

KIC 009906688

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})
009906688-01	OBS	7976.01	5.825635	136.038386	148.7	3.116	8.3	8.7	0.97	5999	1.38	273.55

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009906688-01	OBS	PC	0.97	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.

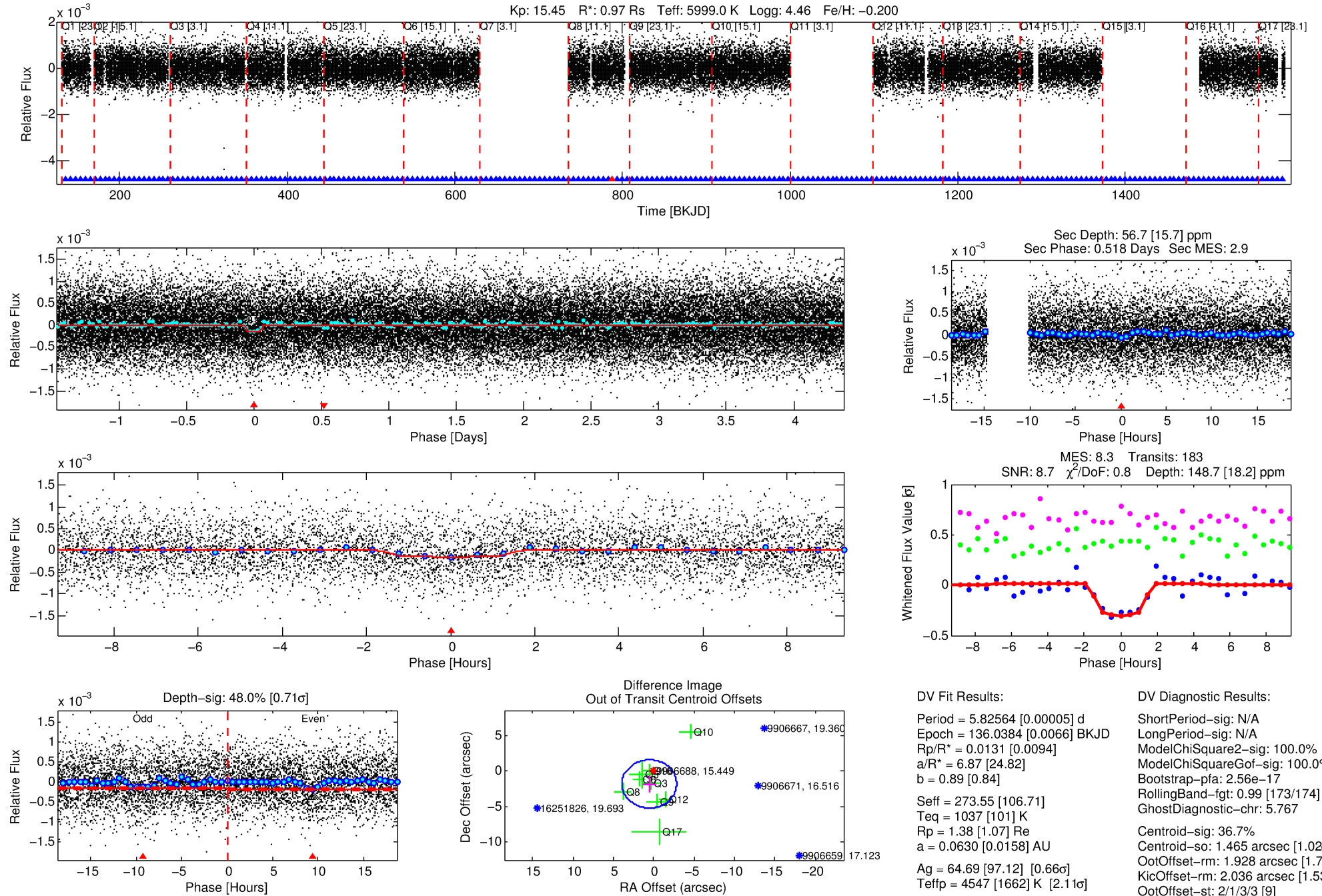
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009906688-01

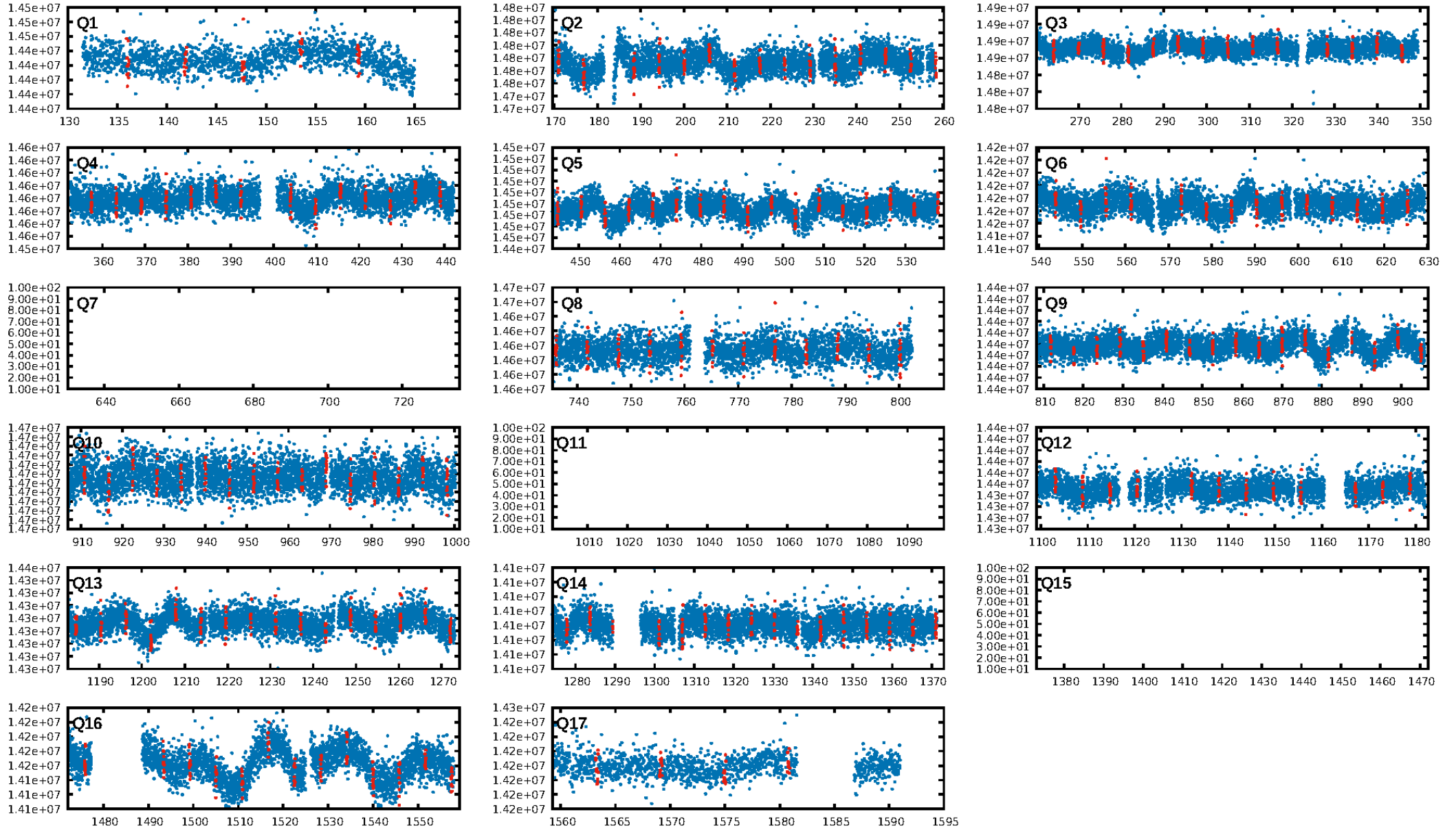
No Significant Match Found

DV One-Page Summary

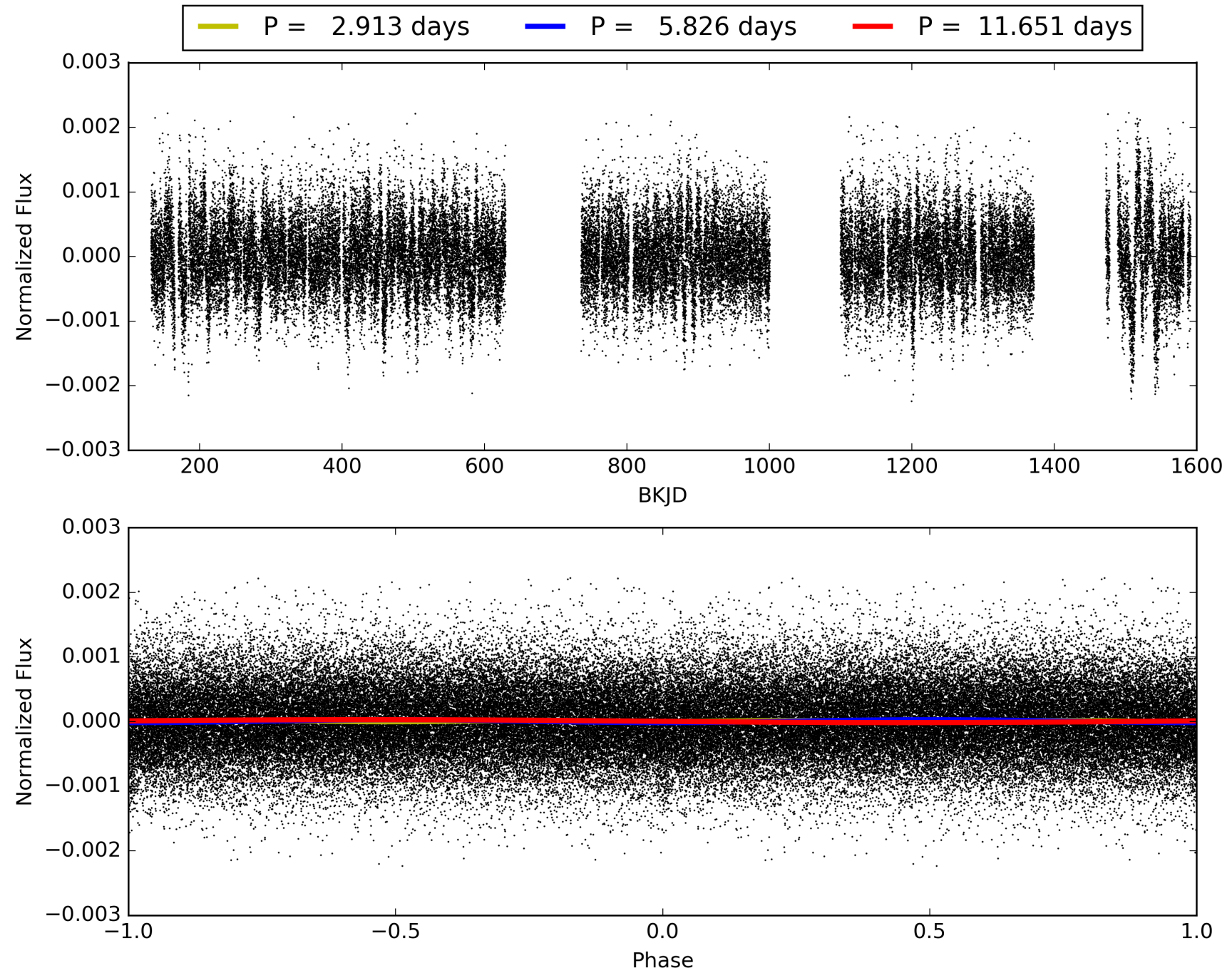
KIC: 9906688 Candidate: 1 of 1 Period: 5.826 d



