

KIC 005305225

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})
005305225-01	OBS	8100.01	322.529241	350.341389	367.8	21.208	9.1	9.6	0.93	5708	2.15	1.03

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005305225-01	OBS	FP	0.00	1	0	1	1	INDIV_TRANS_MARSHALL_SKYE—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST—EPHEM_MATCH

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.

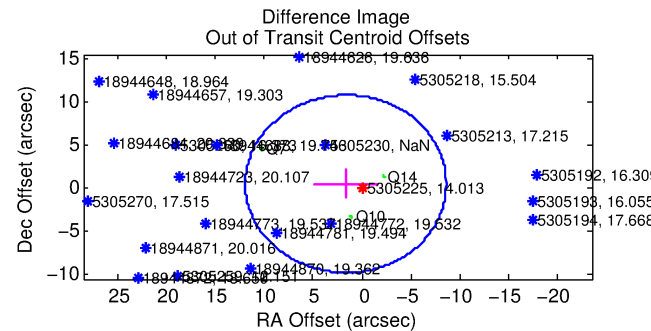
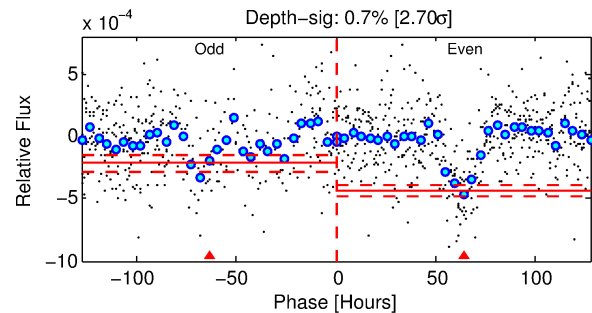
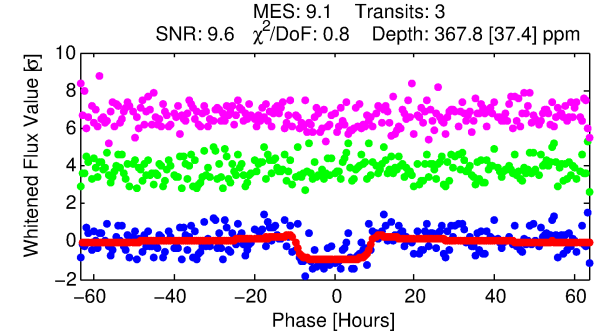
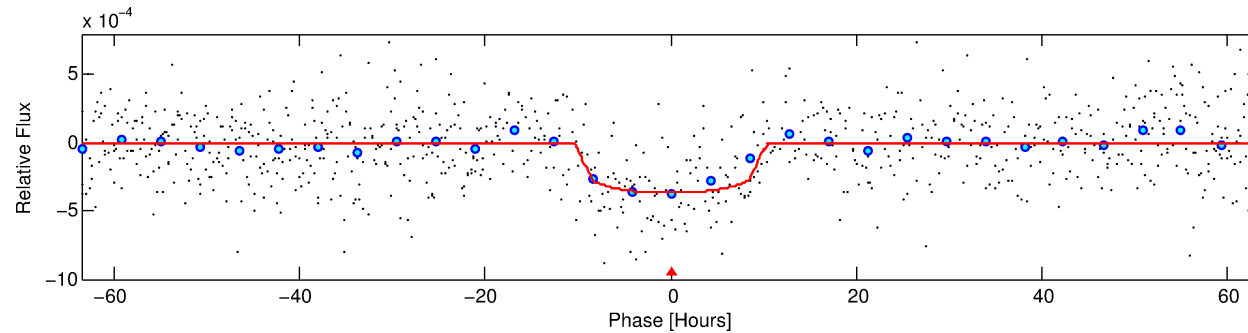
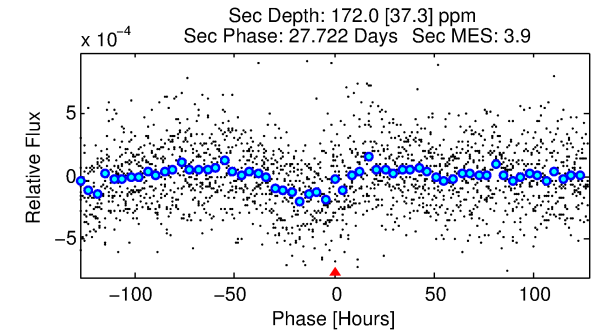
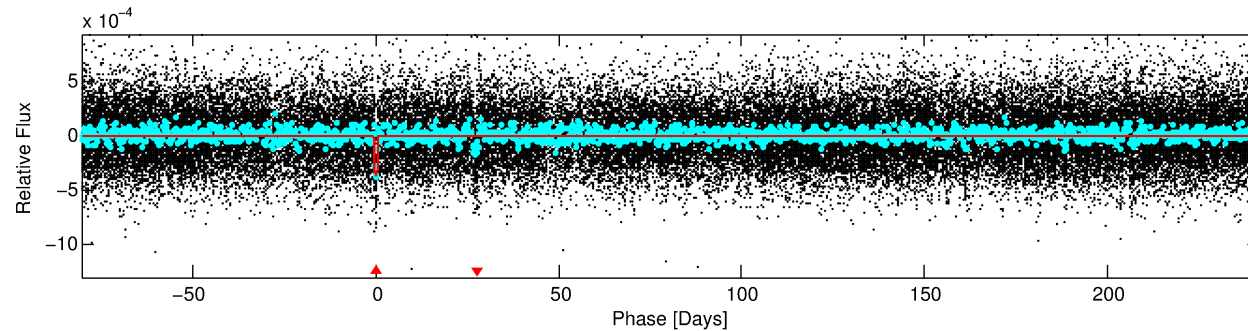
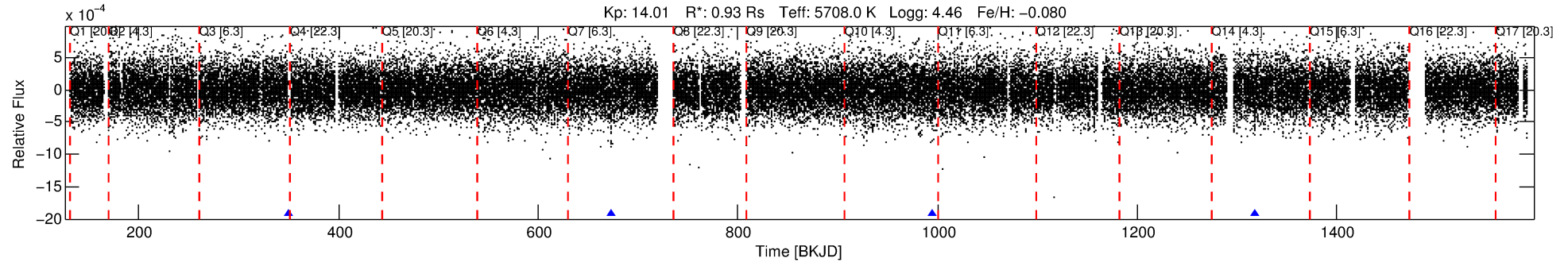
Ephemeris Match Information For 005305225-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
005305225-01	5305225	005217733-pri	5217733	2:1	203.0	50	7	7.39	14.01	274.18	Direct-PRF	0	2.05	0.51

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 5305225 Candidate: 1 of 1 Period: 322.529 d



DV Fit Results:

Period = 322.52924 [0.01950] d
Epoch = 350.3414 [0.0408] BKJD
Rp/R* = 0.0211 [0.0021]
a/R* = 54.27 [21.07]
b = 0.91 [0.08]
Seff = 1.03 [0.36]
Teq = 257 [23] K
Rp = 2.15 [0.62] Re
a = 0.8974 [0.2055] AU
Ag = 16554.81 [7370.99] [2.25σ]
Teffp = 4503 [358] K [11.83σ]

