

KIC 011137065

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R _★ (R _☉)	T _★ (K)	R _p (R _⊕)	S _p (S _⊕)
011137065-01	OBS	4620.01	0.933719	131.541573	74.0	3.077	10.6	9.9	0.93	5496	0.95	2338.01

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011137065-01	OBS	FP	0.00	0	1	0	1	MOD_SEC_DV—CENT_FEW_DIFFS—EPHEM_MATCH

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 011137065-01

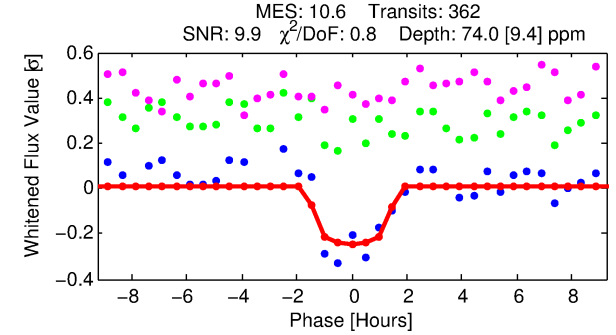
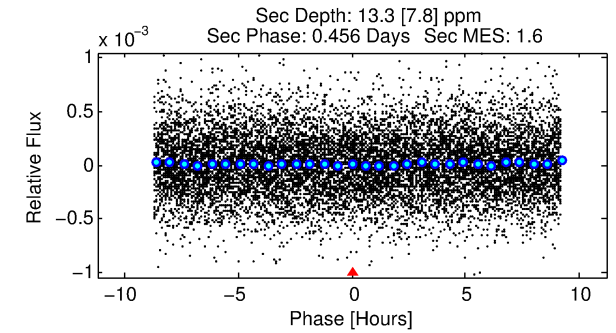
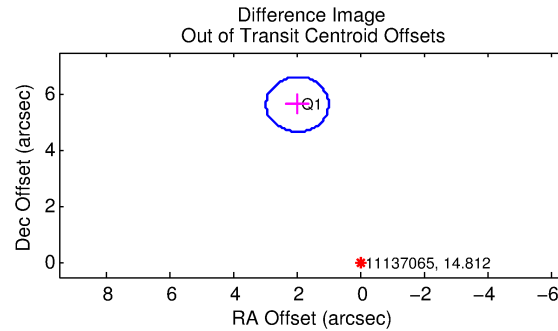
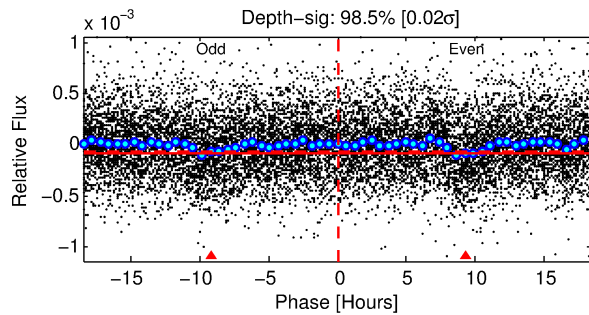
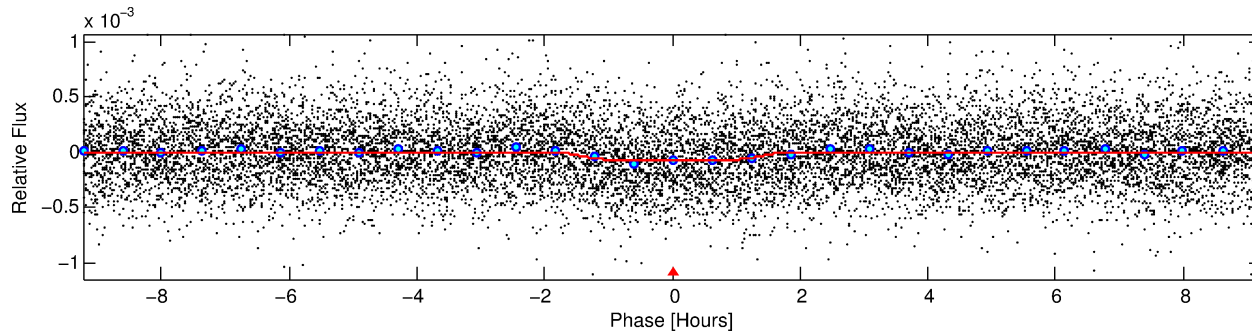
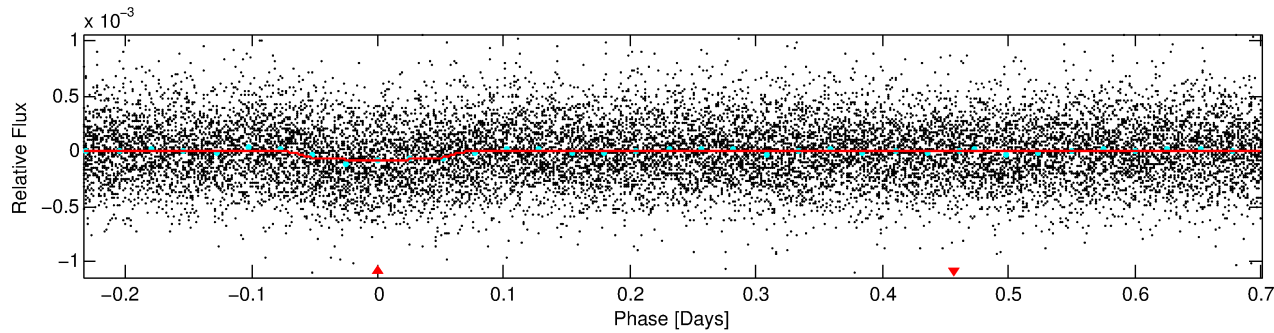
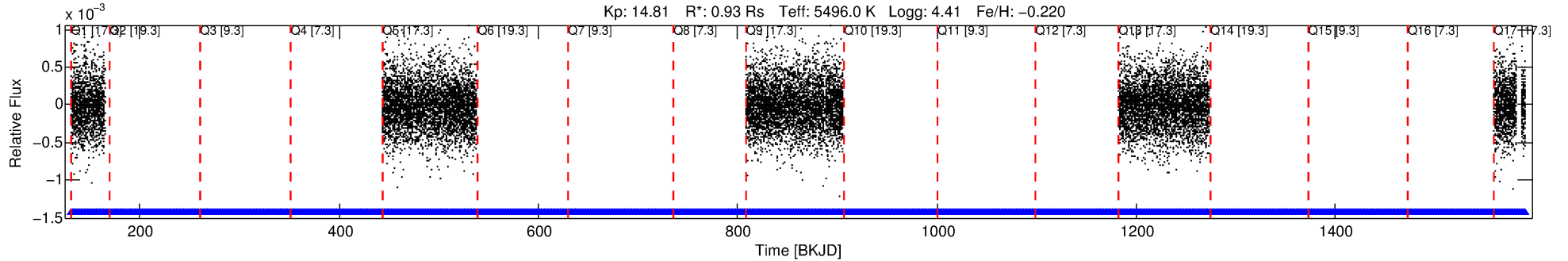
TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist (″)	ΔRow	ΔCol	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ _P	σ _T
011137065-01	11137065	1157.01	10342065	1:1	5504.5	682	13	13.96	14.81	27.38	Col-Anomaly	1	2.74	1.57

Notes: P₁:P₂ is the period ratio. Dist is the distance in arcseconds. ΔRow and ΔCol are the number of pixels apart in row and column. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant σ_P < 5.0 and σ_T < 5.0. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 11137065 Candidate: 1 of 1 Period: 0.934 d
KOI: K04620.01 Corr: 0.949

