

KIC 009108058

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})
009108058-01	OBS	5615.01	2.174664	132.100161	25581.6	5.000	1512.6	-1.0	1.64	6792	26.43	3856.72

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009108058-01	OBS	FP	0.00	0	1	0	0	SWEET_EB—MOD_SEC_ALT—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 009108058-01

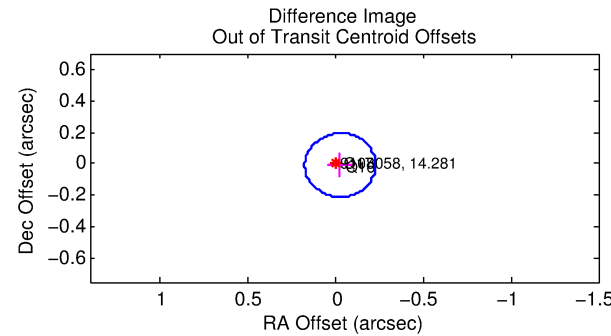
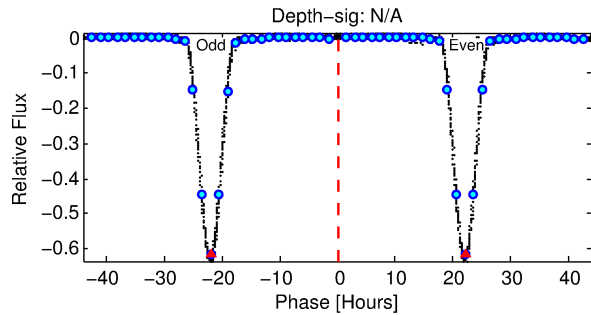
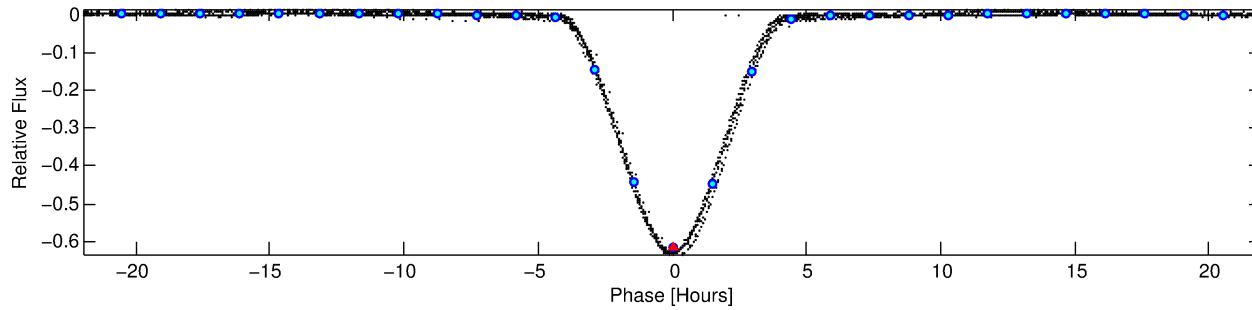
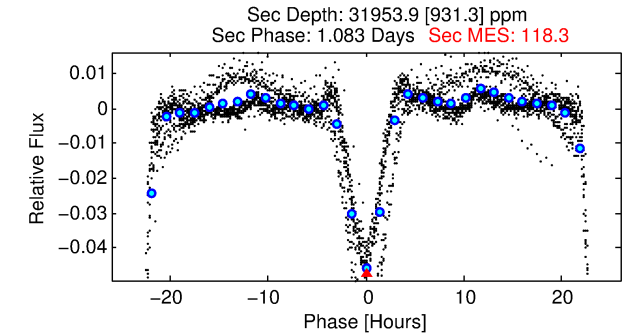
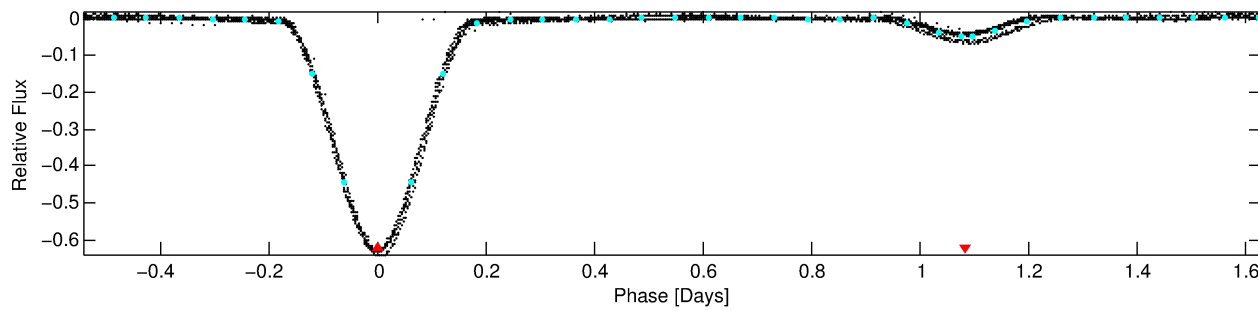
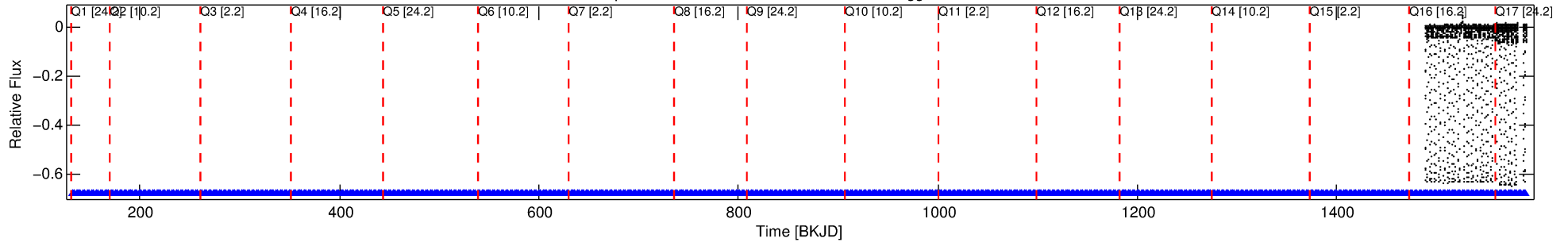
No Significant Match Found

DV One-Page Summary

KIC: 9108058 Candidate: 1 of 1 Period: 2.175 d

KOI: K05615 Corr: No Ephemeris Match

Kp: 14.28 R*: 1.64 Rs Teff: 6792.0 K Logg: 4.14 Fe/H: -0.140



TPS TCE Results:

