

KIC 006383821

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})
006383821-01	OBS	1238.01	27.072389	139.111828	523.0	7.102	35.5	37.7	0.96	5936	2.37	31.66

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006383821-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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.

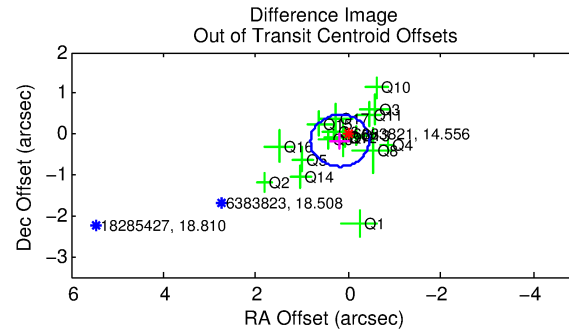
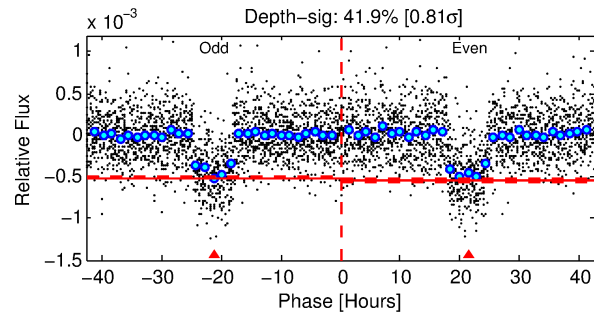
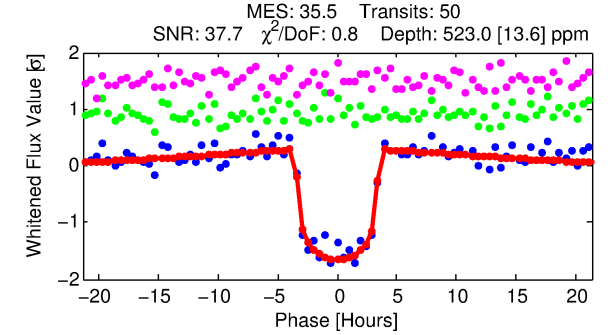
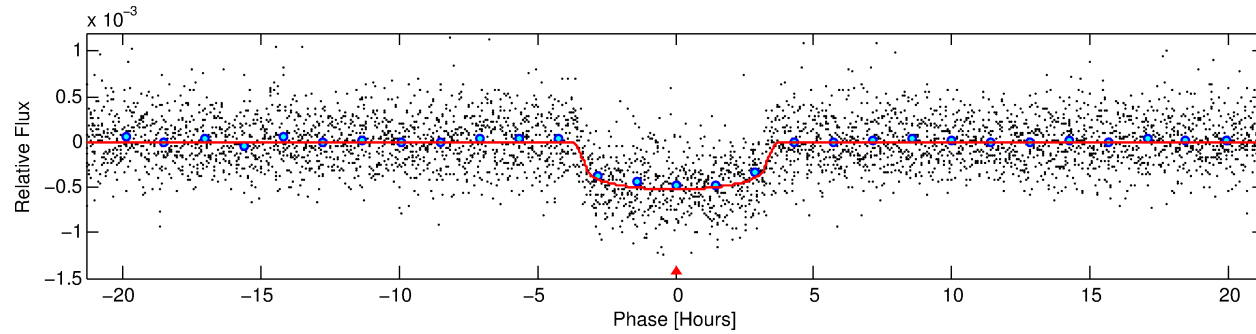
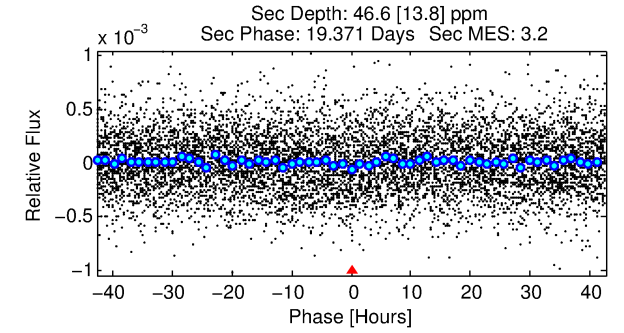
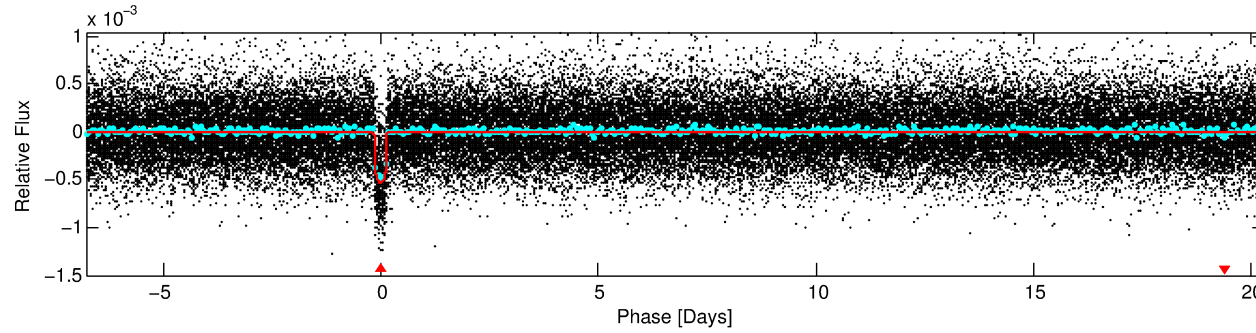
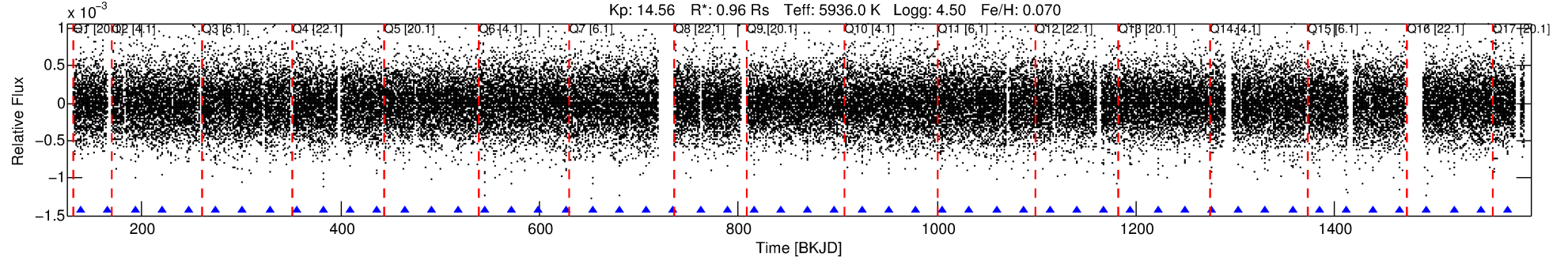
Ephemeris Match Information For 006383821-01

No Significant Match Found

DV One-Page Summary

KIC: 6383821 Candidate: 1 of 1 Period: 27.072 d

KOI: K01238.01 Corr: 0.989



DV Fit Results:

Period = 27.07239 [0.00010] d
Epoch = 139.1118 [0.0033] BKJD
Rp/R* = 0.0225 [0.0034]
a/R* = 21.31 [14.61]
b = 0.71 [0.48]
Seff = 31.66 [5.59]
Teff = 605 [27] K
Rp = 2.37 [0.46] Re
a = 0.1809 [0.0197] AU
Ag = 149.53 [67.82] [2.19σ]
Teffp = 3270 [349] K [7.61σ]

