

KIC 003534076

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})
003534076-01	OBS	No	408.414703	378.140932	5329.3	3.545	30.1	34.5	1.01	5821	8.63	0.88

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003534076-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—INCONSISTENT_TRANS—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.

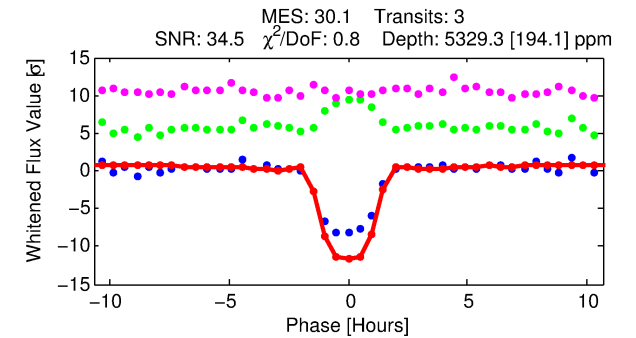
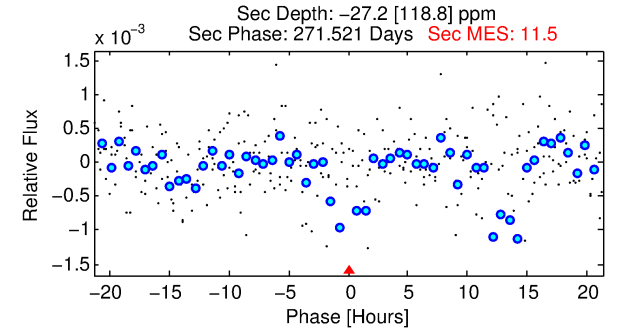
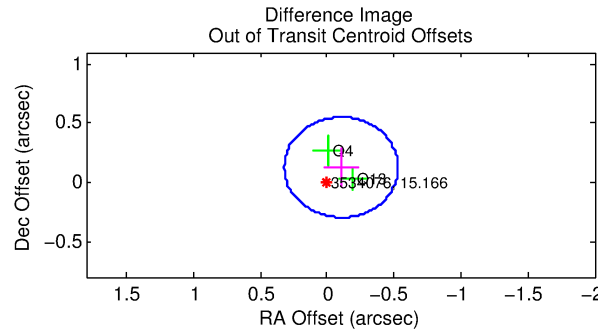
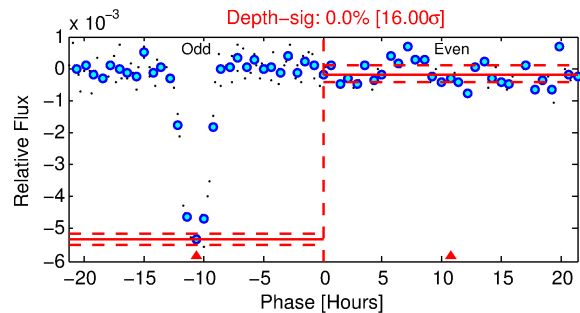
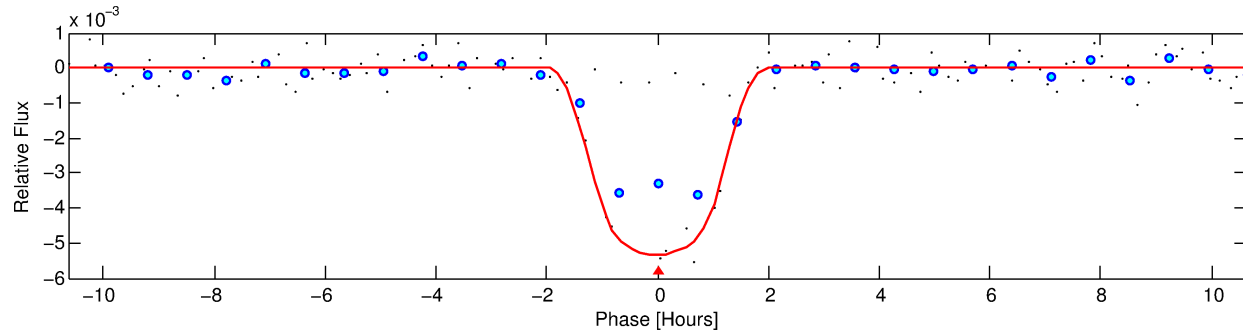
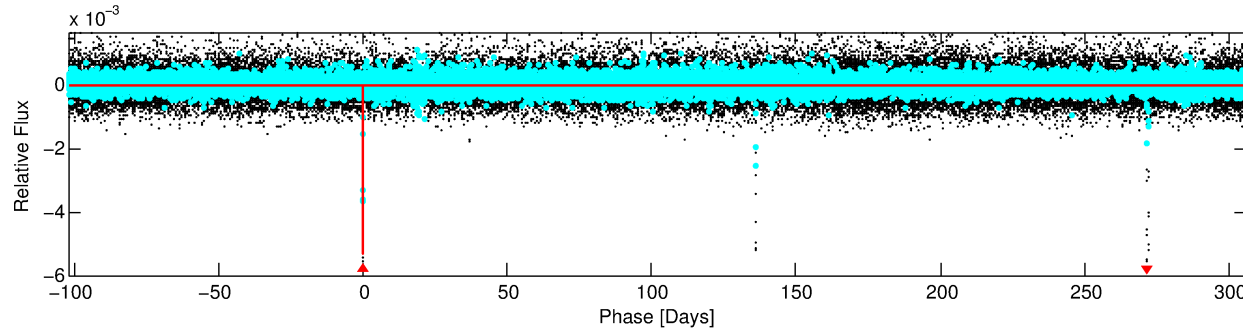
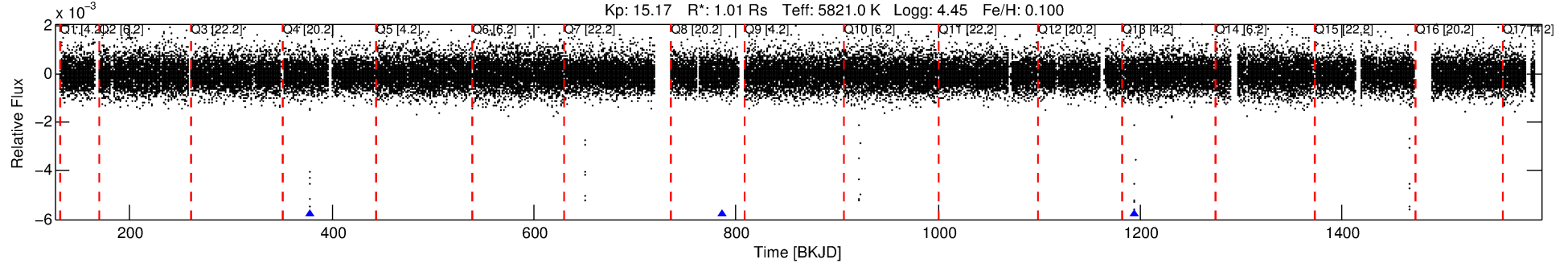
Ephemeris Match Information For 003534076-01

No Significant Match Found

DV One-Page Summary

KIC: 3534076 Candidate: 1 of 1 Period: 408.415 d
KOI: K01209 Corr: No Ephemeris Match

Kp: 15.17 R*: 1.01 Rs Teff: 5821.0 K Logg: 4.45 Fe/H: 0.100



DV Fit Results:

Period = 408.41470 [0.00158] d
Epoch = 378.1409 [0.0020] BKJD
Rp/R* = 0.0786 [0.0029]
a/R* = 547.77 [55.63]
b = 0.88 [0.03]
Seff = 0.88 [0.20]
Teq = 247 [14] K
Rp = 8.63 [1.36] Re
a = 1.0877 [0.1529] AU
Ag = N/A
Teffp = N/A

