

KIC 009221528

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})
009221528-01	OBS	3355.01	16.295406	144.795985	223.1	5.089	11.5	11.9	1.01	6187	1.73	84.42

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009221528-01	OBS	PC	1.00	0	0	0	0	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.

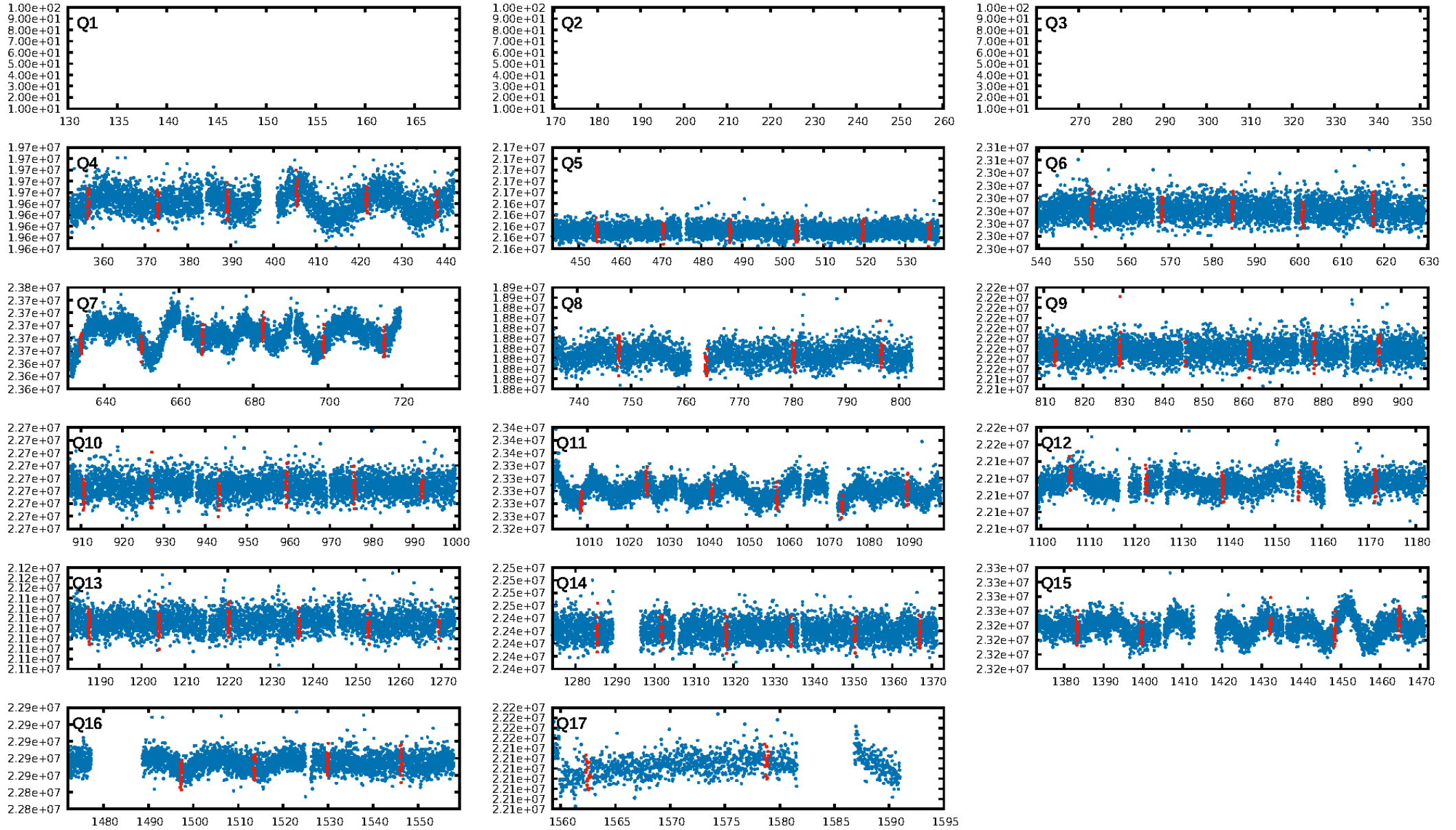
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009221528-01