Kp: 14.81 R*: 0.93 Rs Teff: 5496.0 K Logg: 4.41 Fe/H: -0.220



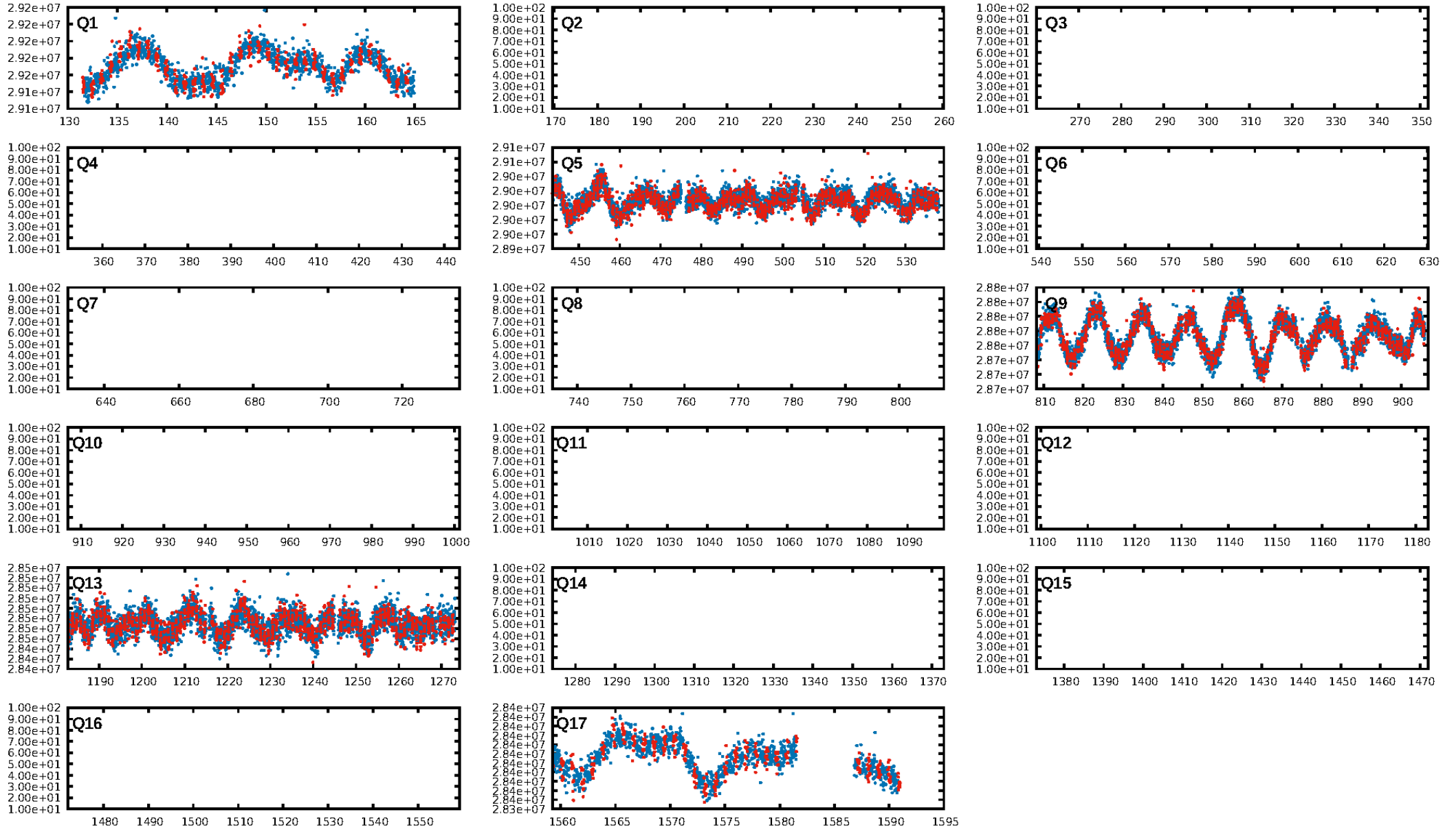
DV Fit Results:

Period = 0.93372 [0.00001] d
Epoch = 131.5416 [0.0039] BKJD
Rp/R* = 0.0094 [0.0073]
a/R* = 1.42 [2.54]
b = 0.90 [0.77]
Seff = 2338.01 [969.48]
Teq = 1773 [184] K
Rp = 0.95 [0.79] Re
a = 0.0173 [0.0045] AU
Ag = 2.42 [4.11] [0.34σ]
Teffp = 3418 [1418] K [1.15σ]

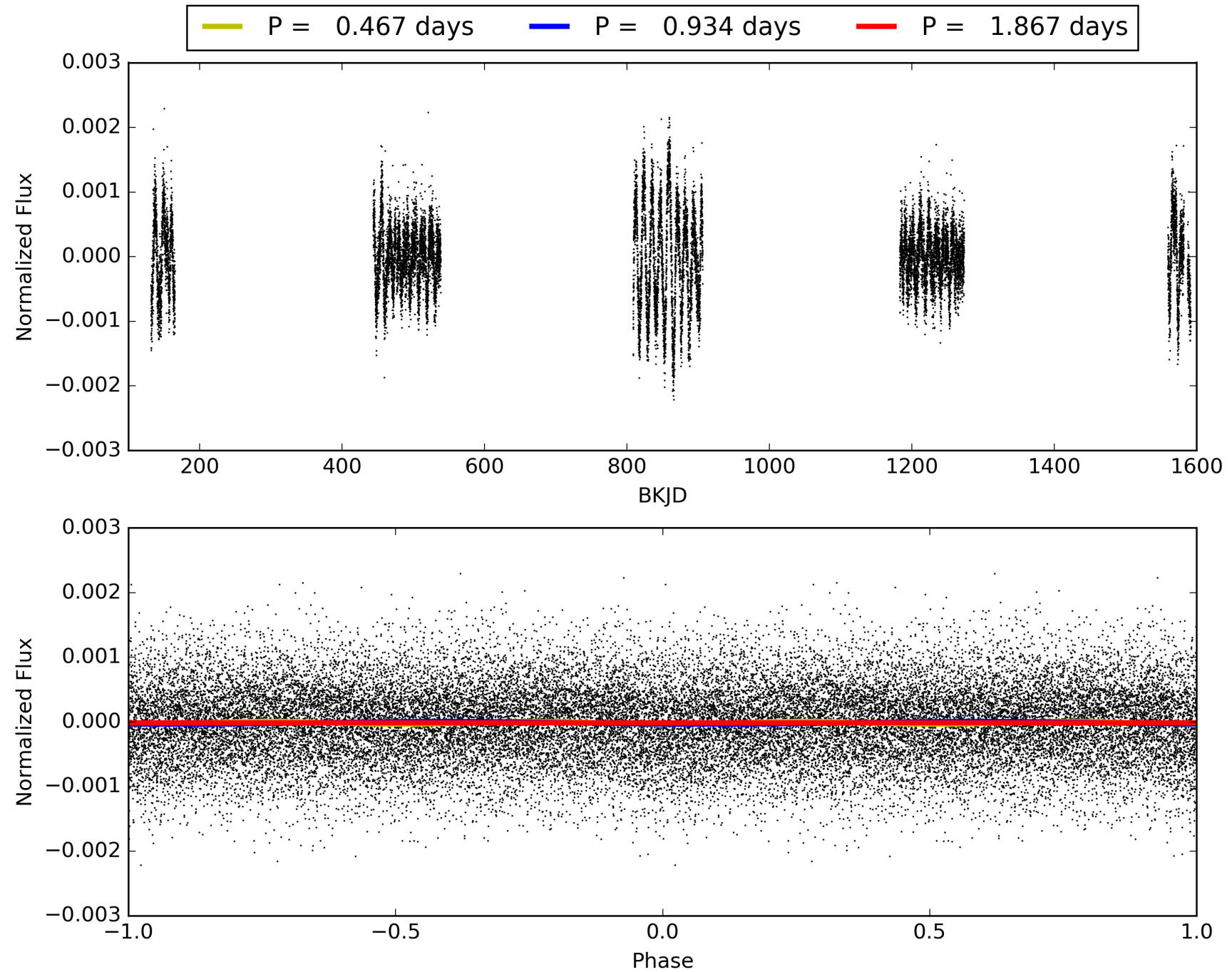
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.53e-25
RollingBand-fgt: 1.00 [296/296]
GhostDiagnostic-chr: -1.051
Centroid-sig: 0.0%
Centroid-so: 4.569 arcsec [3.89σ]
OotOffset-rm: 5.988 arcsec [18.35σ]
KicOffset-rm: 5.907 arcsec [18.11σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [5/5]

