

KIC 008374462

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})
008374462-01	OBS	No	367.012540	238.732987	1041.2	20.974	11.7	9.8	0.84	5123	3.24	0.51

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008374462-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—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.

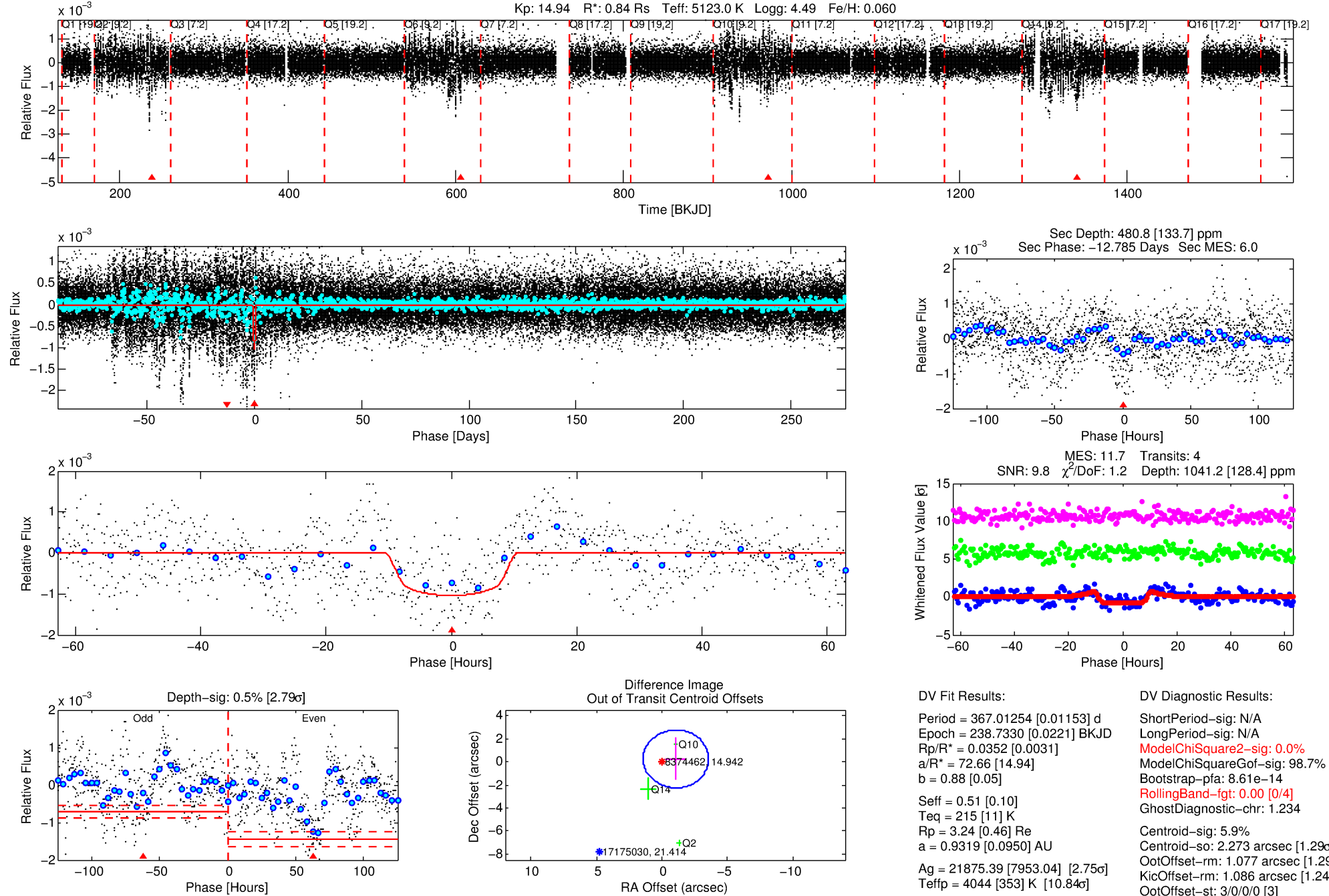
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008374462-01

No Significant Match Found

DV One-Page Summary

KIC: 8374462 Candidate: 1 of 1 Period: 367.013 d



DV Fit Results:

Period = 367.01254 [0.01153] d
Epoch = 238.7330 [0.0221] BKJD
Rp/R* = 0.0352 [0.0031]
a/R* = 72.66 [14.94]
b = 0.88 [0.05]
Seff = 0.51 [0.10]
Teff = 215 [11] K
Rp = 3.24 [0.46] Re
a = 0.9319 [0.0950] AU
Ag = 21875.39 [7953.04] [2.75 σ]
Teffp = 4044 [353] K [10.84 σ]

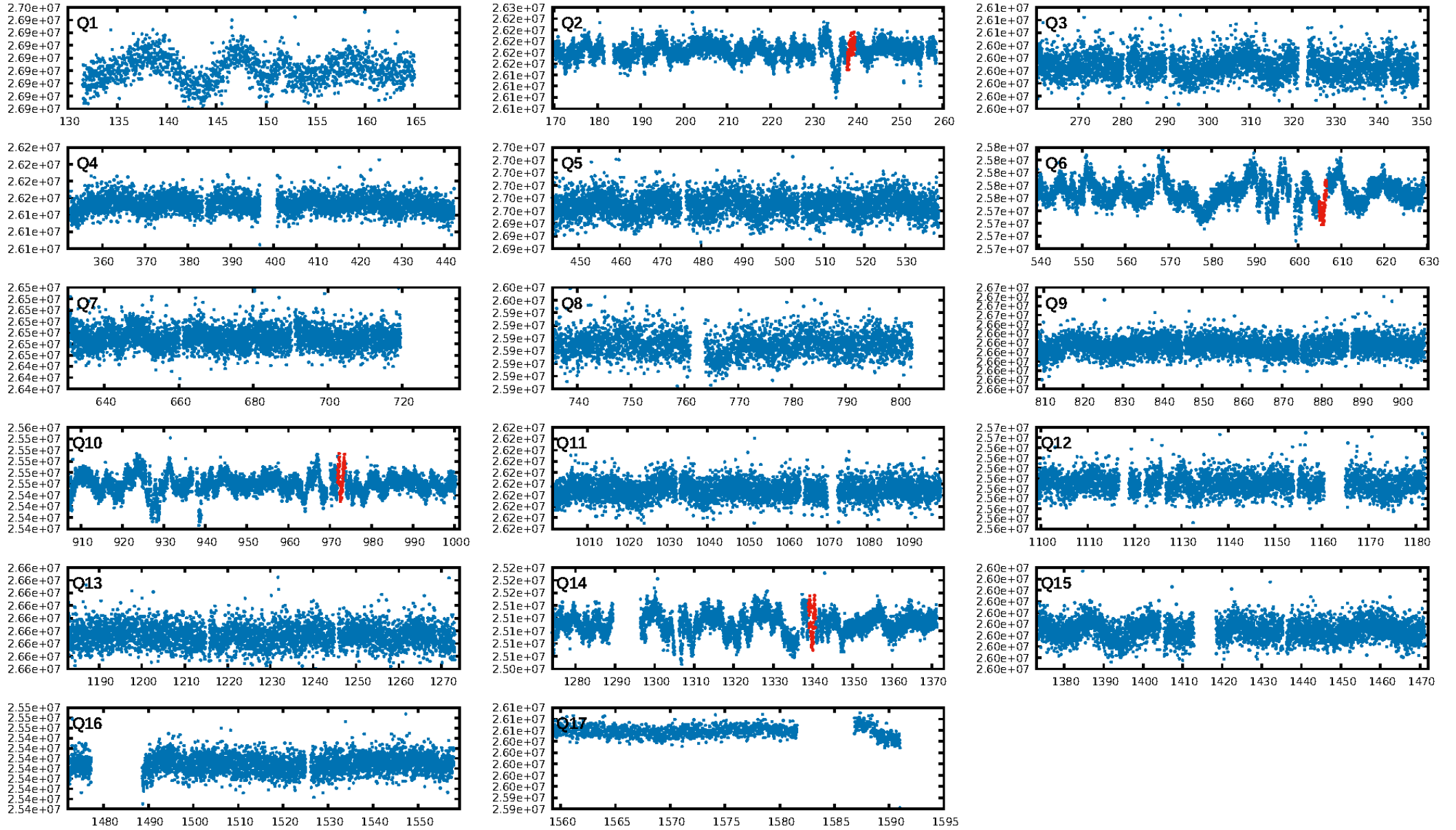
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 98.7%
Bootstrap-pfa: 8.61e-14
RollingBand-fgt: 0.00 [0/4]
GhostDiagnostic-chr: 1.234
Centroid-sig: 5.9%
Centroid-so: 2.273 arcsec [1.29 σ]
OotOffset-rm: 1.077 arcsec [1.29 σ]
KicOffset-rm: 1.086 arcsec [1.24 σ]
OotOffset-st: 3/0/0/0 [3]
KicOffset-st: 3/0/0/0 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [4/4]

