

KIC 008127648

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})
008127648-01	OBS	3713.01	1.023470	131.702973	127444.6	2.406	1002.6	630.2	1.00	5780	53.36	2530.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008127648-01	OBS	FP	0.00	0	1	0	0	SWEET_EB—DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—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.

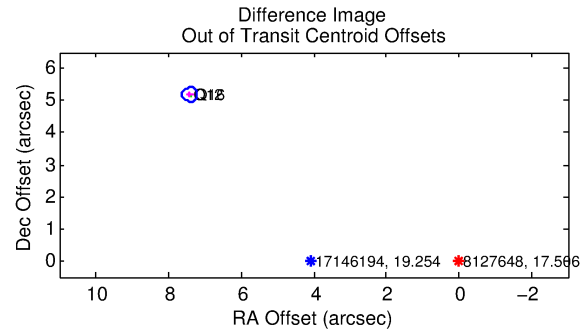
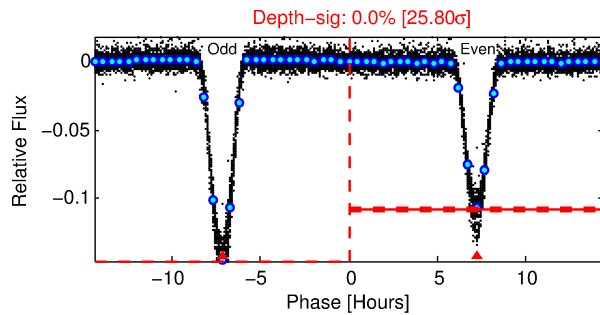
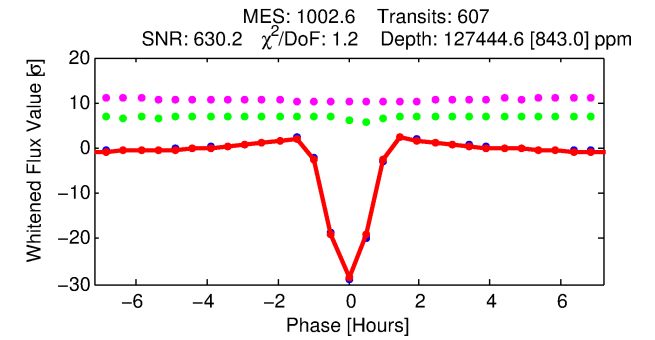
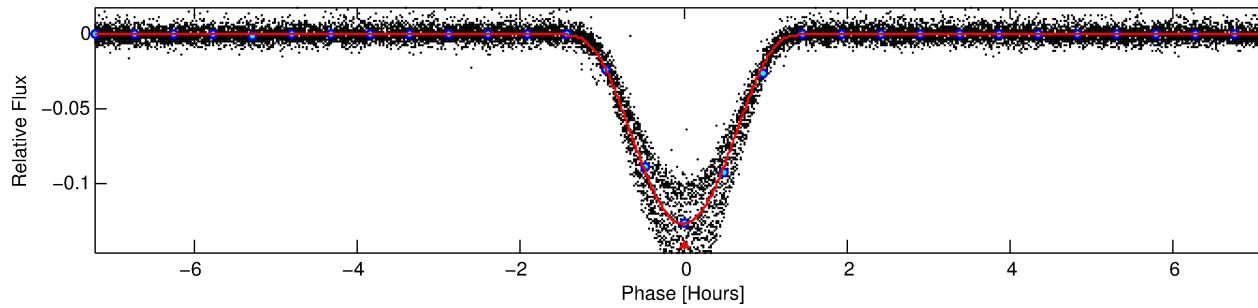
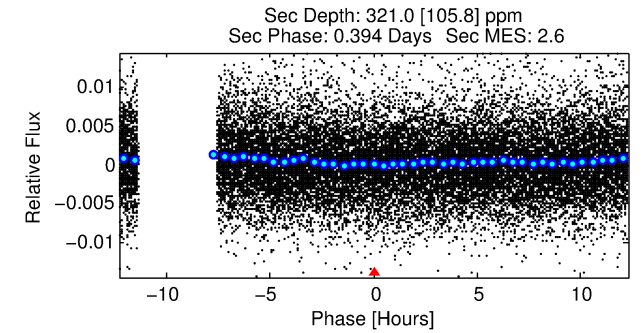
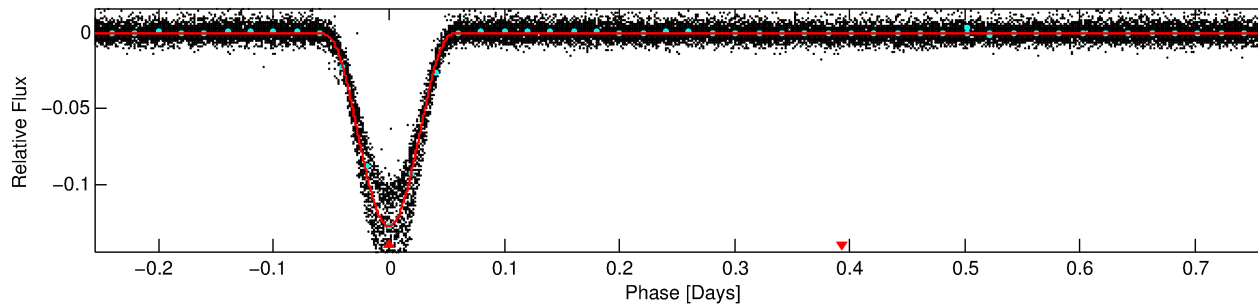
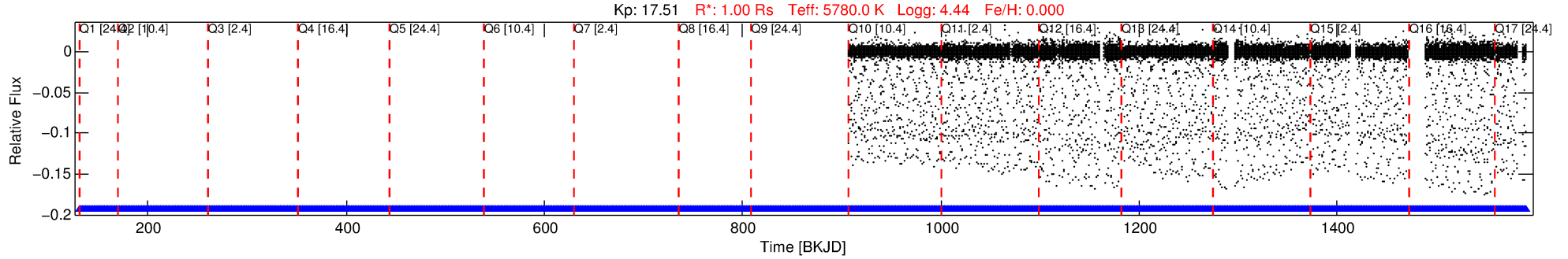
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008127648-01

No Significant Match Found

DV One-Page Summary

KIC: 8127648 Candidate: 1 of 1 Period: 1.023 d
KOI: K03713.01 Corr: 0.981



DV Fit Results:

Period = 1.02347 [0.00000] d
Epoch = 131.7030 [0.0000] BKJD
 $R_p/R^* = 0.4890$ [0.2627]
 $a/R^* = 4.02$ [0.23]
 $b = 0.90$ [0.37]
 $S_{\text{eff}} = 2530.30$ [0.00]
 $T_{\text{eq}} = 1809$ [0] K
 $R_p = 53.36$ [28.66] R_e
 $a = 0.0199$ [0.0000] AU
 $A_g = 0.02$ [0.03] [-35.40σ]
 $T_{\text{eff}} = 1106$ [311] K [-2.26σ]

