

KIC 010528068

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})
010528068-01	OBS	1162.01	158.684402	173.954157	901.1	11.693	89.6	89.4	1.03	5751	3.23	3.54

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010528068-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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

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

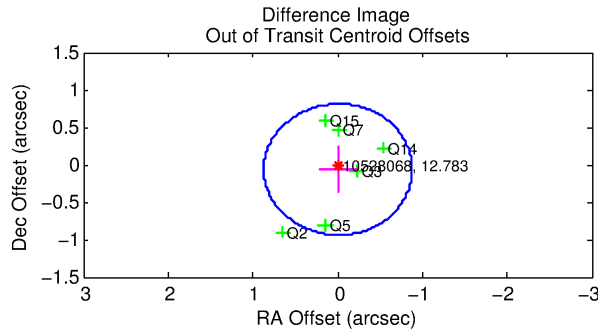
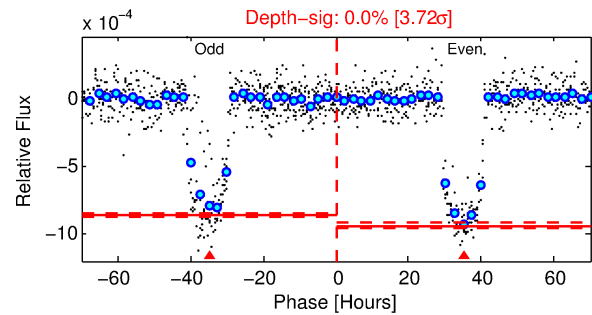
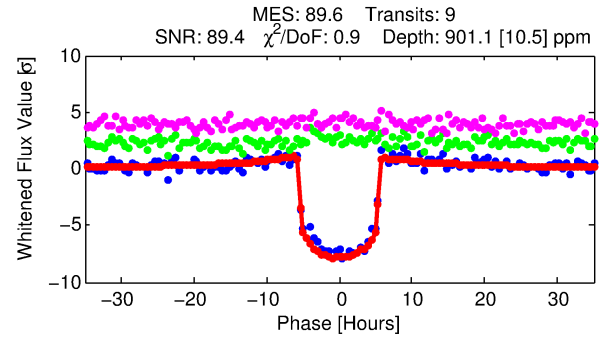
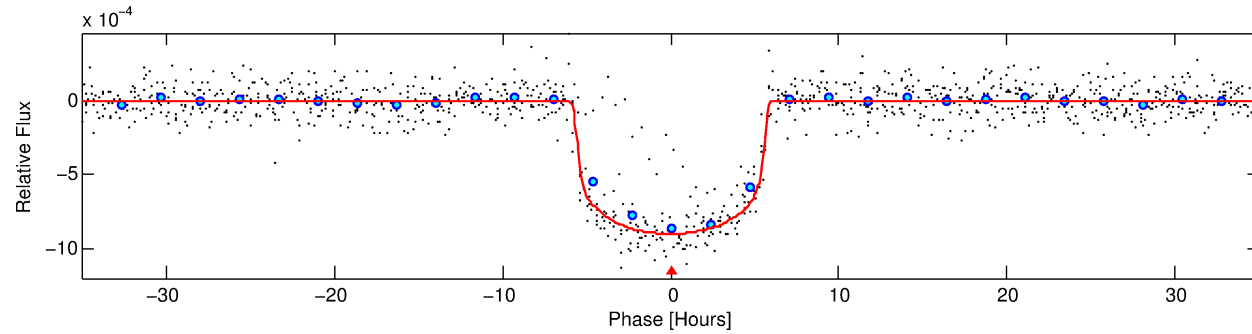
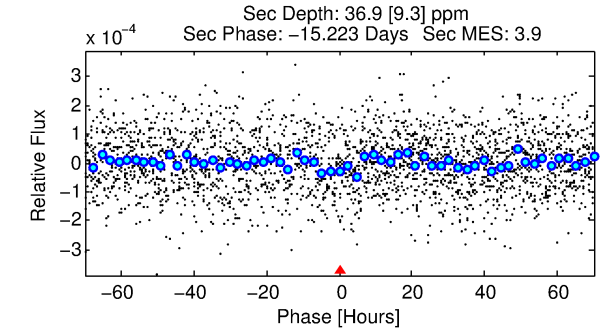
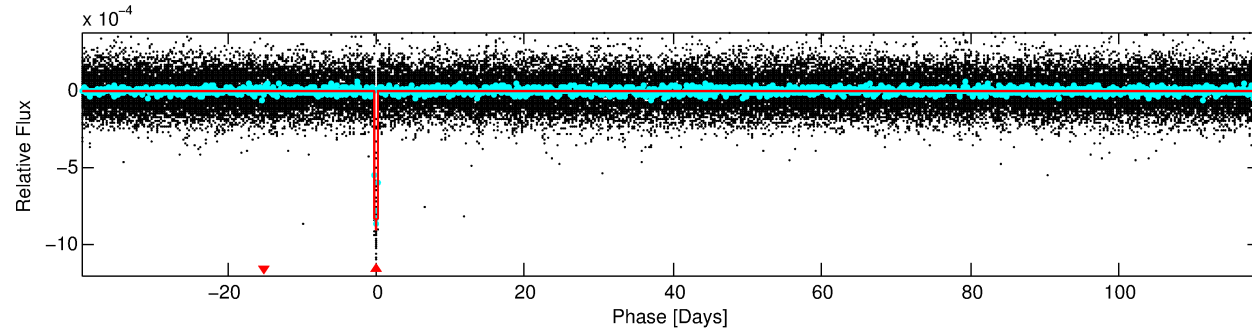
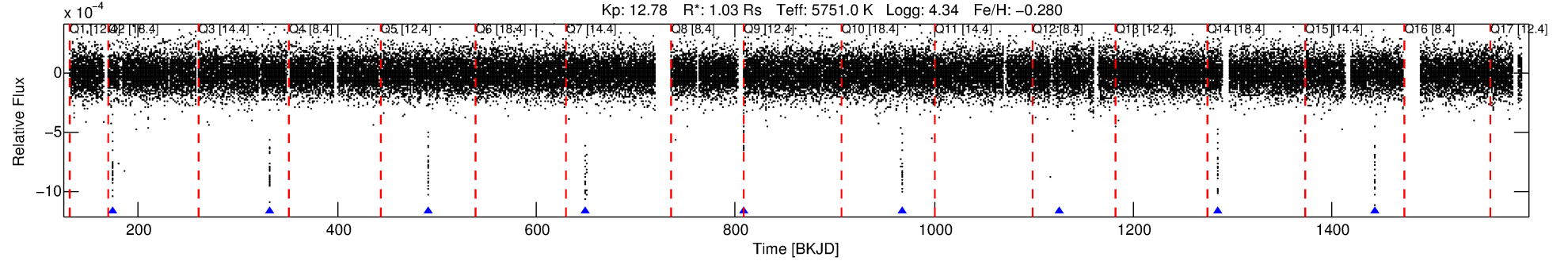
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010528068-01

No Significant Match Found

DV One-Page Summary

KIC: 10528068 Candidate: 1 of 1 Period: 158.684 d
KOI: K01162.01 Corr: 0.994



DV Fit Results:

Period = 158.68440 [0.00042] d
Epoch = 173.9542 [0.0019] BKJD
Rp/R* = 0.0286 [0.0013]
a/R* = 87.14 [17.29]
b = 0.59 [0.22]
Seff = 3.54 [0.96]
Teq = 350 [24] K
Rp = 3.23 [0.53] Re
a = 0.5442 [0.0869] AU
Ag = 577.37 [215.74] [2.67 σ]
Teffp = 2651 [183] K [12.47 σ]

