

KIC 008321567

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})
008321567-01	OBS	No	370.729137	175.659648	95.3	7.096	8.5	6.7	1.58	5737	1.90	2.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008321567-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_SATURATED

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

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

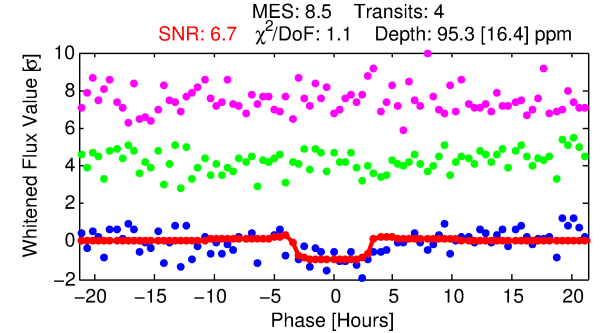
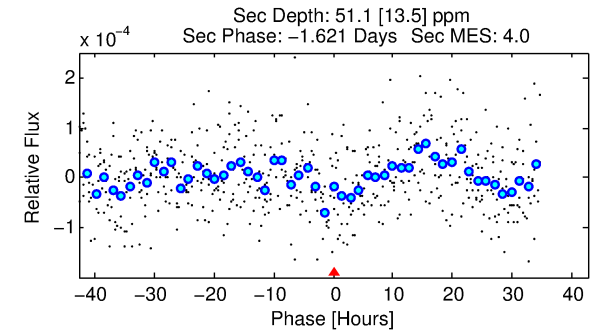
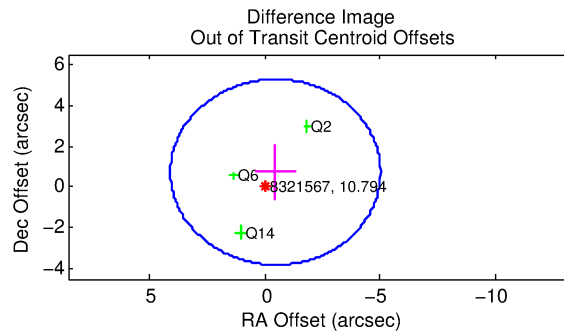
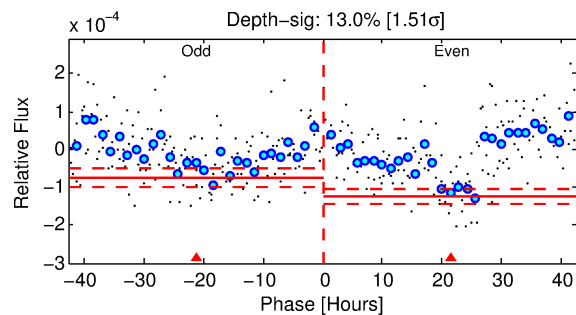
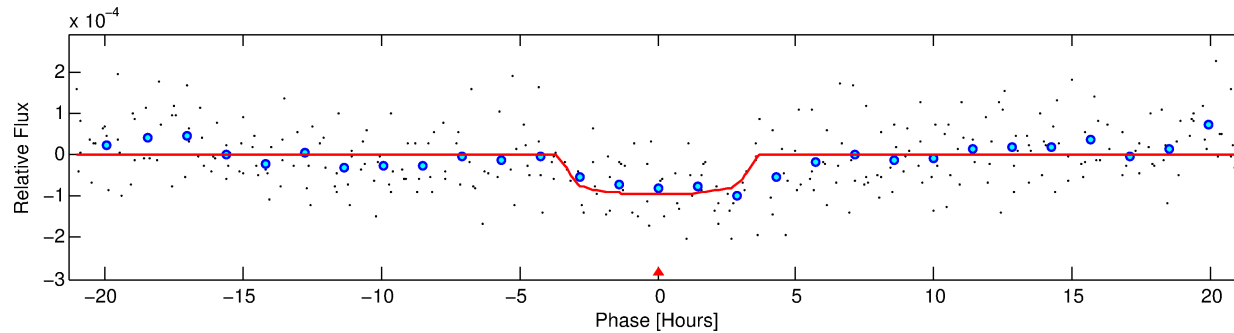
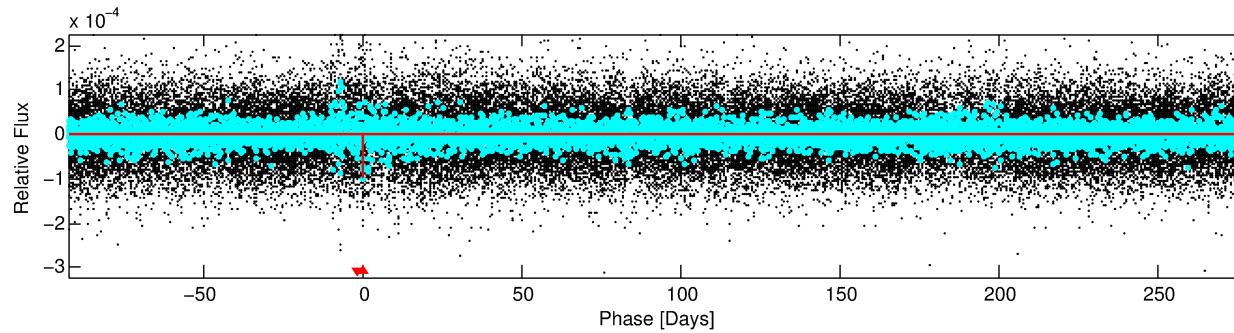
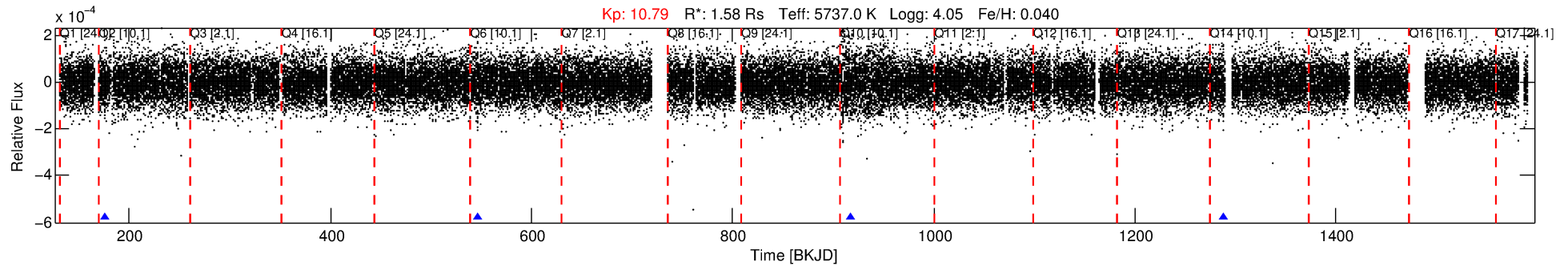
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008321567-01

No Significant Match Found

DV One-Page Summary

KIC: 8321567 Candidate: 1 of 1 Period: 370.729 d



DV Fit Results:

Period = 370.72914 [0.00781] d
Epoch = 175.6596 [0.0136] BKJD
Rp/R* = 0.0110 [0.0033]
a/R* = 159.79 [228.39]
b = 0.93 [0.21]
Seff = 2.33 [0.18]
Teq = 315 [6] K
Rp = 1.90 [0.58] Re
a = 1.0231 [0.0406] AU
Ag = 8154.62 [5337.31] [1.53 σ]
Teffp = 4627 [758] K [5.69 σ]