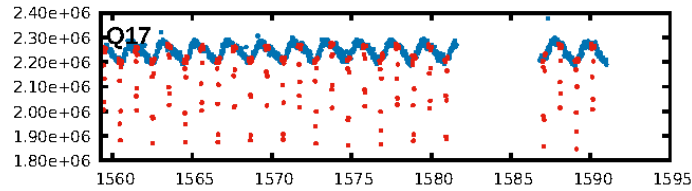
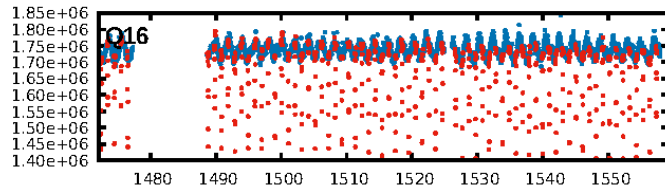
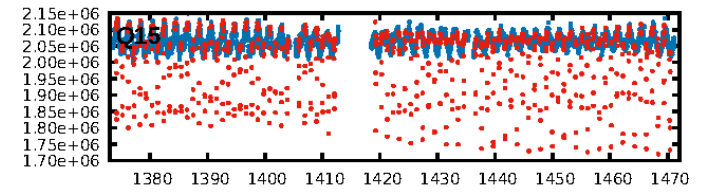
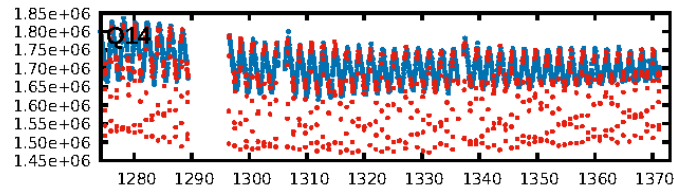
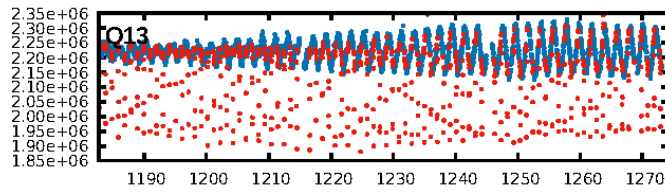
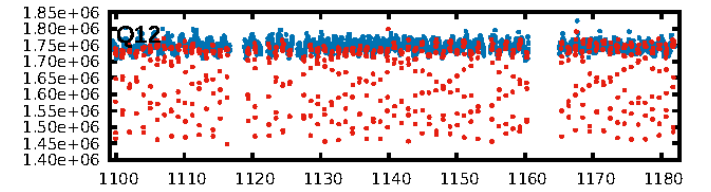
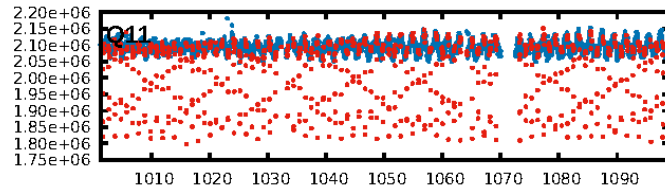
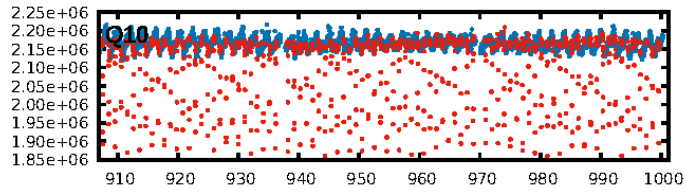
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-figt: 1.00 [581/581]
GhostDiagnostic-chr: 2.85
Centroid-sig: 0.0%
Centroid-so: 2.044 arcsec [270.73σ]
OotOffset-rm: 9.049 arcsec [124.82σ]
KicOffset-rm: 0.762 arcsec [10.33σ]
OotOffset-st: 0/0/2/0 [2]
KicOffset-st: 2/2/2/2 [8]
DiffImageQuality-figm: 1.00 [8/8]
DiffImageOverlap-fno: 1.00 [8/8]

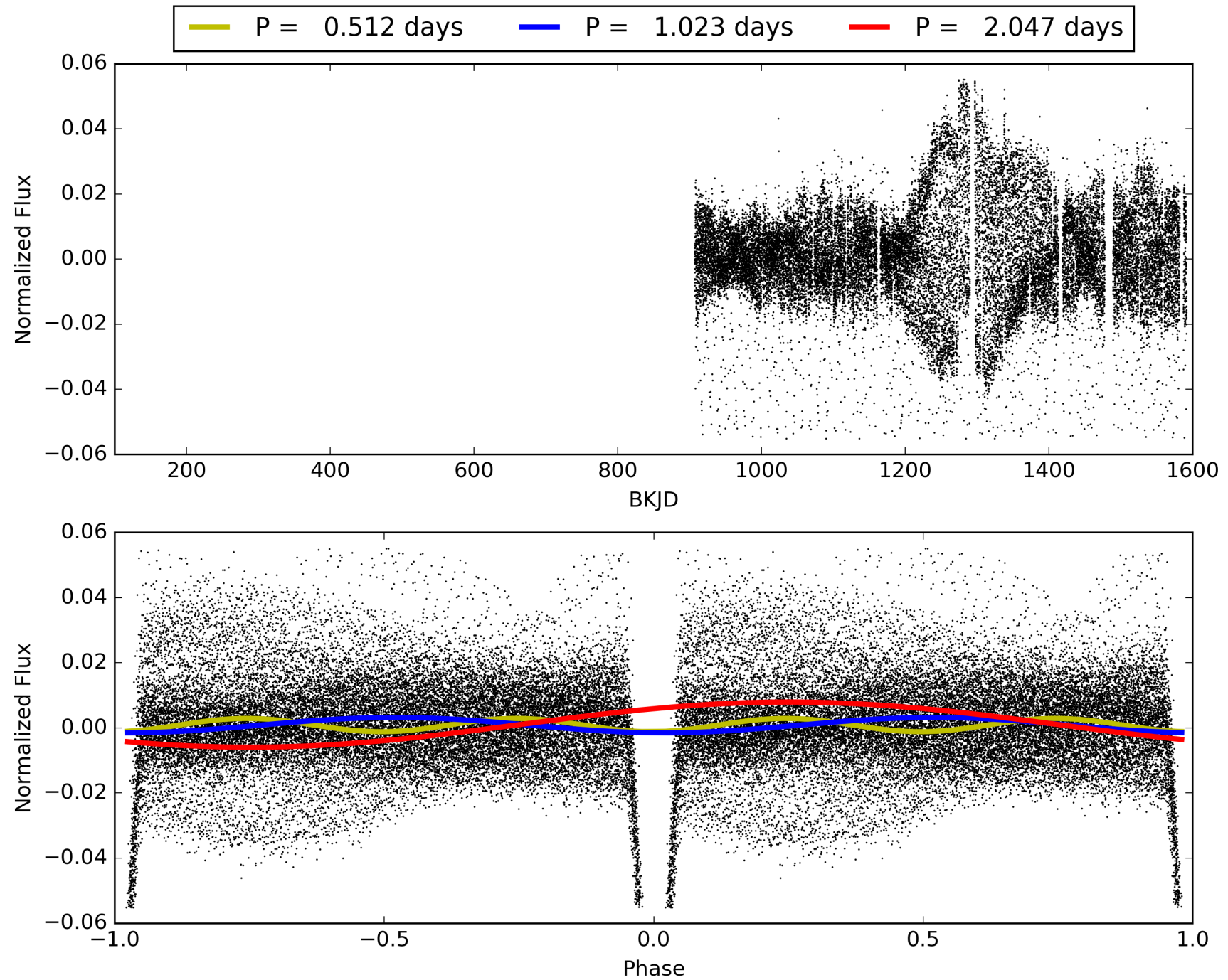
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 18:00:34 Z

