

KIC 008242350

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})
008242350-01	OBS	5493.01	6.993666	131.995075	2427.4	19.712	115.6	168.0	2.47	6565	22.30	1571.59

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008242350-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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 008242350-01

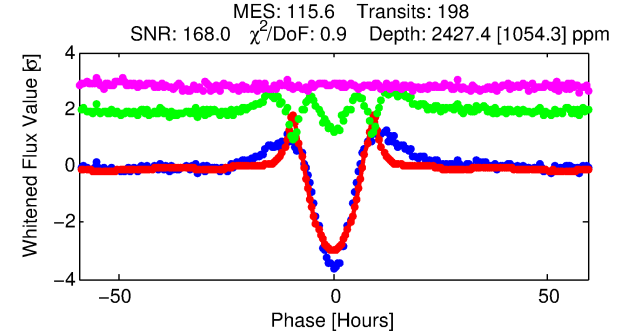
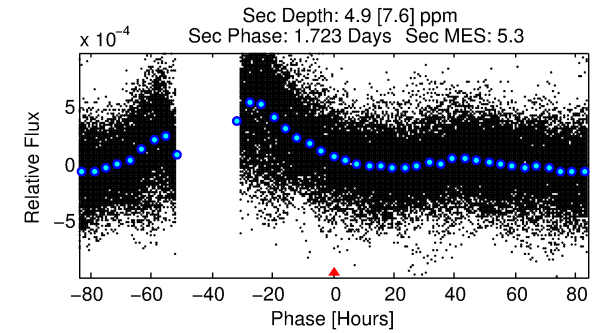
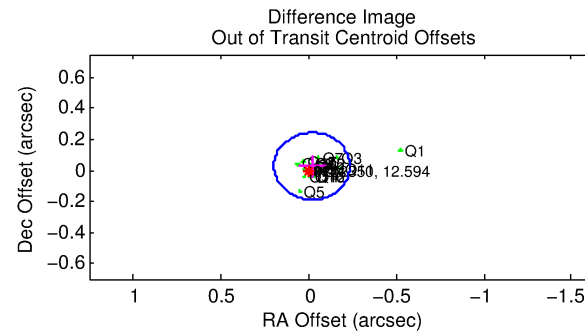
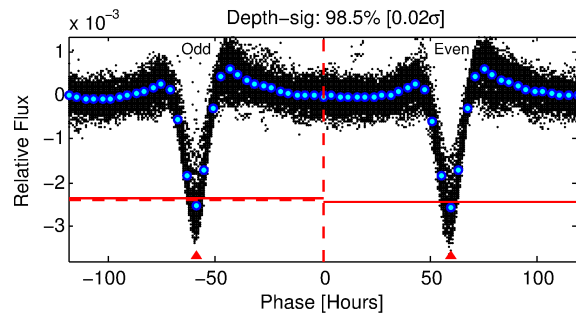
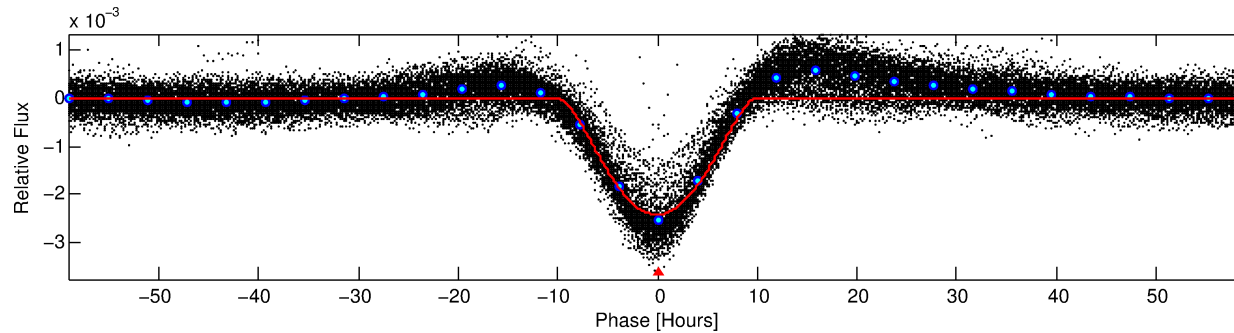
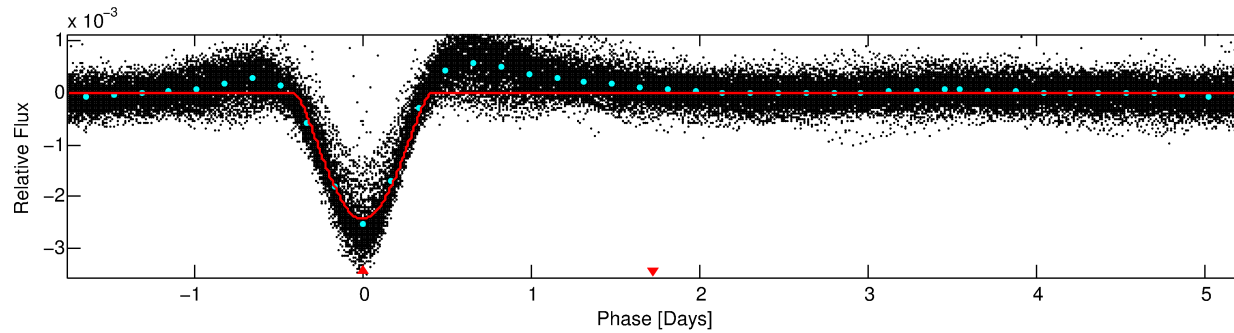
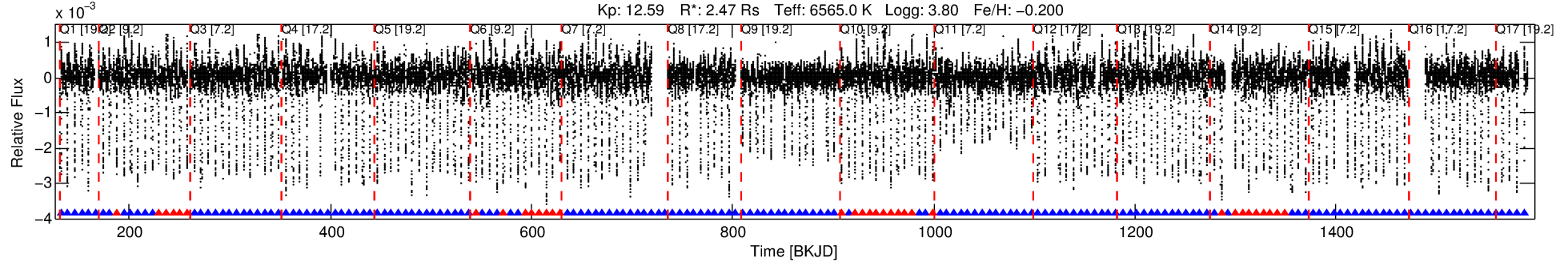
No Significant Match Found

DV One-Page Summary

KIC: 8242350 Candidate: 1 of 1 Period: 6.994 d

KOI: K05493.01 Corr: 0.962

Kp: 12.59 R*: 2.47 Rs Teff: 6565.0 K Logg: 3.80 Fe/H: -0.200



DV Fit Results:

Period = 6.99367 [0.00001] d
Epoch = 131.9951 [0.0015] BKJD
Rp/R* = 0.0828 [0.0050]
a/R* = 1.53 [0.01]
b = 1.00 [0.02]
Seff = 1571.59 [815.47]
Teq = 1606 [208] K
Rp = 22.30 [7.78] Re
a = 0.0803 [0.0258] AU
Ag = 0.04 [0.06] [-16.80σ]
Teffp = 1075 [419] K [-1.13σ]

