

KIC 007255000

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})
007255000-01	OBS	No	483.371498	152.394164	671.4	4.929	7.1	5.1	0.40	3562	1.16	0.03

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007255000-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_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.

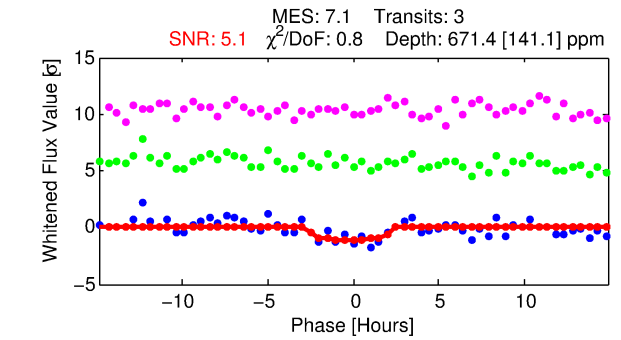
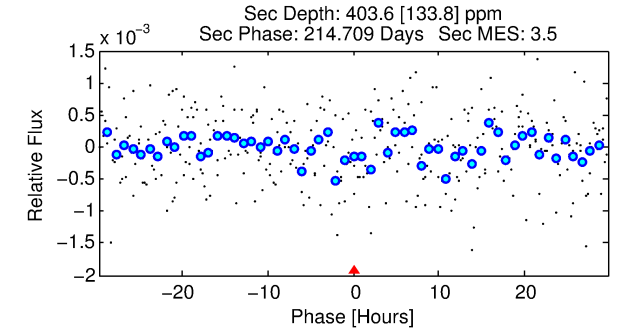
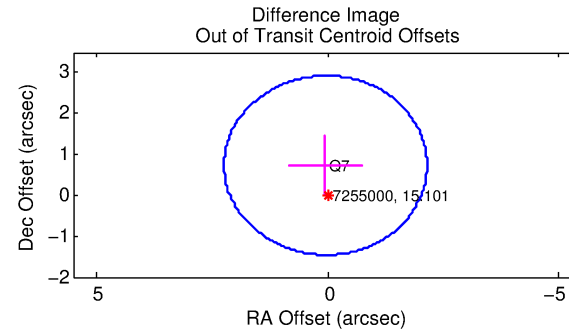
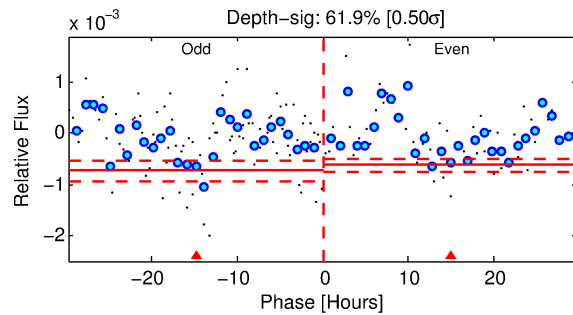
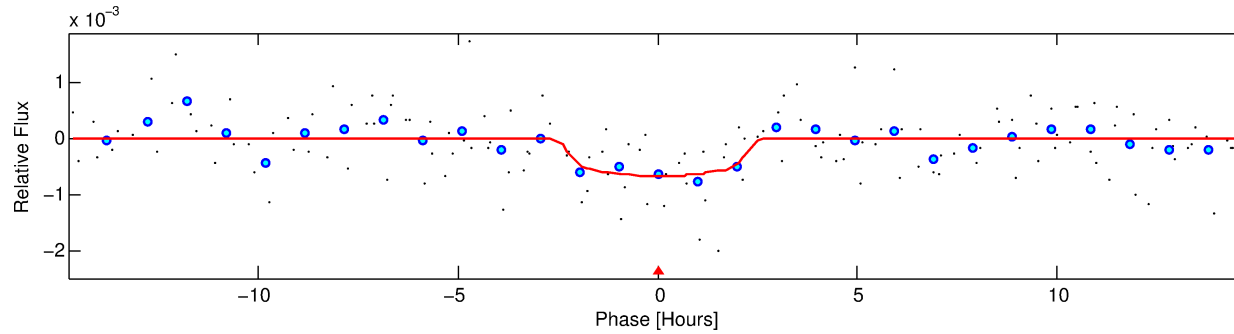
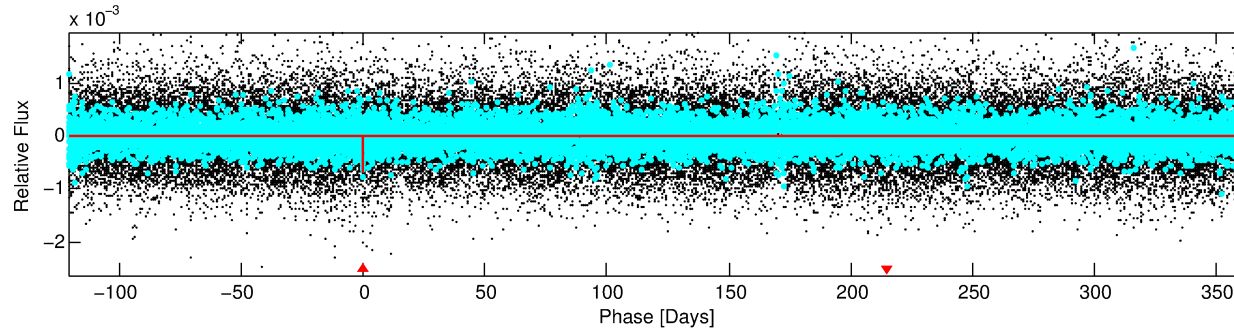
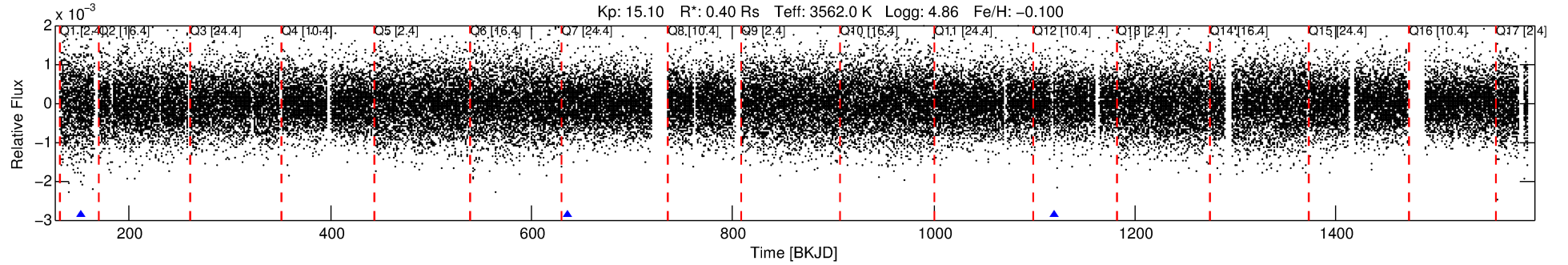
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007255000-01

No Significant Match Found

DV One-Page Summary

KIC: 7255000 Candidate: 1 of 1 Period: 483.371 d



DV Fit Results:

Period = 483.37150 [0.01490] d
Epoch = 152.3942 [0.0248] BKJD
Rp/R* = 0.0265 [0.0351]
a/R* = 472.53 [2729.65]
b = 0.81 [2.47]
Seff = 0.03 [0.00]
Teq = 105 [3] K
Rp = 1.15 [1.54] Re
a = 0.9014 [0.0728] AU
Ag = 135332.17 [362648.58] [0.37 σ]
Teffp = 3104 [2079] K [1.44 σ]

