

KIC 010730703

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})
010730703-01	OBS	2327.01	5.600111	135.967709	341.1	2.992	20.5	22.9	0.98	5288	2.18	194.70

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010730703-01	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.

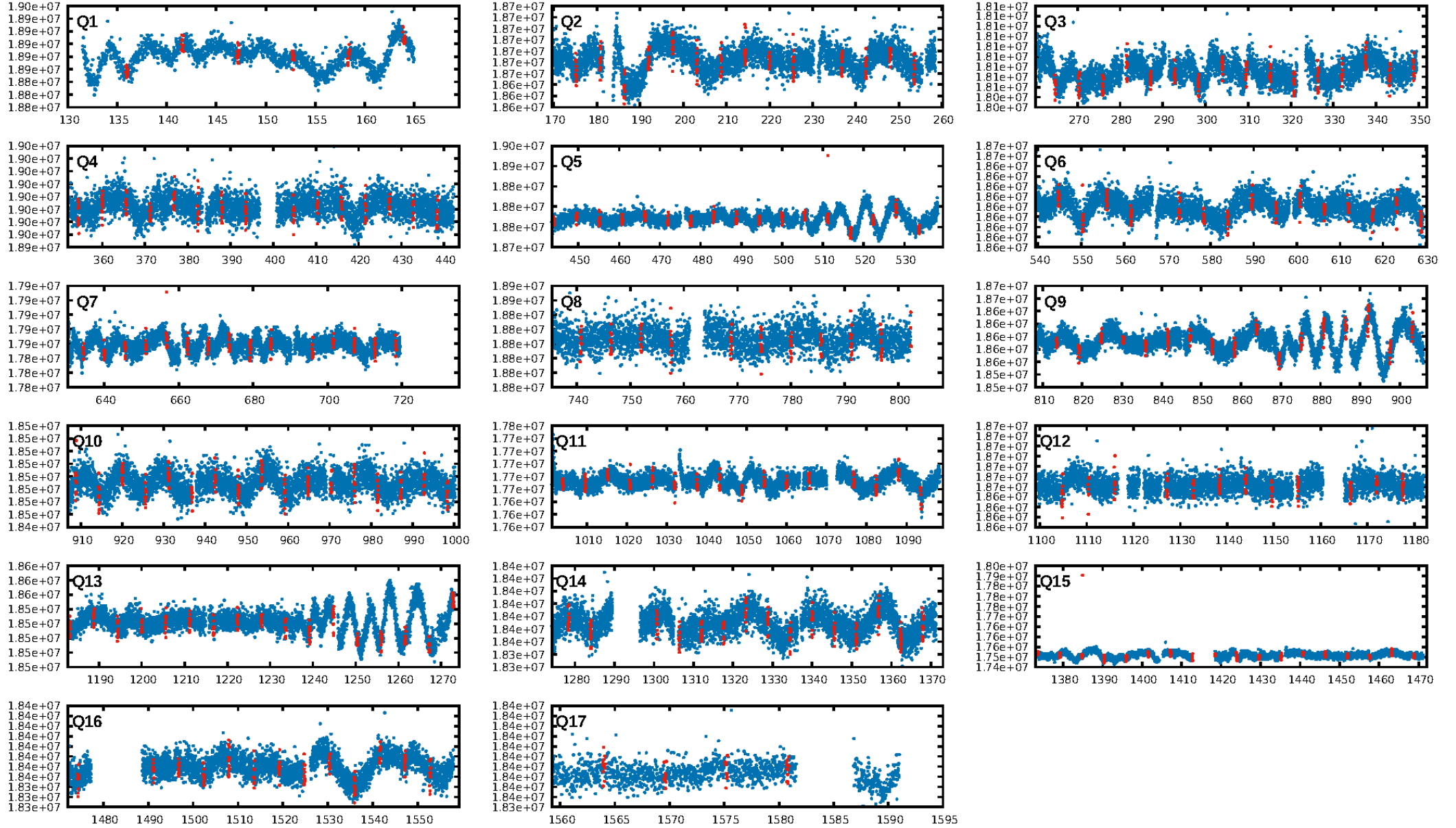
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010730703-01