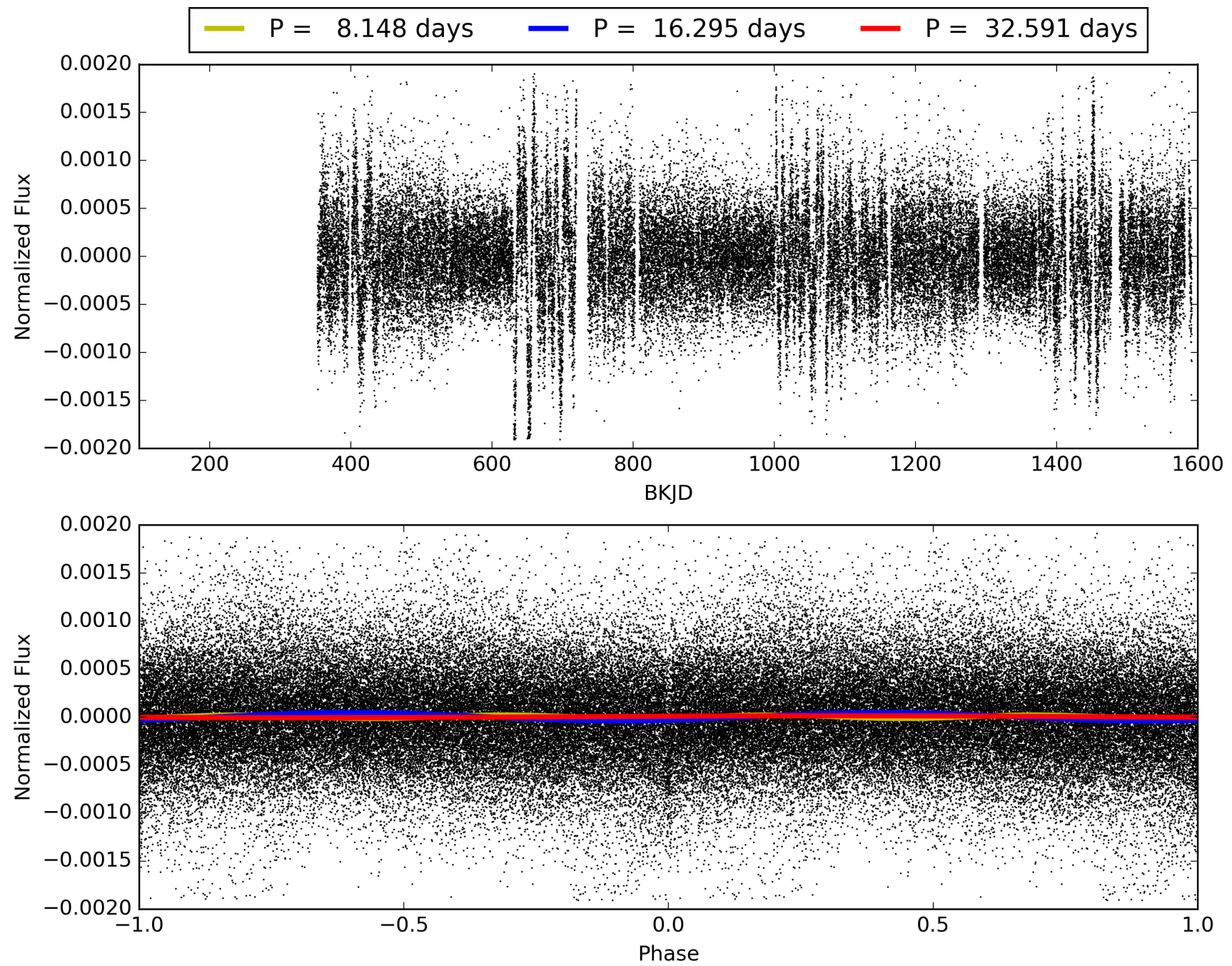
No Significant Match Found

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

TCE 009221528-01, PDC Light Curves

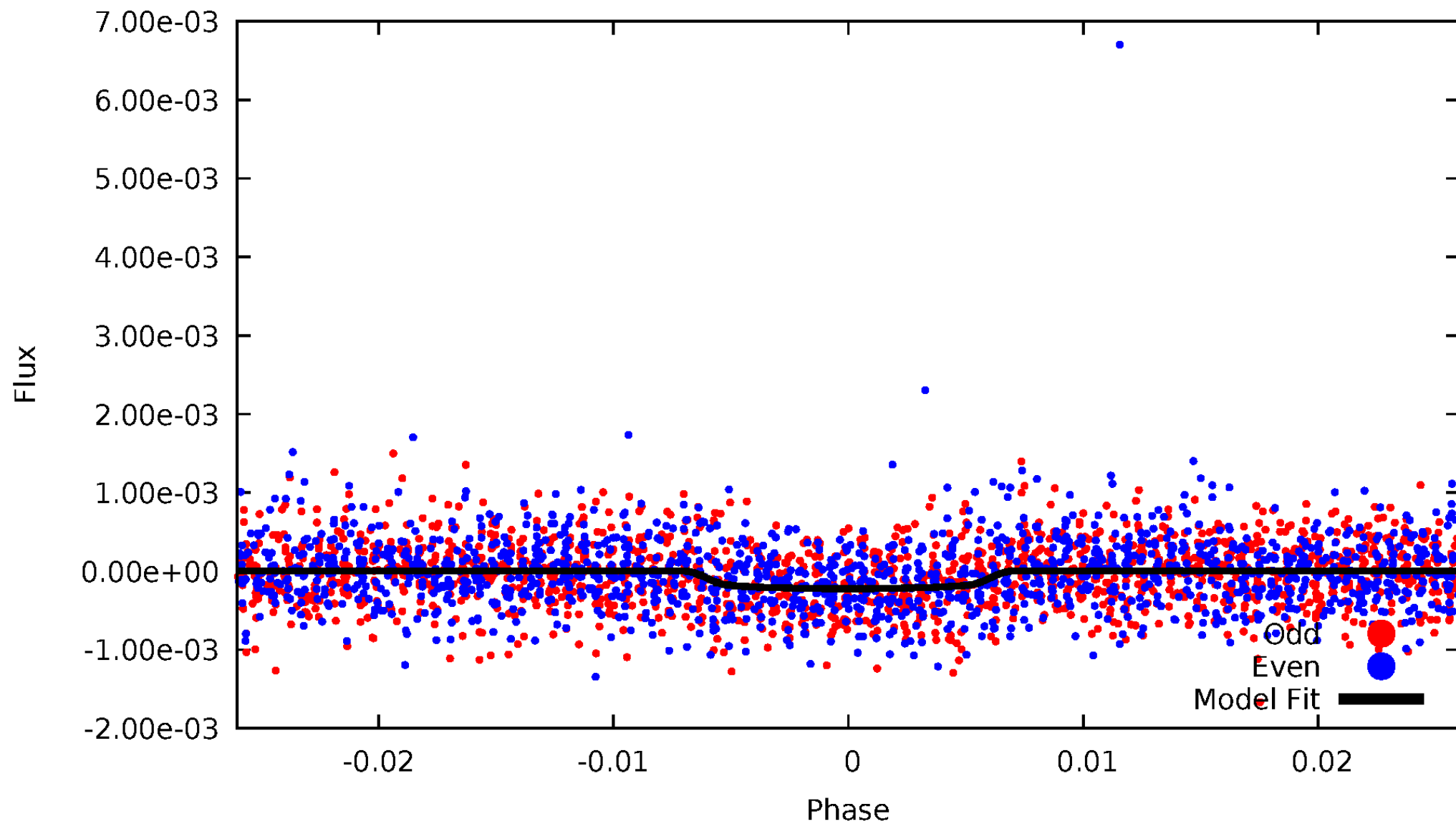


