

KIC 010533214

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})
010533214-01	OBS	No	365.123679	161.871745	1489.5	22.113	7.7	7.5	0.86	5345	4.03	0.63

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010533214-01	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.

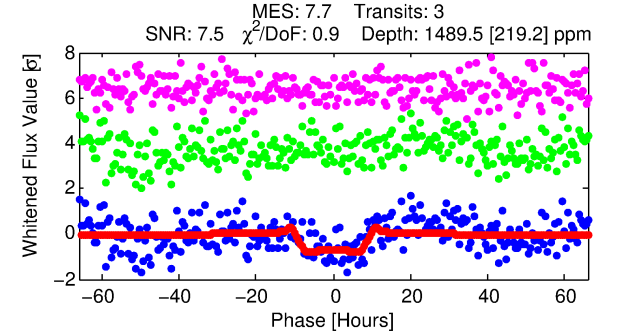
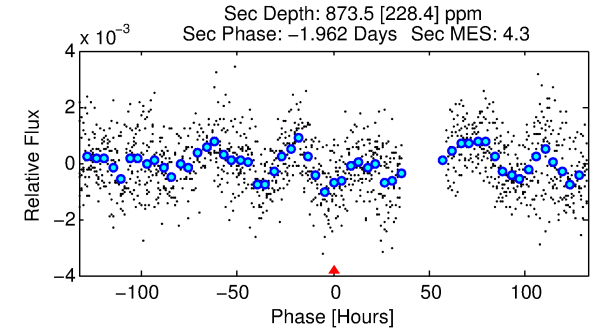
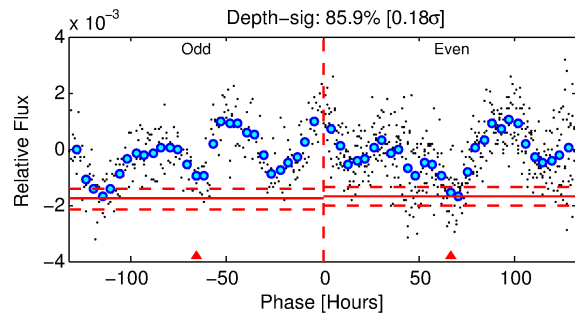
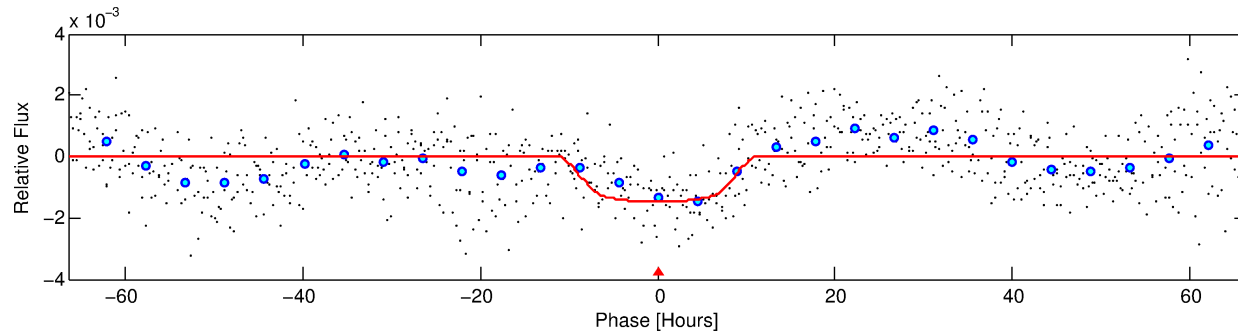
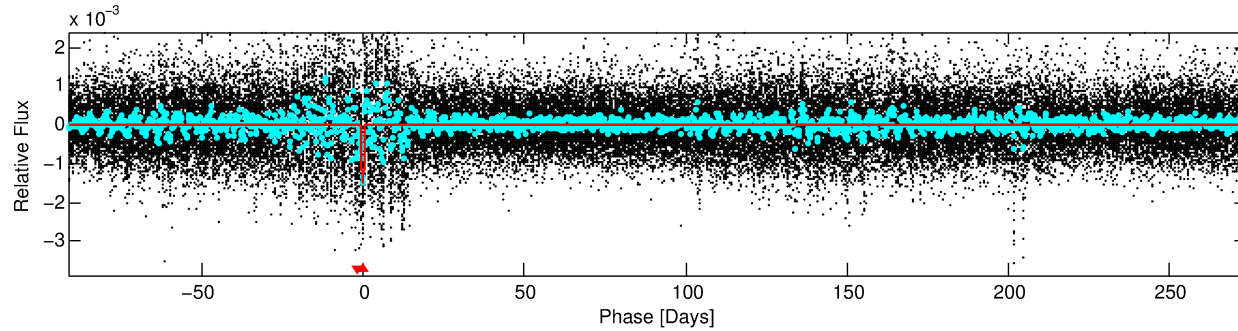
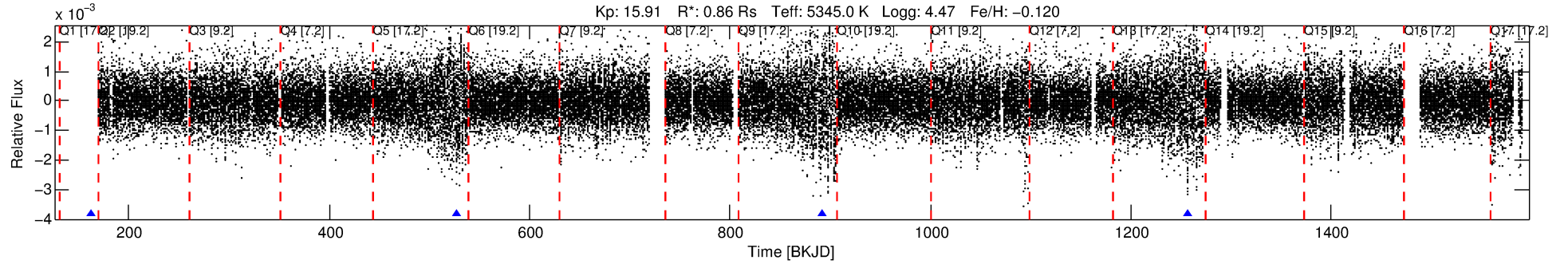
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010533214-01

No Significant Match Found

DV One-Page Summary

KIC: 10533214 Candidate: 1 of 1 Period: 365.124 d



DV Fit Results:

Period = 365.12368 [0.02786] d
Epoch = 161.8717 [0.0577] BKJD
Rp/R* = 0.0430 [0.0042]
a/R* = 64.78 [14.16]
b = 0.91 [0.04]
Seff = 0.63 [0.16]
Teq = 227 [15] K
Rp = 4.03 [0.81] Re
a = 0.9289 [0.1415] AU
Ag = 25523.73 [10182.21] [2.51 σ]
Teffp = 4434 [391] K [10.74 σ]