TCE 009906688-01, PDC Light Curves

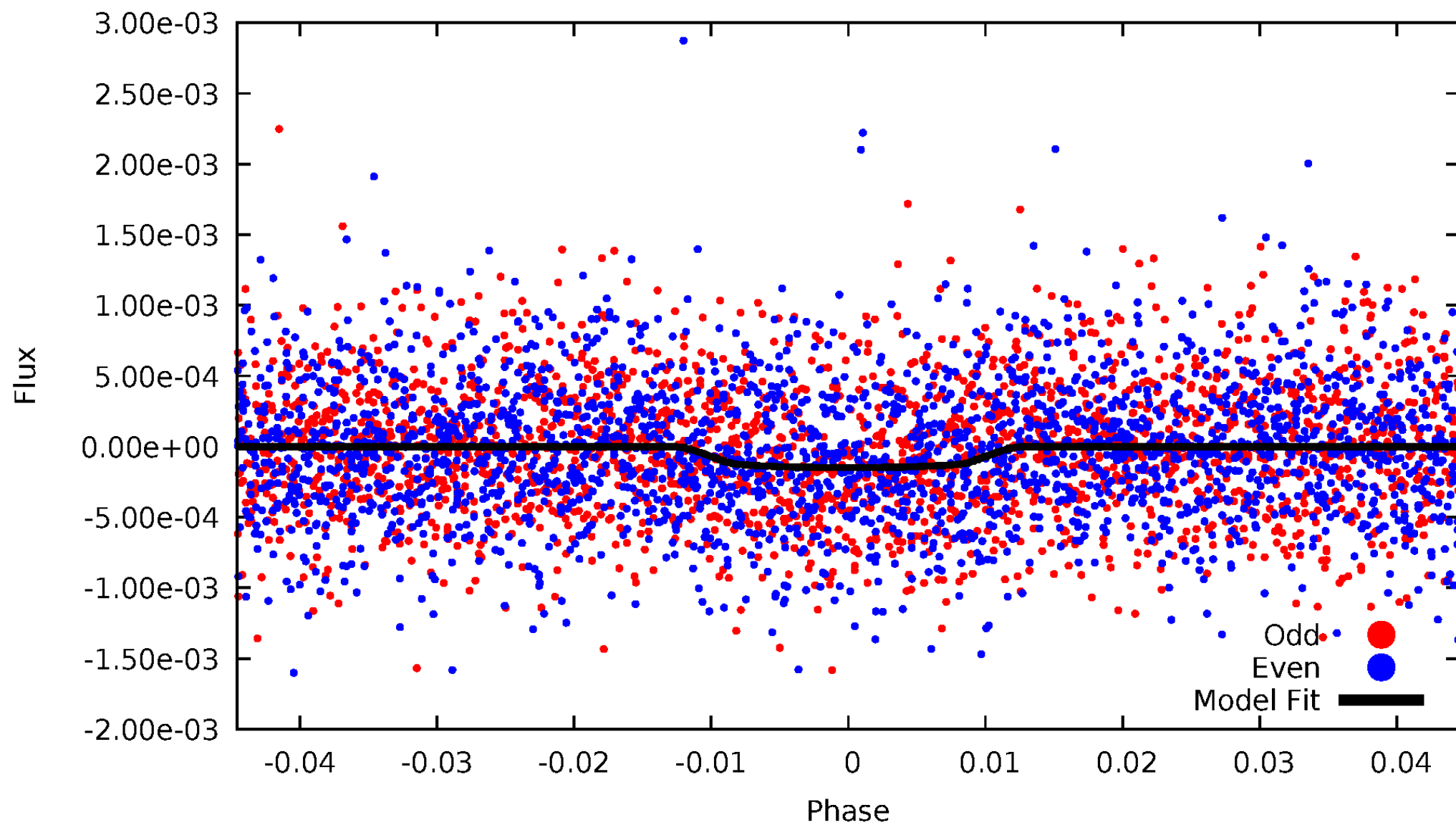


TCE 009906688-01



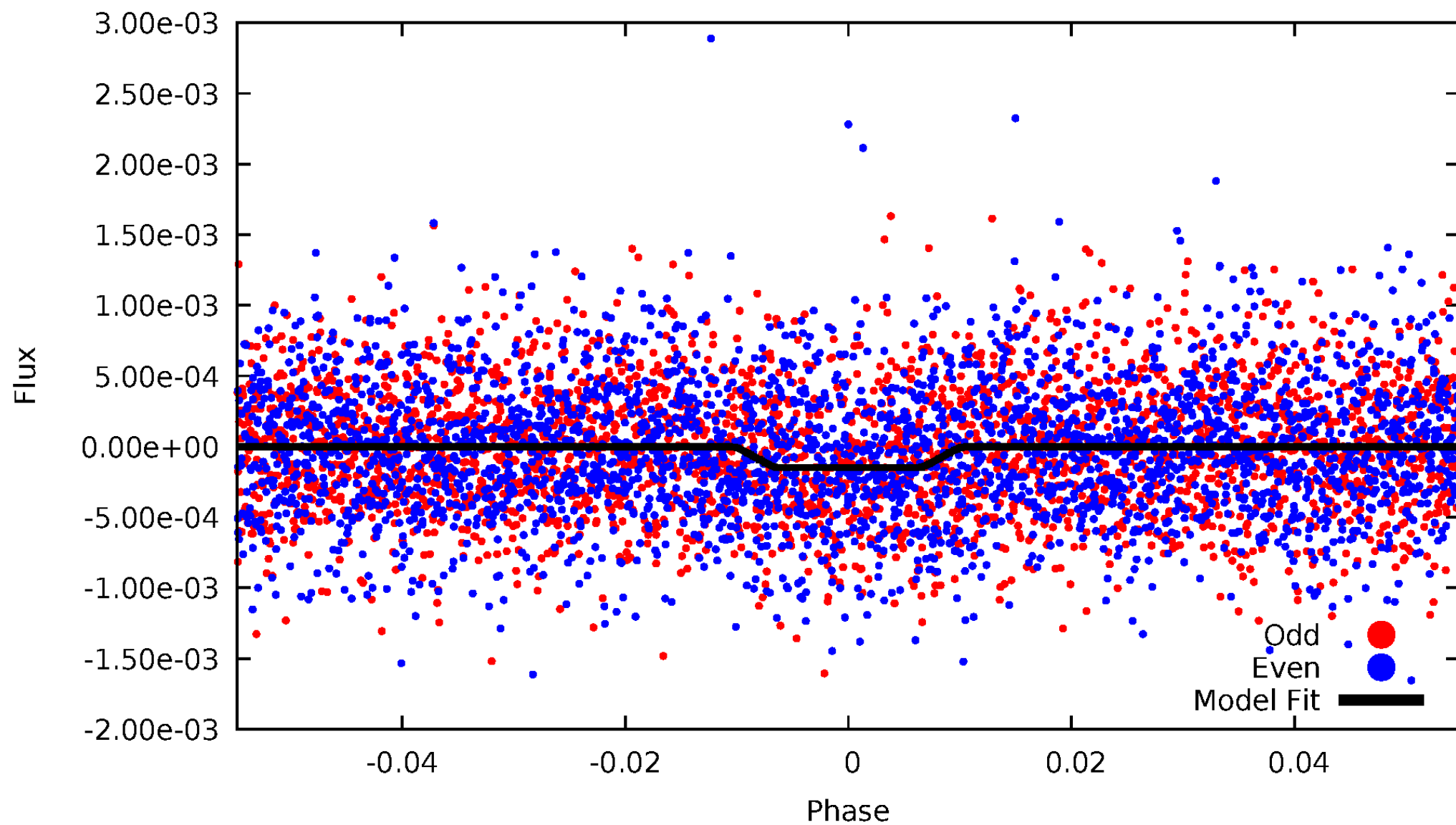
DV Odd/Even

TCE 009906688-01

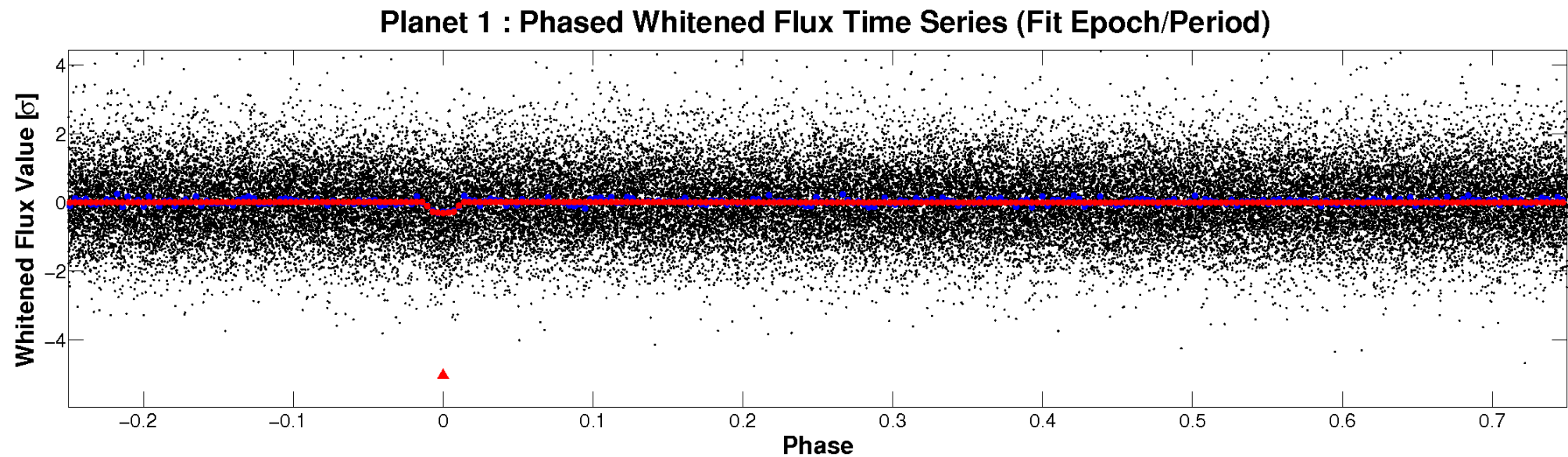
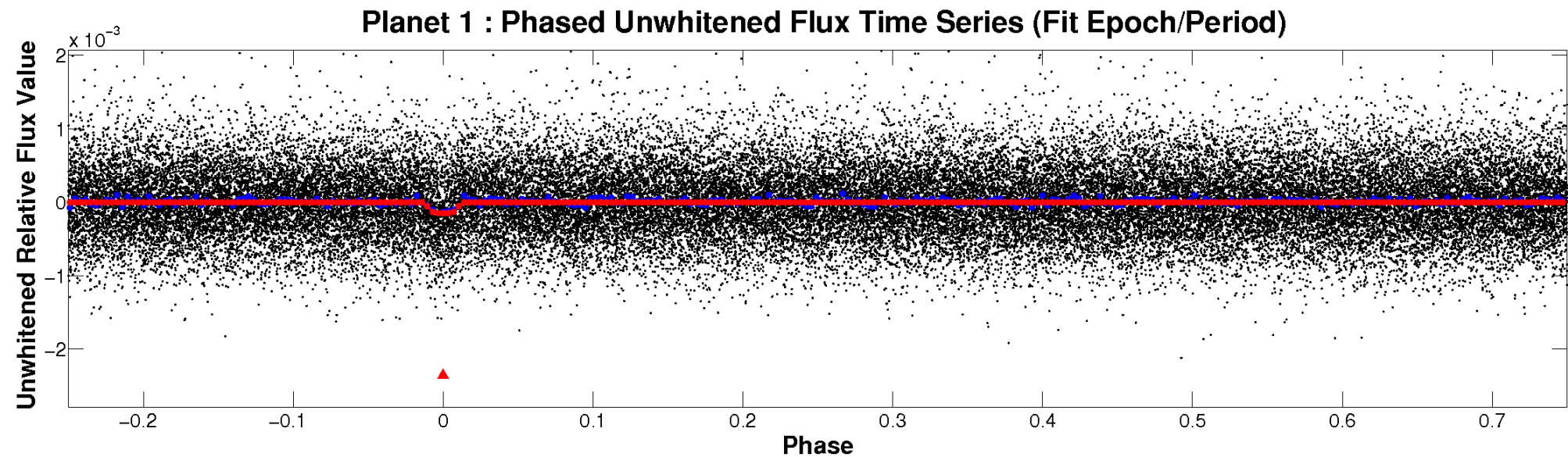


