

KIC 007812175

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})
007812175-01	OBS	3665.01	17.794765	133.986460	116004.5	3.726	687.6	315.6	1.00	5780	51.95	56.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007812175-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—MOD_ODDEVEN_DV—DEEP_V_SHAPED—CENT_KIC_POS

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 007812175-01

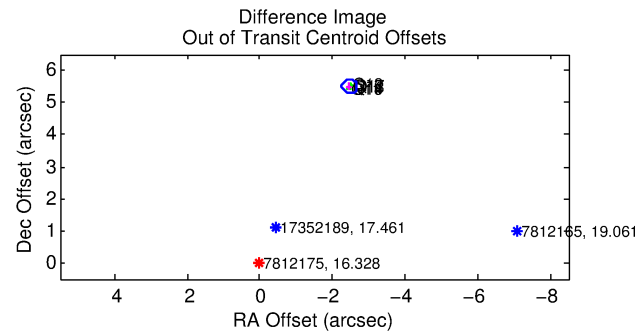
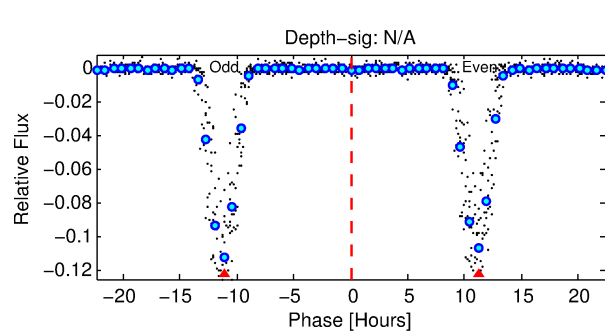
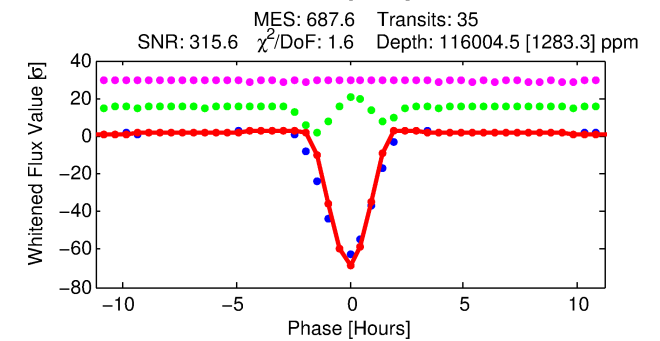
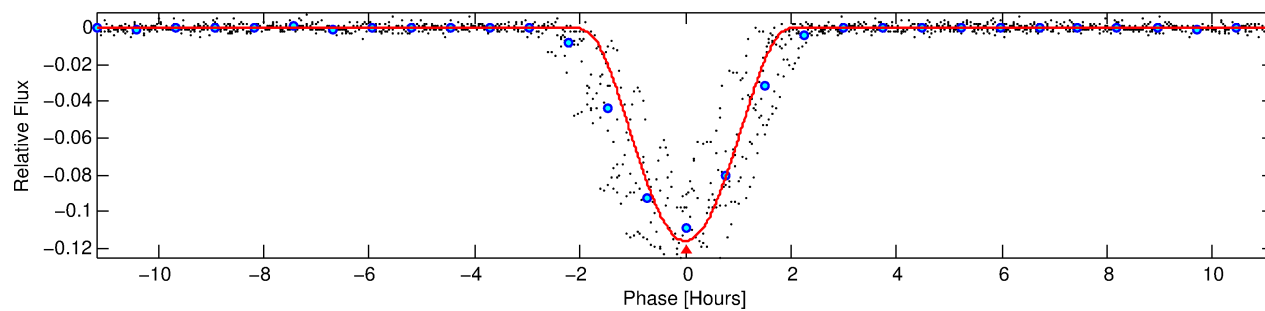
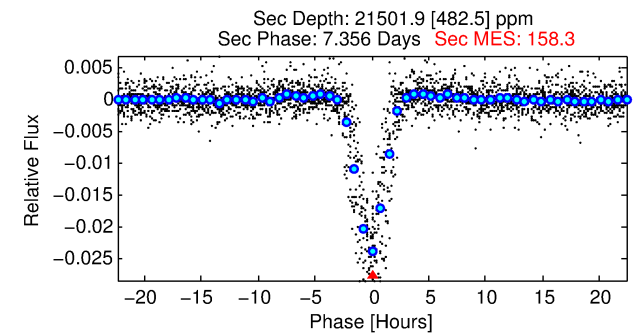
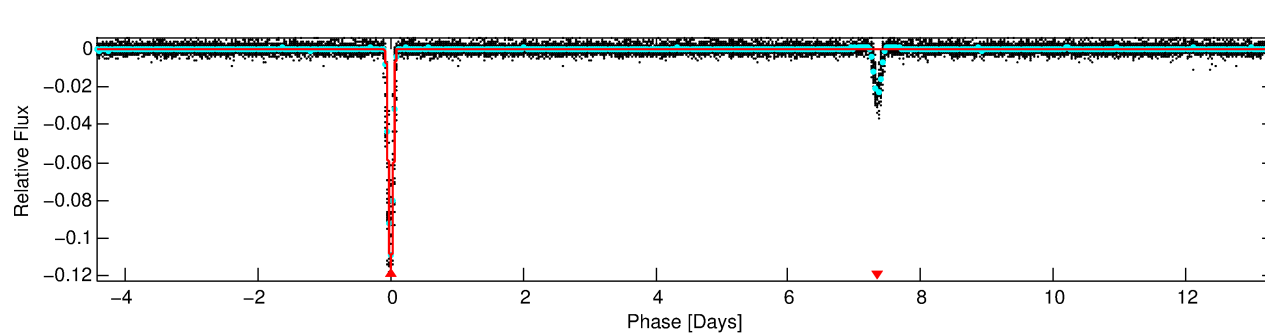
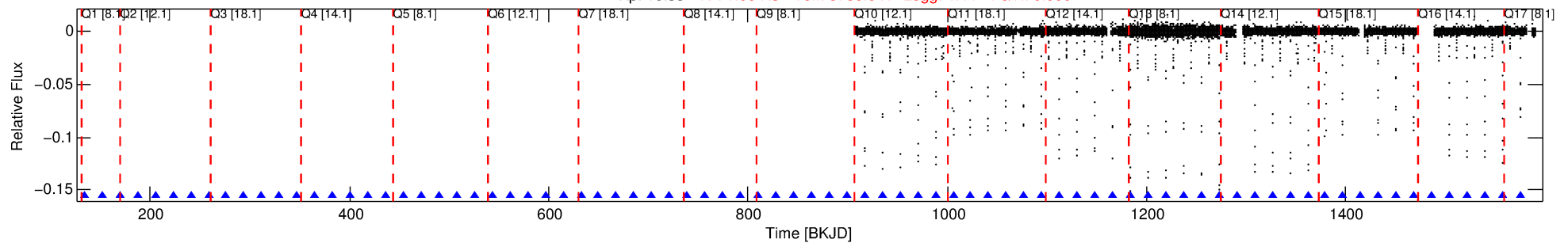
No Significant Match Found

DV One-Page Summary

KIC: 7812175 Candidate: 1 of 1 Period: 17.795 d

KOI: K03665.01 Corr: 0.869

Kp: 16.33 R*: 1.00 Rs Teff: 5780.0 K Logg: 4.44 Fe/H: 0.000



DV Fit Results:

Period = 17.79477 [0.00001] d
Epoch = 133.9865 [0.0005] BKJD
Rp/R* = 0.4761 [0.3958]
a/R* = 42.03 [2.31]
b = 0.92 [0.55]
Seff = 56.18 [0.00]
Teq = 698 [0] K
Rp = 51.96 [43.19] Re
a = 0.1334 [0.0000] AU
Ag = 78.01 [129.70] [0.59σ]
Teffp = 3208 [1333] K [1.88σ]

