

KIC 008736245

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})
008736245-01	OBS	7082.01	2.534740	133.478212	360226.3	5.344	21998.2	22665.2	0.78	5810	48.47	542.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008736245-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT

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.

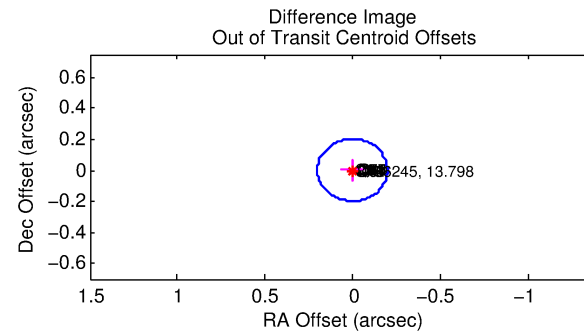
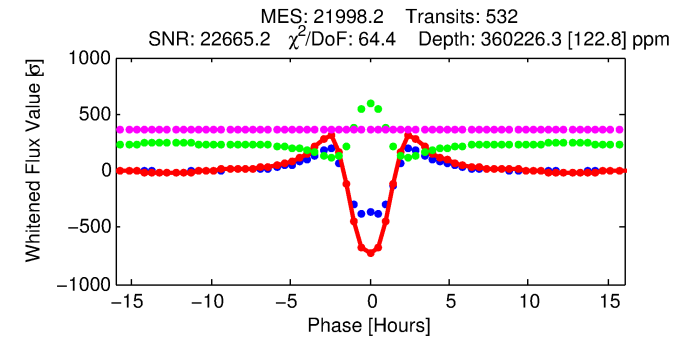
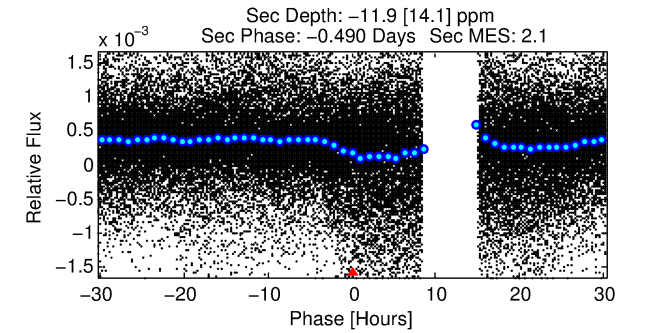
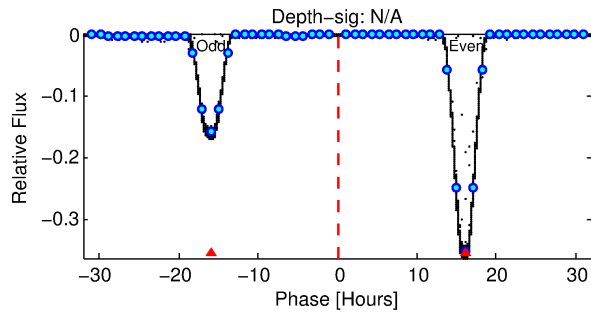
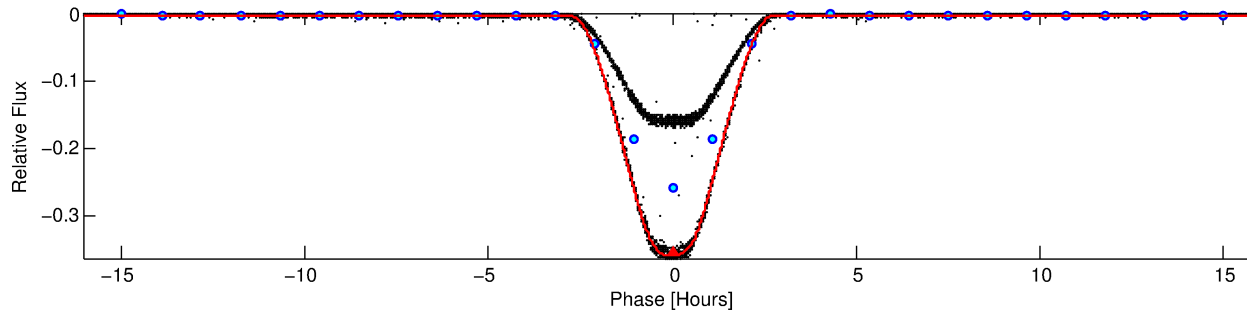
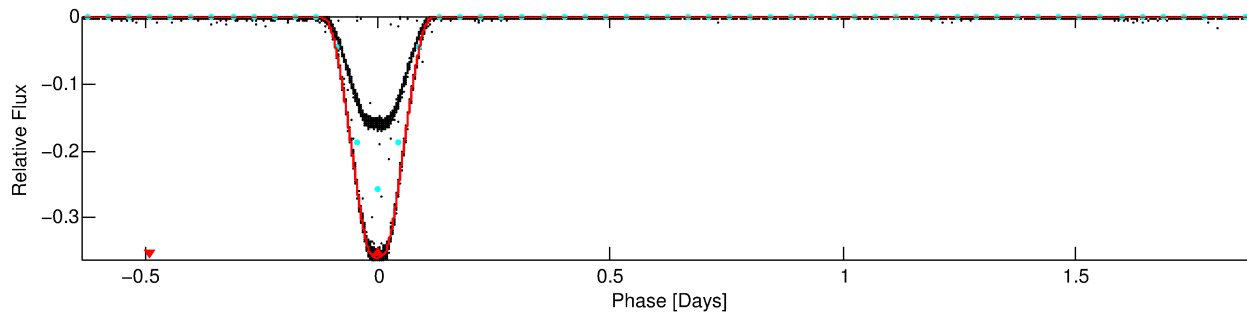
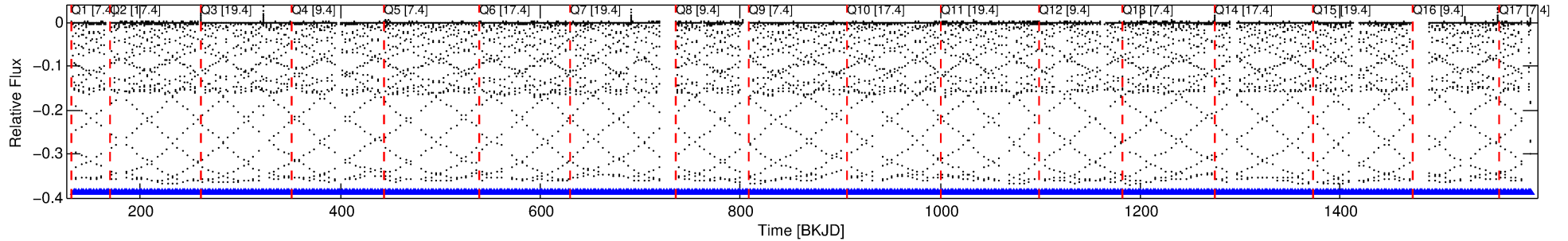
Ephemeris Match Information For 008736245-01

No Significant Match Found

DV One-Page Summary

KIC: 8736245 Candidate: 1 of 1 Period: 2.535 d
KOI: K07082.01 Corr: 0.954

Kp: 13.80 R*: 0.78 Rs Teff: 5810.0 K Logg: 4.56 Fe/H: -0.620



DV Fit Results:

Period = 2.53474 [0.00000] d
Epoch = 133.4782 [0.0000] BKJD
Rp/R* = 0.5688 [0.0001]
a/R* = 5.65 [0.00]
b = 0.32 [0.00]
Seff = 542.15 [160.16]
Teq = 1230 [91] K
Rp = 48.47 [10.92] Re
a = 0.0339 [0.0064] AU
Ag = N/A
Teffp = N/A

