

KIC 005773121

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})
005773121-01	OBS	4002.01	0.524177	131.600528	223.2	0.820	18.3	25.9	0.81	5278	1.50	3030.91

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005773121-01	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.

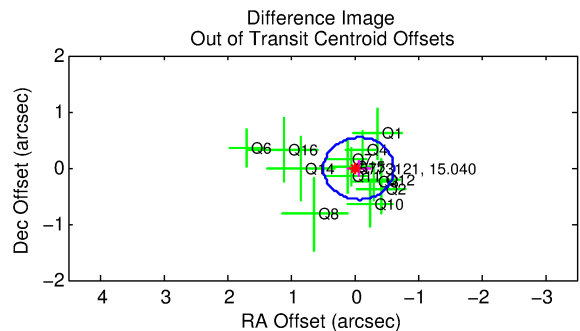
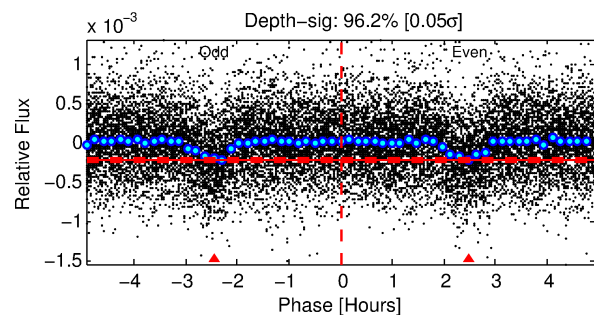
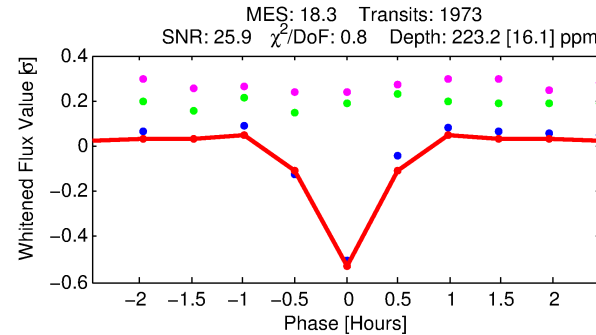
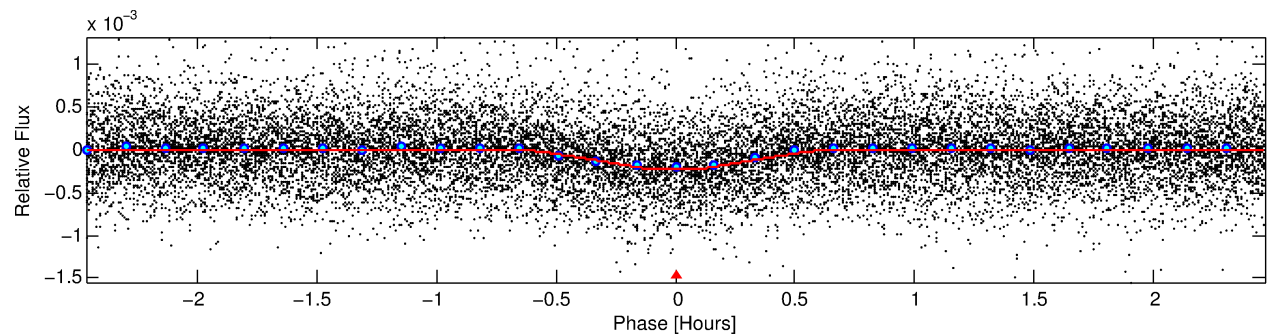
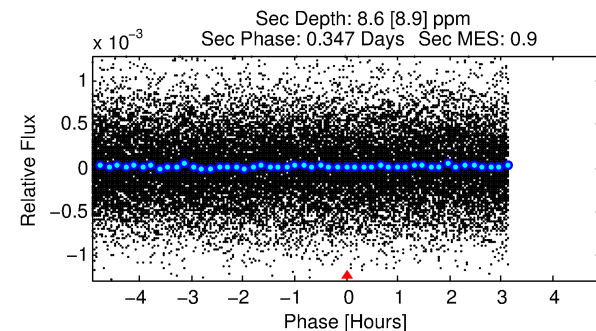
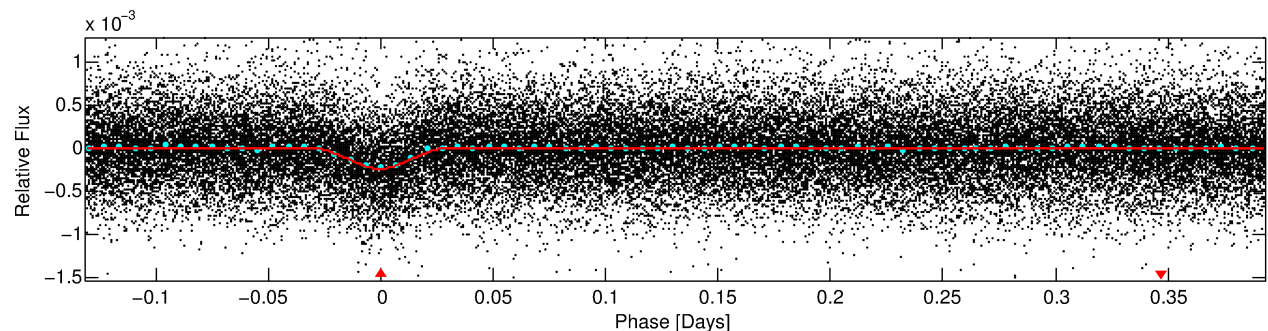
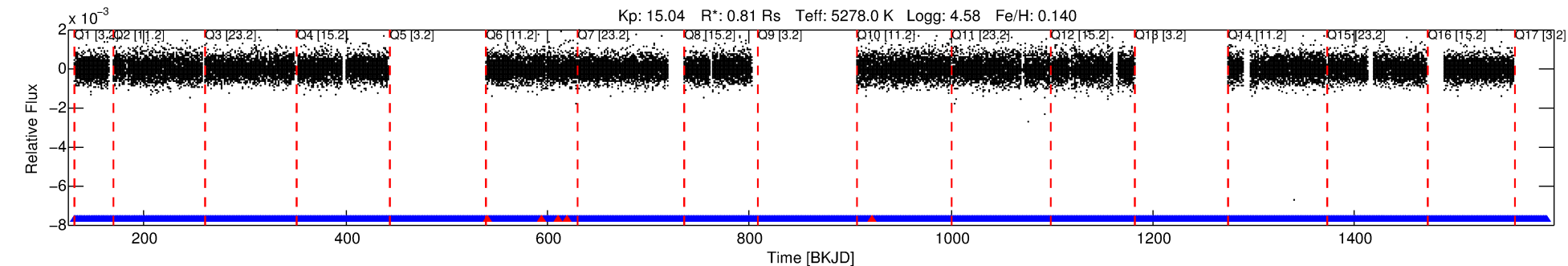
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005773121-01