Period = 2.17466 d
Epoch = 132.1002 BKJD

DV fit results are unavailable

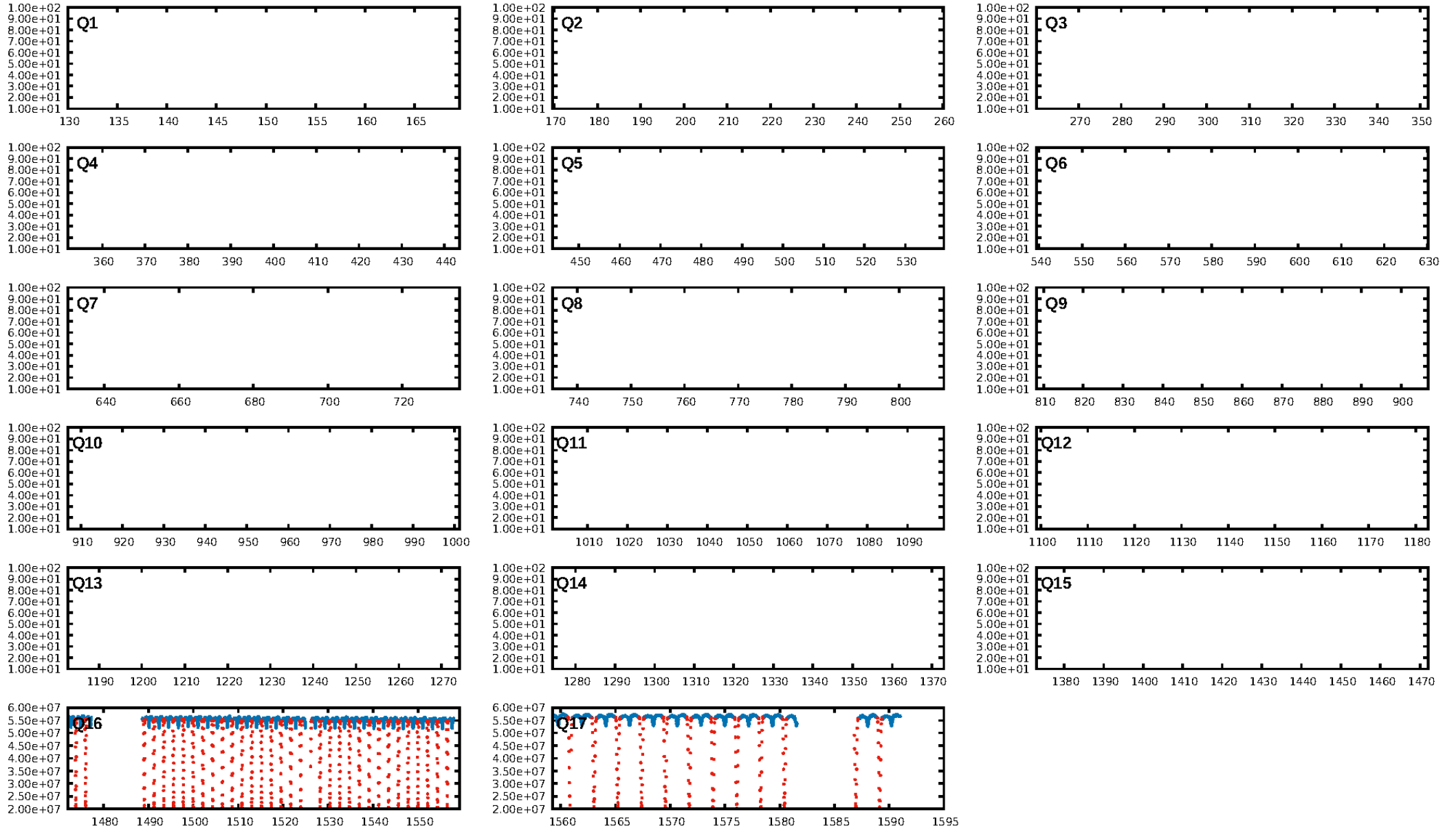
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [32/32]
GhostDiagnostic-chr: 1.799
Centroid-sig: N/A
Centroid-so: 0.170 arcsec [116.91σ]
OotOffset-rm: 0.029 arcsec [0.42σ]
KicOffset-rm: 0.062 arcsec [0.76σ]
OotOffset-st: 0/0/1/1 [2]
KicOffset-st: 0/0/1/1 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

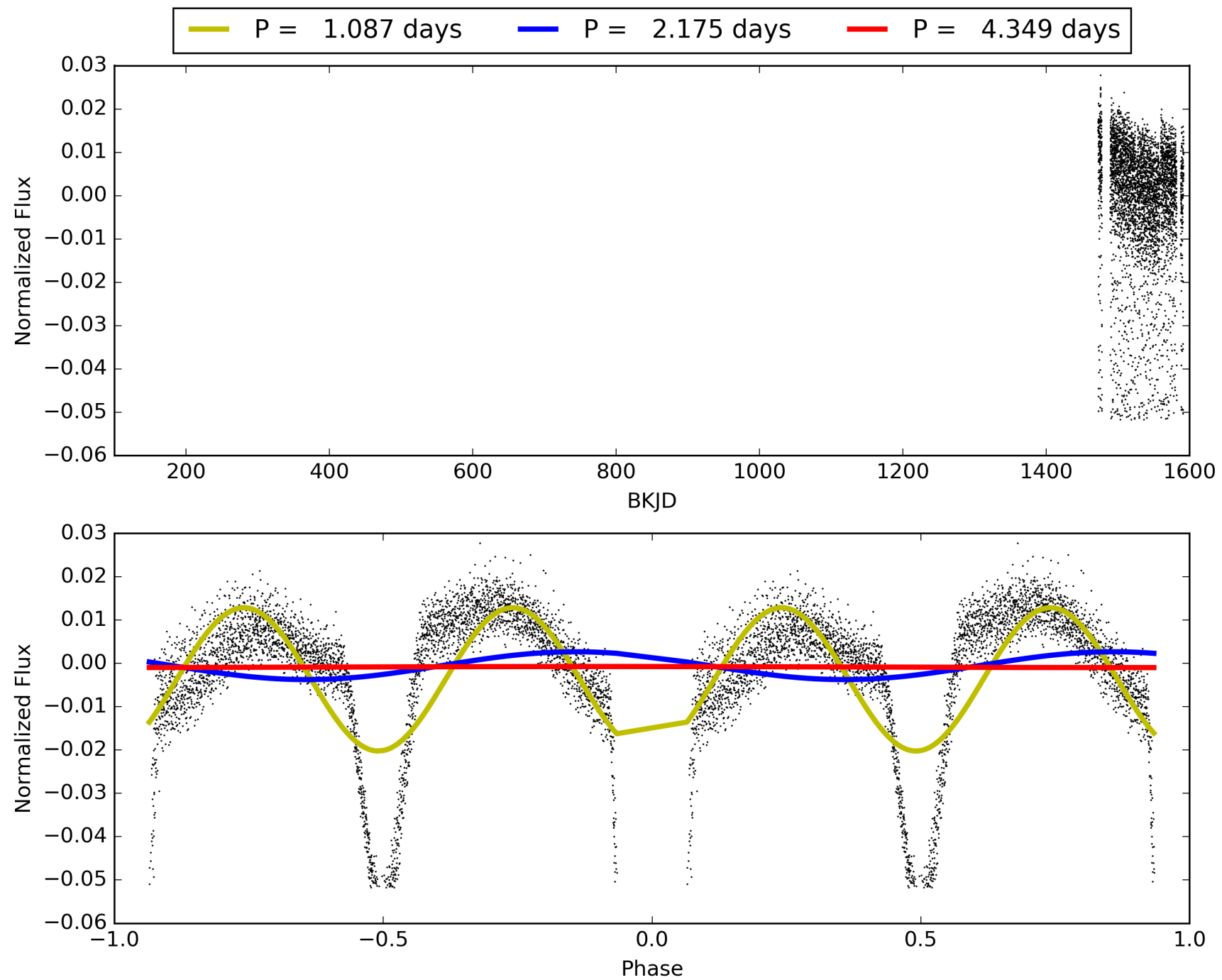
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 22:52:02 Z

