

KIC 009174121

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})
009174121-01	OBS	No	0.588947	131.668480	98.7	3.655	11.1	9.7	1.83	6603	1.95	24512.73

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009174121-01	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.

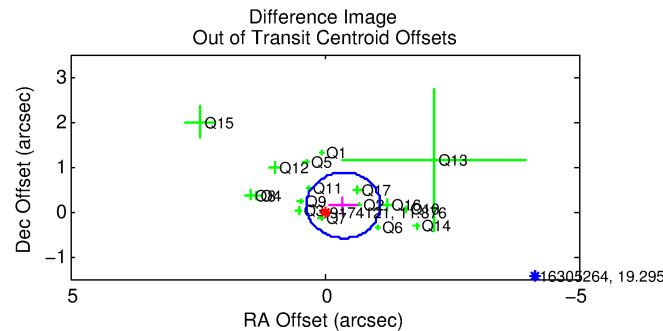
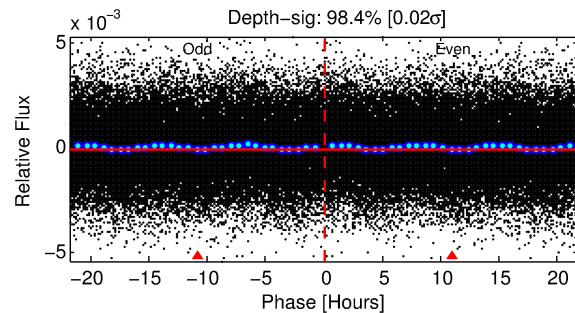
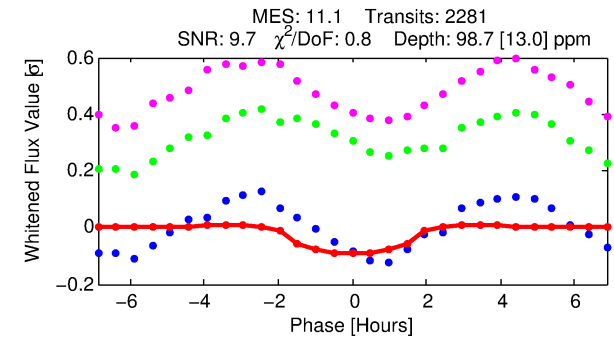
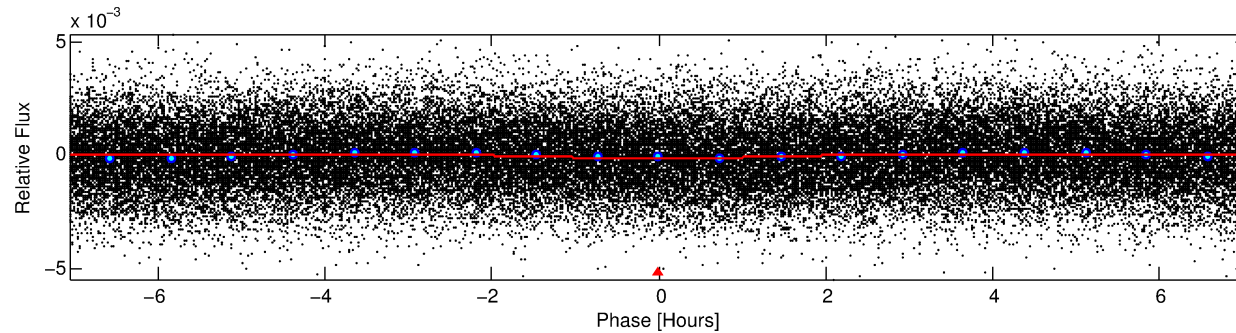
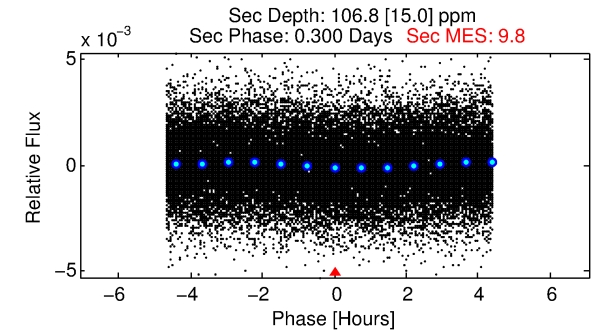
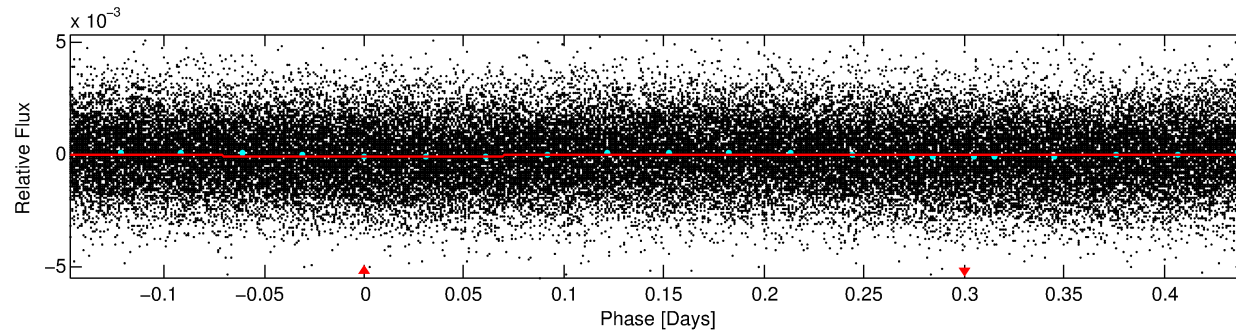
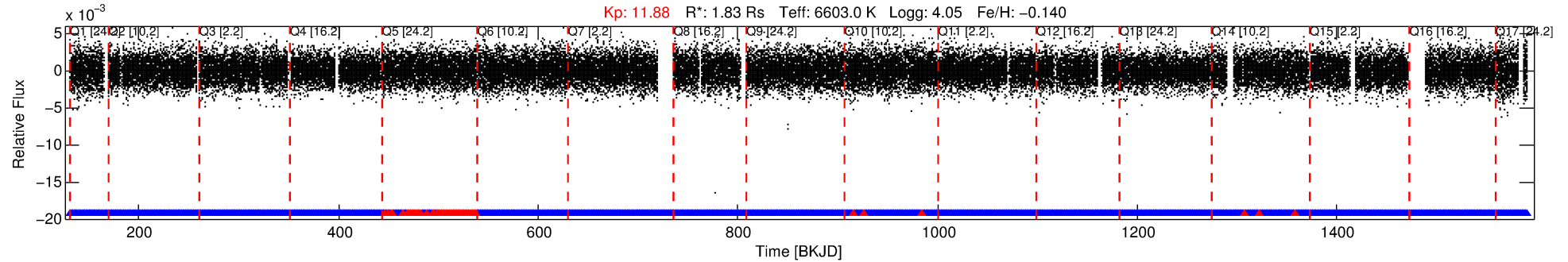
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009174121-01

No Significant Match Found

DV One-Page Summary

KIC: 9174121 Candidate: 1 of 1 Period: 0.589 d



DV Fit Results:

Period = 0.58895 [0.00001] d
Epoch = 131.6685 [0.0048] BKJD
 $R_p/R^* = 0.0098$ [0.0121]
 $a/R^* = 1.22$ [2.77]
 $b = 0.70$ [5.03]
 $S_{\text{eff}} = 24512.73$ [11557.84]
 $T_{\text{eq}} = 3191$ [376] K
 $R_p = 1.95$ [2.52] R_e
 $a = 0.0153$ [0.0046] AU
 $A_g = 3.60$ [9.13] [0.28σ]
 $T_{\text{eff}} = 6795$ [4240] K [0.85σ]