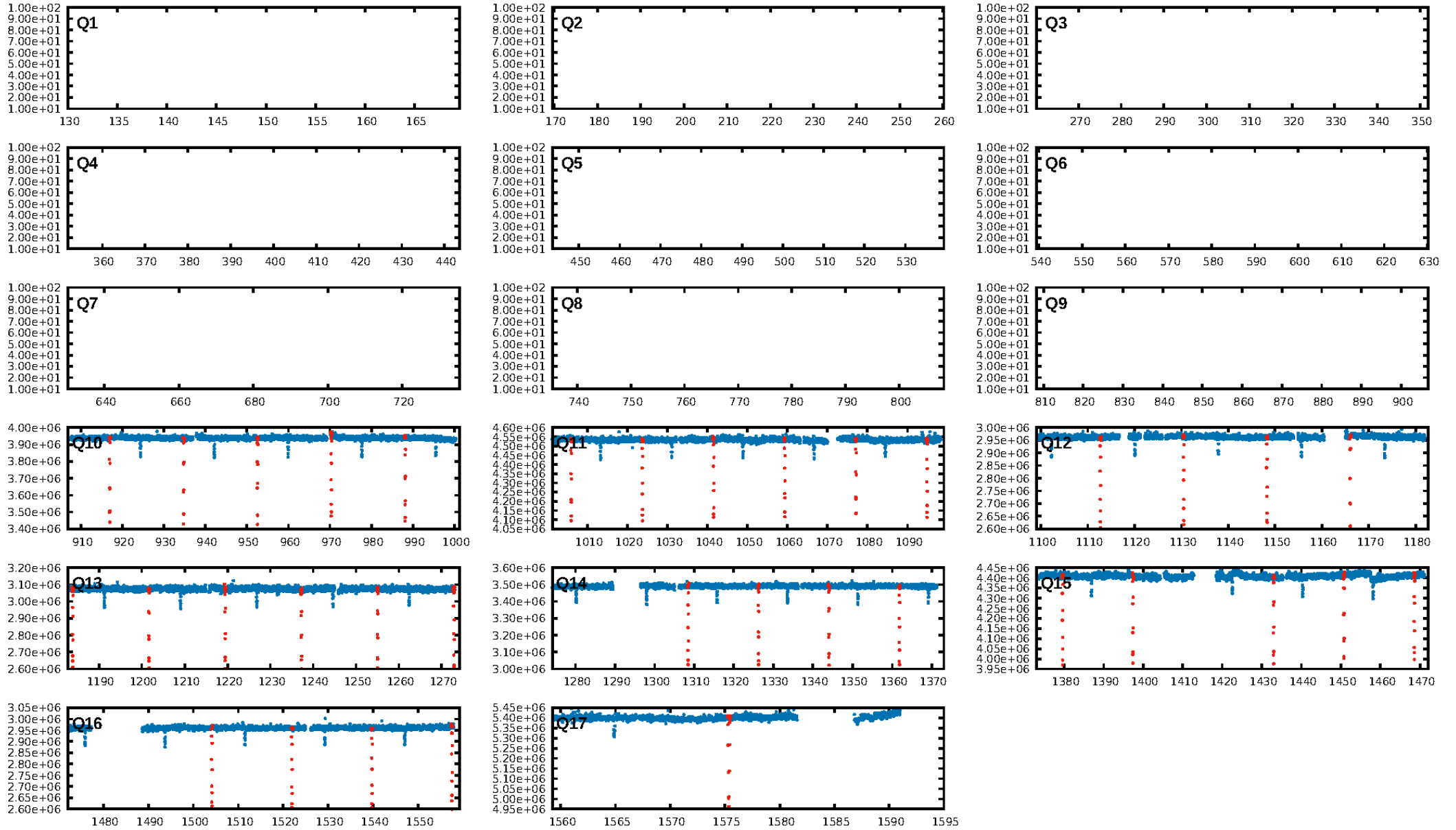
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [34/34]
GhostDiagnostic-chr: 4.191
Centroid-sig: 0.0%
Centroid-so: 2.184 arcsec [724.69σ]
OotOffset-rm: 6.026 arcsec [84.08σ]
KicOffset-rm: 1.051 arcsec [14.99σ]
OotOffset-st: 2/2/2/2 [8]
KicOffset-st: 2/2/2/2 [8]
DiffImageQuality-fgm: 1.00 [8/8]
DiffImageOverlap-fno: 1.00 [8/8]

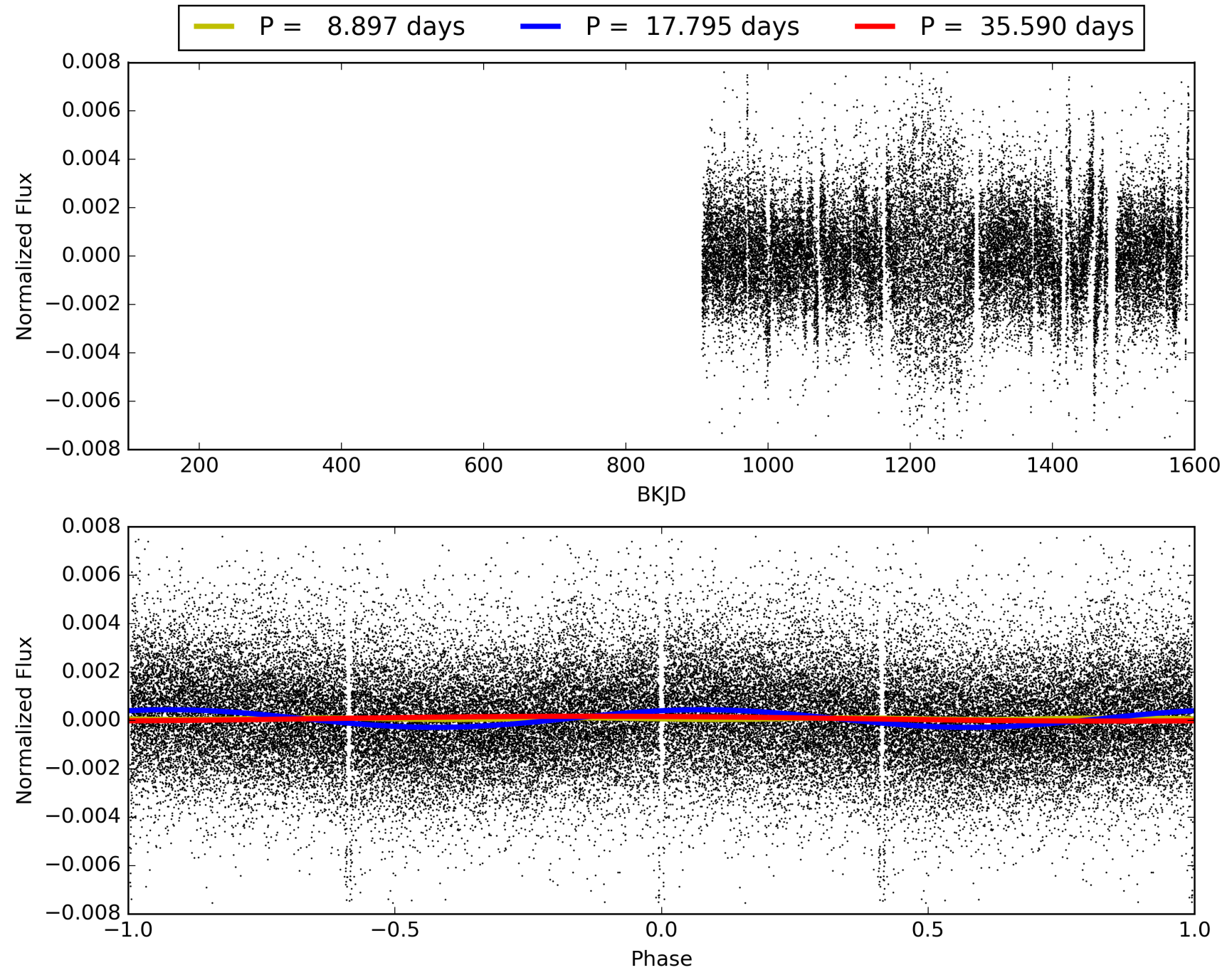
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 06:47:47 Z

