

KIC 008174576

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})
008174576-01	OBS	No	369.247688	233.693091	655.4	18.856	8.9	8.2	0.72	4524	2.92	0.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008174576-01	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.

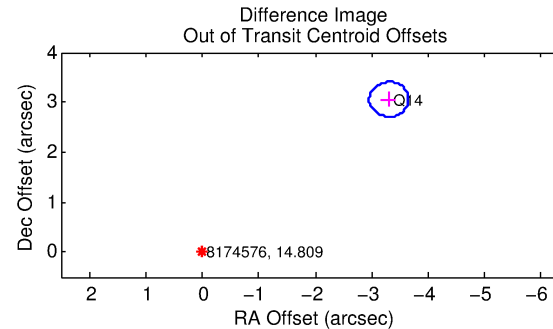
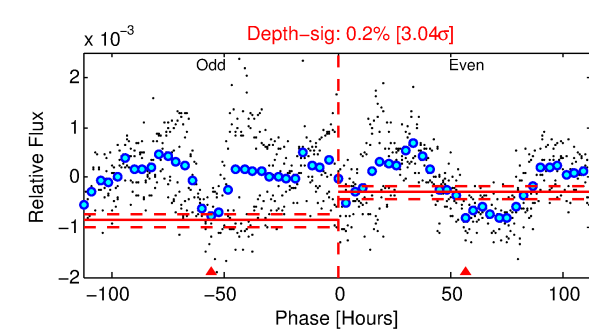
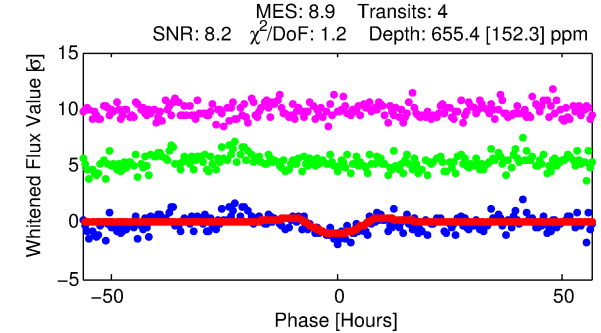
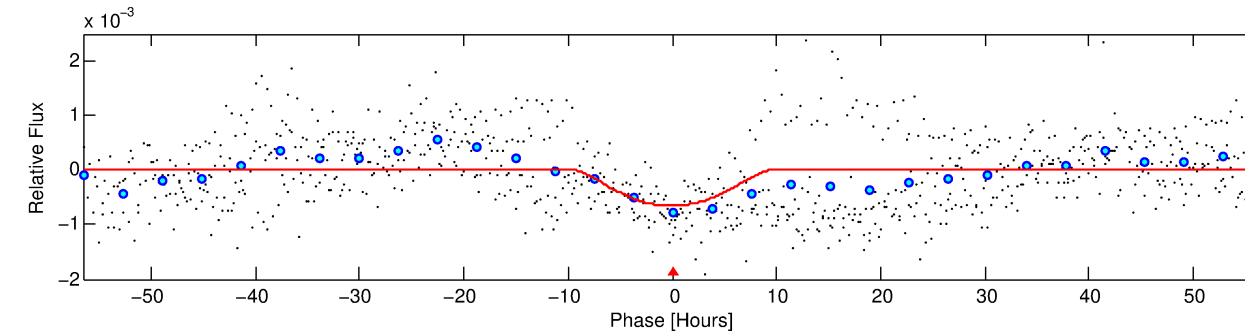
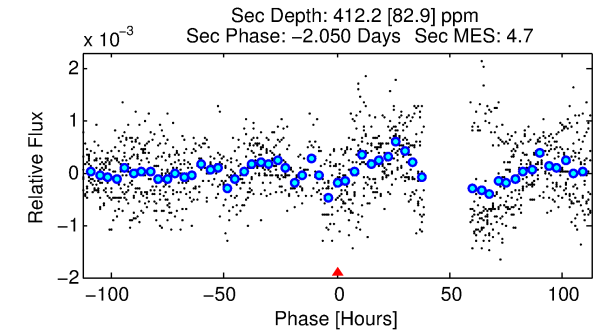
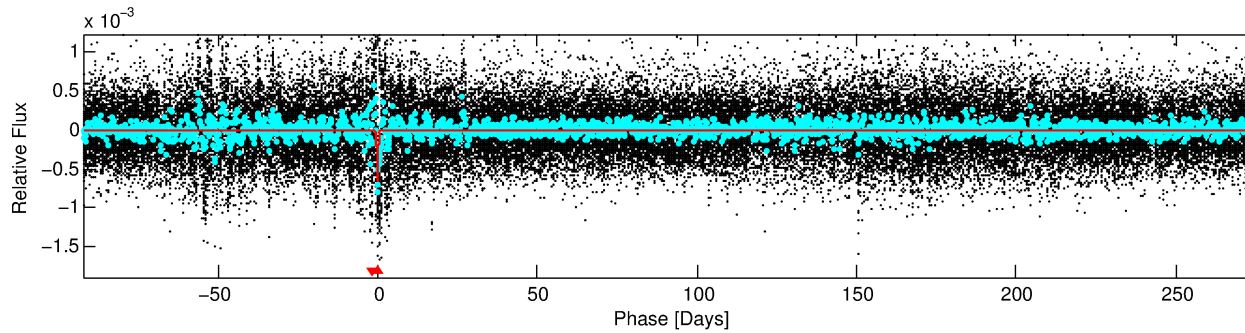
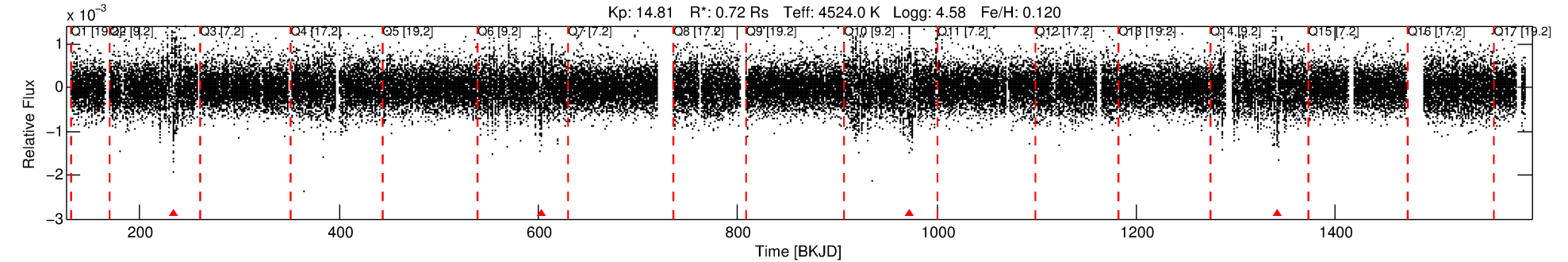
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008174576-01

No Significant Match Found

DV One-Page Summary

KIC: 8174576 Candidate: 1 of 1 Period: 369.248 d



DV Fit Results:

Period = 369.24769 [0.02053] d
Epoch = 233.6931 [0.0371] BKJD
Rp/R* = 0.0373 [0.0339]
a/R* = 51.35 [20.62]
b = 0.98 [0.07]
Seff = 0.24 [0.04]
Teq = 178 [7] K
Rp = 2.91 [2.66] Re
a = 0.8973 [0.0612] AU
Ag = 21494.12 [39408.67] [0.55σ]
Teffp = 3340 [1532] K [2.06σ]

