

KIC 009540226

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})
009540226-01	OBS	No	351.075806	455.846081	782.4	15.000	47.8	-1.0	16.21	4724	43.70	77.42

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009540226-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL LPP_DV LPP_ALT ALL_TRANS_CHASES INCONSISTENT_TRANS CENT_NOFITS

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

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

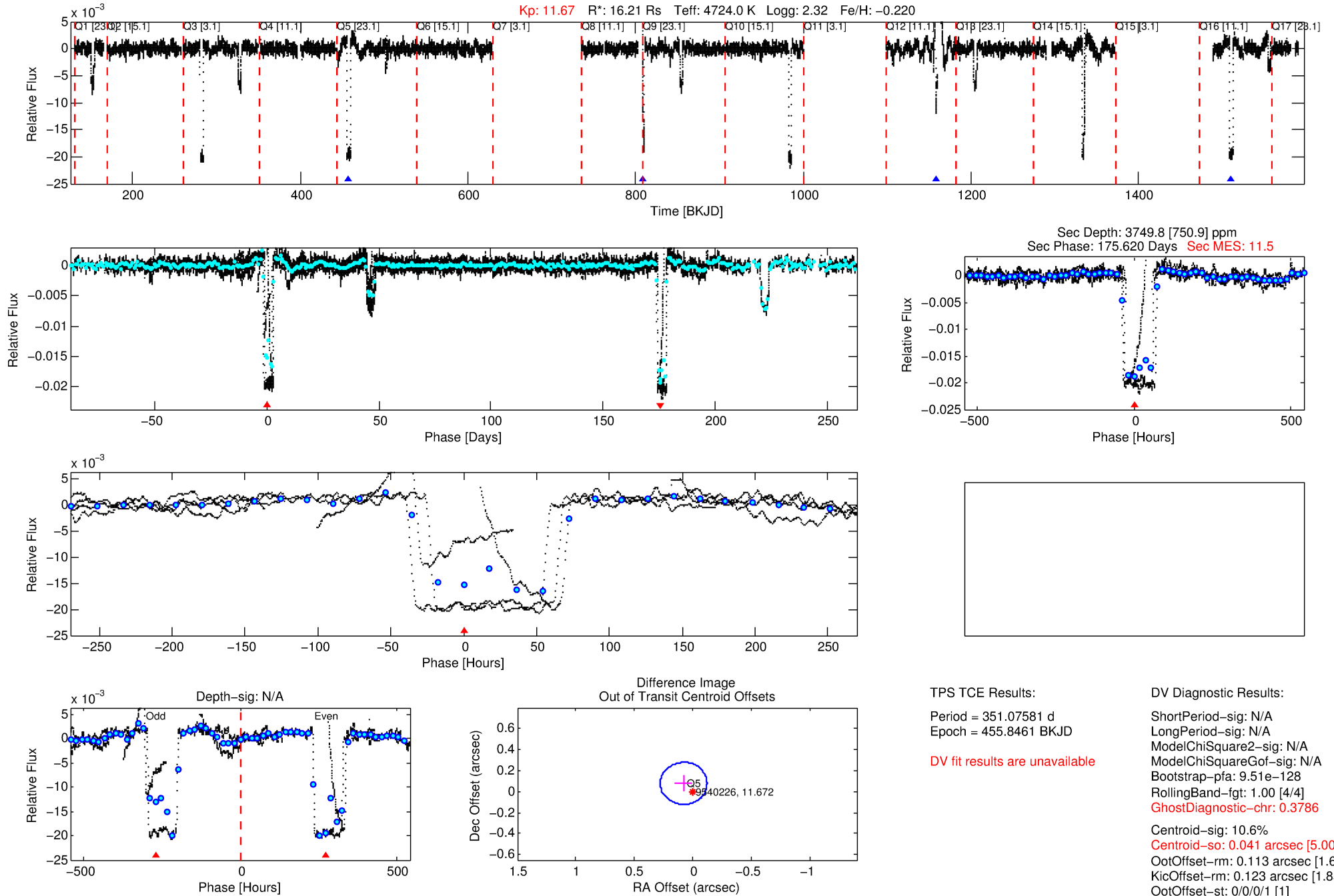
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009540226-01

No Significant Match Found

DV One-Page Summary

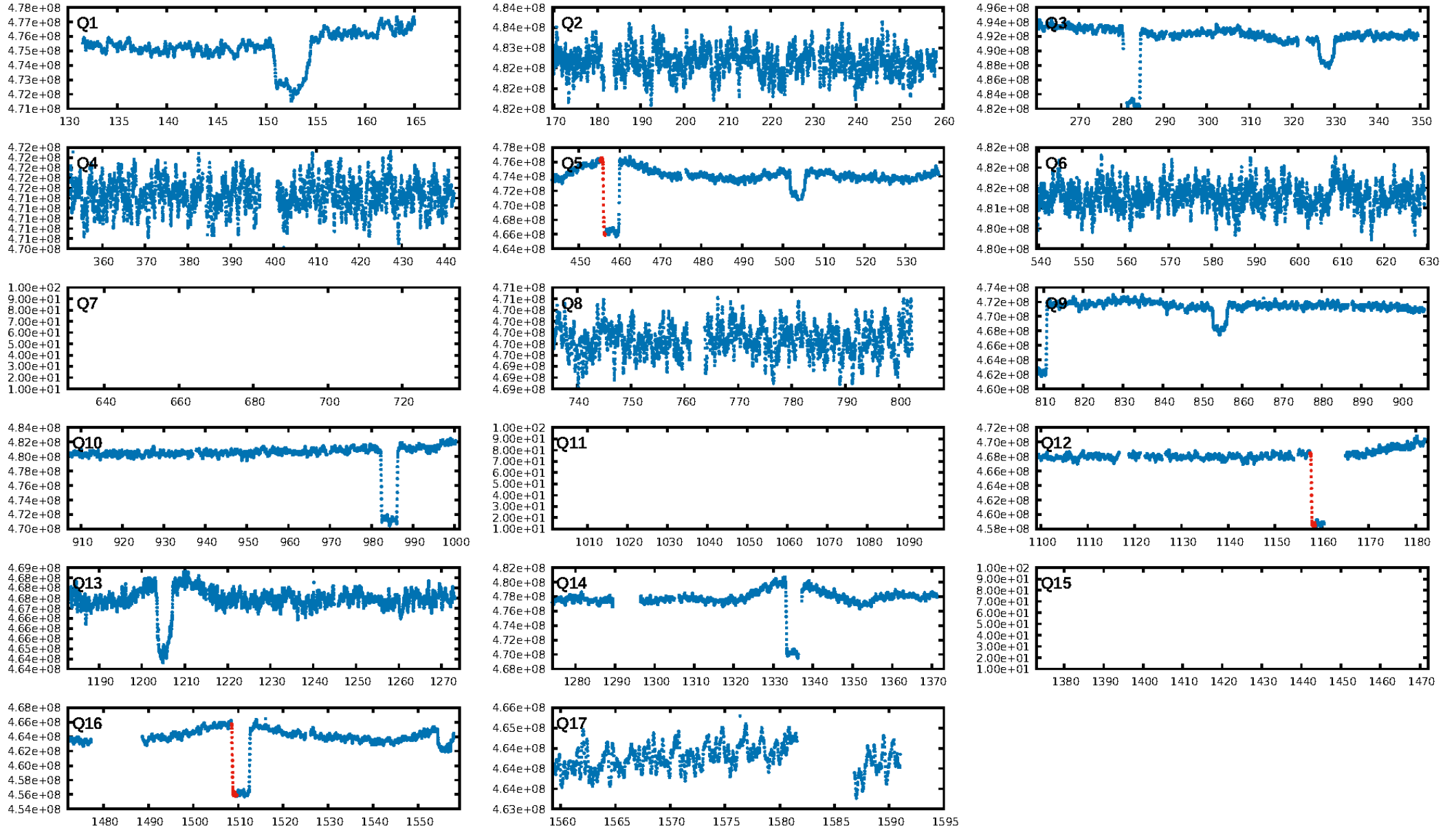
KIC: 9540226 Candidate: 1 of 1 Period: 351.076 d



