

KIC 008240025

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})
008240025-01	OBS	No	625.012839	198.503811	416.1	3.150	8.1	7.9	0.74	5697	1.68	0.29

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008240025-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_MEAS

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

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

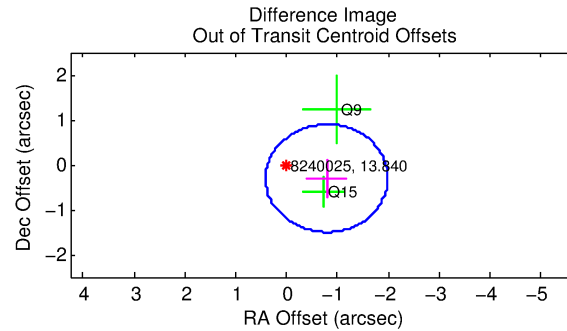
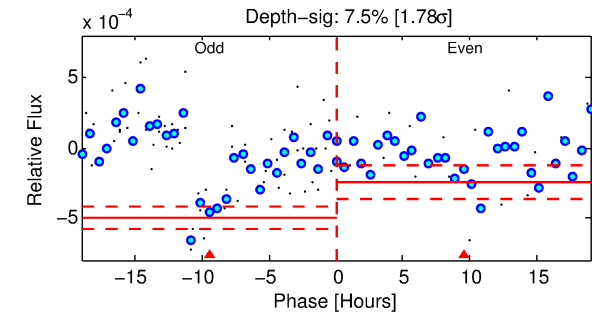
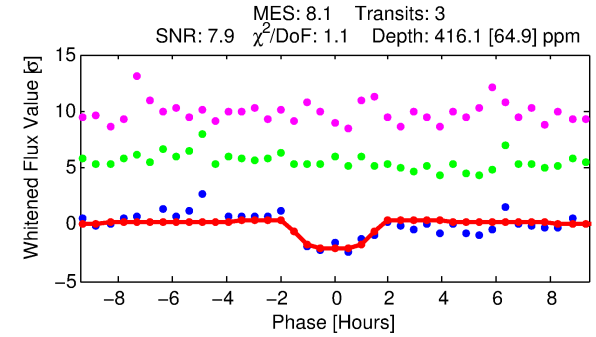
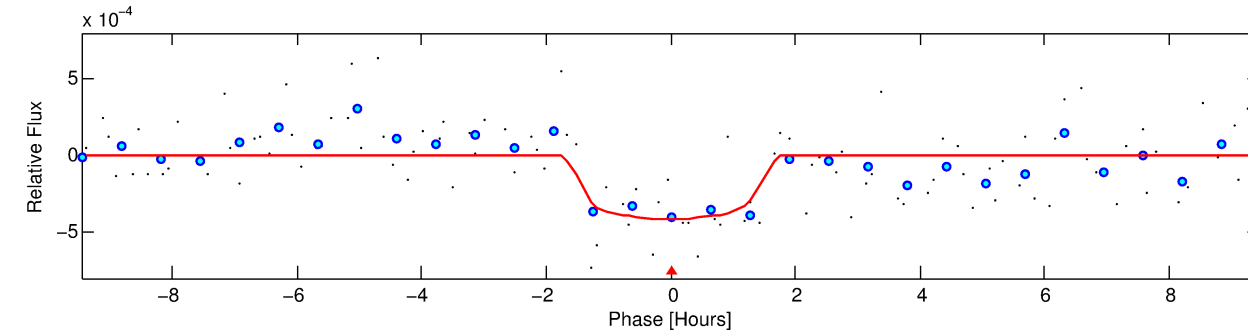
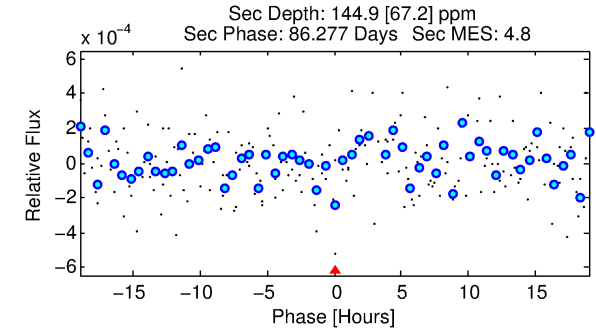
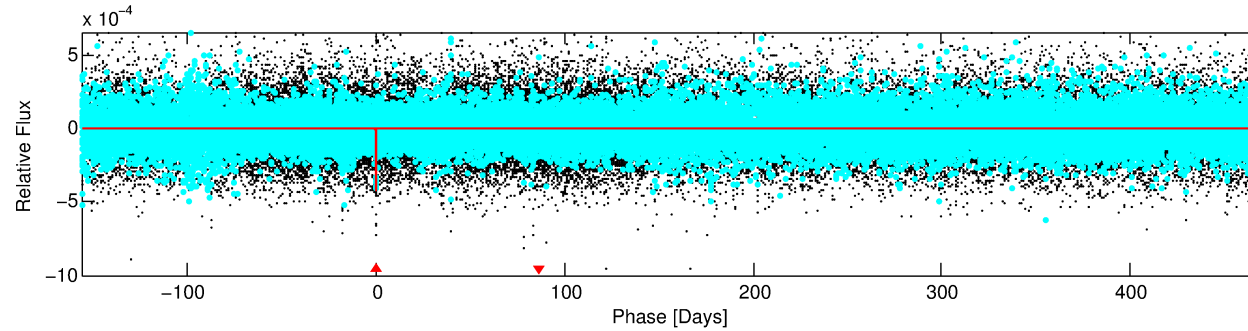
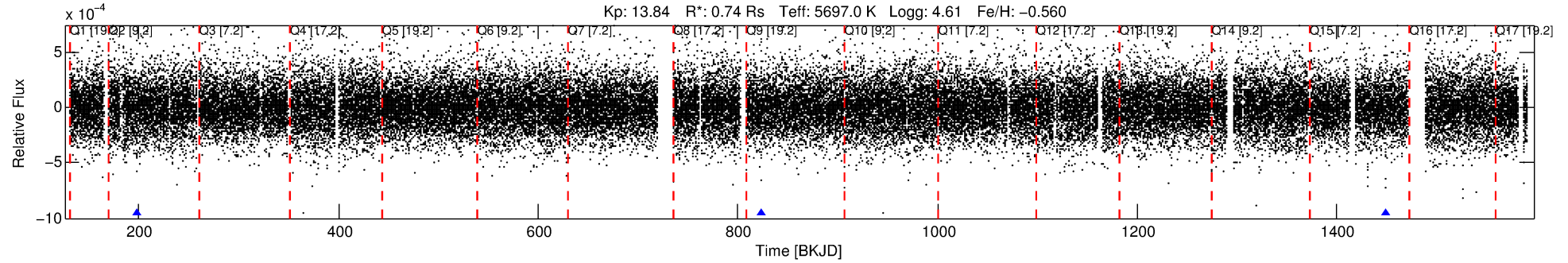
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008240025-01

No Significant Match Found

DV One-Page Summary

KIC: 8240025 Candidate: 1 of 1 Period: 625.013 d



DV Fit Results:

Period = 625.01284 [0.00797] d
Epoch = 198.5038 [0.0100] BKJD
Rp/R* = 0.0207 [0.0261]
a/R* = 964.62 [5799.60]
b = 0.80 [2.77]
Seff = 0.29 [0.08]
Teq = 187 [13] K
Rp = 1.68 [2.14] Re
a = 1.3364 [0.2334] AU
Ag = 50525.29 [130055.64] [0.39 σ]
Teffp = 4344 [2785] K [1.49 σ]