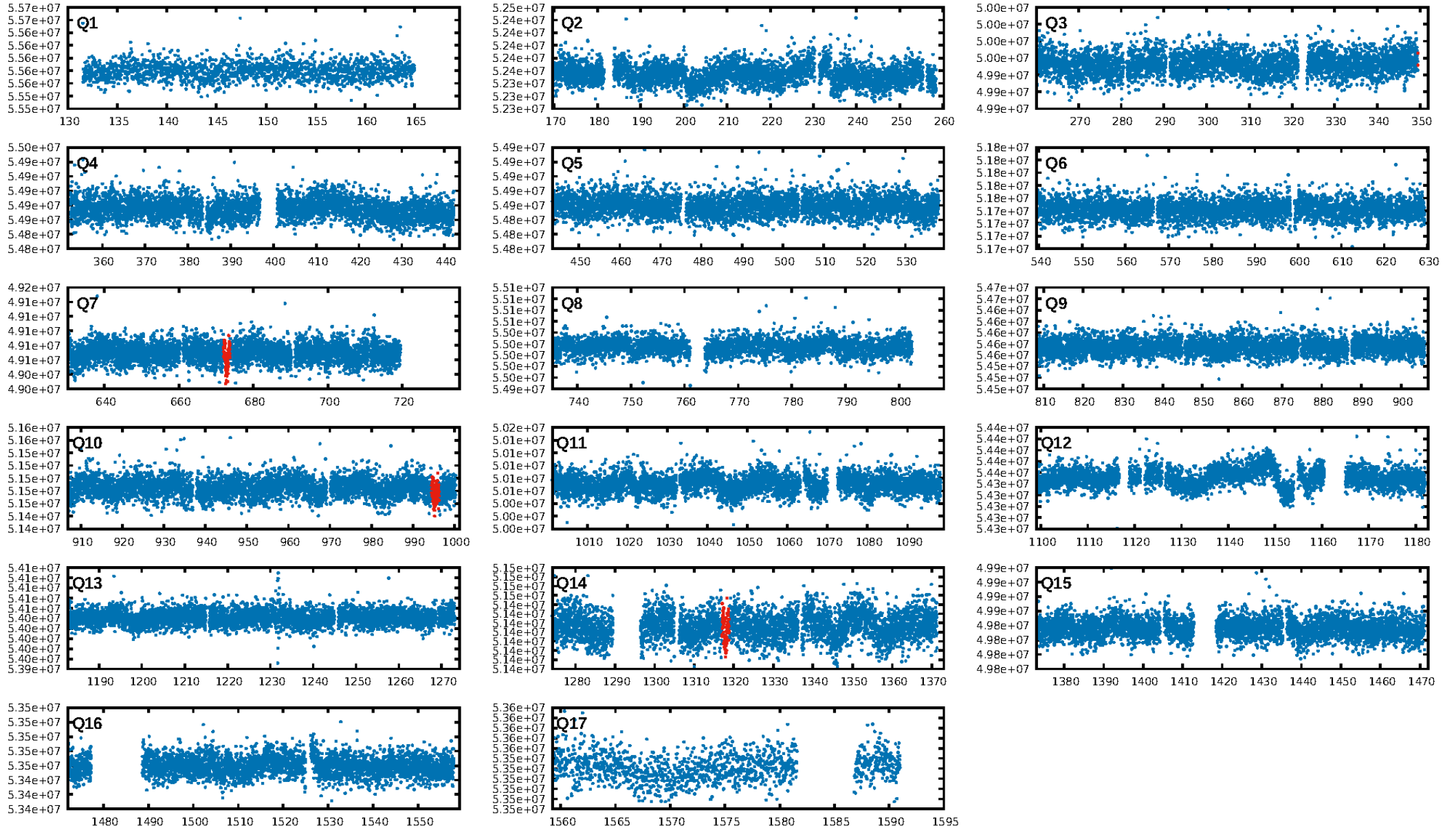
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 16.7%
ModelChiSquare-fsig: 100.0%
Bootstrap-pfa: 2.38e-13
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.179
Centroid-sig: 7.1%
Centroid-so: 1.236 arcsec [1.10σ]
OotOffset-rm: 1.737 arcsec [0.51σ]
KicOffset-rm: 2.013 arcsec [0.56σ]
OotOffset-st: 2/1/0/0 [3]
KicOffset-st: 2/1/0/0 [3]
DiffImageQuality-fgm: 0.00 [0/3]
DiffImageOverlap-fno: 1.00 [3/3]

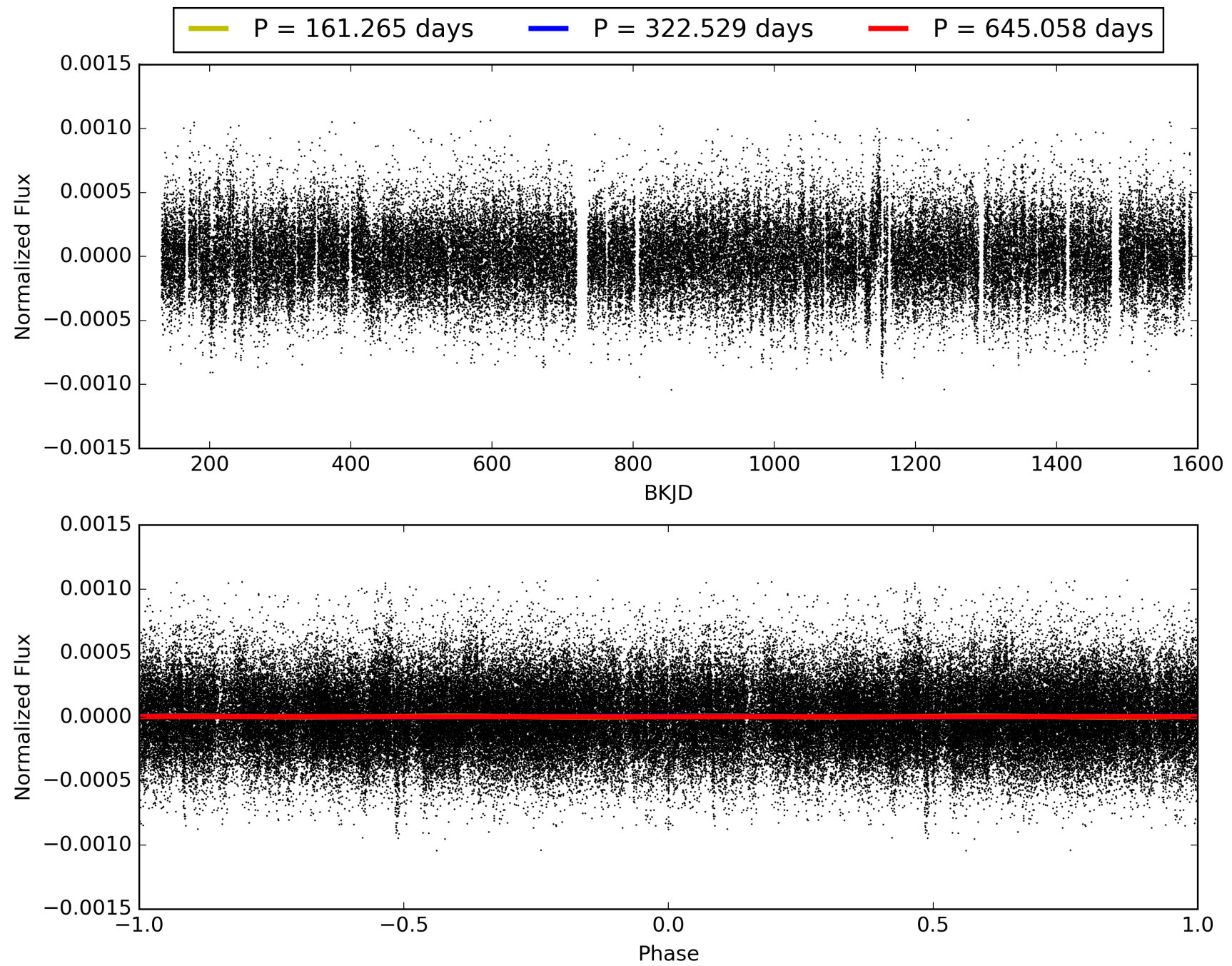
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 05:38:07 Z

