

KIC 009075779

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})
009075779-01	OBS	No	318.373823	226.676213	730.0	18.767	9.1	9.0	0.85	5750	2.43	0.88

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009075779-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

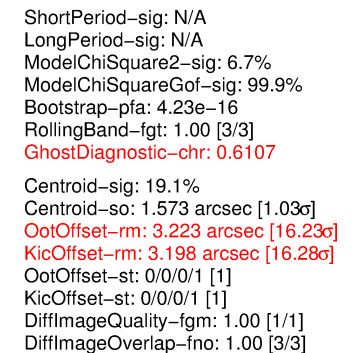
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

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

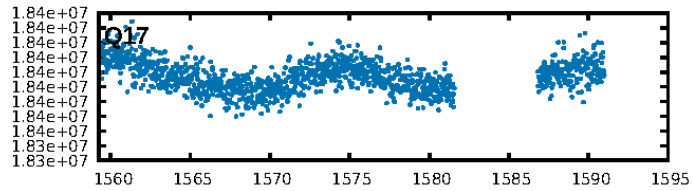
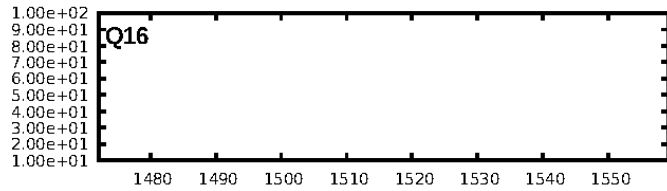
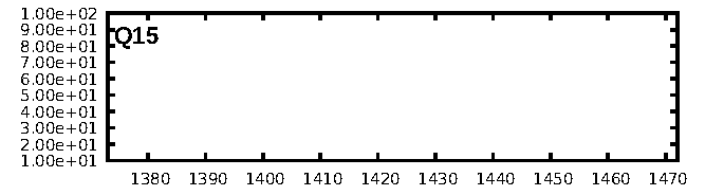
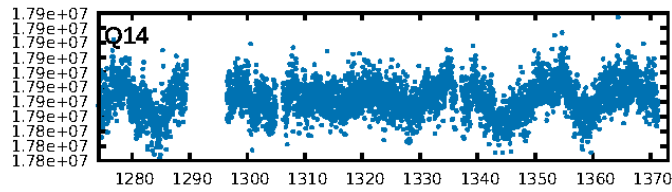
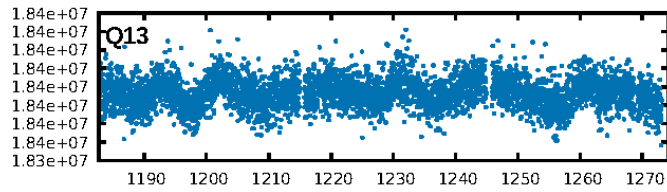
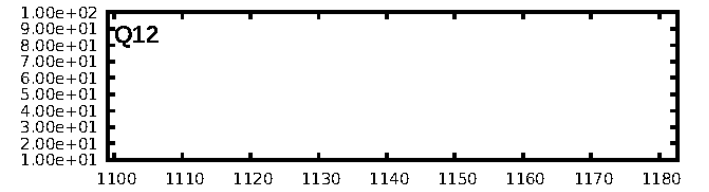
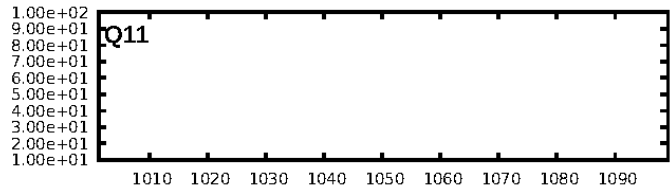
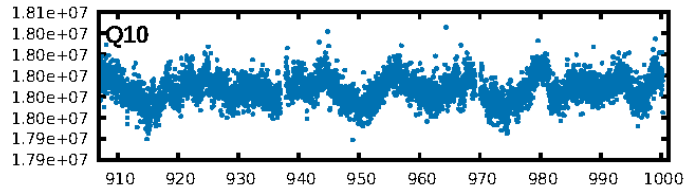
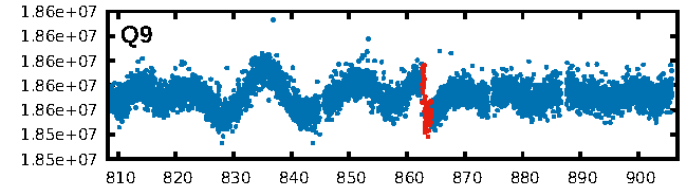
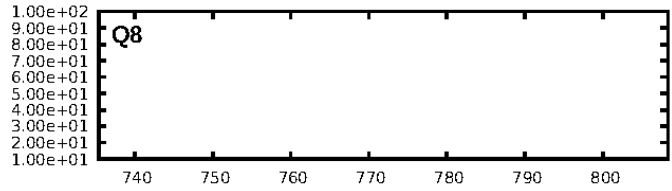
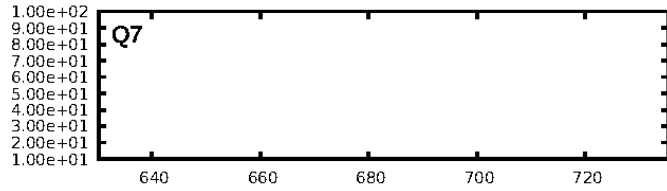
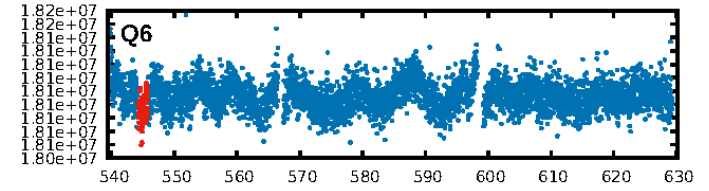
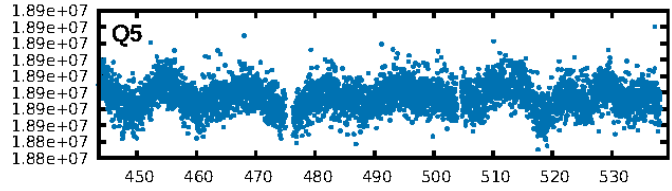
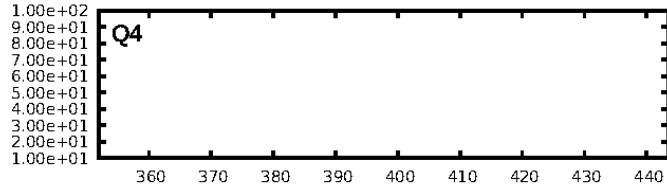
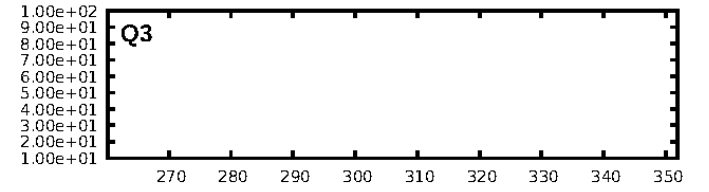
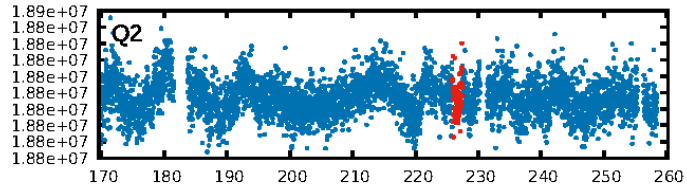
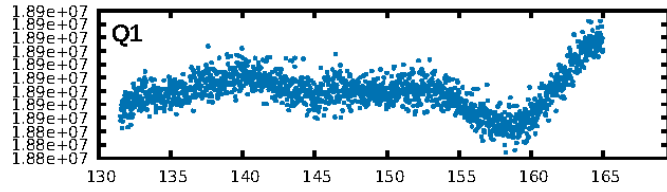
Ephemeris Match Information For 009075779-01

