

KIC 010467431

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})
010467431-01	OBS	No	362.203535	324.451222	1218.2	21.174	8.8	9.9	0.73	5495	4.55	0.51

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010467431-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—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.

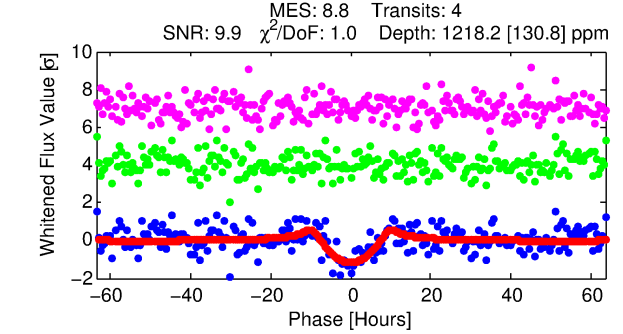
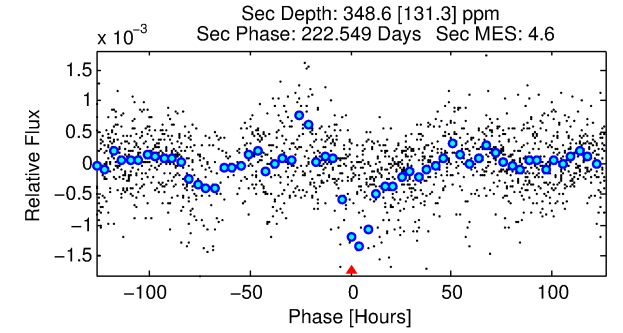
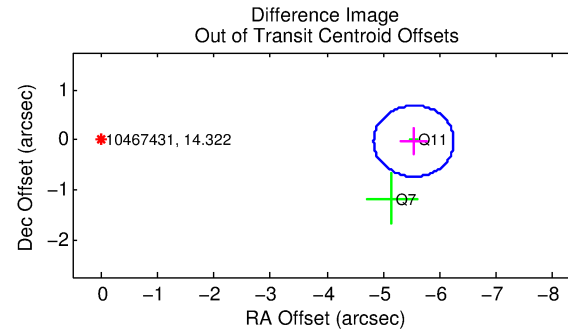
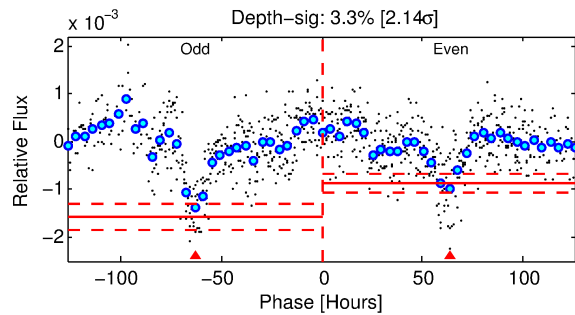
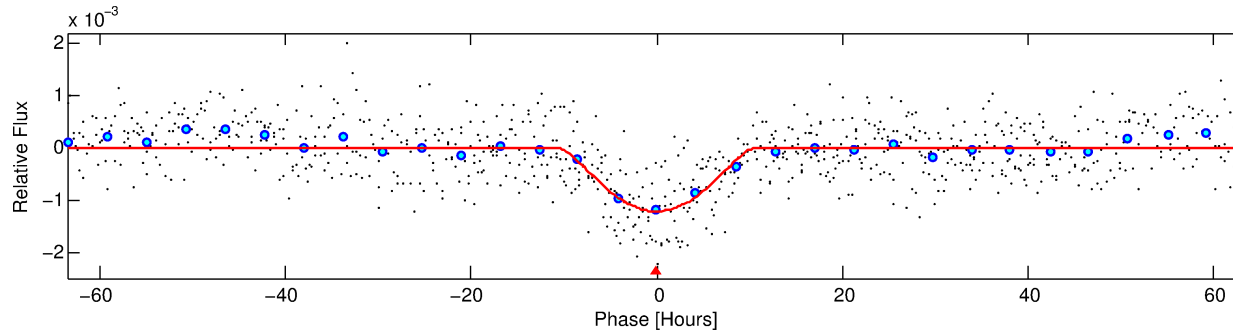
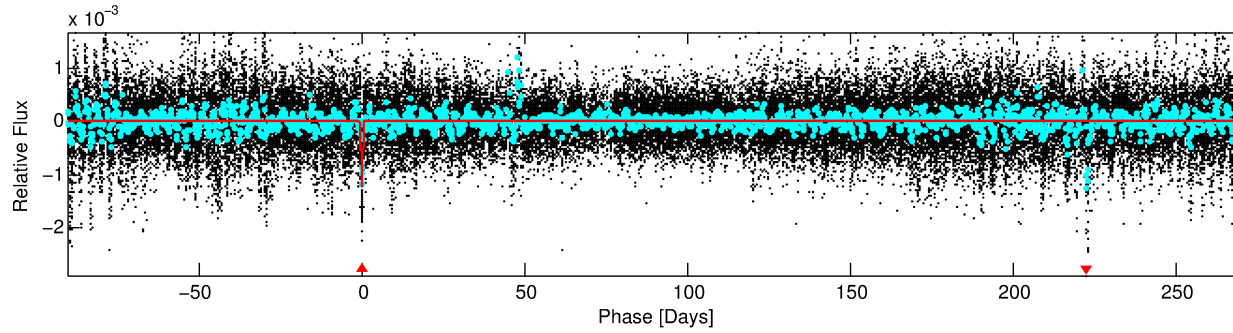
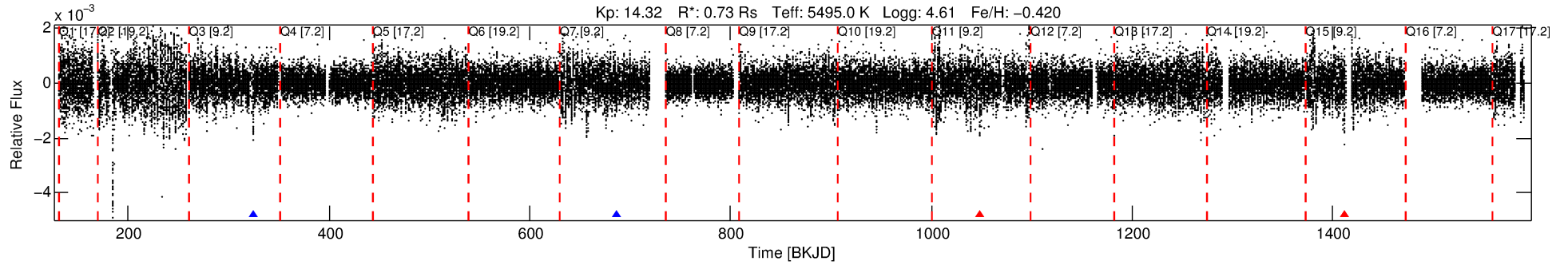
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010467431-01

No Significant Match Found

DV One-Page Summary

KIC: 10467431 Candidate: 1 of 1 Period: 362.204 d



DV Fit Results:

Period = 362.20353 [0.01621] d
Epoch = 324.4512 [0.0287] BKJD
Rp/R* = 0.0568 [0.0775]
a/R* = 47.73 [17.10]
b = 0.99 [0.12]
Seff = 0.51 [0.13]
Teq = 216 [14] K
Rp = 4.55 [6.27] Re
a = 0.9257 [0.1467] AU
Ag = 7925.40 [21874.78] [0.36 σ]
Teff = 3149 [2168] K [1.35 σ]

