

KIC 008175873

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})
008175873-01	OBS	No	366.940242	239.260764	816.9	21.389	9.3	10.2	0.93	5988	3.45	0.98

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008175873-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—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.

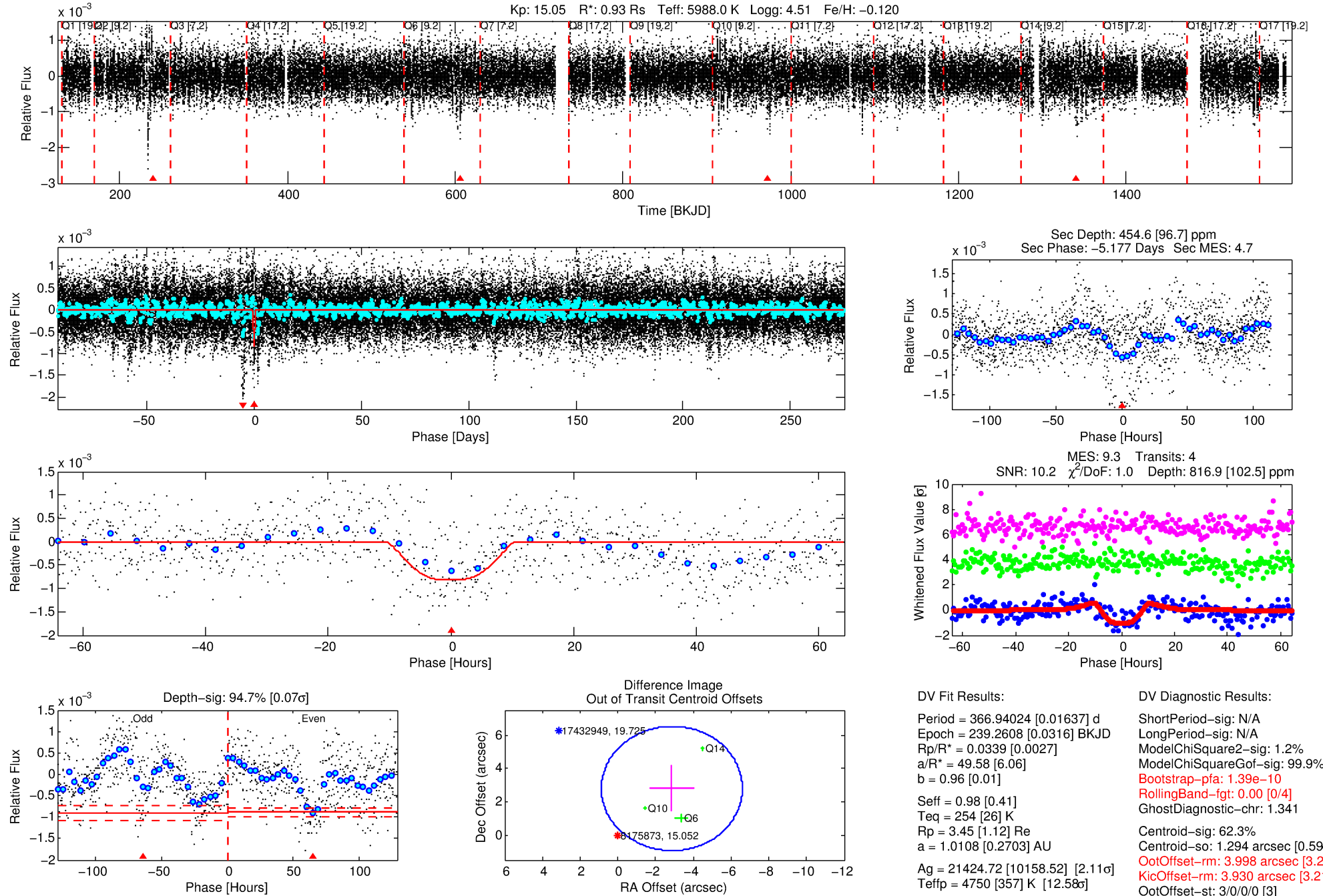
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008175873-01

No Significant Match Found

DV One-Page Summary

KIC: 8175873 Candidate: 1 of 1 Period: 366.940 d



DV Fit Results:

Period = 366.94024 [0.01637] d
Epoch = 239.2608 [0.0316] BKJD
Rp/R* = 0.0339 [0.0027]
a/R* = 49.58 [6.06]
b = 0.96 [0.01]
Seff = 0.98 [0.41]
Teff = 254 [26] K
Rp = 3.45 [1.12] Re
a = 1.0108 [0.2703] AU
Ag = 21424.72 [10158.52] [2.11σ]
Teffp = 4750 [357] K [12.58σ]

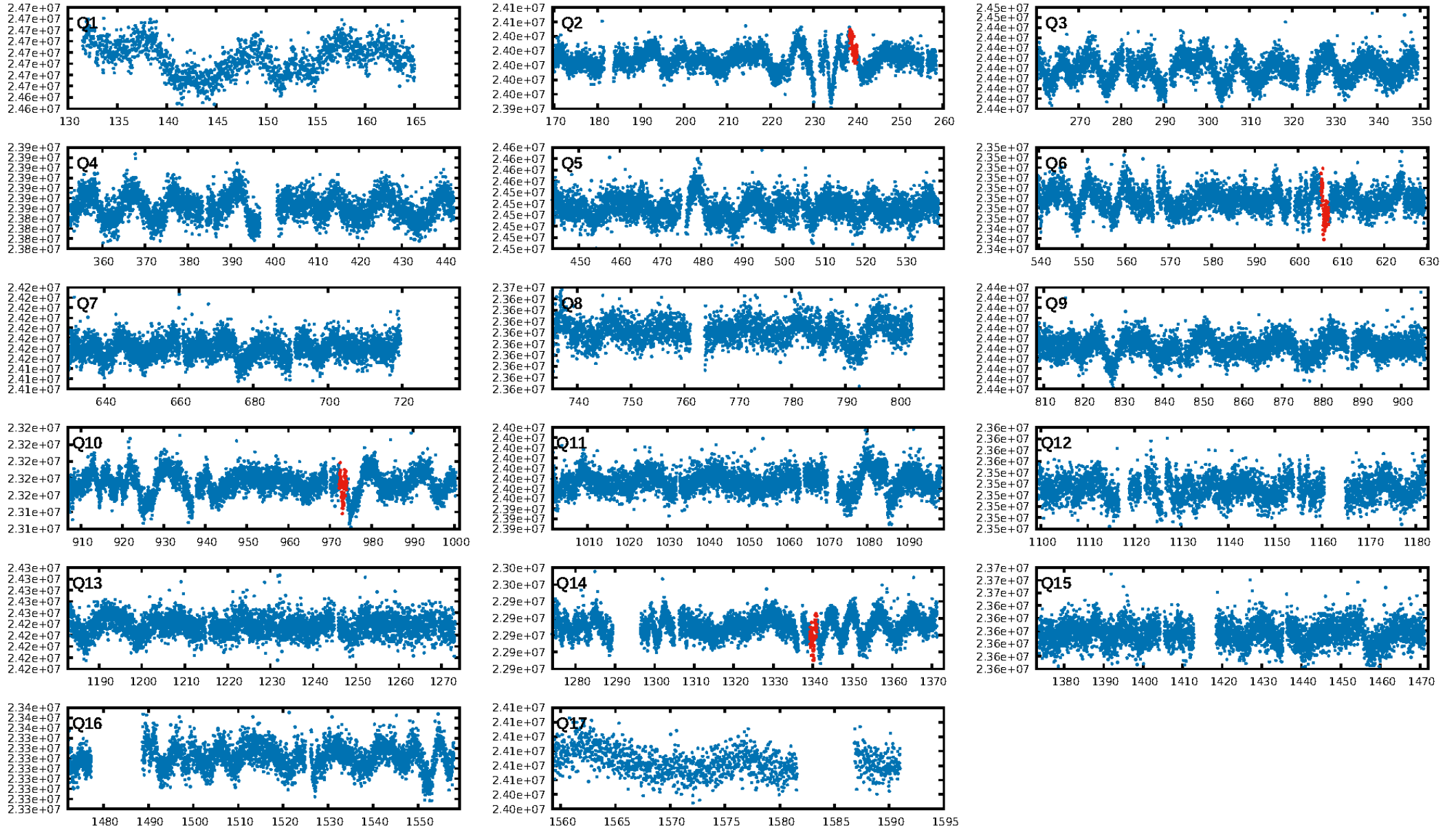
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 1.2%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 1.39e-10
RollingBand-fgt: 0.00 [0/4]
GhostDiagnostic-chr: 1.341
Centroid-sig: 62.3%
Centroid-so: 1.294 arcsec [0.59σ]
OotOffset-rm: 3.998 arcsec [3.21σ]
KicOffset-rm: 3.930 arcsec [3.21σ]
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]

