

KIC 004633249

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})
004633249-01	OBS	No	231.575753	358.923281	1062.7	3.855	9.0	5.6	17.75	5148	58.86	182.51

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004633249-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

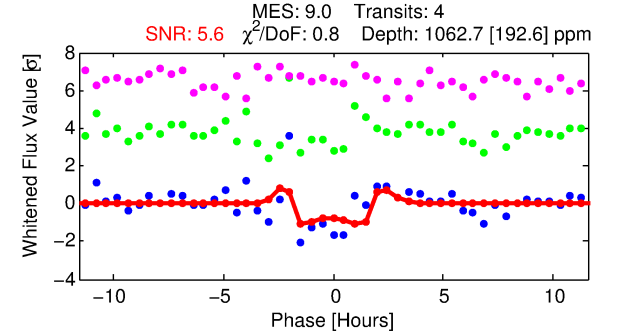
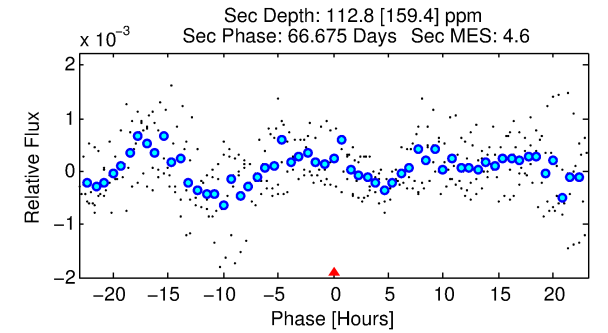
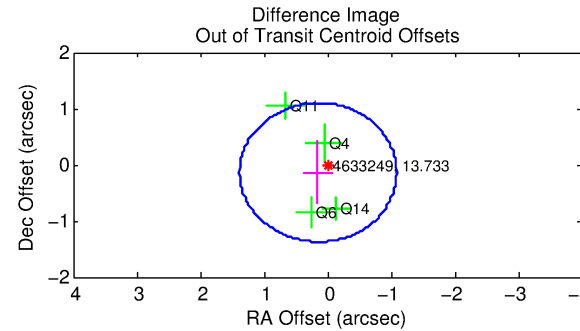
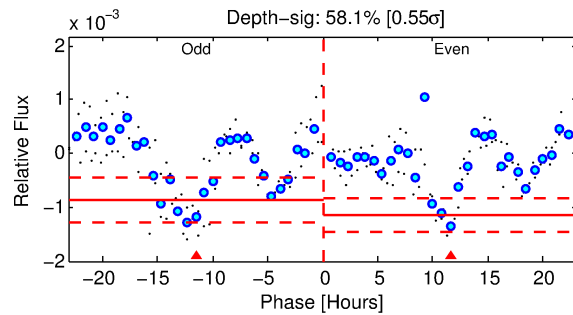
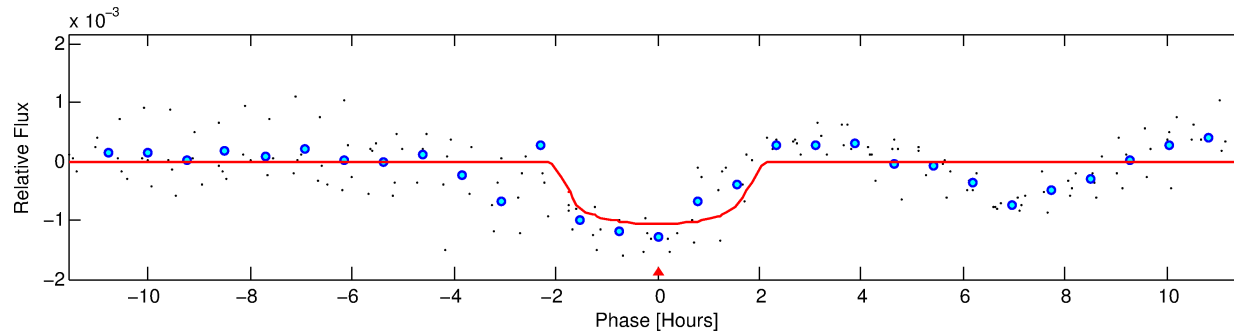
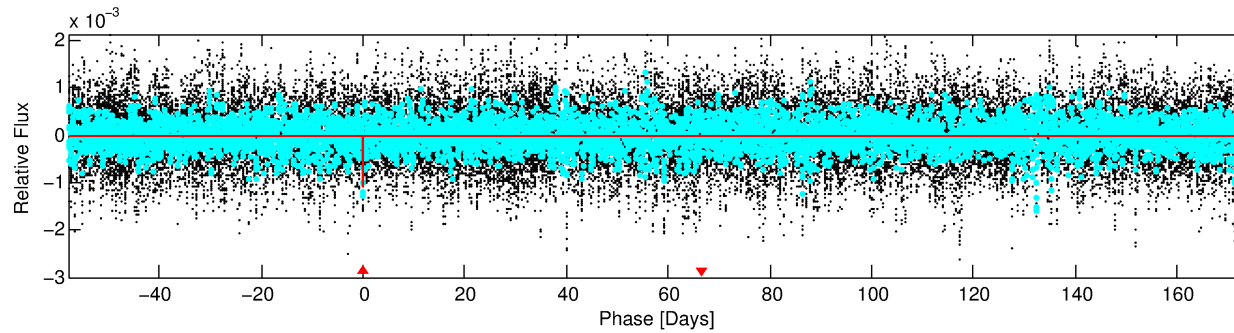
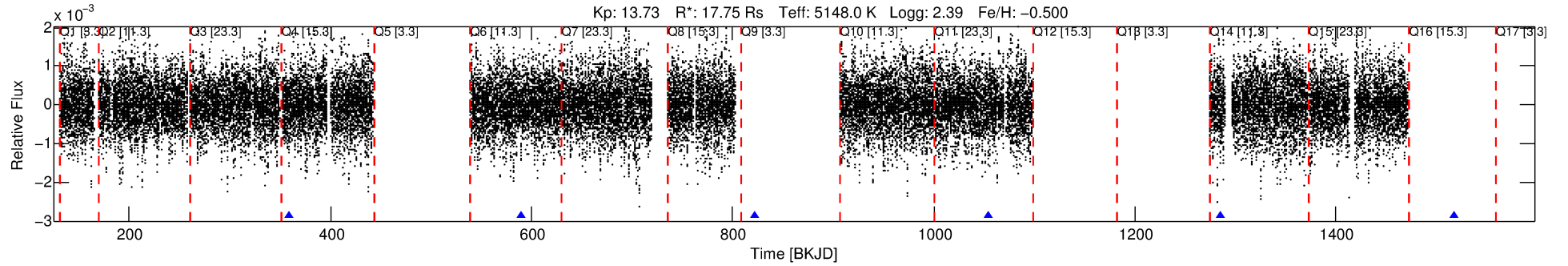
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004633249-01

No Significant Match Found

DV One-Page Summary

KIC: 4633249 Candidate: 1 of 1 Period: 231.576 d



DV Fit Results:

Period = 231.57575 [0.00154] d
Epoch = 358.9233 [0.0040] BKJD
Rp/R* = 0.0304 [0.0309]
a/R* = 414.23 [1653.55]
b = 0.50 [6.13]
Seff = 182.51 [57.21]
Teq = 937 [73] K
Rp = 58.86 [63.18] Re
a = 1.0421 [0.2420] AU
Ag = 19.46 [48.37] [0.38 σ]
Teffp = 3043 [1889] K [1.11 σ]

