

KIC 008621578

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})
008621578-01	OBS	No	378.533756	134.335979	172.0	12.001	8.1	5.9	0.94	5751	1.35	1.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008621578-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_NONUNIQ_ALT—CENT_KIC_POS

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

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

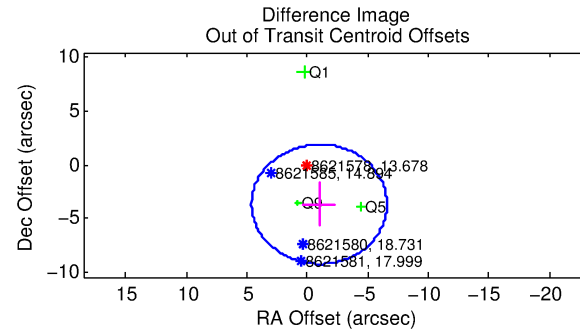
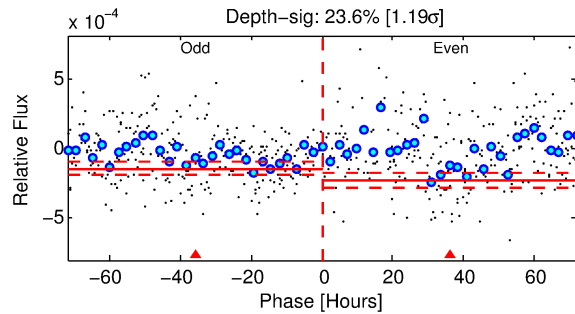
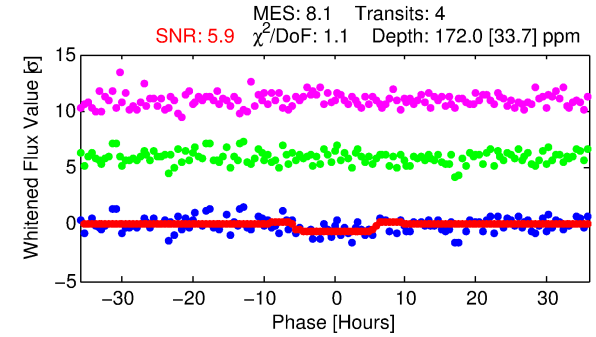
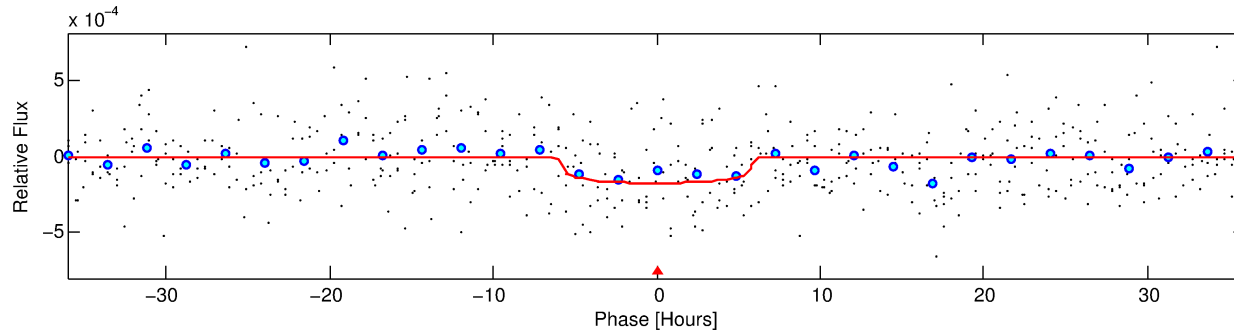
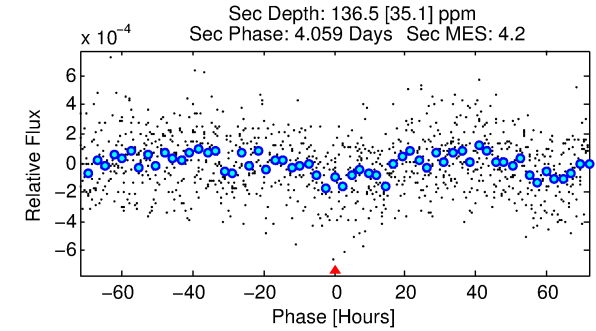
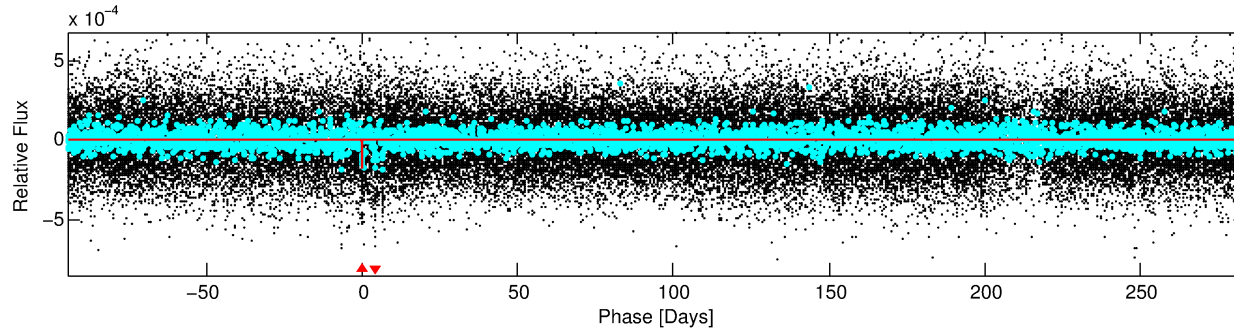
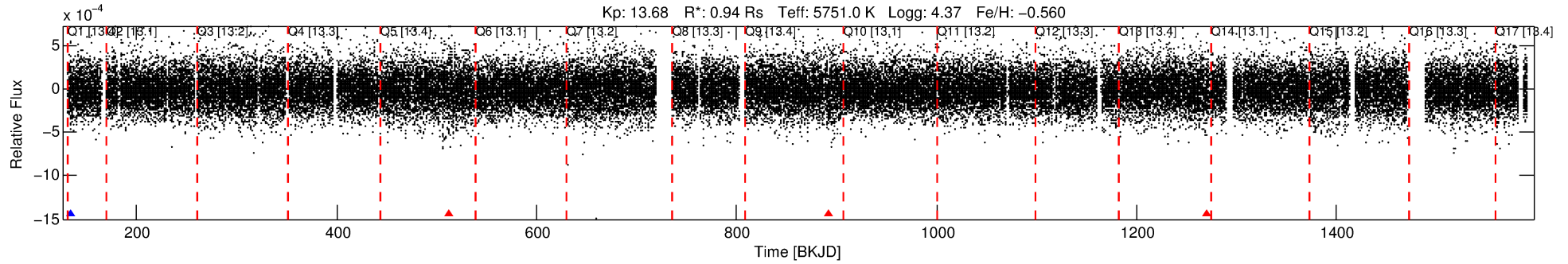
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008621578-01

No Significant Match Found

DV One-Page Summary

KIC: 8621578 Candidate: 1 of 1 Period: 378.534 d



DV Fit Results:

Period = 378.53376 [0.01370] d
Epoch = 134.3360 [0.0256] BKJD
Rp/R* = 0.0131 [0.0094]
a/R* = 160.69 [555.18]
b = 0.76 [1.92]
Seff = 1.00 [0.37]
Teq = 255 [24] K
Rp = 1.35 [1.05] Re
a = 0.9356 [0.2306] AU
Ag = 36165.26 [54272.81] [0.67σ]
Teffp = 5431 [1984] K [2.61σ]