ALT Odd/Even

TCE 009906688-01

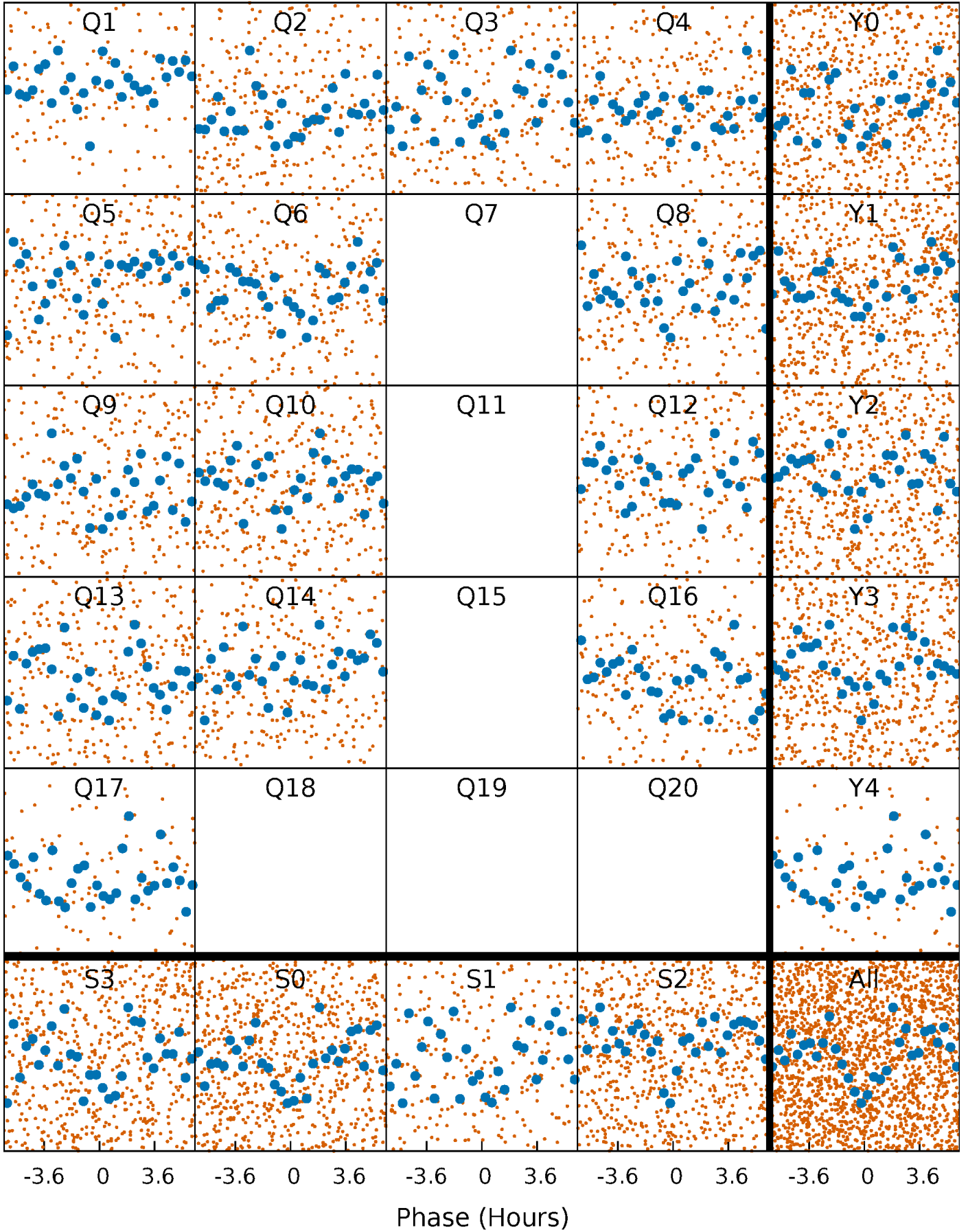


Non-Whitened Vs. Whitened Light Curve



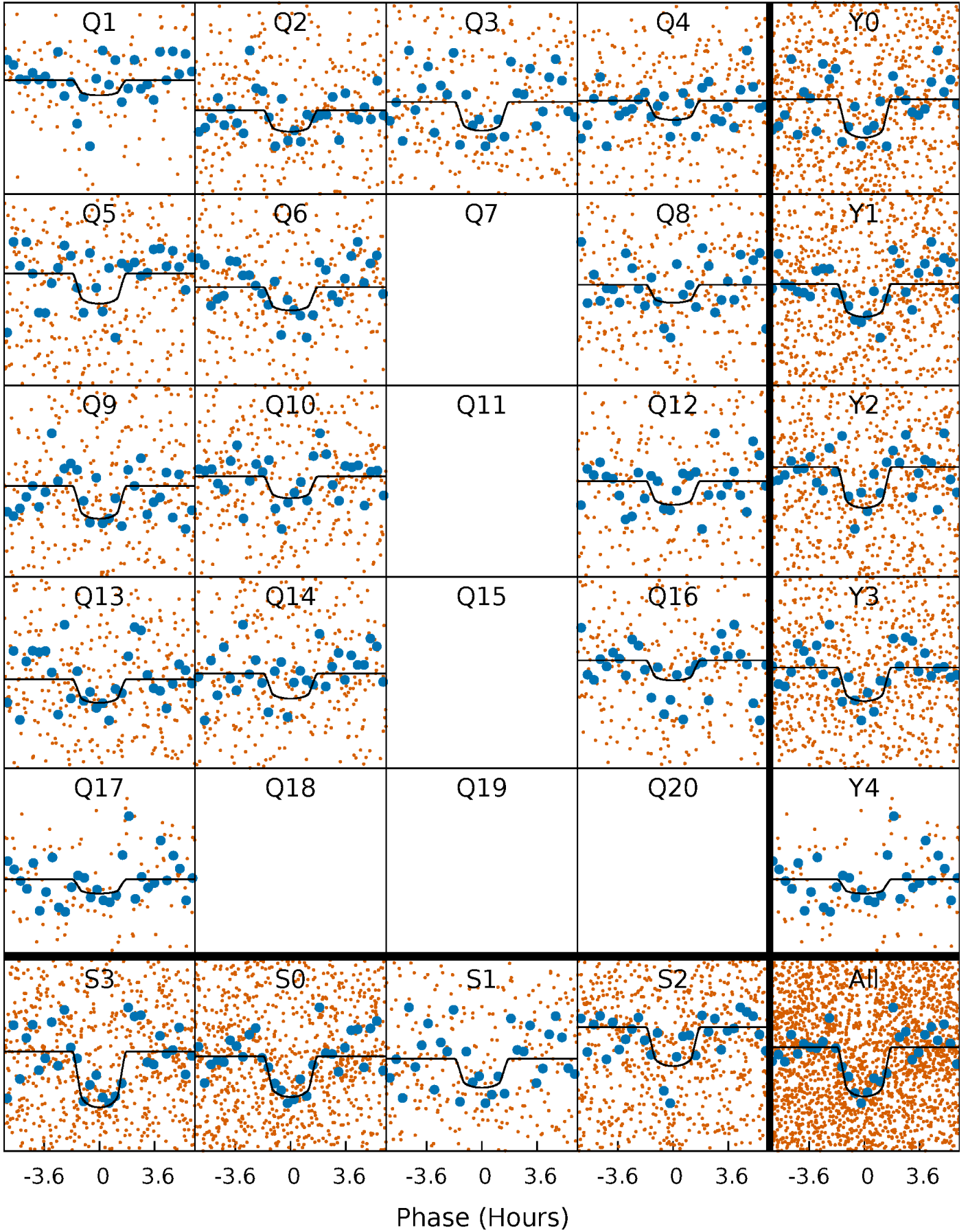
PDC Quarter-Phased Transit Curves

TCE 009906688-01 P= 5.825635 Days $T_0=136.038386$ (BKJD)



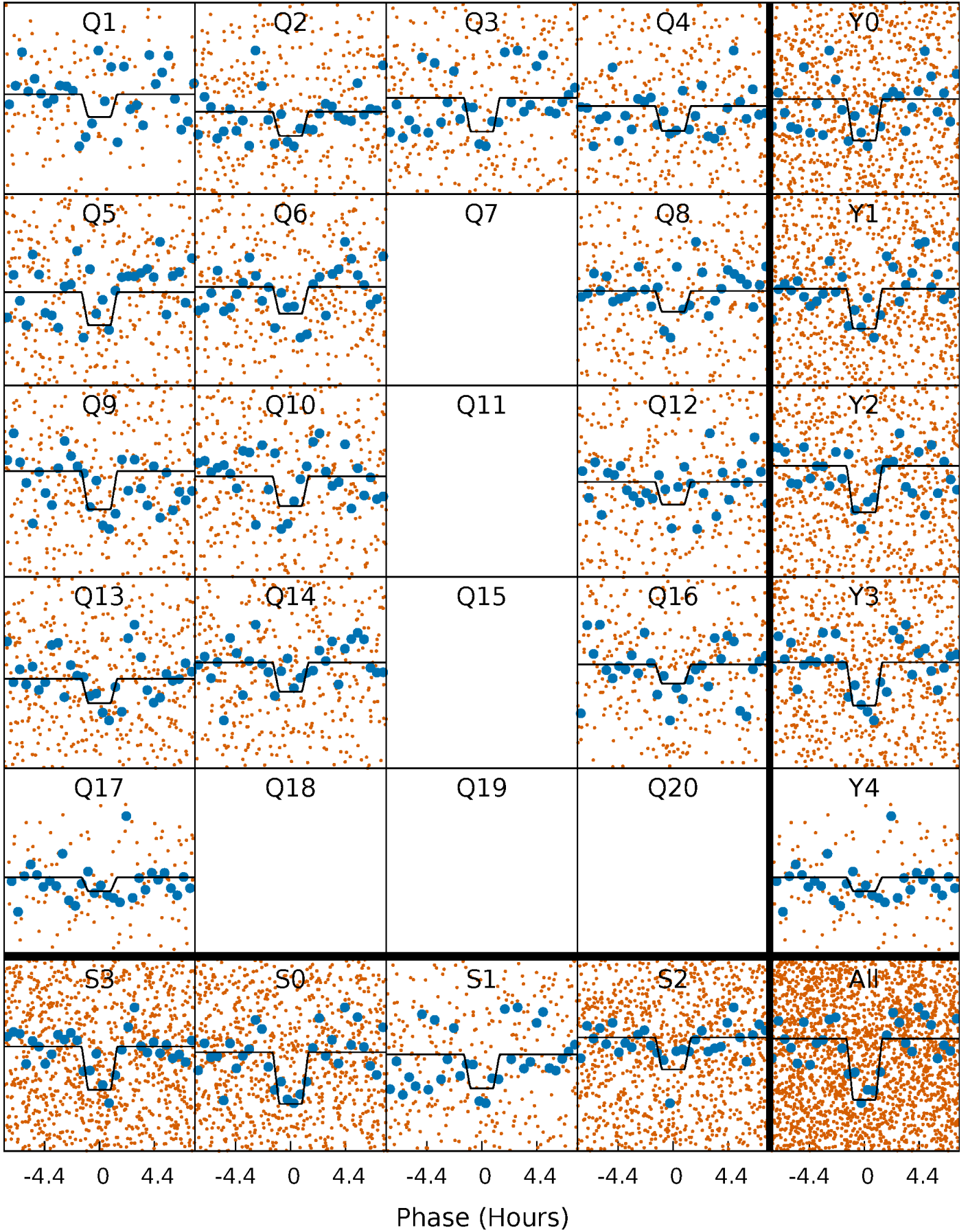
DV Quarter-Phased Transit Curves

TCE 009906688-01 P= 5.825635 Days $T_0=136.038386$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

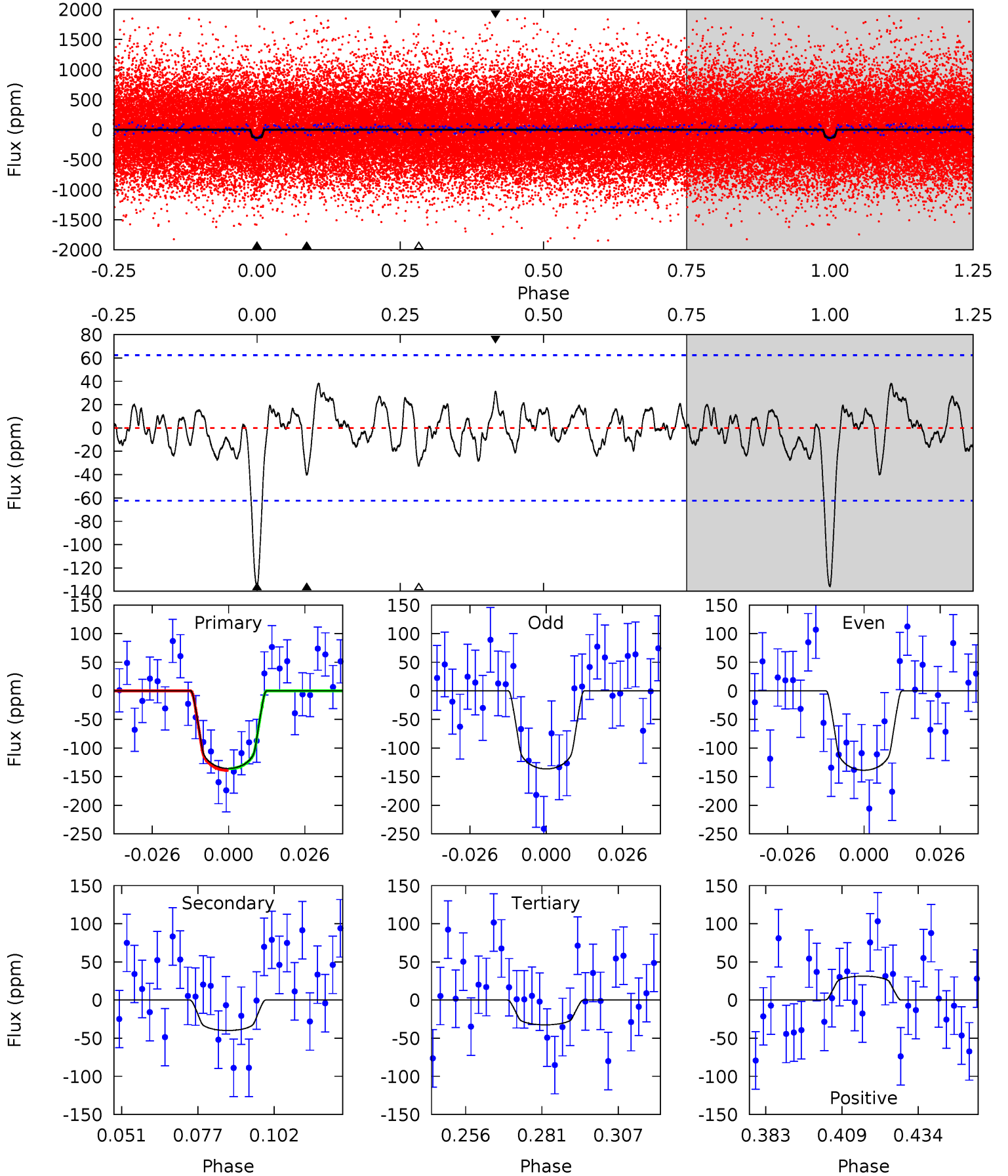
TCE 009906688-01 P= 5.825557 Days $T_0=136.044716$ (BKJD)