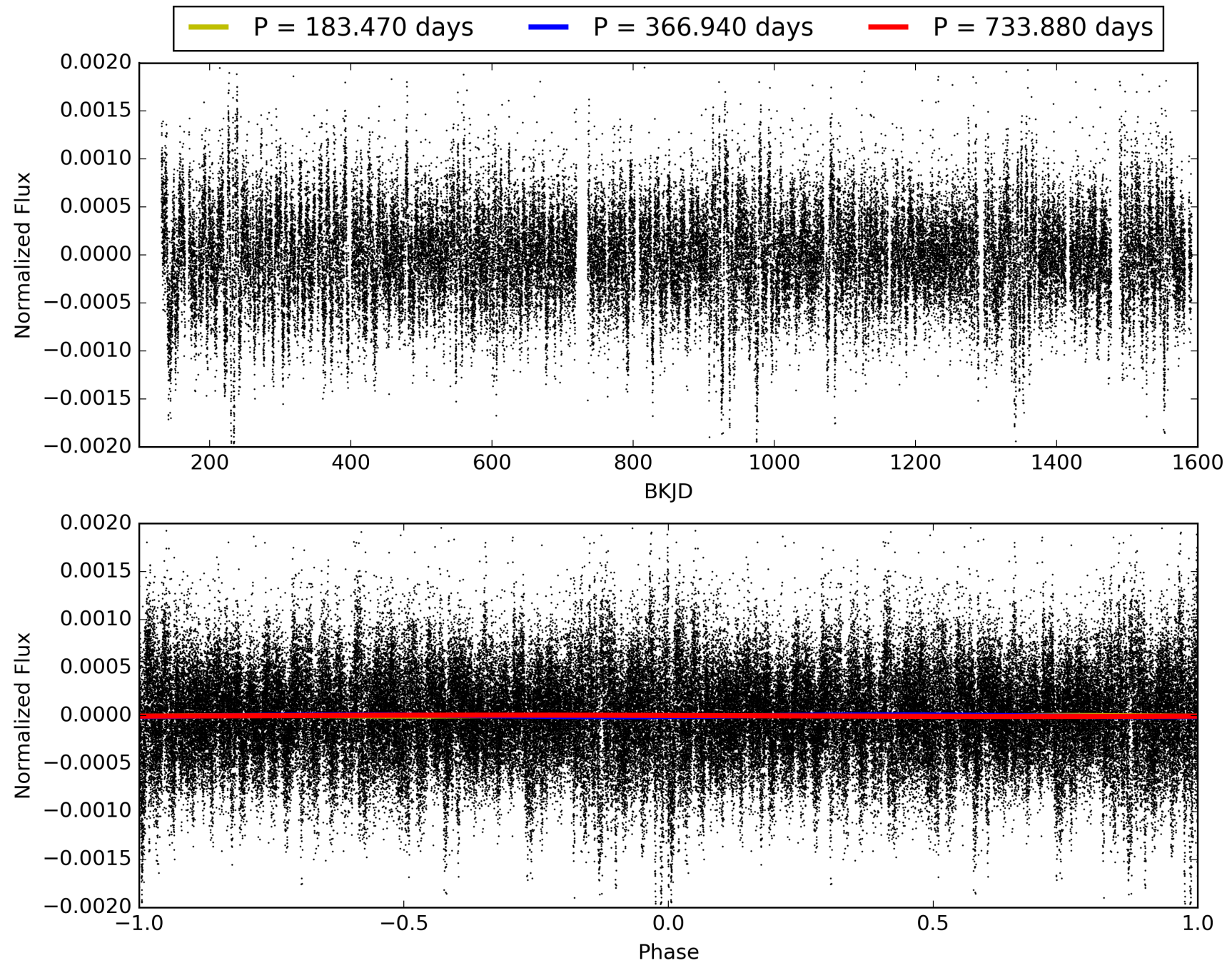
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:31:53 Z