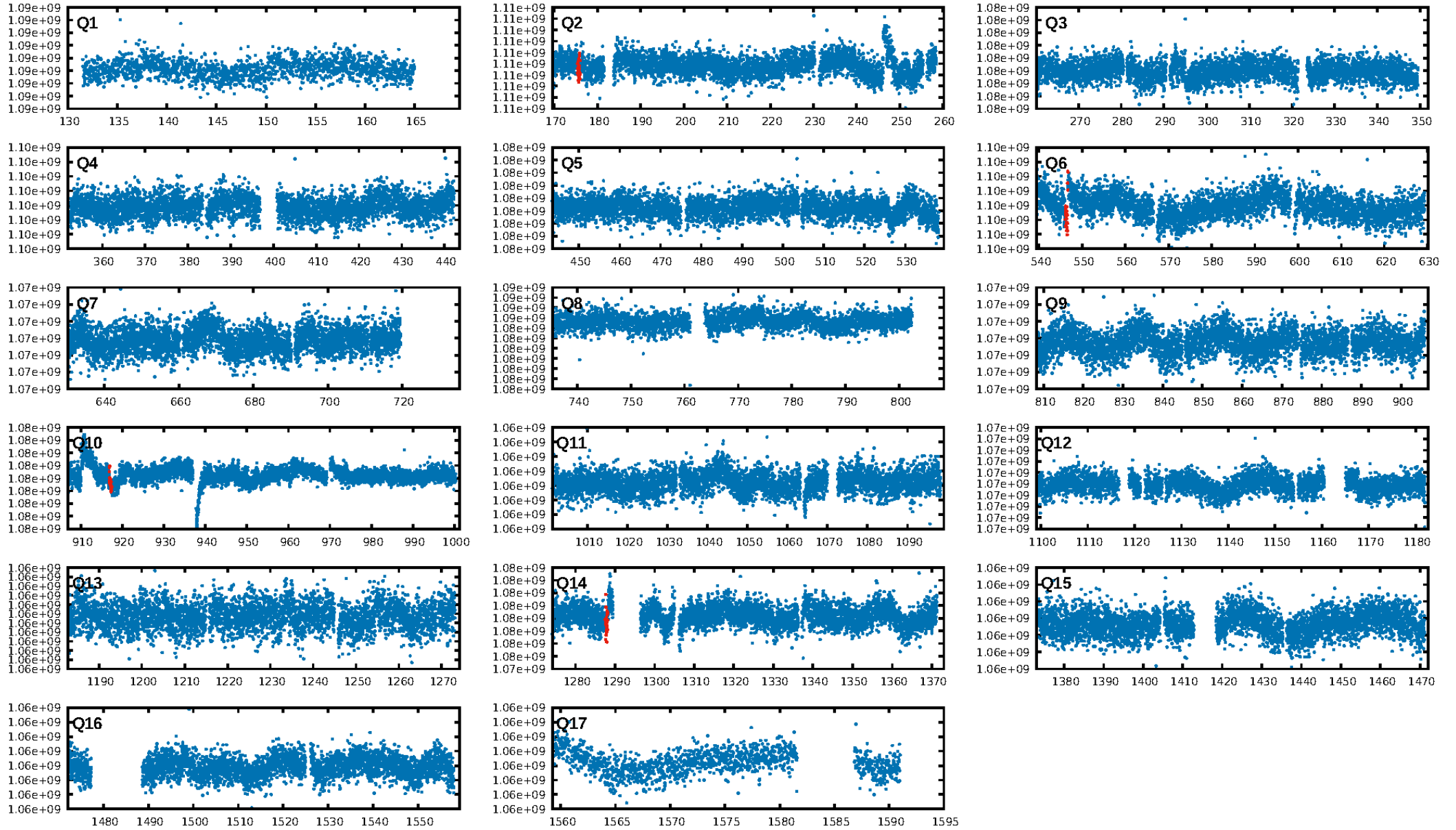
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 80.2%
ModelChiSquareGof-sig: 99.5%
Bootstrap-pfa: 5.82e-13
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.7917
Centroid-sig: 0.1%
Centroid-so: 11.039 arcsec [2.12 σ]
OotOffset-rm: 0.868 arcsec [0.57 σ]
KicOffset-rm: 0.501 arcsec [0.40 σ]
OotOffset-st: 3/0/0/0 [3]
KicOffset-st: 3/0/0/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [4/4]

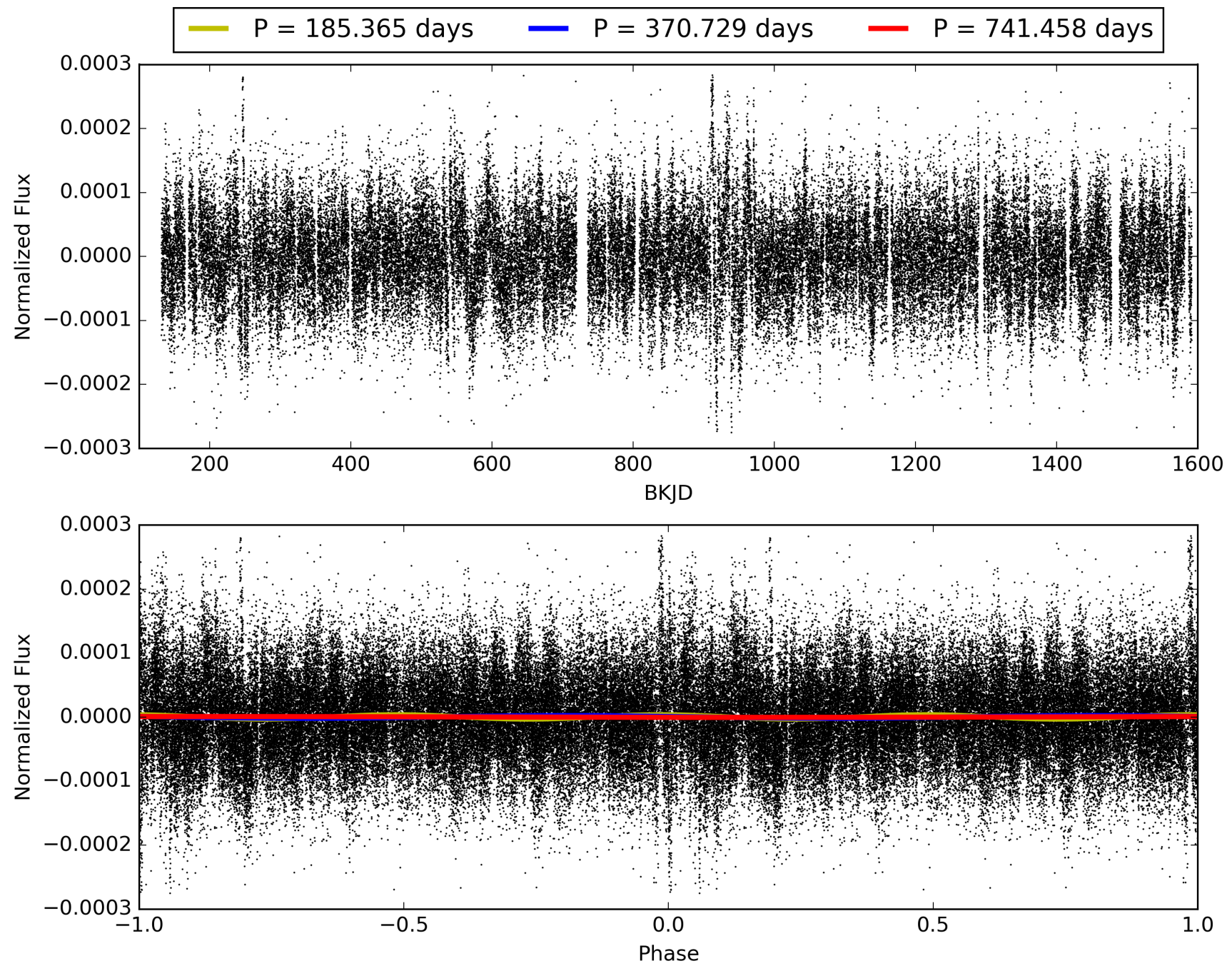
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:33:08 Z