DV Model-Shift Uniqueness Test

009906688-01, P = 5.825635 Days, E = 130.212751 Days

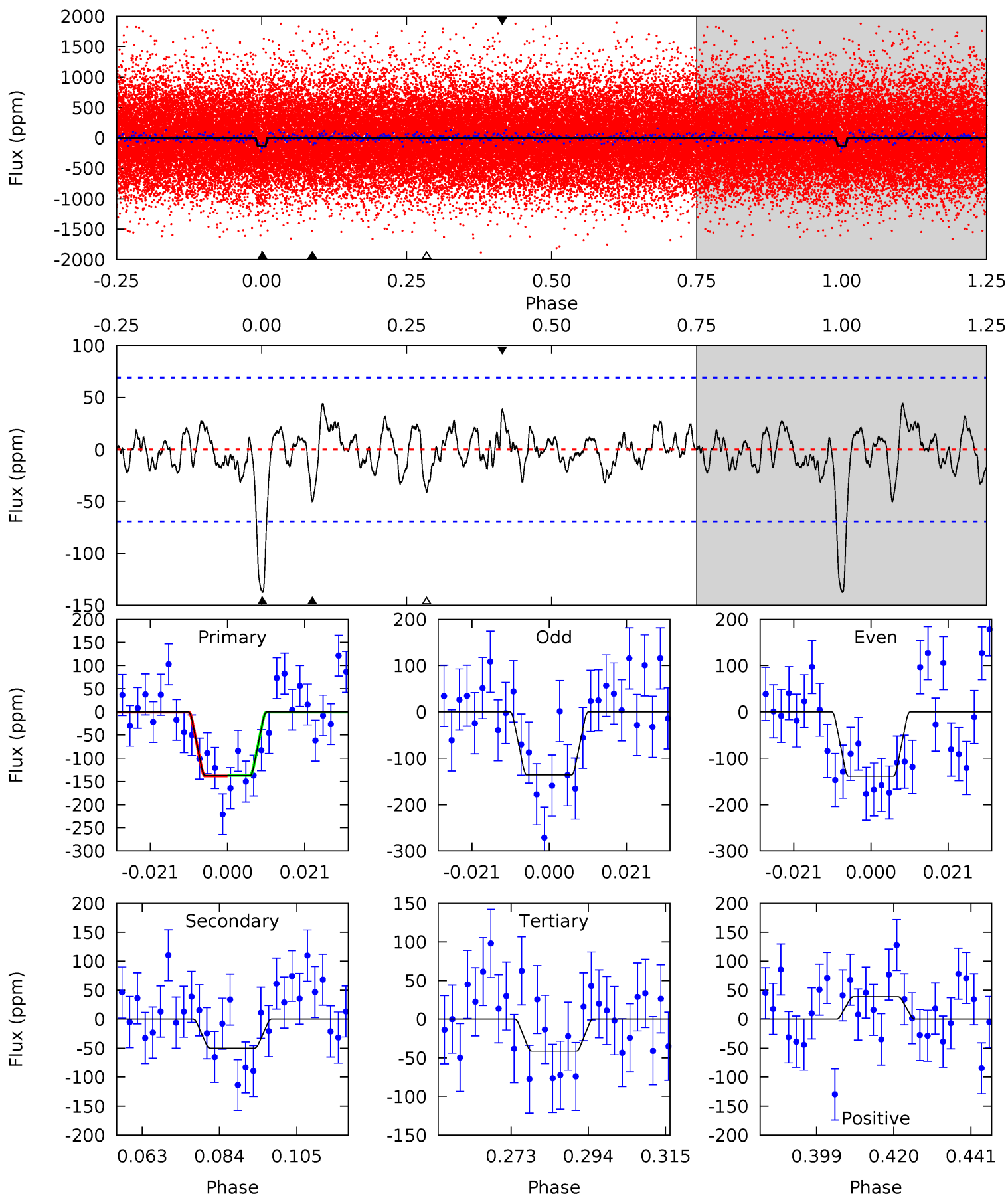
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.5	3.10	2.52	2.43	4.84	2.23	1.03	8.01	8.10	0.58	0.67	0.09	0.92	0.22	0.12



Alt Model-Shift Uniqueness Test

009906688-01, P = 5.825557 Days, E = 130.219159 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.69	3.52	2.91	2.71	4.88	2.31	1.03	6.78	6.98	0.61	0.81	0.11	0.99	0.24	0.06



Stellar Parameters For KIC 009906688

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5999^{+180}_{-198}	$4.459^{+0.067}_{-0.202}$	$-0.200^{+0.300}_{-0.300}$	$0.967^{+0.285}_{-0.122}$	$0.979^{+0.131}_{-0.118}$	$1.528^{+0.559}_{-0.791}$
	+3%/-3%	+2%/-5%	+150%/-150%	+29%/-13%	+13%/-12%	+37%/-52%
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 009906688-01 / KOI 7976.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-40 ± 13	$1.51^{+1.06}_{-0.91}$	1481^{+107}_{-81}	4300^{+2200}_{-795}	37^{+195}_{-26}
Alt.	-50 ± 14	$1.42^{+1.05}_{-0.85}$	1476^{+102}_{-72}	4599^{+2236}_{-881}	51^{+266}_{-34}

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 $A_{obs} \gg 1.0$

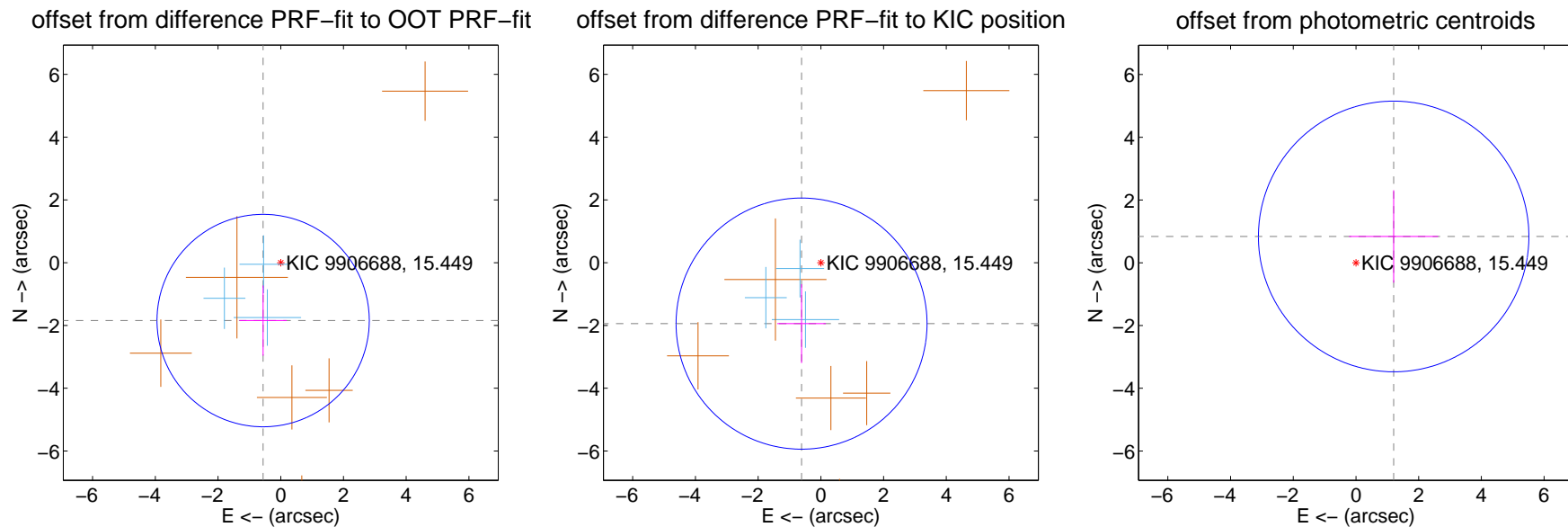
DV Centroid Data

Supplemental centroid analysis for 009906688-01. Kepler magnitude: 15.45. Transit SNR 8.71