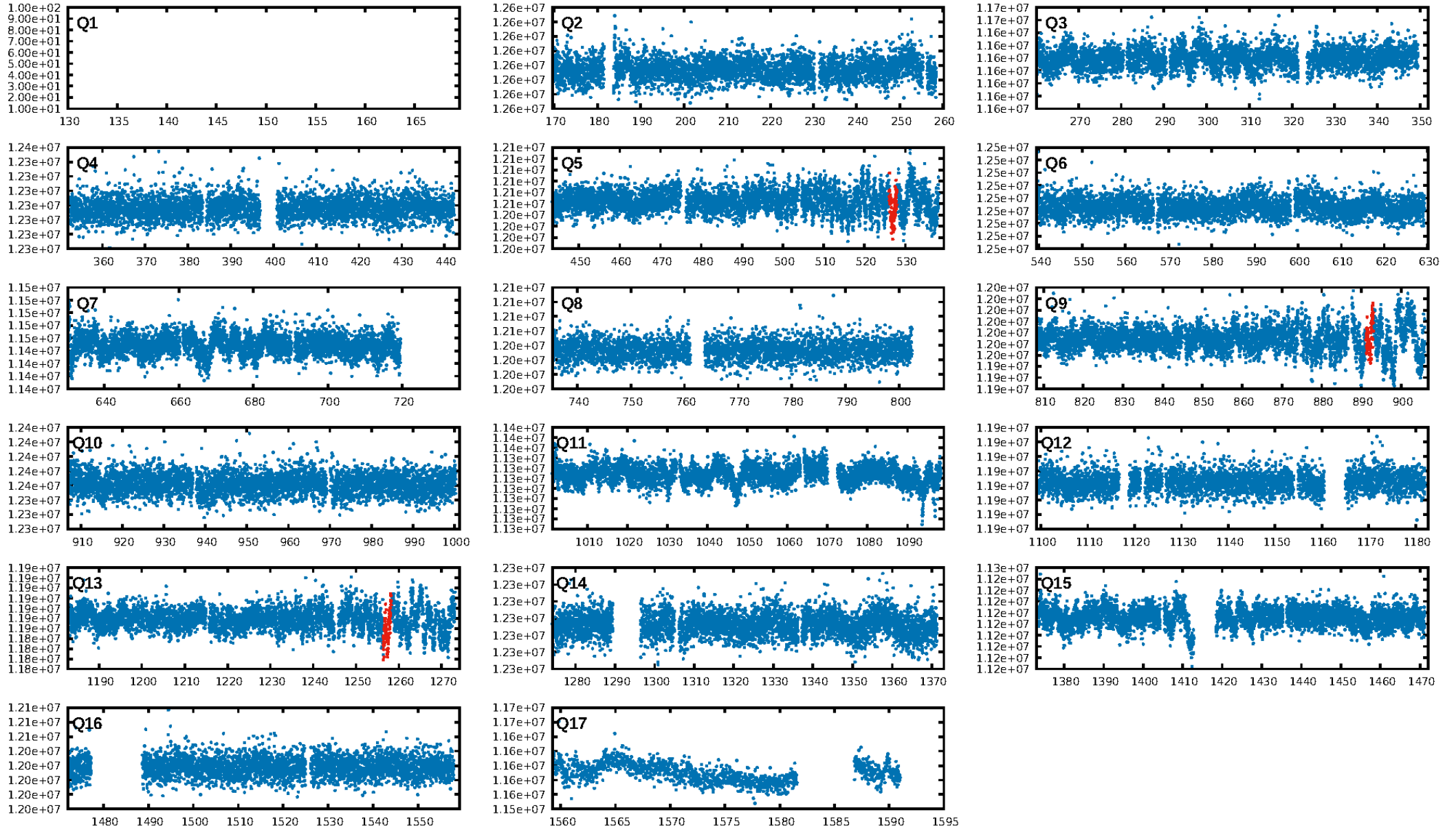
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.60e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.8456
Centroid-sig: 3.8%
Centroid-so: 1.659 arcsec [0.93 σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [3/3]

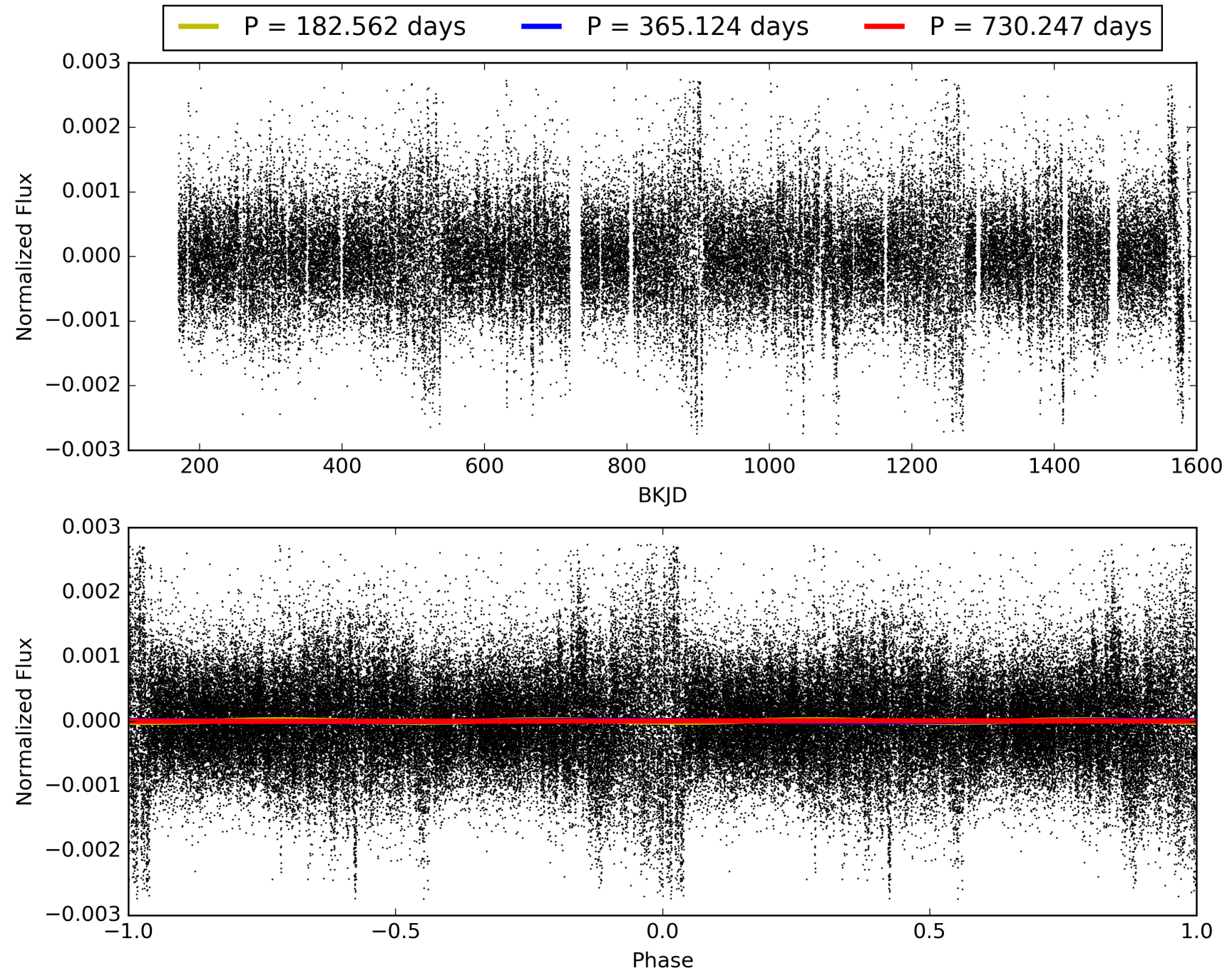
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 22:19:57 Z

