

KIC 008375533

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})
008375533-01	OBS	No	370.723400	230.655606	752.4	15.387	9.0	9.4	1.12	6315	4.72	1.58

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008375533-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—ALL_TRANS_CHASES—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.

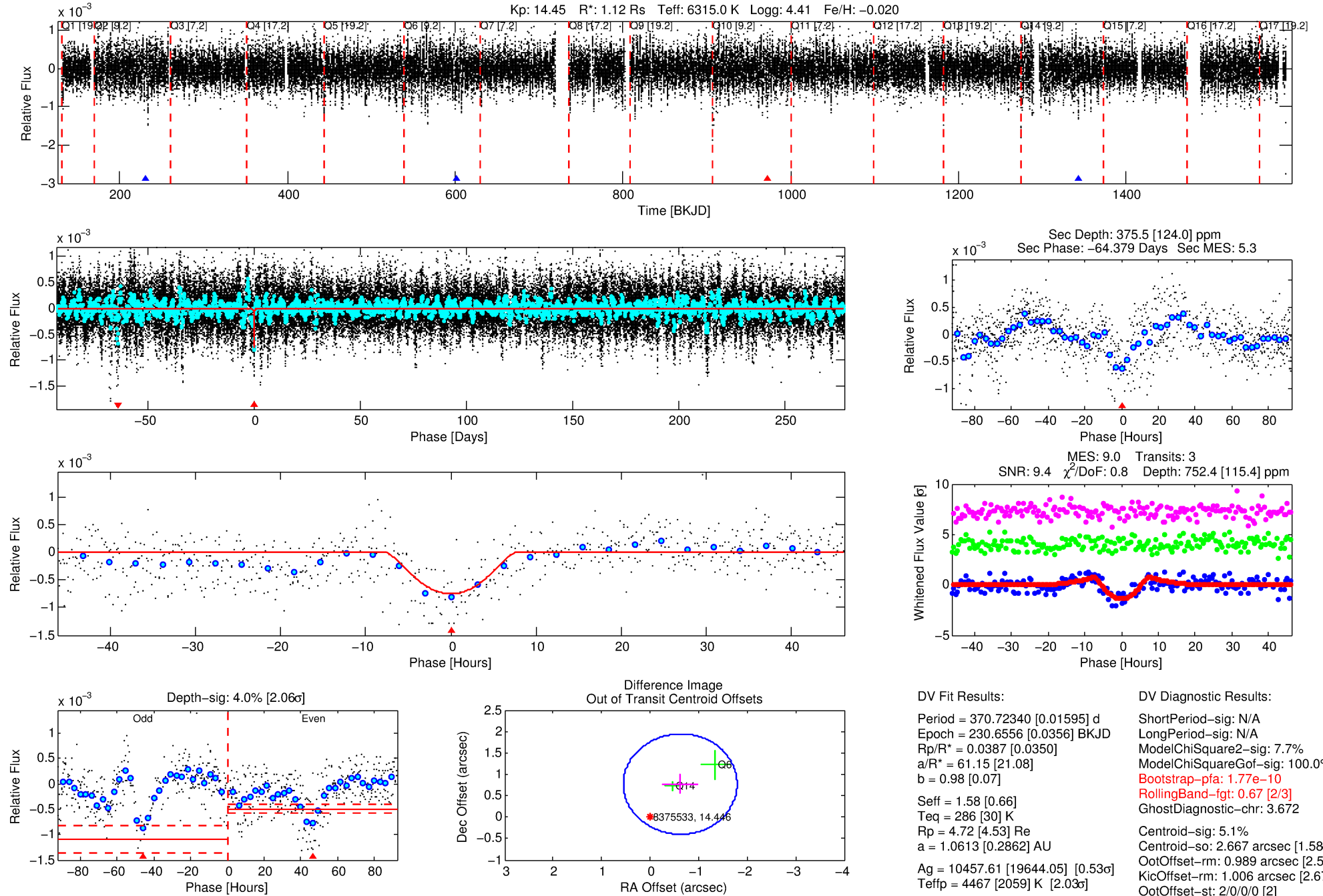
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008375533-01

No Significant Match Found

DV One-Page Summary

KIC: 8375533 Candidate: 1 of 1 Period: 370.723 d



DV Fit Results:

Period = 370.72340 [0.01595] d
Epoch = 230.6556 [0.0356] BKJD
Rp/R* = 0.0387 [0.0350]
a/R* = 61.15 [21.08]
b = 0.98 [0.07]
Seff = 1.58 [0.66]
Teff = 286 [30] K
Rp = 4.72 [4.53] Re
a = 1.0613 [0.2862] AU
Ag = 10457.61 [19644.05] [0.53 σ]
Teffp = 4467 [2059] K [2.03 σ]

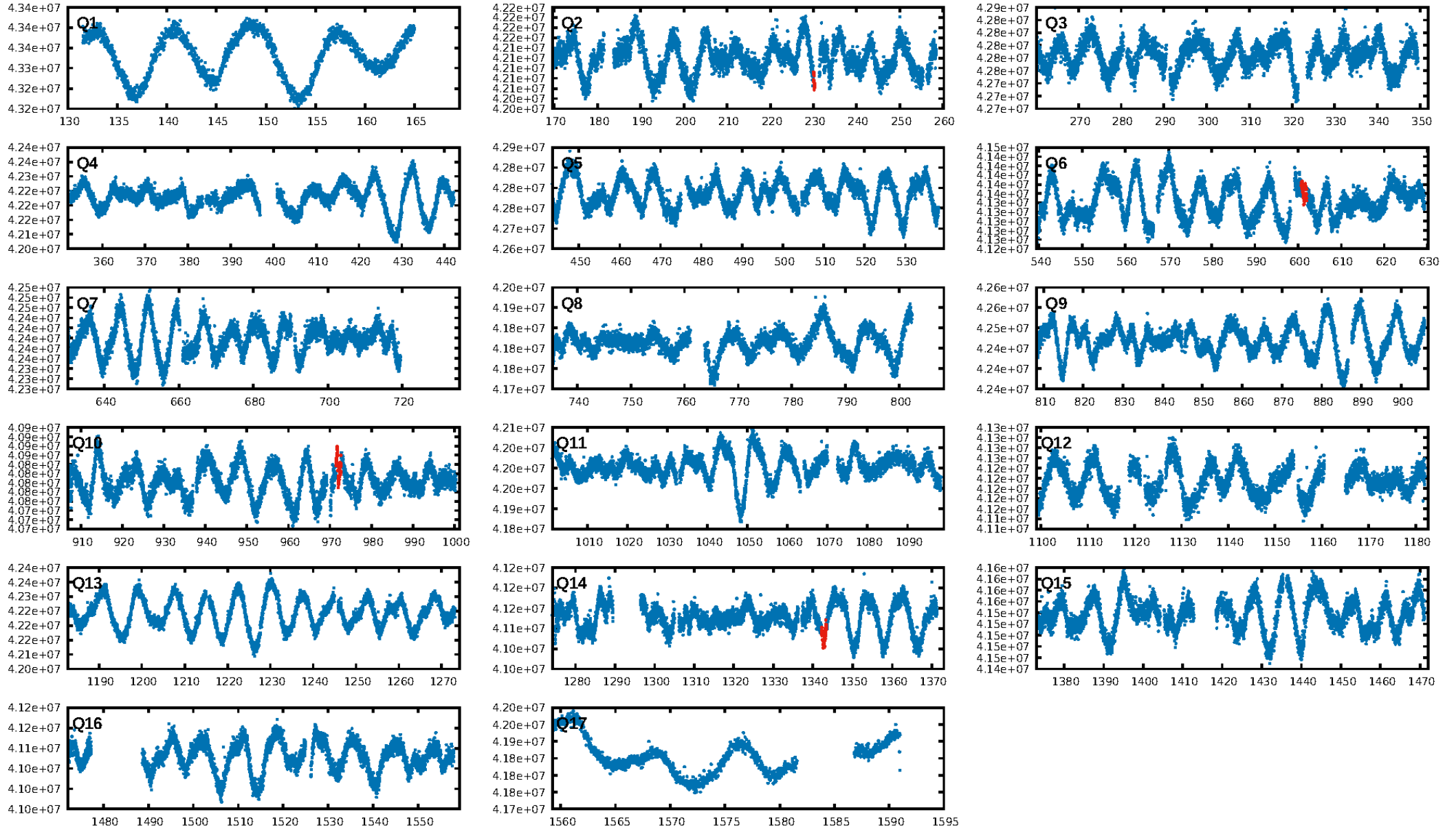
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 7.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.77e-10
RollingBand-fgt: 0.67 [2/3]
GhostDiagnostic-chr: 3.672
Centroid-sig: 5.1%
Centroid-so: 2.667 arcsec [1.58 σ]
OotOffset-rm: 0.989 arcsec [2.53 σ]
KicOffset-rm: 1.006 arcsec [2.67 σ]
OotOffset-st: 2/0/0/0 [2]
KicOffset-st: 2/0/0/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

