

KIC 008239980

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})
008239980-01	OBS	No	371.400724	230.403658	1619.7	7.775	8.0	7.8	0.81	5348	3.62	0.50

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008239980-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—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.

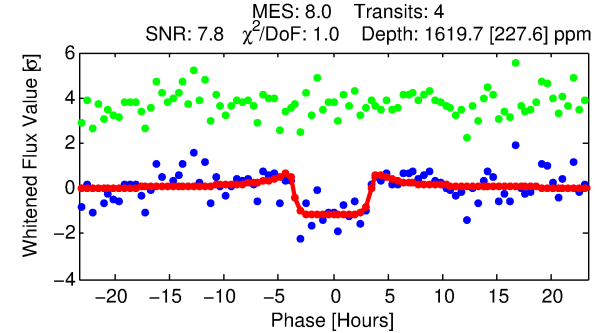
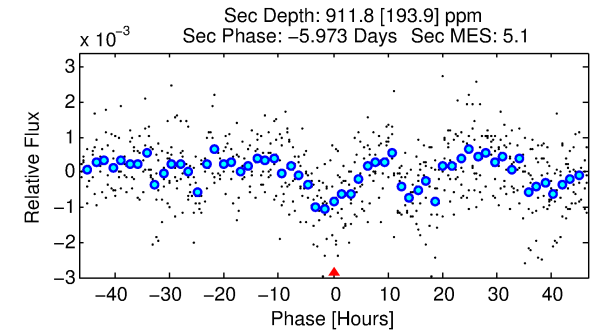
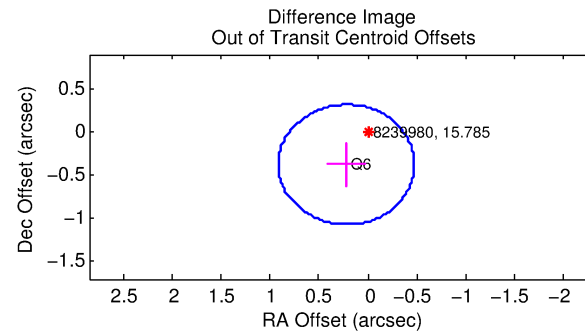
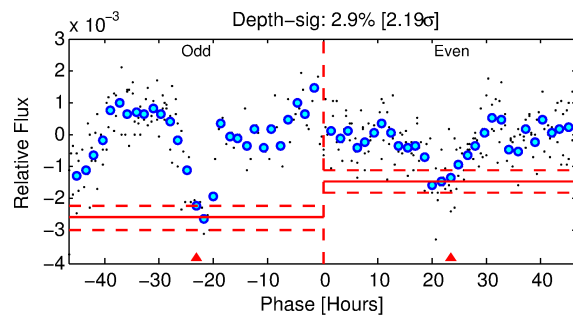
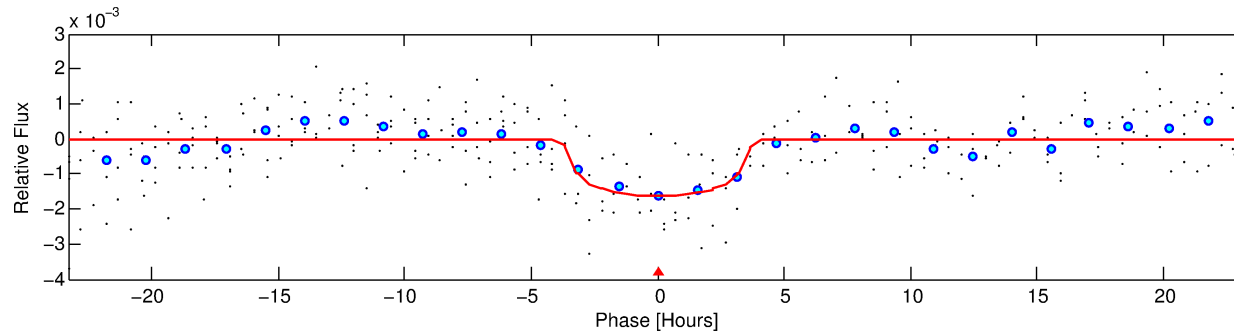
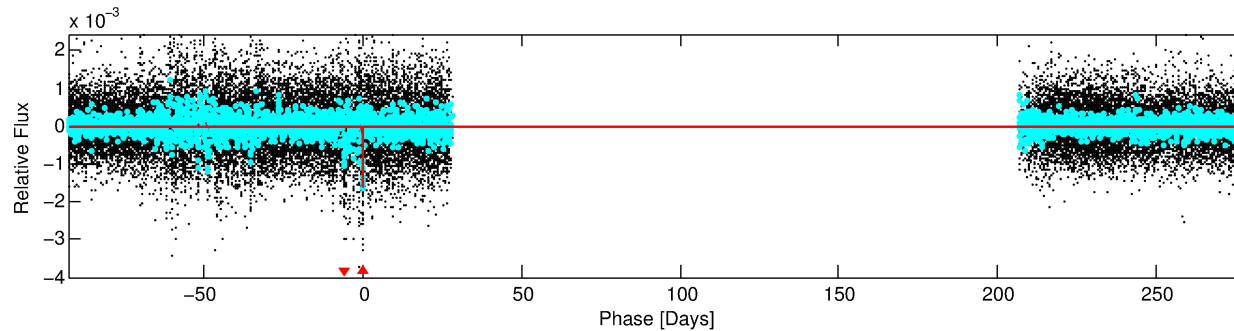
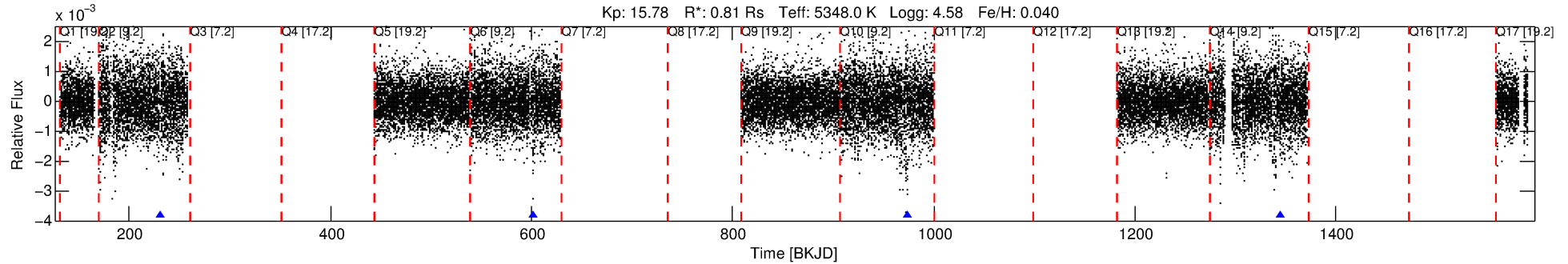
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008239980-01

No Significant Match Found

DV One-Page Summary

KIC: 8239980 Candidate: 1 of 1 Period: 371.401 d



DV Fit Results:

Period = 371.40072 [0.00672] d
Epoch = 230.4037 [0.0137] BKJD
Rp/R* = 0.0410 [0.0067]
a/R* = 245.65 [128.75]
b = 0.79 [0.25]
Seff = 0.50 [0.13]
Teq = 215 [14] K
Rp = 3.62 [0.88] Re
a = 0.9762 [0.1510] AU
Ag = 36433.83 [16450.39] [2.21 σ]
Teff = 4588 [471] K [9.29 σ]

