

KIC 009330740

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})
009330740-01	OBS	No	404.323396	422.436043	157.4	4.930	7.2	5.8	0.92	5717	1.35	0.70

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009330740-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—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.

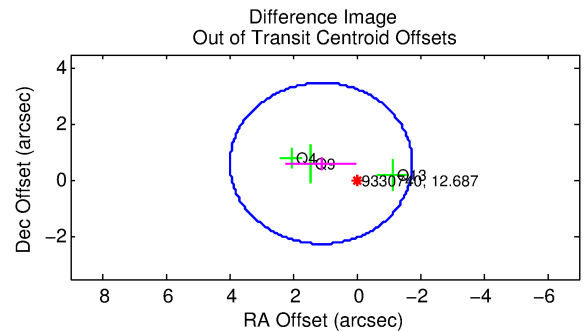
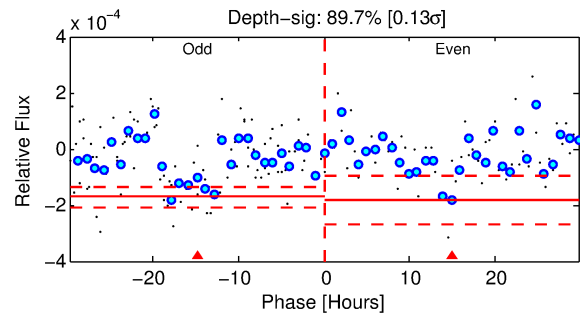
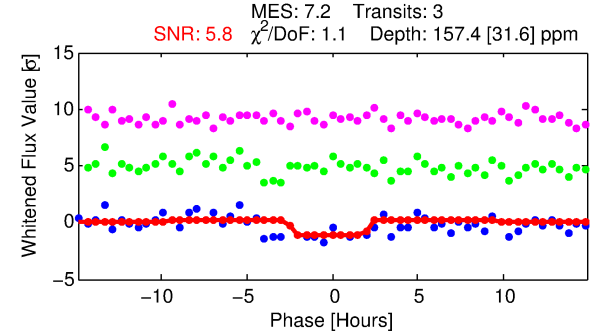
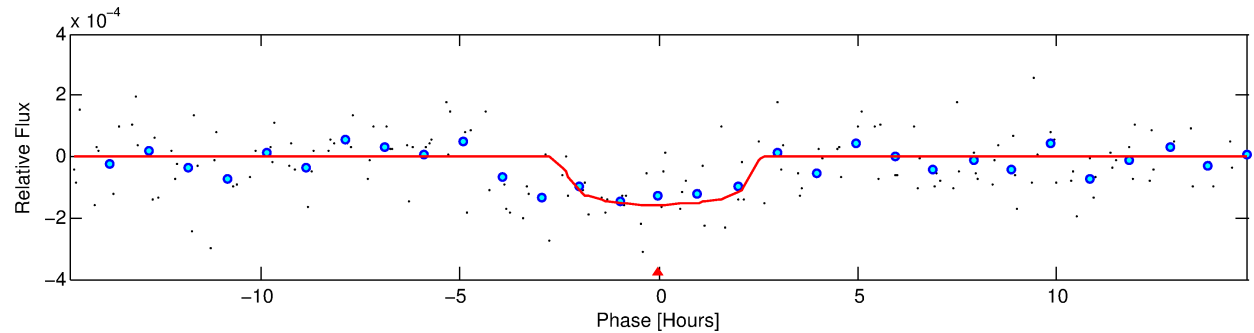
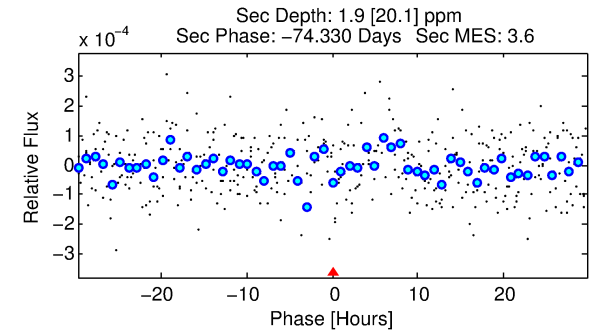
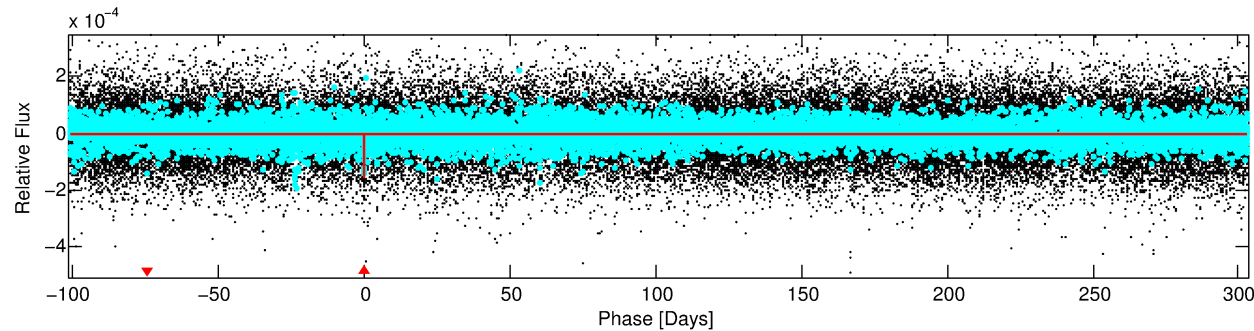
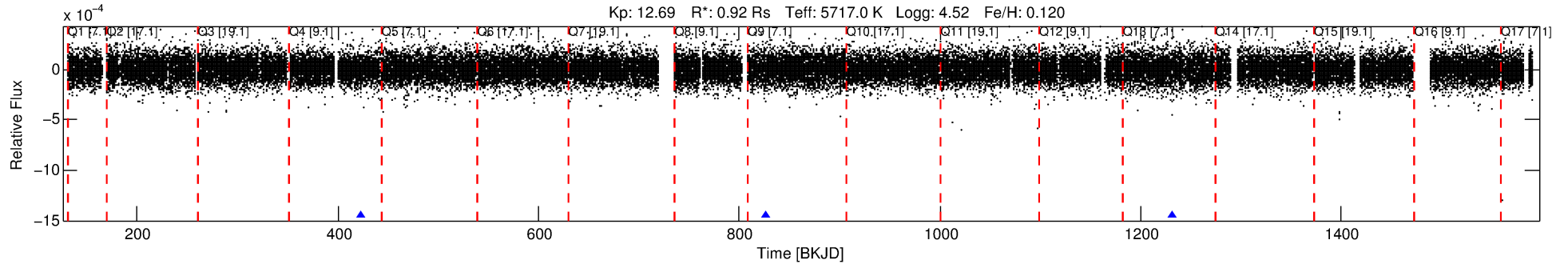
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009330740-01

No Significant Match Found

DV One-Page Summary

KIC: 9330740 Candidate: 1 of 1 Period: 404.323 d
KOI: K05656 Corr: No Ephemeris Match



DV Fit Results:

Period = 404.32340 [0.01009] d
Epoch = 422.4360 [0.0121] BKJD
Rp/R* = 0.0135 [0.0094]
a/R* = 315.49 [995.72]
b = 0.88 [0.82]
Seff = 0.70 [0.16]
Teq = 233 [13] K
Rp = 1.35 [0.96] Re
a = 1.0781 [0.1499] AU
Ag = 649.79 [7058.59] [0.09 σ]
Teffp = 1821 [4943] K [0.32 σ]

