

KIC 008685497

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})
008685497-01	OBS	1629.01	4.409676	132.448072	129.6	2.213	23.3	25.4	1.17	5836	1.60	477.84

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008685497-01	OBS	PC	0.99	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.

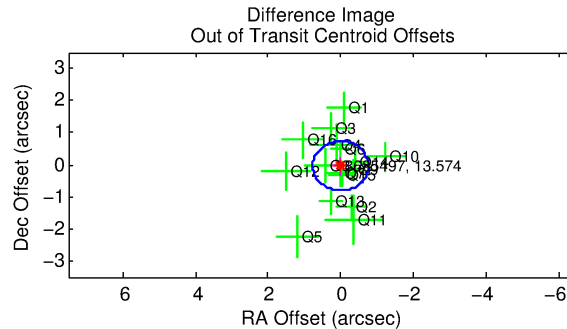
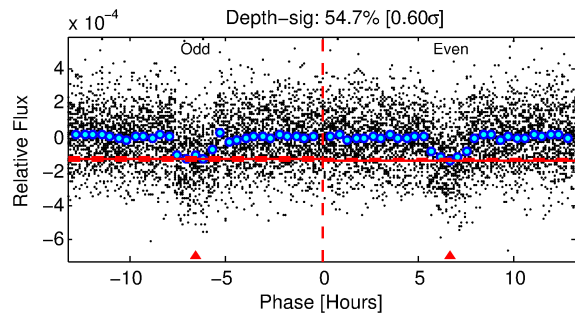
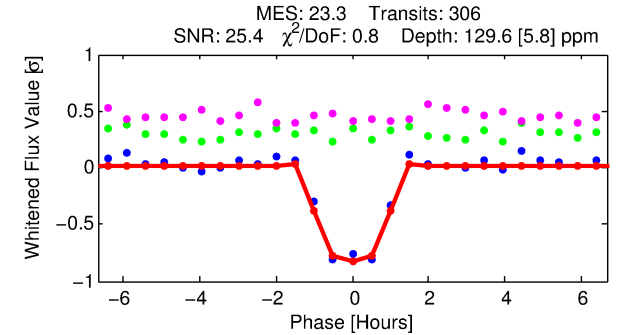
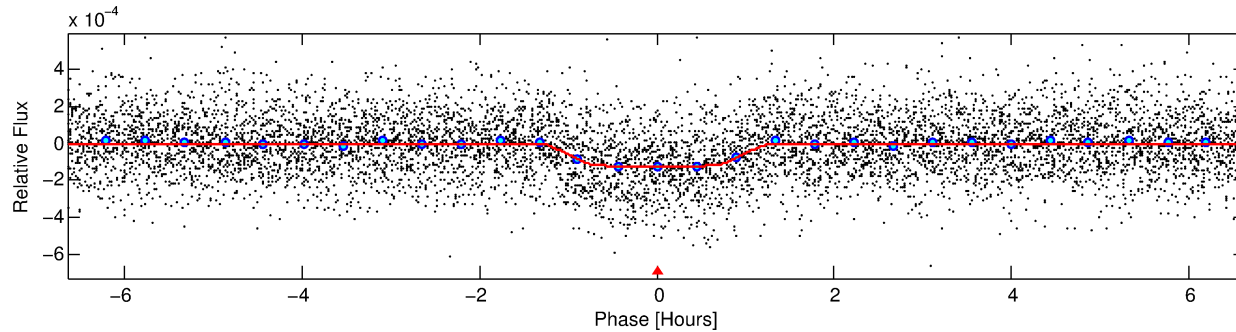
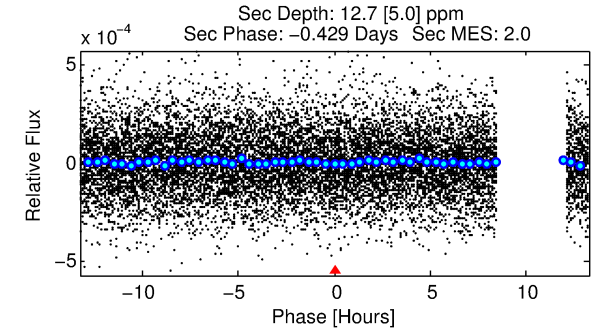
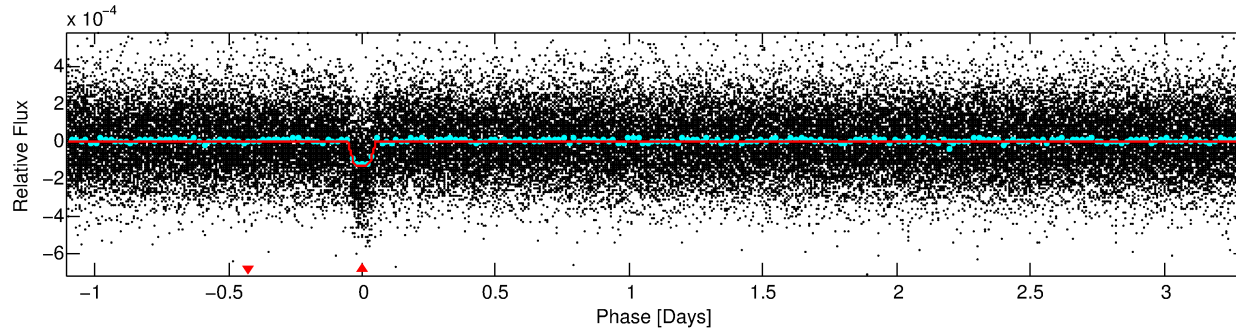
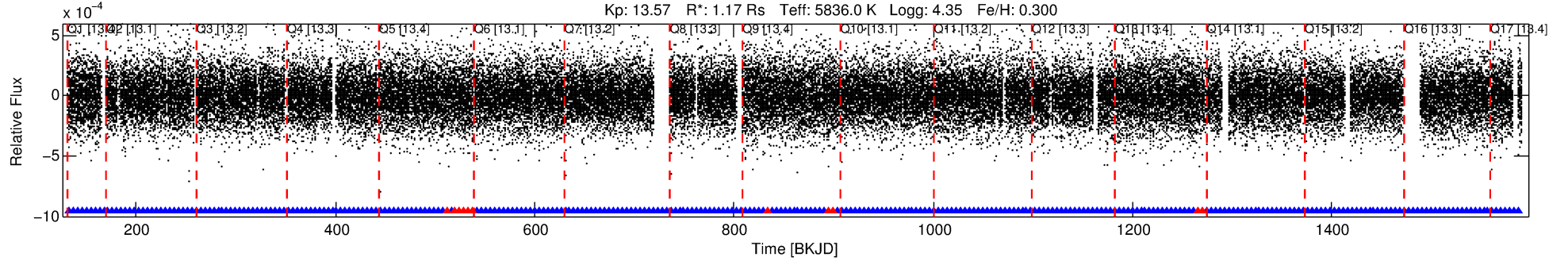
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008685497-01

No Significant Match Found

DV One-Page Summary

KIC: 8685497 Candidate: 1 of 1 Period: 4.410 d
KOI: K01629.01 Corr: 0.975



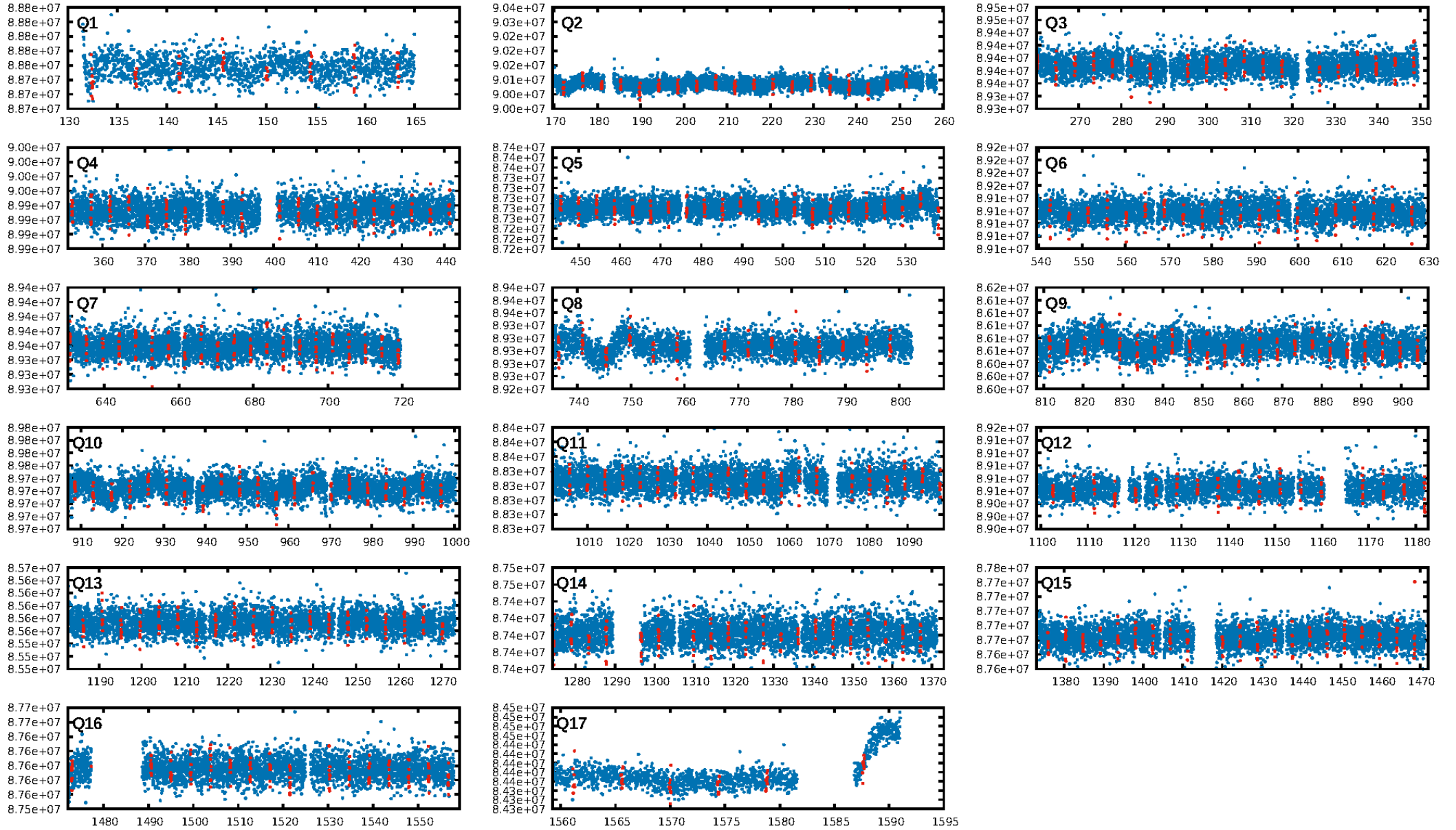
DV Fit Results:

