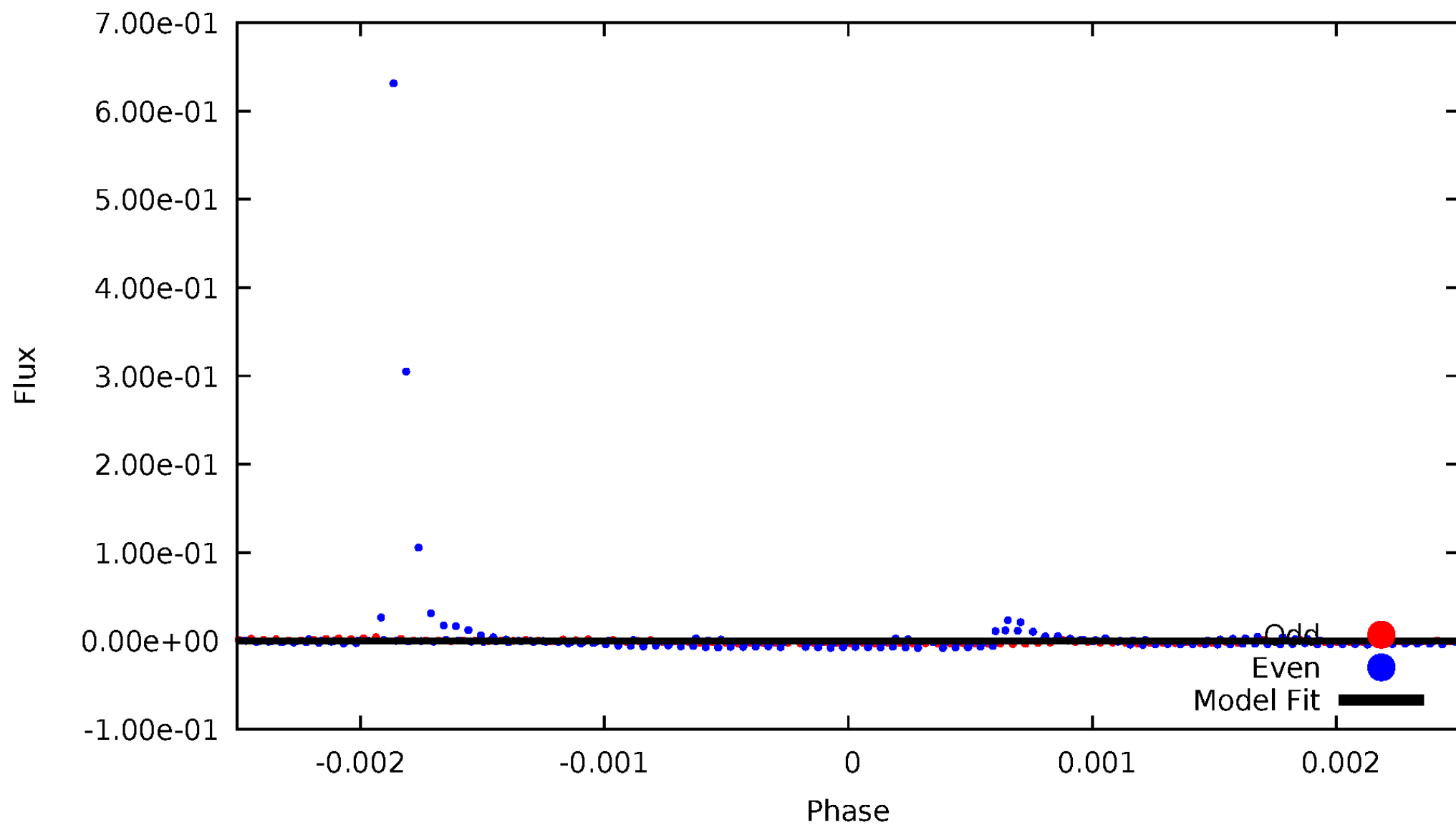


TCE 009201463-01



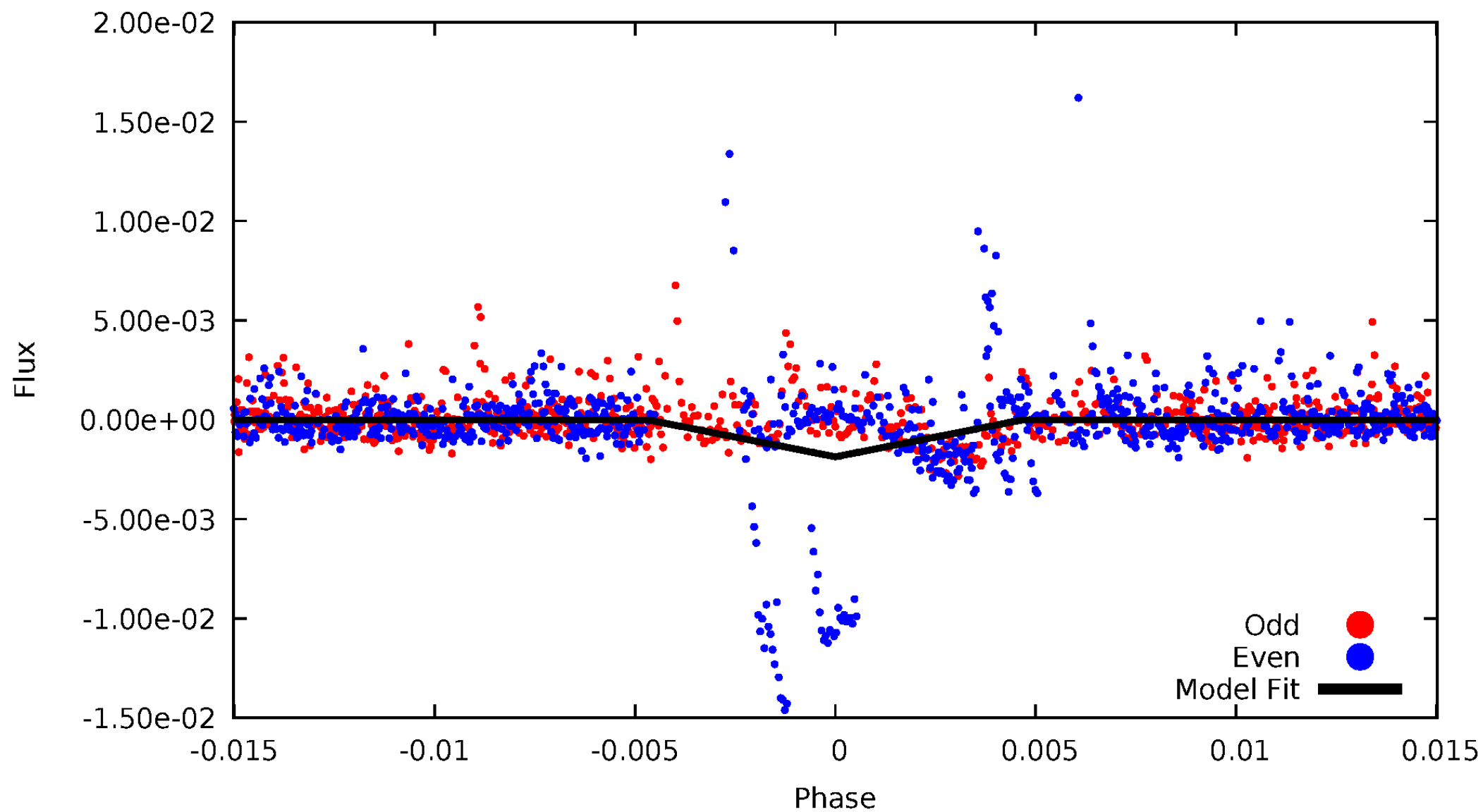
DV Odd/Even

TCE 009201463-01



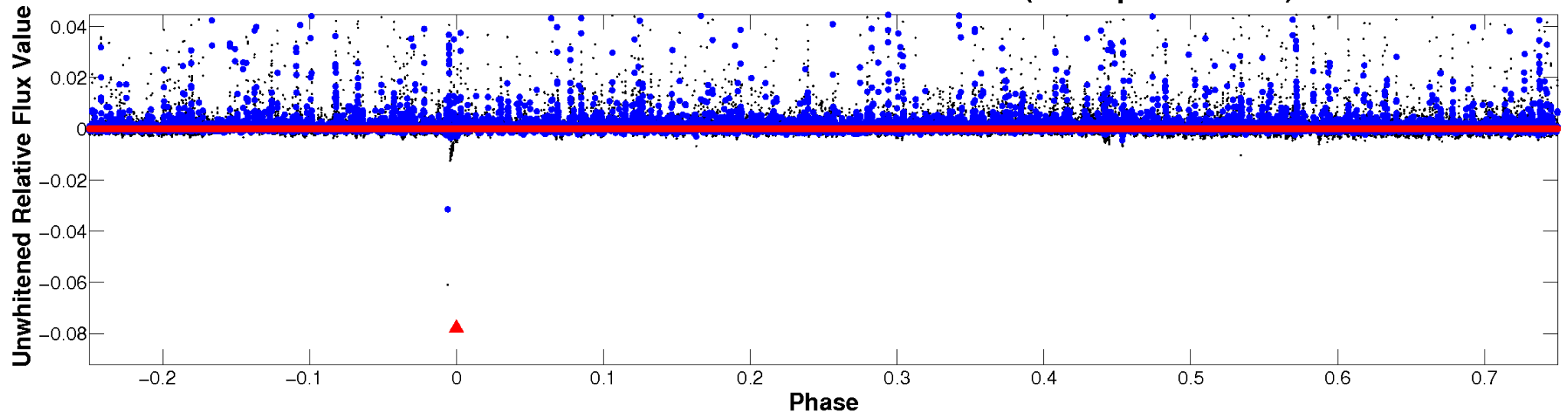
ALT Odd/Even