TCE 009221528-01



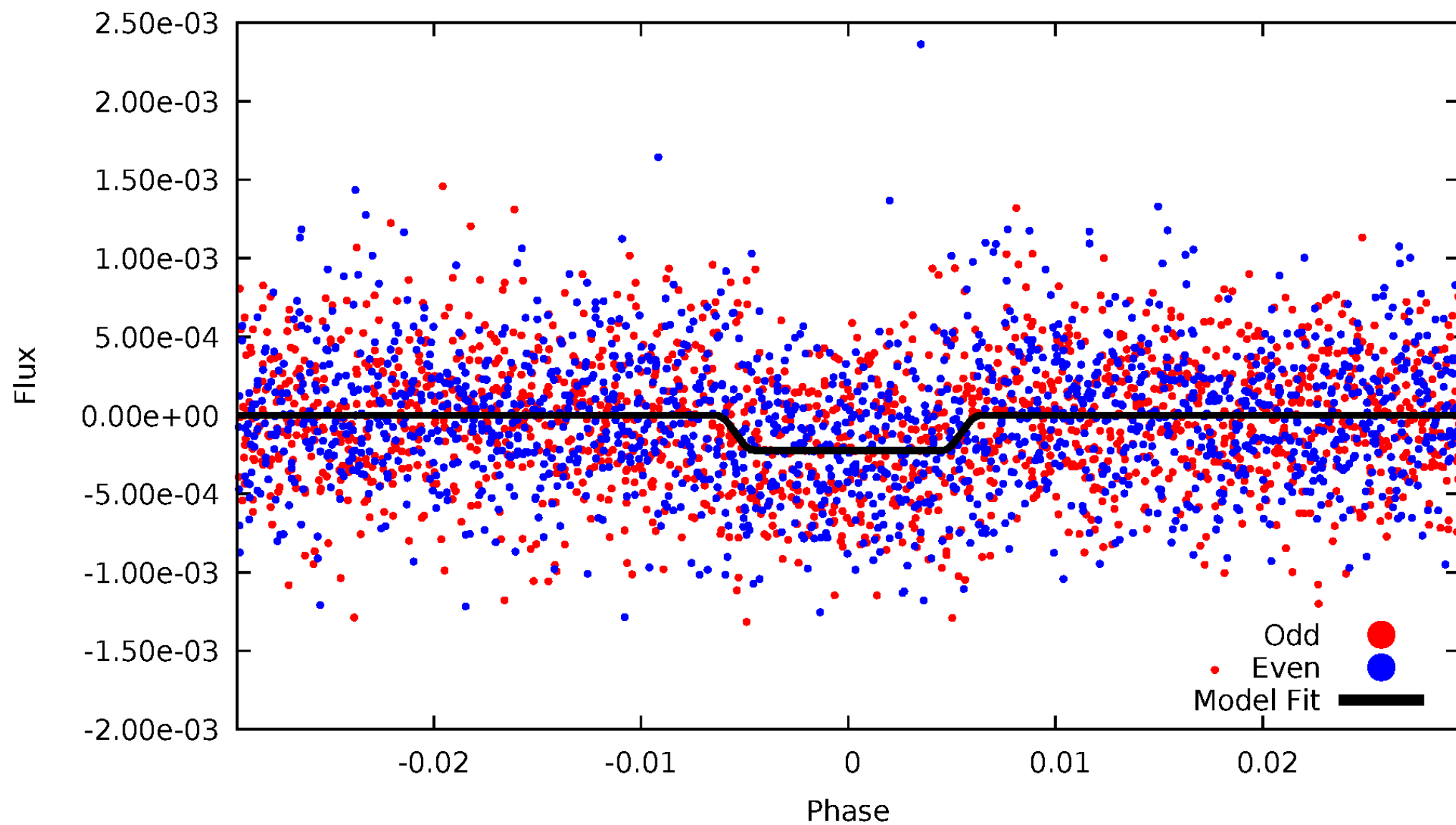
DV Odd/Even

TCE 009221528-01

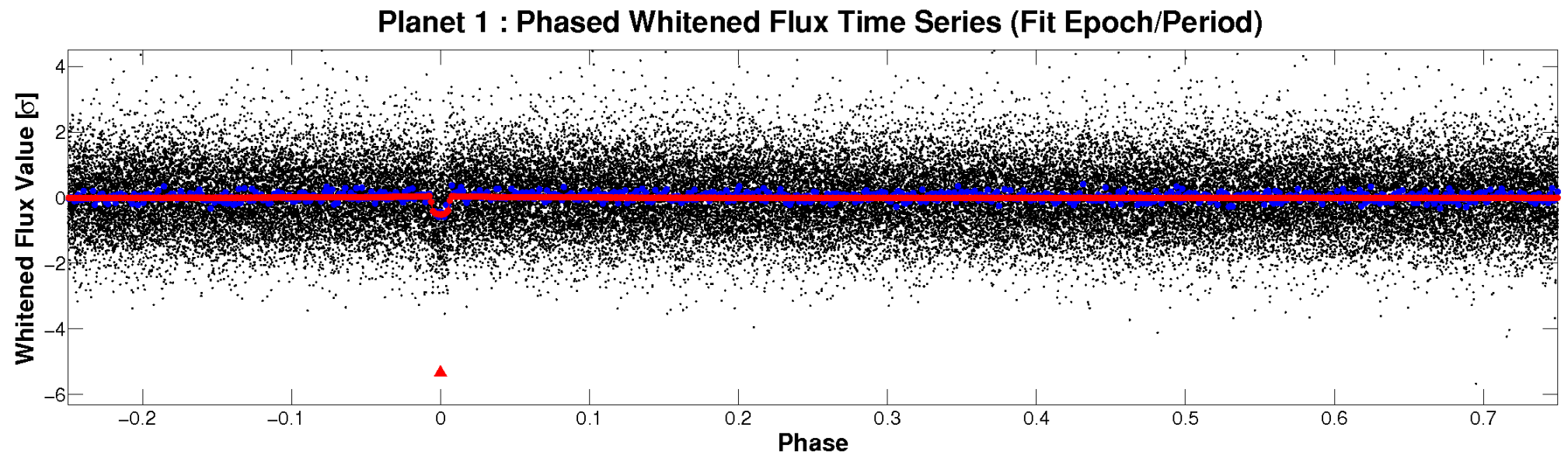
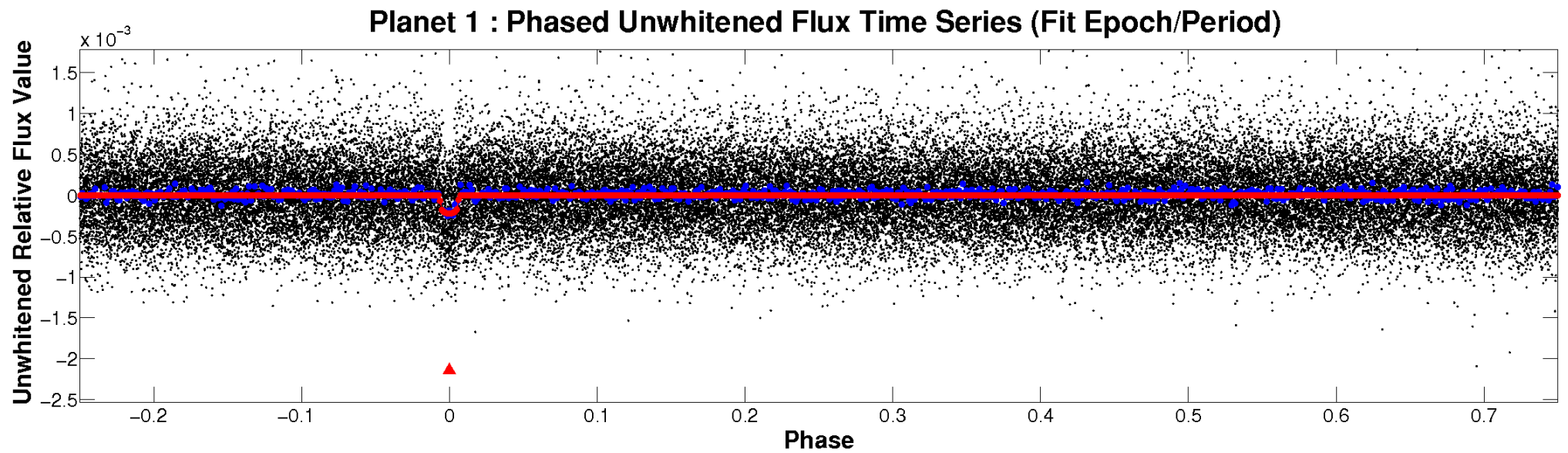