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

TCE 005305225-01, PDC Light Curves

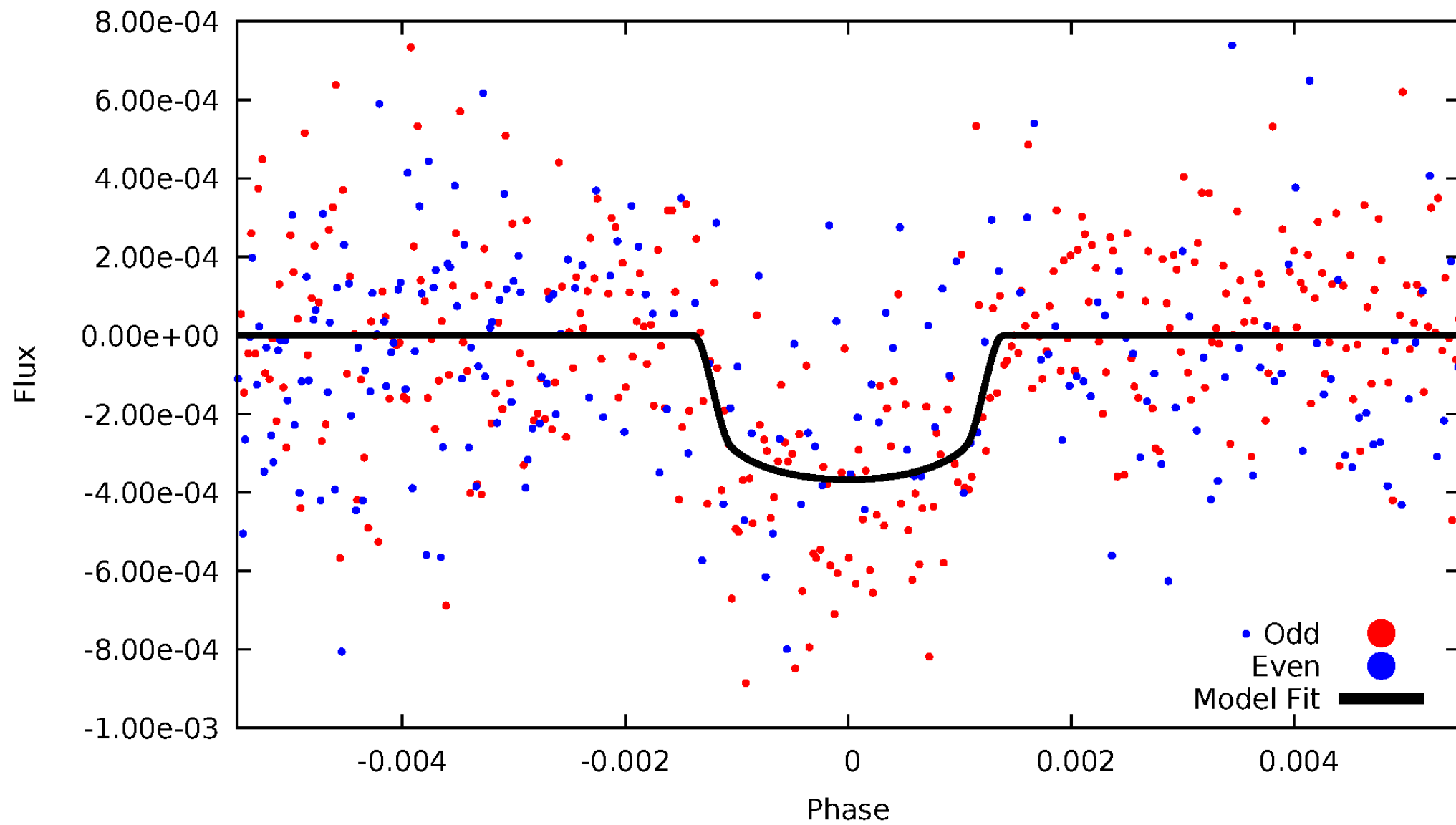


TCE 005305225-01



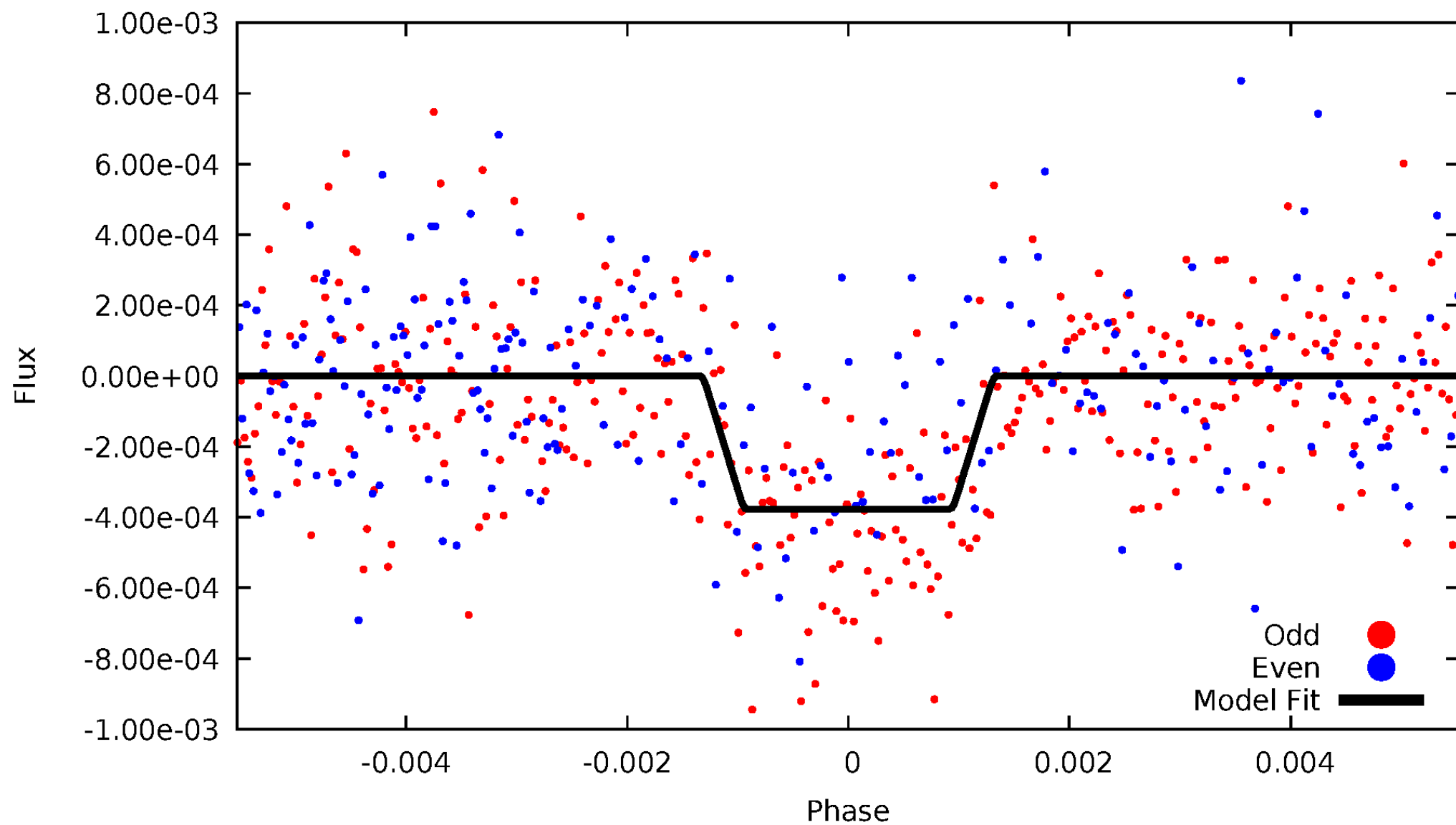
DV Odd/Even

TCE 005305225-01



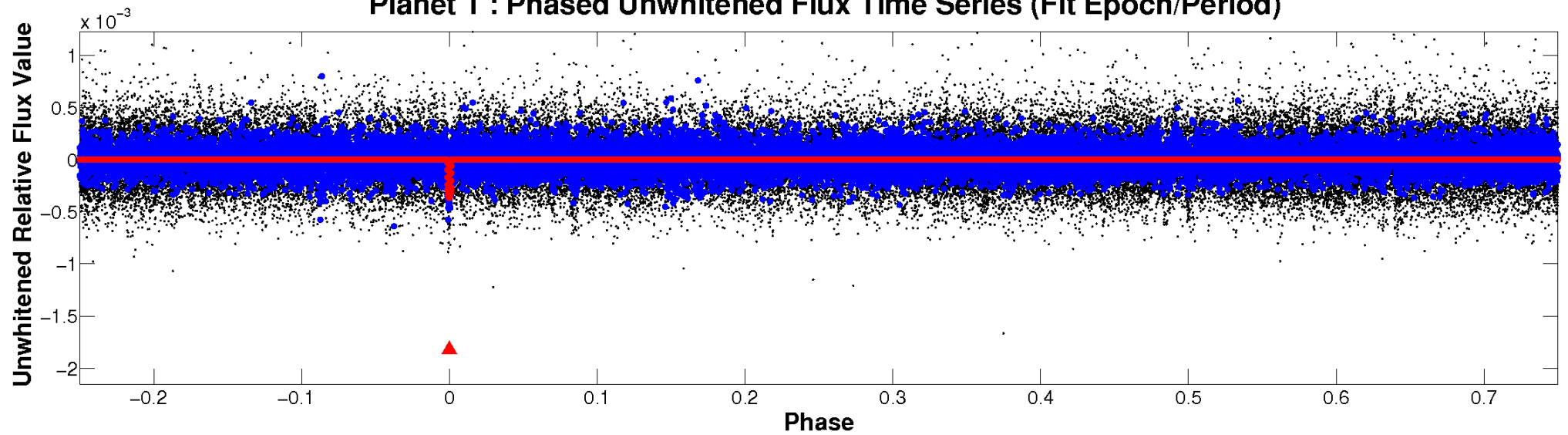
ALT Odd/Even

TCE 005305225-01

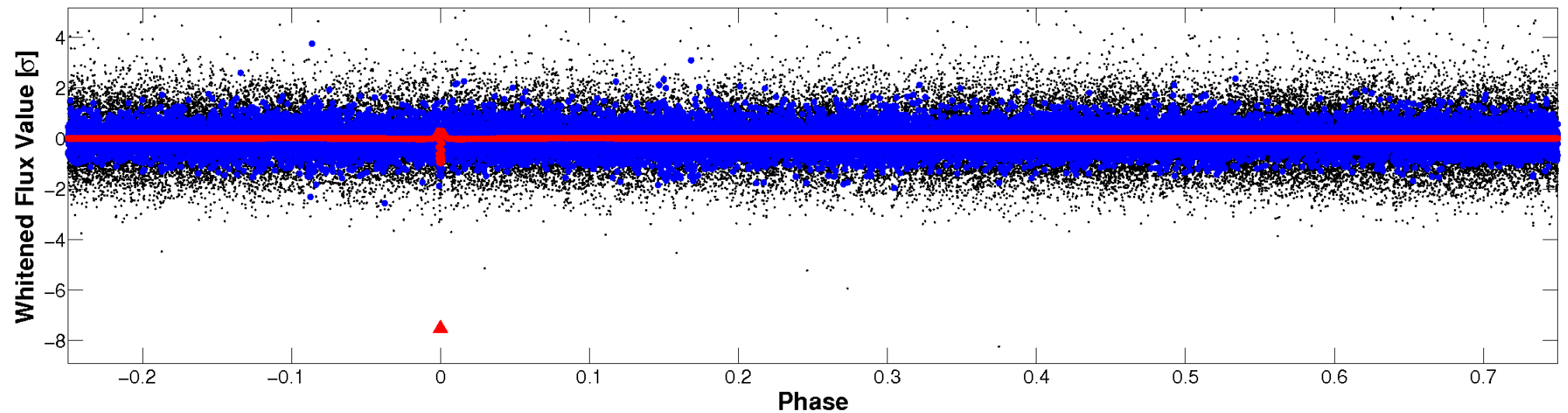


