

KIC 003241164

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})
003241164-01	OBS	No	500.009472	547.717807	488.1	5.177	7.9	7.8	0.92	6210	2.24	0.77

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003241164-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—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.

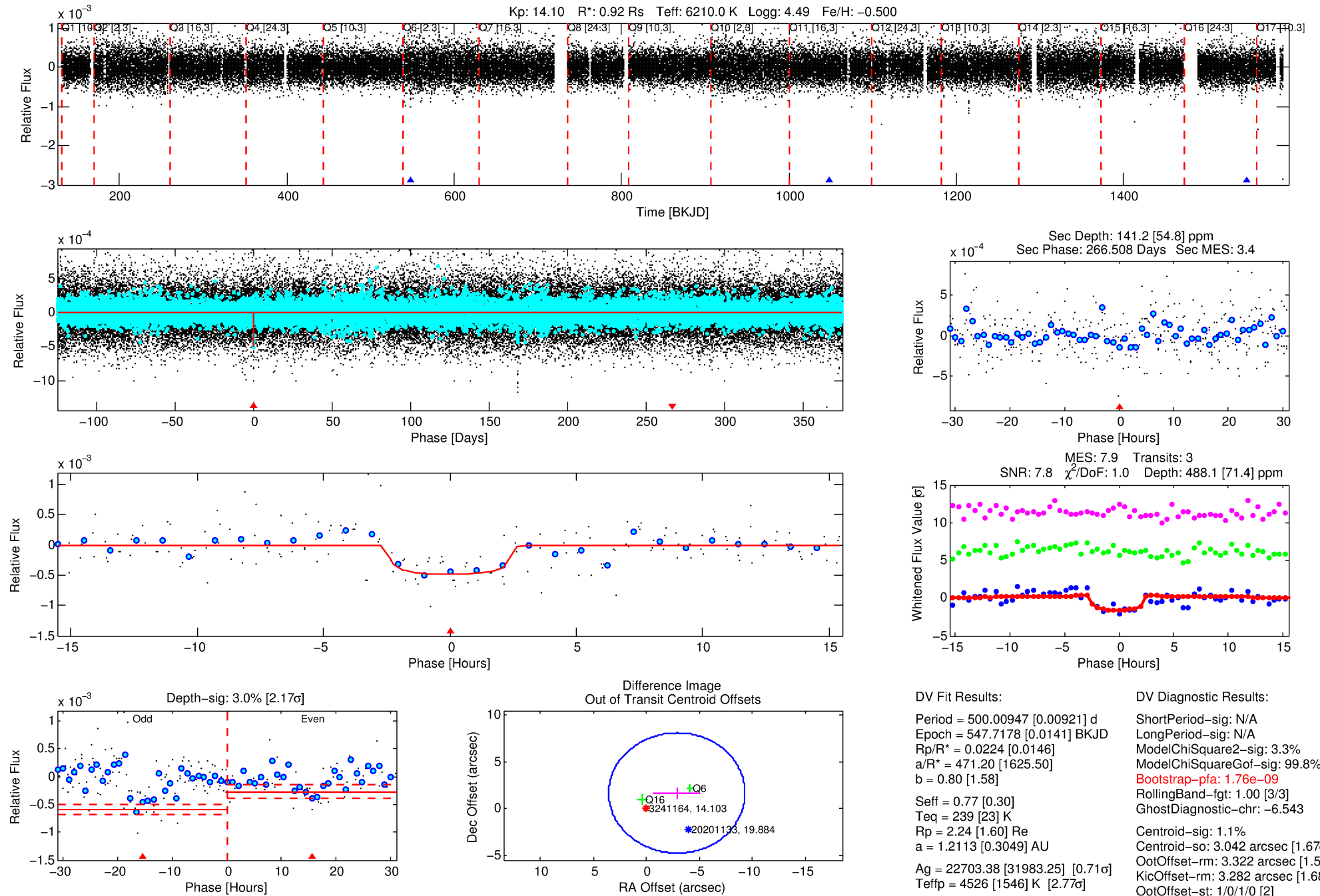
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003241164-01

No Significant Match Found

DV One-Page Summary

KIC: 3241164 Candidate: 1 of 1 Period: 500.009 d



DV Fit Results:

Period = 500.00947 [0.00921] d
Epoch = 547.7178 [0.0141] BKJD
Rp/R* = 0.0224 [0.0146]
a/R* = 471.20 [1625.50]
b = 0.80 [1.58]
Seff = 0.77 [0.30]
Teff = 239 [23] K
Rp = 2.24 [1.60] Re
a = 1.2113 [0.3049] AU
Ag = 22703.38 [31983.25] [0.71 σ]
Teffp = 4526 [1546] K [2.77 σ]

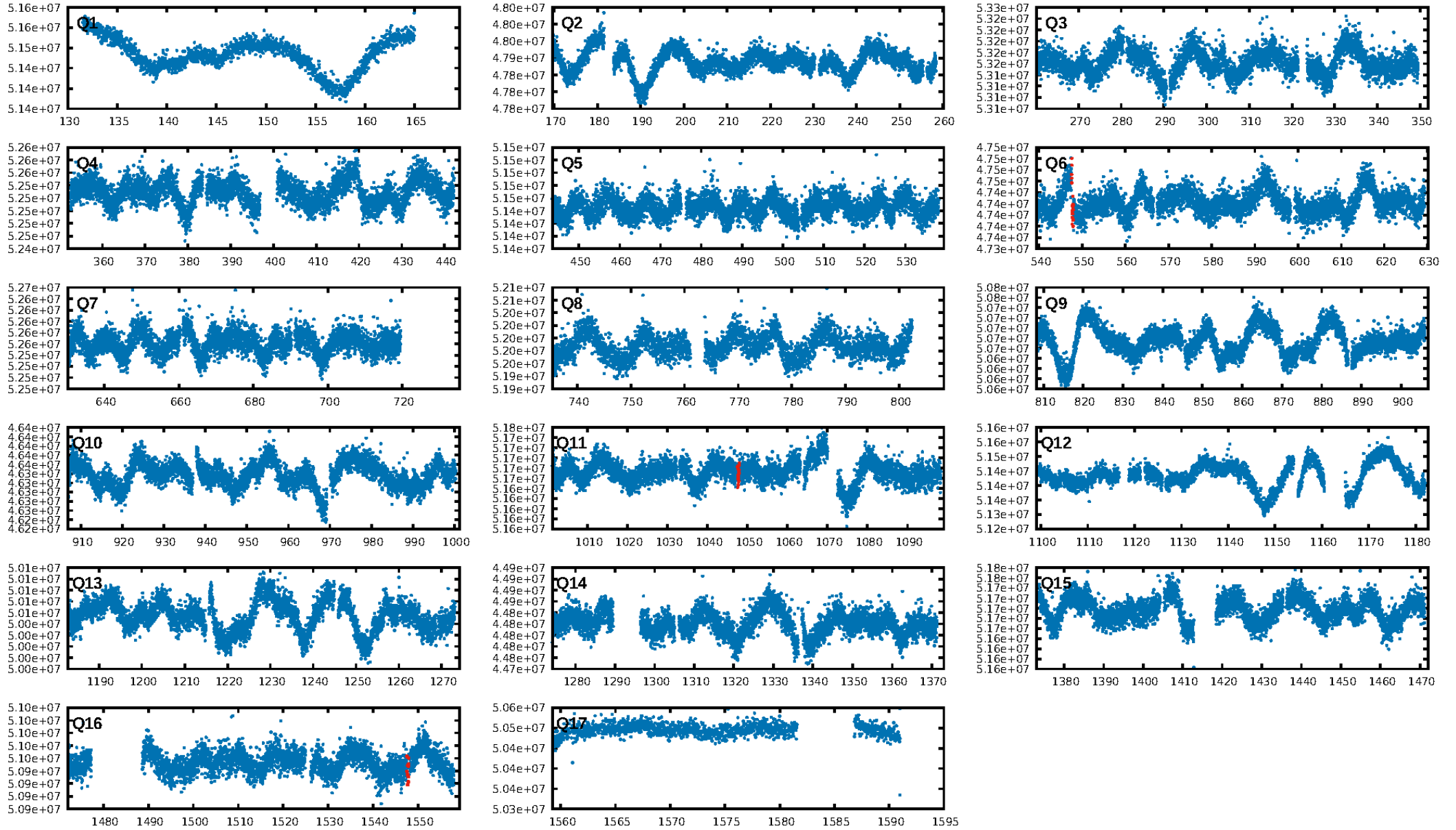
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 3.3%
ModelChiSquareGof-sig: 99.8%
Bootstrap-pfa: 1.76e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -6.543
Centroid-sig: 1.1%
Centroid-so: 3.042 arcsec [1.67 σ]
OotOffset-rm: 3.322 arcsec [1.55 σ]
KicOffset-rm: 3.282 arcsec [1.68 σ]
OotOffset-st: 1/0/1/0 [2]
KicOffset-st: 1/0/1/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