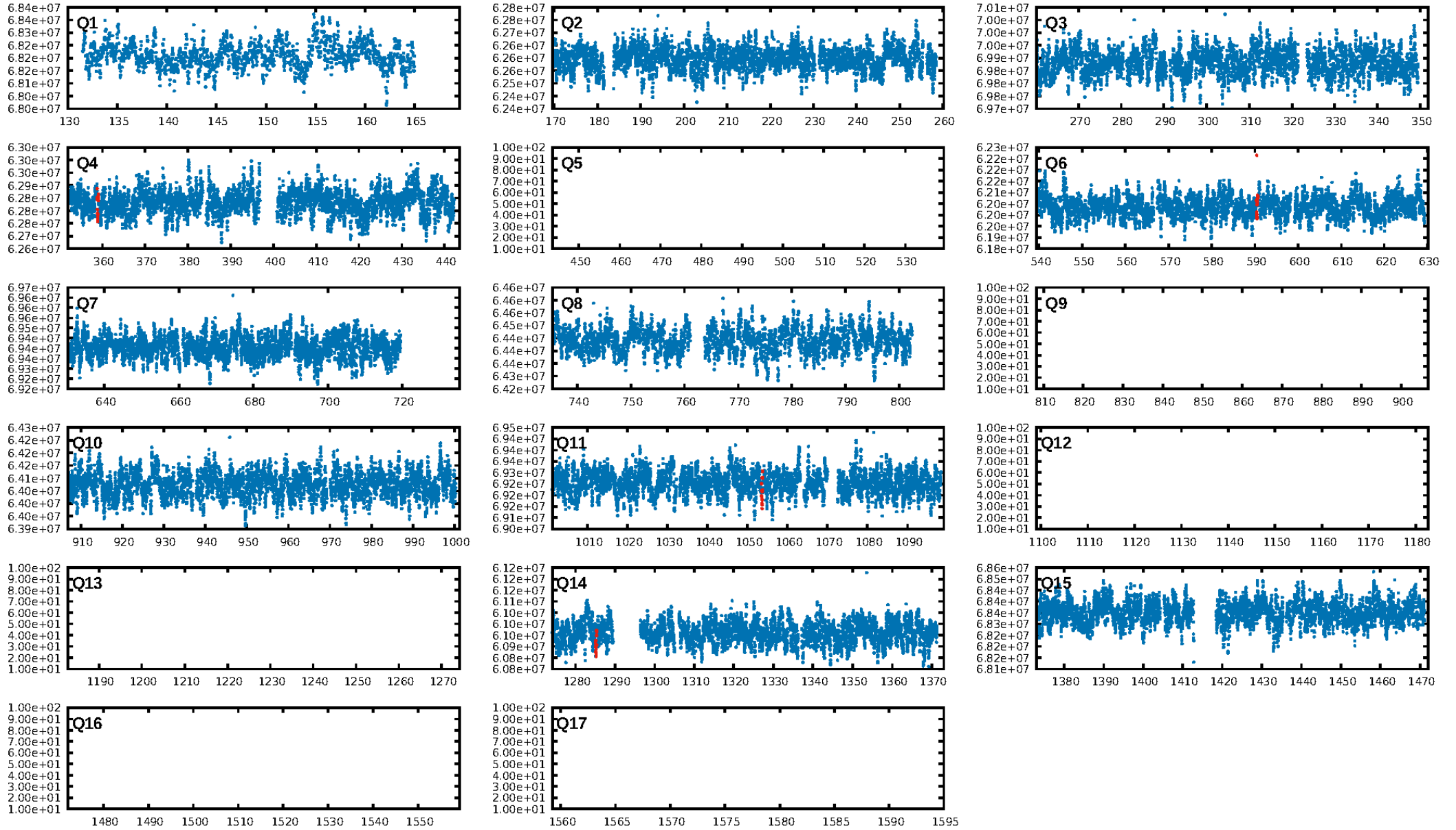
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 98.6%
ModelChiSquareGof-sig: 96.9%
Bootstrap-pfa: 2.57e-13
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.6018
Centroid-sig: N/A
Centroid-so: 0.276 arcsec [0.43 σ]
OotOffset-rm: 0.202 arcsec [0.49 σ]
OotOffset-st: 2/1/1/0 [4]
KicOffset-rm: 0.298 arcsec [0.55 σ]
KicOffset-st: 2/1/1/0 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 1.00 [4/4]

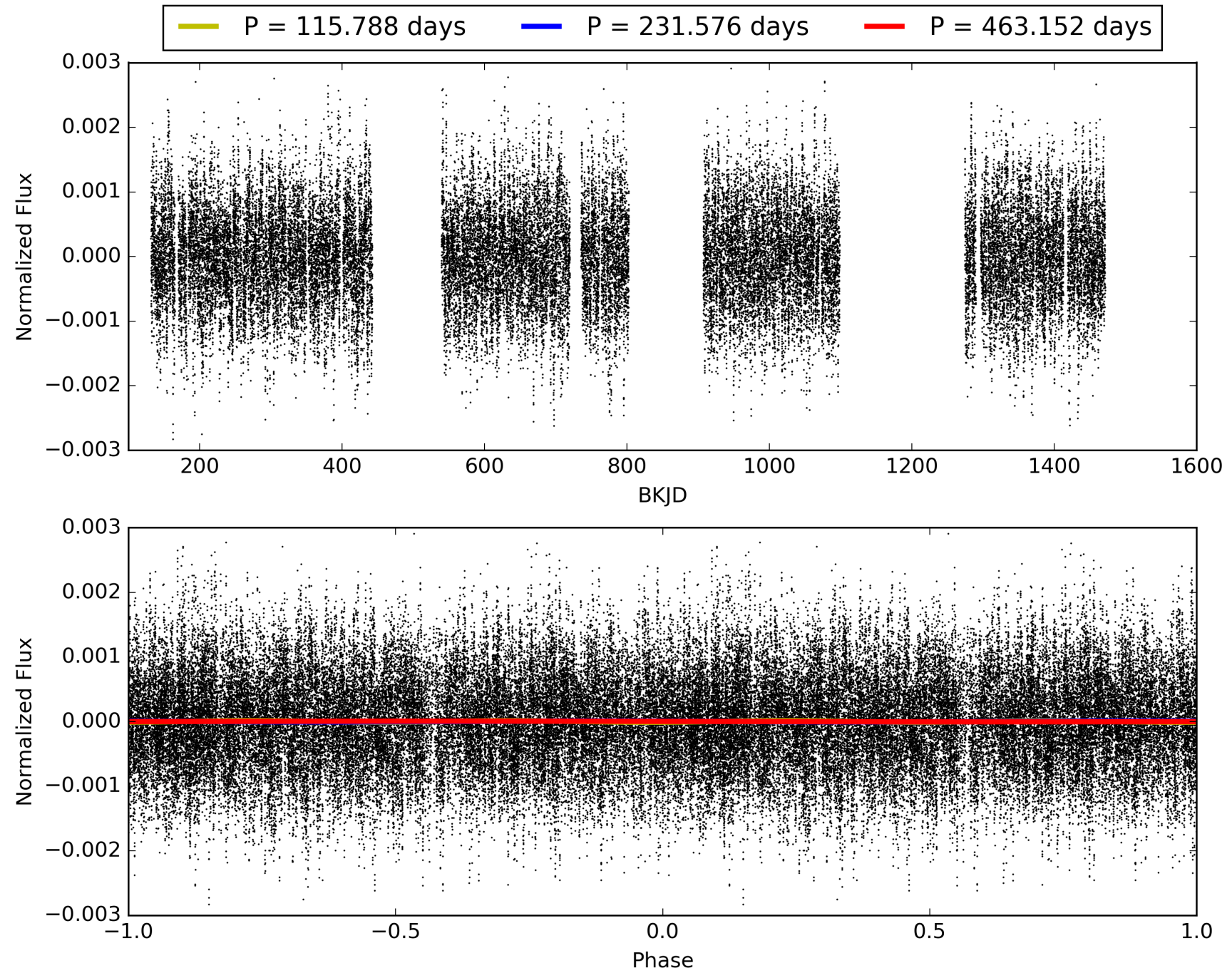
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:31:57 Z

