

KIC 012353844

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})
012353844-01	OBS	No	298.959797	410.439321	735.5	2.976	7.4	6.9	1.02	6072	3.08	1.55

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012353844-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—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.

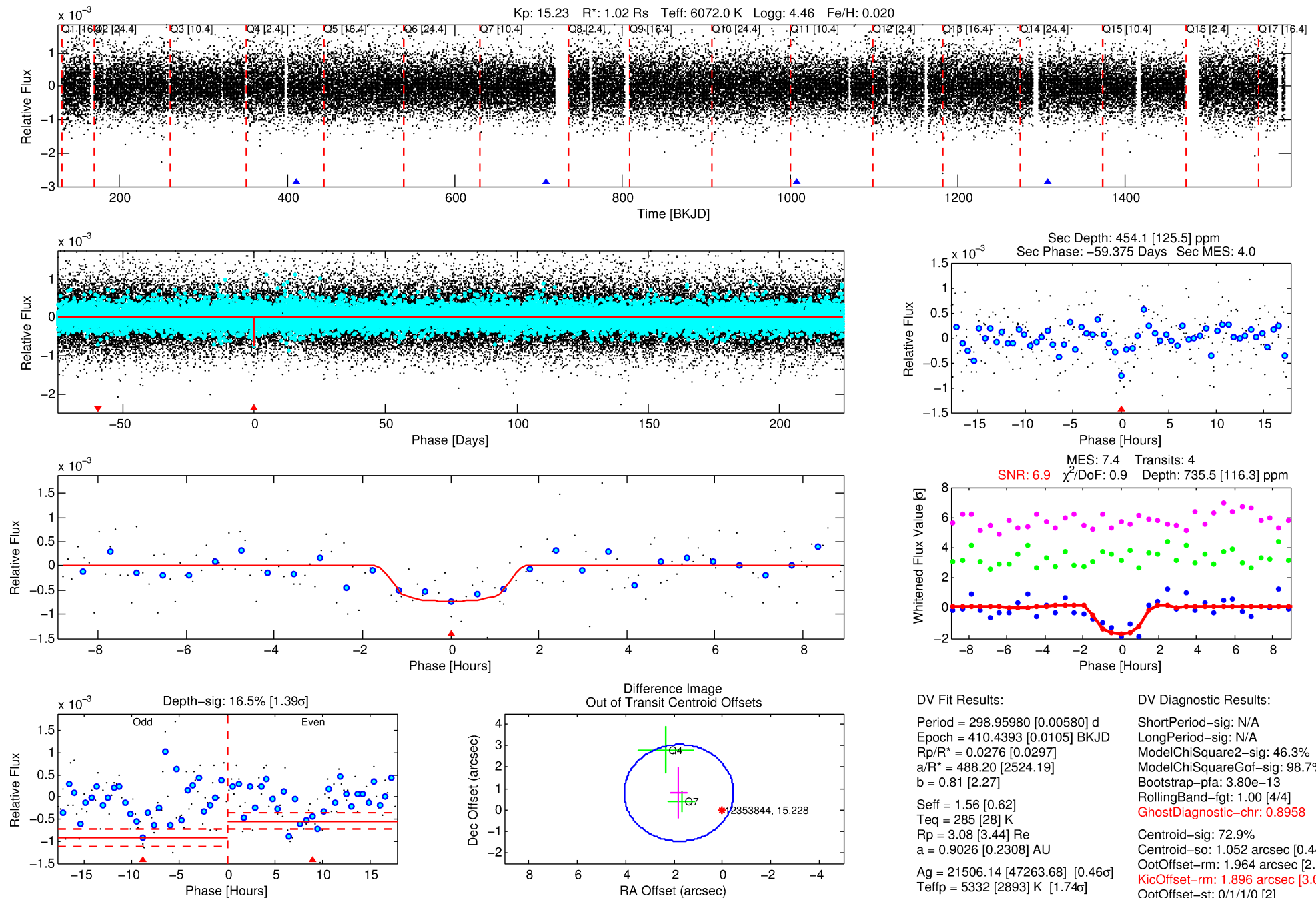
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012353844-01

No Significant Match Found

DV One-Page Summary

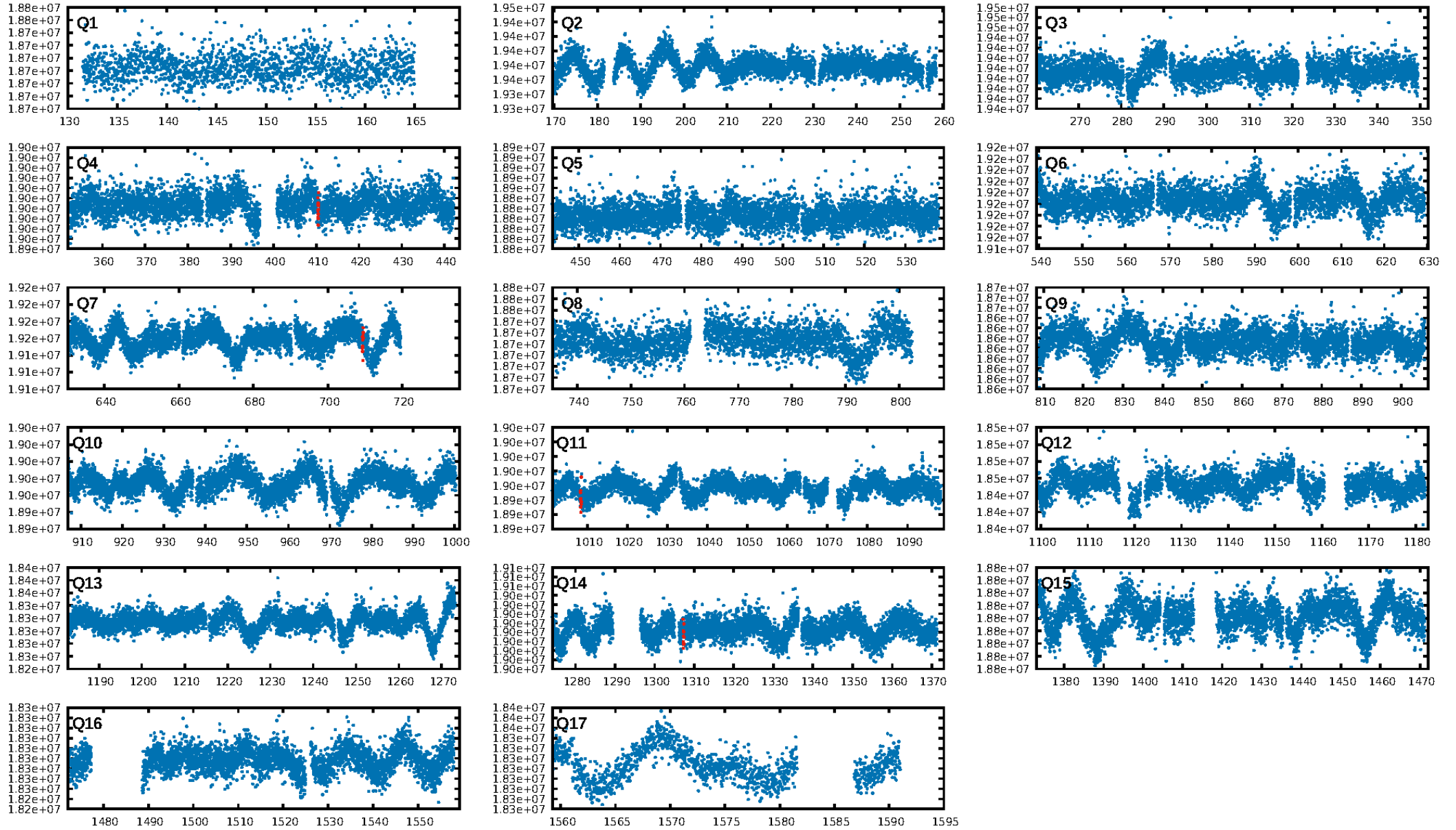
KIC: 12353844 Candidate: 1 of 1 Period: 298.960 d