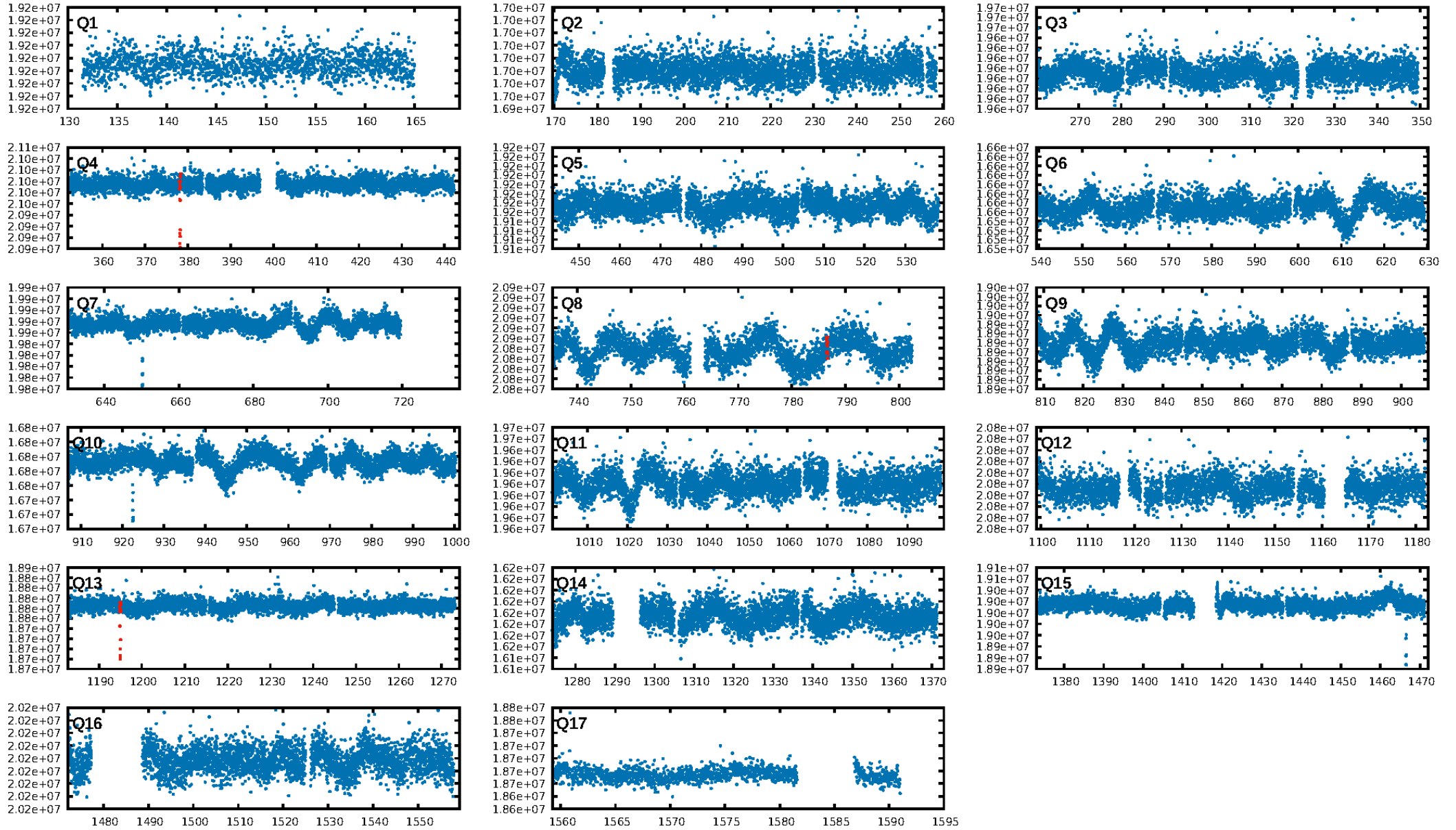
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 17.0%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 4.31e-202
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 8.778
Centroid-sig: 5.0%
Centroid-so: 0.473 arcsec [1.39σ]
OotOffset-rm: 0.164 arcsec [1.16σ]
KicOffset-rm: 0.102 arcsec [0.44σ]
OotOffset-st: 0/0/1/1 [2]
KicOffset-st: 0/0/1/1 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

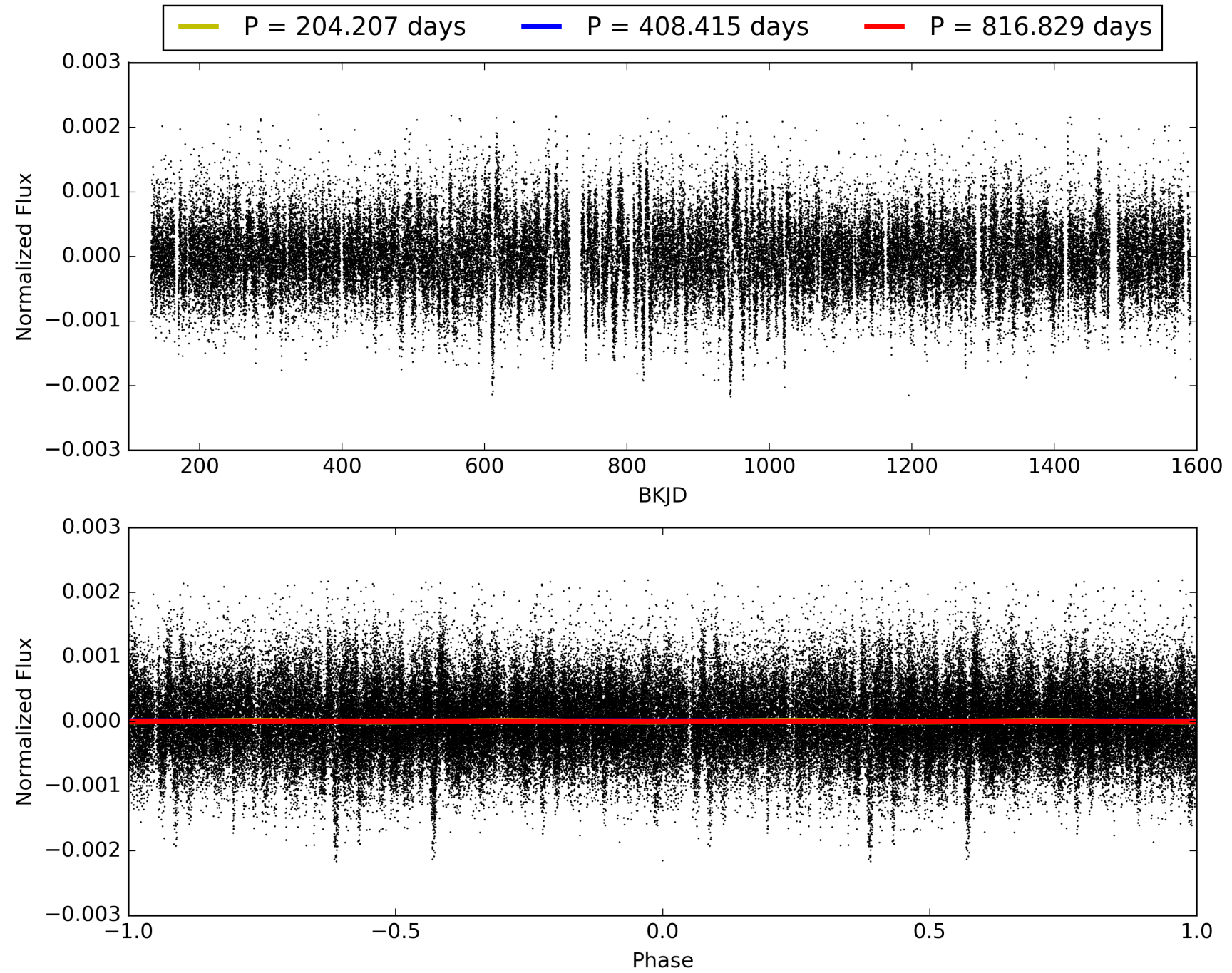
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 16:55:50 Z