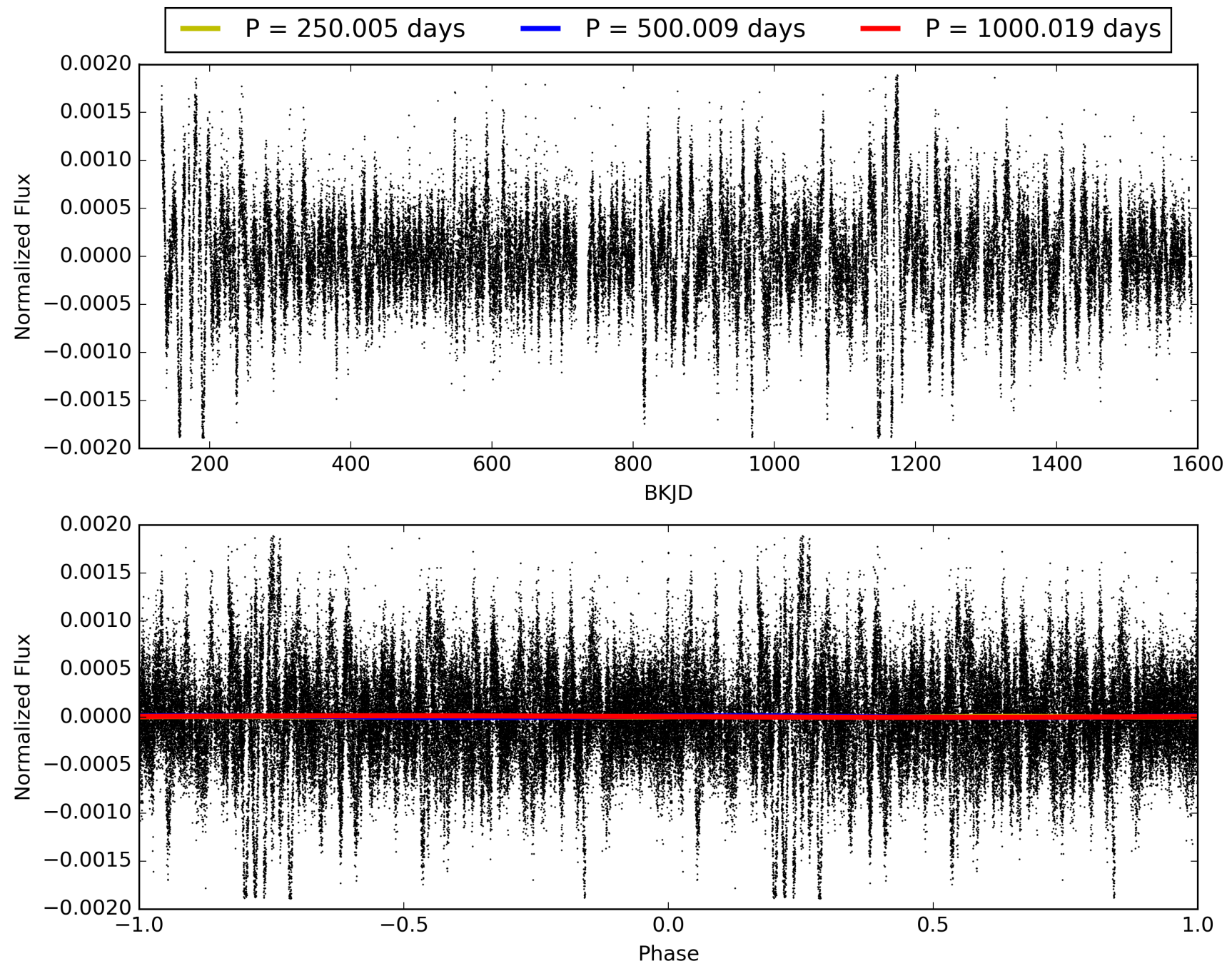
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 19:47:10 Z