No Significant Match Found

DV One-Page Summary

KIC: 5773121 Candidate: 1 of 1 Period: 0.524 d
KOI: K04002.01 Corr: 0.960



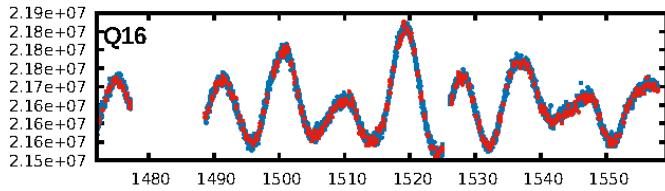
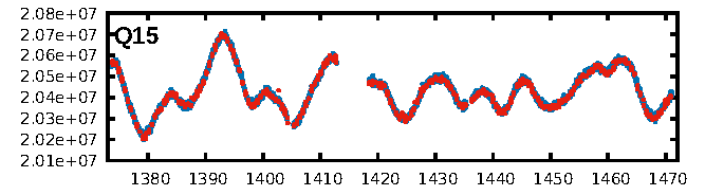
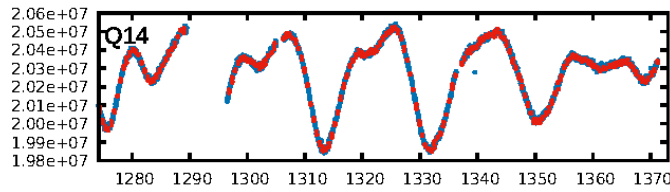
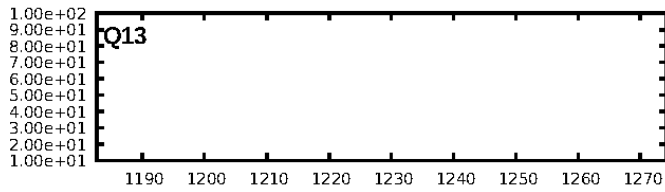
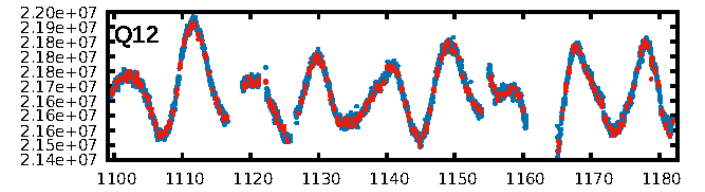
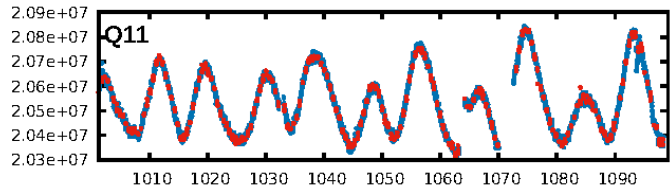
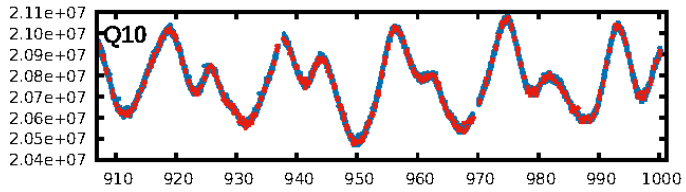
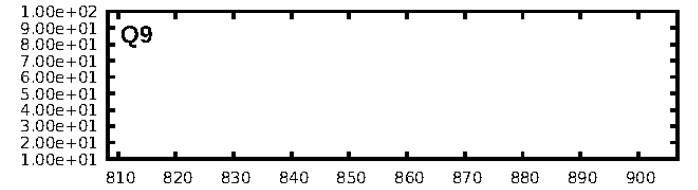
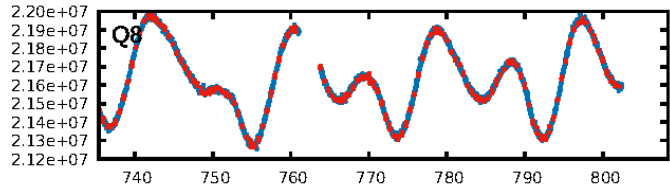
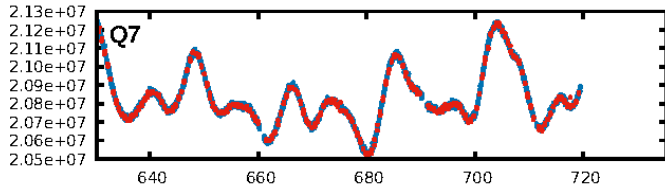
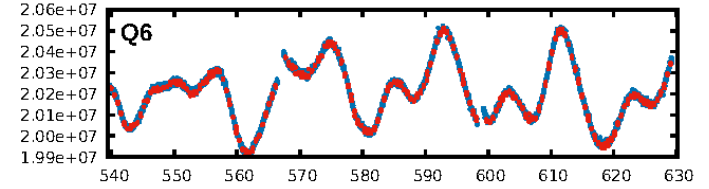
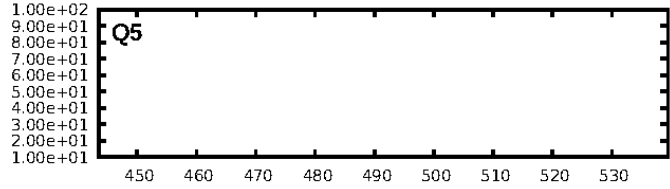
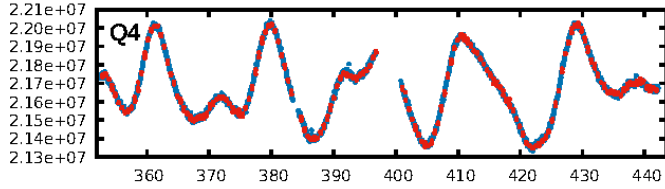
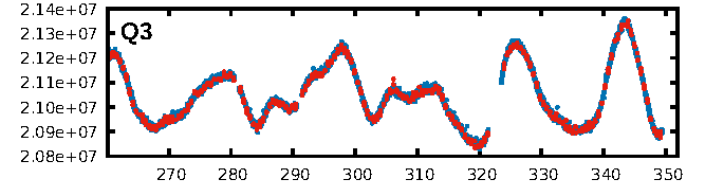
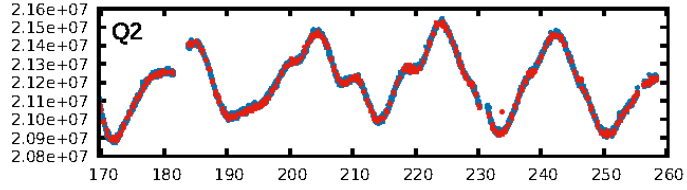
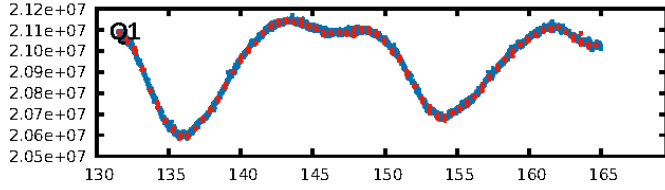
DV Fit Results:

Period = 0.52418 [0.00000] d
Epoch = 131.6005 [0.0005] BKJD
Rp/R* = 0.0168 [0.0067]
a/R* = 2.51 [3.49]
b = 0.90 [0.37]
Seff = 3030.91 [501.90]
Teff = 1892 [78] K
Rp = 1.50 [0.62] Re
a = 0.0123 [0.0012] AU
Ag = 0.32 [0.43] [-1.59σ]
Teffp = 2207 [722] K [0.43σ]

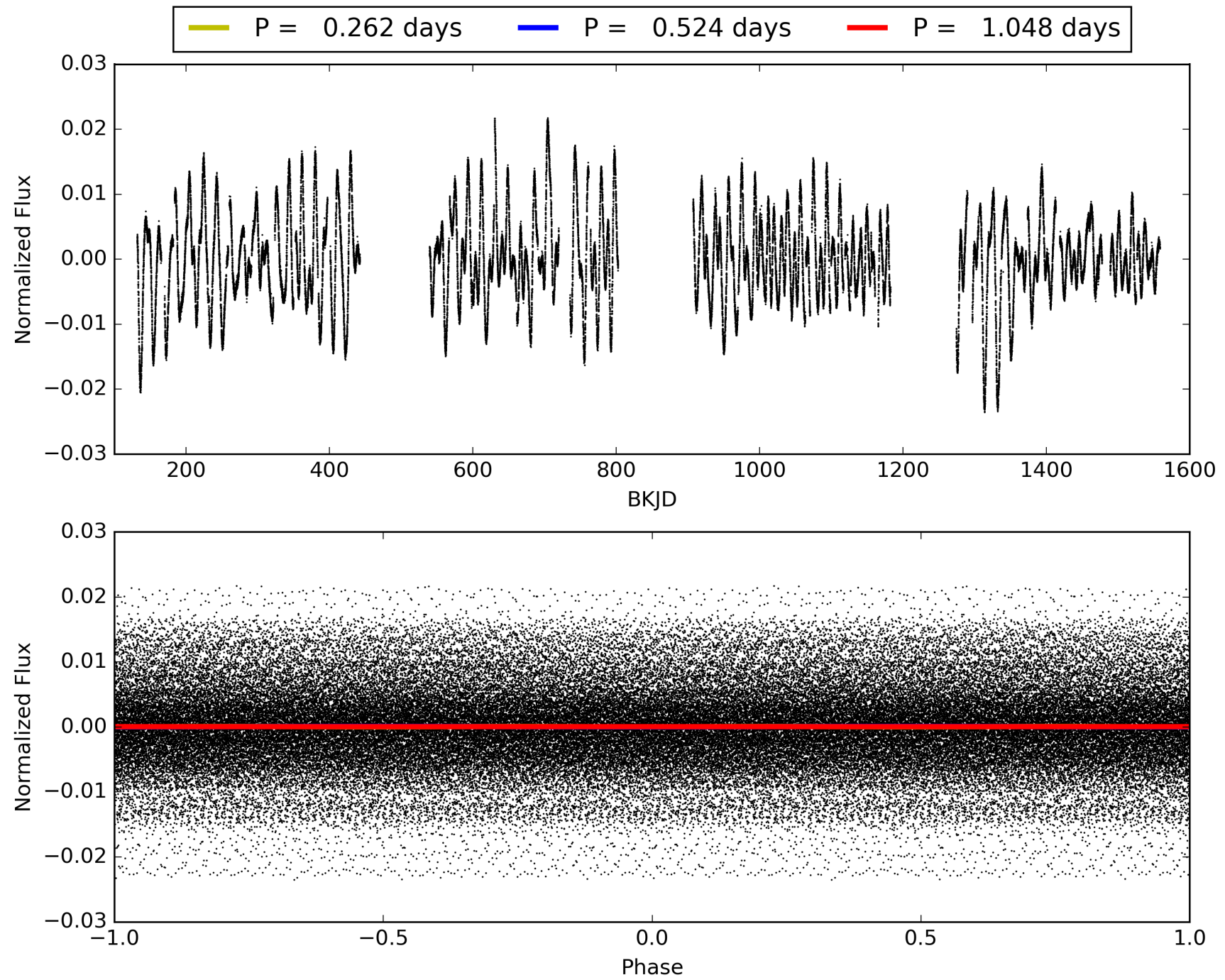
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.80e-67
RollingBand-fgt: 1.00 [1904/1909]
GhostDiagnostic-chr: 2.484
Centroid-sig: 0.1%
Centroid-so: 0.854 arcsec [1.65σ]
OotOffset-rm: 0.071 arcsec [0.38σ]
KicOffset-rm: 0.288 arcsec [1.45σ]
OotOffset-st: 4/4/4/1 [13]
KicOffset-st: 4/4/4/1 [13]
DiffImageQuality-fgm: 1.00 [13/13]
DiffImageOverlap-fno: 1.00 [13/13]

