

KIC 011858979

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})
011858979-01	OBS	4062.01	3.059229	131.781512	798.2	1.033	19.7	23.8	1.12	6238	3.73	1001.62

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011858979-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—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.

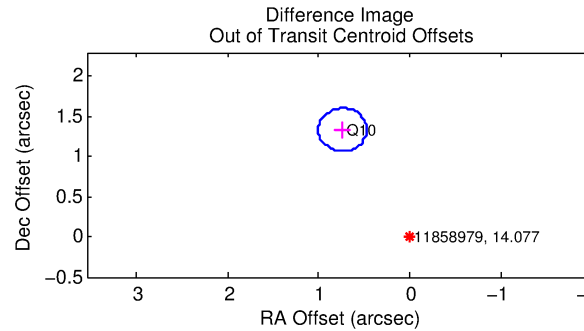
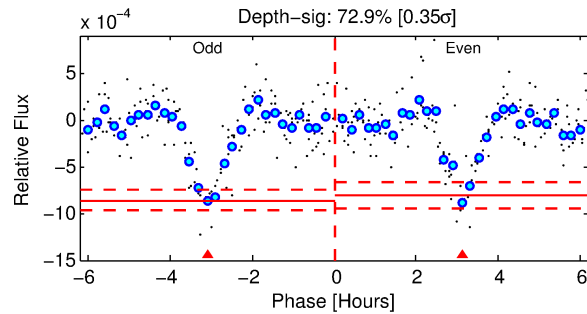
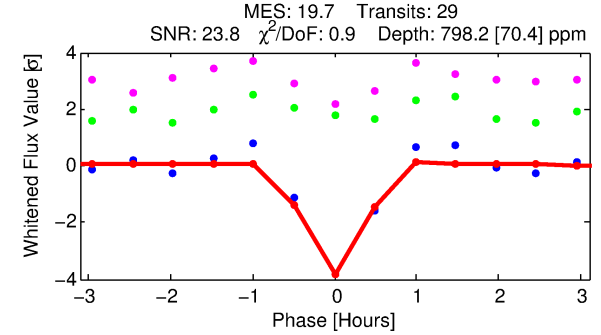
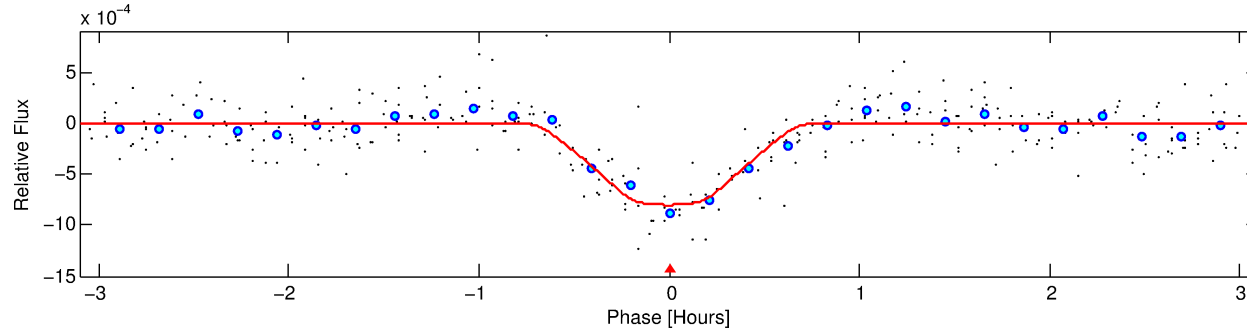
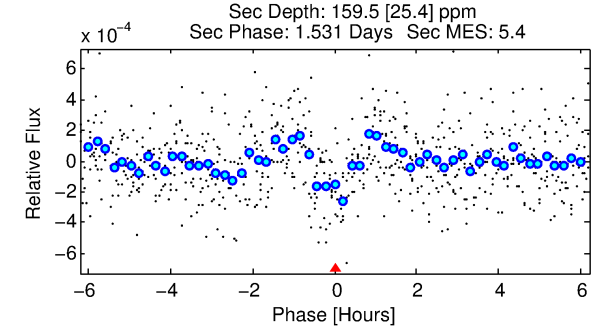
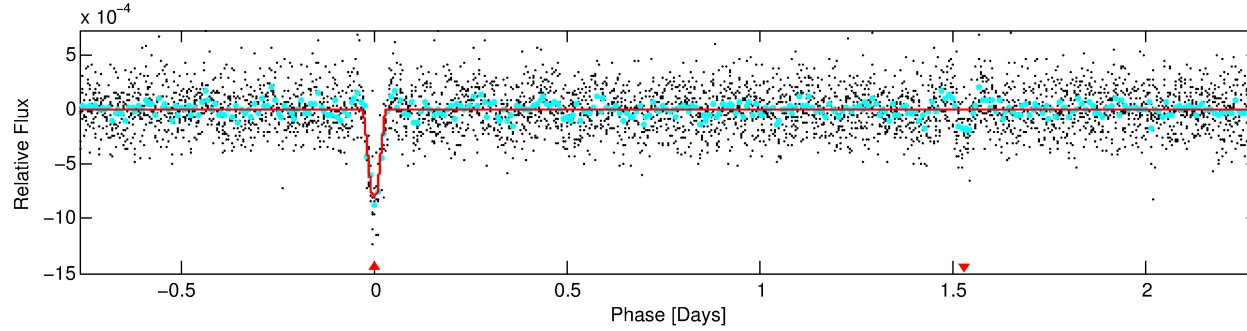
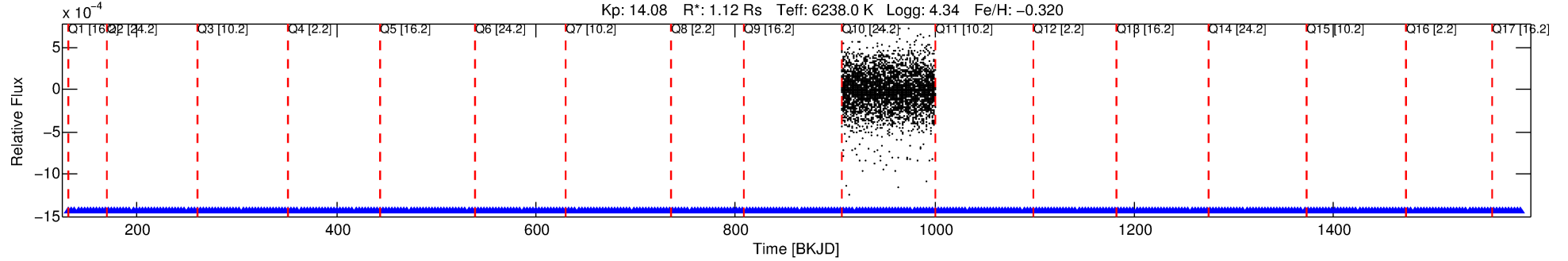
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011858979-01

No Significant Match Found

DV One-Page Summary

KIC: 11858979 Candidate: 1 of 1 Period: 3.059 d
KOI: K04062.01 Corr: 0.754



DV Fit Results:

Period = 3.05923 [0.00001] d
Epoch = 131.7815 [0.0010] BKJD
Rp/R* = 0.0307 [0.0068]
a/R* = 11.35 [12.65]
b = 0.90 [0.24]
Seff = 1001.62 [397.52]
Teq = 1435 [142] K
Rp = 3.73 [1.41] Re
a = 0.0411 [0.0104] AU
Ag = 10.62 [6.35] [1.51σ]
Teffp = 4003 [498] K [4.96σ]

