

KIC 008823397

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})
008823397-01	OBS	7096.01	1.506515	132.987528	475152.4	4.878	5266.9	2984.0	2.35	8751	181.94	26431.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008823397-01	OBS	FP	0.00	0	1	0	0	SWEET_EB—MOD_SEC_DV—MOD_SEC_ALT—DEEP_V_SHAPED

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.

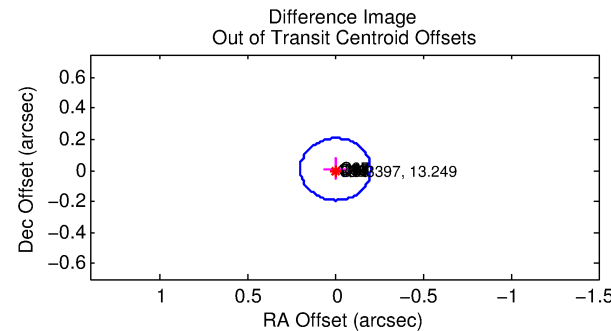
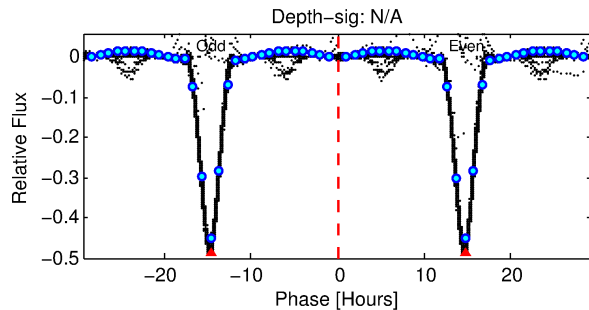
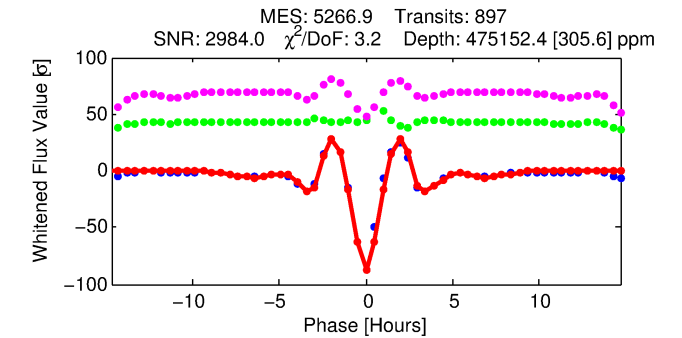
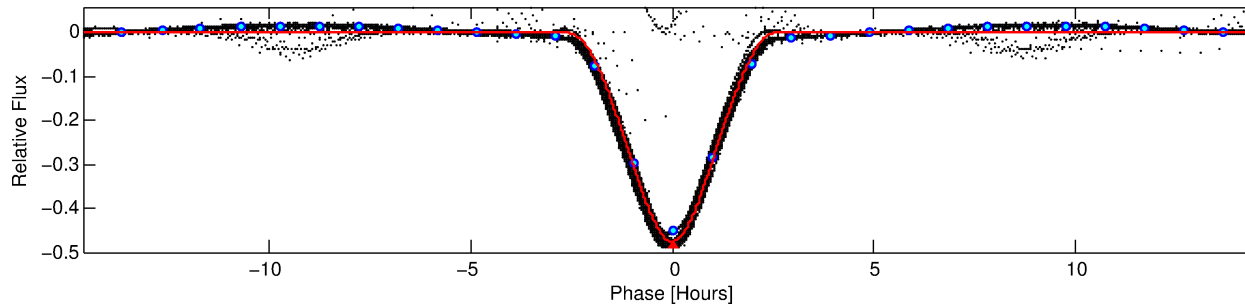
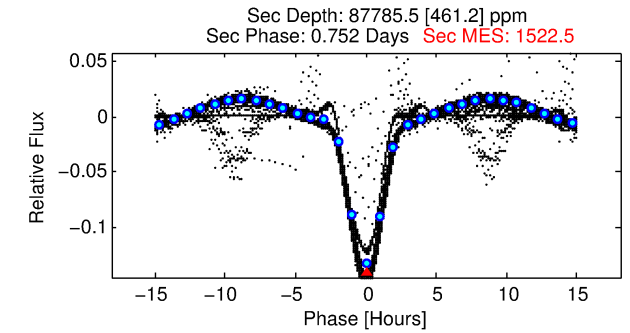
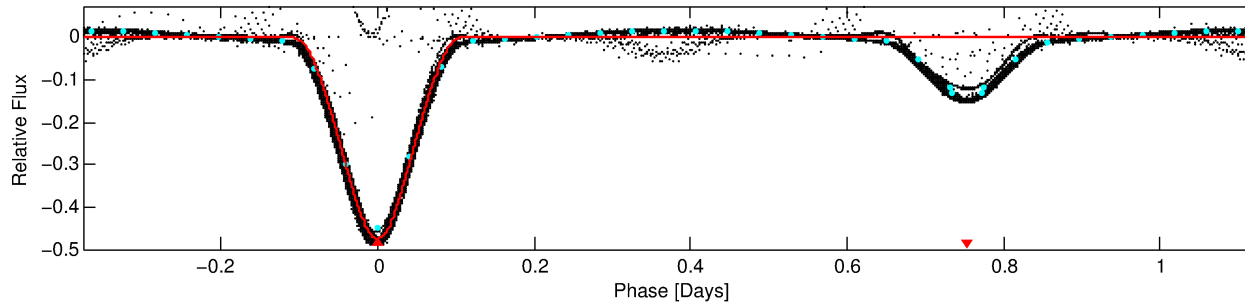
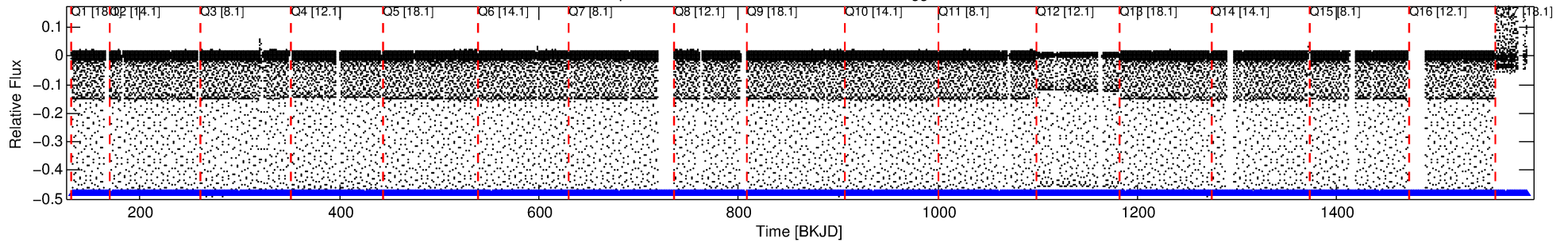
Ephemeris Match Information For 008823397-01

No Significant Match Found

DV One-Page Summary

KIC: 8823397 Candidate: 1 of 1 Period: 1.507 d
KOI: K07096.01 Corr: 0.982

Kp: 13.25 R*: 2.35 Rs Teff: 8751.0 K Logg: 4.03 Fe/H: 0.070



DV Fit Results:

Period = 1.50652 [0.00000] d
Epoch = 132.9875 [0.0000] BKJD
Rp/R* = 0.7089 [0.0023]
a/R* = 4.04 [0.00]
b = 0.44 [0.00]
Seff = 26431.31 [10826.43]
Teff = 3251 [333] K
Rp = 181.94 [54.54] Re
a = 0.0332 [0.0083] AU
Ag = 1.60 [0.58] [1.04σ]
Teffp = 5657 [267] K [5.64σ]