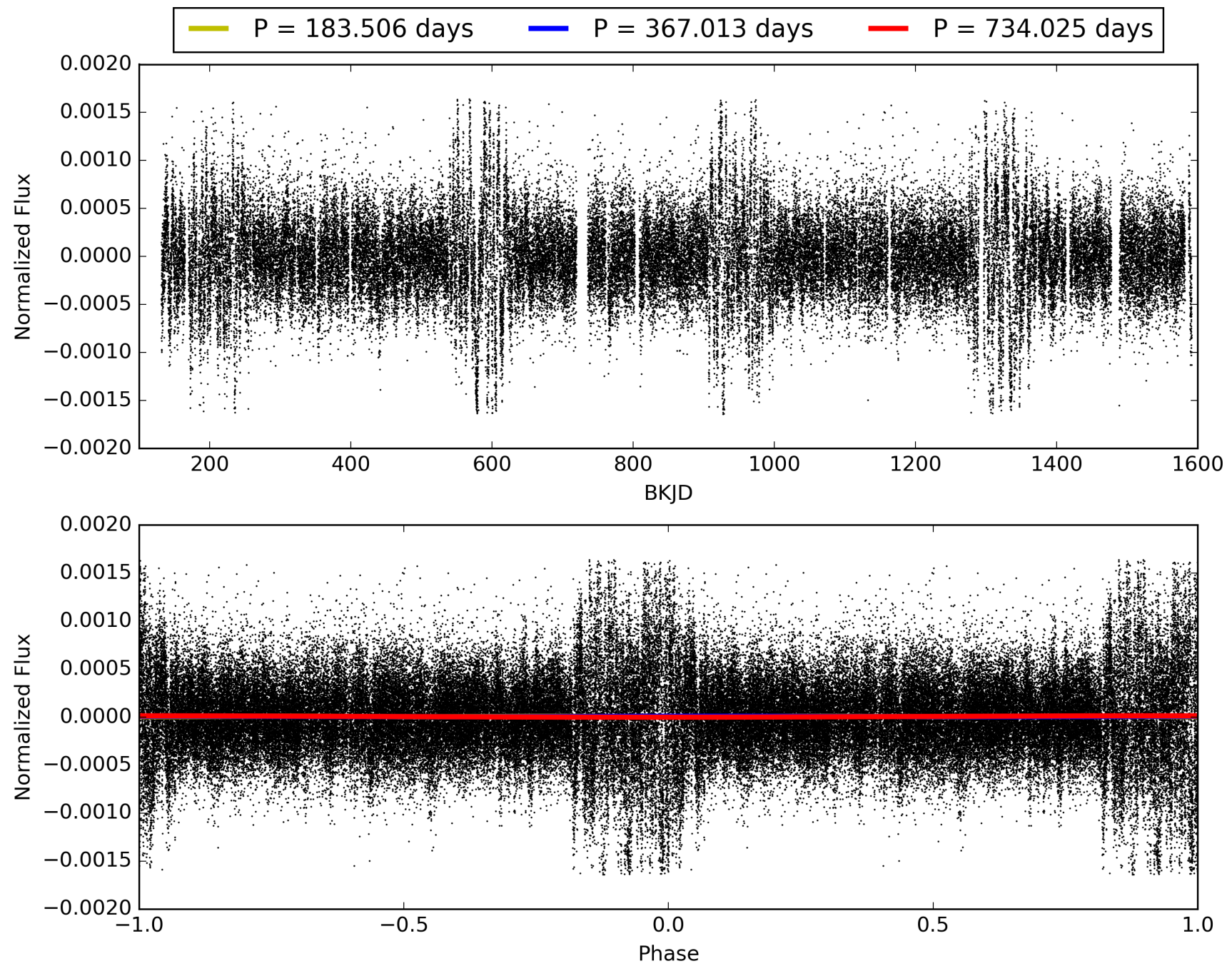
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:21:34 Z