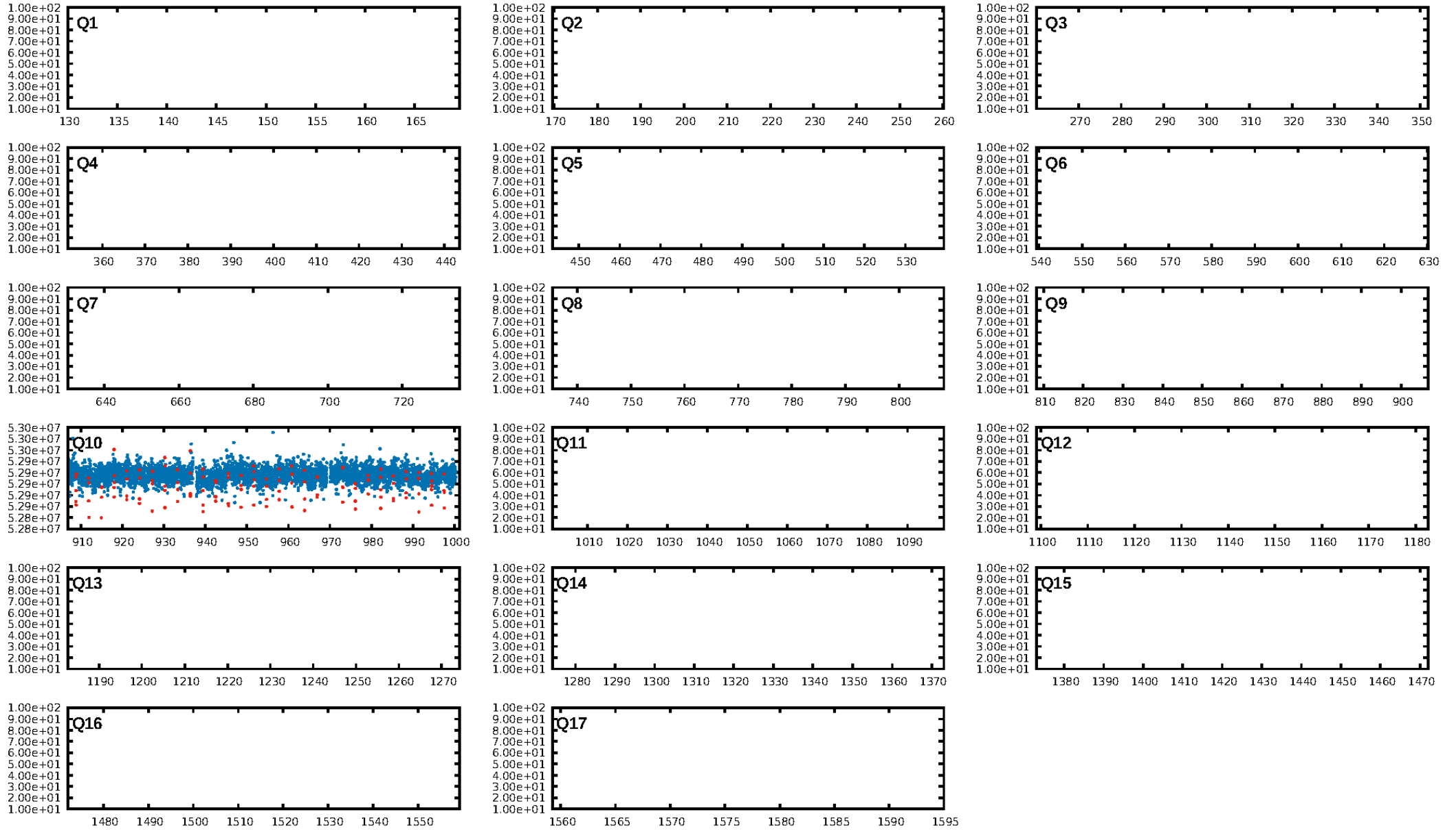
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 88.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.24e-88
RollingBand-fgt: 1.00 [29/29]
GhostDiagnostic-chr: 2.186
Centroid-sig: 0.0%
Centroid-so: 1.908 arcsec [3.52σ]
OotOffset-rm: 1.527 arcsec [17.18σ]
KicOffset-rm: 1.479 arcsec [16.65σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [1/1]

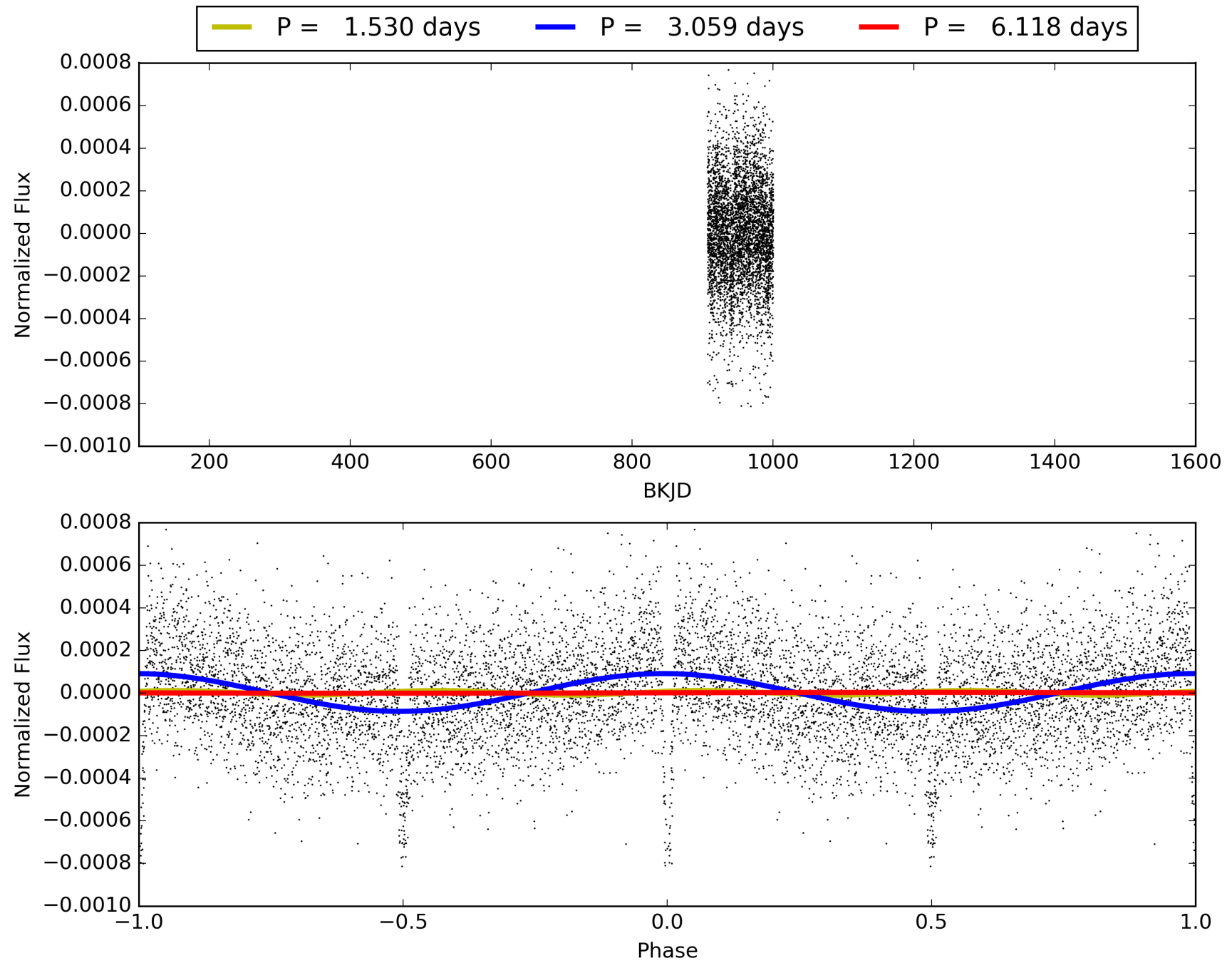
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:57:07 Z