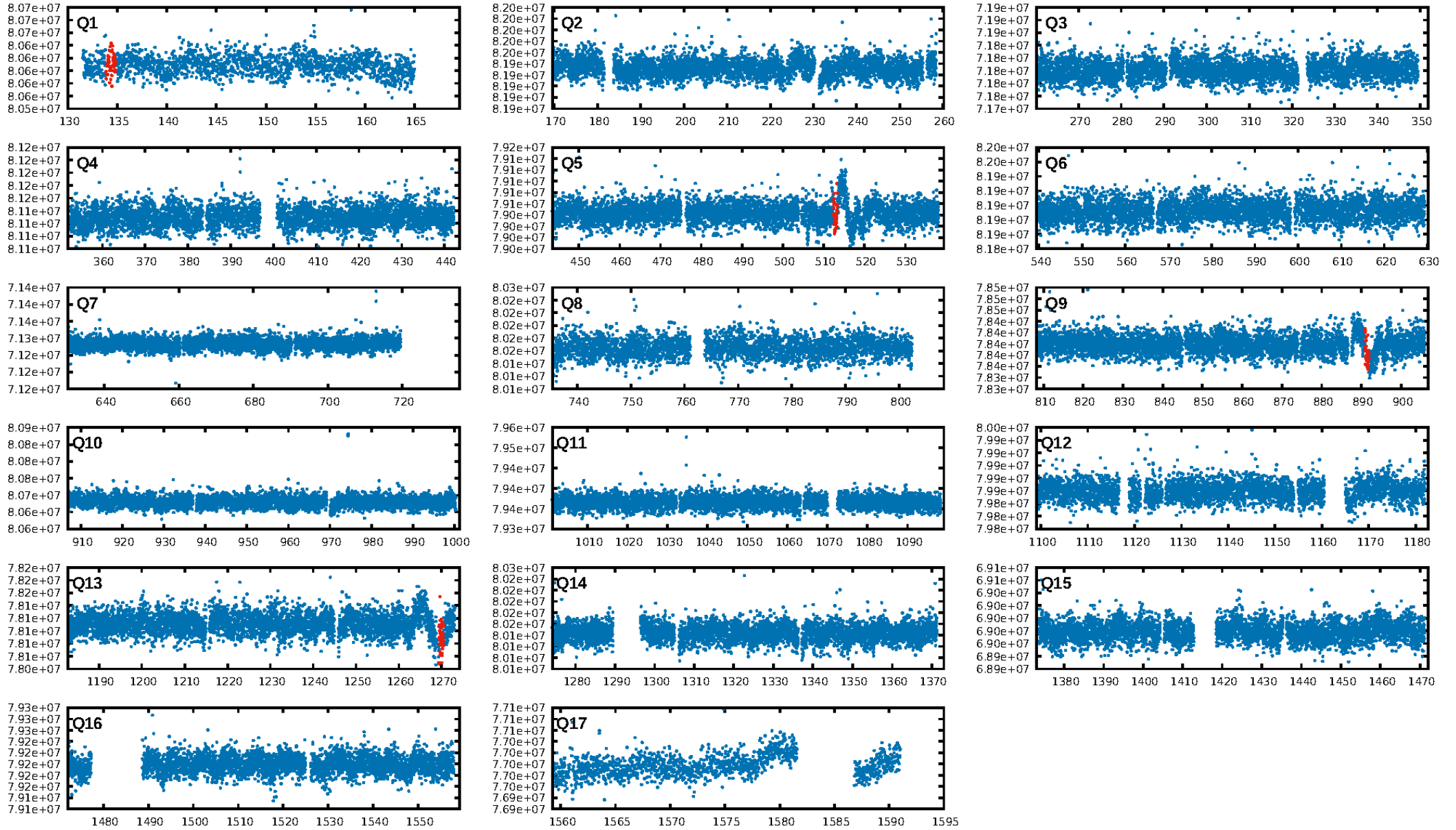
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.5%
ModelChiSquareGof-sig: 96.0%
Bootstrap-pfa: 6.32e-11
RollingBand-fgt: 0.00 [0/3]
GhostDiagnostic-chr: -0.5504
Centroid-sig: 1.5%
Centroid-so: 4.077 arcsec [1.50σ]
OotOffset-rm: 3.828 arcsec [2.06σ]
OotOffset-st: 0/0/0/3 [3]
KicOffset-rm: 3.370 arcsec [0.81σ]
KicOffset-st: 0/0/0/3 [3]
DiffImageQuality-fgm: 0.00 [0/3]
DiffImageOverlap-fno: 1.00 [3/3]

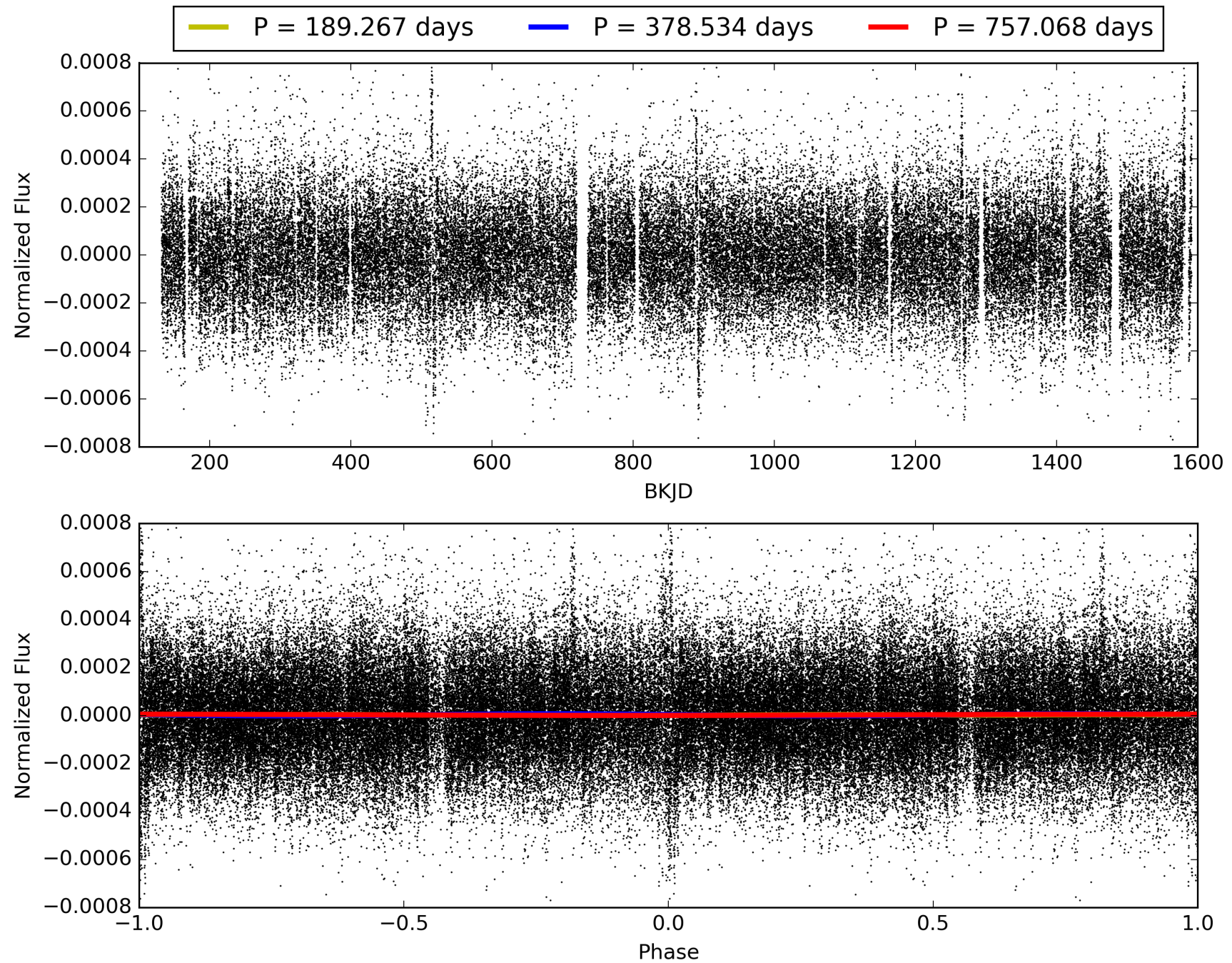
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:12:38 Z