Non-Whitened Vs. Whitened Light Curve

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

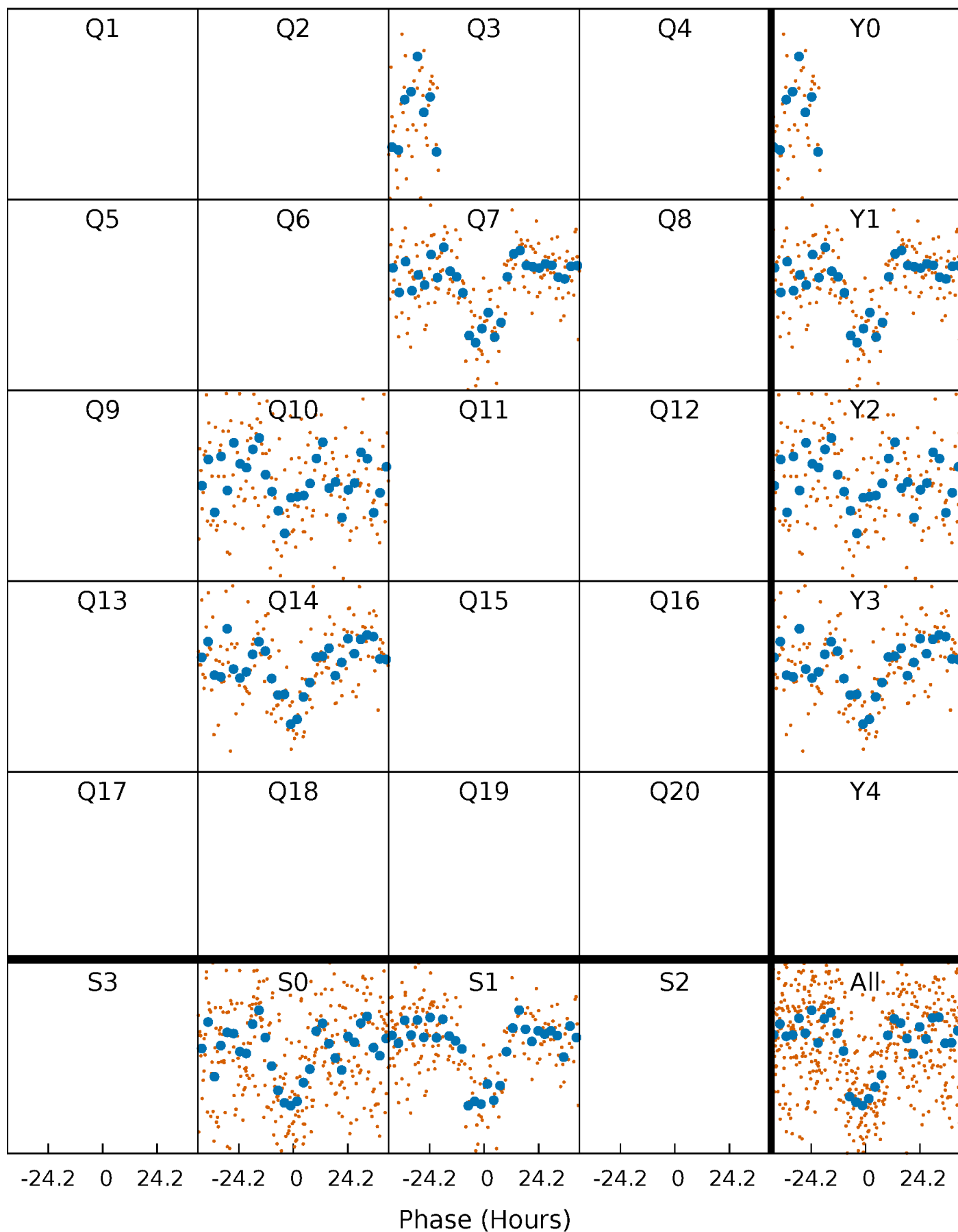


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



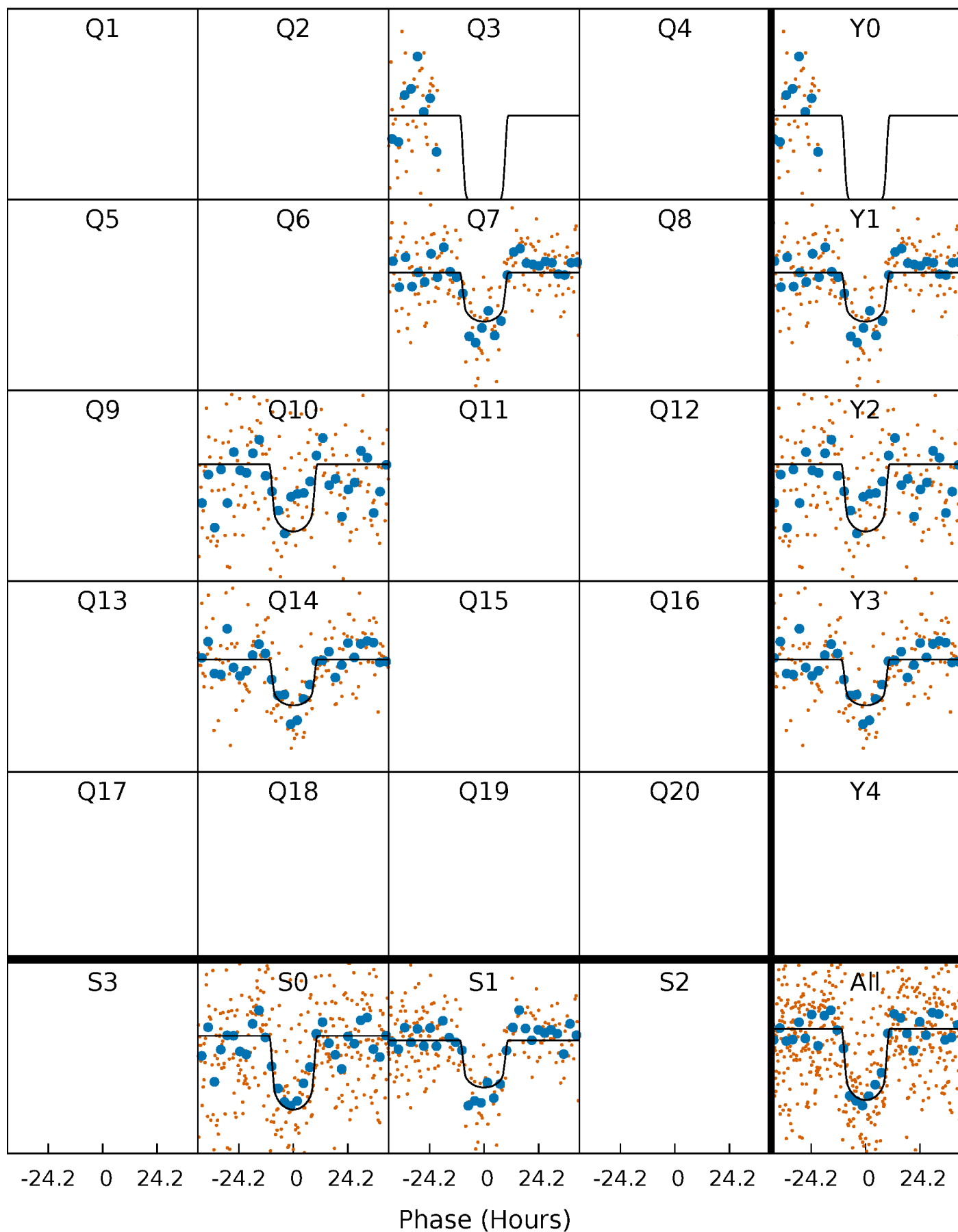
PDC Quarter-Phased Transit Curves

TCE 005305225-01 P=322.529241 Days $T_0=350.341389$ (BKJD)



