

KIC 012167188

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})
012167188-01	OBS	No	365.823509	138.070268	340.1	17.866	7.6	7.5	1.77	6638	5.73	4.83

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012167188-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—MOD_TER_DV—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.

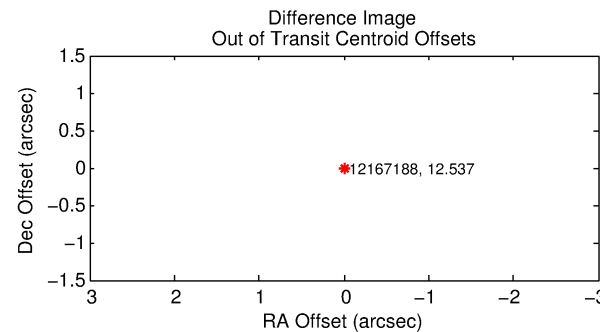
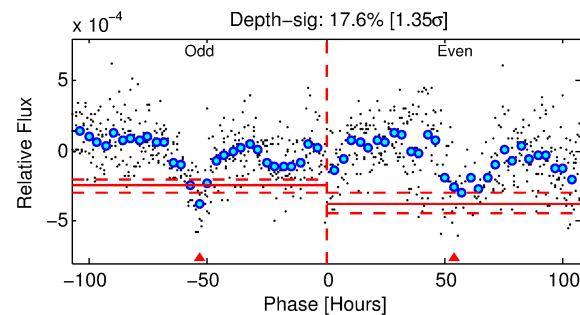
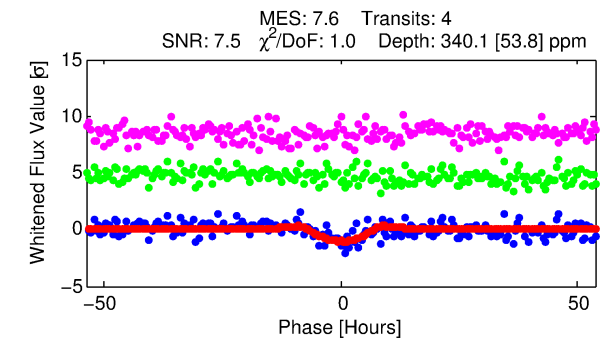
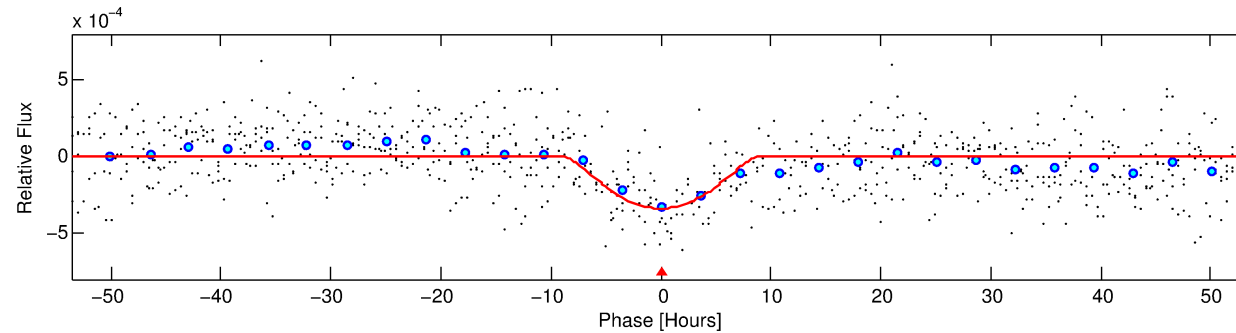
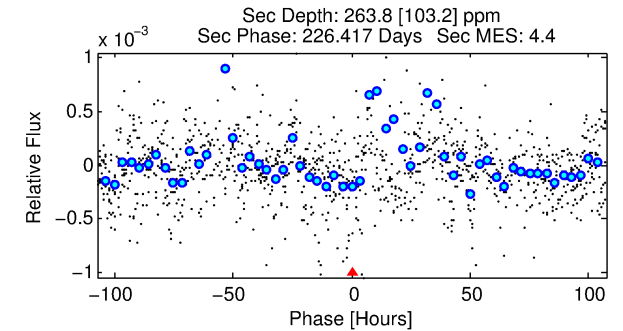
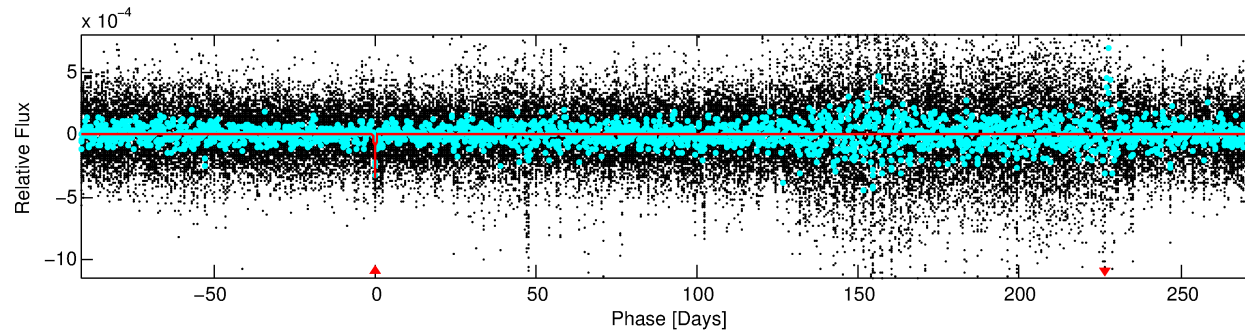
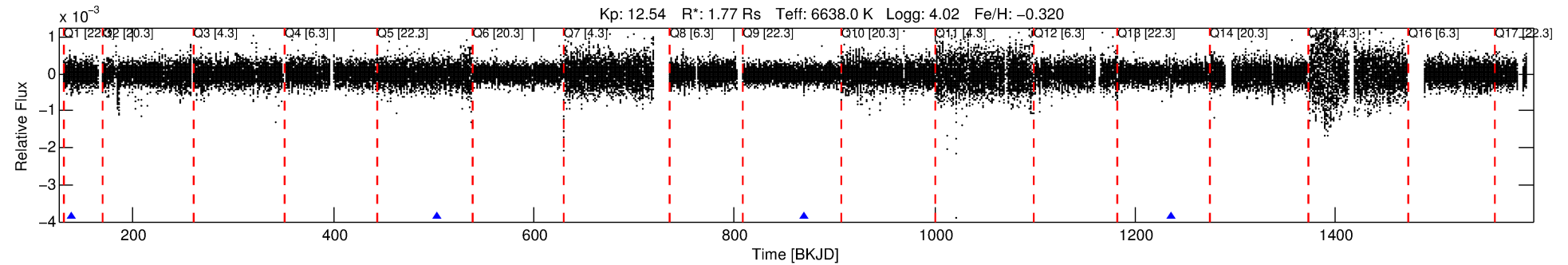
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012167188-01

No Significant Match Found

DV One-Page Summary

KIC: 12167188 Candidate: 1 of 1 Period: 365.824 d



DV Fit Results:

Period = 365.82351 [0.02053] d
Epoch = 138.0703 [0.0417] BKJD
Rp/R* = 0.0296 [0.0578]
a/R* = 41.33 [24.41]
b = 1.00 [0.09]
Seff = 4.82 [2.58]
Teq = 378 [51] K
Rp = 5.73 [11.36] Re
a = 1.0658 [0.3439] AU
Ag = 5016.04 [19844.66] [0.25σ]
Teffp = 4917 [4826] K [0.94σ]