There are 3 quarters with good PRF difference image offsets

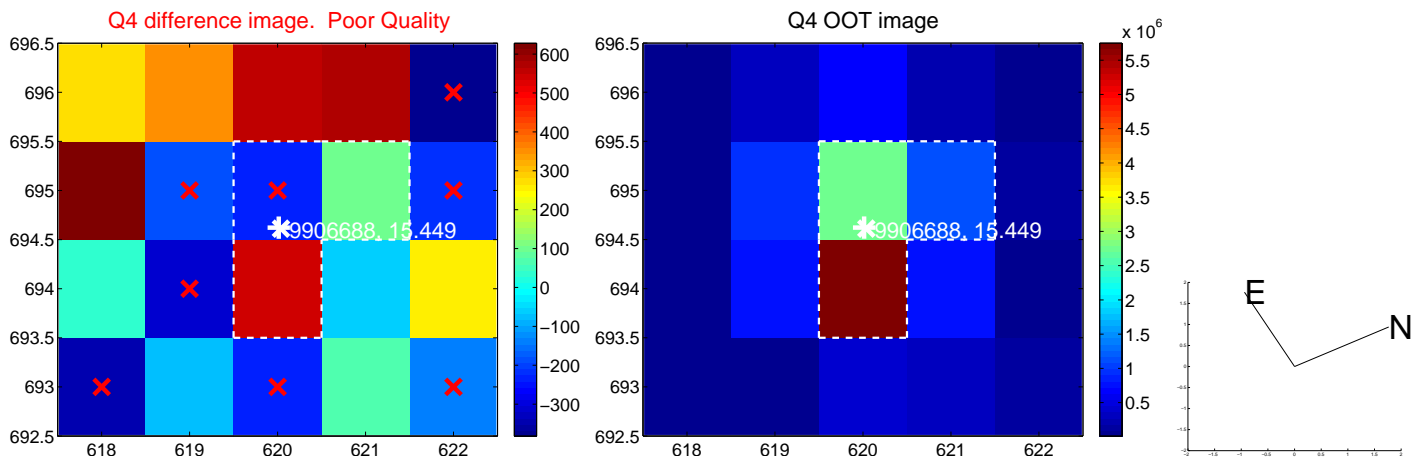
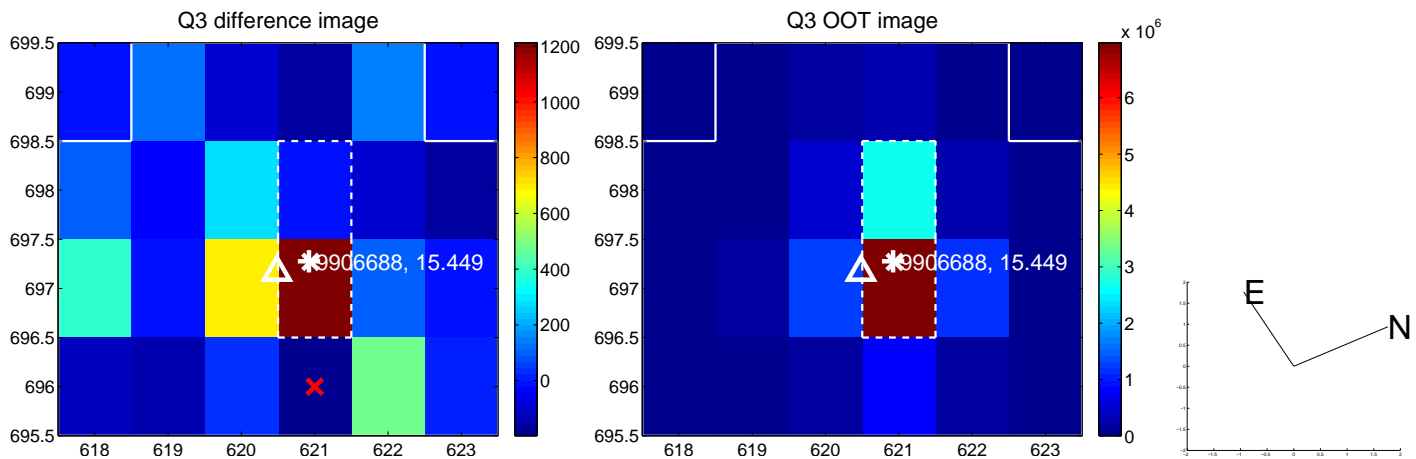
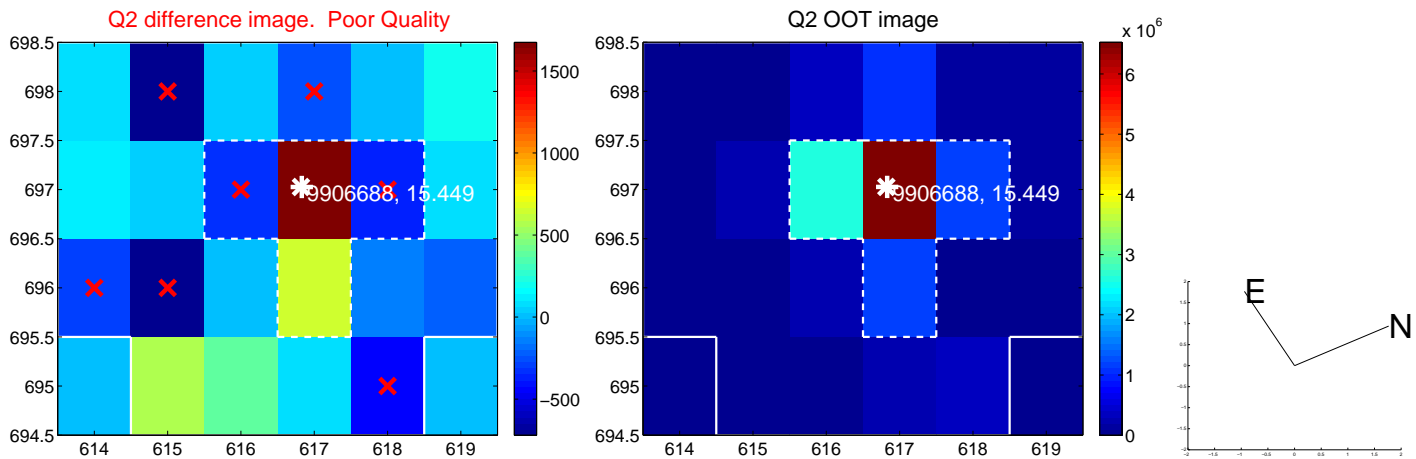
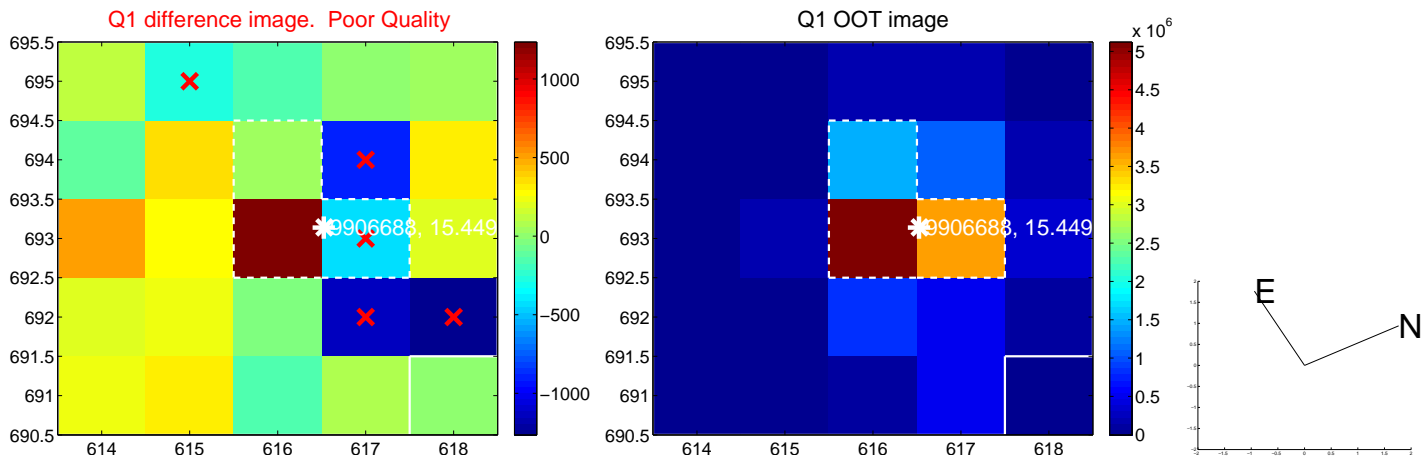
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.928 ± 1.128	1.71	0.562 ± 0.752	-1.844 ± 1.116
PRF-fit source offset from KIC position	2.036 ± 1.334	1.53	0.616 ± 0.774	-1.941 ± 1.258
photometric centroid source offset	1.47 ± 1.44	1.02	-1.20 ± 1.42	0.84 ± 1.47