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

TCE 004633249-01, PDC Light Curves

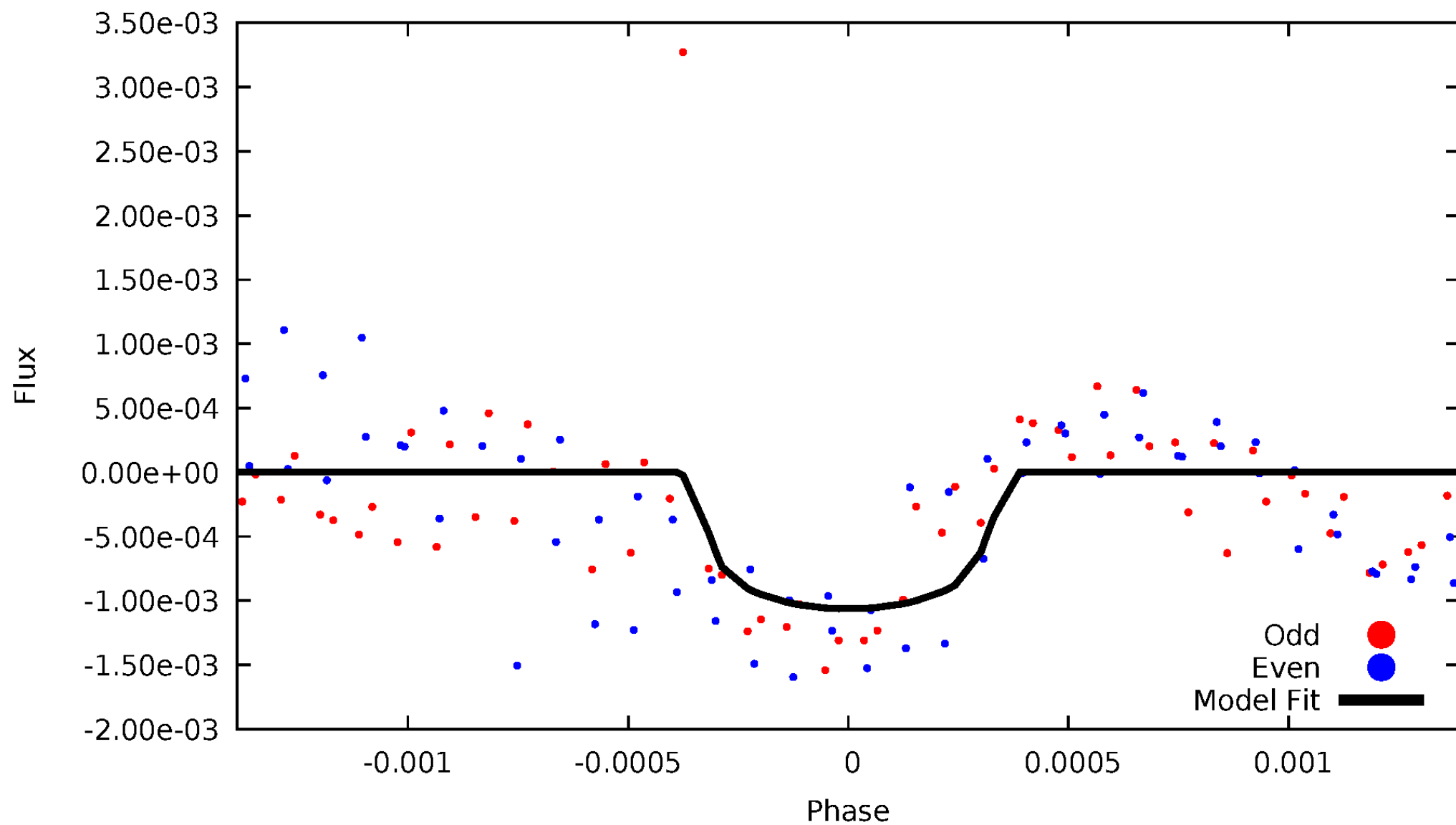


TCE 004633249-01



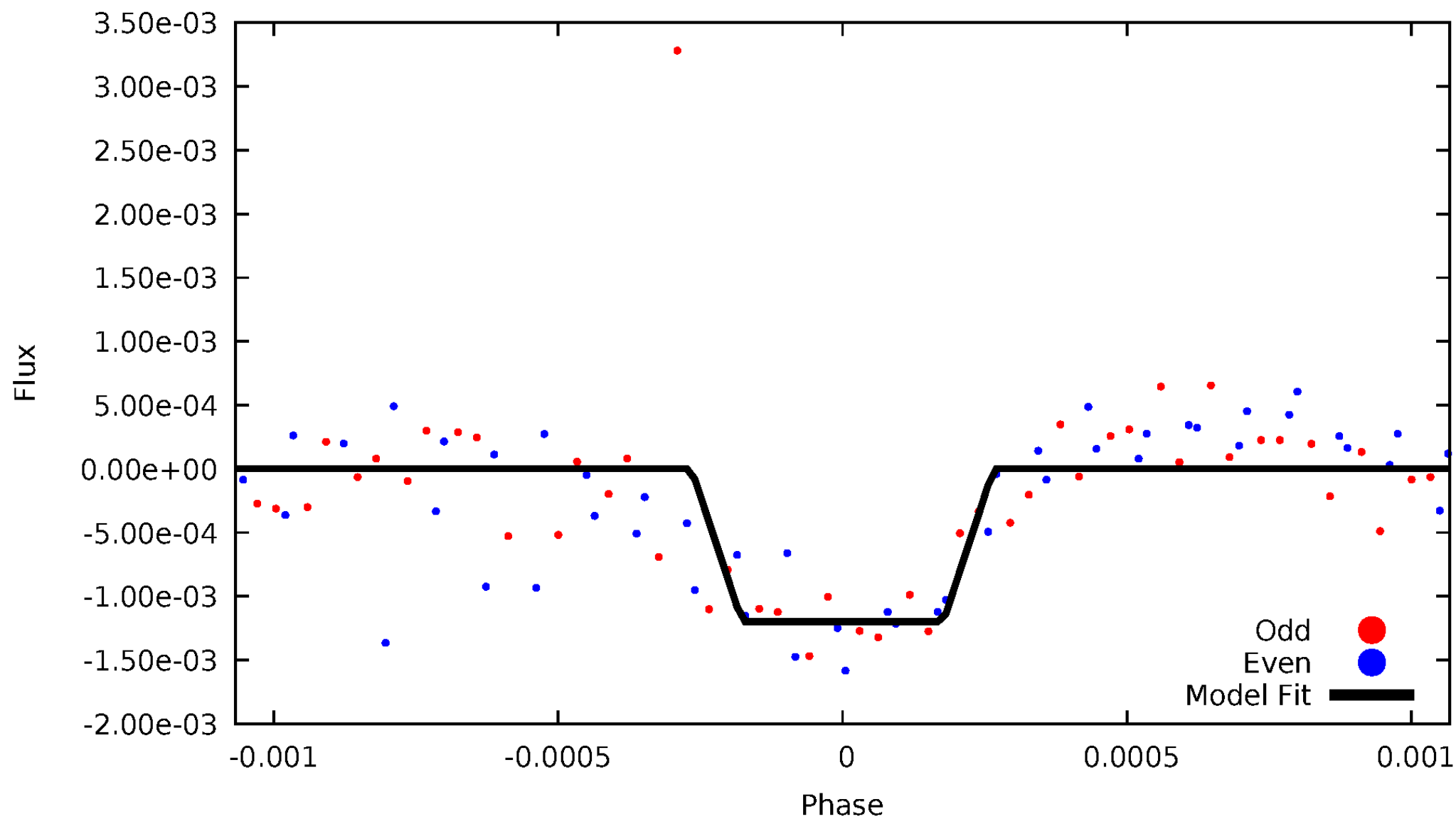
DV Odd/Even

TCE 004633249-01



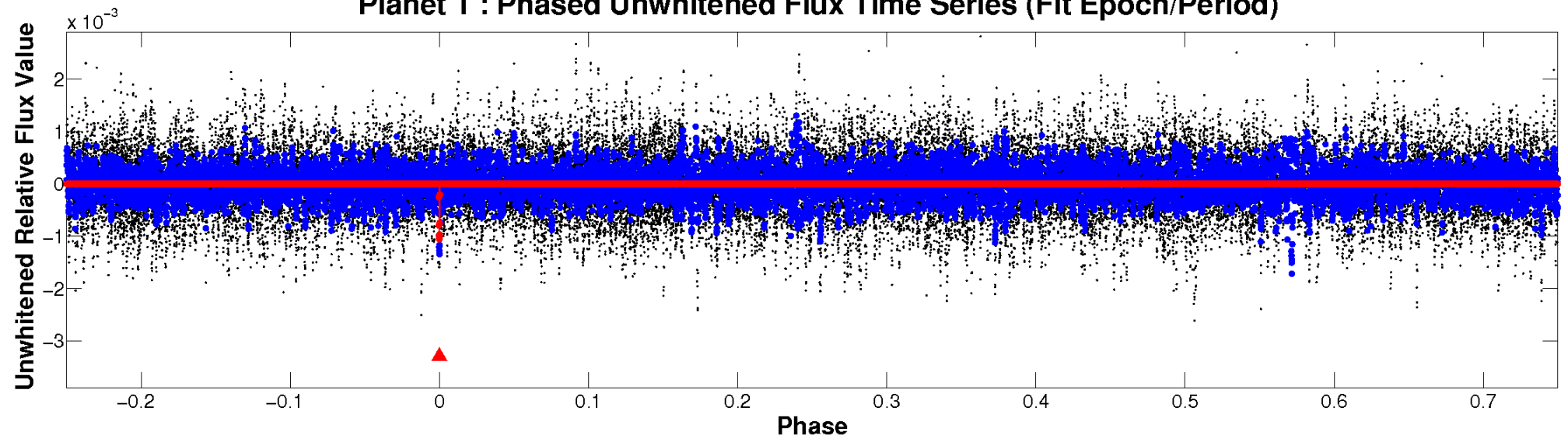
ALT Odd/Even

TCE 004633249-01

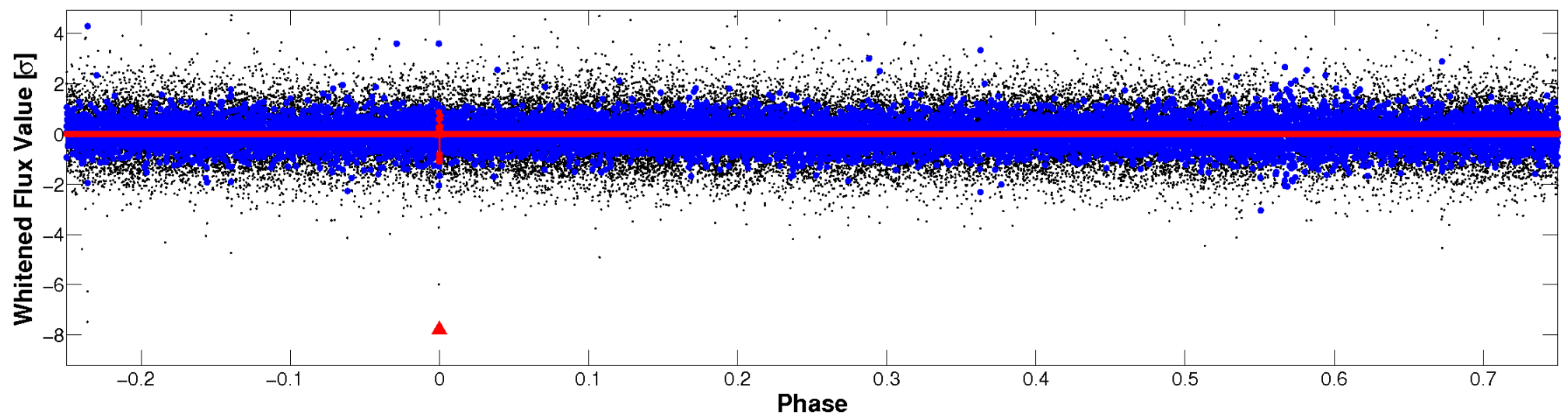


