

KIC 006291837

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})
006291837-01	OBS	0308.01	35.597274	151.923534	633.2	6.531	73.1	72.6	1.21	6212	3.57	41.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006291837-01	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.

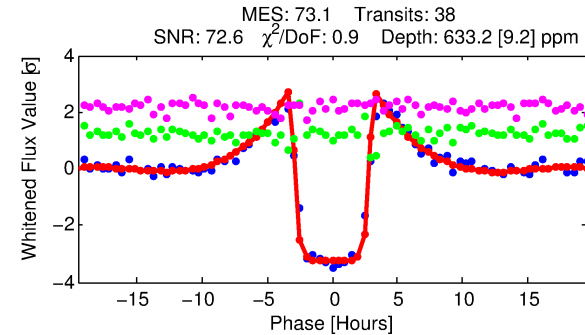
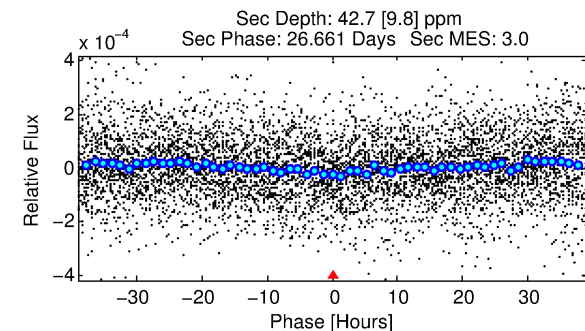
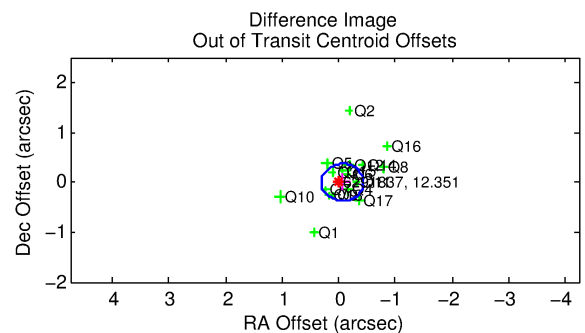
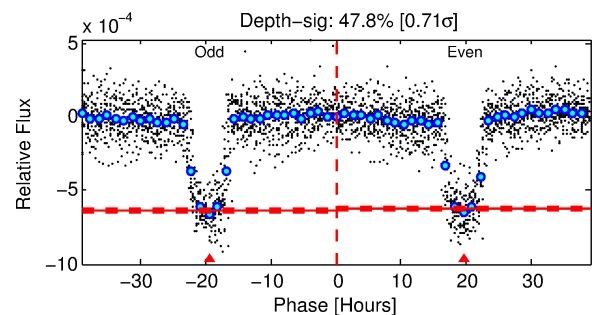
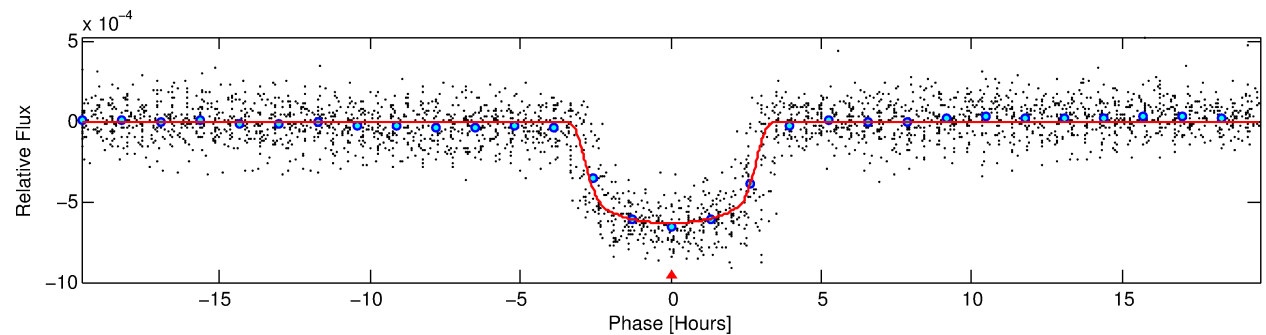
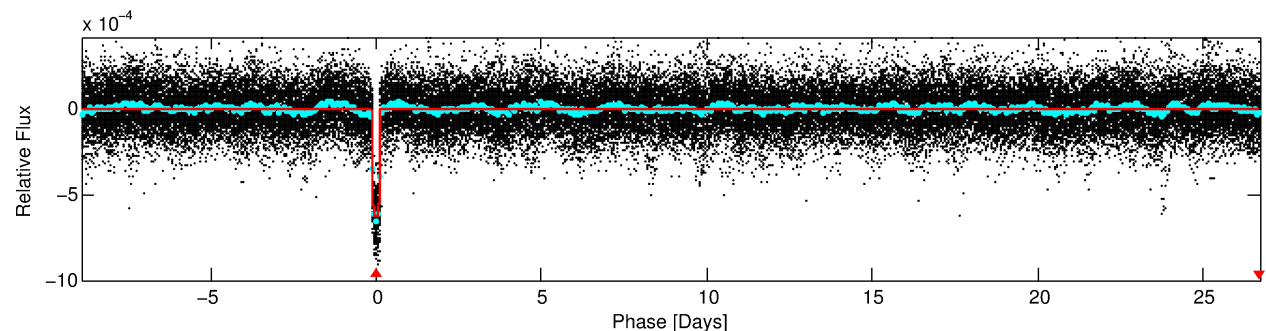
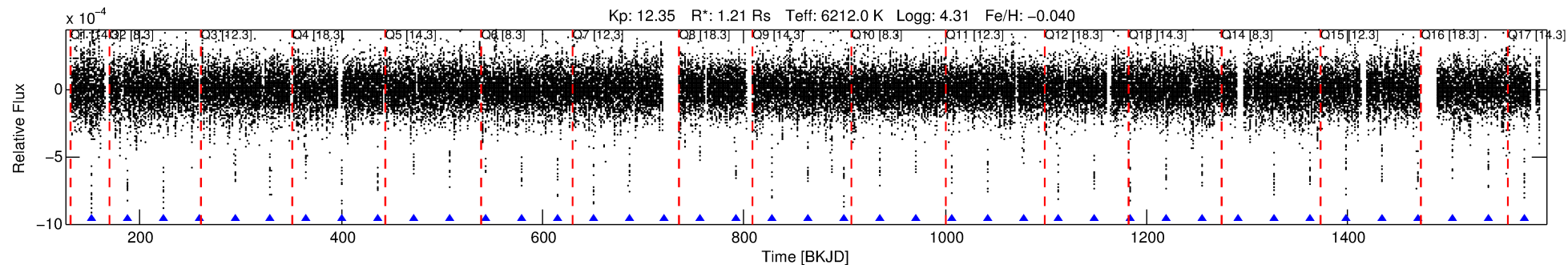
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006291837-01