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

TCE 008127648-01, PDC Light Curves

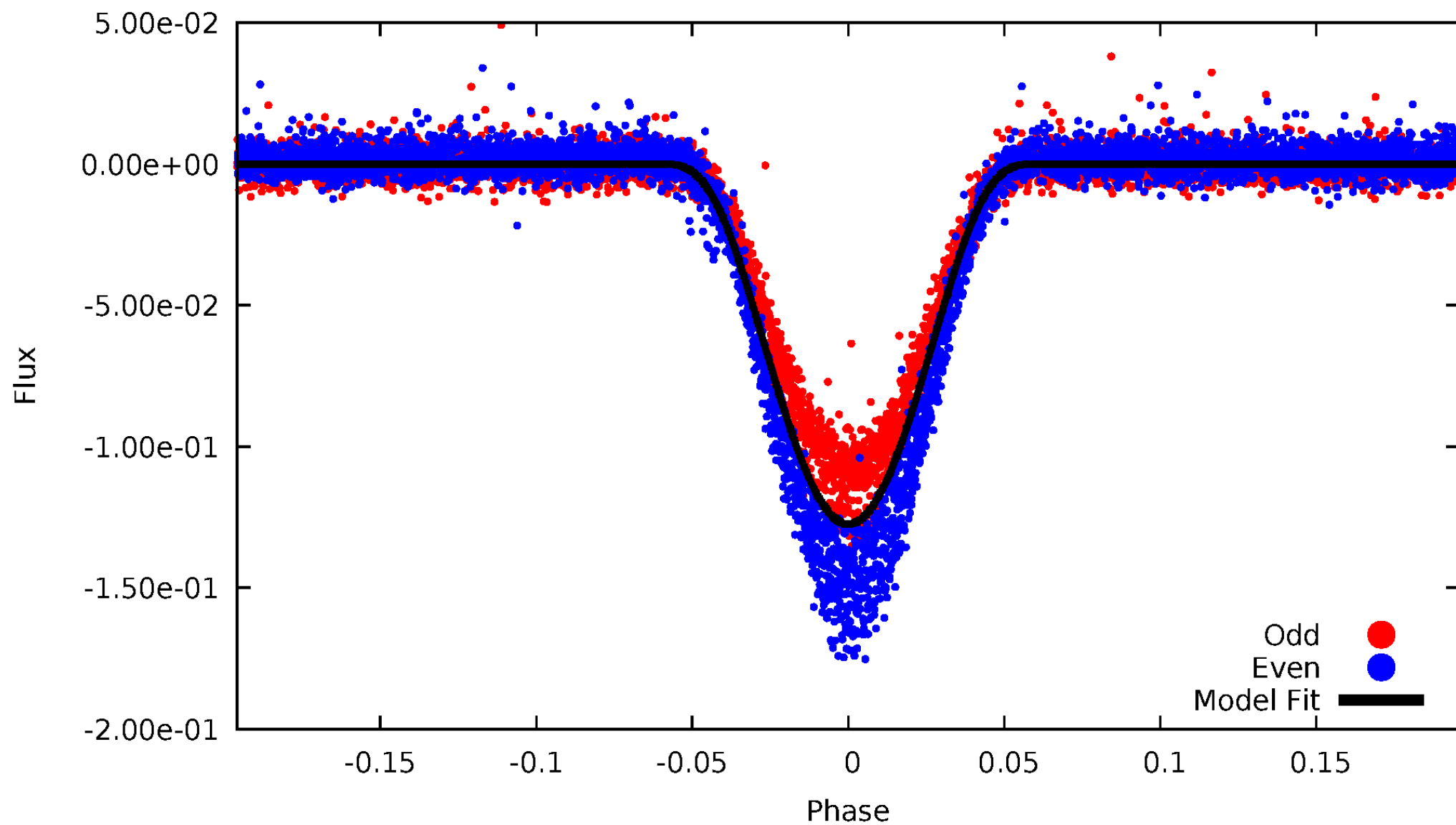


TCE 008127648-01



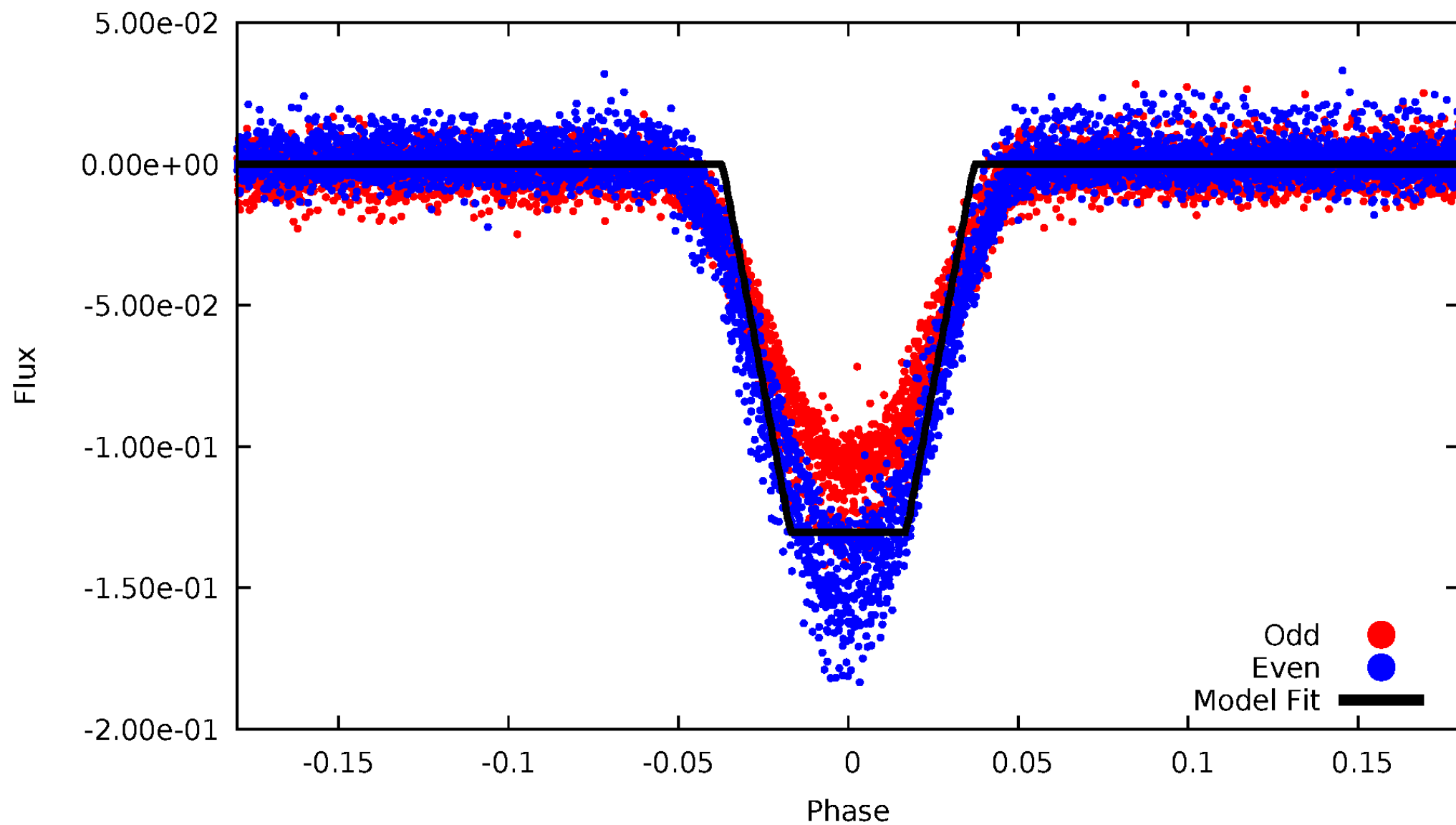
DV Odd/Even

TCE 008127648-01



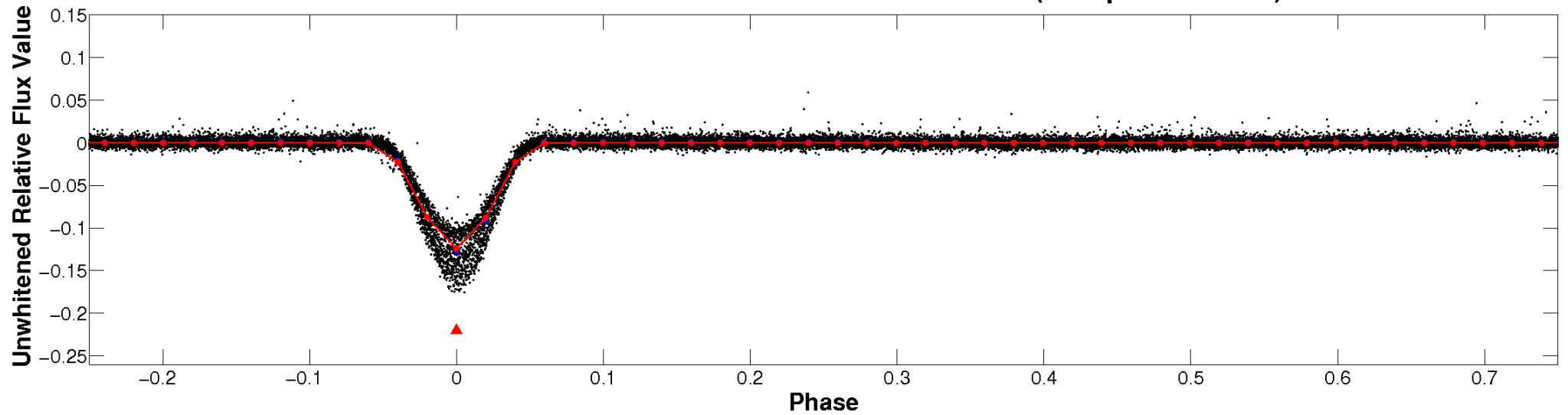
ALT Odd/Even