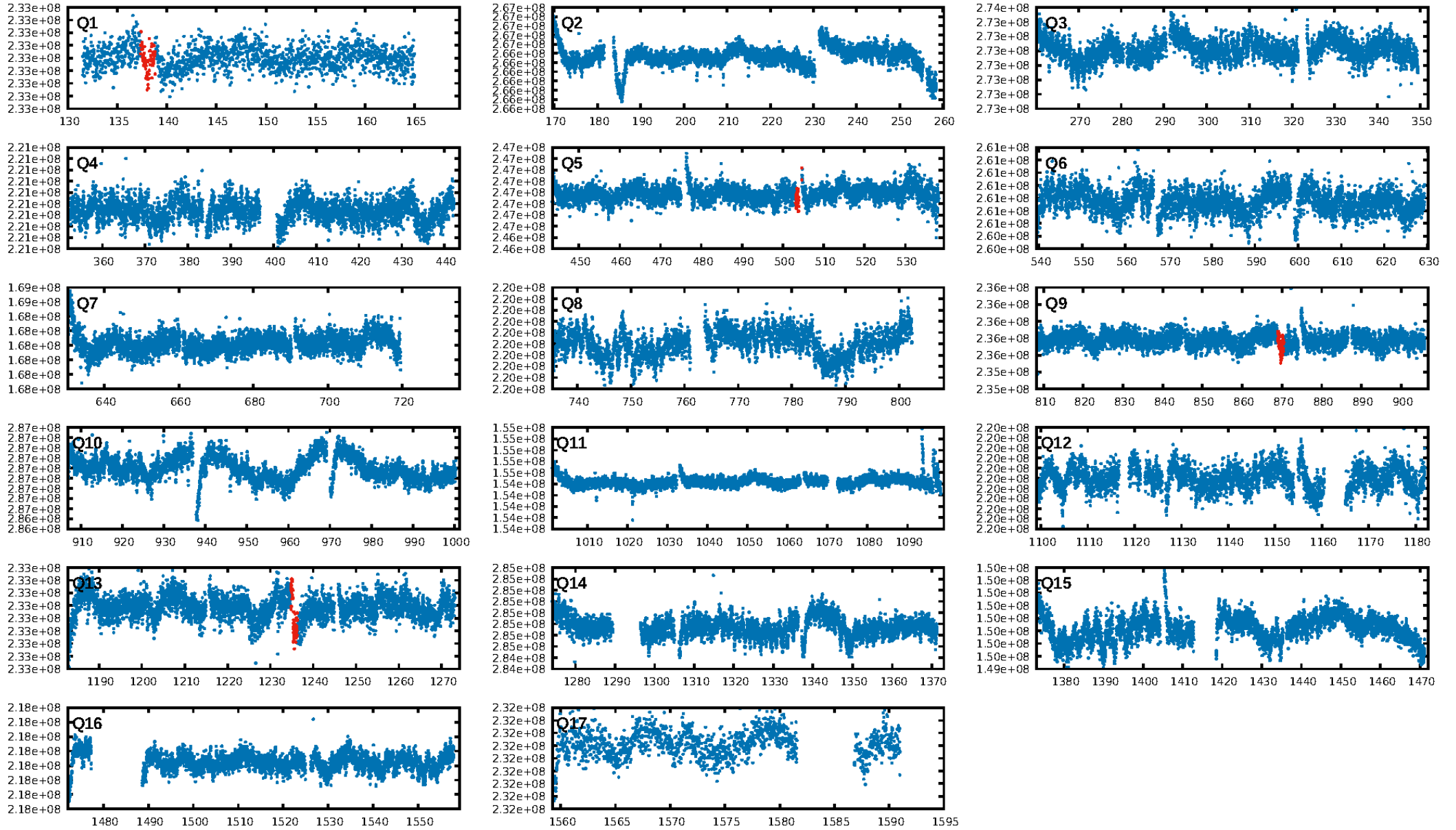
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 53.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.31e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 4.419
Centroid-sig: 55.2%
Centroid-so: 3.127 arcsec [3.19σ]
OotOffset-rm: N/A
KicOffset-rm: 4.364 arcsec [51.56σ]
OotOffset-st: 0/0/0 [0]
KicOffset-st: 0/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [3/3]

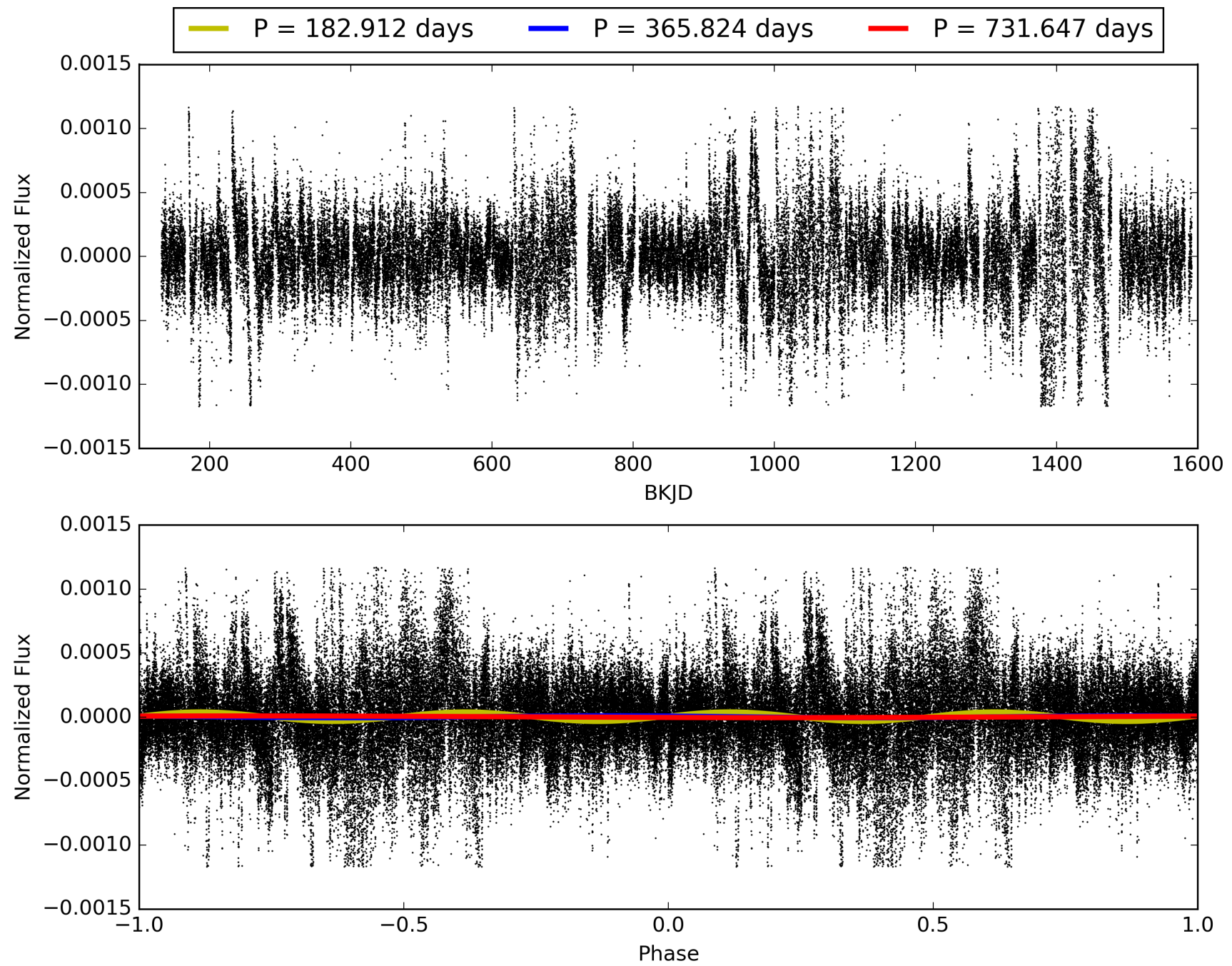
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:59:11 Z