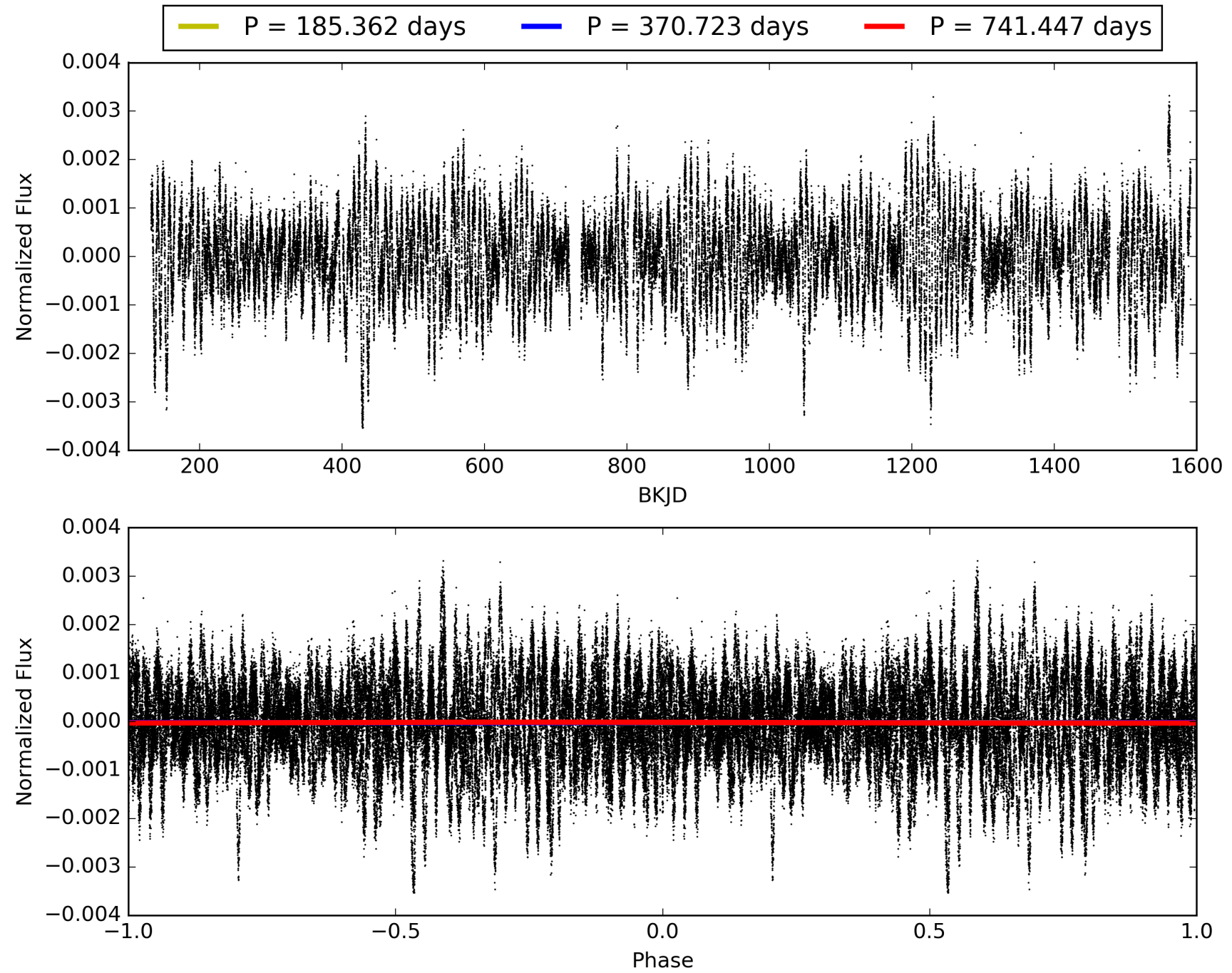
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:14:03 Z

