

KIC 008618728

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})
008618728-01	OBS	No	0.608323	131.963915	31.3	2.534	8.5	7.6	0.79	5836	0.54	3639.62

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008618728-01	OBS	FP	0.00	1	0	0	1	LPP_DV—EPHEM_MATCH

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.

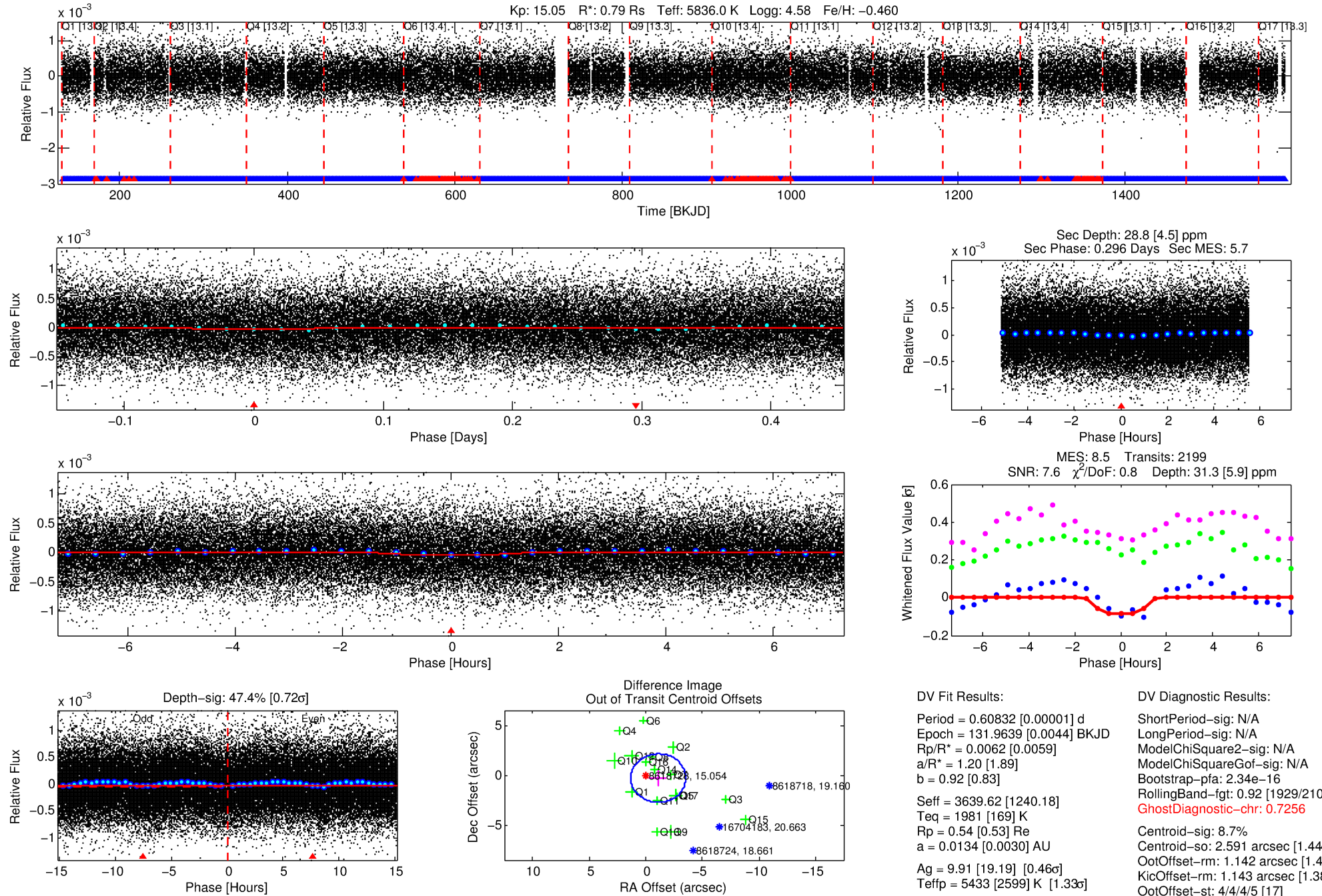
Ephemeris Match Information For 008618728-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
008618728-01	8618728	008554005-pri	8554005	1:1	68.2	16	-6	12.71	15.05	12455.00	Direct-PRF	0	3.17	0.65