Period = 4.40968 [0.00001] d
Epoch = 132.4481 [0.0016] BKJD
Rp/R* = 0.0126 [0.0039]
a/R* = 6.88 [9.99]
b = 0.91 [0.29]
Seff = 477.84 [110.72]
Teq = 1192 [69] K
Rp = 1.60 [0.56] Re
a = 0.0544 [0.0078] AU
Ag = 8.07 [6.20] [1.14σ]
Teffp = 3107 [577] K [3.29σ]

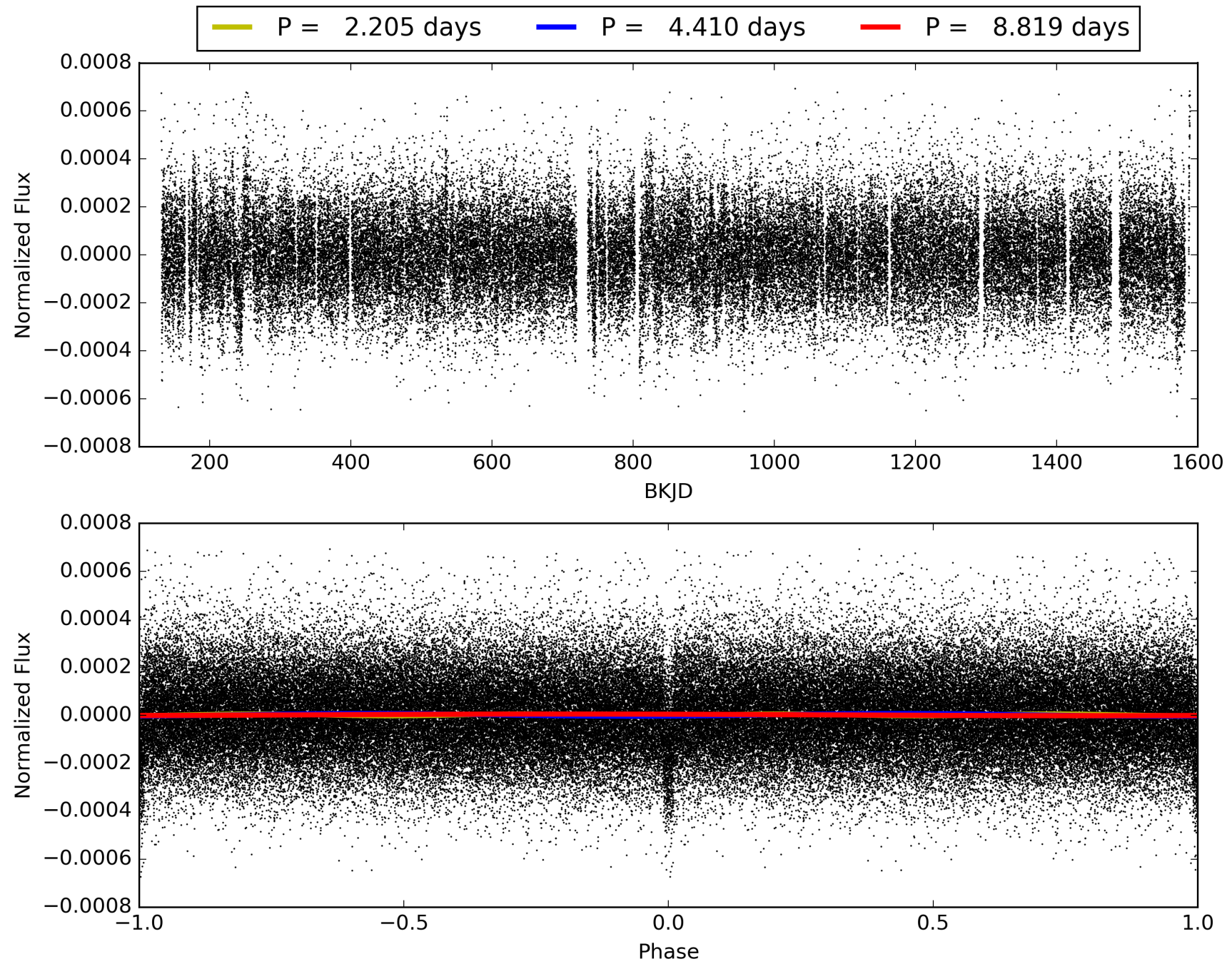
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.10e-119
RollingBand-fgt: 0.96 [281/292]
GhostDiagnostic-chr: 20.37
Centroid-sig: 96.7%
Centroid-so: 0.312 arcsec [0.58σ]
OotOffset-rm: 0.043 arcsec [0.17σ]
OotOffset-st: 4/4/4 [16]
KicOffset-rm: 0.150 arcsec [0.77σ]
KicOffset-st: 4/4/4 [16]
DiffImageQuality-fgm: 1.00 [16/16]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008685497-01, PDC Light Curves