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

TCE 008375533-01, PDC Light Curves

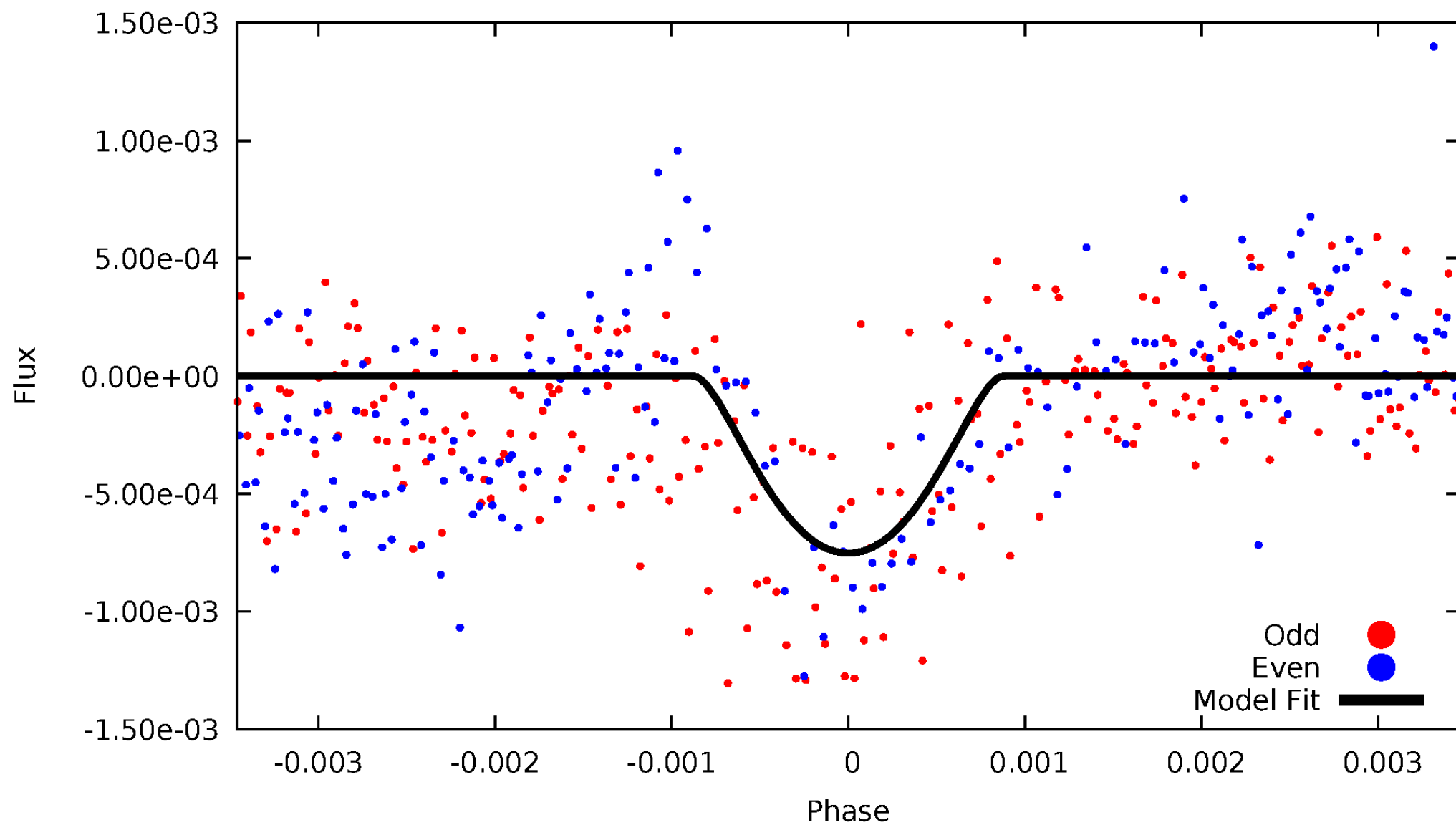


TCE 008375533-01



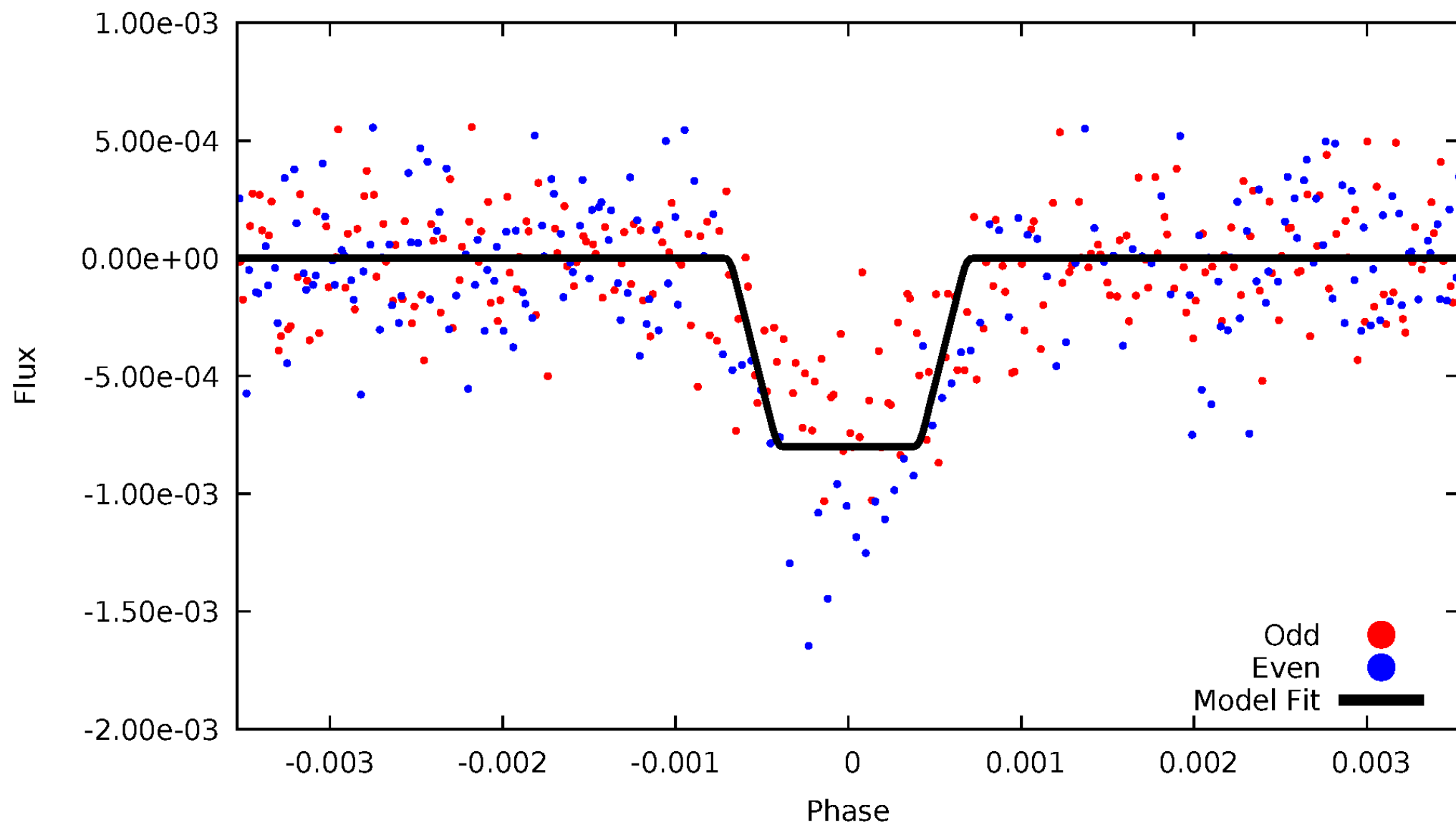
DV Odd/Even

TCE 008375533-01



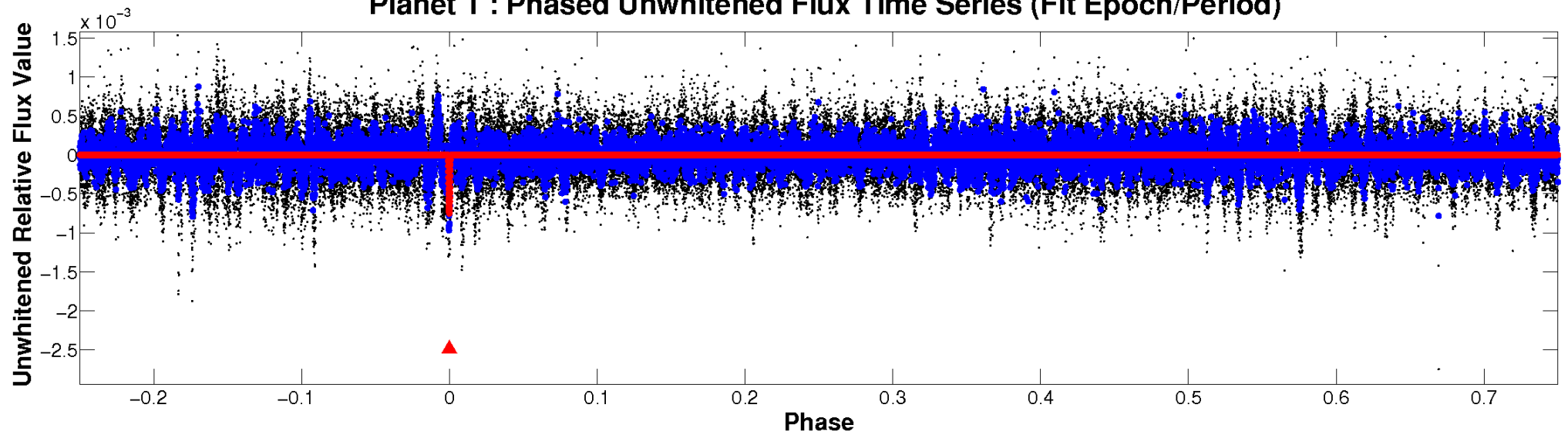
ALT Odd/Even

TCE 008375533-01

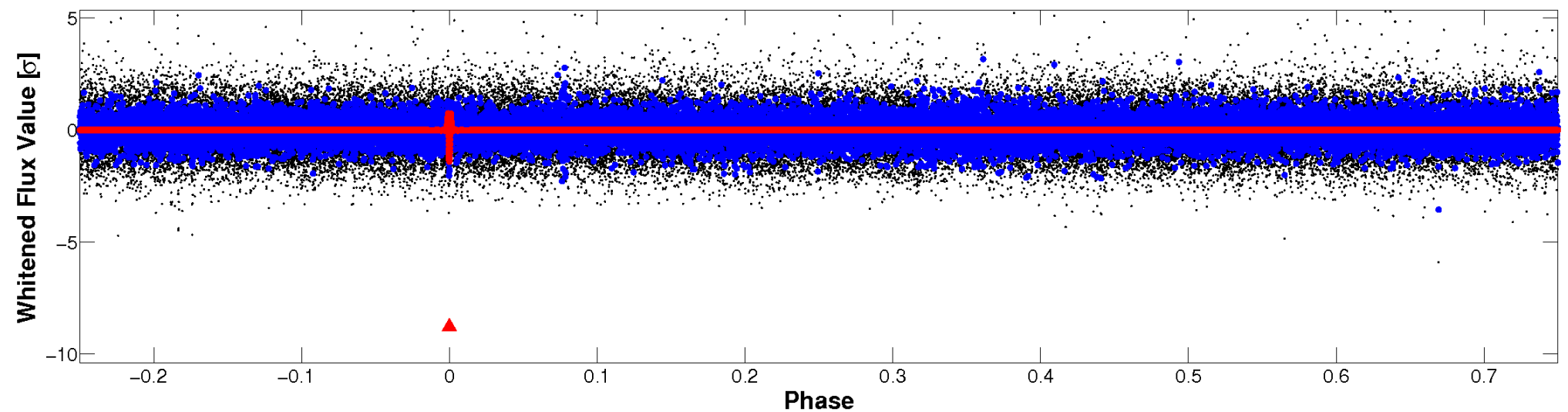


Non-Whitened Vs. Whitened Light Curve

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