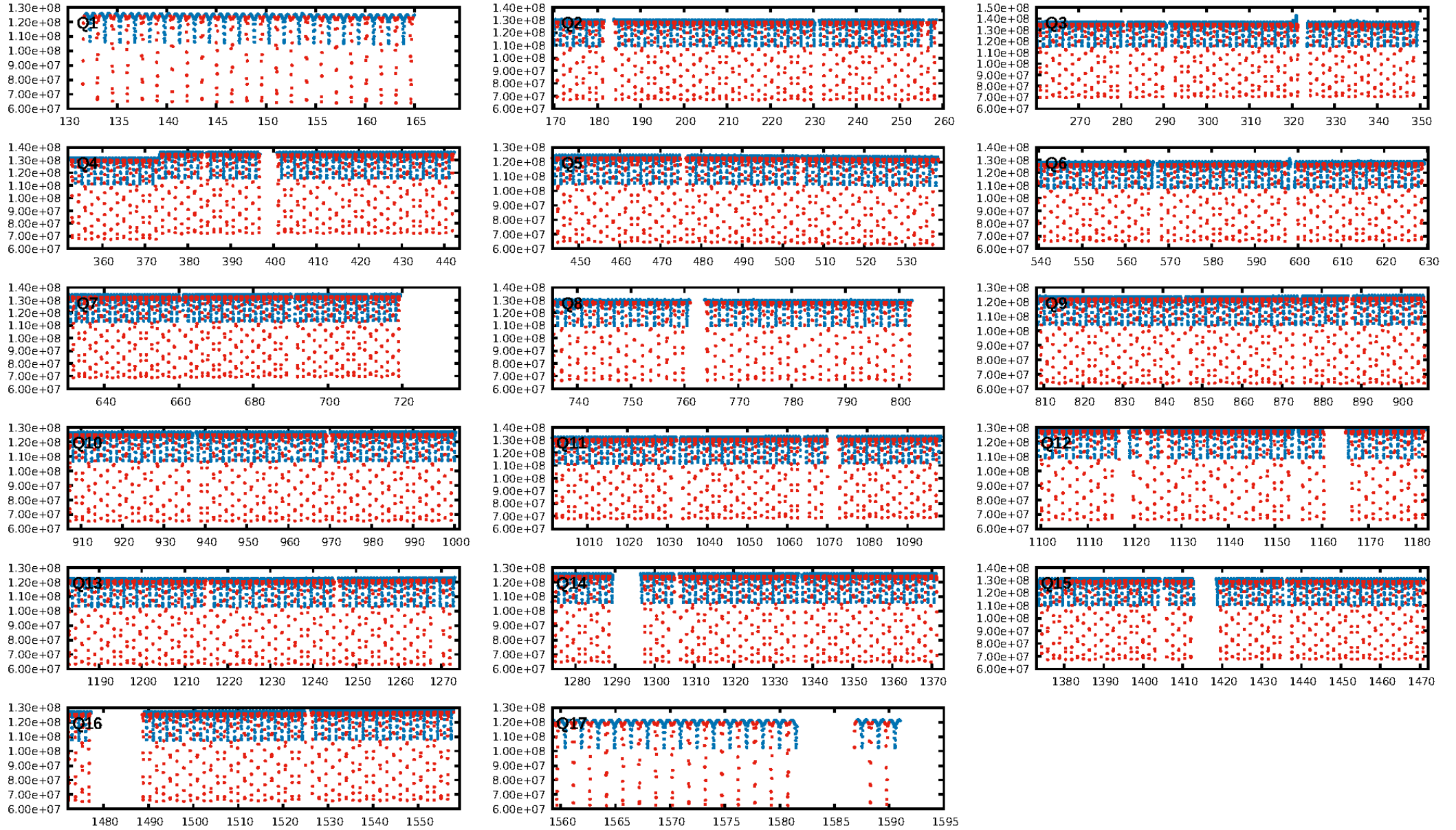
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [856/856]
GhostDiagnostic-chr: 1.446
Centroid-sig: 0.0%
Centroid-so: 0.136 arcsec [629.77σ]
OotOffset-rm: 0.008 arcsec [0.11σ]
KicOffset-rm: 0.045 arcsec [0.65σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

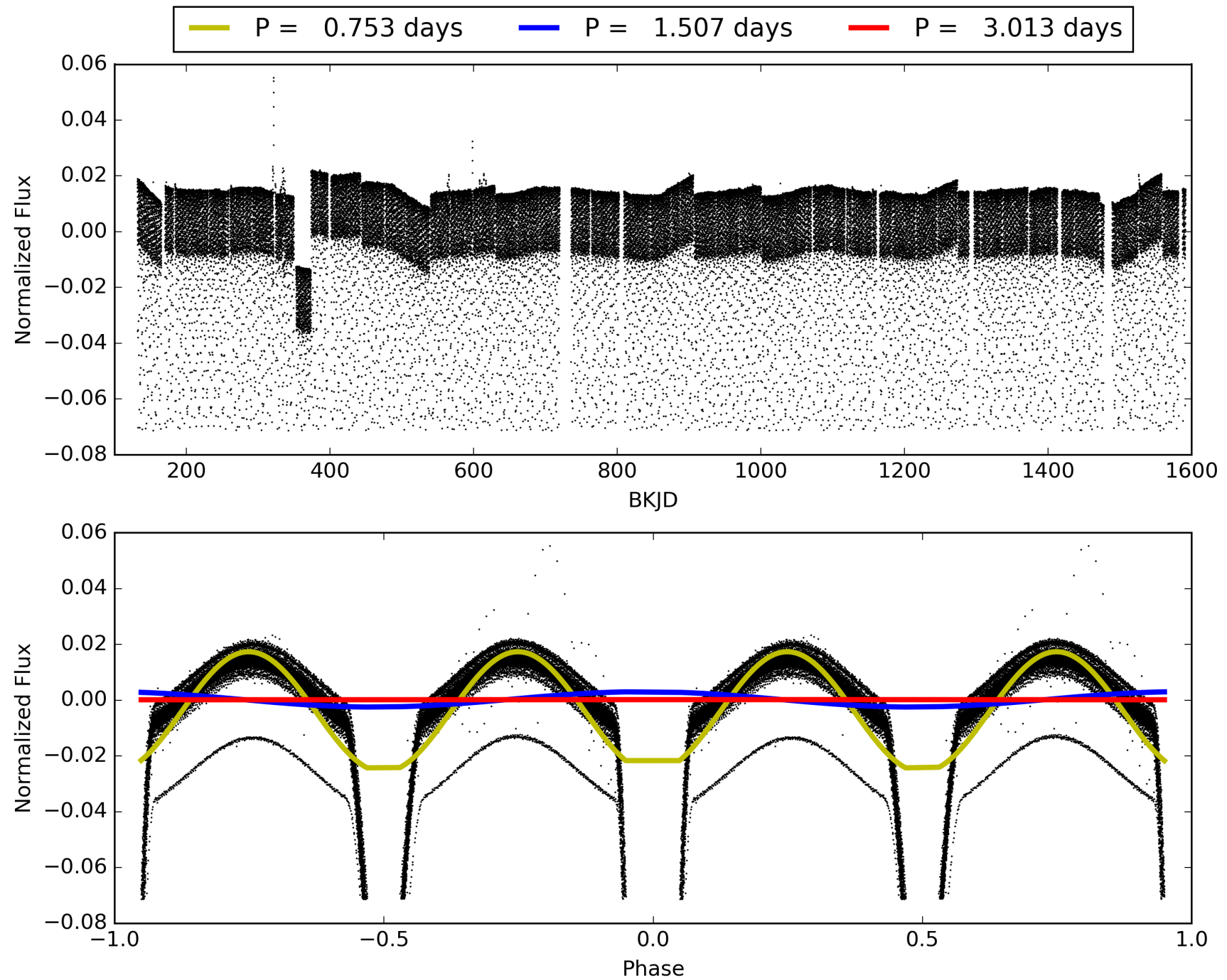
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:56:35 Z

