

KIC 008331640

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})
008331640-01	OBS	No	0.721739	132.162099	416.4	1.854	7.5	4.8	12.06	4860	30.09	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008331640-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—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.

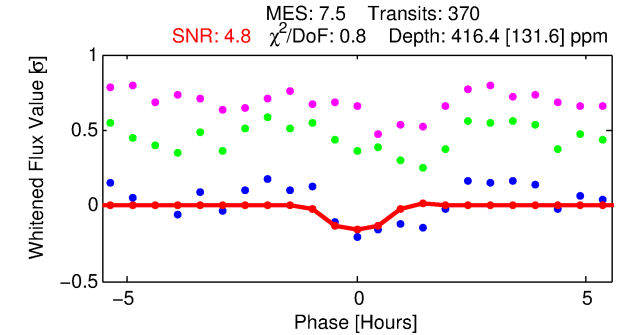
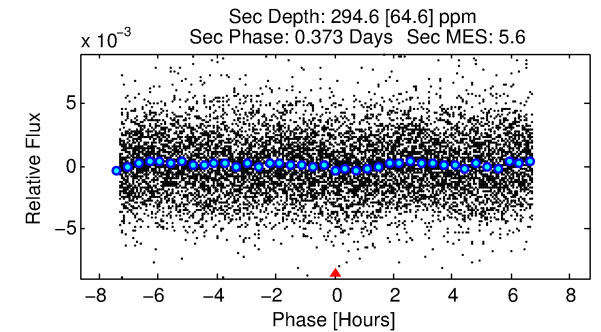
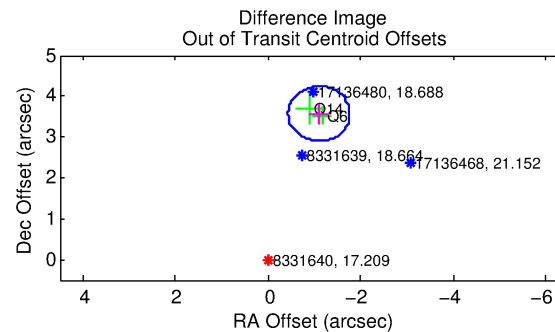
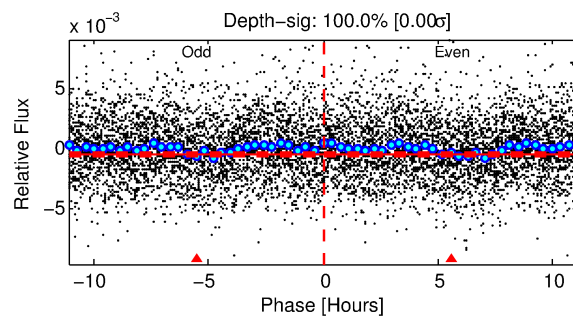
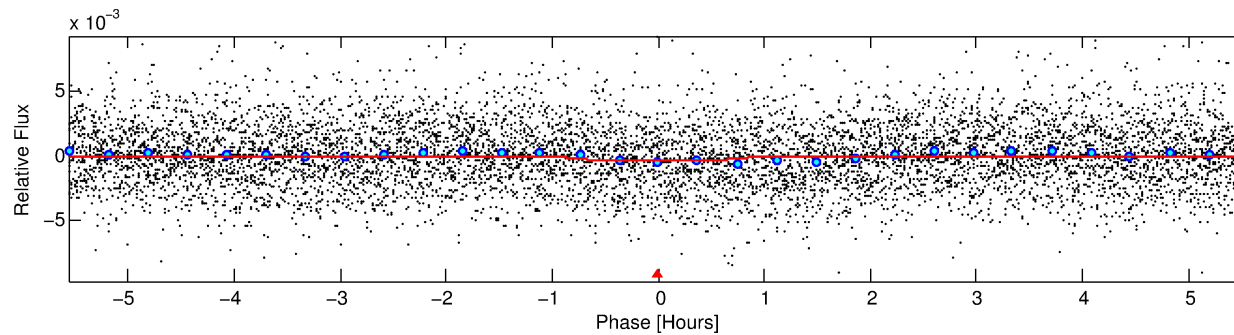
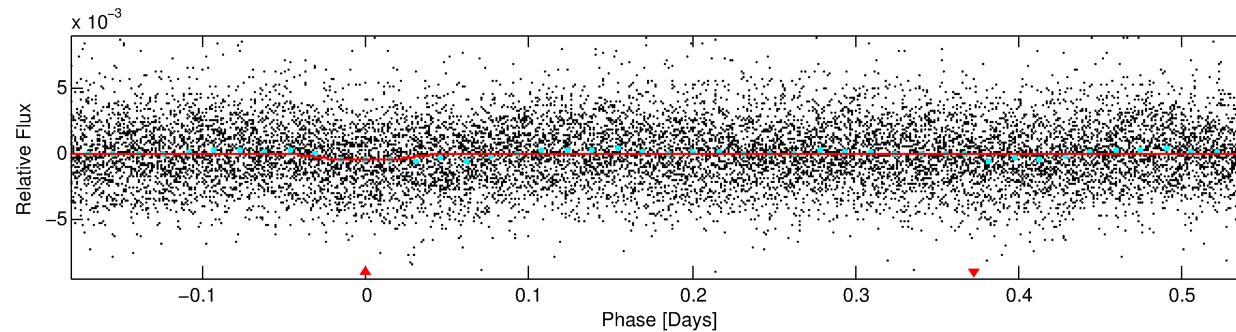
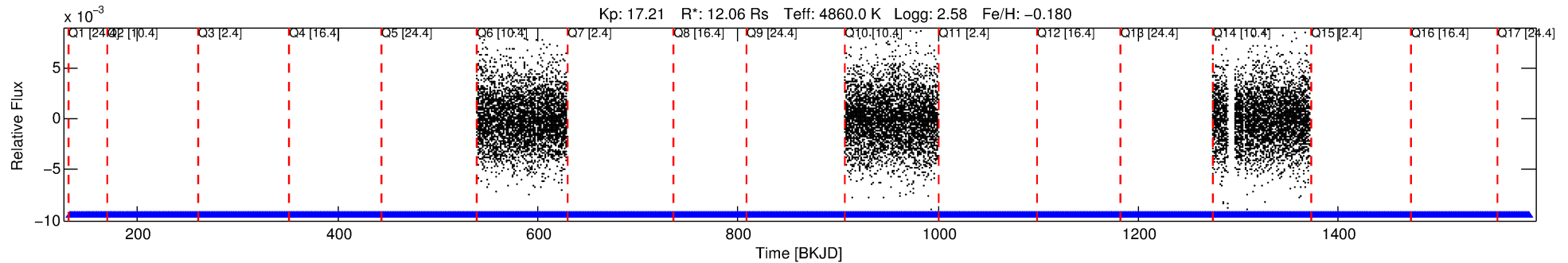
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008331640-01

No Significant Match Found

DV One-Page Summary

KIC: 8331640 Candidate: 1 of 1 Period: 0.722 d



DV Fit Results:

Period = 0.72174 [0.00002] d
Epoch = 132.1621 [0.0053] BKJD
Rp/R* = 0.0229 [0.0349]
a/R* = 1.73 [6.72]
b = 0.90 [1.29]
Seff = N/A
Teq = N/A
Rp = 30.09 [48.51] Re
a = N/A
Ag = N/A
Teffp = N/A

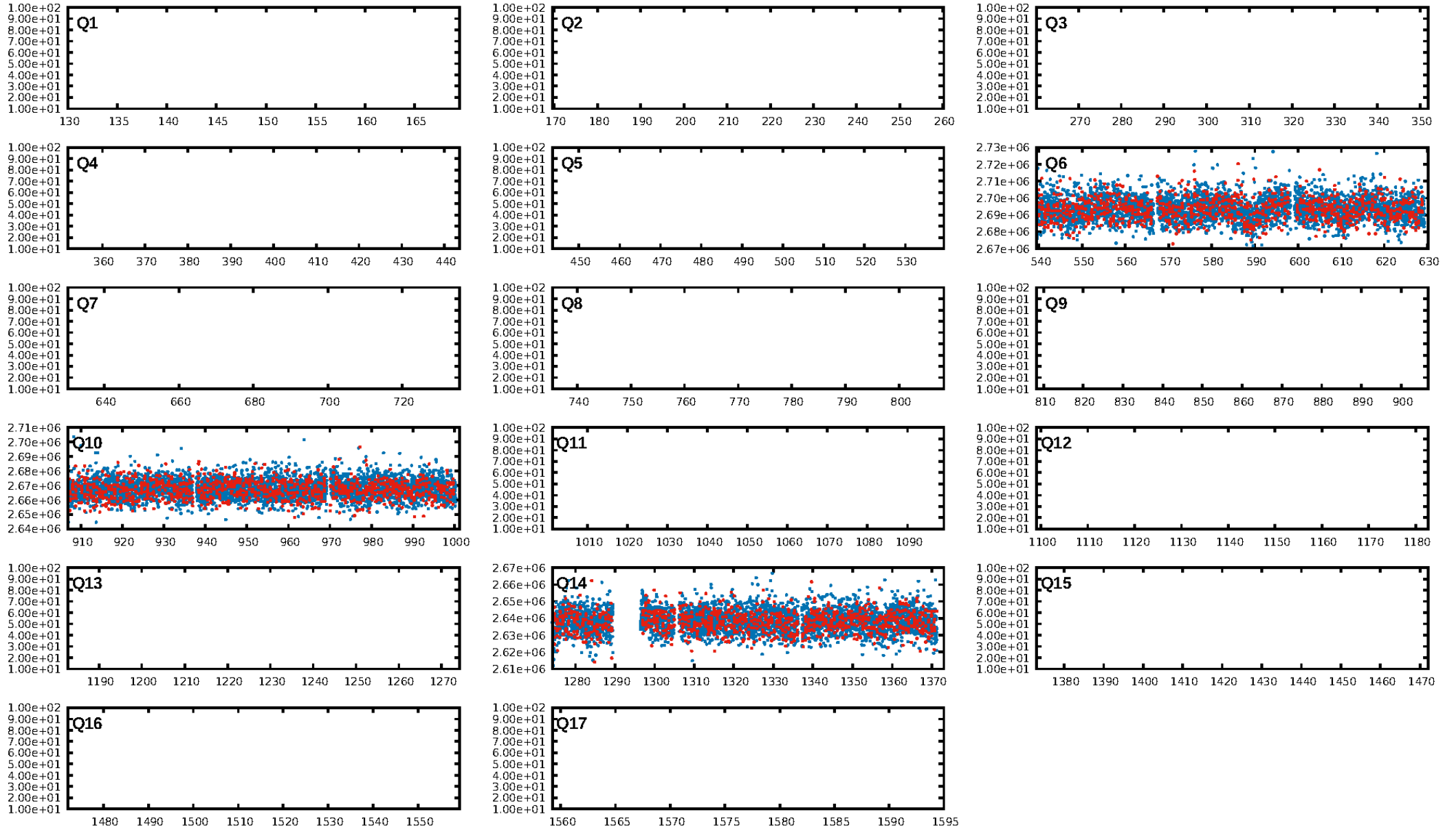
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.77e-15
RollingBand-fgt: 1.00 [370/370]
GhostDiagnostic-chr: 0.7151
Centroid-sig: 0.5%
Centroid-so: 5.732 arcsec [2.31 σ]
OotOffset-rm: 3.734 arcsec [16.77 σ]
KicOffset-rm: 3.868 arcsec [17.29 σ]
OotOffset-st: 2/0/0/0 [2]
KicOffset-st: 2/0/0/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

