

KIC 007418173

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})
007418173-01	OBS	3995.01	0.780630	132.191449	252.5	0.772	24.1	45.1	2.18	5354	4.22	12842.58

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007418173-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—CENT_KIC_POS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

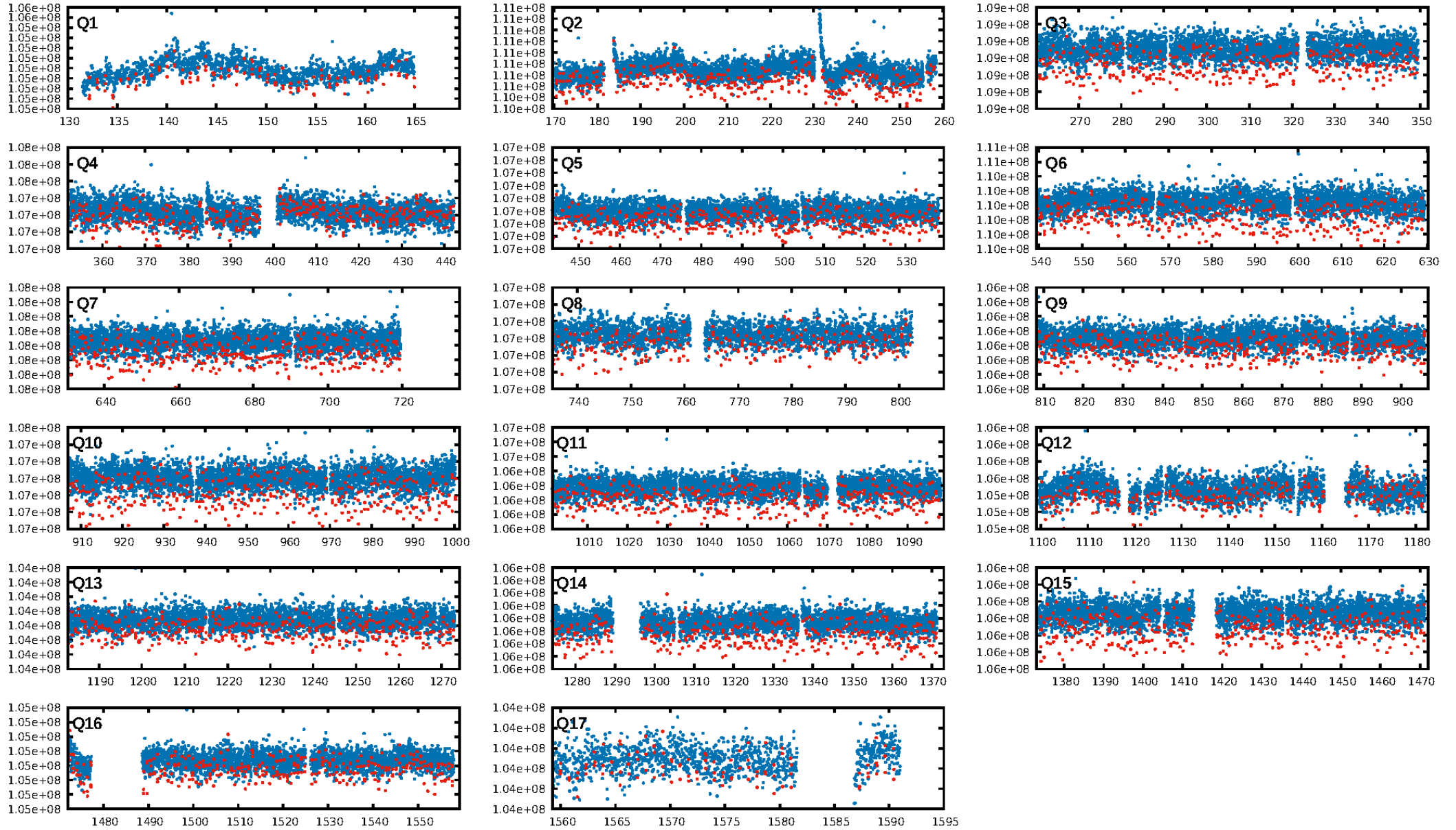
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007418173-01