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

TCE 008374462-01, PDC Light Curves

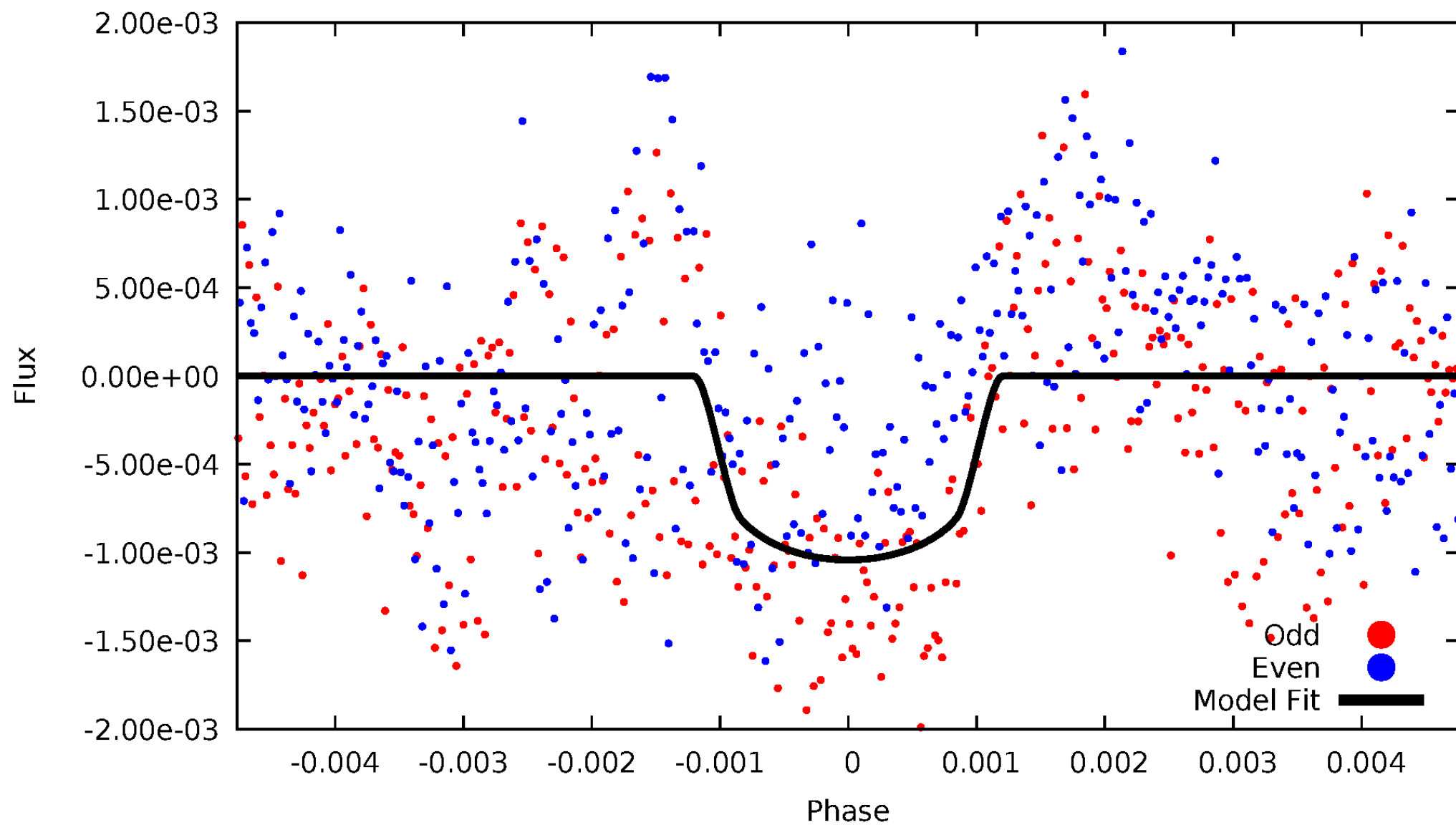


TCE 008374462-01



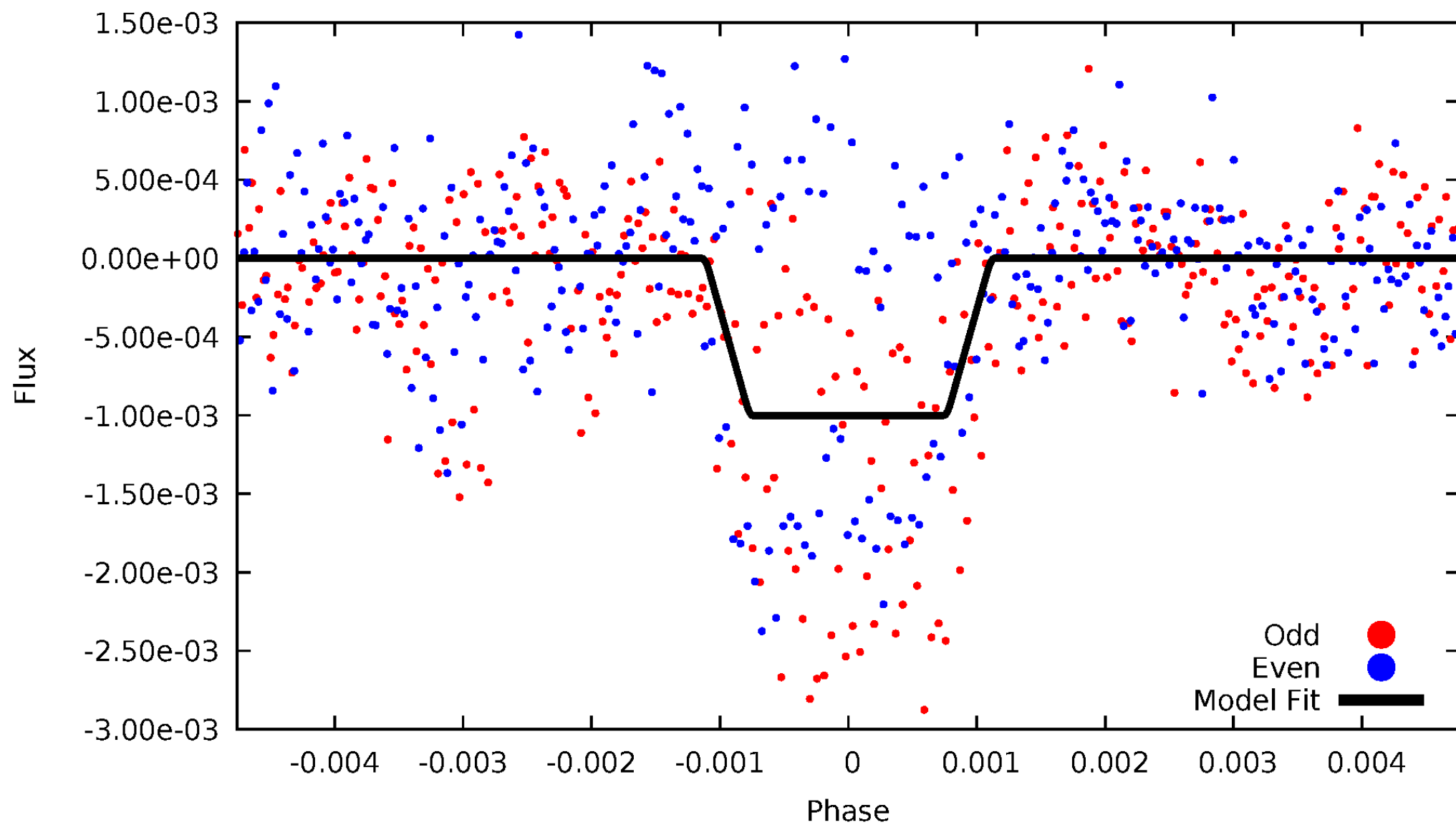
DV Odd/Even

TCE 008374462-01



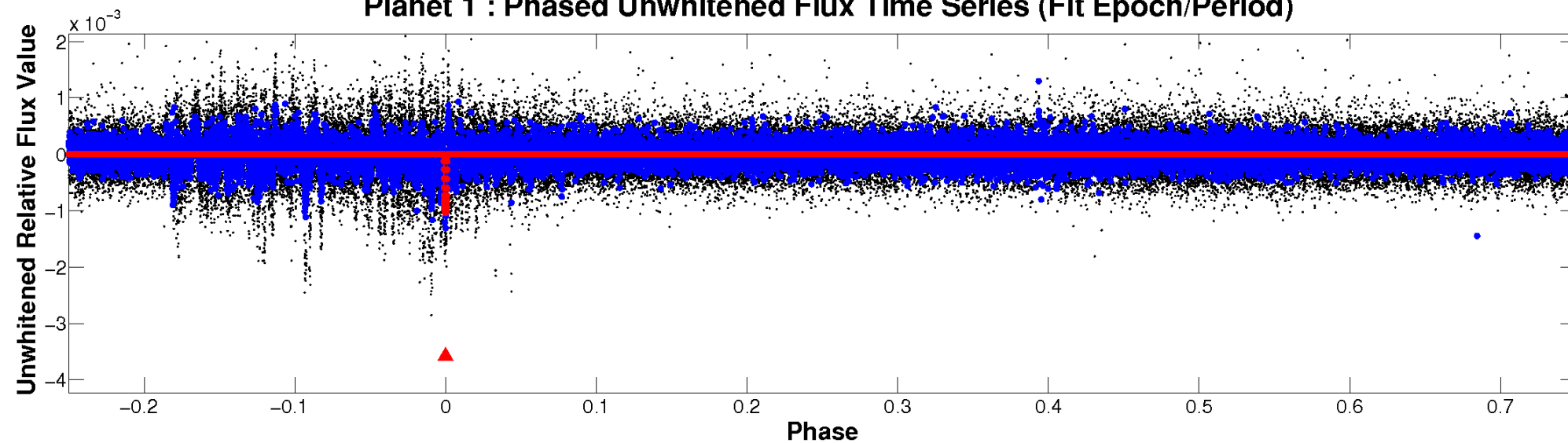
ALT Odd/Even

TCE 008374462-01

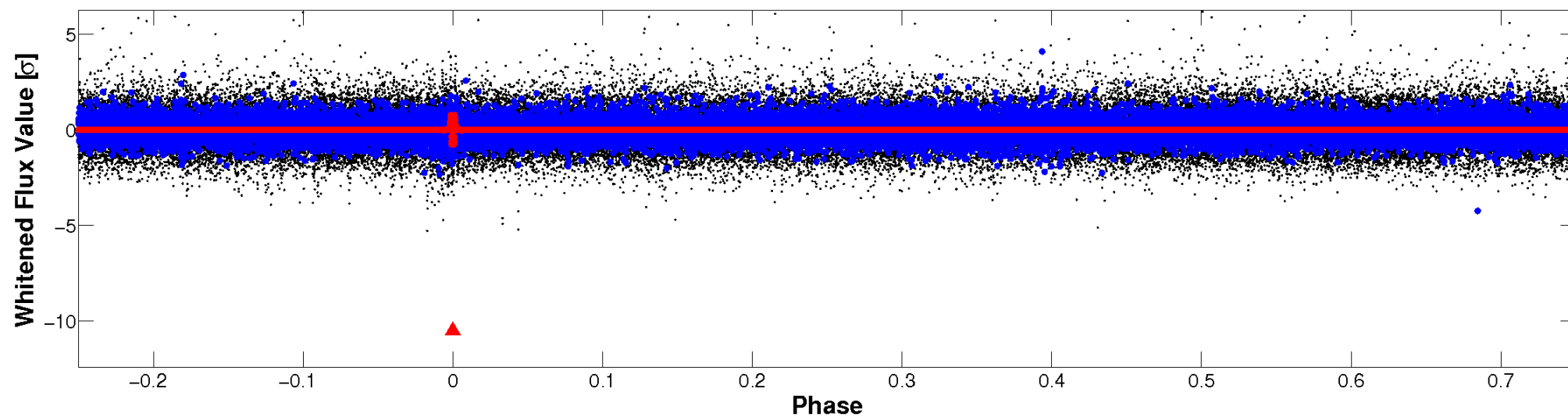


Non-Whitened Vs. Whitened Light Curve

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