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

TCE 007812175-01, PDC Light Curves

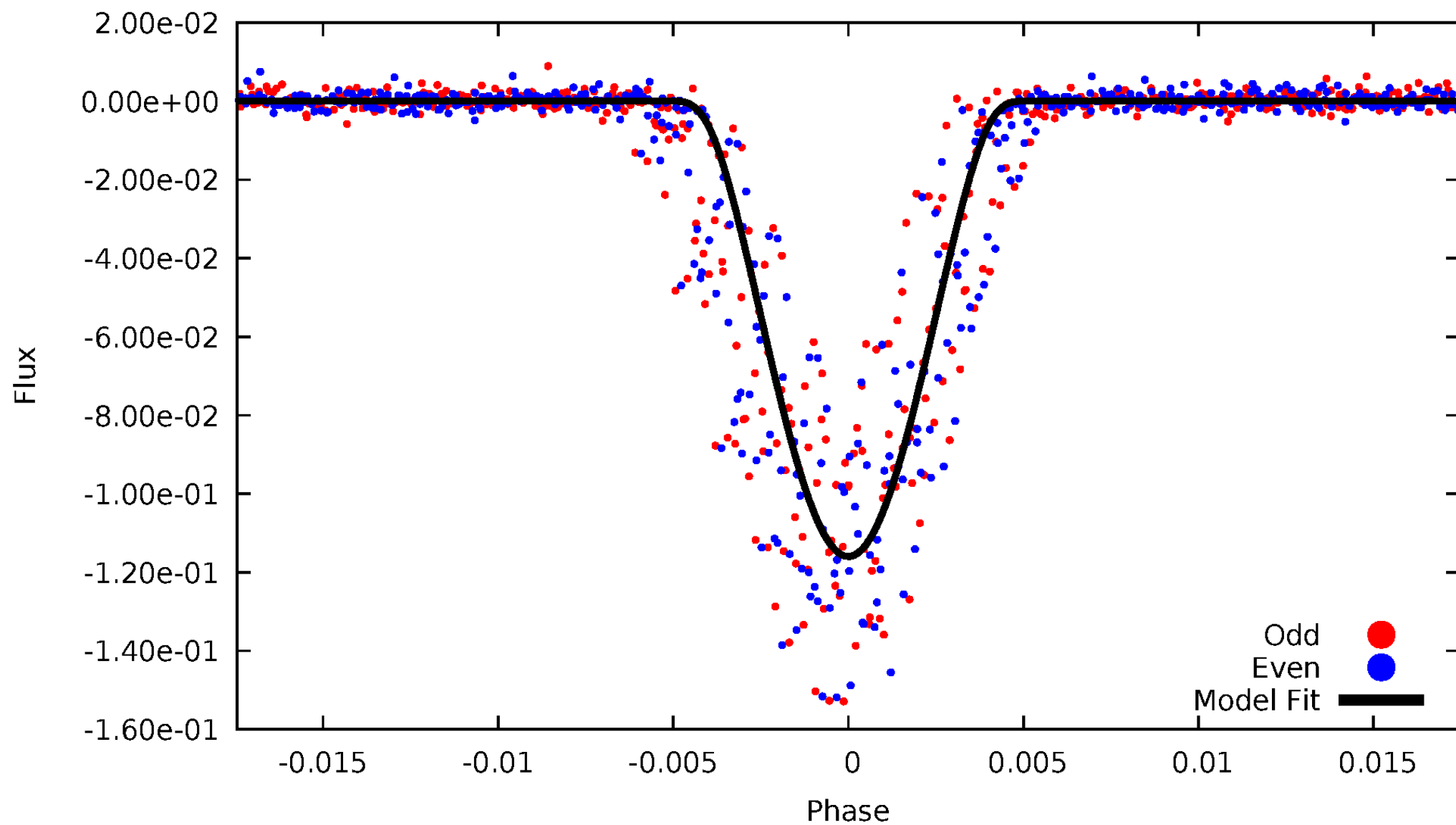


TCE 007812175-01



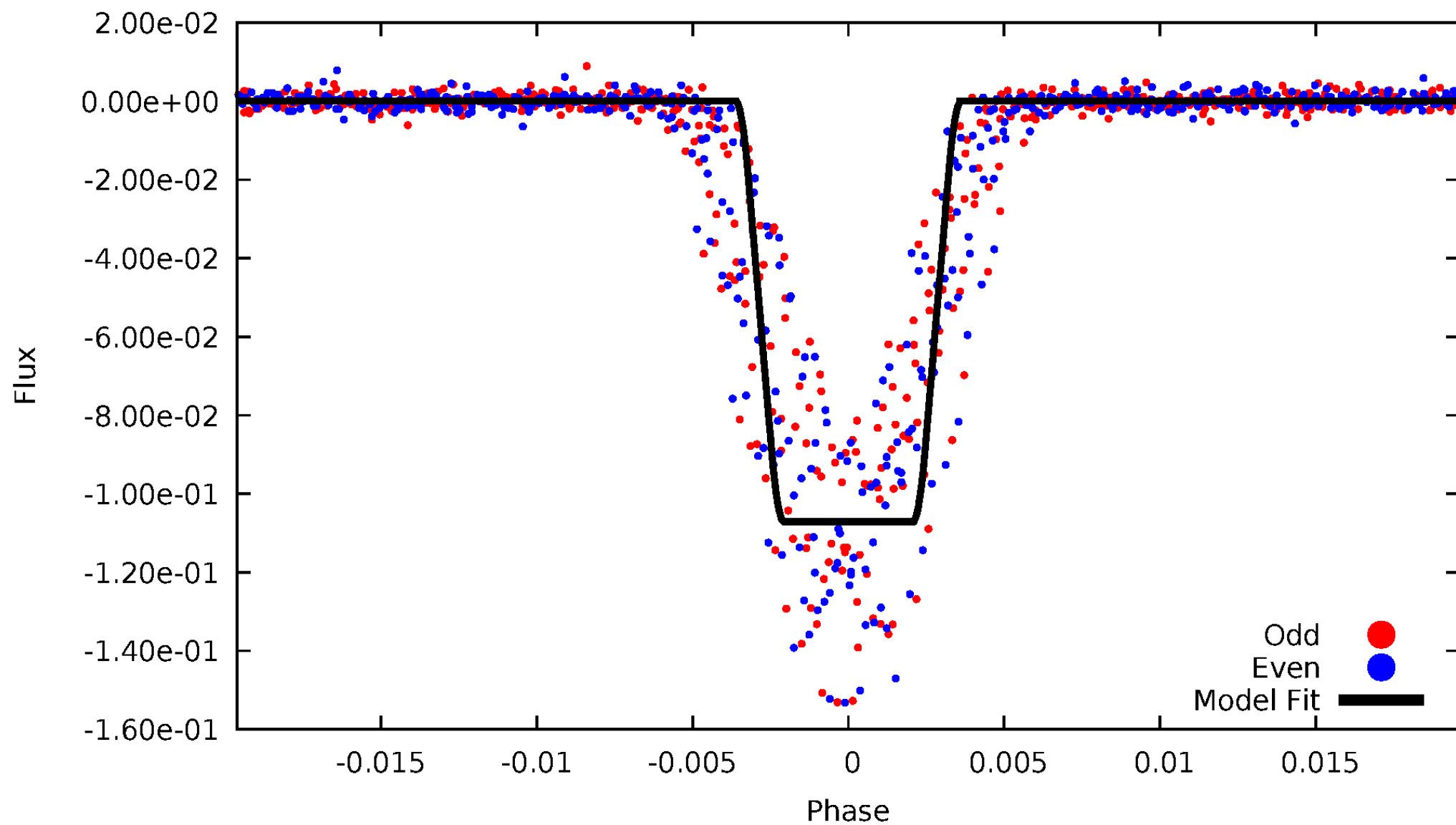
DV Odd/Even

TCE 007812175-01



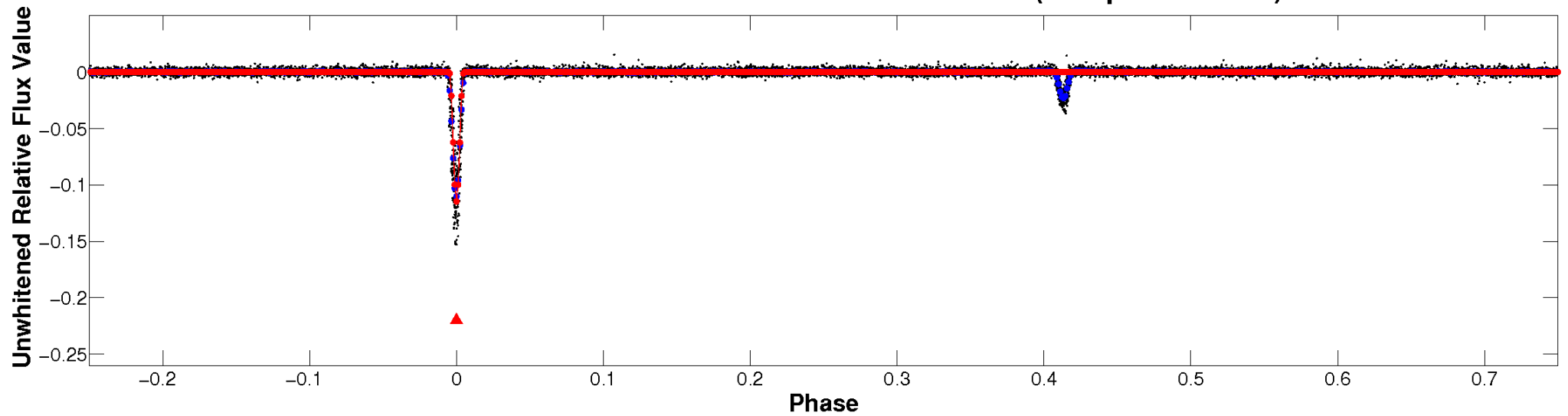
ALT Odd/Even

TCE 007812175-01

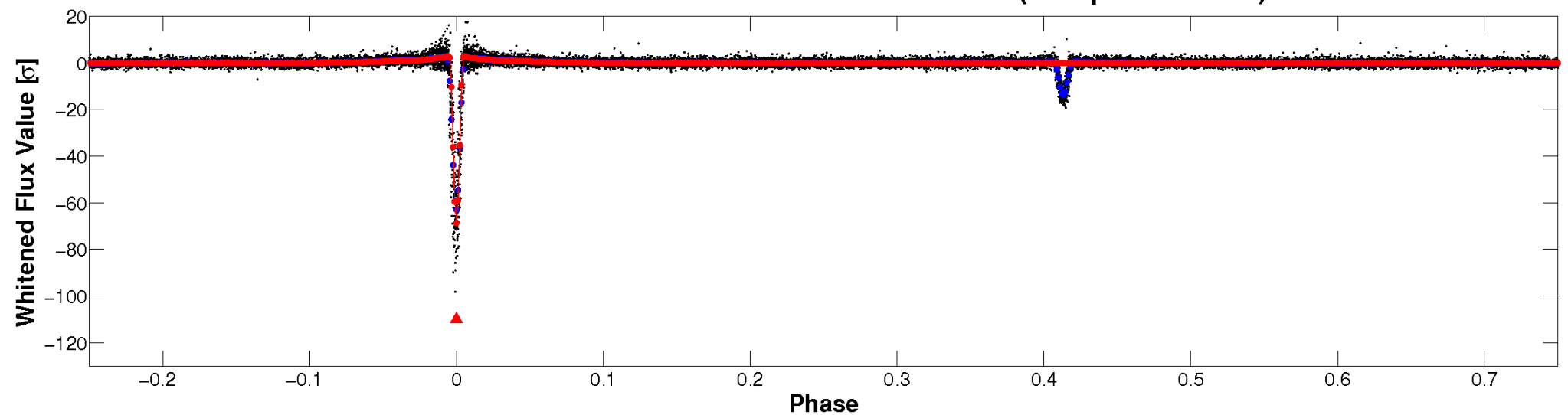


