

KIC 008555215

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})
008555215-01	OBS	No	381.717802	163.983843	594.7	63.665	8.0	11.6	1.02	6213	4.79	1.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008555215-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL_SKYE—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

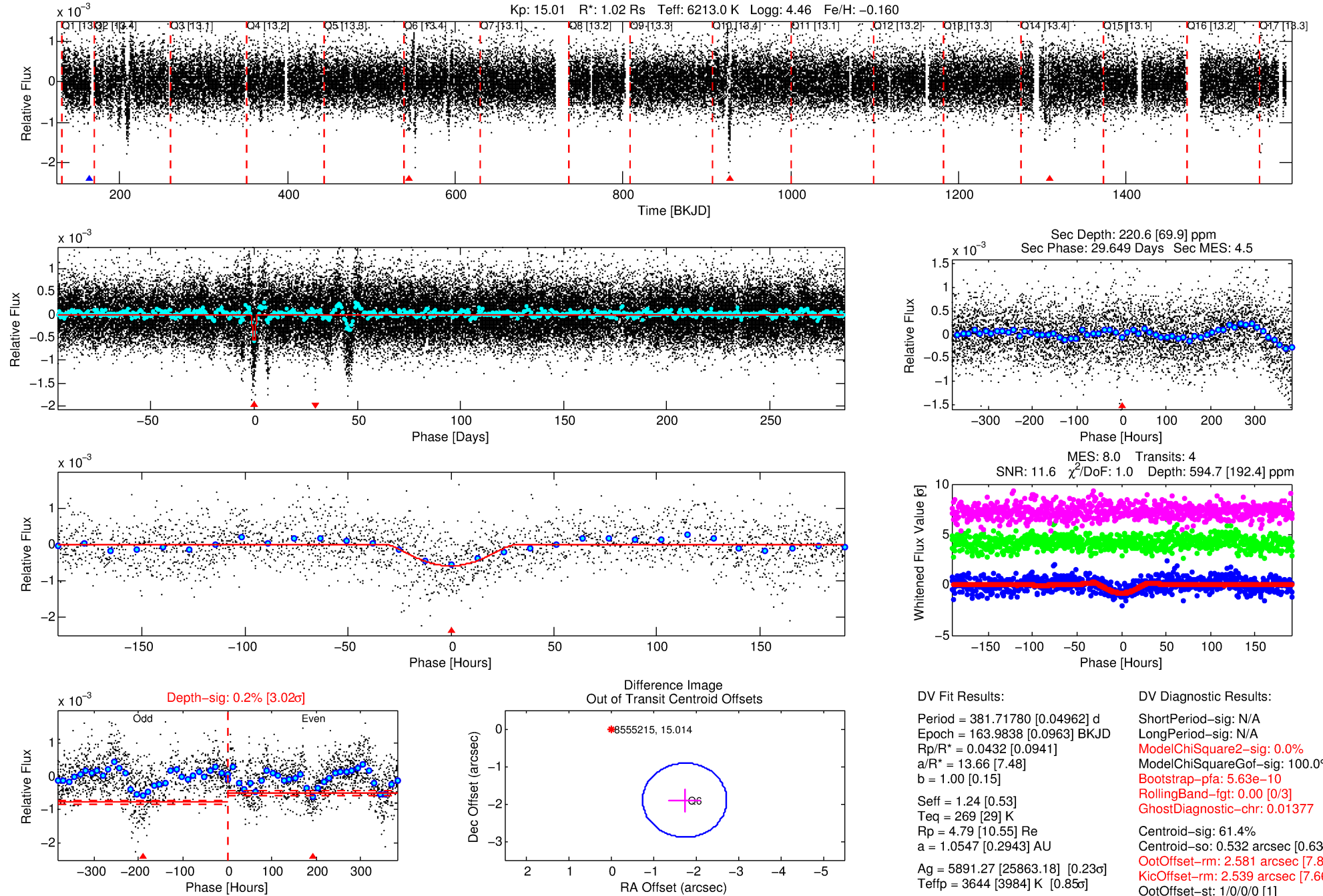
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008555215-01

No Significant Match Found

DV One-Page Summary

KIC: 8555215 Candidate: 1 of 1 Period: 381.718 d



DV Fit Results:

Period = 381.71780 [0.04962] d
 Epoch = 163.9838 [0.0963] BKJD
 Rp/R* = 0.0432 [0.0941]
 a/R* = 13.66 [7.48]
 b = 1.00 [0.15]
 Seff = 1.24 [0.53]
 Teq = 269 [29] K
 Rp = 4.79 [10.55] Re
 a = 1.0547 [0.2943] AU
 Ag = 5891.27 [25863.18] [0.23 σ]
 Tefp = 3644 [3984] K [0.85 σ]

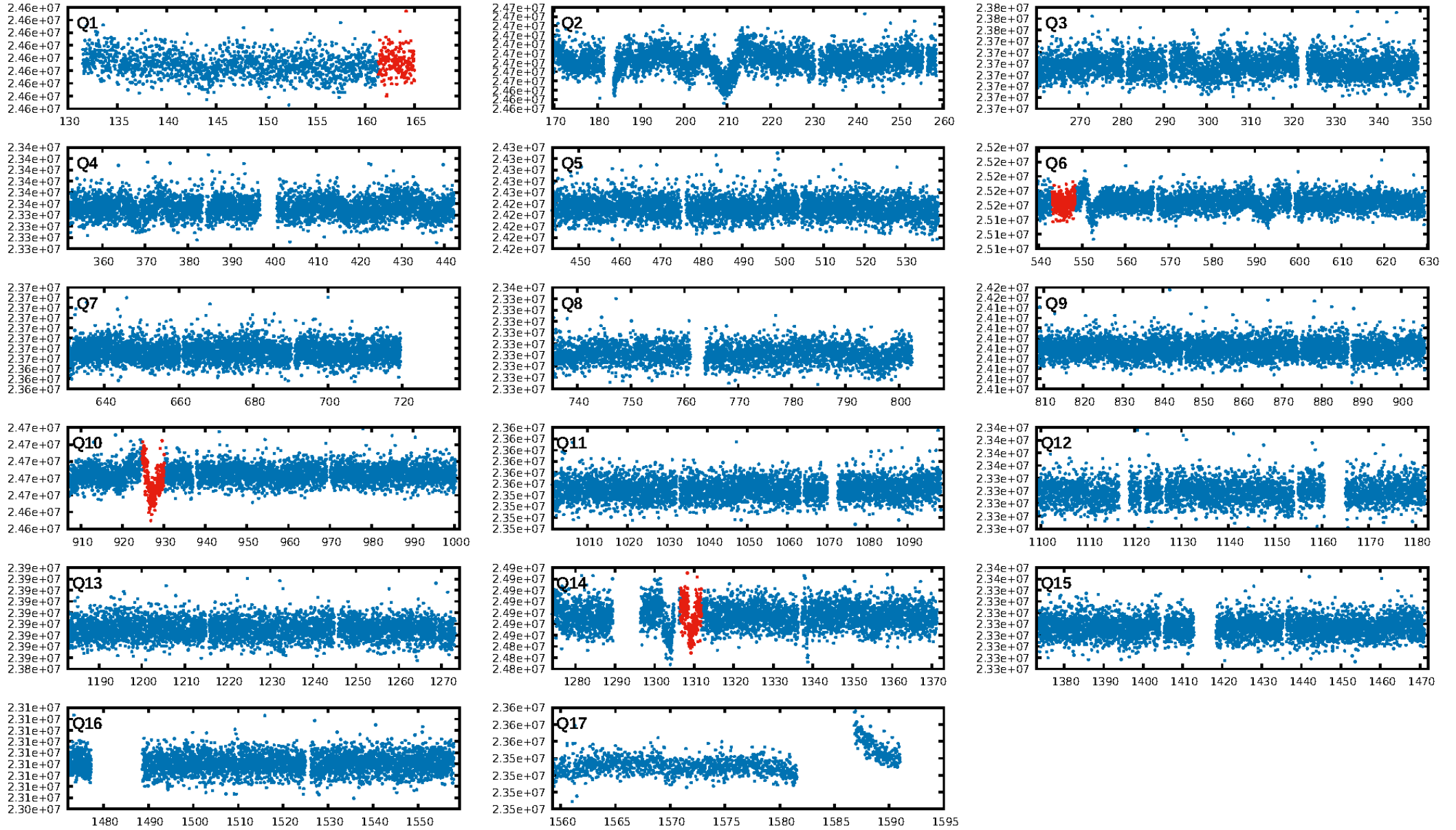
DV Diagnostic Results:

