

KIC 009079587

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})
009079587-01	OBS	7921.01	364.361856	183.258703	1399.9	11.465	8.6	8.3	0.80	5606	3.48	0.64

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009079587-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—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.

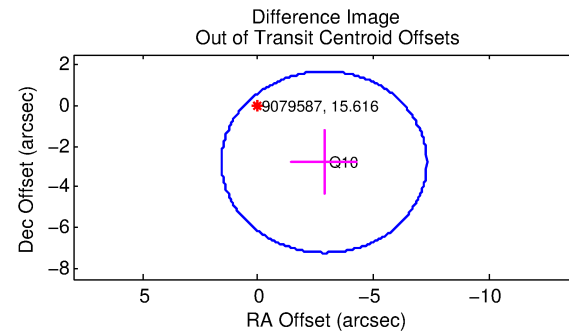
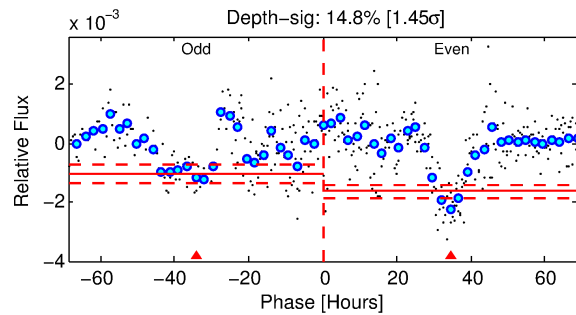
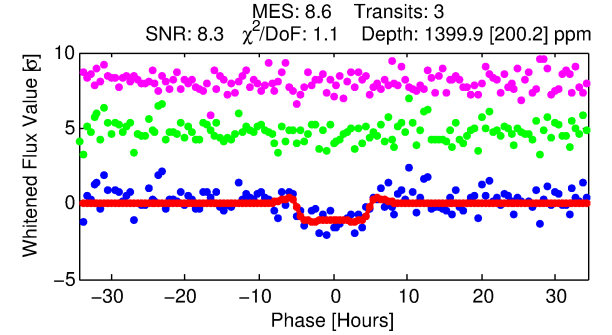
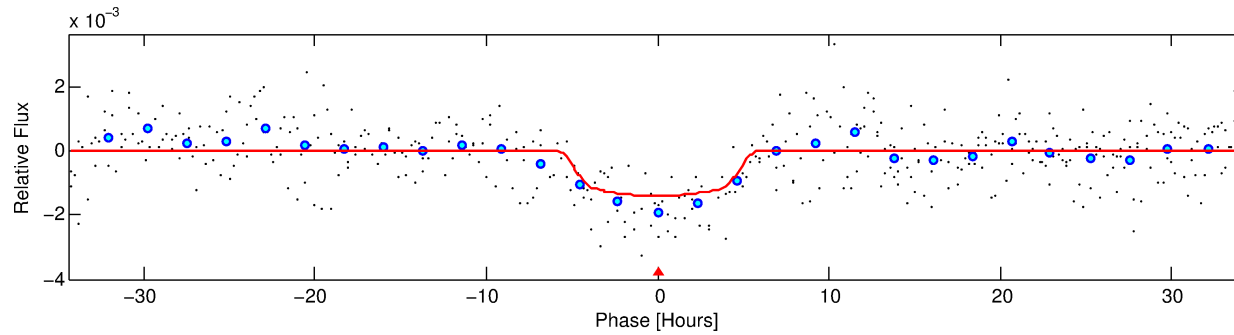
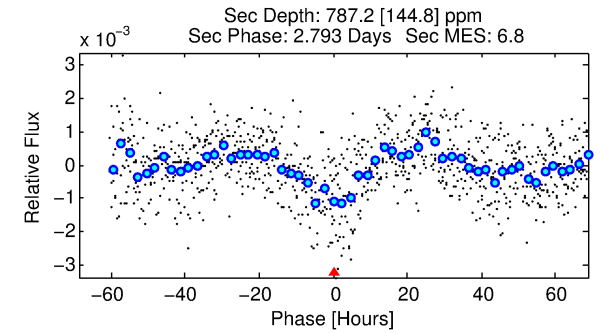
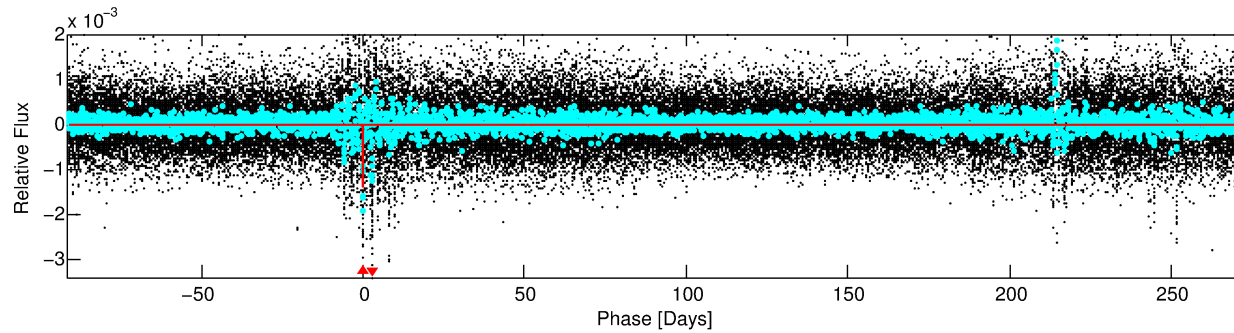
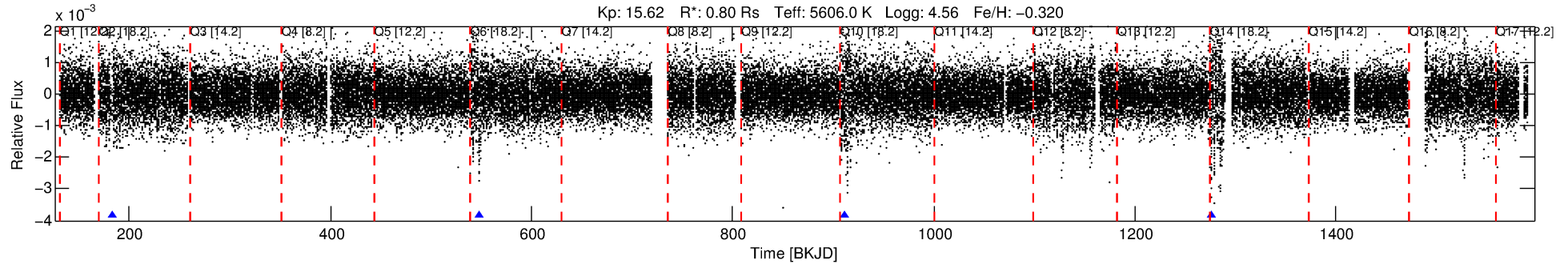
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009079587-01

No Significant Match Found

DV One-Page Summary

KIC: 9079587 Candidate: 1 of 1 Period: 364.362 d



DV Fit Results:

Period = 364.36186 [0.01407] d
Epoch = 183.2587 [0.0284] BKJD
Rp/R* = 0.0399 [0.0046]
a/R* = 136.45 [48.61]
b = 0.87 [0.10]
Seff = 0.64 [0.19]
Teq = 228 [17] K
Rp = 3.48 [0.88] Re
a = 0.9429 [0.1789] AU
Ag = 31730.90 [12764.85] [2.49σ]
Teff = 4701 [368] K [12.16σ]