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

TCE 008321567-01, PDC Light Curves

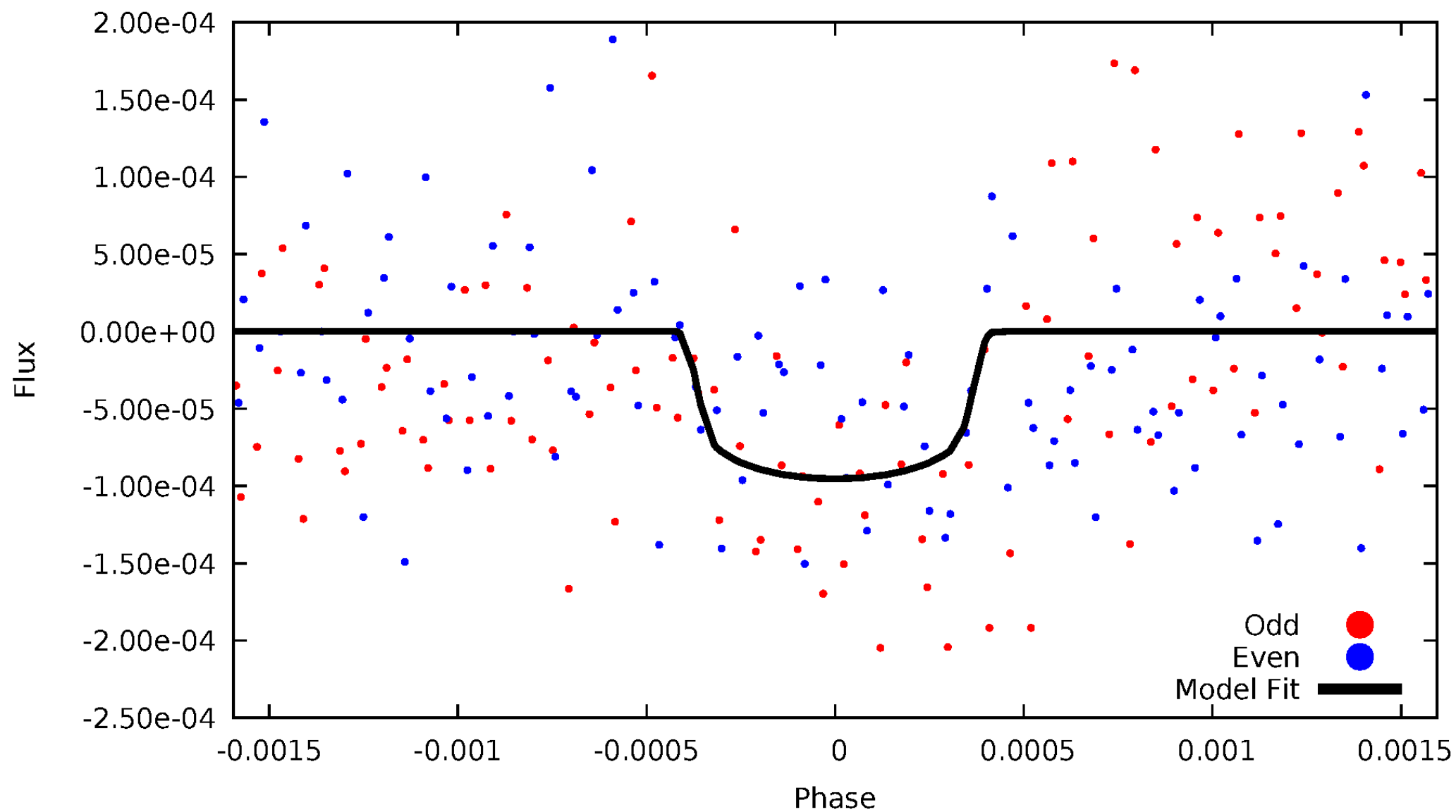


TCE 008321567-01



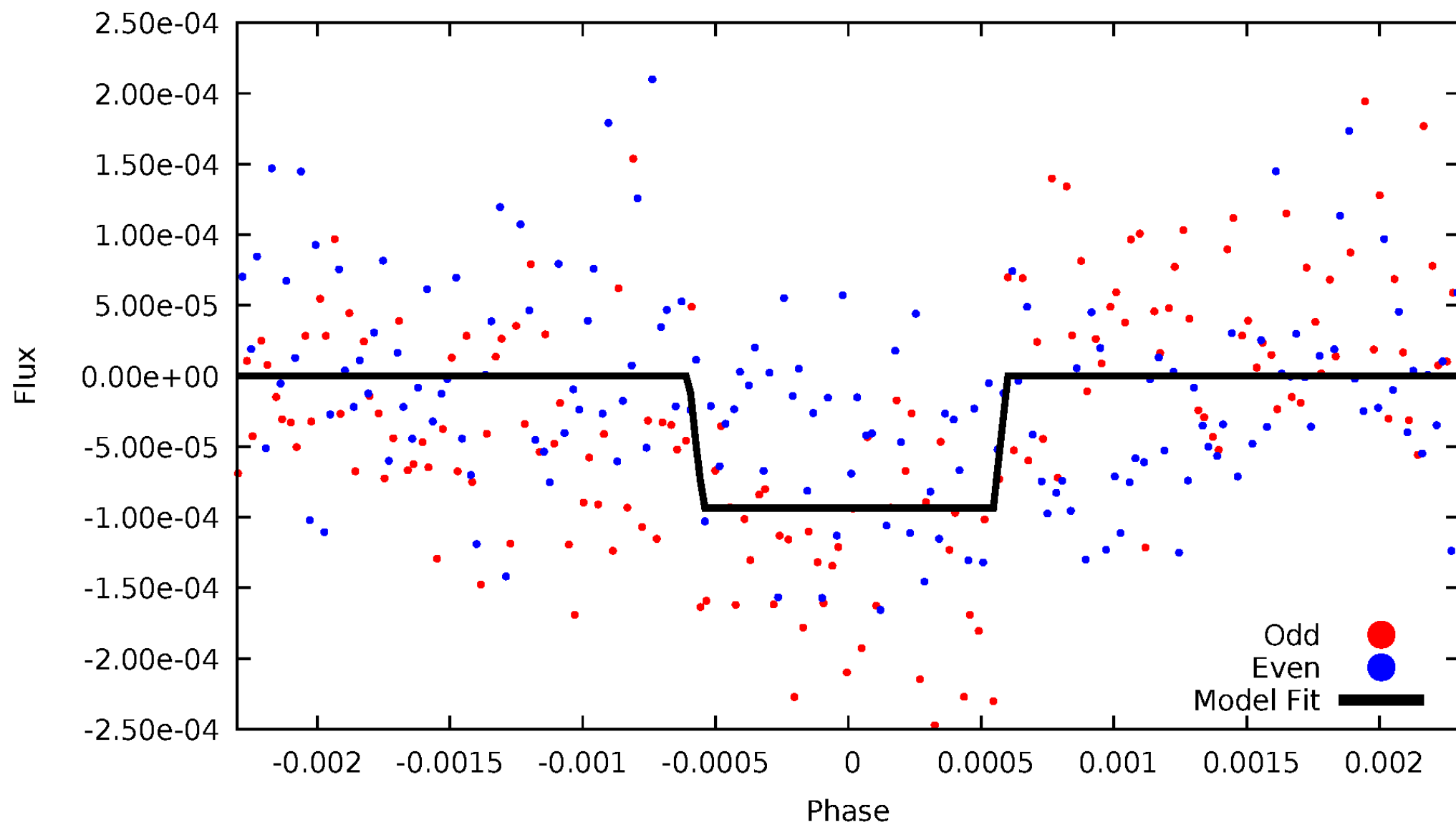
DV Odd/Even

TCE 008321567-01



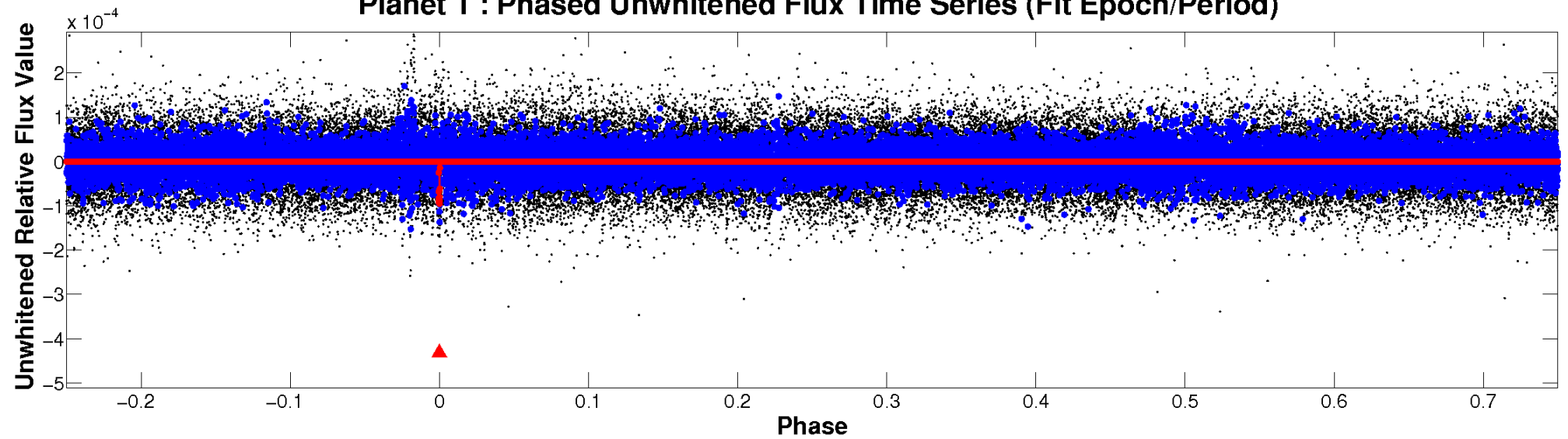
ALT Odd/Even

TCE 008321567-01

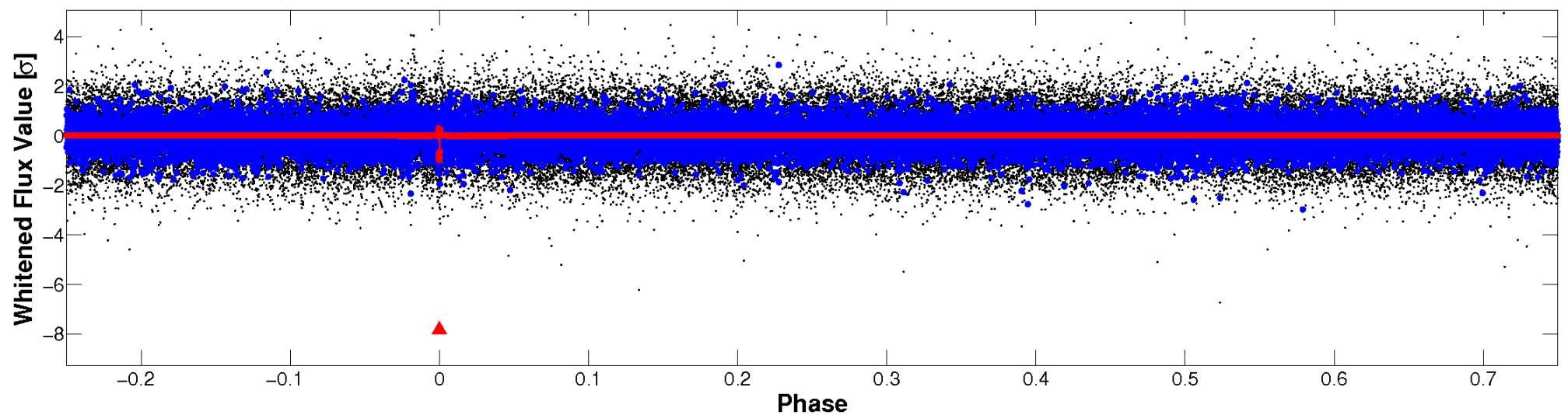