No Significant Match Found

DV One-Page Summary

KIC: 6291837 Candidate: 1 of 1 Period: 35.597 d
KOI: K00308.01 Corr: 0.966



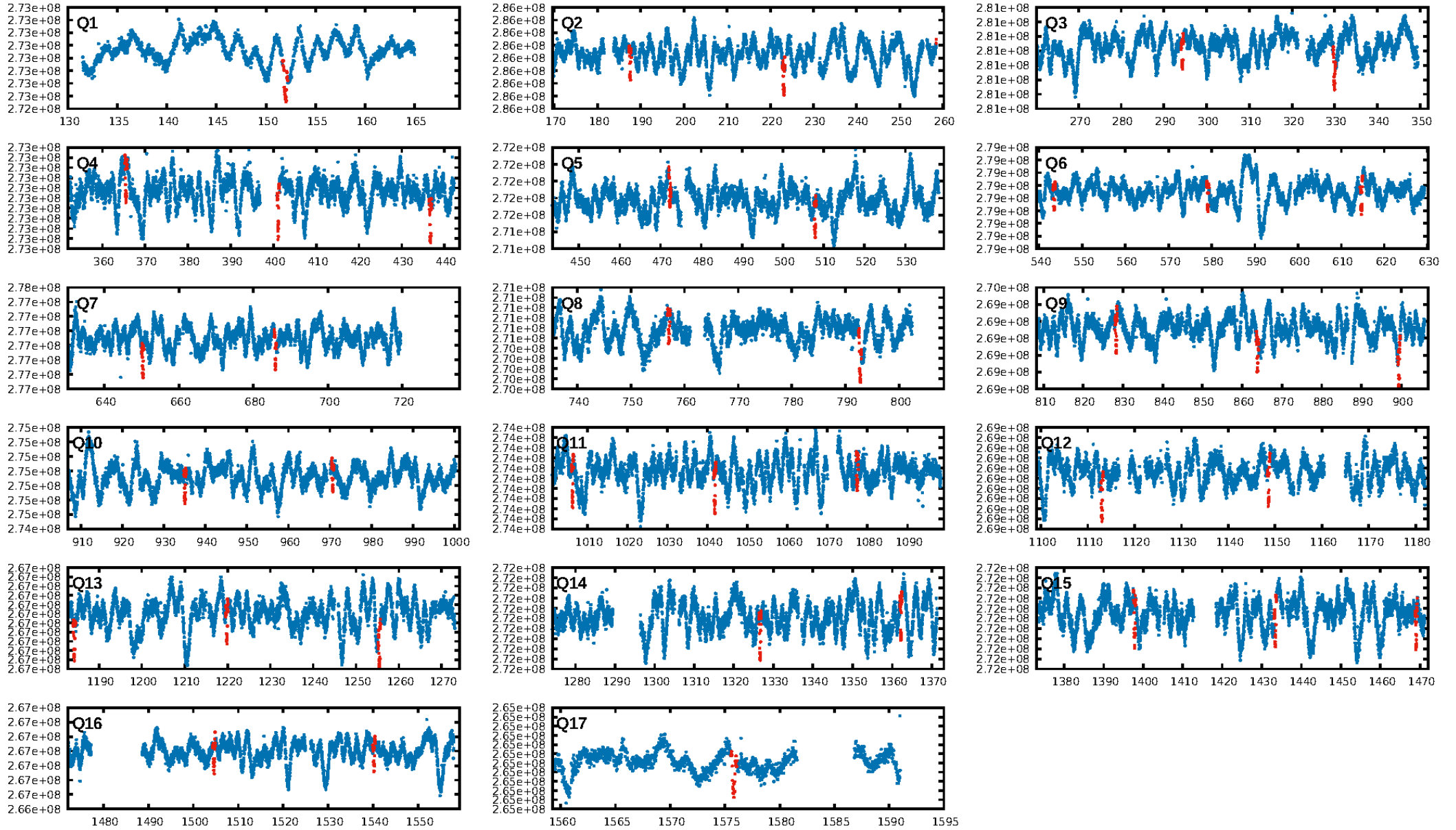
DV Fit Results:

Period = 35.59727 [0.00005] d
Epoch = 151.9235 [0.0012] BKJD
Rp/R* = 0.0271 [0.0004]
a/R* = 20.81 [1.03]
b = 0.90 [0.01]
Seff = 41.14 [9.45]
Teq = 646 [37] K
Rp = 3.57 [0.62] Re
a = 0.2177 [0.0318] AU
Ag = 87.44 [27.49] [3.14σ]
Teffp = 3053 [189] K [12.49σ]

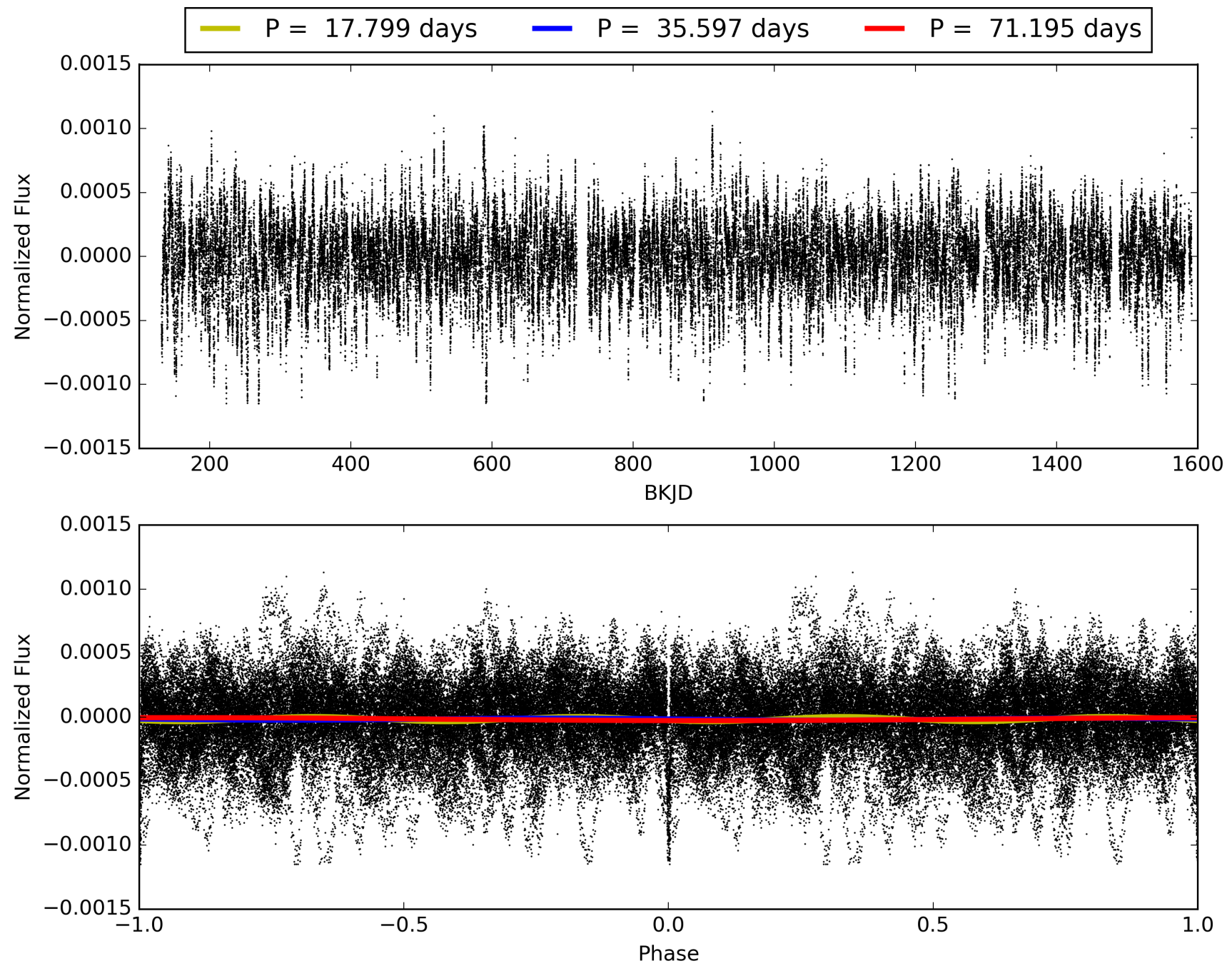
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 81.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [36/36]
GhostDiagnostic-chr: 5.534
Centroid-sig: 0.8%
Centroid-so: 0.315 arcsec [4.11σ]
OotOffset-rm: 0.066 arcsec [0.53σ]
KicOffset-rm: 0.124 arcsec [0.86σ]
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]