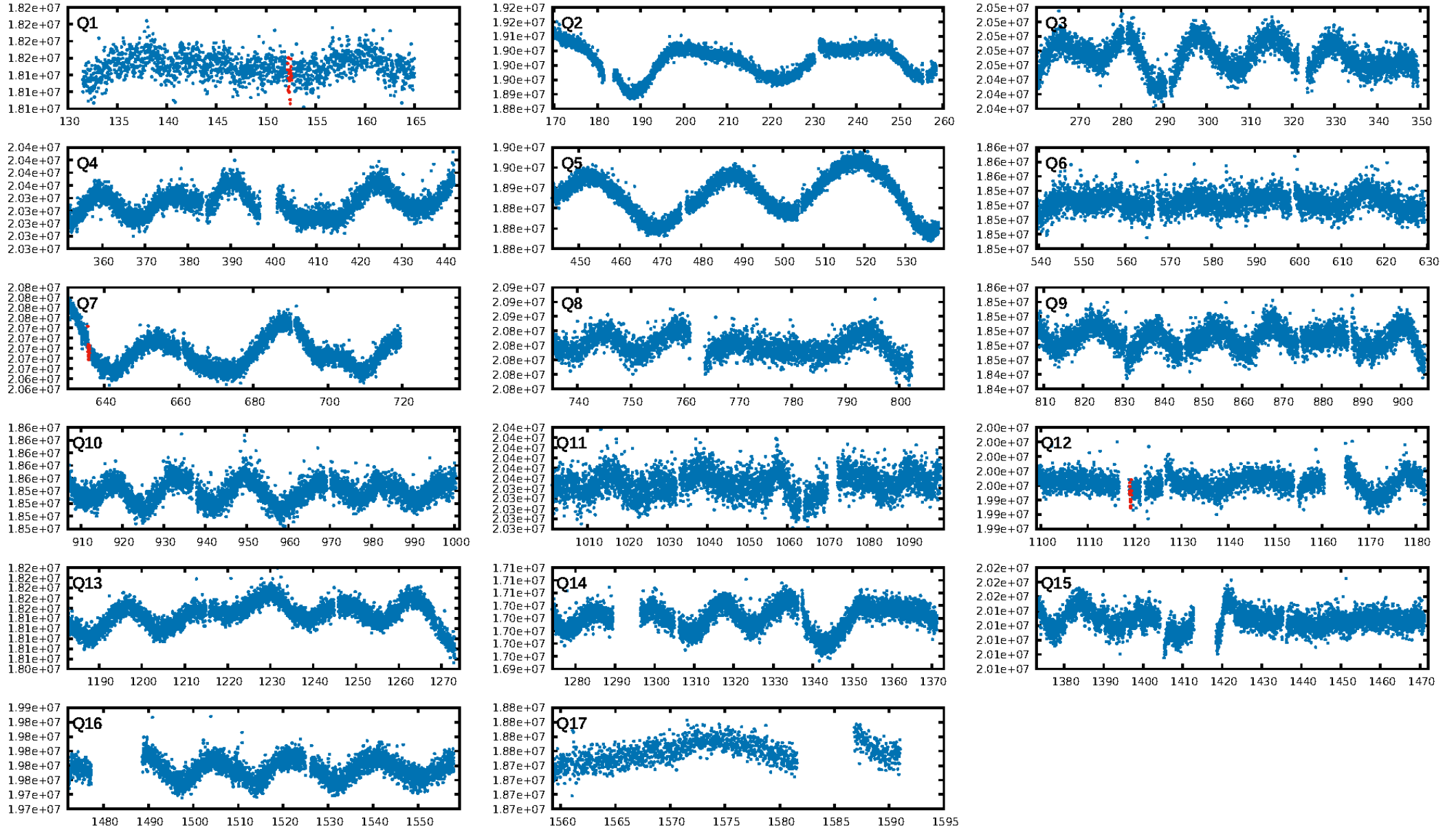
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 70.7%
ModelChiSquareGof-sig: 98.4%
Bootstrap-pfa: 2.90e-12
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 0.8199
Centroid-sig: 1.0%
Centroid-so: 6.427 arcsec [2.66 σ]
OotOffset-rm: 0.734 arcsec [1.00 σ]
OotOffset-st: 0/1/0/0 [1]
KicOffset-rm: 0.656 arcsec [0.88 σ]
KicOffset-st: 0/1/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [2/2]

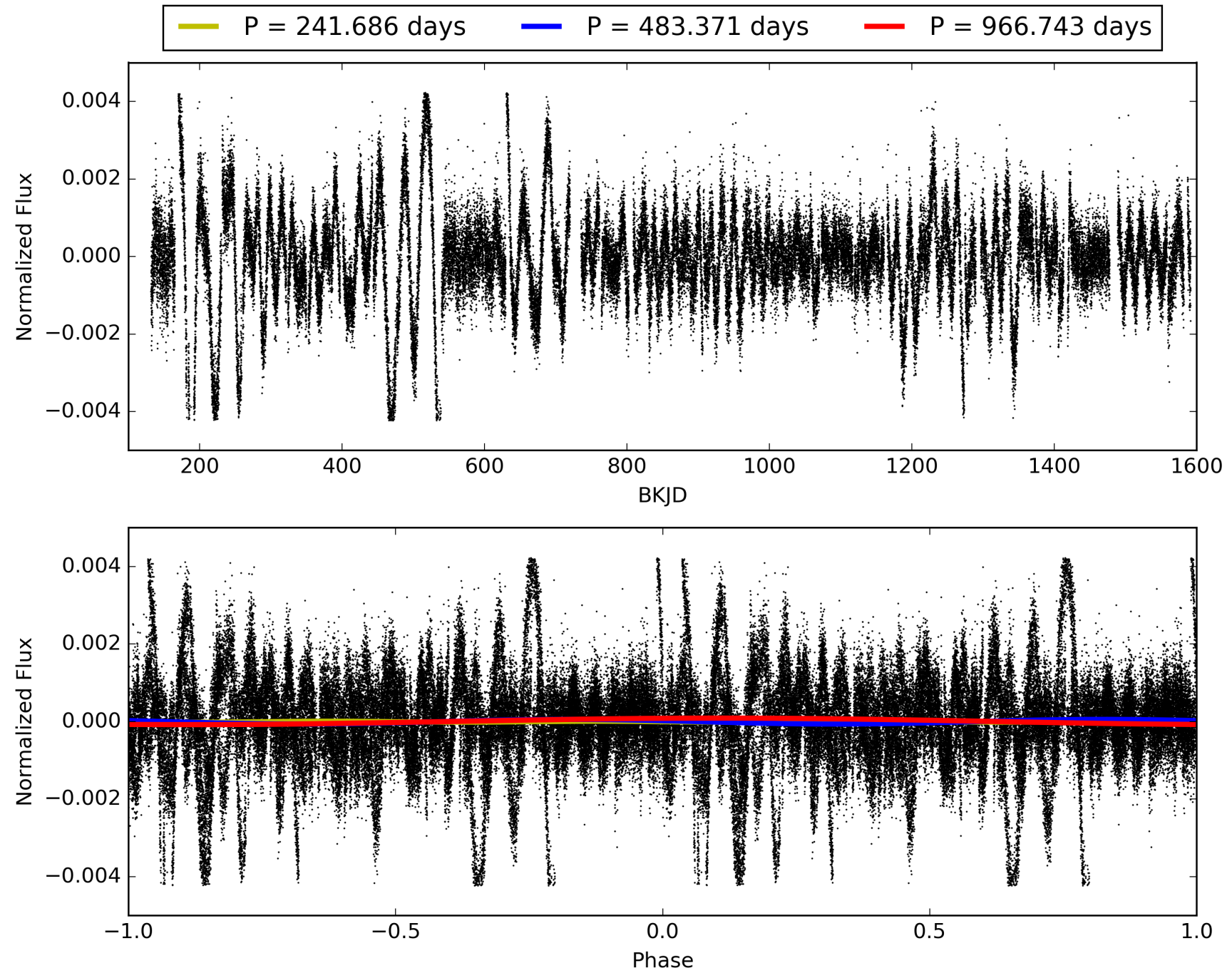
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 05:23:28 Z