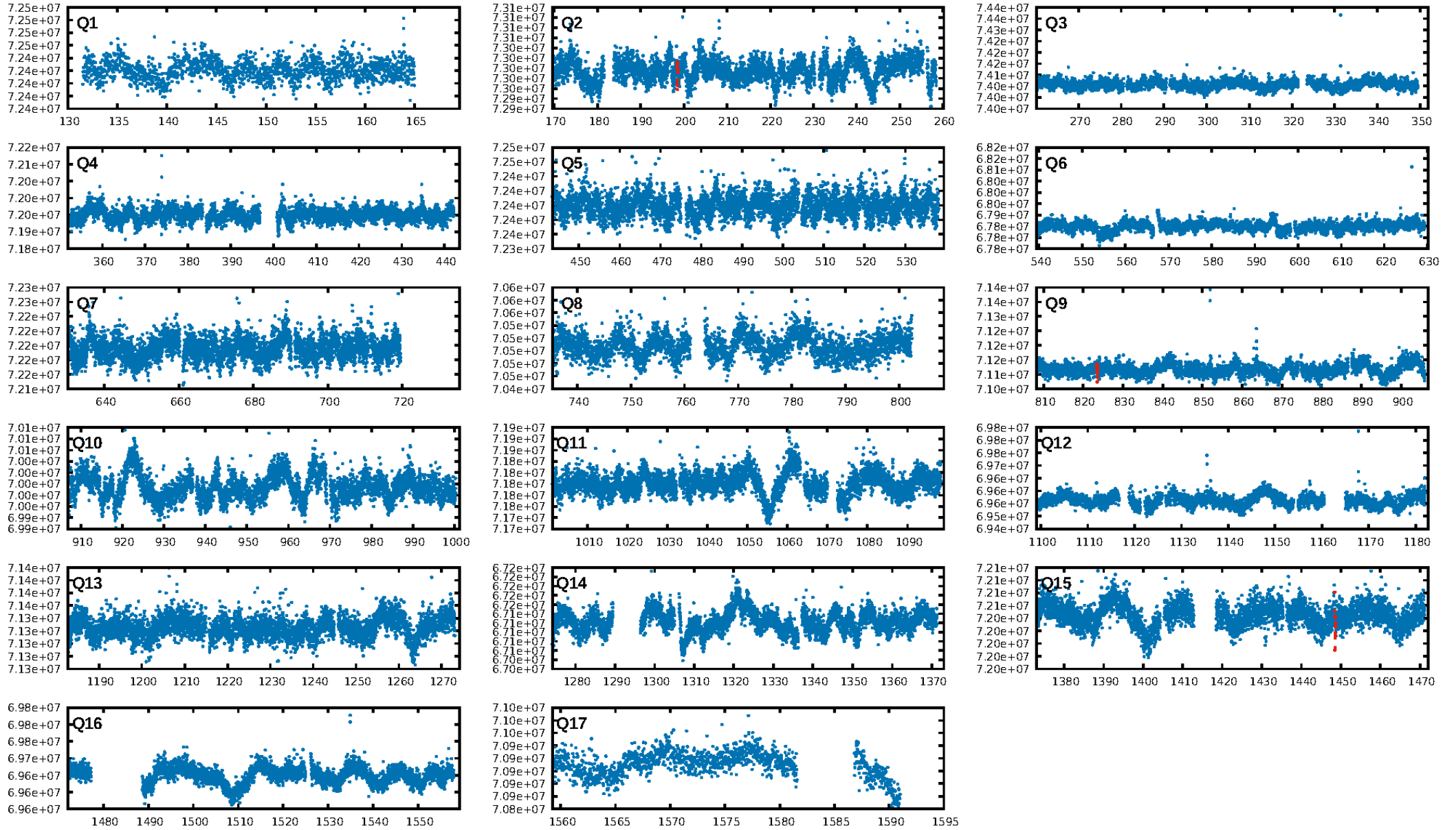
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 12.9%
ModelChiSquareGof-sig: 89.4%
Bootstrap-pfa: 4.19e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 7.144
Centroid-sig: 42.3%
Centroid-so: 1.236 arcsec [0.68 σ]
OotOffset-rm: 0.847 arcsec [2.12 σ]
OotOffset-st: 0.1/0/1 [2]
KicOffset-rm: 0.652 arcsec [1.64 σ]
KicOffset-st: 0.1/0/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

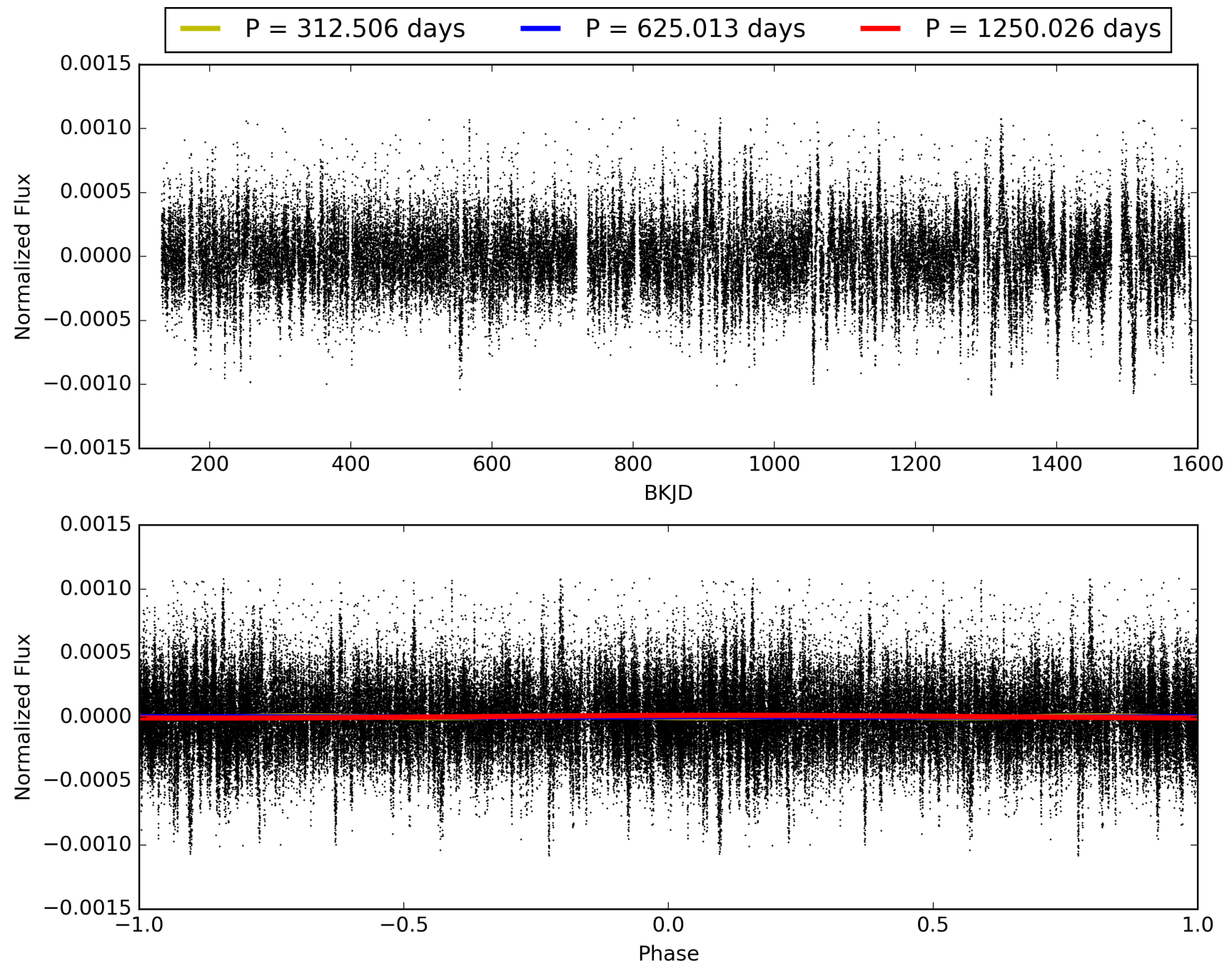
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:14:48 Z