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

TCE 011858979-01, PDC Light Curves

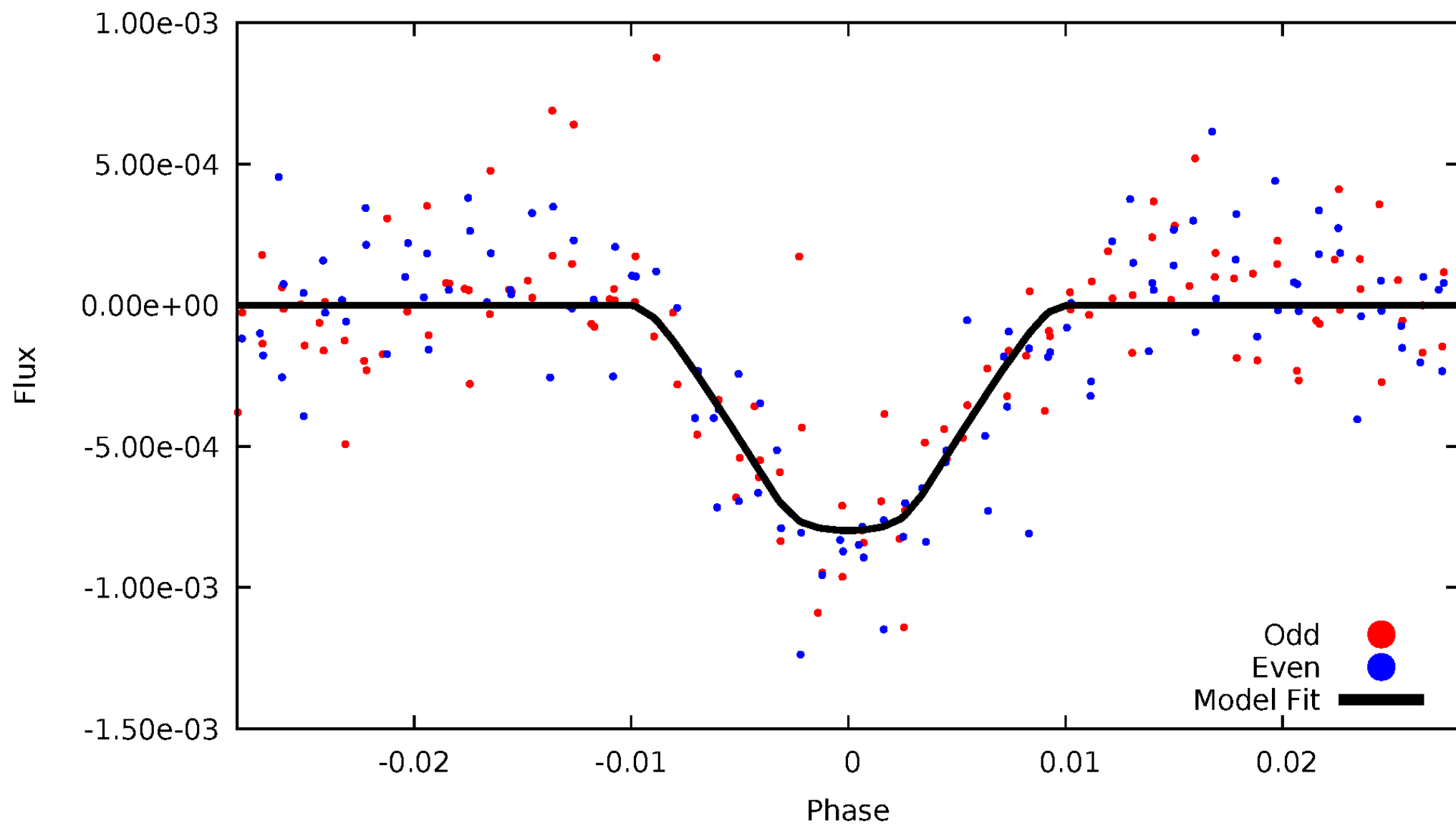


TCE 011858979-01



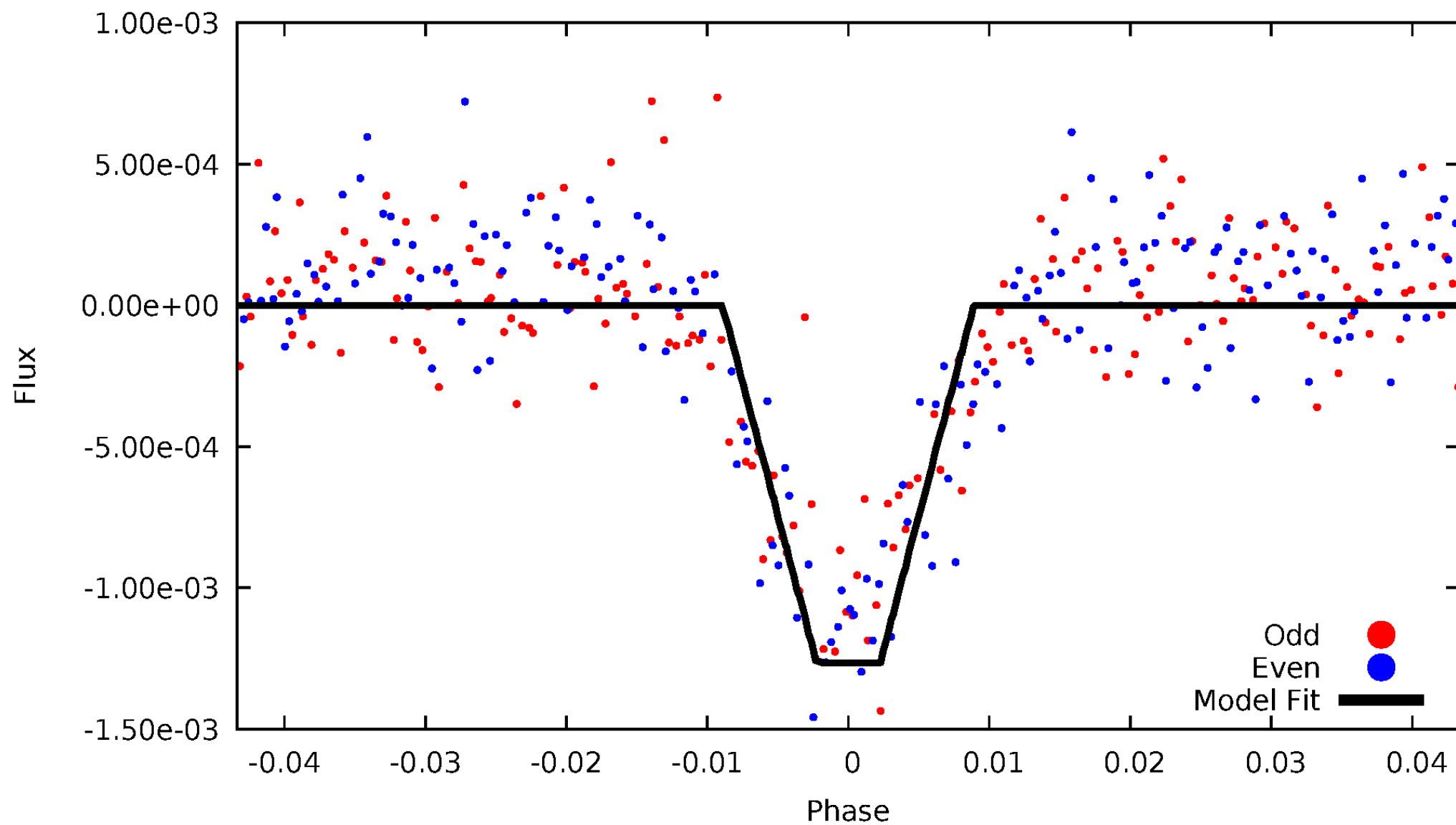
DV Odd/Even

TCE 011858979-01

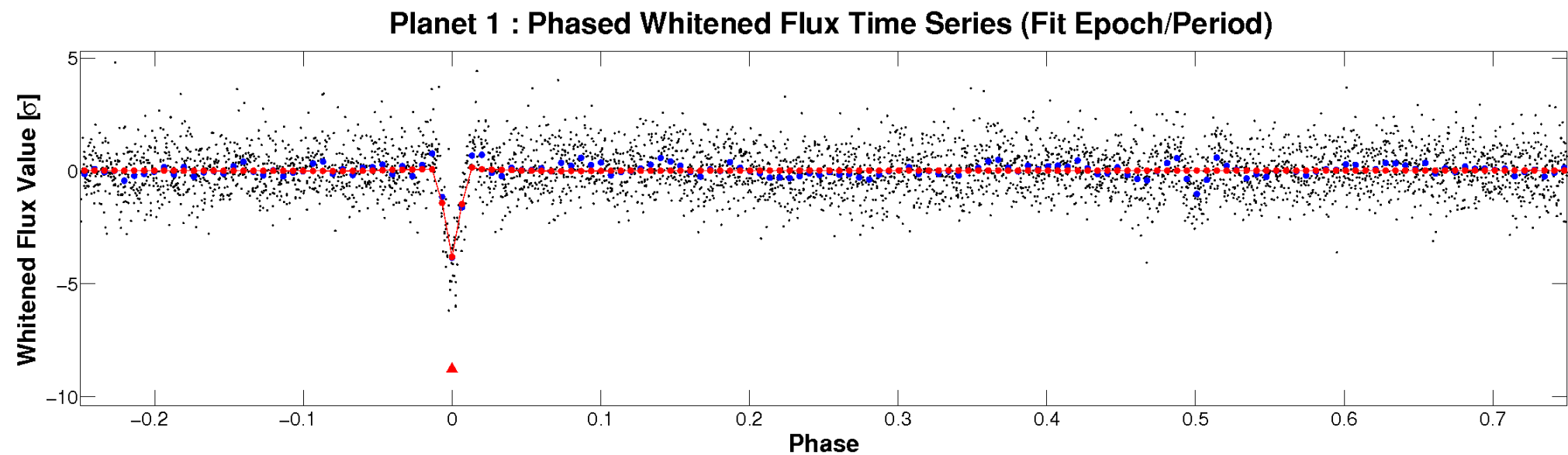
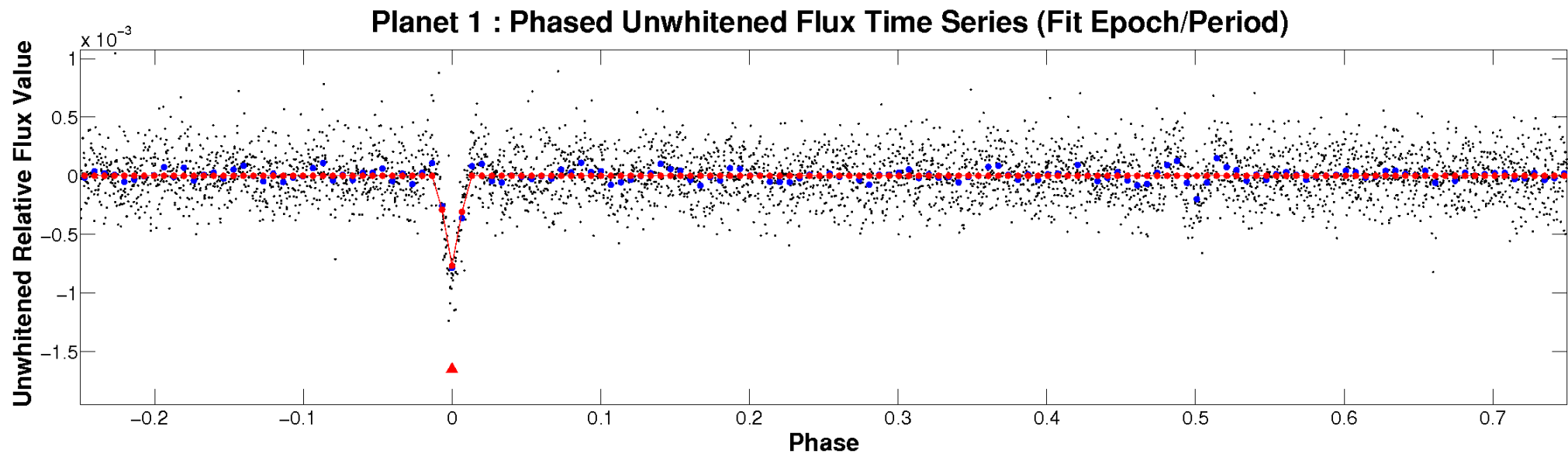