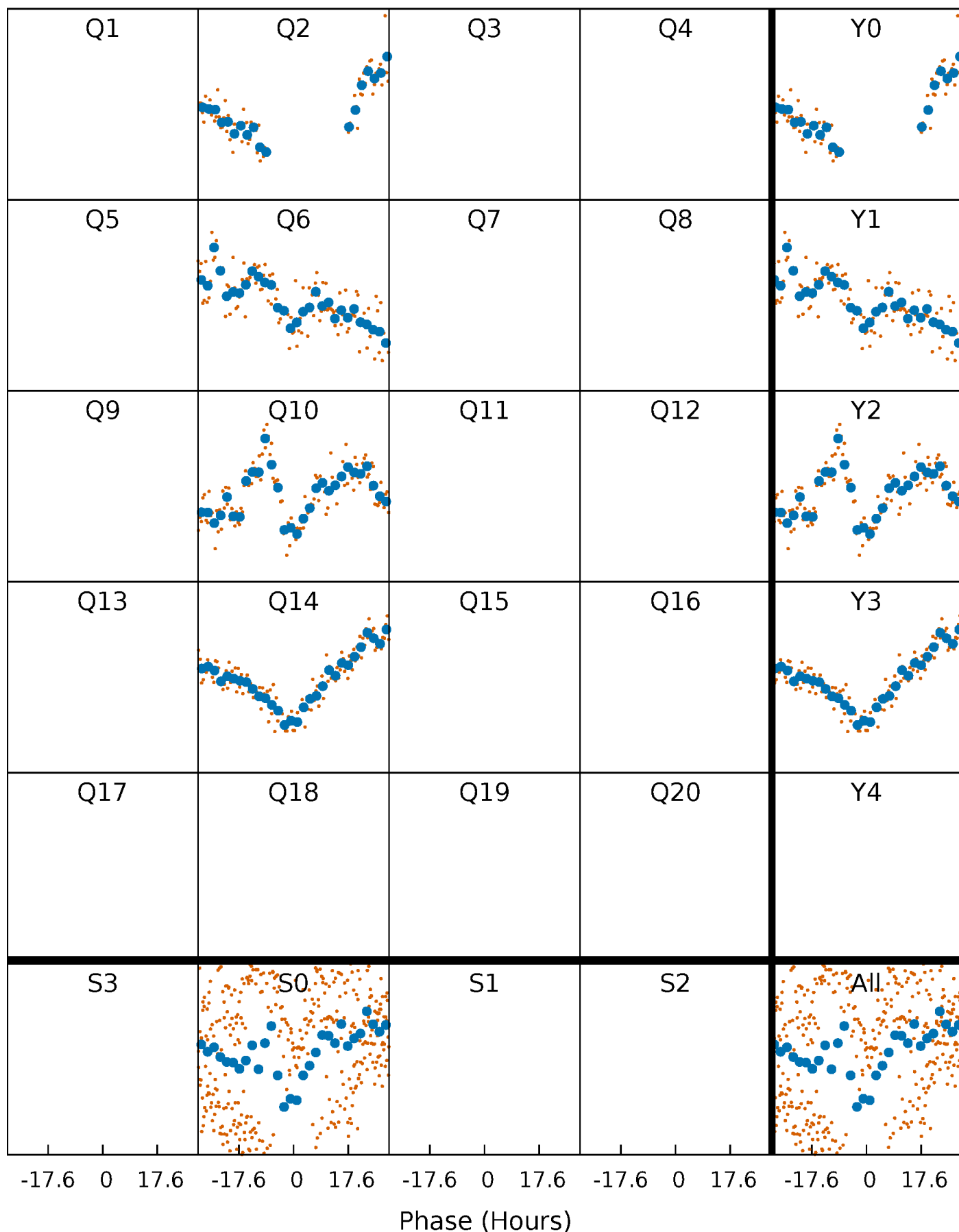


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



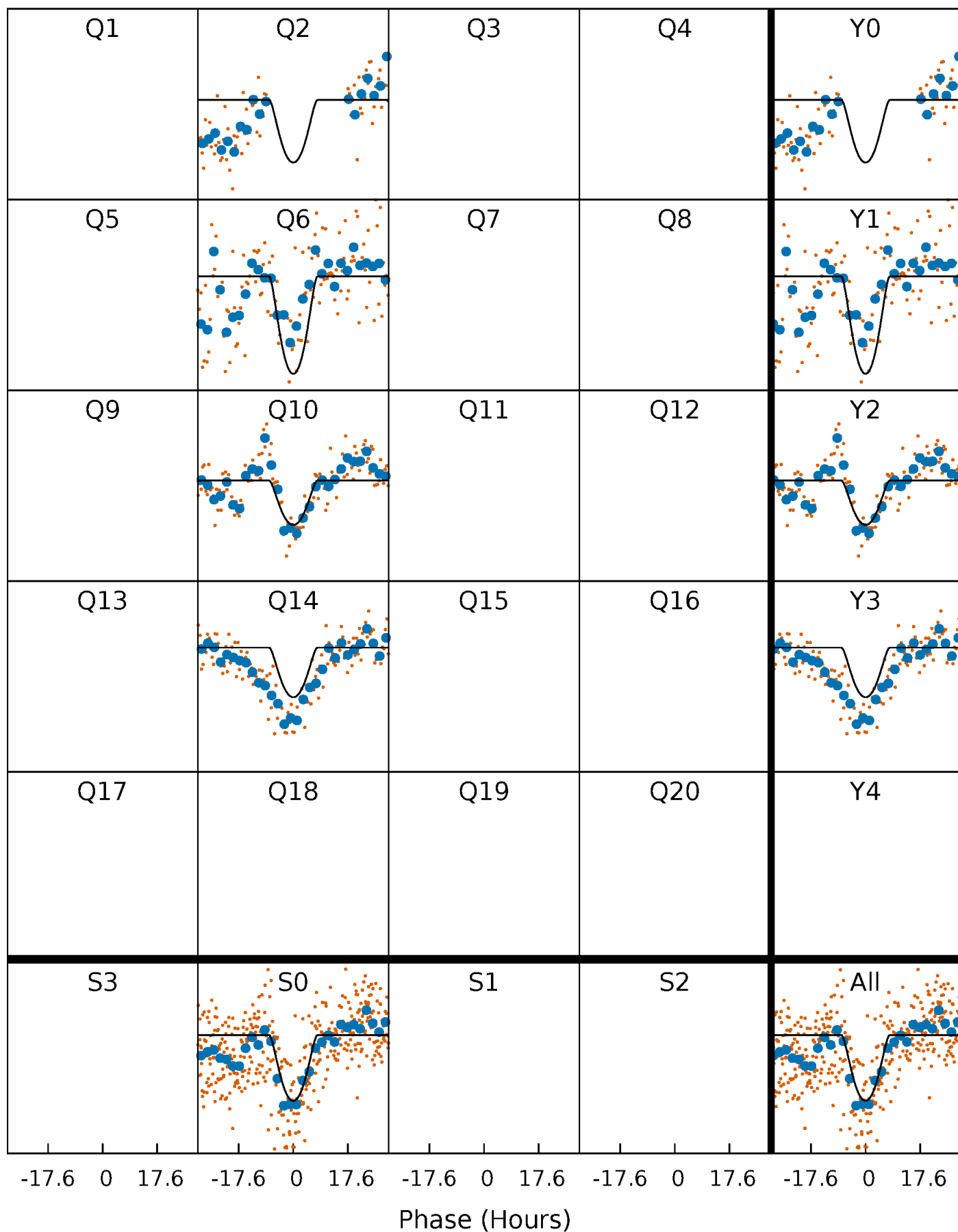
PDC Quarter-Phased Transit Curves

TCE 008375533-01 P=370.723400 Days $T_0=230.655606$ (BKJD)



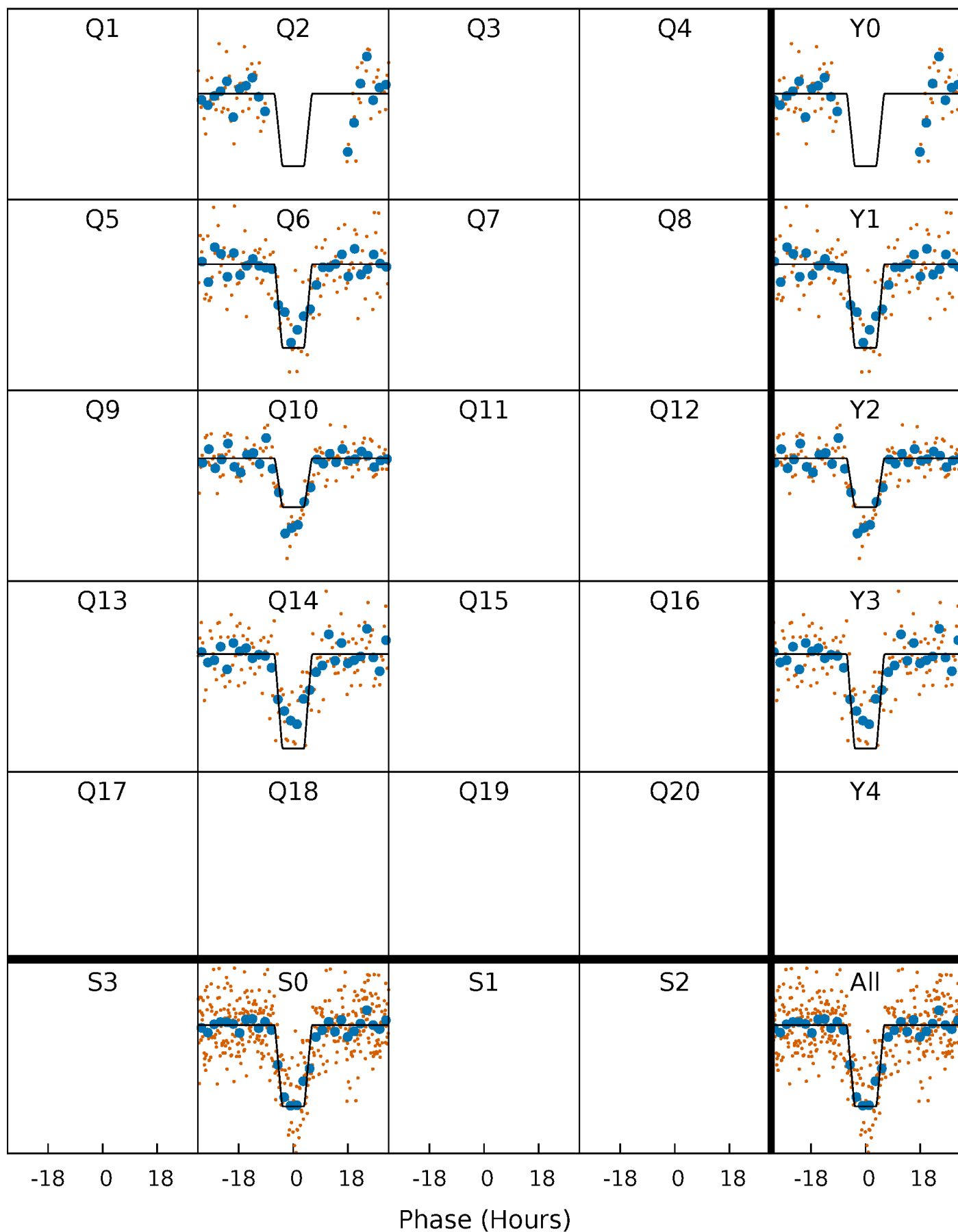
DV Quarter-Phased Transit Curves

TCE 008375533-01 P=370.723400 Days $T_0=230.655606$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

