

KIC 006309193

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})
006309193-01	OBS	No	530.056530	221.623947	191.2	2.803	8.3	3.5	0.89	5553	1.41	0.49

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006309193-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—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.

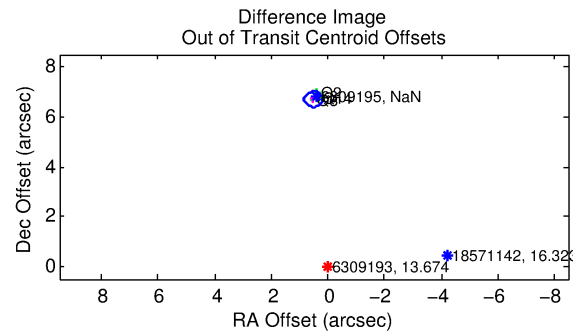
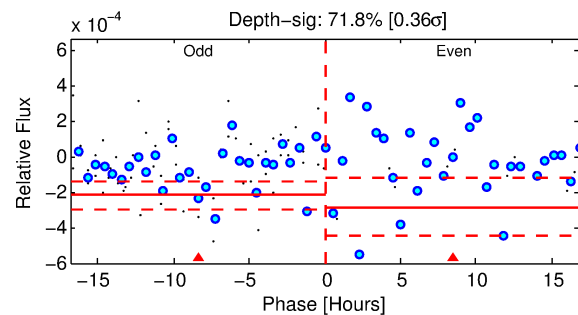
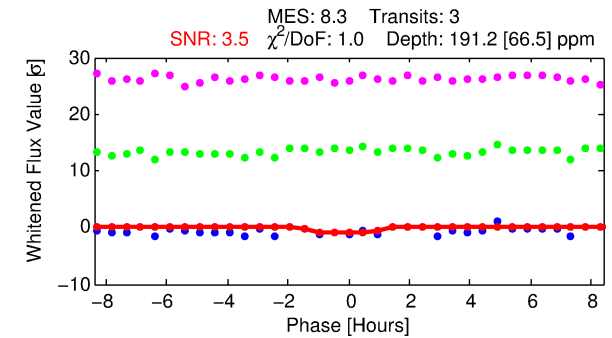
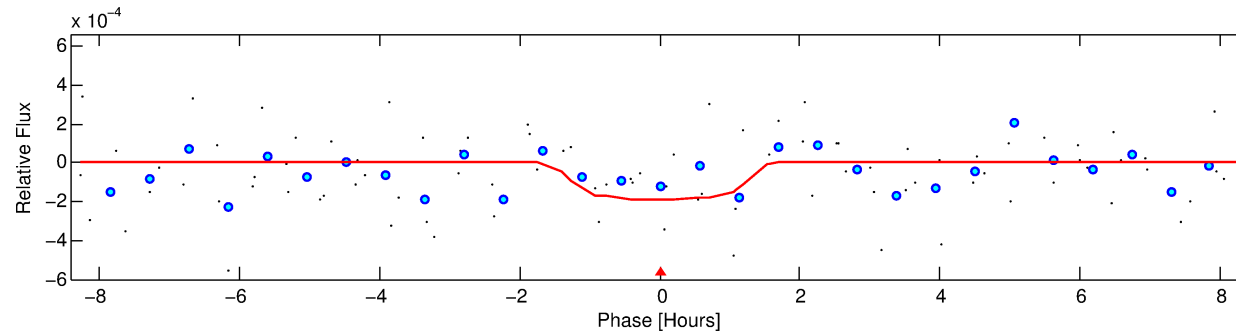
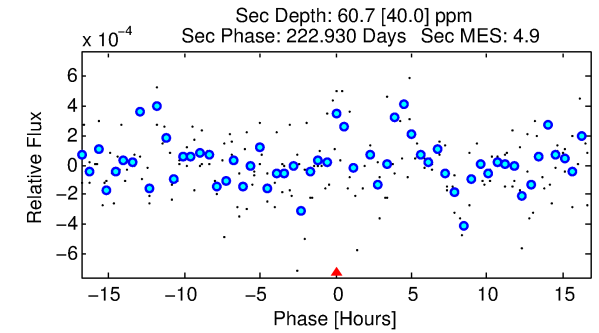
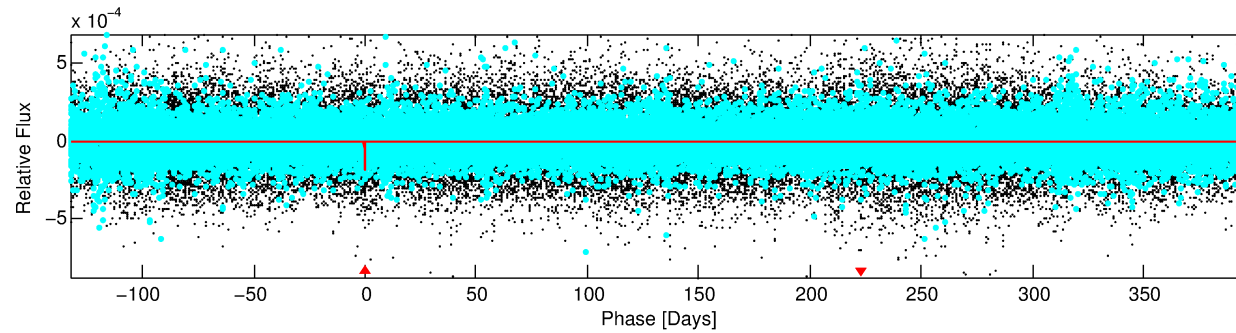
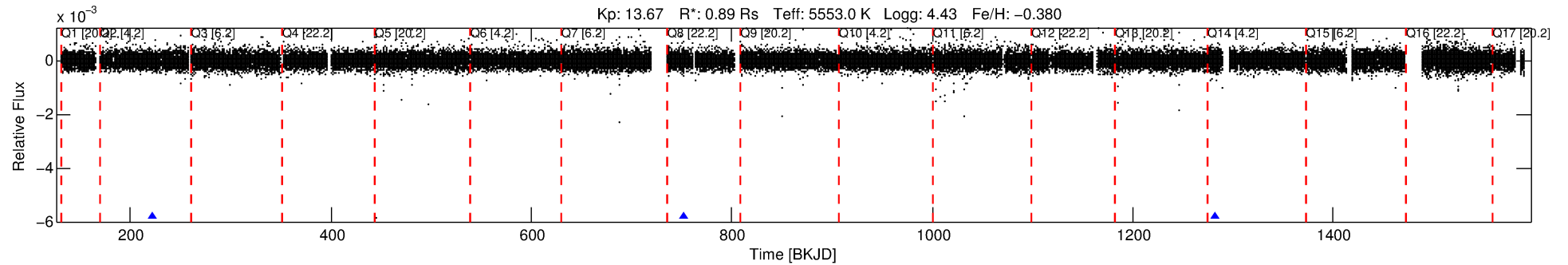
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006309193-01

No Significant Match Found

DV One-Page Summary

KIC: 6309193 Candidate: 1 of 1 Period: 530.057 d



DV Fit Results:

Period = 530.05653 [0.01603] d
Epoch = 221.6239 [0.0210] BKJD
Rp/R* = 0.0146 [0.0436]
a/R* = 782.73 [10724.16]
b = 0.86 [4.29]
Seff = 0.49 [0.17]
Teq = 213 [19] K
Rp = 1.41 [4.23] Re
a = 1.1727 [0.2495] AU
Ag = 23106.89 [139209.29] [0.17σ]
Teff = 4061 [6109] K [0.63σ]