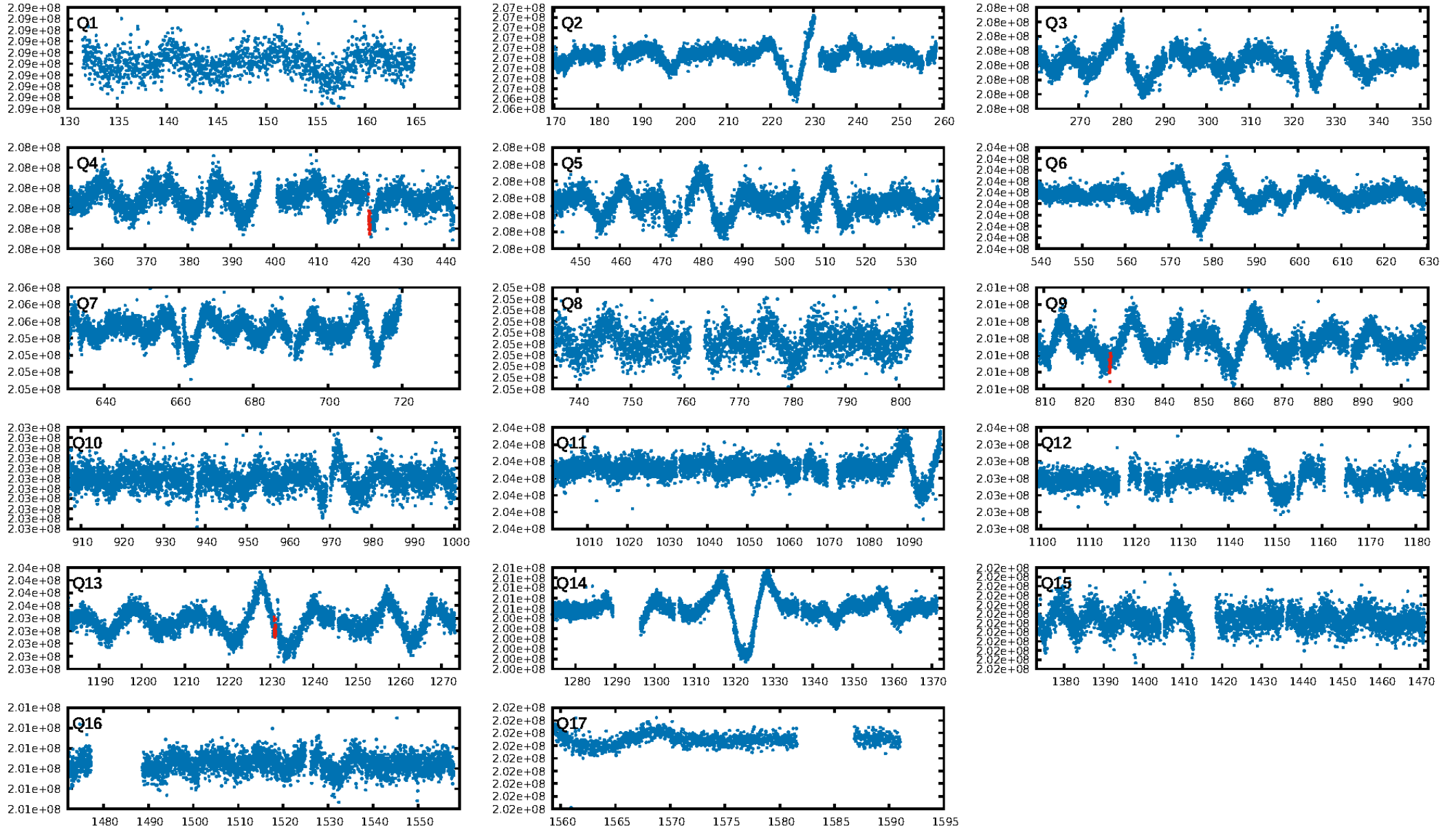
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 52.5%
ModelChiSquareGof-sig: 99.4%
Bootstrap-pfa: 9.43e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.537
Centroid-sig: 33.9%
Centroid-so: 1.723 arcsec [1.34 σ]
OotOffset-rm: 1.271 arcsec [1.33 σ]
OotOffset-st: 0/0/1/2 [3]
KicOffset-rm: 1.791 arcsec [2.39 σ]
KicOffset-st: 0/0/1/2 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

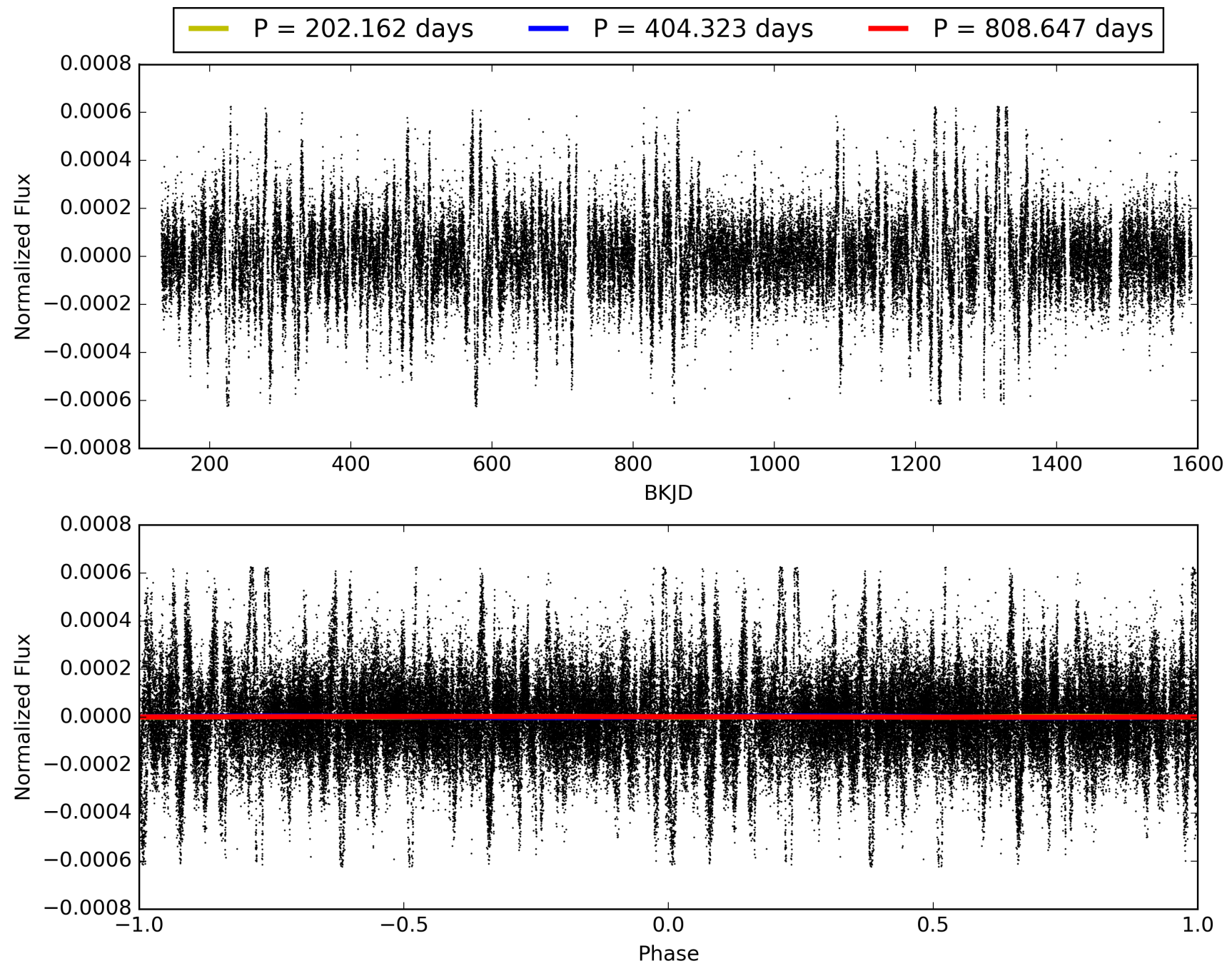
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:10:06 Z