Non-Whitened Vs. Whitened Light Curve

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

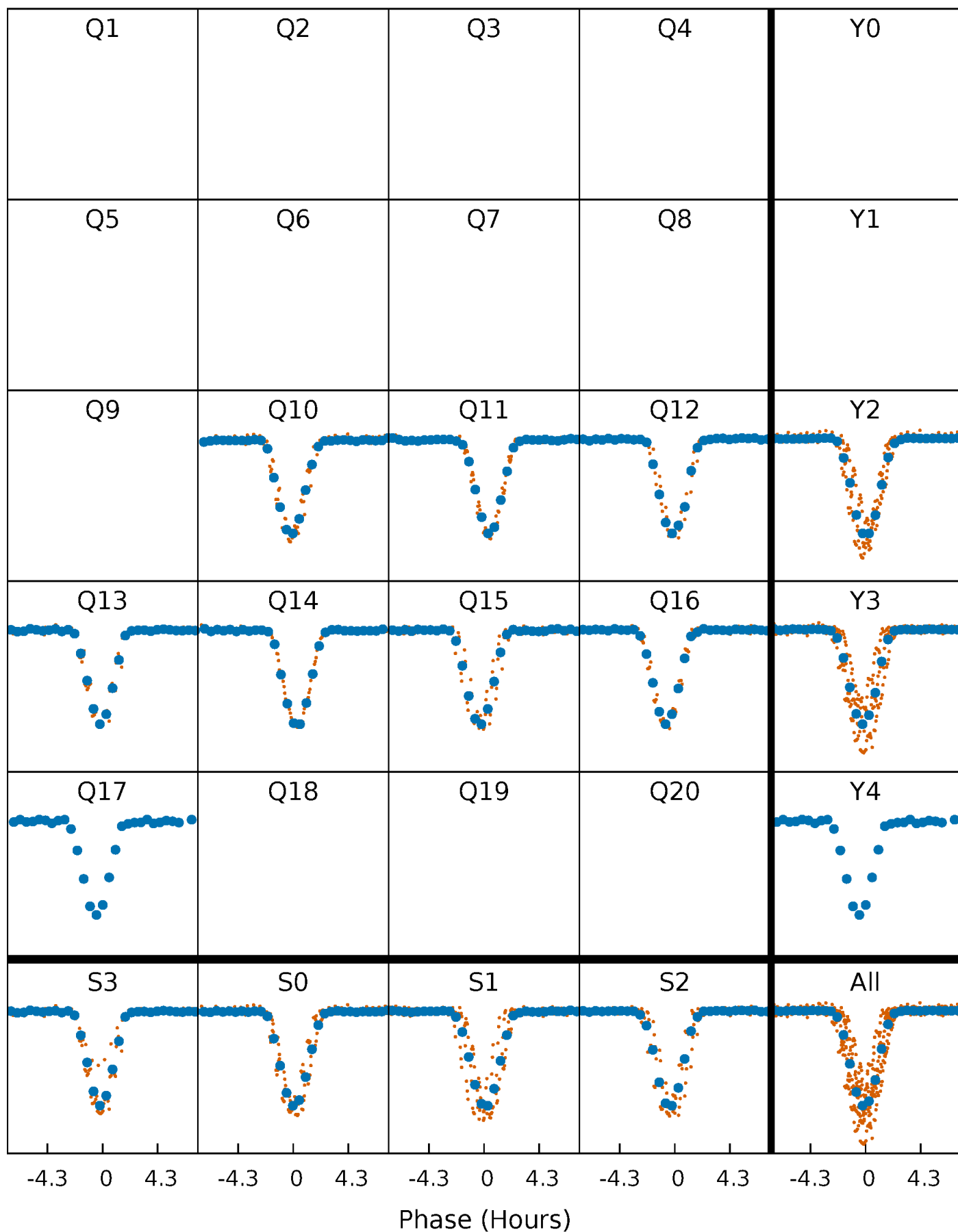


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



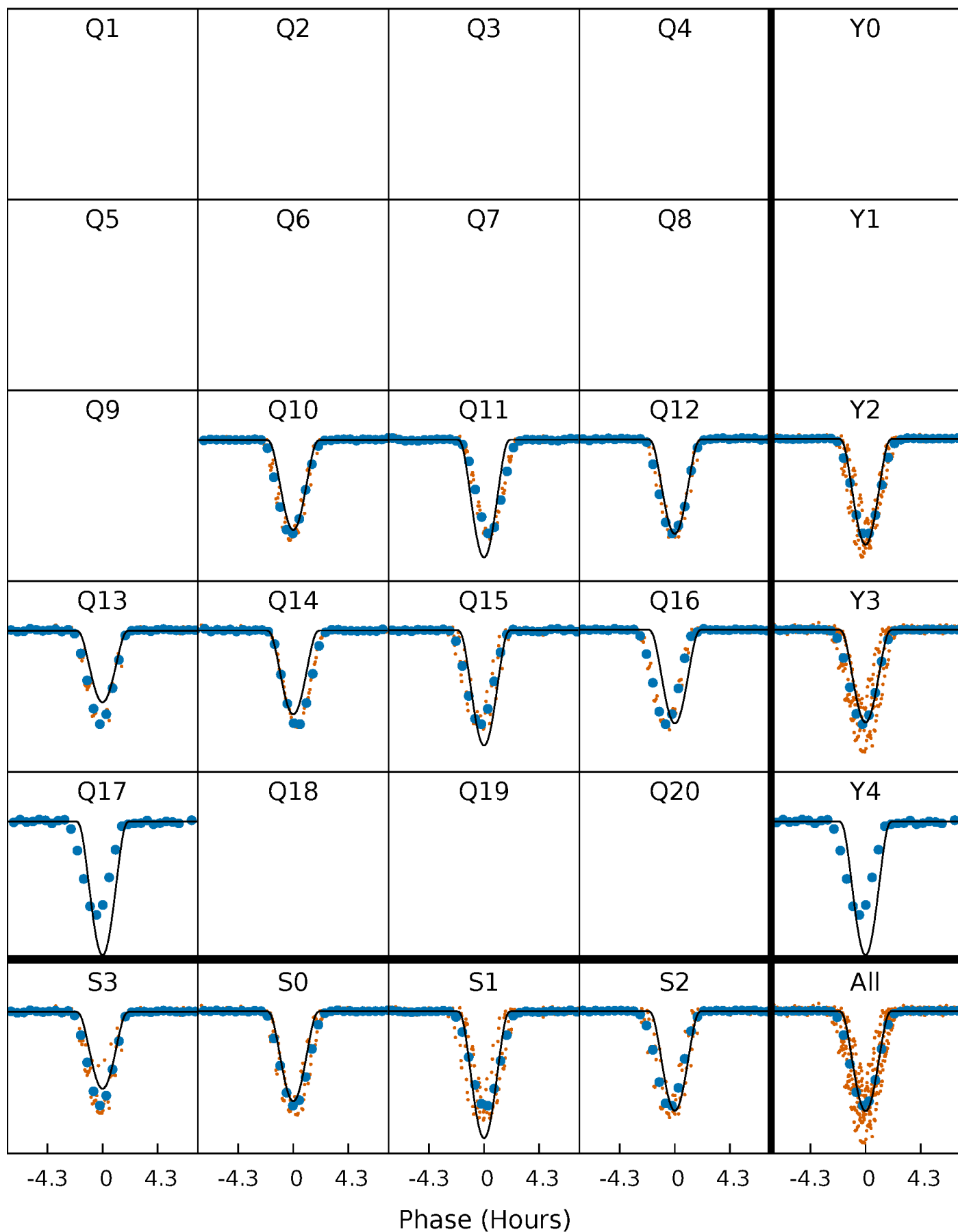
PDC Quarter-Phased Transit Curves

TCE 007812175-01 P= 17.794765 Days $T_0=133.986460$ (BKJD)



