

KIC 007020707

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})
007020707-01	OBS	No	0.864046	131.890855	41.3	4.834	13.4	13.7	2.32	7689	1.75	36938.90

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007020707-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

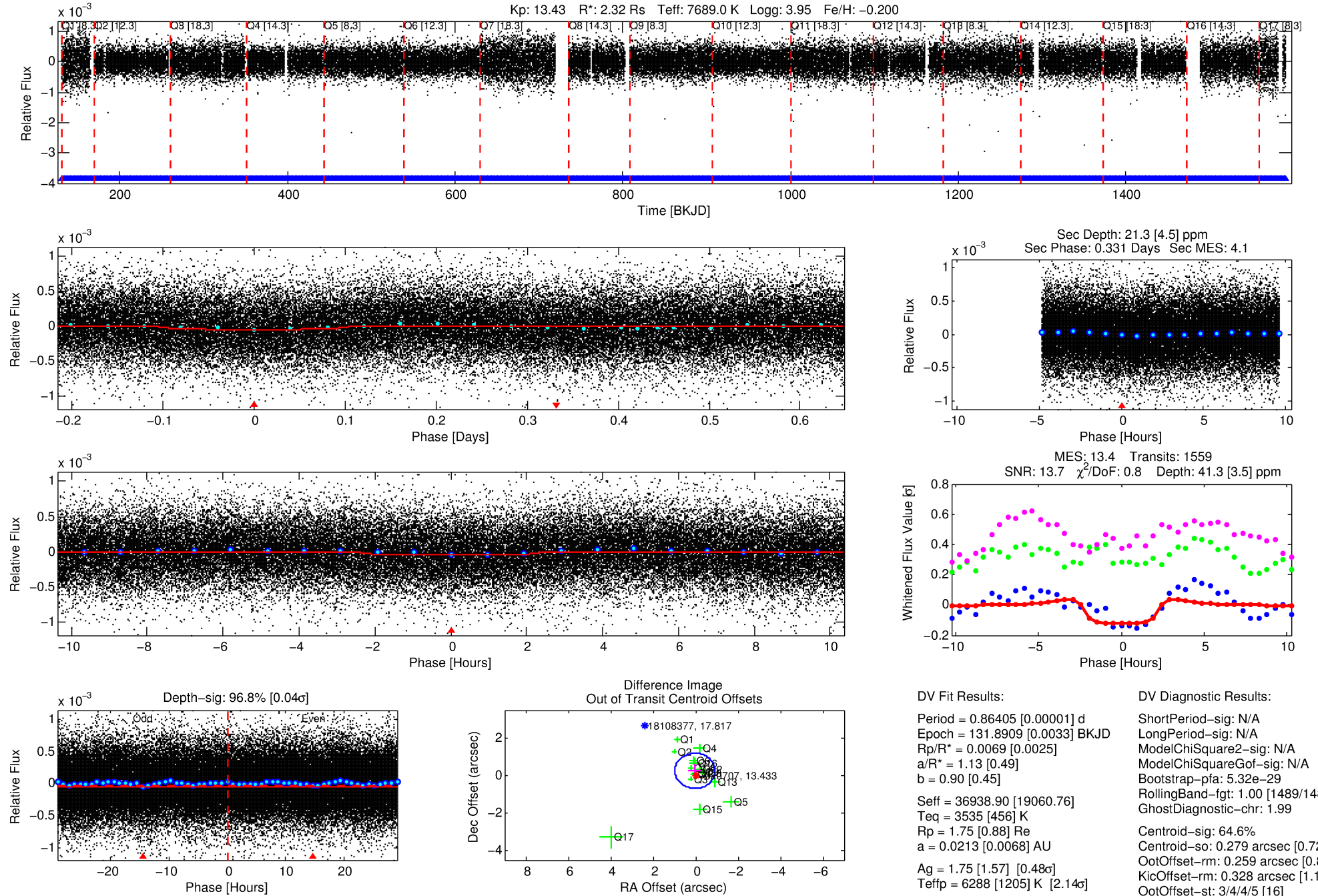
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007020707-01

No Significant Match Found

DV One-Page Summary

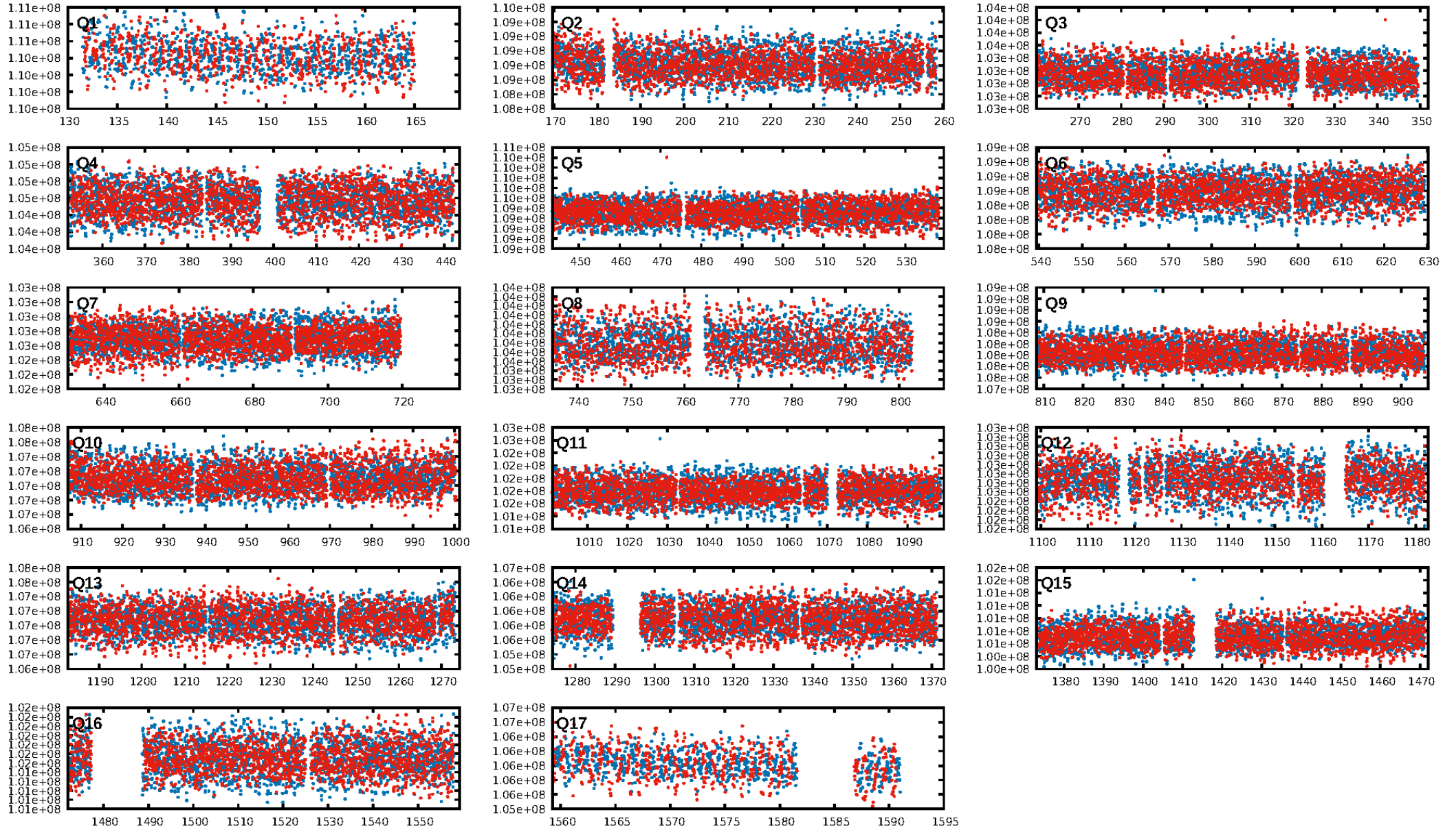
KIC: 7020707 Candidate: 1 of 1 Period: 0.864 d



