

KIC 007205040

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})
007205040-01	OBS	No	363.235057	185.162456	789.2	13.273	13.1	15.4	1.23	6201	4.98	2.16

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007205040-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

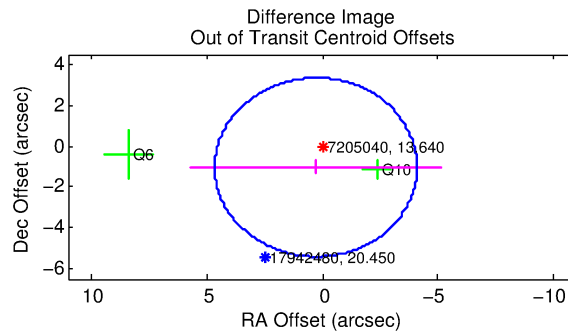
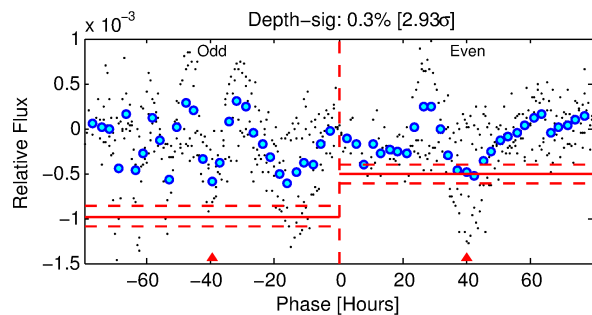
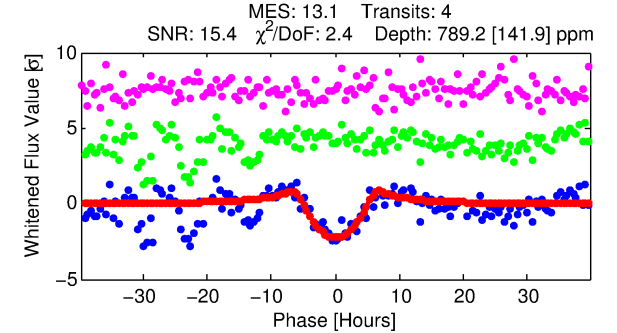
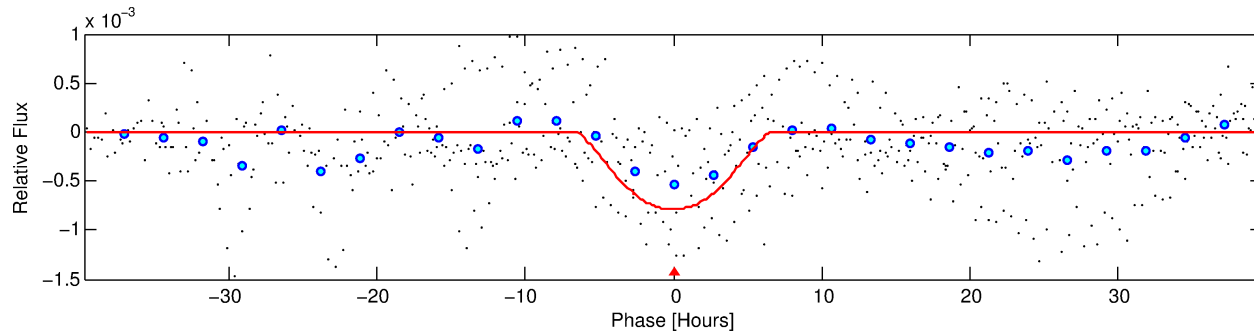
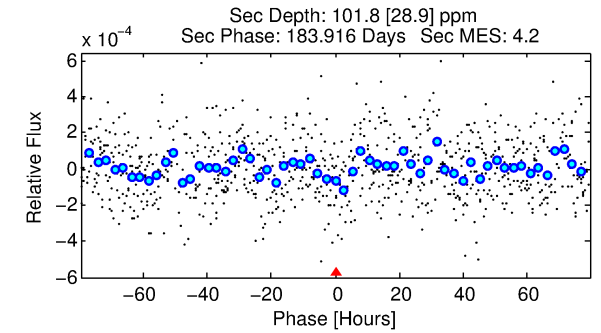
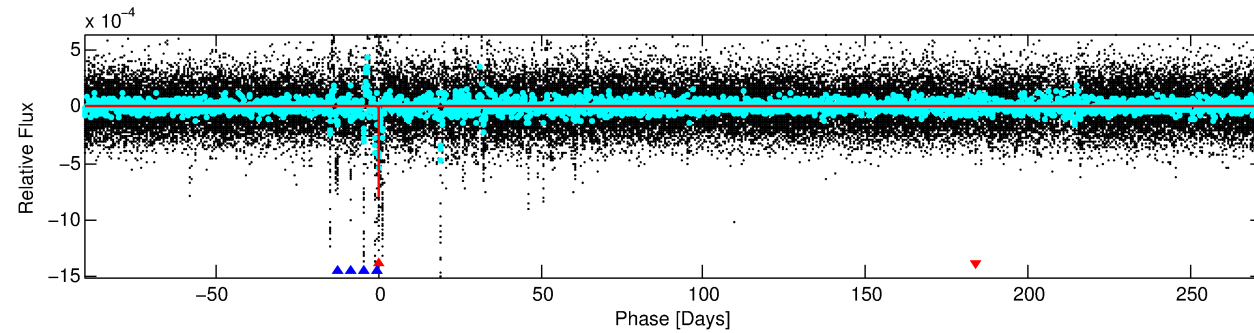
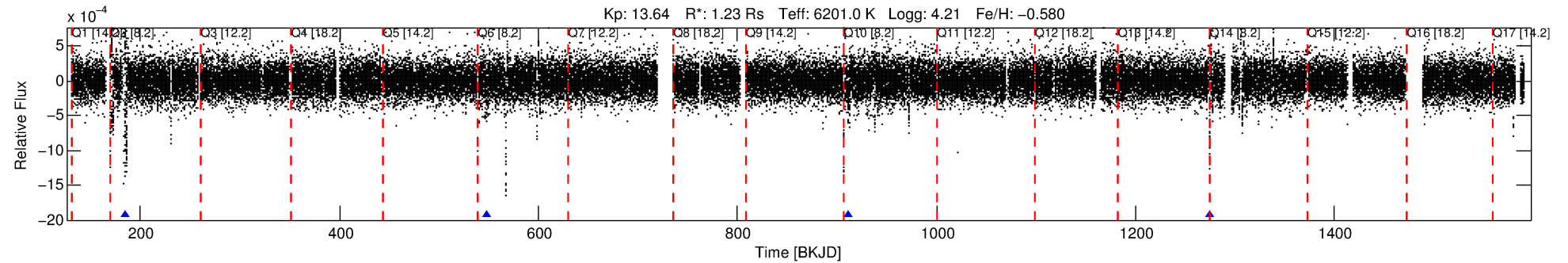
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007205040-01

No Significant Match Found

DV One-Page Summary

KIC: 7205040 Candidate: 1 of 2 Period: 363.235 d



DV Fit Results:

Period = 363.23506 [0.01109] d
Epoch = 185.1625 [0.0194] BKJD
Rp/R* = 0.0371 [0.0231]
a/R* = 71.49 [20.76]
b = 0.98 [0.05]
Seff = 2.16 [0.97]
Teq = 309 [35] K
Rp = 4.98 [3.38] Re
a = 0.9626 [0.2562] AU
Ag = 2093.79 [2830.34] [0.74σ]
Teffp = 3234 [1040] K [2.81σ]