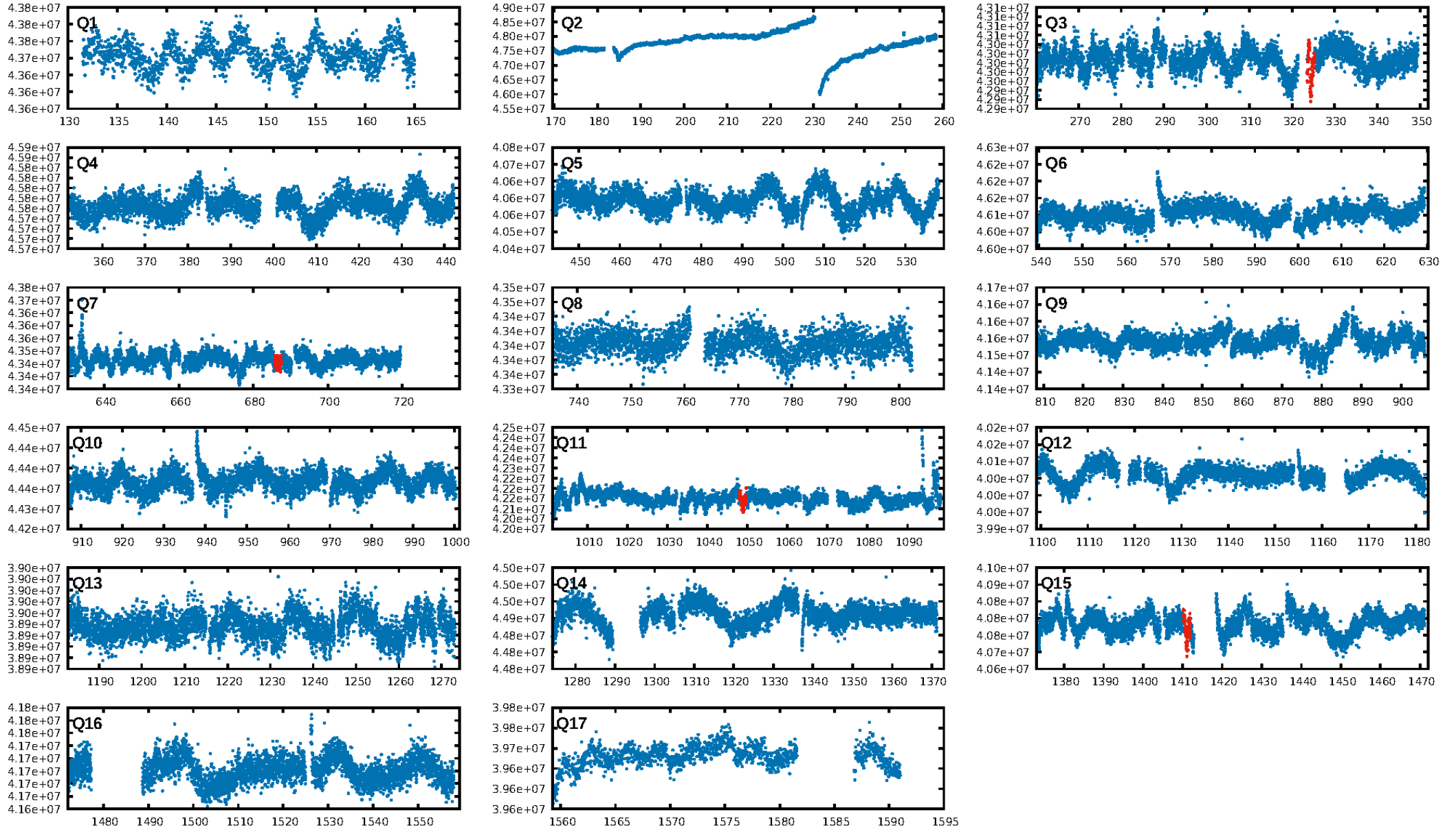
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 99.5%
Bootstrap-pfa: 1.48e-10
RollingBand-fgt: 0.50 [2/4]
GhostDiagnostic-chr: 1.38
Centroid-sig: 0.4%
Centroid-so: 1.349 arcsec [2.73 σ]
OotOffset-rm: 5.537 arcsec [23.34 σ]
KicOffset-rm: 2.359 arcsec [8.82 σ]
OotOffset-st: 0/2/0/0 [2]
KicOffset-st: 0/2/0/0 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [2/2]

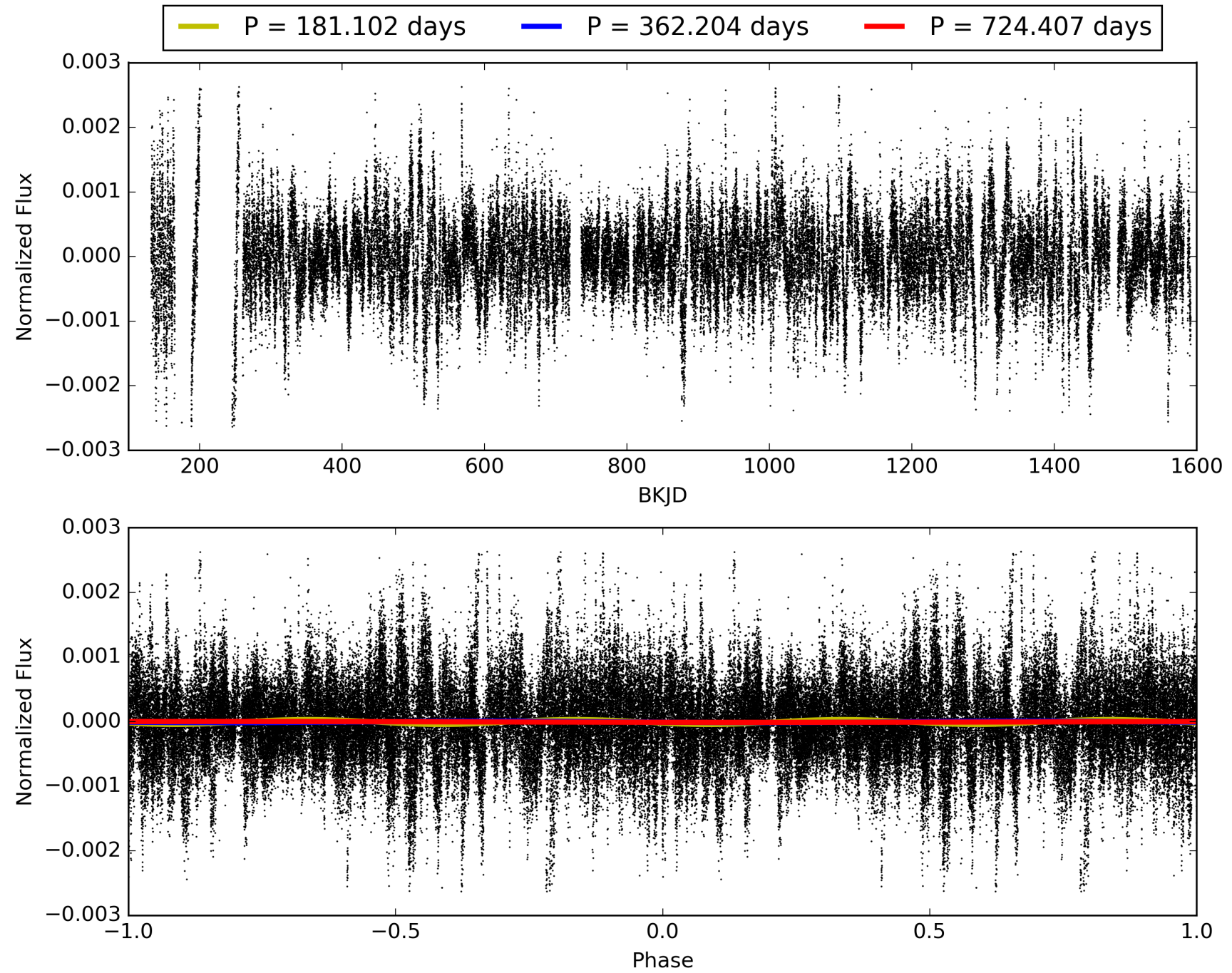
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 22:47:10 Z