No Significant Match Found

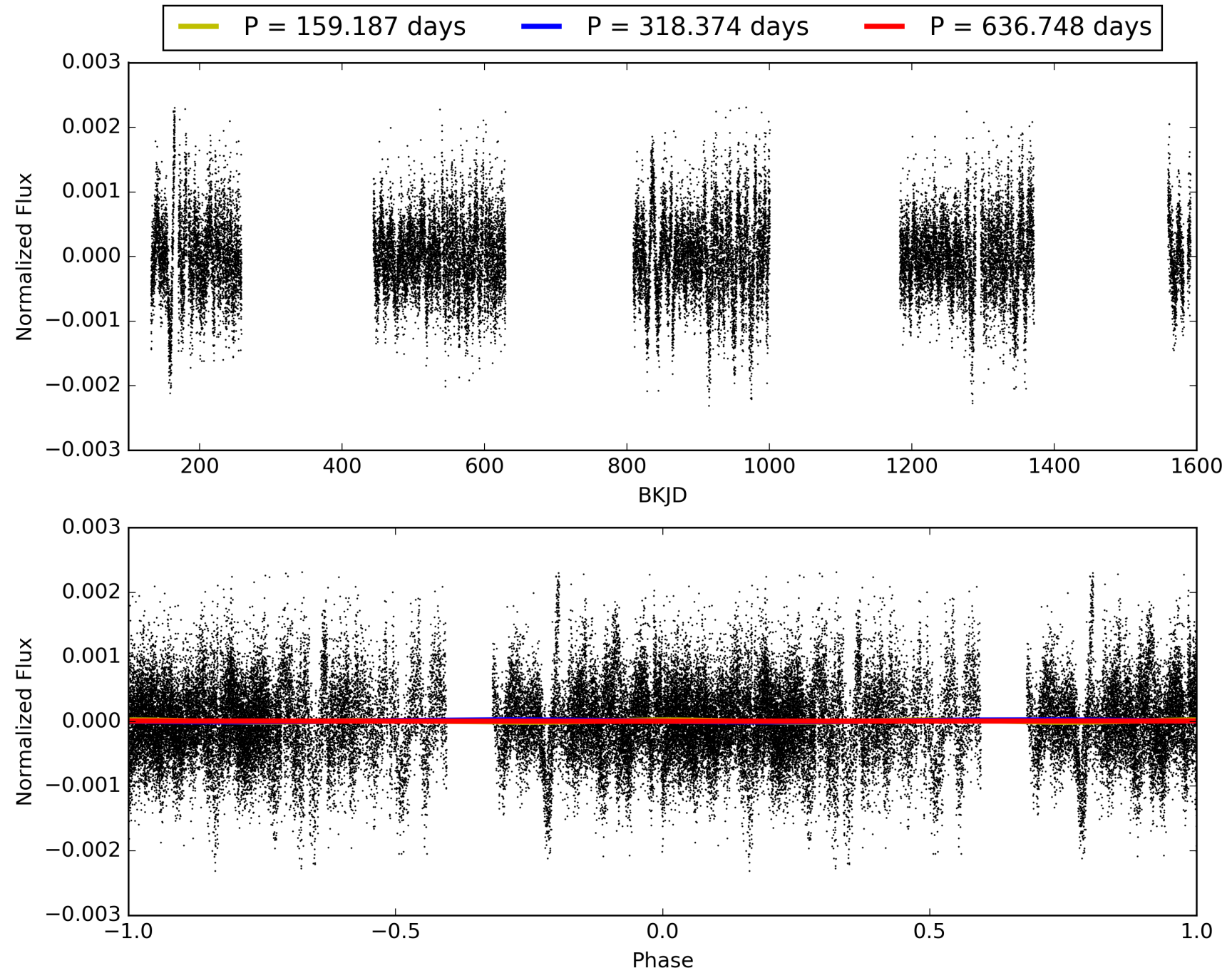
KIC: 9075779 Candidate: 1 of 1 Period: 318.374 d