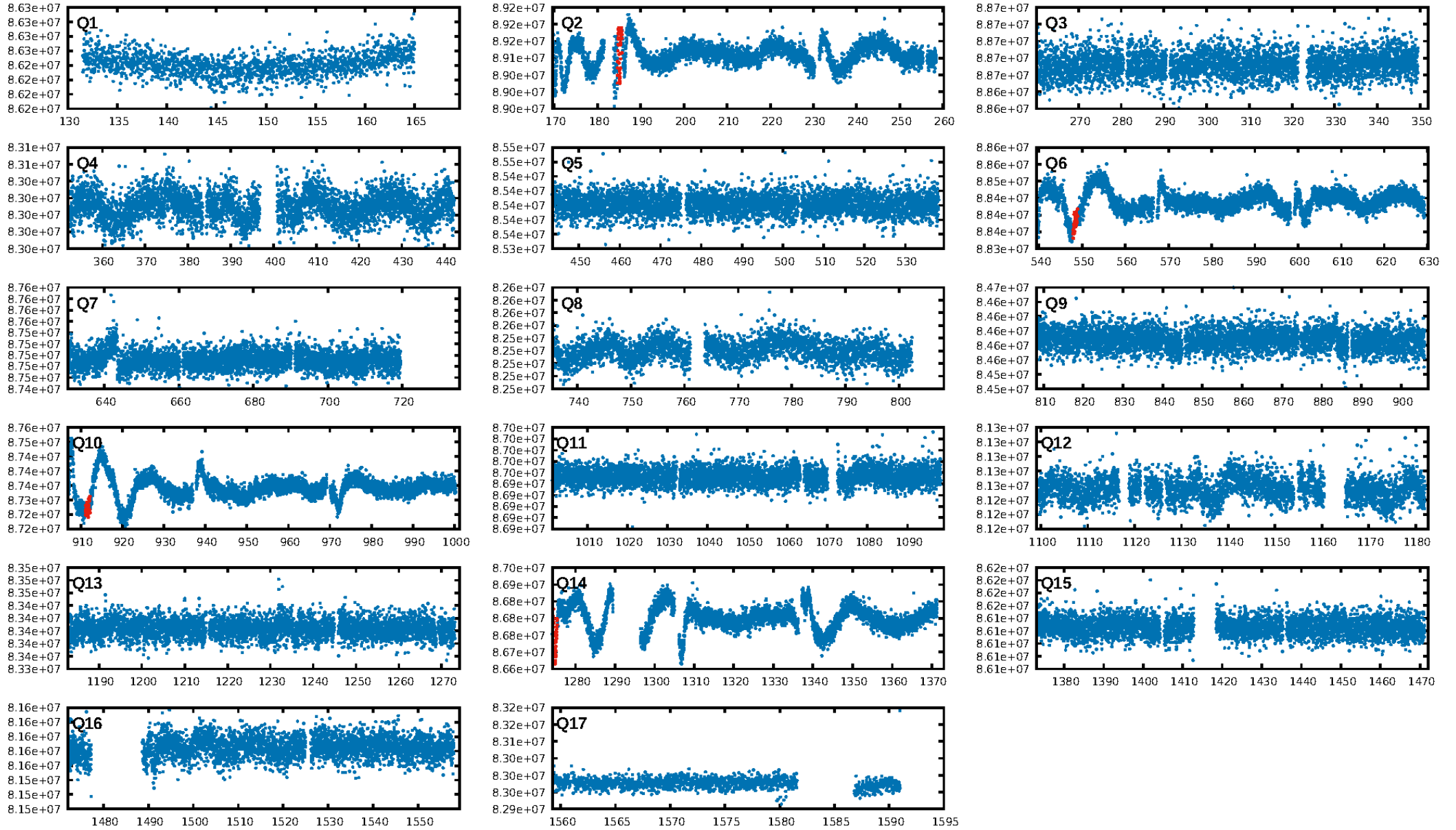
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [4.72σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: 5.41e-19
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -0.1443
Centroid-sig: 24.1%
Centroid-so: 0.532 arcsec [1.20σ]
OotOffset-rm: 1.072 arcsec [0.73σ]
KicOffset-rm: 1.028 arcsec [0.49σ]
OotOffset-st: 2/0/0/0 [2]
KicOffset-st: 2/0/0/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [2/2]

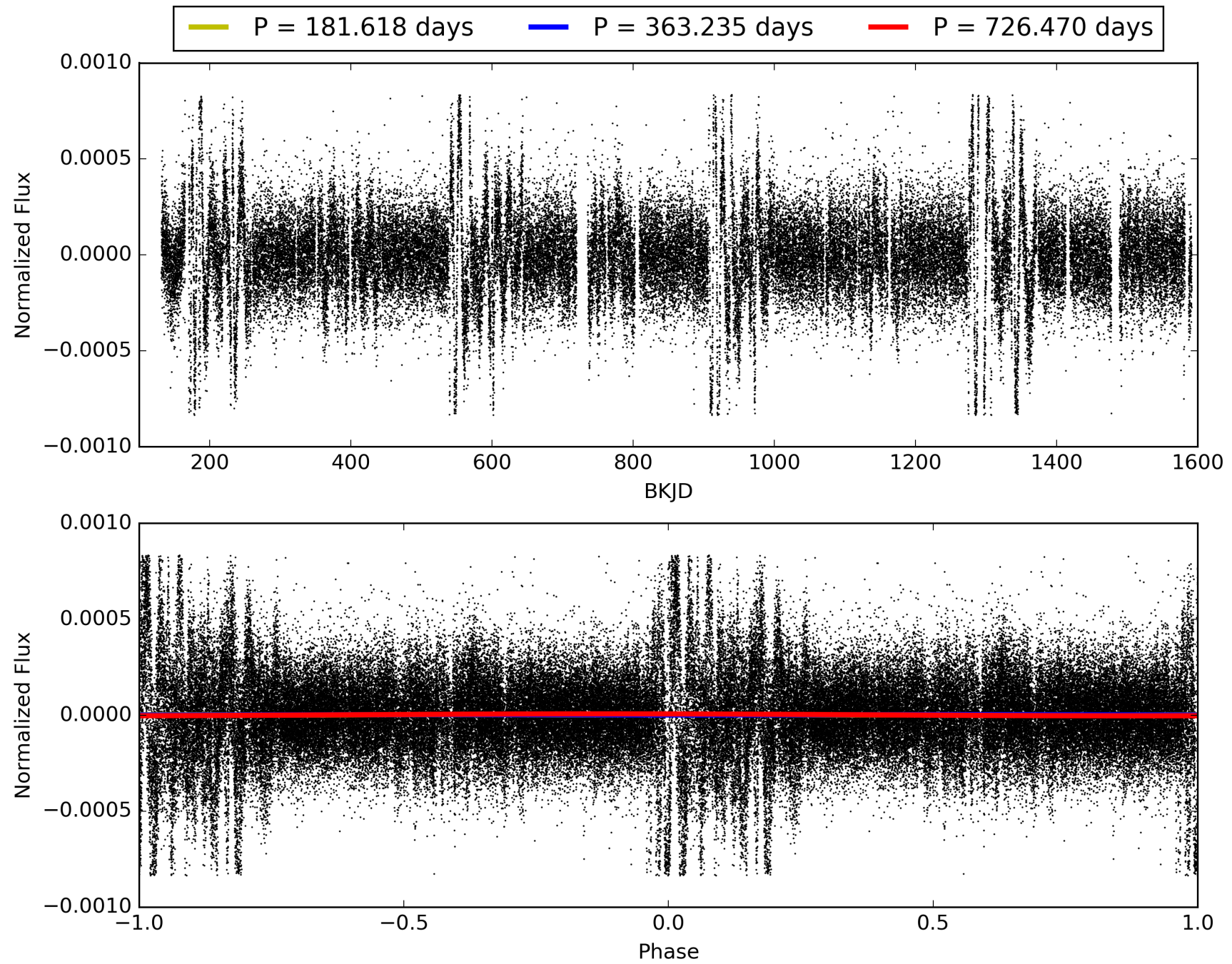
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 12:44:30 Z