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

TCE 010533214-01, PDC Light Curves

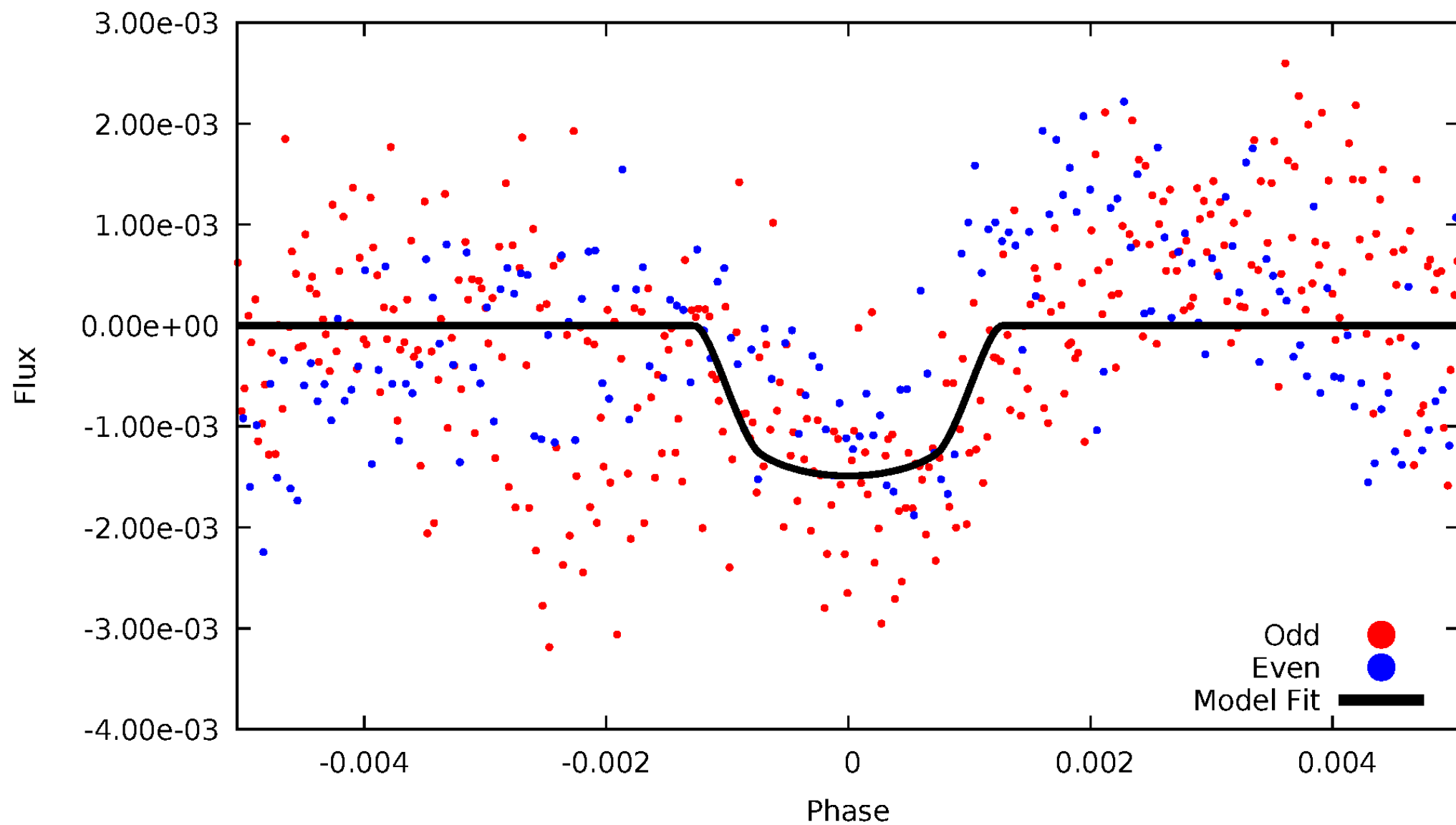


TCE 010533214-01



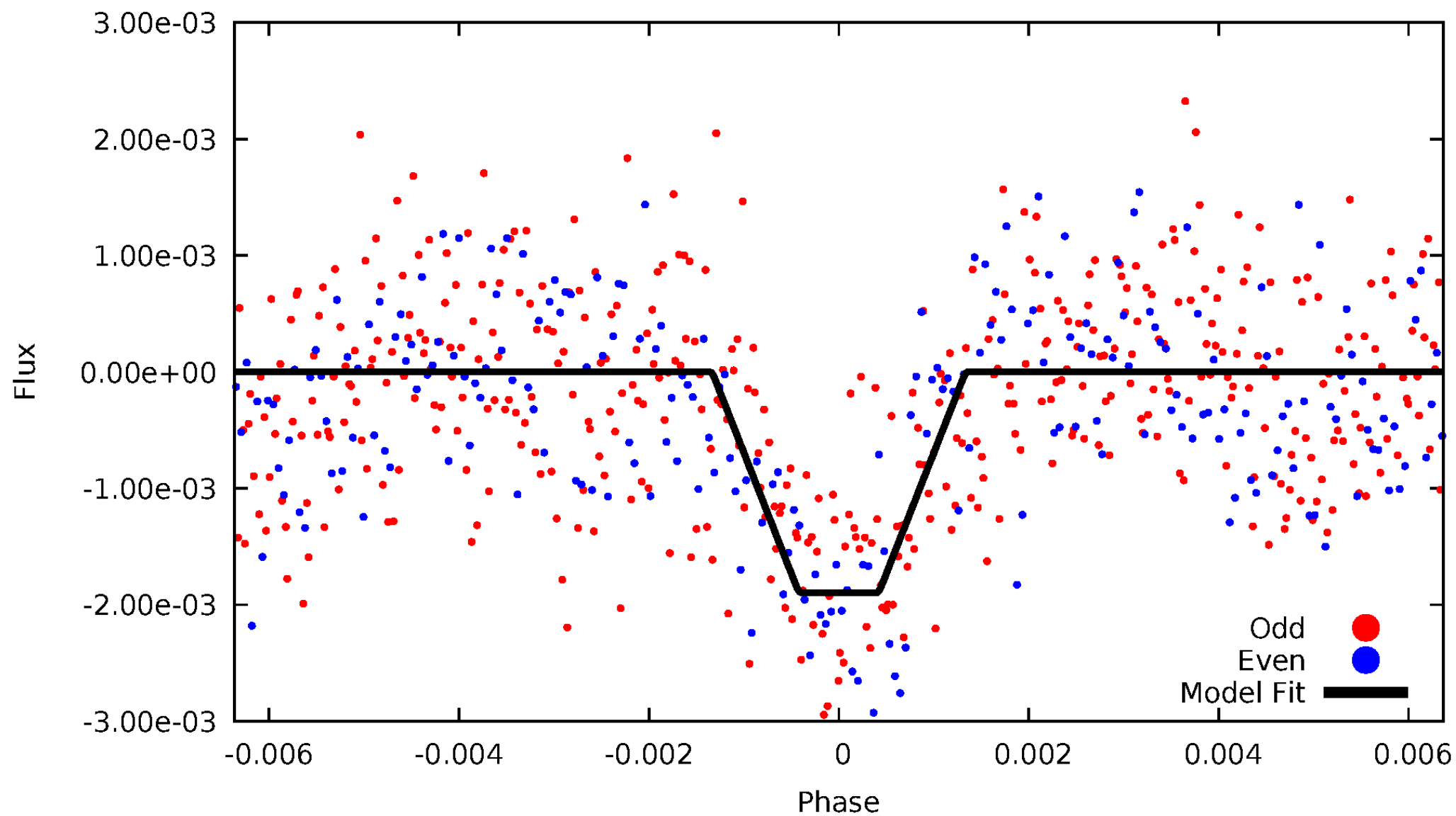
DV Odd/Even

TCE 010533214-01



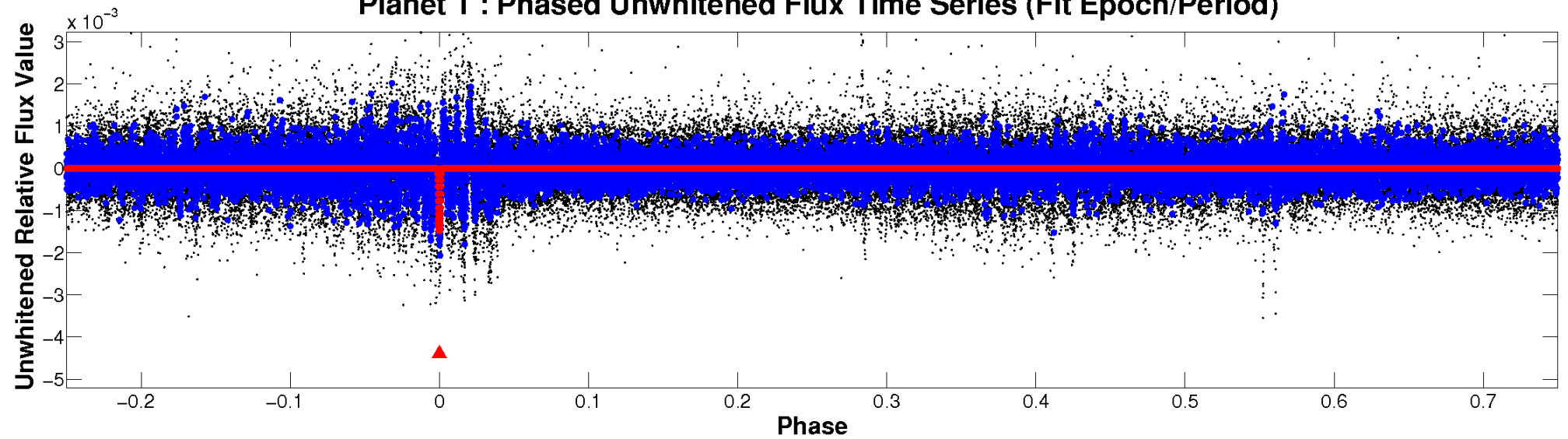
