

KIC 006939291

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})
006939291-01	OBS	No	0.914608	132.384140	29.1	3.600	10.5	11.2	4.04	7358	2.53	77921.90

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006939291-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED

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

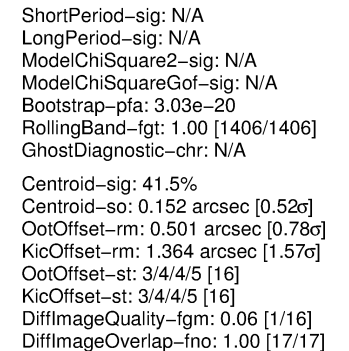
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

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

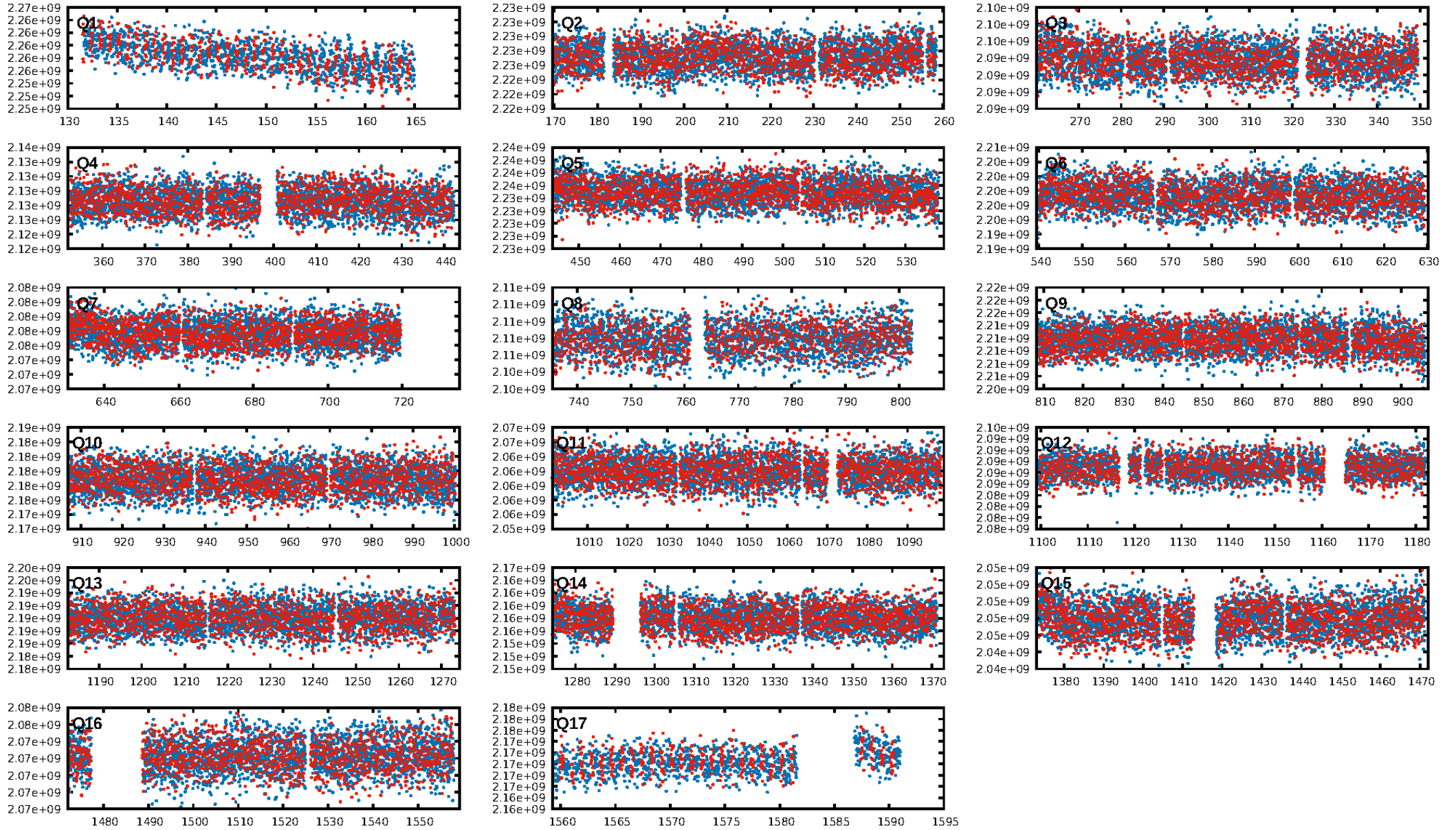
Ephemeris Match Information For 006939291-01

No Significant Match Found

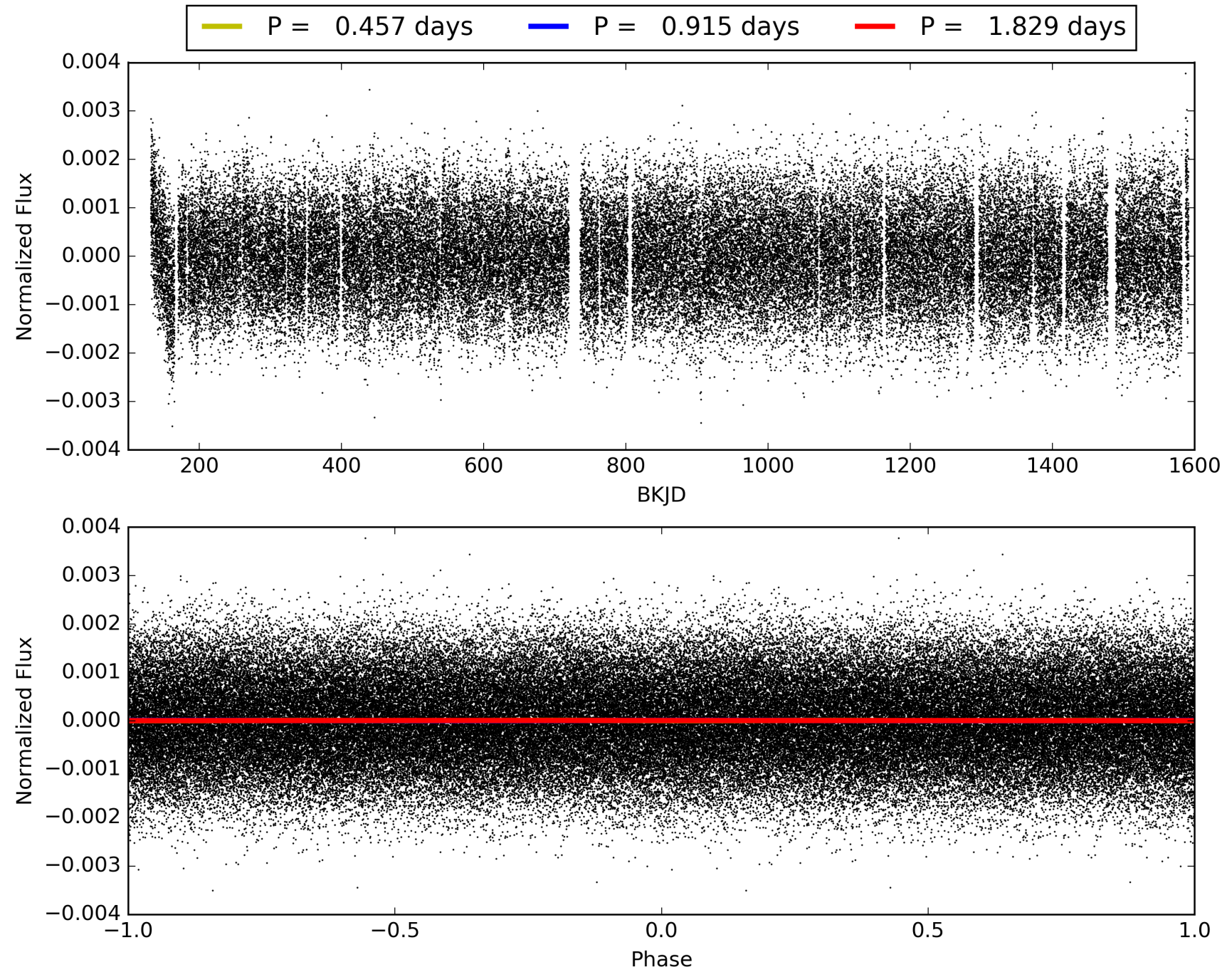
KIC: 6939291 Candidate: 1 of 1 Period: 0.915 d