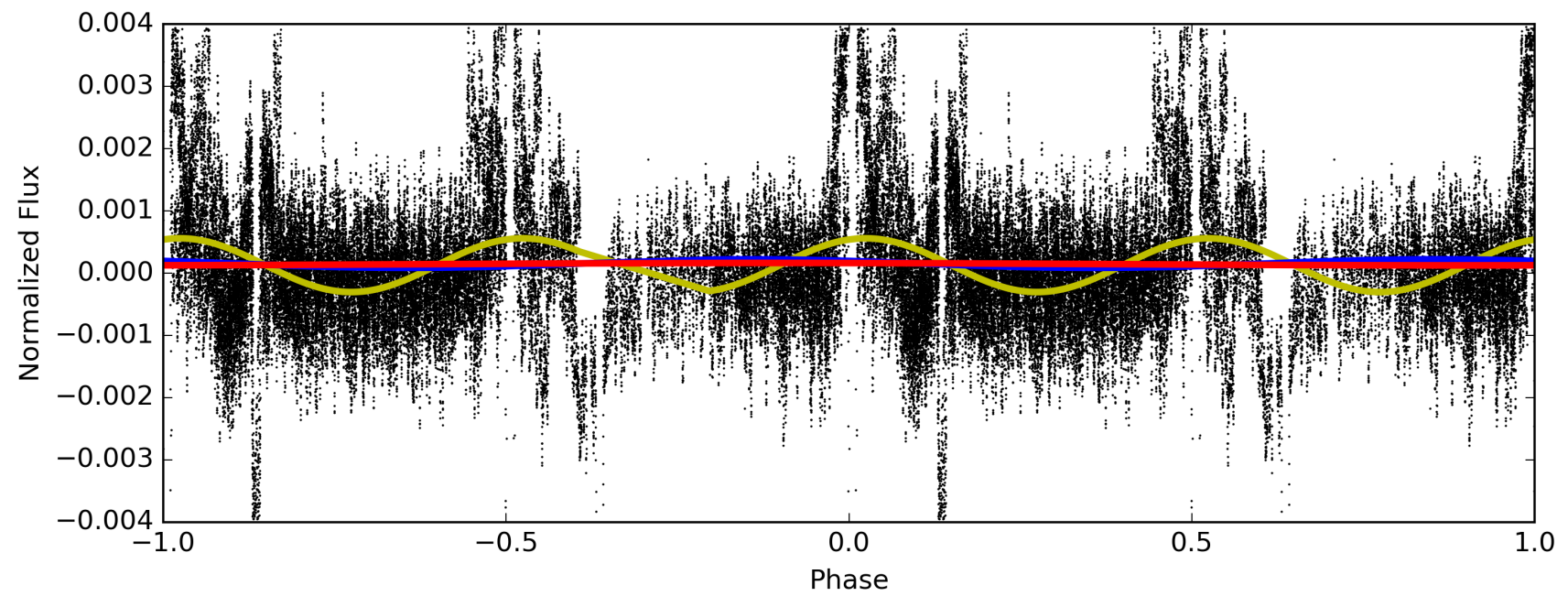
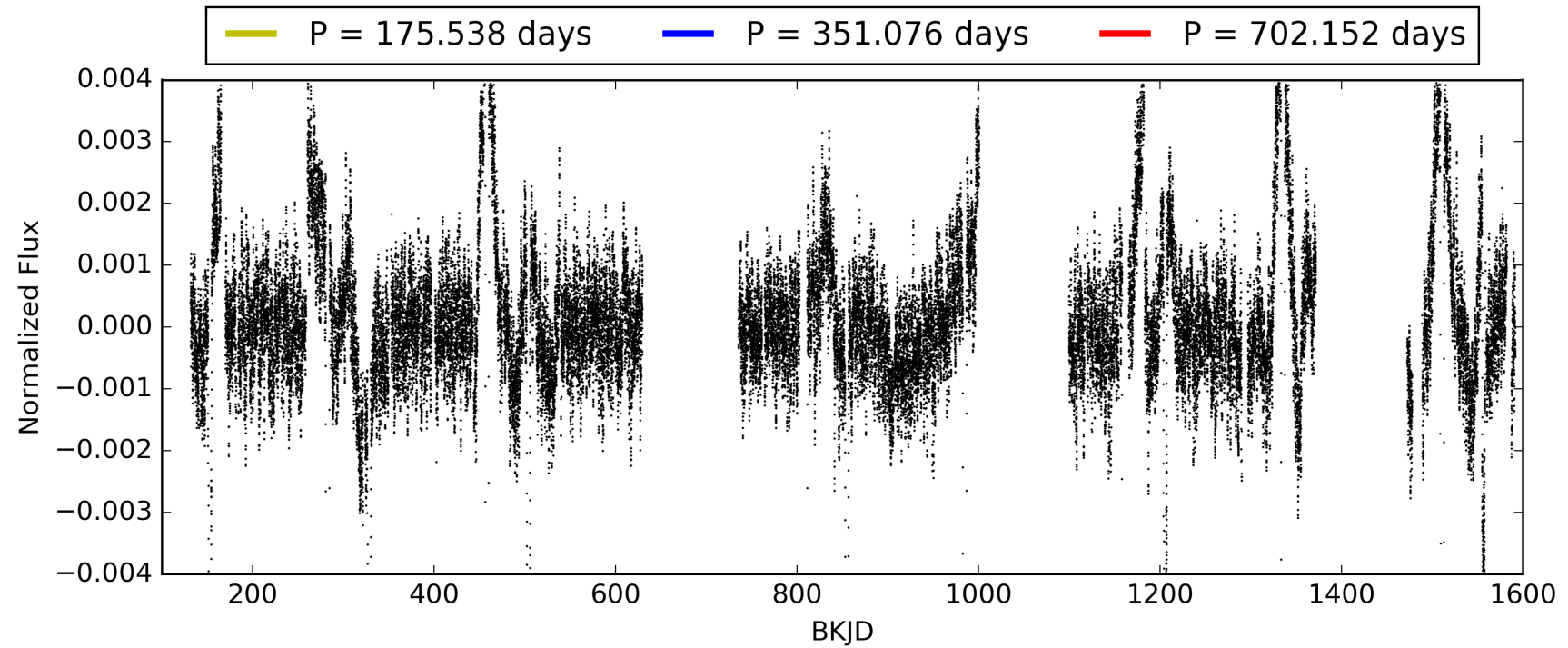
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 09:28:10 Z