ALT Odd/Even

TCE 010533214-01

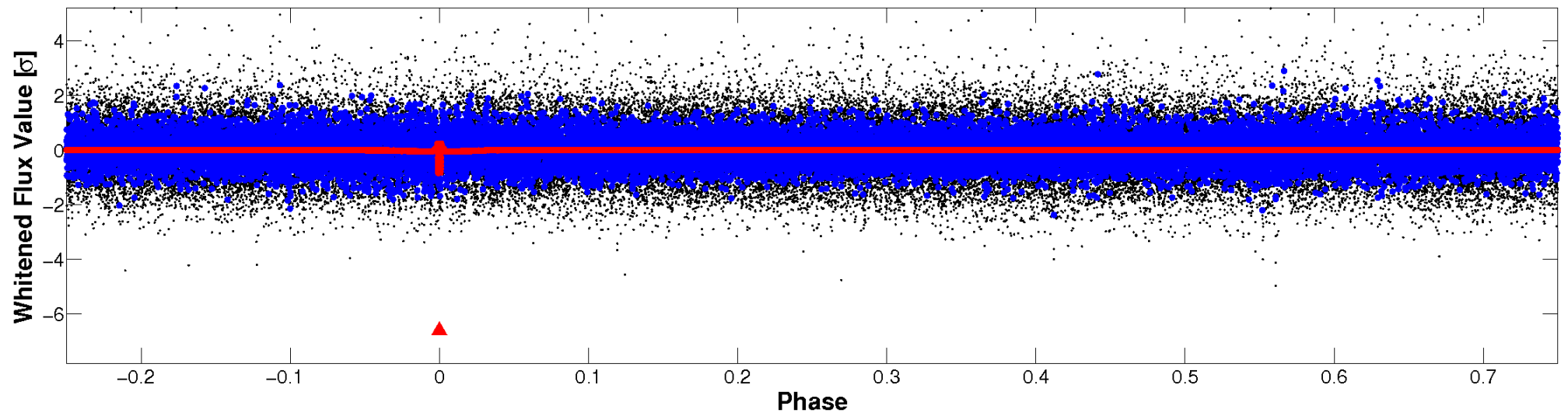


Non-Whitened Vs. Whitened Light Curve

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

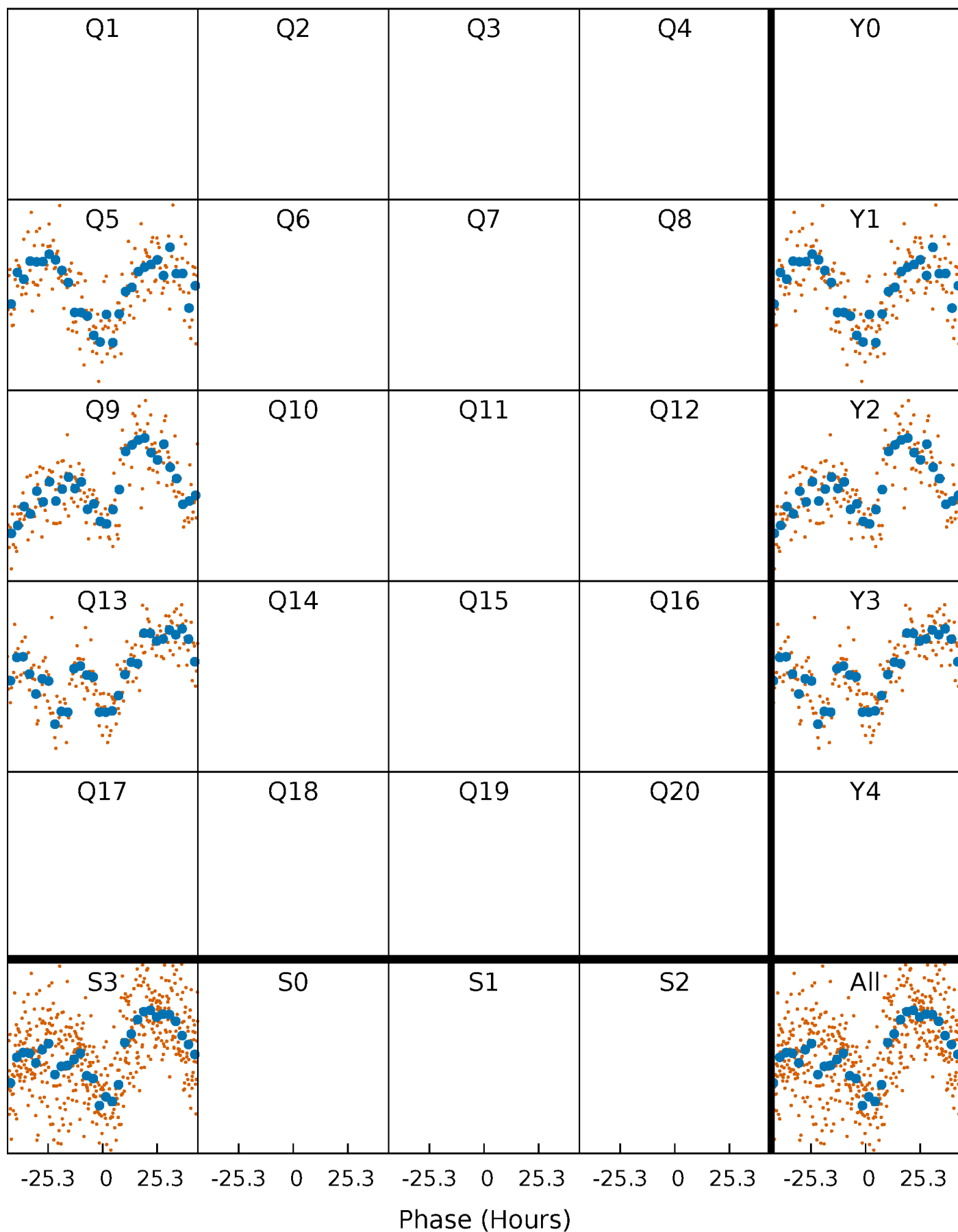


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