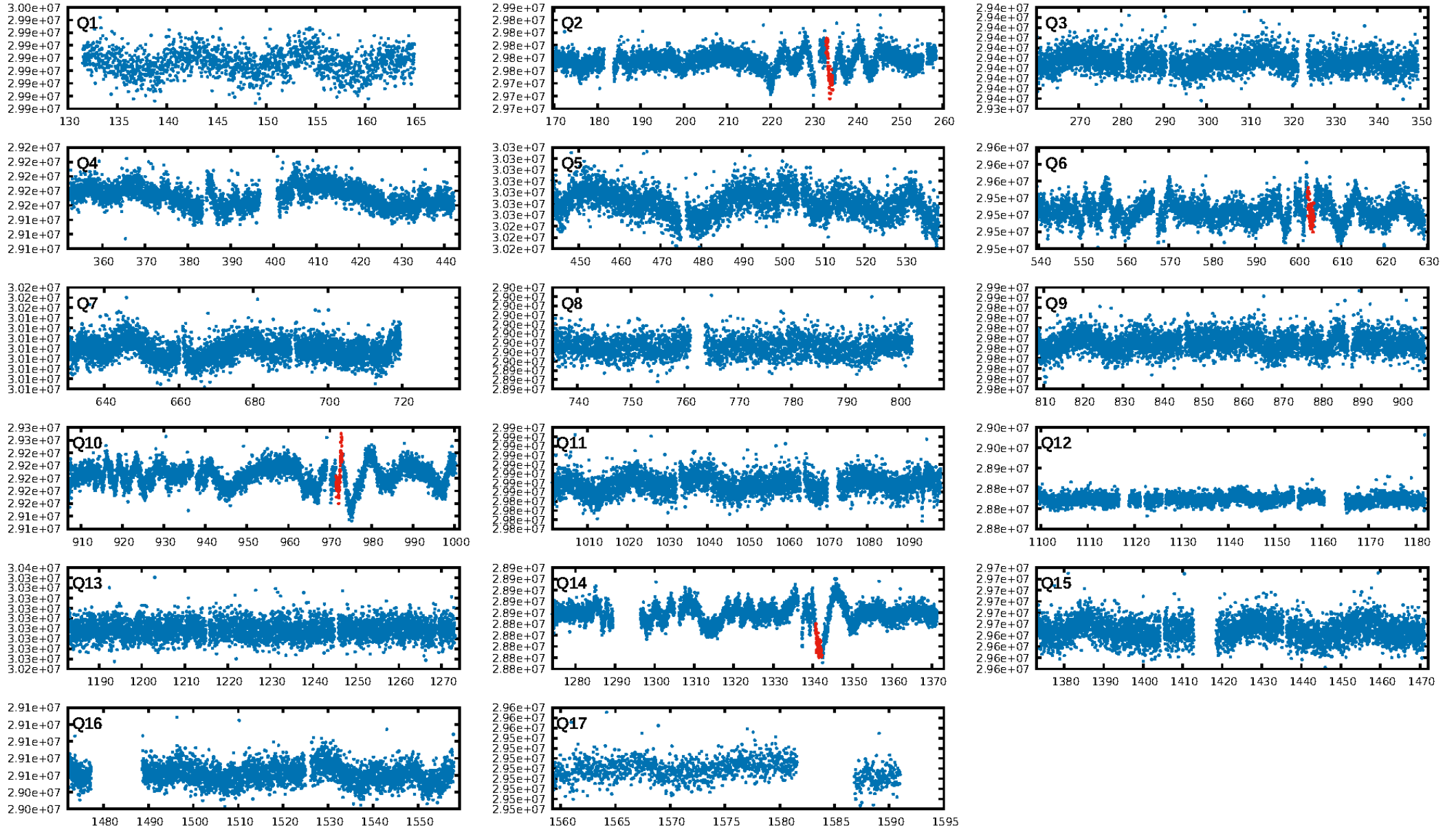
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 20.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.96e-13
RollingBand-fgt: 0.00 [0/4]
GhostDiagnostic-chr: 2.276
Centroid-sig: 0.0%
Centroid-so: 16.296 arcsec [7.07σ]
OotOffset-rm: 4.500 arcsec [38.64σ]
KicOffset-rm: 4.495 arcsec [38.25σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [3/3]

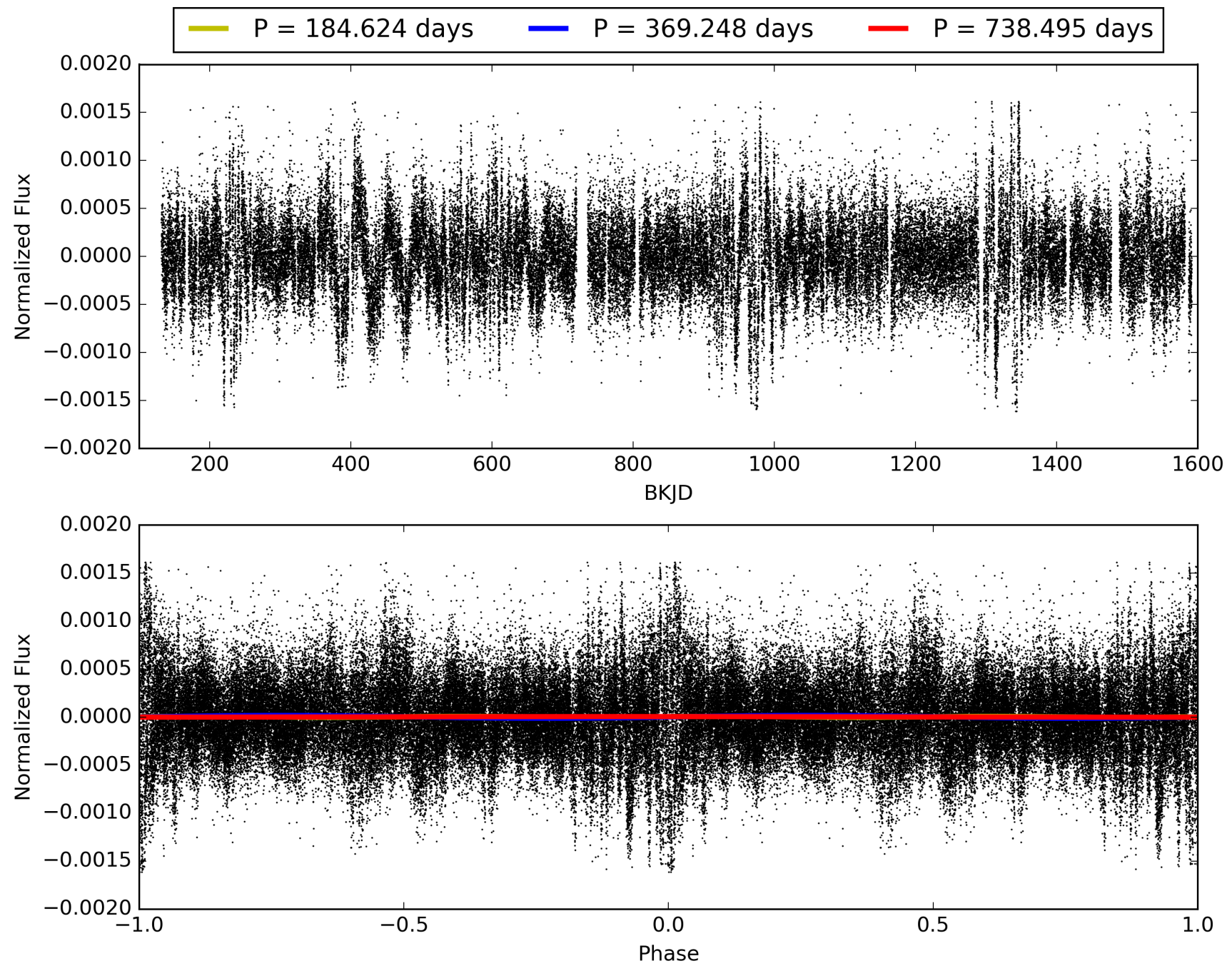
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:18:15 Z