TCE 006939291-01, PDC Light Curves

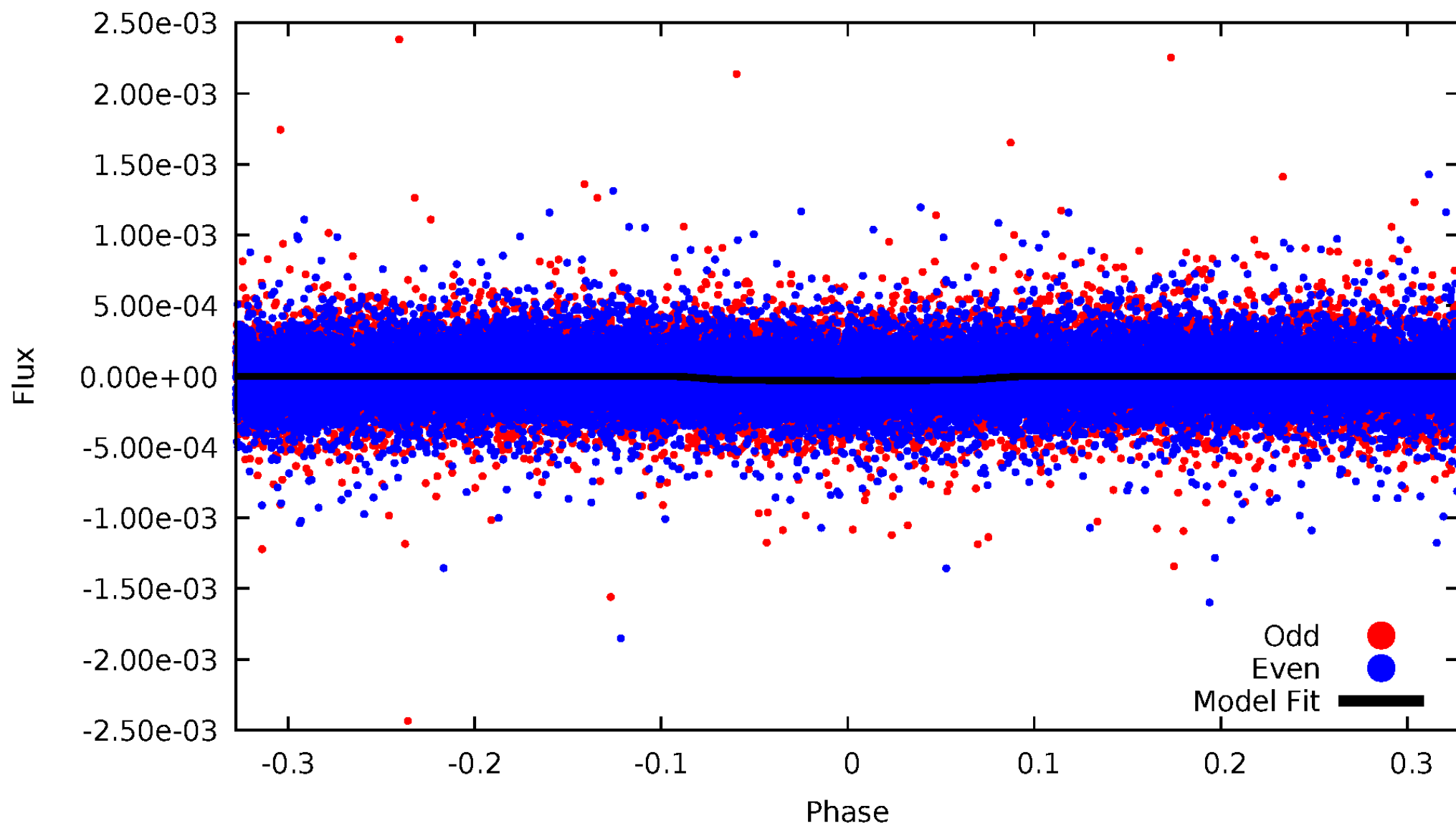


TCE 006939291-01



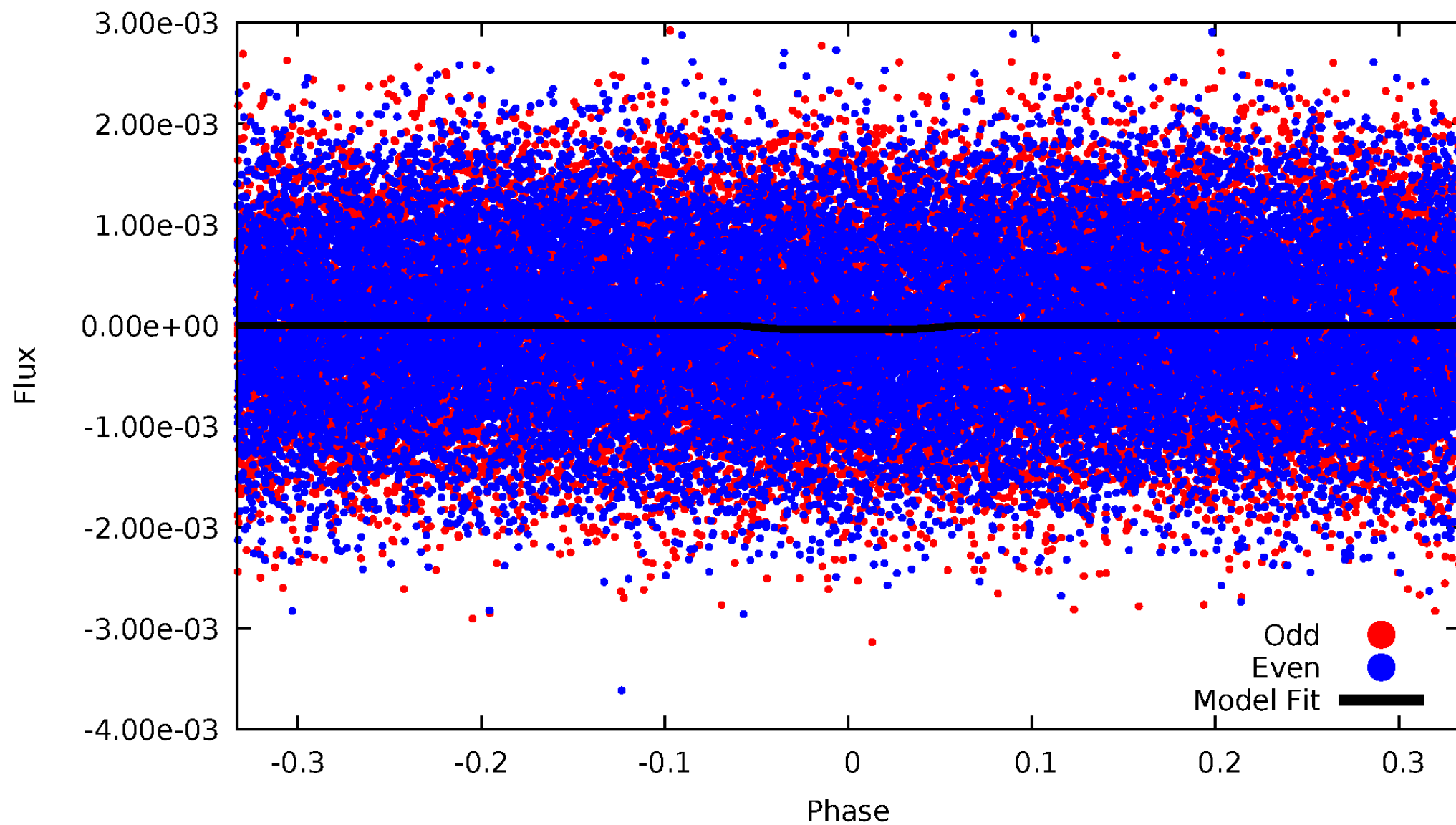
DV Odd/Even

TCE 006939291-01



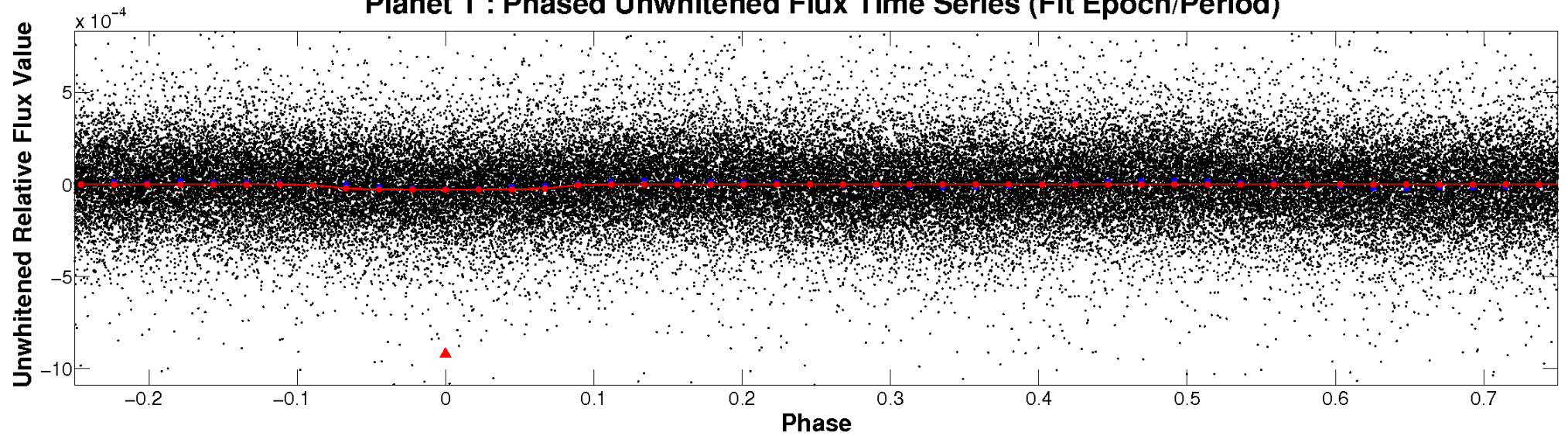
ALT Odd/Even

TCE 006939291-01

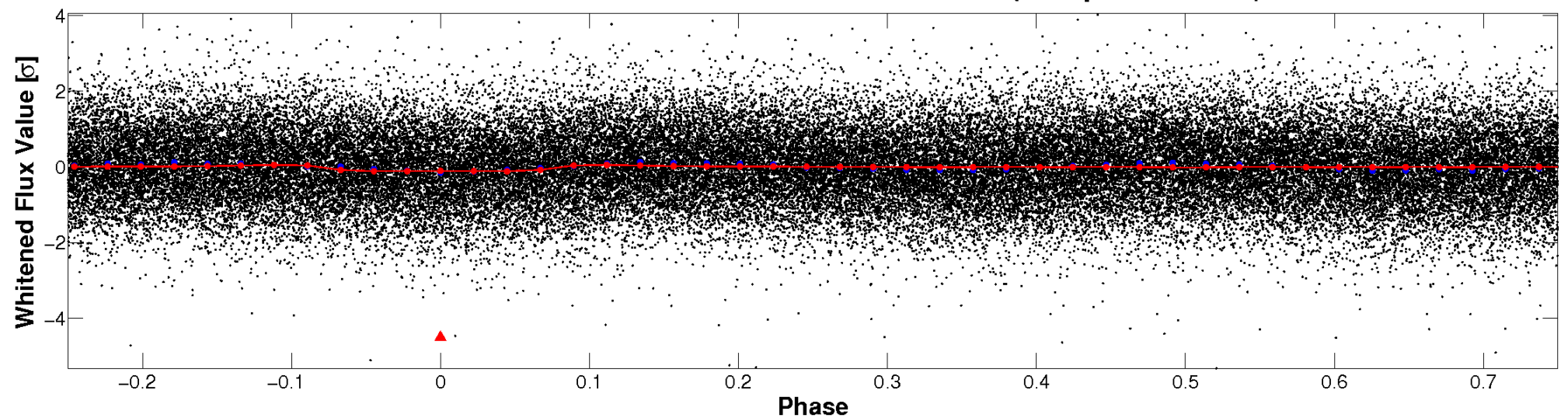


Non-Whitened Vs. Whitened Light Curve