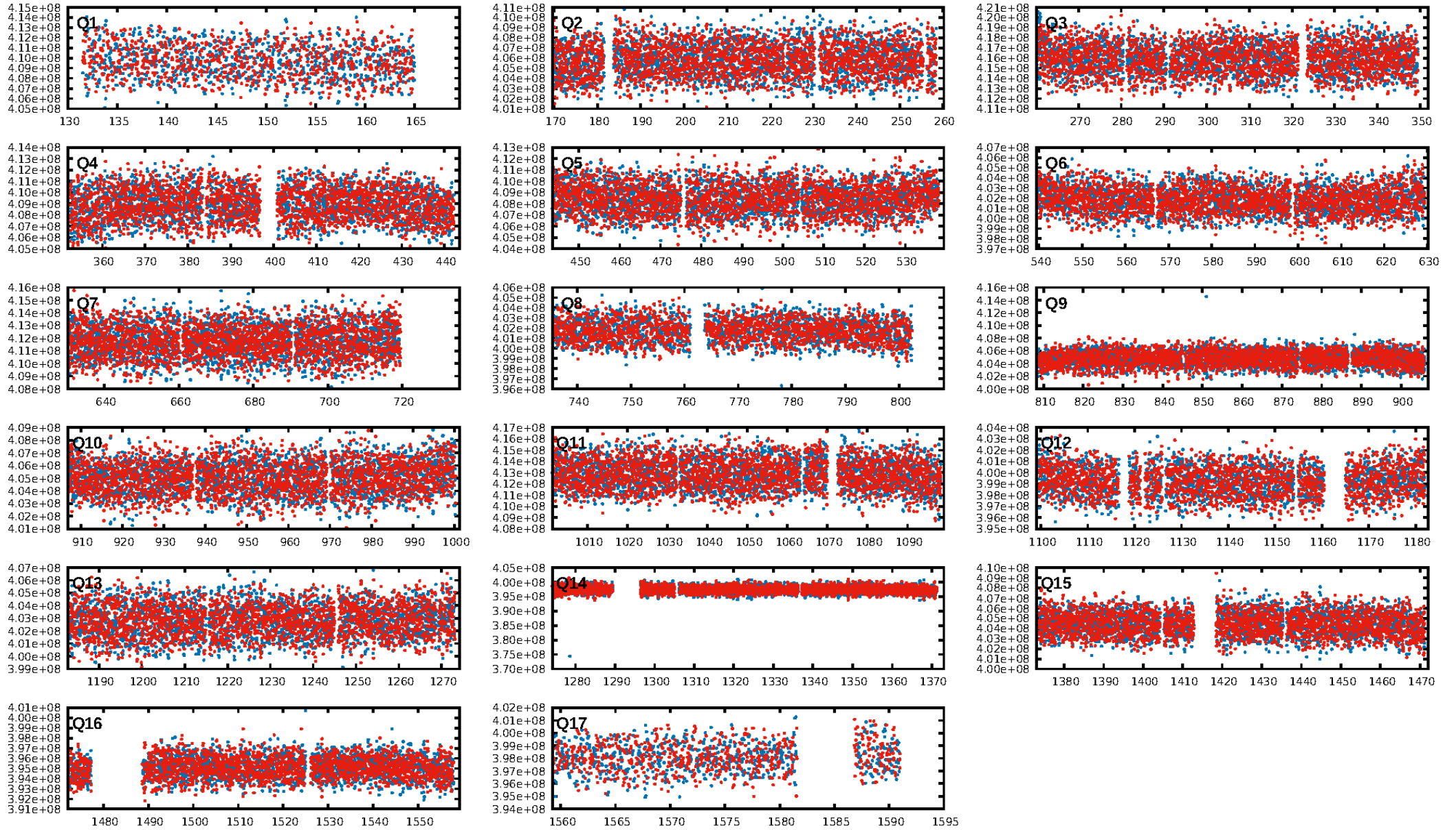
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.31e-19
RollingBand-fgt: 0.96 [2098/2177]
GhostDiagnostic-chr: 1.783
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.391 arcsec [1.61σ]
KicOffset-rm: 0.513 arcsec [1.94σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.76 [13/17]
DiffImageOverlap-fno: 1.00 [17/17]

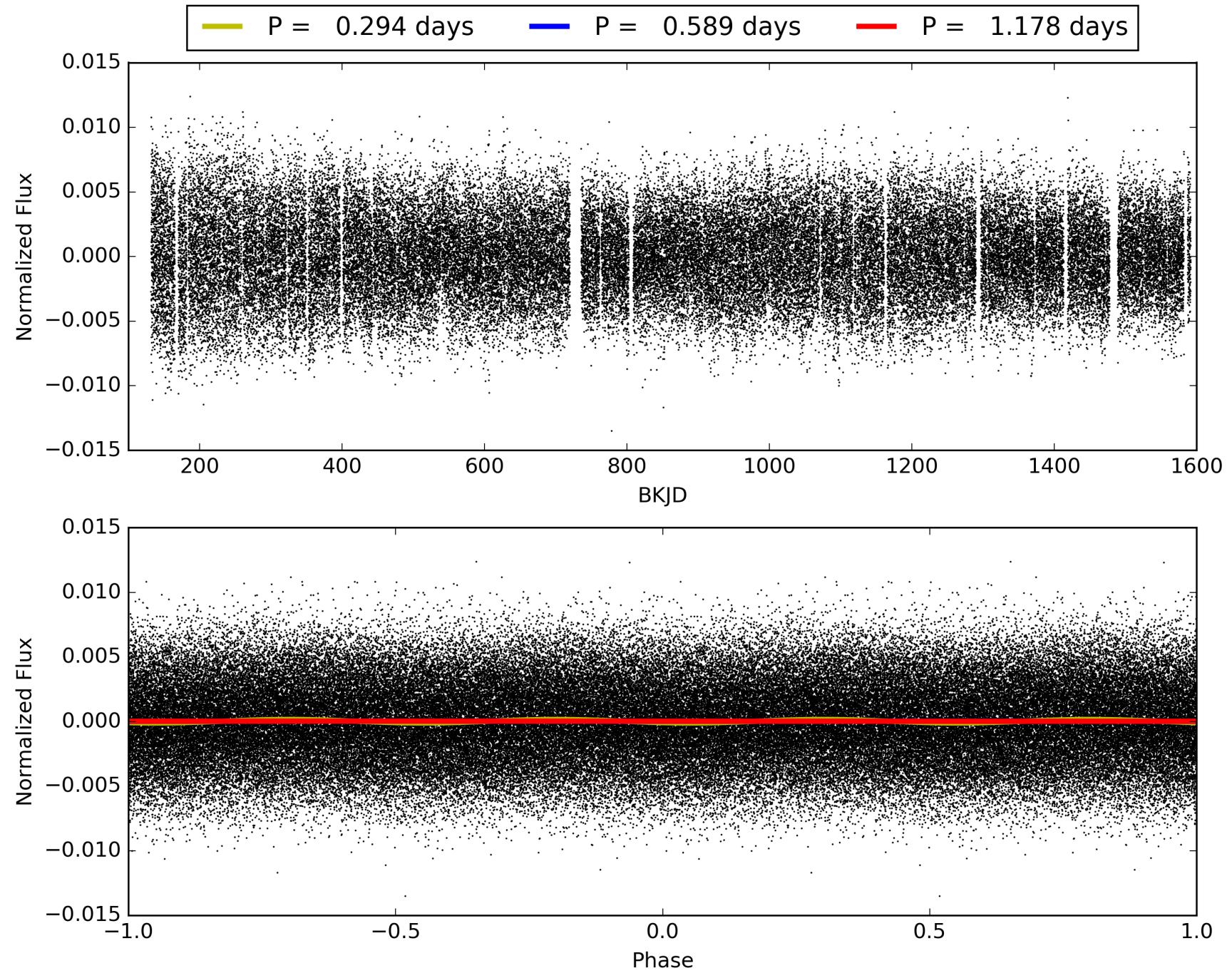
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:31:43 Z