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

TCE 007255000-01, PDC Light Curves

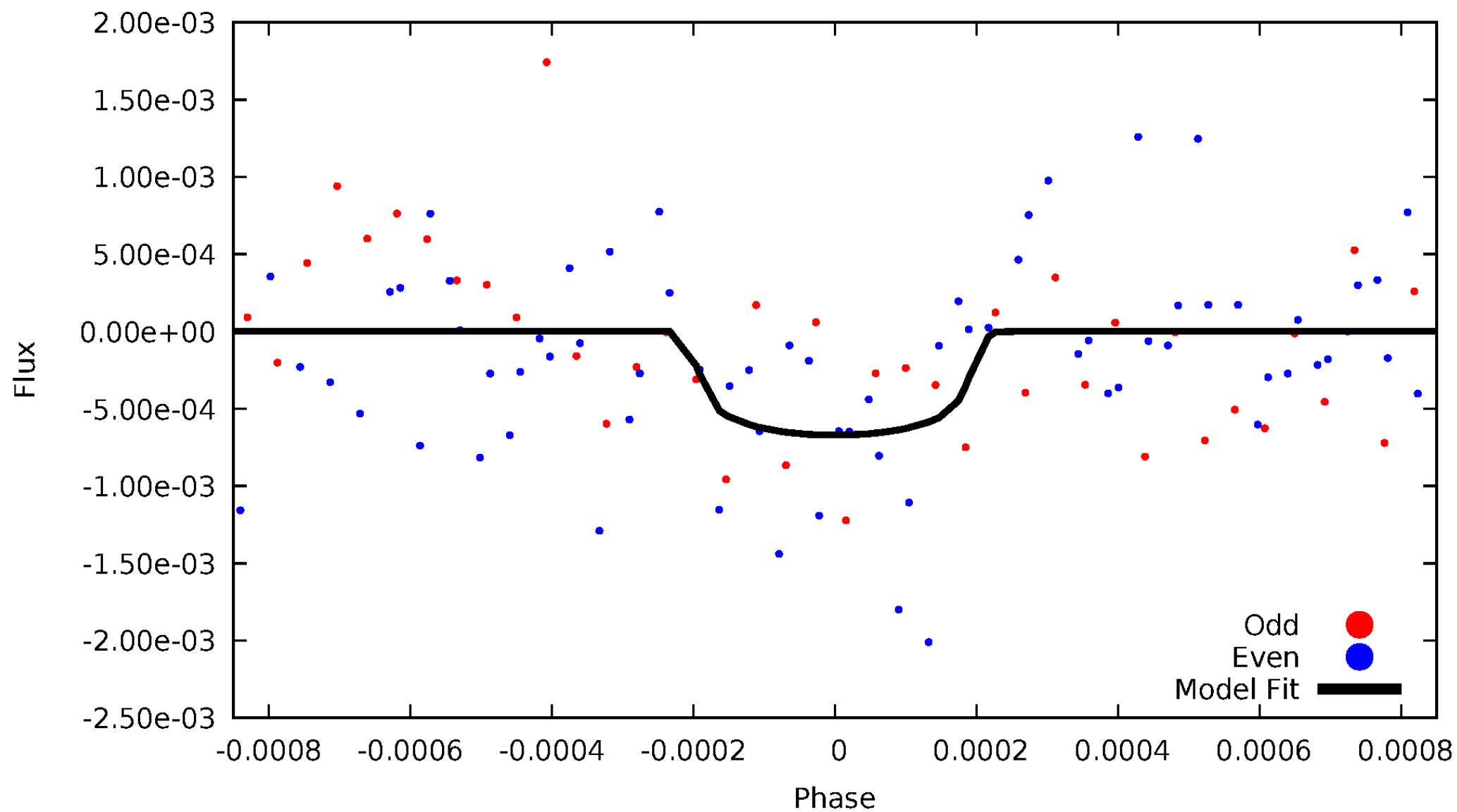


TCE 007255000-01



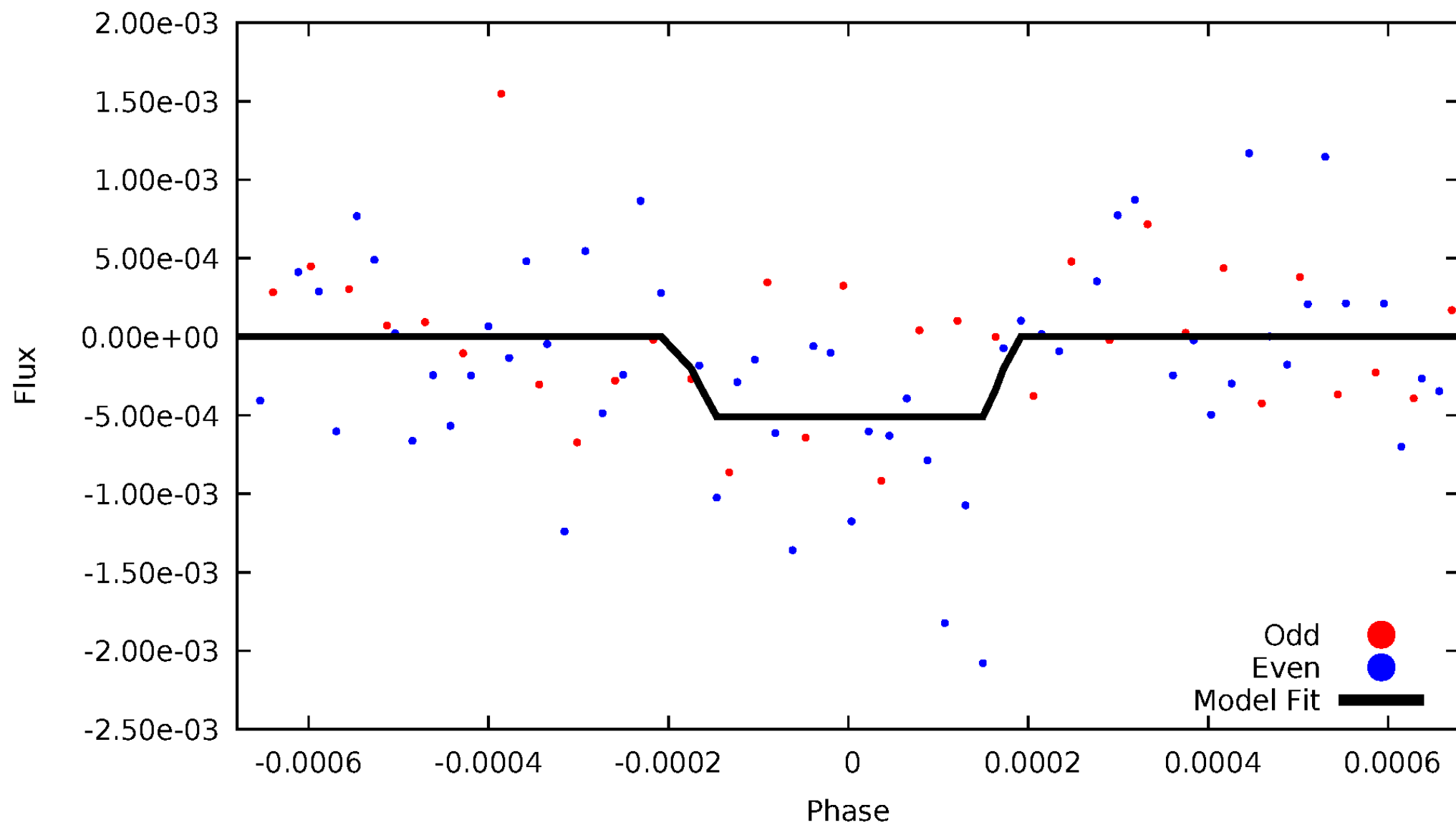
DV Odd/Even

TCE 007255000-01



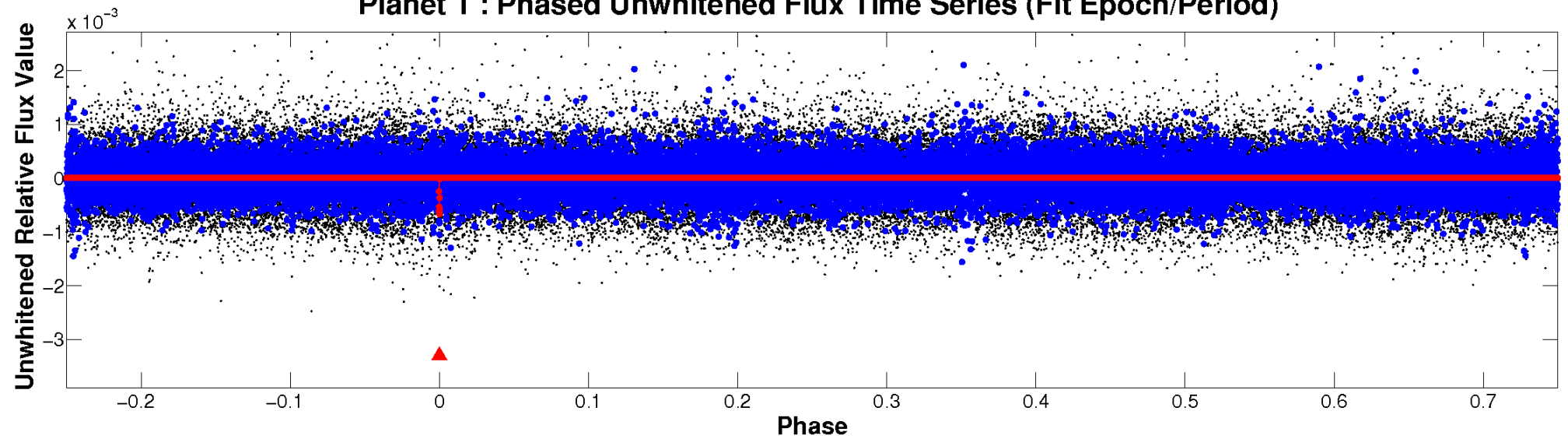
ALT Odd/Even

TCE 007255000-01