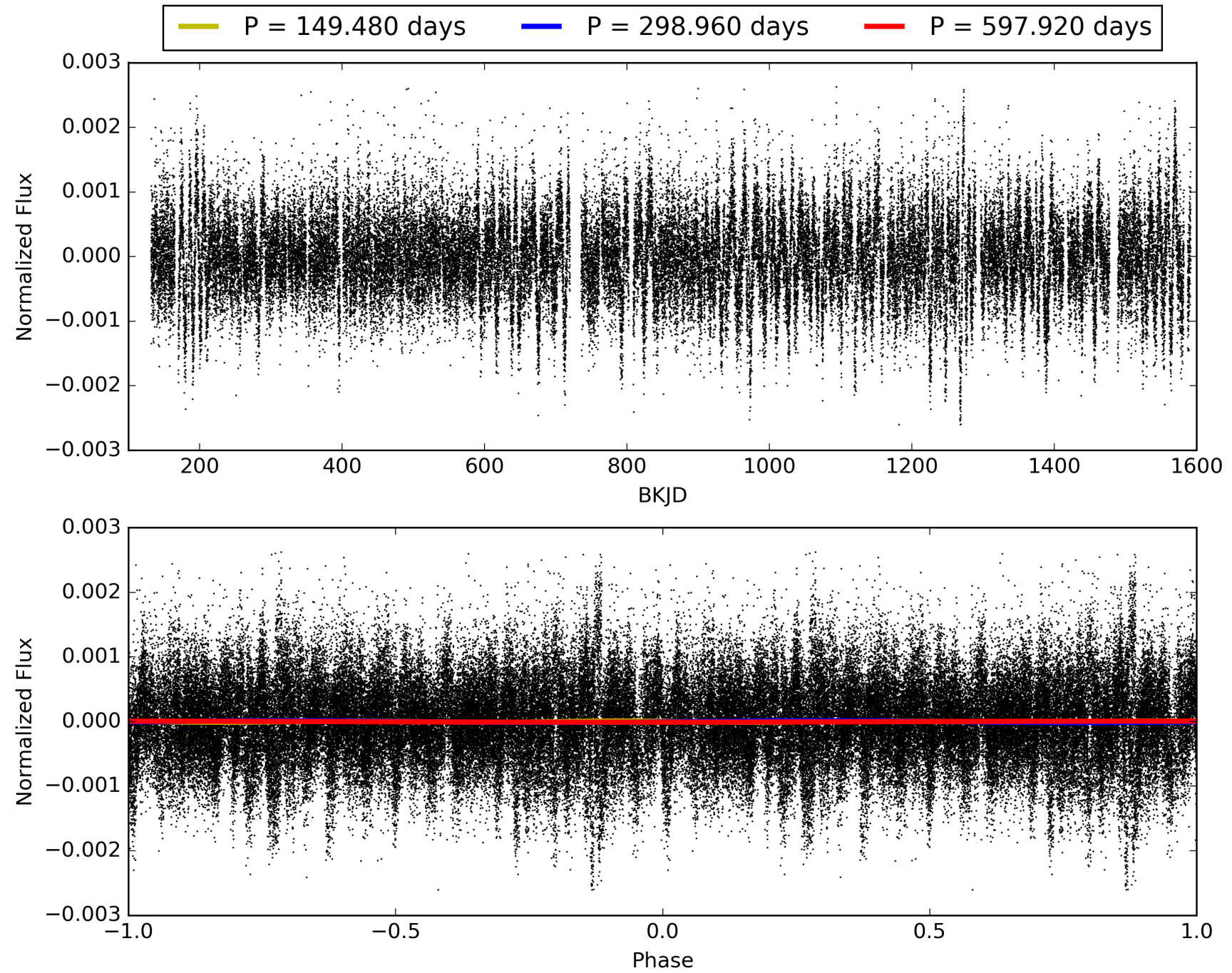
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 19:24:20 Z