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

TCE 003534076-01, PDC Light Curves

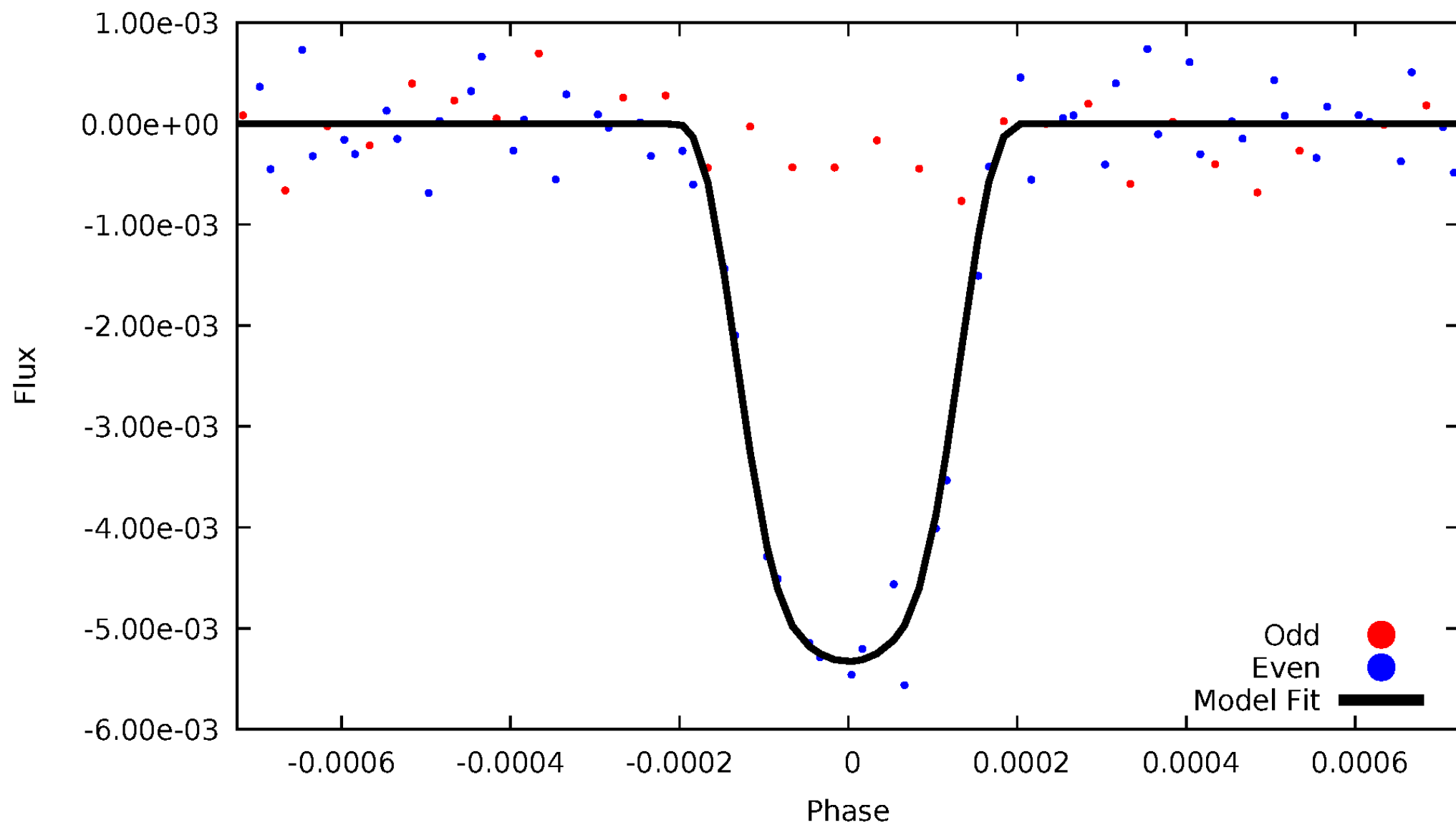


TCE 003534076-01



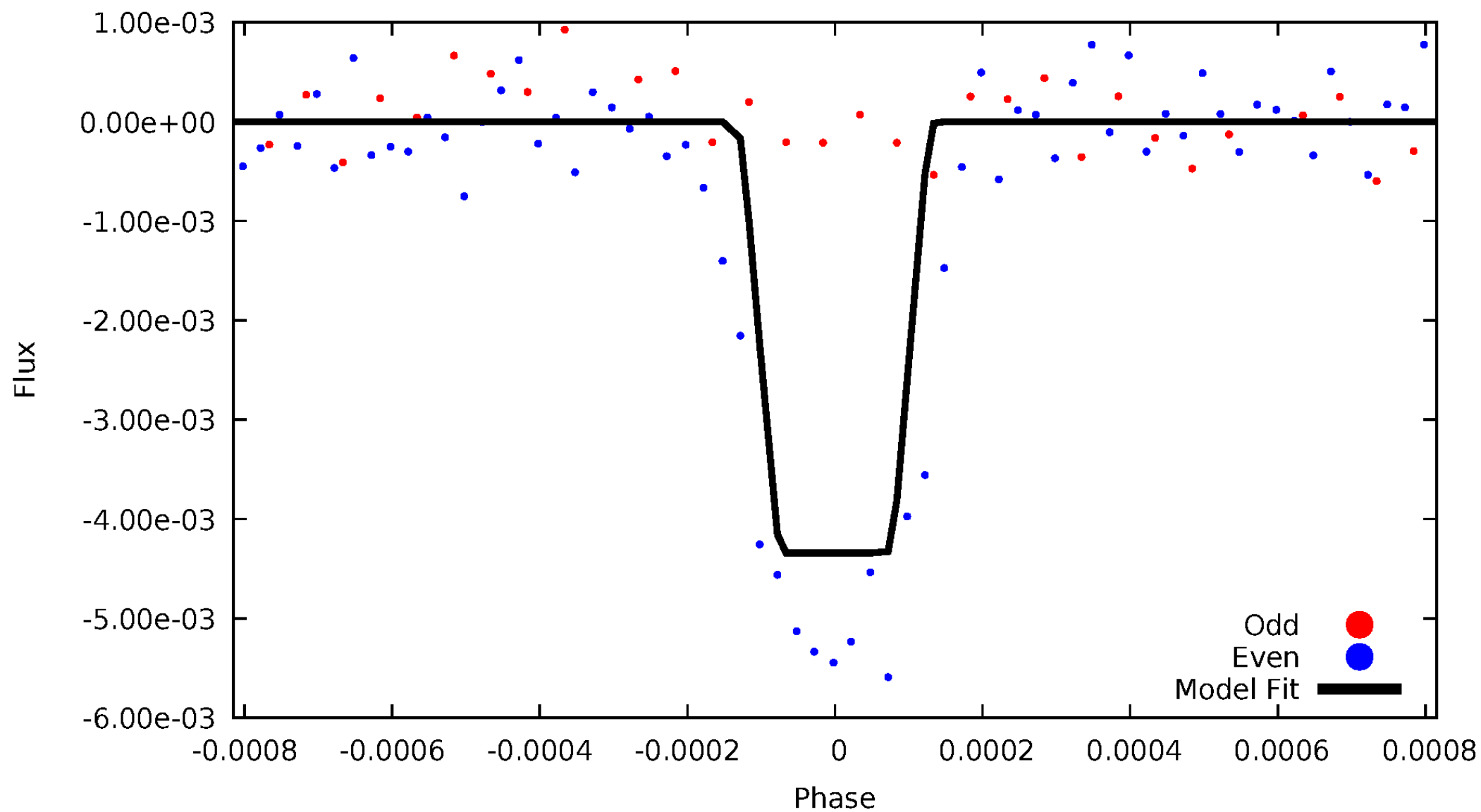
DV Odd/Even

TCE 003534076-01



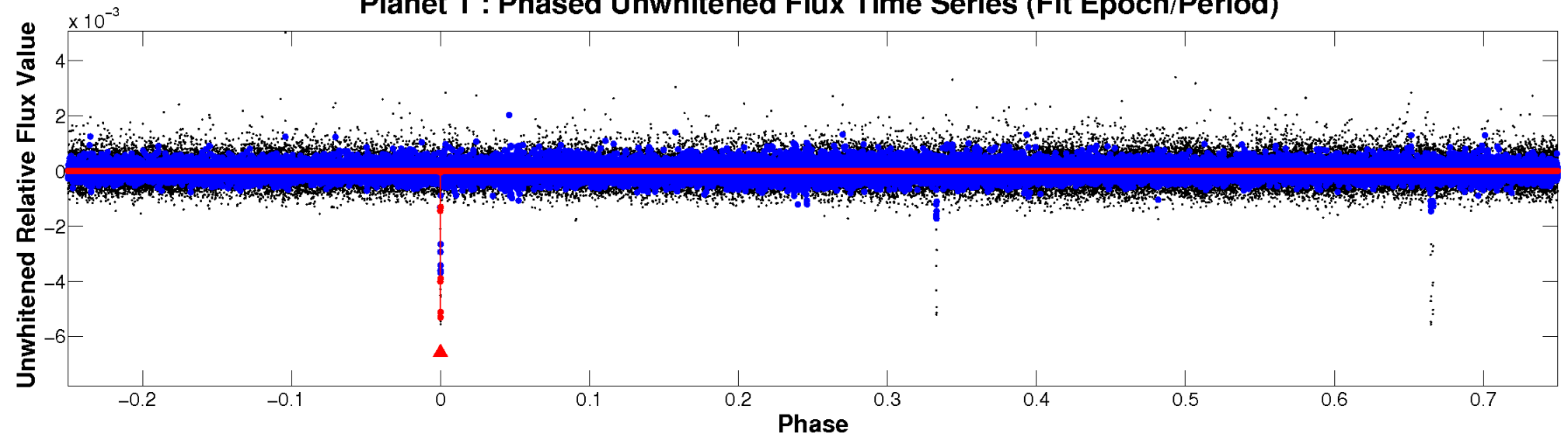
ALT Odd/Even