TCE 011137065-01, PDC Light Curves

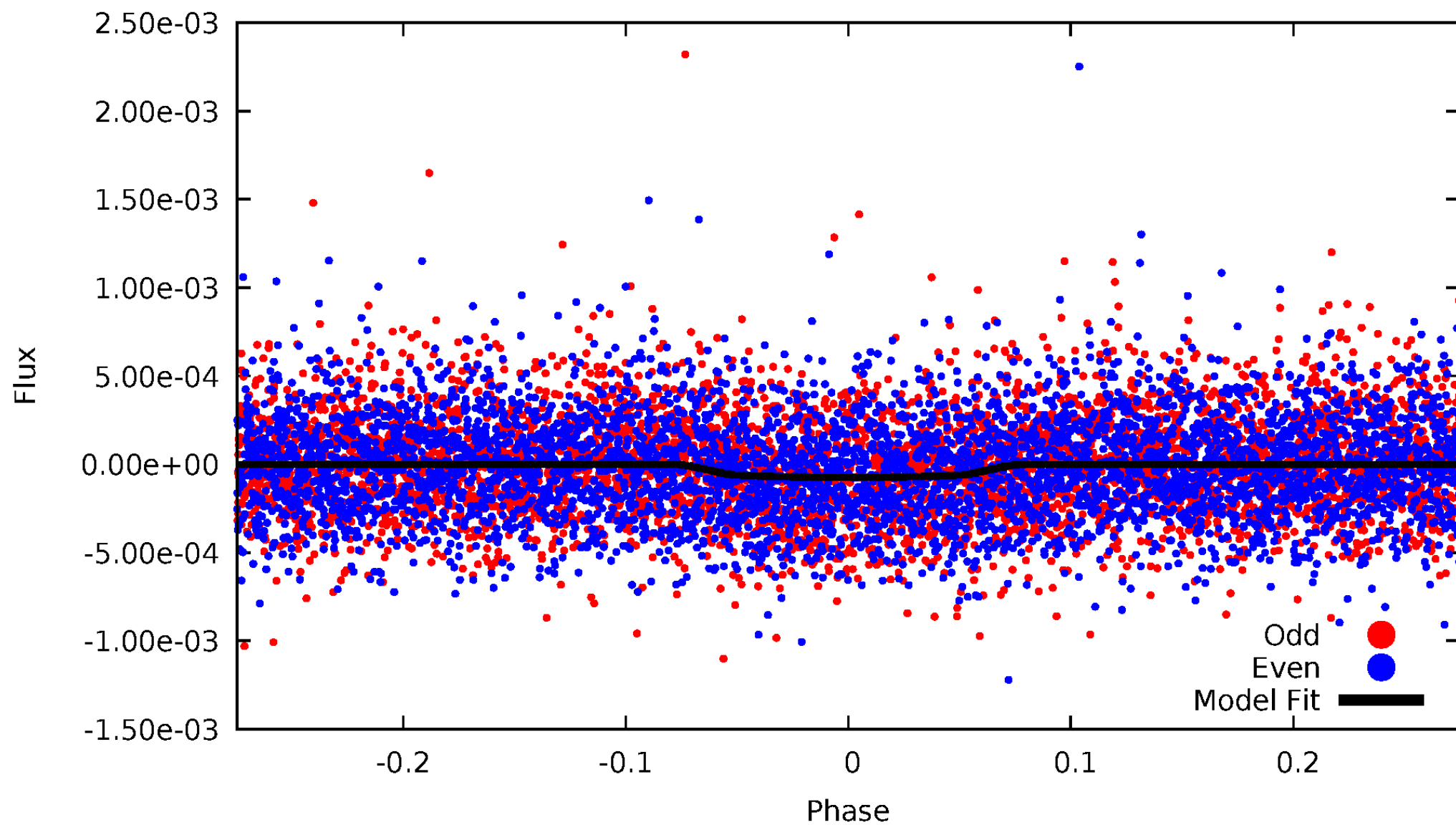


TCE 011137065-01



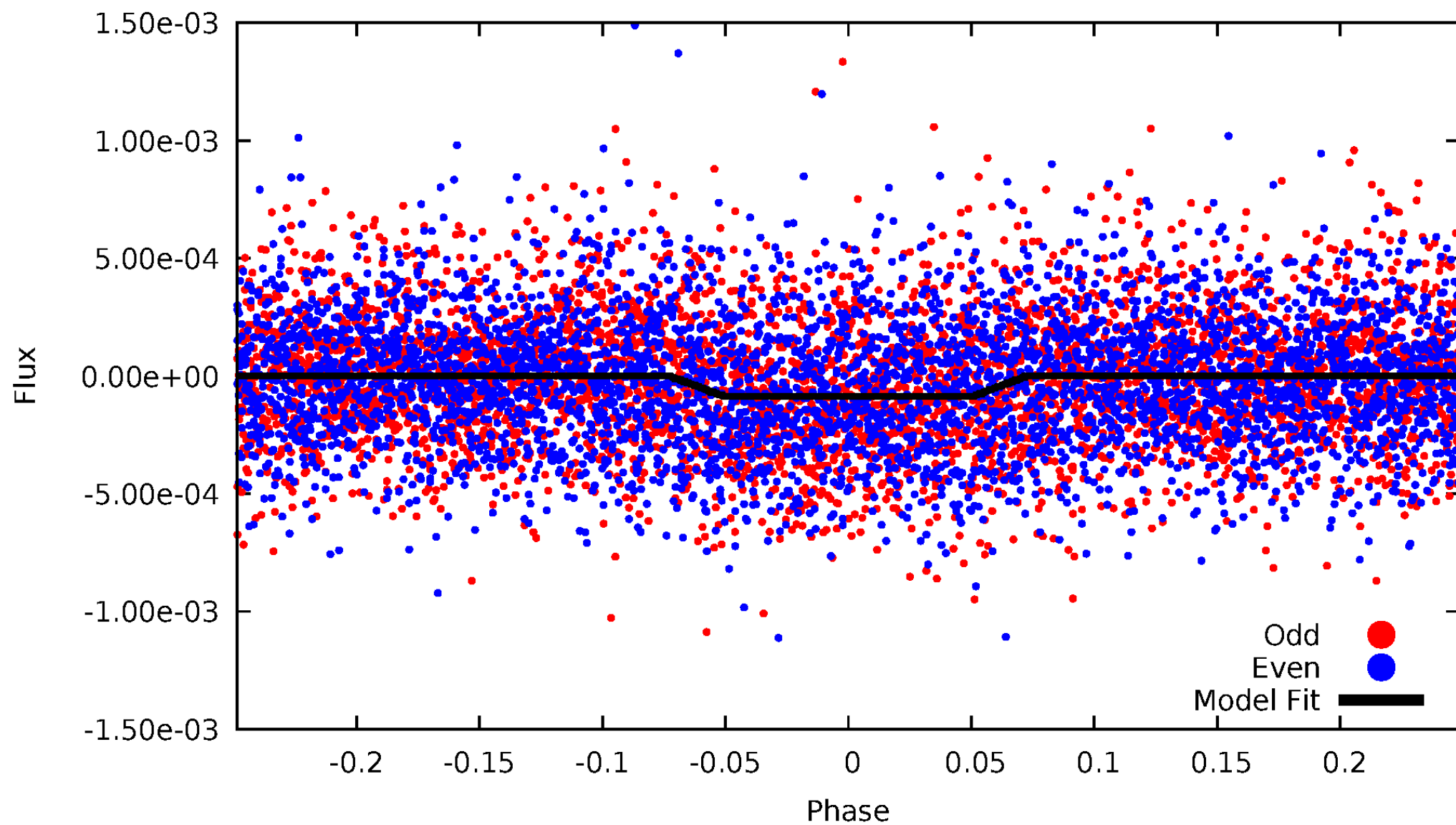