TCE 009201463-01

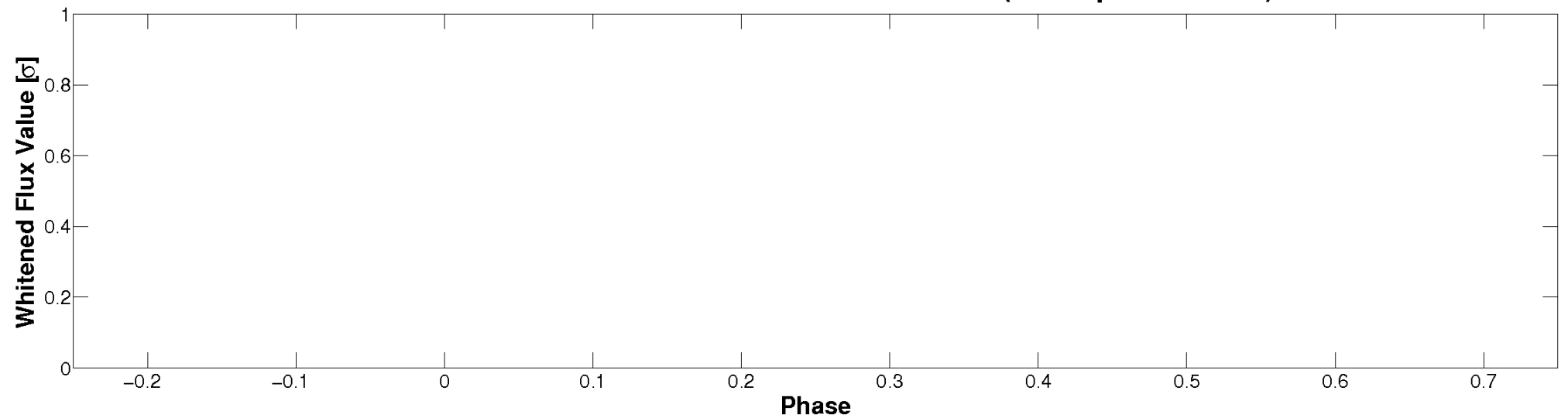


Non-Whitened Vs. Whitened Light Curve

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

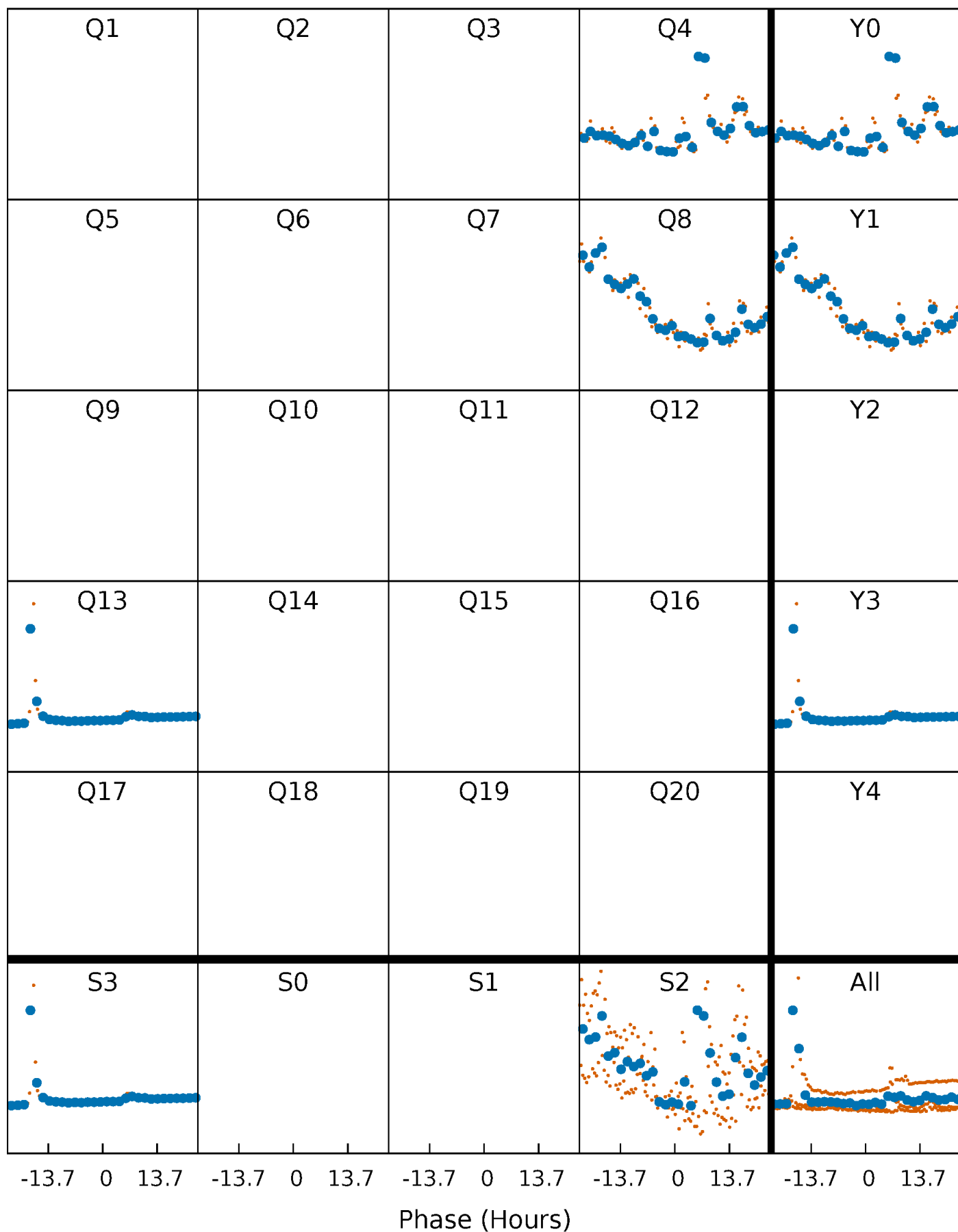