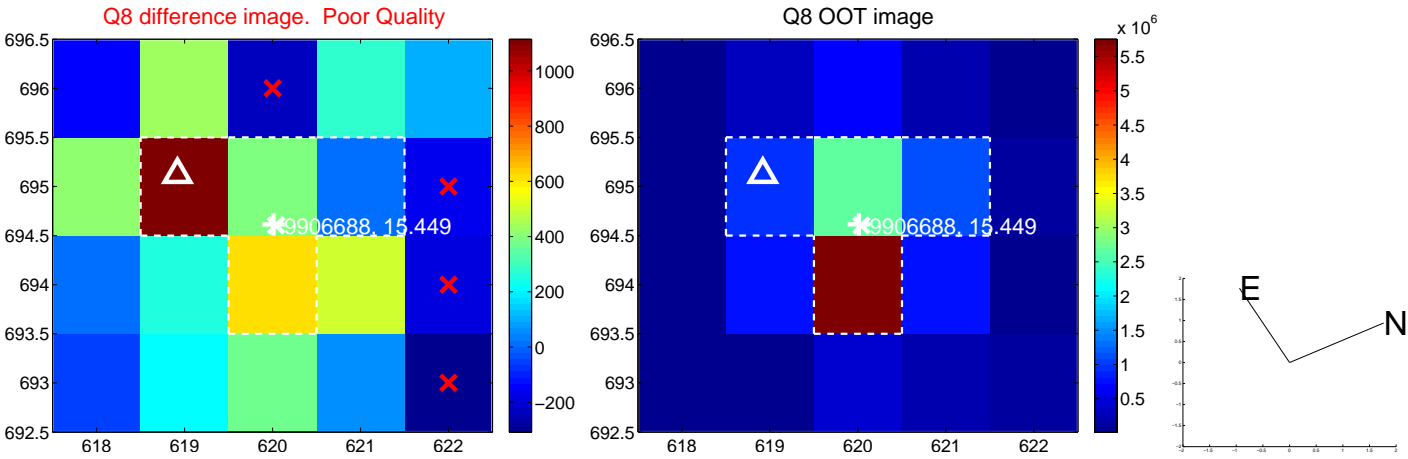
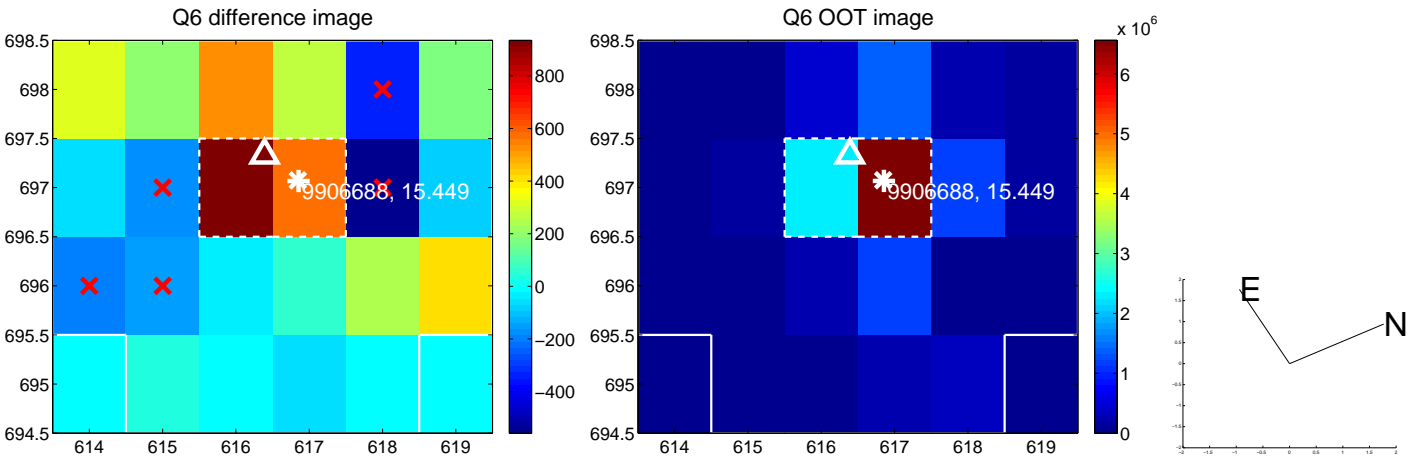
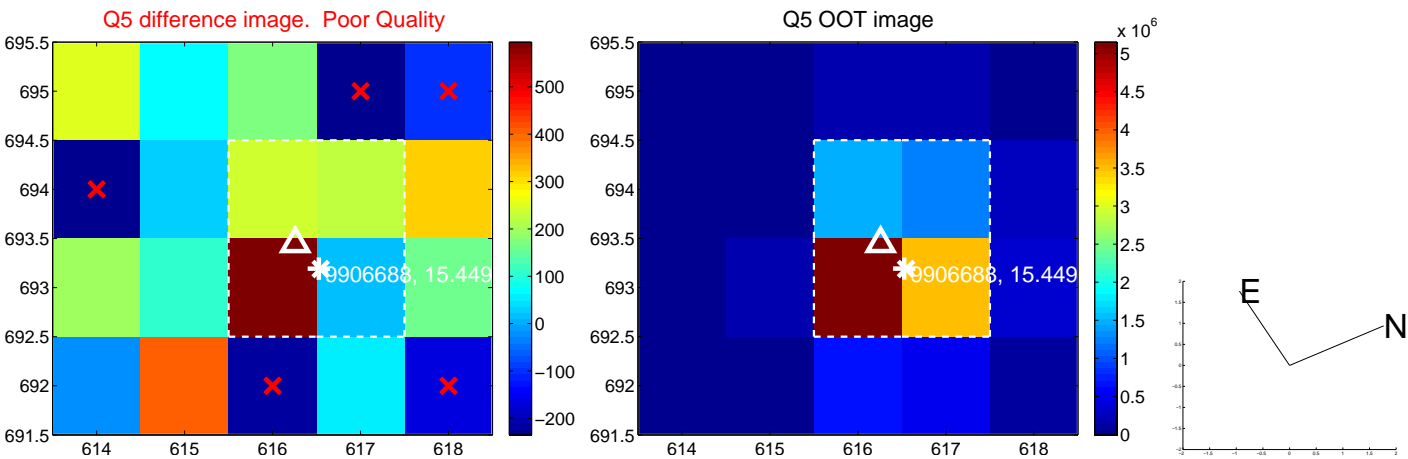


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

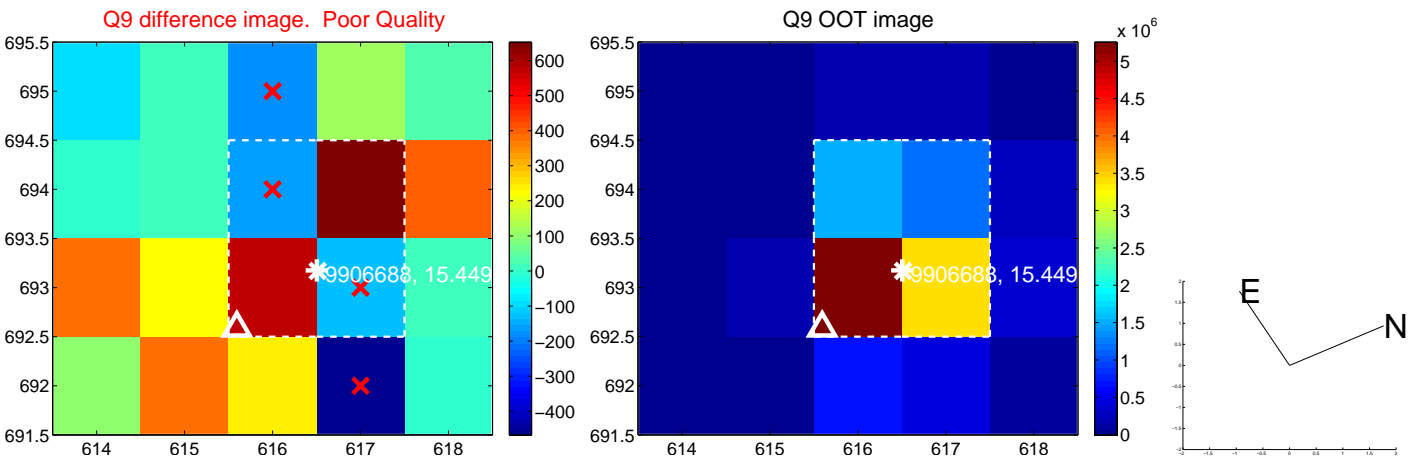
