

KIC 010711510

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})
010711510-01	OBS	No	641.336637	235.873726	562.9	3.969	7.3	7.0	1.04	6085	2.70	0.60

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010711510-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—MOD_NONUNIQ_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.

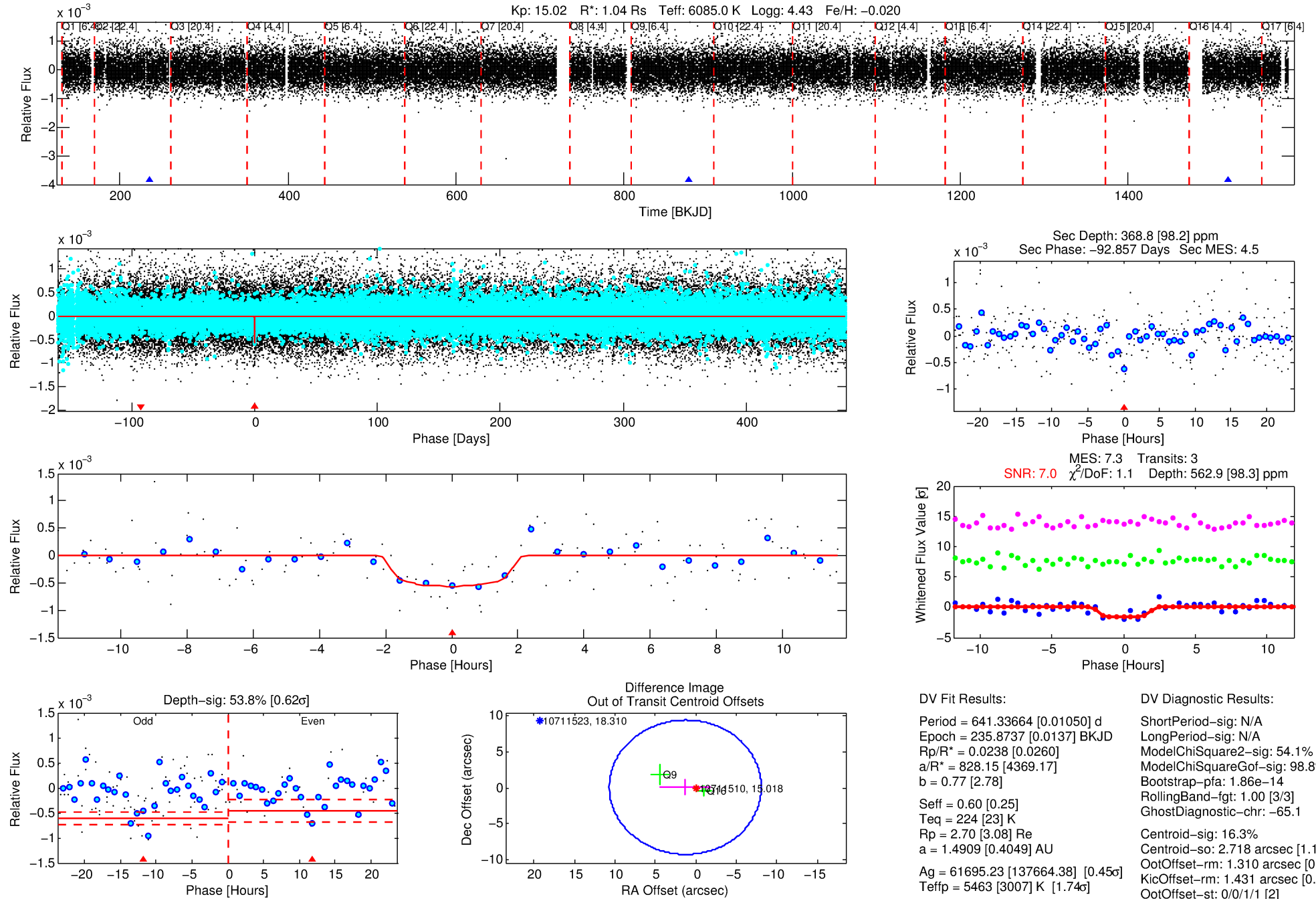
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010711510-01

No Significant Match Found

DV One-Page Summary

KIC: 10711510 Candidate: 1 of 1 Period: 641.337 d



DV Fit Results:

Period = 641.33664 [0.01050] d
Epoch = 235.8737 [0.0137] BKJD
Rp/R* = 0.0238 [0.0260]
a/R* = 828.15 [4369.17]
b = 0.77 [2.78]
Seff = 0.60 [0.25]
Teff = 224 [23] K
Rp = 2.70 [3.08] Re
a = 1.4909 [0.4049] AU
Ag = 61695.23 [137664.38] [0.45σ]
Teffp = 5463 [3007] K [1.74σ]

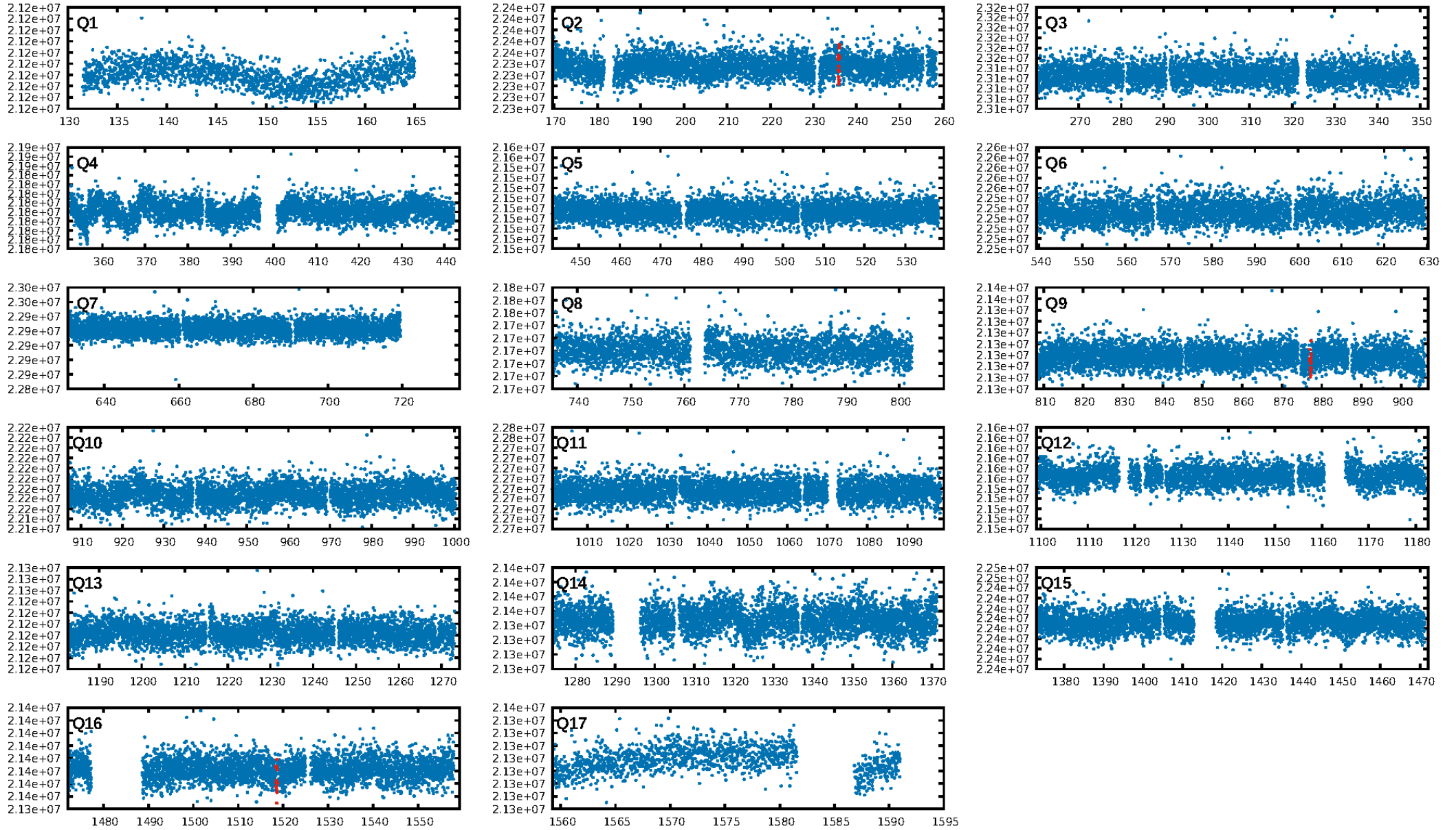
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 54.1%
ModelChiSquareGof-sig: 98.8%
Bootstrap-pfa: 1.86e-14
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -65.1
Centroid-sig: 16.3%
Centroid-so: 2.718 arcsec [1.14σ]
OotOffset-rm: 1.310 arcsec [0.42σ]
OotOffset-st: 0/0/1/1 [2]
KicOffset-rm: 1.431 arcsec [0.46σ]
KicOffset-st: 0/0/1/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