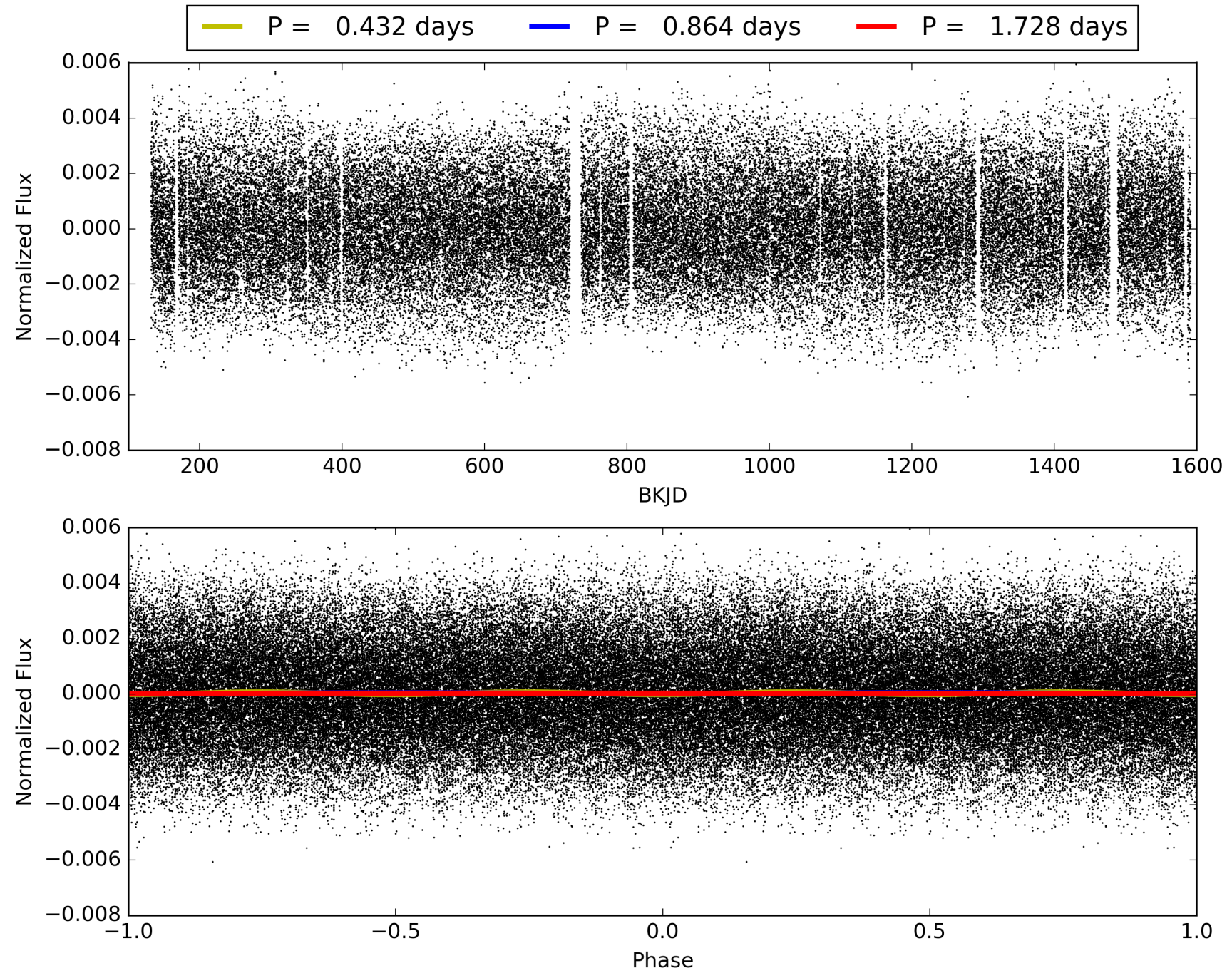
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 20:18:54 Z