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



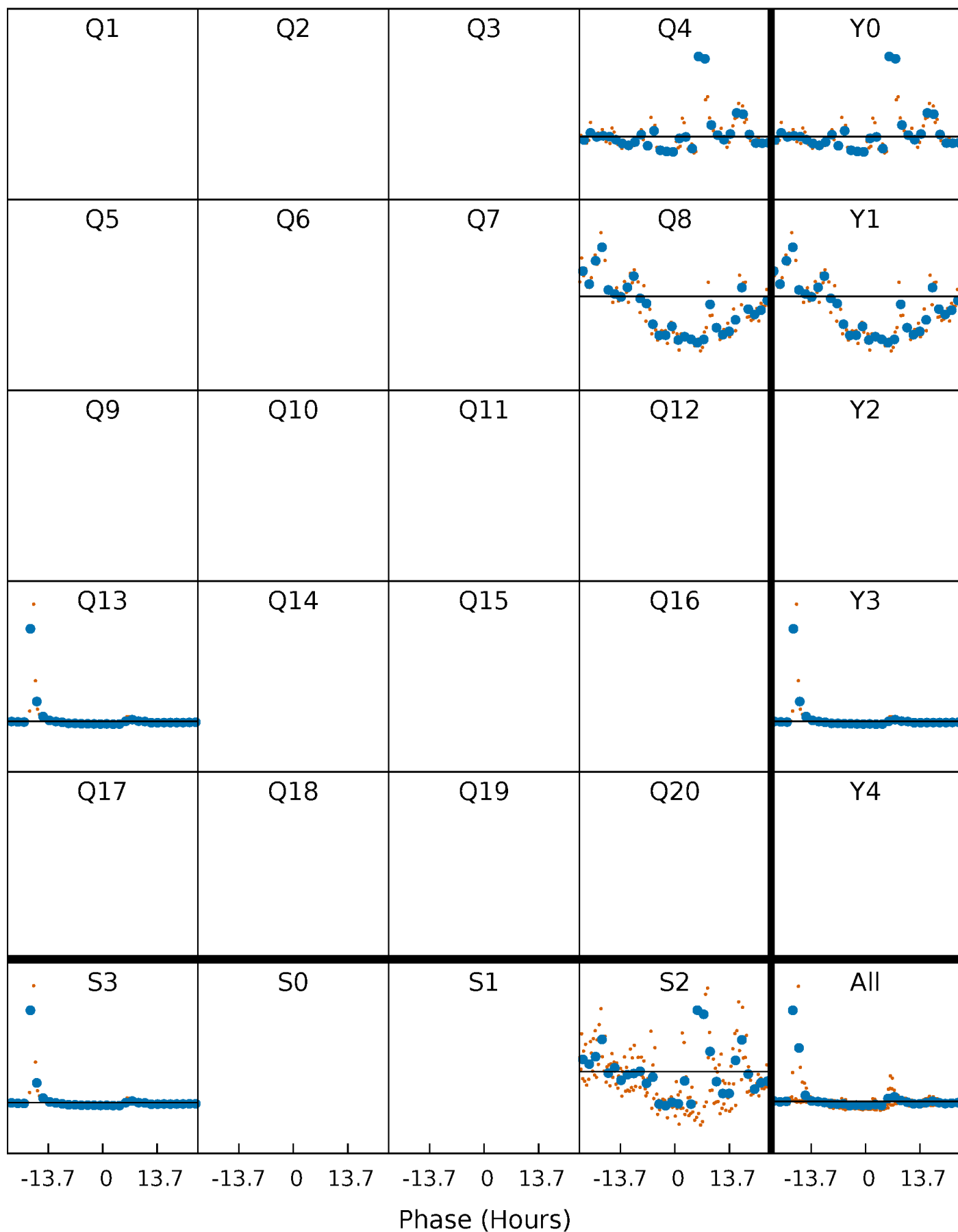
PDC Quarter-Phased Transit Curves

TCE 009201463-01 P=399.367119 Days $T_0=386.402627$ (BKJD)