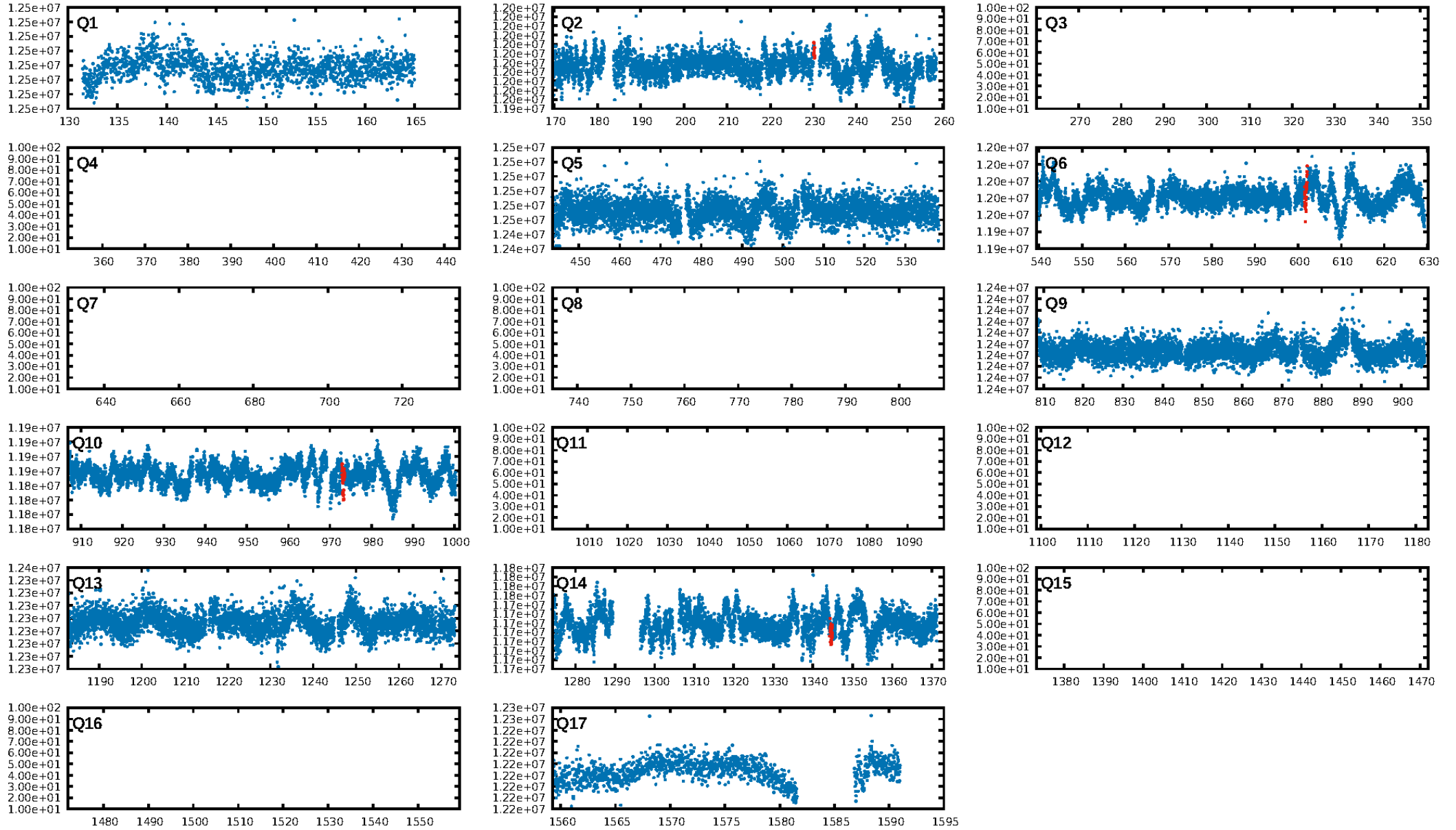
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 14.6%
ModelChiSquareGof-sig: 99.7%
Bootstrap-pfa: 8.75e-09
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -12.34
Centroid-sig: 78.1%
Centroid-so: 1.578 arcsec [0.72 σ]
OotOffset-rm: 0.437 arcsec [1.89 σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-rm: 0.460 arcsec [1.90 σ]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [3/3]

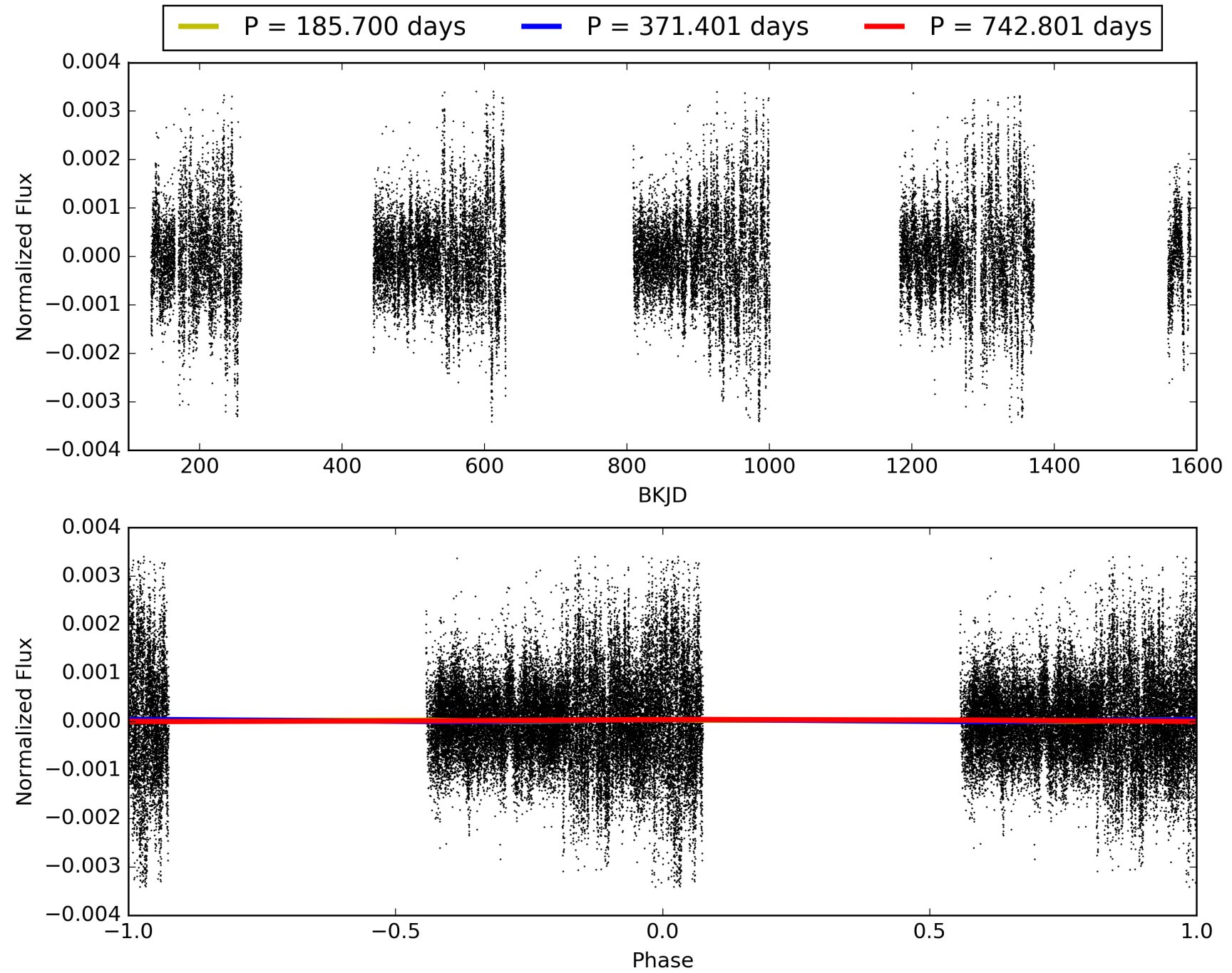
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:19:41 Z