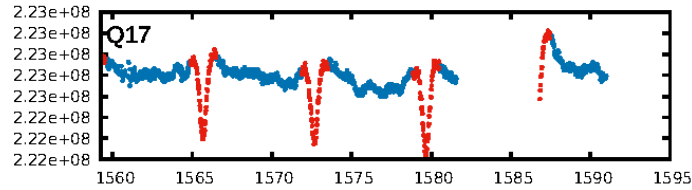
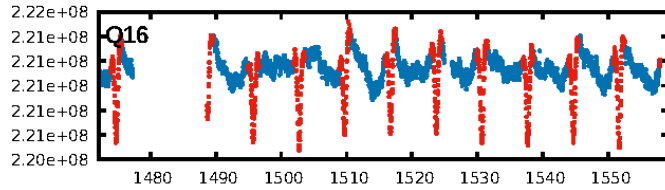
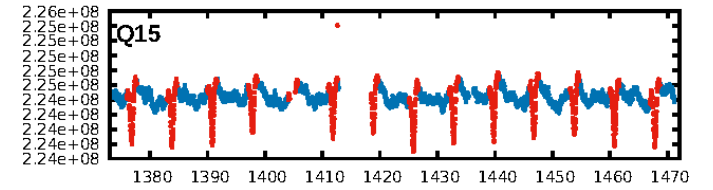
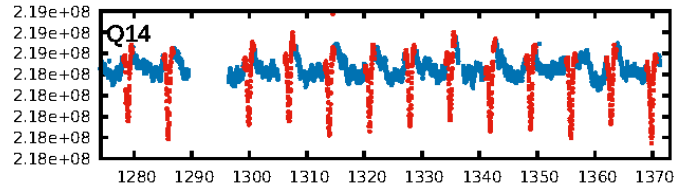
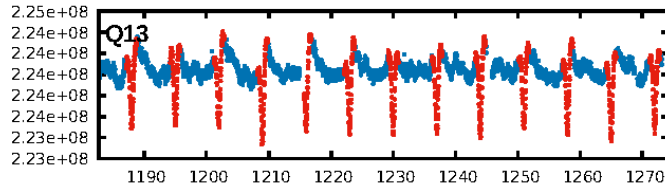
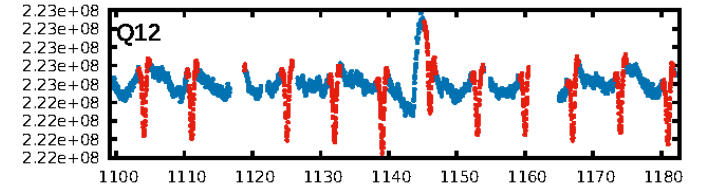
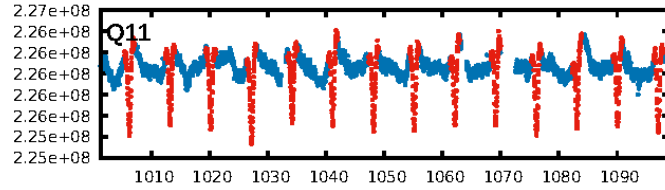
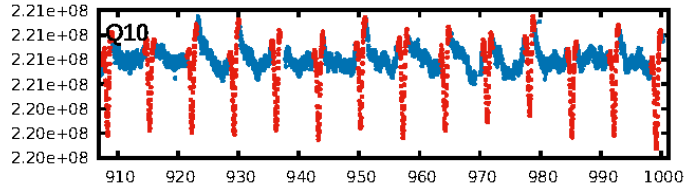
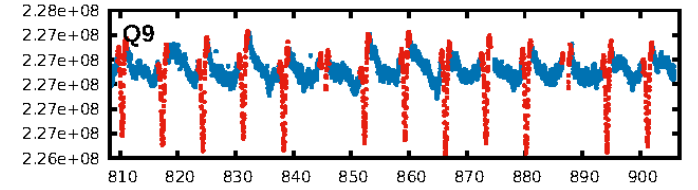
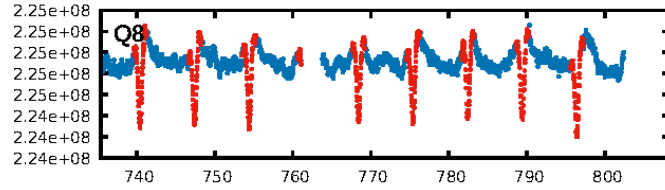
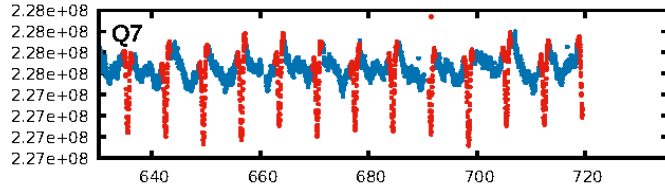
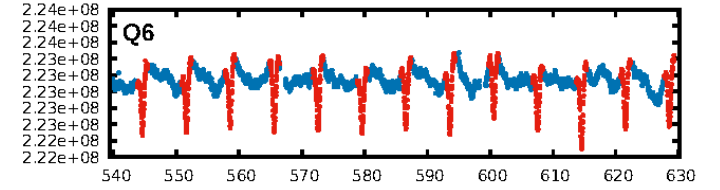
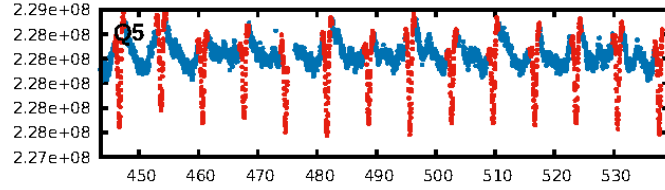
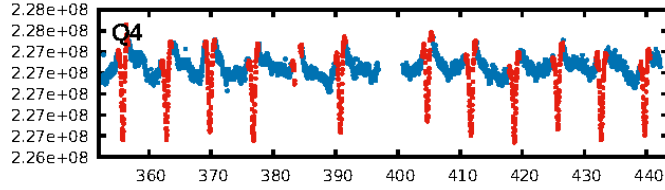
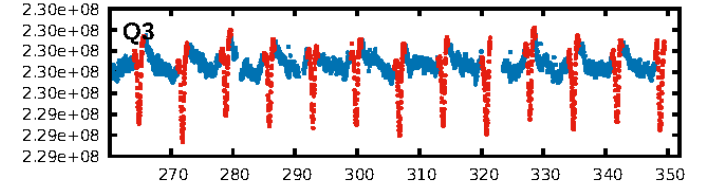
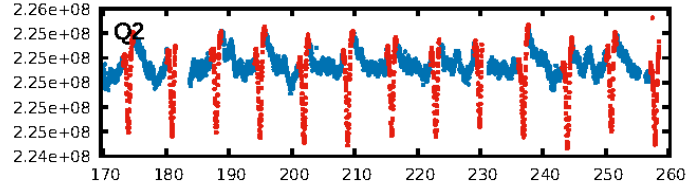
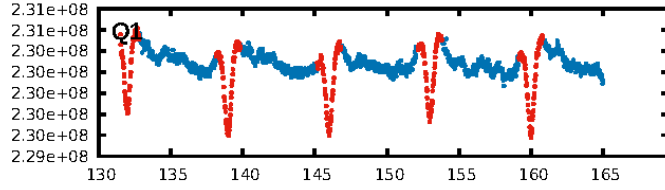
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.82 [155/189]
GhostDiagnostic-chr: 3.221
Centroid-sig: 60.6%
Centroid-so: 0.081 arcsec [6.79σ]
OotOffset-rm: 0.034 arcsec [0.47σ]
KicOffset-rm: 0.051 arcsec [0.71σ]
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]

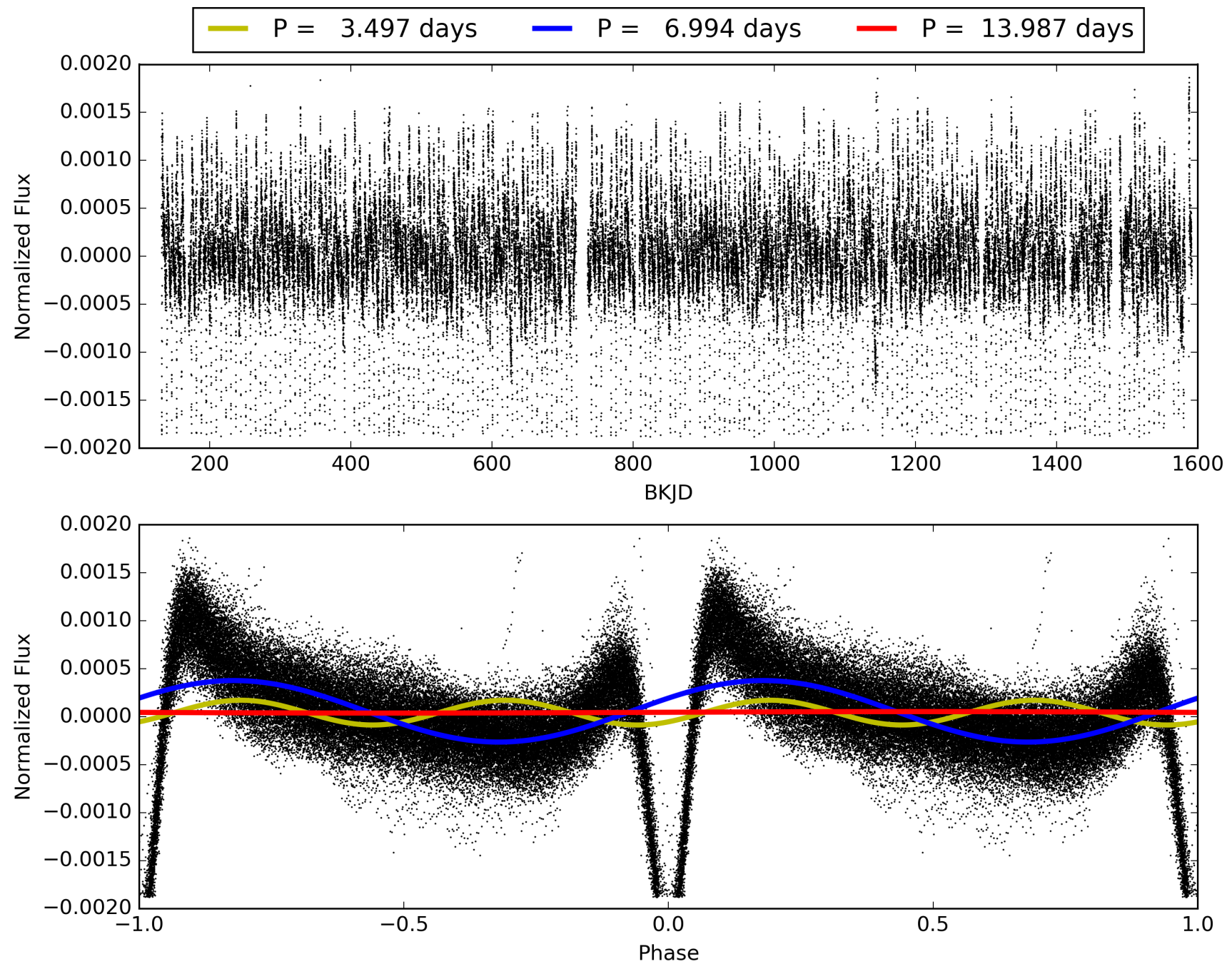
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 16:07:42 Z