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

TCE 008621578-01, PDC Light Curves

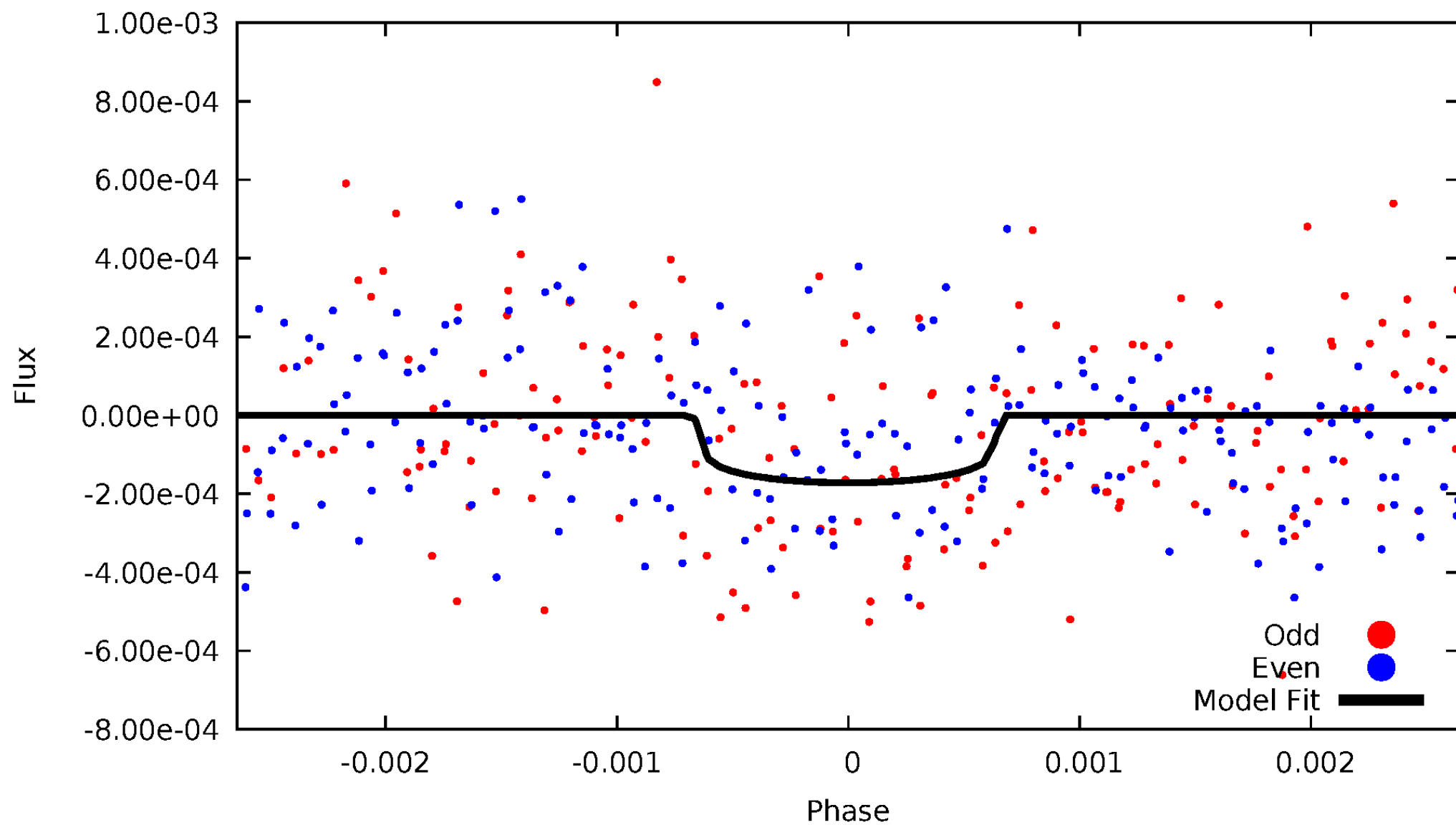


TCE 008621578-01