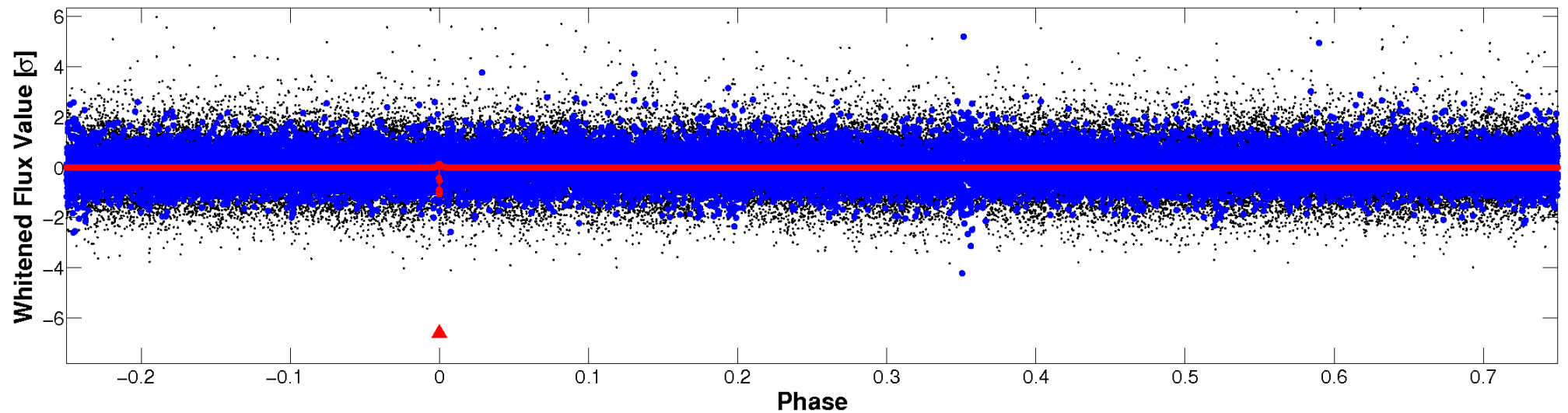


Non-Whitened Vs. Whitened Light Curve

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

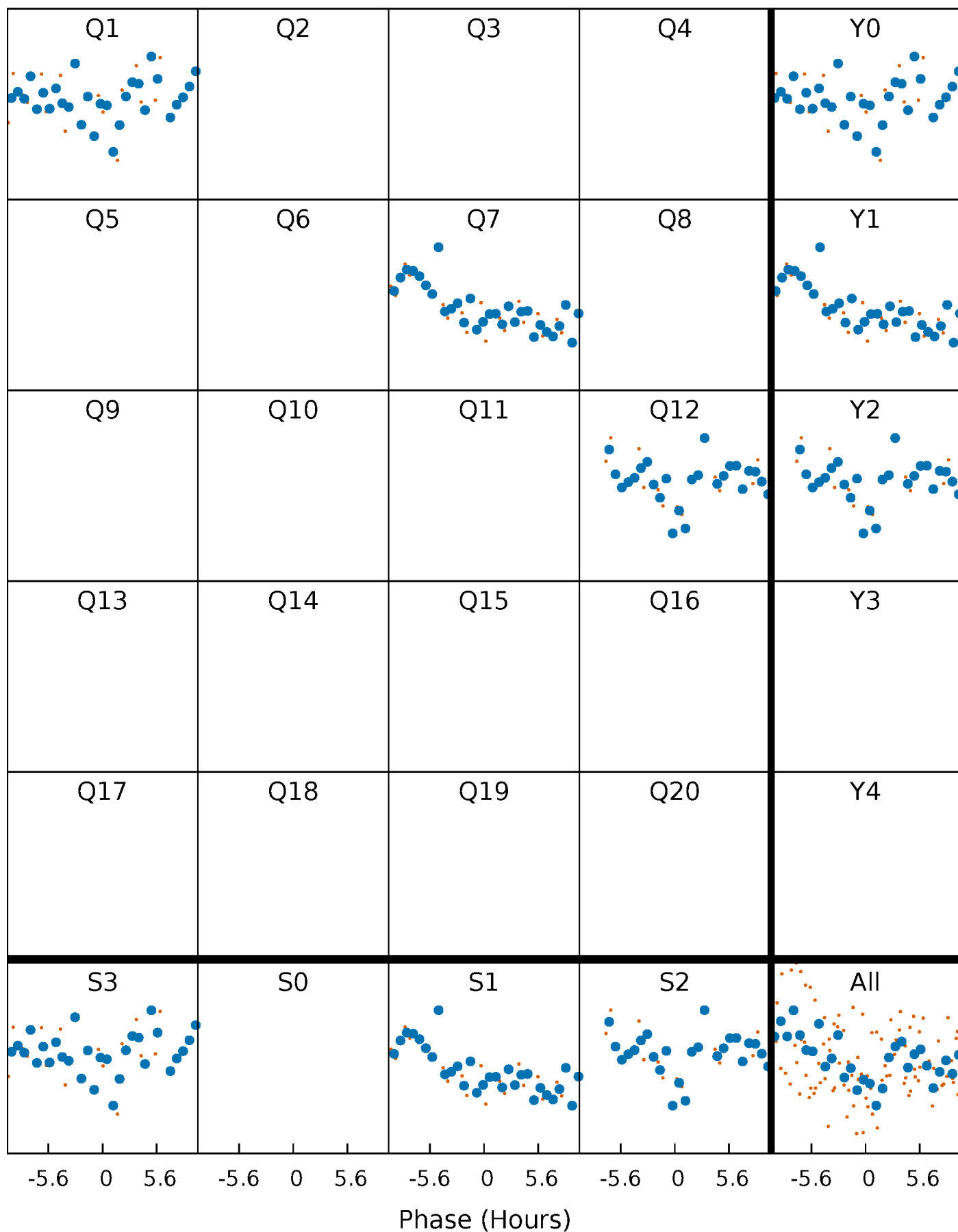


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



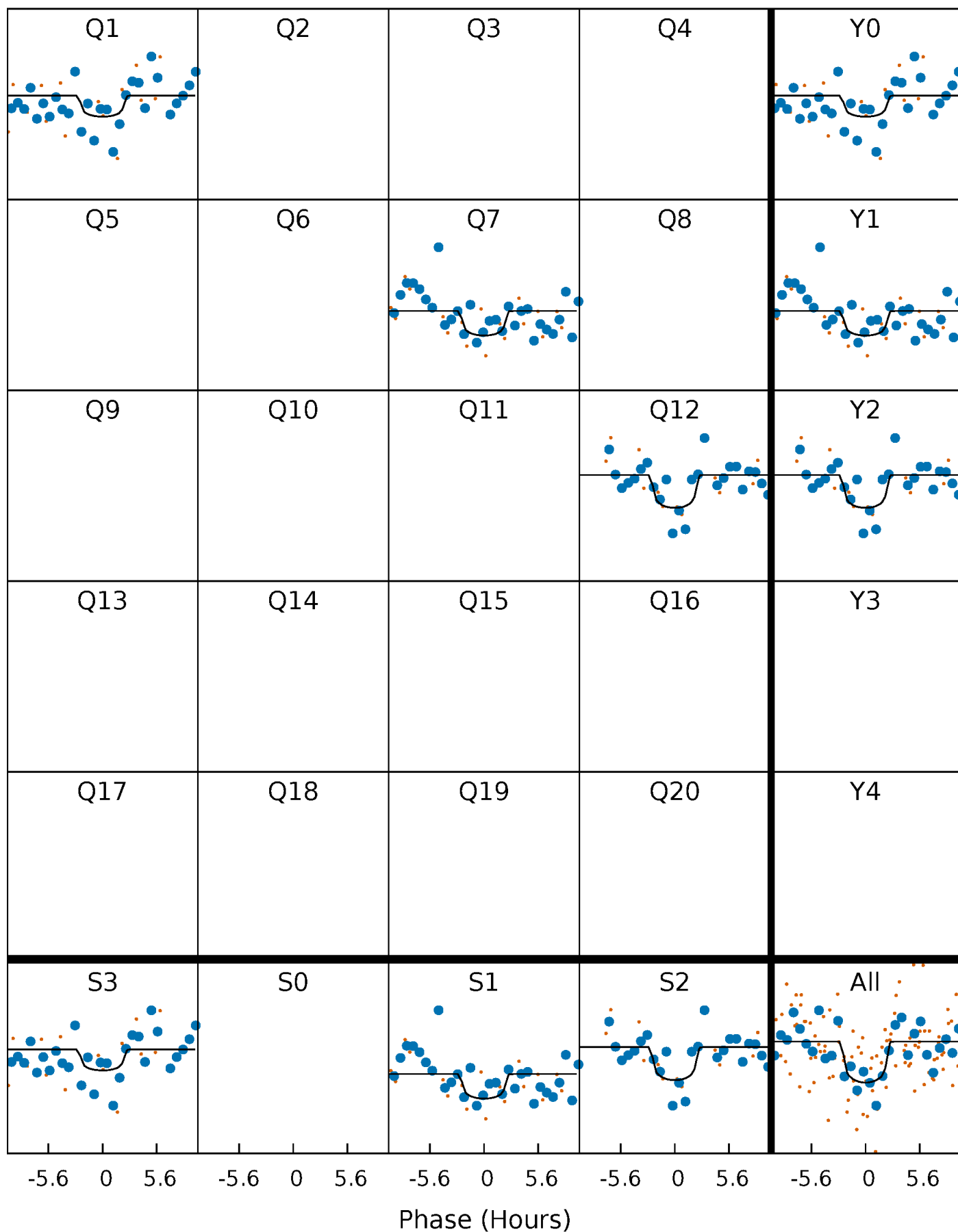
PDC Quarter-Phased Transit Curves