ShortPeriod-sig: N/A
 LongPeriod-sig: N/A
 ModelChiSquare2-sig: 0.0%
 ModelChiSquareGof-sig: 100.0%
 Bootstrap-pfa: 5.63e-10
 RollingBand-fgt: 0.00 [0/3]
 GhostDiagnostic-chr: 0.01377
 Centroid-sig: 61.4%
 Centroid-so: 0.532 arcsec [0.63 σ]
 OotOffset-rm: 2.581 arcsec [7.83 σ]
 KicOffset-rm: 2.539 arcsec [7.66 σ]
 OotOffset-st: 1/0/0/0 [1]
 KicOffset-st: 1/0/0/0 [1]
 DiffImageQuality-fgm: 1.00 [1/1]
 DiffImageOverlap-fno: 1.00 [1/1]

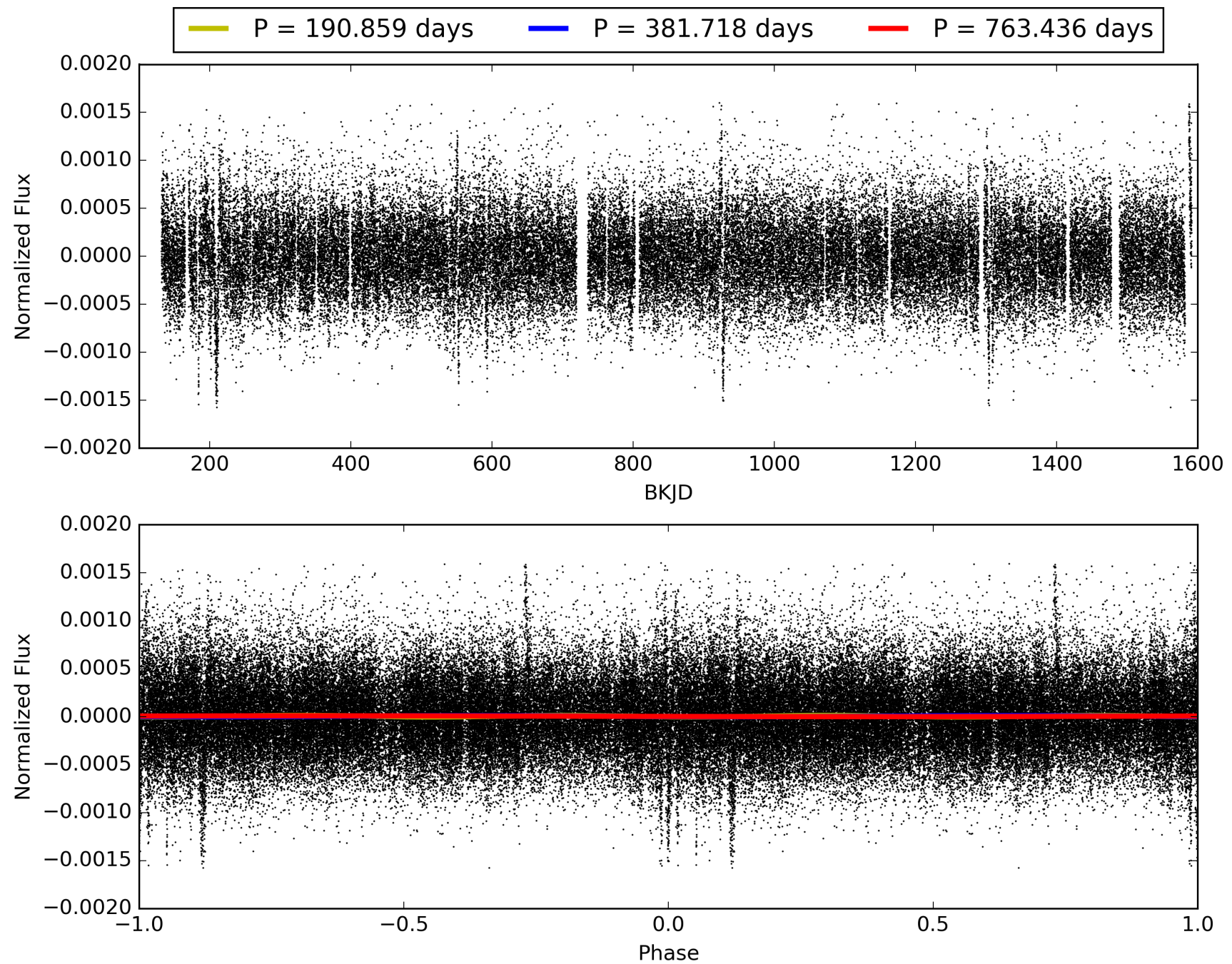
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 17:05:19 Z

