

KIC 008022338

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})
008022338-01	OBS	No	370.418624	269.430272	2628.6	73.647	8.5	13.2	0.88	5543	8.65	0.67

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008022338-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—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.

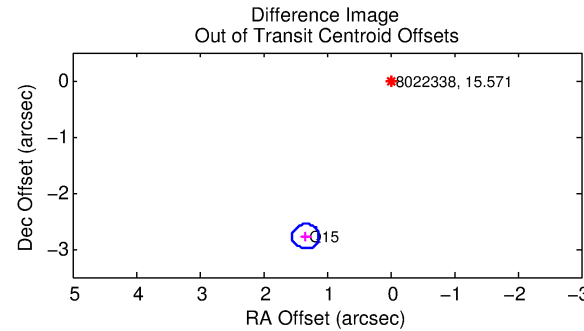
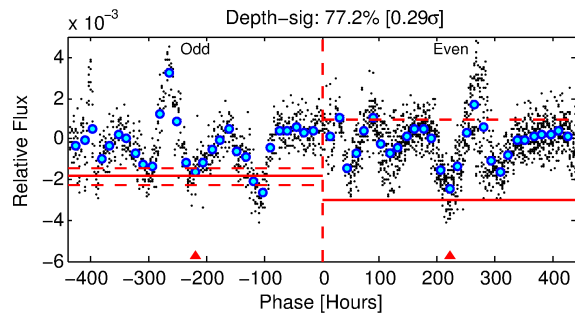
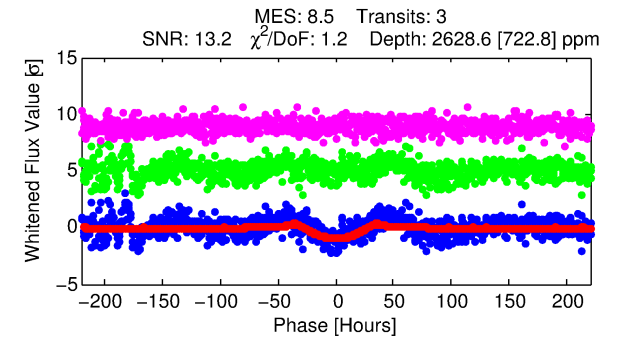
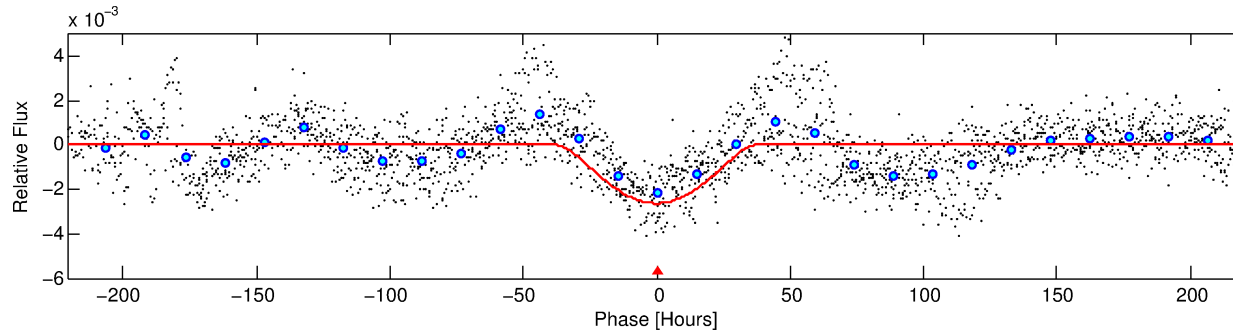
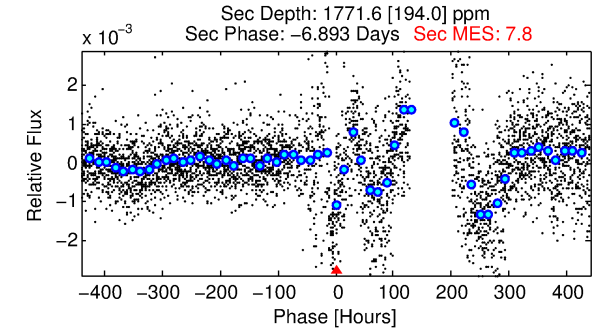
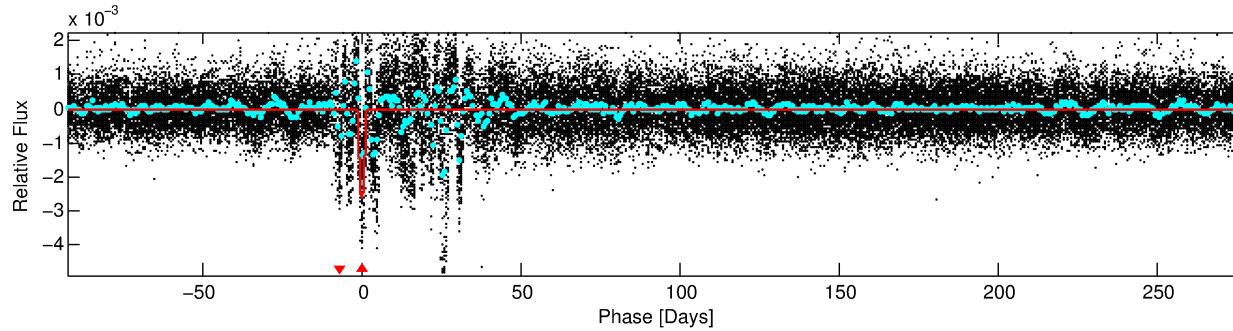
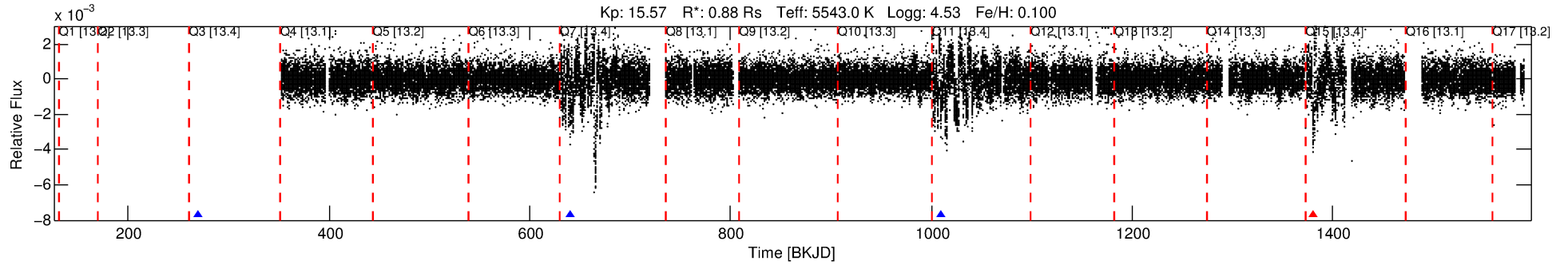
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008022338-01

No Significant Match Found

DV One-Page Summary

KIC: 8022338 Candidate: 1 of 1 Period: 370.419 d



DV Fit Results:

Period = 370.41862 [0.07114] d
Epoch = 269.4303 [0.1671] BKJD
Rp/R* = 0.0898 [0.1591]
a/R* = 16.69 [5.87]
b = 1.00 [0.24]
Seff = 0.67 [0.23]
Teq = 230 [20] K
Rp = 8.65 [15.50] Re
a = 0.9957 [0.2232] AU
Ag = 12907.91 [45949.43] [0.28σ]
Teff = 3795 [3366] K [1.06σ]