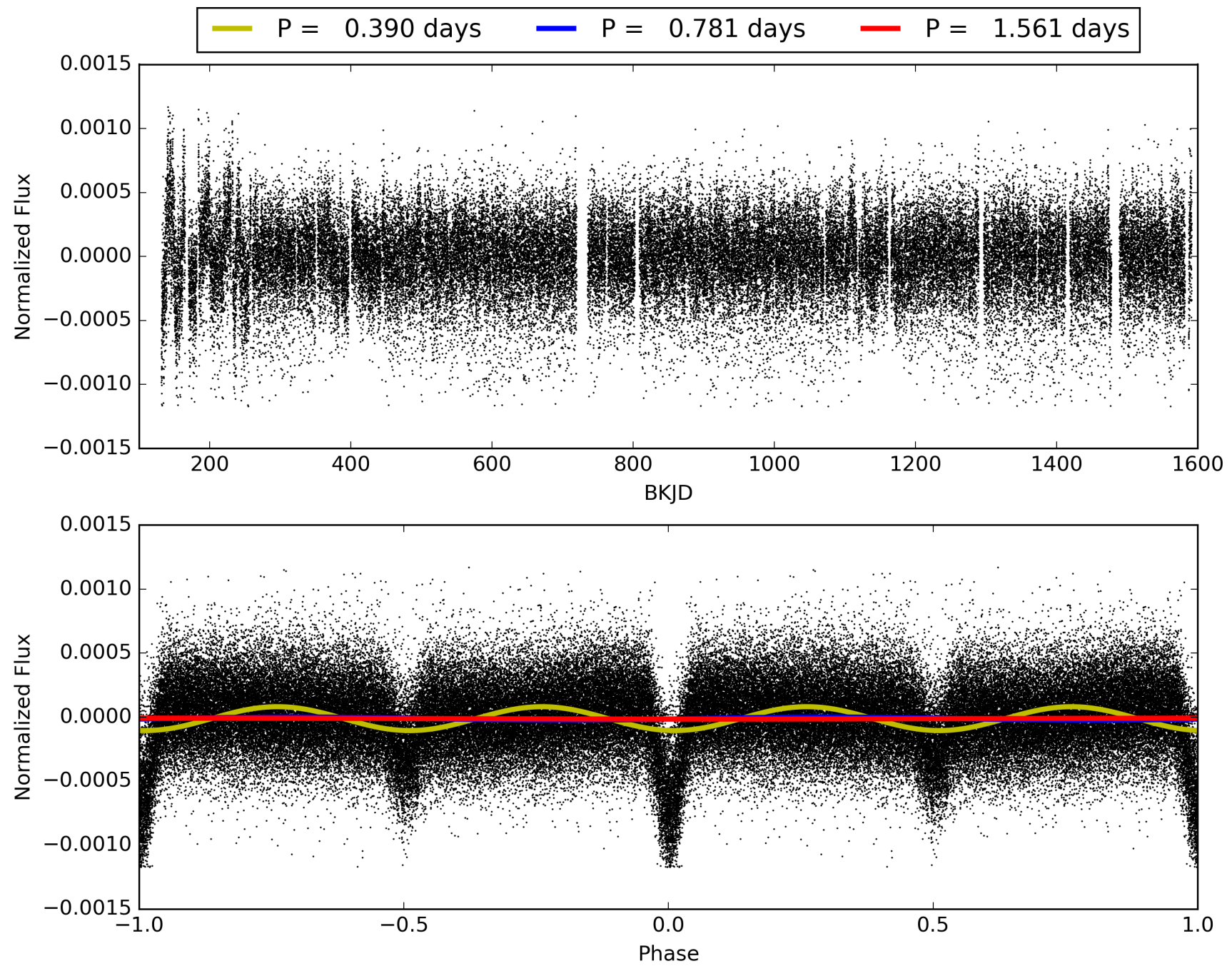
No Significant Match Found

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

TCE 007418173-01, PDC Light Curves

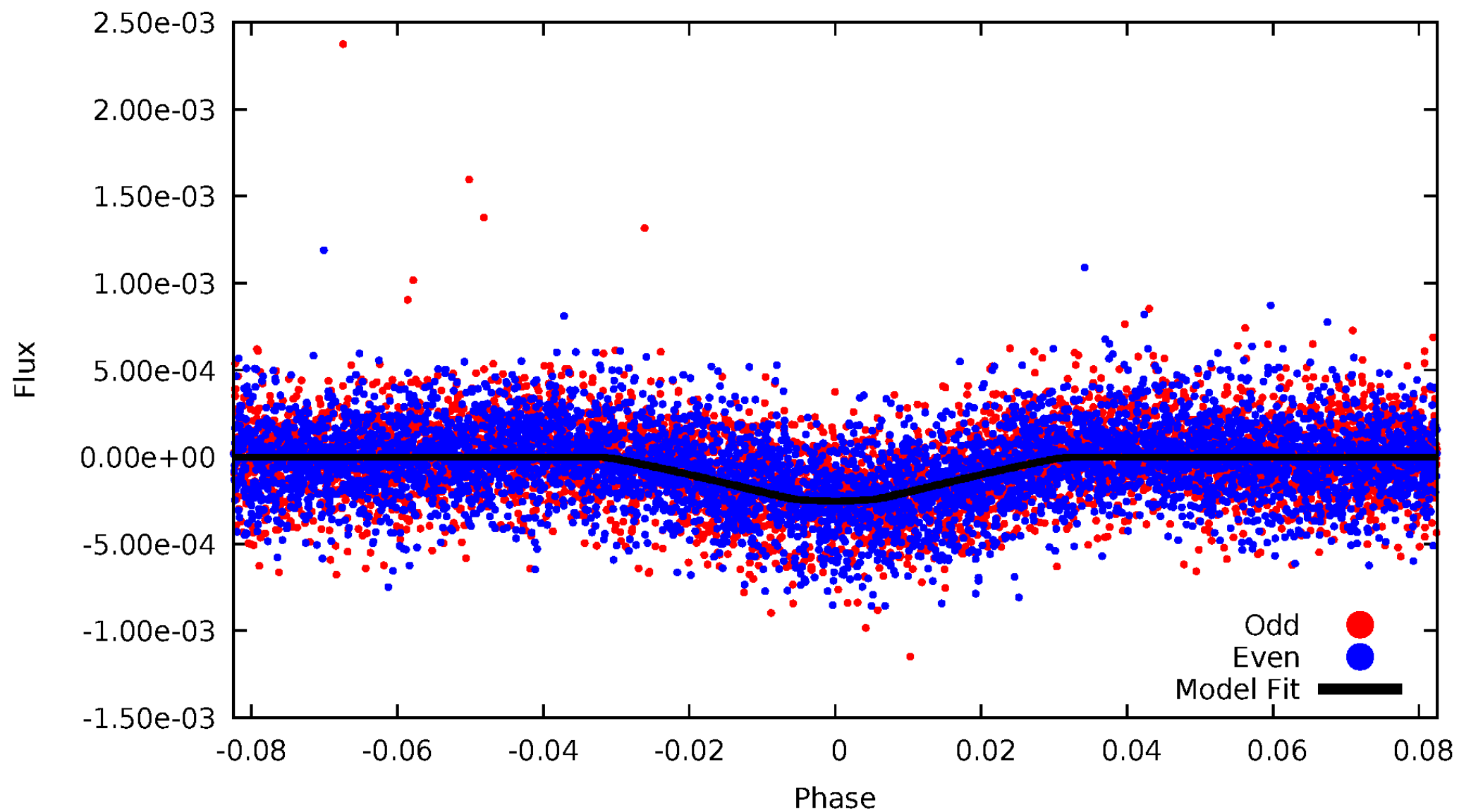


