

KIC 005352027

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})
005352027-01	OBS	No	584.720961	374.187241	4206.1	4.144	12.3	7.8	0.86	5927	5.56	0.45

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005352027-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—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.

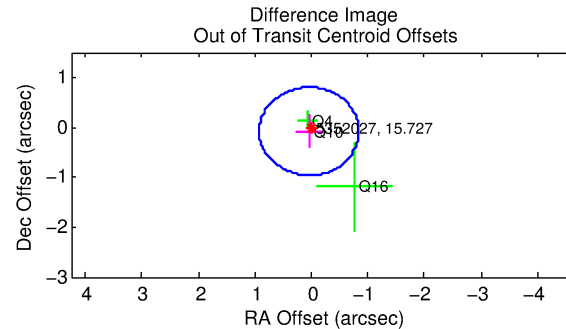
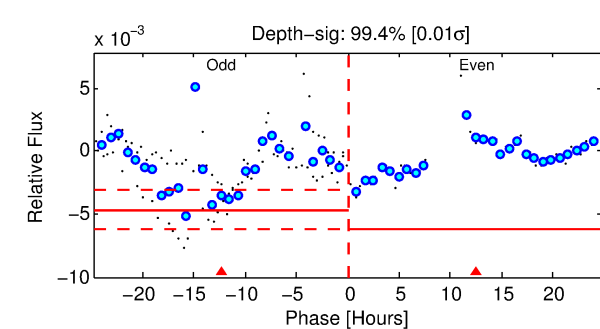
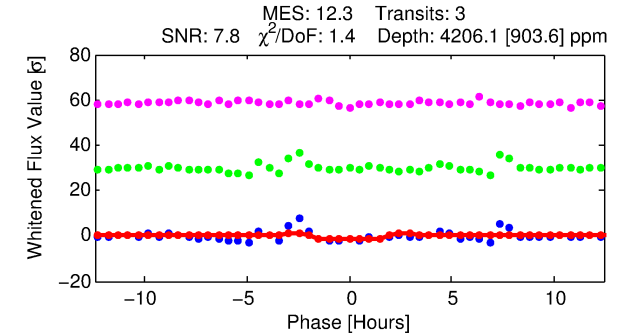
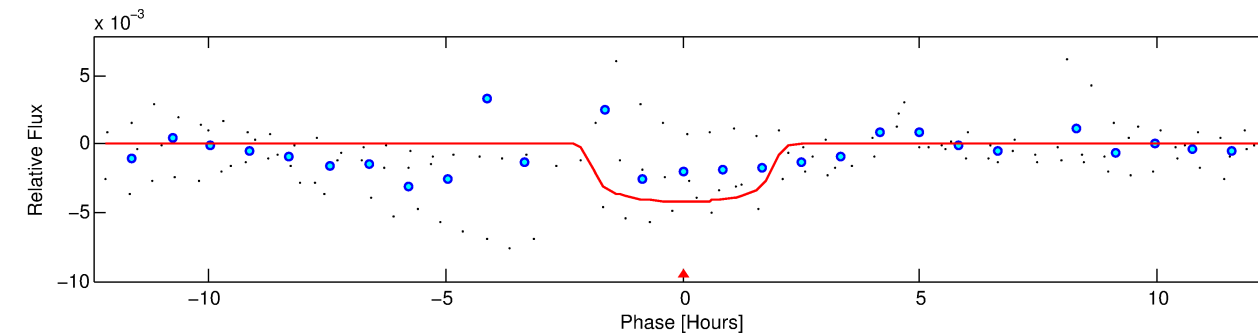
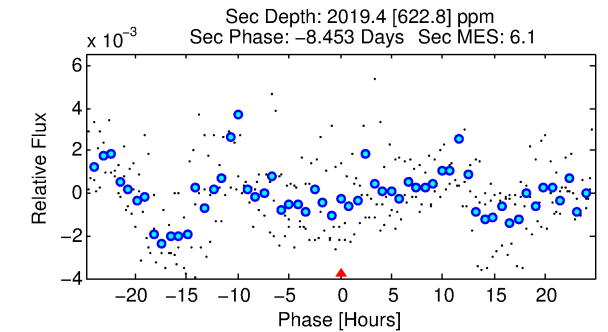
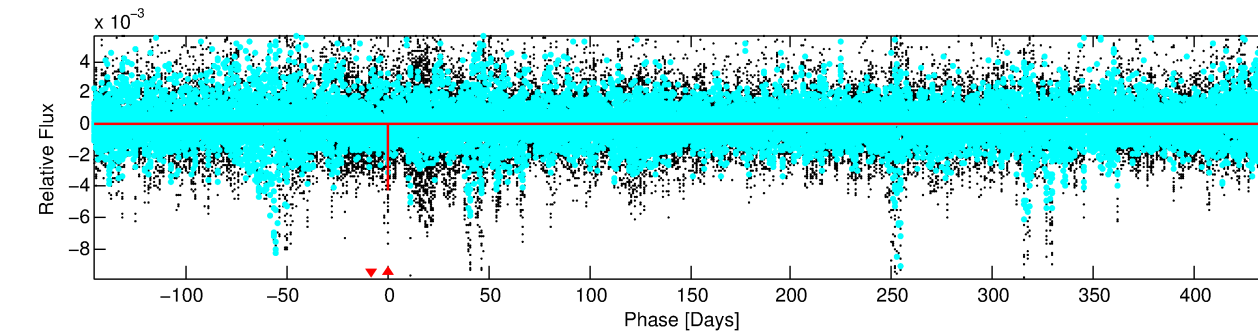
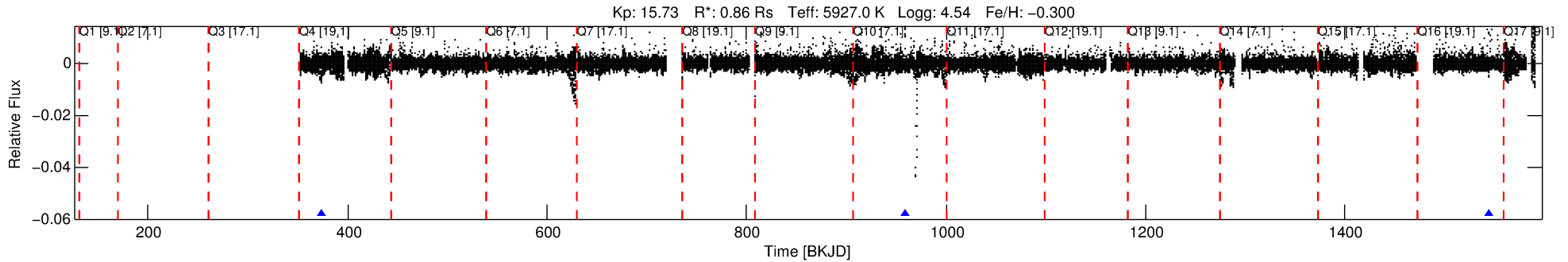
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005352027-01