TCE 006291837-01, PDC Light Curves

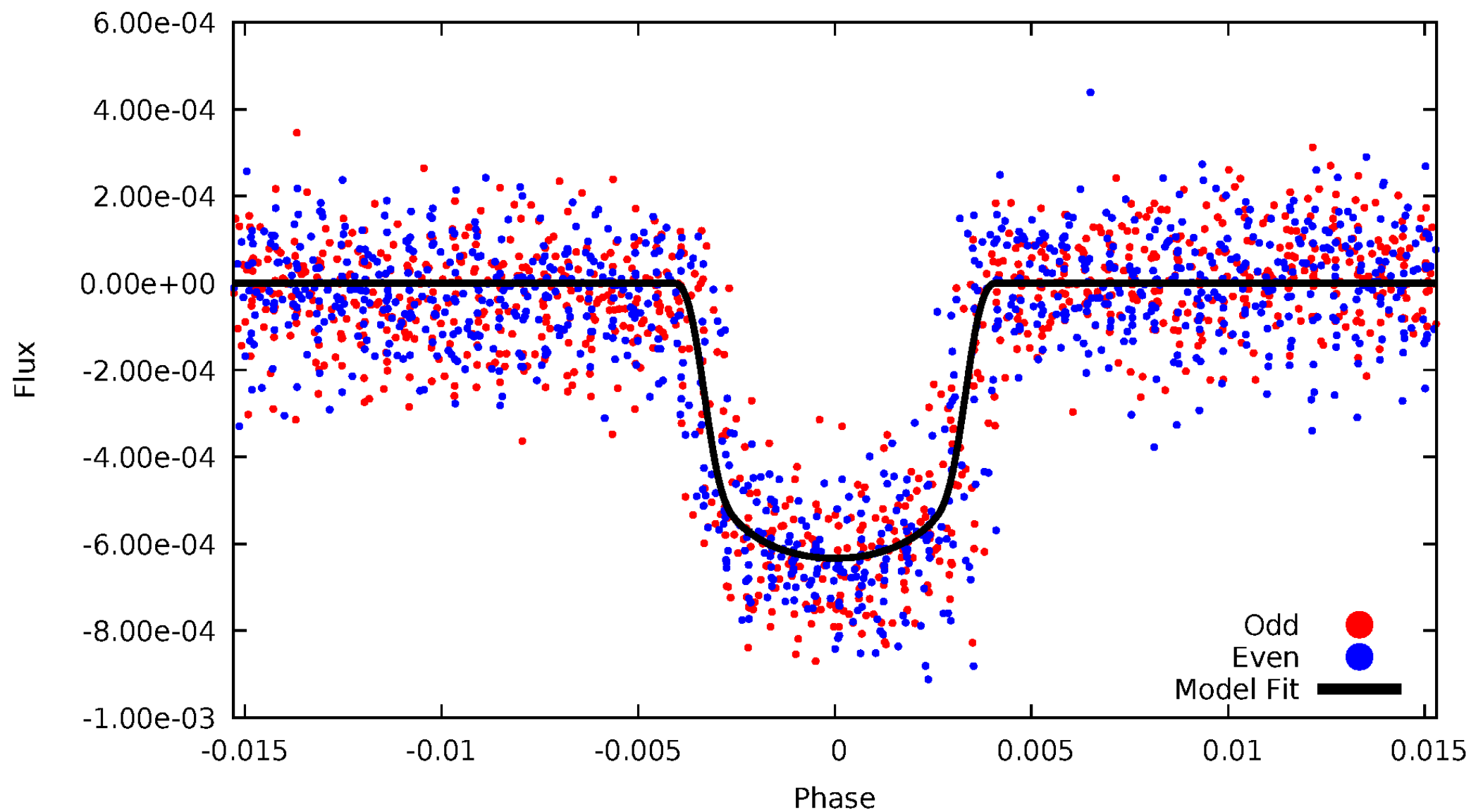


TCE 006291837-01



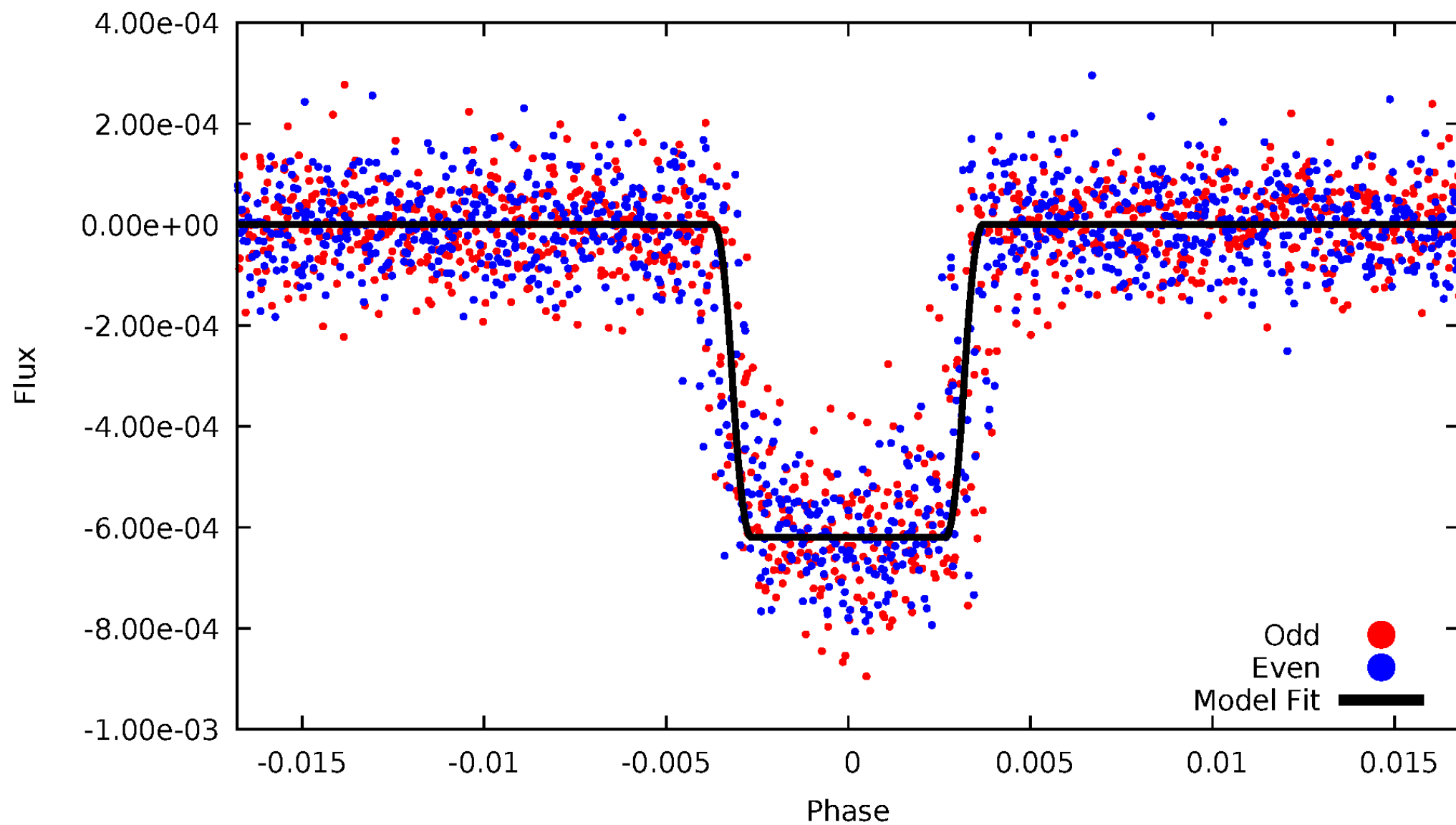
DV Odd/Even

TCE 006291837-01

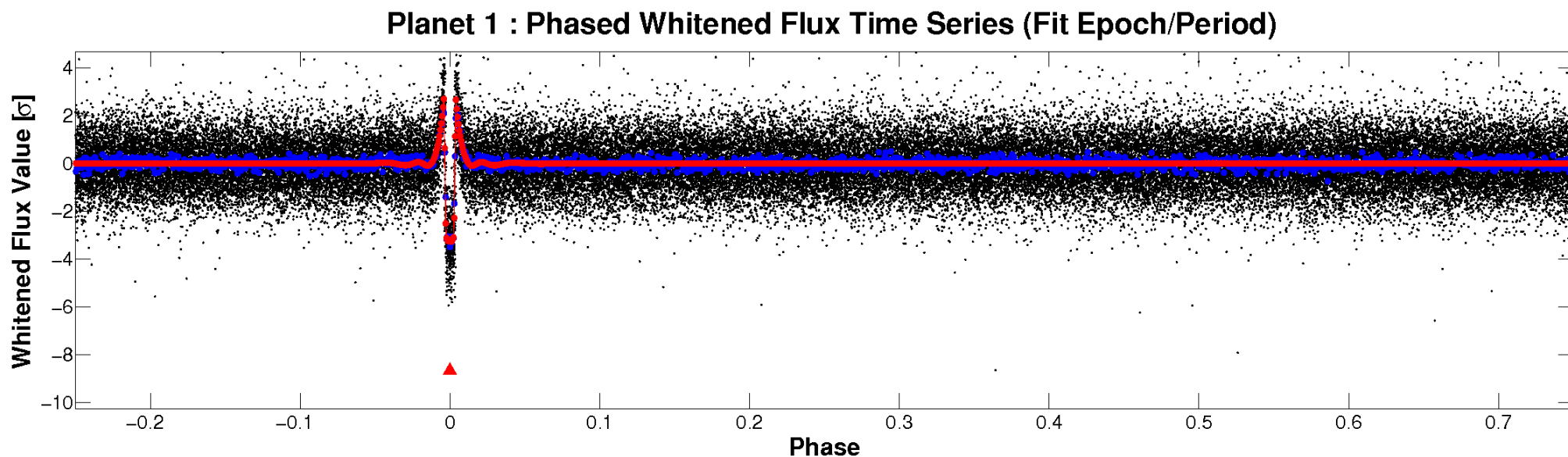
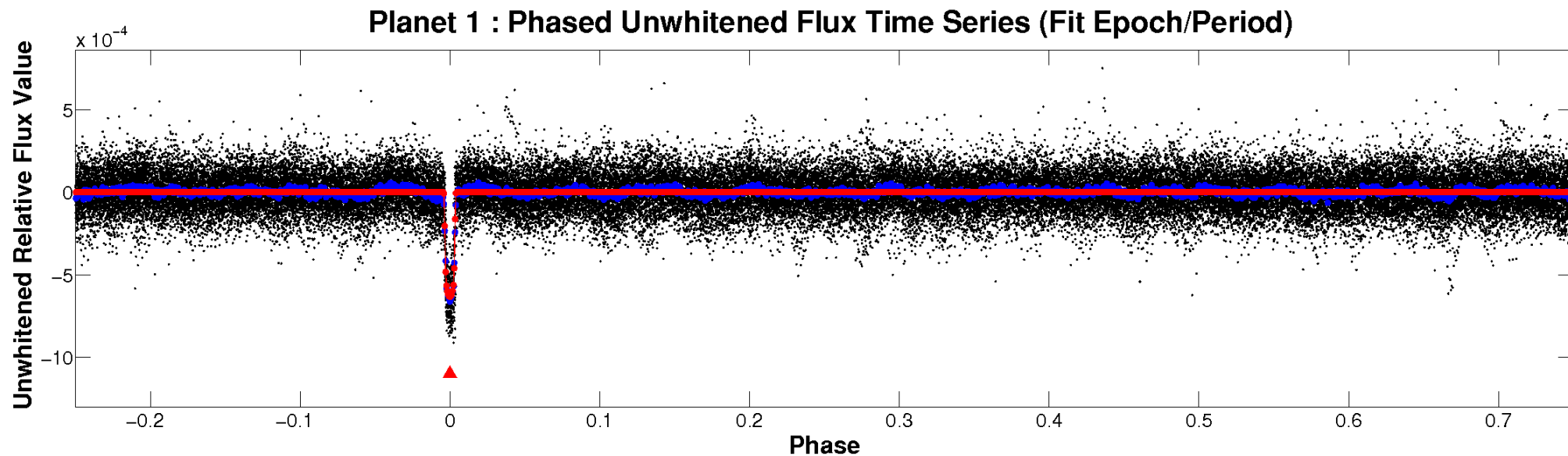