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

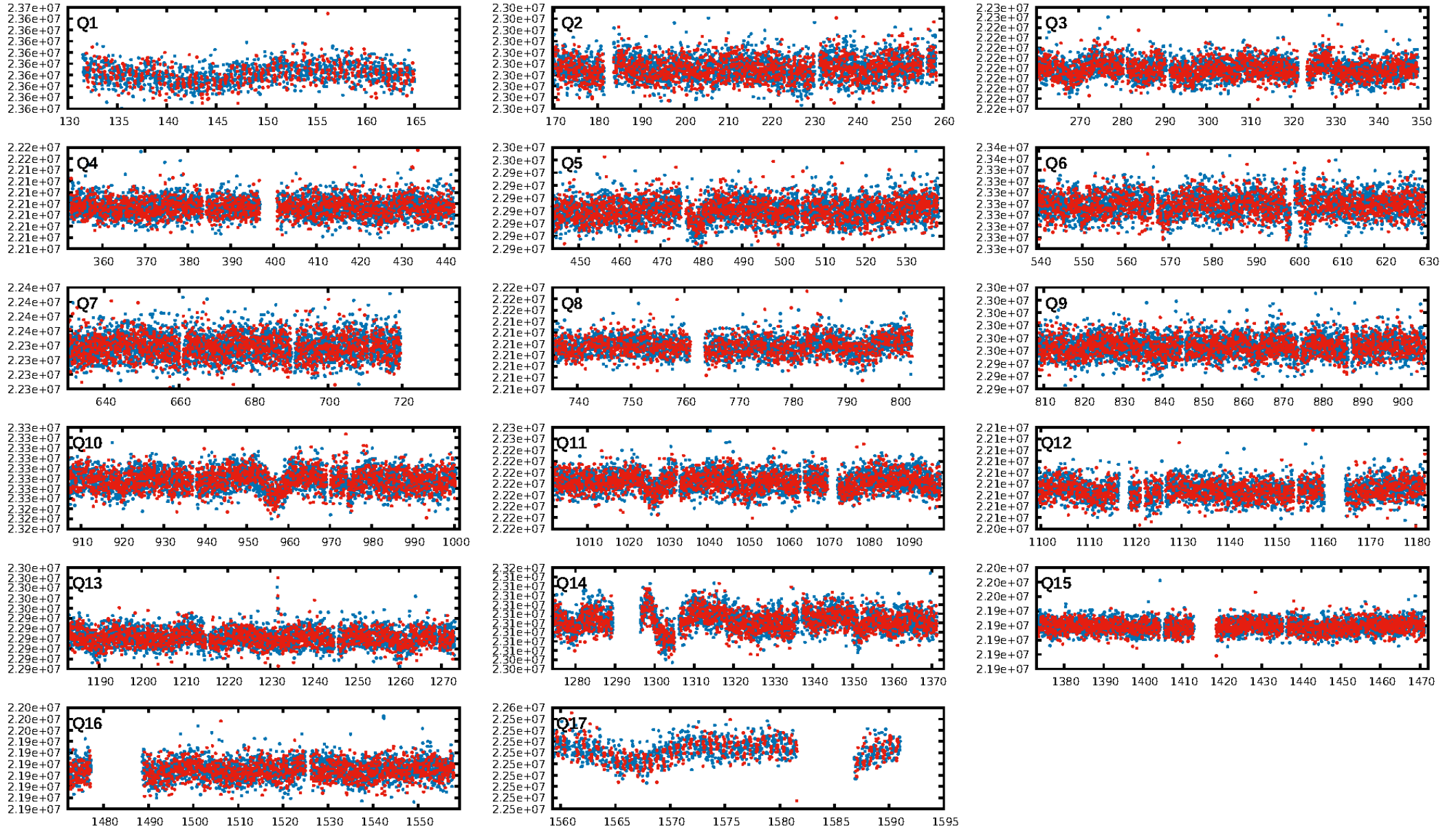
KIC: 8618728 Candidate: 1 of 1 Period: 0.608 d