TCE 008127648-01

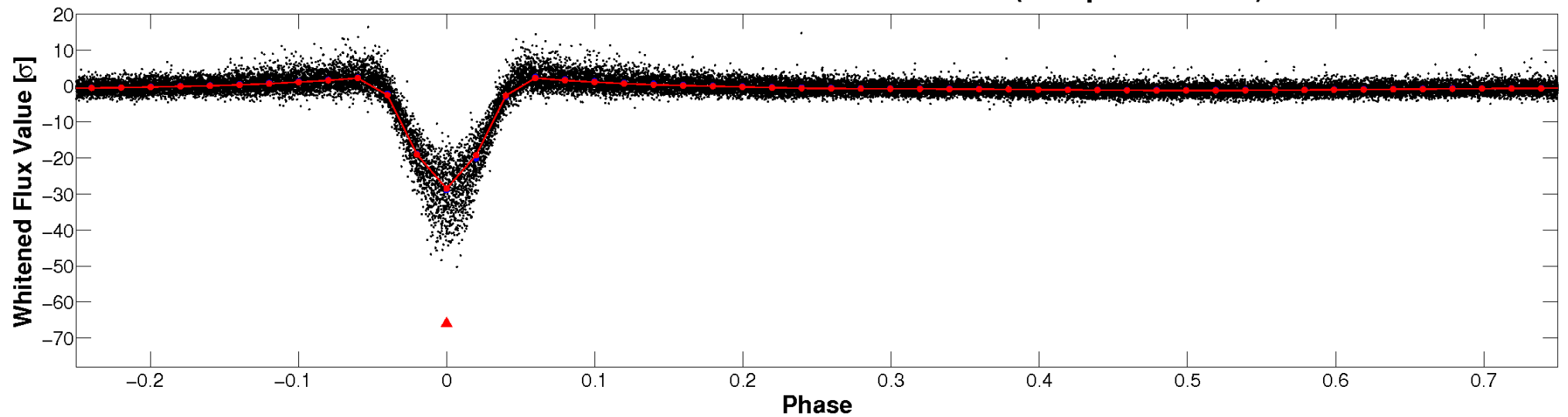


Non-Whitened Vs. Whitened Light Curve

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

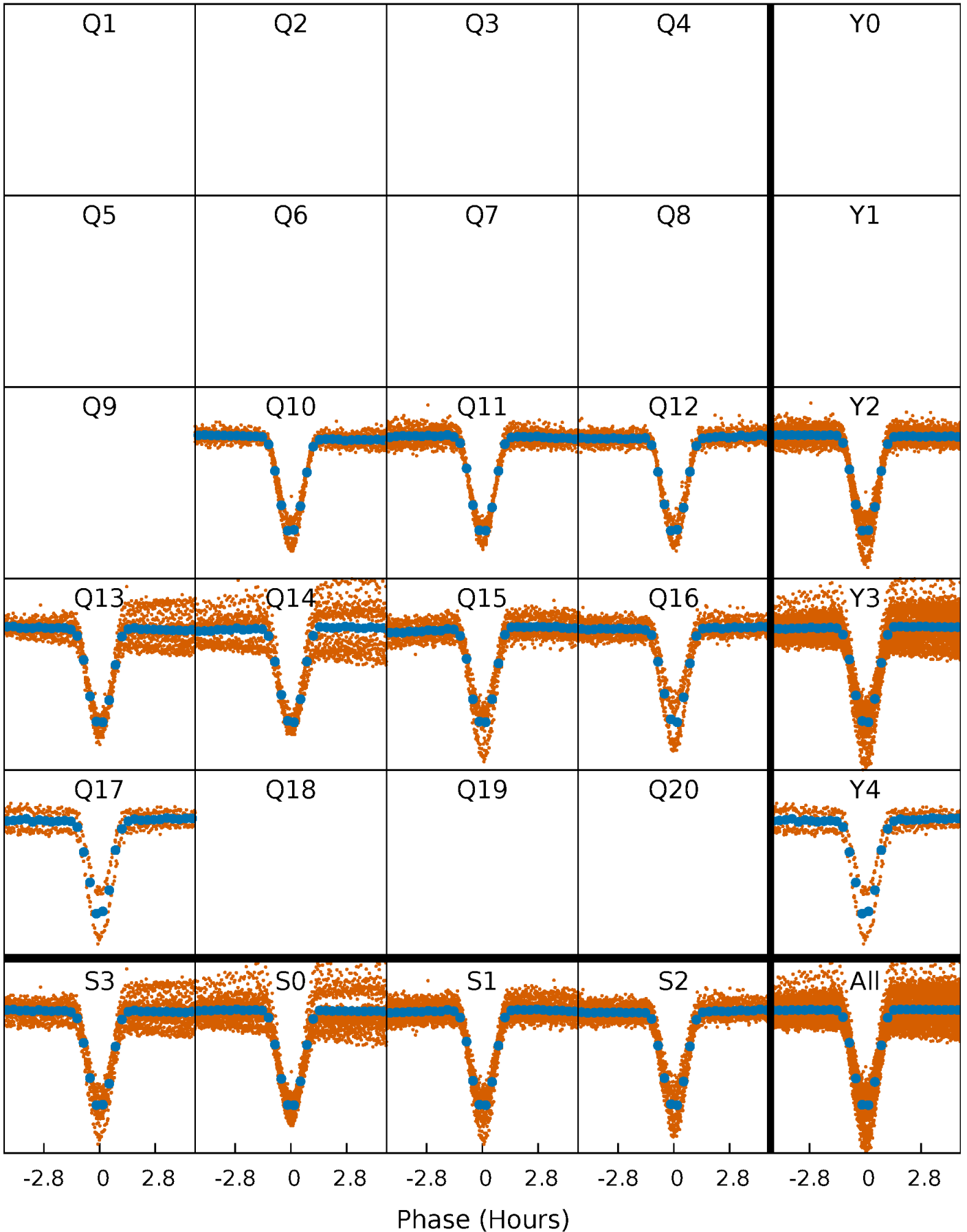


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



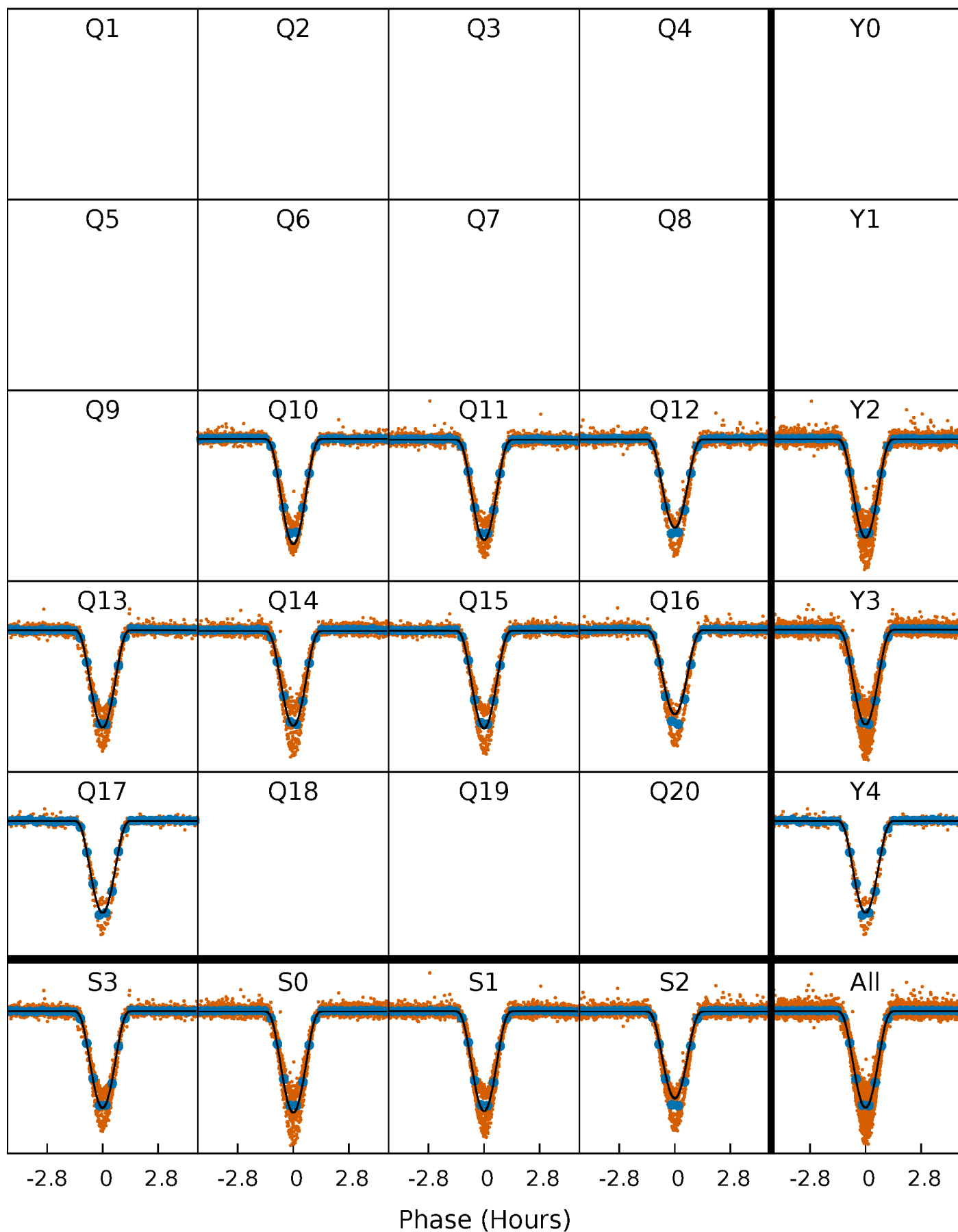