TCE 007255000-01 P=483.371498 Days $T_0=152.394164$ (BKJD)



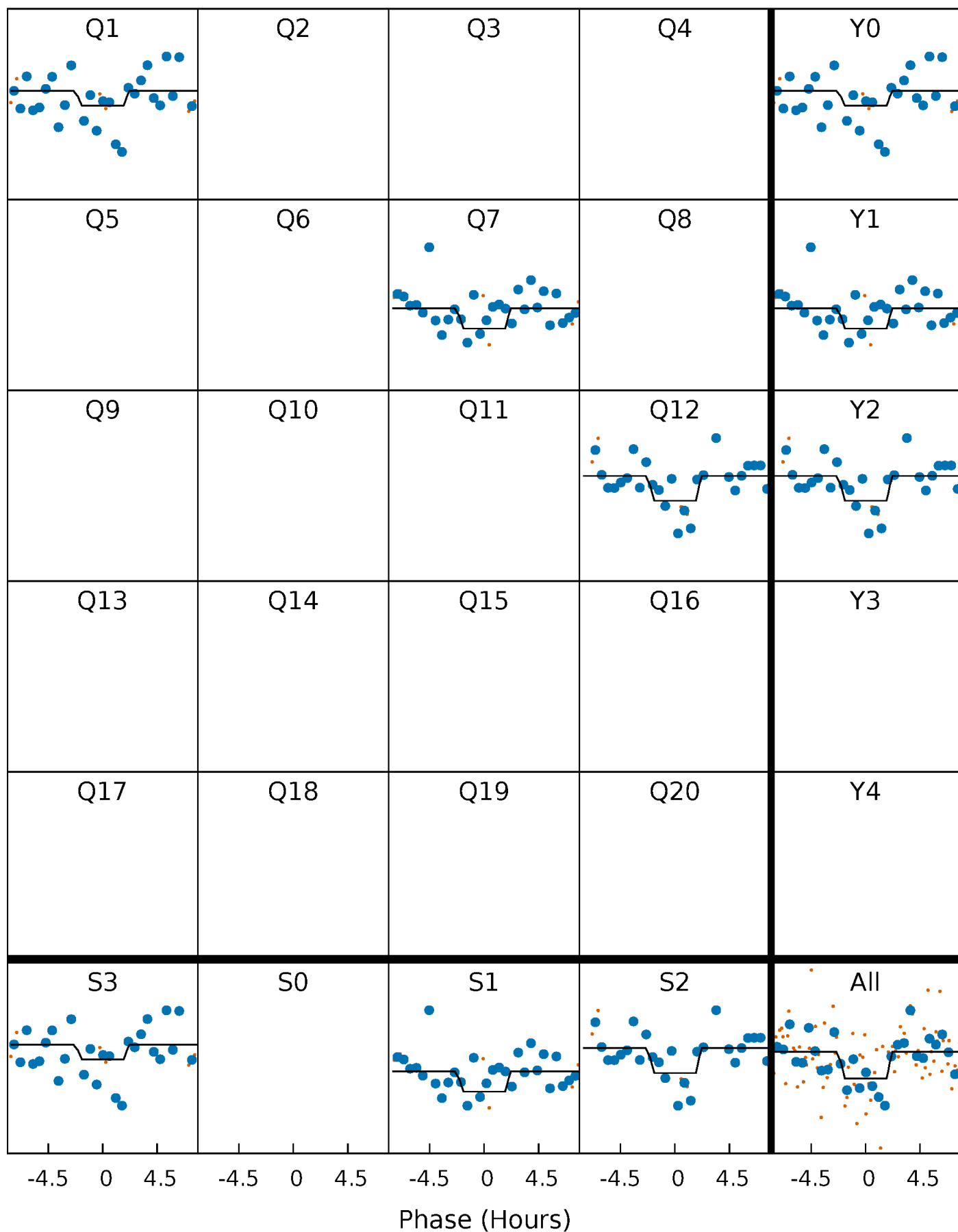
DV Quarter-Phased Transit Curves

TCE 007255000-01 P=483.371498 Days $T_0=152.394164$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

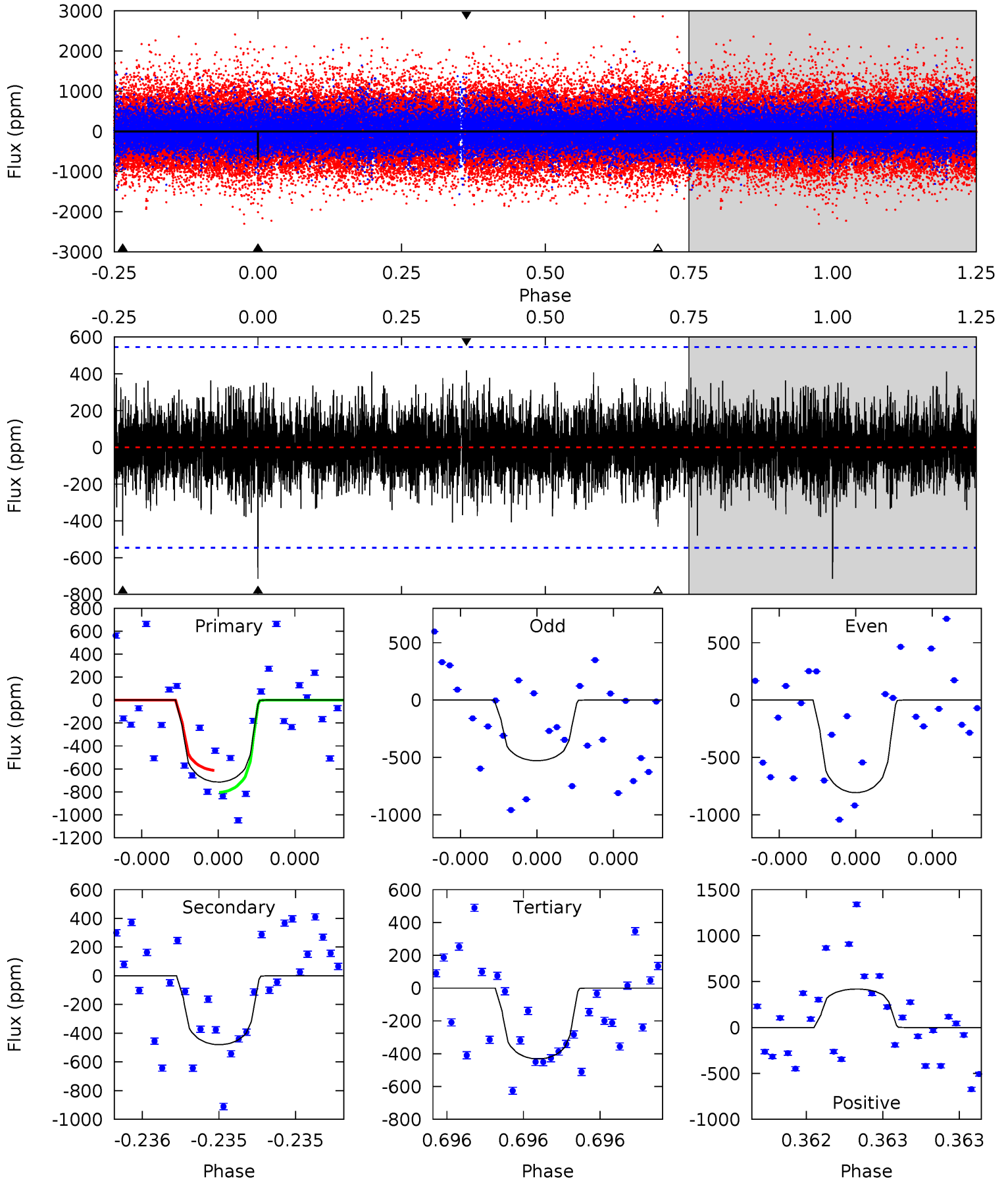
TCE 007255000-01 P=483.369484 Days $T_0=152.385849$ (BKJD)