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

TCE 009540226-01, PDC Light Curves

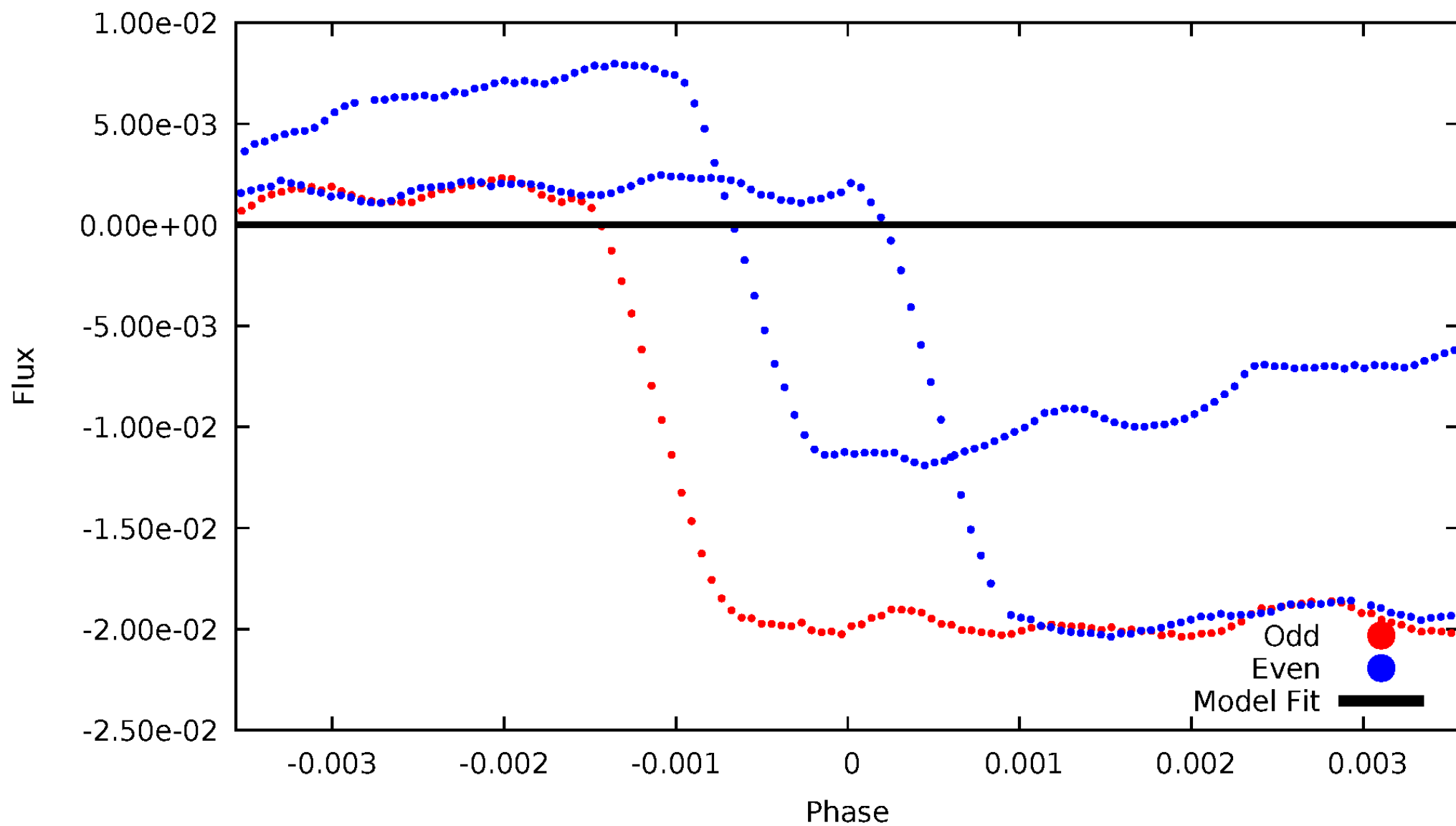


TCE 009540226-01



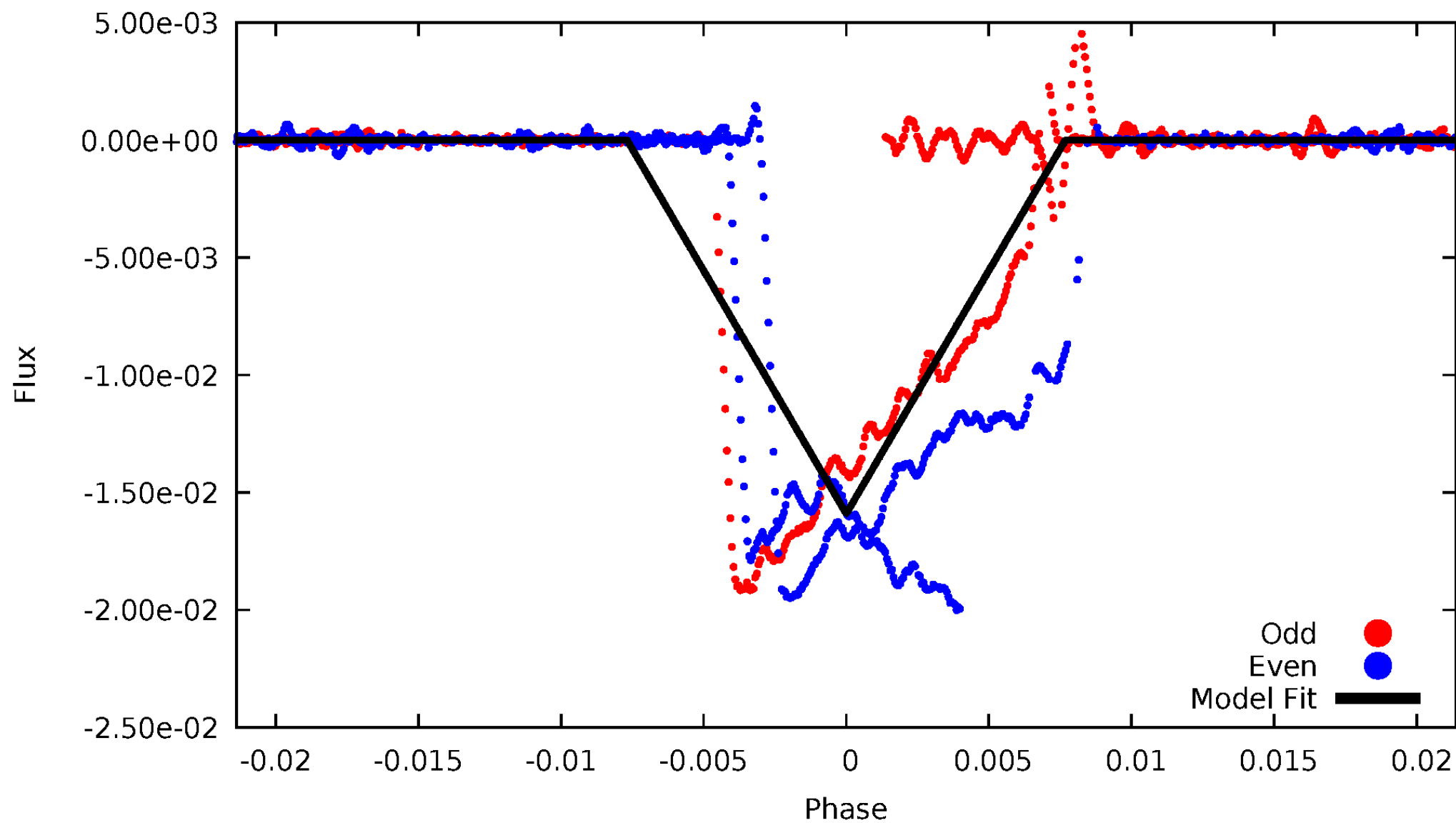
DV Odd/Even

TCE 009540226-01



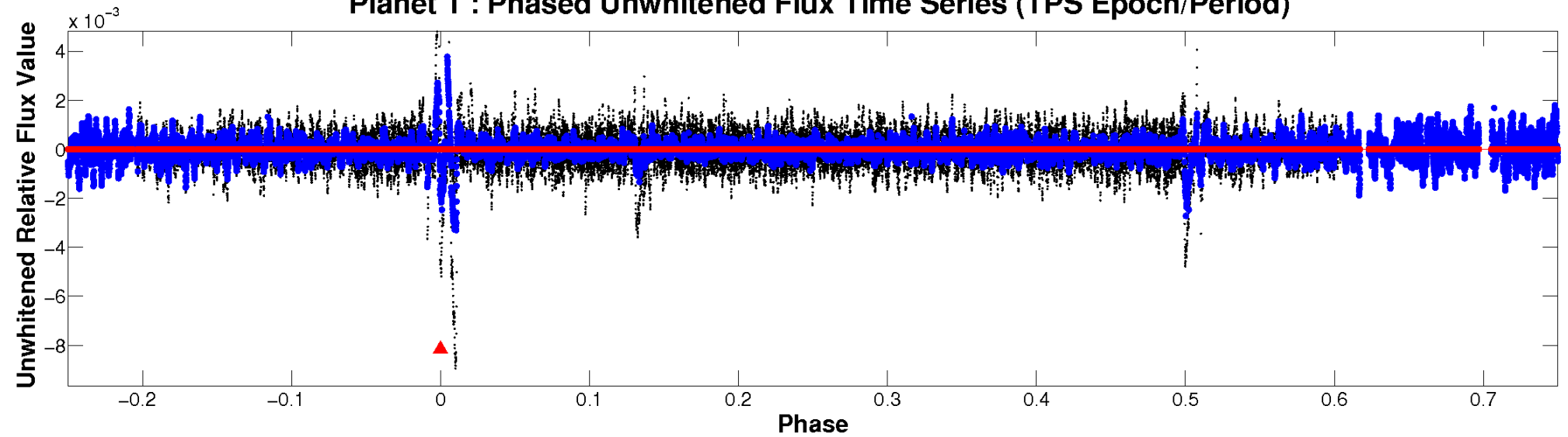
ALT Odd/Even