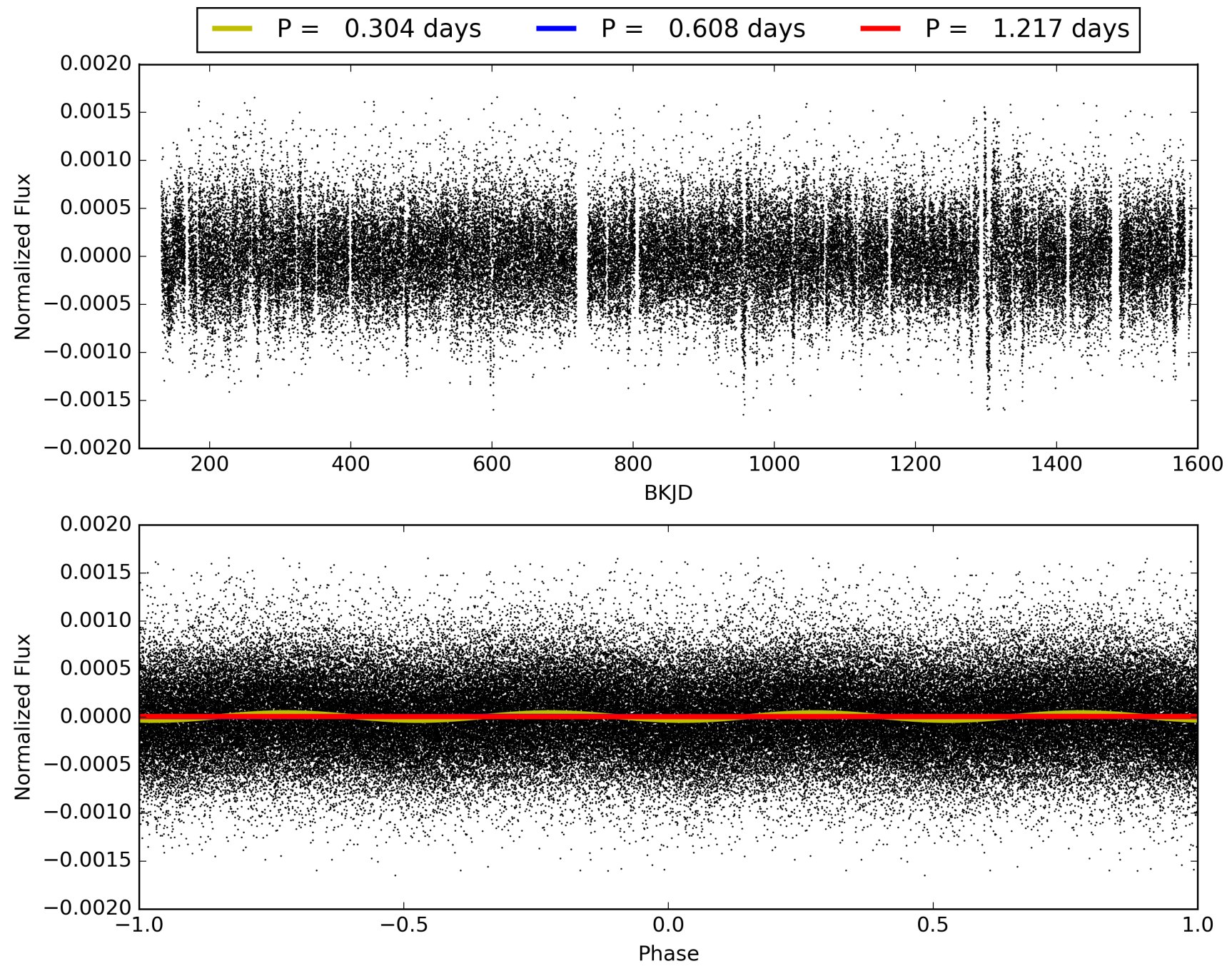
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 21:47:05 Z