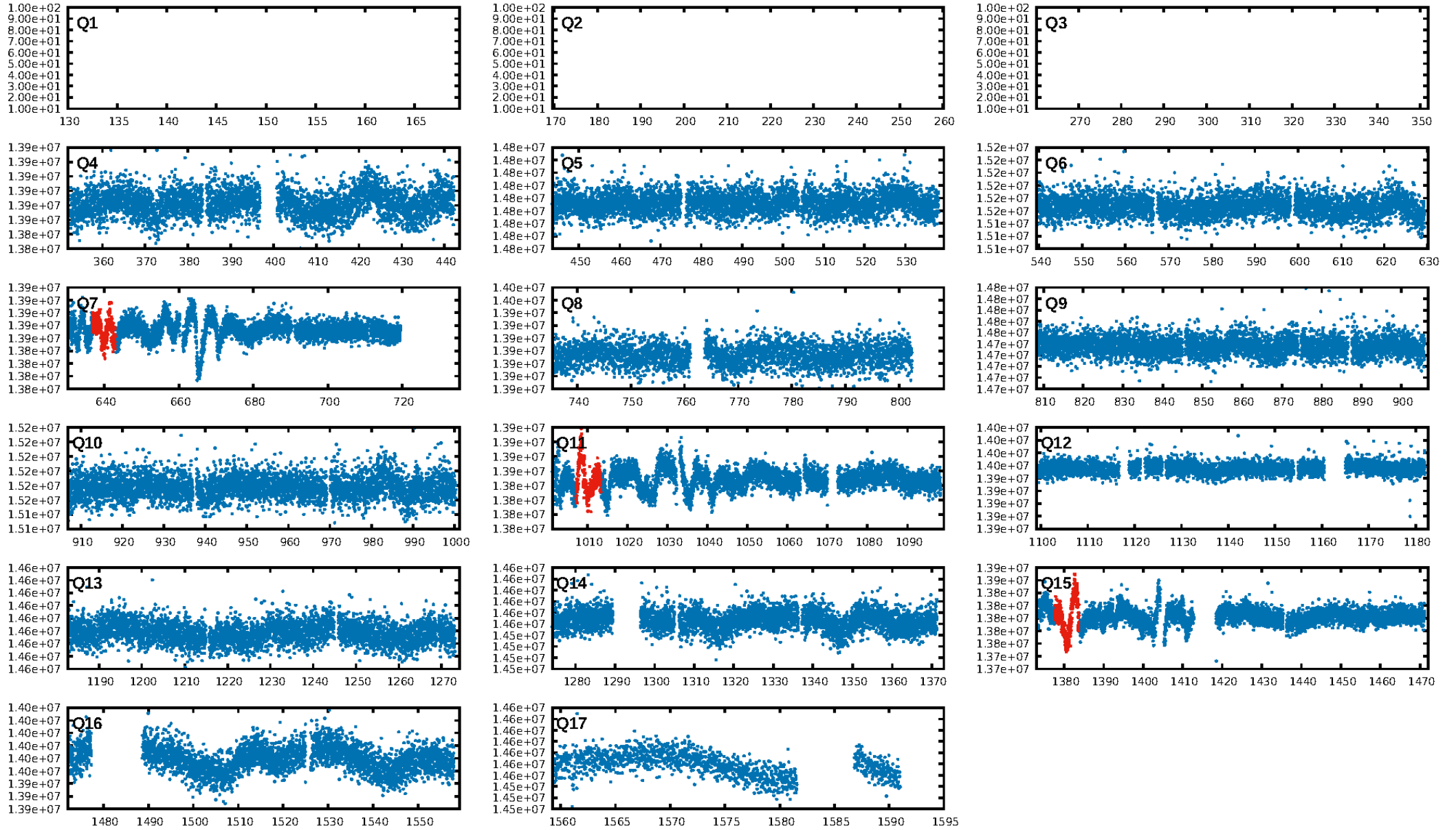
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 1.6%
ModelChiSquareGoF-sig: 100.0%
Bootstrap-pfa: 2.90e-11
RollingBand-fgt: 0.67 [2/3]
GhostDiagnostic-chr: 10.1
Centroid-sig: 0.0%
Centroid-so: 2.527 arcsec [2.21σ]
OotOffset-rm: 3.081 arcsec [42.67σ]
KicOffset-rm: 0.606 arcsec [8.38σ]
OotOffset-st: 0/1/0/0 [1]
KicOffset-st: 0/1/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [1/1]

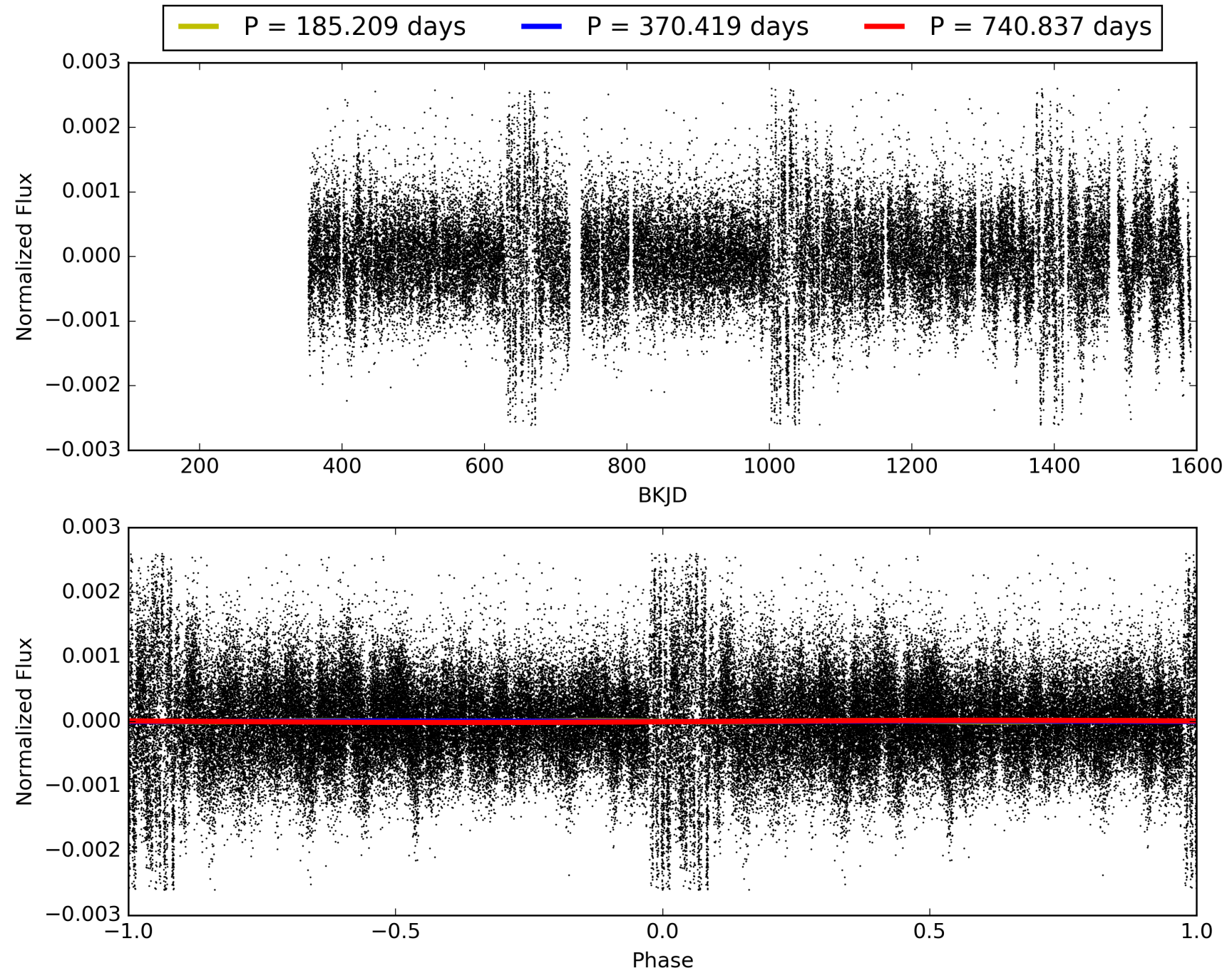
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 12:57:52 Z