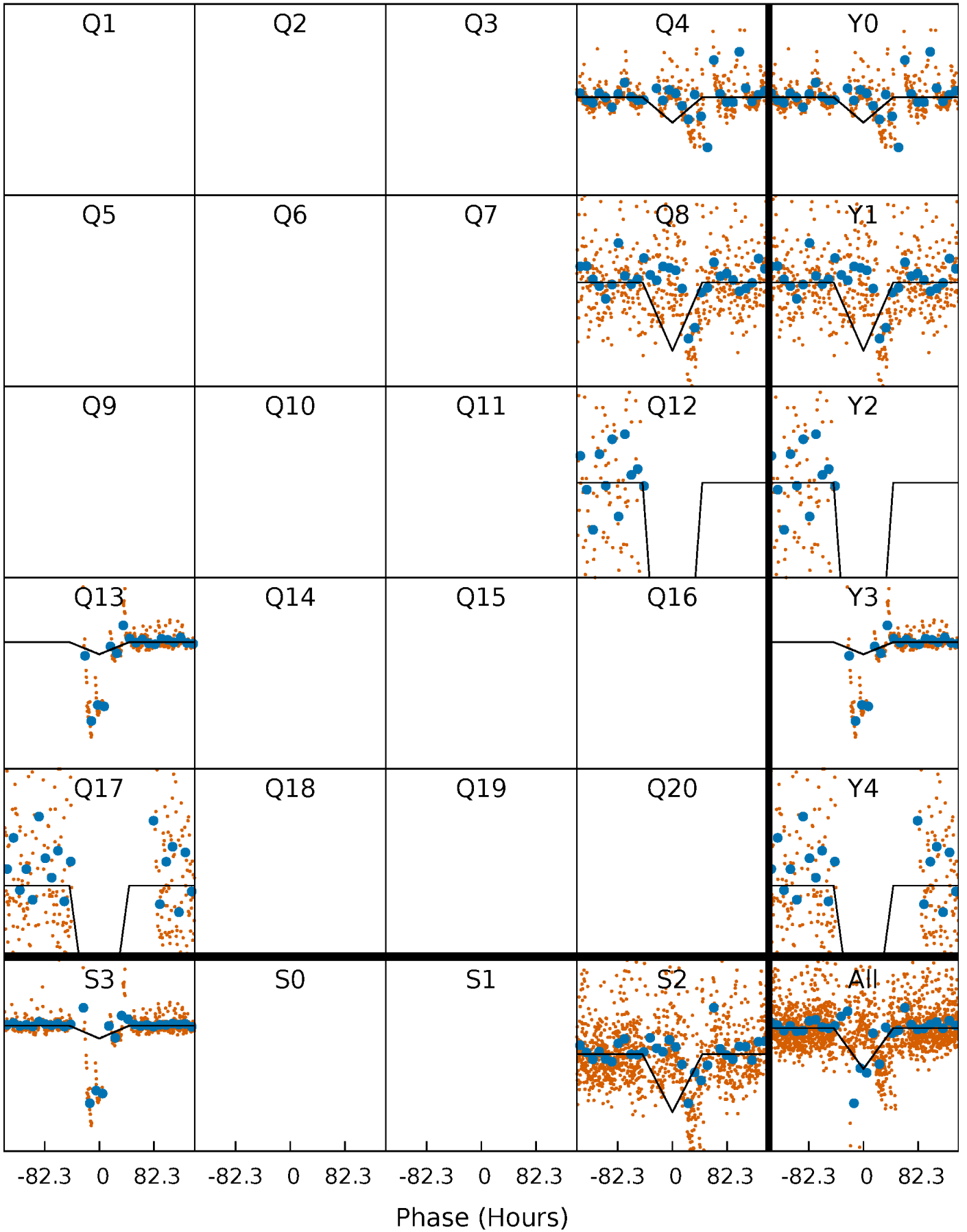
DV Quarter-Phased Transit Curves

TCE 009201463-01 P=399.367119 Days $T_0=386.402627$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