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

TCE 012167188-01, PDC Light Curves

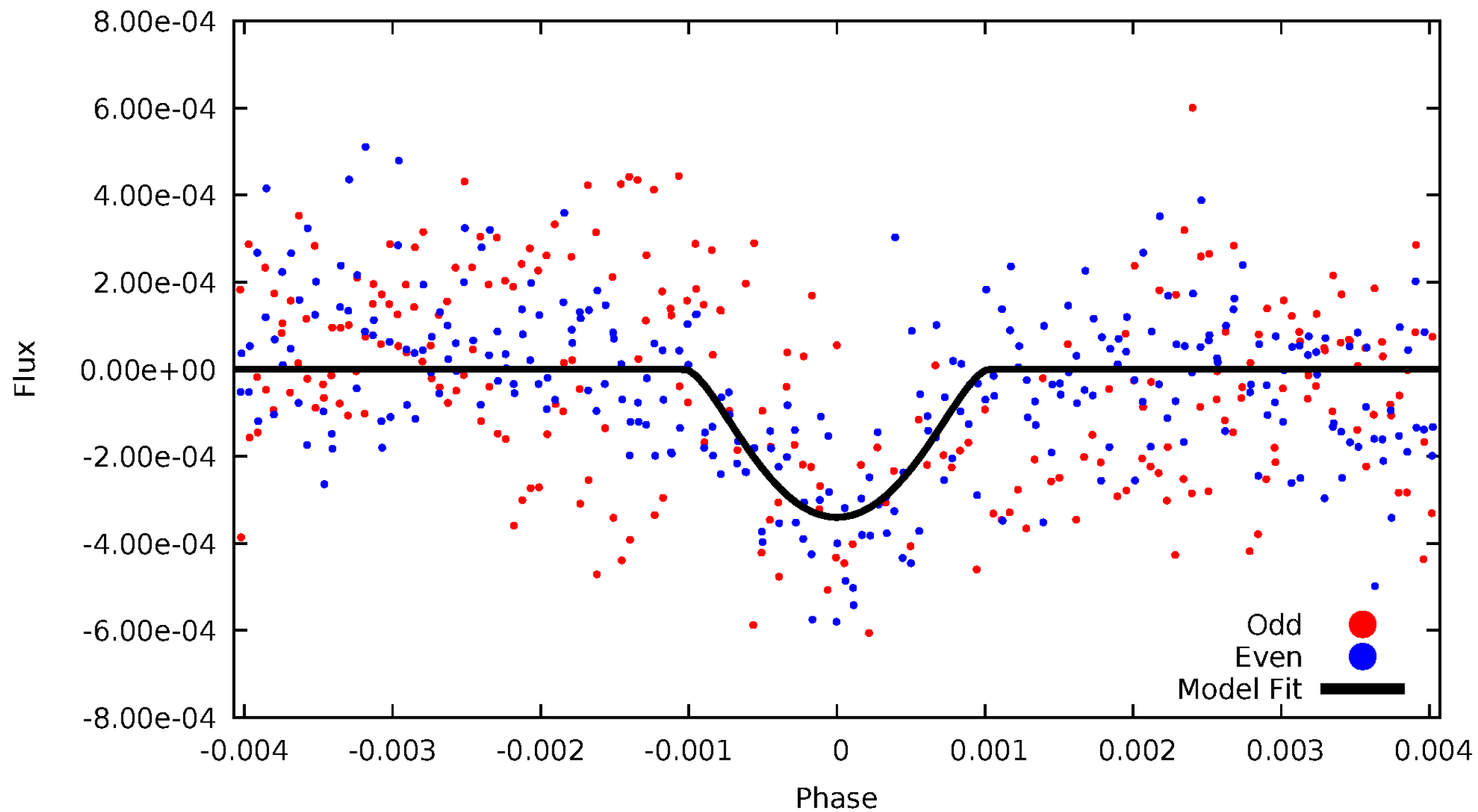


TCE 012167188-01



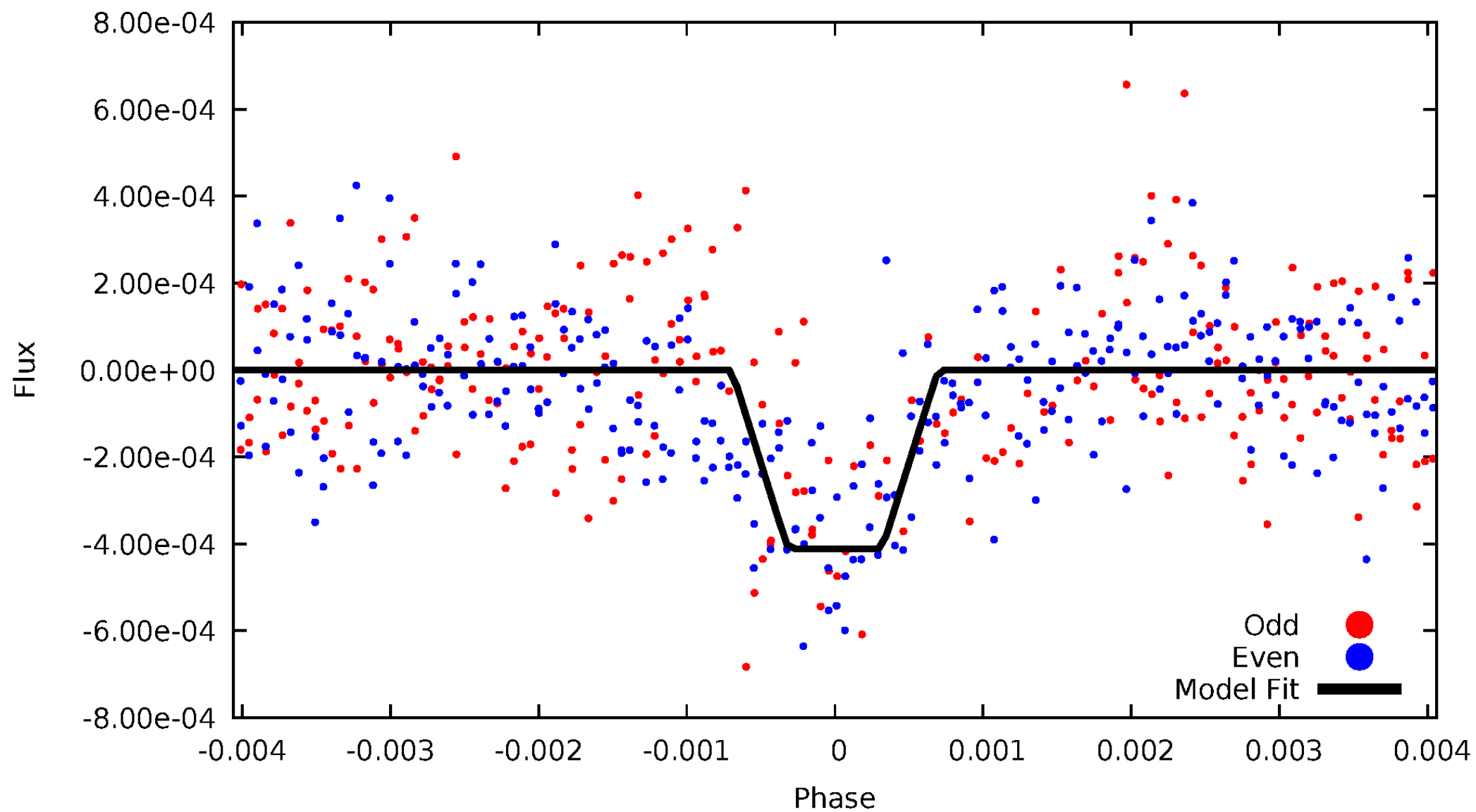
DV Odd/Even

TCE 012167188-01



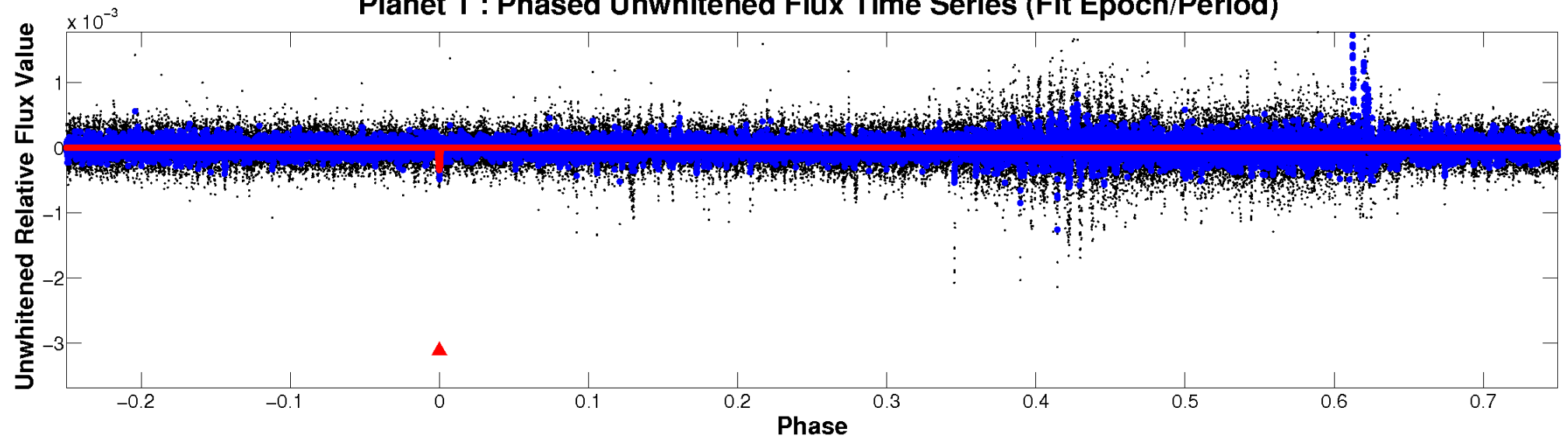
ALT Odd/Even