TCE 009075779-01, PDC Light Curves

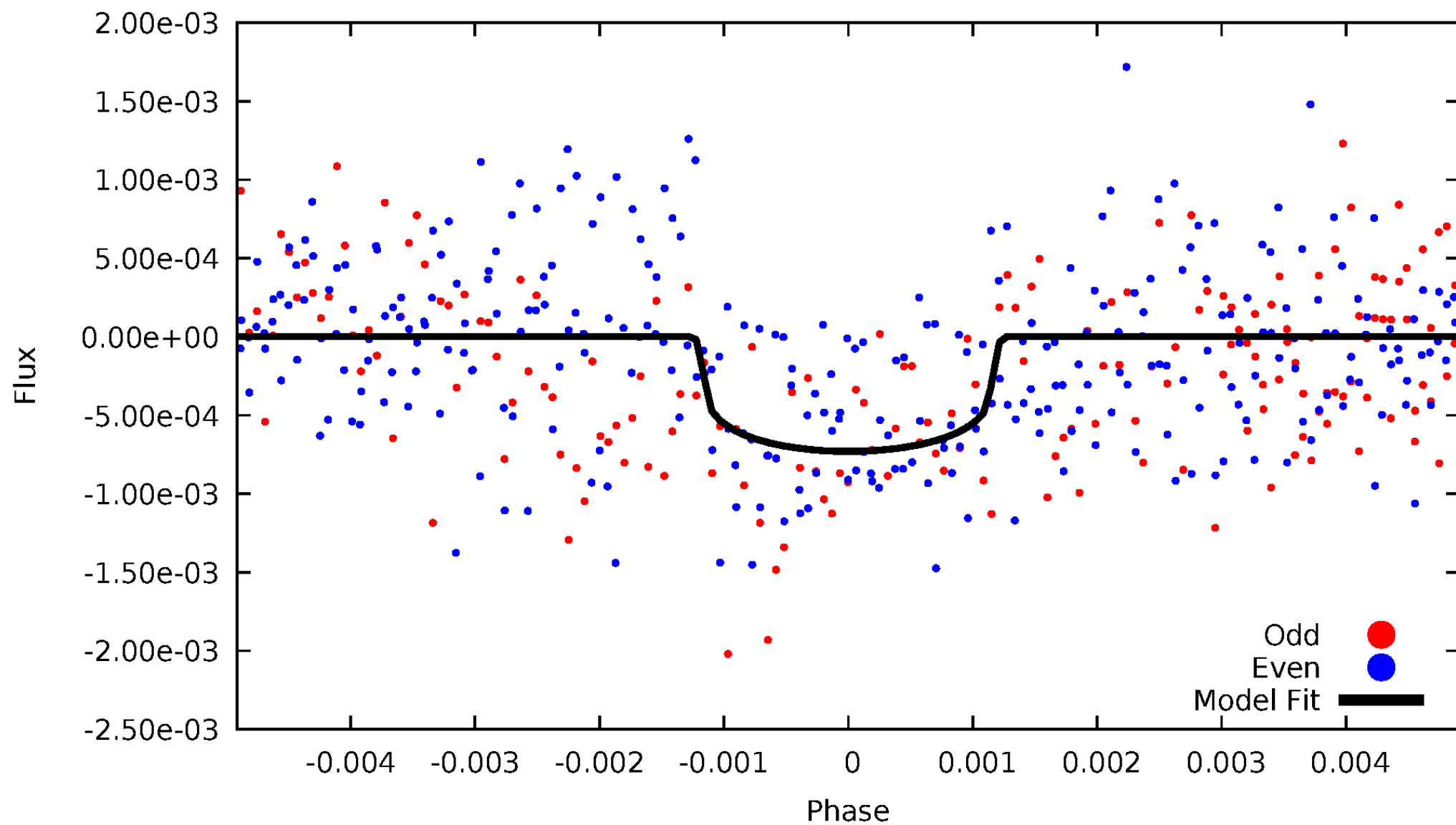


TCE 009075779-01



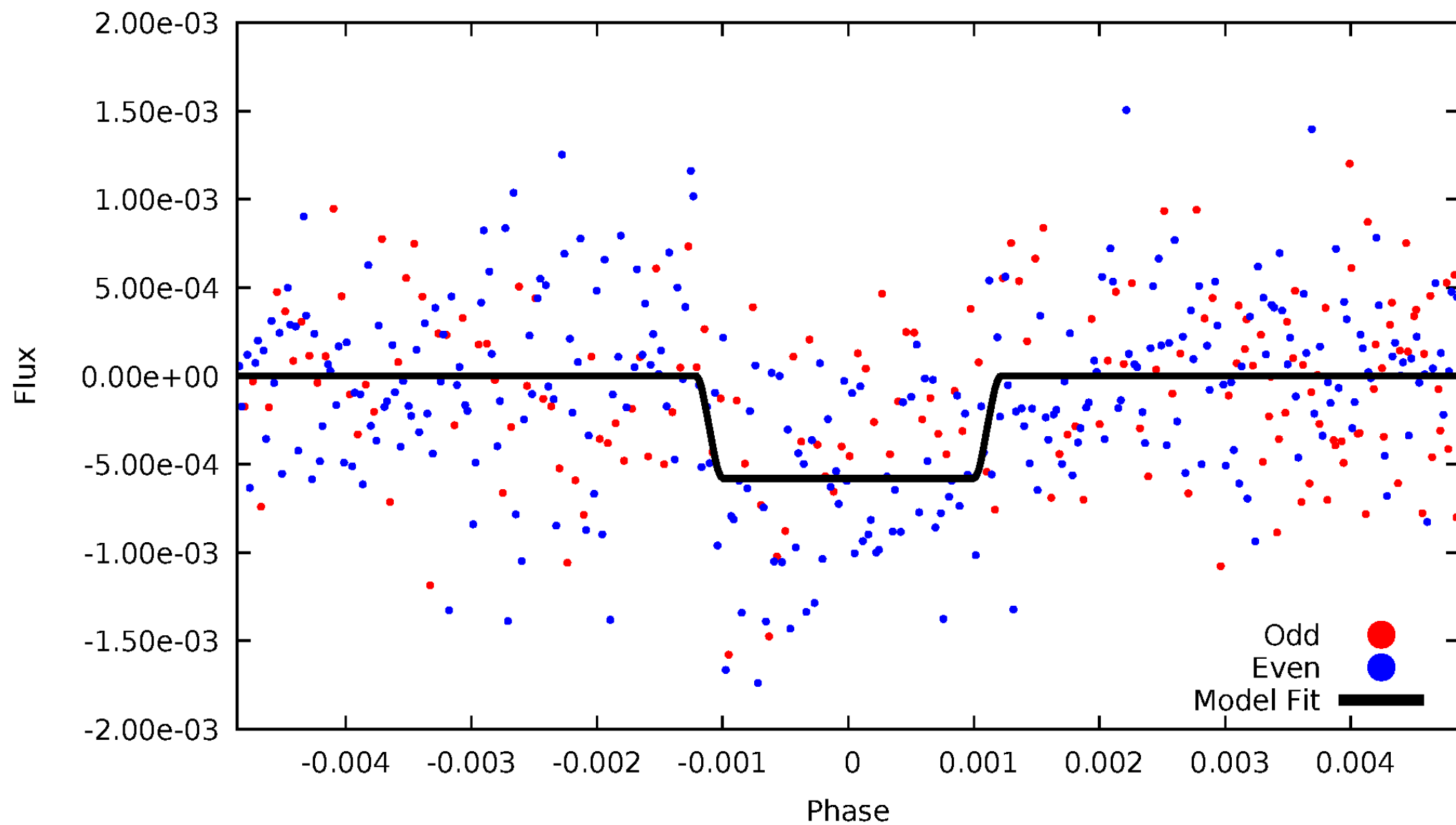
DV Odd/Even

TCE 009075779-01



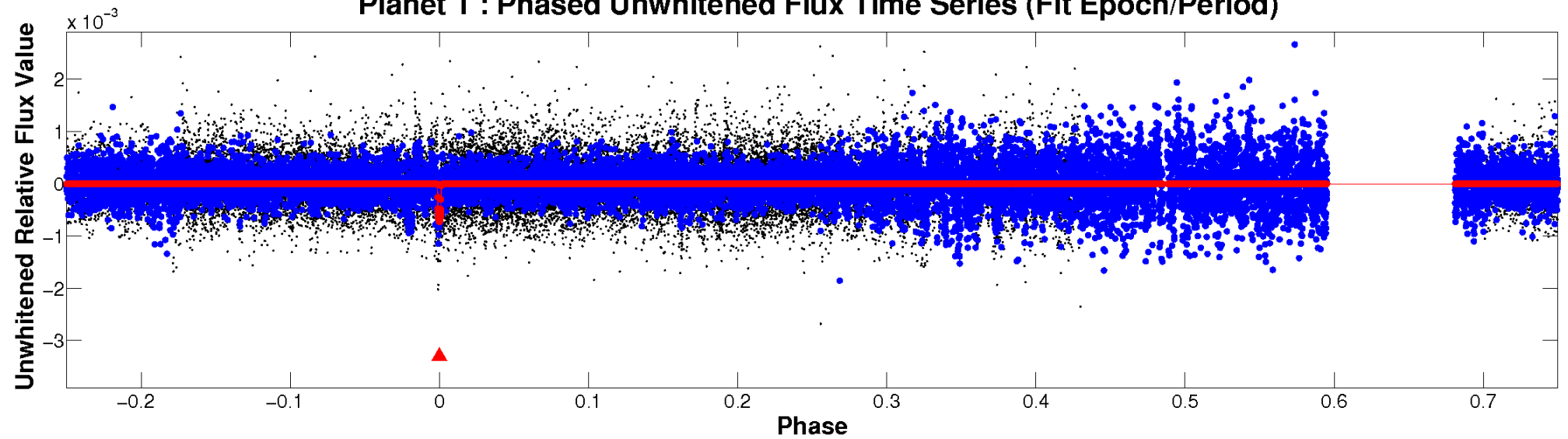
ALT Odd/Even

TCE 009075779-01

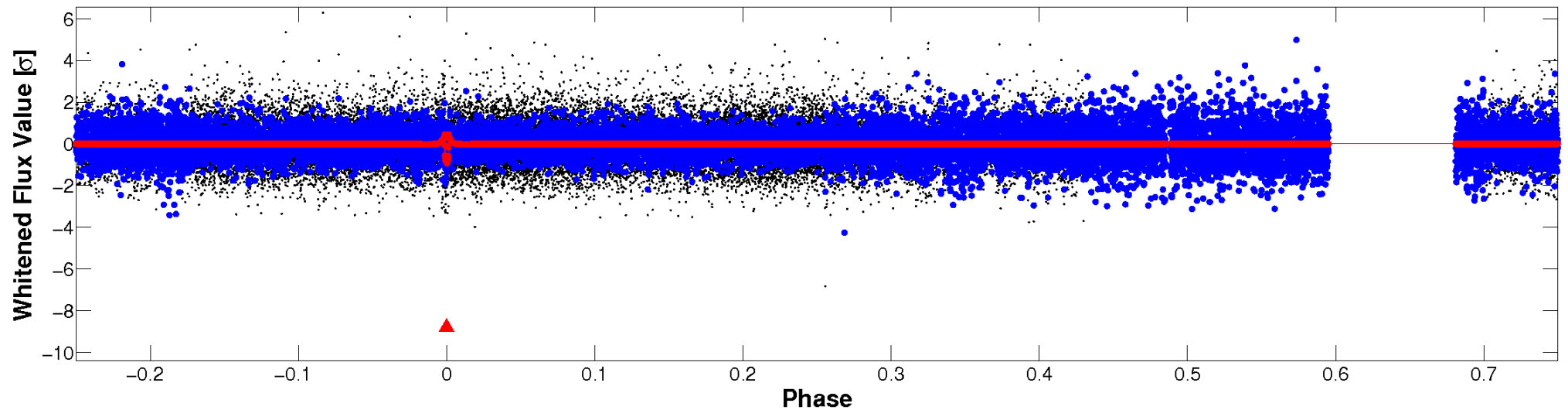


Non-Whitened Vs. Whitened Light Curve

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