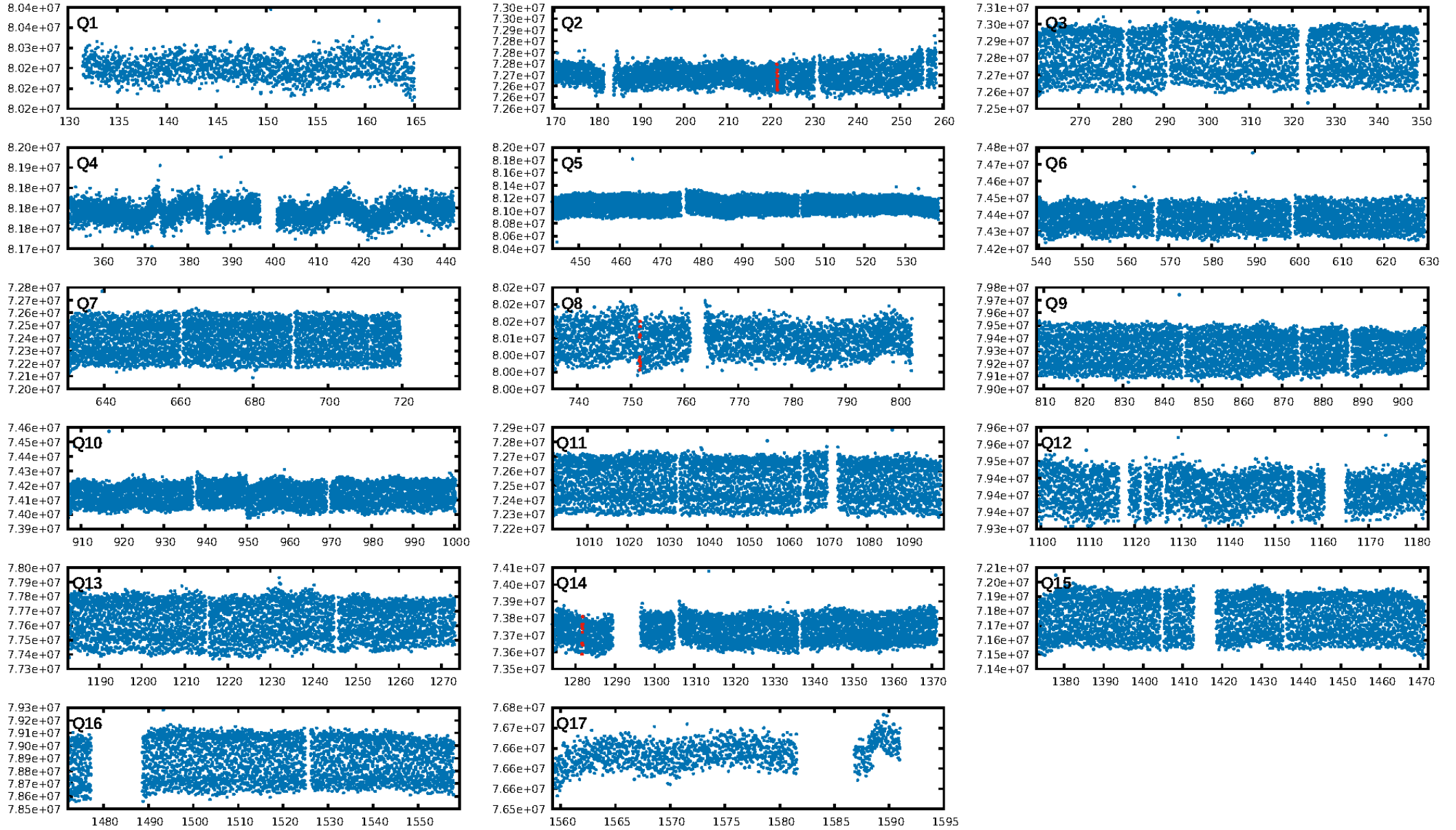
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 62.5%
ModelChiSquareGoF-sig: 99.5%
Bootstrap-pfa: 7.80e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.7984
Centroid-sig: 64.3%
Centroid-so: 2.659 arcsec [0.39σ]
OotOffset-rm: 6.726 arcsec [64.98σ]
KicOffset-rm: 6.758 arcsec [65.30σ]
OotOffset-st: 2/0/1/0 [3]
KicOffset-st: 2/0/1/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

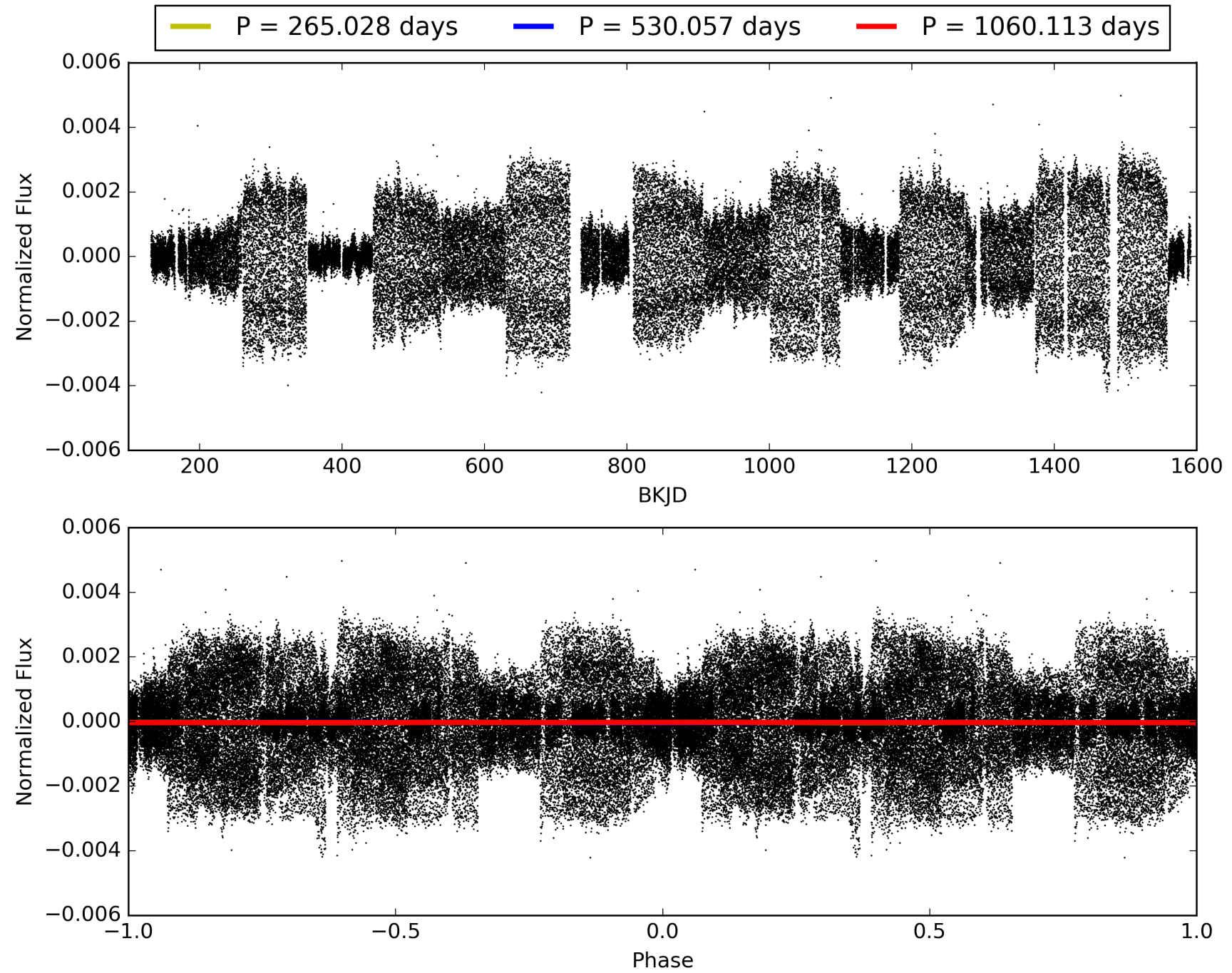
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 21:39:12 Z