No Significant Match Found

DV One-Page Summary

KIC: 5352027 Candidate: 1 of 1 Period: 584.721 d



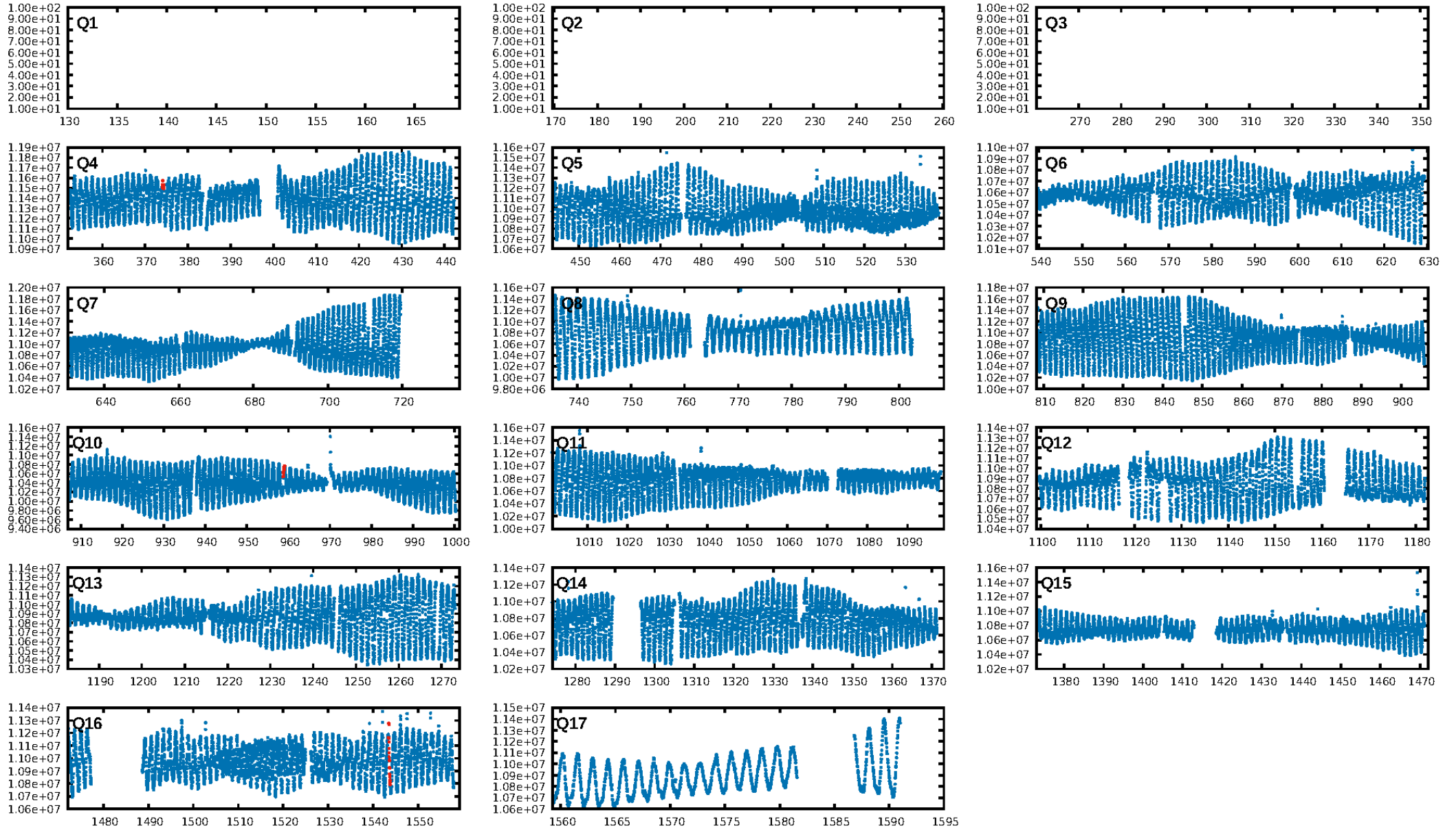
DV Fit Results:

Period = 584.72096 [0.00553] d
Epoch = 374.1872 [0.0072] BKJD
Rp/R* = 0.0593 [0.0356]
a/R* = 1141.57 [3014.15]
b = 0.02 [174.12]
Seff = 0.45 [0.18]
Teq = 209 [21] K
Rp = 5.56 [3.74] Re
a = 1.3428 [0.3427] AU
Ag = 64737.30 [83740.99] [0.77σ]
Teffp = 5161 [1609] K [3.08σ]

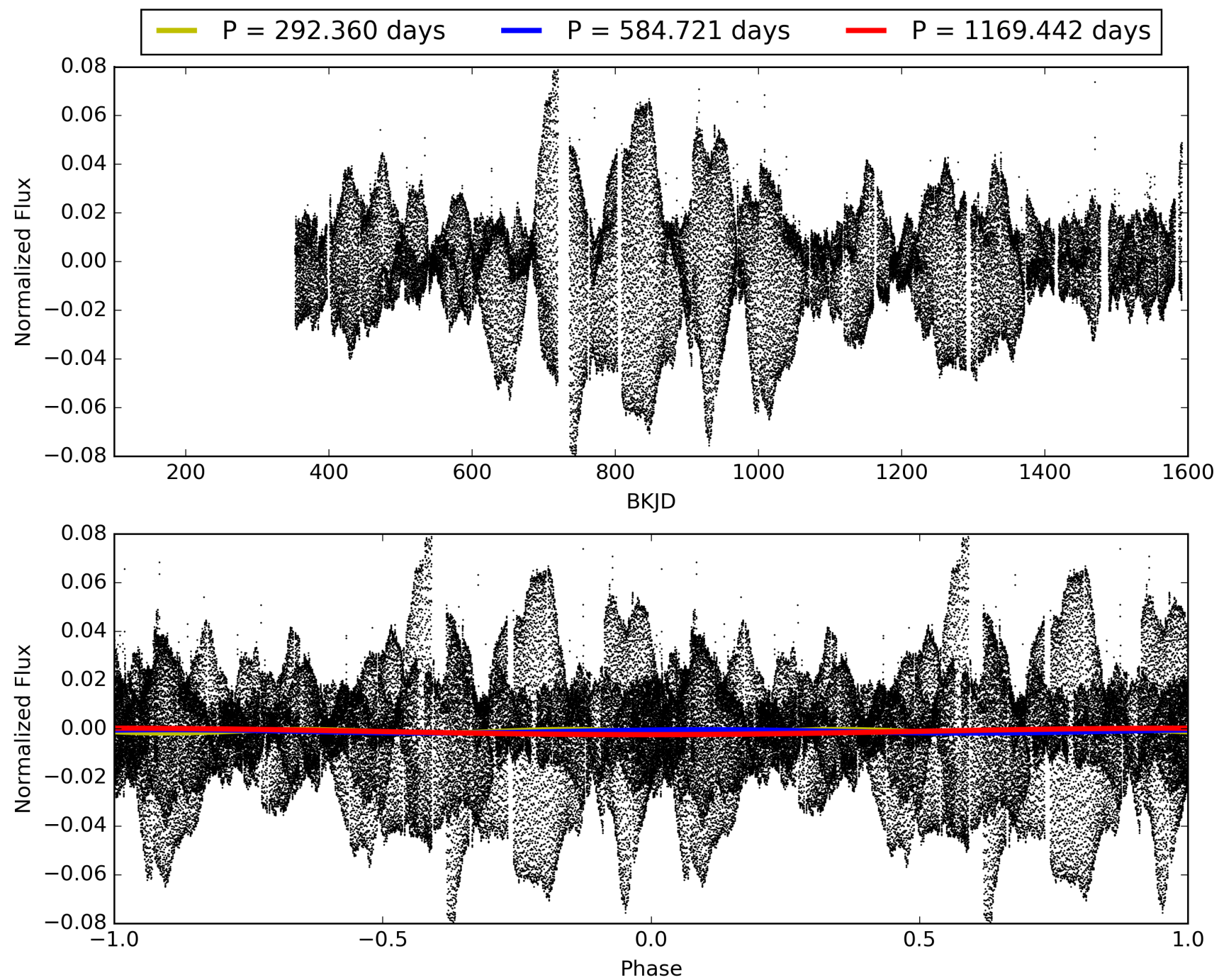
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 70.4%
ModelChiSquareGof-sig: 63.6%
Bootstrap-pfa: 2.52e-08
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 6.494
Centroid-sig: 11.1%
Centroid-so: 0.534 arcsec [0.88σ]
OotOffset-rm: 0.093 arcsec [0.32σ]
KicOffset-rm: 0.073 arcsec [0.25σ]
OotOffset-st: 1/0/2/0 [3]
KicOffset-st: 1/0/2/0 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 005352027-01, PDC Light Curves