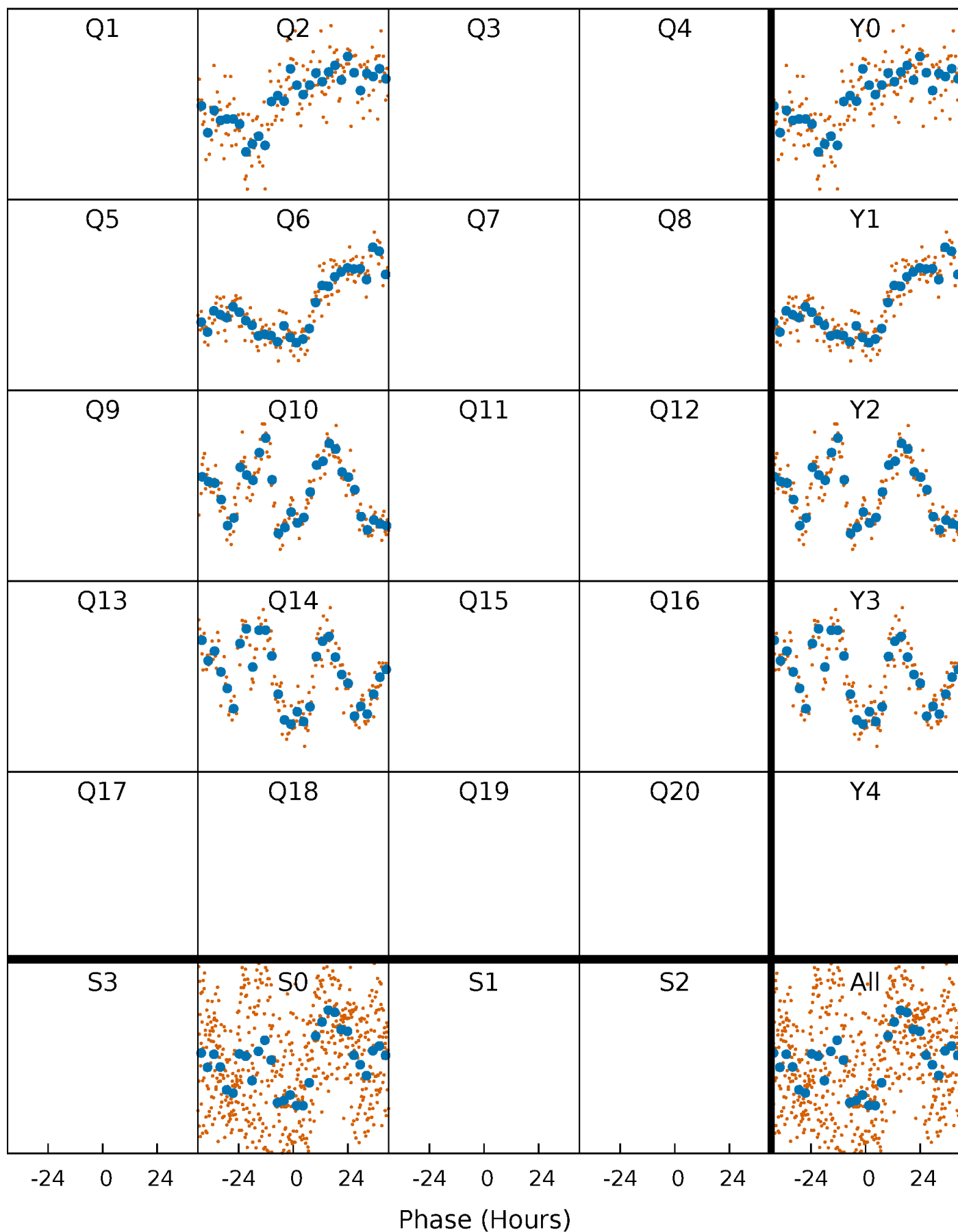


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



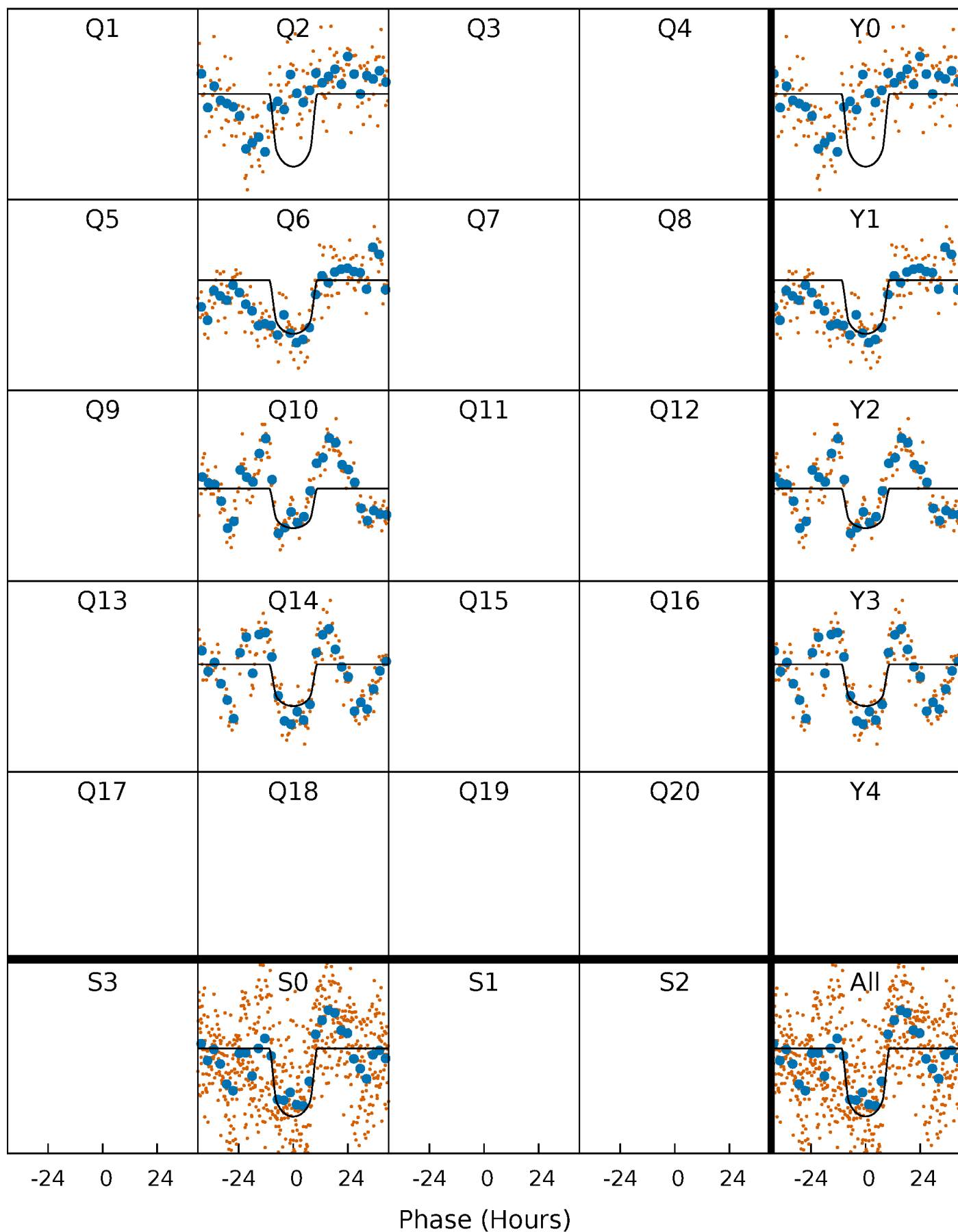
PDC Quarter-Phased Transit Curves

TCE 008374462-01 P=367.012540 Days $T_0=238.732987$ (BKJD)



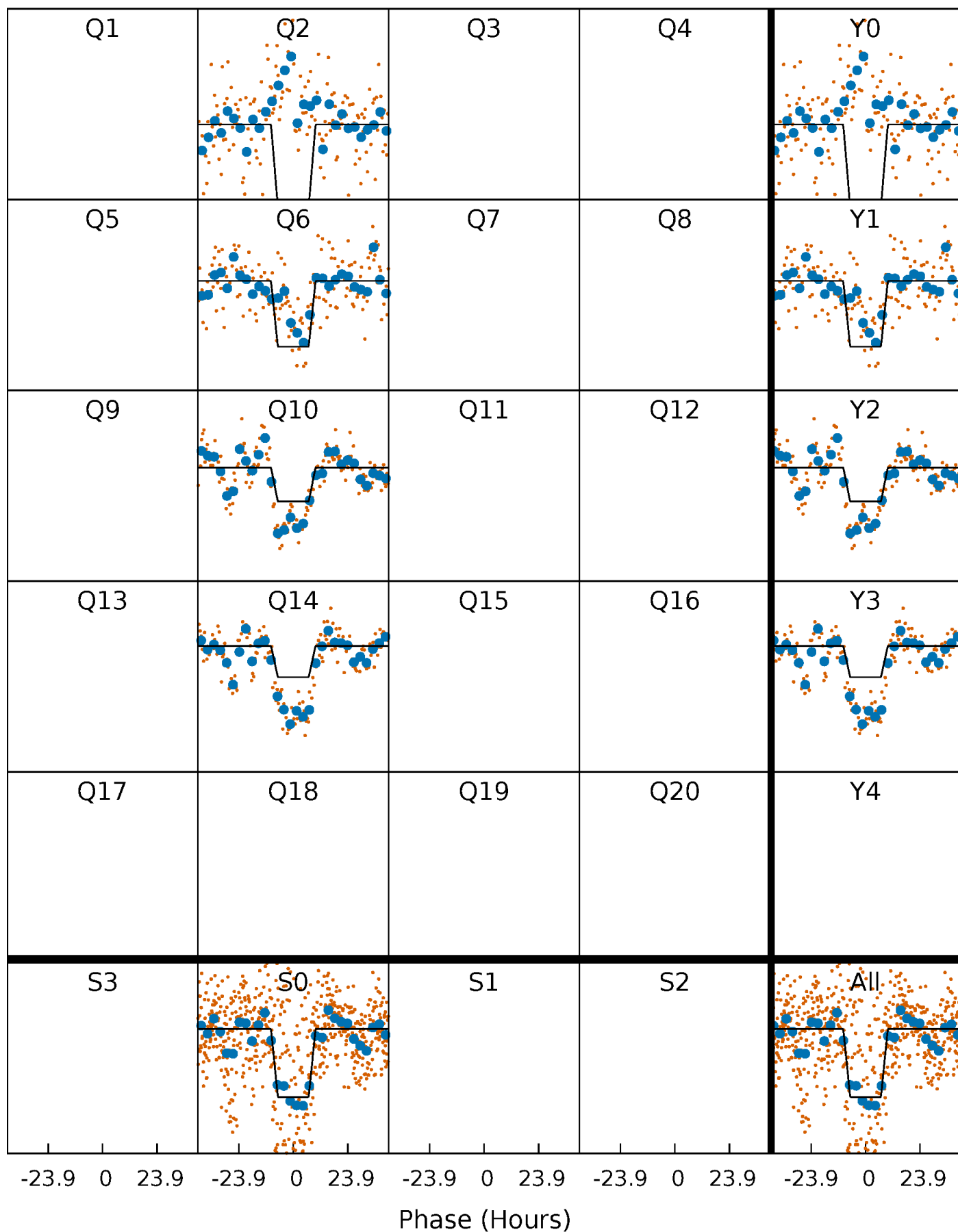
DV Quarter-Phased Transit Curves

TCE 008374462-01 P=367.012540 Days $T_0=238.732987$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