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

TCE 003241164-01, PDC Light Curves

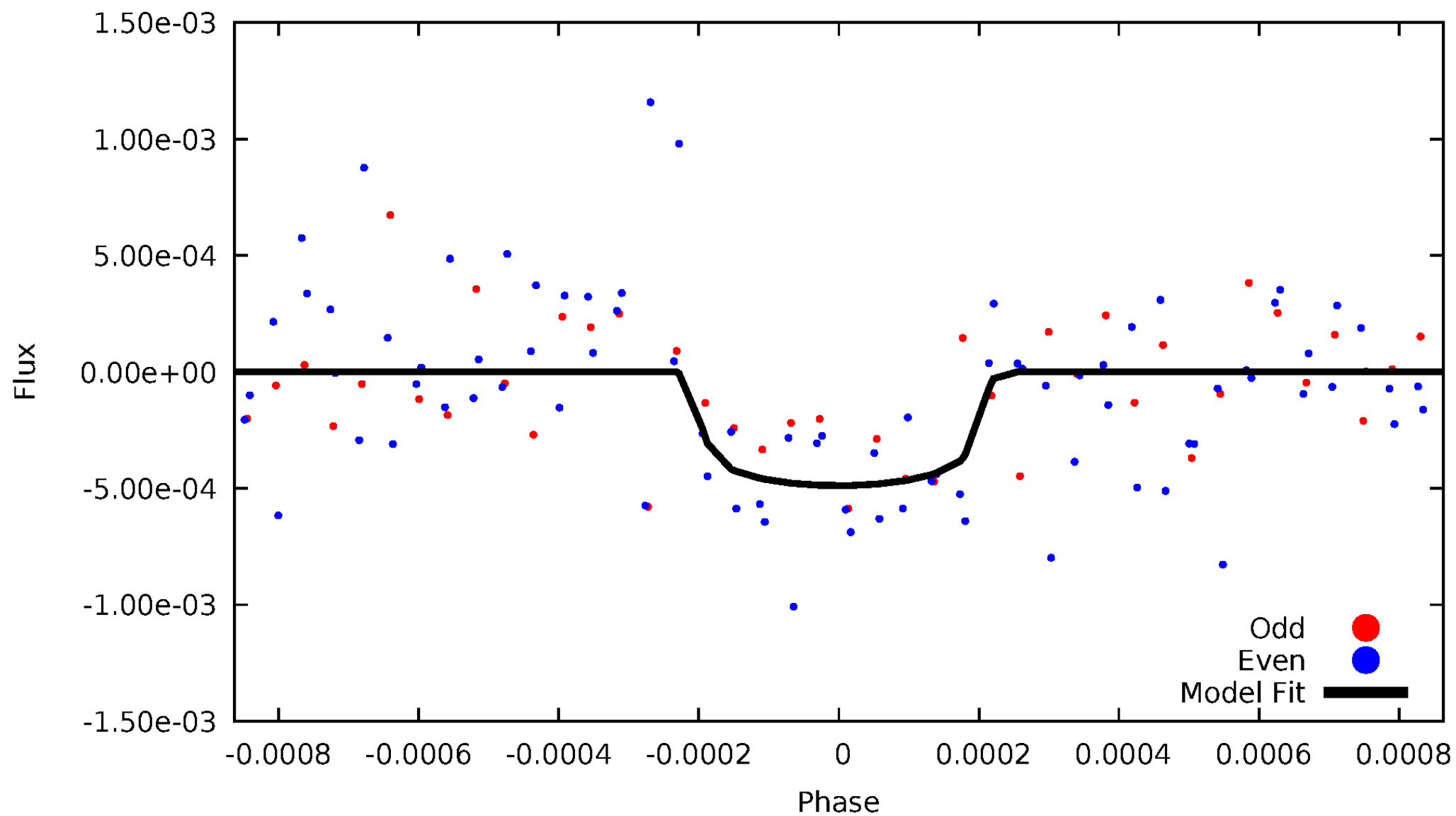


TCE 003241164-01



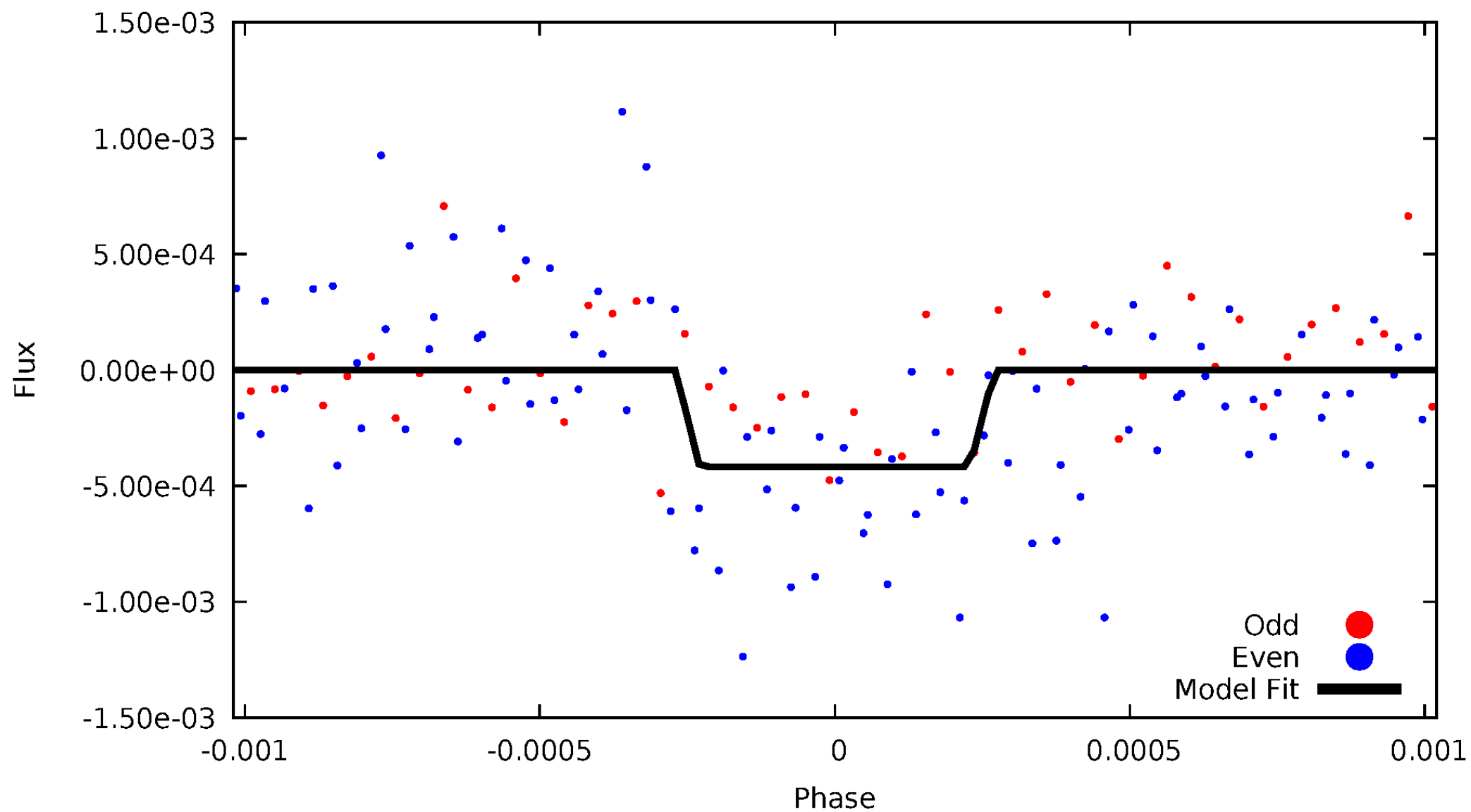
DV Odd/Even

TCE 003241164-01



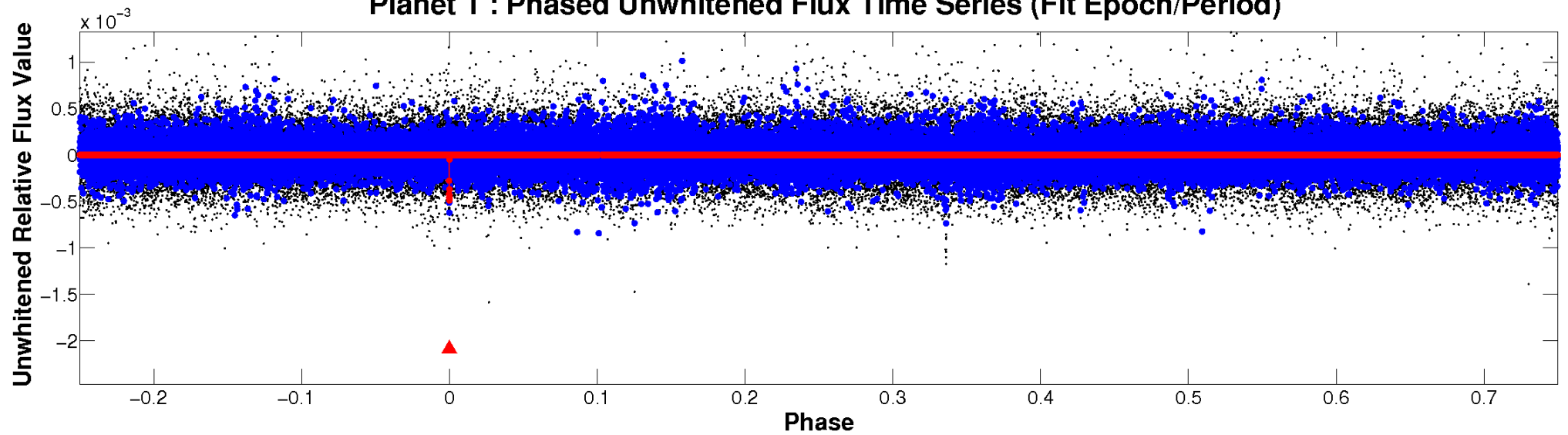
ALT Odd/Even

TCE 003241164-01

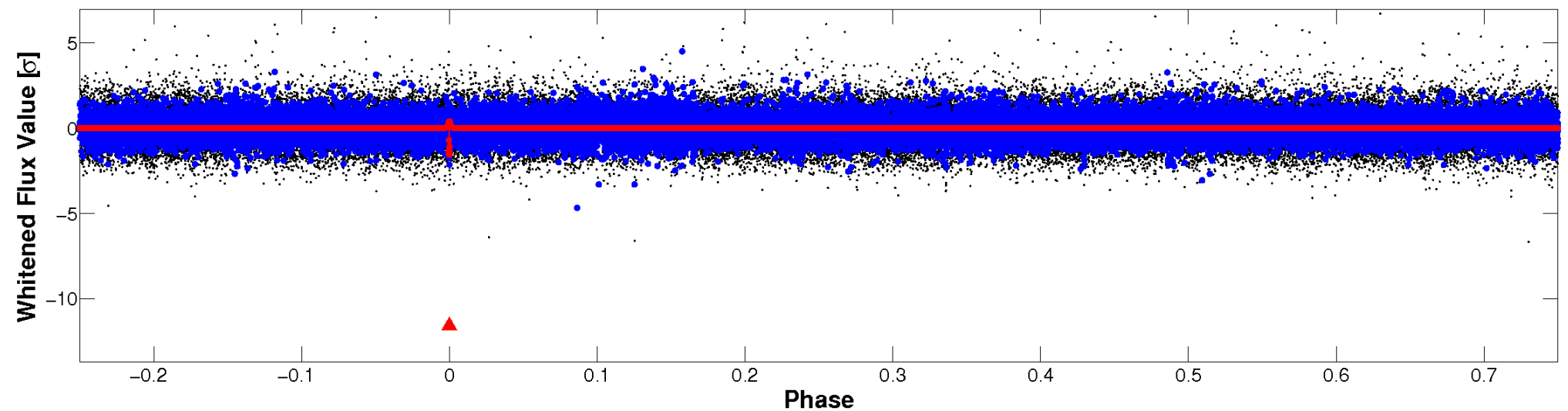