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

TCE 008823397-01, PDC Light Curves

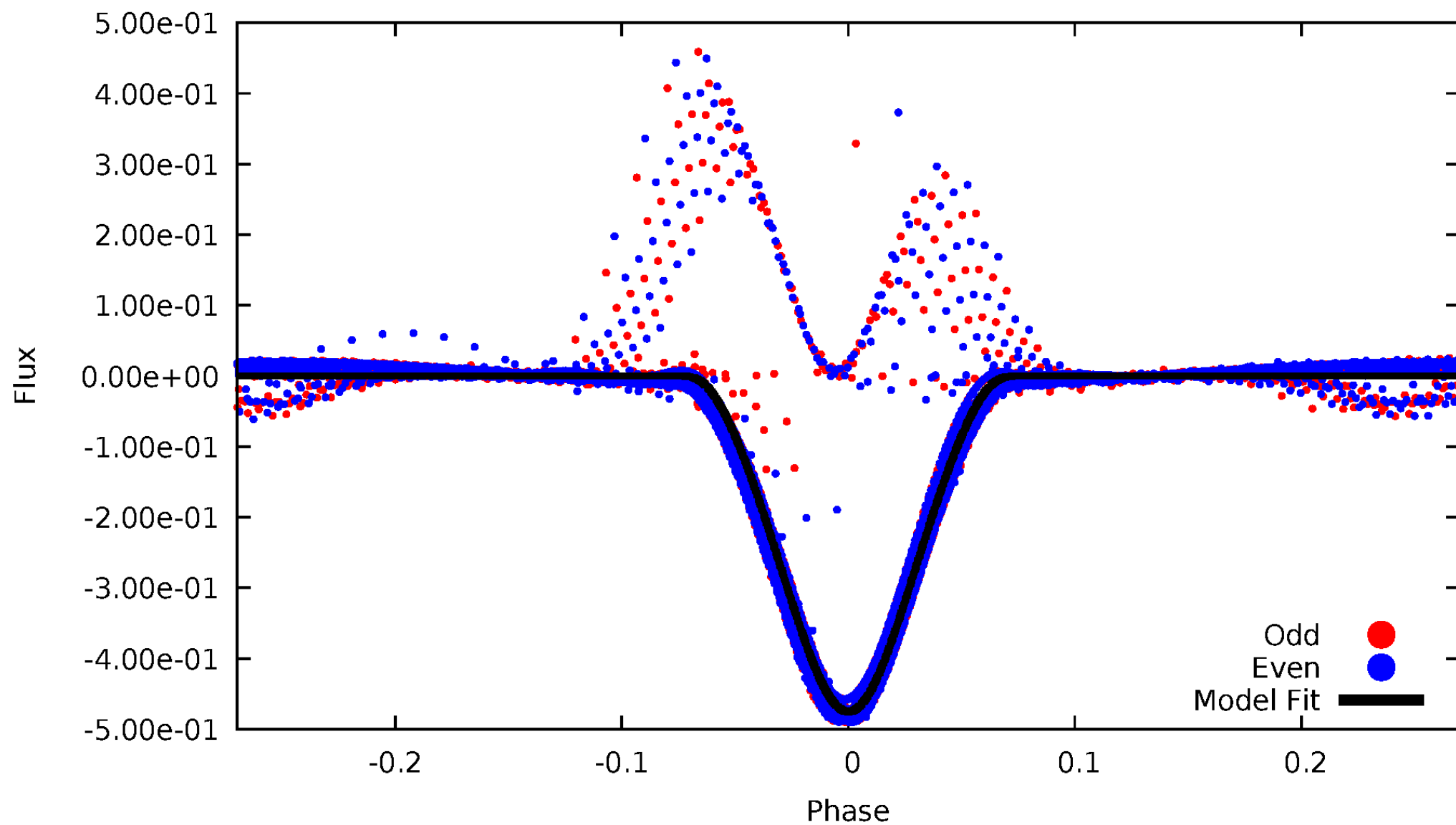


TCE 008823397-01



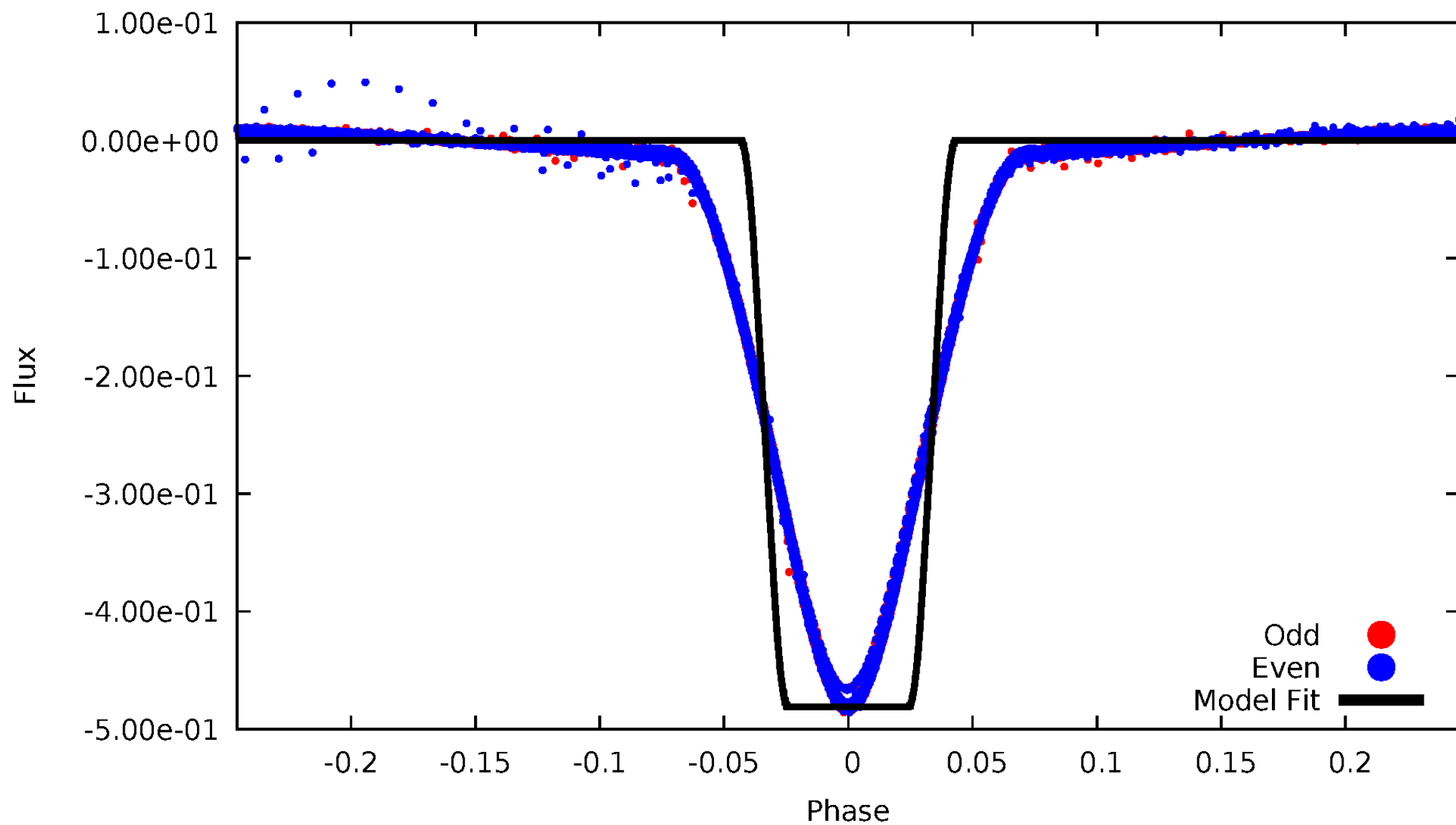
DV Odd/Even

TCE 008823397-01



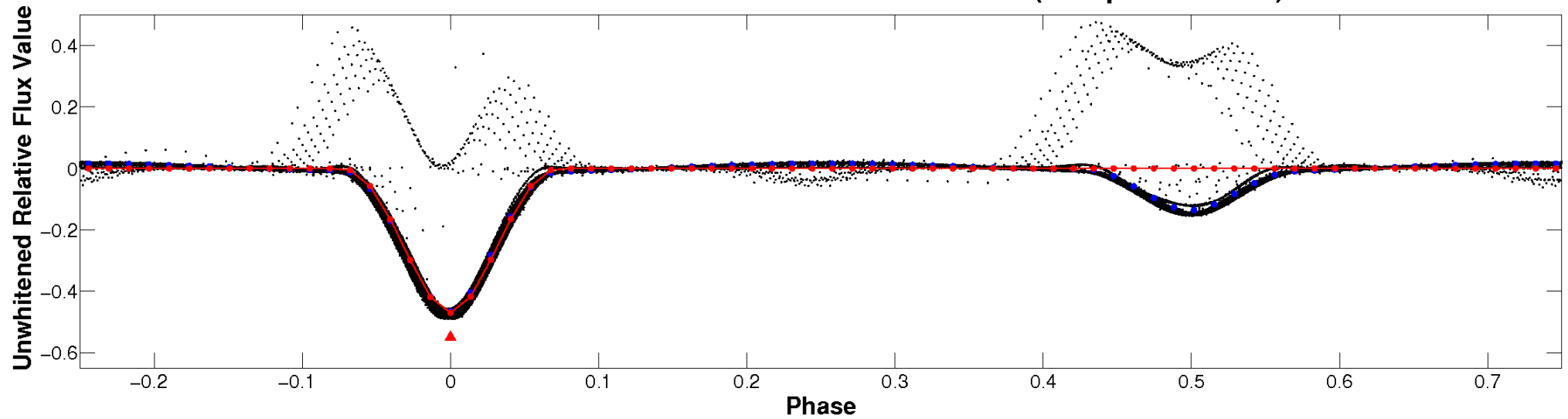
ALT Odd/Even

TCE 008823397-01

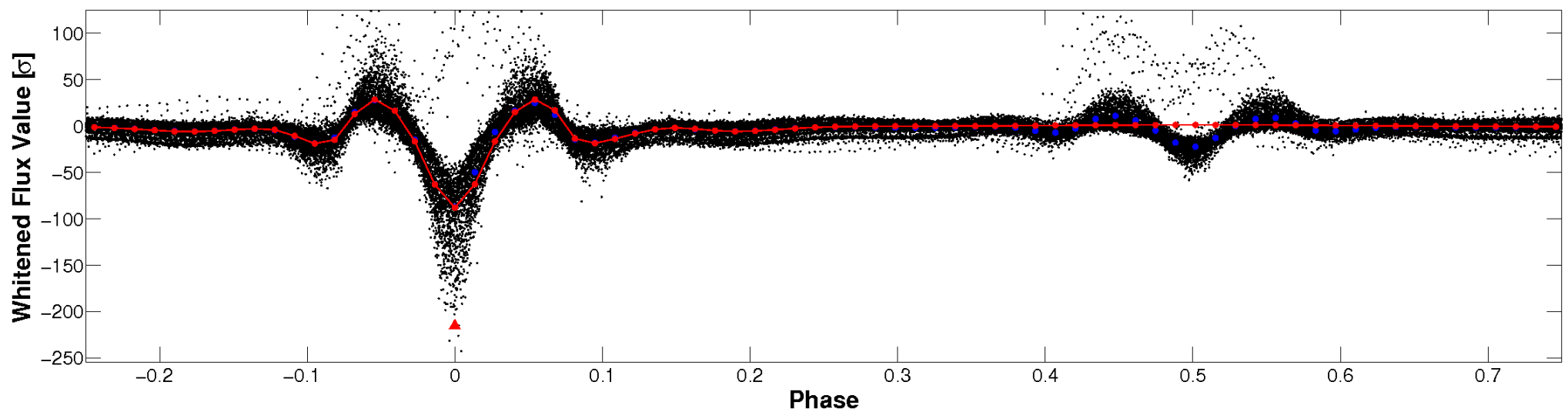