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

TCE 009108058-01, PDC Light Curves

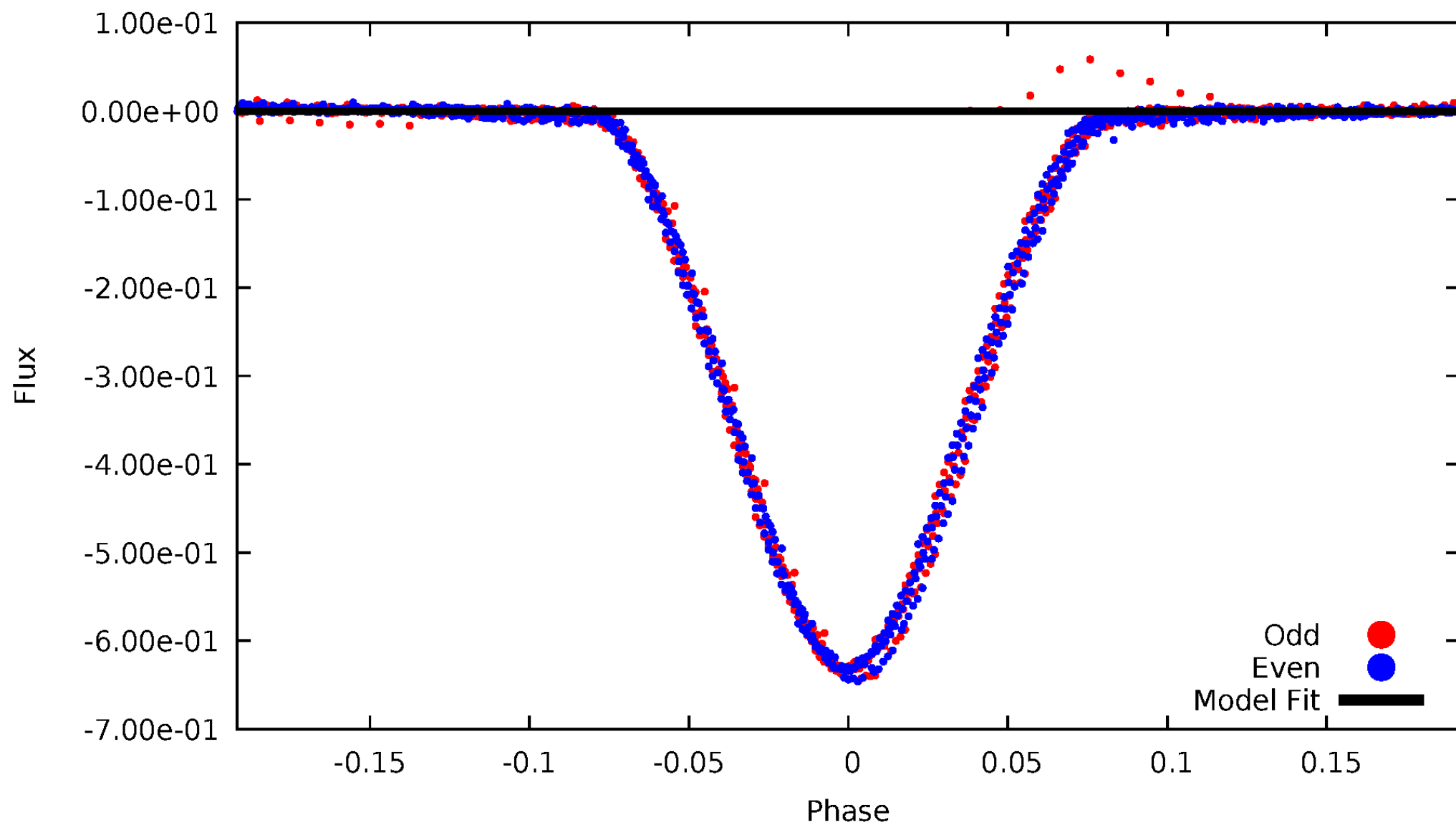


TCE 009108058-01



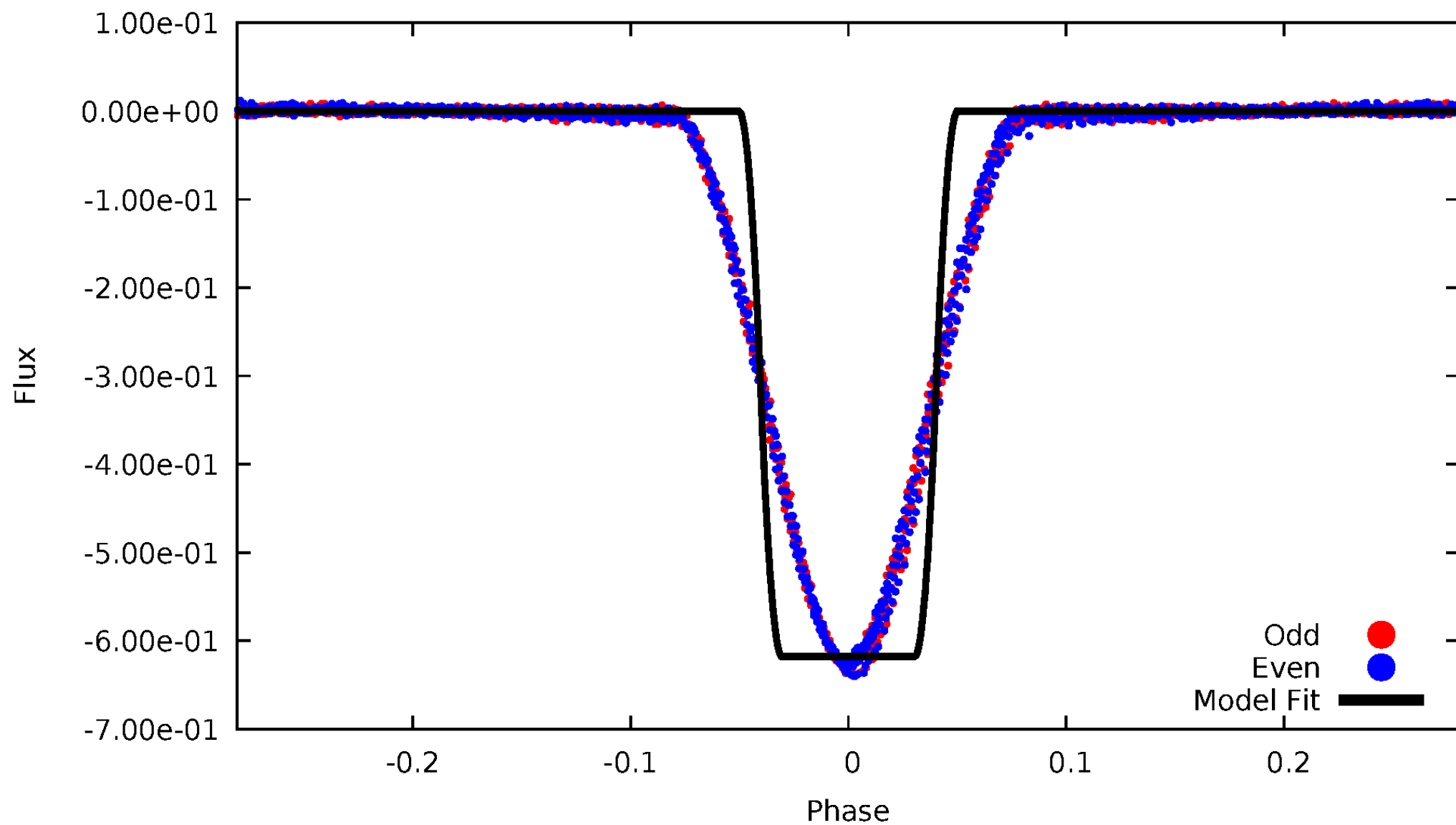
DV Odd/Even