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

TCE 008242350-01, PDC Light Curves

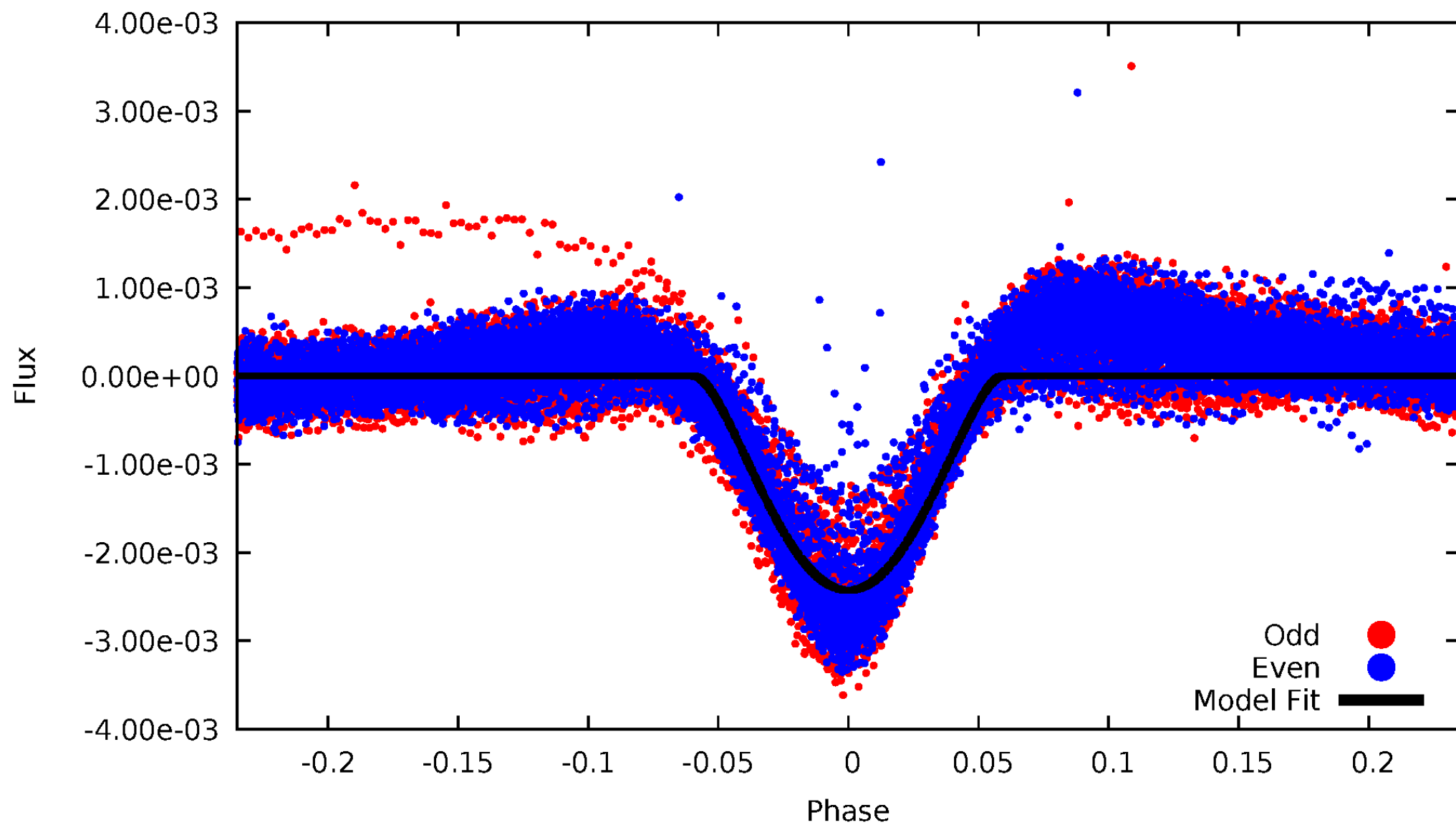


TCE 008242350-01



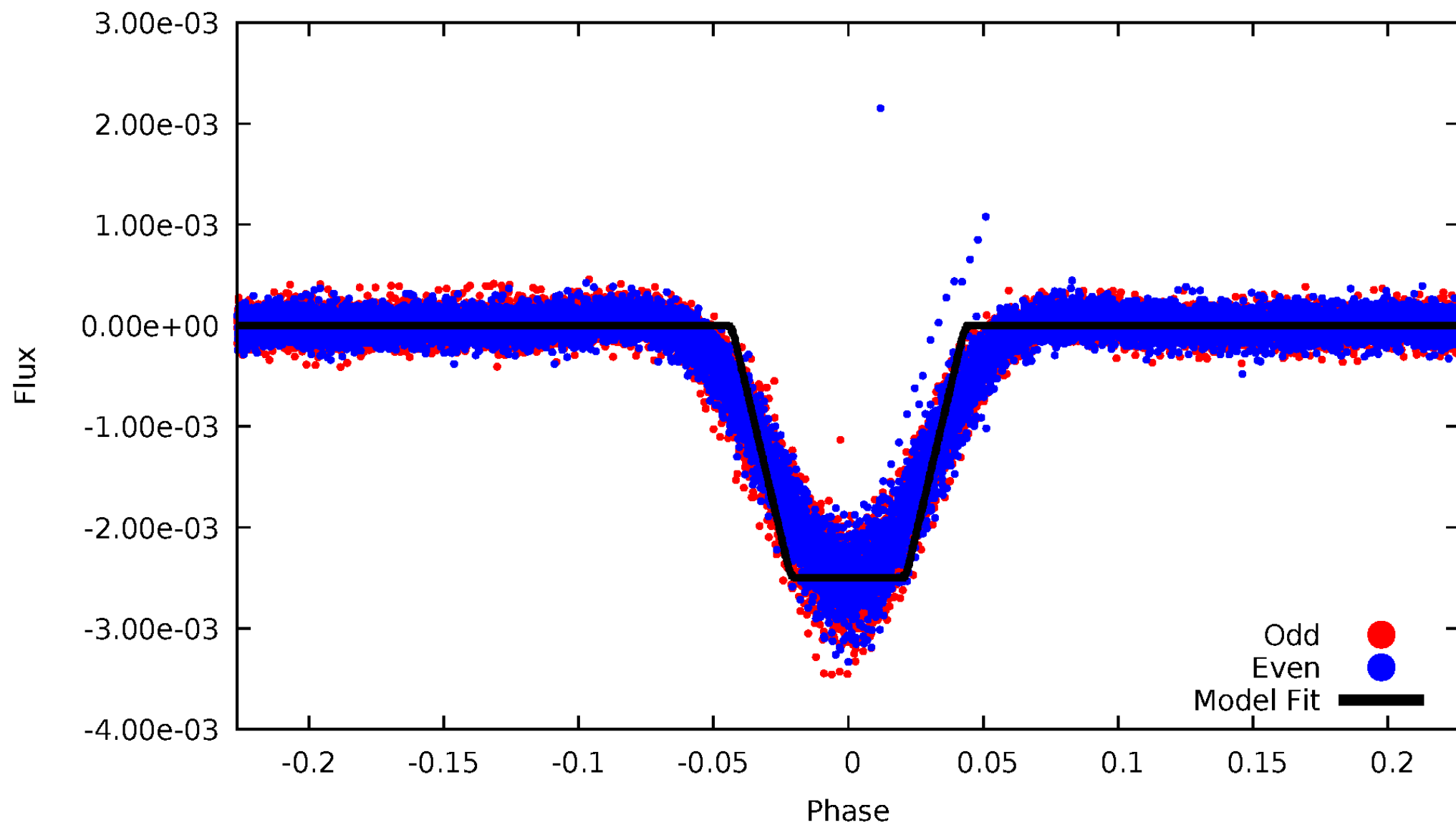
DV Odd/Even

TCE 008242350-01



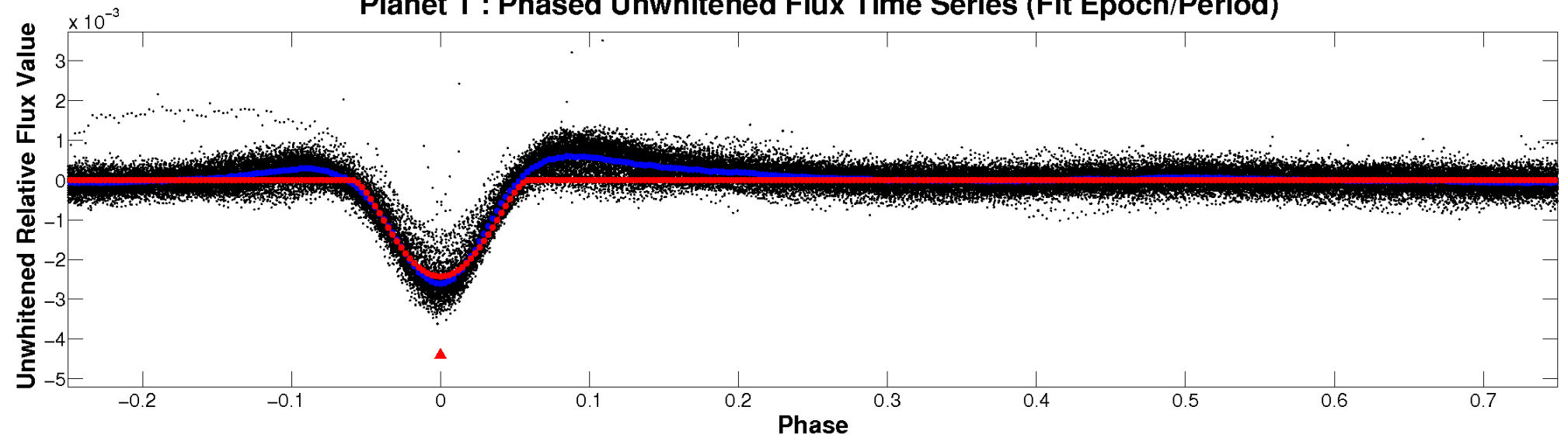
ALT Odd/Even

TCE 008242350-01