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

TCE 008240025-01, PDC Light Curves

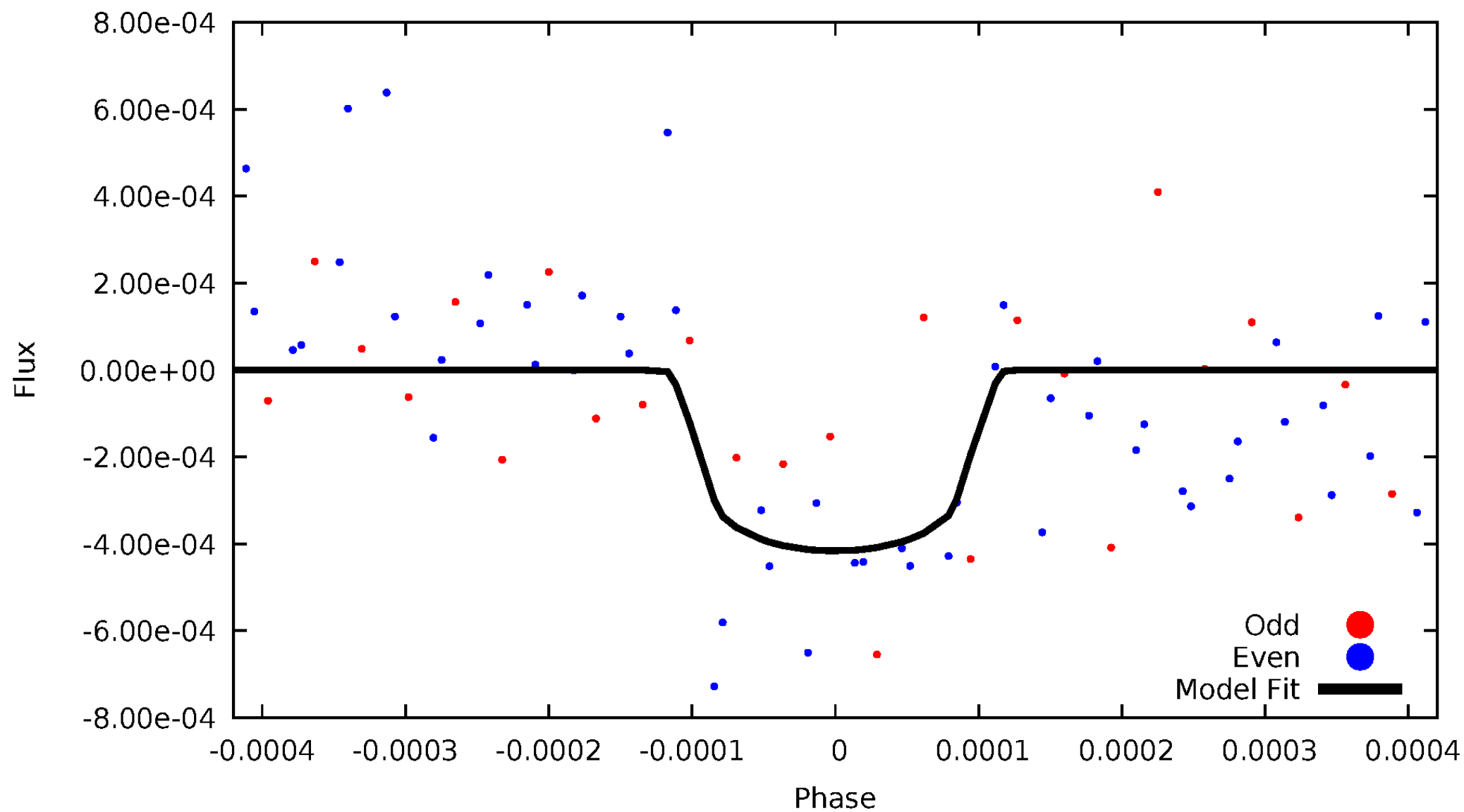


TCE 008240025-01



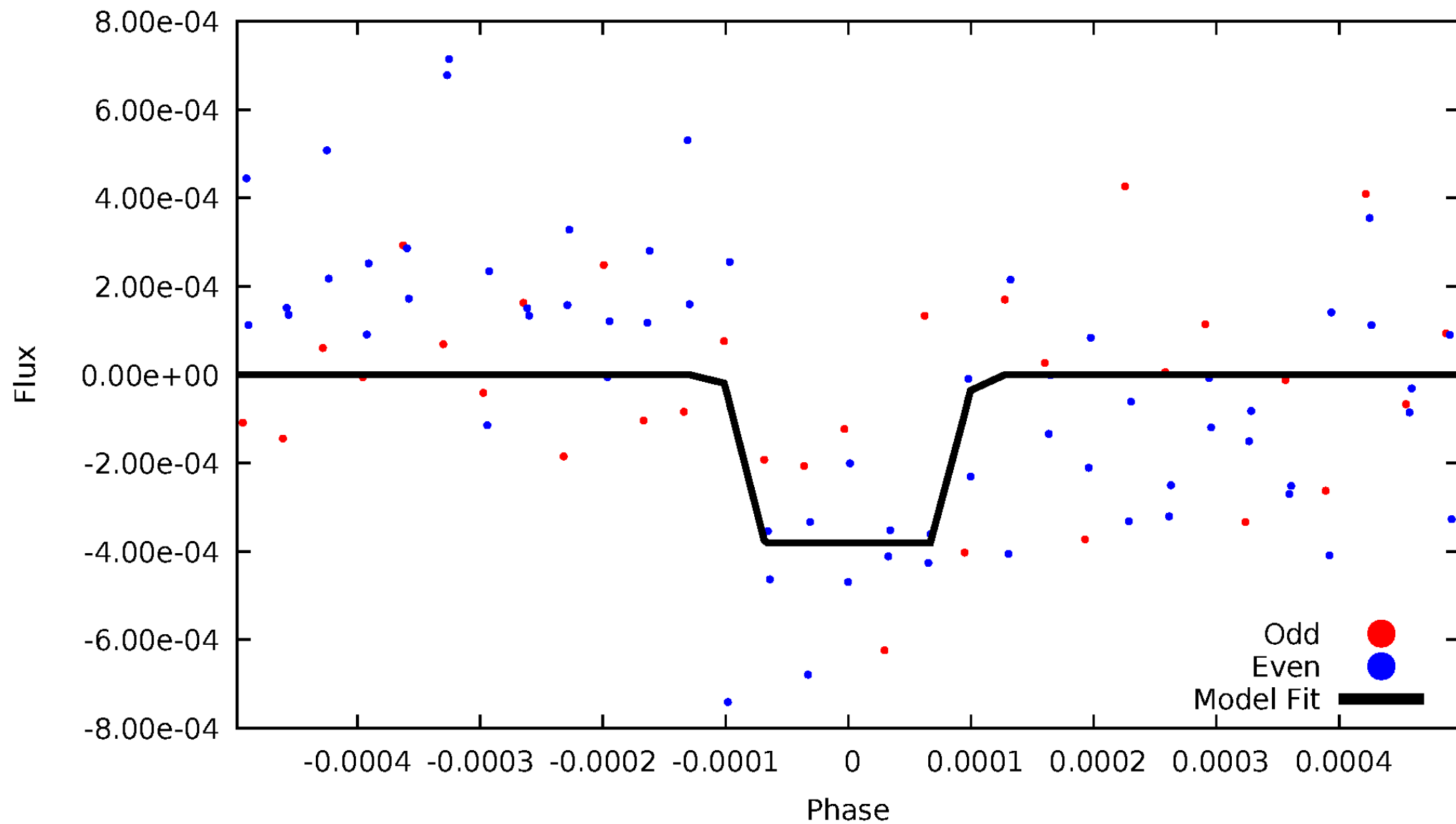
DV Odd/Even

TCE 008240025-01

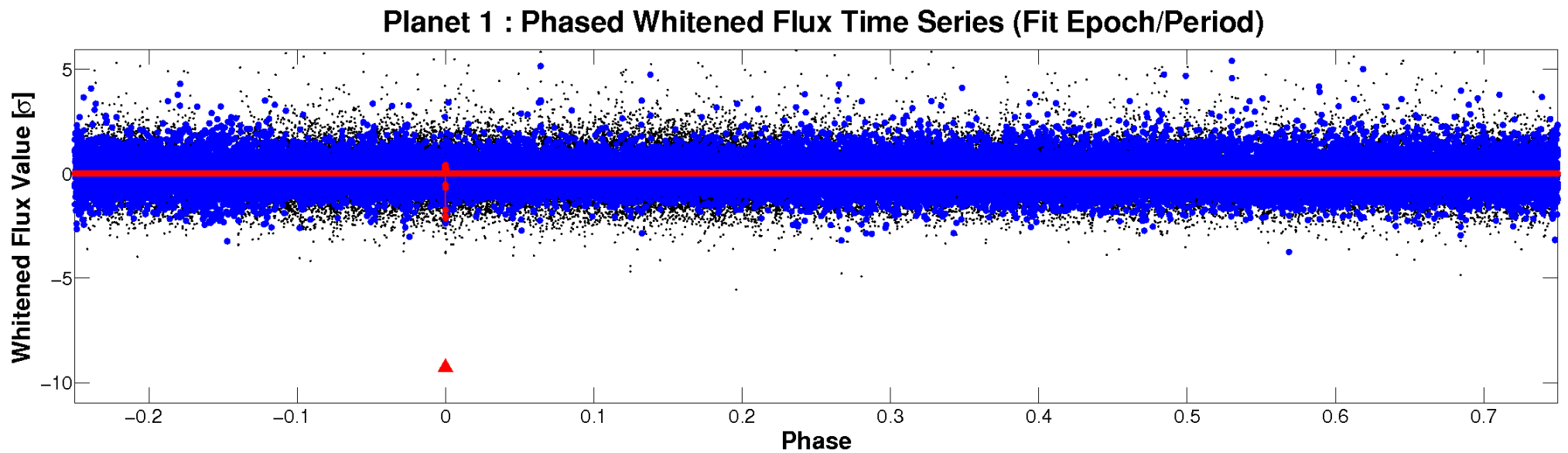
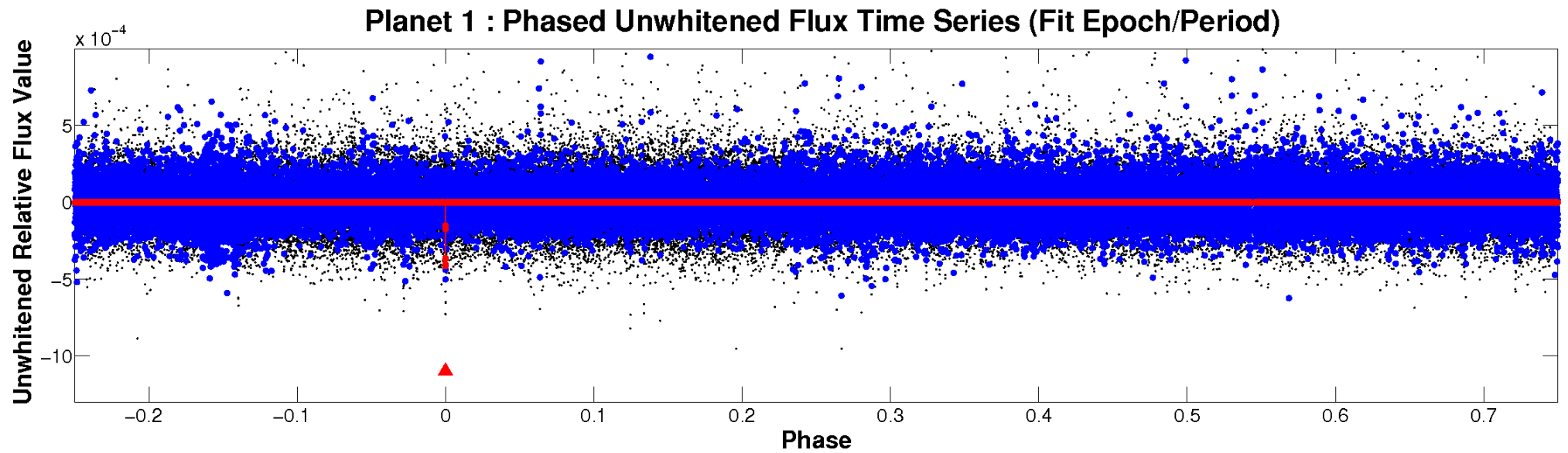


