

KIC 008105710

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})
008105710-01	OBS	No	317.833068	270.623328	655.1	21.419	7.5	7.8	1.00	6004	3.36	1.41

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008105710-01	OBS	FP	0.00	1	0	0	0	ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—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.

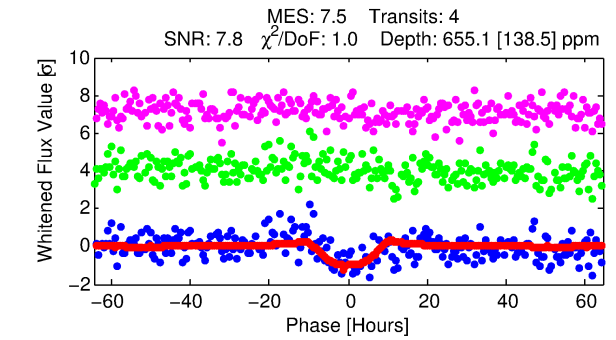
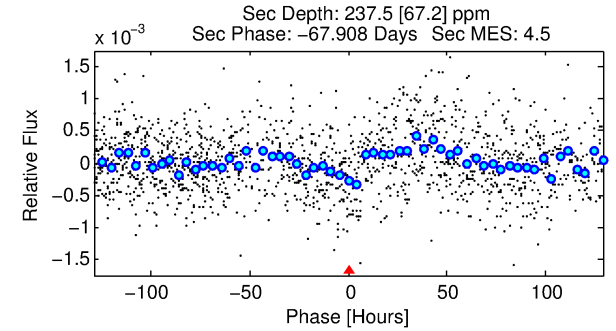
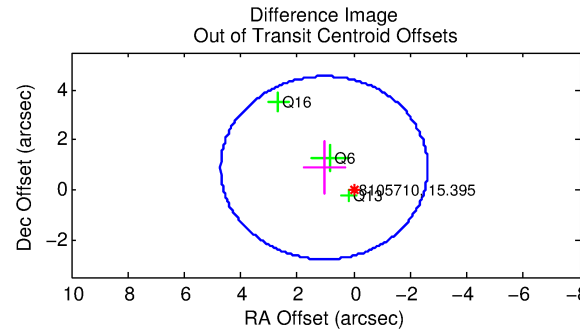
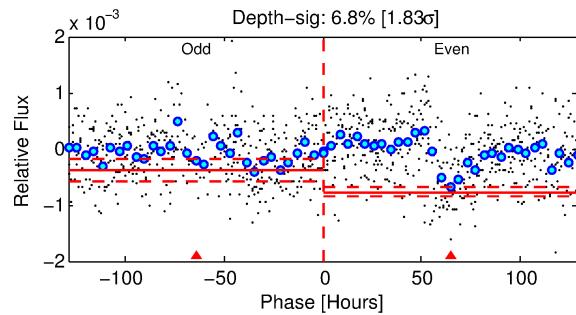
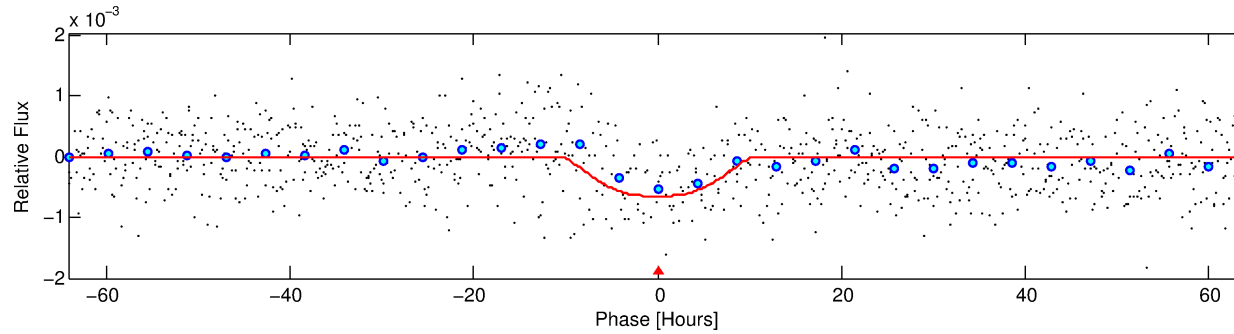
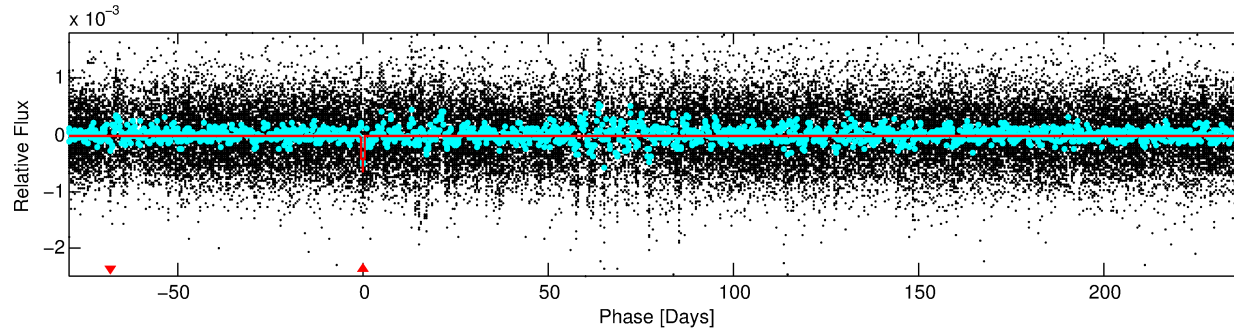
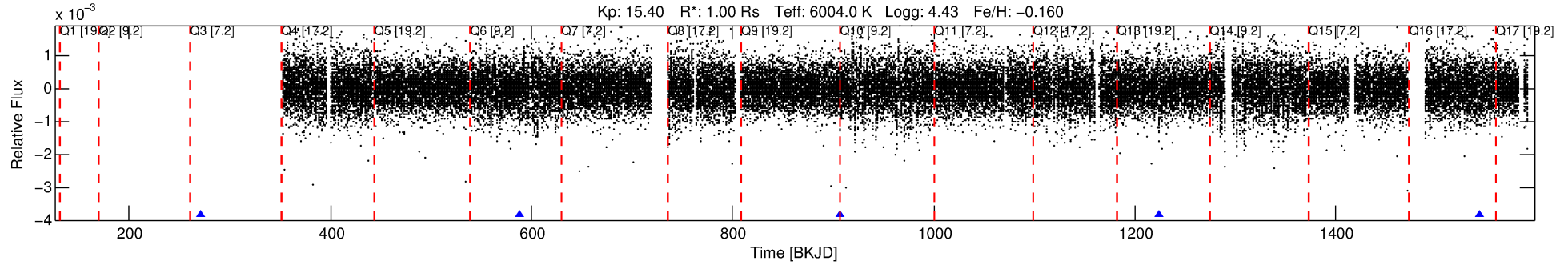
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008105710-01

No Significant Match Found

DV One-Page Summary

KIC: 8105710 Candidate: 1 of 1 Period: 317.833 d



DV Fit Results:

Period = 317.83307 [0.02439] d
Epoch = 270.6233 [0.0710] BKJD
Rp/R* = 0.0308 [0.0046]
a/R* = 40.10 [8.41]
b = 0.97 [0.02]
Seff = 1.41 [0.56]
Teq = 278 [28] K
Rp = 3.36 [1.16] Re
a = 0.9089 [0.2333] AU
Ag = 9574.00 [5288.64] [1.81 σ]
Teffp = 4249 [469] K [8.45 σ]