Non-Whitened Vs. Whitened Light Curve

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

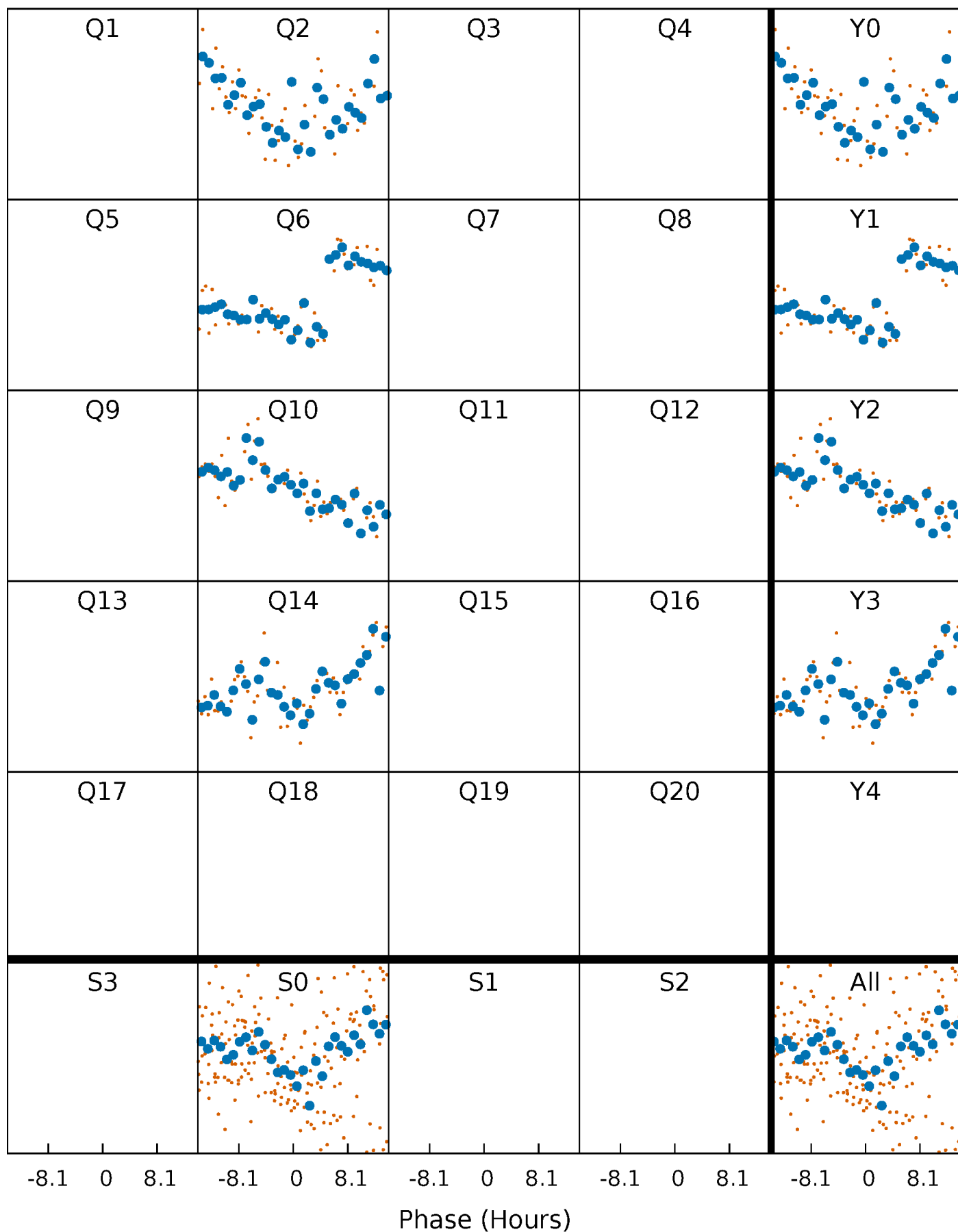


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



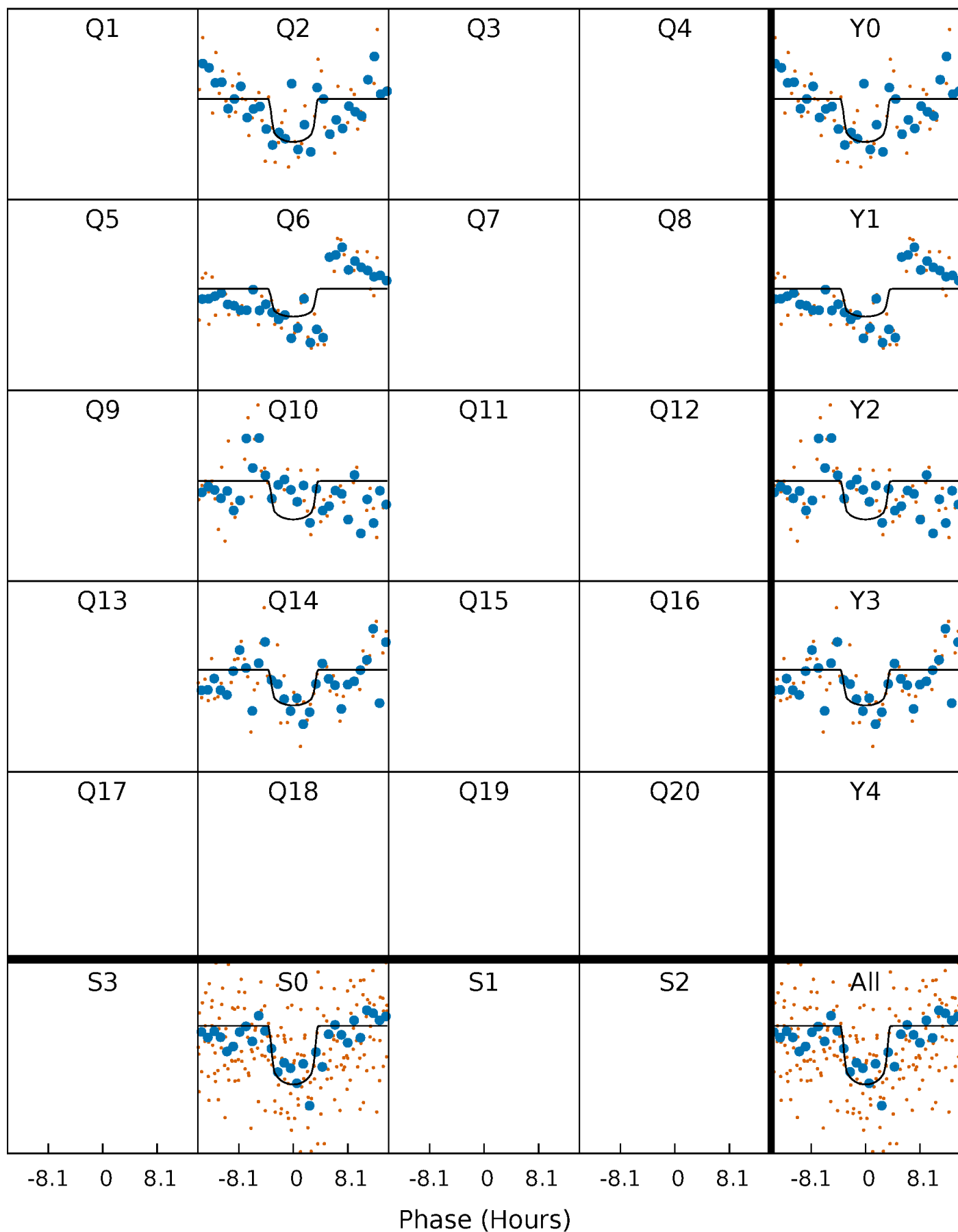
PDC Quarter-Phased Transit Curves

TCE 008321567-01 P=370.729137 Days $T_0=175.659648$ (BKJD)