Non-Whitened Vs. Whitened Light Curve

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

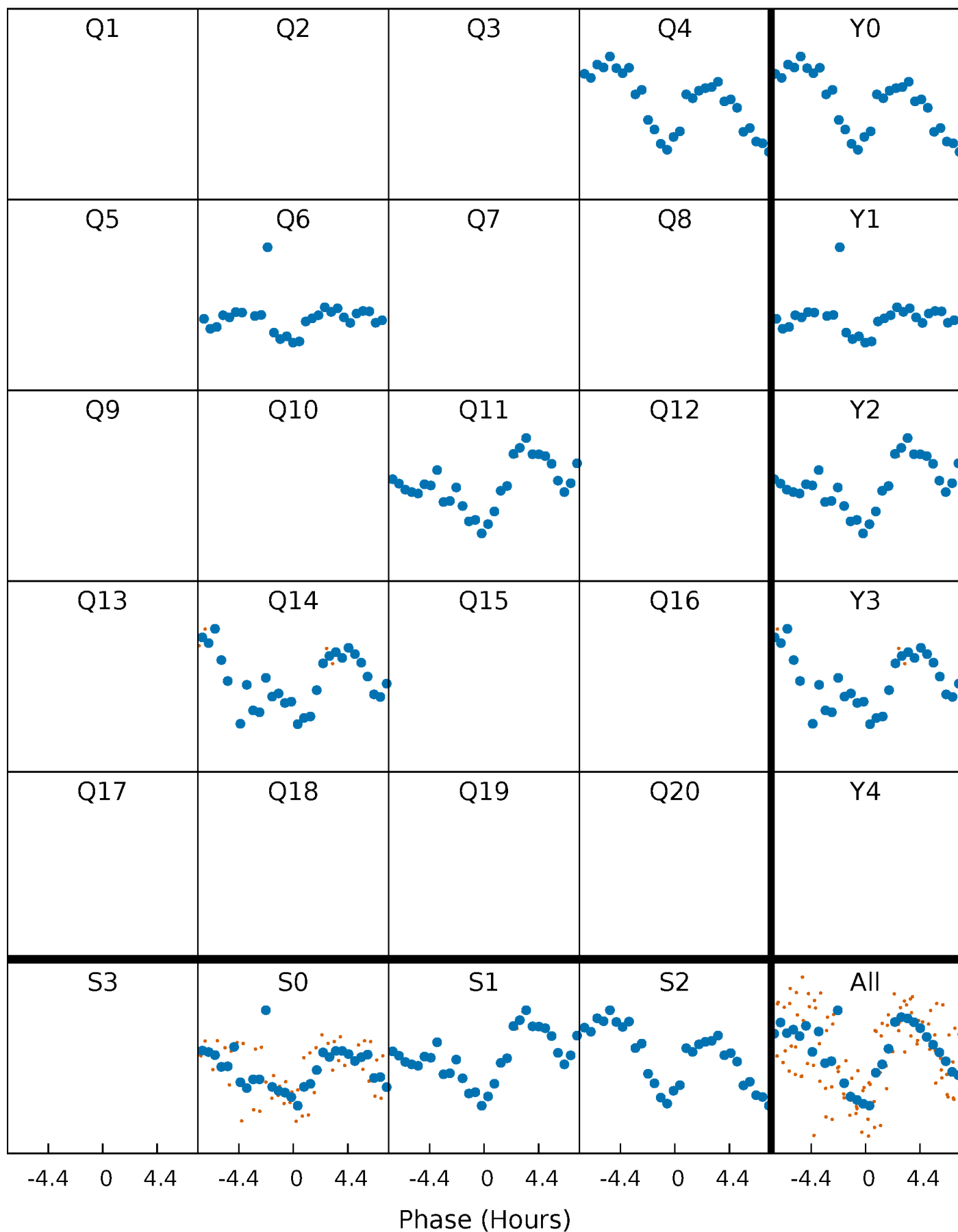


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



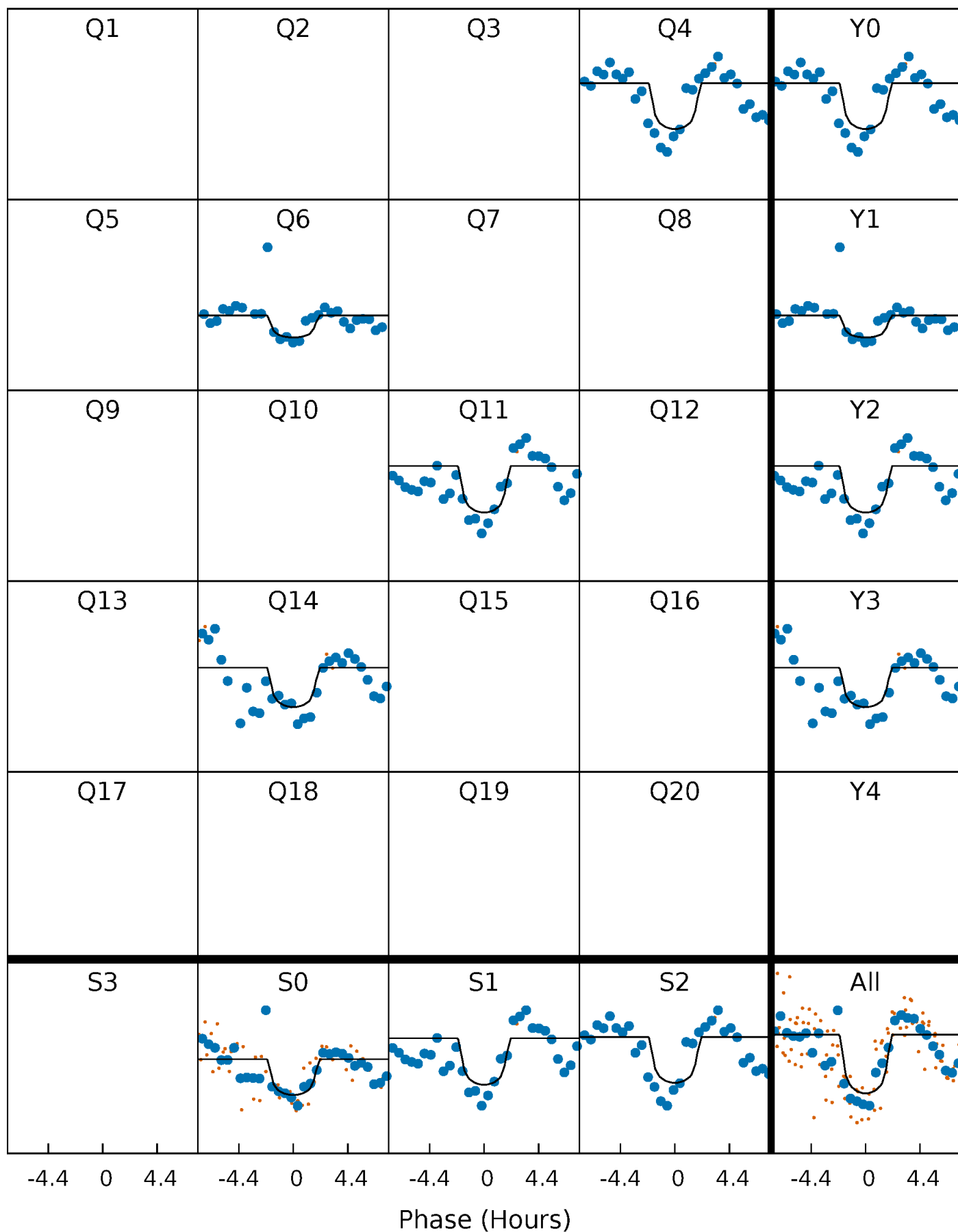
PDC Quarter-Phased Transit Curves

TCE 004633249-01 P=231.575753 Days $T_0=358.923281$ (BKJD)