DV Model-Shift Uniqueness Test

007255000-01, P = 483.371498 Days, E = 152.394164 Days

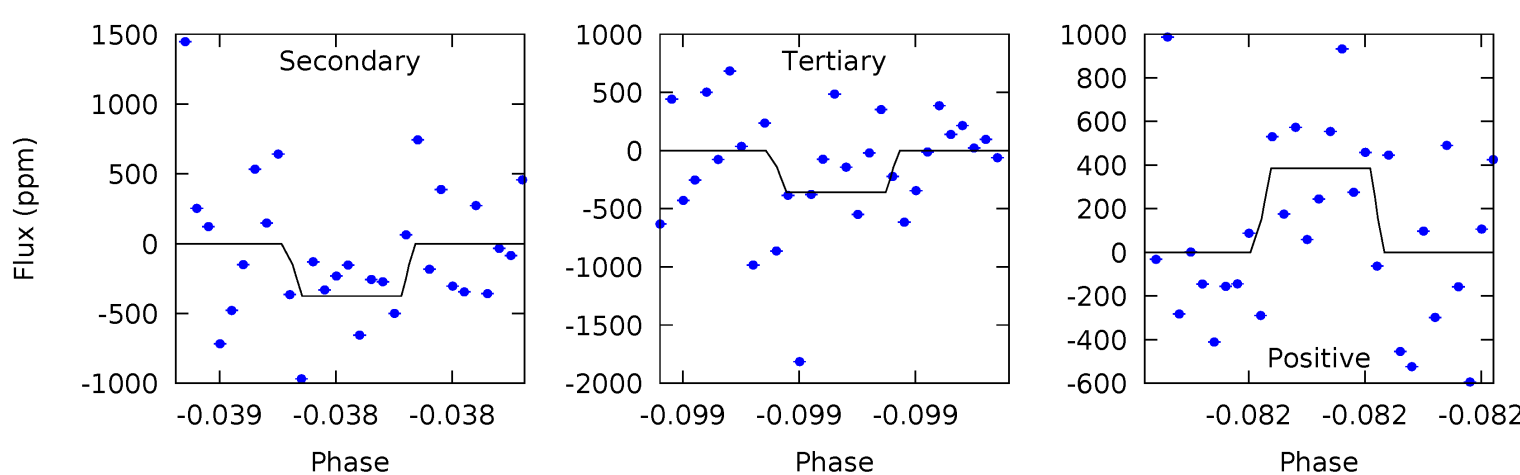
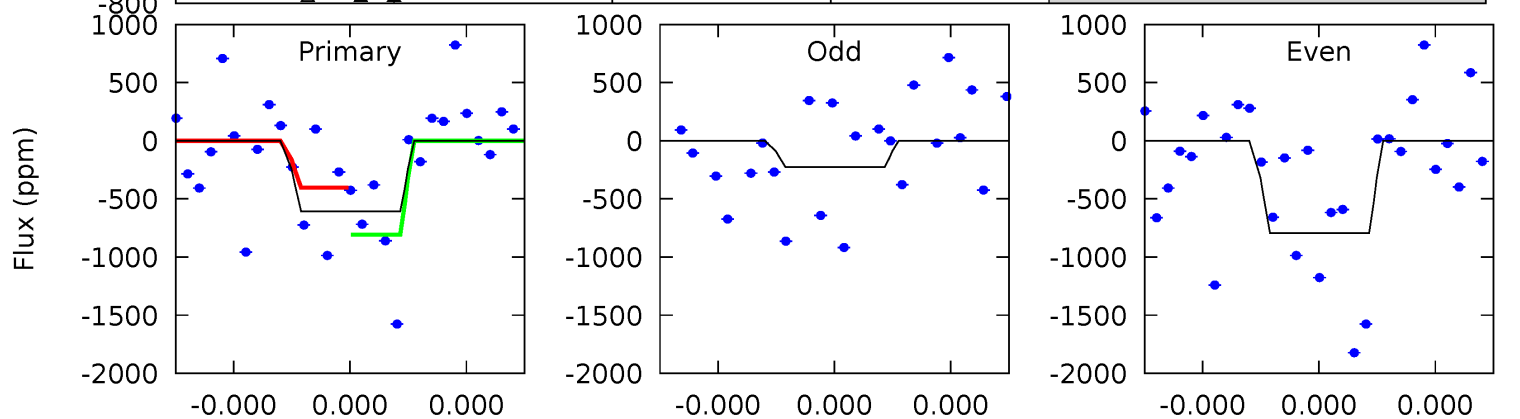
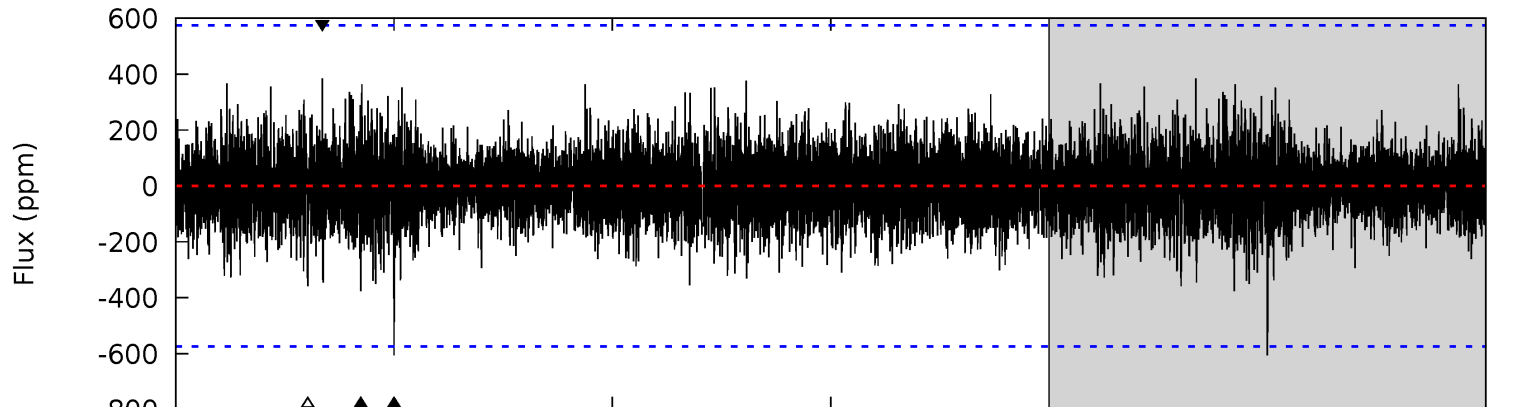
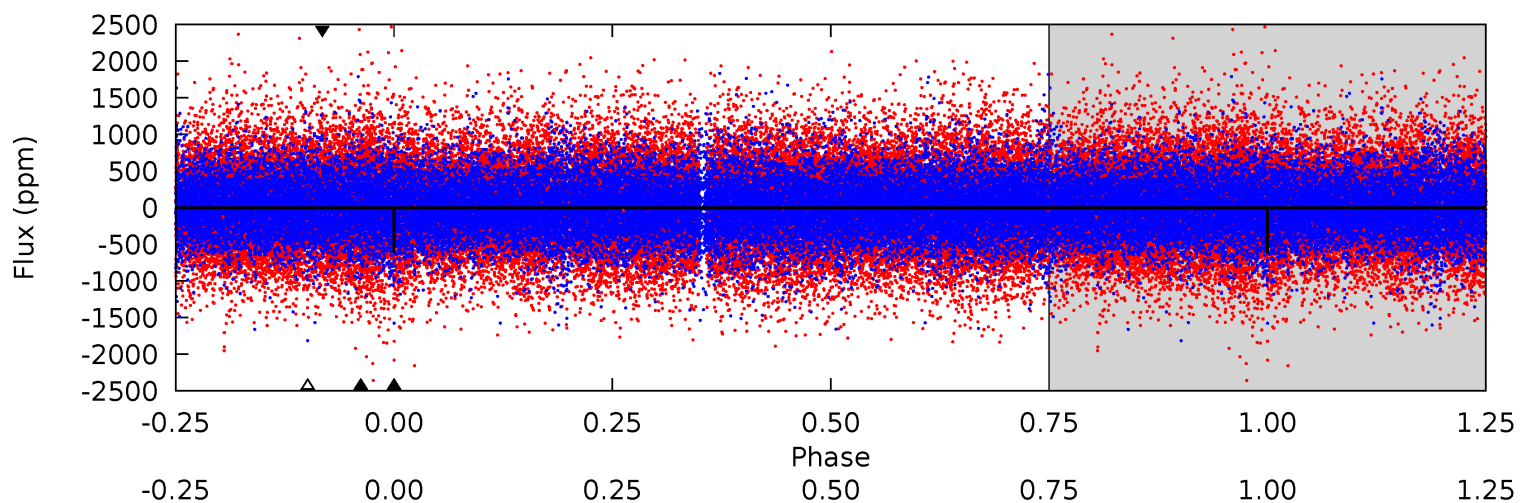
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.34	4.93	4.43	4.30	5.60	3.53	1.17	2.90	3.04	0.49	0.63	1.35	1.09	0.37	0.97