ALT Odd/Even

TCE 009221528-01

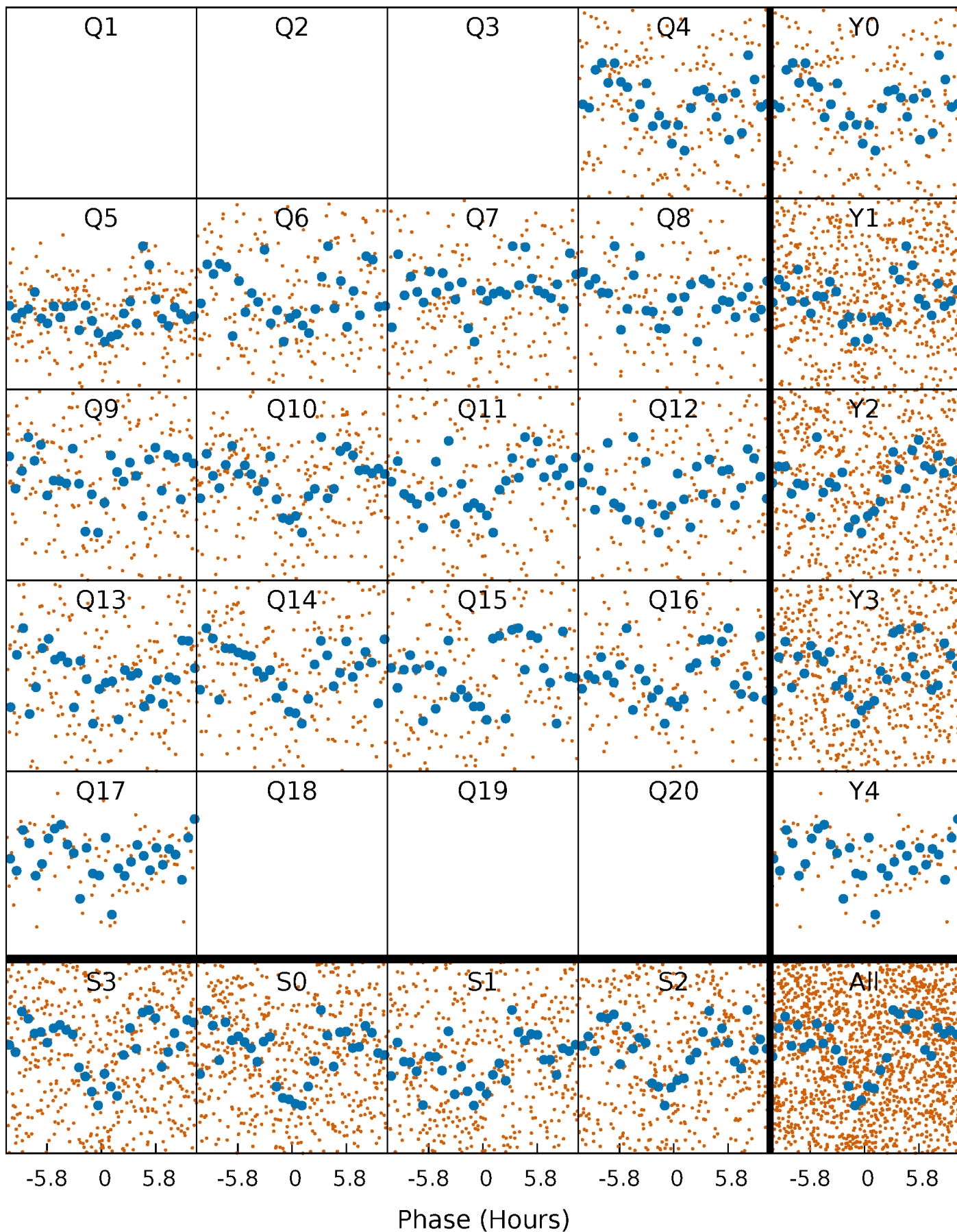


Non-Whitened Vs. Whitened Light Curve



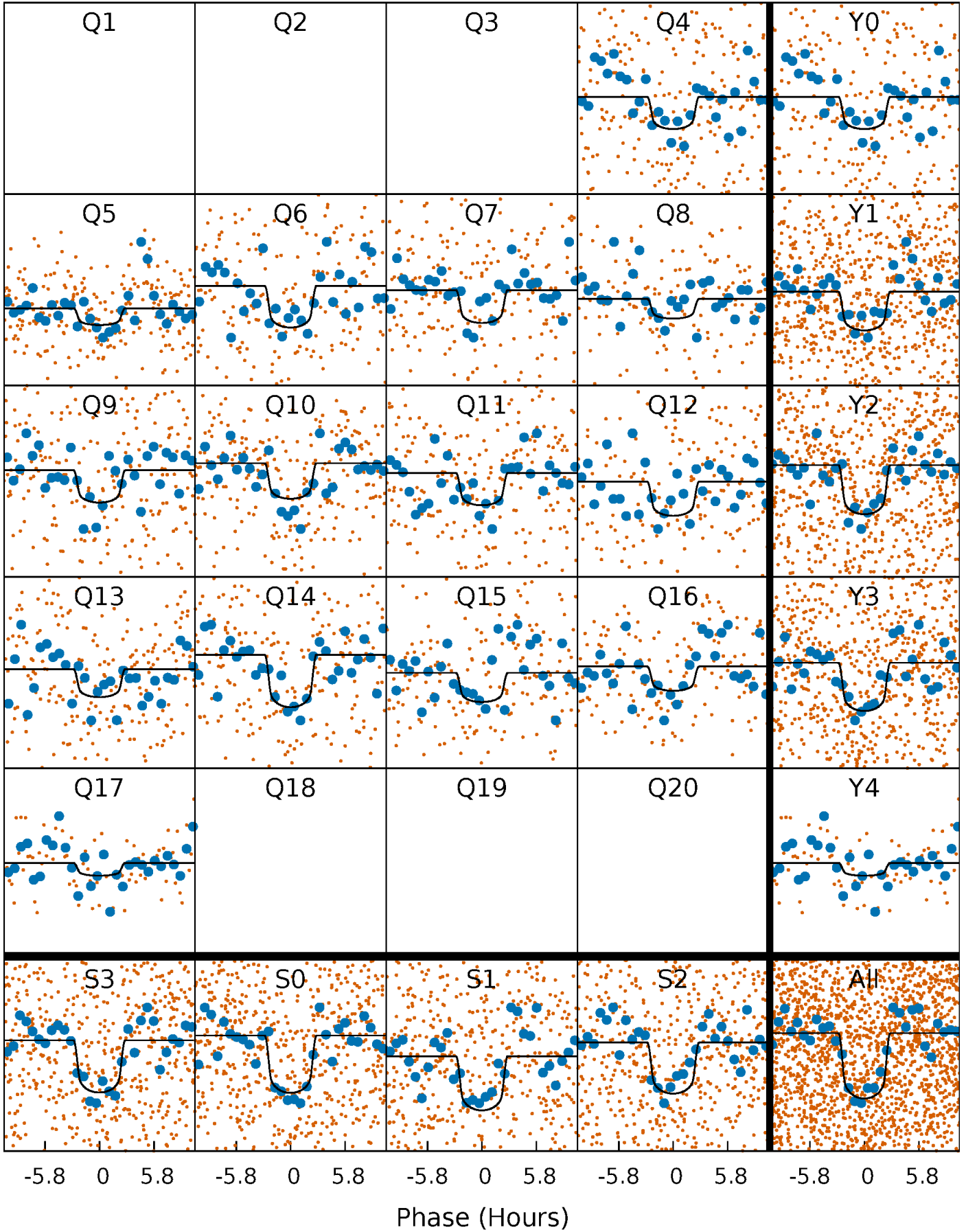
PDC Quarter-Phased Transit Curves

TCE 009221528-01 P= 16.295406 Days $T_0=144.795986$ (BKJD)



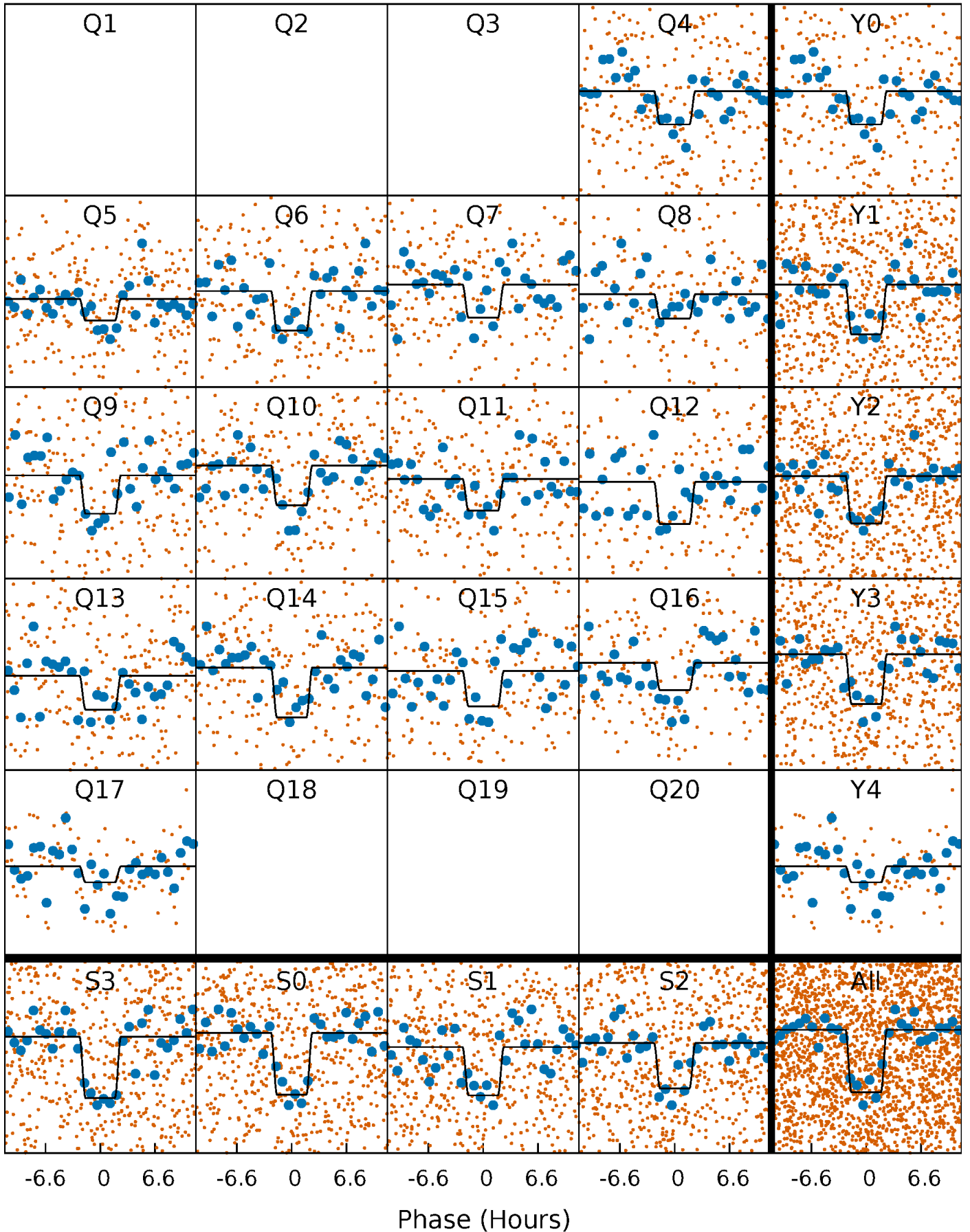
DV Quarter-Phased Transit Curves

TCE 009221528-01 P= 16.295406 Days $T_0=144.795986$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

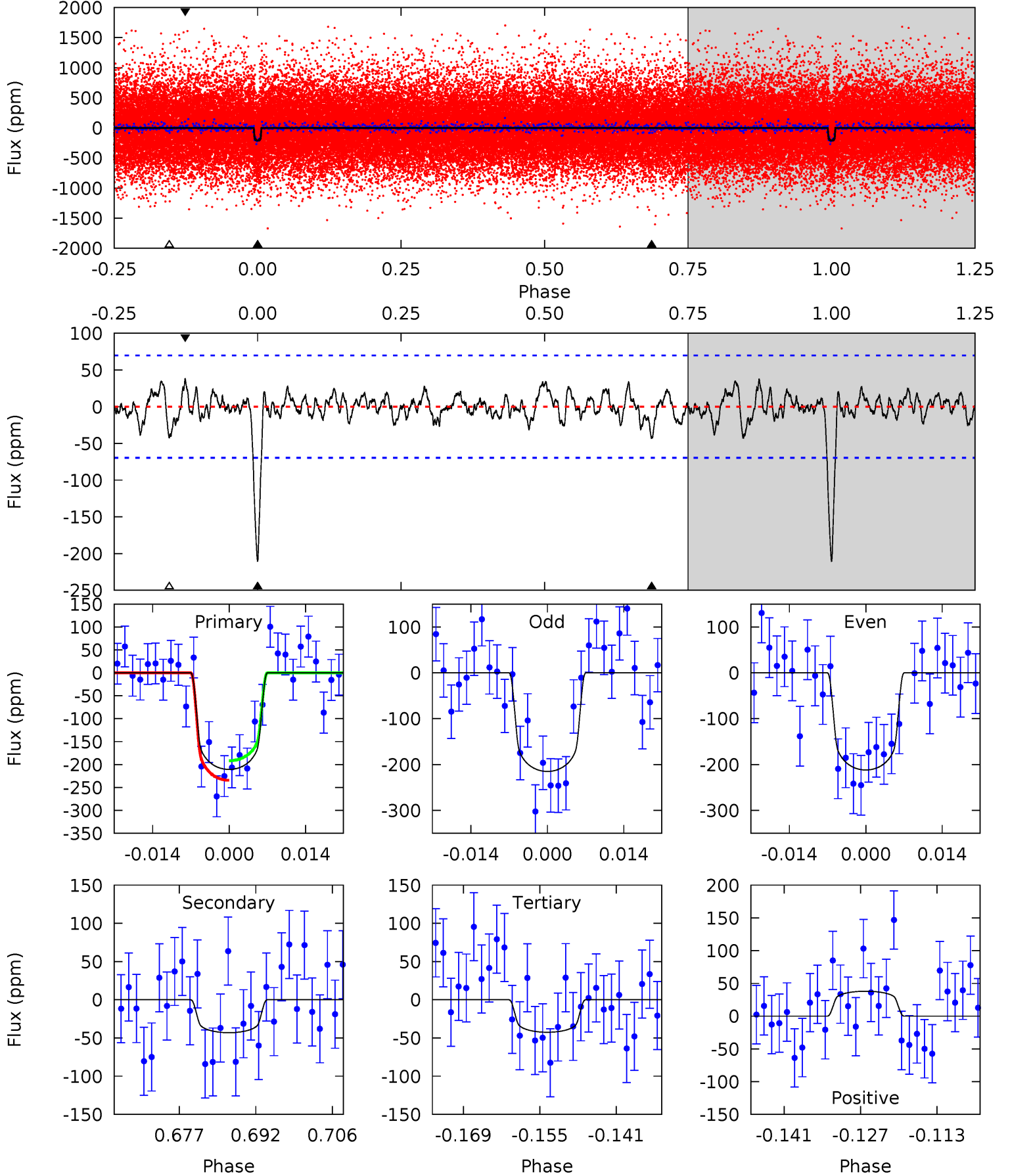
TCE 009221528-01 P= 16.295176 Days $T_0=144.802091$ (BKJD)