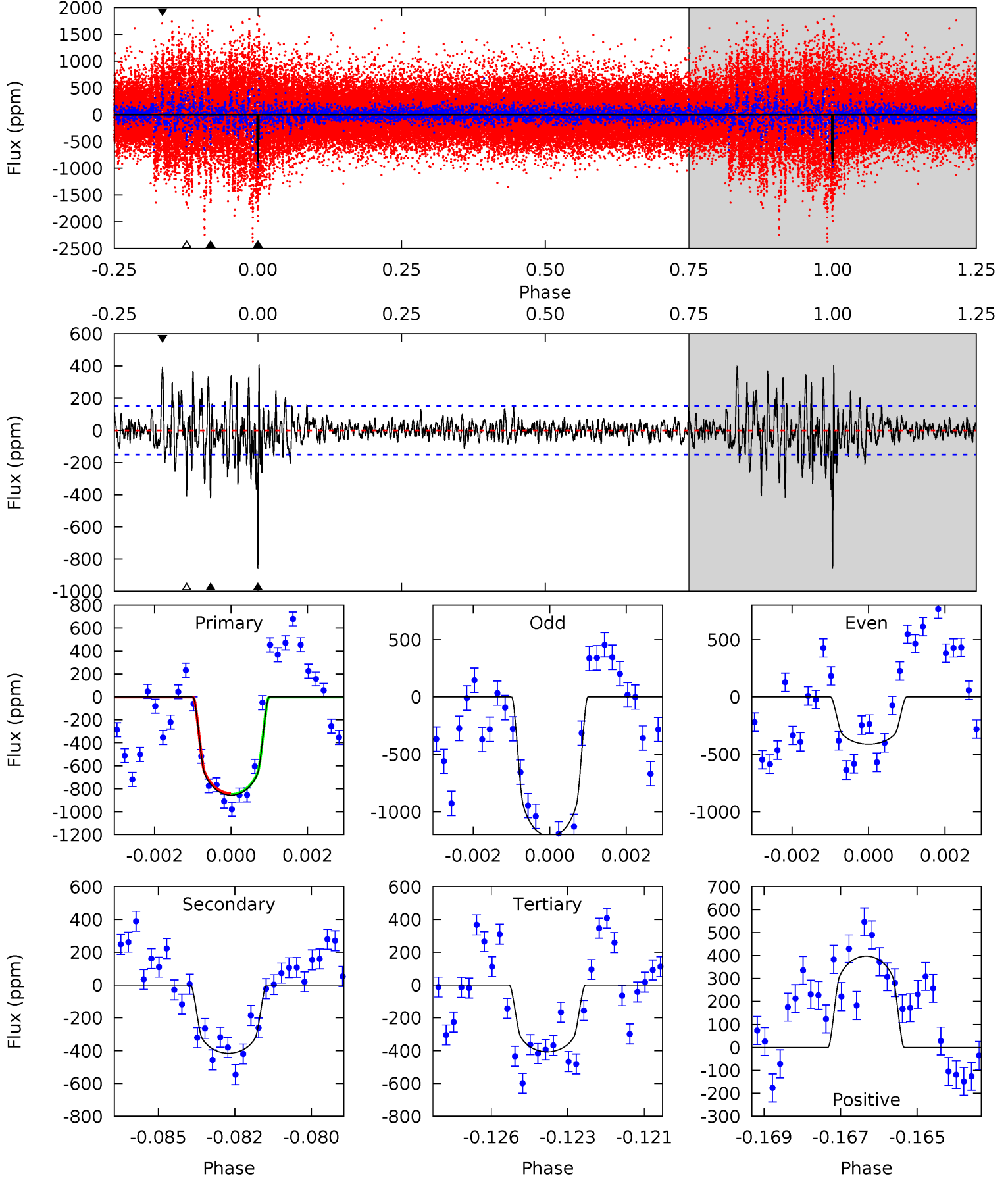
TCE 008374462-01 P=366.993549 Days $T_0=238.780282$ (BKJD)



DV Model-Shift Uniqueness Test

008374462-01, P = 367.012540 Days, E = 238.732987 Days

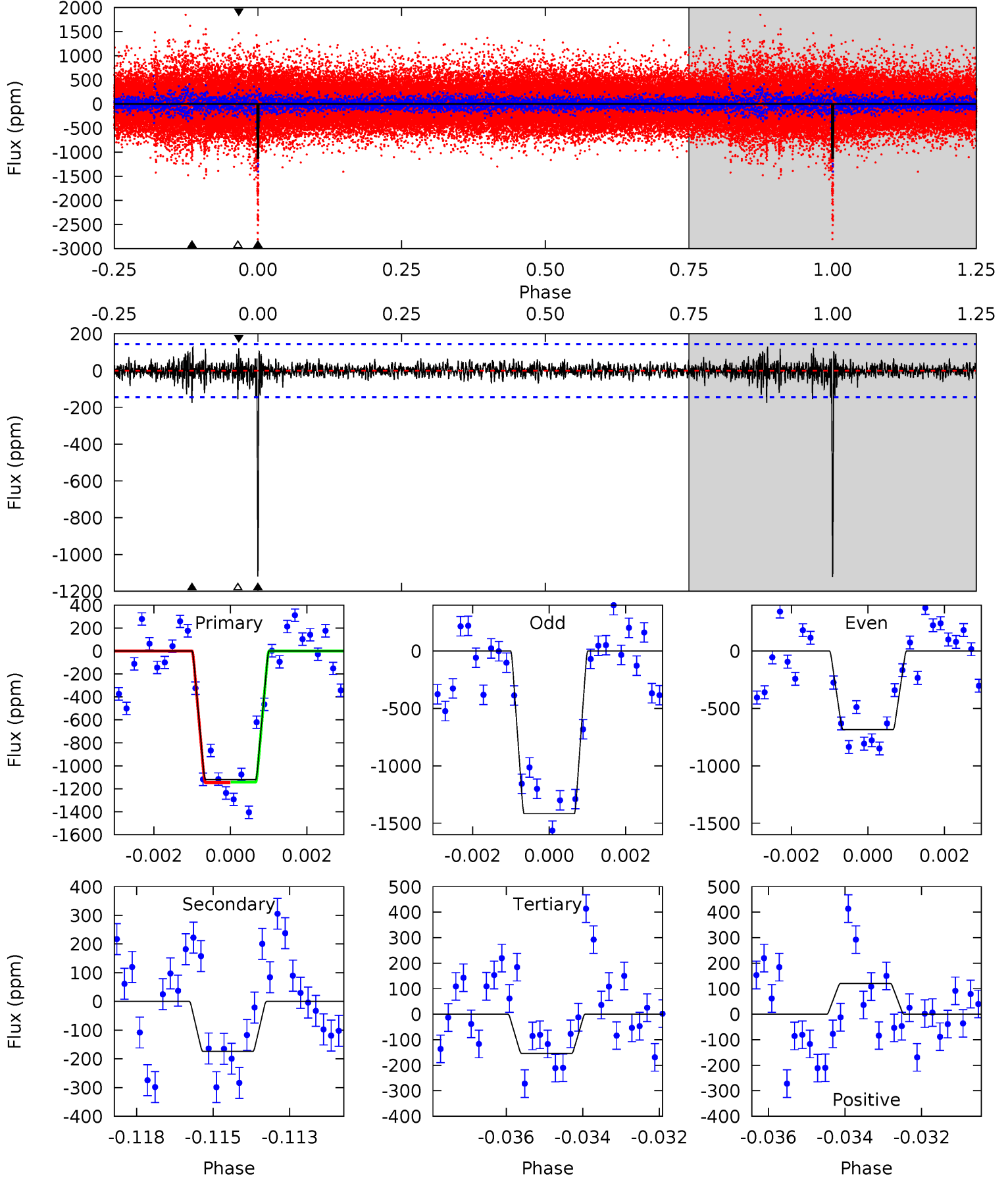
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.7	14.4	14.1	13.8	5.29	3.03	2.72	15.6	15.9	0.30	0.66	14.0	0.83	0.32	0.15



Alt Model-Shift Uniqueness Test

008374462-01, P = 366.993549 Days, E = 238.780282 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
40.9	6.34	5.61	4.38	5.30	3.05	0.95	35.3	36.5	0.73	1.96	14.0	0.90	0.10	0.05



Stellar Parameters For KIC 008374462

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5123^{+154}_{-139}	$4.489^{+0.090}_{-0.081}$	$0.060^{+0.250}_{-0.300}$	$0.844^{+0.095}_{-0.095}$	$0.799^{+0.085}_{-0.064}$	$1.874^{+0.726}_{-0.482}$
	+3%/-3%	+2%/-2%	+417%/-500%	+11%/-11%	+11%/-8%	+39%/-26%
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 008374462-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-416 ± 29	$3.25^{+0.35}_{-0.35}$	300^{+13}_{-12}	4132^{+178}_{-162}	19128^{+4765}_{-3656}
Alt.	-174 ± 27	$2.89^{+0.36}_{-0.33}$	300^{+14}_{-12}	3686^{+186}_{-152}	9837^{+3425}_{-2447}

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 $A_{obs} \gg 1.0$

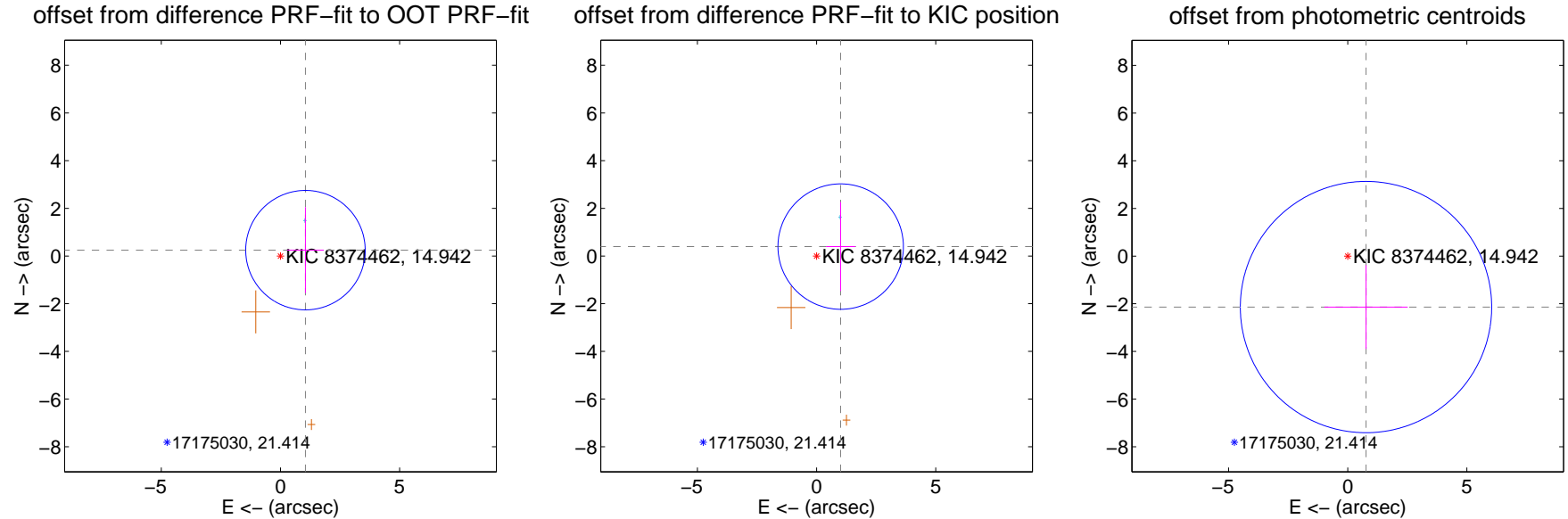
DV Centroid Data

Supplemental centroid analysis for 008374462-01. Kepler magnitude: 14.94. Transit SNR 9.77

