

KIC 008107380

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})
008107380-01	OBS	0162.01	14.006402	142.208930	713.4	4.744	95.7	96.1	1.12	5788	3.21	100.25

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008107380-01	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.

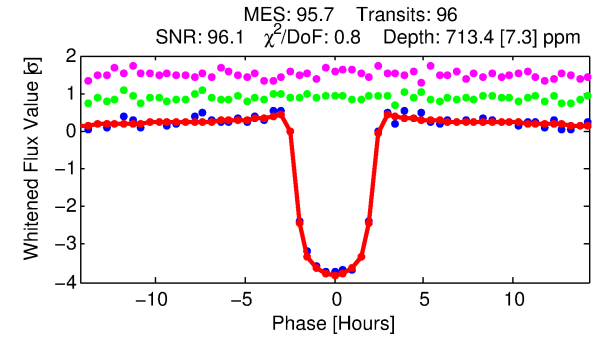
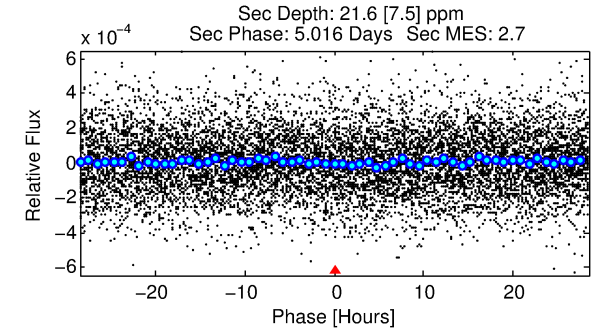
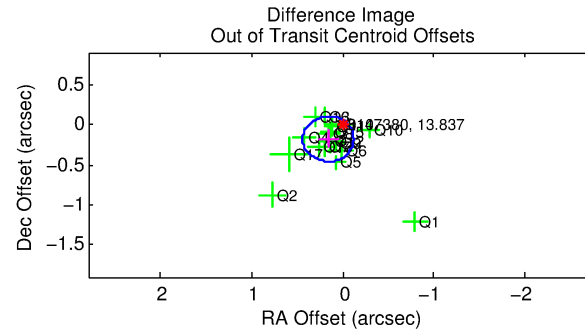
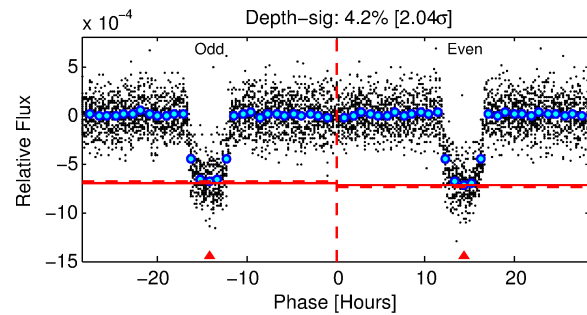
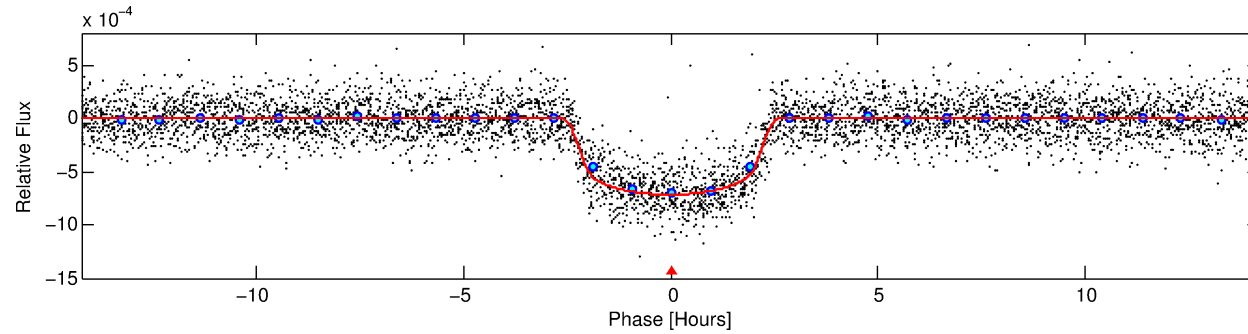
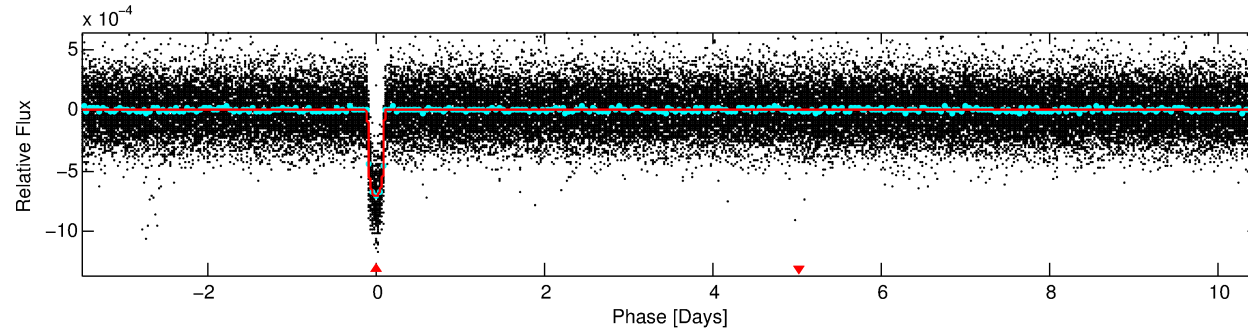
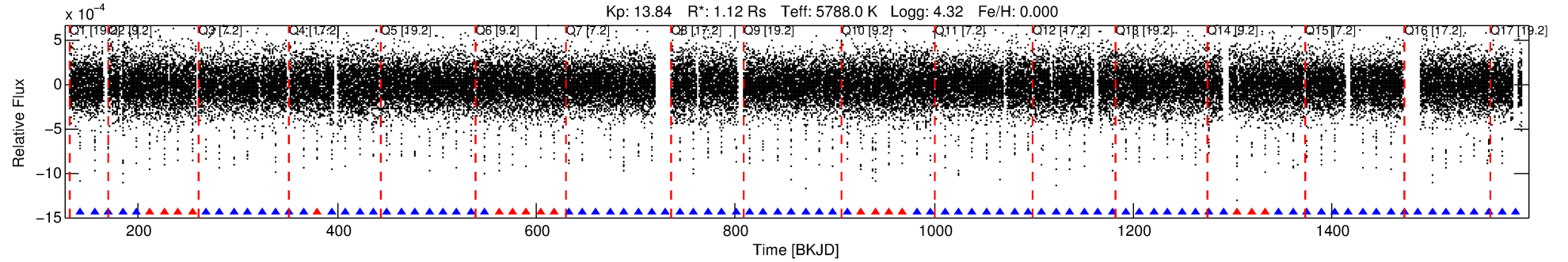
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008107380-01

No Significant Match Found

DV One-Page Summary

KIC: 8107380 Candidate: 1 of 1 Period: 14.006 d
KOI: K00162.01 Corr: 0.993



DV Fit Results:

Period = 14.00640 [0.00002] d
Epoch = 142.2089 [0.0010] BKJD
Rp/R* = 0.0262 [0.0022]
a/R* = 16.78 [6.19]
b = 0.71 [0.26]
Seff = 100.25 [23.92]
Teff = 807 [48] K
Rp = 3.21 [0.54] Re
a = 0.1126 [0.0158] AU
Ag = 14.56 [6.51] [2.08 σ]
Teffp = 2437 [240] K [6.65 σ]