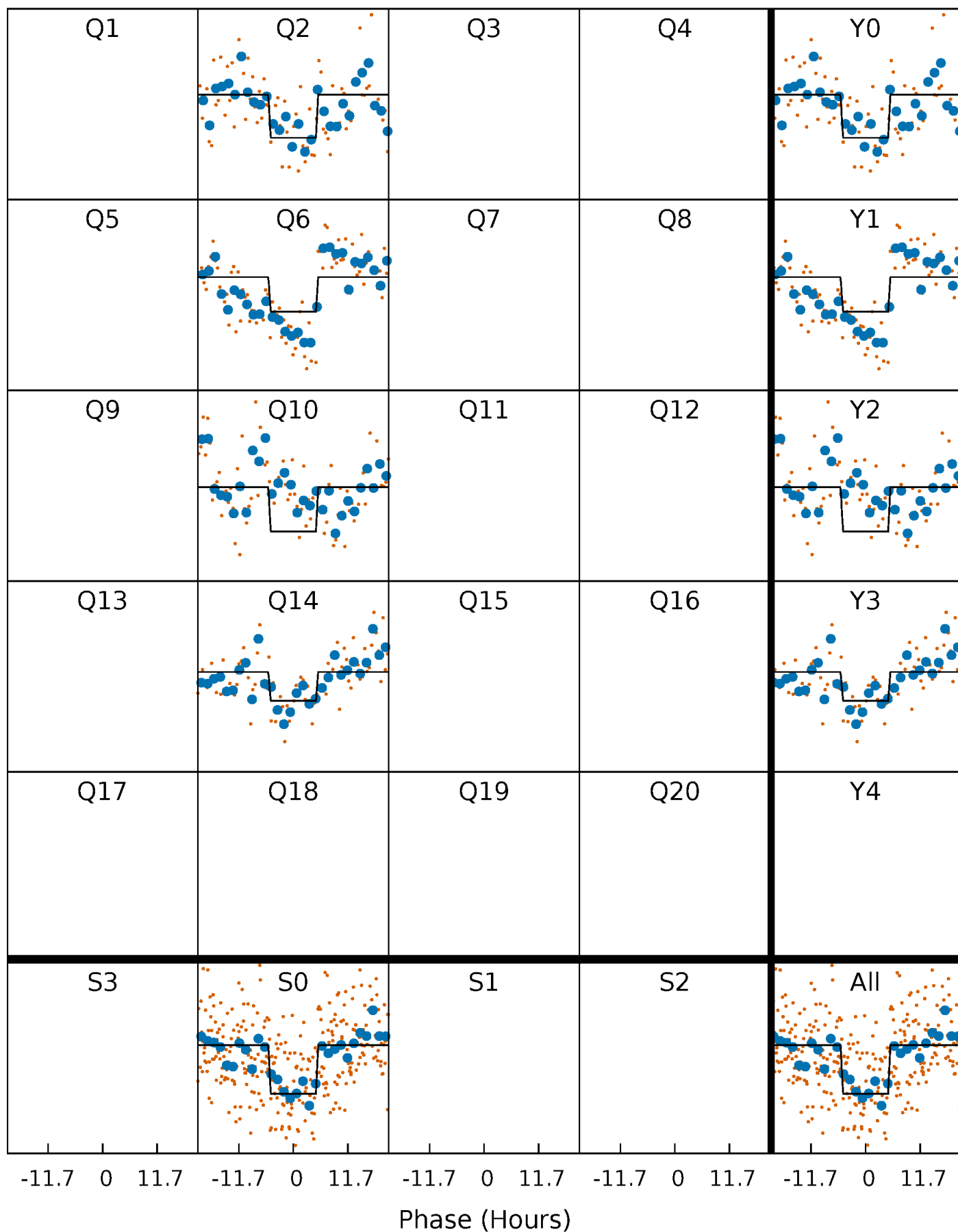
DV Quarter-Phased Transit Curves

TCE 008321567-01 P=370.729137 Days $T_0=175.659648$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

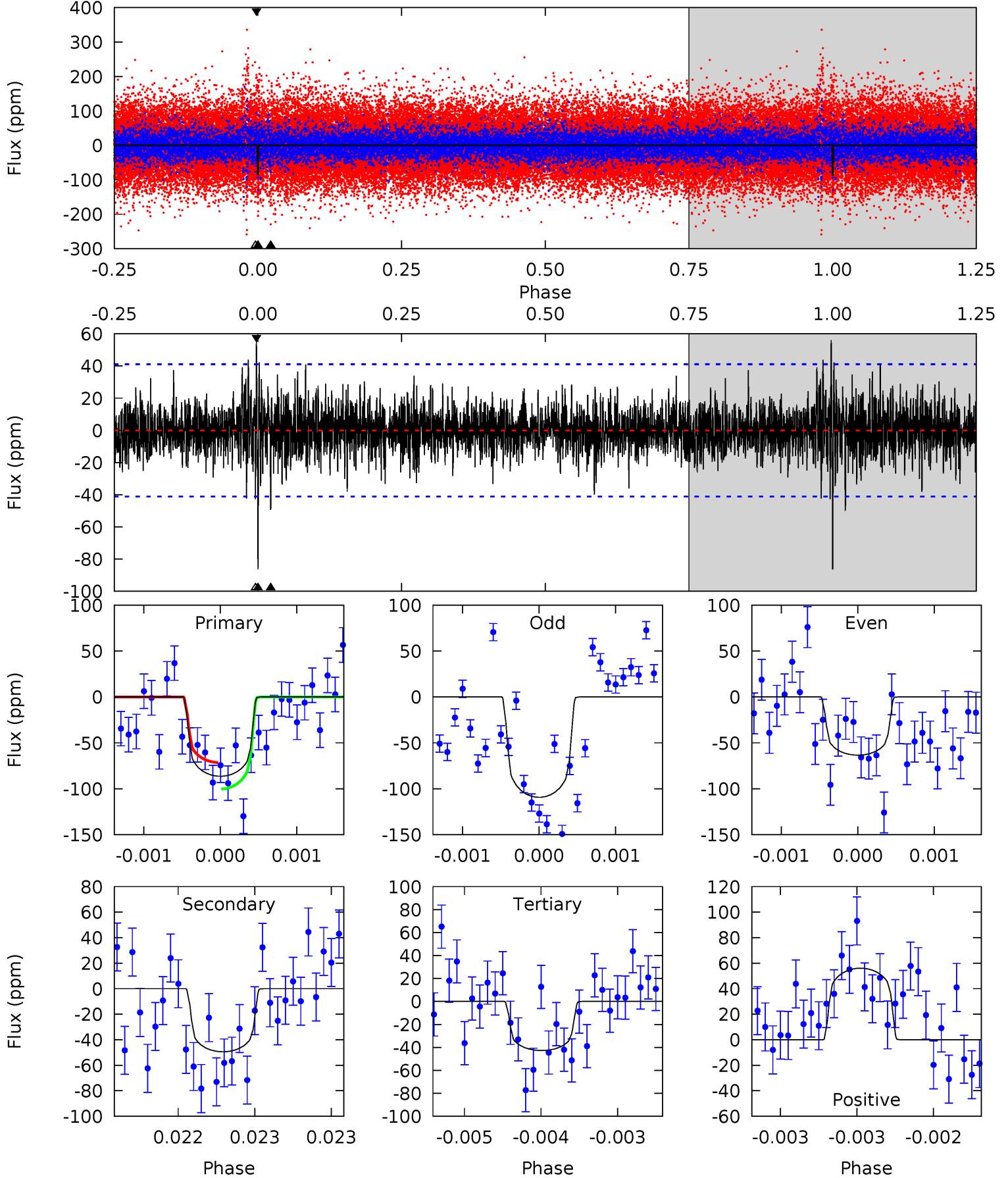
TCE 008321567-01 P=370.794191 Days $T_0=175.584648$ (BKJD)



DV Model-Shift Uniqueness Test

008321567-01, P = 370.729137 Days, E = 175.659648 Days

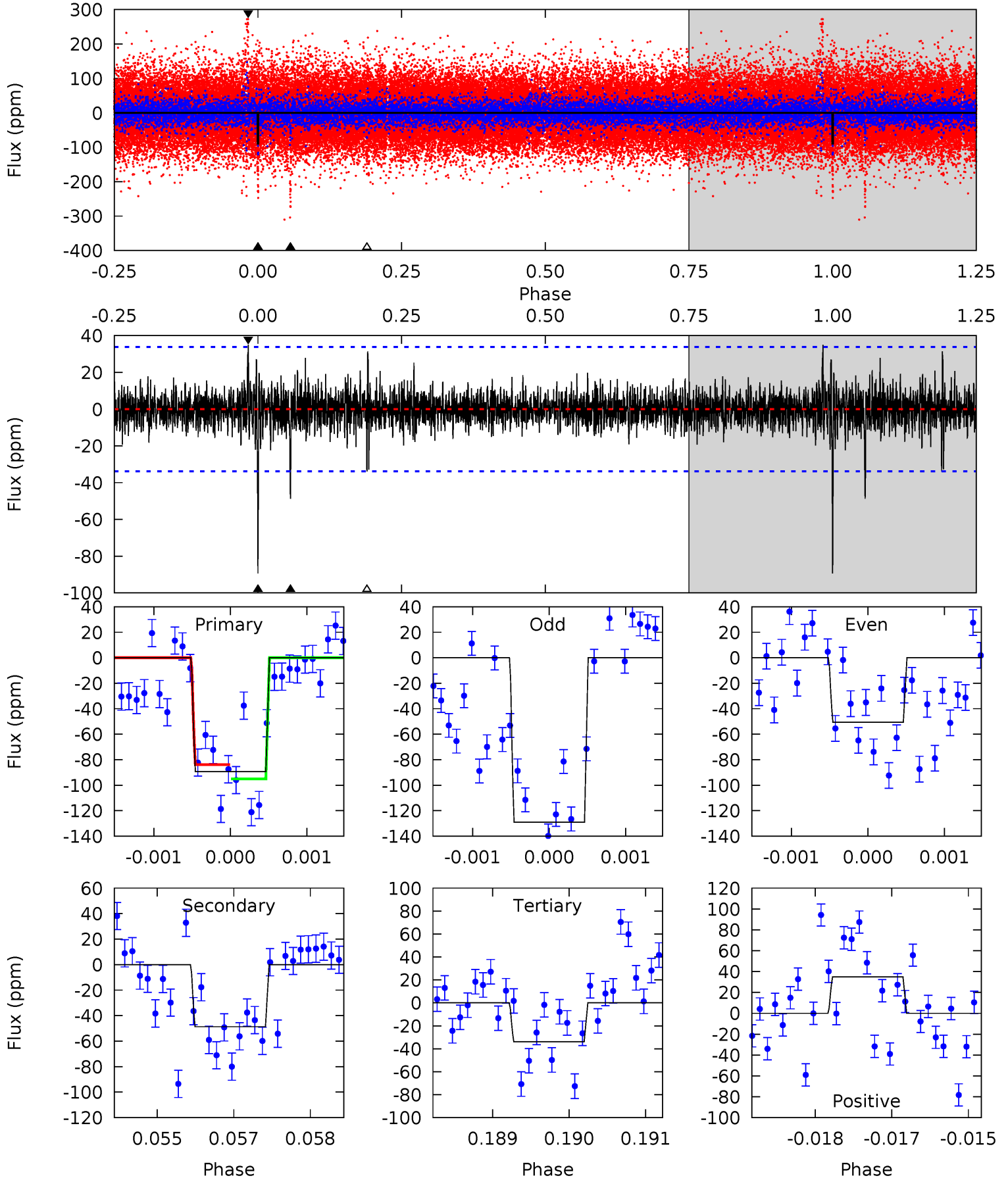
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.5	6.59	5.69	7.47	5.48	3.33	1.43	5.82	4.04	0.90	-0.88	3.08	0.94	0.39	1.92