DV Odd/Even

TCE 011137065-01

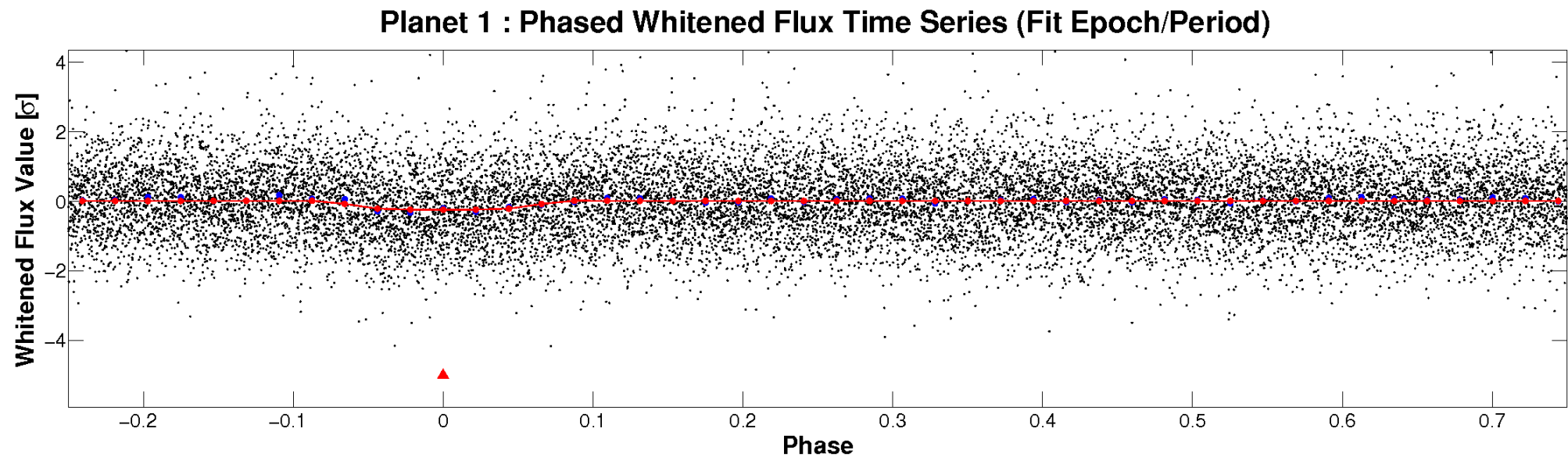
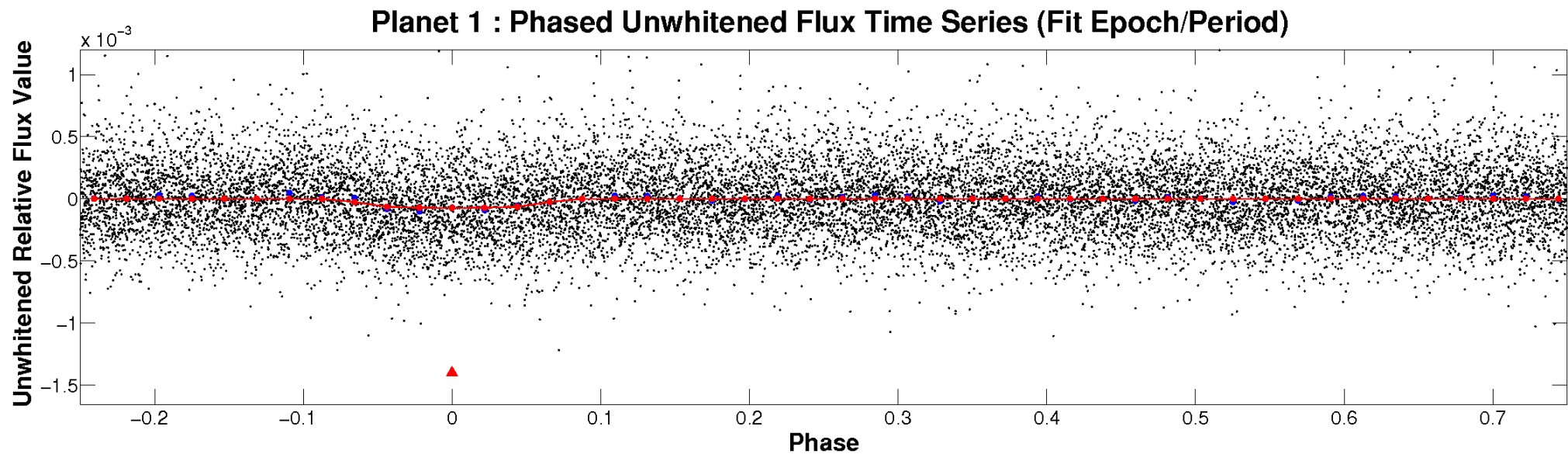