TCE 009540226-01

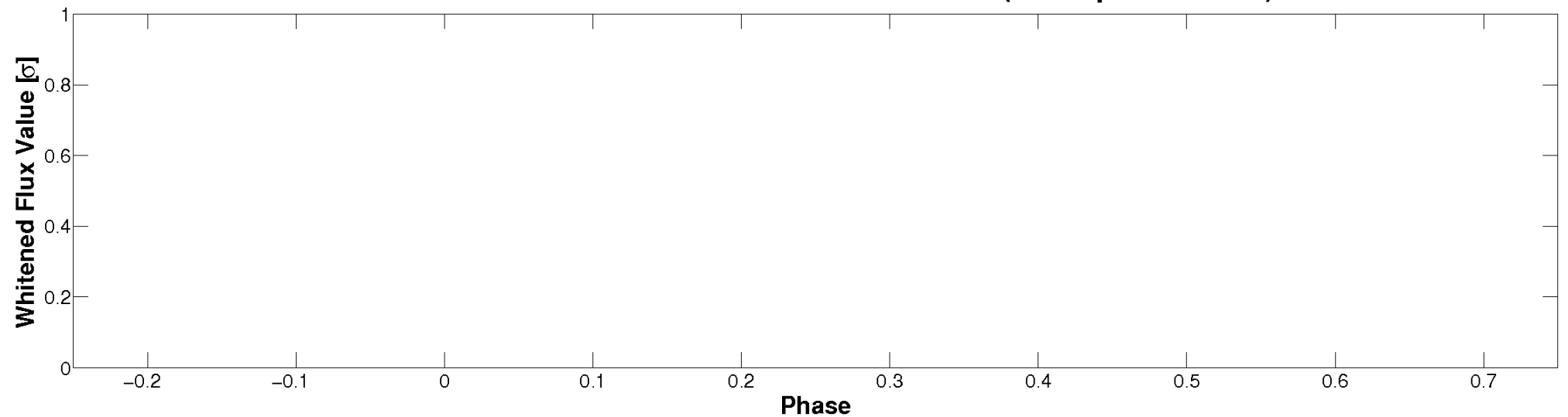


Non-Whitened Vs. Whitened Light Curve

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

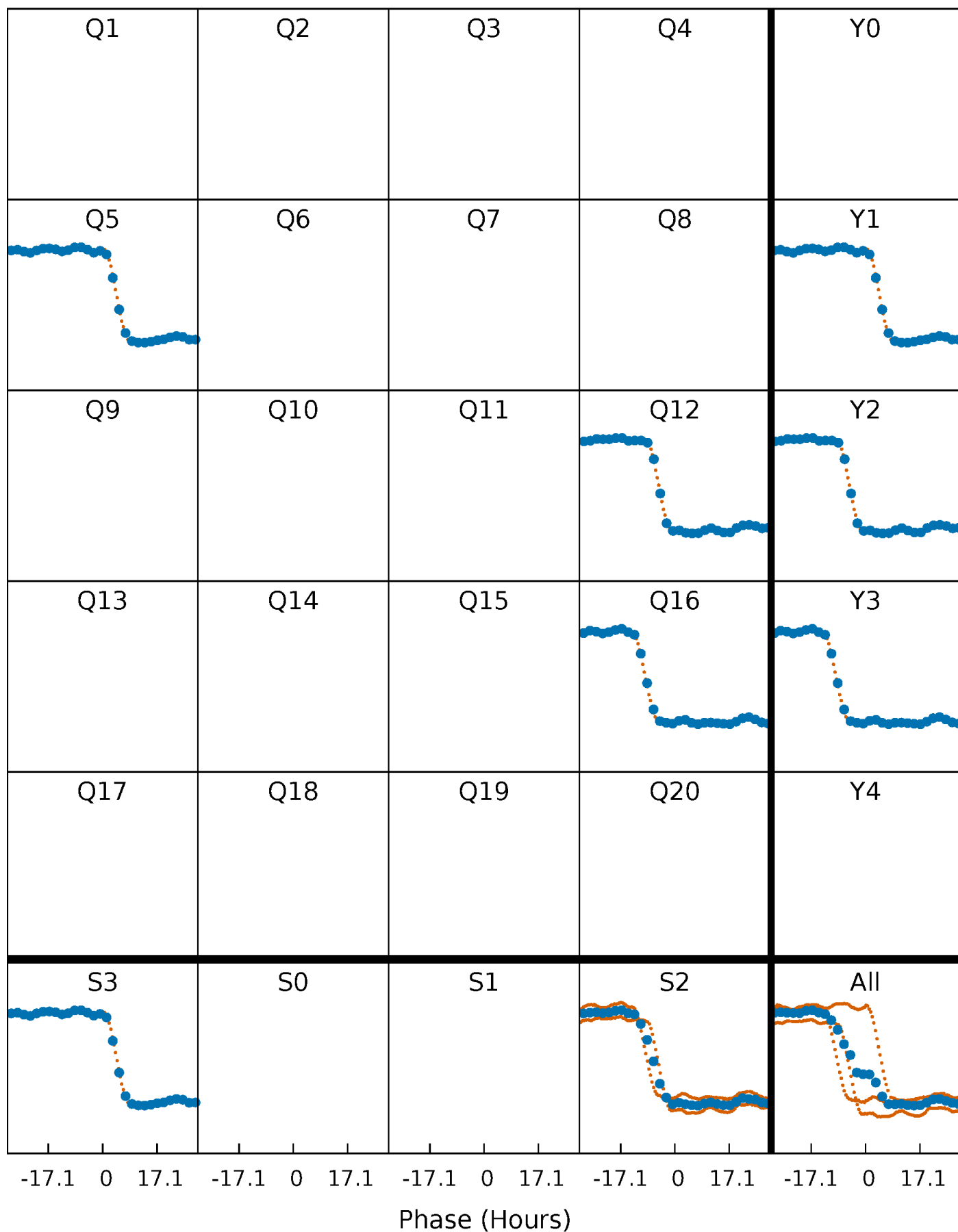


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



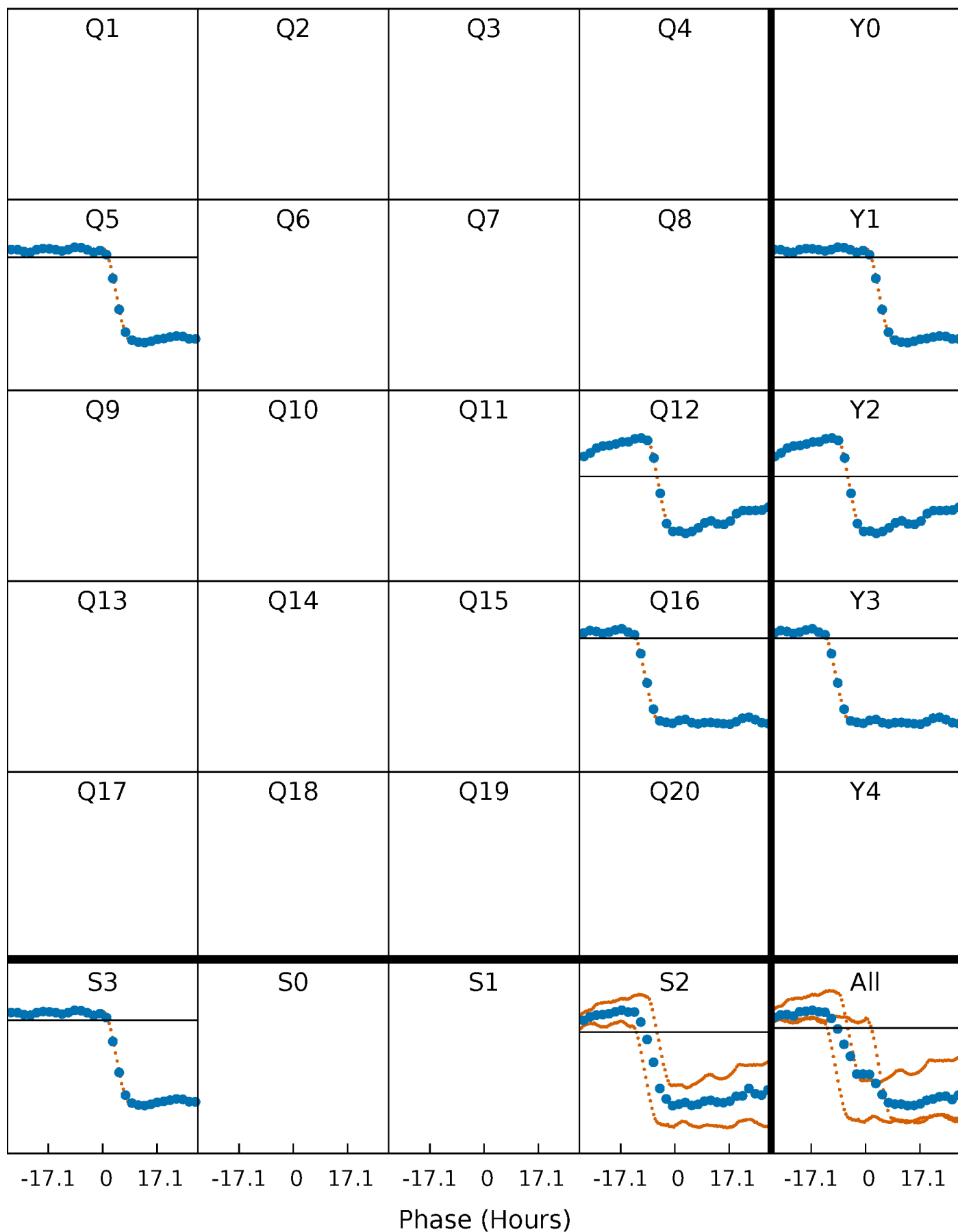