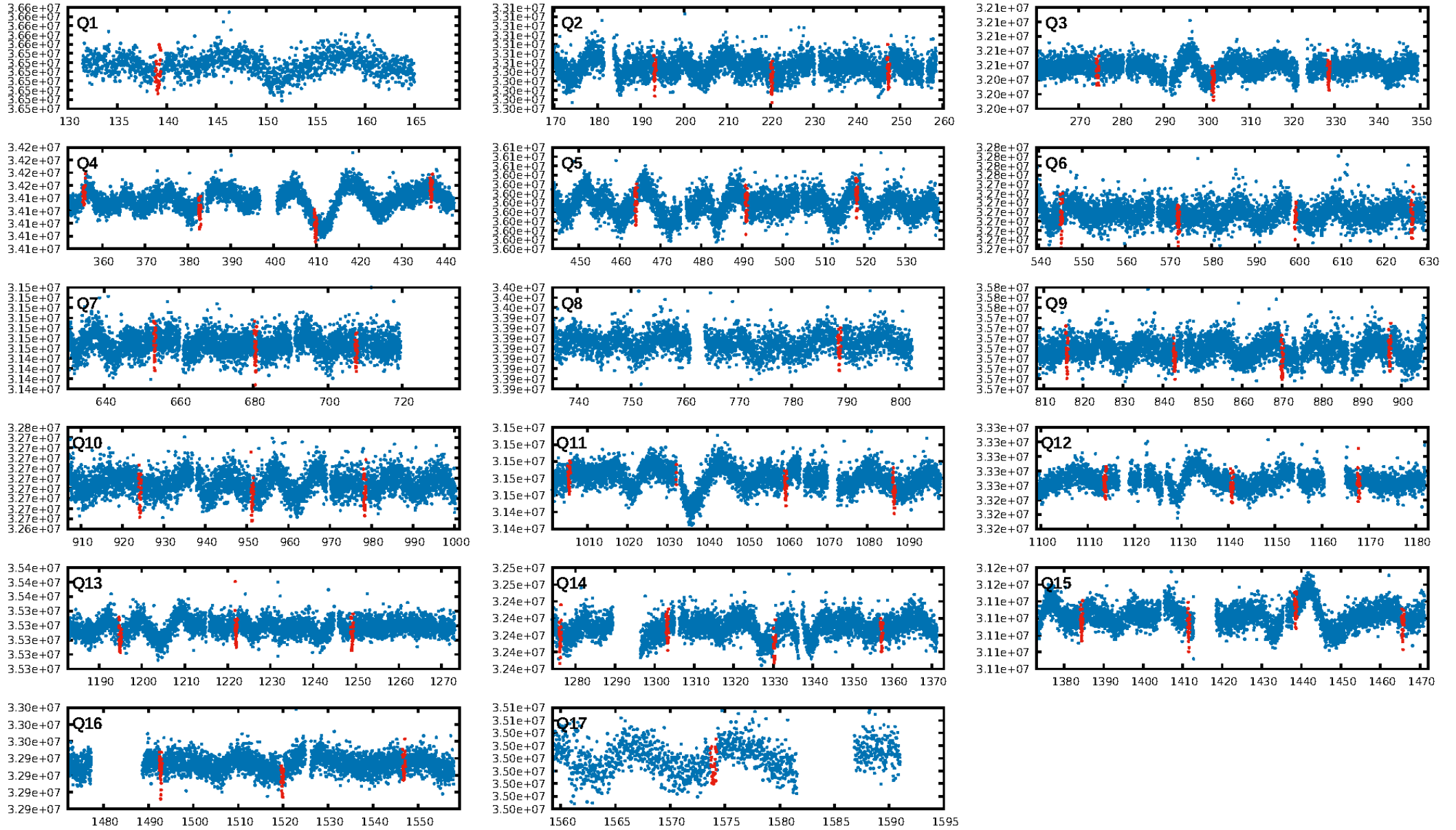
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 64.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.45e-269
RollingBand-fgt: 1.00 [48/48]
GhostDiagnostic-chr: 1.805
Centroid-sig: 22.1%
Centroid-so: 0.472 arcsec [1.43σ]
OotOffset-rm: 0.251 arcsec [1.19σ]
KicOffset-rm: 0.333 arcsec [1.45σ]
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]

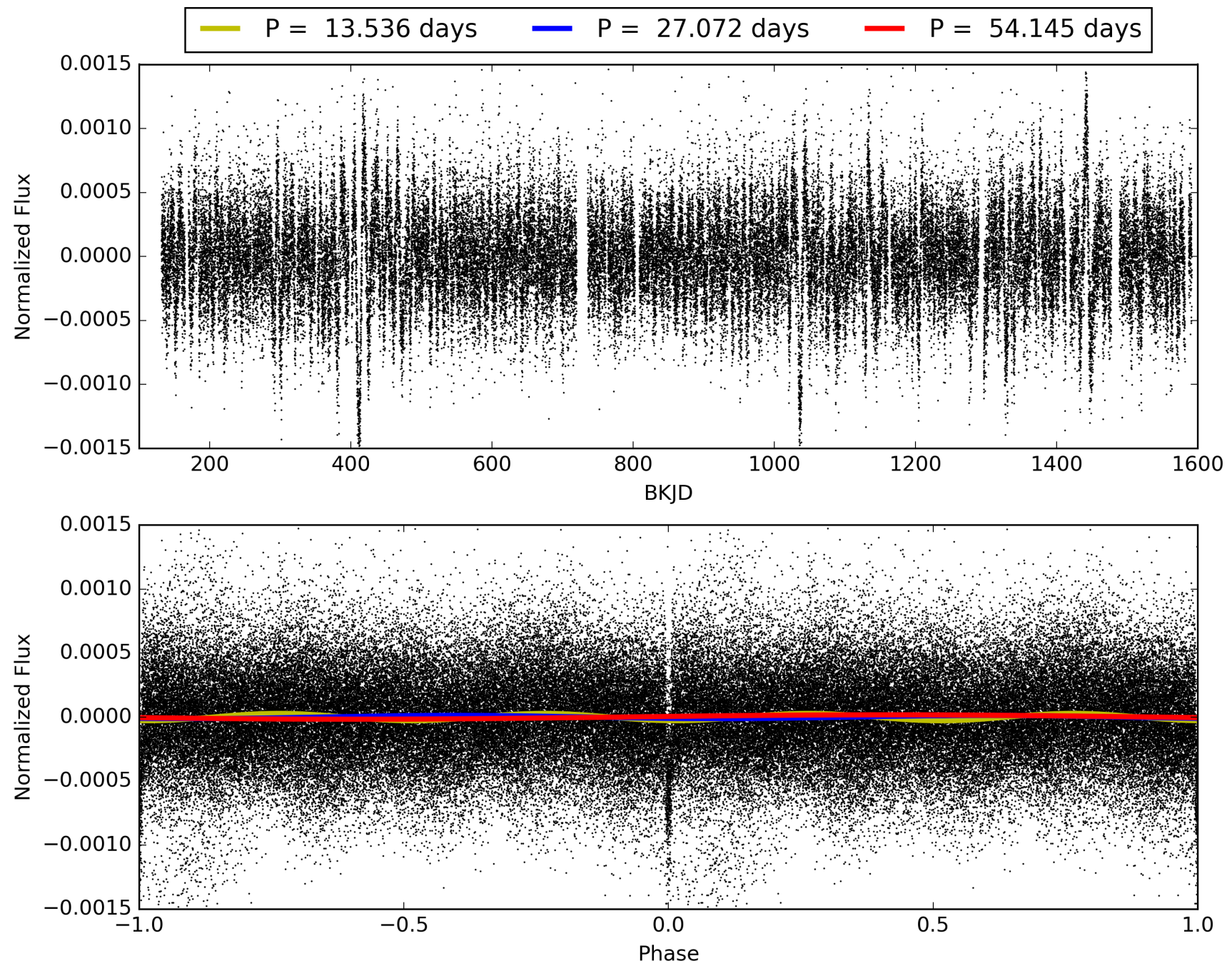
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 11:39:00 Z