DV Model-Shift Uniqueness Test

009221528-01, P = 16.295406 Days, E = 144.795986 Days

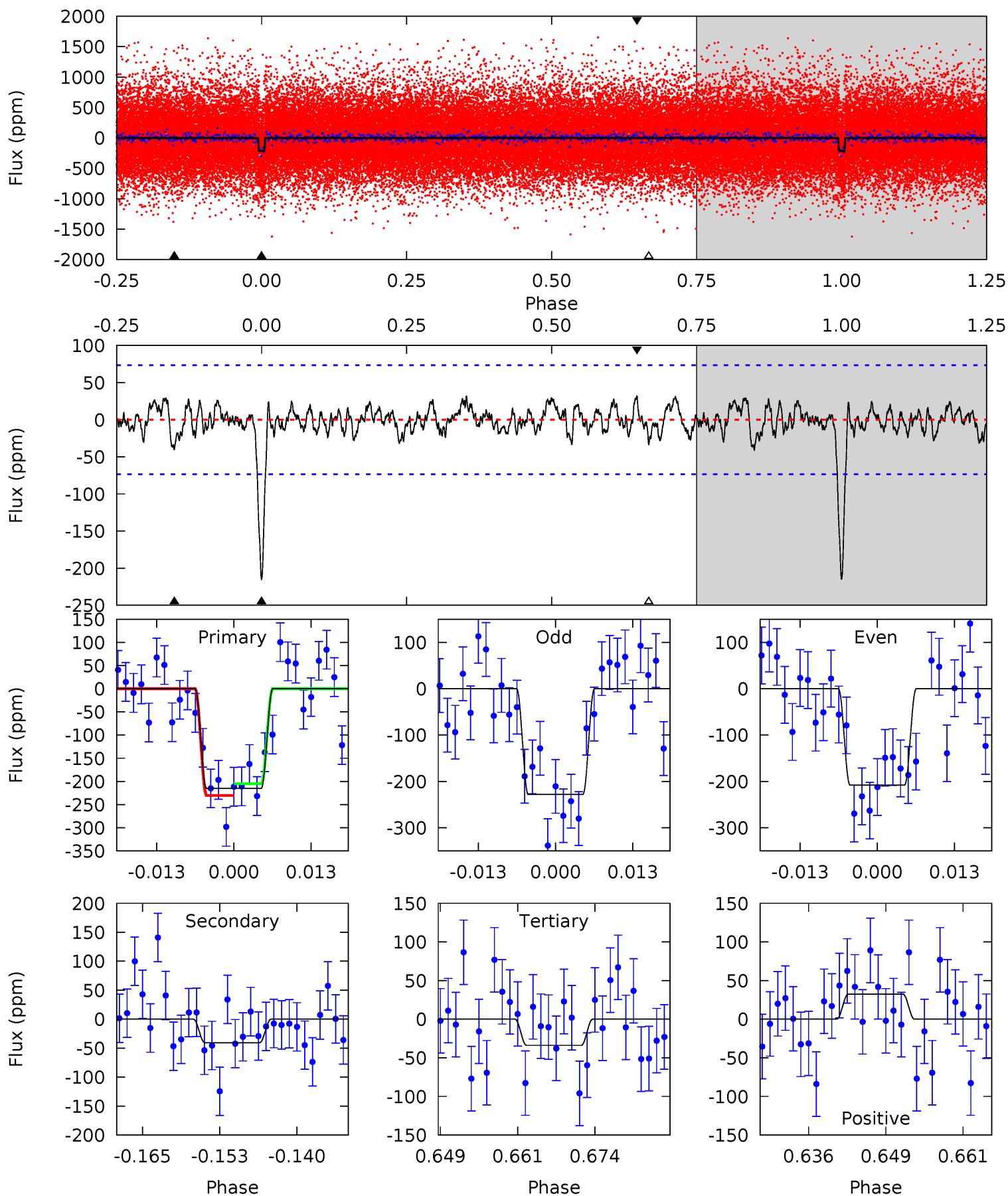
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.0	3.07	3.03	2.70	4.96	2.45	0.98	12.0	12.3	0.04	0.36	0.11	0.91	0.15	1.52



Alt Model-Shift Uniqueness Test

009221528-01, P = 16.295176 Days, E = 144.802091 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.6	2.76	2.30	2.20	4.98	2.49	0.91	12.3	12.4	0.46	0.56	0.70	0.87	0.13	0.85



Stellar Parameters For KIC 009221528

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6187^{+197}_{-241}	$4.432^{+0.072}_{-0.203}$	$-0.240^{+0.250}_{-0.300}$	$1.013^{+0.326}_{-0.140}$	$1.007^{+0.160}_{-0.120}$	$1.365^{+0.505}_{-0.707}$
	+3%/-4%	+2%/-5%	+104%/-125%	+32%/-14%	+16%/-12%	+37%/-52%
Source	KIC0	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 009221528-01 / KOI 3355.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-43 ± 14	$1.81^{+0.59}_{-0.59}$	1102^{+85}_{-61}	4250^{+793}_{-462}	116^{+156}_{-60}
Alt.	-41 ± 15	$1.72^{+0.66}_{-0.58}$	1102^{+70}_{-59}	4255^{+772}_{-517}	121^{+157}_{-65}

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 $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

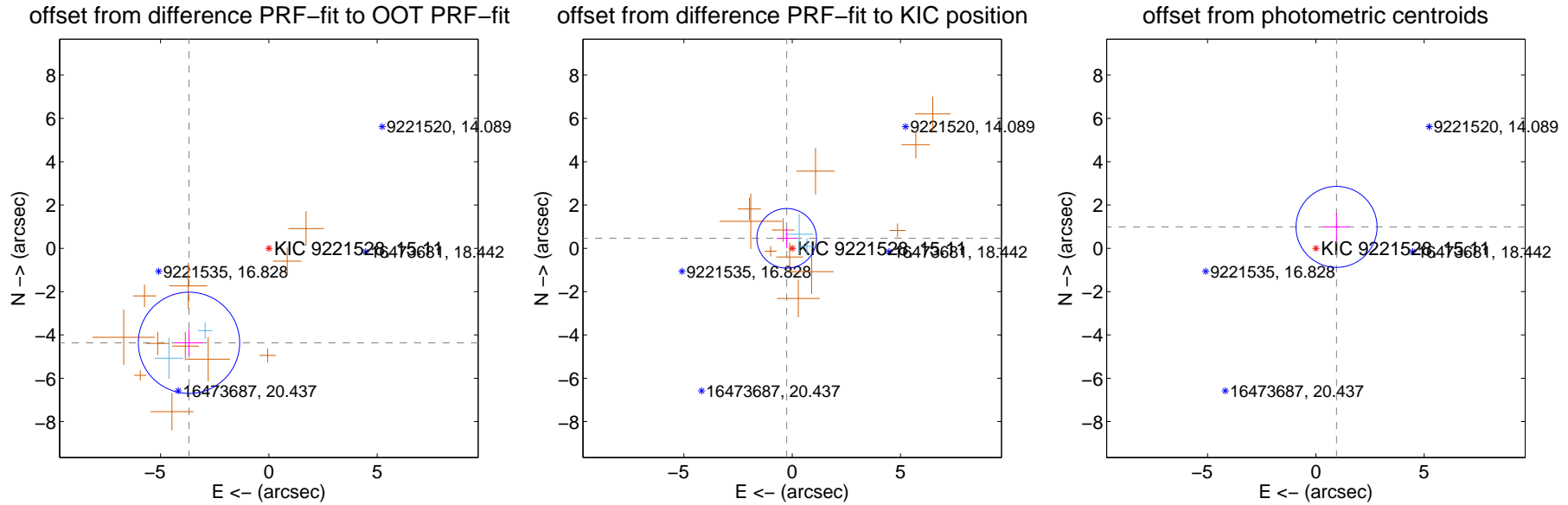
DV Centroid Data

Supplemental centroid analysis for 009221528-01. Kepler magnitude: 15.11. Transit SNR 11.88