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

TCE 008555215-01, PDC Light Curves

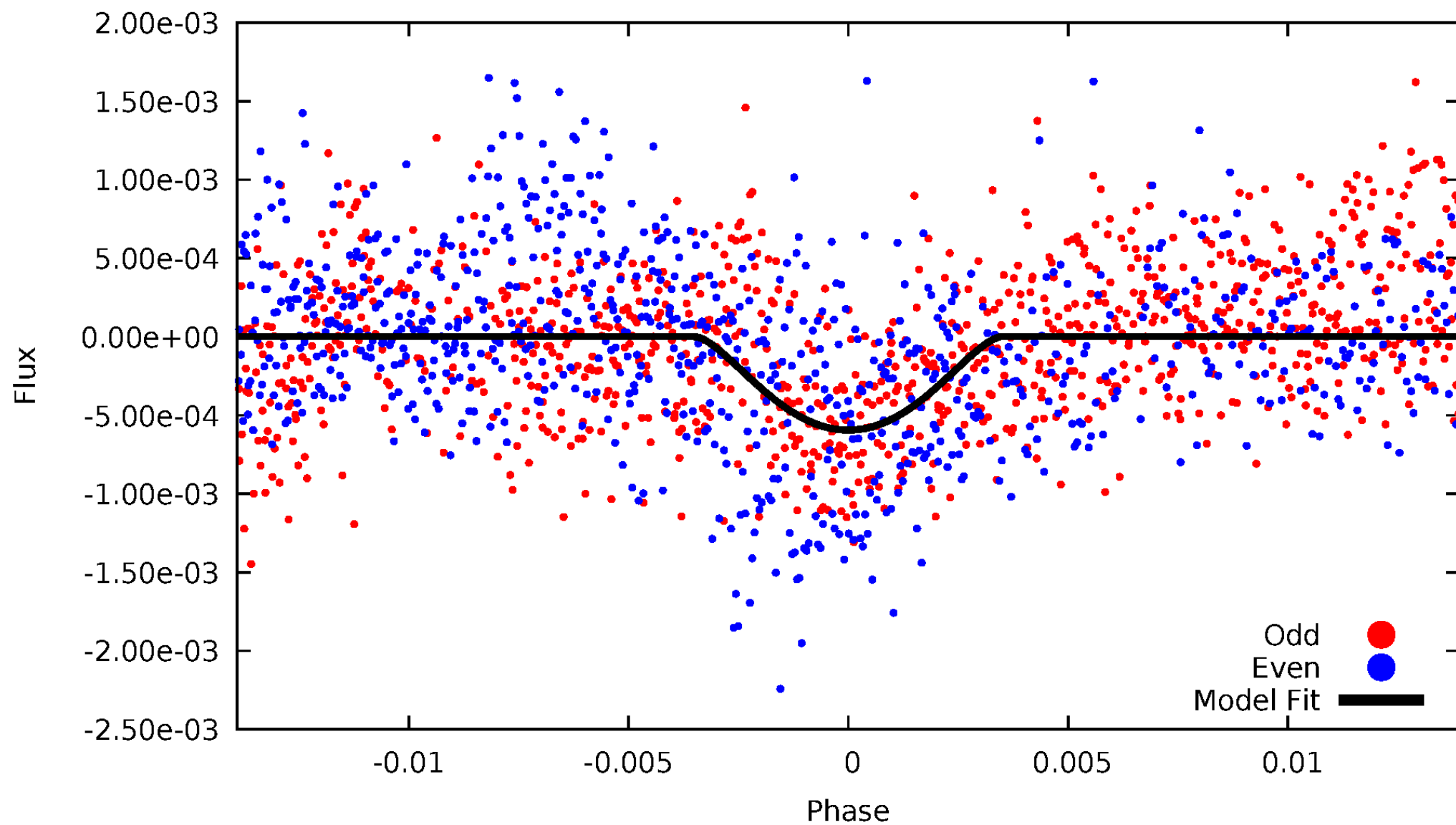


TCE 008555215-01



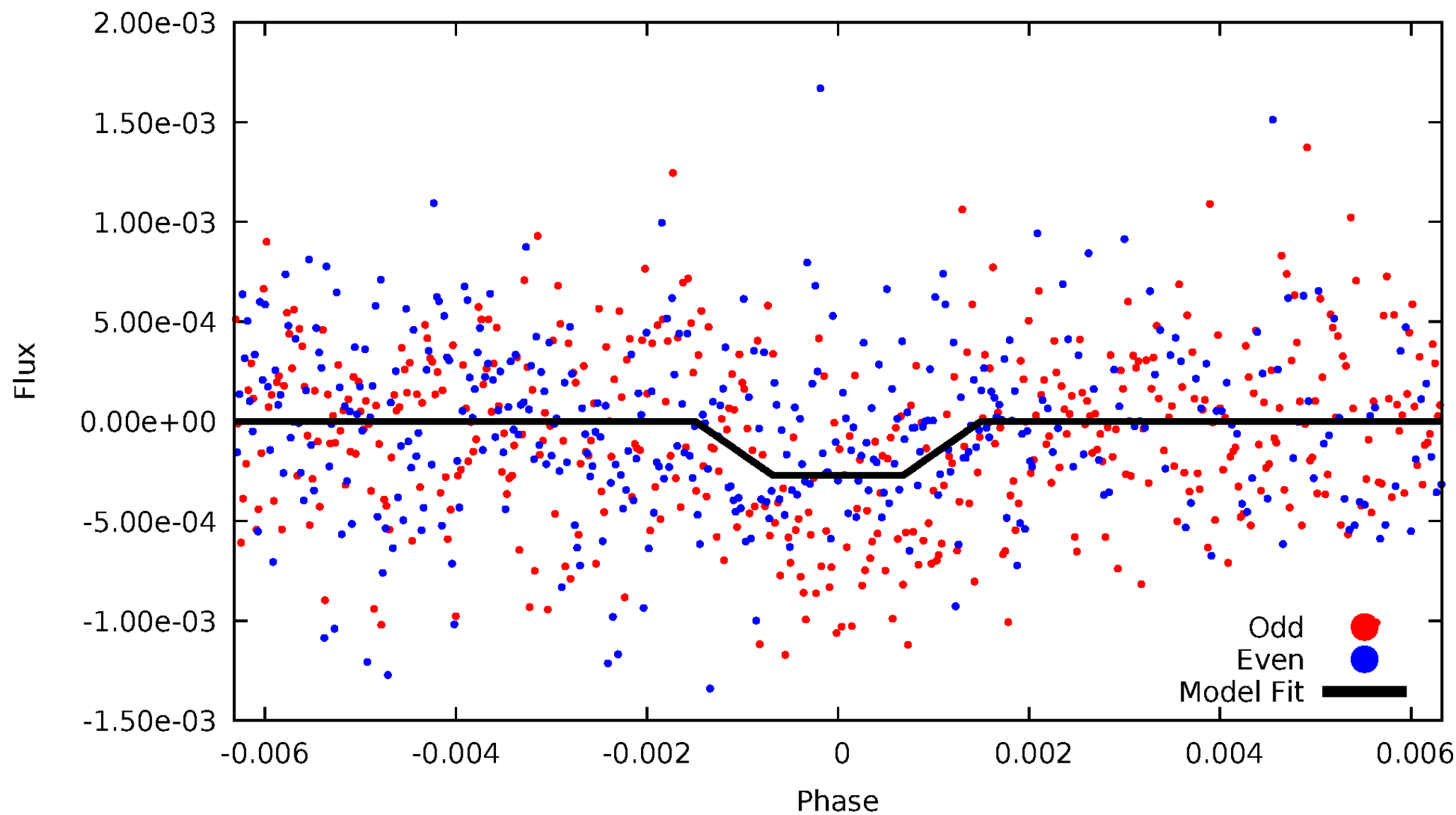
DV Odd/Even

TCE 008555215-01