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

TCE 008239980-01, PDC Light Curves

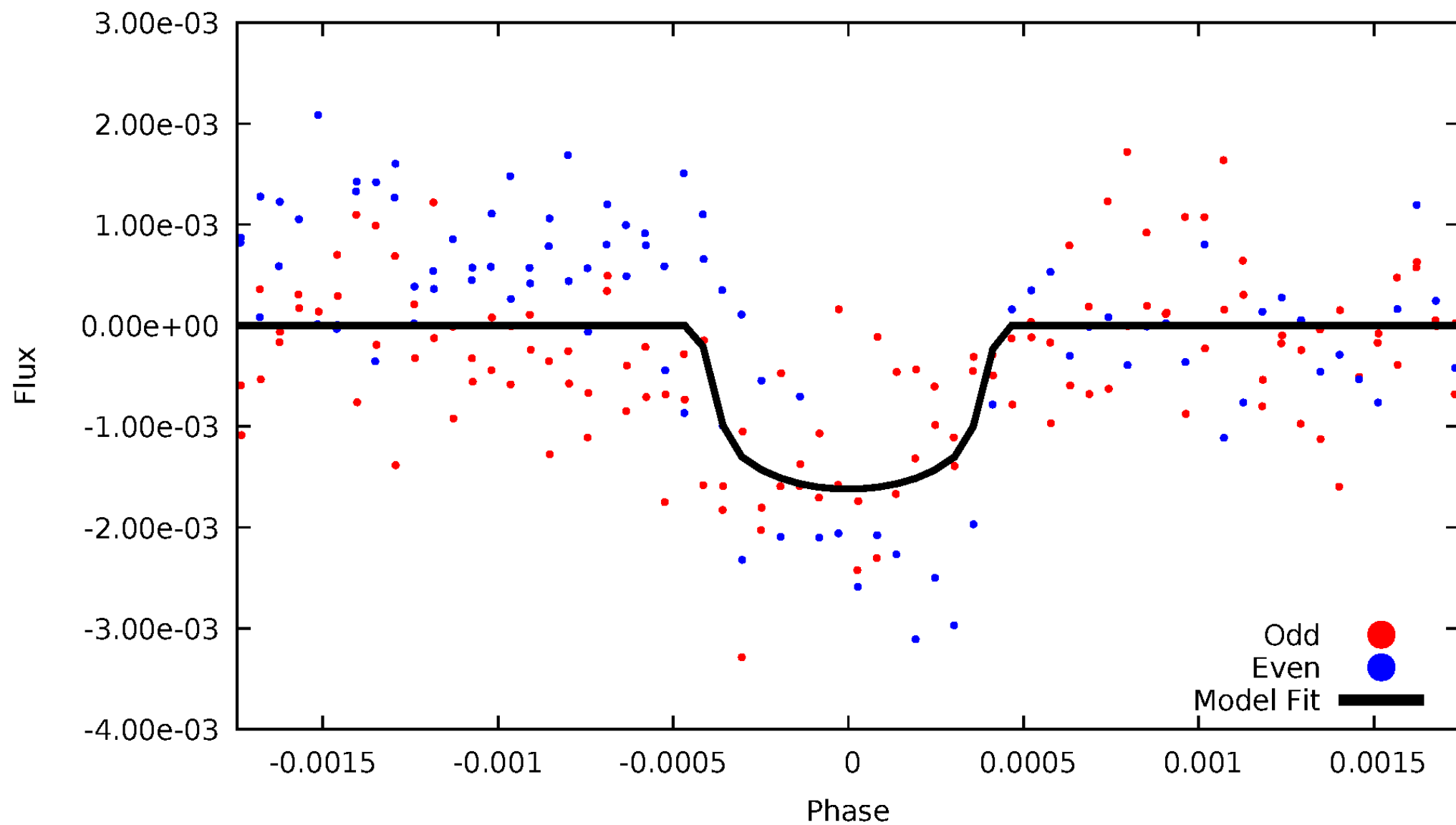


TCE 008239980-01



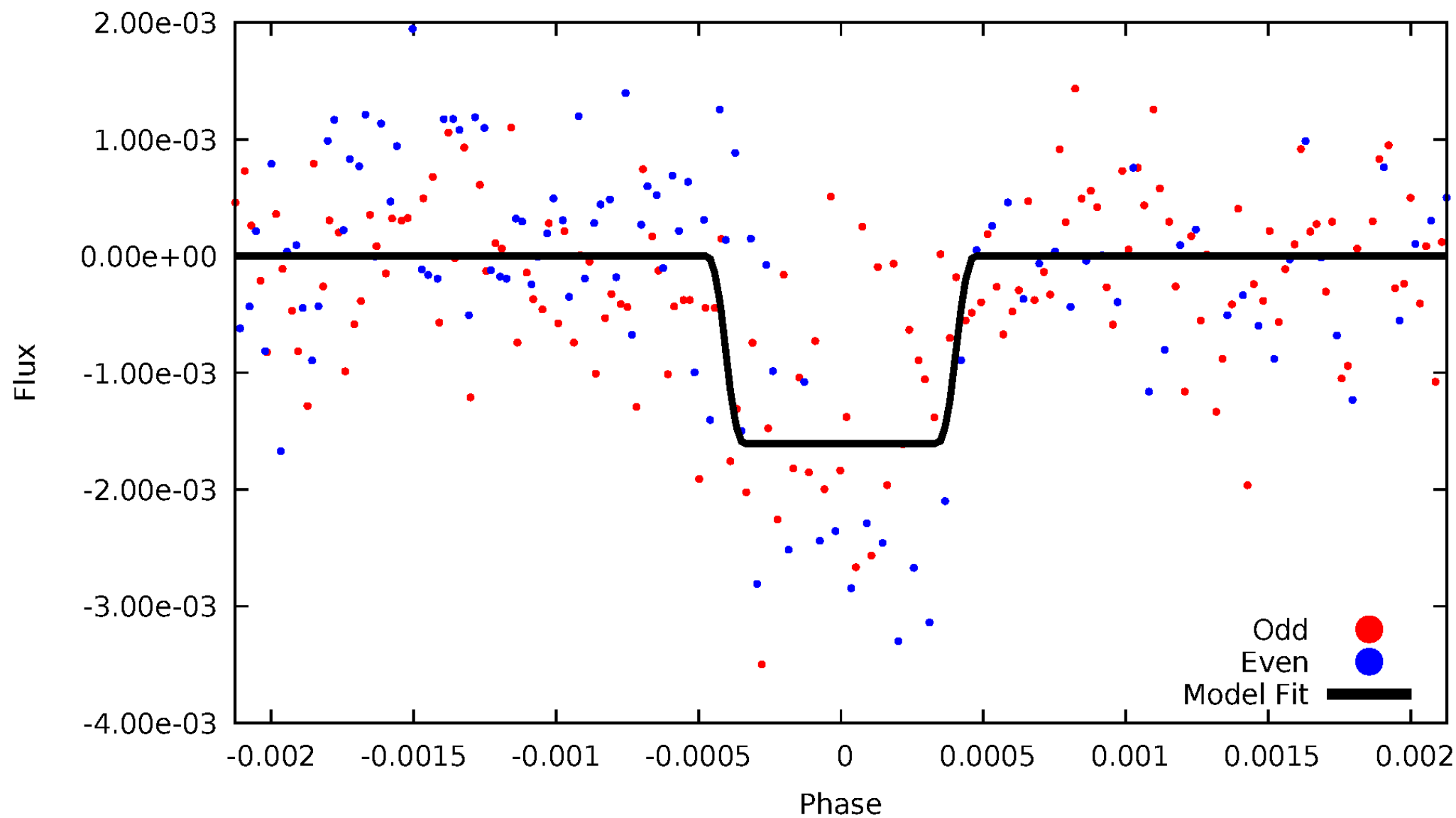
DV Odd/Even

TCE 008239980-01



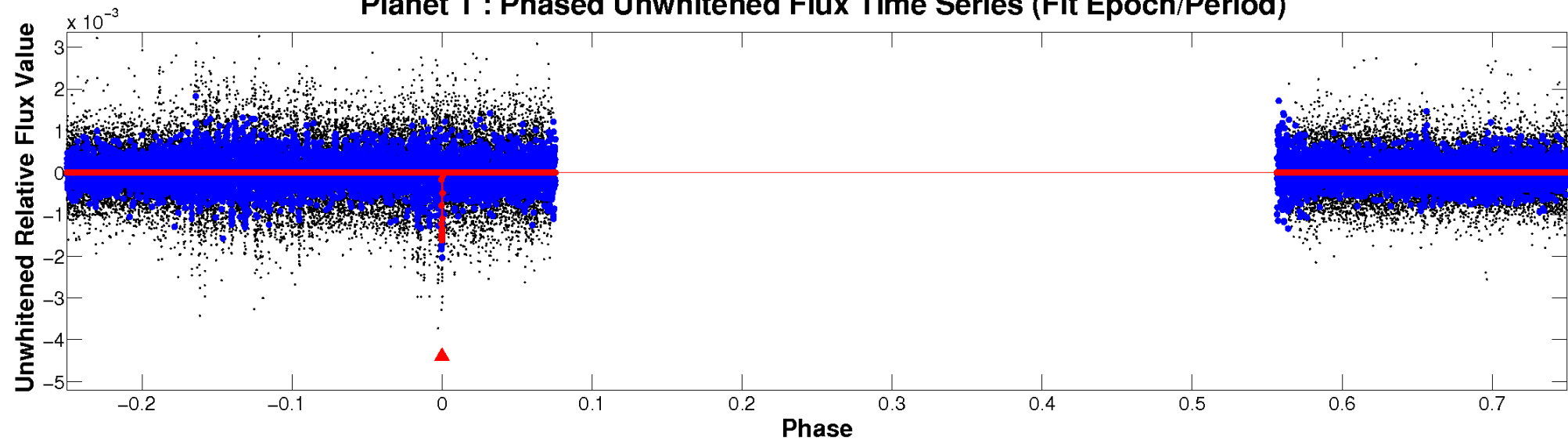
ALT Odd/Even

TCE 008239980-01

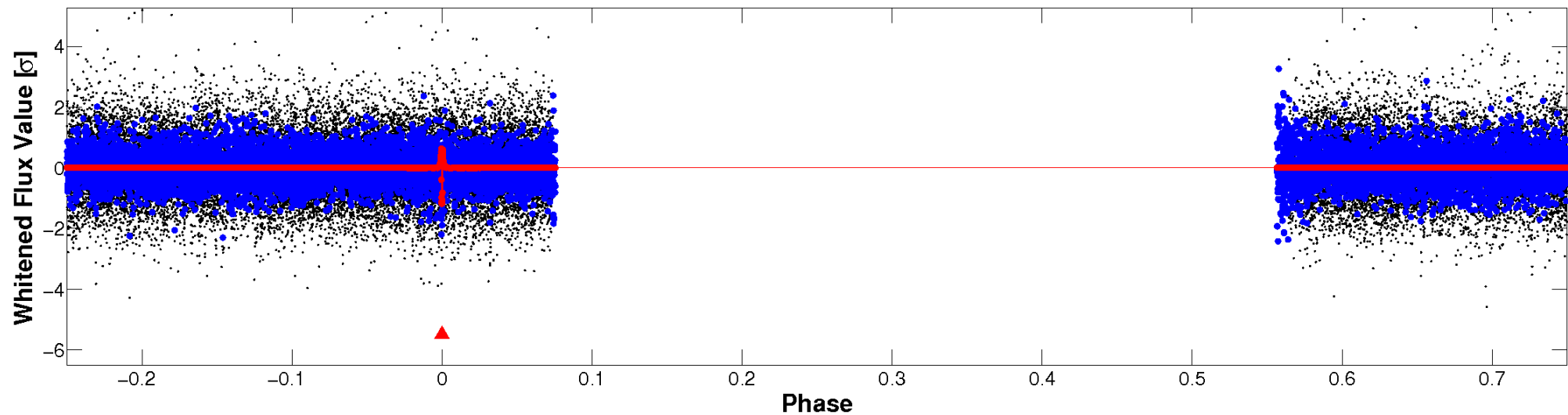