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

TCE 008022338-01, PDC Light Curves

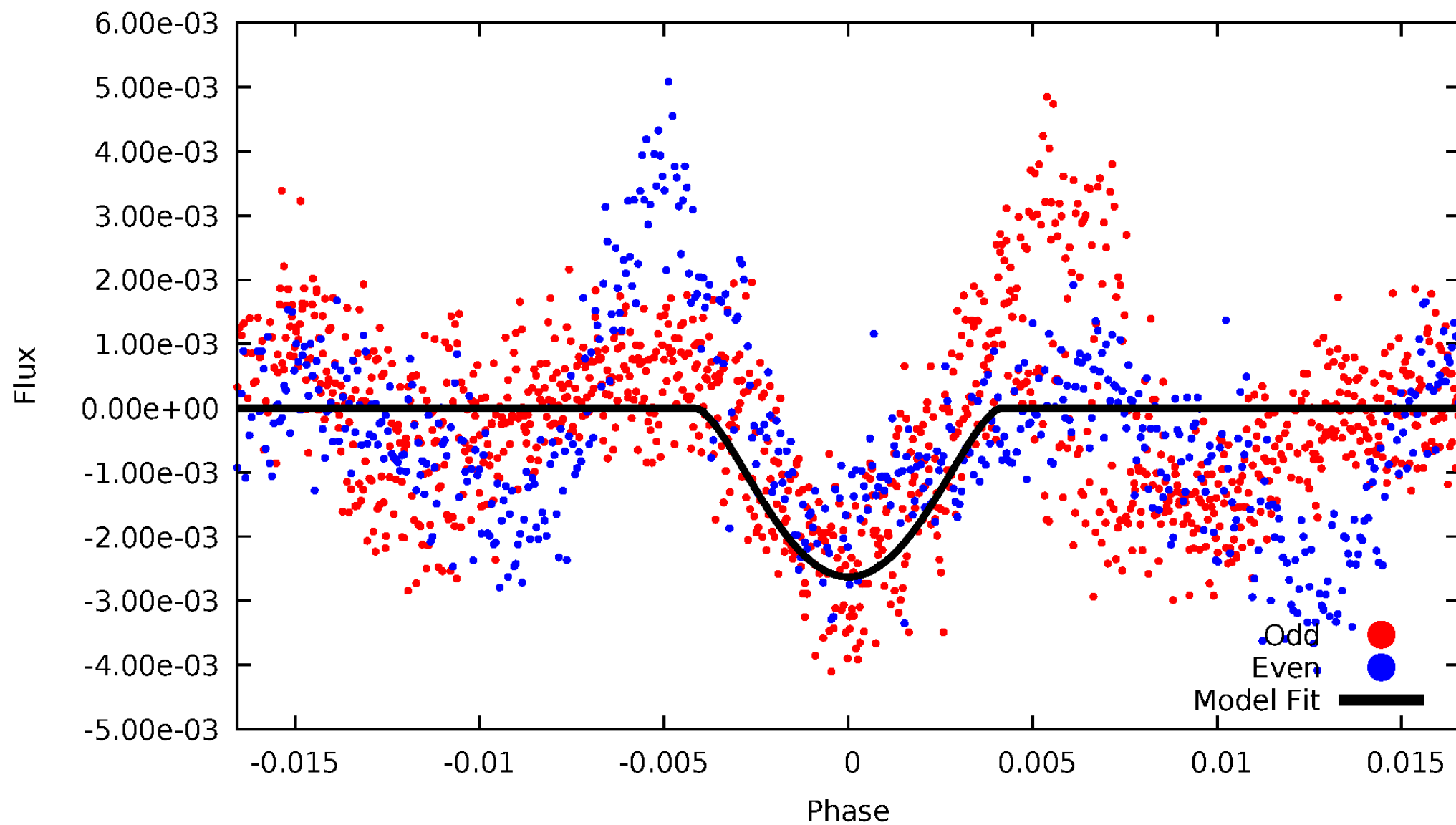


TCE 008022338-01



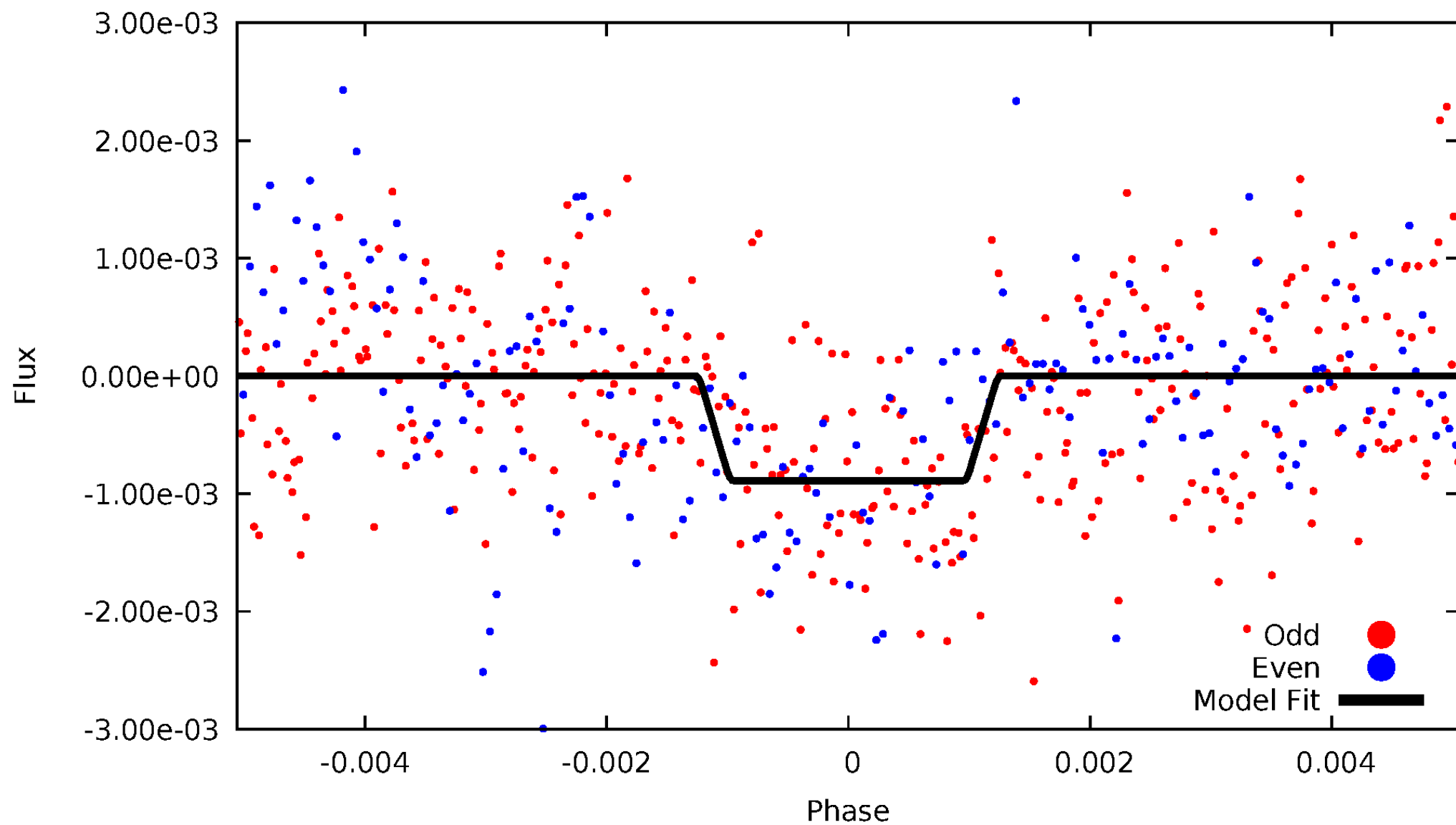
DV Odd/Even

TCE 008022338-01



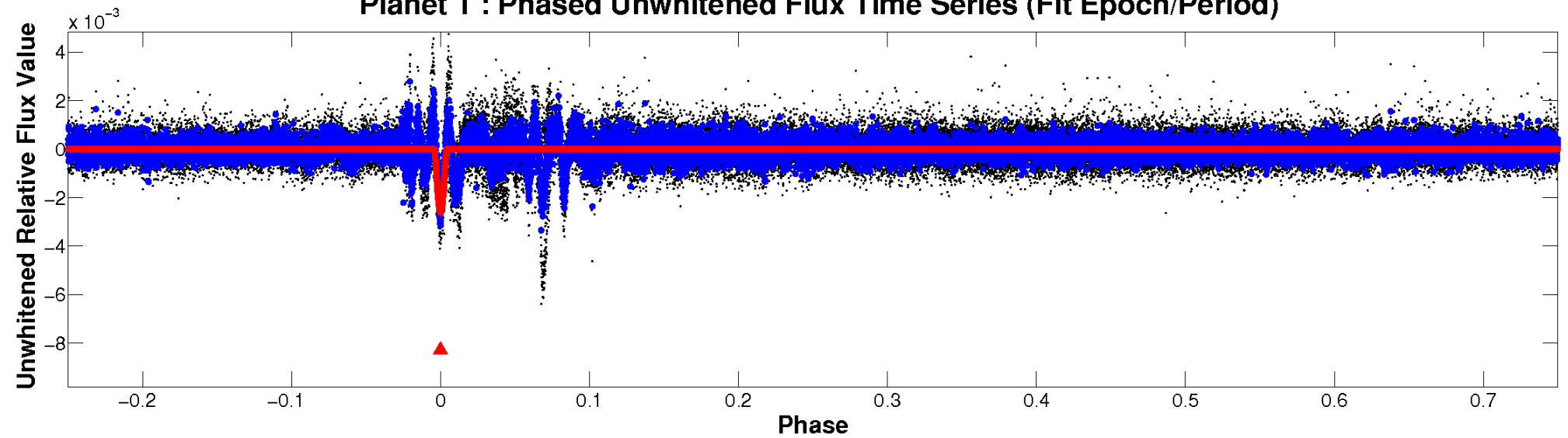
ALT Odd/Even

TCE 008022338-01

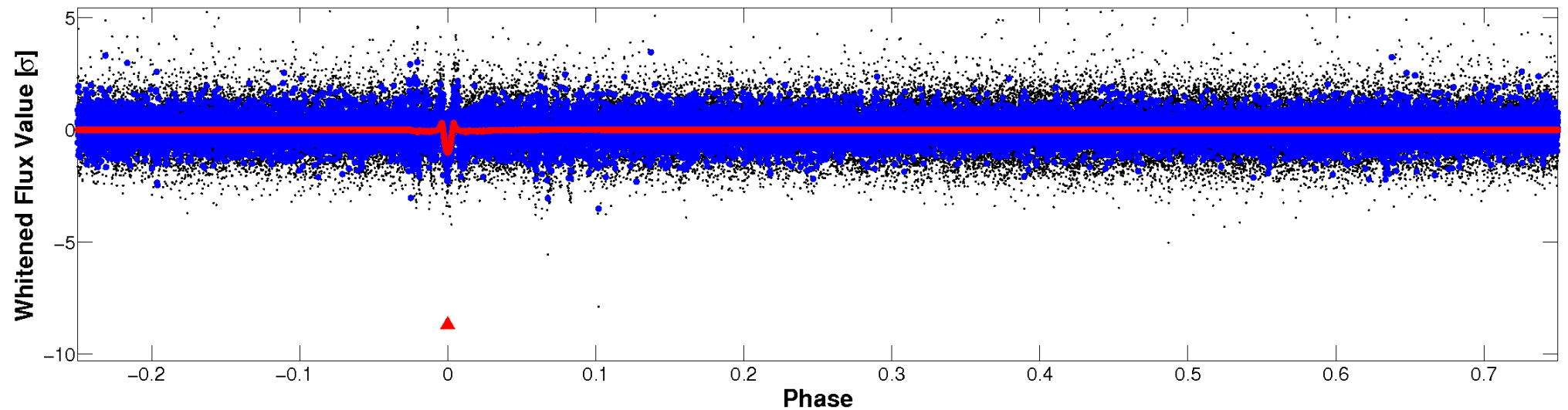