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

TCE 009330740-01, PDC Light Curves

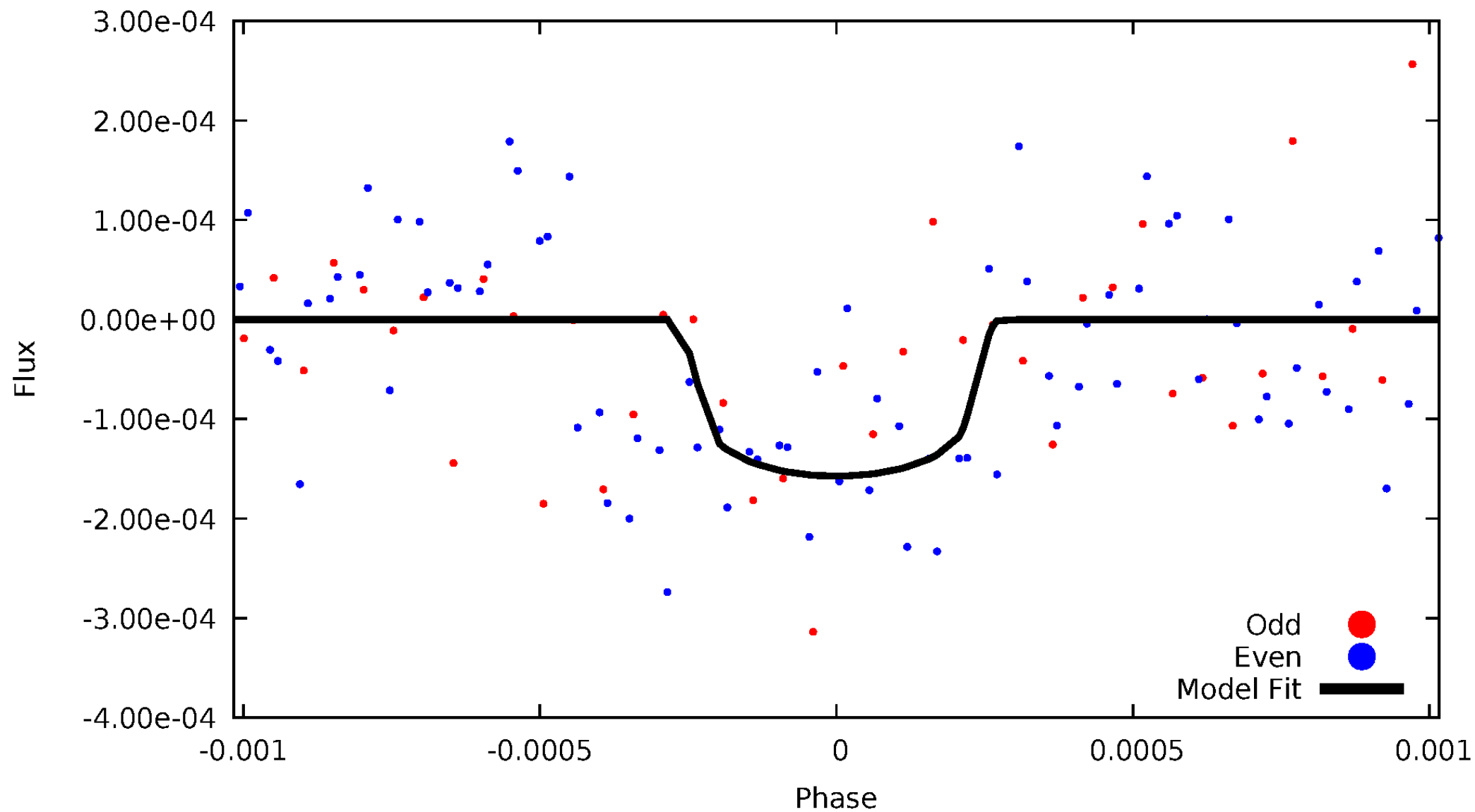


TCE 009330740-01



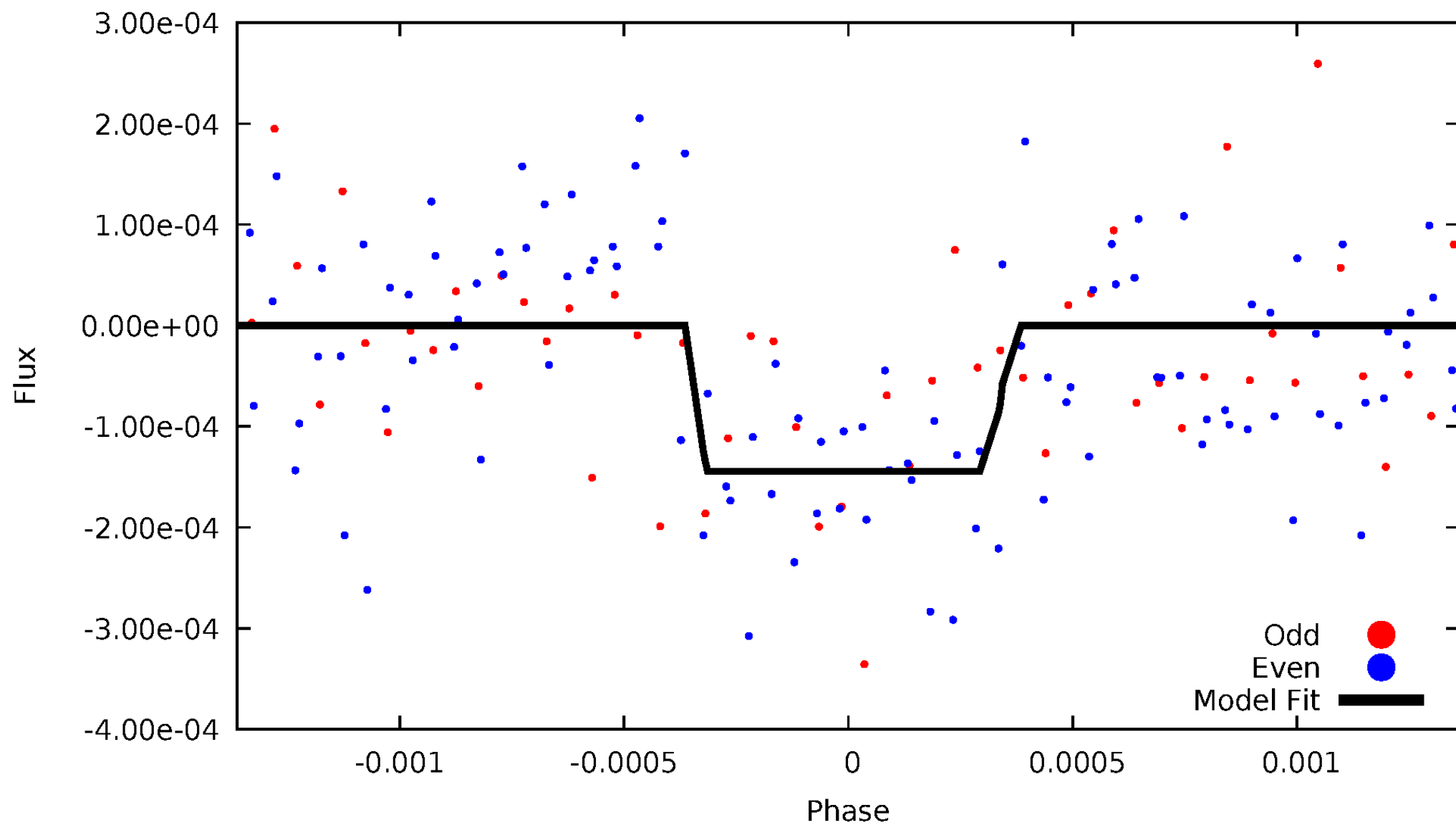
DV Odd/Even

TCE 009330740-01



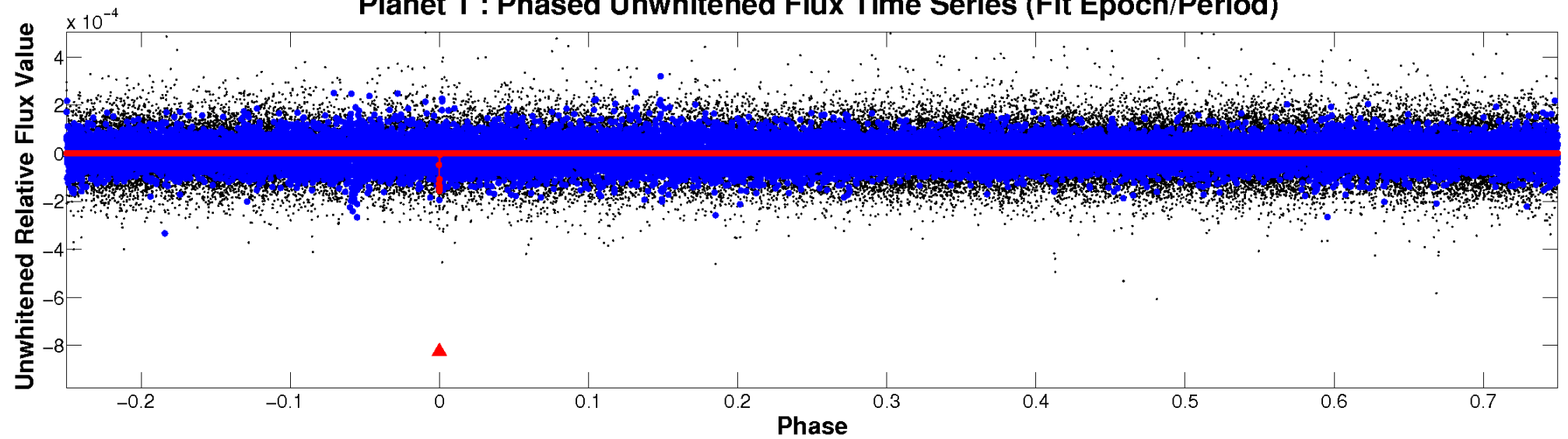
ALT Odd/Even

TCE 009330740-01

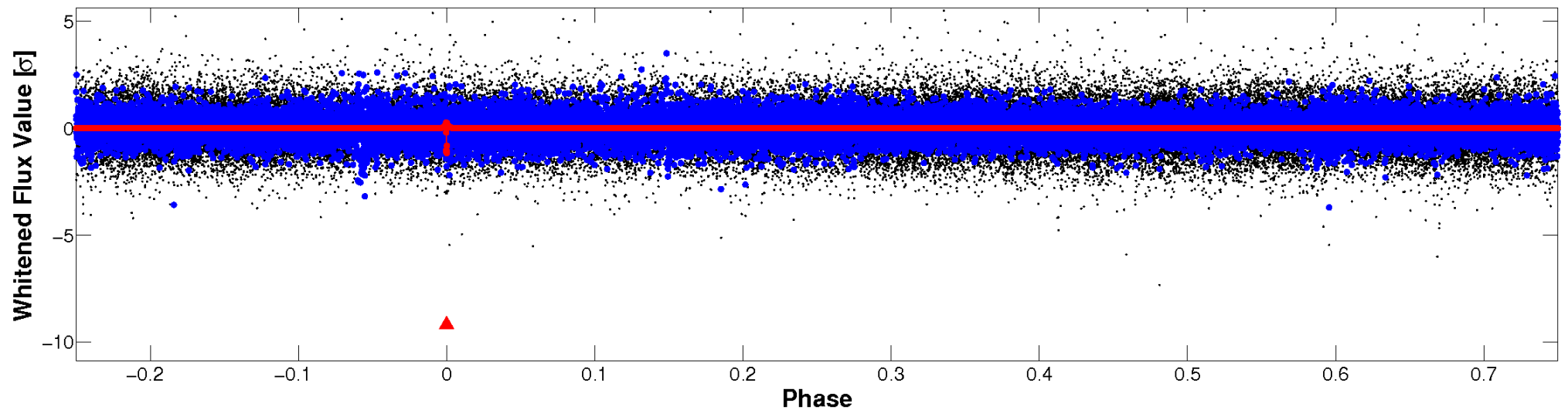