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

TCE 006309193-01, PDC Light Curves

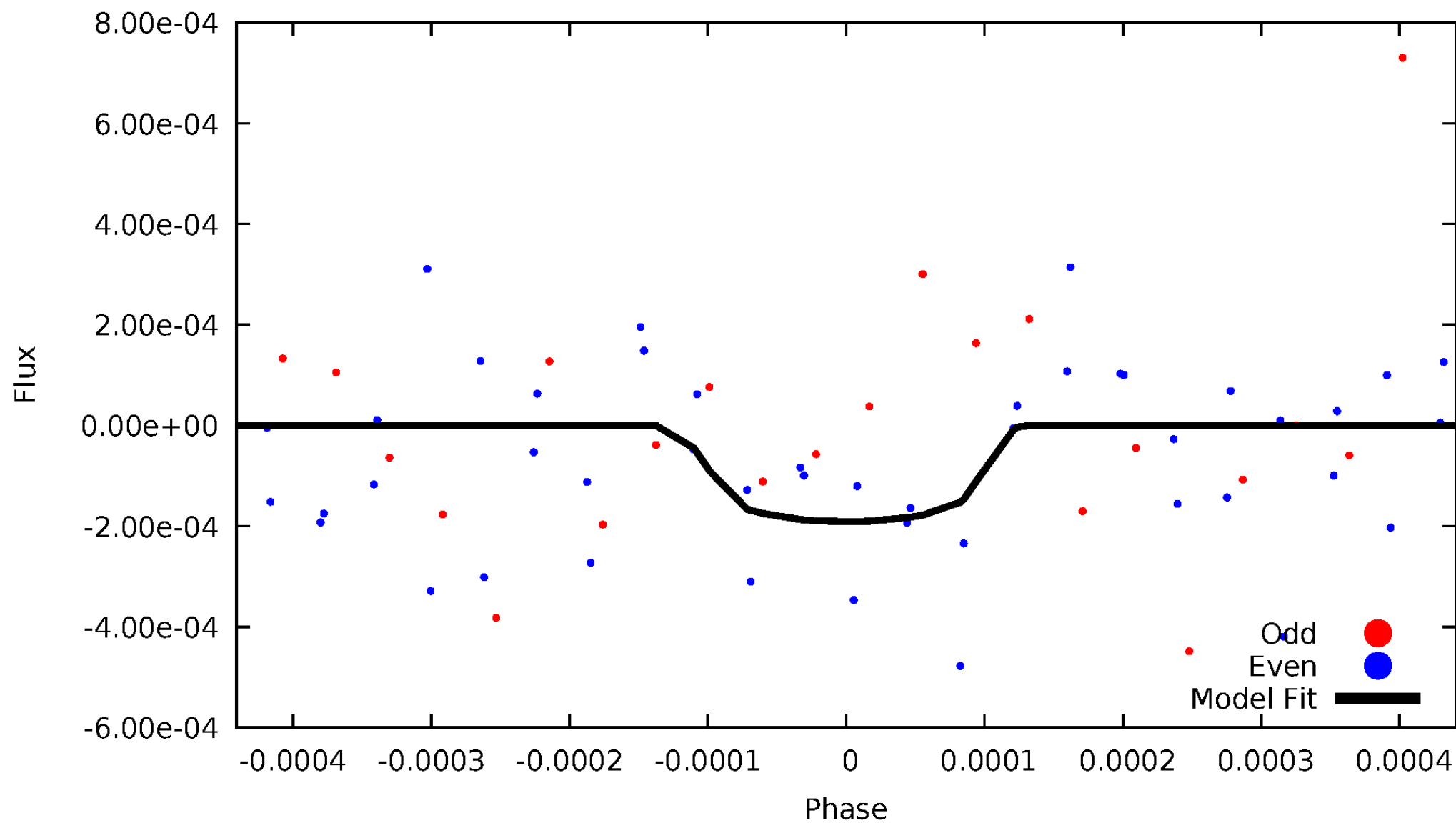


TCE 006309193-01



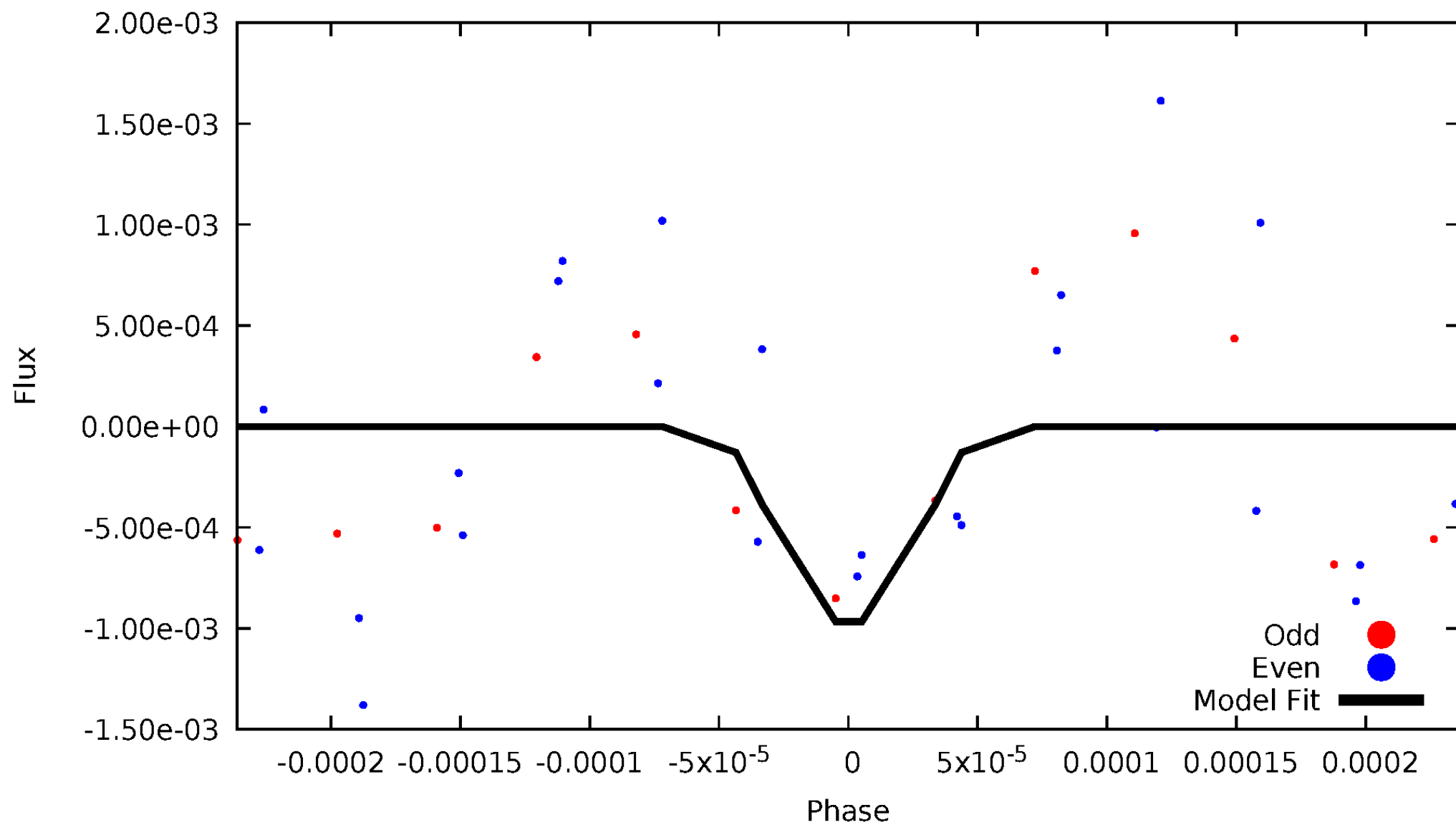
DV Odd/Even

TCE 006309193-01



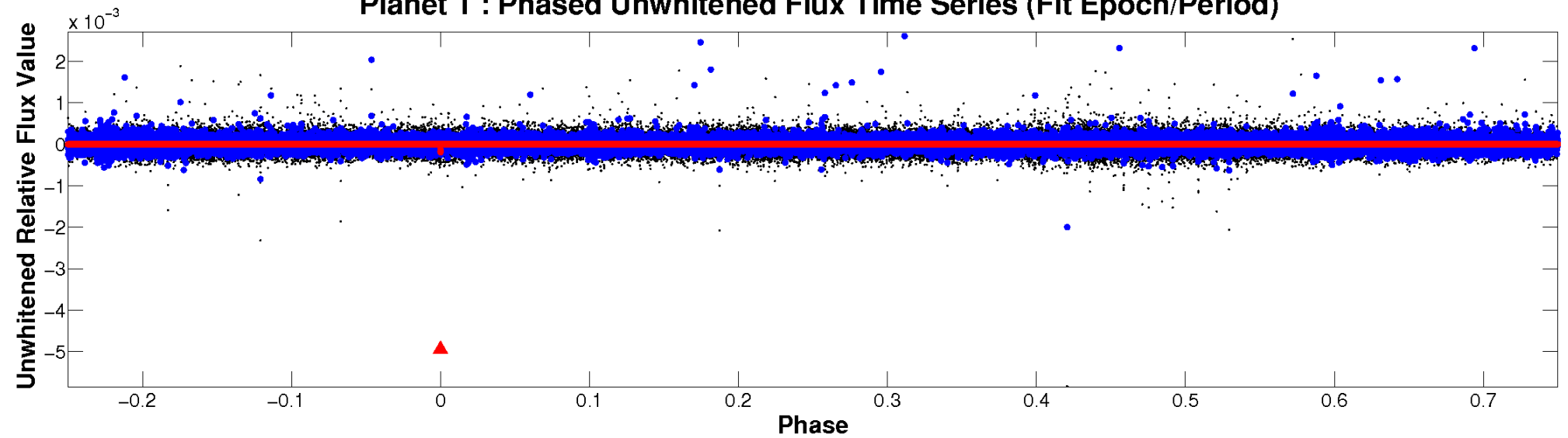
ALT Odd/Even

TCE 006309193-01