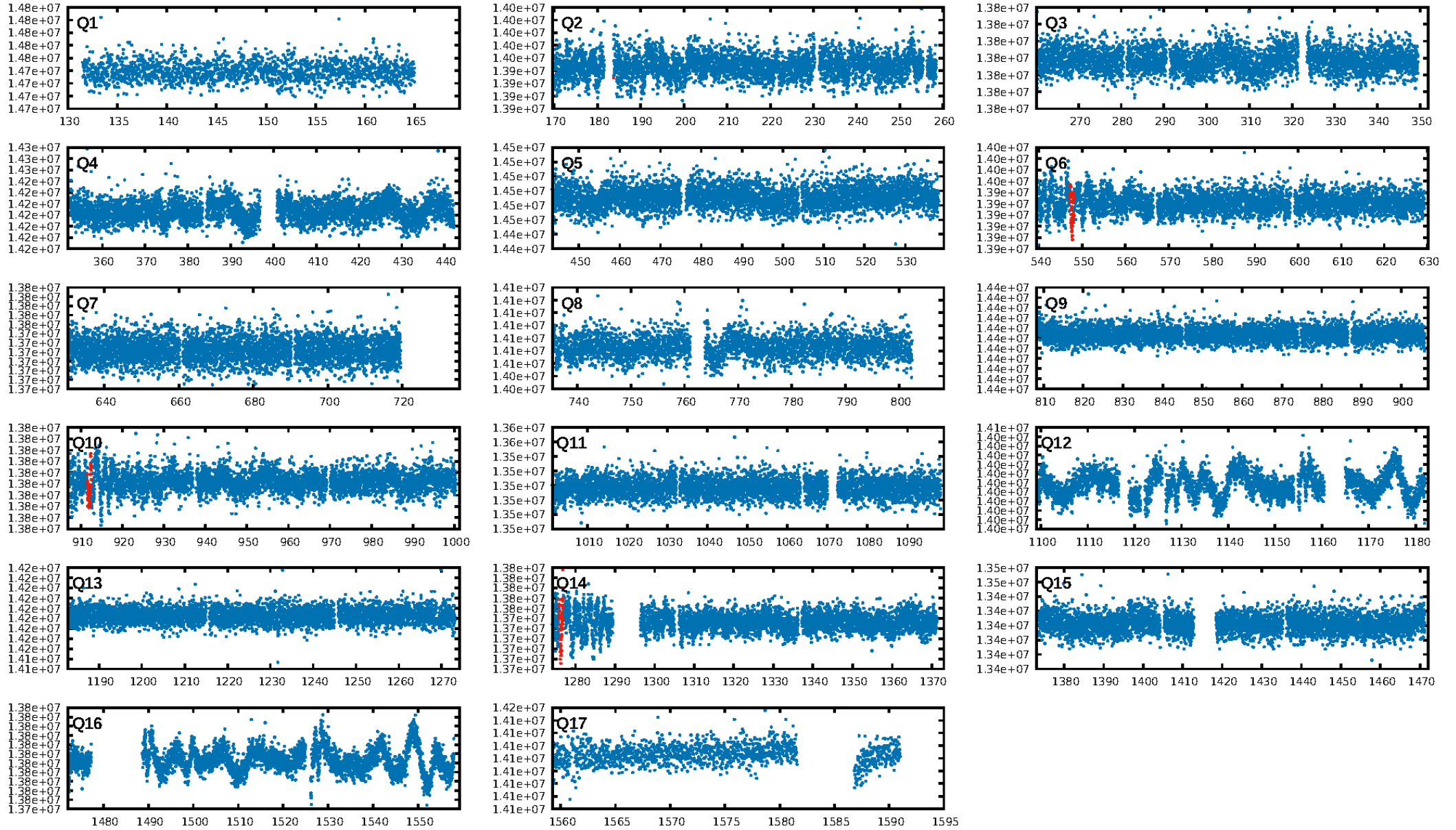
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 28.4%
ModelChiSquareGof-sig: 99.4%
Bootstrap-pfa: 4.42e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.877
Centroid-sig: 41.3%
Centroid-so: 2.498 arcsec [1.14σ]
OotOffset-rm: 3.986 arcsec [2.69σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-rm: 3.561 arcsec [2.44σ]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [3/3]

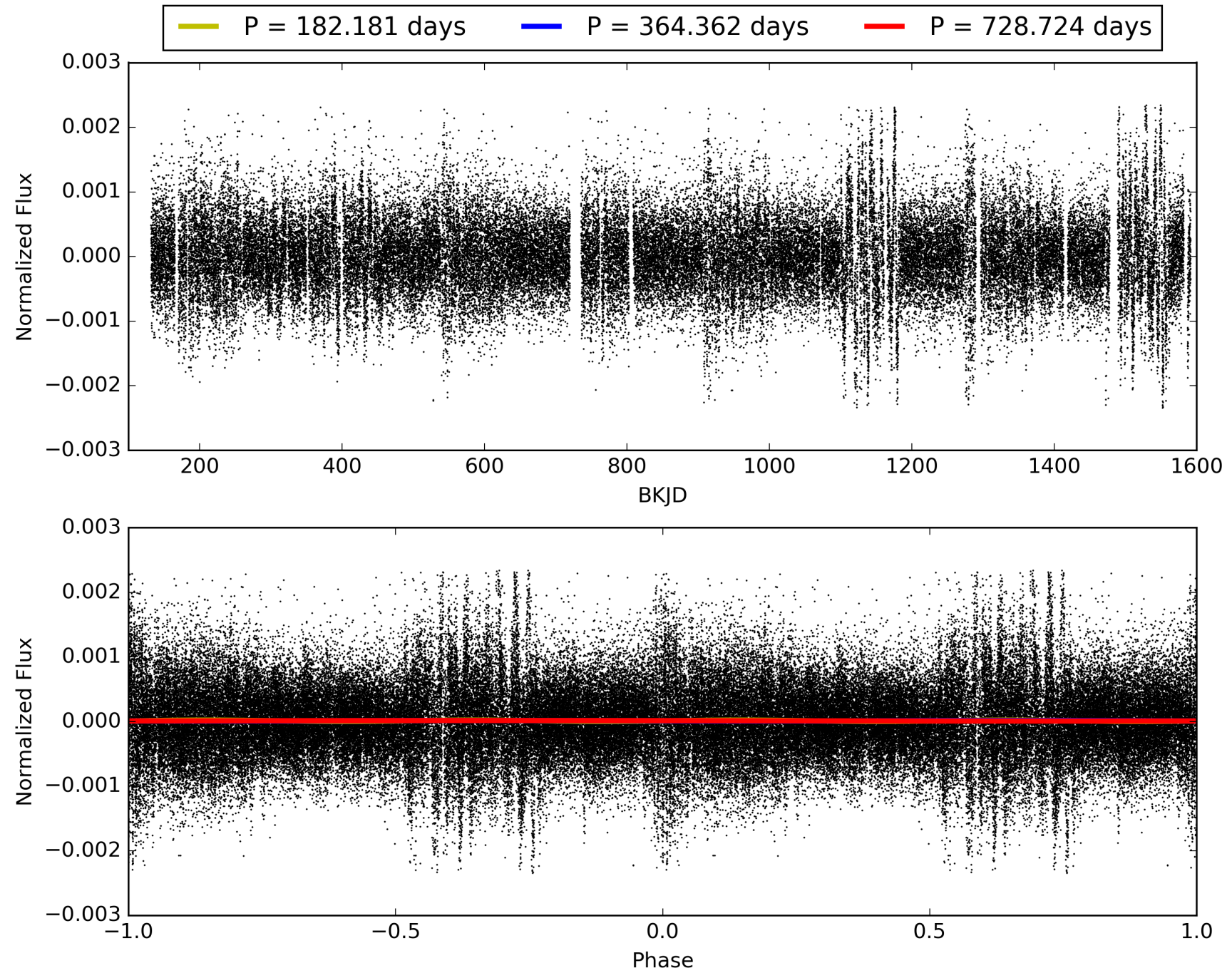
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:32:38 Z