Alt Model-Shift Uniqueness Test

008321567-01, P = 370.794191 Days, E = 175.584648 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.3	7.80	5.41	5.60	5.42	3.24	1.07	8.91	8.72	2.39	2.20	6.27	0.94	0.28	0.90



Stellar Parameters For KIC 008321567

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5737^{+86}_{-77}	$4.055^{+0.020}_{-0.018}$	$0.040^{+0.200}_{-0.150}$	$1.584^{+0.087}_{-0.063}$	$1.038^{+0.087}_{-0.065}$	$0.368^{+0.031}_{-0.028}$
	+1%/-1%	+0%/-0%	+500%/-375%	+5%/-4%	+8%/-6%	+8%/-8%
Source	SPE72	AST10	SPE72	DSEP		

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

Secondary Eclipse Parameters for KIC 008321567-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-49 ± 8	$1.91^{+0.58}_{-0.55}$	440^{+7}_{-7}	4718^{+725}_{-476}	8020^{+7357}_{-3490}
Alt.	-49 ± 6	$1.69^{+0.54}_{-0.54}$	440^{+8}_{-8}	4957^{+918}_{-566}	9929^{+11470}_{-4441}

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 $A_{obs} \gg 1.0$

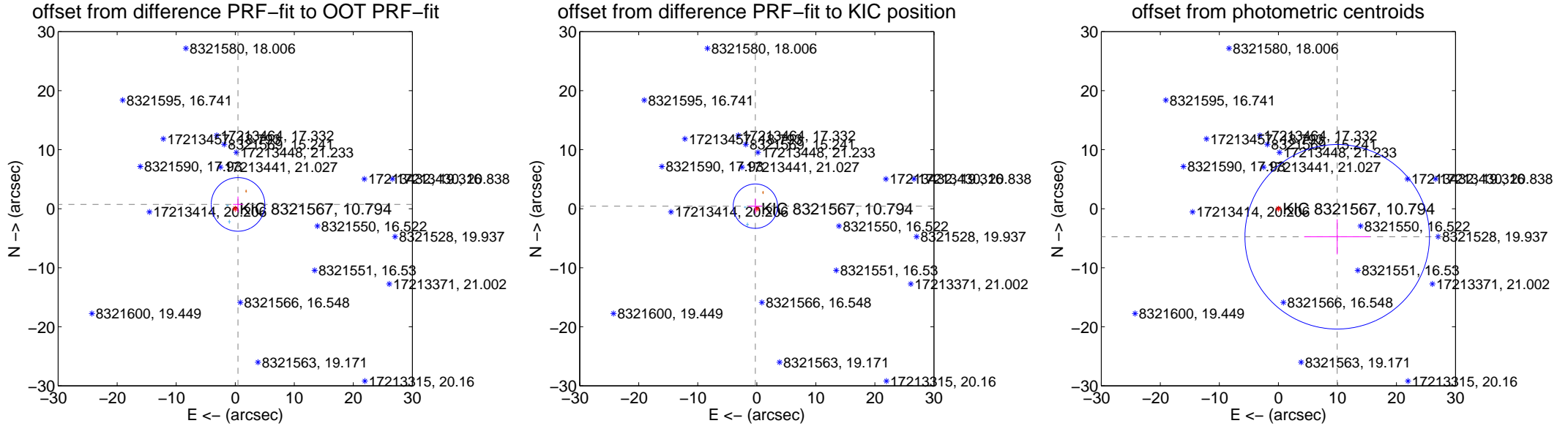
DV Centroid Data

Supplemental centroid analysis for 008321567-01. **Kepler magnitude: 10.79.** Transit SNR 6.74

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.75 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.868 ± 1.514	0.57	-0.468 ± 0.825	0.731 ± 1.332
PRF-fit source offset from KIC position	0.501 ± 1.253	0.40	0.247 ± 1.181	0.436 ± 1.275
photometric centroid source offset	11.04 ± 5.21	2.12	-9.96 ± 5.59	-4.75 ± 2.98



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.

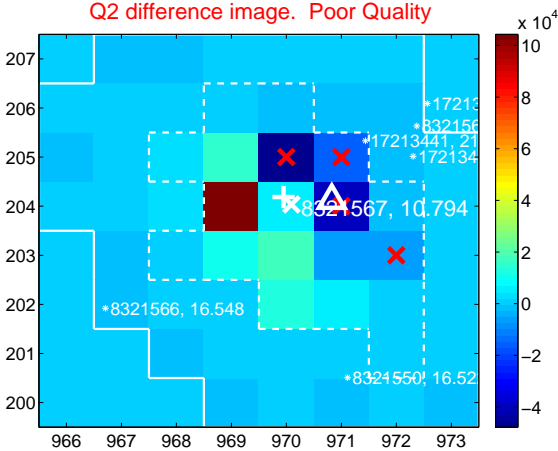
Q1 no difference image



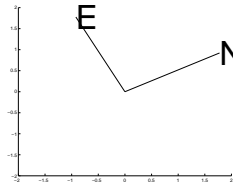
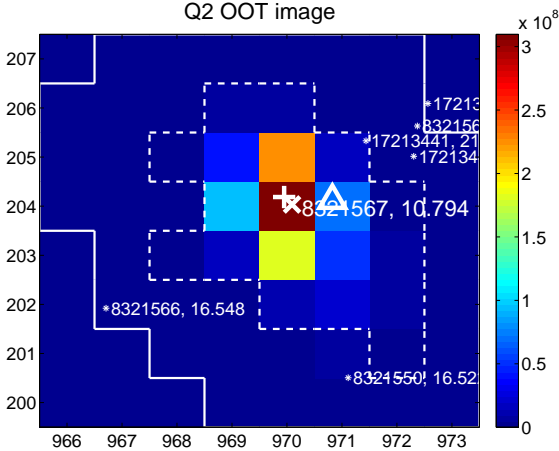
Q1 no OOT image