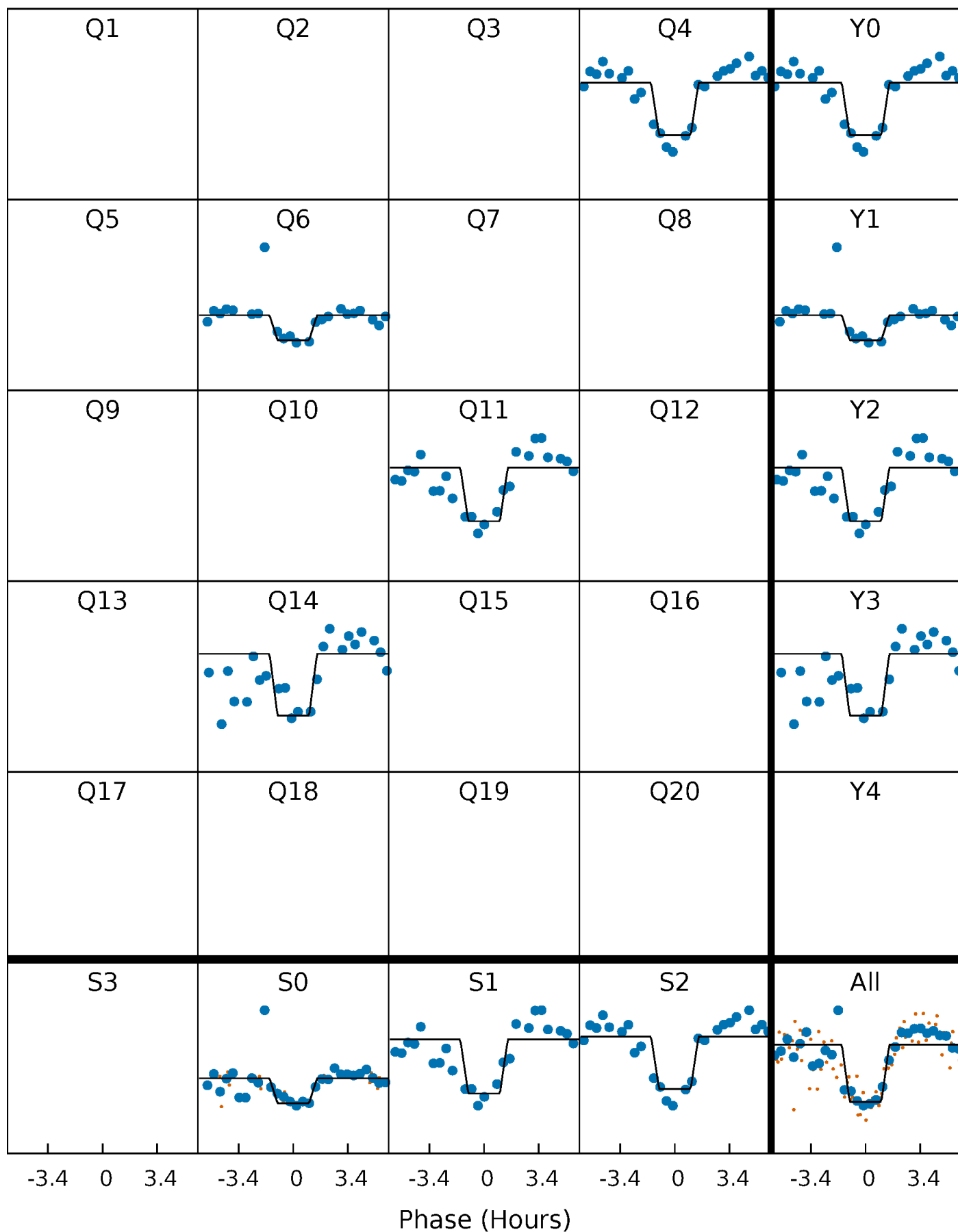
DV Quarter-Phased Transit Curves

TCE 004633249-01 P=231.575753 Days $T_0=358.923281$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

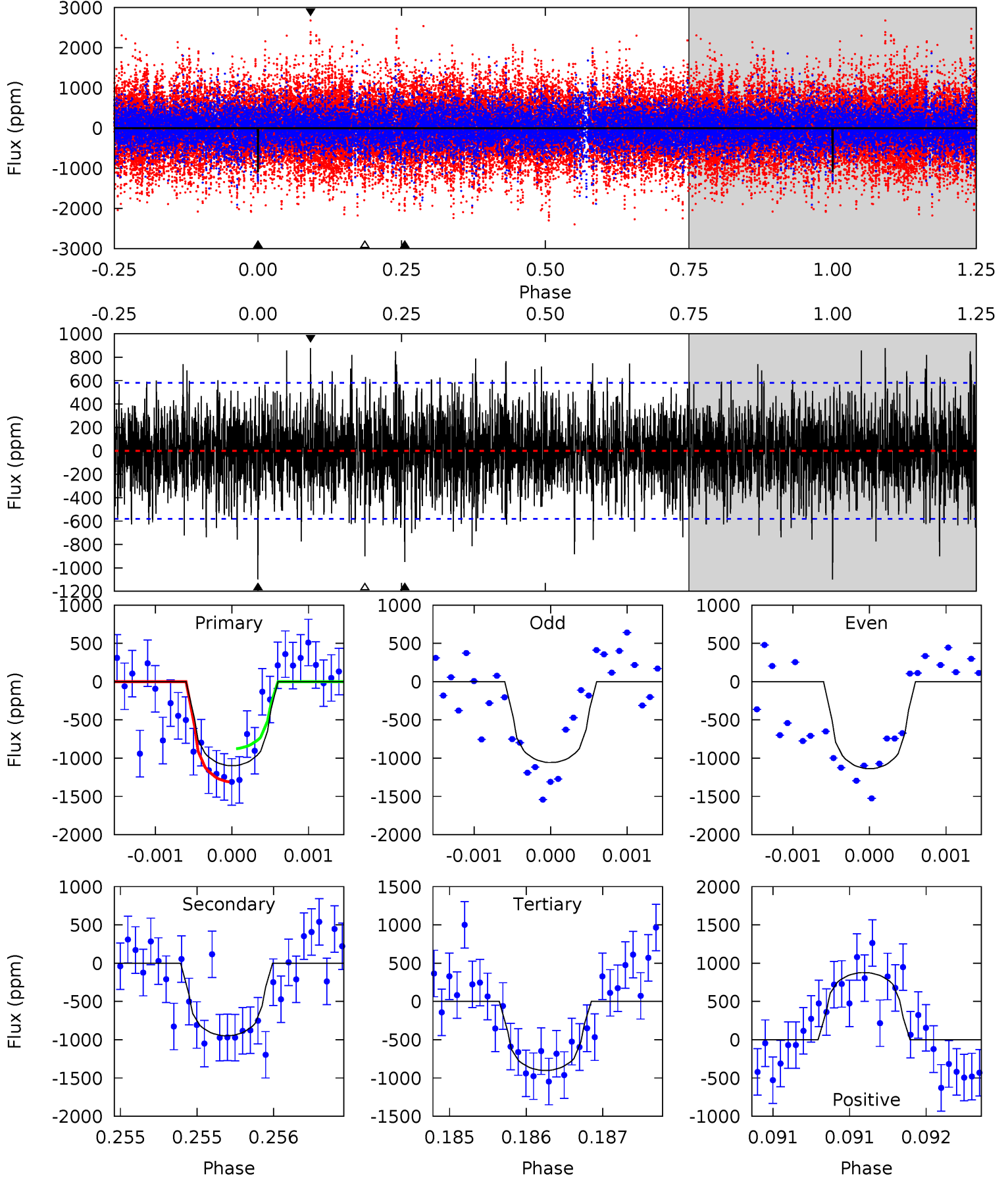
TCE 004633249-01 P=231.586270 Days $T_0=358.893117$ (BKJD)