Non-Whitened Vs. Whitened Light Curve

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

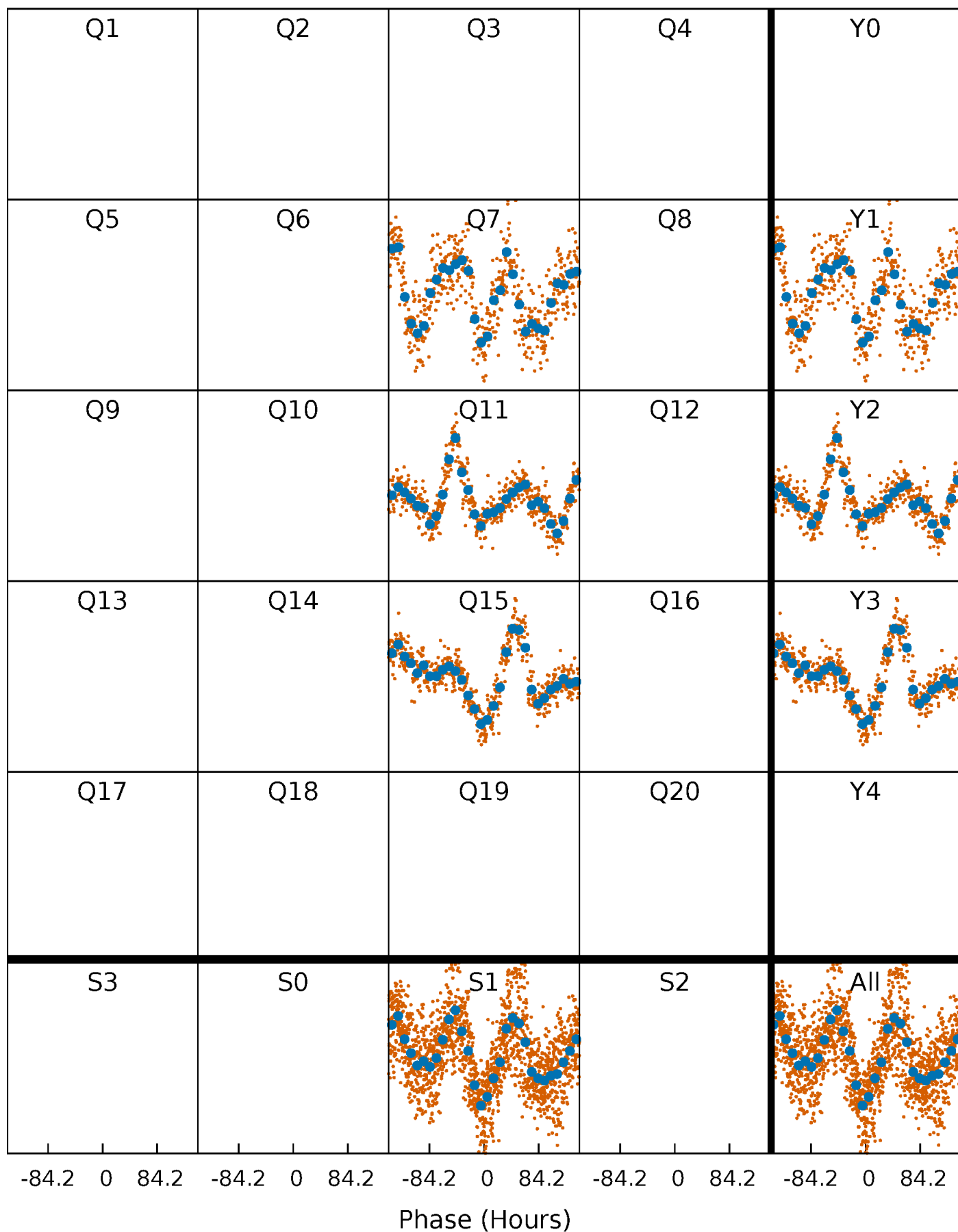


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



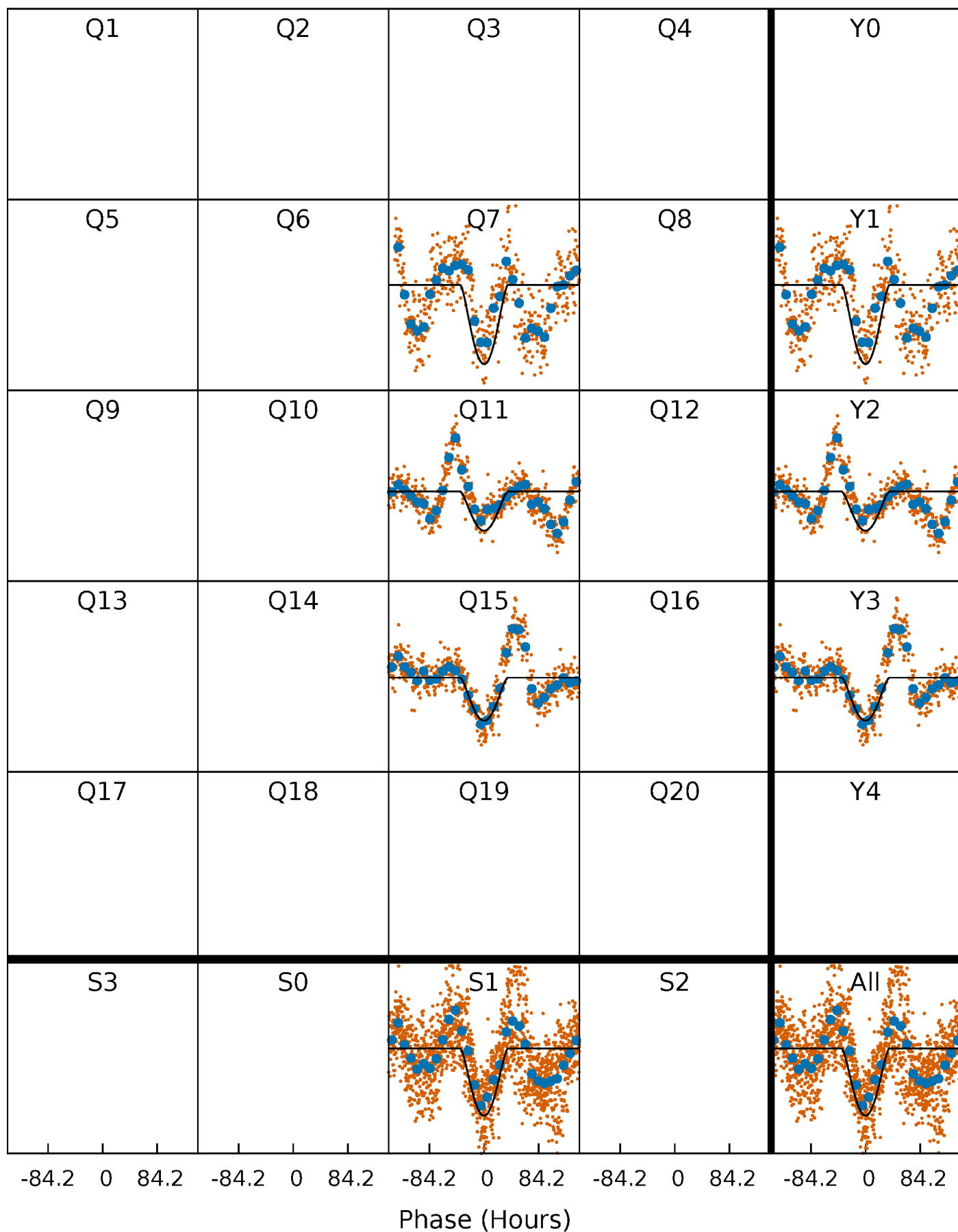
PDC Quarter-Phased Transit Curves

TCE 008022338-01 P=370.418624 Days $T_0=269.430272$ (BKJD)