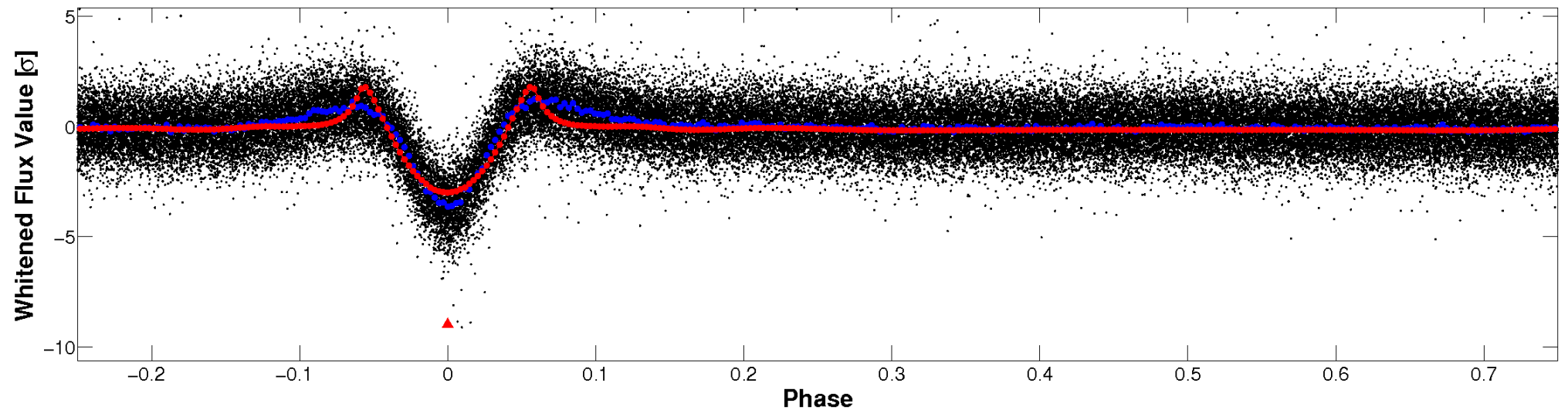


Non-Whitened Vs. Whitened Light Curve

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

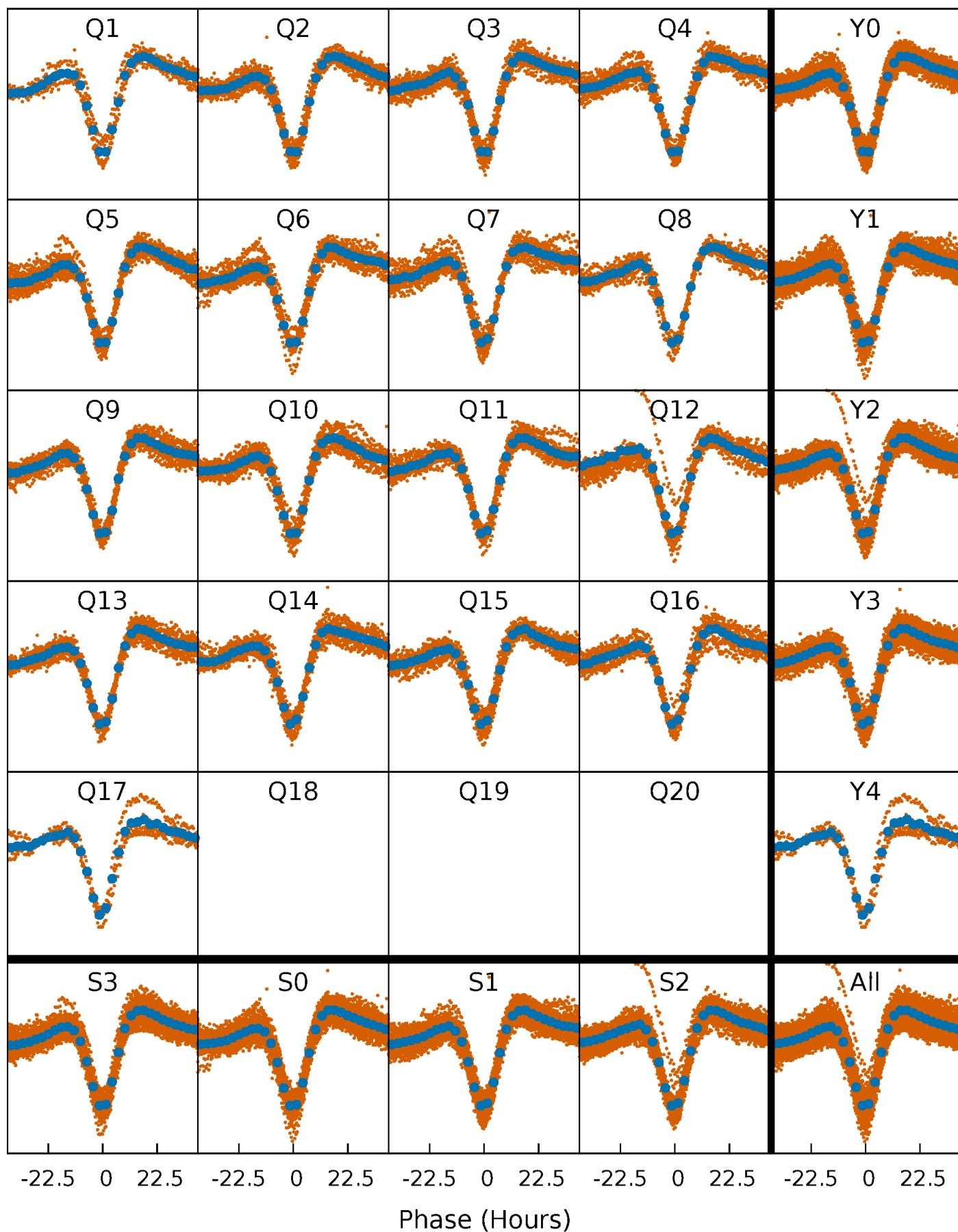


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



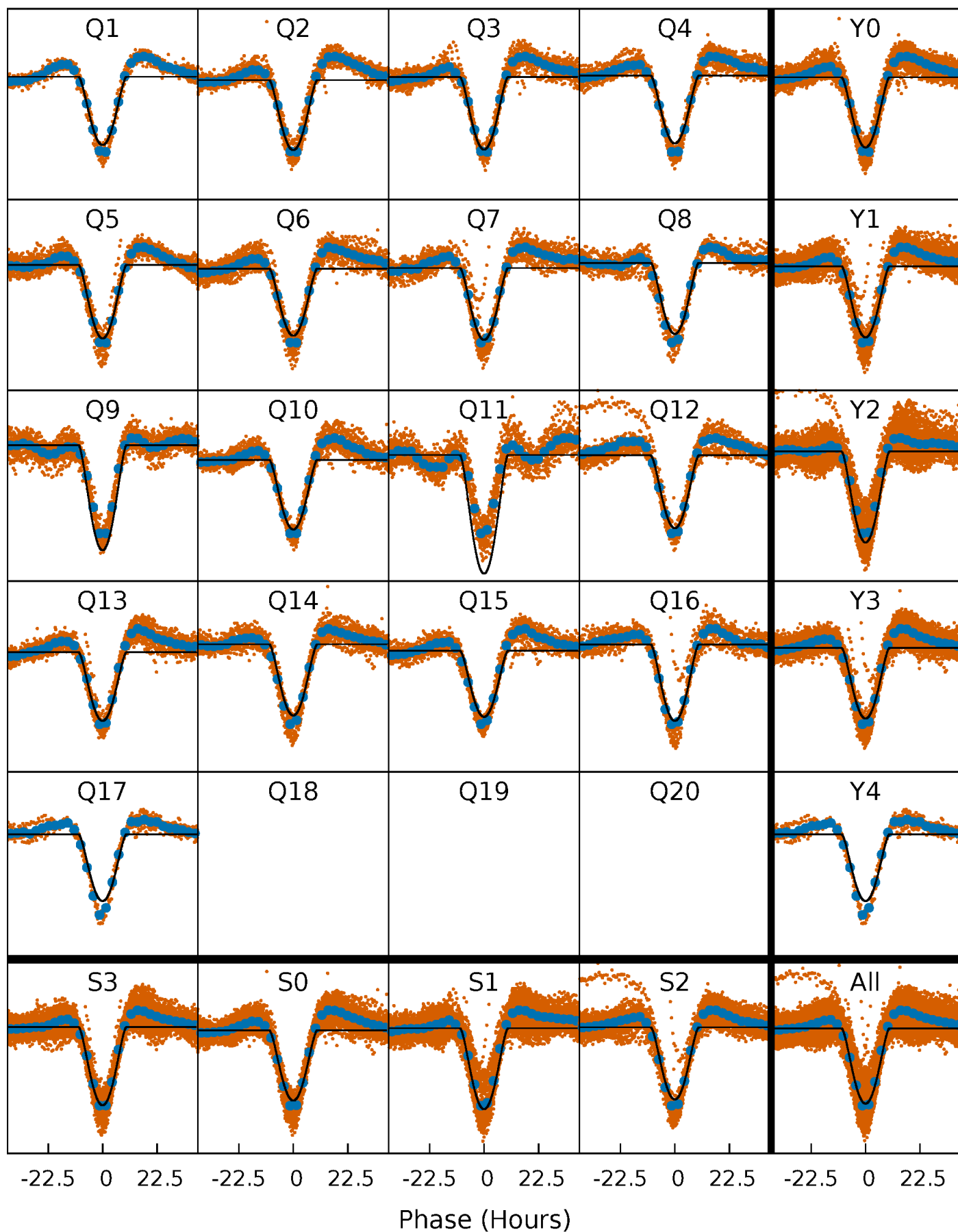
PDC Quarter-Phased Transit Curves