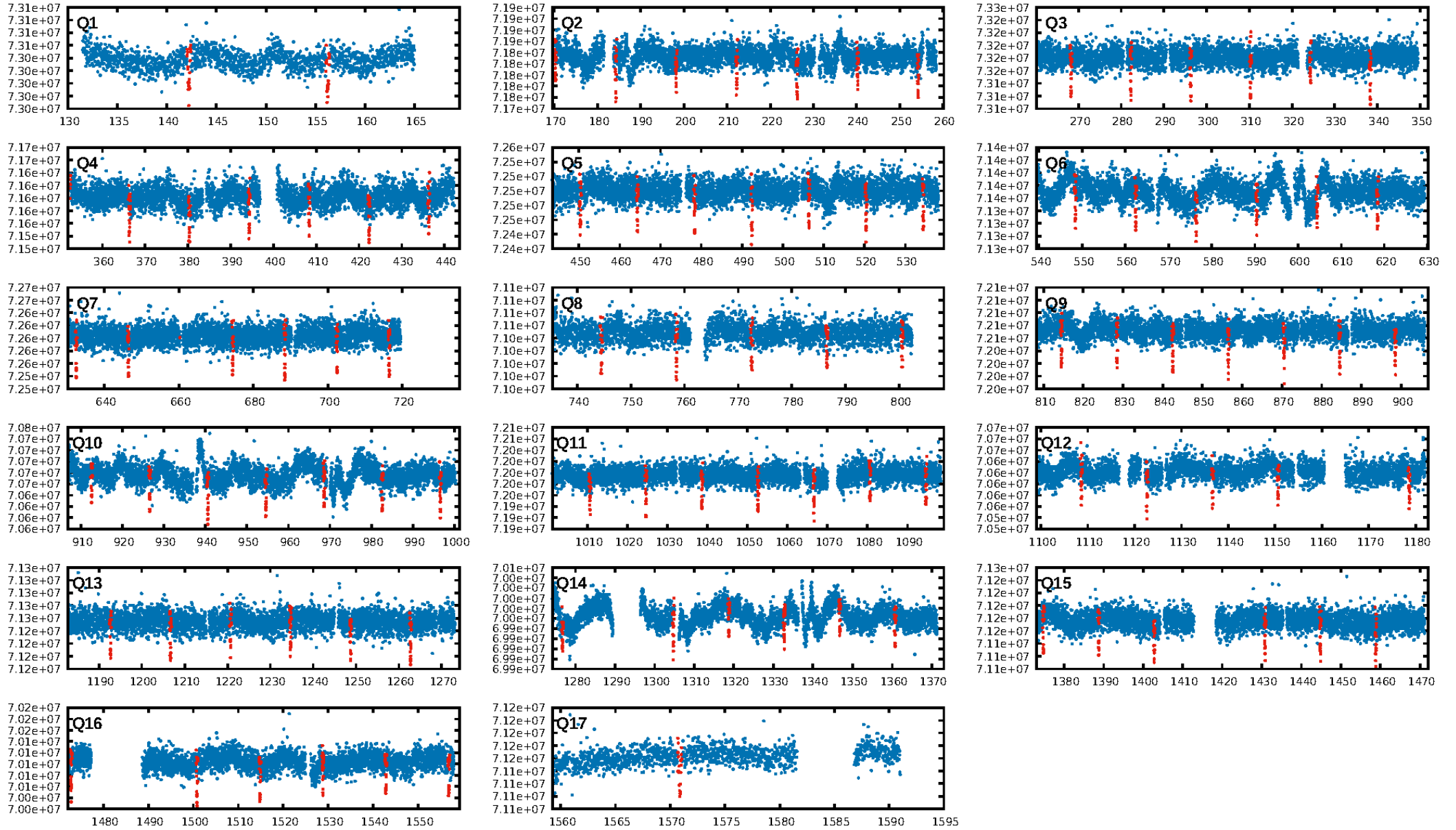
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 97.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.82 [76/93]
GhostDiagnostic-chr: 9.574
Centroid-sig: 3.6%
Centroid-so: 0.201 arcsec [1.37 σ]
OotOffset-rm: 0.239 arcsec [2.55 σ]
KicOffset-rm: 0.179 arcsec [1.86 σ]
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]

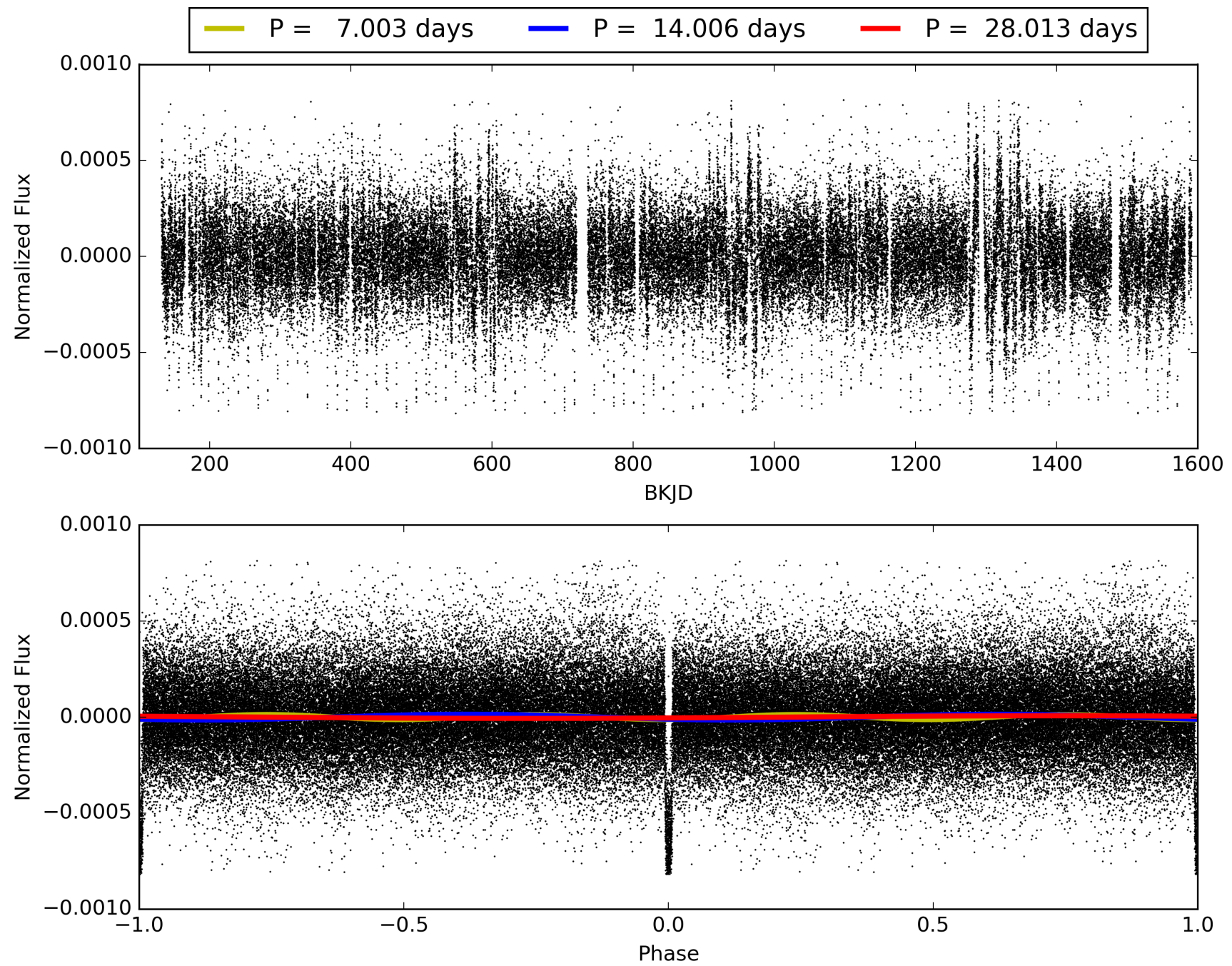
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 02:16:37 Z