TCE 005773121-01, PDC Light Curves

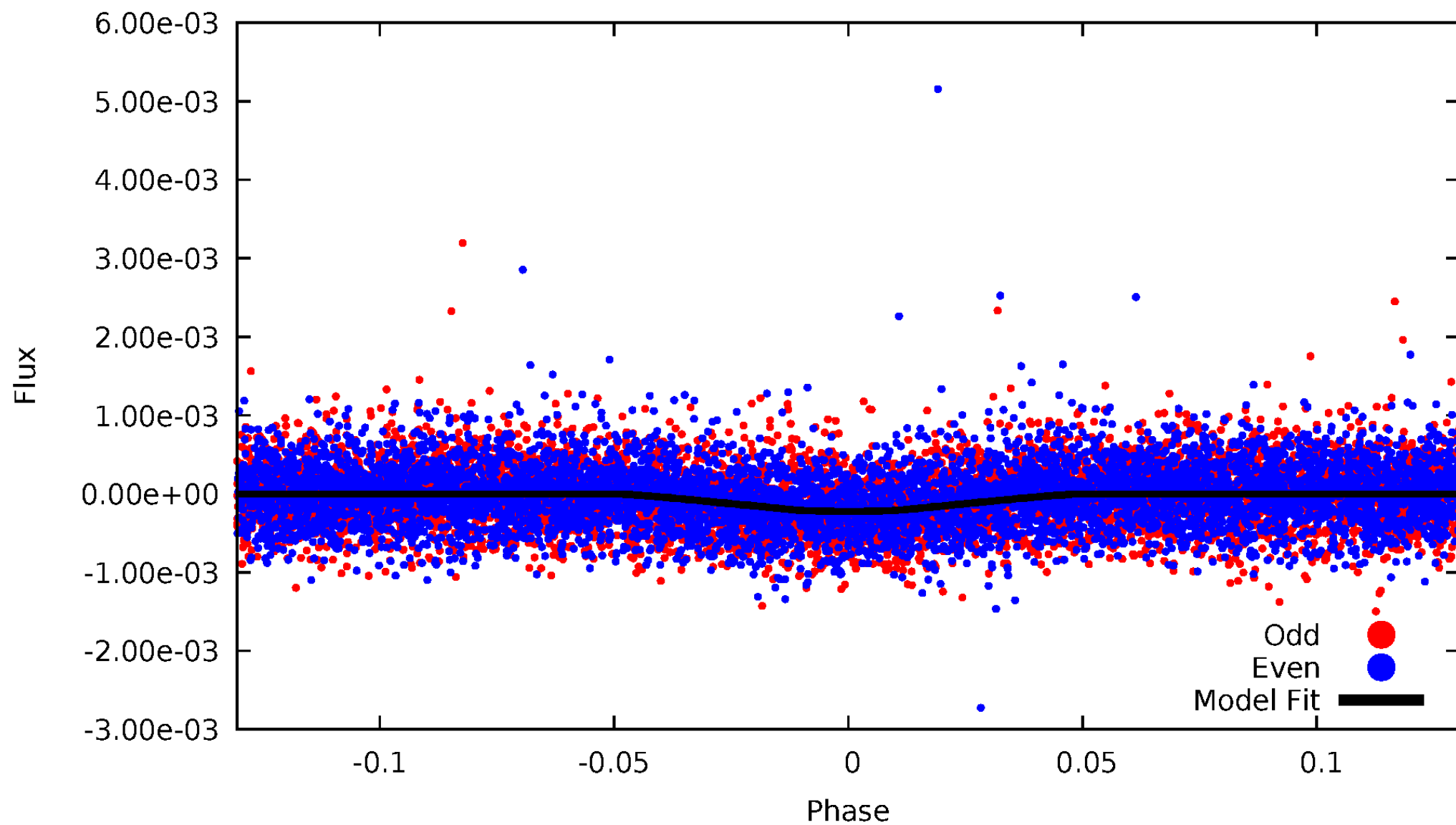


TCE 005773121-01



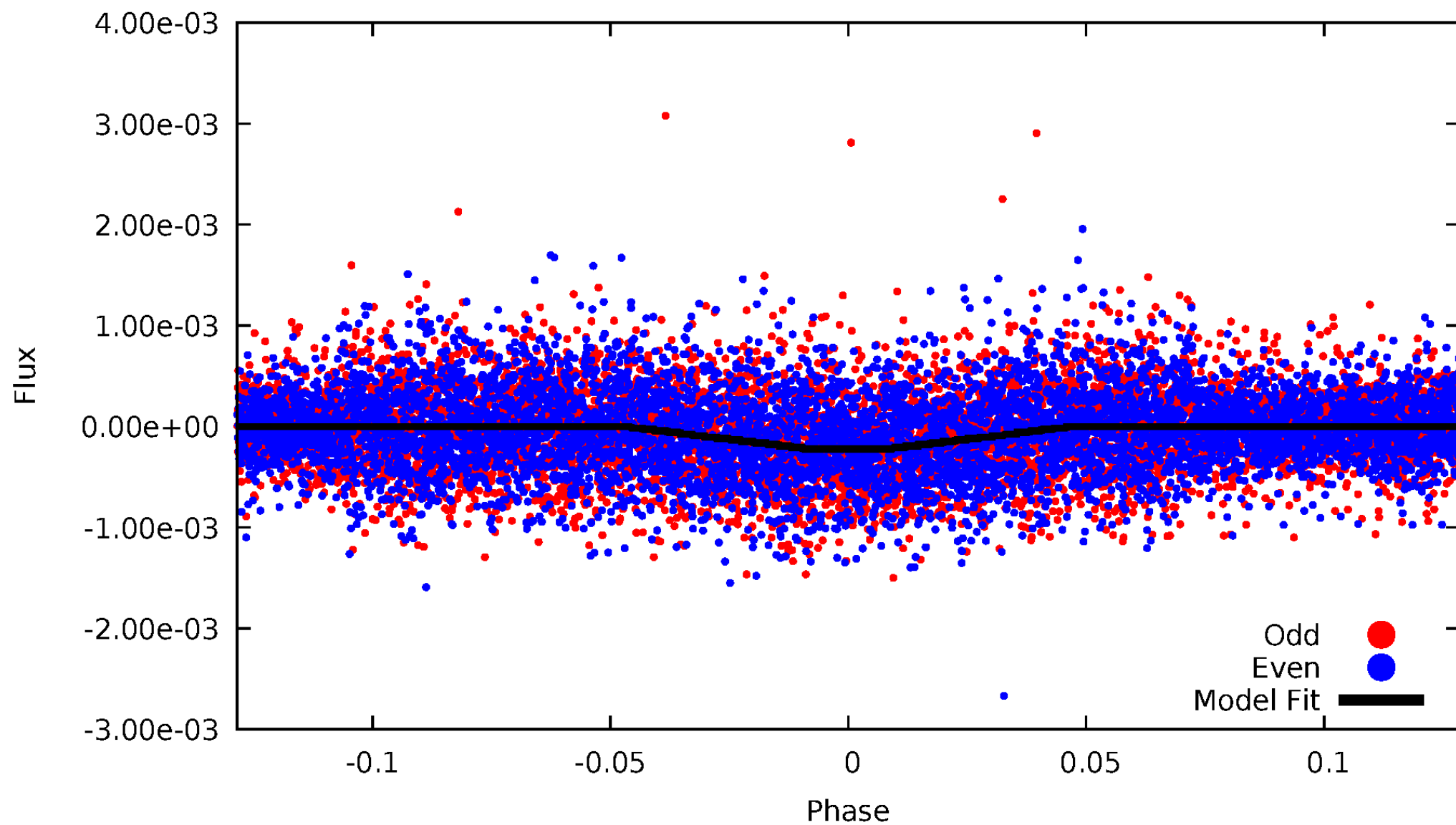
DV Odd/Even

TCE 005773121-01

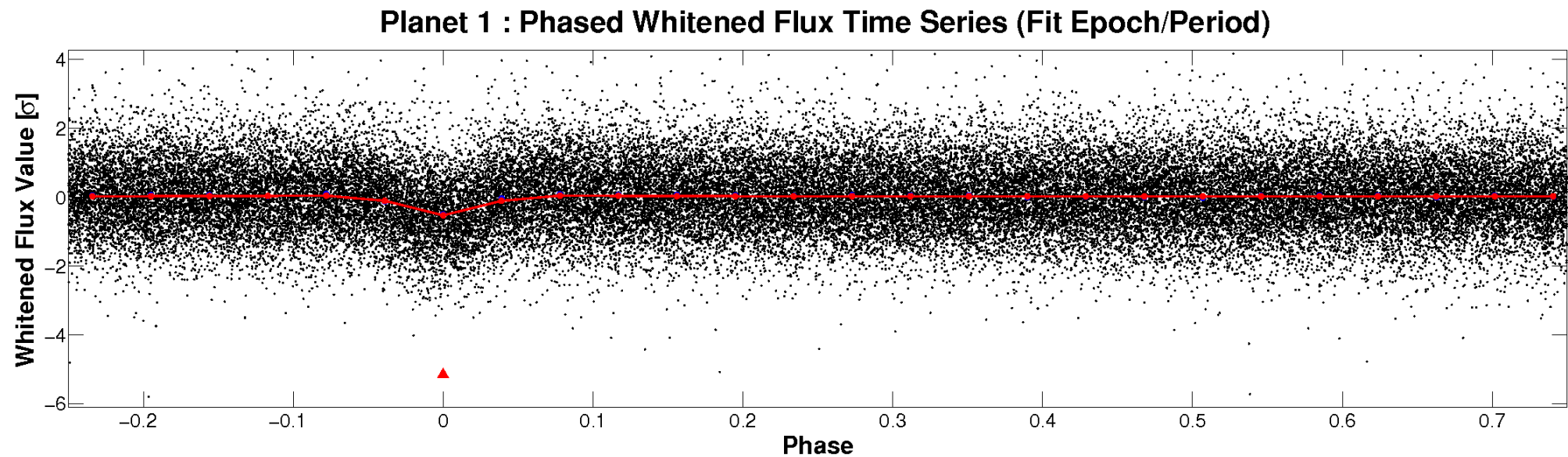
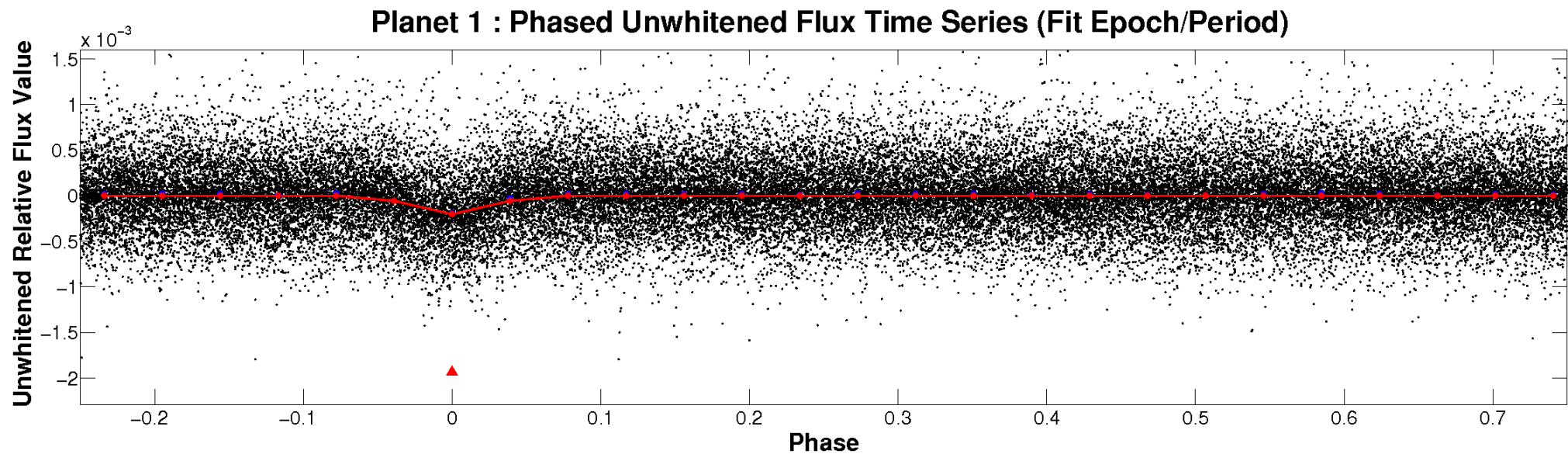


