

KIC 009761573

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})
009761573-01	OBS	3837.01	7.441698	137.303813	2220.1	2.853	58.2	58.7	1.18	6540	8.94	394.12

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009761573-01	OBS	FP	0.00	0	1	0	0	DEEP_V_SHAPED—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.

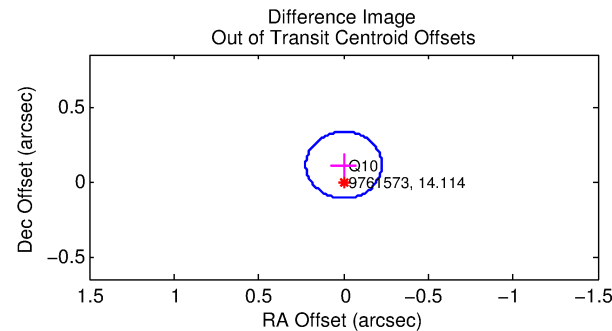
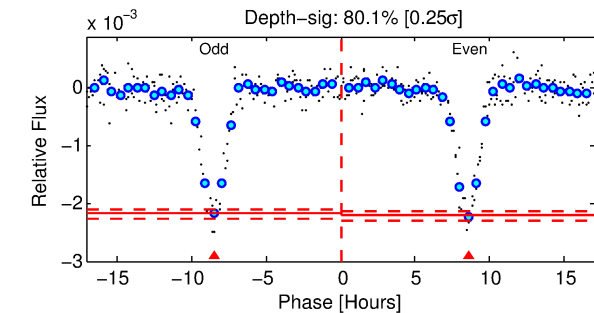
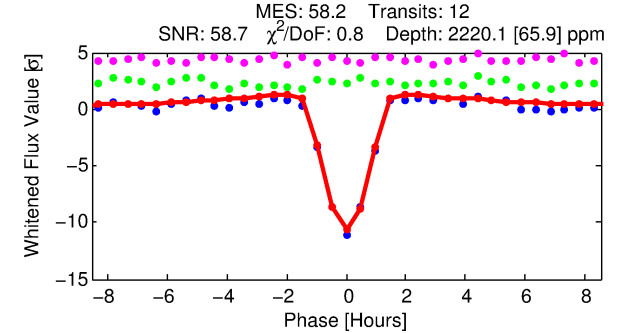
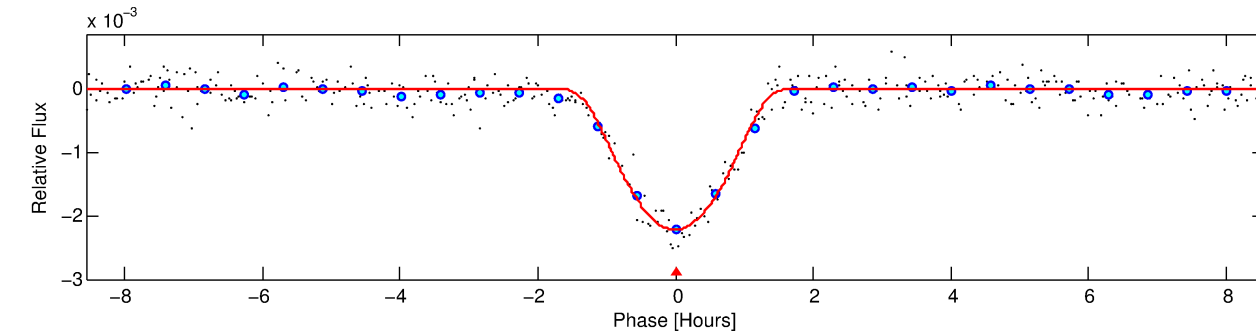
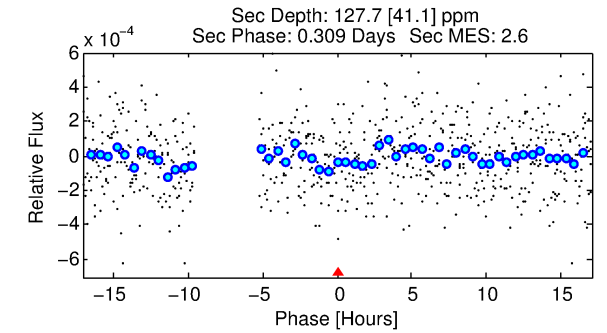
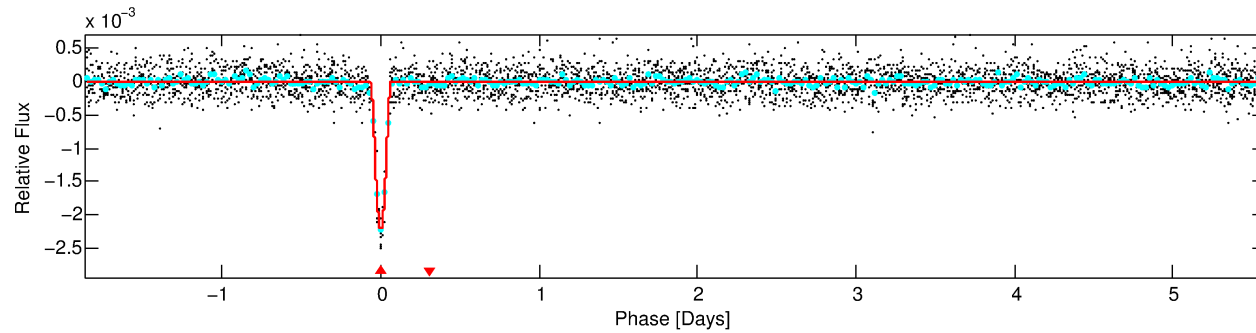
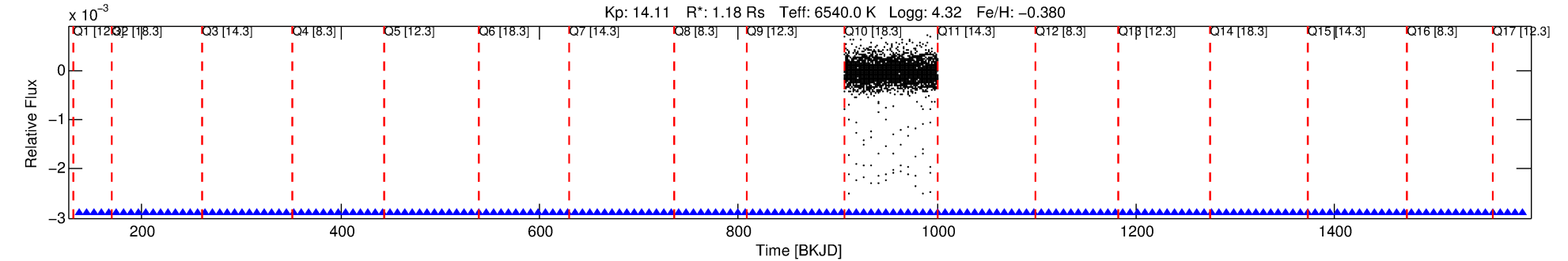
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009761573-01