TCE 008242350-01 P= 6.993666 Days $T_0=131.995075$ (BKJD)



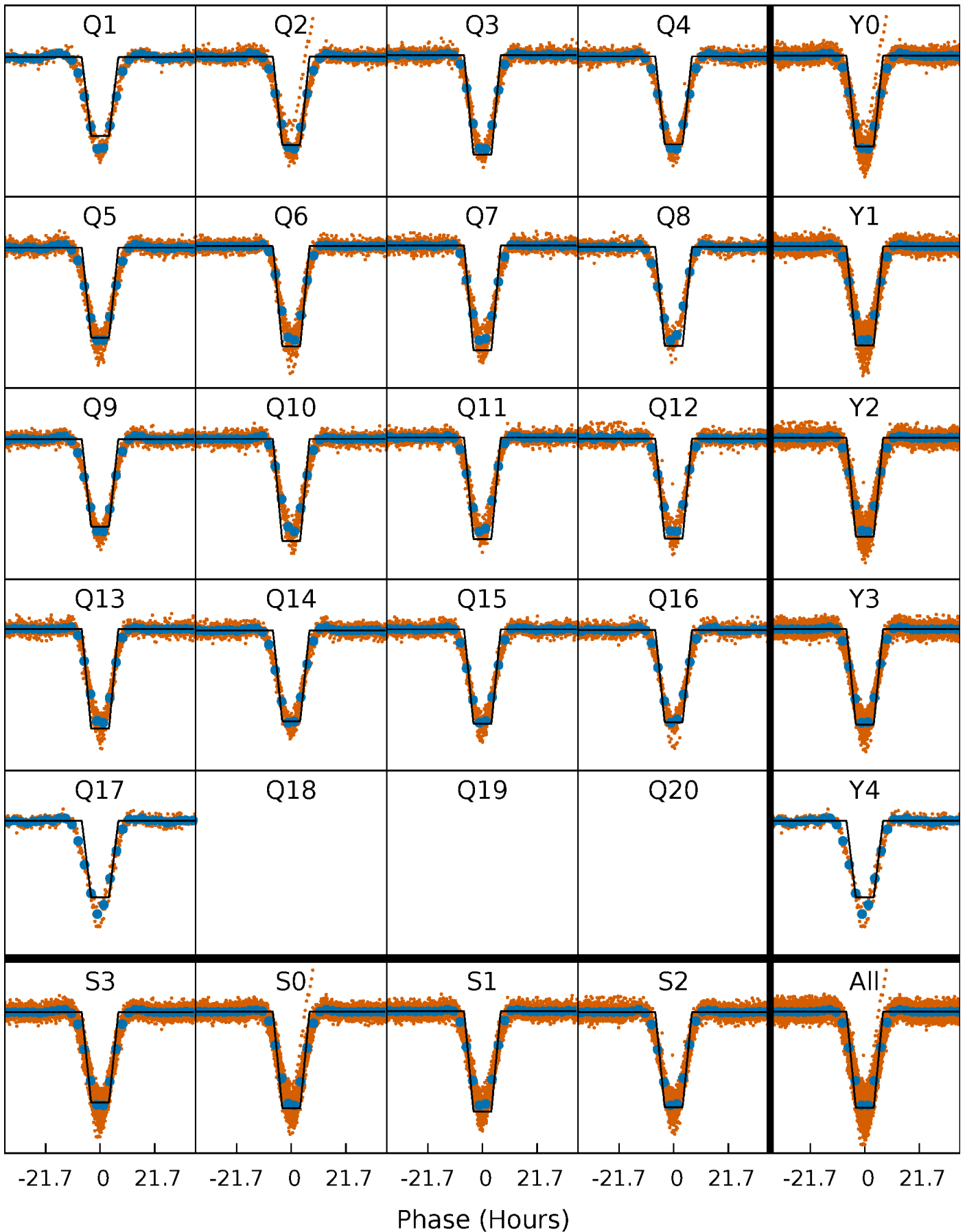
DV Quarter-Phased Transit Curves

TCE 008242350-01 P= 6.993666 Days $T_0=131.995075$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

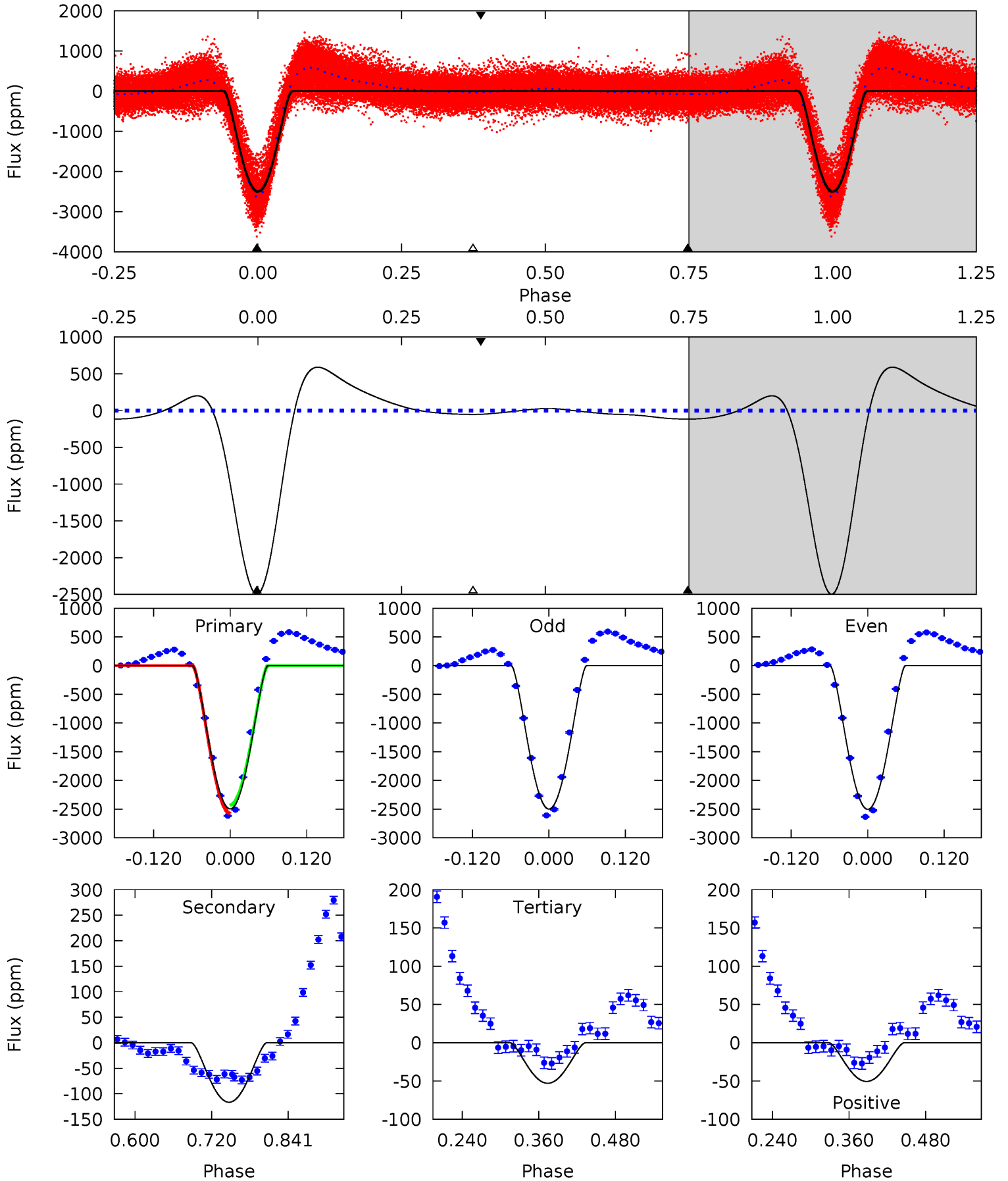
TCE 008242350-01 P= 6.993621 Days $T_0=132.002890$ (BKJD)