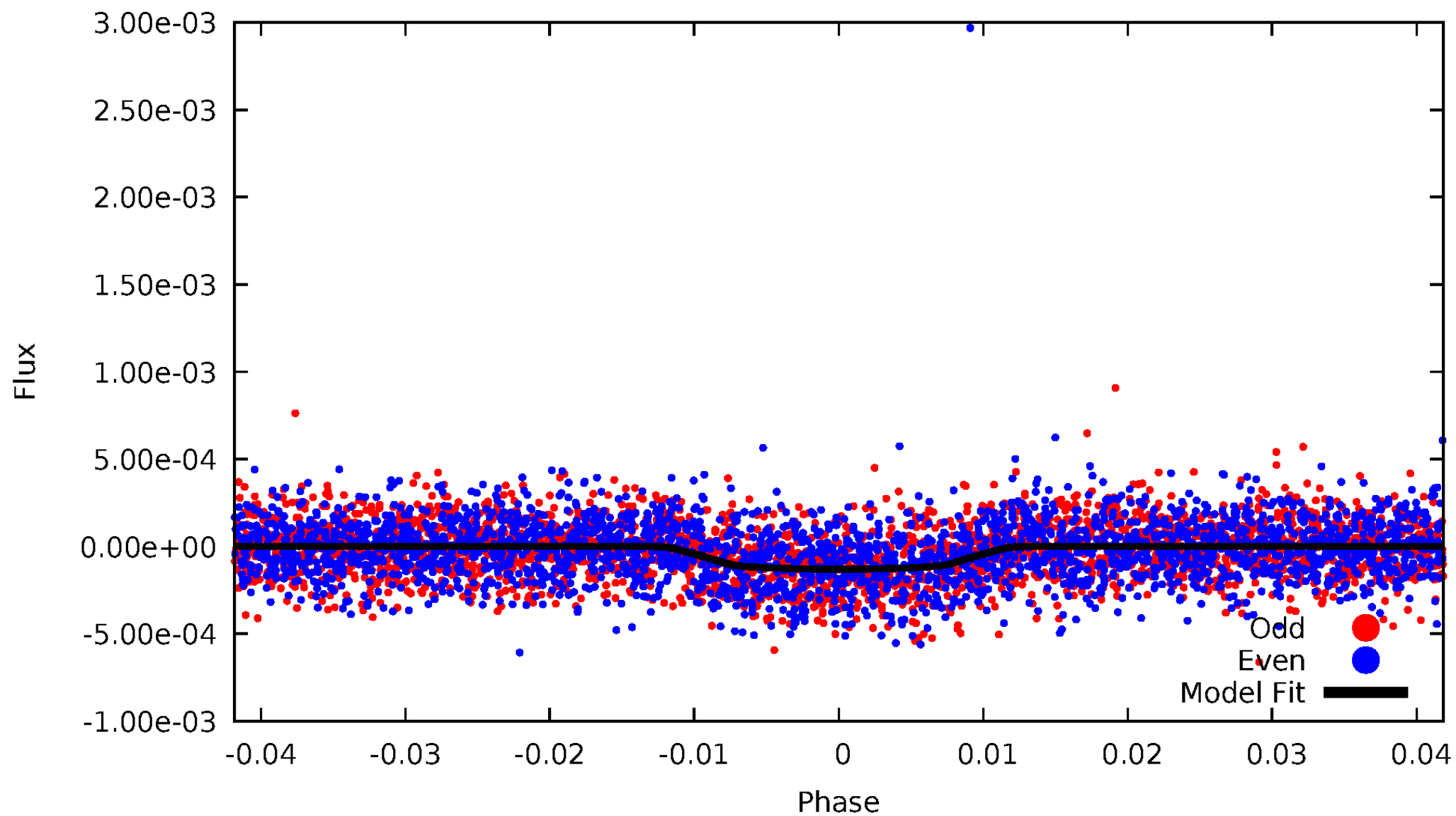


TCE 008685497-01



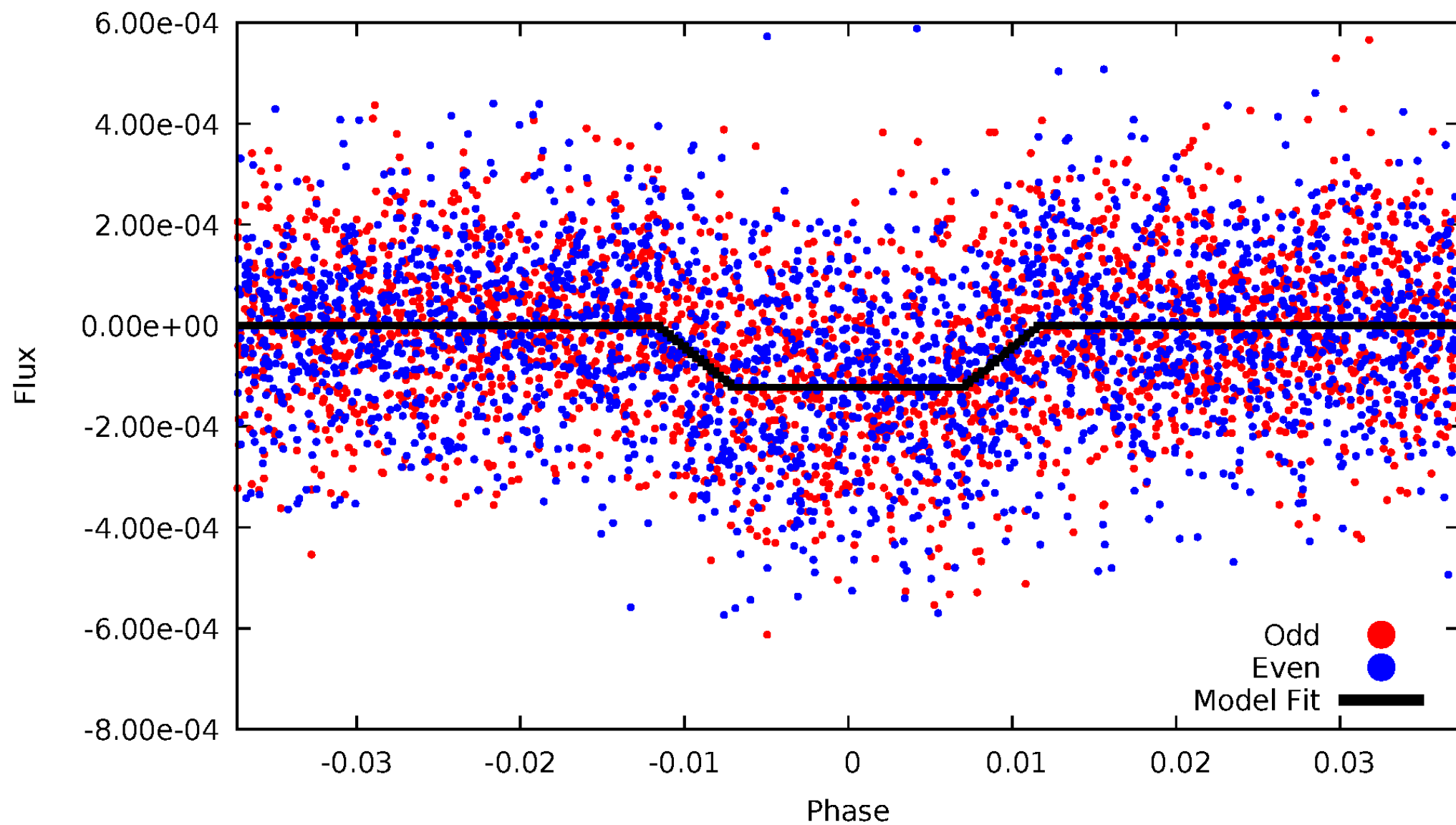
DV Odd/Even

TCE 008685497-01



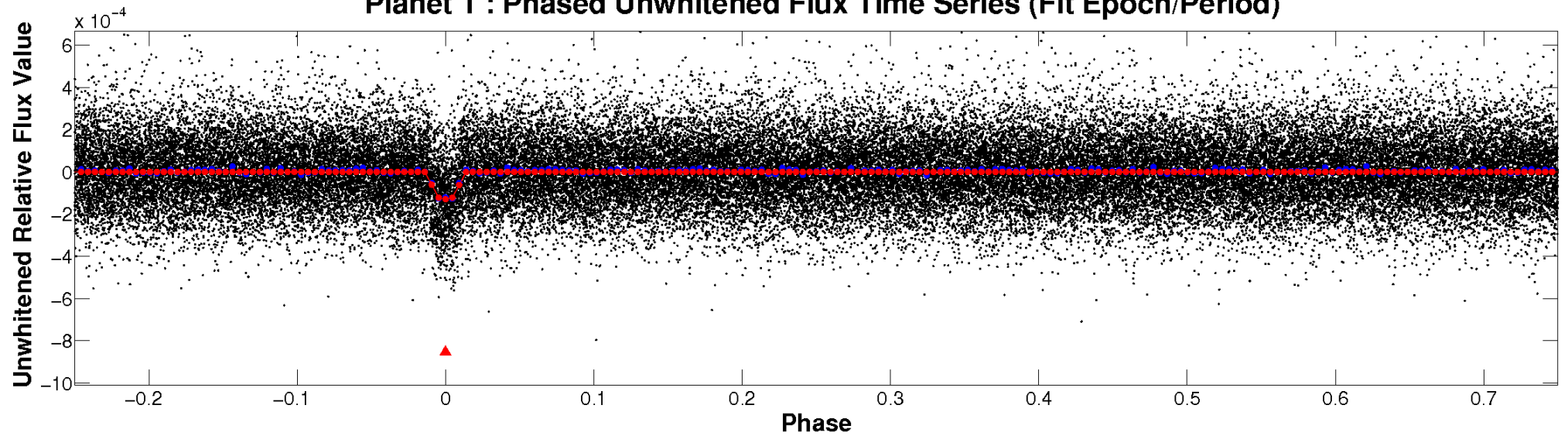
ALT Odd/Even

TCE 008685497-01

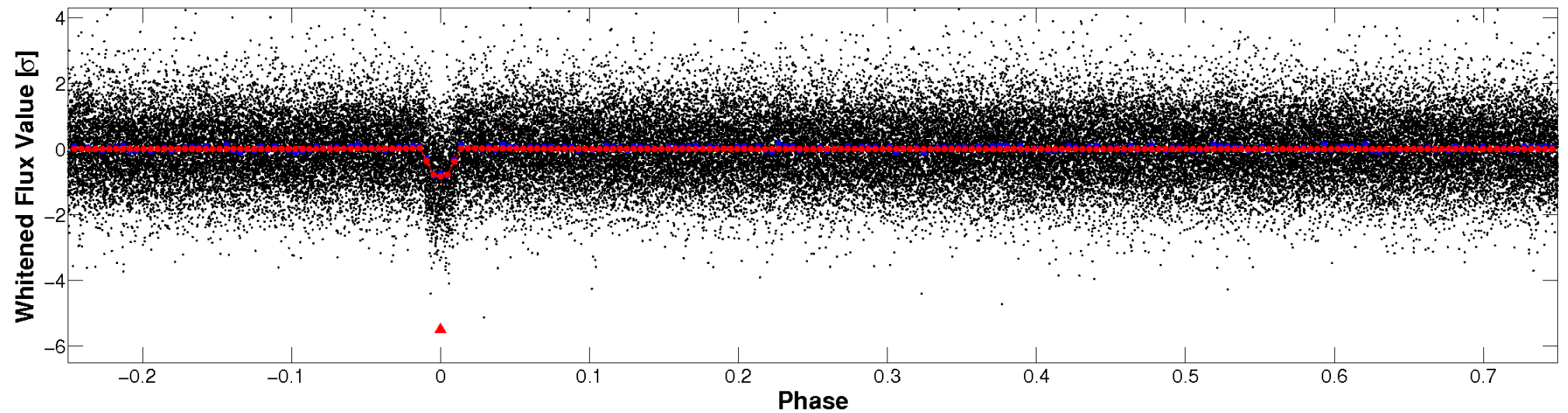


Non-Whitened Vs. Whitened Light Curve