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

TCE 007020707-01, PDC Light Curves

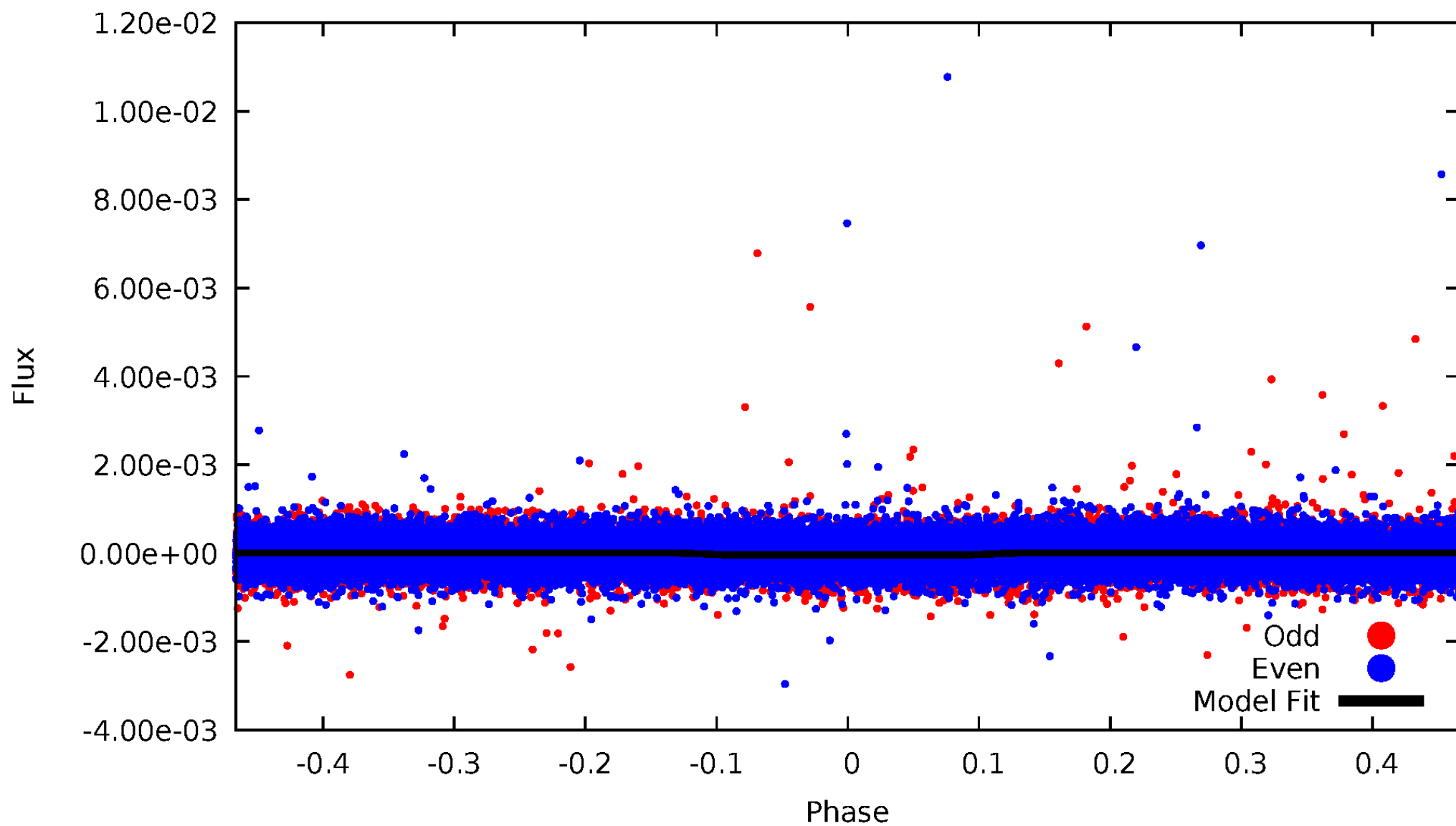


TCE 007020707-01



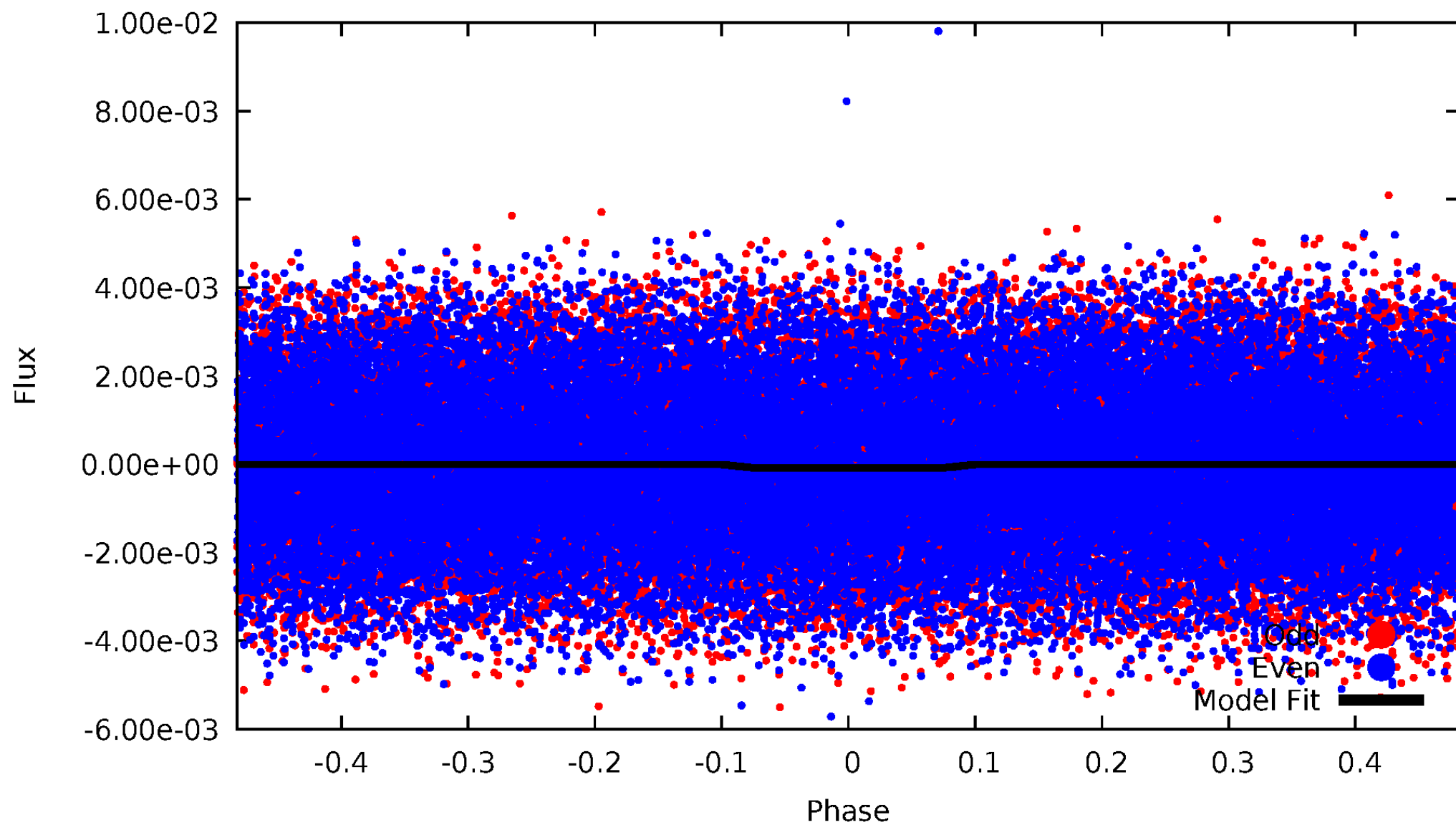
DV Odd/Even

TCE 007020707-01

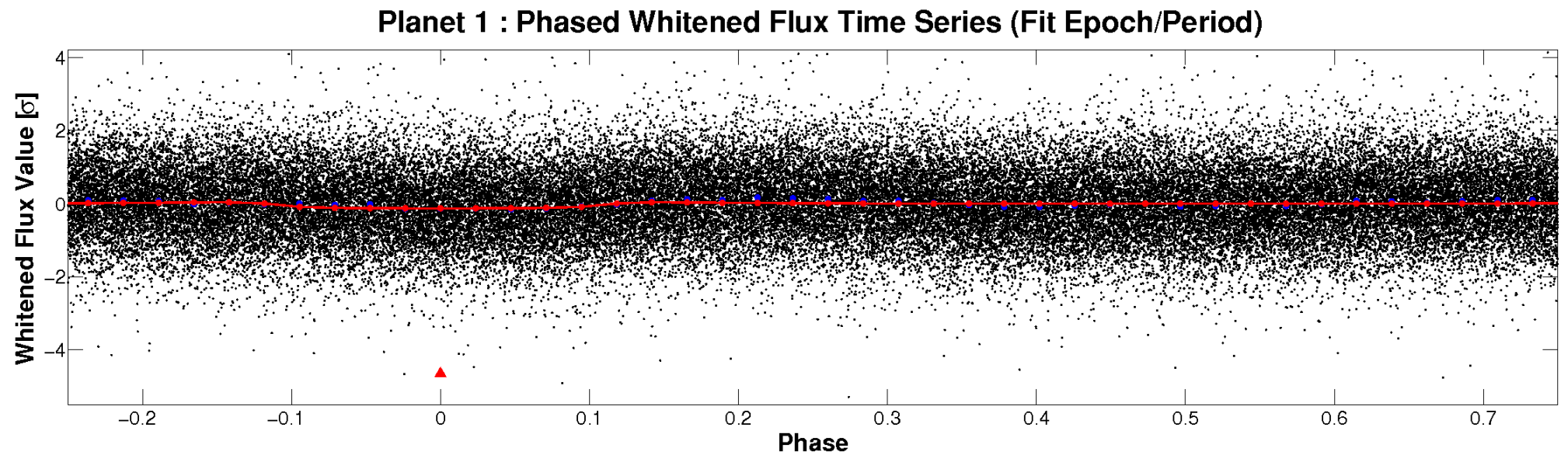
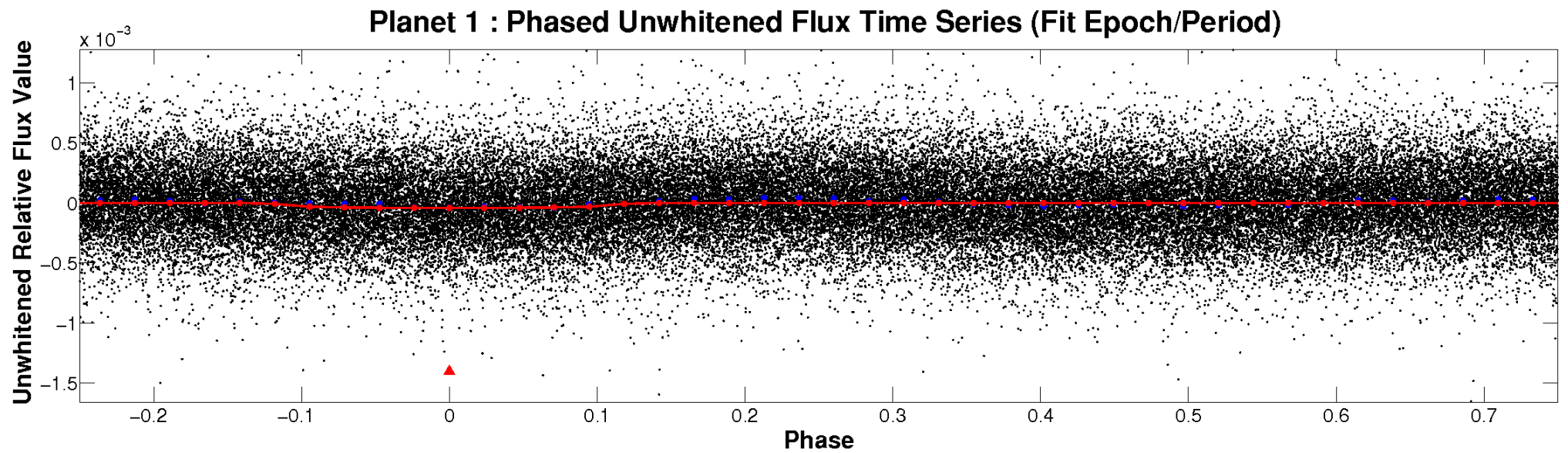