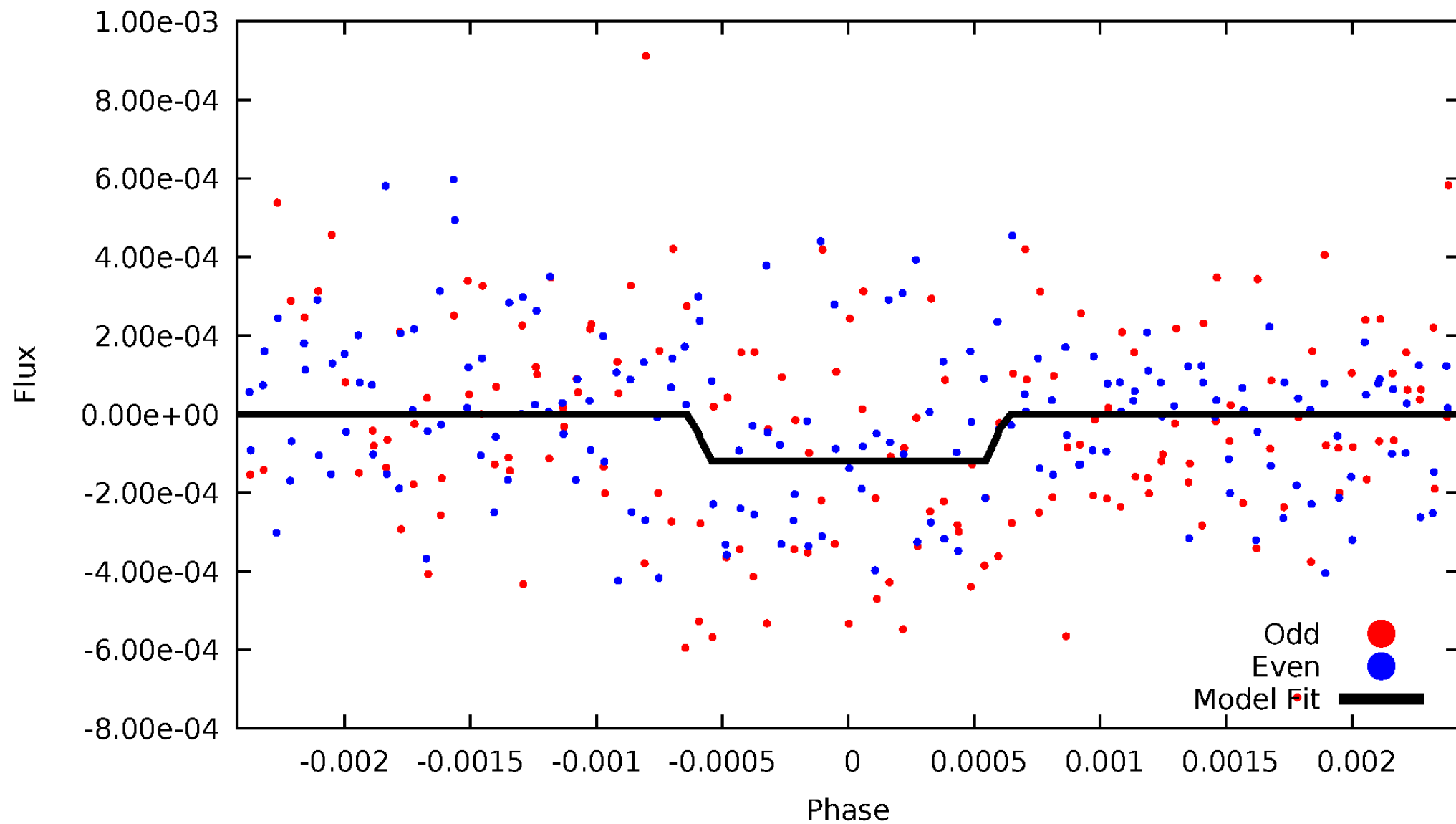
DV Odd/Even

TCE 008621578-01

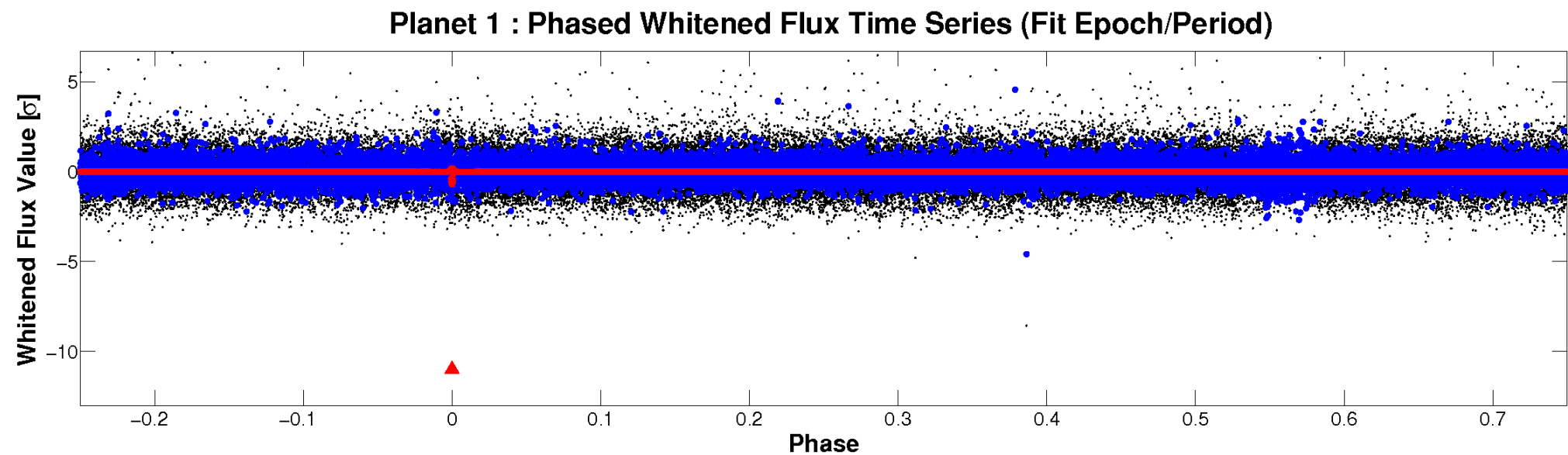
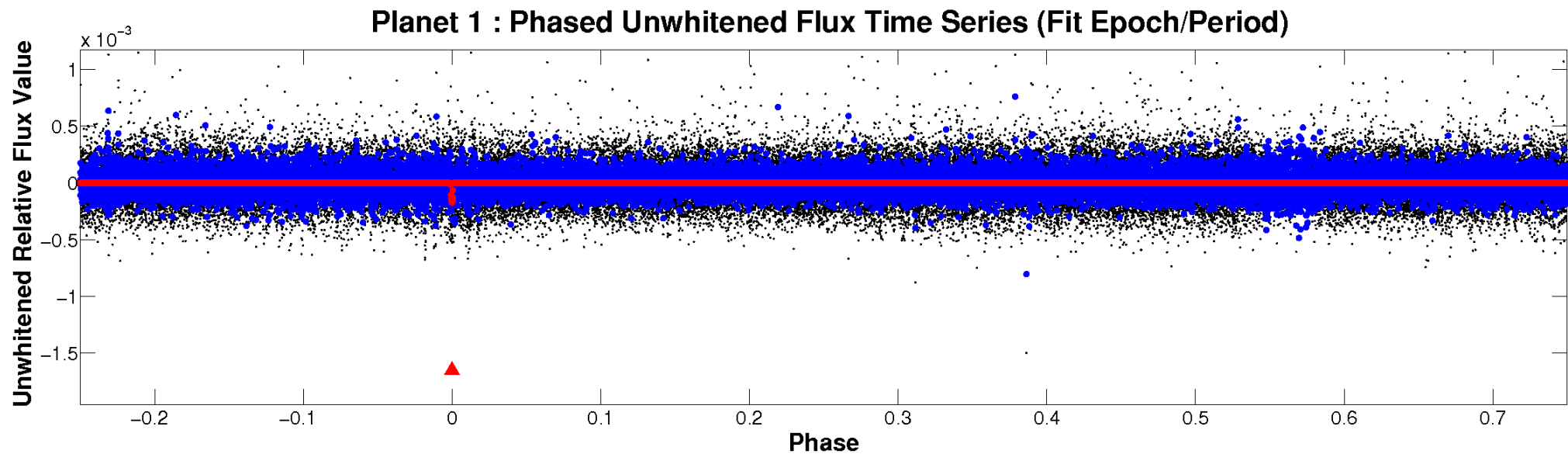