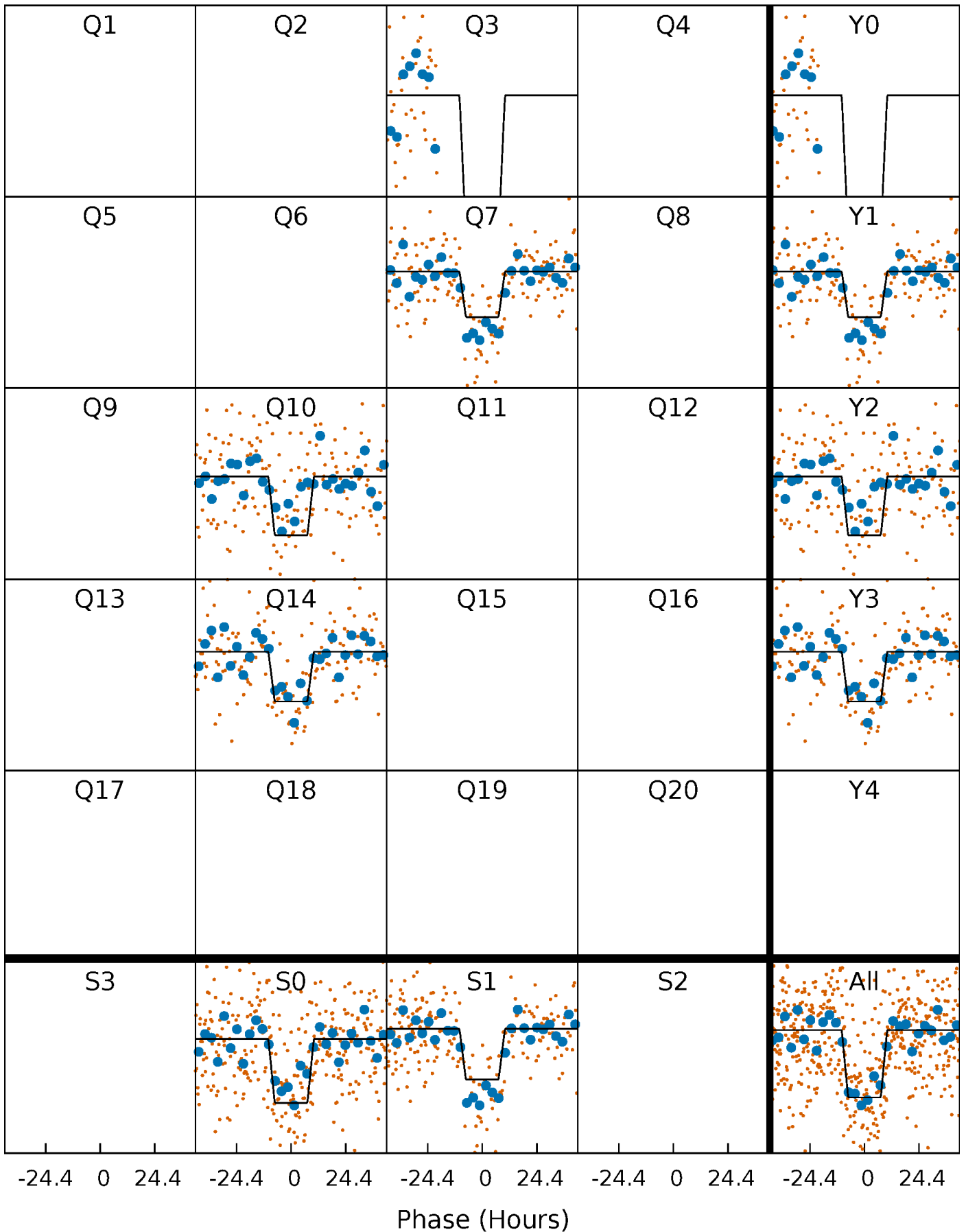
DV Quarter-Phased Transit Curves

TCE 005305225-01 P=322.529241 Days $T_0=350.341389$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

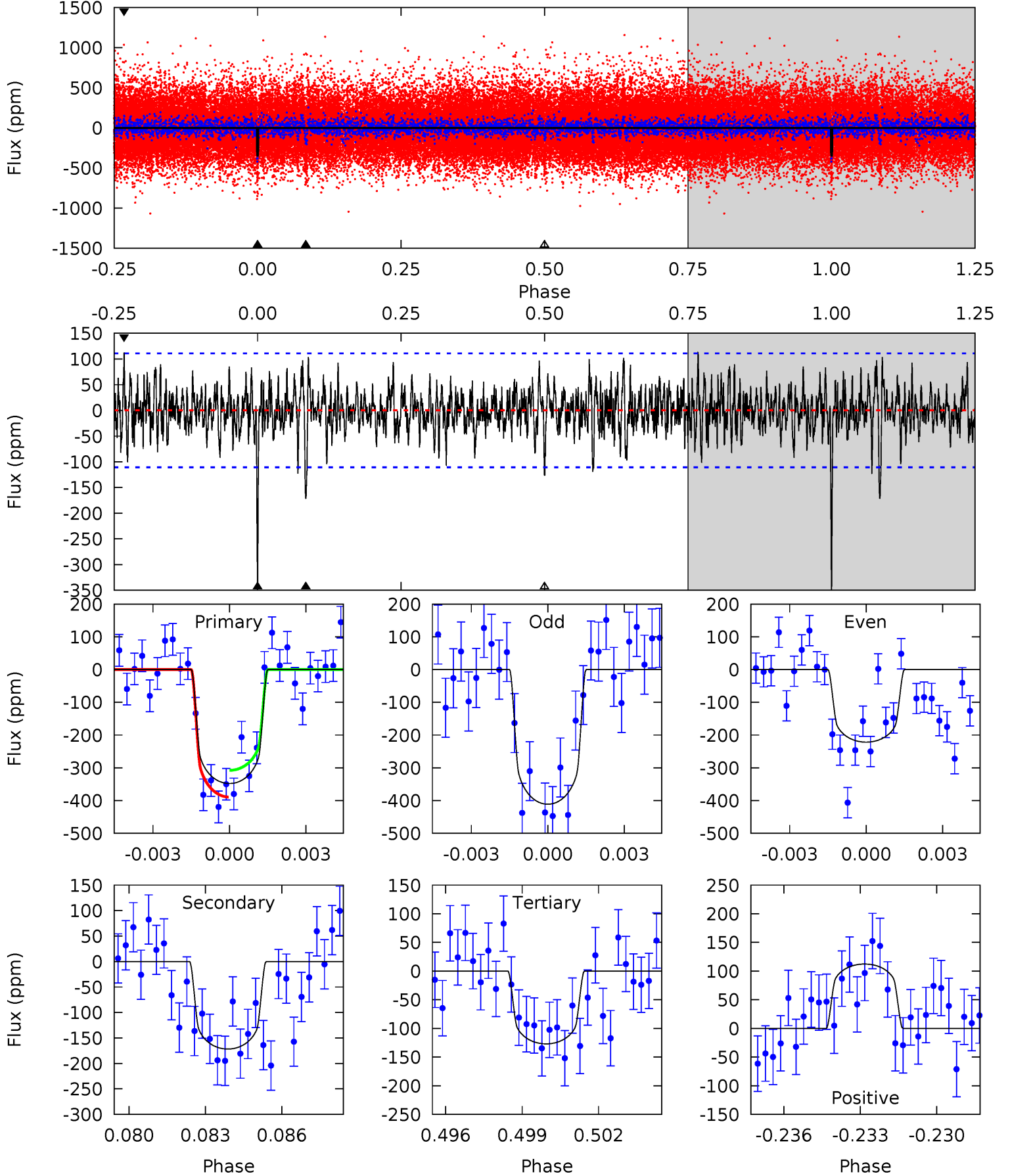
TCE 005305225-01 P=322.509689 Days $T_0=350.344284$ (BKJD)