ALT Odd/Even

TCE 008240025-01

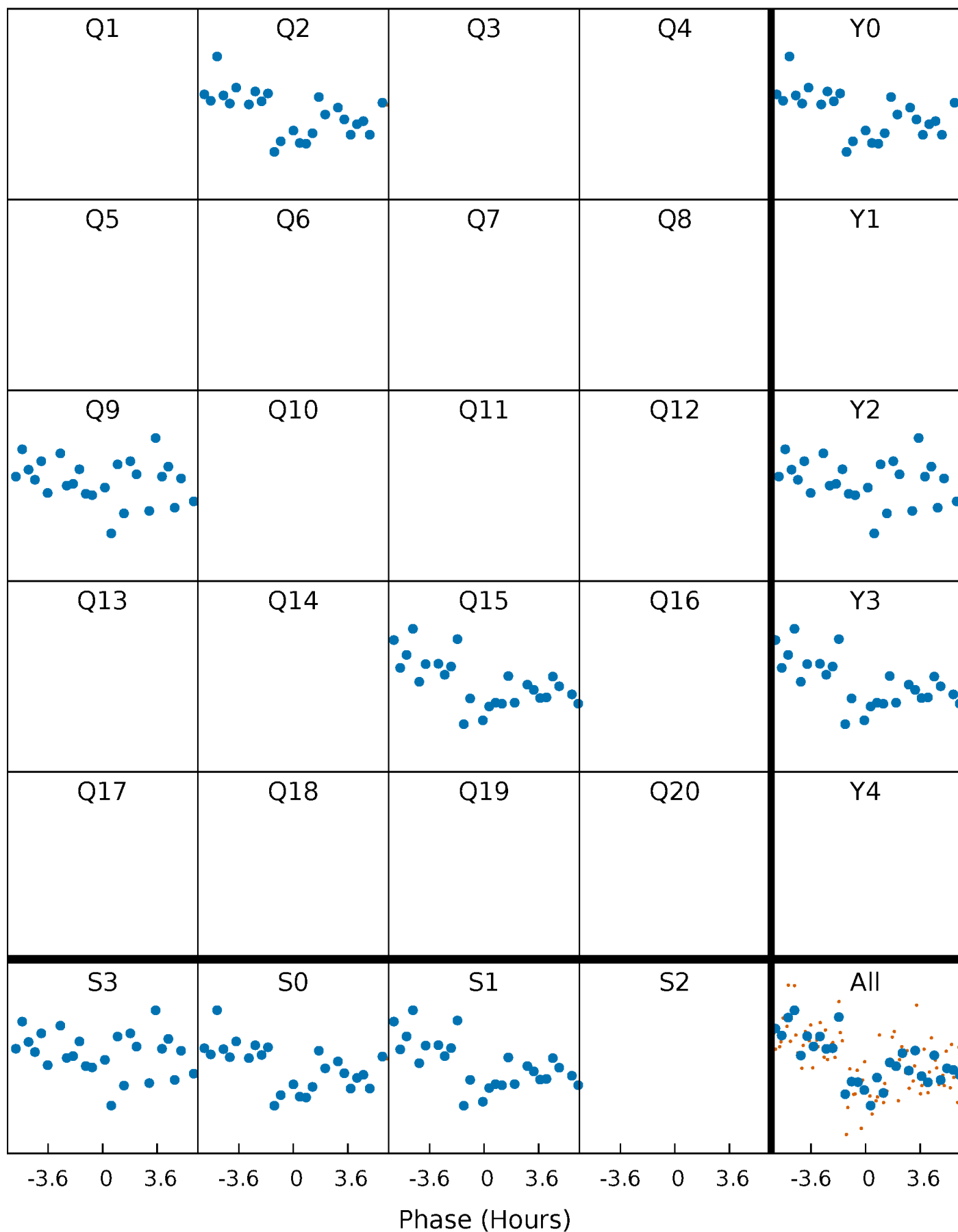


Non-Whitened Vs. Whitened Light Curve



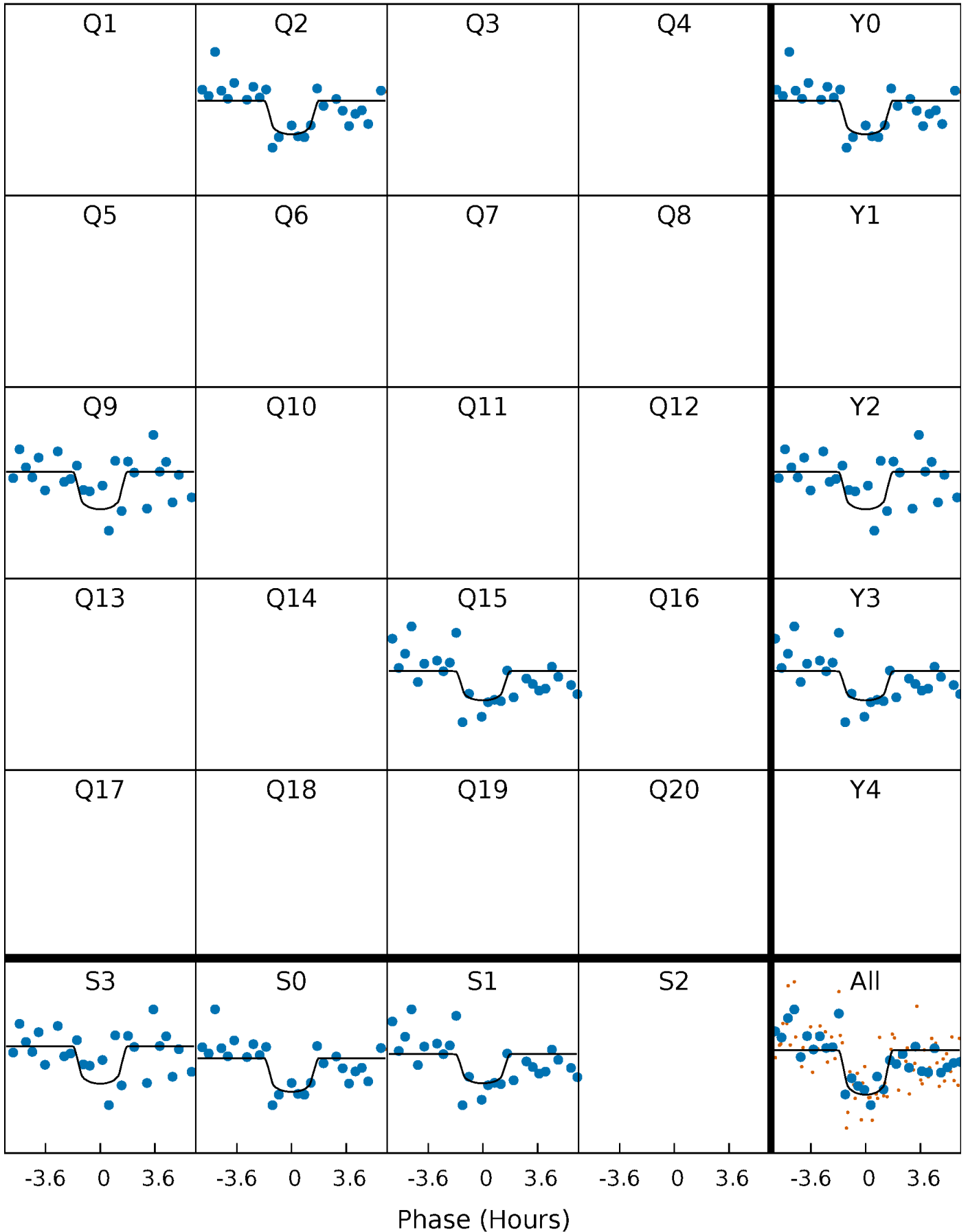
PDC Quarter-Phased Transit Curves

TCE 008240025-01 P=625.012839 Days $T_0=198.503811$ (BKJD)