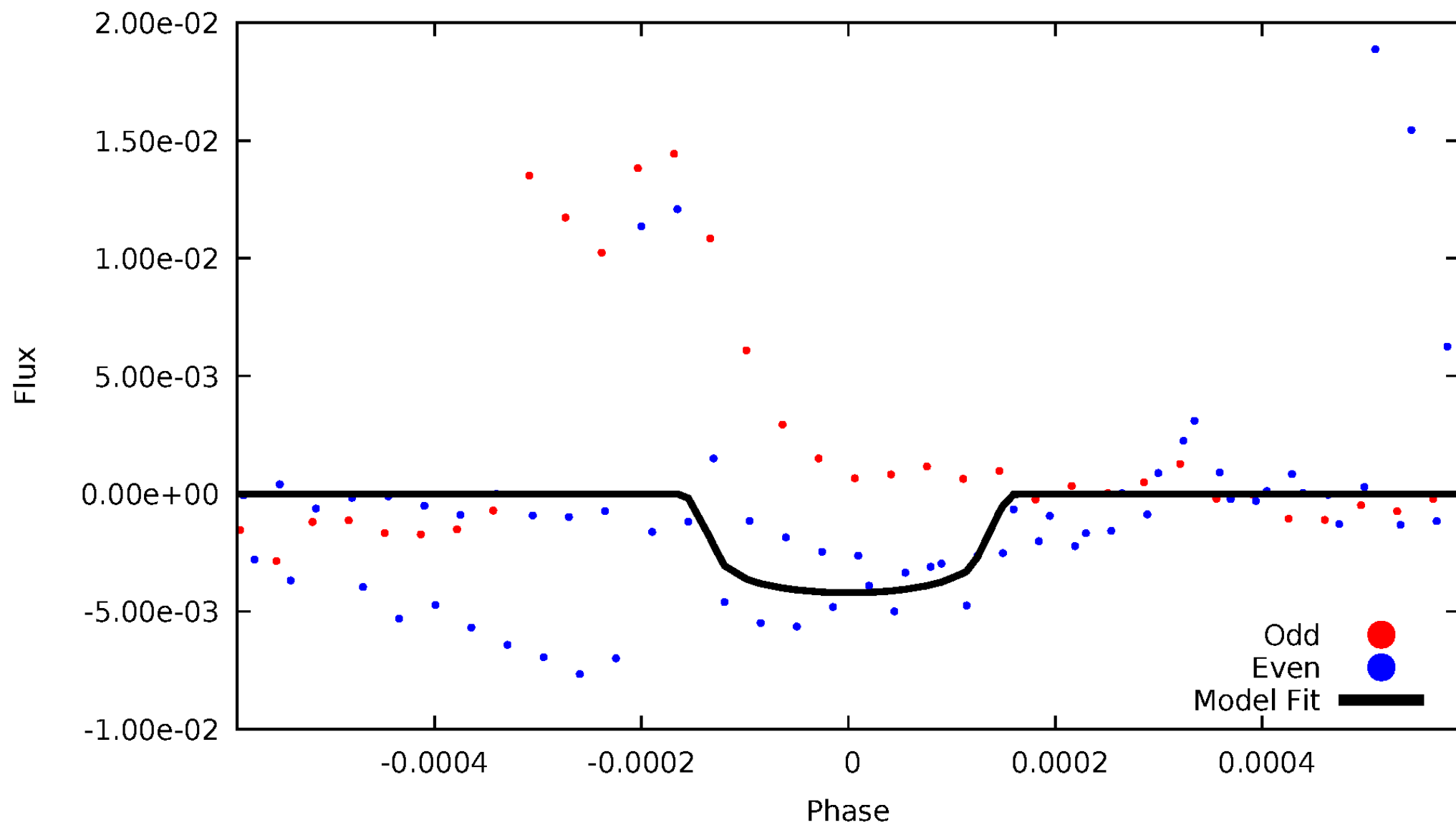


TCE 005352027-01



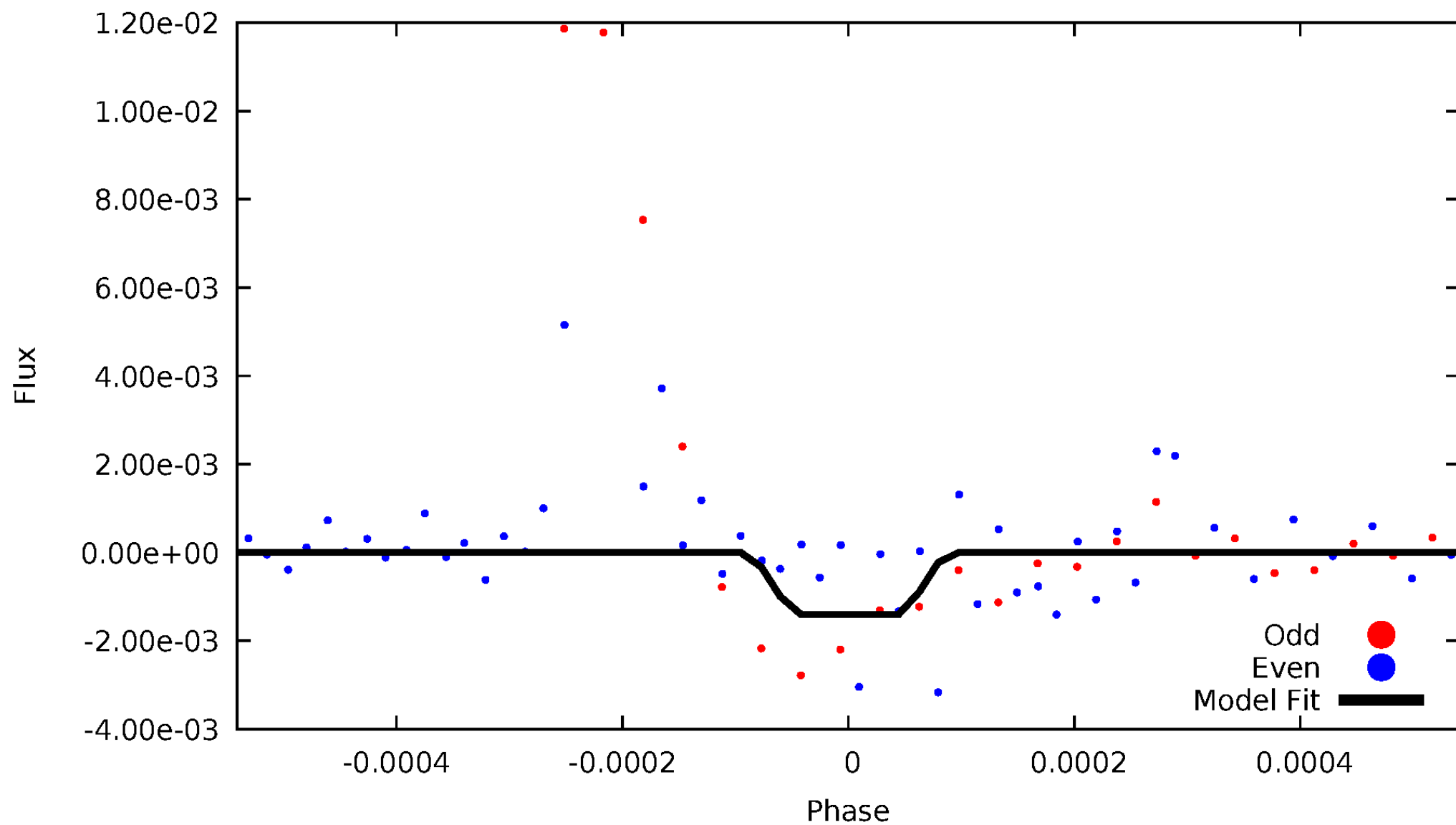
DV Odd/Even

TCE 005352027-01



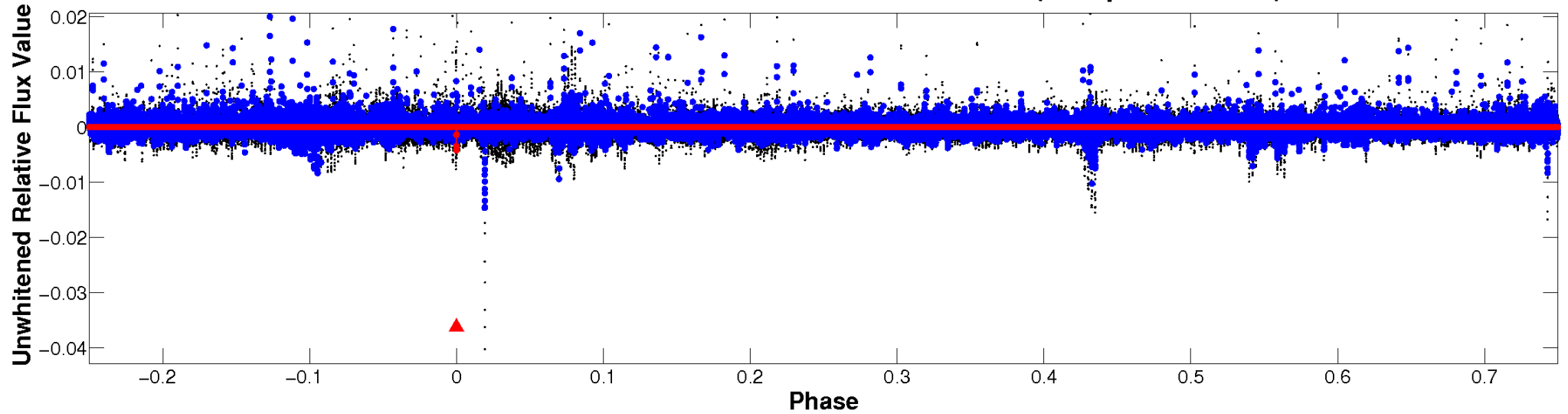
ALT Odd/Even

TCE 005352027-01

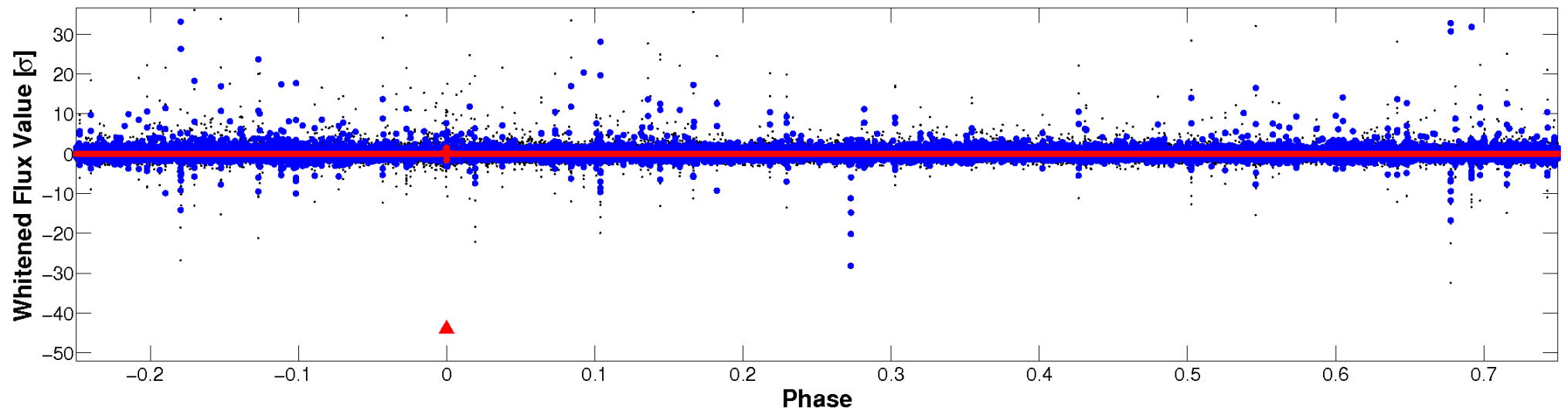


Non-Whitened Vs. Whitened Light Curve