TCE 009108058-01



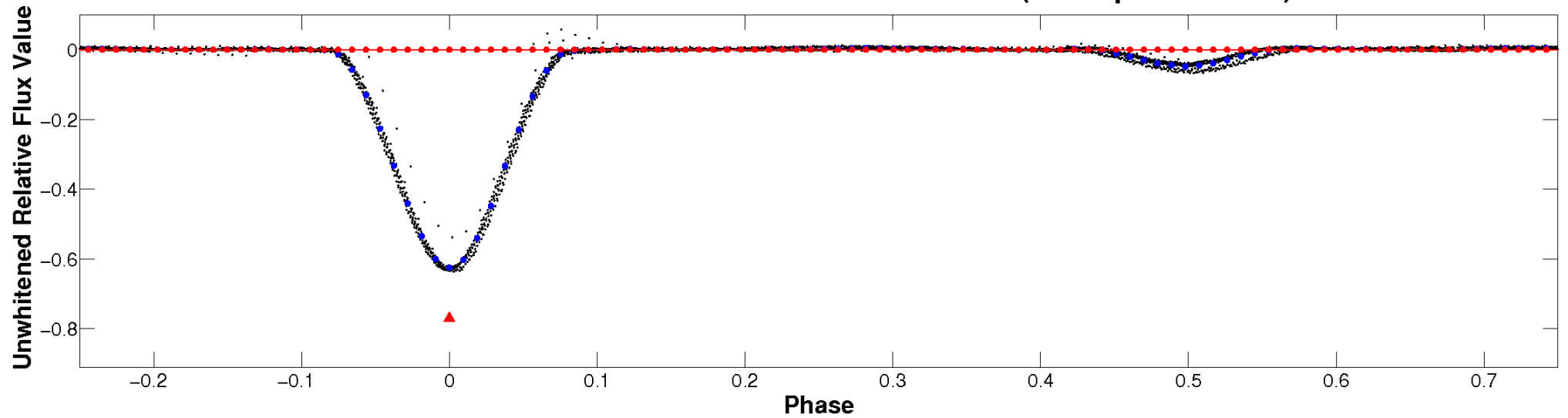
ALT Odd/Even

TCE 009108058-01



Non-Whitened Vs. Whitened Light Curve

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

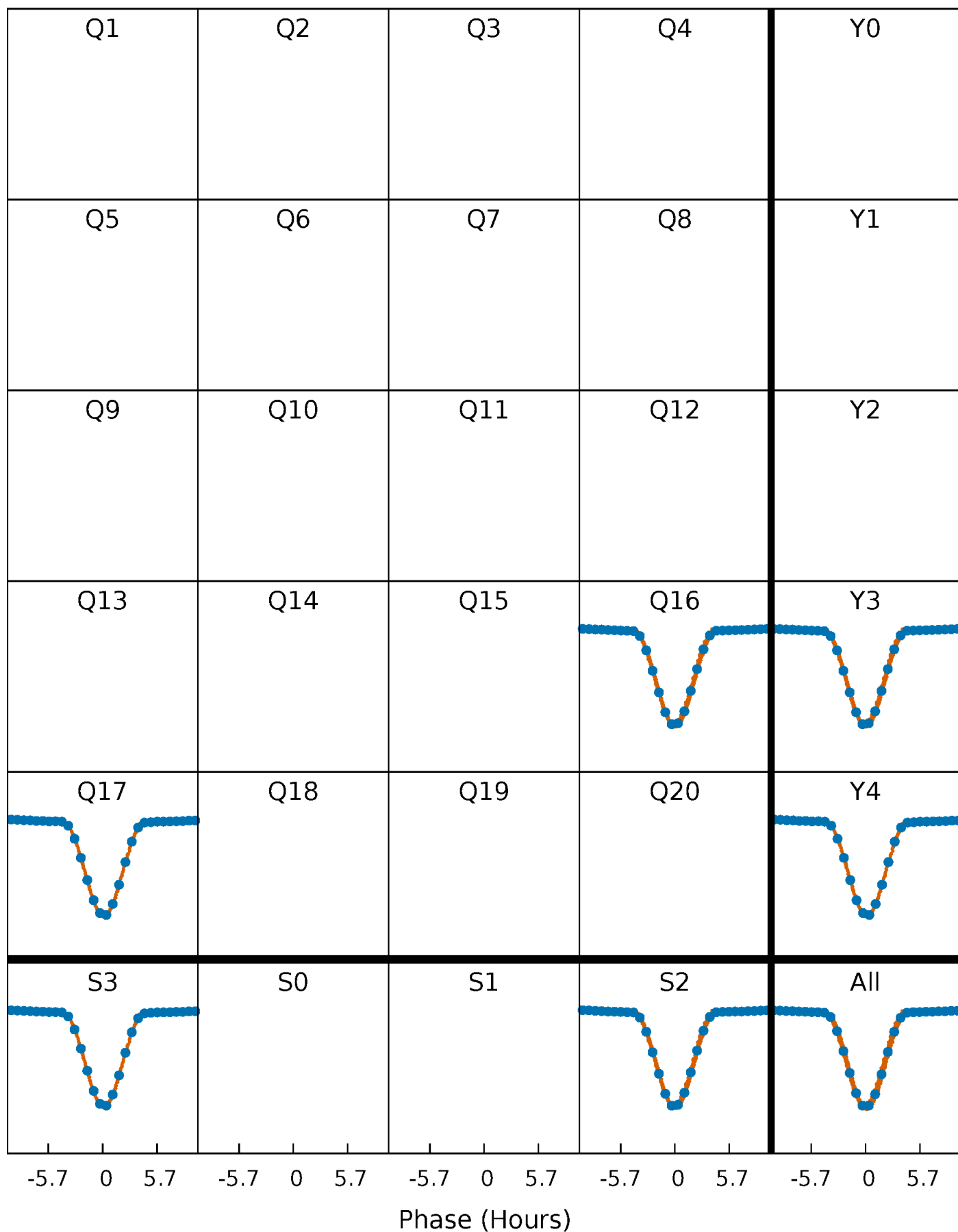