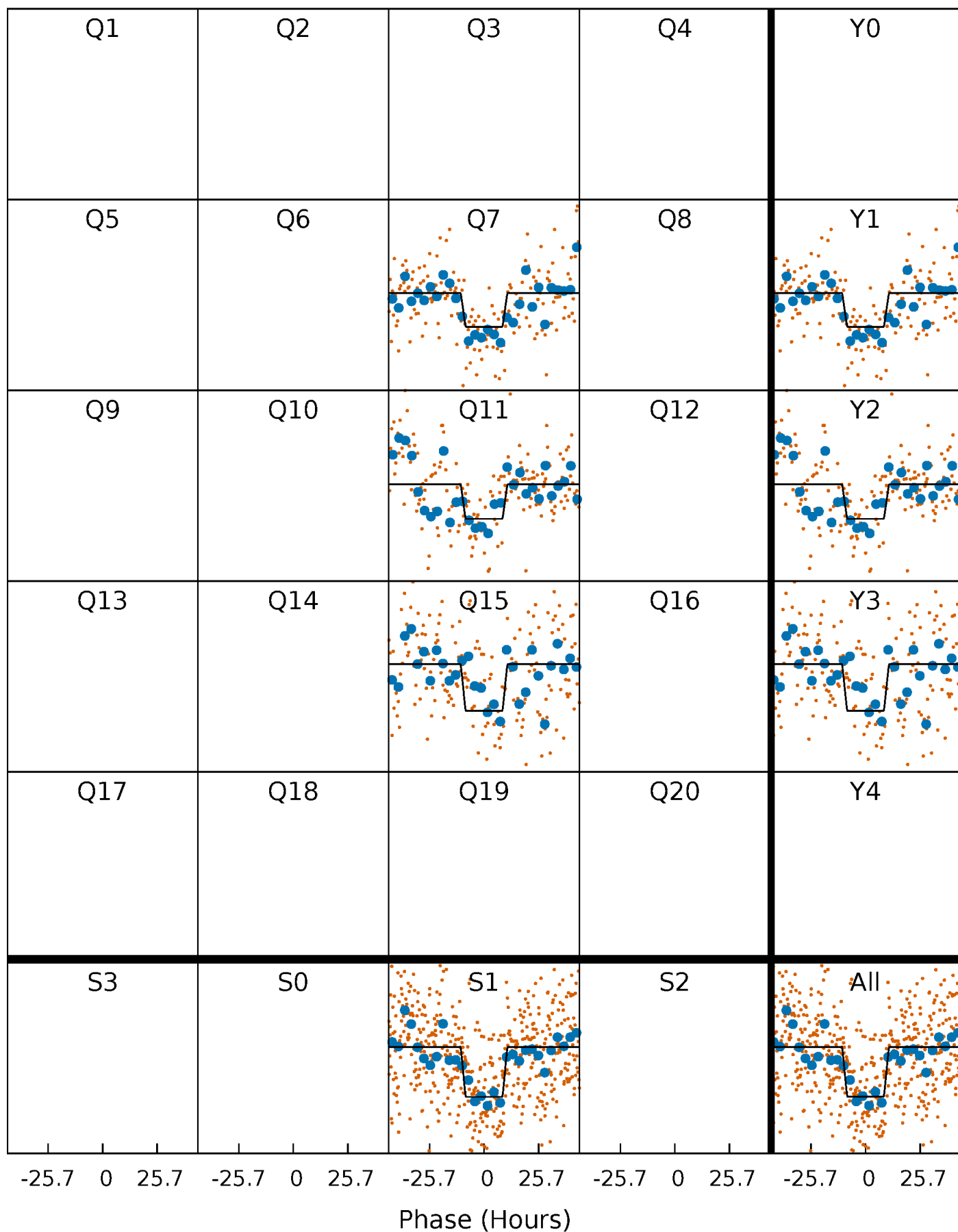
DV Quarter-Phased Transit Curves

TCE 008022338-01 $P=370.418624$ Days $T_0=269.430272$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

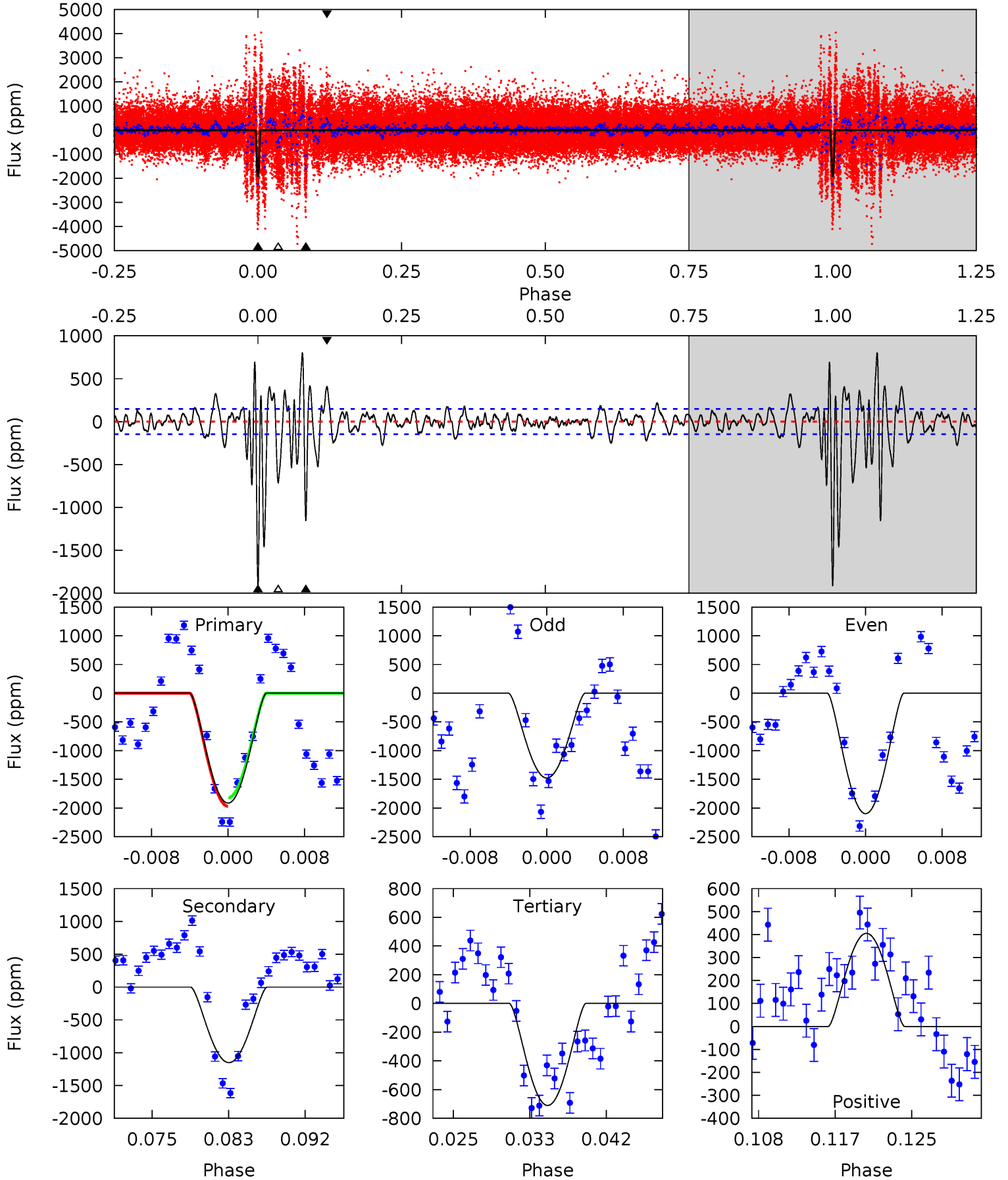
TCE 008022338-01 P=370.453632 Days $T_0=269.103721$ (BKJD)



DV Model-Shift Uniqueness Test

008022338-01, P = 370.418624 Days, E = 269.430272 Days

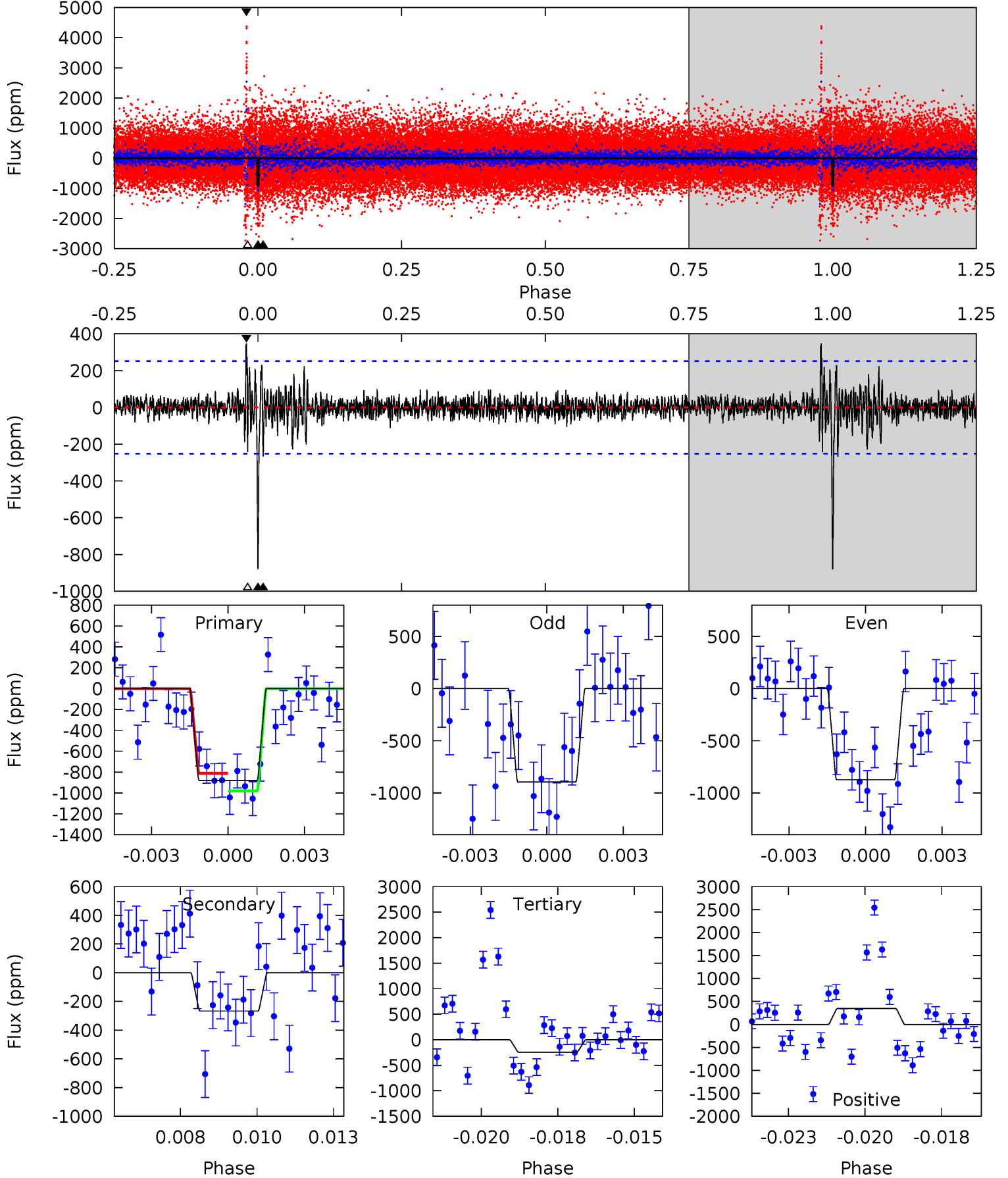
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
65.6	39.4	24.3	13.9	5.06	2.64	5.53	41.2	51.7	15.1	25.6	9.98	1.23	0.30	2.44