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

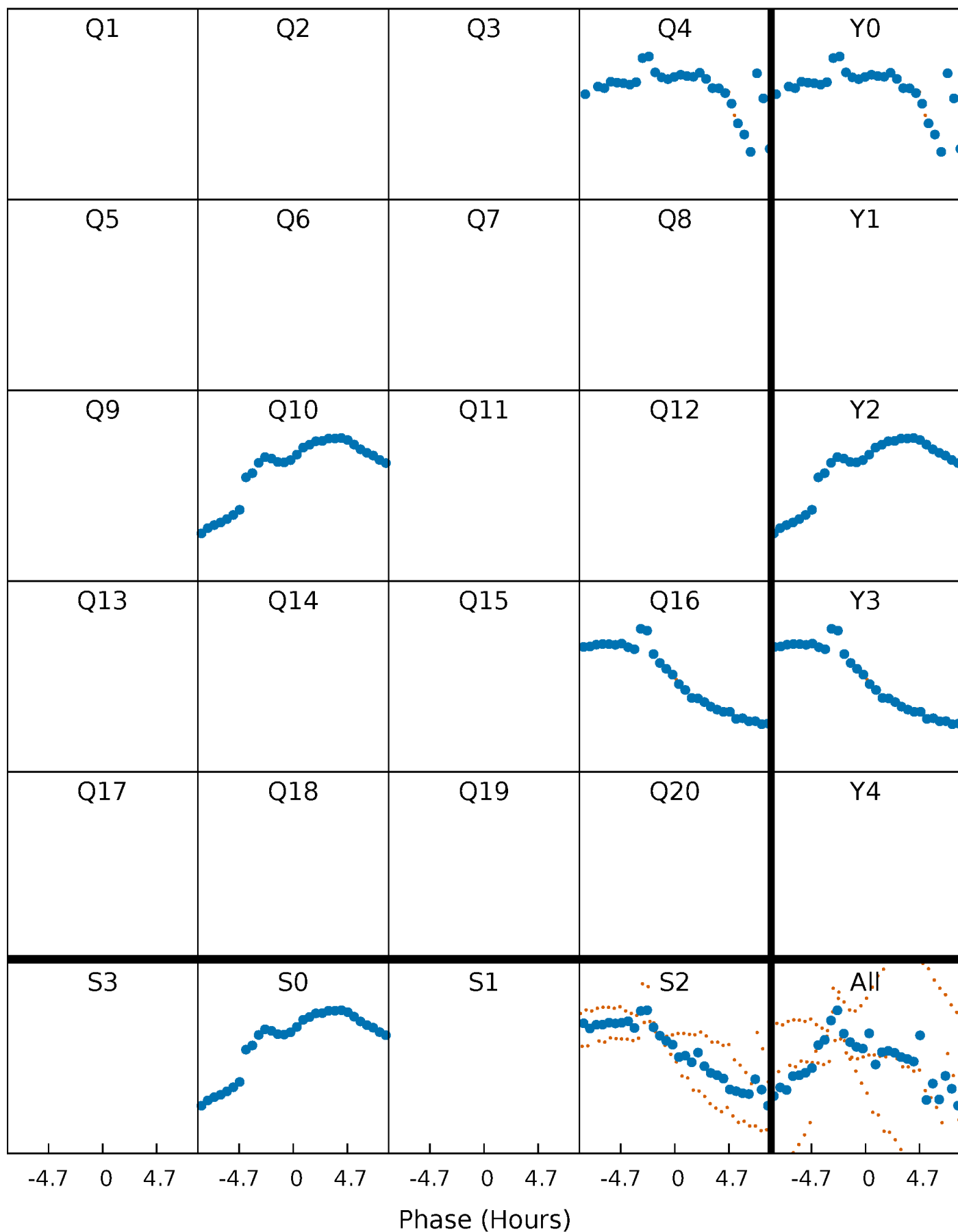


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



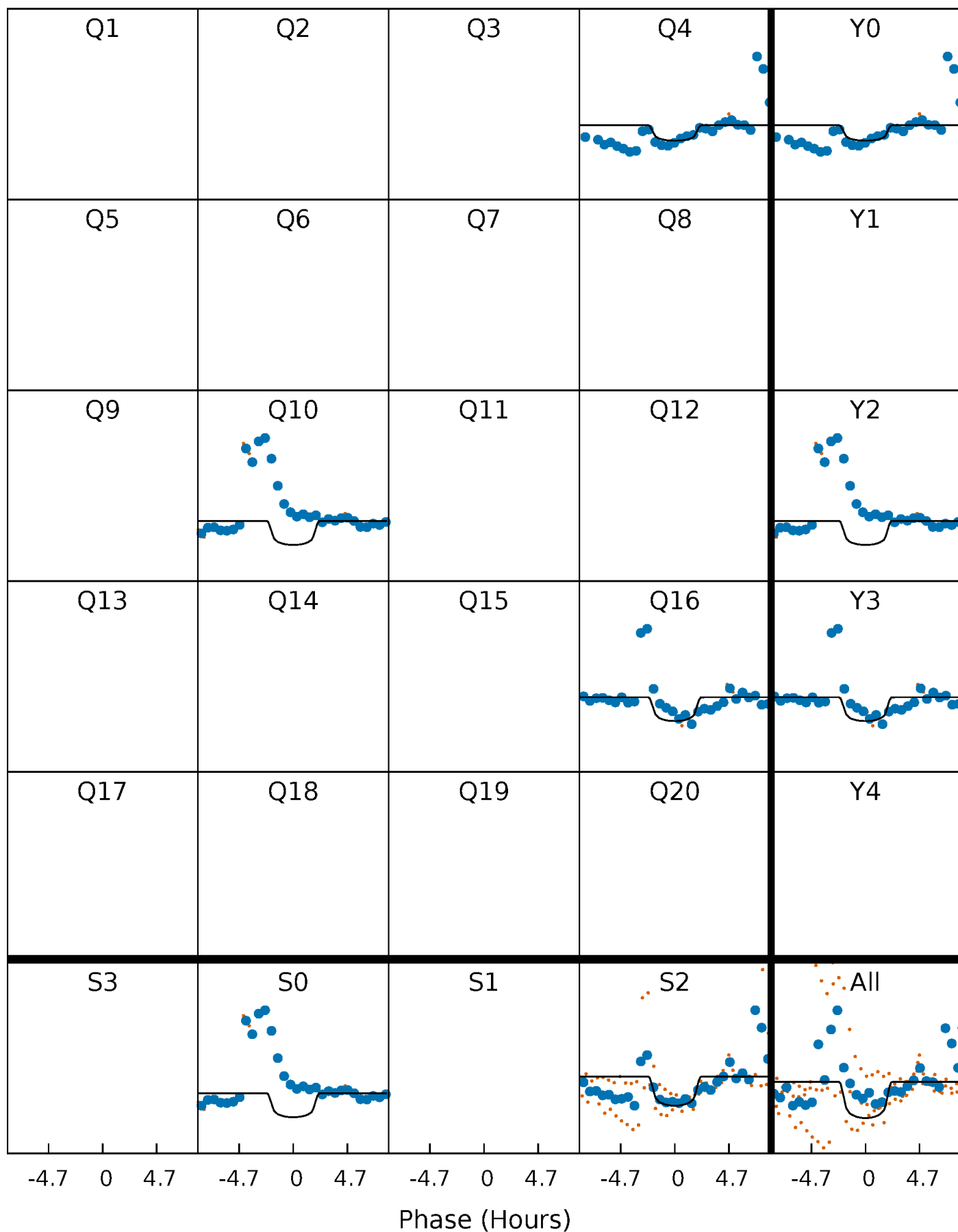
PDC Quarter-Phased Transit Curves

TCE 005352027-01 P=584.720961 Days $T_0=374.187241$ (BKJD)