DV Model-Shift Uniqueness Test

008242350-01, P = 6.993666 Days, E = 125.001409 Days

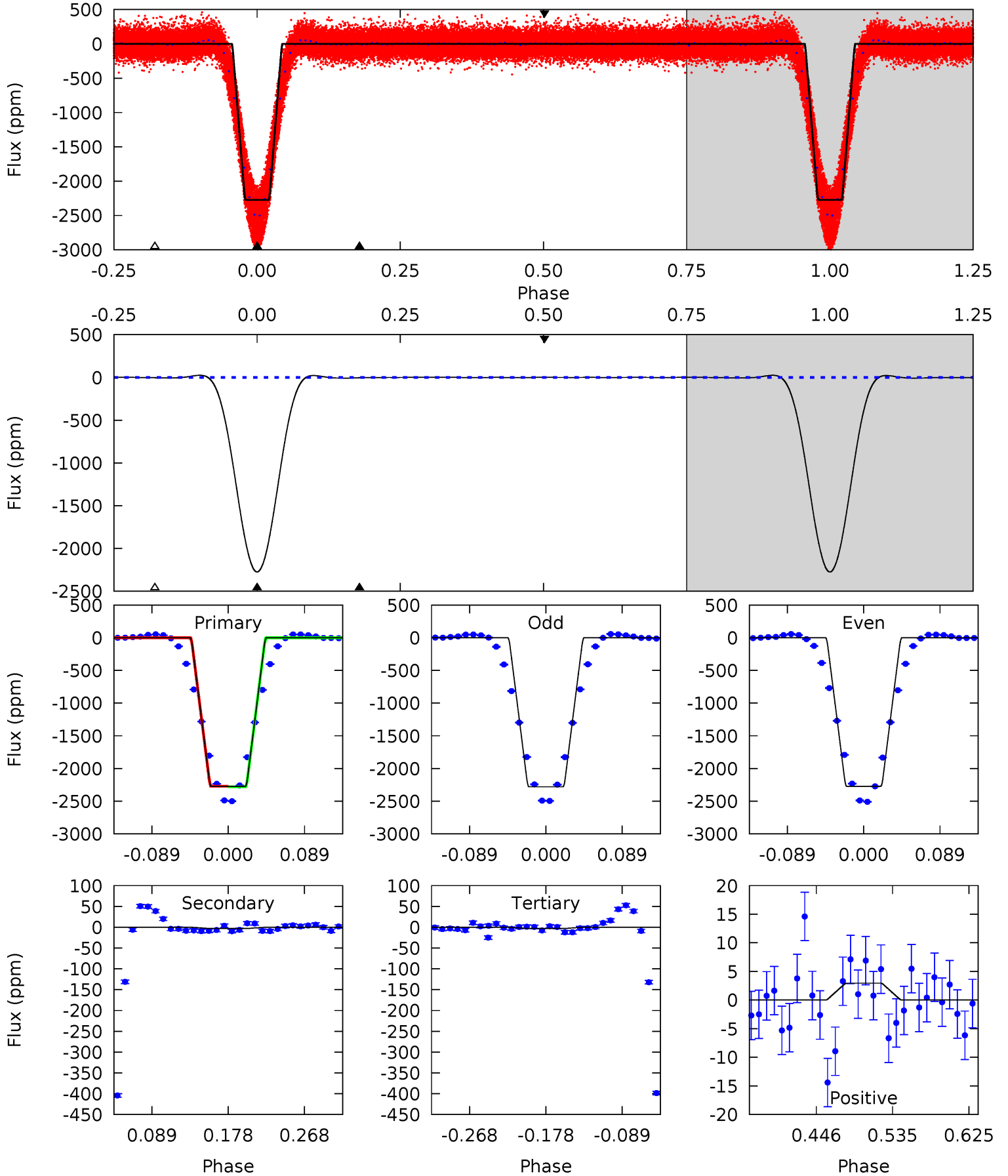
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
833.3	38.9	17.7	-16.9	4.53	1.55	49.0	815.7	850.2	21.2	55.7	0.91	0.96	0.19	23.9



Alt Model-Shift Uniqueness Test

008242350-01, P = 6.993621 Days, E = 125.009269 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1673	2.39	2.33	2.17	4.59	1.70	3.46	1671	1671	0.06	0.22	2.67	1.02	0.01	2.32



Stellar Parameters For KIC 008242350

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6565^{+158}_{-198}	$3.803^{+0.293}_{-0.098}$	$-0.200^{+0.300}_{-0.250}$	$2.467^{+0.456}_{-0.847}$	$1.414^{+0.228}_{-0.253}$	$0.133^{+0.266}_{-0.041}$
	+2%/-3%	+8%/-3%	+150%/-125%	+18%/-34%	+16%/-18%	+201%/-31%
Source	PHO1	FLK73	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 008242350-01 / KOI 5493.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-117 ± 3	$21.81^{+2.99}_{-4.19}$	2196^{+141}_{-202}	2860^{+97}_{-110}	$0.907^{+0.388}_{-0.215}$
Alt.	-3 ± 1	$12.84^{+2.36}_{-2.55}$	2195^{+134}_{-192}	-2522^{+147}_{-97}	$0.072^{+0.044}_{-0.032}$

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

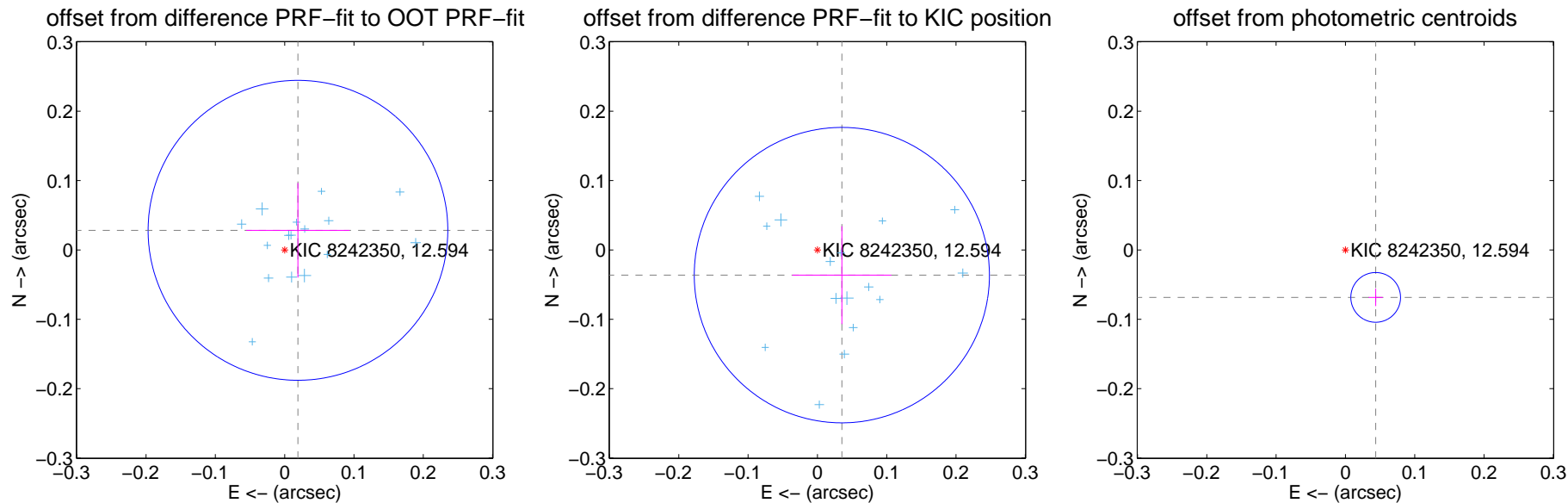
DV Centroid Data

Supplemental centroid analysis for 008242350-01. Kepler magnitude: 12.59. Transit SNR 167.97