There are 1 quarters with good PRF difference image offsets

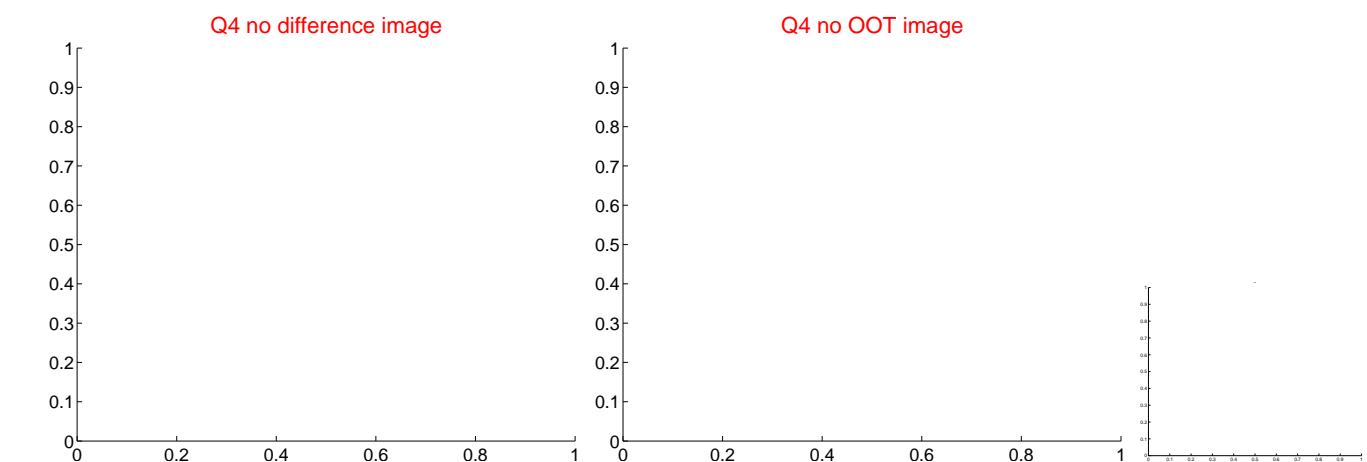
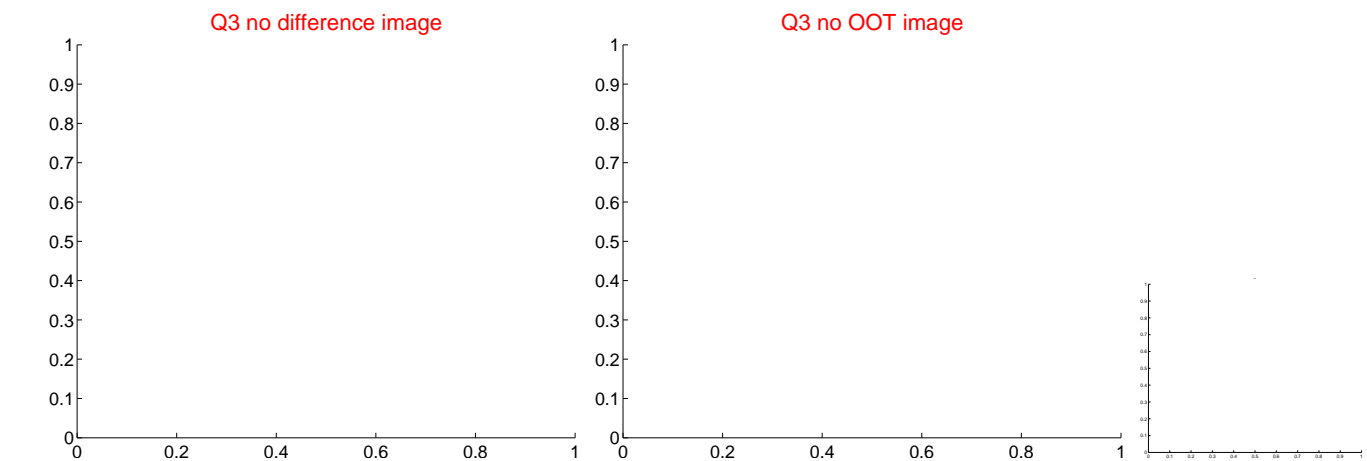
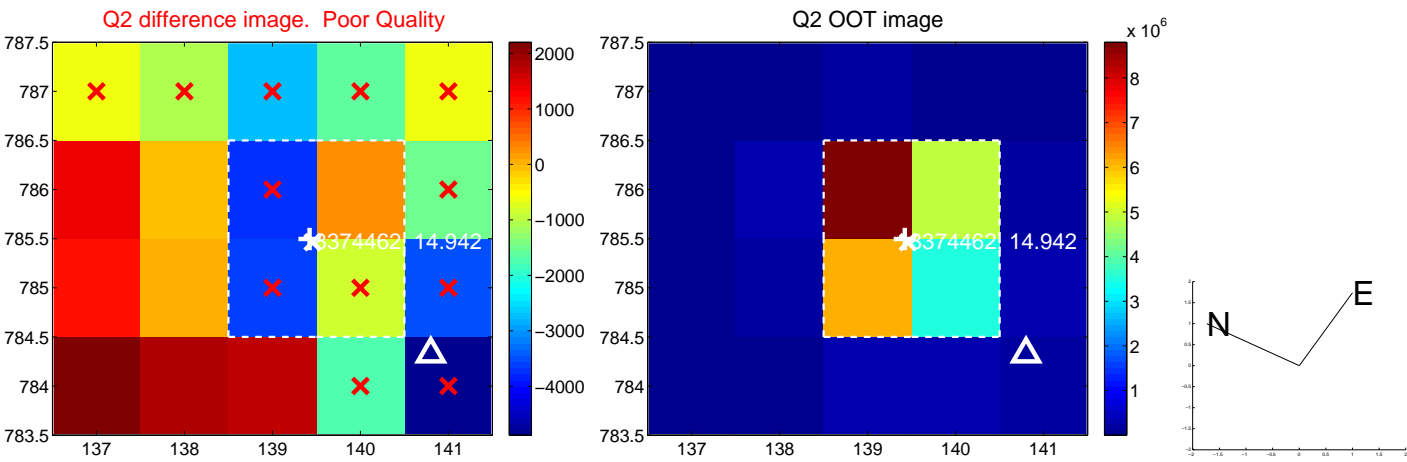
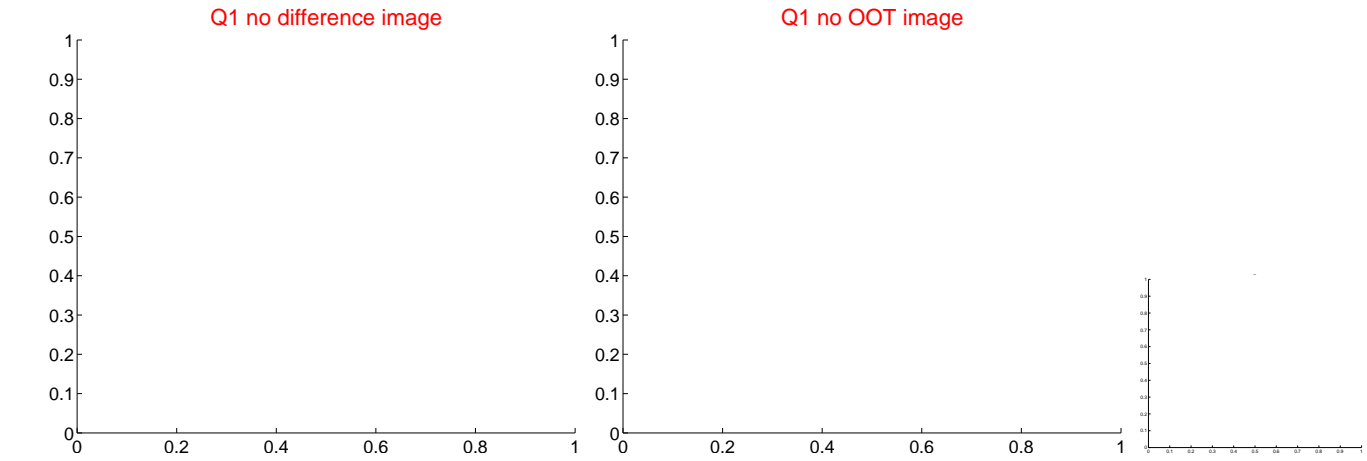
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.077 ± 0.835	1.29	-1.048 ± 0.771	0.247 ± 1.802
PRF-fit source offset from KIC position	1.086 ± 0.877	1.24	-1.011 ± 0.605	0.396 ± 1.863
photometric centroid source offset	2.27 ± 1.76	1.29	-0.77 ± 1.75	-2.14 ± 1.76