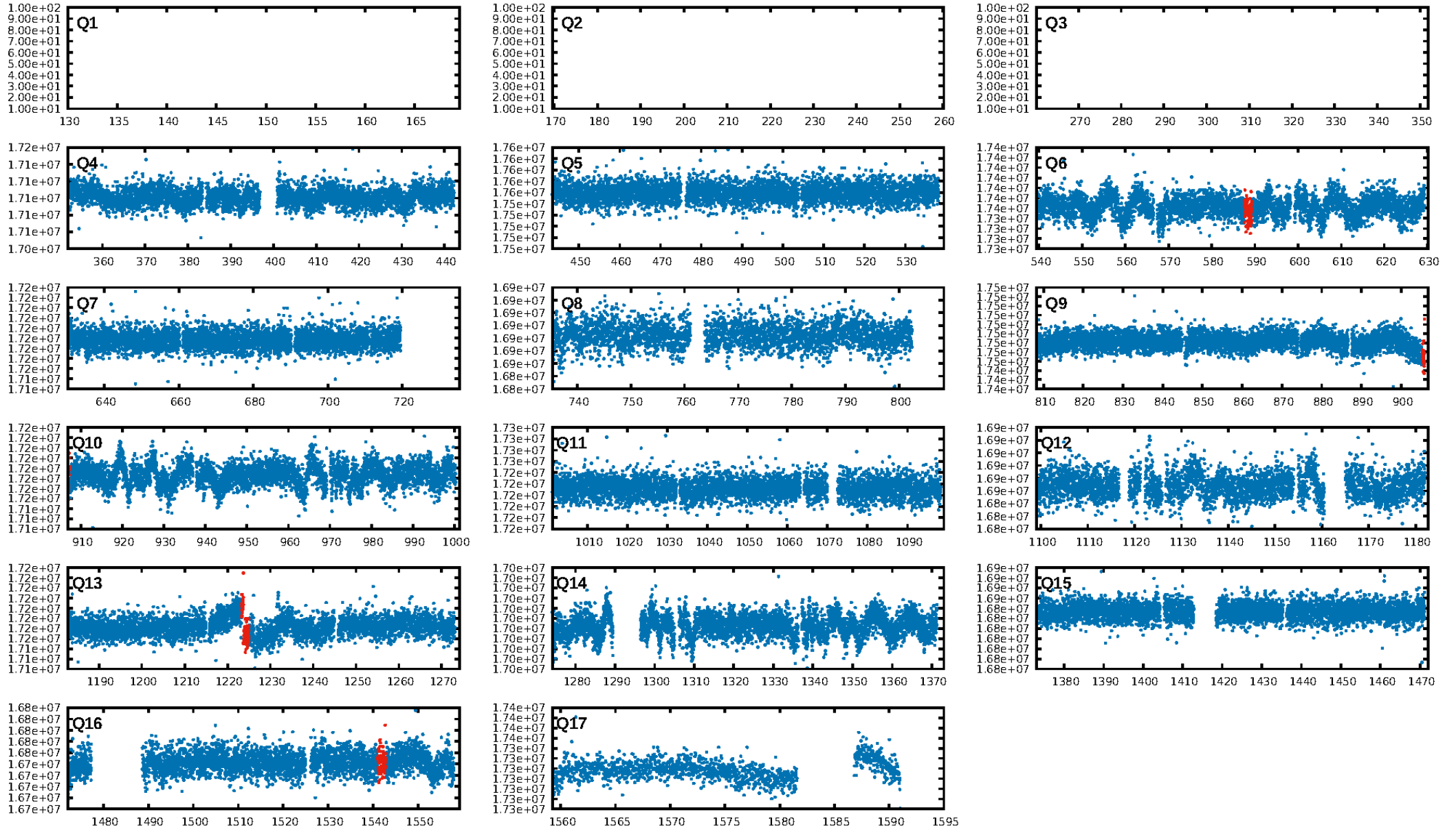
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 15.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.57e-08
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -1.86
Centroid-sig: 13.8%
Centroid-so: 2.501 arcsec [1.19 σ]
OotOffset-rm: 1.362 arcsec [1.11 σ]
KicOffset-rm: 1.371 arcsec [1.04 σ]
OotOffset-st: 1/0/1/1 [3]
KicOffset-st: 1/0/1/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

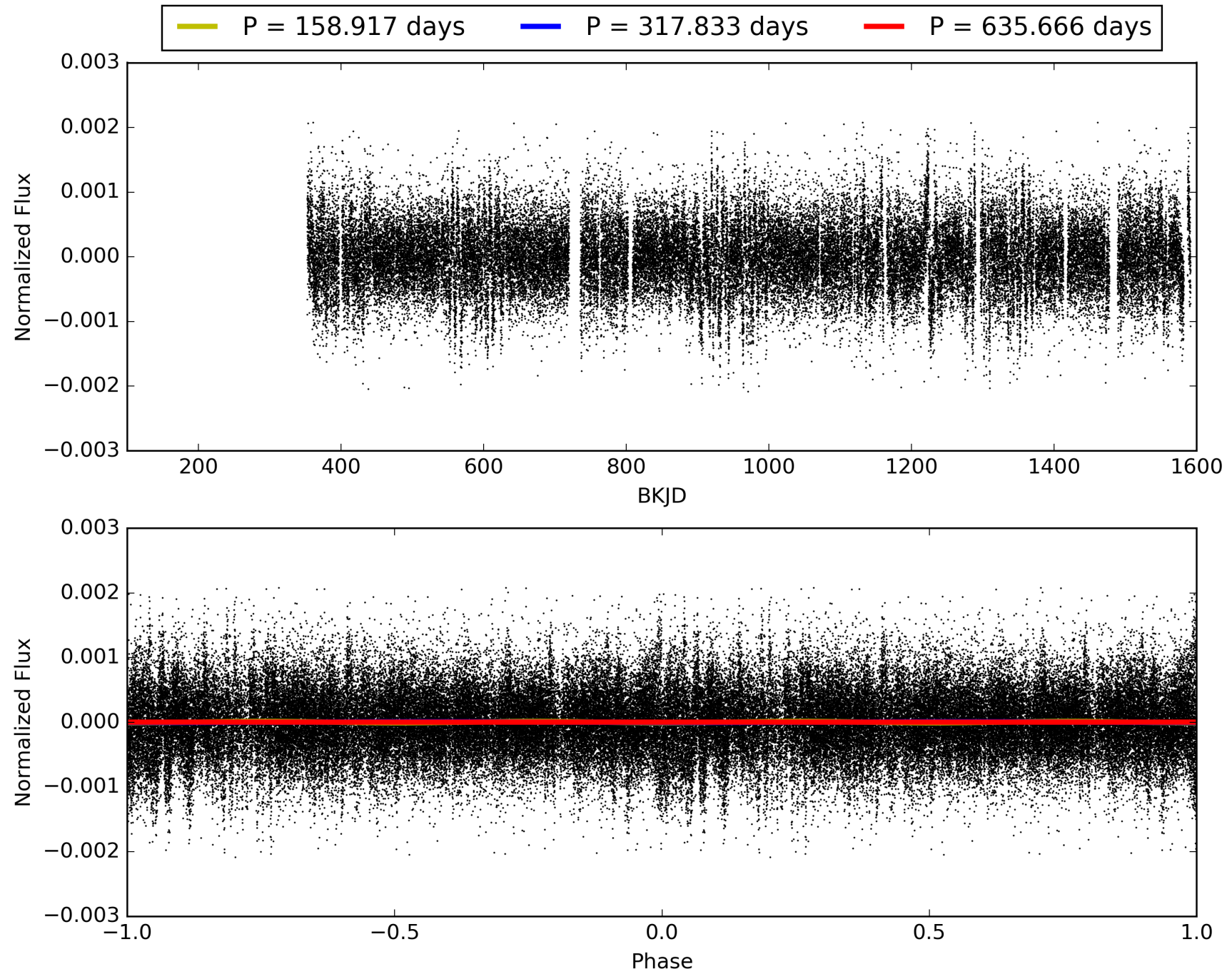
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:30:19 Z