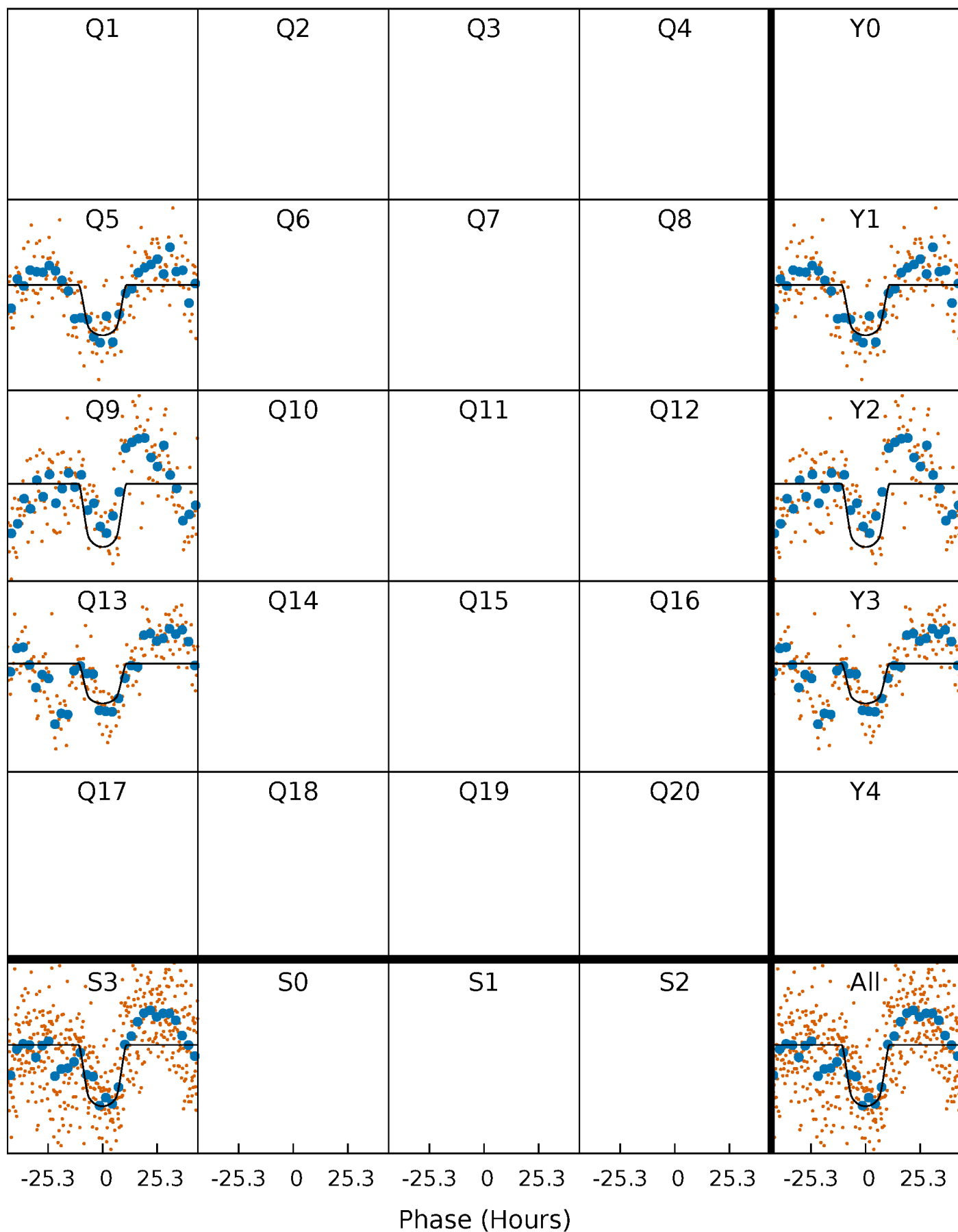
PDC Quarter-Phased Transit Curves

TCE 010533214-01 P=365.123678 Days $T_0=161.871745$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 010533214-01 $P=365.123678$ Days $T_0=161.871745$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