ALT Odd/Even

TCE 005773121-01

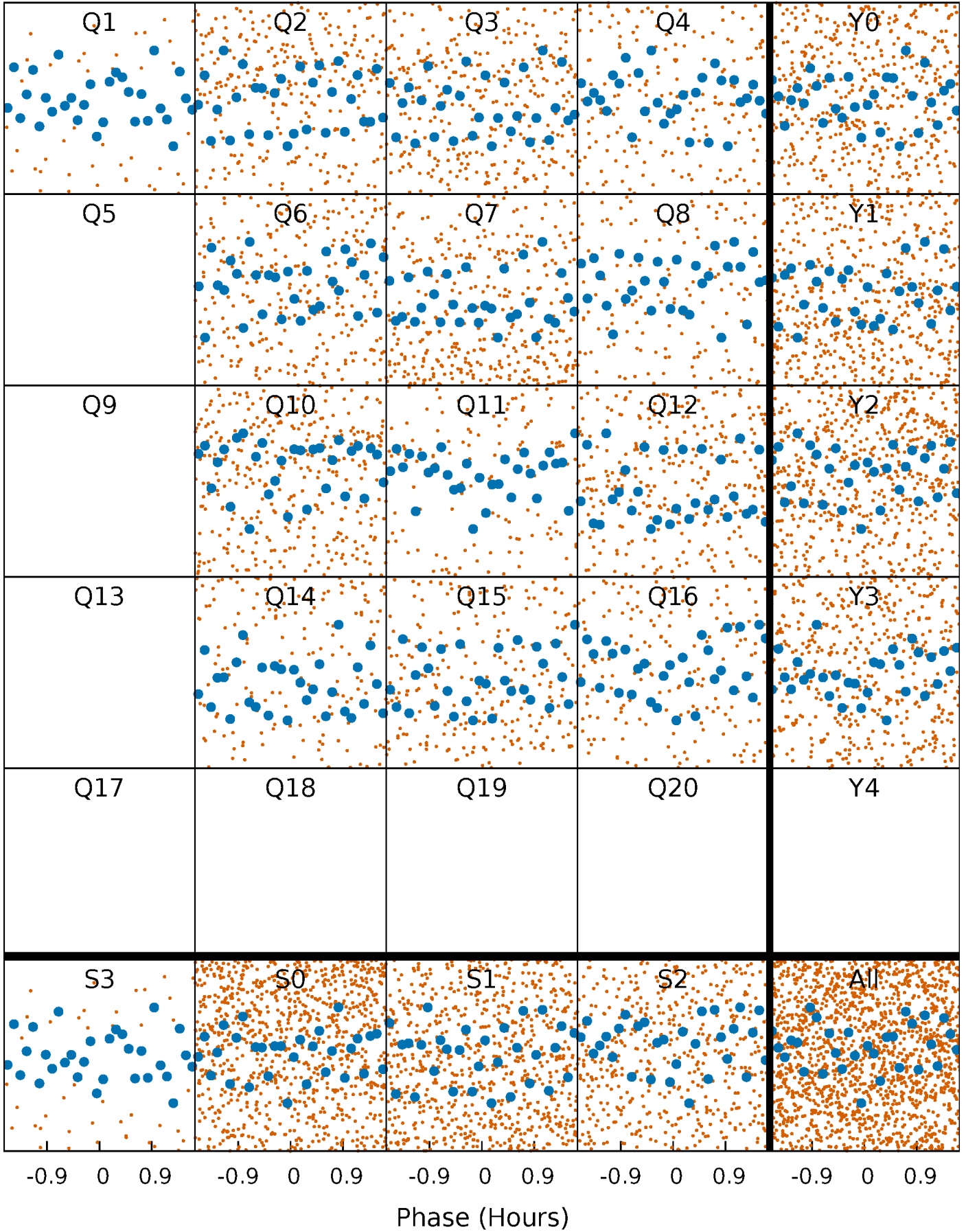


Non-Whitened Vs. Whitened Light Curve



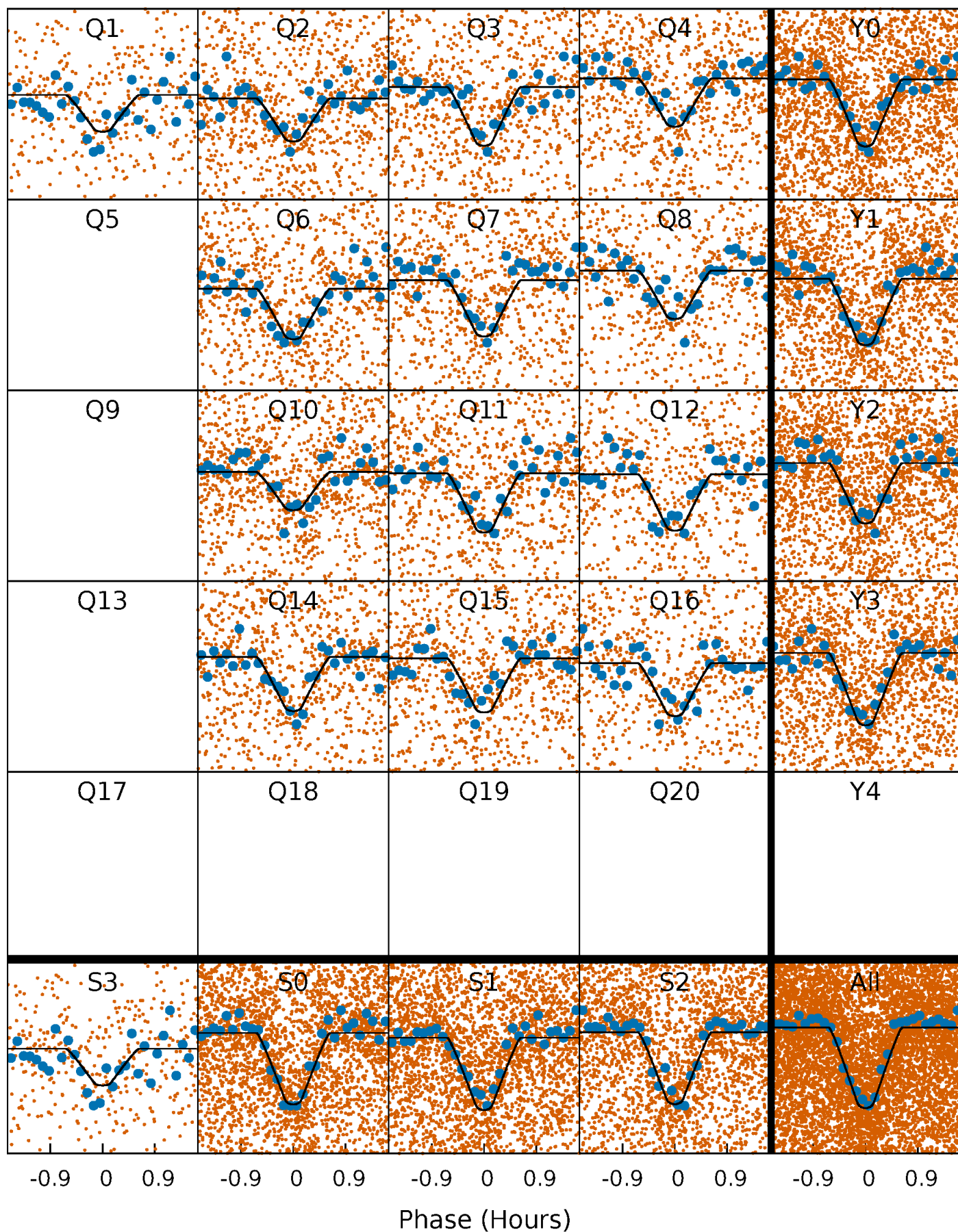
PDC Quarter-Phased Transit Curves

TCE 005773121-01 P= 0.524177 Days $T_0=131.600528$ (BKJD)