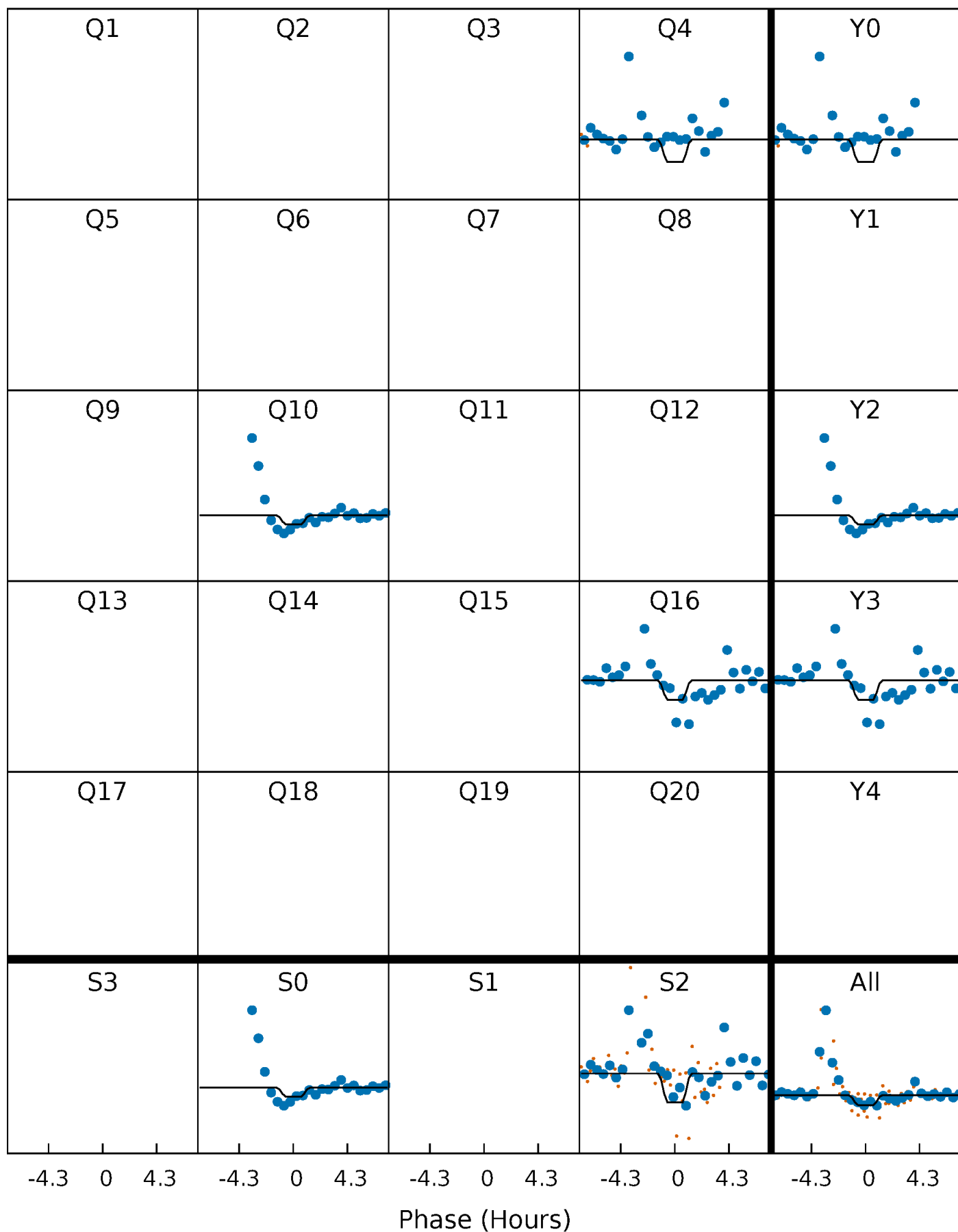
DV Quarter-Phased Transit Curves

TCE 005352027-01 P=584.720961 Days $T_0=374.187241$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

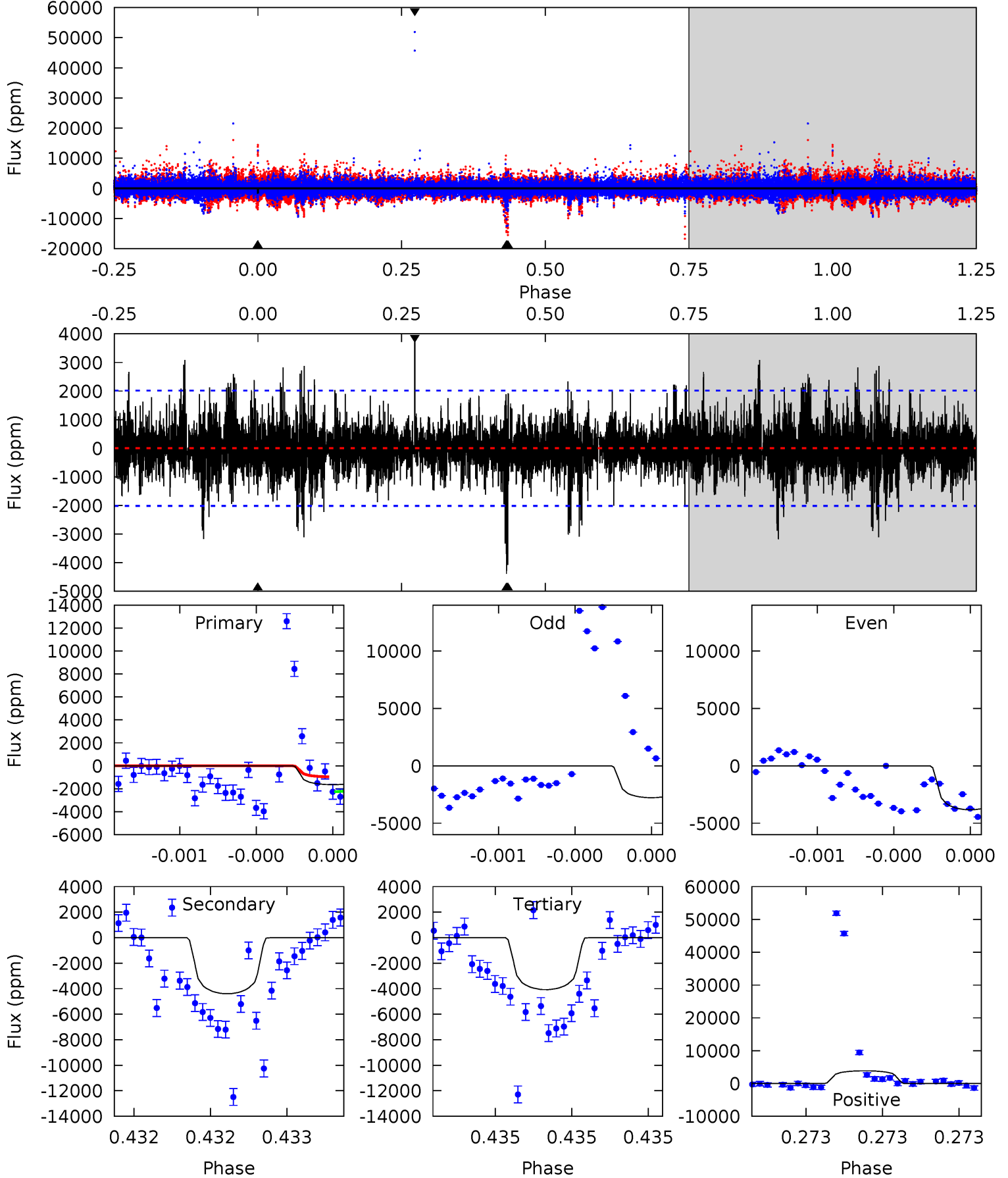
TCE 005352027-01 P=584.713131 Days $T_0=374.223293$ (BKJD)