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

TCE 012353844-01, PDC Light Curves

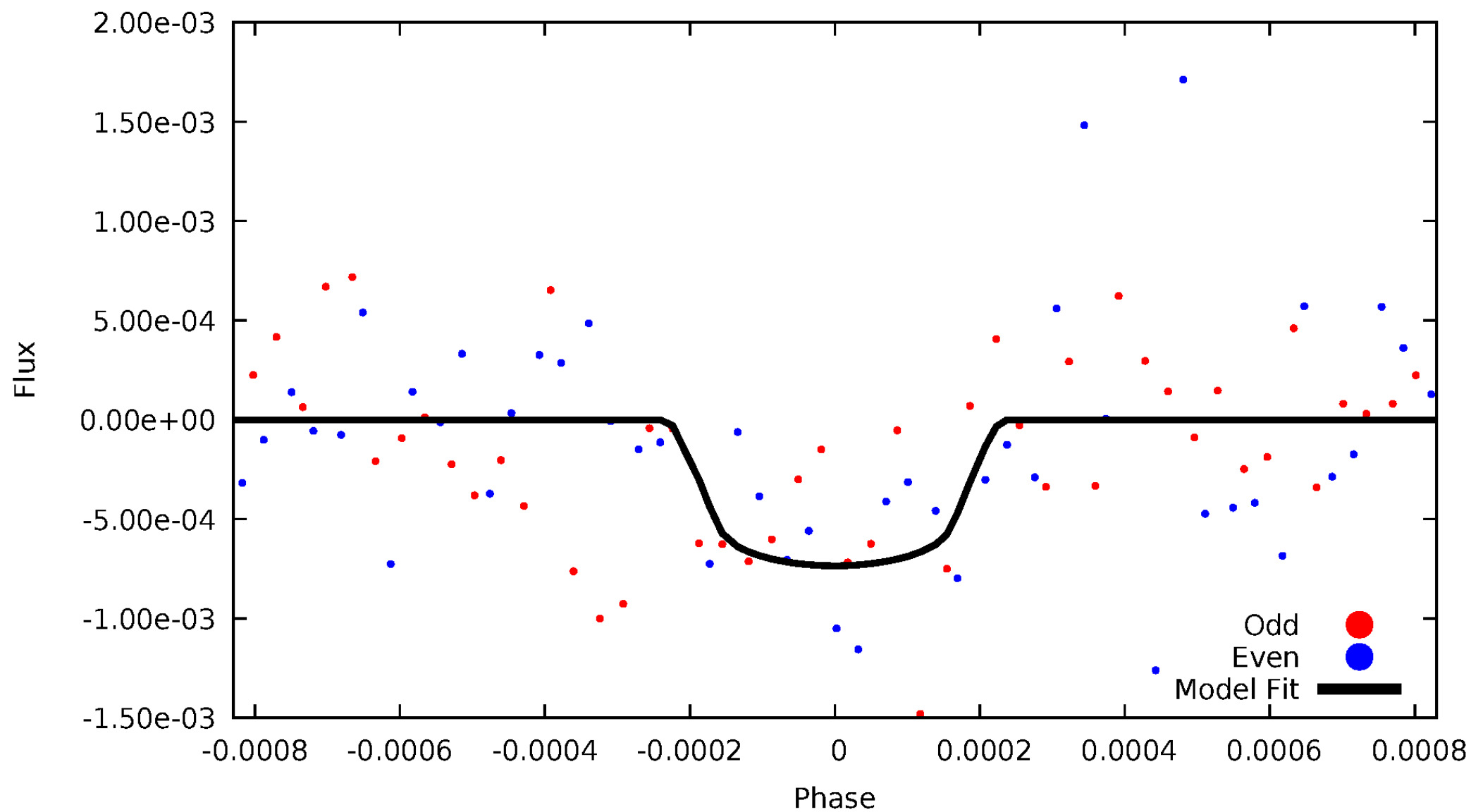


TCE 012353844-01



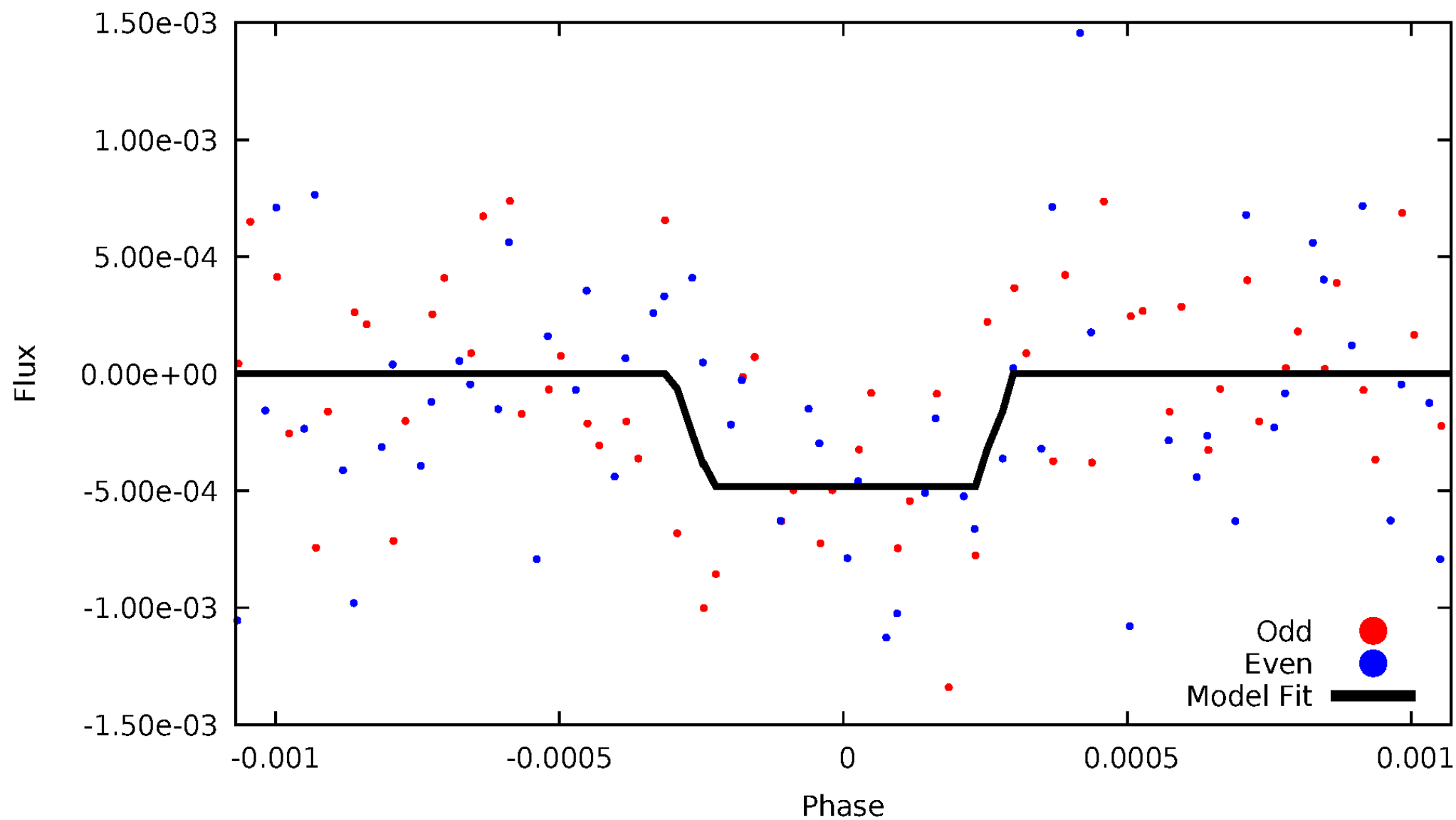
DV Odd/Even

TCE 012353844-01

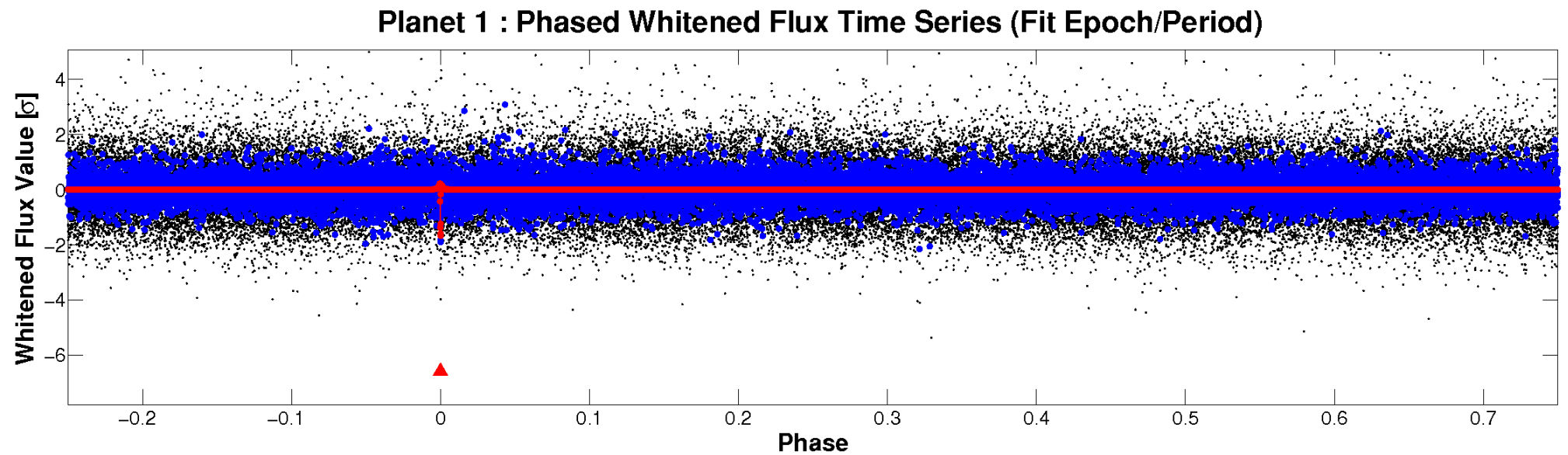
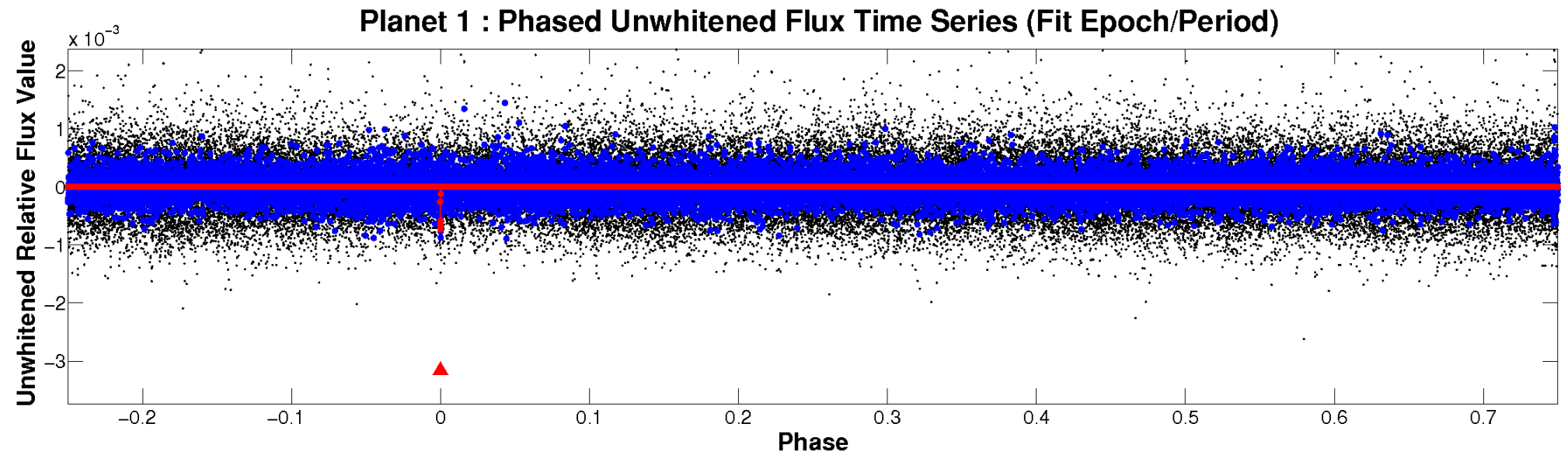