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

TCE 008107380-01, PDC Light Curves

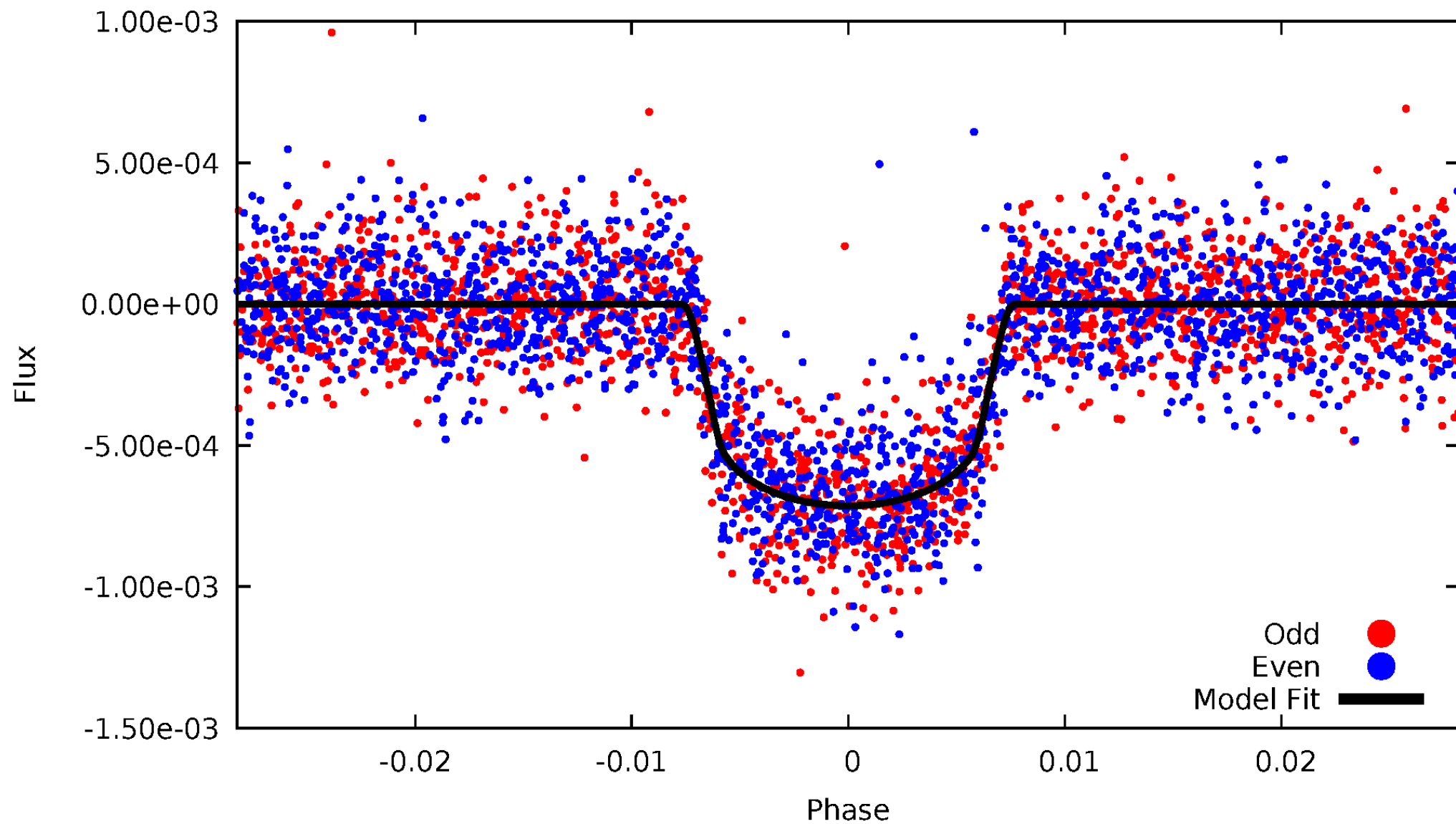


TCE 008107380-01



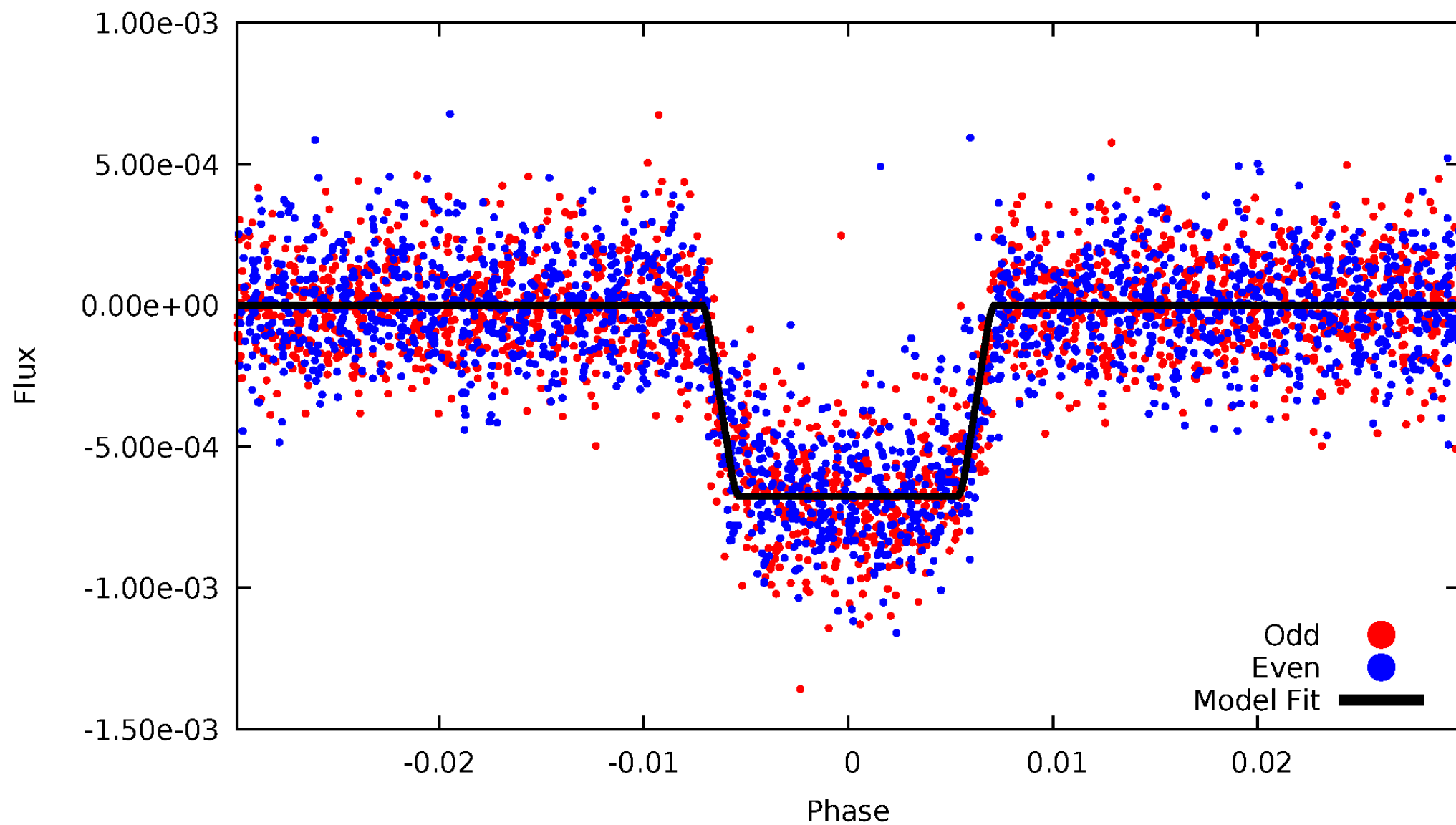
DV Odd/Even

TCE 008107380-01



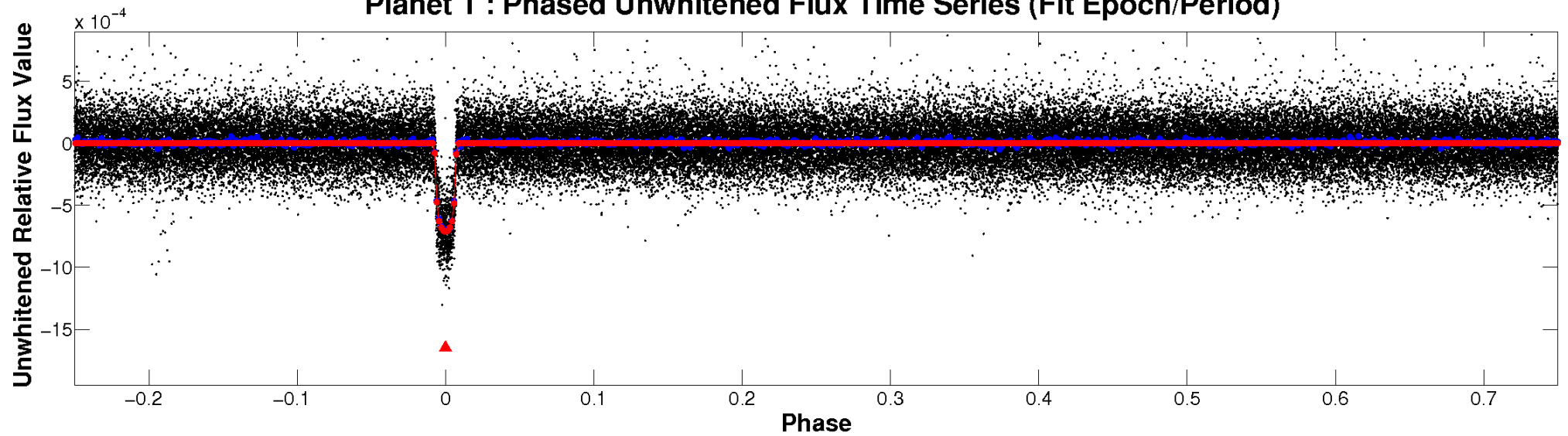
ALT Odd/Even

TCE 008107380-01

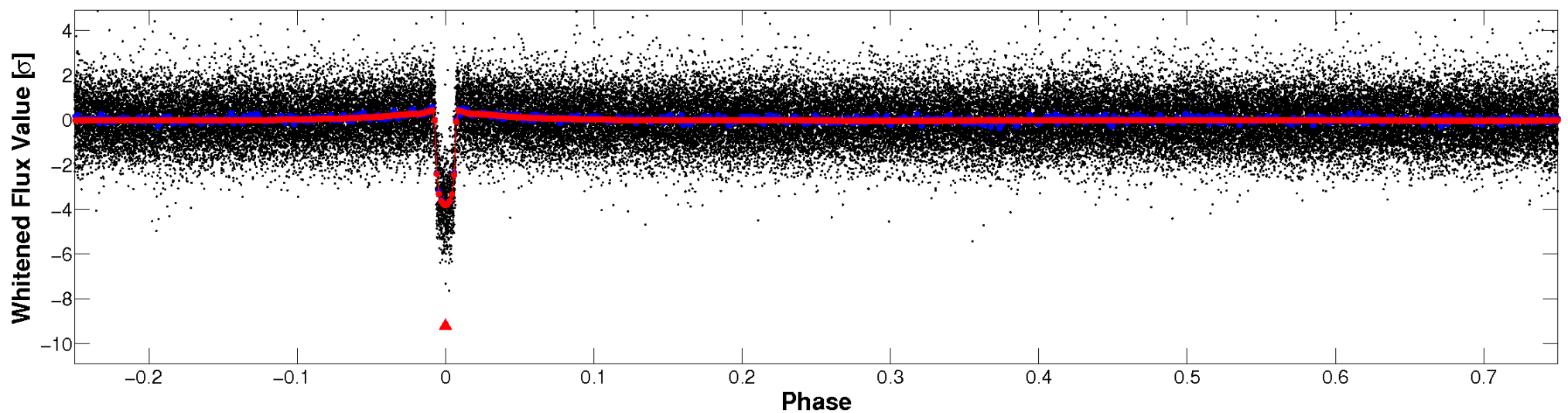