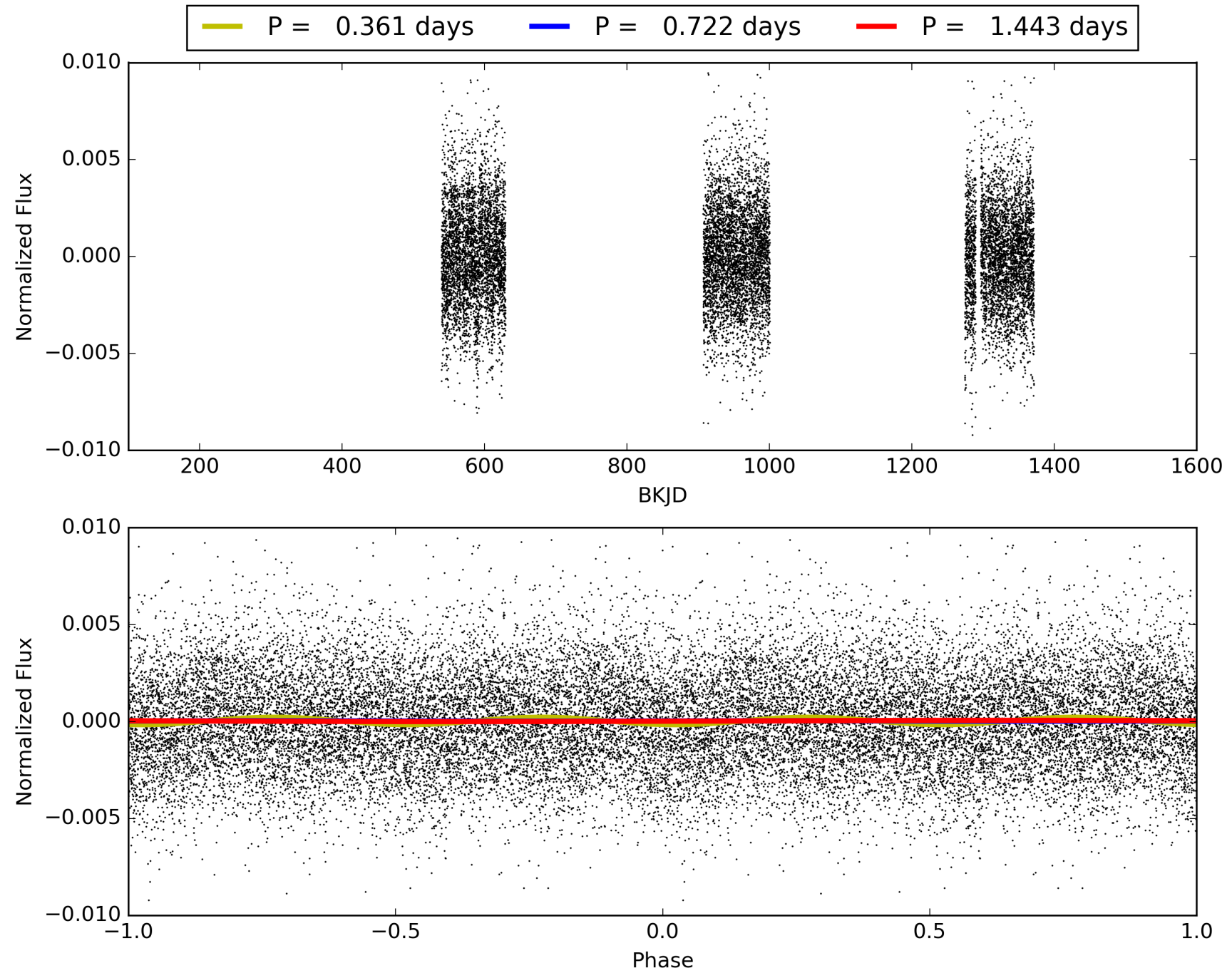
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 00:05:24 Z