DV Model-Shift Uniqueness Test

004633249-01, P = 231.575753 Days, E = 127.347528 Days

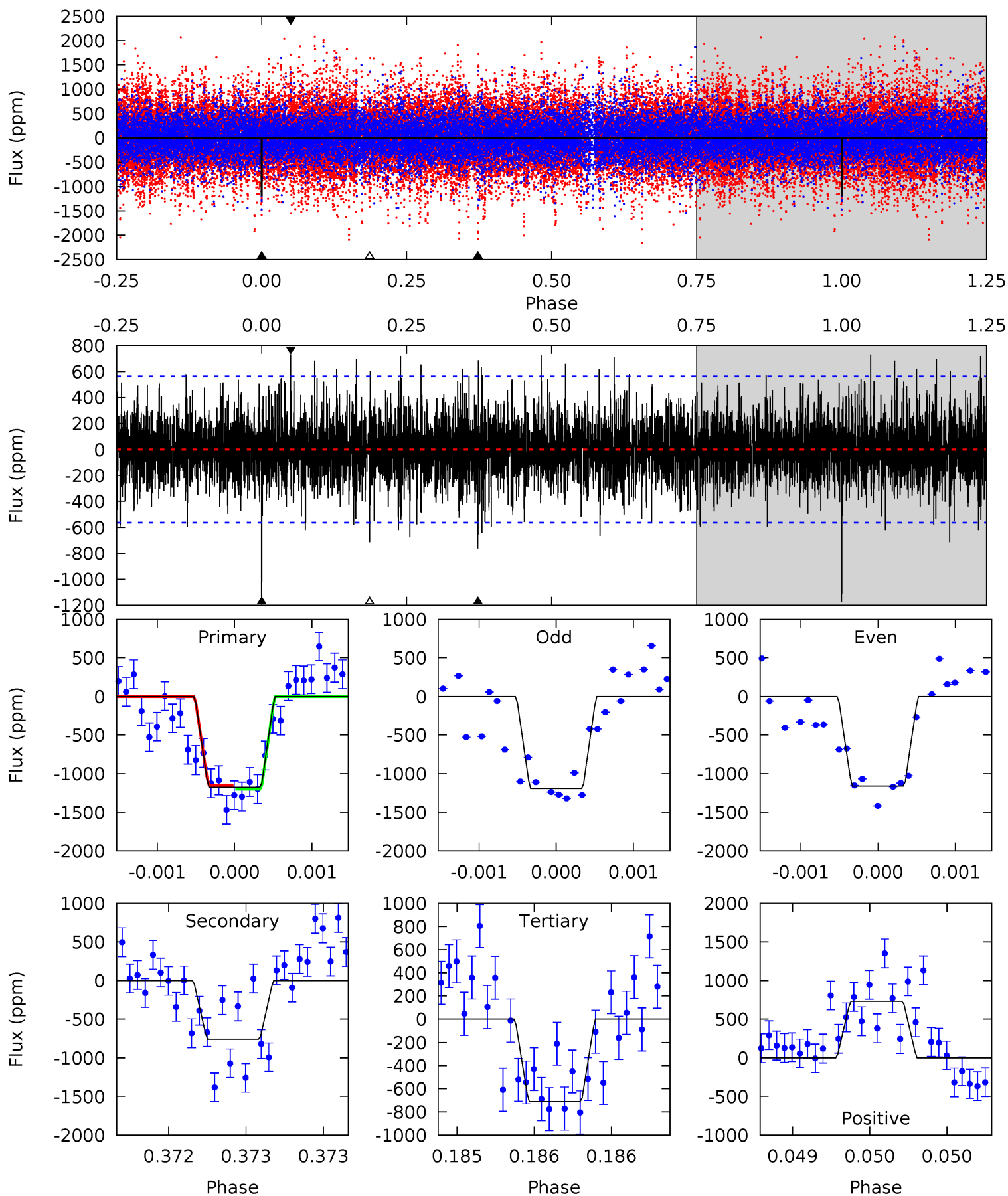
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.4	9.01	8.57	8.34	5.53	3.41	2.32	1.88	2.11	0.45	0.68	0.38	0.99	0.44	2.06



Alt Model-Shift Uniqueness Test

004633249-01, P = 231.586270 Days, E = 127.306847 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.6	7.51	7.05	7.23	5.57	3.47	1.93	4.57	4.39	0.47	0.29	0.17	0.99	0.38	0.27



Stellar Parameters For KIC 004633249

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5148^{+163}_{-265}	$2.389^{+0.033}_{-0.030}$	$-0.500^{+0.050}_{-0.450}$	$17.748^{+1.536}_{-6.145}$	$2.812^{+0.184}_{-1.660}$	$0.001^{+0.000}_{-0.000}$
	+3%/-5%	+1%/-1%	+10%/-90%	+9%/-35%	+7%/-59%	+57%/-14%
Source	PHO1	AST9	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 004633249-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-948 ± 105	$71.42^{+59.46}_{-49.28}$	1304^{+50}_{-69}	4669^{+3753}_{-908}	112^{+997}_{-78}
Alt.	-760 ± 101	$75.60^{+56.37}_{-45.76}$	1312^{+42}_{-79}	4429^{+2213}_{-837}	79^{+413}_{-53}

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

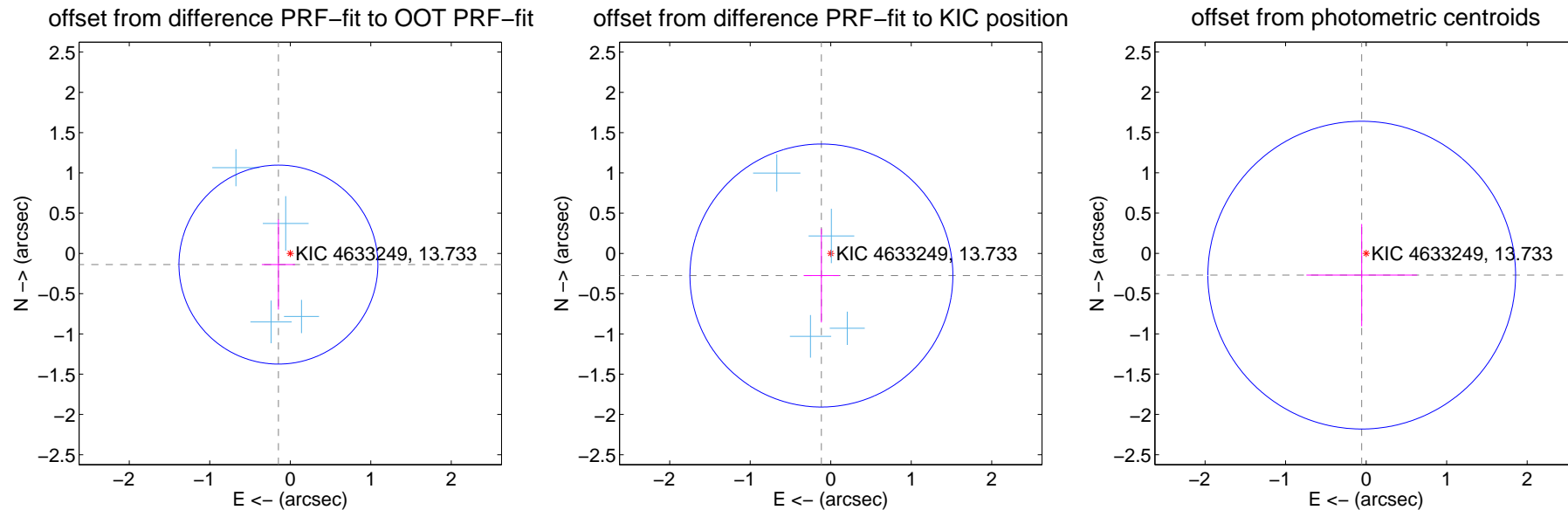
DV Centroid Data

Supplemental centroid analysis for 004633249-01. Kepler magnitude: 13.73. Transit SNR 5.58