TCE 007418173-01



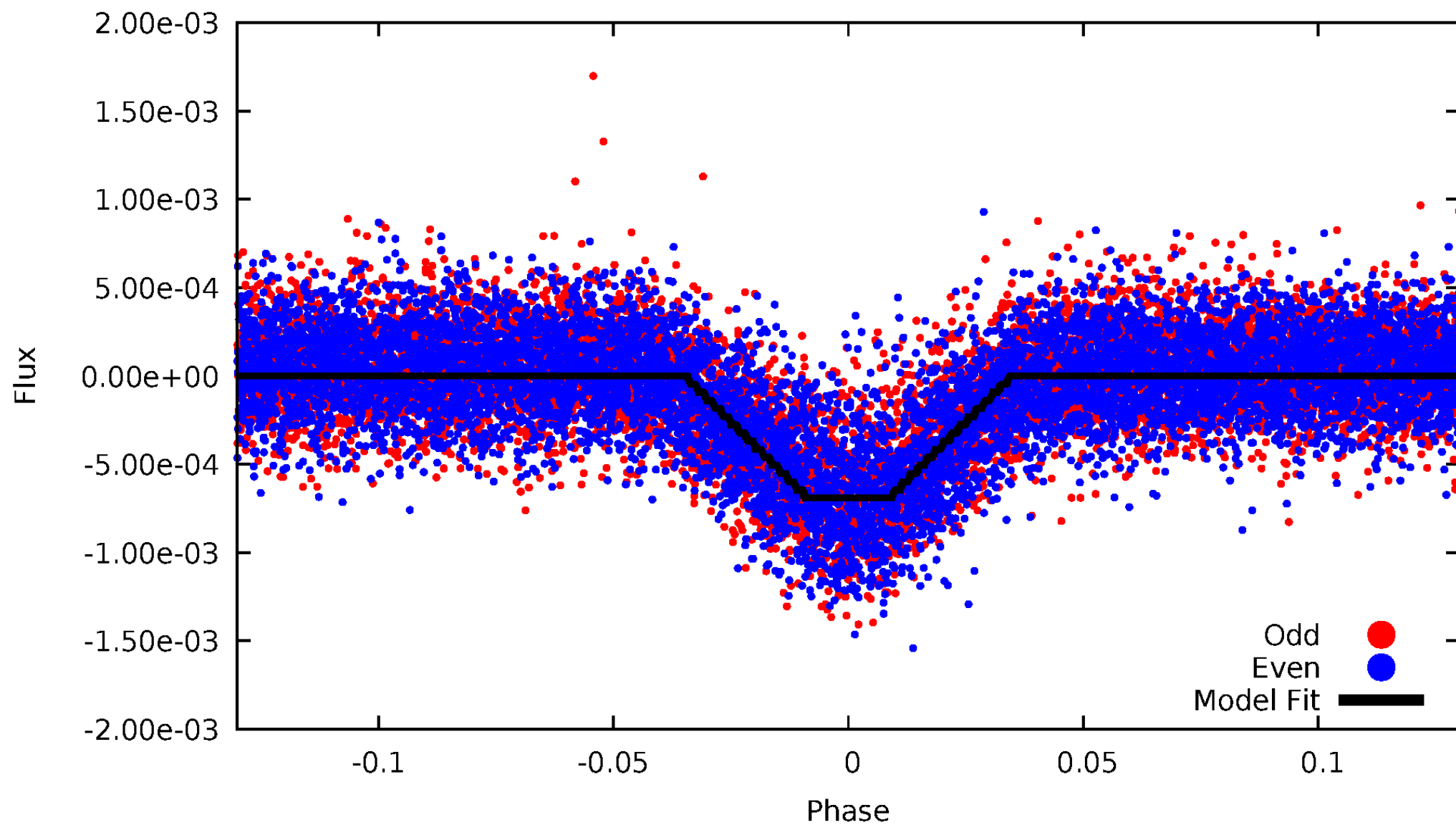
DV Odd/Even

TCE 007418173-01

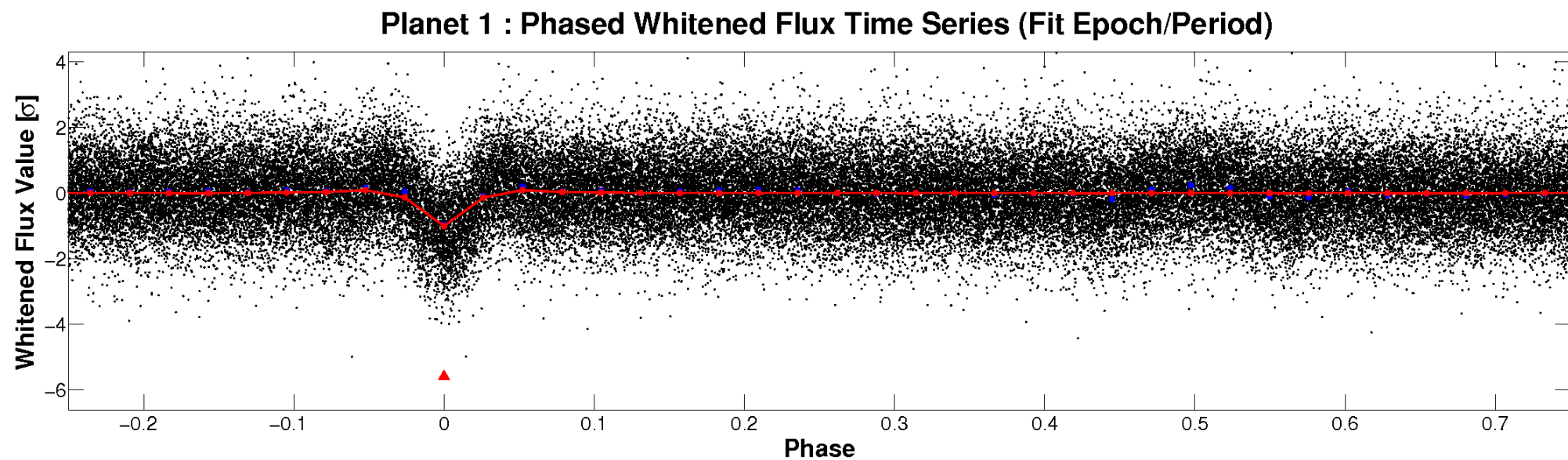
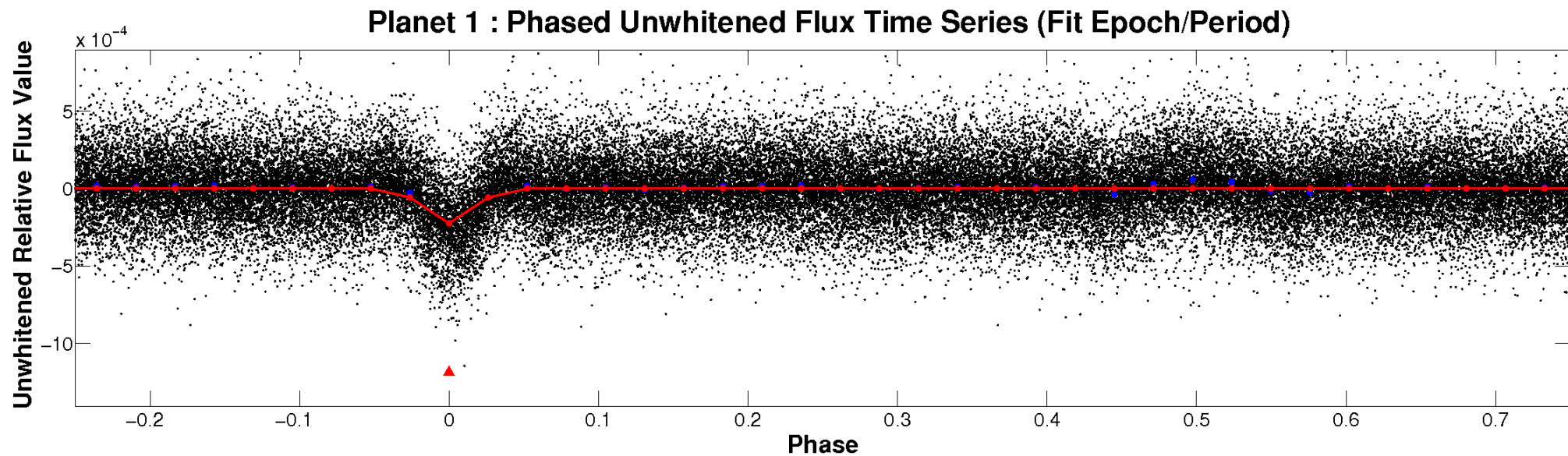