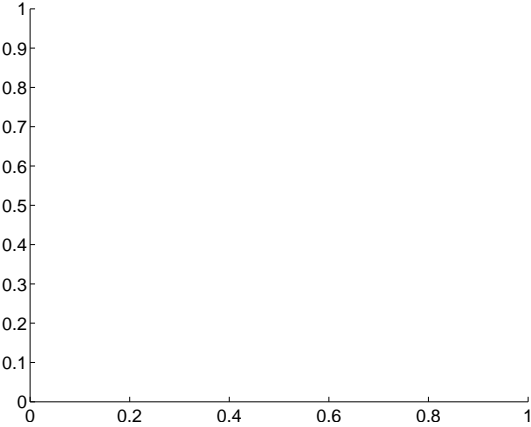
Q2 difference image. Poor Quality



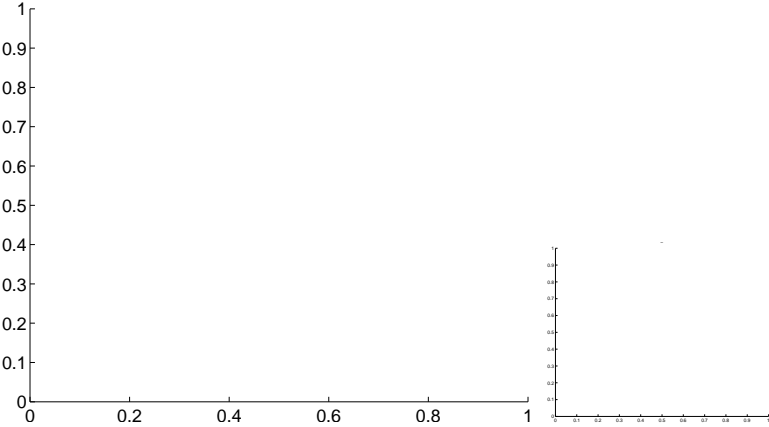
Q2 OOT image



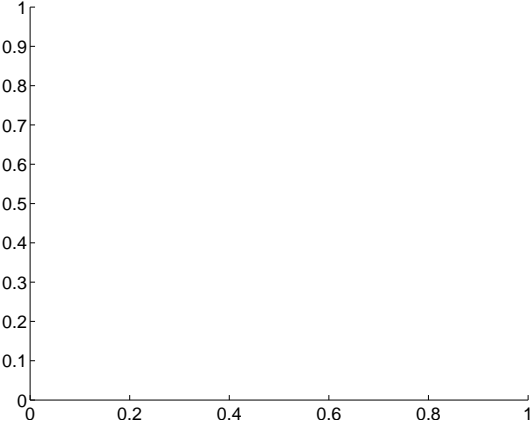
Q3 no difference image



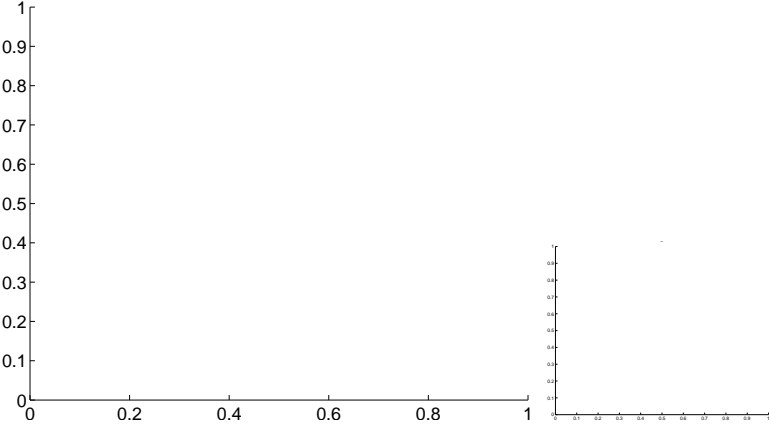
Q3 no OOT image



Q4 no difference image

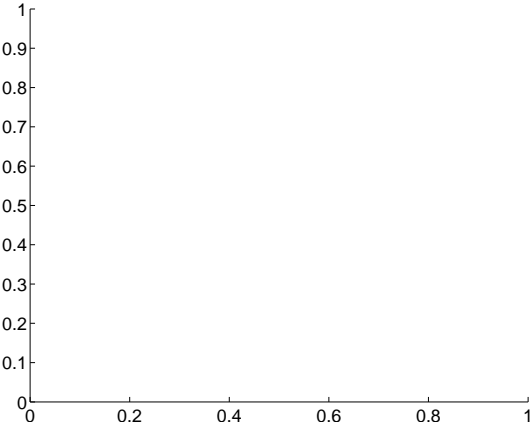


Q4 no OOT image

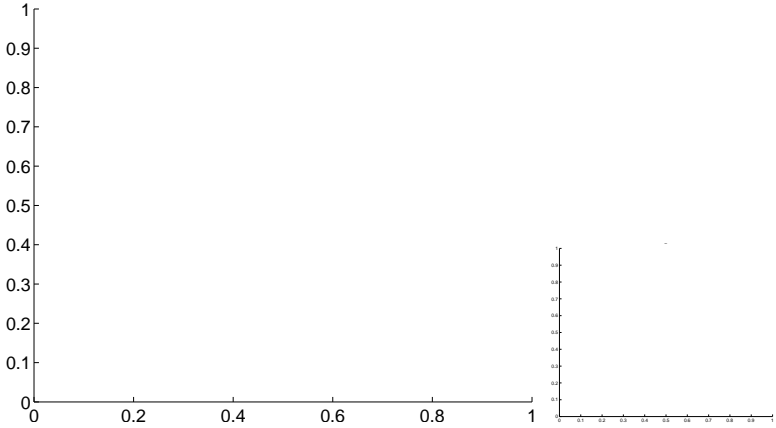


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

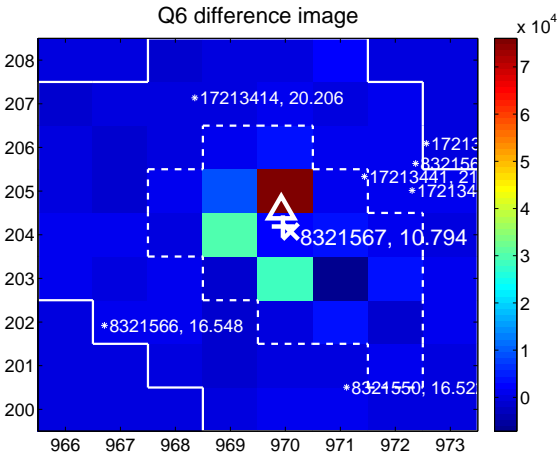
Q5 no difference image



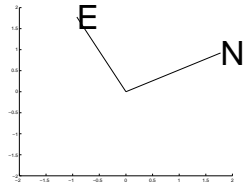
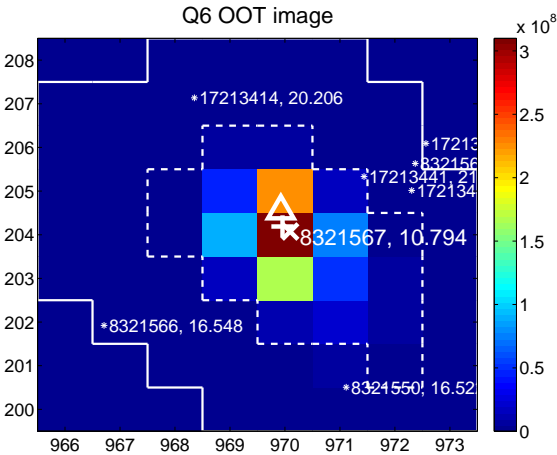
Q5 no OOT image