Non-Whitened Vs. Whitened Light Curve

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

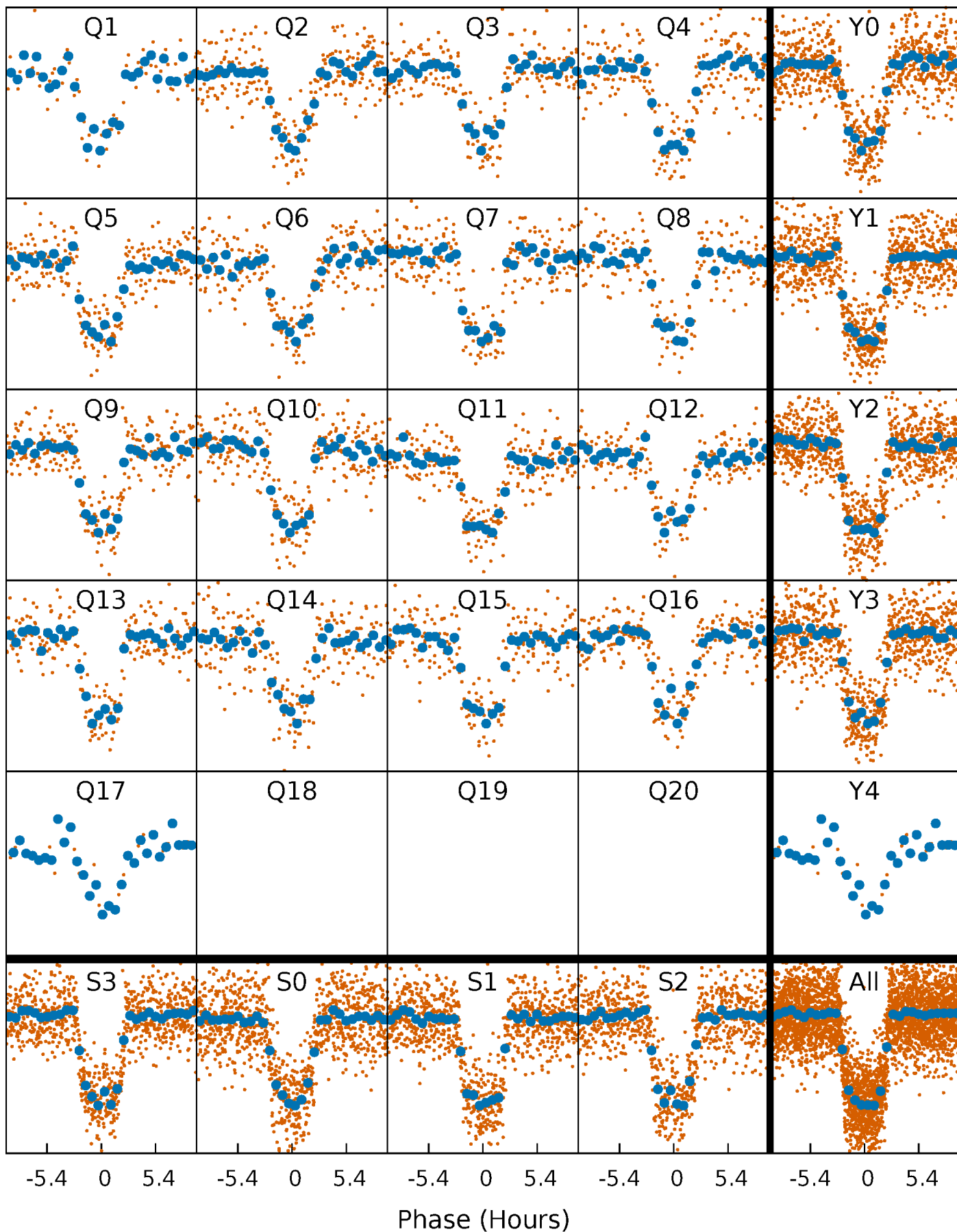


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



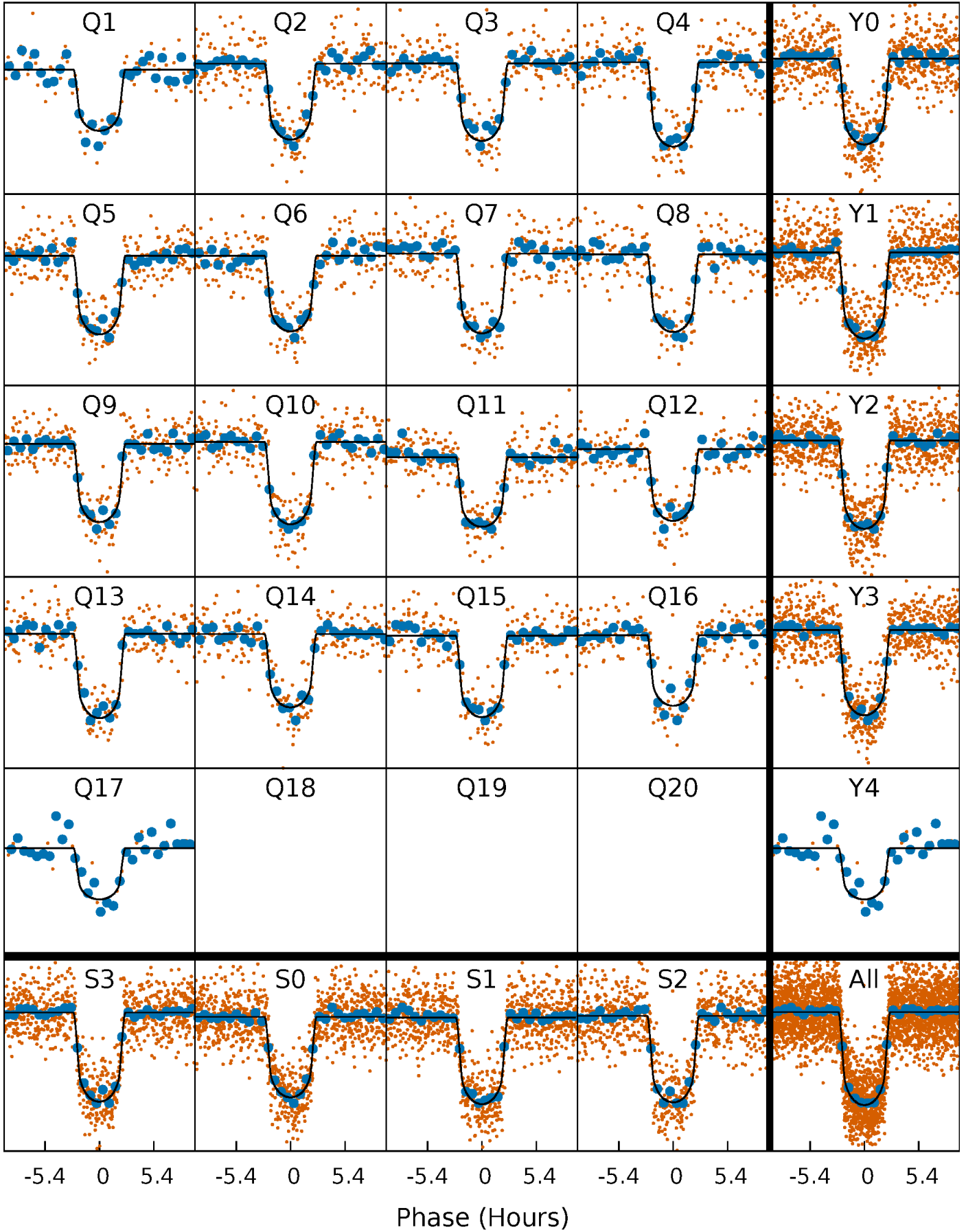
PDC Quarter-Phased Transit Curves

TCE 008107380-01 P= 14.006402 Days $T_0=142.208930$ (BKJD)