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

TCE 008331640-01, PDC Light Curves

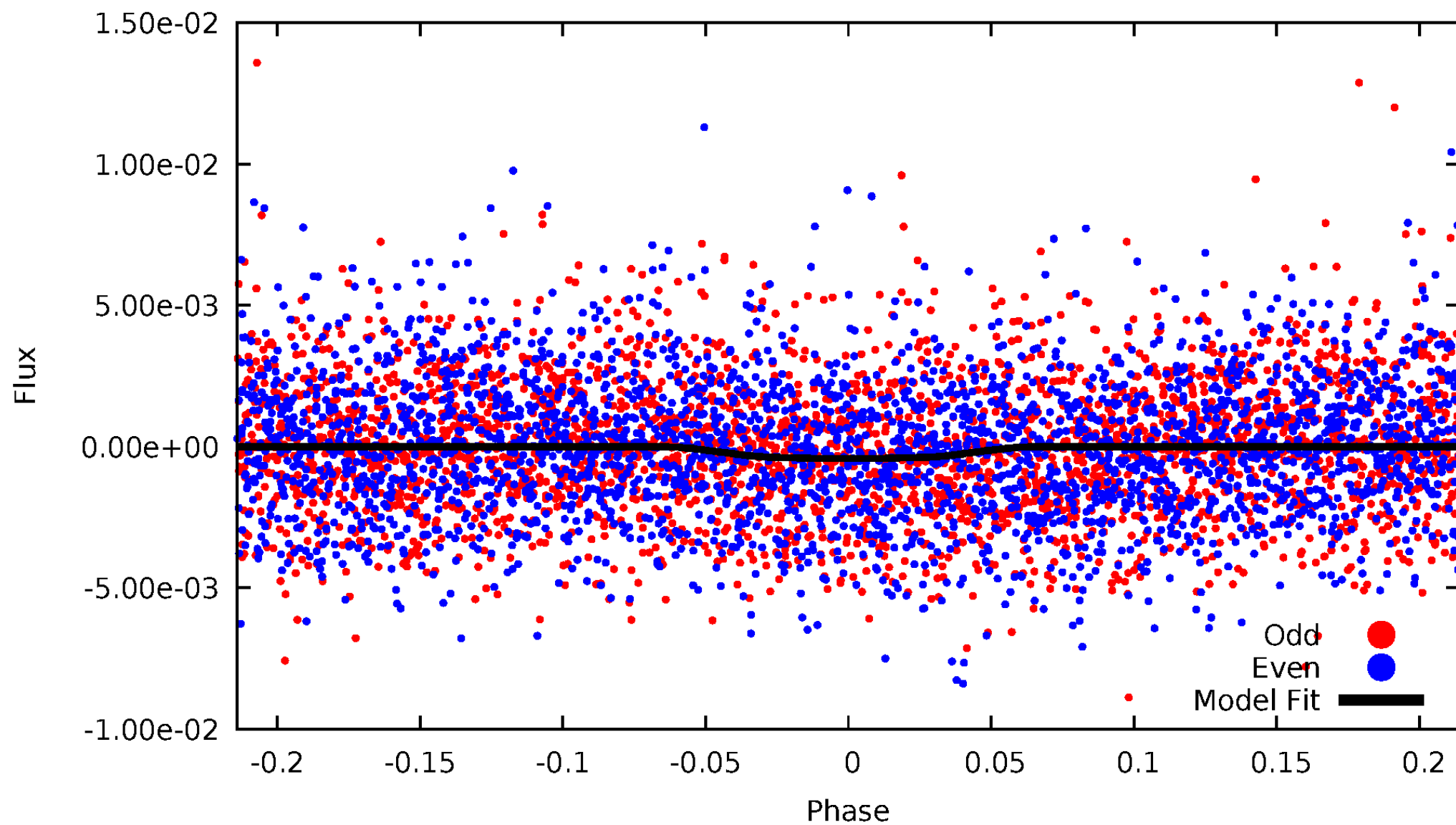


TCE 008331640-01



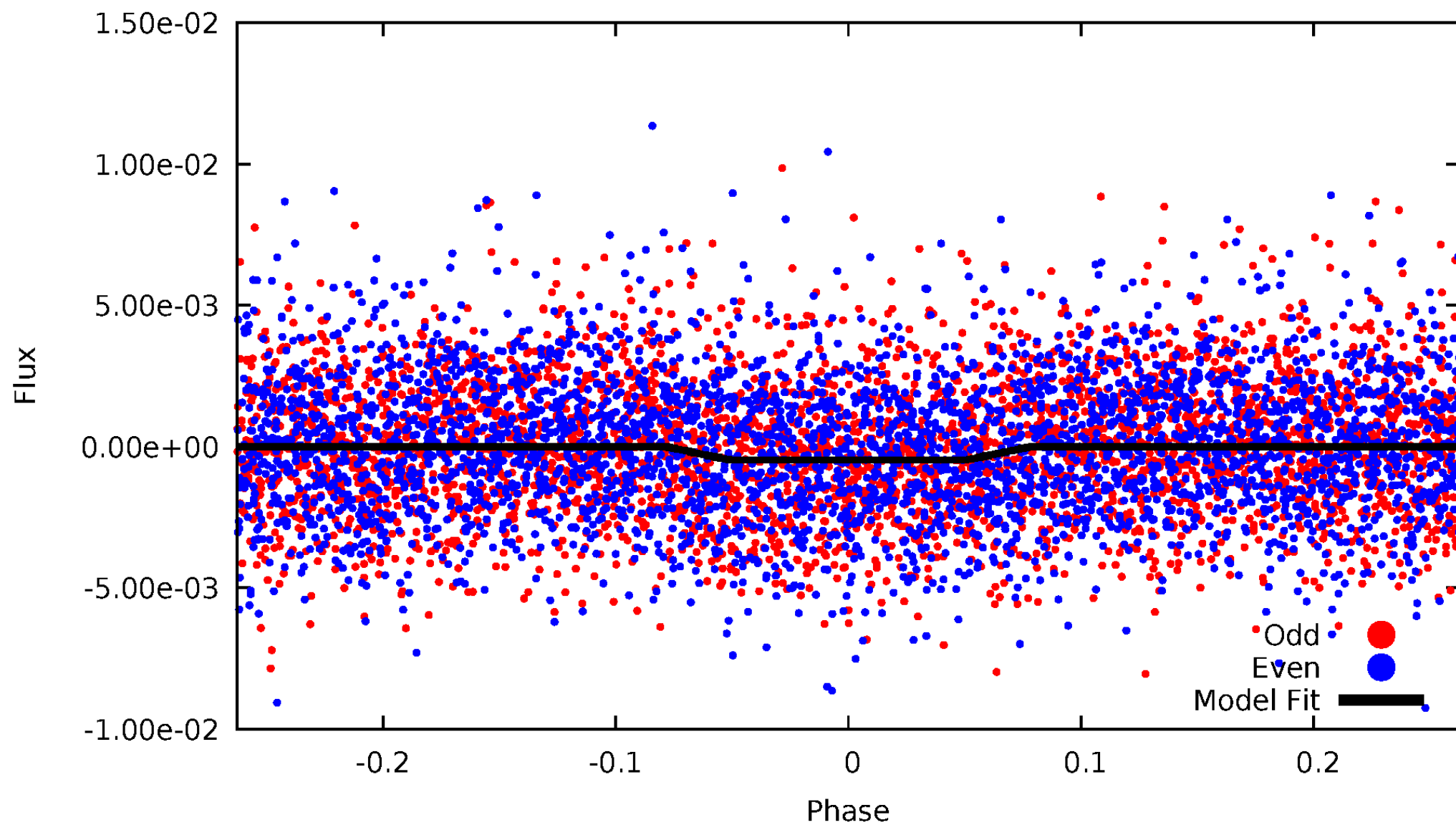
DV Odd/Even

TCE 008331640-01



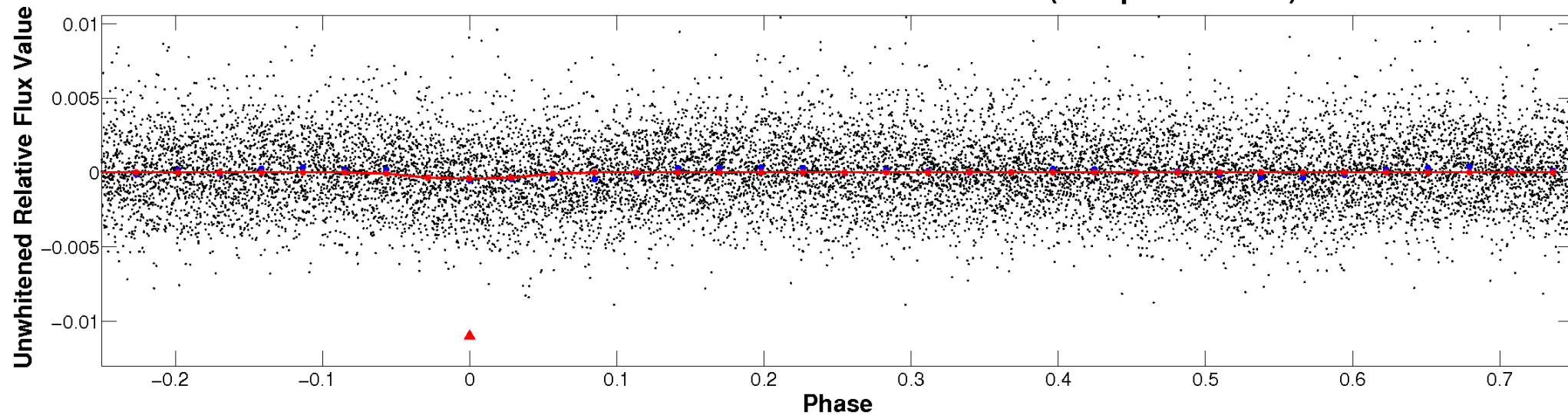
ALT Odd/Even

TCE 008331640-01

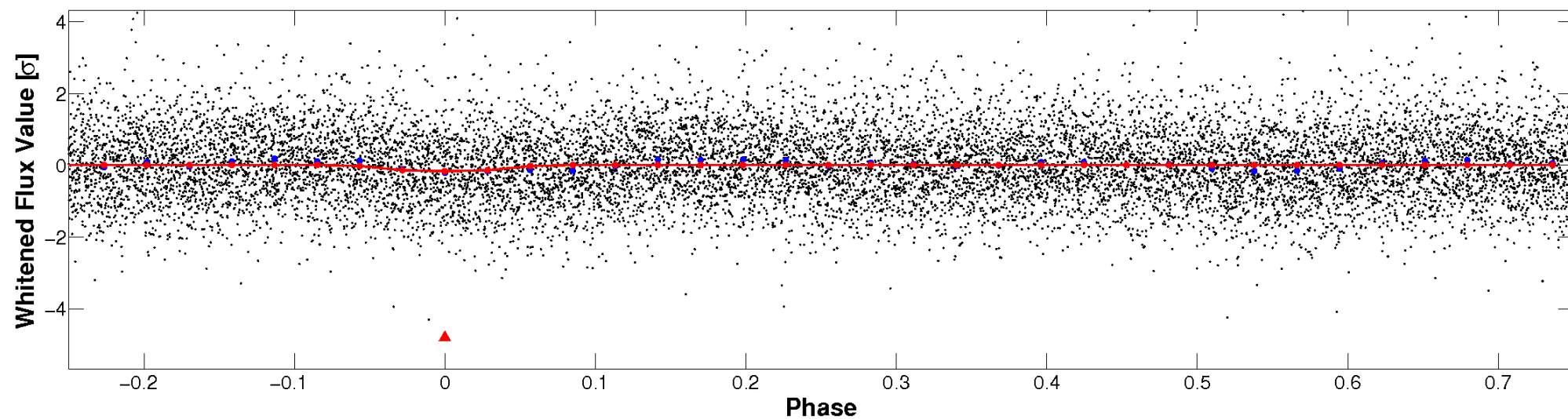


Non-Whitened Vs. Whitened Light Curve

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