ALT Odd/Even

TCE 012353844-01

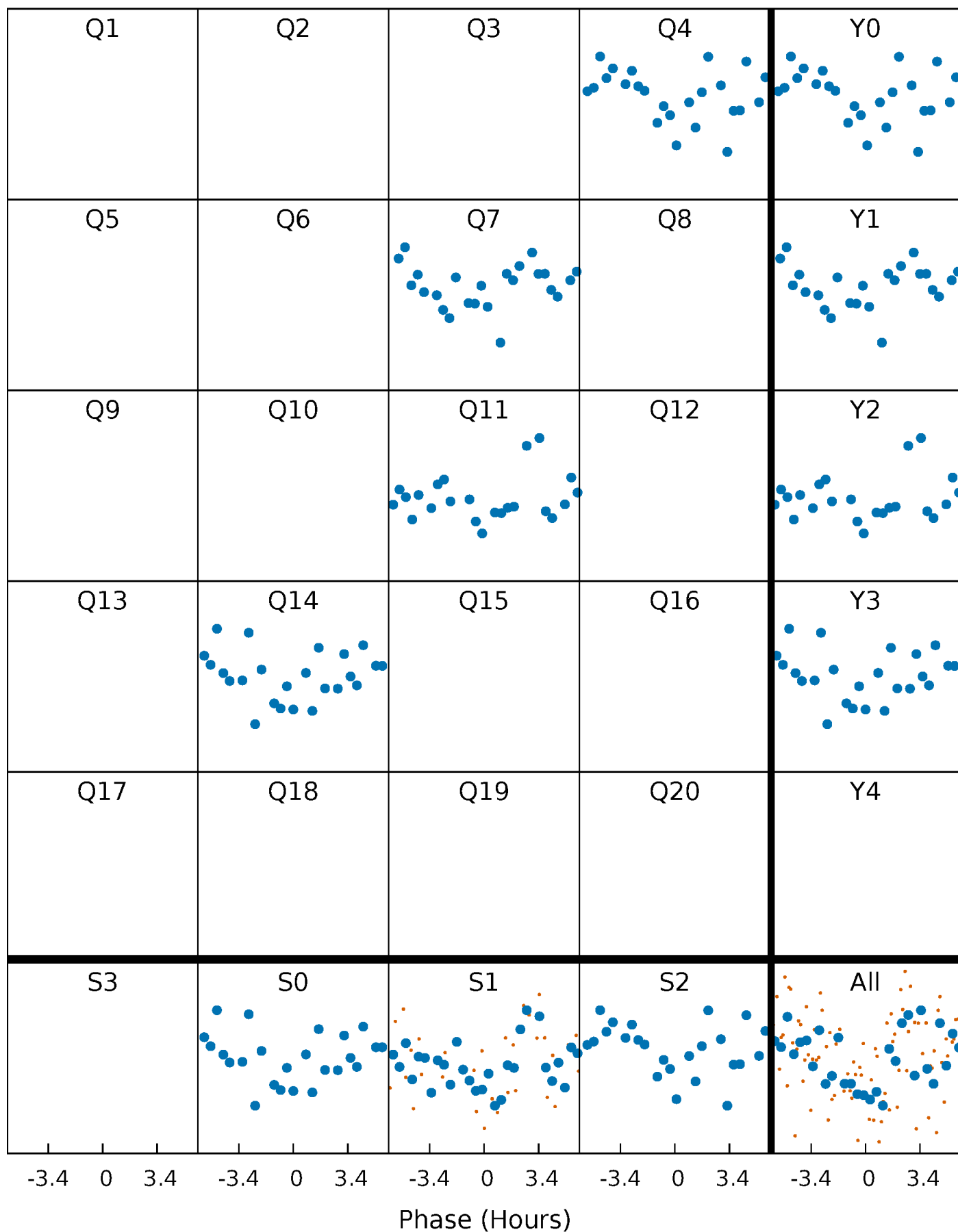


Non-Whitened Vs. Whitened Light Curve



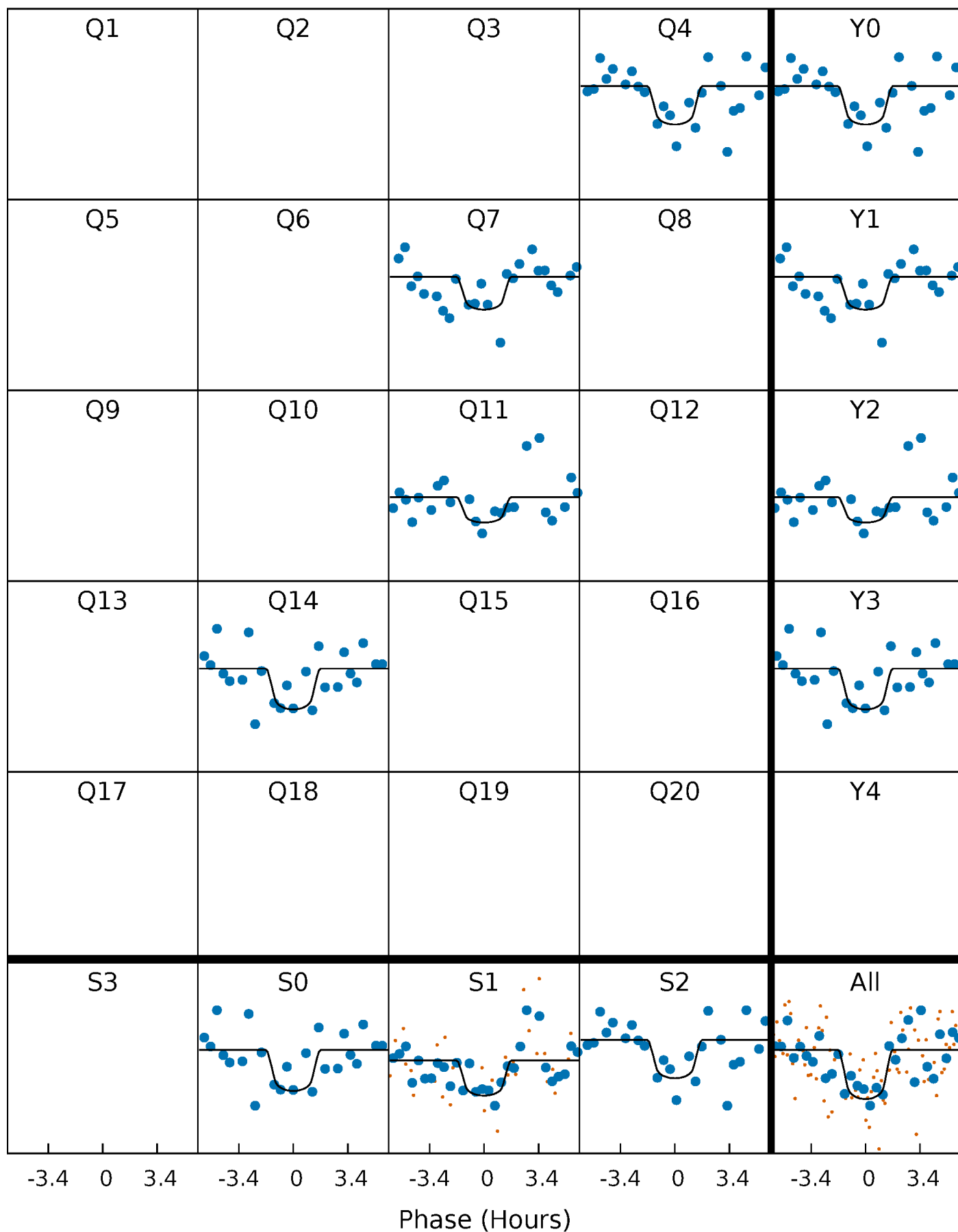
PDC Quarter-Phased Transit Curves

TCE 012353844-01 P=298.959797 Days $T_0=410.439321$ (BKJD)