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

TCE 007205040-01, PDC Light Curves

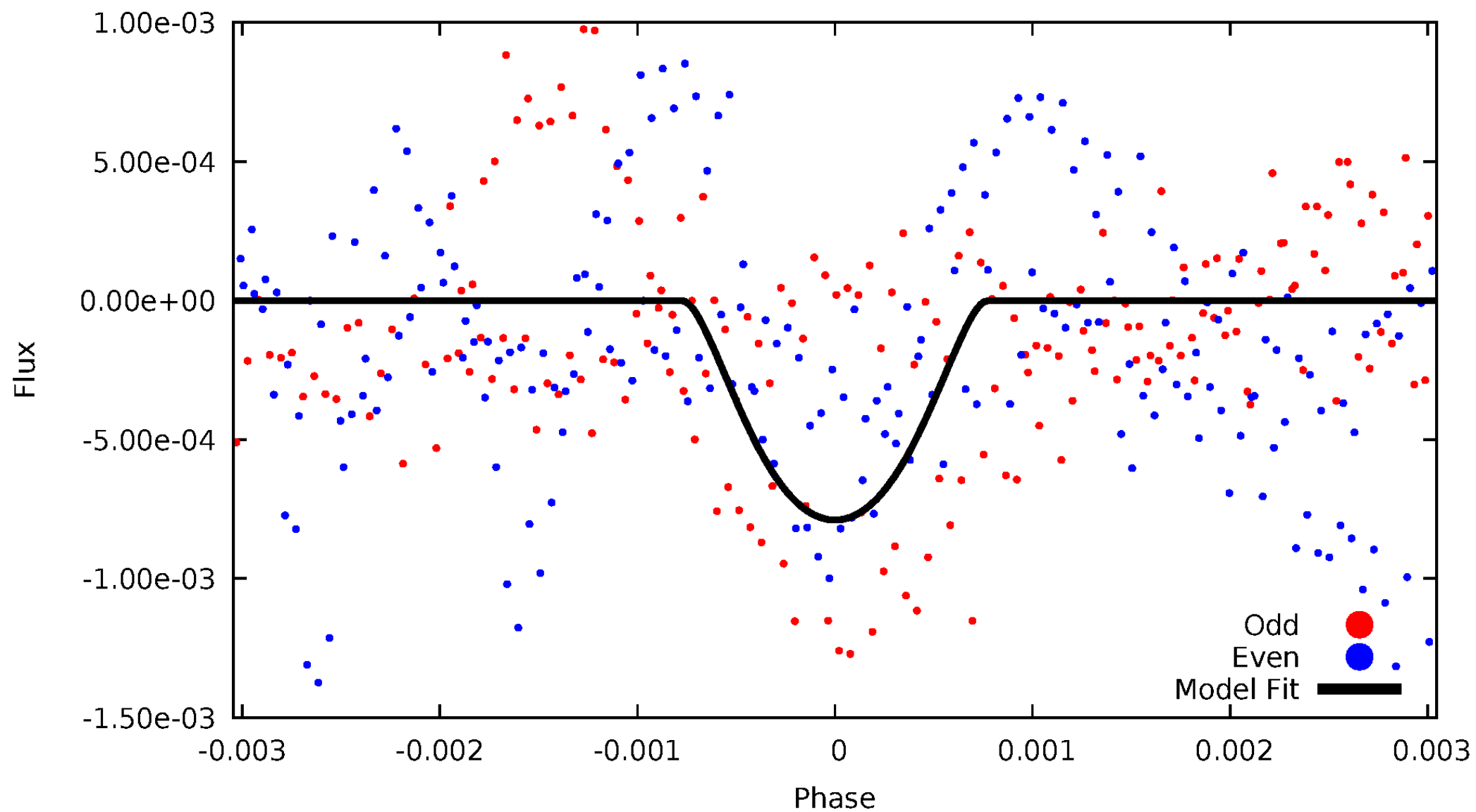


TCE 007205040-01



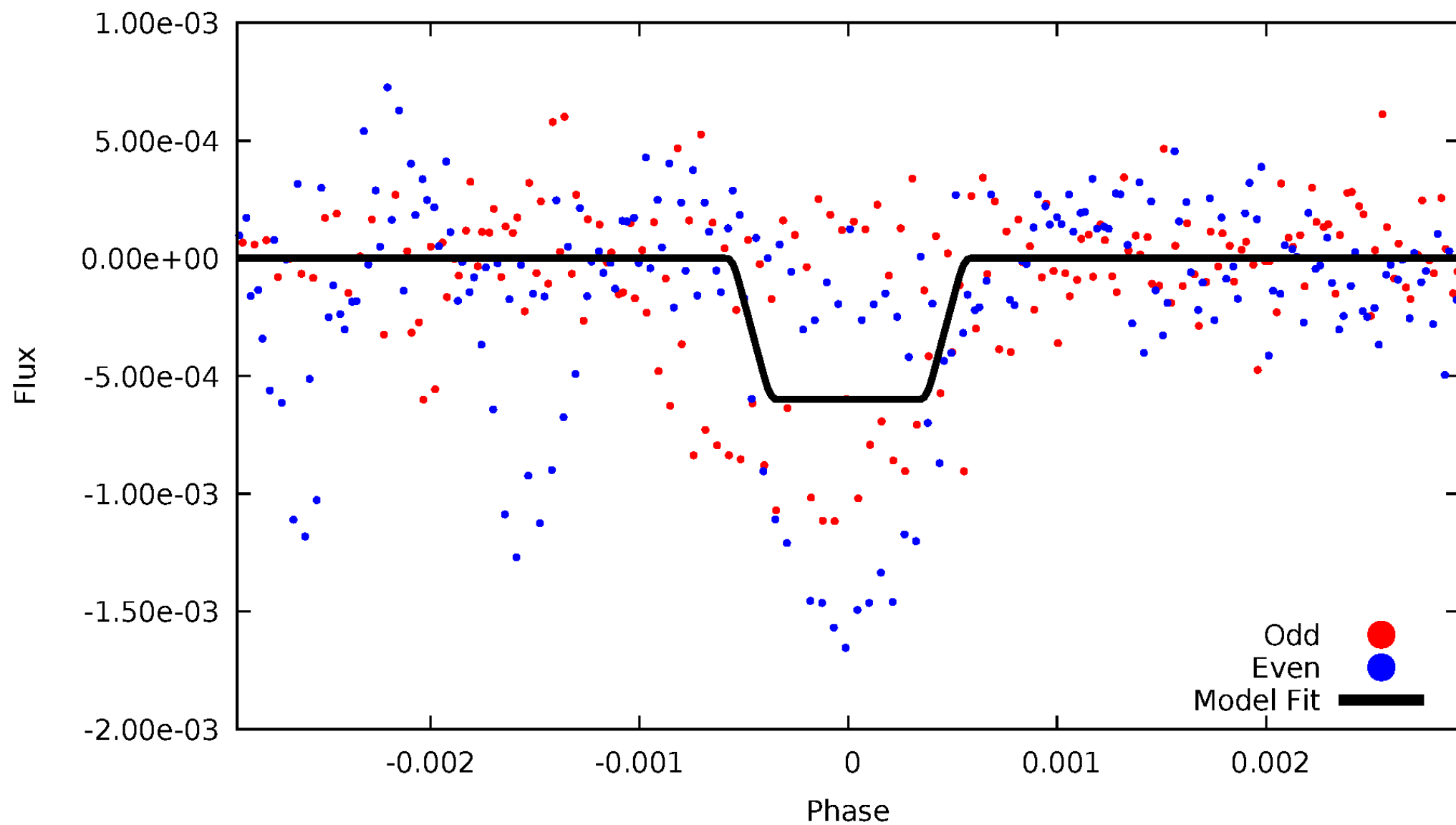
DV Odd/Even

TCE 007205040-01



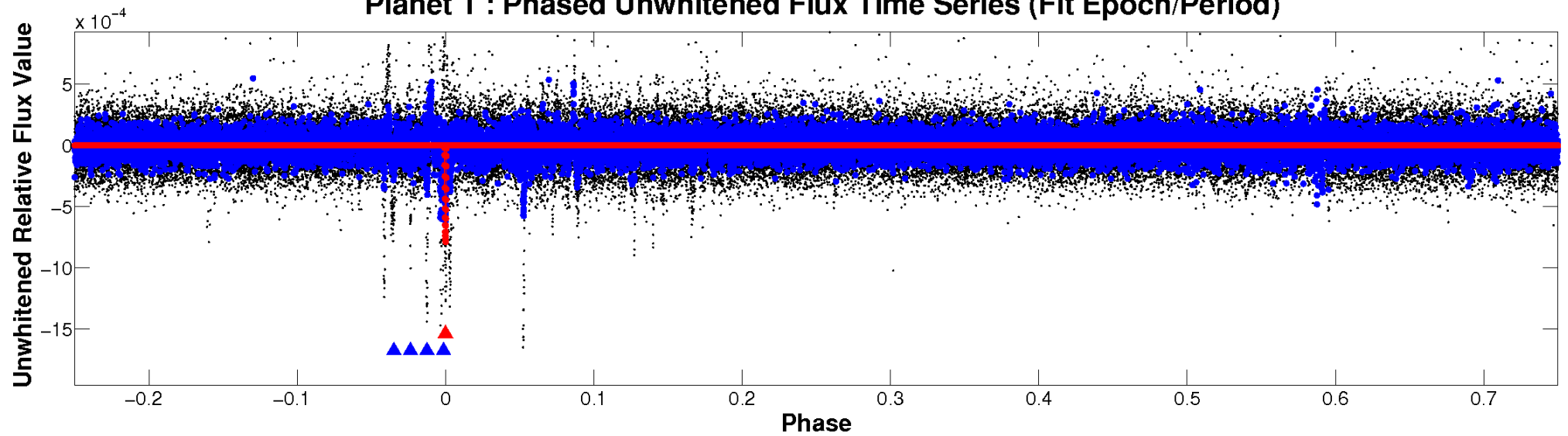
ALT Odd/Even

TCE 007205040-01