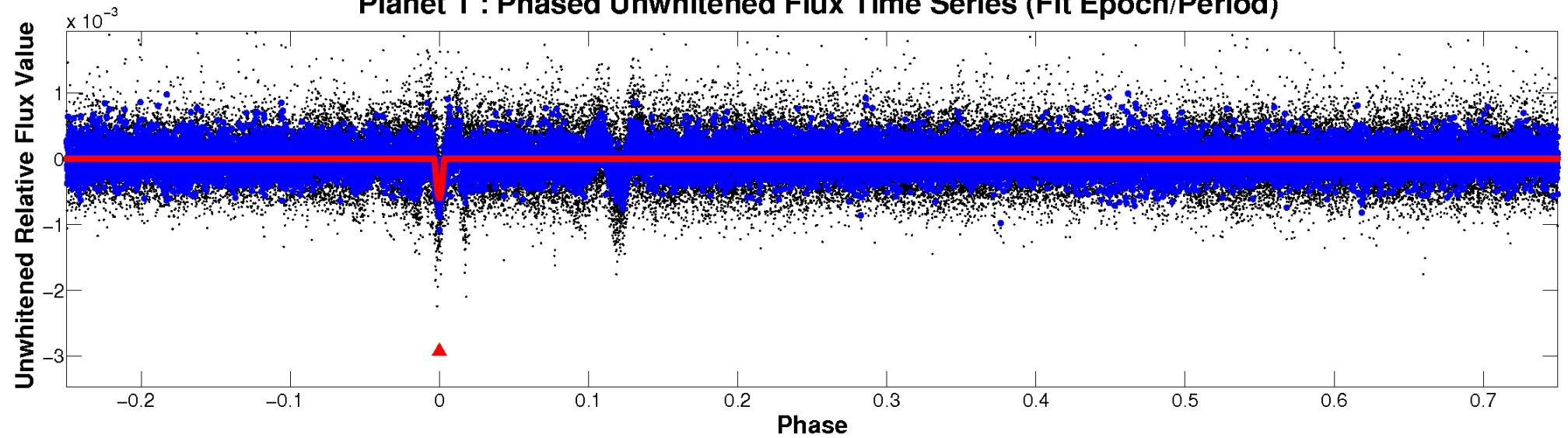
ALT Odd/Even

TCE 008555215-01

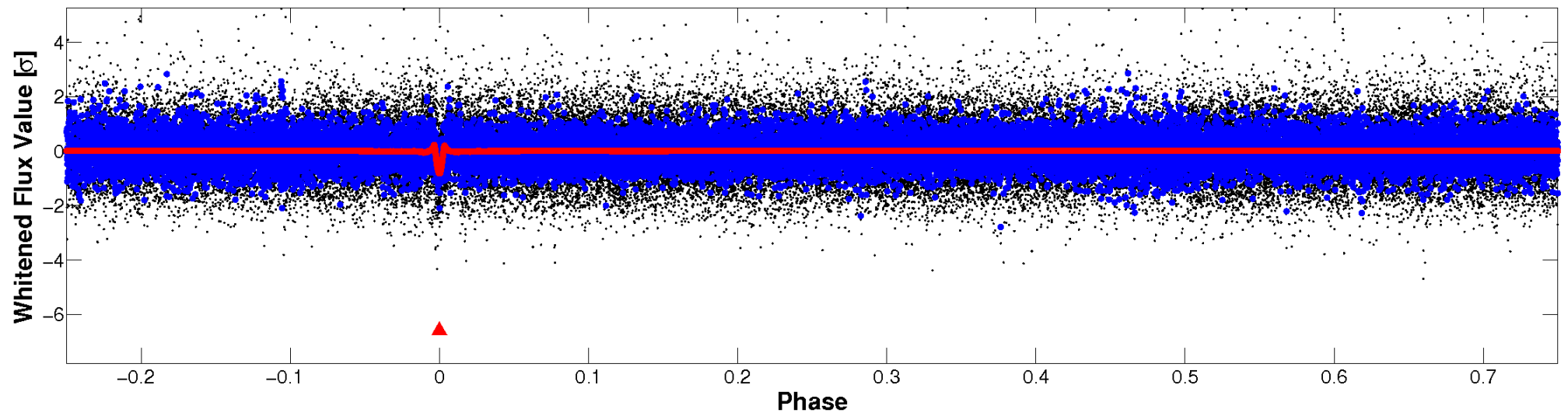


Non-Whitened Vs. Whitened Light Curve

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