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

TCE 006383821-01, PDC Light Curves

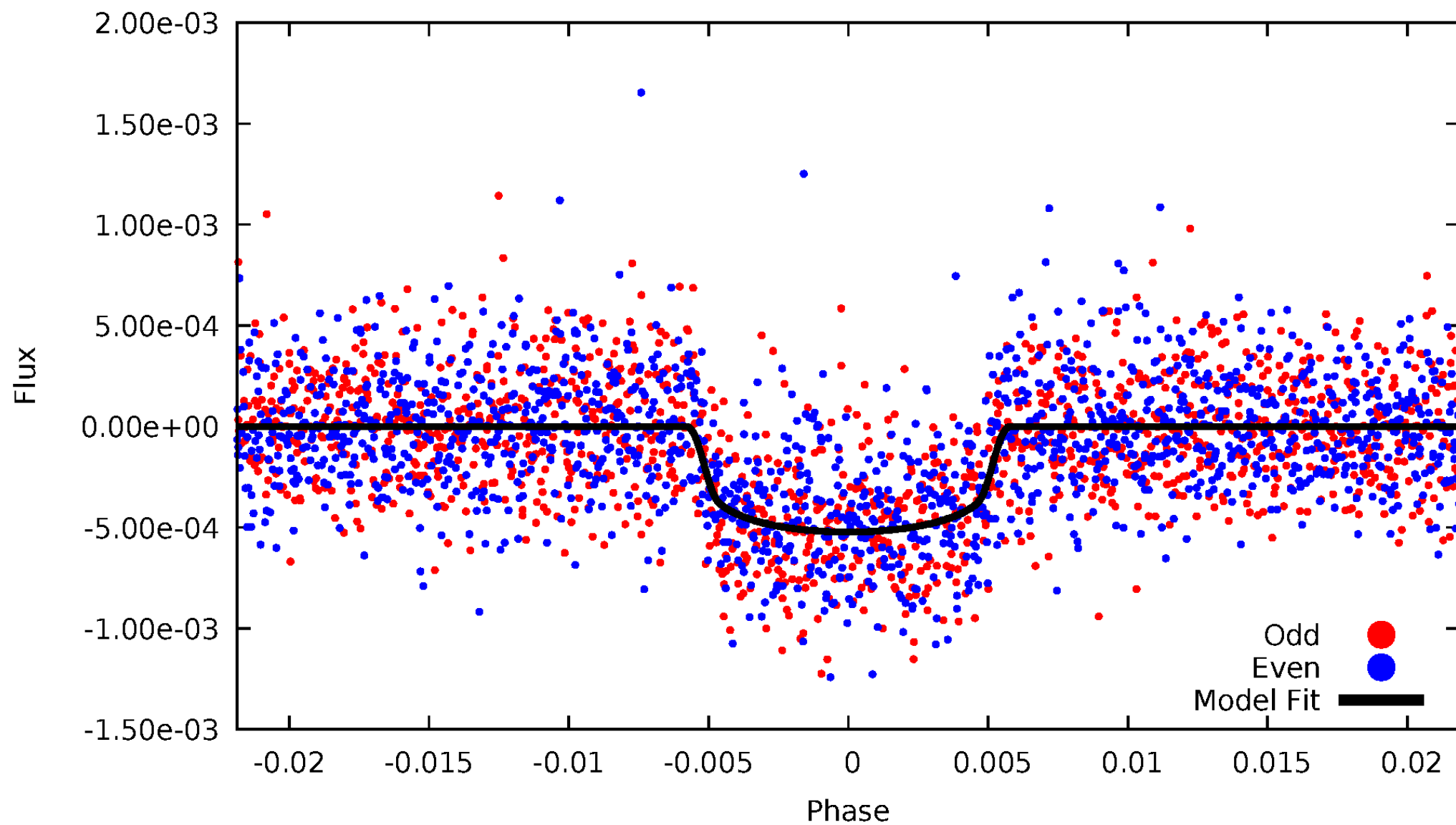


TCE 006383821-01



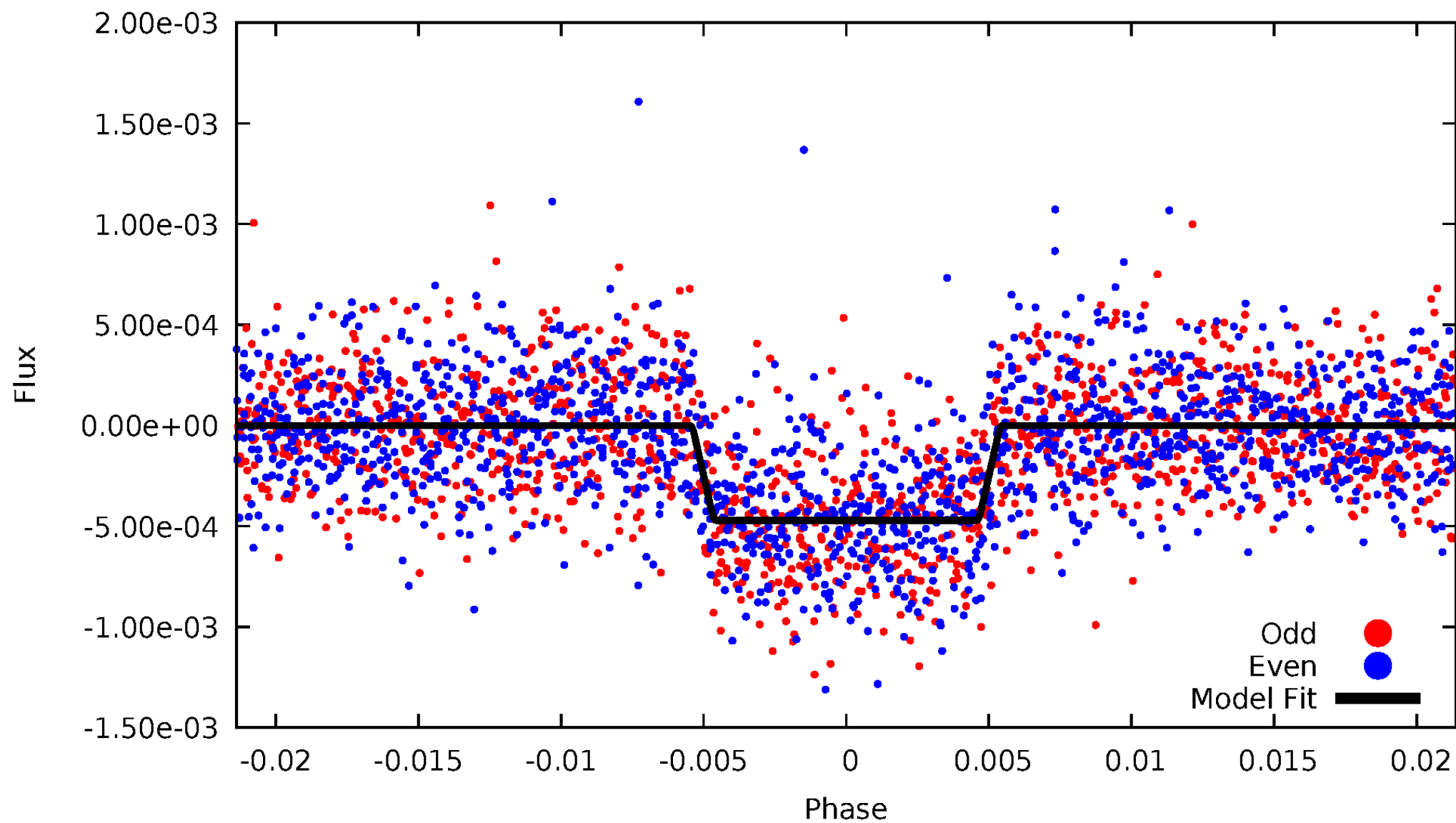
DV Odd/Even

TCE 006383821-01

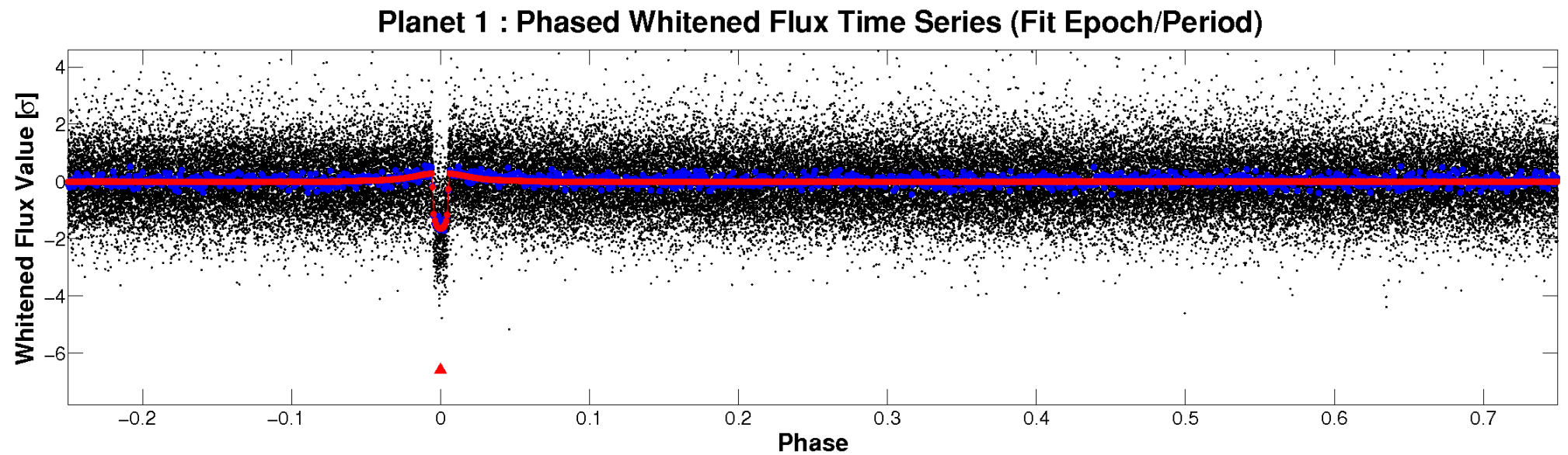
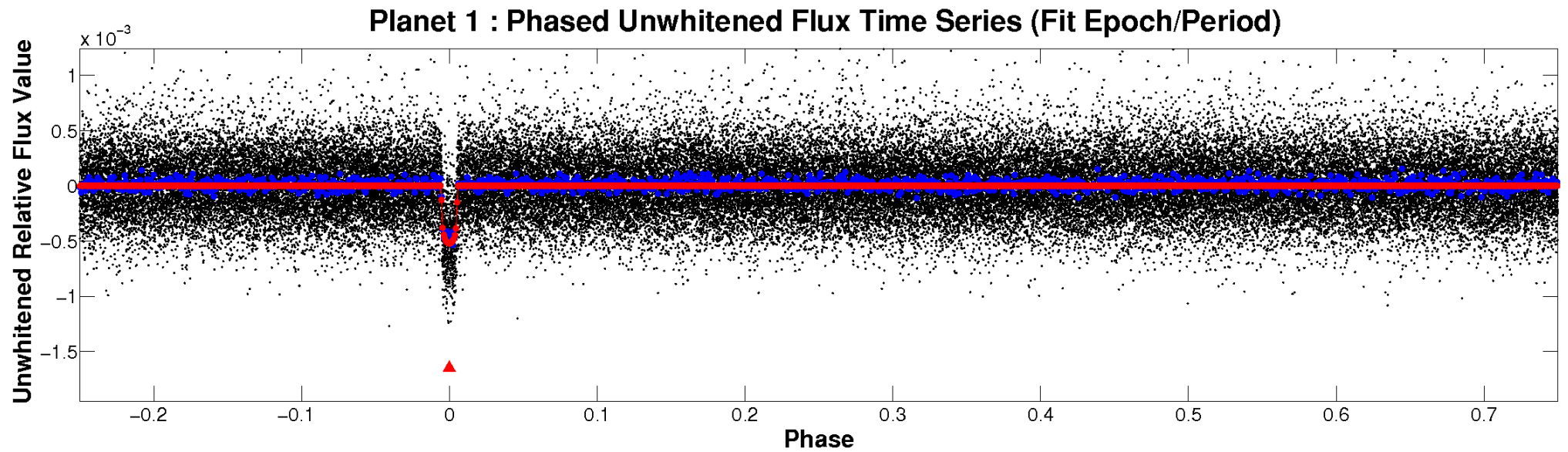