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

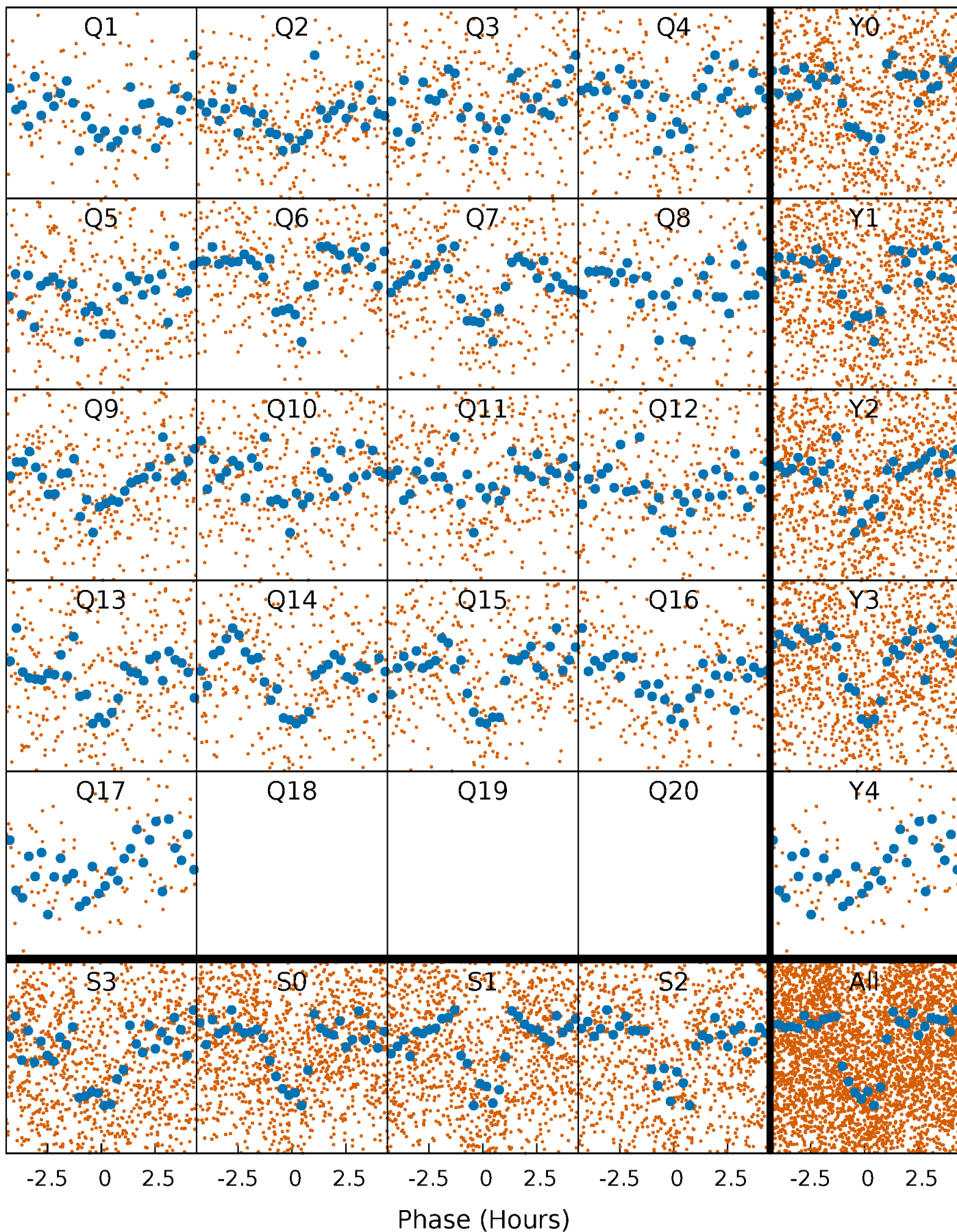


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



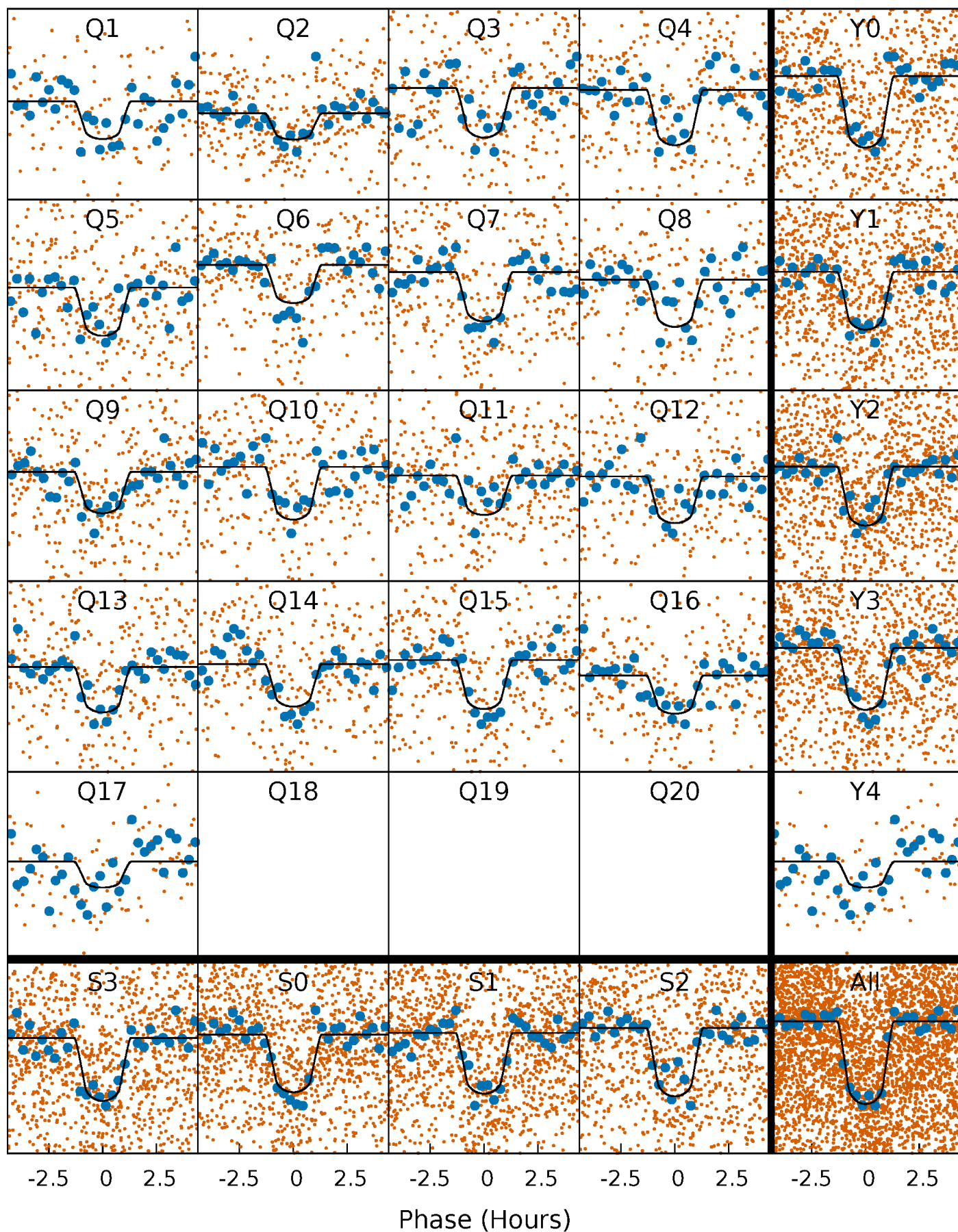
PDC Quarter-Phased Transit Curves

TCE 008685497-01 P= 4.409676 Days $T_0=132.448072$ (BKJD)