Non-Whitened Vs. Whitened Light Curve

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

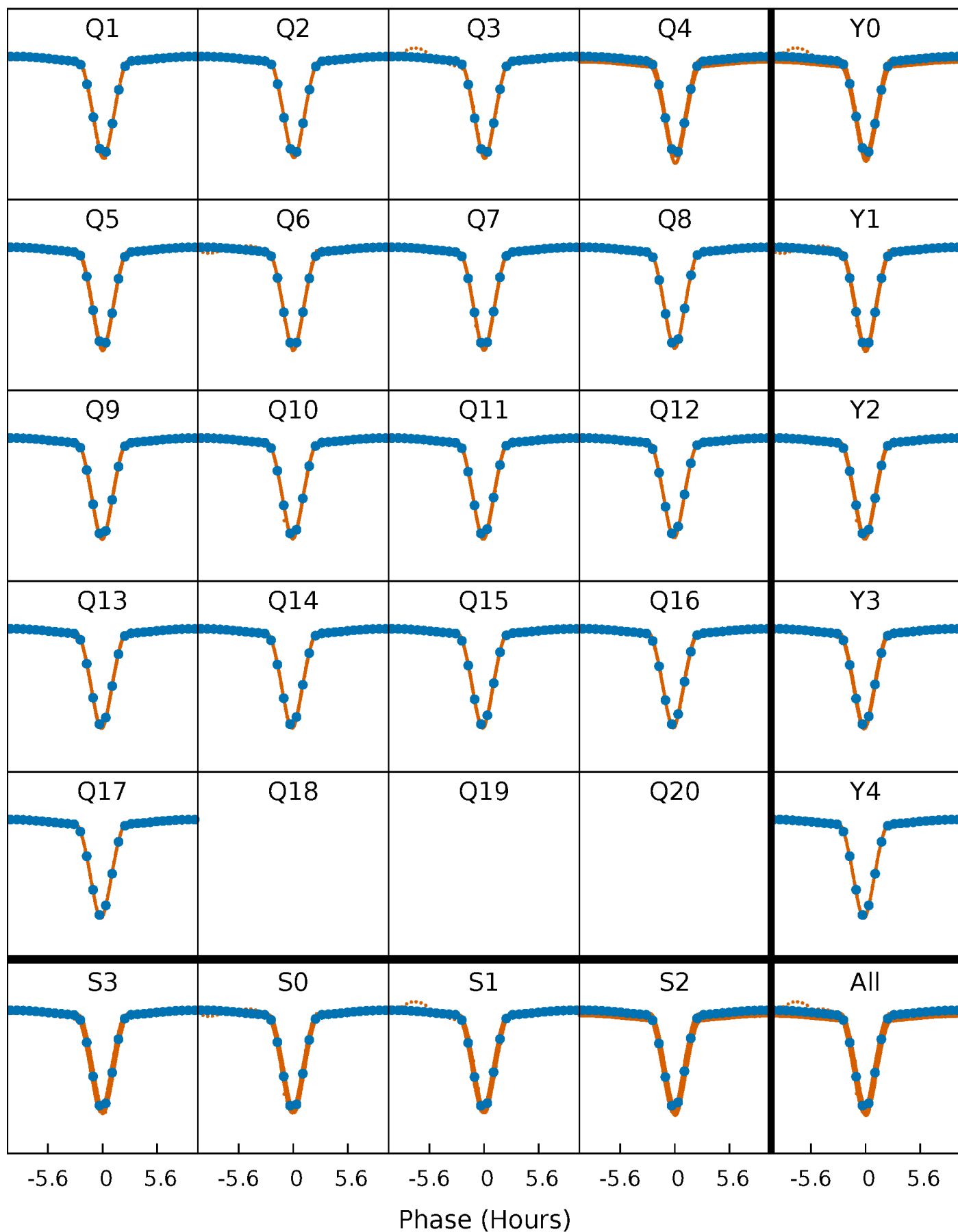


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



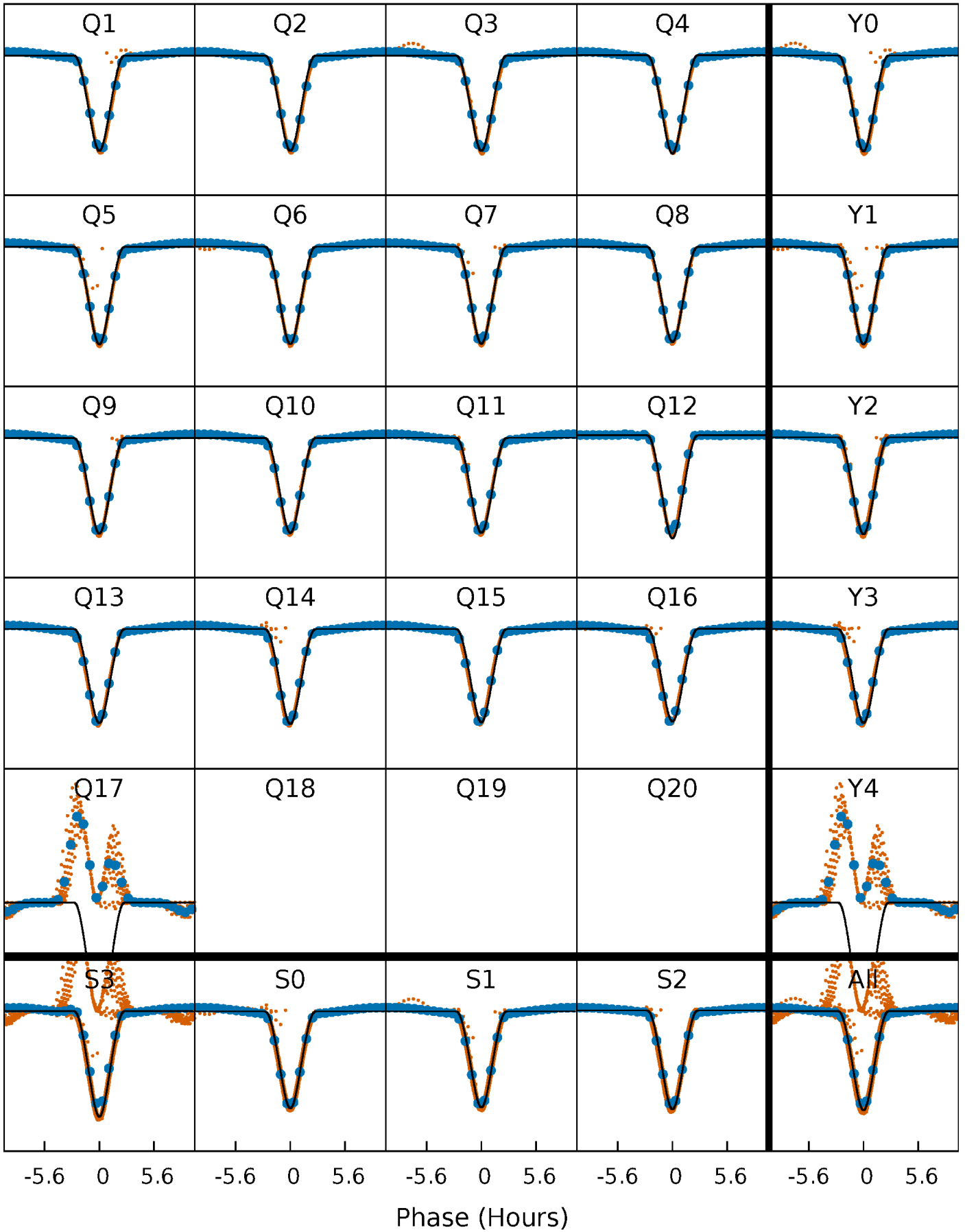
PDC Quarter-Phased Transit Curves

TCE 008823397-01 P= 1.506515 Days $T_0=132.987528$ (BKJD)