Alt Model-Shift Uniqueness Test

008022338-01, P = 370.453632 Days, E = 269.103721 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.5	5.60	5.11	7.29	5.28	3.02	0.91	13.4	11.2	0.50	-1.69	0.22	0.99	0.28	1.76



Stellar Parameters For KIC 008022338

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5543^{+183}_{-183}	$4.528^{+0.044}_{-0.176}$	$0.100^{+0.250}_{-0.300}$	$0.883^{+0.237}_{-0.079}$	$0.958^{+0.085}_{-0.104}$	$1.964^{+0.448}_{-0.901}$
	+3%/-3%	+1%/-4%	+250%/-300%	+27%/-9%	+9%/-11%	+23%/-46%
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 008022338-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1152 ± 29	$15.14^{+14.74}_{-10.28}$	328^{+20}_{-16}	3221^{+1463}_{-543}	2737^{+22837}_{-2025}
Alt.	-267 ± 48	$12.13^{+12.53}_{-8.07}$	329^{+19}_{-16}	2767^{+1124}_{-437}	942^{+7633}_{-712}

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

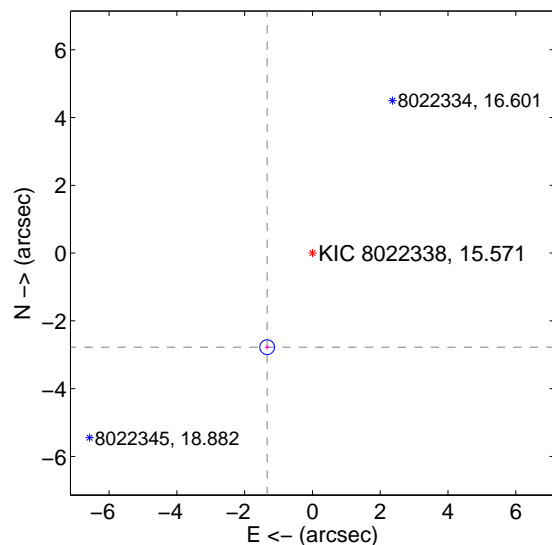
Supplemental centroid analysis for 008022338-01. Kepler magnitude: 15.57. Transit SNR 13.21

There are 0 quarters with good PRF difference image offsets

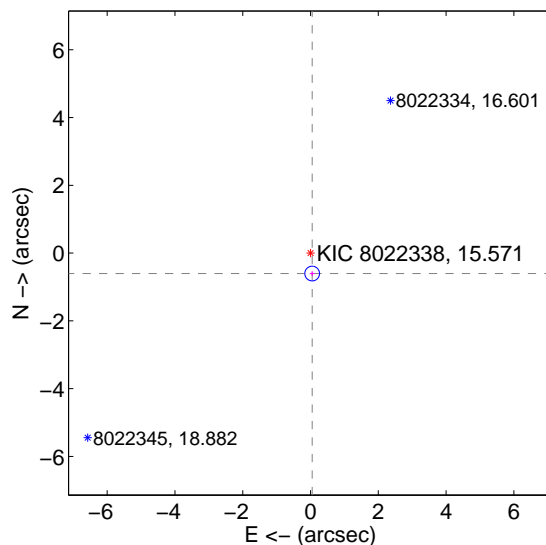
The OOT PRF centroid is offset from the target star catalog position by about 2.58 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.081 ± 0.072	42.67	1.336 ± 0.072	-2.776 ± 0.072
PRF-fit source offset from KIC position	0.606 ± 0.072	8.38	-0.048 ± 0.072	-0.604 ± 0.072
photometric centroid source offset	2.53 ± 1.14	2.21	0.11 ± 0.46	-2.52 ± 1.14

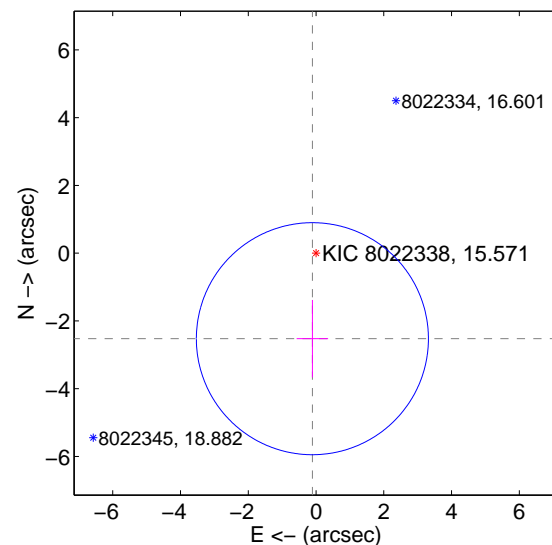
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