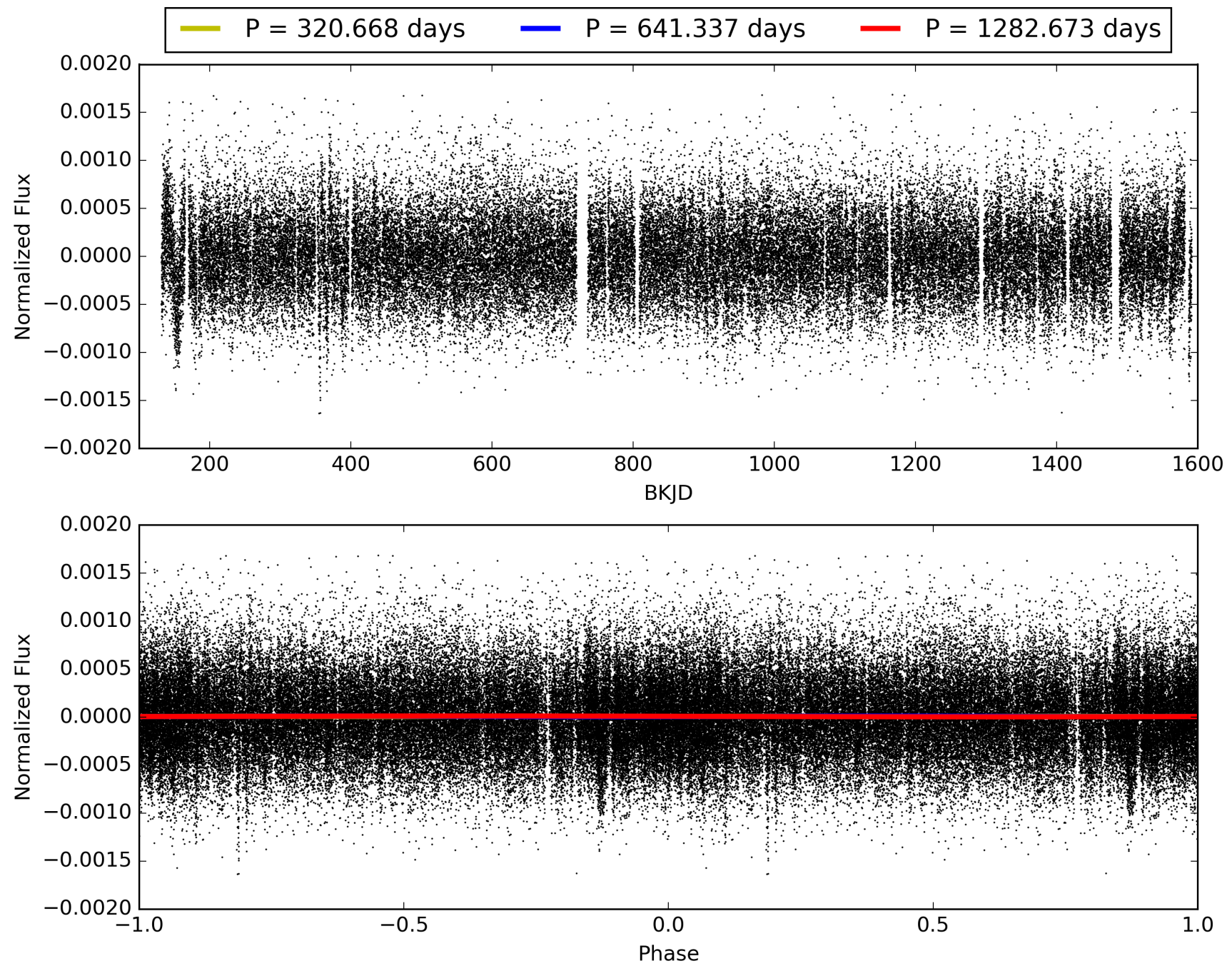
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:55:56 Z