DV Model-Shift Uniqueness Test

005305225-01, $P = 322.529241$ Days, $E = 27.812148$ Days

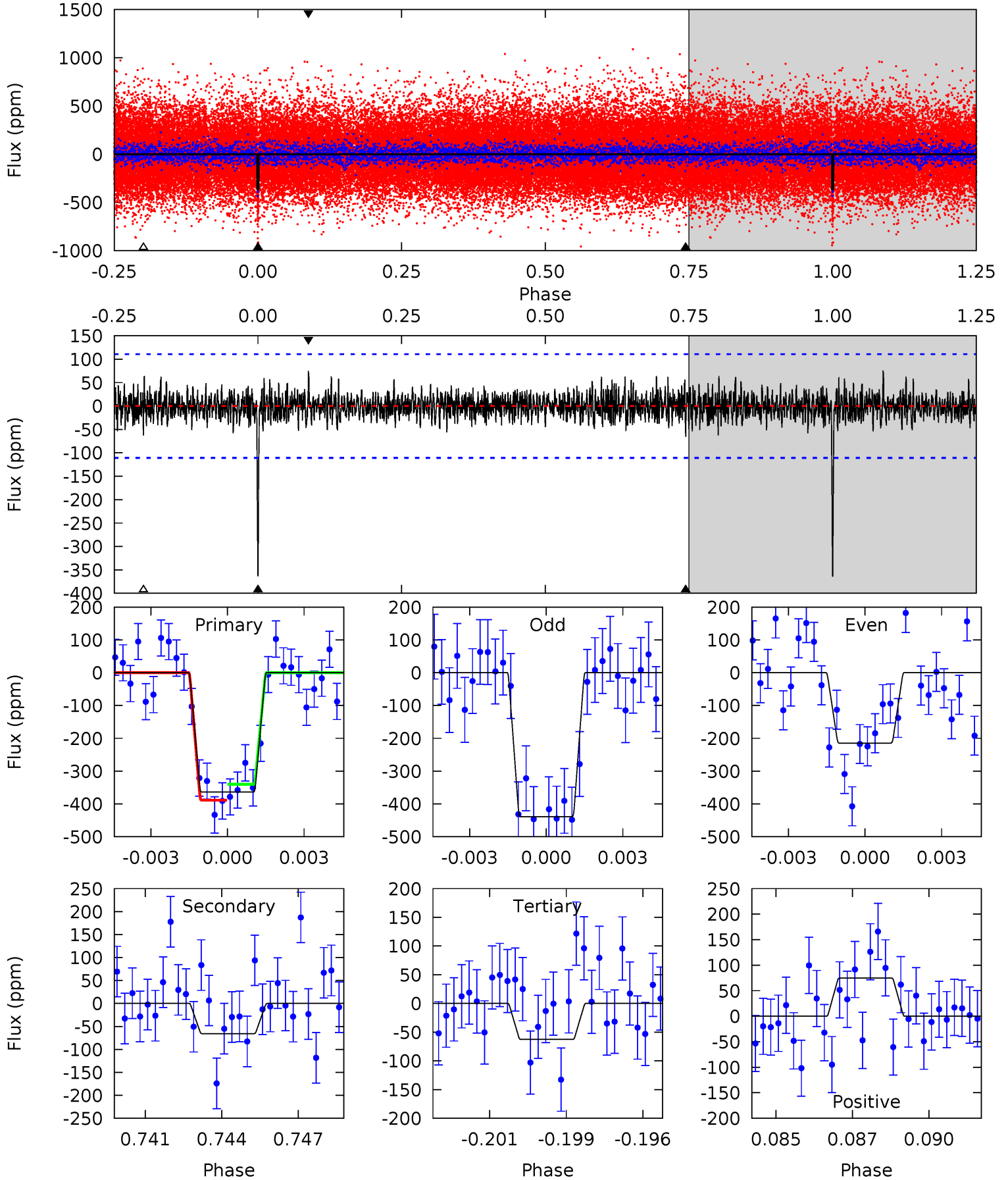
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.5	8.17	6.04	5.34	5.27	2.99	1.62	10.5	11.2	2.13	2.82	4.28	0.94	0.24	1.95



Alt Model-Shift Uniqueness Test

005305225-01, $P = 322.509689$ Days, $E = 27.834595$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.3	3.13	2.98	3.56	5.28	3.01	0.94	14.4	13.8	0.15	-0.43	5.04	1.03	0.17	1.16



Stellar Parameters For KIC 005305225

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5708^{+152}_{-169}	$4.465^{+0.078}_{-0.182}$	$-0.080^{+0.300}_{-0.300}$	$0.933^{+0.254}_{-0.109}$	$0.926^{+0.115}_{-0.094}$	$1.605^{+0.532}_{-0.777}$
	+3%/-3%	+2%/-4%	+375%/-375%	+27%/-12%	+12%/-10%	+33%/-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 005305225-01 / KOI 8100.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-172 ± 21	$2.19^{+0.39}_{-0.29}$	364^{+25}_{-19}	4642^{+287}_{-221}	15462^{+5756}_{-4237}
Alt.	-66 ± 21	$2.05^{+0.37}_{-0.29}$	364^{+25}_{-18}	3982^{+277}_{-282}	6762^{+3186}_{-2660}

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

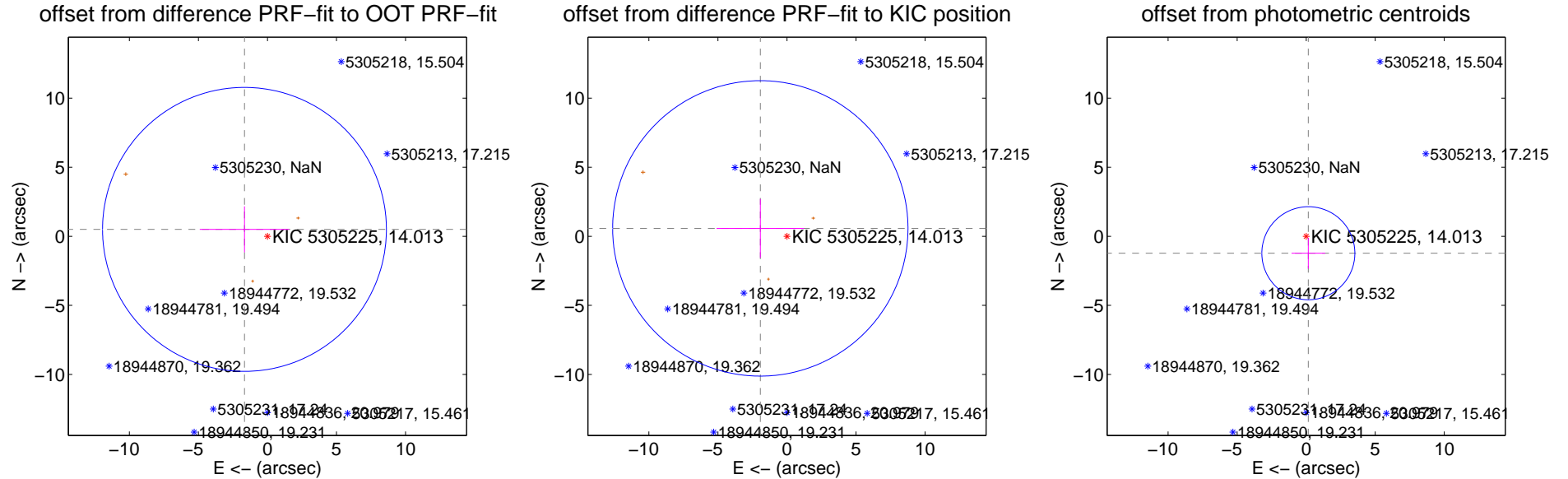
DV Centroid Data

Supplemental centroid analysis for 005305225-01. Kepler magnitude: 14.01. Transit SNR 9.61

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.32 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.737 ± 3.425	0.51	1.664 ± 3.240	0.500 ± 1.663
PRF-fit source offset from KIC position	2.013 ± 3.564	0.56	1.930 ± 3.168	0.572 ± 2.124
photometric centroid source offset	1.24 ± 1.12	1.10	-0.16 ± 1.22	-1.23 ± 1.12