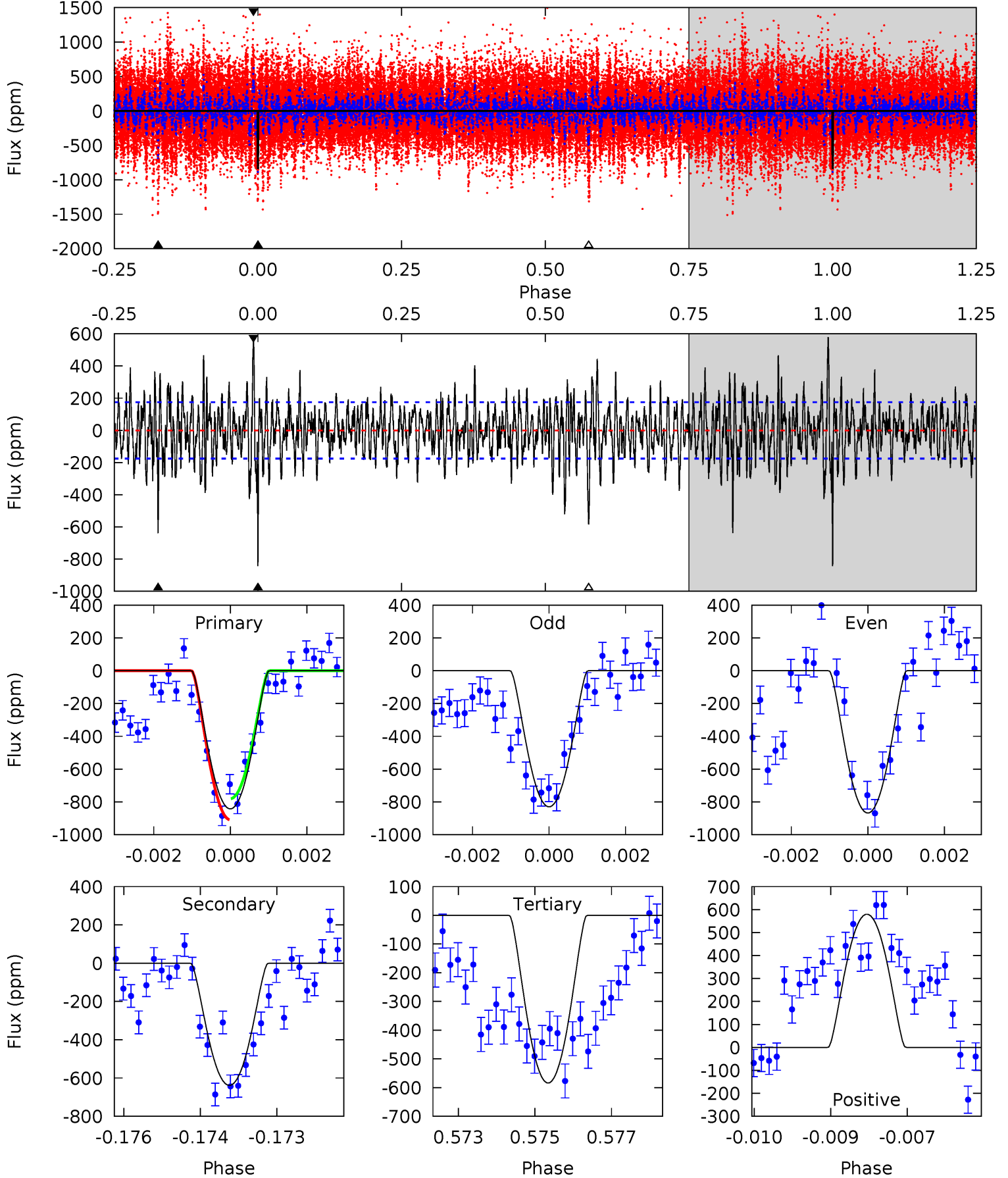
TCE 008375533-01 P=370.719268 Days $T_0=230.656177$ (BKJD)



DV Model-Shift Uniqueness Test

008375533-01, P = 370.723400 Days, E = 230.655606 Days

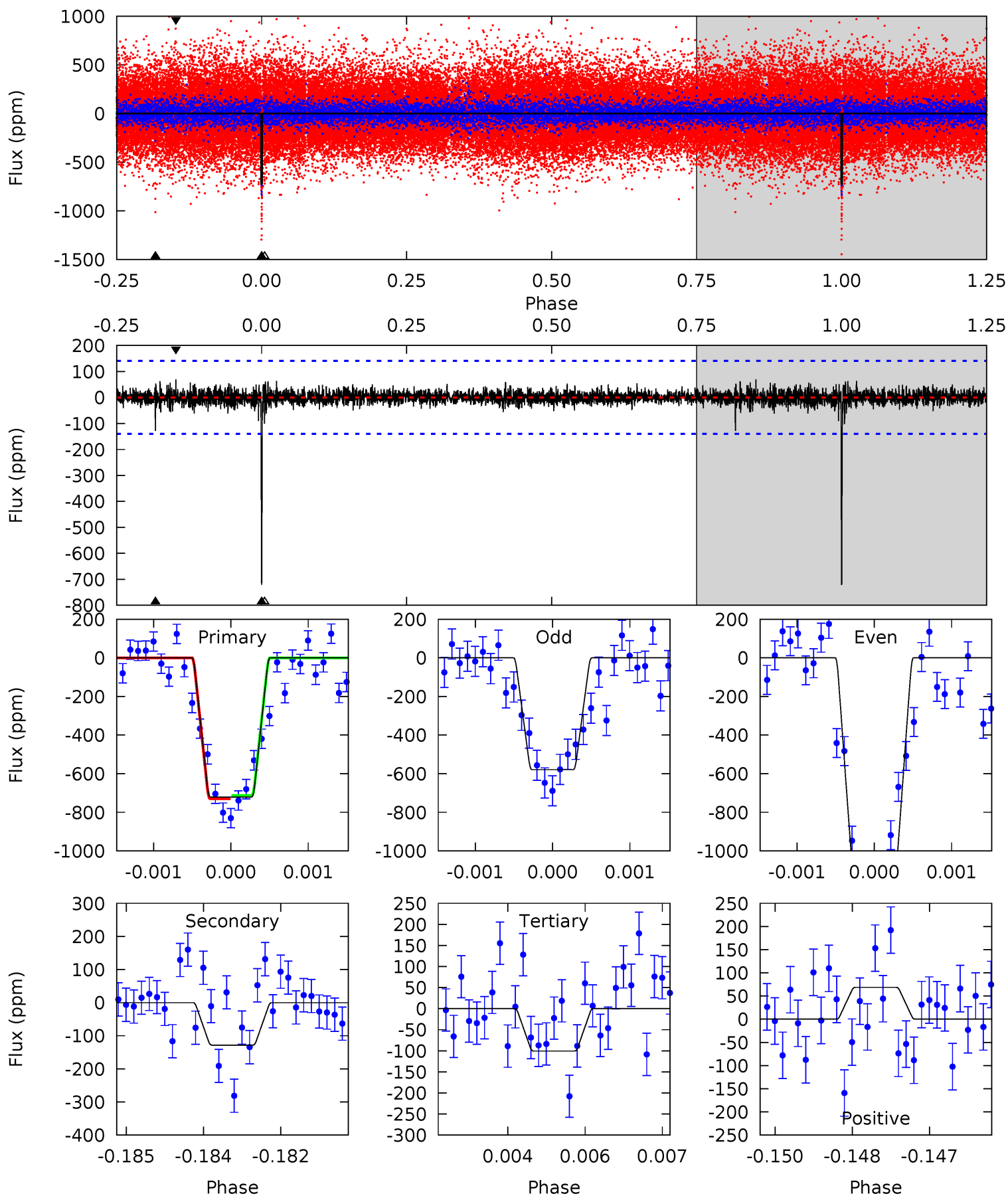
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.7	19.4	17.8	17.7	5.35	3.13	4.34	7.88	8.01	1.65	1.78	0.55	0.96	0.41	1.95



Alt Model-Shift Uniqueness Test

008375533-01, P = 370.719268 Days, E = 230.656177 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.7	4.92	3.86	2.63	5.39	3.19	0.64	23.8	25.0	1.06	2.29	8.78	1.15	0.09	0.33



Stellar Parameters For KIC 008375533

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6315^{+152}_{-239}	$4.407^{+0.070}_{-0.210}$	$-0.020^{+0.250}_{-0.300}$	$1.116^{+0.362}_{-0.129}$	$1.161^{+0.169}_{-0.169}$	$1.177^{+0.357}_{-0.646}$
	+2%/-4%	+2%/-5%	+1250%/-1500%	+32%/-12%	+15%/-15%	+30%/-55%
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 008375533-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-638 ± 33	$5.77^{+4.33}_{-3.53}$	405^{+31}_{-22}	4833^{+2797}_{-925}	11641^{+67128}_{-7817}
Alt.	-128 ± 26	$4.53^{+4.04}_{-2.99}$	404^{+30}_{-20}	3871^{+2103}_{-705}	3845^{+27651}_{-2774}