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

TCE 010711510-01, PDC Light Curves

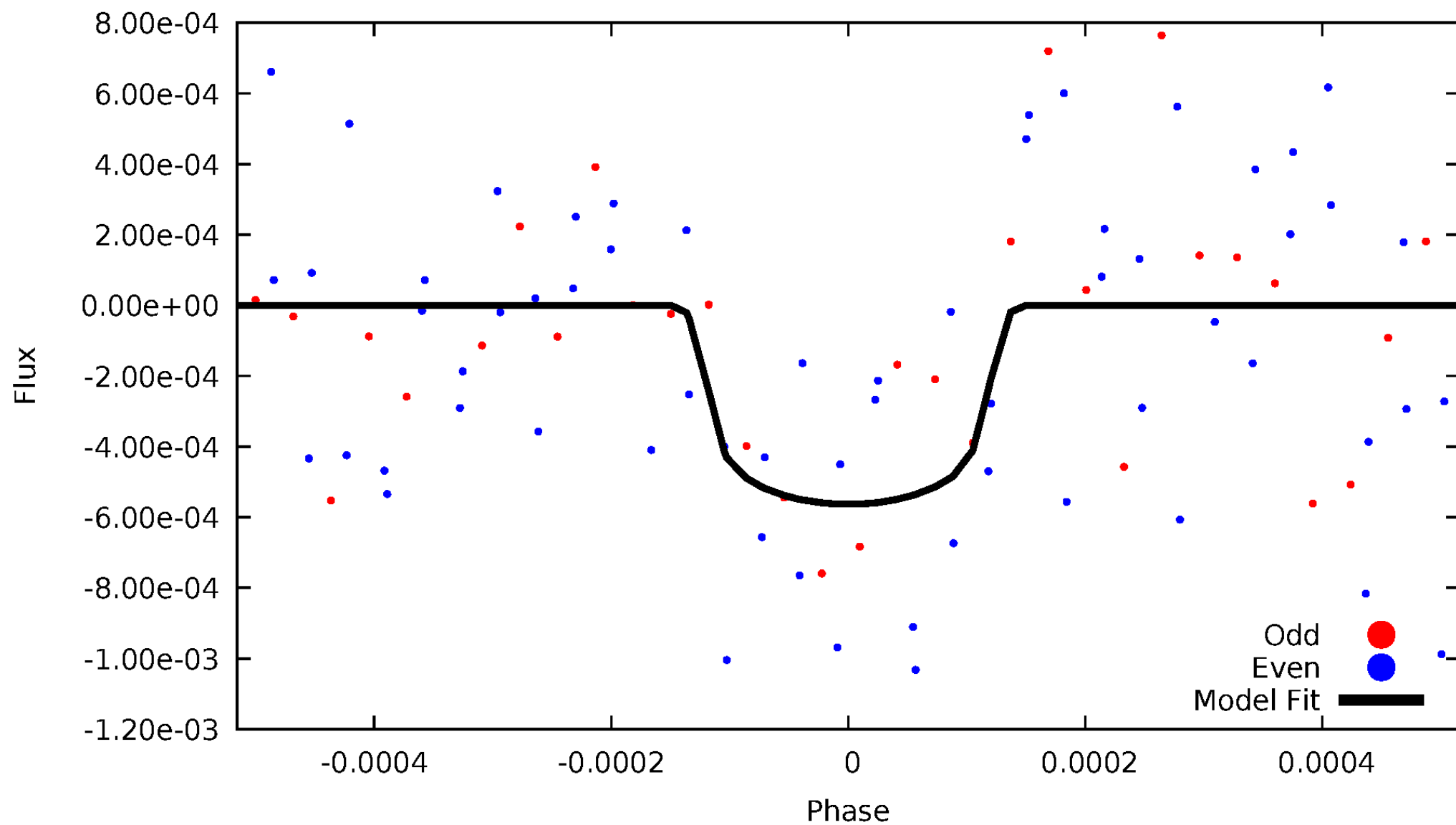


TCE 010711510-01



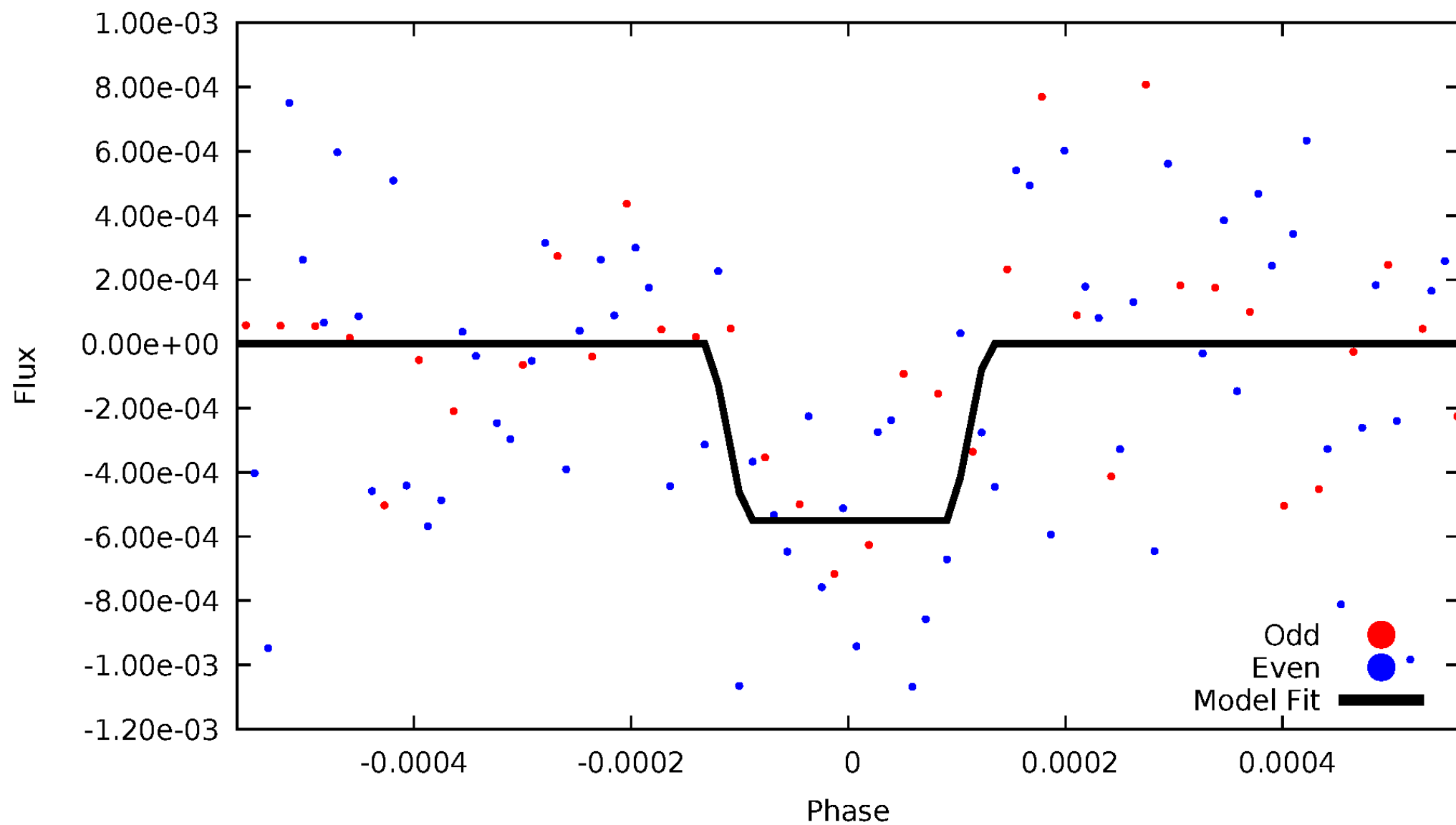
DV Odd/Even

TCE 010711510-01



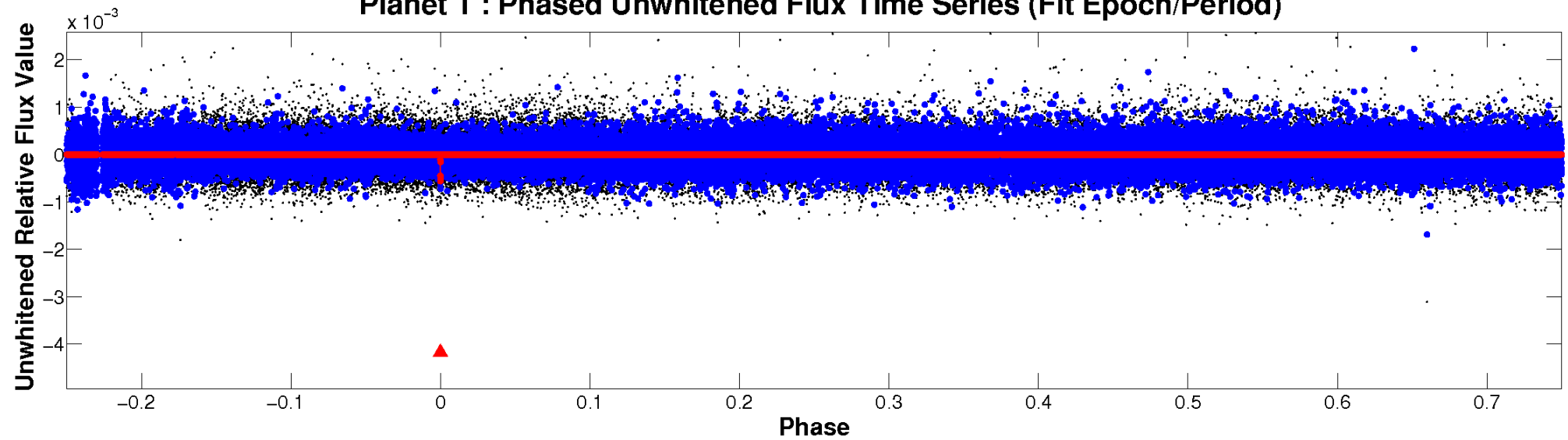
ALT Odd/Even

TCE 010711510-01

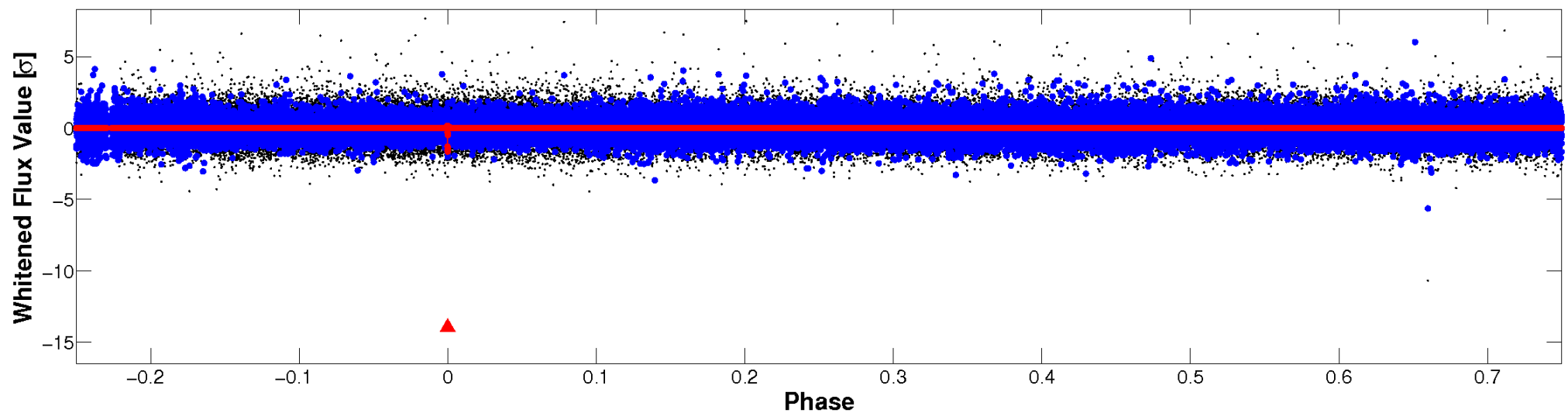


Non-Whitened Vs. Whitened Light Curve

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