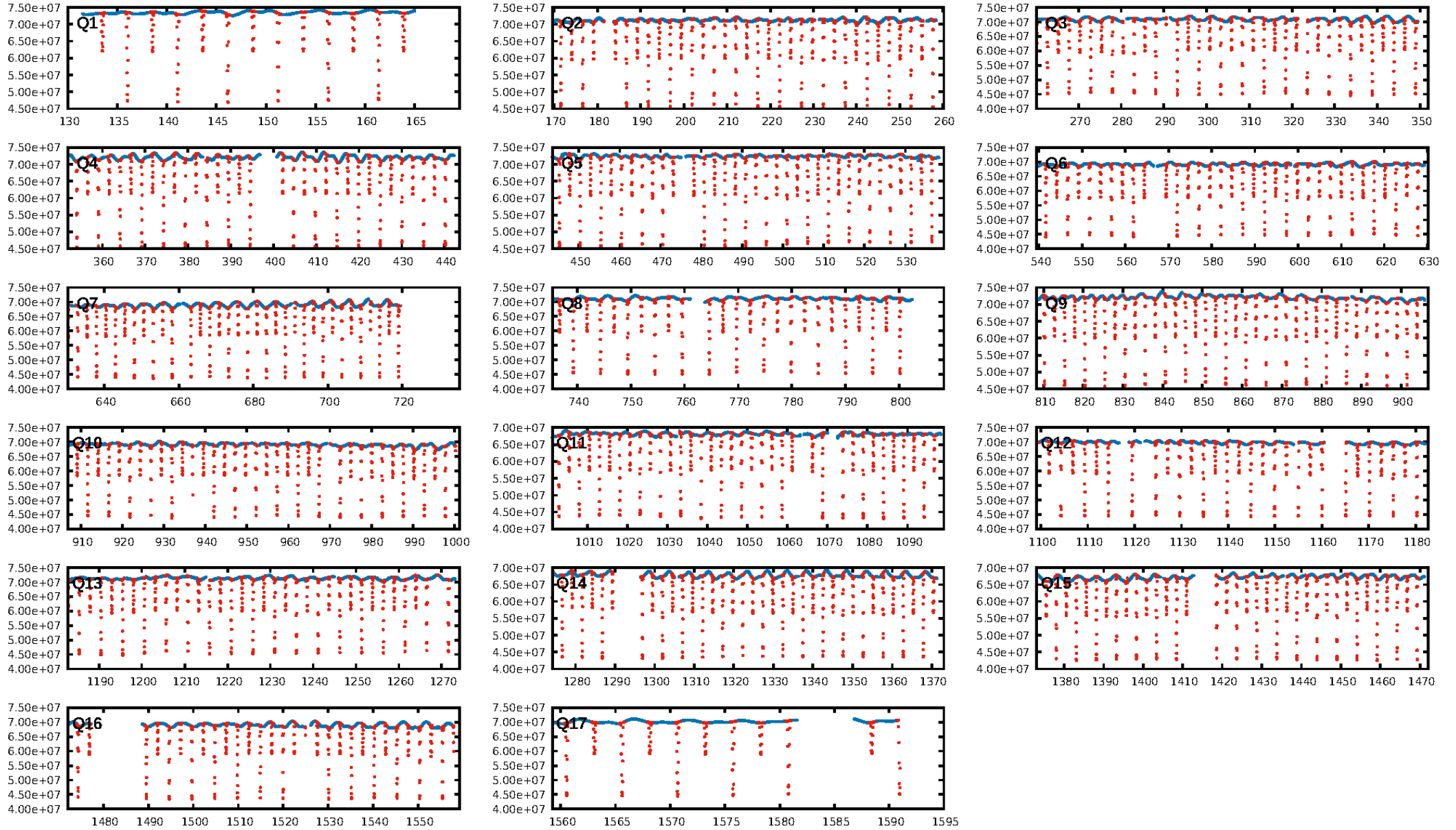
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [508/508]
GhostDiagnostic-chr: 0.7002
Centroid-sig: N/A
Centroid-so: 0.170 arcsec [596.68σ]
OotOffset-rm: 0.005 arcsec [0.07σ]
KicOffset-rm: 0.153 arcsec [2.21σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

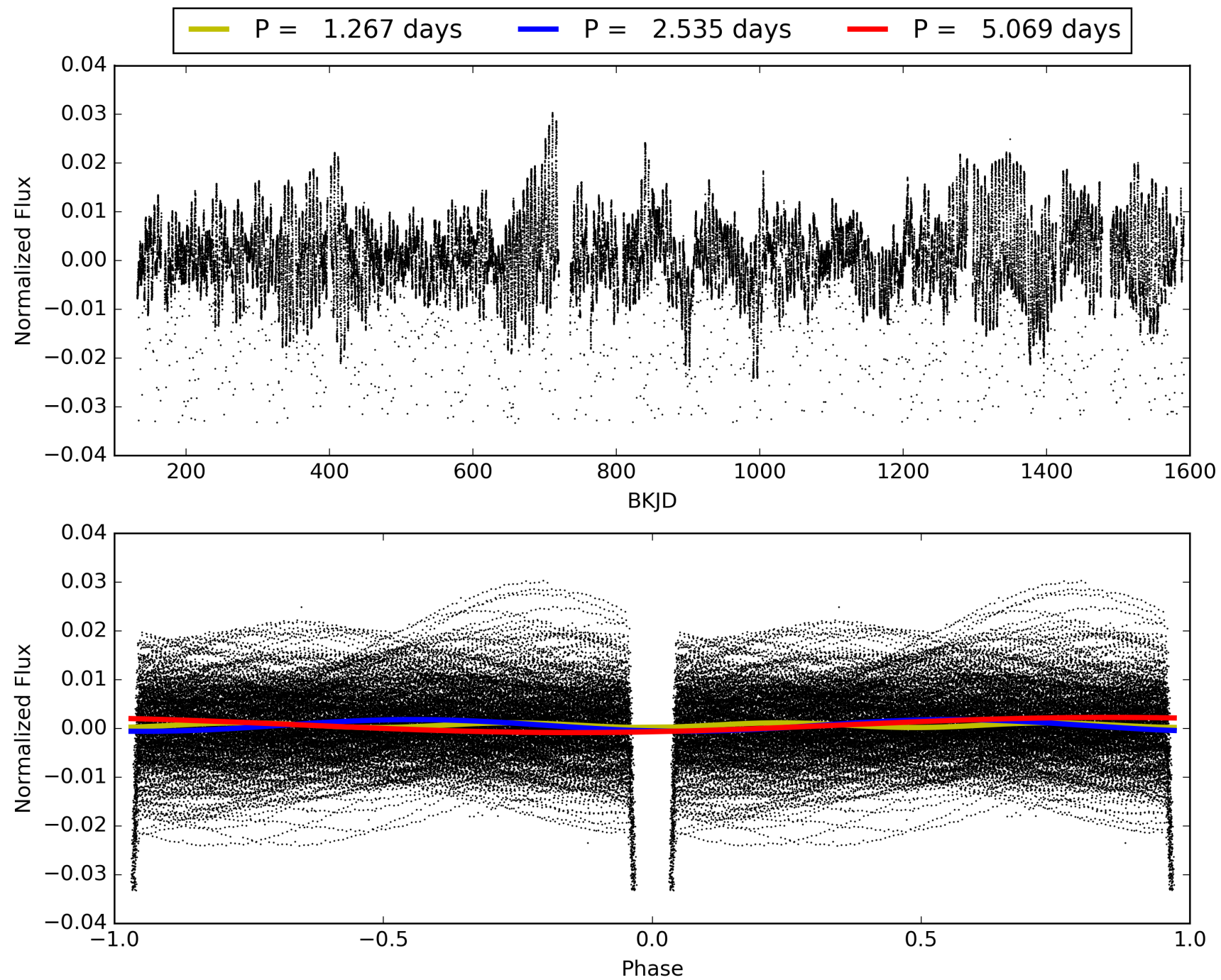
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 08:01:16 Z