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



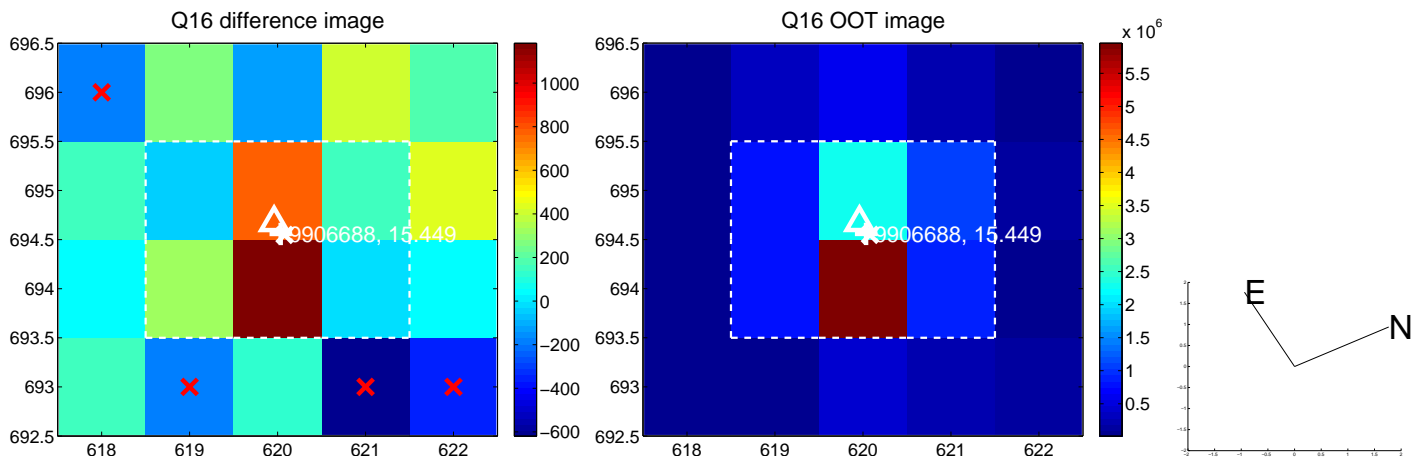
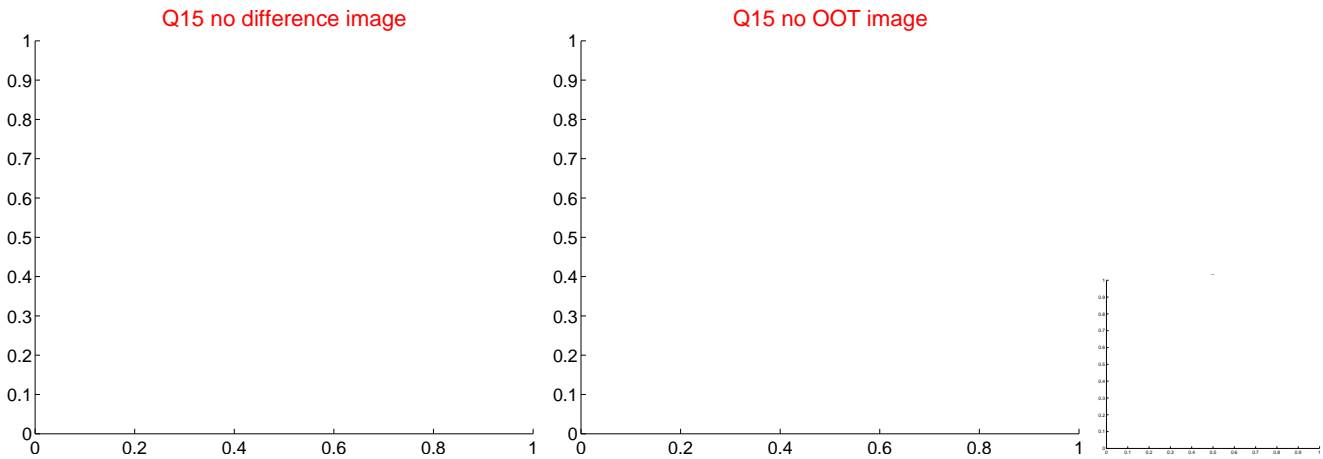
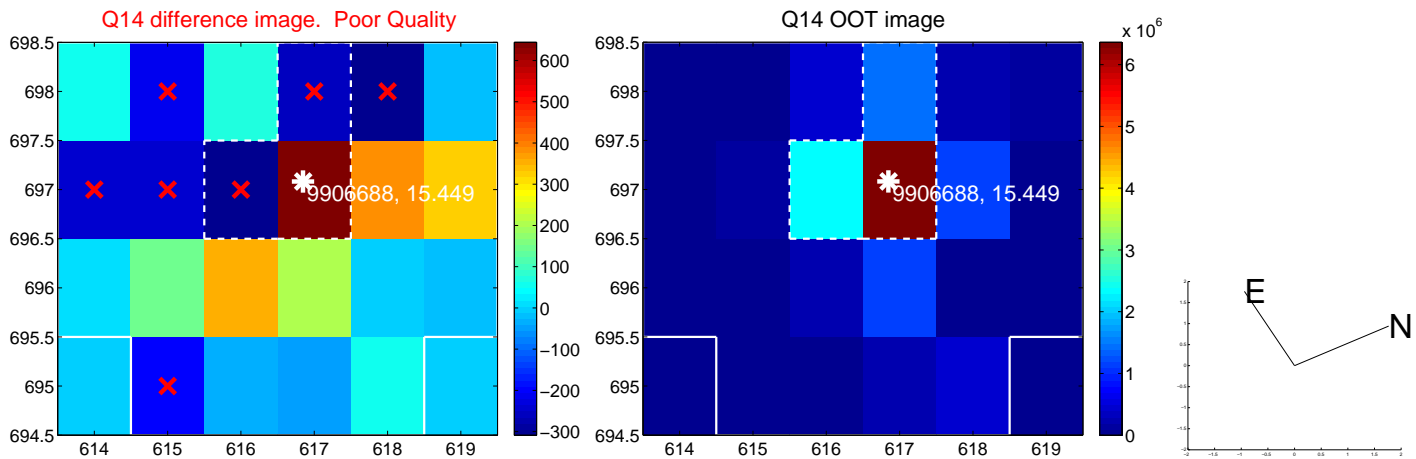
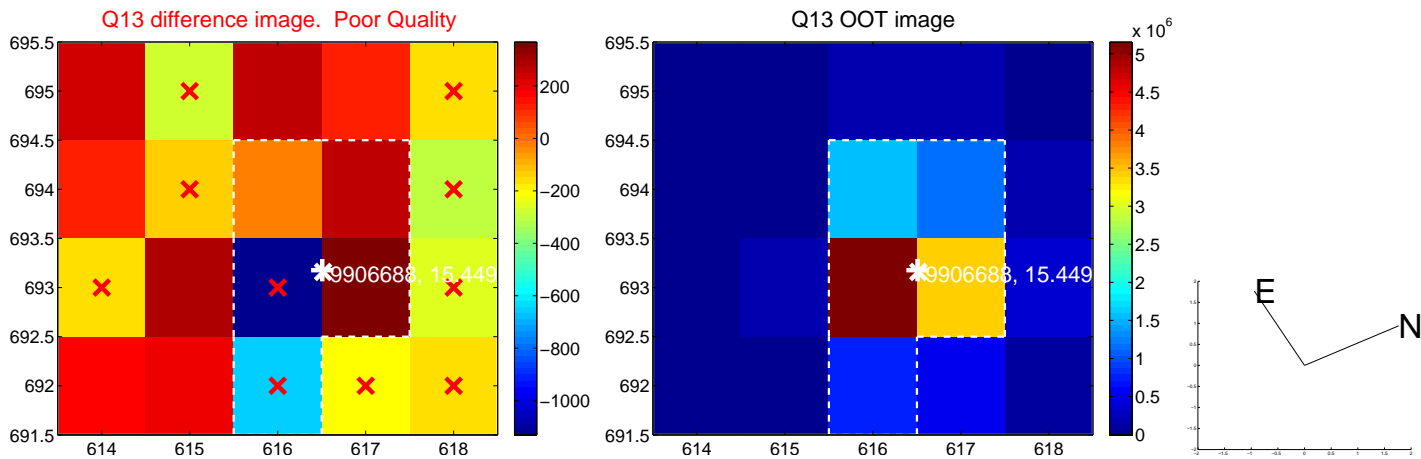
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