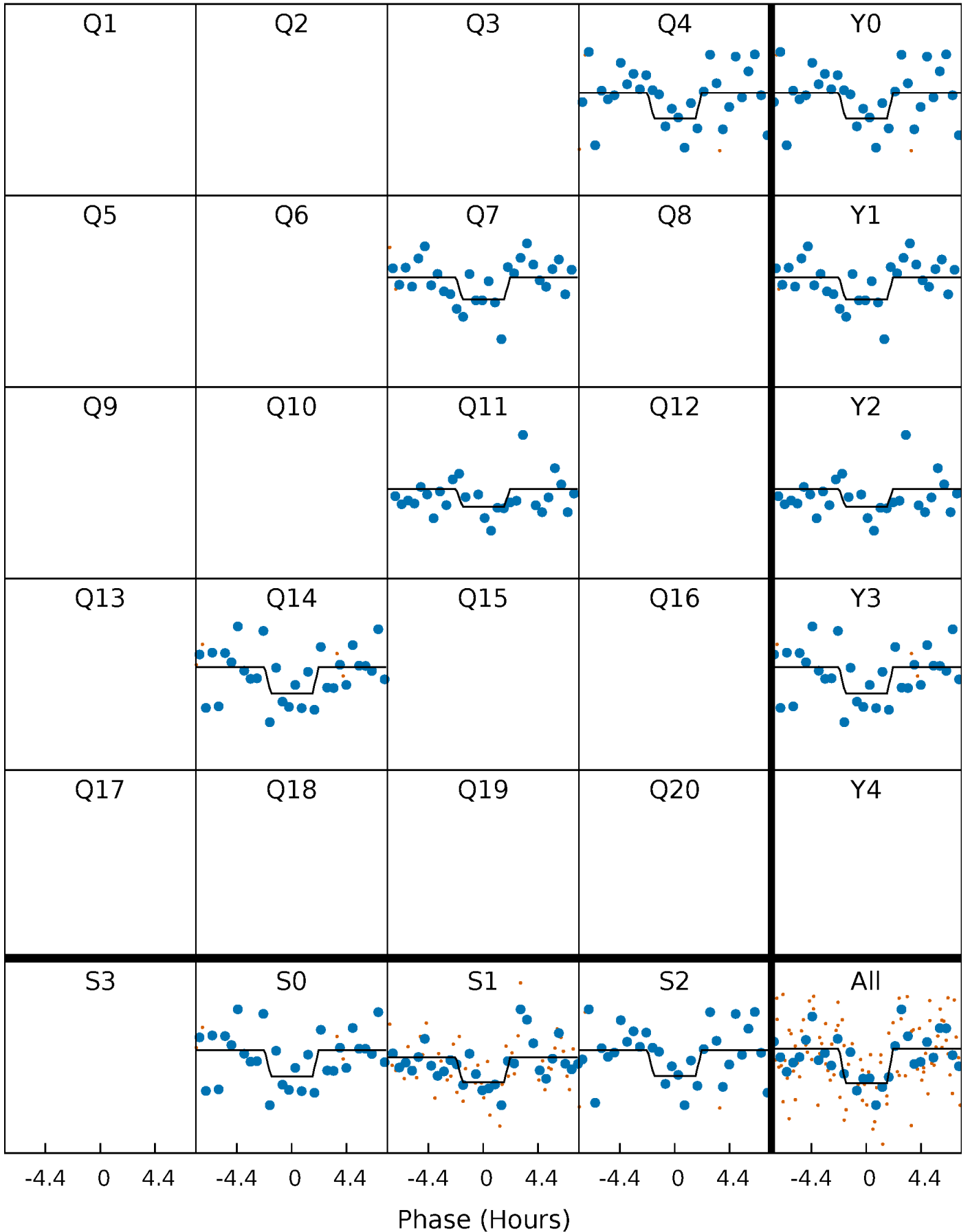
DV Quarter-Phased Transit Curves

TCE 012353844-01 P=298.959797 Days $T_0=410.439321$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

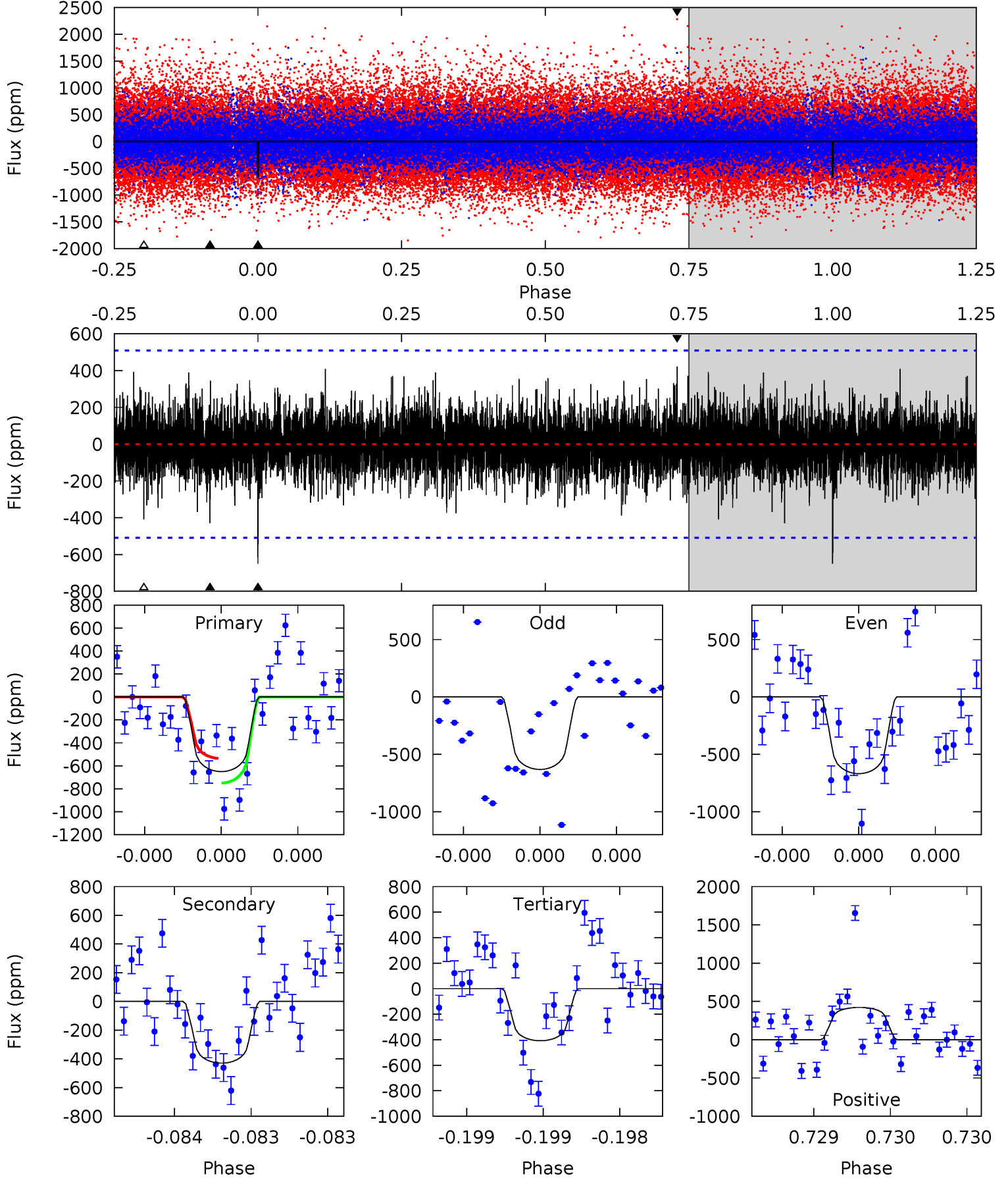
TCE 012353844-01 P=298.958171 Days $T_0=410.420755$ (BKJD)



DV Model-Shift Uniqueness Test

012353844-01, P = 298.959797 Days, E = 111.479524 Days

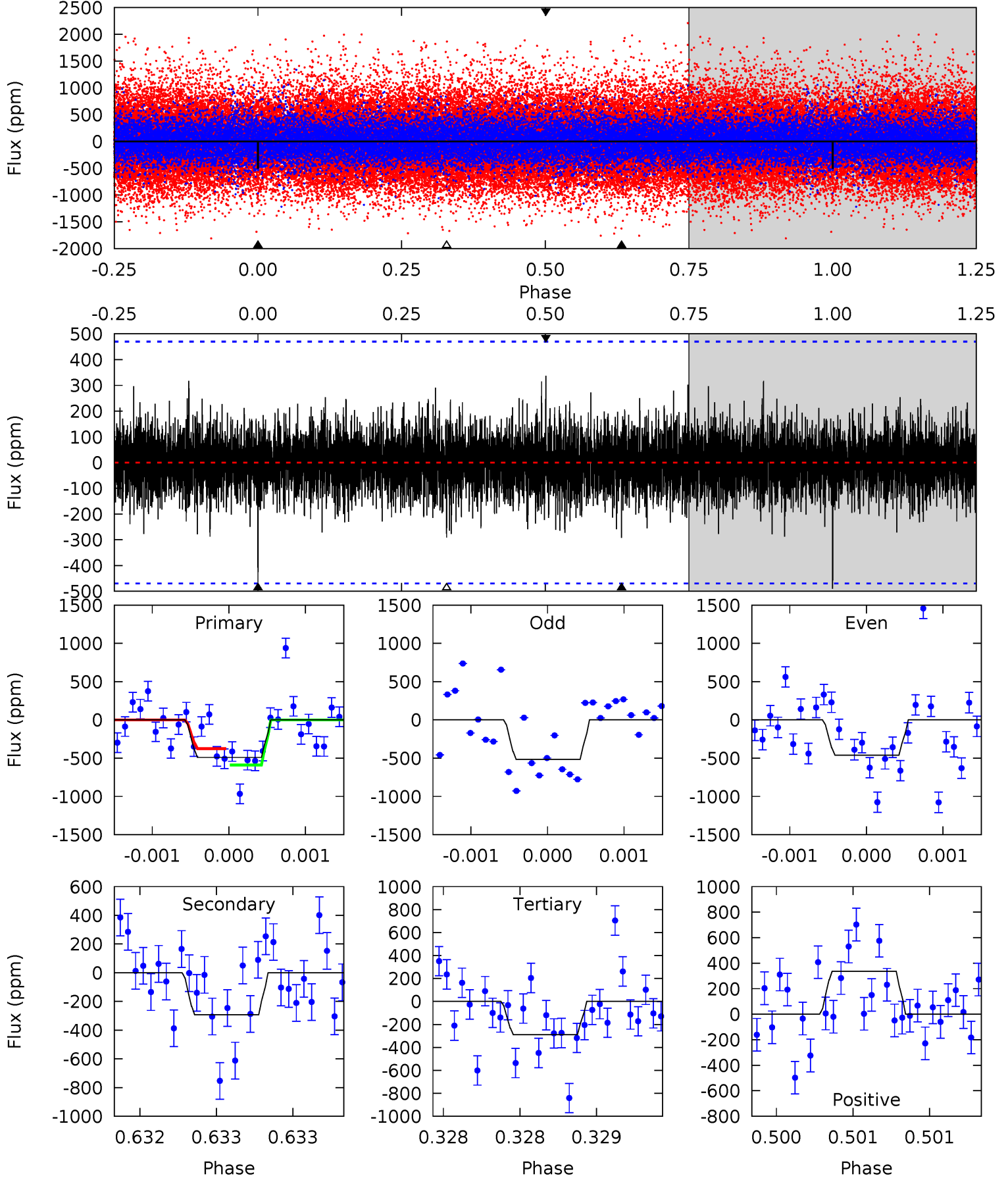
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.13	4.71	4.47	4.63	5.58	3.49	1.15	2.66	2.50	0.24	0.08	0.20	1.00	0.39	1.17