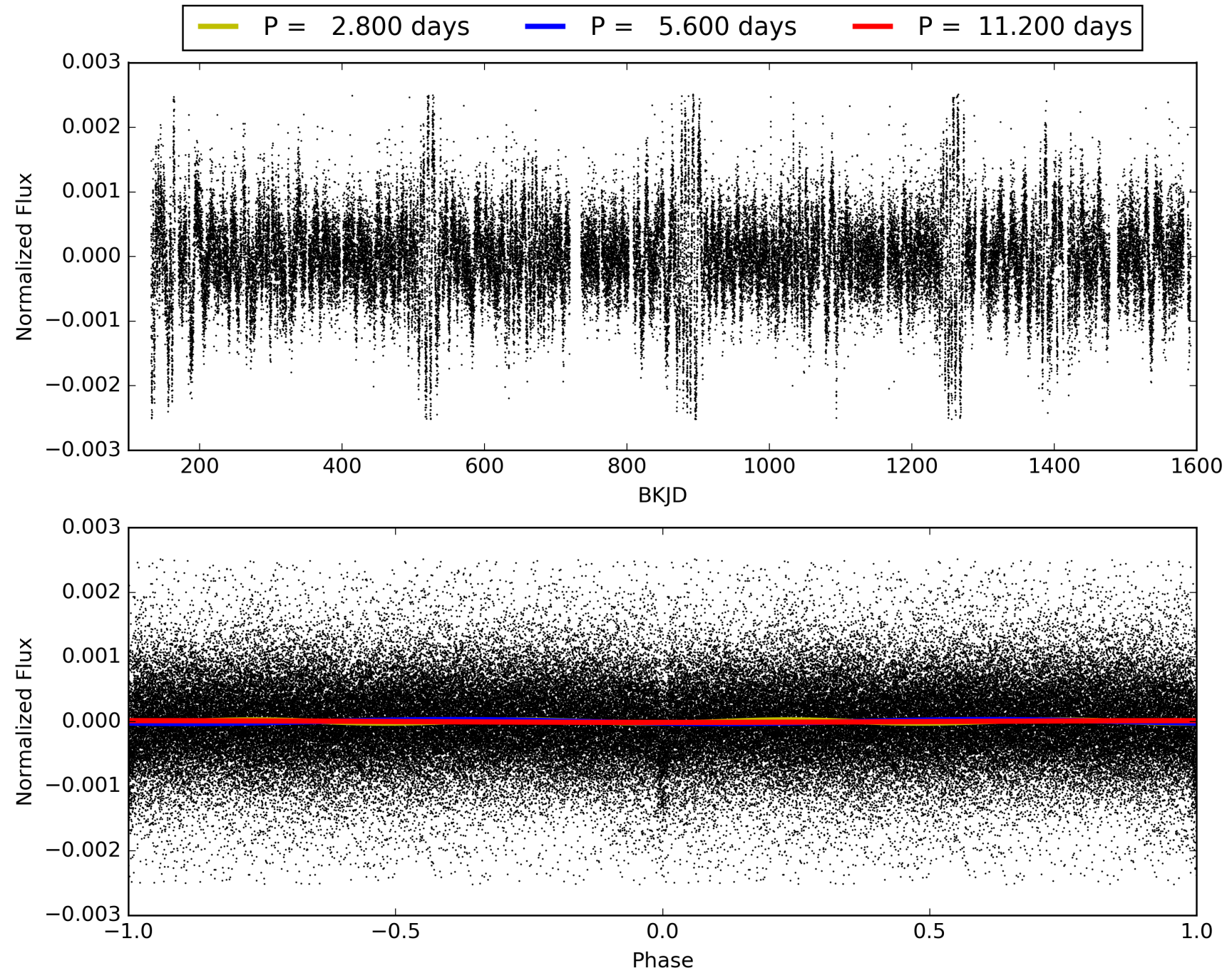
No Significant Match Found

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

TCE 010730703-01, PDC Light Curves

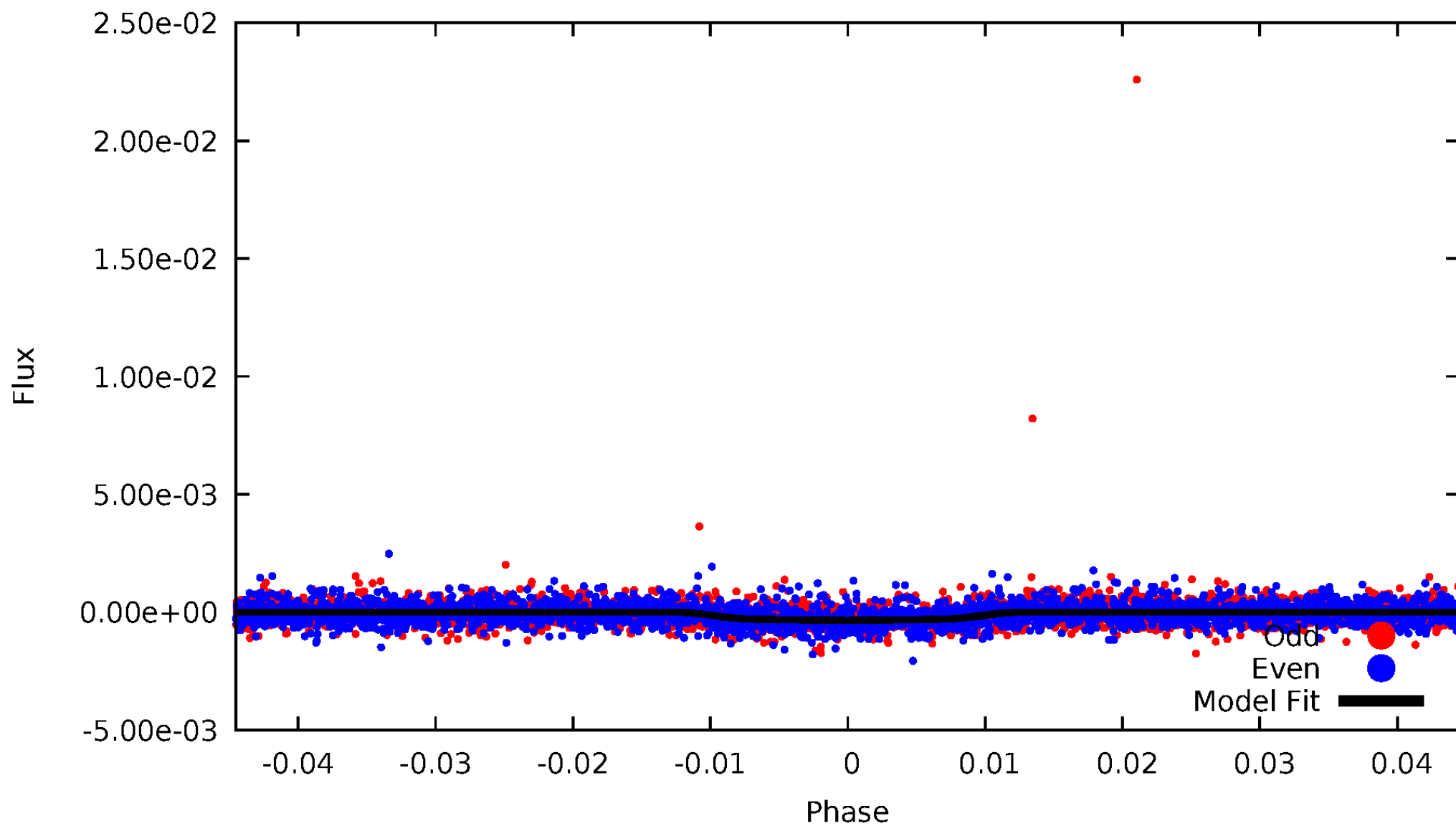


TCE 010730703-01



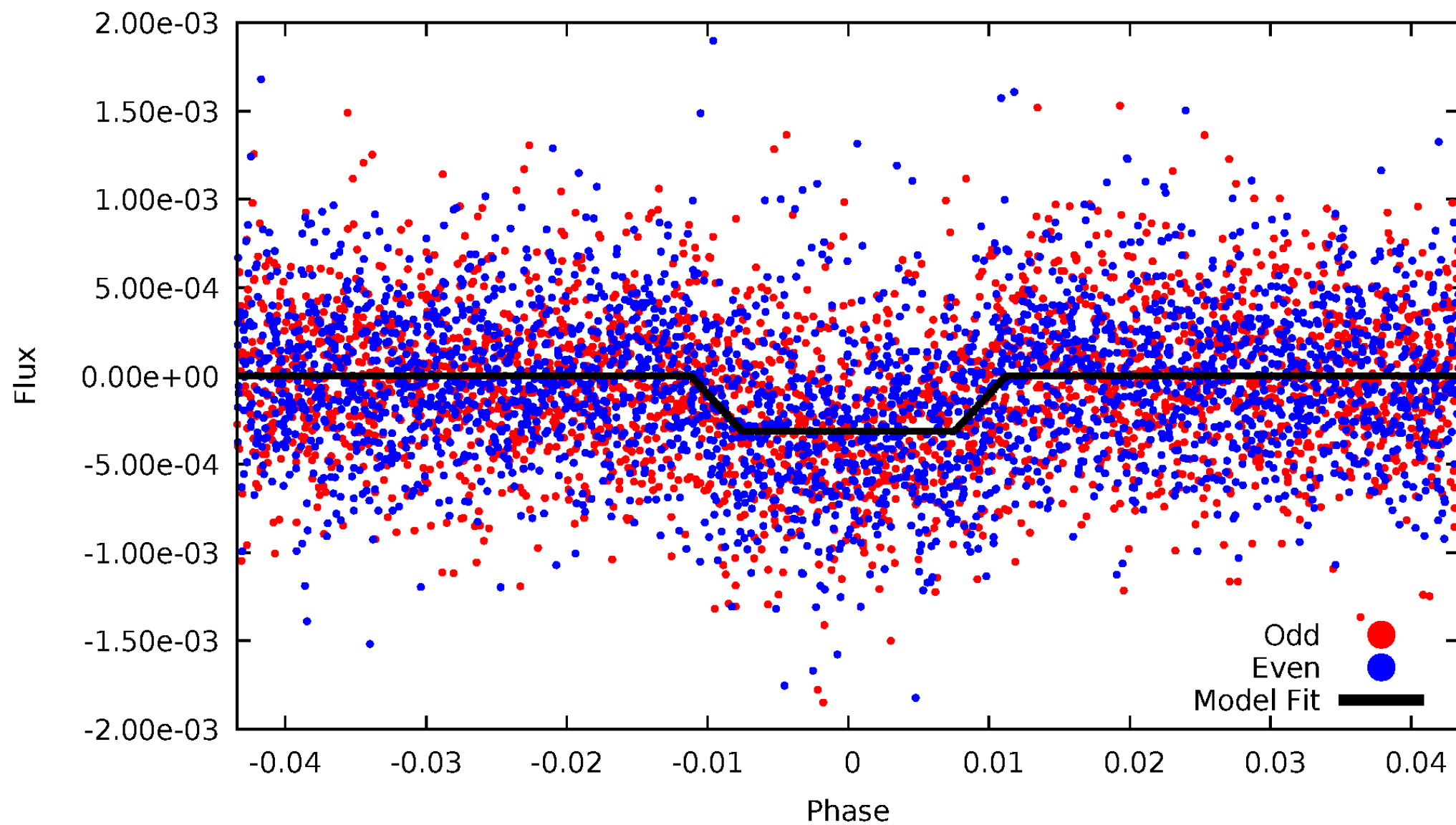
DV Odd/Even

TCE 010730703-01



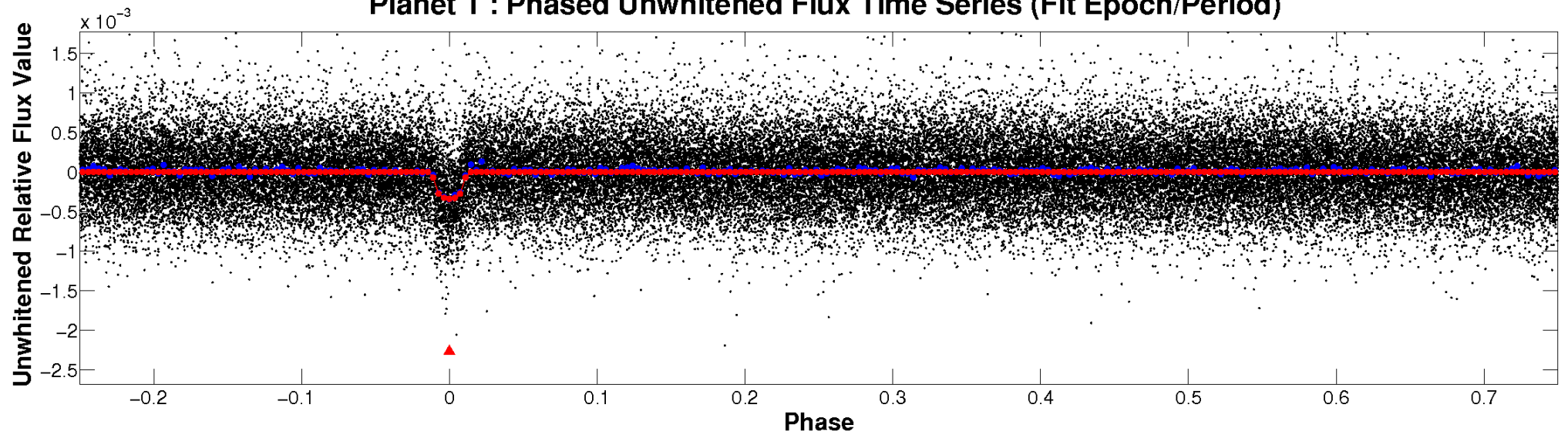
ALT Odd/Even

TCE 010730703-01

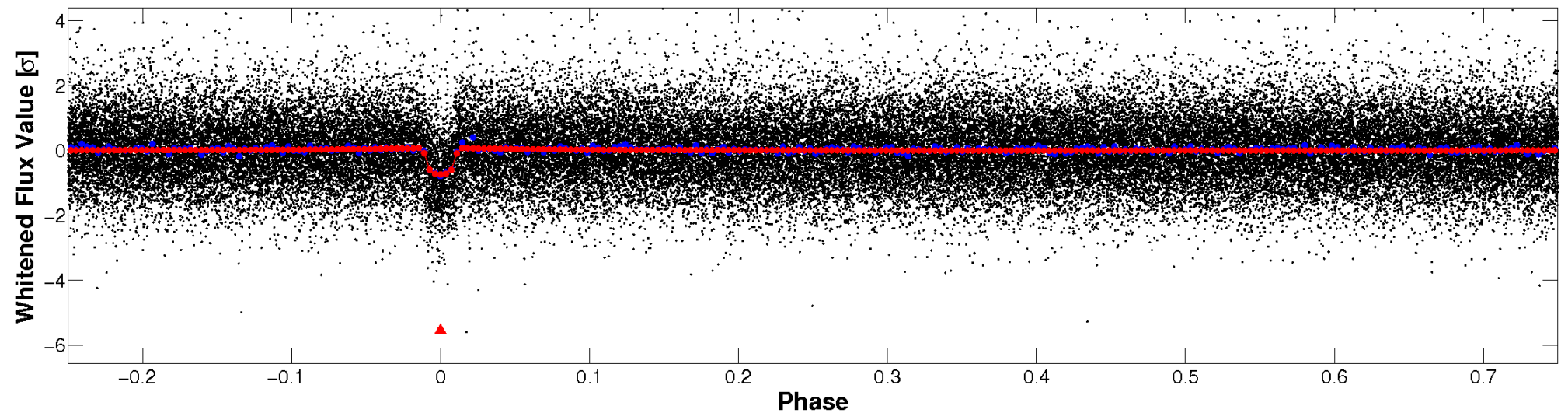


Non-Whitened Vs. Whitened Light Curve