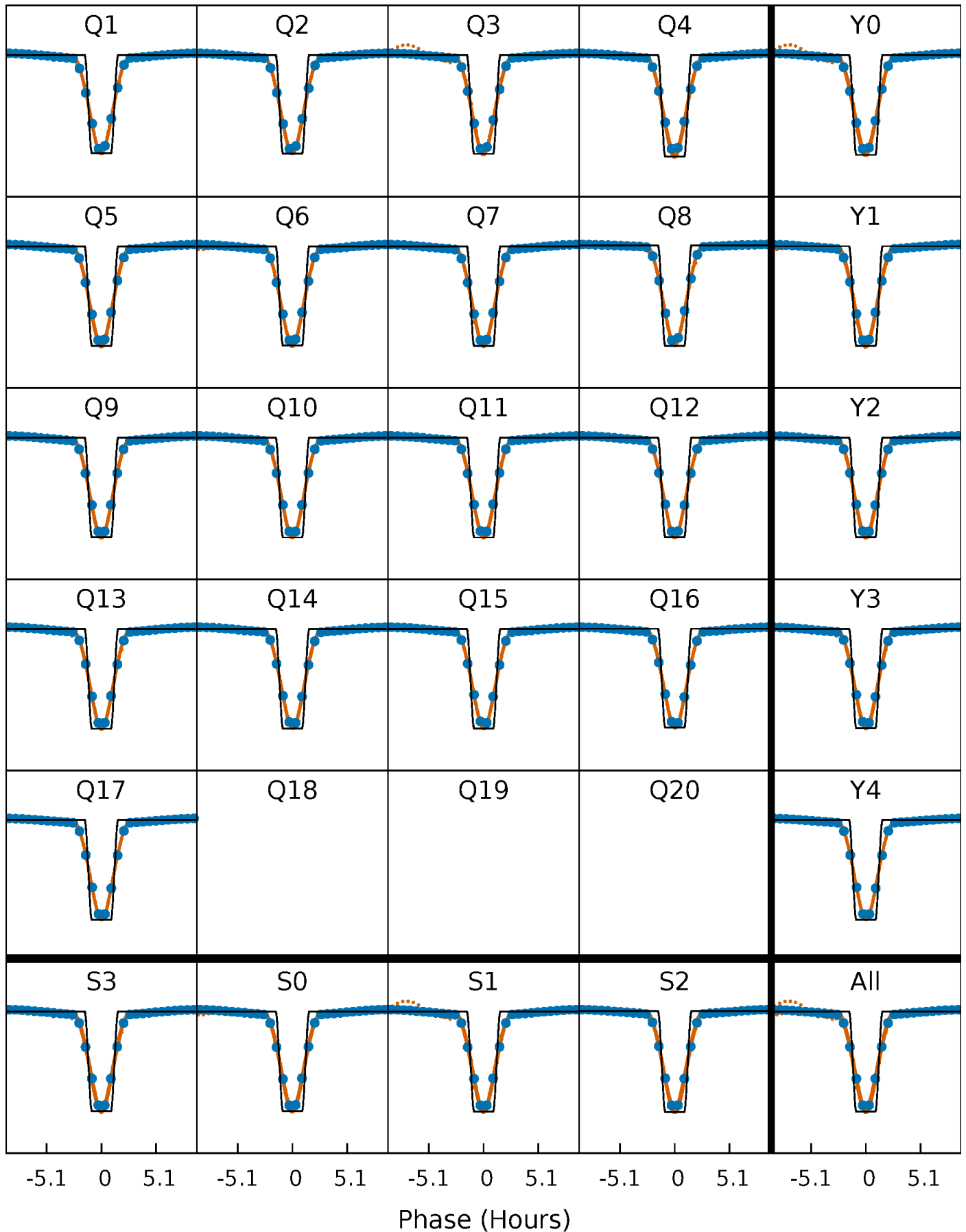
DV Quarter-Phased Transit Curves

TCE 008823397-01 P= 1.506515 Days $T_0=132.987528$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

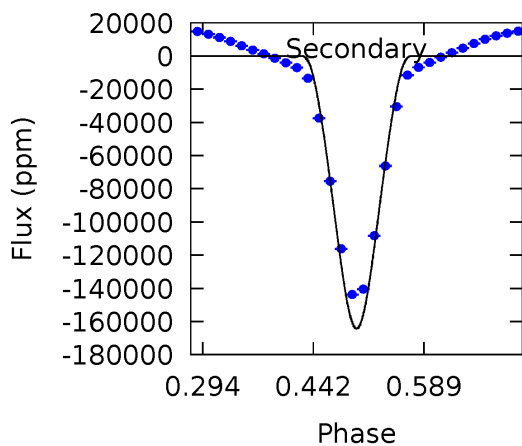
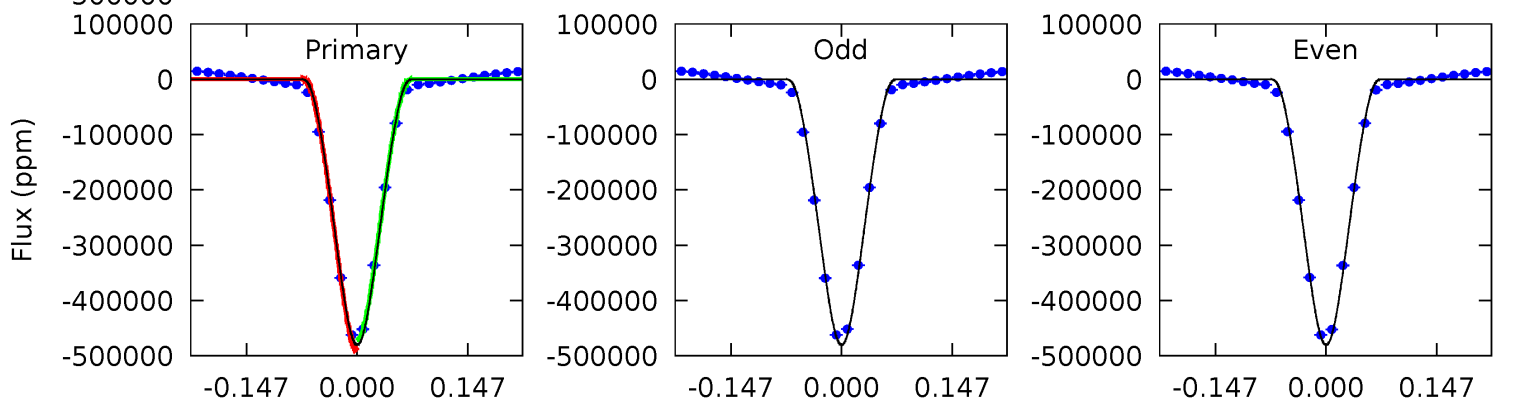
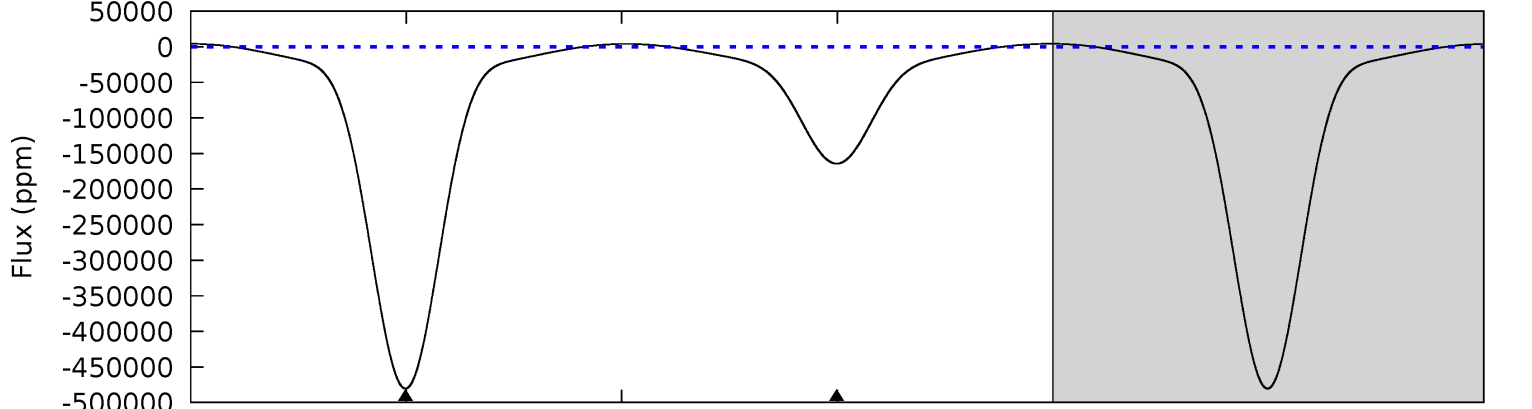
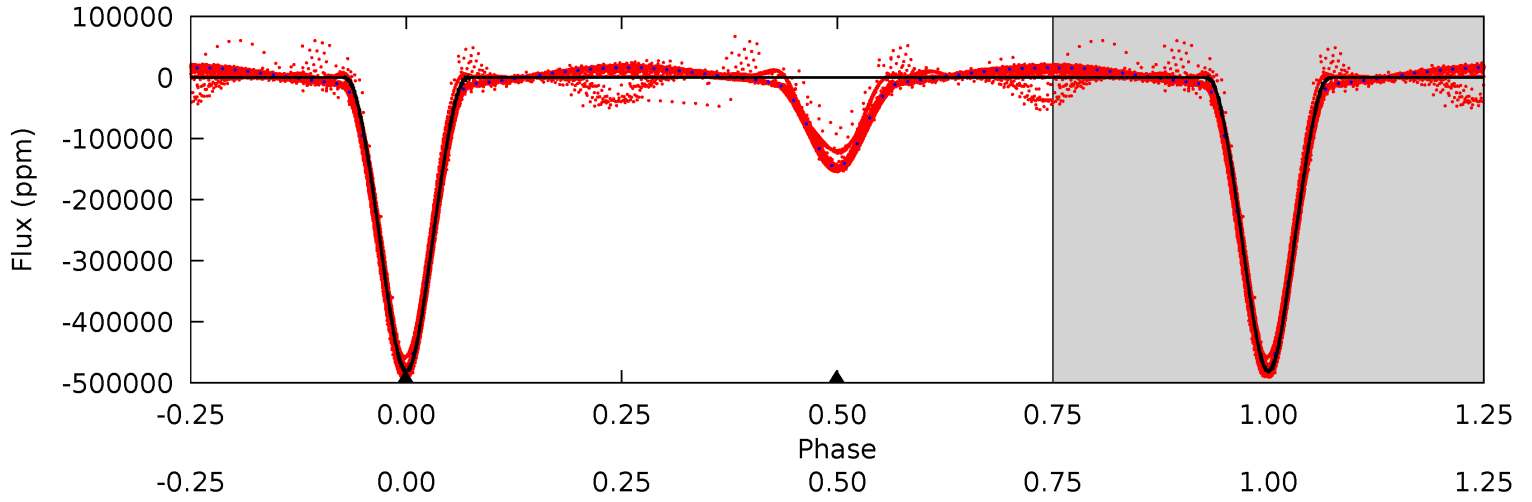
TCE 008823397-01 P= 1.506501 Days $T_0=132.992558$ (BKJD)