ALT Odd/Even

TCE 011858979-01

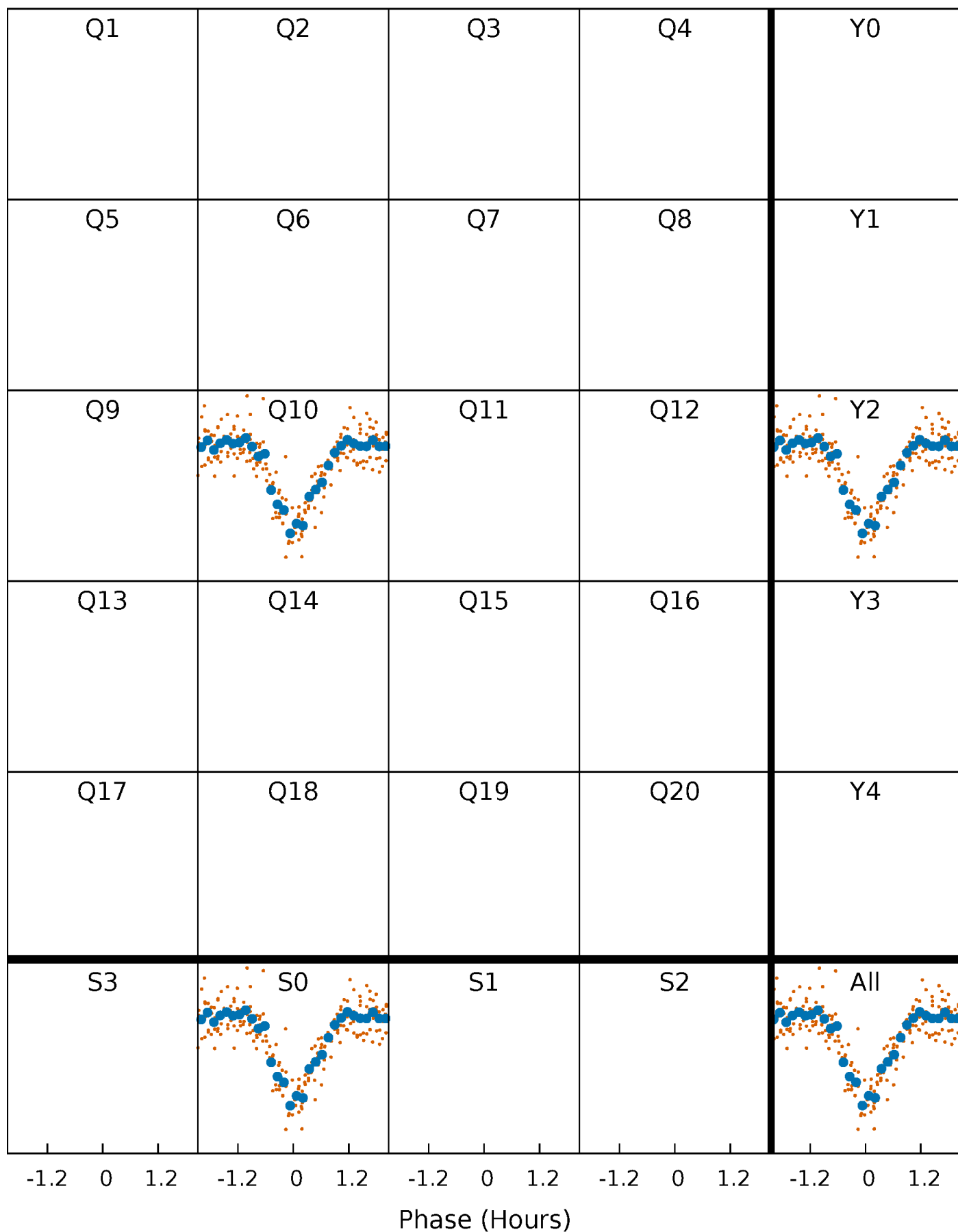


Non-Whitened Vs. Whitened Light Curve



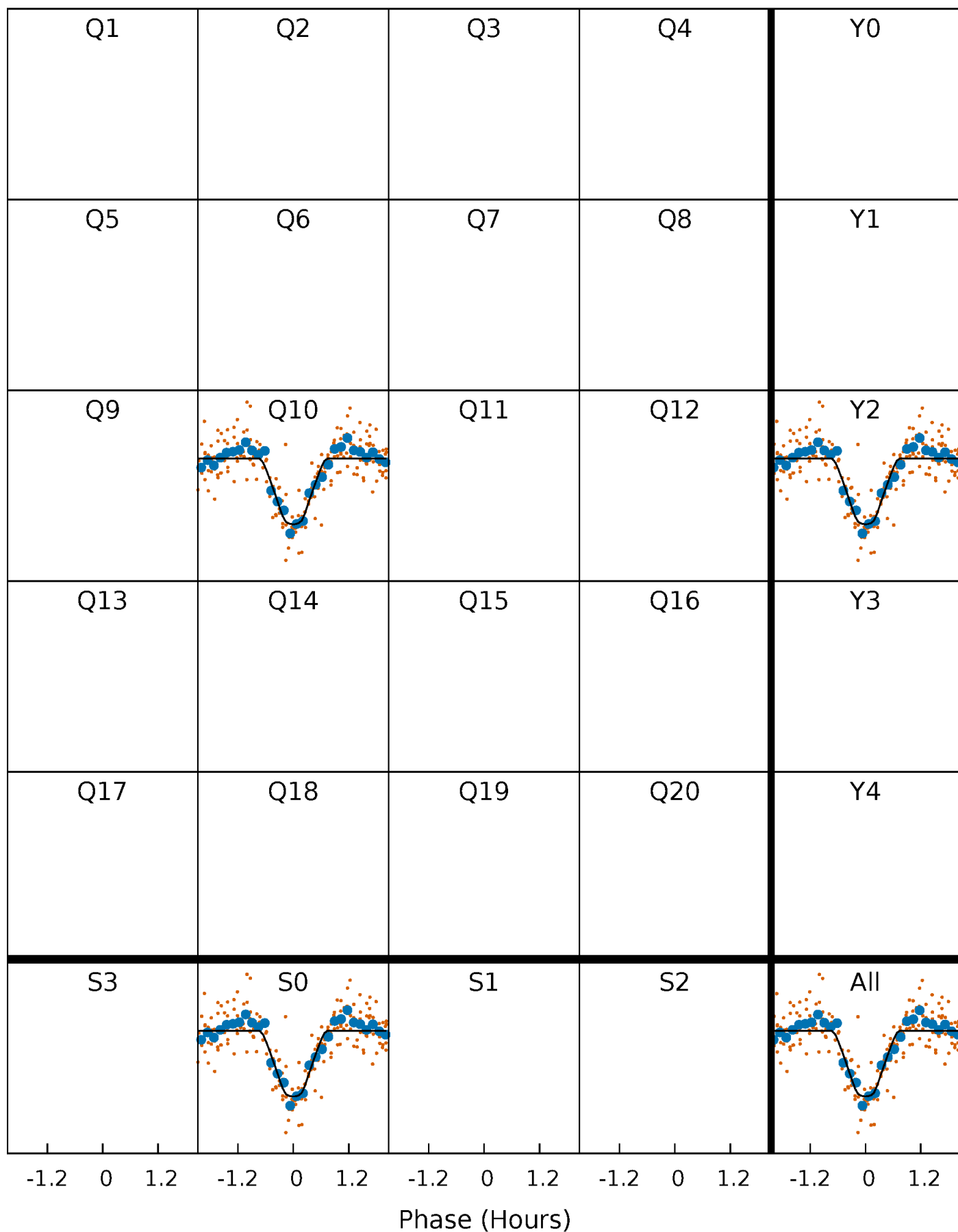
PDC Quarter-Phased Transit Curves

TCE 011858979-01 P= 3.059229 Days $T_0=131.781512$ (BKJD)