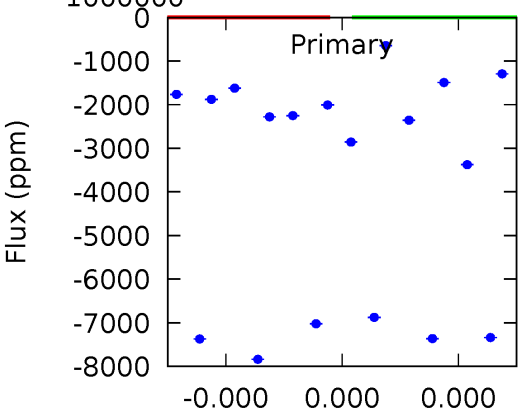
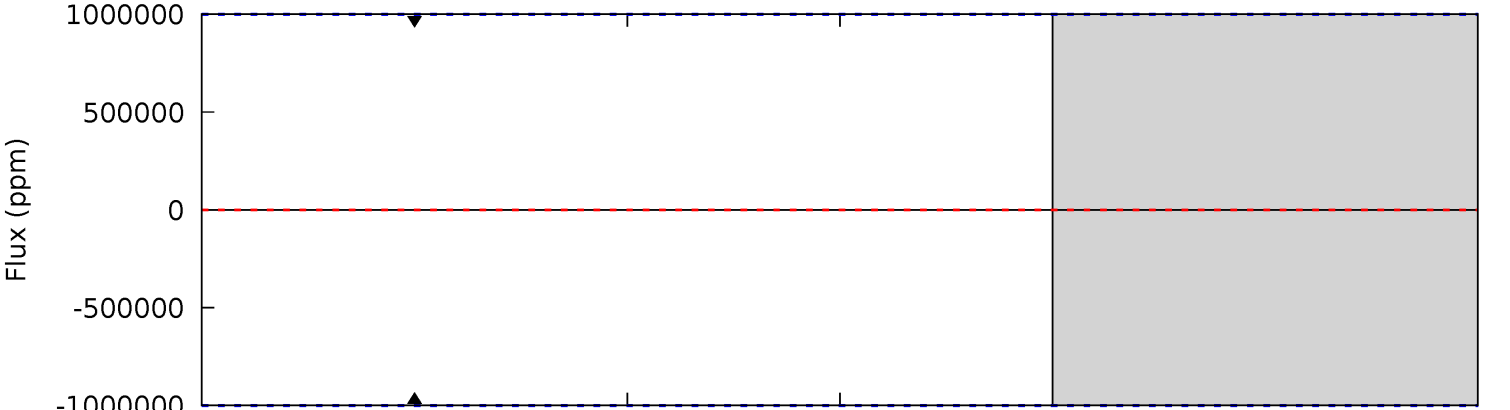
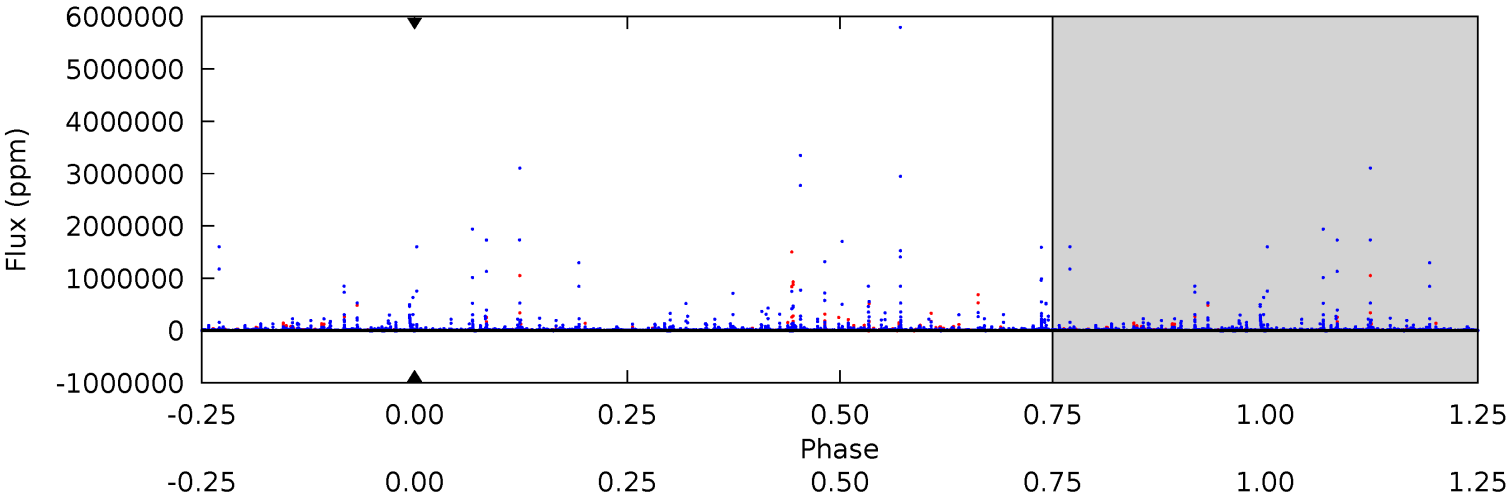
TCE 009201463-01 P=399.367119 Days $T_0=385.221468$ (BKJD)



DV Model-Shift Uniqueness Test

009201463-01, P = 399.367119 Days, E = 386.402627 Days

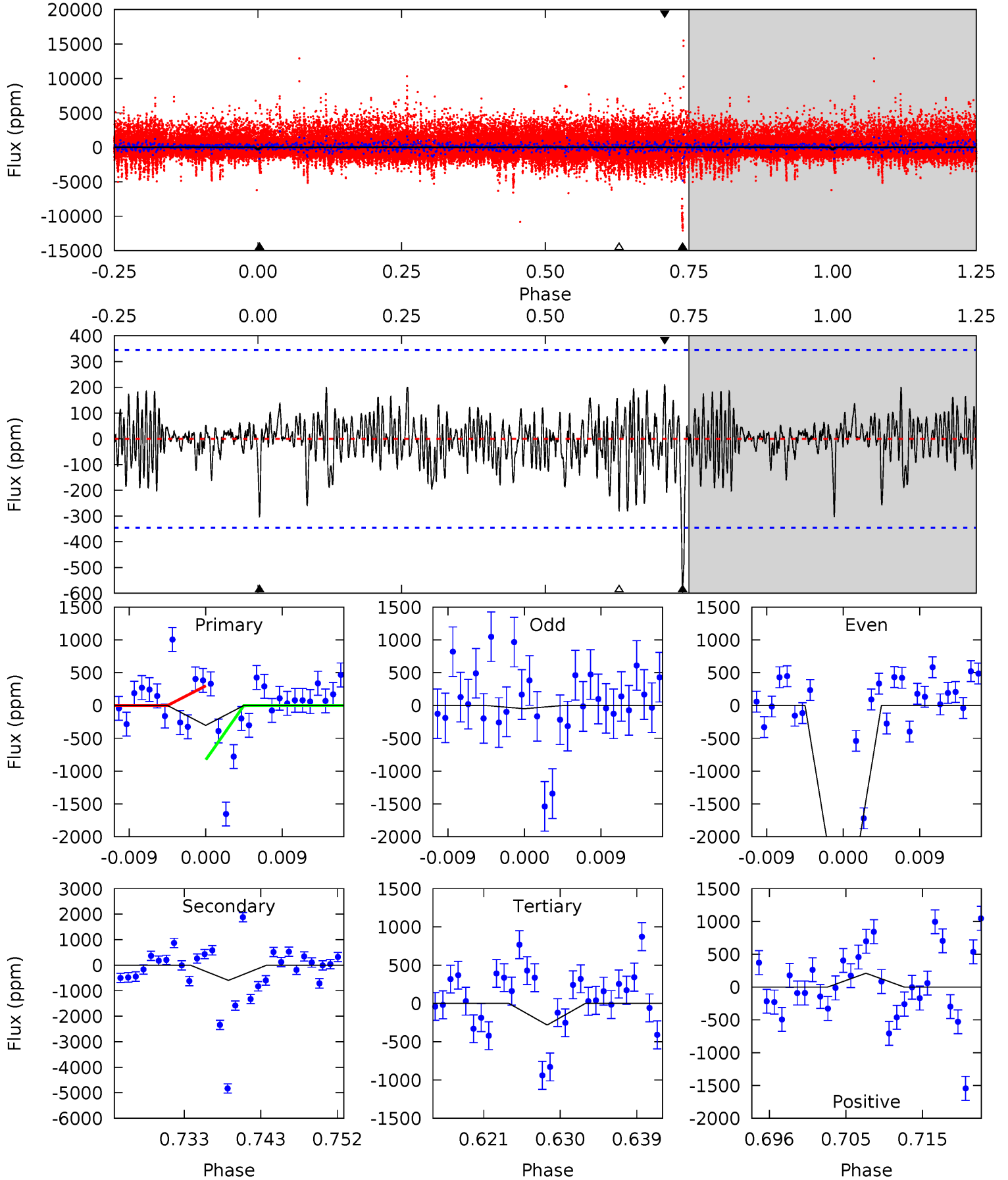
| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|-----|-----|-----|-----|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|-----|-------|-----|
| 0 | 0 | 0 | 0 | 1.00 | 1.00 | 1.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