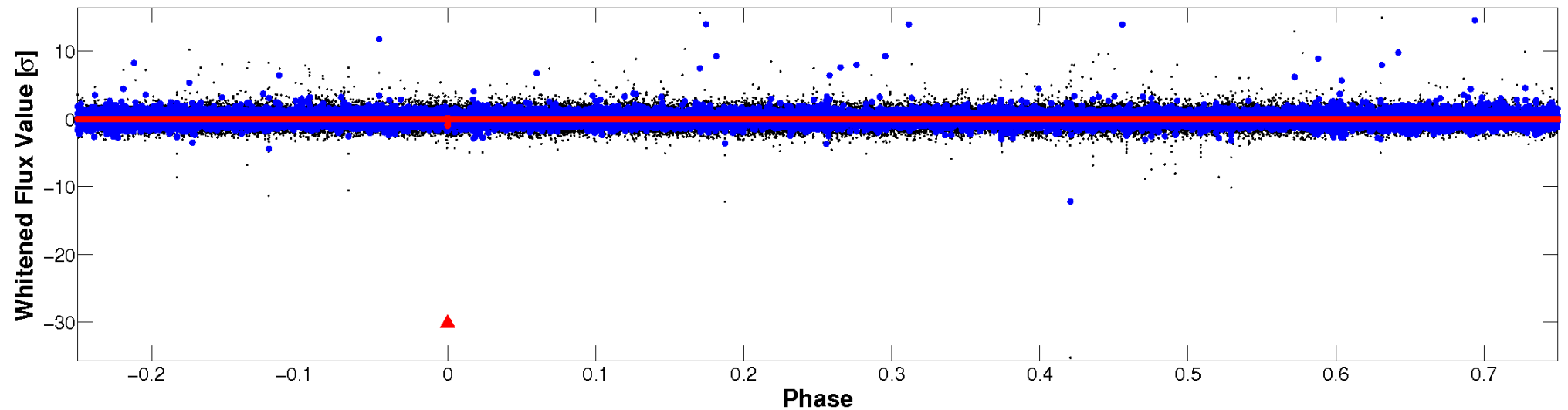


Non-Whitened Vs. Whitened Light Curve

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

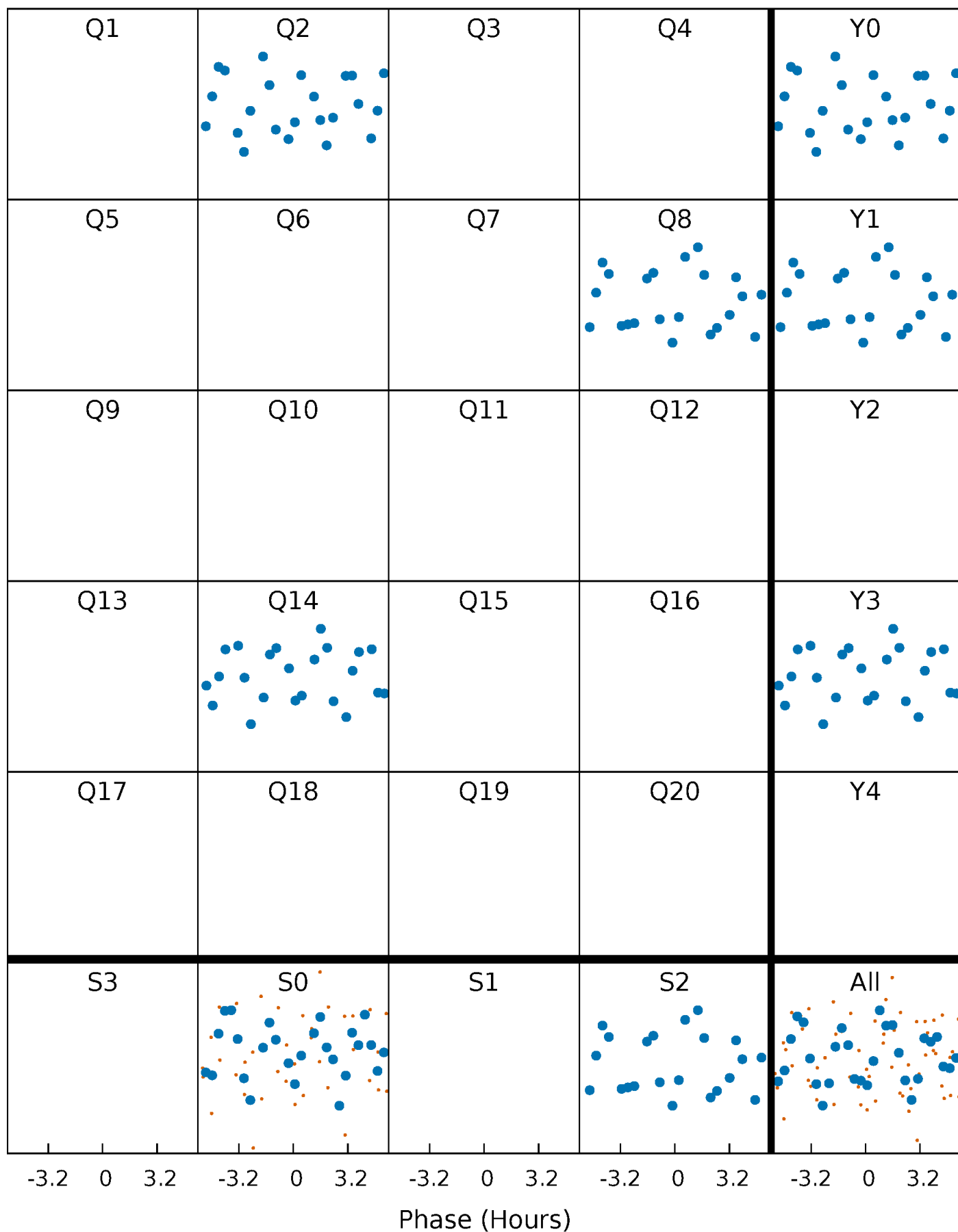


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



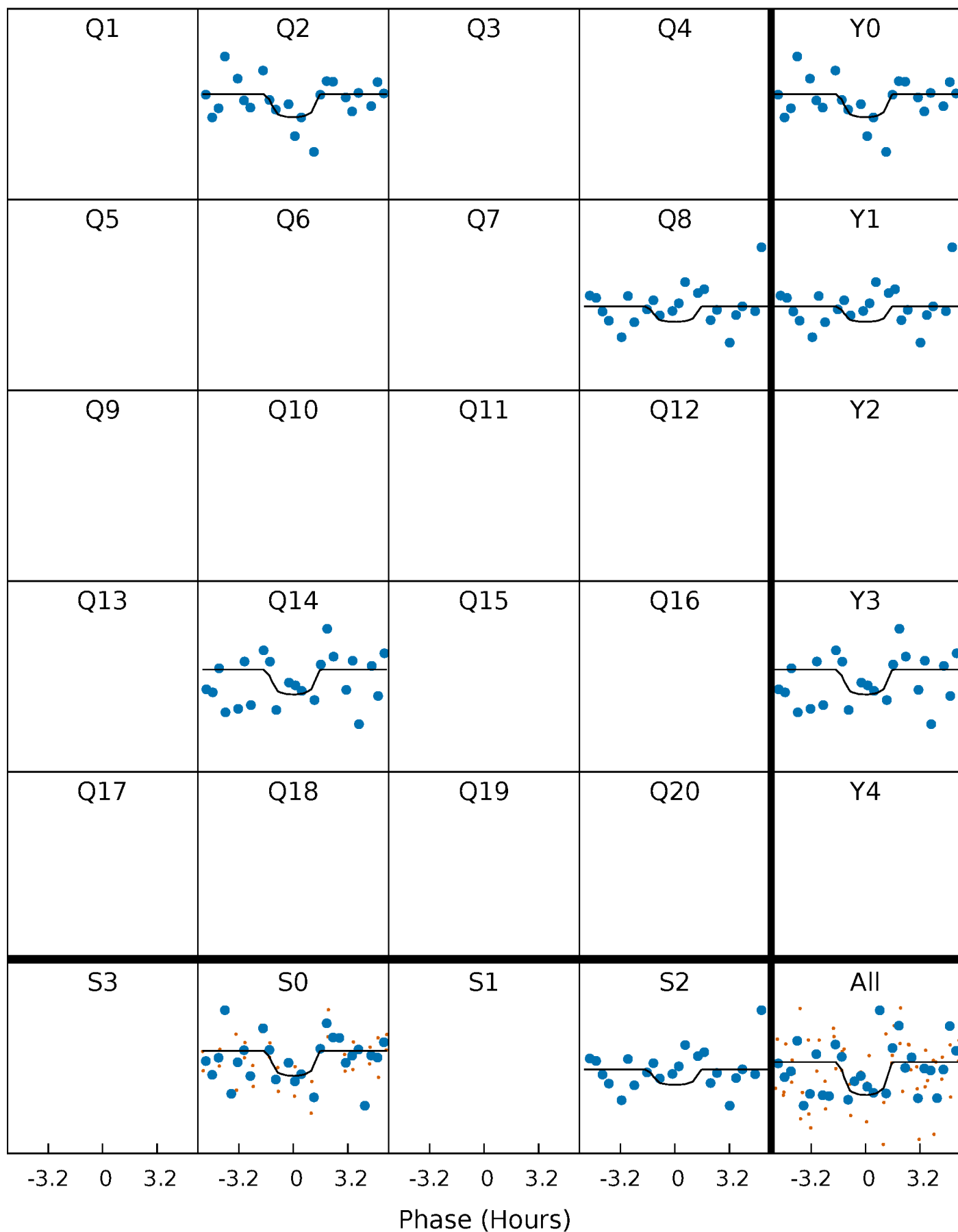
PDC Quarter-Phased Transit Curves