There are 2 quarters with good PRF difference image offsets

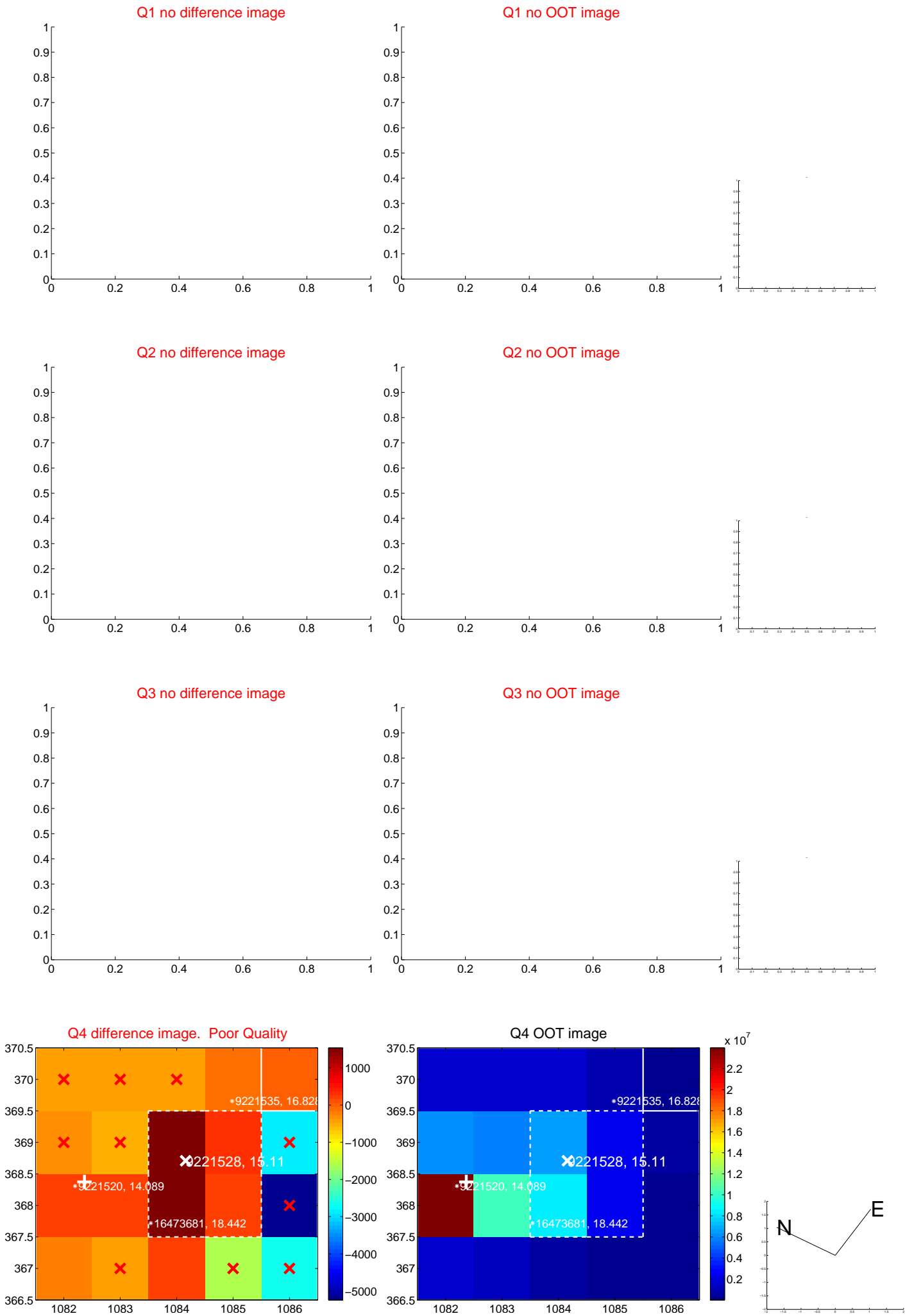
The OOT PRF centroid is offset from the target star catalog position by about 5.56 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.711 \pm 0.779	7.33	3.687 ± 0.658	-4.362 ± 0.609
PRF-fit source offset from KIC position	0.528 ± 0.459	1.15	0.255 ± 0.458	0.462 ± 0.459
photometric centroid source offset	1.37 ± 0.62	2.21	-0.95 ± 0.59	0.99 ± 0.65