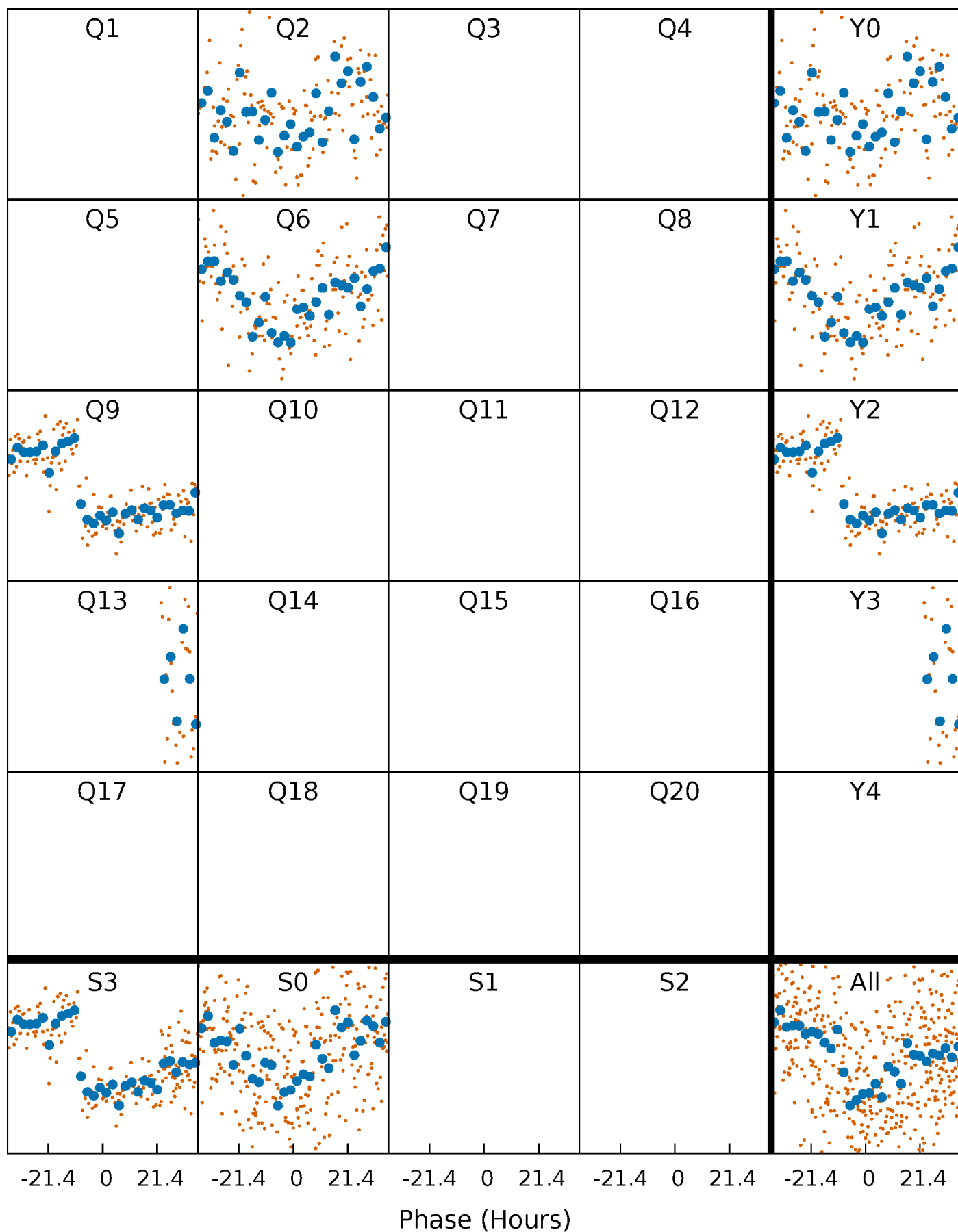


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



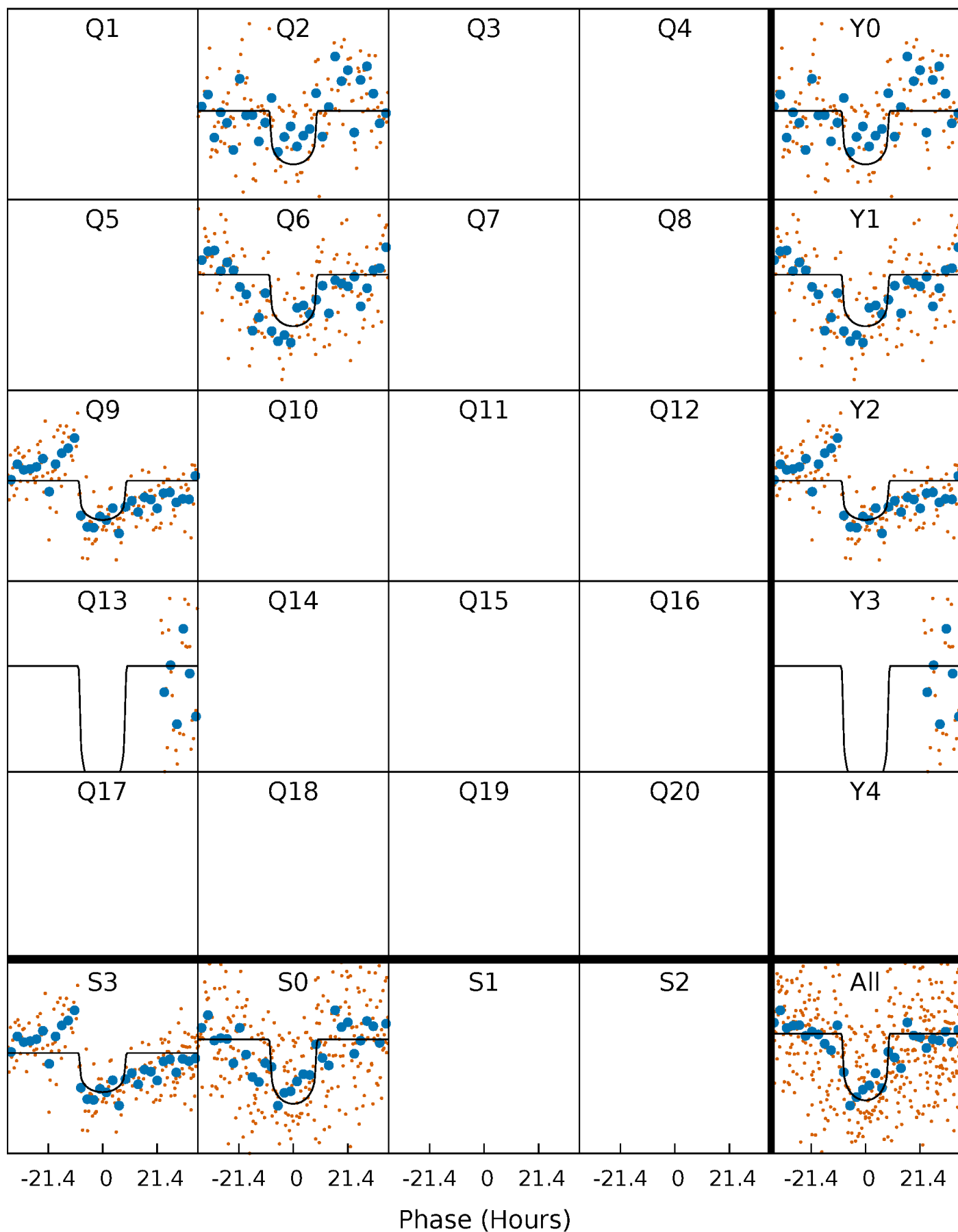
PDC Quarter-Phased Transit Curves

TCE 009075779-01 P=318.373823 Days $T_0=226.676213$ (BKJD)



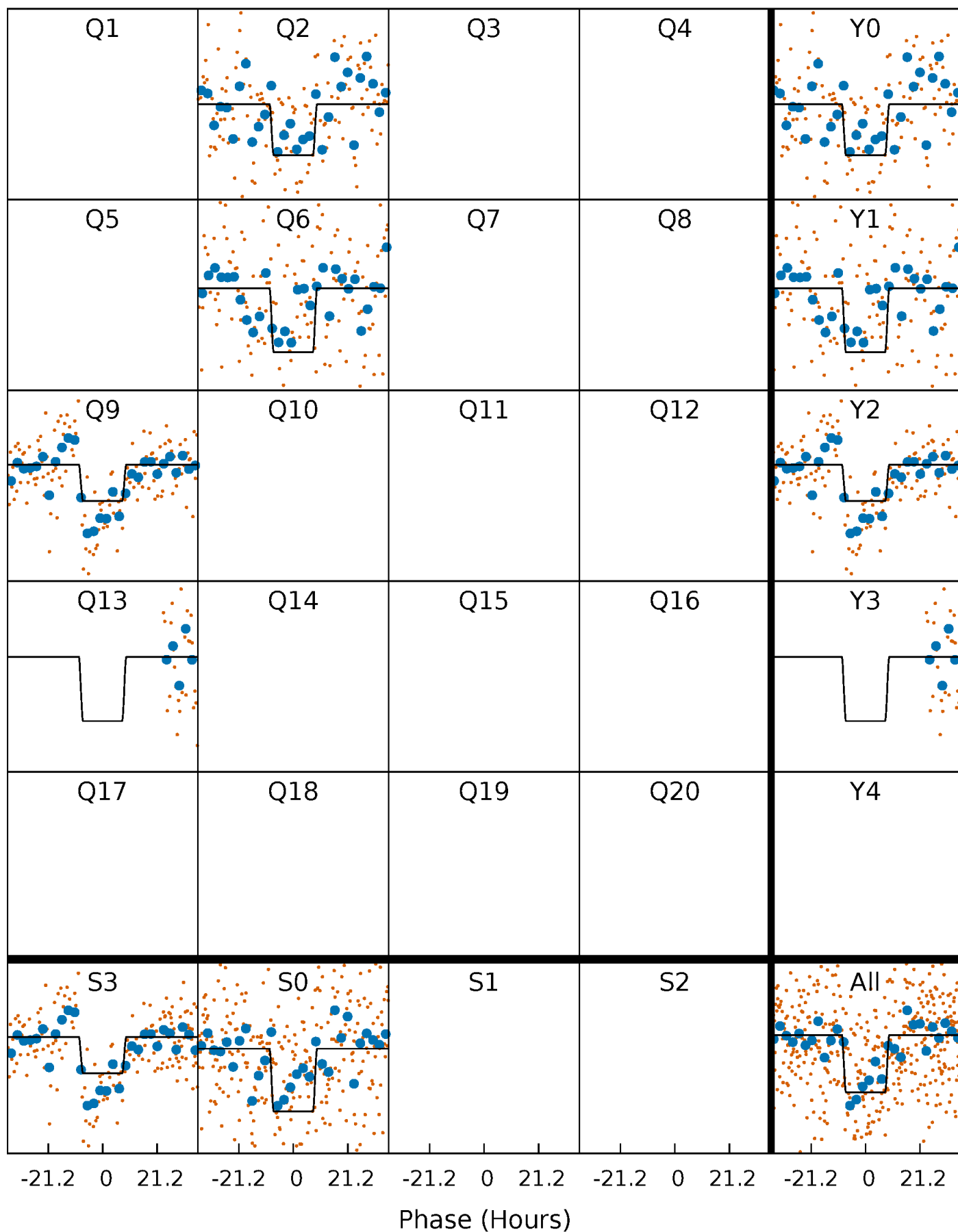
DV Quarter-Phased Transit Curves

TCE 009075779-01 P=318.373823 Days $T_0=226.676213$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