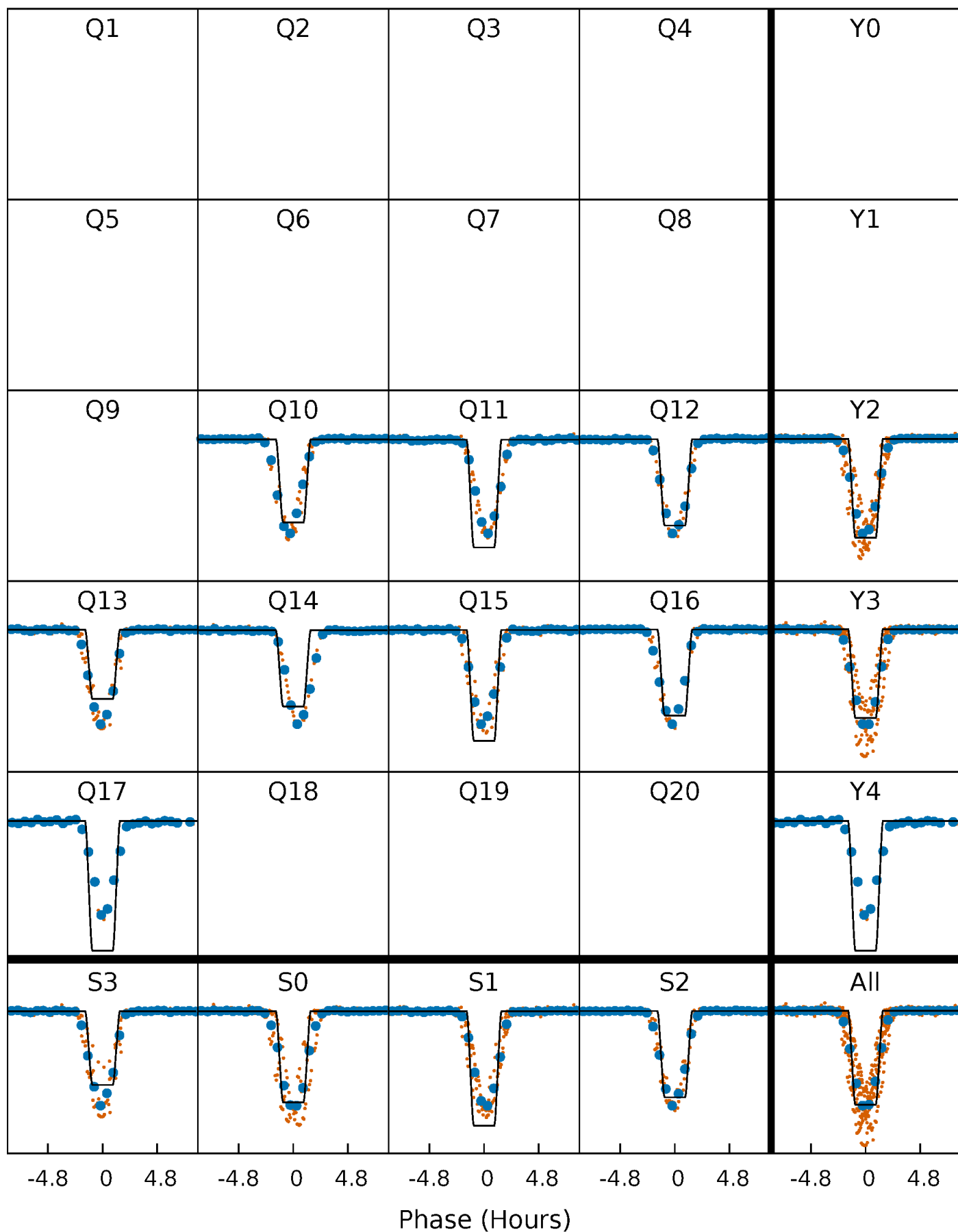
DV Quarter-Phased Transit Curves

TCE 007812175-01 P= 17.794765 Days $T_0=133.986460$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