Alt Model-Shift Uniqueness Test

007255000-01, P = 483.369484 Days, E = 152.385849 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.95	3.68	3.52	3.78	5.64	3.58	0.93	2.43	2.17	0.17	-0.09	2.68	0.95	0.39	1.99



Stellar Parameters For KIC 007255000

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3562^{+57}_{-64}	$4.855^{+0.044}_{-0.036}$	$-0.100^{+0.100}_{-0.100}$	$0.400^{+0.032}_{-0.044}$	$0.417^{+0.034}_{-0.051}$	$9.214^{+2.198}_{-1.326}$
	+2%/-2%	+1%/-1%	+100%/-100%	+8%/-11%	+8%/-12%	+24%/-14%
Source	PHO2	PHO2	PHO2	DSEP		

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

Secondary Eclipse Parameters for KIC 007255000-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-480 ± 97	$1.63^{+1.33}_{-1.09}$	146^{+3}_{-3}	3023^{+1322}_{-451}	$82976^{+627510}_{-59582}$
Alt.	-375 ± 102	$1.55^{+1.35}_{-1.09}$	146^{+4}_{-4}	2958^{+1383}_{-471}	$67955^{+665908}_{-50047}$

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

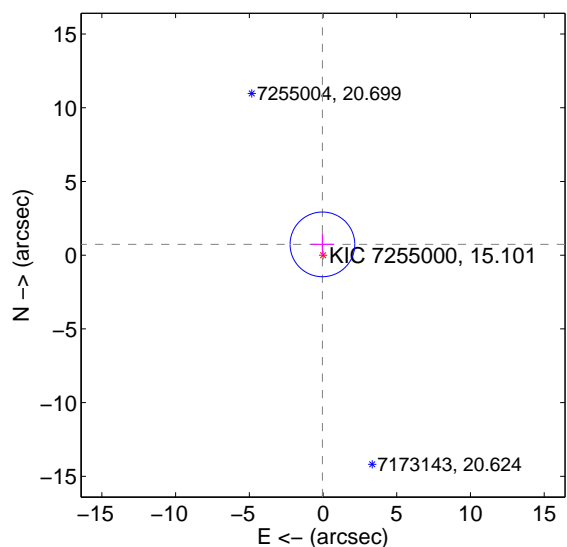
Supplemental centroid analysis for 007255000-01. Kepler magnitude: 15.10. Transit SNR 5.11

There are 1 quarters with good PRF difference image offsets

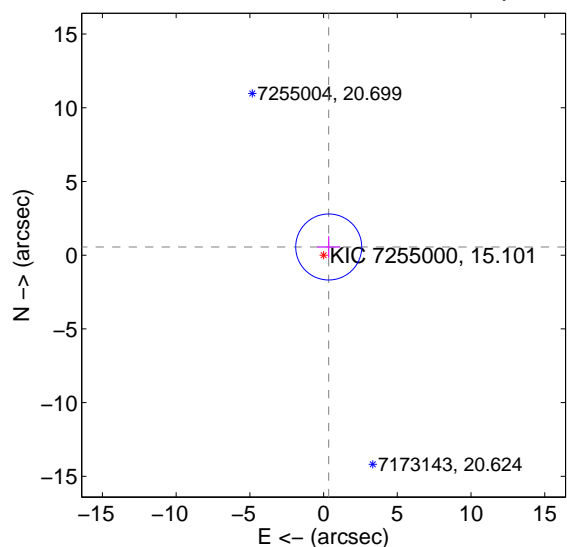
The direct PRF centroid is offset from the target star catalog position by about 0.43 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.734 ± 0.731	1.00	0.041 ± 0.783	0.733 ± 0.731
PRF-fit source offset from KIC position	0.656 ± 0.746	0.88	-0.348 ± 0.783	0.555 ± 0.731
photometric centroid source offset	6.43 ± 2.42	2.66	-5.89 ± 2.43	-2.56 ± 2.34

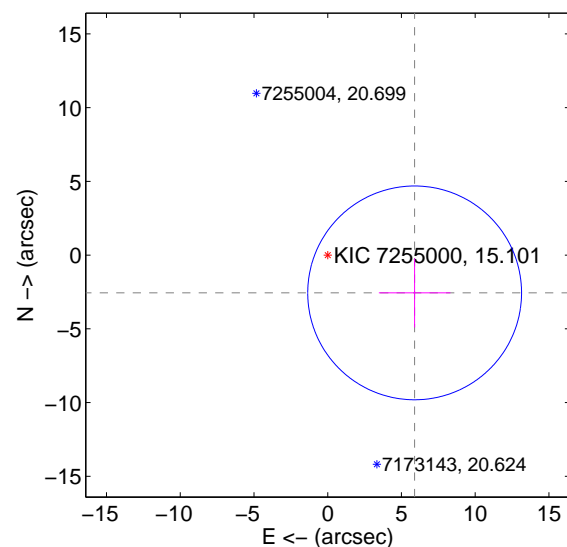
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