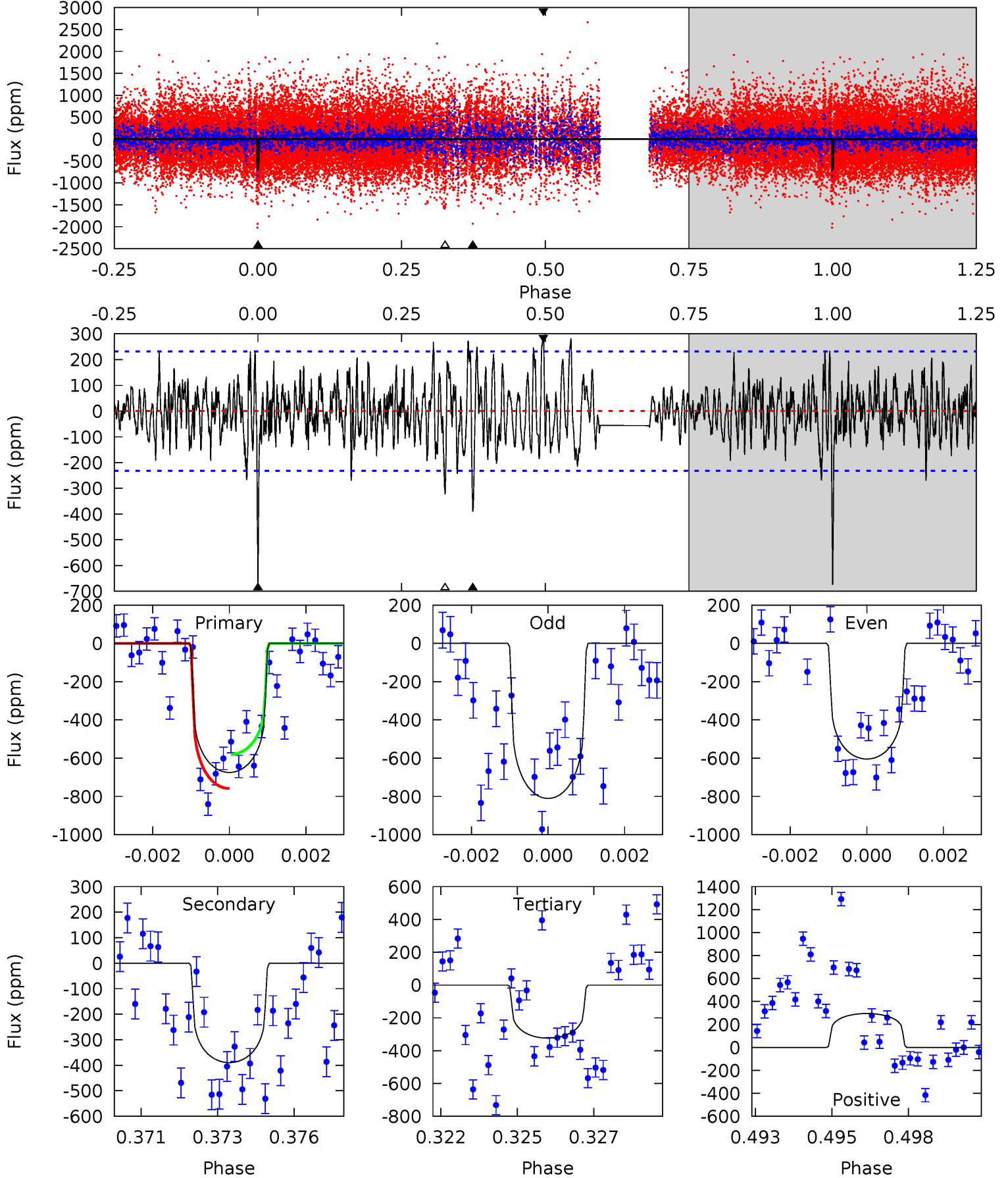
TCE 009075779-01 P=318.361676 Days $T_0=226.683796$ (BKJD)



DV Model-Shift Uniqueness Test

009075779-01, P = 318.373823 Days, E = 226.676213 Days

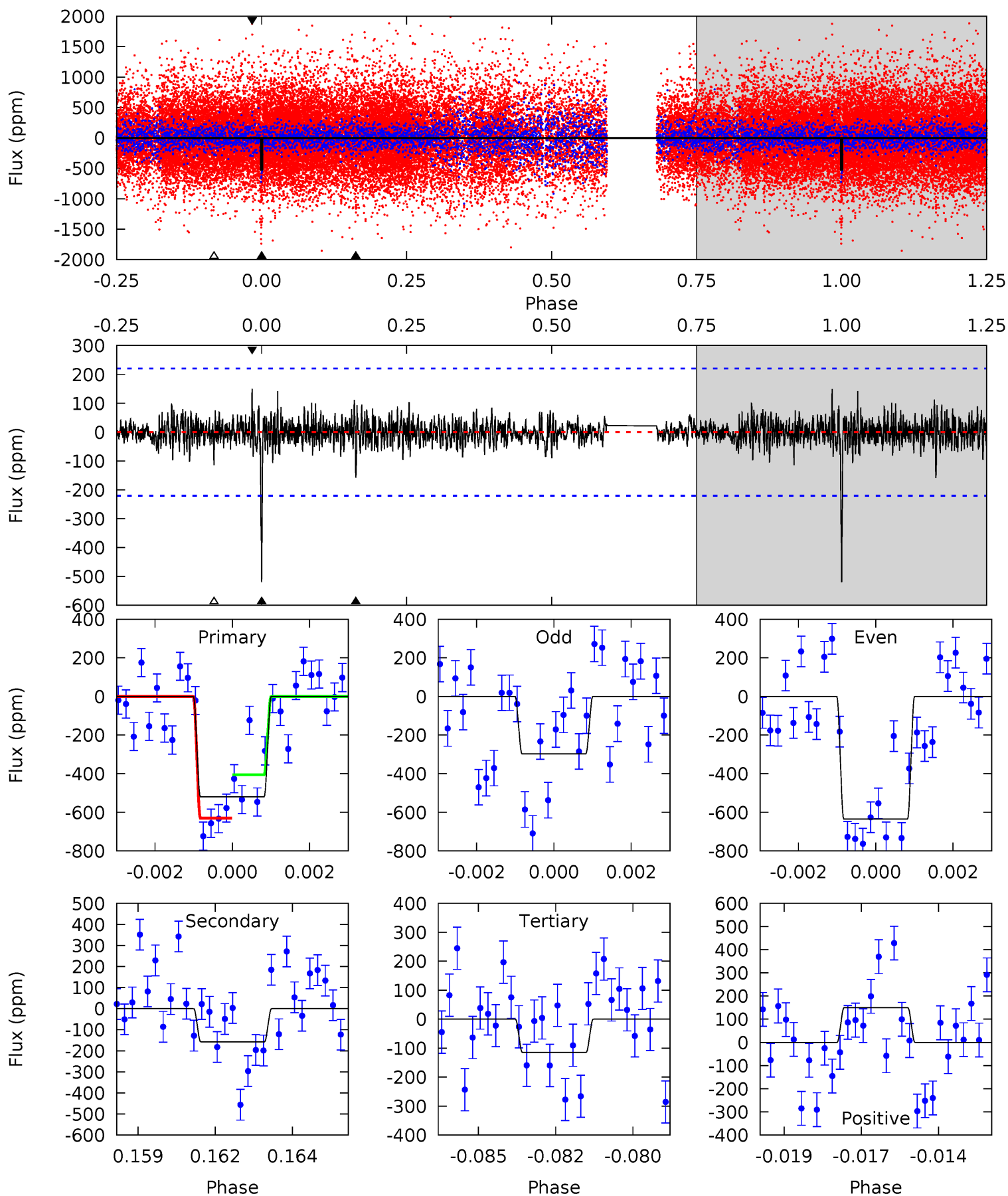
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.4	8.89	7.39	6.73	5.29	3.03	2.01	8.01	8.67	1.51	2.16	2.25	0.82	0.30	2.04