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

TCE 008105710-01, PDC Light Curves

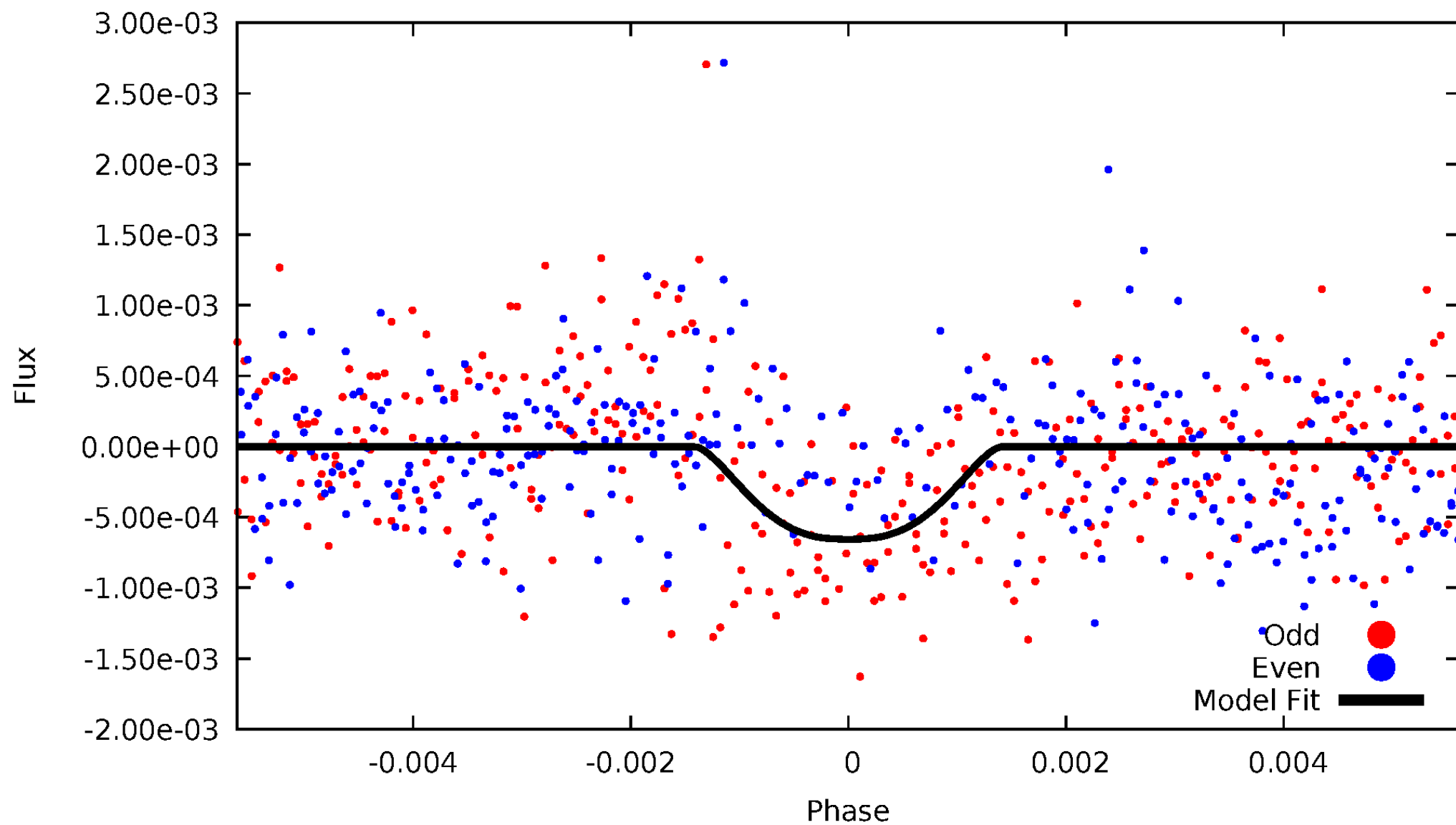


TCE 008105710-01



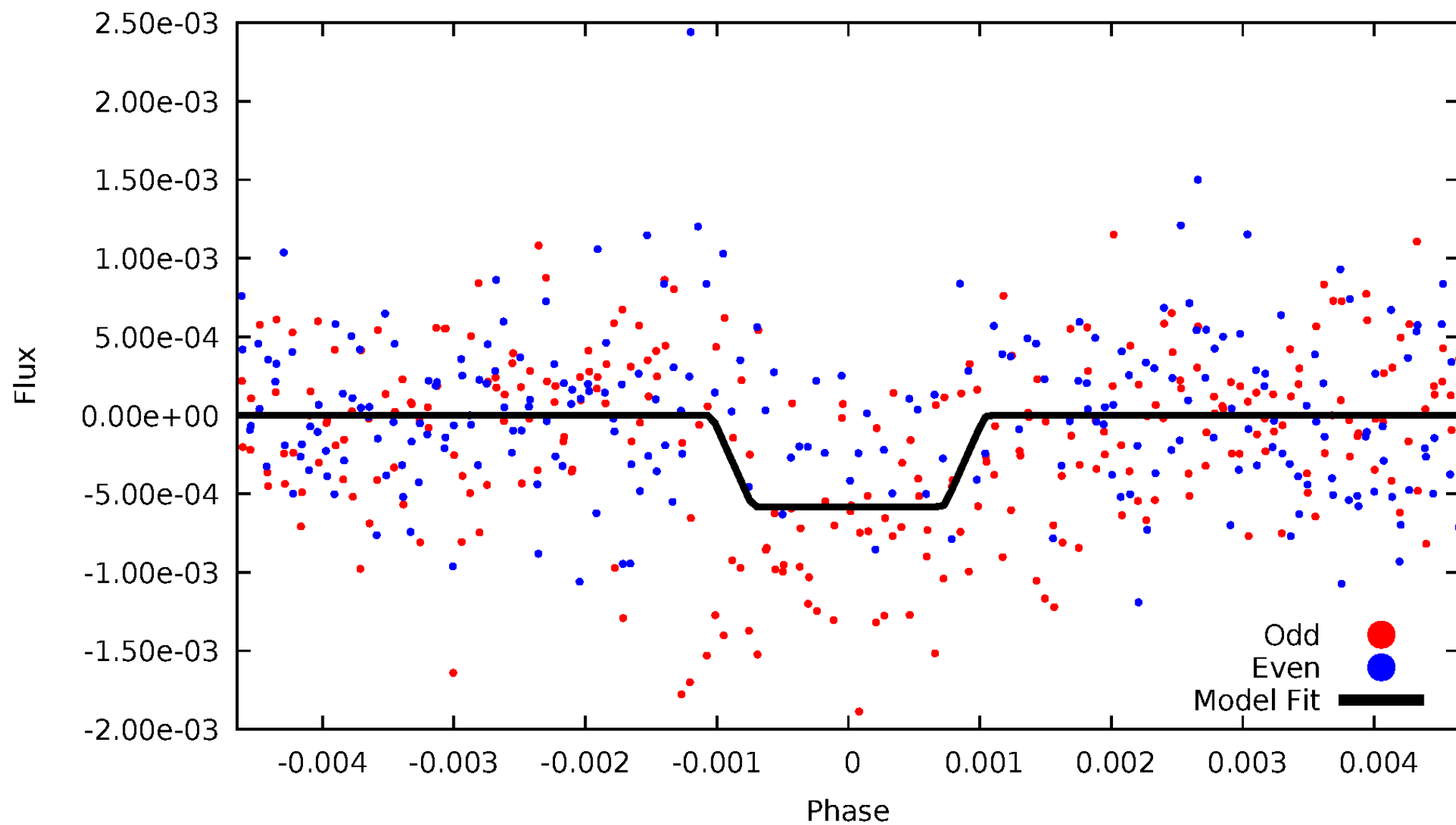
DV Odd/Even

TCE 008105710-01



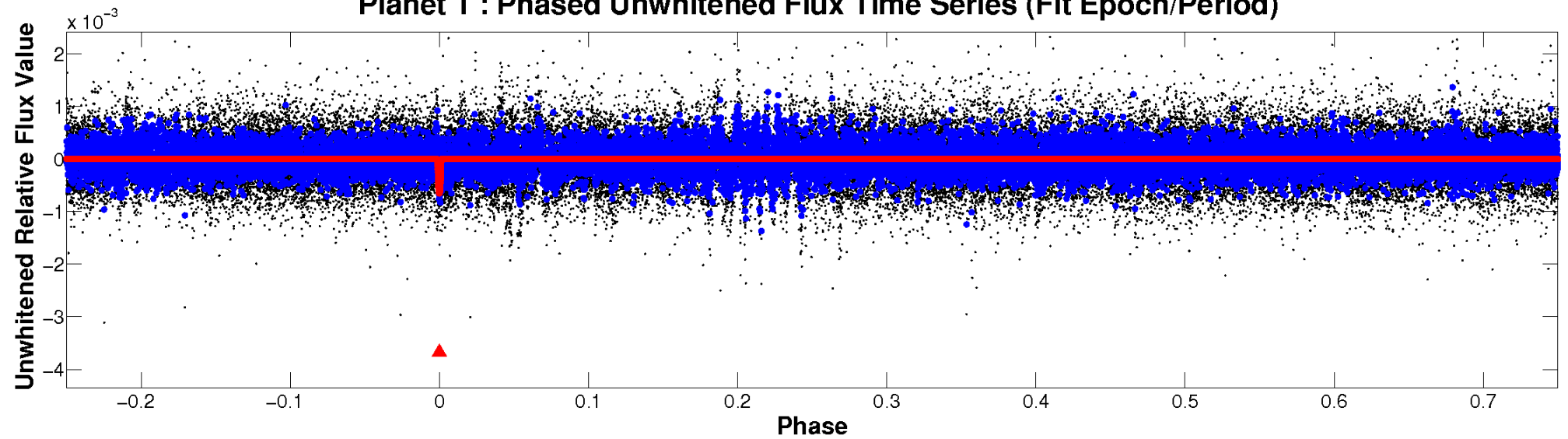
ALT Odd/Even

TCE 008105710-01