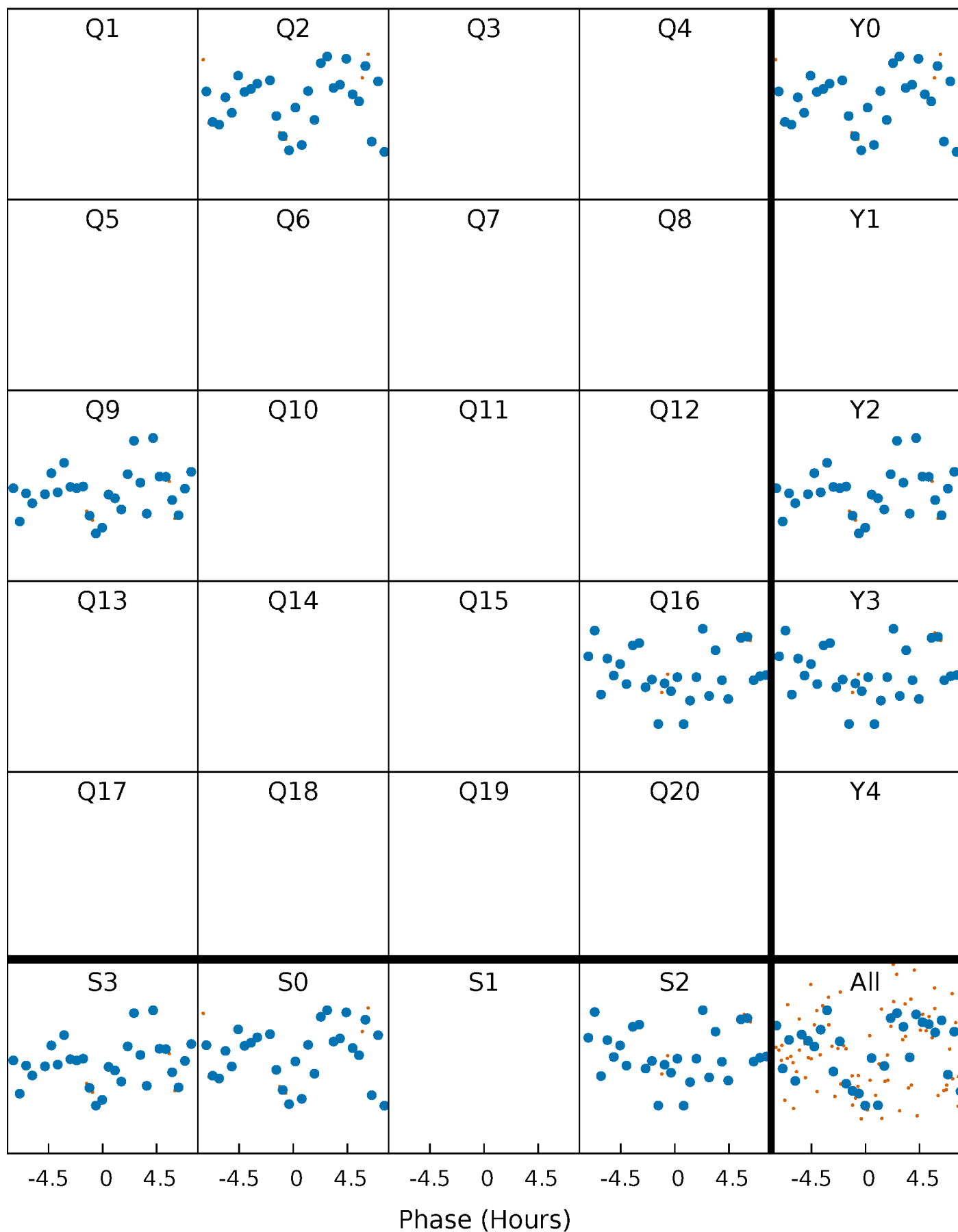


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



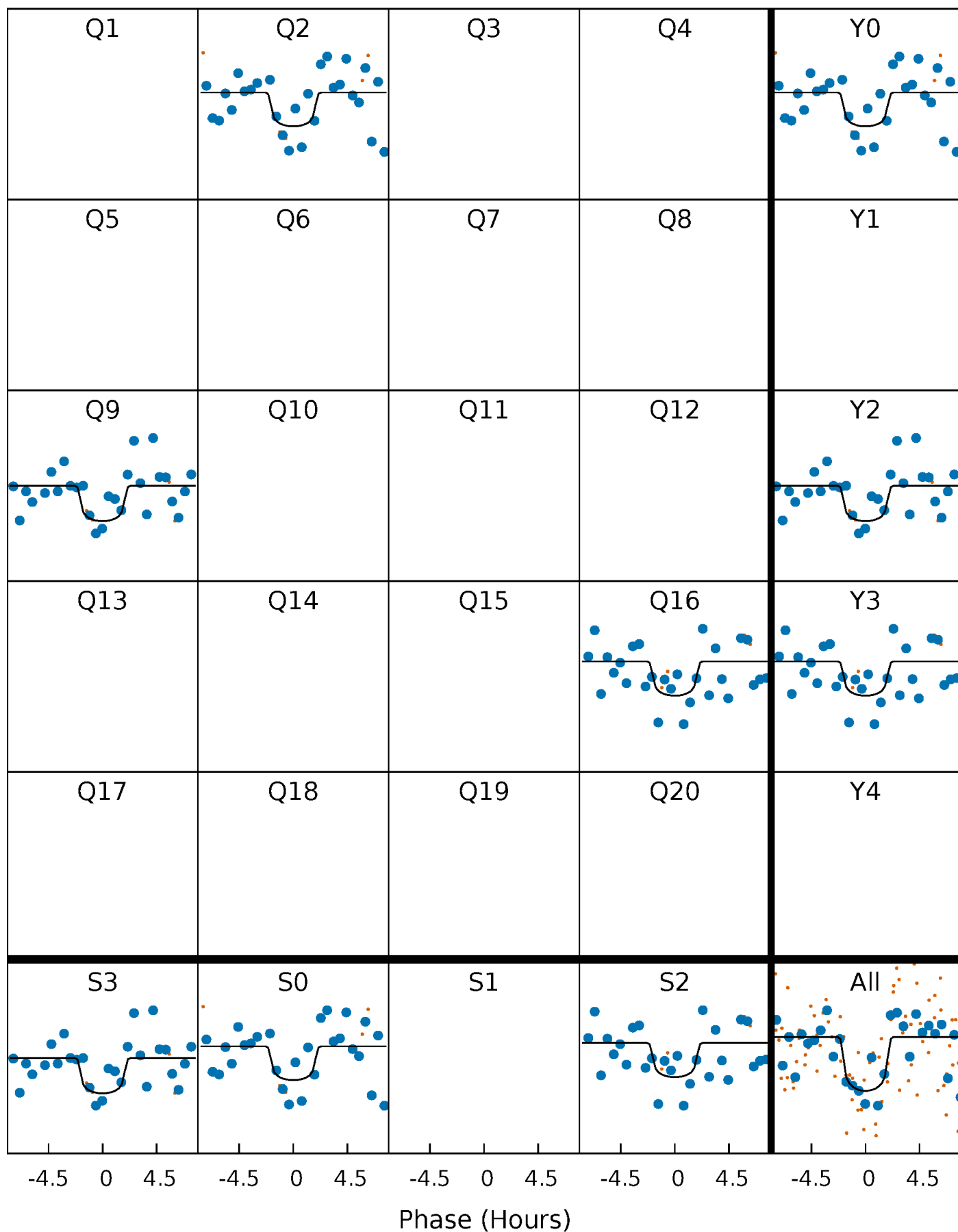
PDC Quarter-Phased Transit Curves

TCE 010711510-01 P=641.336637 Days $T_0=235.873726$ (BKJD)



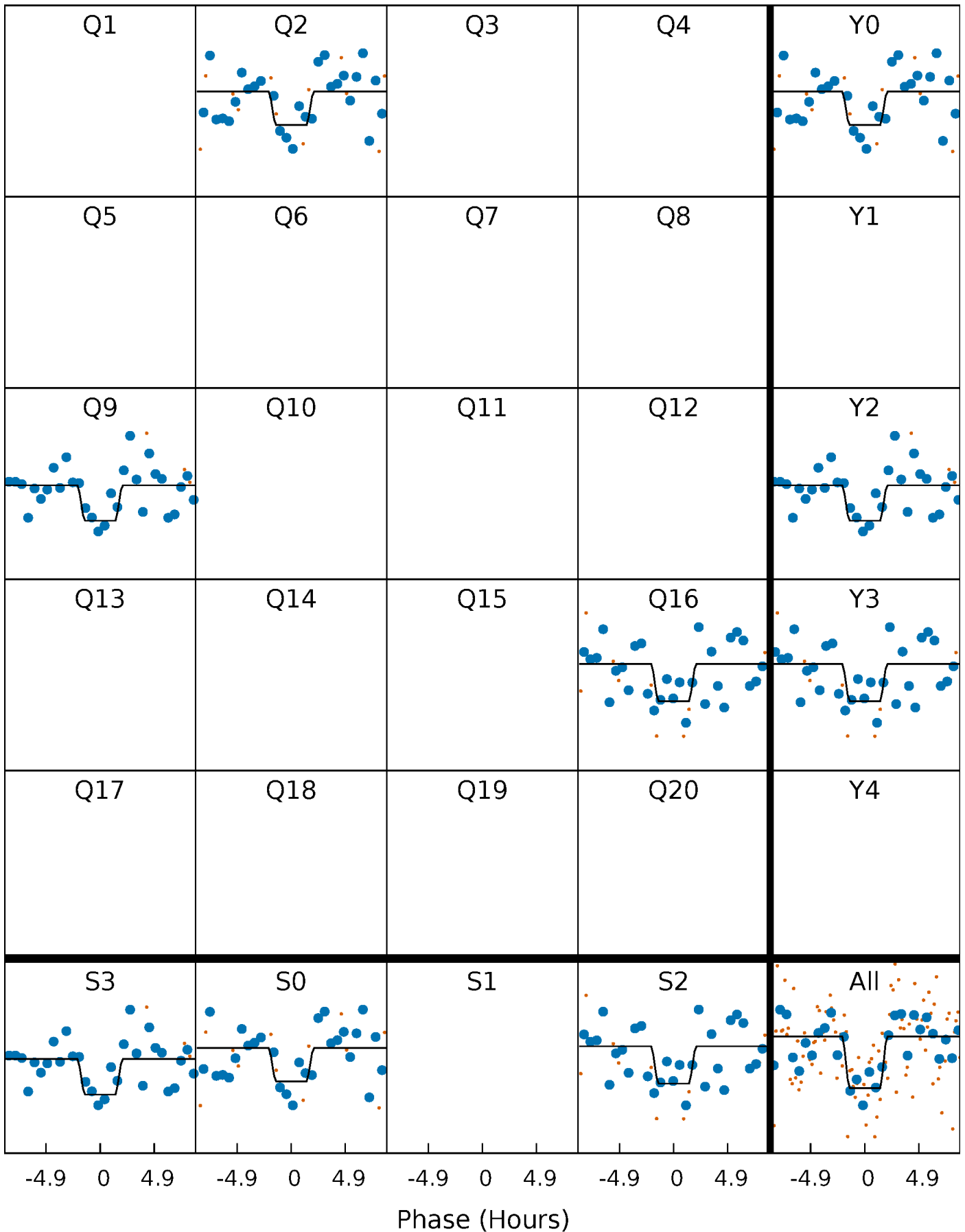
DV Quarter-Phased Transit Curves

TCE 010711510-01 P=641.336637 Days $T_0=235.873726$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