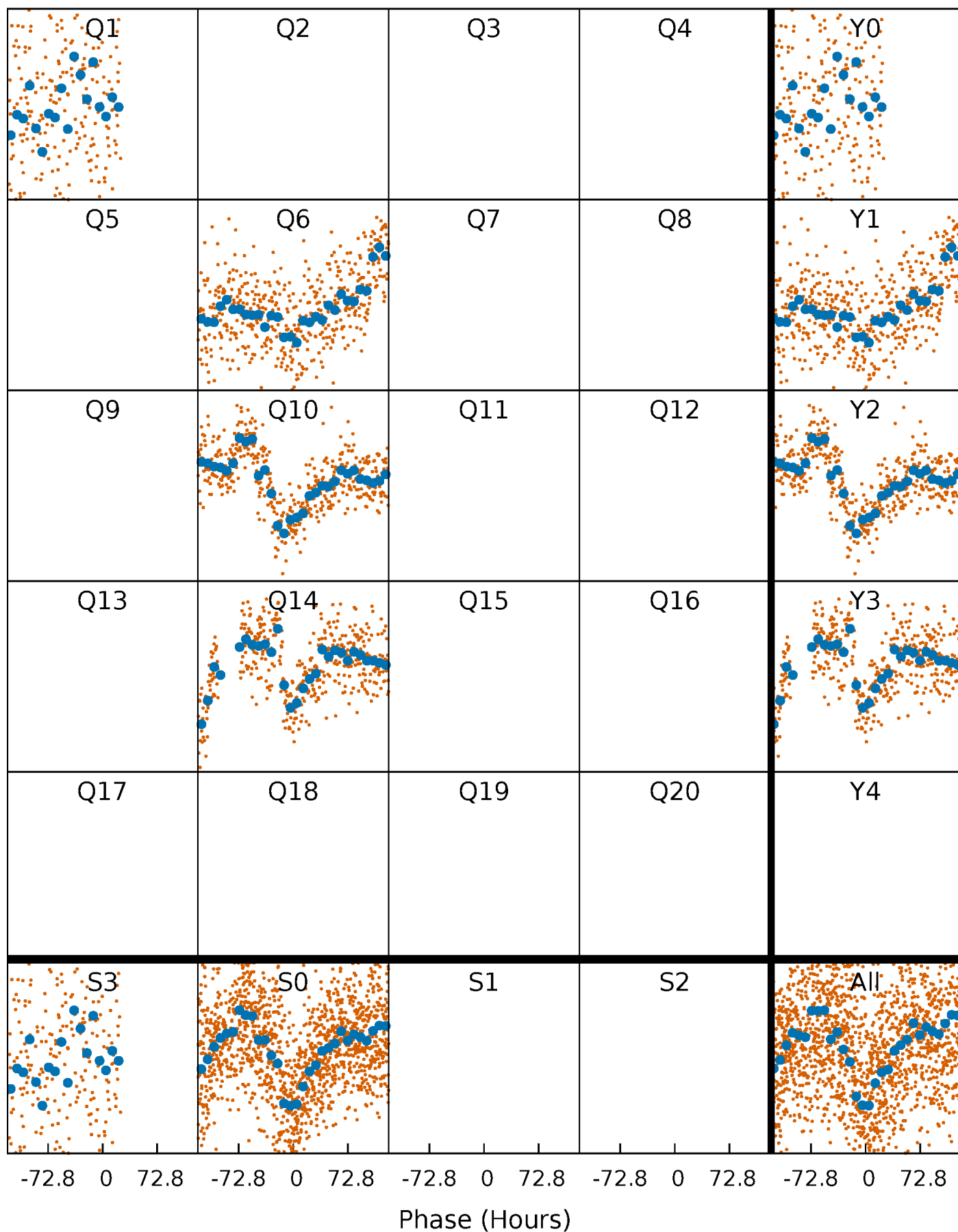


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



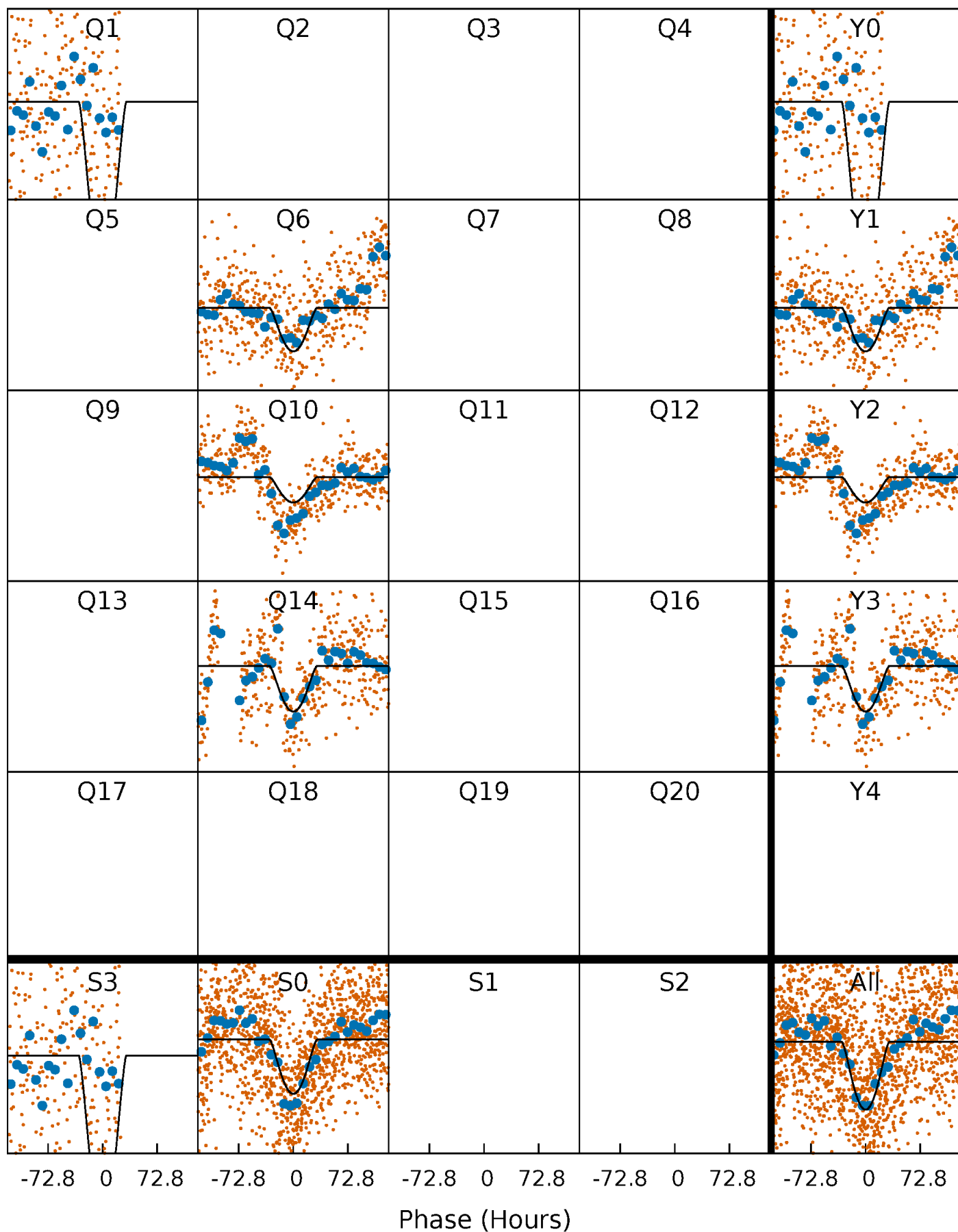
PDC Quarter-Phased Transit Curves

TCE 008555215-01 $P=381.717802$ Days $T_0=163.983843$ (BKJD)