TCE 006309193-01 P=530.056530 Days $T_0=221.623947$ (BKJD)



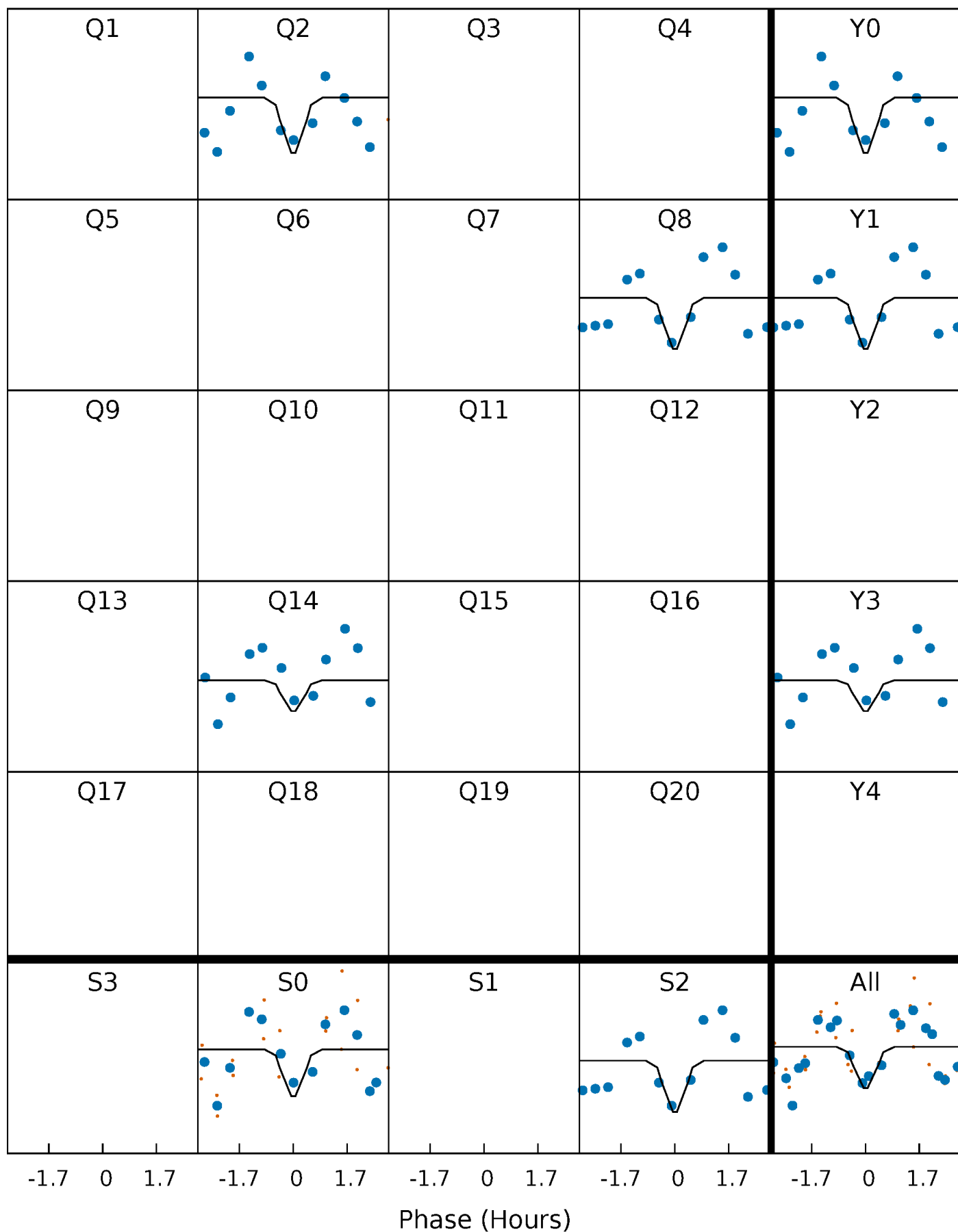
DV Quarter-Phased Transit Curves

TCE 006309193-01 P=530.056530 Days $T_0=221.623947$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

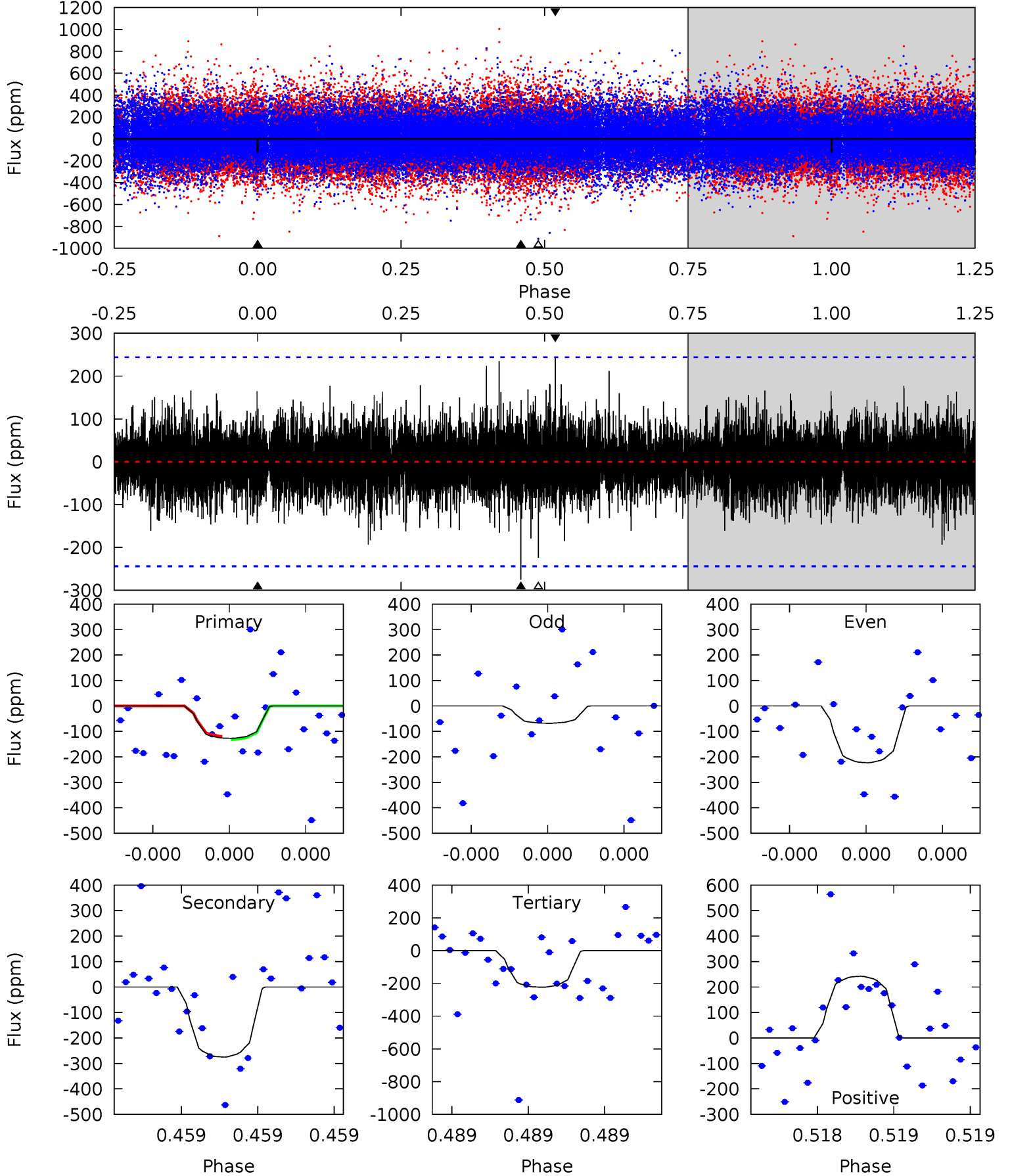
TCE 006309193-01 P=530.066980 Days $T_0=221.604517$ (BKJD)