No Significant Match Found

DV One-Page Summary

KIC: 9761573 Candidate: 1 of 1 Period: 7.442 d
KOI: K03837.01 Corr: 0.834



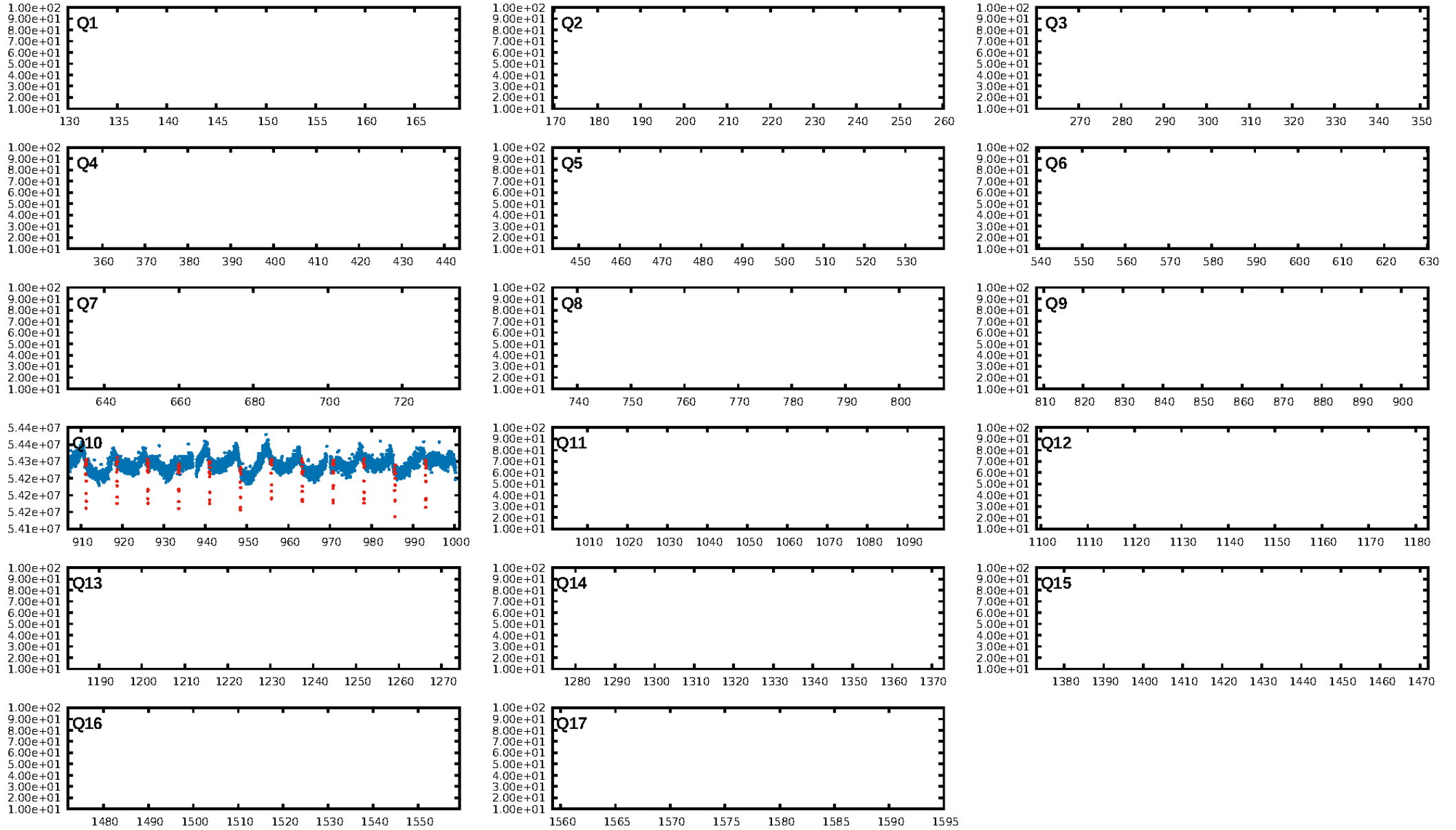
DV Fit Results:

Period = 7.44170 [0.00007] d
Epoch = 137.3038 [0.0071] BKJD
Rp/R* = 0.0693 [0.0421]
a/R* = 8.42 [1.65]
b = 0.98 [0.07]
Seff = 394.12 [152.68]
Teq = 1136 [110] K
Rp = 8.94 [6.01] Re
a = 0.0763 [0.0185] AU
Ag = 5.11 [6.67] [0.62σ]
Teffp = 2641 [836] K [1.79σ]

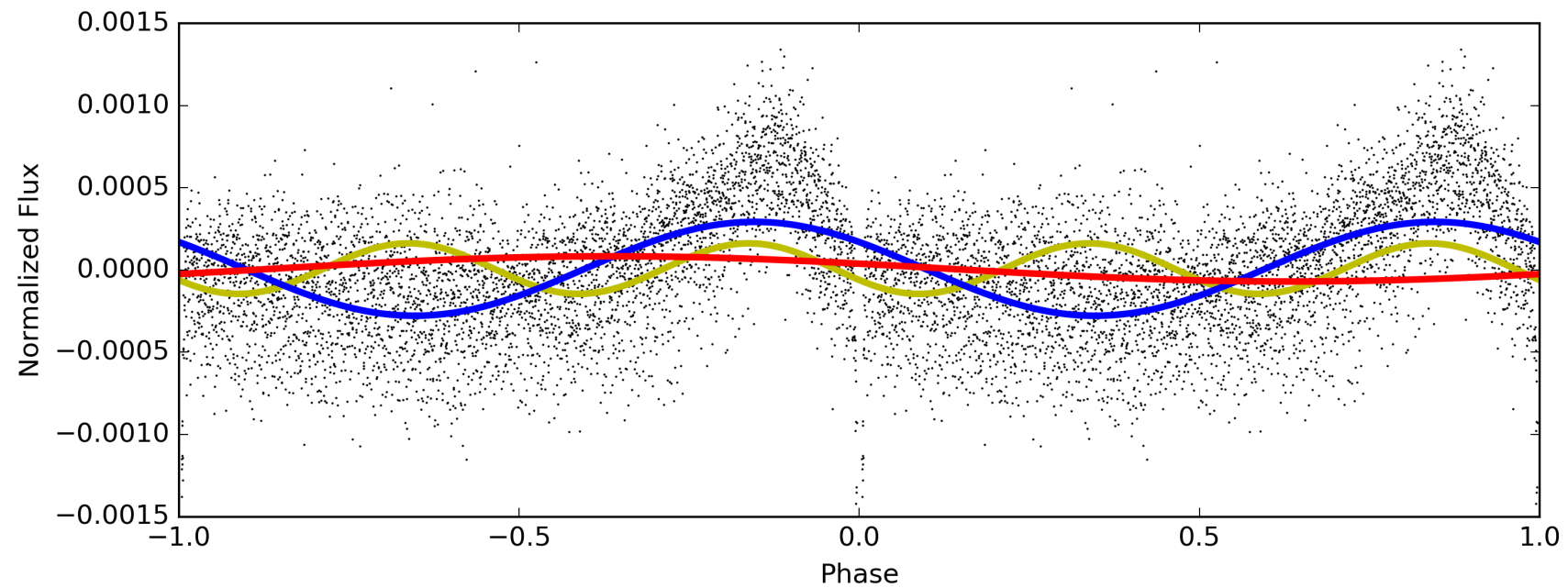
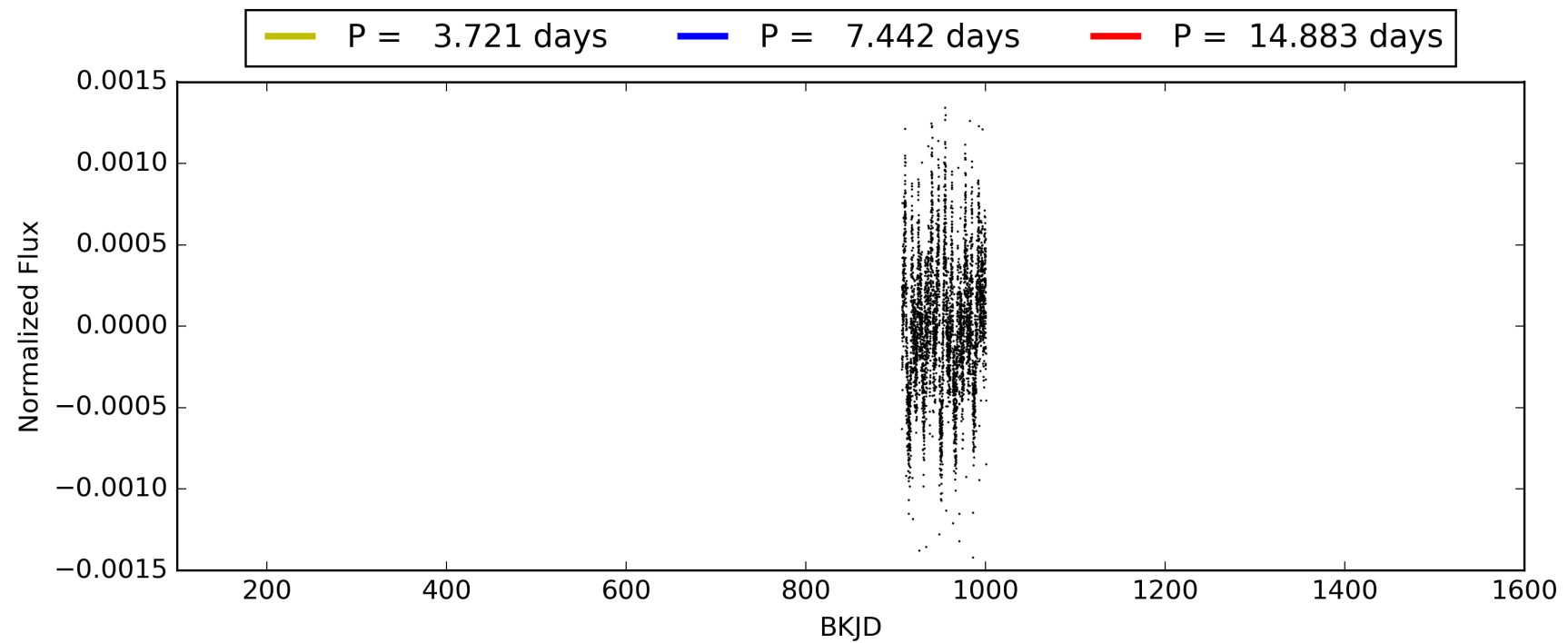
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 80.8%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [12/12]
GhostDiagnostic-chr: 6.049
Centroid-sig: 0.1%
Centroid-so: 0.359 arcsec [1.53σ]
OotOffset-rm: 0.111 arcsec [1.49σ]
KicOffset-rm: 0.041 arcsec [0.54σ]
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]