ALT Odd/Even

TCE 006291837-01

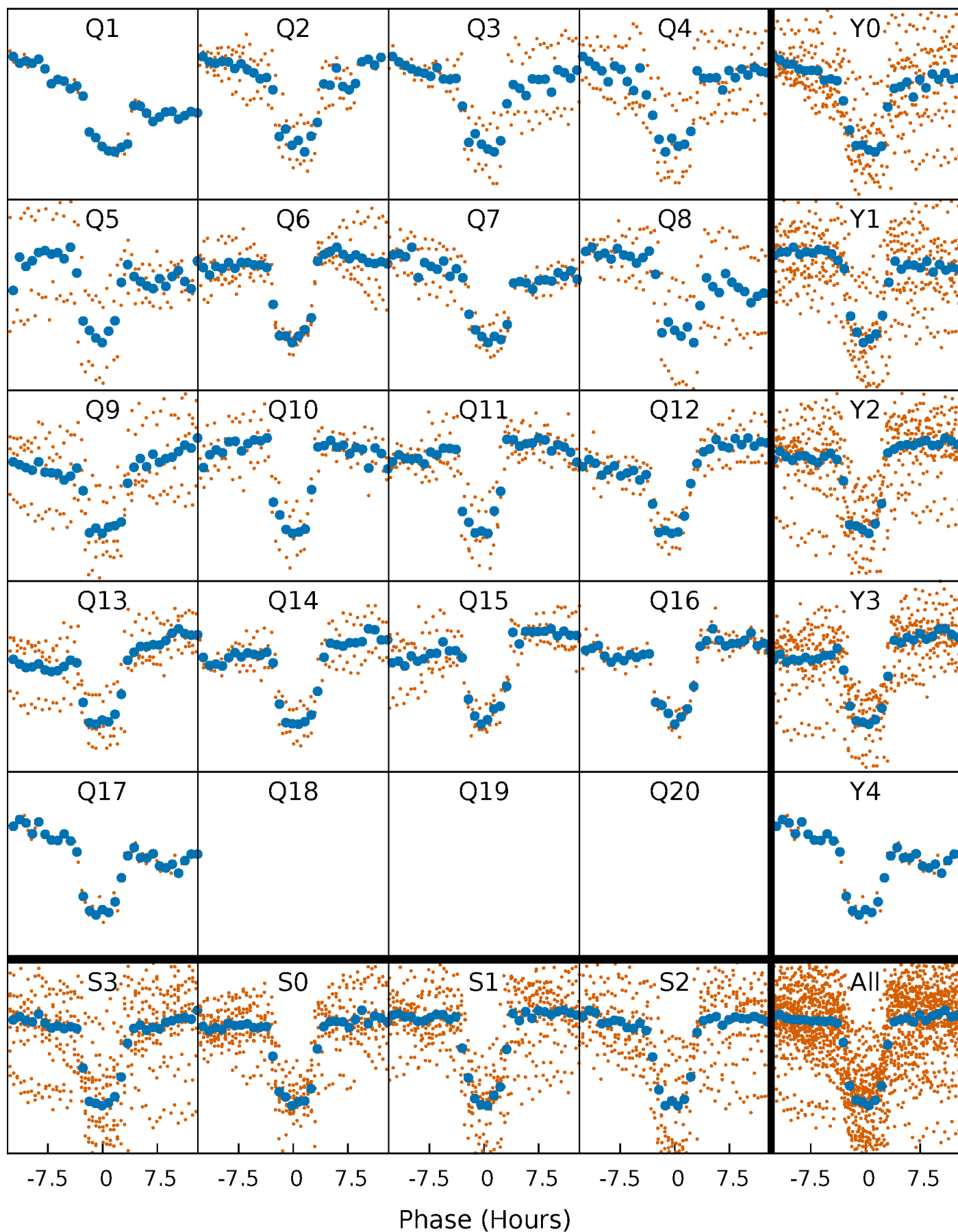


Non-Whitened Vs. Whitened Light Curve



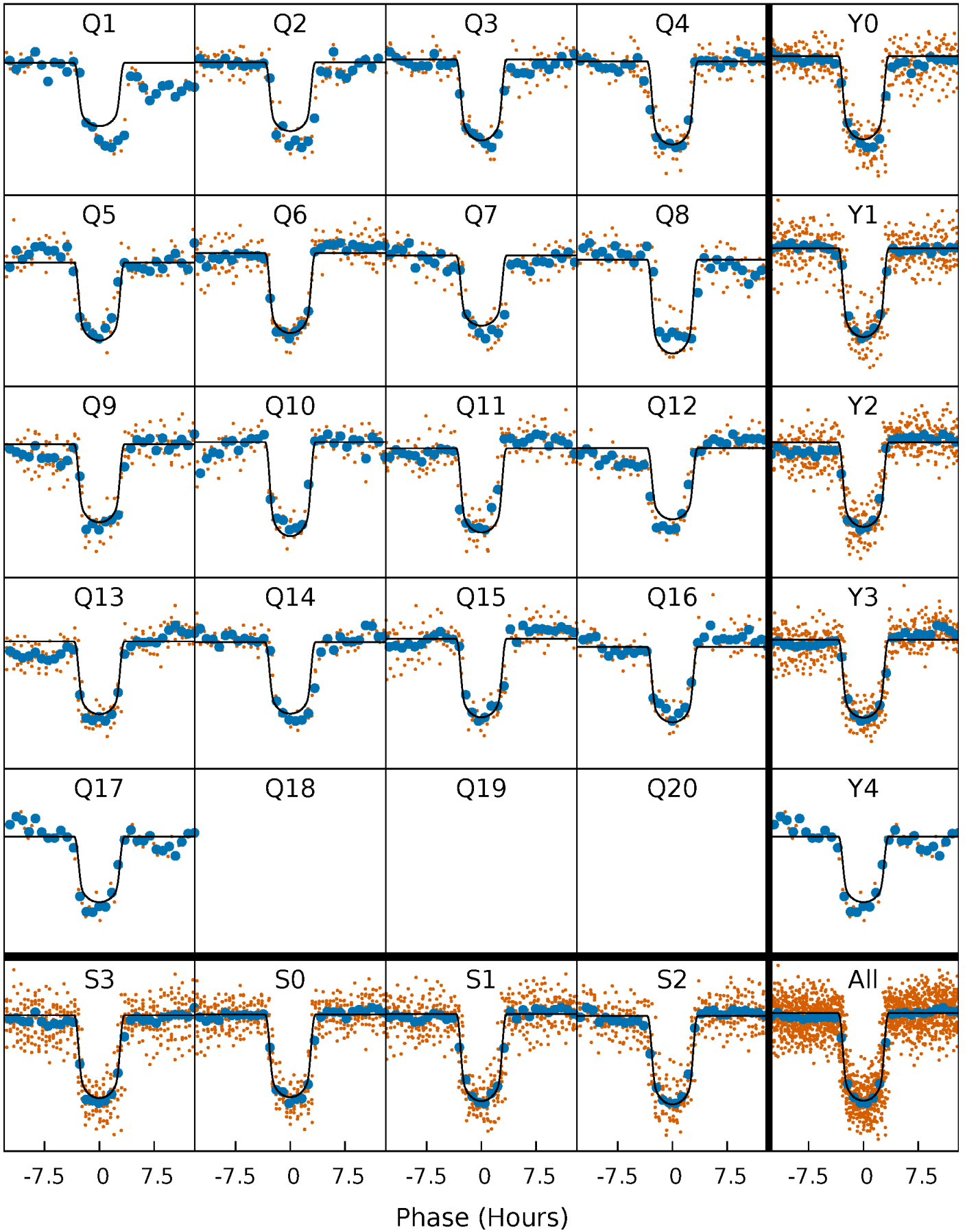
PDC Quarter-Phased Transit Curves

TCE 006291837-01 P= 35.597274 Days $T_0=151.923534$ (BKJD)