There are 4 quarters with good PRF difference image offsets

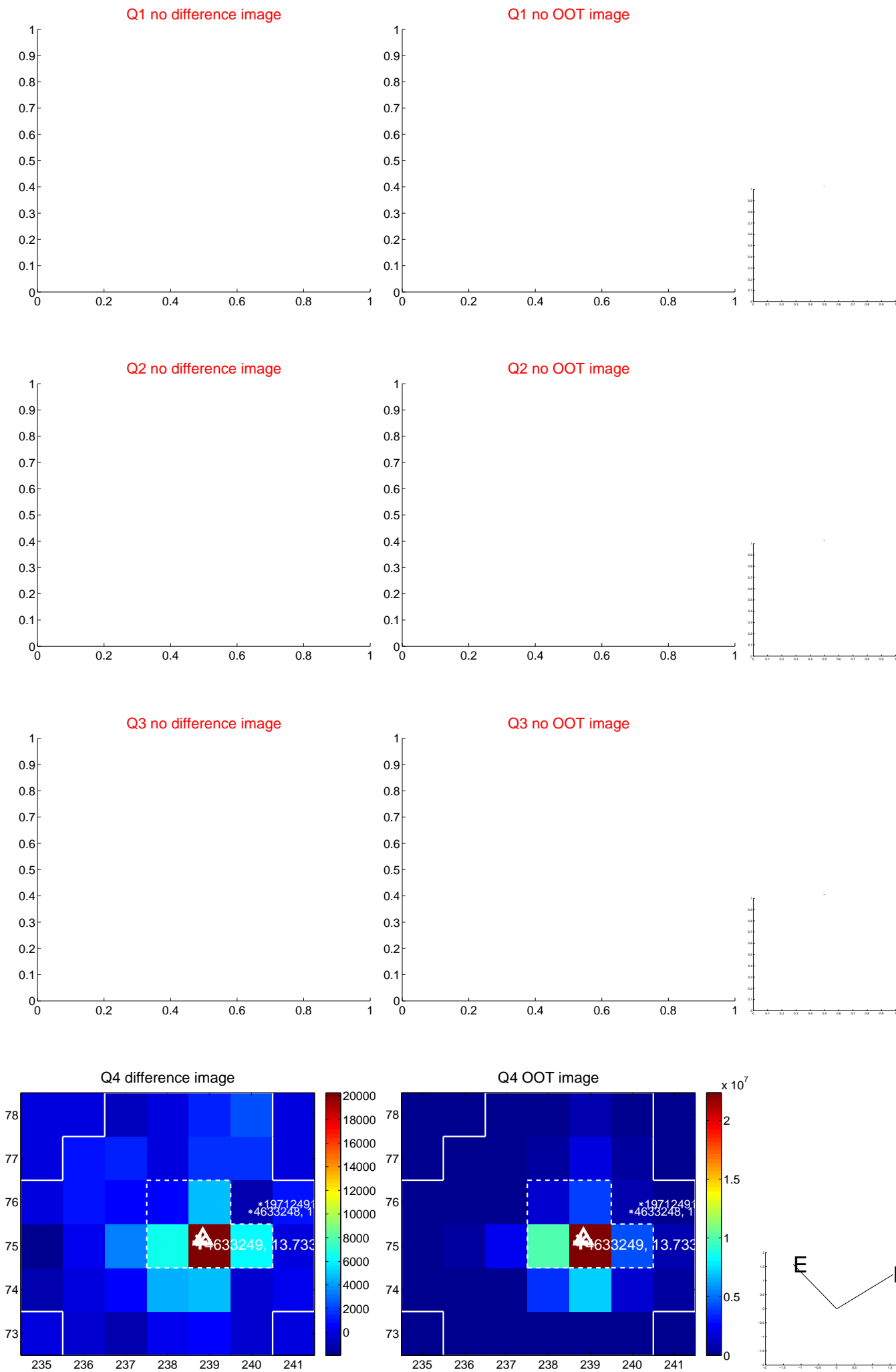
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.202 ± 0.412	0.49	0.147 ± 0.206	-0.139 ± 0.559
PRF-fit source offset from KIC position	0.298 ± 0.544	0.55	0.116 ± 0.221	-0.275 ± 0.583
photometric centroid source offset	0.28 ± 0.64	0.43	0.05 ± 0.69	-0.27 ± 0.63

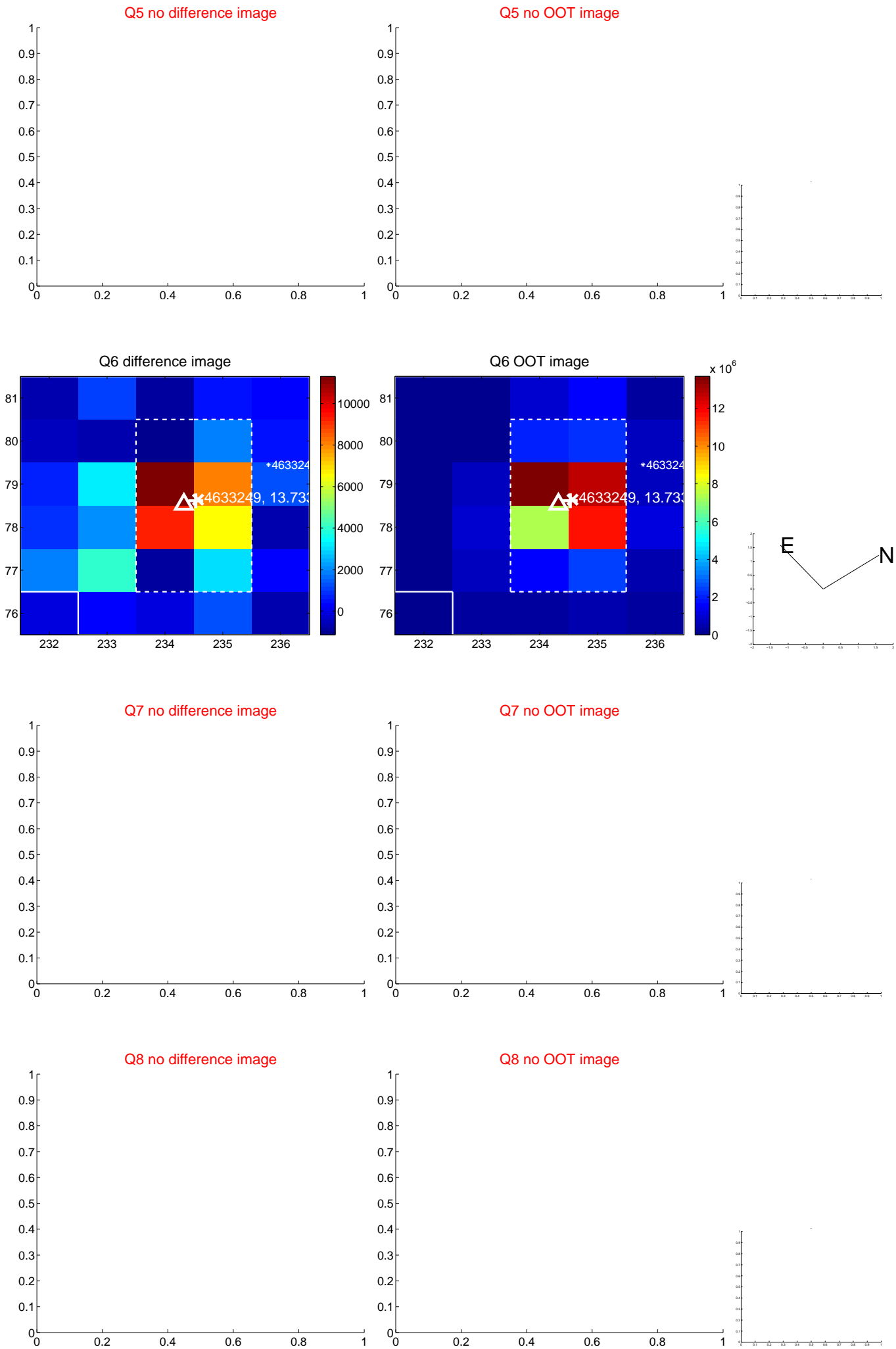


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

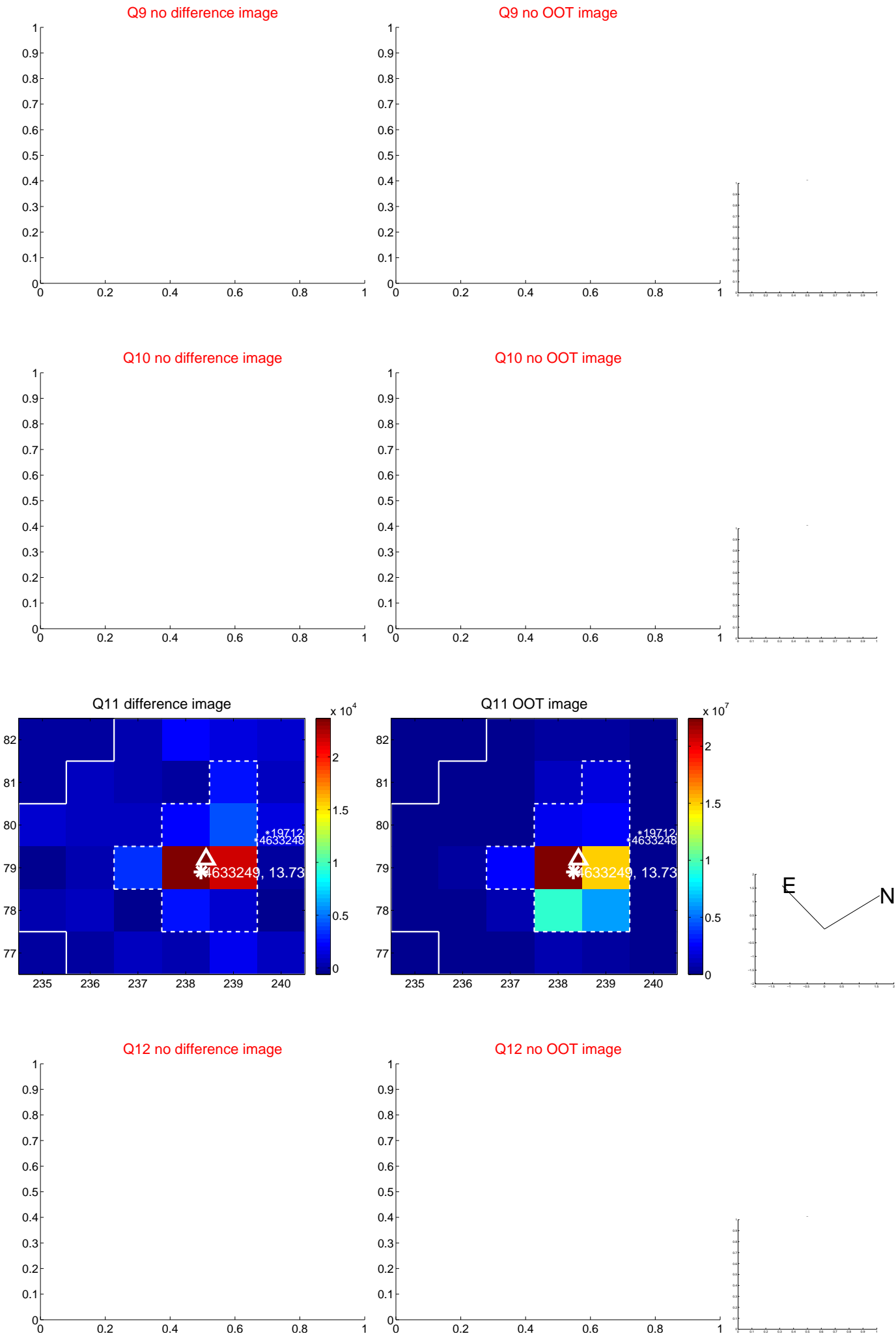
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