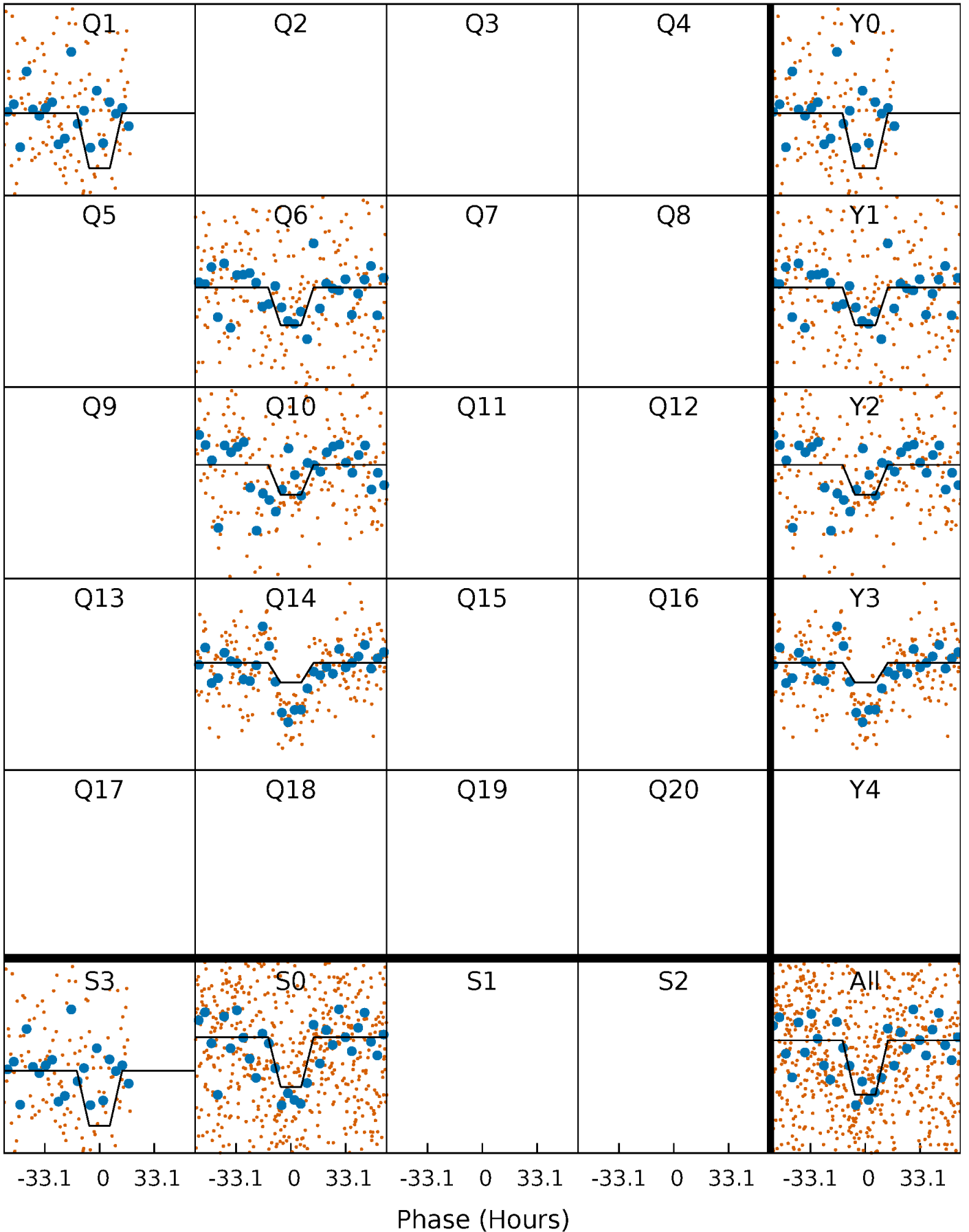
DV Quarter-Phased Transit Curves

TCE 008555215-01 P=381.717802 Days $T_0=163.983843$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

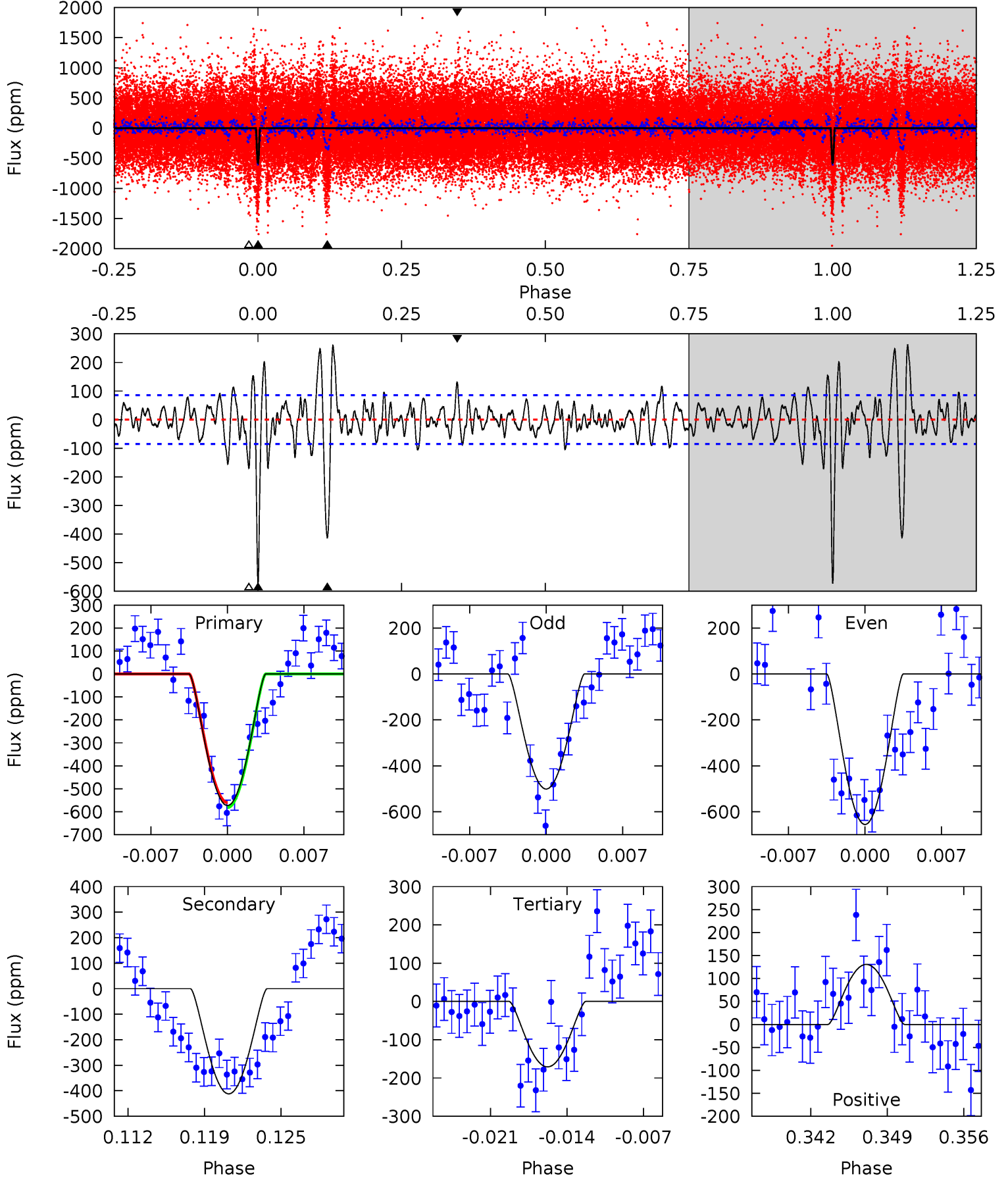
TCE 008555215-01 P=381.562677 Days $T_0=164.216220$ (BKJD)