ALT Odd/Even

TCE 007418173-01

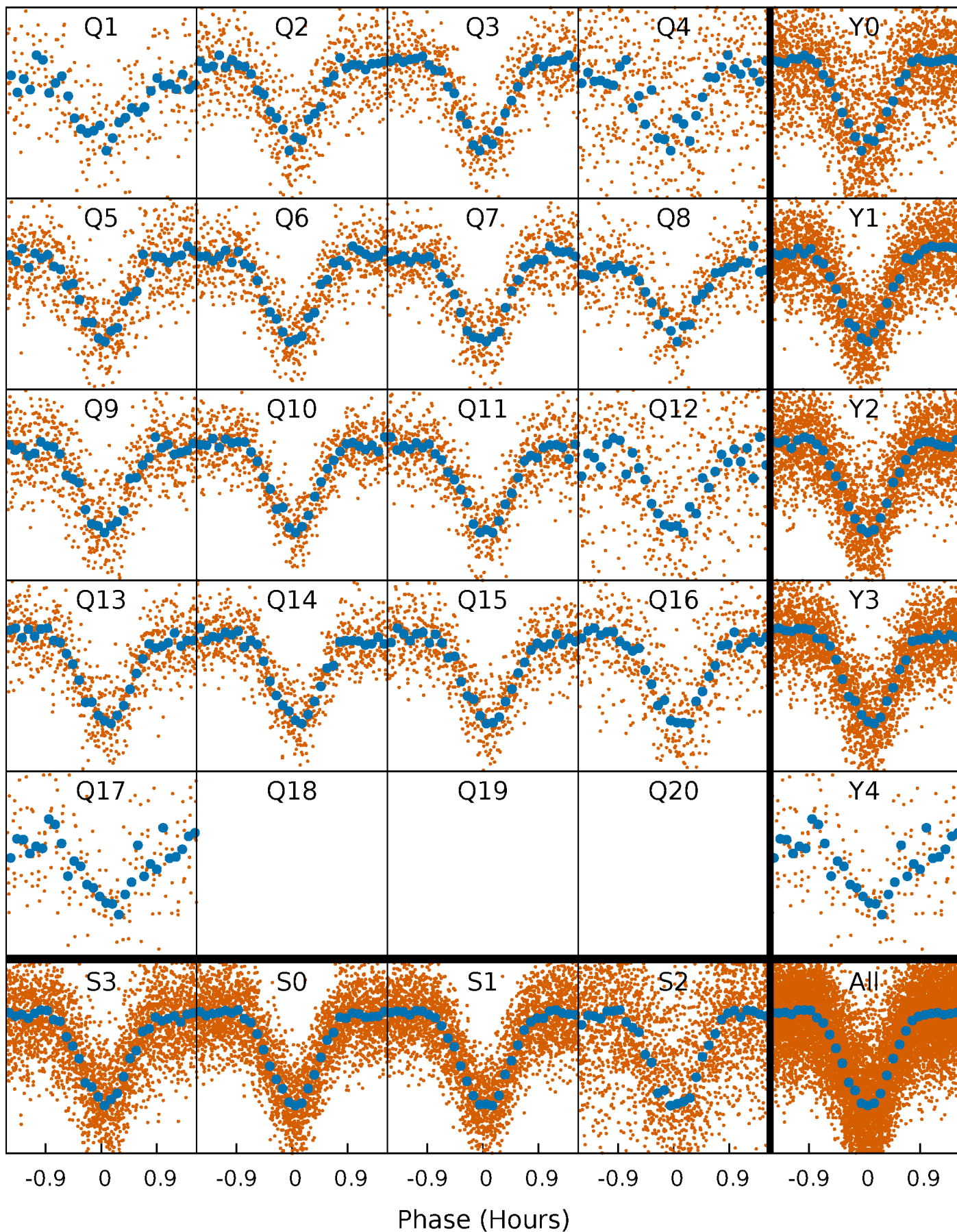


Non-Whitened Vs. Whitened Light Curve



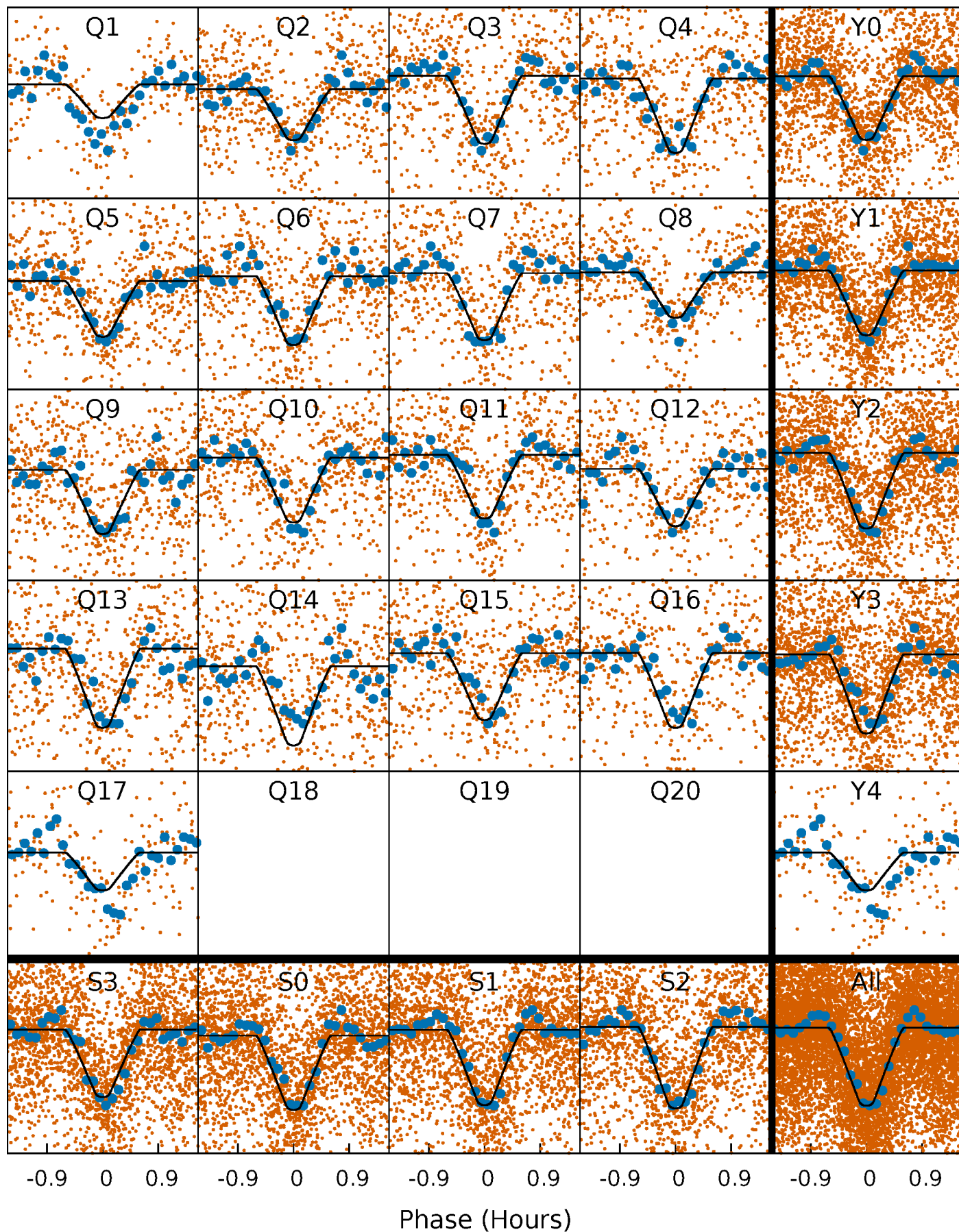
PDC Quarter-Phased Transit Curves

TCE 007418173-01 P= 0.780630 Days $T_0=132.191449$ (BKJD)



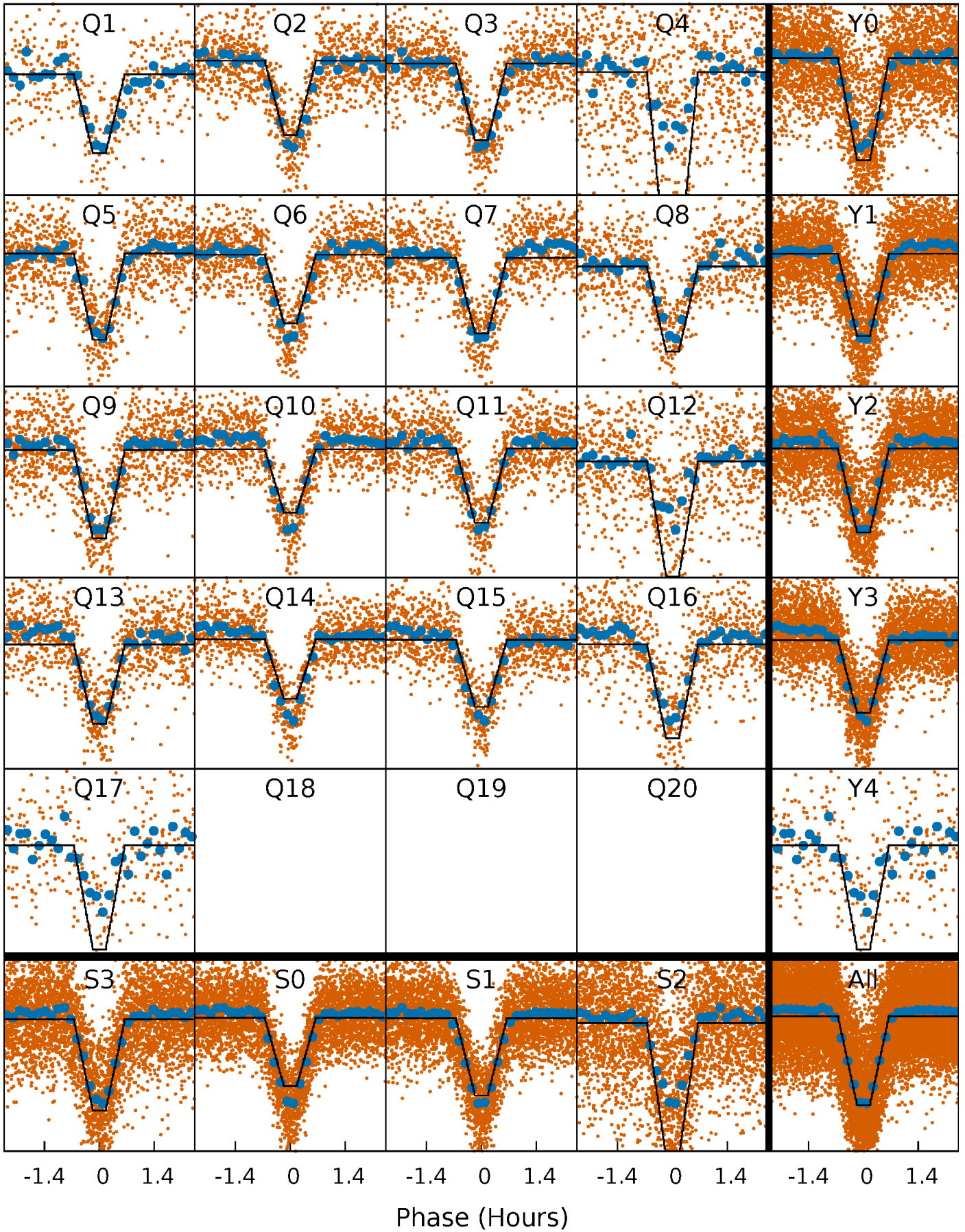
DV Quarter-Phased Transit Curves

TCE 007418173-01 P= 0.780630 Days $T_0=132.191449$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