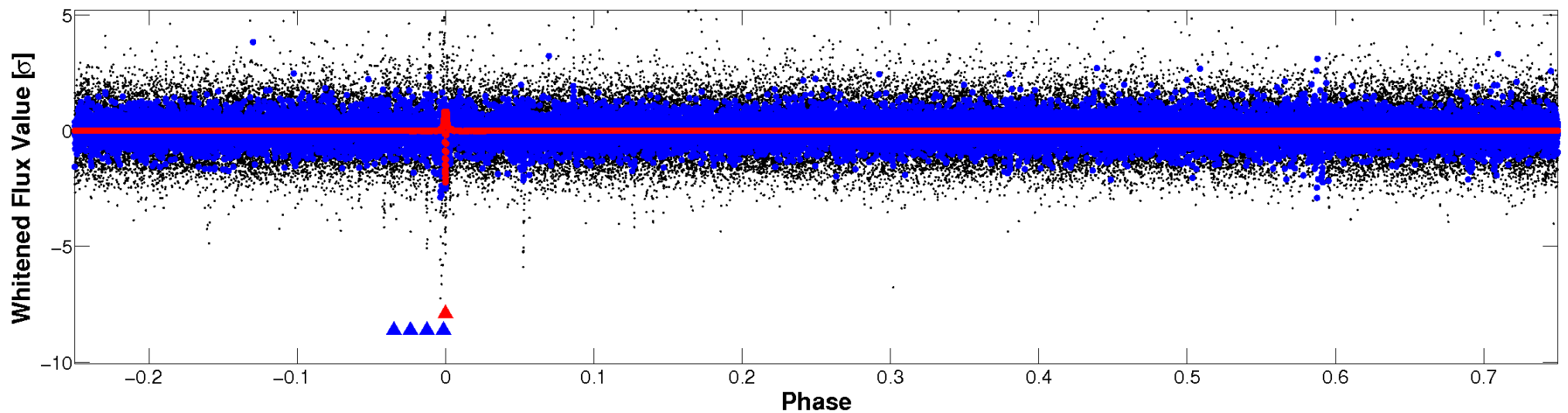


Non-Whitened Vs. Whitened Light Curve

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

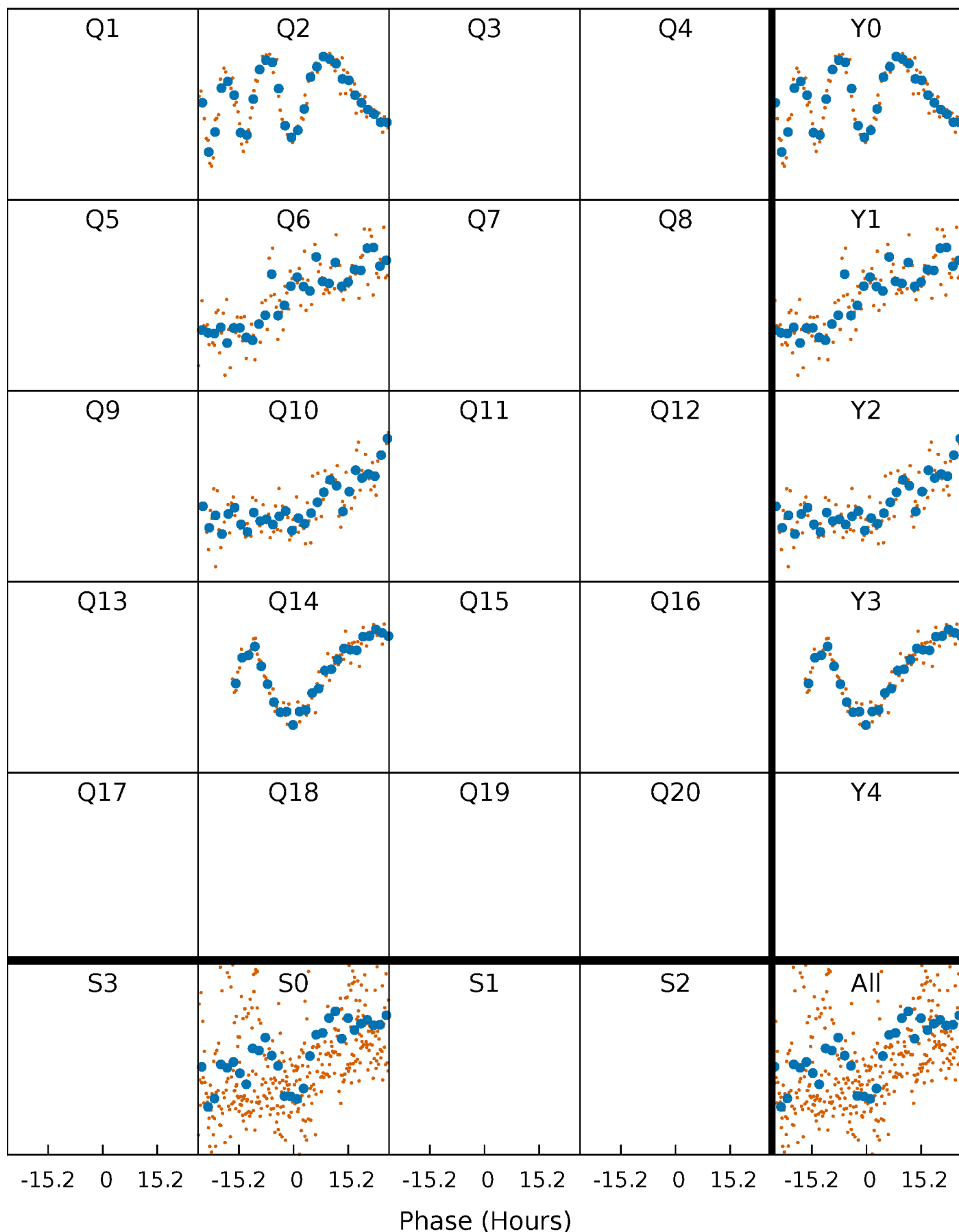


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



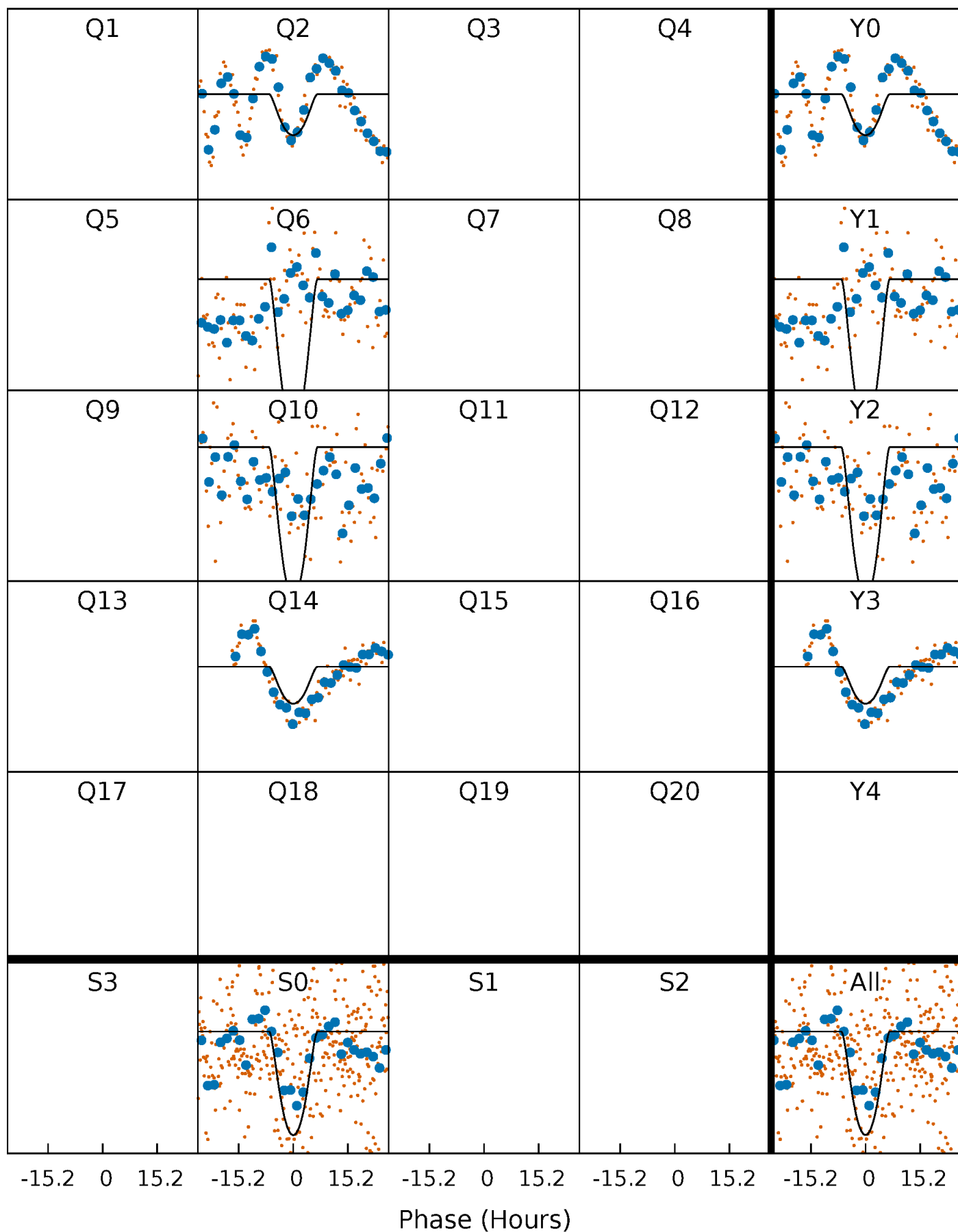
PDC Quarter-Phased Transit Curves