Non-Whitened Vs. Whitened Light Curve

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

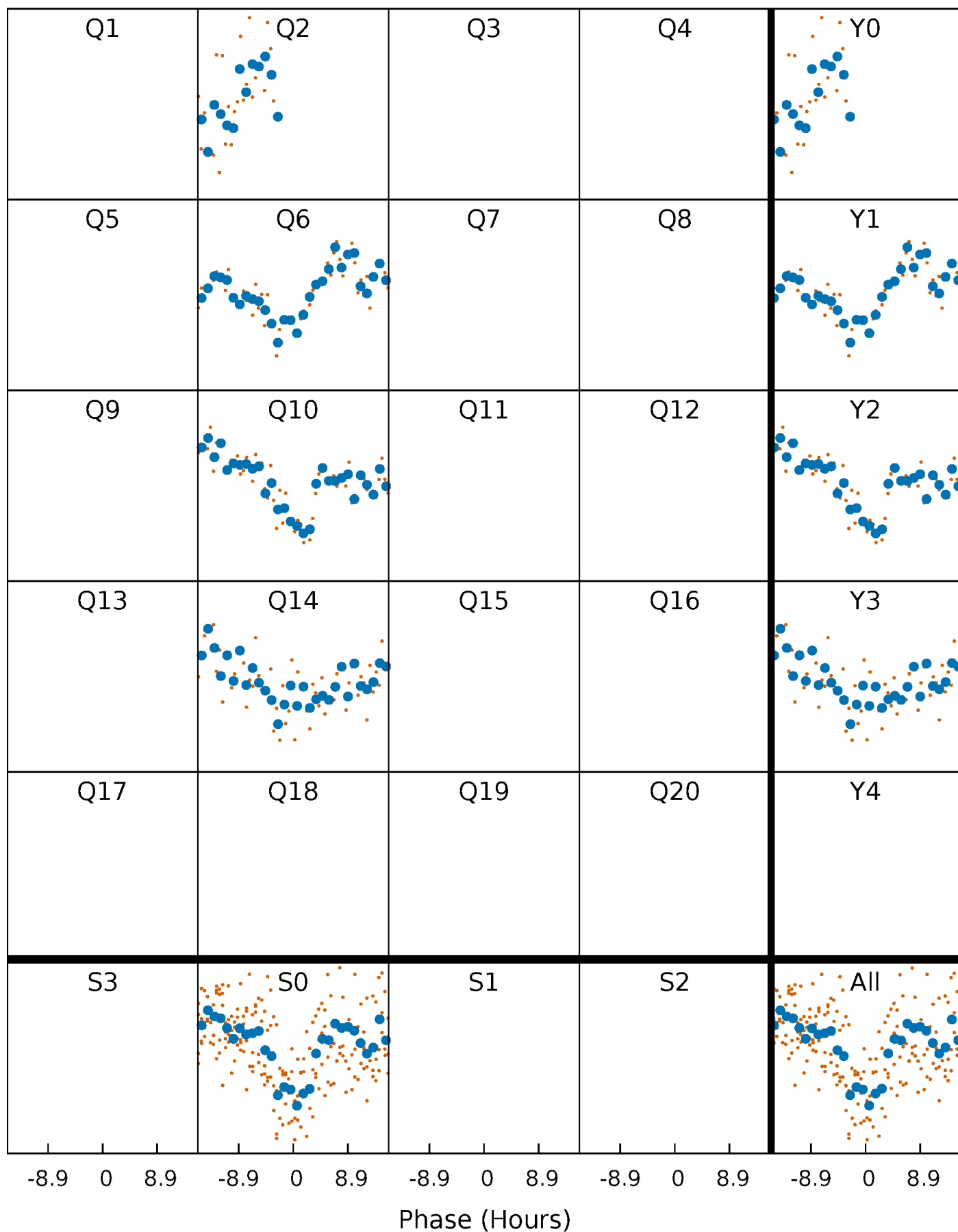


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



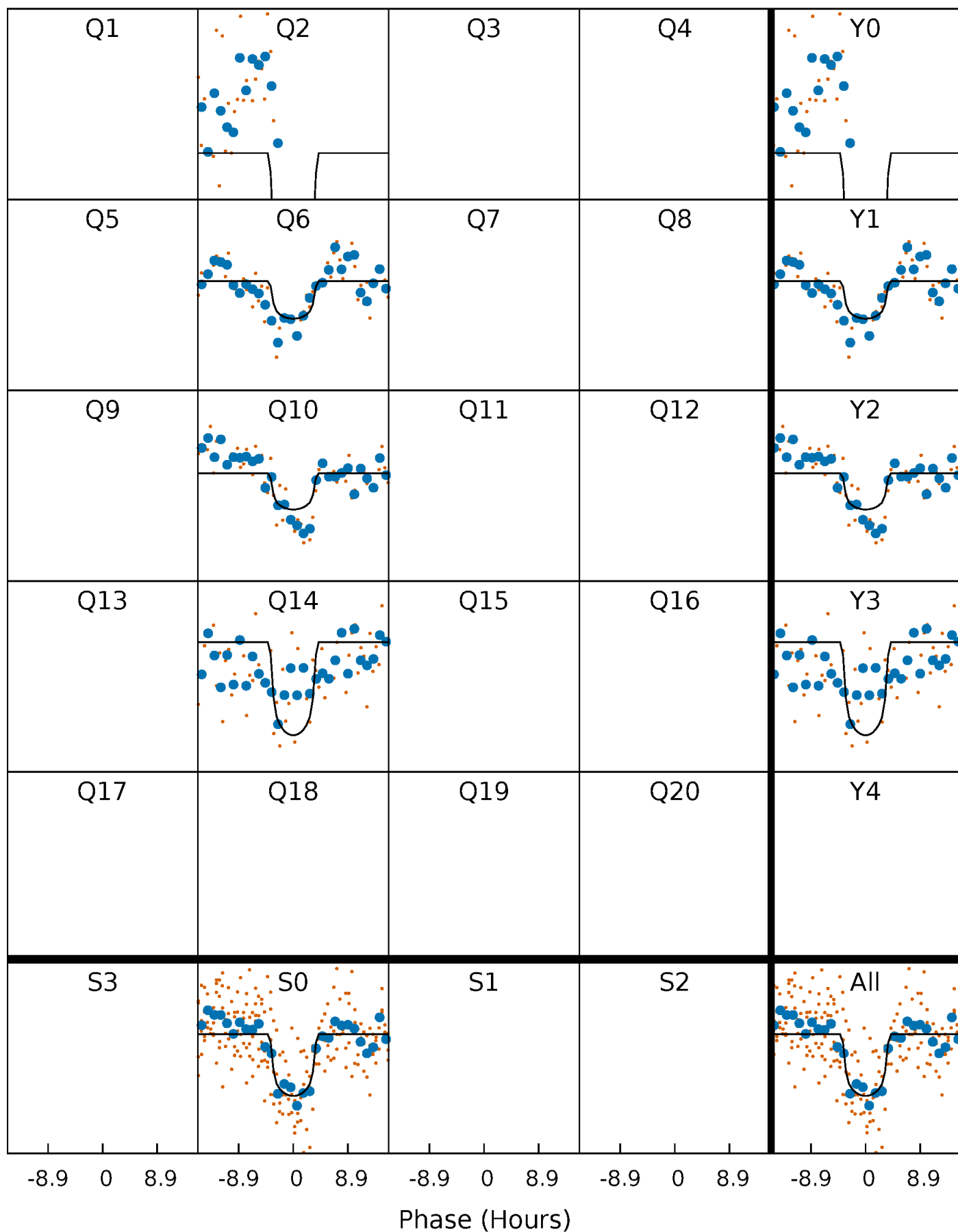
PDC Quarter-Phased Transit Curves

TCE 008239980-01 P=371.400724 Days $T_0=230.403658$ (BKJD)