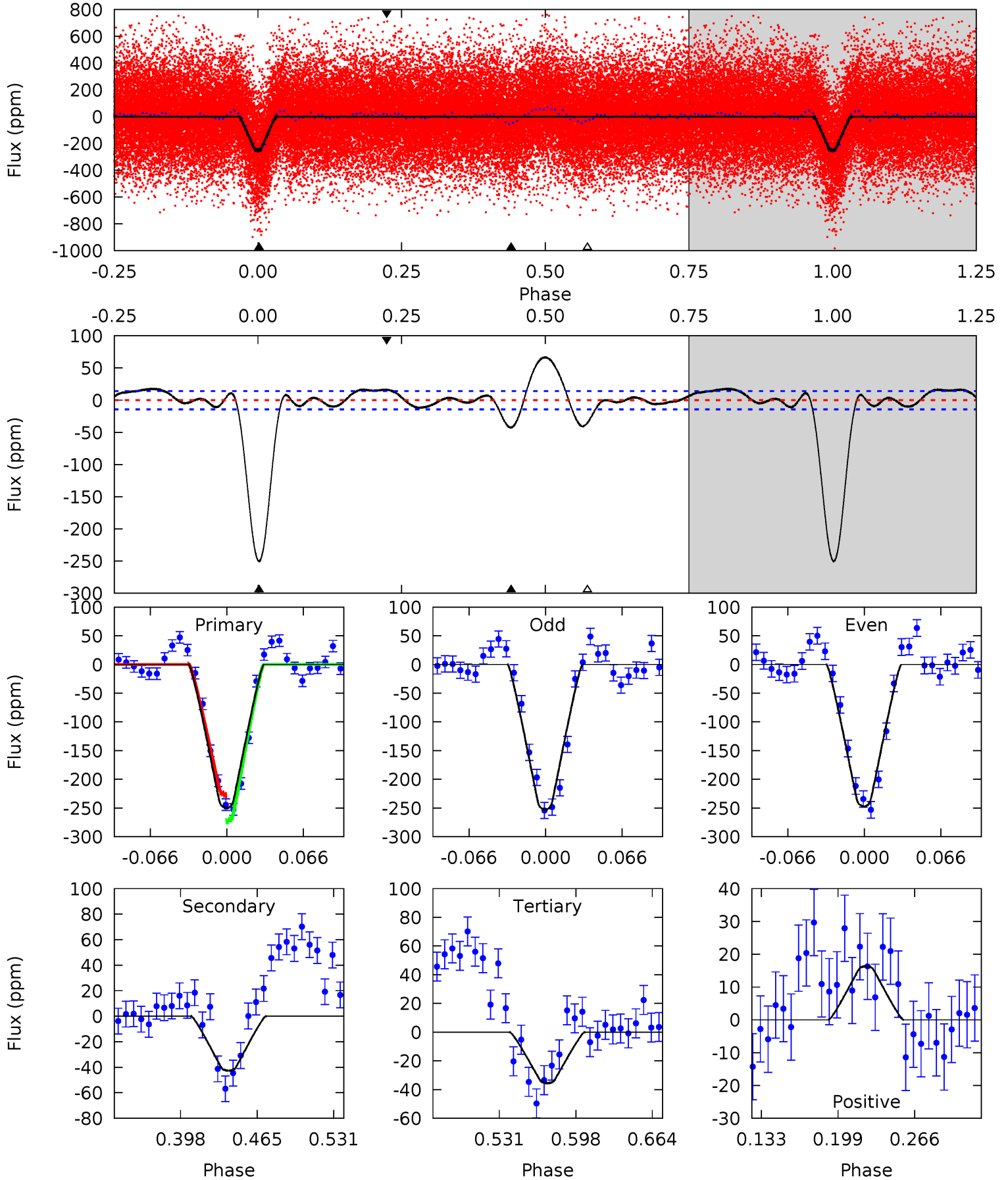
TCE 007418173-01 P= 0.780633 Days $T_0=132.189540$ (BKJD)



DV Model-Shift Uniqueness Test

007418173-01, P = 0.780630 Days, E = 131.410819 Days

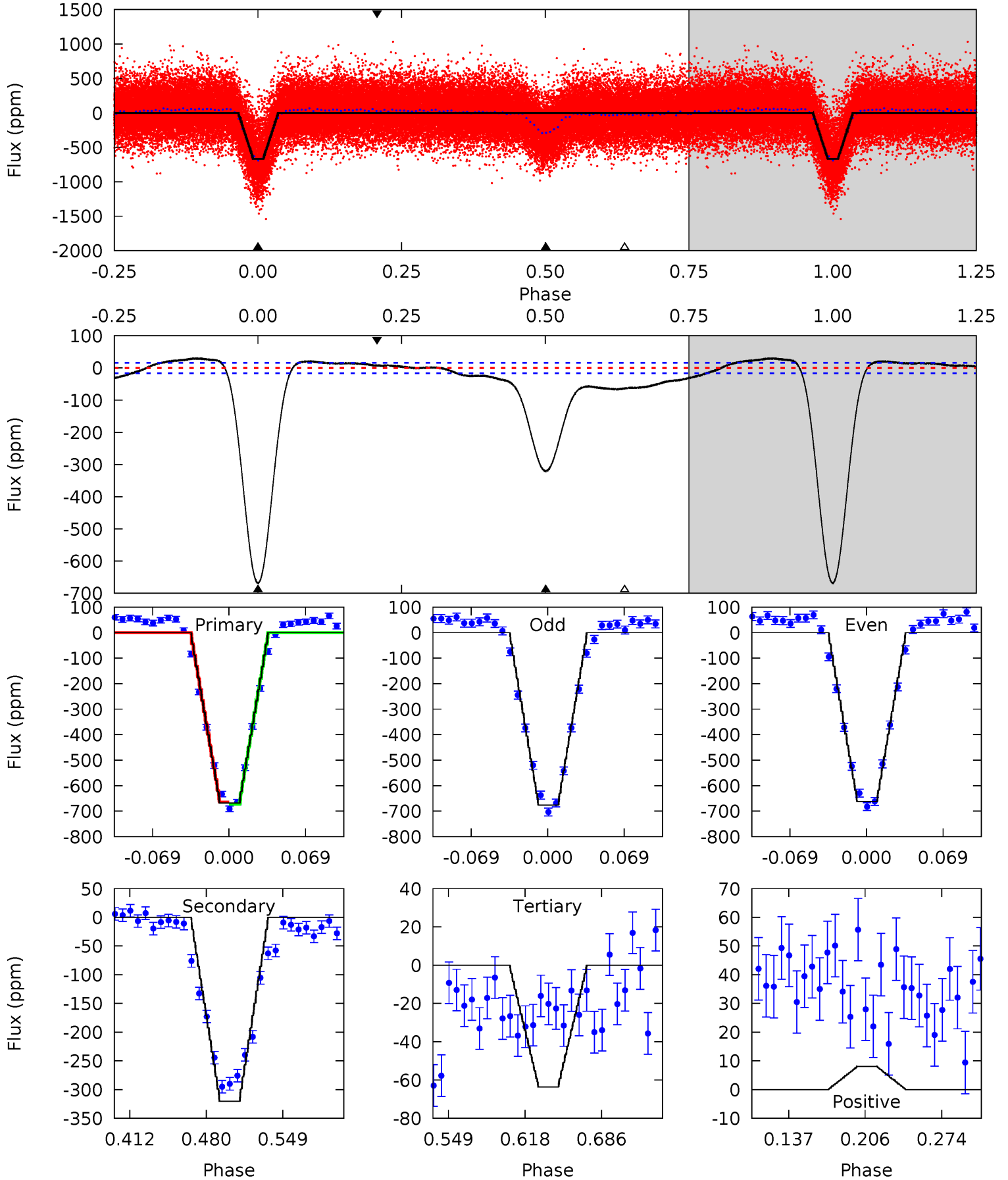
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
82.1	14.0	11.6	5.36	4.65	1.84	4.67	70.5	76.8	2.35	8.64	0.92	1.01	0.21	7.45



Alt Model-Shift Uniqueness Test

007418173-01, P = 0.780633 Days, E = 131.408907 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
191.5	91.8	18.2	2.31	4.64	1.82	8.57	173.3	189.2	73.6	89.5	1.96	0.97	0.04	1.35



Stellar Parameters For KIC 007418173

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5354^{+177}_{-160}	$3.754^{+0.777}_{-0.333}$	$-0.420^{+0.350}_{-0.250}$	$2.180^{+1.134}_{-1.386}$	$0.985^{+0.224}_{-0.224}$	$0.134^{+2.237}_{-0.101}$
	+3%/-3%	+21%/-9%	+83%/-60%	+52%/-64%	+23%/-23%	+1671%/-75%
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 007418173-01 / KOI 3995.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-43 ± 3	$4.03^{+1.79}_{-1.54}$	3741^{+558}_{-729}	2986^{+617}_{-6226}	$0.404^{+0.676}_{-0.213}$
Alt.	-321 ± 3	$5.97^{+2.37}_{-2.07}$	3779^{+543}_{-709}	4321^{+367}_{-382}	$1.326^{+1.777}_{-0.628}$