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

TCE 009174121-01, PDC Light Curves

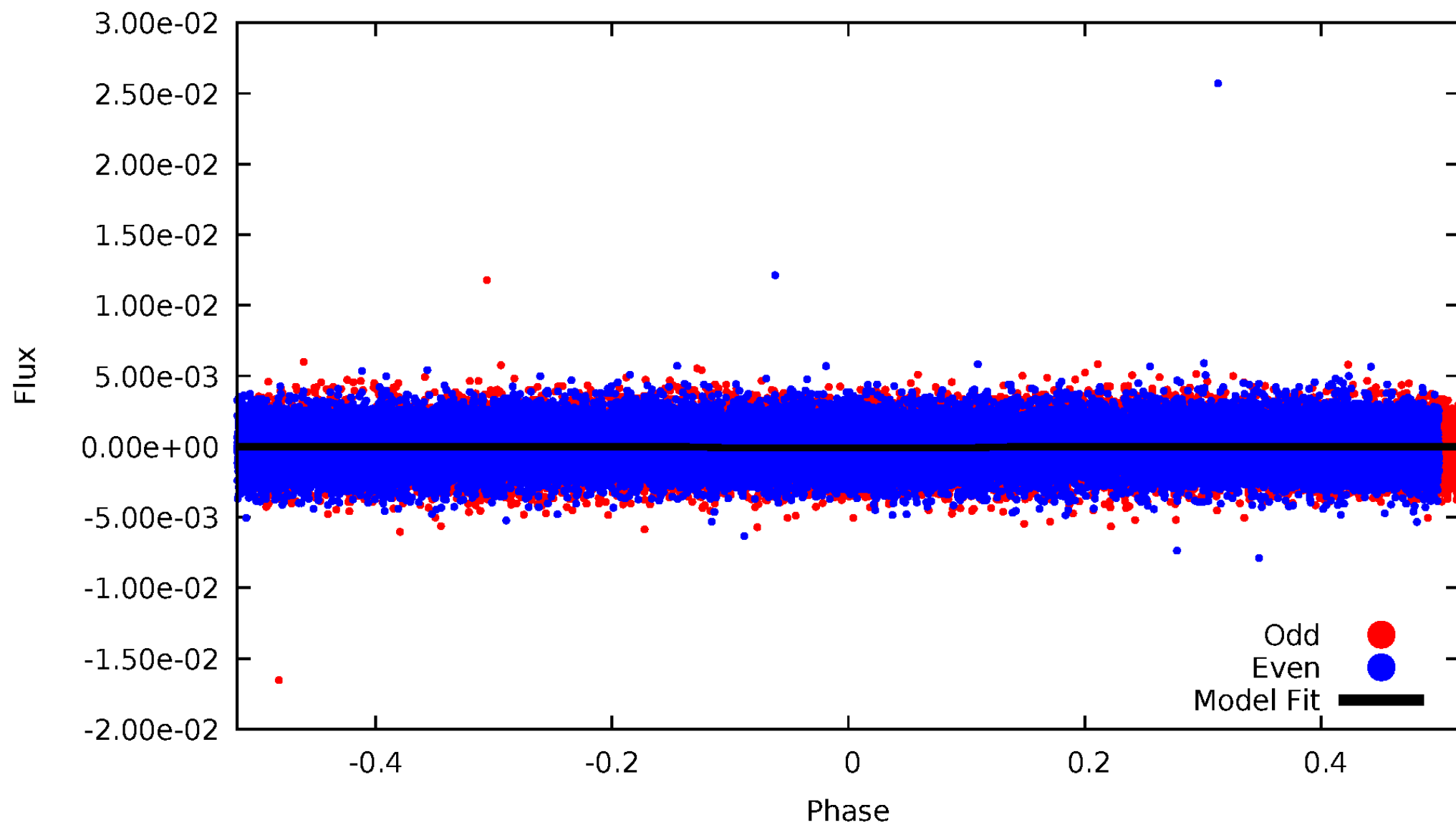


TCE 009174121-01



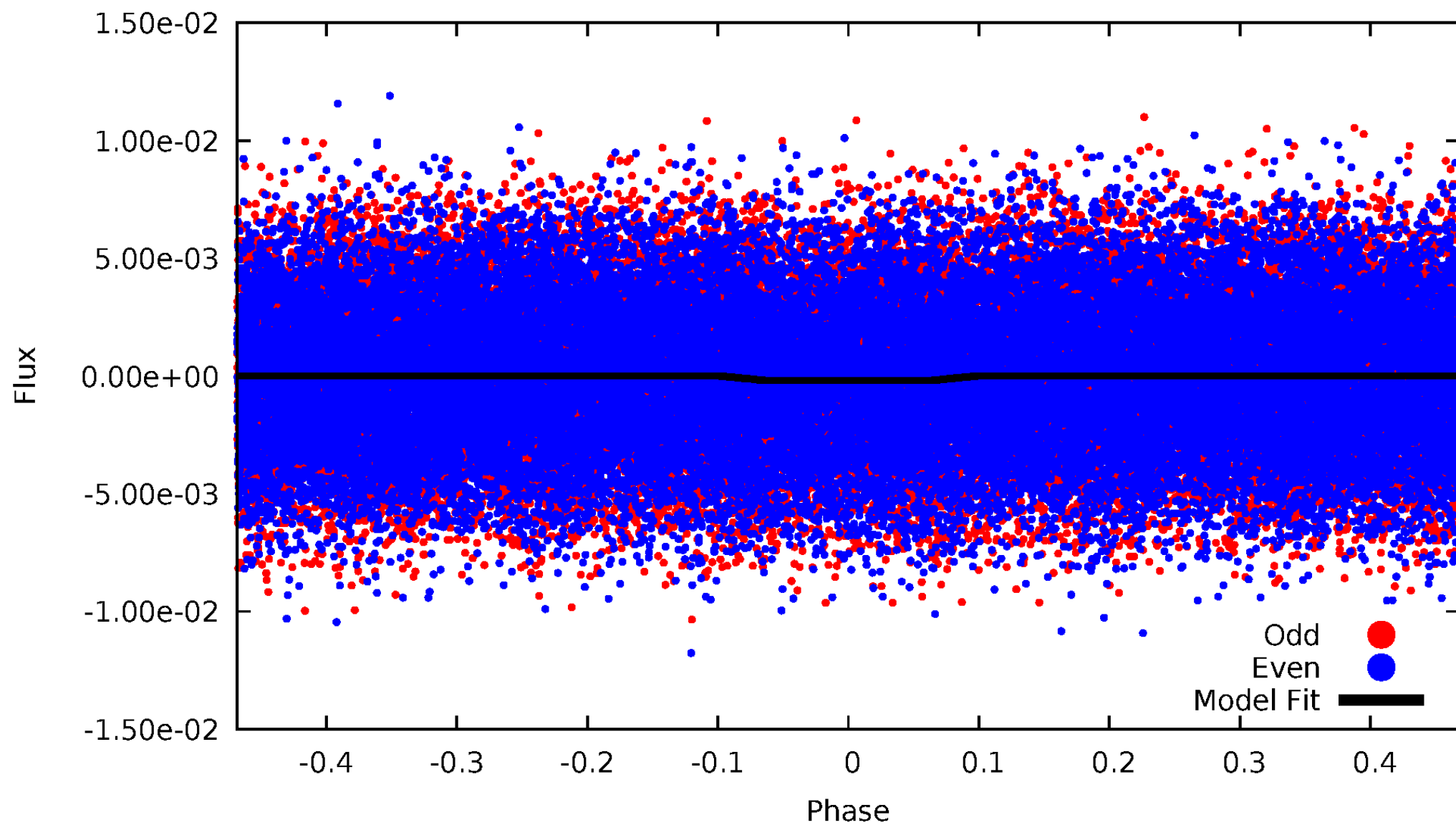
DV Odd/Even

TCE 009174121-01

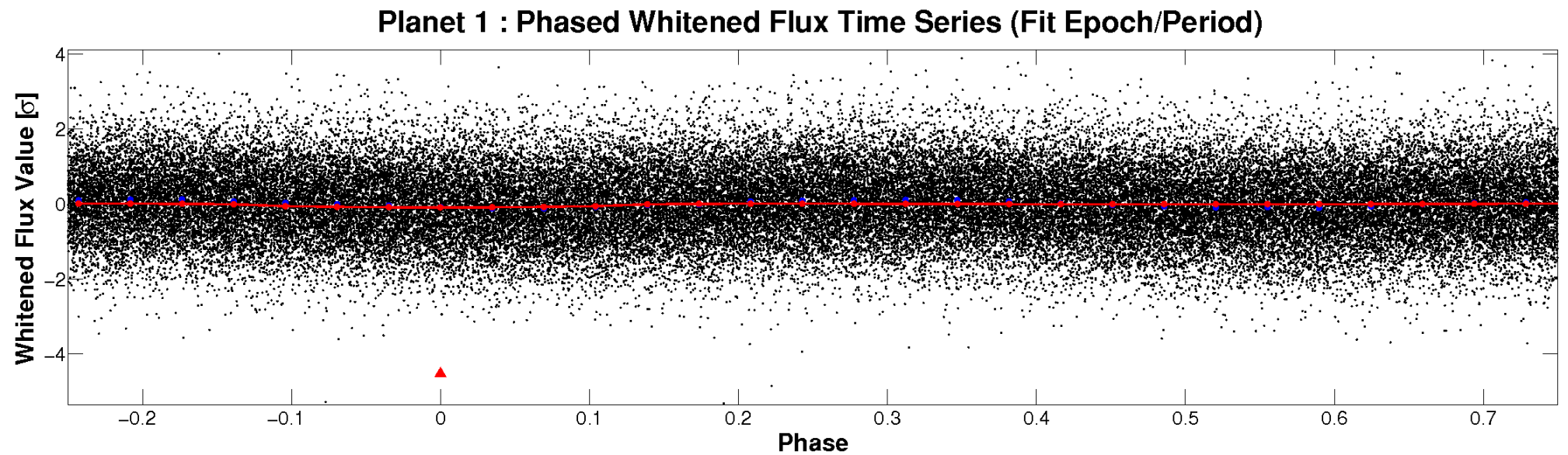
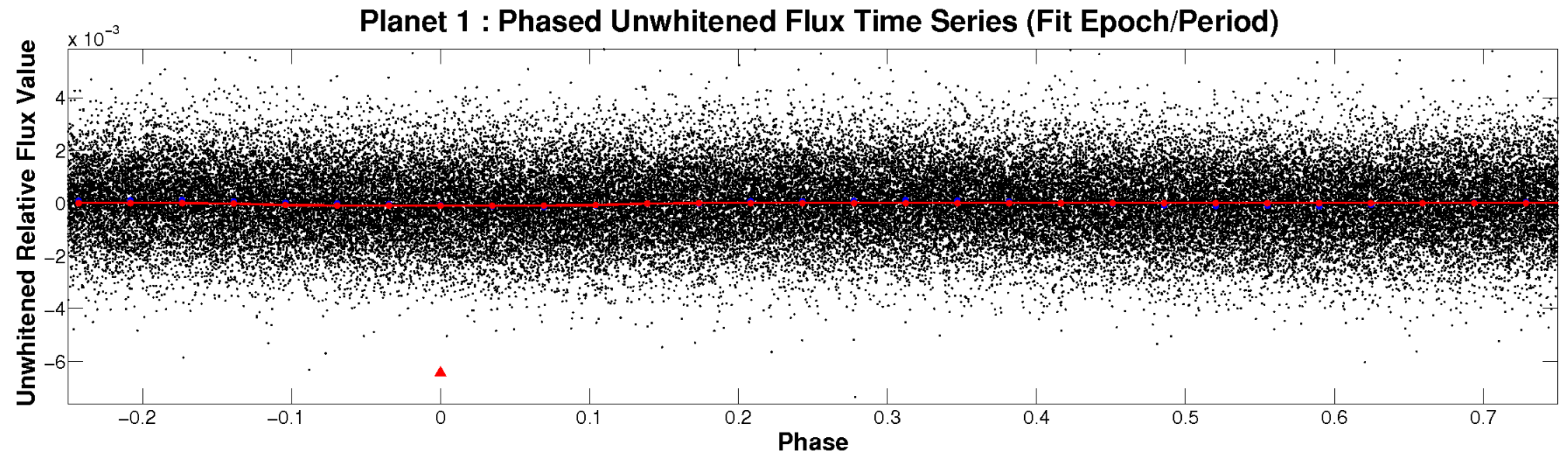