Non-Whitened Vs. Whitened Light Curve

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

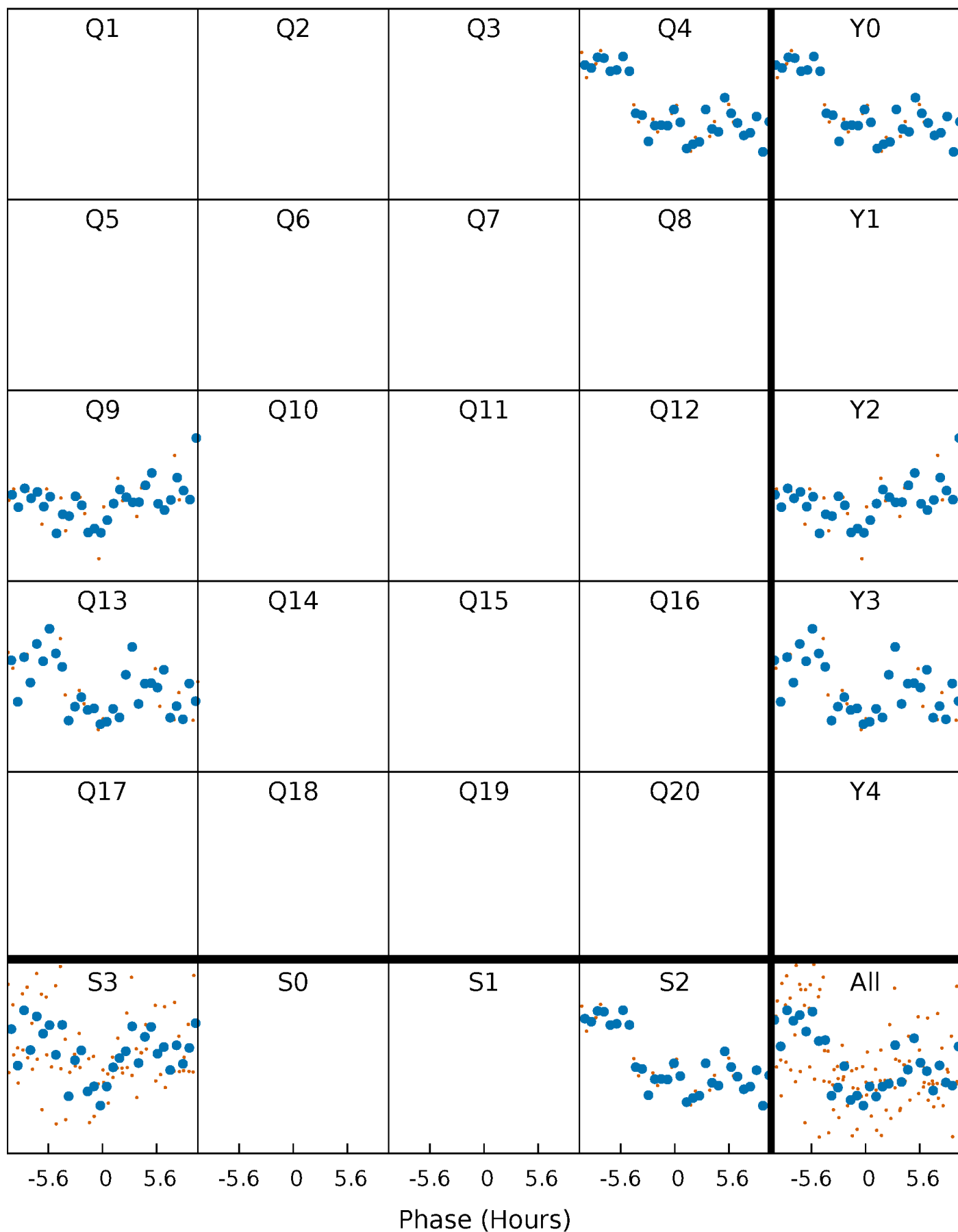


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



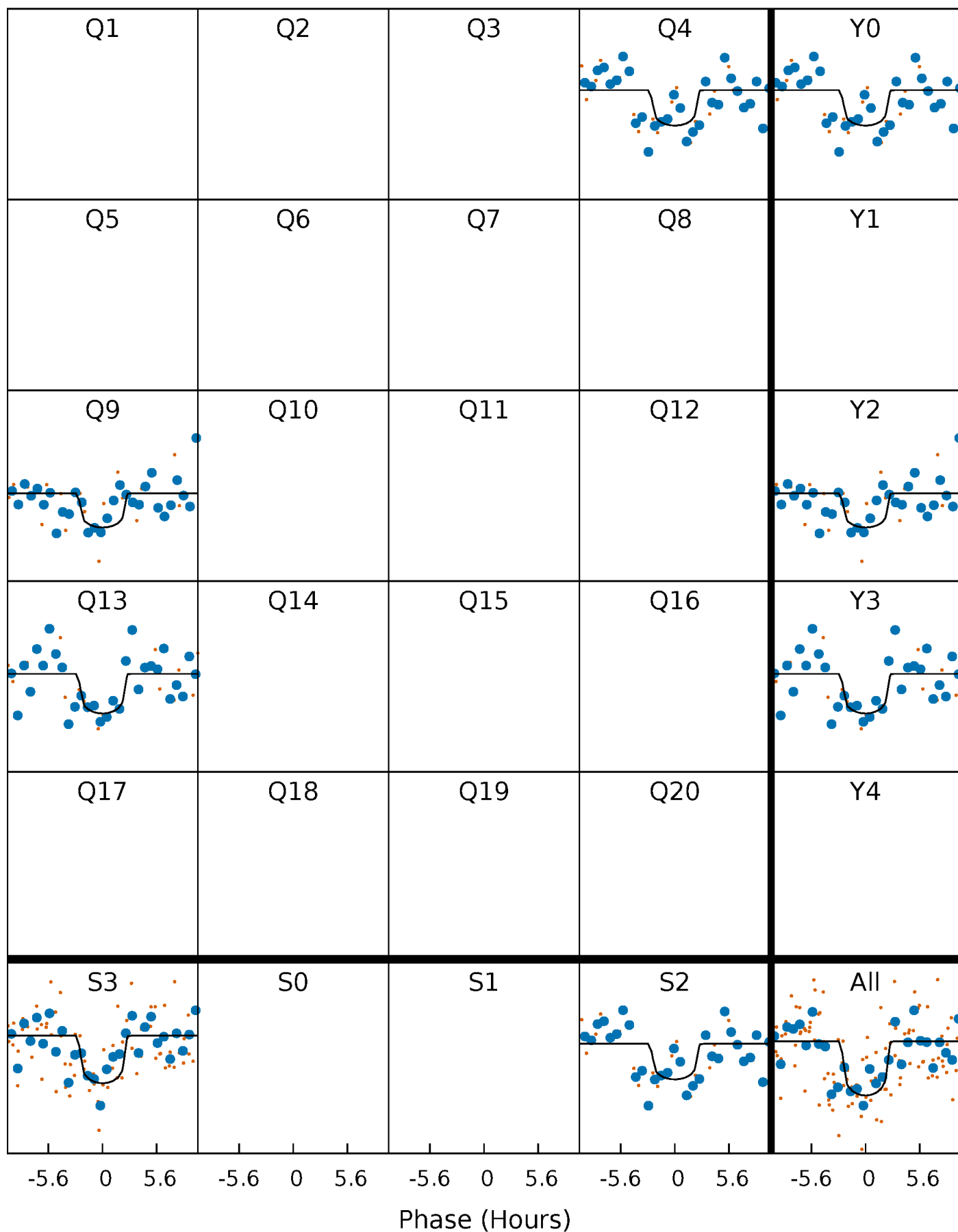
PDC Quarter-Phased Transit Curves

TCE 009330740-01 P=404.323396 Days $T_0=422.436043$ (BKJD)