Non-Whitened Vs. Whitened Light Curve

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

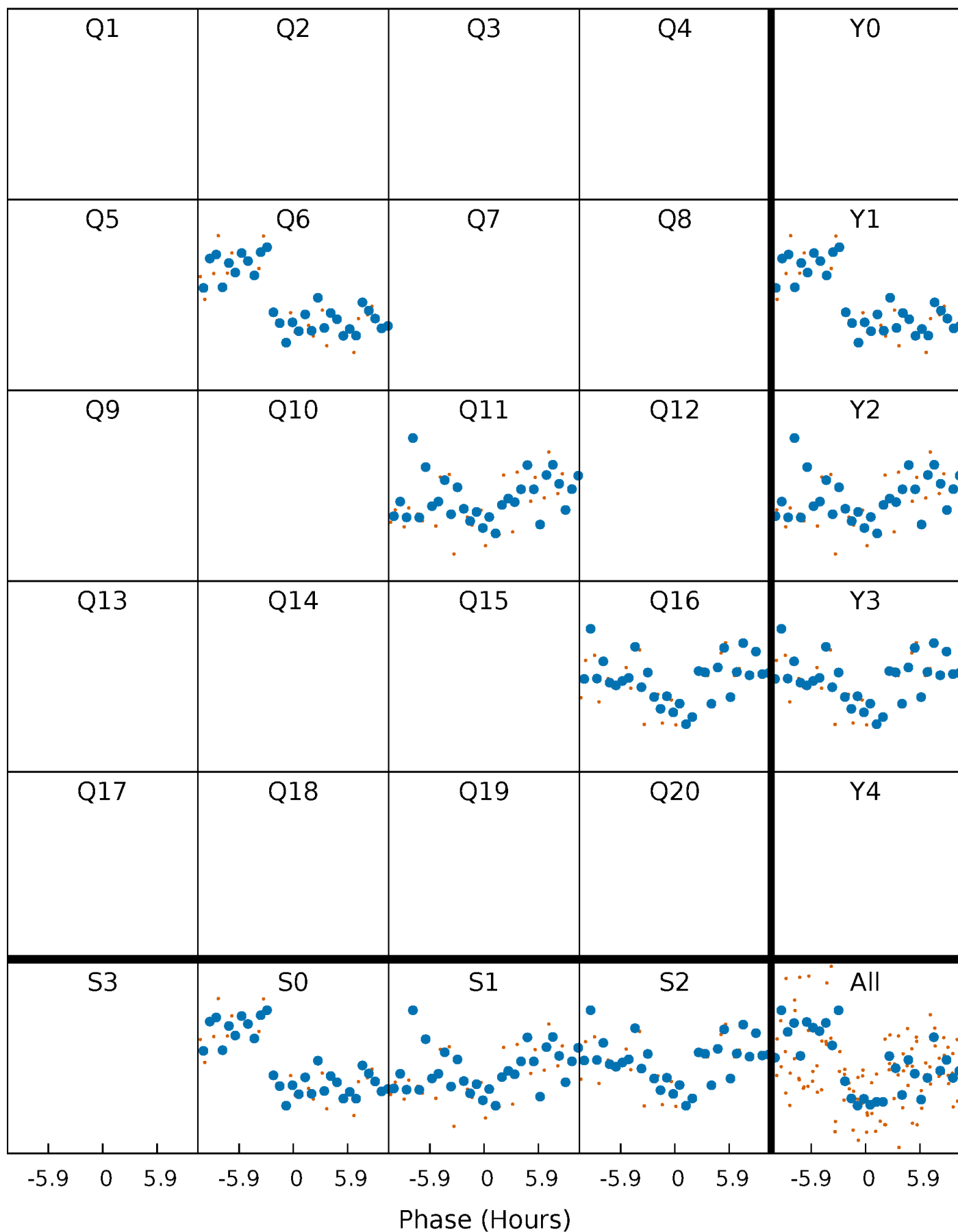


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



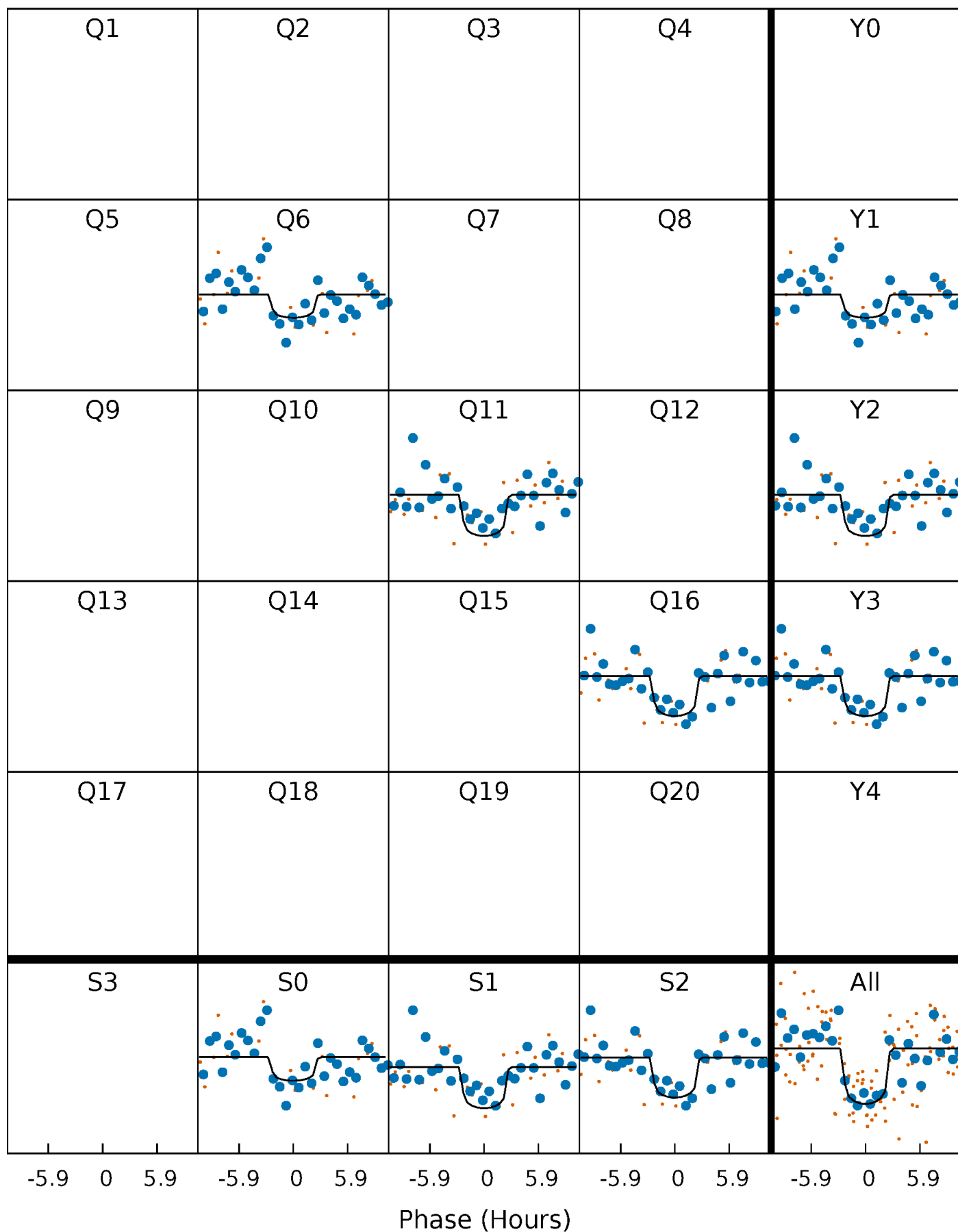
PDC Quarter-Phased Transit Curves

TCE 003241164-01 P=500.009472 Days $T_0=547.717807$ (BKJD)