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

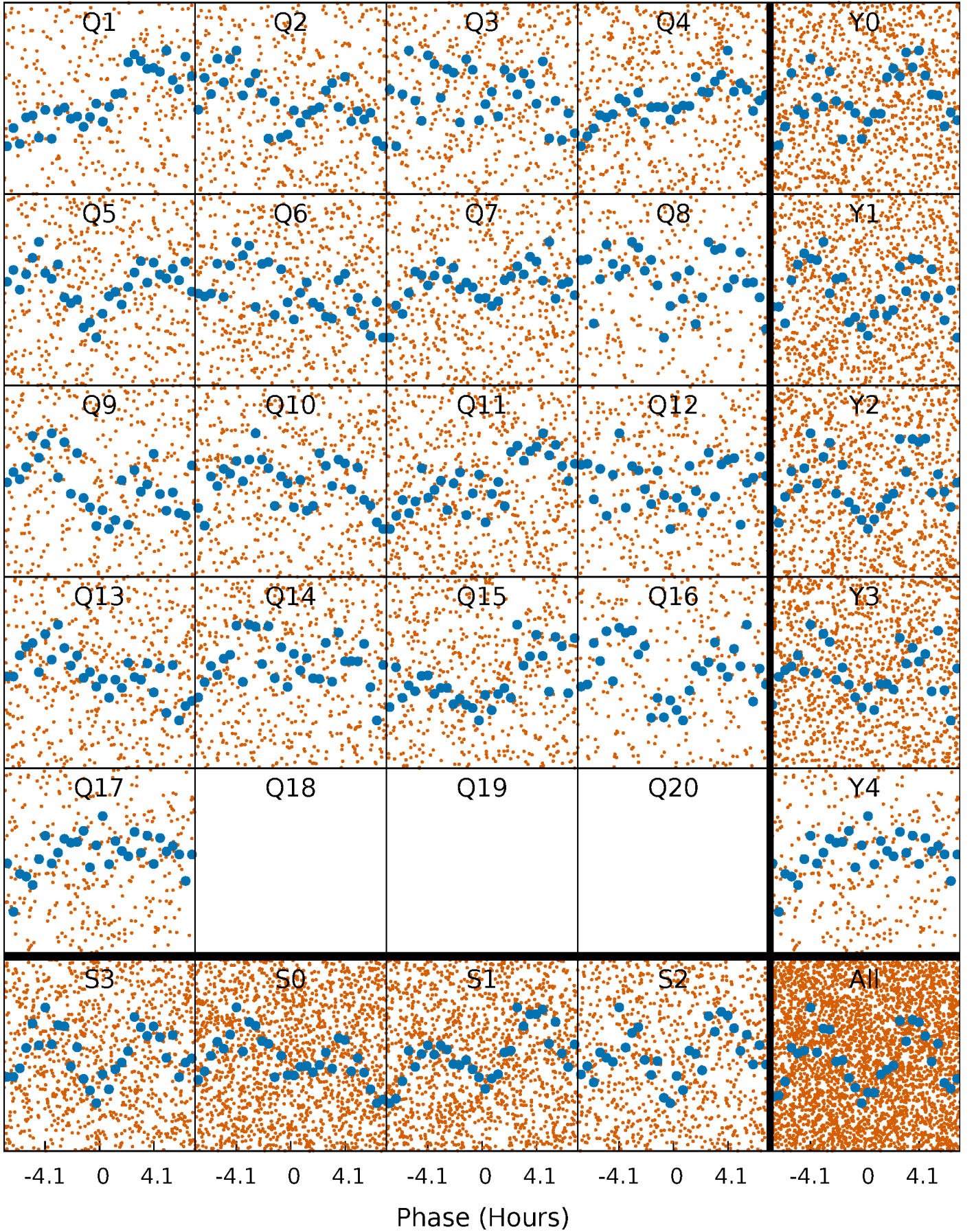


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



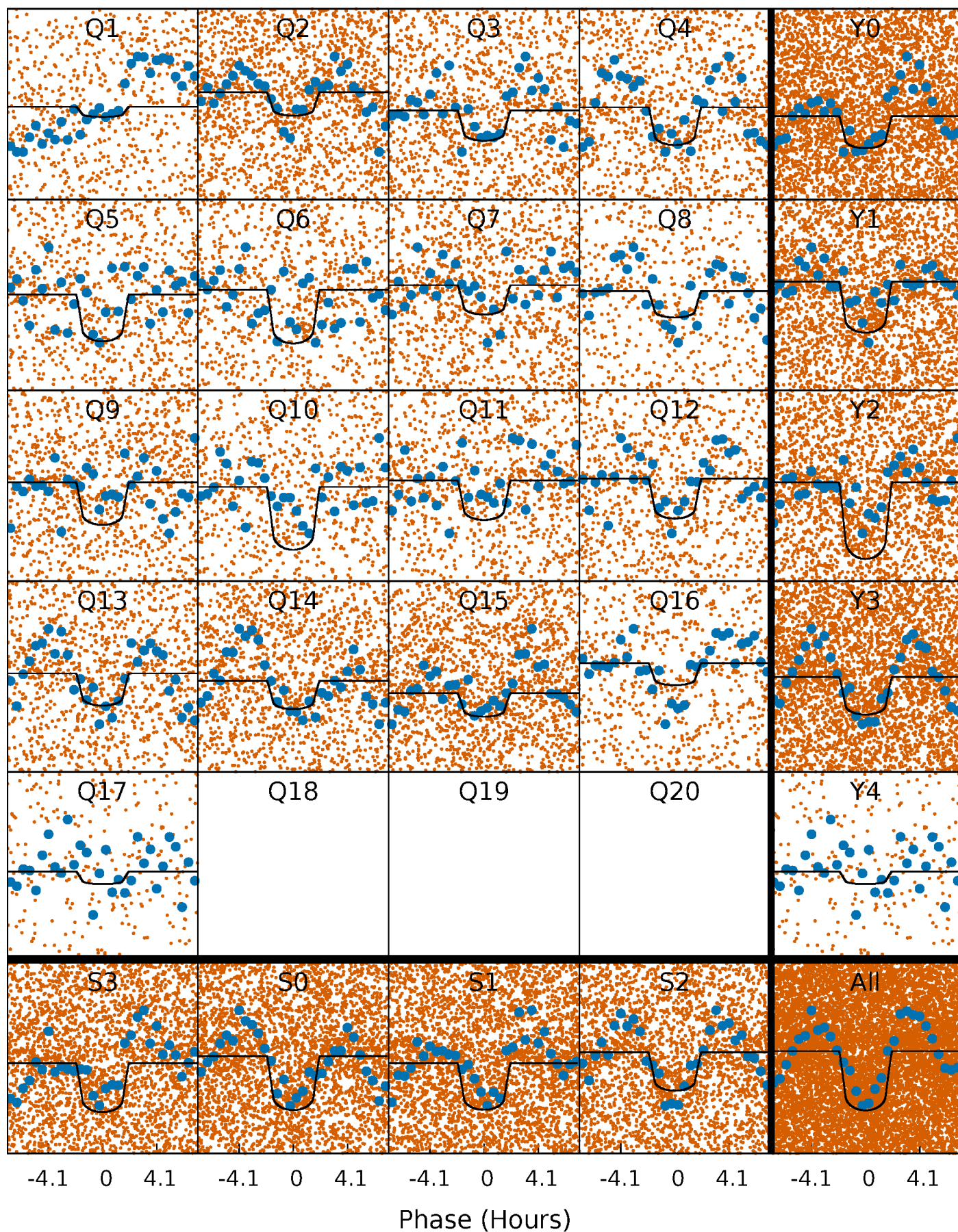
PDC Quarter-Phased Transit Curves

TCE 006939291-01 P= 0.914608 Days $T_0=132.384140$ (BKJD)