ALT Odd/Even

TCE 008621578-01

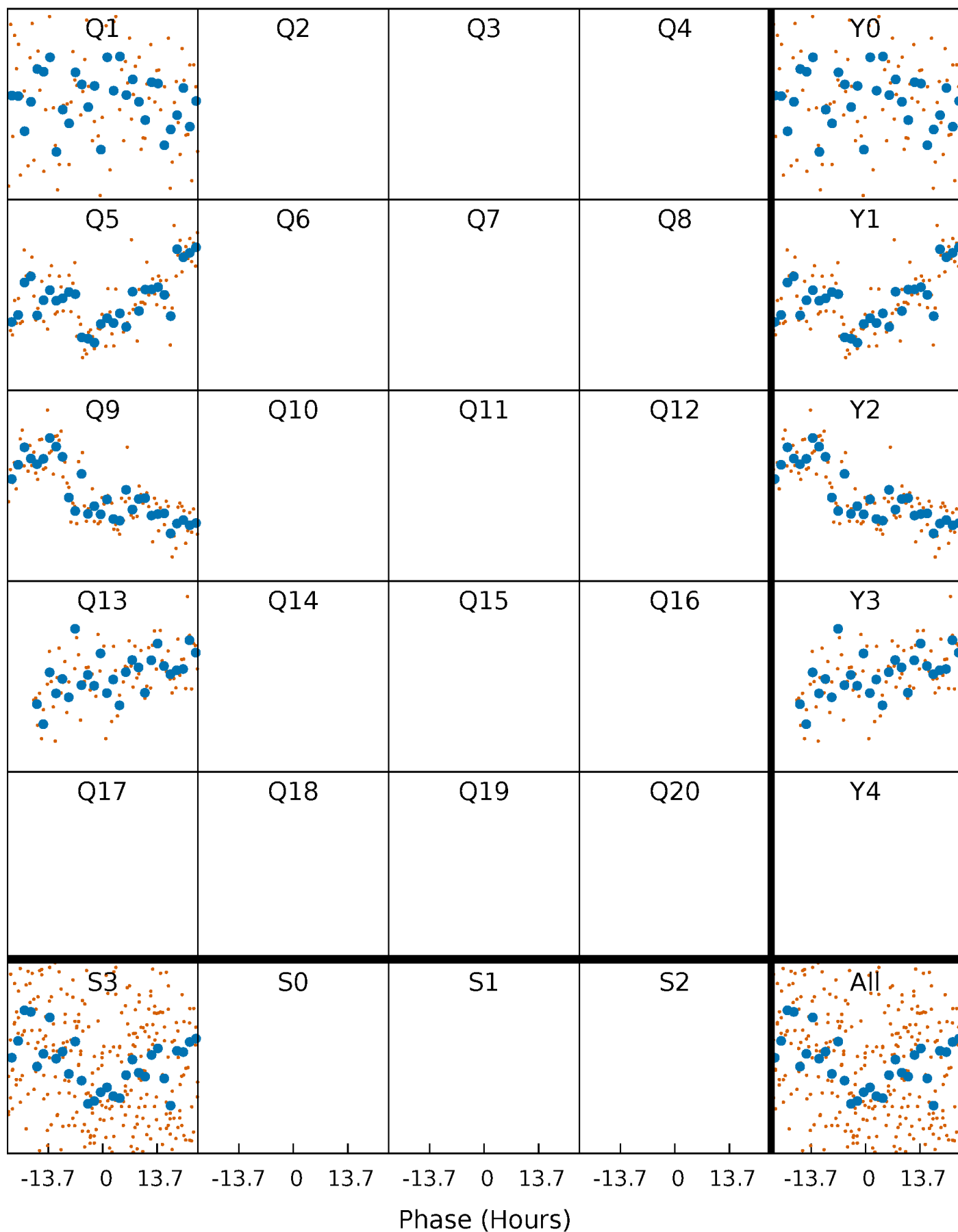


Non-Whitened Vs. Whitened Light Curve



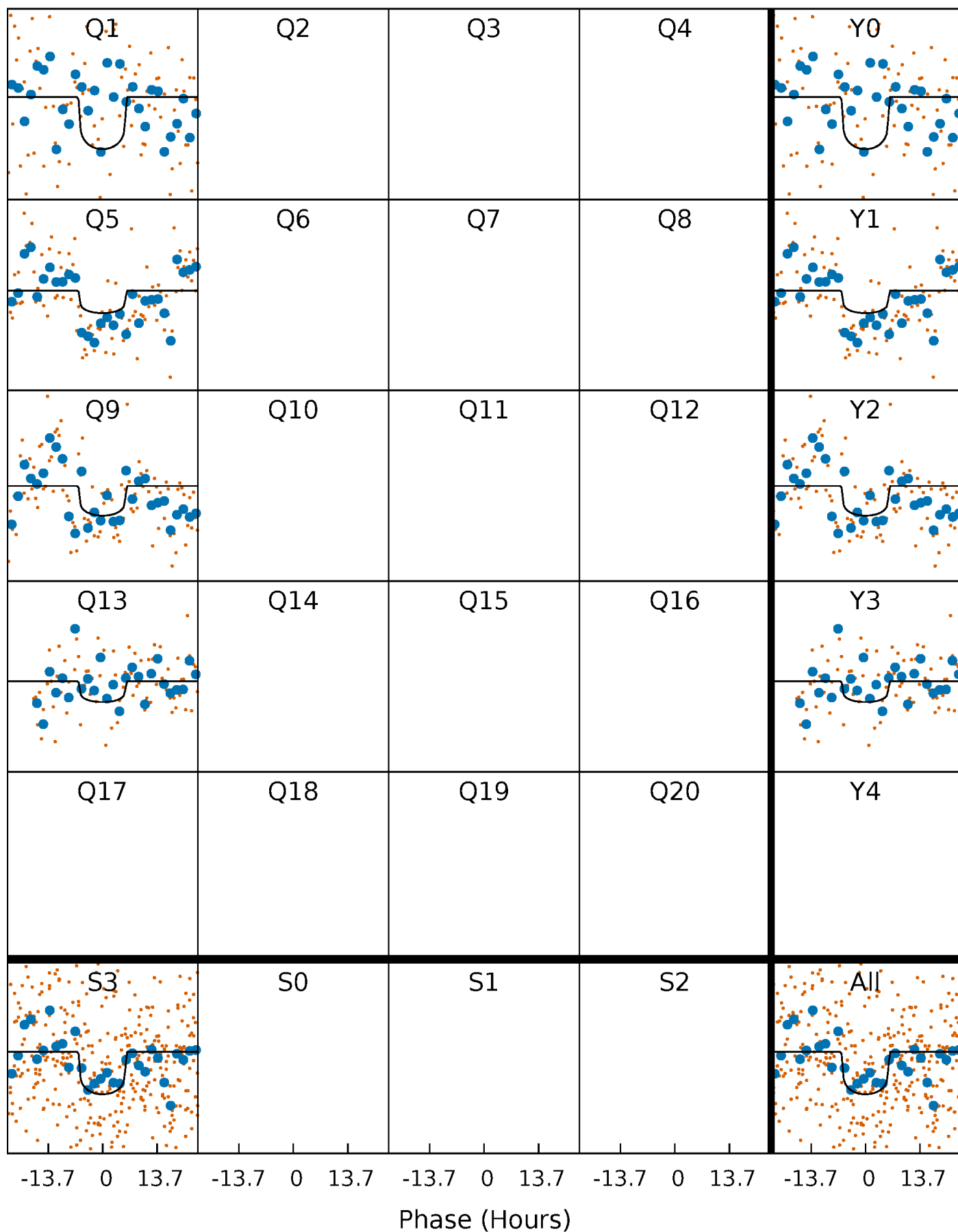
PDC Quarter-Phased Transit Curves

TCE 008621578-01 P=378.533756 Days $T_0=134.335979$ (BKJD)



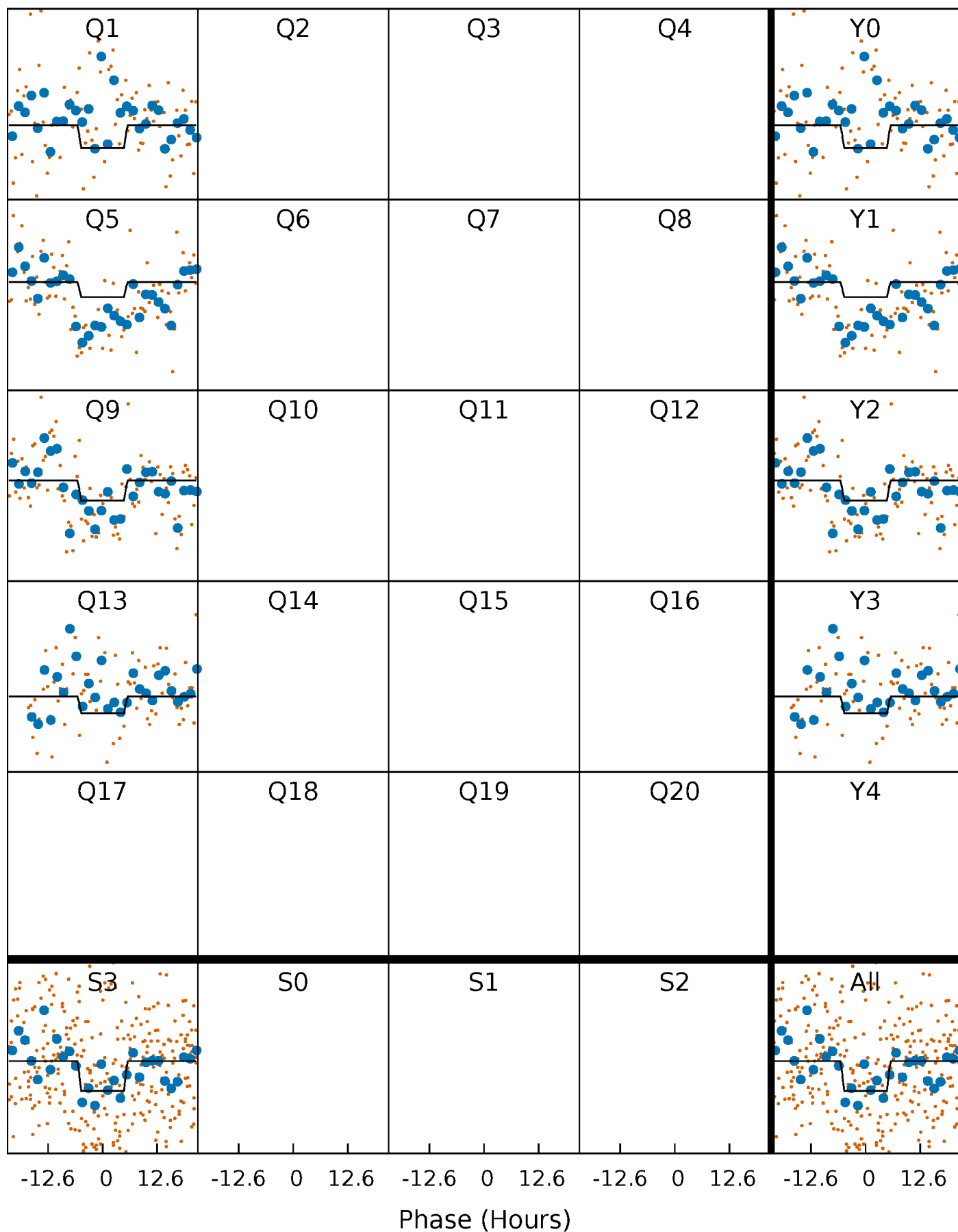
DV Quarter-Phased Transit Curves

TCE 008621578-01 P=378.533756 Days $T_0=134.335979$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