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



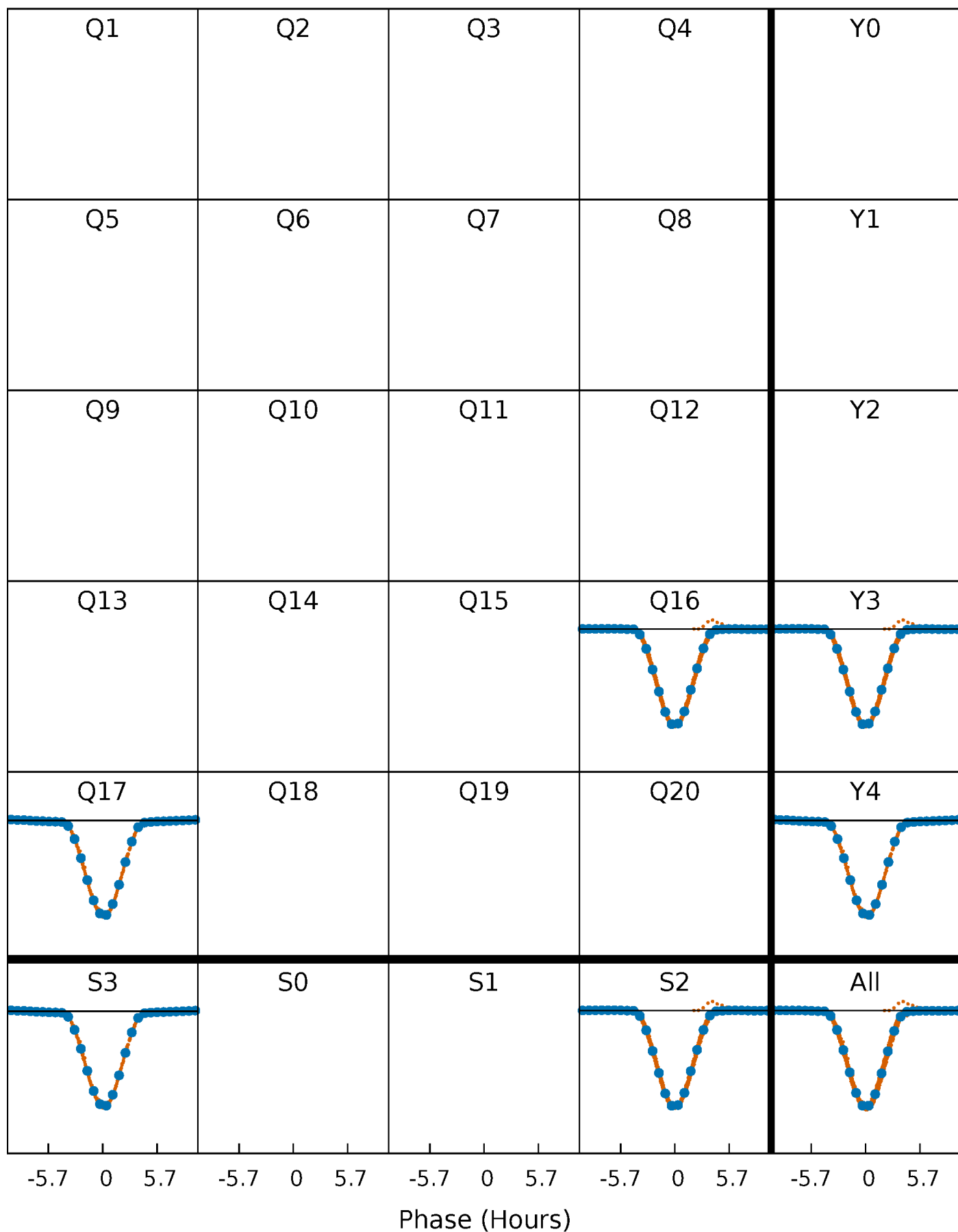
PDC Quarter-Phased Transit Curves

TCE 009108058-01 P= 2.174664 Days $T_0=132.100162$ (BKJD)