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

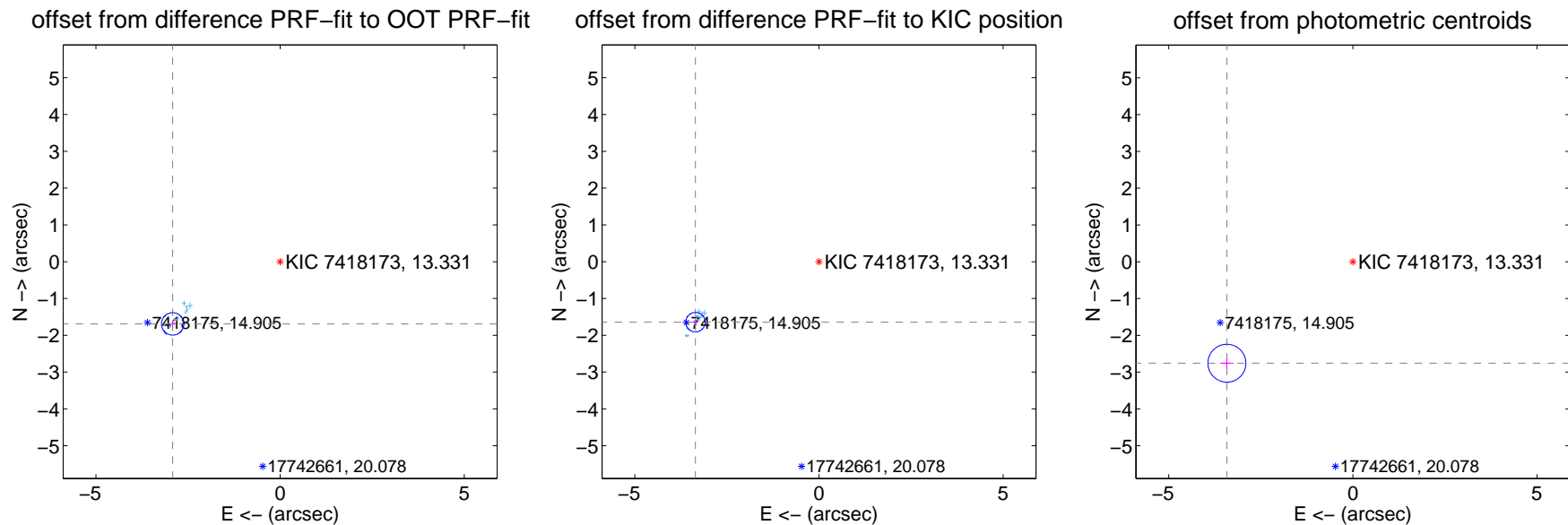
DV Centroid Data

Supplemental centroid analysis for 007418173-01. Kepler magnitude: 13.33. Transit SNR 45.11

There are 17 quarters with good PRF difference image offsets

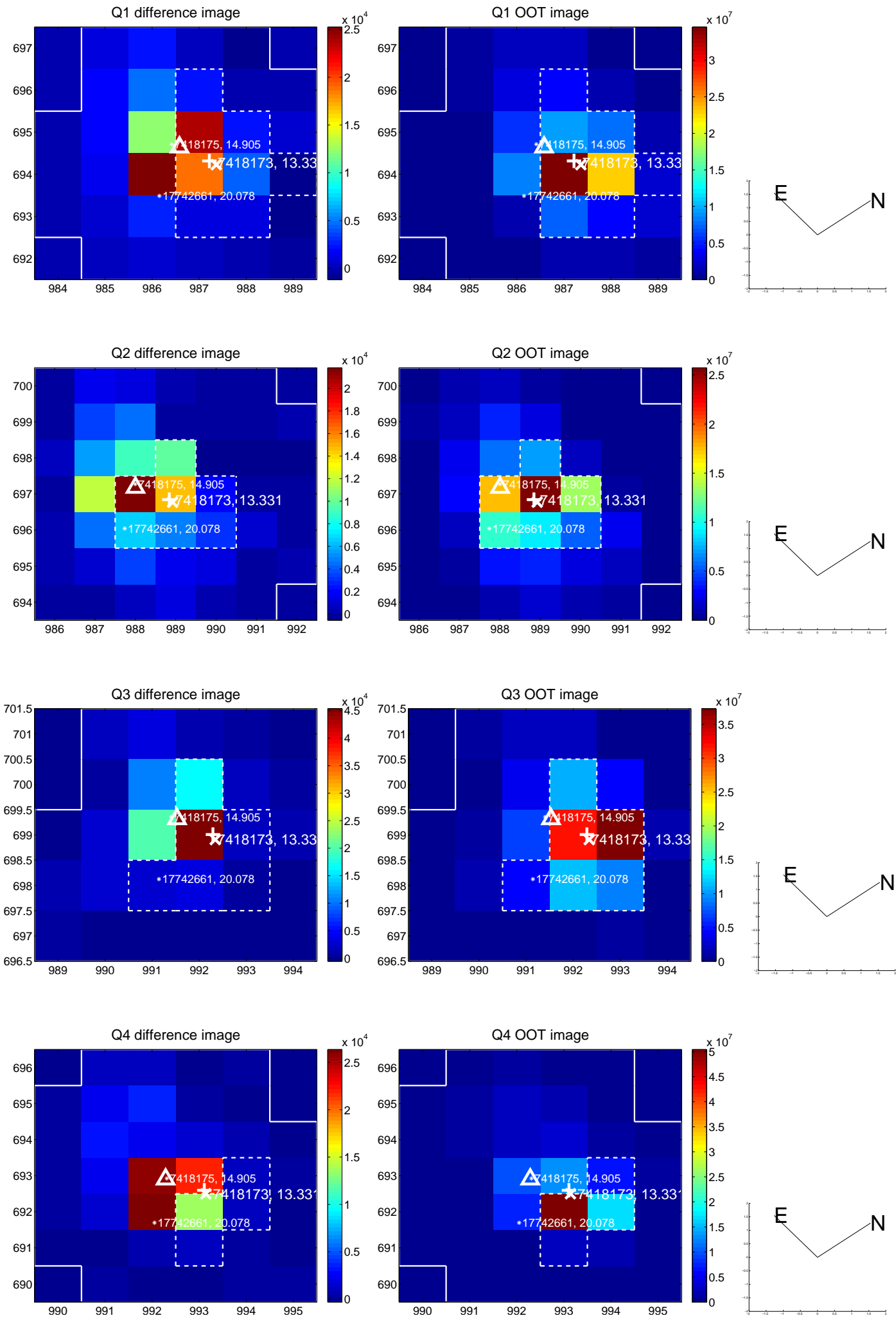
The direct PRF centroid is offset from the target star catalog position by about 0.69 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.372 ± 0.102	33.20	2.917 ± 0.086	-1.690 ± 0.091
PRF-fit source offset from KIC position	3.736 ± 0.088	42.42	3.355 ± 0.077	-1.644 ± 0.086
photometric centroid source offset	4.39 ± 0.17	25.57	3.42 ± 0.18	-2.76 ± 0.16