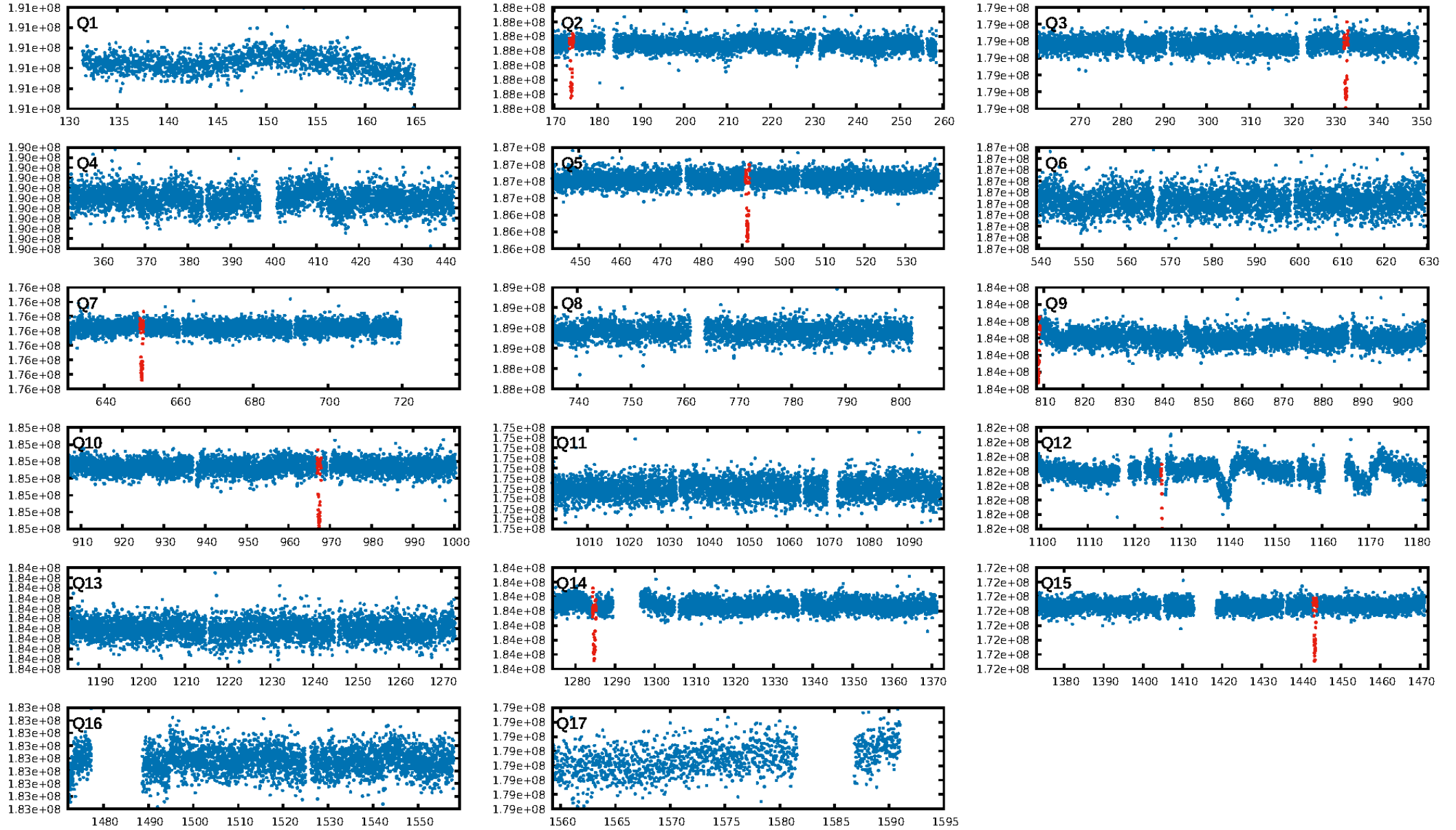
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [9/9]
GhostDiagnostic-chr: 11.09
Centroid-sig: 68.7%
Centroid-so: 0.231 arcsec [1.64 σ]
OotOffset-rm: 0.066 arcsec [0.23 σ]
KicOffset-rm: 0.096 arcsec [0.33 σ]
OotOffset-st: 2/3/0/1 [6]
KicOffset-st: 2/3/0/1 [6]
DiffImageQuality-fgm: 1.00 [6/6]
DiffImageOverlap-fno: 1.00 [6/6]

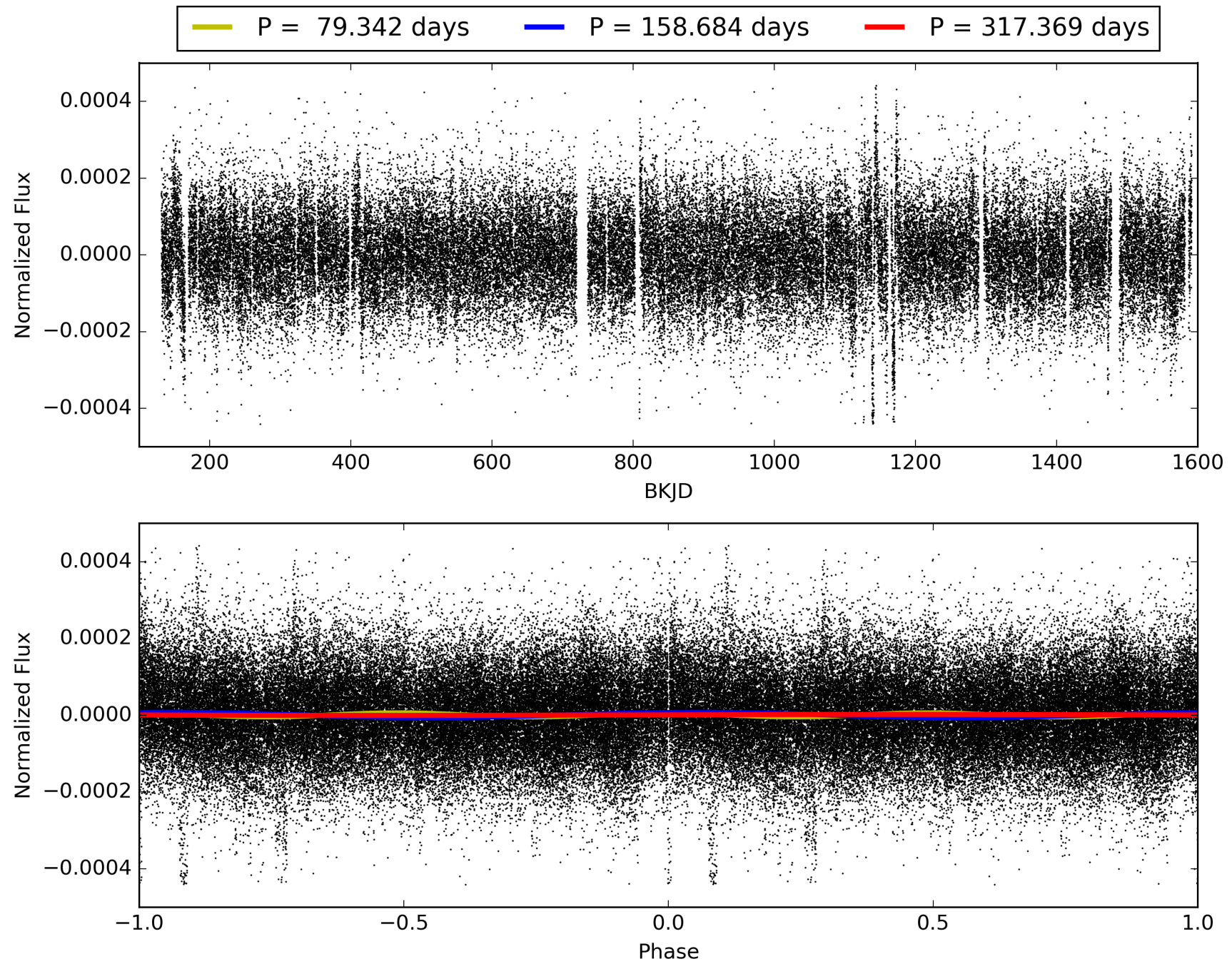
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 22:25:24 Z