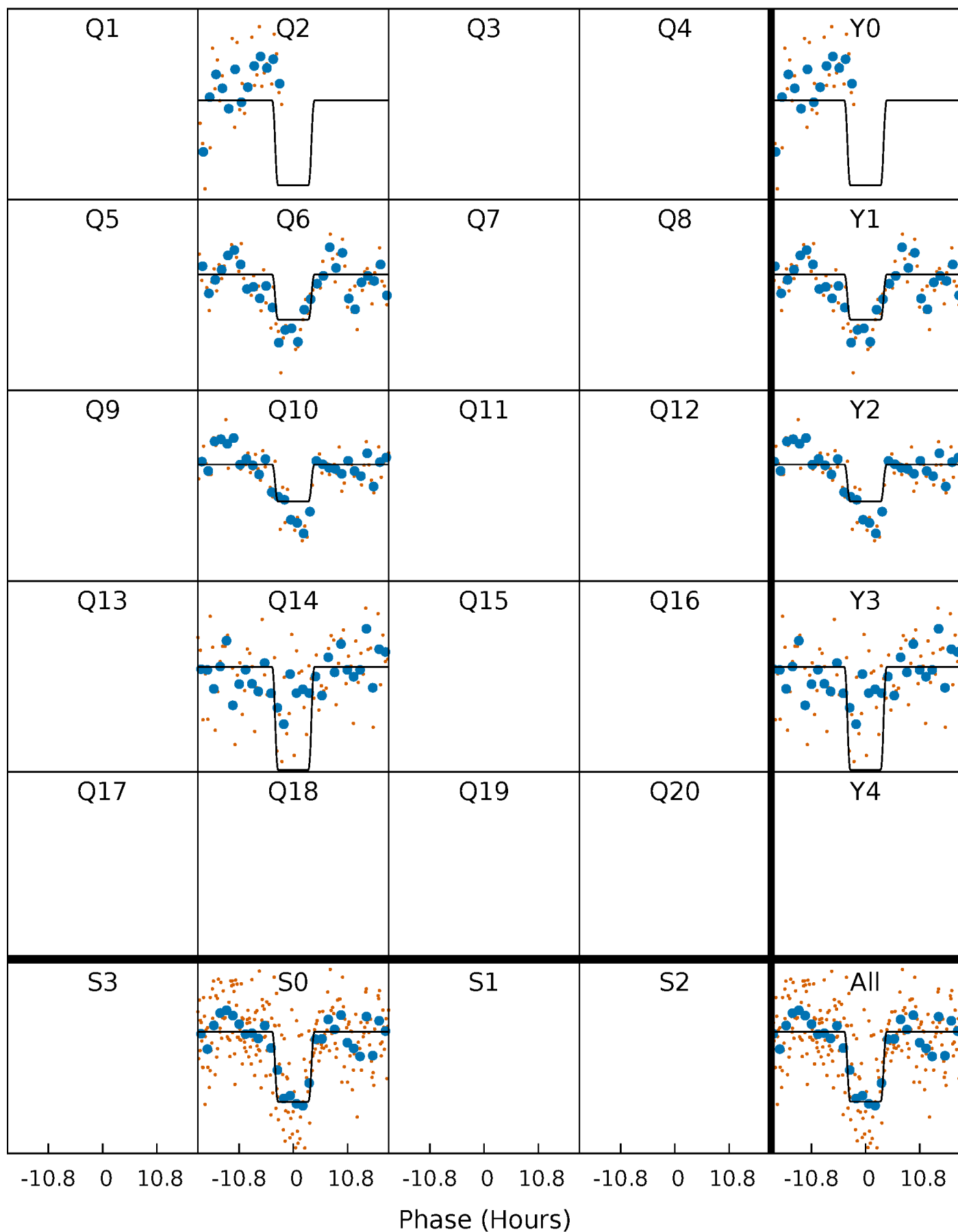
DV Quarter-Phased Transit Curves

TCE 008239980-01 P=371.400724 Days $T_0=230.403658$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

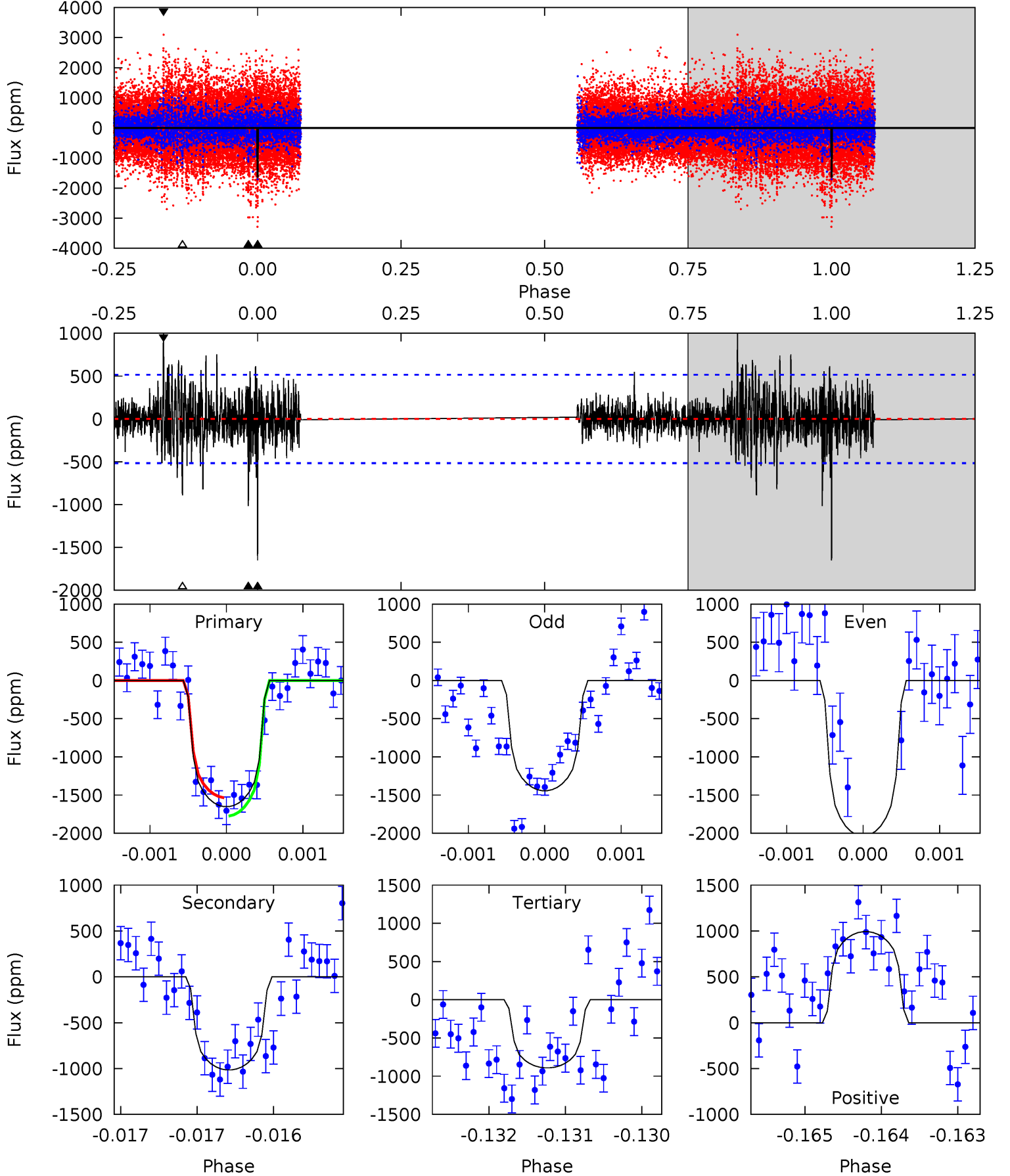
TCE 008239980-01 $P=371.407198$ Days $T_0=230.387287$ (BKJD)



DV Model-Shift Uniqueness Test

008239980-01, P = 371.400724 Days, E = 230.403658 Days

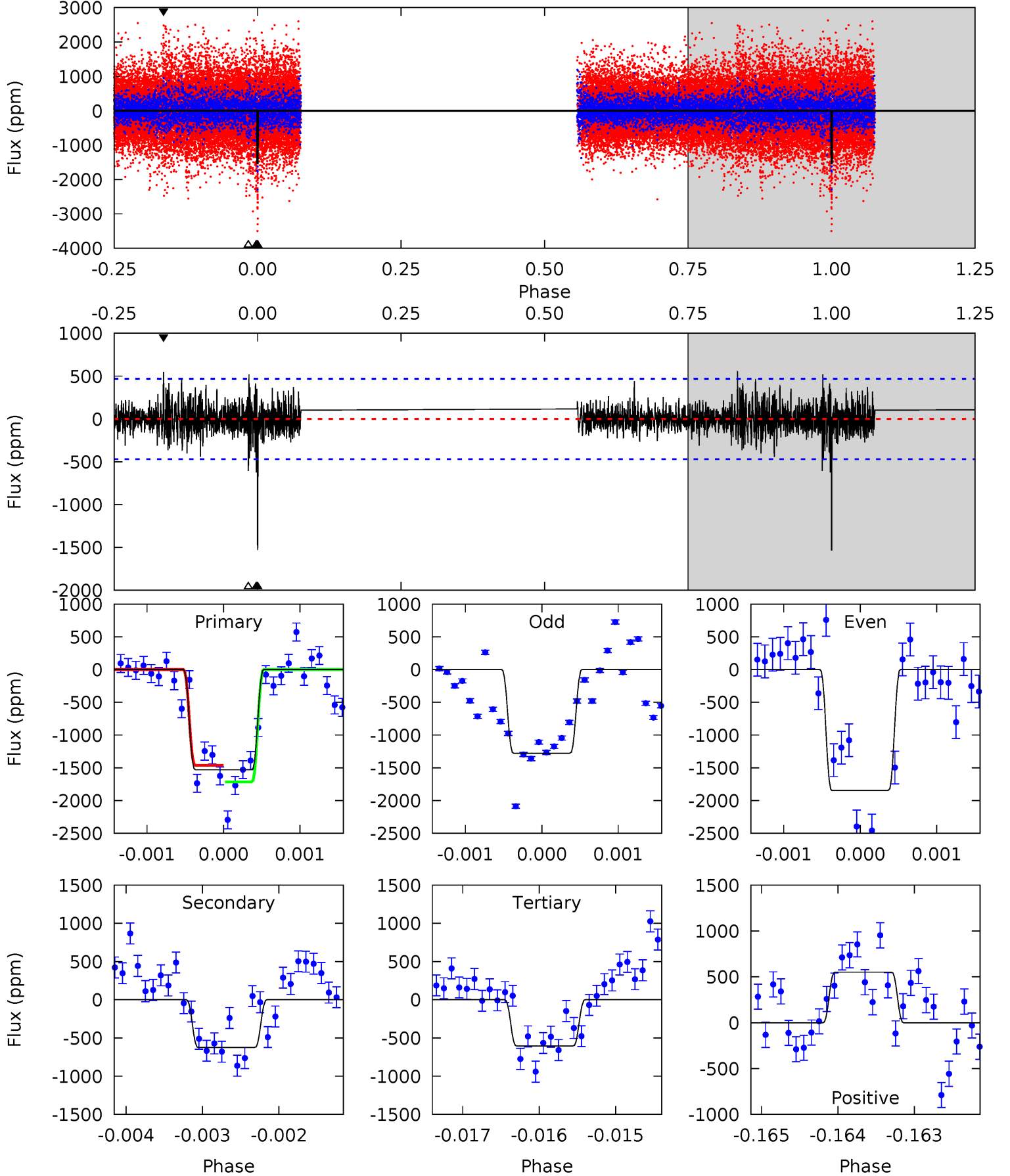
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.6	10.8	9.49	10.6	5.48	3.34	1.94	8.10	7.02	1.32	0.24	3.02	0.82	0.38	1.22