Alt Model-Shift Uniqueness Test

009201463-01, P = 399.367119 Days, E = 385.221468 Days

| Pri | Sec | Ter | Pos | FA ₁ | FA ₂ | F _{Red} | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|------|
| 4.41 | 8.67 | 4.10 | 3.07 | 5.04 | 2.60 | 1.14 | 0.31 | 1.35 | 4.57 | 5.60 | 22.3 | 10.4 | 0.26 | 3.66 |



Stellar Parameters For KIC 009201463

| | $T_{\text{eff}}(K)$ | $\log(g)$ | [Fe/H] | R (R_{\odot}) | M (M_{\odot}) | p_{\star} ($\text{g}\cdot\text{cm}^{-3}$) |
|--------|---------------------|---------------------------|----------------------------|---------------------------|---------------------------|---|
| | 3319^{+118}_{-49} | $5.137^{+0.092}_{-0.138}$ | $-0.420^{+0.350}_{-0.250}$ | $0.177^{+0.088}_{-0.038}$ | $0.157^{+0.099}_{-0.033}$ | $39.670^{+20.030}_{-21.260}$ |
| | +4%/-1% | +2%/-3% | +83%/-60% | +50%/-21% | +63%/-21% | +50%/-54% |
| Source | PHO54 | PHO54 | PHO54 | DSEP | | |

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 009201463-01 / KOI

| Detrend | Depth (ppm) | R_p (R_{\oplus}) | T_{max} (K) | T_{obs} (K) | A_{obs} |
|---------|-----------------|------------------------|----------------------|------------------------|----------------------------------|
| DV | 0 ± 1000000 | $1.55^{+1.55}_{-1.04}$ | 116^{+8}_{-6} | 2918^{+3968}_{-9304} | $166541^{+14981618}_{-12230682}$ |
| Alt. | -595 ± 69 | $1.66^{+1.62}_{-1.11}$ | 115^{+8}_{-5} | 2429^{+770}_{-362} | $41233^{+337841}_{-30969}$ |

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

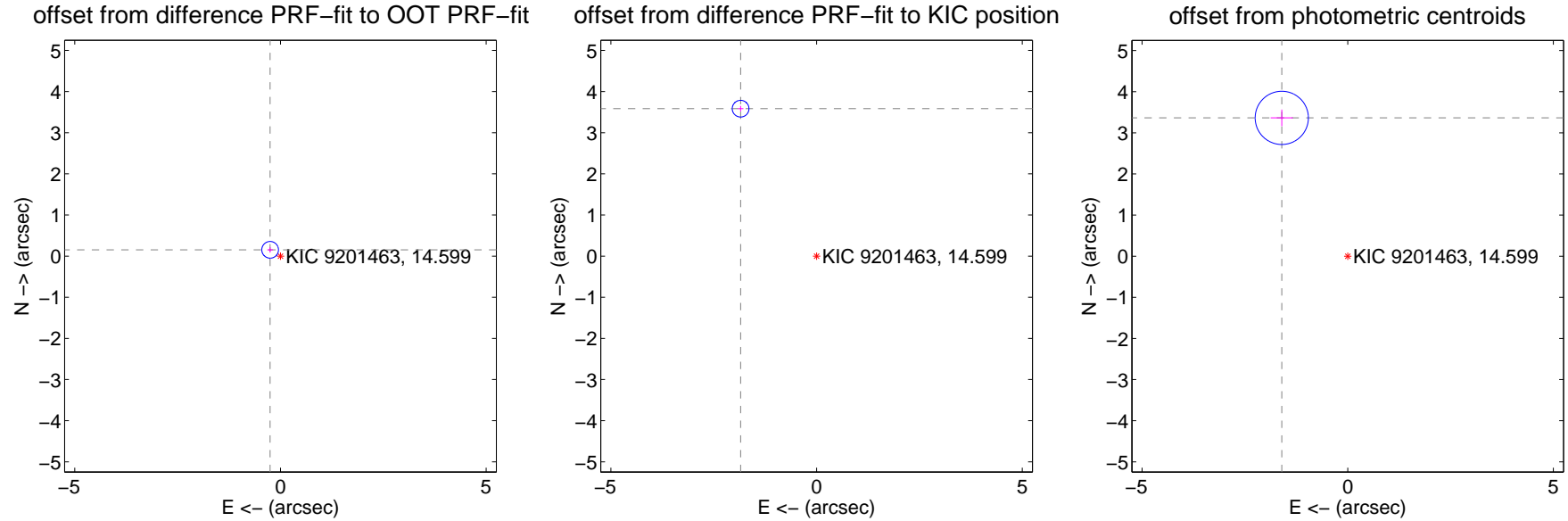
DV Centroid Data

Supplemental centroid analysis for 009201463-01. Kepler magnitude: 14.60. Transit SNR -1.00

There are 0 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 3.78 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

| | Distance in arcsec | Distance / σ | Δ RA | Δ Dec |
|---|--------------------|---------------------|-------------------|-------------------|
| PRF-fit source offset from OOT | 0.294 ± 0.068 | 4.35 | 0.251 ± 0.068 | 0.153 ± 0.068 |
| PRF-fit source offset from KIC position | 4.032 ± 0.068 | 59.55 | 1.847 ± 0.068 | 3.584 ± 0.068 |
| photometric centroid source offset | 3.73 ± 0.22 | 17.27 | 1.60 ± 0.27 | 3.36 ± 0.20 |