Alt Model-Shift Uniqueness Test

012353844-01, P = 298.958171 Days, E = 111.462584 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.80	3.46	3.44	3.99	5.56	3.46	0.94	2.36	1.81	0.02	-0.52	0.32	0.98	0.41	1.26



Stellar Parameters For KIC 012353844

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6072^{+190}_{-211}	$4.461^{+0.054}_{-0.202}$	$0.020^{+0.250}_{-0.300}$	$1.020^{+0.311}_{-0.111}$	$1.095^{+0.145}_{-0.145}$	$1.455^{+0.406}_{-0.758}$
	+3%/-3%	+1%/-5%	+1250%/-1500%	+30%/-11%	+13%/-13%	+28%/-52%
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 012353844-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-430 ± 91	$4.02^{+3.16}_{-2.47}$	406^{+29}_{-20}	4808^{+2909}_{-957}	11157^{+64048}_{-7506}
Alt.	-292 ± 84	$3.50^{+3.39}_{-2.24}$	409^{+27}_{-22}	4640^{+3113}_{-1011}	9833^{+72929}_{-7379}

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 $A_{obs} \gg 1.0$

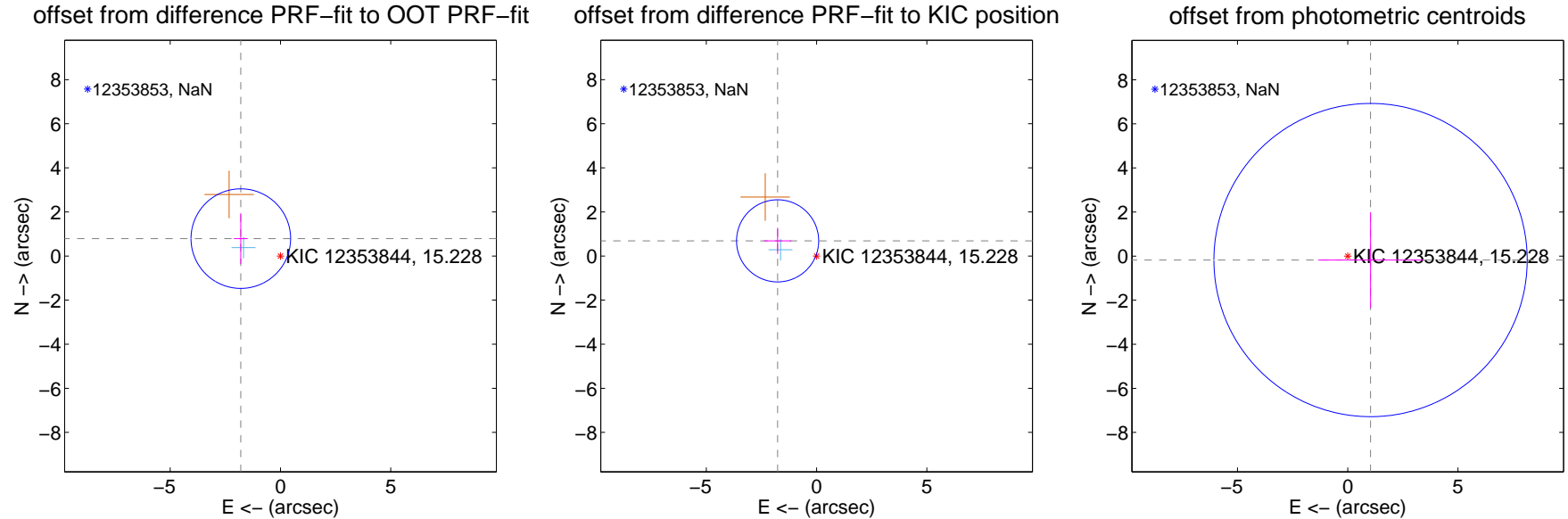
DV Centroid Data

Supplemental centroid analysis for 012353844-01. Kepler magnitude: 15.23. Transit SNR 6.88

There are 1 quarters with good PRF difference image offsets

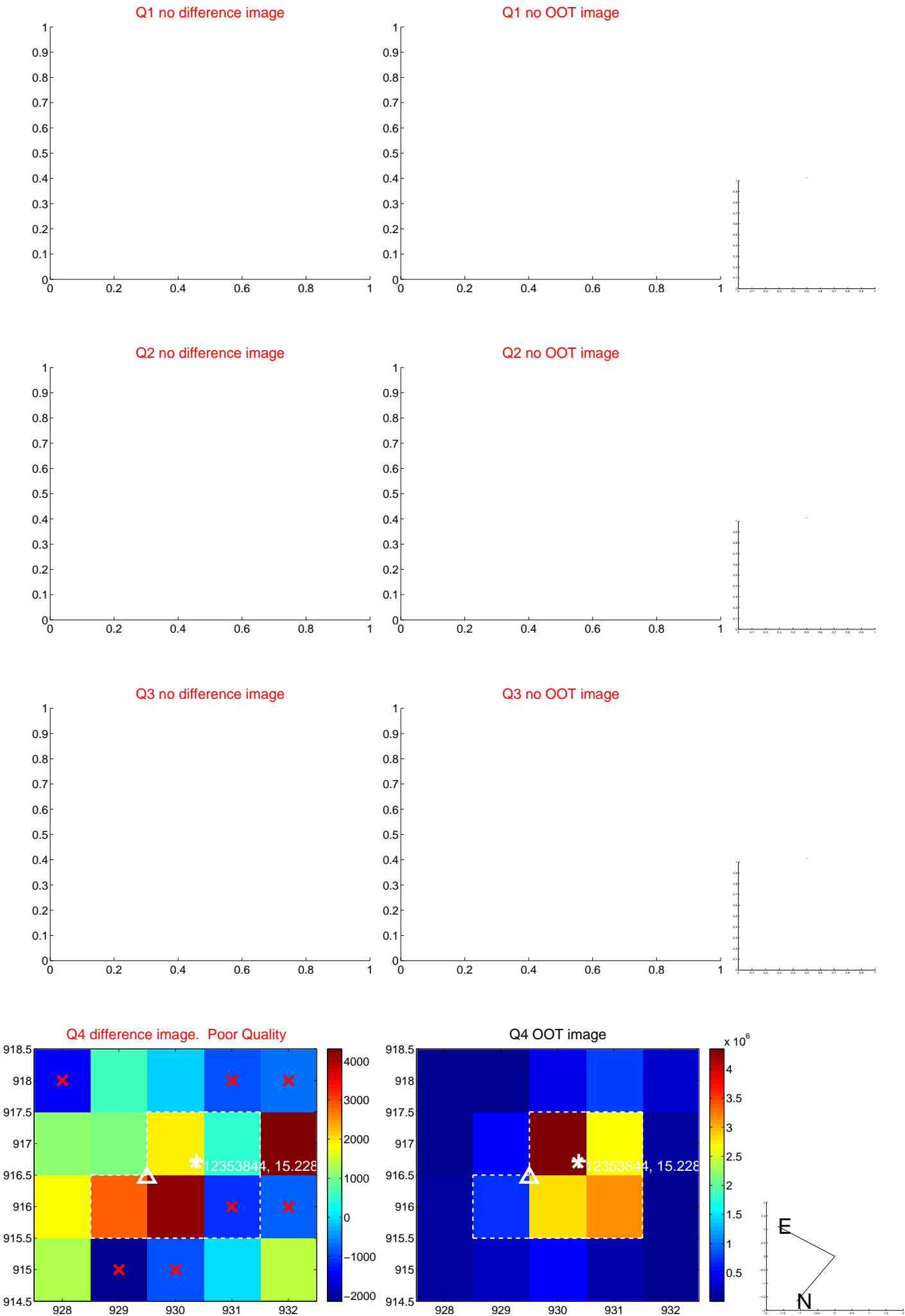
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.964 ± 0.753	2.61	1.798 ± 0.319	0.790 ± 1.155
PRF-fit source offset from KIC position	1.896 ± 0.621	3.05	1.767 ± 0.625	0.688 ± 0.594
photometric centroid source offset	1.05 ± 2.37	0.44	-1.04 ± 2.37	-0.18 ± 2.17