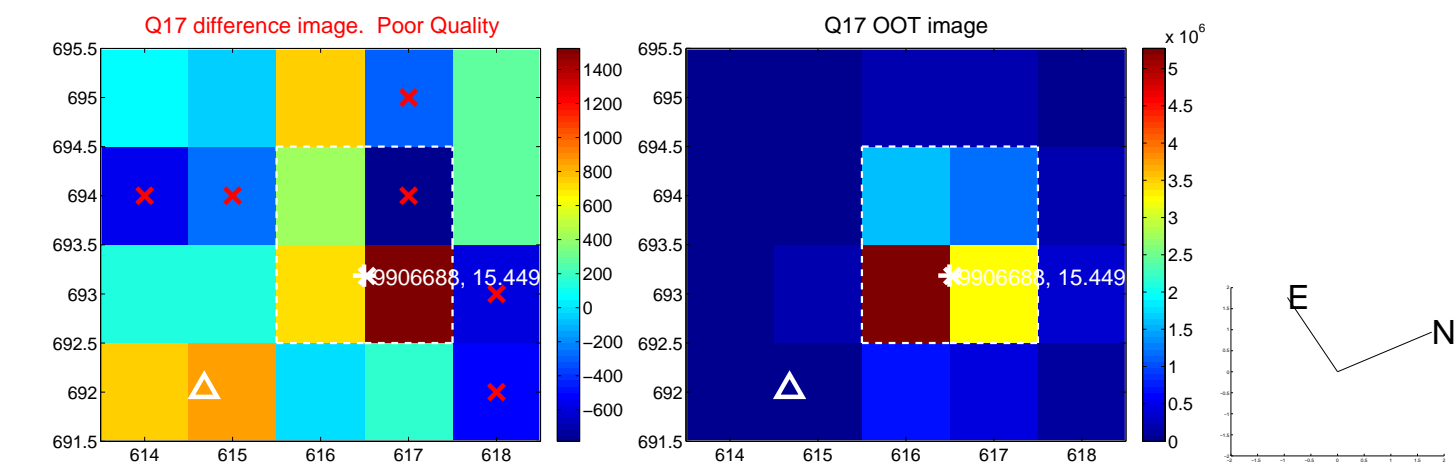
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



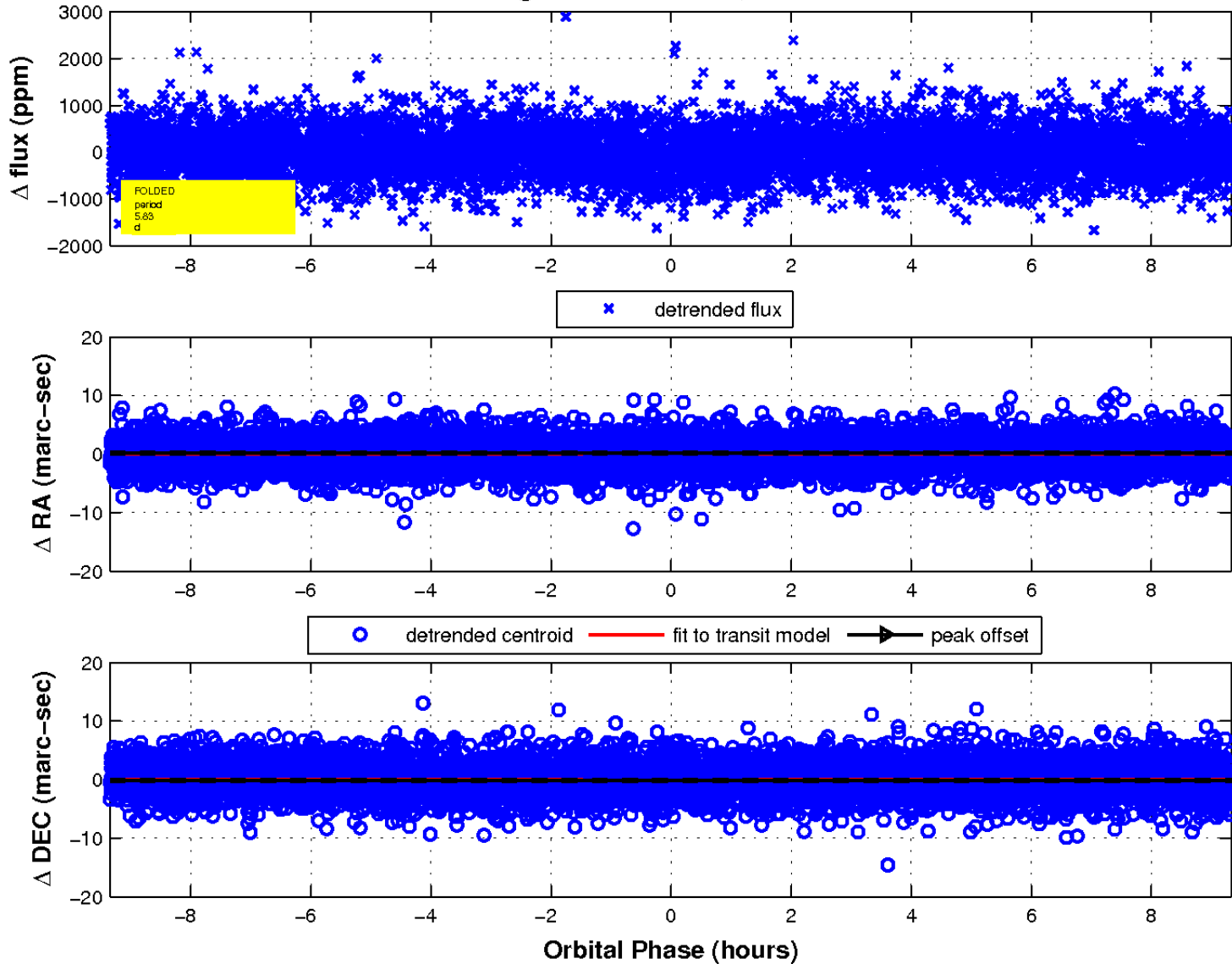
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