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

TCE 008175873-01, PDC Light Curves

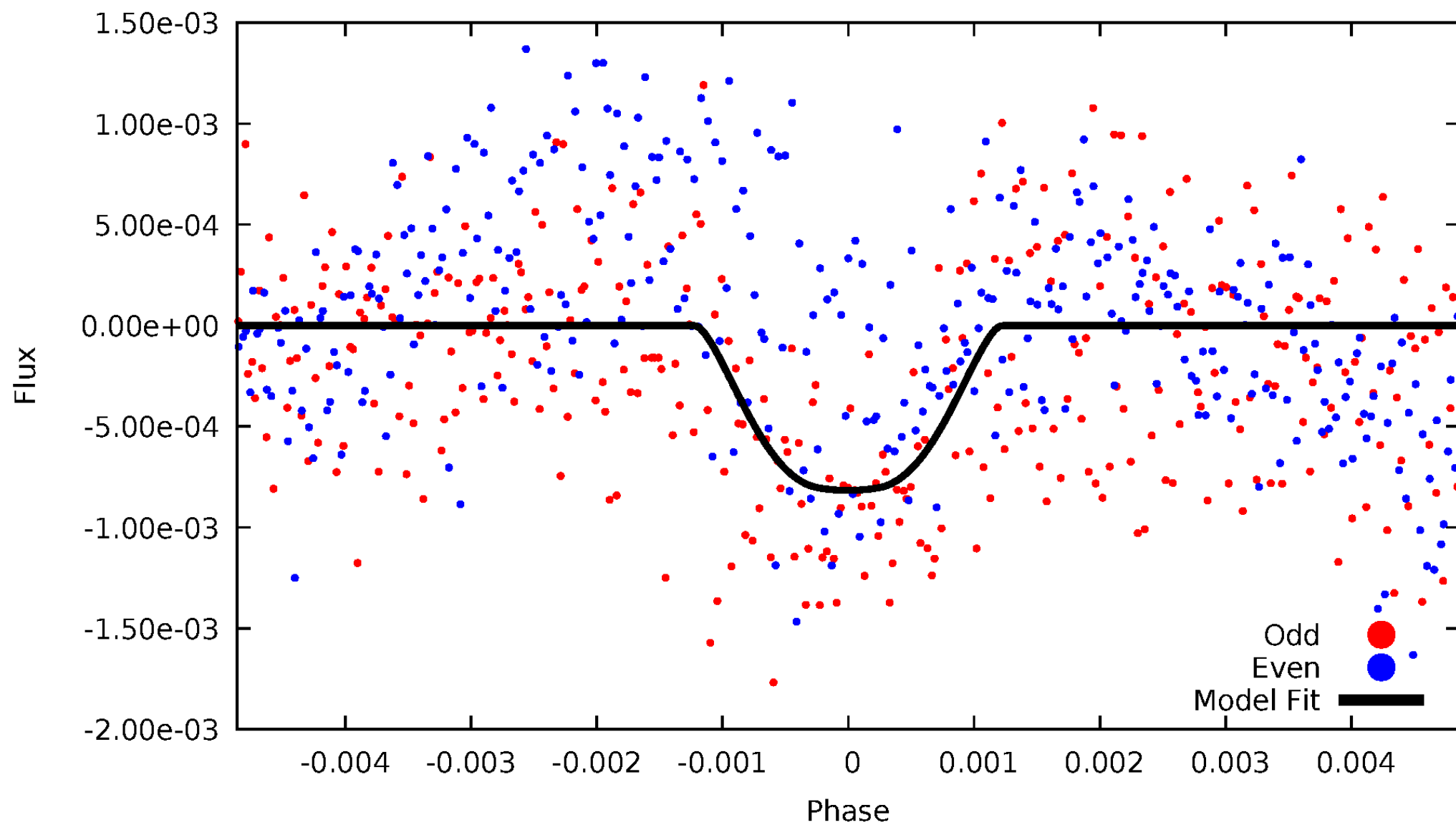


TCE 008175873-01



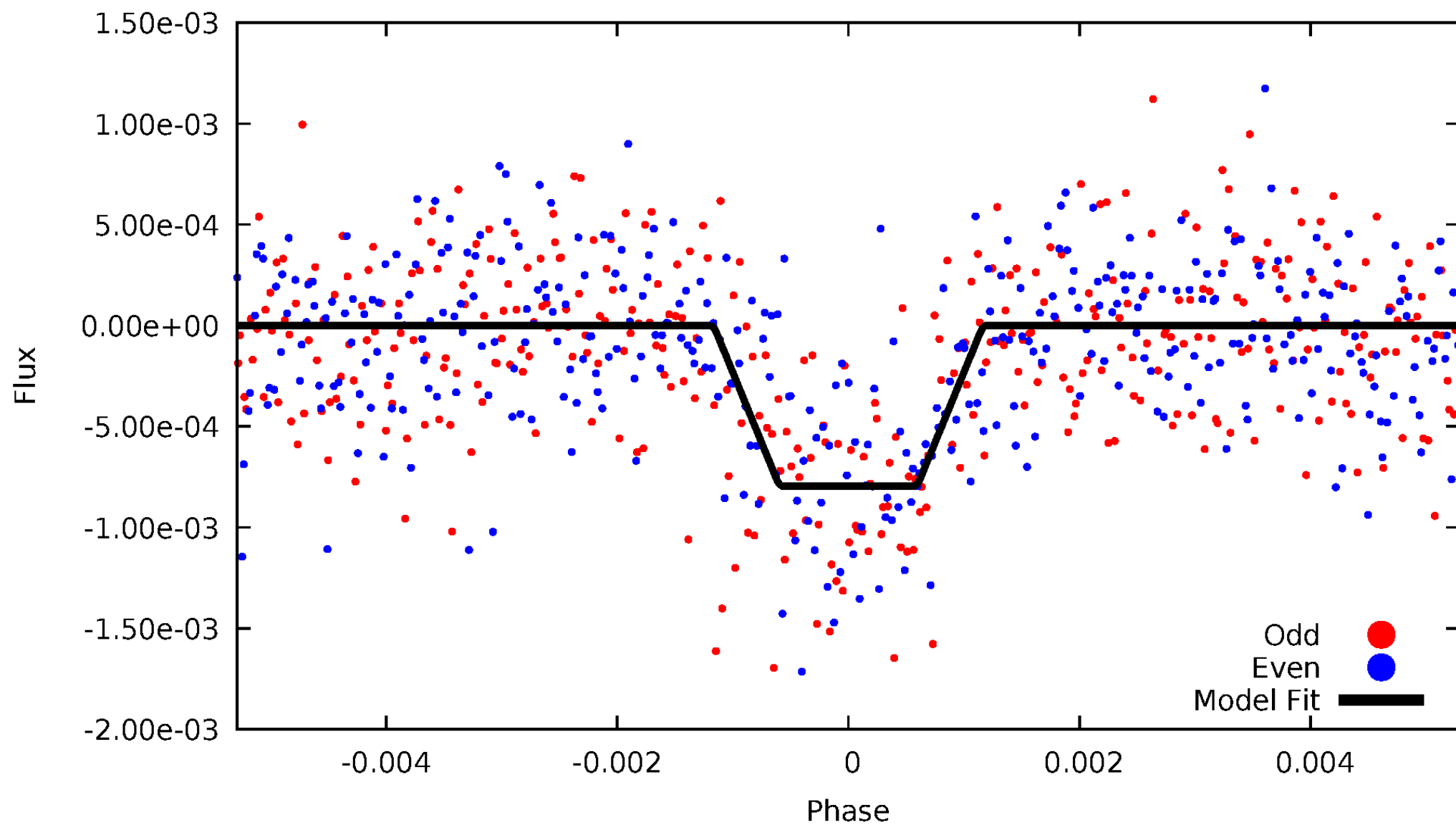
DV Odd/Even

TCE 008175873-01



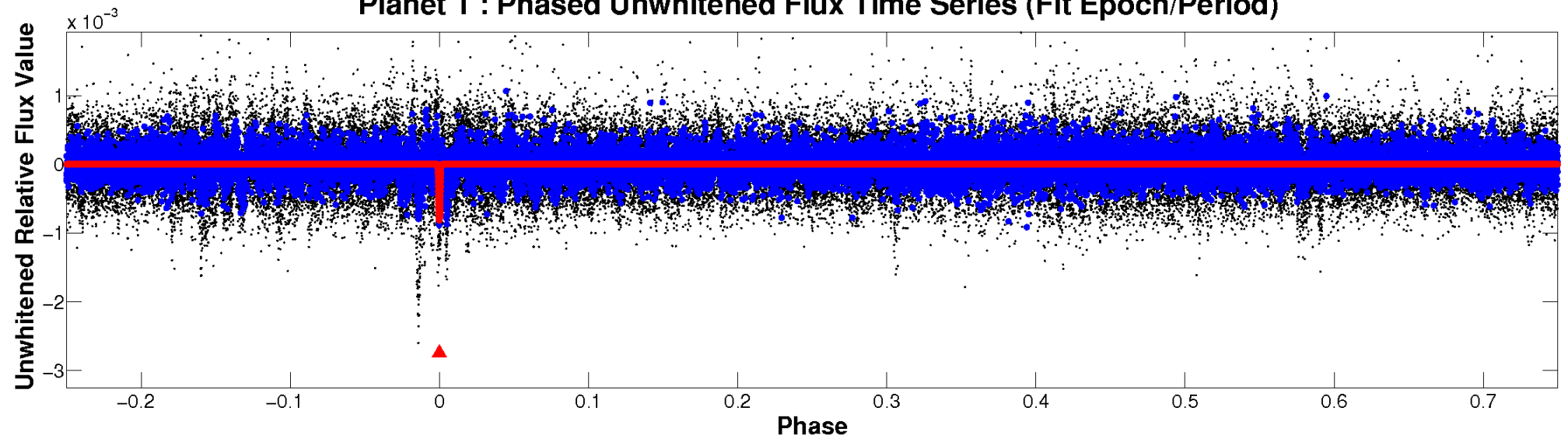
ALT Odd/Even

TCE 008175873-01

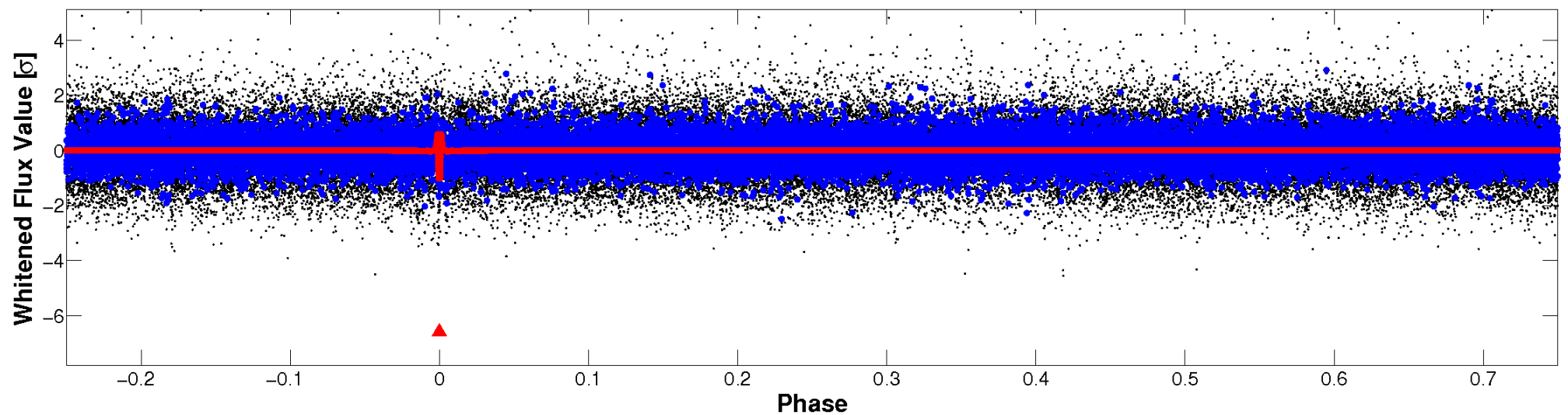


Non-Whitened Vs. Whitened Light Curve

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