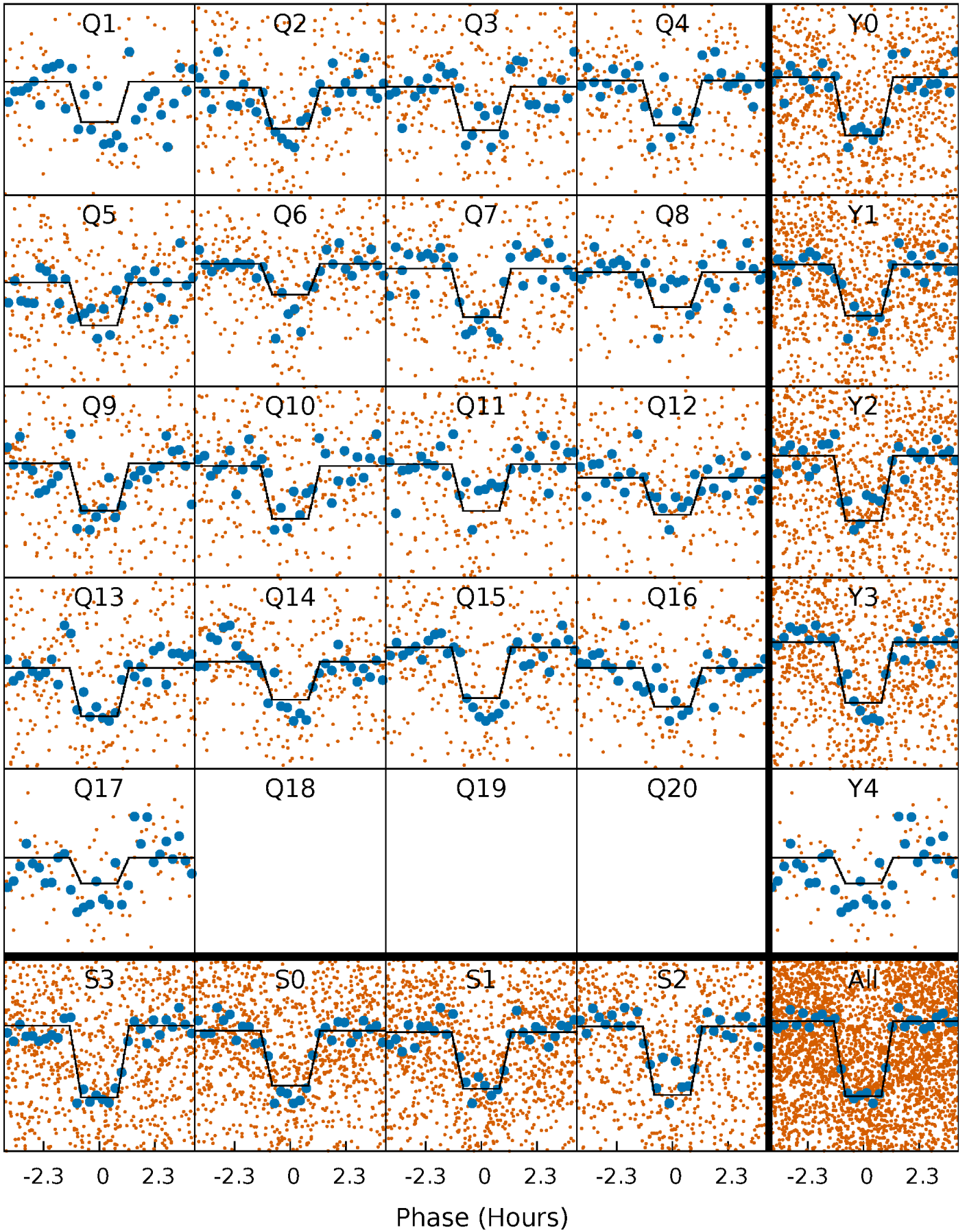
DV Quarter-Phased Transit Curves

TCE 008685497-01 P= 4.409676 Days $T_0=132.448072$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

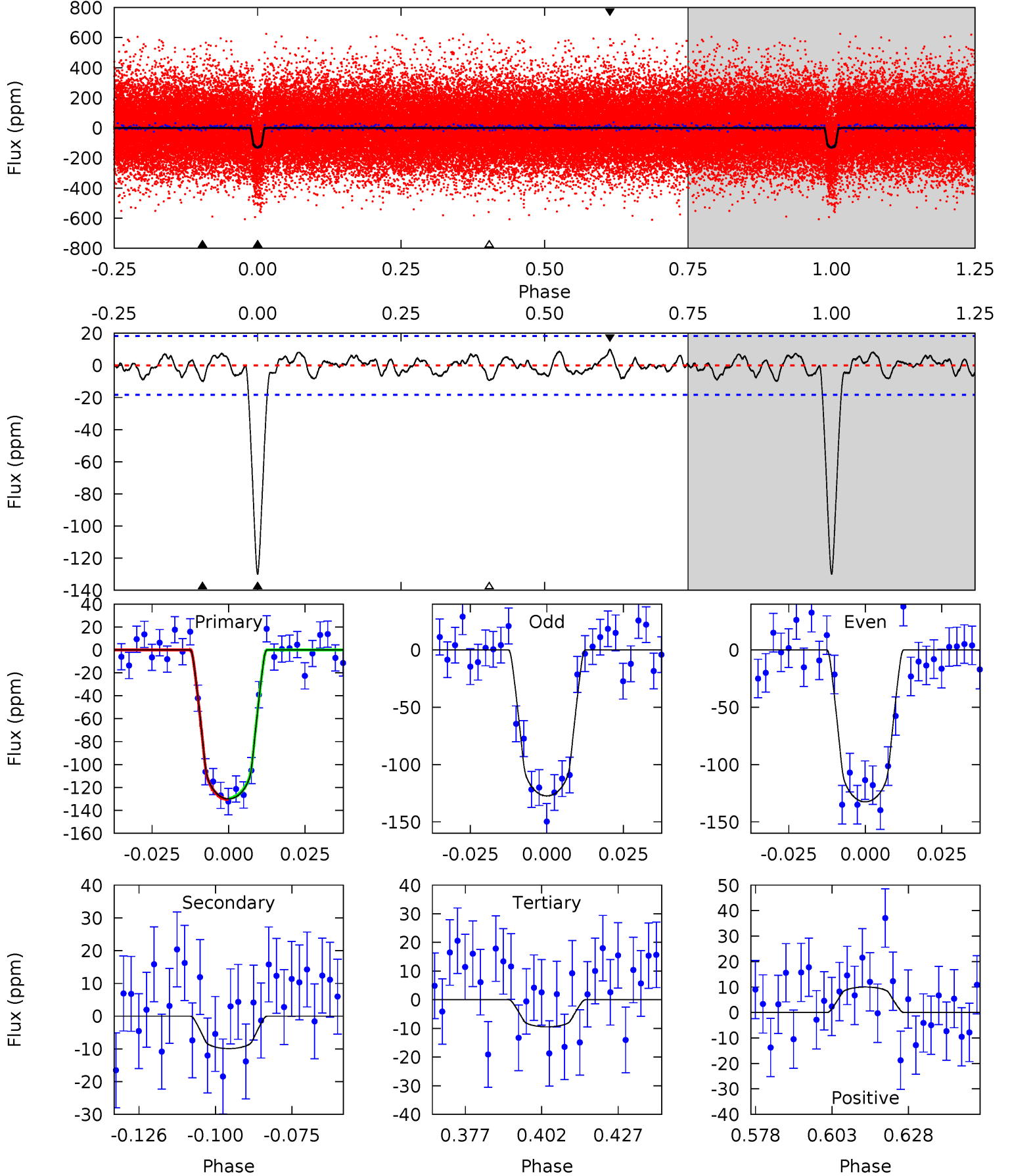
TCE 008685497-01 P= 4.409659 Days $T_0=132.450831$ (BKJD)



DV Model-Shift Uniqueness Test

008685497-01, P = 4.409676 Days, E = 128.038396 Days

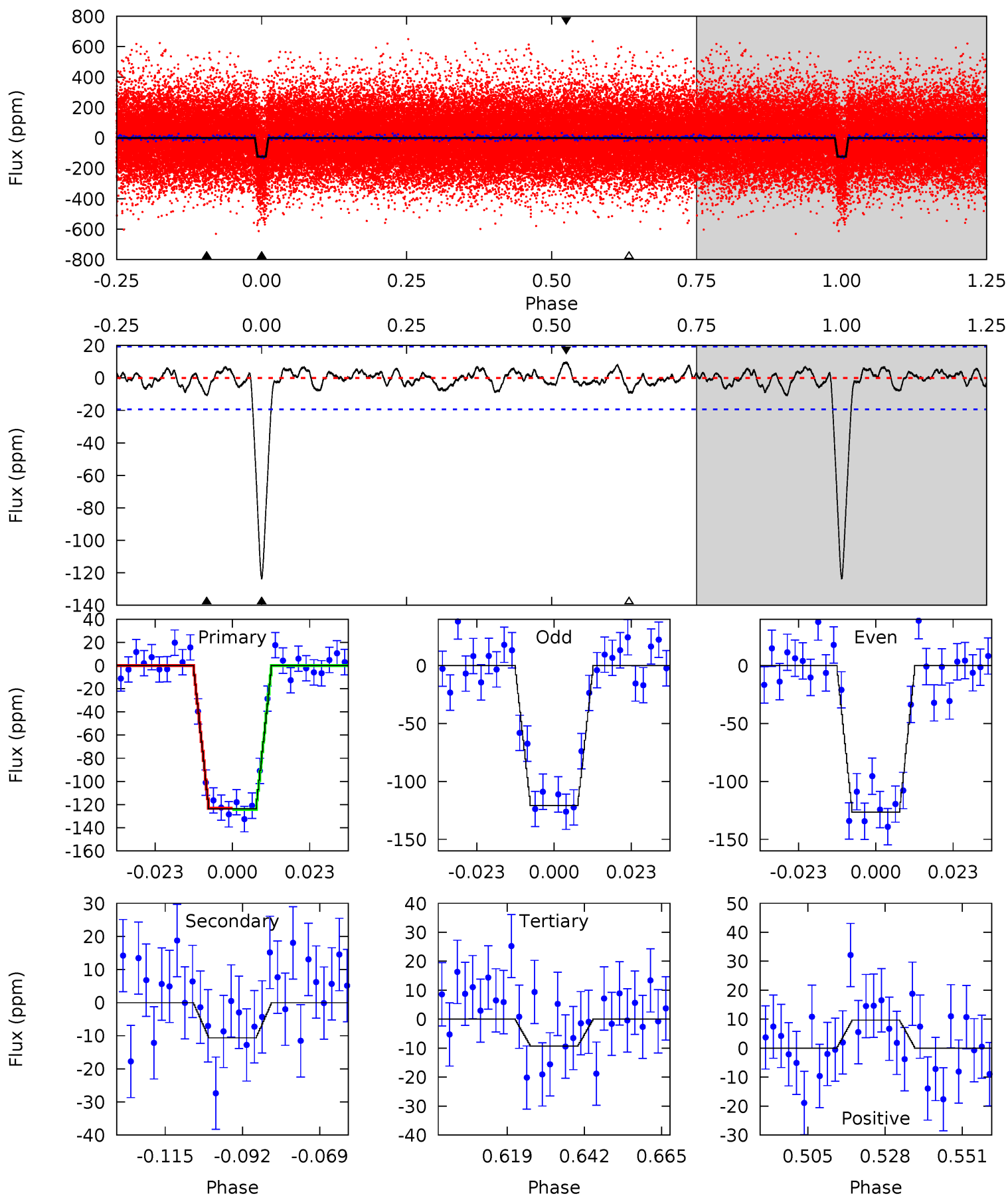
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
34.4	2.62	2.50	2.64	4.85	2.24	1.09	31.9	31.7	0.12	-0.02	0.68	0.96	0.07	0.14