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

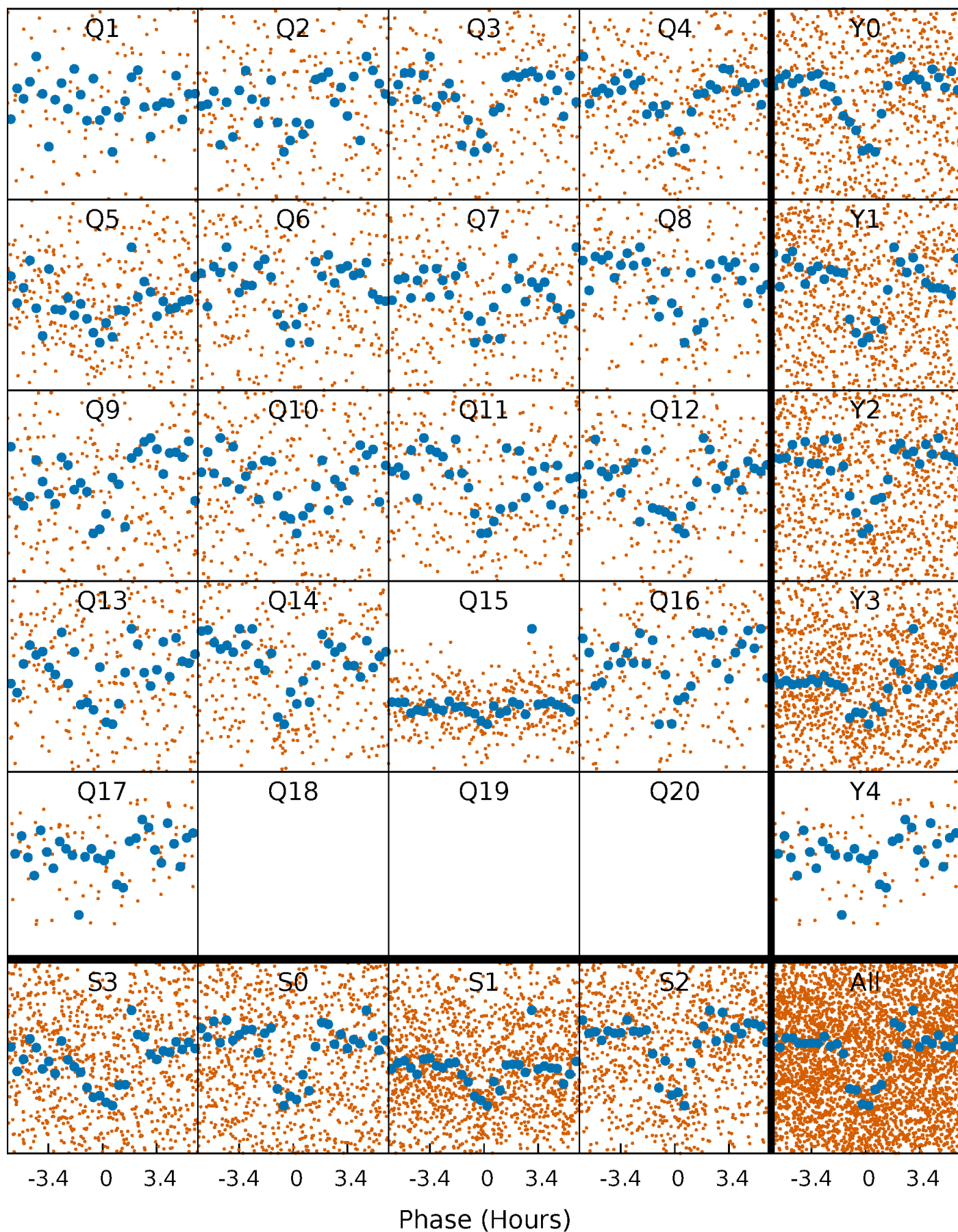


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



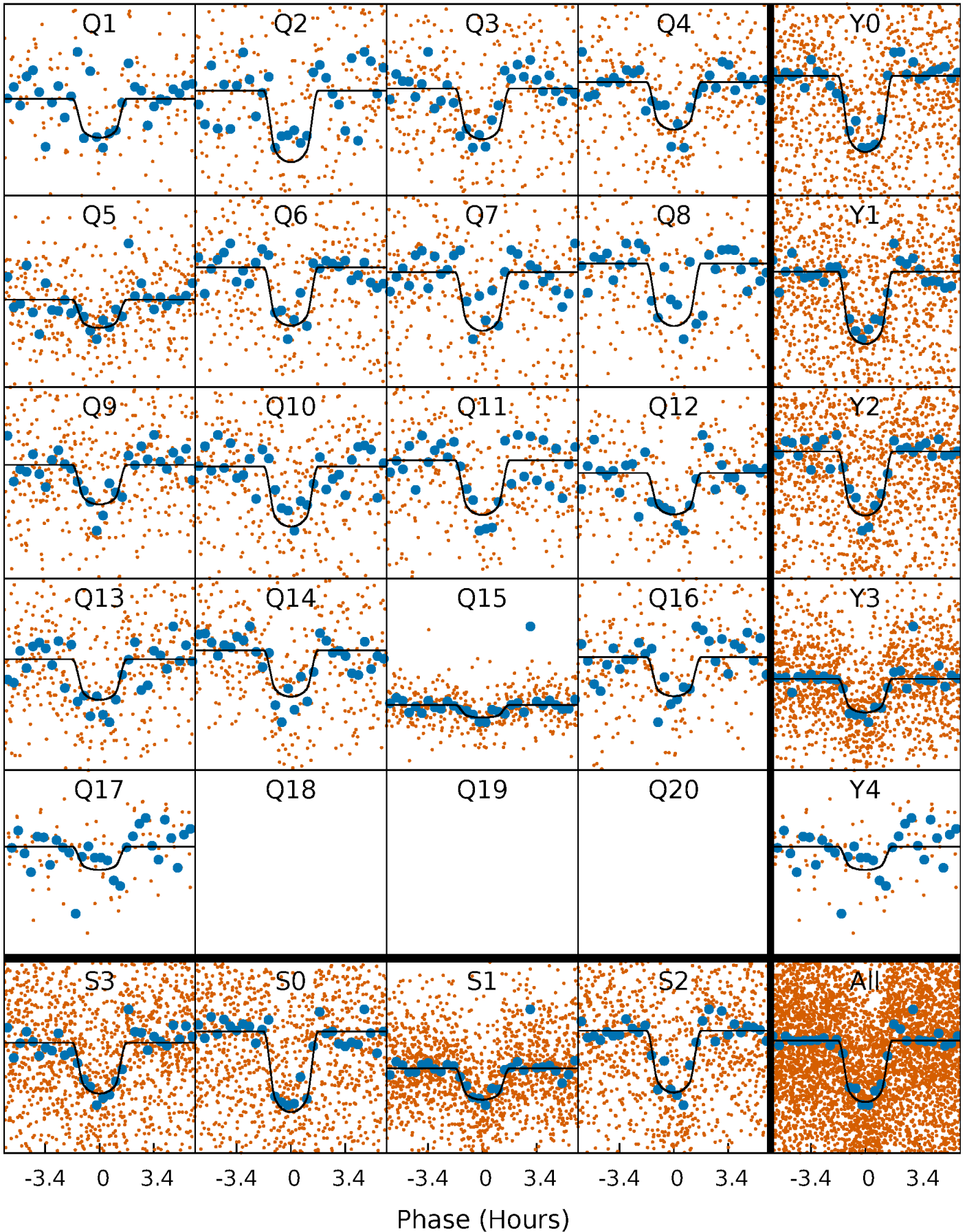
PDC Quarter-Phased Transit Curves

TCE 010730703-01 P= 5.600111 Days $T_0=135.967709$ (BKJD)



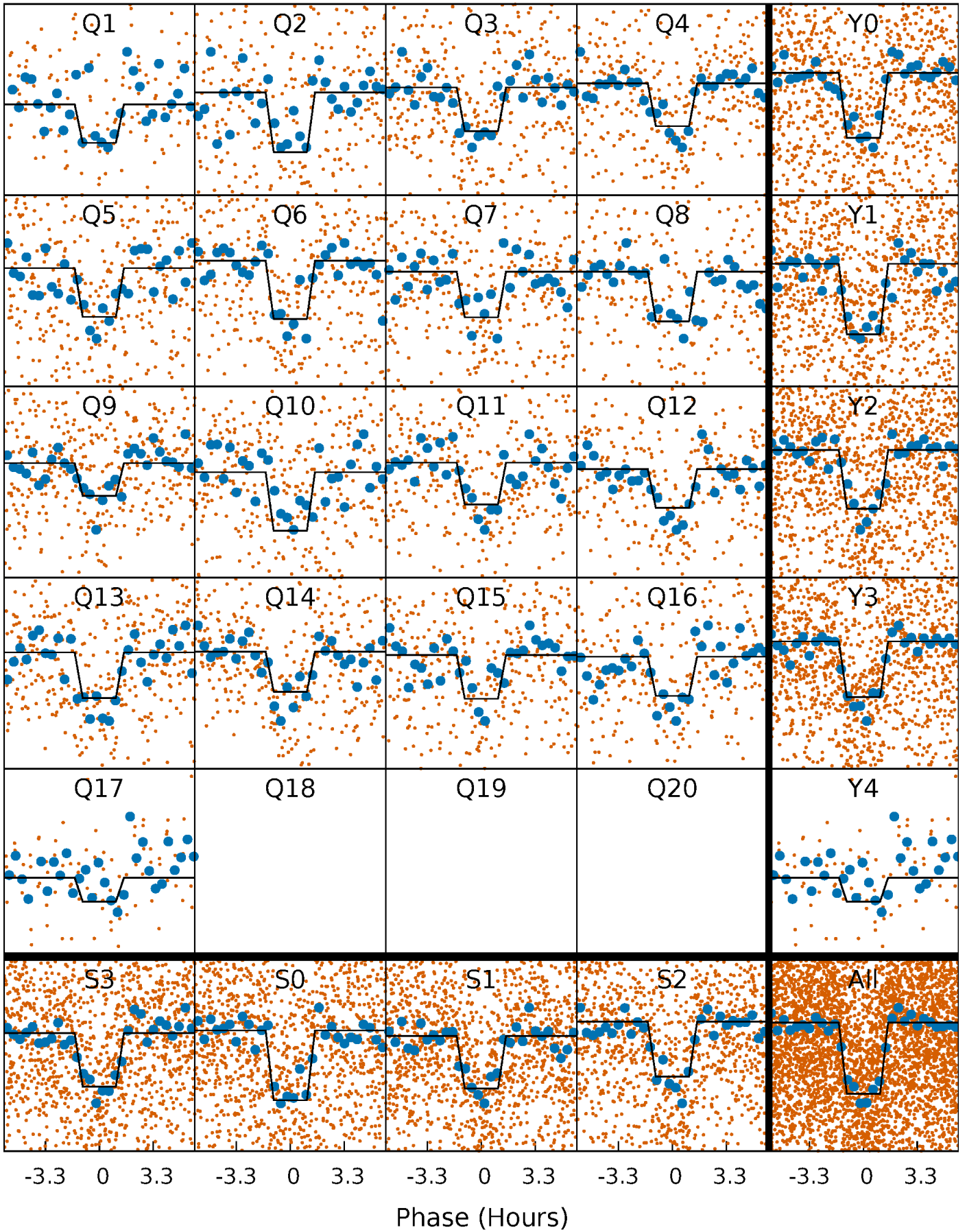
DV Quarter-Phased Transit Curves

TCE 010730703-01 P= 5.600111 Days $T_0=135.967709$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