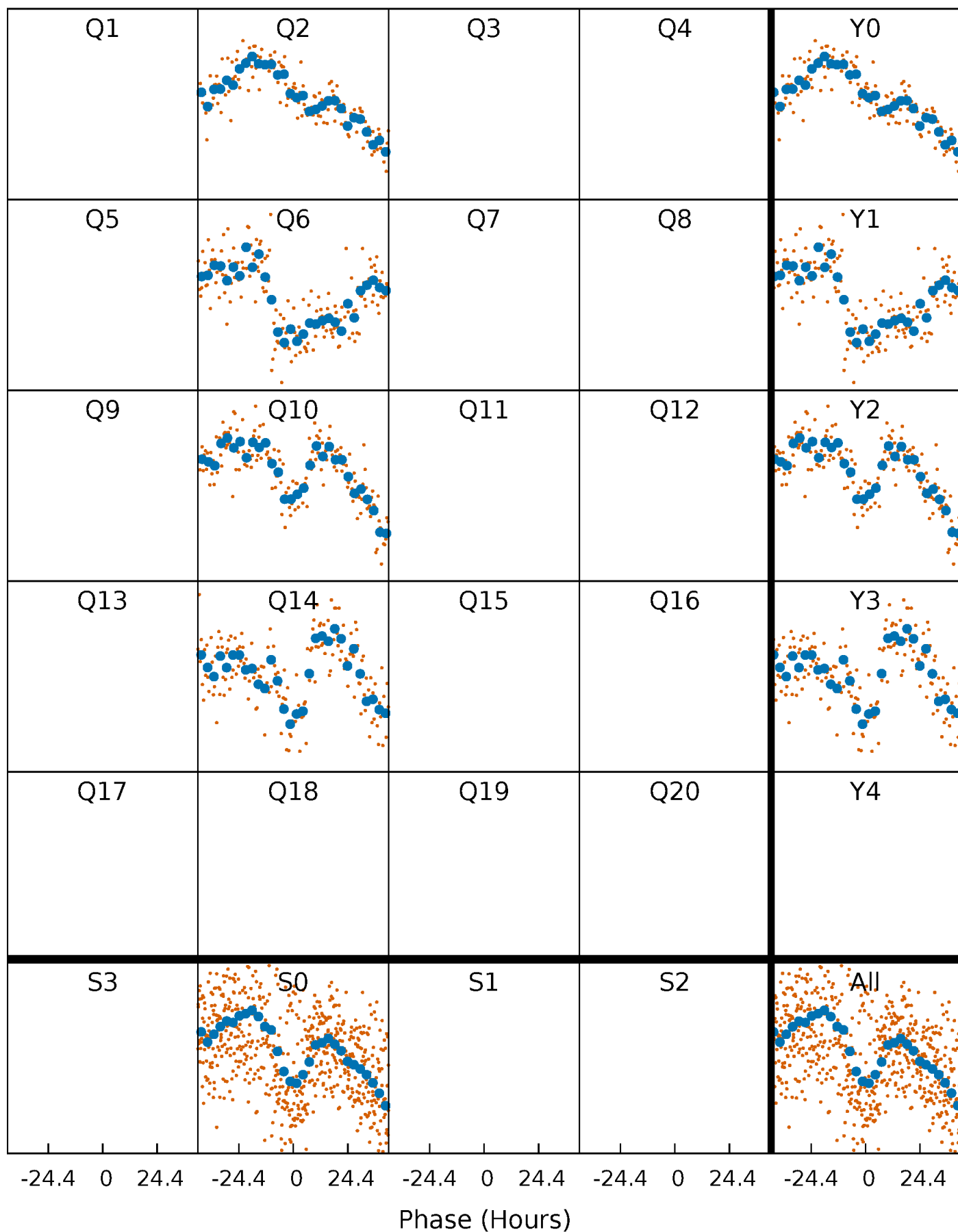


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



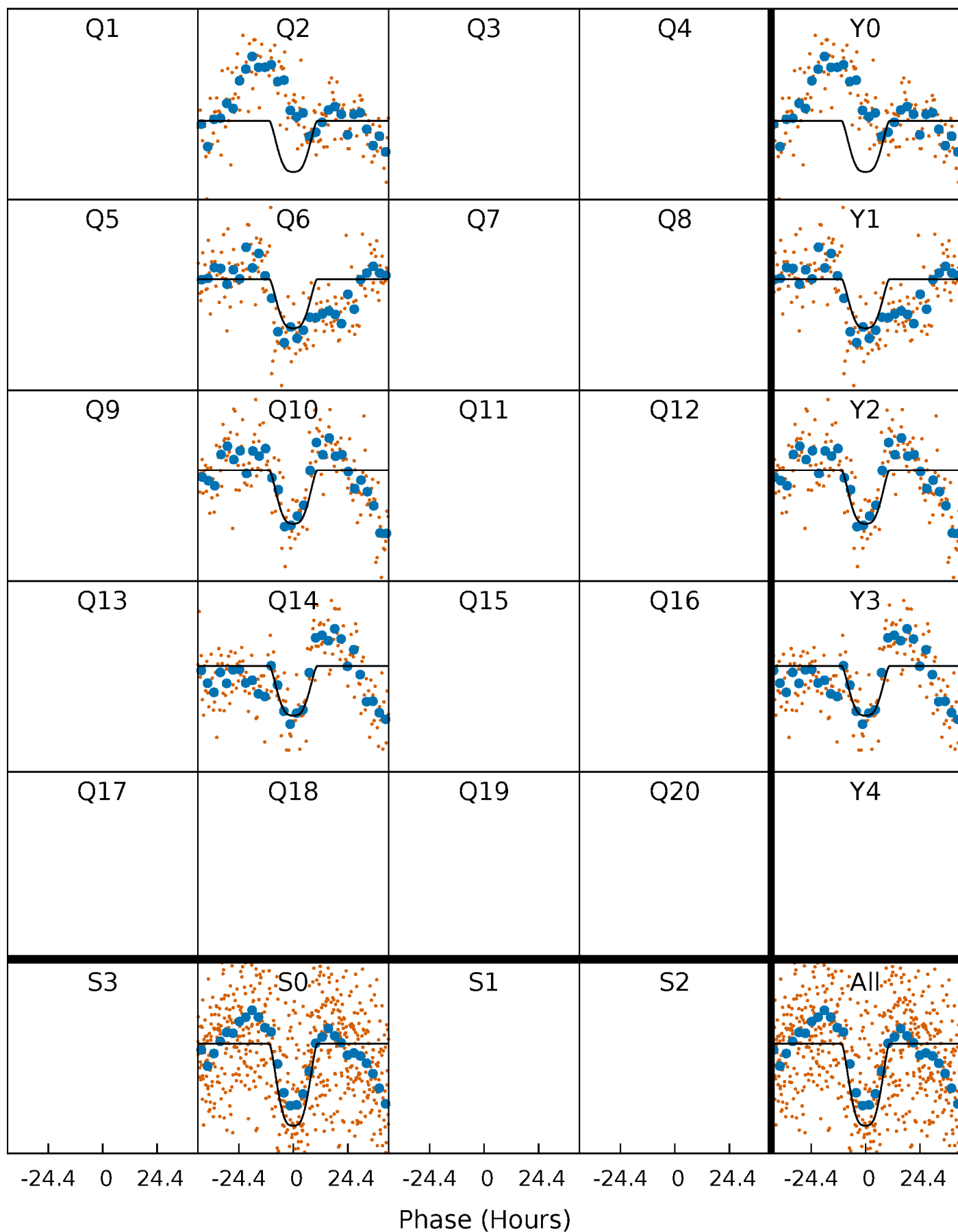
PDC Quarter-Phased Transit Curves

TCE 008175873-01 P=366.940242 Days $T_0=239.260764$ (BKJD)



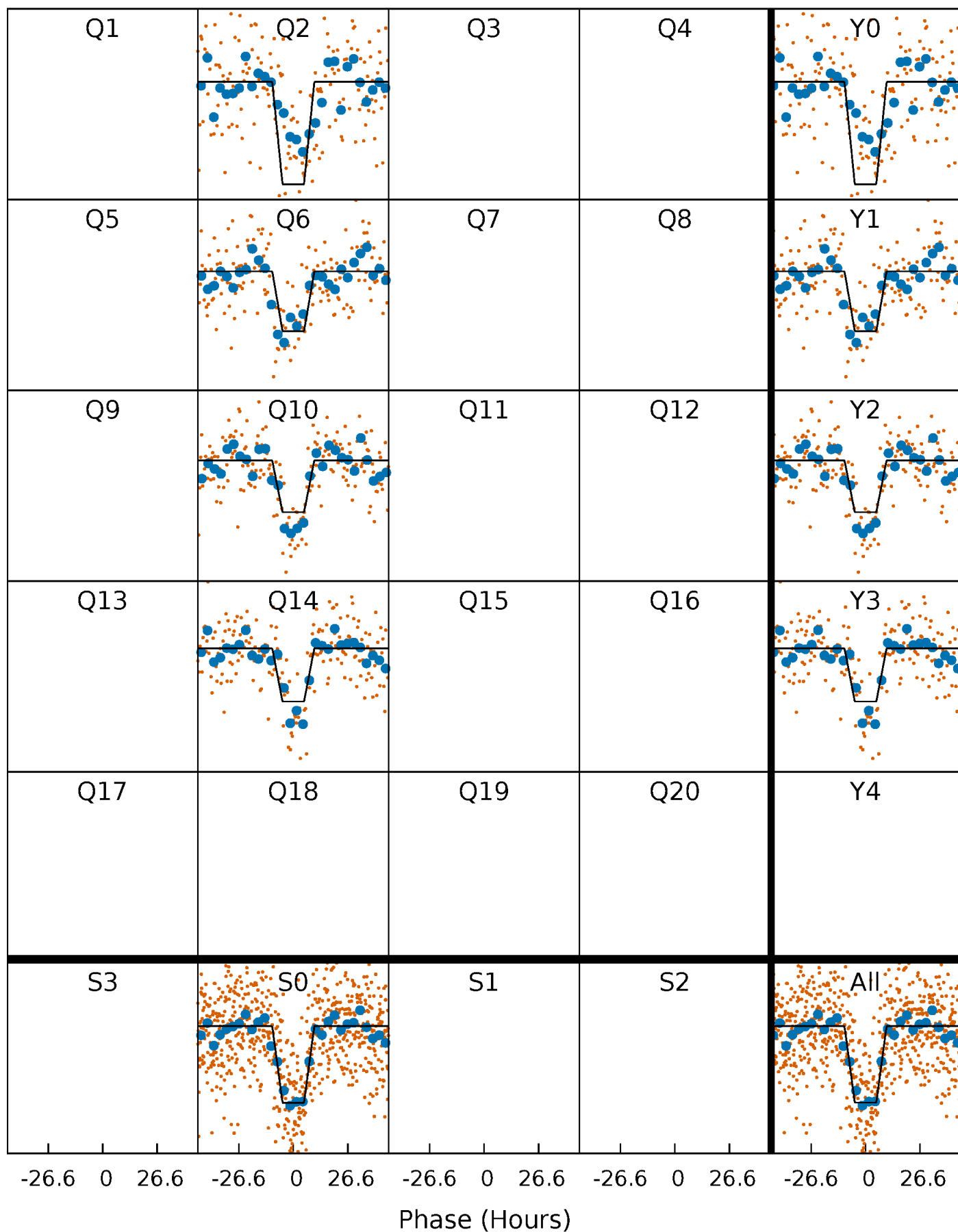
DV Quarter-Phased Transit Curves

TCE 008175873-01 P=366.940242 Days $T_0=239.260764$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