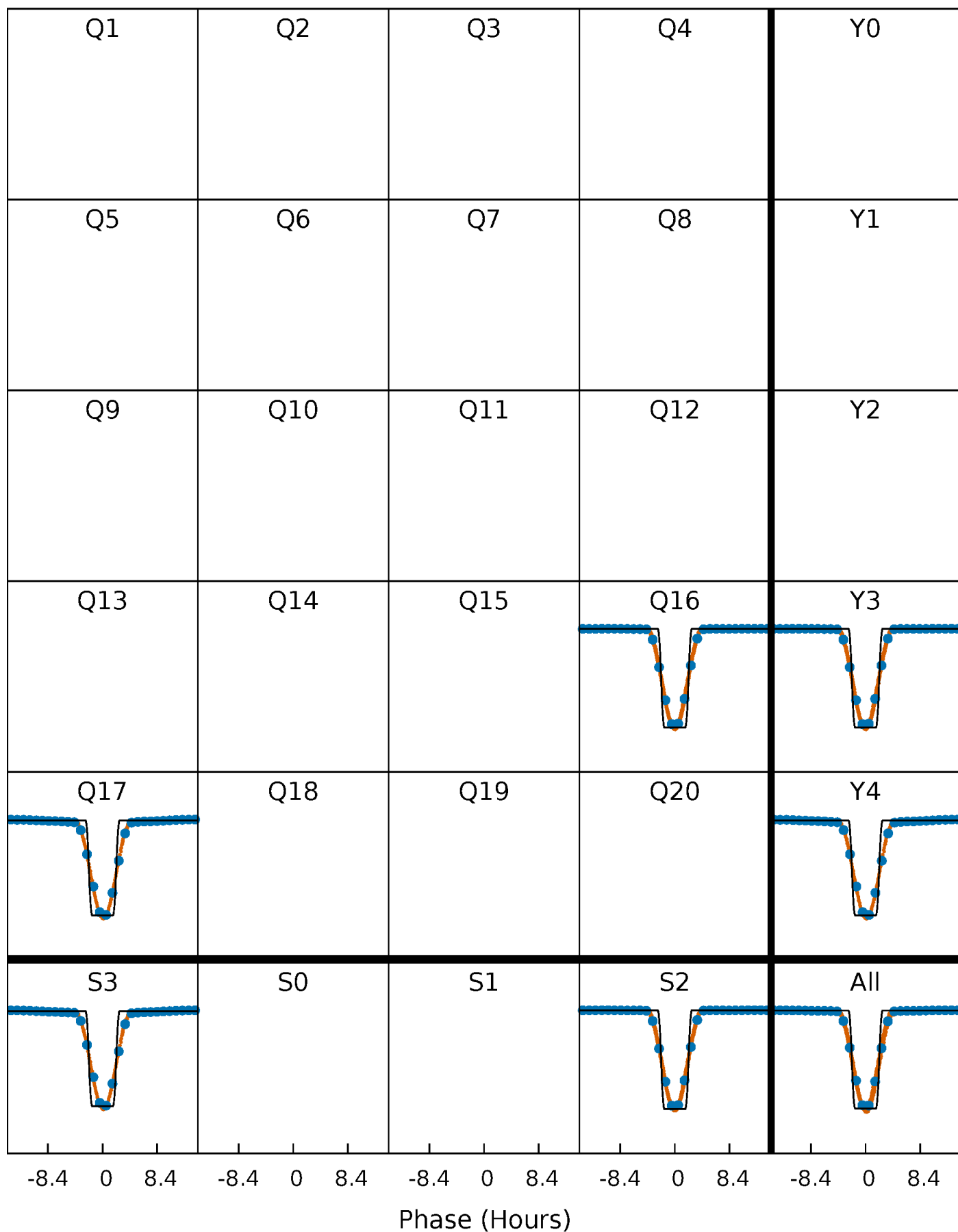
DV Quarter-Phased Transit Curves

TCE 009108058-01 P= 2.174664 Days $T_0=132.100162$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

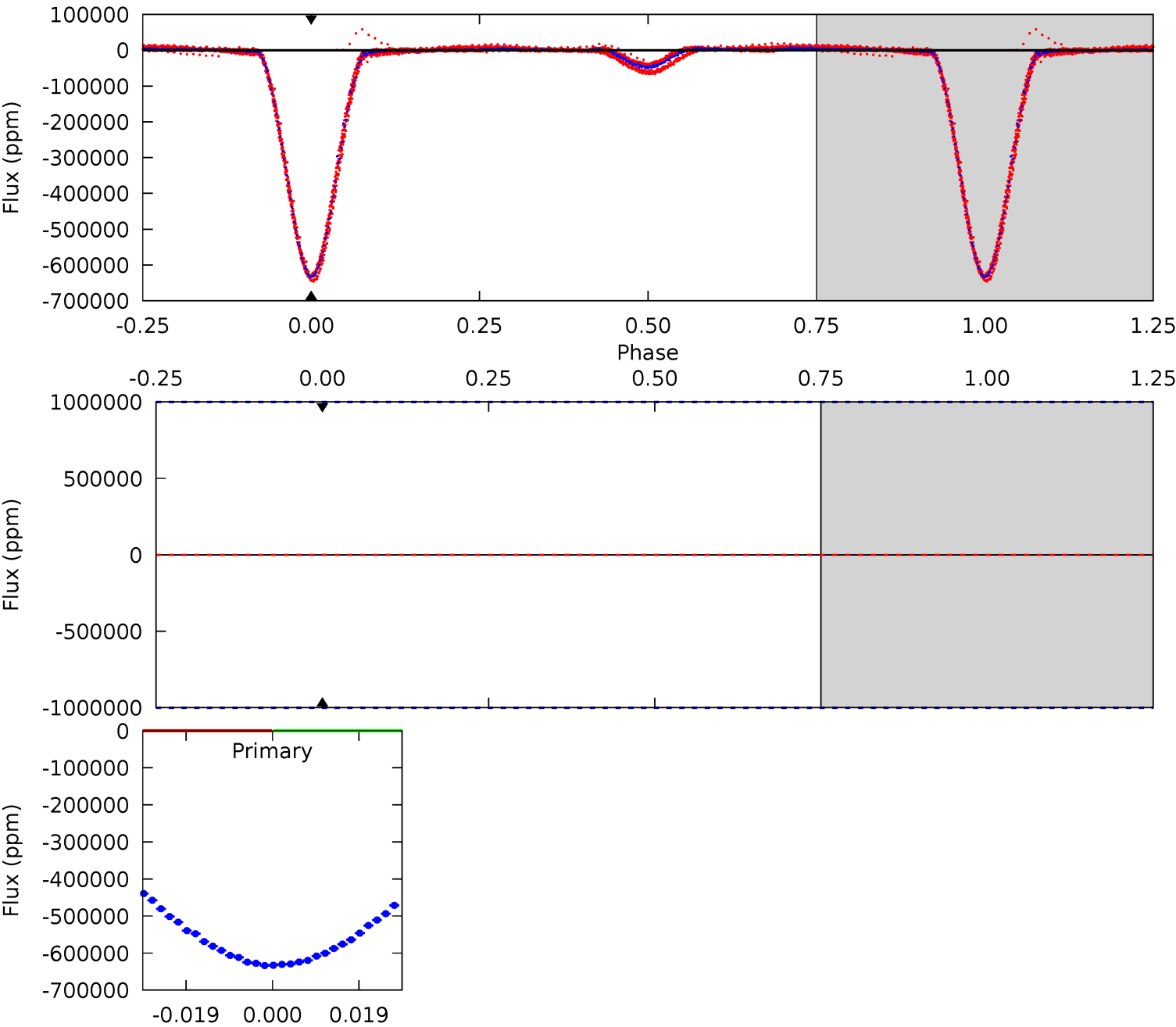
TCE 009108058-01 P= 2.174664 Days $T_0=132.100530$ (BKJD)