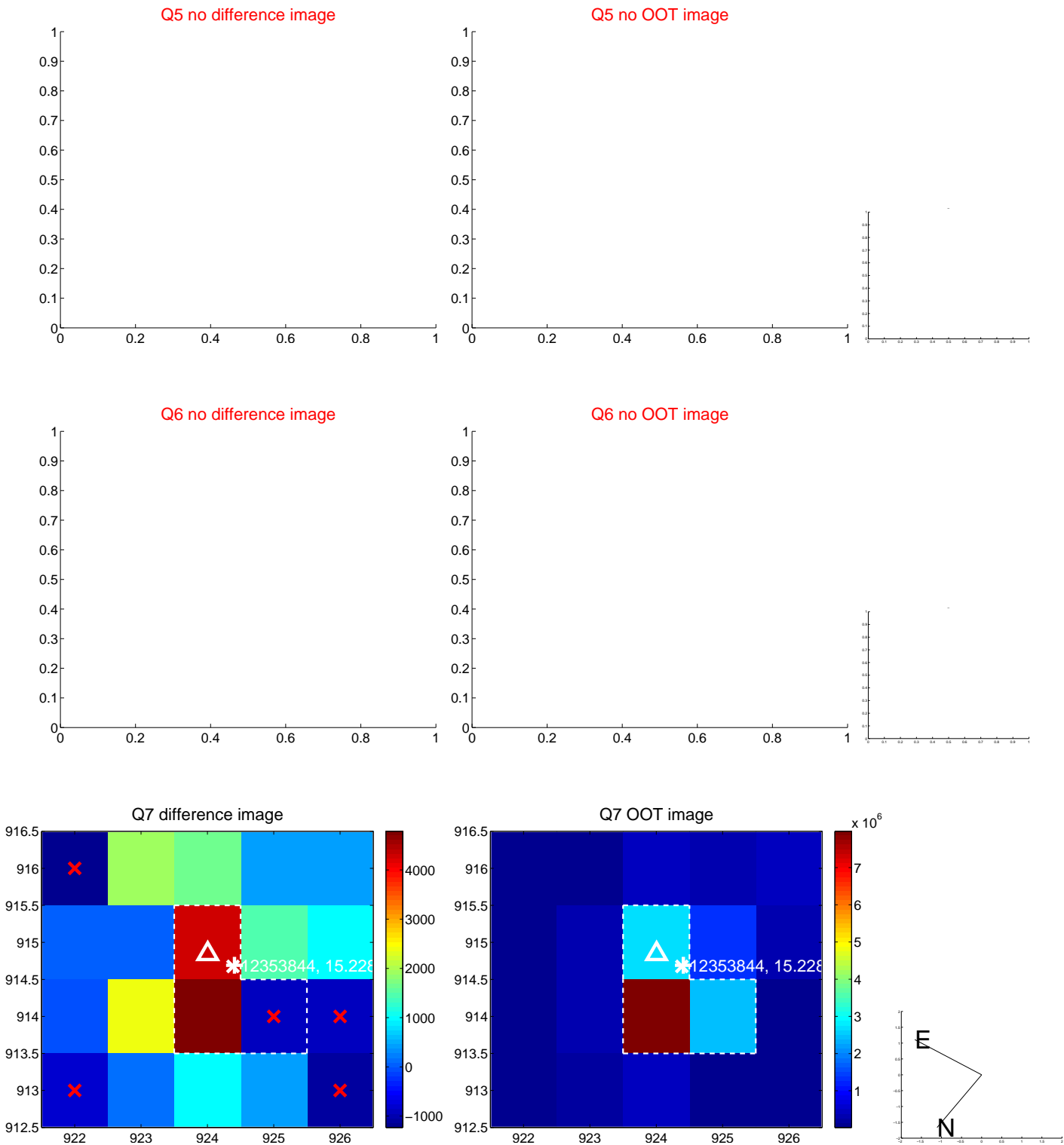


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

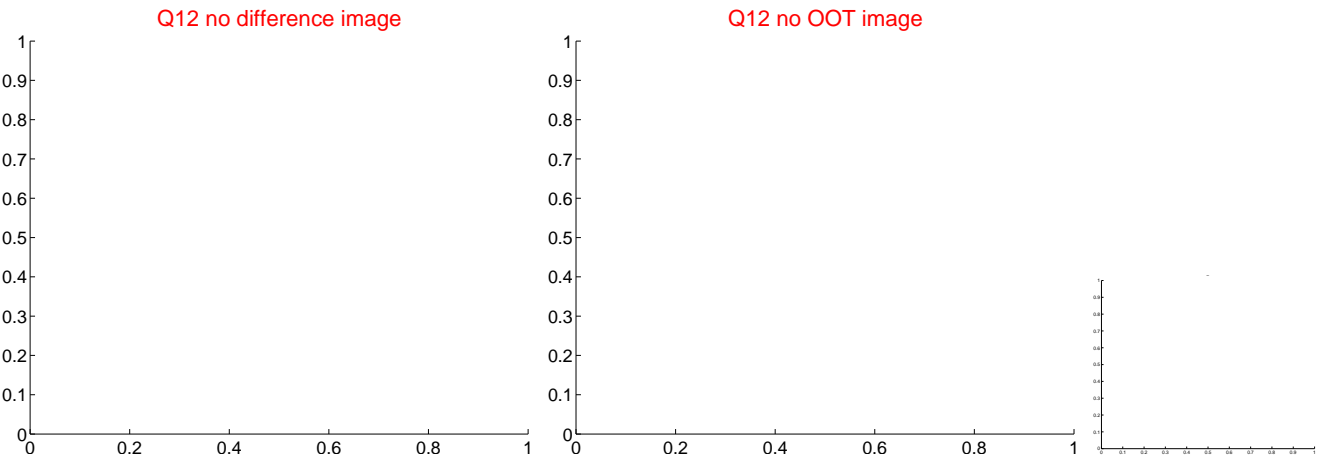
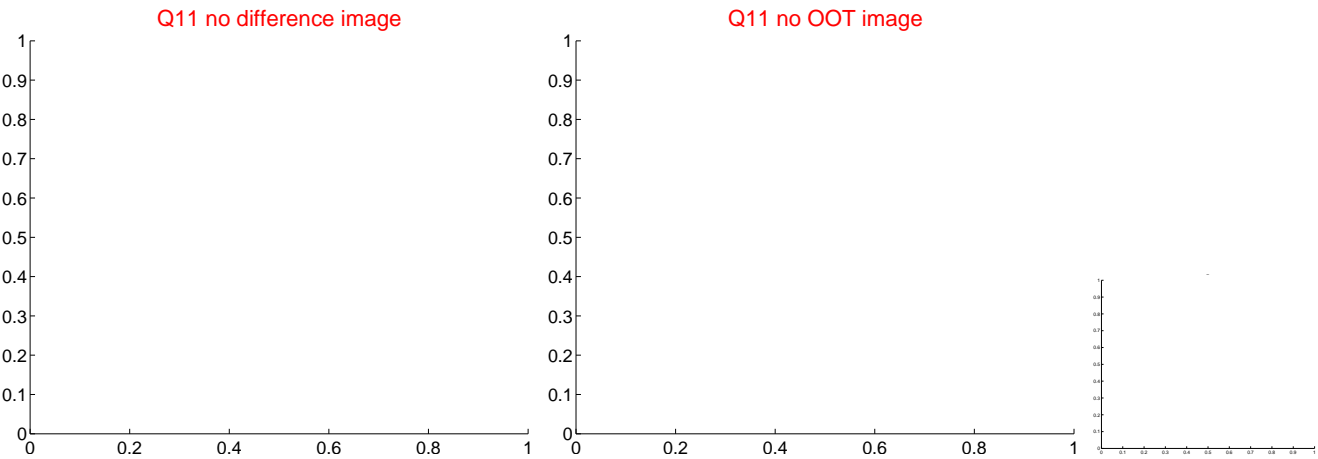
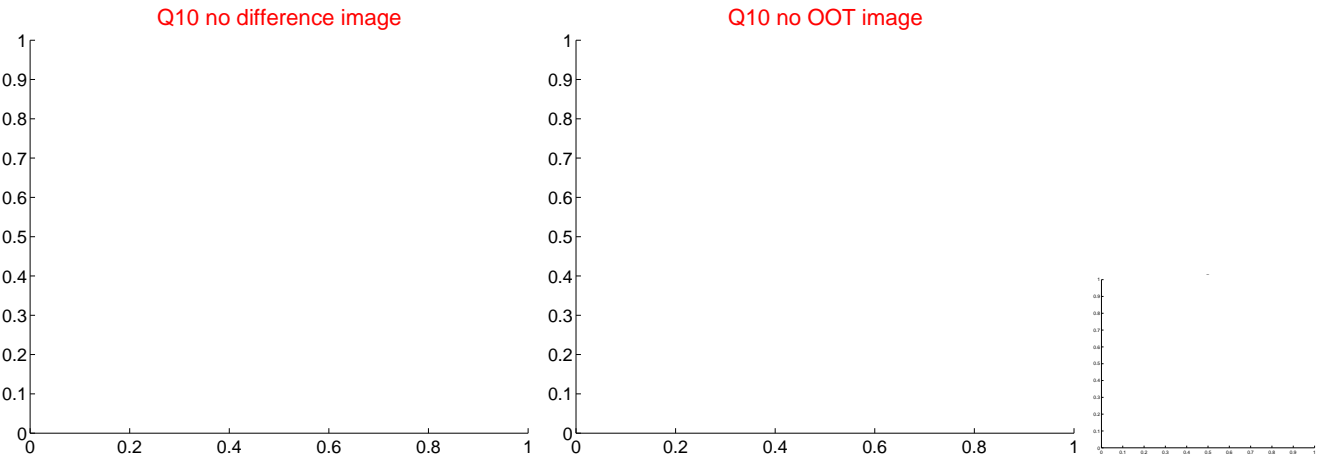