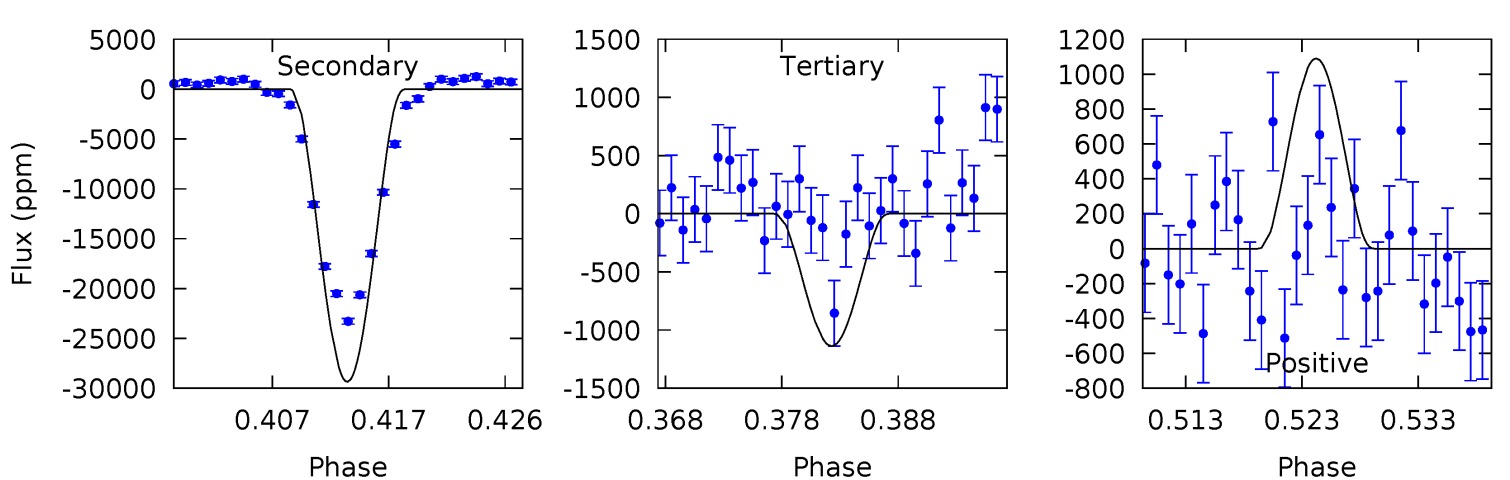
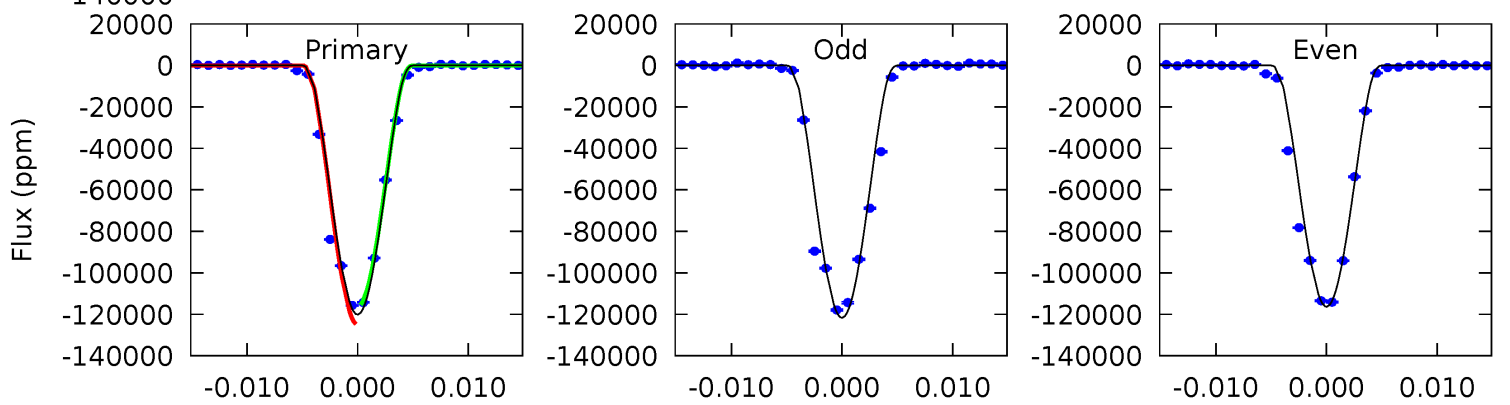
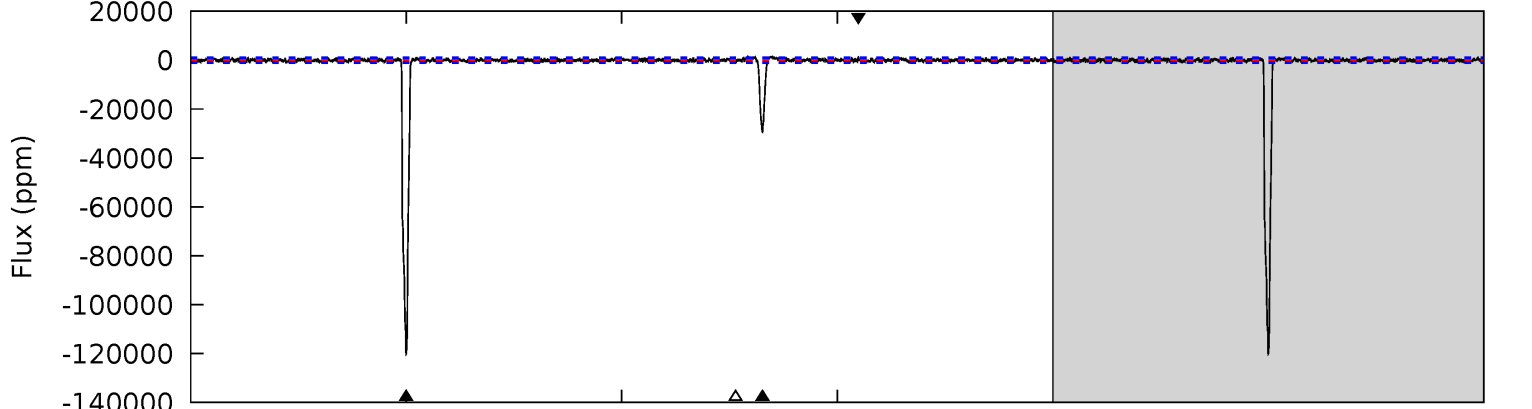
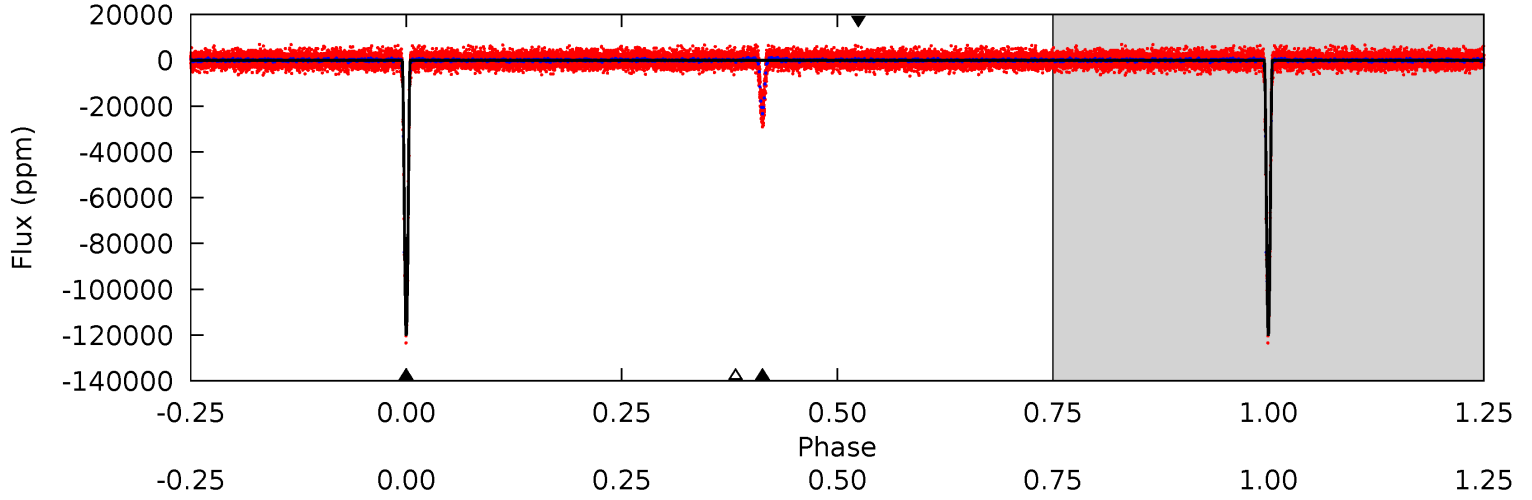
TCE 007812175-01 P= 17.794006 Days $T_0=134.029492$ (BKJD)



DV Model-Shift Uniqueness Test

007812175-01, P = 17.794765 Days, E = 133.986460 Days

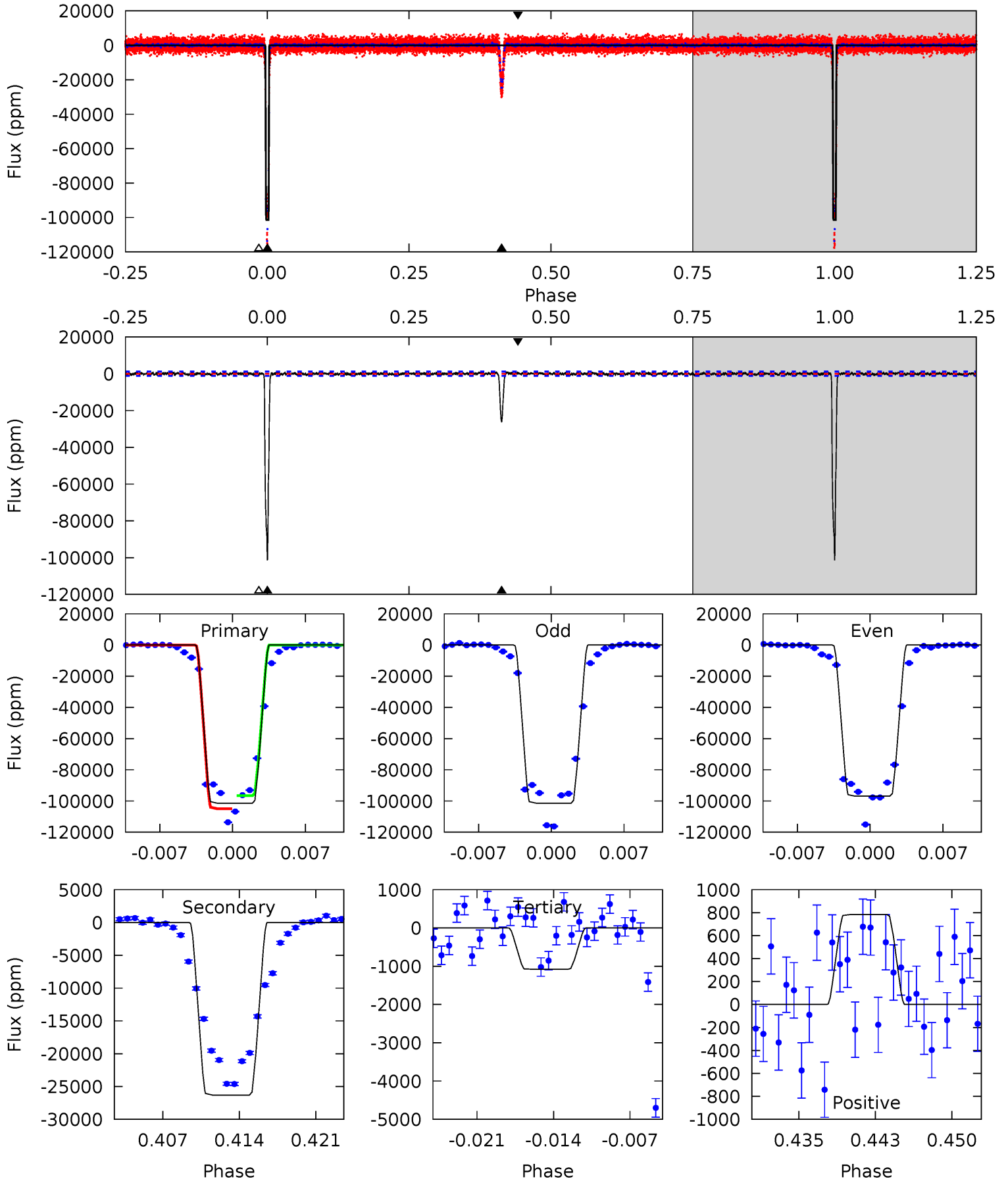
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
601.4	147.0	5.69	5.46	5.03	2.59	1.80	595.7	596.0	141.3	141.5	13.5	0.97	0.01	0