ALT Odd/Even

TCE 009174121-01

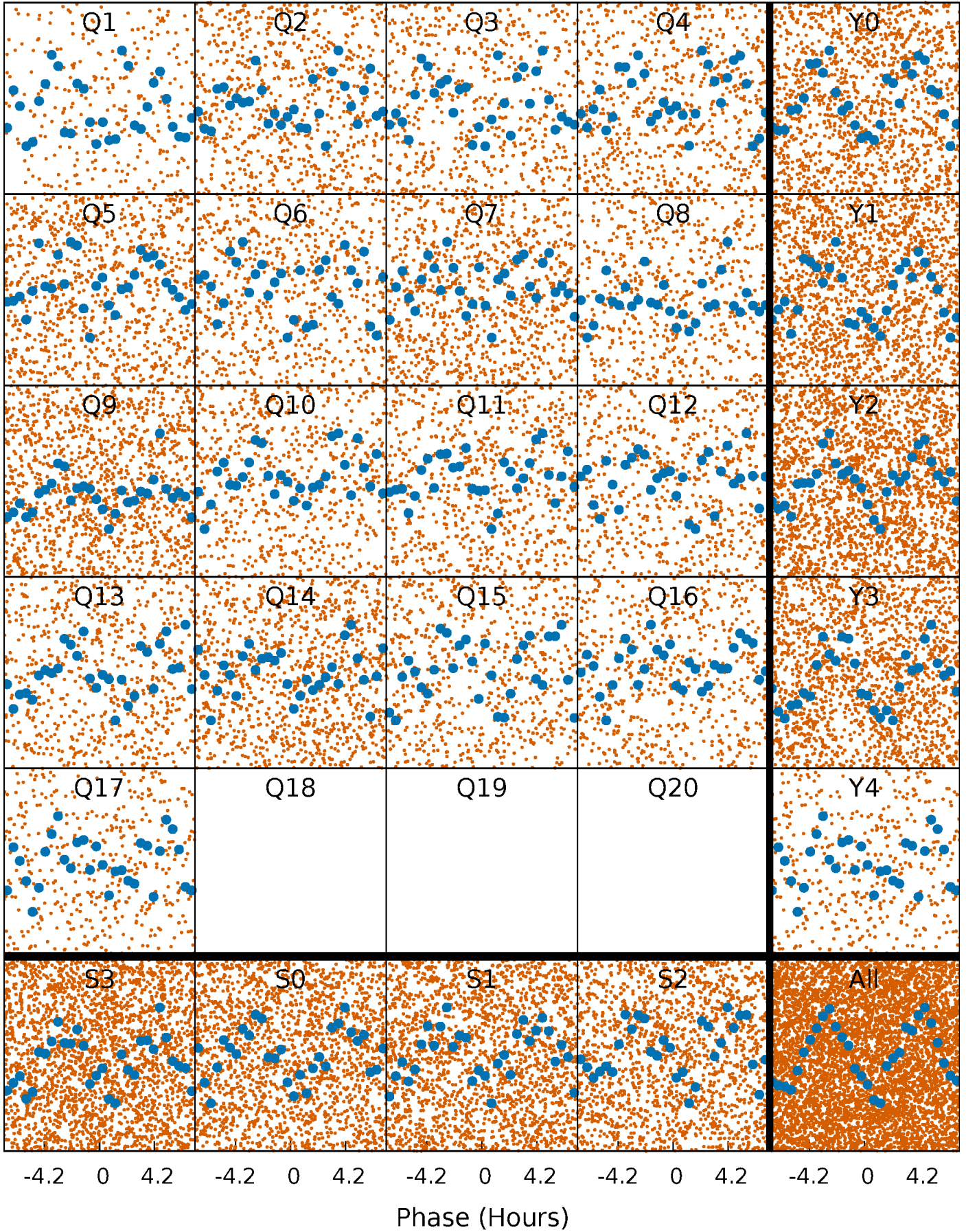


Non-Whitened Vs. Whitened Light Curve



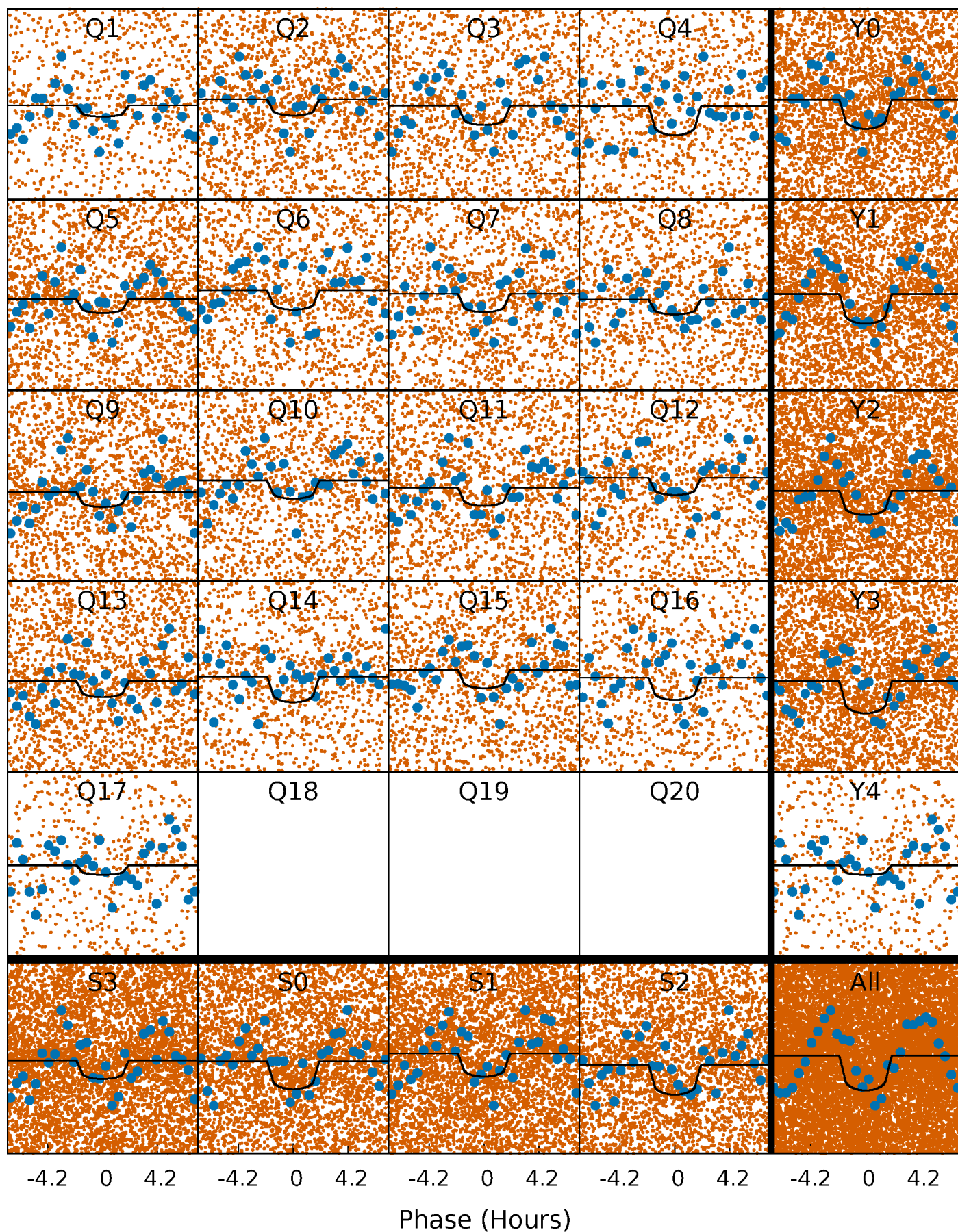
PDC Quarter-Phased Transit Curves

TCE 009174121-01 P= 0.588947 Days $T_0=131.668480$ (BKJD)