PDC Quarter-Phased Transit Curves

TCE 009540226-01 P=351.075806 Days $T_0=455.846081$ (BKJD)



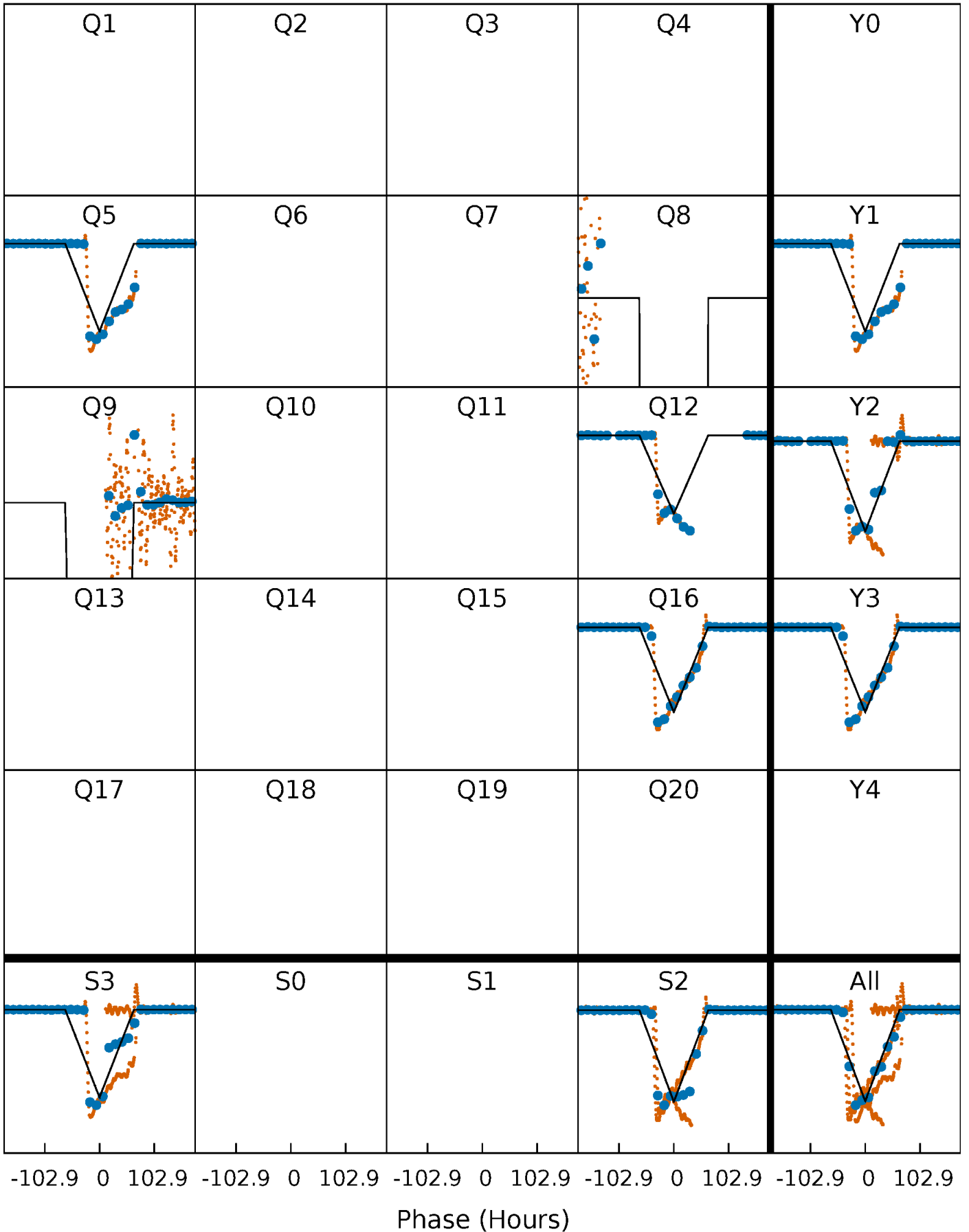
DV Quarter-Phased Transit Curves

TCE 009540226-01 P=351.075806 Days $T_0=455.846081$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