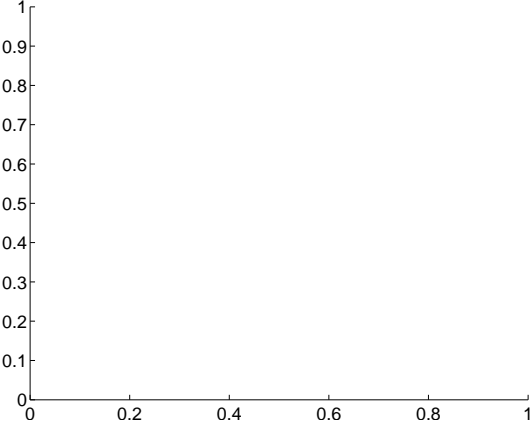
Q6 difference image



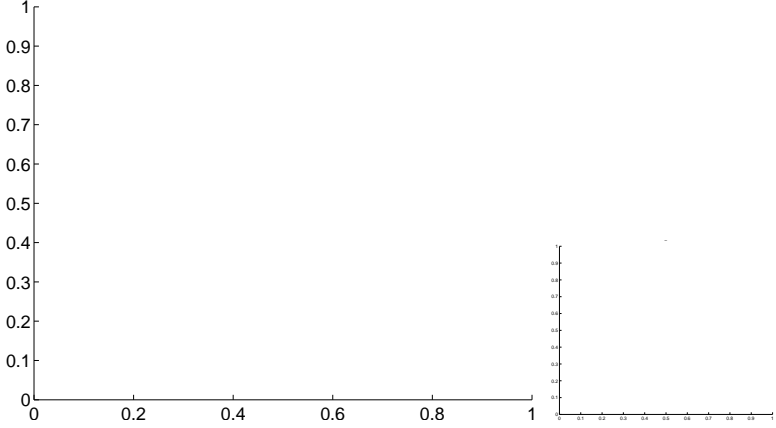
Q6 OOT image



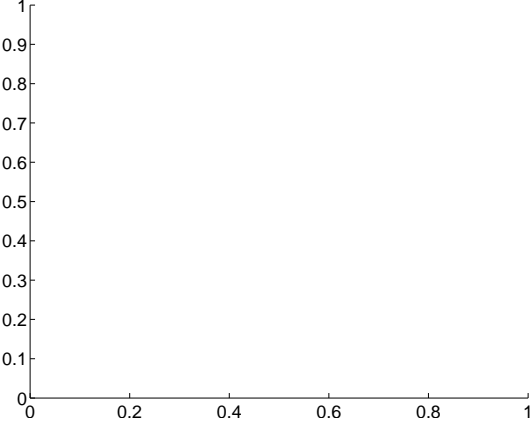
Q7 no difference image



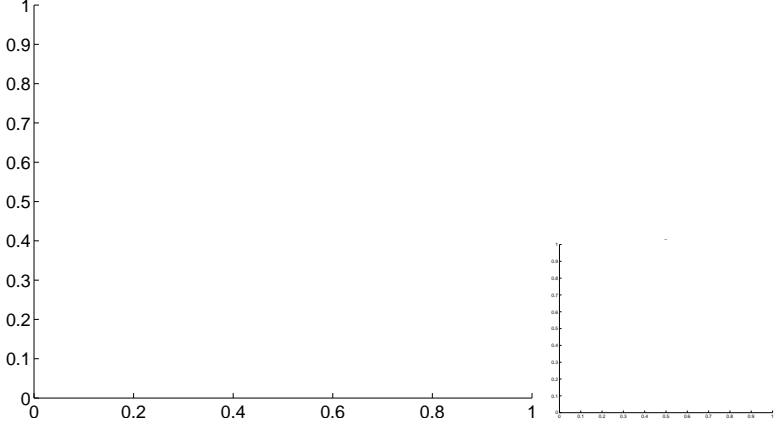
Q7 no OOT image



Q8 no difference image



Q8 no OOT image



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

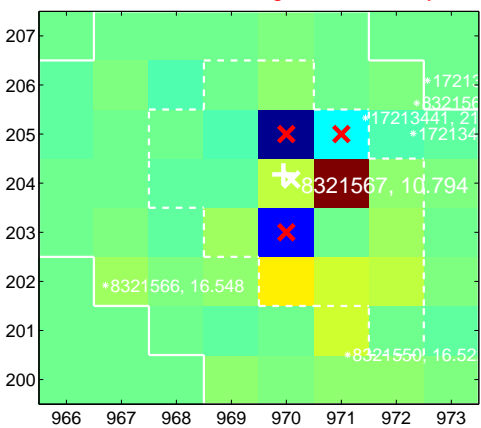
Q9 no difference image



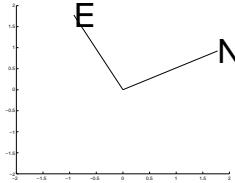
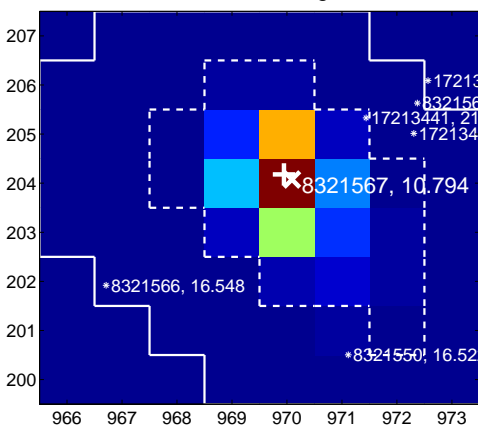
Q9 no OOT image



Q10 difference image. Poor Quality



Q10 OOT image



Q11 no difference image



Q11 no OOT image



Q12 no difference image



Q12 no OOT image



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

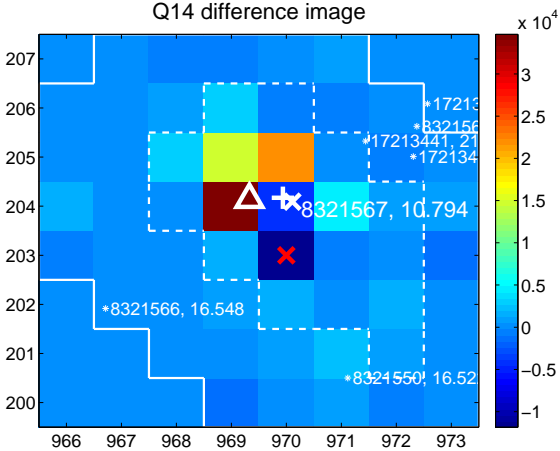
Q13 no difference image



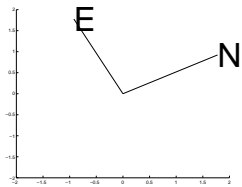
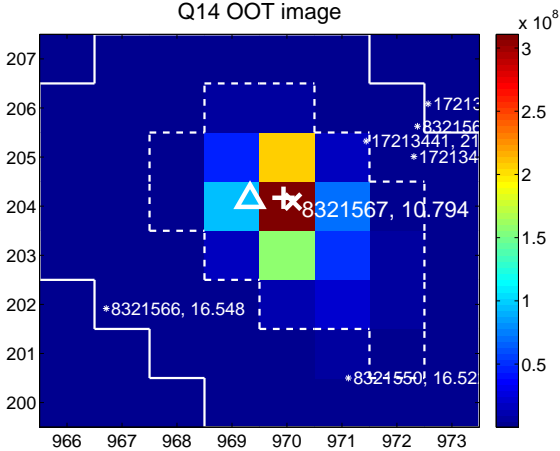
Q13 no OOT image



Q14 difference image



Q14 OOT image



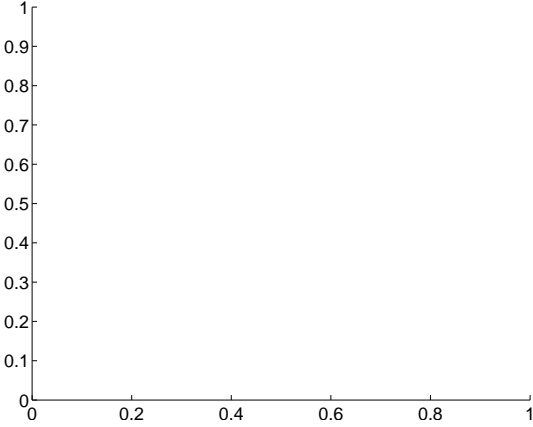
Q15 no difference image



Q15 no OOT image



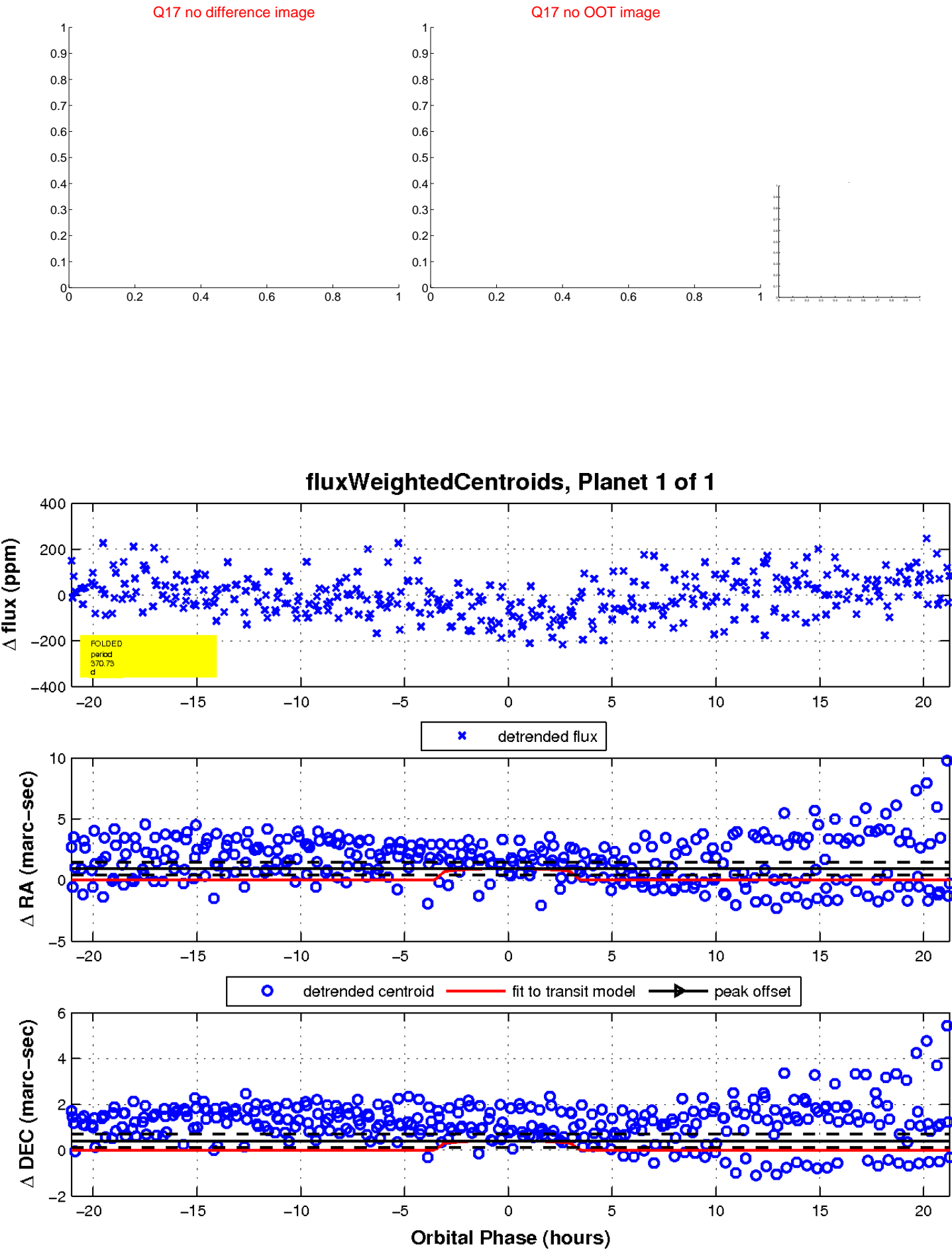
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