DV Model-Shift Uniqueness Test

005352027-01, P = 584.720961 Days, E = 374.187241 Days

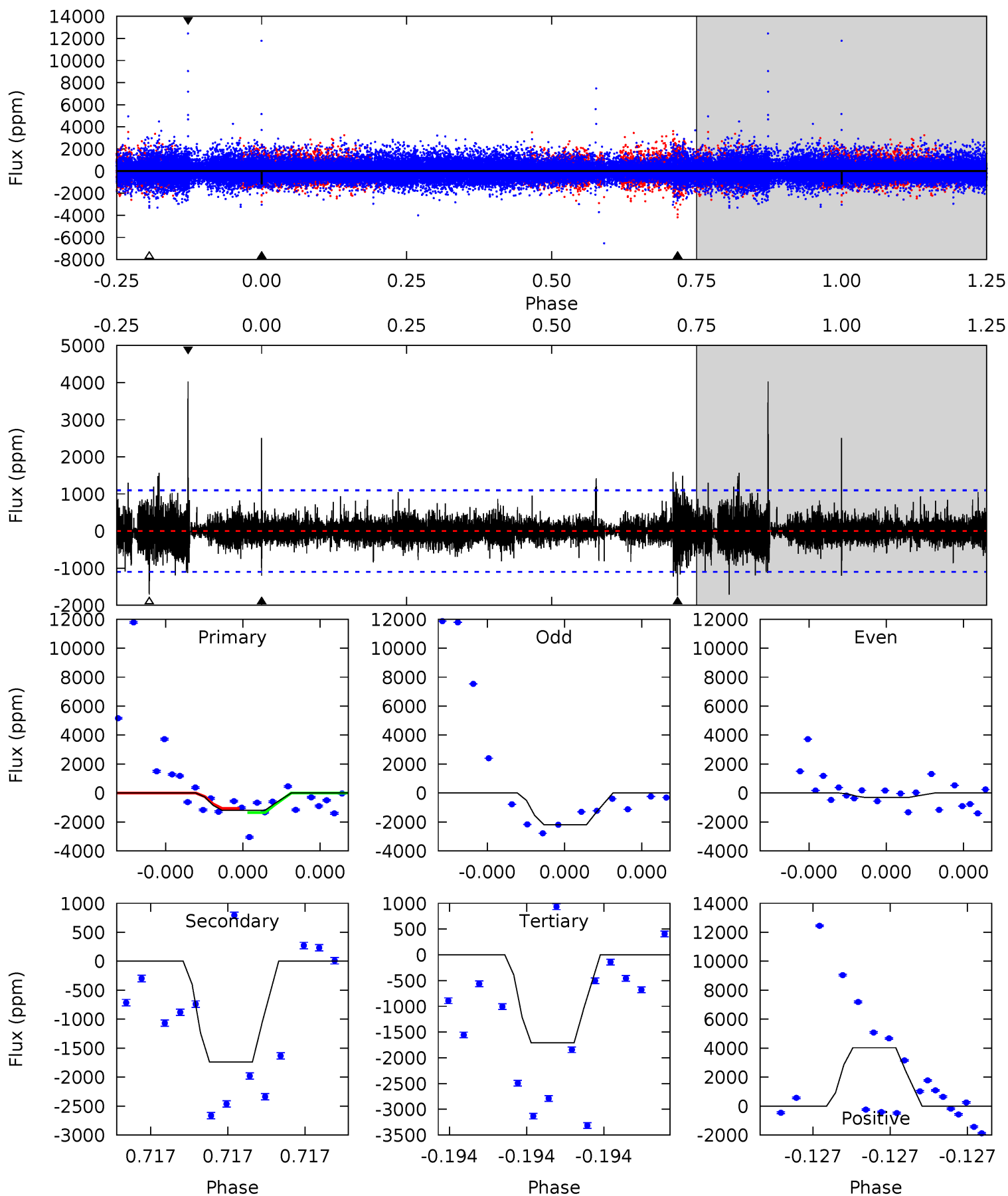
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.60	12.3	11.4	10.9	5.65	3.60	1.89	-6.83	-6.26	0.90	1.47	1.23	0.55	0.47	1.81



Alt Model-Shift Uniqueness Test

005352027-01, P = 584.713131 Days, E = 374.223293 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.28	9.13	8.97	21.1	5.77	3.78	1.25	-2.69	-14.8	0.16	-12.0	4.44	0.77	0.70	0.74



Stellar Parameters For KIC 005352027

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5927^{+175}_{-211}	$4.544^{+0.048}_{-0.204}$	$-0.300^{+0.300}_{-0.300}$	$0.860^{+0.260}_{-0.087}$	$0.944^{+0.108}_{-0.119}$	$2.090^{+0.417}_{-1.075}$
	+3%/-4%	+1%/-4%	+100%/-100%	+30%/-10%	+11%/-13%	+20%/-51%
Source	KIC0	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 005352027-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-4394 ± 356	$5.88^{+3.66}_{-3.22}$	298^{+23}_{-14}	6190^{+4144}_{-1166}	$122897^{+485091}_{-73704}$
Alt.	-1741 ± 191	$4.50^{+3.37}_{-2.82}$	300^{+21}_{-16}	5716^{+4290}_{-1222}	$82510^{+511961}_{-55040}$

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

DV Centroid Data

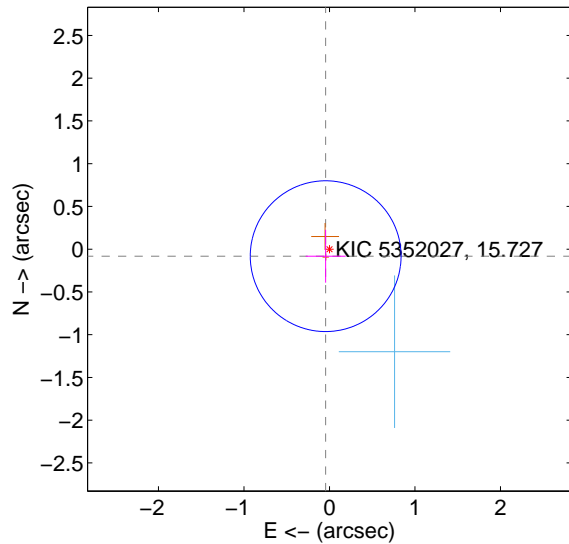
Supplemental centroid analysis for 005352027-01. Kepler magnitude: 15.73. Transit SNR 7.82

There are 1 quarters with good PRF difference image offsets

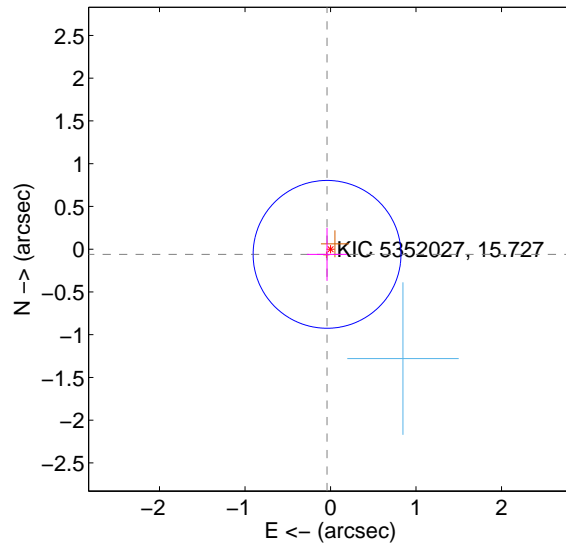
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.093 ± 0.294	0.32	0.044 ± 0.234	-0.082 ± 0.309
PRF-fit source offset from KIC position	0.073 ± 0.288	0.25	0.041 ± 0.234	-0.061 ± 0.309
photometric centroid source offset	0.53 ± 0.61	0.88	0.49 ± 0.62	-0.21 ± 0.53