TCE 009761573-01, PDC Light Curves

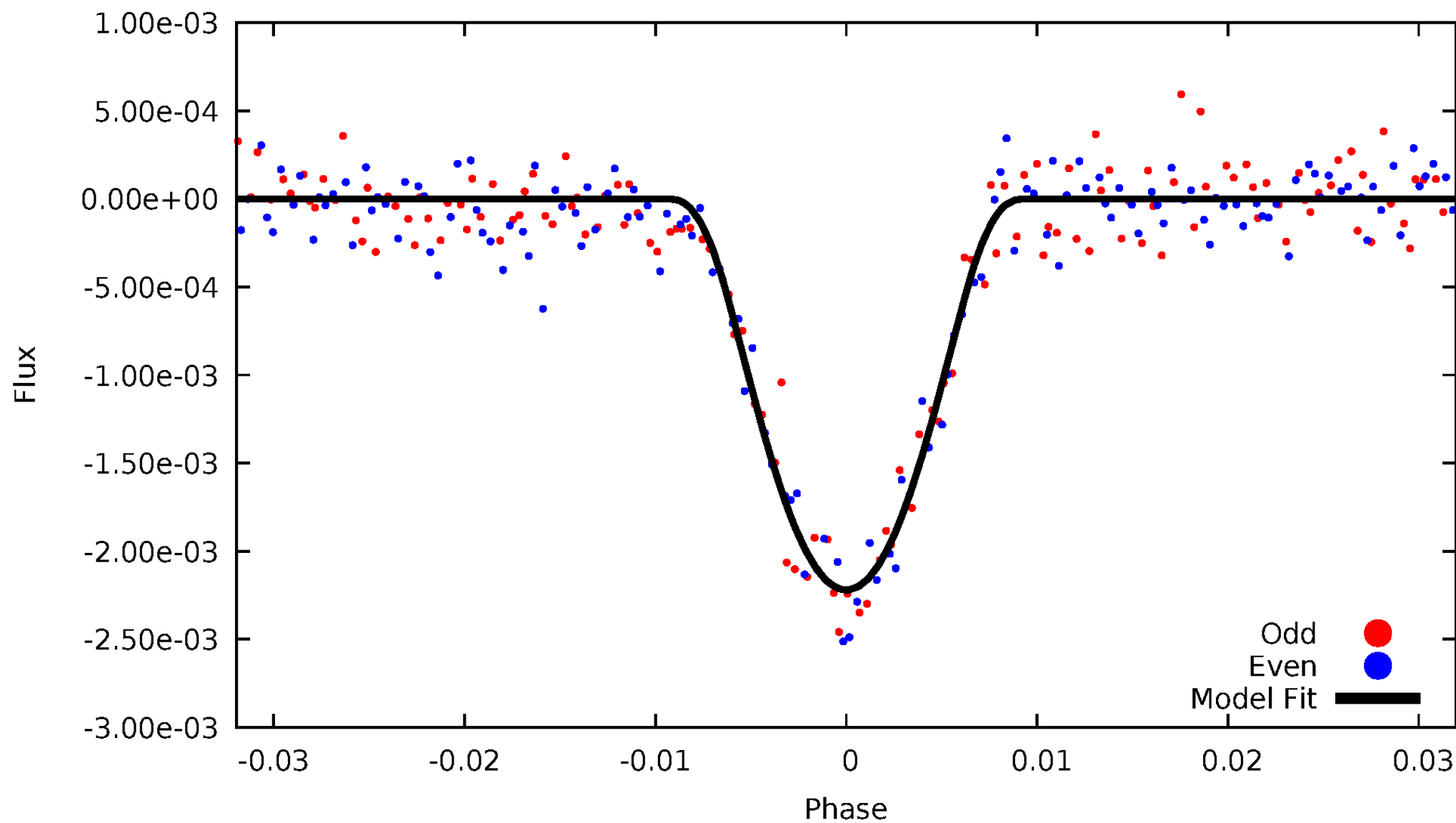


TCE 009761573-01



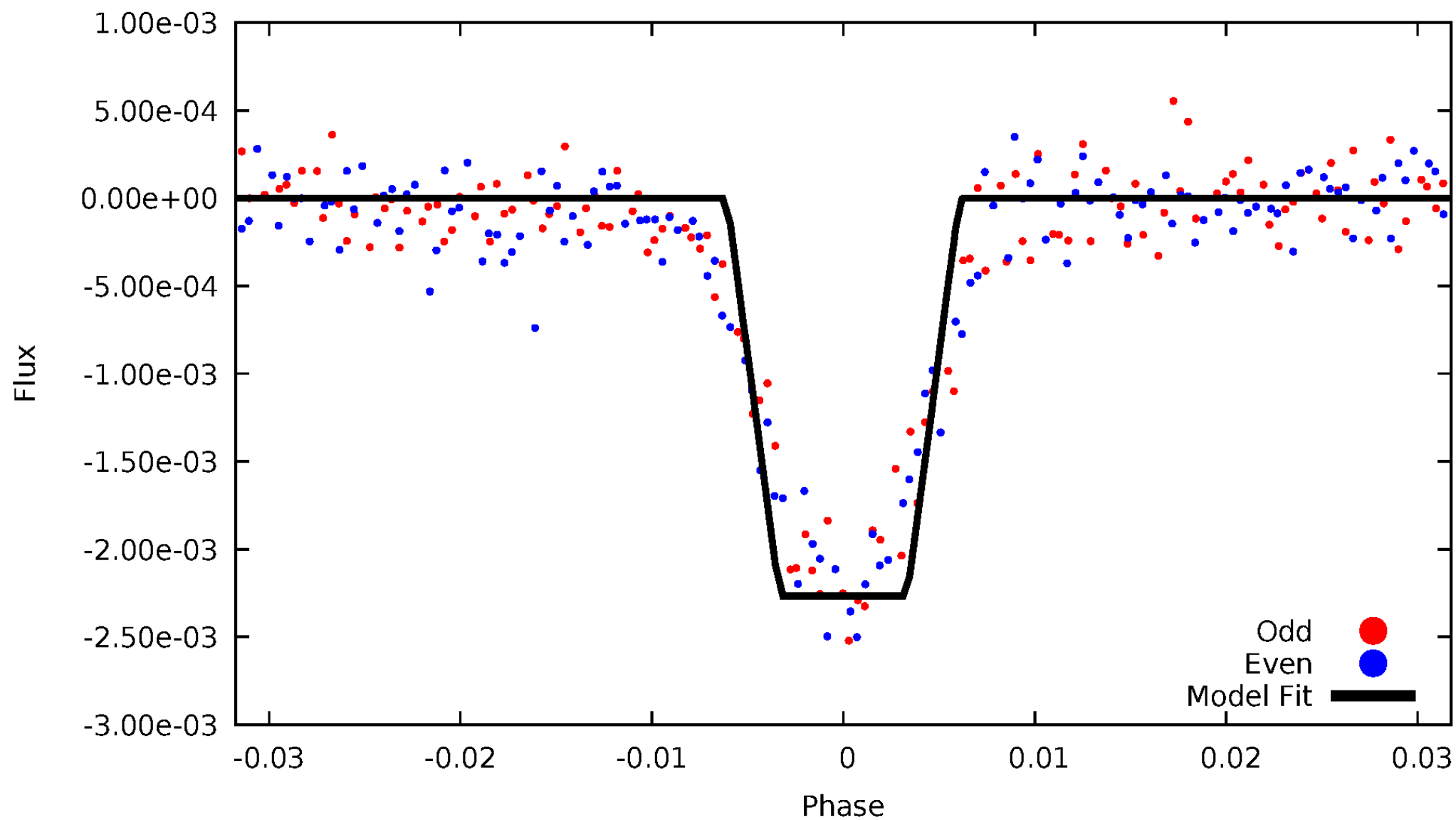
DV Odd/Even

TCE 009761573-01



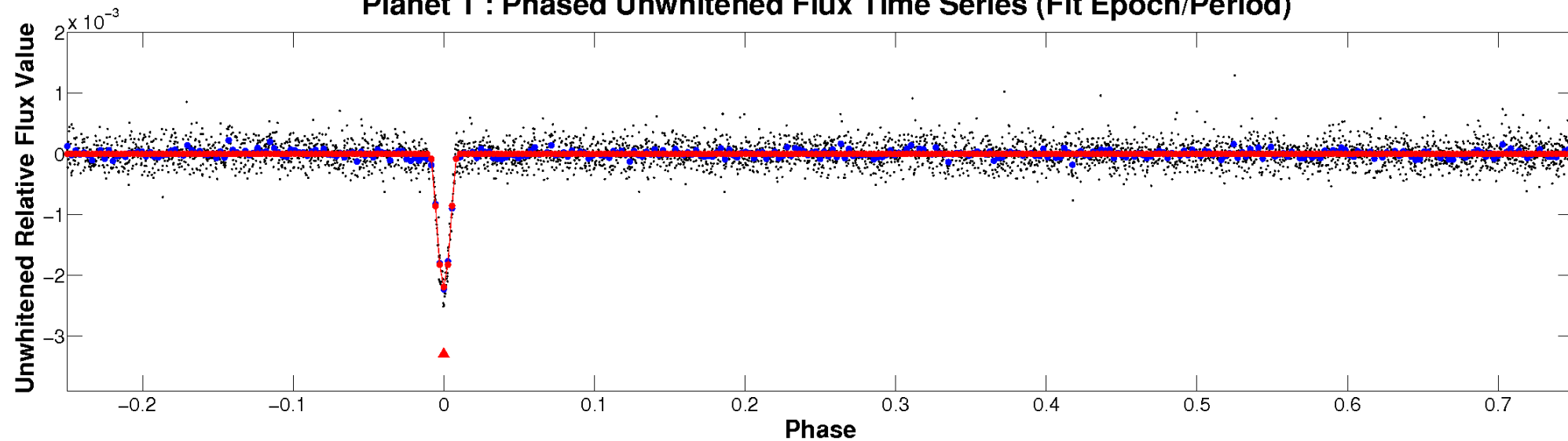