ALT Odd/Even

TCE 006383821-01

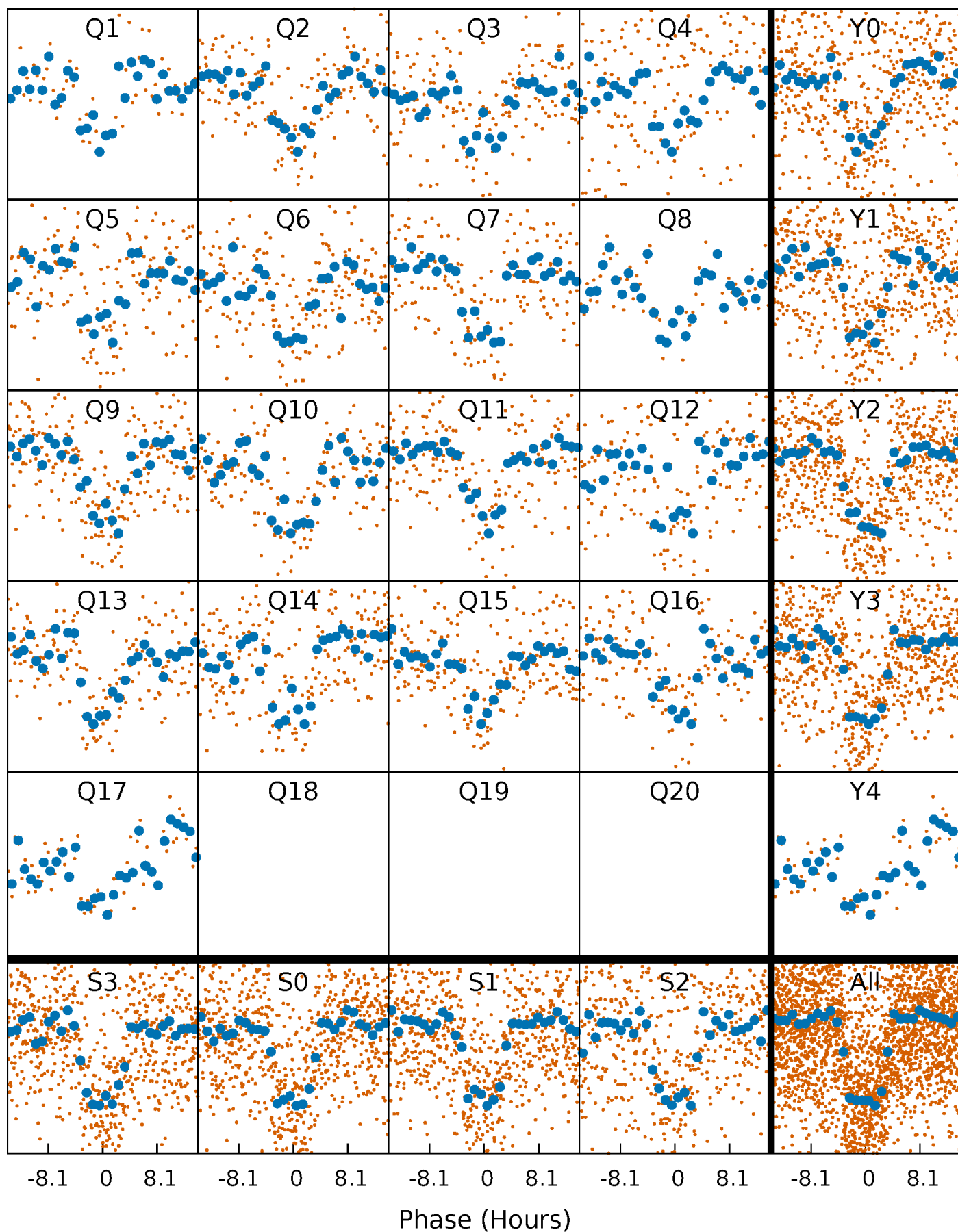


Non-Whitened Vs. Whitened Light Curve



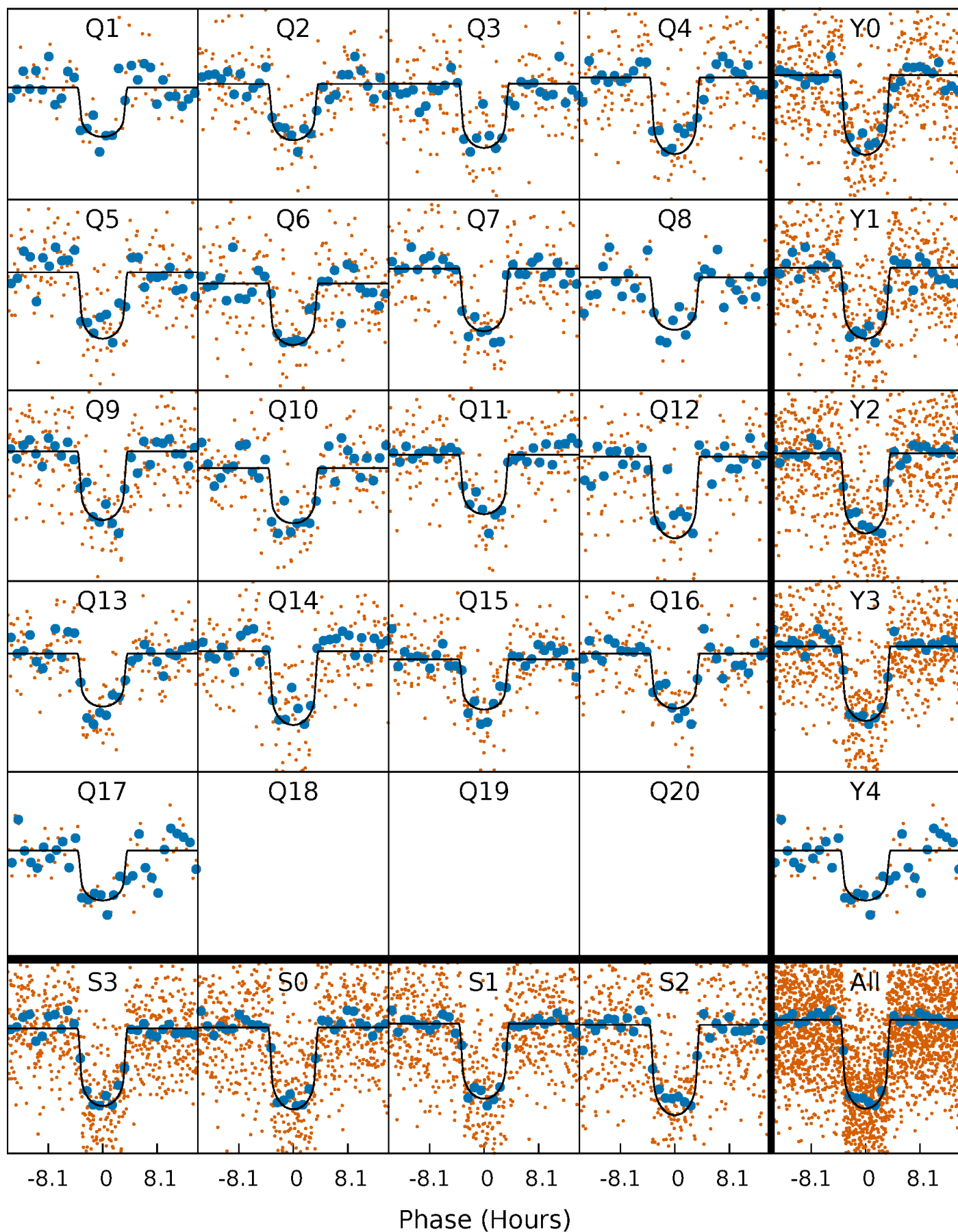
PDC Quarter-Phased Transit Curves

TCE 006383821-01 P= 27.072389 Days $T_0=139.111828$ (BKJD)