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

TCE 008174576-01, PDC Light Curves

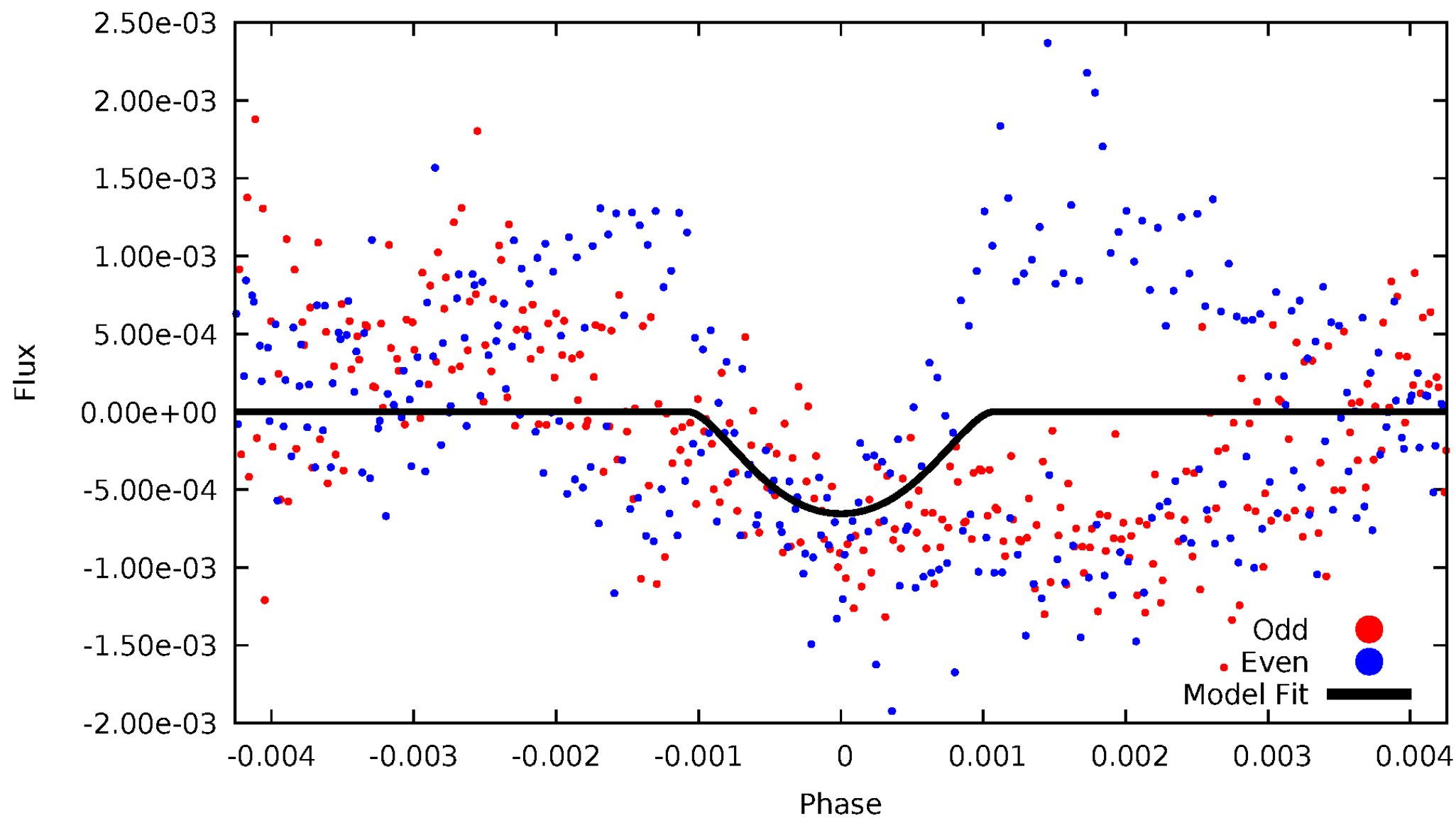


TCE 008174576-01



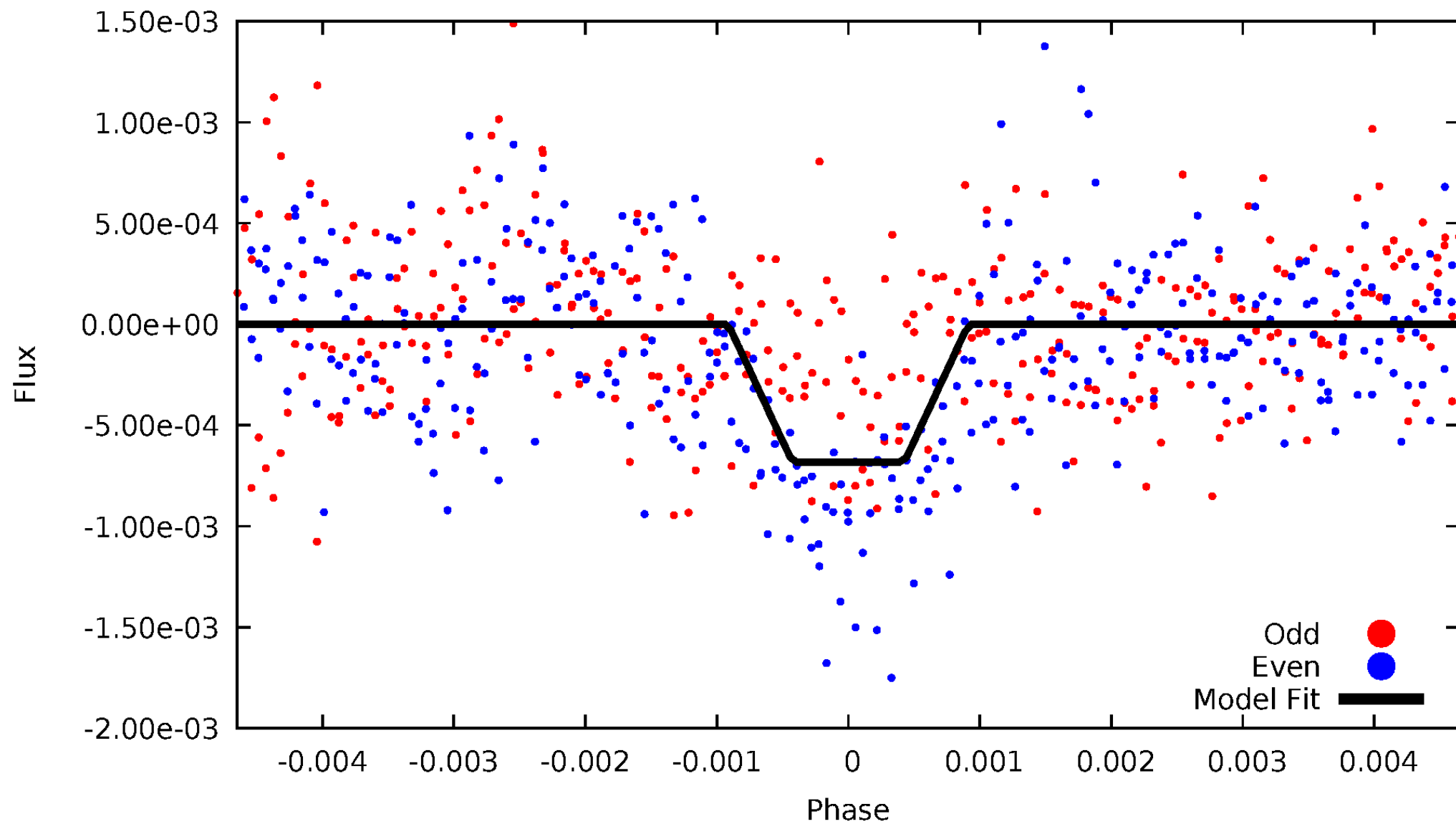
DV Odd/Even

TCE 008174576-01



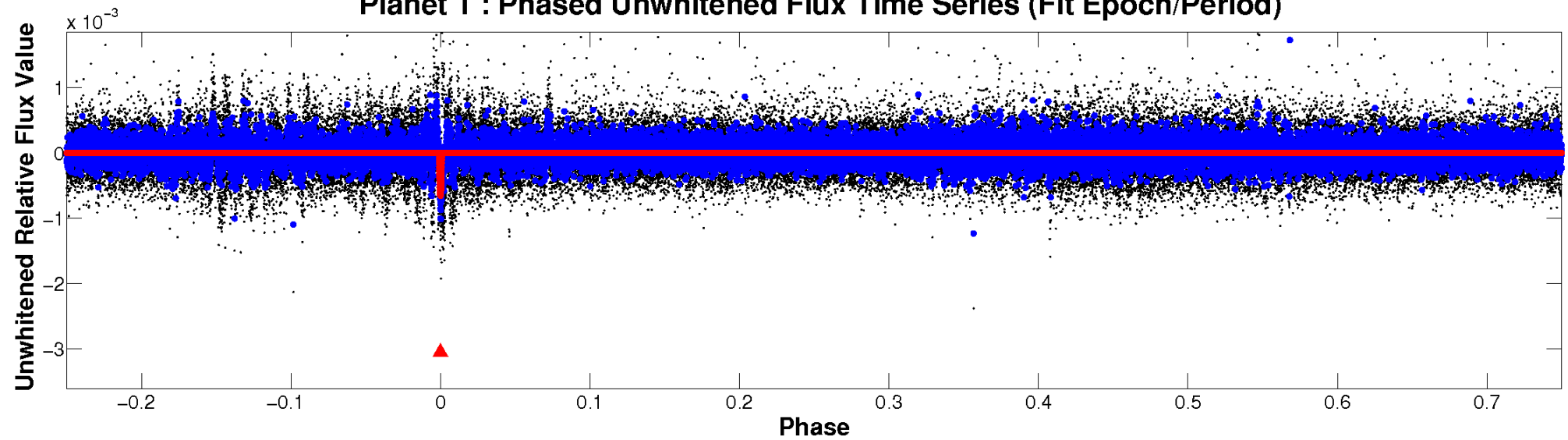
ALT Odd/Even

TCE 008174576-01