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

TCE 008618728-01, PDC Light Curves

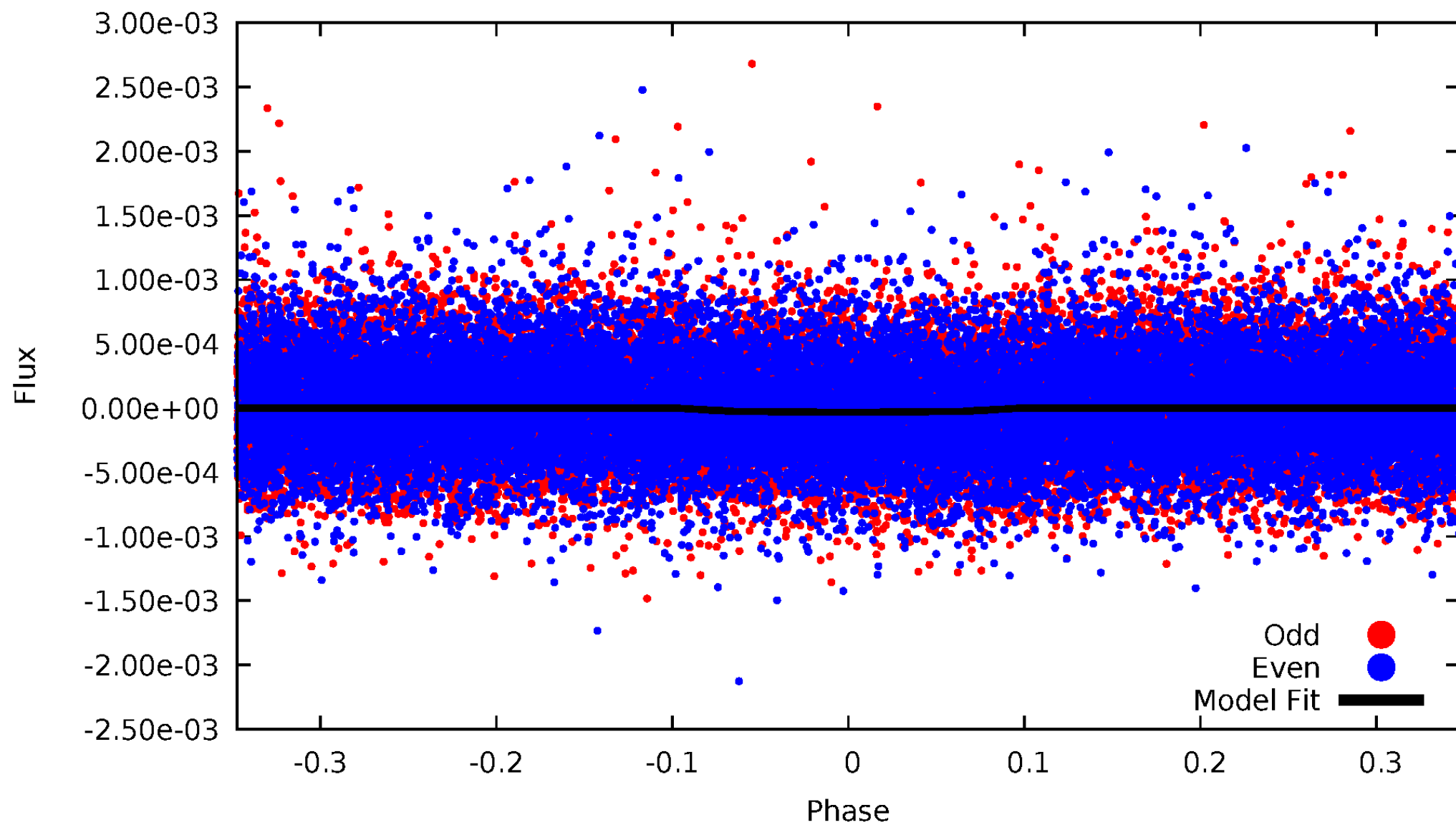


TCE 008618728-01