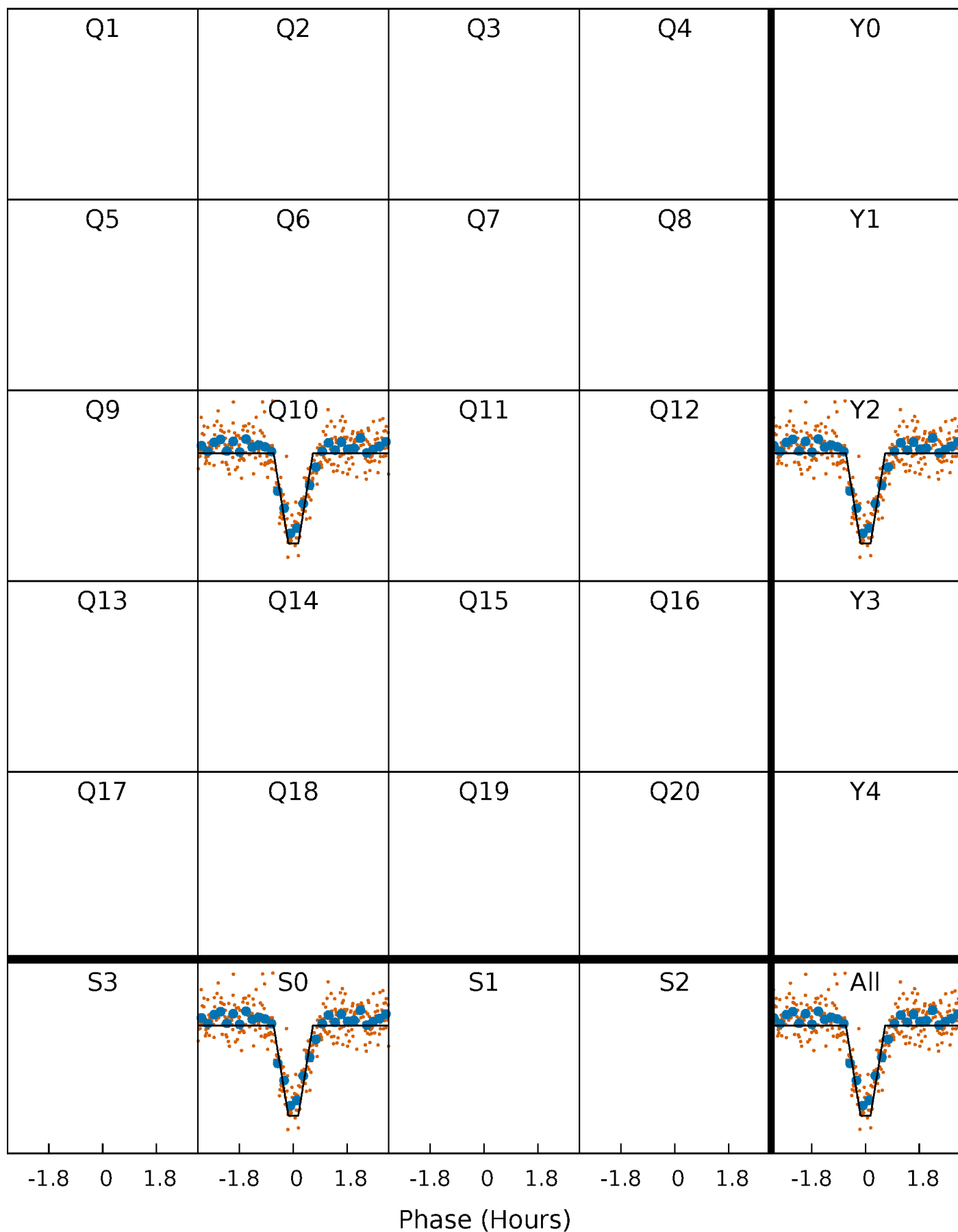
DV Quarter-Phased Transit Curves

TCE 011858979-01 P= 3.059229 Days $T_0=131.781512$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

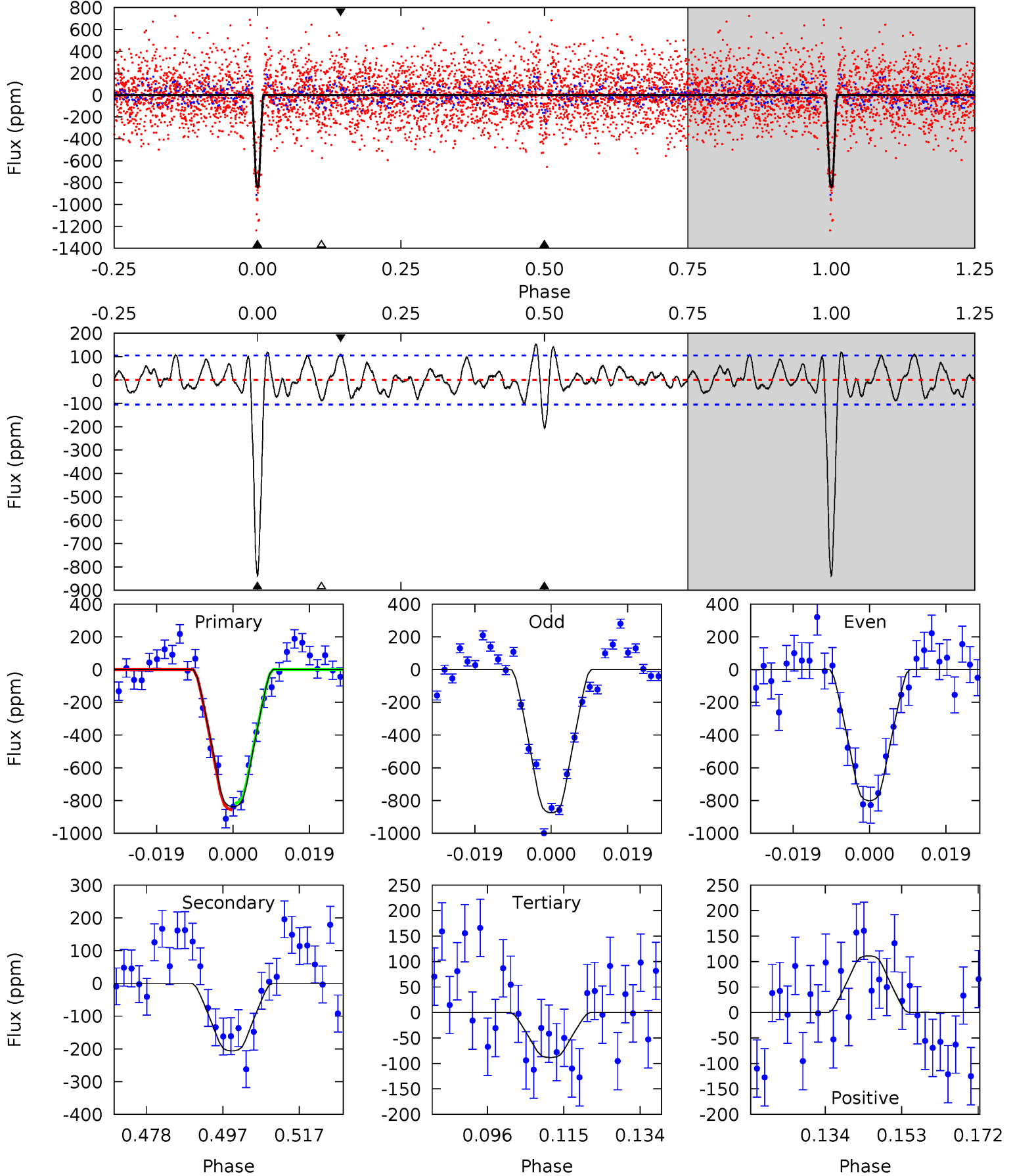
TCE 011858979-01 P= 3.059309 Days $T_0=131.761997$ (BKJD)