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

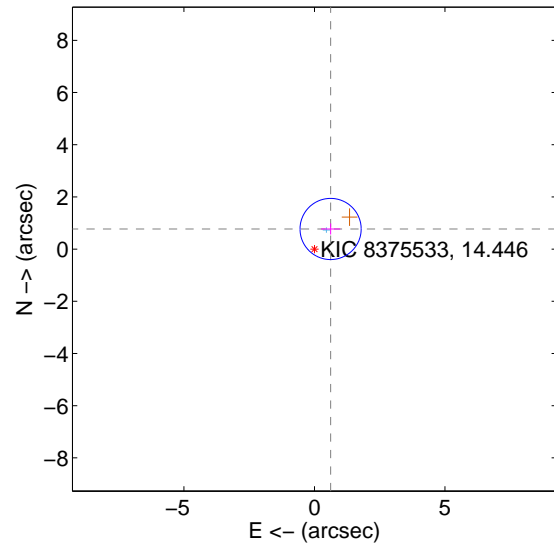
Supplemental centroid analysis for 008375533-01. Kepler magnitude: 14.45. Transit SNR 9.38

There are 1 quarters with good PRF difference image offsets

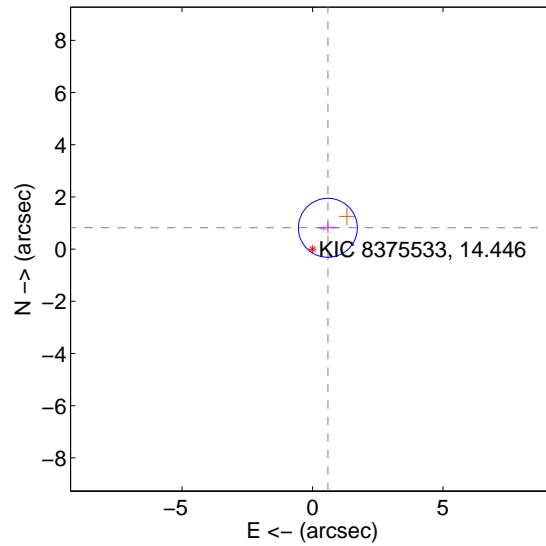
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.989 ± 0.391	2.53	-0.619 ± 0.369	0.771 ± 0.213
PRF-fit source offset from KIC position	1.006 ± 0.376	2.67	-0.588 ± 0.369	0.816 ± 0.206
photometric centroid source offset	2.67 ± 1.69	1.58	-2.28 ± 1.72	-1.38 ± 1.59

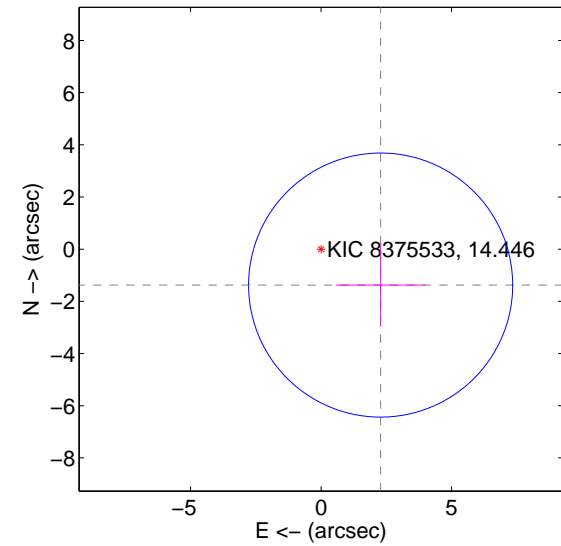
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

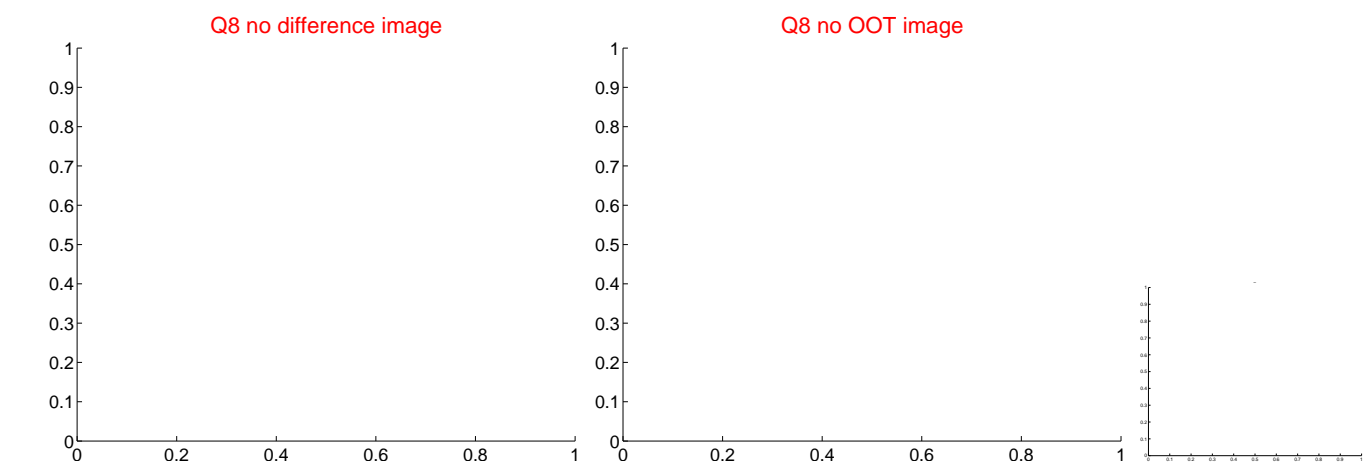
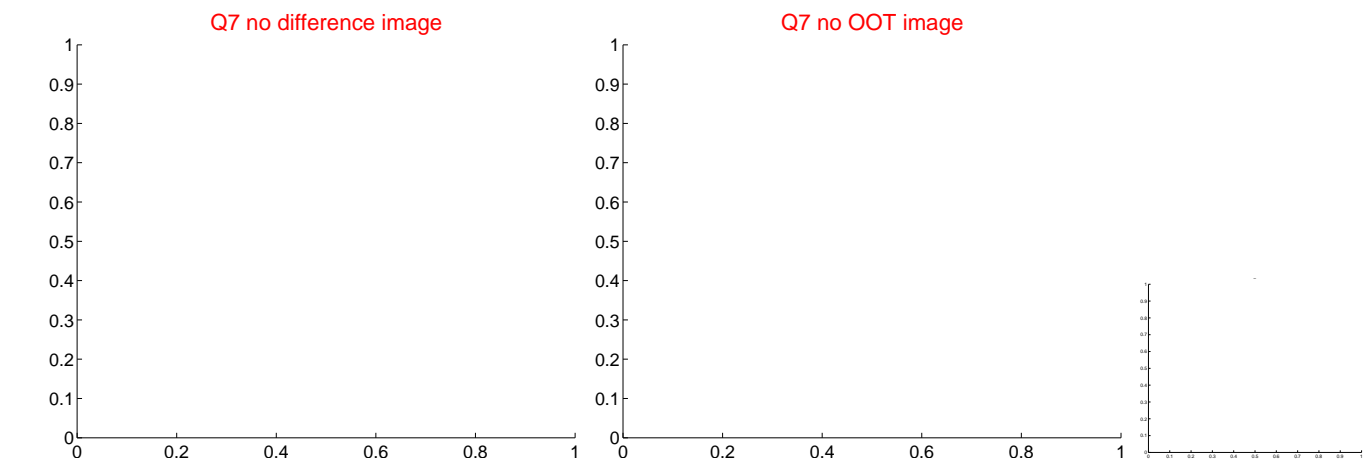
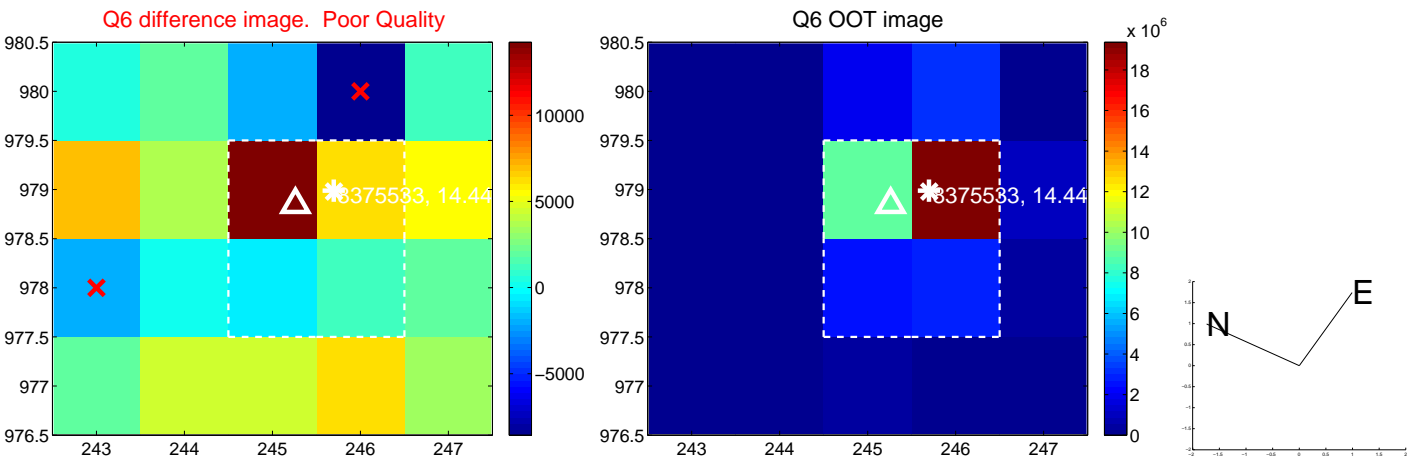
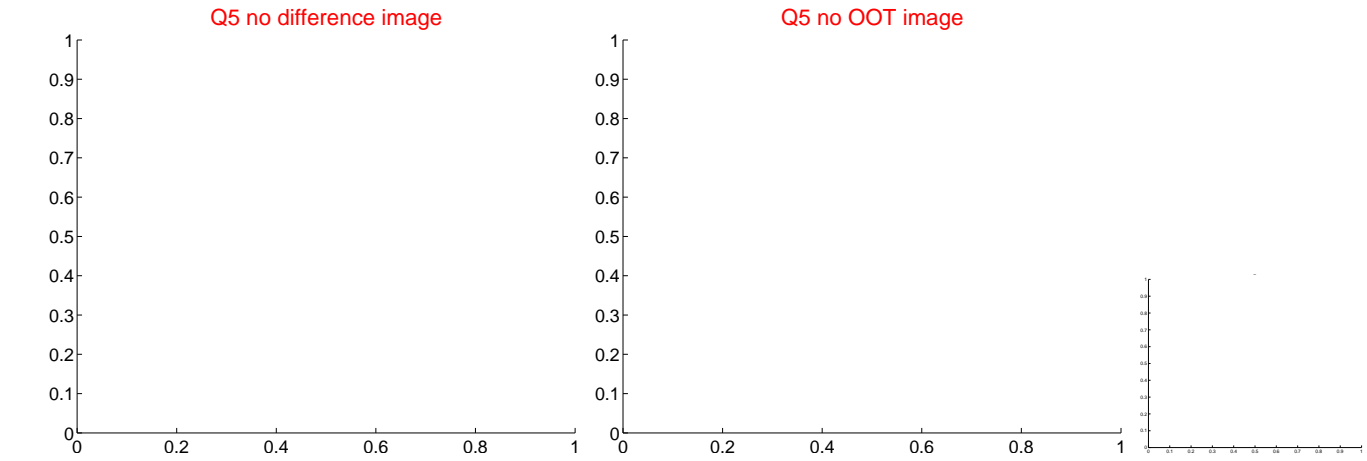