Alt Model-Shift Uniqueness Test

008685497-01, P = 4.409659 Days, E = 128.041172 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.1	2.68	2.34	2.44	4.86	2.27	0.96	28.8	28.7	0.34	0.24	0.71	0.96	0.07	0.13



Stellar Parameters For KIC 008685497

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5836^{+104}_{-127}	$4.347^{+0.080}_{-0.120}$	$0.300^{+0.100}_{-0.150}$	$1.166^{+0.193}_{-0.113}$	$1.100^{+0.075}_{-0.075}$	$0.978^{+0.340}_{-0.354}$
	+2%/-2%	+2%/-3%	+33%/-50%	+17%/-10%	+7%/-7%	+35%/-36%
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 008685497-01 / KOI 1629.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-10 ± 4	$1.63^{+0.55}_{-0.52}$	1668^{+76}_{-60}	3376^{+548}_{-366}	$5.861^{+8.891}_{-3.034}$
Alt.	-11 ± 4	$1.47^{+0.47}_{-0.52}$	1673^{+76}_{-63}	3552^{+574}_{-415}	$7.905^{+11.879}_{-4.178}$

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

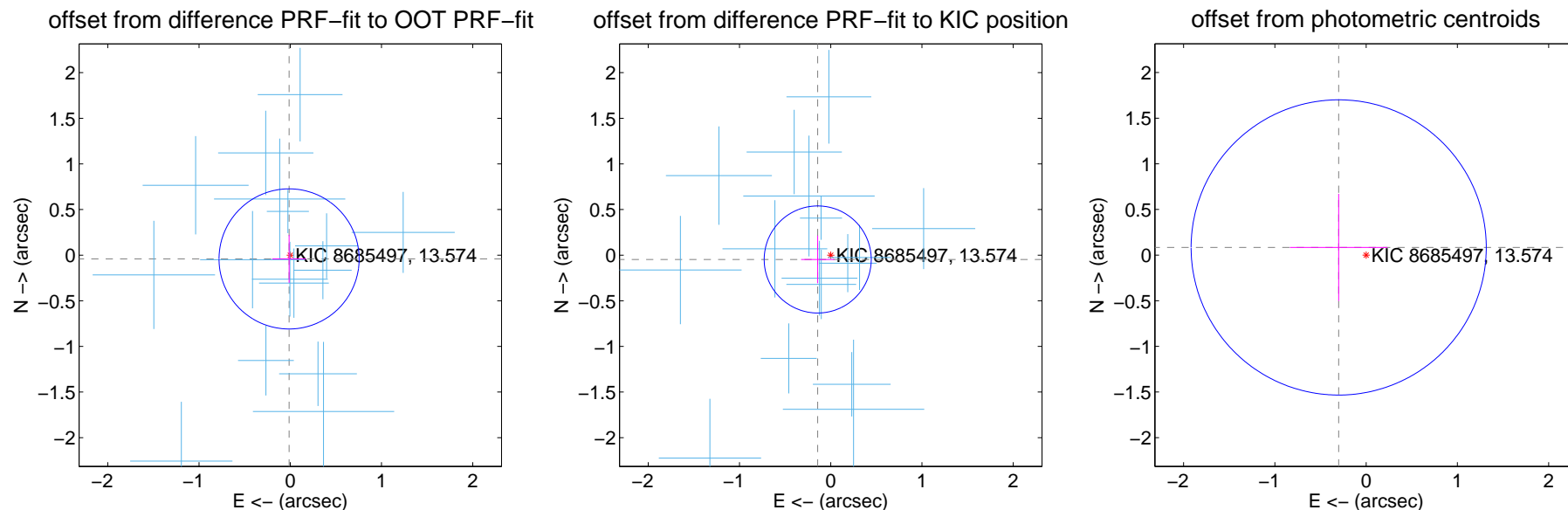
DV Centroid Data

Supplemental centroid analysis for 008685497-01. Kepler magnitude: 13.57. Transit SNR 25.41

There are 16 quarters with good PRF difference image offsets

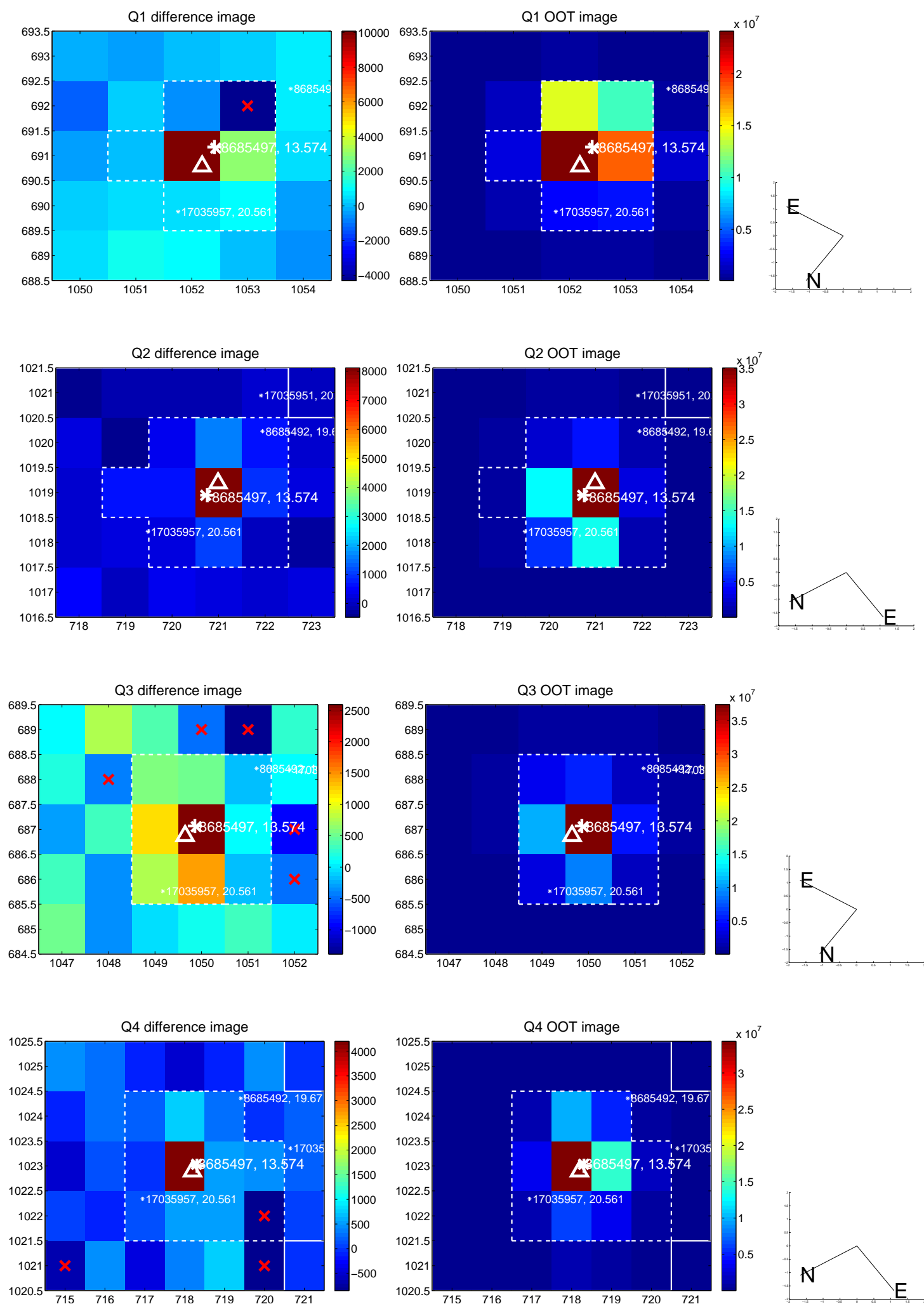
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.043 ± 0.256	0.17	0.013 ± 0.185	-0.041 ± 0.262
PRF-fit source offset from KIC position	0.150 ± 0.196	0.77	0.143 ± 0.182	-0.047 ± 0.261
photometric centroid source offset	0.31 ± 0.54	0.58	0.30 ± 0.54	0.08 ± 0.59