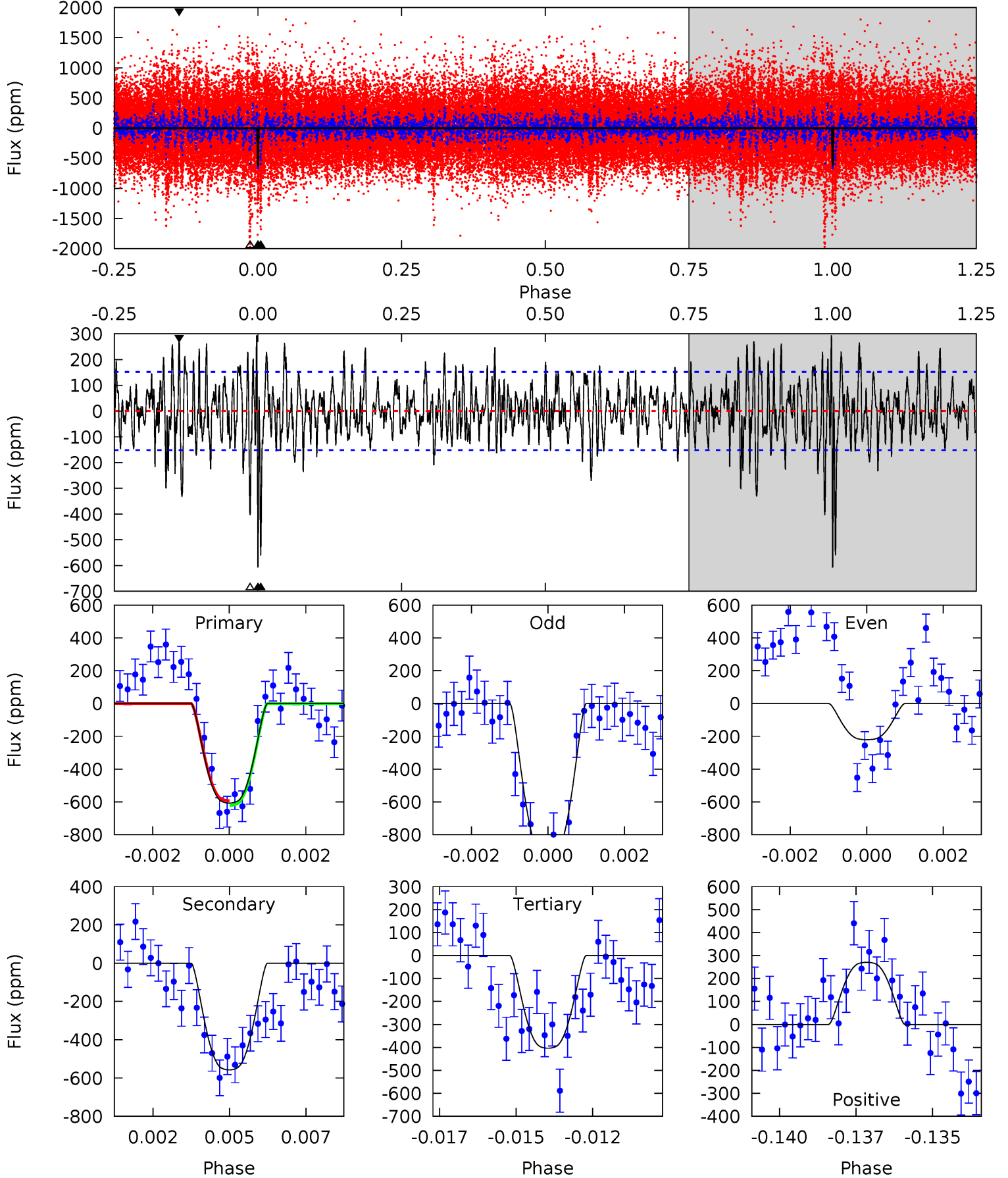
TCE 008175873-01 P=366.918626 Days $T_0=239.300857$ (BKJD)



DV Model-Shift Uniqueness Test

008175873-01, P = 366.940242 Days, E = 239.260764 Days

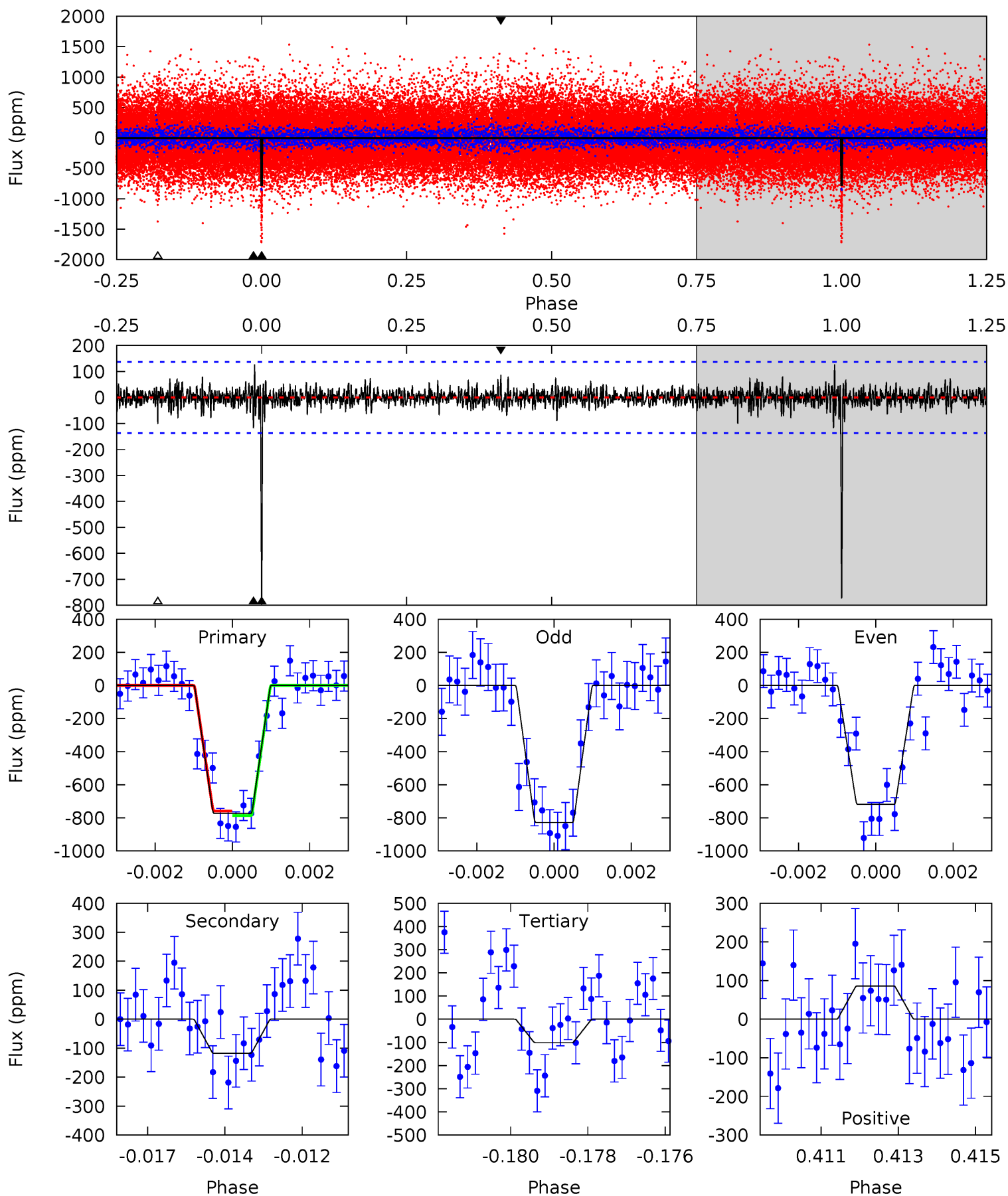
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.2	19.4	14.1	9.42	5.29	3.03	3.17	7.09	11.7	5.36	10.0	12.5	0.76	0.33	0.51



Alt Model-Shift Uniqueness Test

008175873-01, P = 366.918626 Days, E = 239.300857 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.9	4.55	3.91	3.32	5.30	3.04	0.90	26.0	26.6	0.64	1.23	2.11	0.93	0.14	0.53