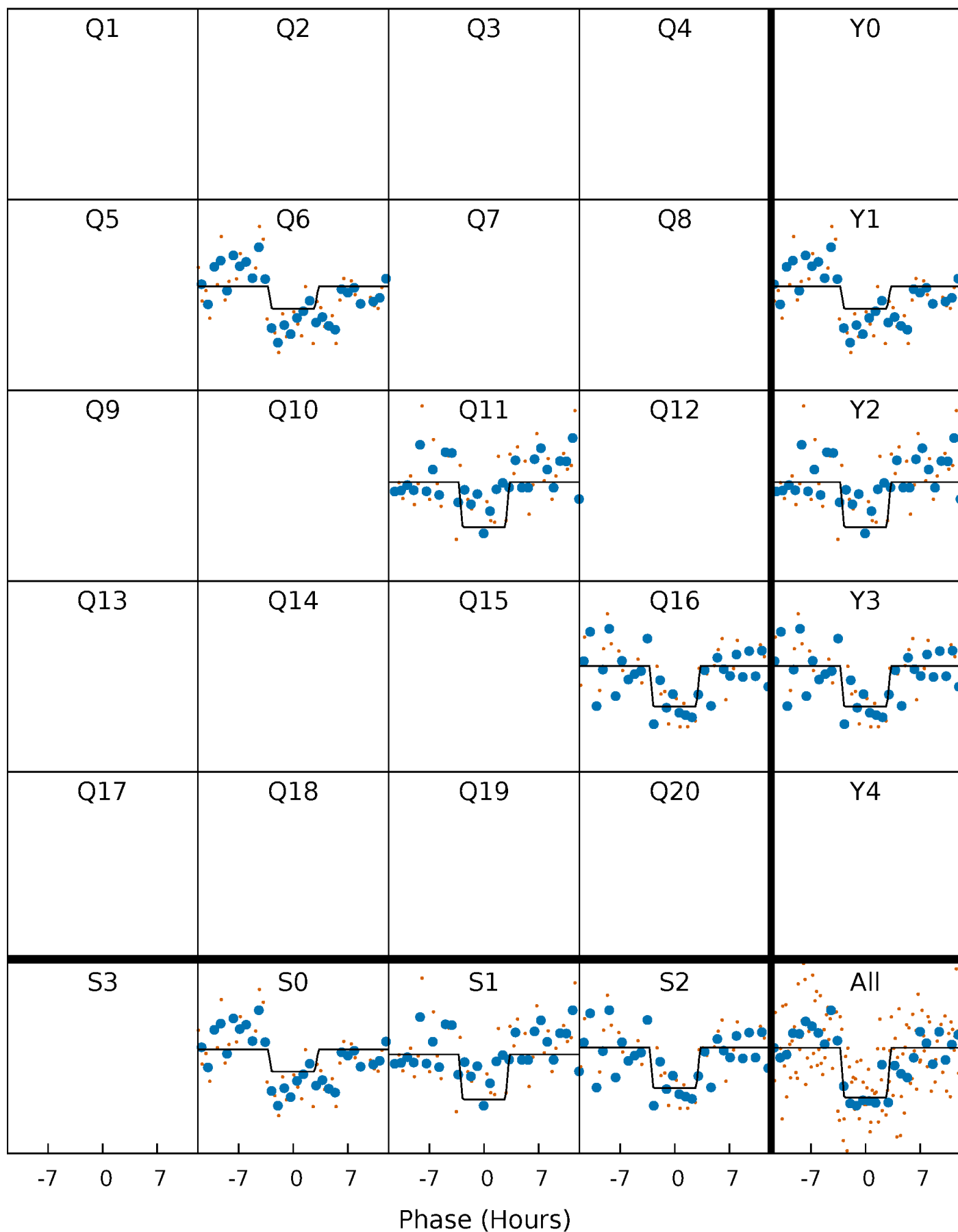
DV Quarter-Phased Transit Curves

TCE 003241164-01 P=500.009472 Days $T_0=547.717807$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

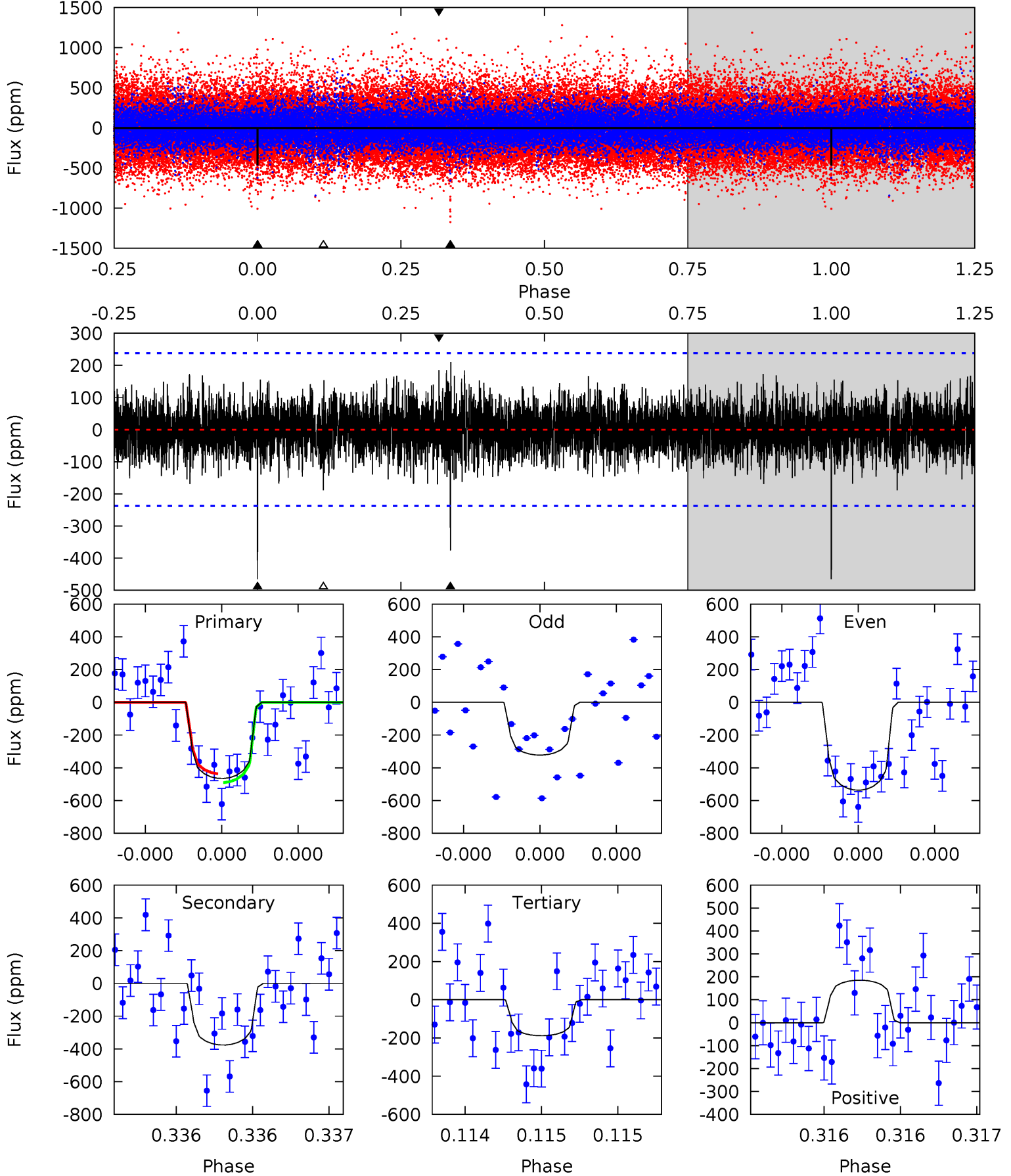
TCE 003241164-01 P=499.975157 Days $T_0=547.763414$ (BKJD)