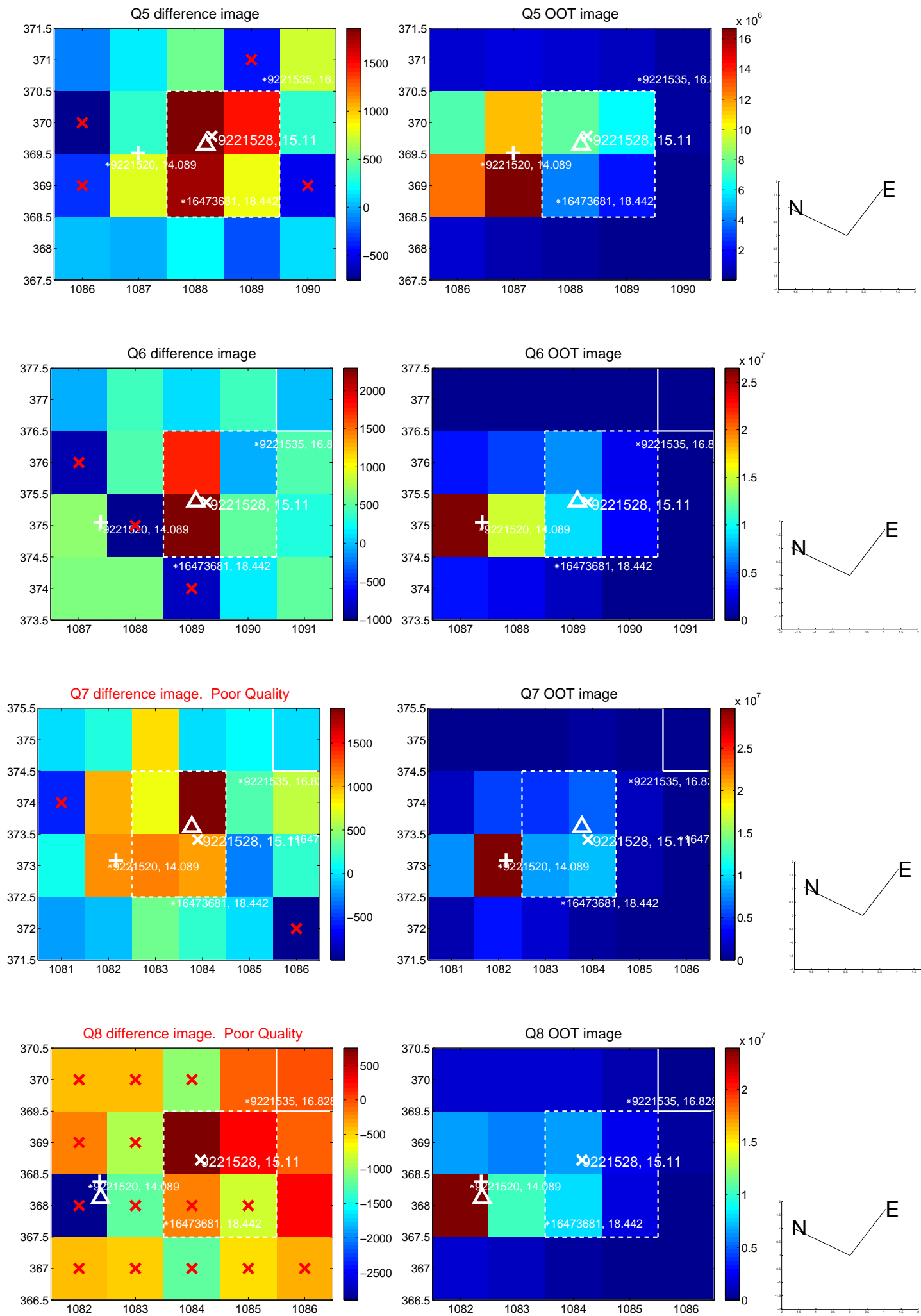


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

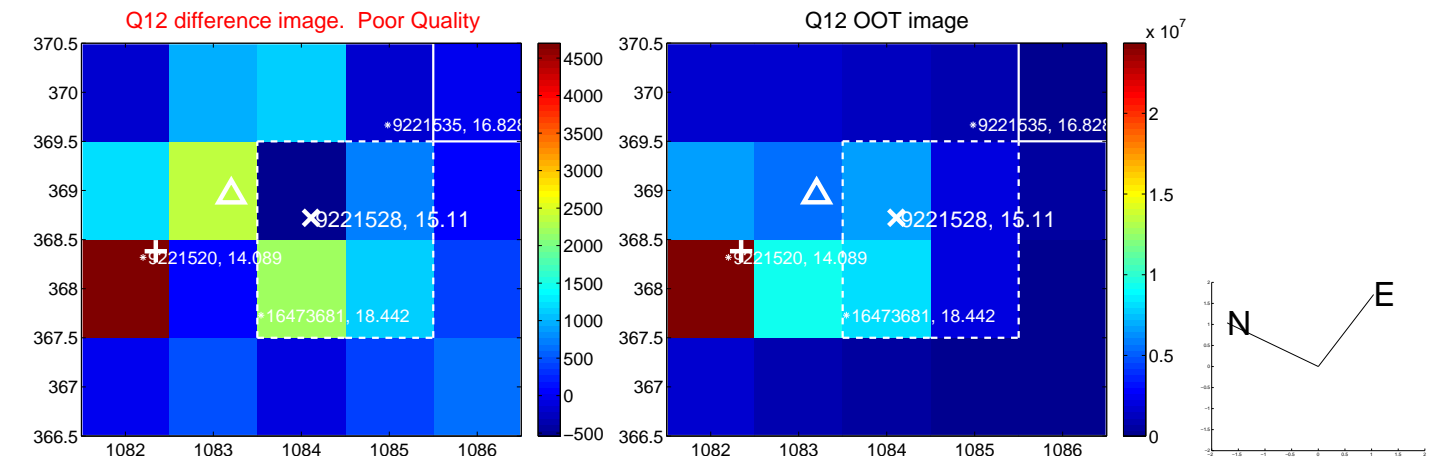
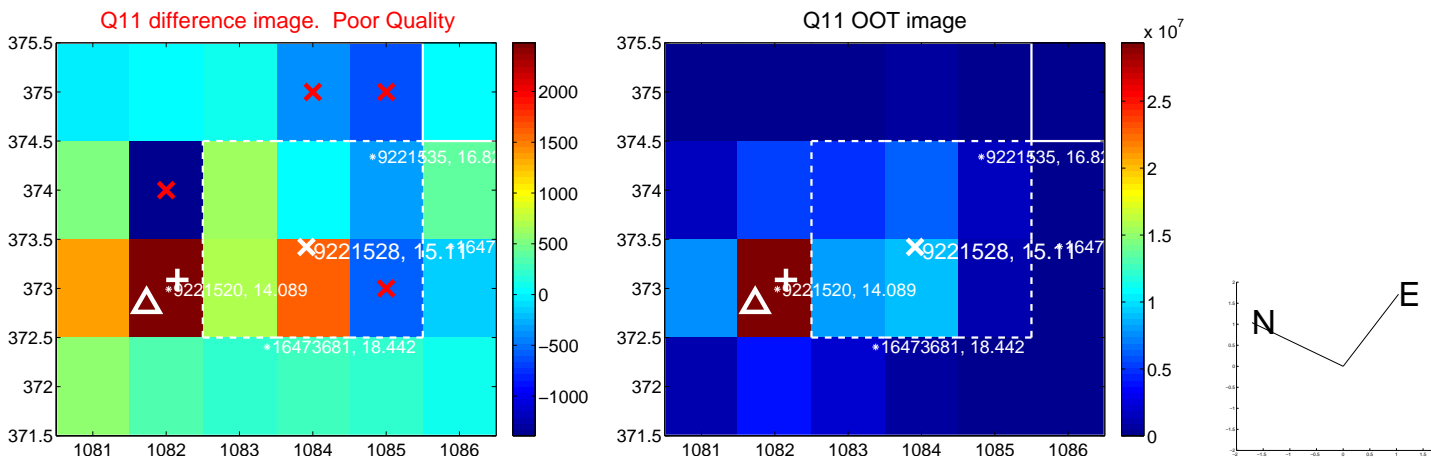
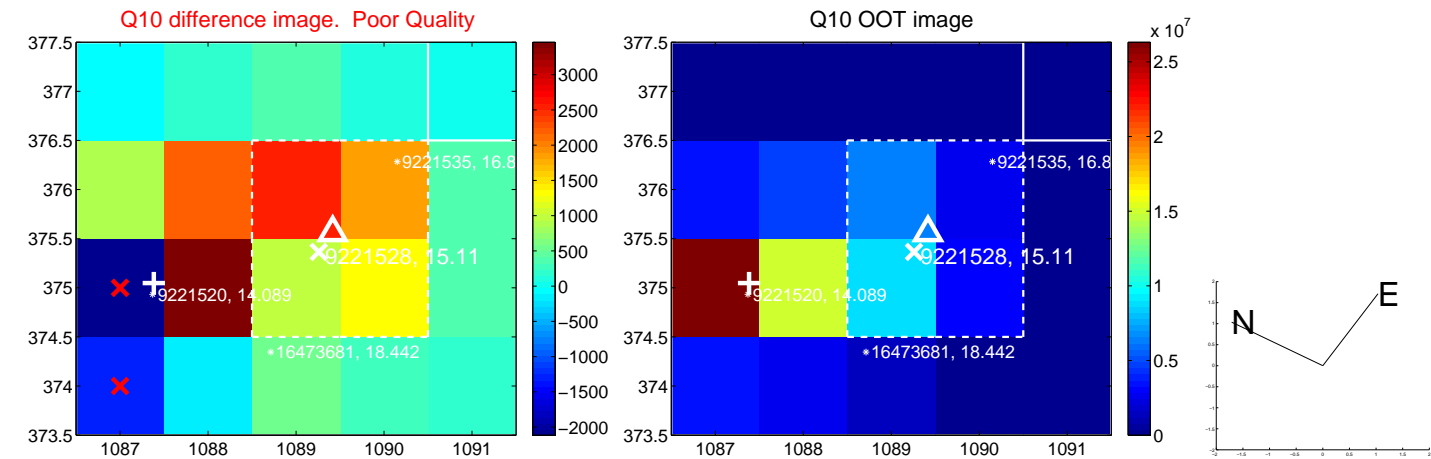
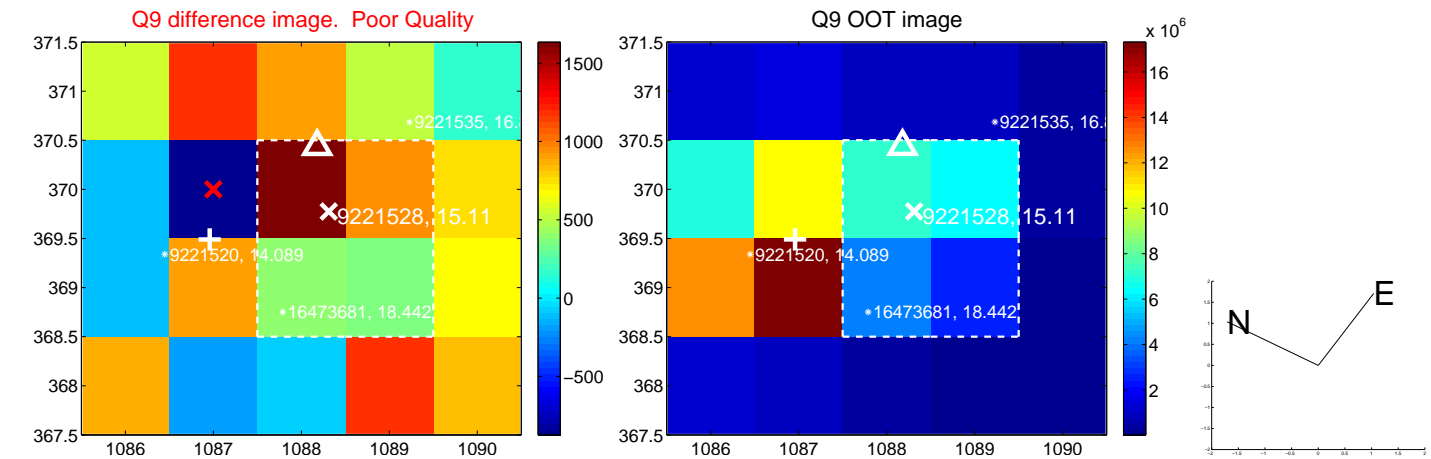
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