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

TCE 010467431-01, PDC Light Curves

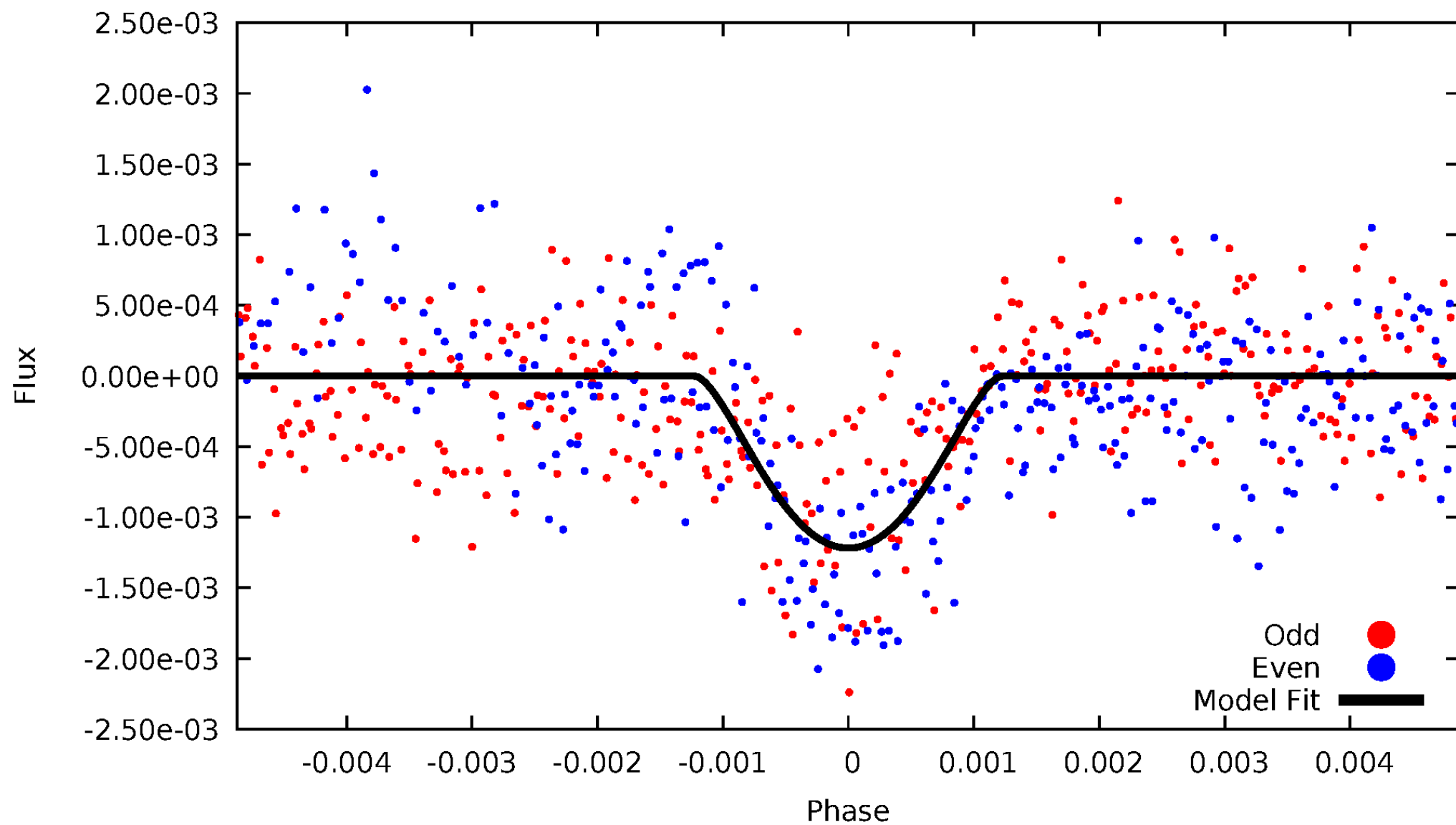


TCE 010467431-01



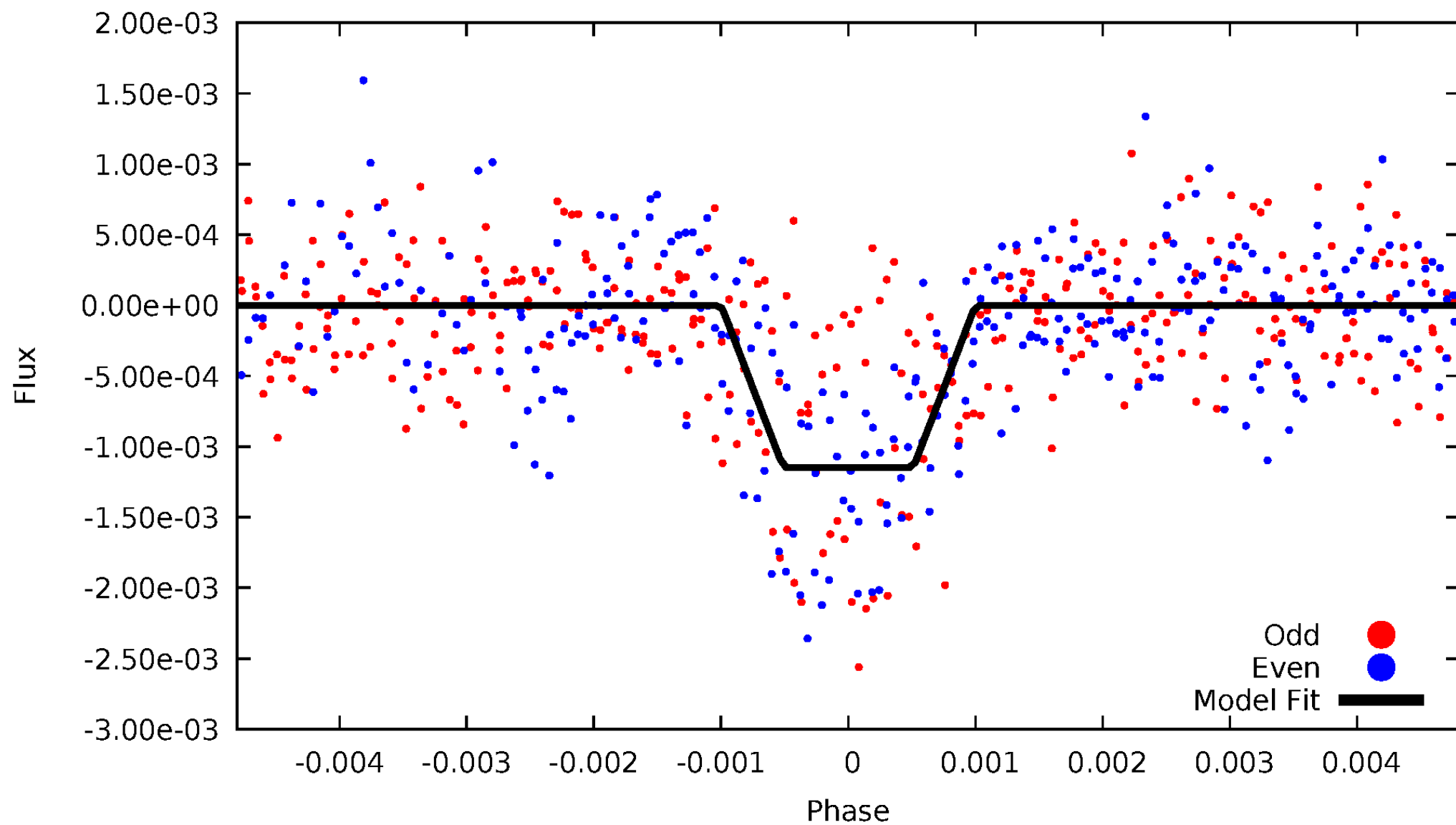
DV Odd/Even

TCE 010467431-01



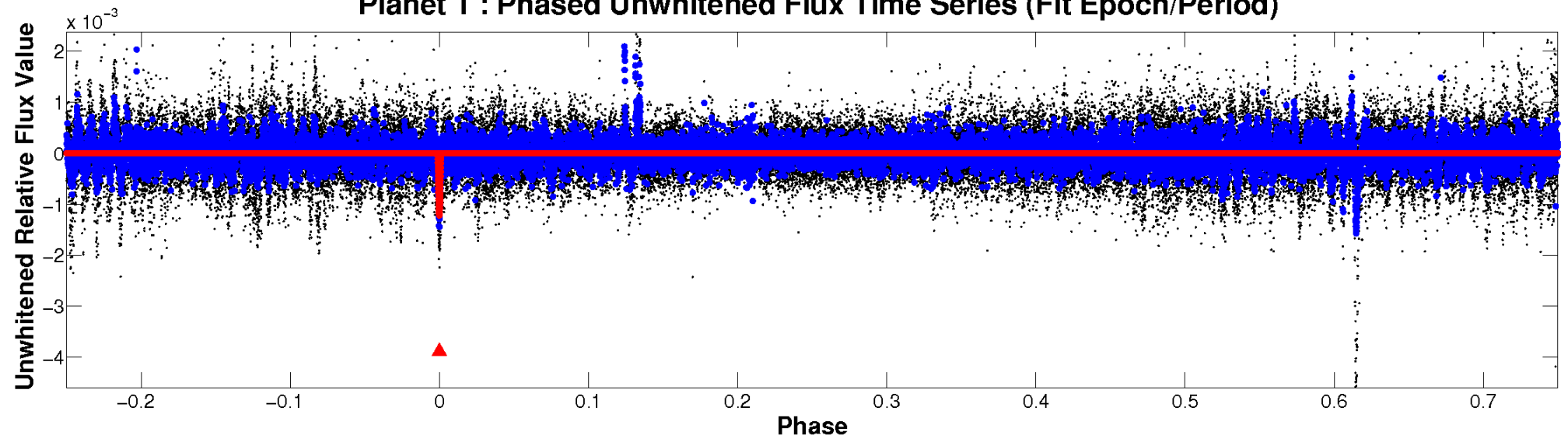
ALT Odd/Even

TCE 010467431-01

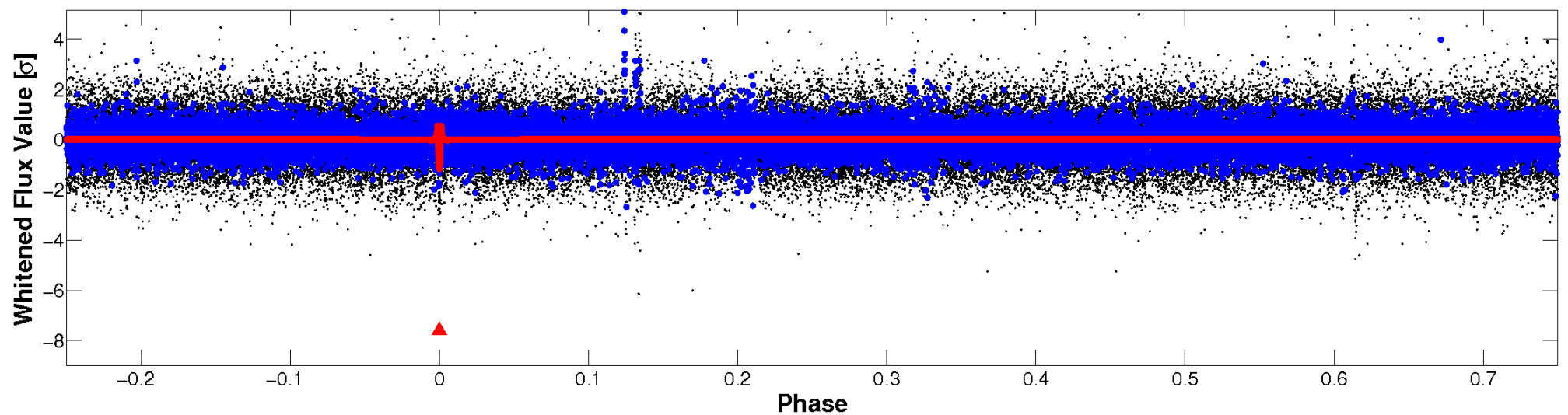