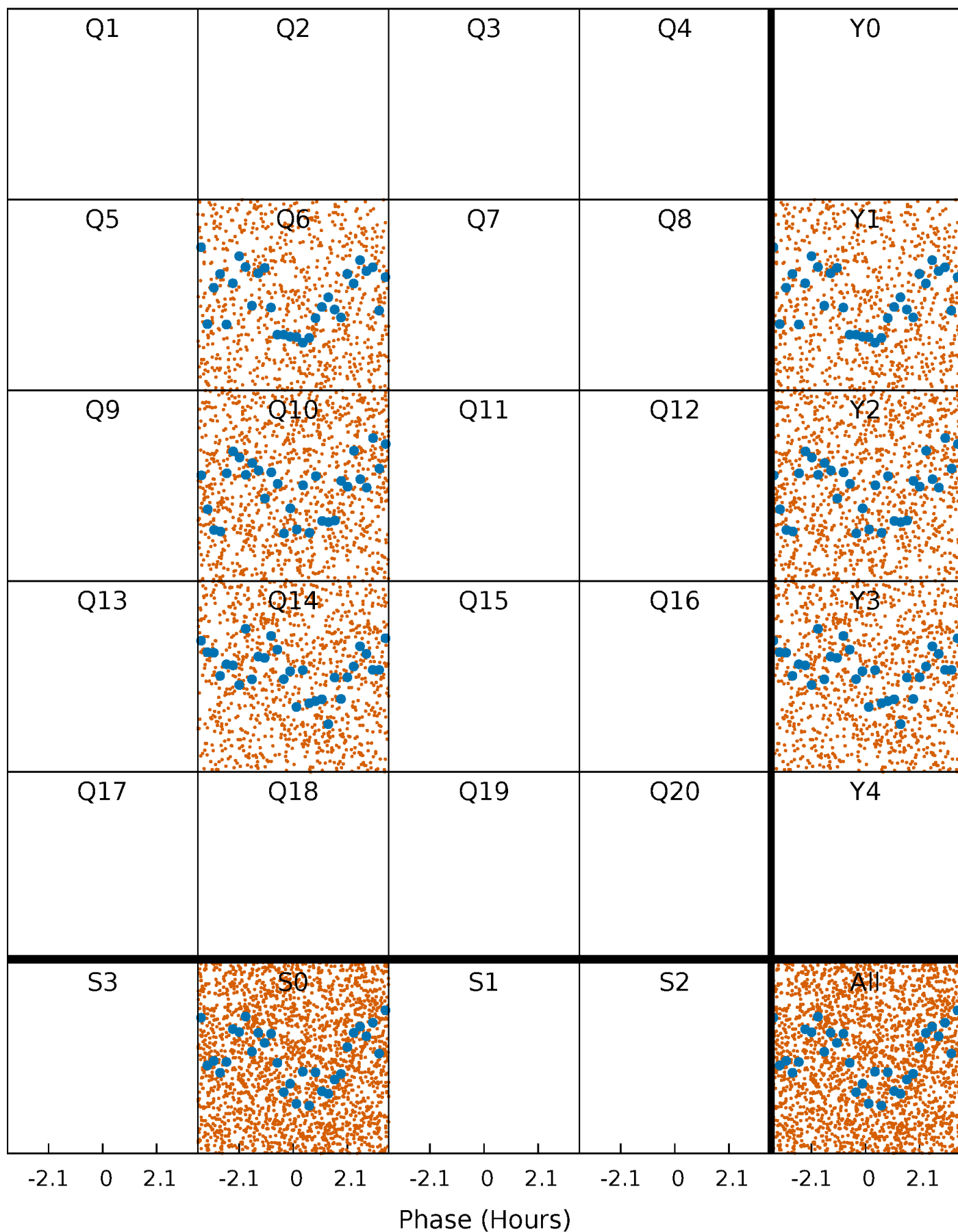


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



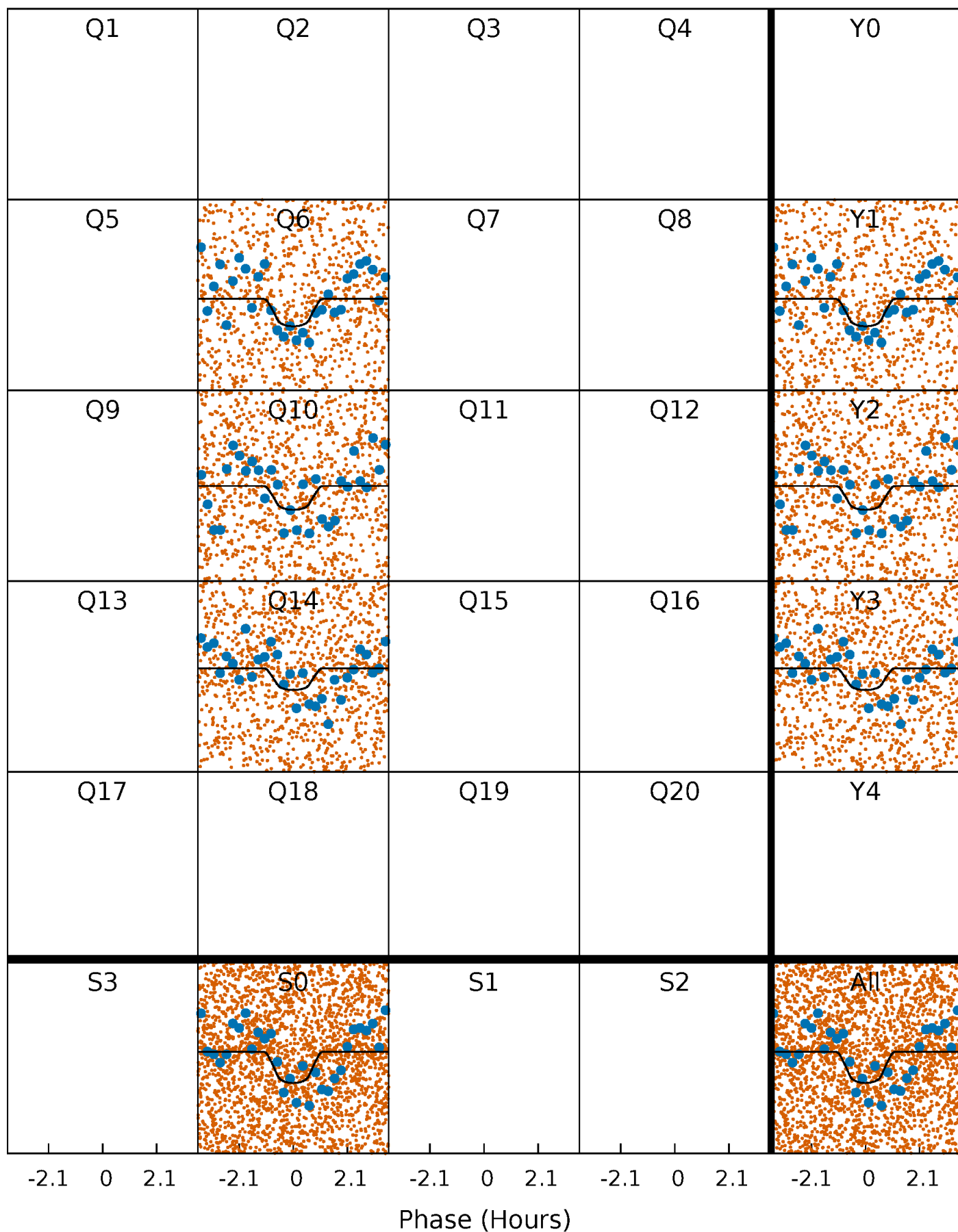
PDC Quarter-Phased Transit Curves

TCE 008331640-01 P= 0.721739 Days $T_0=132.162099$ (BKJD)



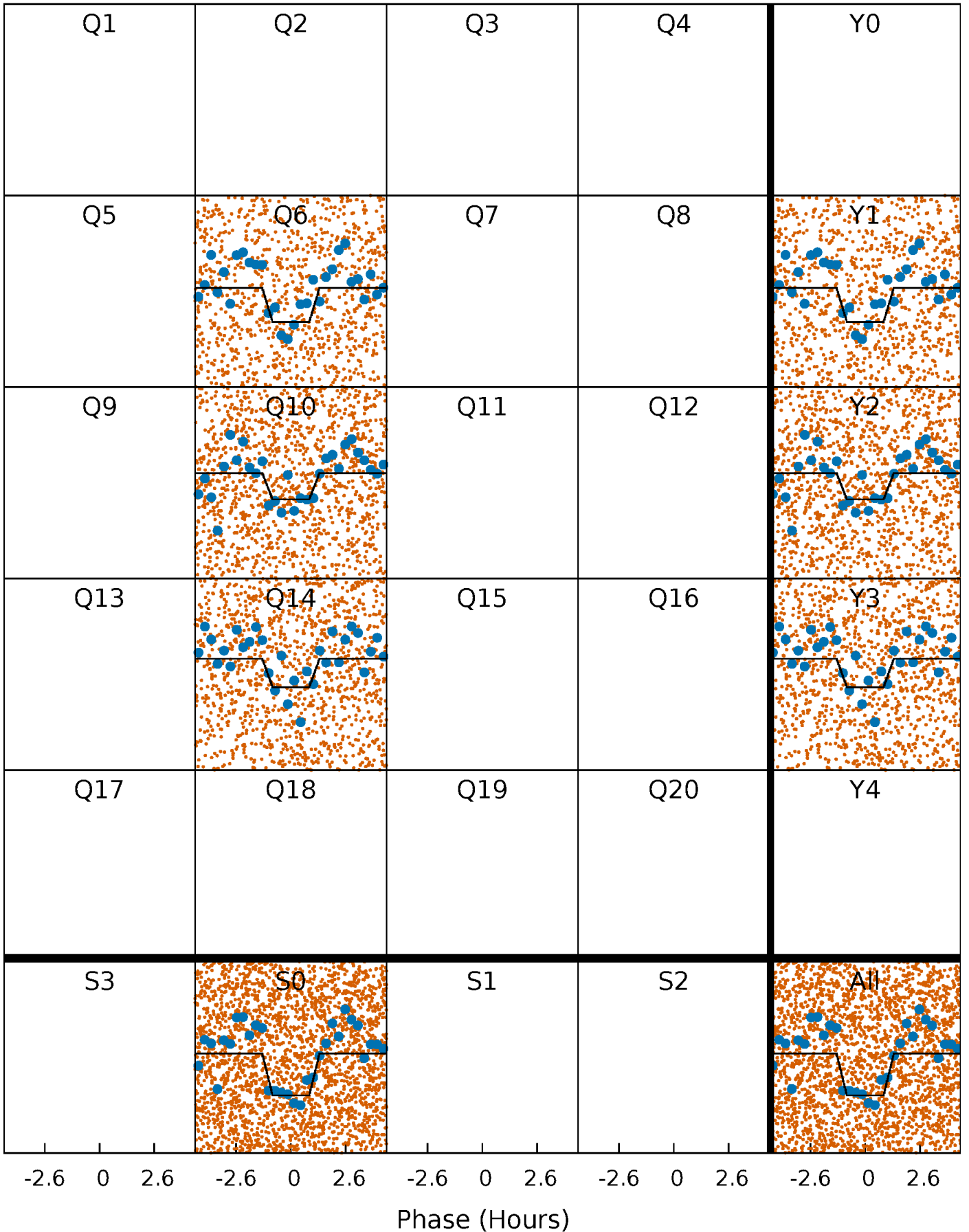
DV Quarter-Phased Transit Curves

TCE 008331640-01 P= 0.721739 Days $T_0=132.162099$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