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

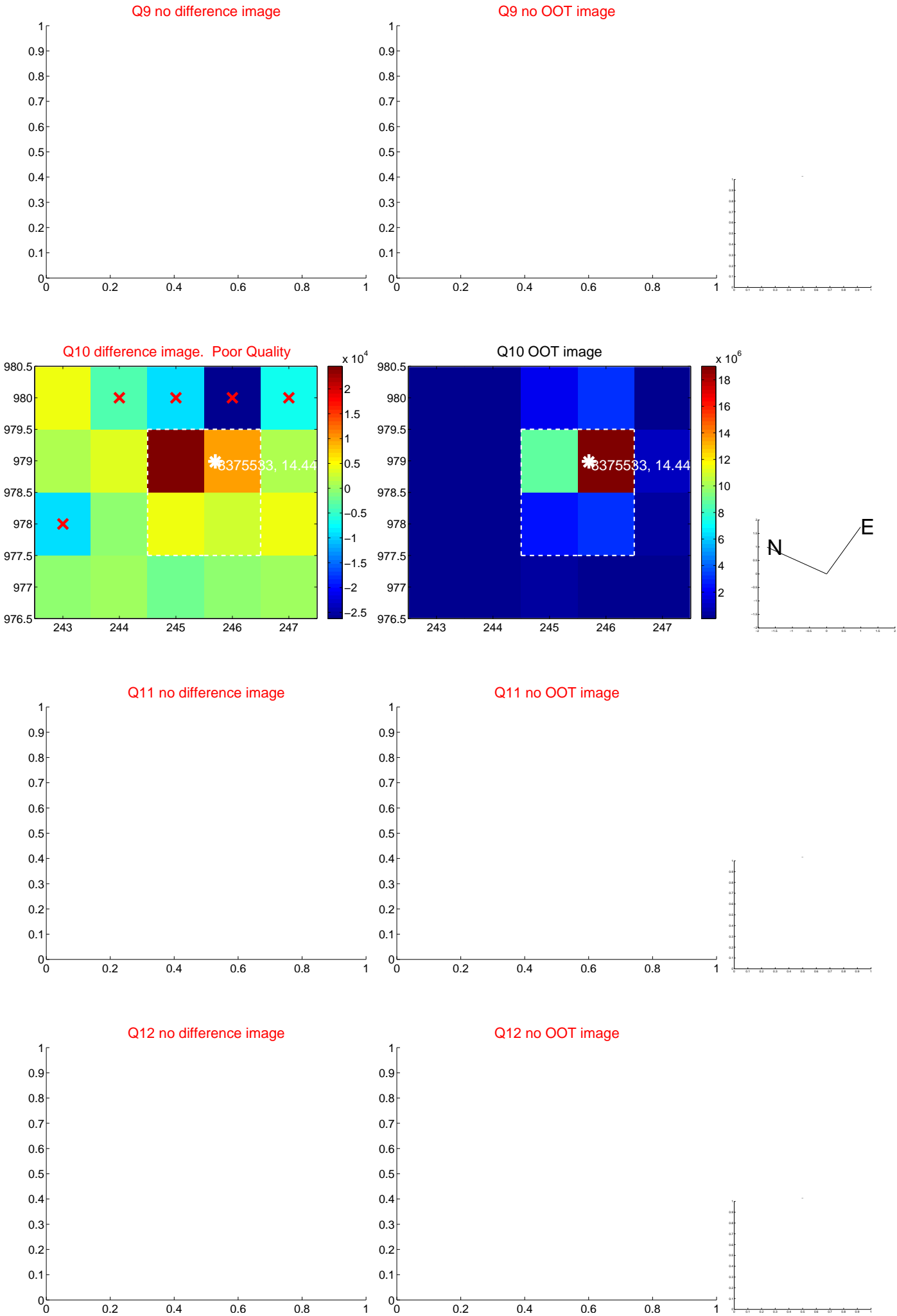
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