Stellar Parameters For KIC 008175873

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5988^{+167}_{-208}	$4.507^{+0.054}_{-0.216}$	$-0.120^{+0.300}_{-0.300}$	$0.934^{+0.294}_{-0.098}$	$1.021^{+0.132}_{-0.145}$	$1.767^{+0.378}_{-0.953}$
	+3%/-3%	+1%/-5%	+250%/-250%	+31%/-10%	+13%/-14%	+21%/-54%
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 008175873-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-558 ± 29	$3.64^{+0.61}_{-0.49}$	363^{+26}_{-18}	5072^{+231}_{-234}	23285^{+6822}_{-6003}
Alt.	-118 ± 26	$2.98^{+0.56}_{-0.38}$	363^{+26}_{-18}	4023^{+233}_{-230}	7158^{+3139}_{-2364}

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 $A_{\text{obs}} \gg 1.0$

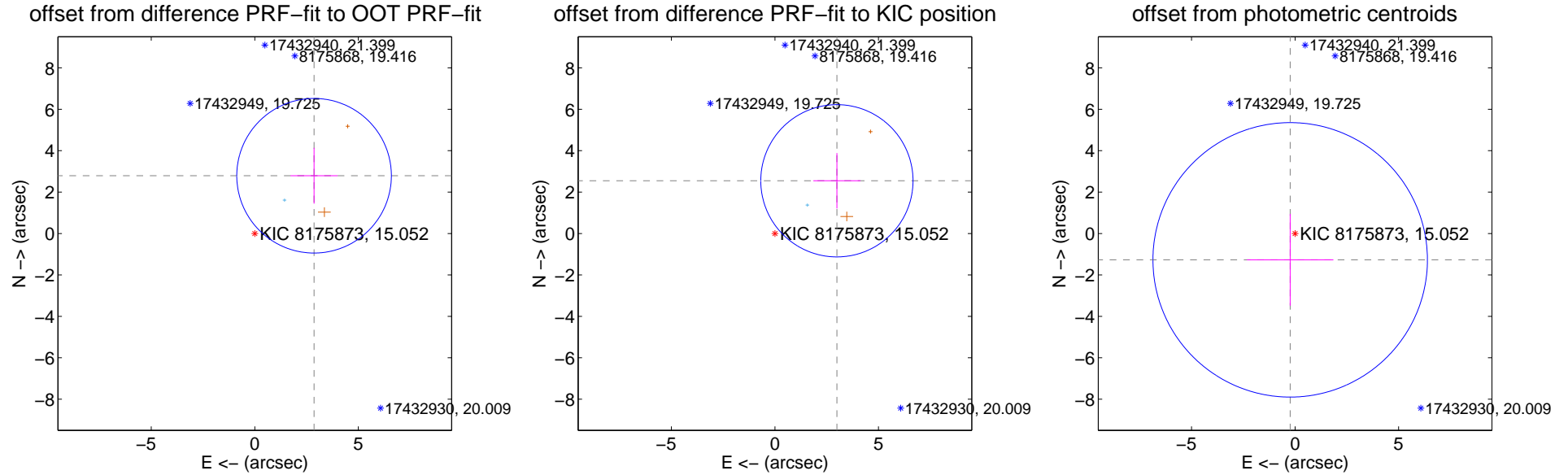
DV Centroid Data

Supplemental centroid analysis for 008175873-01. Kepler magnitude: 15.05. Transit SNR 10.17

There are 1 quarters with good PRF difference image offsets

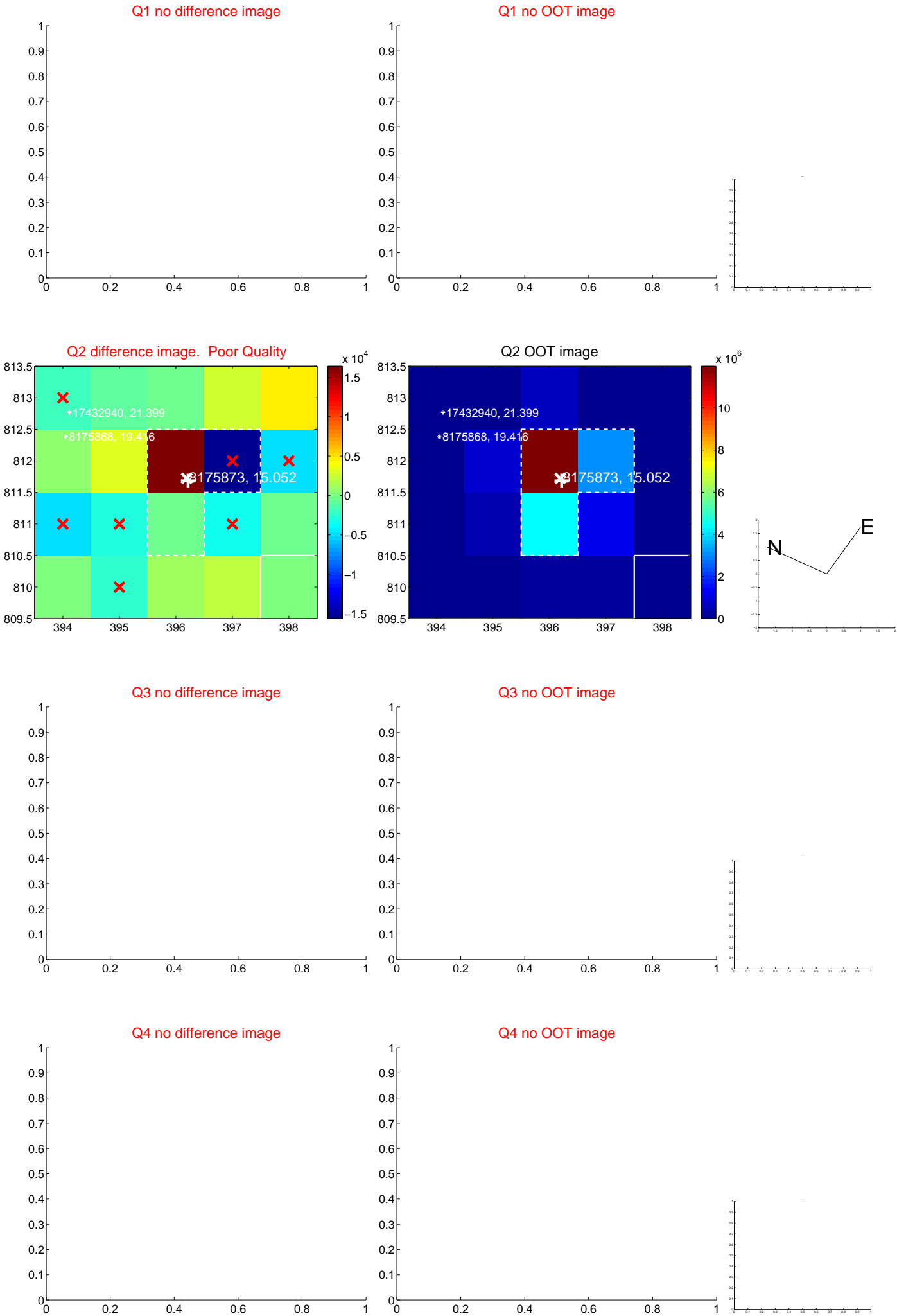
The direct PRF centroid is offset from the target star catalog position by about 0.29 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.998 ± 1.244	3.21	-2.864 ± 1.139	2.790 ± 1.346
PRF-fit source offset from KIC position	3.930 ± 1.226	3.21	-2.993 ± 1.138	2.547 ± 1.337
photometric centroid source offset	1.29 ± 2.21	0.59	0.24 ± 2.09	-1.27 ± 2.21