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

TCE 008736245-01, PDC Light Curves

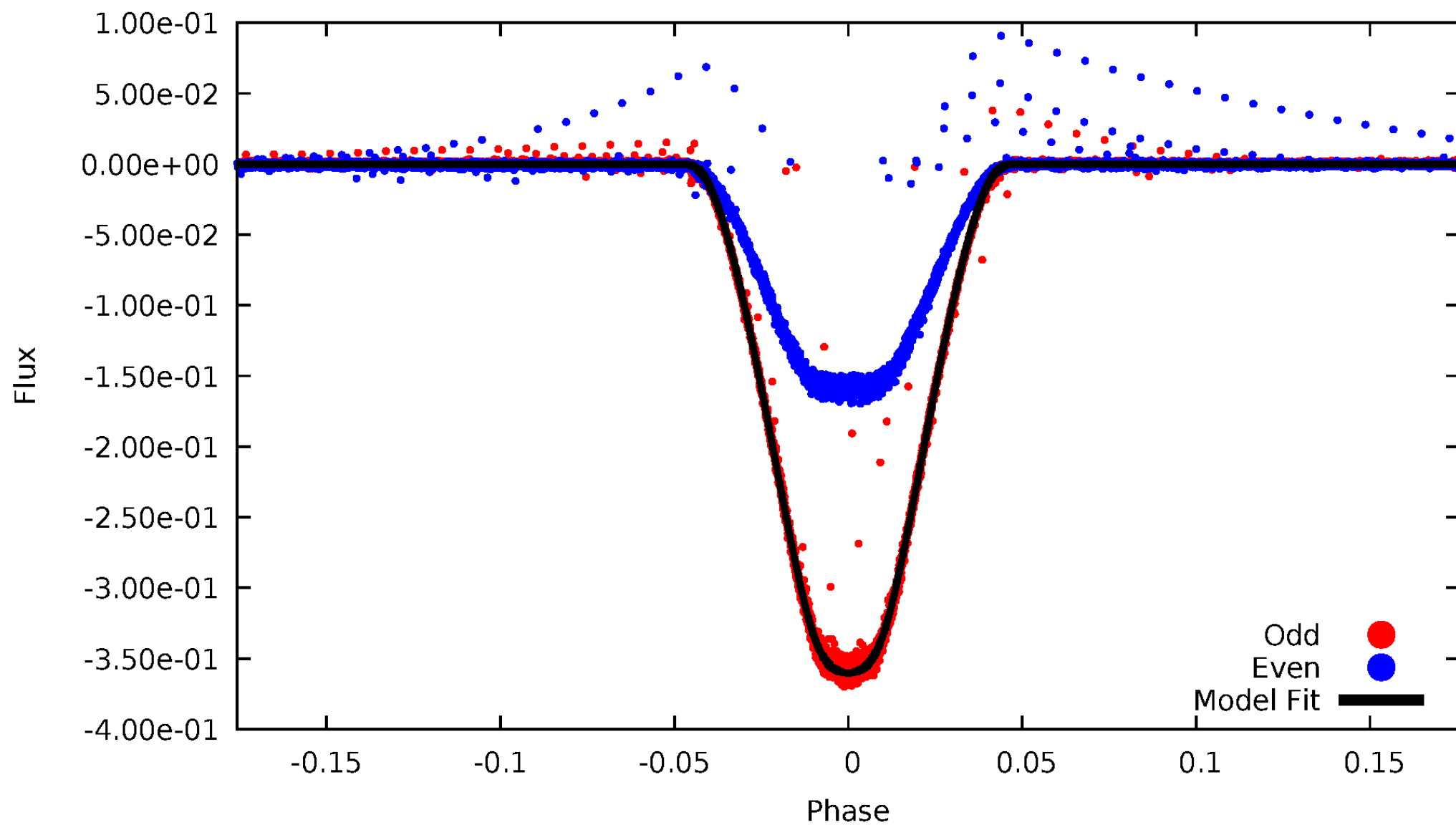


TCE 008736245-01



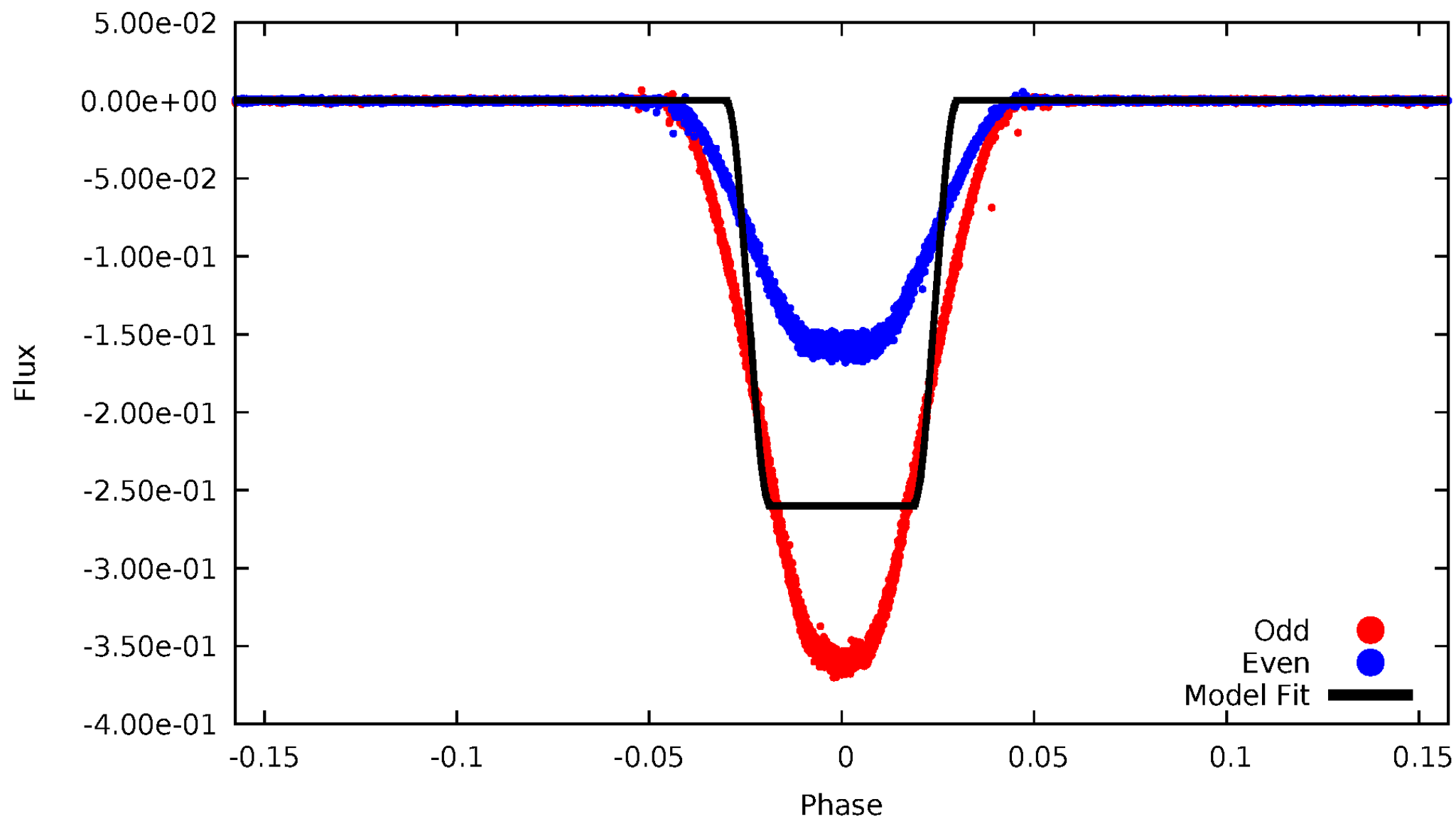
DV Odd/Even

TCE 008736245-01



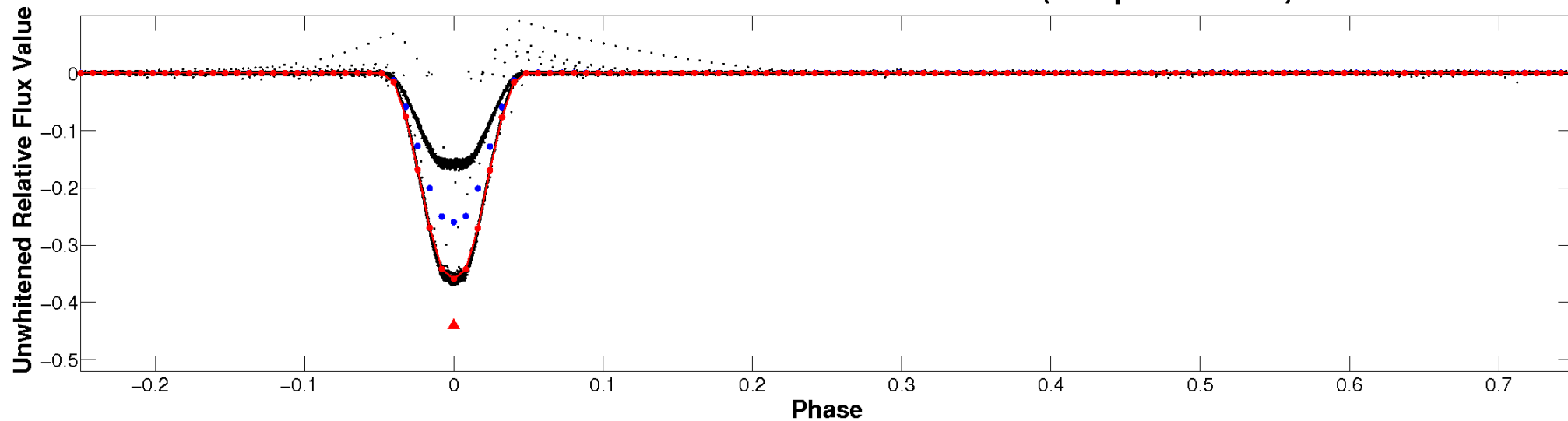
ALT Odd/Even

TCE 008736245-01

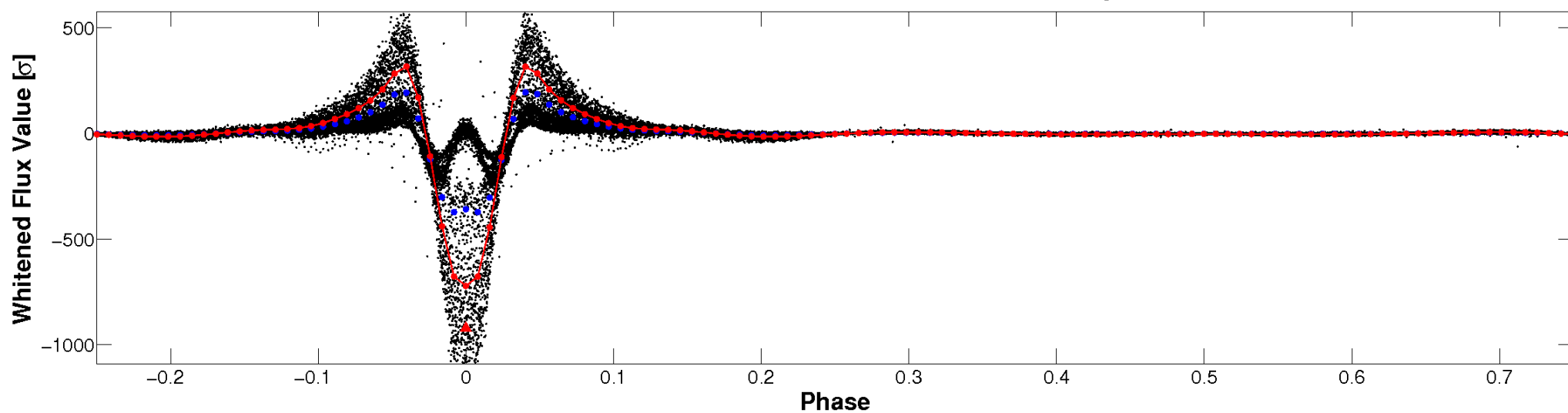