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

TCE 010528068-01, PDC Light Curves

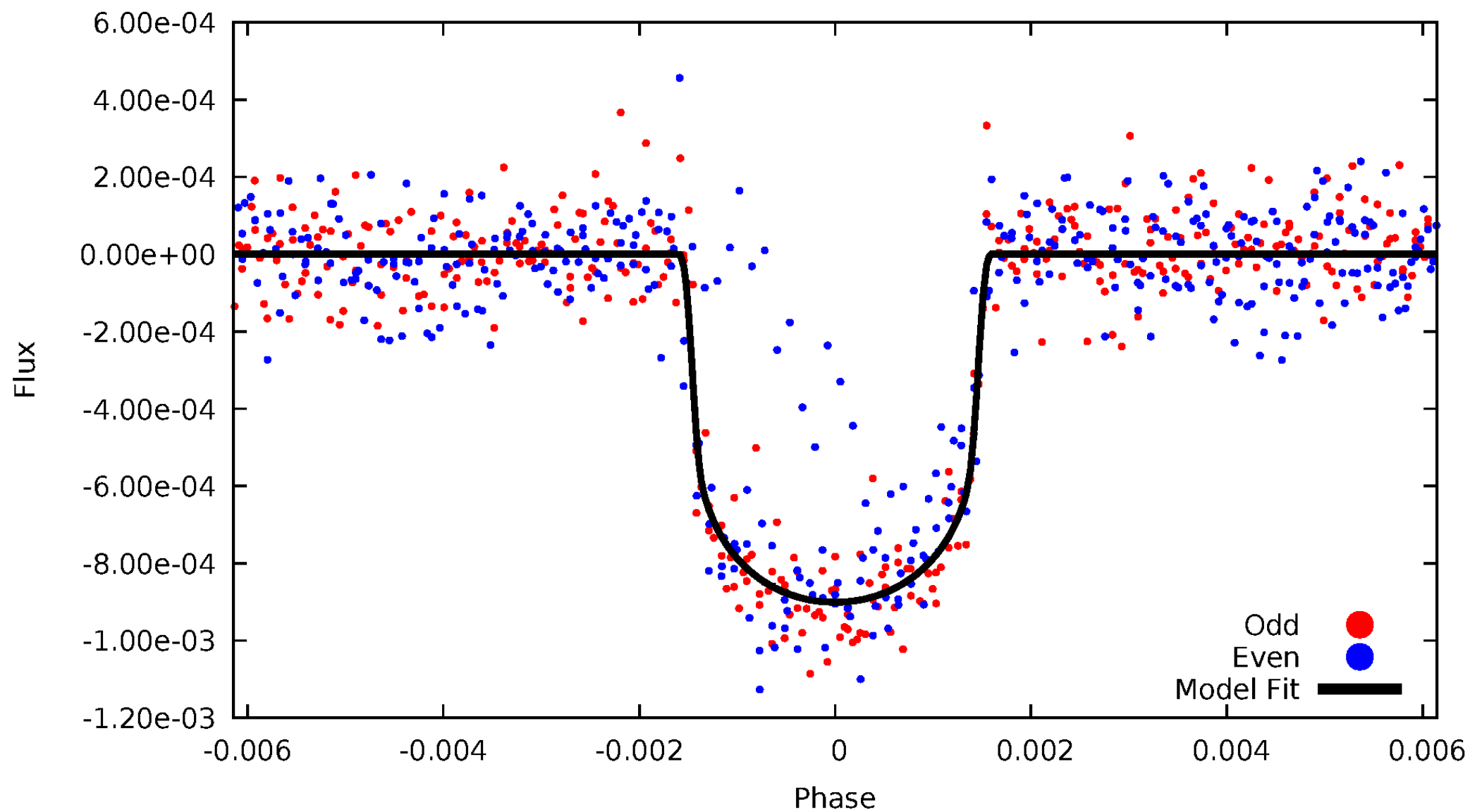


TCE 010528068-01



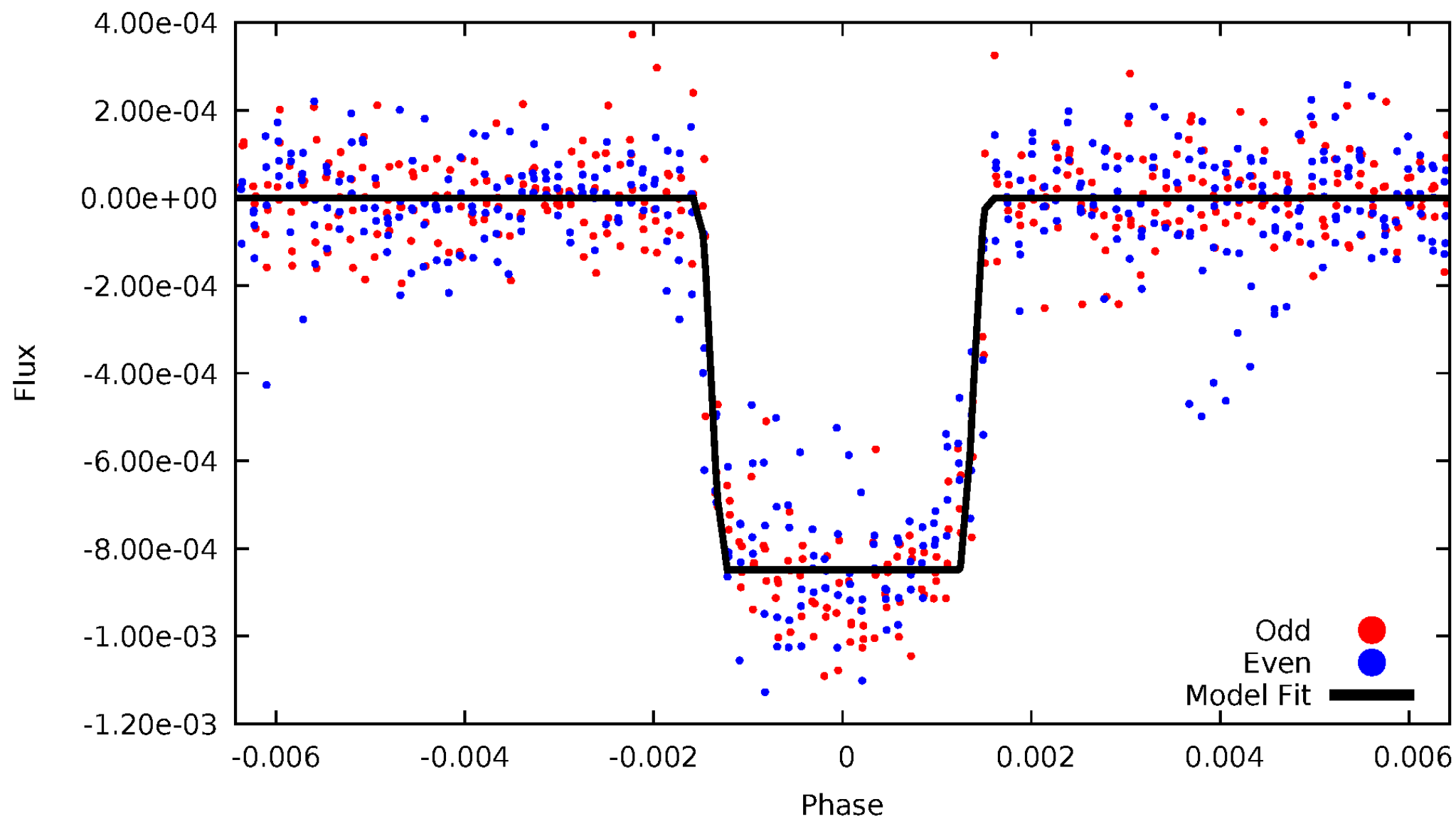
DV Odd/Even

TCE 010528068-01



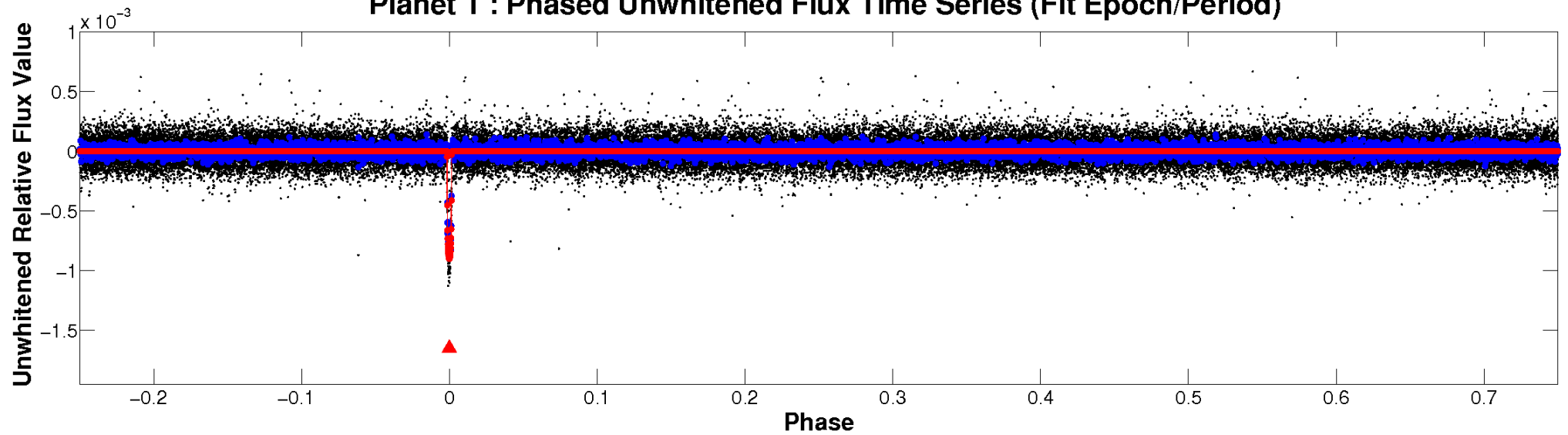
ALT Odd/Even

TCE 010528068-01

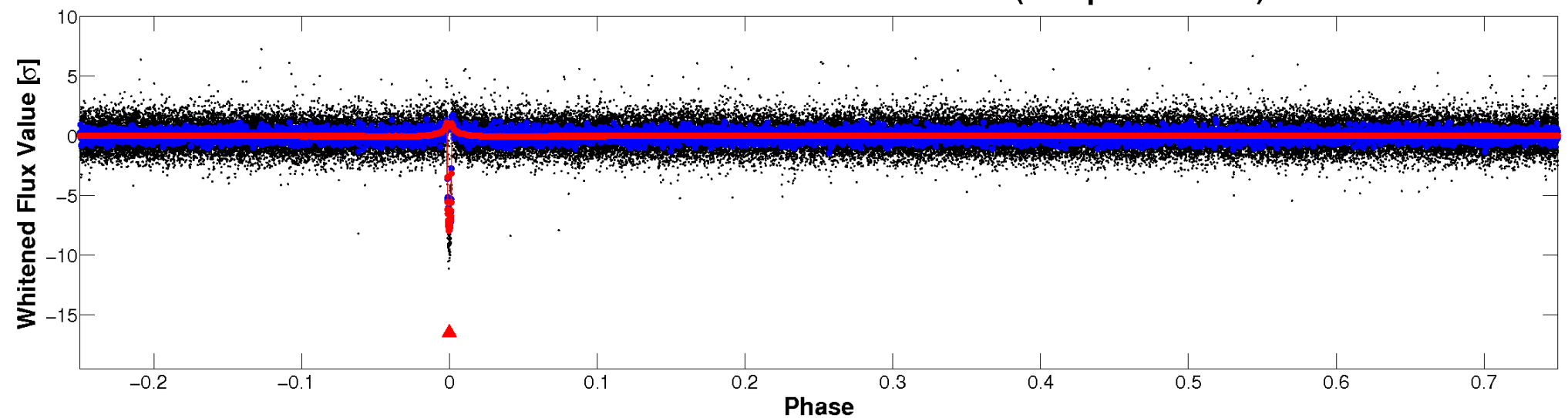