ALT Odd/Even

TCE 007020707-01

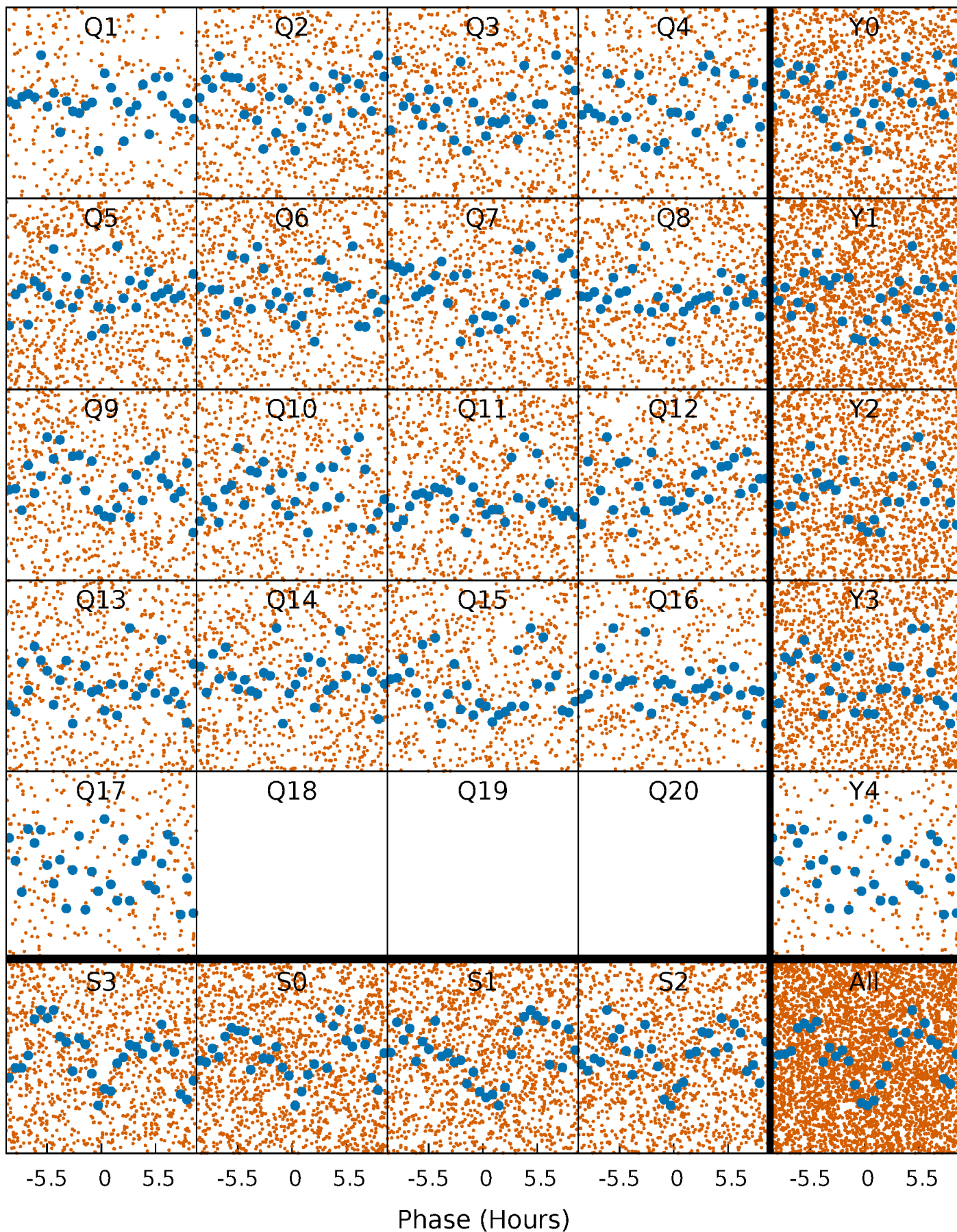


Non-Whitened Vs. Whitened Light Curve



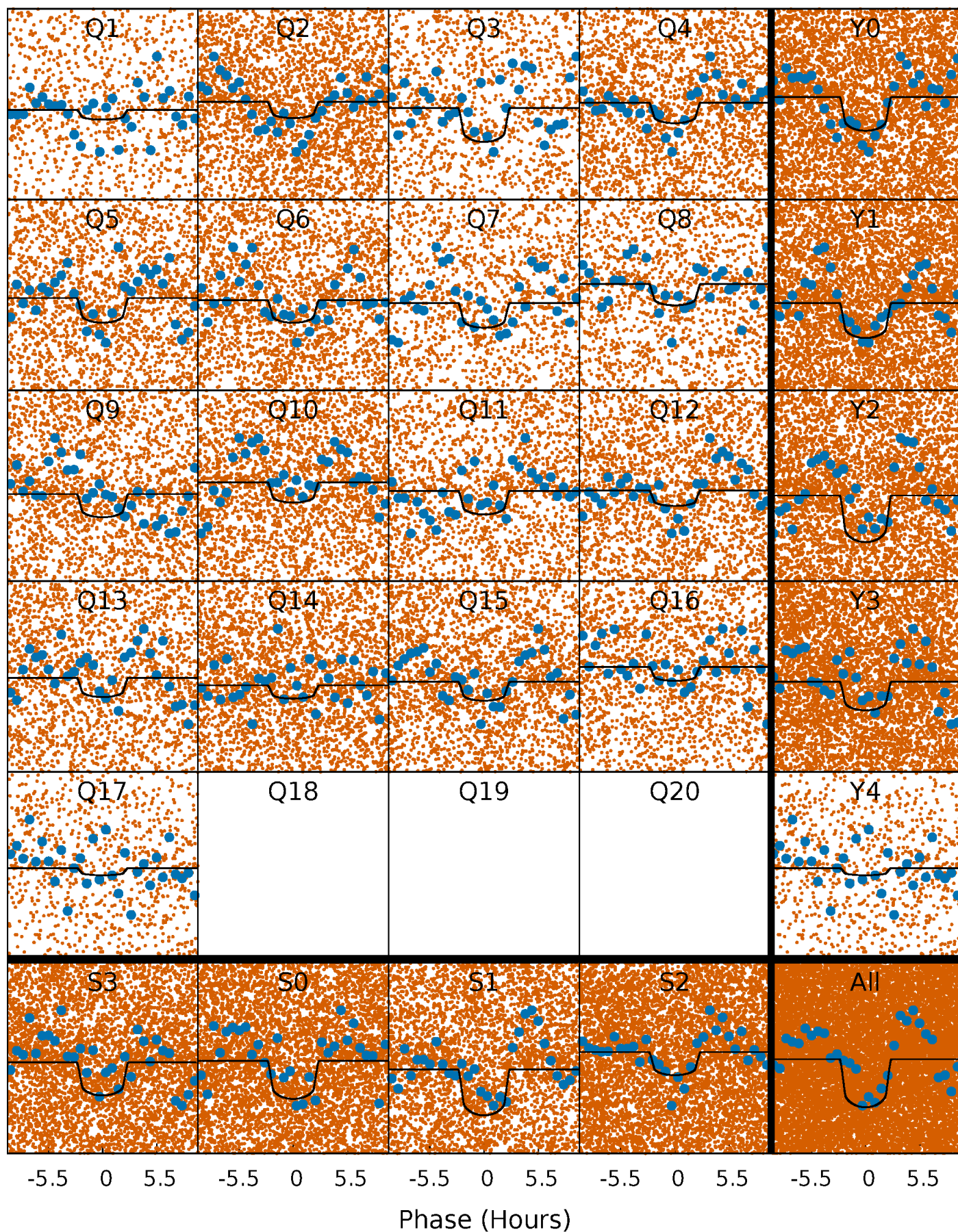
PDC Quarter-Phased Transit Curves

TCE 007020707-01 P= 0.864046 Days $T_0=131.890855$ (BKJD)



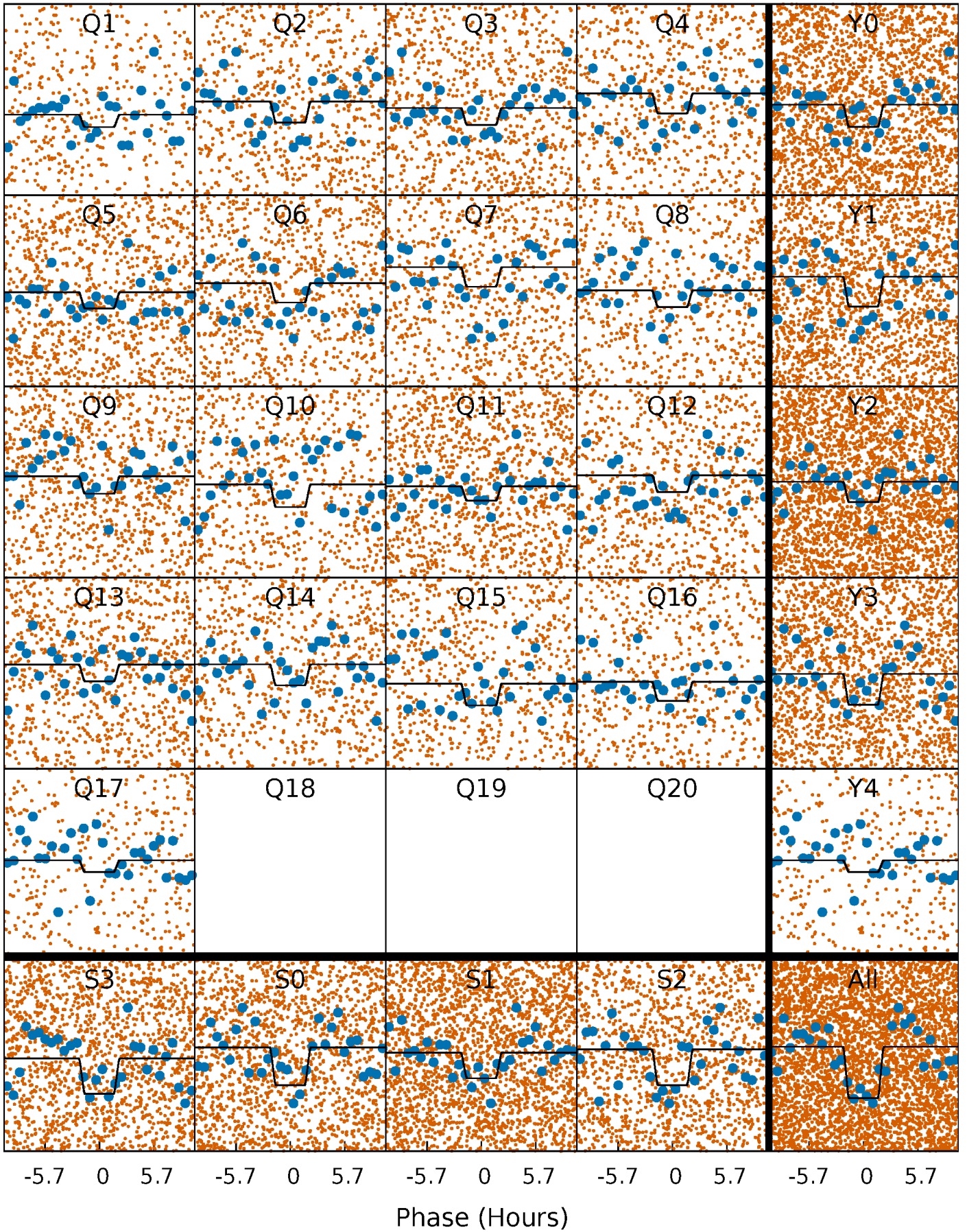
DV Quarter-Phased Transit Curves

TCE 007020707-01 P= 0.864046 Days $T_0=131.890855$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