Non-Whitened Vs. Whitened Light Curve

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

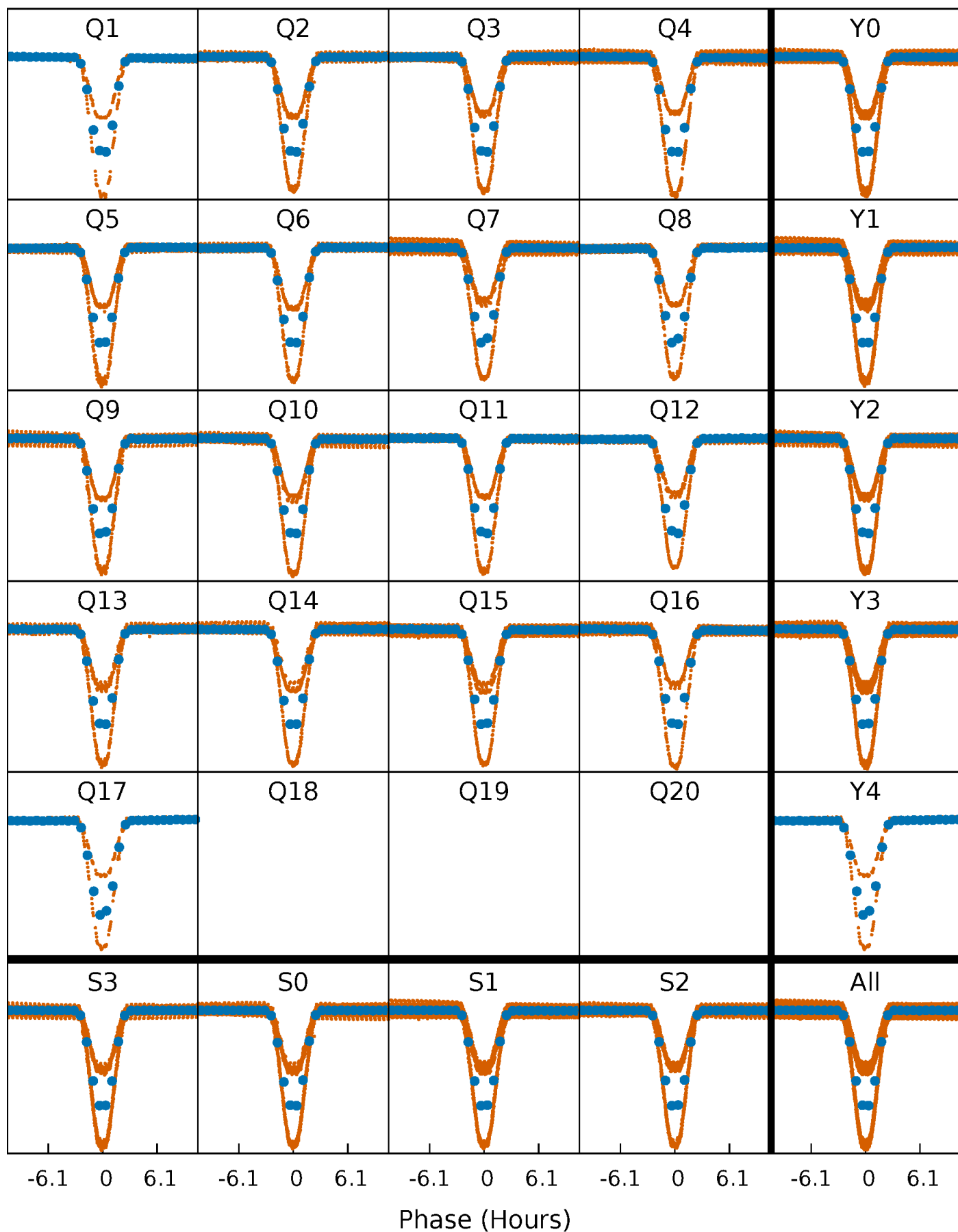


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



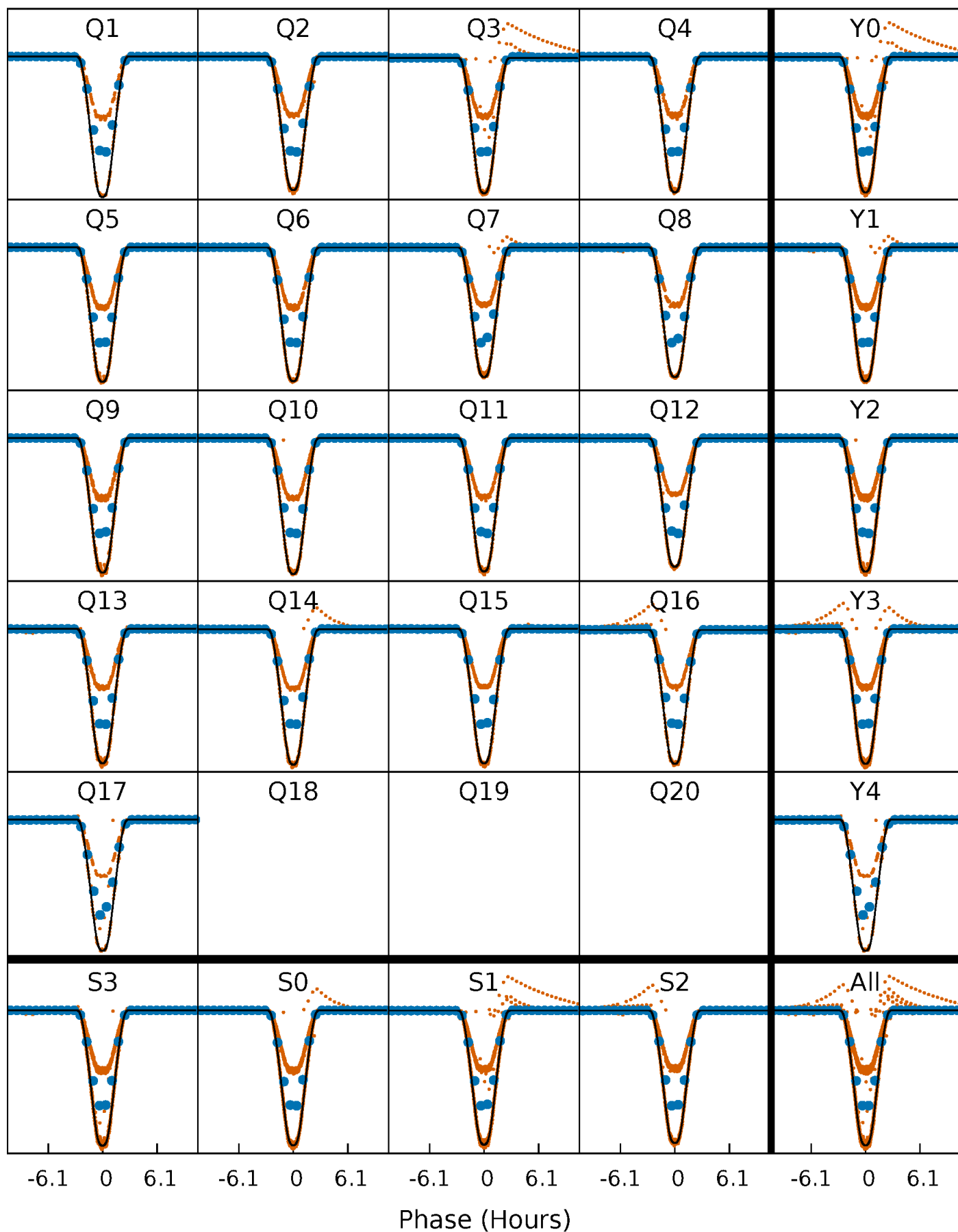
PDC Quarter-Phased Transit Curves

TCE 008736245-01 P= 2.534740 Days $T_0=133.478212$ (BKJD)