DV Model-Shift Uniqueness Test

011858979-01, P = 3.059229 Days, E = 131.781512 Days

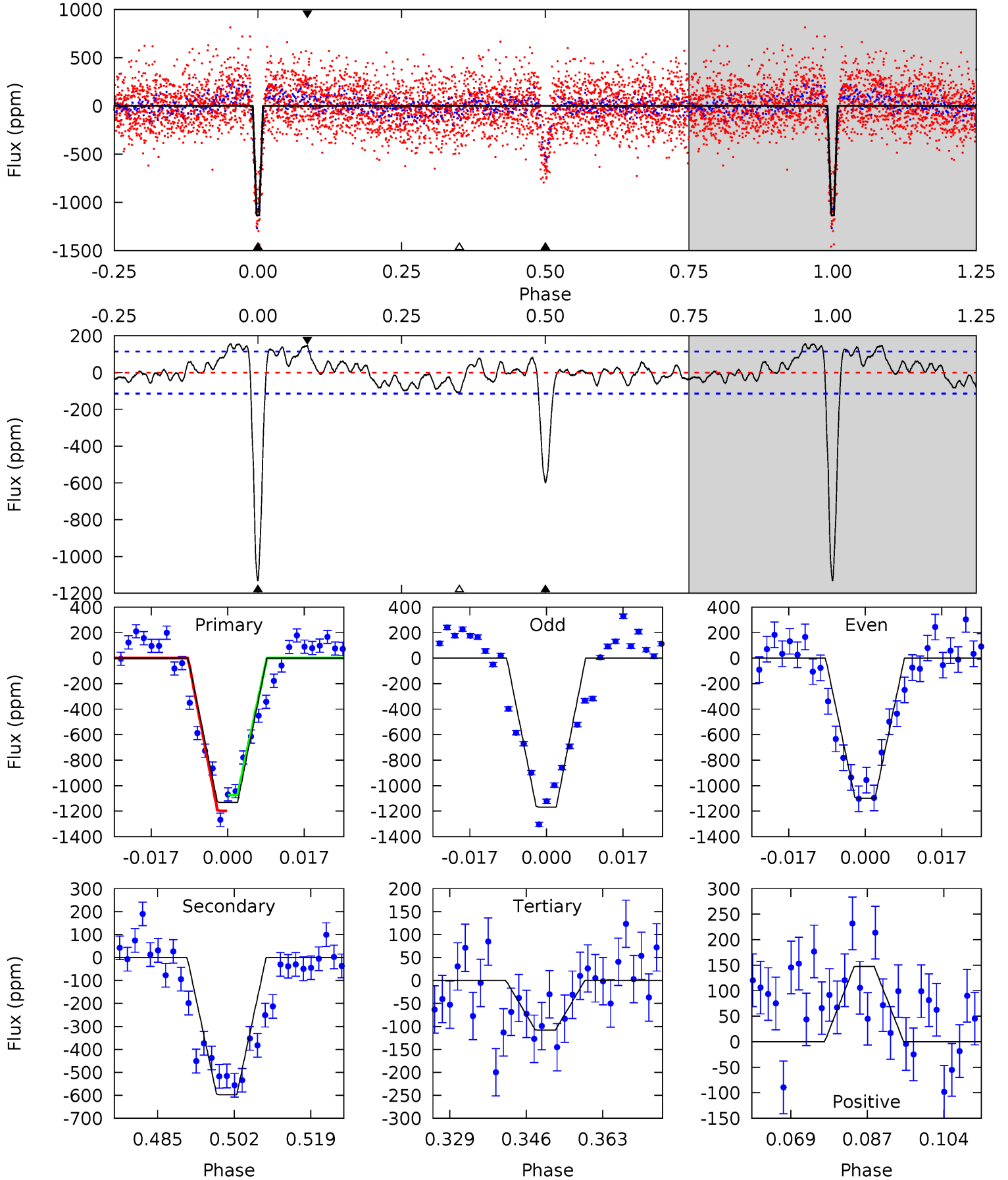
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
39.1	9.61	4.12	5.18	4.90	2.34	1.92	34.9	33.9	5.49	4.42	1.73	0.96	0.15	0.89



Alt Model-Shift Uniqueness Test

011858979-01, P = 3.059309 Days, E = 131.761997 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
48.6	25.7	4.63	6.34	4.92	2.38	2.42	44.0	42.3	21.0	19.3	1.51	0.98	0.12	2.65



Stellar Parameters For KIC 011858979

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6238^{+197}_{-241}	$4.337^{+0.132}_{-0.198}$	$-0.320^{+0.300}_{-0.300}$	$1.116^{+0.340}_{-0.183}$	$0.986^{+0.160}_{-0.107}$	$0.998^{+0.630}_{-0.525}$
	+3%/-4%	+3%/-5%	+94%/-94%	+30%/-16%	+16%/-11%	+63%/-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 011858979-01 / KOI 4062.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-206 ± 21	$3.73^{+1.06}_{-0.88}$	2011^{+148}_{-122}	4441^{+523}_{-363}	14^{+10}_{-5}
Alt.	-598 ± 23	$4.41^{+1.19}_{-0.94}$	2015^{+168}_{-124}	5183^{+568}_{-388}	28^{+17}_{-10}

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

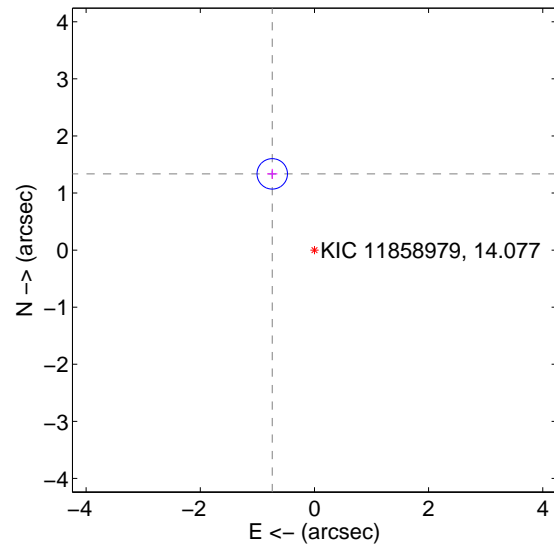
Supplemental centroid analysis for 011858979-01. Kepler magnitude: 14.08. Transit SNR 23.84

There are 1 quarters with good PRF difference image offsets

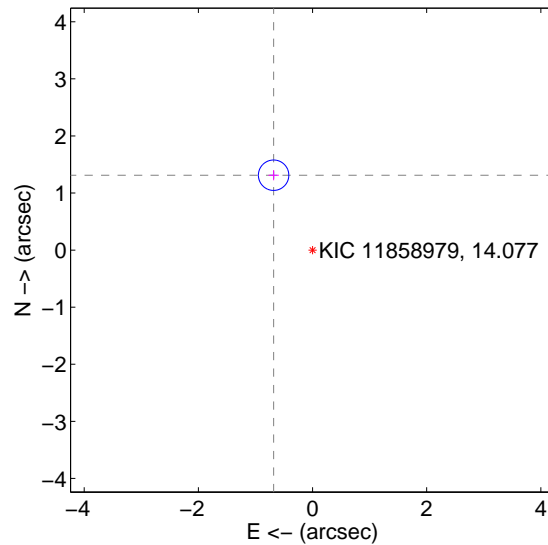
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.527 ± 0.089	17.18	0.739 ± 0.090	1.336 ± 0.088
PRF-fit source offset from KIC position	1.479 ± 0.089	16.65	0.682 ± 0.090	1.312 ± 0.088
photometric centroid source offset	1.91 ± 0.54	3.52	1.68 ± 0.52	0.90 ± 0.61