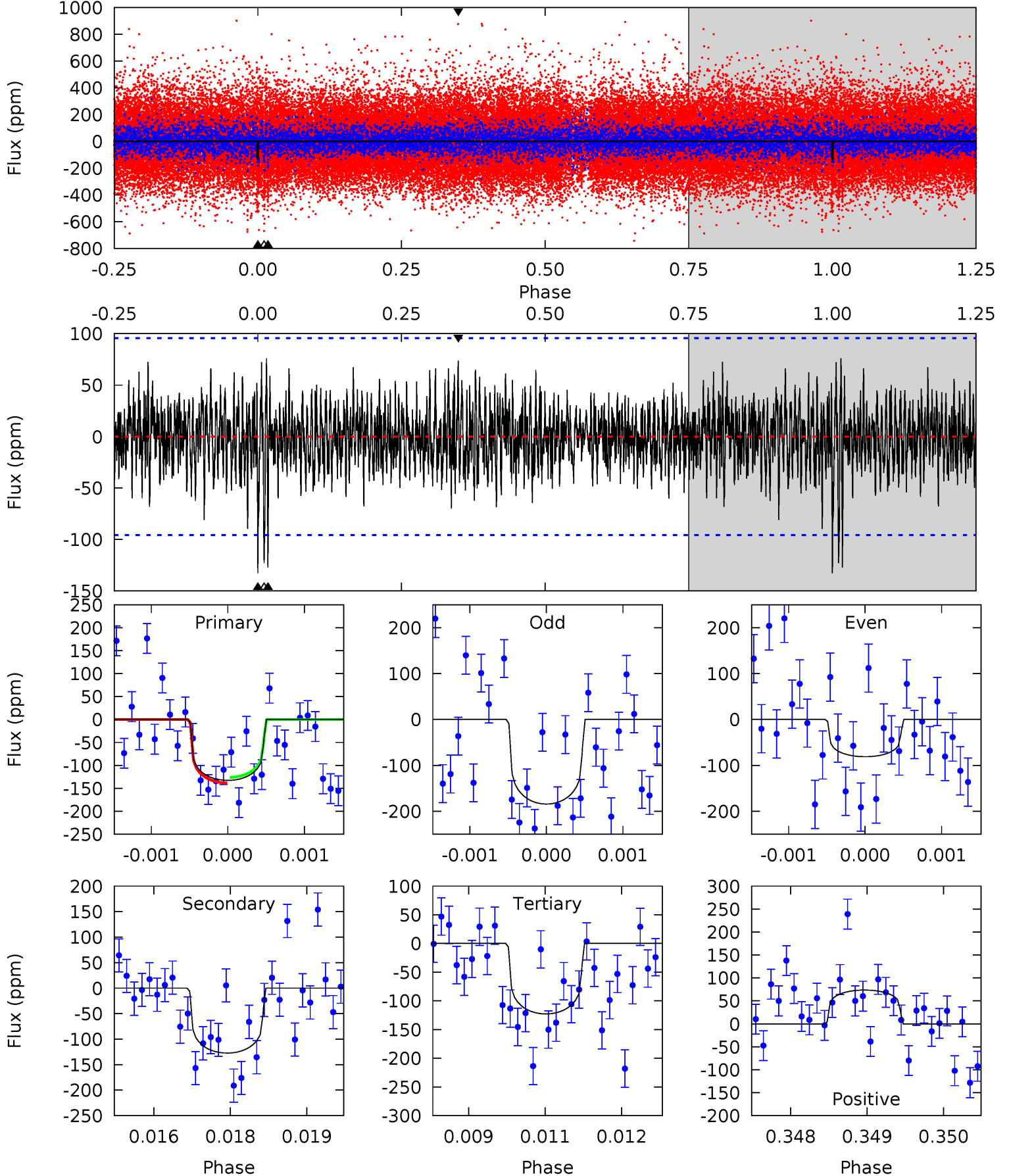
TCE 008621578-01 P=378.511265 Days $T_0=134.394248$ (BKJD)



DV Model-Shift Uniqueness Test

008621578-01, P = 378.533756 Days, E = 134.335979 Days

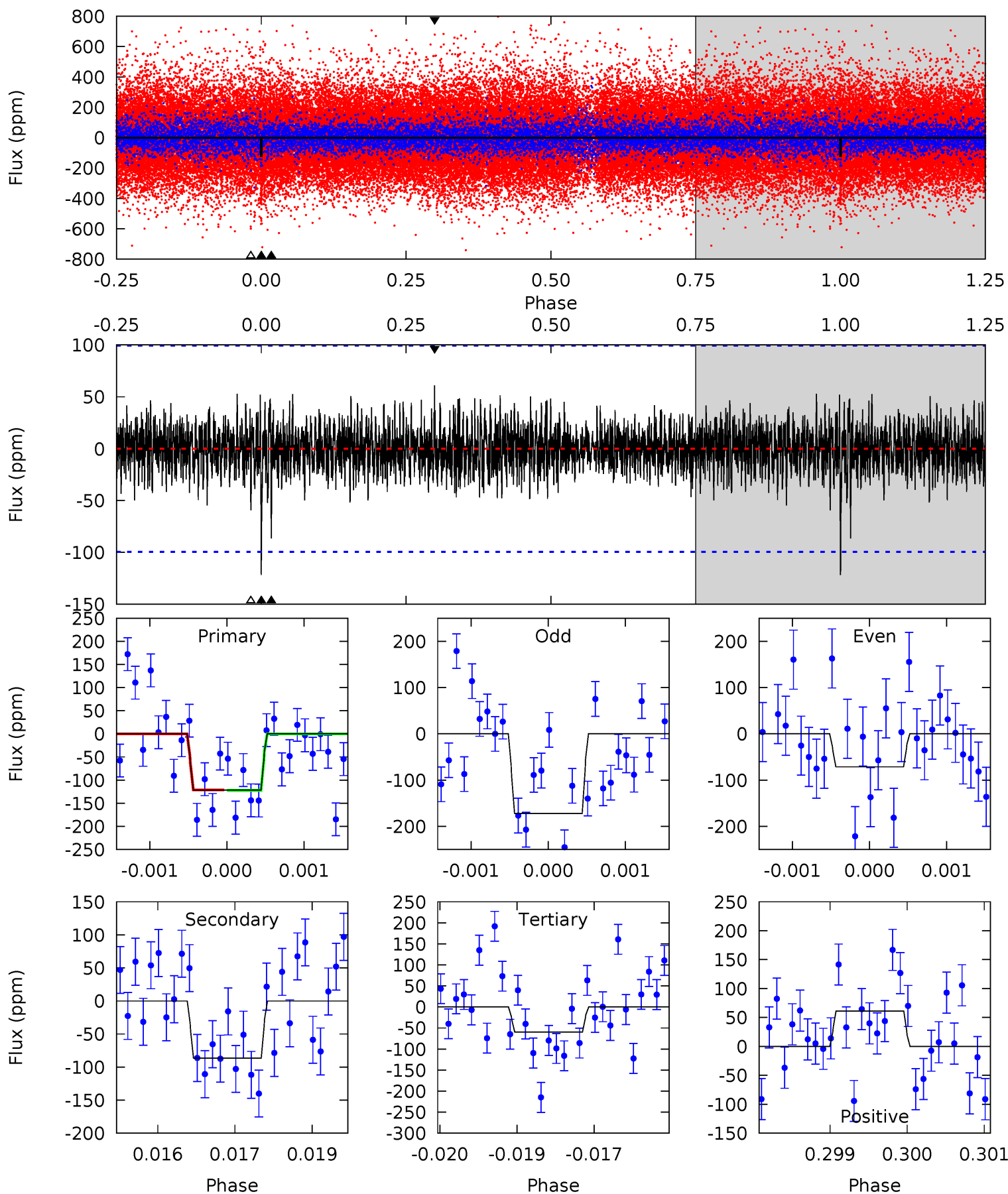
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.48	7.18	6.92	4.15	5.40	3.20	1.35	0.56	3.34	0.26	3.03	2.92	1.22	0.36	0.34



Alt Model-Shift Uniqueness Test

008621578-01, P = 378.511265 Days, E = 134.394248 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.62	4.70	3.23	3.32	5.41	3.23	0.90	3.39	3.30	1.47	1.38	2.76	1.22	0.33	0.03



Stellar Parameters For KIC 008621578

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5751^{+157}_{-157}	$4.371^{+0.195}_{-0.195}$	$-0.560^{+0.300}_{-0.300}$	$0.943^{+0.277}_{-0.192}$	$0.763^{+0.116}_{-0.039}$	$1.280^{+1.121}_{-0.649}$
	+3%/-3%	+4%/-4%	+54%/-54%	+29%/-20%	+15%/-5%	+88%/-51%
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 008621578-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-127 ± 18	$1.47^{+1.00}_{-0.82}$	356^{+25}_{-24}	5232^{+2674}_{-1004}	$28902^{+117758}_{-19250}$
Alt.	-86 ± 18	$1.30^{+0.96}_{-0.77}$	356^{+29}_{-24}	5005^{+3115}_{-945}	$25569^{+136966}_{-17711}$

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

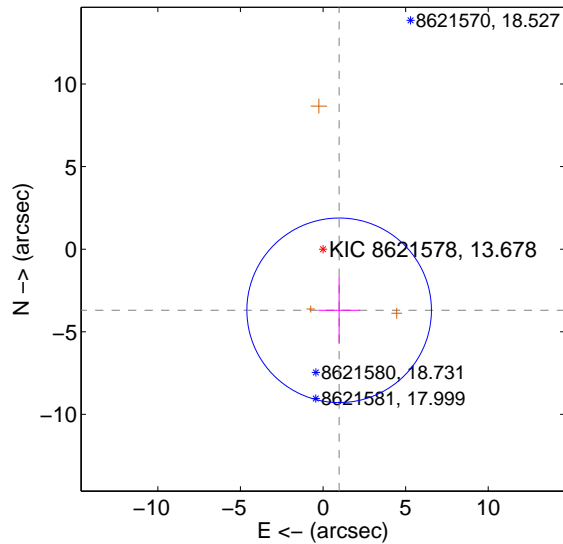
Supplemental centroid analysis for 008621578-01. Kepler magnitude: 13.68. Transit SNR 5.87