ALT Odd/Even

TCE 011137065-01

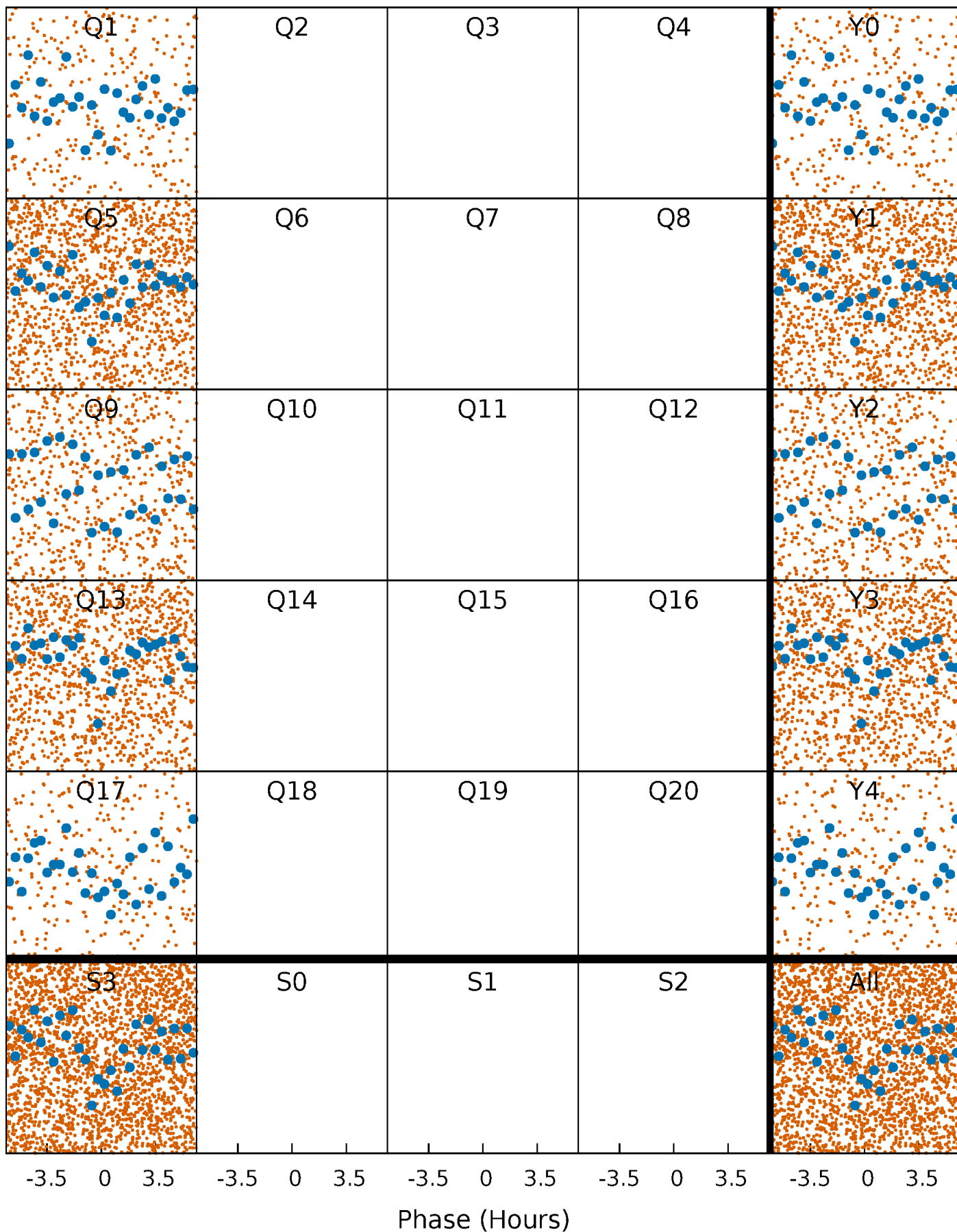


Non-Whitened Vs. Whitened Light Curve



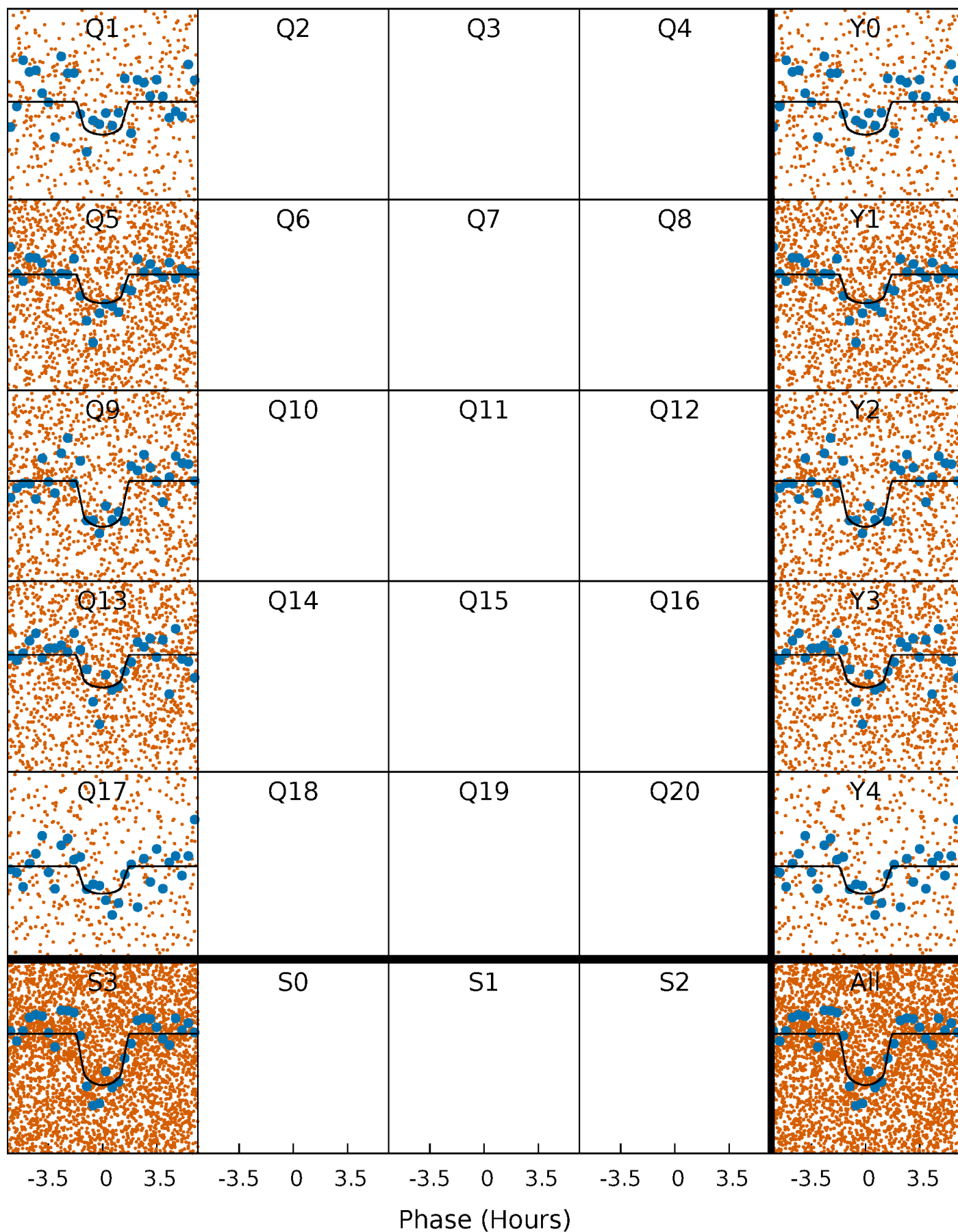
PDC Quarter-Phased Transit Curves

TCE 011137065-01 P= 0.933719 Days $T_0=131.541573$ (BKJD)



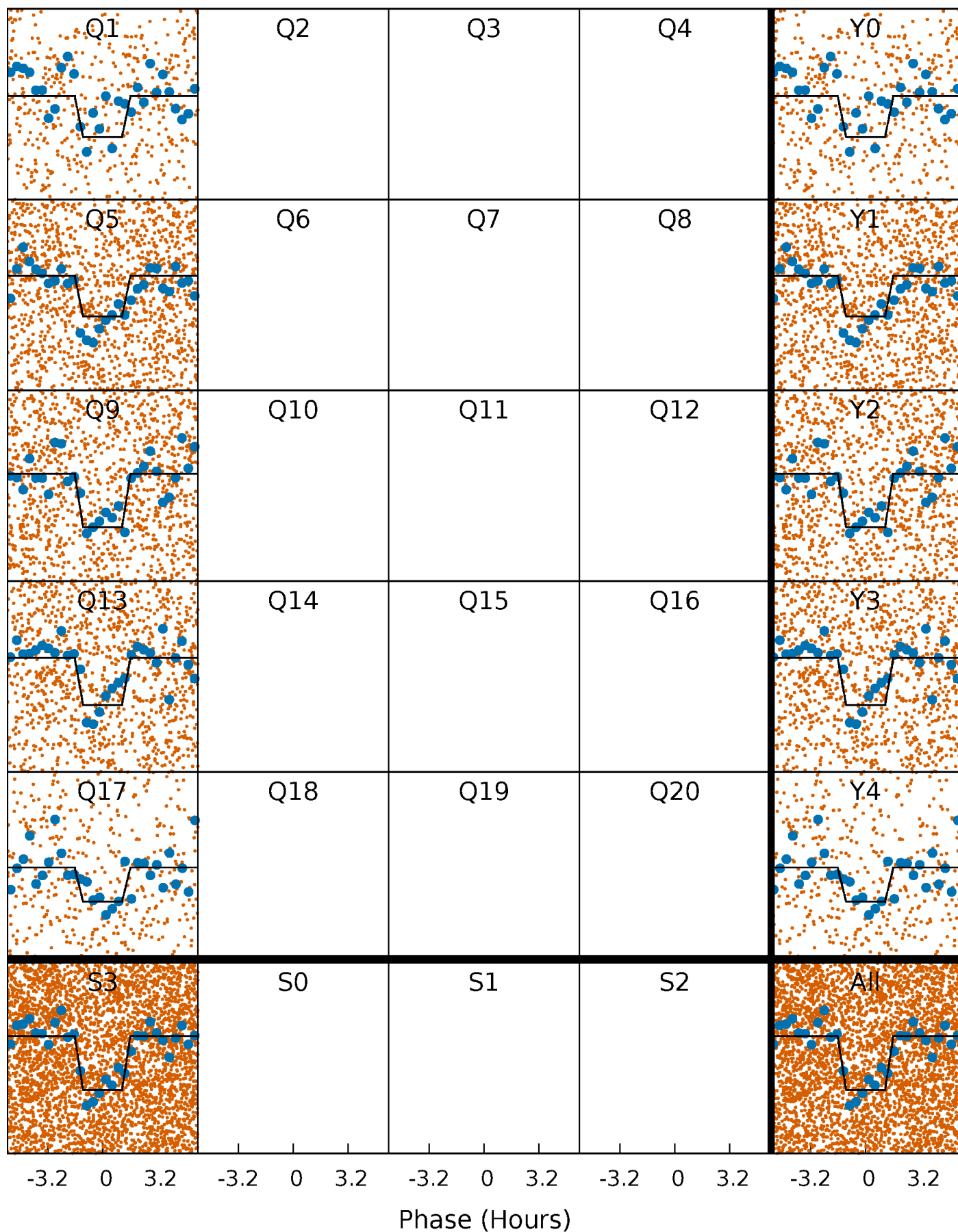
DV Quarter-Phased Transit Curves

TCE 011137065-01 P= 0.933719 Days $T_0=131.541573$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