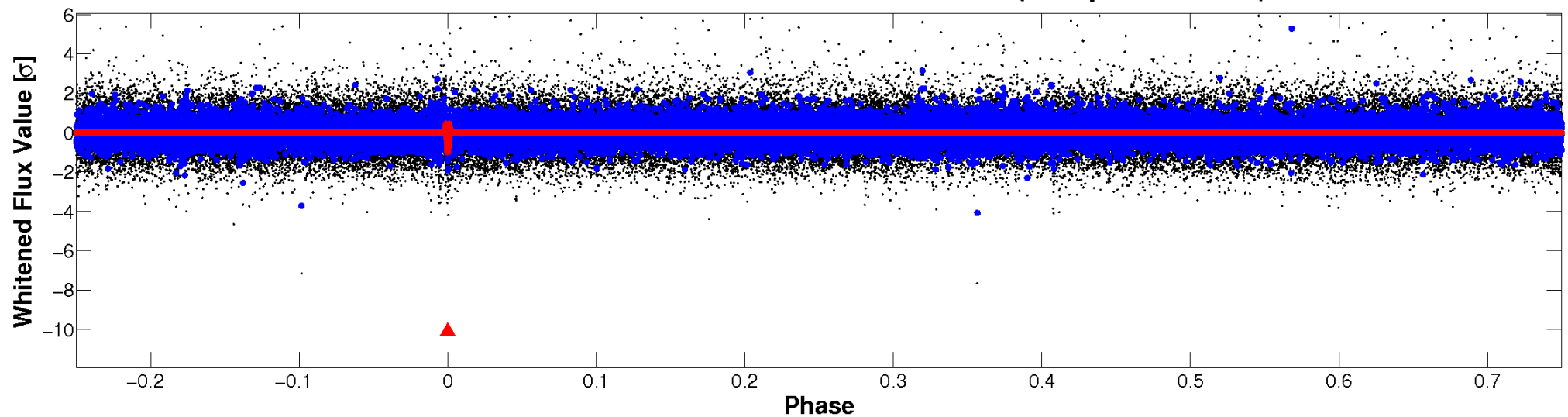


Non-Whitened Vs. Whitened Light Curve

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

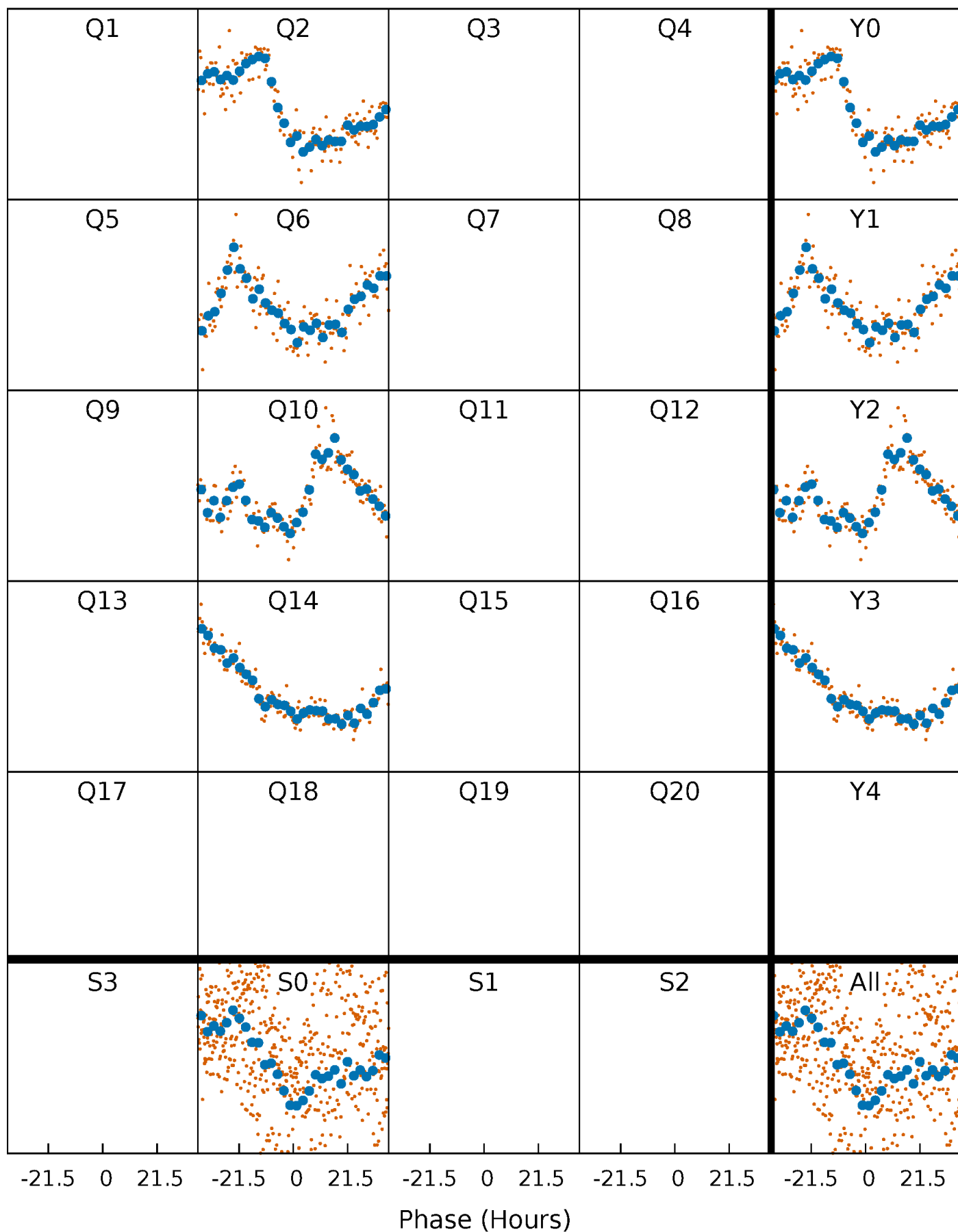


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



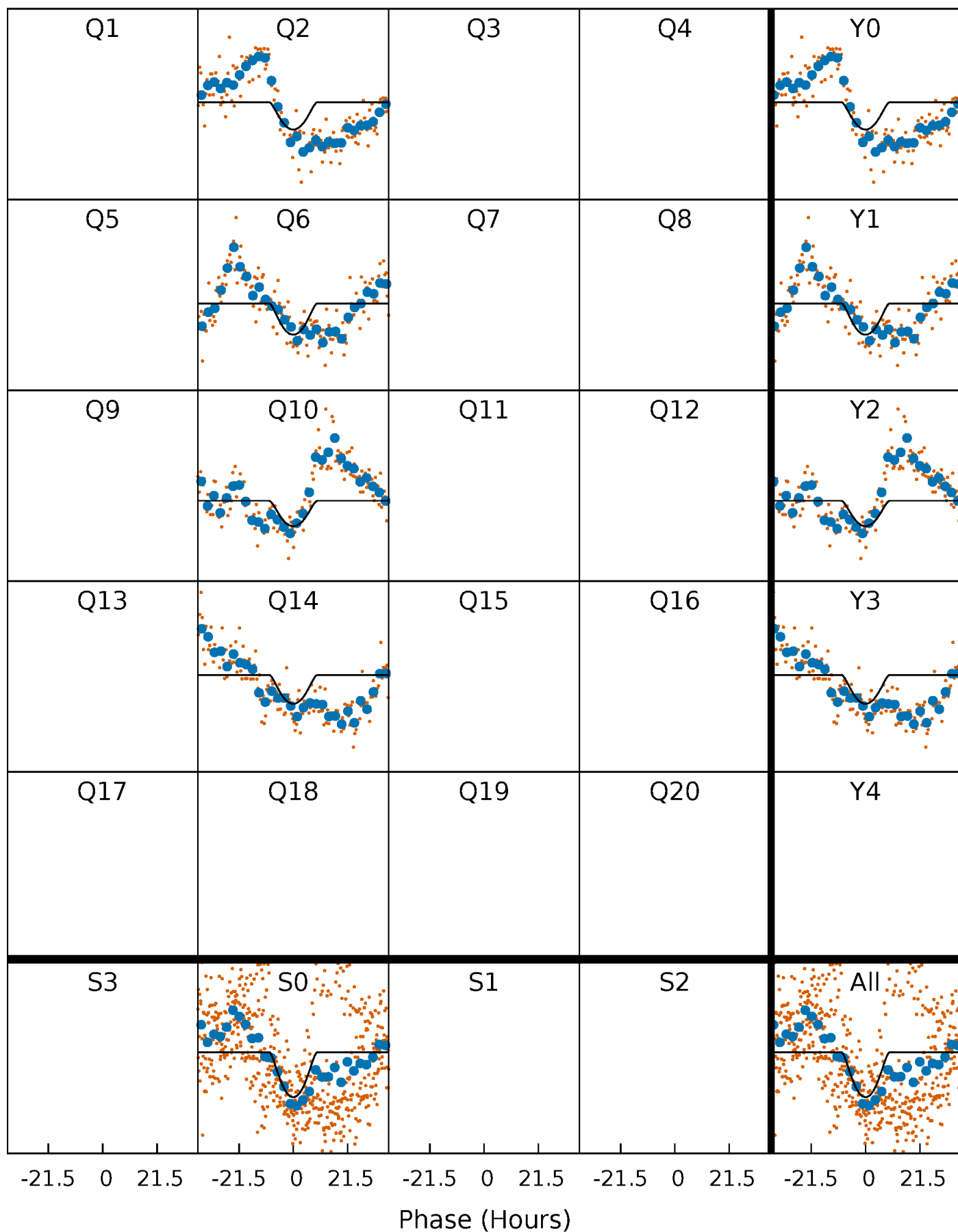
PDC Quarter-Phased Transit Curves