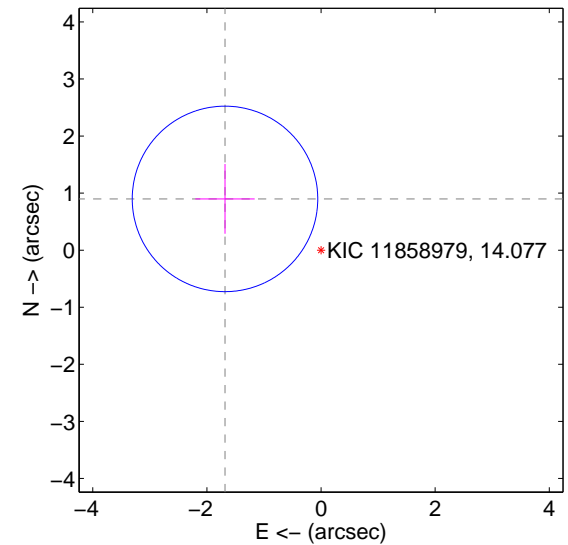
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

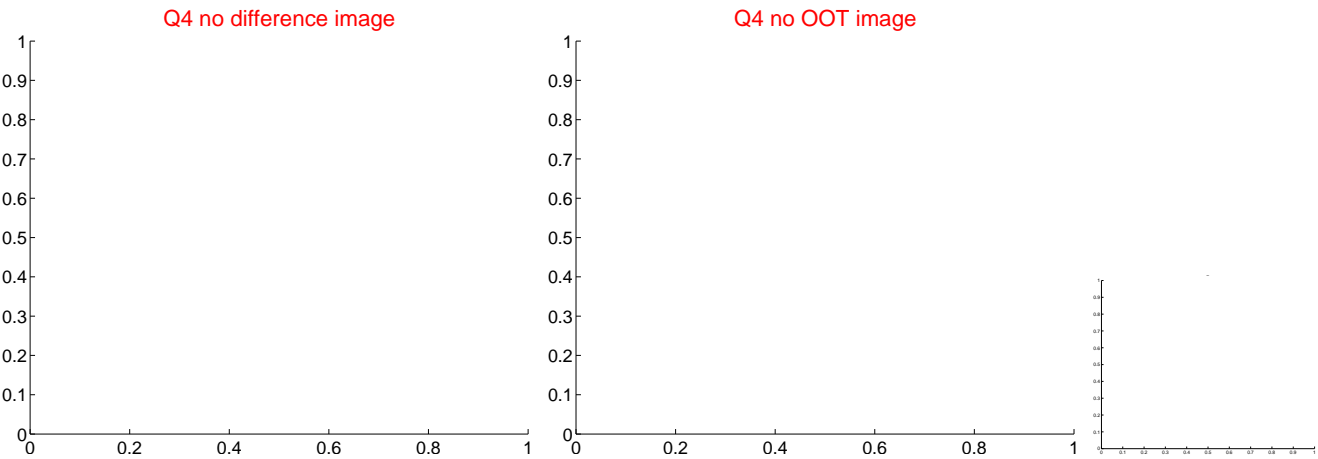
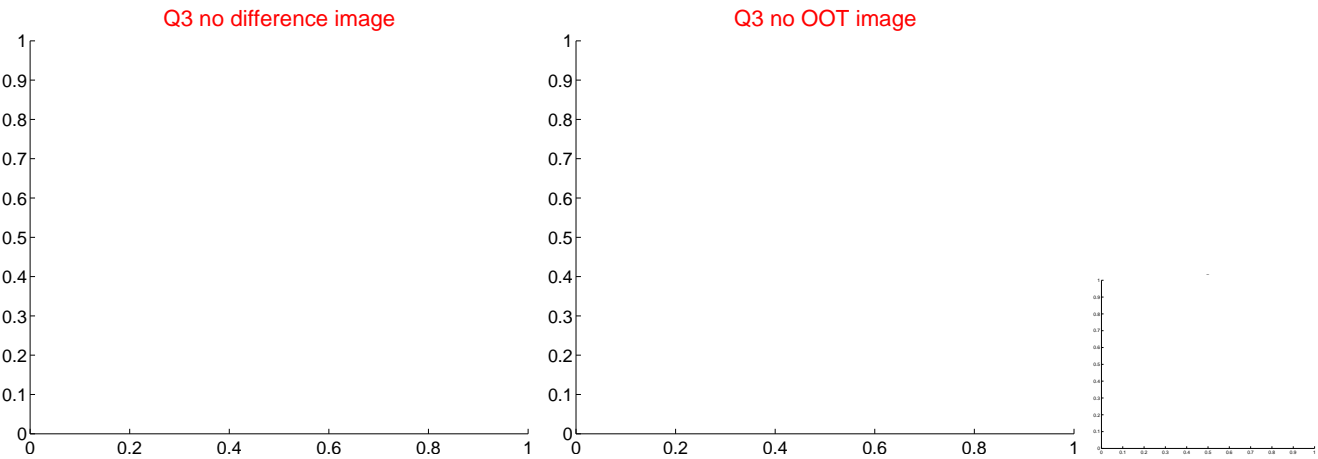
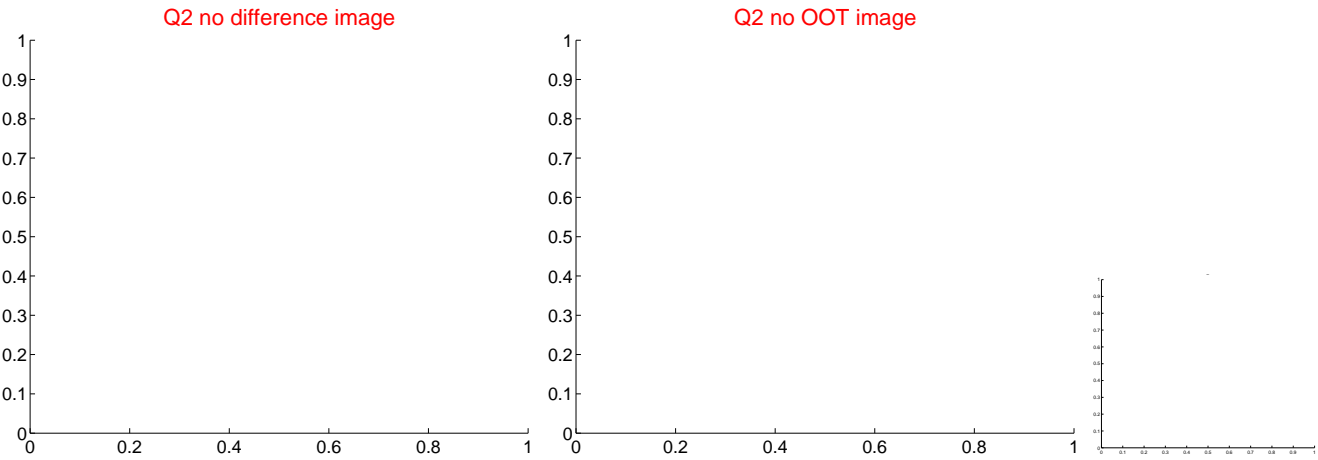
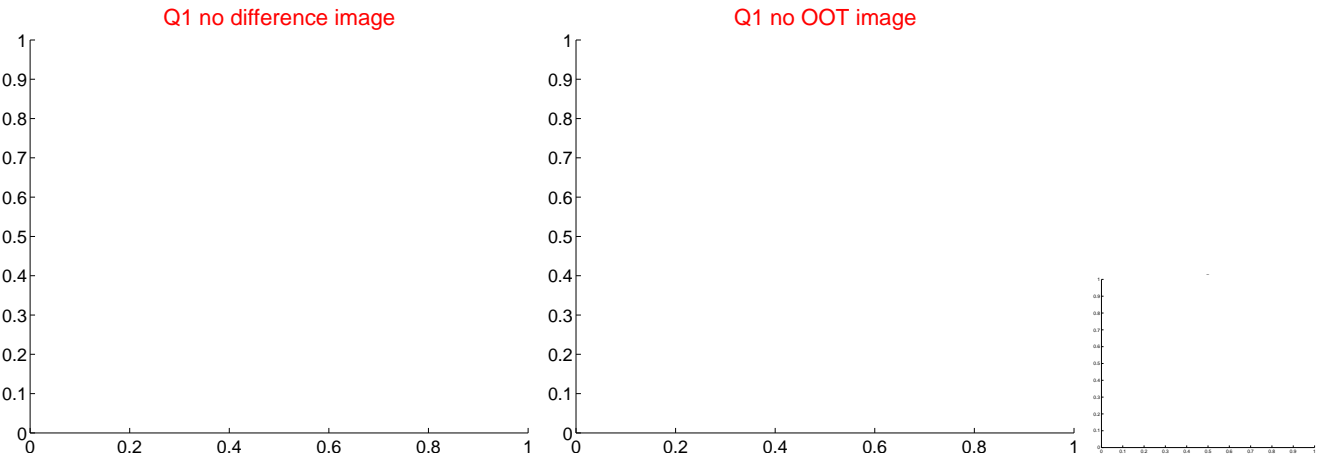


offset from photometric centroids



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.