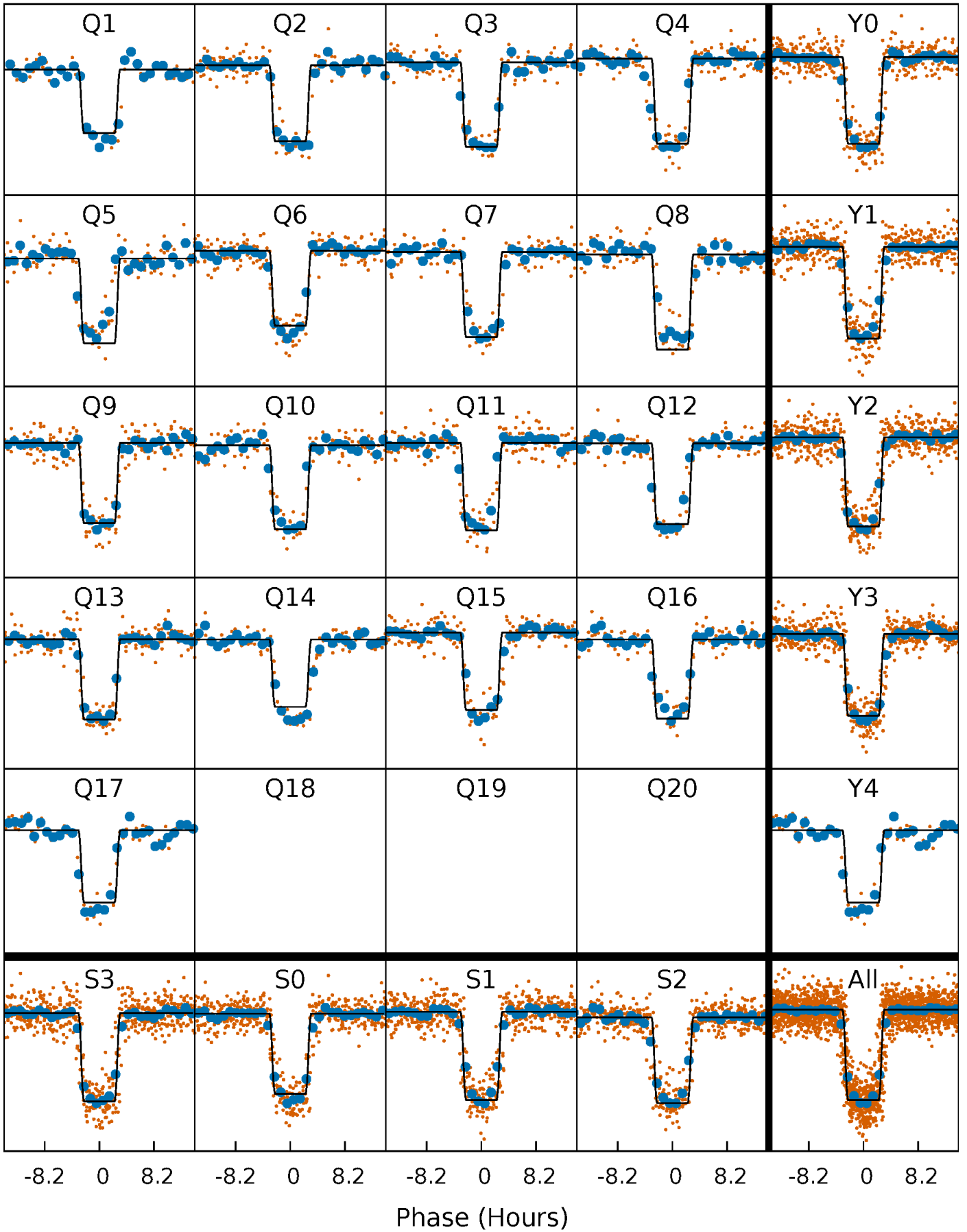
DV Quarter-Phased Transit Curves

TCE 006291837-01 P= 35.597274 Days $T_0=151.923534$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

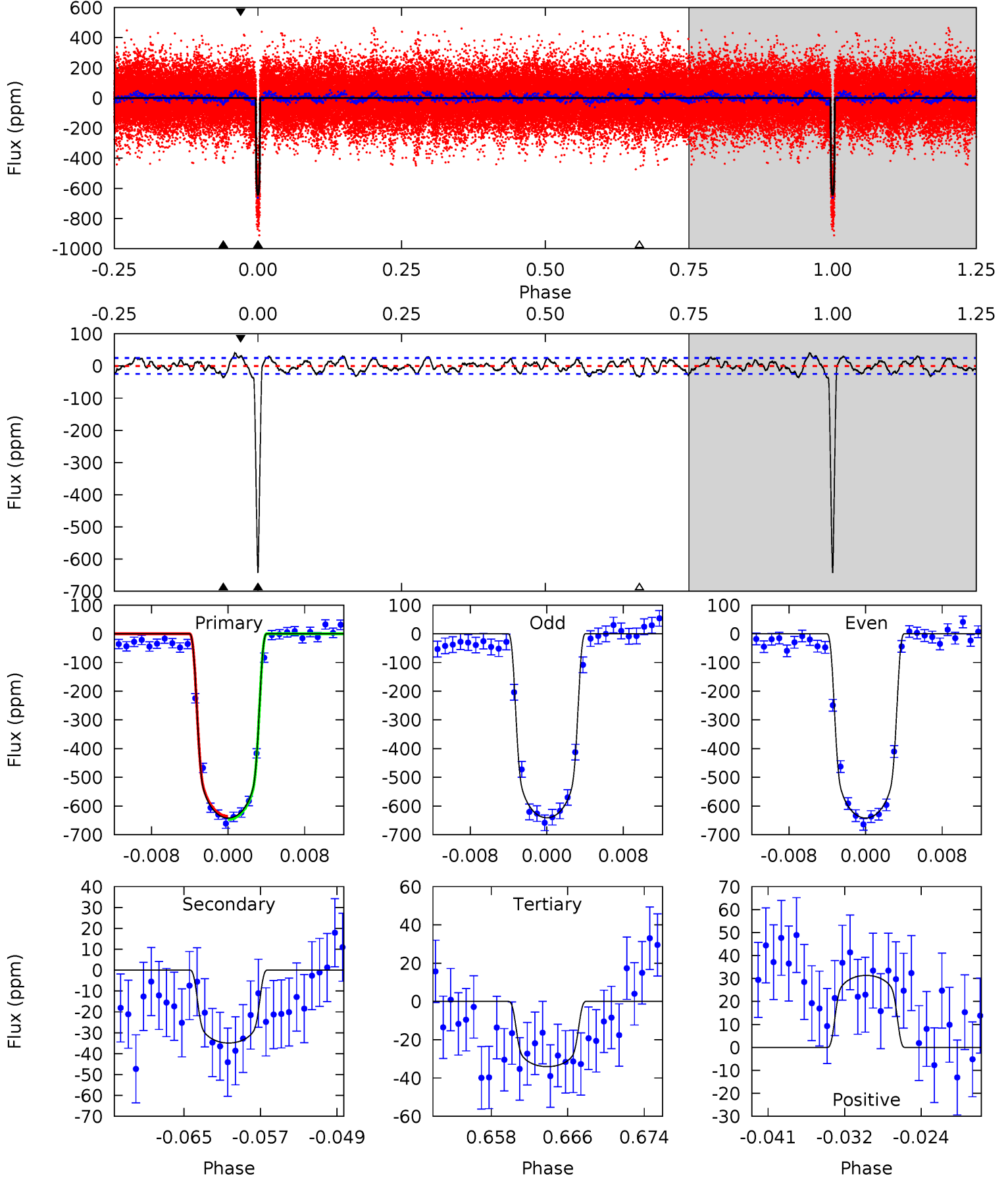
TCE 006291837-01 P= 35.597012 Days $T_0=151.931416$ (BKJD)