Non-Whitened Vs. Whitened Light Curve

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

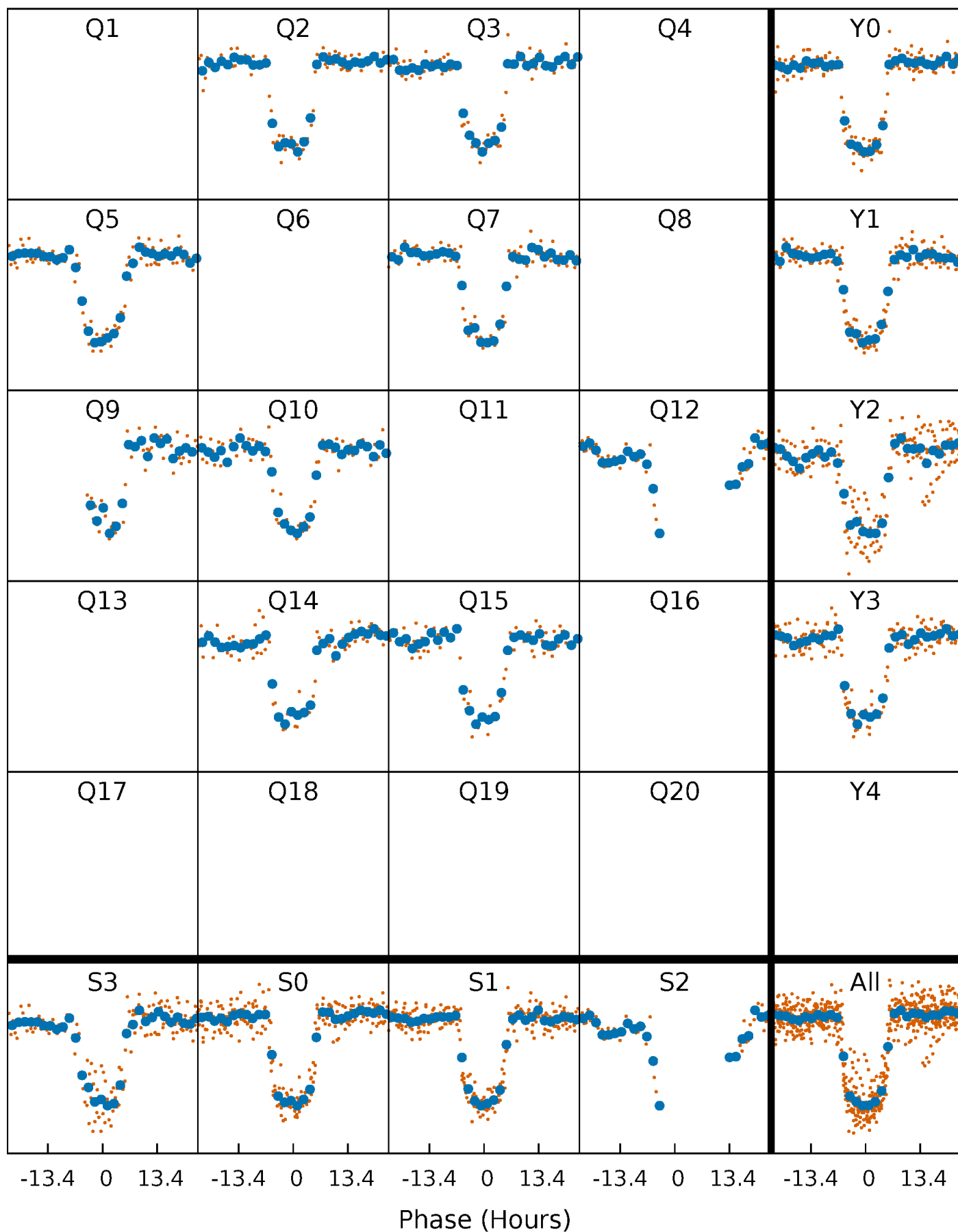


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



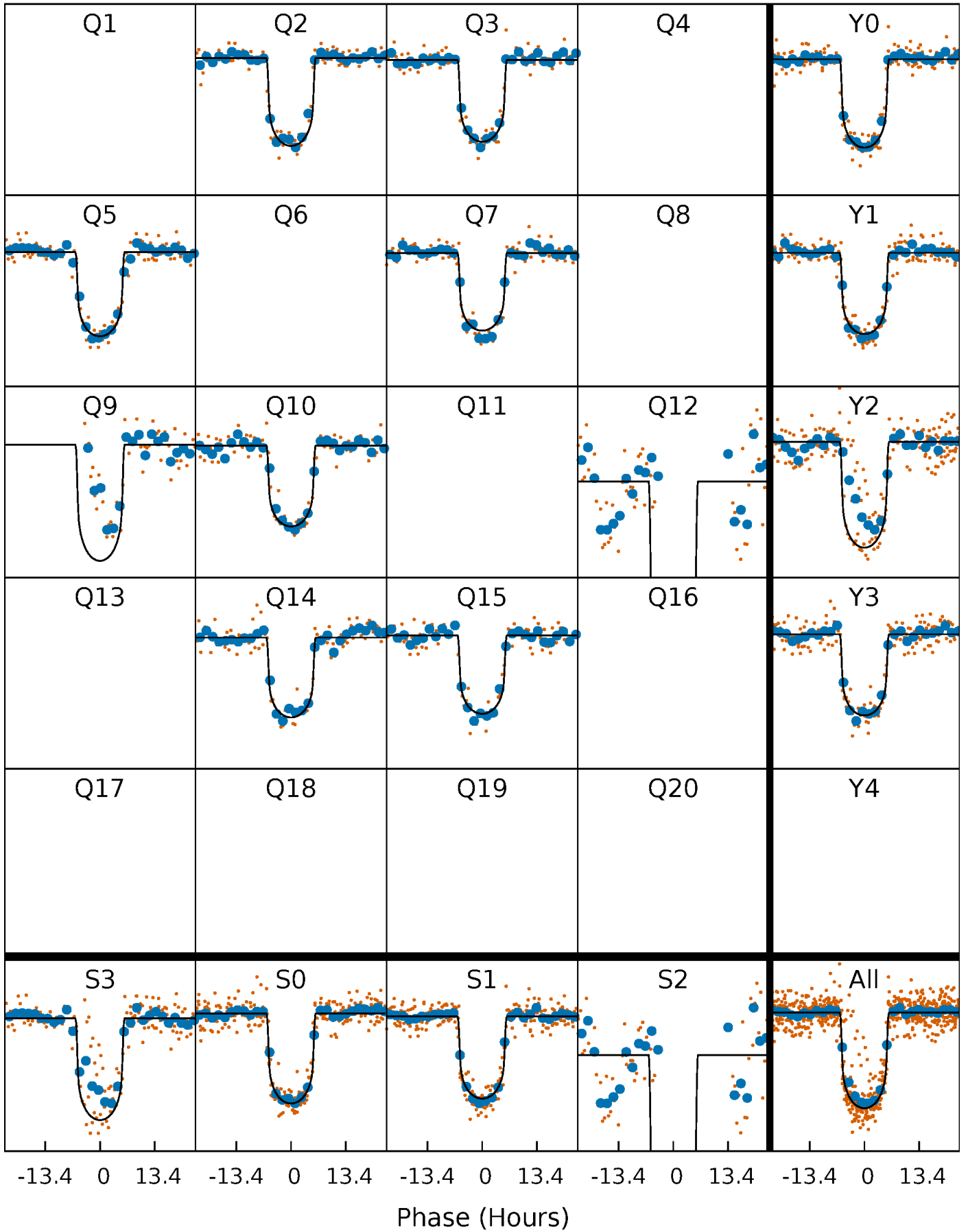
PDC Quarter-Phased Transit Curves

TCE 010528068-01 P=158.684402 Days $T_0=173.954157$ (BKJD)