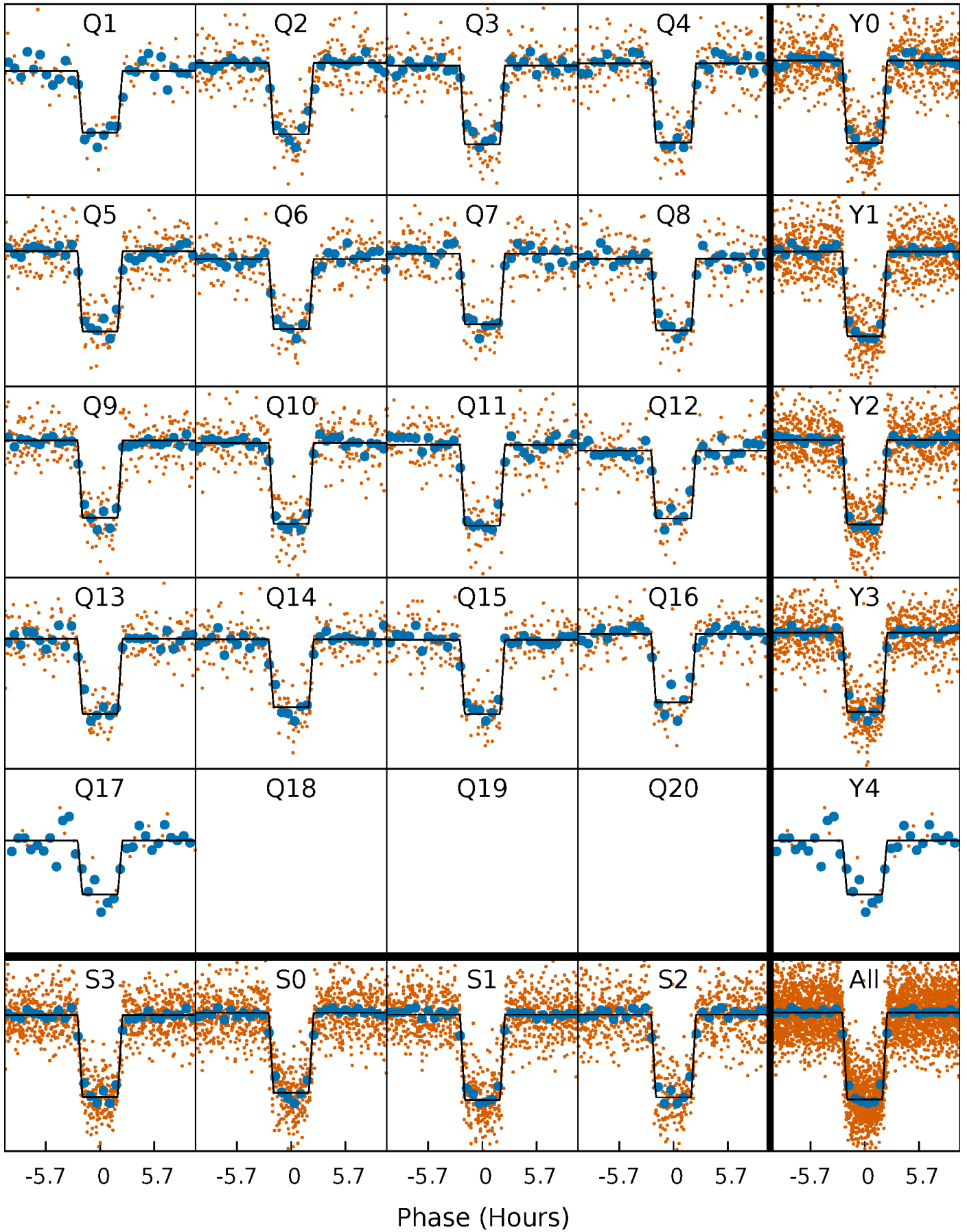
DV Quarter-Phased Transit Curves

TCE 008107380-01 P= 14.006402 Days $T_0=142.208930$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

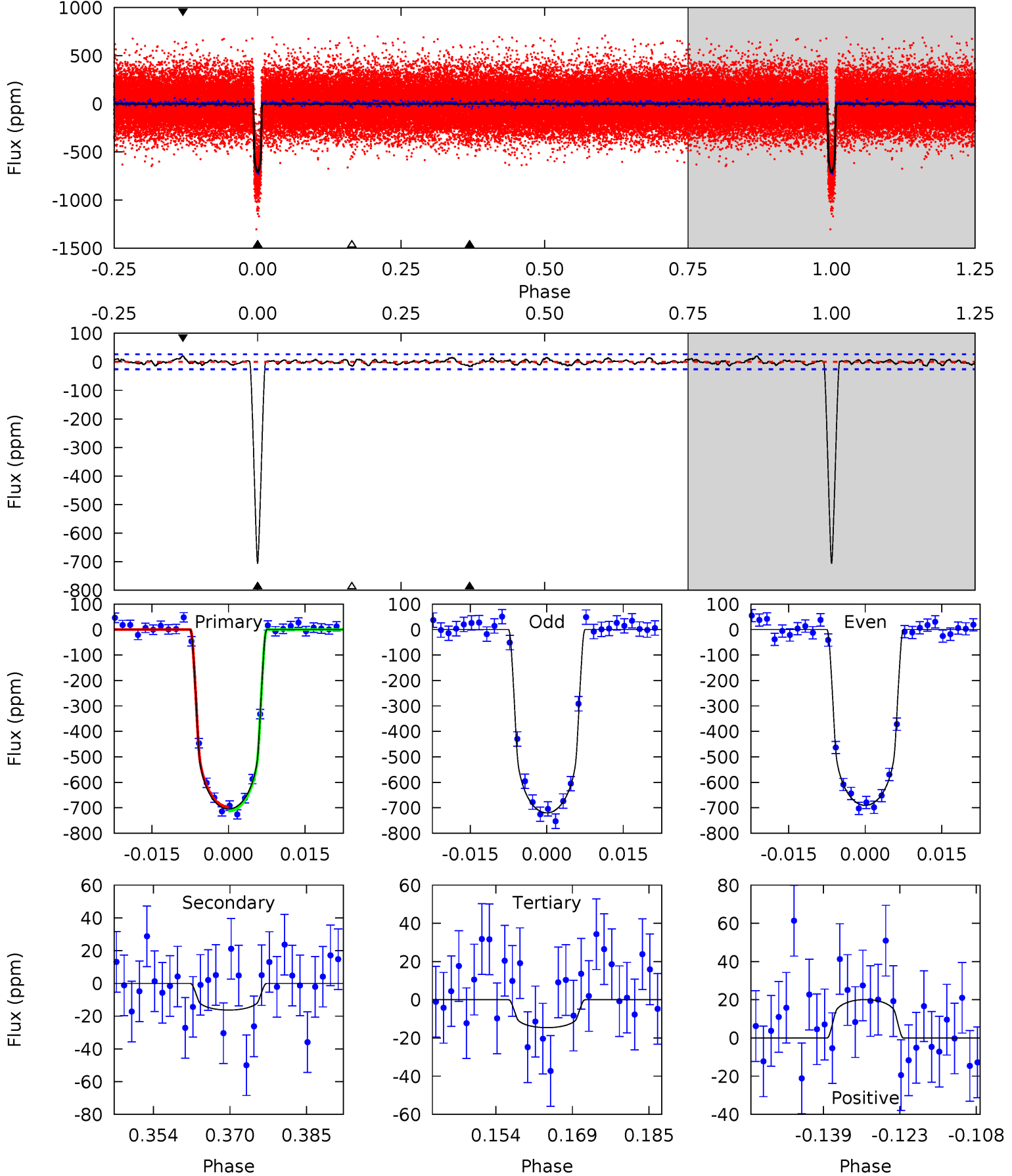
TCE 008107380-01 P= 14.006456 Days $T_0=142.206176$ (BKJD)



DV Model-Shift Uniqueness Test

008107380-01, $P = 14.006402$ Days, $E = 128.202528$ Days

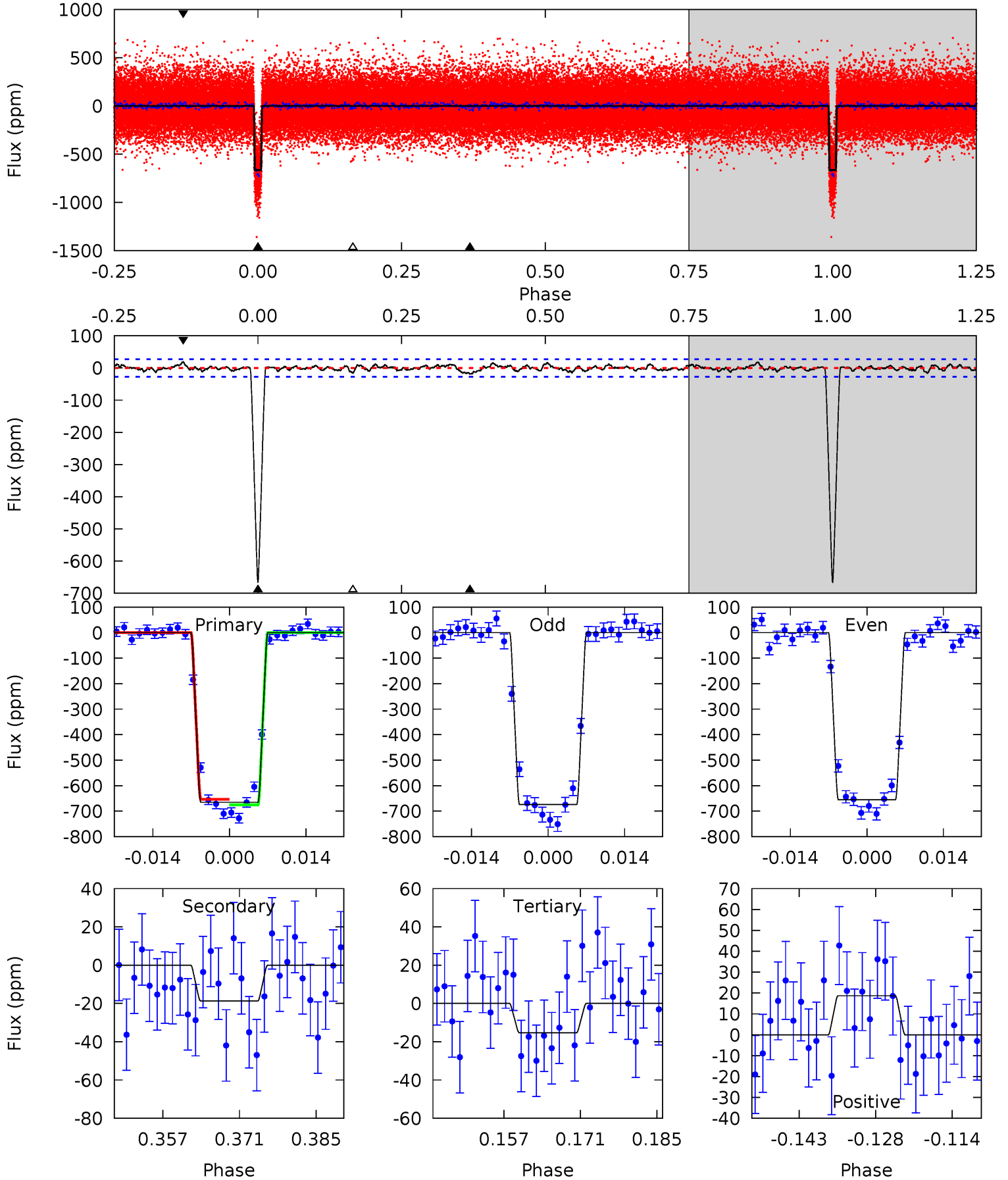
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
132.7	3.07	2.75	3.78	4.94	2.42	1.12	129.9	128.9	0.32	-0.72	2.78	1.01	0.03	1.49