TCE 003534076-01

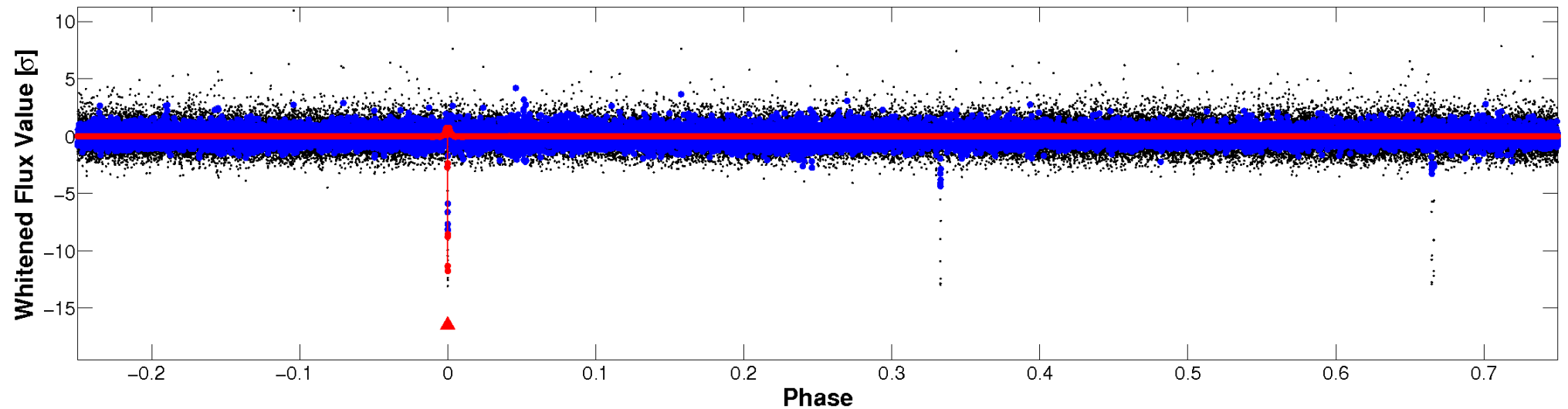


Non-Whitened Vs. Whitened Light Curve

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

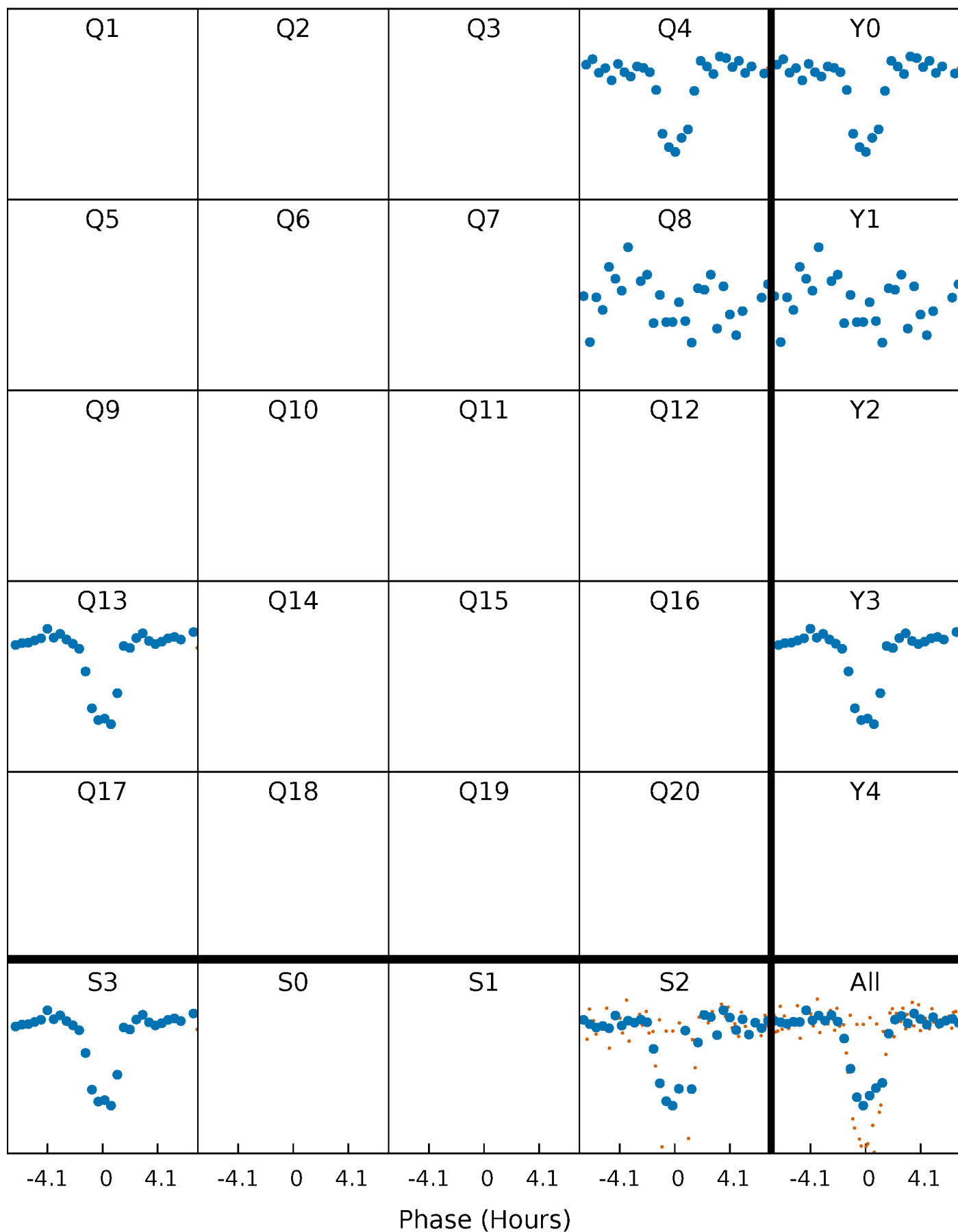


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



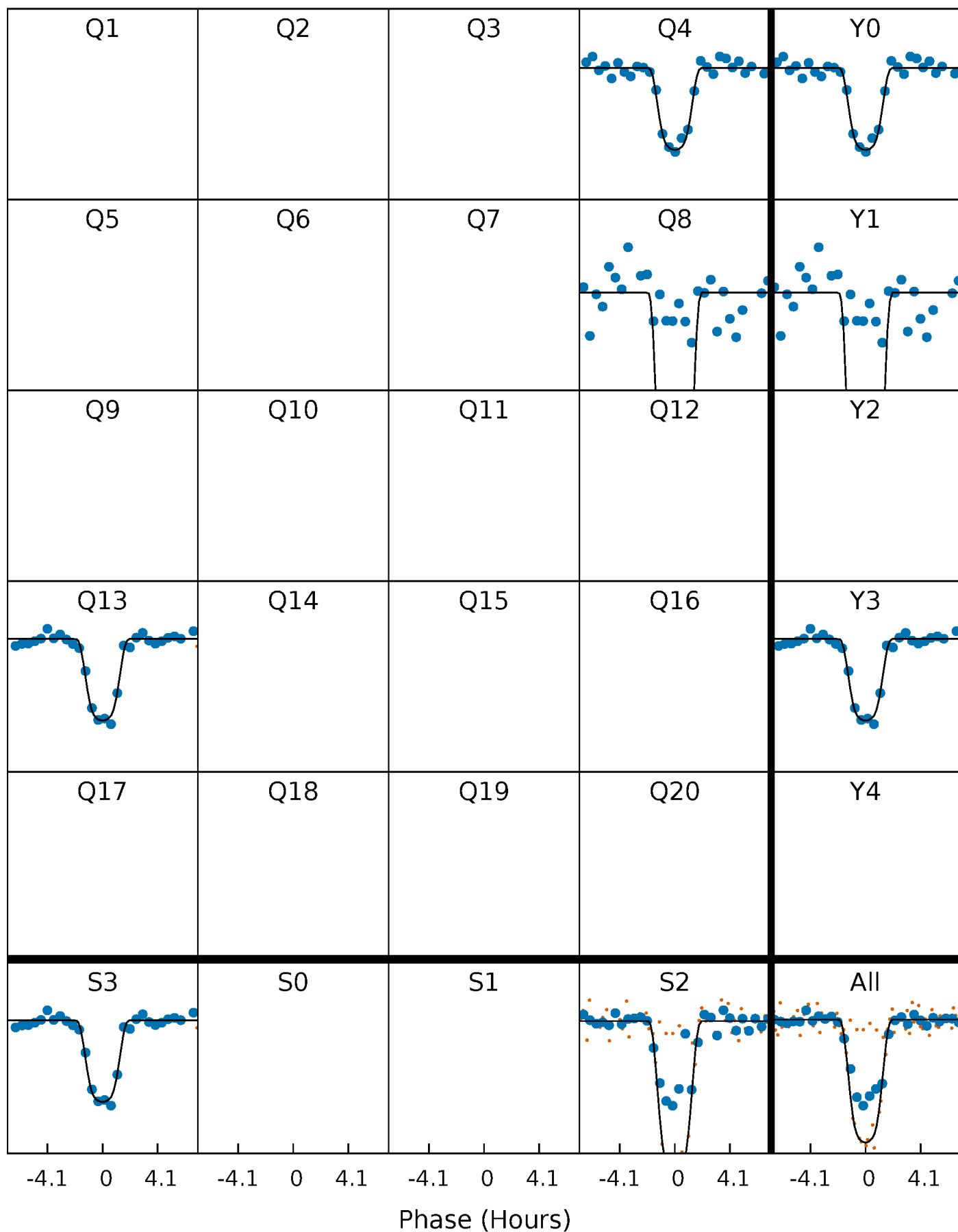