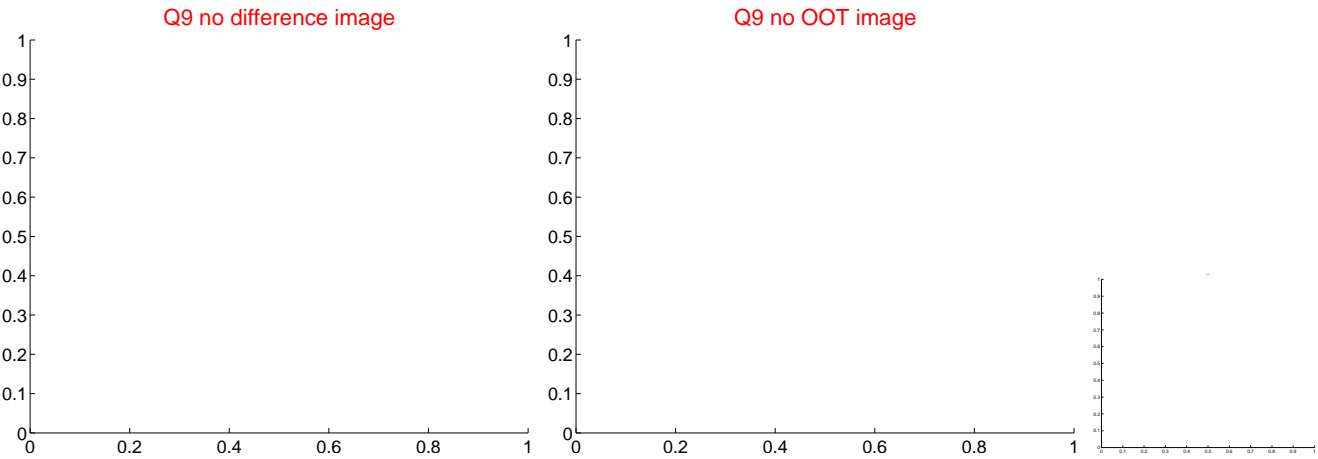
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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



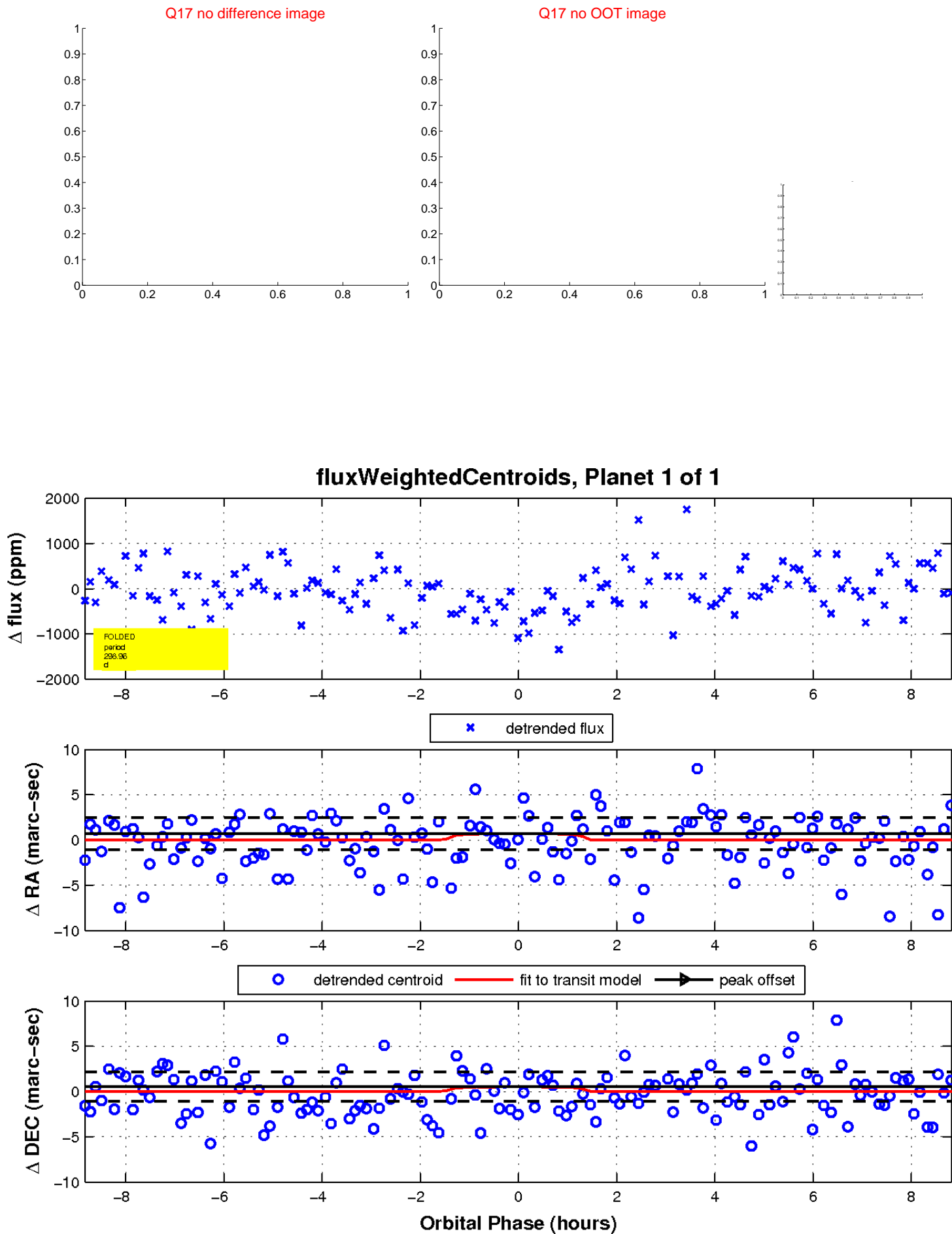
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