PDC Quarter-Phased Transit Curves

TCE 008127648-01 P= 1.023470 Days $T_0=131.702973$ (BKJD)



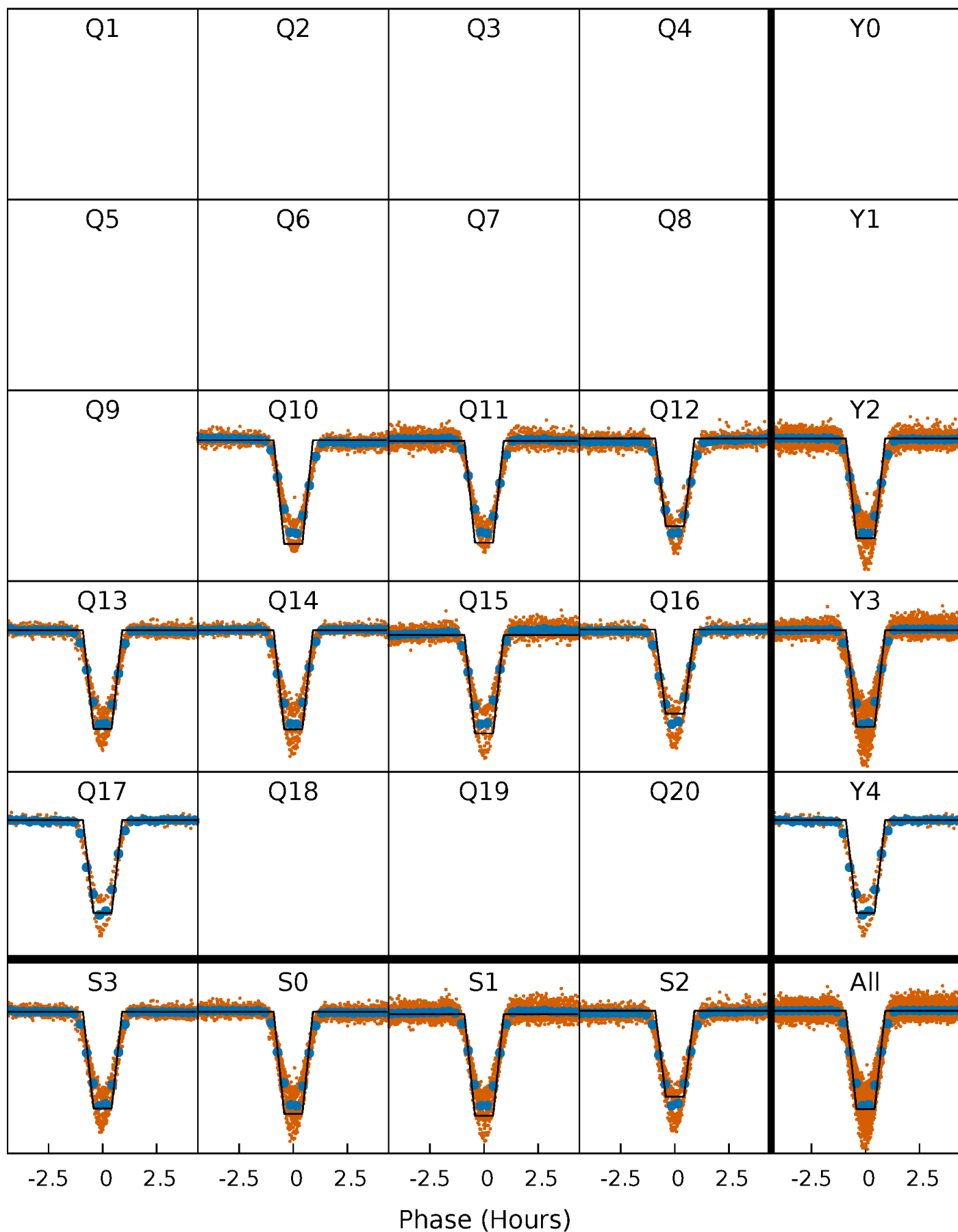
DV Quarter-Phased Transit Curves

TCE 008127648-01 P= 1.023470 Days $T_0=131.702973$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