DV Model-Shift Uniqueness Test

003241164-01, P = 500.009472 Days, E = 47.708335 Days

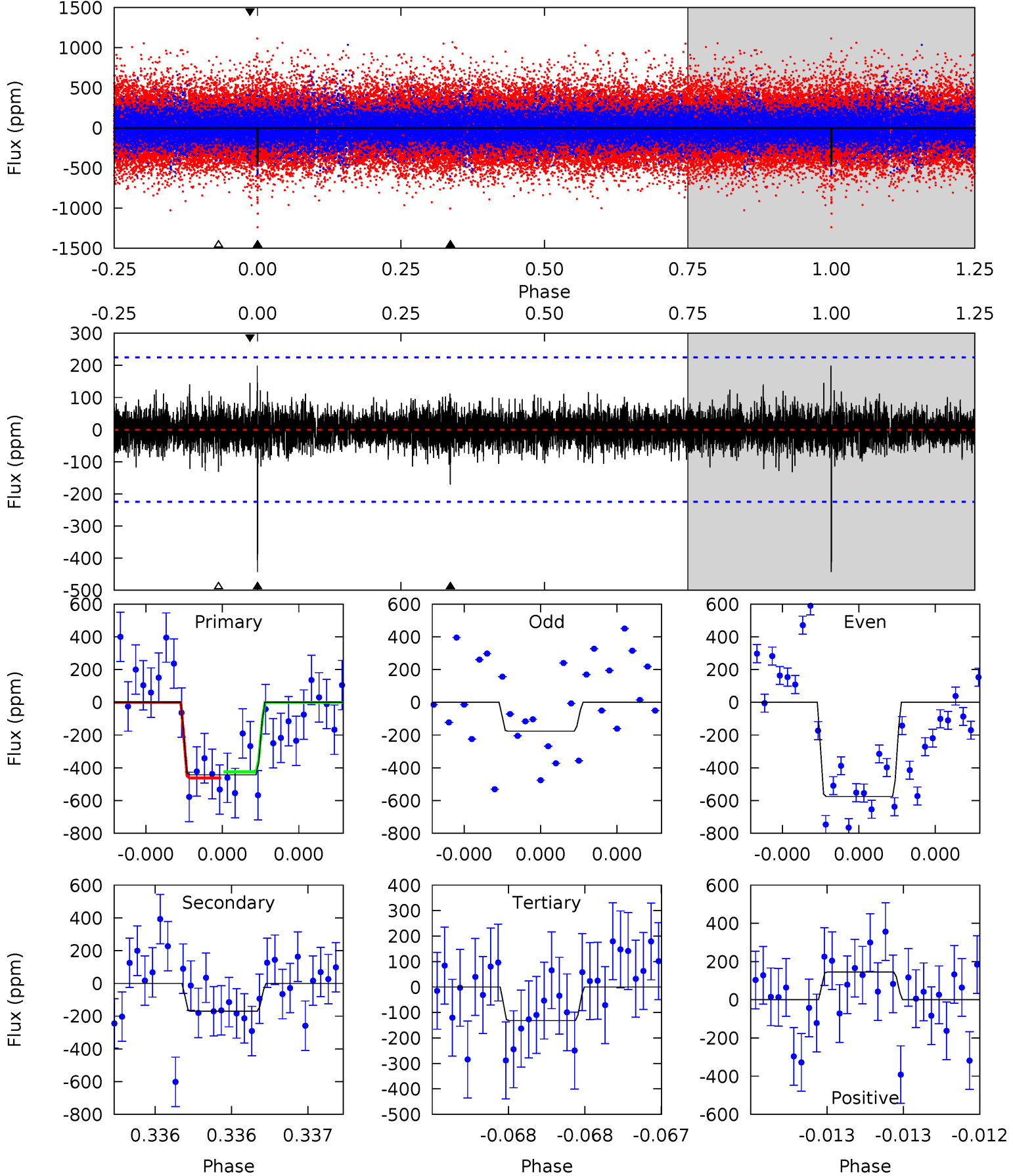
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.9	8.83	4.42	4.35	5.58	3.49	1.20	6.50	6.57	4.41	4.48	2.34	1.00	0.31	0.63



Alt Model-Shift Uniqueness Test

003241164-01, P = 499.975157 Days, E = 47.788257 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.0	4.23	3.26	3.60	5.57	3.48	0.81	7.73	7.40	0.97	0.64	4.67	1.05	0.31	0.48



Stellar Parameters For KIC 003241164

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6210^{+169}_{-206}	$4.489^{+0.054}_{-0.202}$	$-0.500^{+0.300}_{-0.300}$	$0.918^{+0.273}_{-0.091}$	$0.948^{+0.117}_{-0.105}$	$1.725^{+0.462}_{-0.872}$
	+3%/-3%	+1%/-4%	+60%/-60%	+30%/-10%	+12%/-11%	+27%/-51%
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 003241164-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-376 ± 43	$2.43^{+1.49}_{-1.35}$	340^{+23}_{-17}	5713^{+3301}_{-1097}	$49730^{+193955}_{-30837}$
Alt.	-171 ± 40	$2.25^{+1.51}_{-1.22}$	340^{+22}_{-17}	4923^{+2219}_{-907}	25485^{+96401}_{-16252}

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

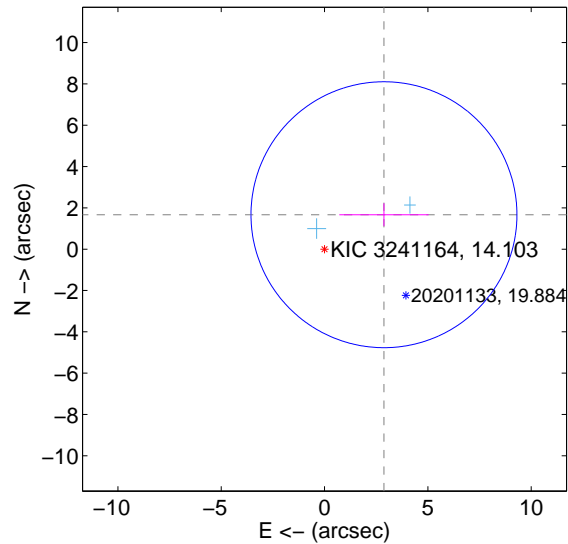
Supplemental centroid analysis for 003241164-01. Kepler magnitude: 14.10. Transit SNR 7.82

There are 2 quarters with good PRF difference image offsets

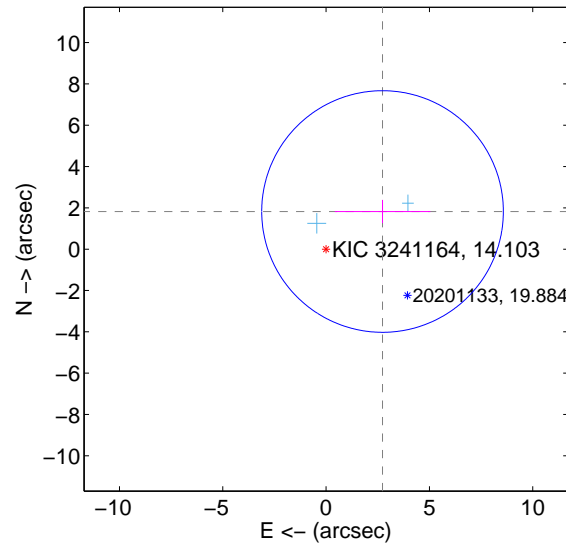
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.322 ± 2.145	1.55	-2.873 ± 2.162	1.667 ± 0.550
PRF-fit source offset from KIC position	3.282 ± 1.948	1.68	-2.729 ± 2.312	1.822 ± 0.563
photometric centroid source offset	3.04 ± 1.82	1.67	-1.93 ± 1.79	2.35 ± 1.85