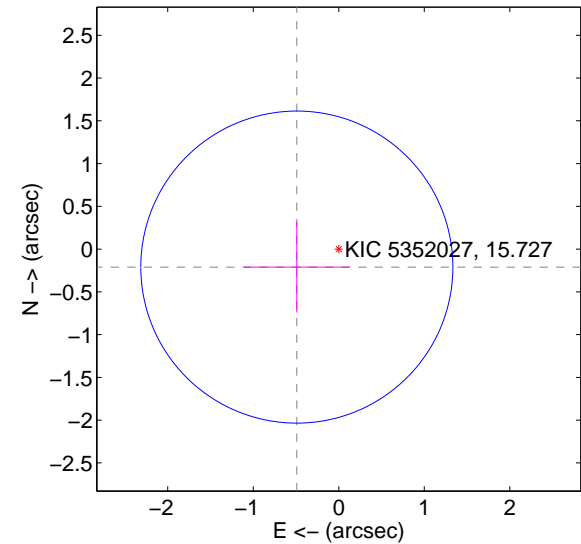
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

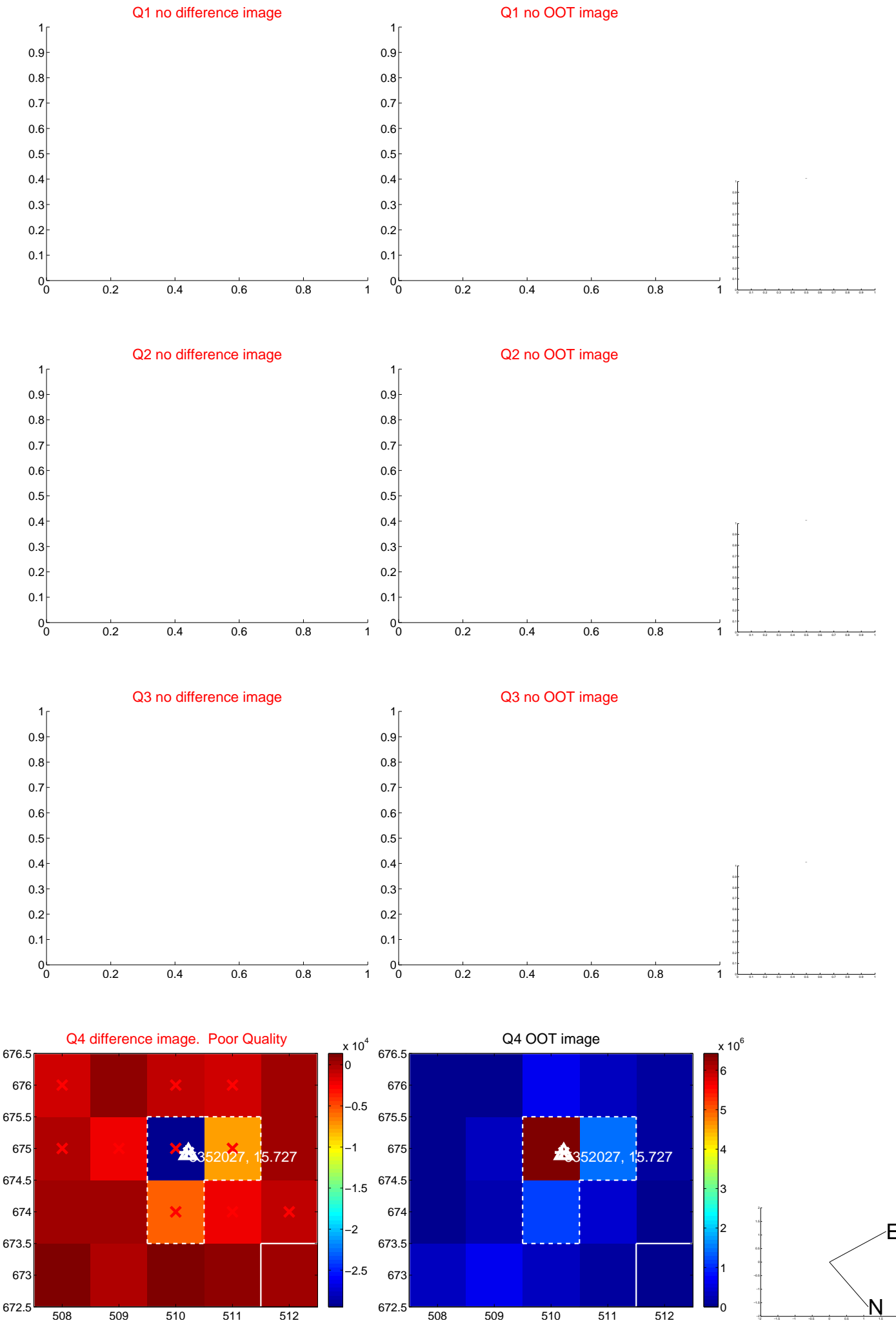


offset from photometric centroids



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.

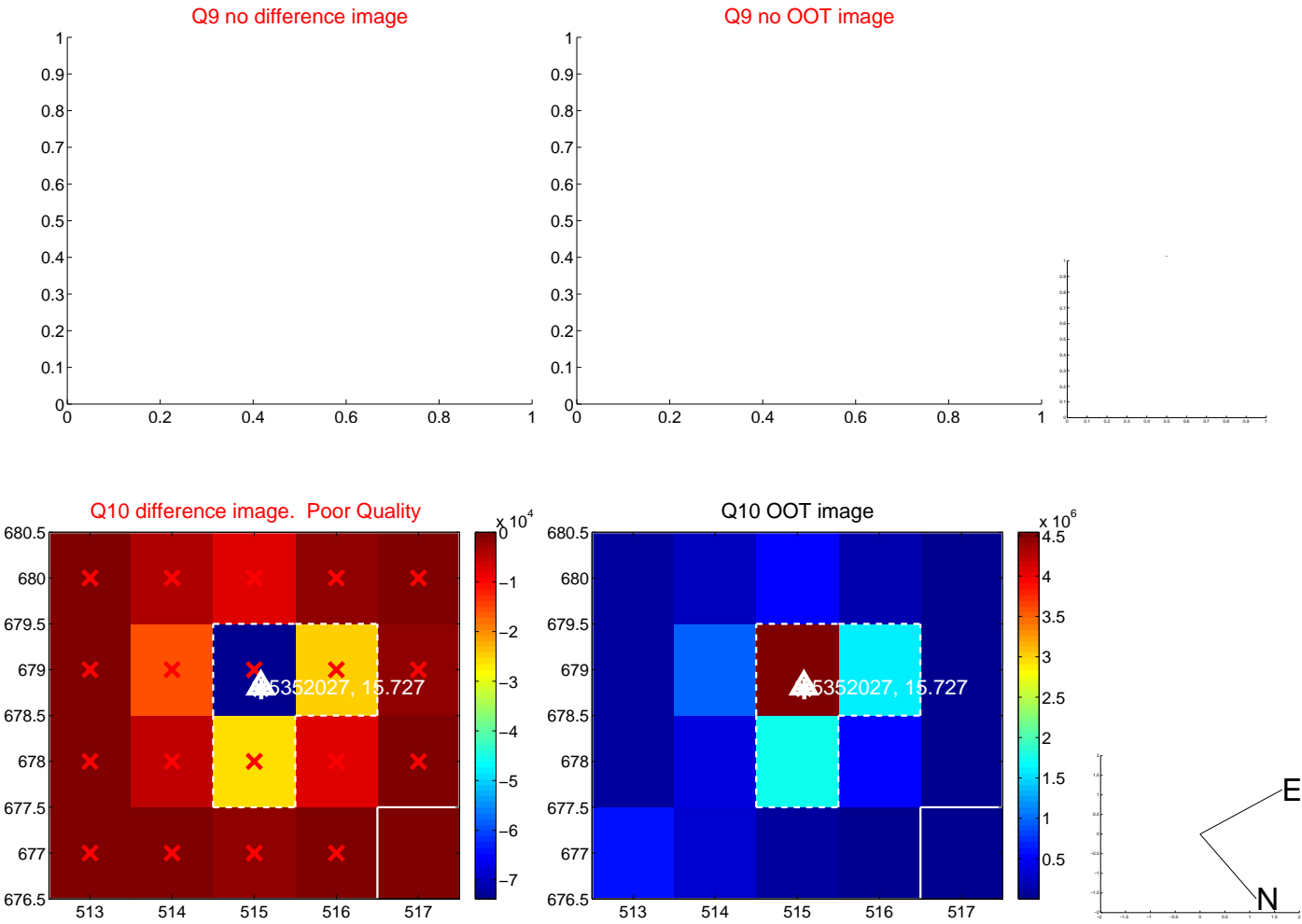
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