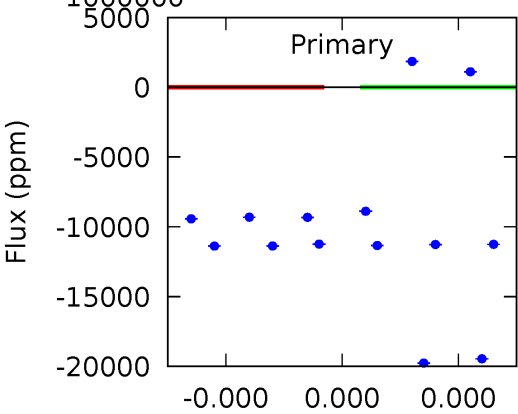
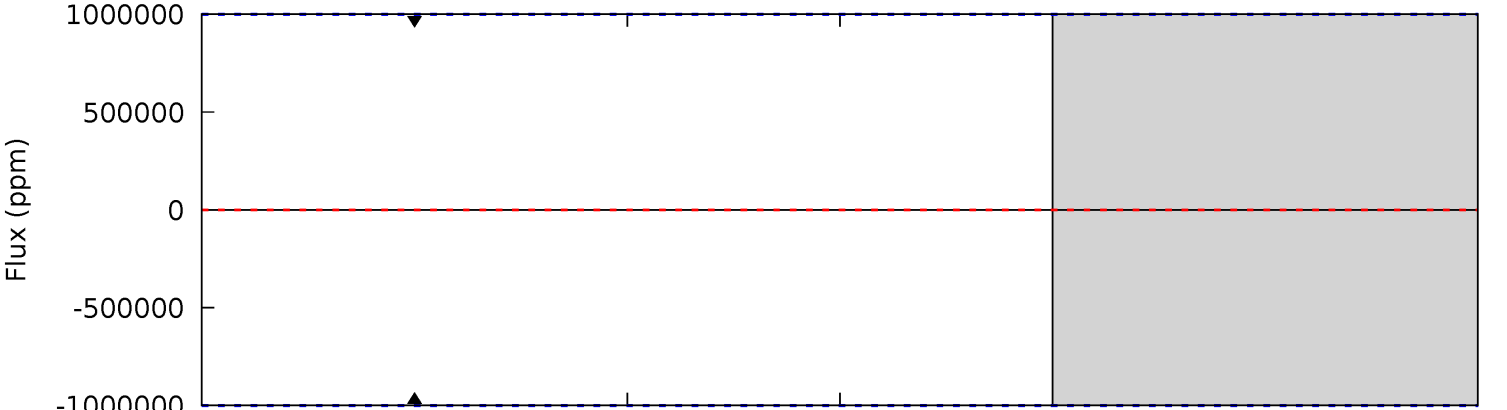
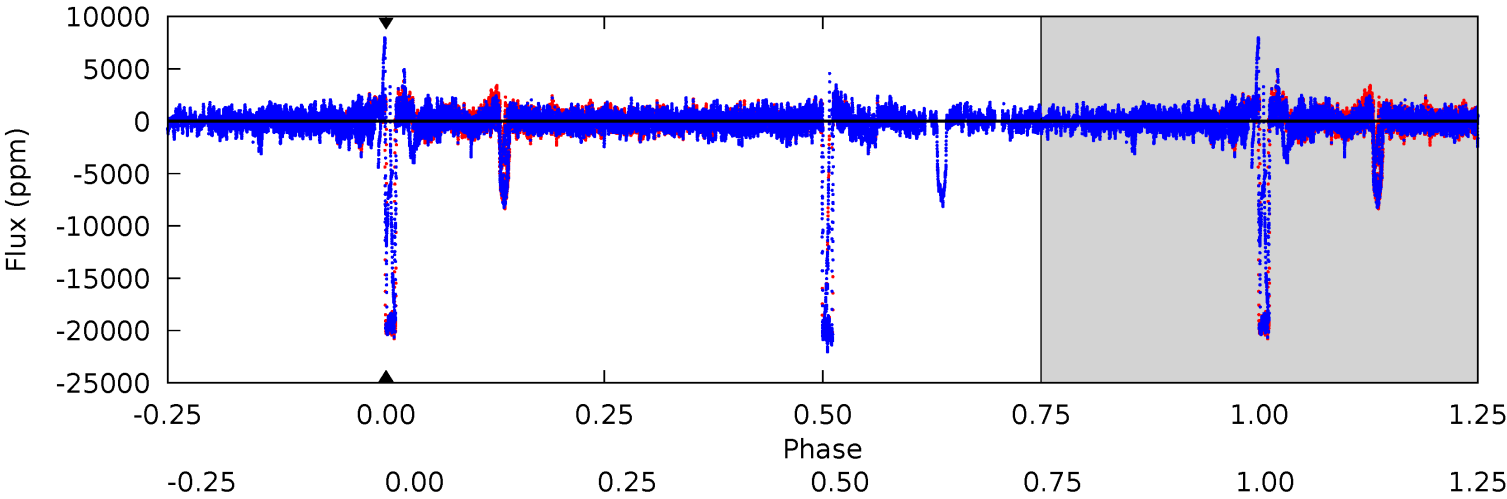
TCE 009540226-01 P=351.075806 Days $T_0=456.974110$ (BKJD)



DV Model-Shift Uniqueness Test

009540226-01, P = 351.075806 Days, E = 104.770275 Days

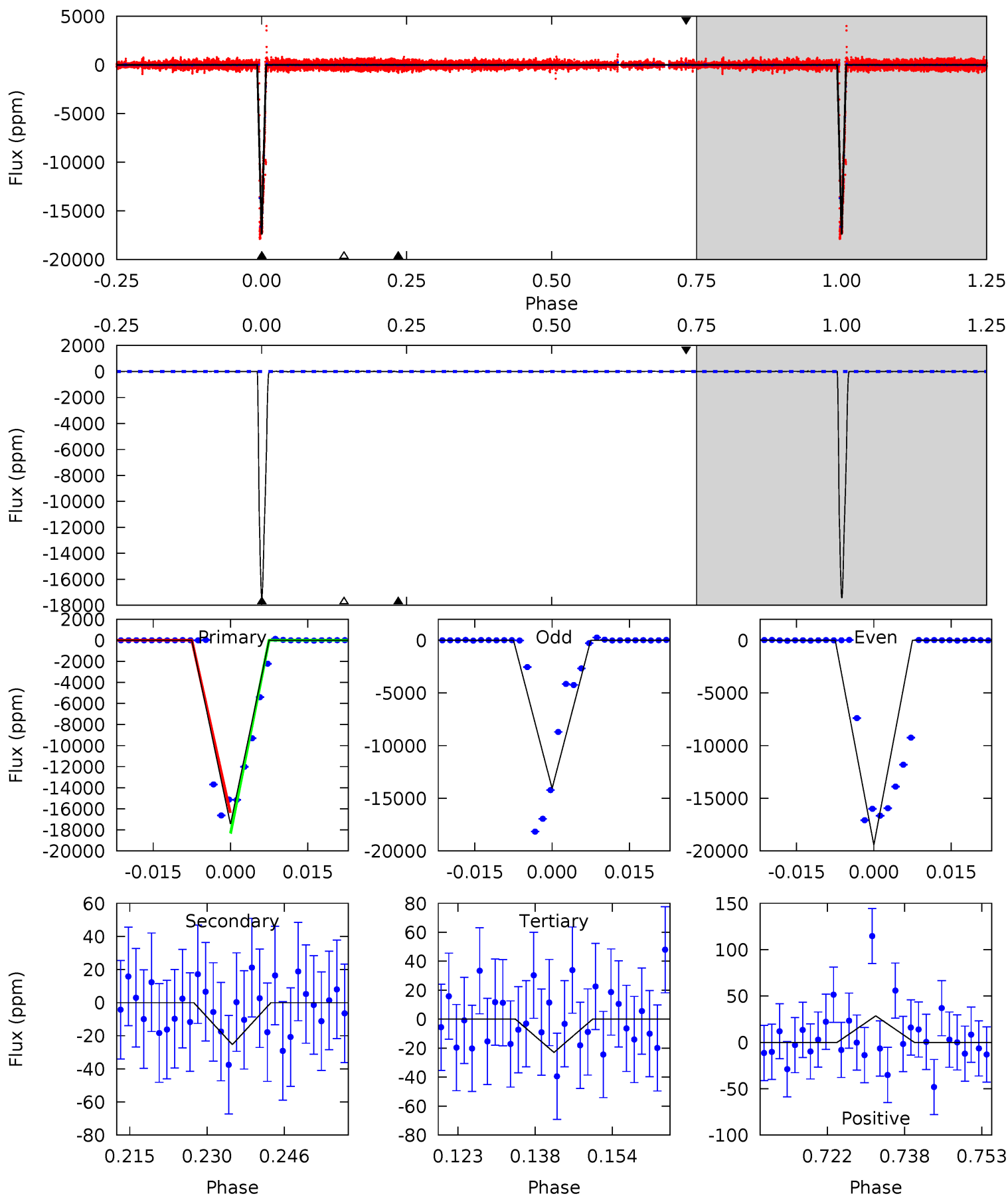
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

009540226-01, P = 351.075806 Days, E = 105.898304 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2236	3.25	2.94	3.66	4.94	2.42	0.87	2233	2233	0.31	-0.41	411.7	0.78	0.00	123.9



Stellar Parameters For KIC 009540226

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	4724^{+42}_{-91}	$2.323^{+0.030}_{-0.027}$	$-0.220^{+0.100}_{-0.200}$	$16.215^{+0.649}_{-3.463}$	$2.017^{+1.150}_{-0.796}$	$0.001^{+0.000}_{-0.000}$
	+1%/-2%	+1%/-1%	+45%/-91%	+4%/-21%	+57%/-39%	+32%/-9%
Source	PHO55	AST55	SPE55	DSEP		