Alt Model-Shift Uniqueness Test

008107380-01, $P = 14.006456$ Days, $E = 128.199720$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
120.9	3.39	2.78	3.40	4.96	2.45	1.06	118.1	117.5	0.62	-0.00	1.75	1.00	0.03	1.94



Stellar Parameters For KIC 008107380

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5788^{+116}_{-116}	$4.323^{+0.132}_{-0.108}$	$0.000^{+0.150}_{-0.150}$	$1.124^{+0.164}_{-0.148}$	$0.969^{+0.080}_{-0.058}$	$0.961^{+0.552}_{-0.298}$
	+2%/-2%	+3%/-2%	+inf%/-inf%	+15%/-13%	+8%/-6%	+57%/-31%
Source	SPE57	SPE57	SPE57	DSEP		

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

Secondary Eclipse Parameters for KIC 008107380-01 / KOI 0162.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-16 ± 5	$3.21^{+0.37}_{-0.38}$	1125^{+49}_{-52}	2940^{+158}_{-157}	11^{+5}_{-4}
Alt.	-19 ± 6	$3.18^{+0.41}_{-0.33}$	1125^{+52}_{-49}	3008^{+140}_{-161}	13^{+5}_{-4}

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 $A_{obs} \gg 1.0$

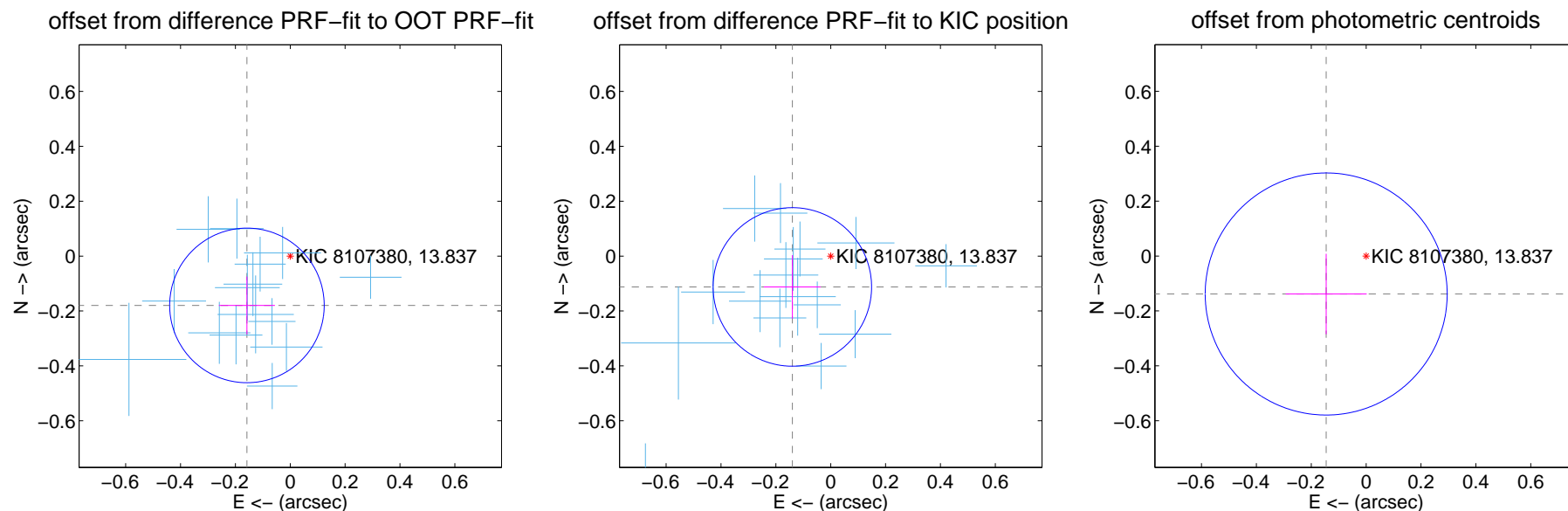
DV Centroid Data

Supplemental centroid analysis for 008107380-01. Kepler magnitude: 13.84. Transit SNR 96.12

There are 17 quarters with good PRF difference image offsets

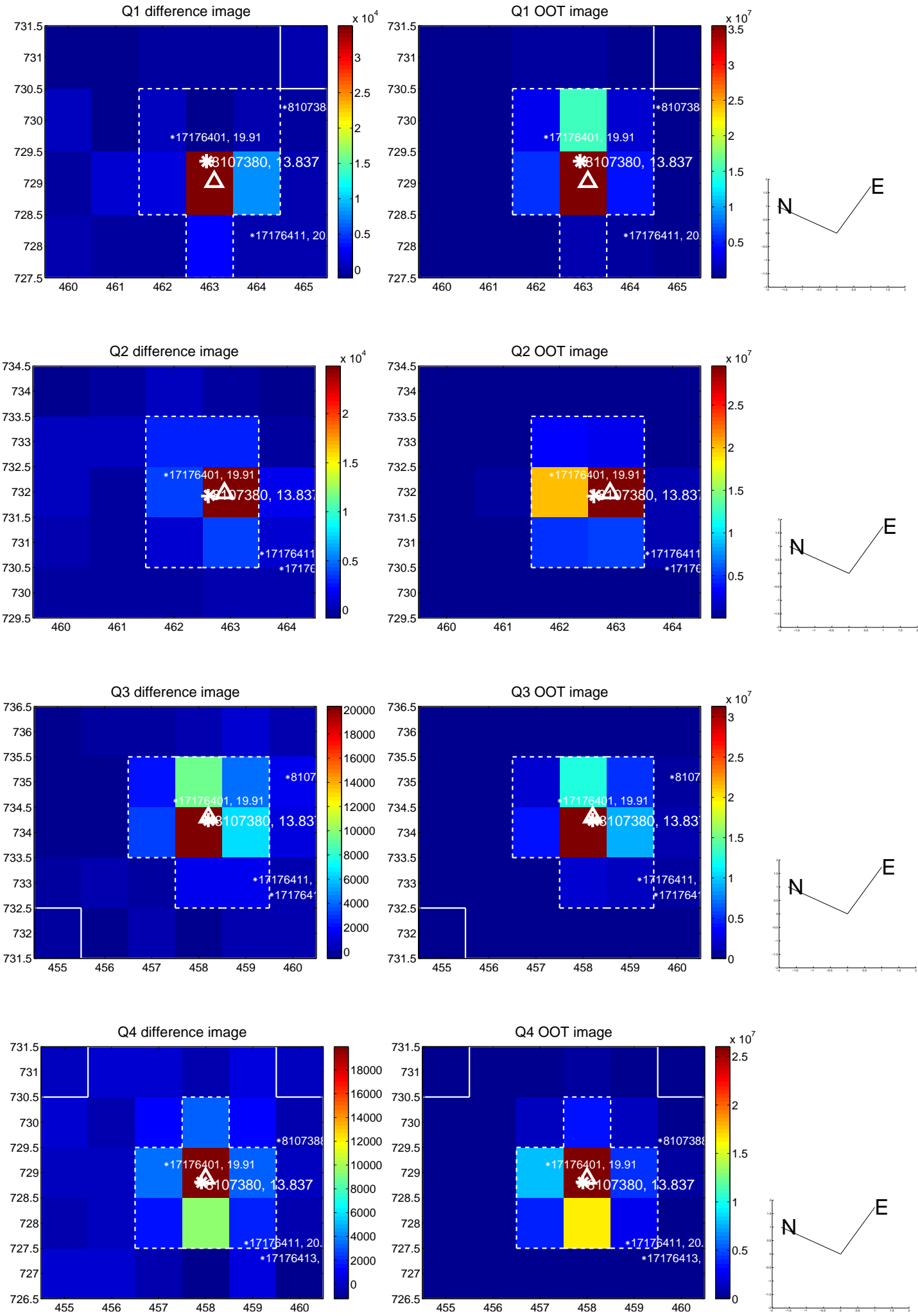
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.239 ± 0.094	2.55	0.158 ± 0.102	-0.180 ± 0.105
PRF-fit source offset from KIC position	0.179 ± 0.096	1.86	0.140 ± 0.104	-0.112 ± 0.116
photometric centroid source offset	0.20 ± 0.15	1.37	0.15 ± 0.15	-0.14 ± 0.15