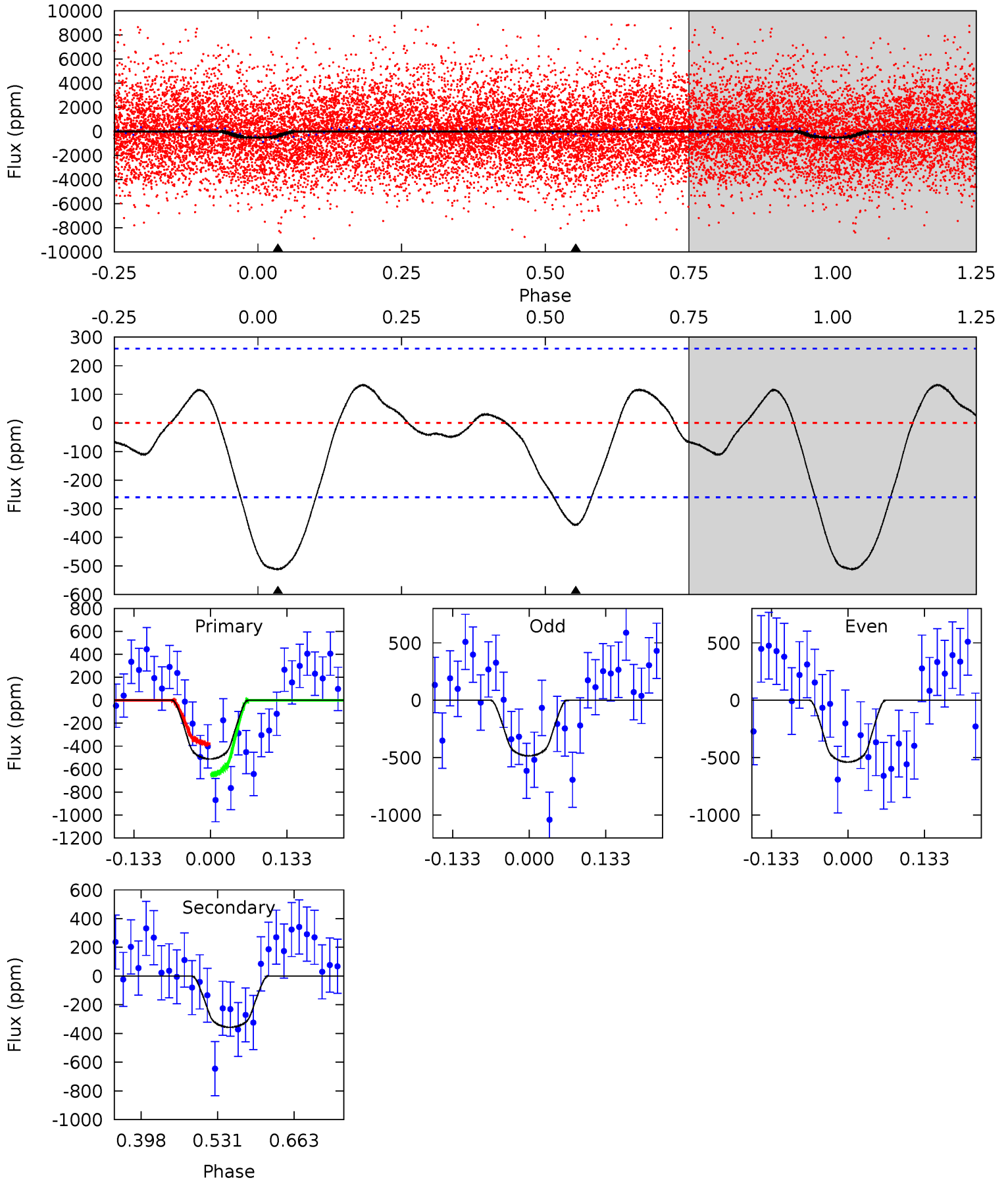
TCE 008331640-01 P= 0.721761 Days $T_0=132.160103$ (BKJD)



DV Model-Shift Uniqueness Test

008331640-01, P = 0.721739 Days, E = 132.162099 Days

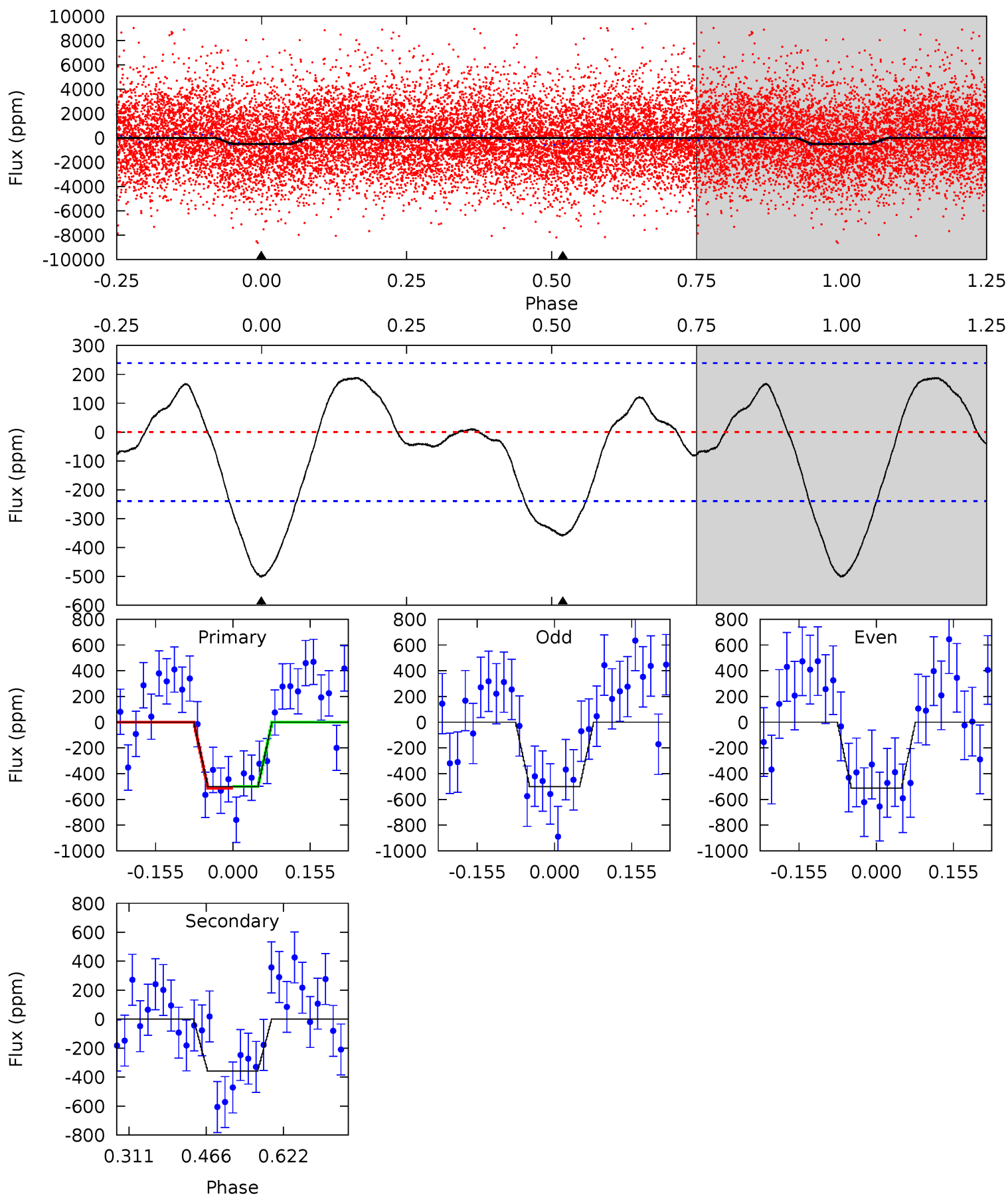
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.87	6.18	0	0	4.51	1.50	1.15	8.87	8.87	6.18	6.18	0.47	1.01	0.21	2.31



Alt Model-Shift Uniqueness Test

008331640-01, P = 0.721761 Days, E = 132.160103 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.36	6.70	0	0	4.47	1.42	1.37	9.36	9.36	6.70	6.70	0.12	0.84	0.27	0.12



Stellar Parameters For KIC 008331640

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4860^{+130}_{-158}	$2.583^{+0.504}_{-0.216}$	$-0.180^{+0.250}_{-0.250}$	$12.064^{+2.890}_{-6.261}$	$2.030^{+0.963}_{-0.963}$	$0.002^{+0.010}_{-0.001}$
	+3%/-3%	+20%/-8%	+139%/-139%	+24%/-52%	+47%/-47%	+627%/-49%
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 008331640-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-357 ± 58	$42.32^{+44.81}_{-28.42}$	7291^{+595}_{-897}	-5384^{+9856}_{-711}	$0.045^{+0.375}_{-0.034}$
Alt.	-359 ± 53	$43.63^{+41.91}_{-28.23}$	7265^{+685}_{-895}	-5386^{+8957}_{-776}	$0.043^{+0.309}_{-0.032}$