TCE 008174576-01 P=369.247687 Days $T_0=233.693091$ (BKJD)



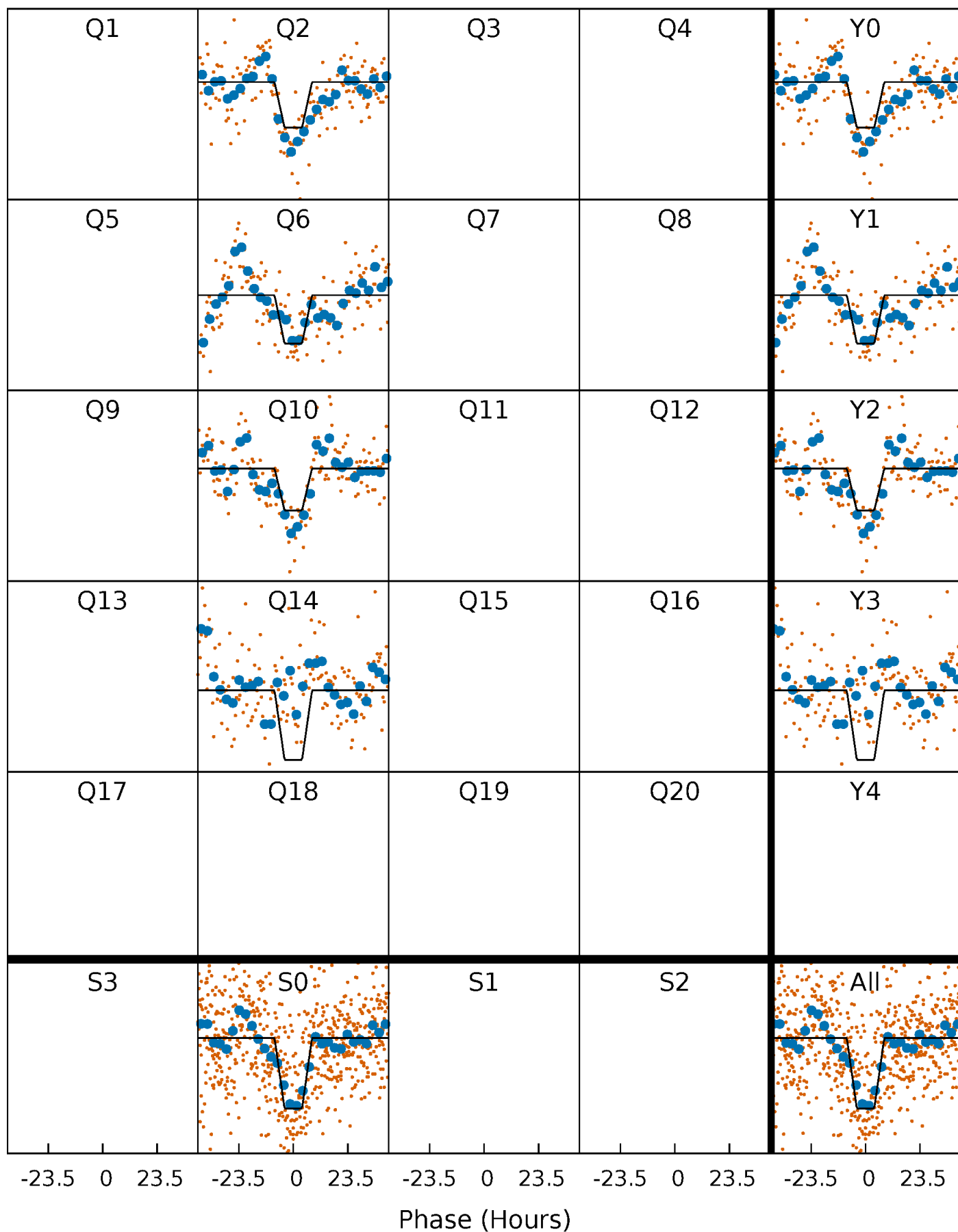
DV Quarter-Phased Transit Curves

TCE 008174576-01 P=369.247687 Days $T_0=233.693091$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

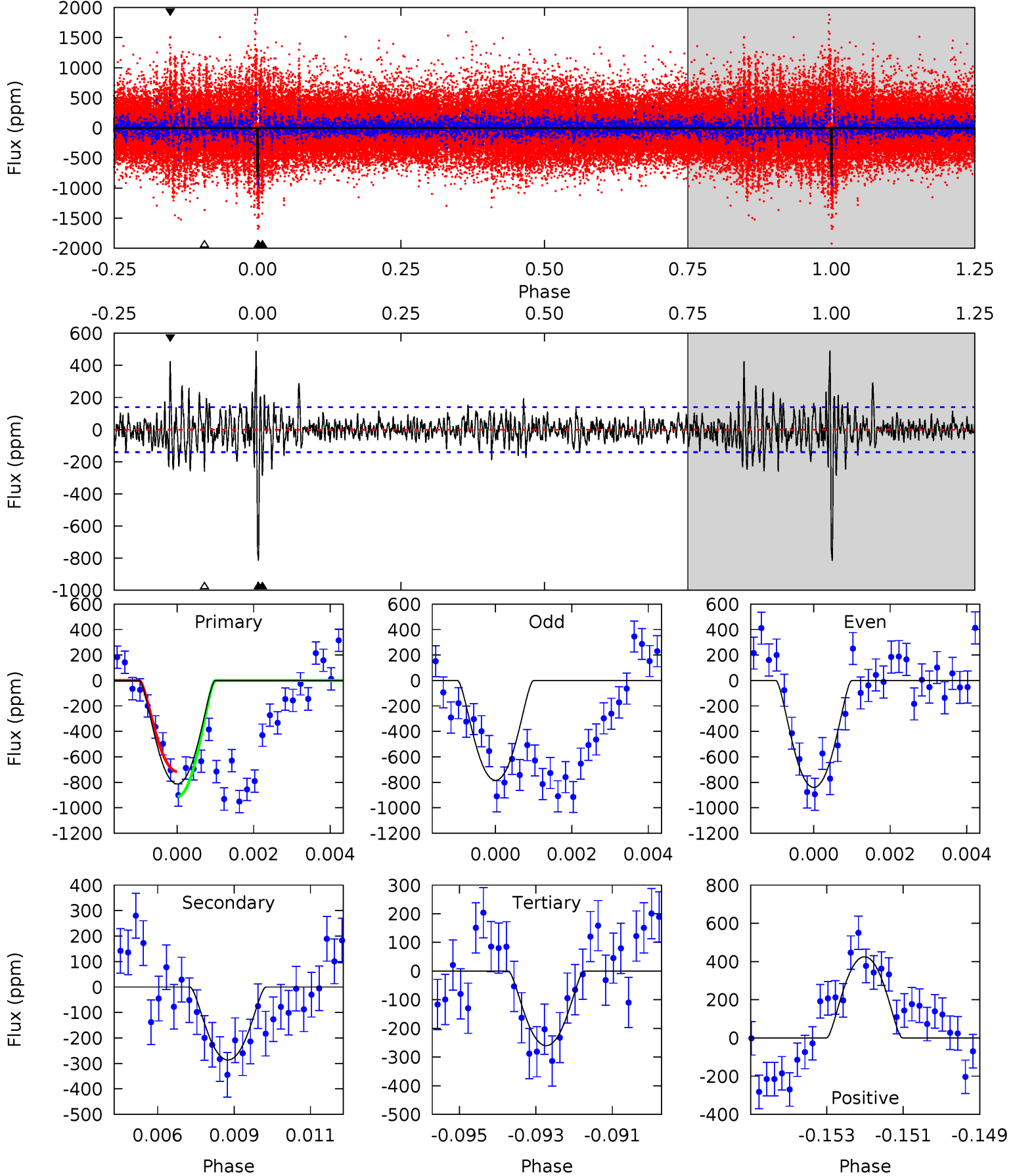
TCE 008174576-01 P=369.234429 Days $T_0=233.704238$ (BKJD)