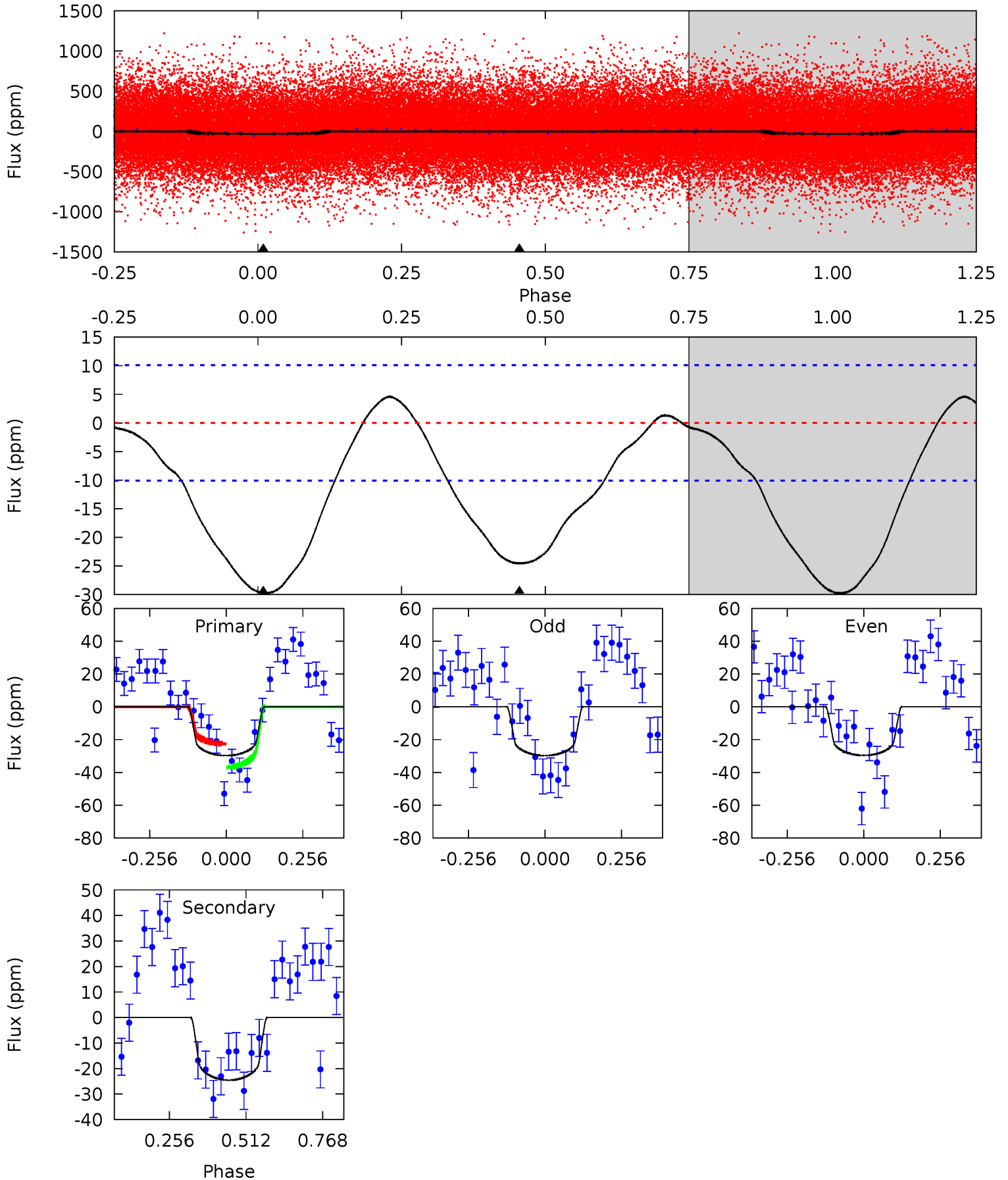
TCE 007020707-01 P= 0.864070 Days $T_0=131.885781$ (BKJD)



DV Model-Shift Uniqueness Test

007020707-01, P = 0.864046 Days, E = 131.026809 Days

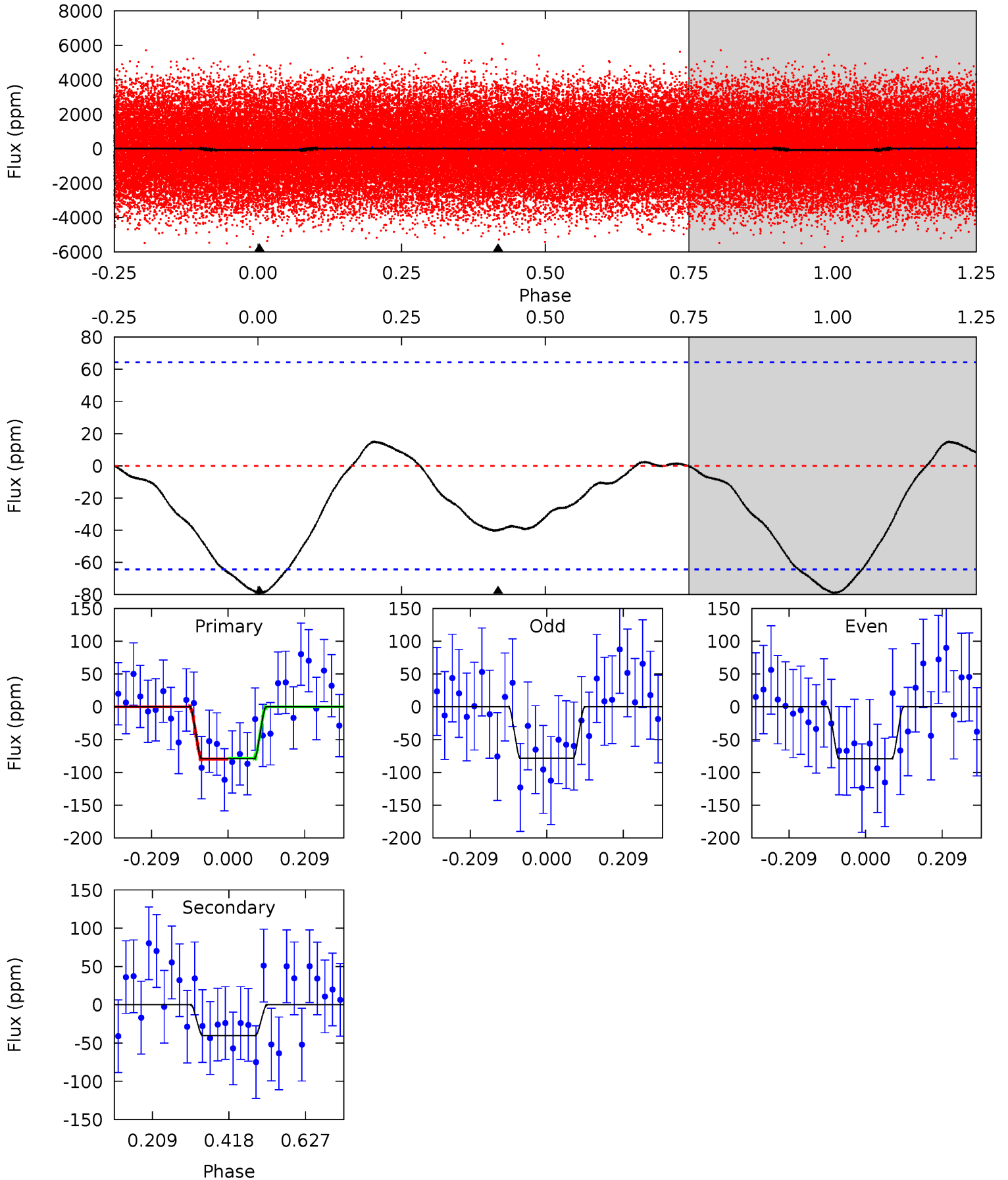
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.9	10.6	0	0	4.36	1.14	0.43	12.9	12.9	10.6	10.6	0.03	0.97	0.13	3.03