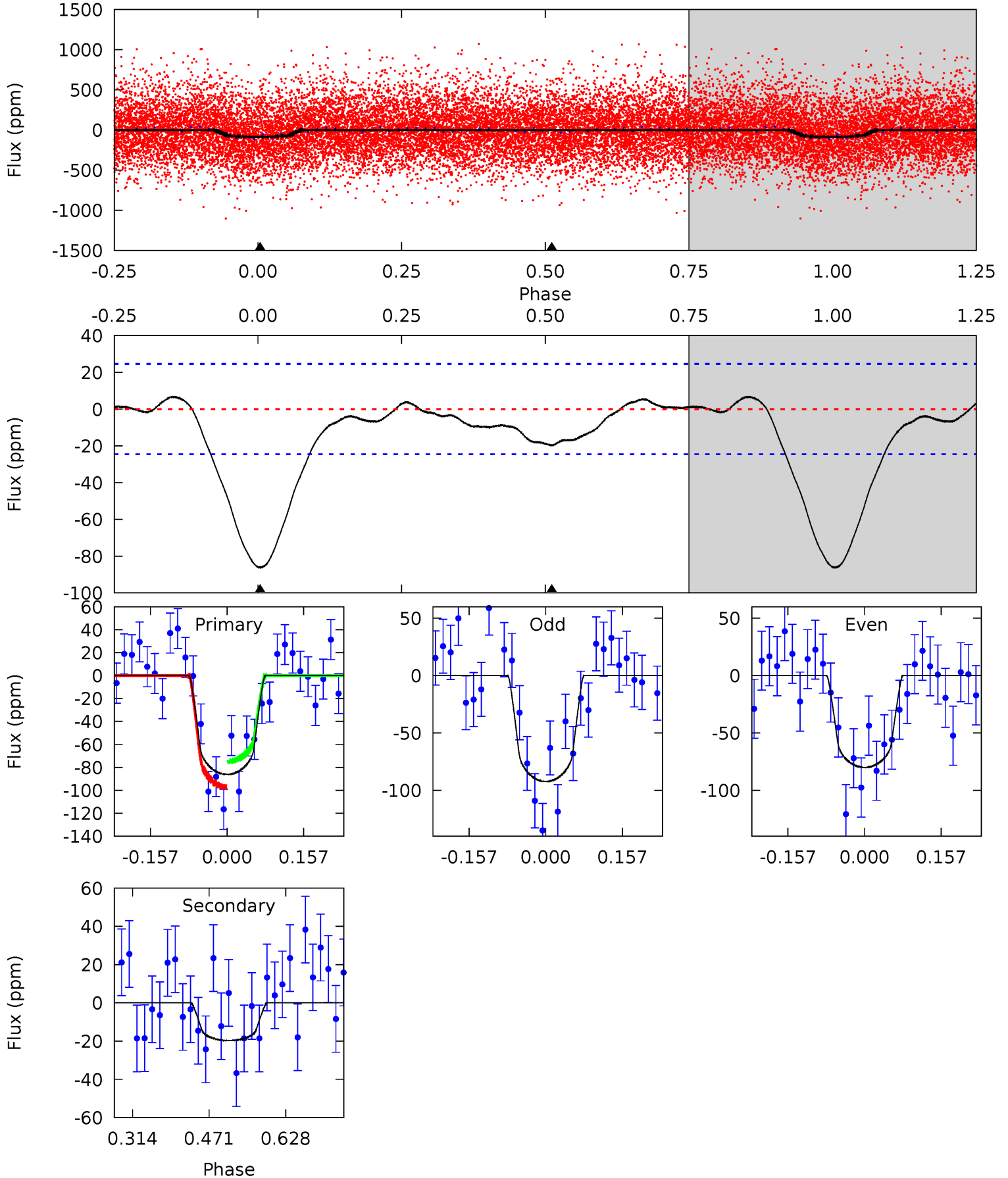
TCE 011137065-01 P= 0.933732 Days $T_0=131.538585$ (BKJD)



DV Model-Shift Uniqueness Test

011137065-01, P = 0.933719 Days, E = 130.607854 Days

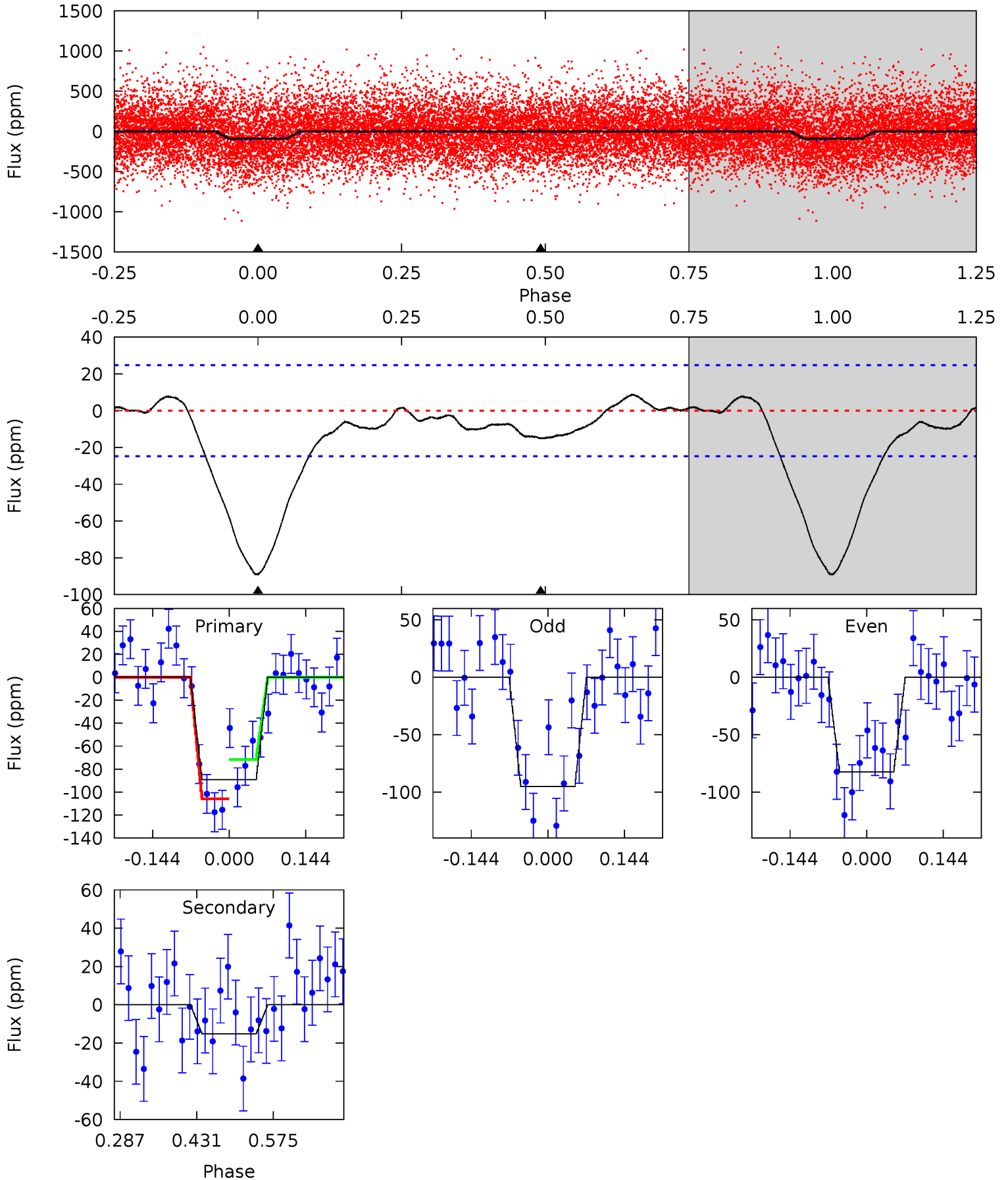
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.7	3.59	0	0	4.47	1.42	0.61	15.7	15.7	3.59	3.59	1.12	0.92	0.07	2.06



Alt Model-Shift Uniqueness Test

011137065-01, P = 0.933732 Days, E = 130.604853 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.2	2.76	0	0	4.49	1.46	0.92	16.2	16.2	2.76	2.76	1.16	0.90	0.09	3.11



Stellar Parameters For KIC 011137065

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5496^{+182}_{-182}	$4.405^{+0.167}_{-0.222}$	$-0.220^{+0.300}_{-0.250}$	$0.927^{+0.272}_{-0.146}$	$0.798^{+0.129}_{-0.065}$	$1.410^{+0.929}_{-0.750}$
	+3%/-3%	+4%/-5%	+136%/-114%	+29%/-16%	+16%/-8%	+66%/-53%
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 011137065-01 / KOI 4620.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-20 ± 5	$1.08^{+0.72}_{-0.63}$	2491^{+219}_{-164}	3858^{+1795}_{-744}	$2.912^{+14.168}_{-1.936}$
Alt.	-15 ± 6	$1.03^{+0.74}_{-0.58}$	2480^{+205}_{-153}	3668^{+1404}_{-743}	$2.247^{+9.633}_{-1.501}$