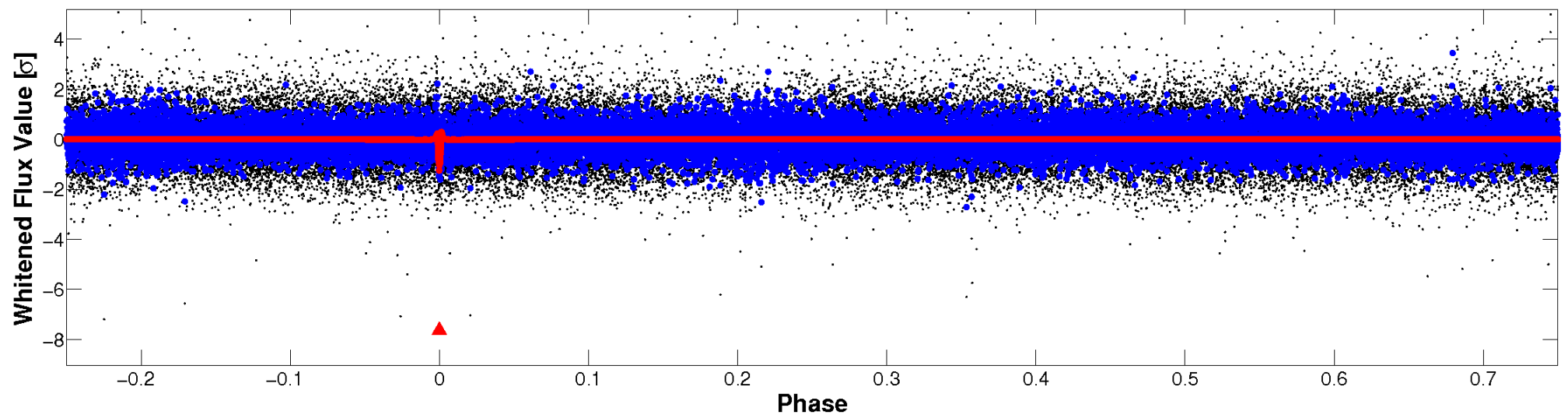


Non-Whitened Vs. Whitened Light Curve

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

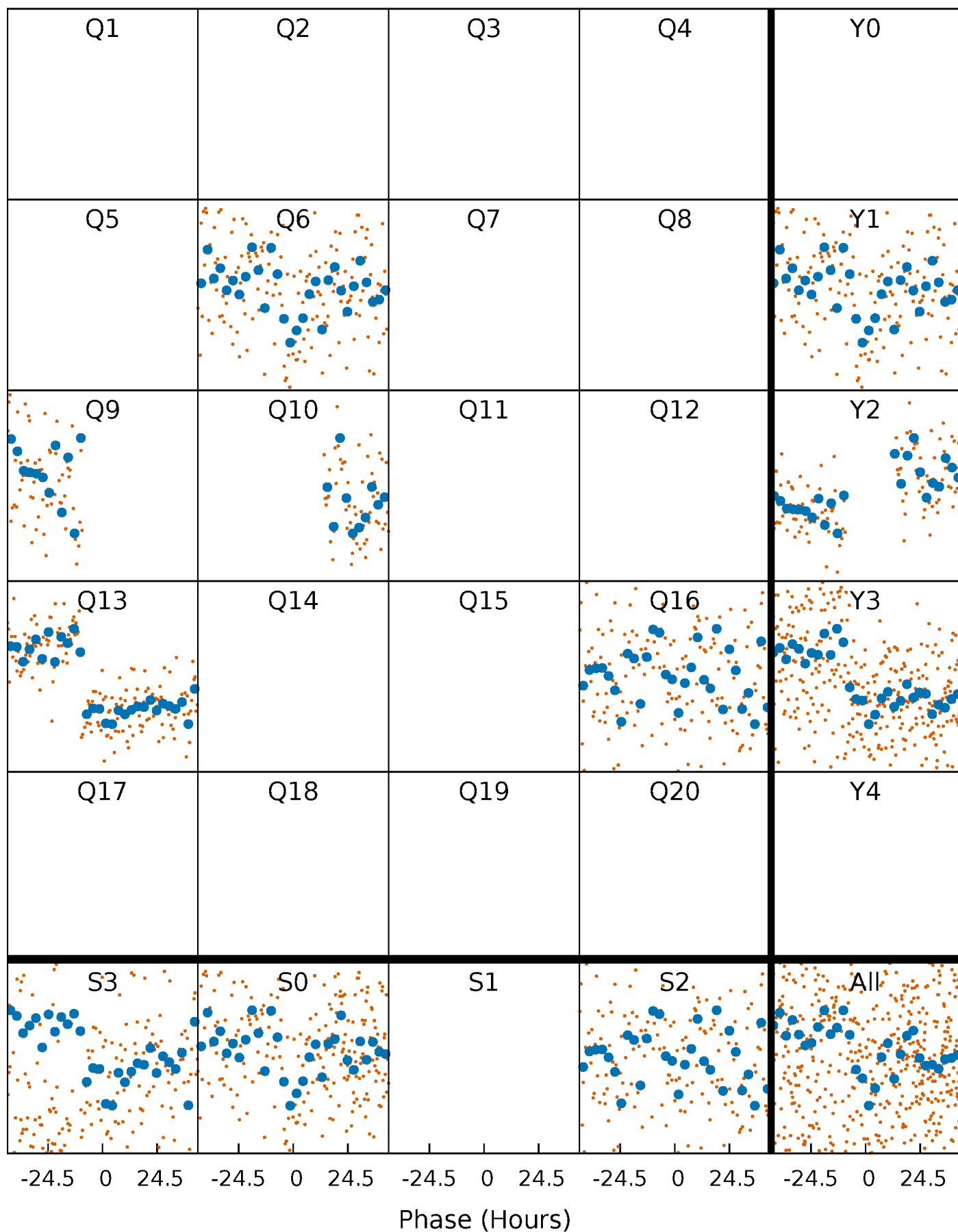


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



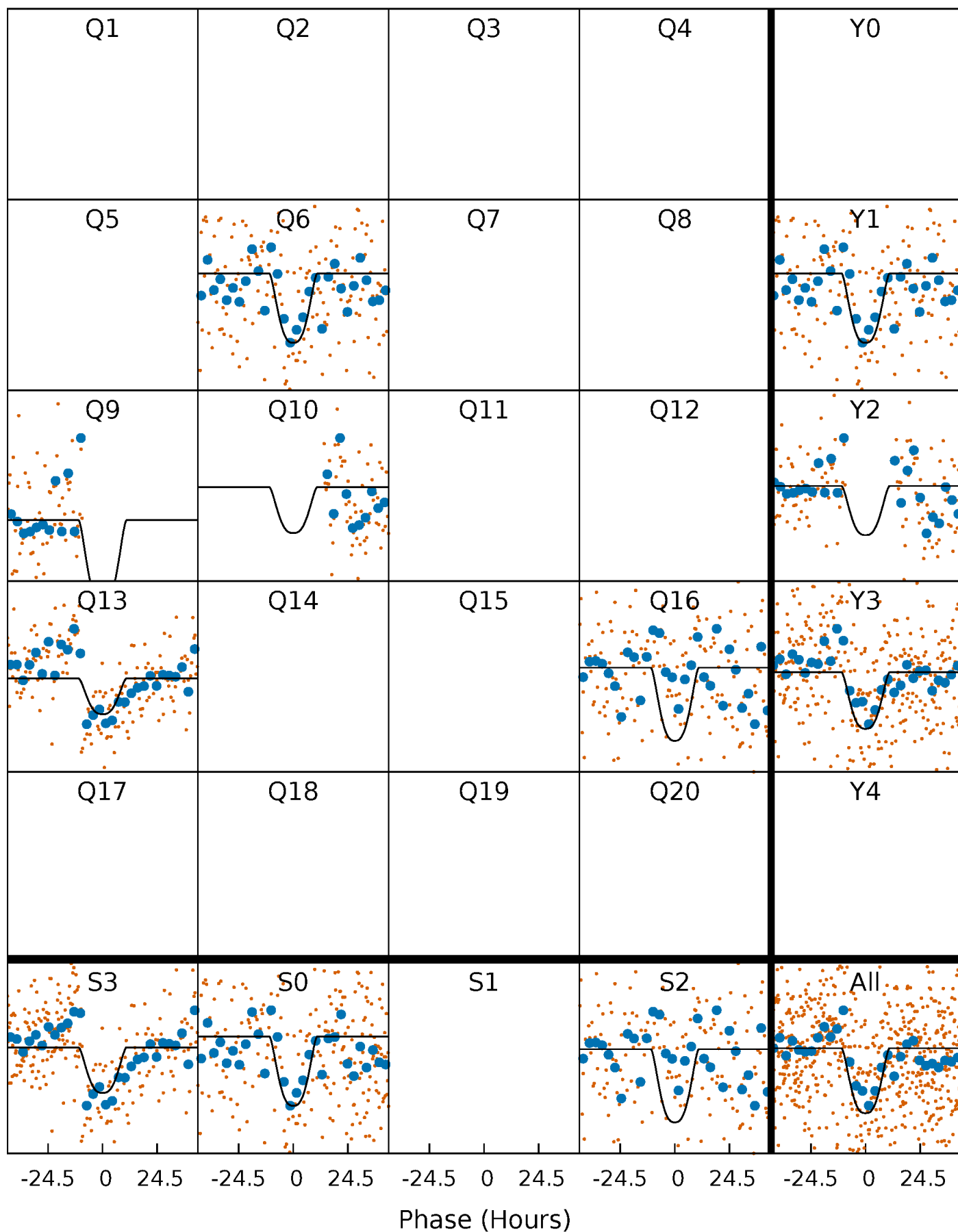
PDC Quarter-Phased Transit Curves