PDC Quarter-Phased Transit Curves

TCE 003534076-01 P=408.414703 Days $T_0=378.140932$ (BKJD)



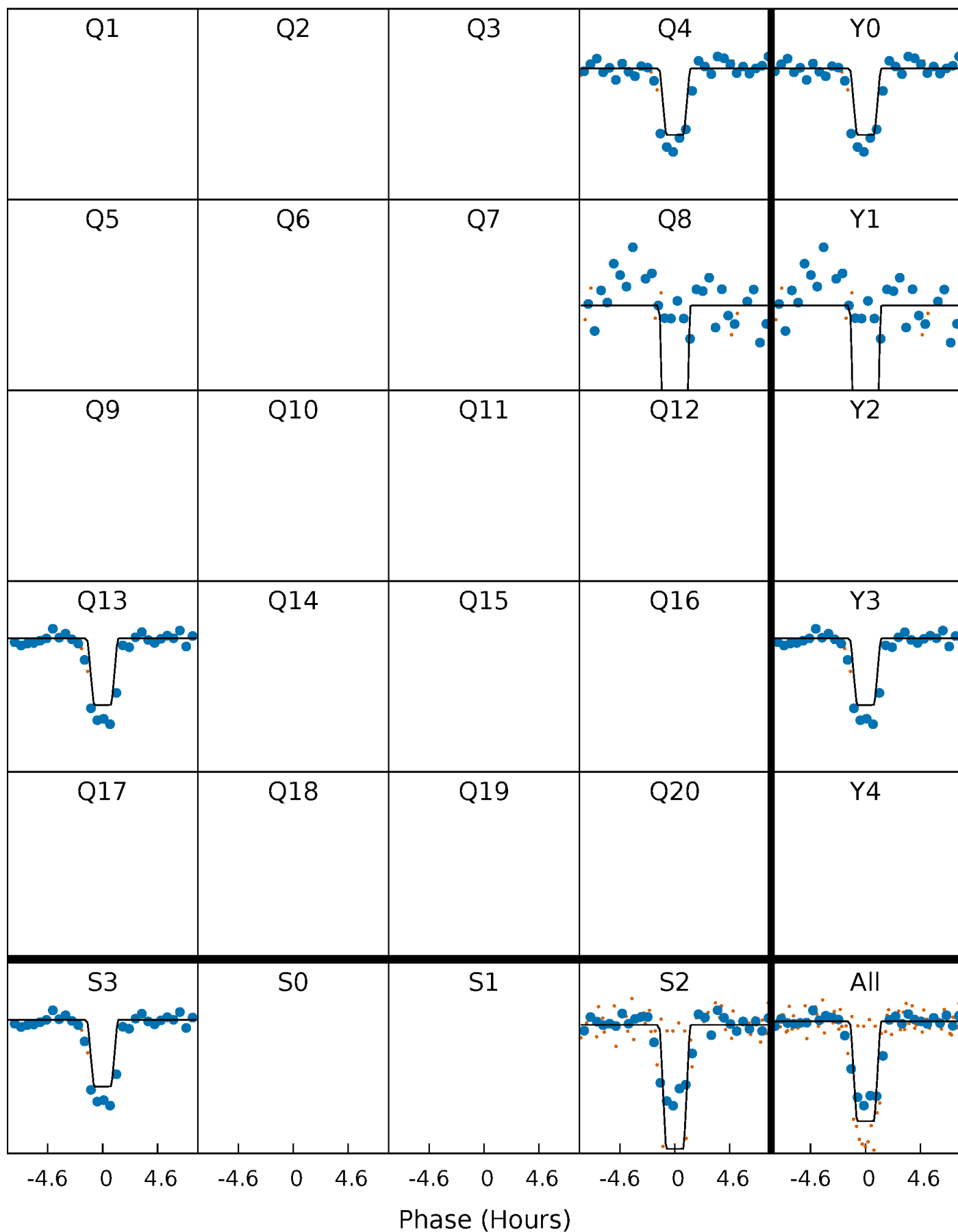
DV Quarter-Phased Transit Curves

TCE 003534076-01 P=408.414703 Days $T_0=378.140932$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