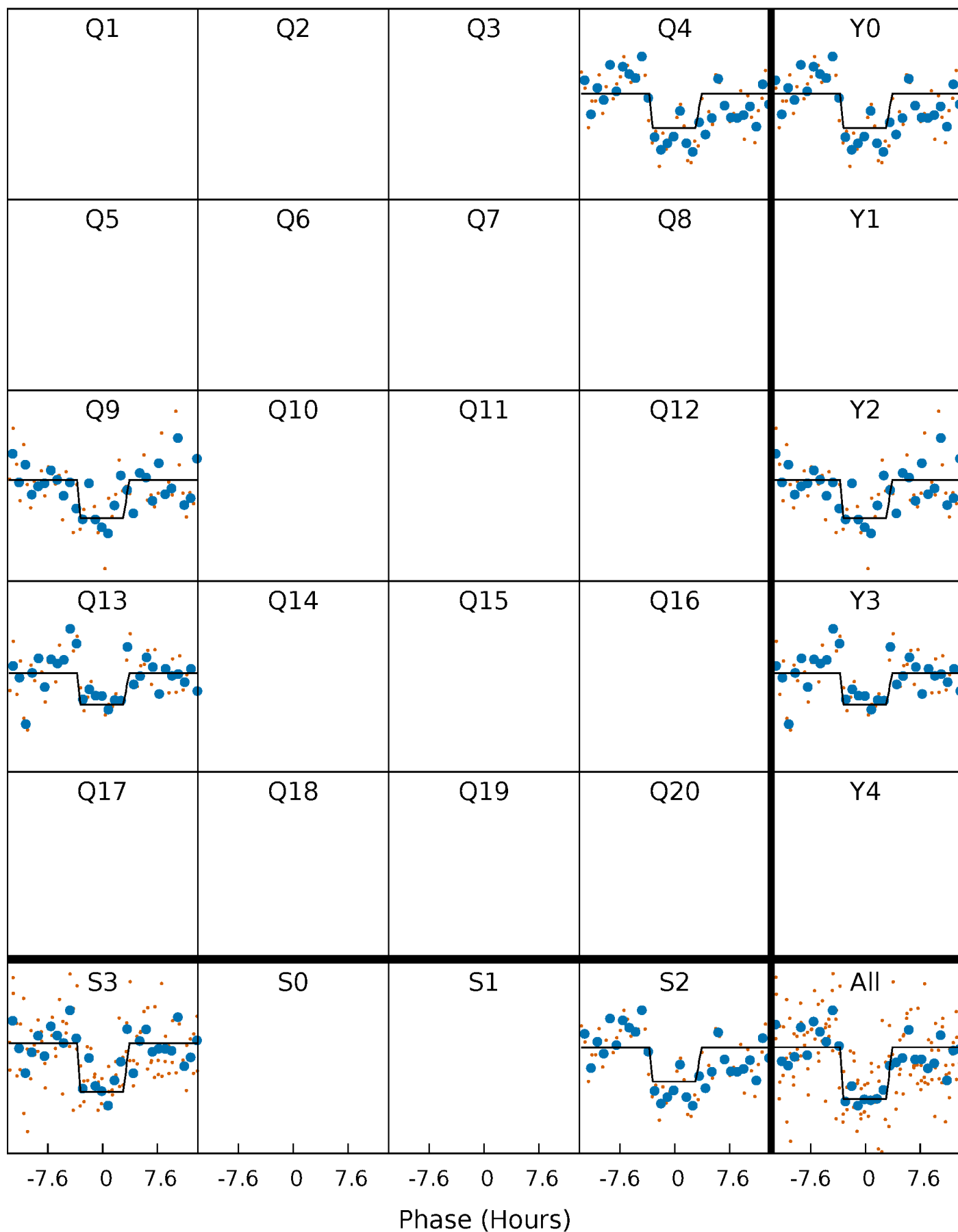
DV Quarter-Phased Transit Curves

TCE 009330740-01 P=404.323396 Days $T_0=422.436043$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

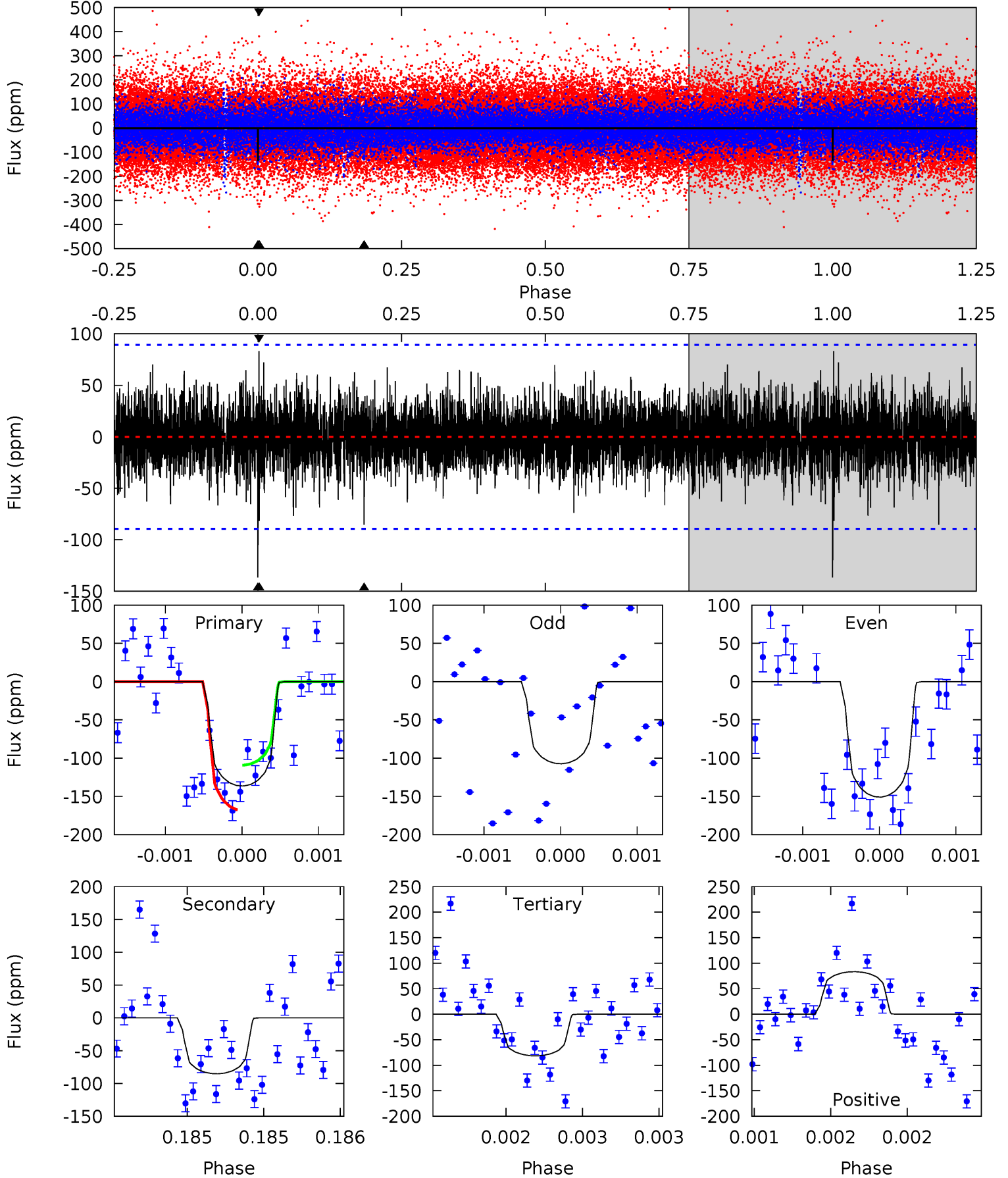
TCE 009330740-01 P=404.318852 Days $T_0=422.410446$ (BKJD)