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 $A_{obs} \gg 1.0$

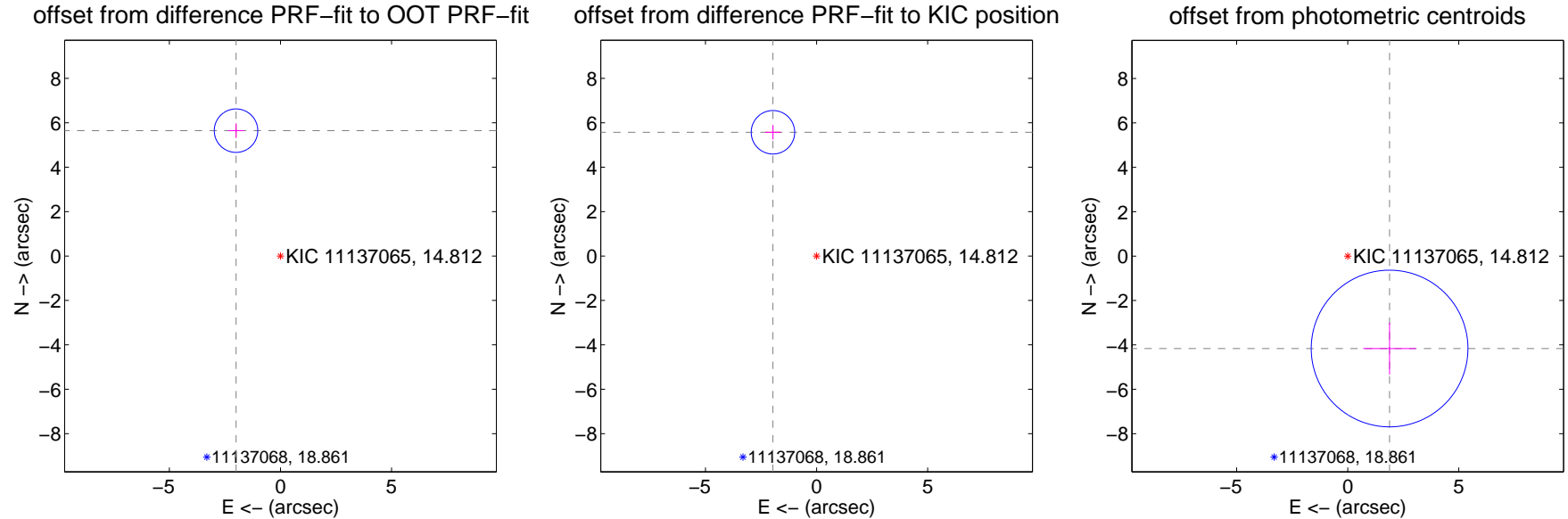
DV Centroid Data

Supplemental centroid analysis for 011137065-01. Kepler magnitude: 14.81. Transit SNR 9.88

There are 0 quarters with good PRF difference image offsets

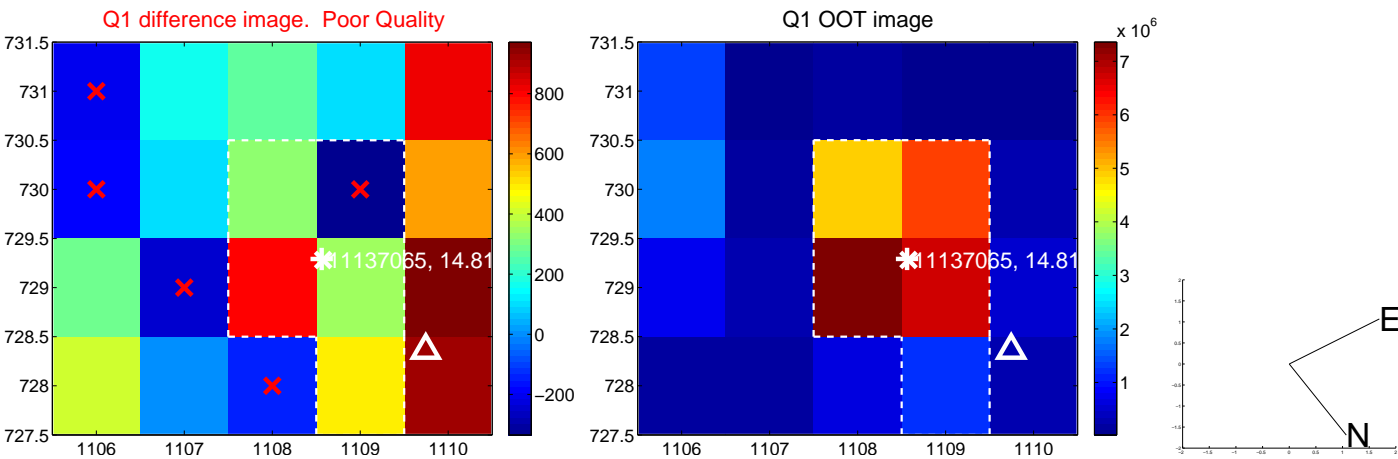
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.988 ± 0.326	18.35	2.000 ± 0.351	5.644 ± 0.323
PRF-fit source offset from KIC position	5.907 ± 0.326	18.11	1.964 ± 0.351	5.571 ± 0.323
photometric centroid source offset	4.57 ± 1.18	3.89	-1.88 ± 1.19	-4.16 ± 1.17

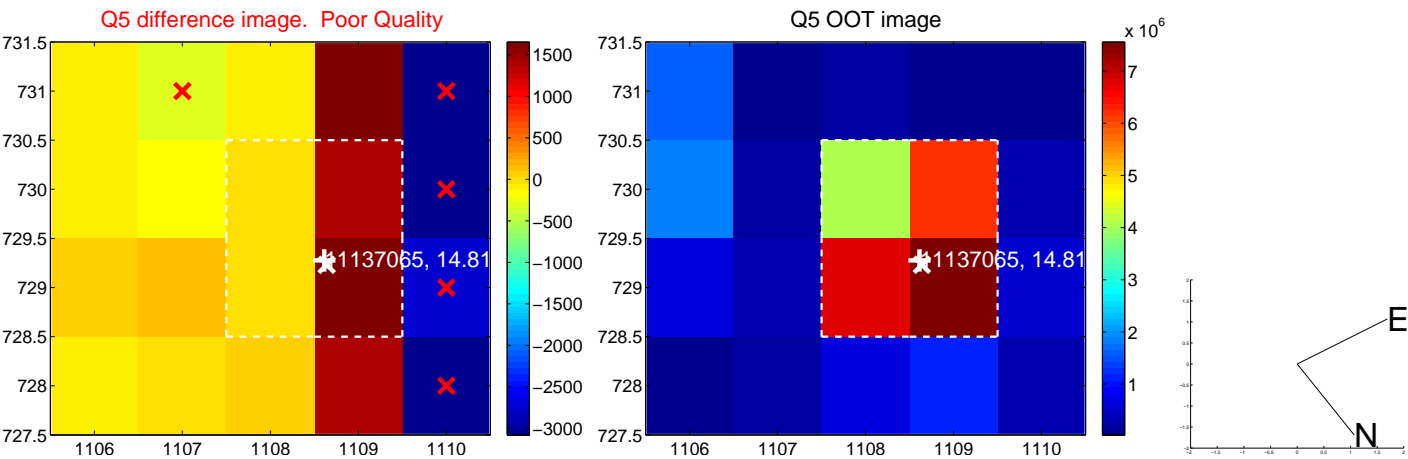


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

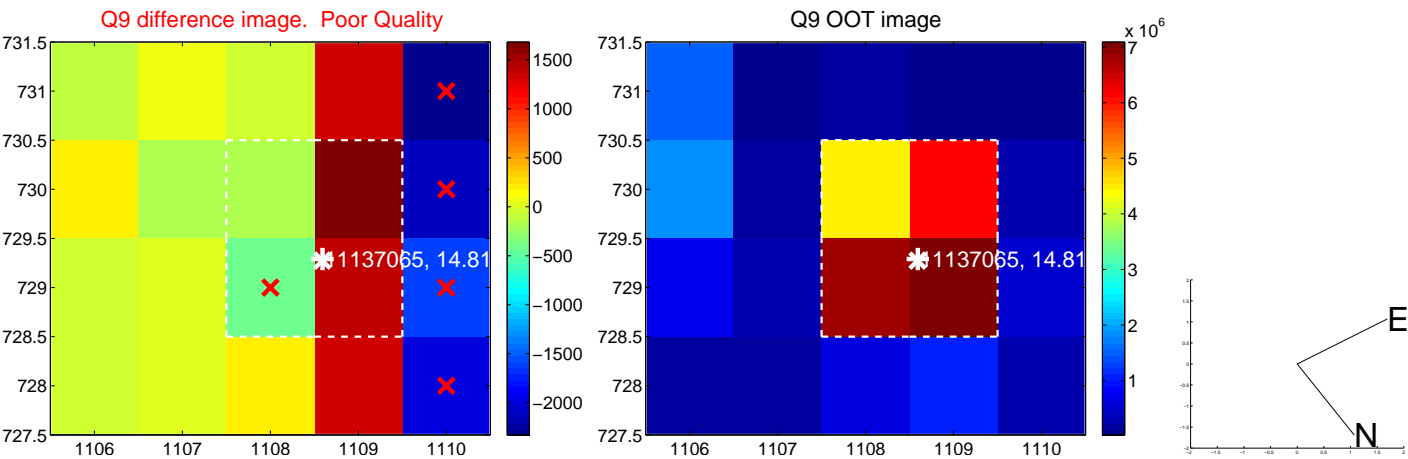
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