TCE 007205040-01 P=363.235057 Days $T_0=185.162456$ (BKJD)



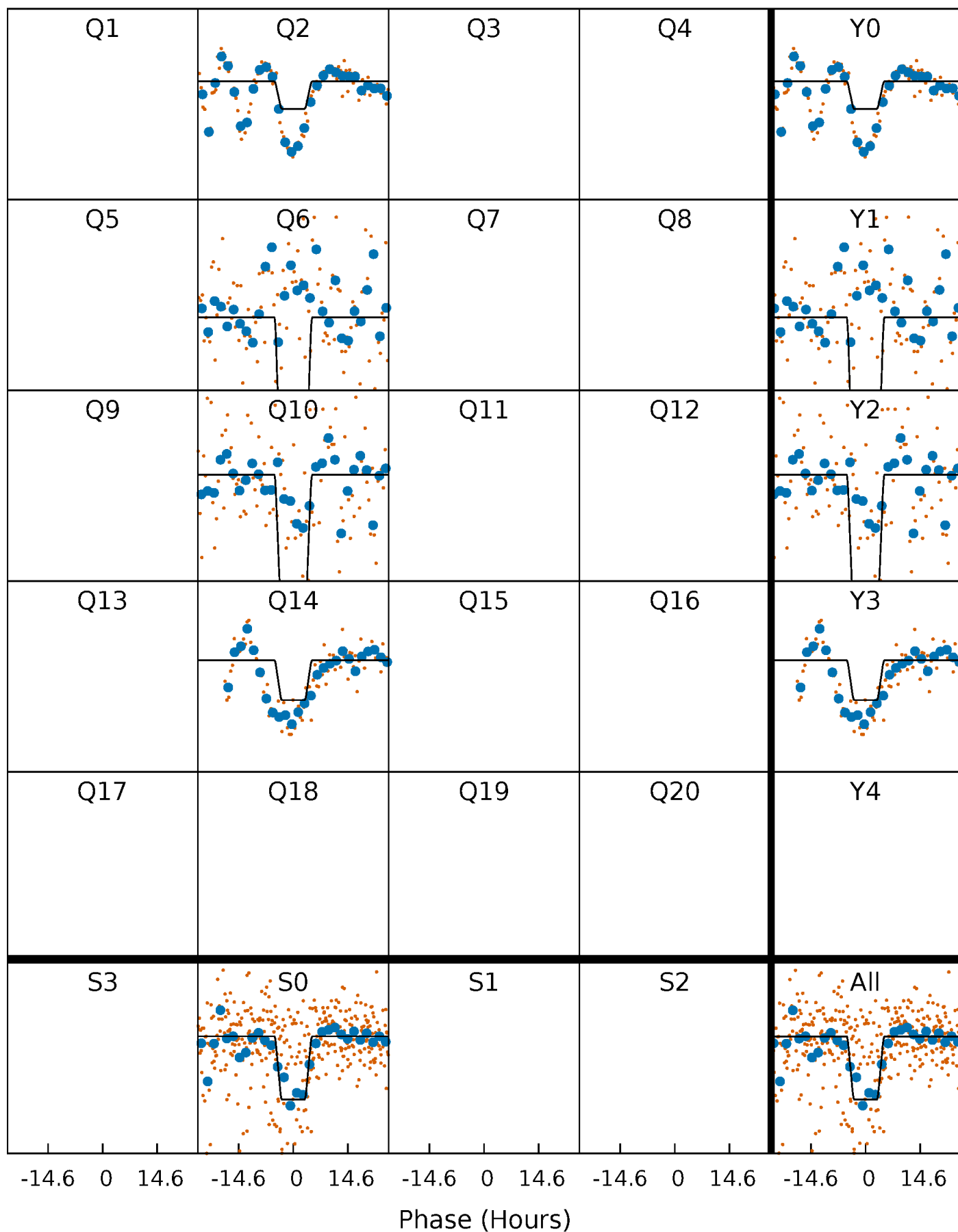
DV Quarter-Phased Transit Curves

TCE 007205040-01 P=363.235057 Days $T_0=185.162456$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

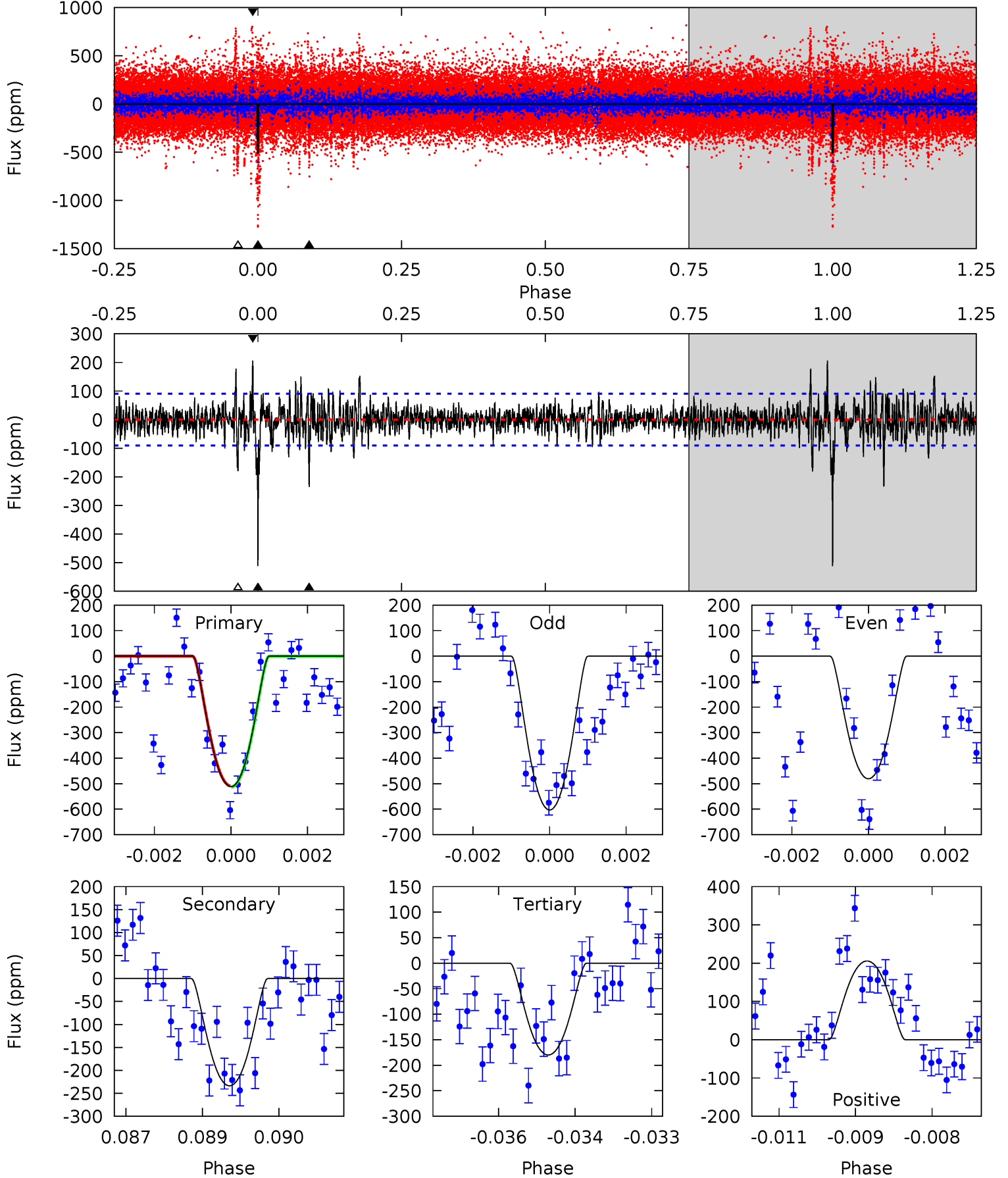
TCE 007205040-01 P=363.254207 Days $T_0=185.157003$ (BKJD)