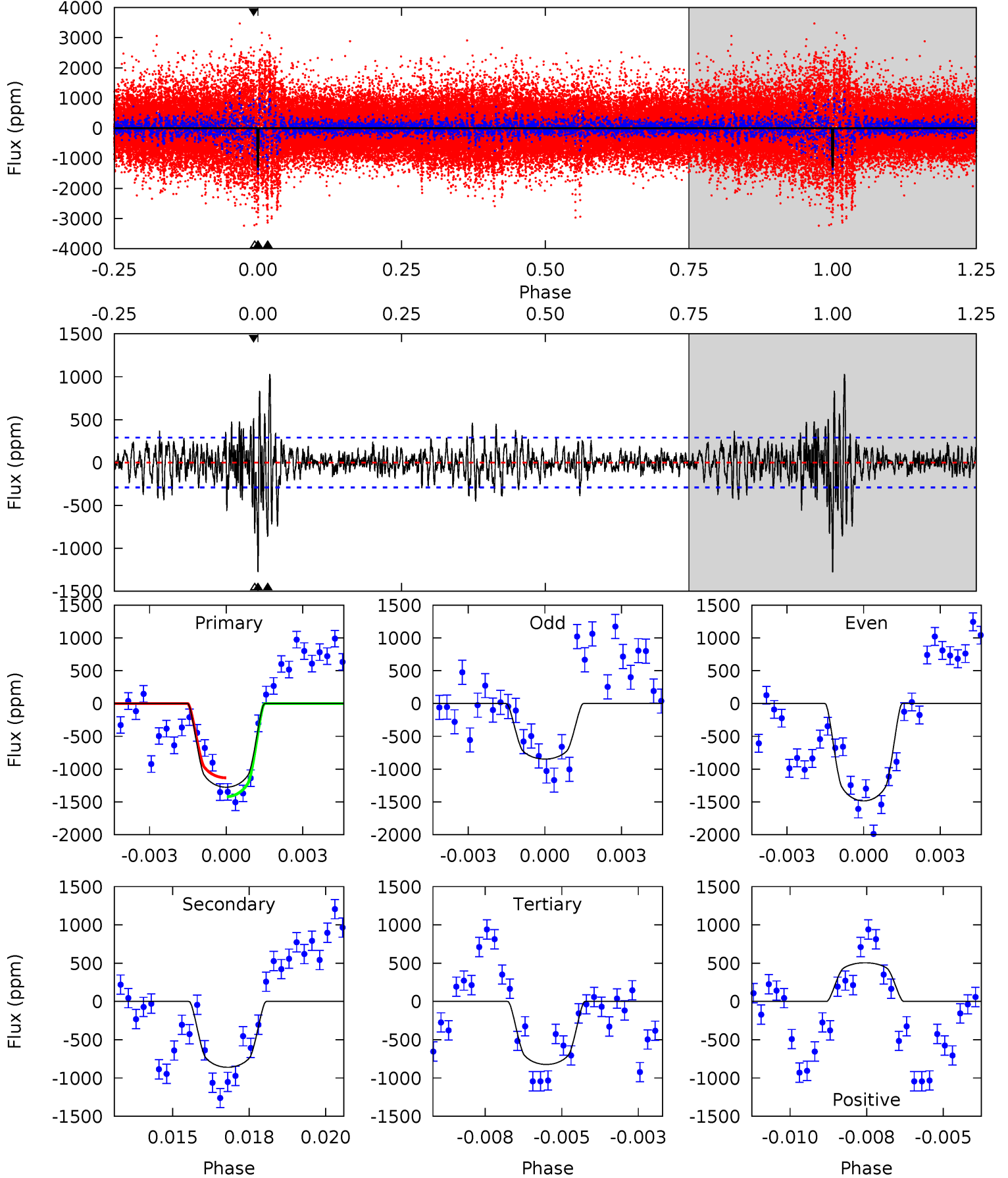
TCE 010533214-01 P=365.202207 Days $T_0=161.778700$ (BKJD)



DV Model-Shift Uniqueness Test

010533214-01, P = 365.123678 Days, E = 161.871745 Days

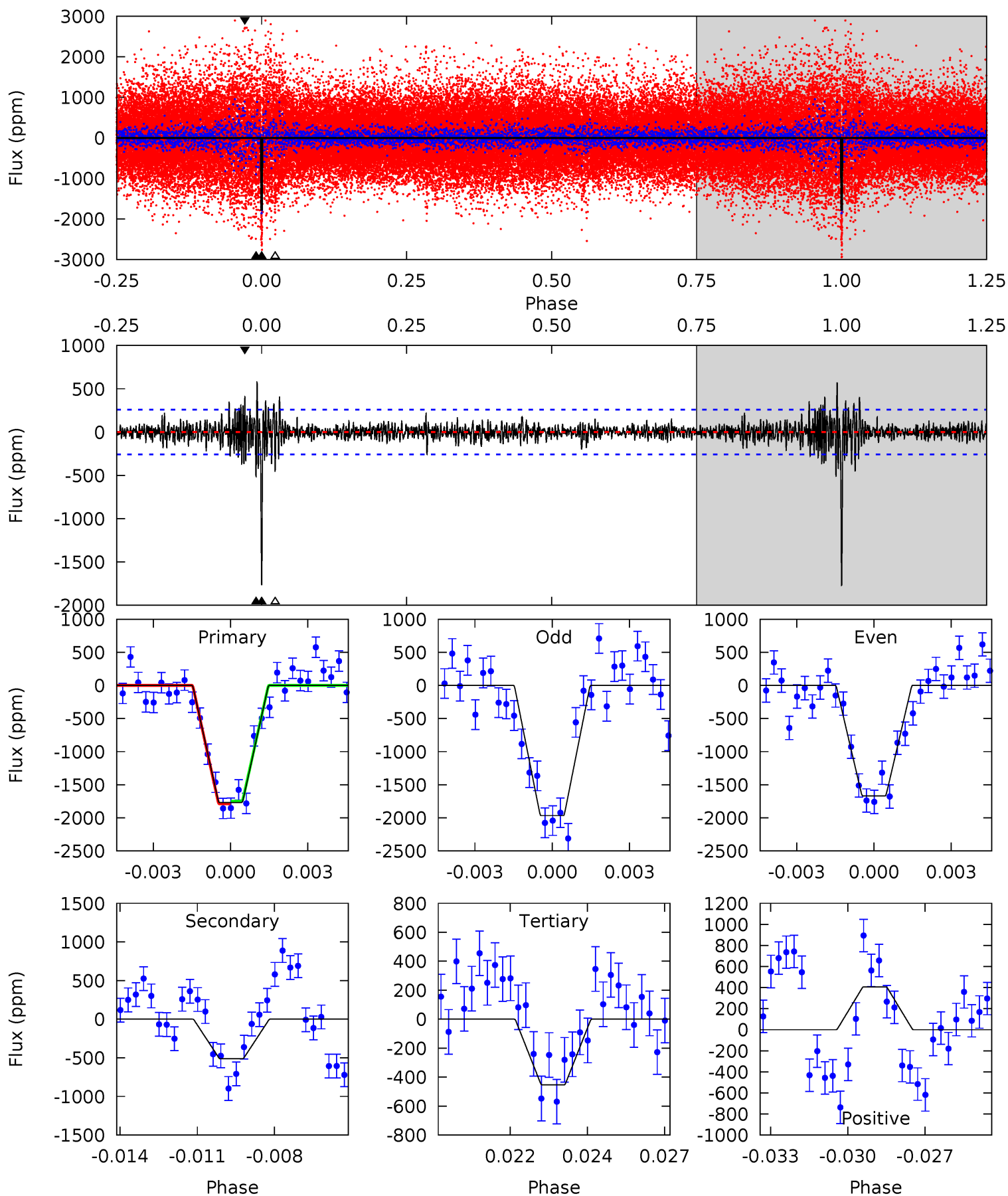
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.3	15.7	15.0	9.21	5.28	3.02	2.73	8.26	14.0	0.67	6.46	5.46	0.89	0.45	2.61