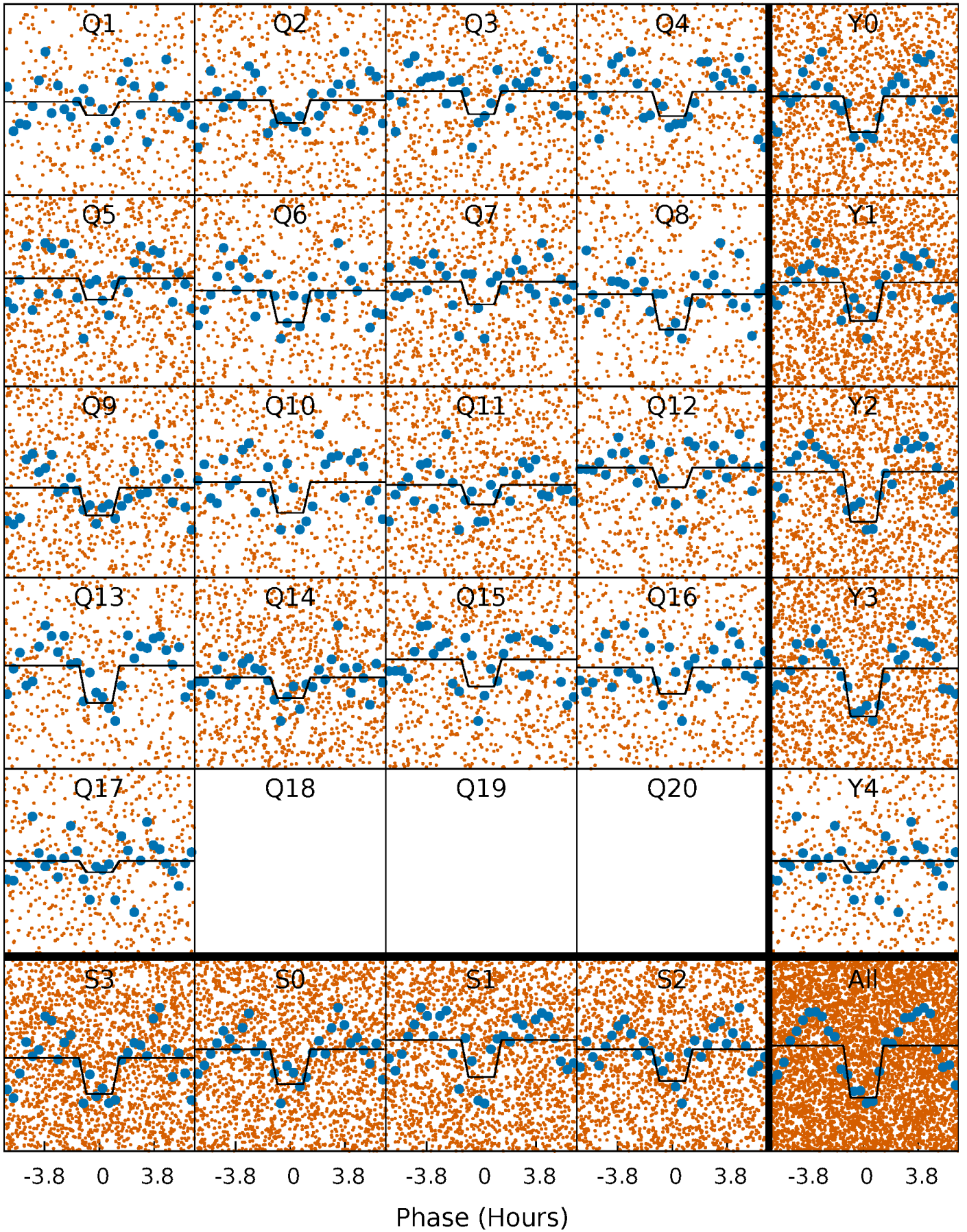
DV Quarter-Phased Transit Curves

TCE 009174121-01 P= 0.588947 Days $T_0=131.668480$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

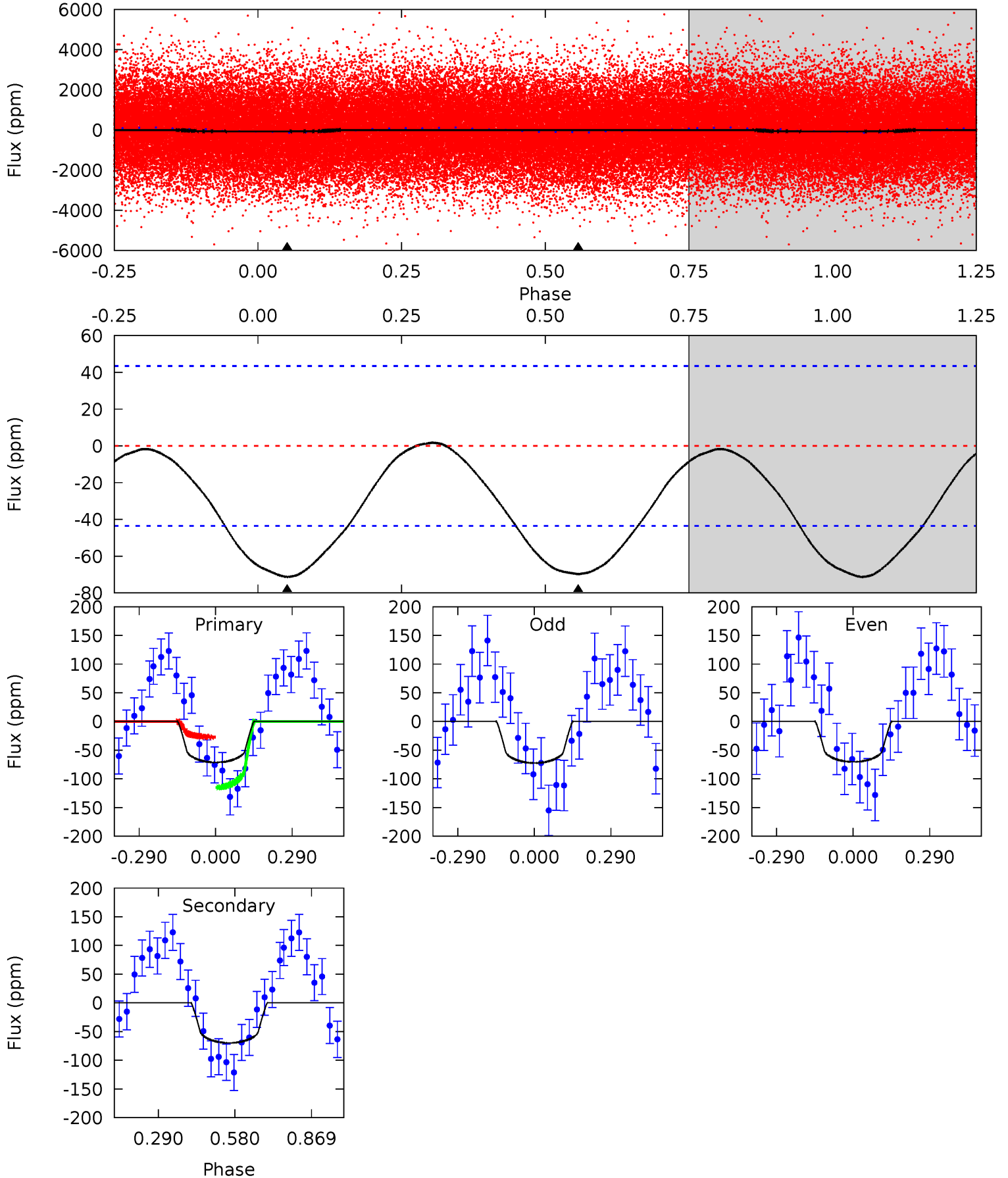
TCE 009174121-01 P= 0.588974 Days $T_0=131.667277$ (BKJD)