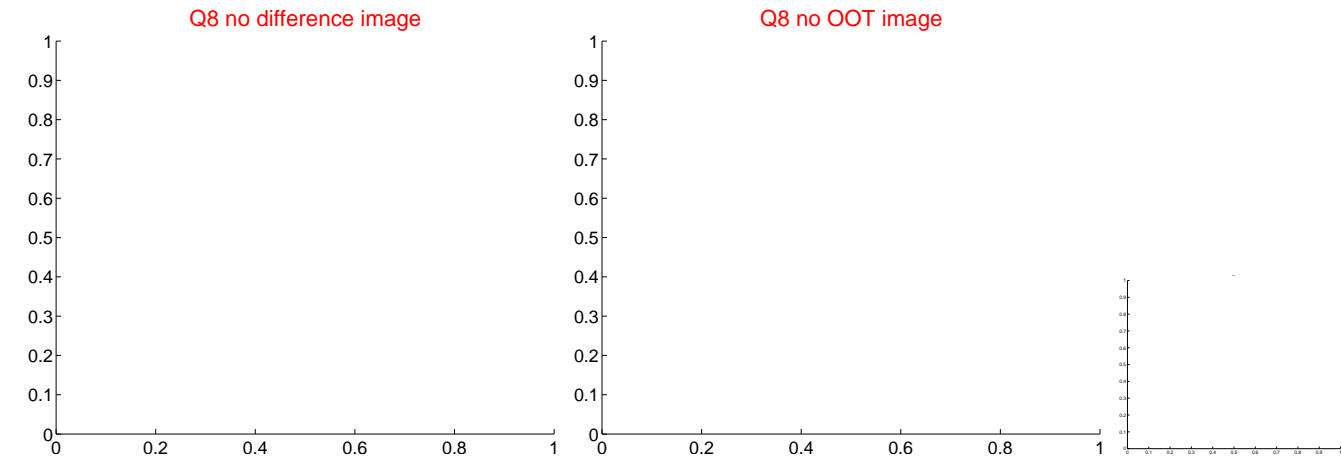
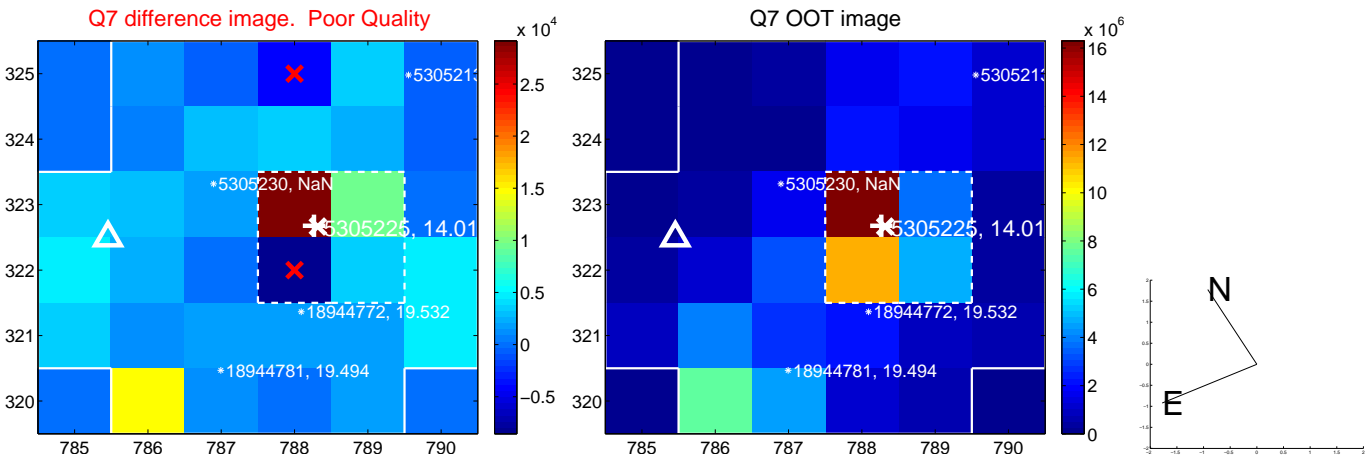
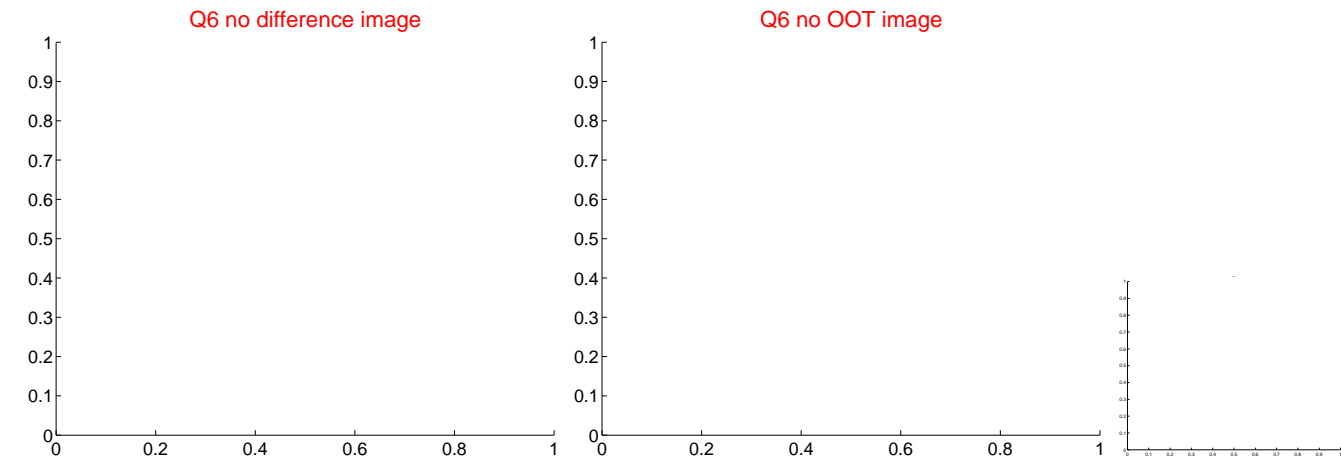
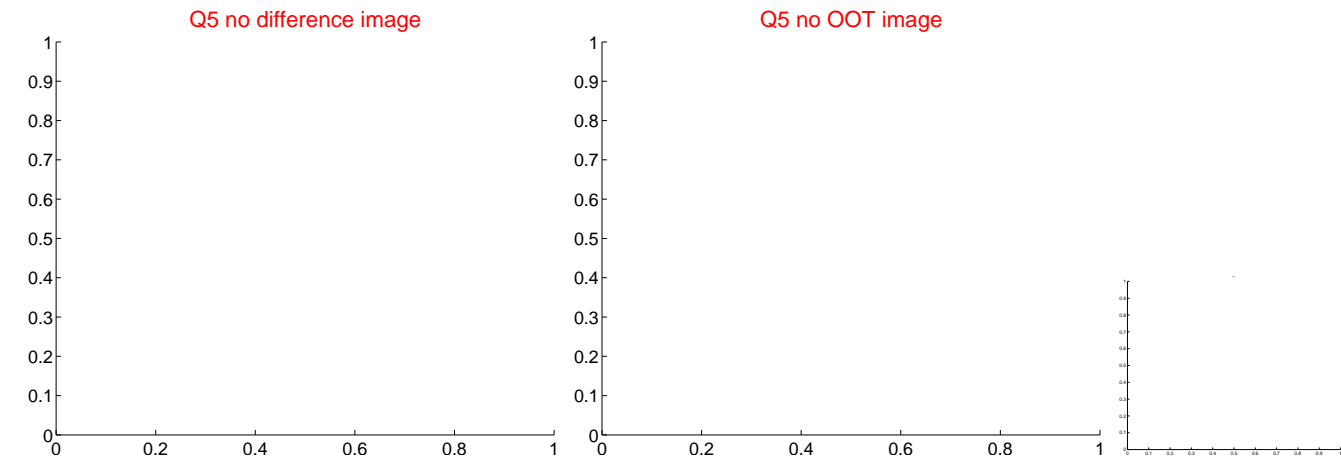


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

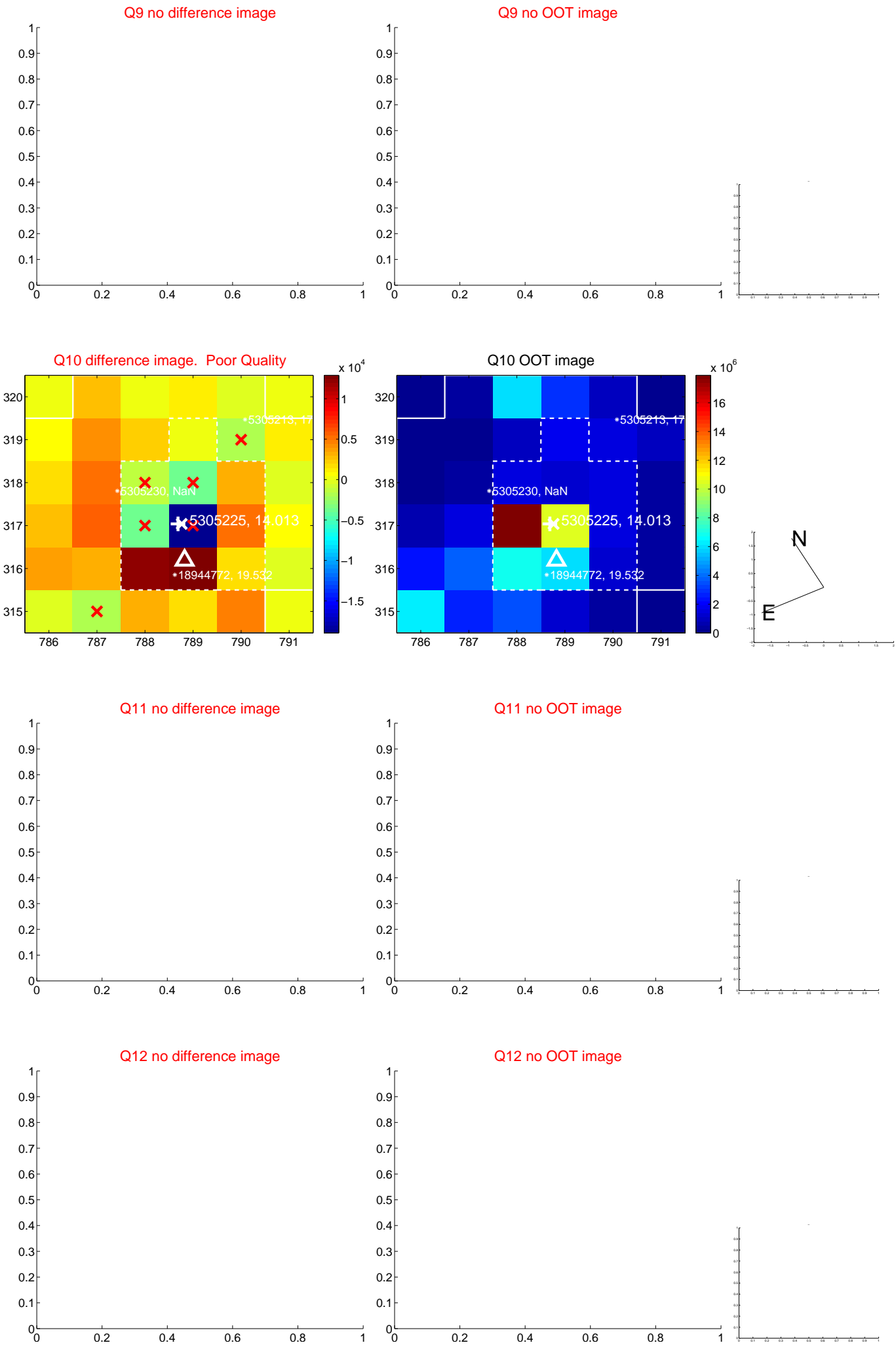
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