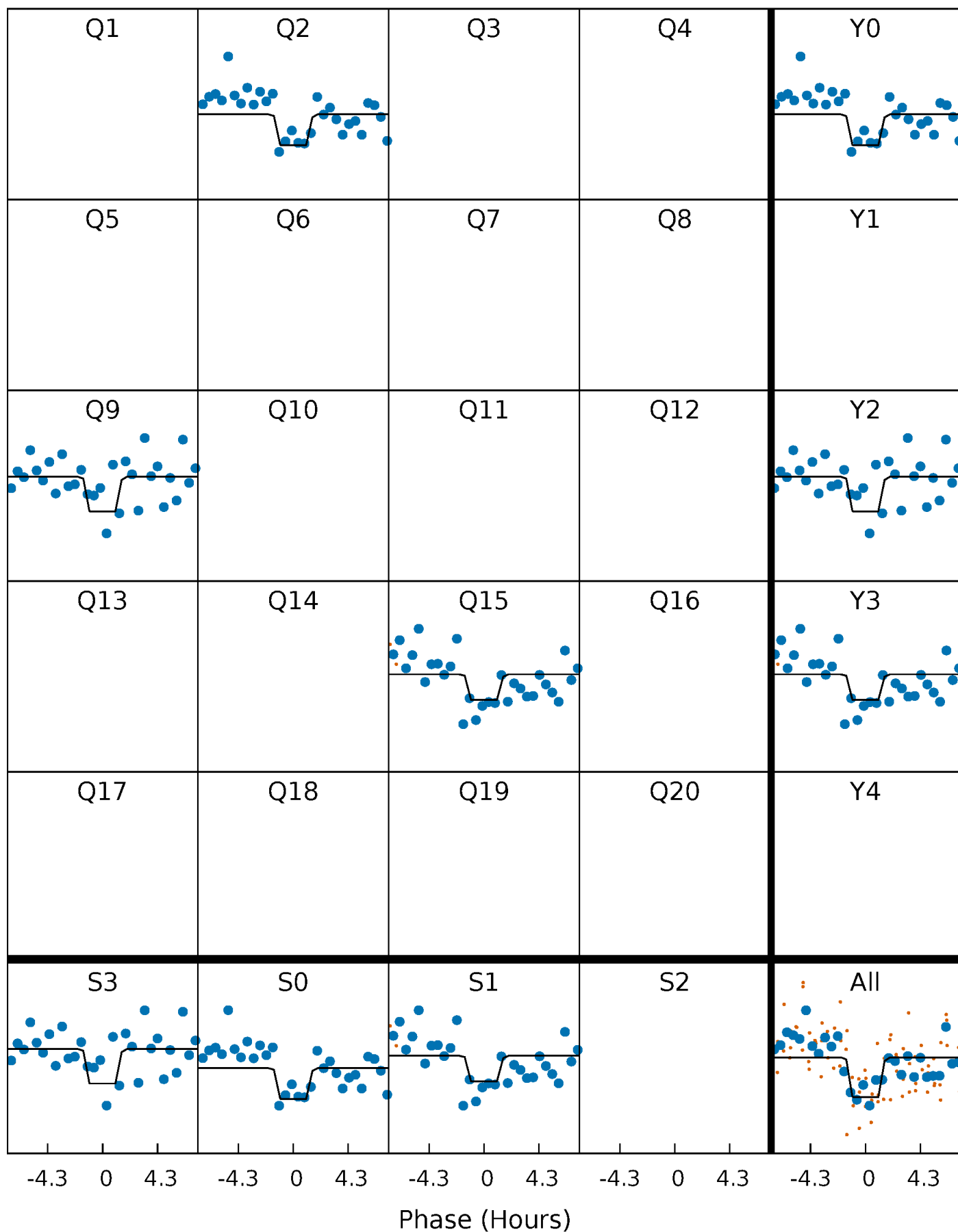
DV Quarter-Phased Transit Curves

TCE 008240025-01 P=625.012839 Days $T_0=198.503811$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

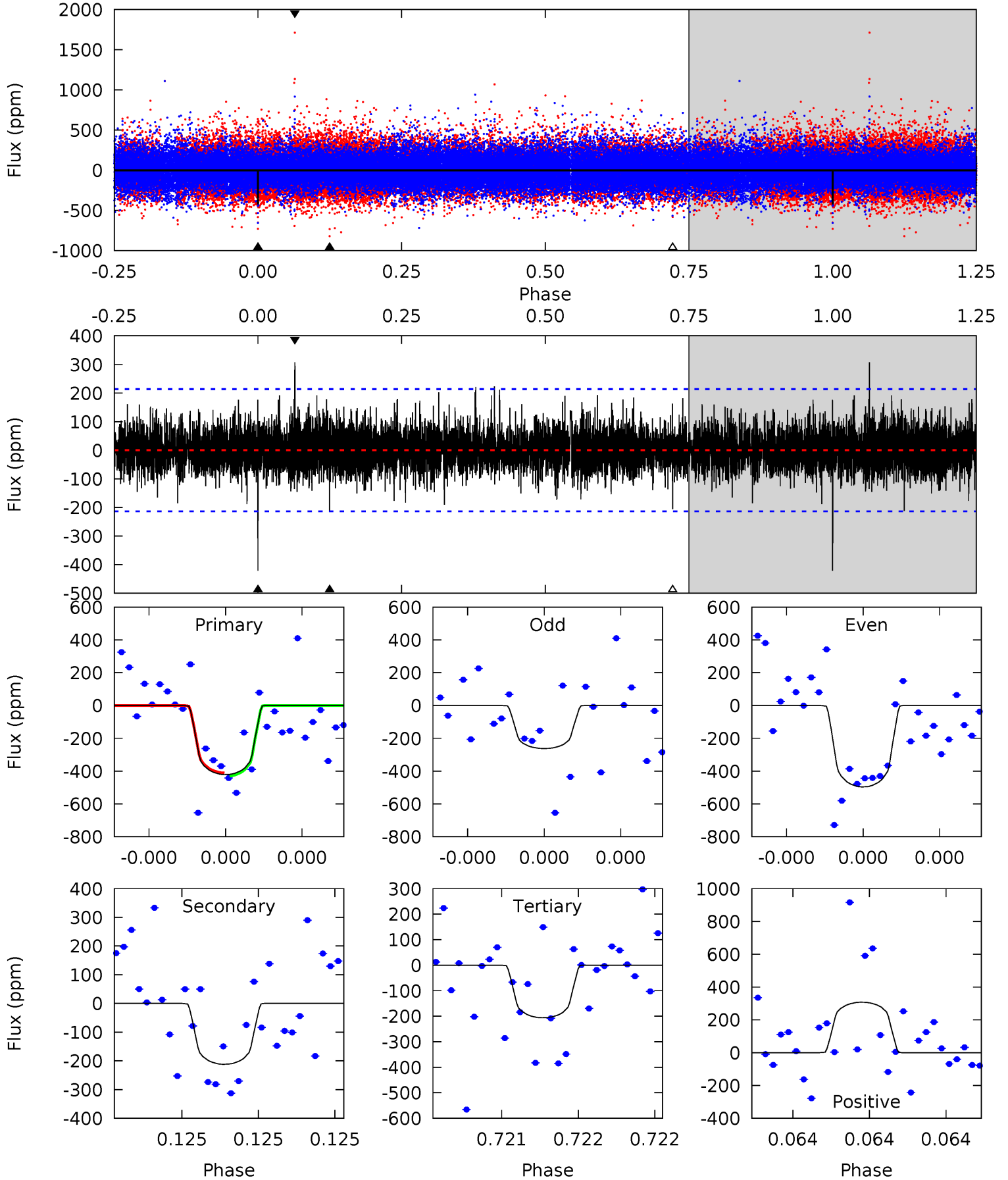
TCE 008240025-01 P=625.021733 Days $T_0=198.494653$ (BKJD)