Non-Whitened Vs. Whitened Light Curve

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

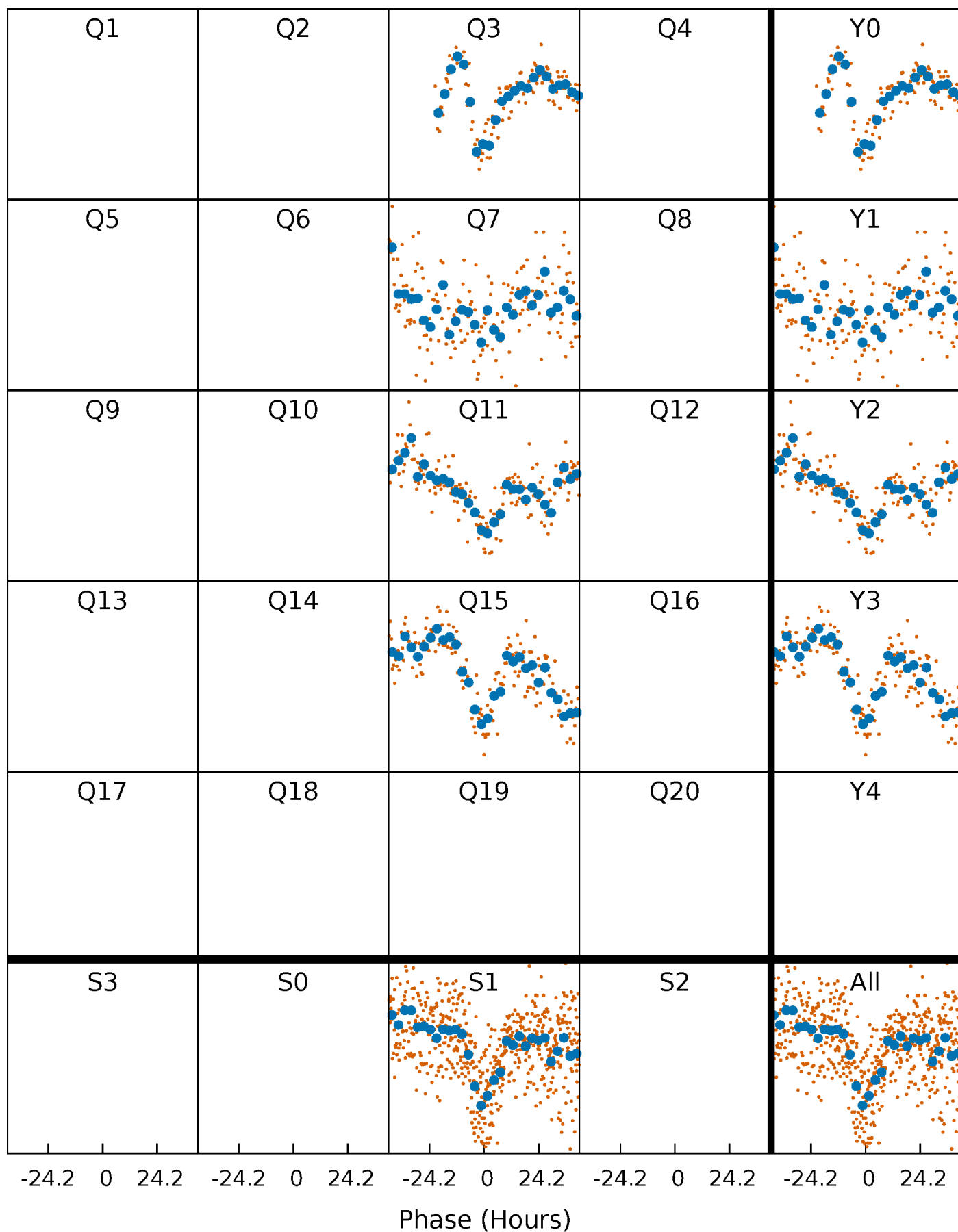


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



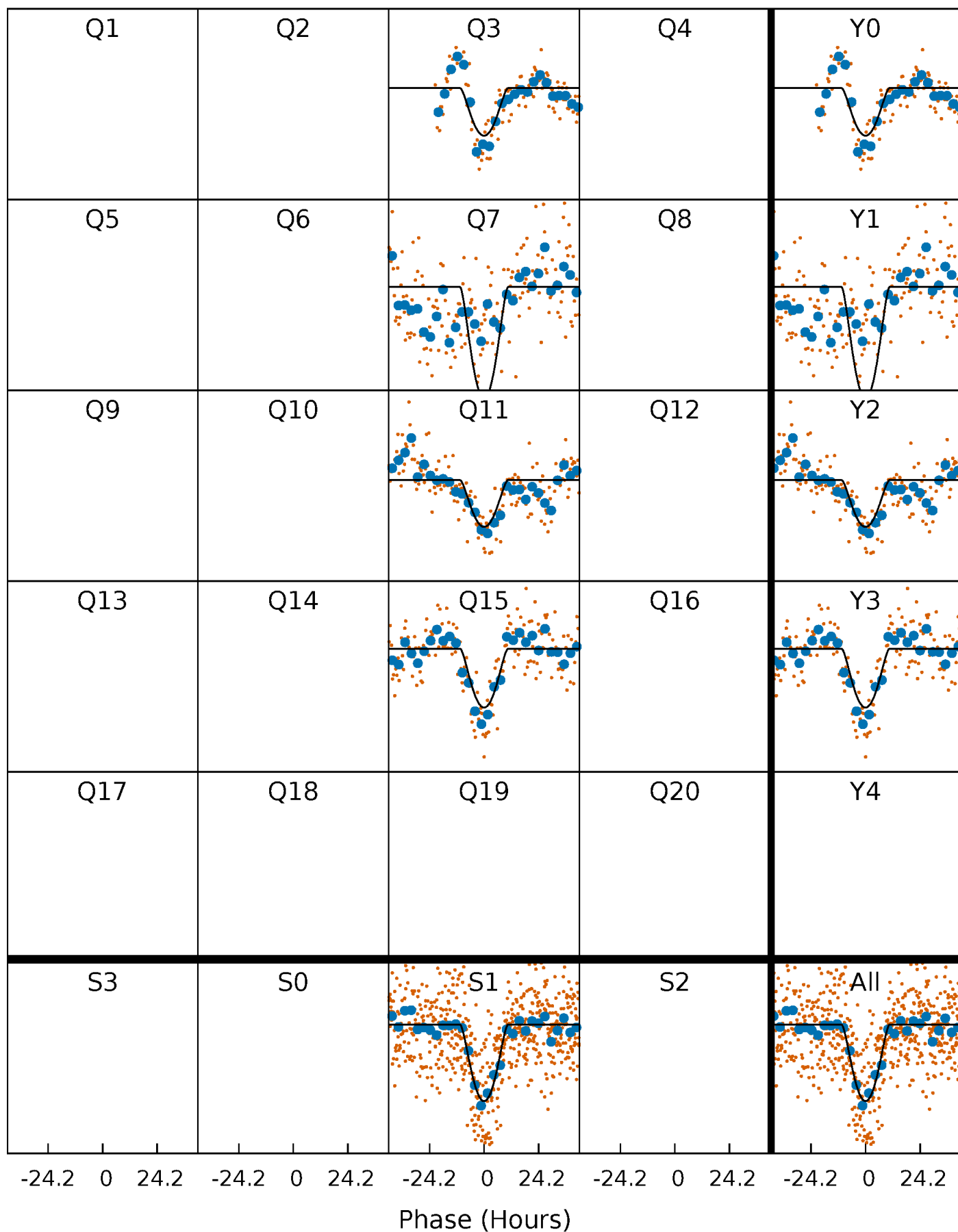
PDC Quarter-Phased Transit Curves

TCE 010467431-01 P=362.203535 Days $T_0=324.451222$ (BKJD)