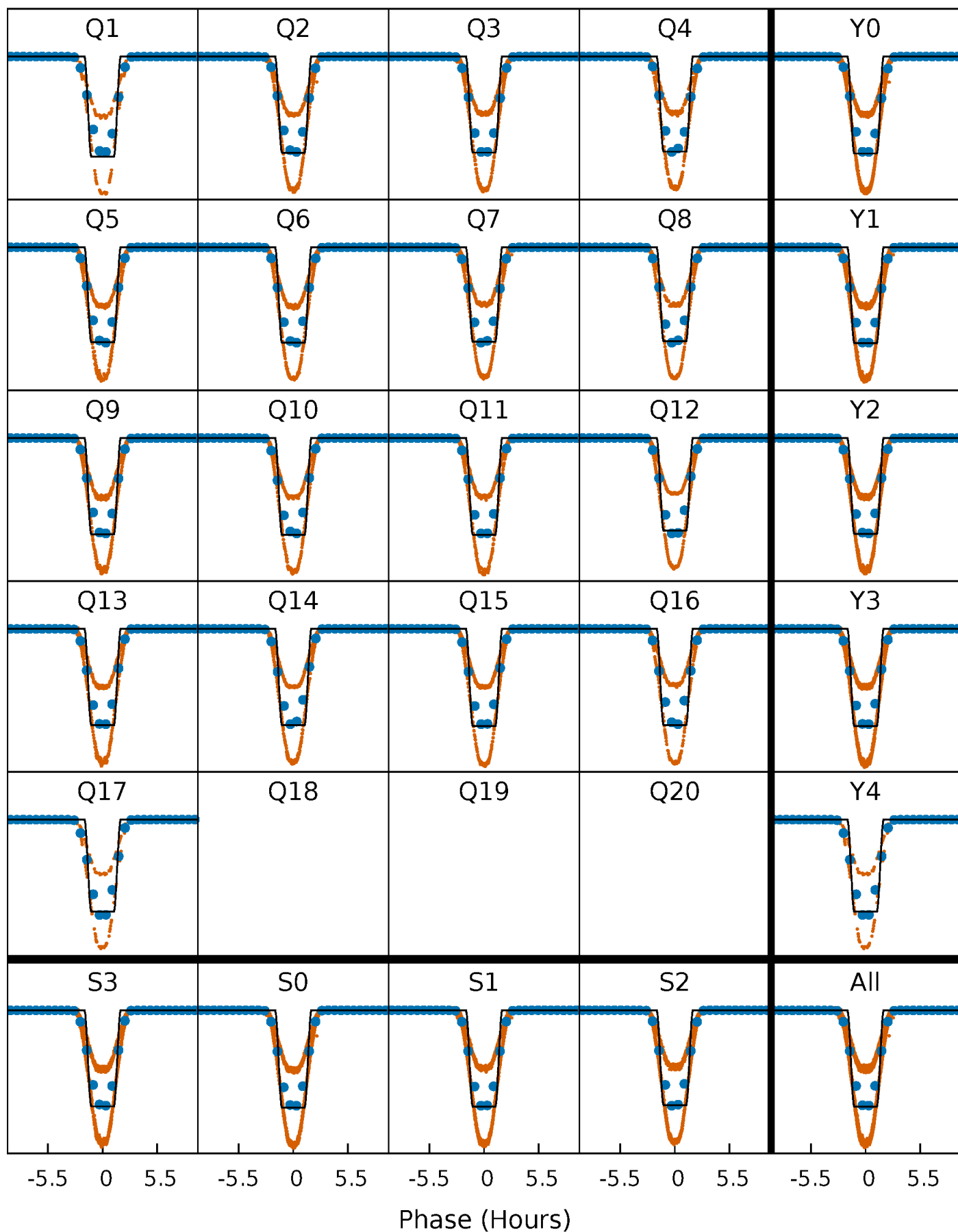
DV Quarter-Phased Transit Curves

TCE 008736245-01 P= 2.534740 Days $T_0=133.478212$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

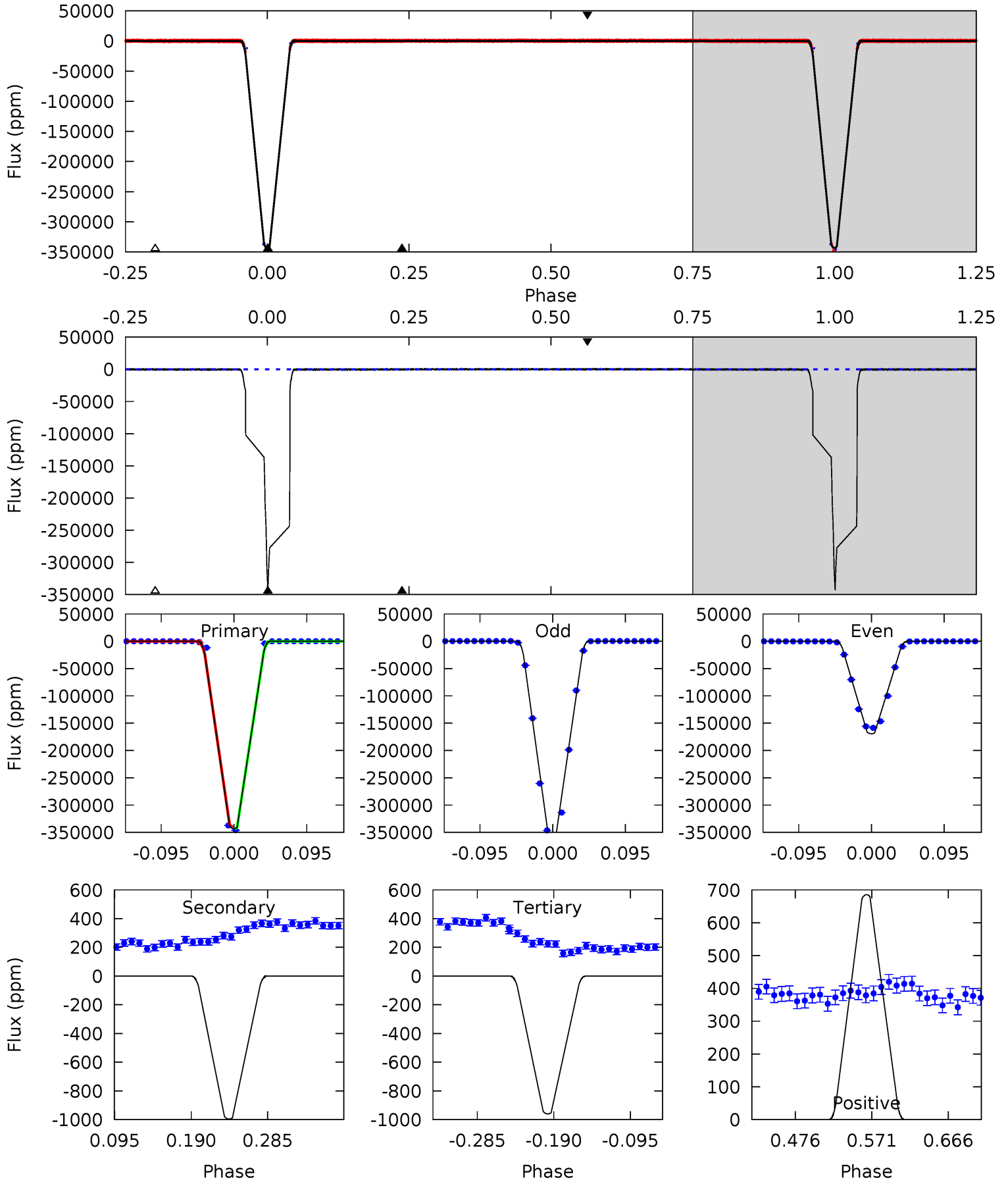
TCE 008736245-01 P= 2.534744 Days $T_0=133.476877$ (BKJD)



DV Model-Shift Uniqueness Test

008736245-01, P = 2.534740 Days, E = 130.943472 Days

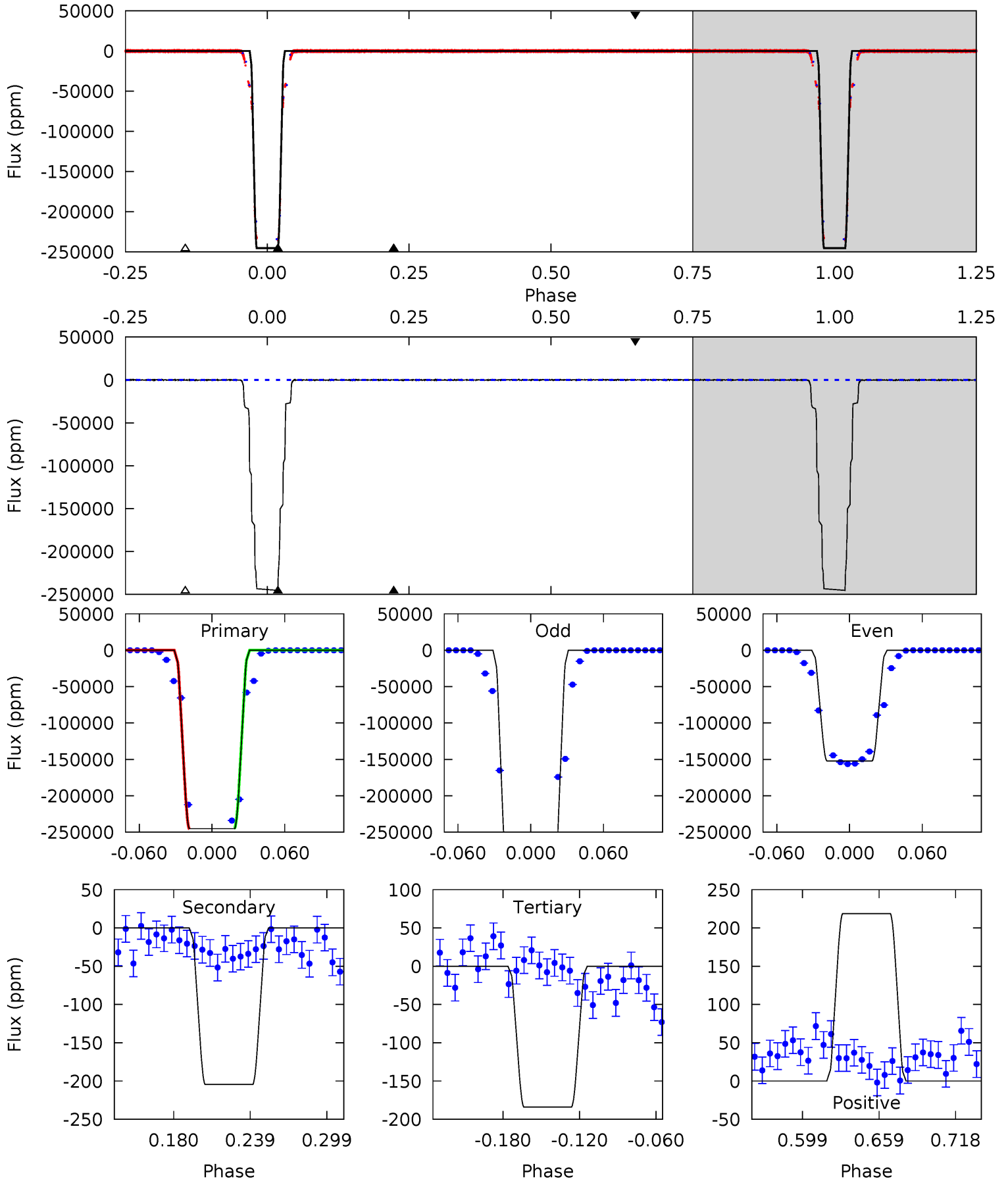
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14618	42.4	40.9	29.2	4.58	1.67	9.76	14577	14589	1.54	13.2	9030	1.08	0.00	0