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

TCE 009079587-01, PDC Light Curves

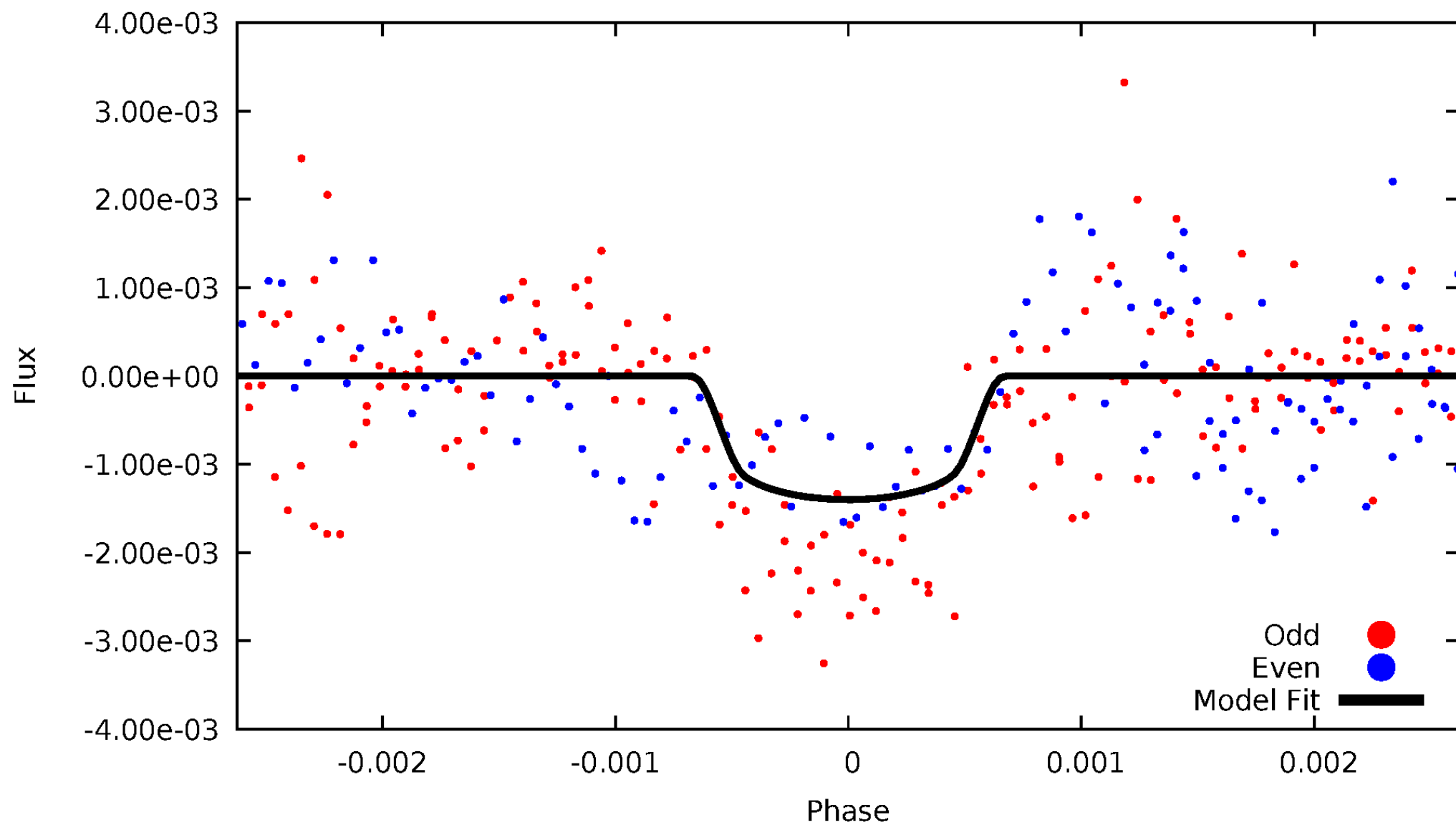


TCE 009079587-01



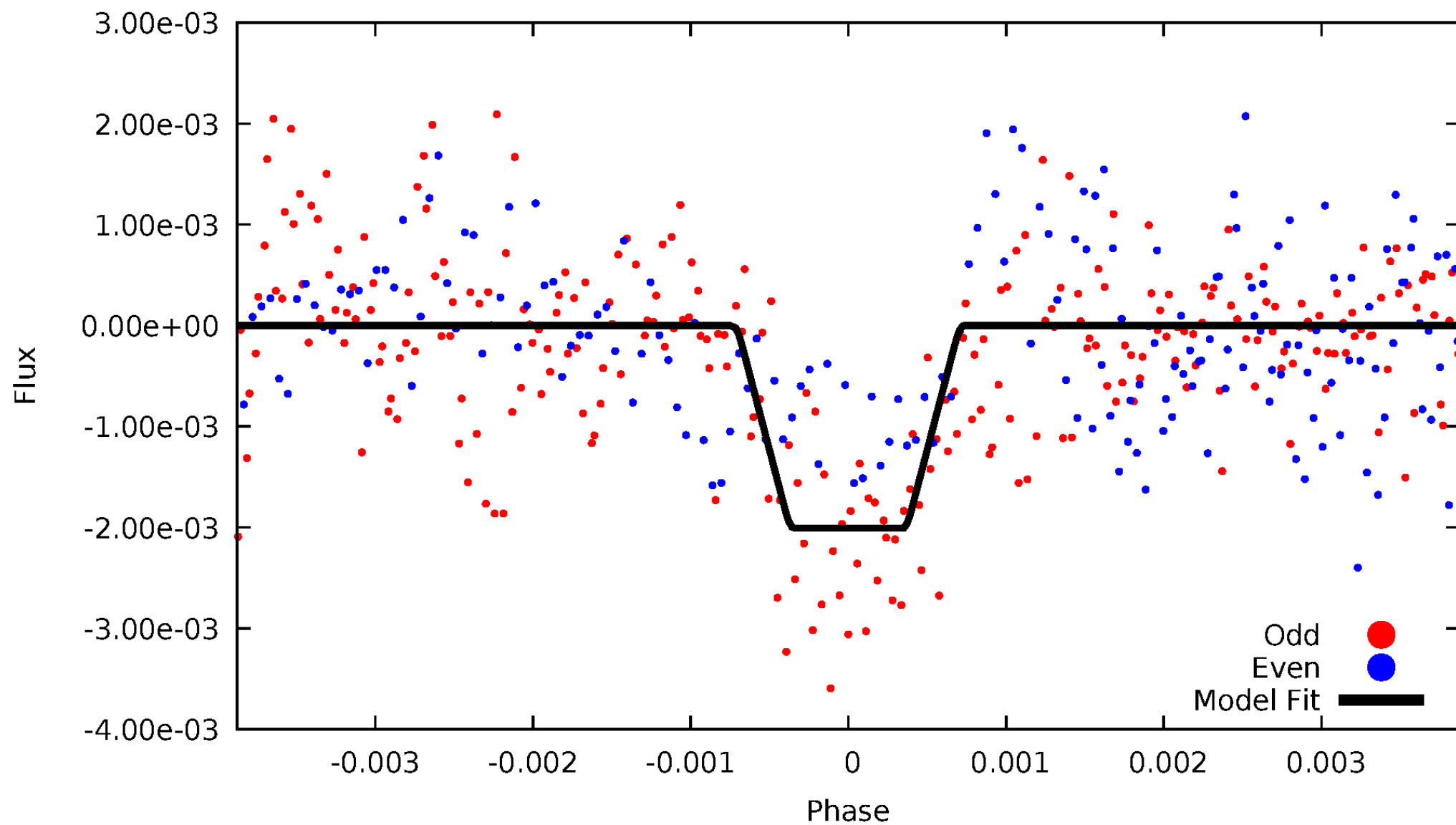
DV Odd/Even

TCE 009079587-01



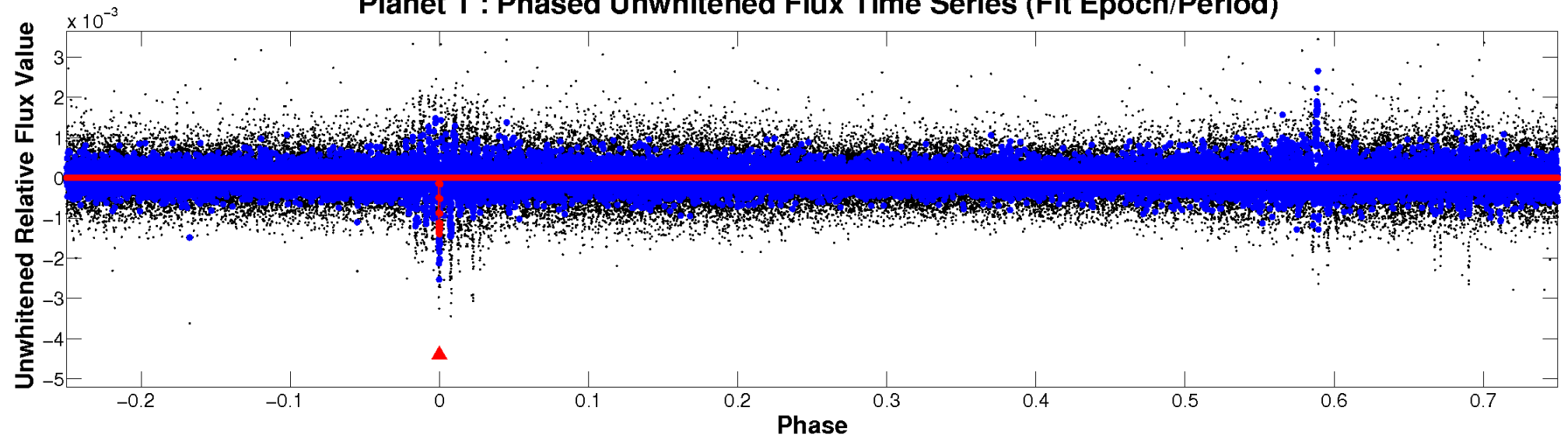
ALT Odd/Even

TCE 009079587-01

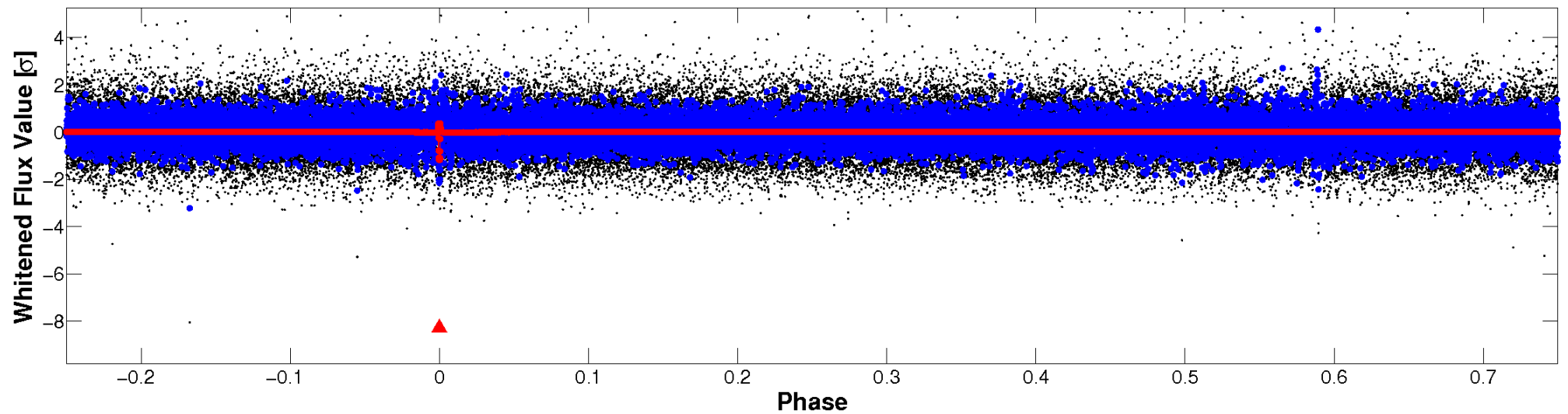