DV Model-Shift Uniqueness Test

006309193-01, P = 530.056530 Days, E = 221.623947 Days

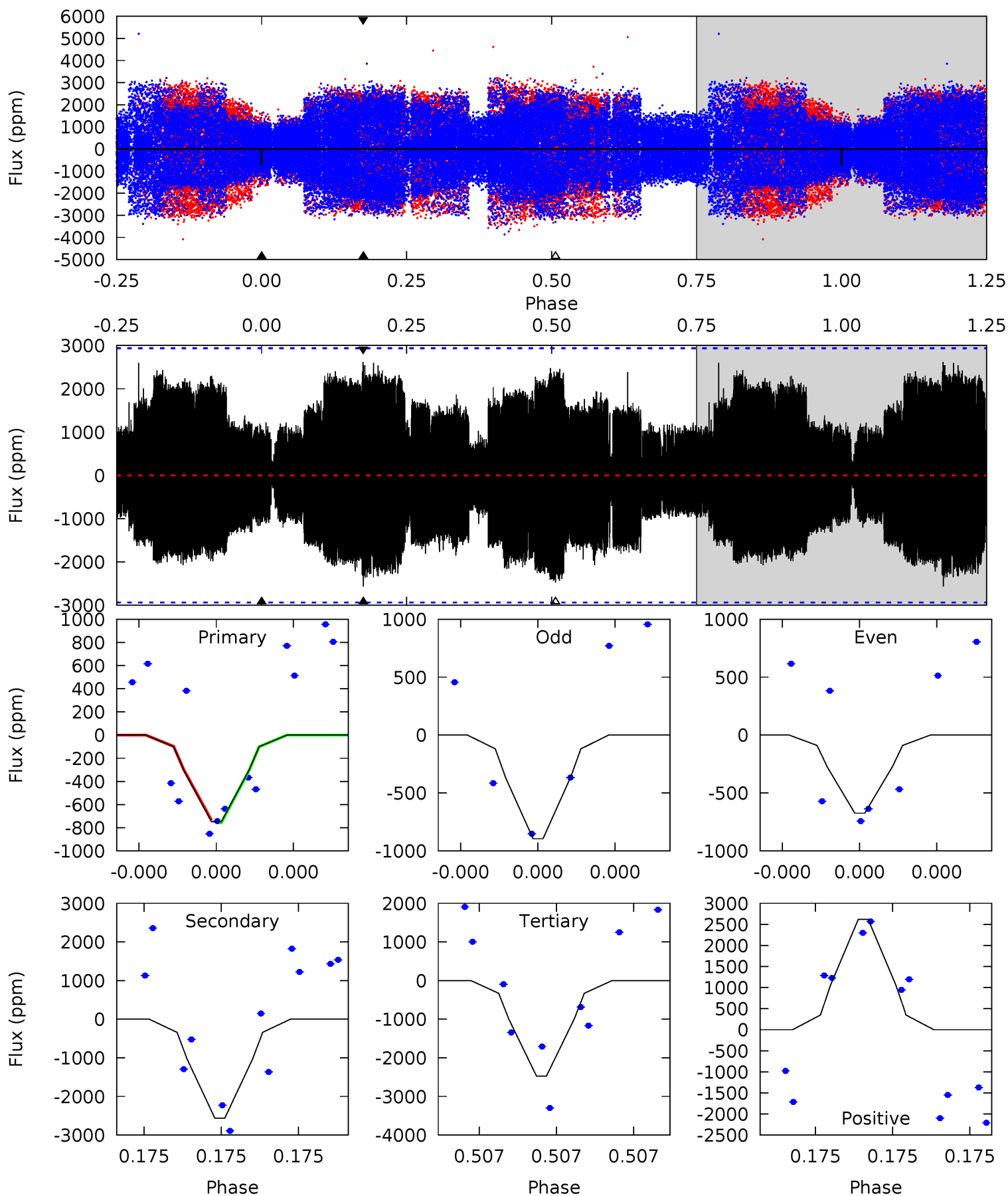
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.97	6.44	5.22	5.66	5.70	3.68	1.11	-2.25	-2.69	1.21	0.77	1.73	0.67	0.47	0.14



Alt Model-Shift Uniqueness Test

006309193-01, P = 530.066980 Days, E = 221.604517 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.50	5.14	4.96	5.25	5.89	3.95	2.03	-3.46	-3.75	0.18	-0.11	0.21	0.85	0.51	0.02



Stellar Parameters For KIC 006309193

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5553^{+166}_{-150}	$4.426^{+0.153}_{-0.187}$	$-0.380^{+0.350}_{-0.250}$	$0.887^{+0.209}_{-0.139}$	$0.767^{+0.127}_{-0.054}$	$1.546^{+0.929}_{-0.745}$
	+3%/-3%	+3%/-4%	+92%/-66%	+24%/-16%	+17%/-7%	+60%/-48%
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 006309193-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-275 ± 43	$3.19^{+3.49}_{-2.14}$	298^{+20}_{-17}	4240^{+2617}_{-950}	$21700^{+180345}_{-17095}$
Alt.	-2565 ± 499	$4.39^{+3.49}_{-2.90}$	301^{+20}_{-18}	5933^{+5765}_{-1374}	$103299^{+825075}_{-73041}$

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

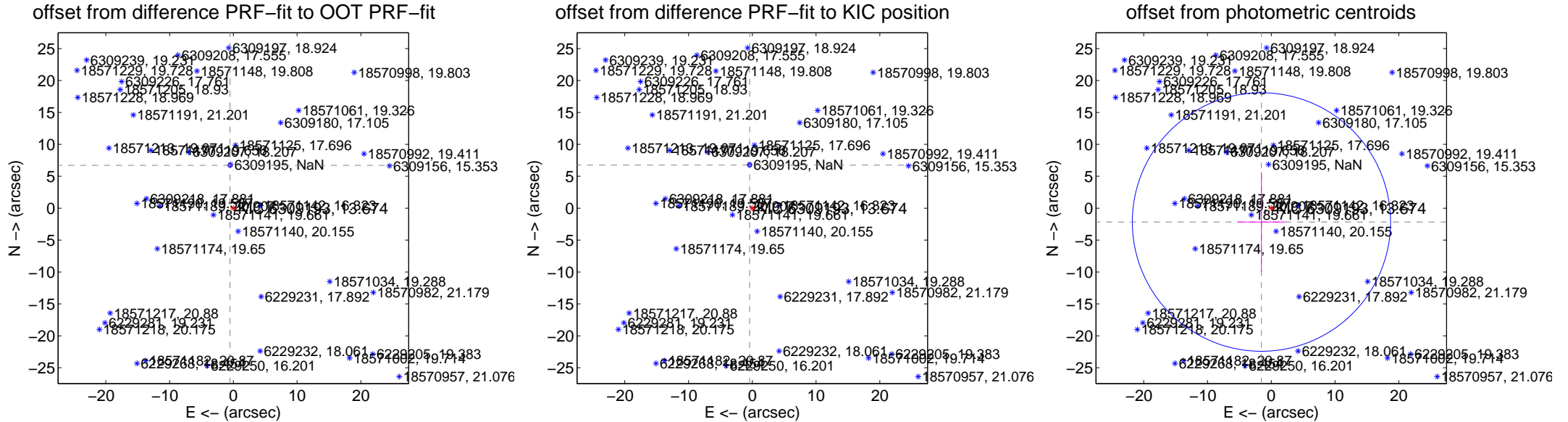
DV Centroid Data

Supplemental centroid analysis for 006309193-01. Kepler magnitude: 13.67. Transit SNR 3.51