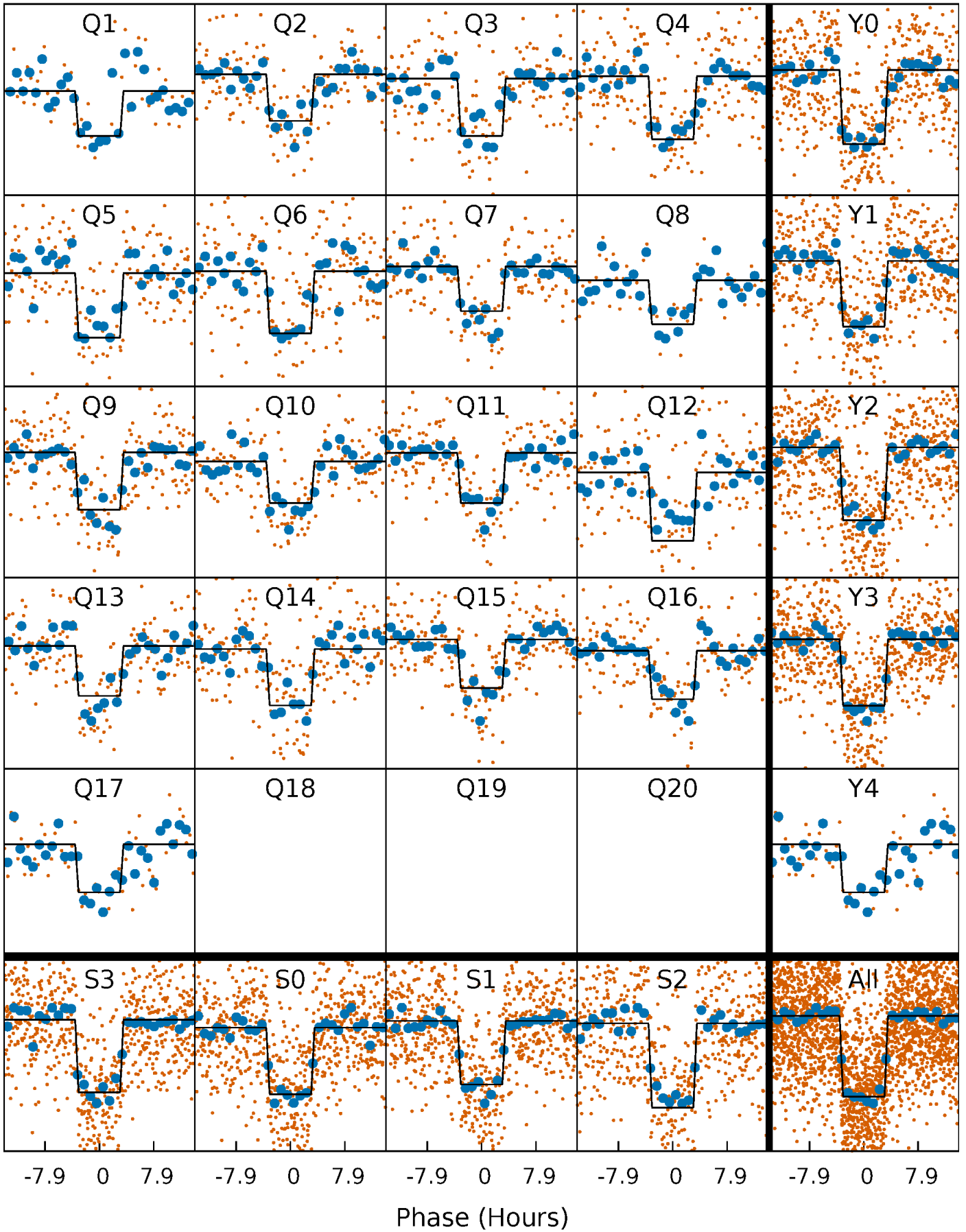
DV Quarter-Phased Transit Curves

TCE 006383821-01 P= 27.072389 Days $T_0=139.111828$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

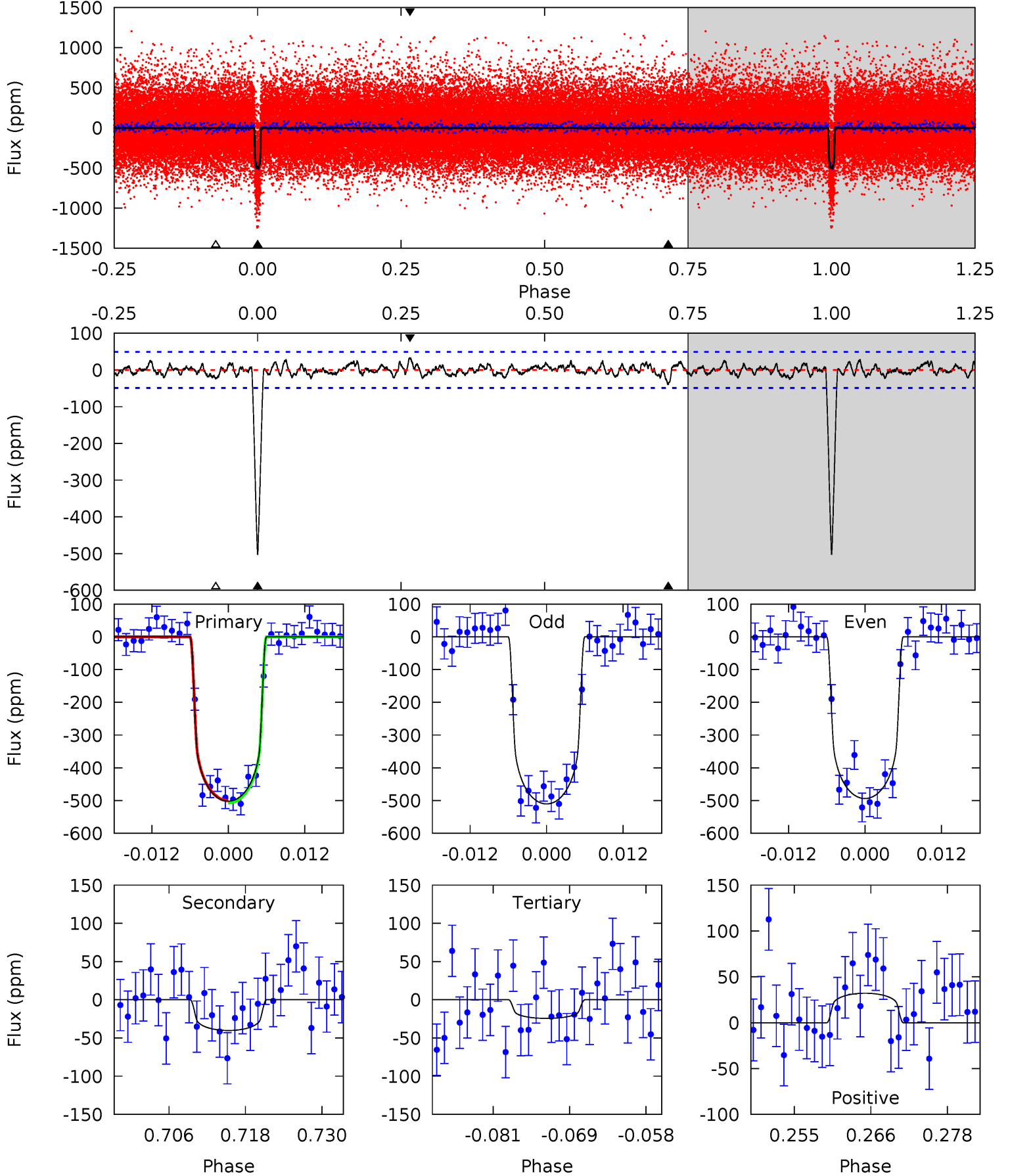
TCE 006383821-01 P= 27.072092 Days $T_0=139.120323$ (BKJD)



DV Model-Shift Uniqueness Test

006383821-01, P = 27.072389 Days, E = 112.039439 Days

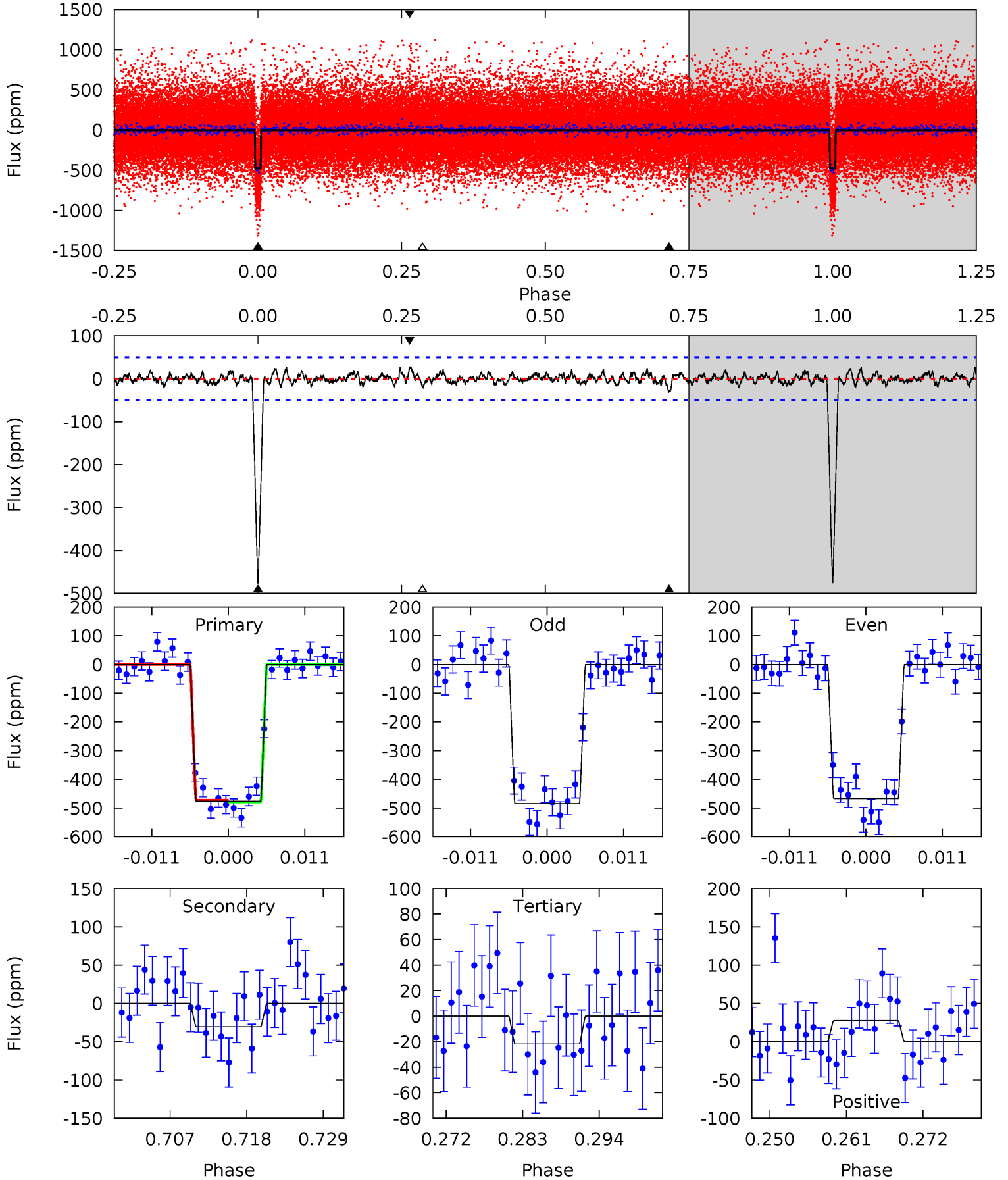
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
51.0	4.09	2.48	3.27	5.00	2.52	1.07	48.6	47.8	1.60	0.82	0.84	0.98	0.06	0.35