Alt Model-Shift Uniqueness Test

008736245-01, P = 2.534744 Days, E = 130.942133 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4944	4.12	3.71	4.41	4.67	1.88	6.81	4940	4940	0.41	-0.29	6659	0.77	0.00	0



Stellar Parameters For KIC 008736245

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5810^{+157}_{-157}	$4.560^{+0.050}_{-0.150}$	$-0.620^{+0.300}_{-0.300}$	$0.781^{+0.176}_{-0.075}$	$0.808^{+0.085}_{-0.062}$	$2.388^{+0.586}_{-1.005}$
	+3%/-3%	+1%/-3%	+48%/-48%	+23%/-10%	+11%/-8%	+25%/-42%
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 008736245-01 / KOI 7082.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-996 ± 23	$49.54^{+5.54}_{-3.06}$	1747^{+92}_{-71}	-1903^{+191}_{-197}	$0.256^{+0.028}_{-0.048}$
Alt.	-205 ± 50	$44.47^{+5.80}_{-2.81}$	1742^{+104}_{-71}	-2274^{+54}_{-75}	$0.062^{+0.020}_{-0.016}$

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 $A_{obs} \gg 1.0$

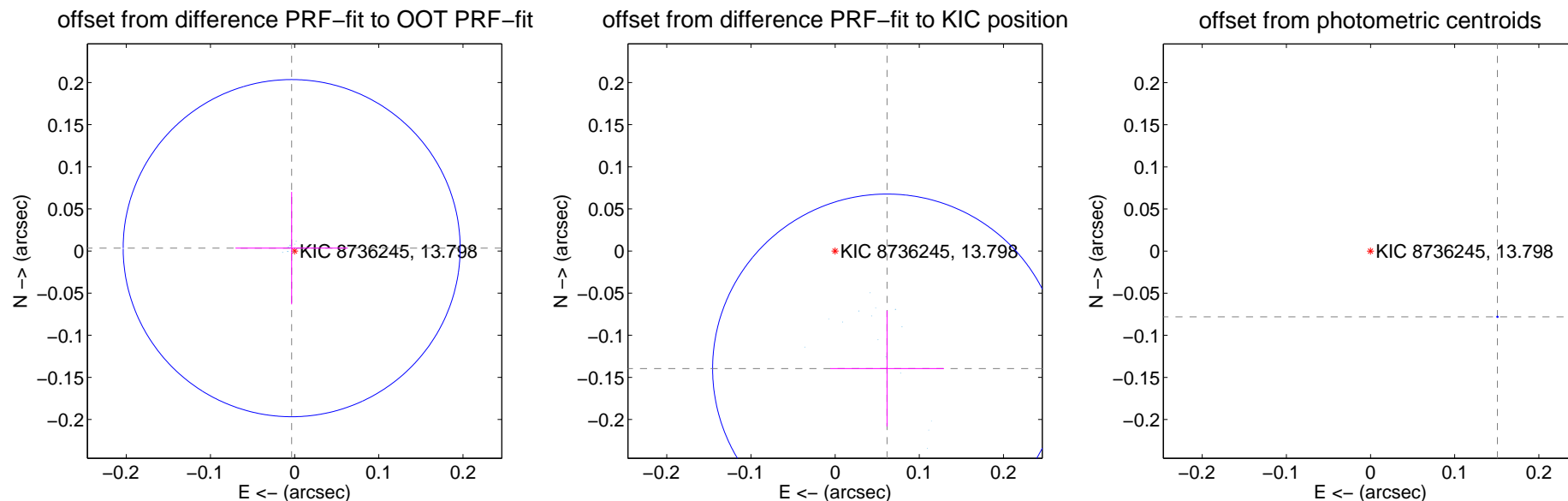
DV Centroid Data

Supplemental centroid analysis for 008736245-01. Kepler magnitude: 13.80. Transit SNR 22665.17

There are 17 quarters with good PRF difference image offsets

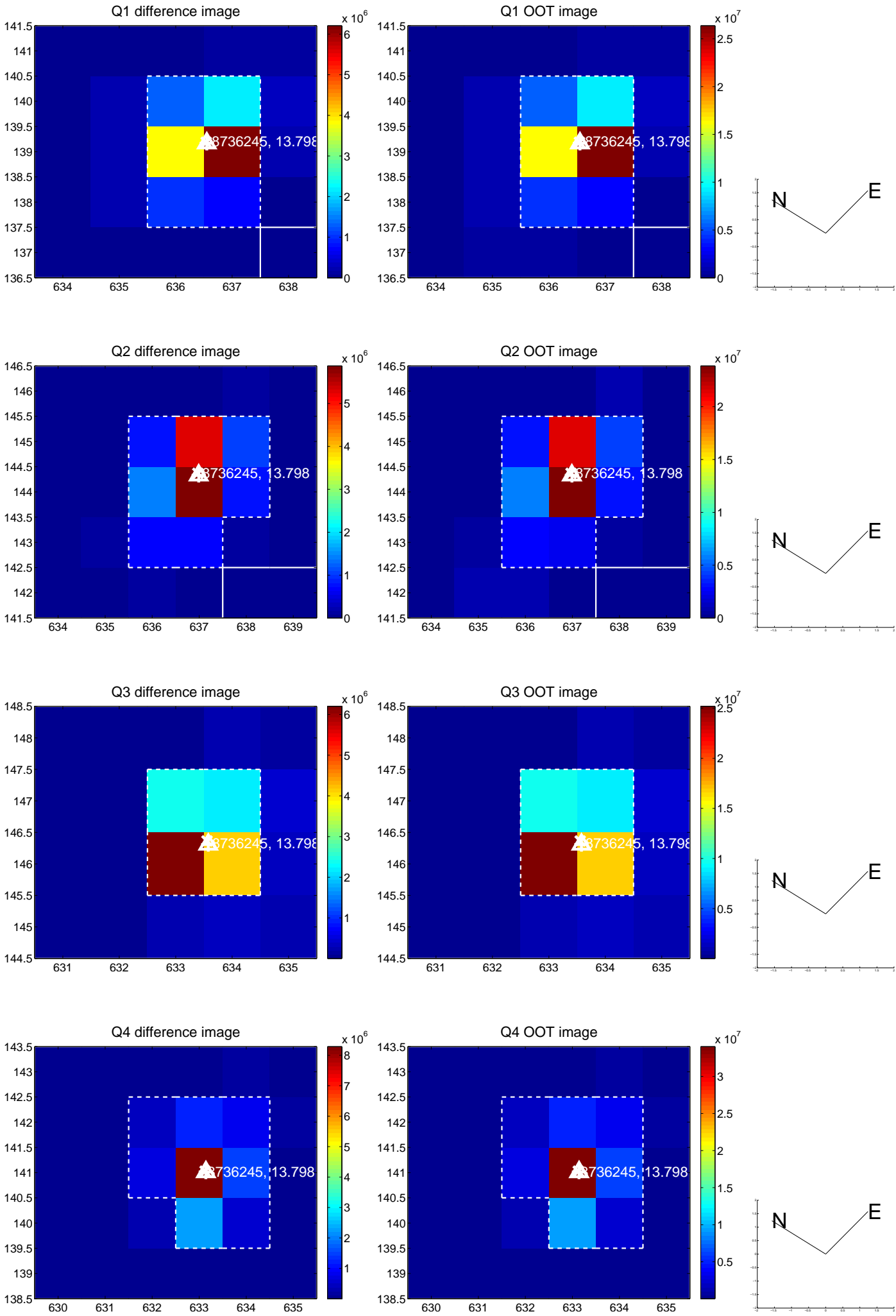
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.005 ± 0.067	0.07	0.004 ± 0.067	0.003 ± 0.067
PRF-fit source offset from KIC position	0.153 ± 0.069	2.21	-0.062 ± 0.067	-0.140 ± 0.069
photometric centroid source offset	0.17 ± 0.00	596.68	-0.15 ± 0.00	-0.08 ± 0.00