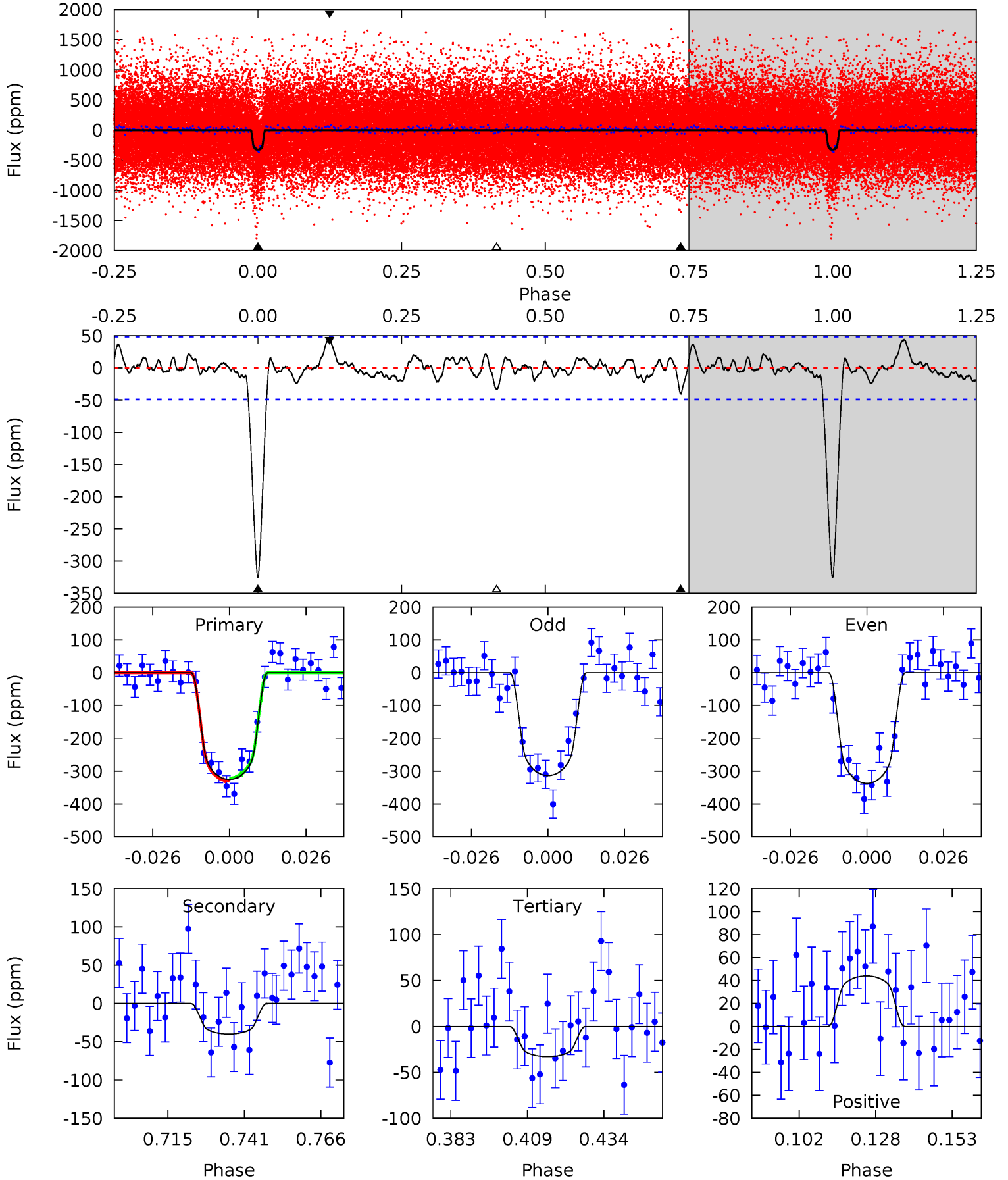
TCE 010730703-01 P= 5.600122 Days $T_0=135.965358$ (BKJD)



DV Model-Shift Uniqueness Test

010730703-01, P = 5.600111 Days, E = 130.367598 Days

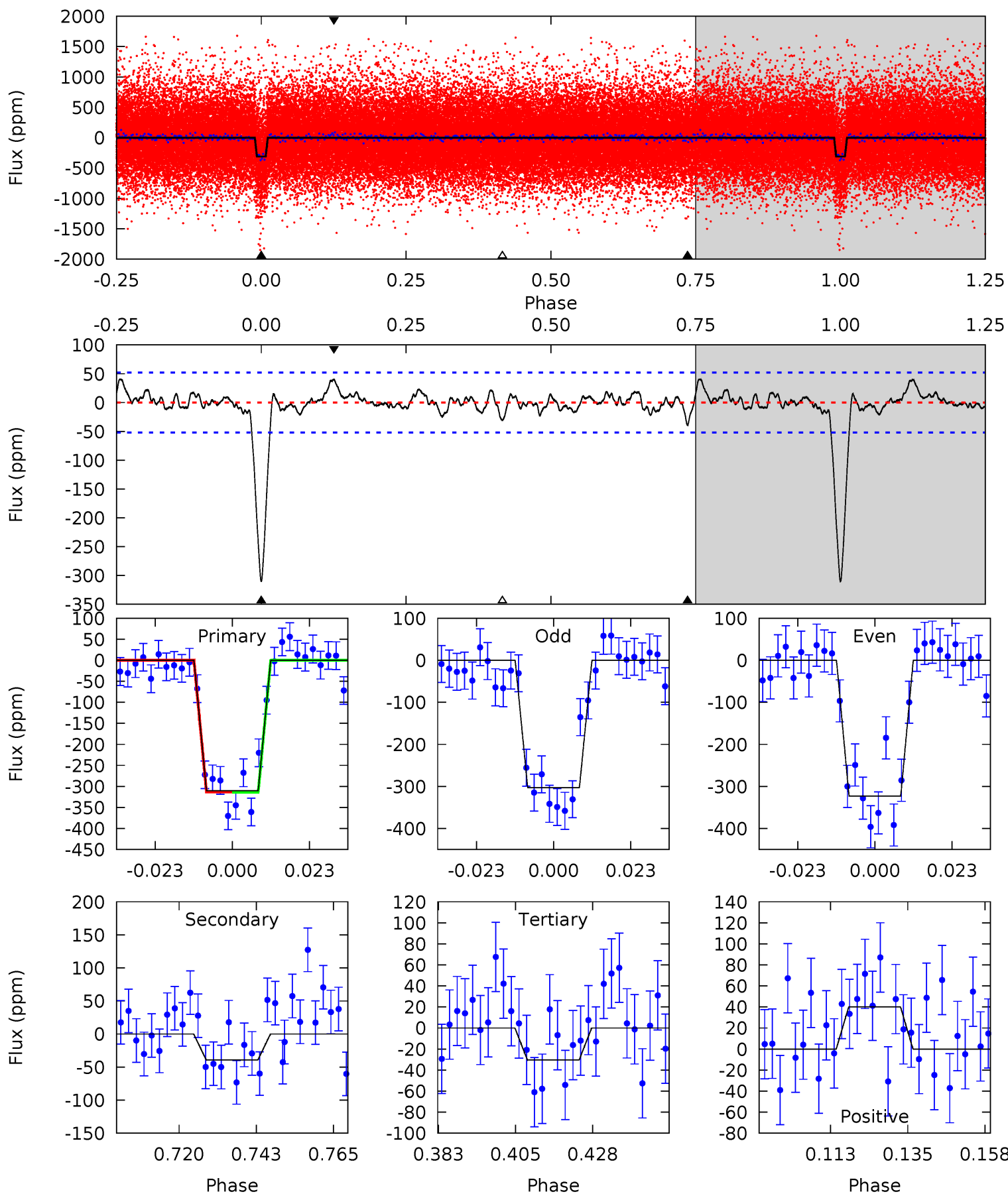
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
32.3	3.96	3.27	4.37	4.84	2.23	1.16	29.0	27.9	0.69	-0.40	1.18	0.98	0.12	0.42



Alt Model-Shift Uniqueness Test

010730703-01, P = 5.600122 Days, E = 130.365236 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.0	3.67	2.85	3.76	4.87	2.28	1.09	26.2	25.3	0.82	-0.09	0.92	1.03	0.11	0.05



Stellar Parameters For KIC 010730703

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5288^{+79}_{-79}	$4.391^{+0.120}_{-0.080}$	$0.180^{+0.150}_{-0.150}$	$0.978^{+0.113}_{-0.124}$	$0.858^{+0.061}_{-0.030}$	$1.292^{+0.684}_{-0.318}$
	+1%/-1%	+3%/-2%	+83%/-83%	+12%/-13%	+7%/-3%	+53%/-25%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 010730703-01 / KOI 2327.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-40 ± 10	$2.17^{+0.53}_{-0.48}$	1329^{+41}_{-49}	3411^{+341}_{-253}	16^{+13}_{-6}
Alt.	-39 ± 11	$1.89^{+0.46}_{-0.44}$	1328^{+48}_{-51}	3570^{+344}_{-292}	21^{+15}_{-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 $A_{\text{obs}} \gg 1.0$