Alt Model-Shift Uniqueness Test

006383821-01, P = 27.072092 Days, E = 112.048231 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
47.6	3.04	2.17	2.75	5.01	2.55	0.85	45.4	44.8	0.86	0.29	0.87	0.98	0.05	0.27



Stellar Parameters For KIC 006383821

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5936^{+65}_{-94}	$4.501^{+0.016}_{-0.093}$	$0.070^{+0.150}_{-0.150}$	$0.965^{+0.119}_{-0.040}$	$1.075^{+0.058}_{-0.065}$	$1.685^{+0.147}_{-0.479}$
	+1%/-2%	+0%/-2%	+214%/-214%	+12%/-4%	+5%/-6%	+9%/-28%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 006383821-01 / KOI 1238.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-40 ± 10	$2.42^{+0.41}_{-0.36}$	853^{+25}_{-18}	3565^{+253}_{-215}	116^{+59}_{-39}
Alt.	-30 ± 10	$2.36^{+0.37}_{-0.38}$	853^{+25}_{-18}	3458^{+257}_{-239}	95^{+54}_{-35}

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

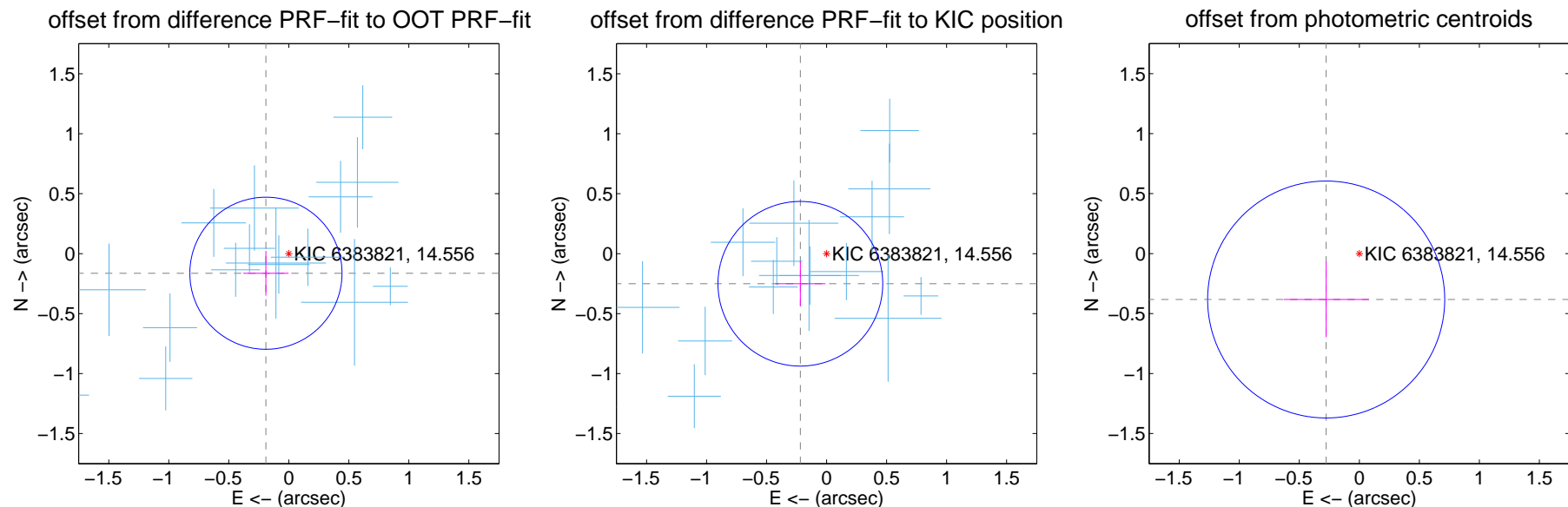
DV Centroid Data

Supplemental centroid analysis for 006383821-01. Kepler magnitude: 14.56. Transit SNR 37.66

There are 17 quarters with good PRF difference image offsets

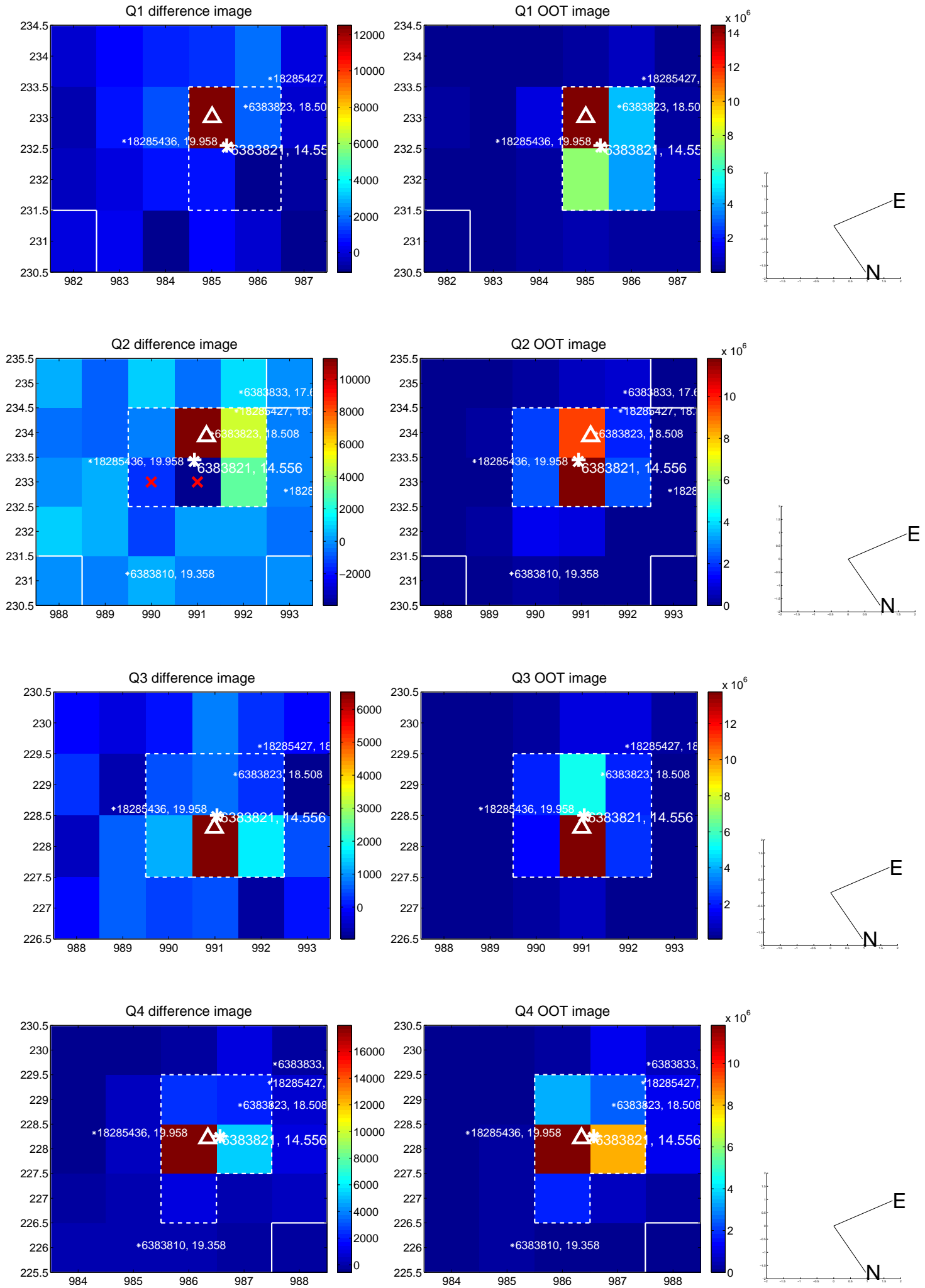
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.251 ± 0.211	1.19	0.191 ± 0.189	-0.163 ± 0.186
PRF-fit source offset from KIC position	0.333 ± 0.229	1.45	0.219 ± 0.208	-0.251 ± 0.187
photometric centroid source offset	0.47 ± 0.33	1.43	0.28 ± 0.36	-0.38 ± 0.31