Alt Model-Shift Uniqueness Test

007020707-01, P = 0.864070 Days, E = 131.021711 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.41	2.75	0	0	4.41	1.26	0.23	5.41	5.41	2.75	2.75	0.03	0.99	0.16	0.06



Stellar Parameters For KIC 007020707

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7689^{+211}_{-316}	$3.947^{+0.280}_{-0.120}$	$-0.200^{+0.200}_{-0.350}$	$2.316^{+0.499}_{-0.811}$	$1.730^{+0.184}_{-0.368}$	$0.196^{+0.386}_{-0.073}$
	+3%/-4%	+7%/-3%	+100%/-175%	+22%/-35%	+11%/-21%	+197%/-37%
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 007020707-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-25 ± 2	$1.66^{+0.67}_{-0.62}$	4822^{+341}_{-406}	6061^{+1860}_{-960}	$2.183^{+3.365}_{-1.068}$
Alt.	-40 ± 15	$2.18^{+0.69}_{-0.65}$	4864^{+316}_{-405}	5971^{+1456}_{-1028}	$2.019^{+2.294}_{-1.012}$

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

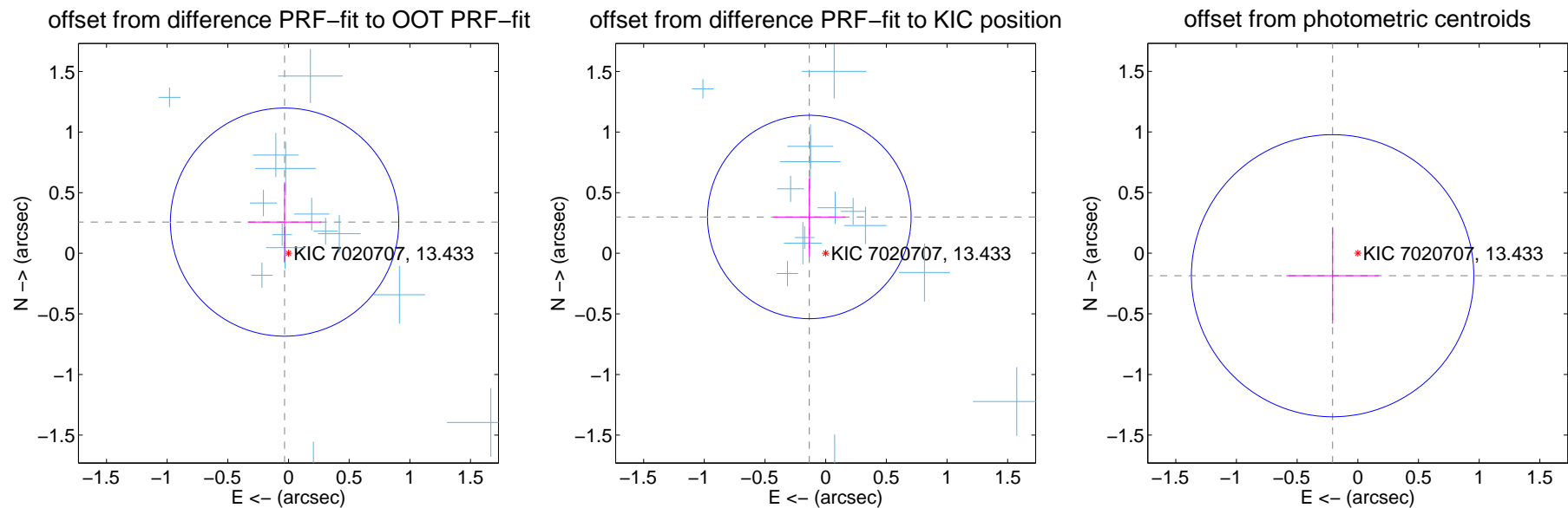
DV Centroid Data

Supplemental centroid analysis for 007020707-01. Kepler magnitude: 13.43. Transit SNR 13.71

There are 16 quarters with good PRF difference image offsets

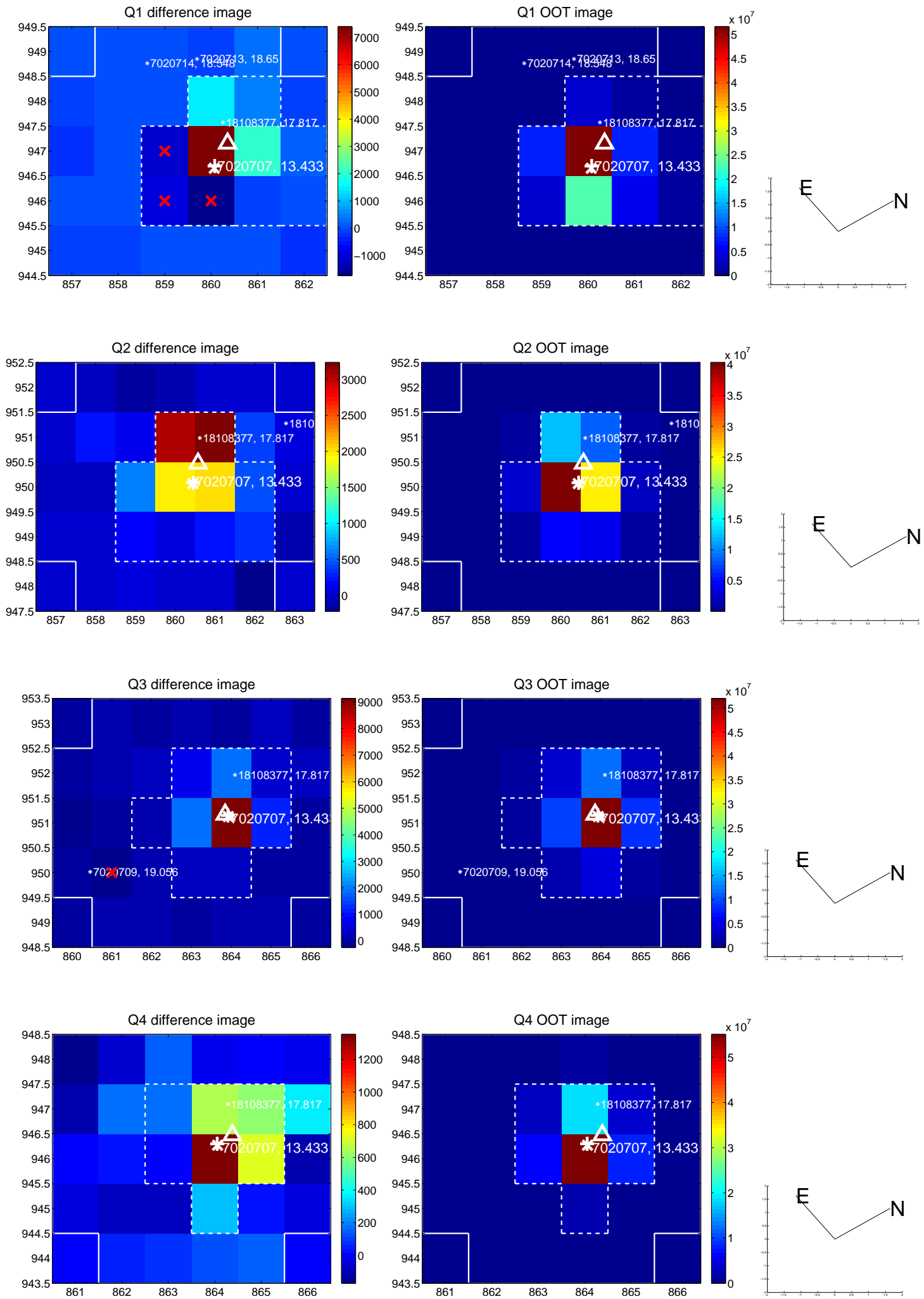
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.259 ± 0.314	0.83	0.032 ± 0.302	0.257 ± 0.329
PRF-fit source offset from KIC position	0.328 ± 0.280	1.17	0.135 ± 0.295	0.299 ± 0.322
photometric centroid source offset	0.28 ± 0.39	0.72	0.21 ± 0.38	-0.19 ± 0.40