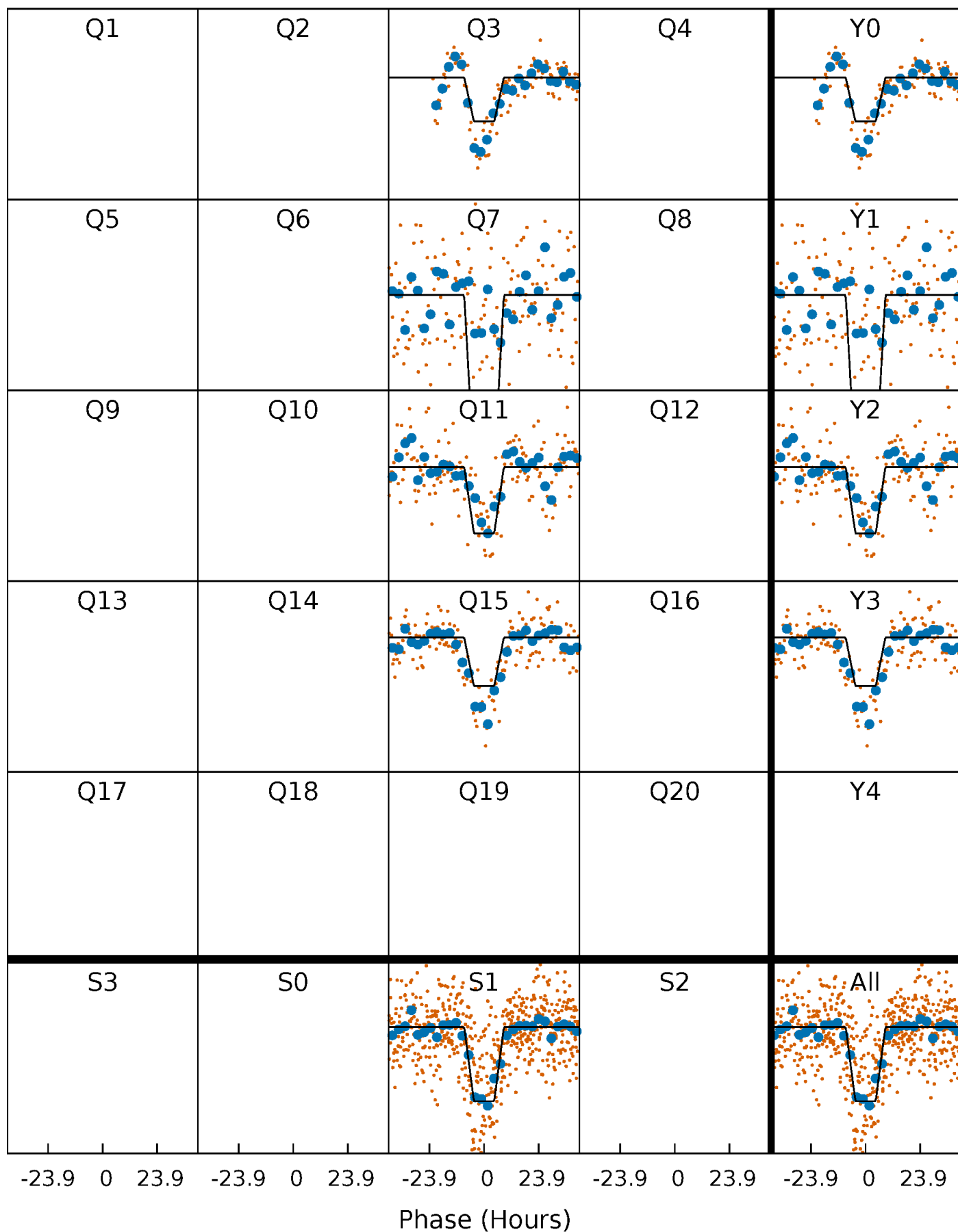
DV Quarter-Phased Transit Curves

TCE 010467431-01 $P=362.203535$ Days $T_0=324.451222$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

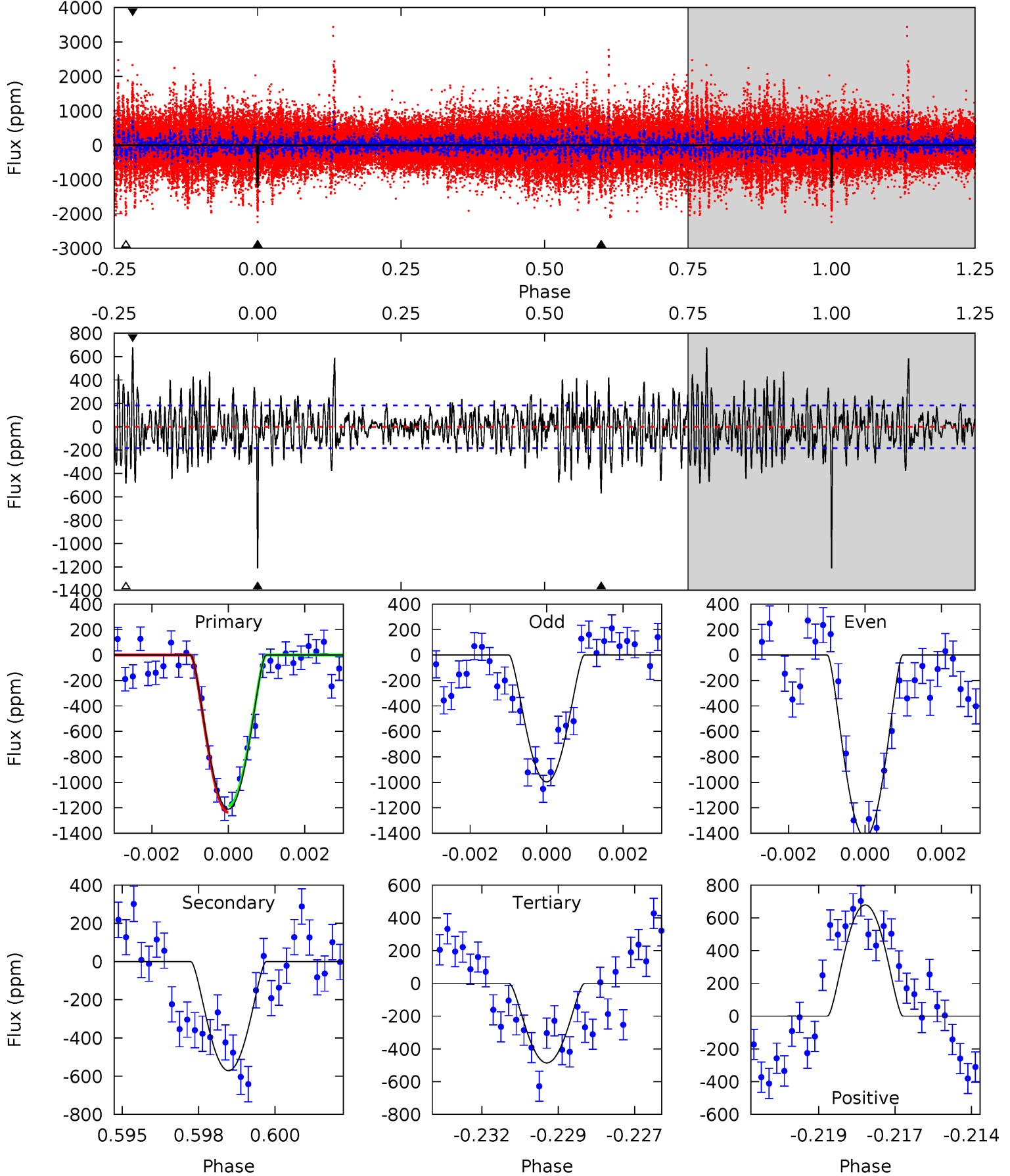
TCE 010467431-01 P=362.184851 Days $T_0=324.479561$ (BKJD)