DV Model-Shift Uniqueness Test

008823397-01, P = 1.506515 Days, E = 131.481013 Days

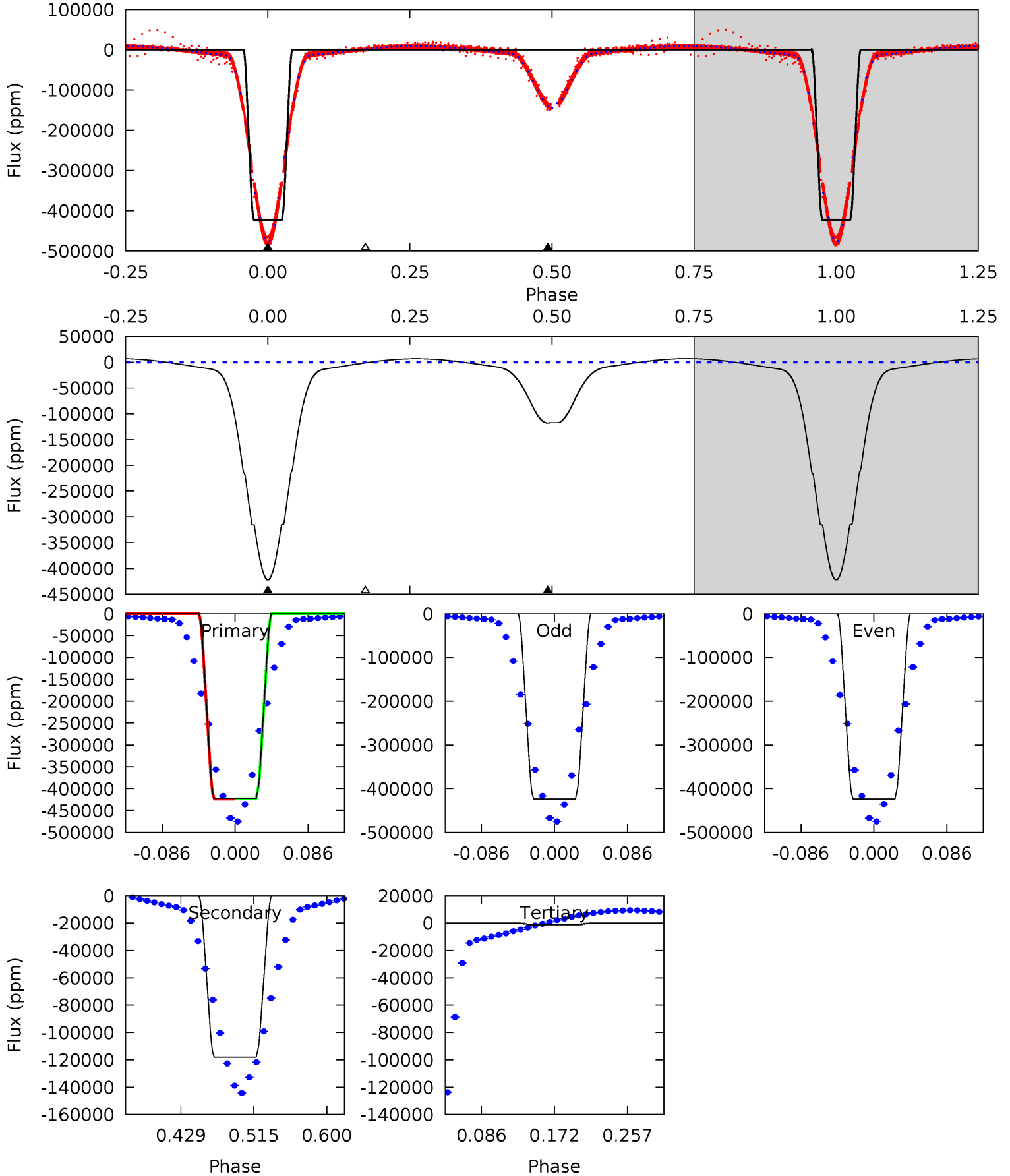
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3411	1166	0	0	4.48	1.45	33.5	3411	3411	1166	1166	0.45	0.96	0.01	63.1



Alt Model-Shift Uniqueness Test

008823397-01, P = 1.506501 Days, E = 131.486057 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4396	1230	13.7	0	4.60	1.72	70.0	4382	4396	1216	1230	0.95	1.00	0.02	3.02



Stellar Parameters For KIC 008823397

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8751^{+240}_{-412}	$4.026^{+0.198}_{-0.132}$	$0.070^{+0.150}_{-0.600}$	$2.352^{+0.577}_{-0.705}$	$2.140^{+0.309}_{-0.574}$	$0.232^{+0.293}_{-0.099}$
	+3%/-5%	+5%/-3%	+214%/-857%	+25%/-30%	+14%/-27%	+127%/-43%
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 008823397-01 / KOI 7096.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-164248 ± 141	$179.35^{+24.08}_{-30.63}$	4471^{+290}_{-369}	6464^{+154}_{-230}	$3.627^{+1.226}_{-0.650}$
Alt.	-118167 ± 96	$174.37^{+23.12}_{-28.76}$	4456^{+305}_{-374}	5881^{+134}_{-213}	$2.653^{+0.856}_{-0.539}$

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 $A_{obs} \gg 1.0$

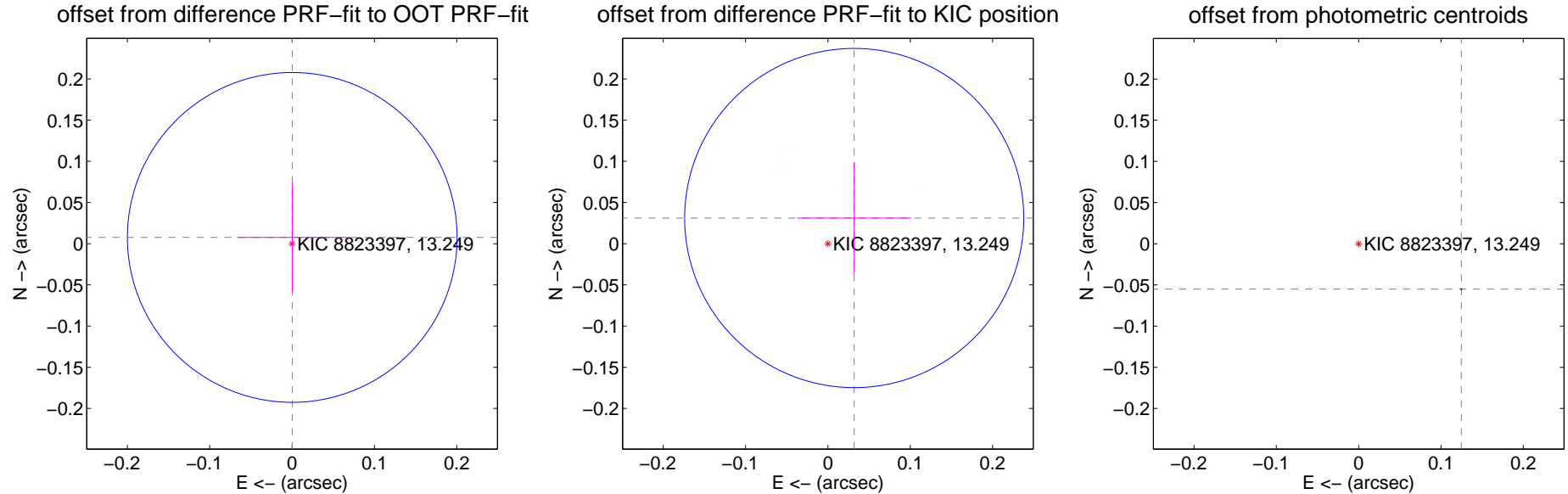
DV Centroid Data

Supplemental centroid analysis for 008823397-01. Kepler magnitude: 13.25. Transit SNR 2983.97