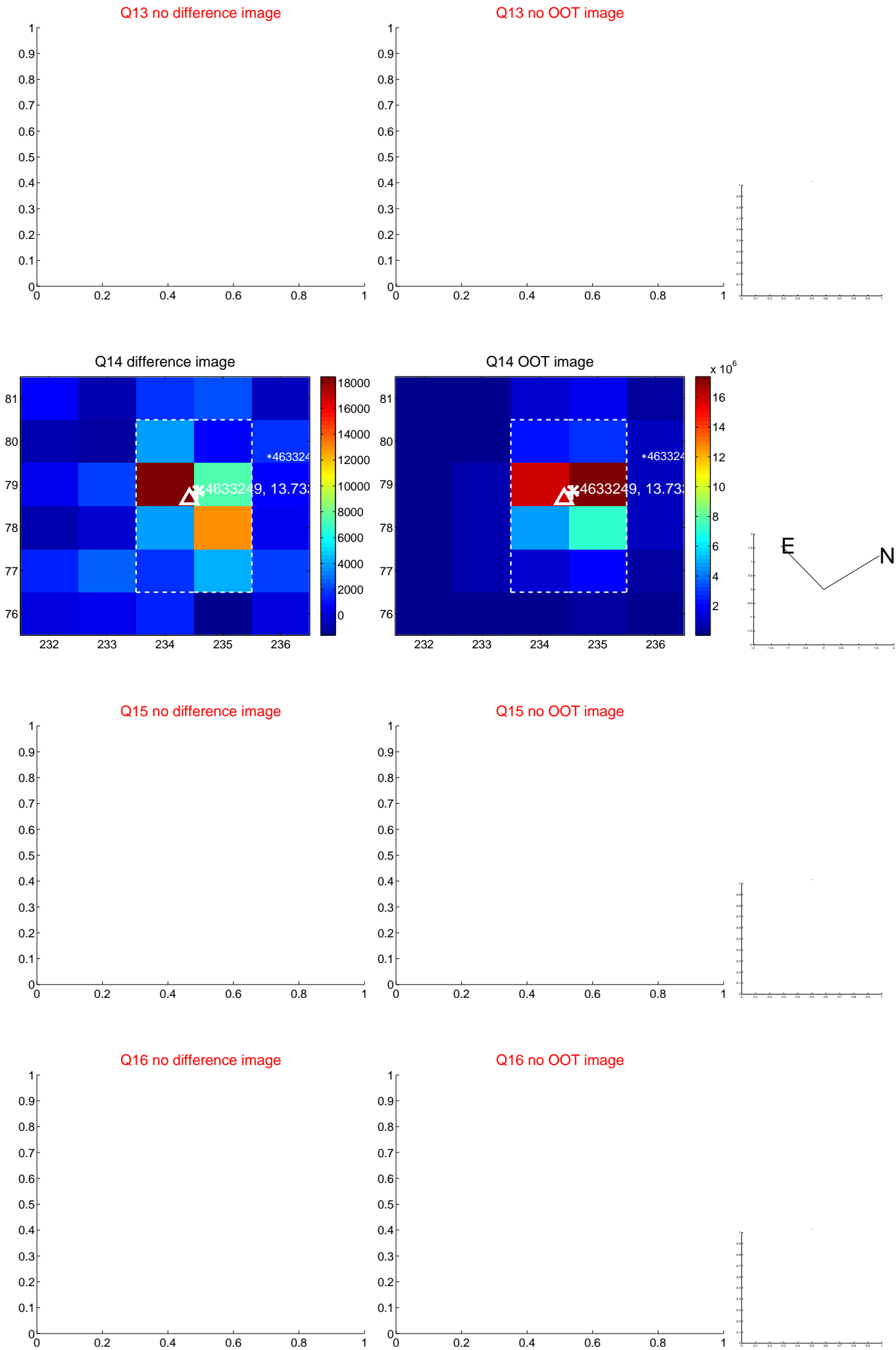
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



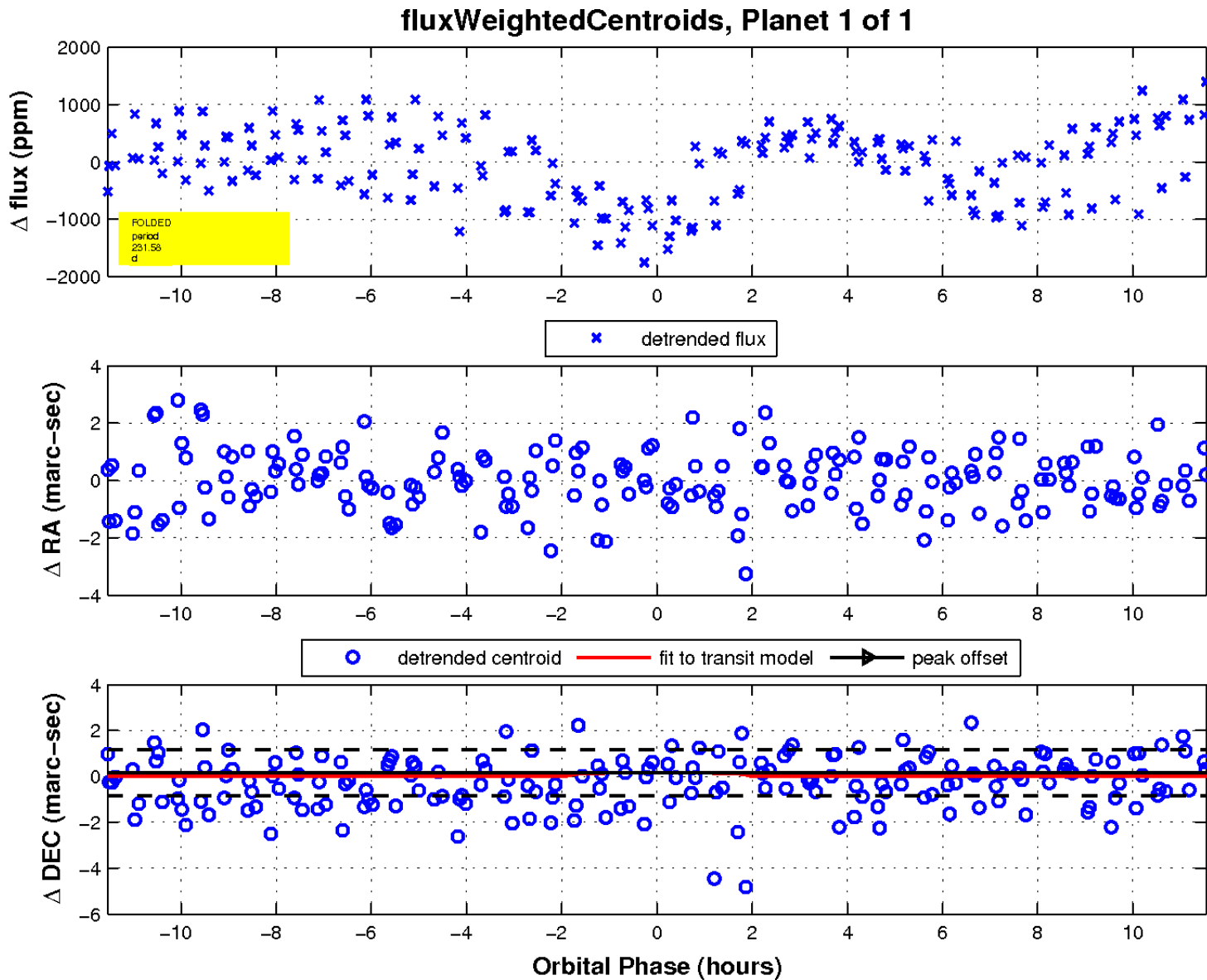
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