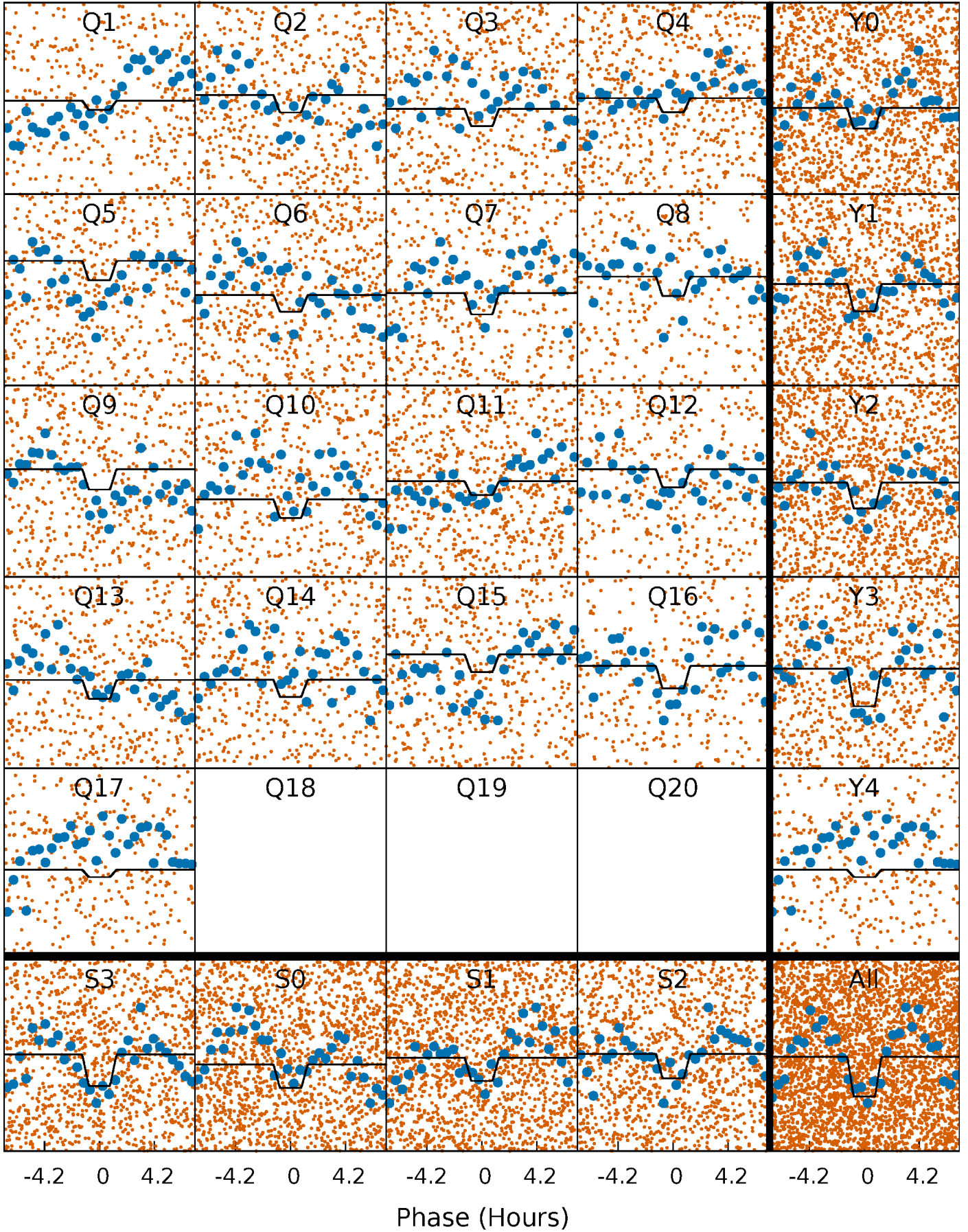
DV Quarter-Phased Transit Curves

TCE 006939291-01 P= 0.914608 Days $T_0=132.384140$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

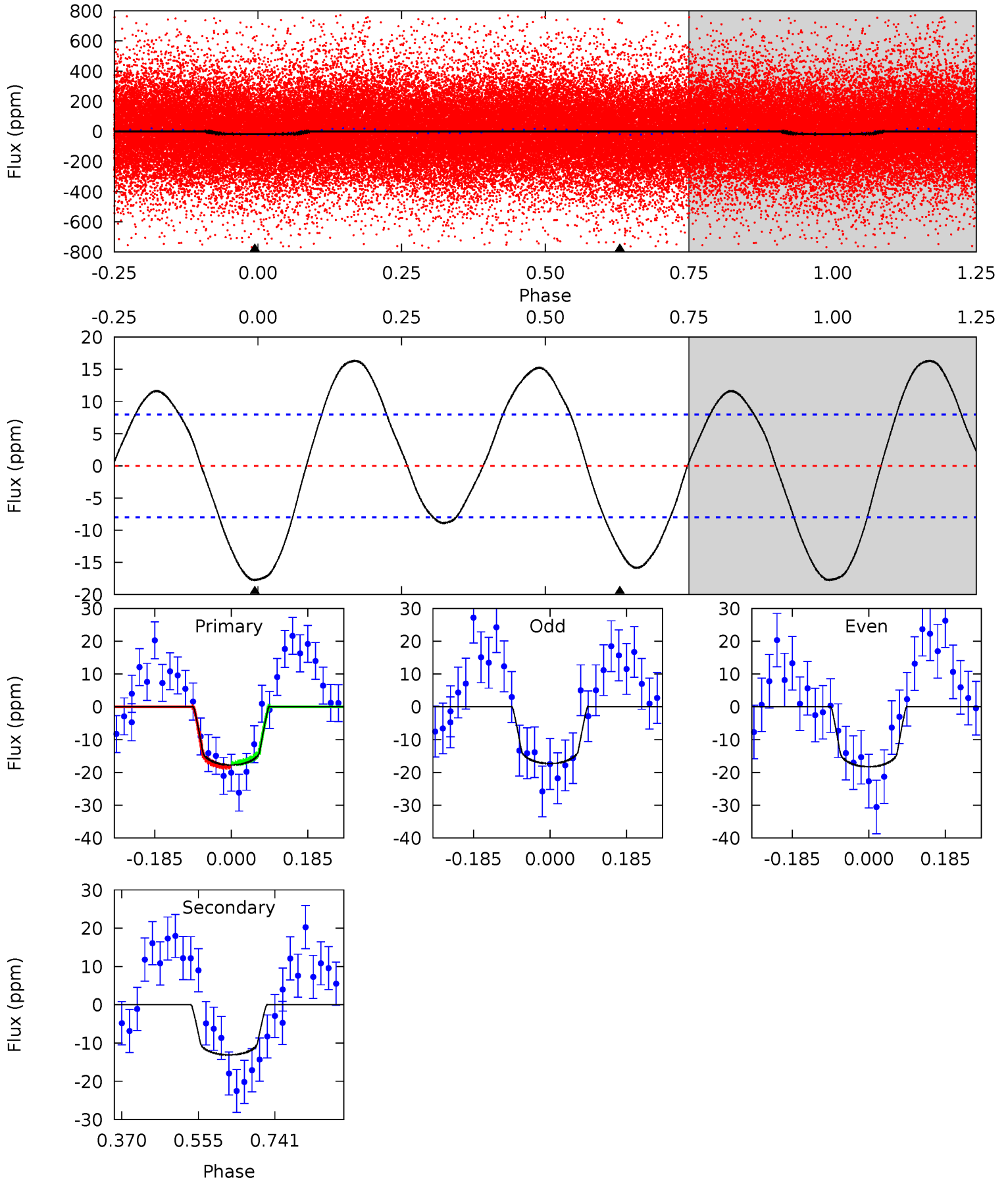
TCE 006939291-01 P= 0.914614 Days $T_0=132.383727$ (BKJD)



DV Model-Shift Uniqueness Test

006939291-01, P = 0.914608 Days, E = 131.469532 Days

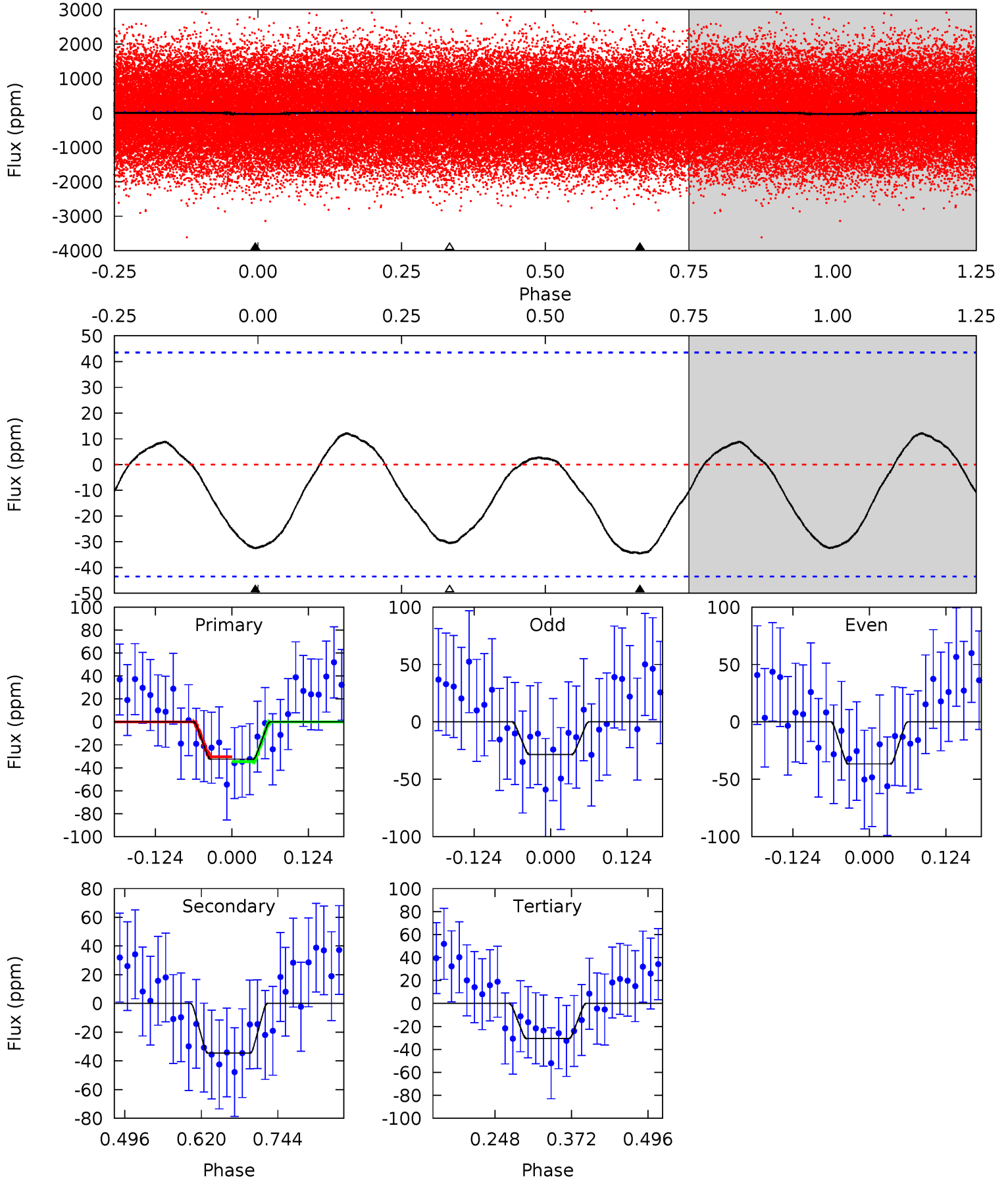
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.87	7.28	0	0	4.43	1.33	4.26	9.87	9.87	7.28	7.28	0.27	1.11	0.48	0.32