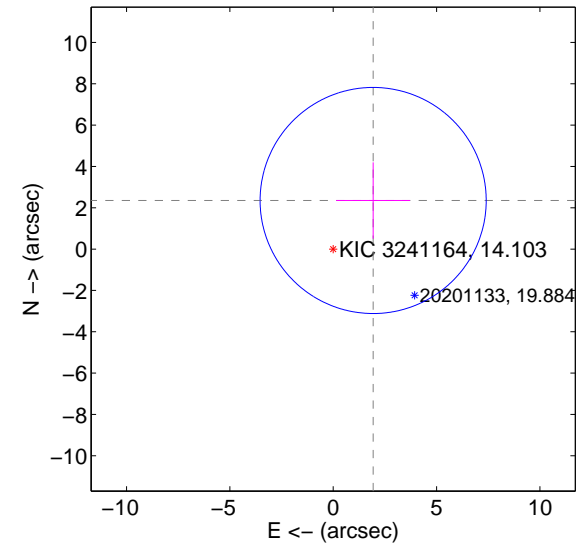
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

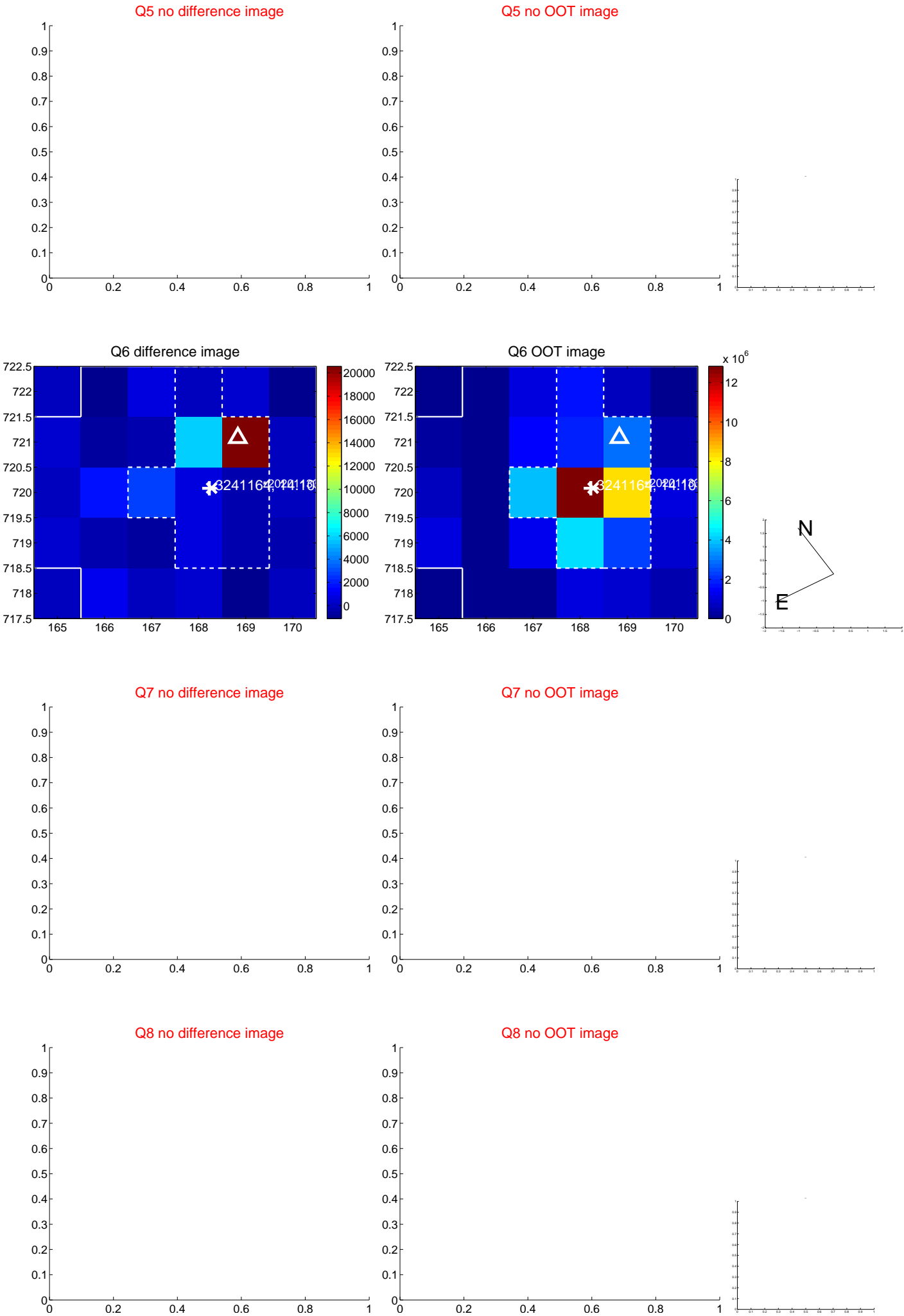


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

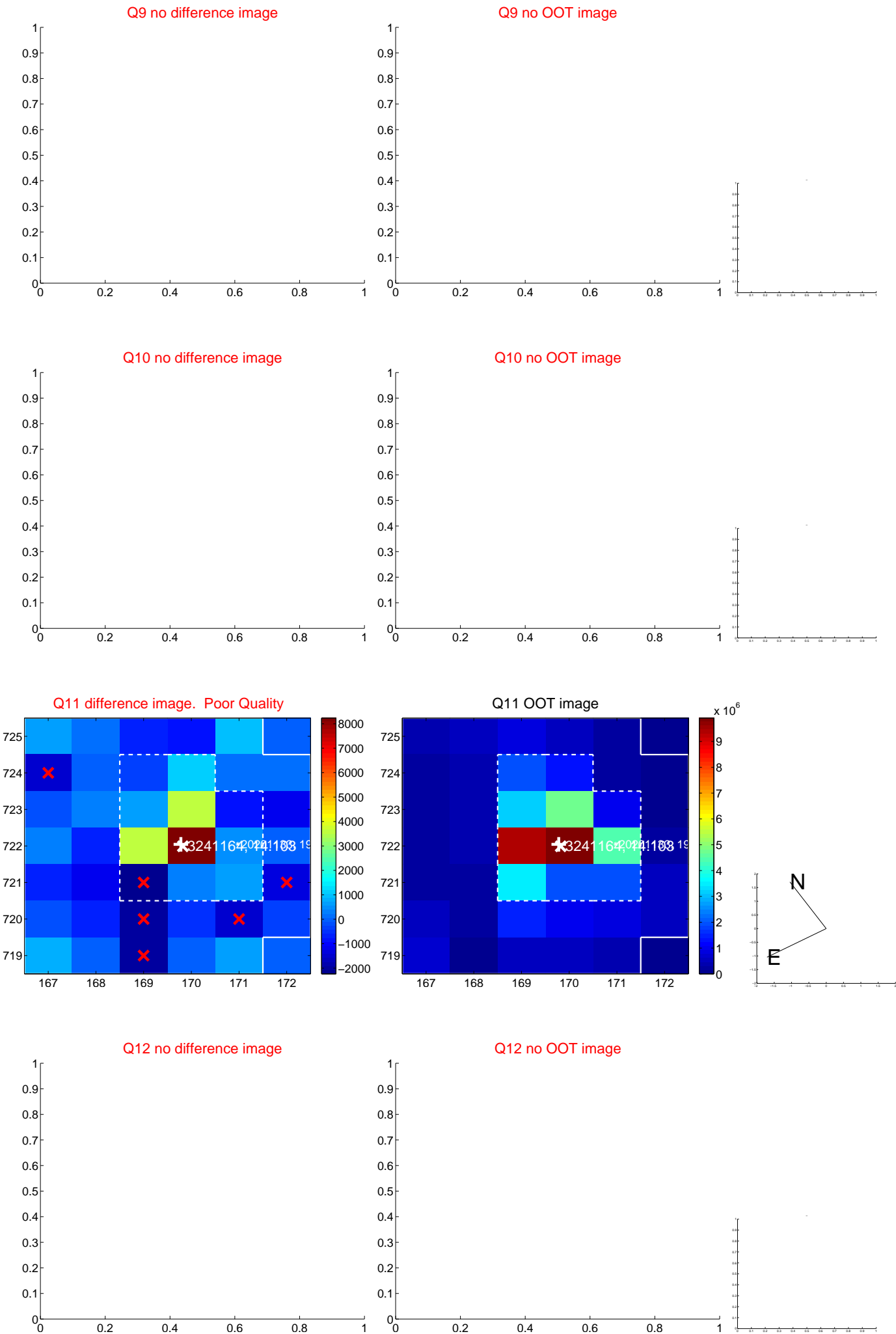
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