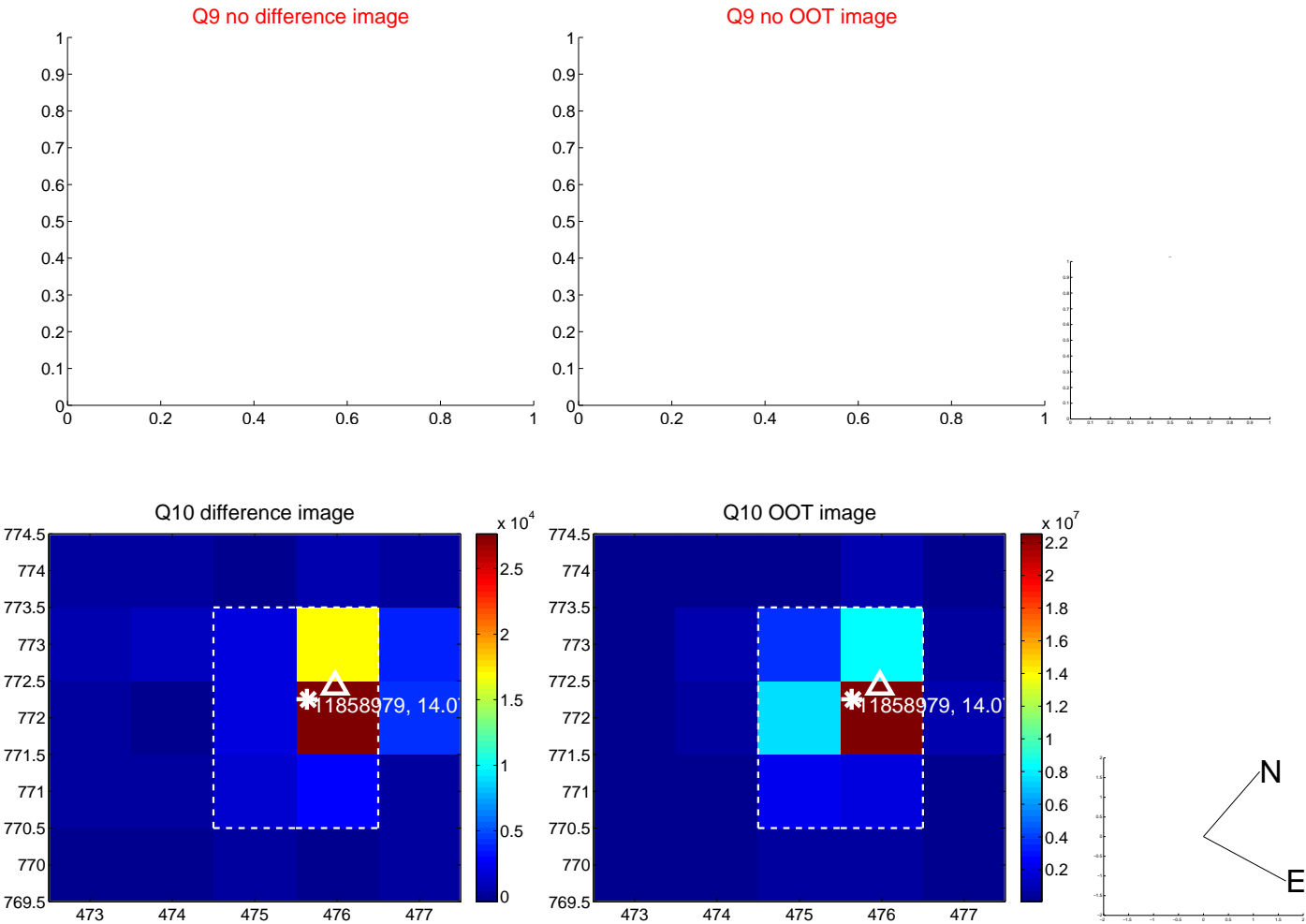
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



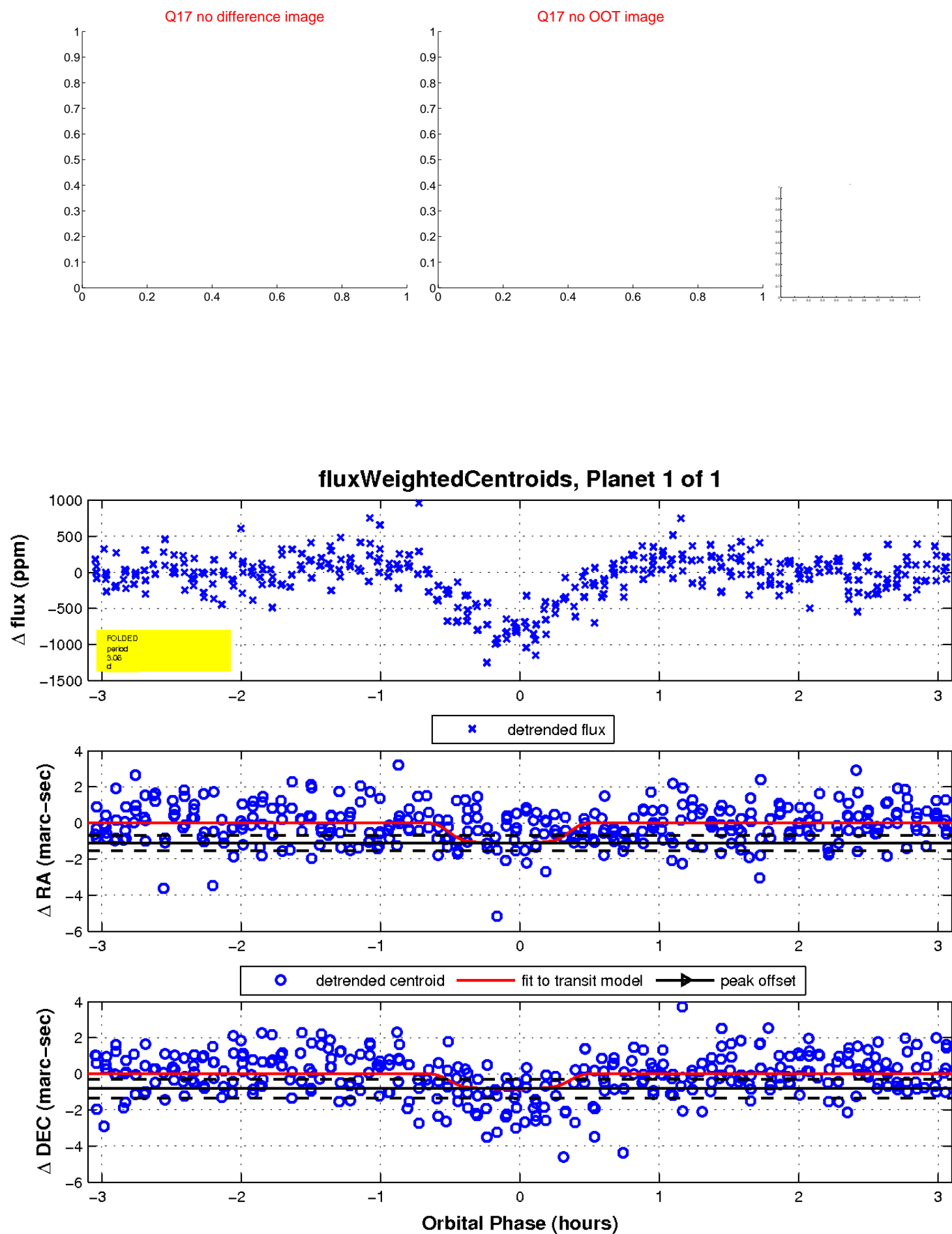
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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