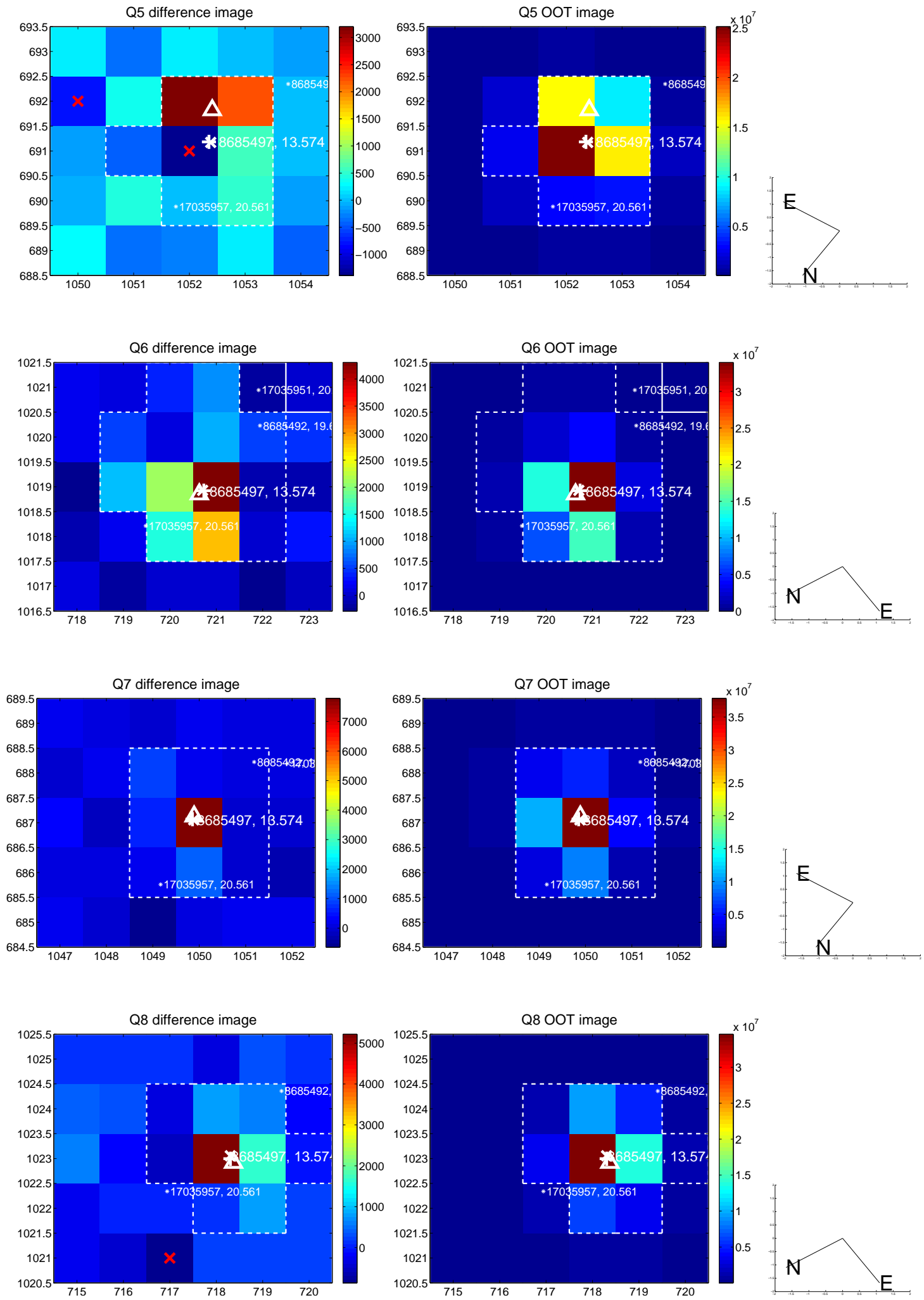


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

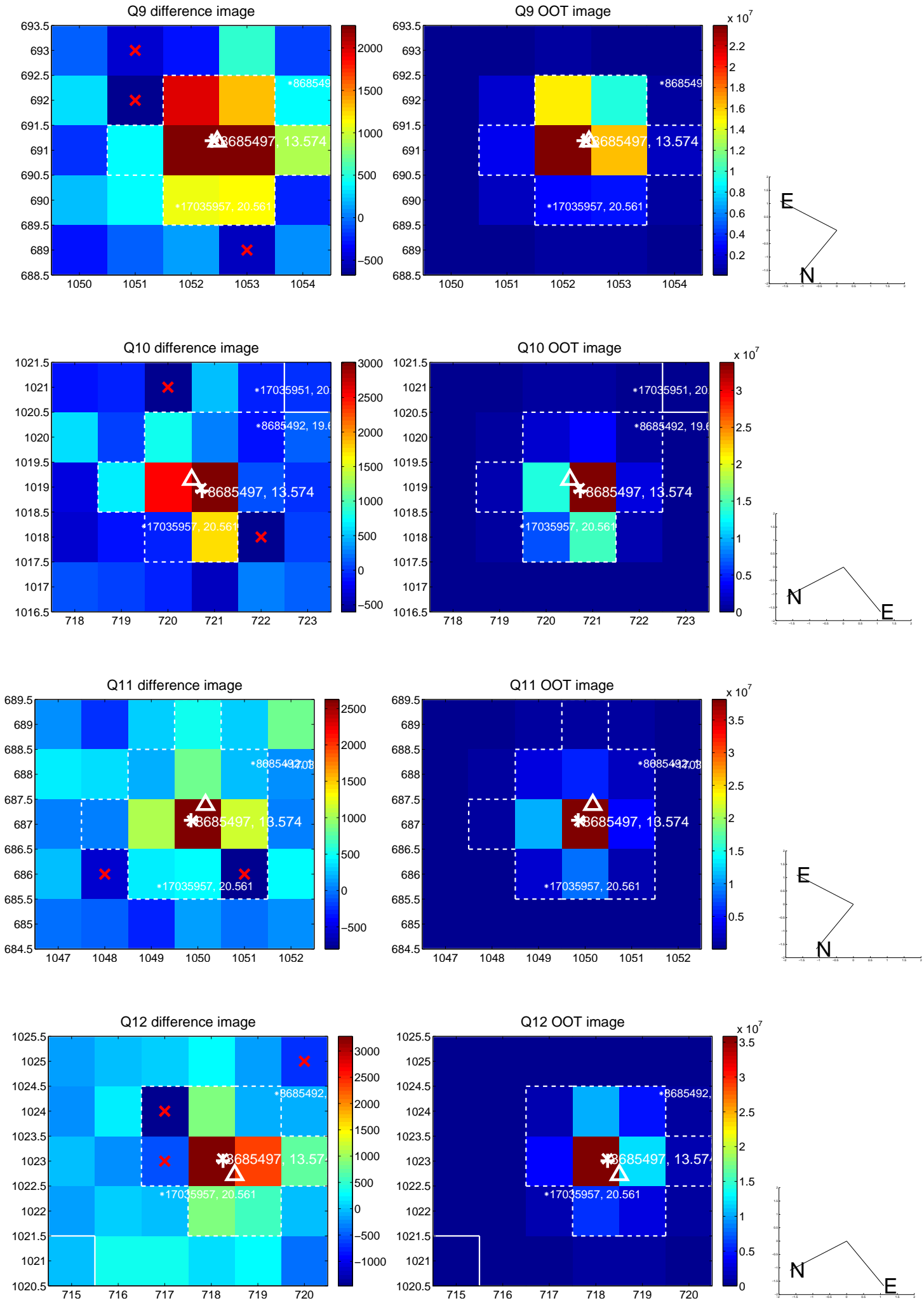
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