DV Model-Shift Uniqueness Test

008174576-01, P = 369.247687 Days, E = 233.693091 Days

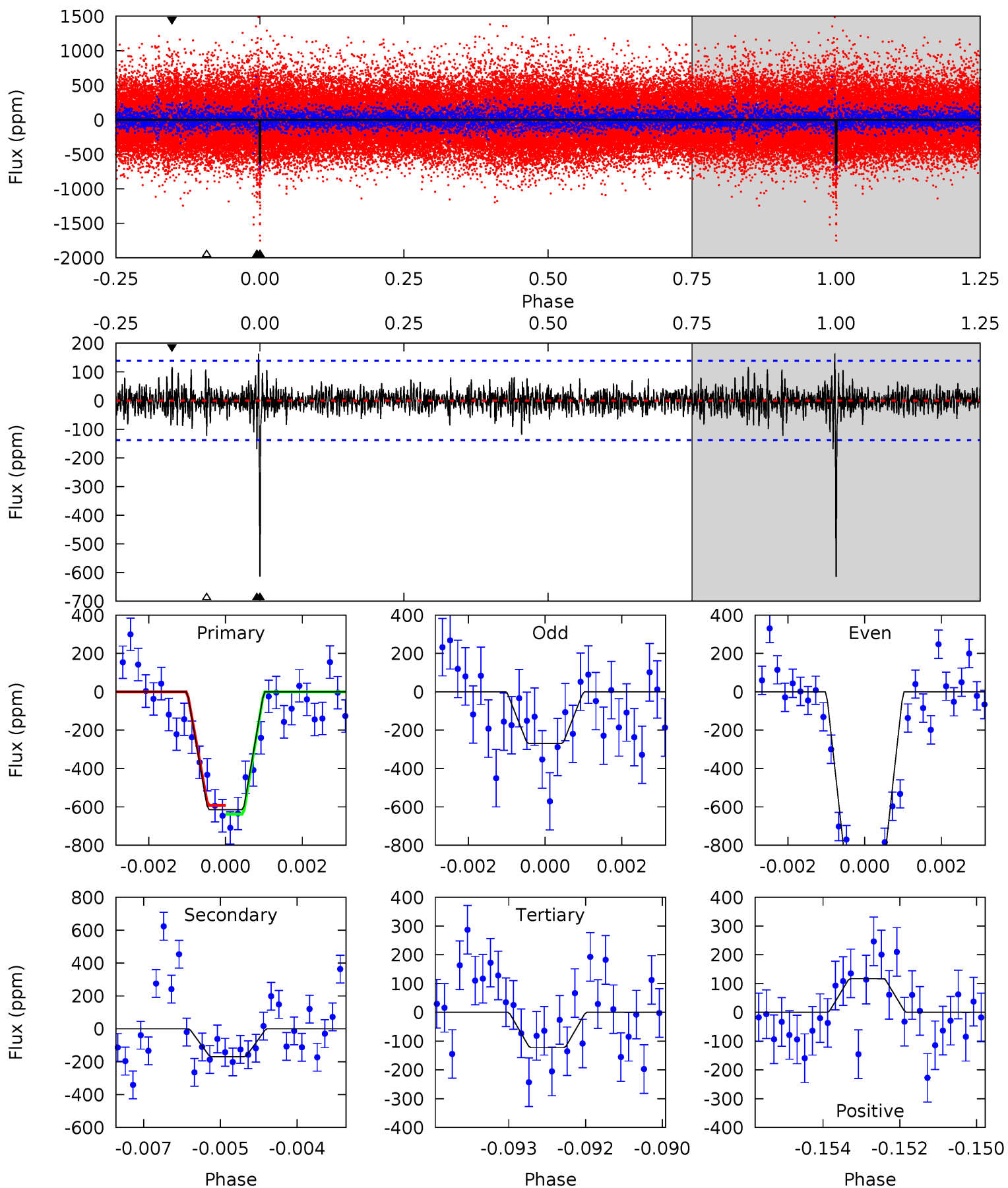
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.9	10.9	9.88	16.2	5.31	3.07	2.68	21.0	14.7	1.00	-5.27	1.07	1.03	0.38	3.73



Alt Model-Shift Uniqueness Test

008174576-01, P = 369.234429 Days, E = 233.704238 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.7	6.55	4.72	4.51	5.34	3.12	1.09	19.0	19.2	1.83	2.04	13.5	0.83	0.21	0.87



Stellar Parameters For KIC 008174576

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4524^{+137}_{-123}	$4.576^{+0.056}_{-0.020}$	$0.120^{+0.250}_{-0.300}$	$0.717^{+0.035}_{-0.057}$	$0.707^{+0.056}_{-0.050}$	$2.697^{+0.631}_{-0.233}$
	+3%/-3%	+1%/-0%	+208%/-250%	+5%/-8%	+8%/-7%	+23%/-9%
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 008174576-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-286 ± 26	$3.54^{+2.31}_{-2.11}$	247^{+10}_{-8}	3240^{+1146}_{-447}	10095^{+53477}_{-6385}
Alt.	-170 ± 26	$2.76^{+2.04}_{-1.85}$	248^{+8}_{-8}	3208^{+1495}_{-453}	10110^{+80069}_{-6810}

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

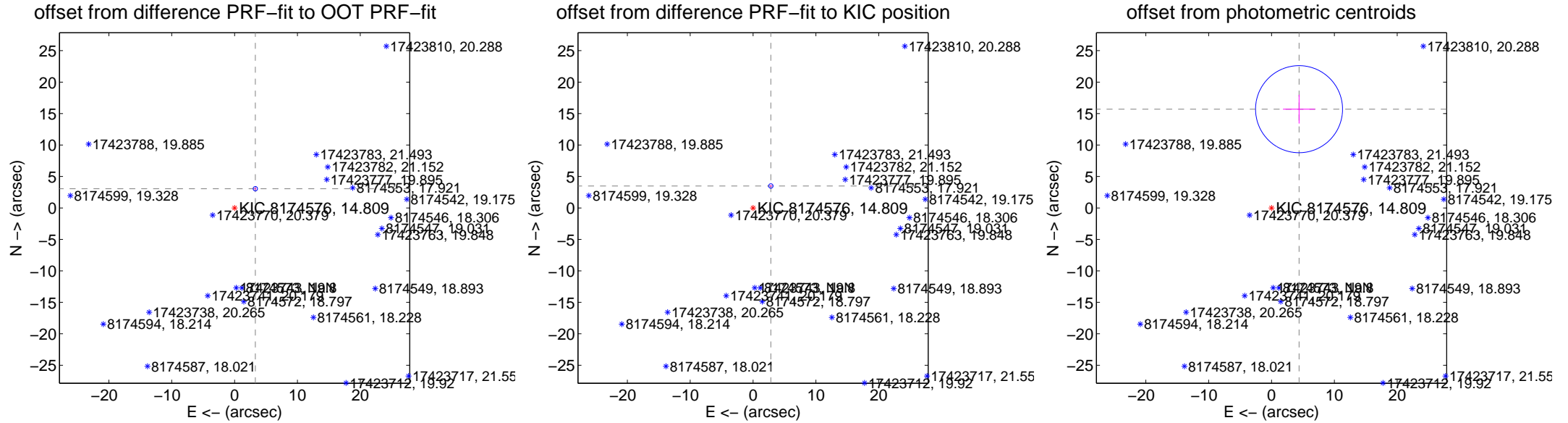
DV Centroid Data

Supplemental centroid analysis for 008174576-01. Kepler magnitude: 14.81. Transit SNR 8.24