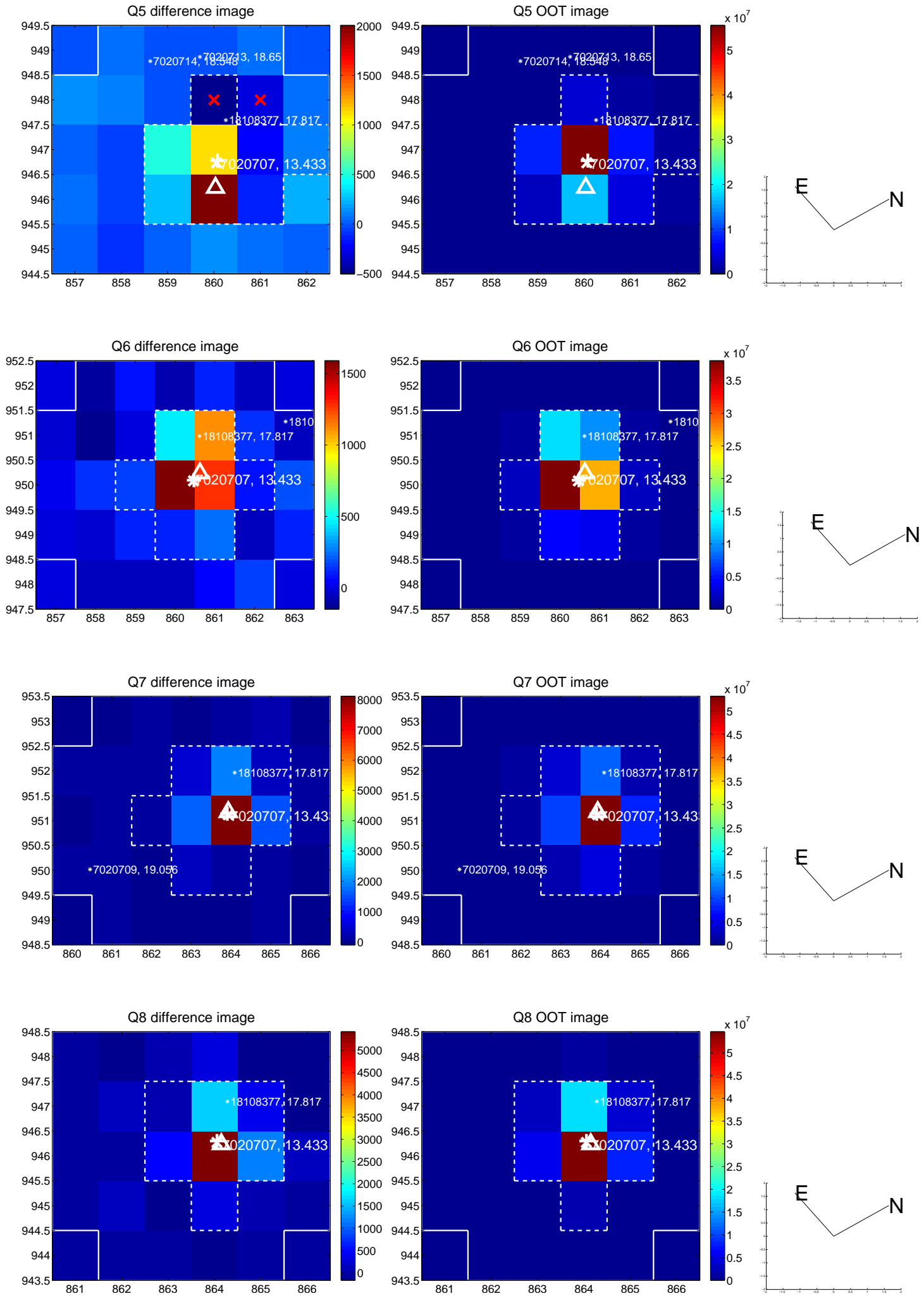


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

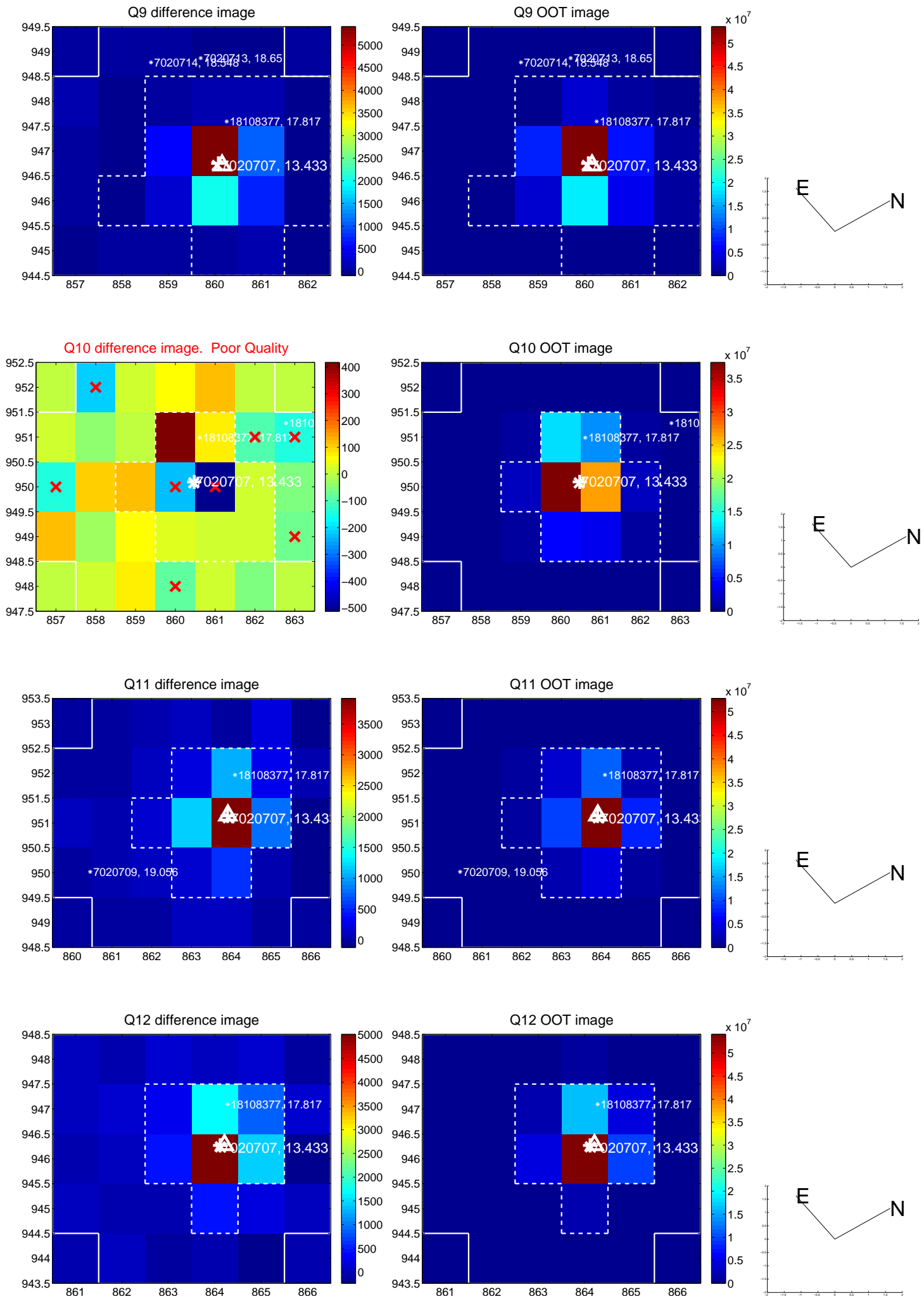
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