TCE 012167188-01

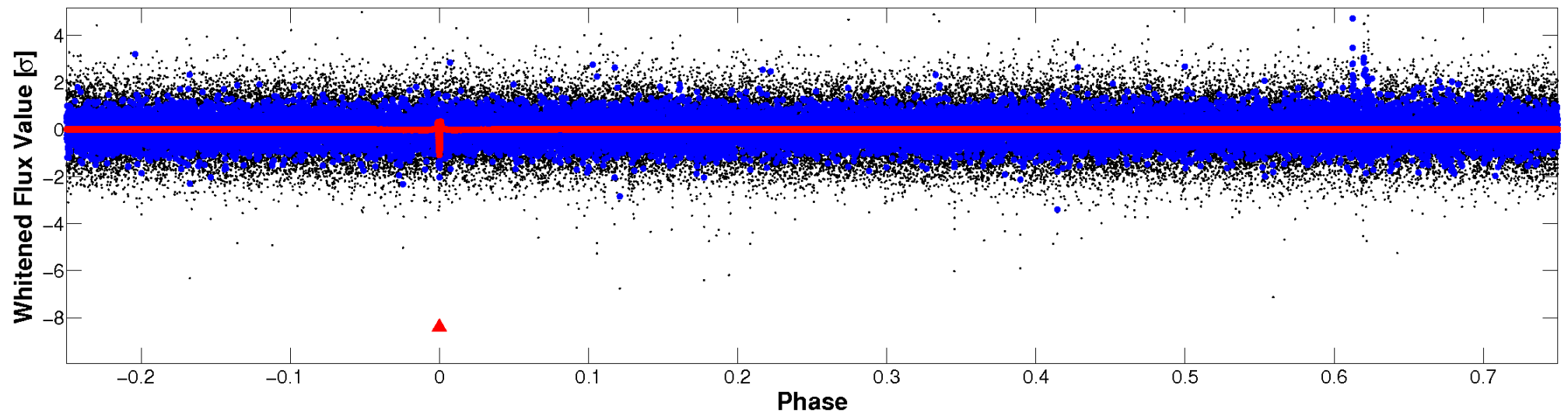


Non-Whitened Vs. Whitened Light Curve

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

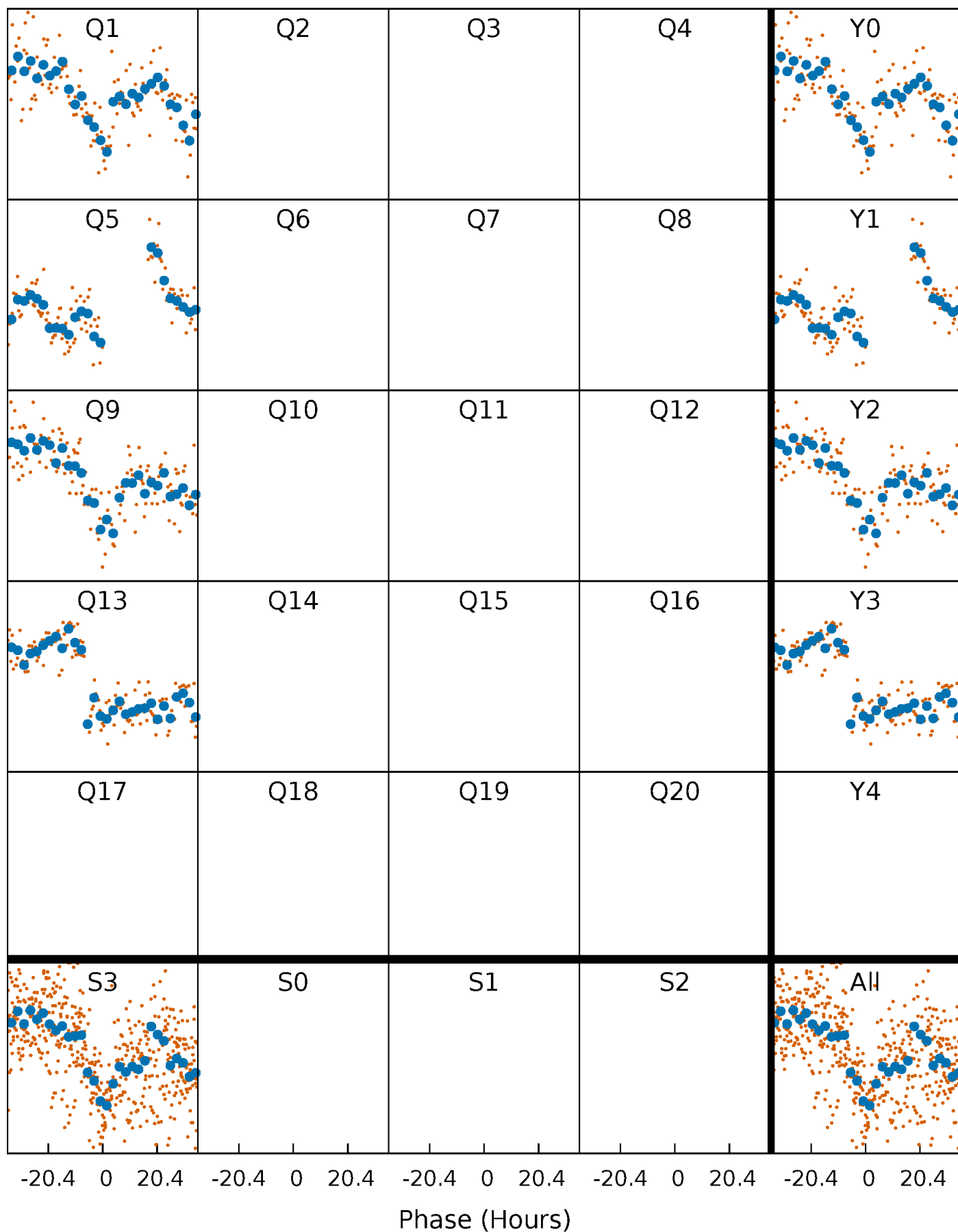


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



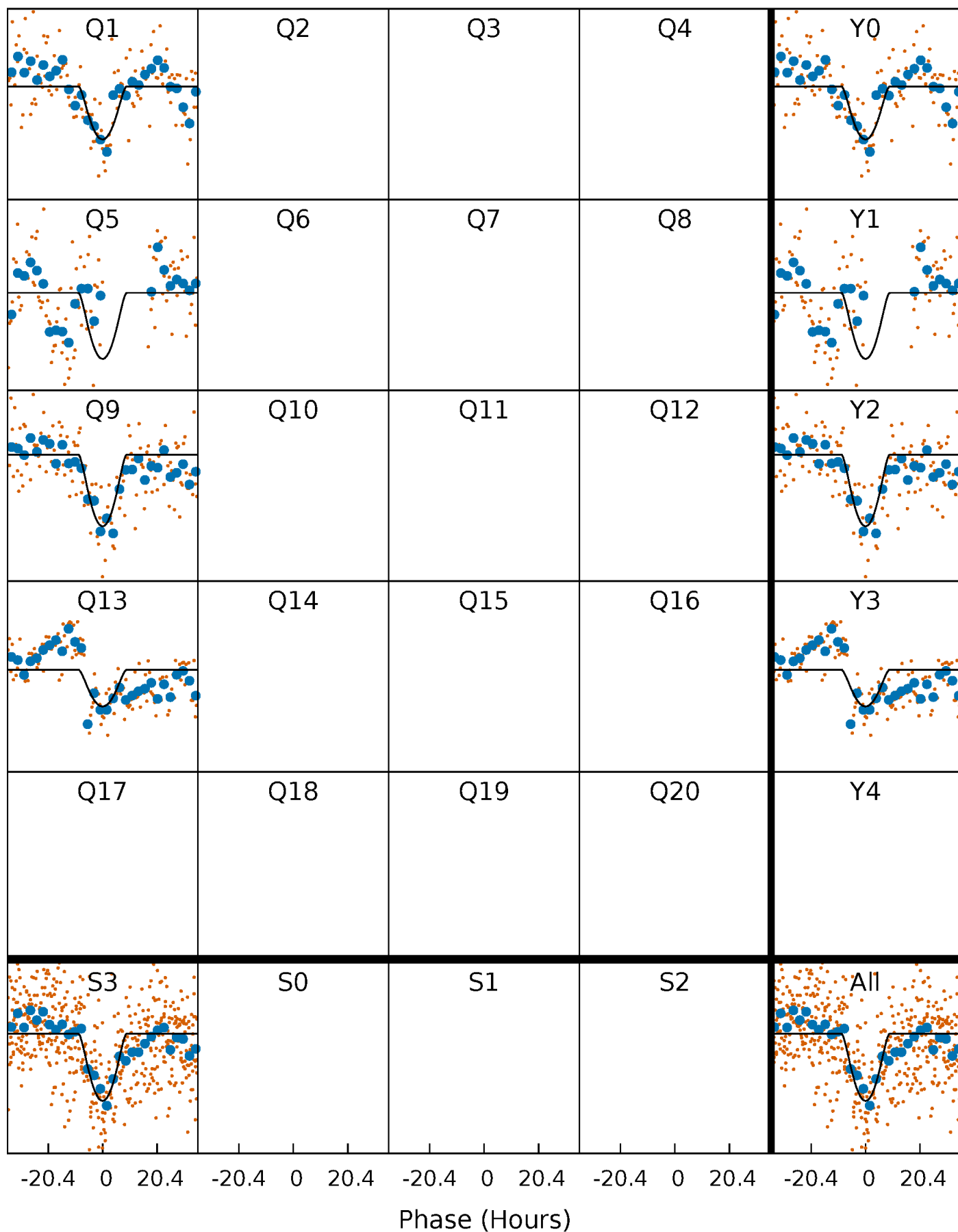