Non-Whitened Vs. Whitened Light Curve

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

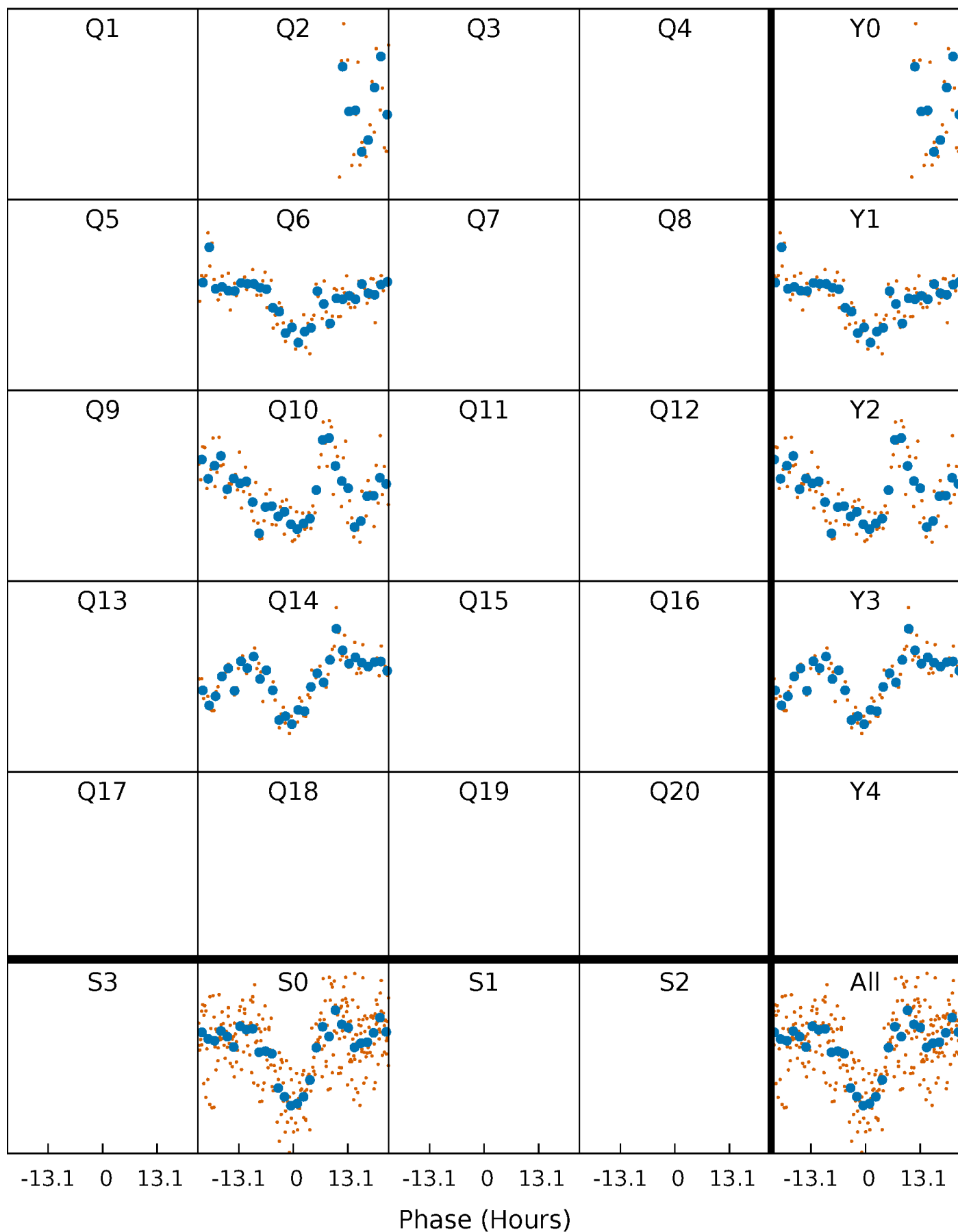


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



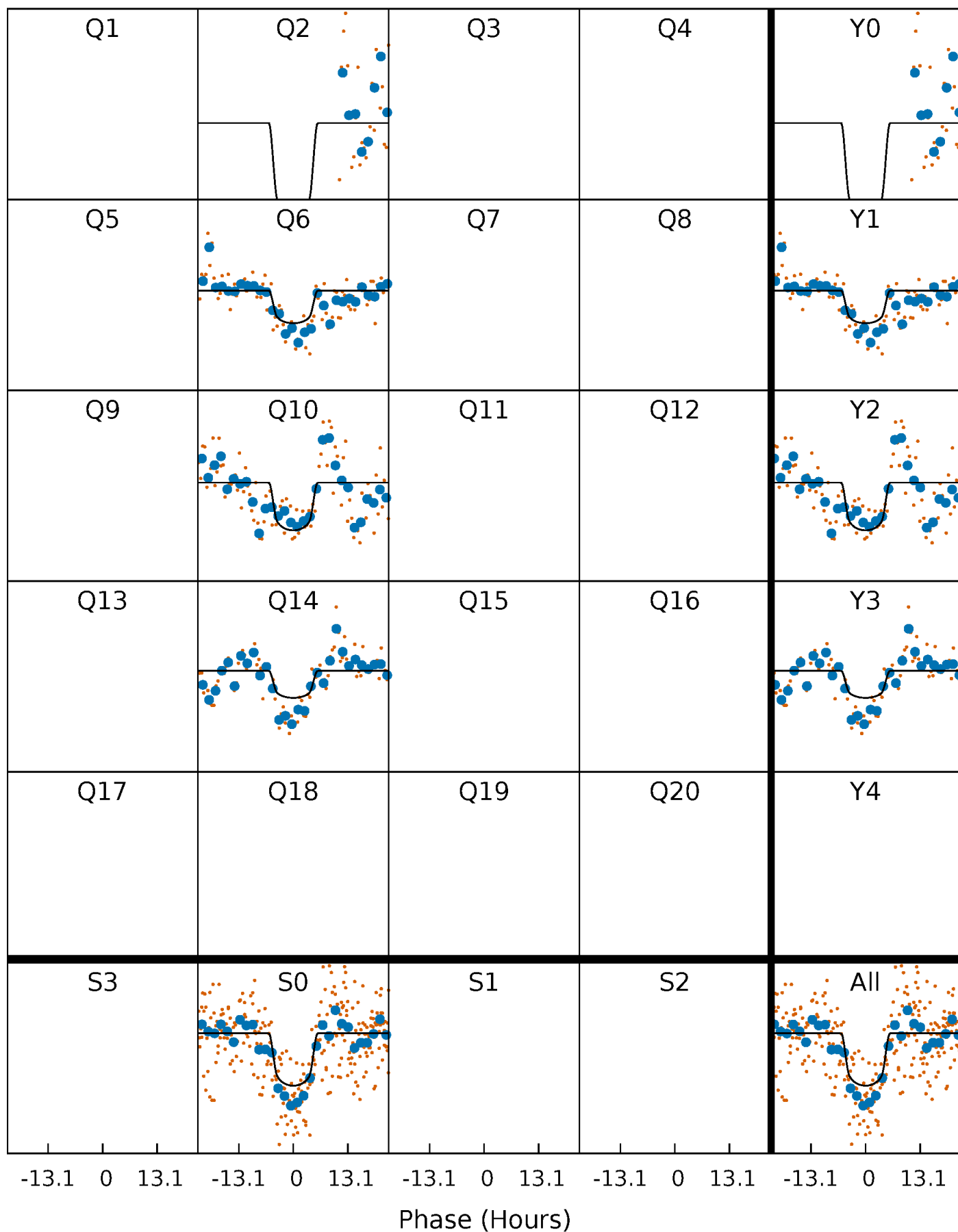
PDC Quarter-Phased Transit Curves

TCE 009079587-01 P=364.361856 Days $T_0=183.258703$ (BKJD)