DV Model-Shift Uniqueness Test

007205040-01, P = 363.235057 Days, E = 185.162456 Days

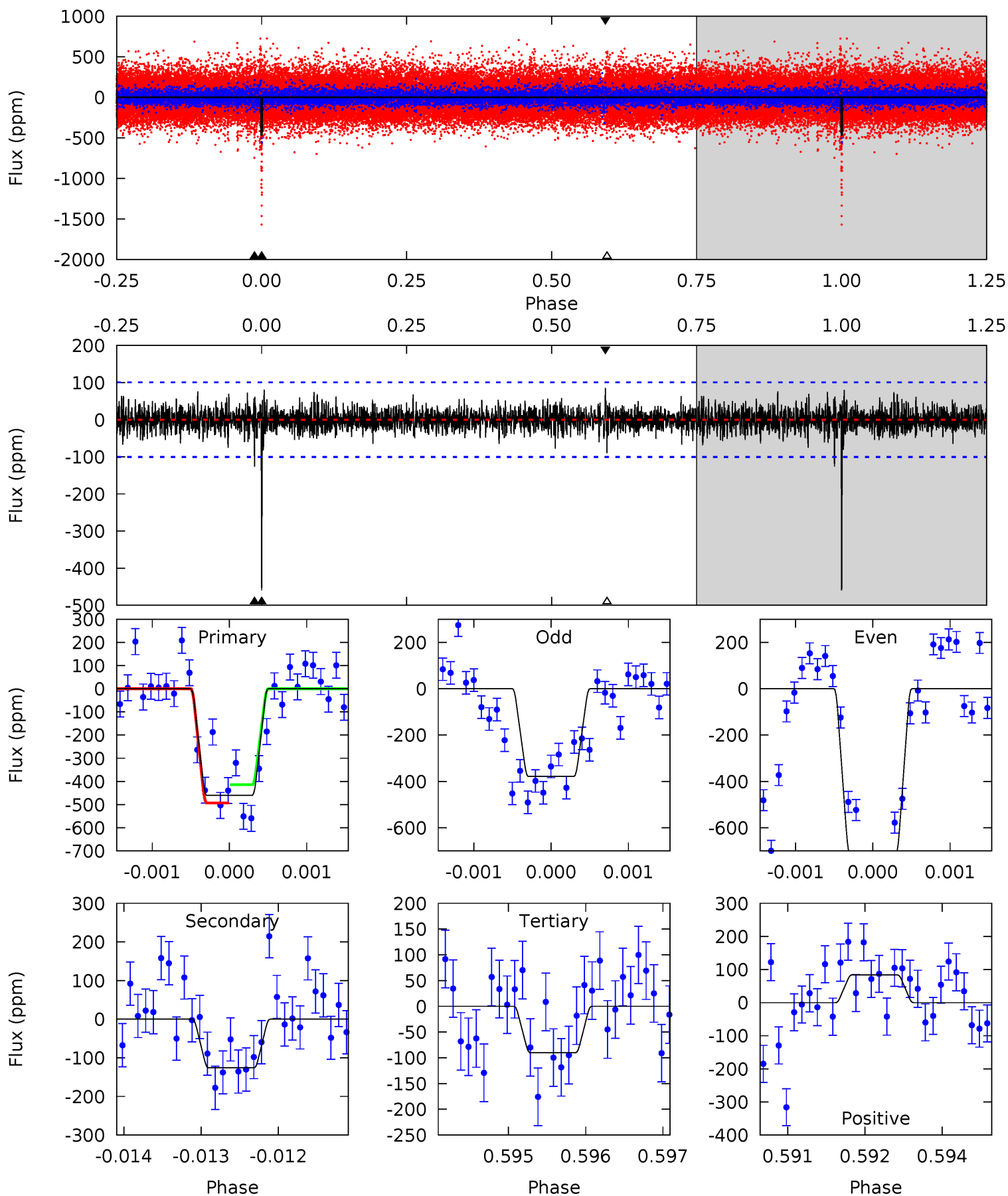
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.4	13.9	10.7	12.2	5.37	3.16	2.19	19.7	18.2	3.19	1.66	3.70	1.17	0.29	0.14



Alt Model-Shift Uniqueness Test

007205040-01, P = 363.254207 Days, E = 185.157003 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.8	6.79	4.85	4.52	5.42	3.25	1.12	20.0	20.3	1.94	2.27	9.56	1.09	0.15	2.07



Stellar Parameters For KIC 007205040

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6201^{+187}_{-187}	$4.213^{+0.258}_{-0.172}$	$-0.580^{+0.300}_{-0.300}$	$1.230^{+0.328}_{-0.328}$	$0.900^{+0.128}_{-0.082}$	$0.682^{+0.945}_{-0.326}$
	+3%/-3%	+6%/-4%	+52%/-52%	+27%/-27%	+14%/-9%	+139%/-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 007205040-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-234 ± 17	$4.88^{+3.29}_{-2.70}$	428^{+35}_{-35}	4239^{+1704}_{-657}	5085^{+20207}_{-3258}
Alt.	-126 ± 19	$3.77^{+2.98}_{-2.24}$	429^{+32}_{-39}	4142^{+1982}_{-745}	4540^{+23027}_{-3201}

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

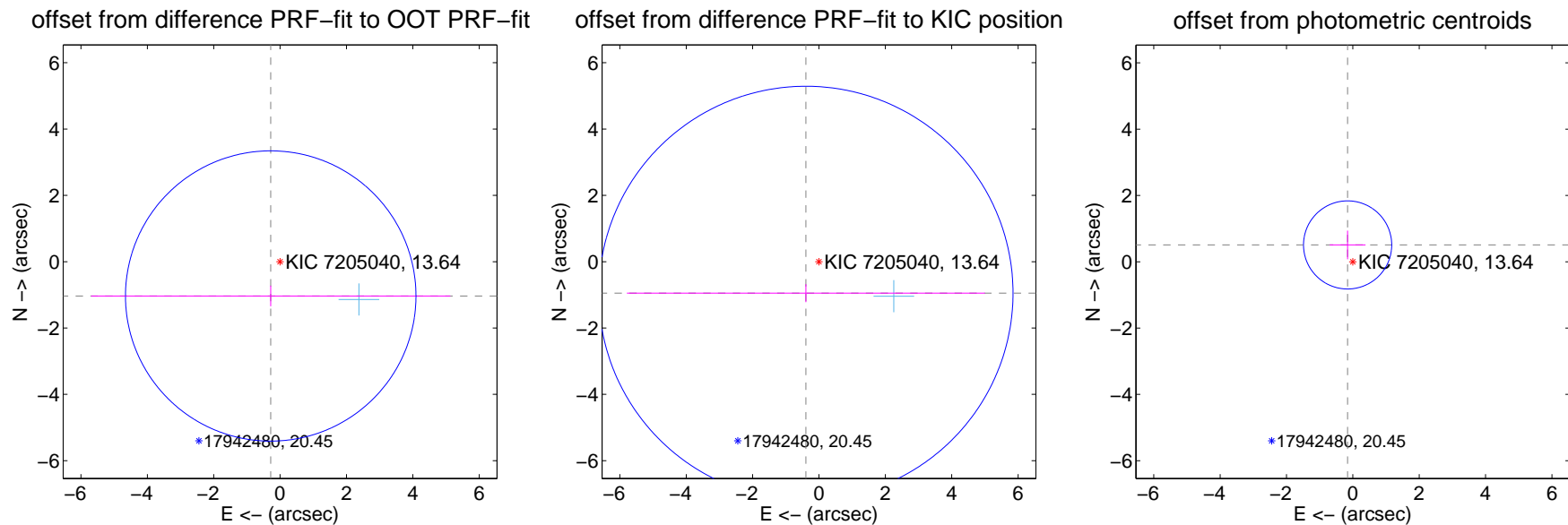
DV Centroid Data

Supplemental centroid analysis for 007205040-01. Kepler magnitude: 13.64. Transit SNR 15.39