Alt Model-Shift Uniqueness Test

008239980-01, $P = 371.407198$ Days, $E = 230.387287$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.9	7.29	7.06	6.42	5.47	3.32	1.37	10.8	11.4	0.23	0.87	3.25	0.87	0.26	1.38



Stellar Parameters For KIC 008239980

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5348^{+176}_{-160}	$4.576^{+0.032}_{-0.128}$	$0.040^{+0.250}_{-0.300}$	$0.809^{+0.145}_{-0.067}$	$0.901^{+0.071}_{-0.097}$	$2.393^{+0.401}_{-0.889}$
	+3%/-3%	+1%/-3%	+625%/-750%	+18%/-8%	+8%/-11%	+17%/-37%
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 008239980-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1015 ± 94	$3.78^{+0.69}_{-0.66}$	306^{+15}_{-13}	4778^{+449}_{-307}	36519^{+17799}_{-10064}
Alt.	-625 ± 86	$3.65^{+0.68}_{-0.67}$	305^{+16}_{-12}	4403^{+400}_{-308}	24054^{+12595}_{-7499}

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

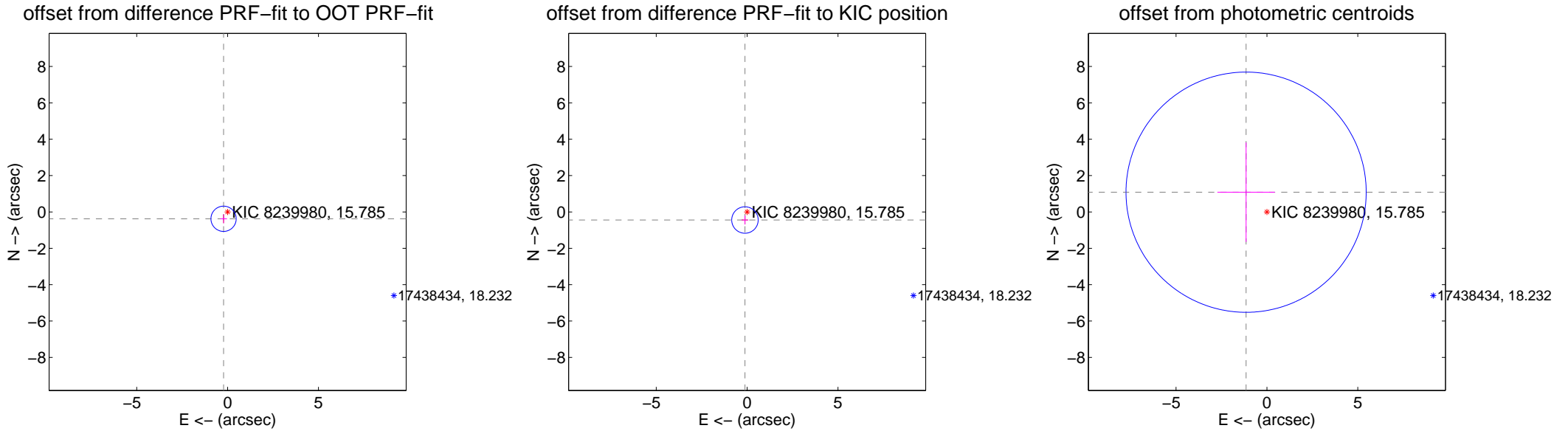
DV Centroid Data

Supplemental centroid analysis for 008239980-01. Kepler magnitude: 15.79. Transit SNR 7.76

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.437 ± 0.232	1.89	0.221 ± 0.182	-0.377 ± 0.246
PRF-fit source offset from KIC position	0.460 ± 0.243	1.90	0.120 ± 0.182	-0.445 ± 0.246
photometric centroid source offset	1.58 ± 2.20	0.72	1.15 ± 1.58	1.09 ± 2.73

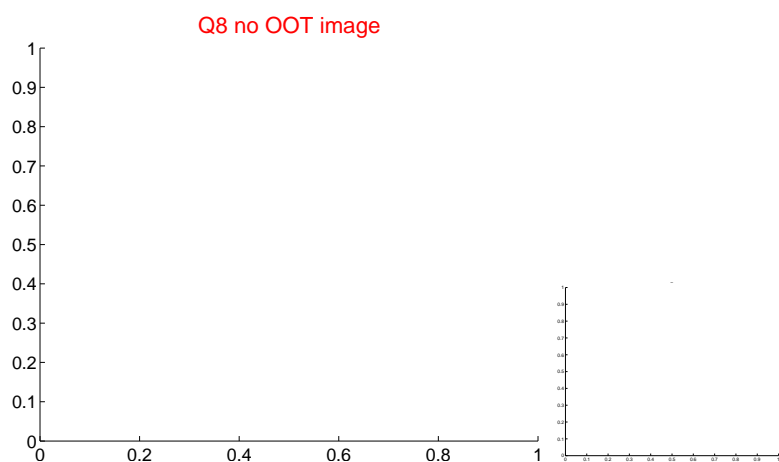
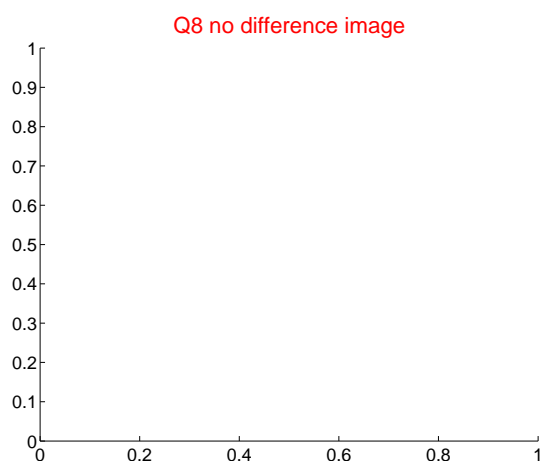
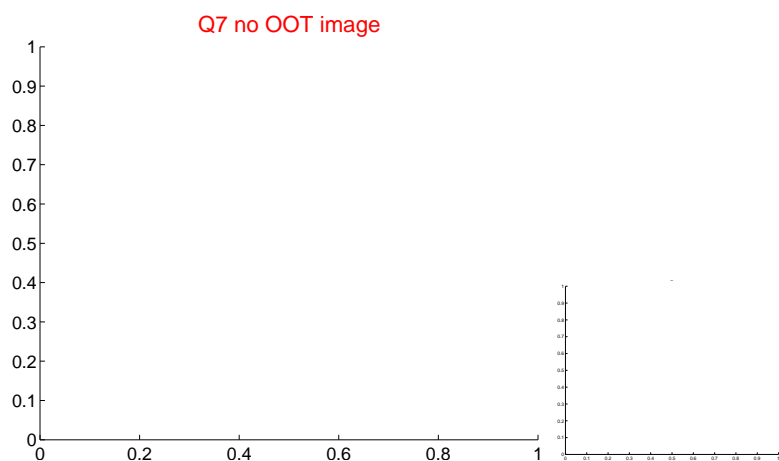
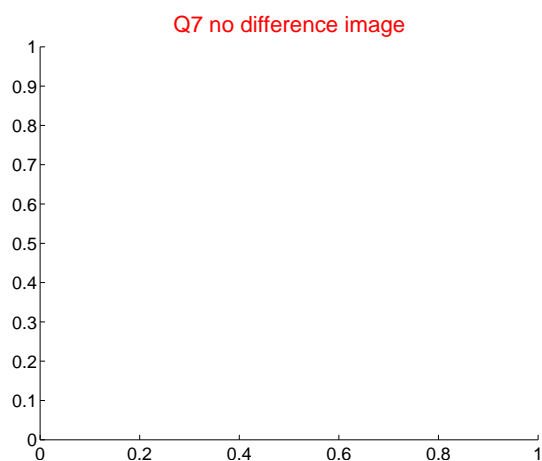
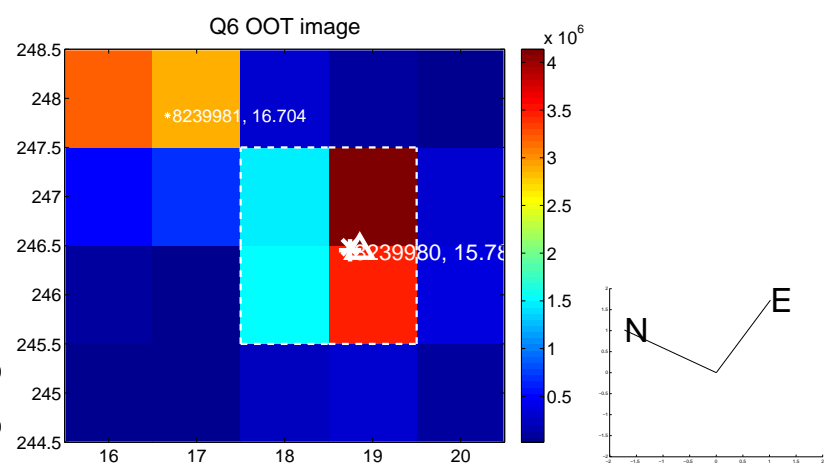
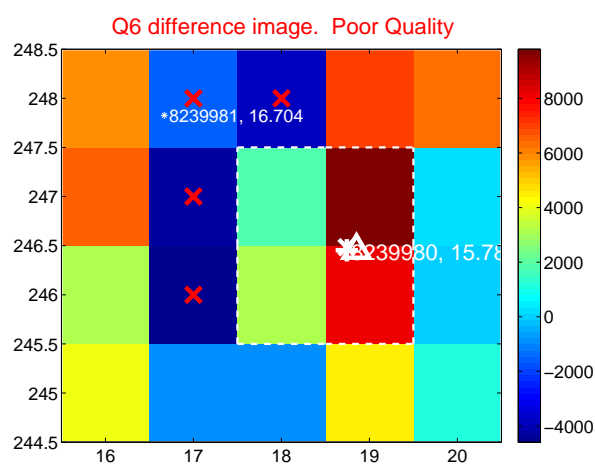
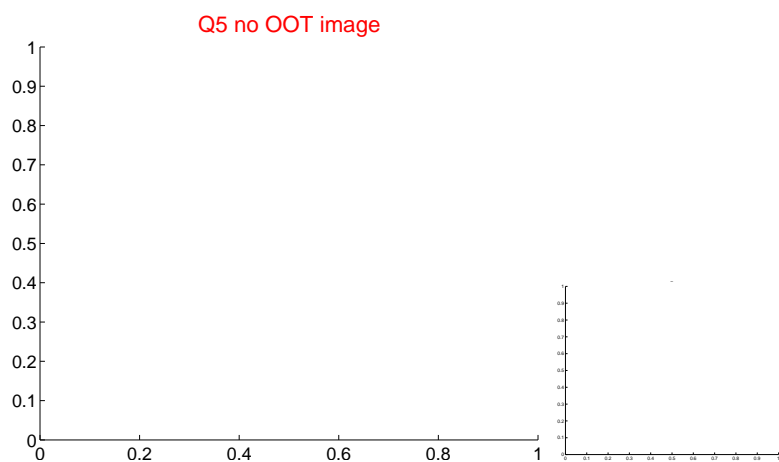
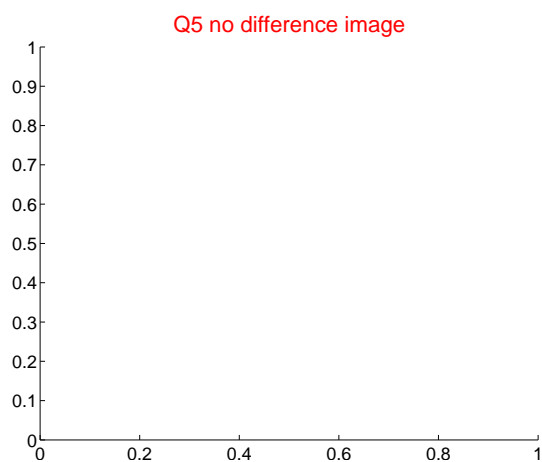