PDC Quarter-Phased Transit Curves

TCE 012167188-01 P=365.823509 Days $T_0=138.070268$ (BKJD)



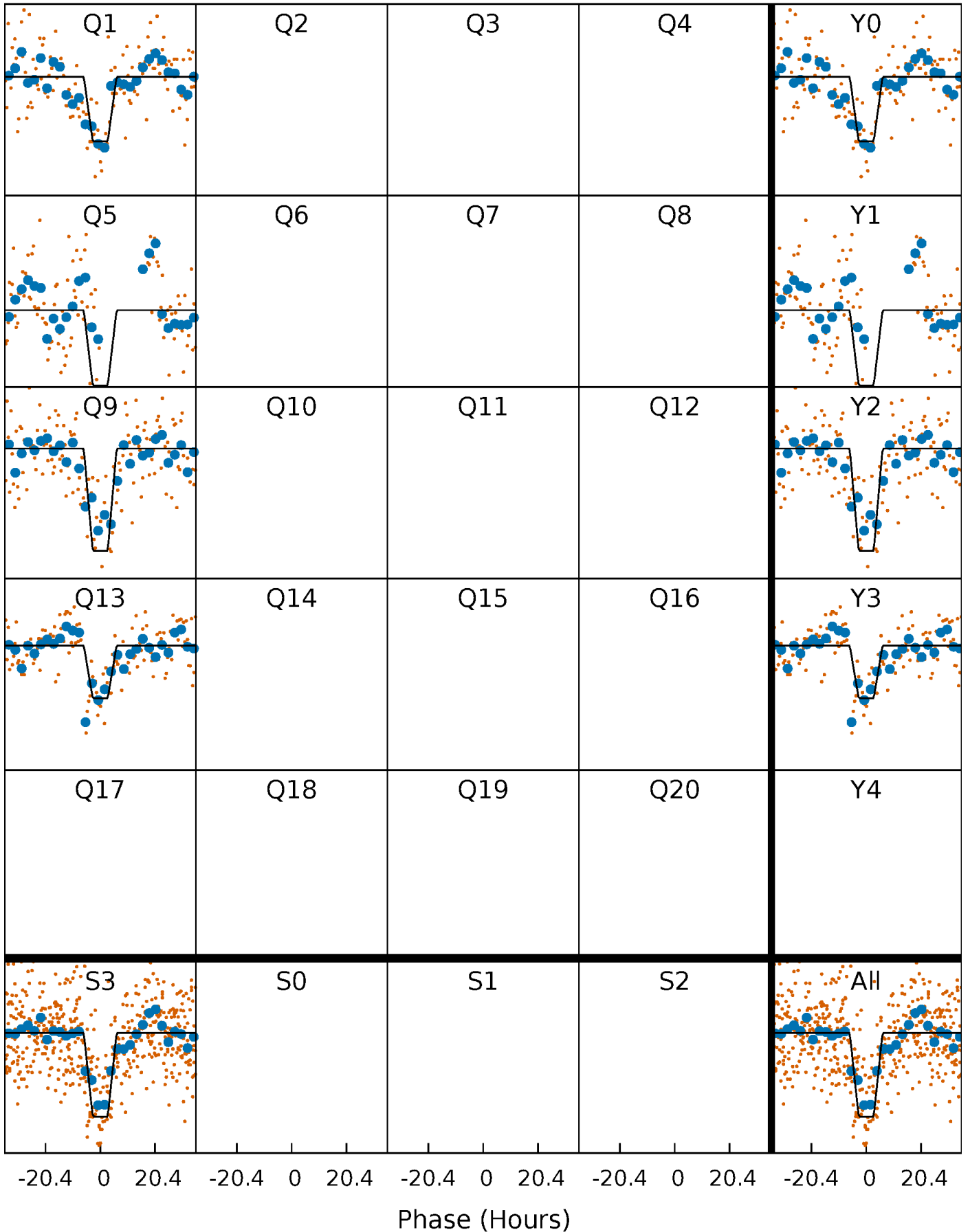
DV Quarter-Phased Transit Curves

TCE 012167188-01 P=365.823509 Days $T_0=138.070268$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