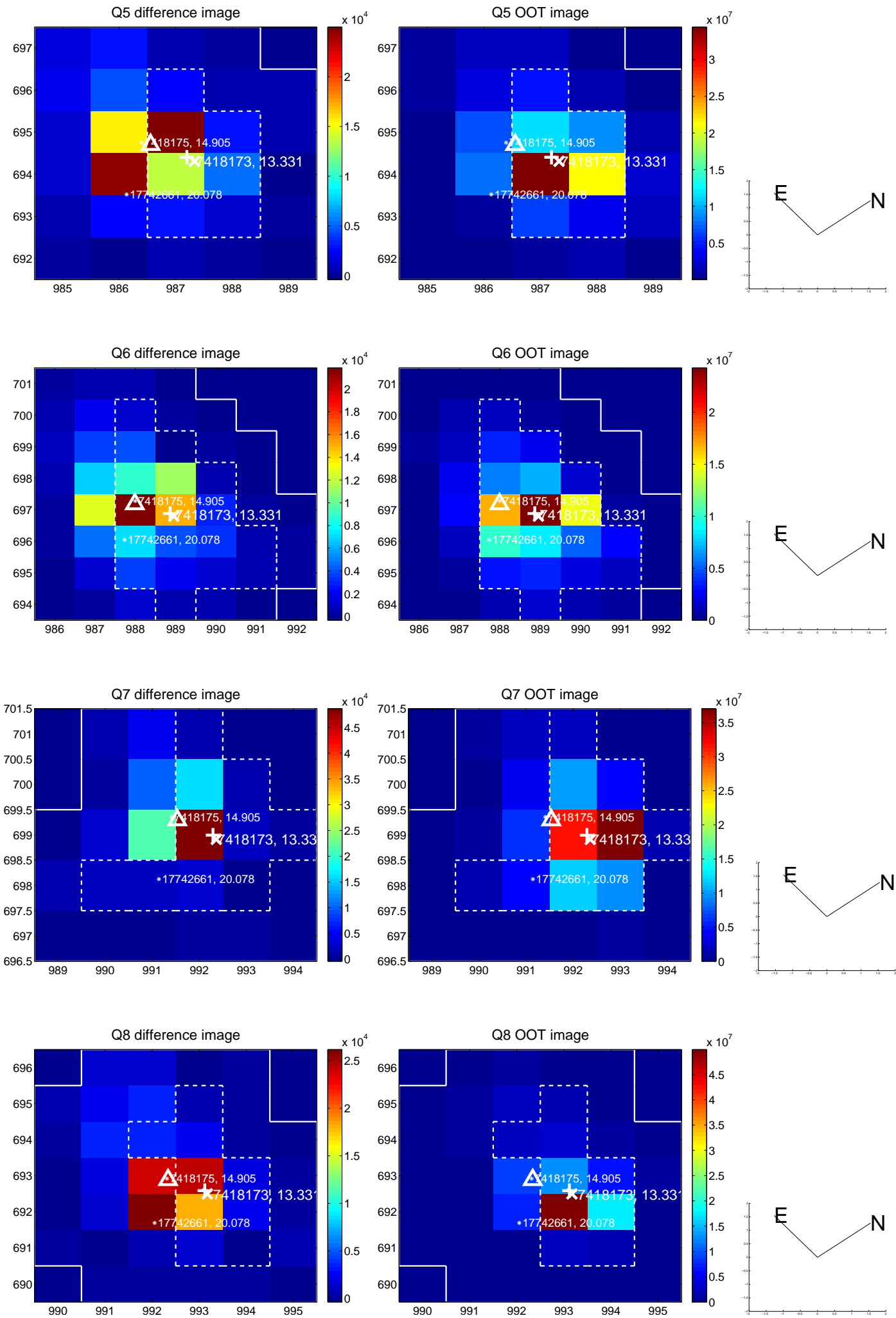


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

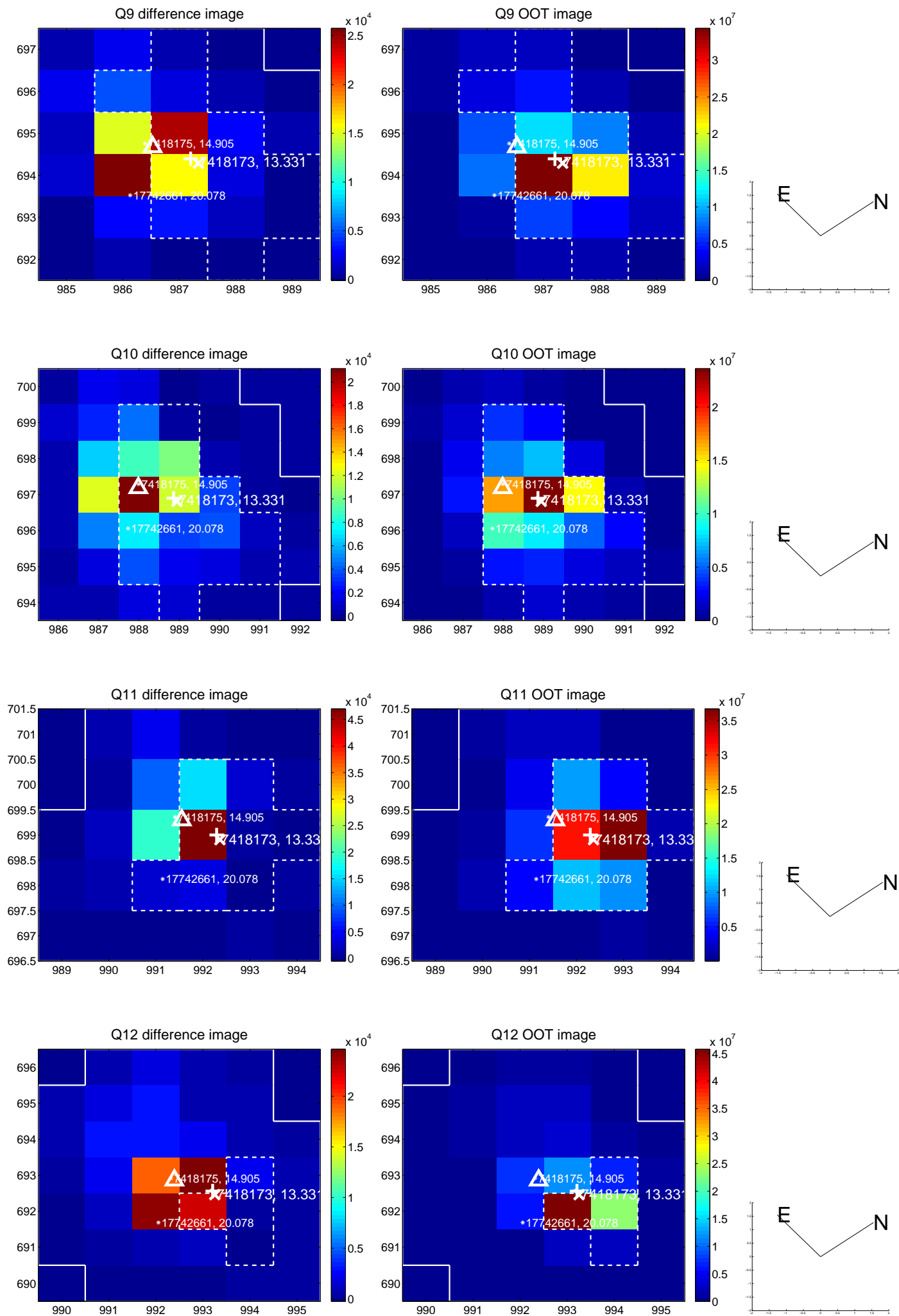
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