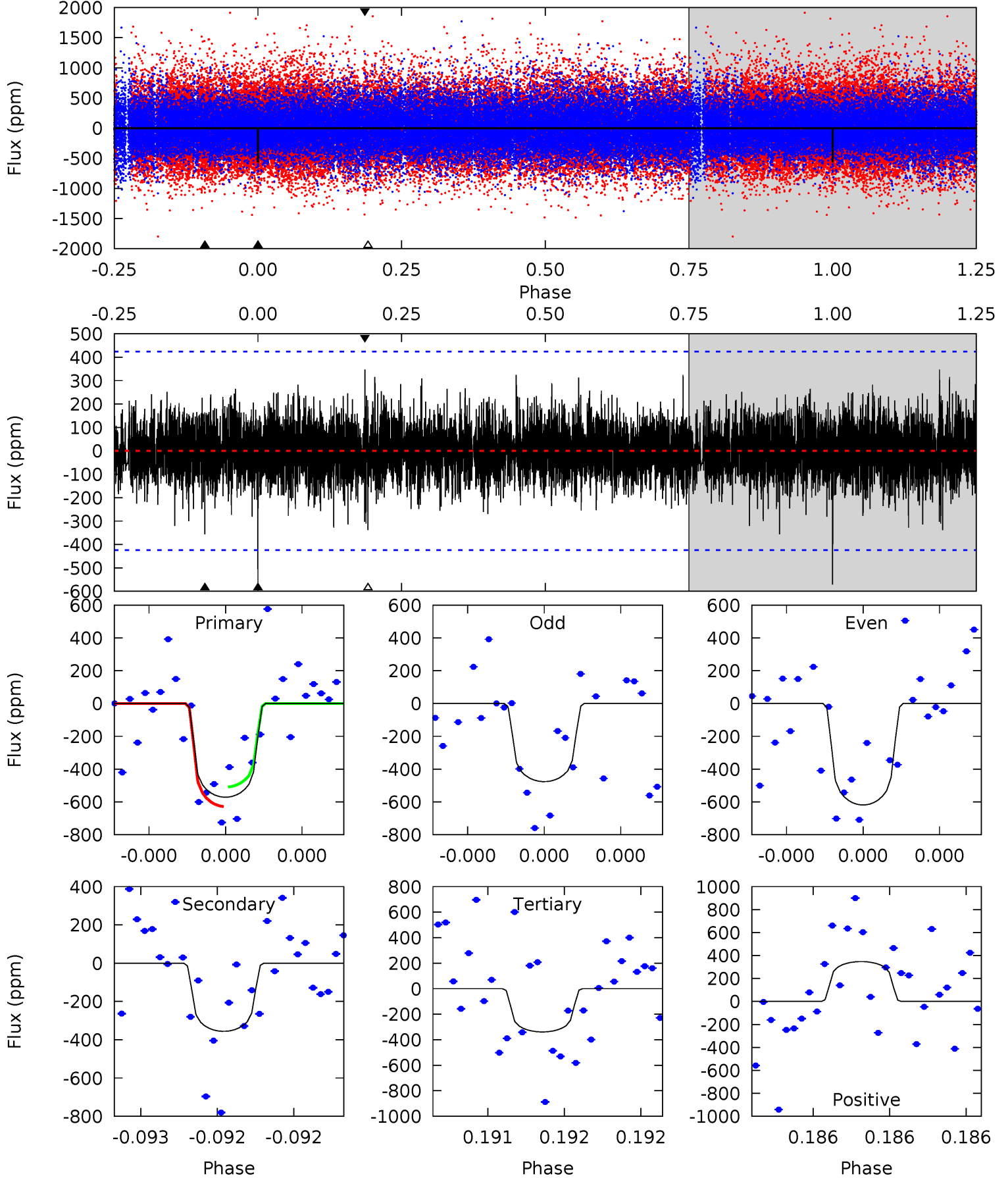
TCE 010711510-01 P=641.341337 Days $T_0=235.862974$ (BKJD)



DV Model-Shift Uniqueness Test

010711510-01, P = 641.336637 Days, E = 235.873726 Days

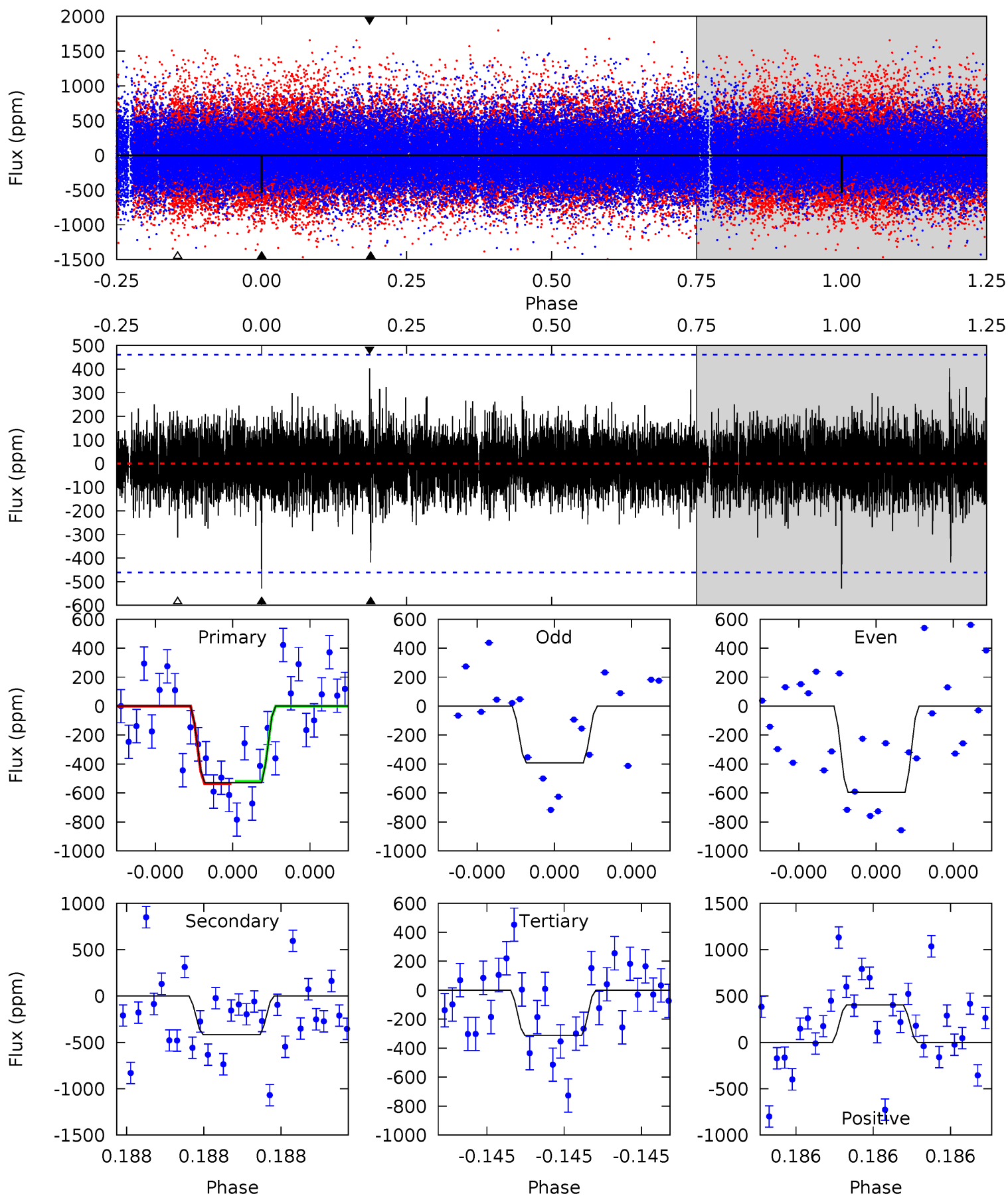
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.63	4.76	4.53	4.64	5.67	3.63	1.10	3.11	2.99	0.23	0.12	0.91	0.96	0.38	0.80



Alt Model-Shift Uniqueness Test

010711510-01, P = 641.341337 Days, E = 235.862974 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.54	5.16	3.86	4.98	5.70	3.67	0.98	2.68	1.55	1.30	0.18	1.22	0.94	0.43	0.10