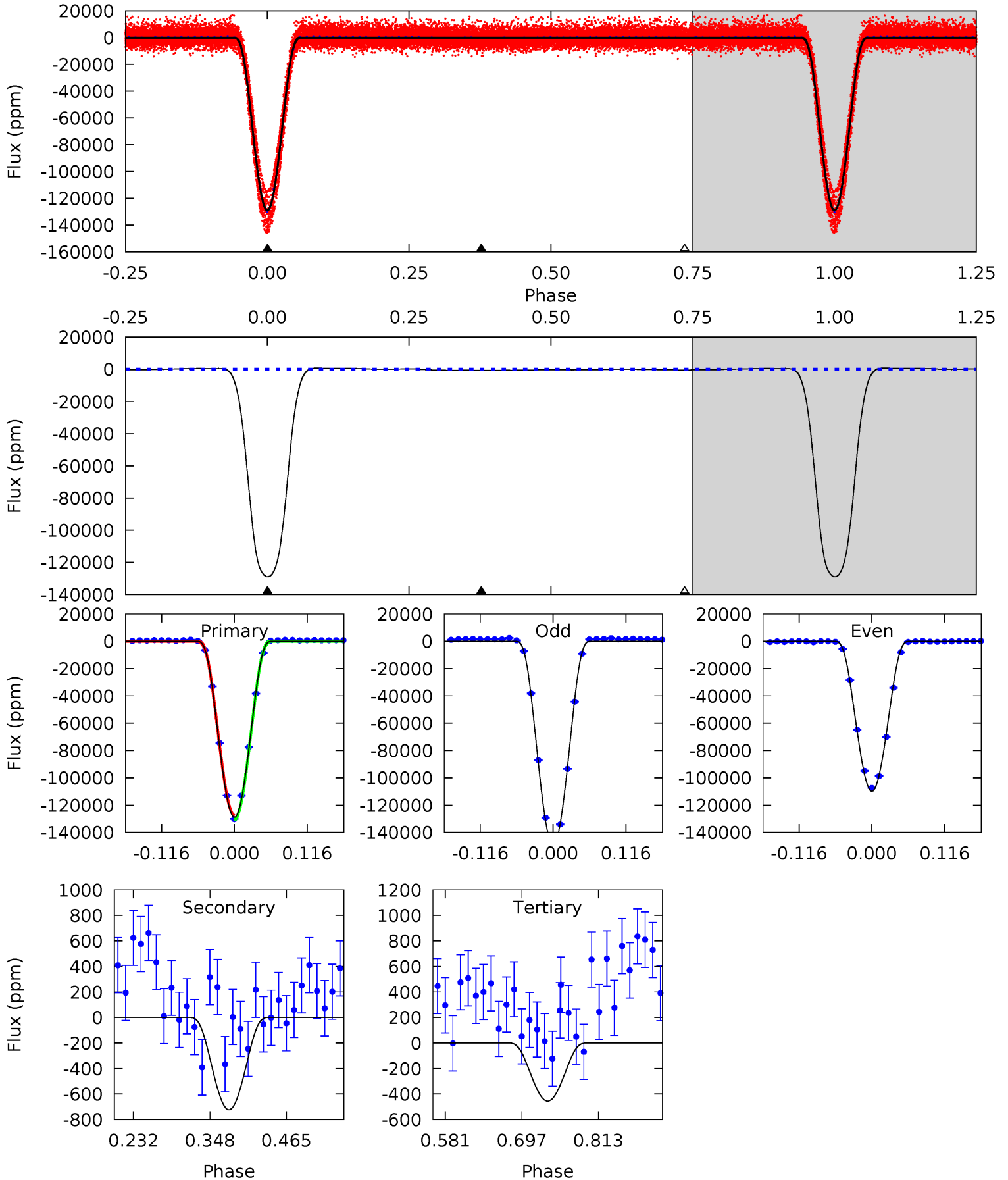
TCE 008127648-01 P= 1.023476 Days $T_0=131.696587$ (BKJD)



DV Model-Shift Uniqueness Test

008127648-01, P = 1.023470 Days, E = 131.702973 Days

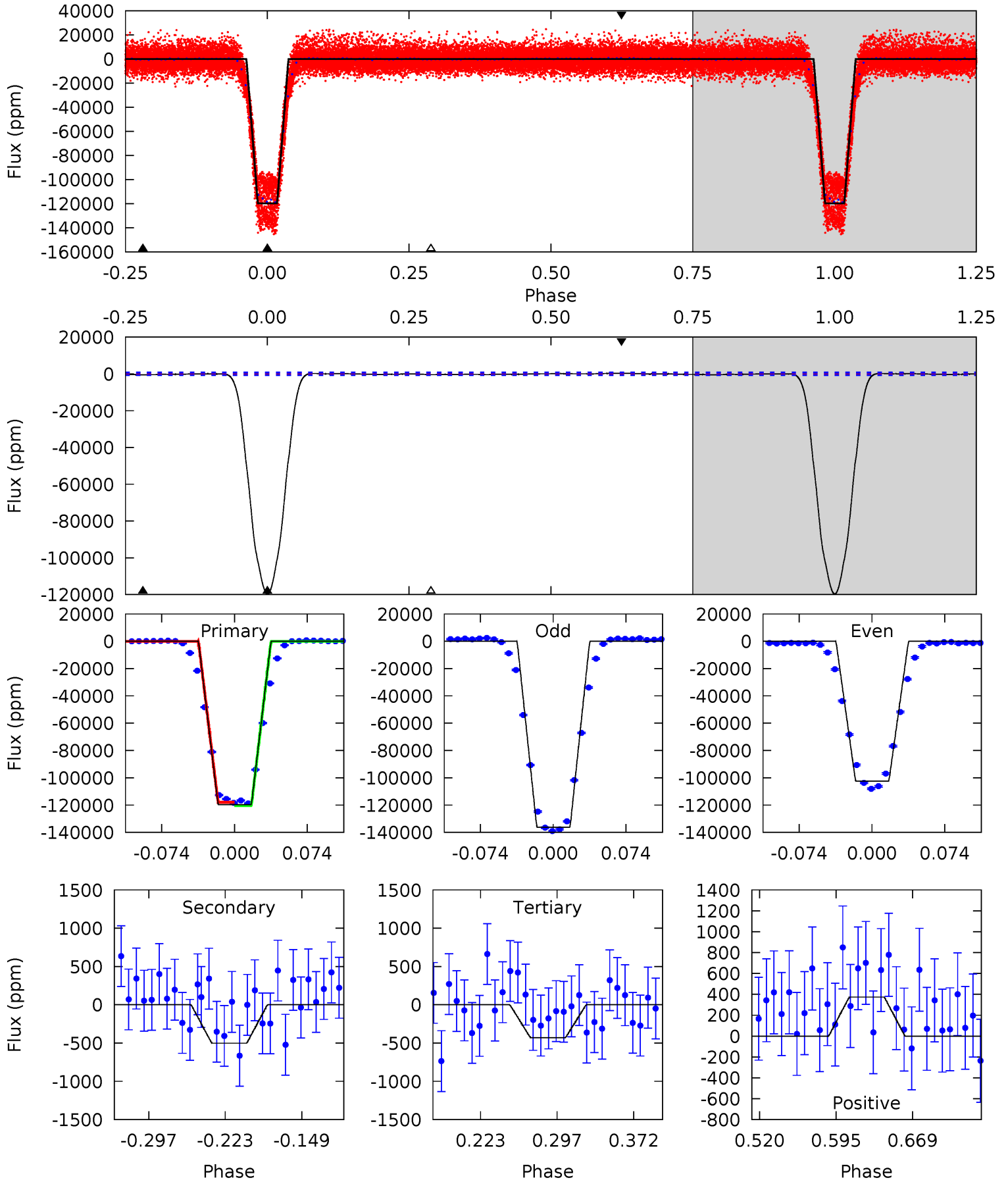
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1663	9.33	5.87	0	4.53	1.57	4.10	1657	1663	3.46	9.33	280.5	1.00	0.01	19.5