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

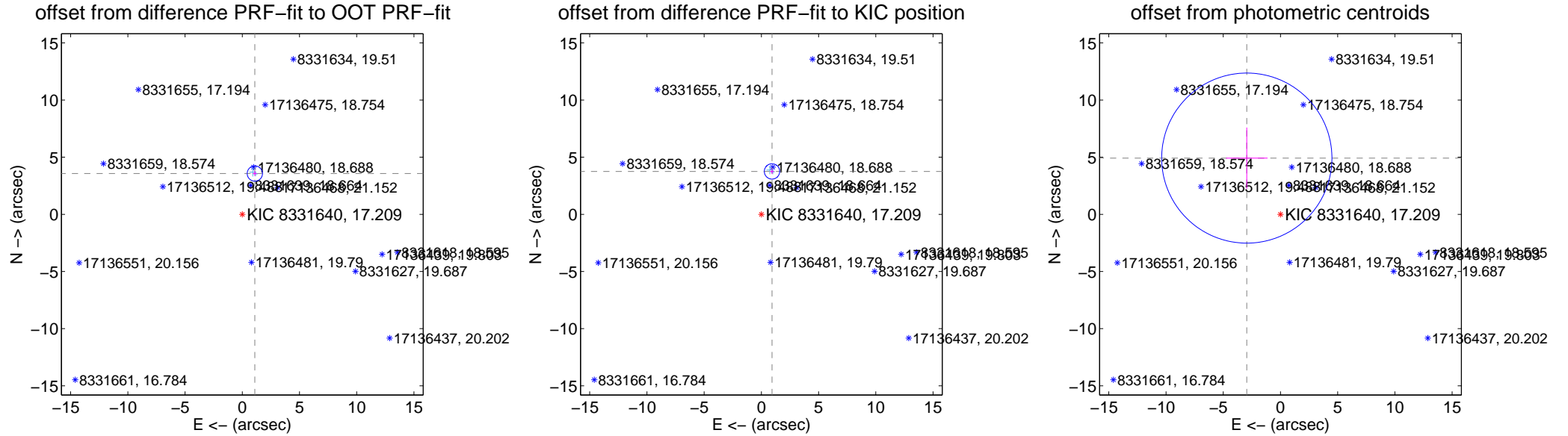
DV Centroid Data

Supplemental centroid analysis for 008331640-01. Kepler magnitude: 17.21. Transit SNR 4.84

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.734 ± 0.223	16.77	-1.098 ± 0.186	3.569 ± 0.226
PRF-fit source offset from KIC position	3.868 ± 0.224	17.29	-0.930 ± 0.186	3.755 ± 0.226
photometric centroid source offset	5.73 ± 2.48	2.31	2.94 ± 1.81	4.92 ± 2.68



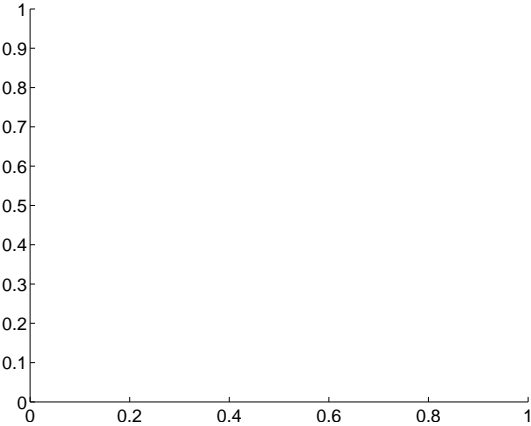
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

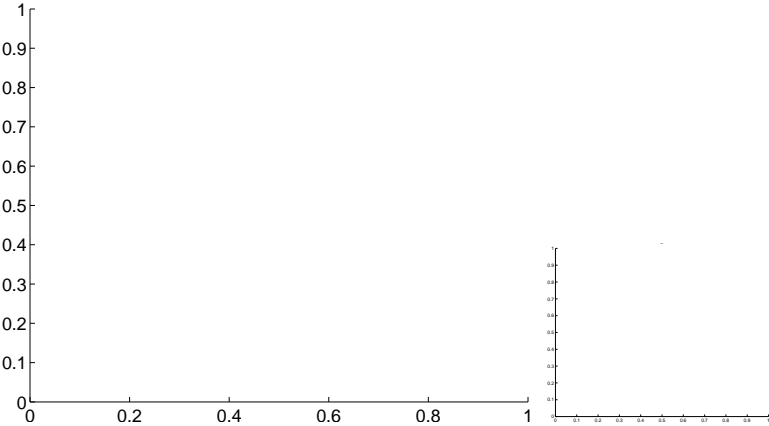


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

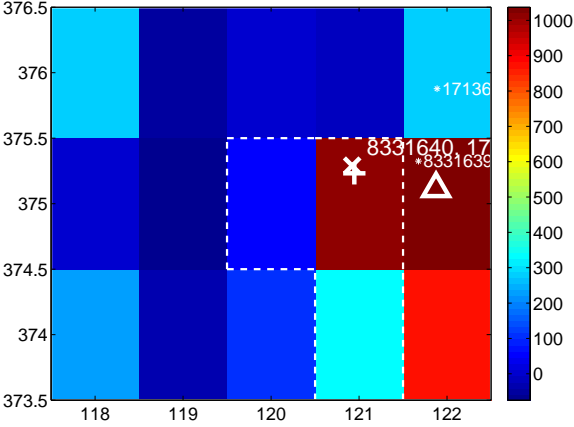
Q5 no difference image



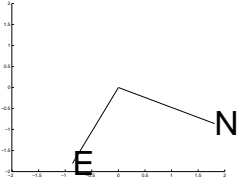
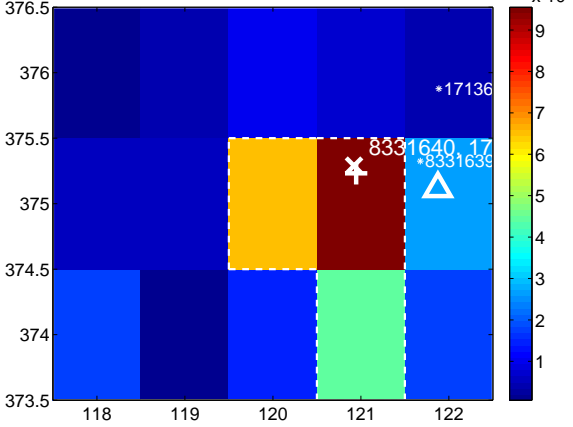
Q5 no OOT image