Stellar Parameters For KIC 010711510

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6085^{+171}_{-214}	$4.435^{+0.070}_{-0.210}$	$-0.020^{+0.250}_{-0.300}$	$1.040^{+0.341}_{-0.114}$	$1.069^{+0.153}_{-0.139}$	$1.340^{+0.409}_{-0.740}$
	+3%/-4%	+2%/-5%	+1250%/-1500%	+33%/-11%	+14%/-13%	+31%/-55%
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 010711510-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-356 ± 75	$3.51^{+2.79}_{-2.28}$	320^{+24}_{-17}	4969^{+3498}_{-1026}	$34522^{+257618}_{-24116}$
Alt.	-418 ± 81	$3.45^{+2.69}_{-2.09}$	318^{+21}_{-16}	5165^{+3200}_{-1099}	$43112^{+229890}_{-30012}$

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

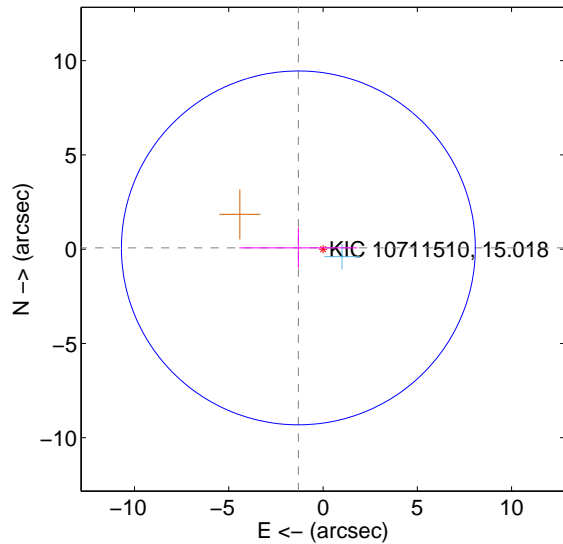
Supplemental centroid analysis for 010711510-01. Kepler magnitude: 15.02. Transit SNR 6.99

There are 1 quarters with good PRF difference image offsets

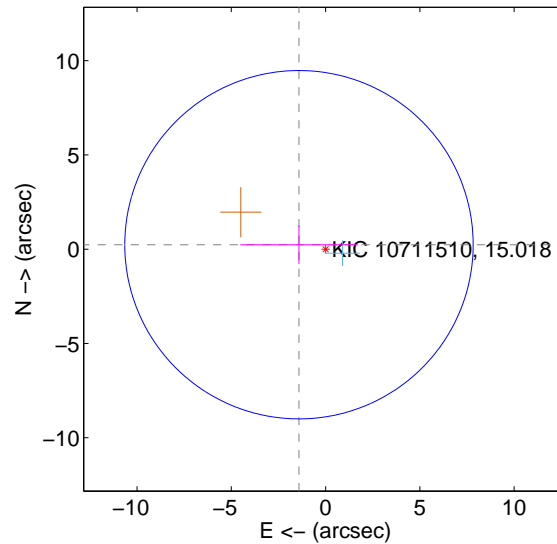
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.310 ± 3.128	0.42	1.308 ± 3.132	0.068 ± 1.063
PRF-fit source offset from KIC position	1.431 ± 3.080	0.46	1.411 ± 3.118	0.237 ± 1.031
photometric centroid source offset	2.72 ± 2.38	1.14	1.90 ± 2.40	1.94 ± 2.36

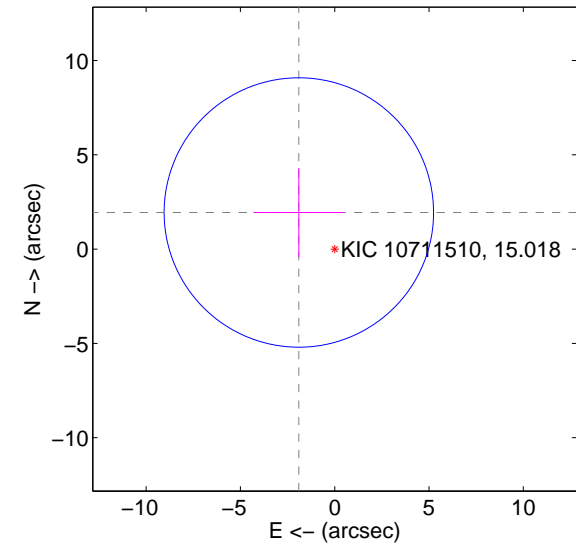
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

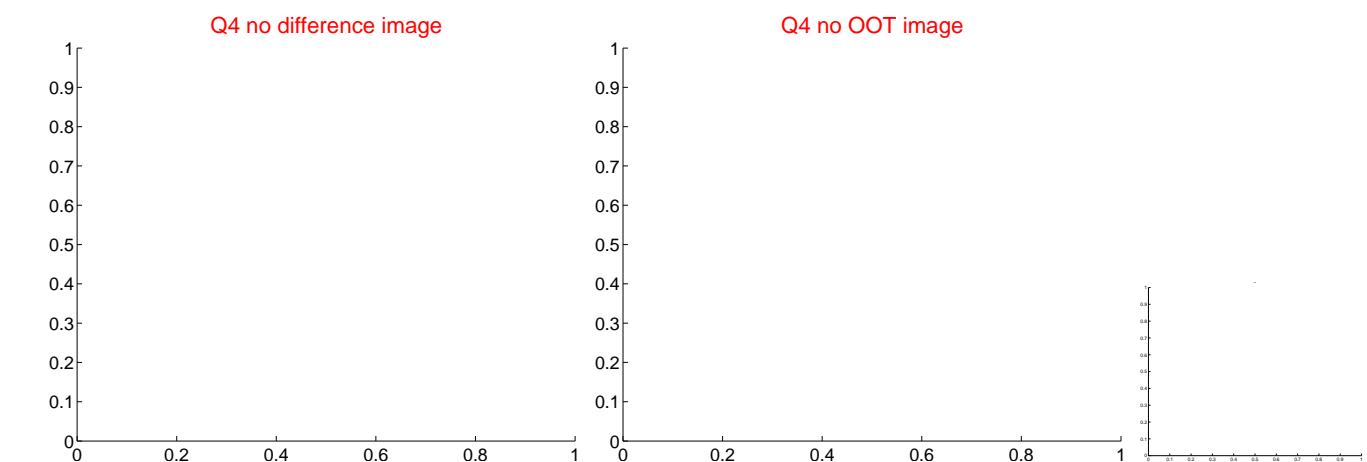
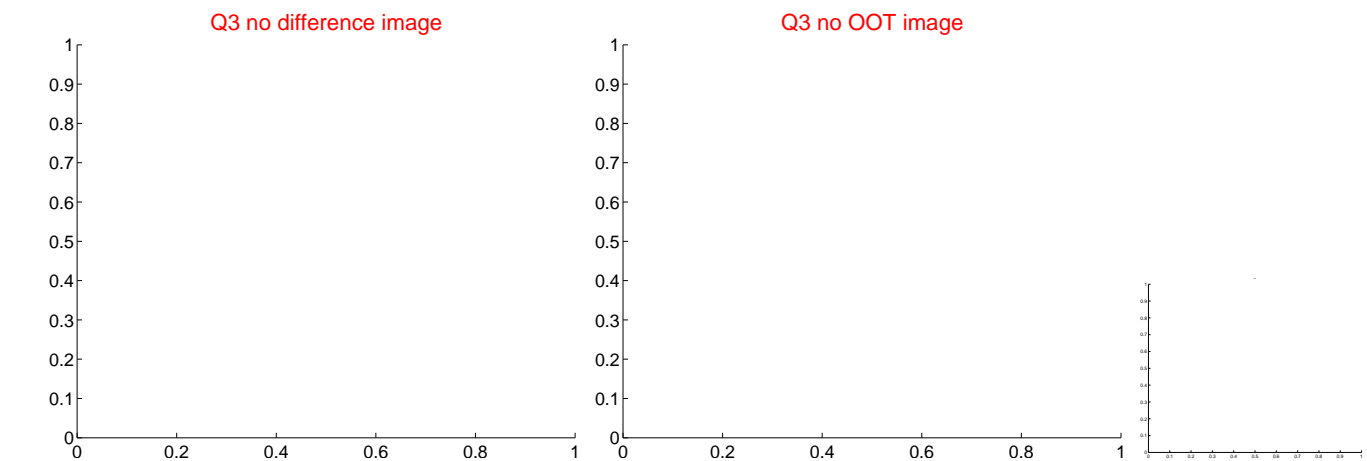
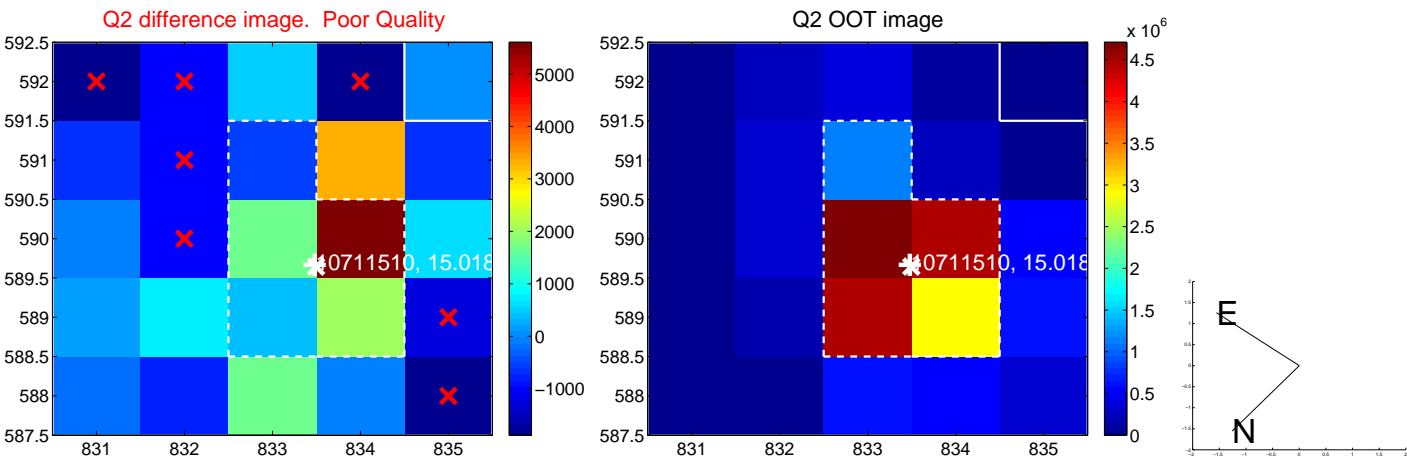
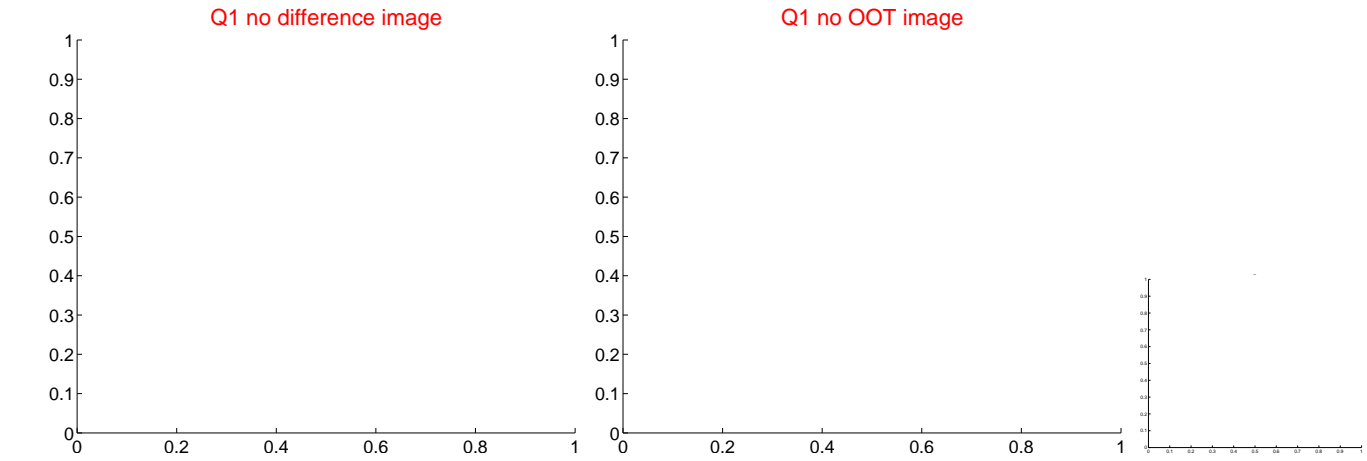