ALT Odd/Even

TCE 009761573-01

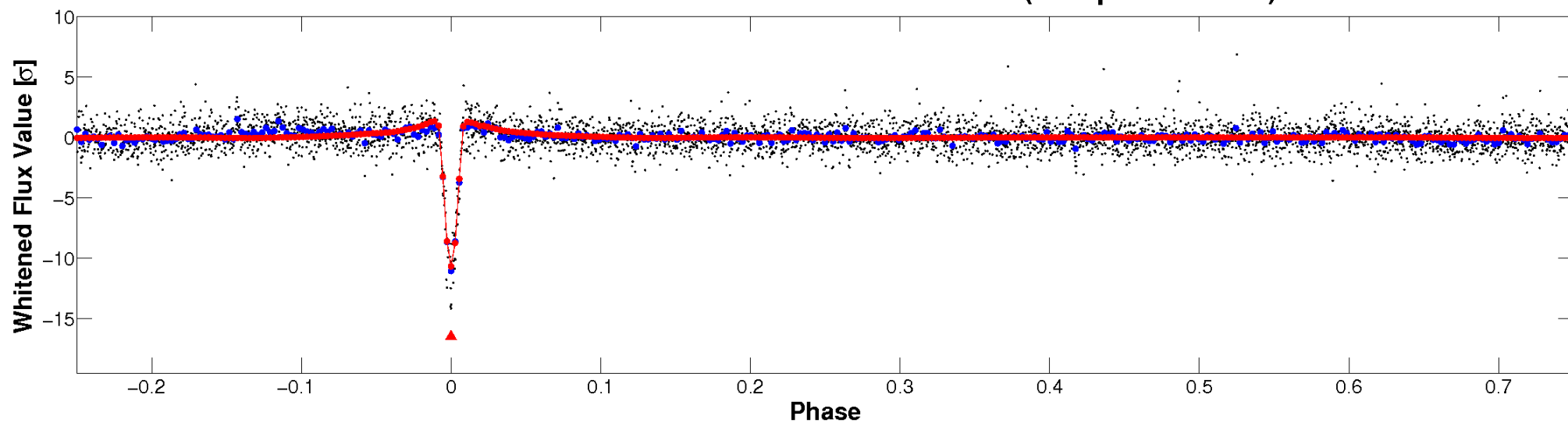


Non-Whitened Vs. Whitened Light Curve

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

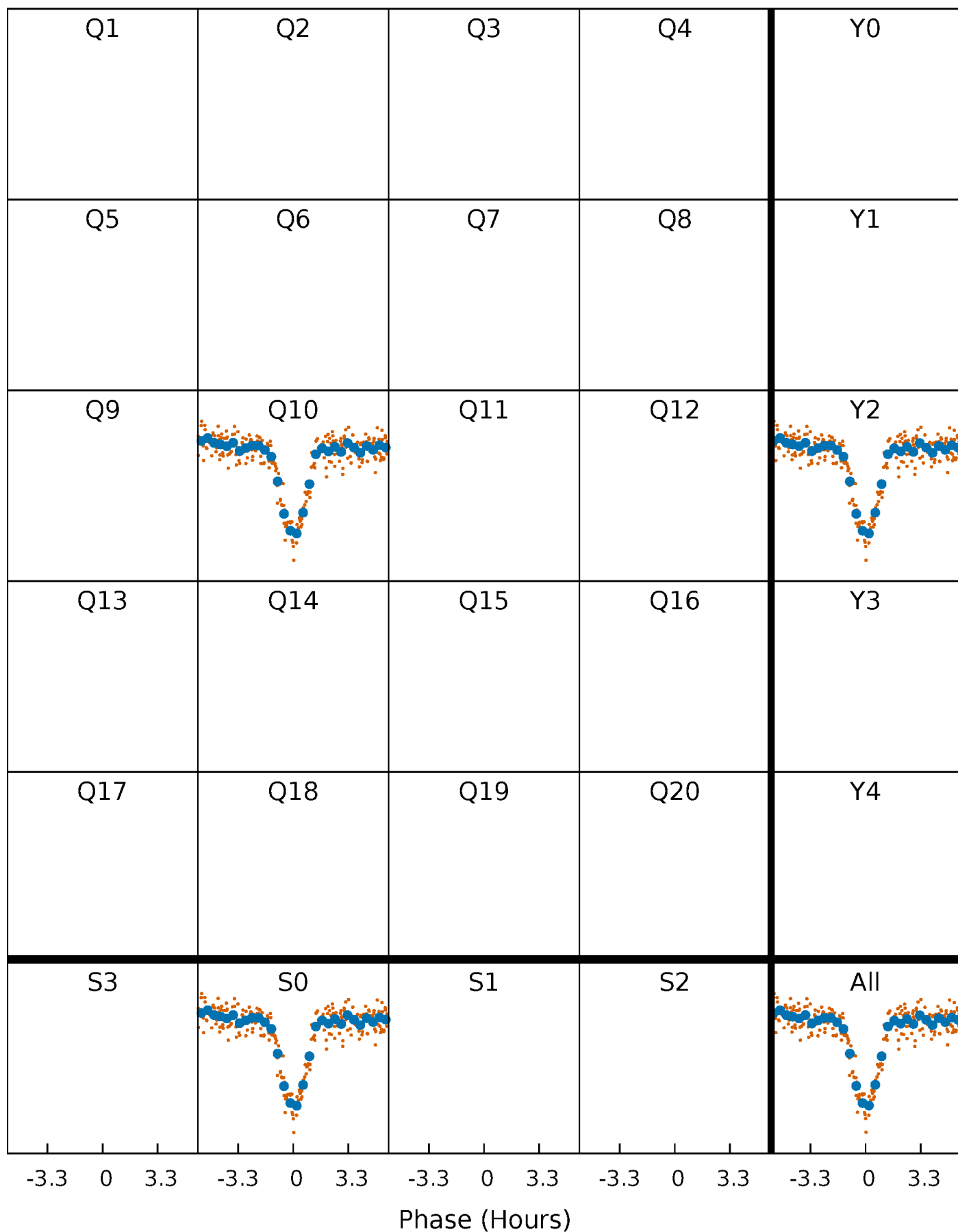