There are 17 quarters with good PRF difference image offsets

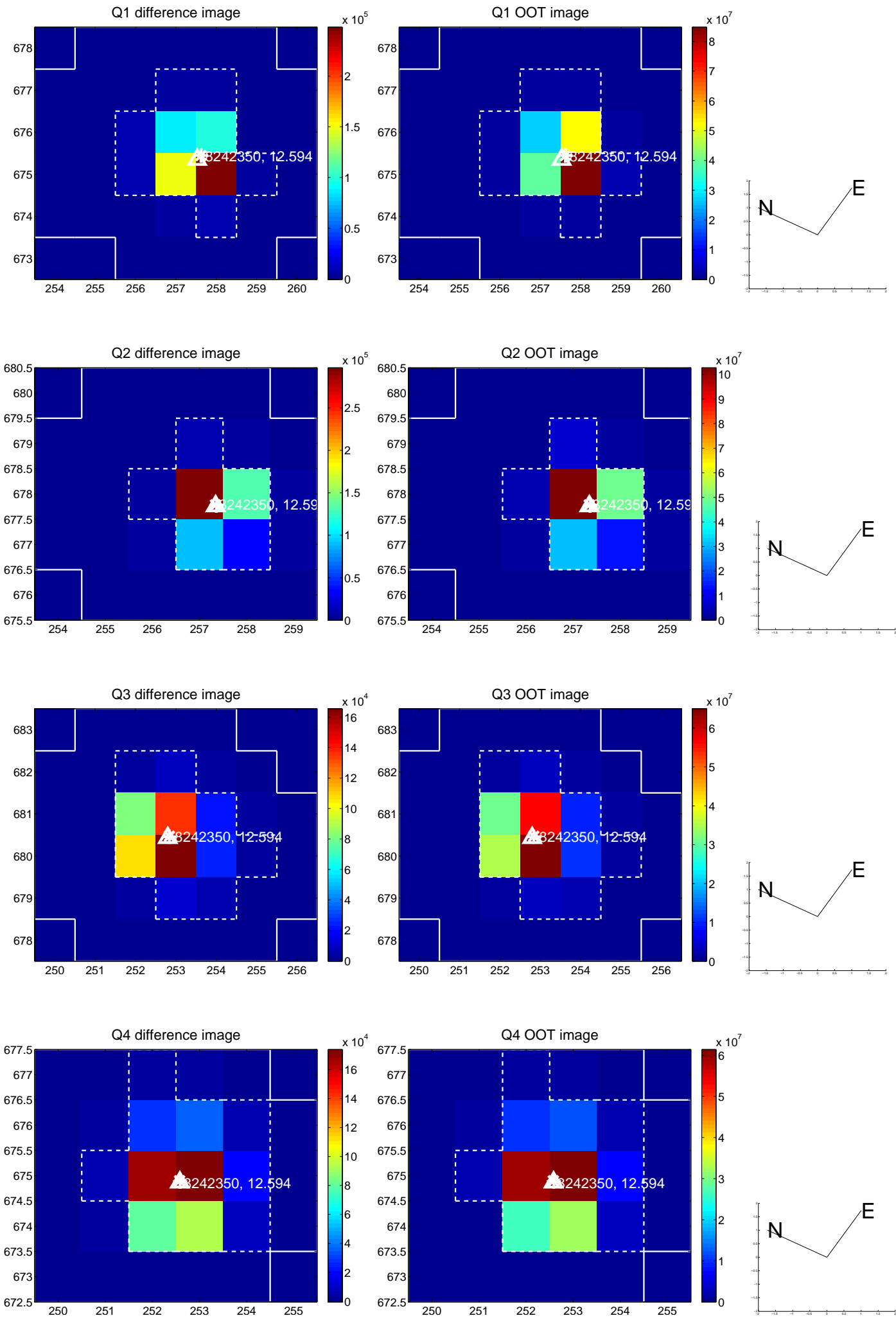
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.034 ± 0.072	0.47	-0.019 ± 0.074	0.028 ± 0.068
PRF-fit source offset from KIC position	0.051 ± 0.071	0.71	-0.035 ± 0.071	-0.036 ± 0.071
photometric centroid source offset	0.08 ± 0.01	6.79	-0.04 ± 0.01	-0.07 ± 0.01

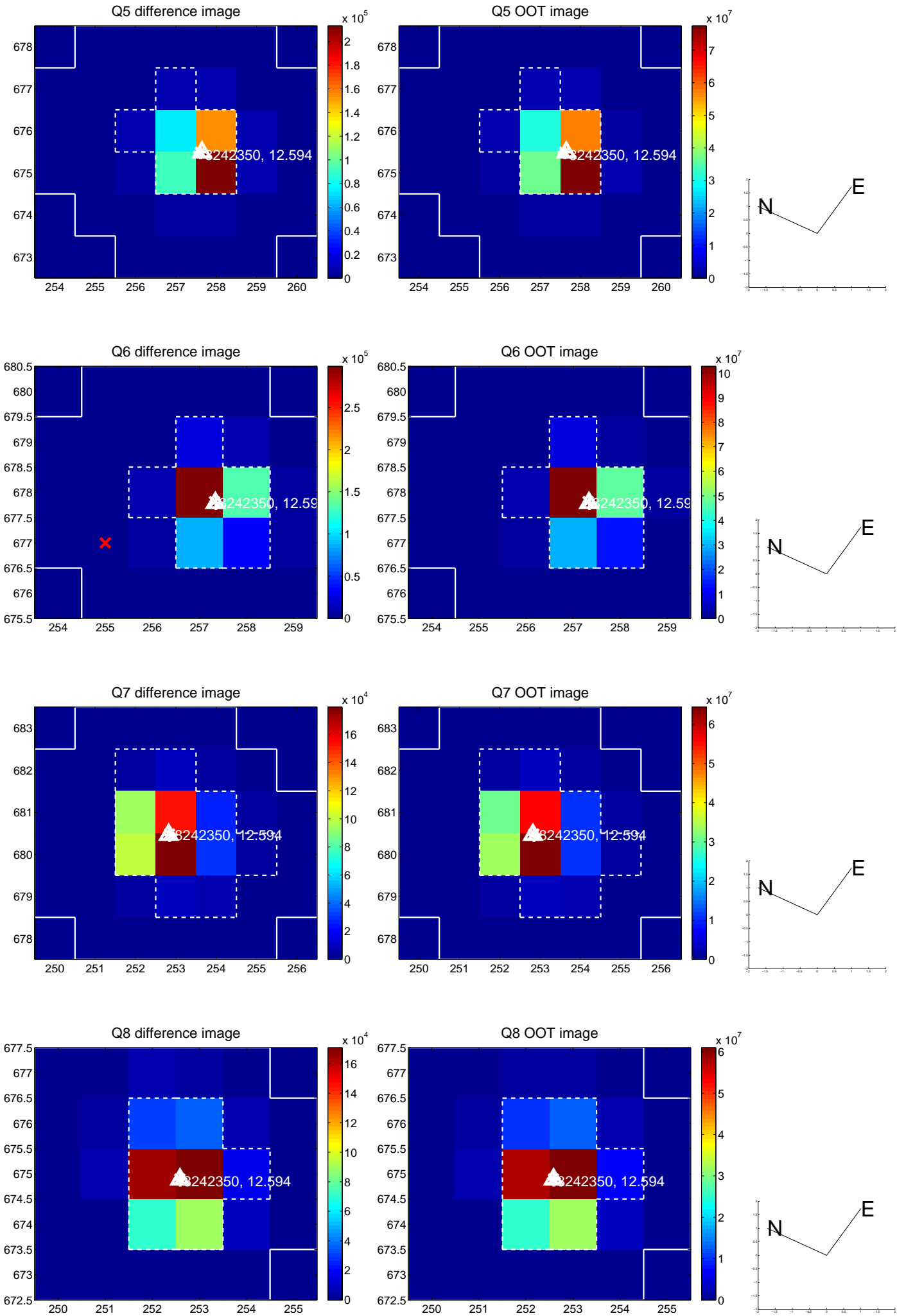


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

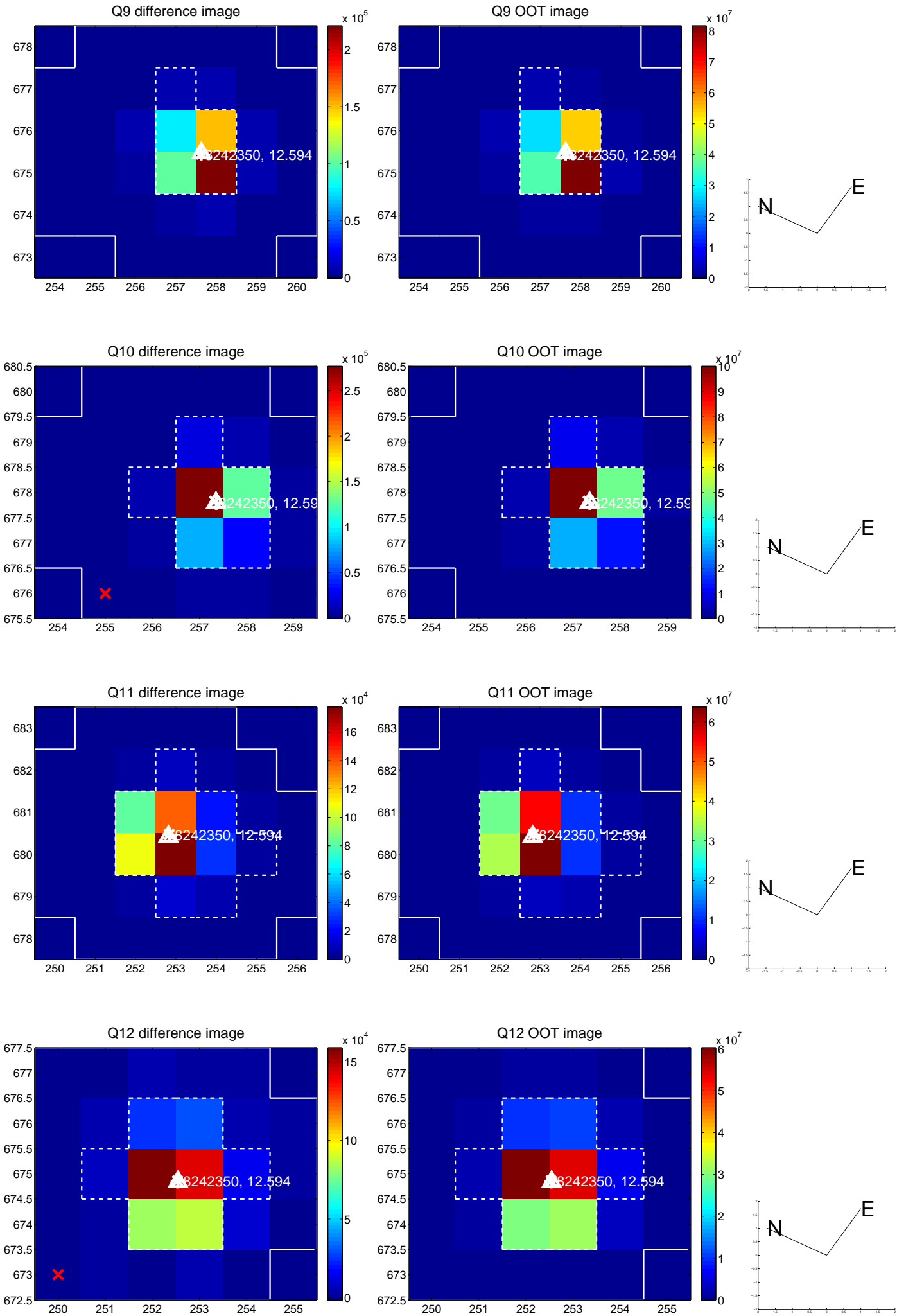
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