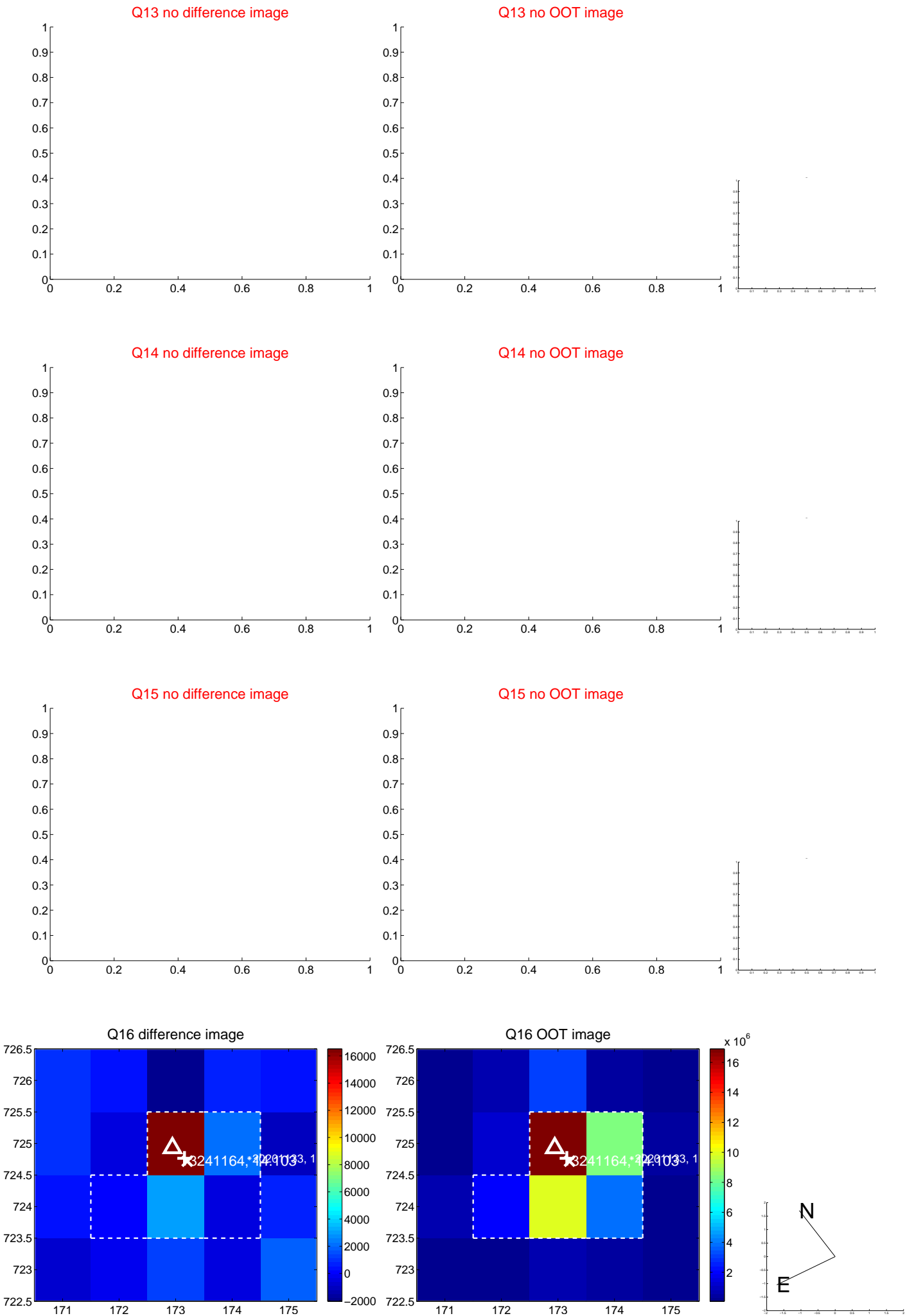
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



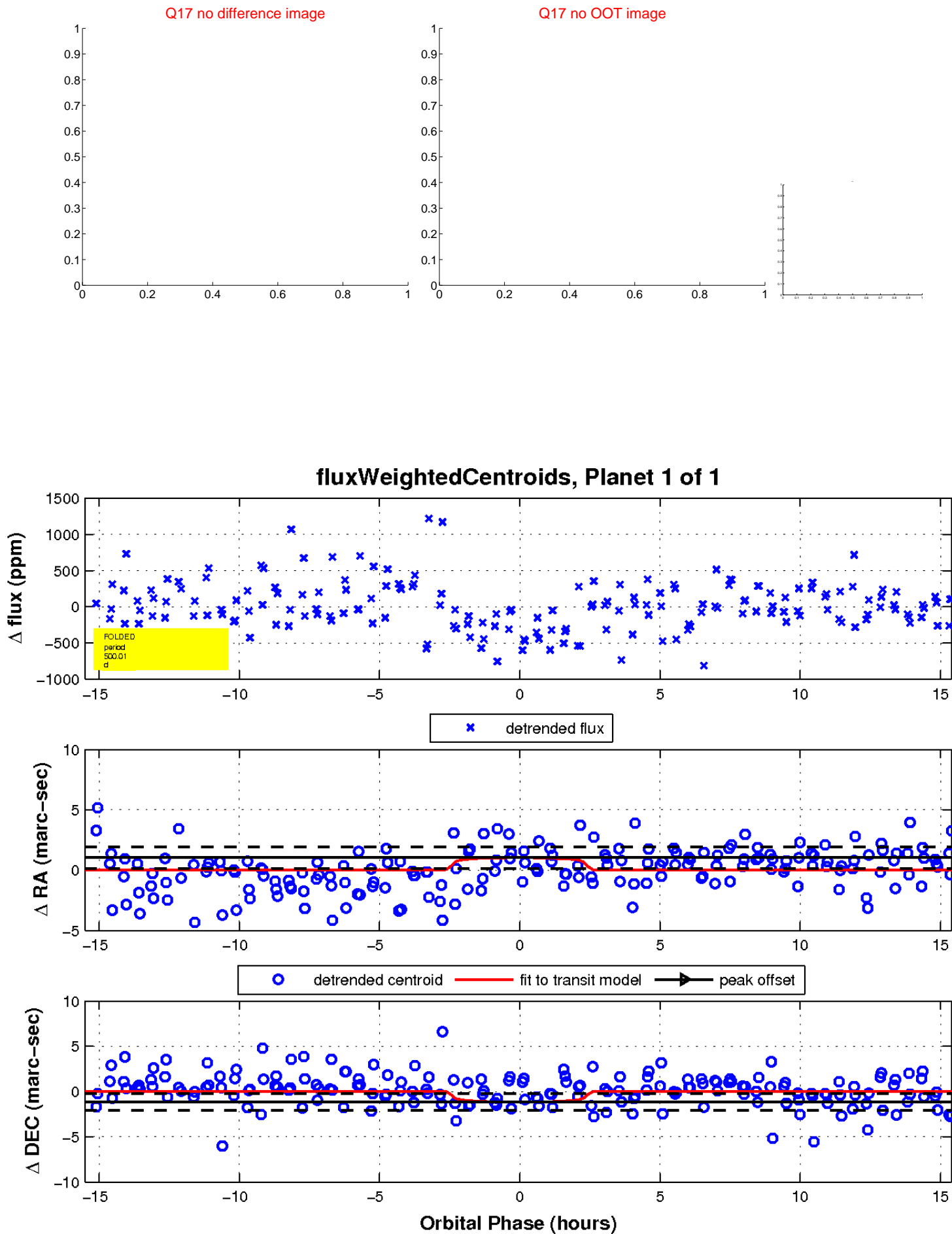
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