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



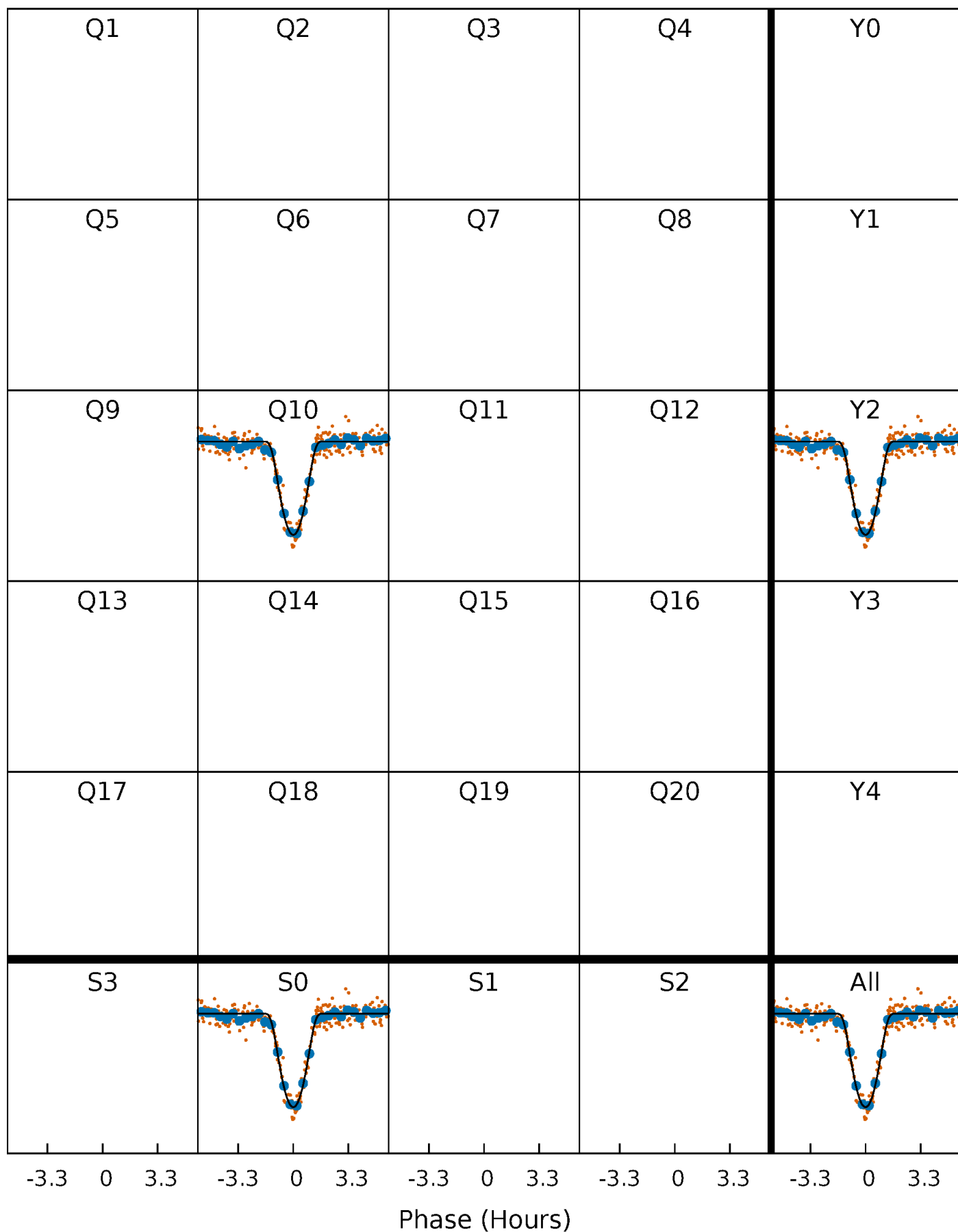
PDC Quarter-Phased Transit Curves

TCE 009761573-01 P= 7.441698 Days $T_0=137.303813$ (BKJD)