TCE 008105710-01 P=317.833068 Days $T_0=270.623328$ (BKJD)



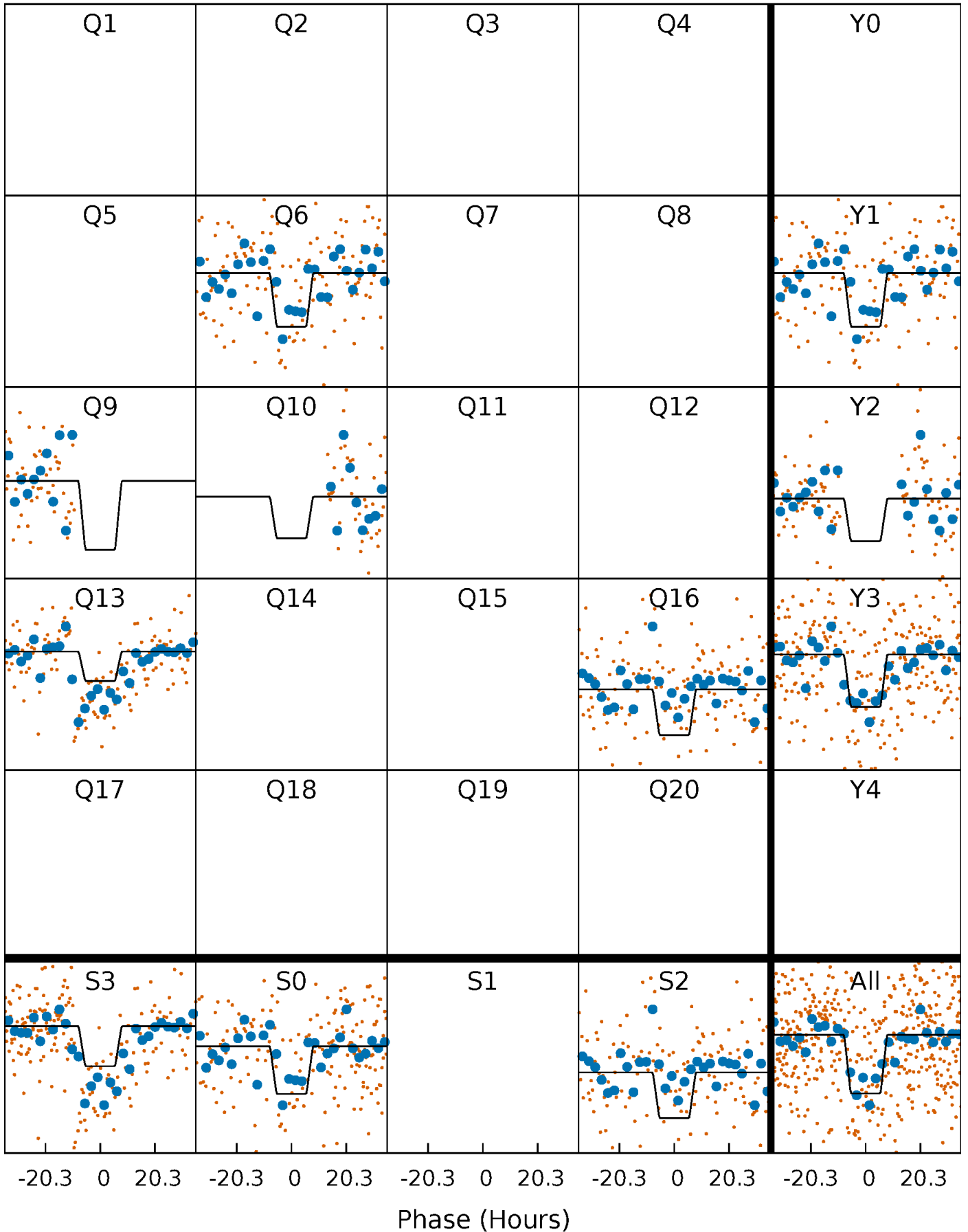
DV Quarter-Phased Transit Curves

TCE 008105710-01 P=317.833068 Days $T_0=270.623328$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

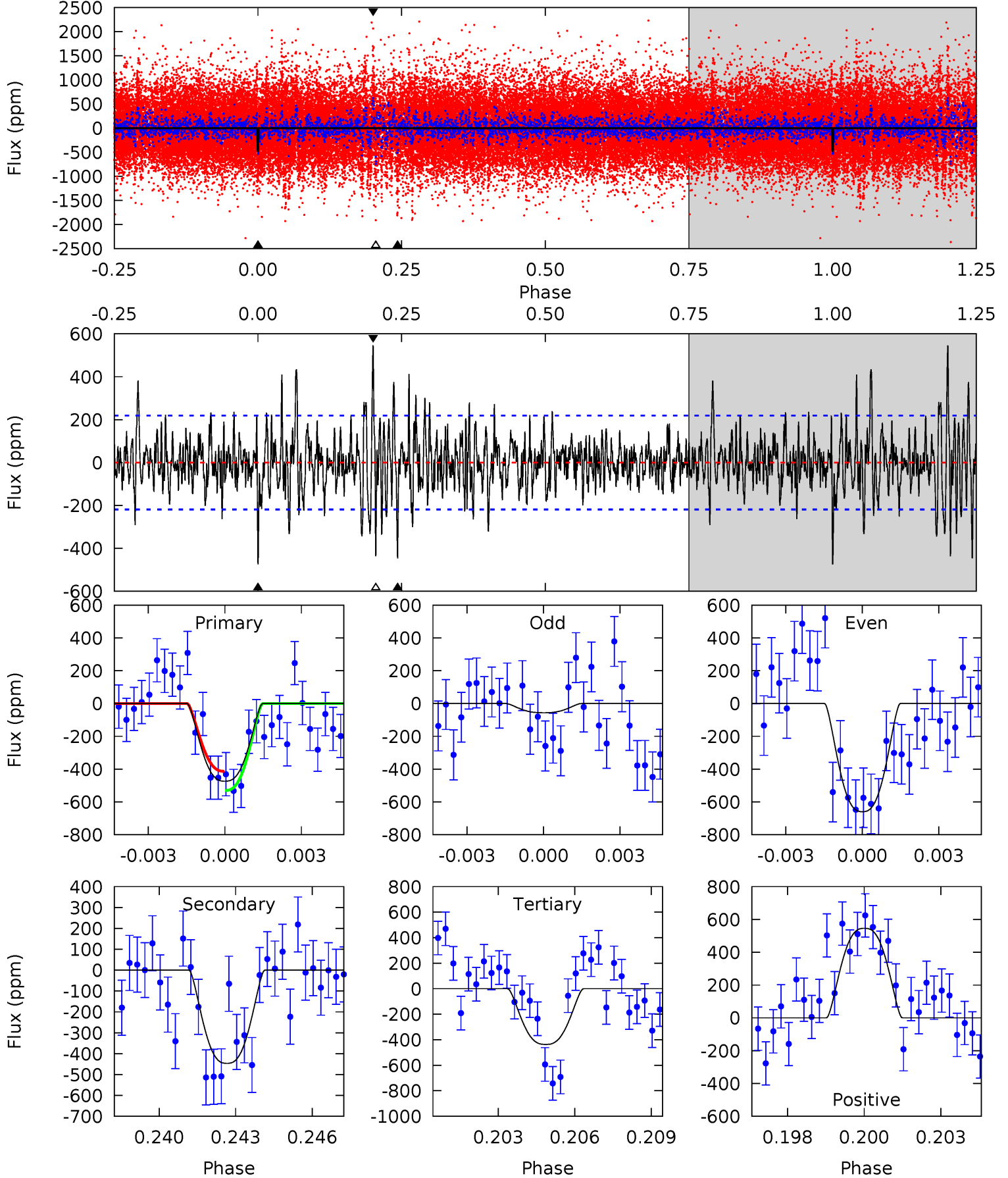
TCE 008105710-01 P=317.823592 Days $T_0=270.660466$ (BKJD)