DV Model-Shift Uniqueness Test

009174121-01, P = 0.588947 Days, E = 131.079533 Days

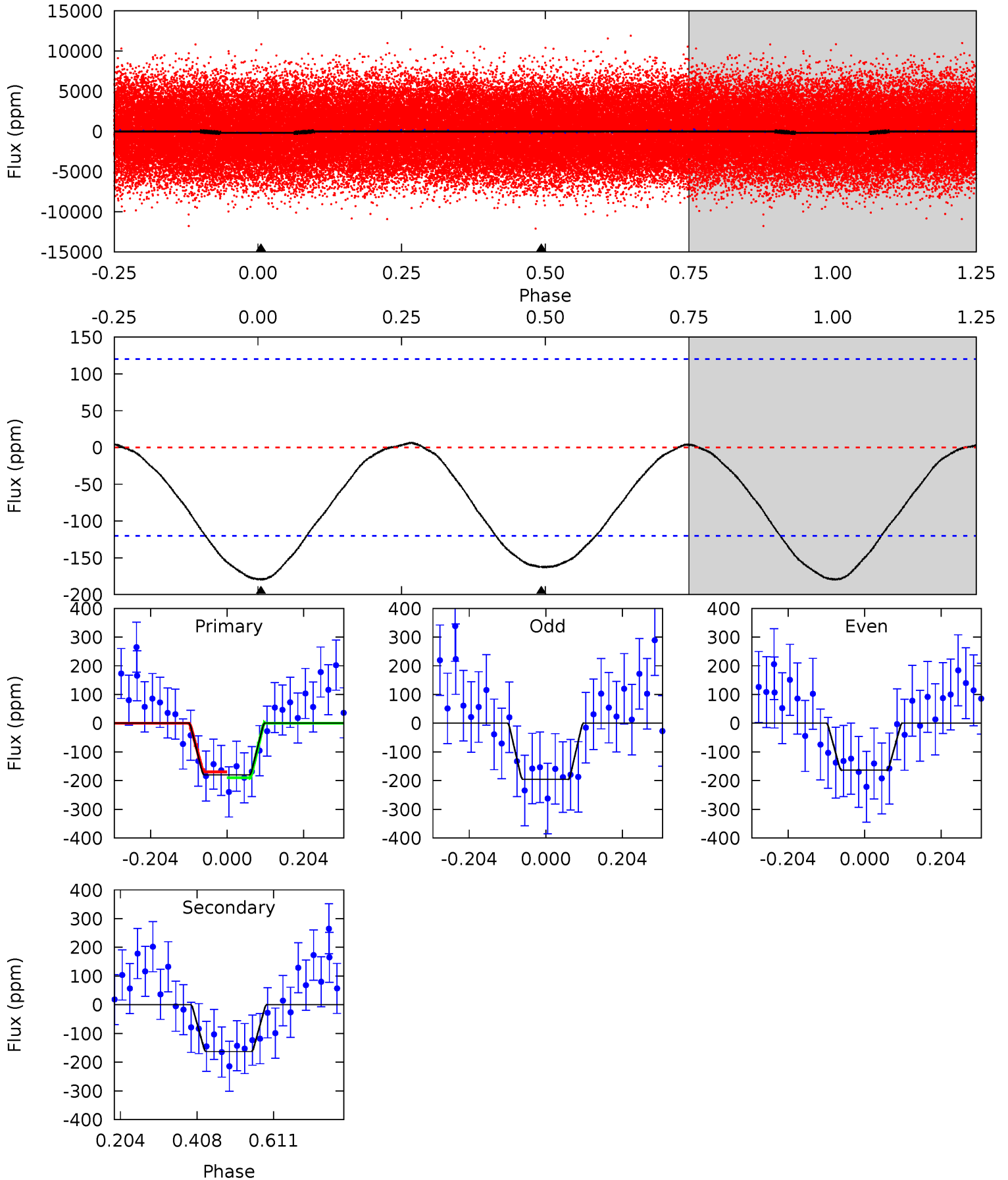
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.12	6.96	0	0	4.34	1.06	0.17	7.12	7.12	6.96	6.96	0.10	0.76	0.02	4.35



Alt Model-Shift Uniqueness Test

009174121-01, P = 0.588974 Days, E = 131.078303 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.59	5.99	0	0	4.41	1.27	0.20	6.59	6.59	5.99	5.99	0.58	1.09	0.04	0.38



Stellar Parameters For KIC 009174121

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6603^{+156}_{-195}	$4.048^{+0.258}_{-0.172}$	$-0.140^{+0.250}_{-0.300}$	$1.830^{+0.510}_{-0.623}$	$1.370^{+0.187}_{-0.280}$	$0.315^{+0.523}_{-0.150}$
	+2%/-3%	+6%/-4%	+179%/-214%	+28%/-34%	+14%/-20%	+166%/-48%
Source	PHO1	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 009174121-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-70 ± 10	$2.53^{+2.14}_{-1.63}$	4429^{+340}_{-384}	5084^{+4069}_{-1685}	$1.425^{+9.273}_{-0.997}$
Alt.	-163 ± 27	$2.86^{+2.55}_{-1.76}$	4413^{+335}_{-376}	5789^{+5083}_{-1539}	$2.402^{+14.101}_{-1.658}$

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

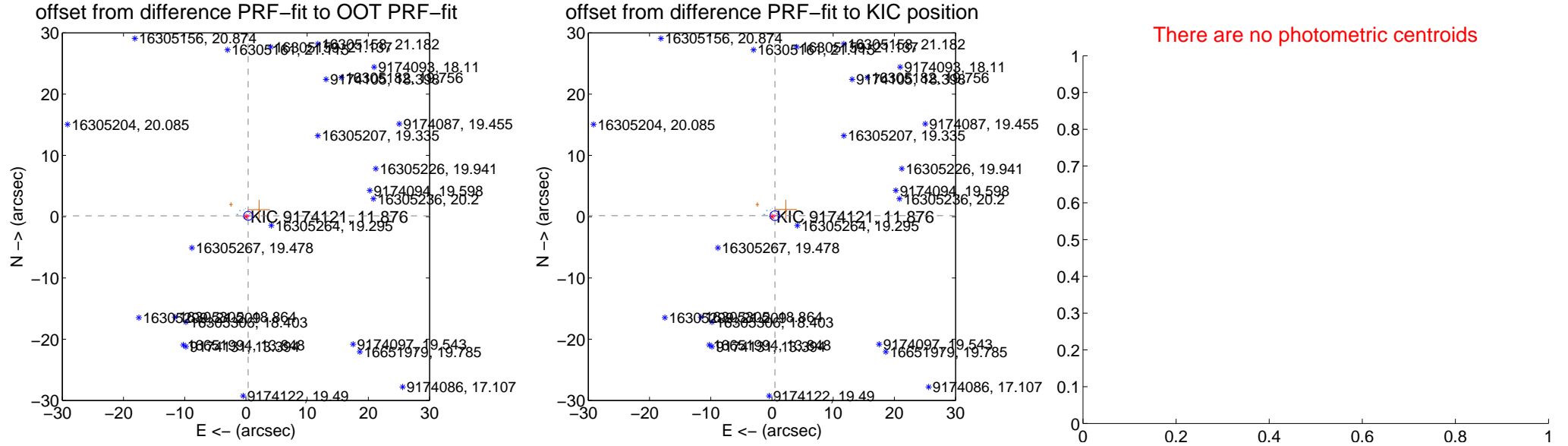
DV Centroid Data

Supplemental centroid analysis for 009174121-01. **Kepler magnitude: 11.88.** Transit SNR 9.69