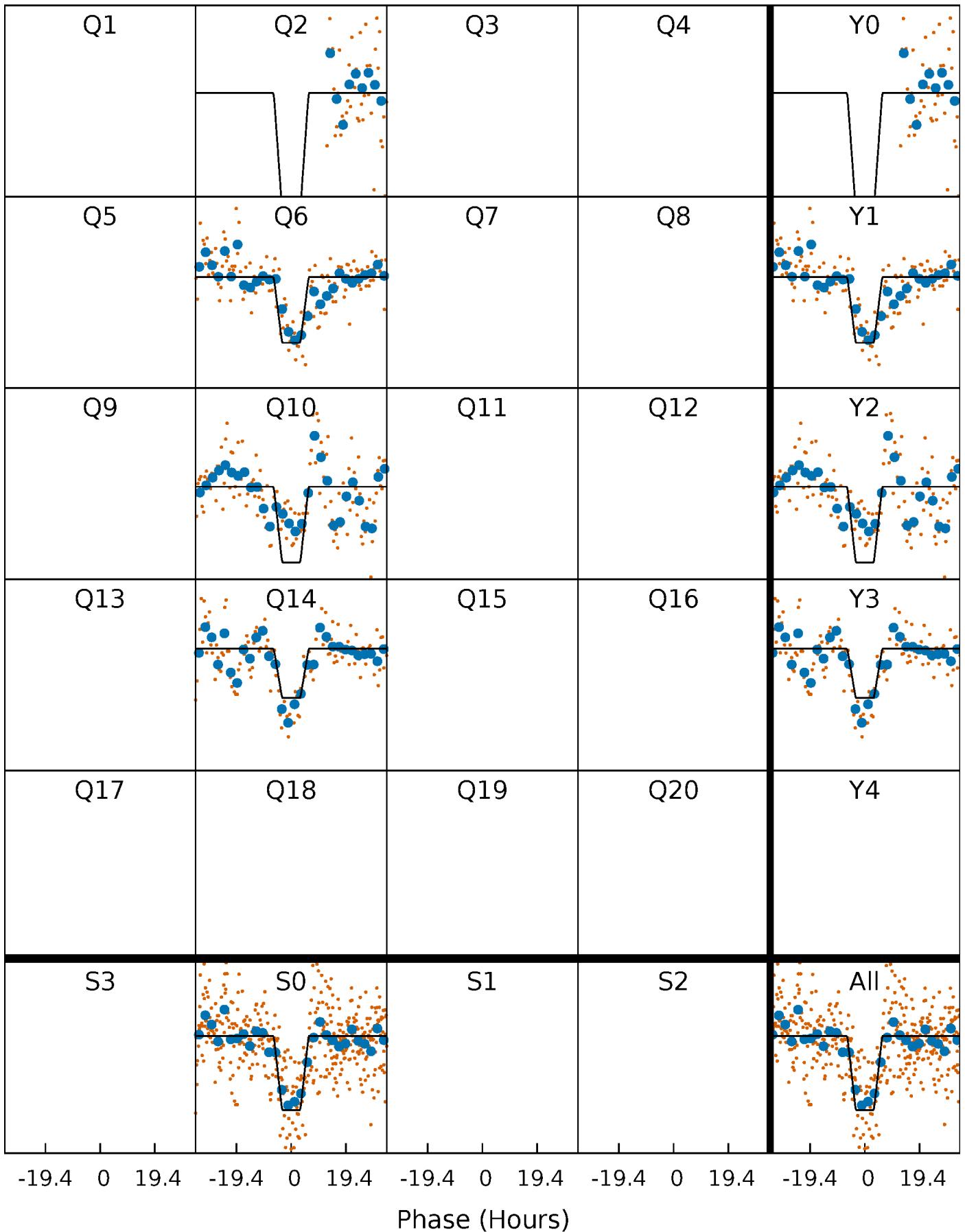
DV Quarter-Phased Transit Curves

TCE 009079587-01 P=364.361856 Days $T_0=183.258703$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

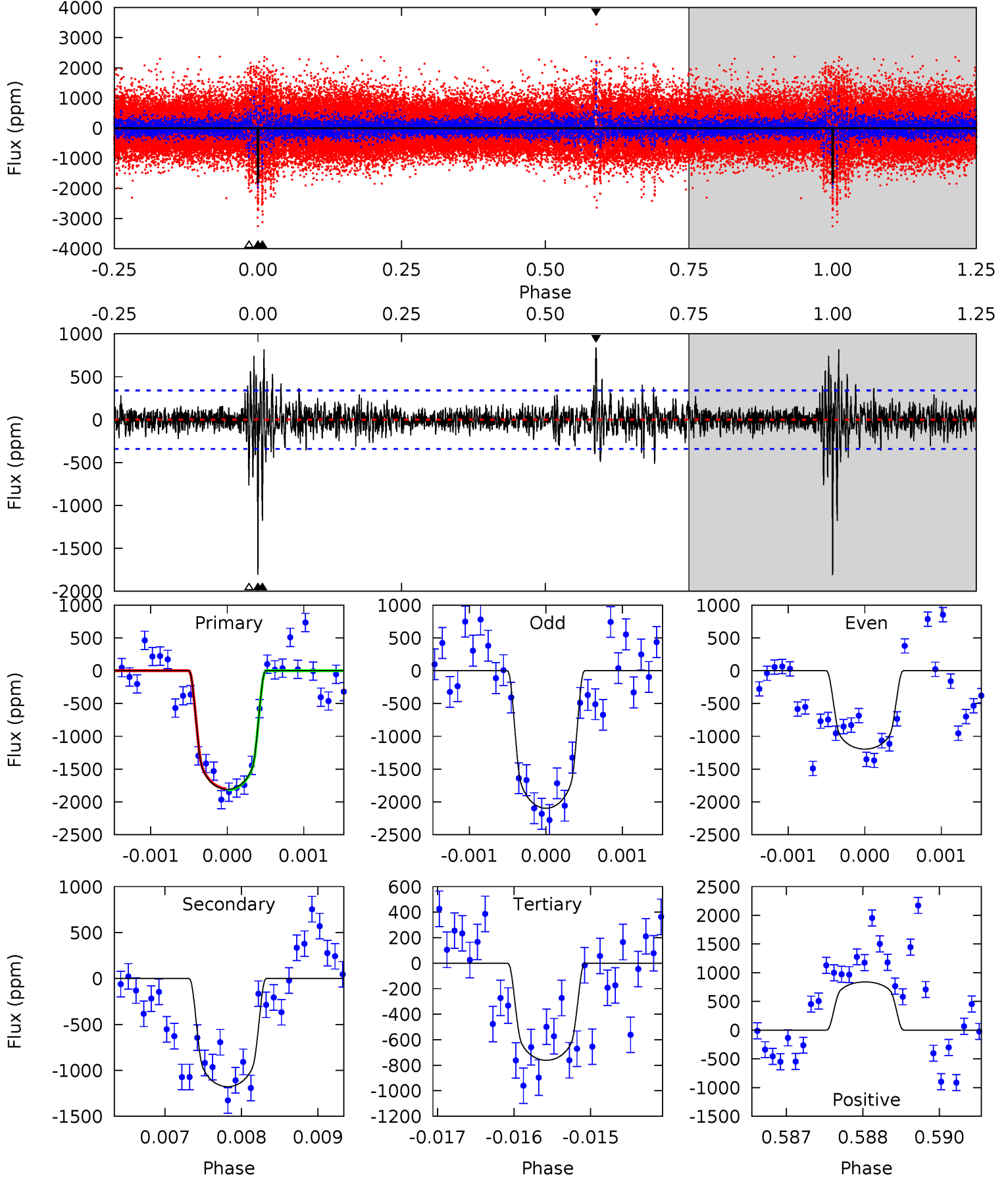
TCE 009079587-01 P=364.384864 Days $T_0=183.192284$ (BKJD)