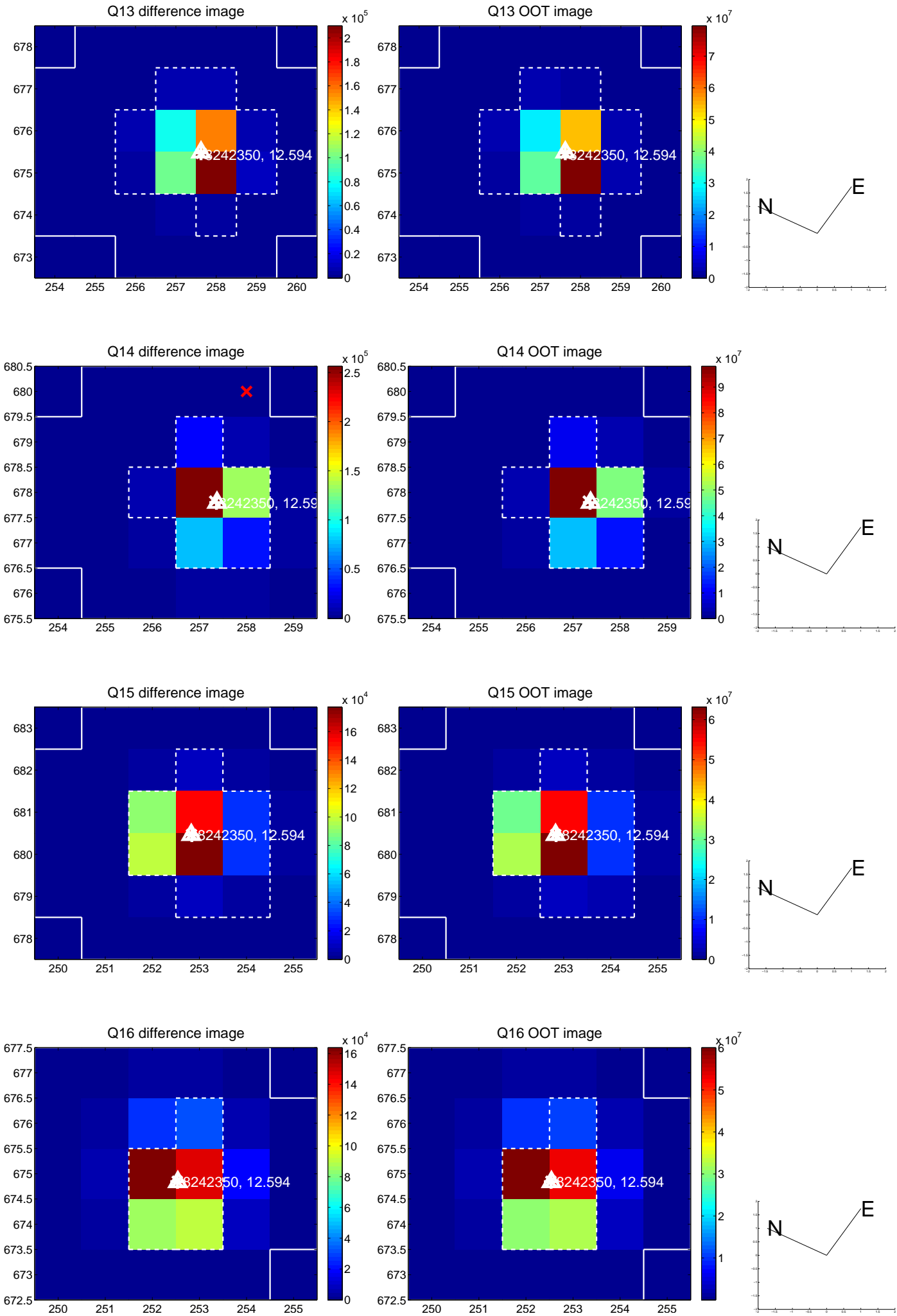
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



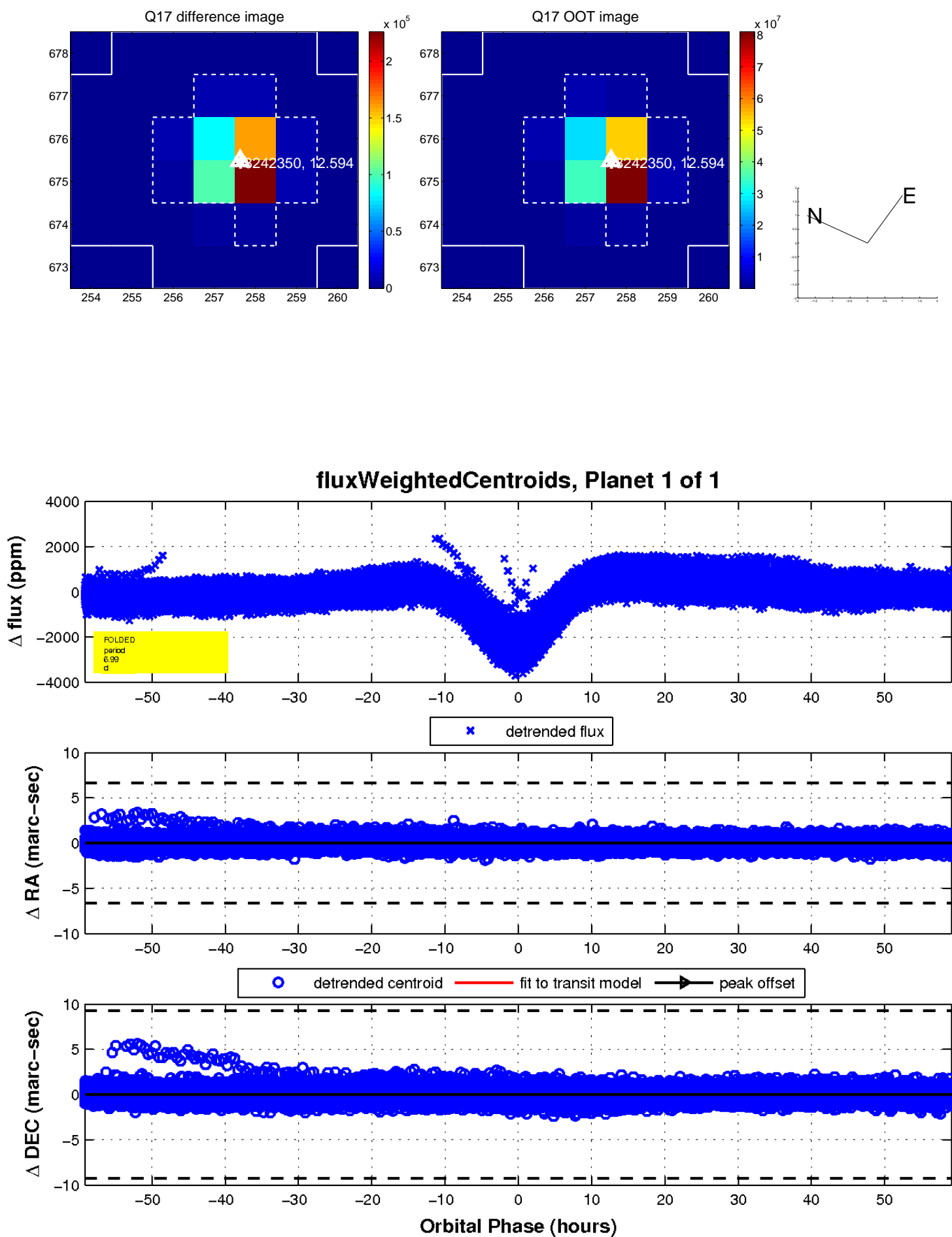
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