Alt Model-Shift Uniqueness Test

008127648-01, P = 1.023476 Days, E = 131.696587 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
830.5	3.48	2.99	2.59	4.63	1.78	1.38	827.5	827.9	0.50	0.89	123.9	1.01	0.00	8.52



Stellar Parameters For KIC 008127648

	$T_{\text{eff}}(K)$	$\log(g)$	[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 008127648-01 / KOI 3713.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-723 ± 78	$54.98^{+30.26}_{-27.21}$	2528^{+112}_{-118}	-2718^{+286}_{-99}	$0.053^{+0.147}_{-0.032}$
Alt.	-502 ± 144	$41.96^{+26.74}_{-23.48}$	2532^{+121}_{-119}	-2706^{+4720}_{-109}	$0.061^{+0.260}_{-0.040}$

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 $A_{obs} \gg 1.0$

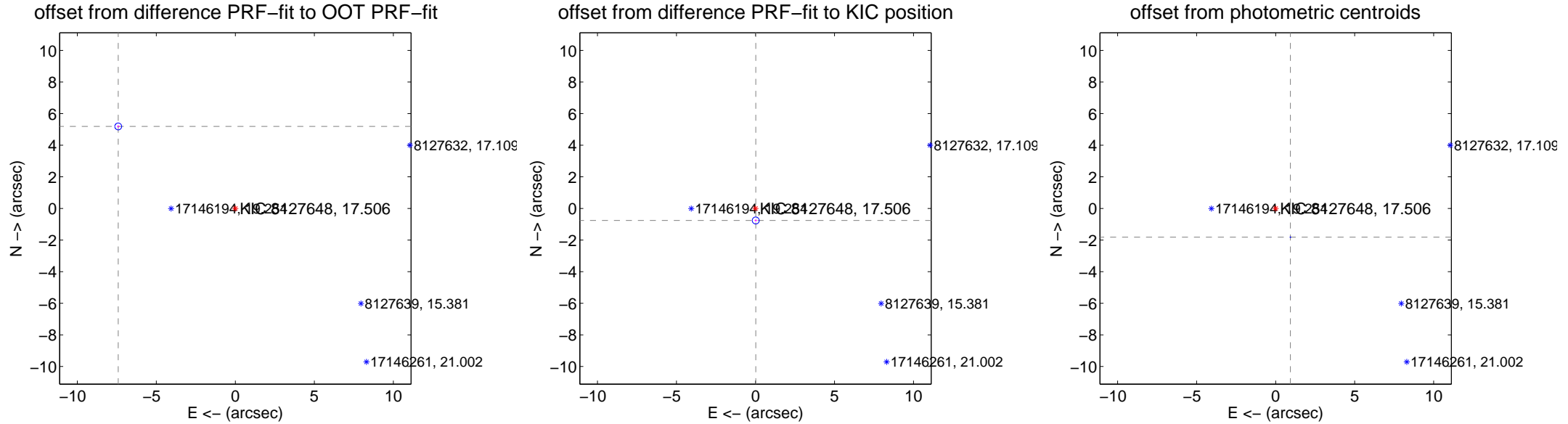
DV Centroid Data

Supplemental centroid analysis for 008127648-01. Kepler magnitude: 17.51. Transit SNR 630.23

There are 8 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 9.41 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	9.049 ± 0.072	124.82	7.413 ± 0.073	5.189 ± 0.071
PRF-fit source offset from KIC position	0.762 ± 0.074	10.33	-0.016 ± 0.072	-0.762 ± 0.074
photometric centroid source offset	2.04 ± 0.01	270.73	-0.93 ± 0.01	-1.82 ± 0.01



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.

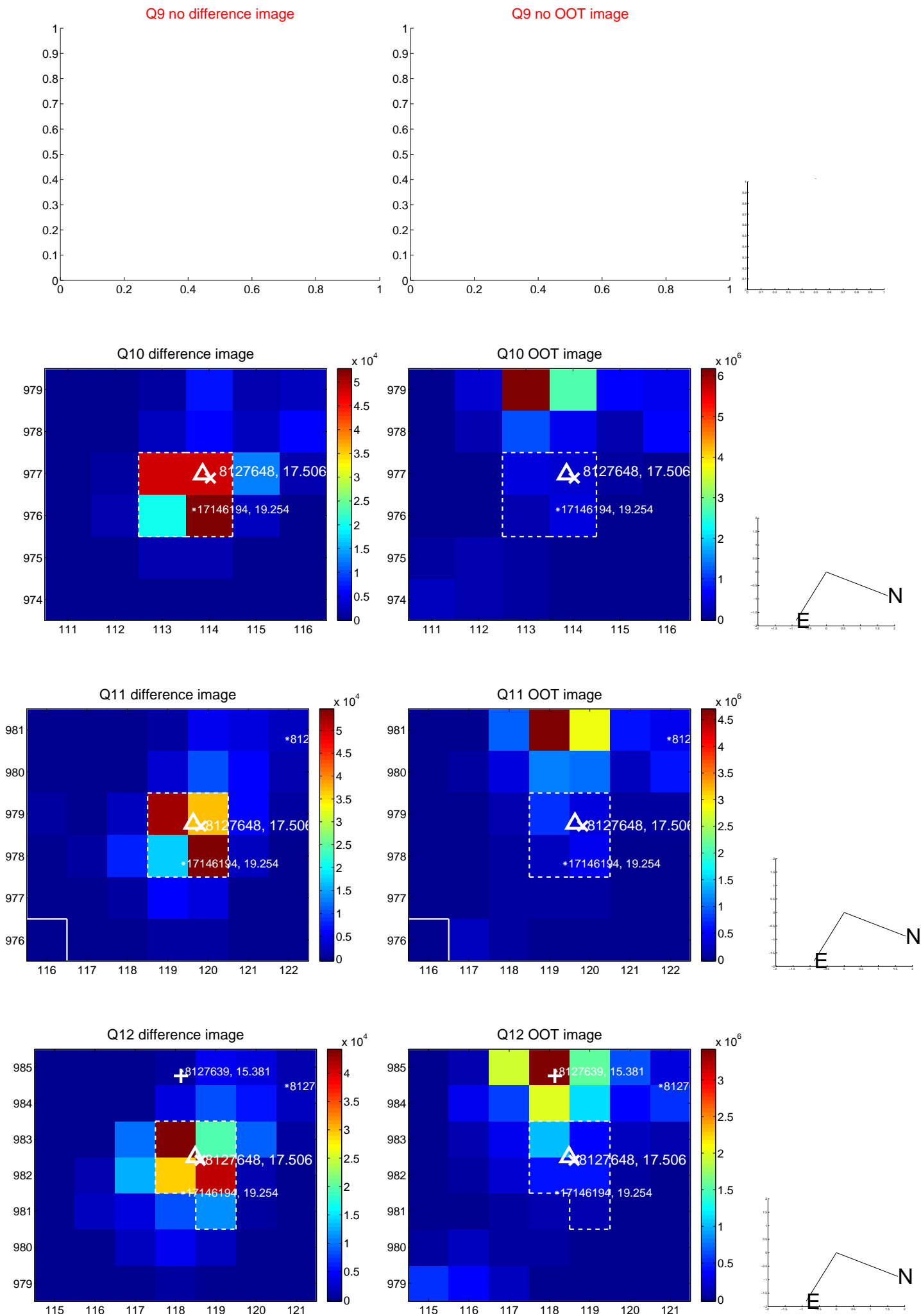
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