DV Model-Shift Uniqueness Test

006291837-01, $P = 35.597274$ Days, $E = 116.326260$ Days

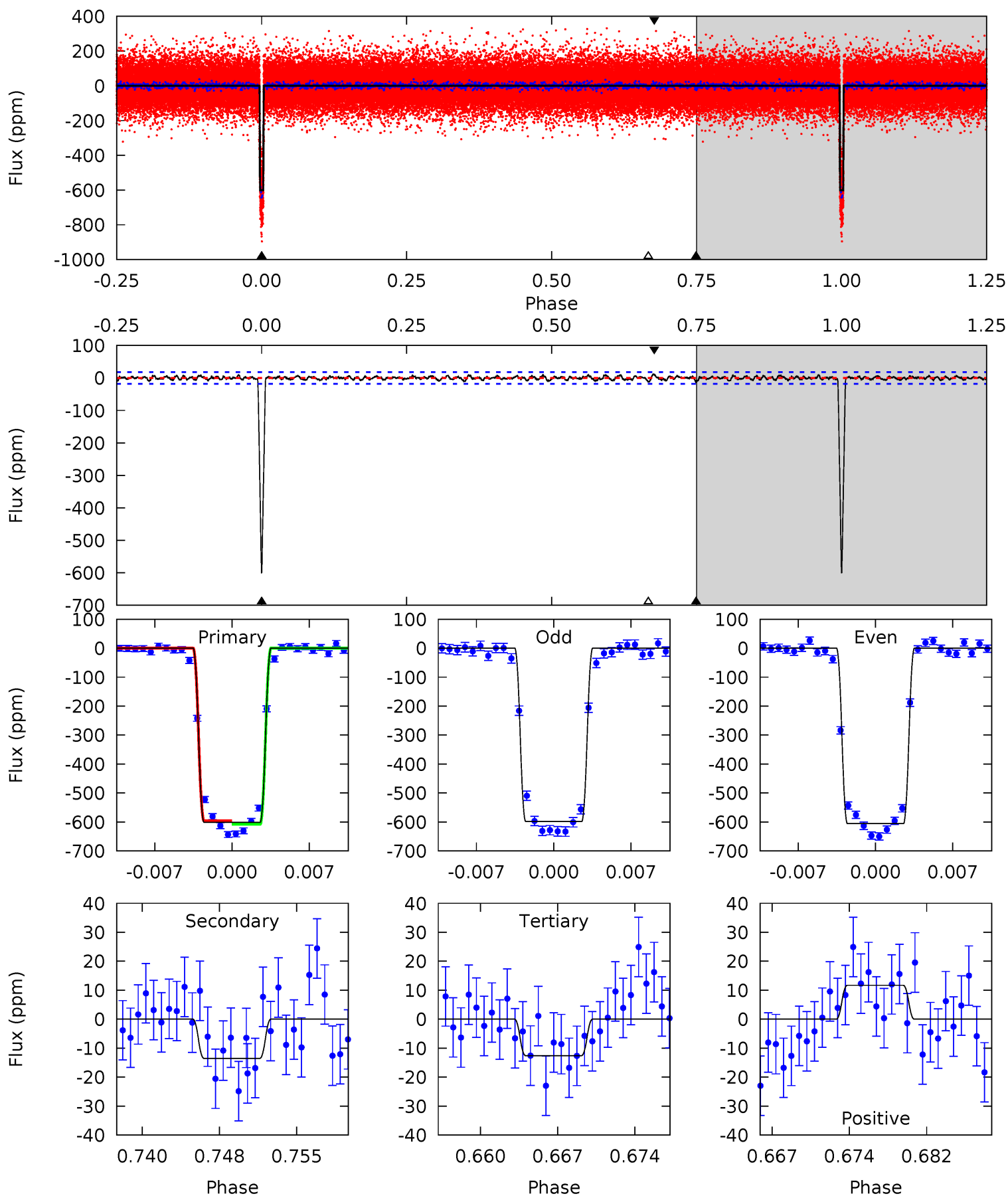
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
131.7	7.16	6.99	6.43	5.07	2.65	2.94	124.7	125.3	0.17	0.73	0.09	0.98	0.06	1.12



Alt Model-Shift Uniqueness Test

006291837-01, P = 35.597012 Days, E = 116.334404 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
168.7	3.79	3.53	3.28	5.09	2.68	1.10	165.1	165.4	0.26	0.51	1.10	1.01	0.02	1.62



Stellar Parameters For KIC 006291837

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6212^{+111}_{-136}	$4.309^{+0.095}_{-0.116}$	$-0.040^{+0.150}_{-0.150}$	$1.209^{+0.210}_{-0.140}$	$1.082^{+0.103}_{-0.066}$	$0.864^{+0.362}_{-0.300}$
	+2%/-2%	+2%/-3%	+375%/-375%	+17%/-12%	+10%/-6%	+42%/-35%
Source	SPE59	SPE59	SPE59	DSEP		

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

Secondary Eclipse Parameters for KIC 006291837-01 / KOI 0308.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-35 ± 5	$3.57^{+0.35}_{-0.22}$	903^{+42}_{-37}	3409^{+84}_{-85}	70^{+15}_{-15}
Alt.	-14 ± 4	$3.30^{+0.30}_{-0.22}$	903^{+40}_{-35}	3028^{+120}_{-138}	31^{+11}_{-9}

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

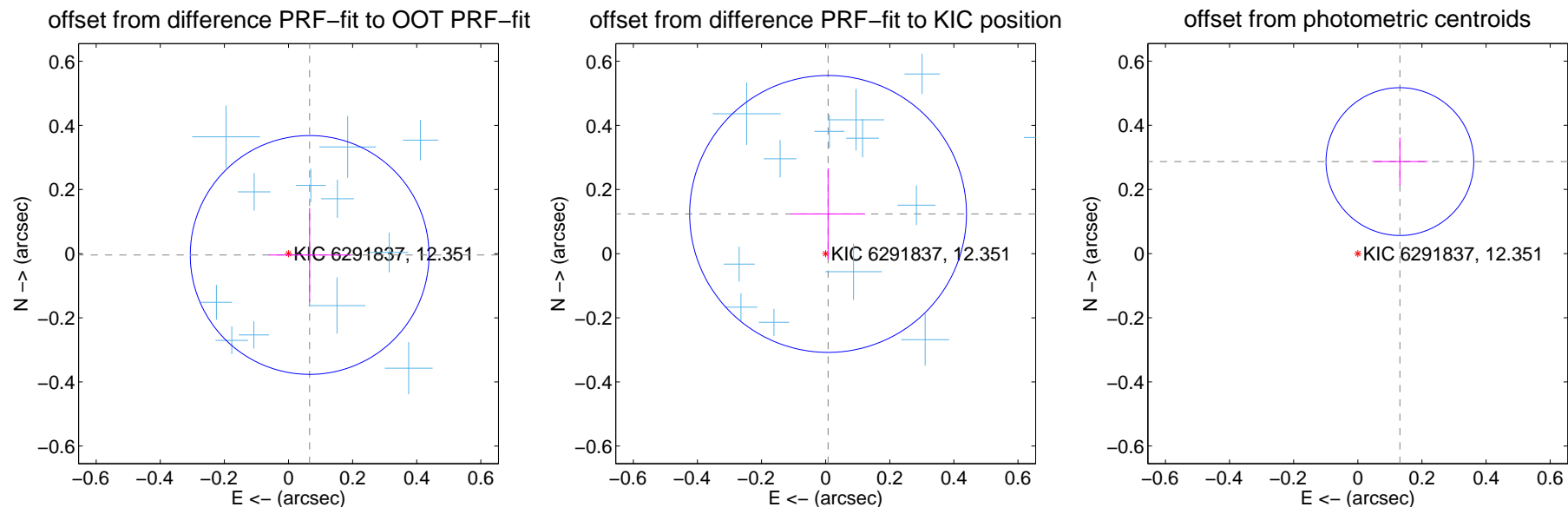
DV Centroid Data

Supplemental centroid analysis for 006291837-01. Kepler magnitude: 12.35. Transit SNR 72.61