Alt Model-Shift Uniqueness Test

006939291-01, P = 0.914614 Days, E = 131.469113 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.37	3.59	3.17	0	4.52	1.54	1.41	0.20	3.37	0.42	3.59	0.42	0.84	0.26	0.22



Stellar Parameters For KIC 006939291

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7358^{+228}_{-304}	$3.538^{+0.580}_{-0.061}$	$-0.080^{+0.250}_{-0.300}$	$4.037^{+0.400}_{-2.266}$	$2.054^{+0.110}_{-0.585}$	$0.044^{+0.322}_{-0.010}$
	+3%/-4%	+16%/-2%	+312%/-375%	+10%/-56%	+5%/-28%	+733%/-22%
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 006939291-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-13 ± 2	$2.18^{+0.84}_{-0.79}$	5727^{+405}_{-836}	5185^{+1345}_{-1105}	$0.803^{+1.111}_{-0.378}$
Alt.	-35 ± 10	$2.29^{+0.90}_{-0.82}$	5715^{+407}_{-759}	6906^{+1813}_{-1231}	$1.904^{+2.791}_{-0.961}$

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

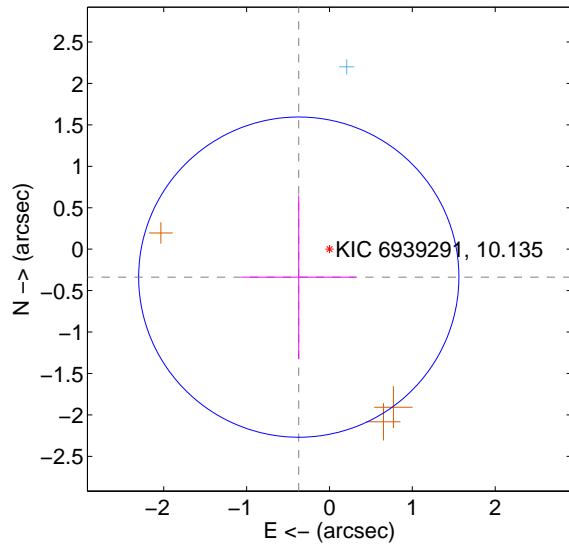
Supplemental centroid analysis for 006939291-01. **Kepler magnitude: 10.13.** Transit SNR 11.19

There are 1 quarters with good PRF difference image offsets

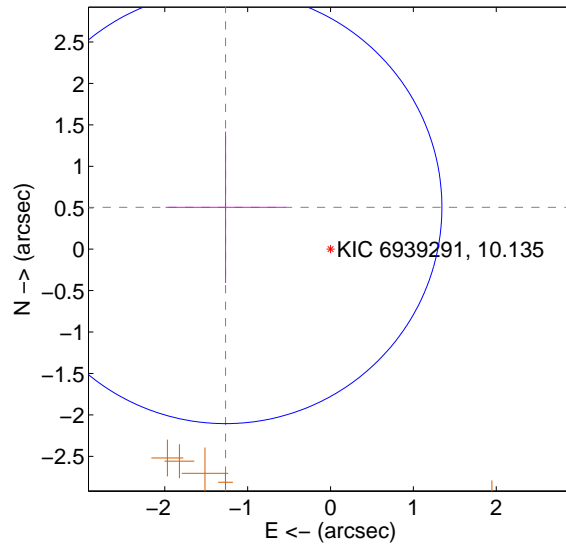
The direct PRF centroid is offset from the target star catalog position by about 1.44 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.501 ± 0.644	0.78	0.370 ± 0.688	-0.337 ± 0.987
PRF-fit source offset from KIC position	1.364 ± 0.870	1.57	1.267 ± 0.724	0.506 ± 0.914
photometric centroid source offset	0.15 ± 0.29	0.52	0.08 ± 0.35	0.13 ± 0.26

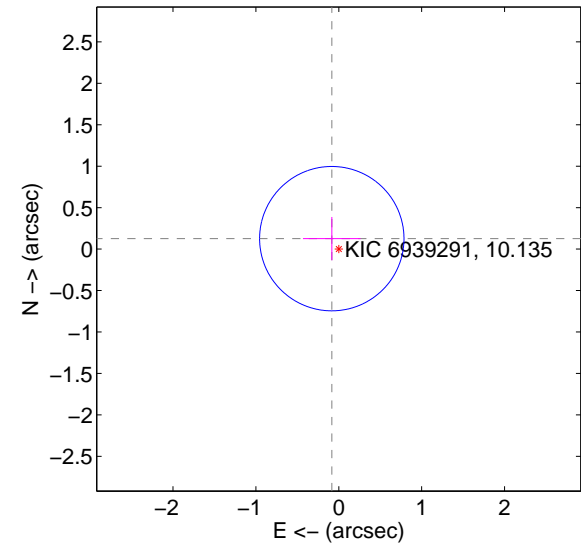
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