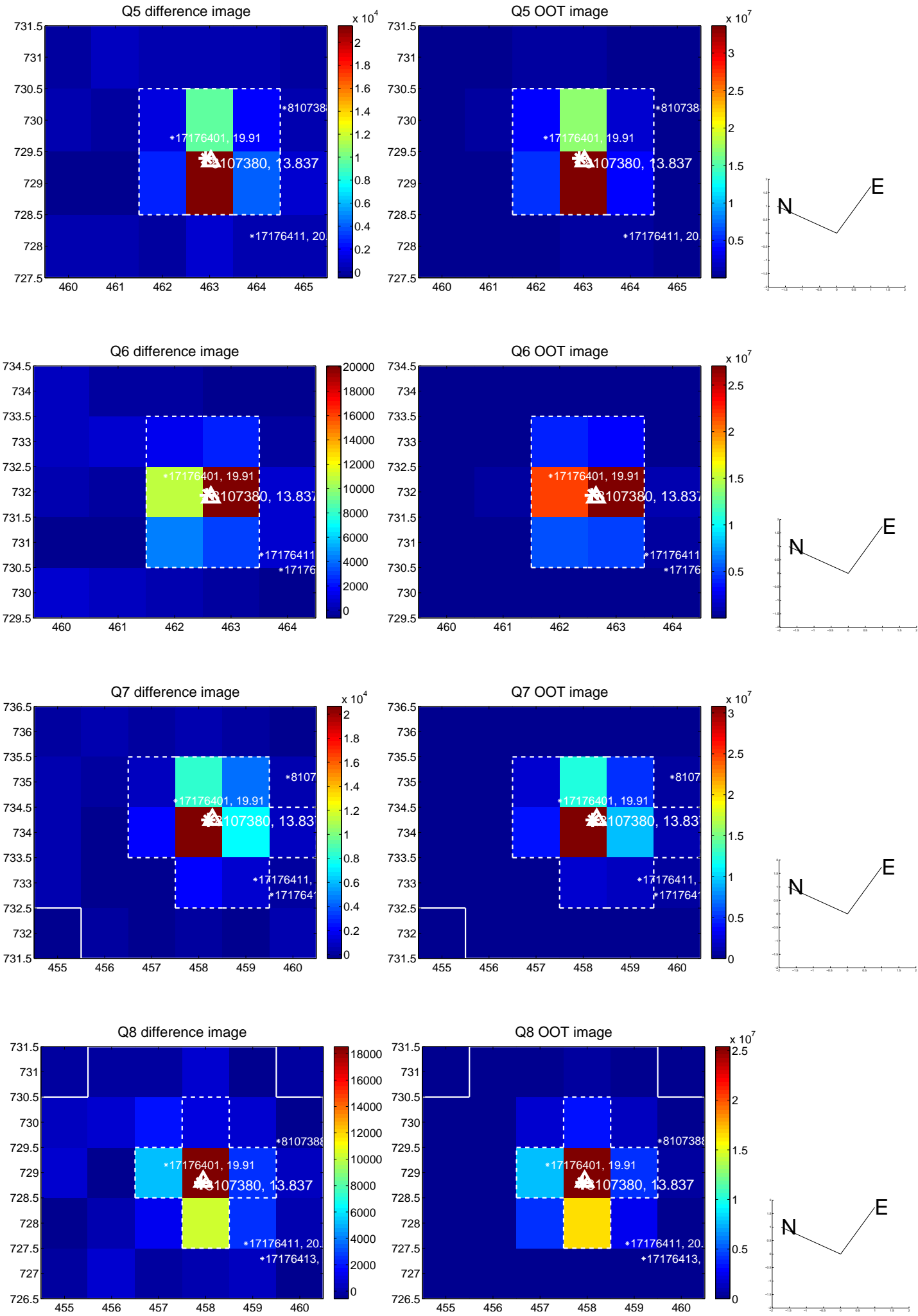


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

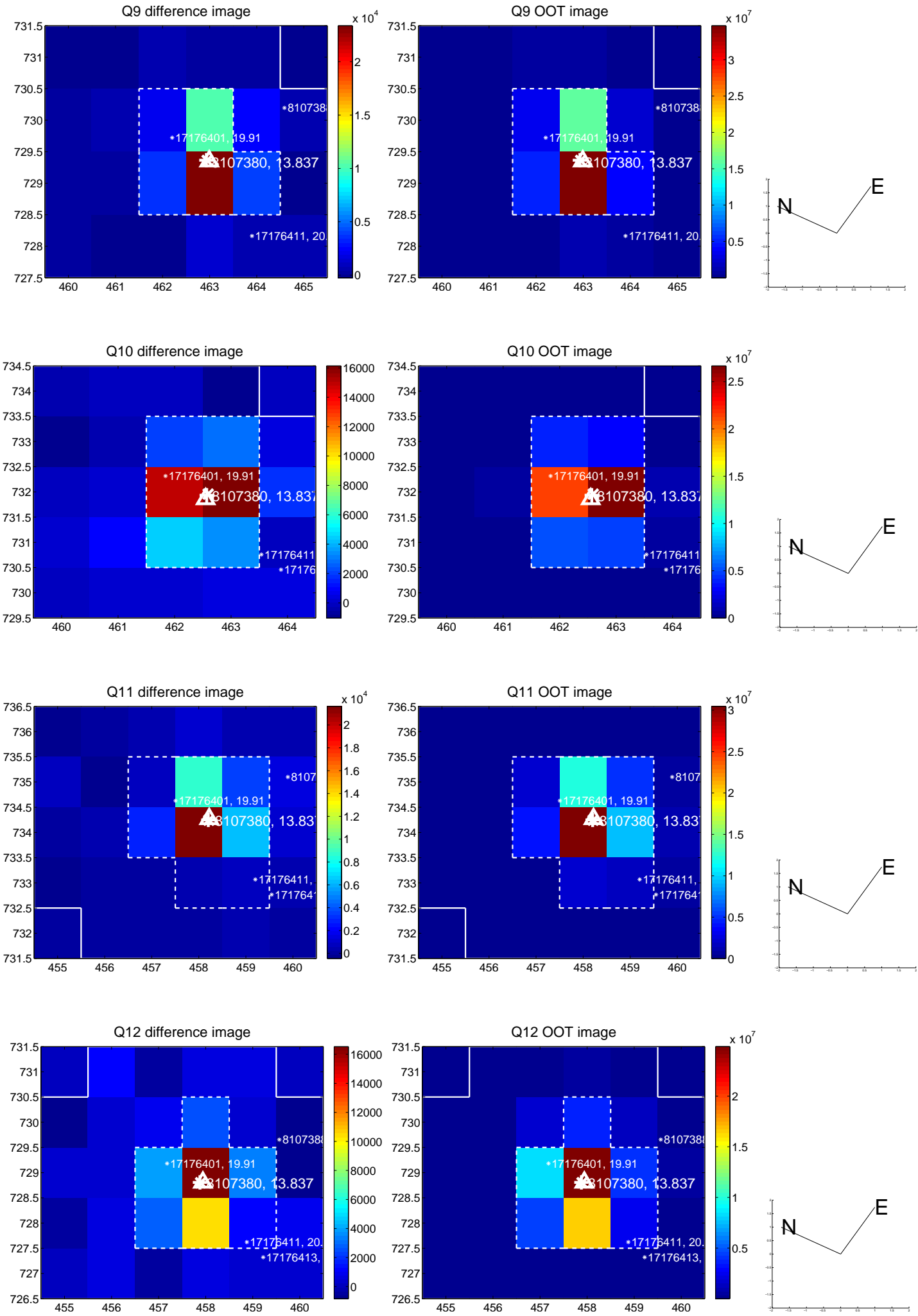
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