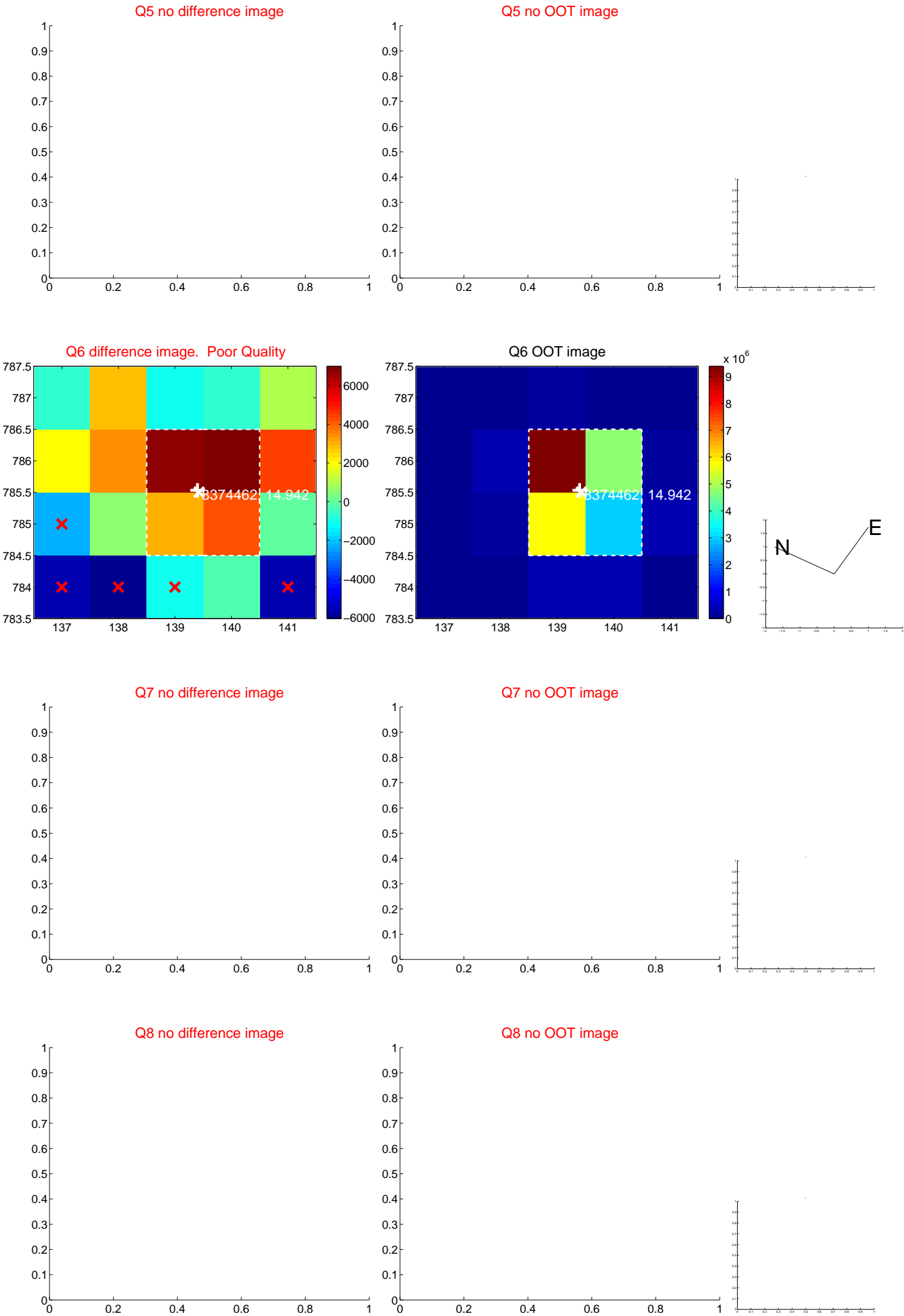


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

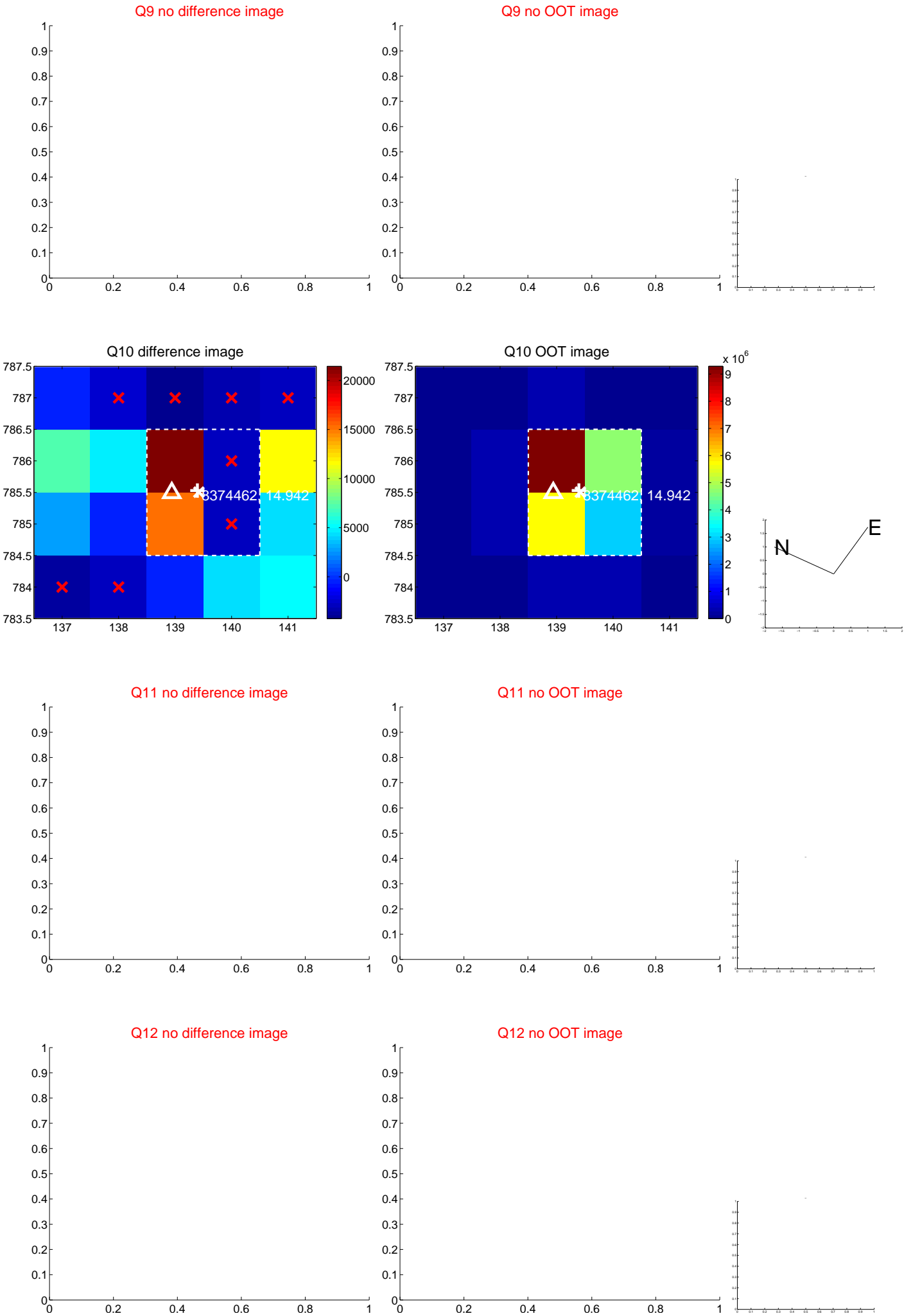
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