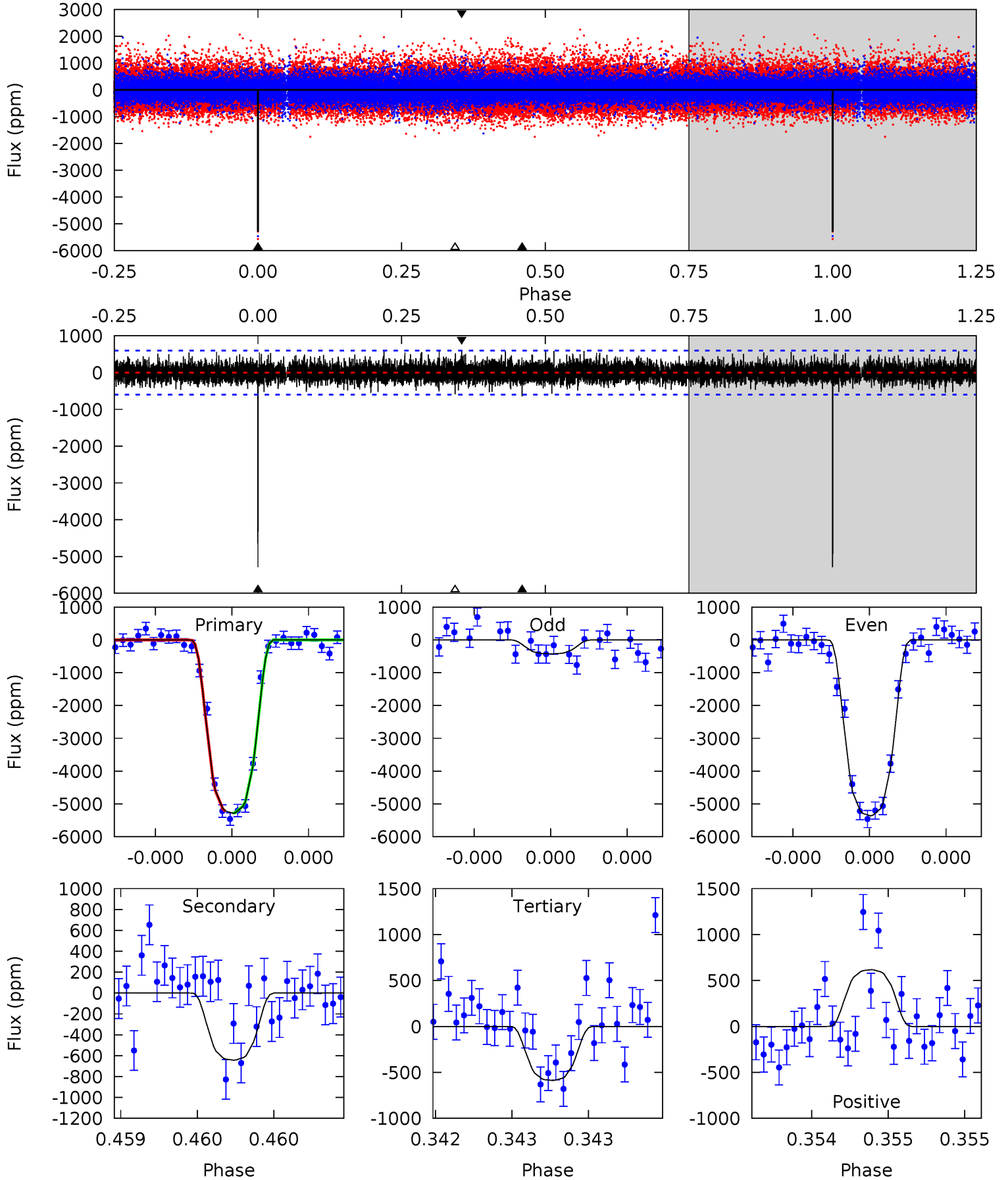
TCE 003534076-01 P=408.412375 Days $T_0=378.143319$ (BKJD)



DV Model-Shift Uniqueness Test

003534076-01, P = 408.414703 Days, E = 378.140932 Days

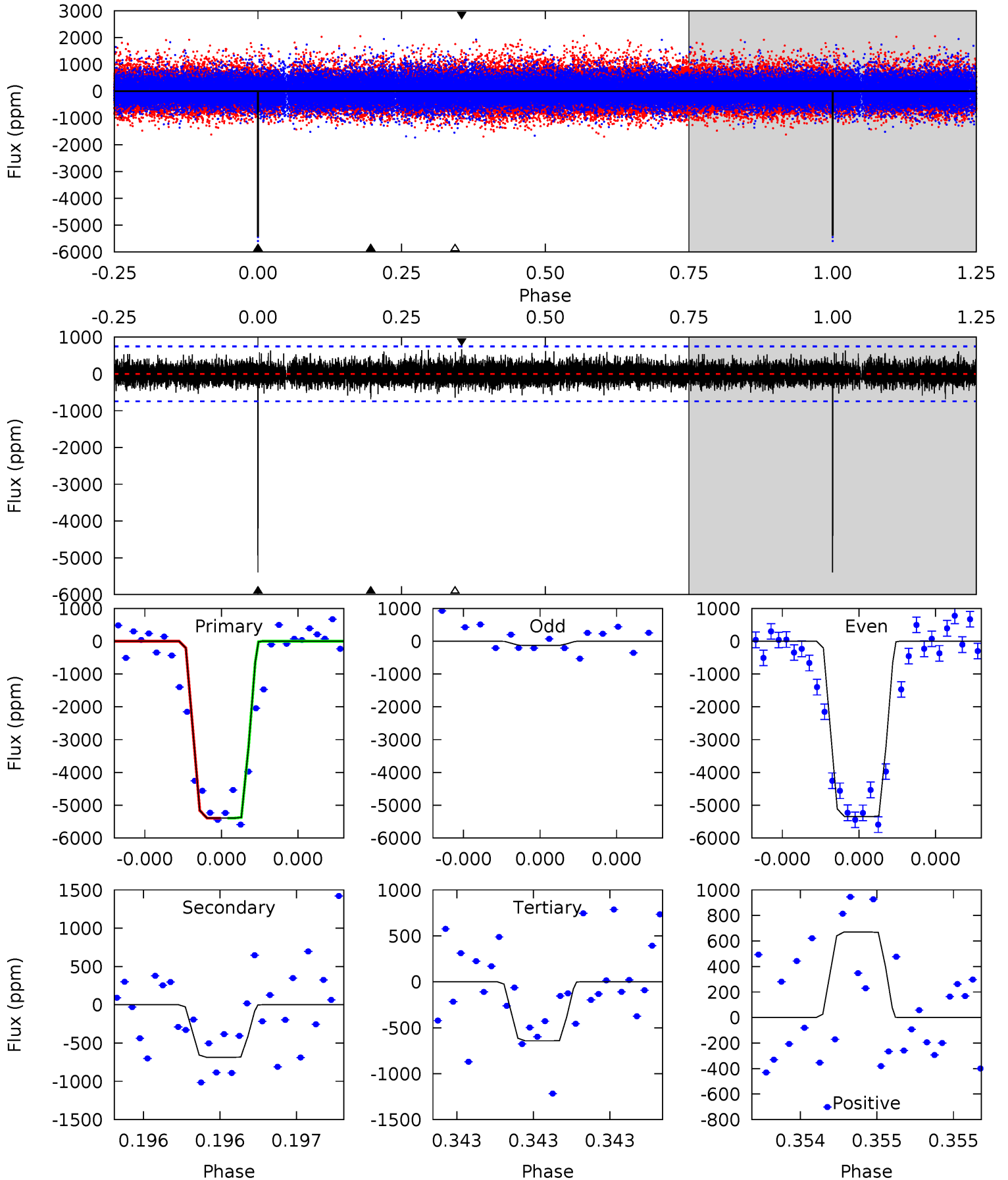
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
49.8	6.05	5.53	5.81	5.62	3.55	1.42	44.3	44.0	0.52	0.25	24.4	0.70	0.10	0



Alt Model-Shift Uniqueness Test

003534076-01, P = 408.412375 Days, E = 378.143319 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
41.0	5.22	4.89	5.10	5.68	3.64	1.21	36.1	35.9	0.33	0.13	22.7	0.68	0.11	0.00



Stellar Parameters For KIC 003534076

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	5821^{+69}_{-87}	$4.445^{+0.045}_{-0.126}$	$0.100^{+0.150}_{-0.150}$	$1.006^{+0.154}_{-0.059}$	$1.028^{+0.063}_{-0.063}$	$1.422^{+0.295}_{-0.508}$
	+1%/-1%	+1%/-3%	+150%/-150%	+15%/-6%	+6%/-6%	+21%/-36%
Source	SPE90	SPE90	SPE90	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 003534076-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-643 ± 106	$8.79^{+0.81}_{-0.58}$	348^{+15}_{-9}	3715^{+118}_{-118}	5361^{+1233}_{-1134}
Alt.	-686 ± 131	$7.38^{+0.67}_{-0.52}$	348^{+14}_{-9}	3983^{+147}_{-157}	8023^{+2092}_{-1789}