There are 2 quarters with good PRF difference image offsets

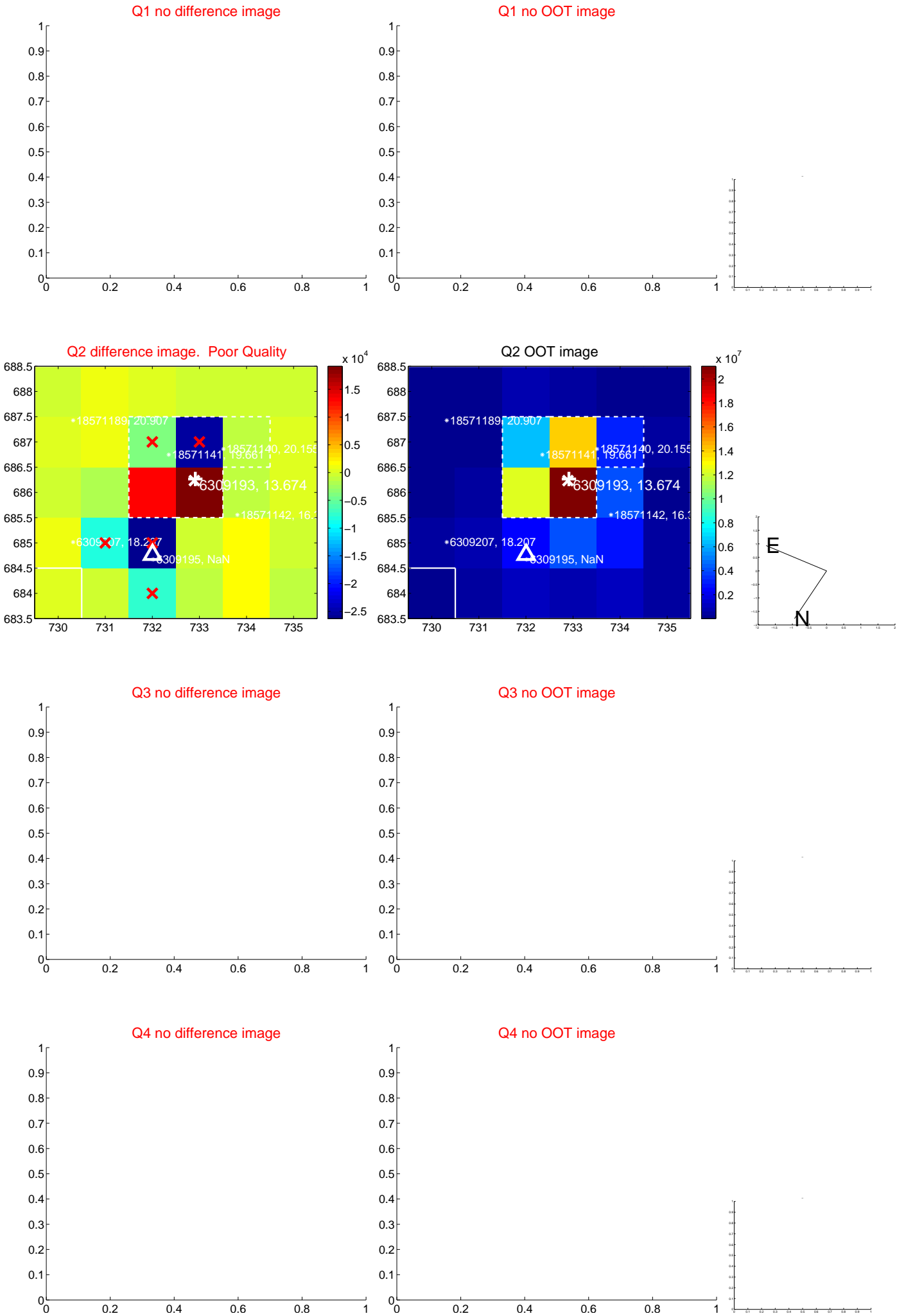
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.726 \pm 0.104	64.98	0.522 \pm 0.107	6.706 \pm 0.103
PRF-fit source offset from KIC position	6.758 \pm 0.103	65.30	0.421 \pm 0.107	6.745 \pm 0.103
photometric centroid source offset	2.66 \pm 6.75	0.39	1.54 \pm 3.78	-2.17 \pm 7.83