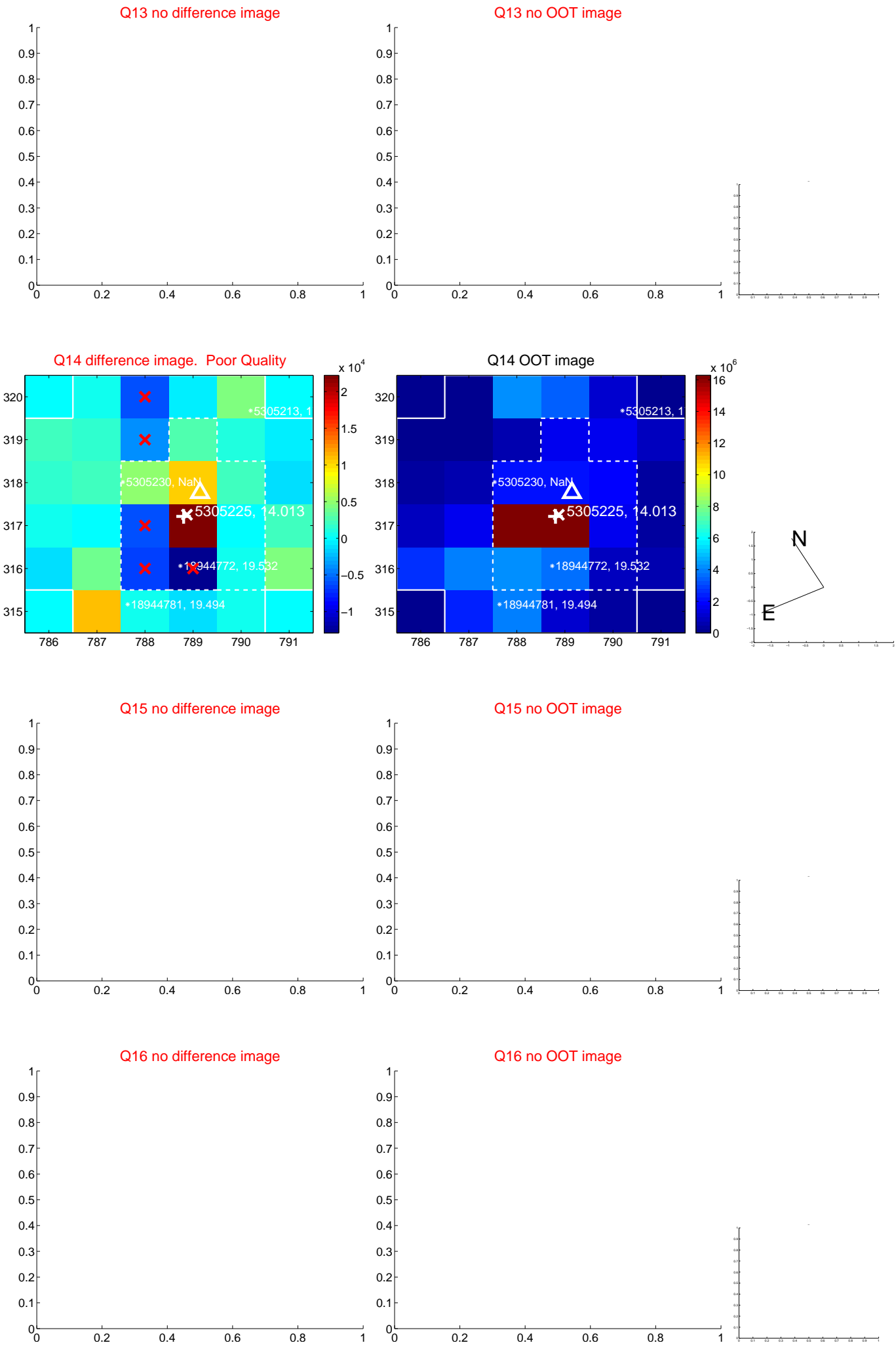
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



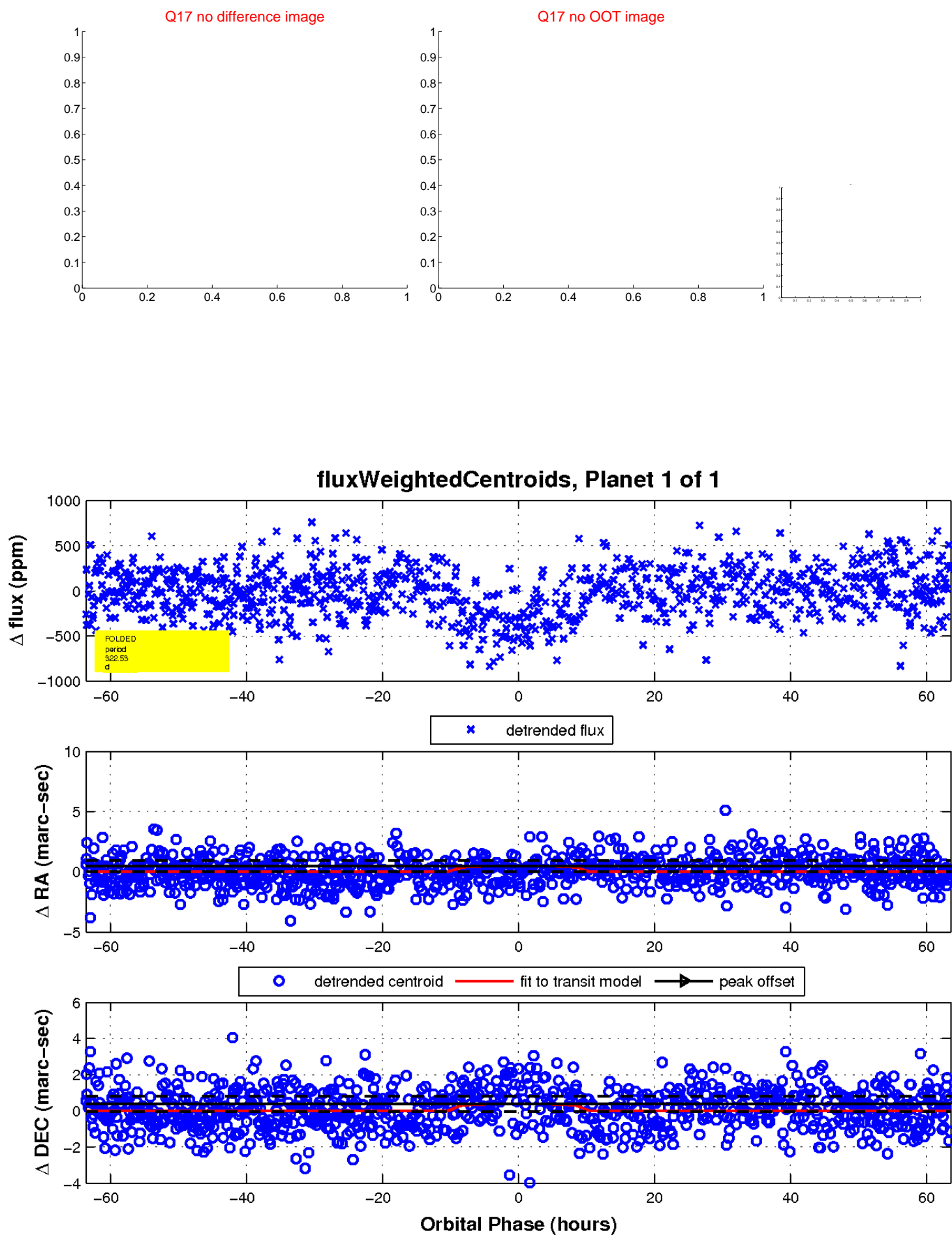
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