DV Model-Shift Uniqueness Test

008240025-01, P = 625.012839 Days, E = 198.503811 Days

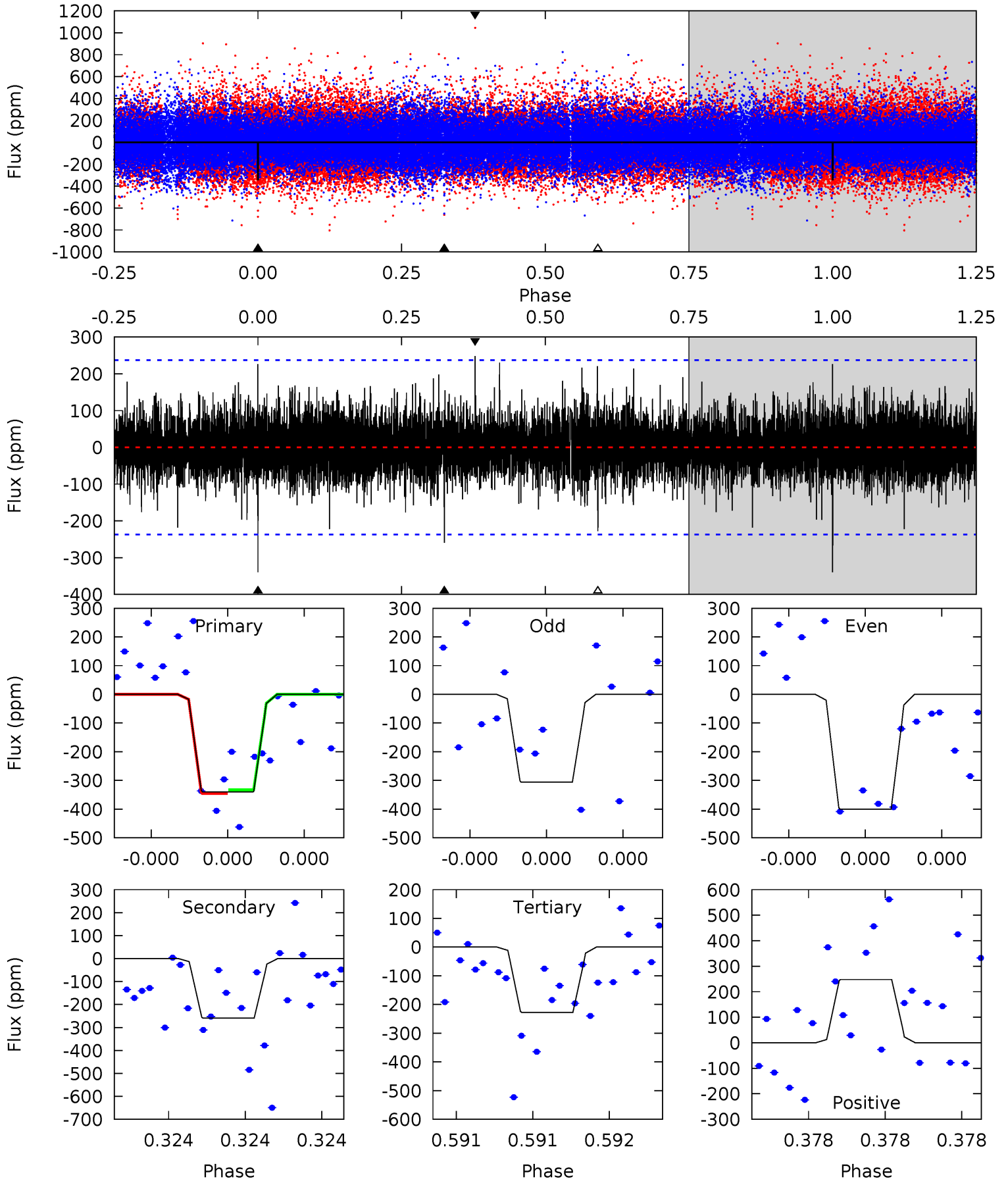
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.2	5.65	5.50	8.20	5.70	3.67	1.32	5.74	3.03	0.16	-2.55	2.88	0.91	0.42	0.25



Alt Model-Shift Uniqueness Test

008240025-01, P = 625.021733 Days, E = 198.494653 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.21	6.27	5.50	5.99	5.73	3.72	1.19	2.71	2.22	0.77	0.28	1.01	1.03	0.42	0.16



Stellar Parameters For KIC 008240025

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5697^{+155}_{-155}	$4.607^{+0.034}_{-0.136}$	$-0.560^{+0.300}_{-0.300}$	$0.743^{+0.156}_{-0.052}$	$0.828^{+0.079}_{-0.087}$	$2.844^{+0.503}_{-1.160}$
	+3%/-3%	+1%/-3%	+54%/-54%	+21%/-7%	+10%/-11%	+18%/-41%
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 008240025-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-212 ± 37	$2.46^{+1.89}_{-1.61}$	267^{+14}_{-11}	4223^{+2615}_{-735}	$33971^{+249090}_{-23527}$
Alt.	-259 ± 41	$2.15^{+1.89}_{-1.41}$	266^{+12}_{-10}	4638^{+3239}_{-922}	$52344^{+421723}_{-36175}$

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

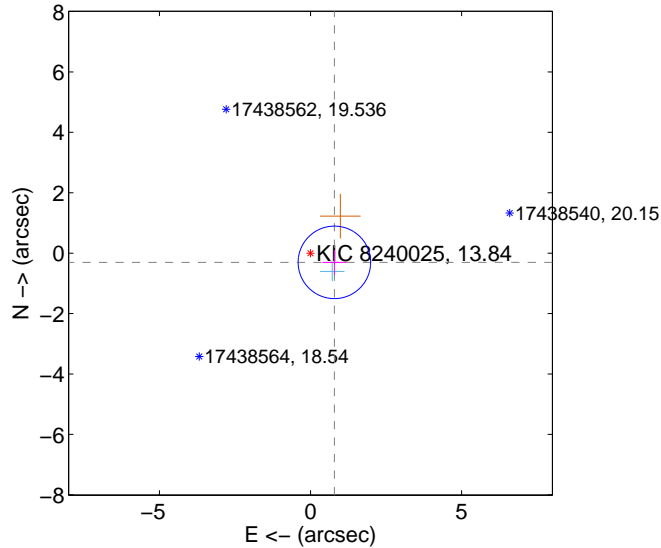
Supplemental centroid analysis for 008240025-01. Kepler magnitude: 13.84. Transit SNR 7.86

There are 1 quarters with good PRF difference image offsets

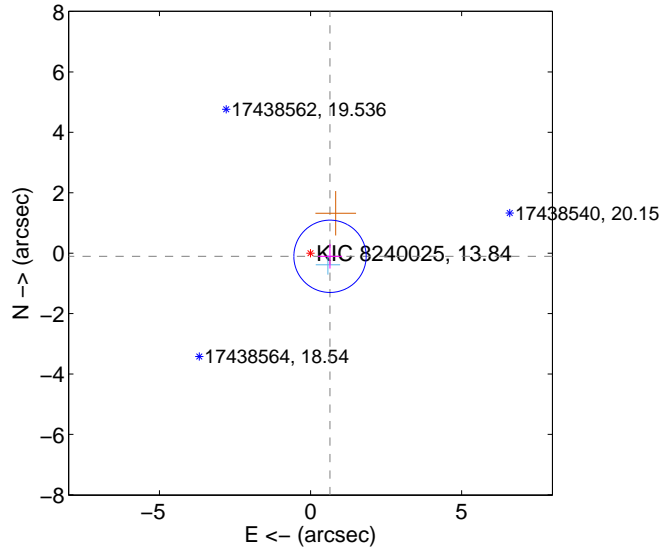
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.847 ± 0.400	2.12	-0.790 ± 0.399	-0.304 ± 0.408
PRF-fit source offset from KIC position	0.652 ± 0.399	1.64	-0.644 ± 0.399	-0.104 ± 0.408
photometric centroid source offset	1.24 ± 1.81	0.68	0.52 ± 1.63	-1.12 ± 1.85

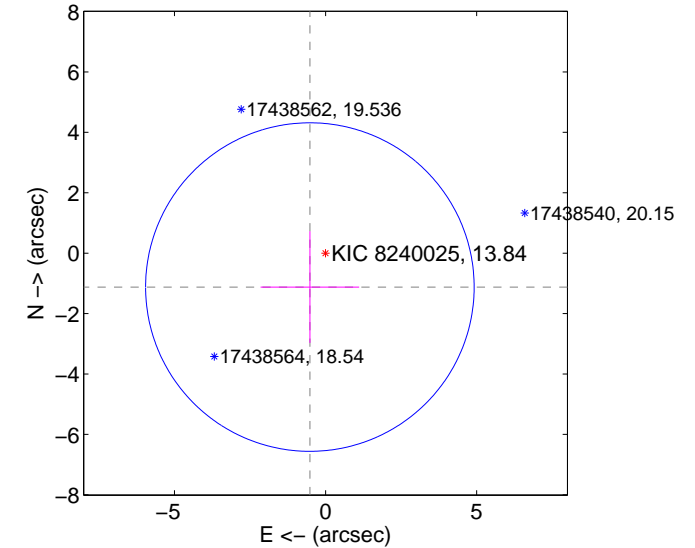
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