DV Model-Shift Uniqueness Test

009079587-01, P = 364.361856 Days, E = 183.258703 Days

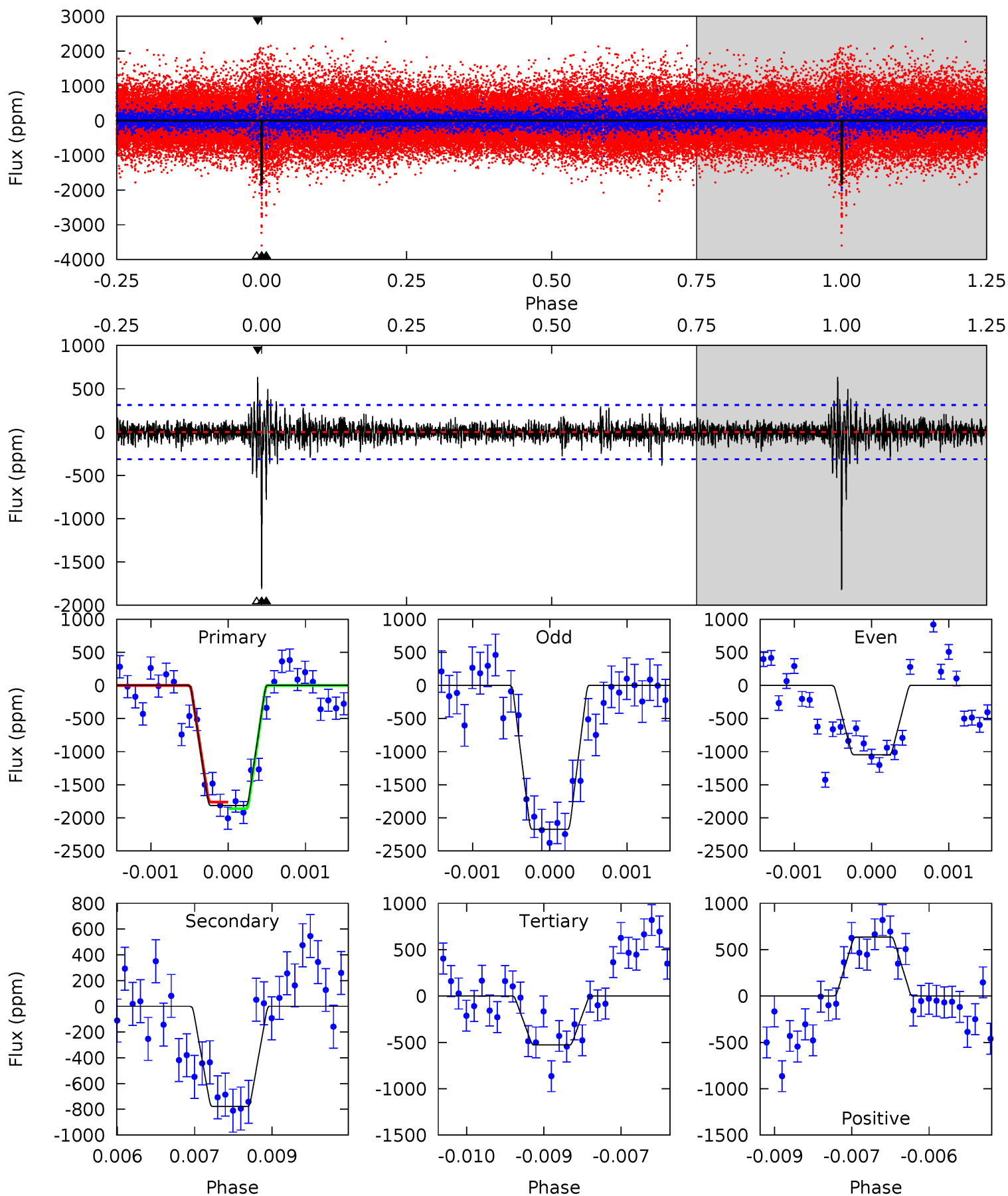
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.7	18.7	12.1	13.3	5.40	3.21	1.84	16.6	15.4	6.60	5.35	6.70	0.95	0.32	0.15



Alt Model-Shift Uniqueness Test

009079587-01, P = 364.384864 Days, E = 183.192284 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.1	13.4	9.08	10.9	5.38	3.18	1.37	22.1	20.2	4.29	2.45	9.08	1.04	0.26	0.86



Stellar Parameters For KIC 009079587

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5606^{+152}_{-152}	$4.557^{+0.050}_{-0.150}$	$-0.320^{+0.300}_{-0.300}$	$0.800^{+0.181}_{-0.077}$	$0.841^{+0.097}_{-0.078}$	$2.319^{+0.583}_{-0.939}$
	+3%/-3%	+1%/-3%	+94%/-94%	+23%/-10%	+12%/-9%	+25%/-40%
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 009079587-01 / KOI 7921.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1178 ± 63	$3.60^{+0.58}_{-0.49}$	324^{+17}_{-13}	5241^{+343}_{-274}	43764^{+15214}_{-10931}
Alt.	-778 ± 58	$4.06^{+0.61}_{-0.52}$	324^{+19}_{-14}	4575^{+231}_{-198}	22645^{+7557}_{-5187}

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

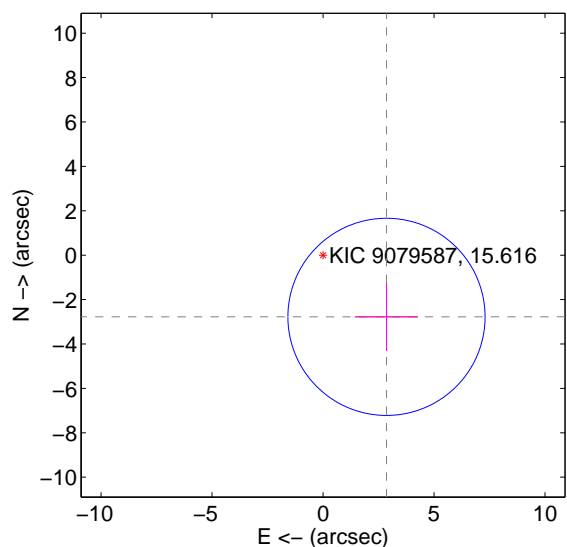
Supplemental centroid analysis for 009079587-01. Kepler magnitude: 15.62. Transit SNR 8.30

There are 0 quarters with good PRF difference image offsets

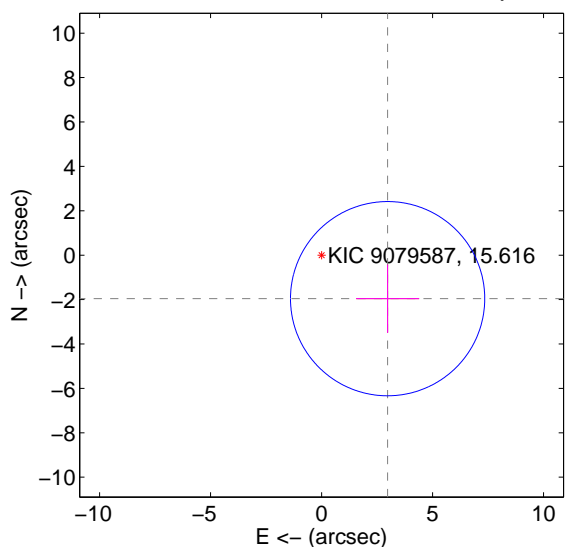
The direct PRF centroid is offset from the target star catalog position by about 0.83 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.986 ± 1.480	2.69	-2.858 ± 1.421	-2.778 ± 1.540
PRF-fit source offset from KIC position	3.561 ± 1.458	2.44	-2.974 ± 1.421	-1.959 ± 1.540
photometric centroid source offset	2.50 ± 2.19	1.14	2.30 ± 2.22	0.97 ± 2.04

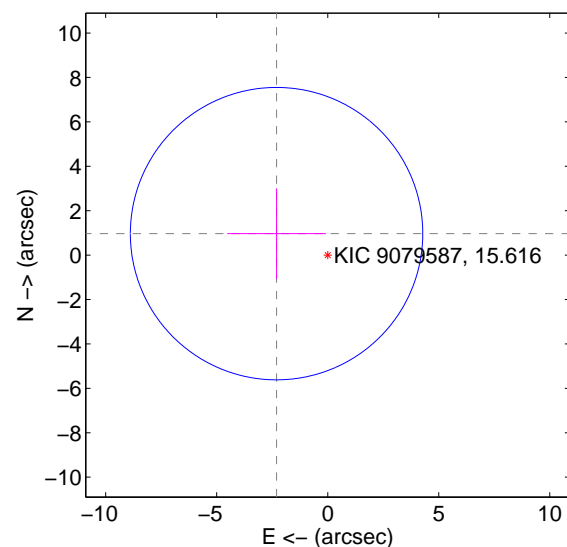
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