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 $A_{obs} \gg 1.0$

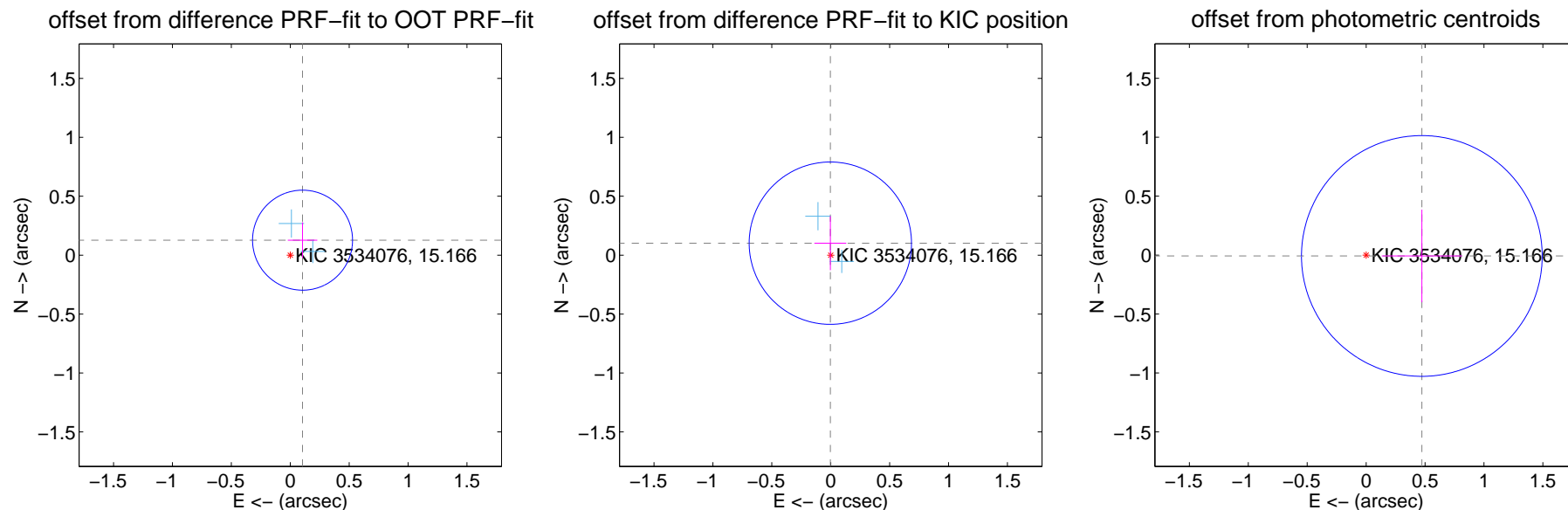
DV Centroid Data

Supplemental centroid analysis for 003534076-01. Kepler magnitude: 15.17. Transit SNR 34.52

There are 2 quarters with good PRF difference image offsets

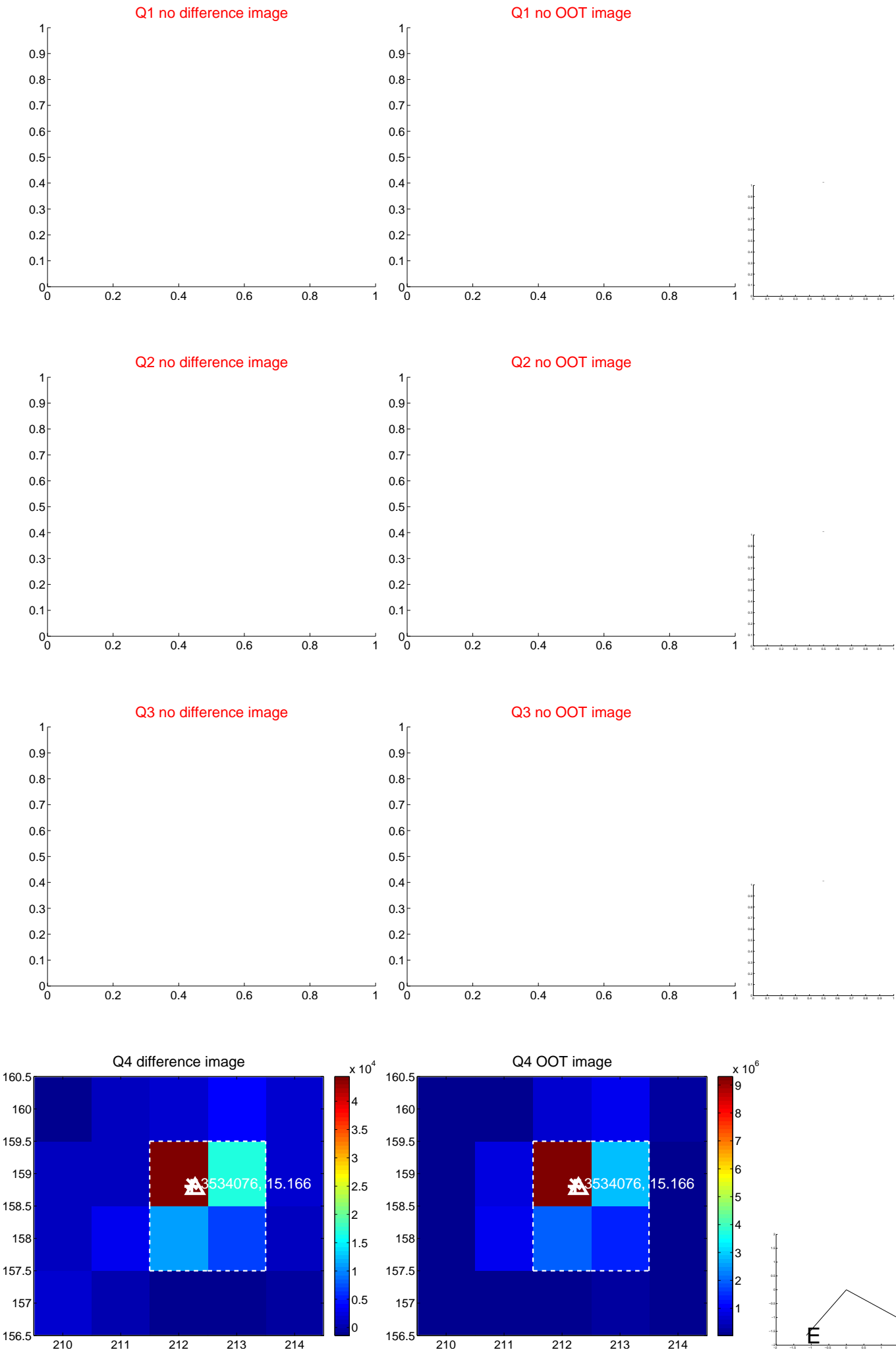
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.164 ± 0.141	1.16	-0.104 ± 0.125	0.127 ± 0.151
PRF-fit source offset from KIC position	0.102 ± 0.230	0.44	0.003 ± 0.135	0.102 ± 0.230
photometric centroid source offset	0.47 ± 0.34	1.39	-0.47 ± 0.34	-0.01 ± 0.39