DV Model-Shift Uniqueness Test

009108058-01, P = 2.174664 Days, E = 132.100162 Days

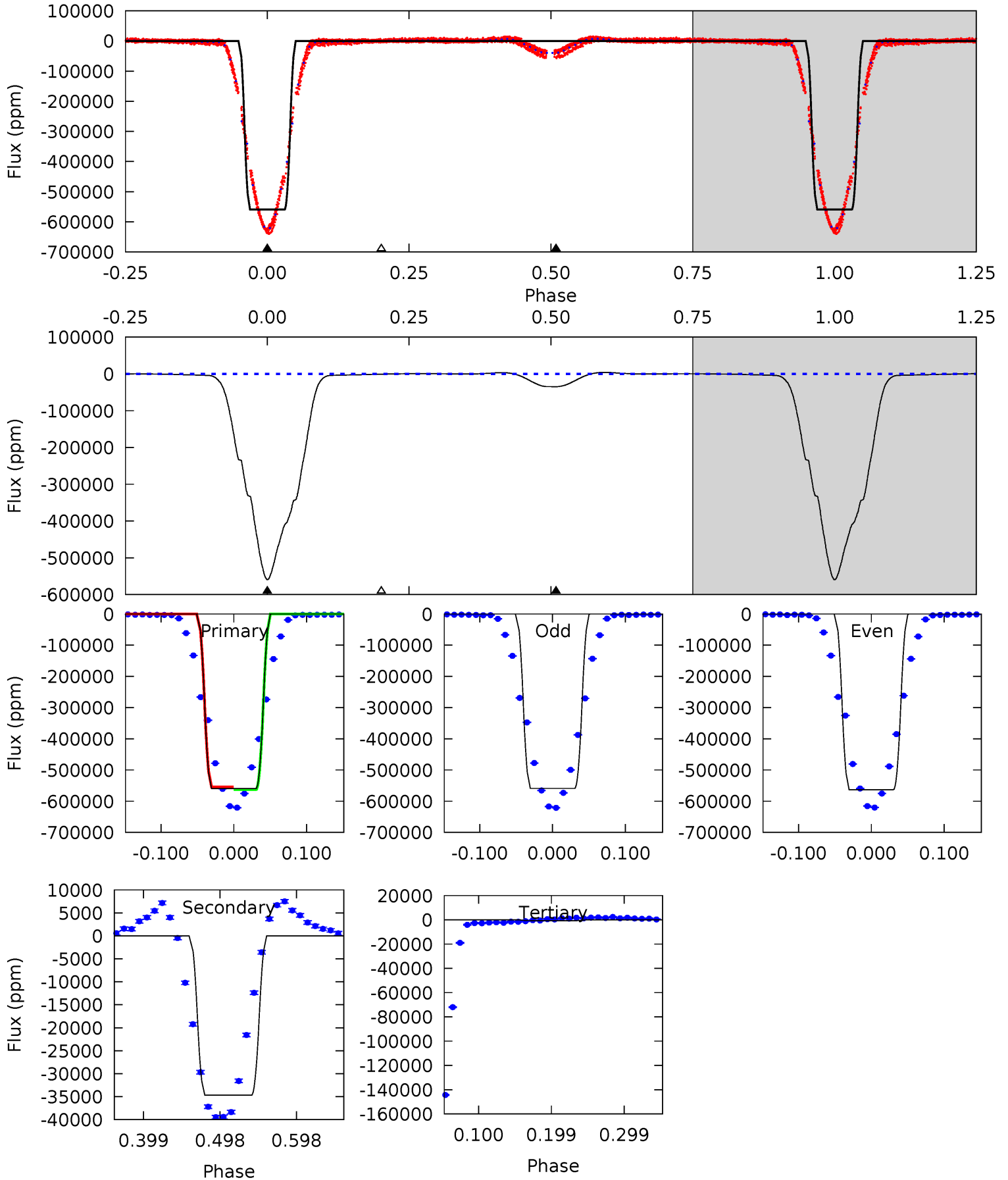
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

009108058-01, P = 2.174664 Days, E = 132.100530 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2615	162.1	3.12	0	4.57	1.65	8.09	2612	2615	159.0	162.1	9.36	1.00	0.01	18.4



Stellar Parameters For KIC 009108058

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6792^{+190}_{-286}	$4.143^{+0.180}_{-0.180}$	$-0.140^{+0.250}_{-0.300}$	$1.636^{+0.494}_{-0.404}$	$1.364^{+0.202}_{-0.269}$	$0.439^{+0.429}_{-0.215}$
	+3%/-4%	+4%/-4%	+179%/-214%	+30%/-25%	+15%/-20%	+98%/-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 009108058-01 / KOI 5615.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$27.88^{+18.95}_{-16.50}$	2804^{+204}_{-211}	-3989^{+16176}_{-8112}	$-1.827^{+137.998}_{-120.144}$
Alt.	-34690 ± 214	$140.38^{+29.62}_{-27.24}$	2803^{+232}_{-233}	3560^{+225}_{-206}	$1.331^{+0.660}_{-0.423}$

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 $A_{obs} \gg 1.0$

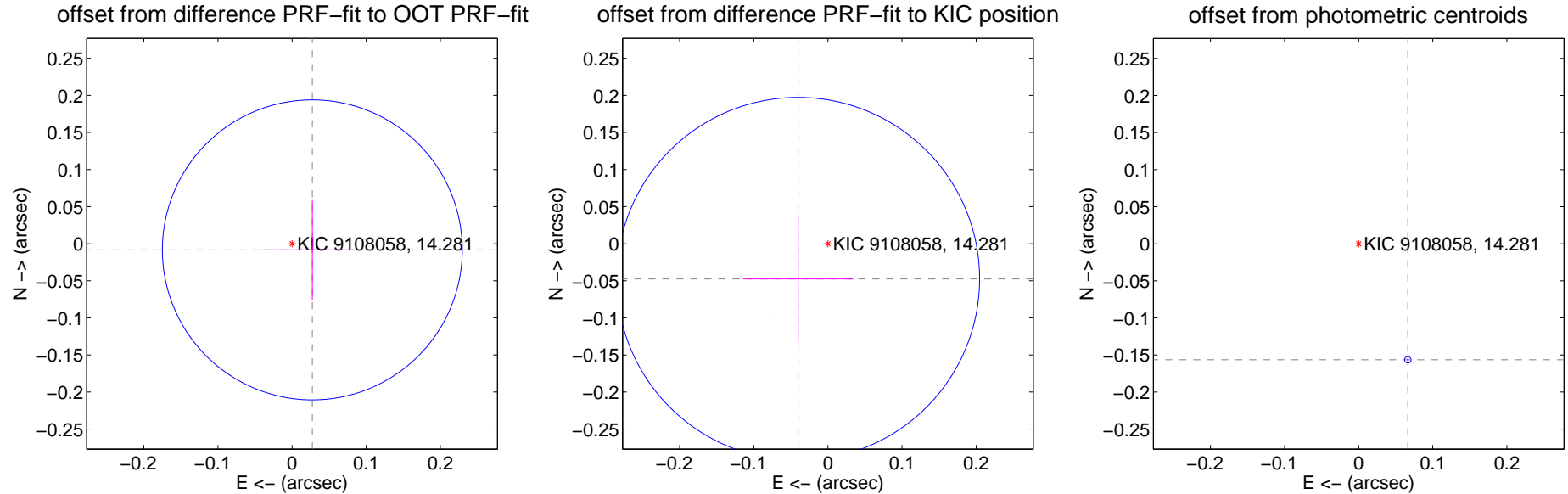
DV Centroid Data

Supplemental centroid analysis for 009108058-01. Kepler magnitude: 14.28. Transit SNR -1.00

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.029 ± 0.067	0.42	-0.027 ± 0.067	-0.008 ± 0.067
PRF-fit source offset from KIC position	0.062 ± 0.082	0.76	0.040 ± 0.074	-0.047 ± 0.086
photometric centroid source offset	0.17 ± 0.00	116.91	-0.07 ± 0.00	-0.16 ± 0.00



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.