There are 17 quarters with good PRF difference image offsets

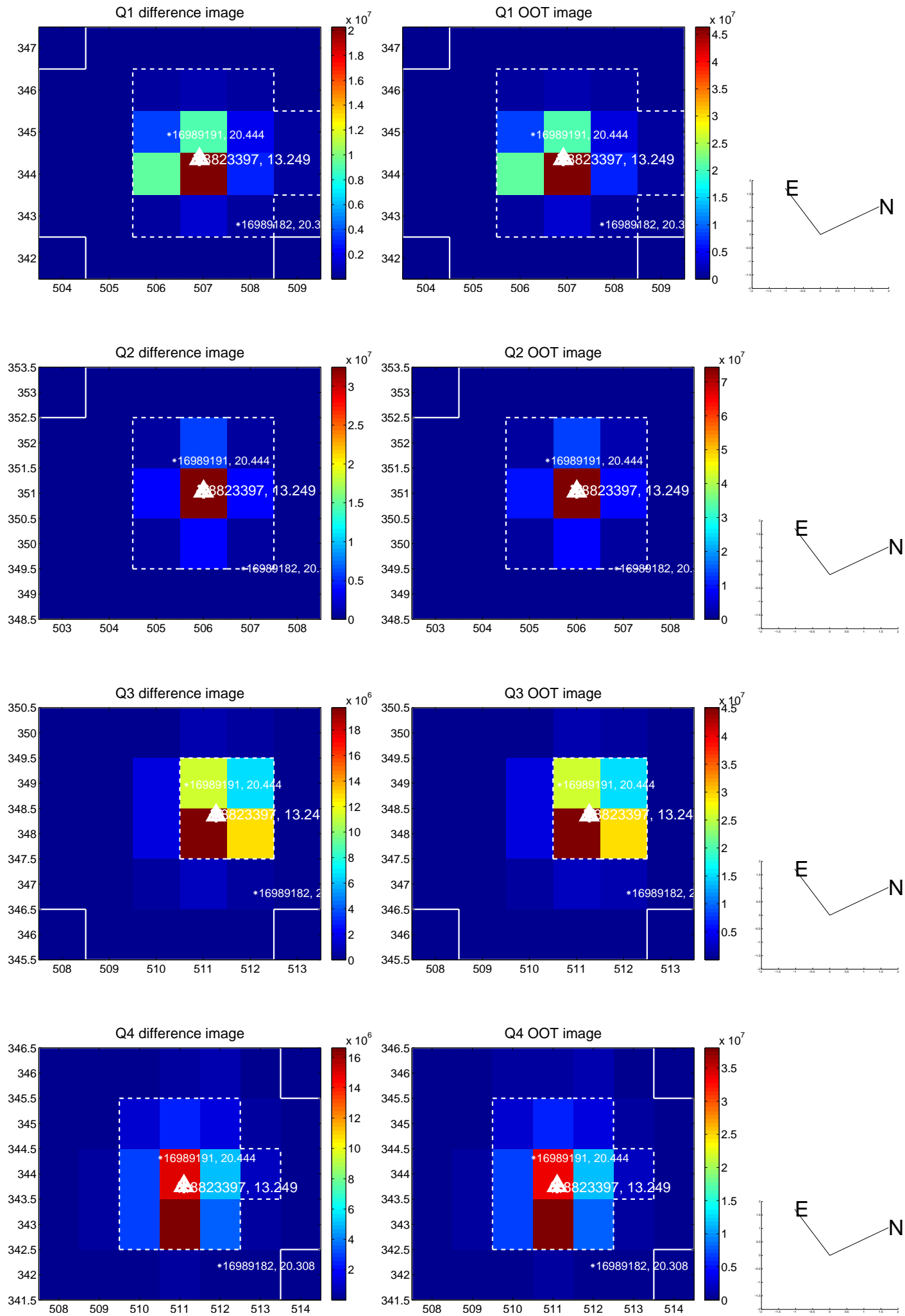
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.008 ± 0.067	0.11	-0.000 ± 0.067	0.008 ± 0.067
PRF-fit source offset from KIC position	0.045 ± 0.069	0.65	-0.032 ± 0.069	0.031 ± 0.068
photometric centroid source offset	0.14 ± 0.00	629.77	-0.12 ± 0.00	-0.06 ± 0.00

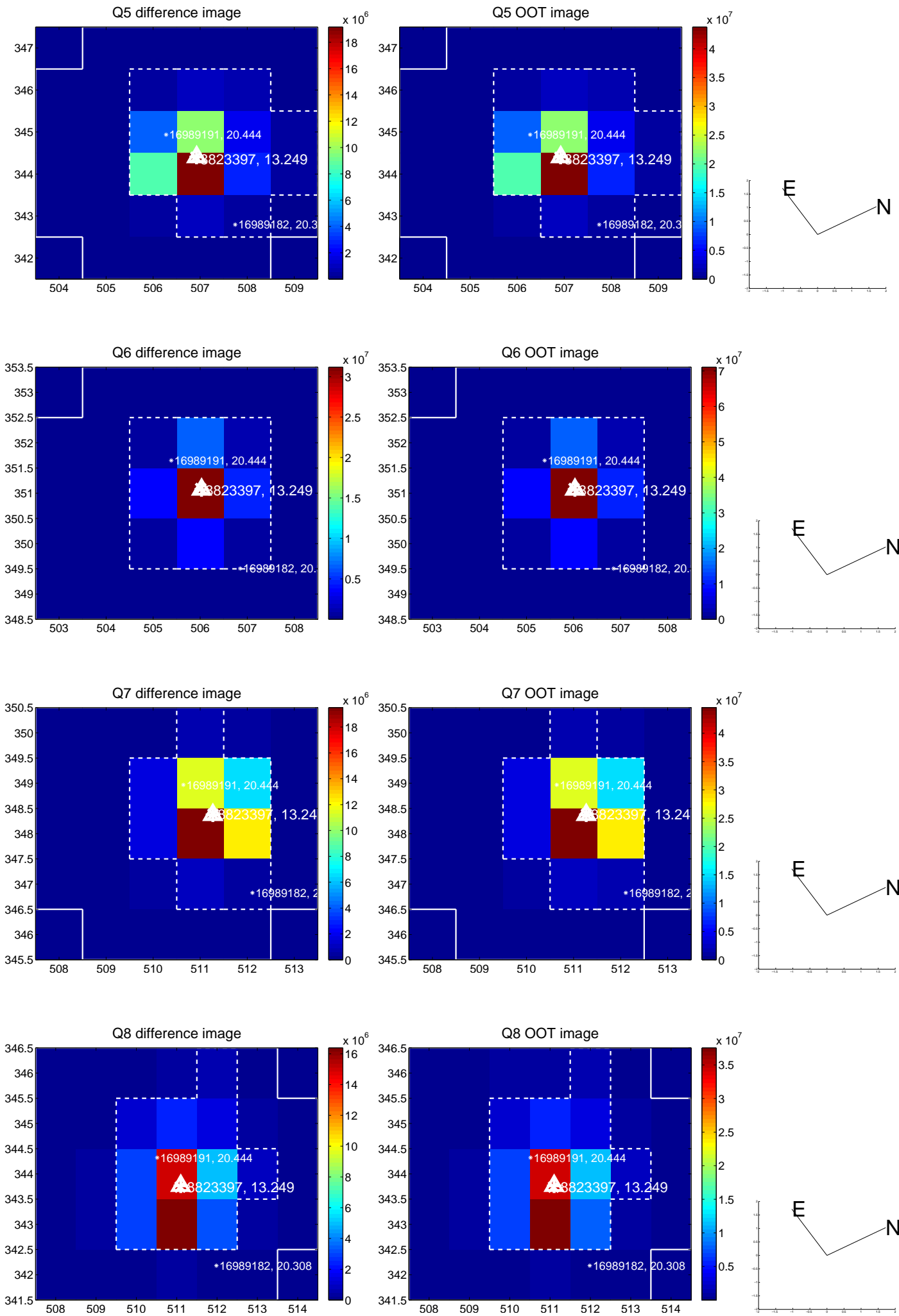


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . 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.

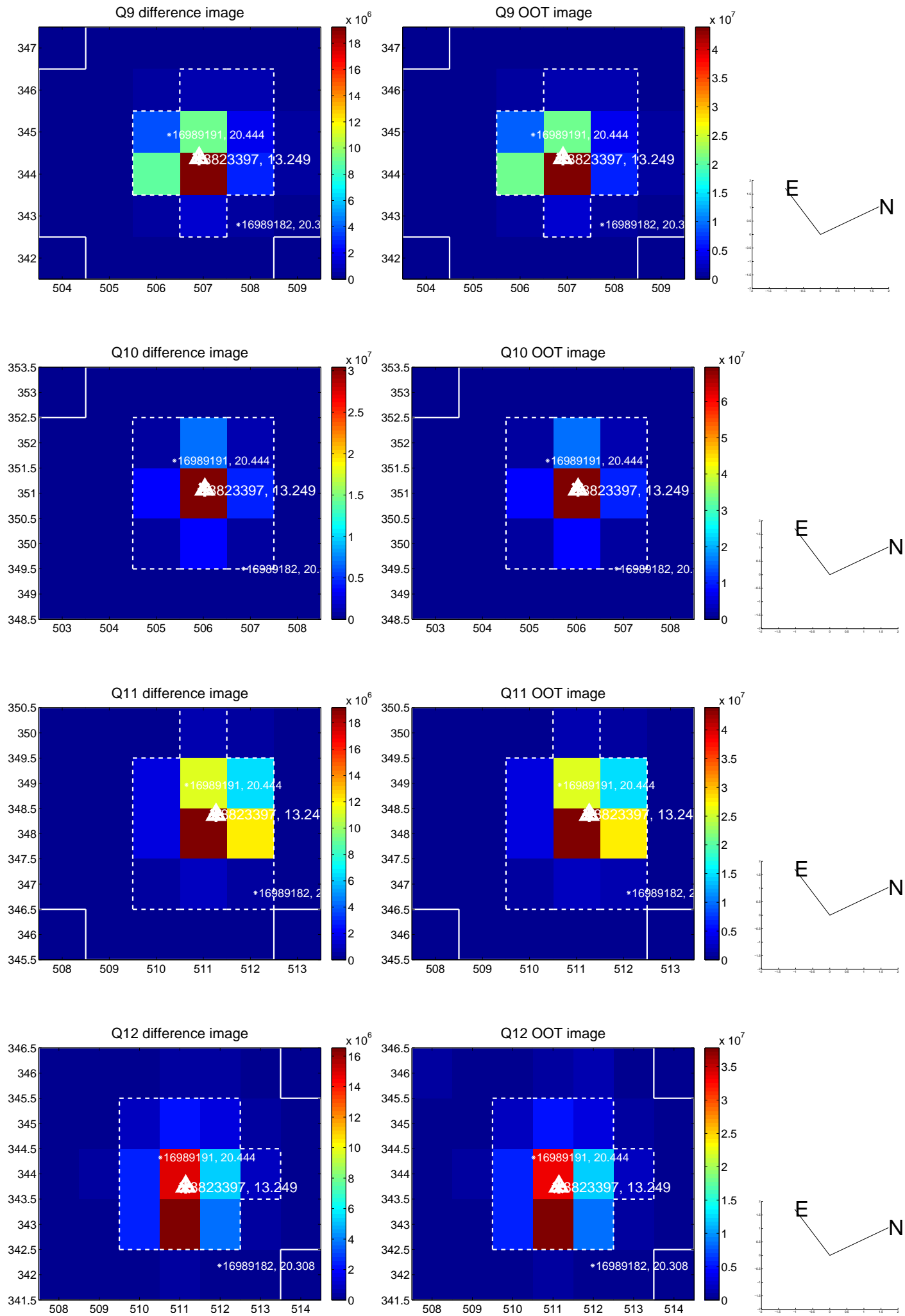
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