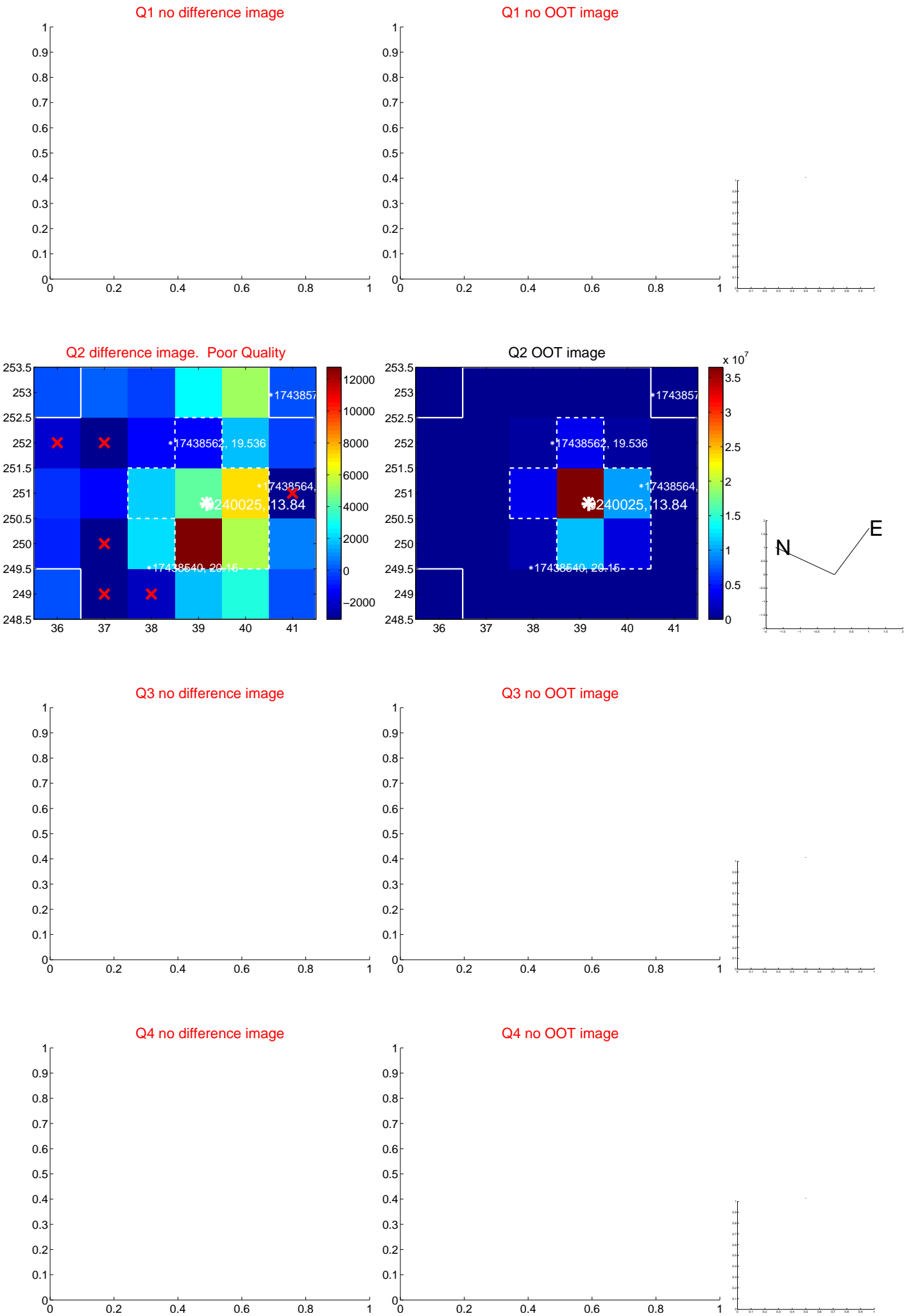


offset from photometric centroids



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.

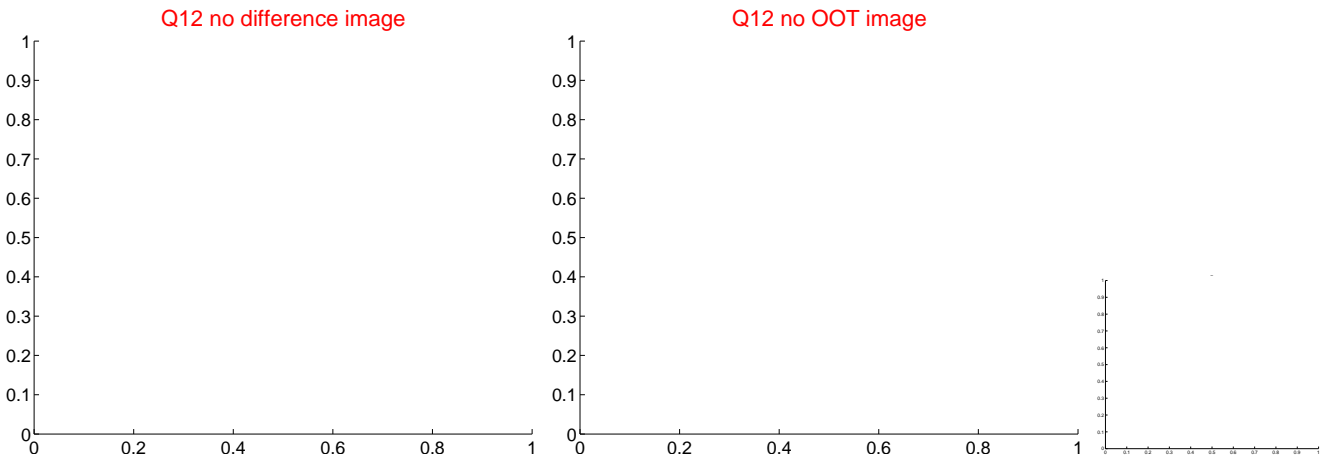
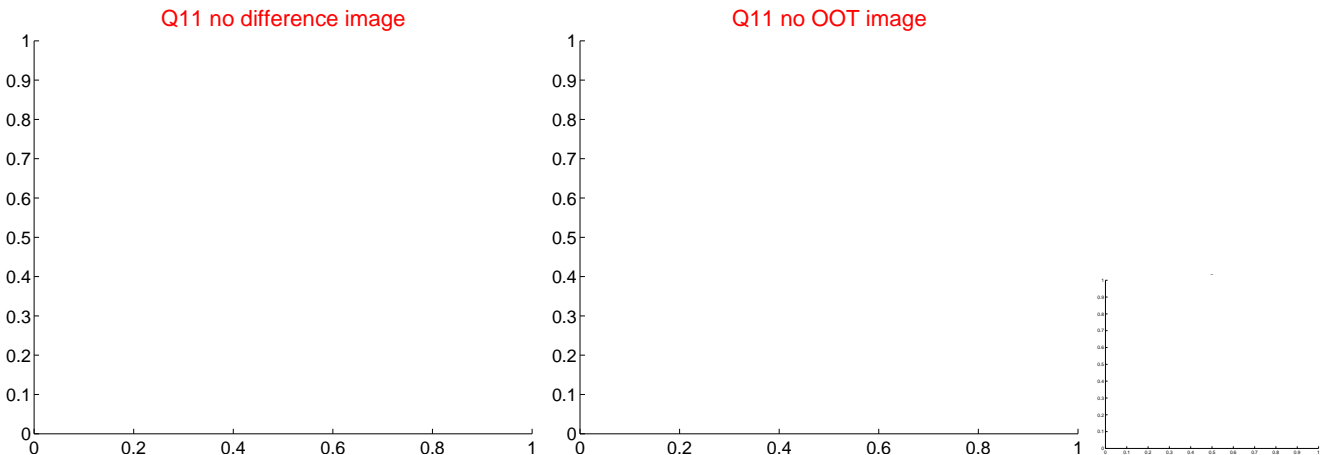
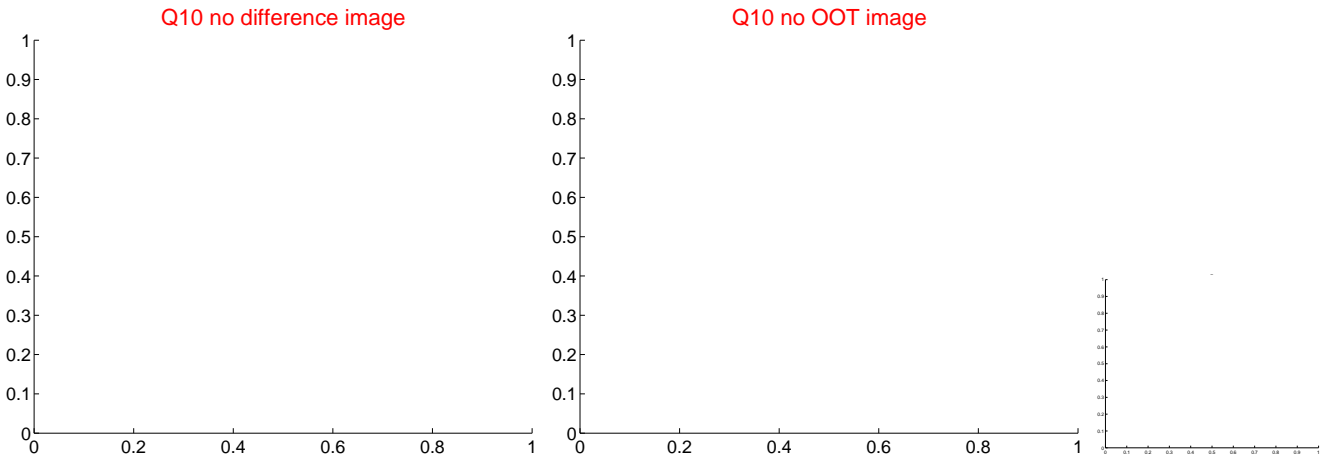
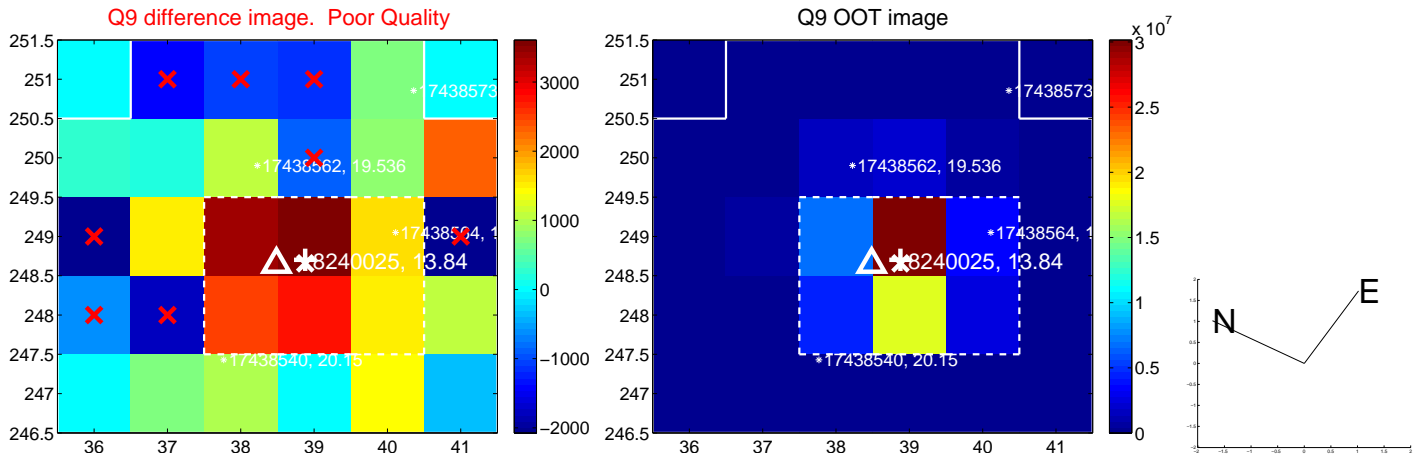
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