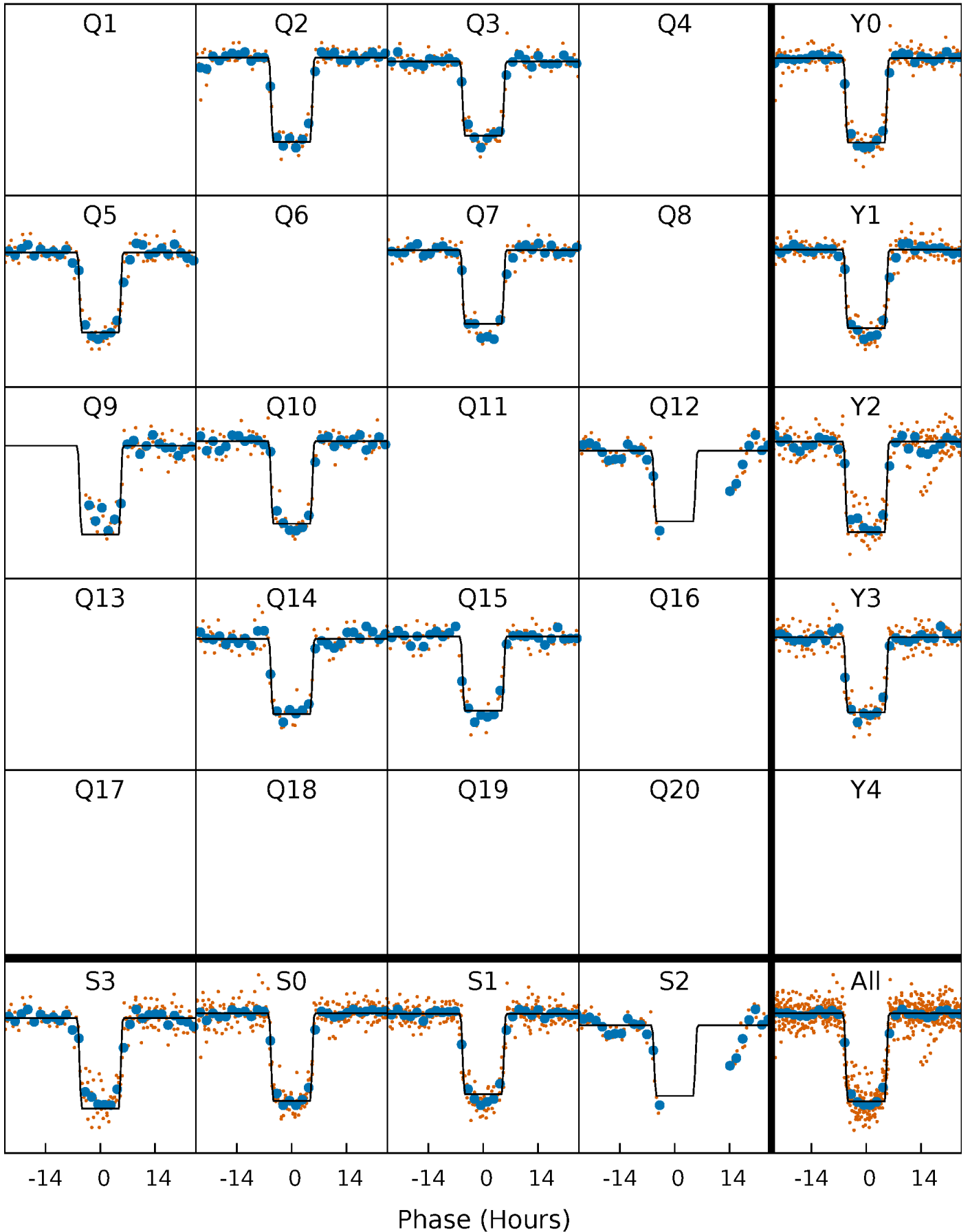
DV Quarter-Phased Transit Curves

TCE 010528068-01 P=158.684402 Days $T_0=173.954157$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

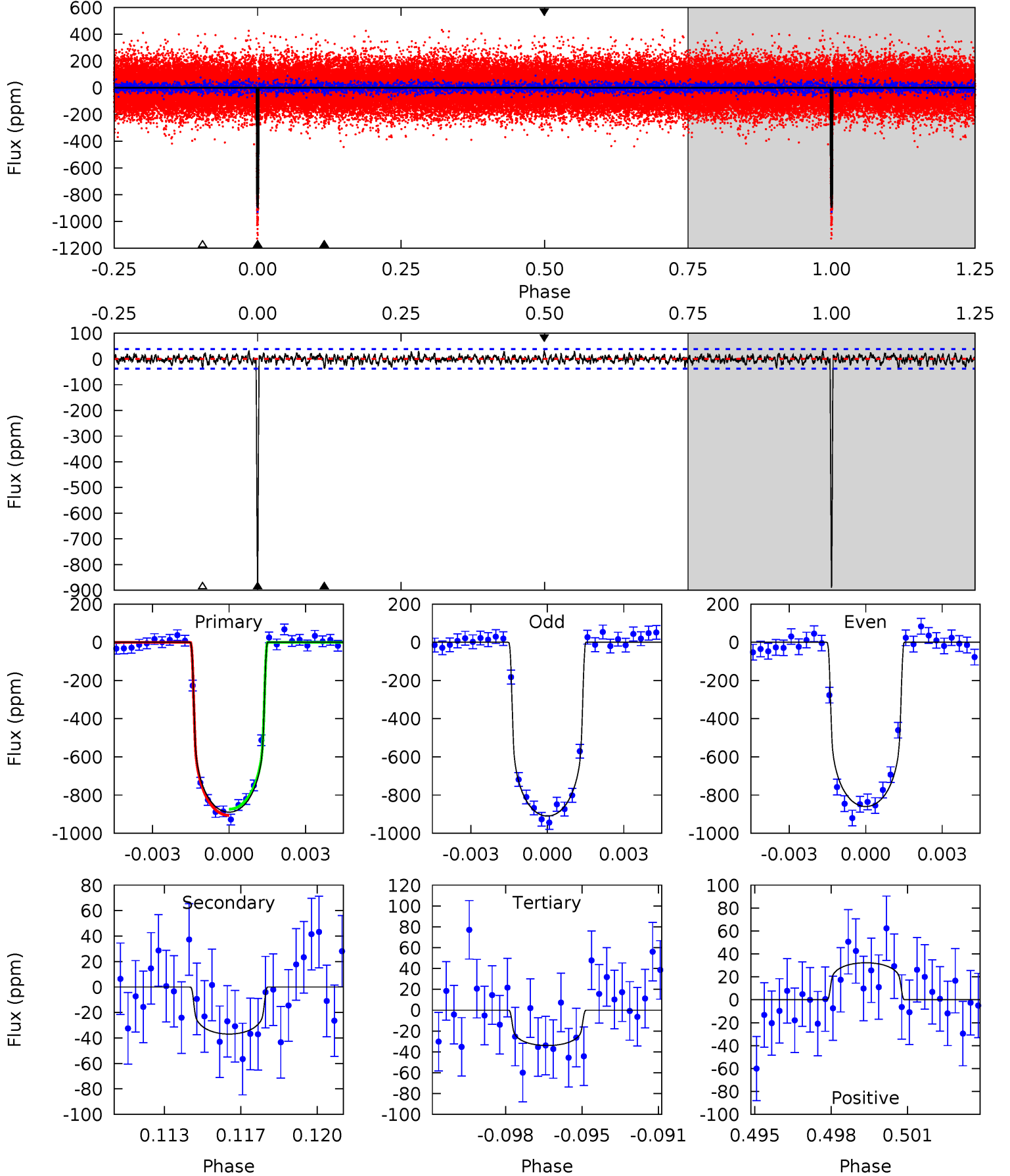
TCE 010528068-01 P=158.687027 Days $T_0=173.941296$ (BKJD)