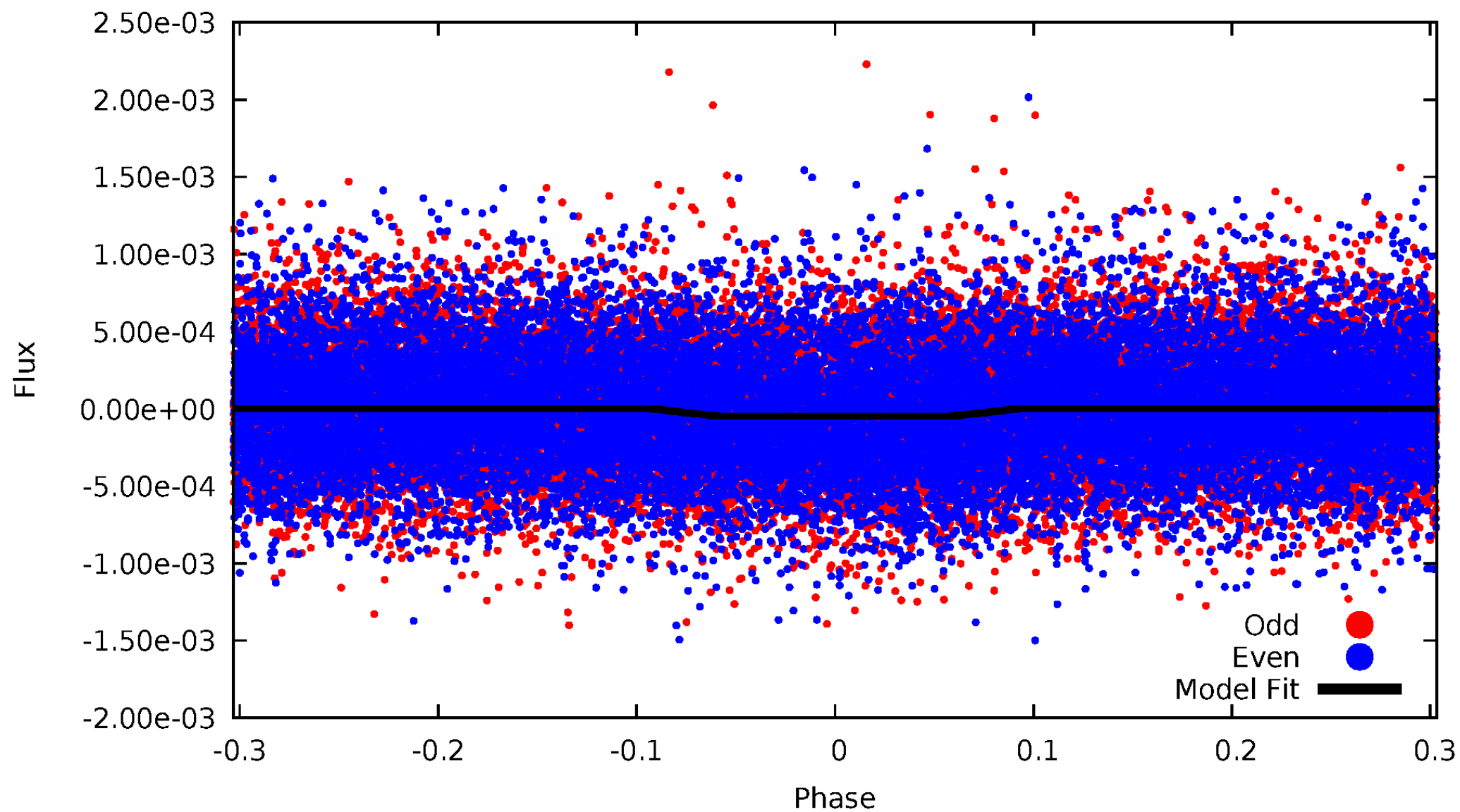
DV Odd/Even

TCE 008618728-01

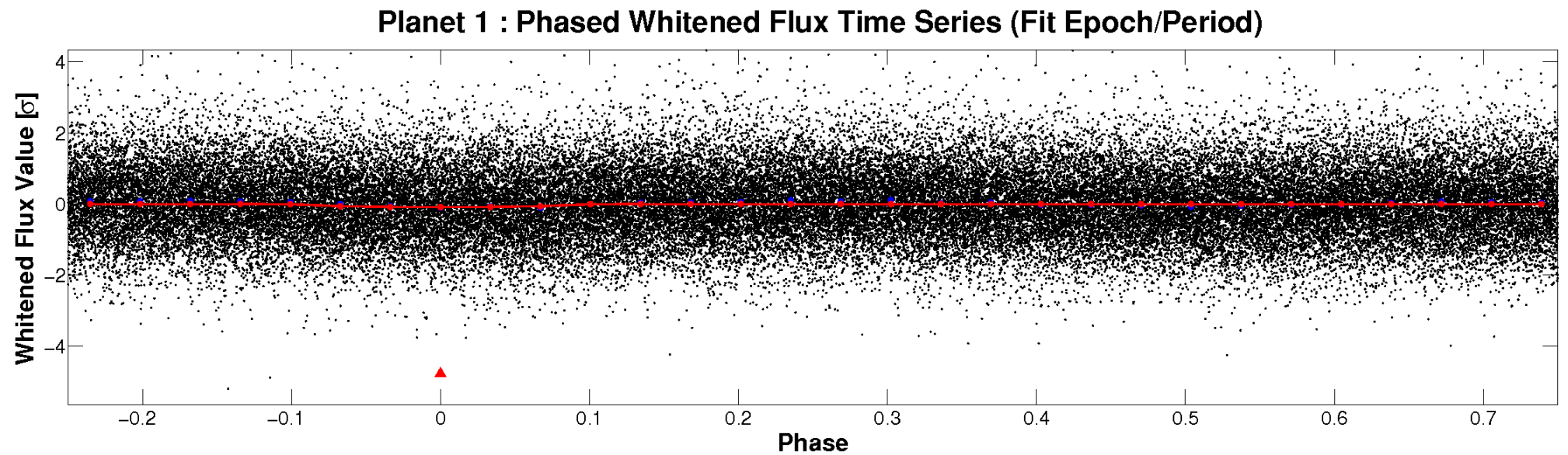
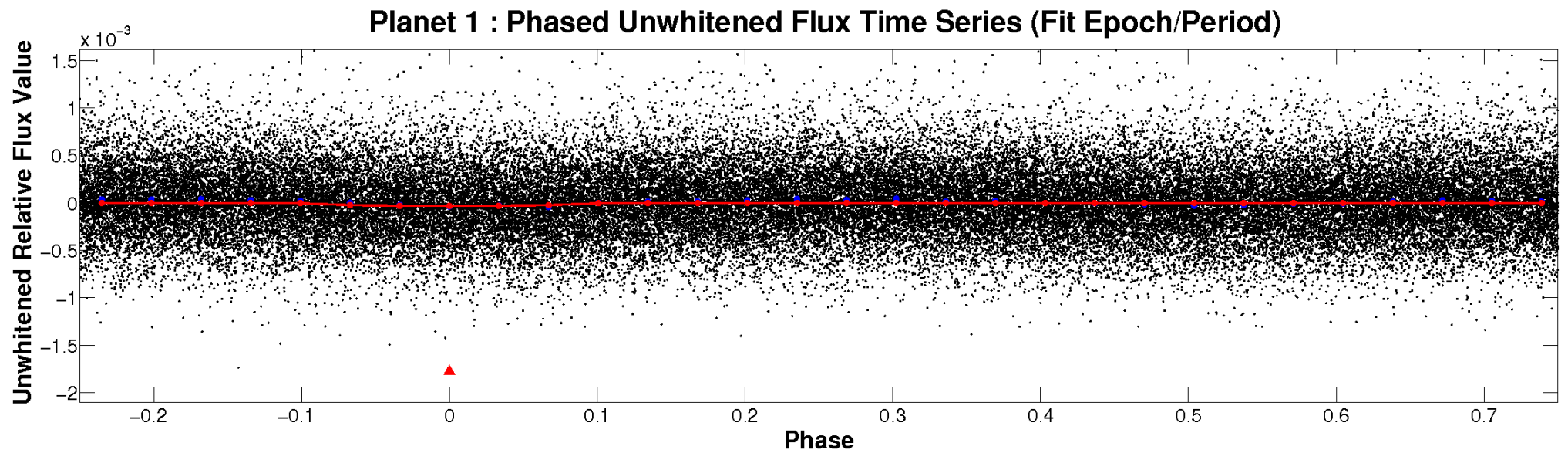