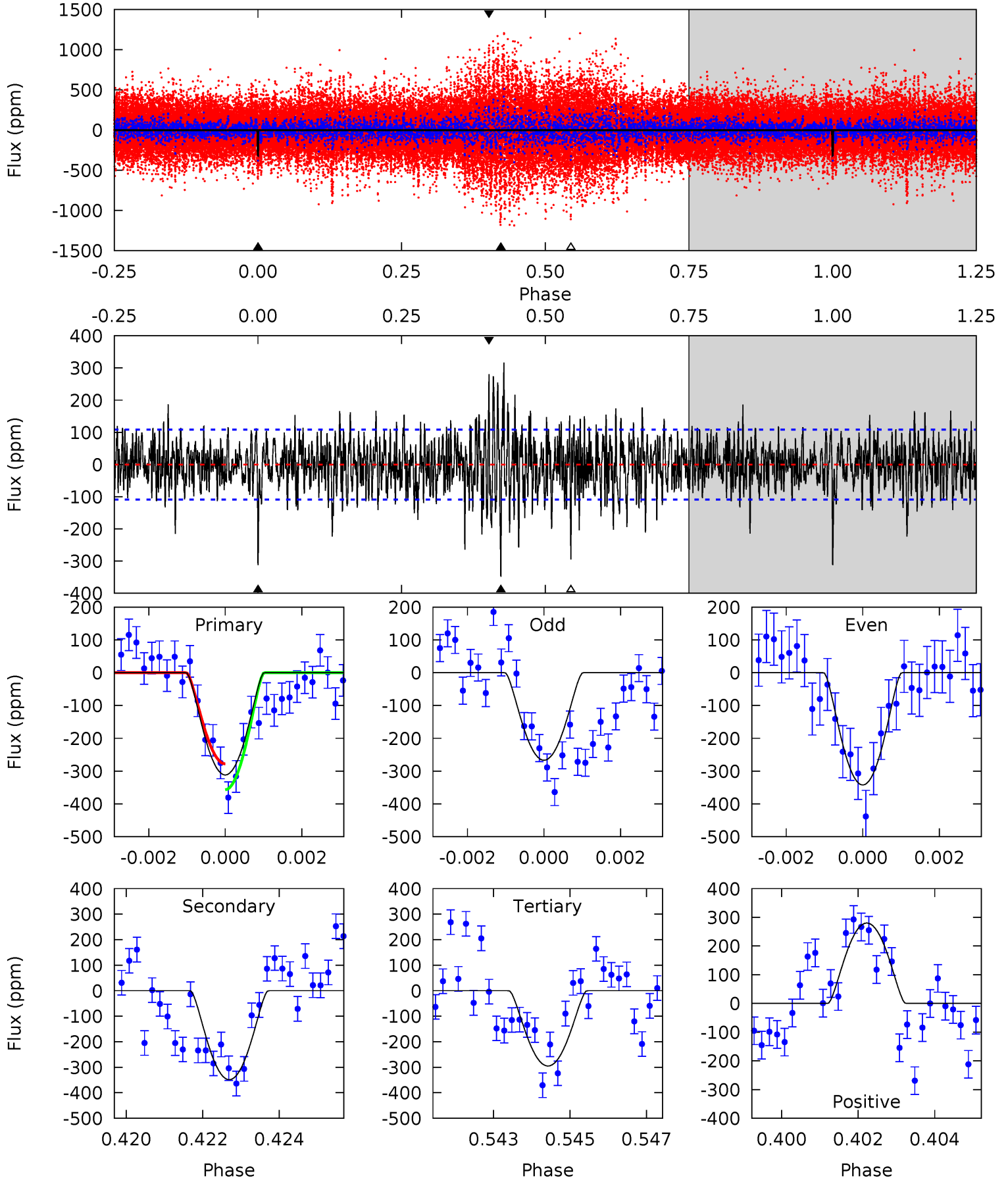
TCE 012167188-01 $P=365.822025$ Days $T_0=138.087476$ (BKJD)



DV Model-Shift Uniqueness Test

012167188-01, P = 365.823509 Days, E = 138.070268 Days

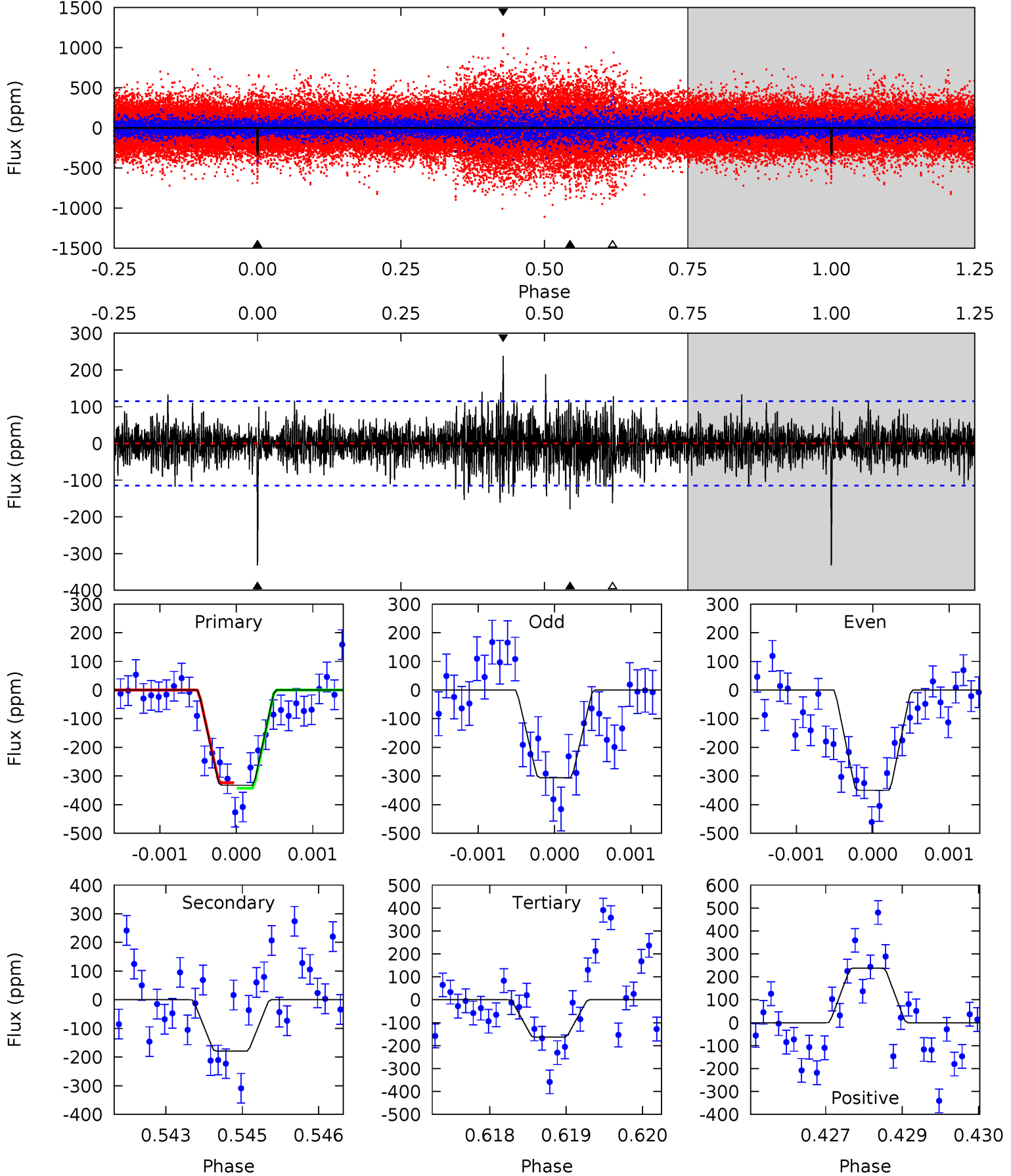
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.3	17.1	14.5	13.7	5.33	3.09	3.43	0.82	1.55	2.62	3.35	1.73	0.81	0.48	1.92