DV Model-Shift Uniqueness Test

010467431-01, P = 362.203535 Days, E = 324.451222 Days

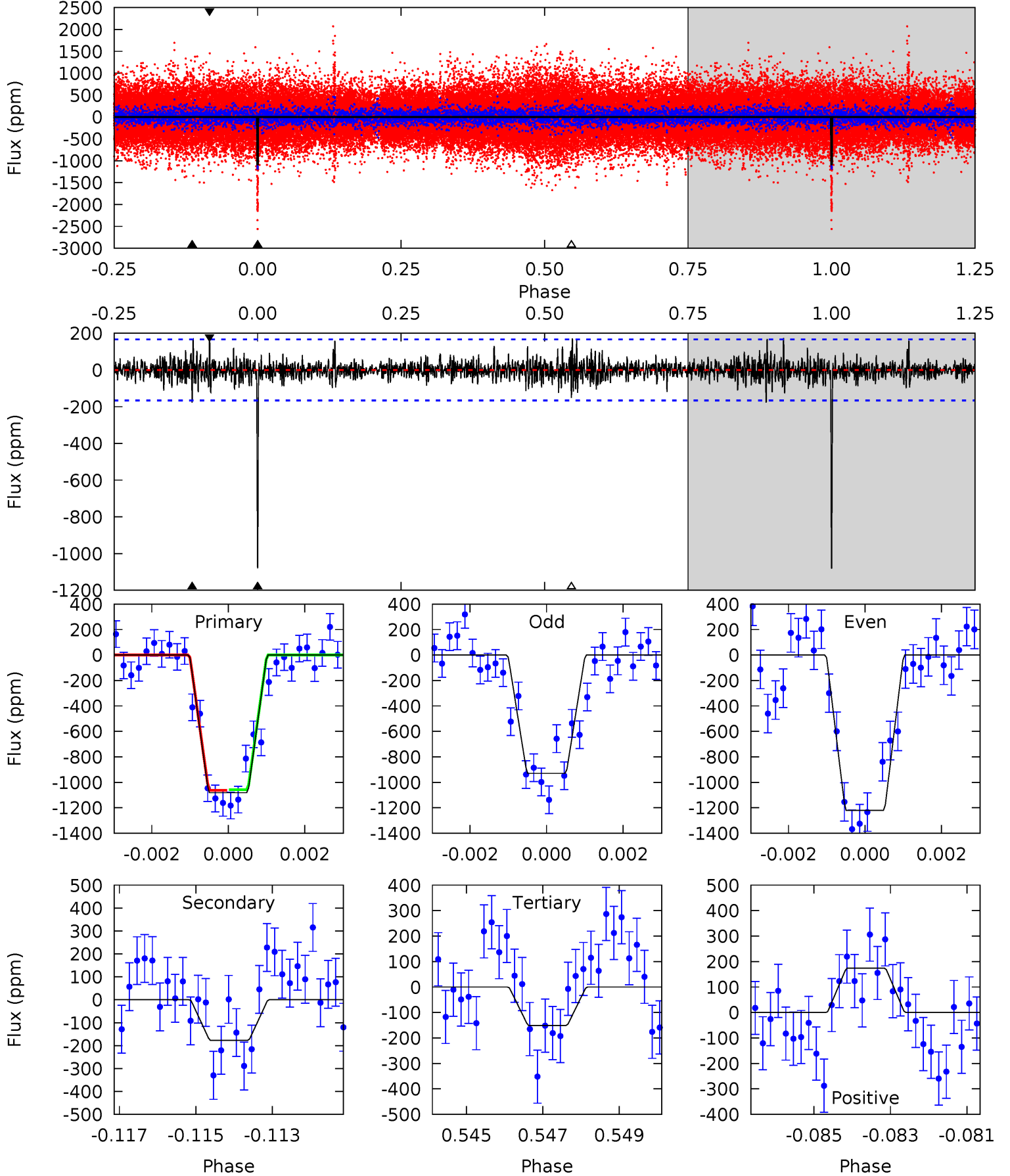
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
34.9	16.5	14.0	19.6	5.29	3.02	4.47	20.9	15.3	2.47	-3.11	6.12	0.85	0.36	0.73



Alt Model-Shift Uniqueness Test

010467431-01, P = 362.184851 Days, E = 324.479561 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
34.7	5.68	4.84	5.59	5.33	3.09	1.19	29.9	29.1	0.84	0.09	4.61	0.88	0.14	0.07



Stellar Parameters For KIC 010467431

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5495^{+162}_{-146}	$4.613^{+0.032}_{-0.120}$	$-0.420^{+0.350}_{-0.300}$	$0.734^{+0.142}_{-0.061}$	$0.814^{+0.083}_{-0.083}$	$2.905^{+0.471}_{-1.056}$
	+3%/-3%	+1%/-3%	+83%/-71%	+19%/-8%	+10%/-10%	+16%/-36%
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 010467431-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-571 ± 35	$6.76^{+5.40}_{-4.41}$	307^{+14}_{-12}	3464^{+1639}_{-568}	5880^{+42415}_{-4040}
Alt.	-177 ± 31	$5.69^{+5.42}_{-3.93}$	307^{+15}_{-12}	3048^{+1460}_{-508}	2431^{+25837}_{-1778}

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

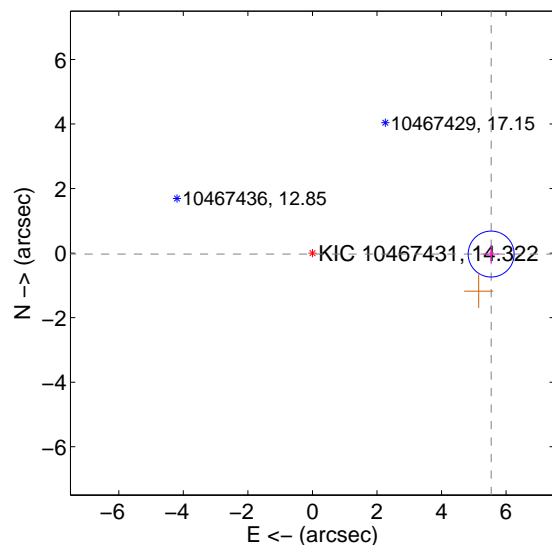
Supplemental centroid analysis for 010467431-01. Kepler magnitude: 14.32. Transit SNR 9.86

There are 0 quarters with good PRF difference image offsets

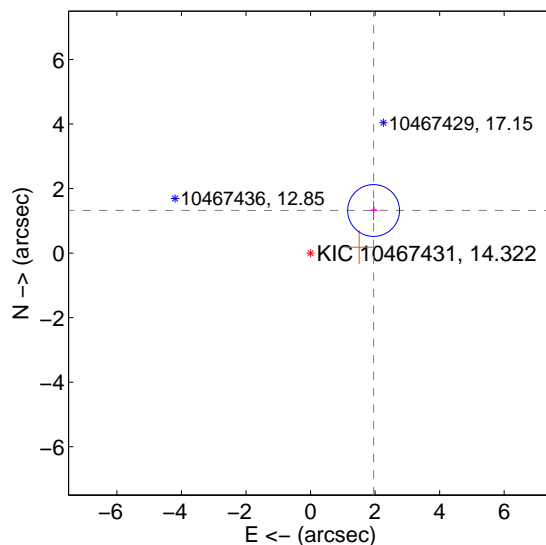
The OOT PRF centroid is offset from the target star catalog position by about 3.83 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.537 ± 0.237	23.34	-5.537 ± 0.237	-0.030 ± 0.271
PRF-fit source offset from KIC position	2.359 ± 0.268	8.82	-1.954 ± 0.133	1.320 ± 0.300
photometric centroid source offset	1.35 ± 0.49	2.73	1.34 ± 0.50	0.15 ± 0.30

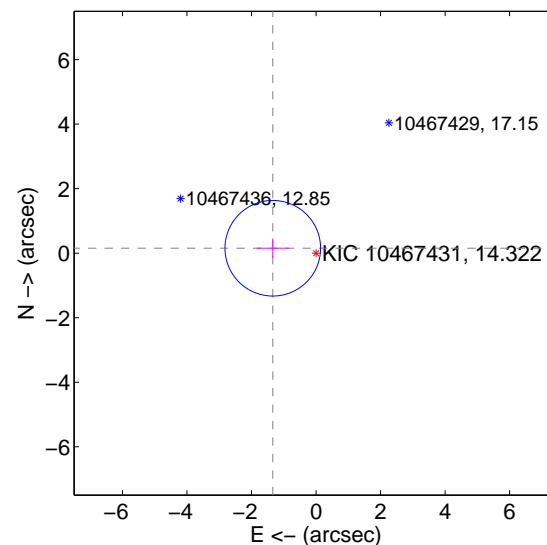
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