DV Model-Shift Uniqueness Test

008105710-01, P = 317.833068 Days, E = 270.623328 Days

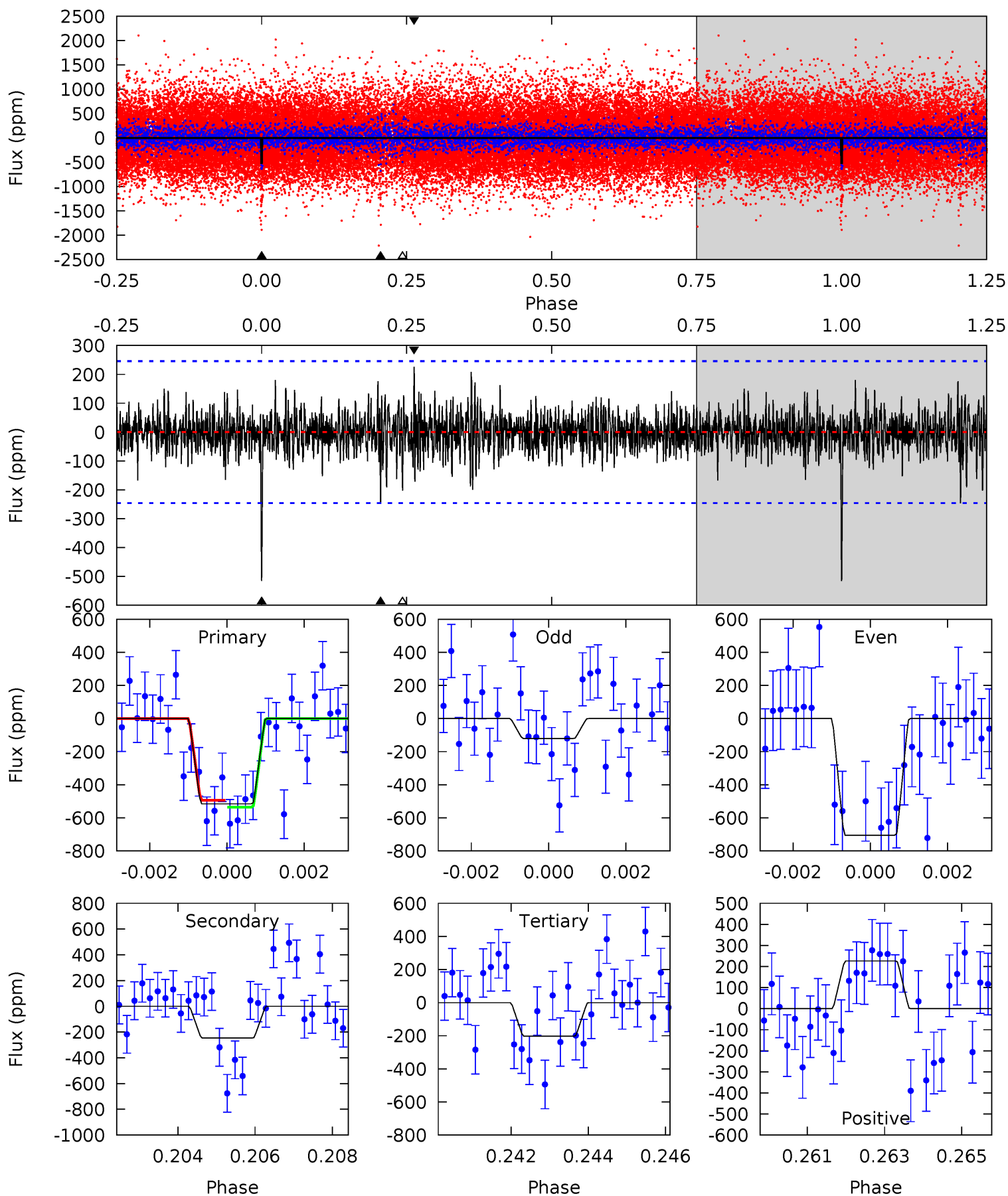
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.4	10.7	10.5	13.1	5.26	2.98	2.56	0.88	-1.74	0.23	-2.39	7.01	-5.43	0.54	1.40



Alt Model-Shift Uniqueness Test

008105710-01, P = 317.823592 Days, E = 270.660466 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.2	5.34	4.39	4.90	5.32	3.07	1.11	6.77	6.27	0.95	0.44	5.90	1.35	0.30	0.46



Stellar Parameters For KIC 008105710

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6004^{+188}_{-230}	$4.434^{+0.084}_{-0.196}$	$-0.160^{+0.300}_{-0.300}$	$1.000^{+0.312}_{-0.134}$	$0.991^{+0.144}_{-0.118}$	$1.395^{+0.532}_{-0.745}$
	+3%/-4%	+2%/-4%	+188%/-188%	+31%/-13%	+15%/-12%	+38%/-53%
Source	KIC0	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 008105710-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-447 ± 42	$3.47^{+0.74}_{-0.63}$	393^{+27}_{-21}	5041^{+405}_{-348}	16620^{+7822}_{-5411}
Alt.	-247 ± 46	$2.75^{+0.70}_{-0.60}$	394^{+28}_{-21}	4906^{+575}_{-439}	14403^{+10074}_{-5439}

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

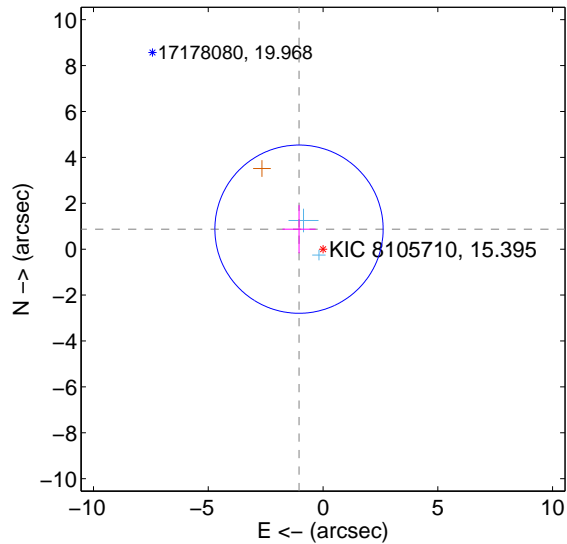
Supplemental centroid analysis for 008105710-01. Kepler magnitude: 15.39. Transit SNR 7.75

There are 2 quarters with good PRF difference image offsets

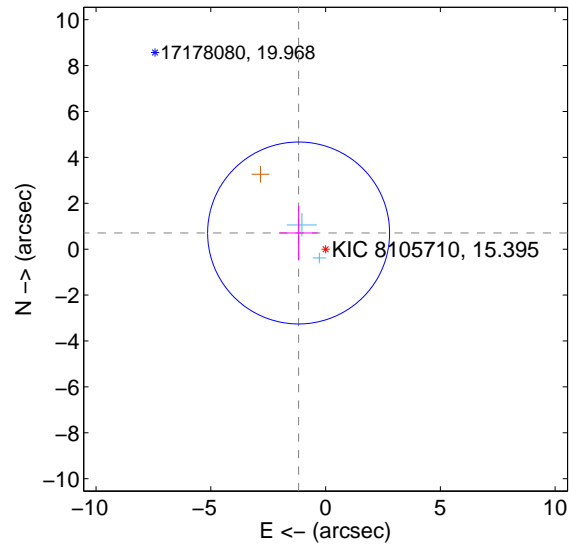
The direct PRF centroid is offset from the target star catalog position by about 0.30 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.362 ± 1.222	1.11	1.046 ± 0.722	0.872 ± 1.047
PRF-fit source offset from KIC position	1.371 ± 1.321	1.04	1.175 ± 0.835	0.705 ± 1.181
photometric centroid source offset	2.50 ± 2.09	1.19	-1.05 ± 1.78	-2.27 ± 2.16