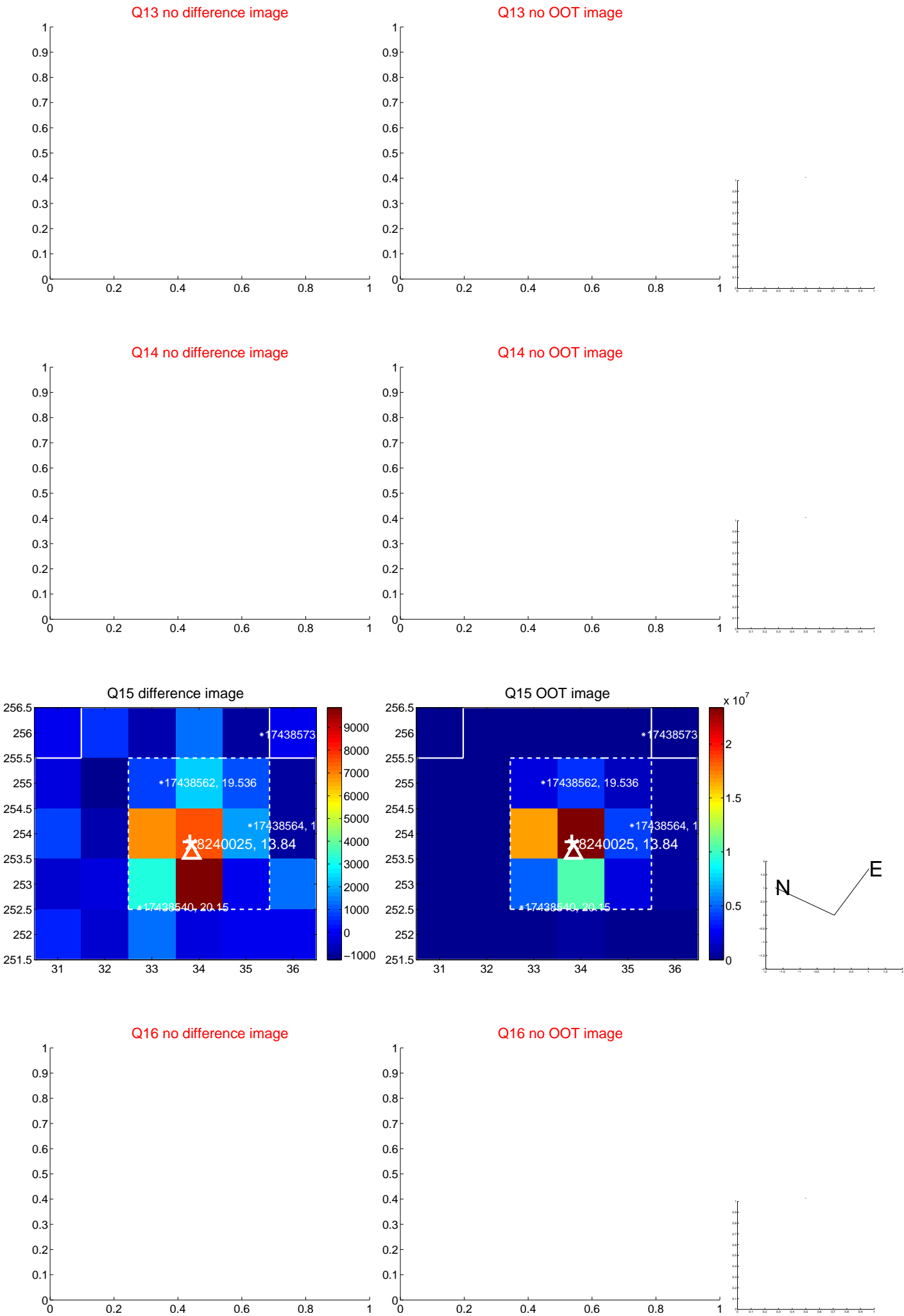
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



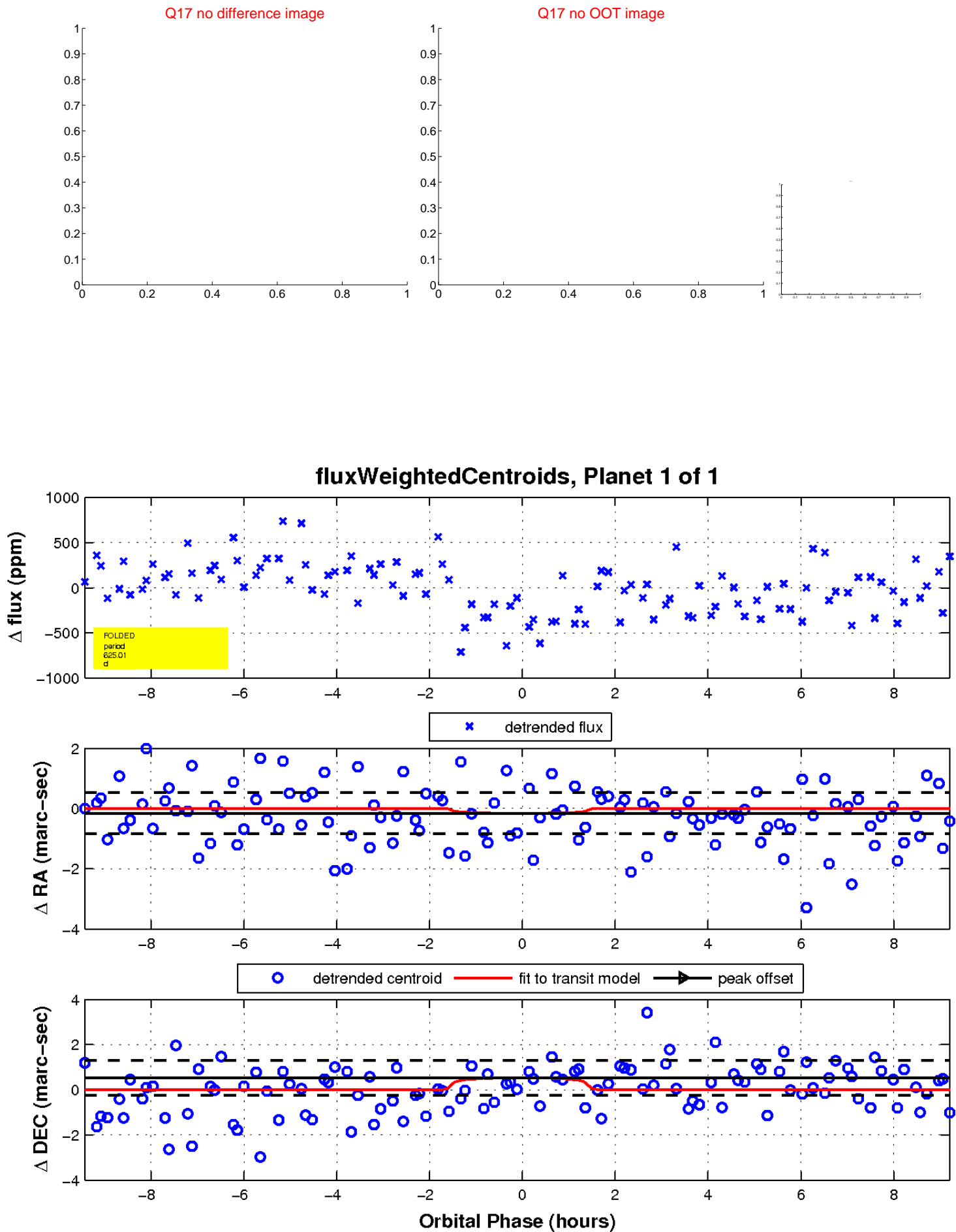
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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

Declination