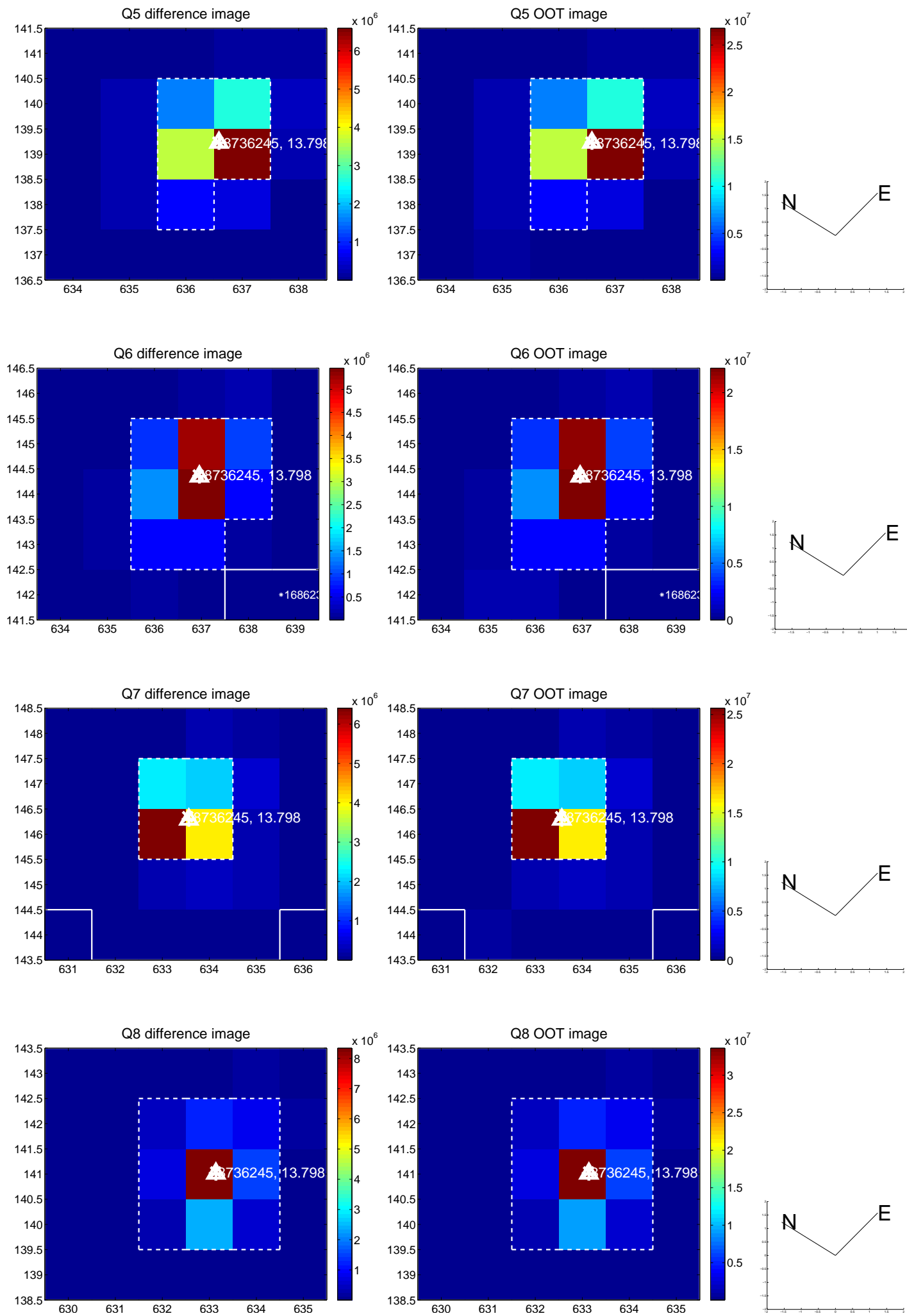


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

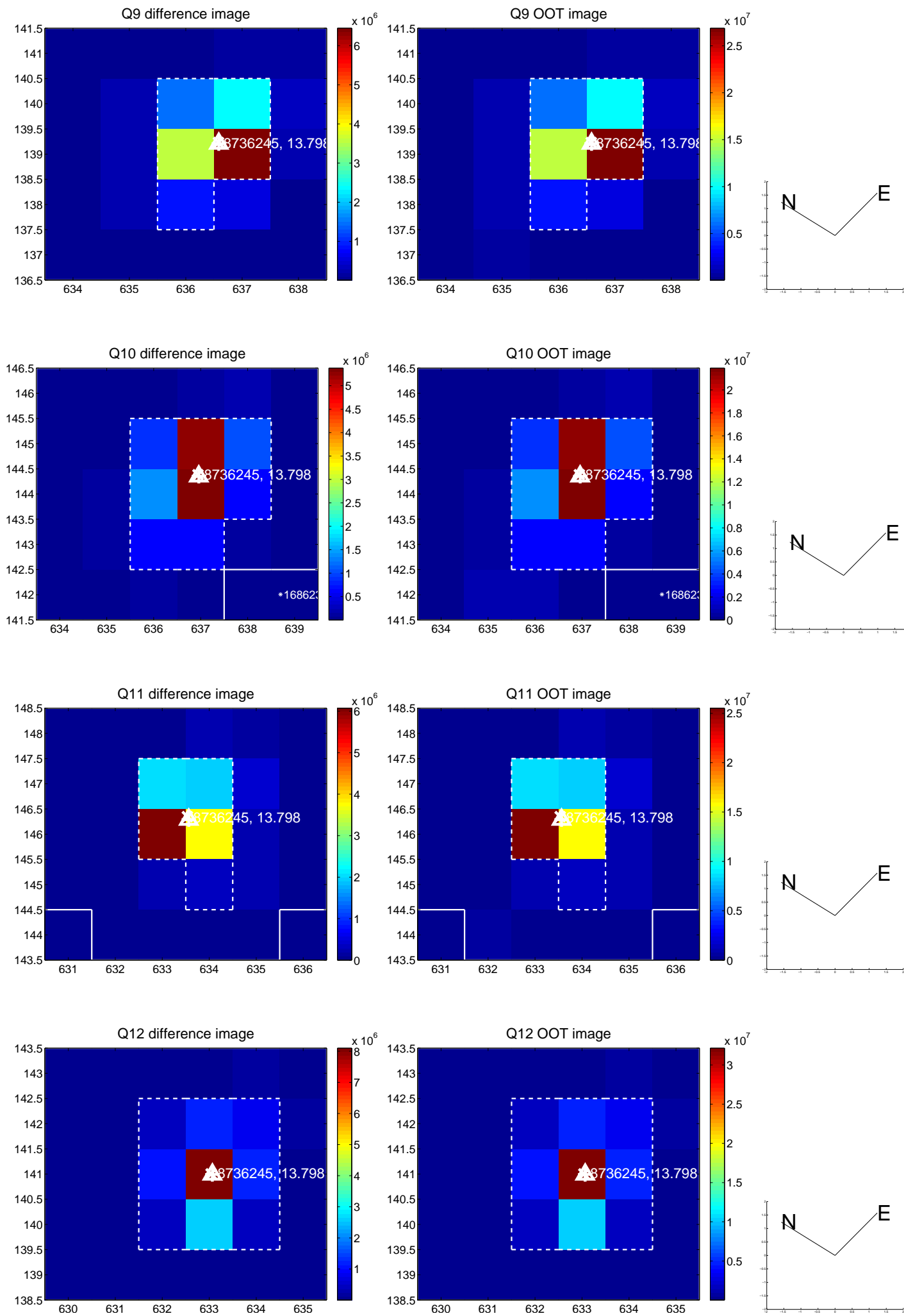
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