offset from photometric centroids



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.

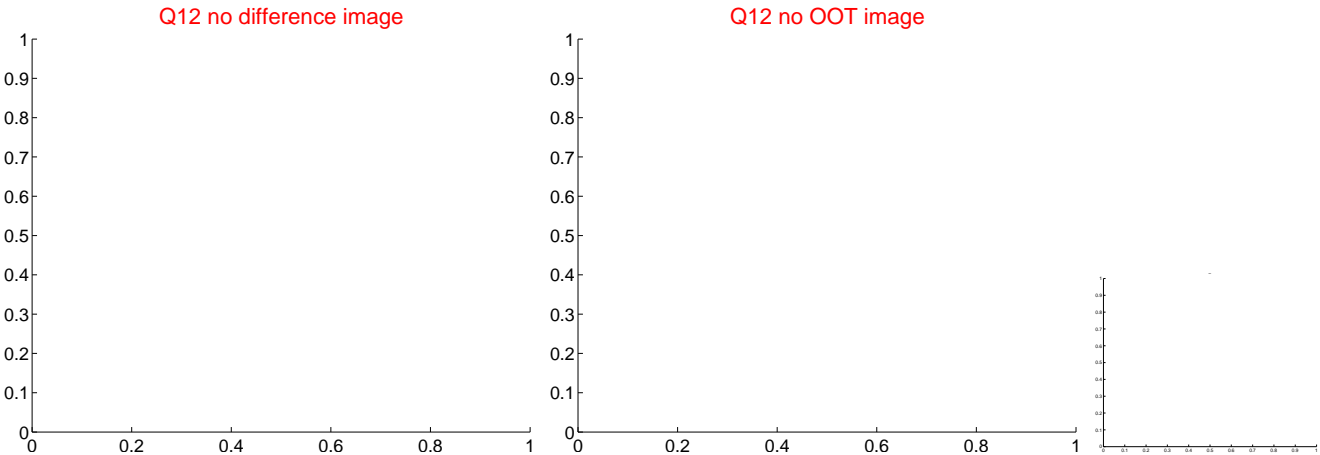
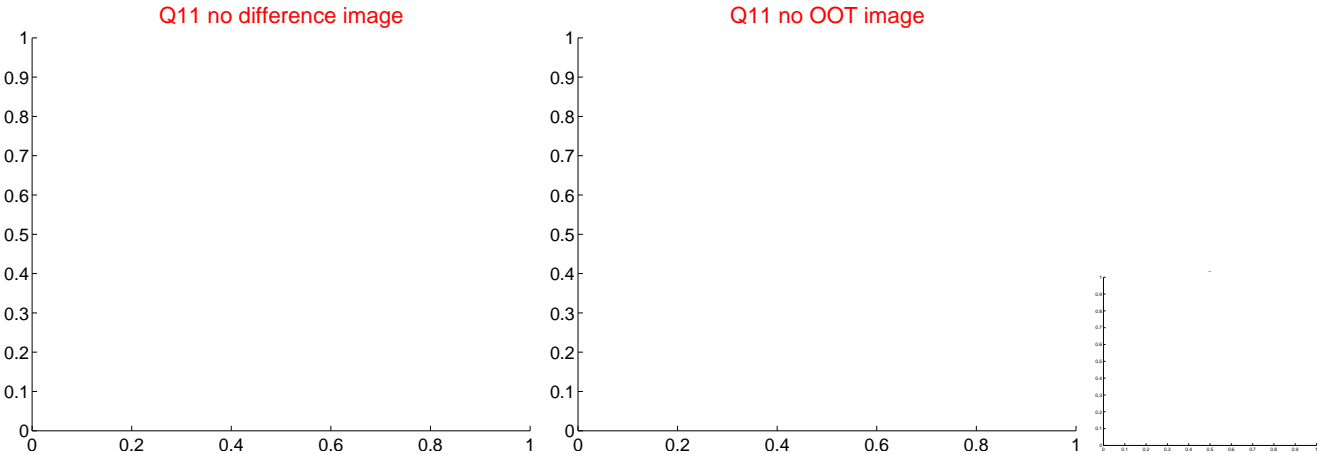
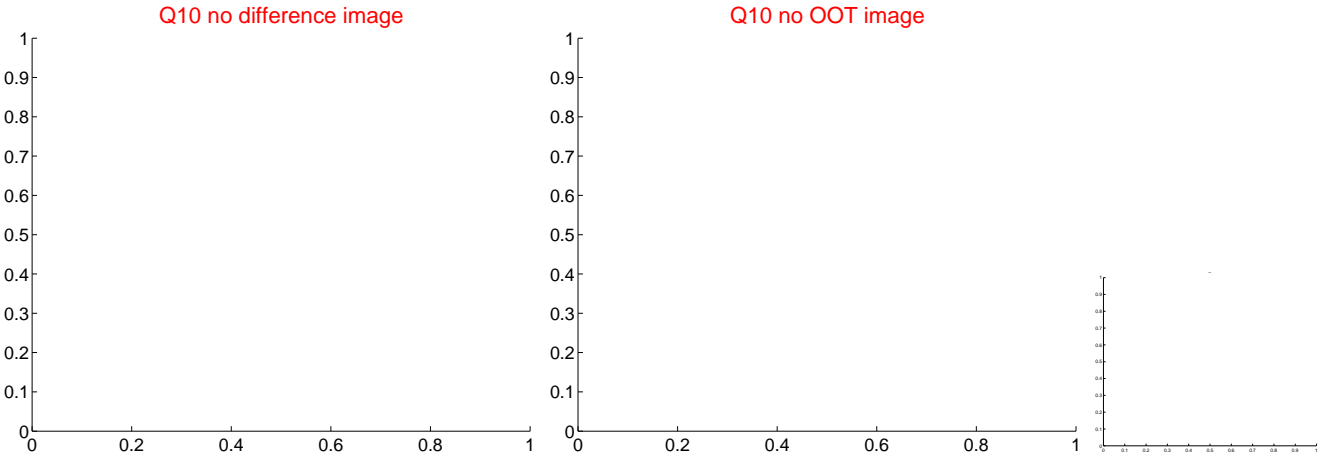
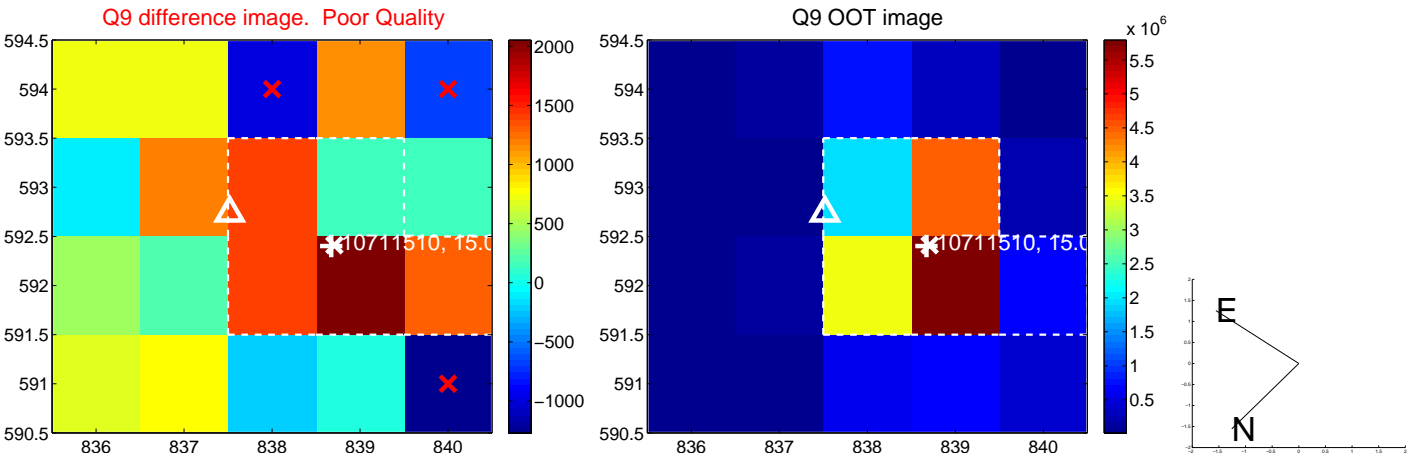
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