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

Secondary Eclipse Parameters for KIC 009540226-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$142.55^{+122.92}_{-98.43}$	1050^{+21}_{-29}	-4158^{+16134}_{-7209}	$-136.836^{+7347.202}_{-5993.127}$
Alt.	-25 ± 8	$260.08^{+170.86}_{-147.02}$	1050^{+19}_{-27}	-1376^{+3550}_{-418}	$0.292^{+1.300}_{-0.193}$

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

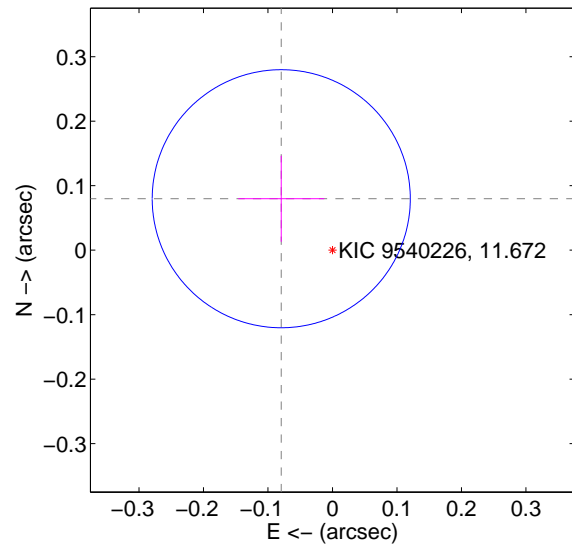
Supplemental centroid analysis for 009540226-01. **Kepler magnitude: 11.67.** Transit SNR -1.00

There are 1 quarters with good PRF difference image offsets

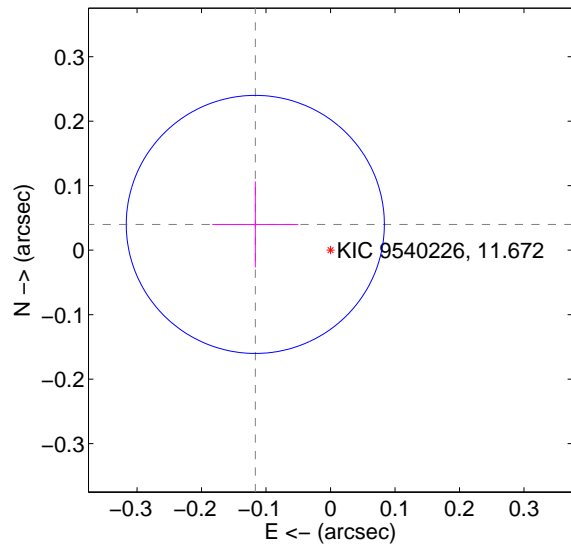
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.113 ± 0.067	1.69	0.079 ± 0.067	0.080 ± 0.067
PRF-fit source offset from KIC position	0.123 ± 0.067	1.85	0.117 ± 0.067	0.040 ± 0.067
photometric centroid source offset	0.04 ± 0.01	5.00	0.04 ± 0.01	0.01 ± 0.01

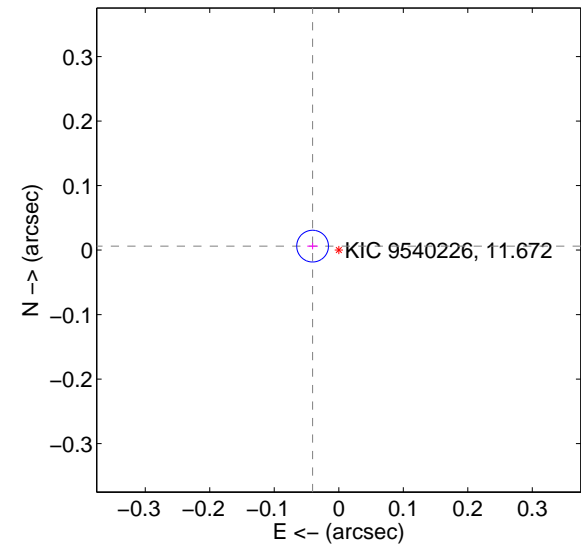
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