Alt Model-Shift Uniqueness Test

009075779-01, P = 318.361676 Days, E = 226.683796 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.5	3.78	2.76	3.59	5.29	3.03	0.77	9.73	8.90	1.02	0.19	3.86	1.43	0.22	2.73



Stellar Parameters For KIC 009075779

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5750^{+155}_{-172}	$4.554^{+0.036}_{-0.204}$	$-0.160^{+0.300}_{-0.300}$	$0.849^{+0.252}_{-0.079}$	$0.945^{+0.098}_{-0.120}$	$2.174^{+0.426}_{-1.111}$
	+3%/-3%	+1%/-4%	+188%/-188%	+30%/-9%	+10%/-13%	+20%/-51%
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 009075779-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-390 ± 44	$2.56^{+0.67}_{-0.60}$	353^{+25}_{-14}	5059^{+642}_{-447}	25453^{+18505}_{-9326}
Alt.	-157 ± 42	$2.32^{+0.73}_{-0.58}$	355^{+22}_{-16}	4340^{+612}_{-417}	12276^{+10890}_{-5493}

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 $A_{obs} \gg 1.0$

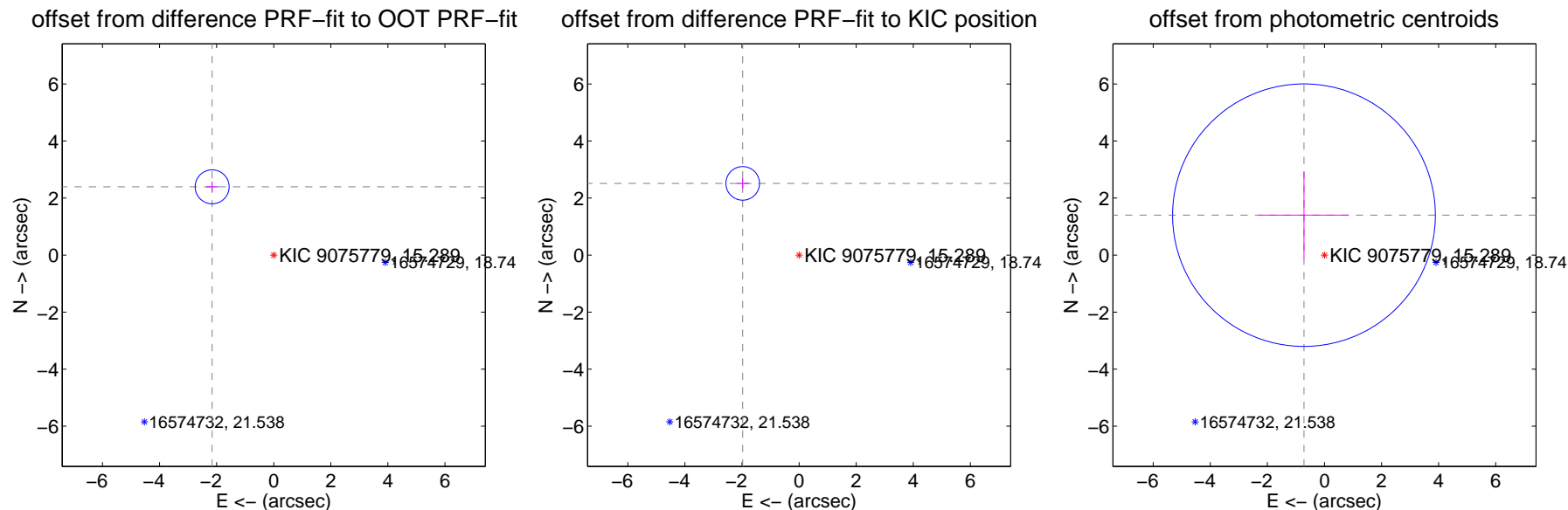
DV Centroid Data

Supplemental centroid analysis for 009075779-01. Kepler magnitude: 15.29. Transit SNR 9.04

There are 1 quarters with good PRF difference image offsets

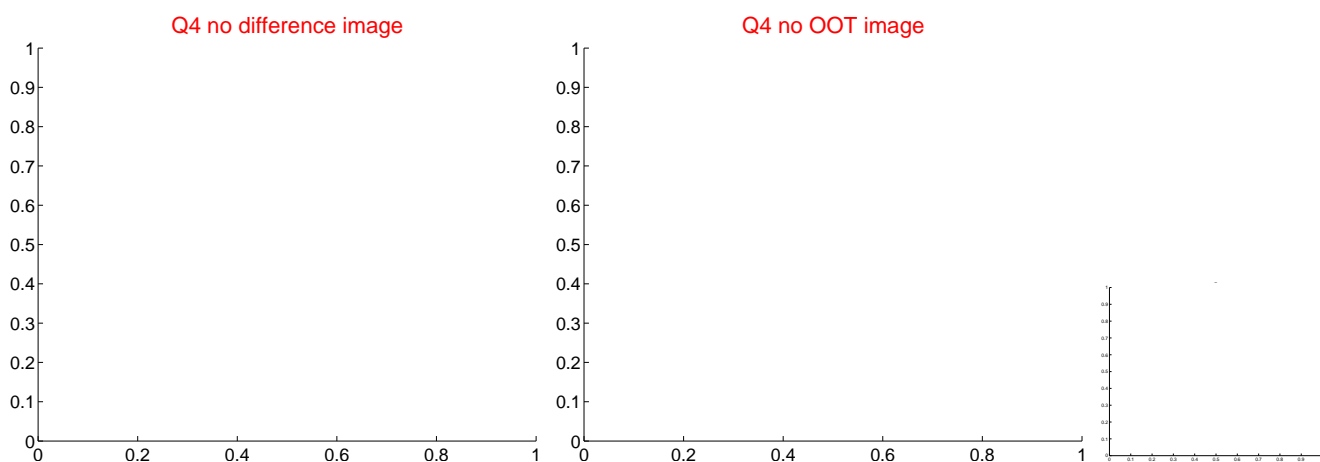
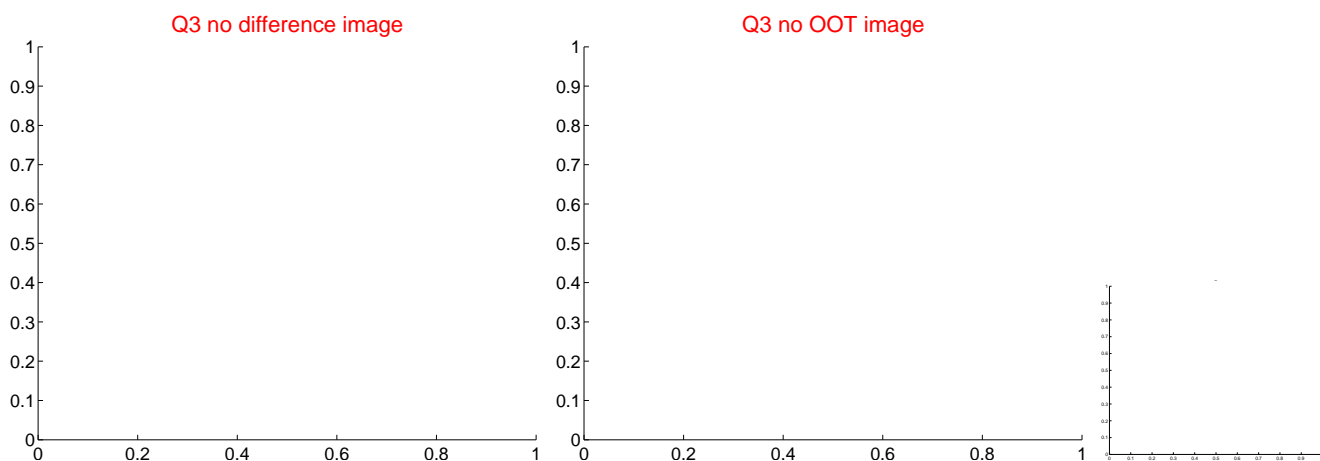
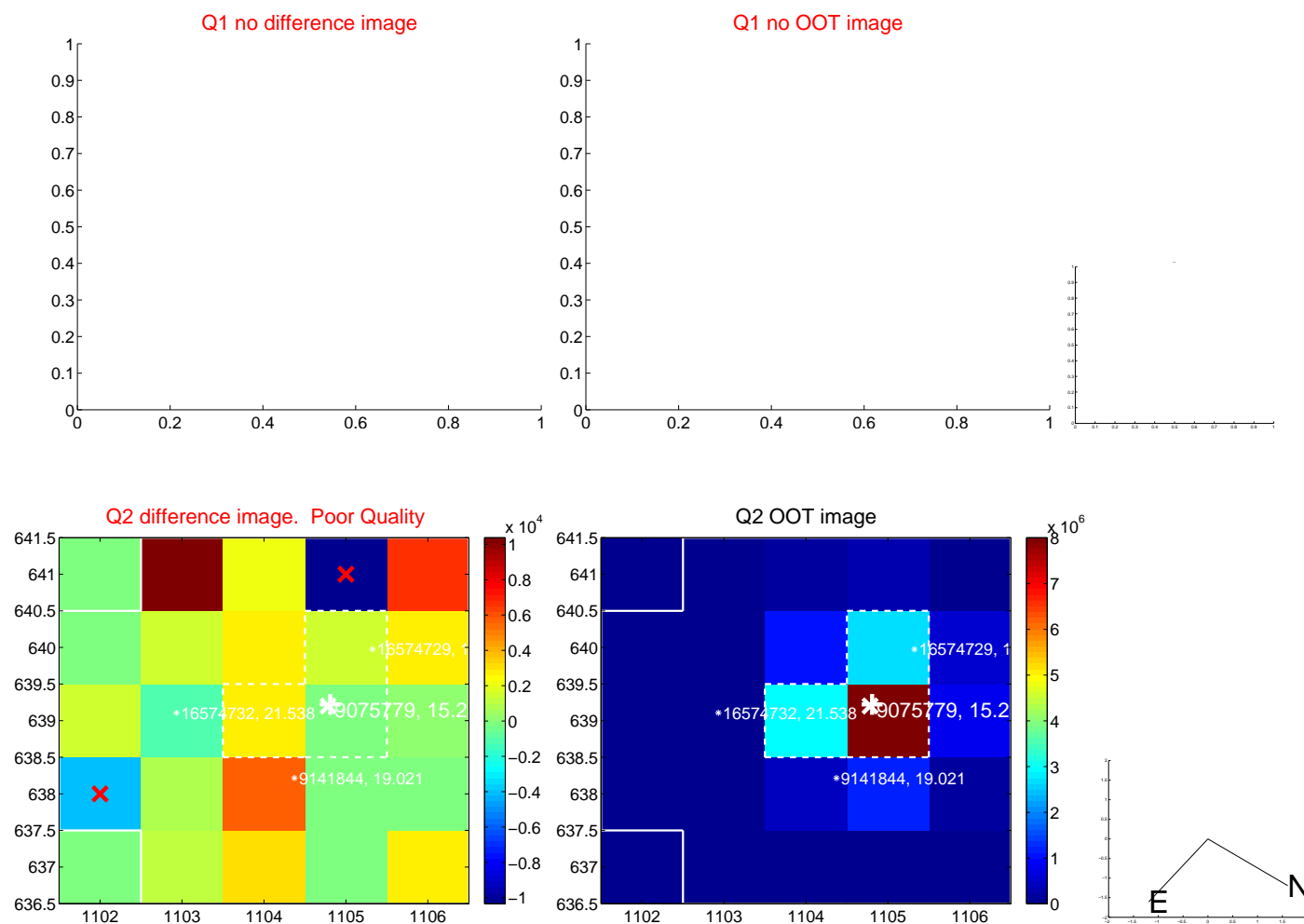
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.223 ± 0.199	16.23	2.158 ± 0.216	2.394 ± 0.184
PRF-fit source offset from KIC position	3.198 ± 0.196	16.28	1.976 ± 0.216	2.514 ± 0.184
photometric centroid source offset	1.57 ± 1.53	1.03	0.72 ± 1.58	1.40 ± 1.52