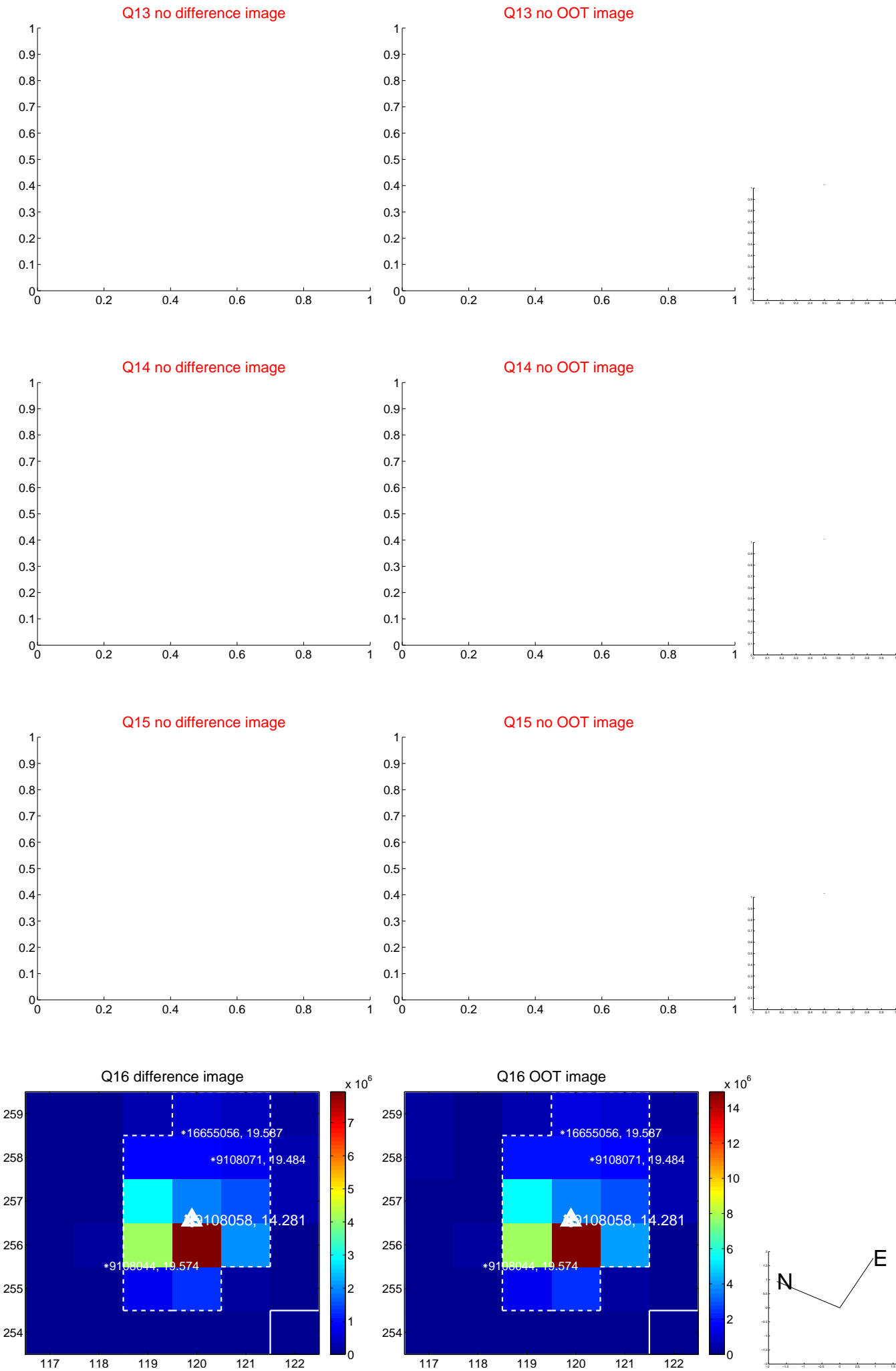
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



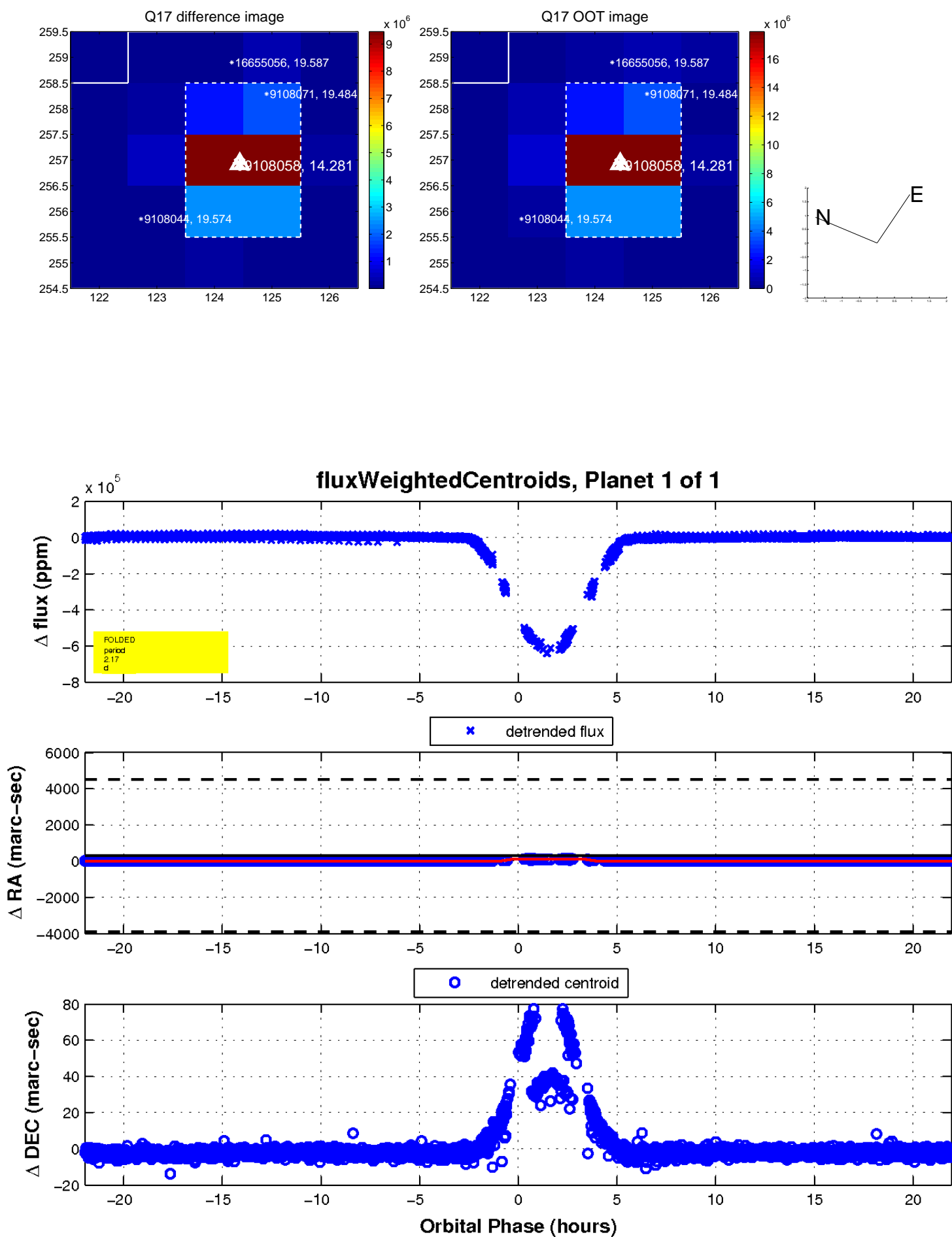
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