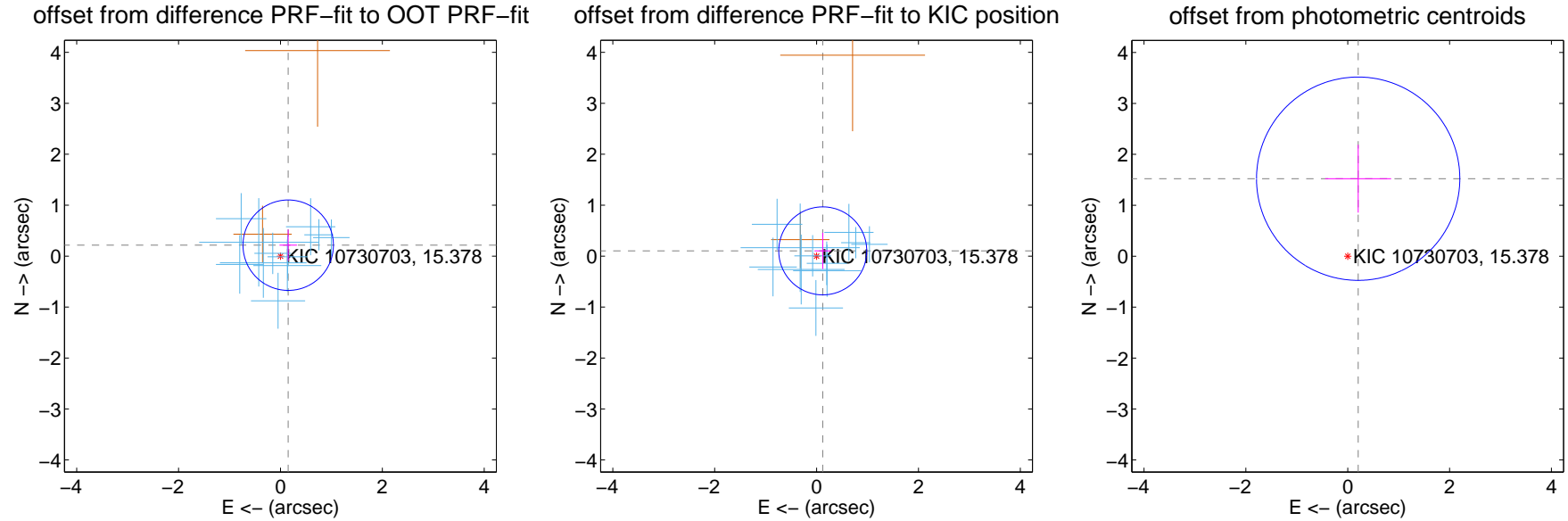
DV Centroid Data

Supplemental centroid analysis for 010730703-01. Kepler magnitude: 15.38. Transit SNR 22.94

There are 11 quarters with good PRF difference image offsets

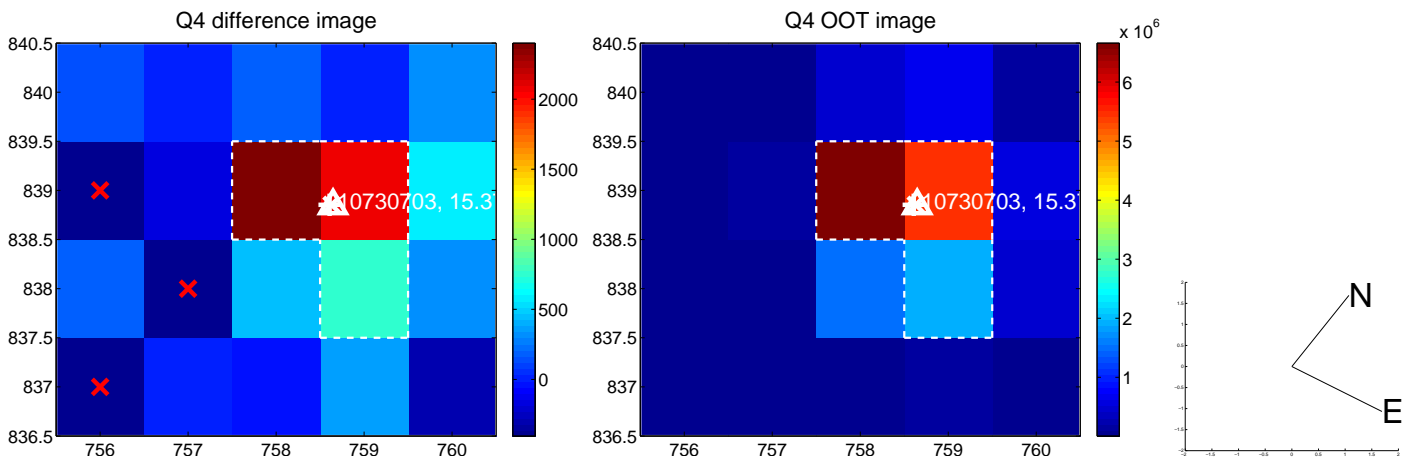
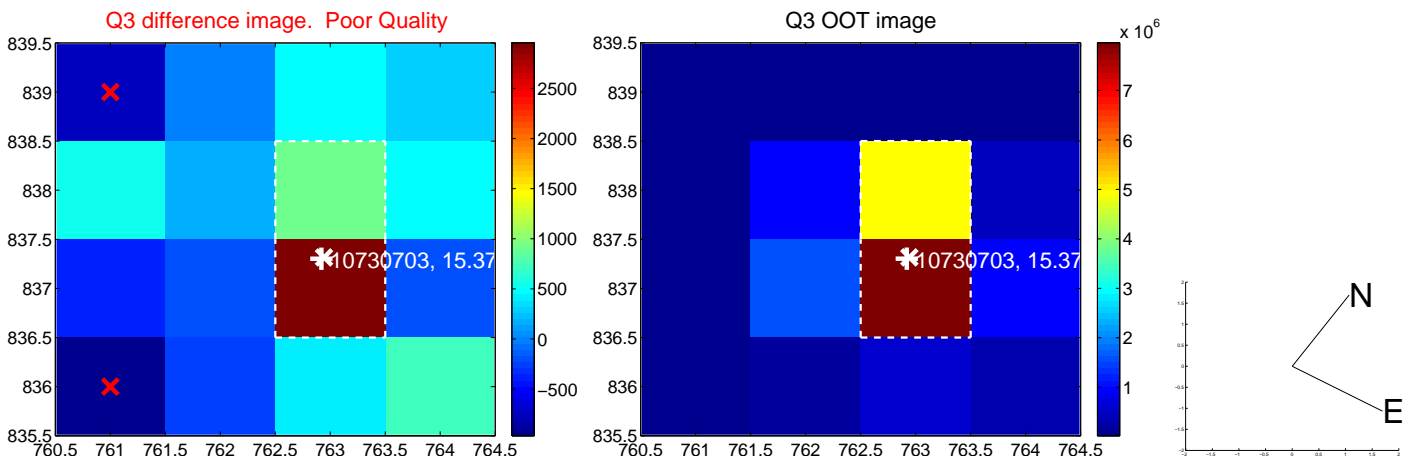
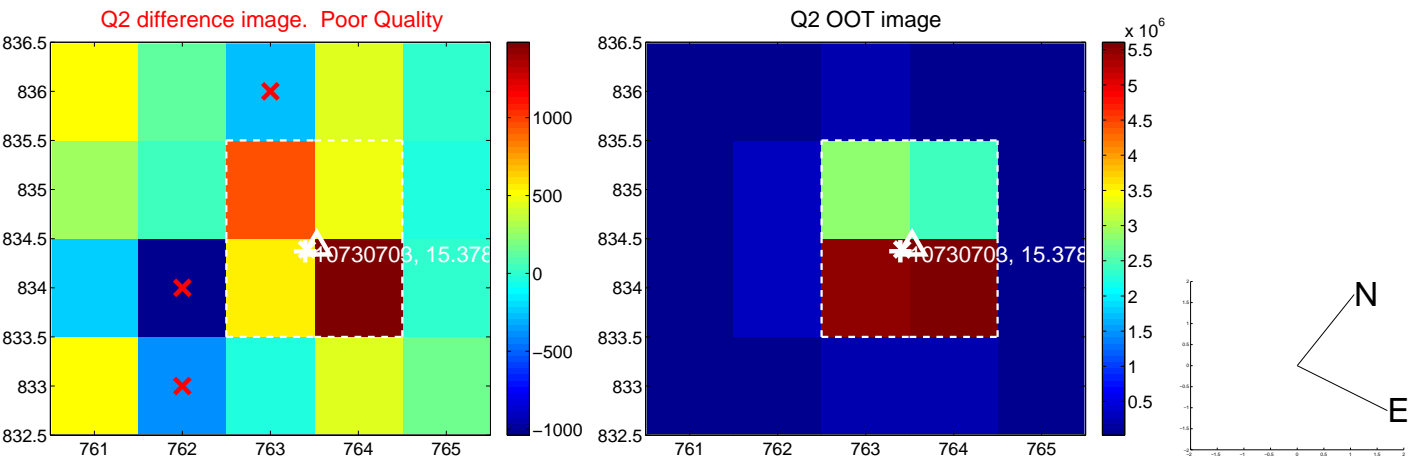
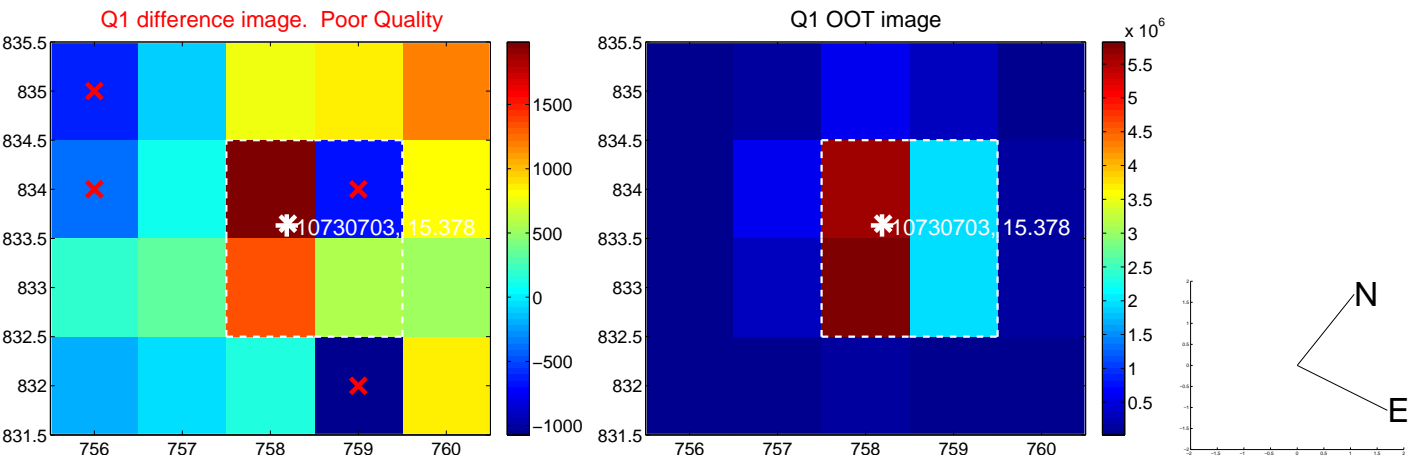
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.263 ± 0.296	0.89	-0.152 ± 0.171	0.215 ± 0.306
PRF-fit source offset from KIC position	0.159 ± 0.288	0.55	-0.121 ± 0.161	0.103 ± 0.356
photometric centroid source offset	1.54 ± 0.67	2.31	-0.21 ± 0.65	1.52 ± 0.67