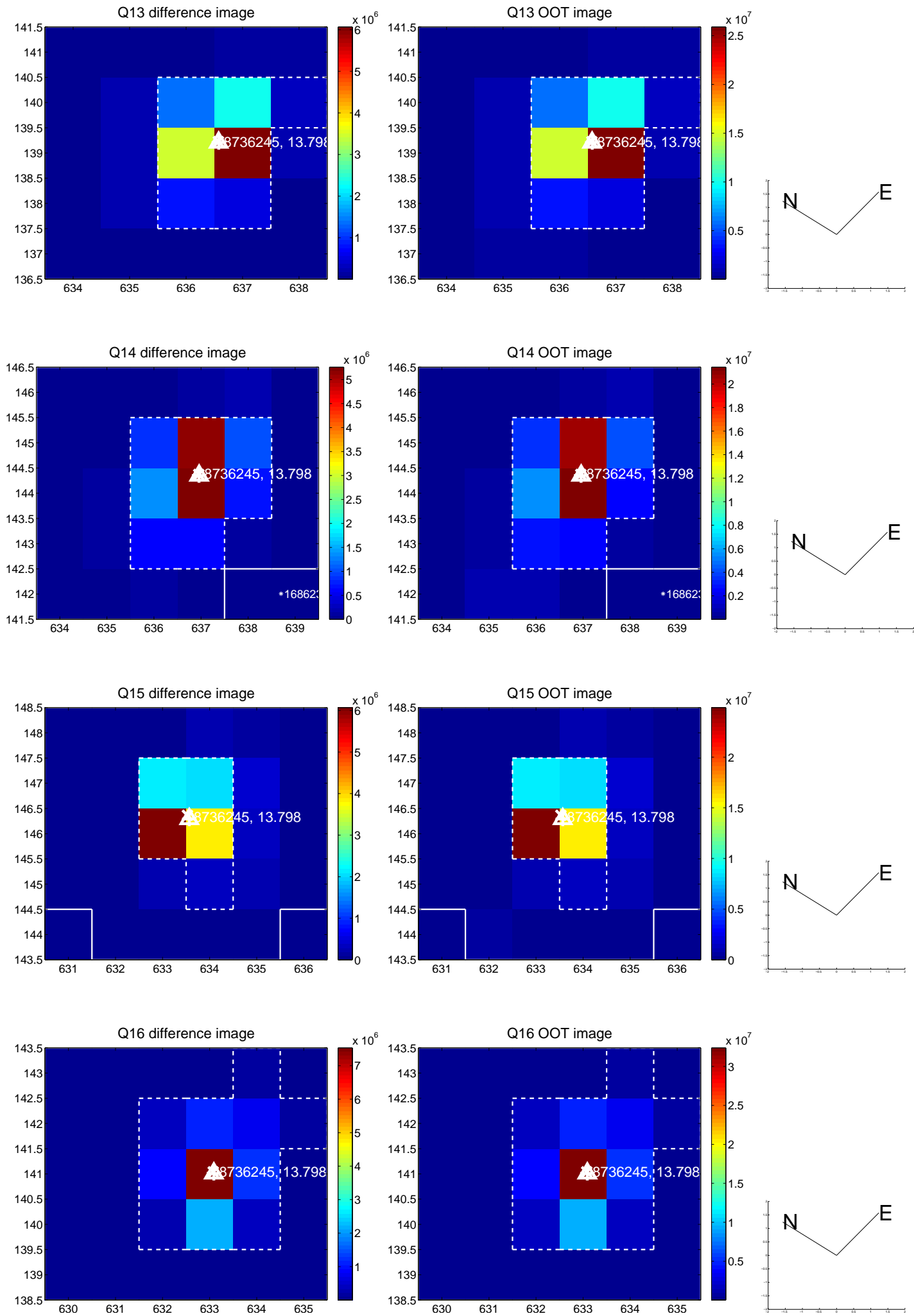
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



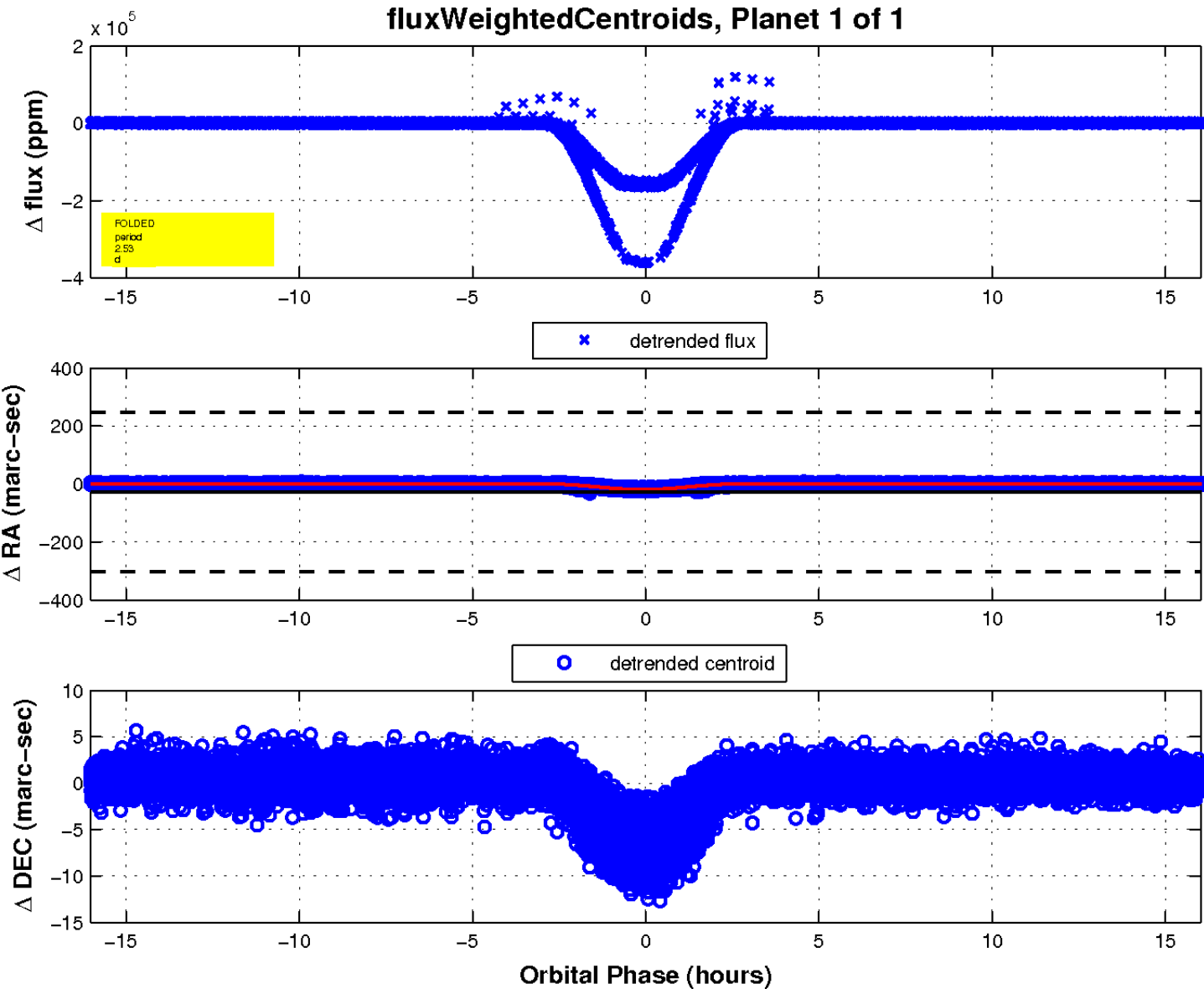
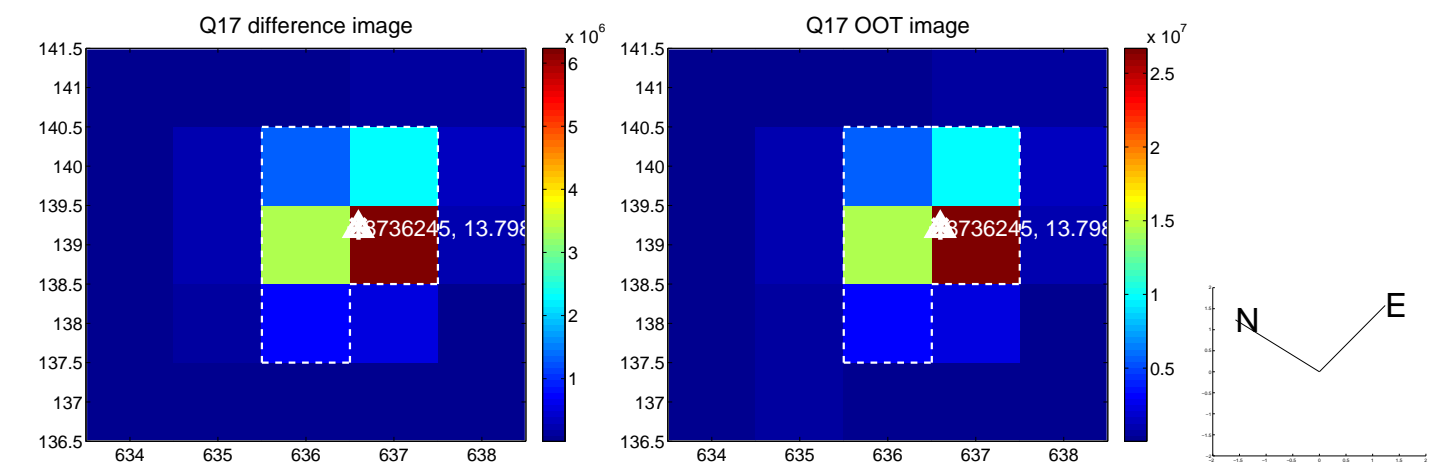
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