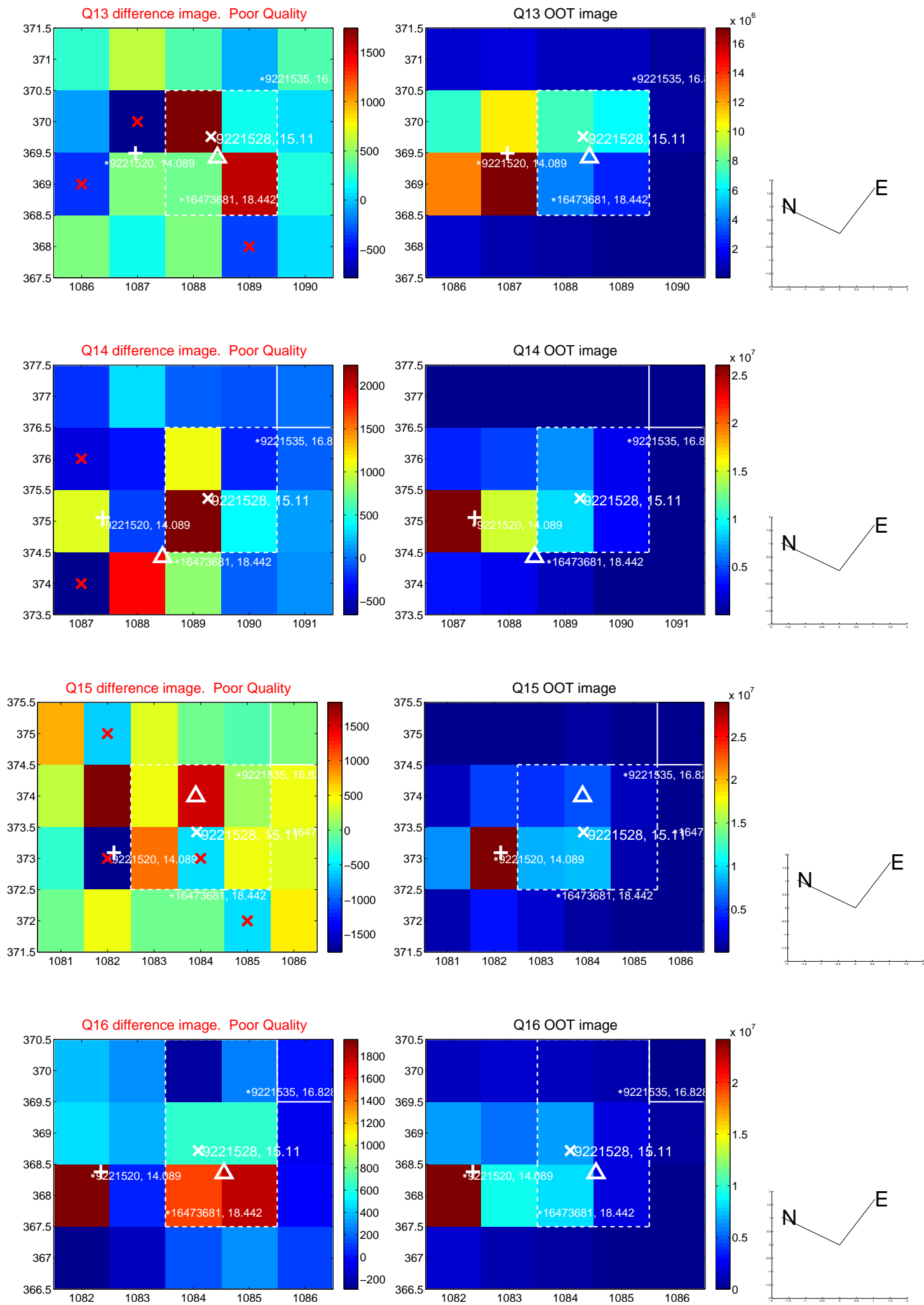
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



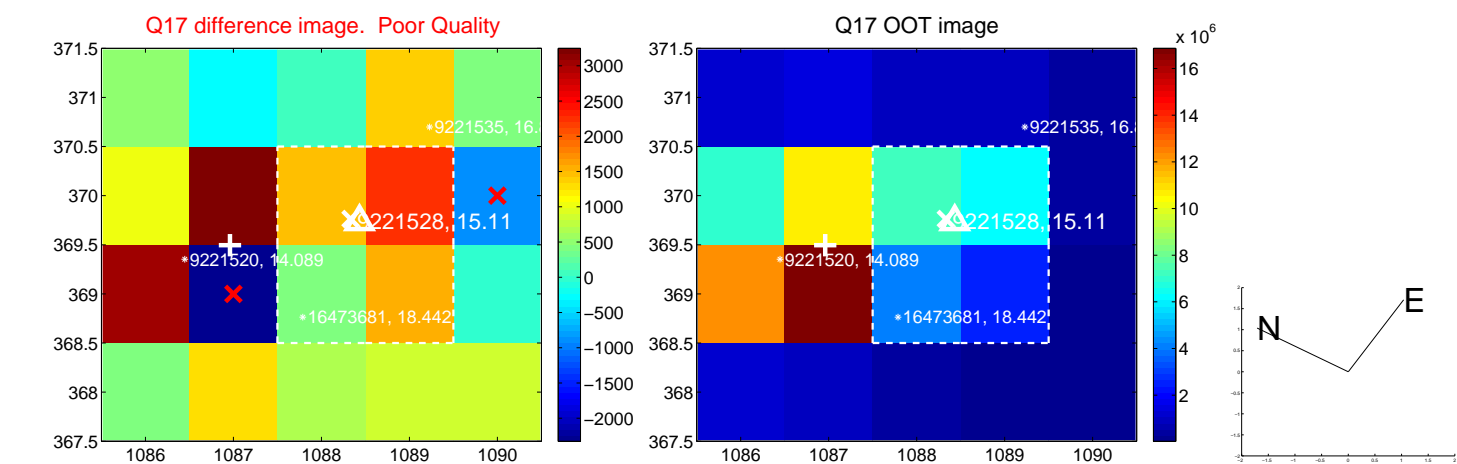
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



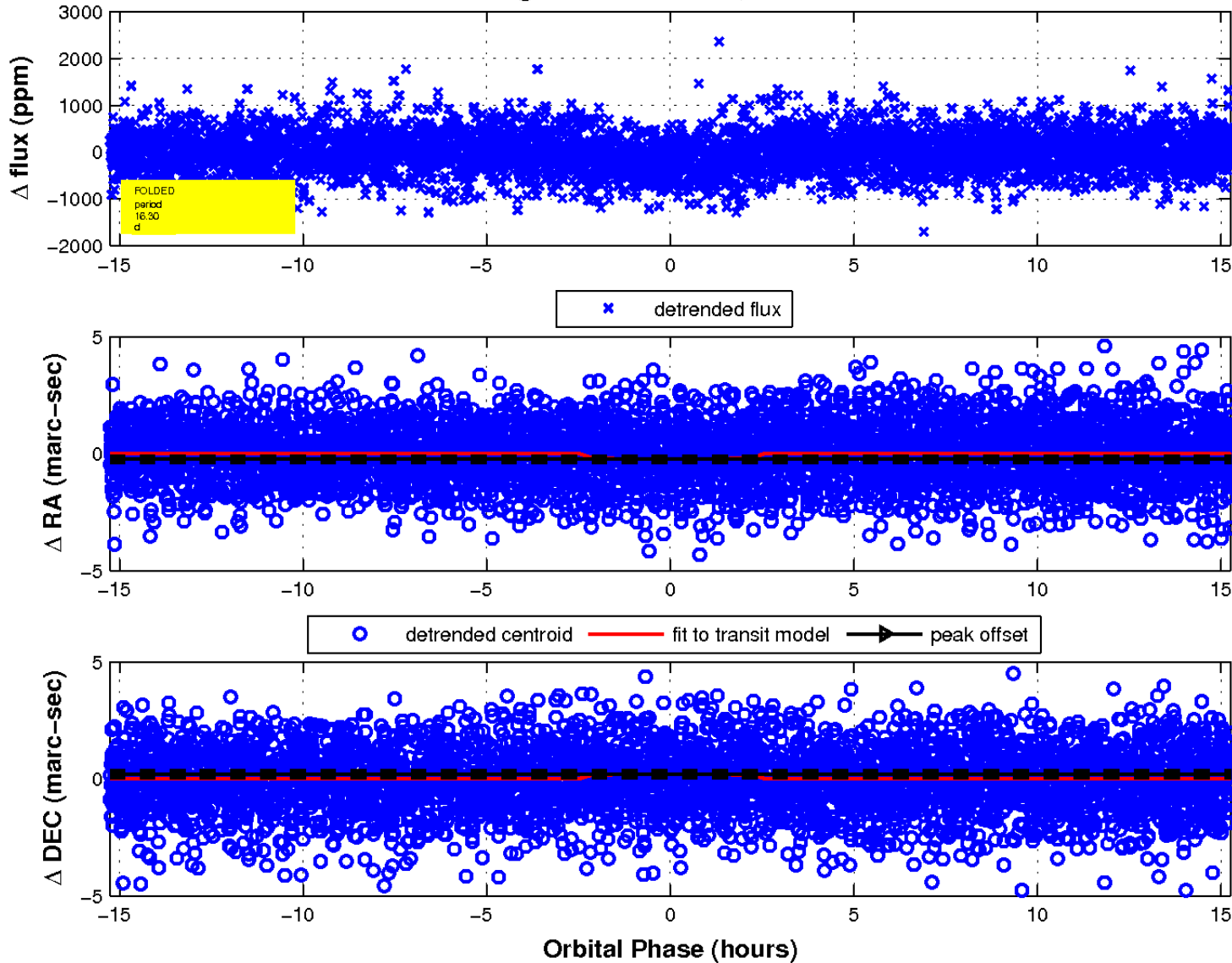
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