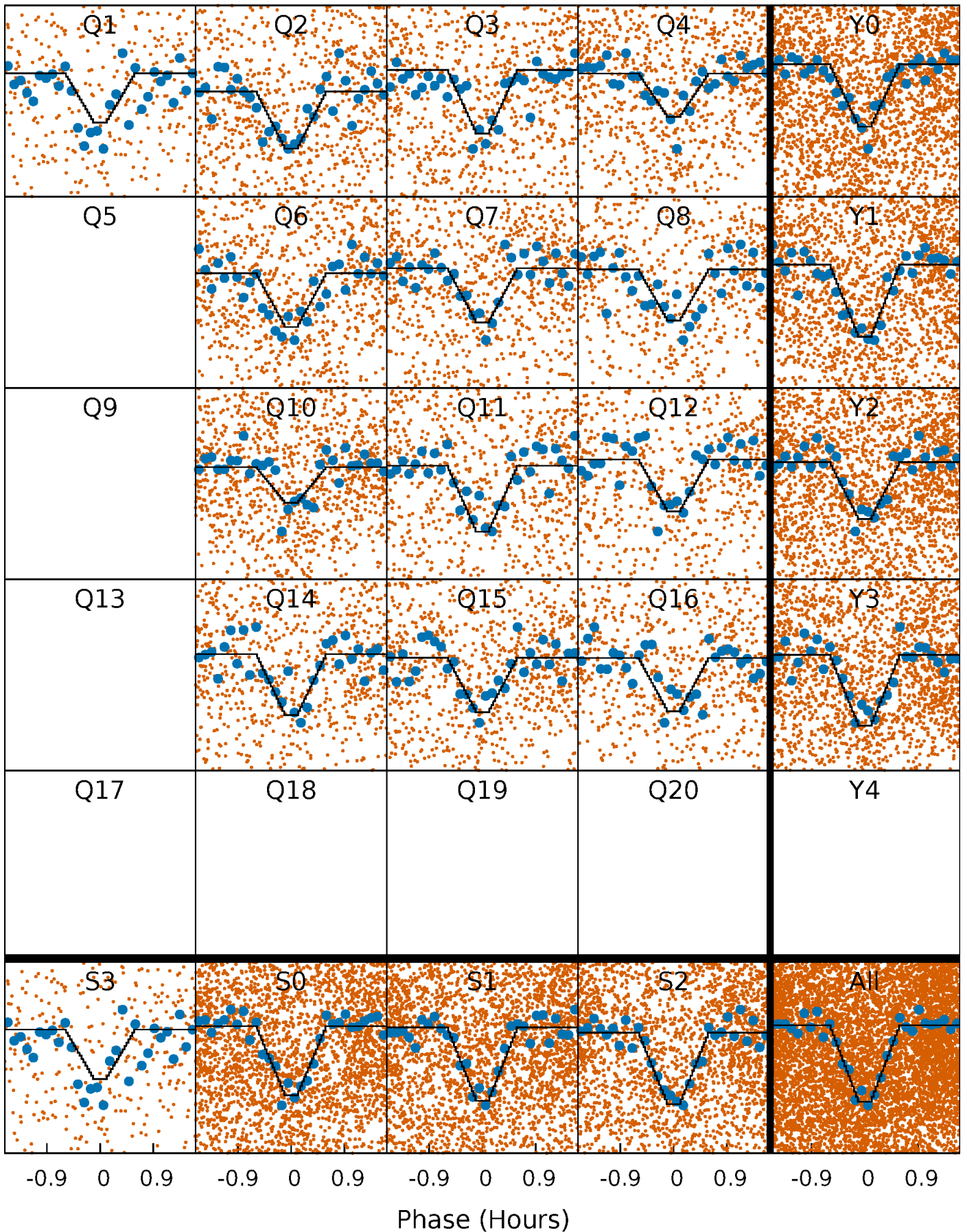
DV Quarter-Phased Transit Curves

TCE 005773121-01 P= 0.524177 Days $T_0=131.600528$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

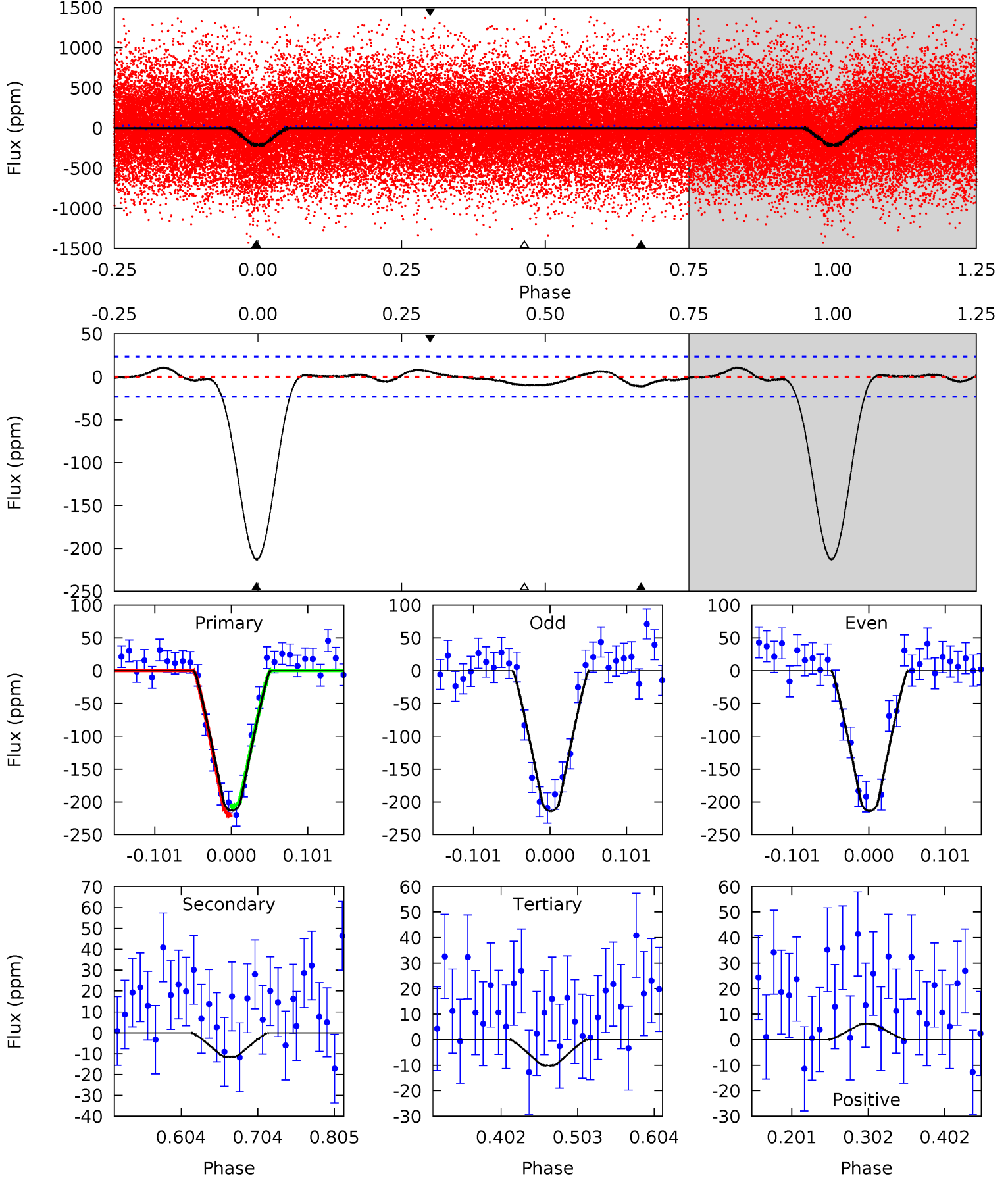
TCE 005773121-01 P= 0.524174 Days $T_0=131.603537$ (BKJD)



DV Model-Shift Uniqueness Test

005773121-01, P = 0.524177 Days, E = 131.076351 Days

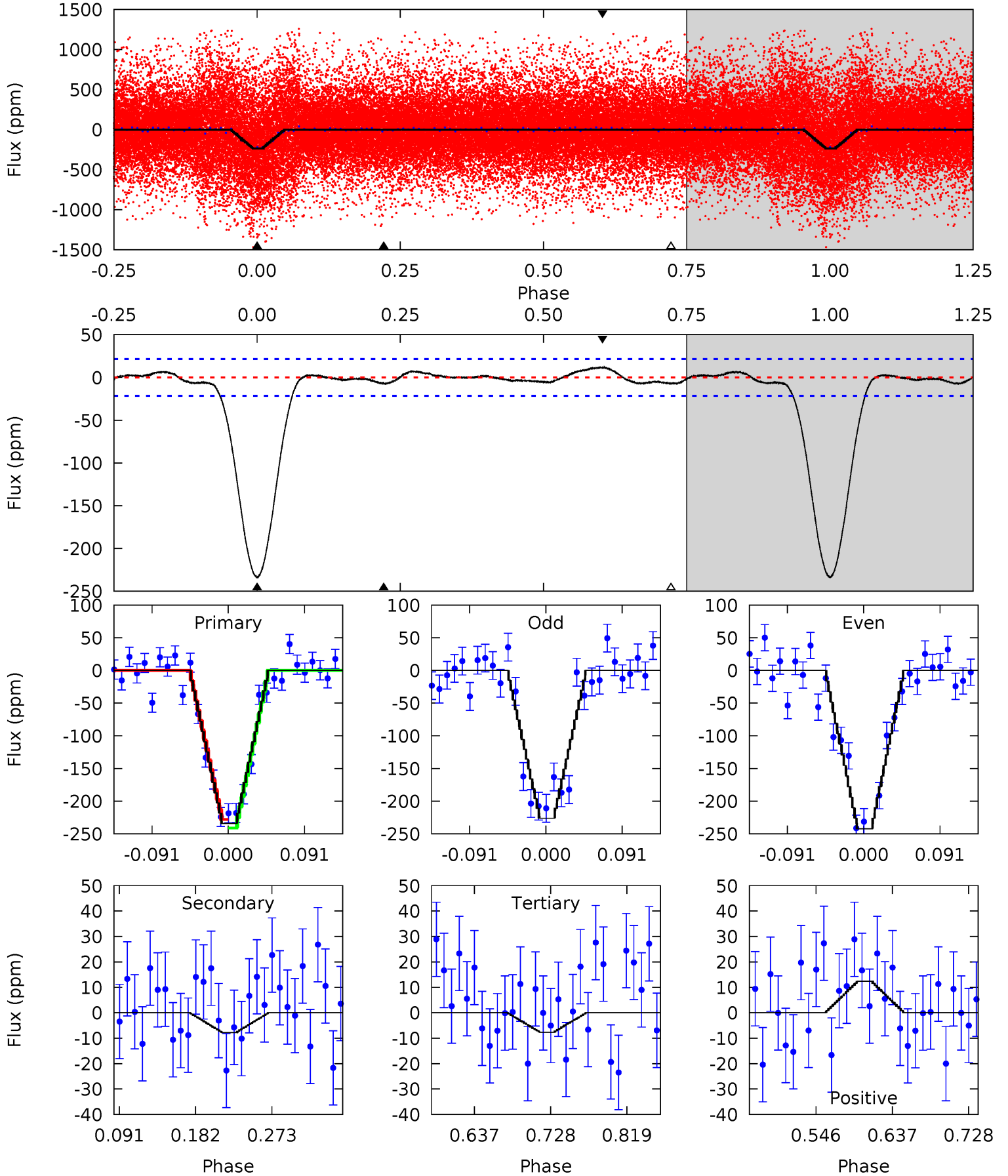
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
42.0	2.27	2.00	1.22	4.56	1.64	1.01	40.0	40.7	0.28	1.05	0.05	0.95	0.05	1.37