DV Model-Shift Uniqueness Test

009330740-01, P = 404.323396 Days, E = 18.112647 Days

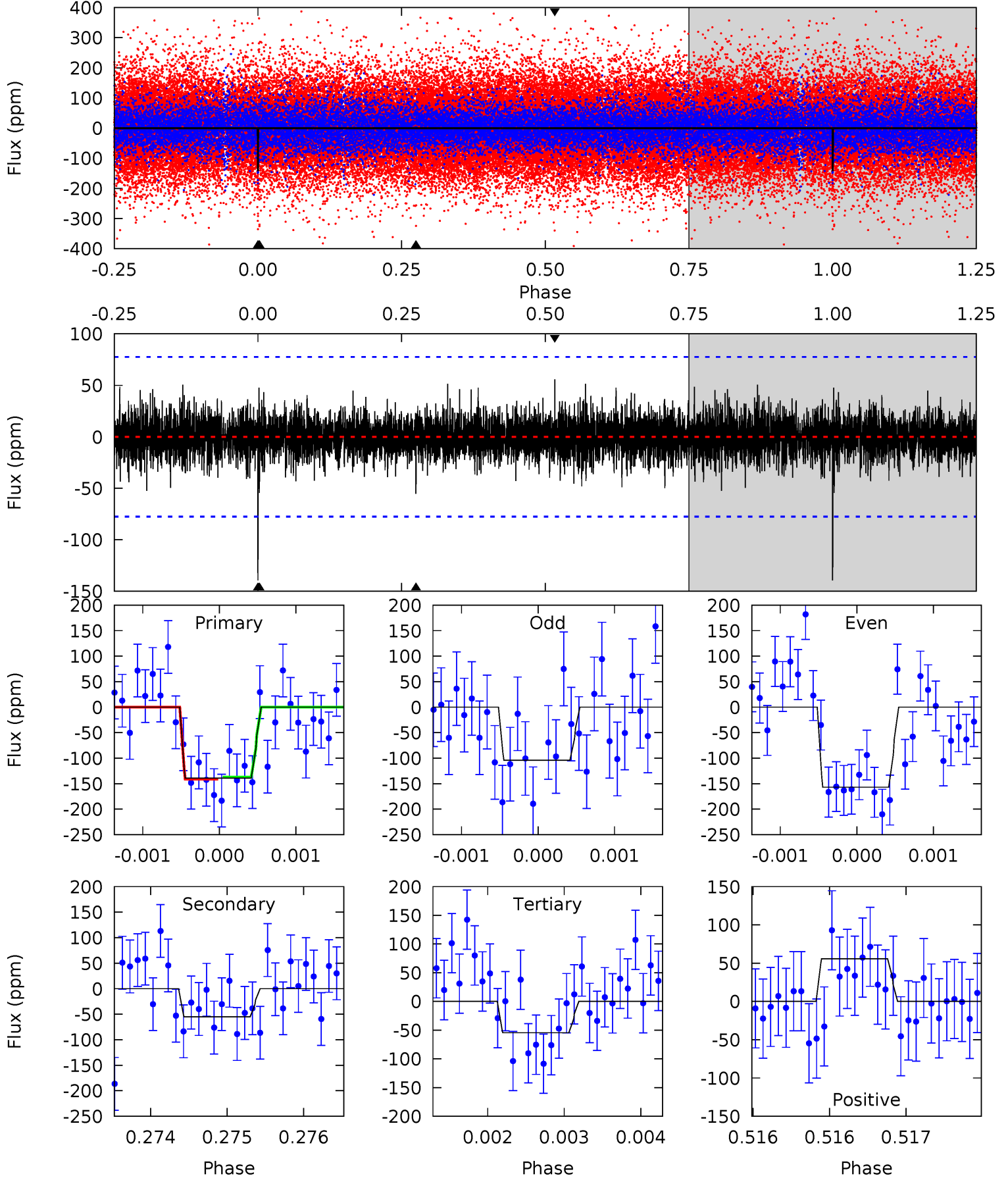
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.48	5.30	5.07	5.18	5.55	3.45	1.22	3.41	3.30	0.23	0.12	1.30	0.96	0.38	1.80



Alt Model-Shift Uniqueness Test

009330740-01, P = 404.318852 Days, E = 18.091594 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.90	3.92	3.87	3.96	5.51	3.39	0.95	6.03	5.94	0.05	-0.04	1.76	1.21	0.29	0.14



Stellar Parameters For KIC 009330740

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	5717^{+68}_{-85}	$4.518^{+0.023}_{-0.128}$	$0.120^{+0.150}_{-0.150}$	$0.922^{+0.136}_{-0.043}$	$1.022^{+0.043}_{-0.081}$	$1.835^{+0.195}_{-0.609}$
	+1%/-1%	+1%/-3%	+125%/-125%	+15%/-5%	+4%/-8%	+11%/-33%
Source	SPE90	SPE90	SPE90	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 009330740-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-85 ± 16	$1.48^{+1.01}_{-0.88}$	330^{+13}_{-7}	4735^{+2724}_{-853}	$24586^{+133233}_{-16153}$
Alt.	-55 ± 14	$1.38^{+0.94}_{-0.80}$	330^{+12}_{-8}	4422^{+2133}_{-757}	17587^{+87807}_{-11472}

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 $A_{obs} \gg 1.0$

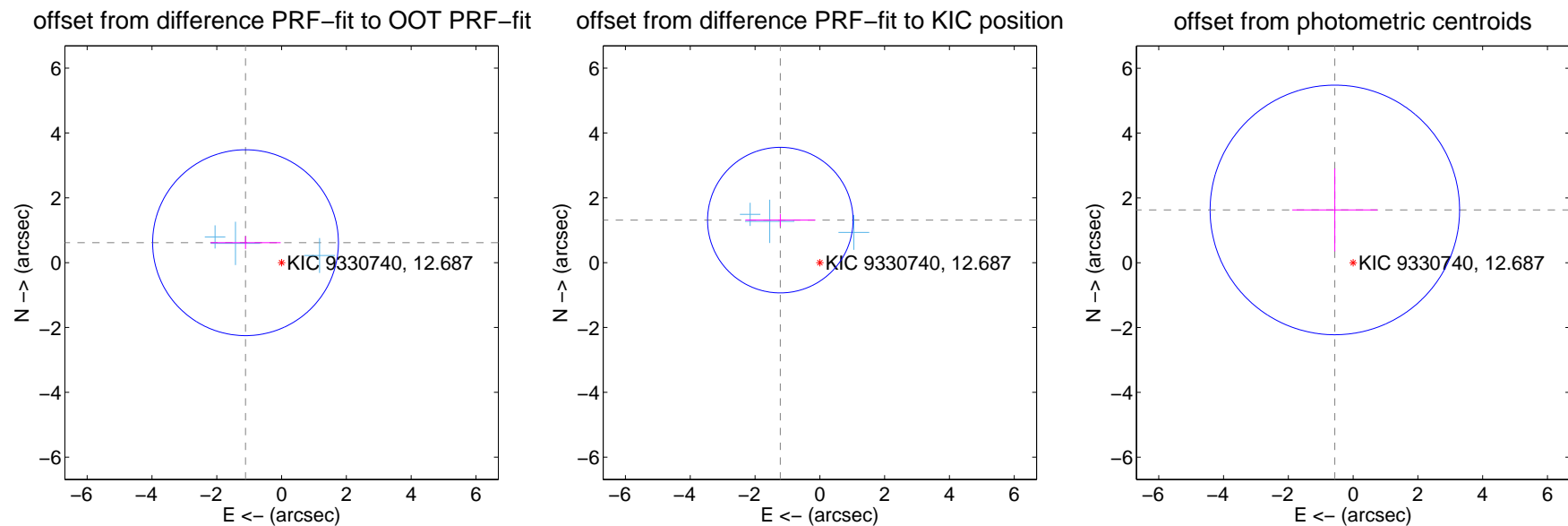
DV Centroid Data

Supplemental centroid analysis for 009330740-01. Kepler magnitude: 12.69. Transit SNR 5.79