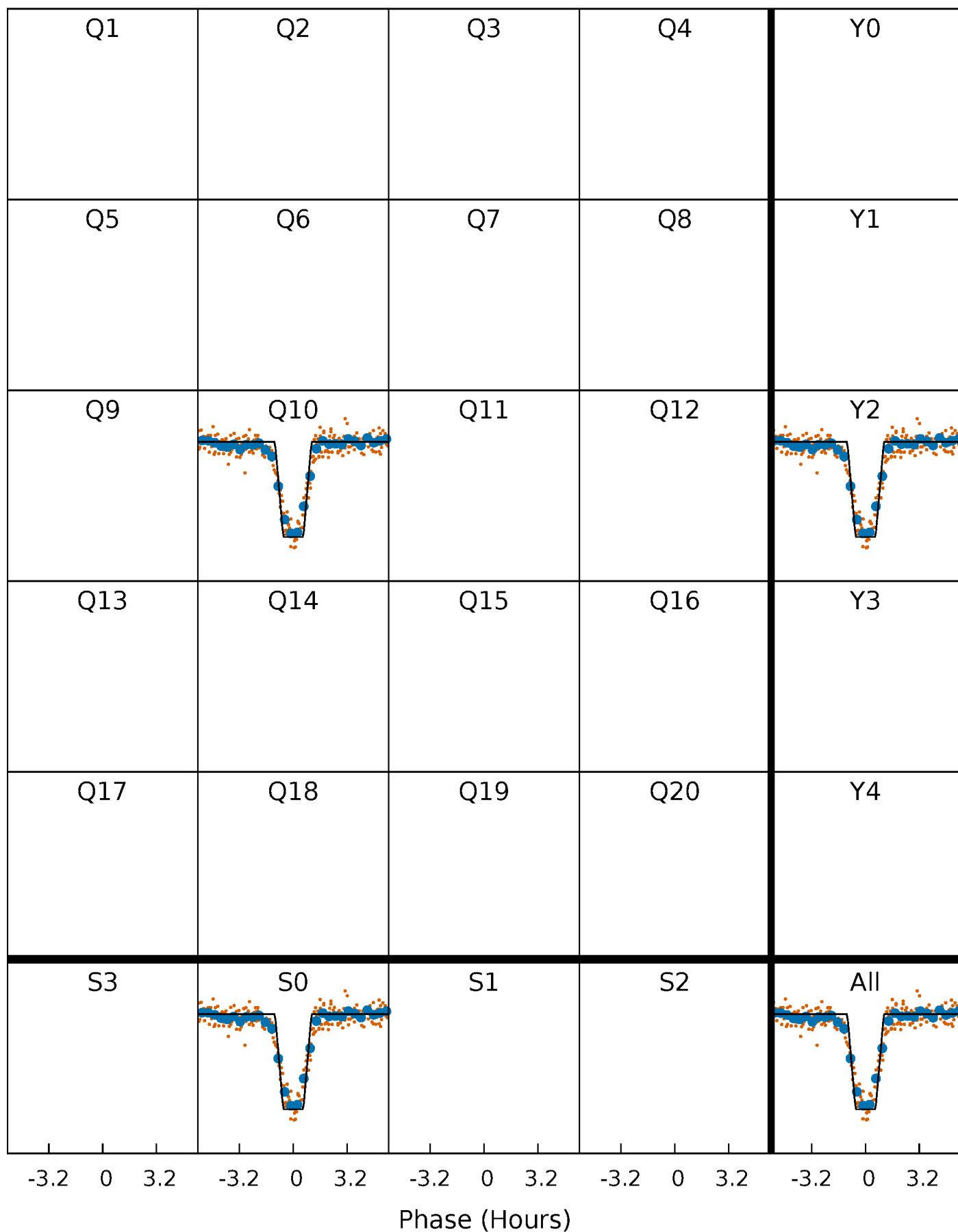
DV Quarter-Phased Transit Curves

TCE 009761573-01 P= 7.441698 Days $T_0=137.303813$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

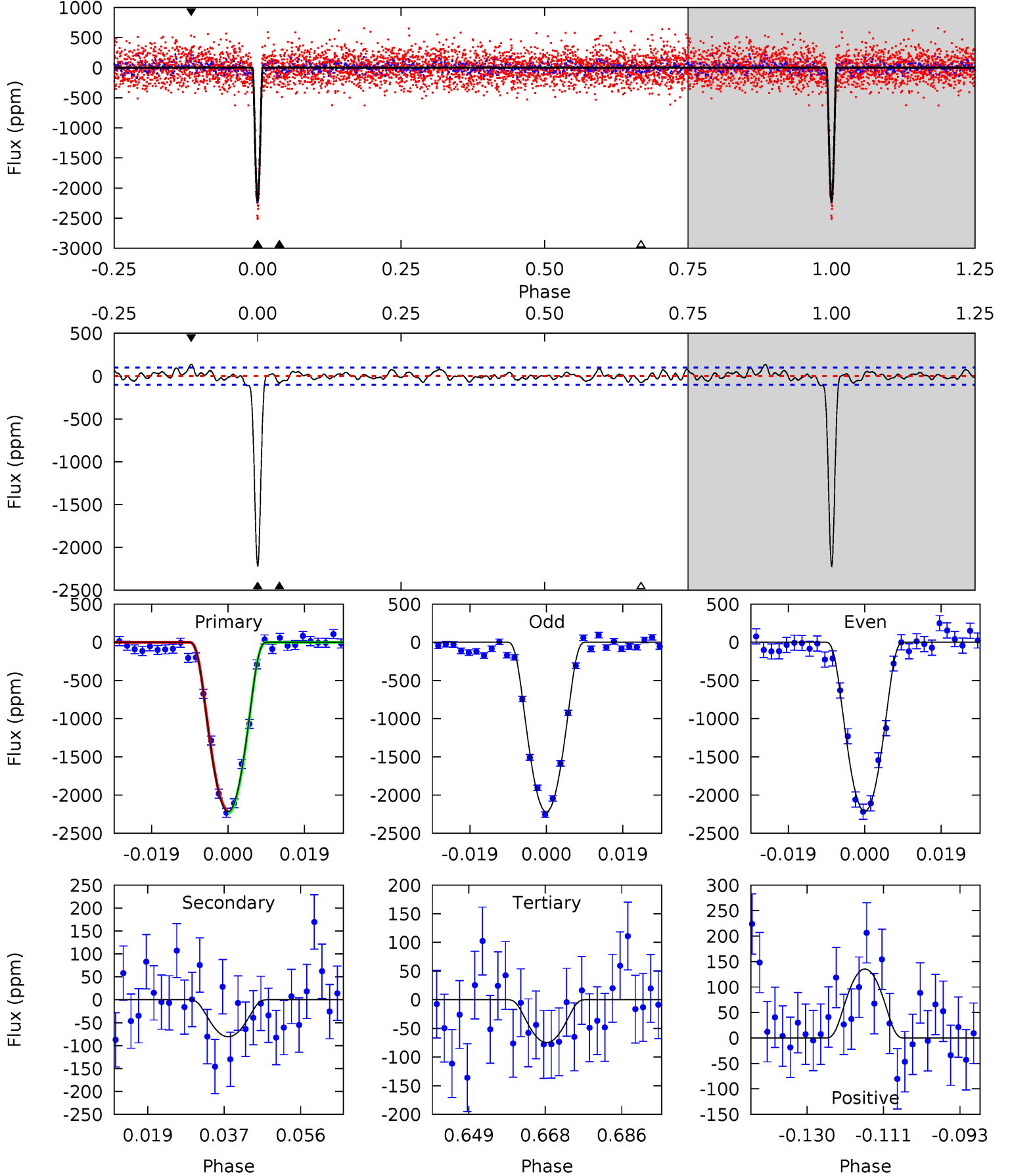
TCE 009761573-01 P= 7.440779 Days $T_0=137.404480$ (BKJD)