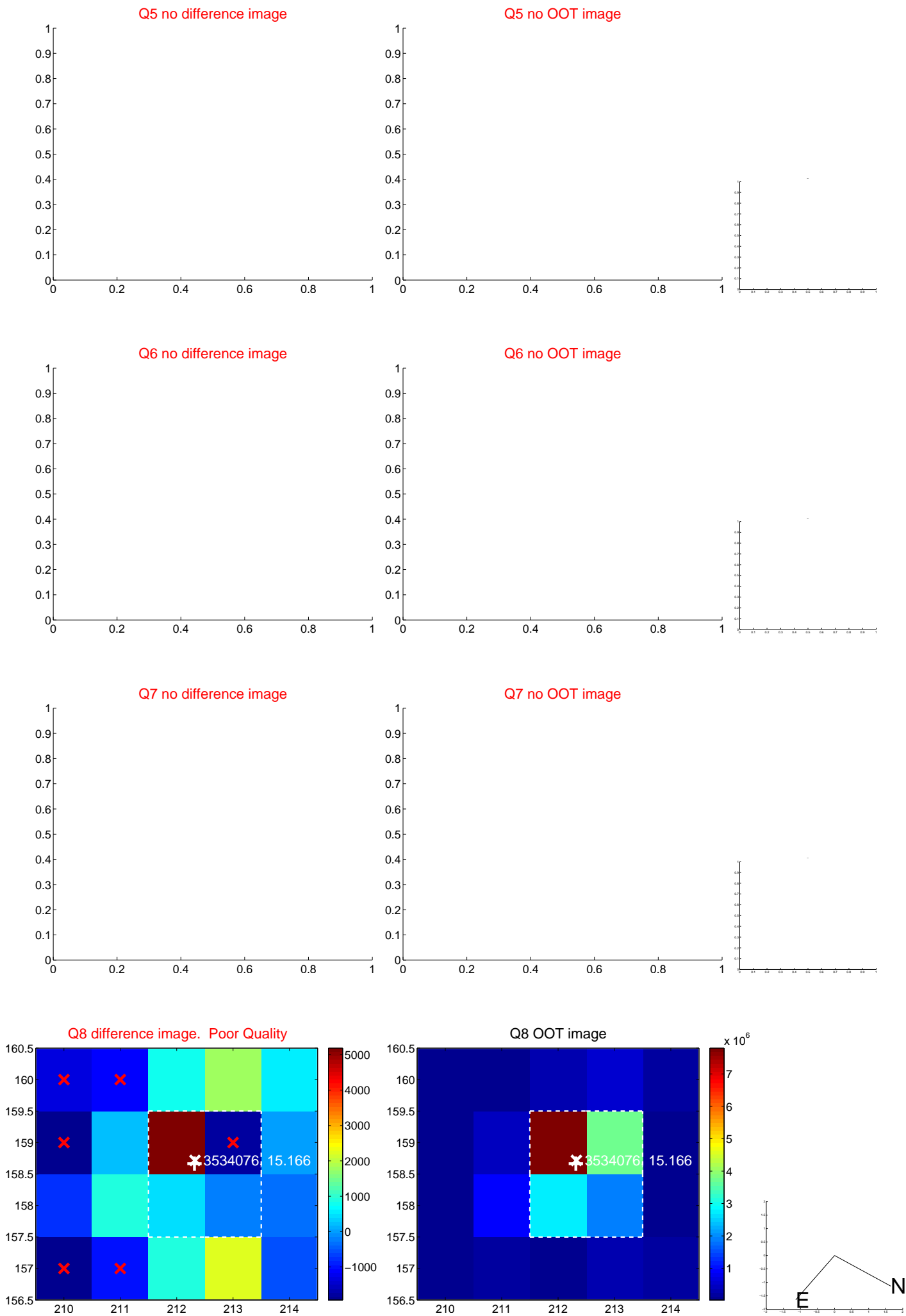


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



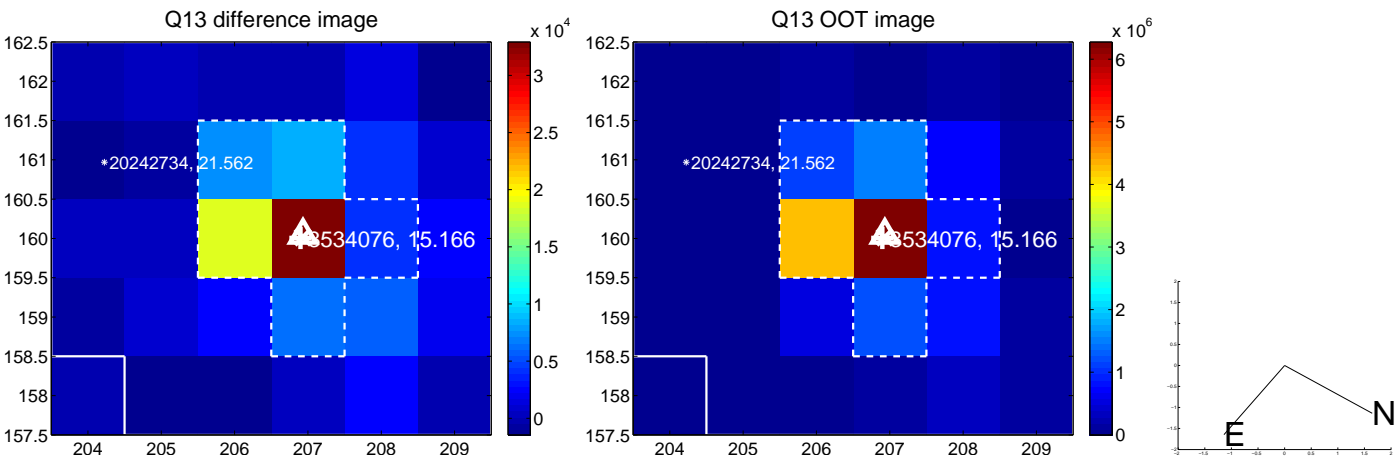
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



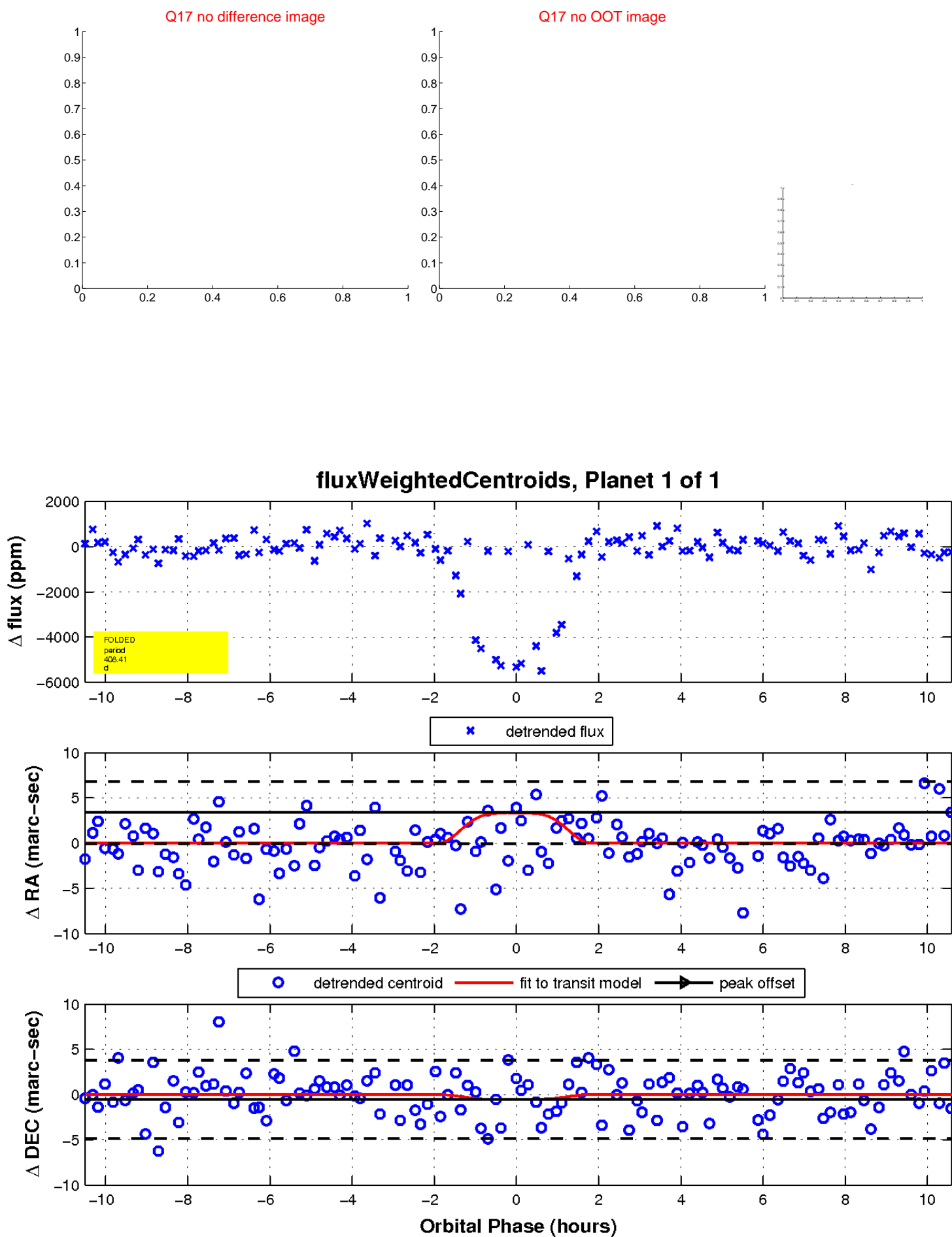
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