There are 3 quarters with good PRF difference image offsets

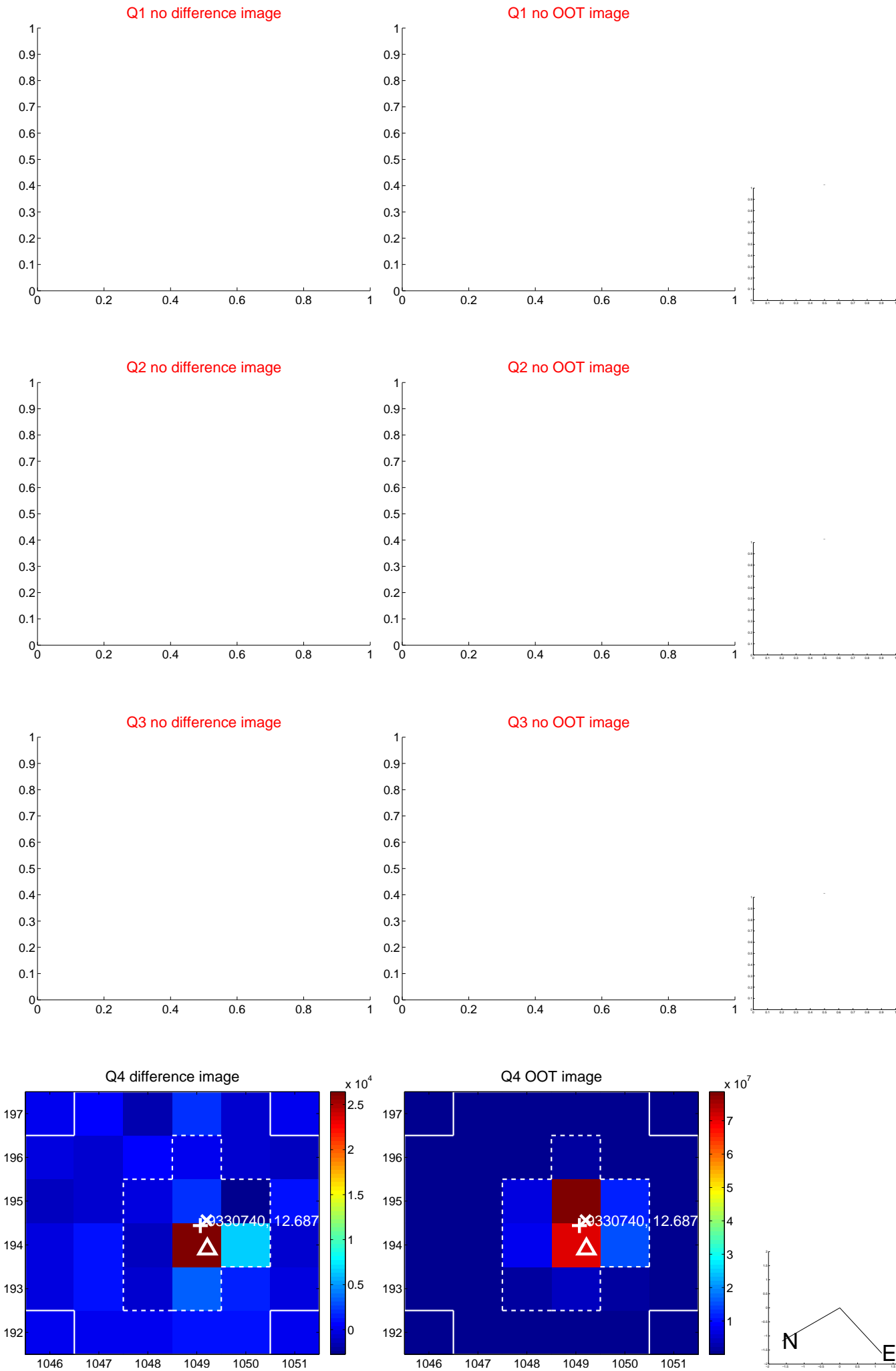
The direct PRF centroid is offset from the target star catalog position by about 0.72 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.271 ± 0.956	1.33	1.112 ± 1.087	0.615 ± 0.196
PRF-fit source offset from KIC position	1.791 ± 0.748	2.39	1.220 ± 1.079	1.311 ± 0.191
photometric centroid source offset	1.72 ± 1.28	1.34	0.56 ± 1.32	1.63 ± 1.28



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.

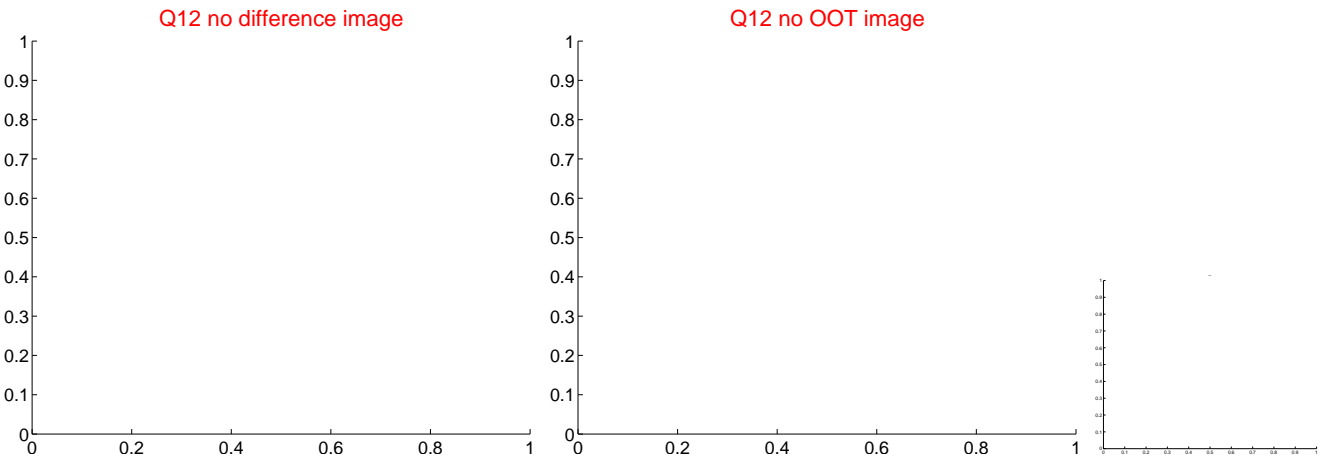
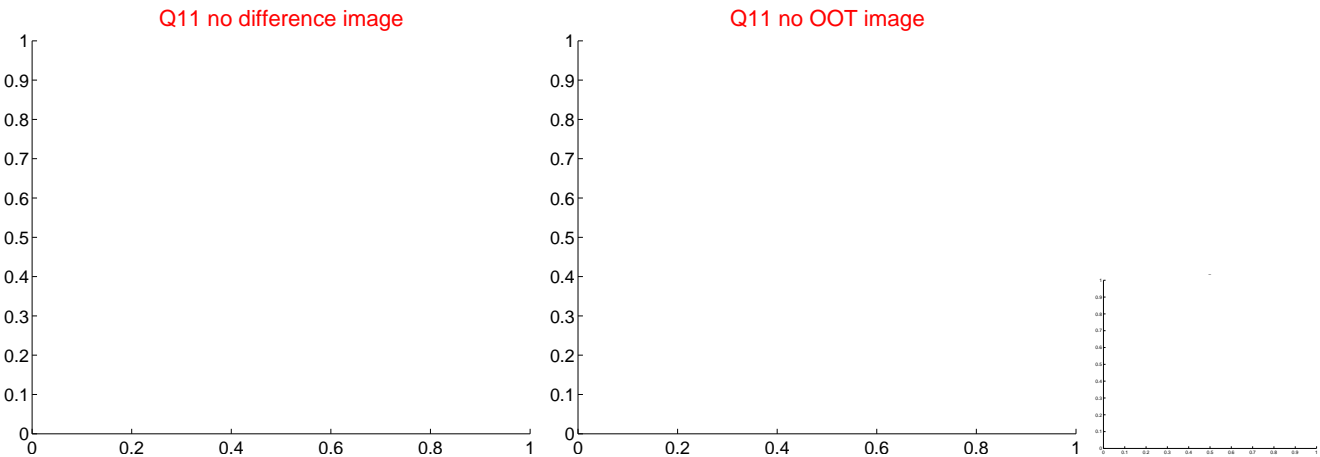
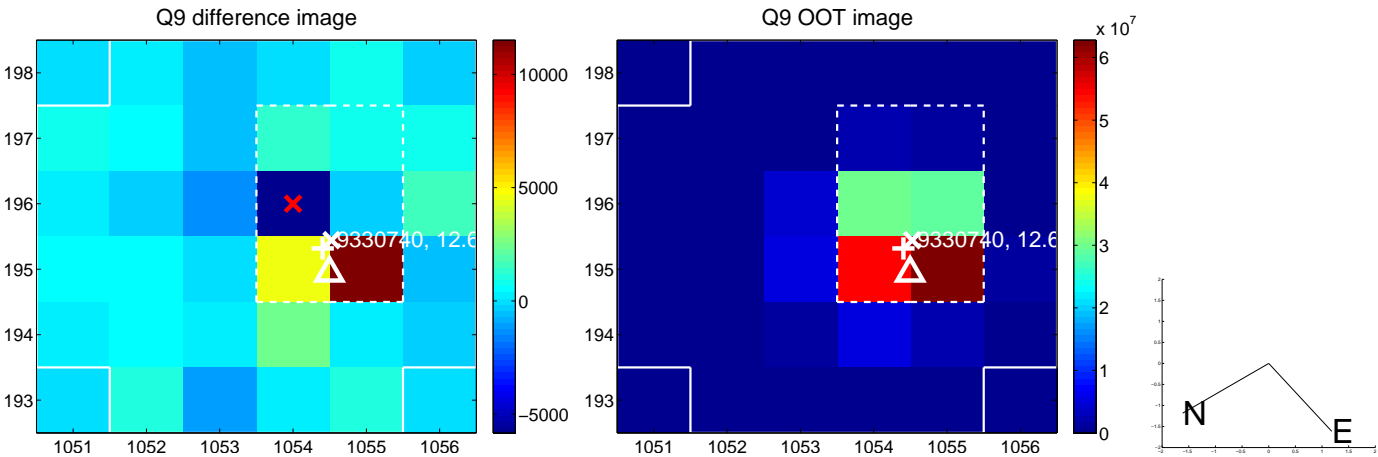
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