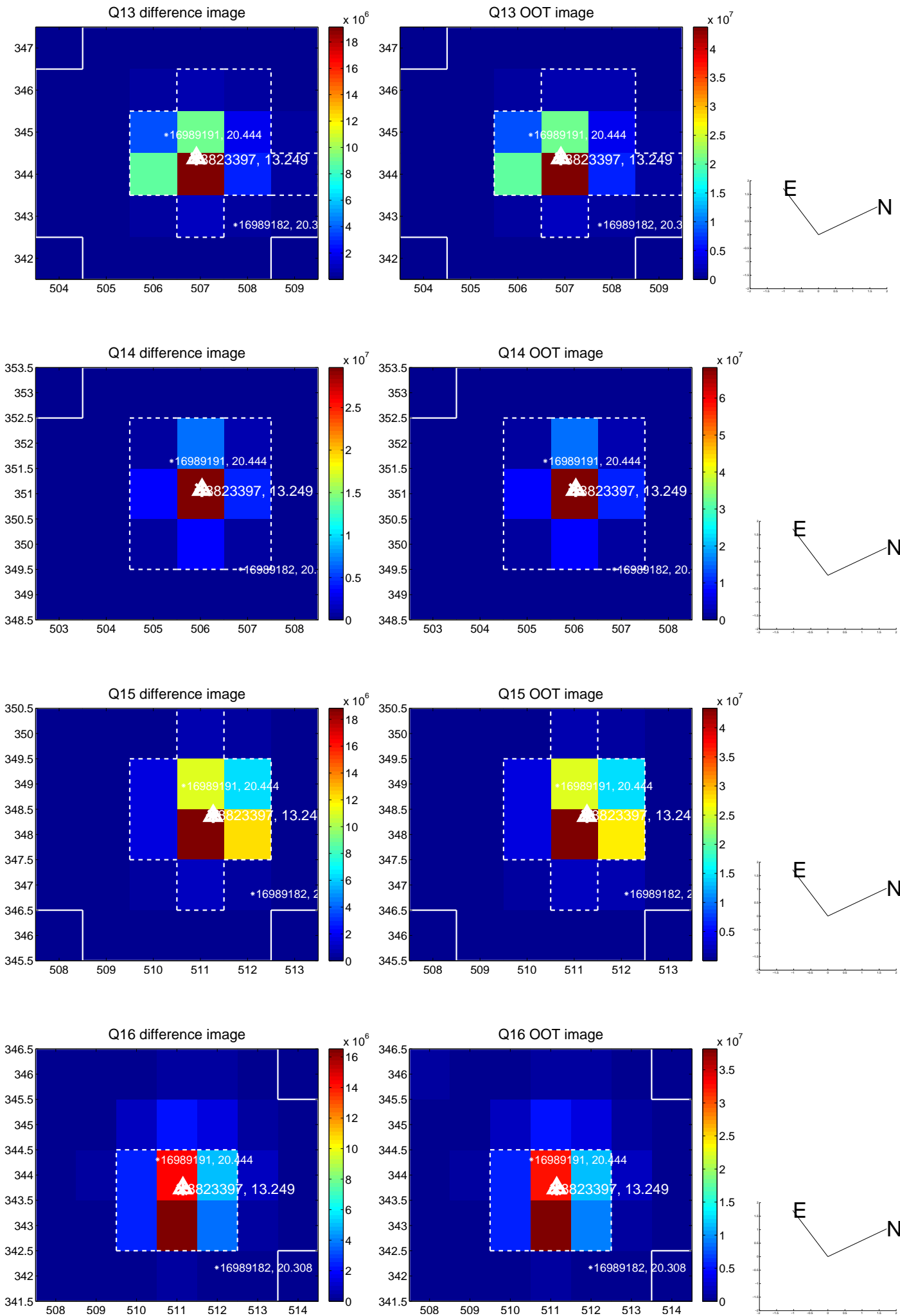
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



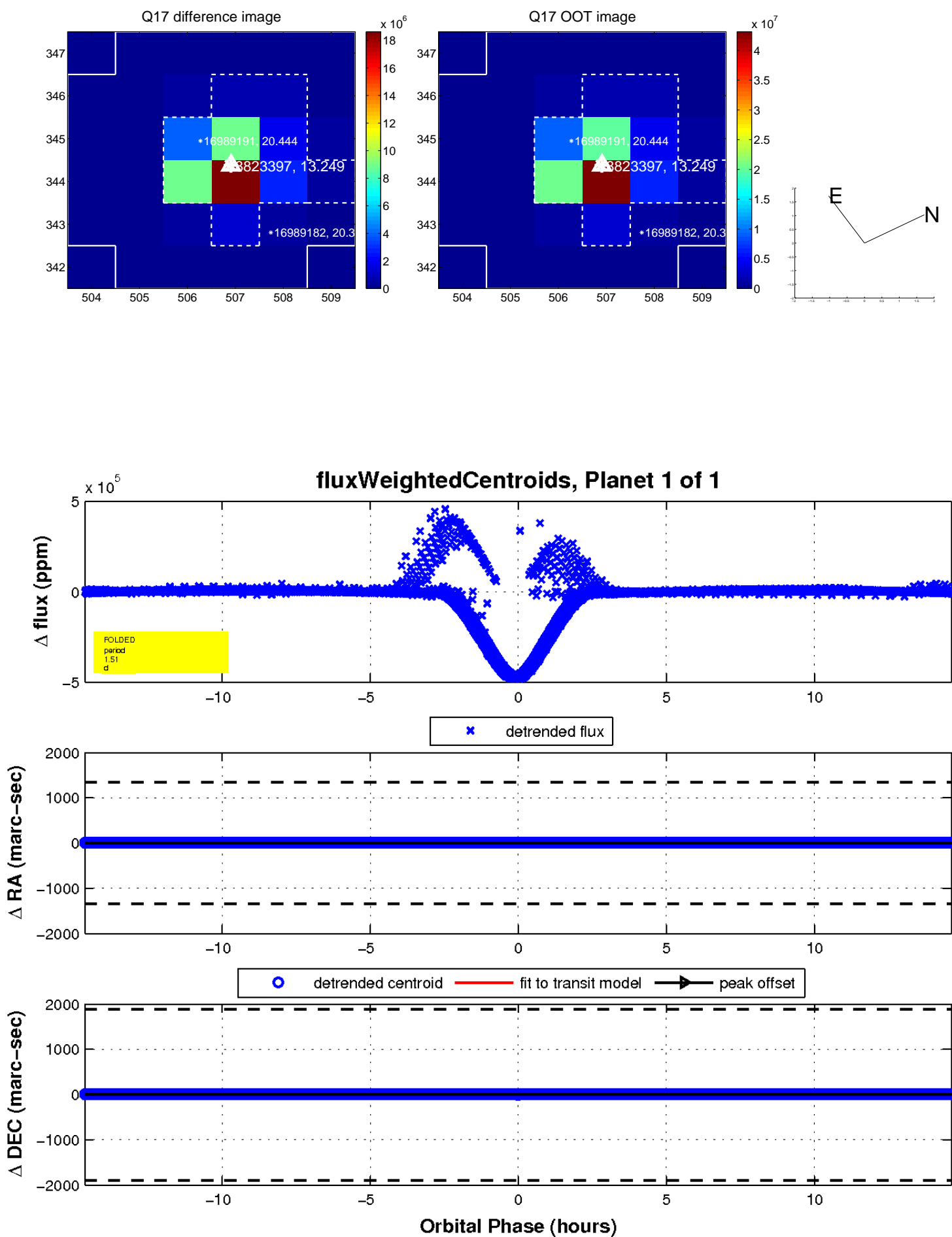
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