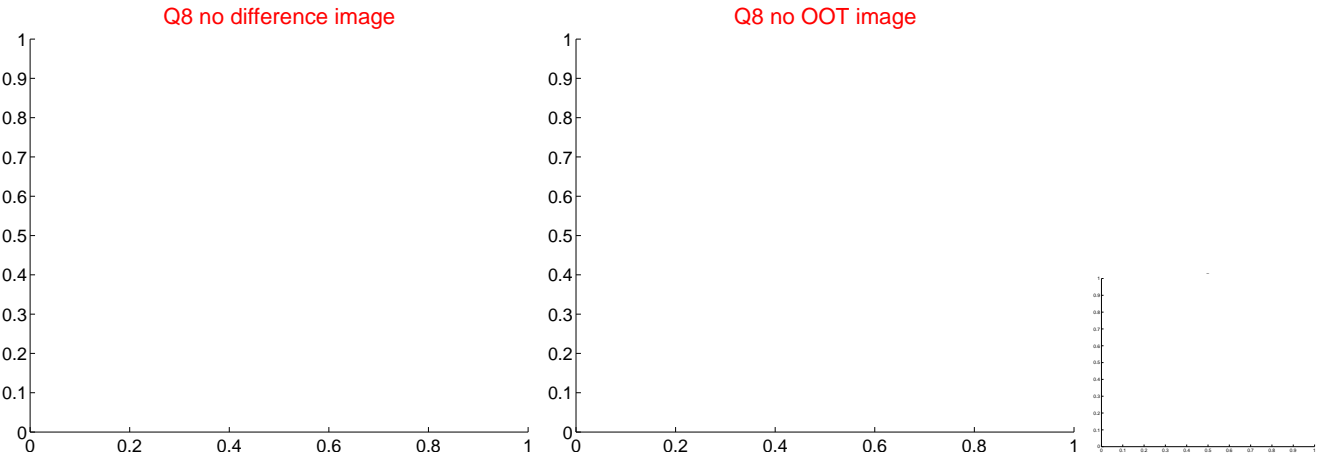
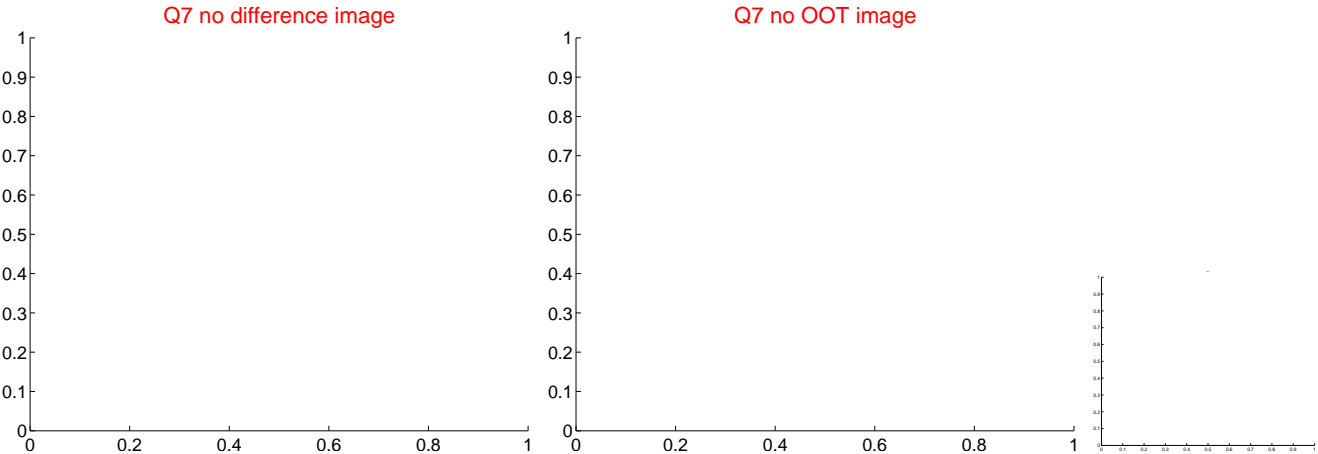
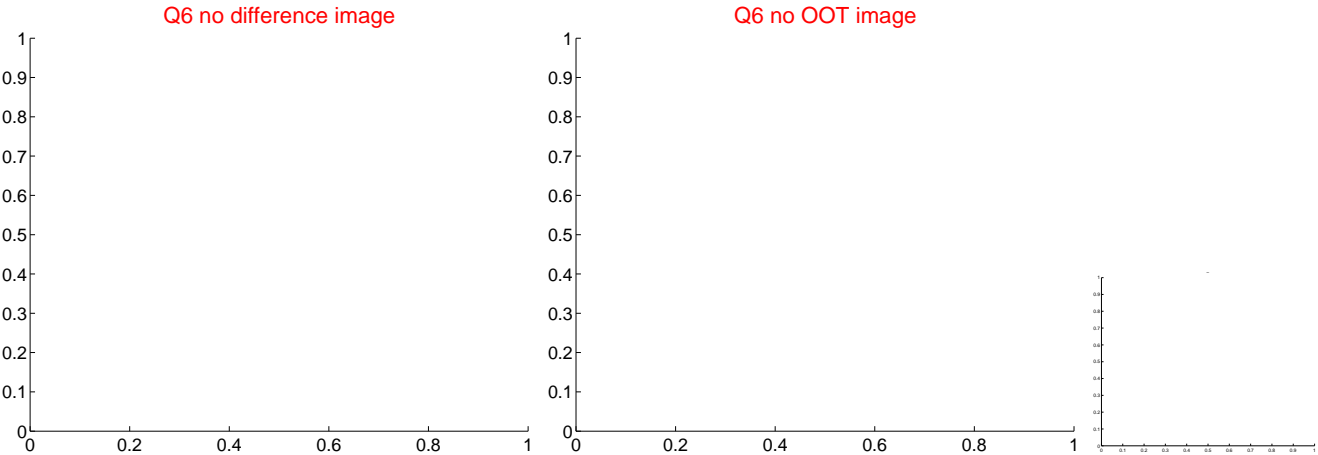
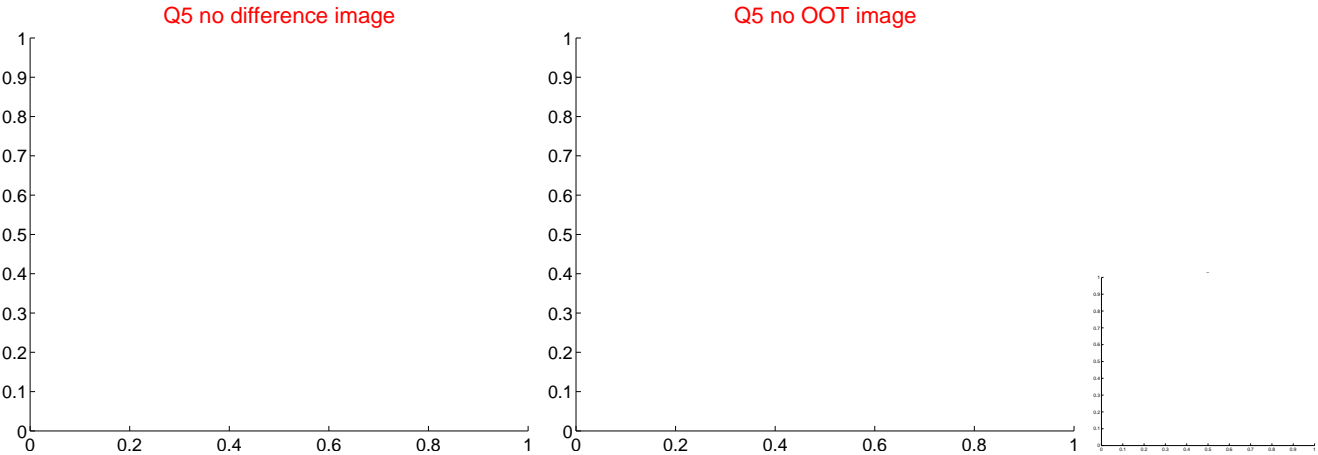


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

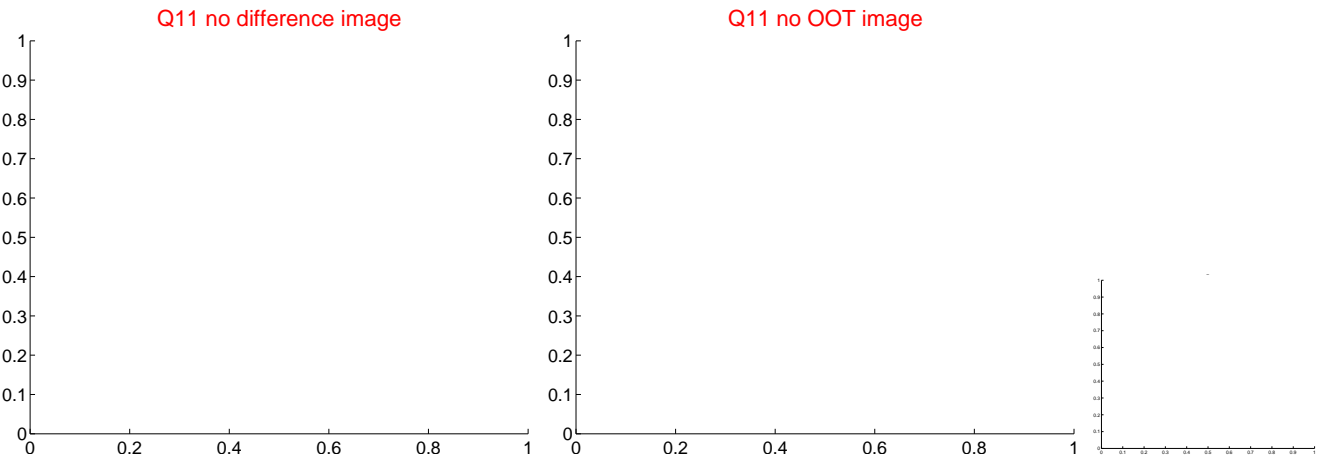
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