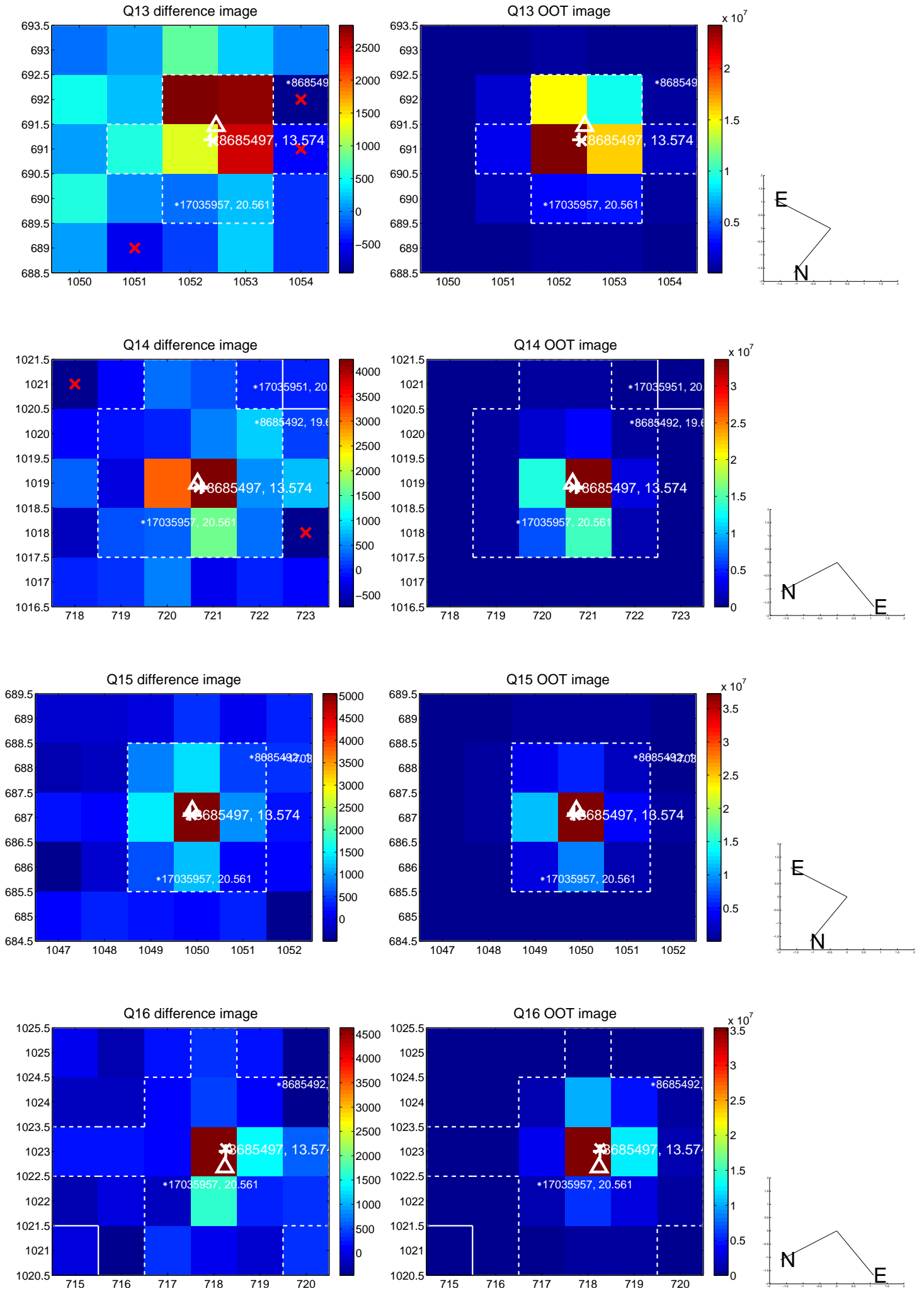
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



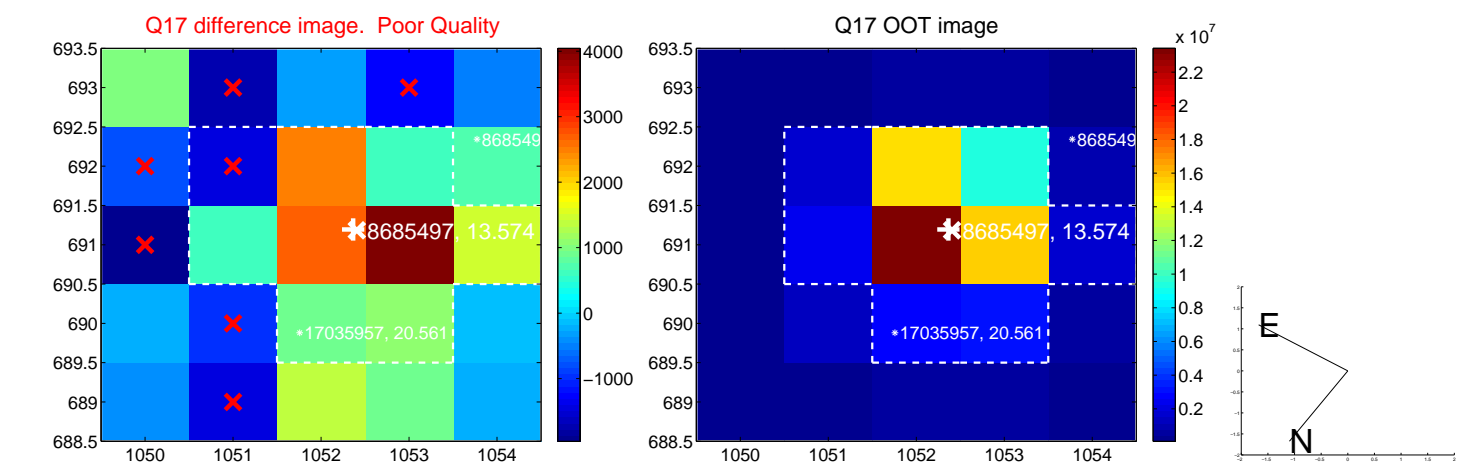
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



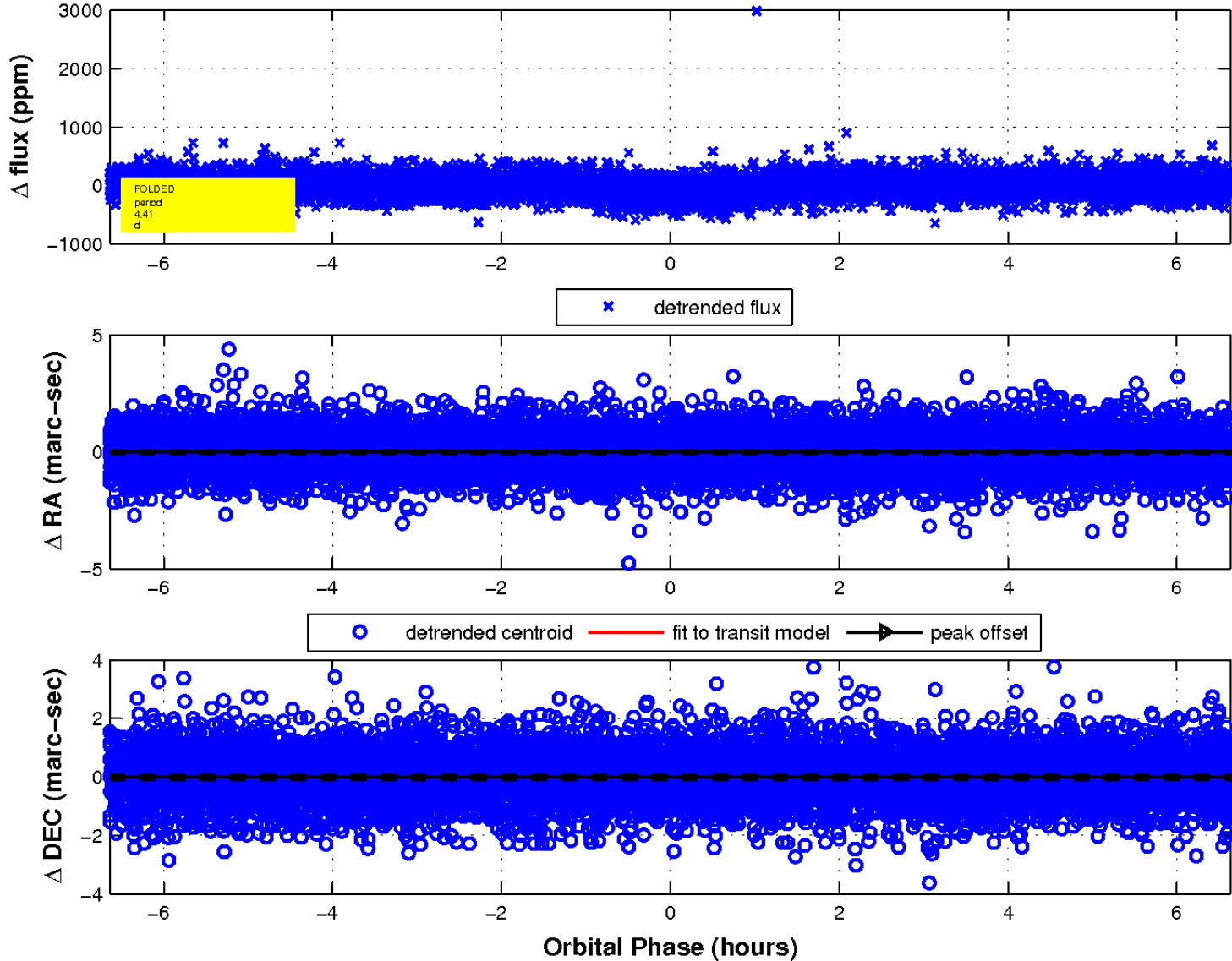
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