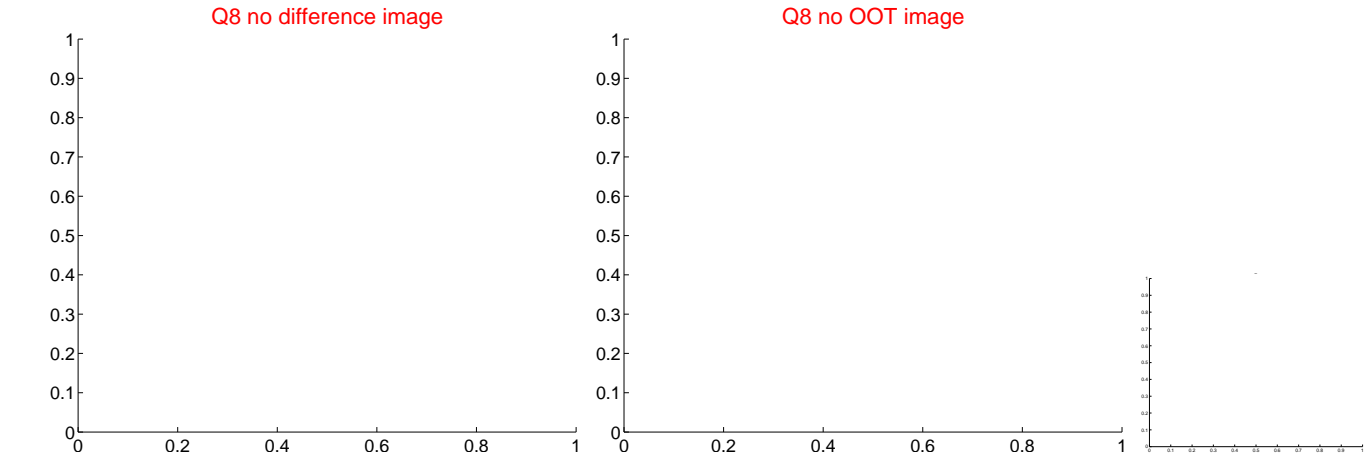
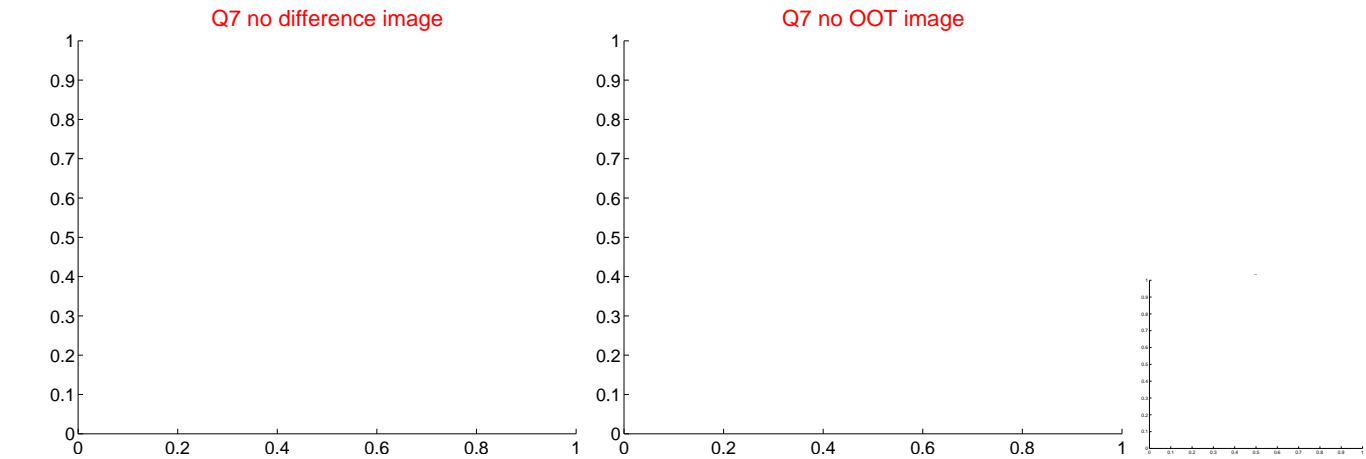
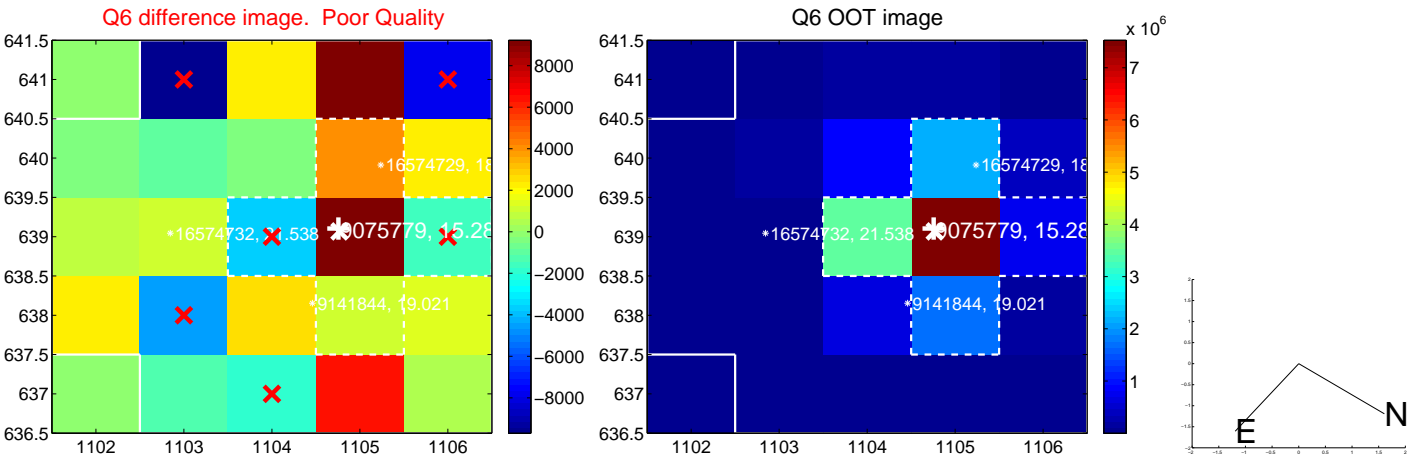
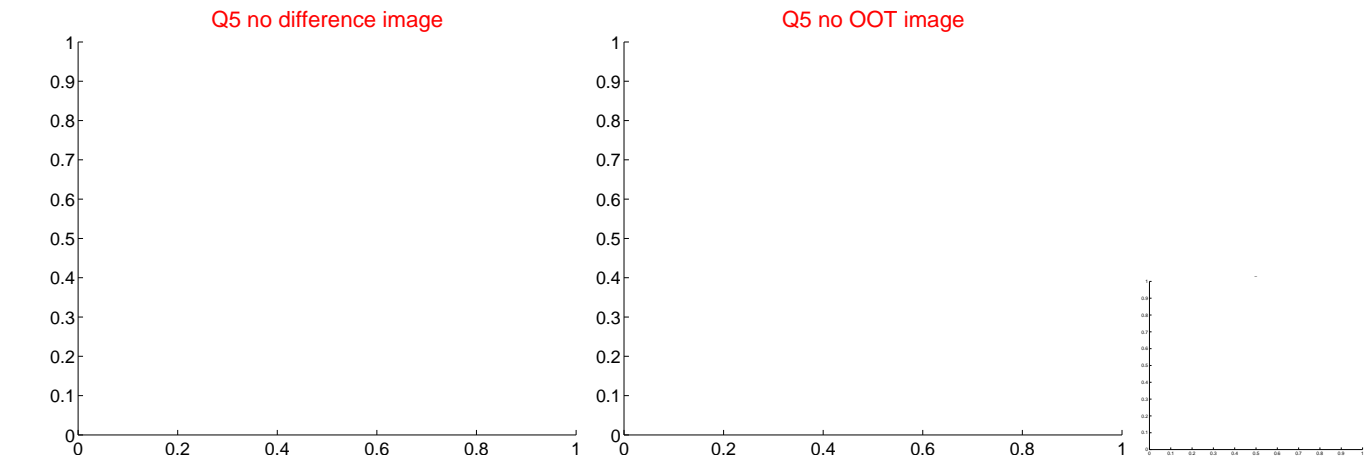