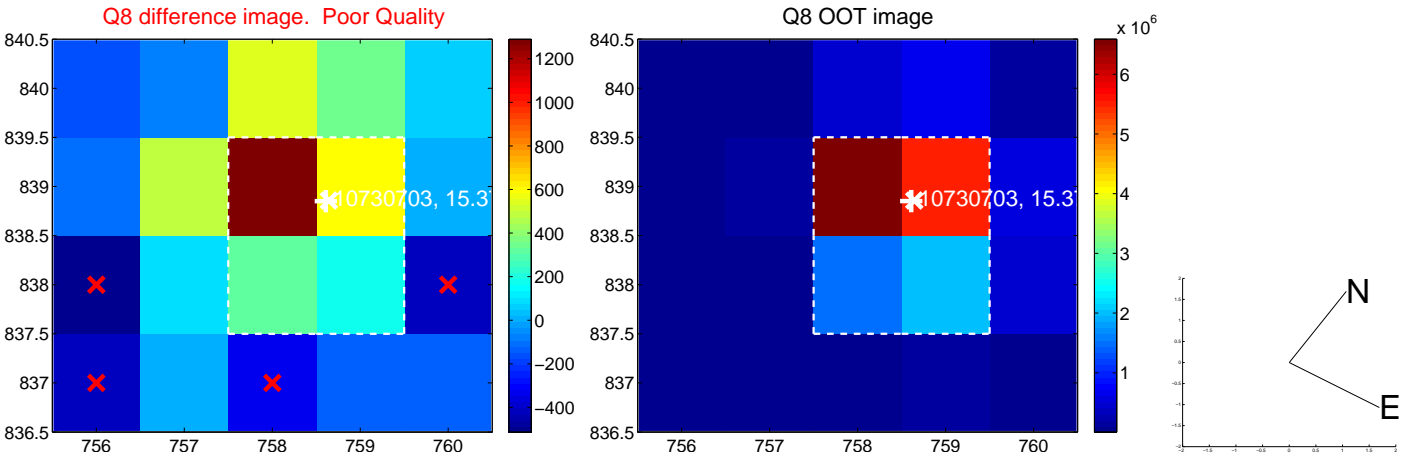
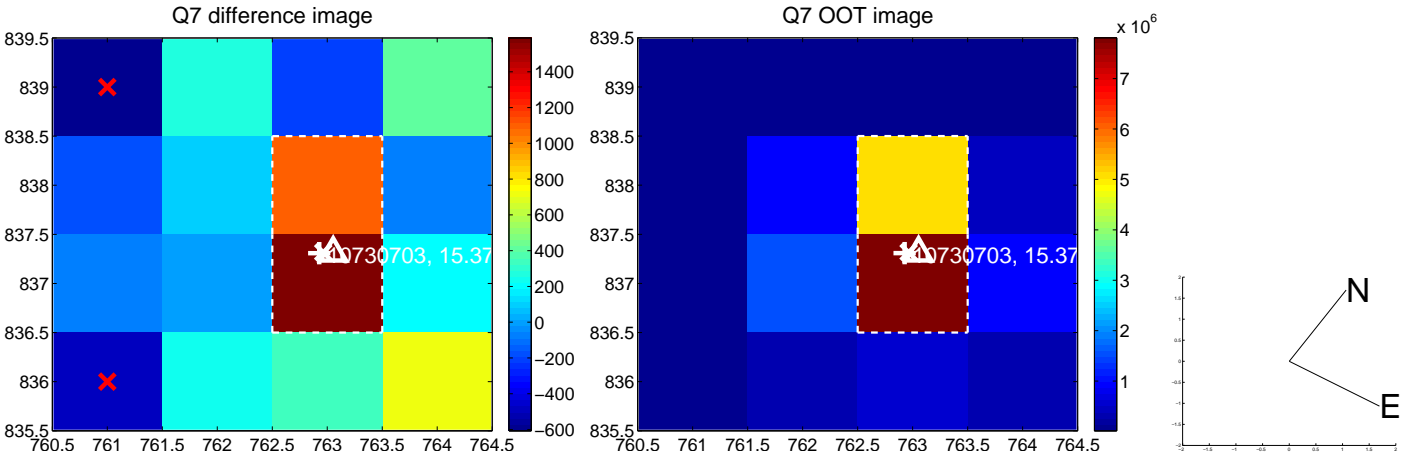
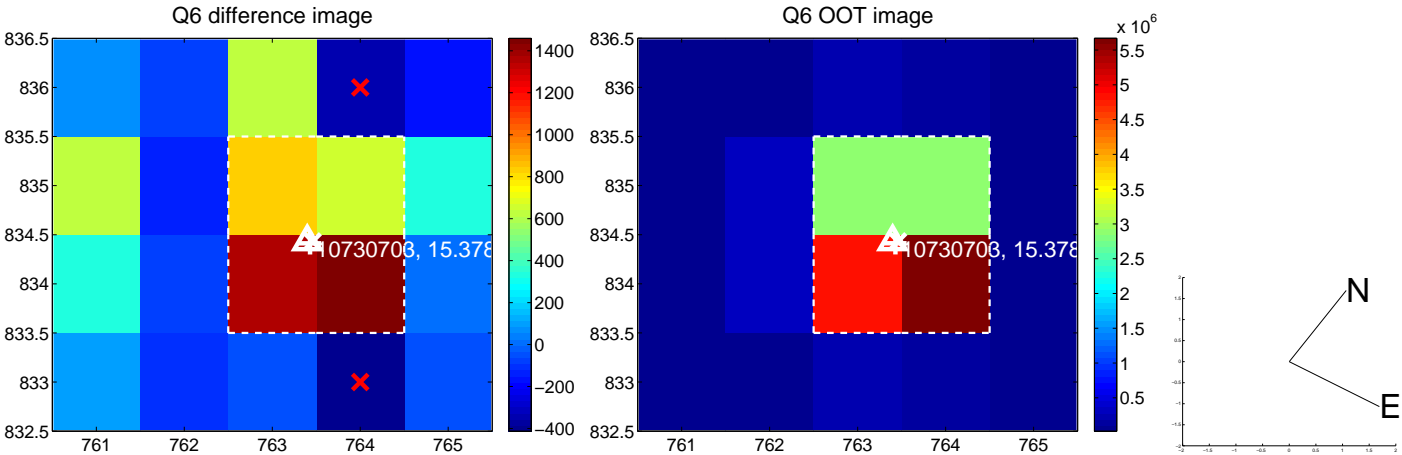
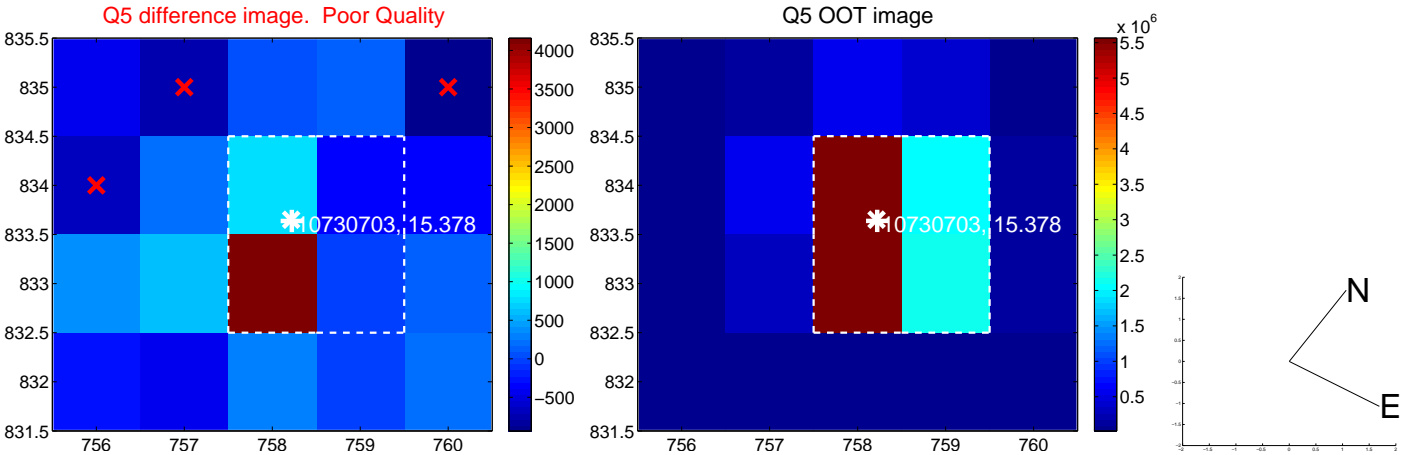