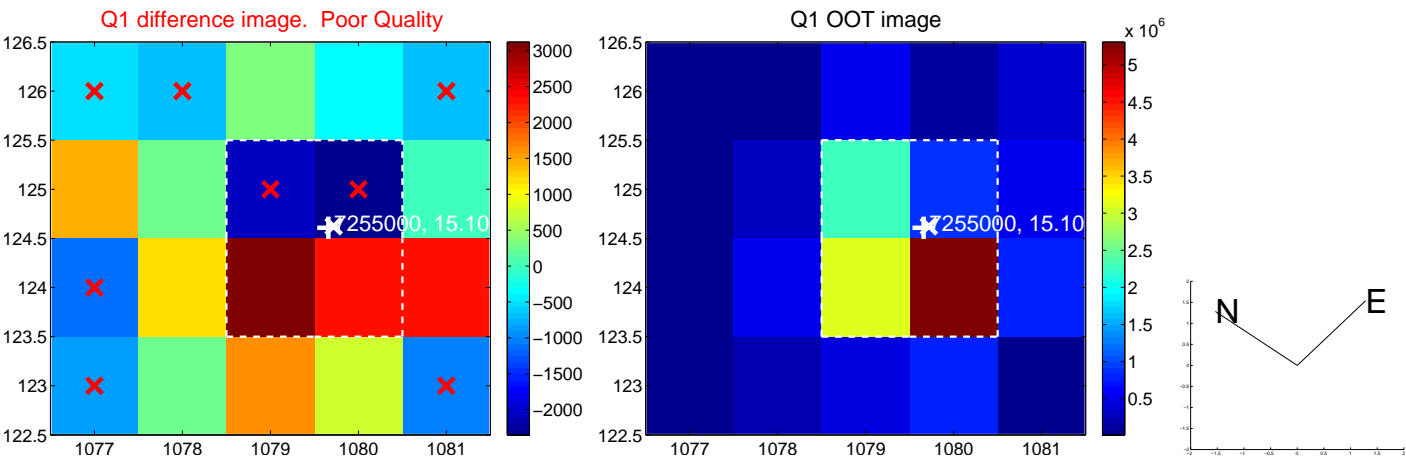


offset from photometric centroids

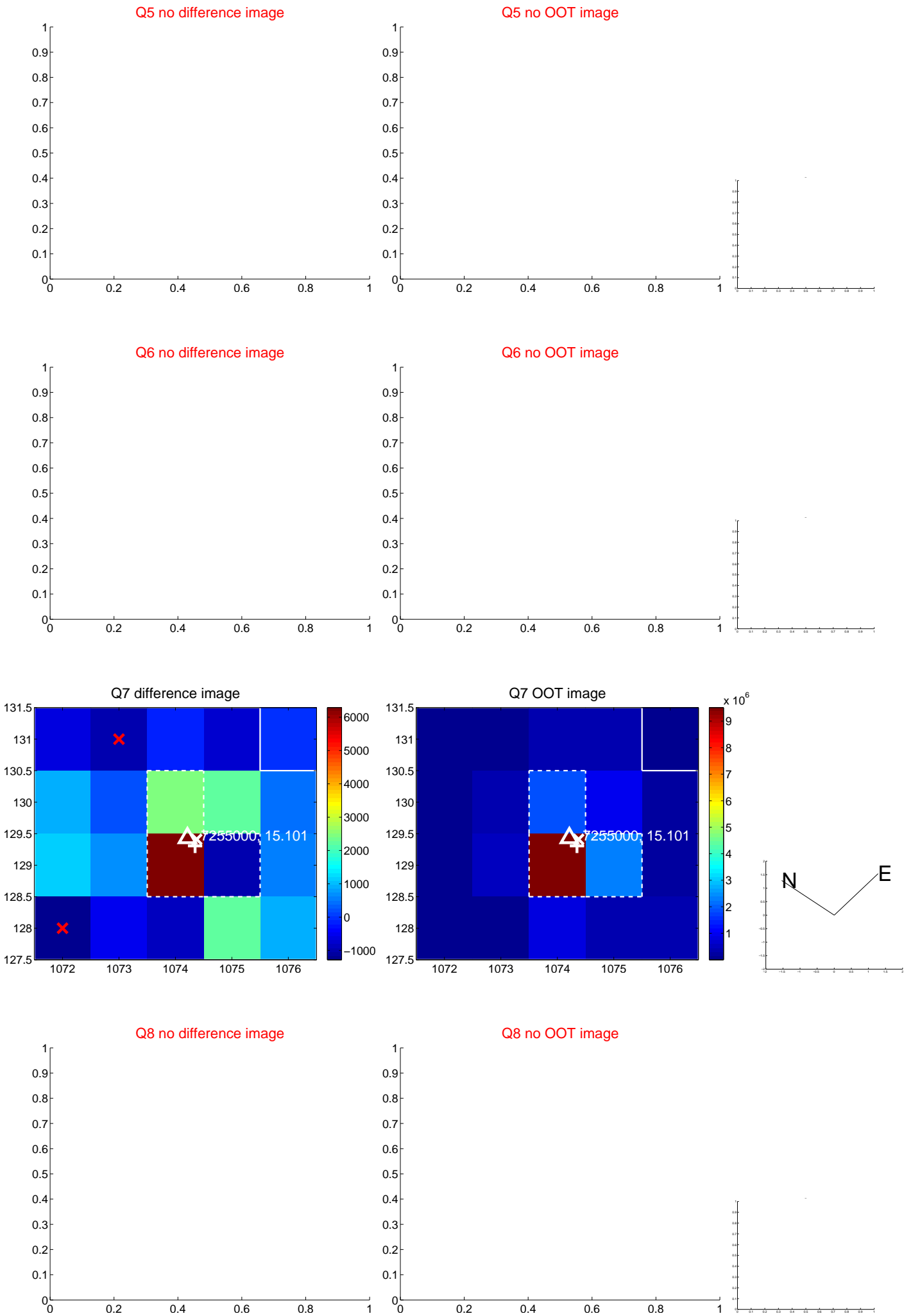


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . 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 ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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



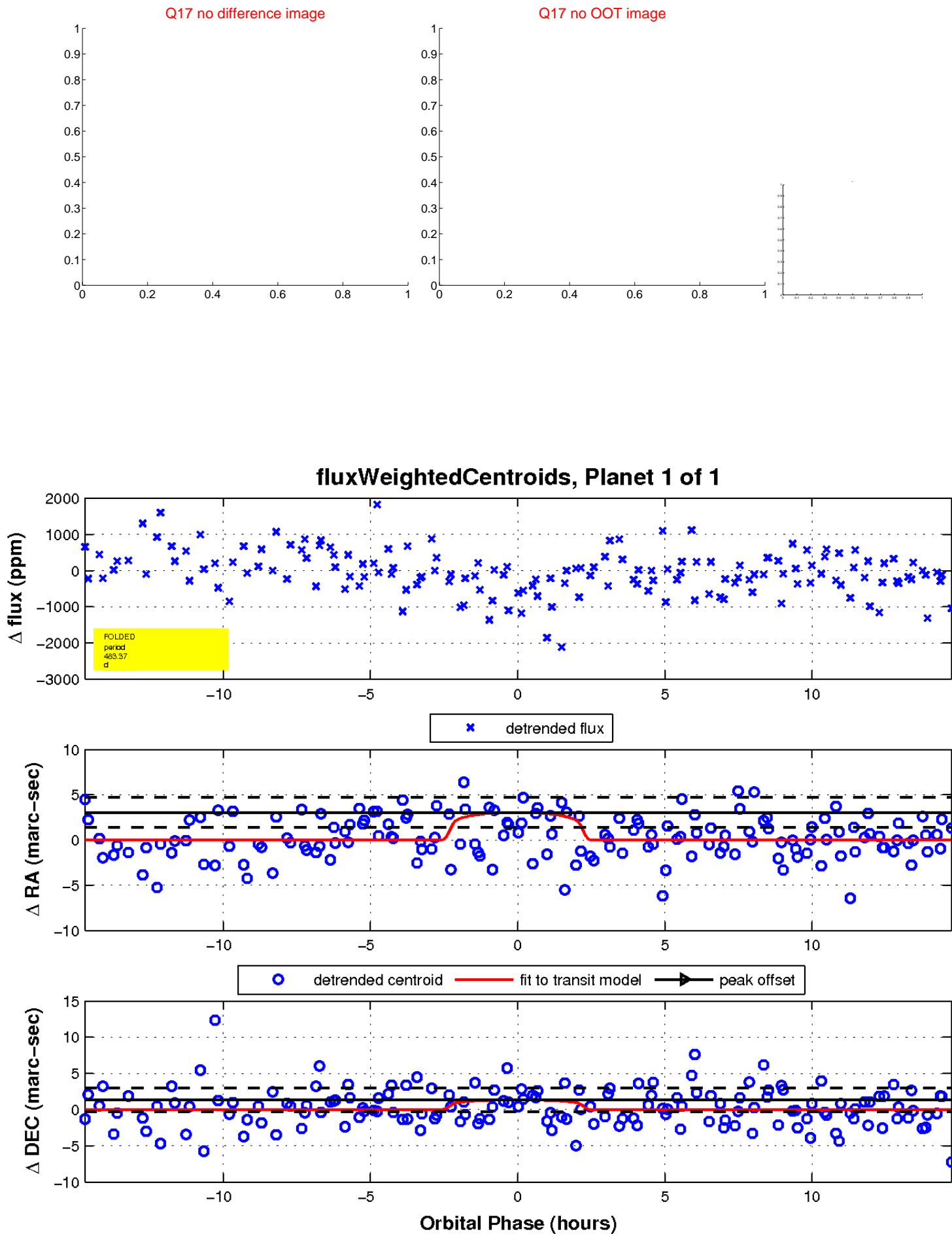
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