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

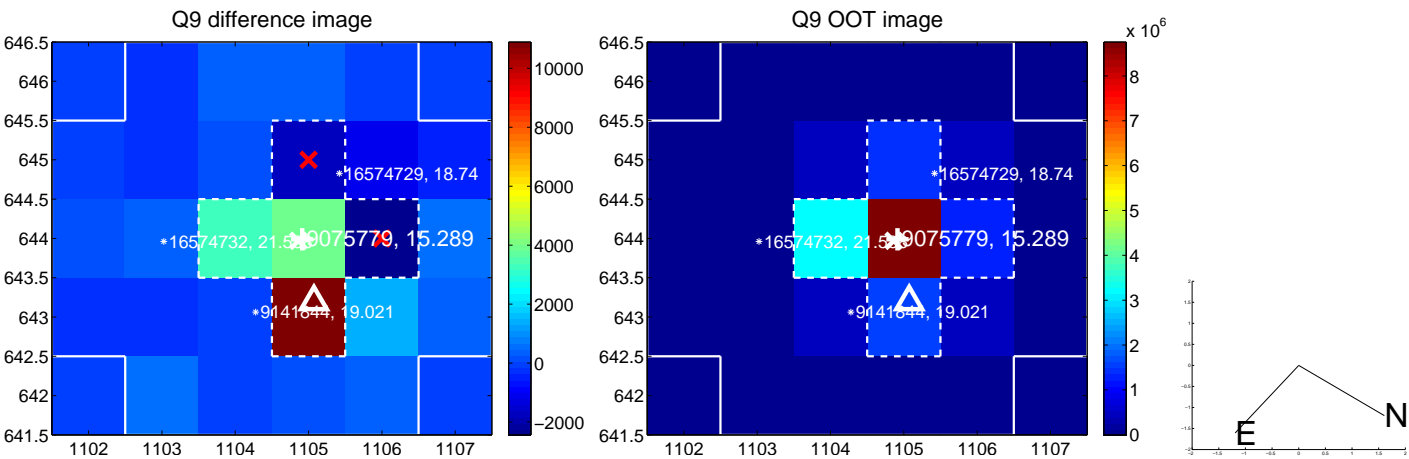
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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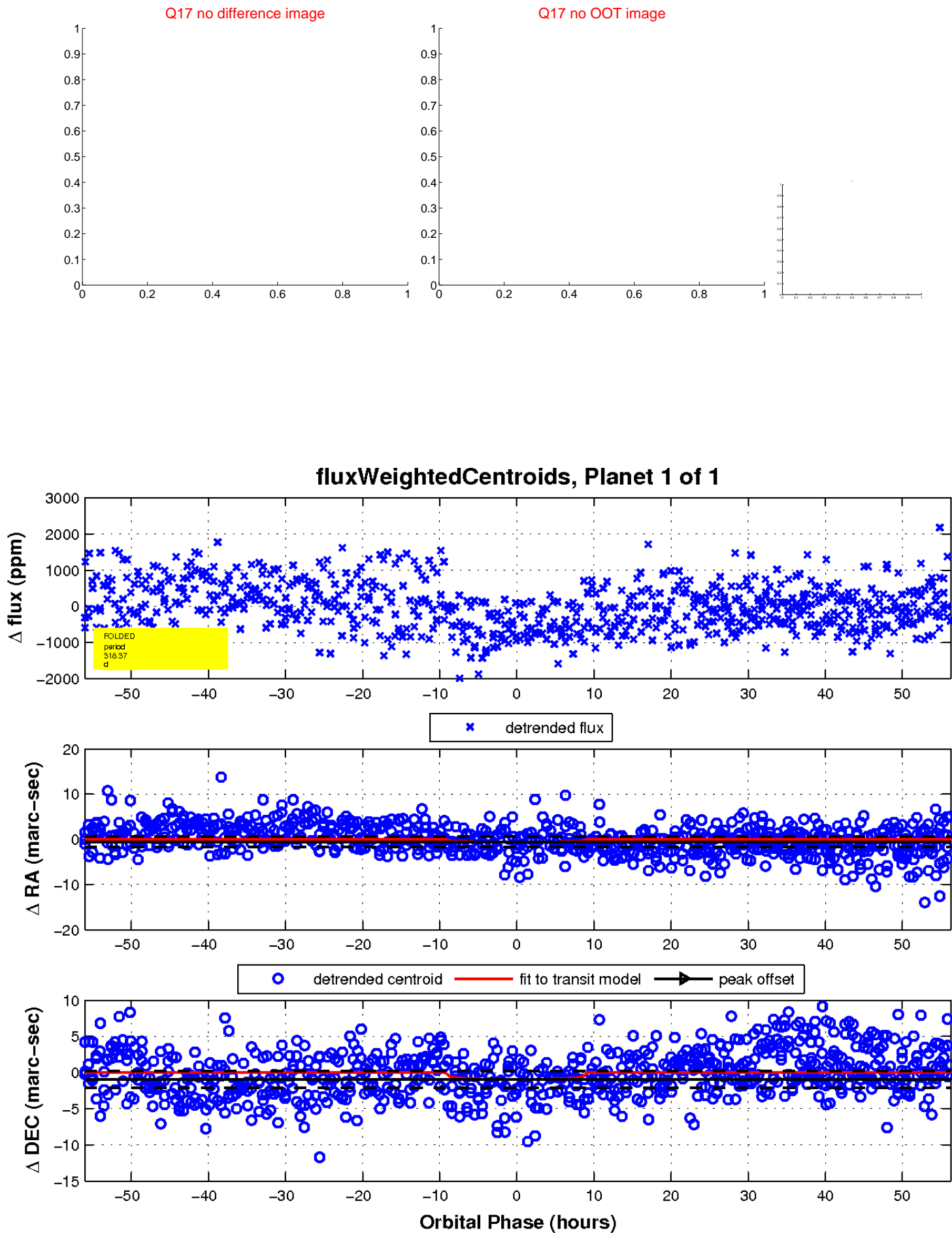
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UKIRT Image

Declination