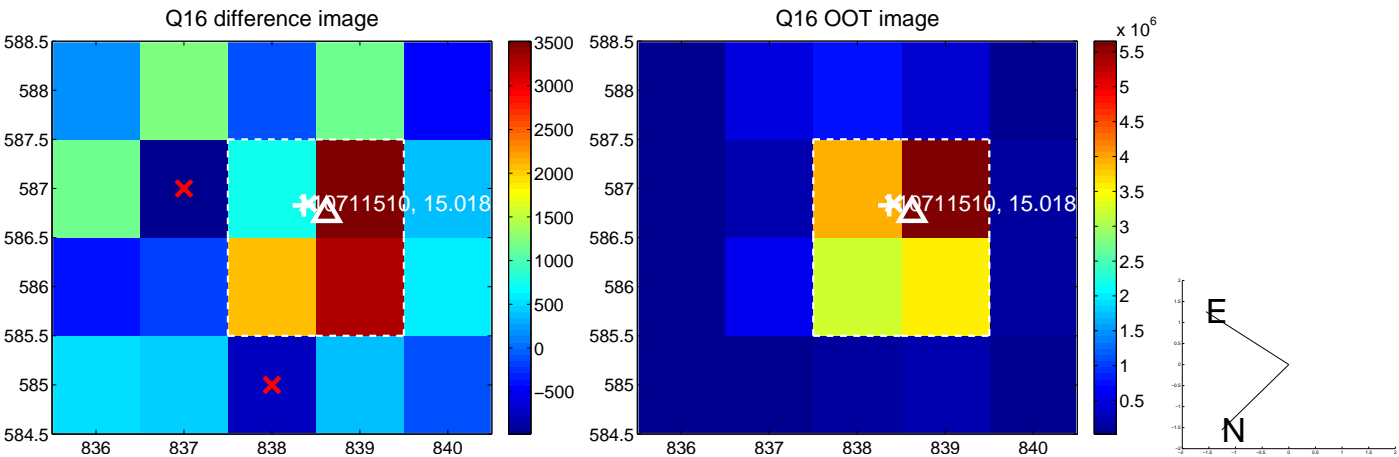
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



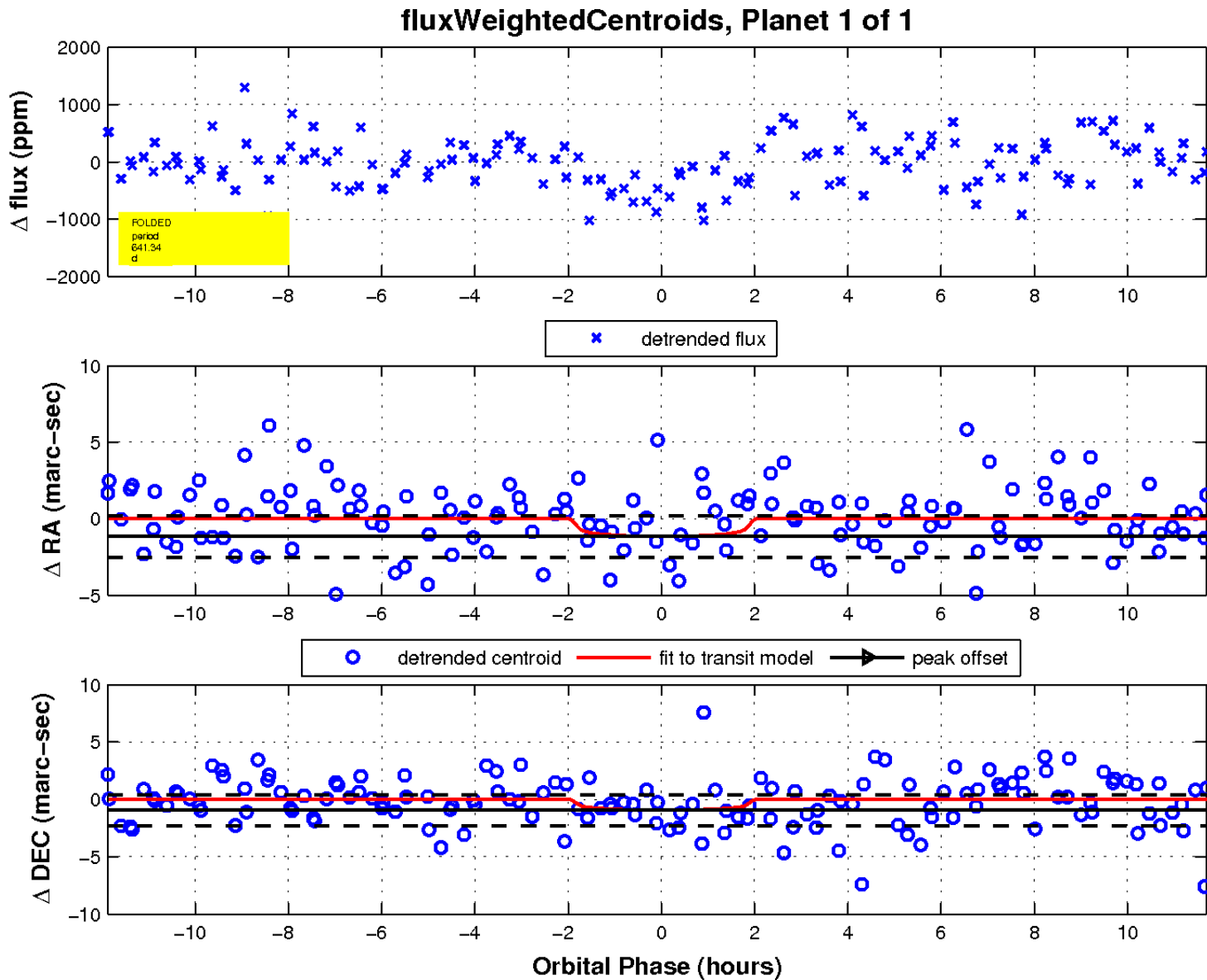
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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



UKIRT Image

Declination