Alt Model-Shift Uniqueness Test

005773121-01, P = 0.524174 Days, E = 131.079363 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
49.9	1.66	1.63	2.64	4.58	1.69	1.05	48.2	47.2	0.03	-0.98	1.72	0.95	0.05	1.42



Stellar Parameters For KIC 005773121

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	5278^{+73}_{-84}	$4.576^{+0.015}_{-0.090}$	$0.140^{+0.150}_{-0.150}$	$0.815^{+0.080}_{-0.029}$	$0.911^{+0.033}_{-0.060}$	$2.369^{+0.182}_{-0.606}$
	+1%/-2%	+0%/-2%	+107%/-107%	+10%/-4%	+4%/-7%	+8%/-26%
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 005773121-01 / KOI 4002.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-12 ± 5	$1.52^{+0.65}_{-0.59}$	2672^{+76}_{-57}	2493^{+867}_{-5122}	$0.396^{+0.779}_{-0.240}$
Alt.	-8 ± 5	$1.38^{+0.63}_{-0.57}$	2672^{+65}_{-55}	1934^{+1421}_{-4673}	$0.309^{+0.787}_{-0.208}$

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

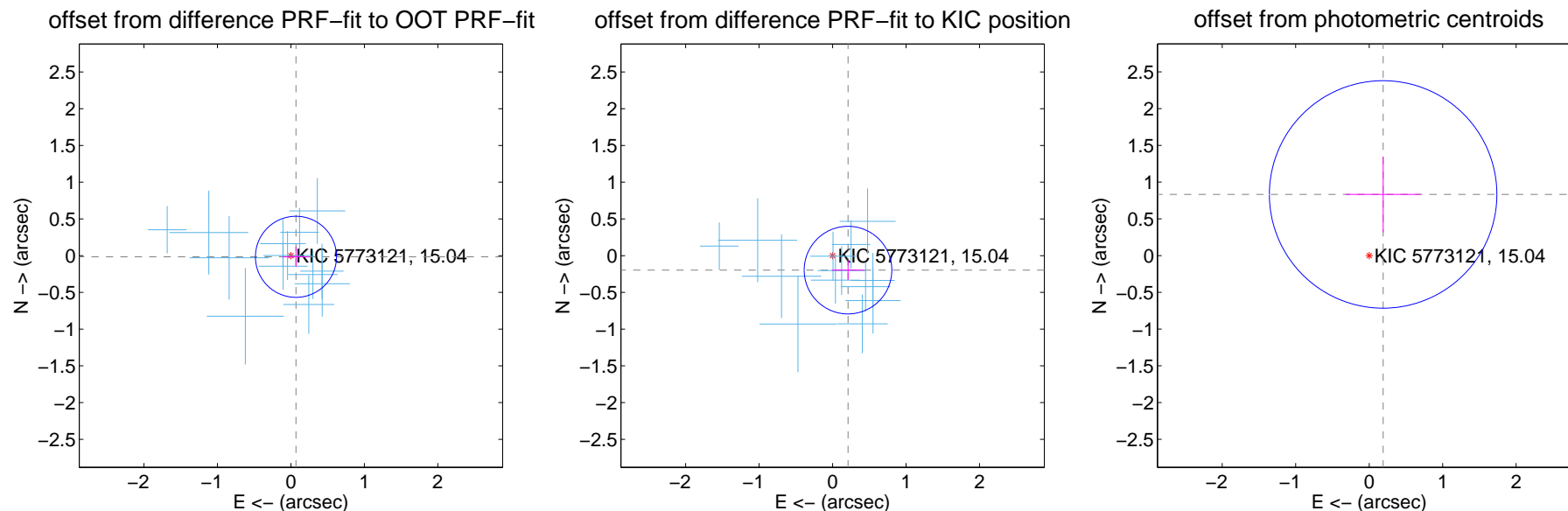
DV Centroid Data

Supplemental centroid analysis for 005773121-01. Kepler magnitude: 15.04. Transit SNR 25.93