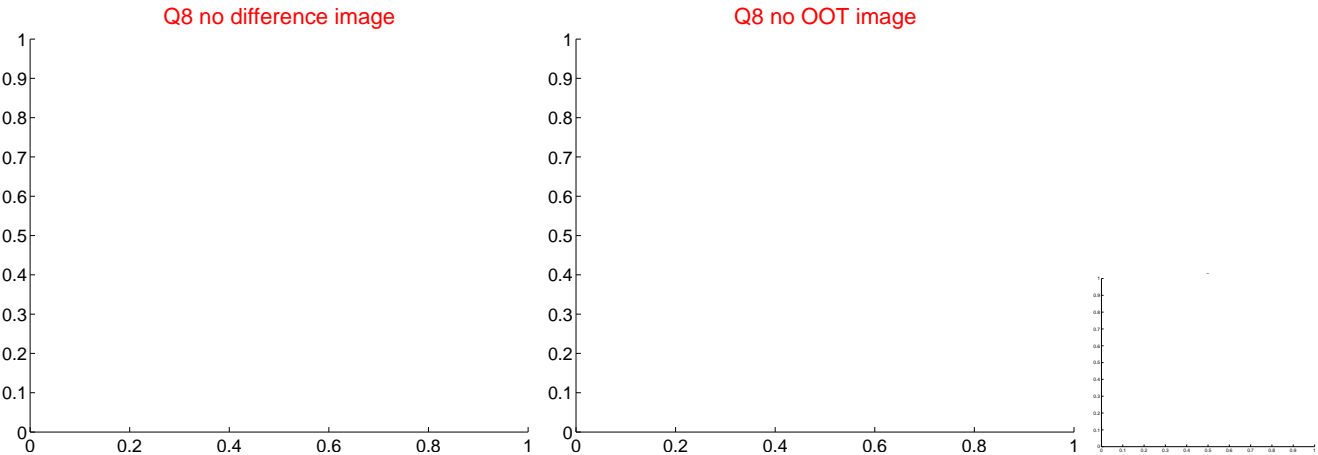
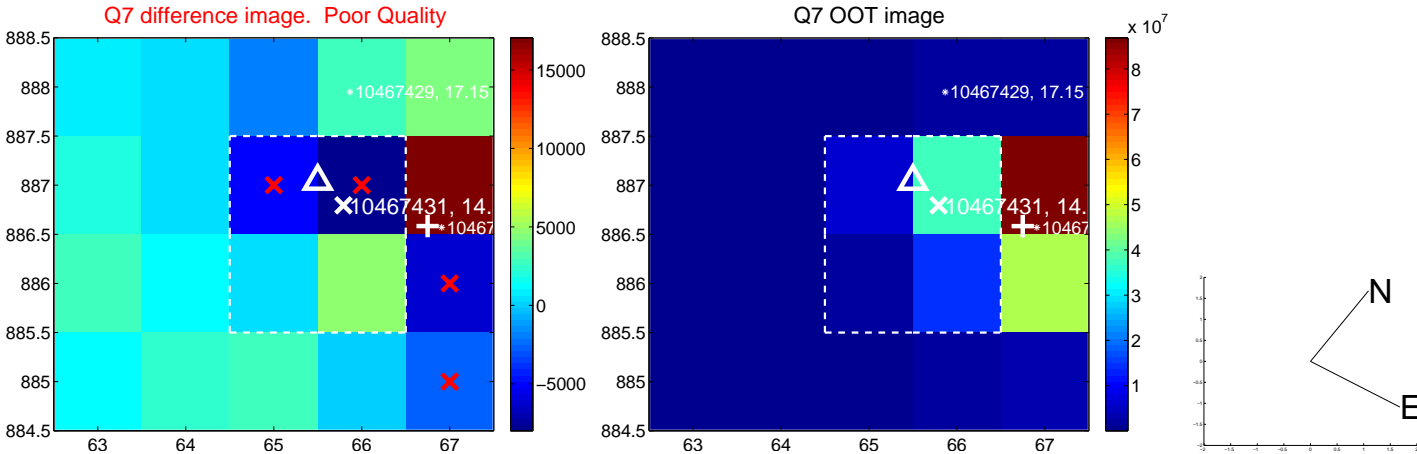
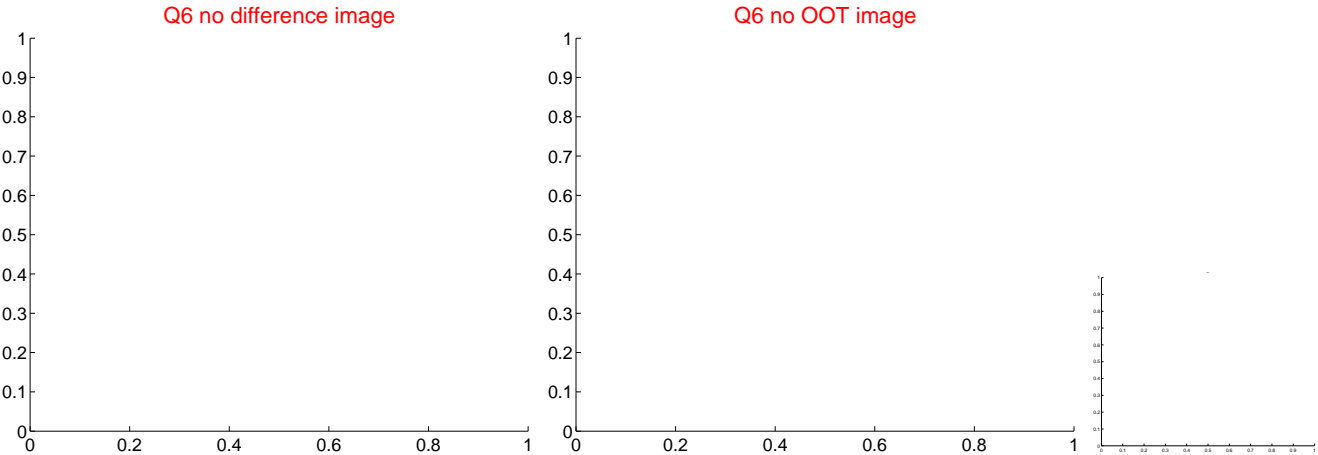
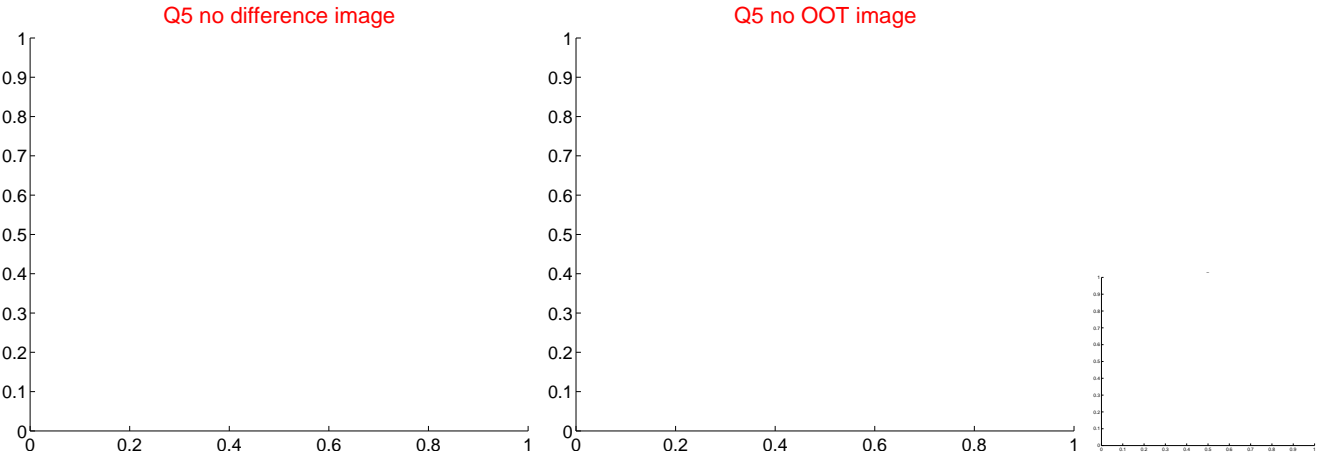