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

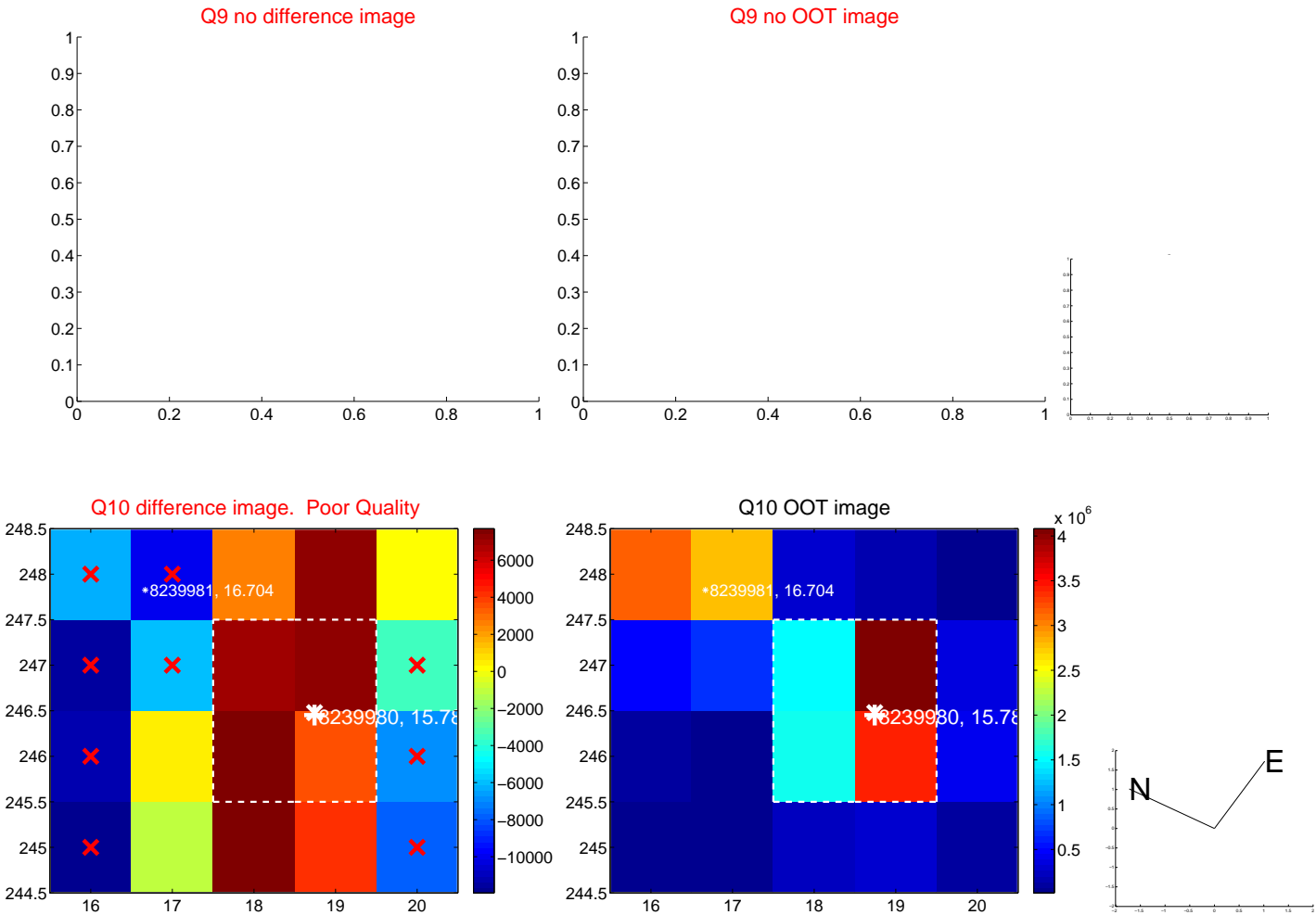
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