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

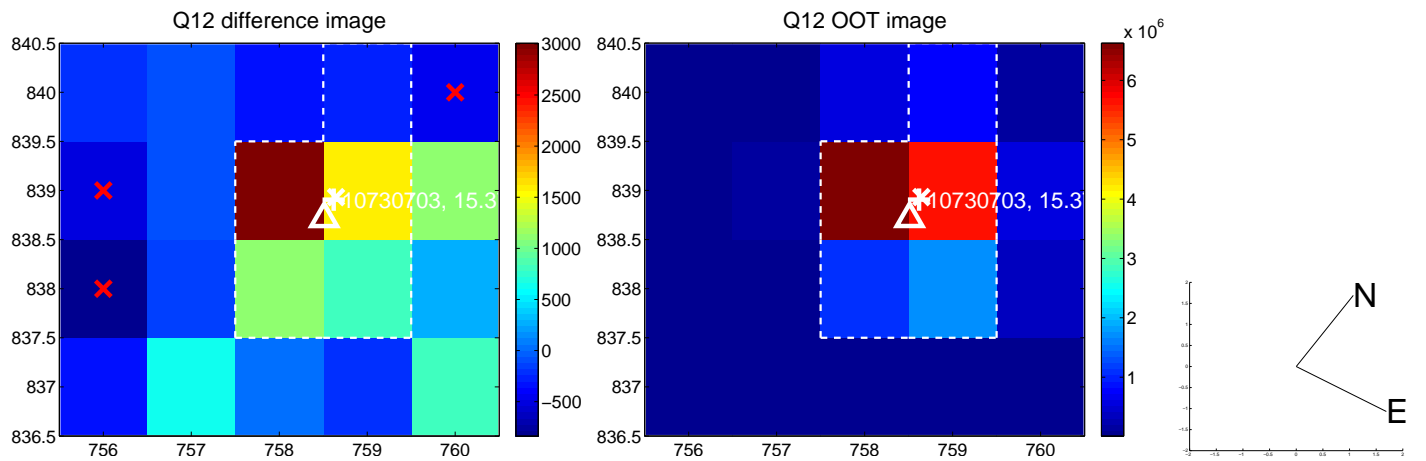
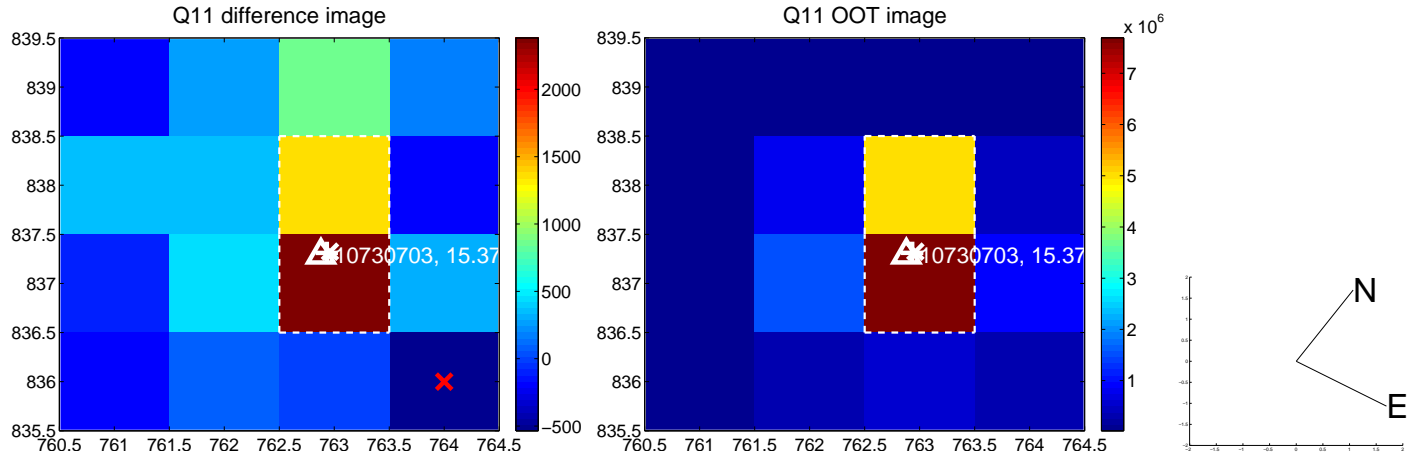
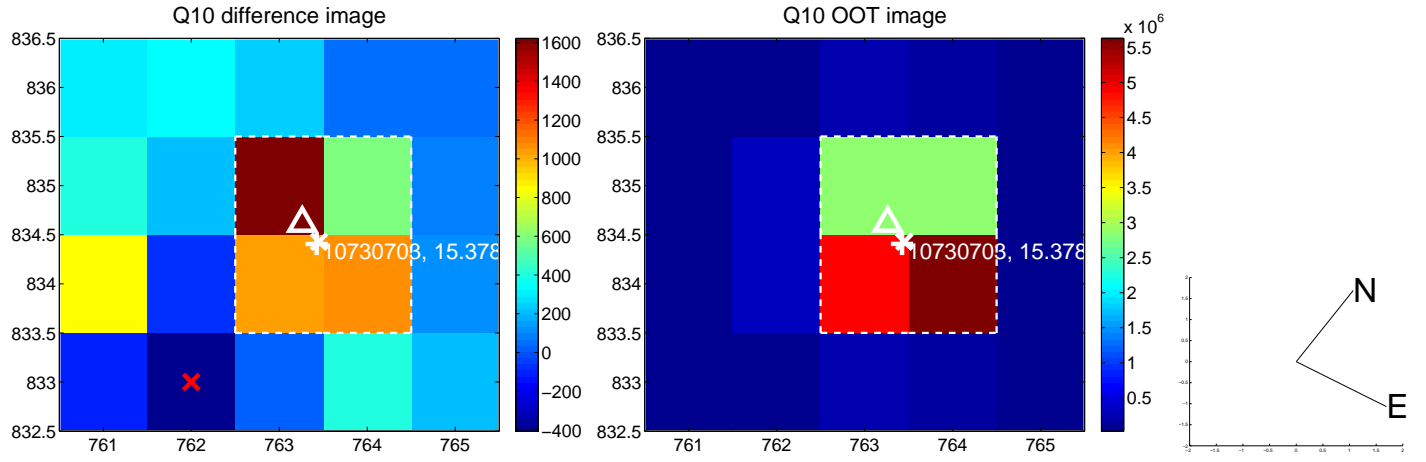
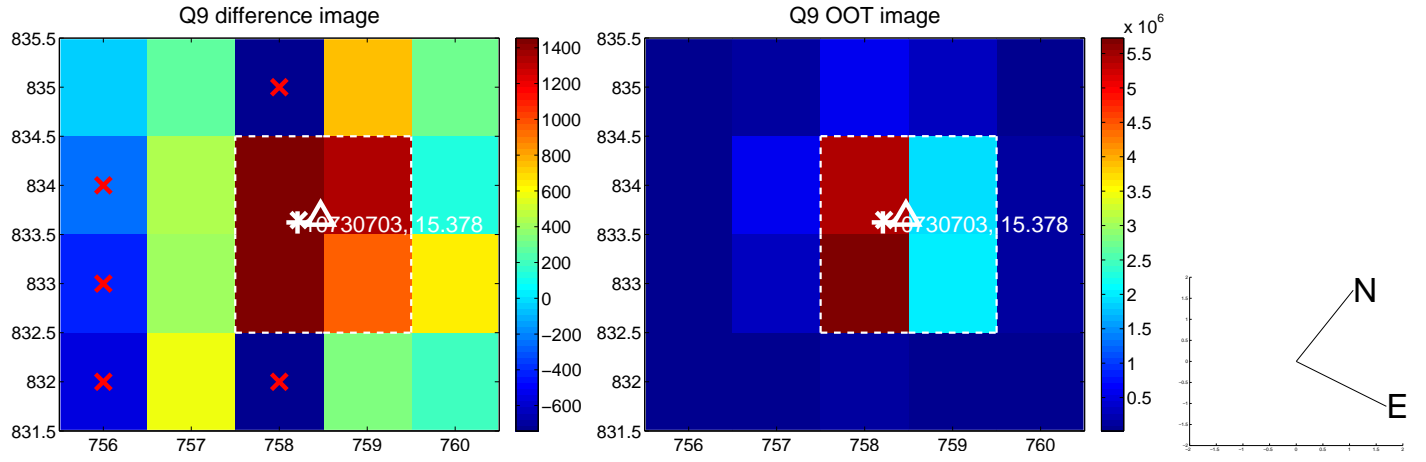
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