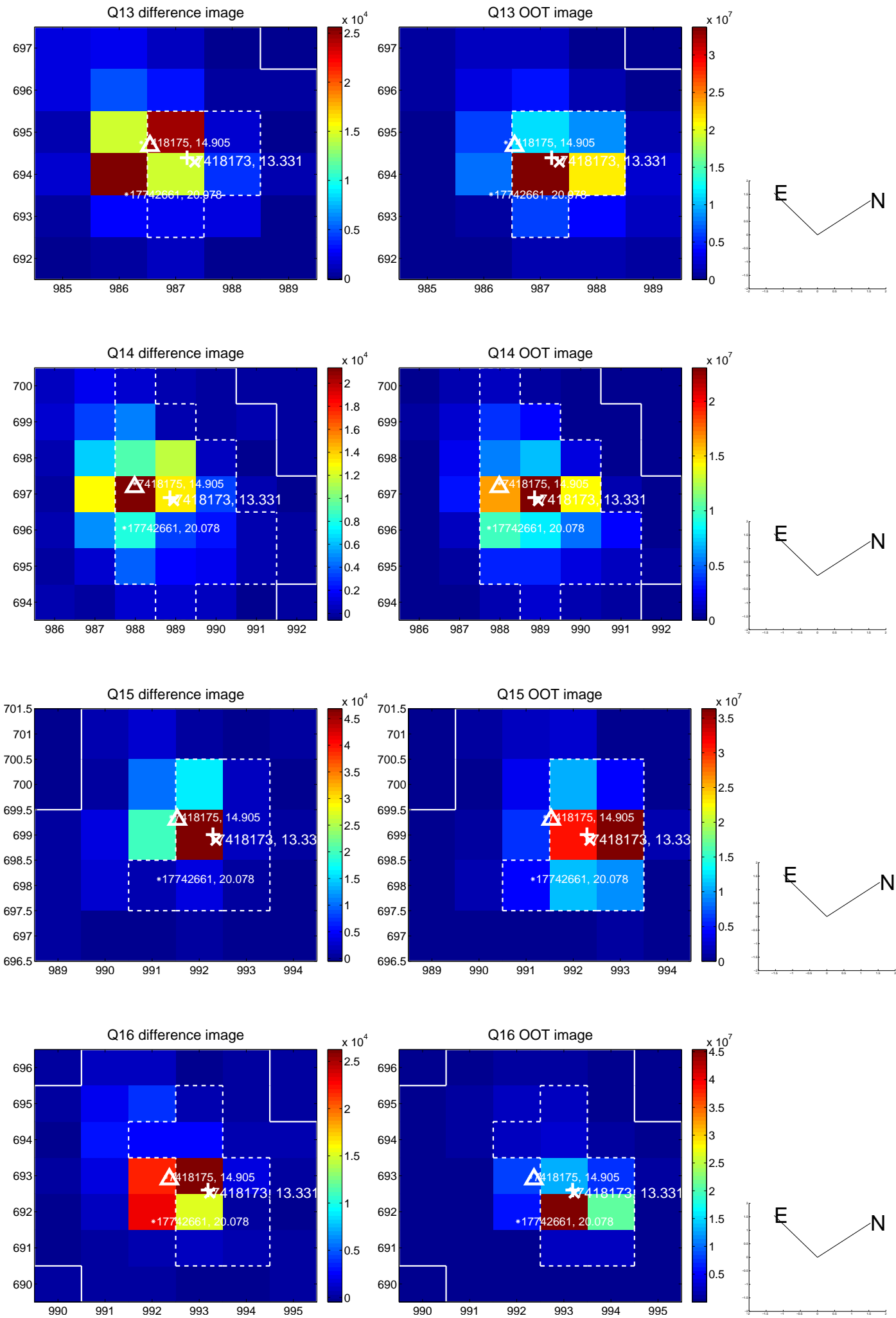
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



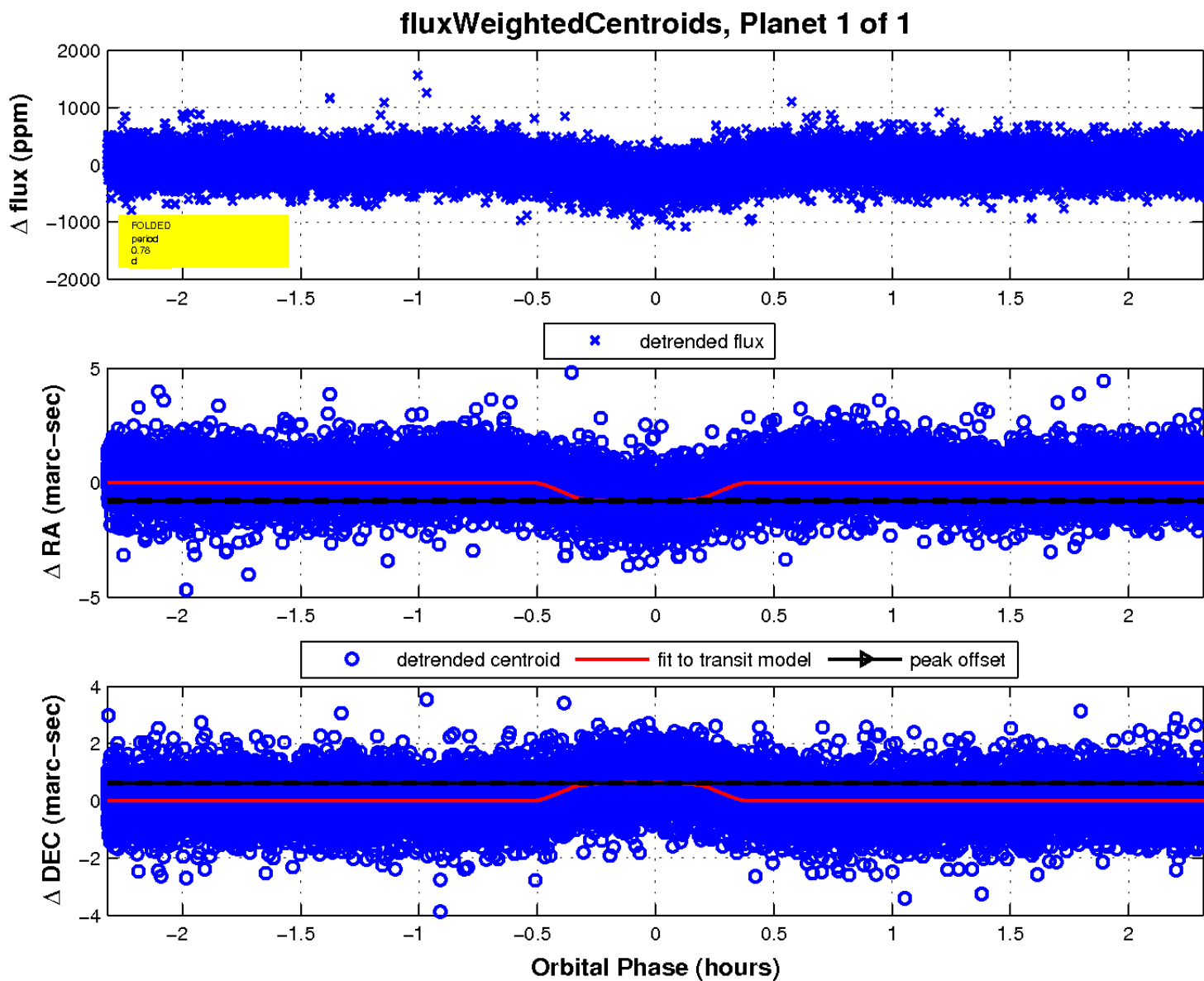
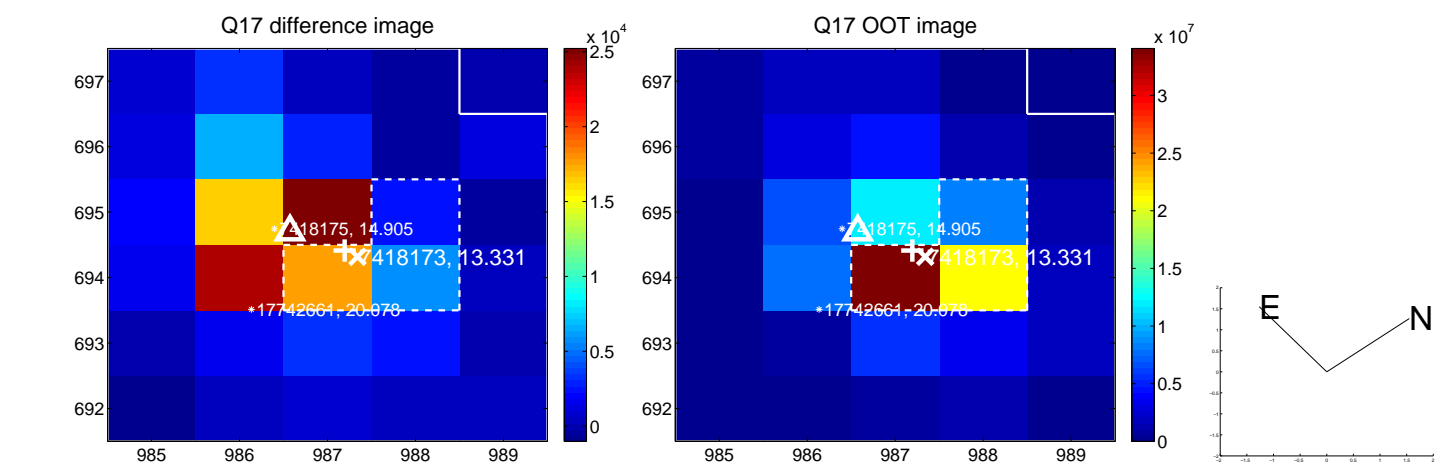
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UKIRT Image

Declination