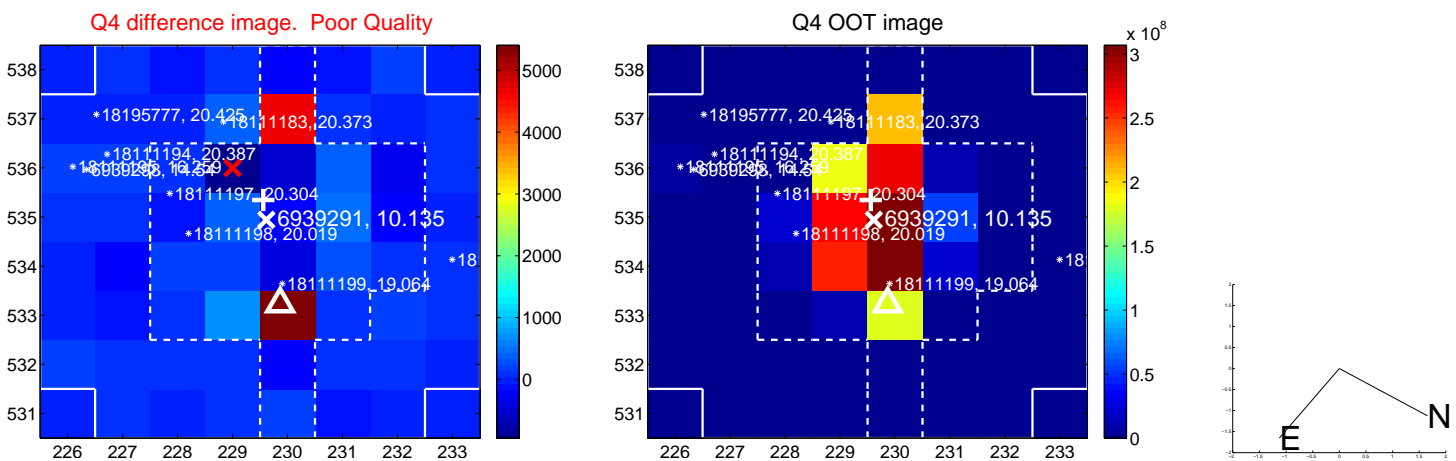
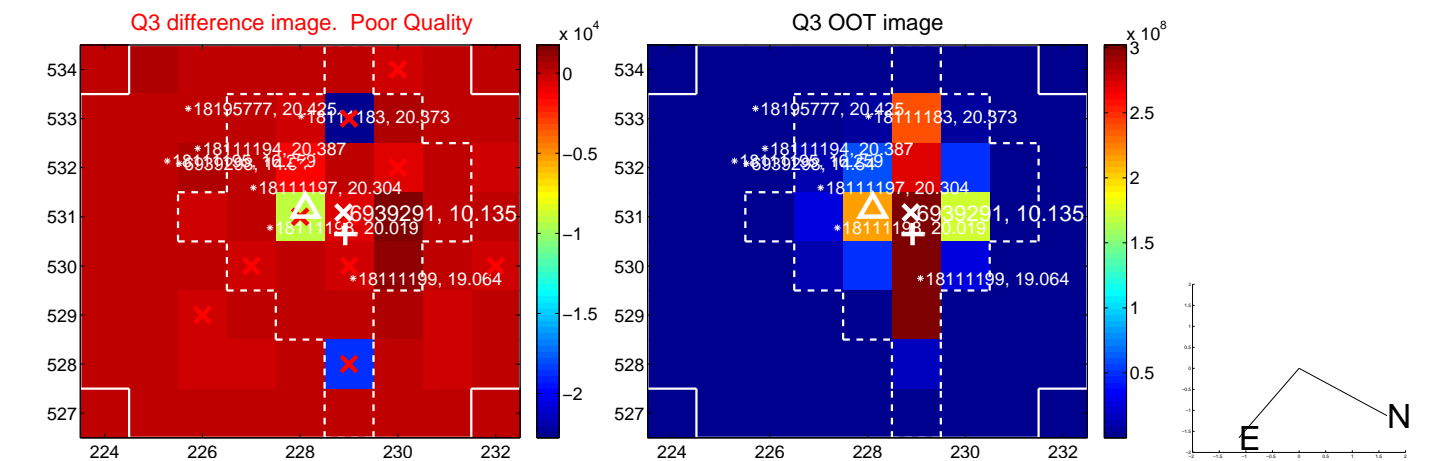
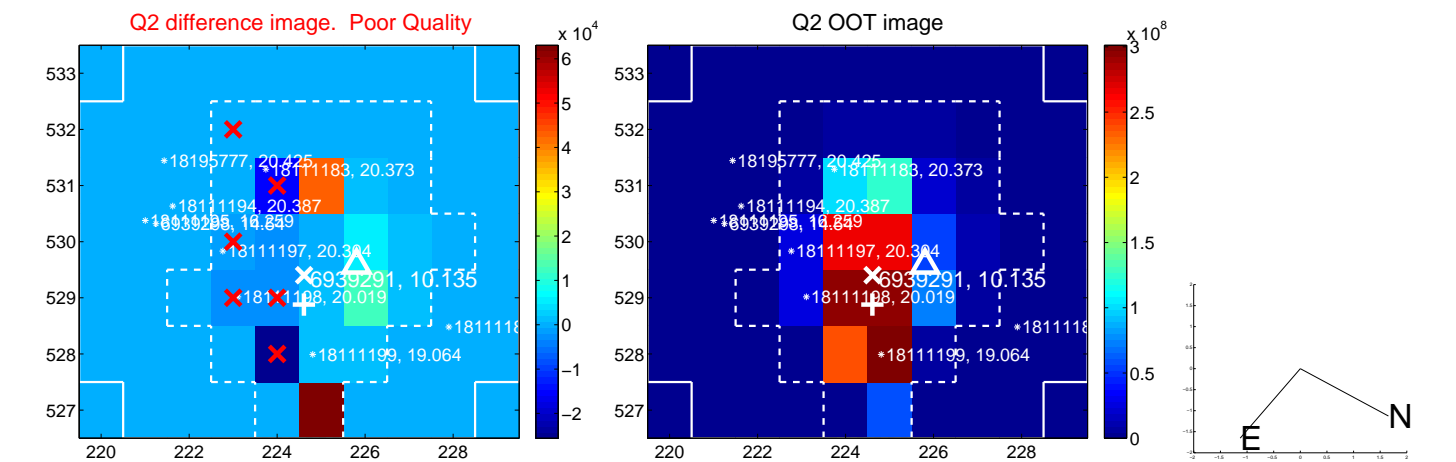
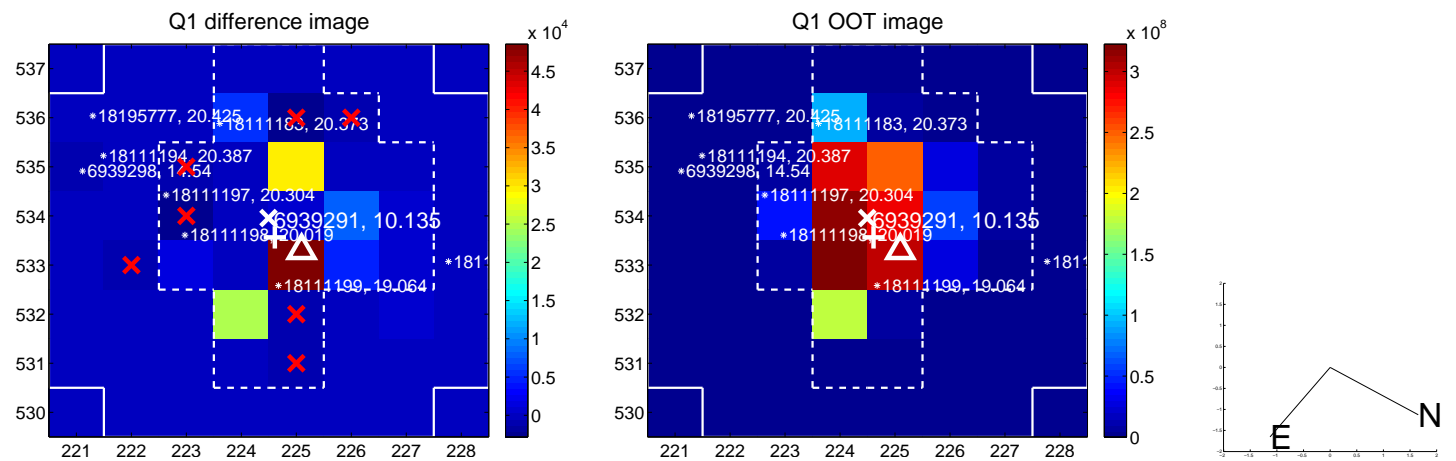