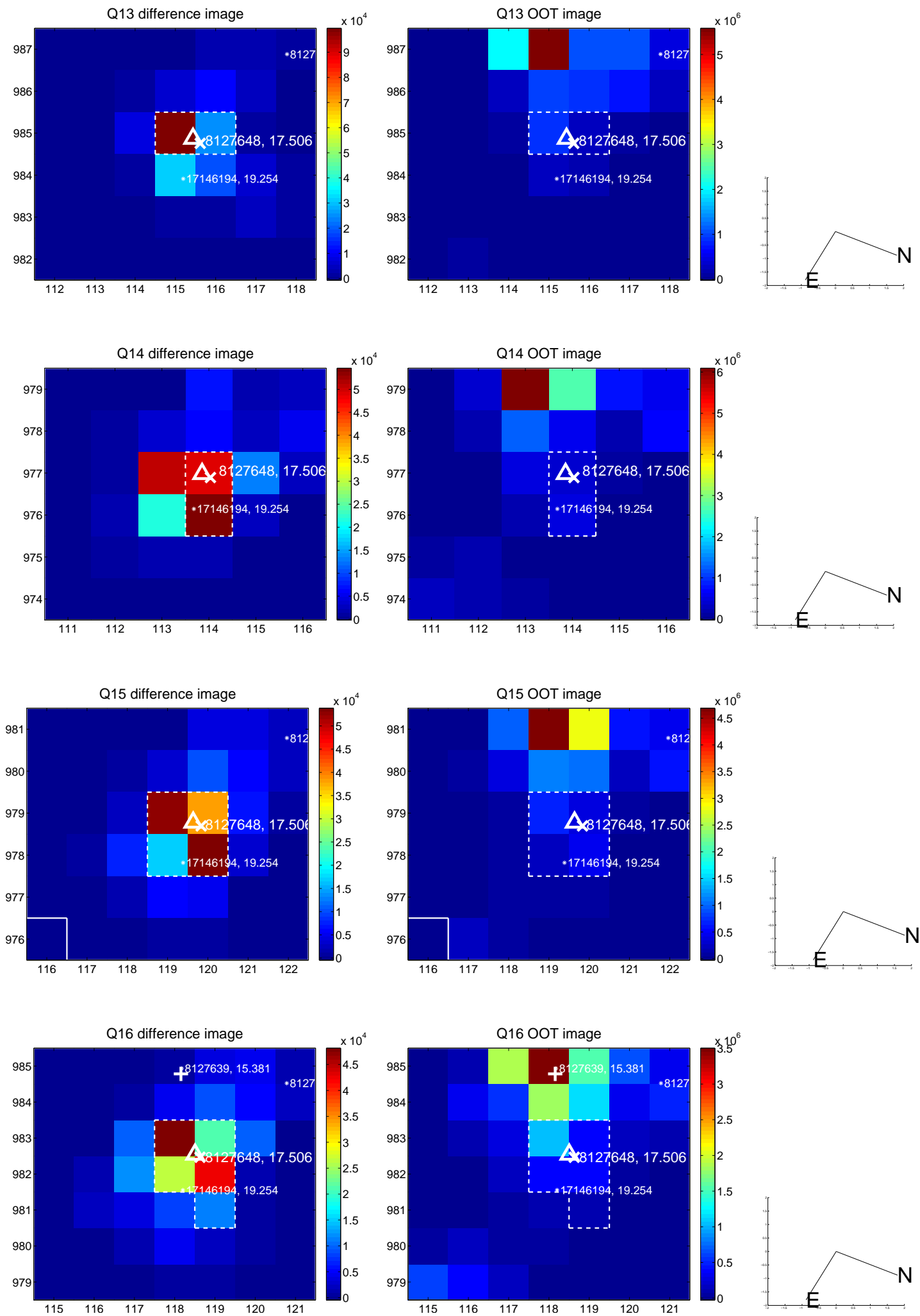
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



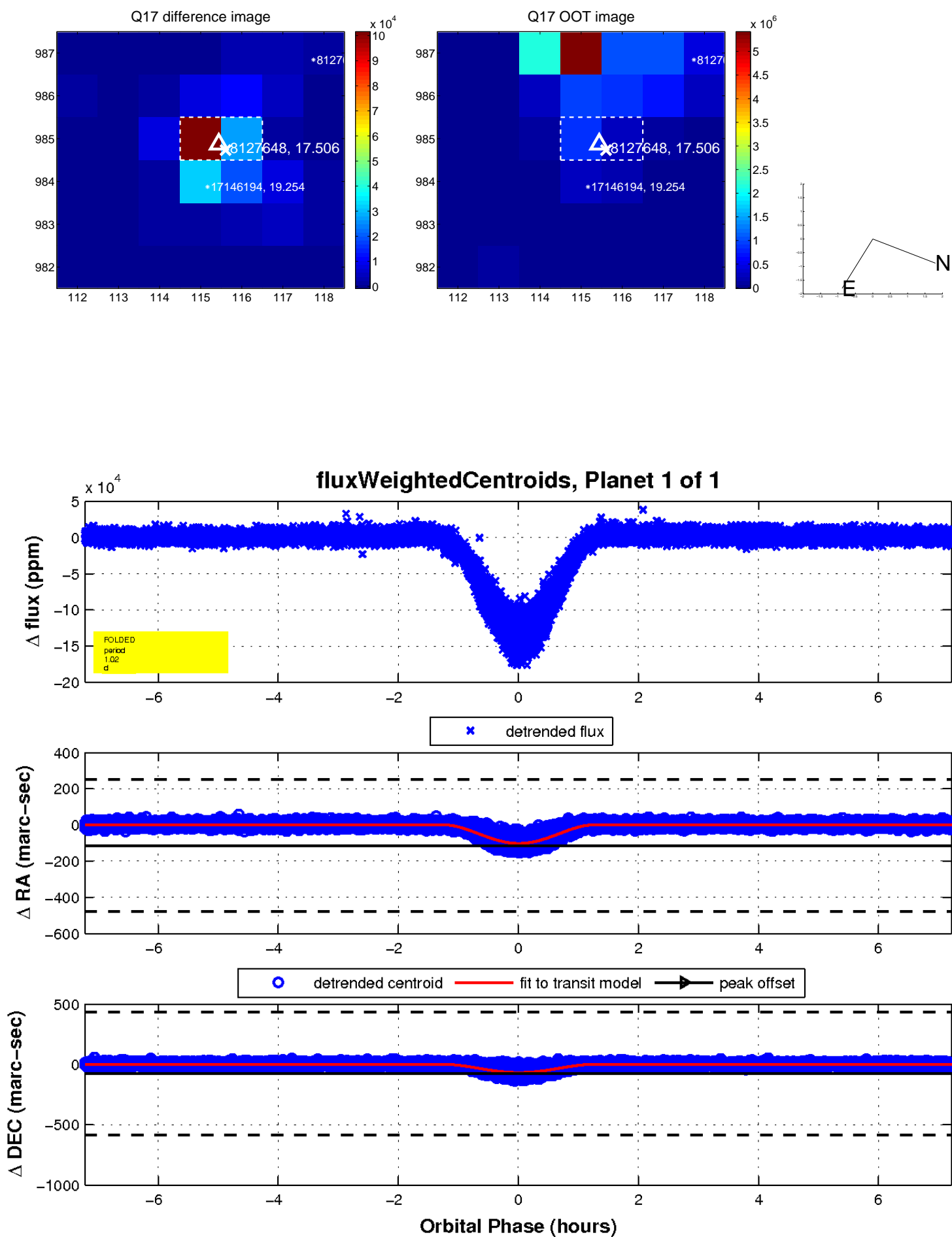
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