ALT Odd/Even

TCE 008618728-01

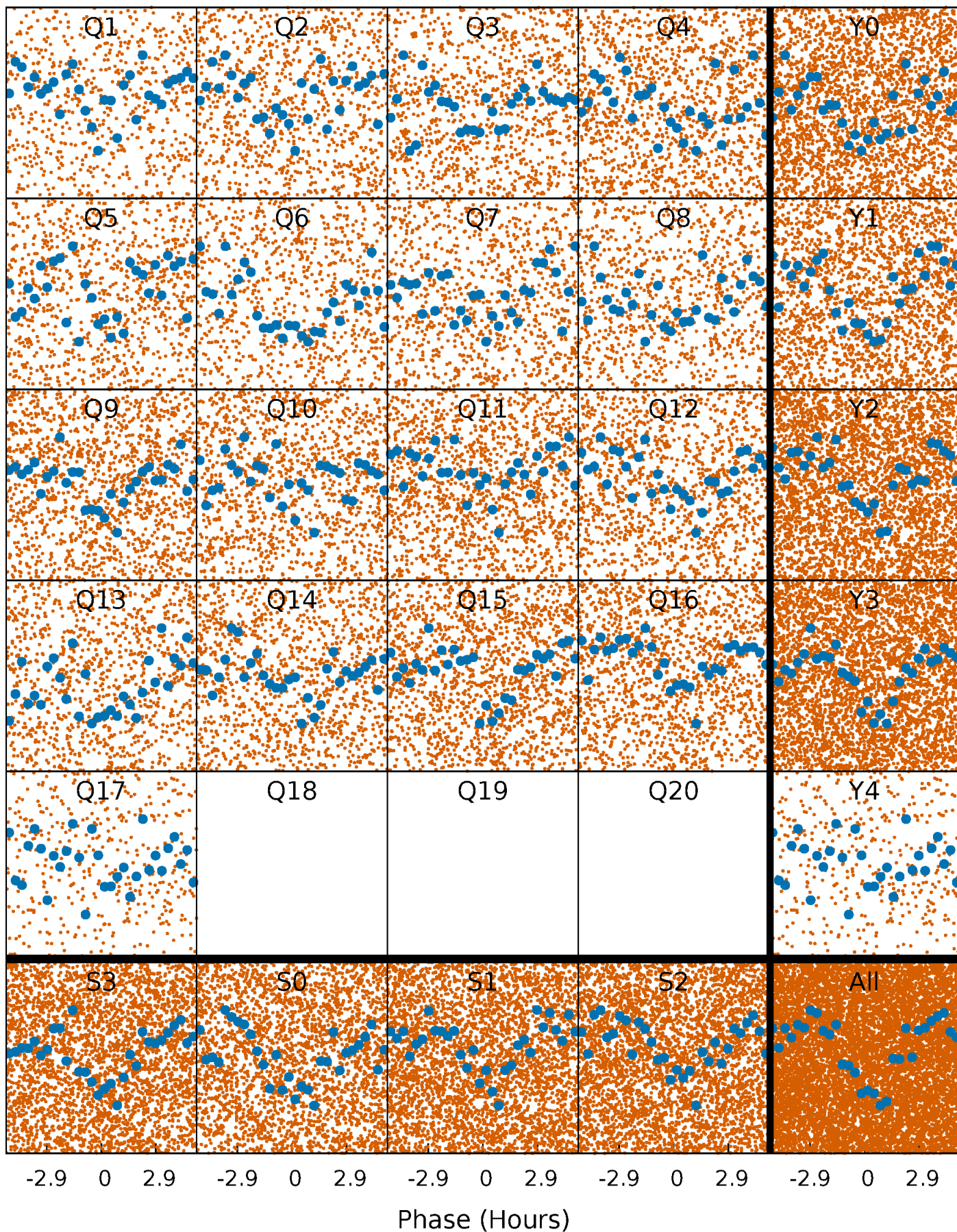


Non-Whitened Vs. Whitened Light Curve



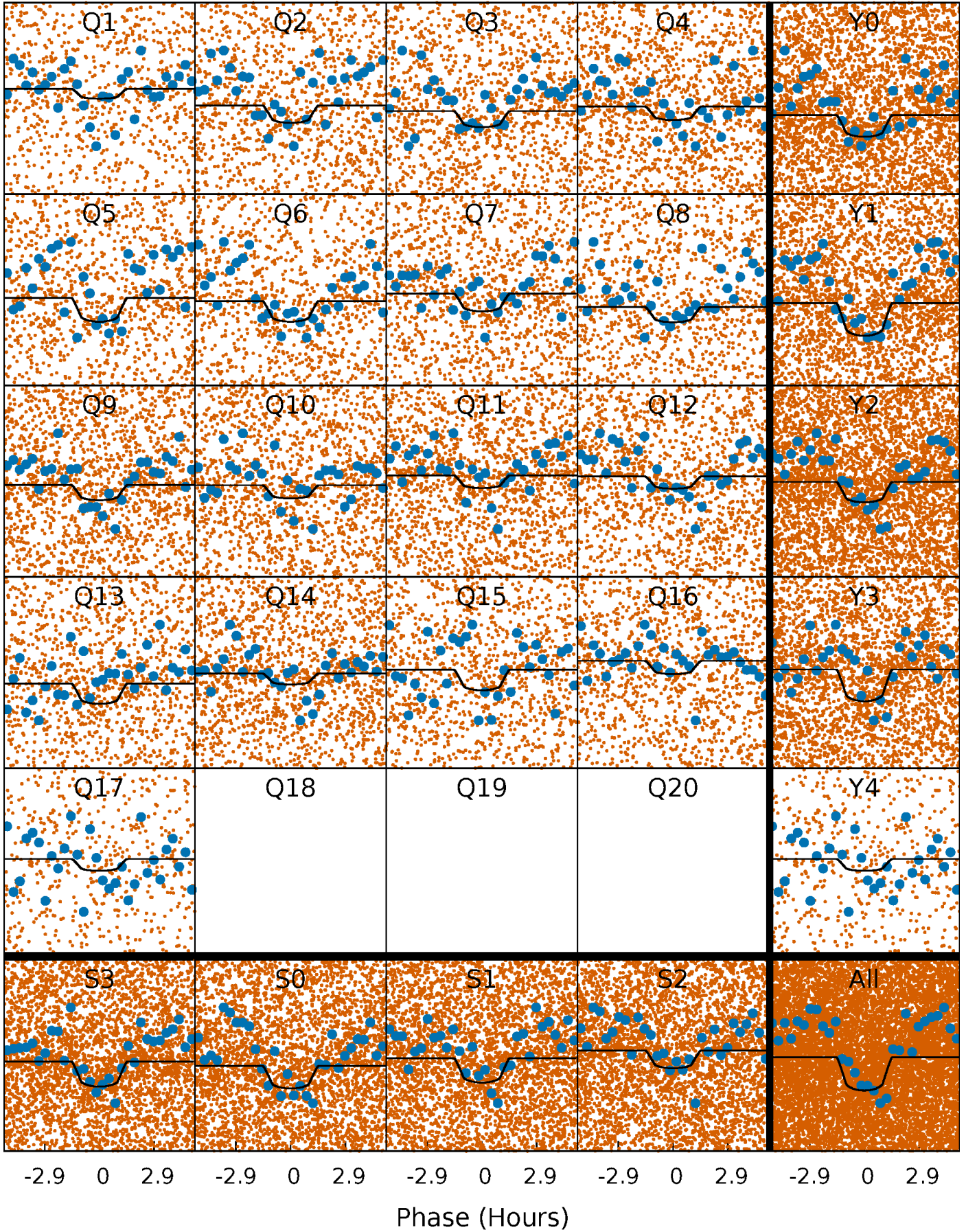
PDC Quarter-Phased Transit Curves

TCE 008618728-01 P= 0.608323 Days $T_0=131.963915$ (BKJD)