offset from photometric centroids

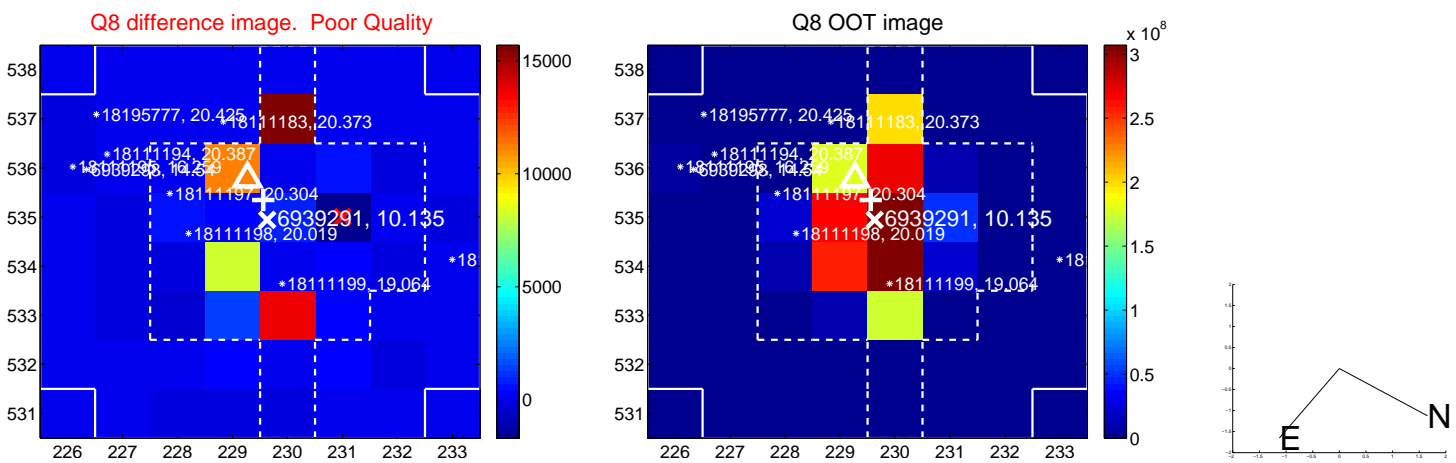
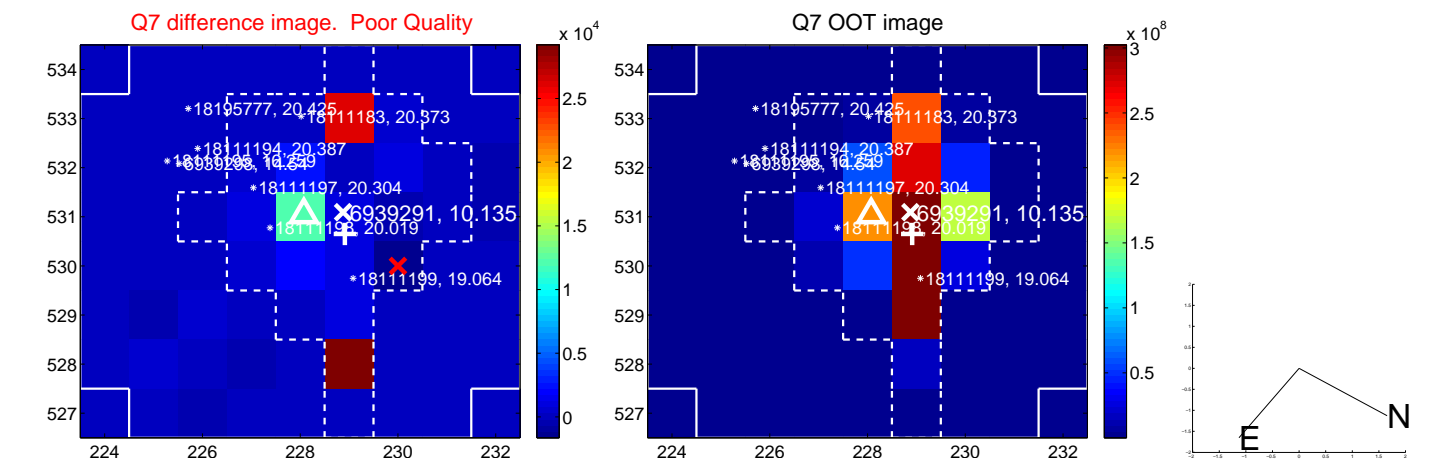
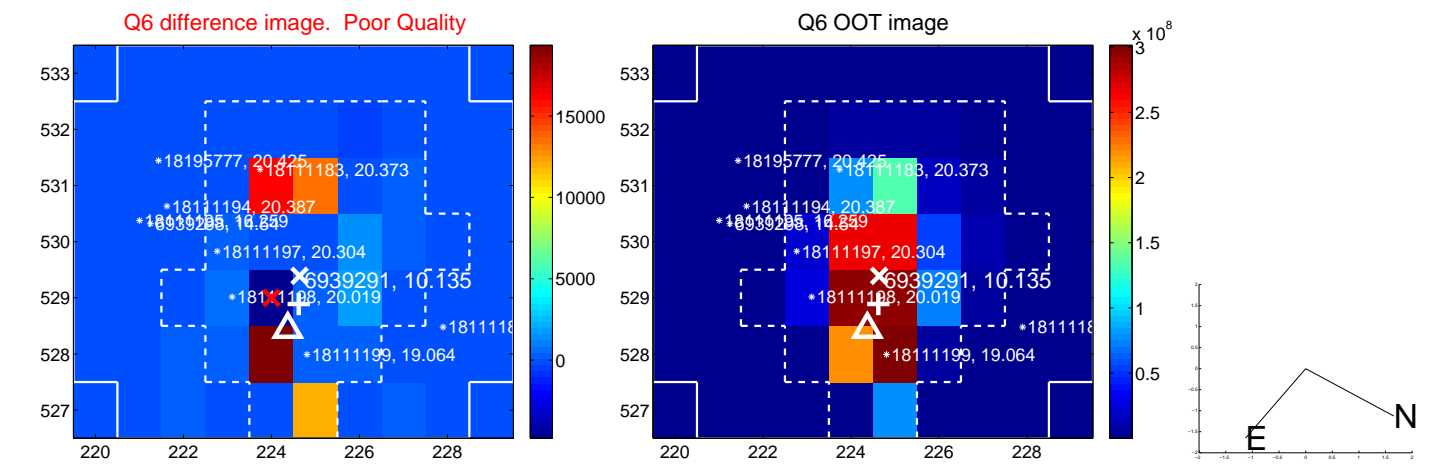
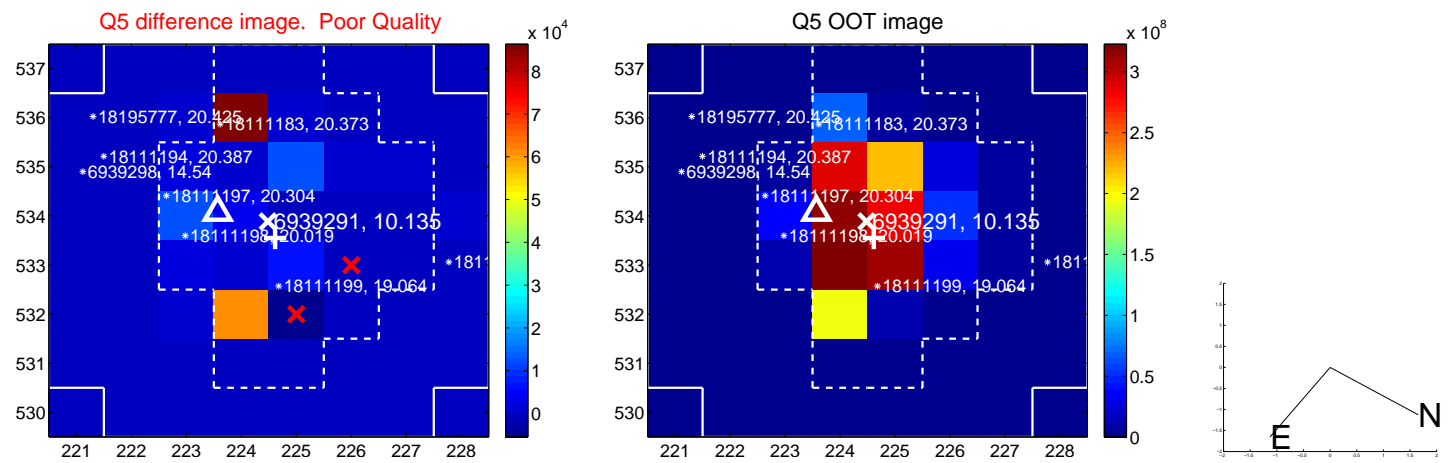


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

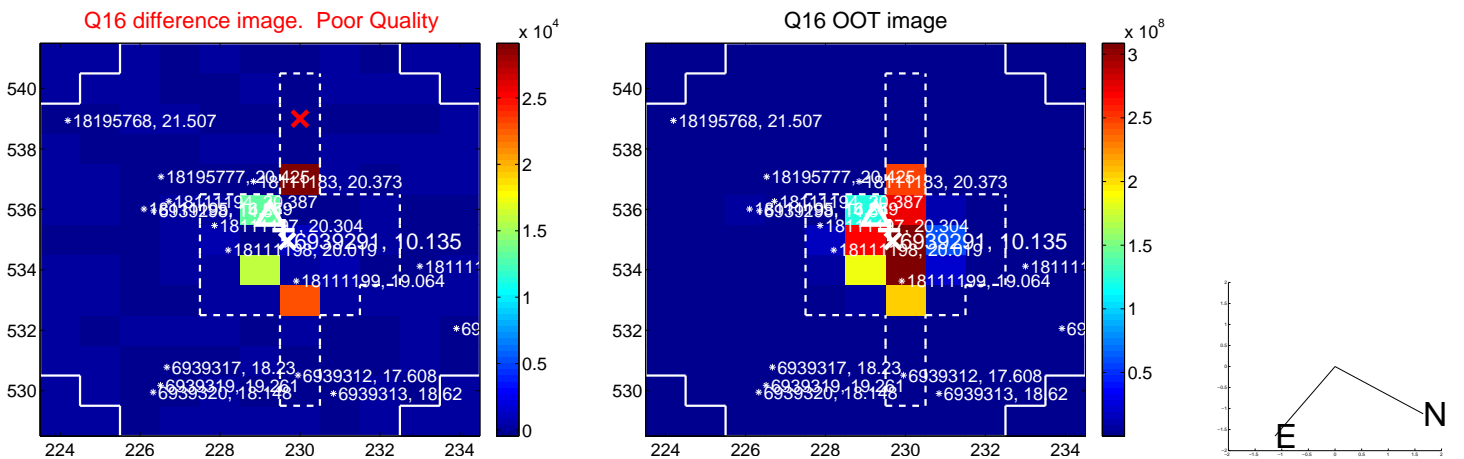
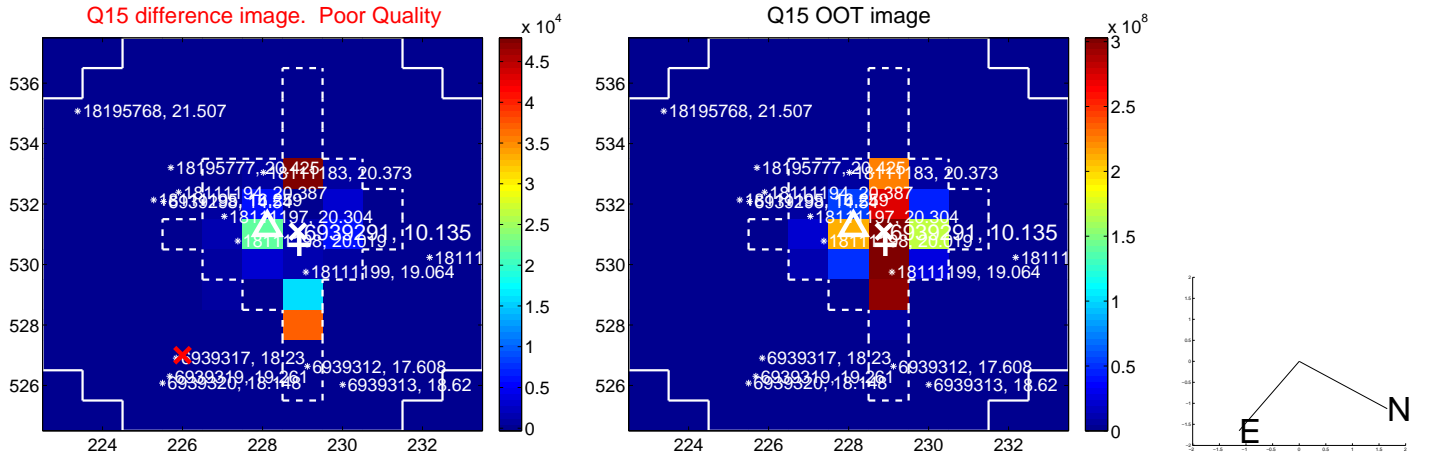
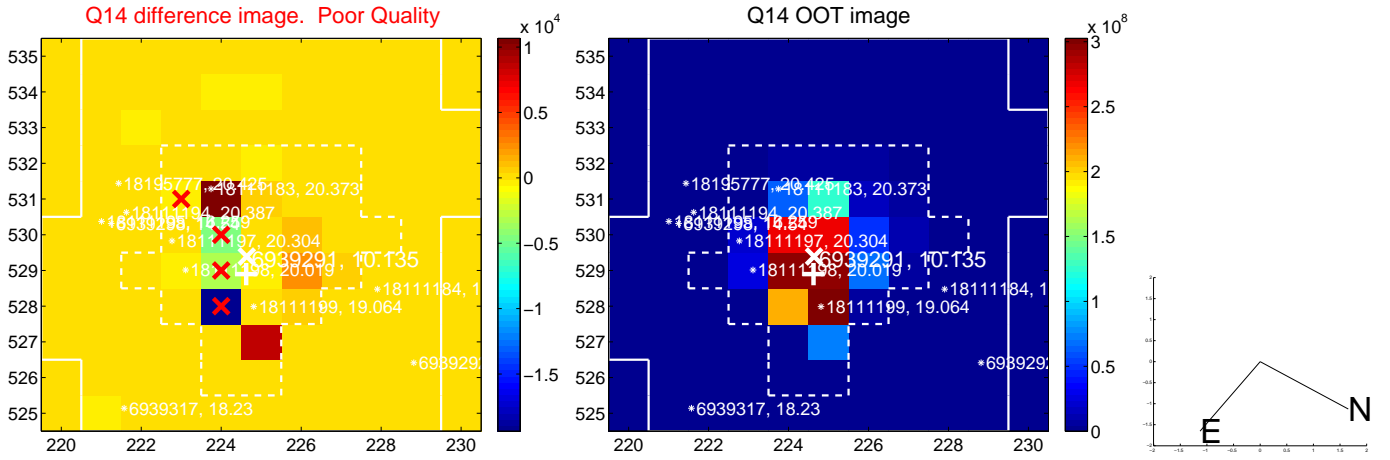
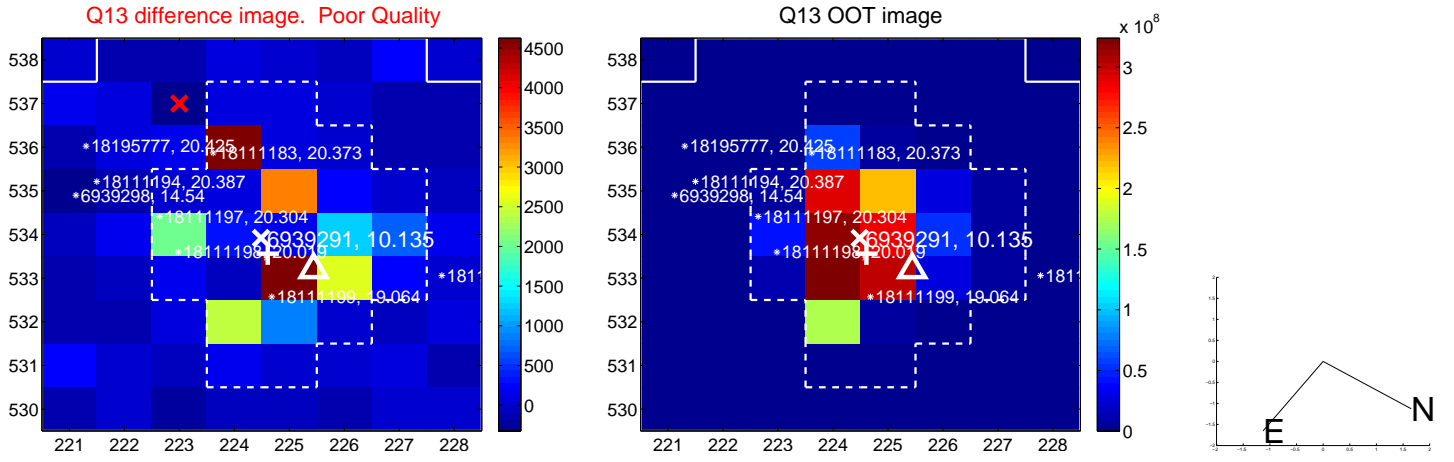
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