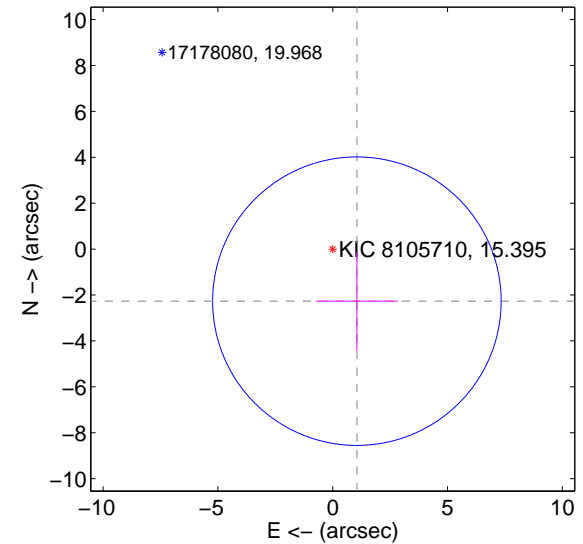
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

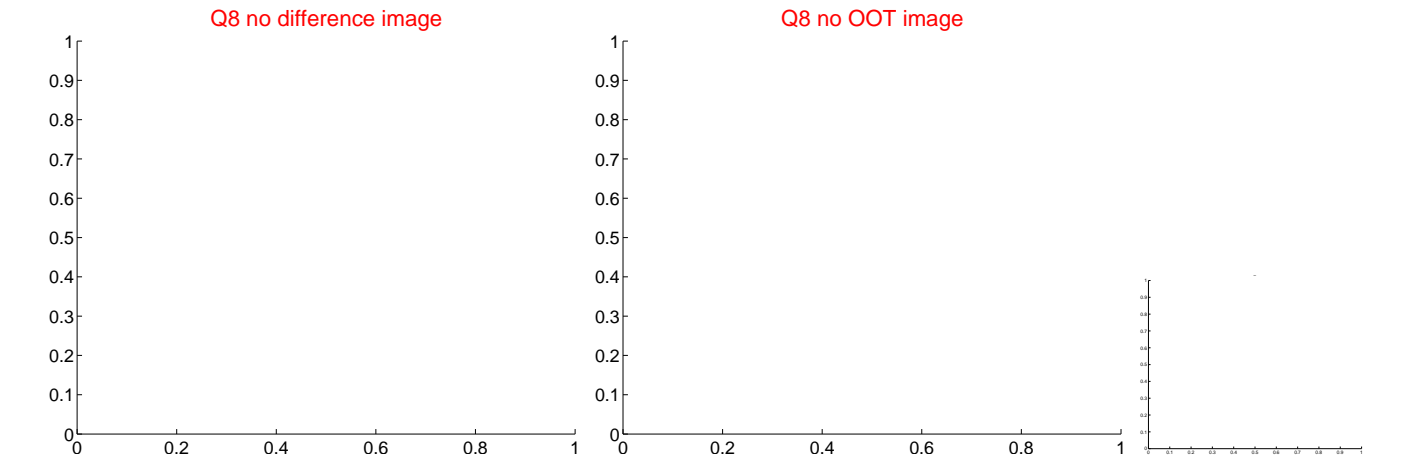
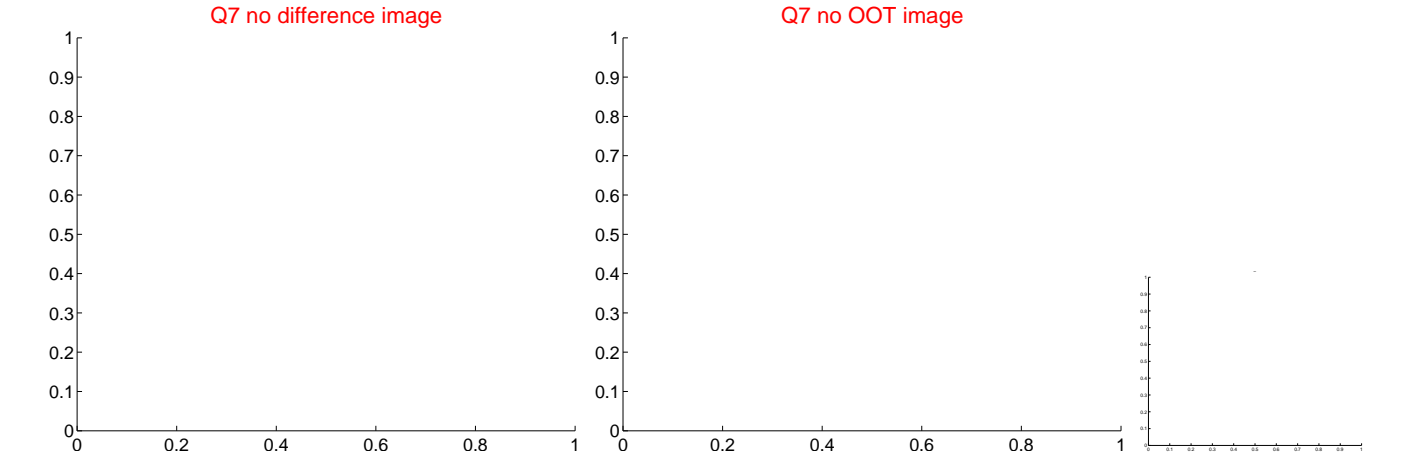
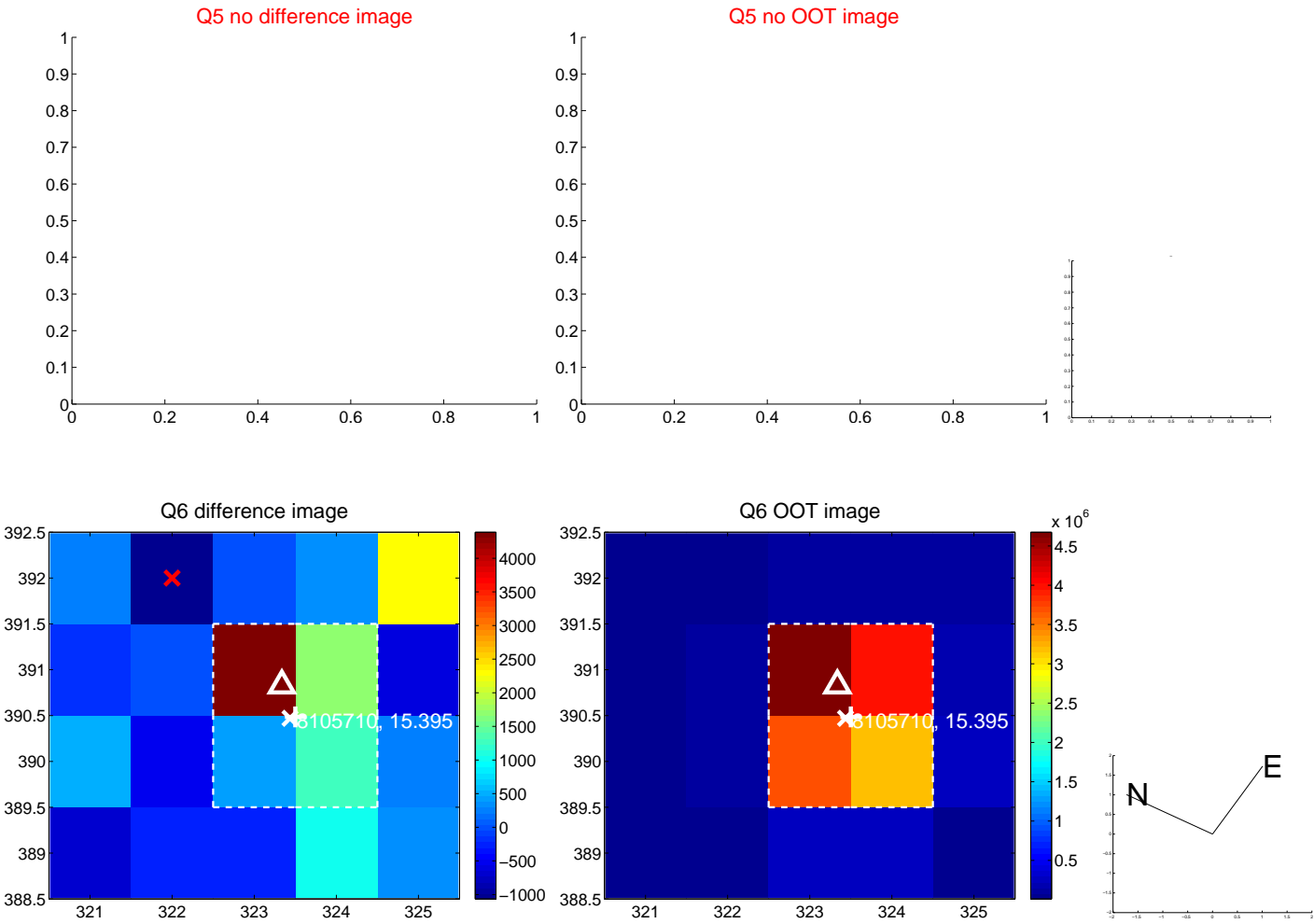