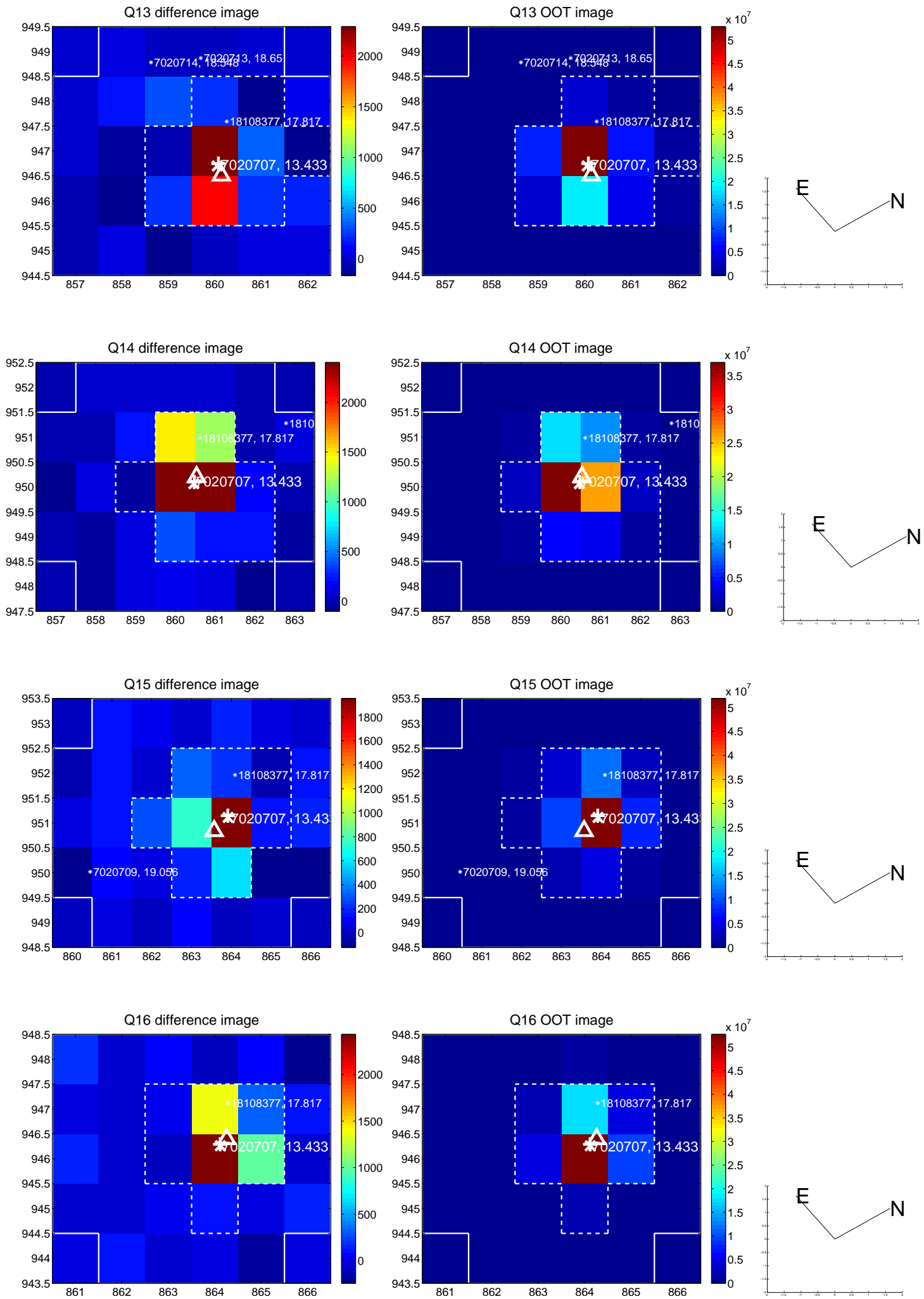
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



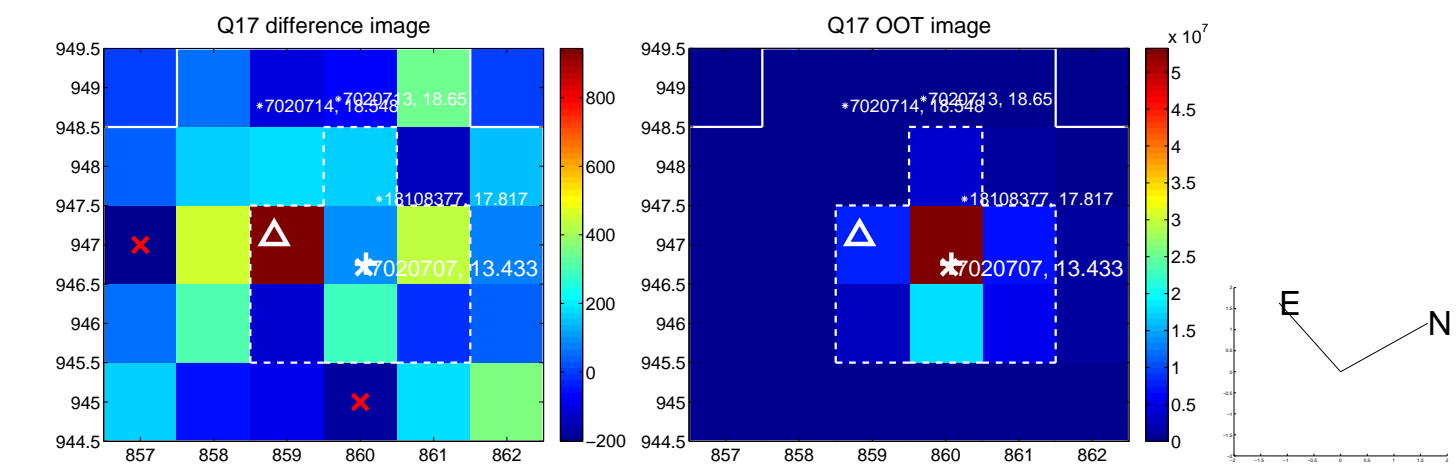
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



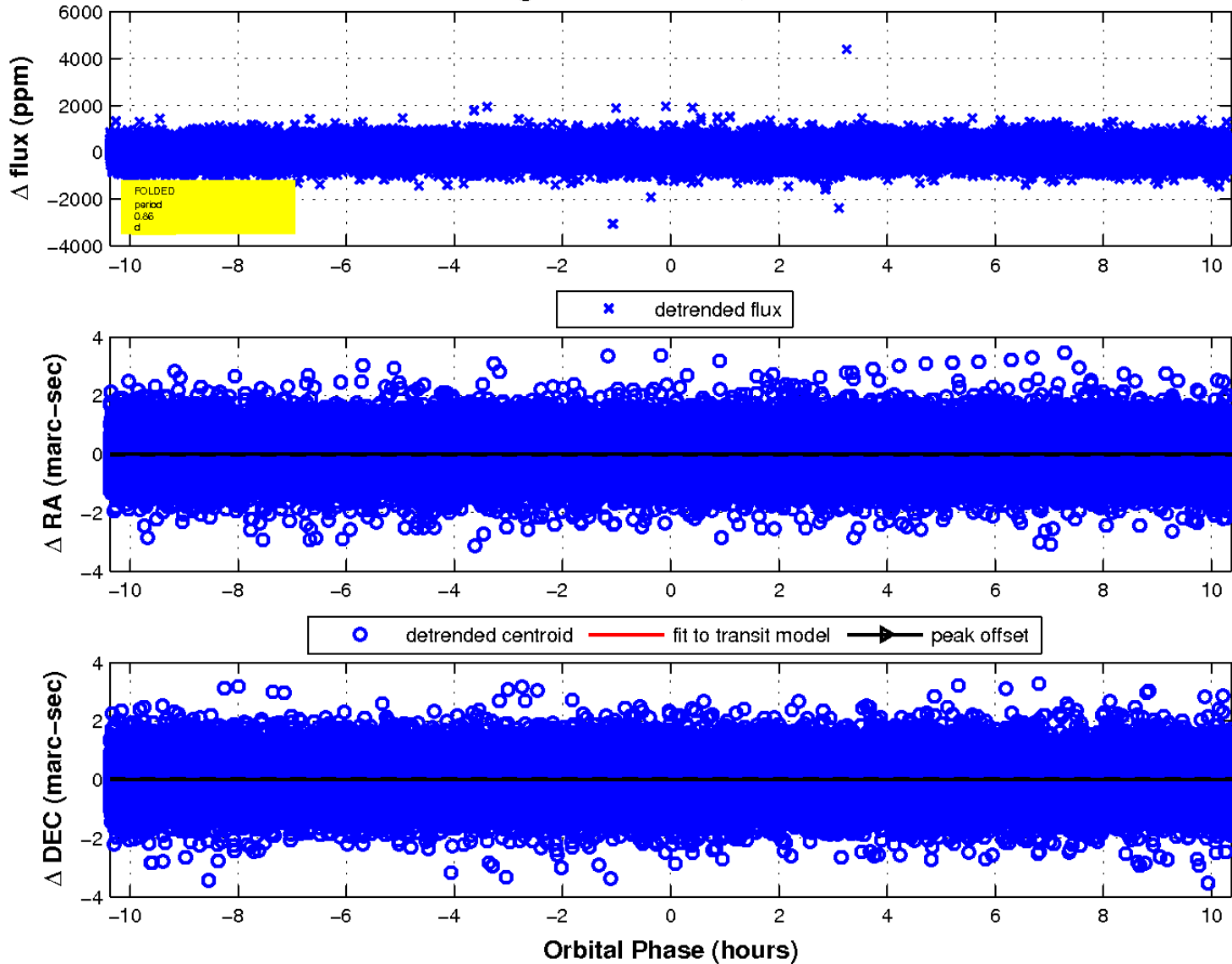
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