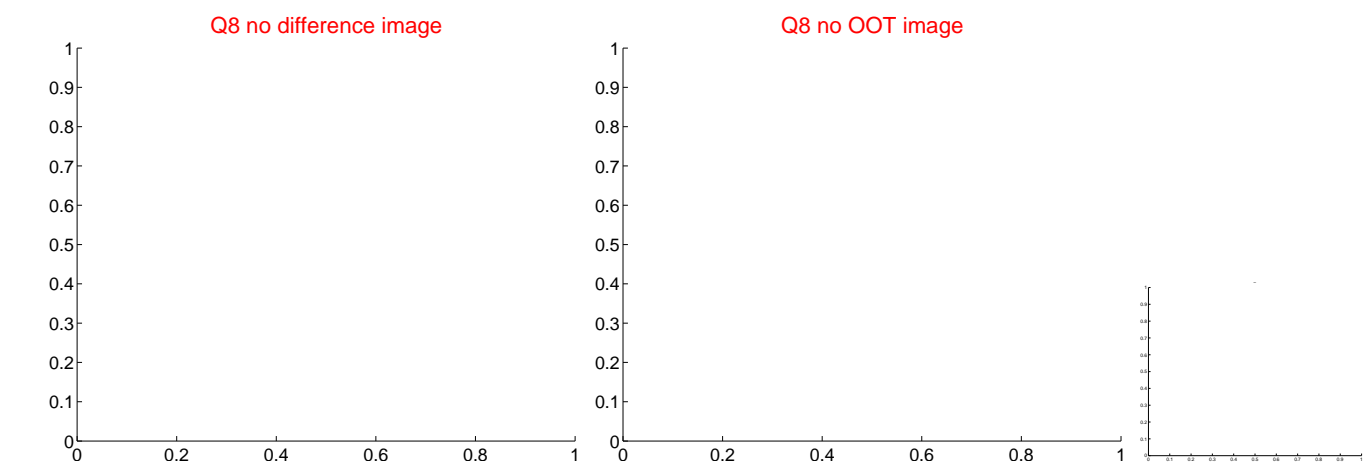
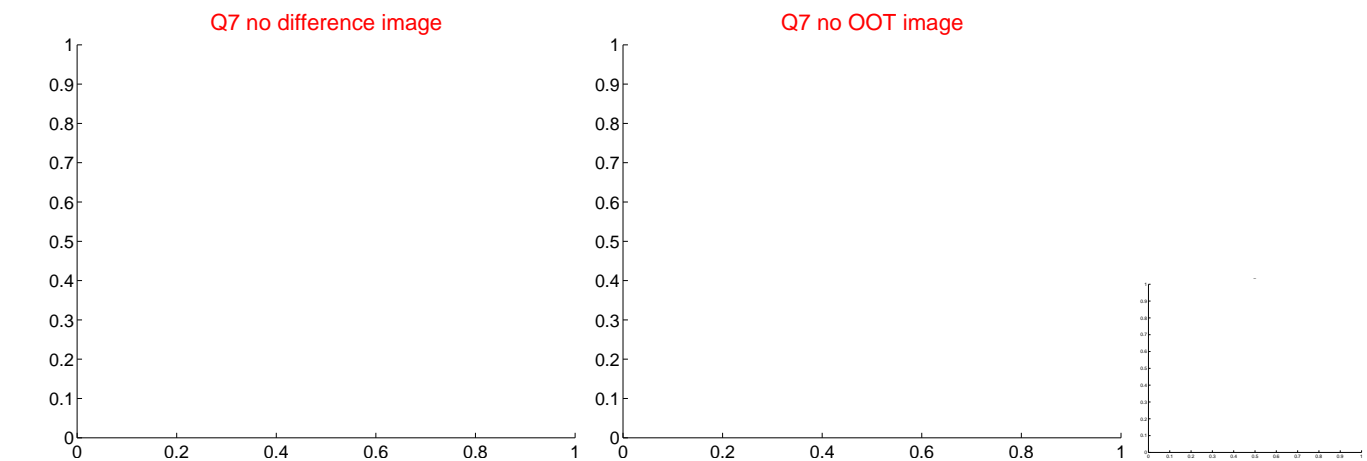
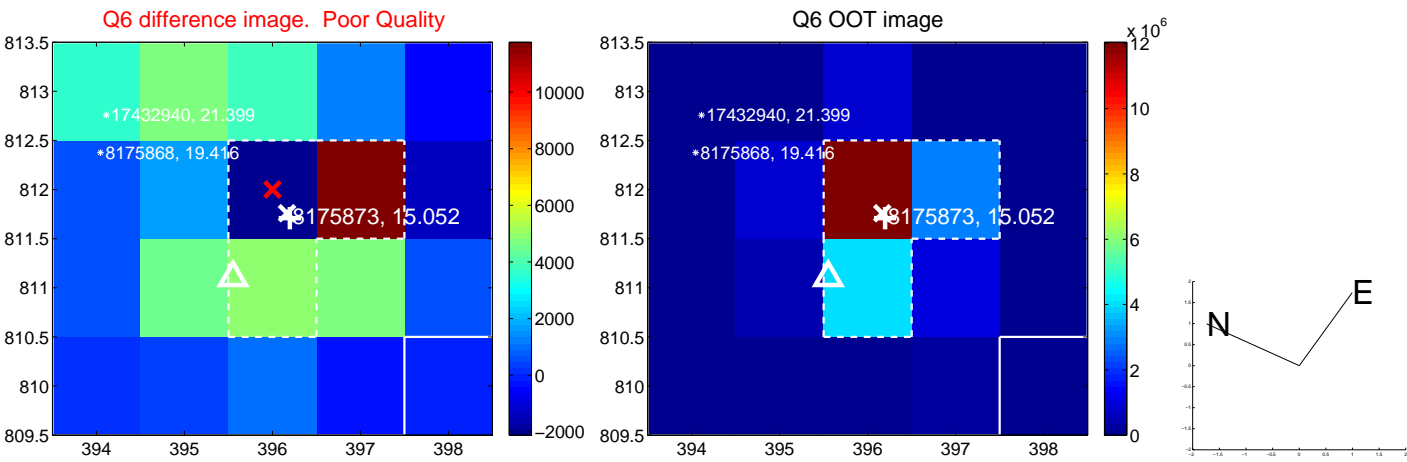
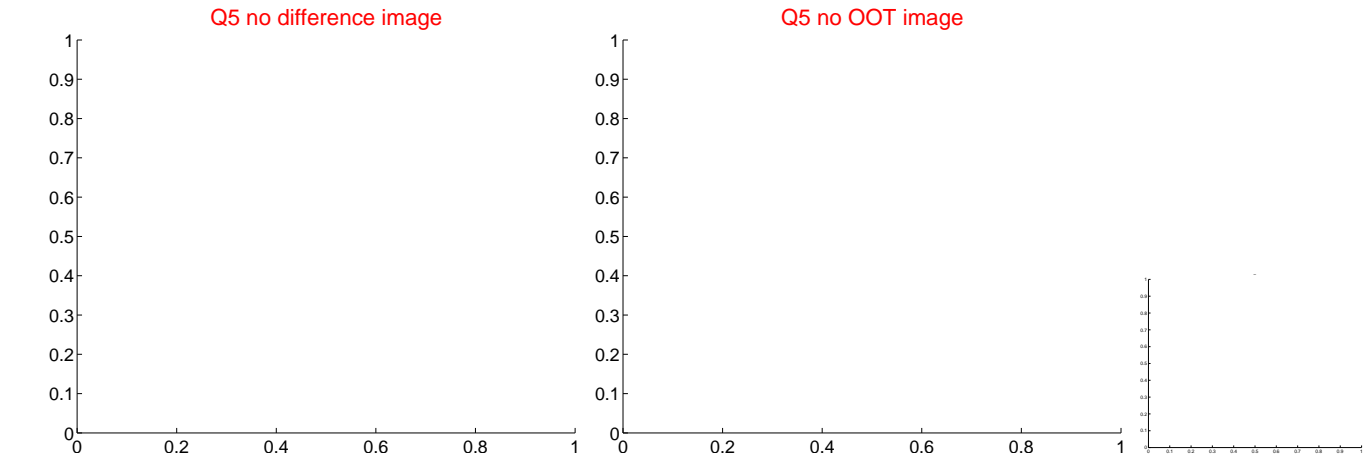


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

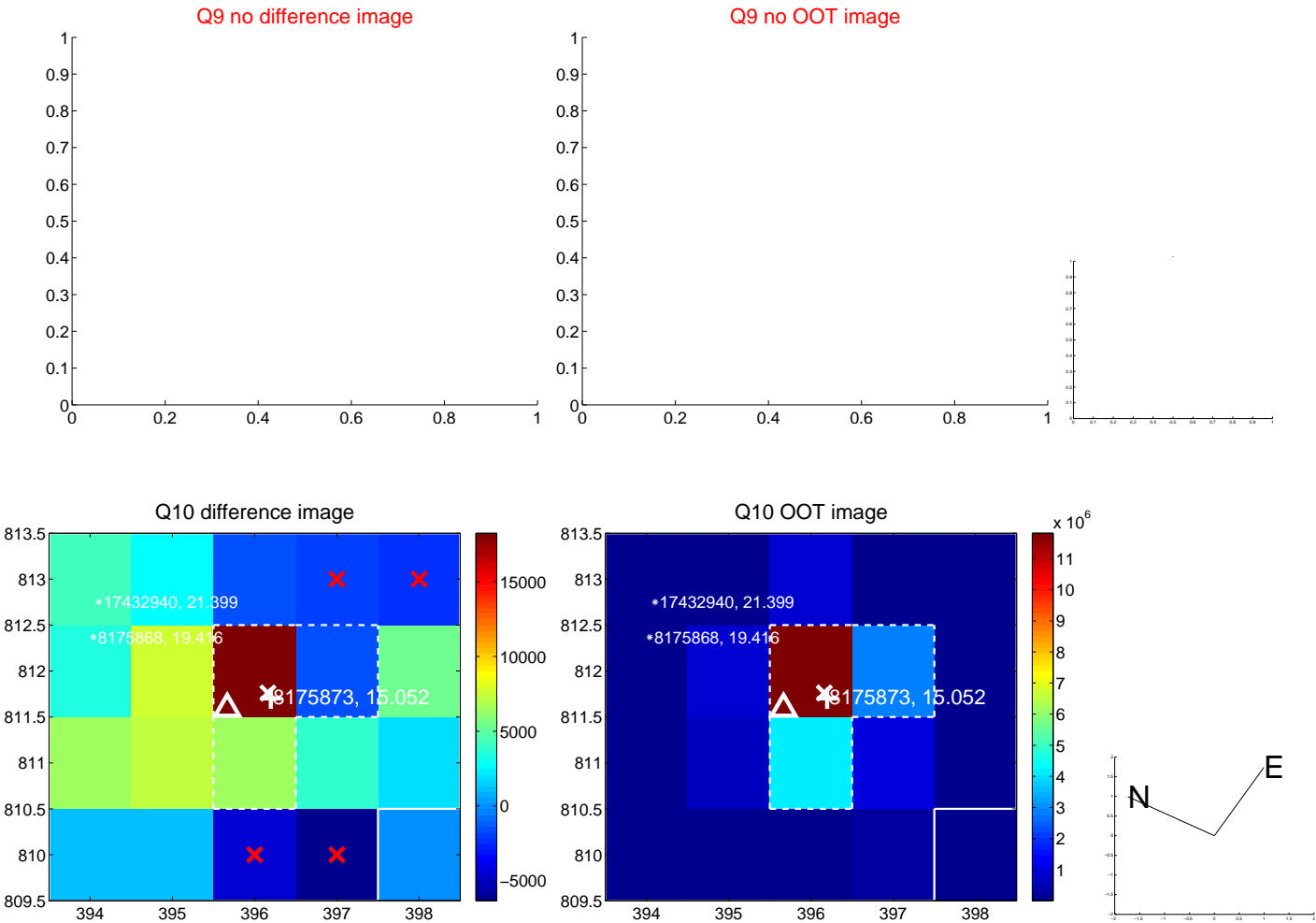
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