DV Model-Shift Uniqueness Test

009761573-01, P = 7.441698 Days, E = 137.303813 Days

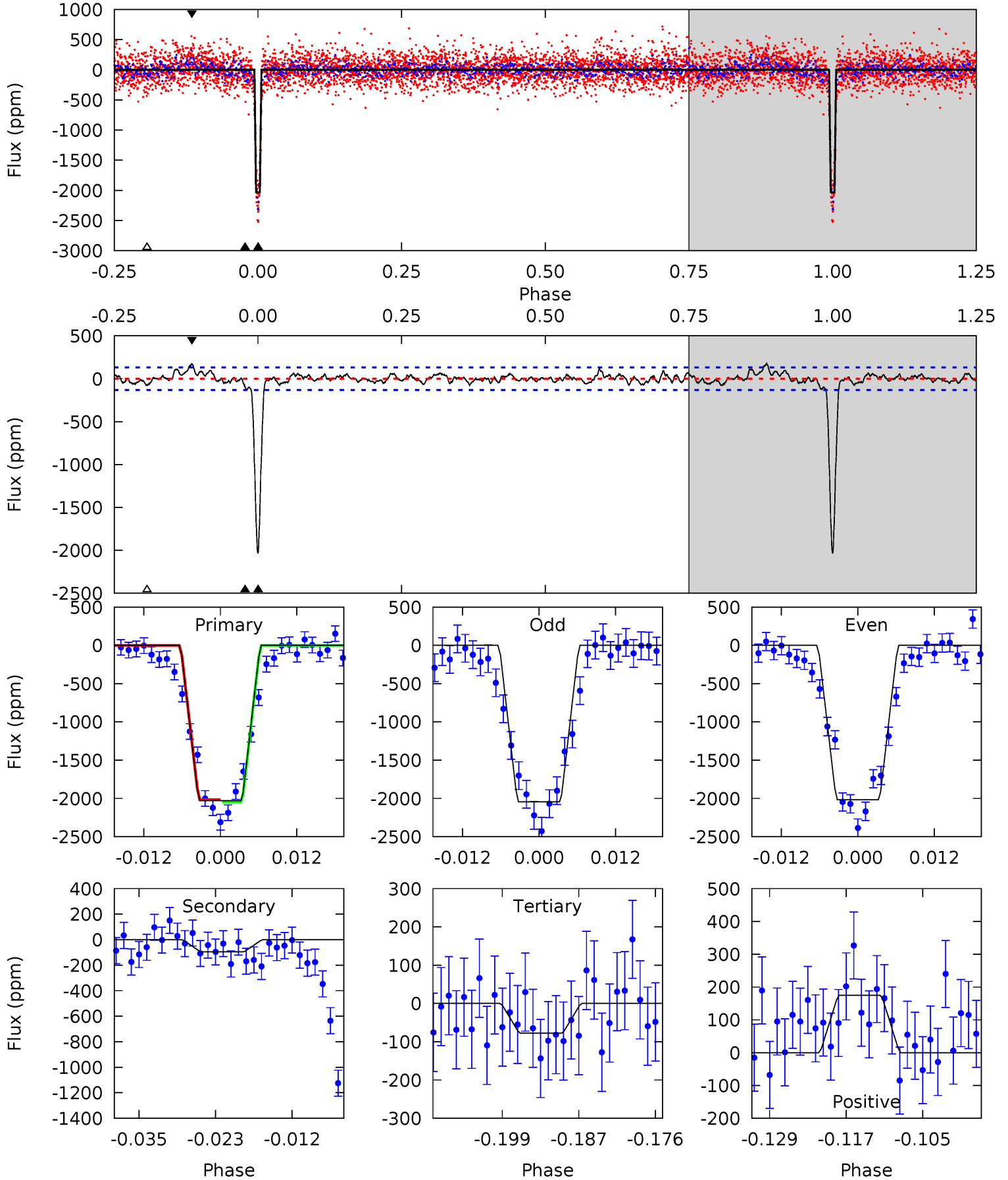
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
108.0	3.93	3.63	6.59	4.91	2.35	1.78	104.3	101.4	0.30	-2.66	0.13	1.00	0.06	1.01



Alt Model-Shift Uniqueness Test

009761573-01, P = 7.440779 Days, E = 137.404480 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
77.3	3.65	2.96	6.65	5.00	2.52	1.51	74.3	70.6	0.69	-3.00	0.53	1.00	0.08	0.53



Stellar Parameters For KIC 009761573

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6540^{+183}_{-252}	$4.321^{+0.105}_{-0.195}$	$-0.380^{+0.250}_{-0.300}$	$1.183^{+0.340}_{-0.183}$	$1.066^{+0.175}_{-0.117}$	$0.907^{+0.512}_{-0.441}$
	+3%/-4%	+2%/-5%	+66%/-79%	+29%/-15%	+16%/-11%	+56%/-49%
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 009761573-01 / KOI 3837.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-81 ± 21	$9.87^{+5.92}_{-5.52}$	1604^{+116}_{-97}	2910^{+799}_{-428}	$2.547^{+10.537}_{-1.551}$
Alt.	-96 ± 26	$6.99^{+6.00}_{-4.22}$	1594^{+131}_{-90}	3296^{+1369}_{-610}	$6.049^{+34.536}_{-4.406}$

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 $A_{\text{obs}} \gg 1.0$

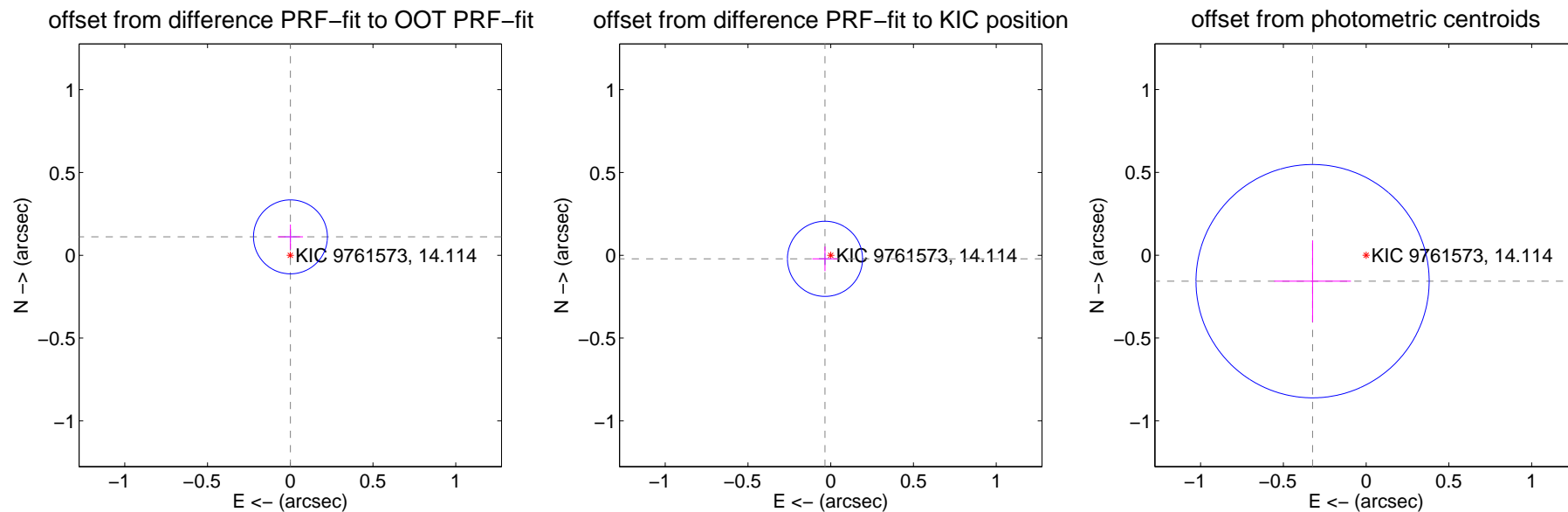
DV Centroid Data

Supplemental centroid analysis for 009761573-01. Kepler magnitude: 14.11. Transit SNR 58.75

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.111 ± 0.074	1.49	-0.001 ± 0.076	0.111 ± 0.074
PRF-fit source offset from KIC position	0.041 ± 0.076	0.54	0.035 ± 0.076	-0.021 ± 0.074
photometric centroid source offset	0.36 ± 0.23	1.53	0.32 ± 0.23	-0.16 ± 0.25



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.