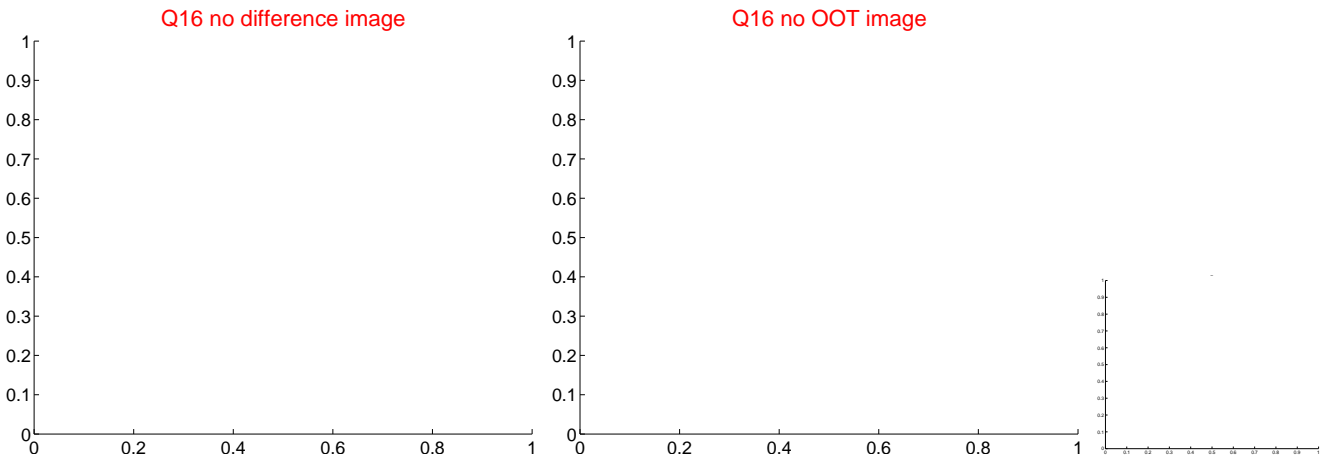
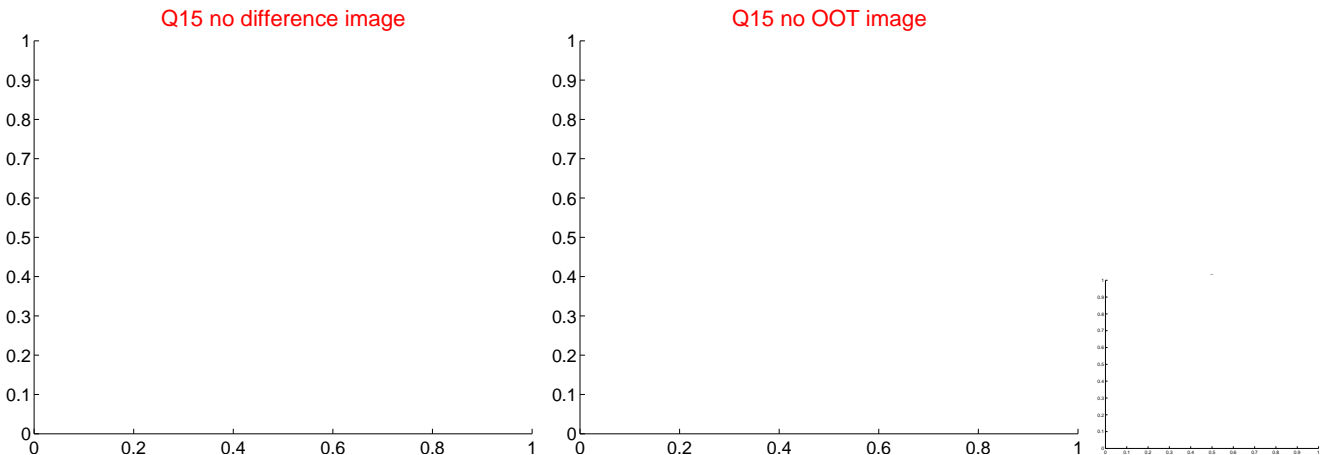
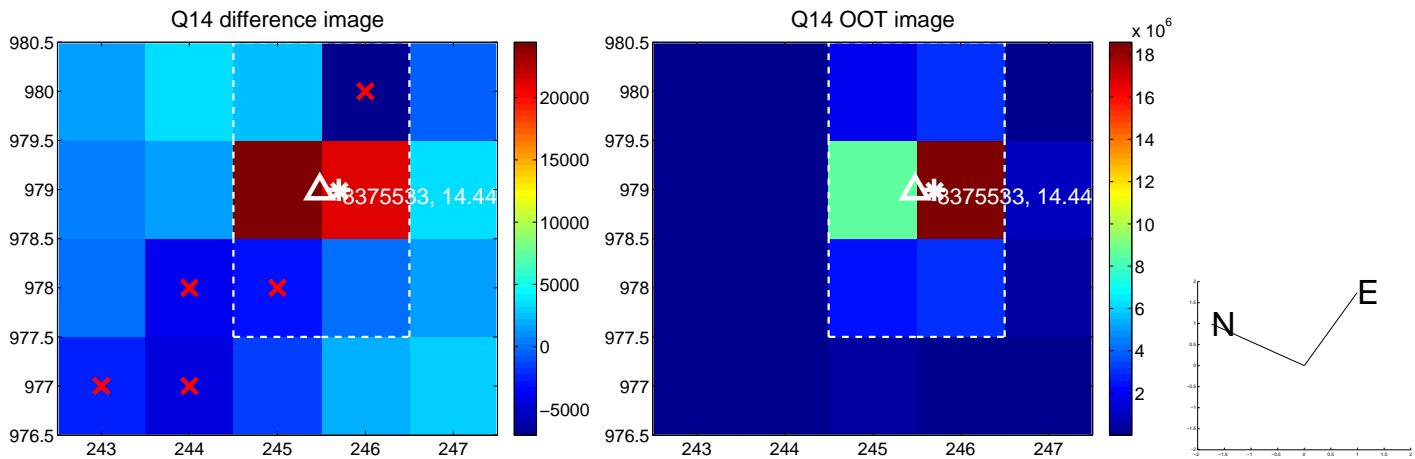
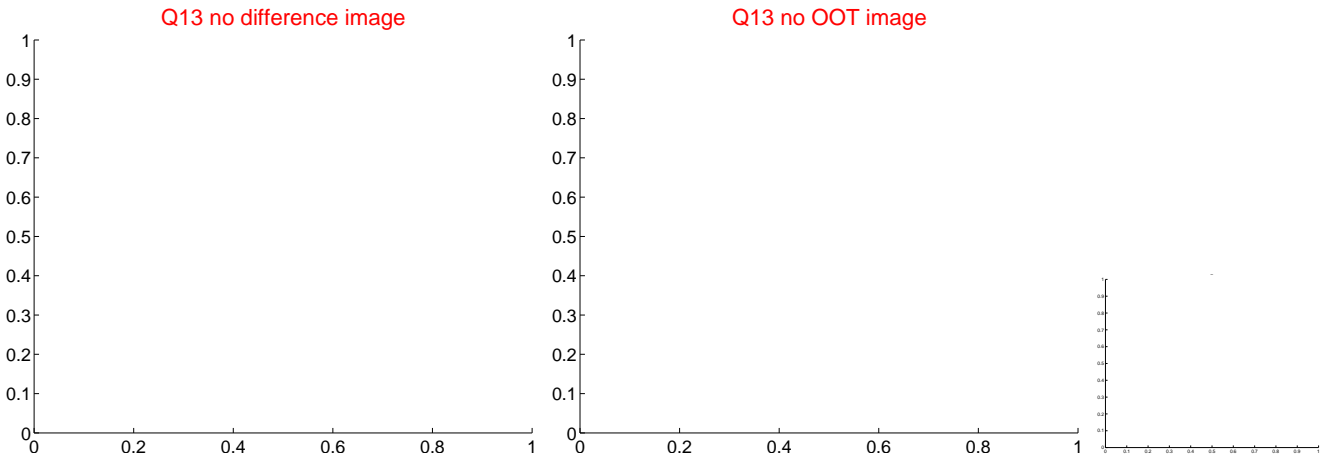
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



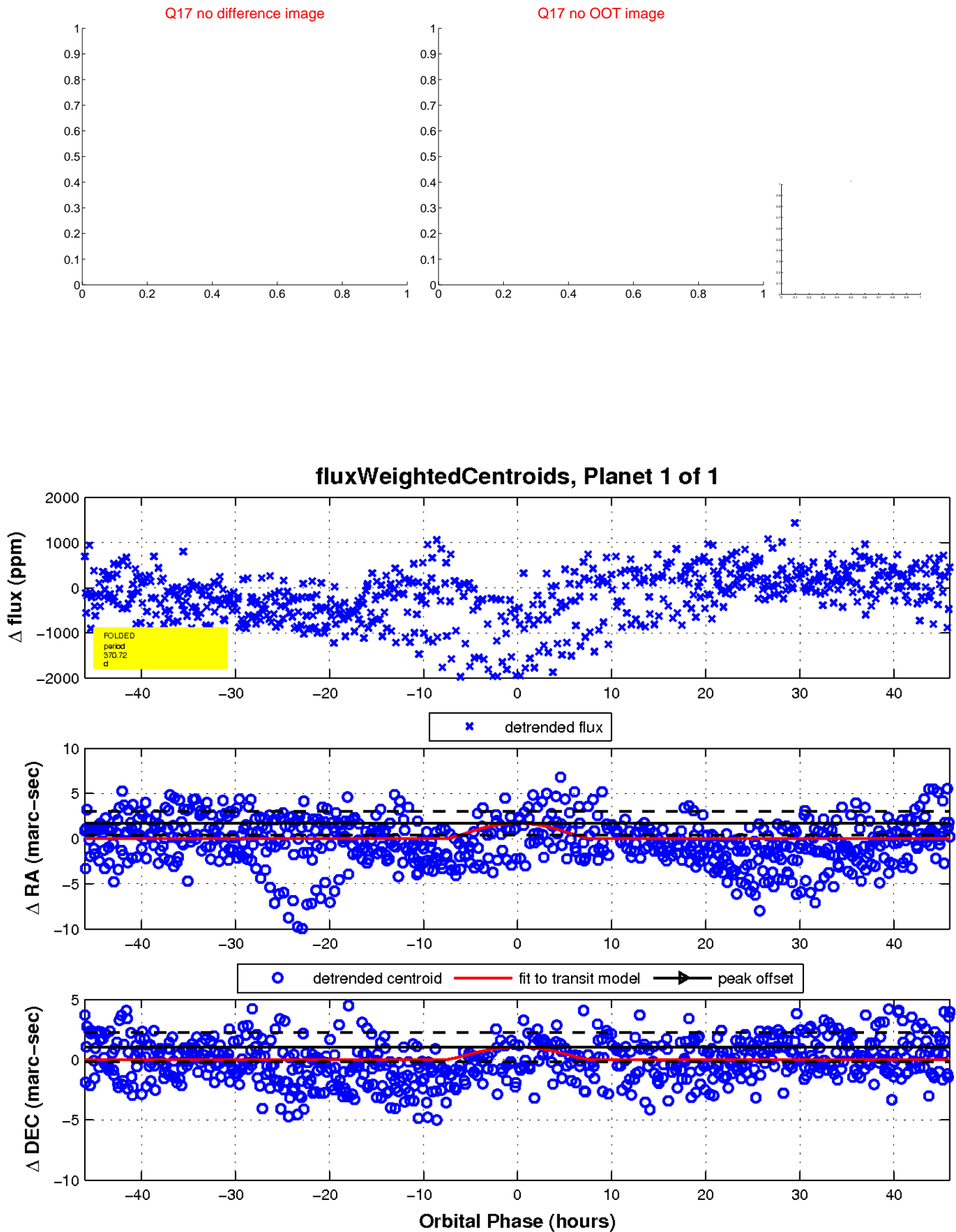
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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