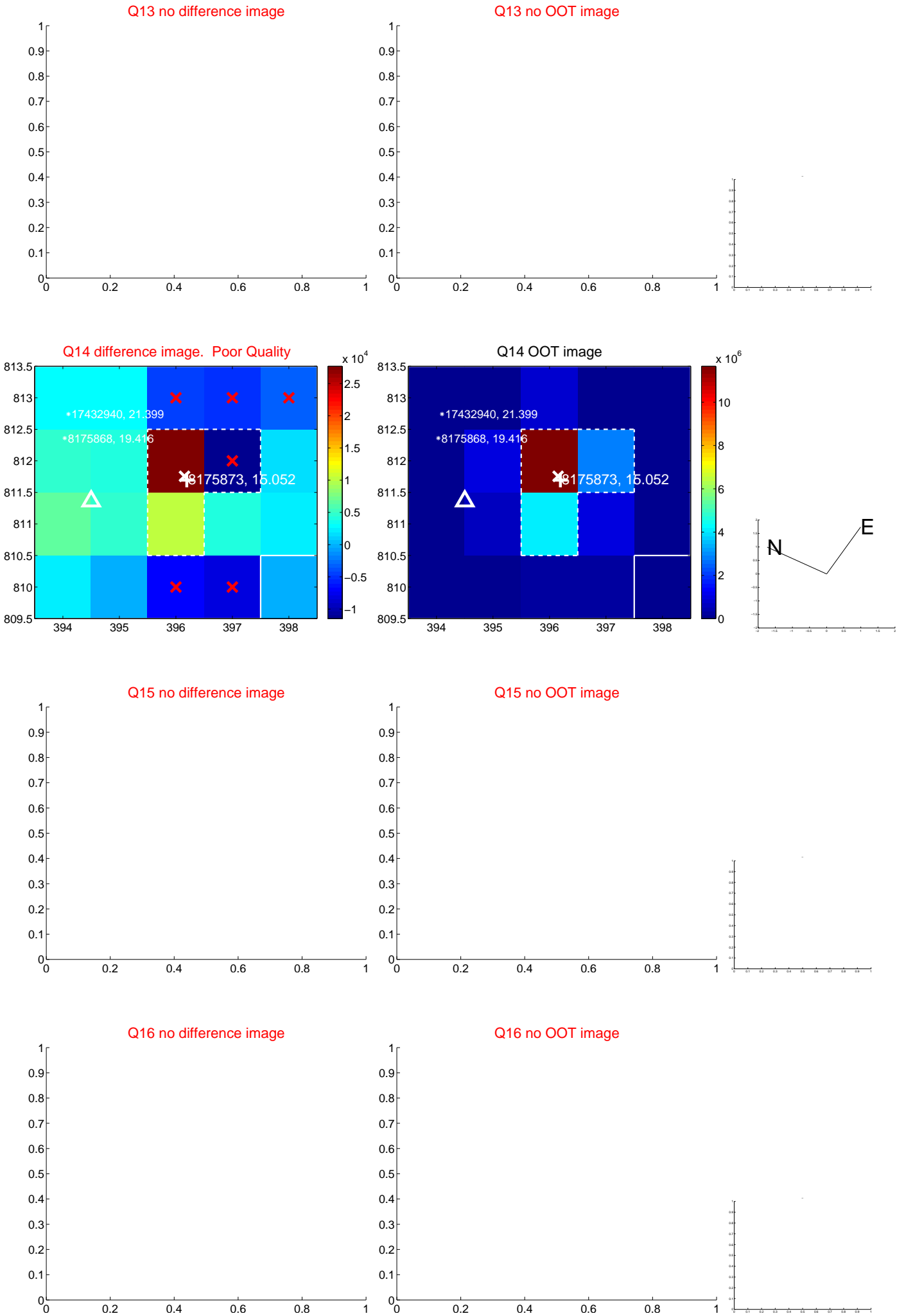
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



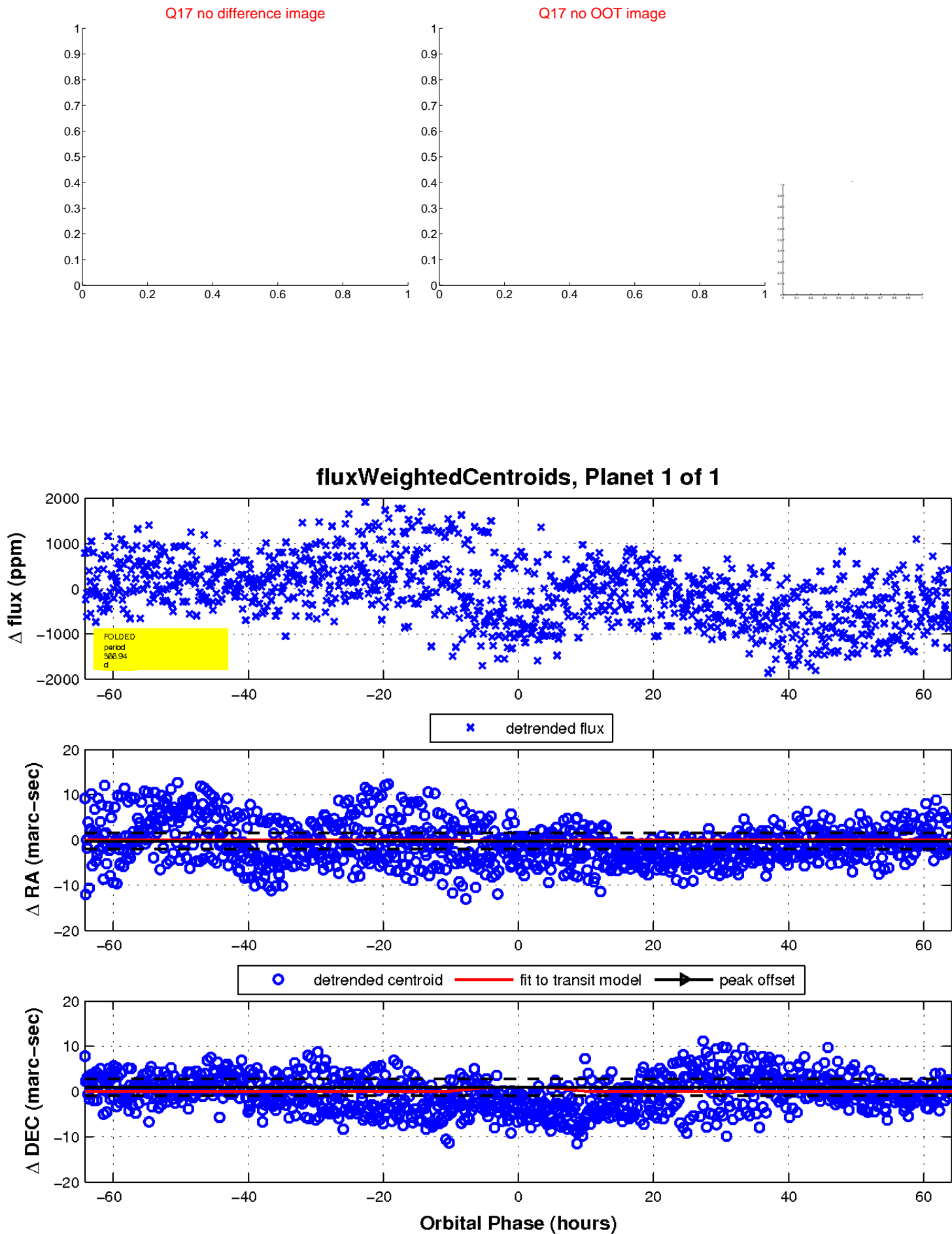
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