DV Model-Shift Uniqueness Test

008555215-01, P = 381.717802 Days, E = 163.983843 Days

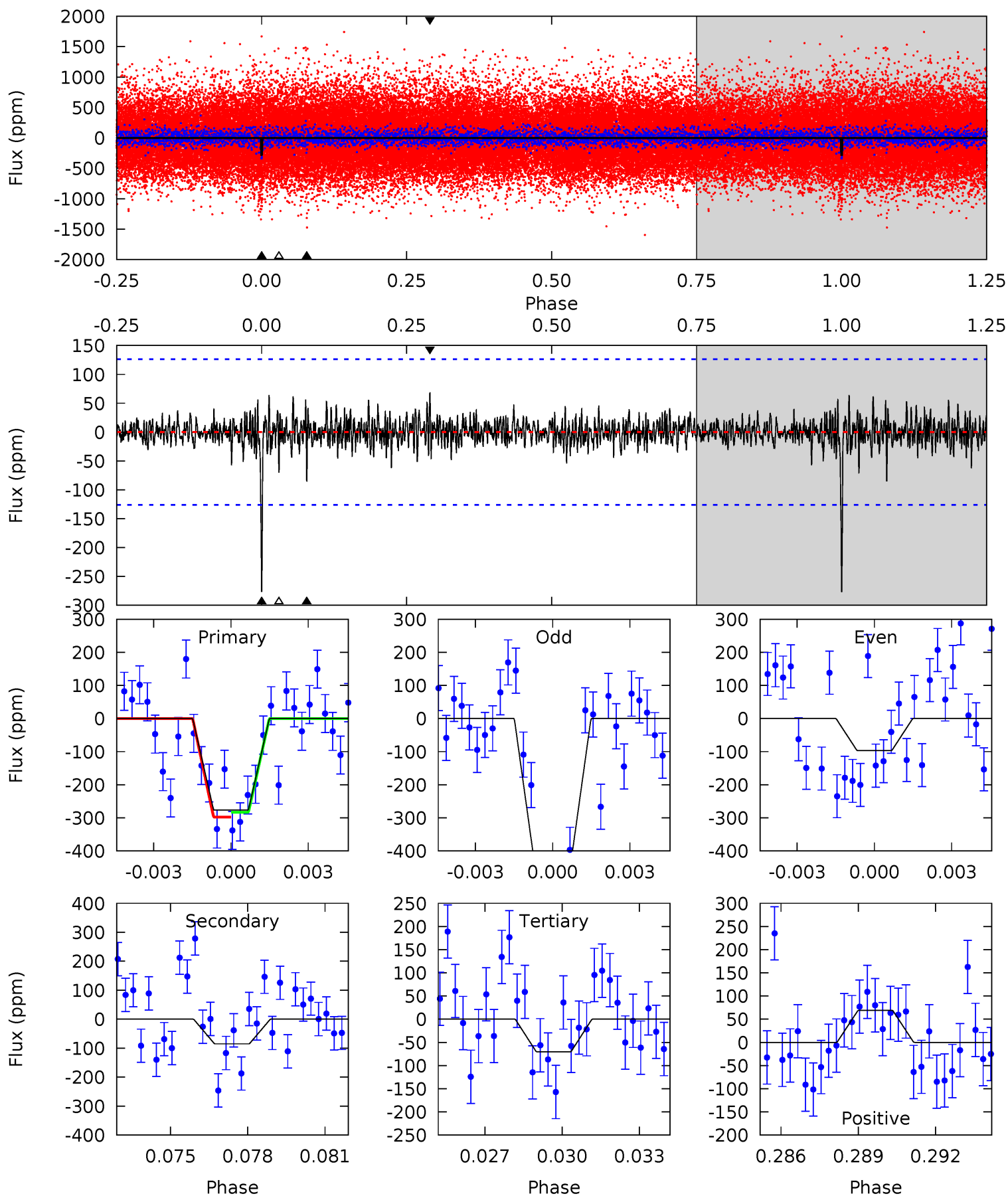
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
34.3	24.6	10.2	7.82	5.10	2.70	3.36	24.0	26.5	14.4	16.8	4.63	1.14	0.31	0.65



Alt Model-Shift Uniqueness Test

008555215-01, $P = 381.562677$ Days, $E = 164.216220$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.5	3.55	2.92	2.87	5.25	2.97	0.72	8.60	8.66	0.62	0.68	7.44	1.45	0.20	0.30



Stellar Parameters For KIC 008555215

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6213^{+175}_{-218}	$4.455^{+0.056}_{-0.224}$	$-0.160^{+0.250}_{-0.300}$	$1.016^{+0.335}_{-0.112}$	$1.068^{+0.154}_{-0.139}$	$1.435^{+0.419}_{-0.765}$
	+3%/-4%	+1%/-5%	+156%/-188%	+33%/-11%	+14%/-13%	+29%/-53%
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 008555215-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-412 ± 17	$9.80^{+8.92}_{-6.40}$	385^{+30}_{-20}	3543^{+1784}_{-625}	2611^{+19489}_{-1905}
Alt.	-85 ± 24	$8.60^{+8.32}_{-5.79}$	383^{+27}_{-19}	2918^{+1257}_{-517}	722^{+5903}_{-565}

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

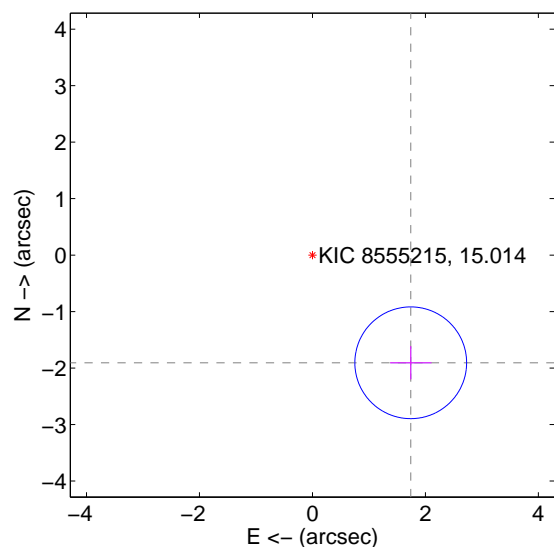
Supplemental centroid analysis for 008555215-01. Kepler magnitude: 15.01. Transit SNR 11.65

There are 1 quarters with good PRF difference image offsets

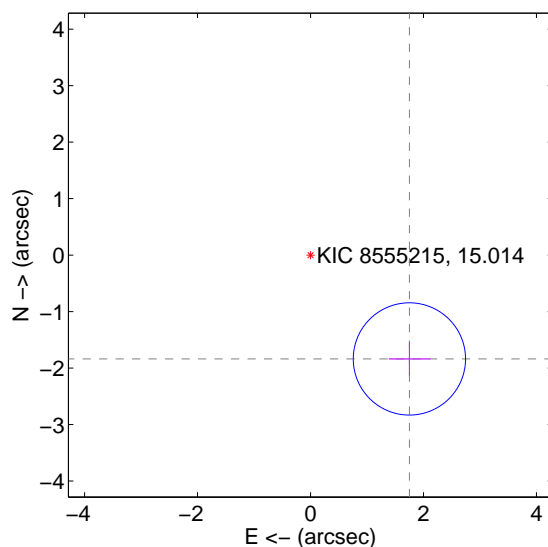
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.581 ± 0.330	7.83	-1.740 ± 0.367	-1.907 ± 0.295
PRF-fit source offset from KIC position	2.539 ± 0.331	7.66	-1.751 ± 0.367	-1.839 ± 0.295
photometric centroid source offset	0.53 ± 0.84	0.63	0.51 ± 0.84	-0.16 ± 0.87

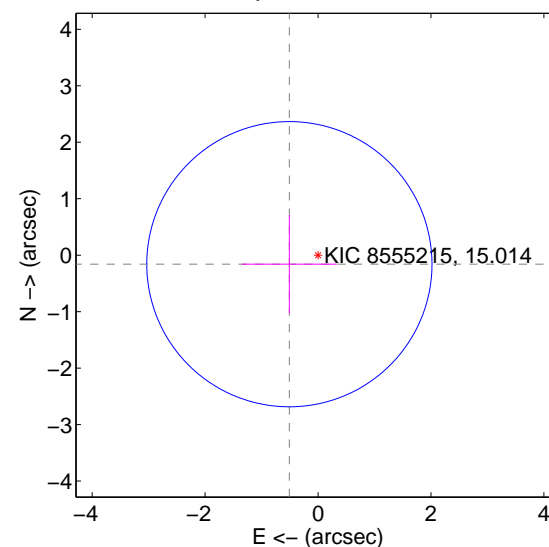
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