Alt Model-Shift Uniqueness Test

012167188-01, P = 365.822025 Days, E = 138.087476 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.6	8.40	7.65	11.2	5.39	3.19	1.87	7.96	4.41	0.75	-2.79	1.01	0.84	0.42	0.44



Stellar Parameters For KIC 012167188

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6638^{+188}_{-259}	$4.021^{+0.299}_{-0.161}$	$-0.320^{+0.300}_{-0.300}$	$1.775^{+0.494}_{-0.604}$	$1.208^{+0.190}_{-0.190}$	$0.304^{+0.651}_{-0.143}$
	+3%/-4%	+7%/-4%	+94%/-94%	+28%/-34%	+16%/-16%	+214%/-47%
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 012167188-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-349 ± 20	$9.37^{+9.36}_{-6.30}$	519^{+43}_{-46}	4226^{+2675}_{-823}	2501^{+20703}_{-1885}
Alt.	-179 ± 21	$8.74^{+8.61}_{-5.85}$	518^{+39}_{-49}	3850^{+2282}_{-720}	1491^{+12128}_{-1118}

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 $A_{obs} \gg 1.0$

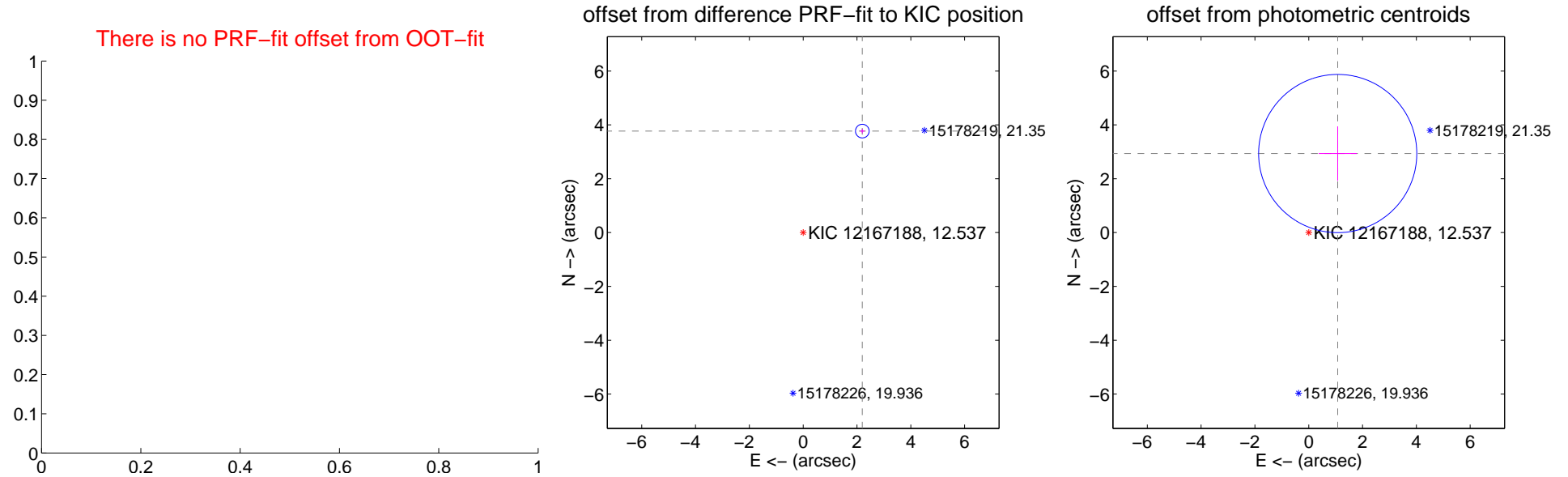
DV Centroid Data

Supplemental centroid analysis for 012167188-01. Kepler magnitude: 12.54. Transit SNR 7.53

There are 1 quarters with good PRF difference image offsets

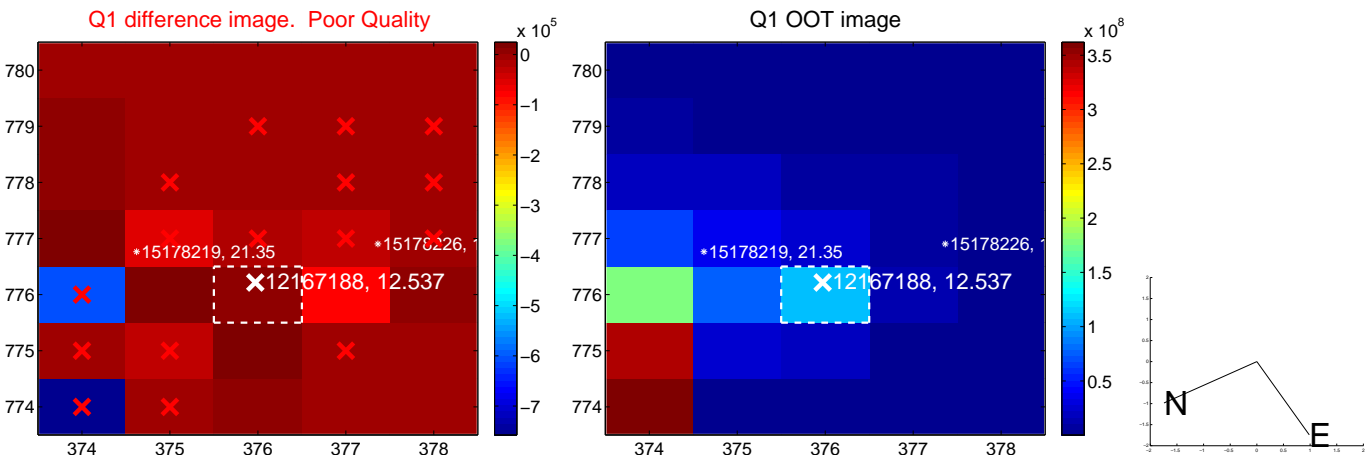
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	4.364 ± 0.085	51.56	-2.198 ± 0.088	3.770 ± 0.084
photometric centroid source offset	3.13 ± 0.98	3.19	-1.08 ± 0.71	2.94 ± 1.01



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.