Alt Model-Shift Uniqueness Test

010533214-01, P = 365.202207 Days, E = 161.778700 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
36.0	10.5	9.24	8.30	5.27	3.00	1.54	26.8	27.7	1.21	2.15	2.86	0.98	0.25	0.41



Stellar Parameters For KIC 010533214

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5345^{+175}_{-159}	$4.473^{+0.104}_{-0.127}$	$-0.120^{+0.300}_{-0.300}$	$0.860^{+0.151}_{-0.113}$	$0.802^{+0.115}_{-0.067}$	$1.776^{+0.761}_{-0.624}$
	+3%/-3%	+2%/-3%	+250%/-250%	+18%/-13%	+14%/-8%	+43%/-35%
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 010533214-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-860 ± 55	$4.05^{+0.62}_{-0.51}$	318^{+18}_{-16}	4571^{+239}_{-224}	24961^{+7846}_{-6124}
Alt.	-513 ± 49	$4.13^{+0.57}_{-0.47}$	319^{+18}_{-17}	4119^{+193}_{-181}	14385^{+4266}_{-3423}

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 $A_{obs} \gg 1.0$

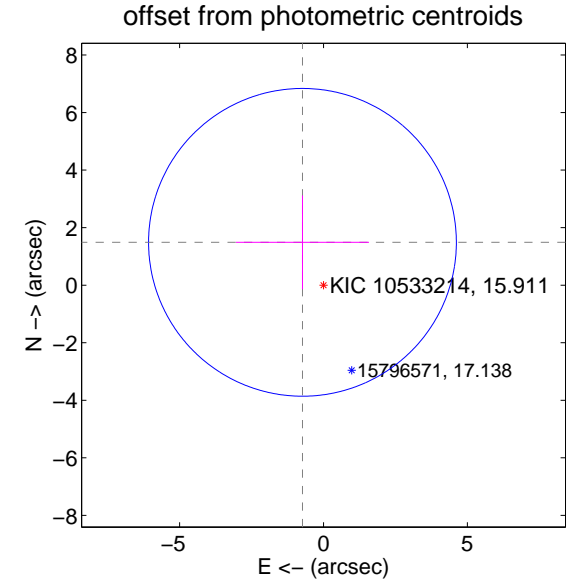
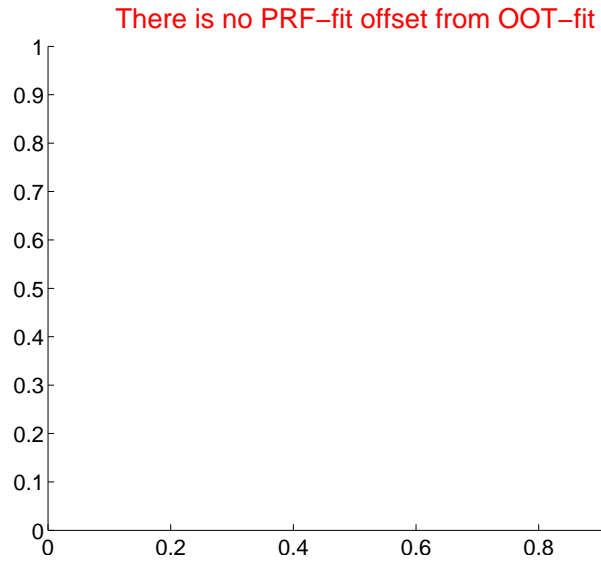
DV Centroid Data

Supplemental centroid analysis for 010533214-01. Kepler magnitude: 15.91. Transit SNR 7.47

There are 0 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	1.66 ± 1.78	0.93	0.73 ± 2.31	1.49 ± 1.63