Alt Model-Shift Uniqueness Test

007812175-01, P = 17.794006 Days, E = 134.029492 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
440.4	114.2	4.68	3.40	5.09	2.69	1.21	435.7	437.0	109.6	110.8	9.49	0.98	0.01	0



Stellar Parameters For KIC 007812175

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5780^{+1}_{-1}	$4.438^{+1.000}_{-1.000}$	$0.000^{+1.000}_{-1.000}$	$1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$
	+0%/-0%	+23%/-23%	+inf%/-inf%	+100%/-100%	+100%/-100%	+100%/-100%
Source	Solar	Solar	Solar	Solar		

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

Secondary Eclipse Parameters for KIC 007812175-01 / KOI 3665.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-29357 ± 200	$59.10^{+39.82}_{-34.99}$	976^{+47}_{-45}	3702^{+1509}_{-590}	85^{+438}_{-55}
Alt.	-26308 ± 230	$47.04^{+38.15}_{-31.97}$	976^{+47}_{-45}	3925^{+2201}_{-687}	122^{+1024}_{-86}

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

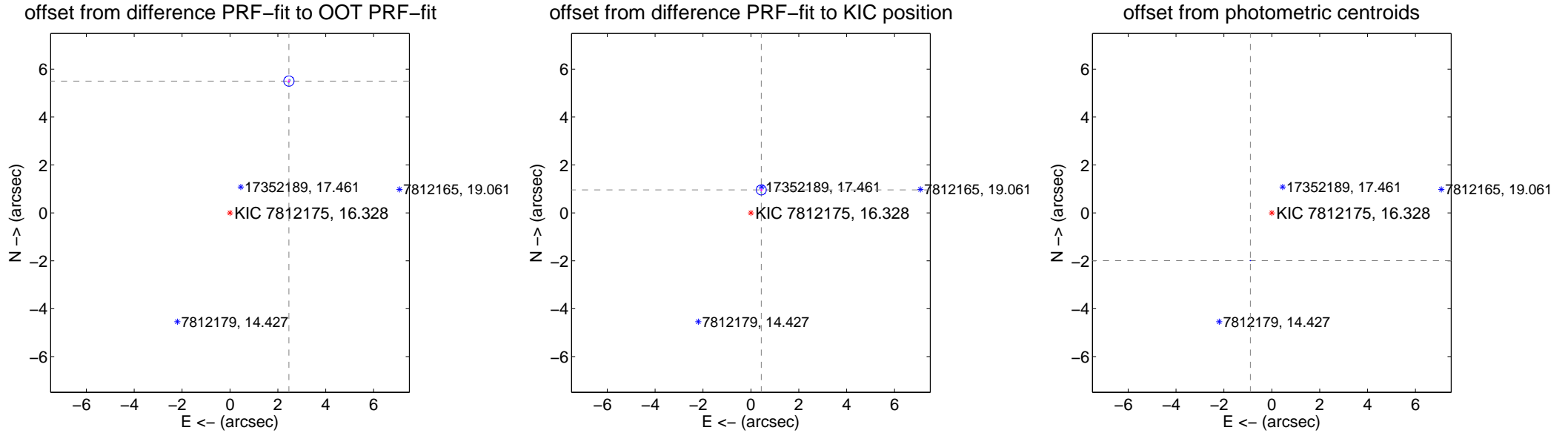
DV Centroid Data

Supplemental centroid analysis for 007812175-01. Kepler magnitude: 16.33. Transit SNR 315.62

There are 8 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 4.98 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.026 ± 0.072	84.08	-2.462 ± 0.067	5.500 ± 0.073
PRF-fit source offset from KIC position	1.051 ± 0.070	14.99	-0.434 ± 0.067	0.958 ± 0.071
photometric centroid source offset	2.18 ± 0.00	724.69	0.89 ± 0.00	-1.99 ± 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.

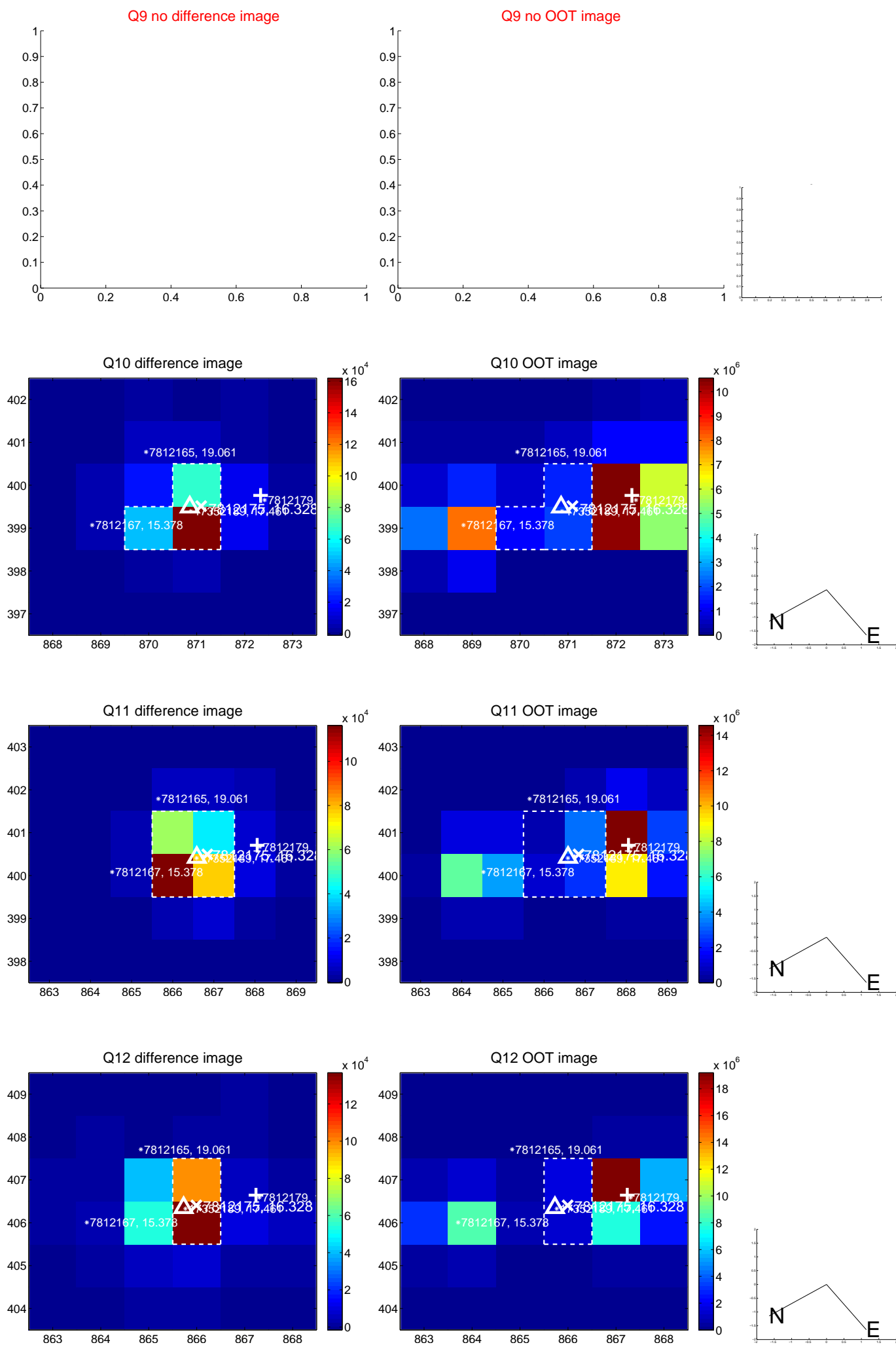
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