There are 0 quarters with good PRF difference image offsets

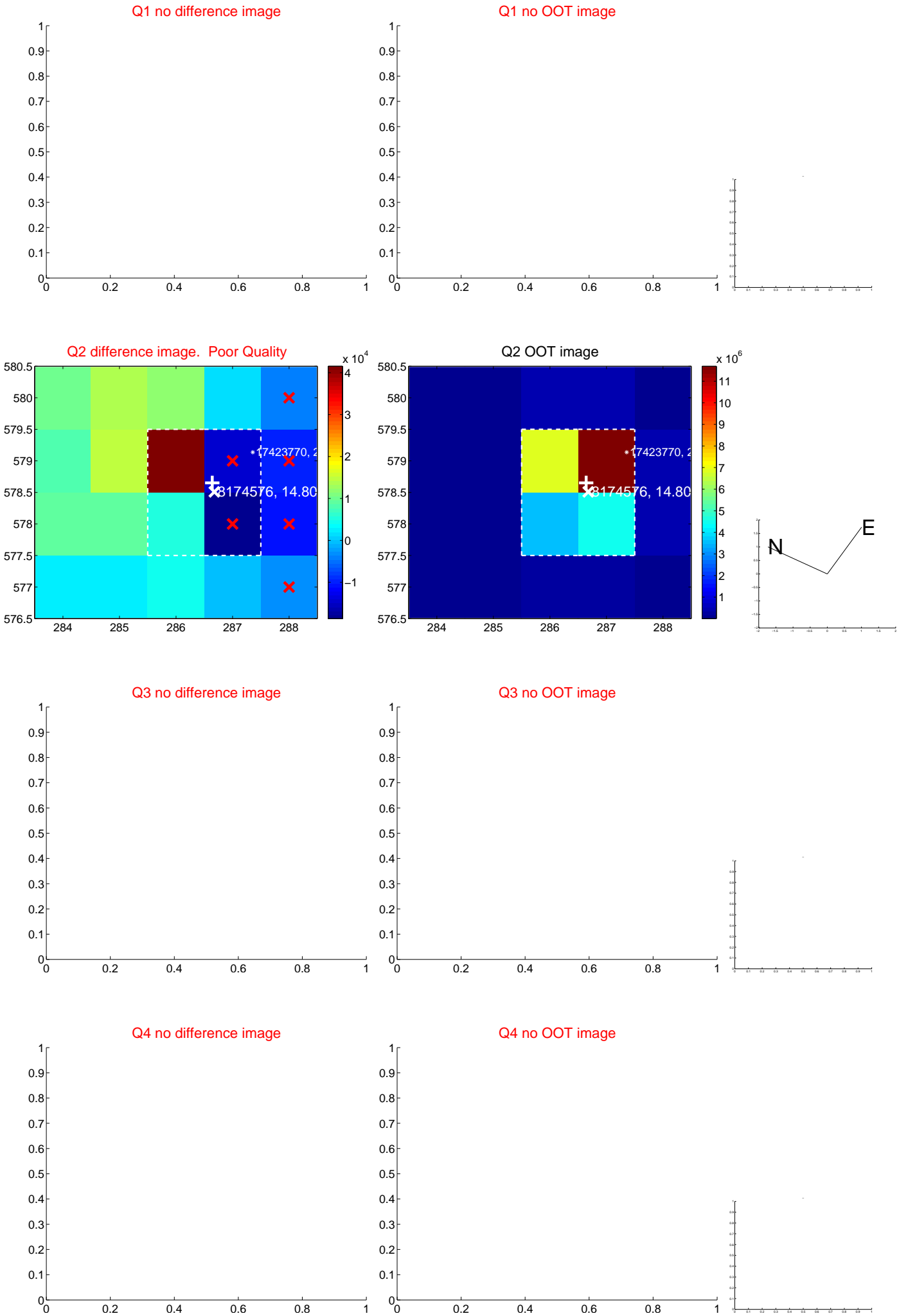
The direct PRF centroid is offset from the target star catalog position by about 0.64 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.500 \pm 0.116	38.64	-3.302 \pm 0.113	3.058 \pm 0.120
PRF-fit source offset from KIC position	4.495 \pm 0.118	38.25	-2.832 \pm 0.113	3.491 \pm 0.120
photometric centroid source offset	16.30 \pm 2.31	7.07	-4.38 \pm 2.55	15.70 \pm 2.29