DV Model-Shift Uniqueness Test

010528068-01, P = 158.684402 Days, E = 15.269755 Days

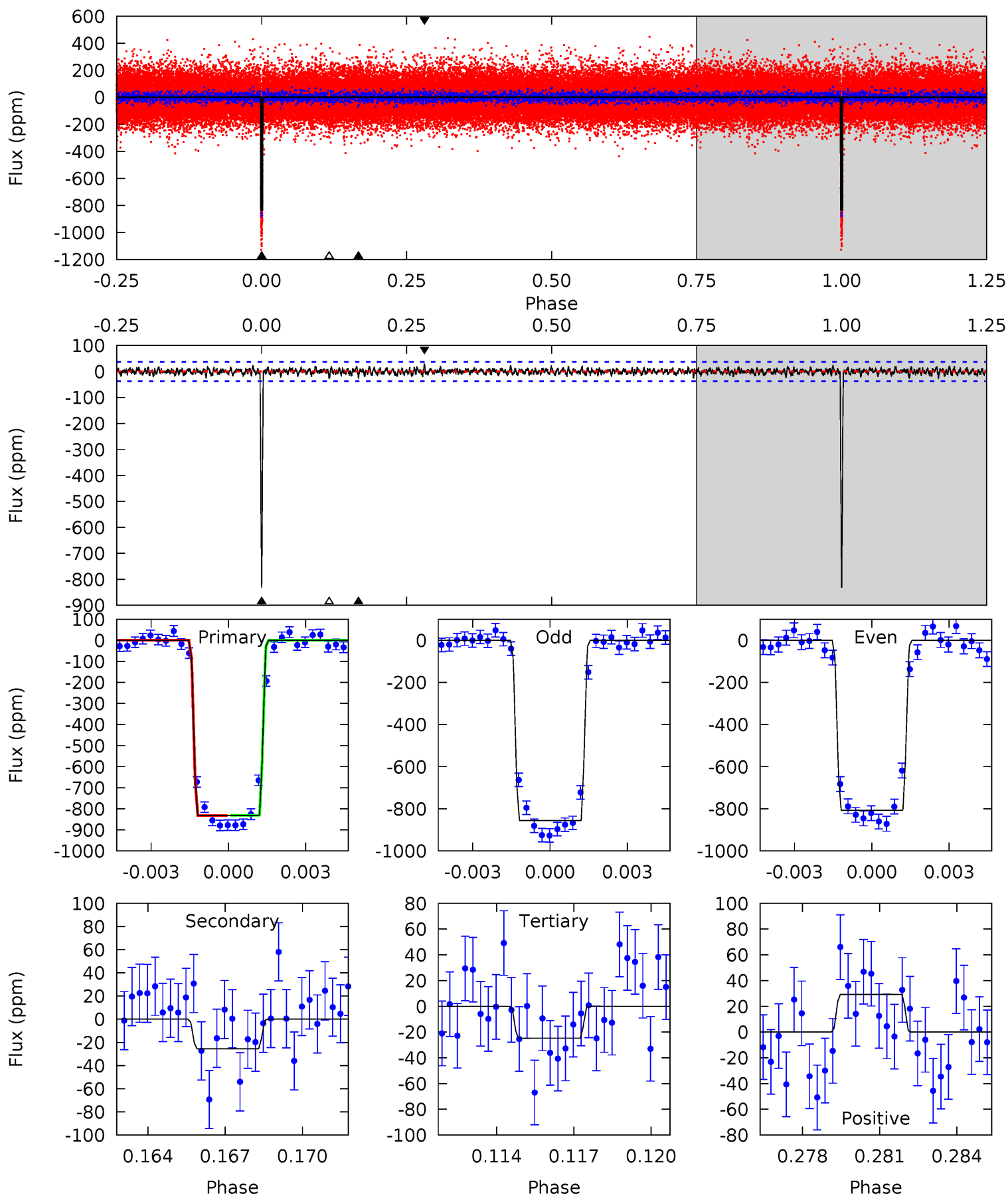
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
122.0	5.06	4.65	4.42	5.24	2.95	1.34	117.3	117.5	0.41	0.64	3.43	0.84	0.03	2.23



Alt Model-Shift Uniqueness Test

010528068-01, $P = 158.687027$ Days, $E = 15.254269$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
117.3	3.59	3.48	4.13	5.25	2.96	1.00	113.8	113.2	0.11	-0.54	3.48	1.01	0.03	0.06



Stellar Parameters For KIC 010528068

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5751^{+103}_{-103}	$4.340^{+0.156}_{-0.104}$	$-0.280^{+0.150}_{-0.150}$	$1.034^{+0.149}_{-0.164}$	$0.852^{+0.072}_{-0.042}$	$1.086^{+0.743}_{-0.350}$
	+2%/-2%	+4%/-2%	+54%/-54%	+14%/-16%	+8%/-5%	+68%/-32%
Source	SPE59	SPE59	SPE59	DSEP		

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

Secondary Eclipse Parameters for KIC 010528068-01 / KOI 1162.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-37 ± 7	$3.21^{+0.34}_{-0.31}$	487^{+22}_{-22}	3230^{+108}_{-114}	583^{+192}_{-151}
Alt.	-25 ± 7	$3.27^{+0.31}_{-0.32}$	486^{+21}_{-23}	3046^{+120}_{-137}	396^{+145}_{-123}

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 $A_{obs} \gg 1.0$

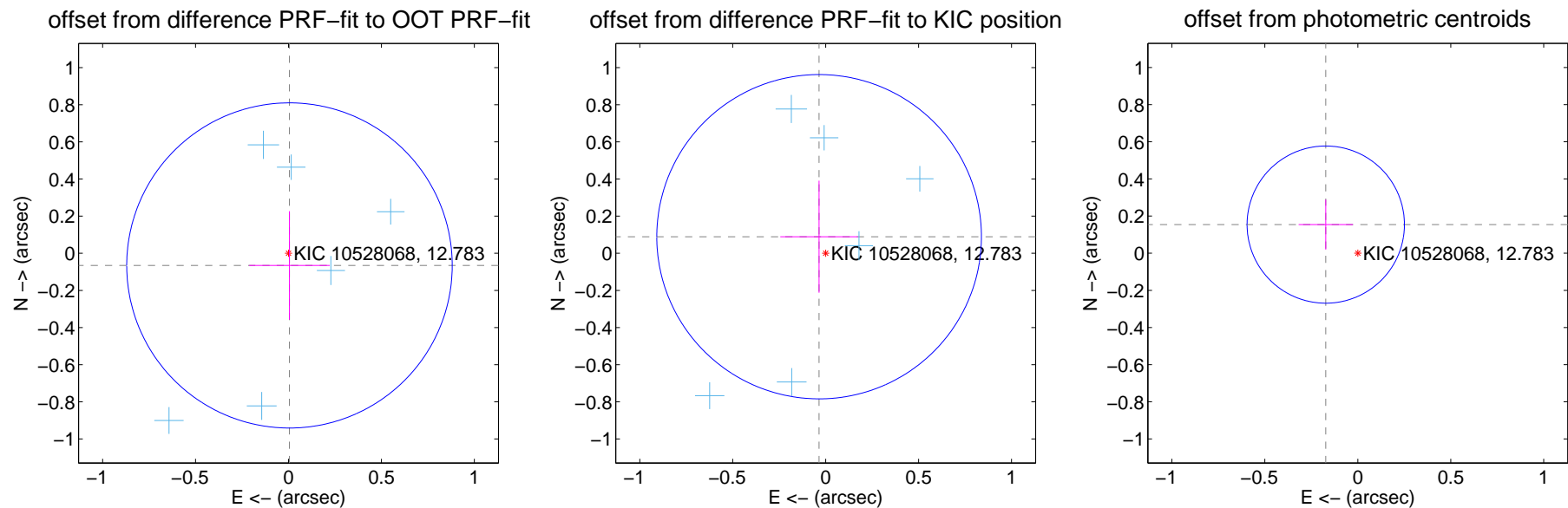
DV Centroid Data

Supplemental centroid analysis for 010528068-01. Kepler magnitude: 12.78. Transit SNR 89.38

There are 6 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.066 ± 0.292	0.23	-0.005 ± 0.217	-0.066 ± 0.292
PRF-fit source offset from KIC position	0.096 ± 0.291	0.33	0.035 ± 0.209	0.089 ± 0.302
photometric centroid source offset	0.23 ± 0.14	1.64	0.17 ± 0.15	0.15 ± 0.13



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.

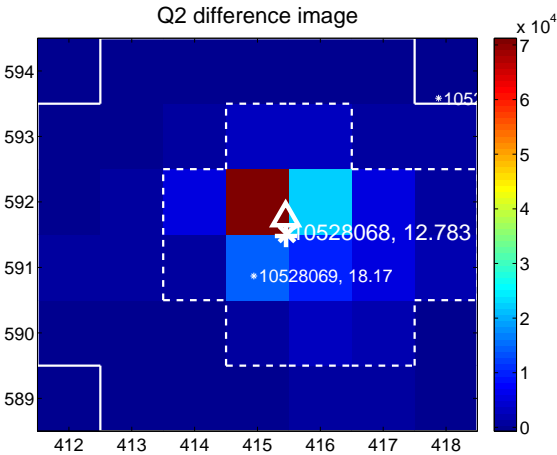
Q1 no difference image



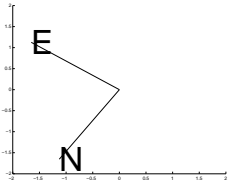
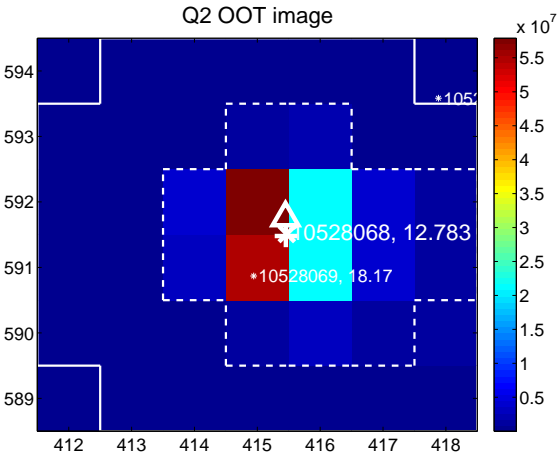
Q1 no OOT image