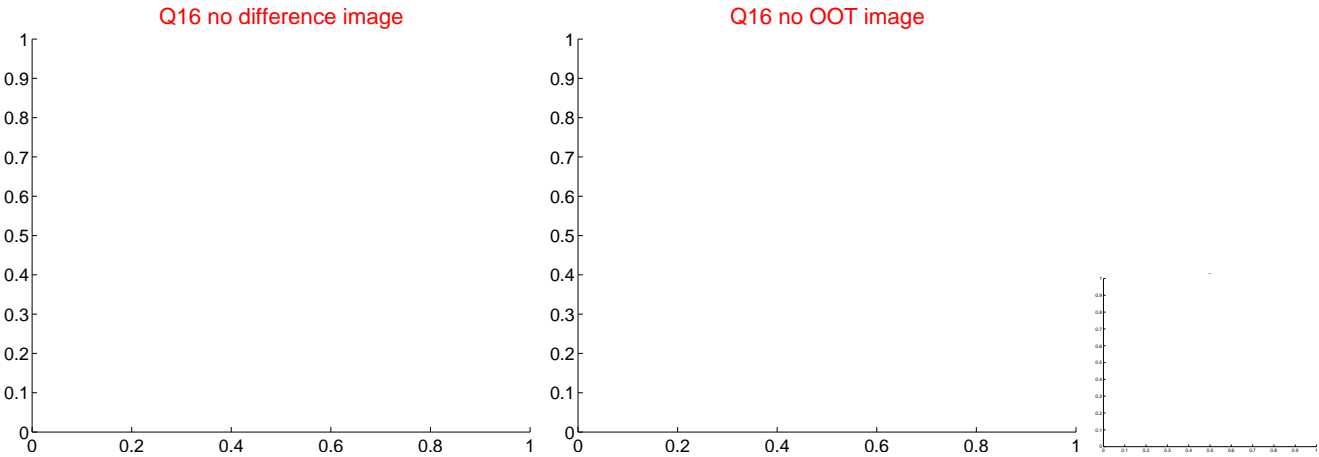
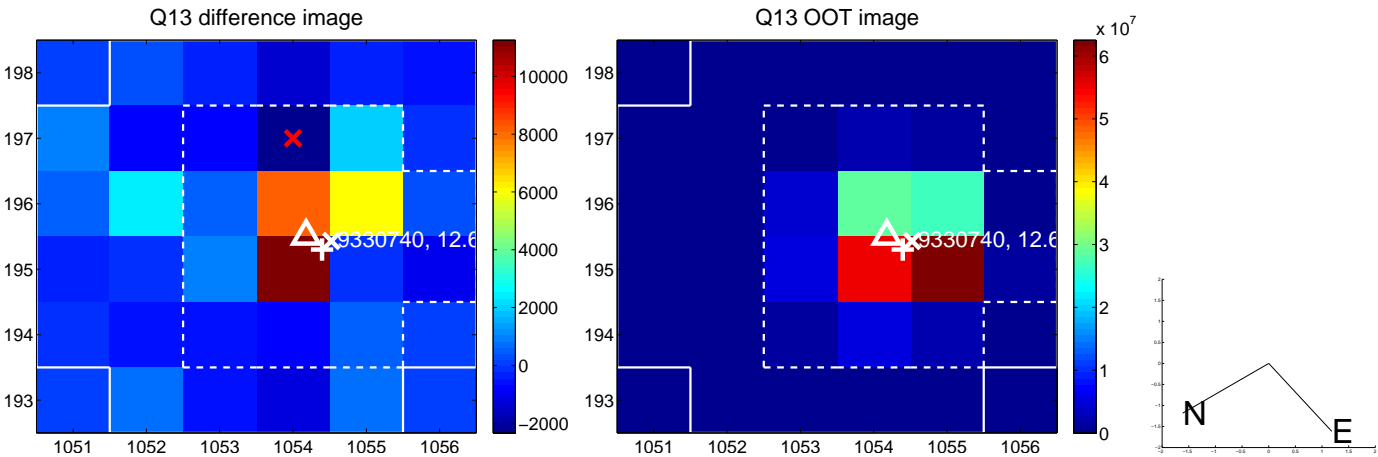
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



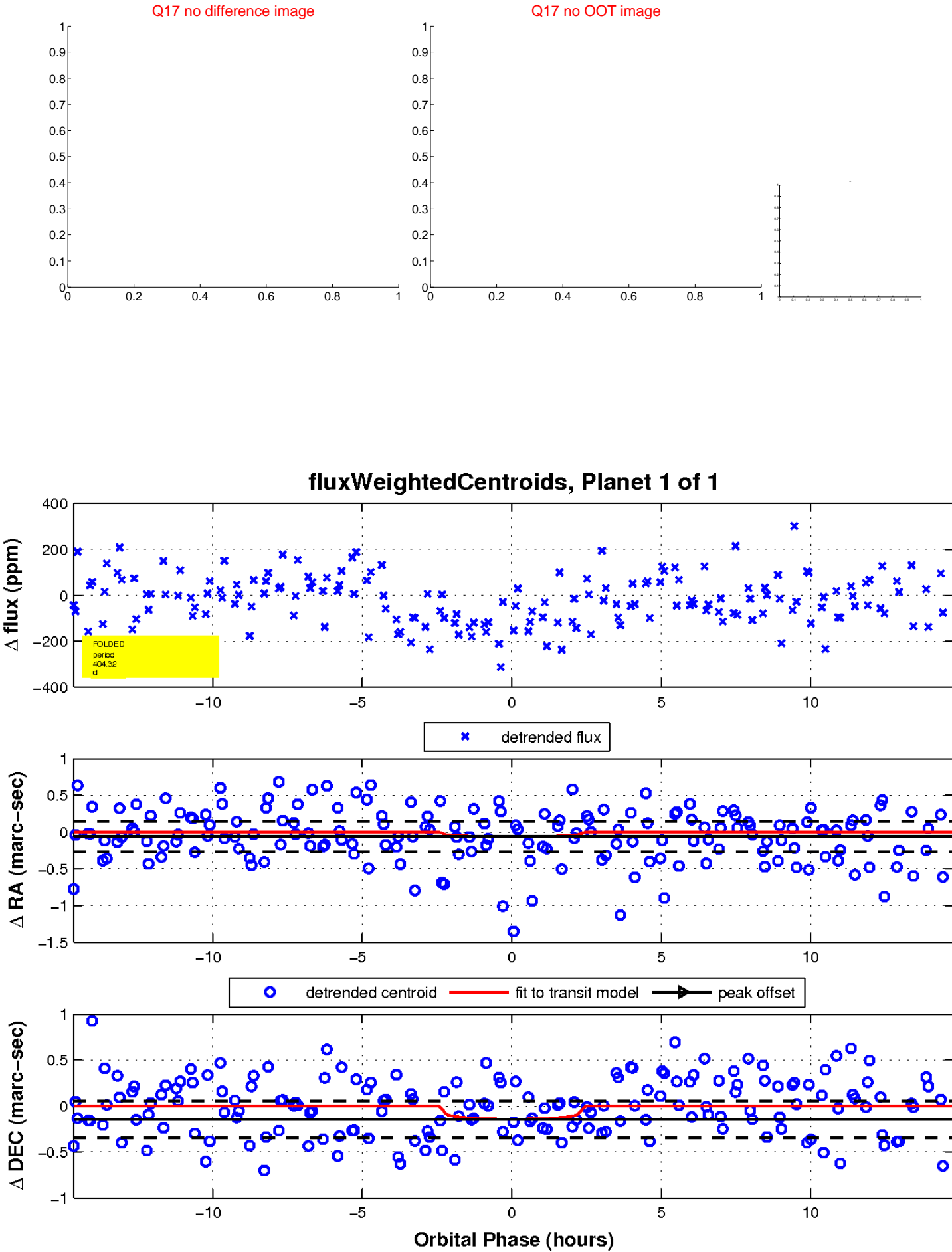
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