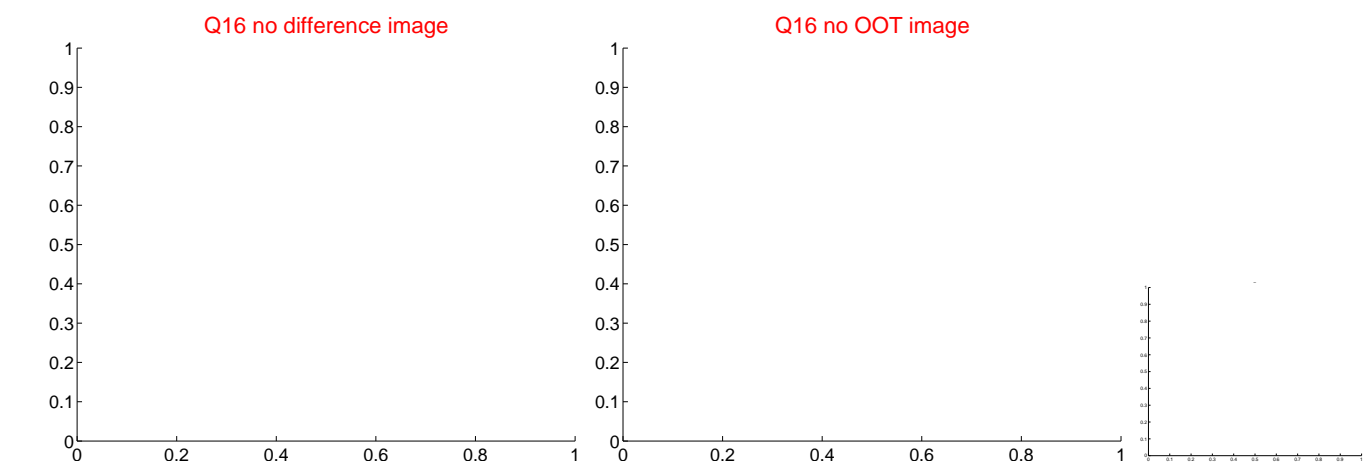
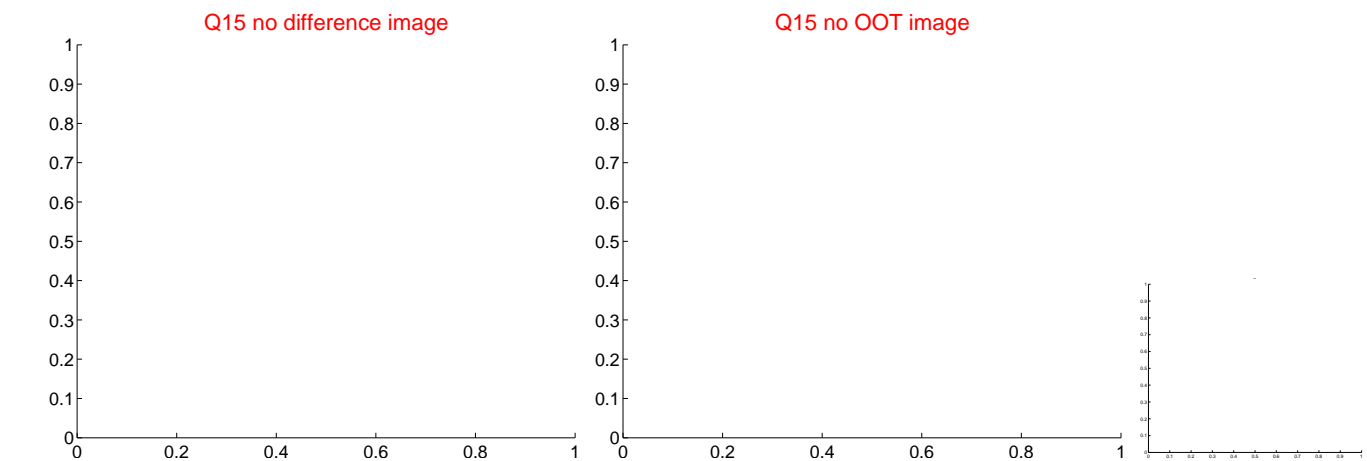
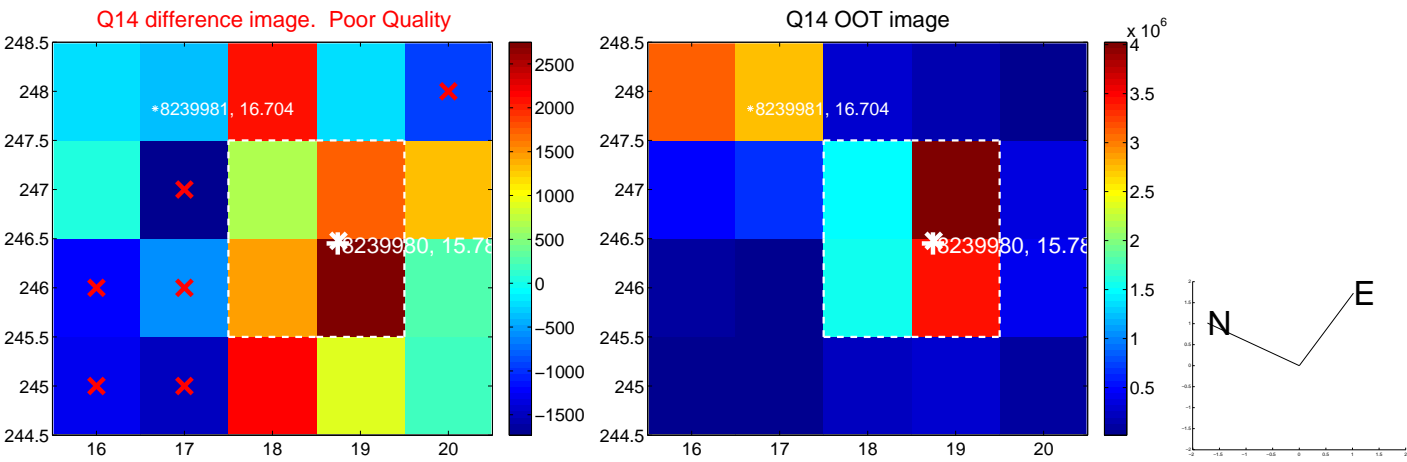
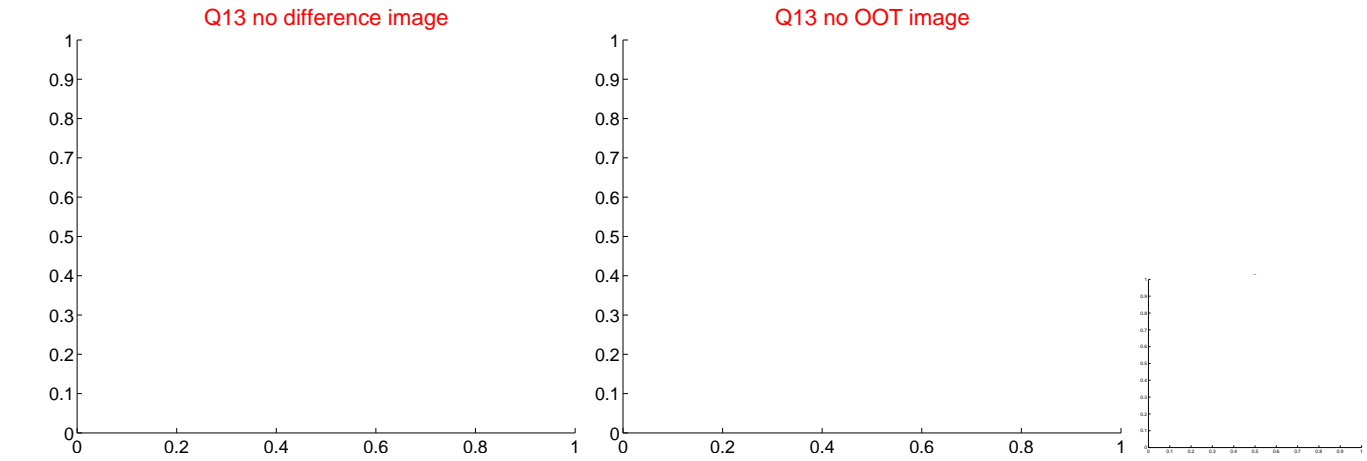
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



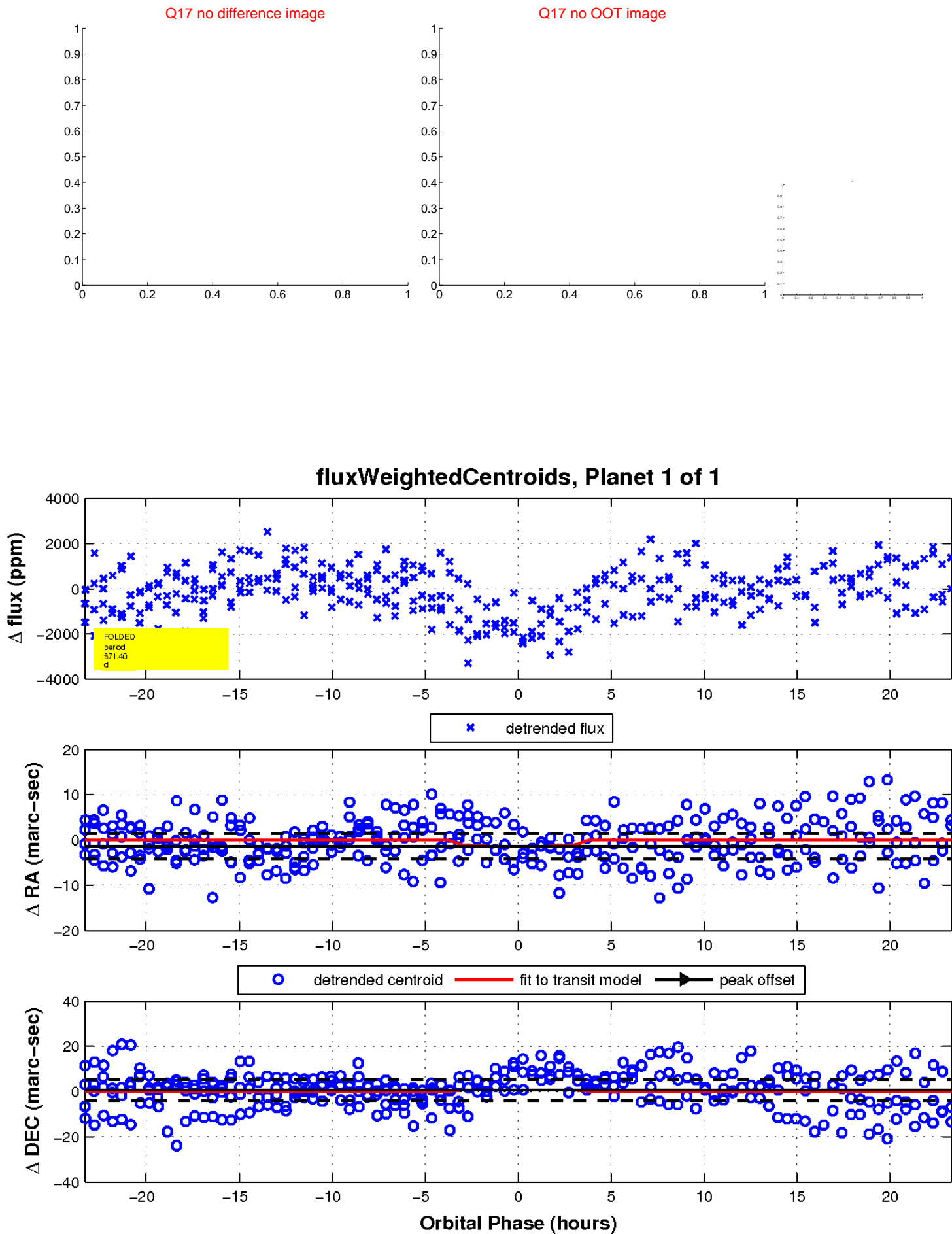
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



white ×: 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.



UKIRT Image