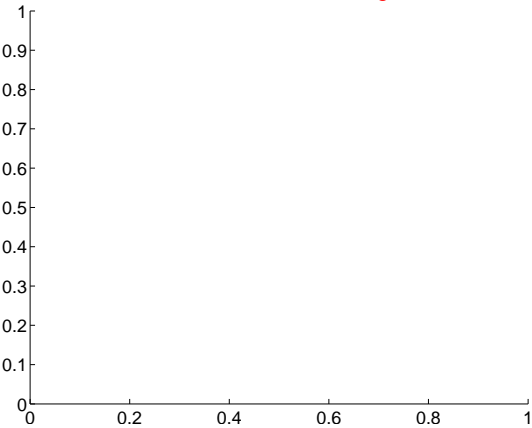


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

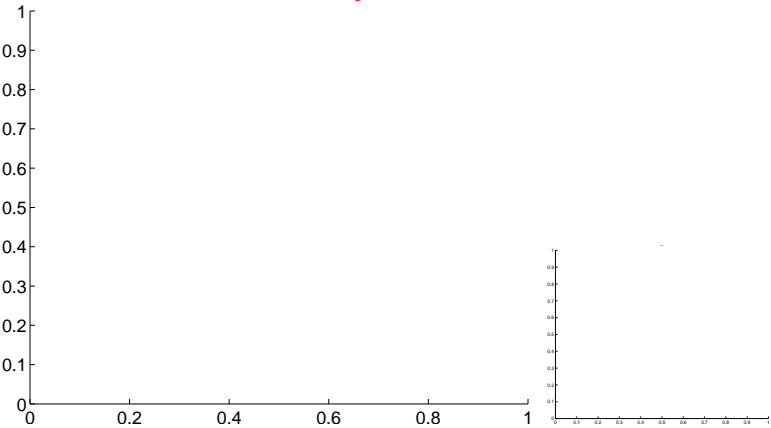


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

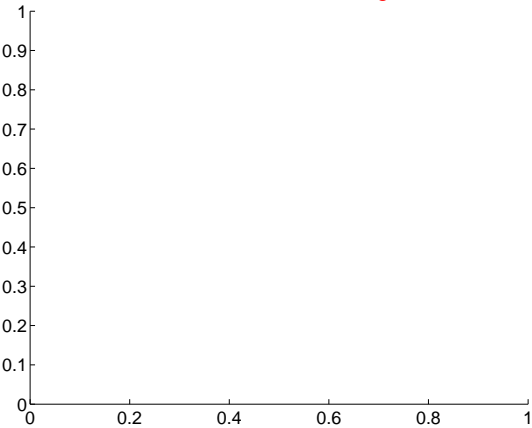
Q13 no difference image



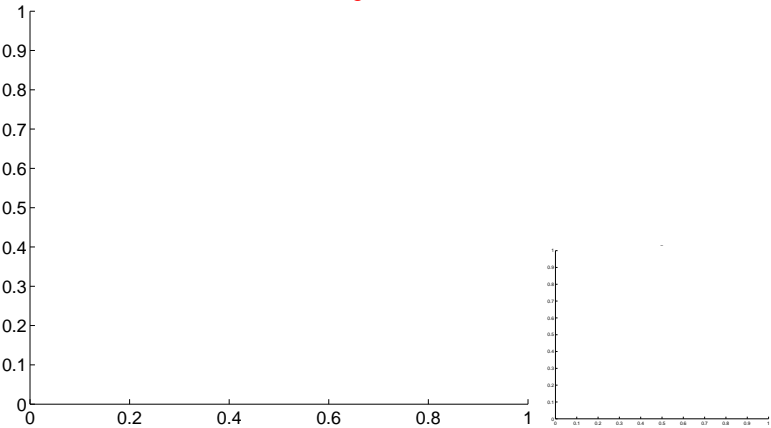
Q13 no OOT image



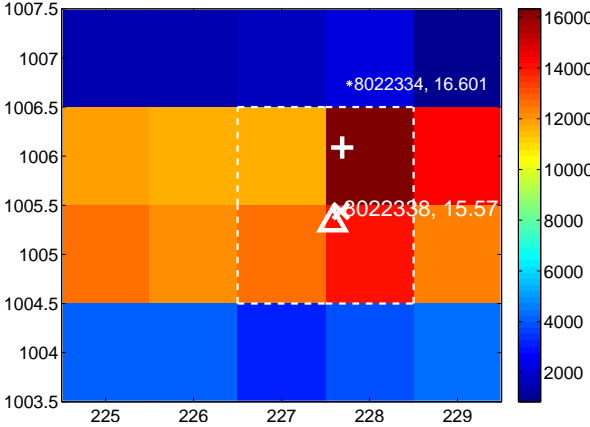
Q14 no difference image



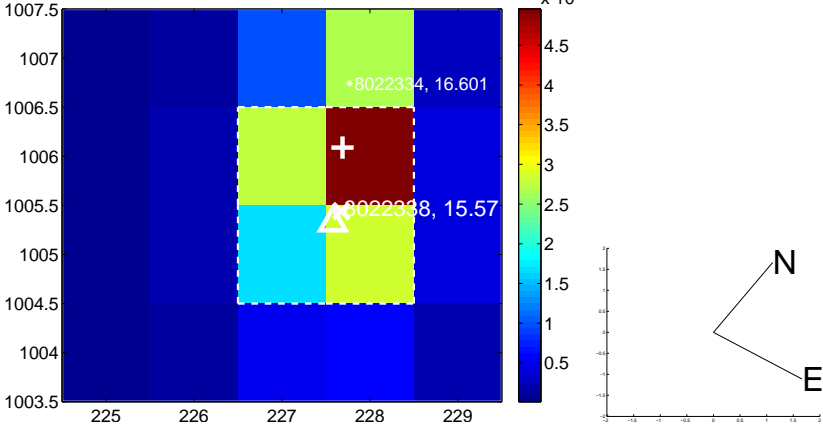
Q14 no OOT image



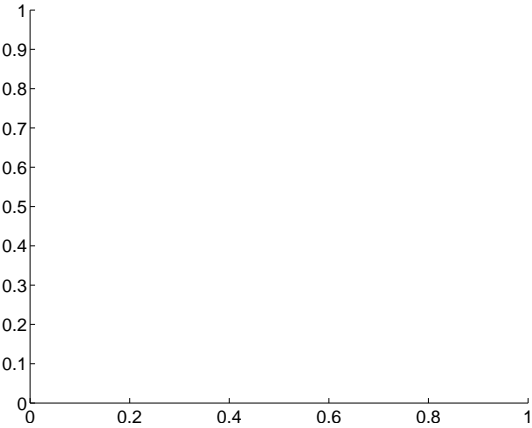
Q15 difference image. Poor Quality



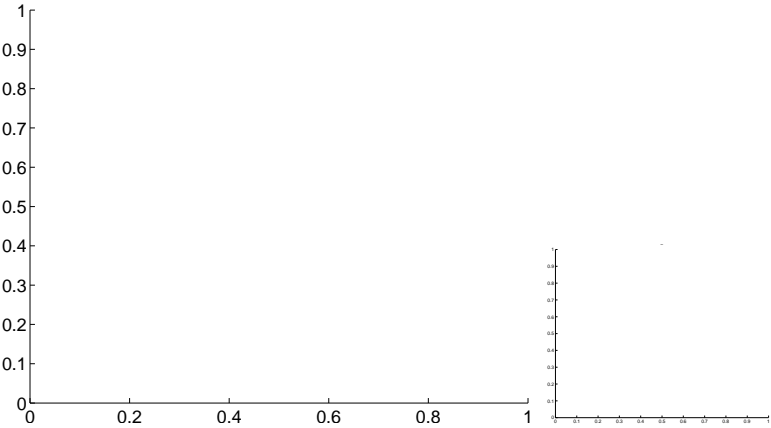
Q15 OOT image



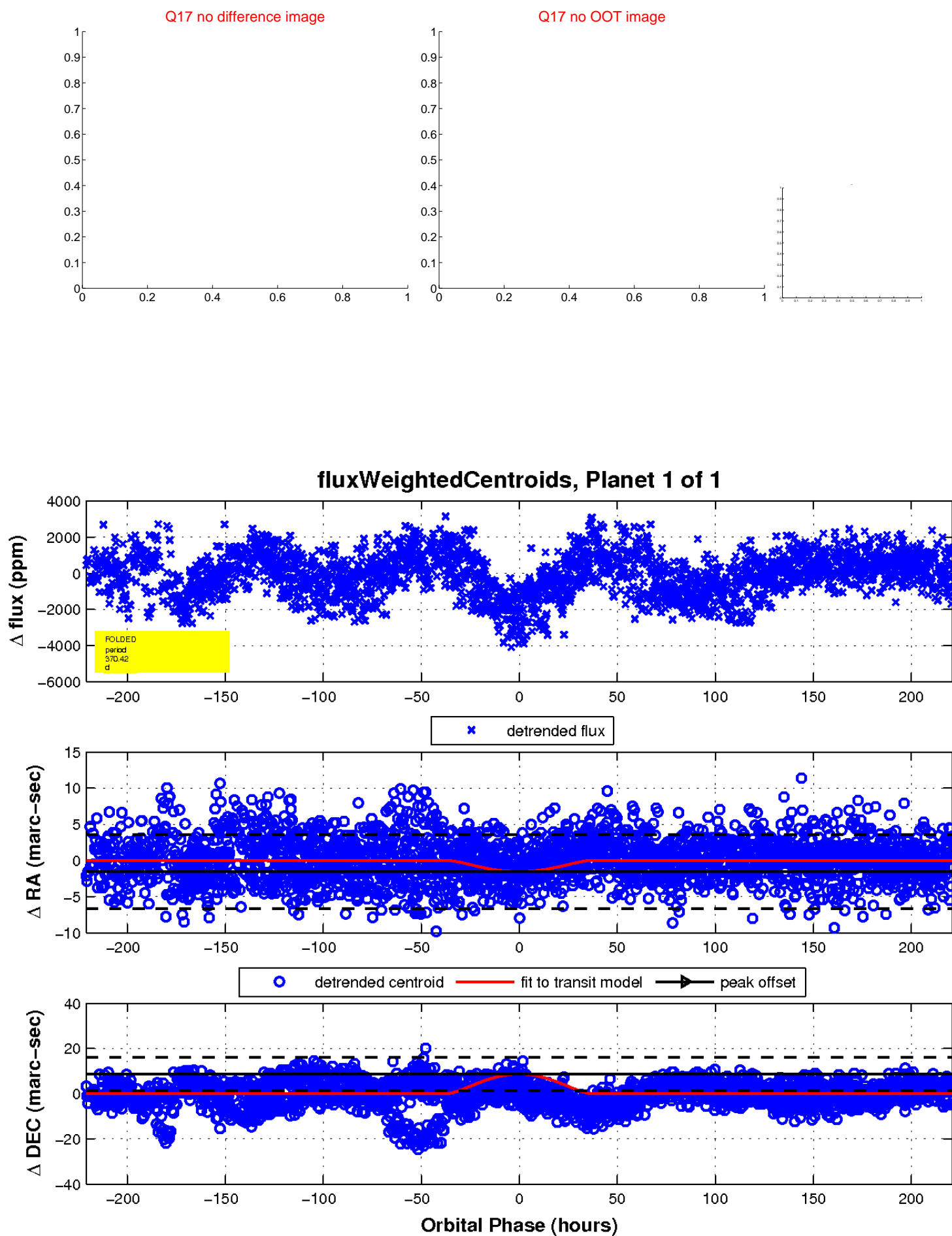
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