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.072 ± 1.459	0.73	0.283 ± 5.411	-1.034 ± 0.310
PRF-fit source offset from KIC position	1.028 ± 2.080	0.49	0.393 ± 5.392	-0.949 ± 0.270
photometric centroid source offset	0.53 ± 0.44	1.20	0.16 ± 0.54	0.51 ± 0.43

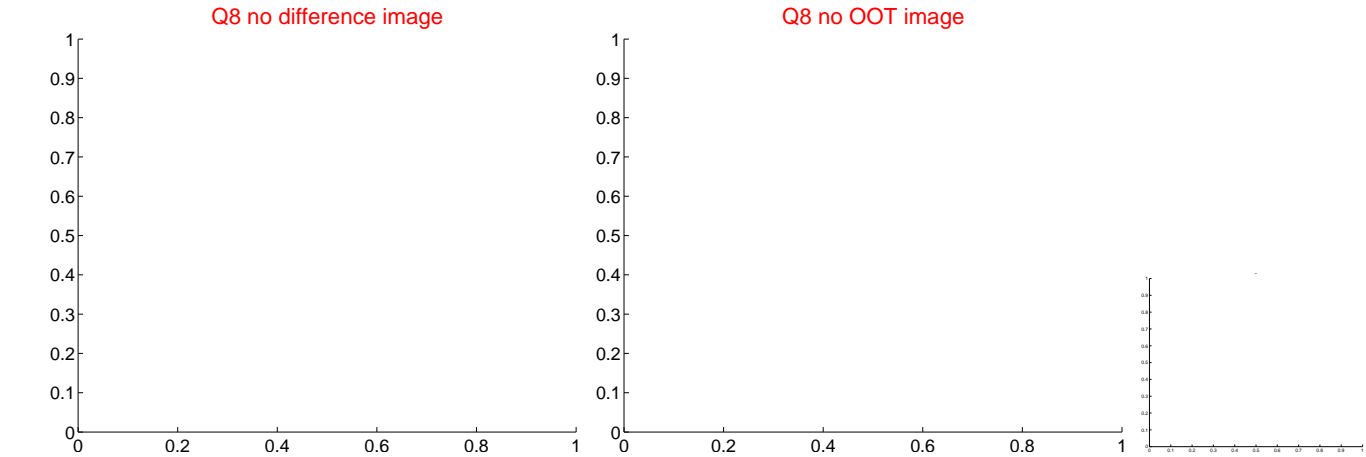
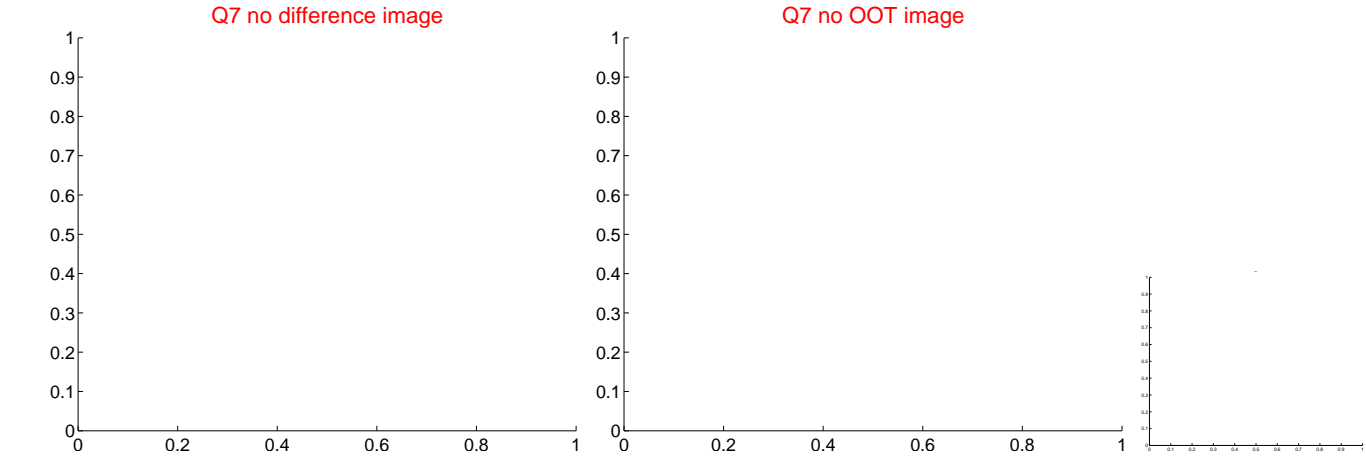
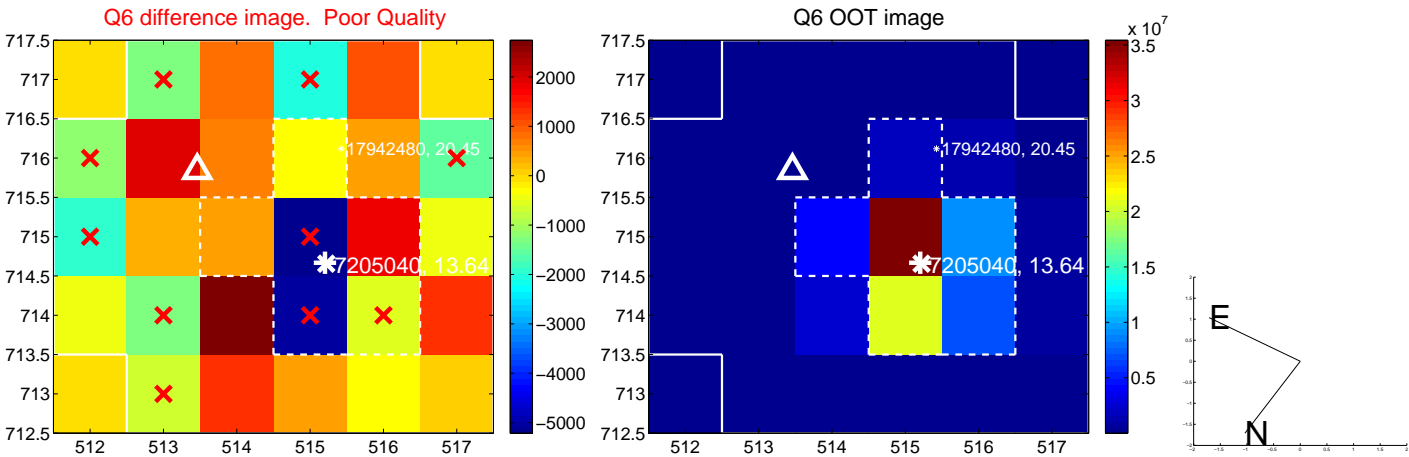
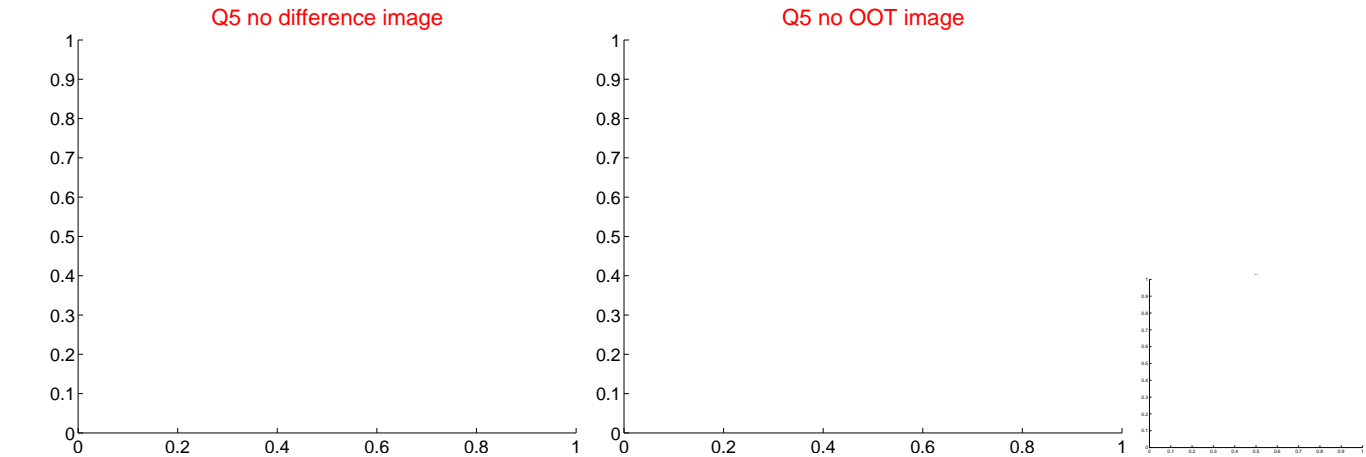