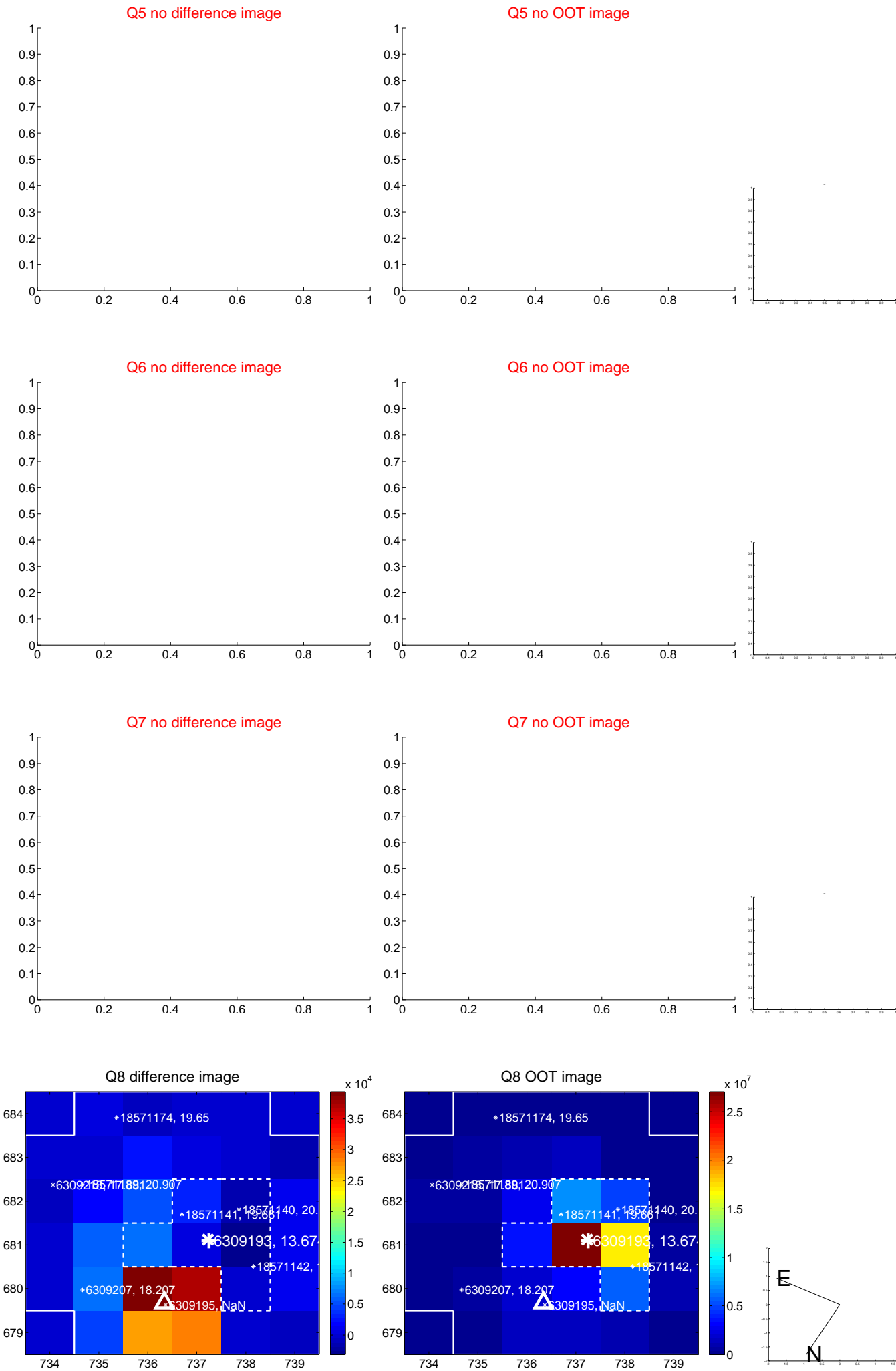


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



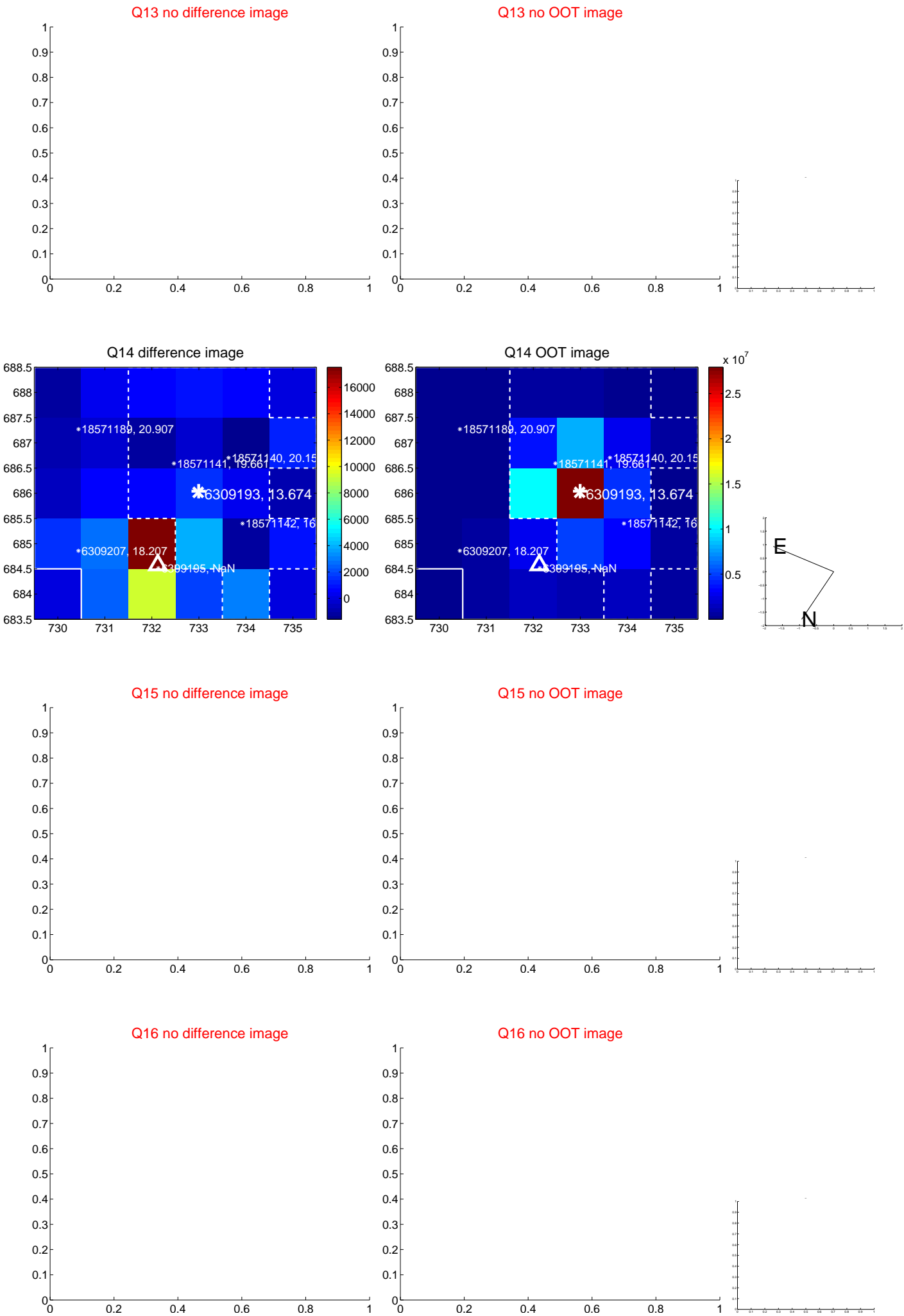
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



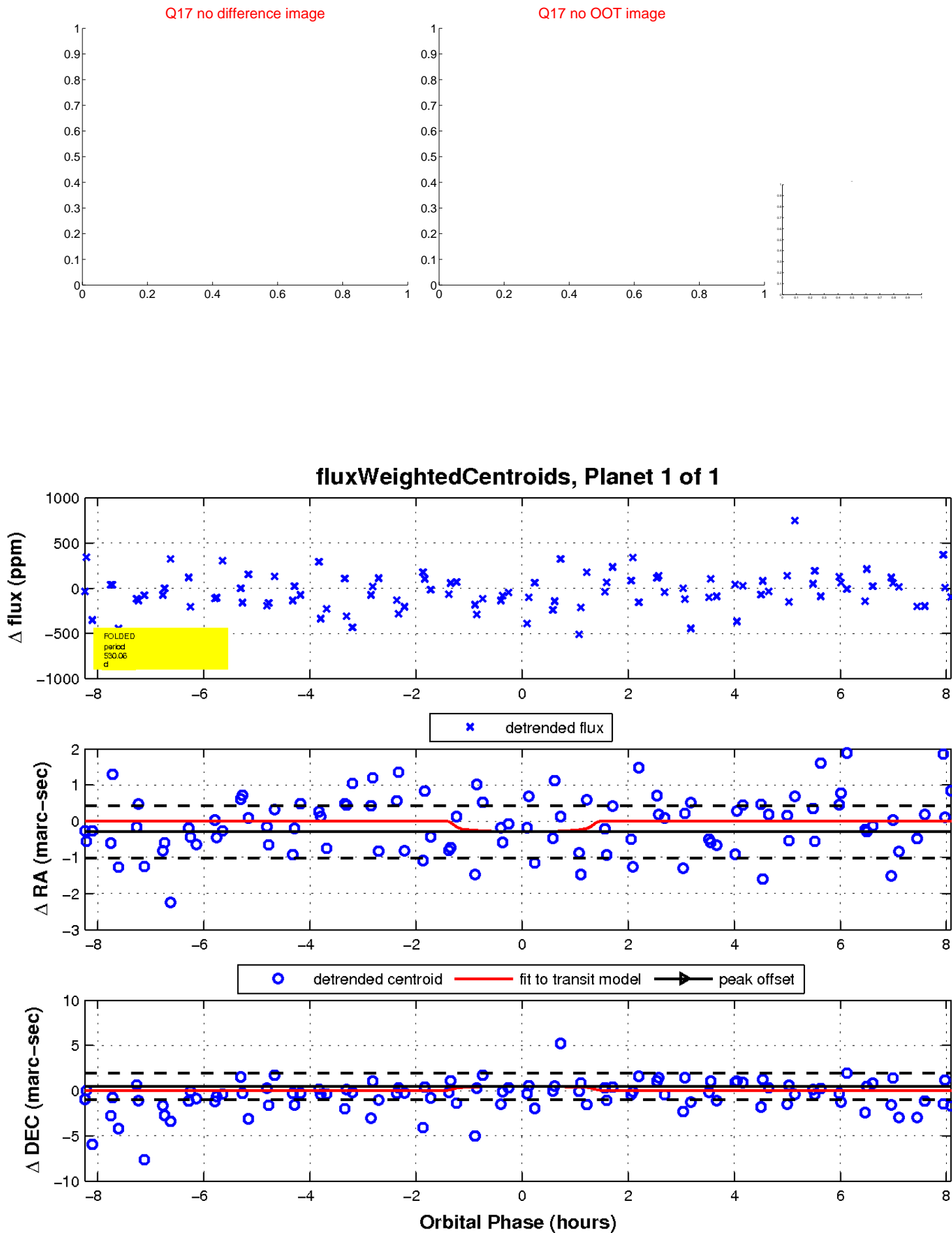
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

Declination