There are 13 quarters with good PRF difference image offsets

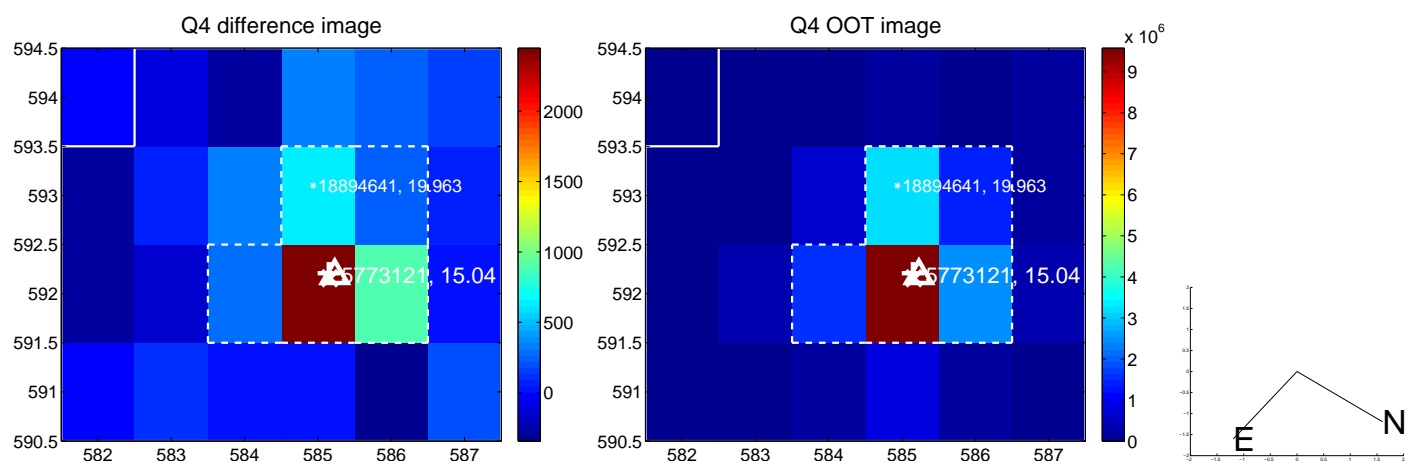
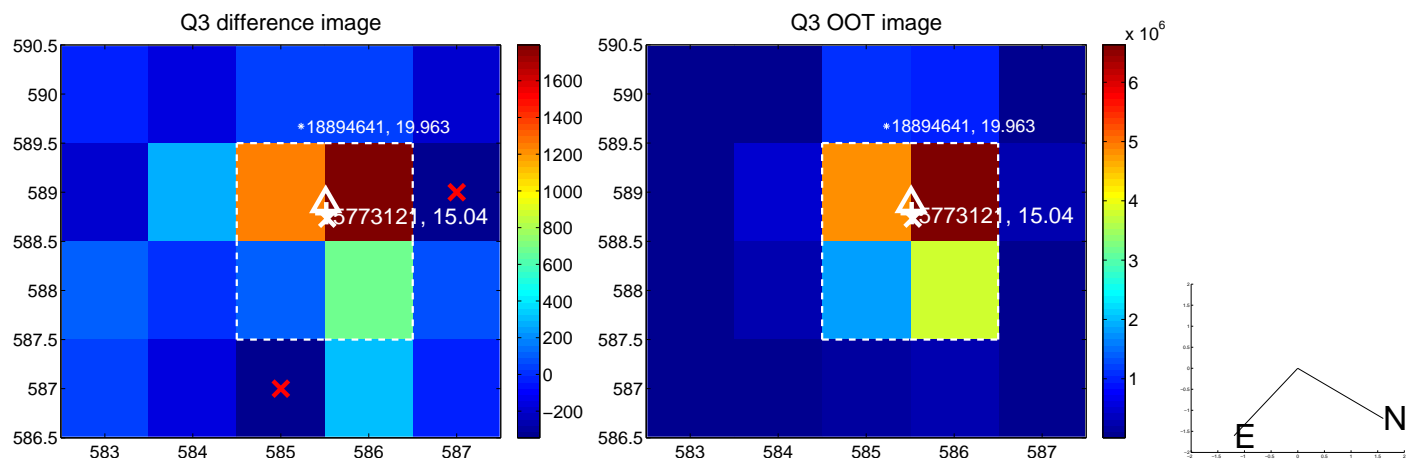
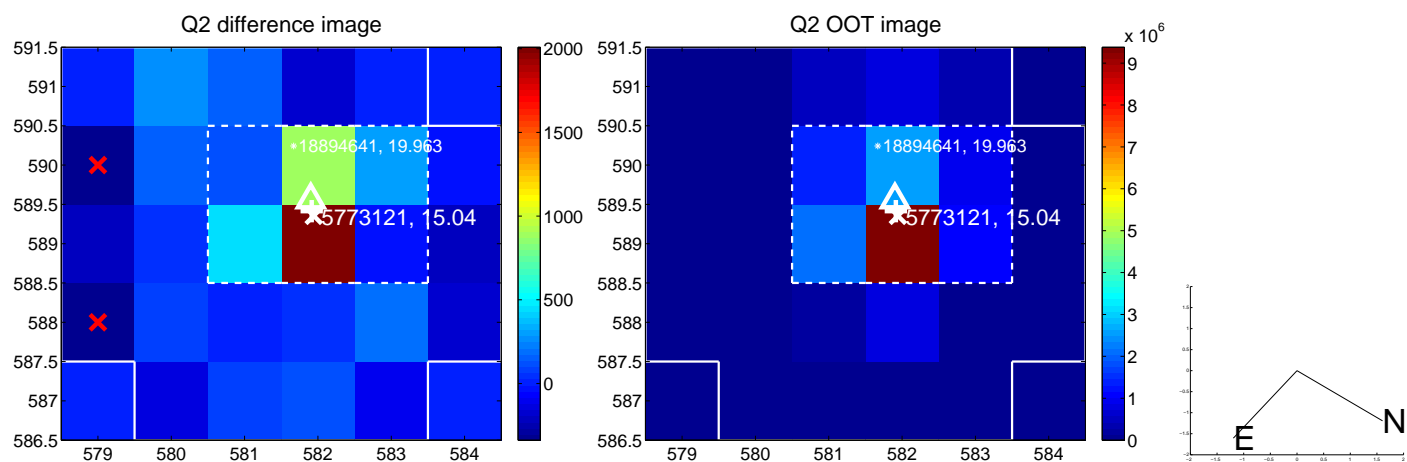
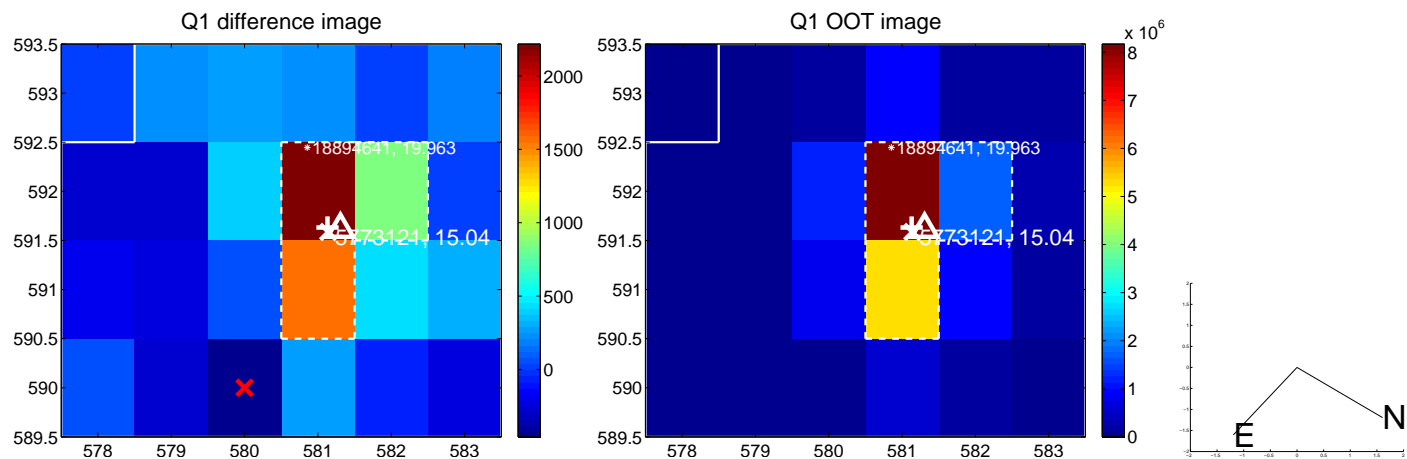
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.071 ± 0.184	0.38	-0.069 ± 0.182	-0.016 ± 0.135
PRF-fit source offset from KIC position	0.288 ± 0.199	1.45	-0.210 ± 0.220	-0.197 ± 0.132
photometric centroid source offset	0.85 ± 0.52	1.65	-0.19 ± 0.51	0.83 ± 0.52