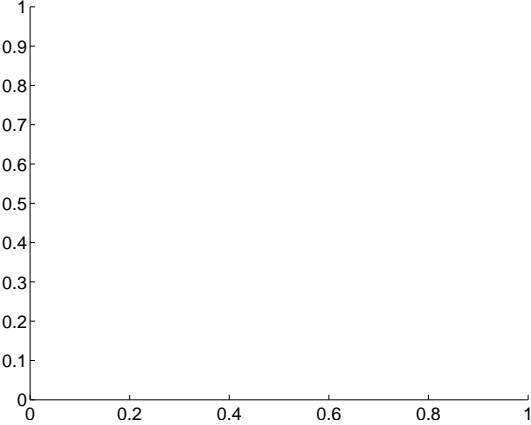
Q6 difference image



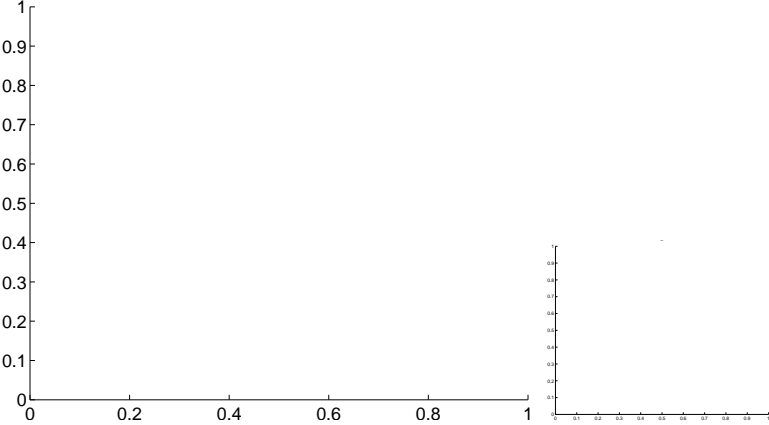
Q6 OOT image



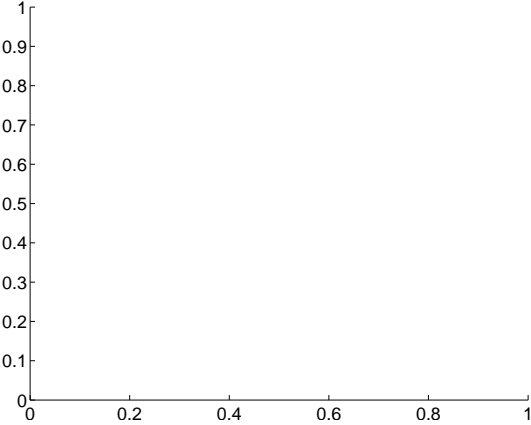
Q7 no difference image



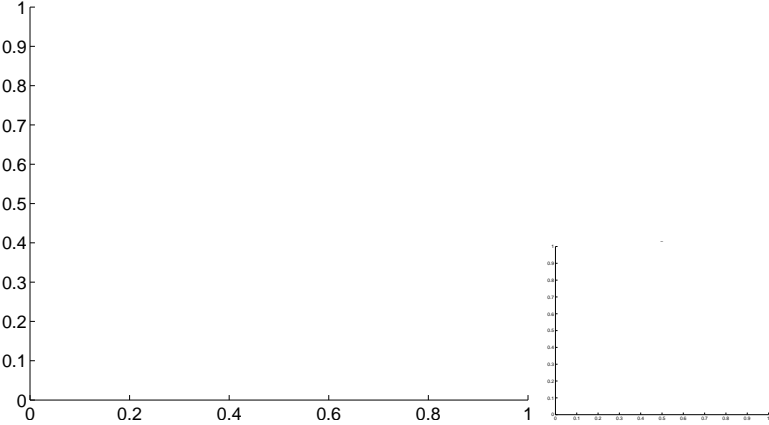
Q7 no OOT image



Q8 no difference image

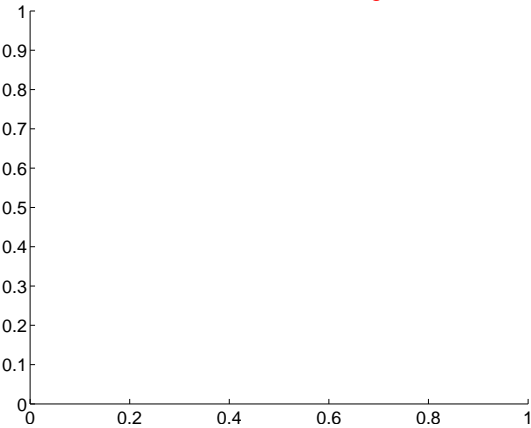


Q8 no OOT image

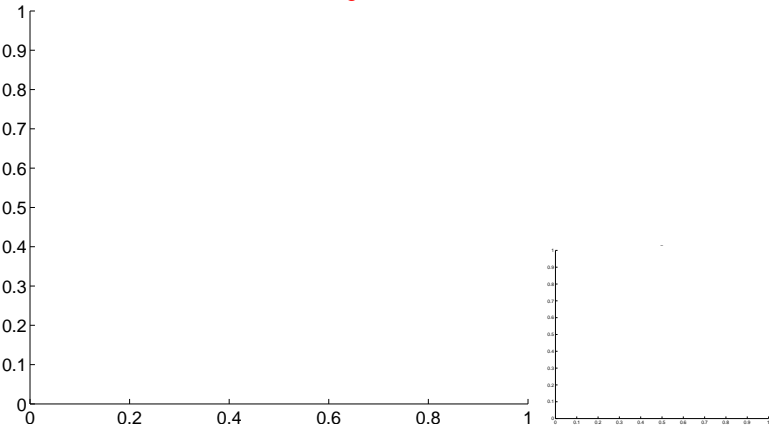


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

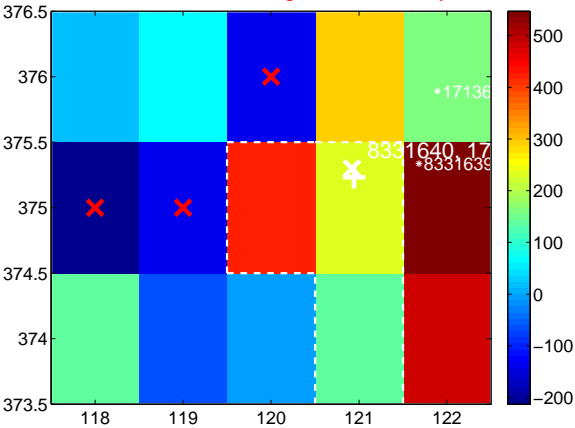
Q9 no difference image



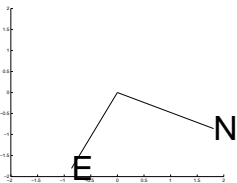
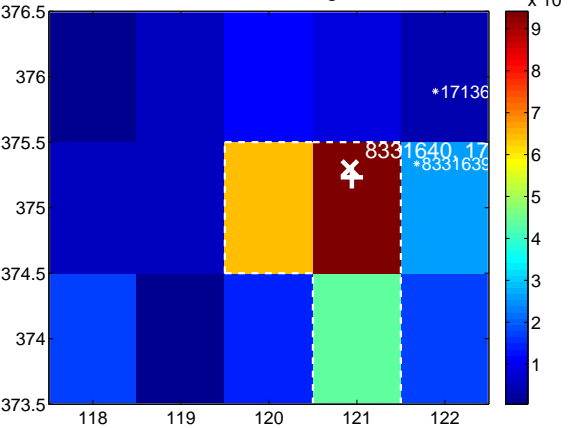
Q9 no OOT image