There are 17 quarters with good PRF difference image offsets

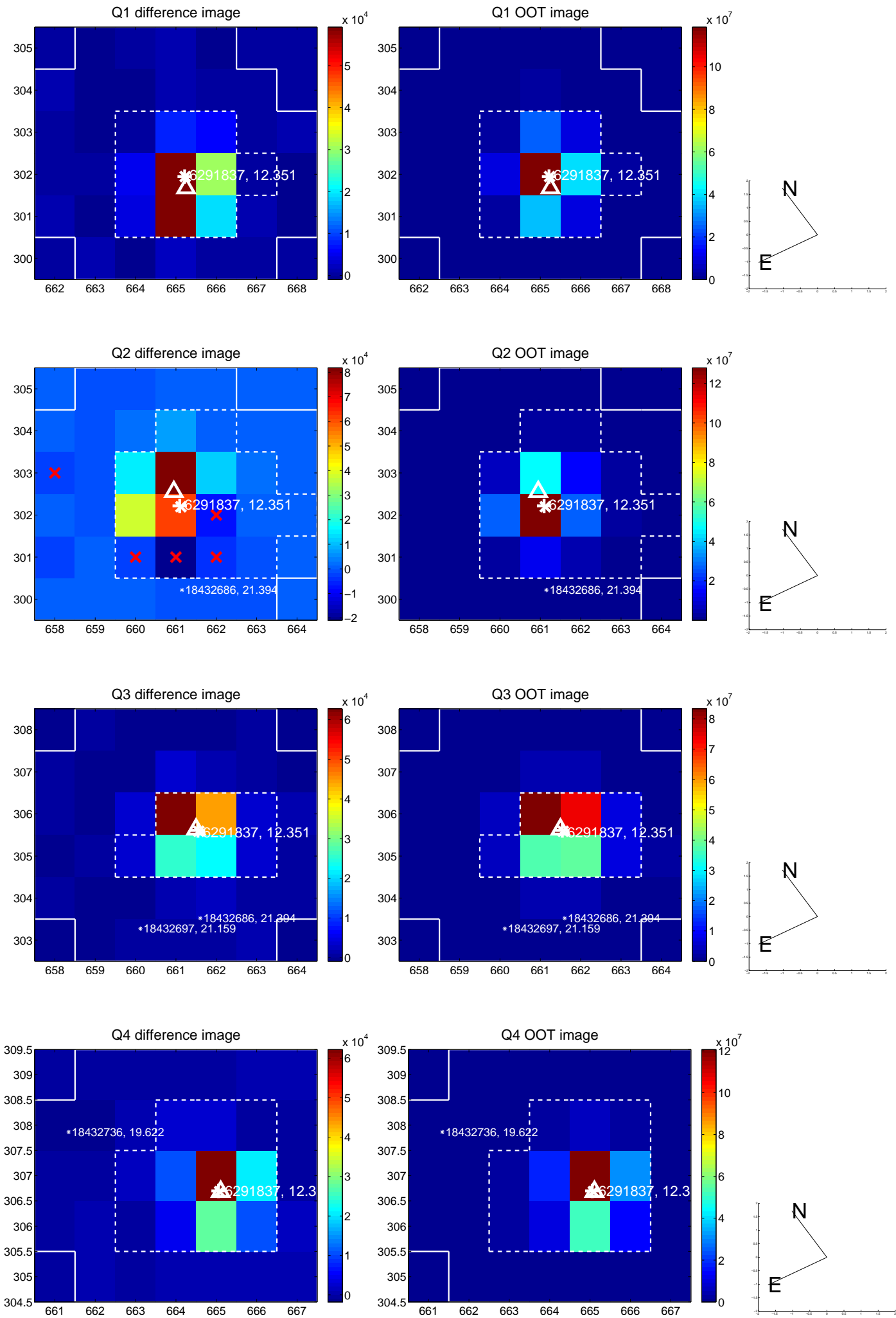
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.066 ± 0.124	0.53	-0.066 ± 0.127	-0.004 ± 0.146
PRF-fit source offset from KIC position	0.124 ± 0.144	0.86	-0.008 ± 0.116	0.124 ± 0.142
photometric centroid source offset	0.32 ± 0.08	4.11	-0.13 ± 0.09	0.29 ± 0.07

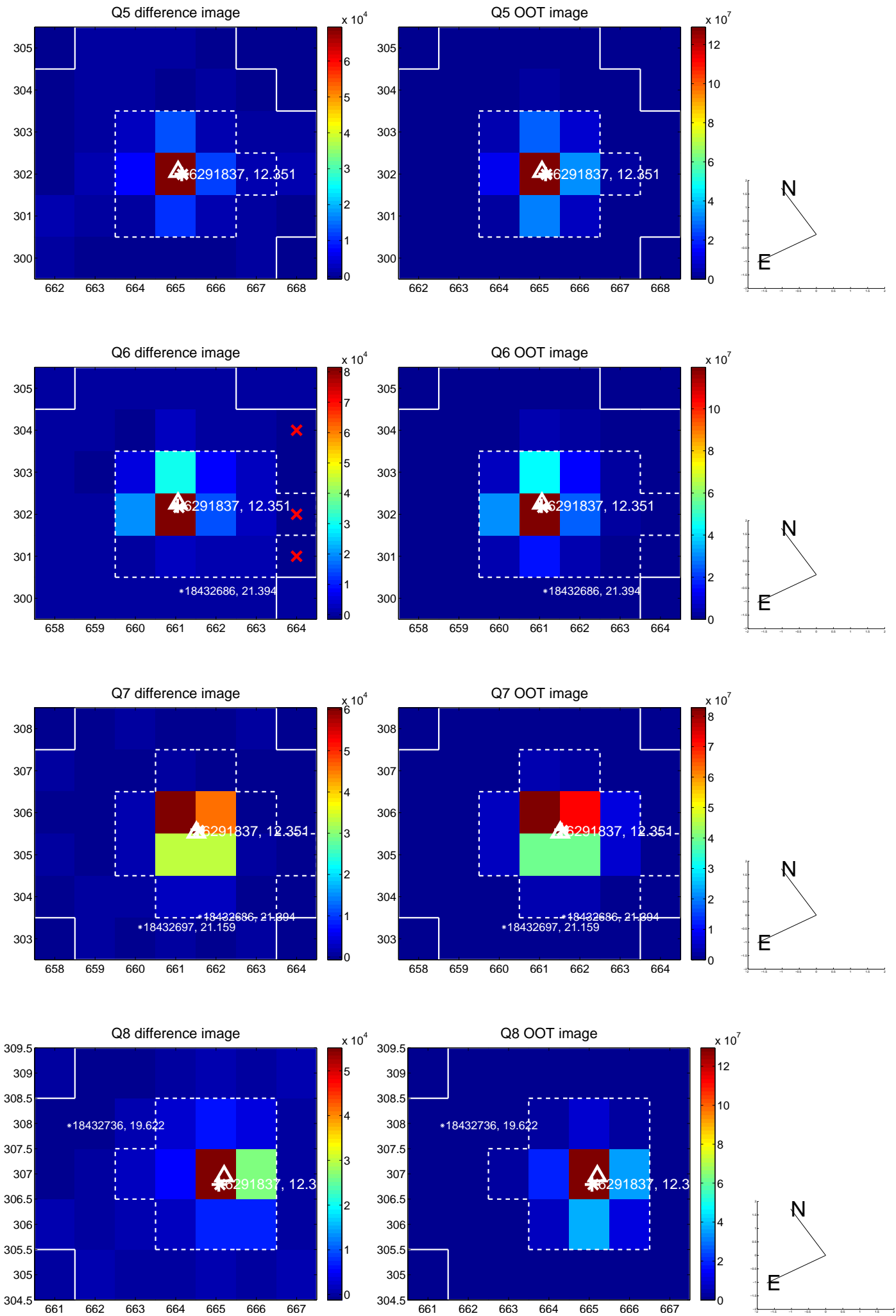


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

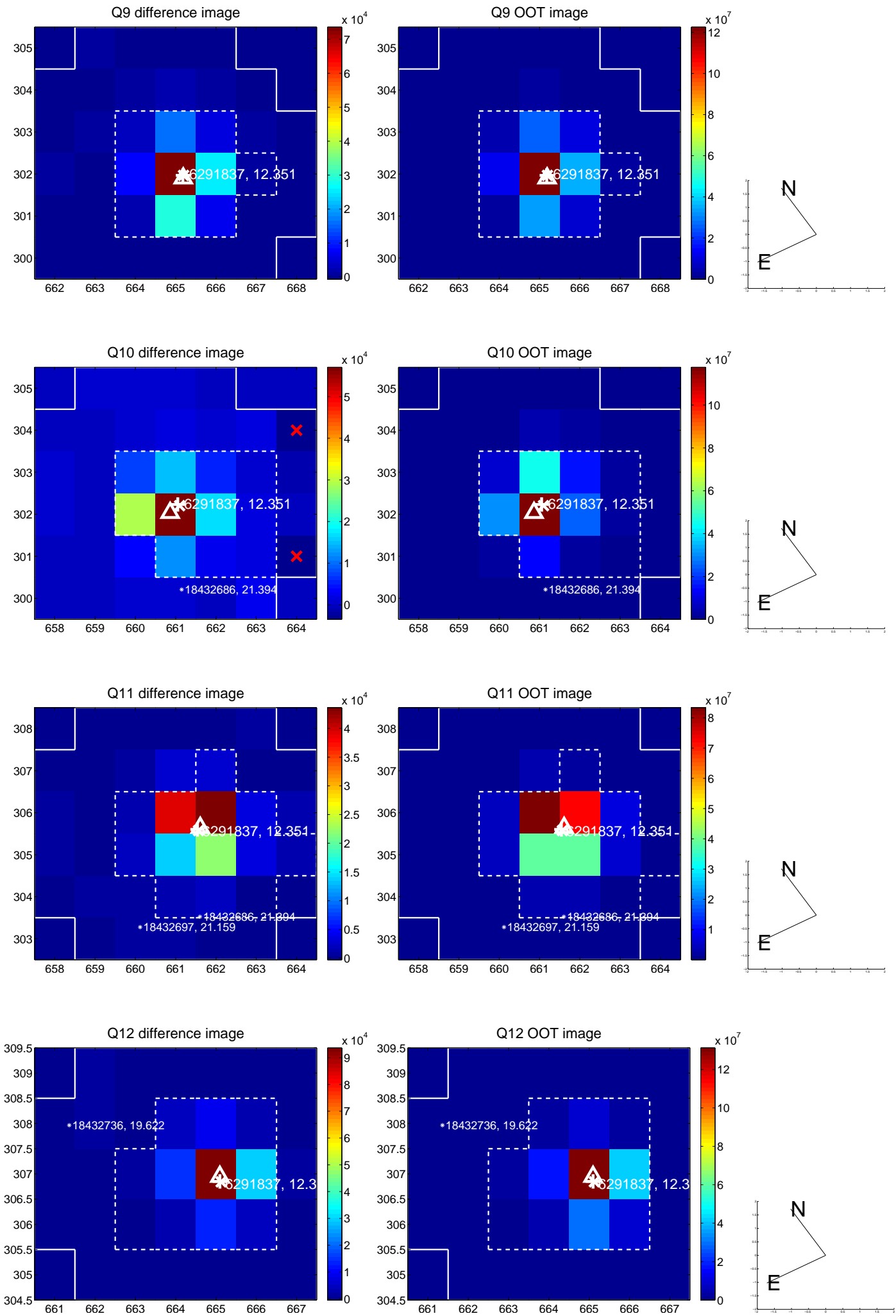
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