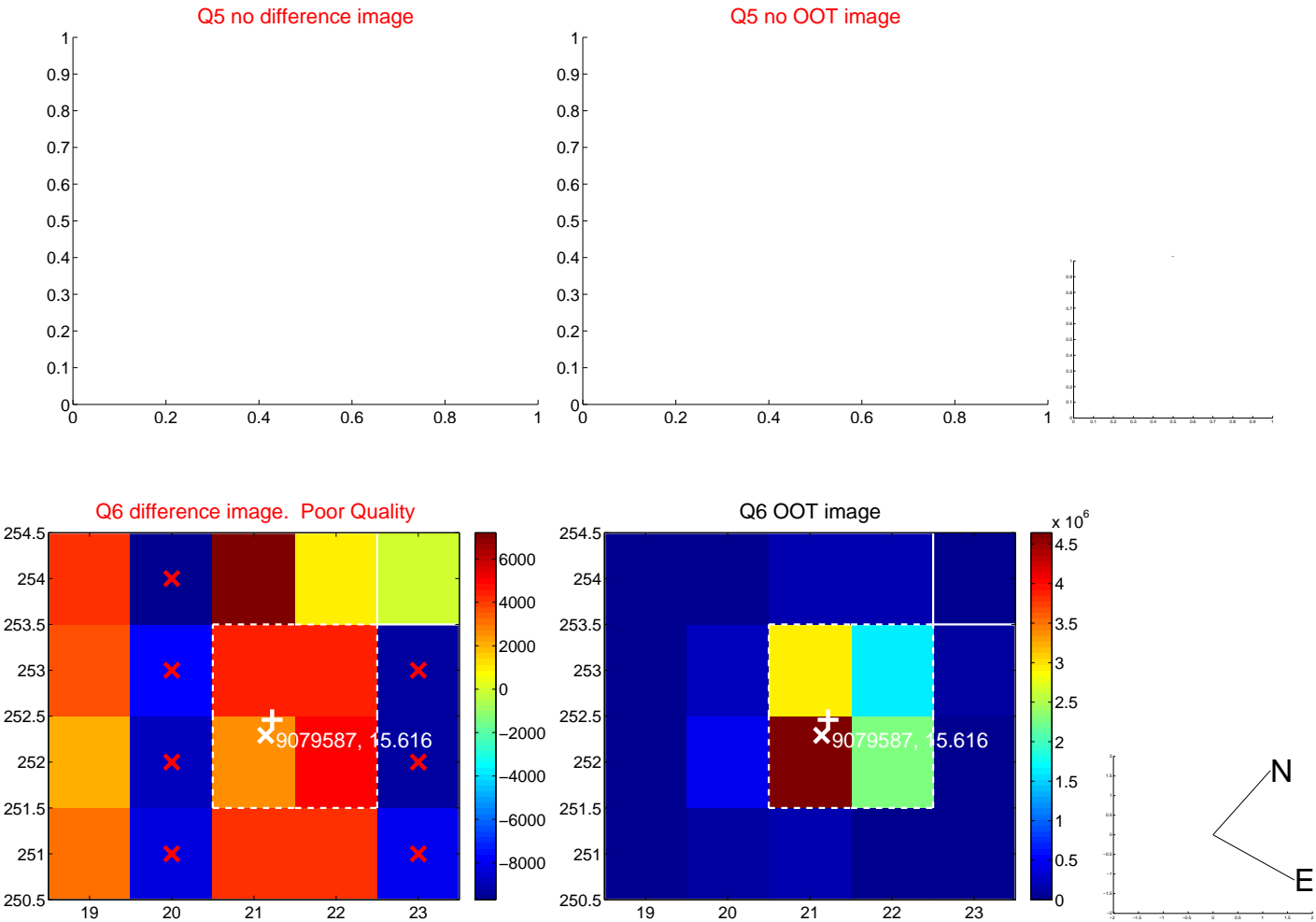


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

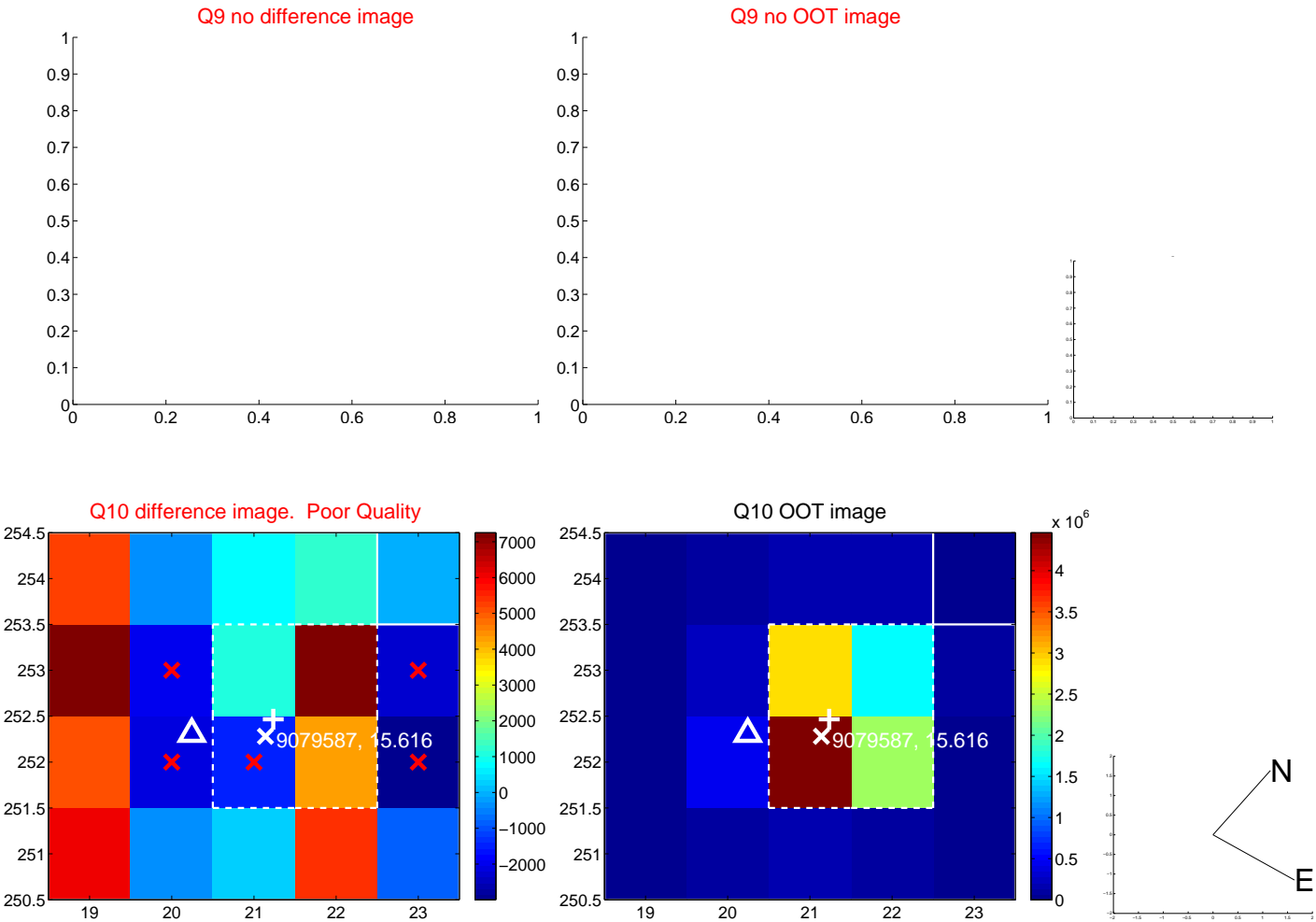
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