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



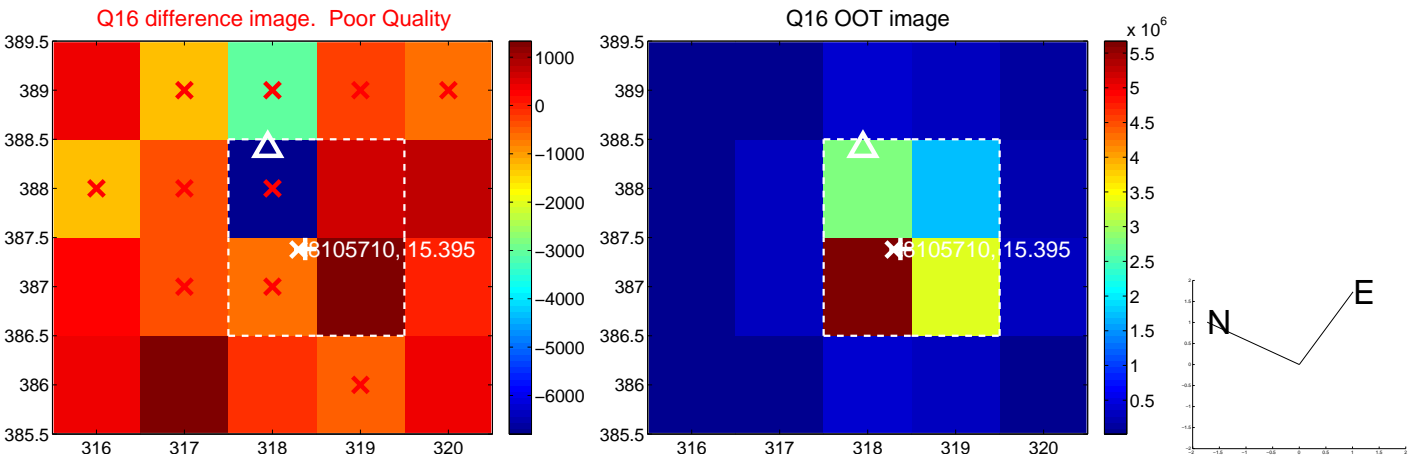
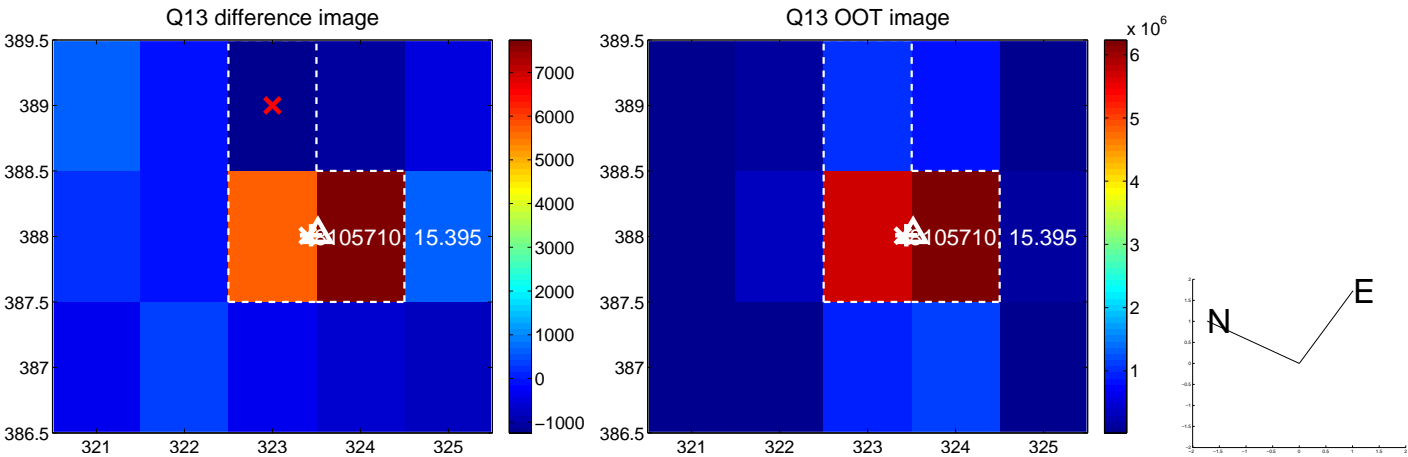
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



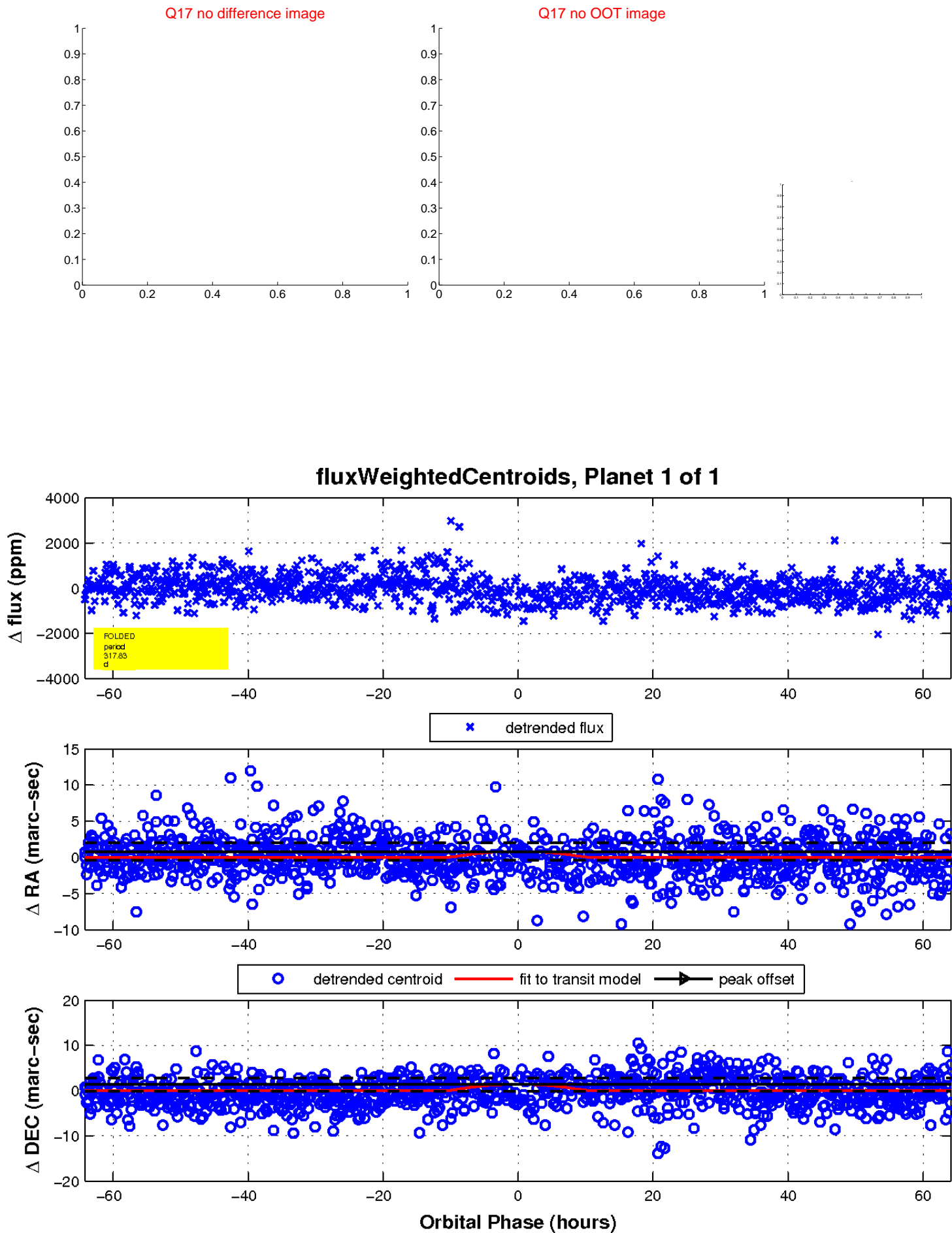
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