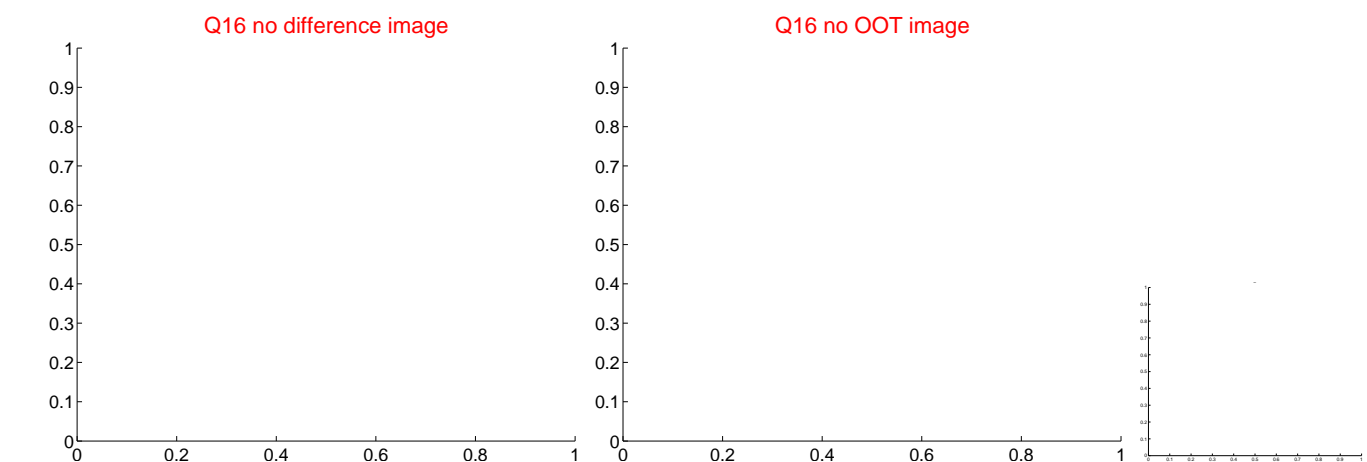
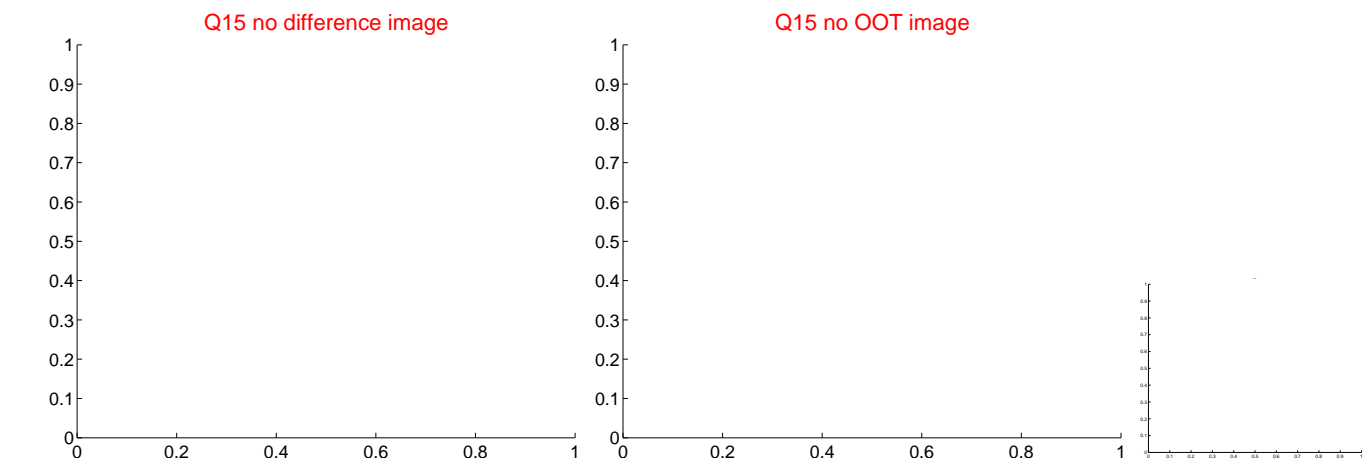
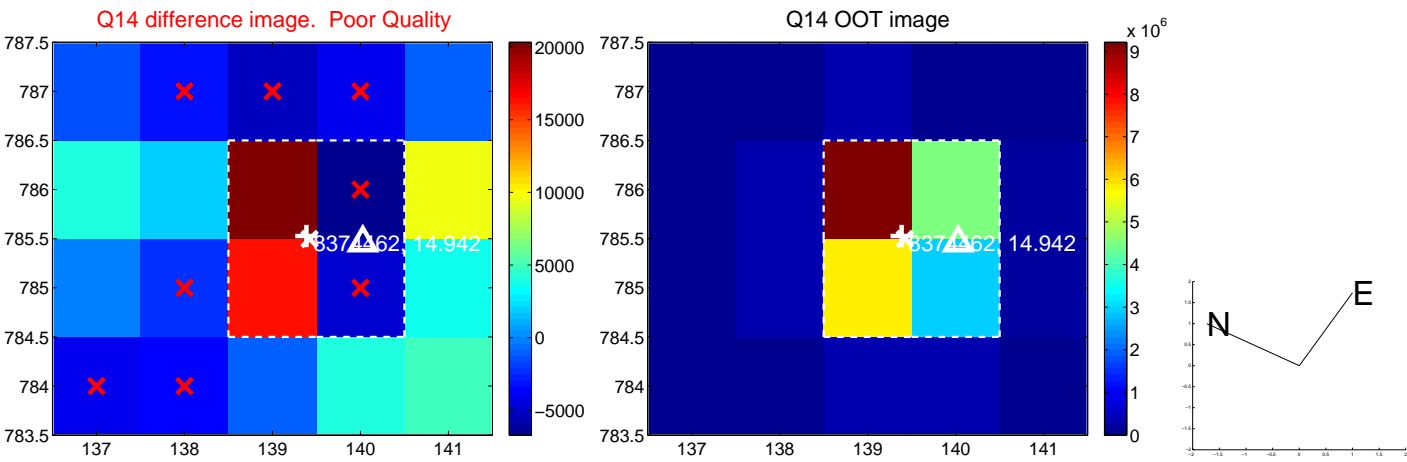
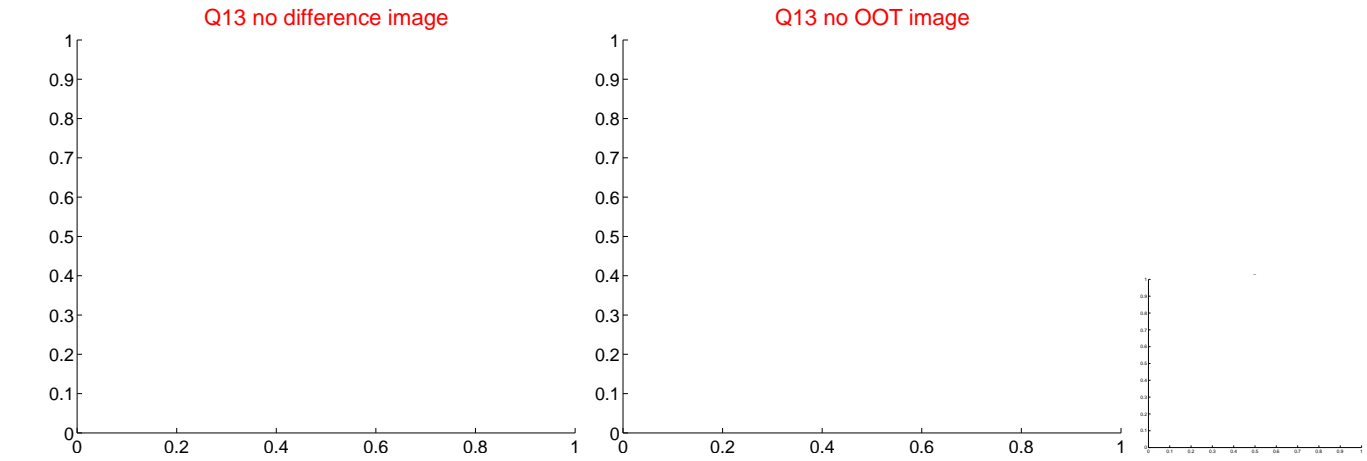
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



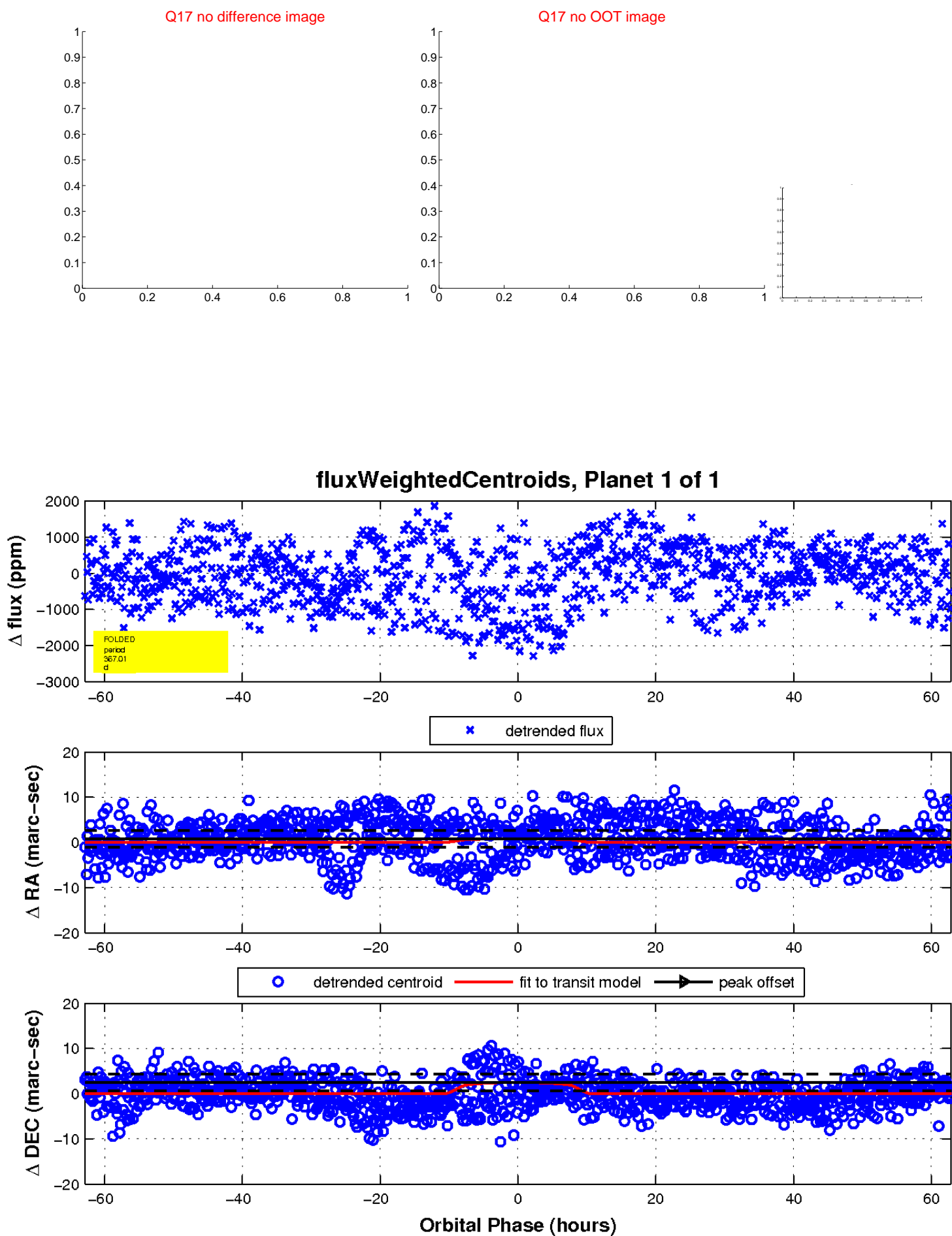
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: 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