There are 13 quarters with good PRF difference image offsets

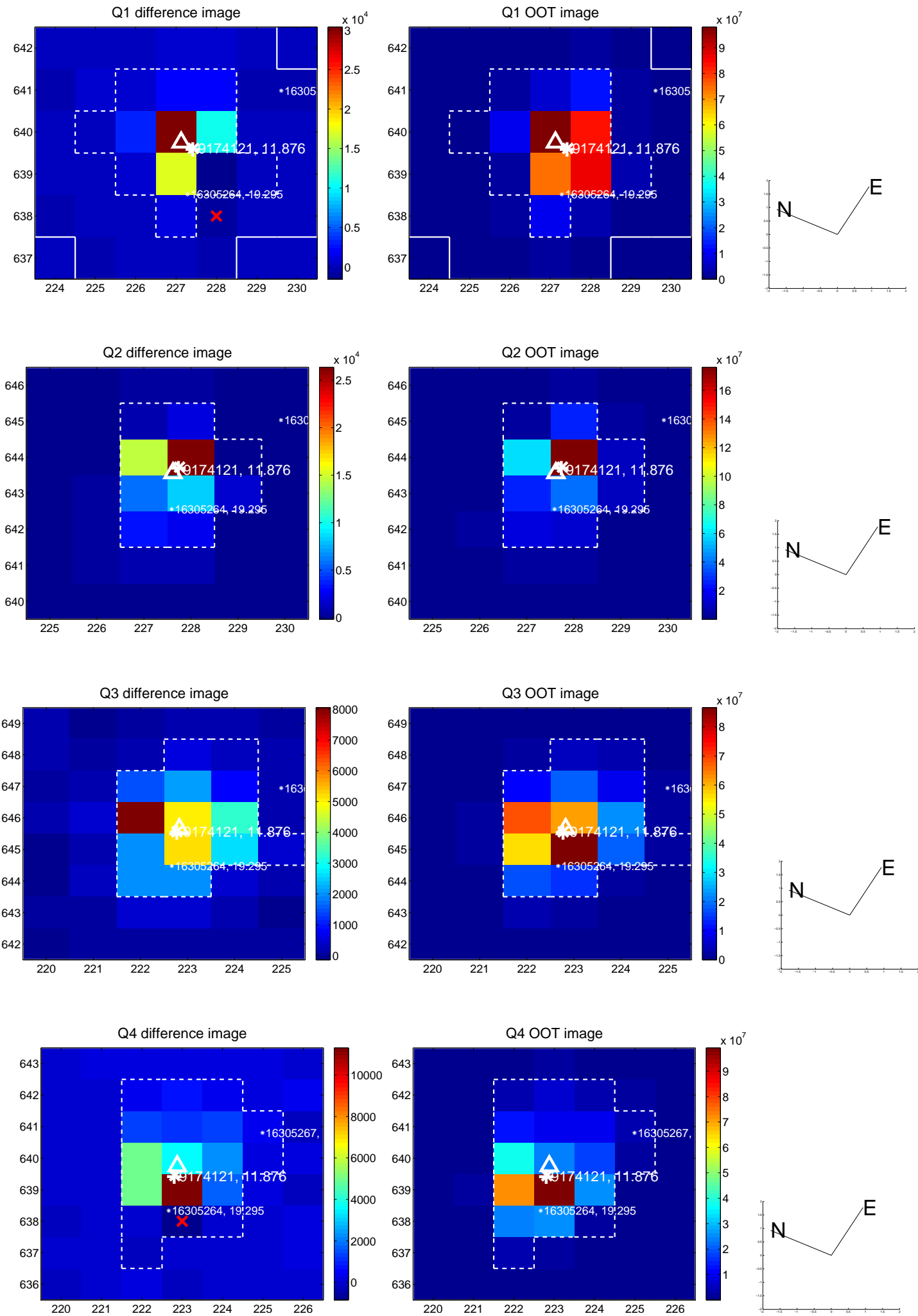
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.391 ± 0.243	1.61	-0.365 ± 0.287	0.139 ± 0.170
PRF-fit source offset from KIC position	0.513 ± 0.264	1.94	-0.488 ± 0.291	0.157 ± 0.153
photometric centroid source offset	—	—	—	—