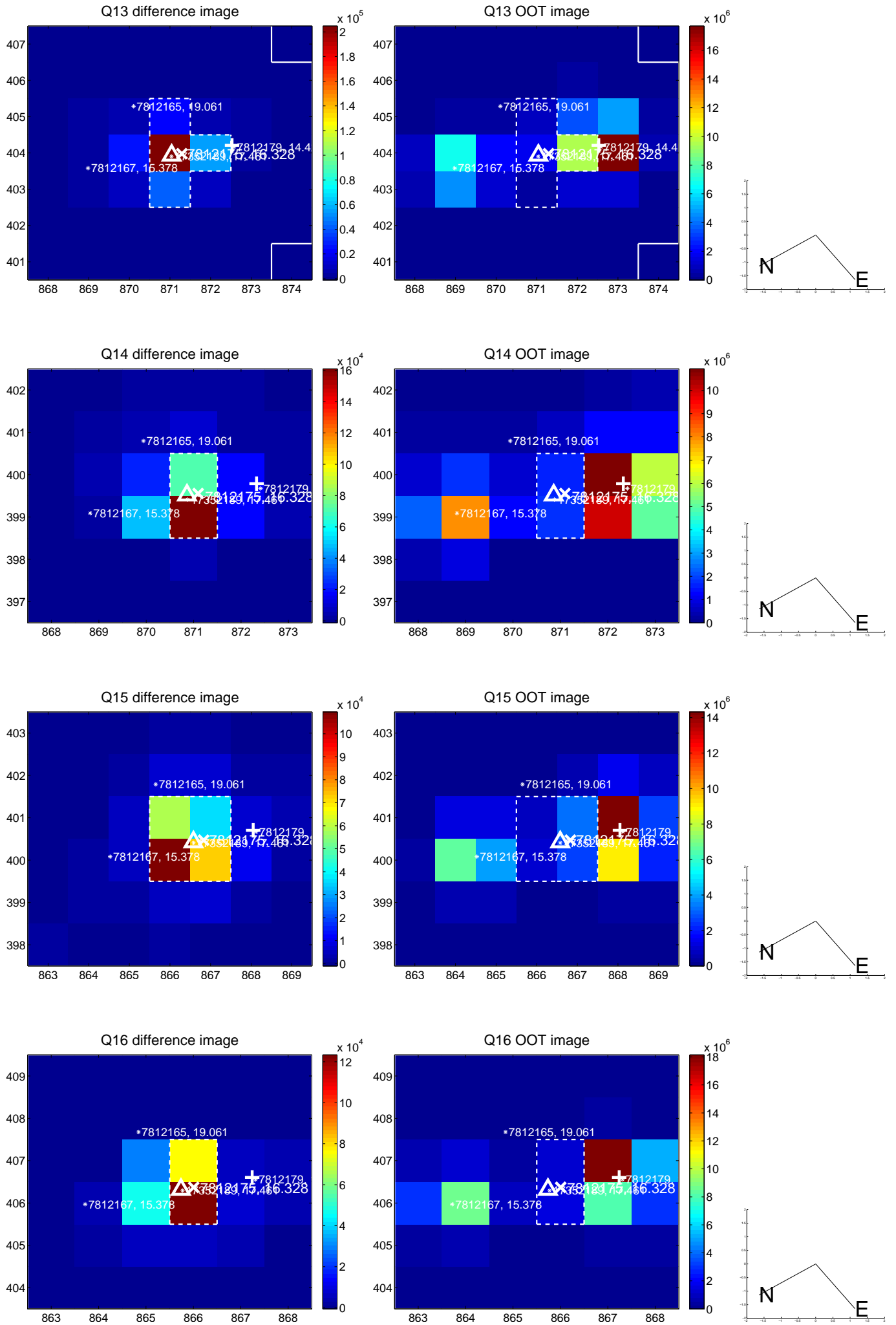
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



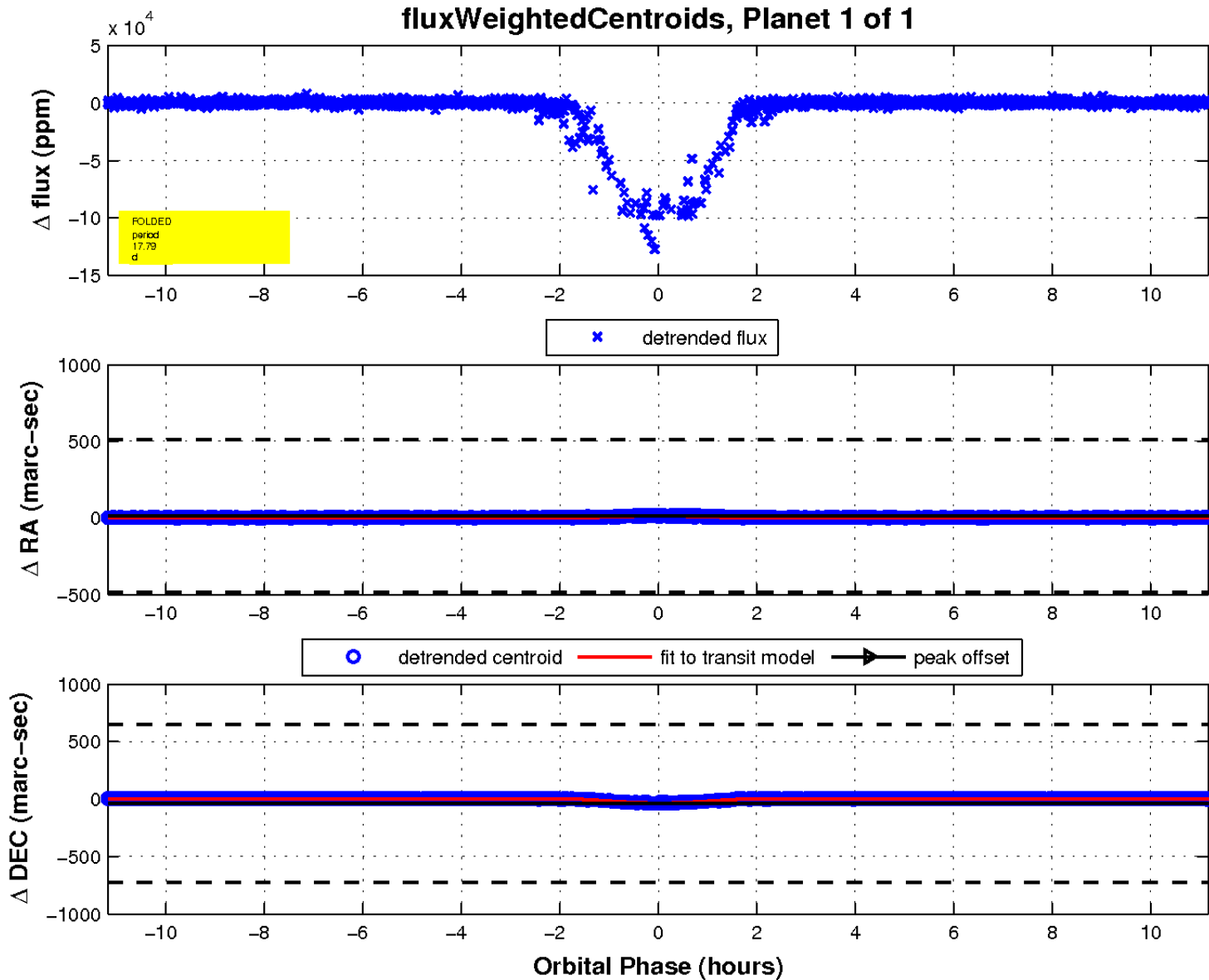
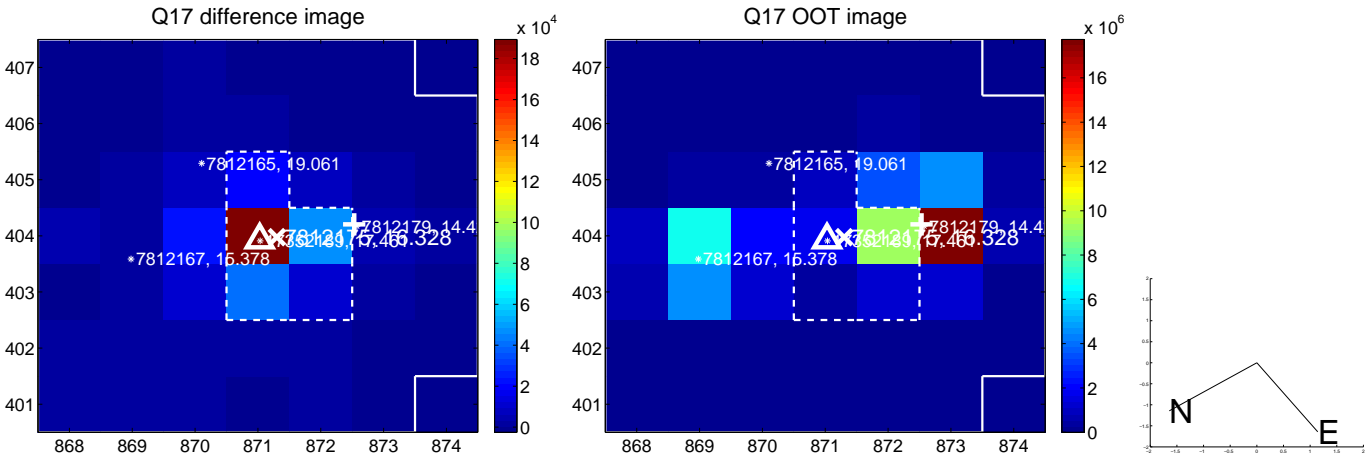
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