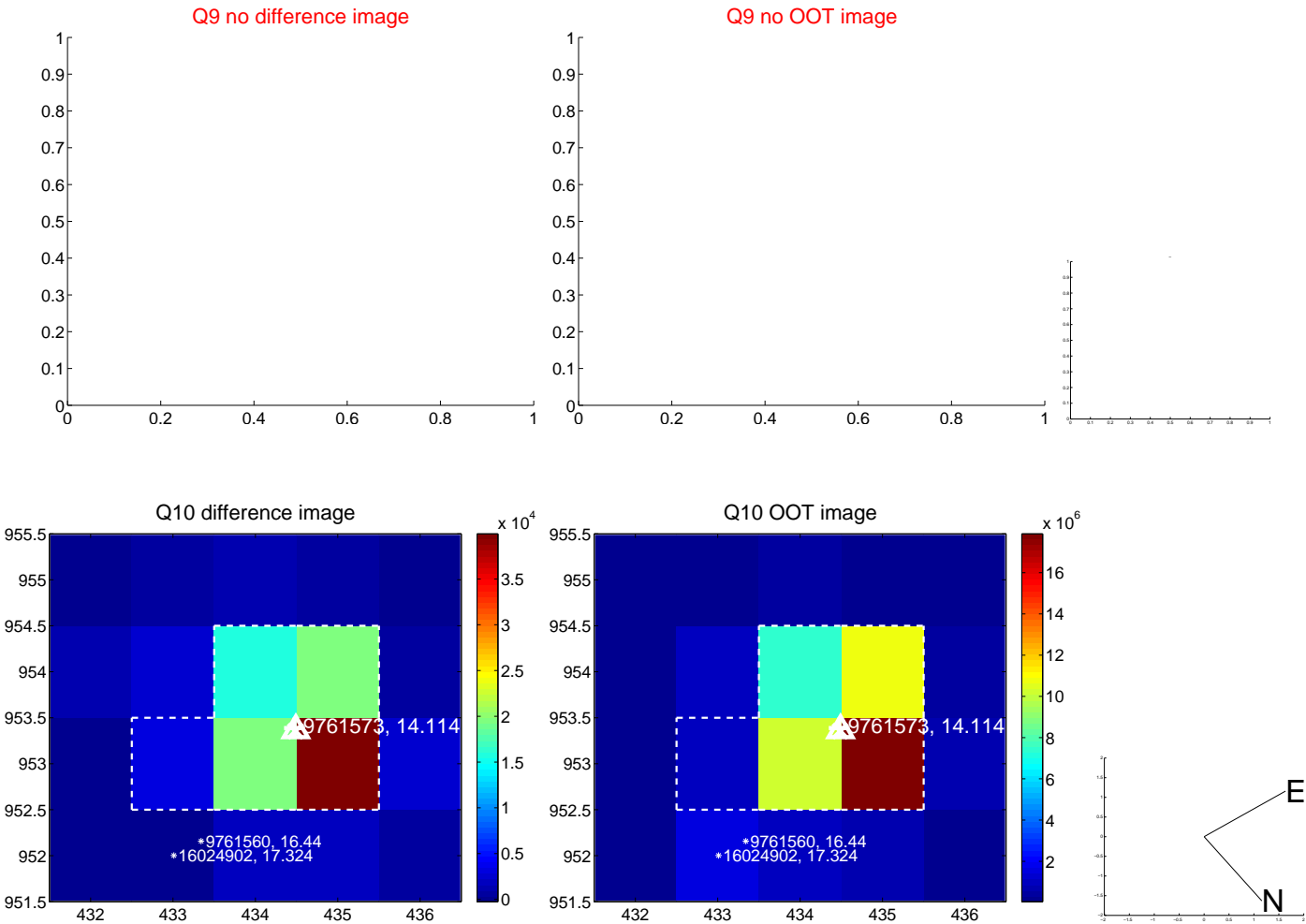
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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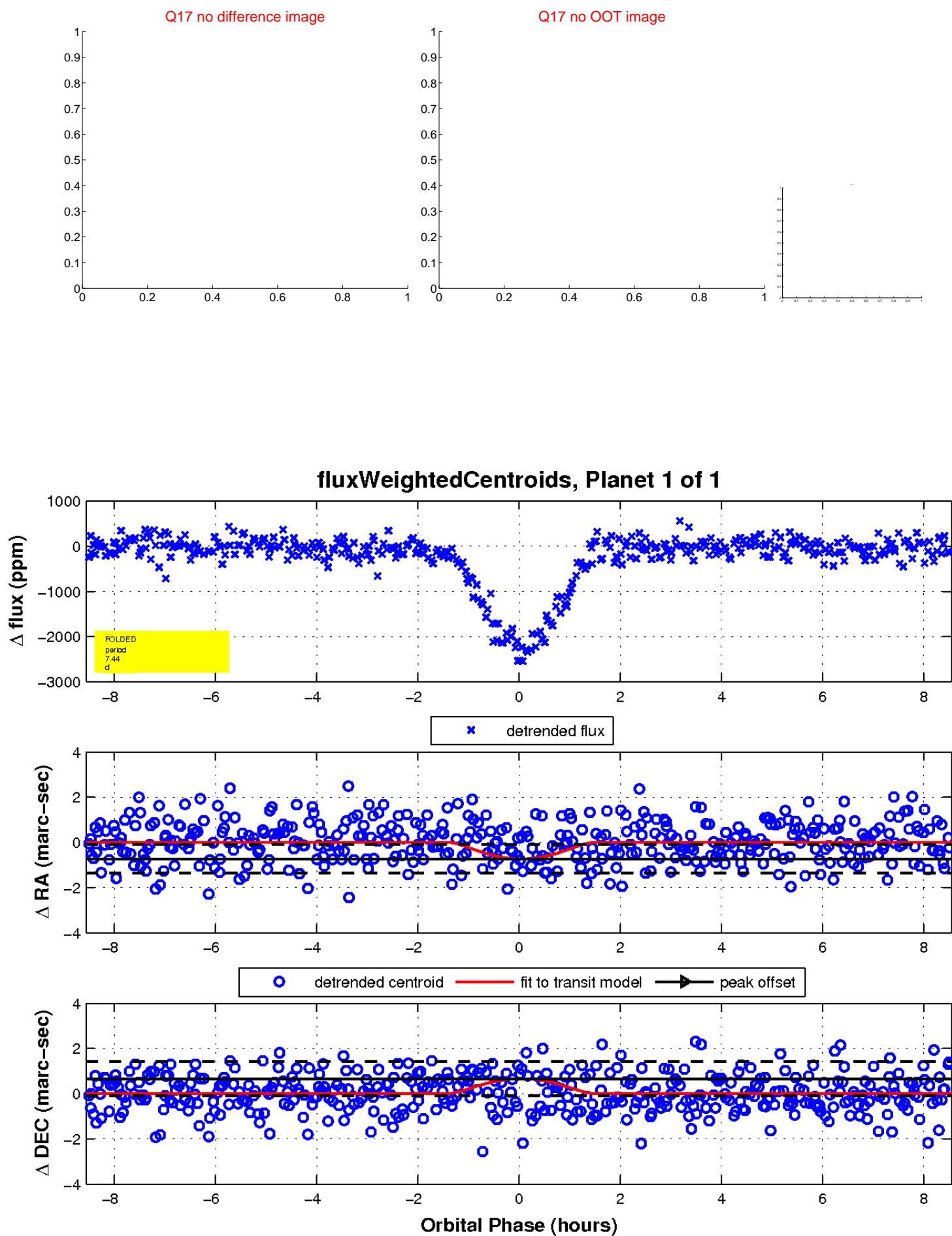
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