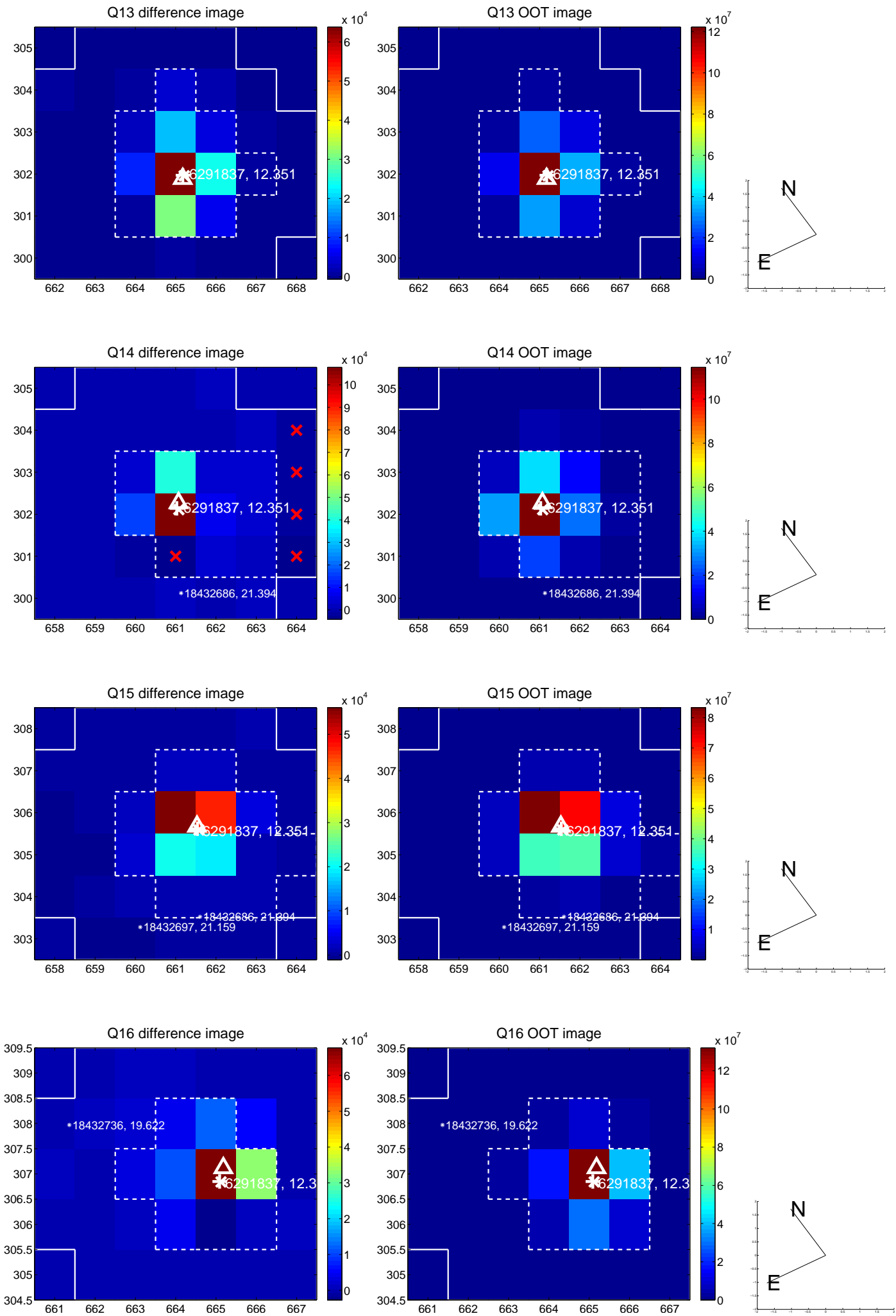
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



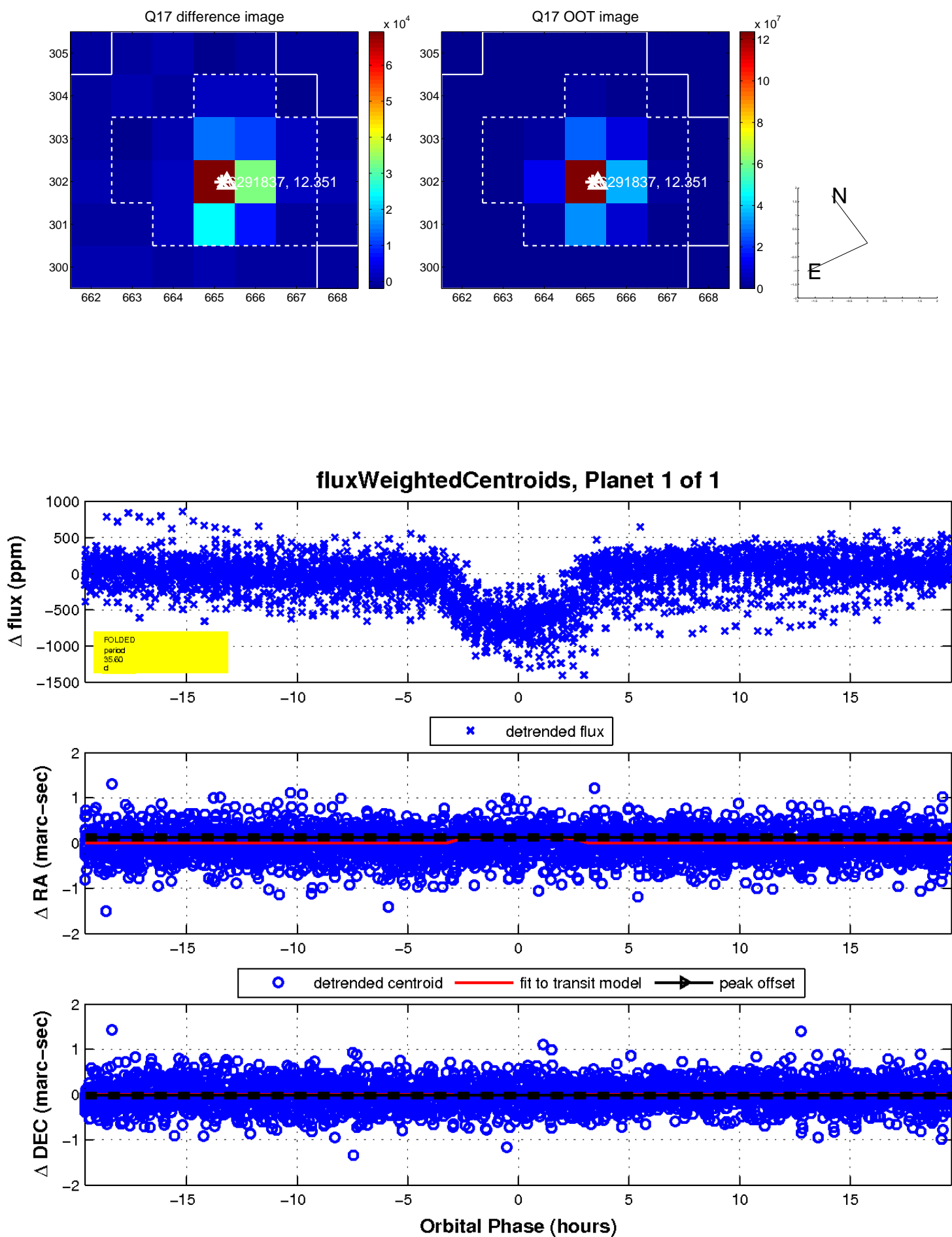
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