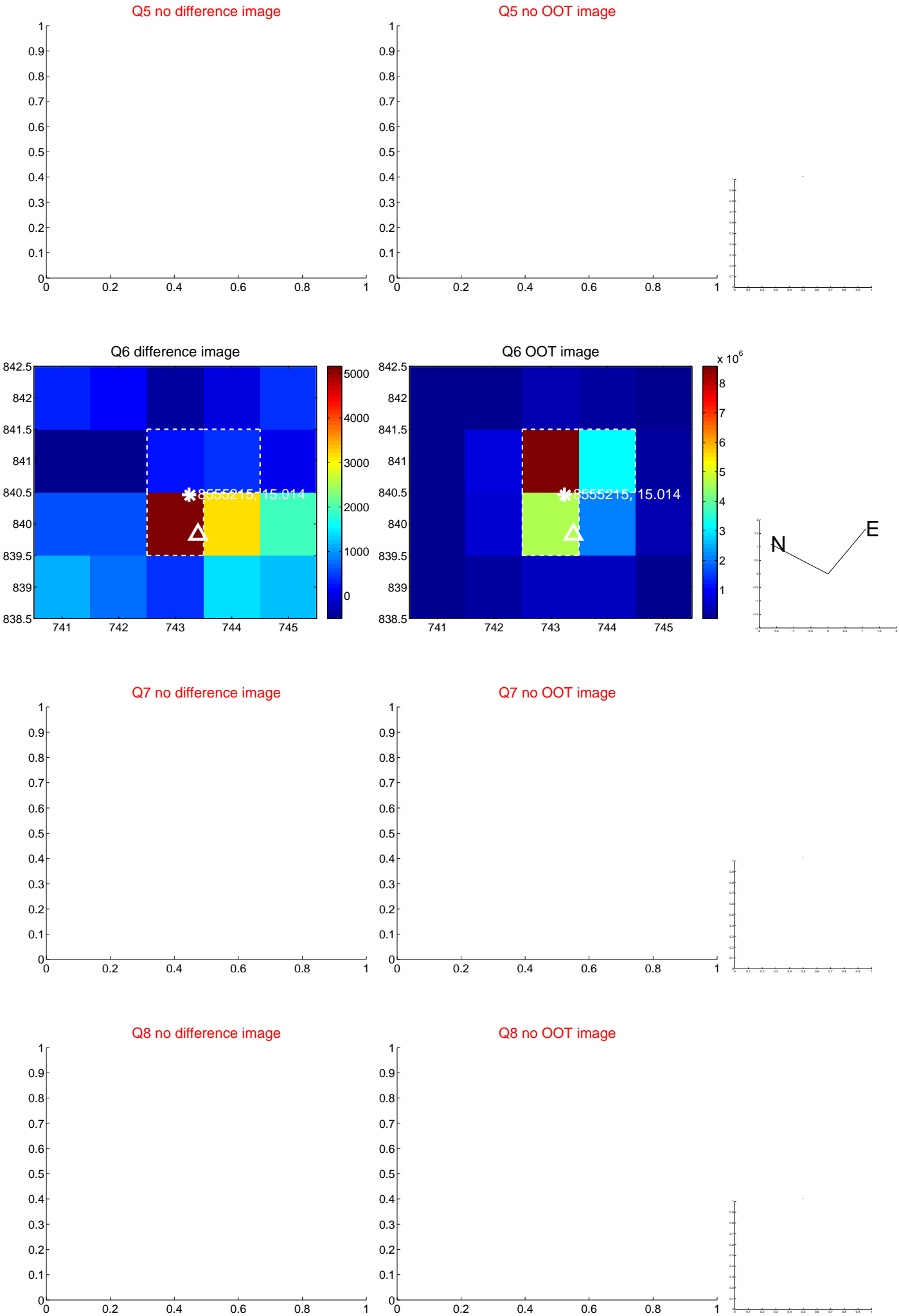


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . 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 ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



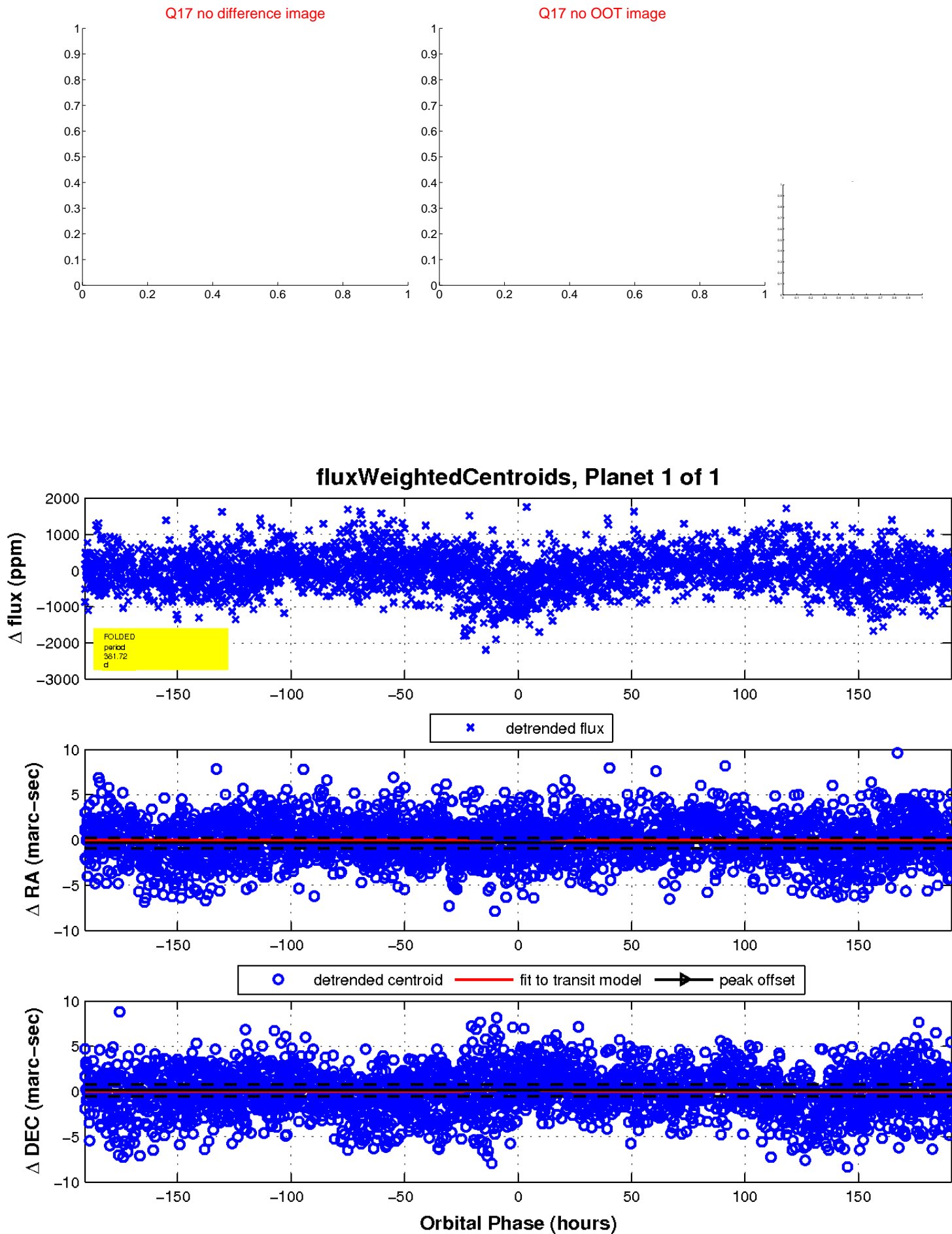
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