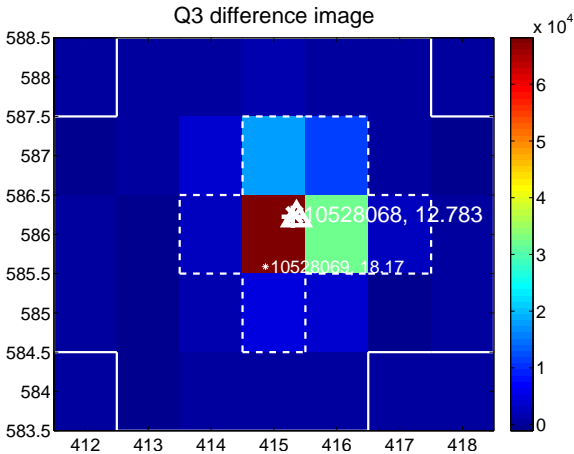
Q2 difference image



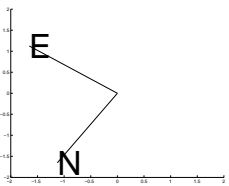
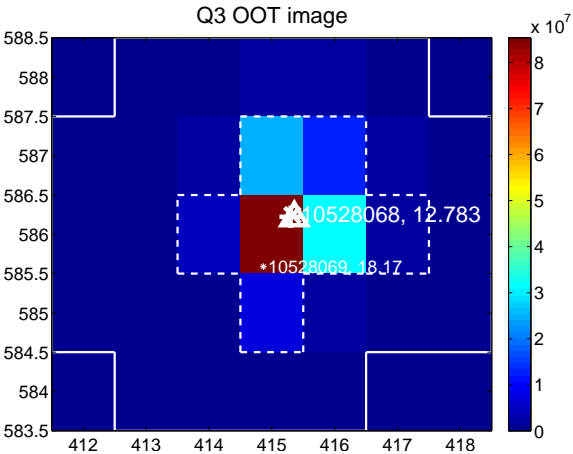
Q2 OOT image



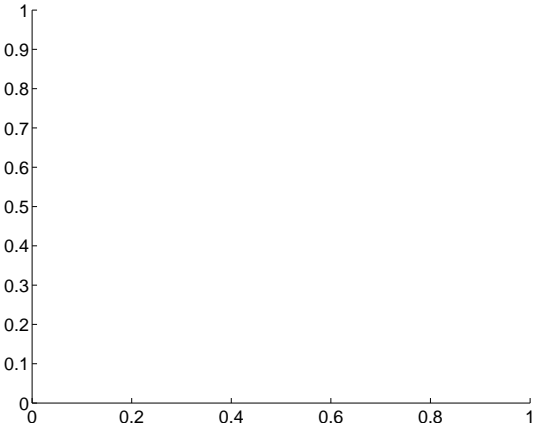
Q3 difference image



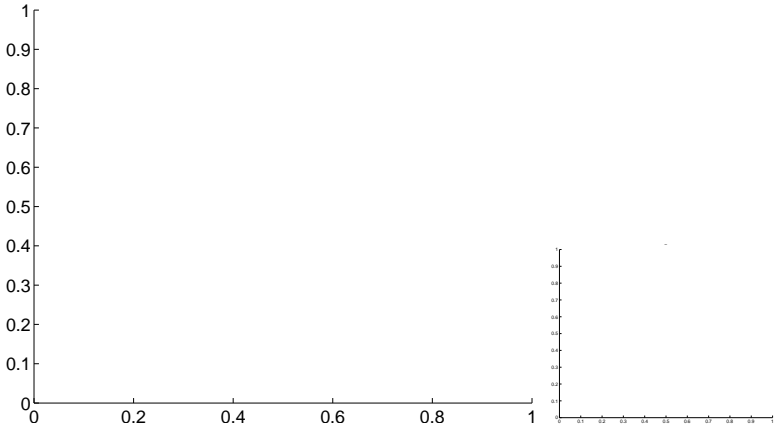
Q3 OOT image



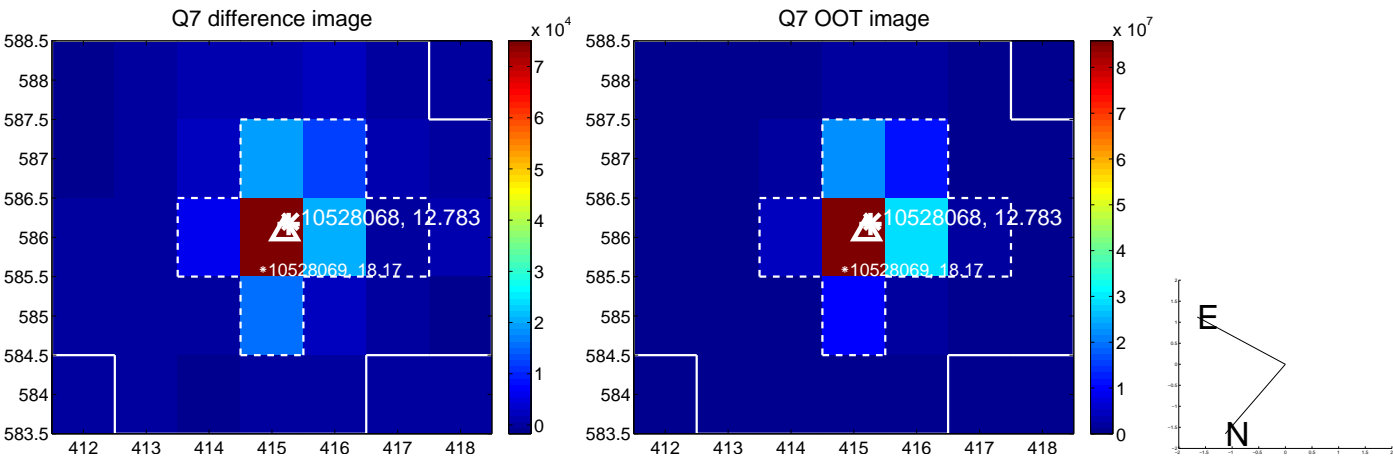
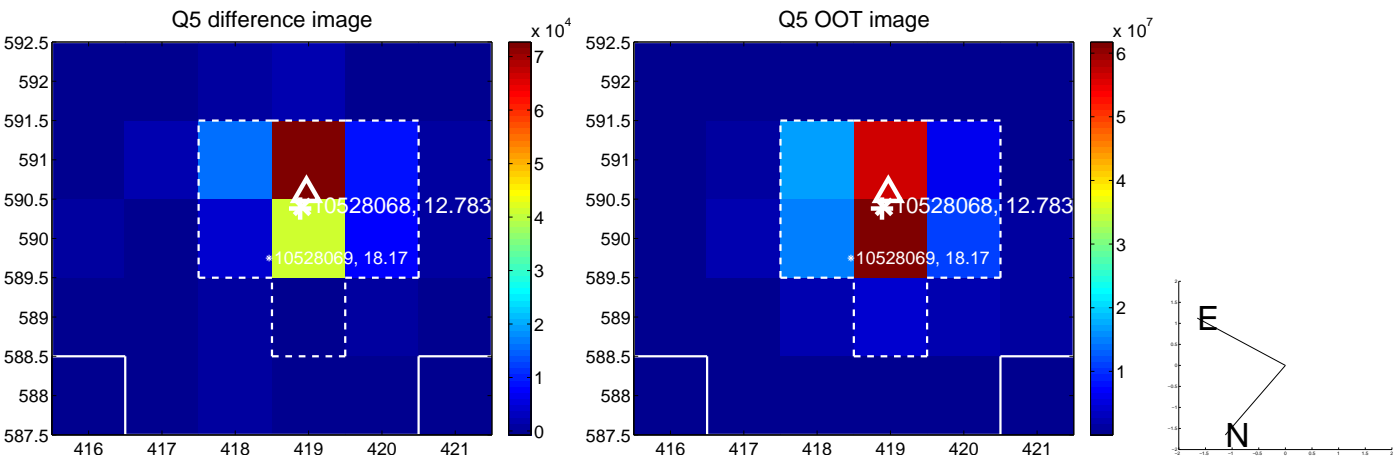
Q4 no difference image



Q4 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.