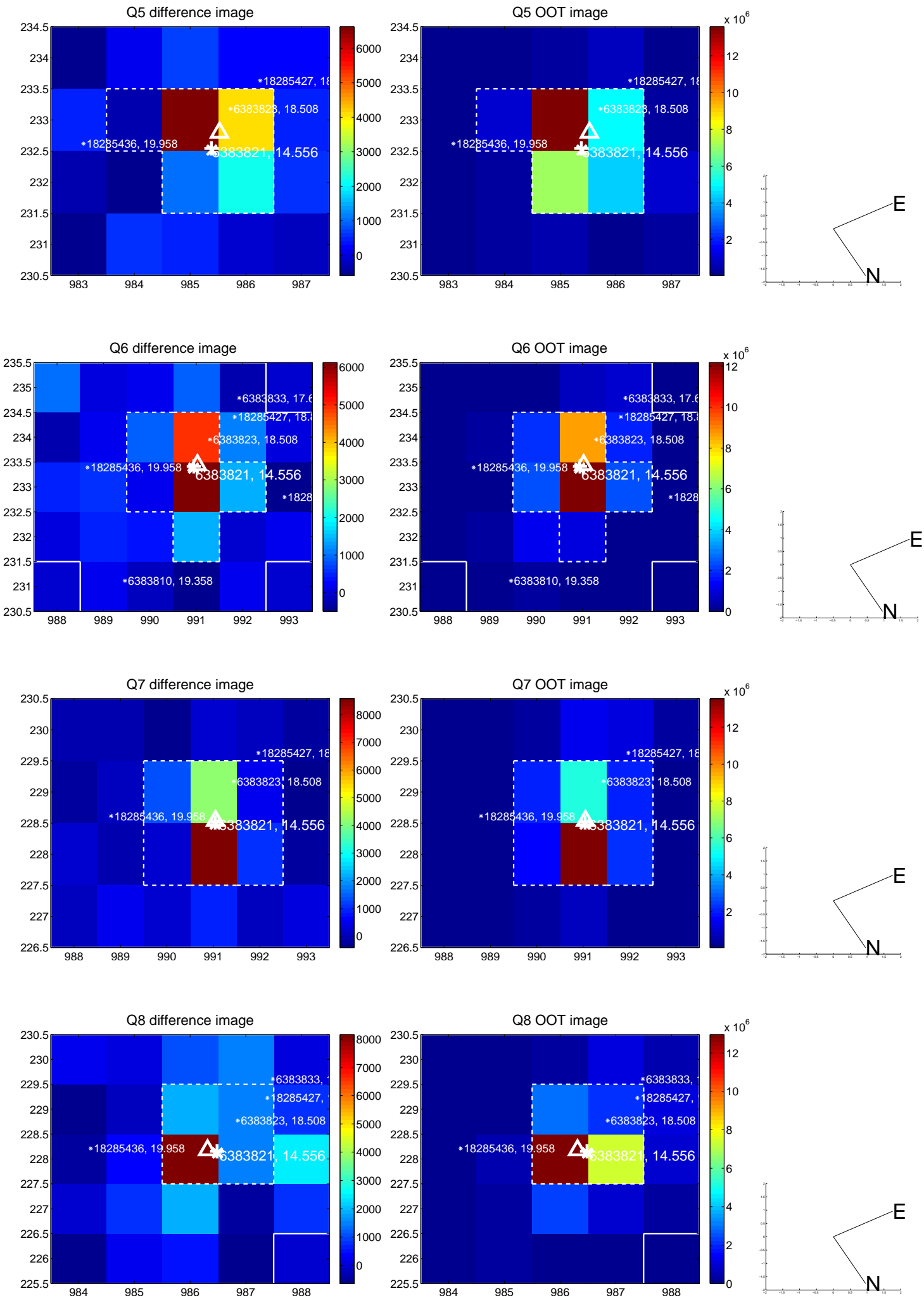


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

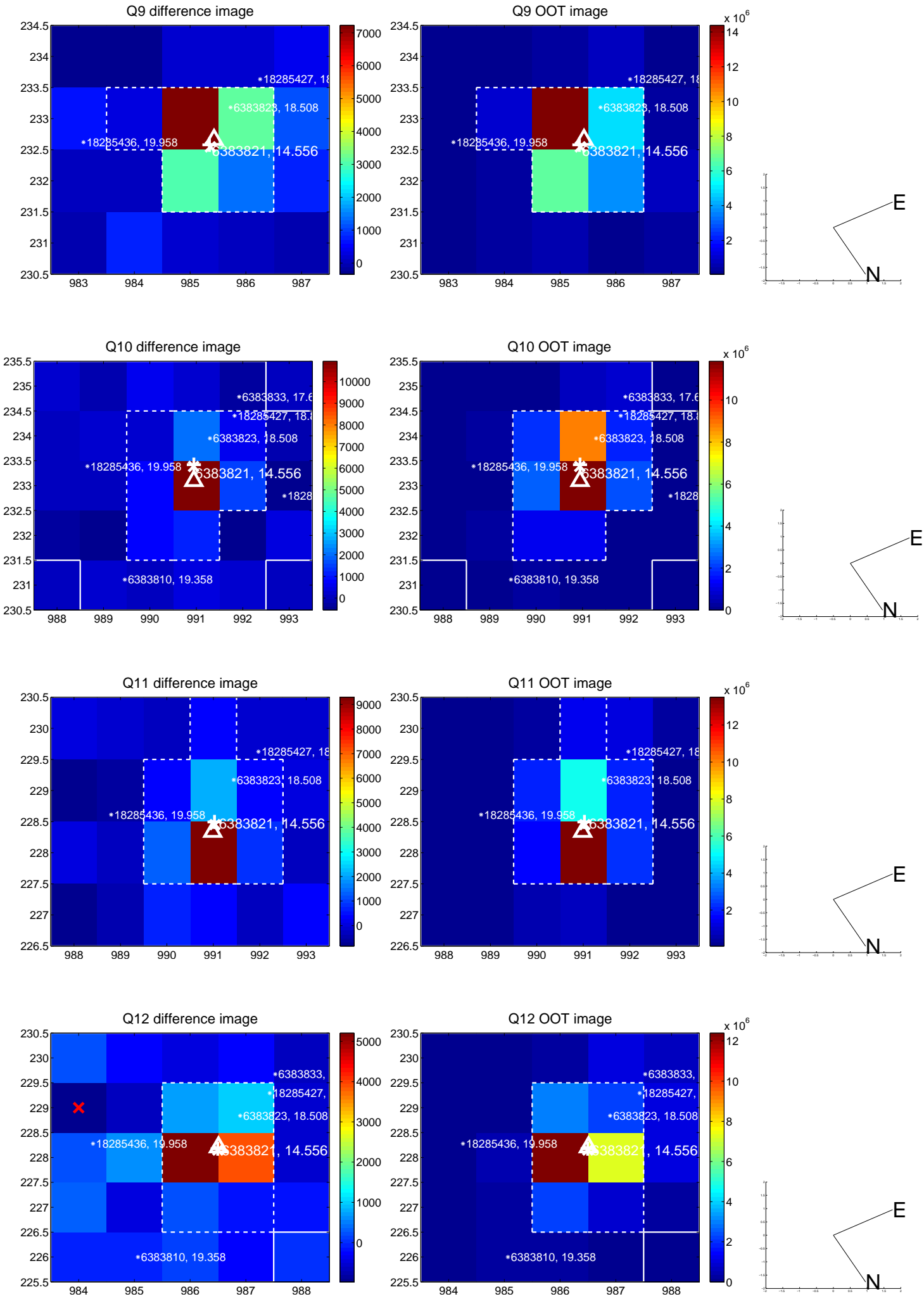
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