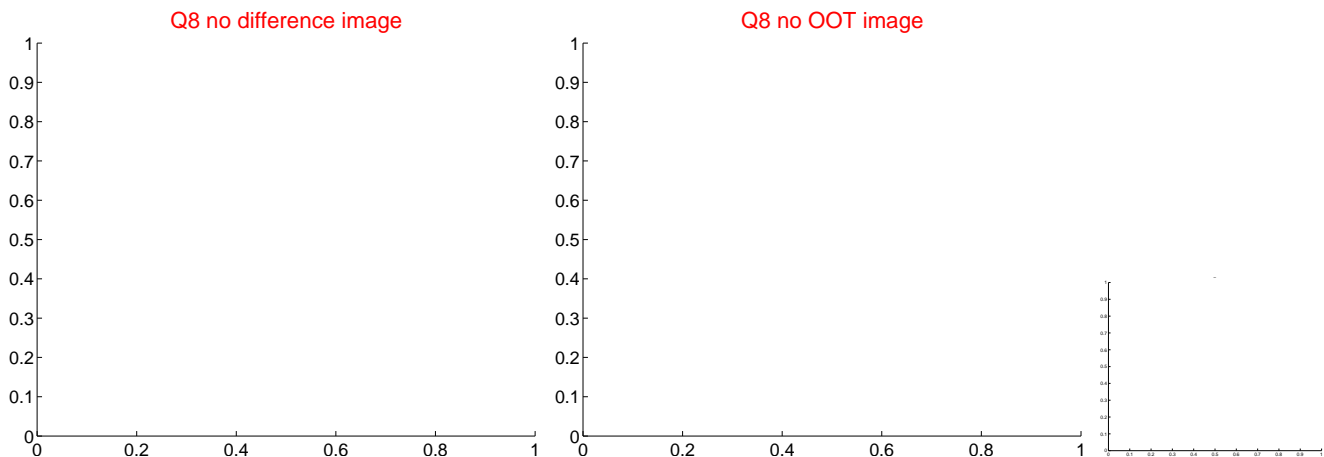
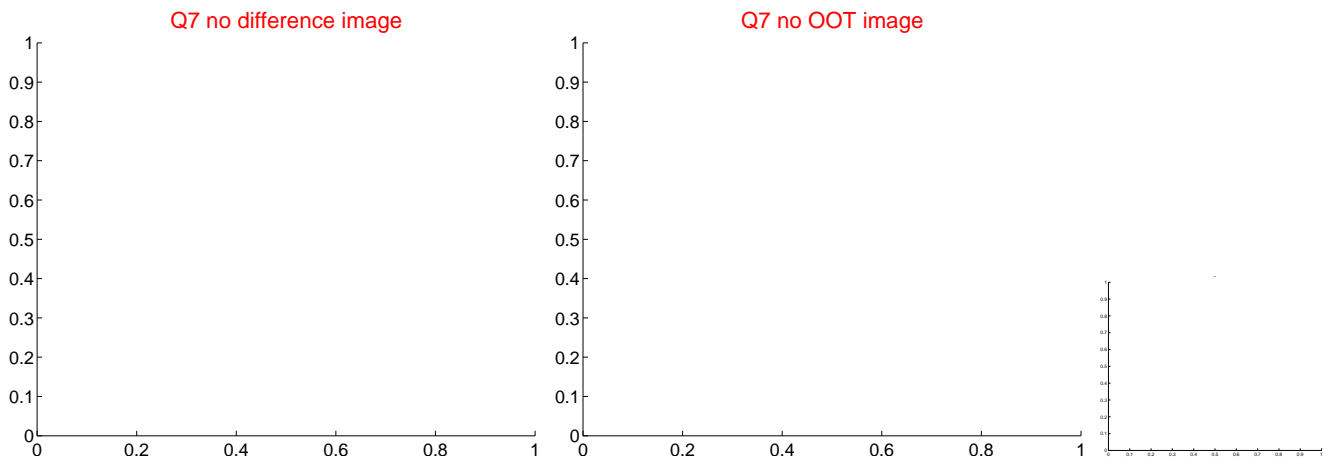
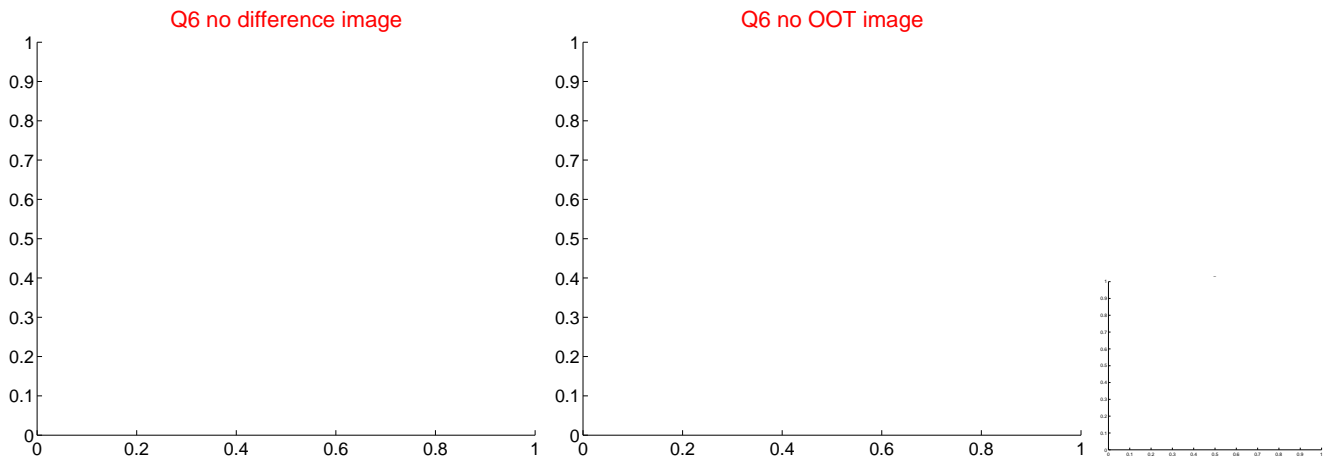
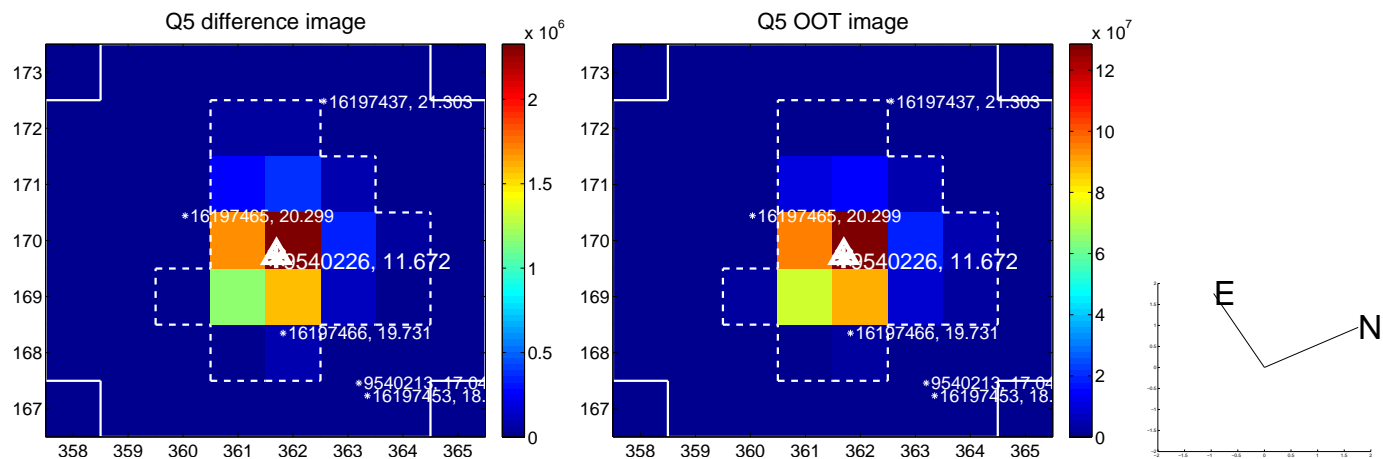


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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



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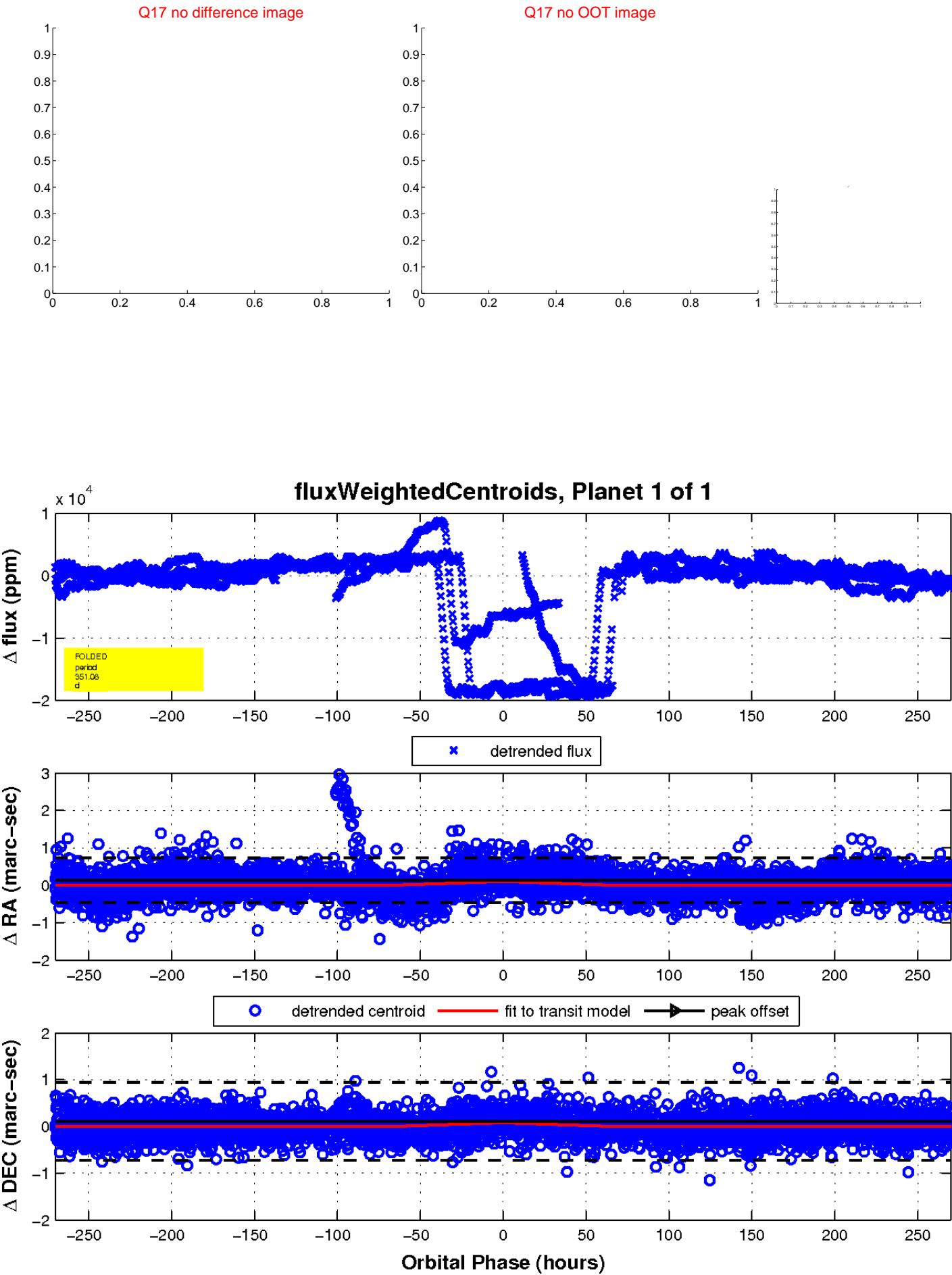
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