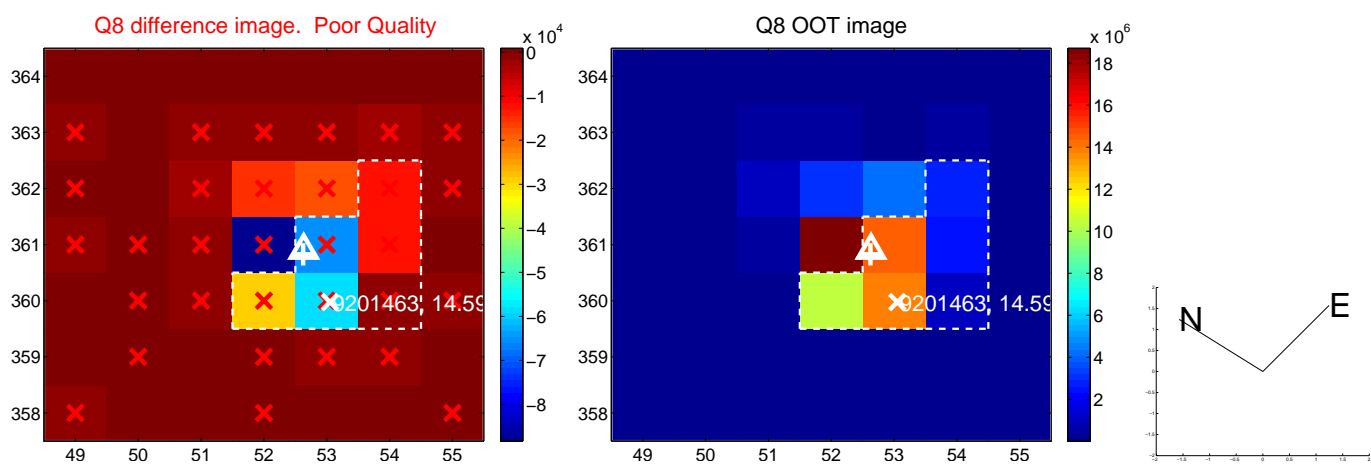
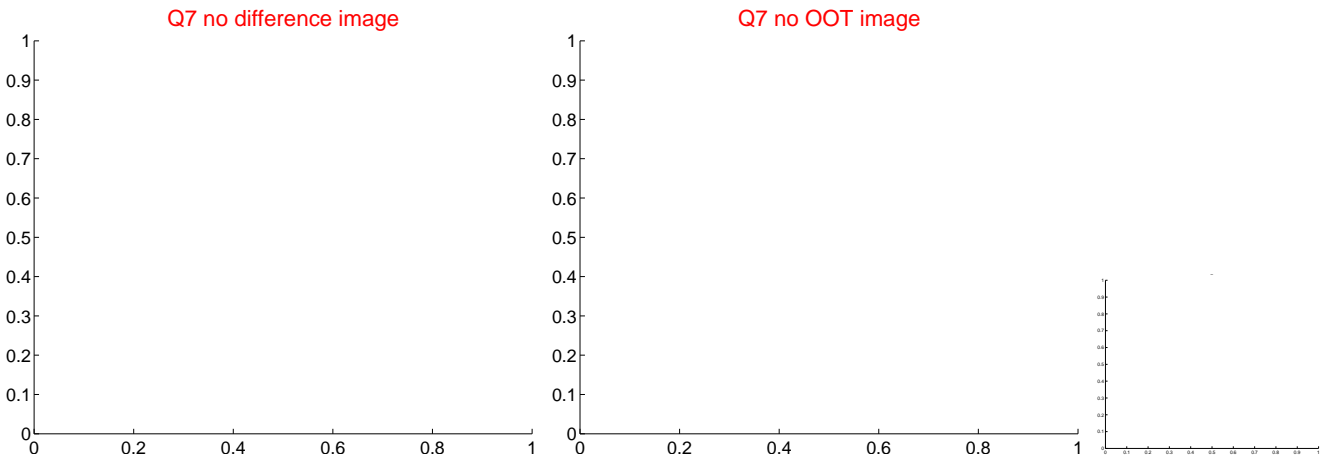
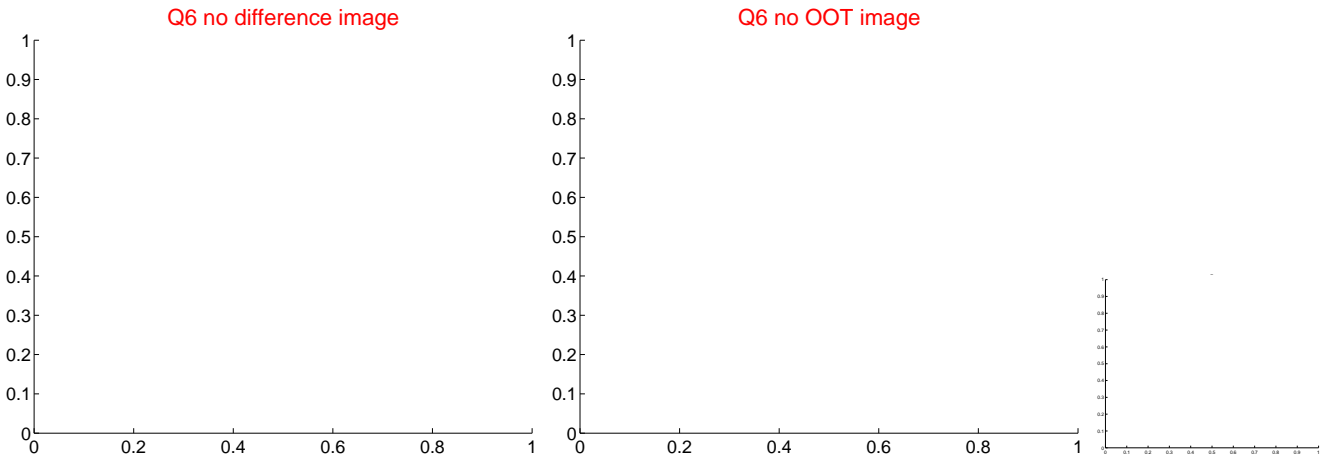
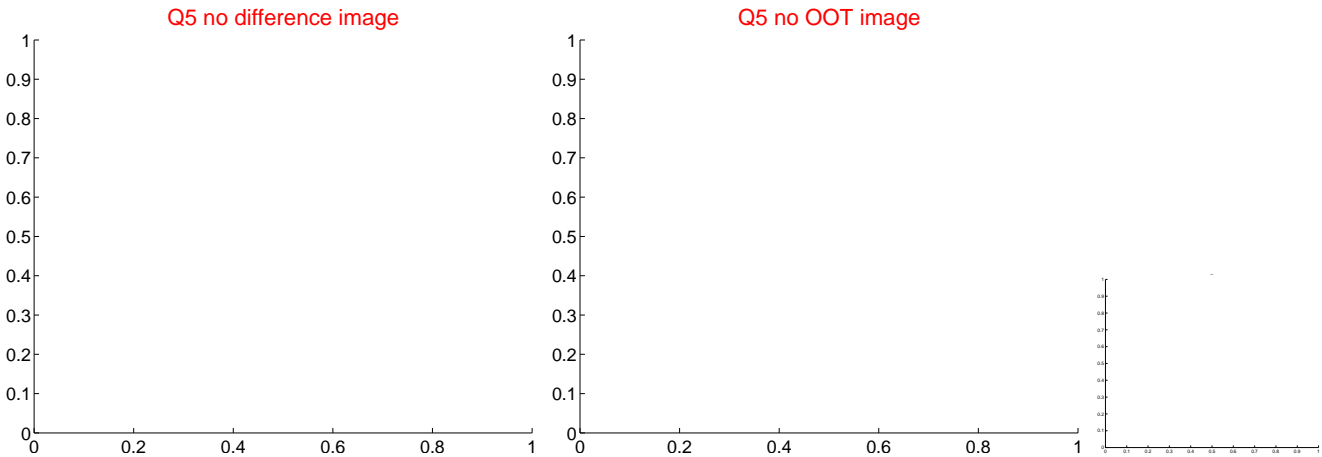