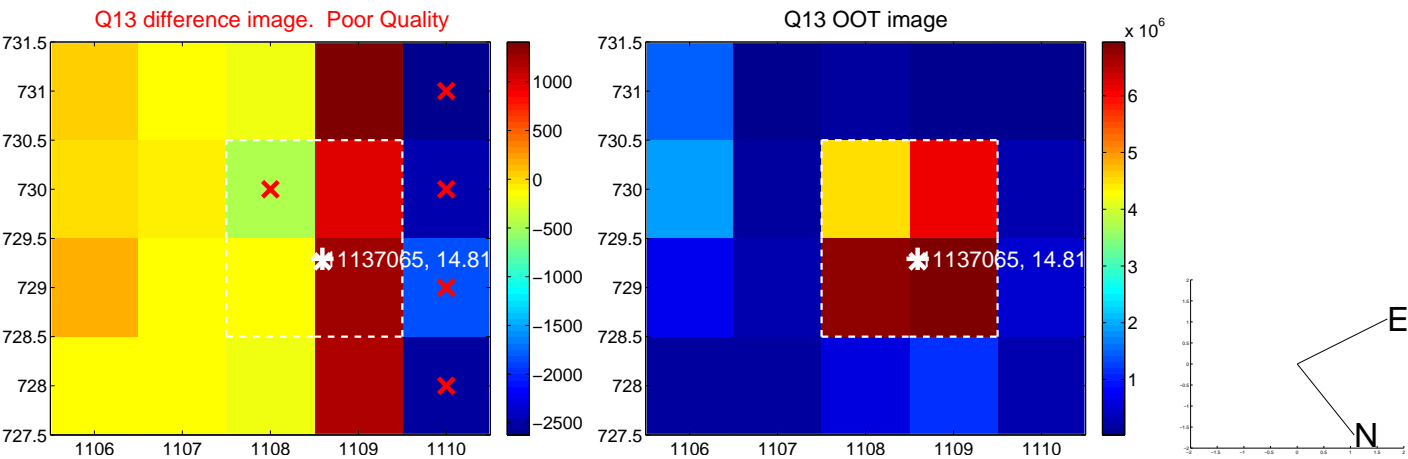
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



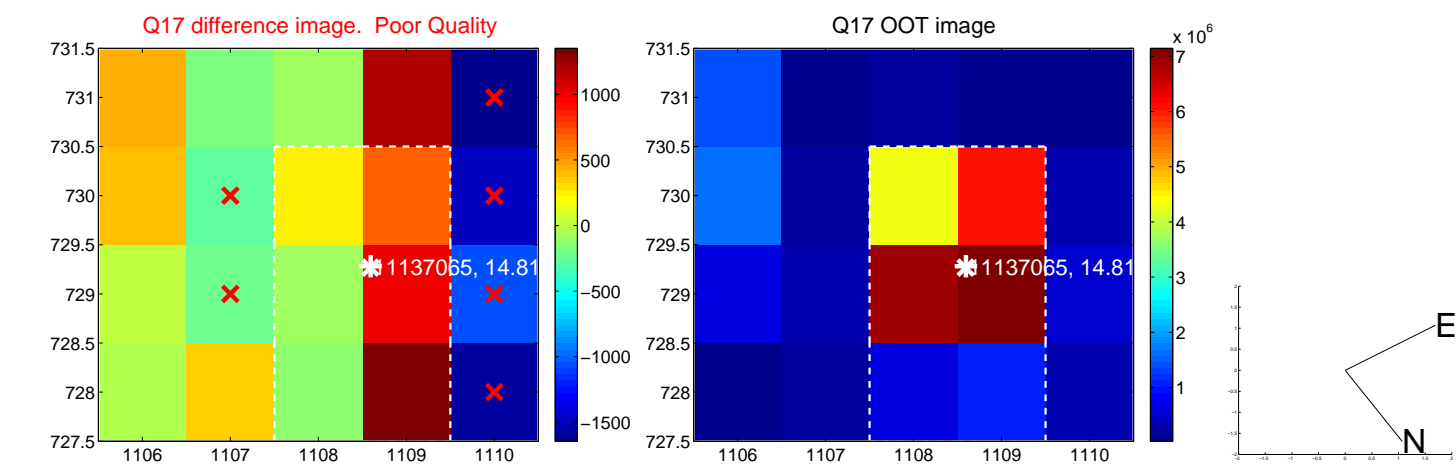
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



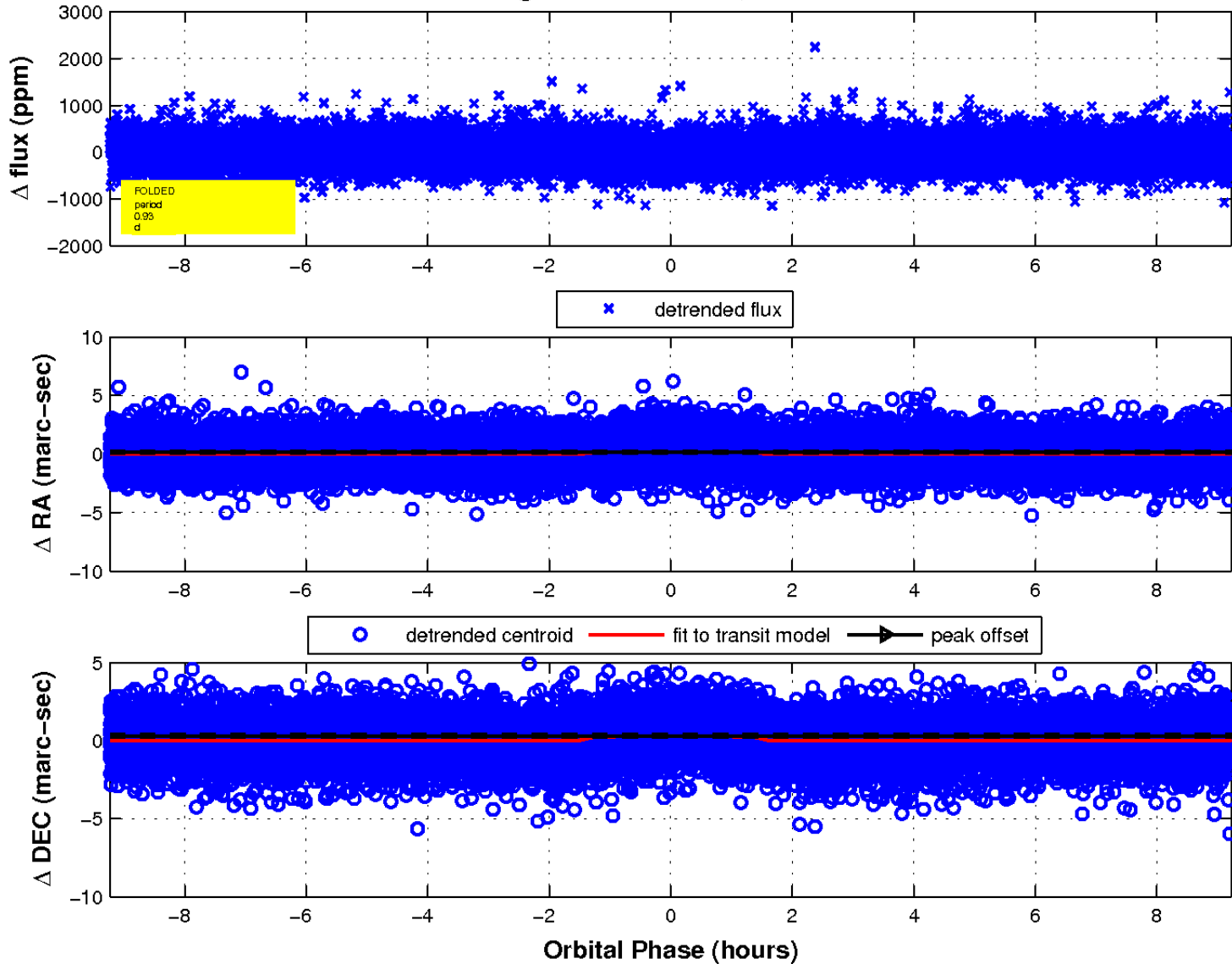
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