There are 0 quarters with good PRF difference image offsets

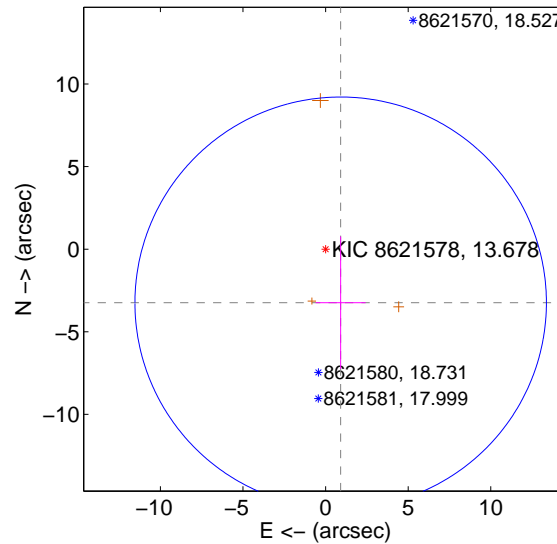
The direct PRF centroid is offset from the target star catalog position by about 0.49 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.828 ± 1.862	2.06	-0.976 ± 1.261	-3.701 ± 2.029
PRF-fit source offset from KIC position	3.370 ± 4.152	0.81	-0.914 ± 1.511	-3.243 ± 4.013
photometric centroid source offset	4.08 ± 2.71	1.50	1.72 ± 2.69	-3.70 ± 2.72

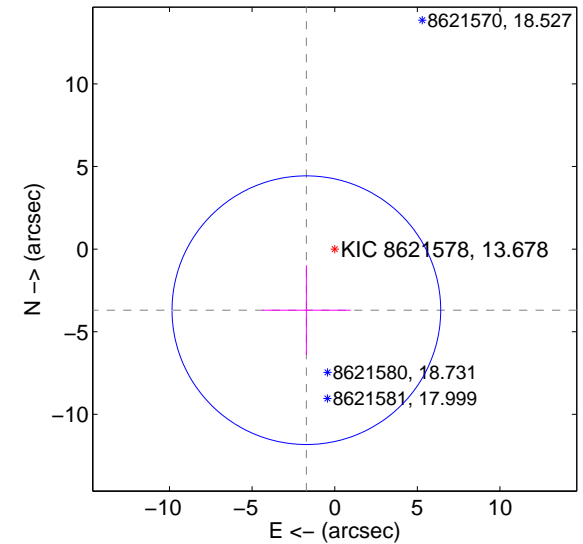
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

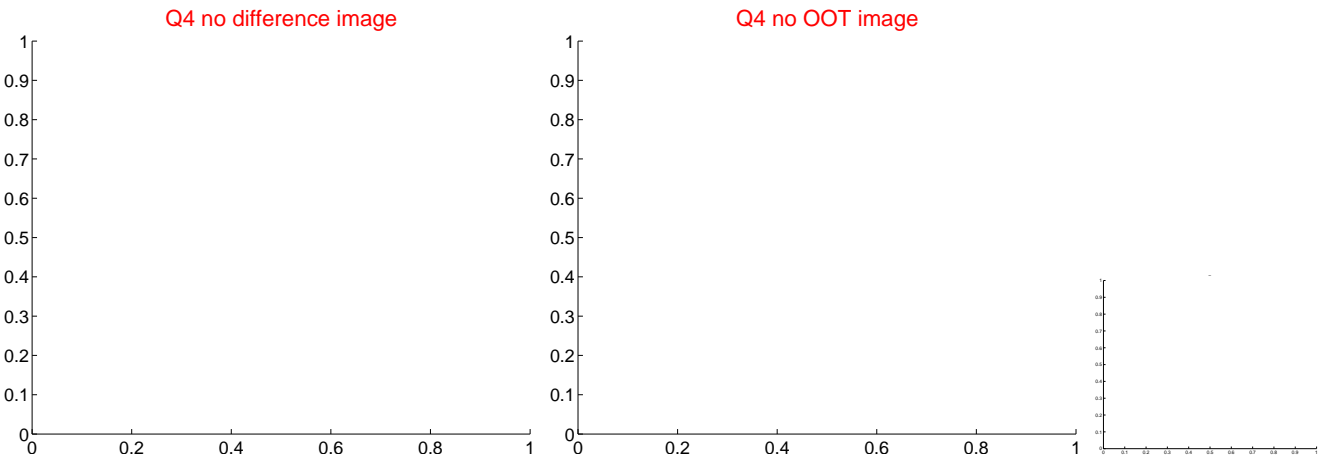
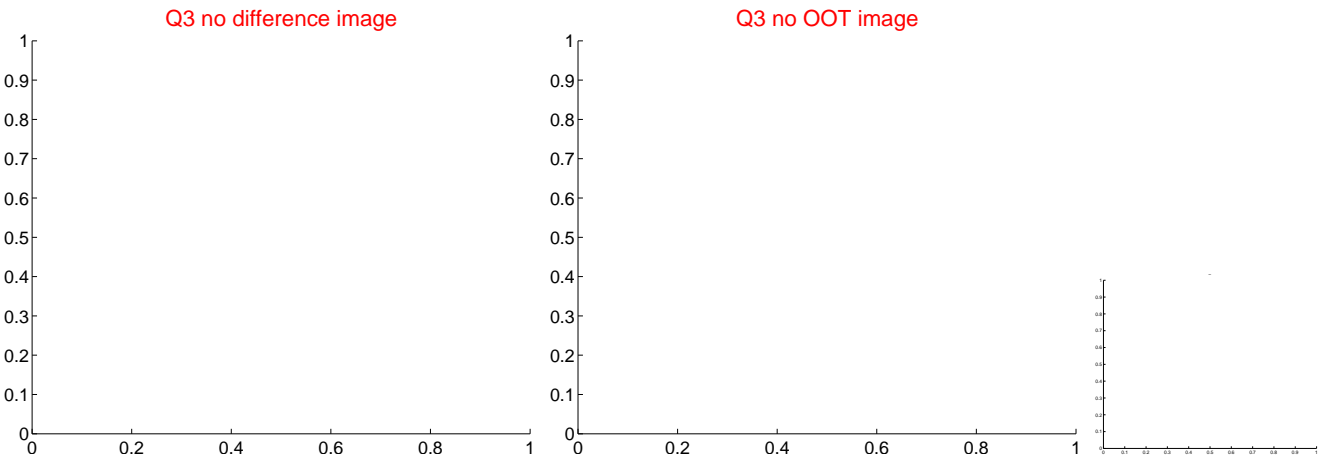
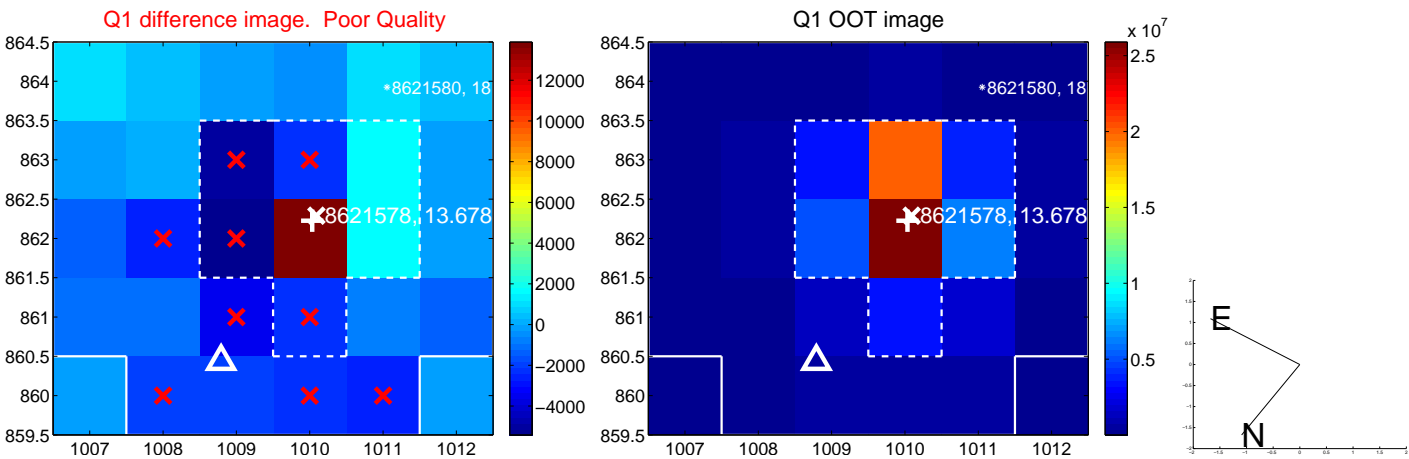