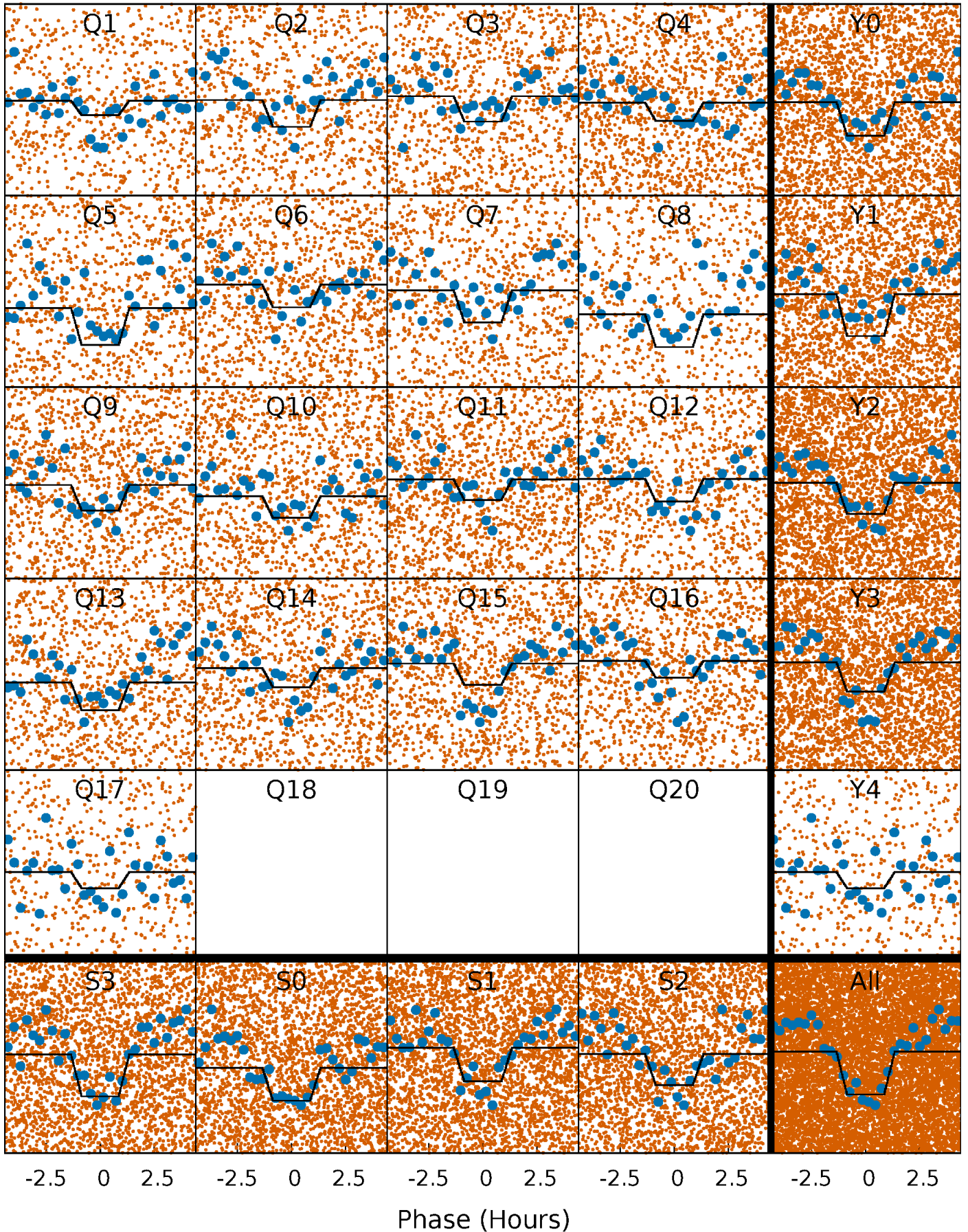
DV Quarter-Phased Transit Curves

TCE 008618728-01 P= 0.608323 Days $T_0=131.963915$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