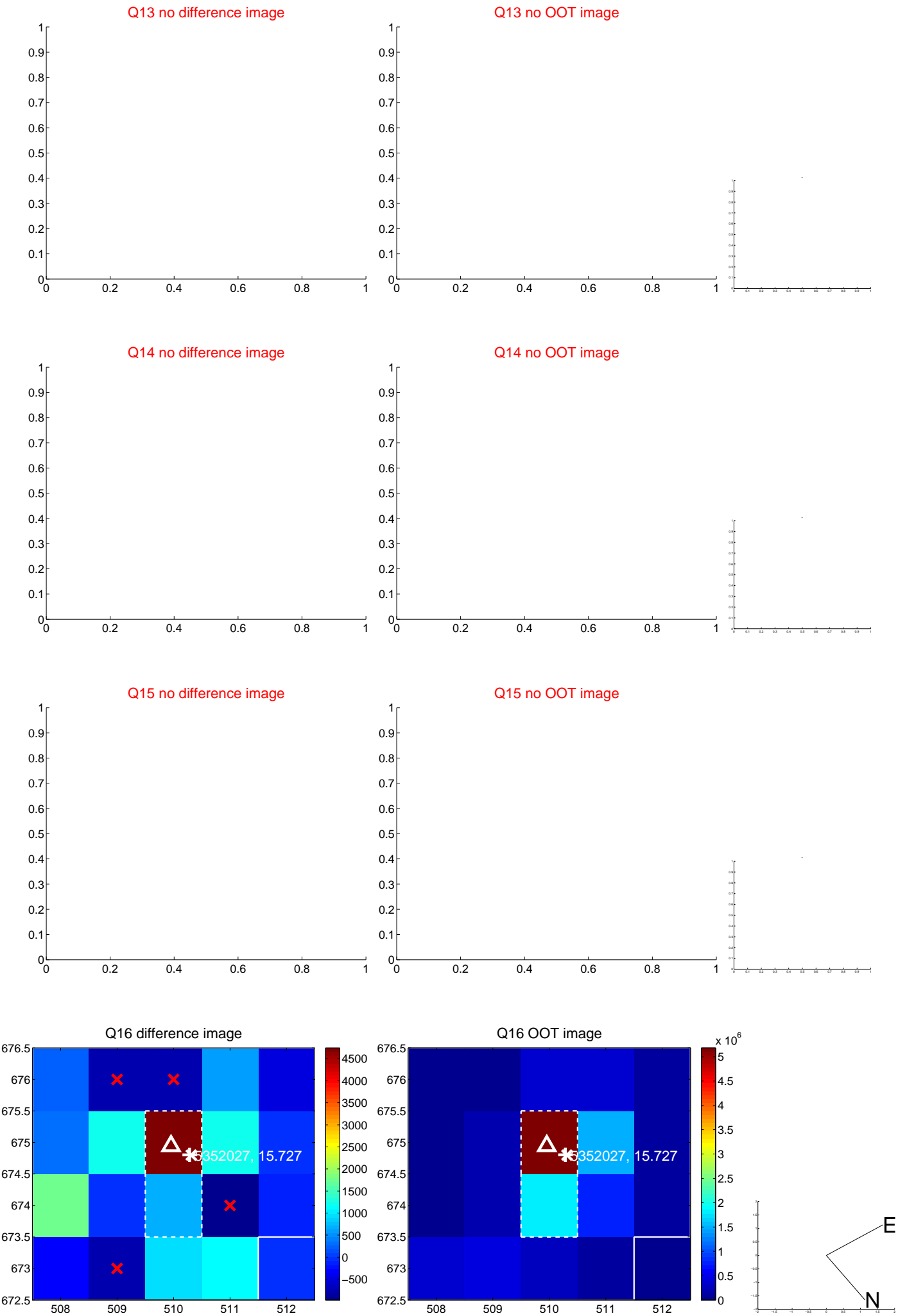
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



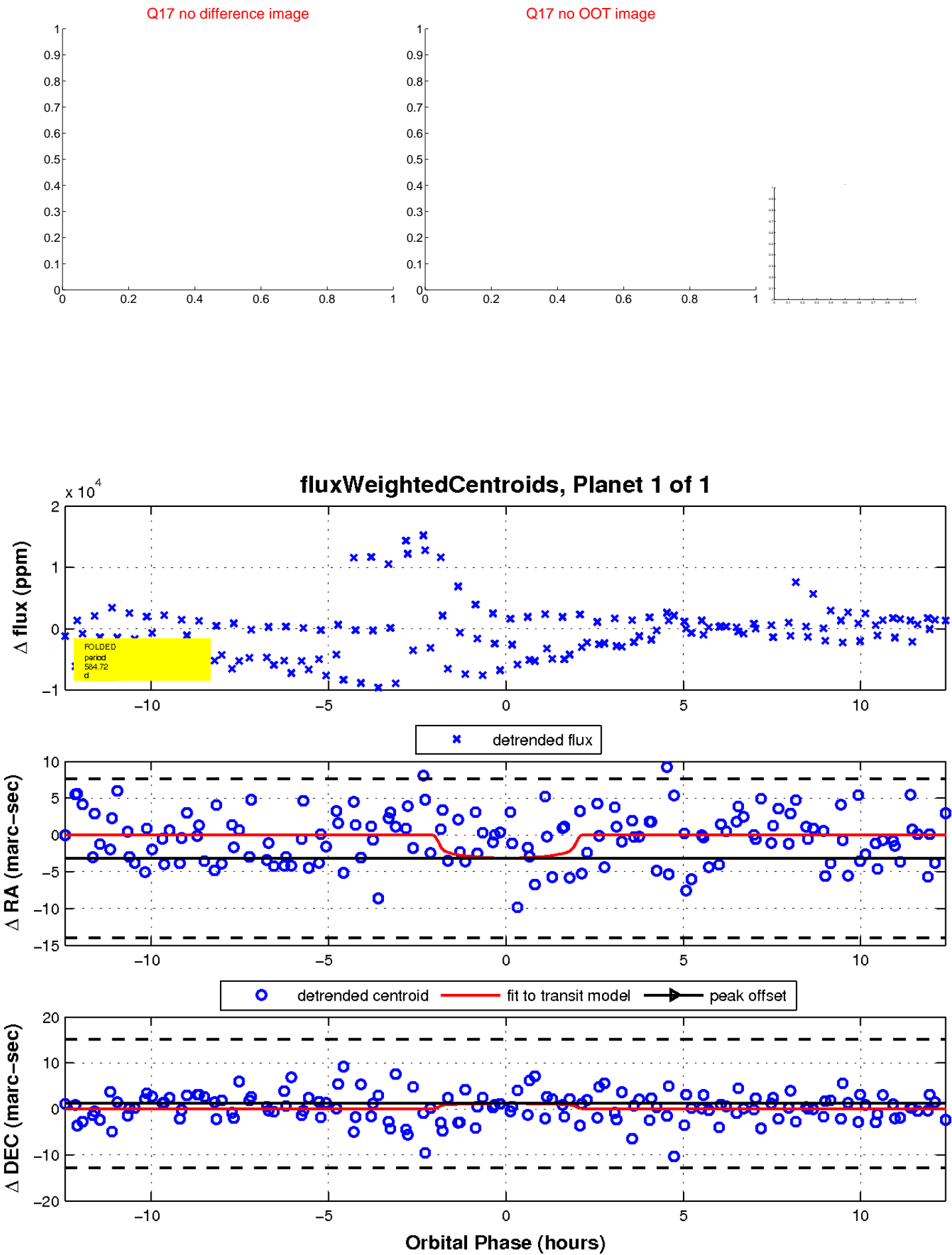
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: 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.



UKIRT Image

Declination