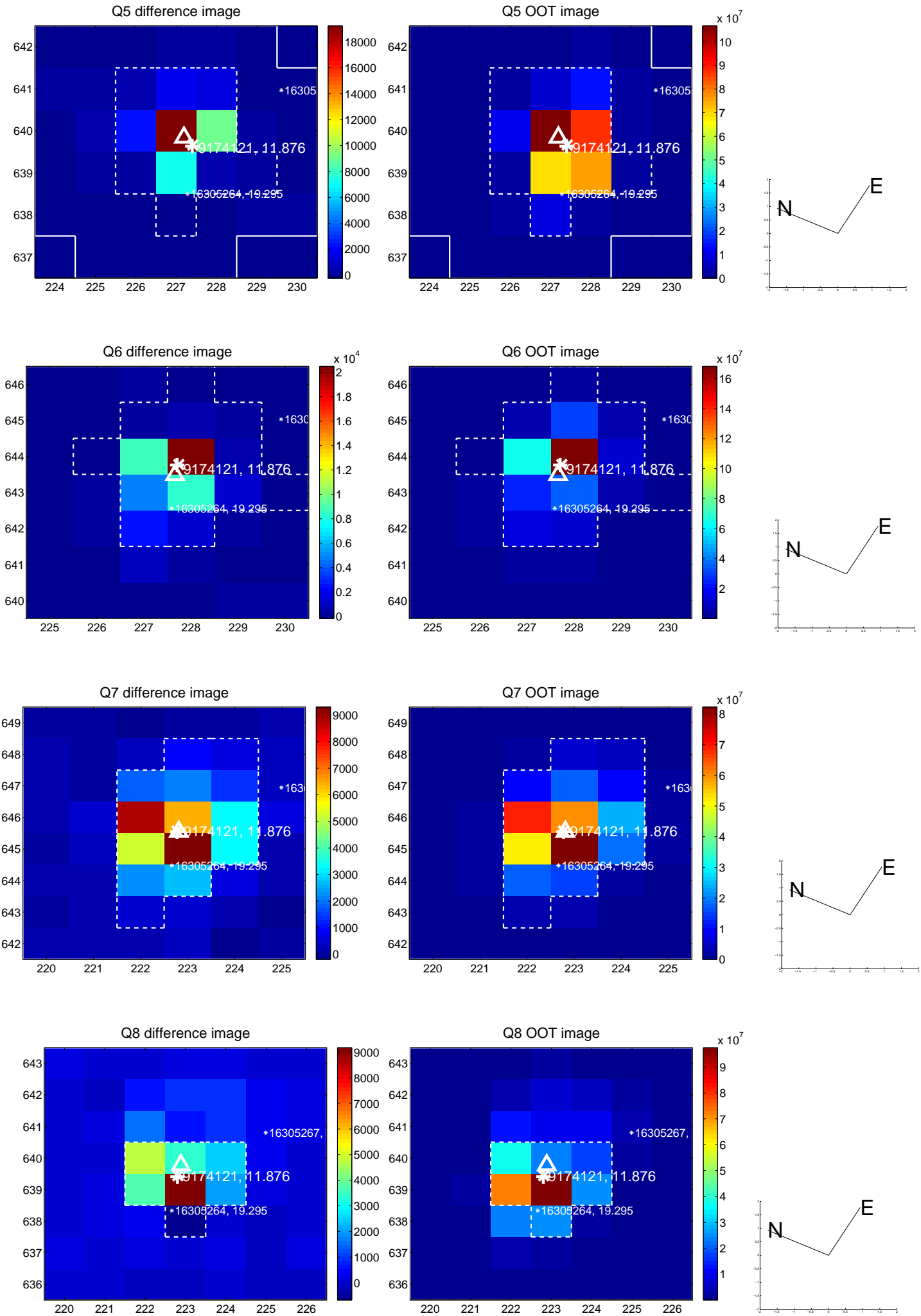


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

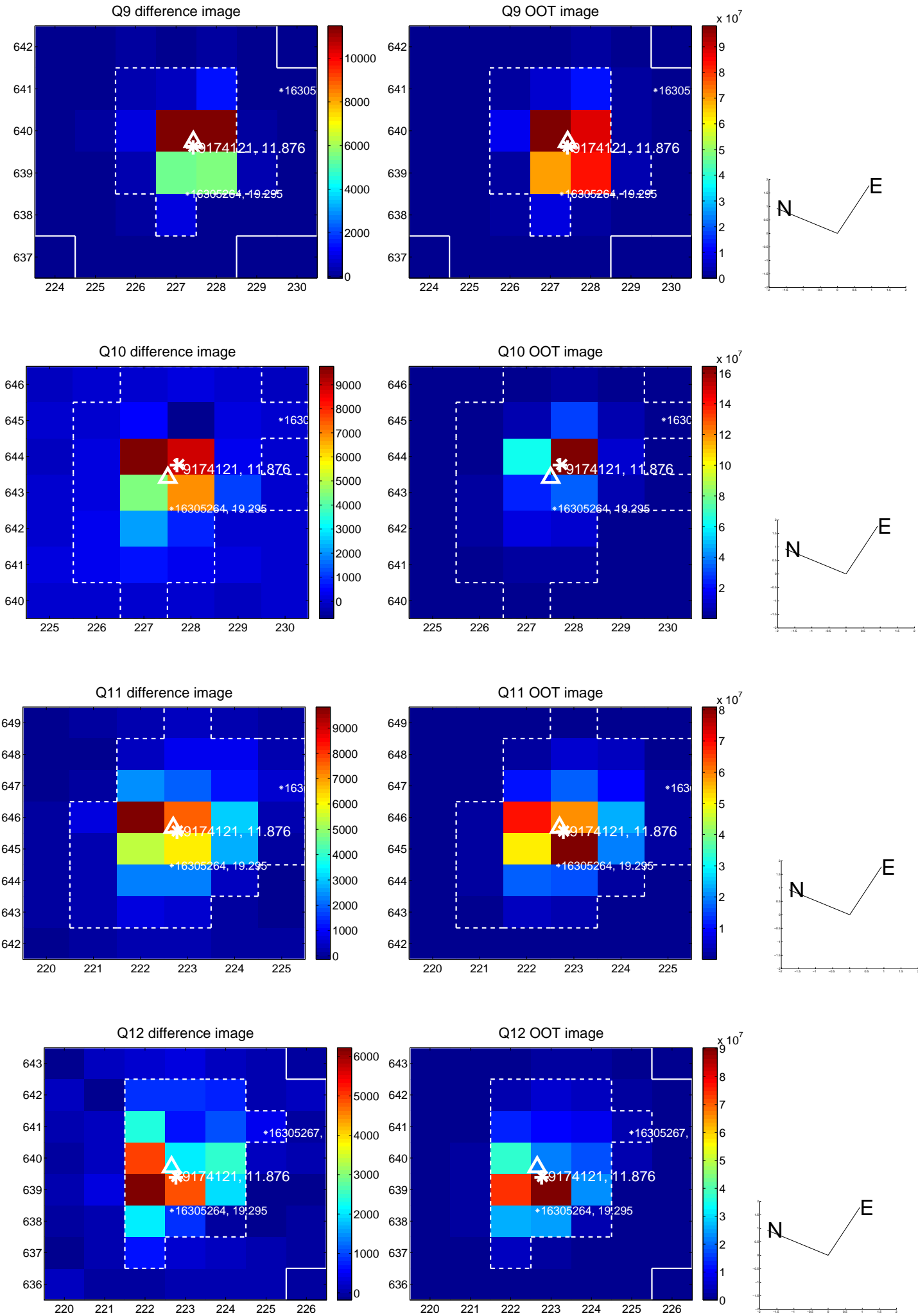
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



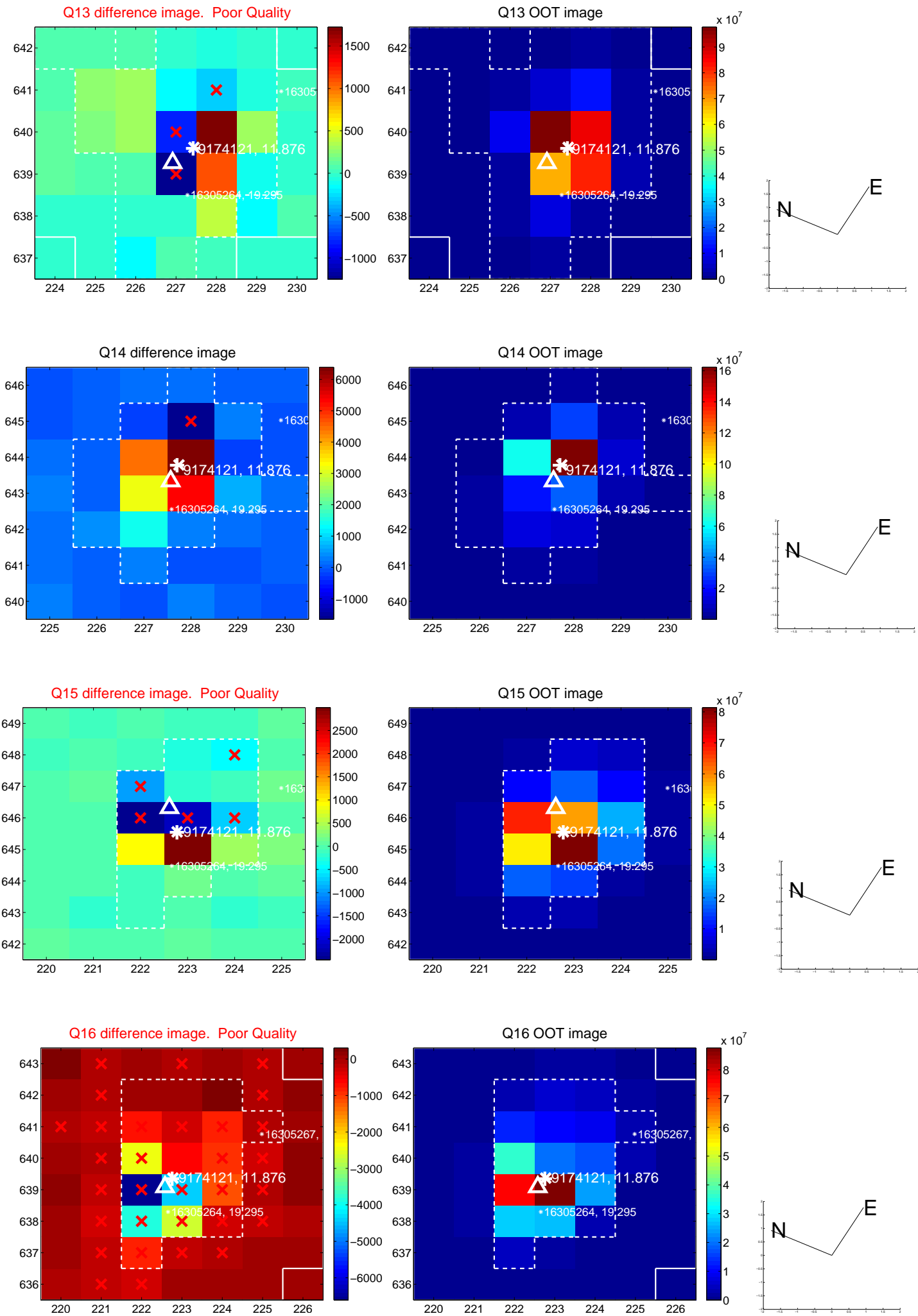
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



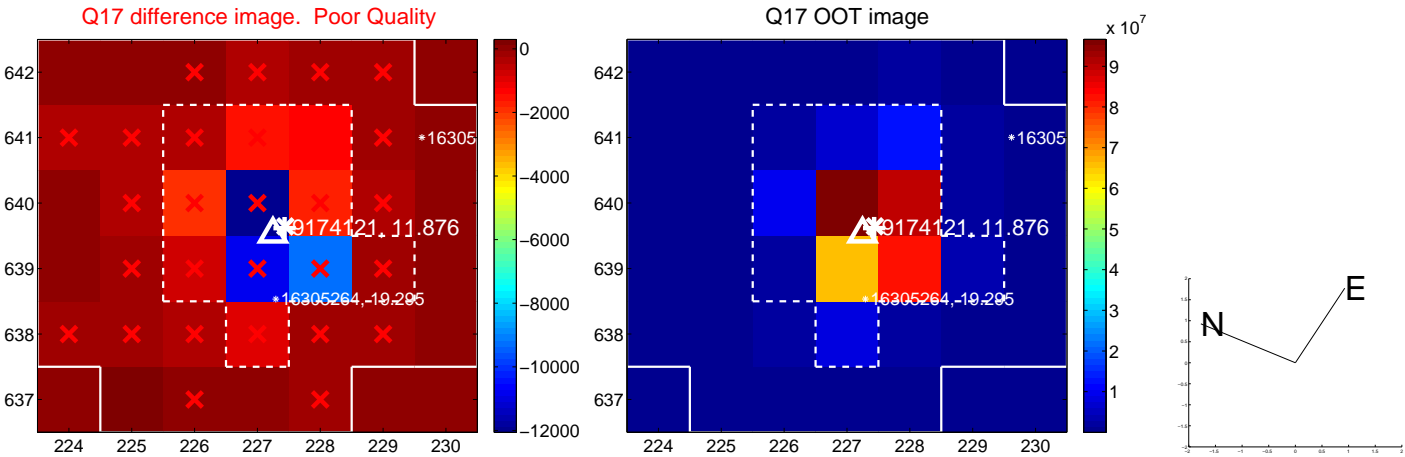
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



folded centroid time series figure for this object.

UKIRT Image

Declination