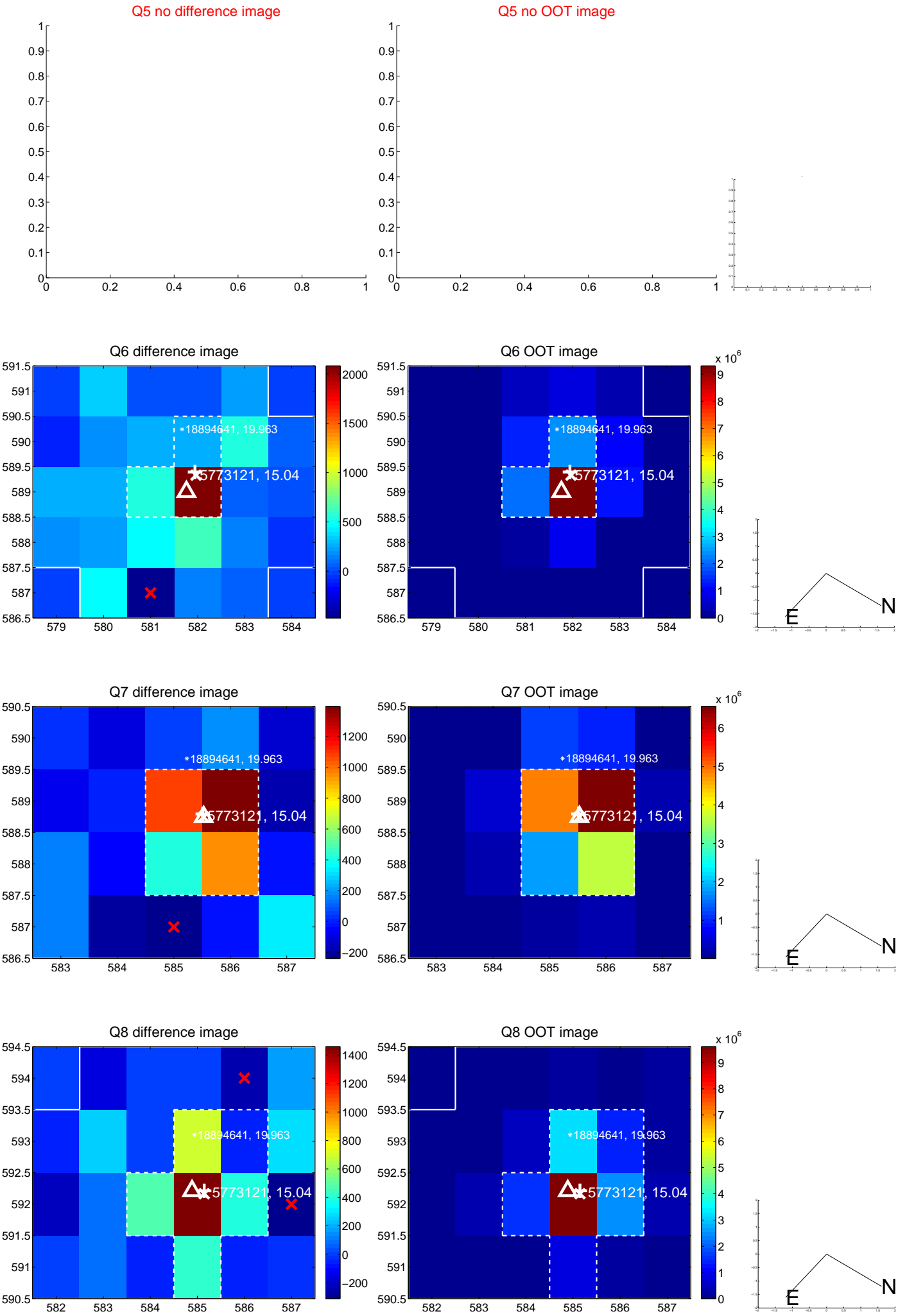


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

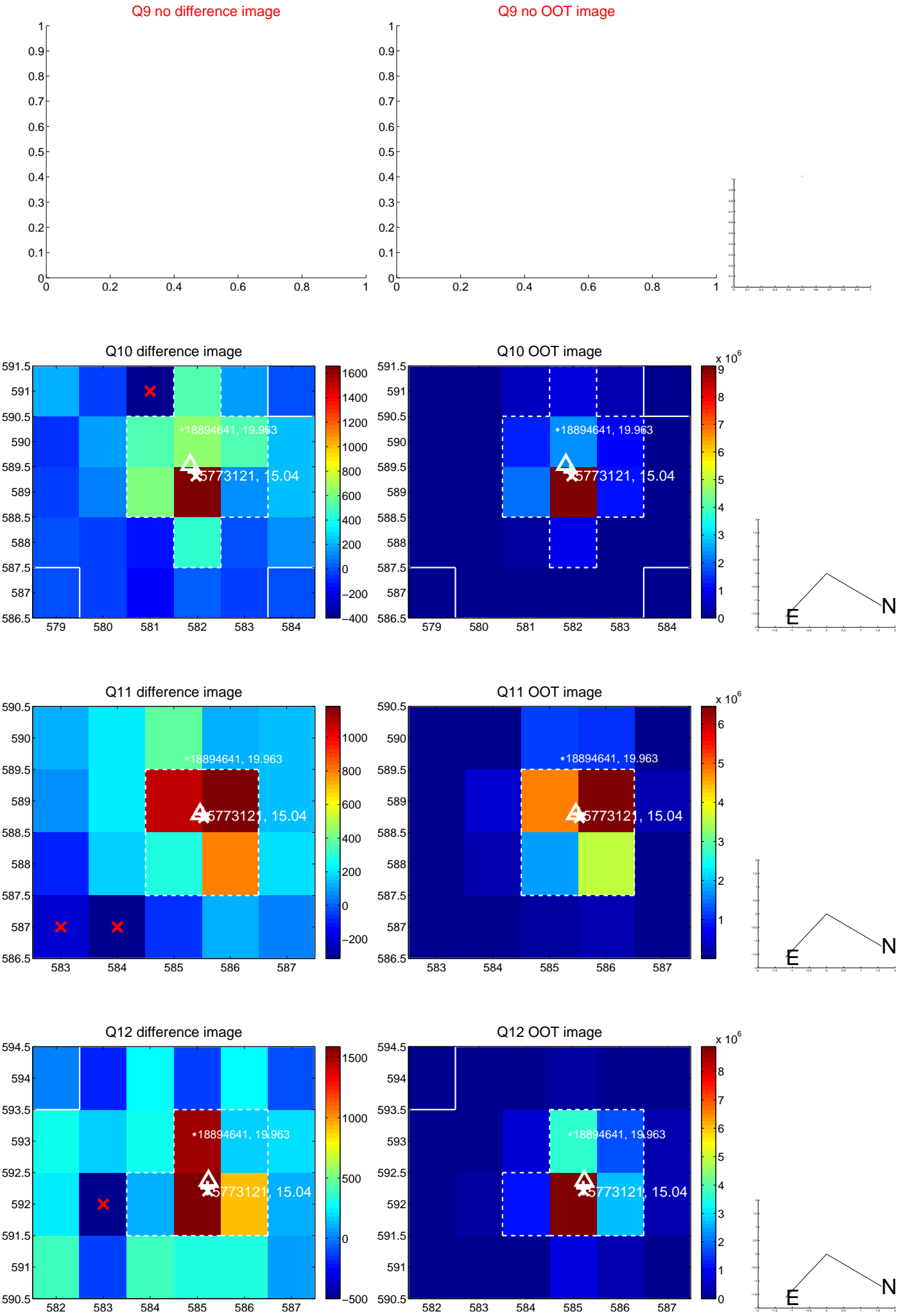
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



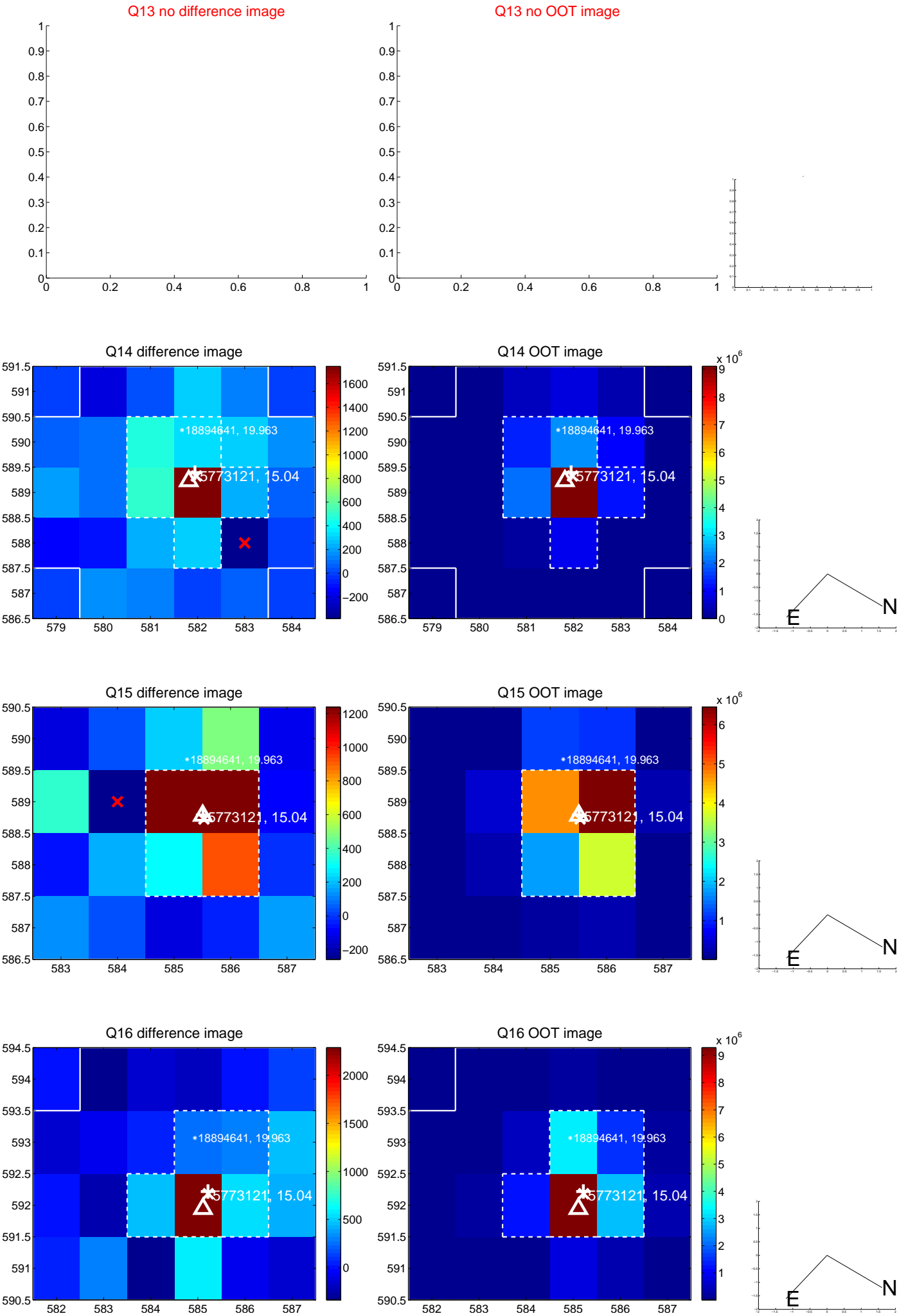
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



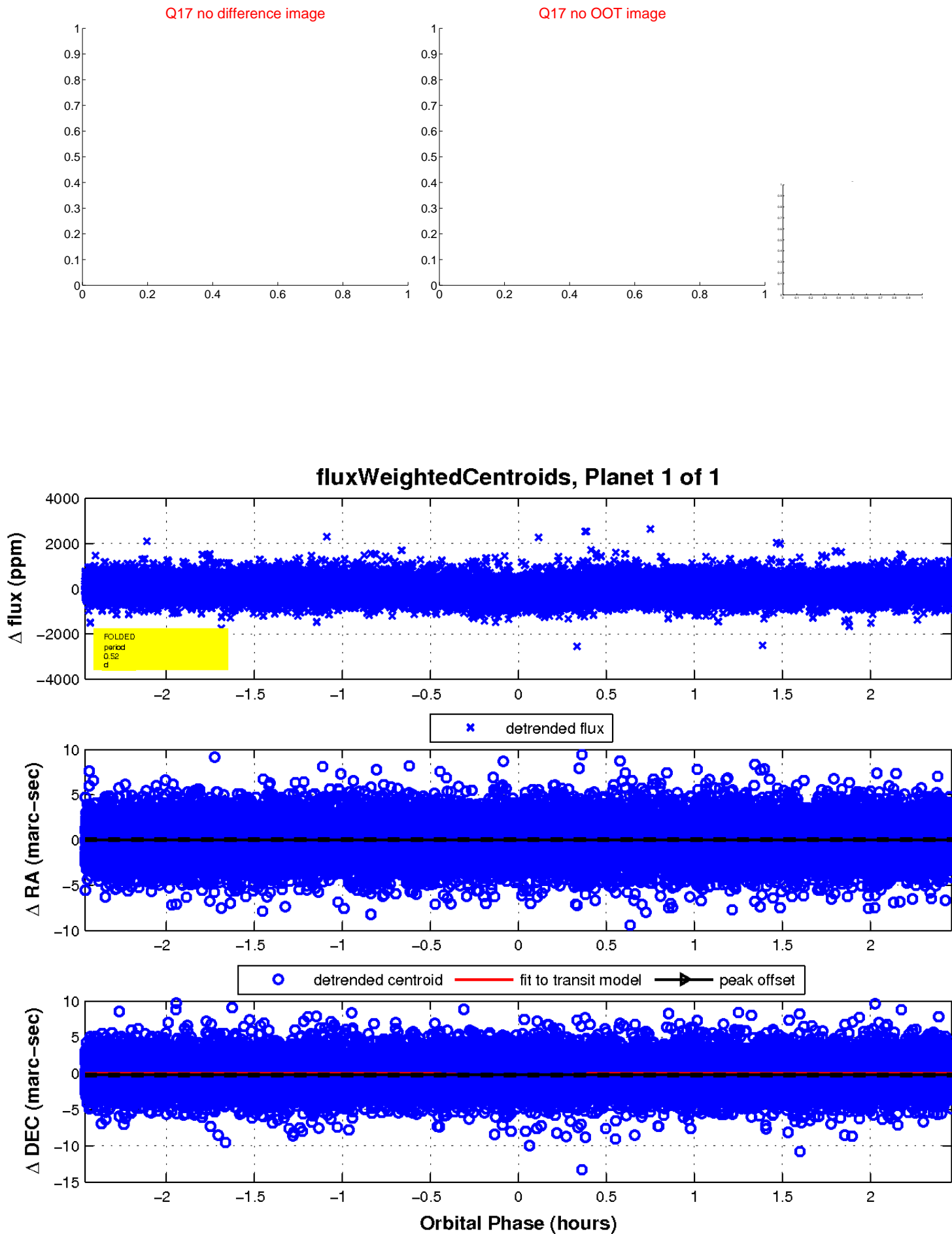
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