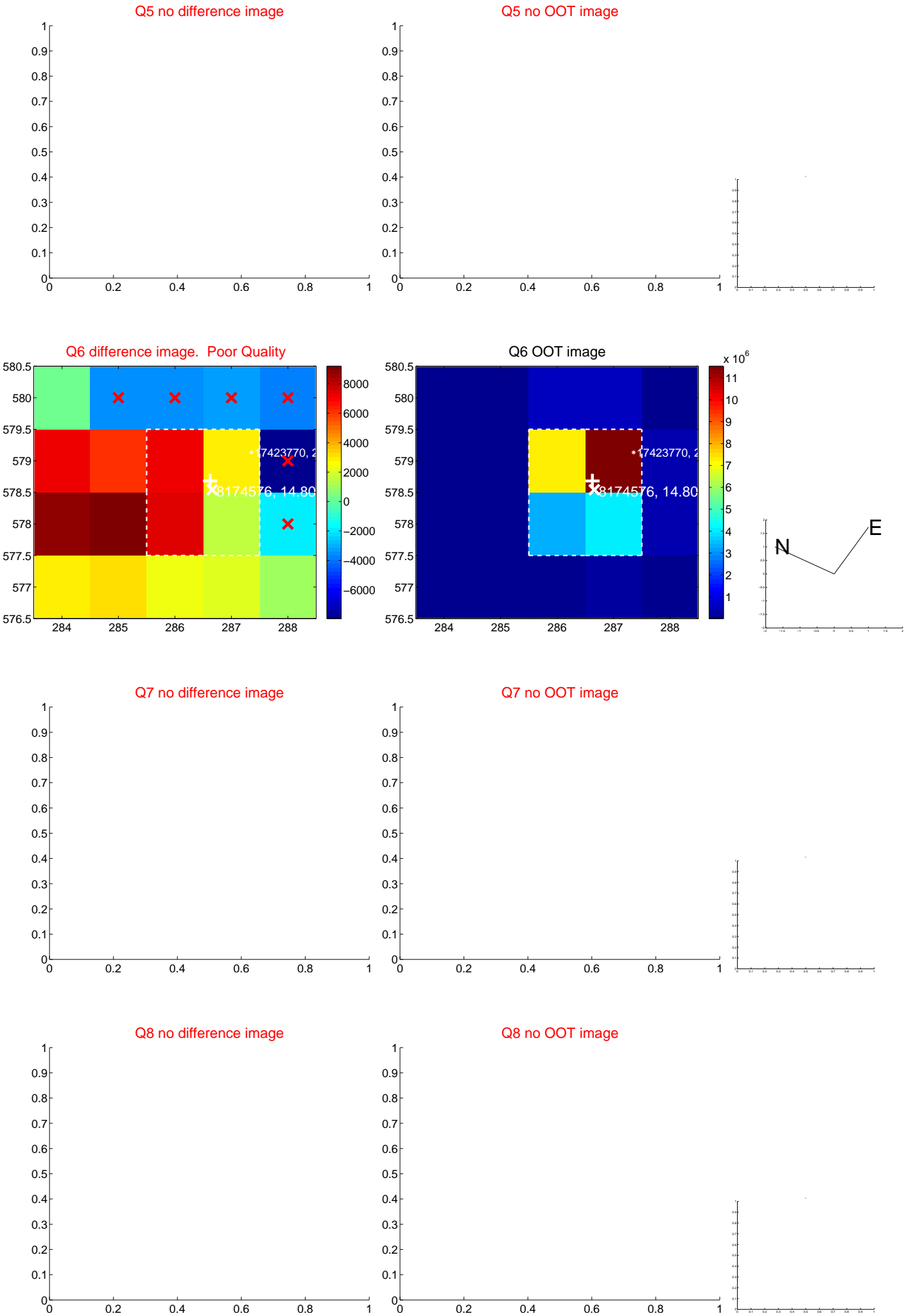


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



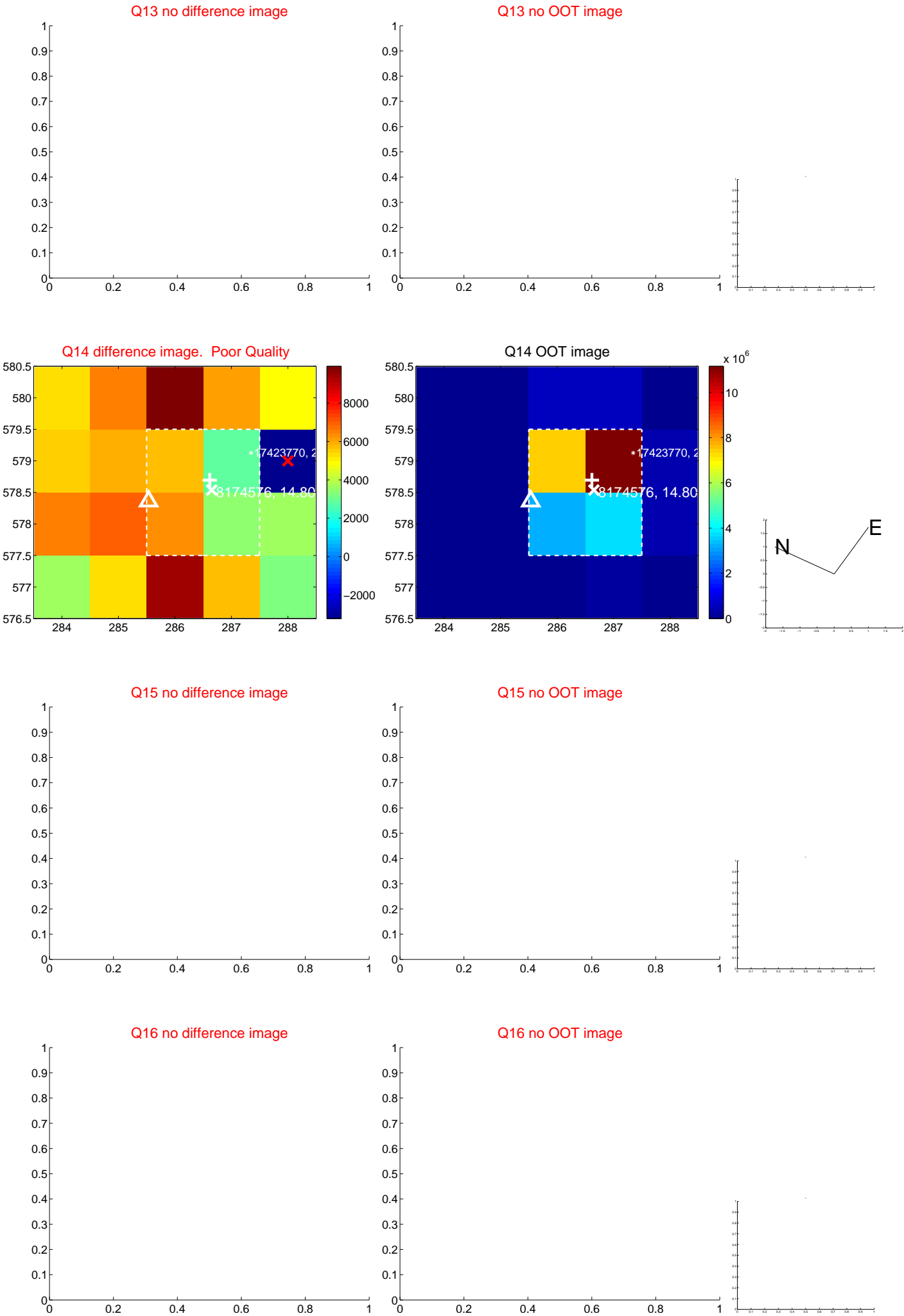
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



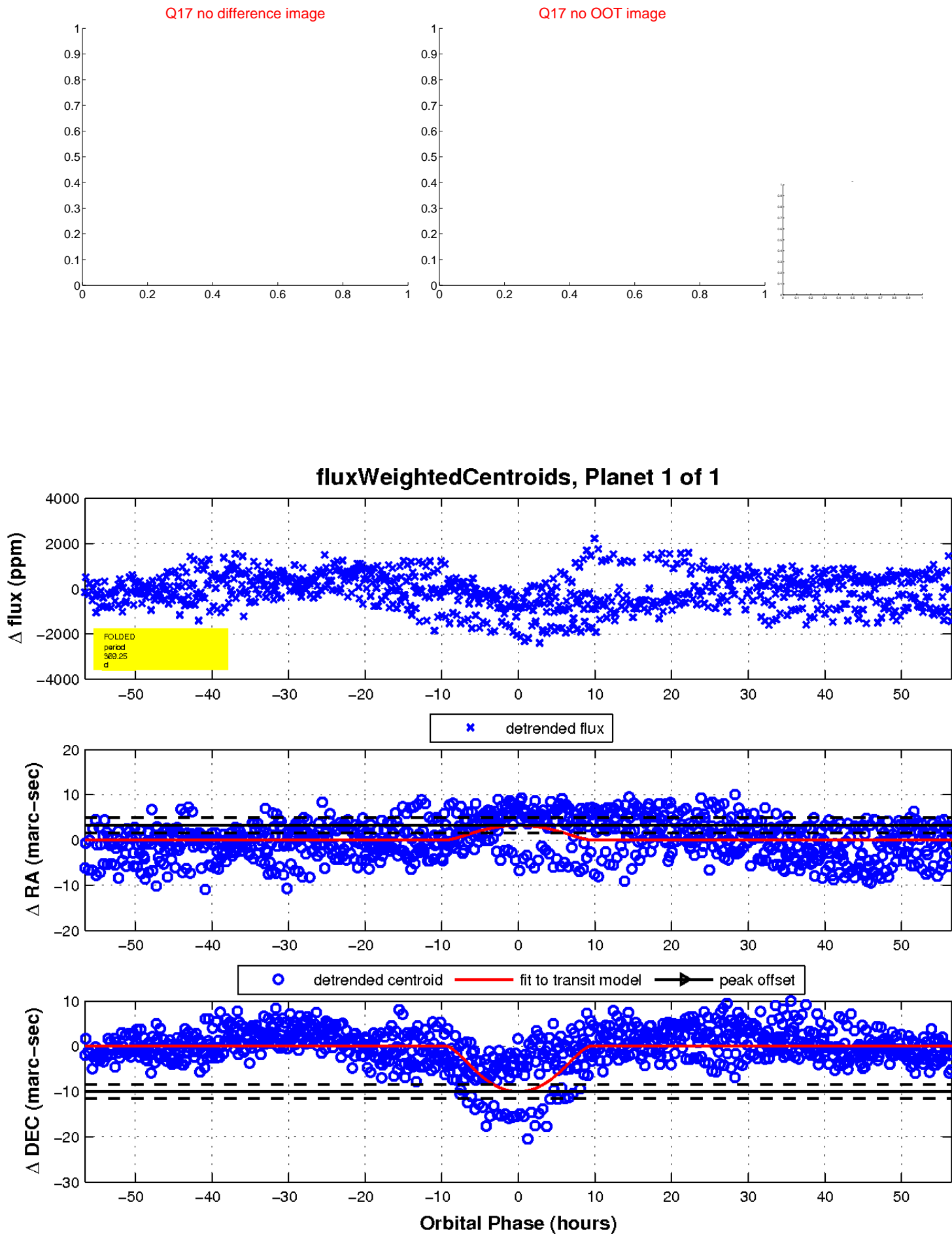
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