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



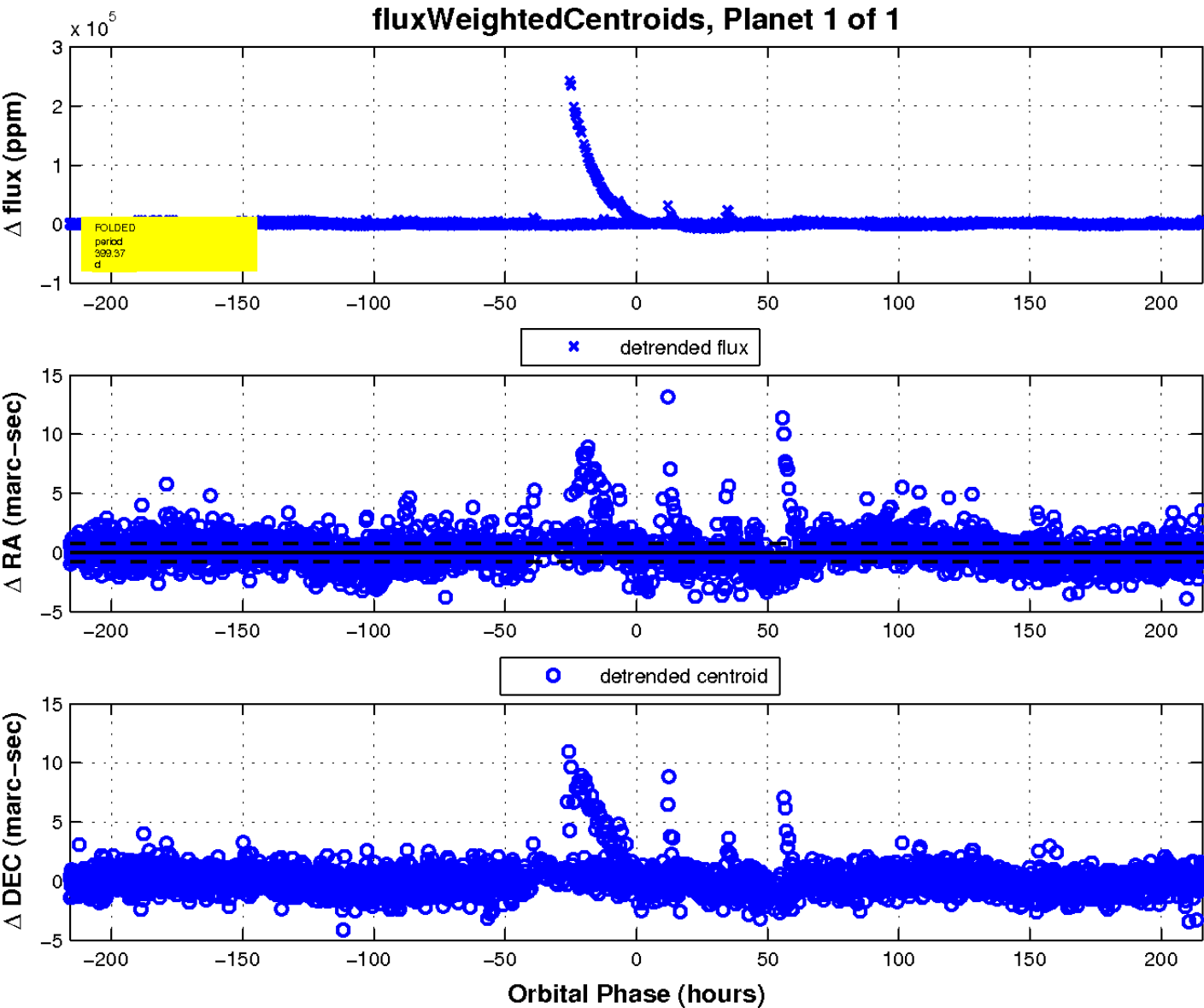
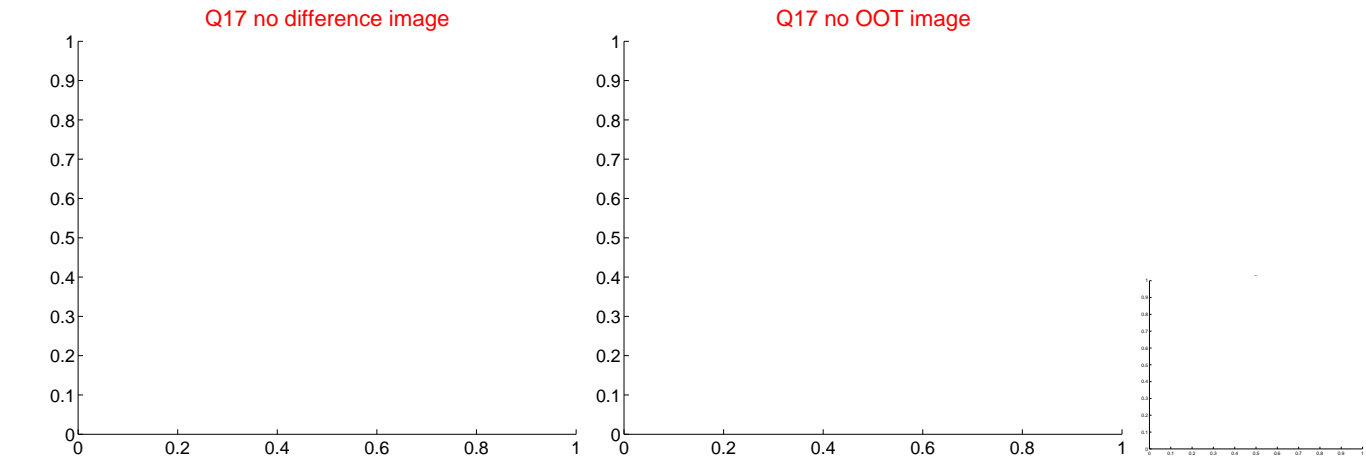
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