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

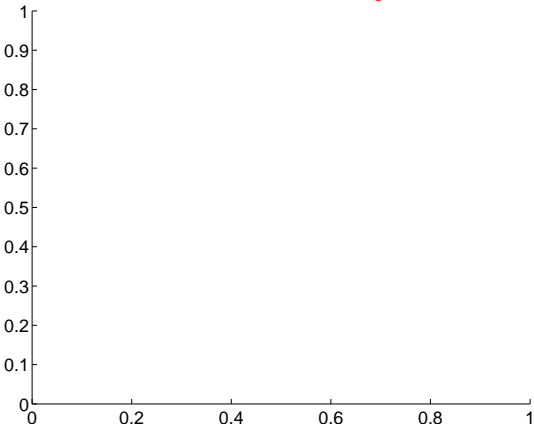


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

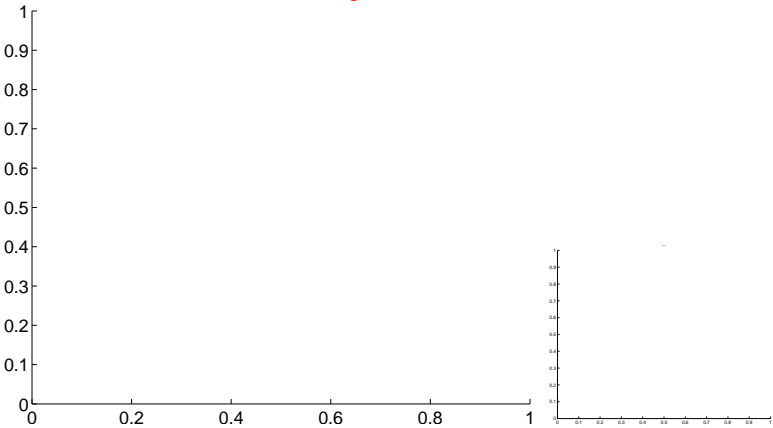


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

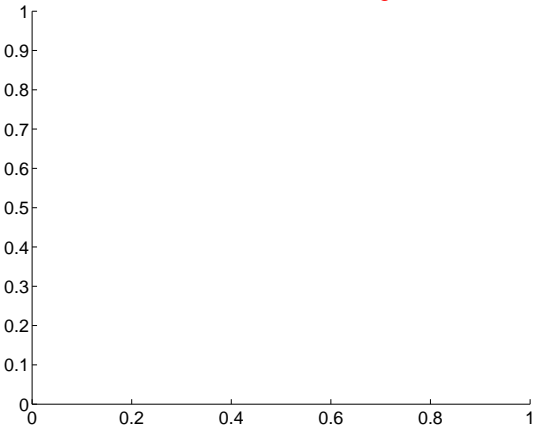
Q9 no difference image



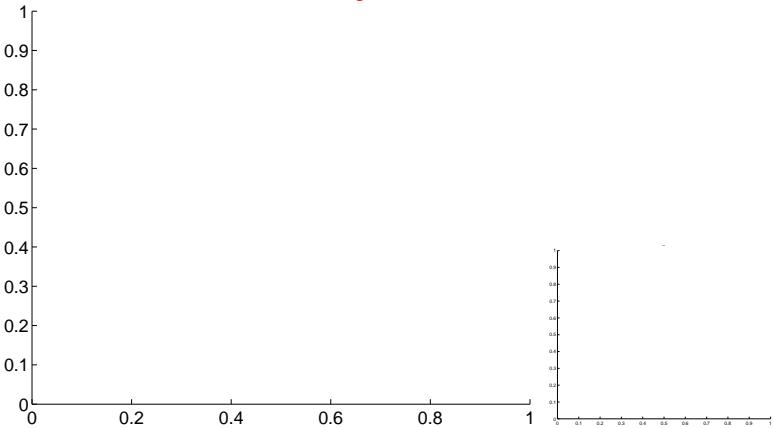
Q9 no OOT image



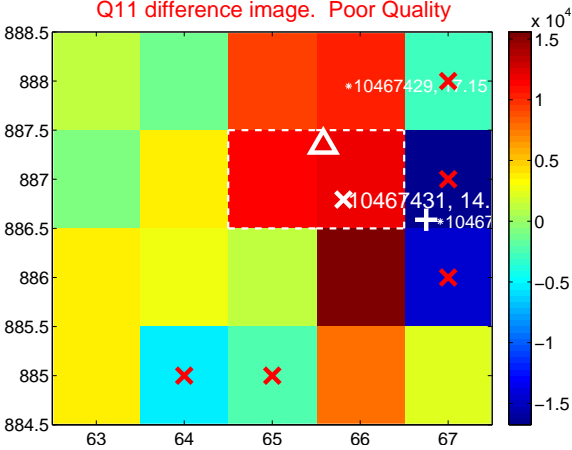
Q10 no difference image



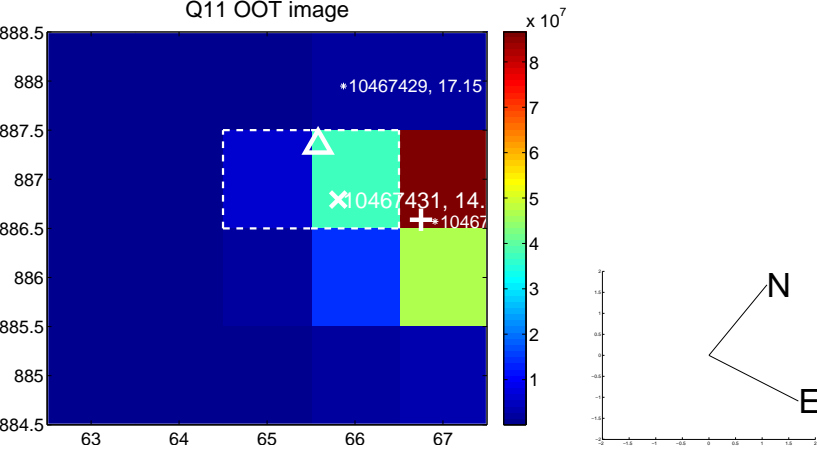
Q10 no OOT image



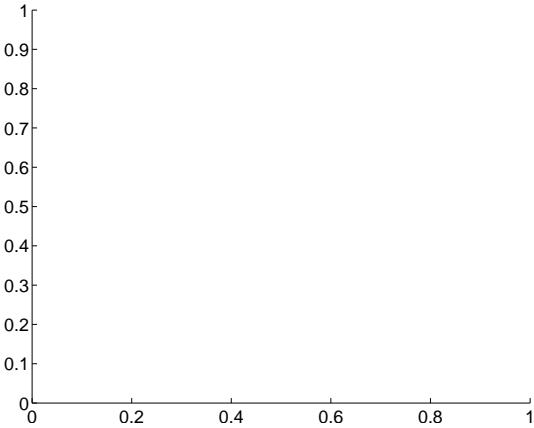
Q11 difference image. Poor Quality



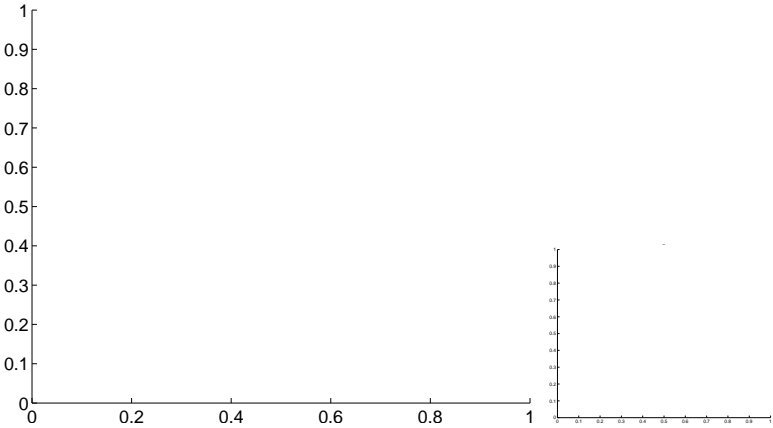
Q11 OOT image



Q12 no difference image



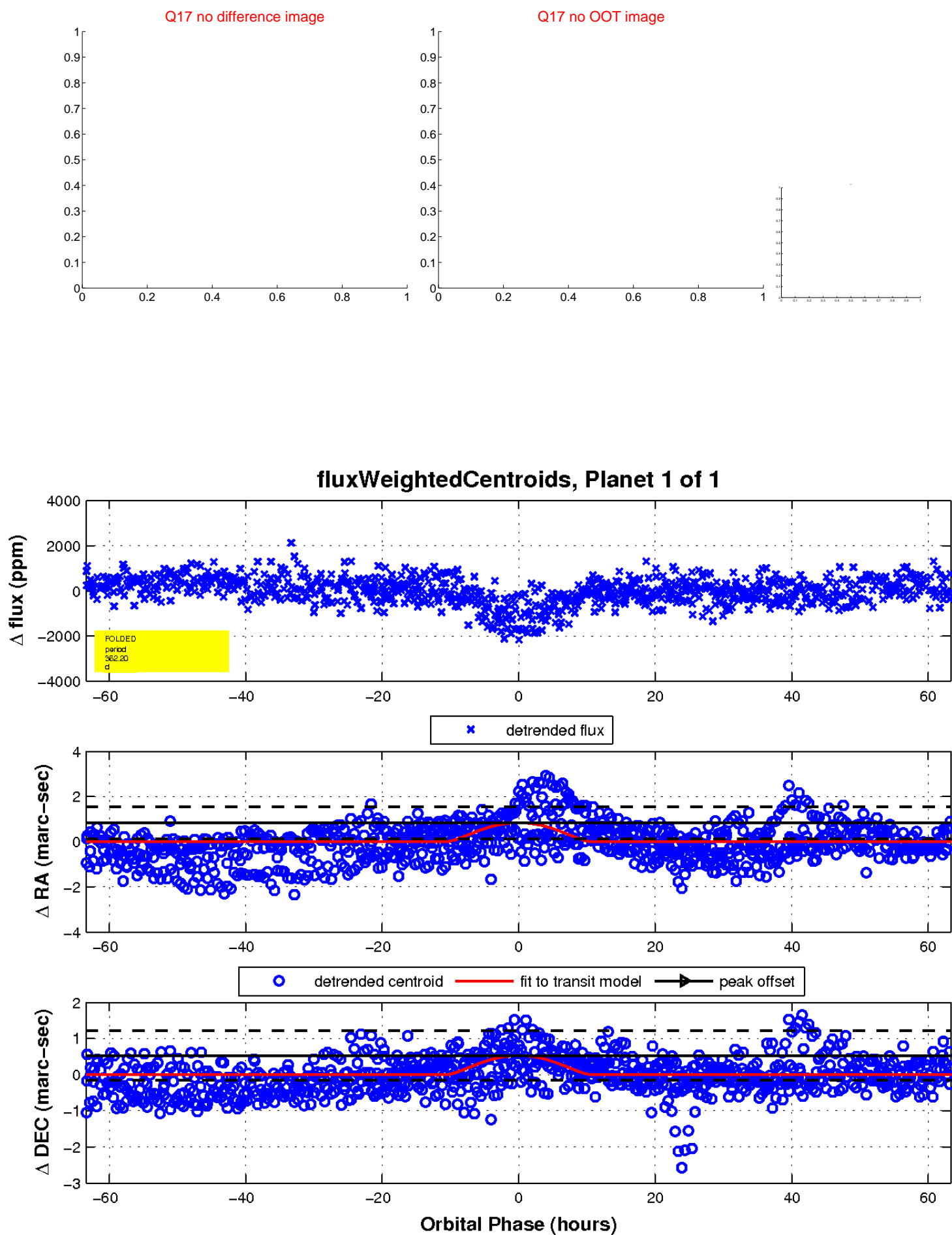
Q12 no OOT image



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