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

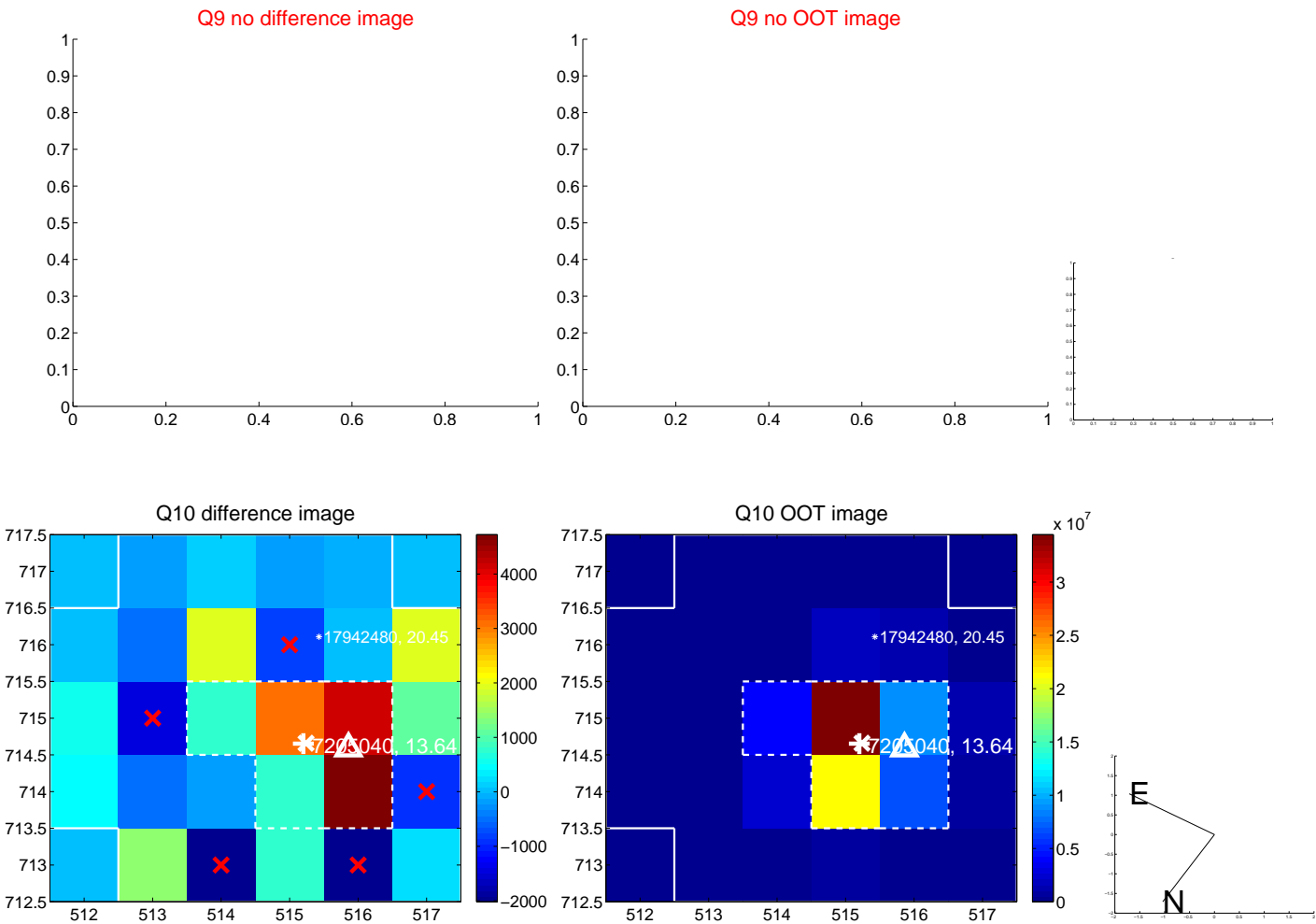
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



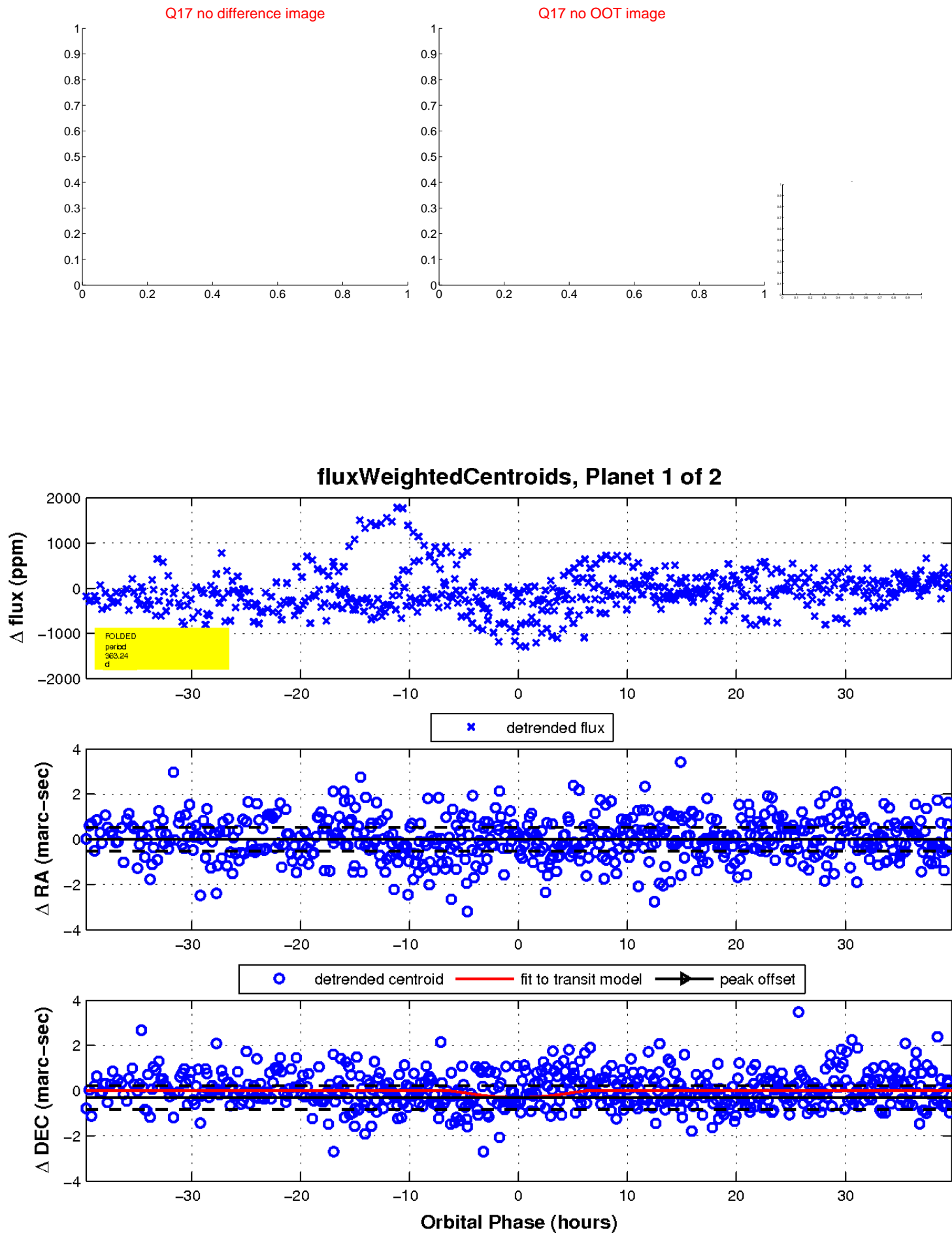
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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