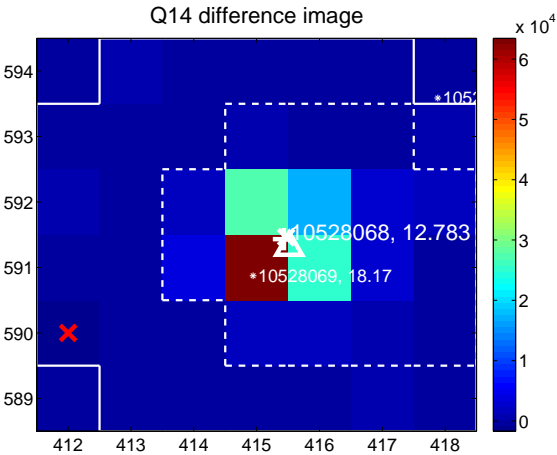
Q13 no difference image



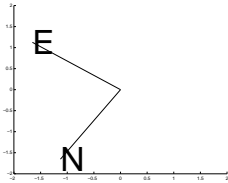
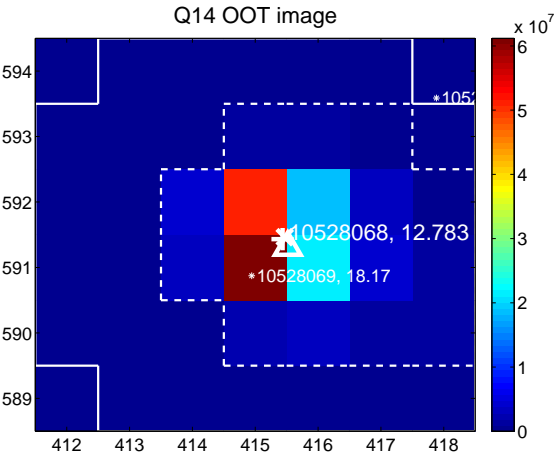
Q13 no OOT image



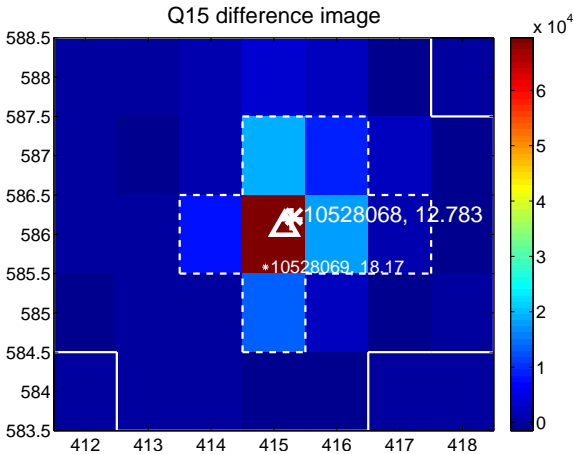
Q14 difference image



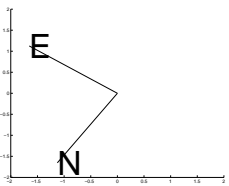
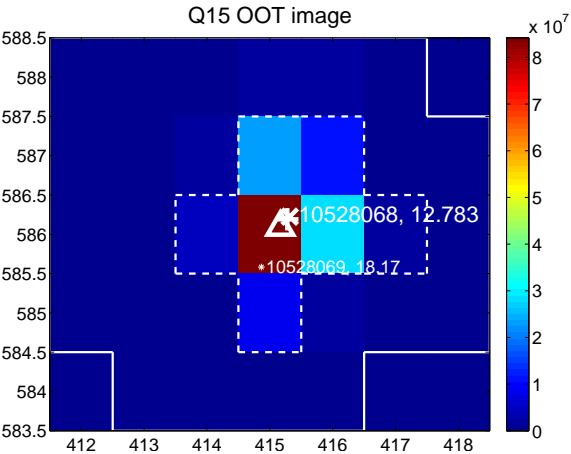
Q14 OOT image



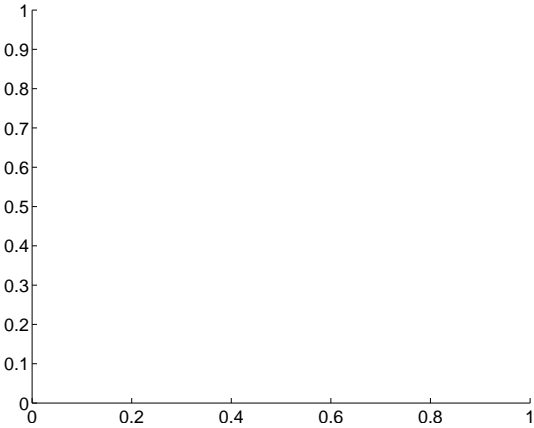
Q15 difference image



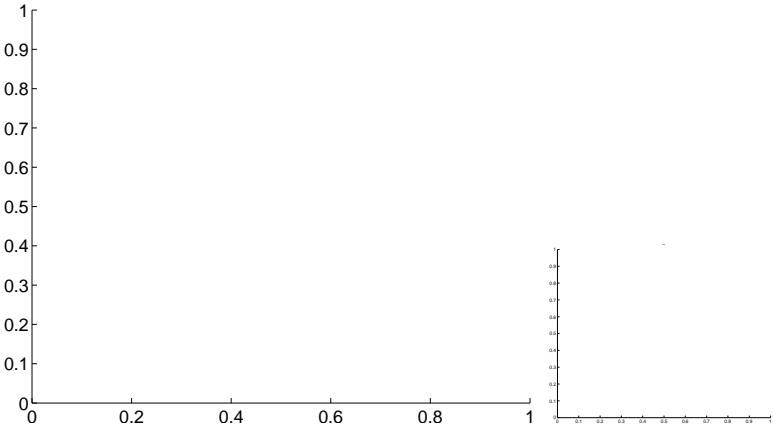
Q15 OOT image



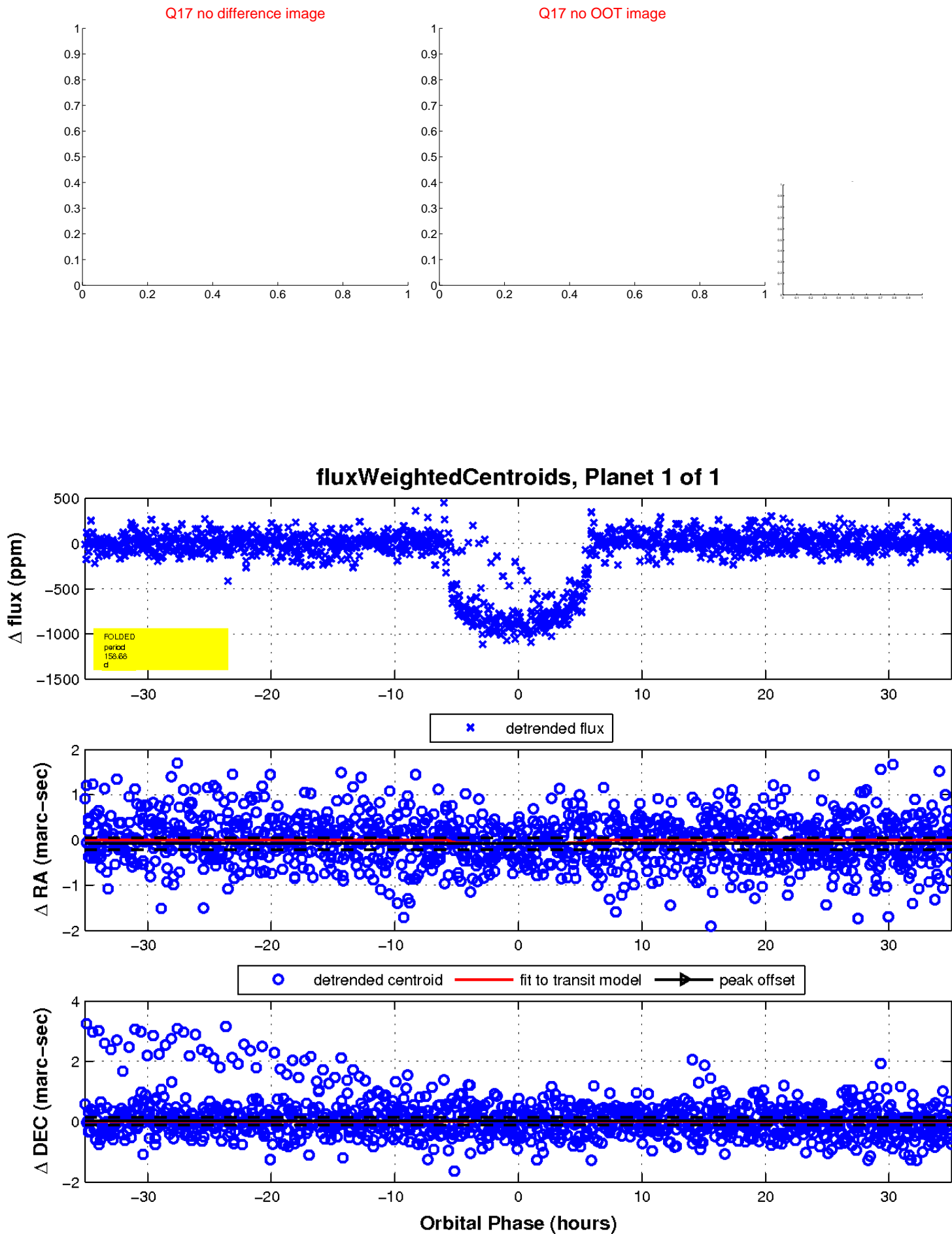
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