offset from photometric centroids

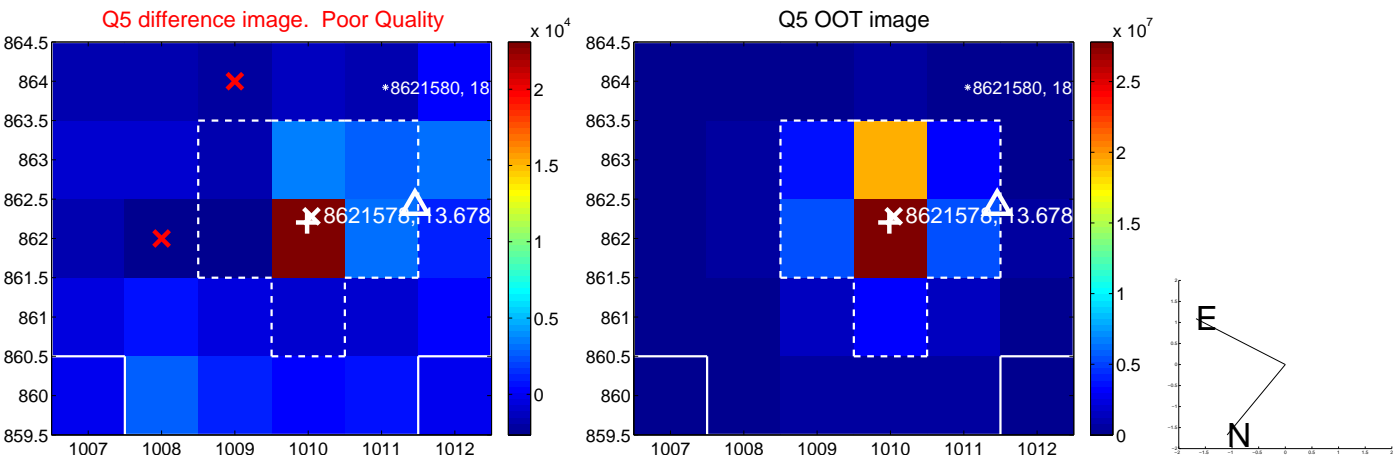


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

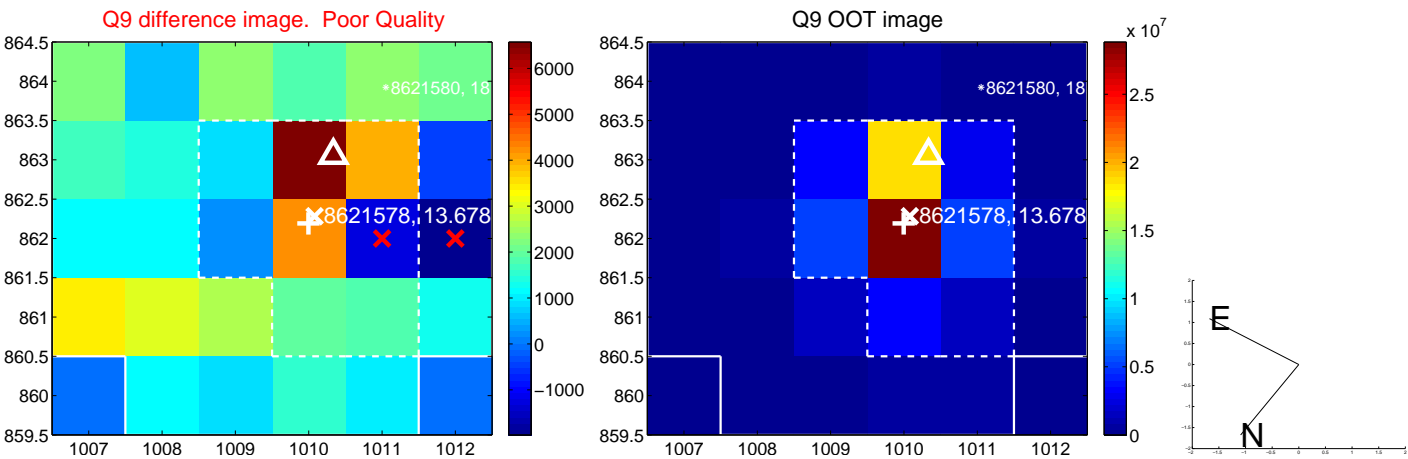
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



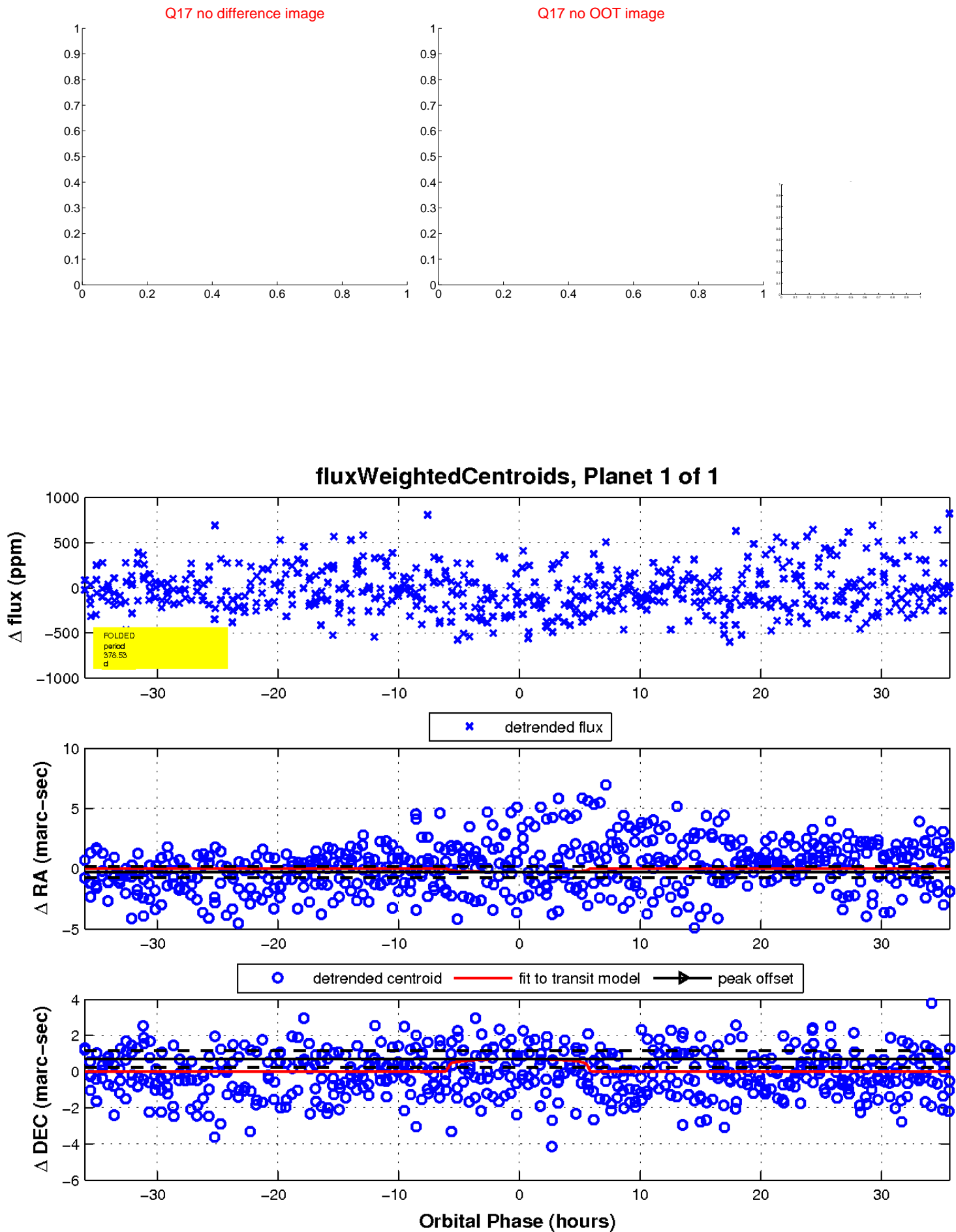
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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



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



UKIRT Image

Declination