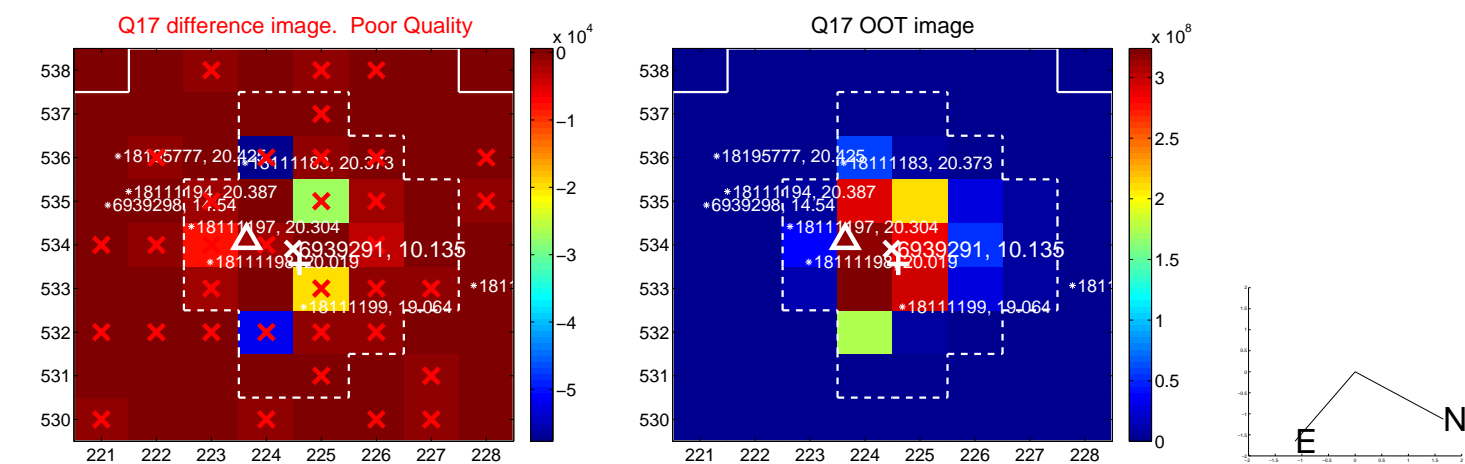
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



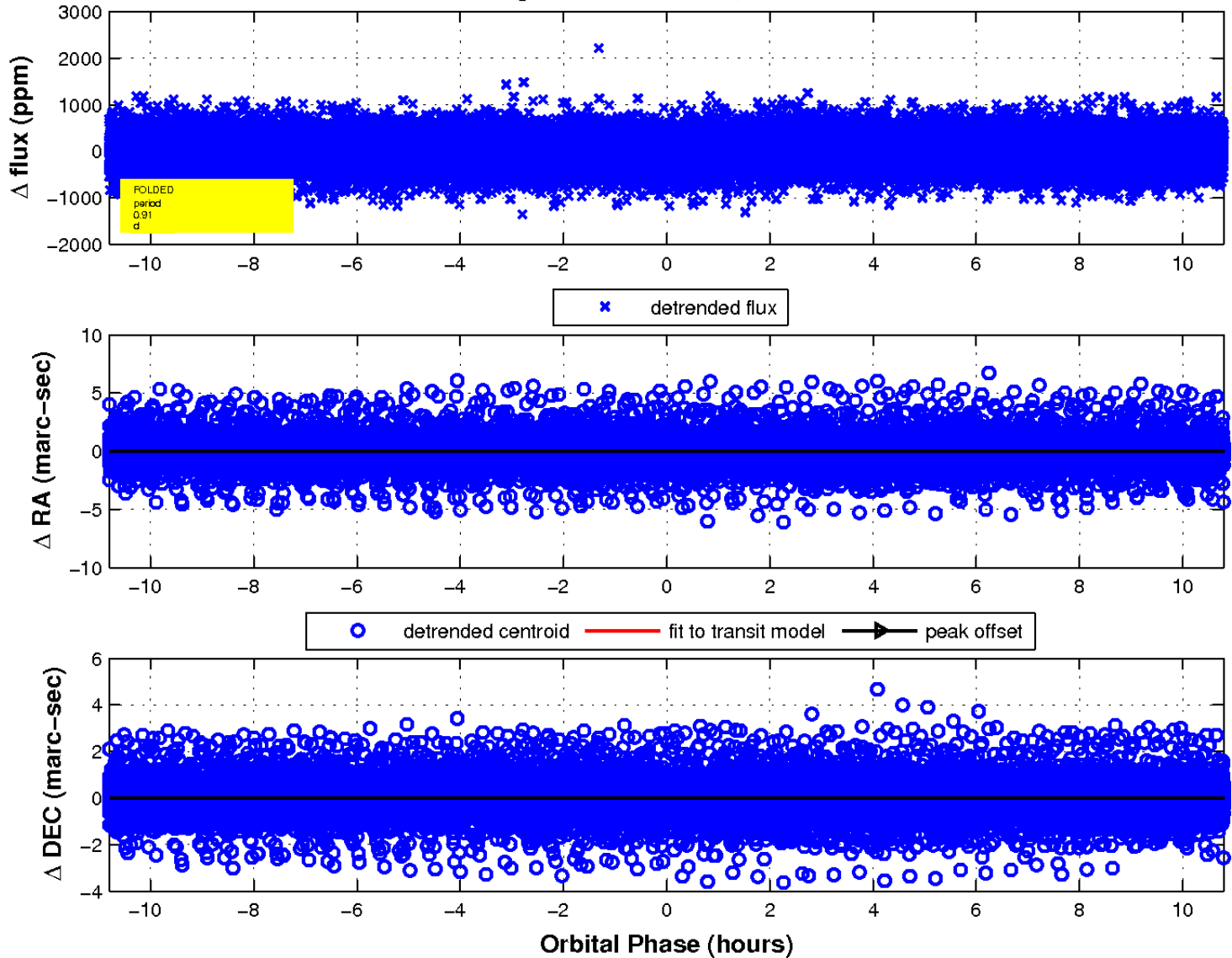
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