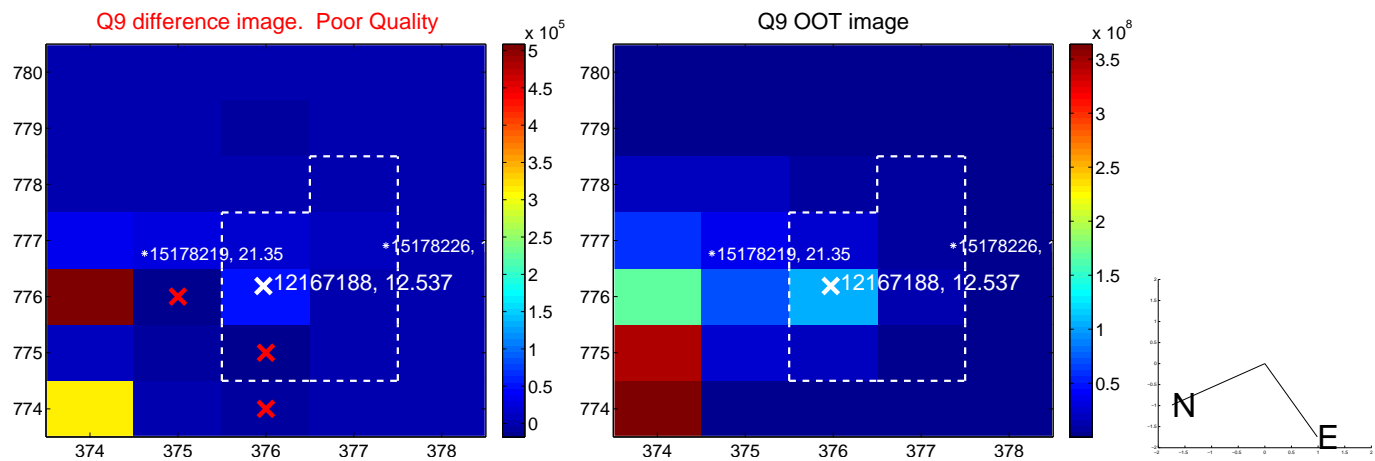
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



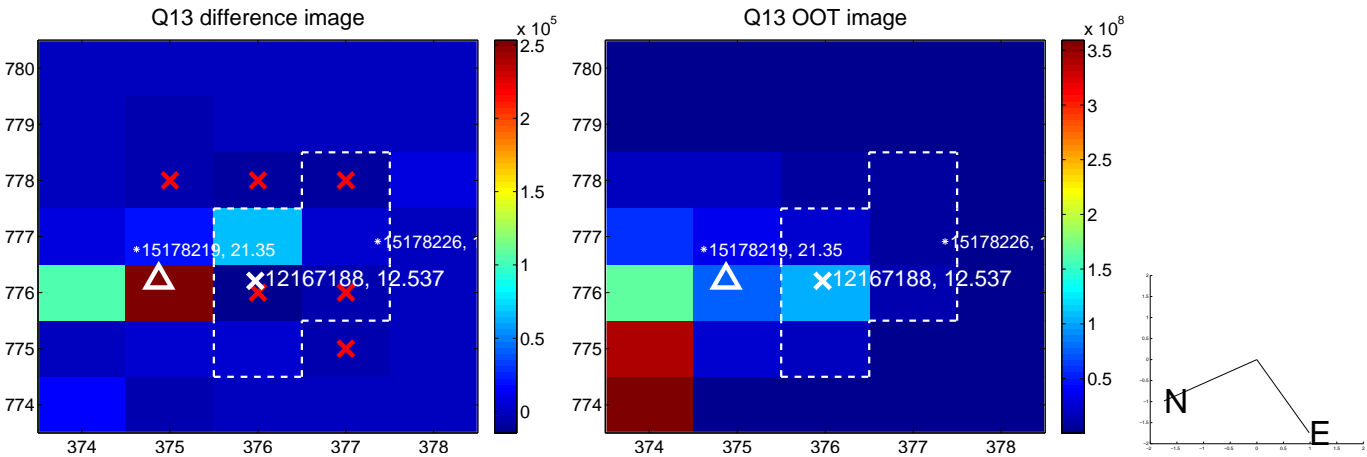
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



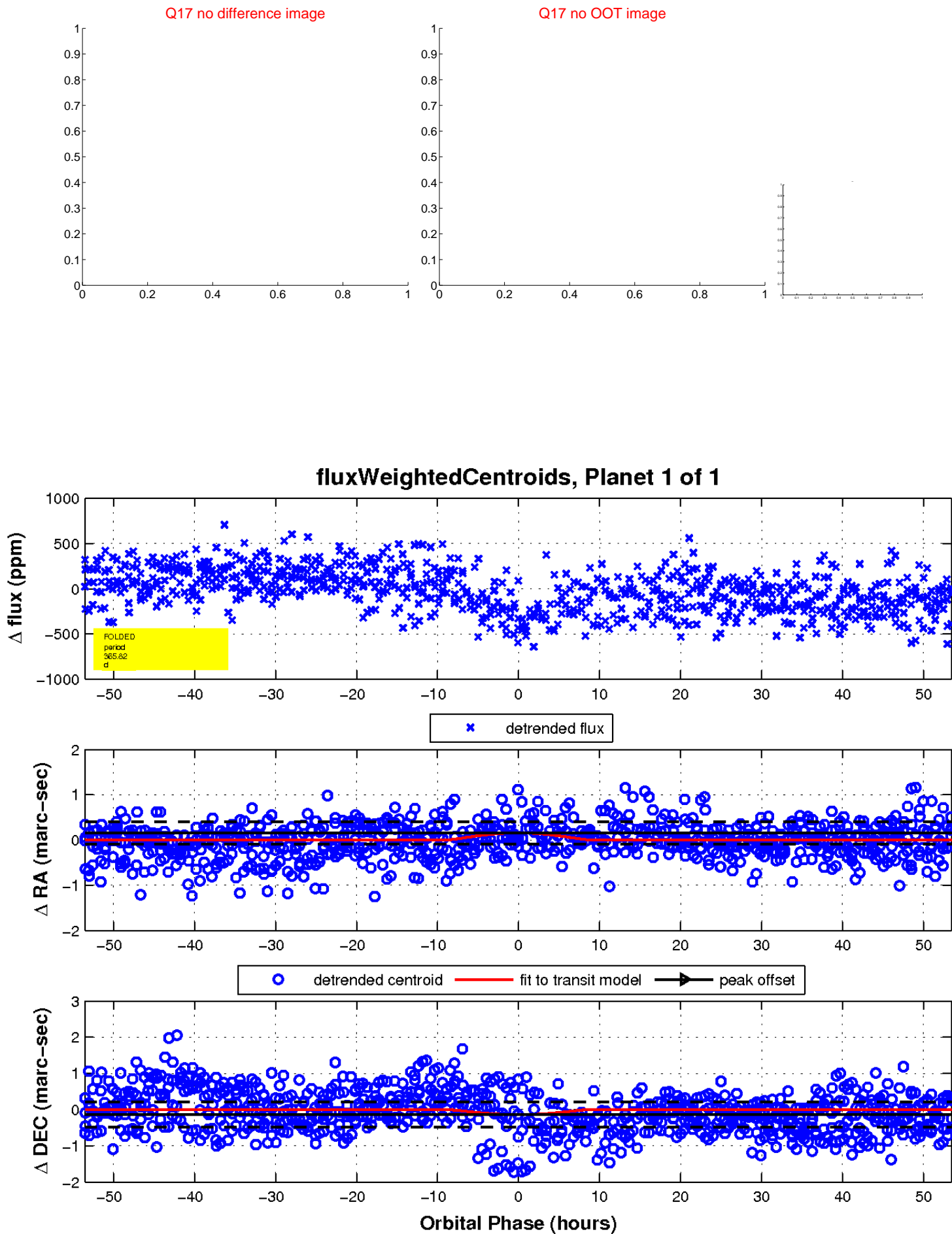
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