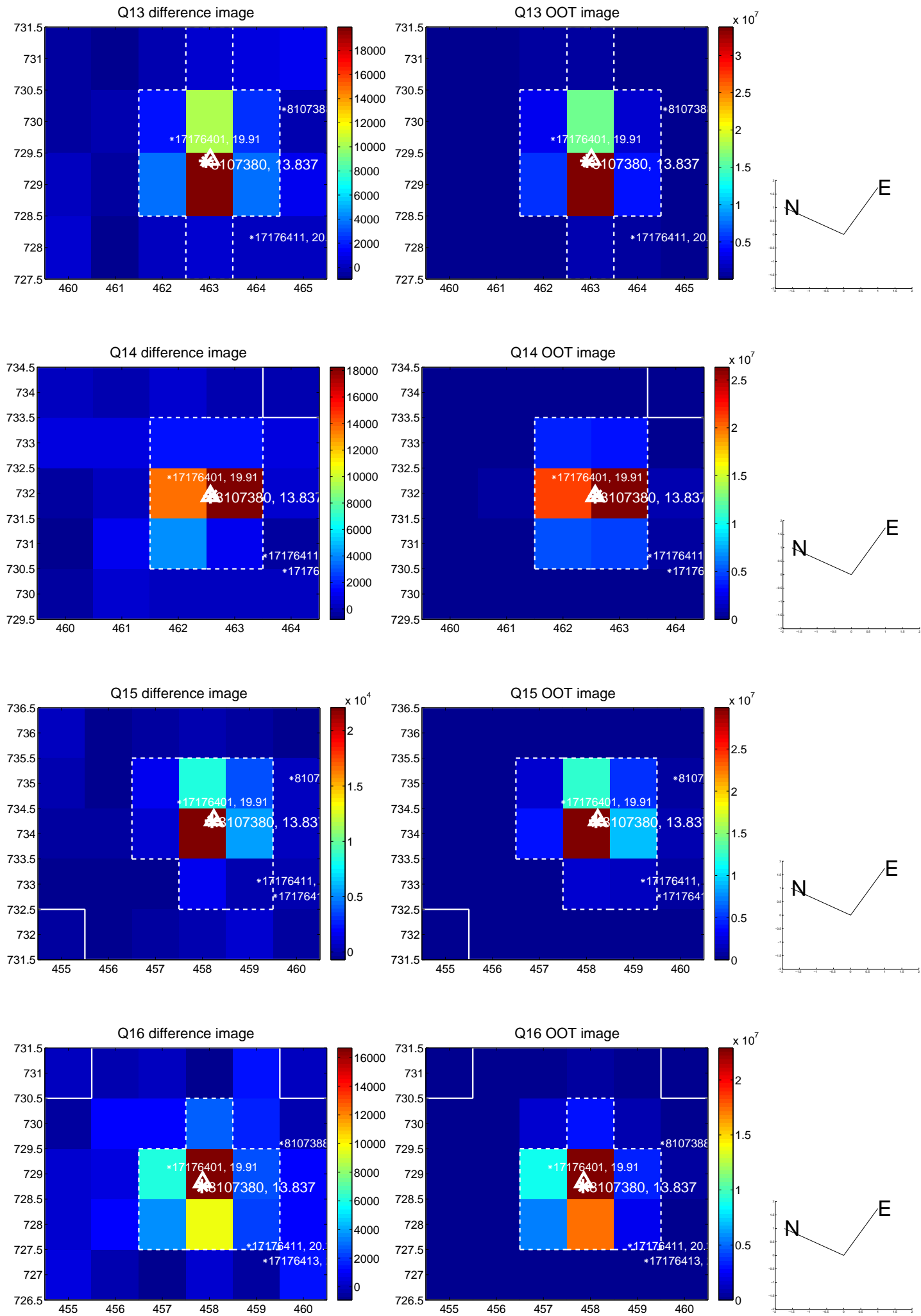
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



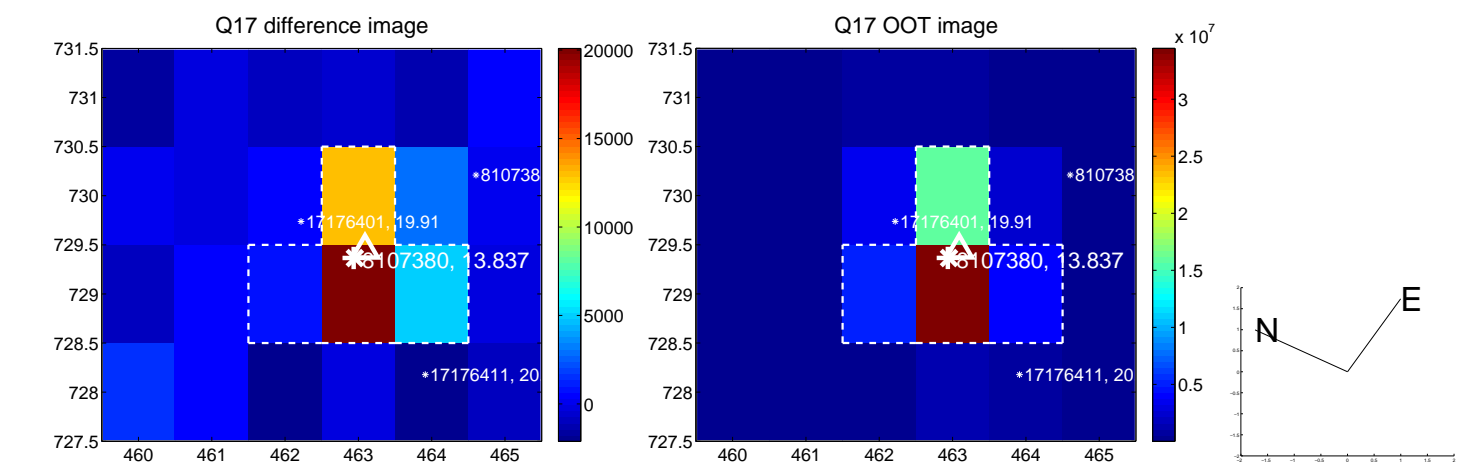
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



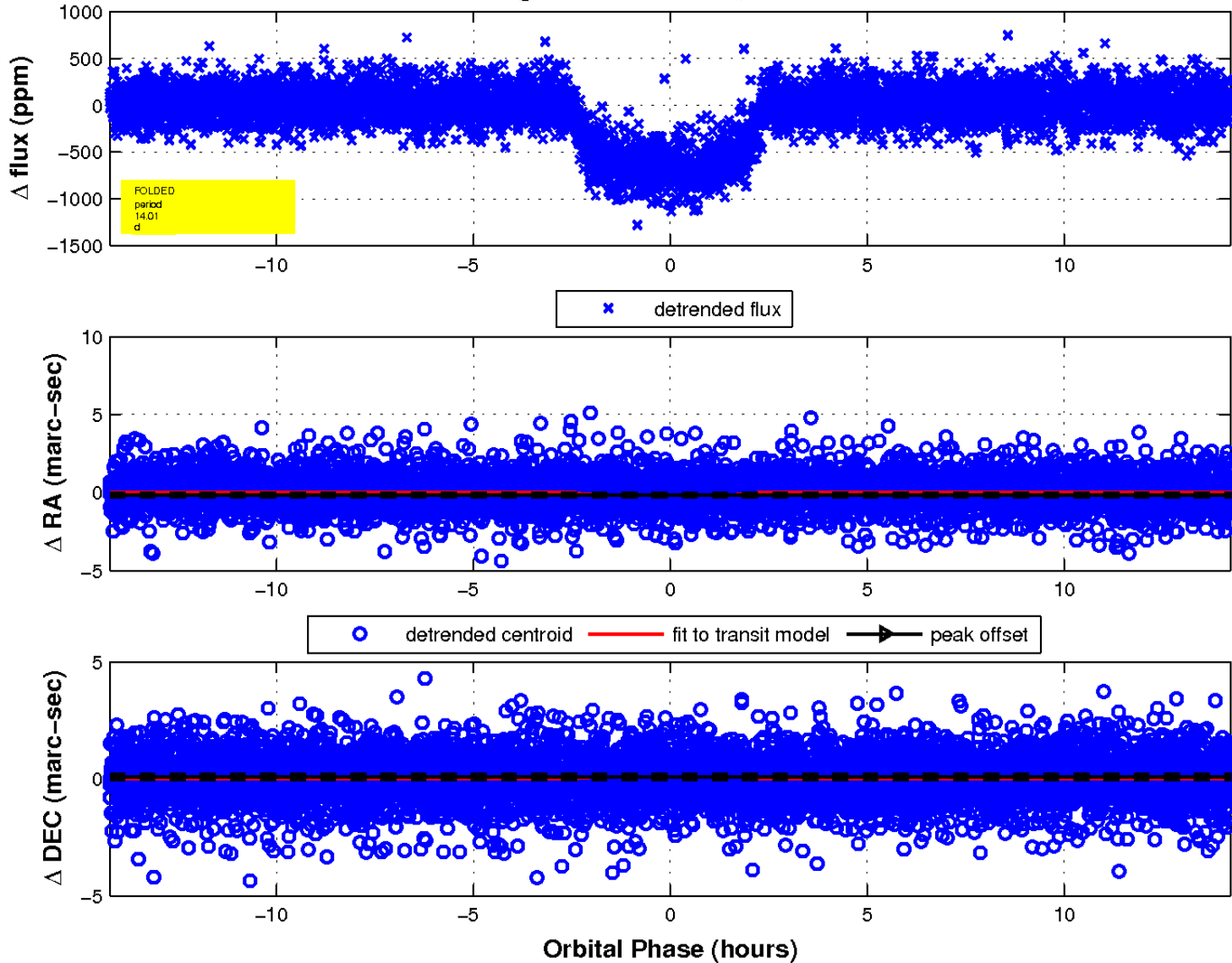
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