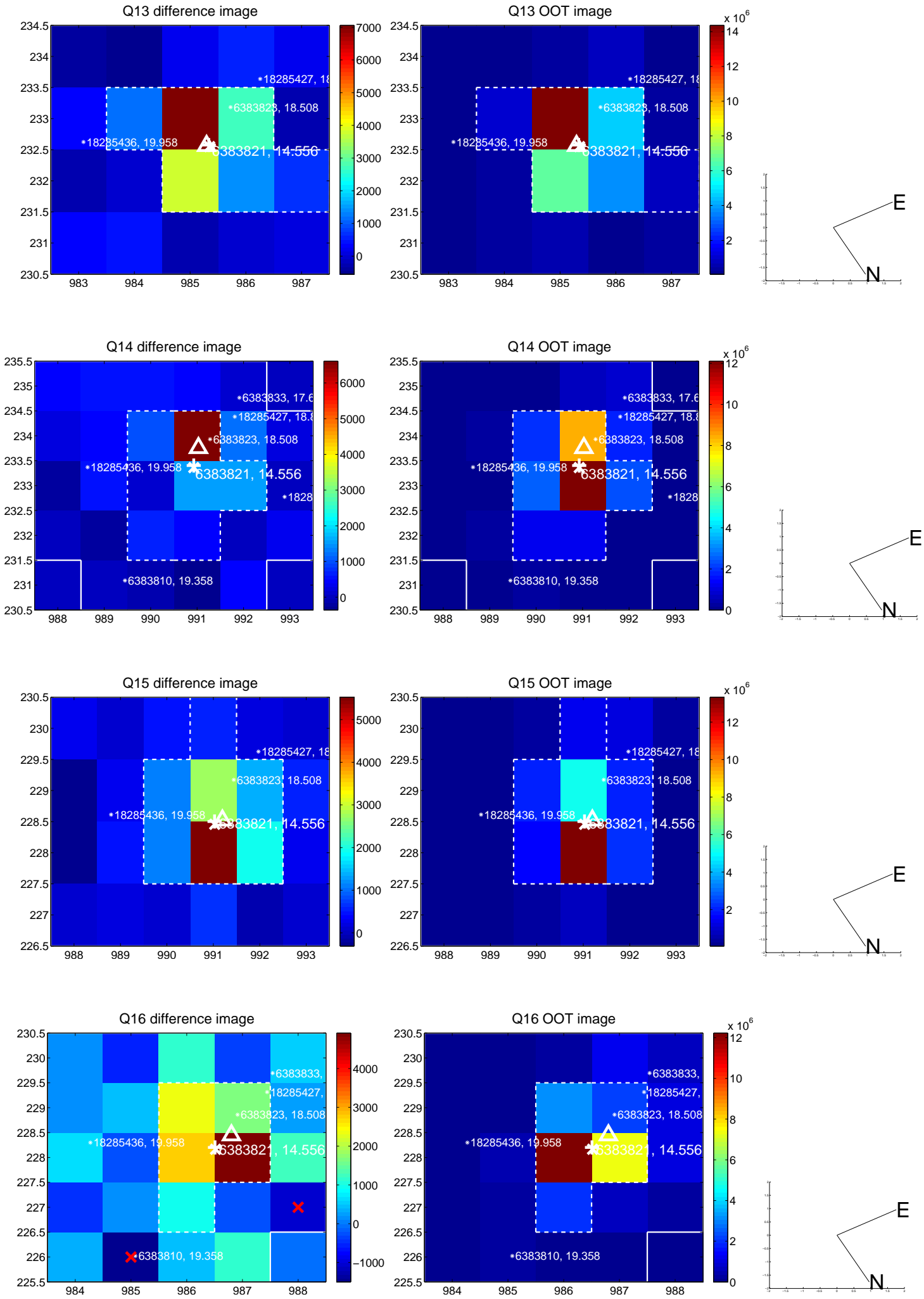
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



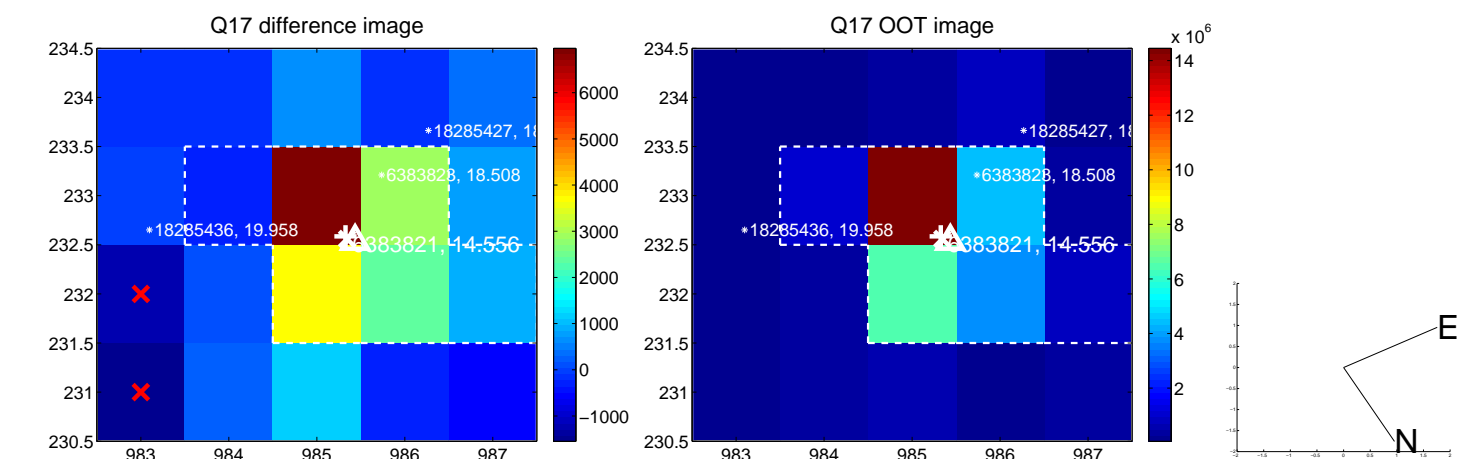
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



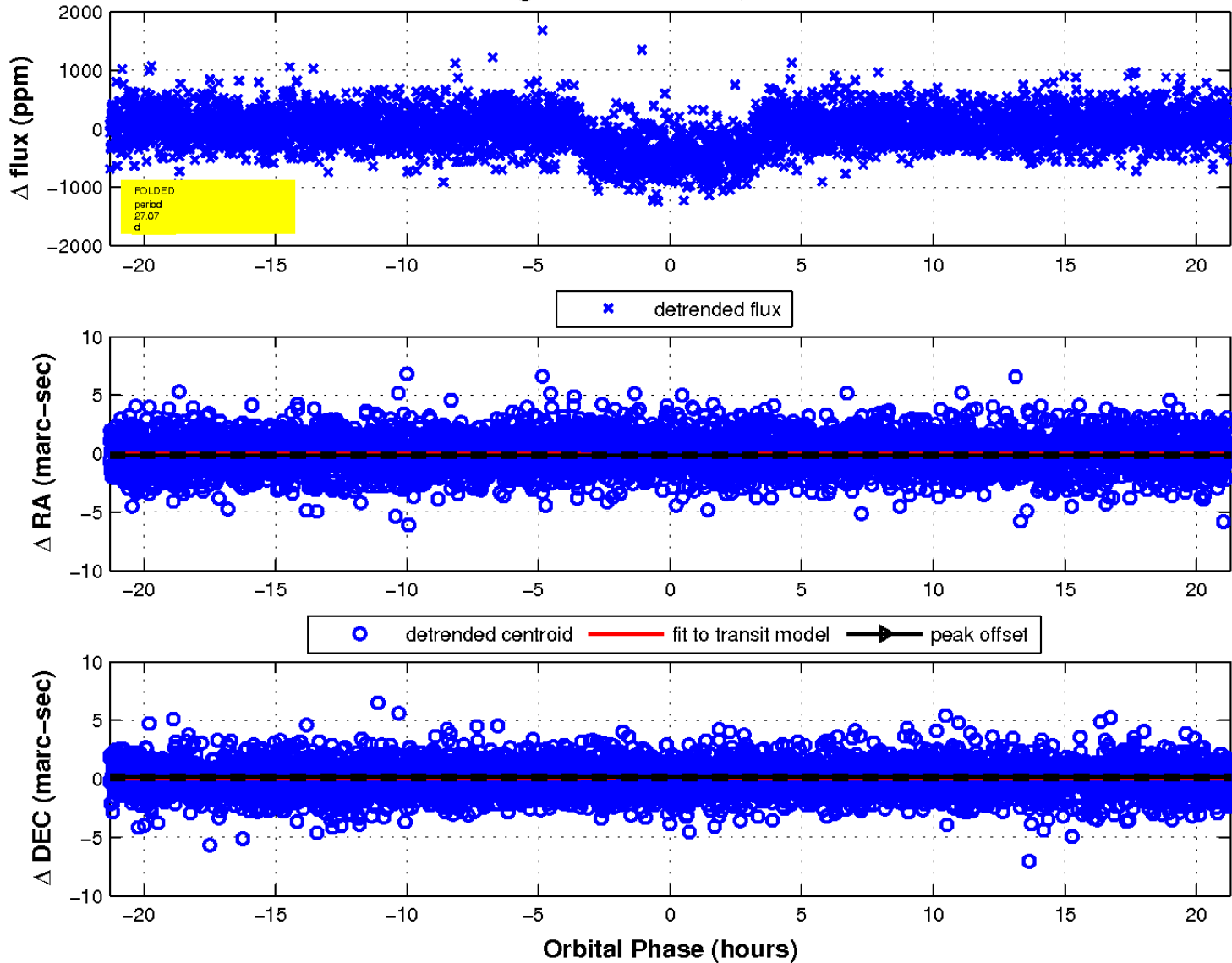
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