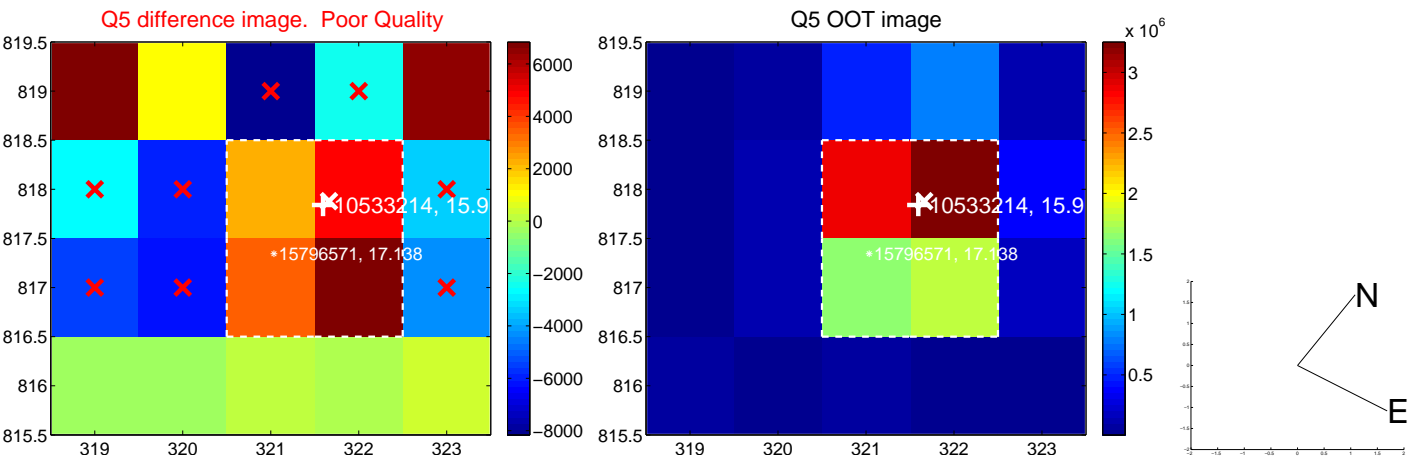


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

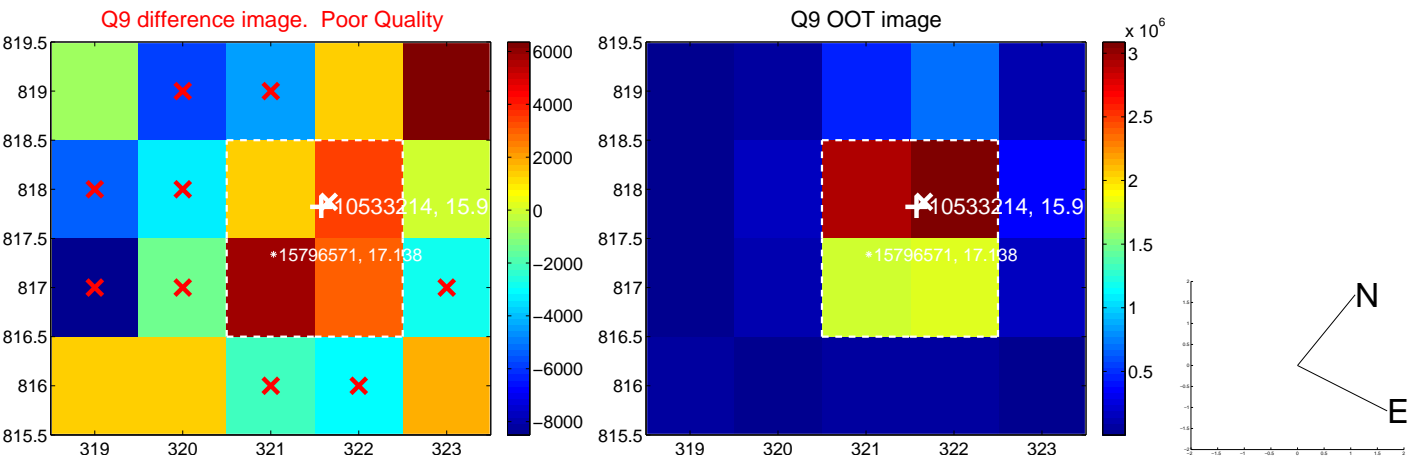
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



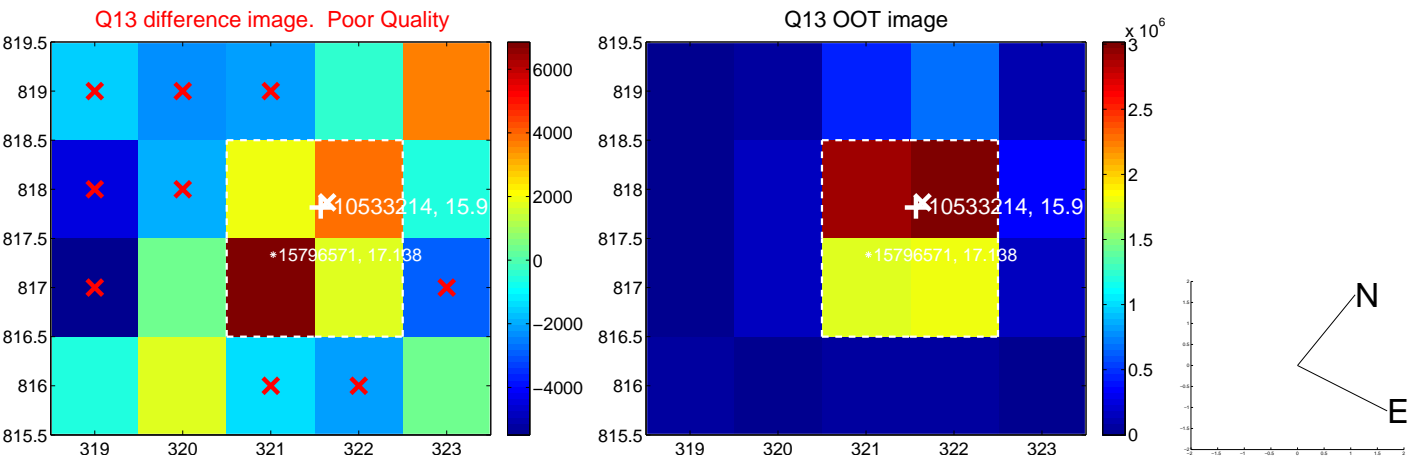
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



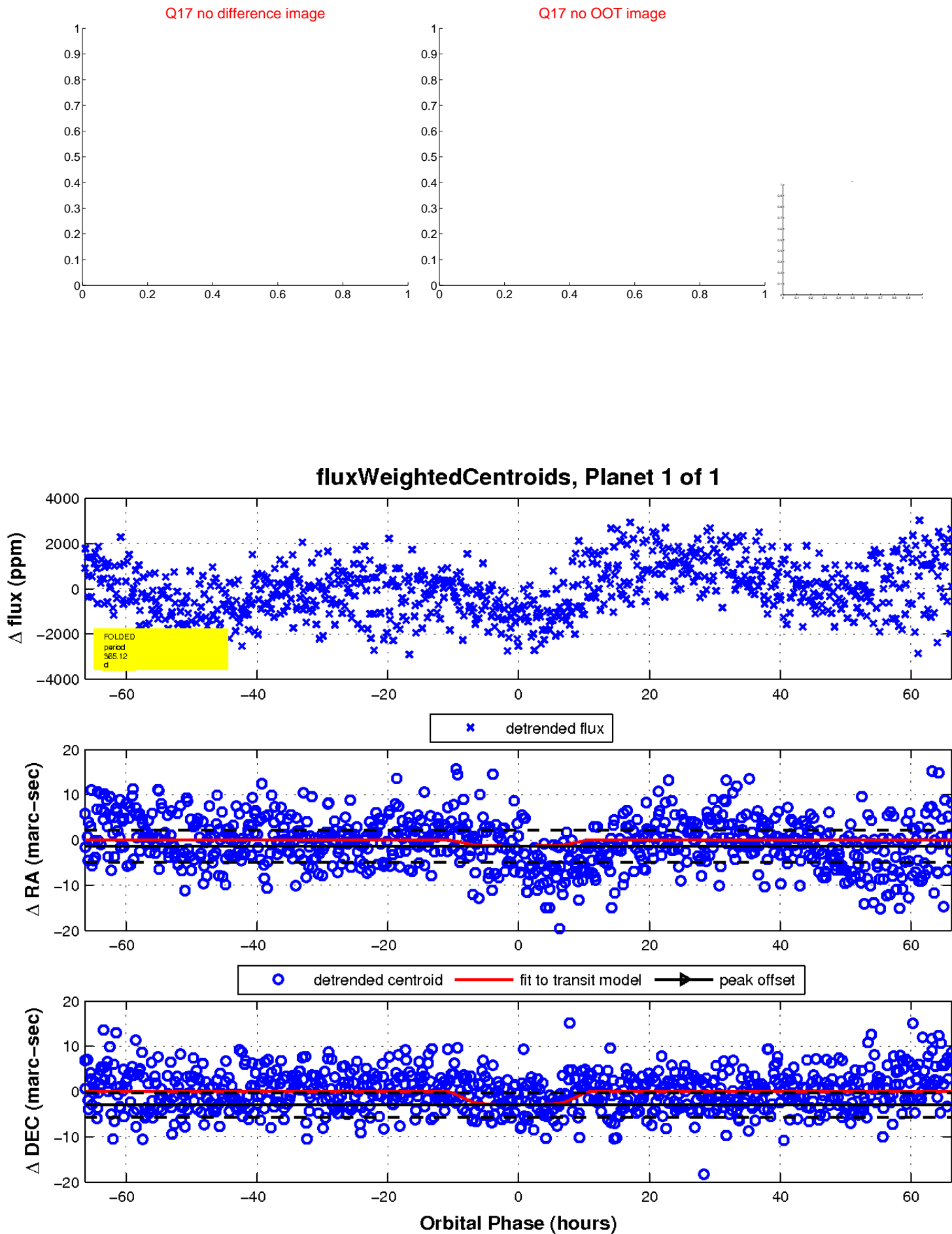
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