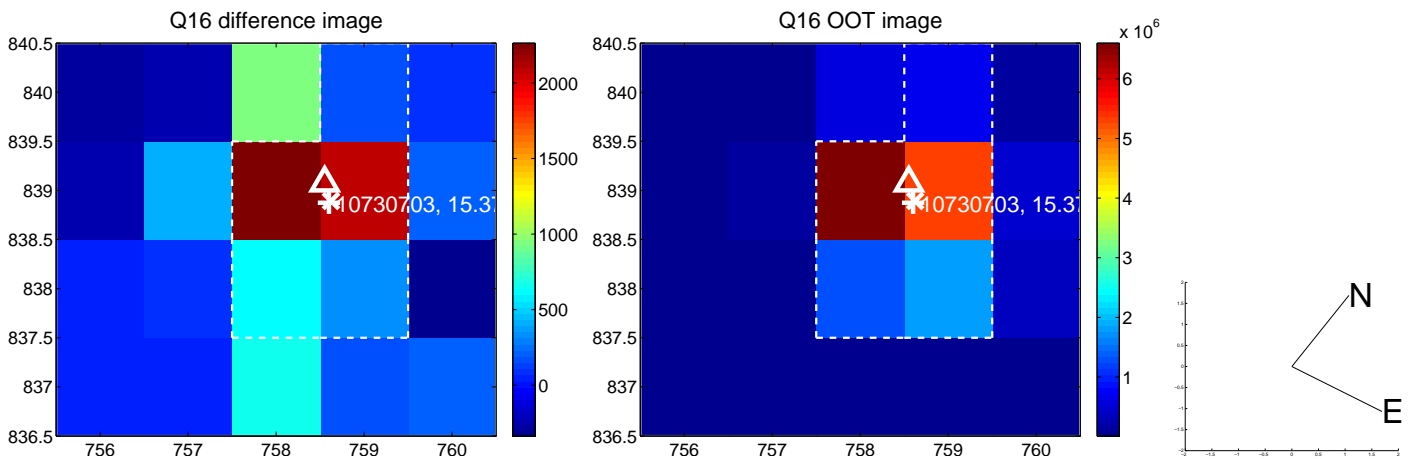
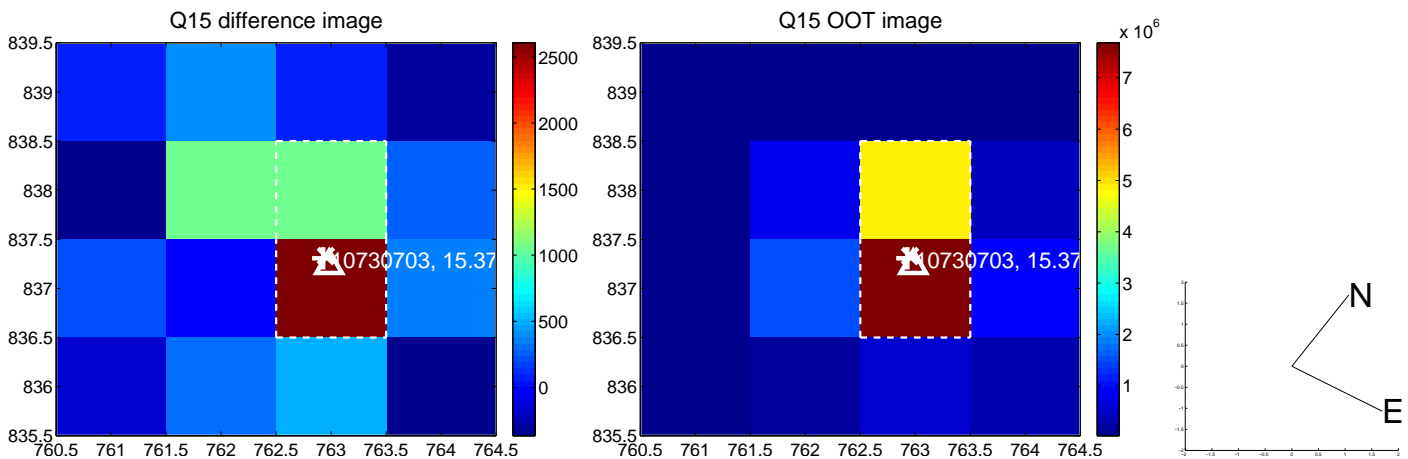
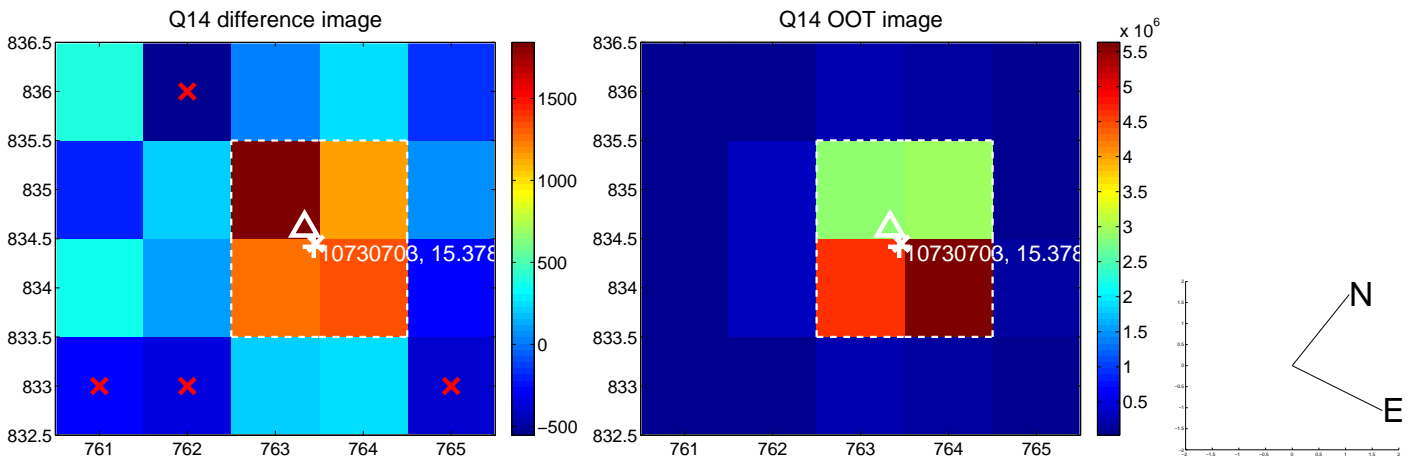
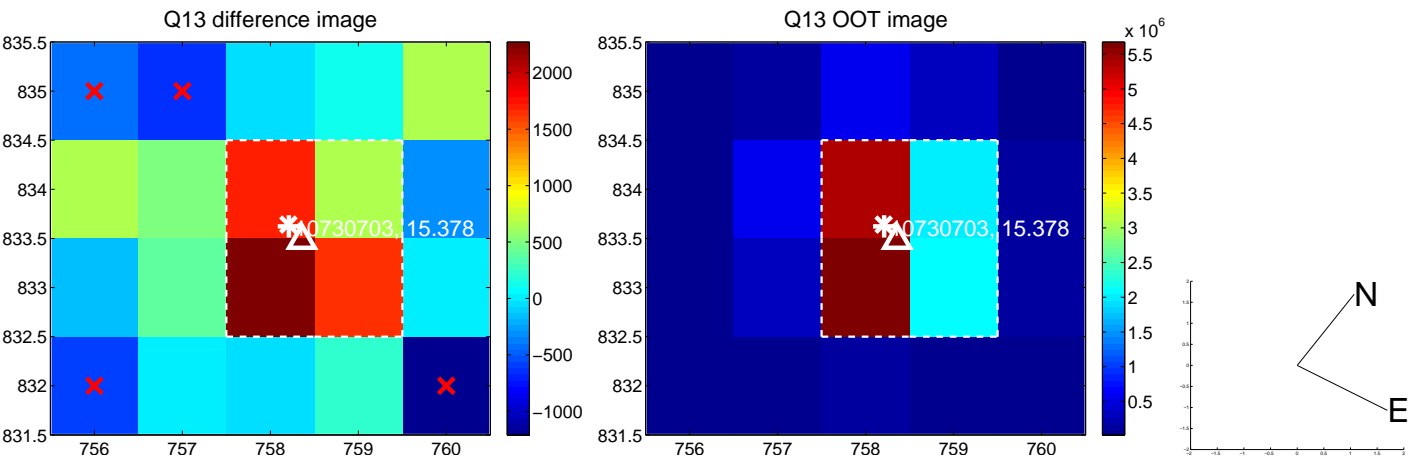
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



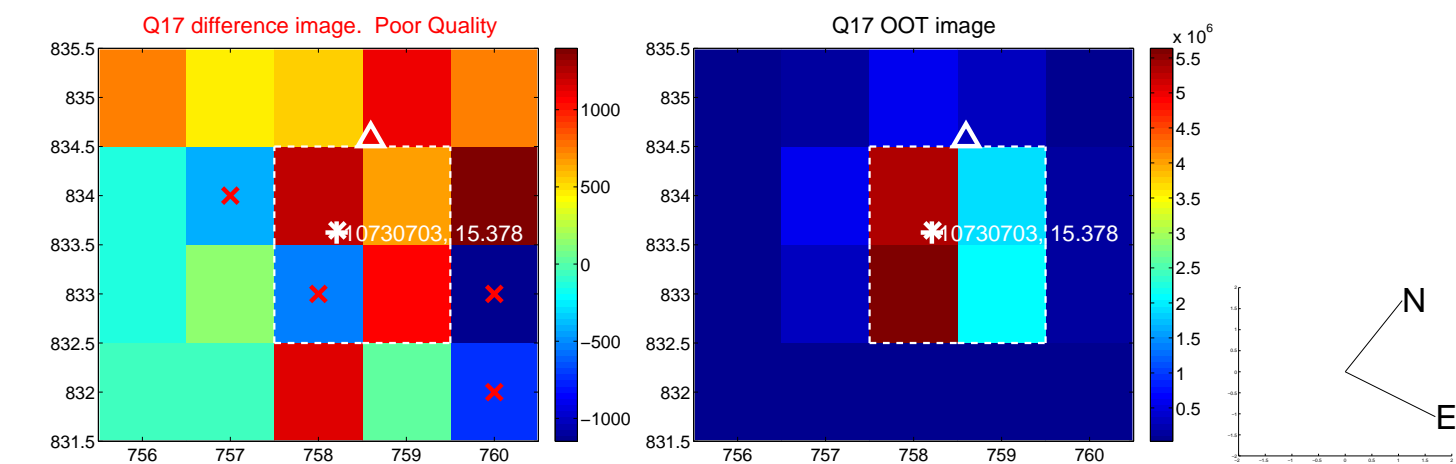
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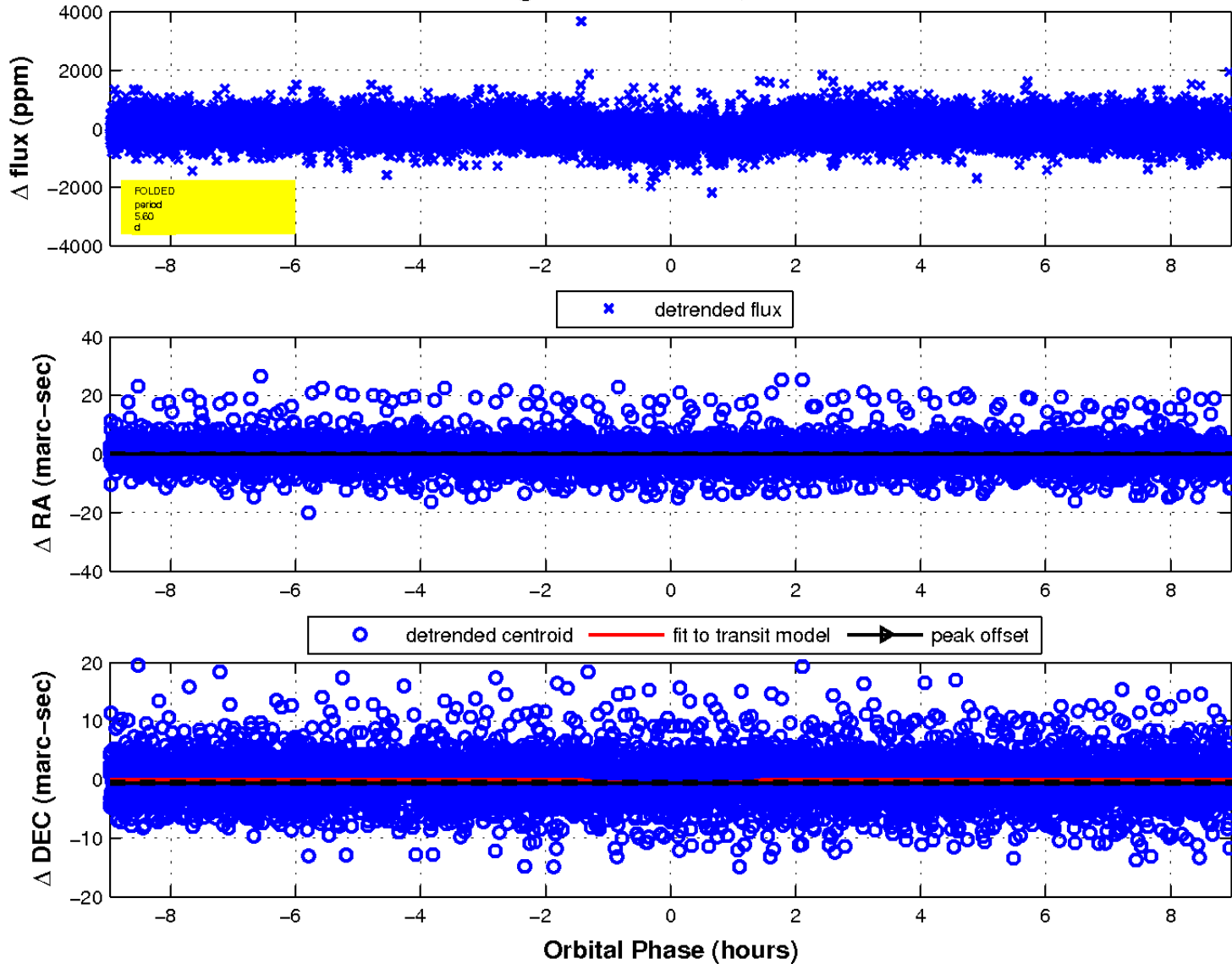
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