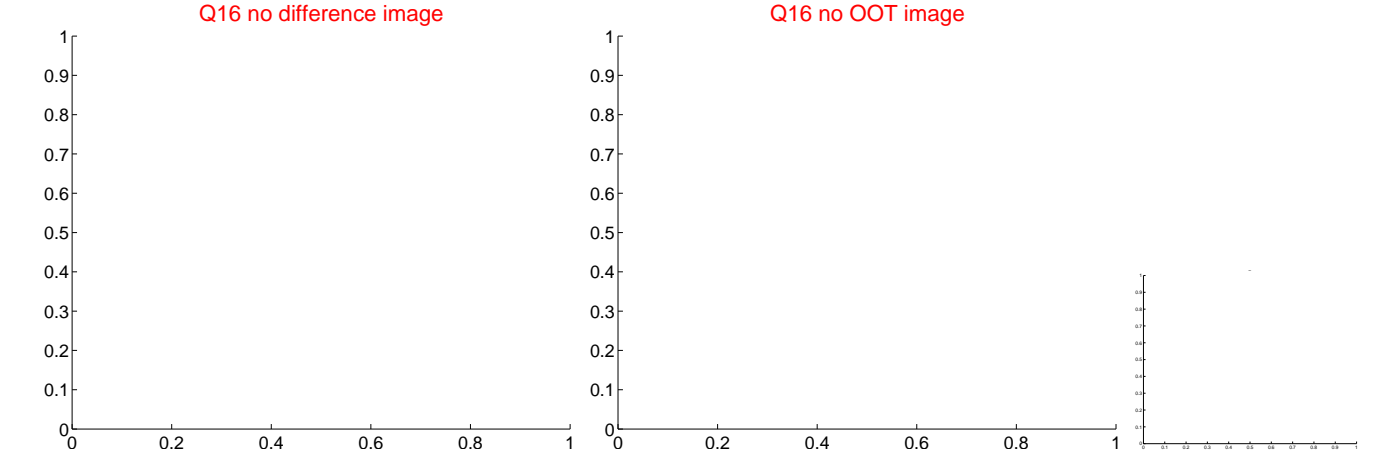
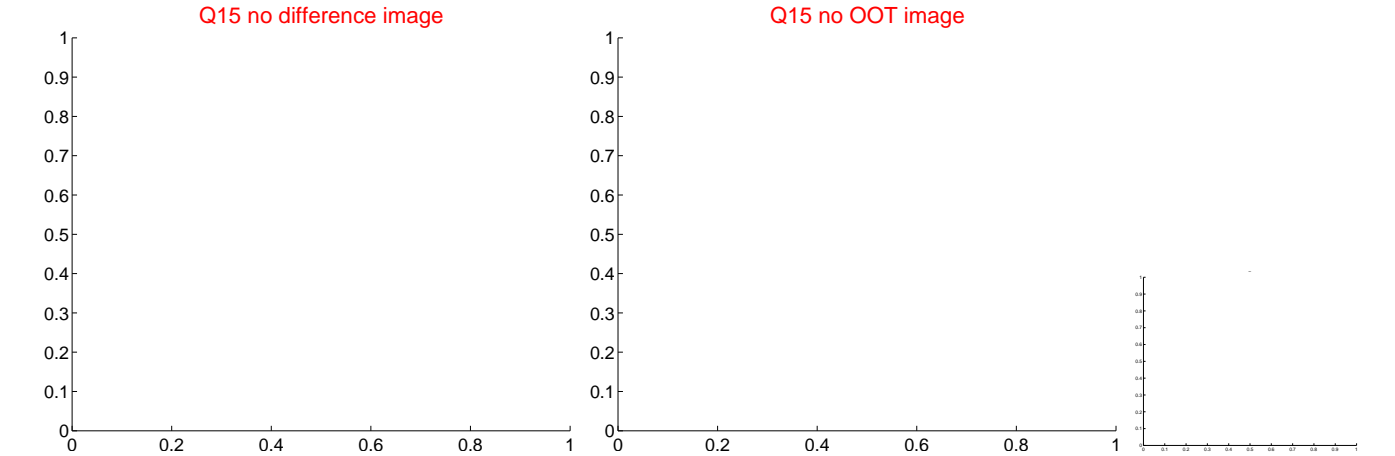
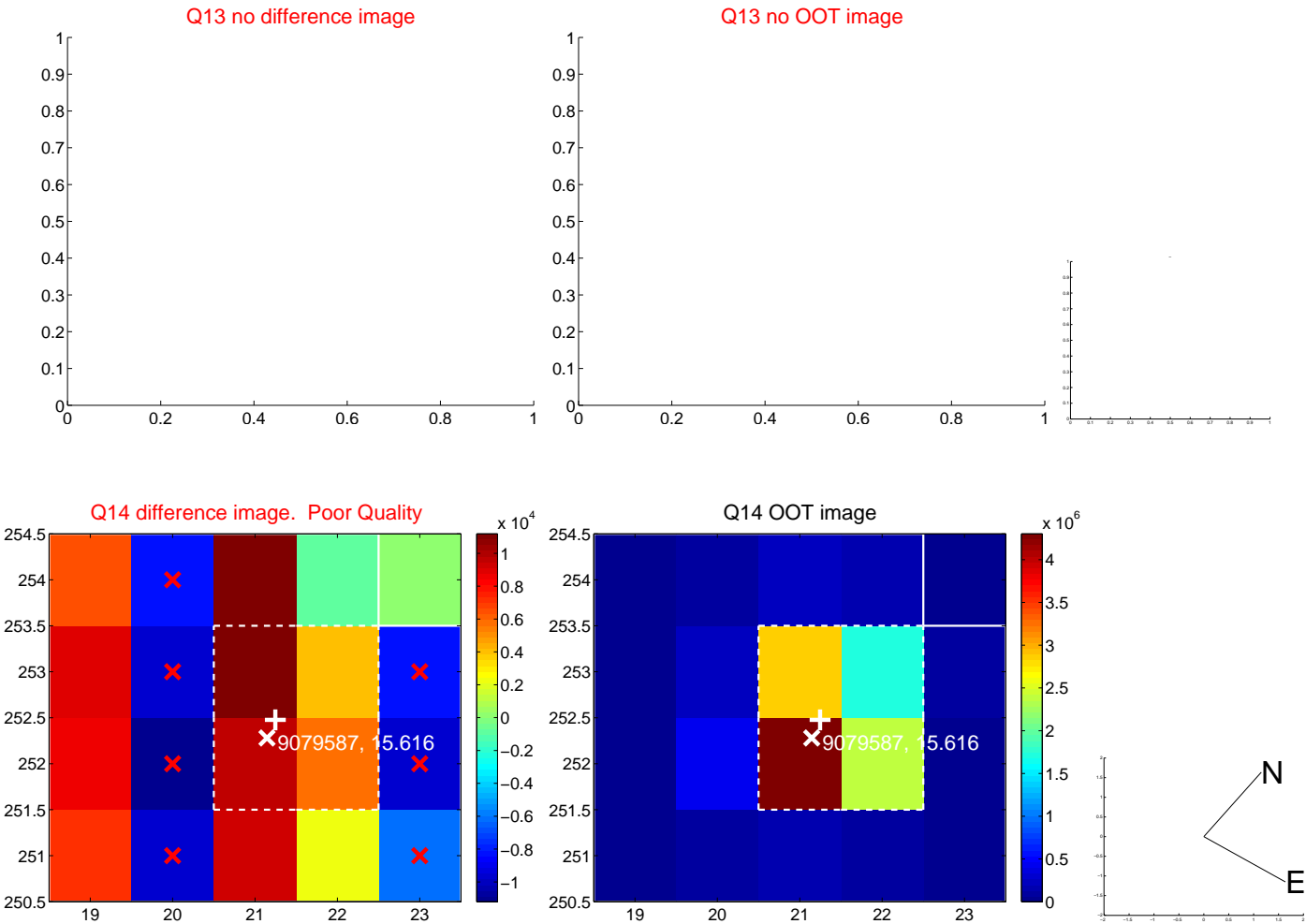
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



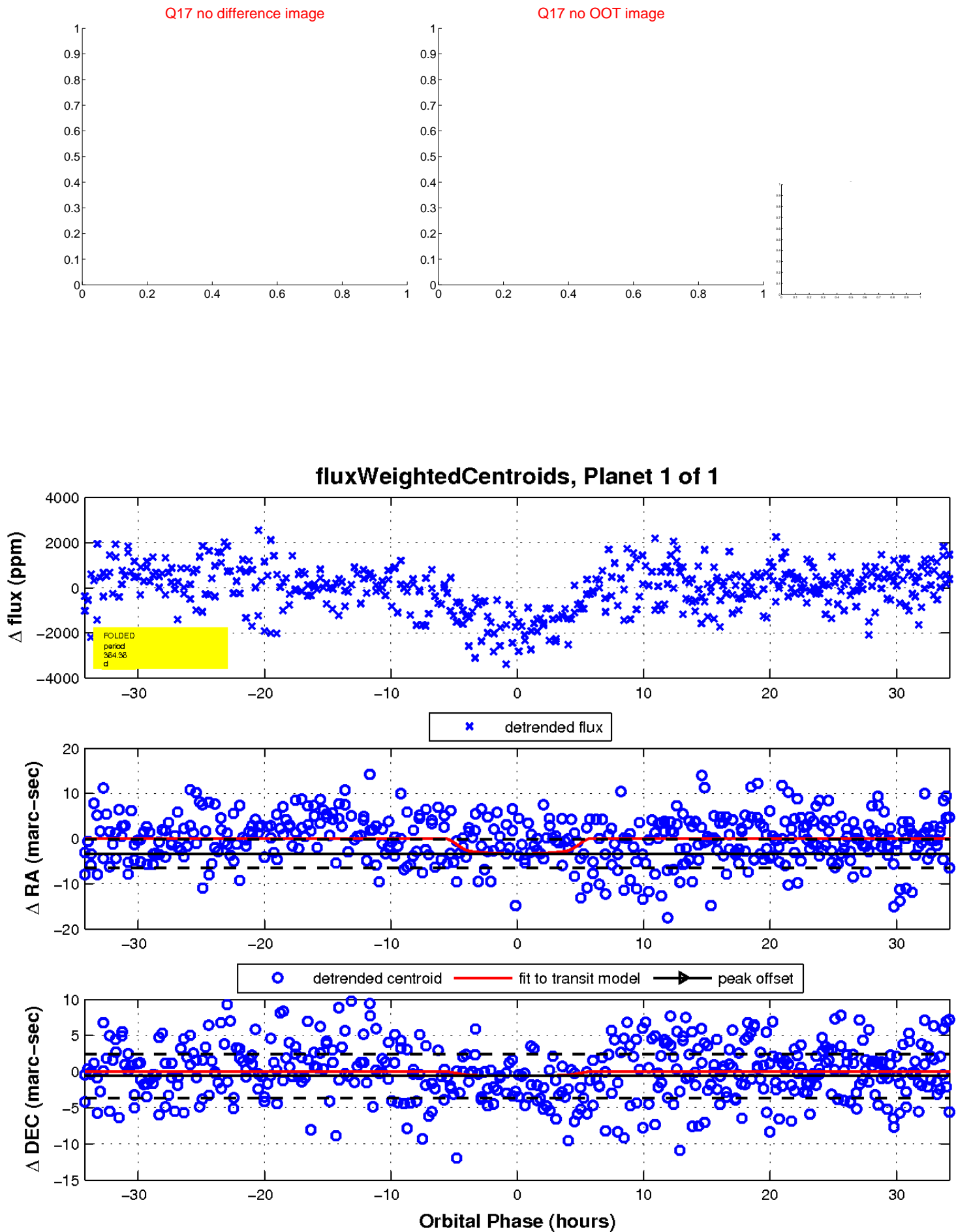
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