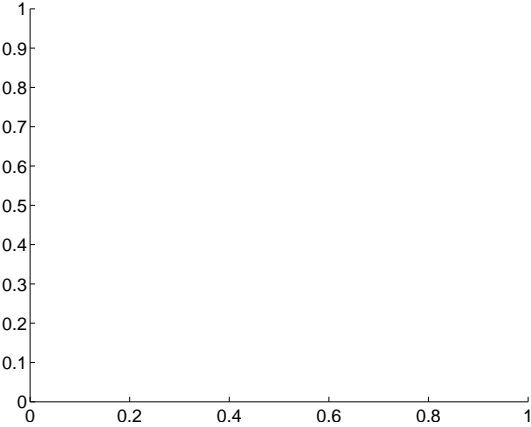
Q10 difference image. Poor Quality



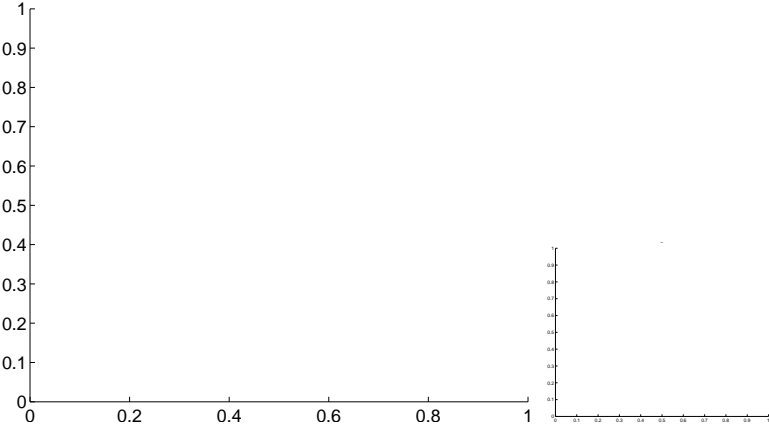
Q10 OOT image



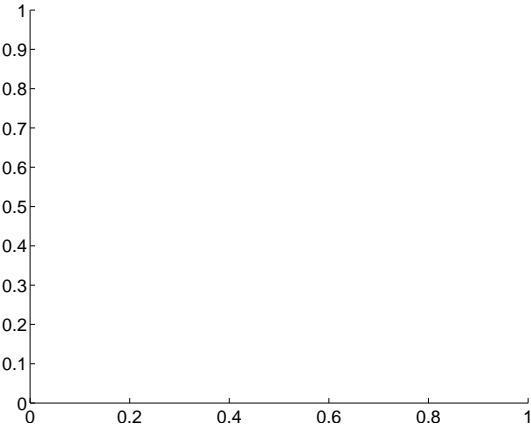
Q11 no difference image



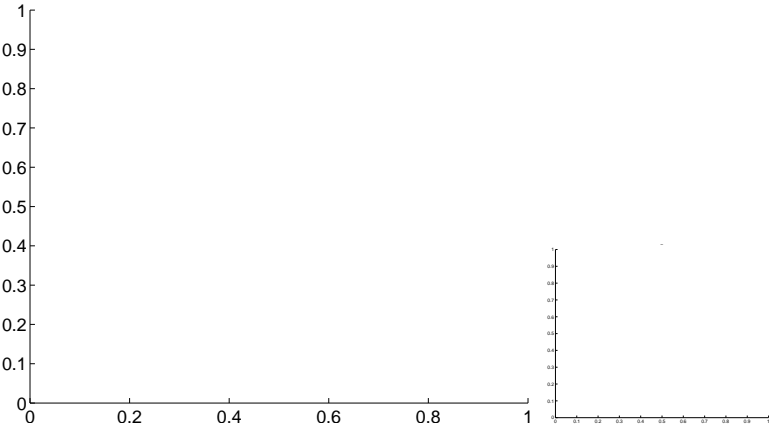
Q11 no OOT image



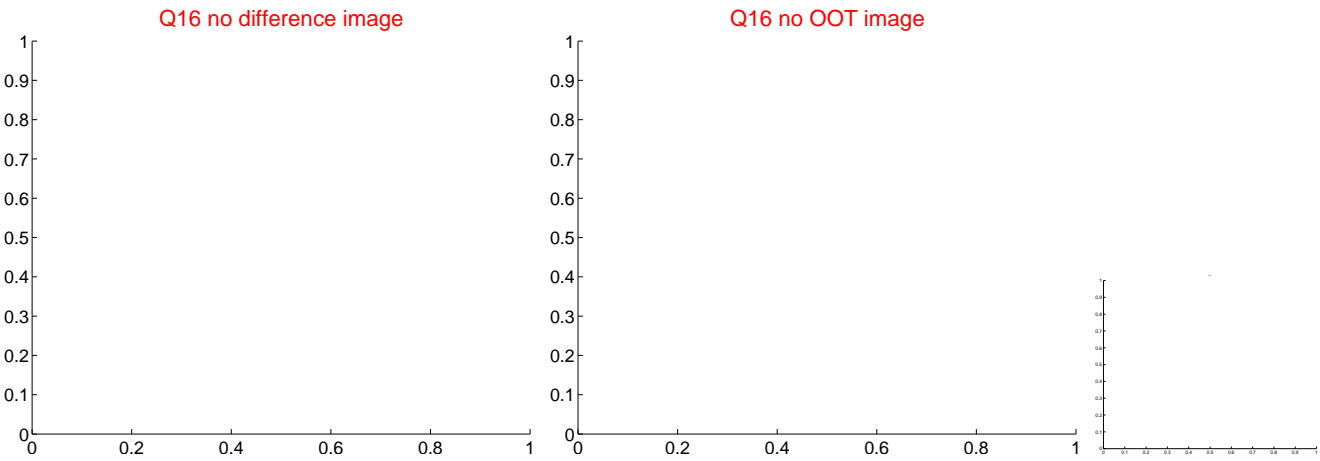
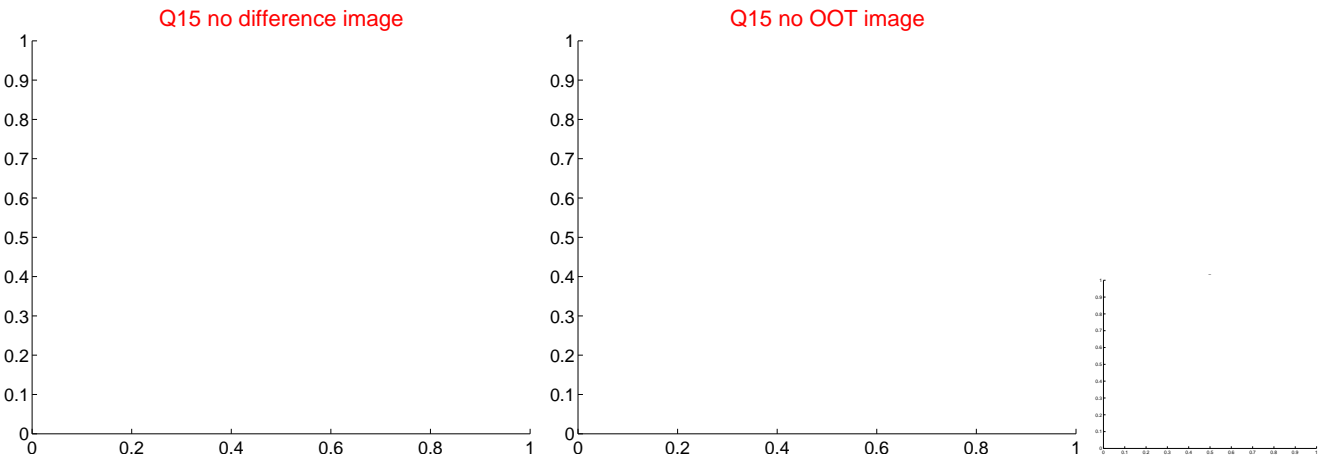
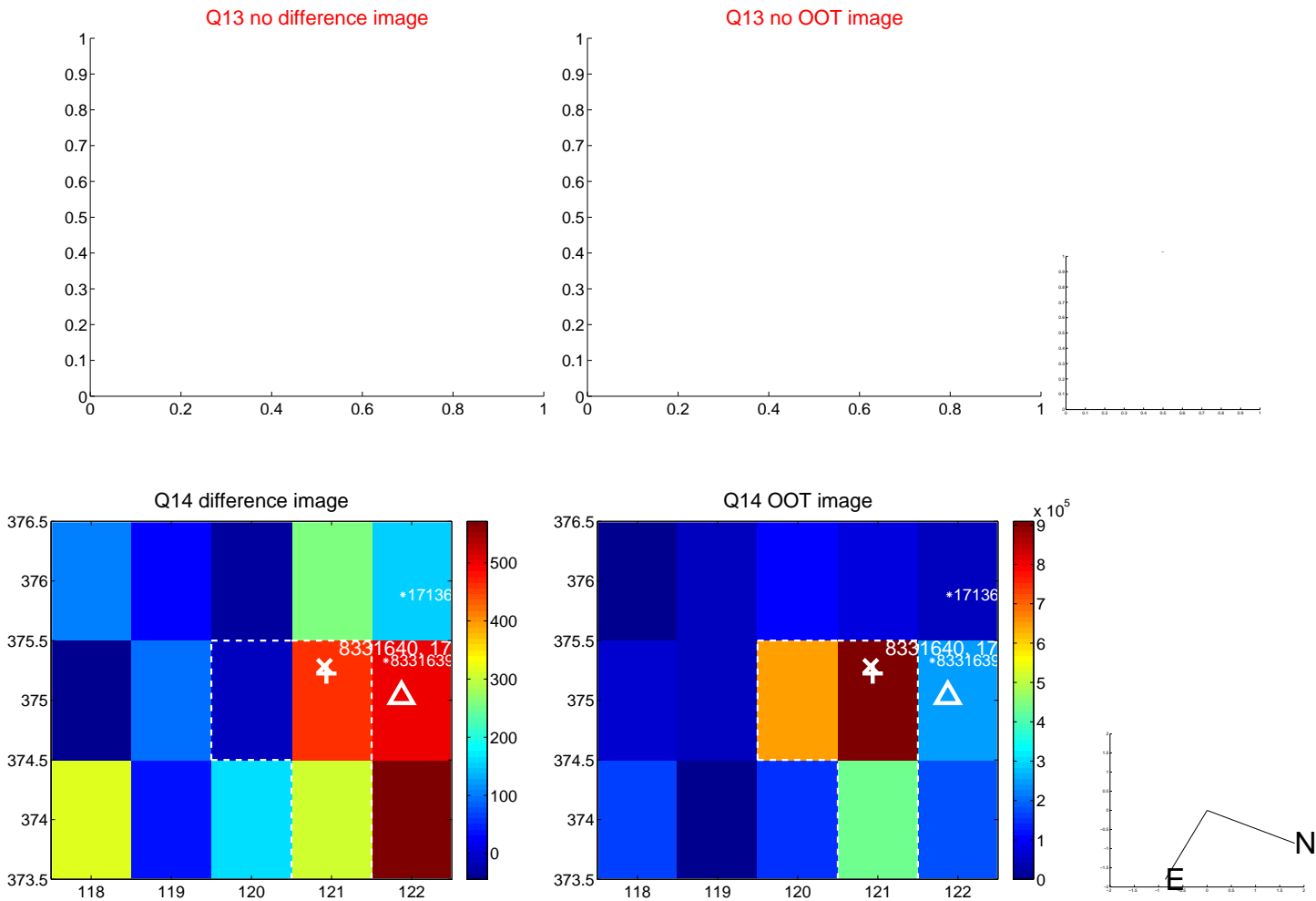
Q12 no difference image



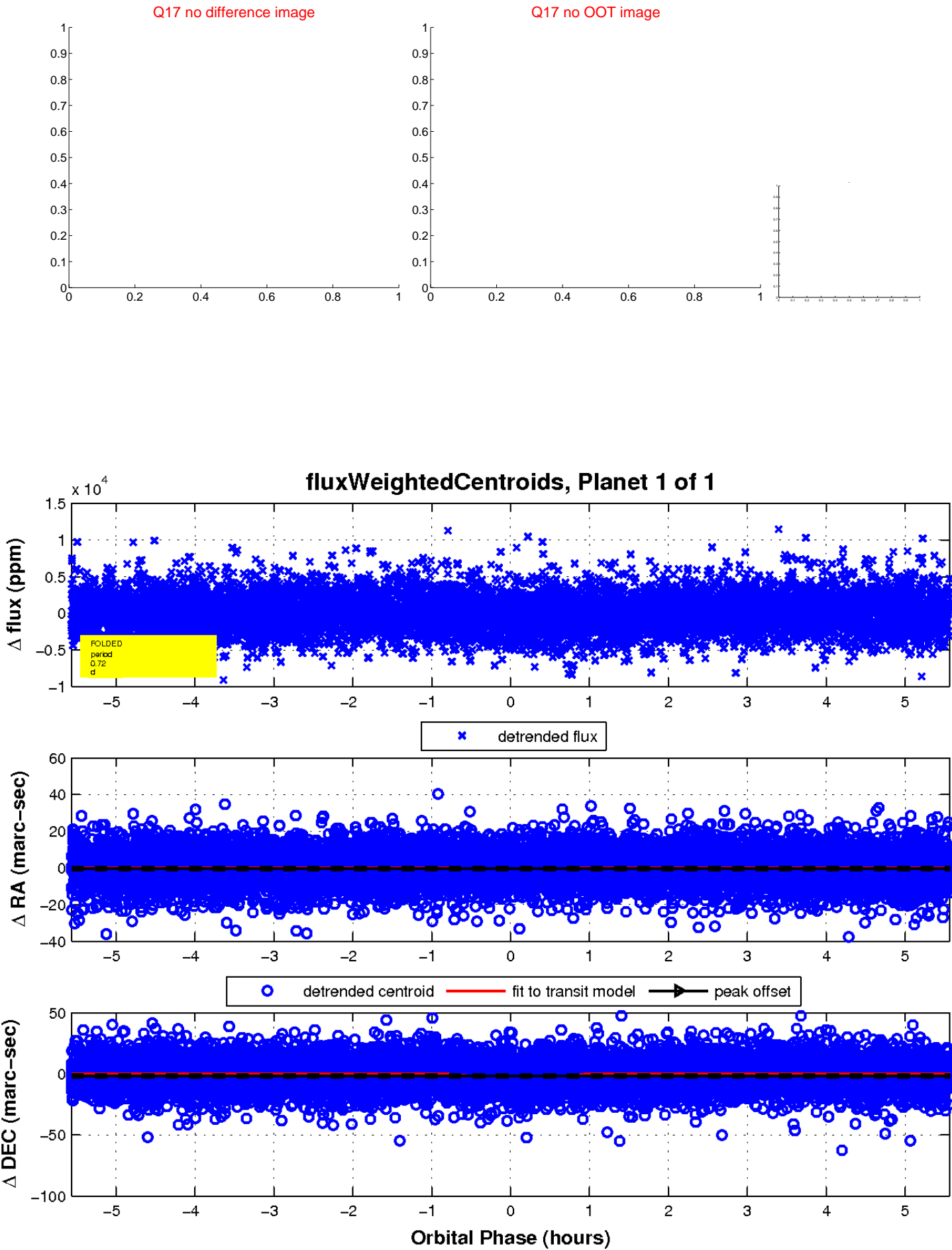
Q12 no OOT image



white \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