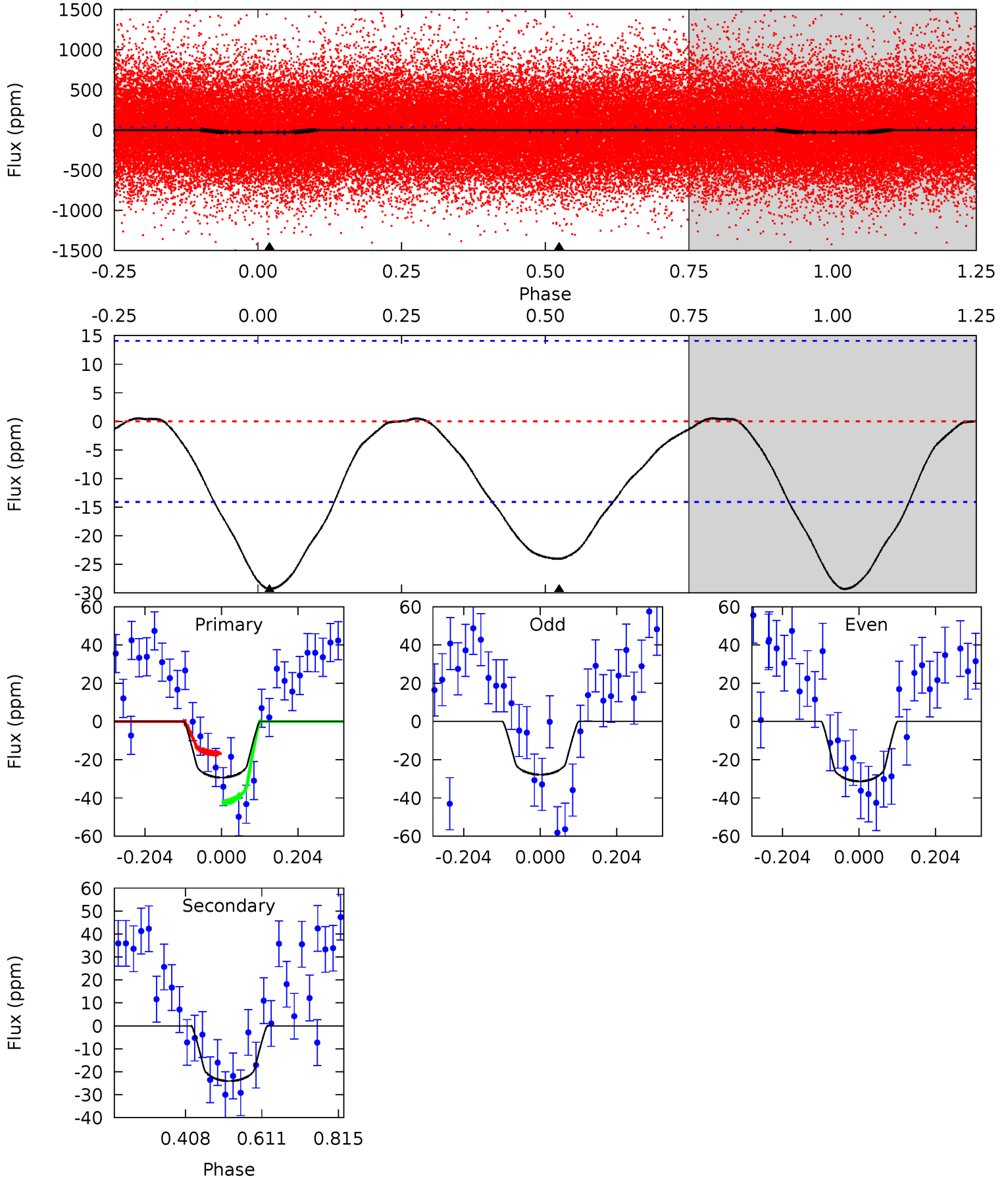
TCE 008618728-01 P= 0.608342 Days $T_0=131.955167$ (BKJD)



DV Model-Shift Uniqueness Test

008618728-01, P = 0.608323 Days, E = 131.355592 Days

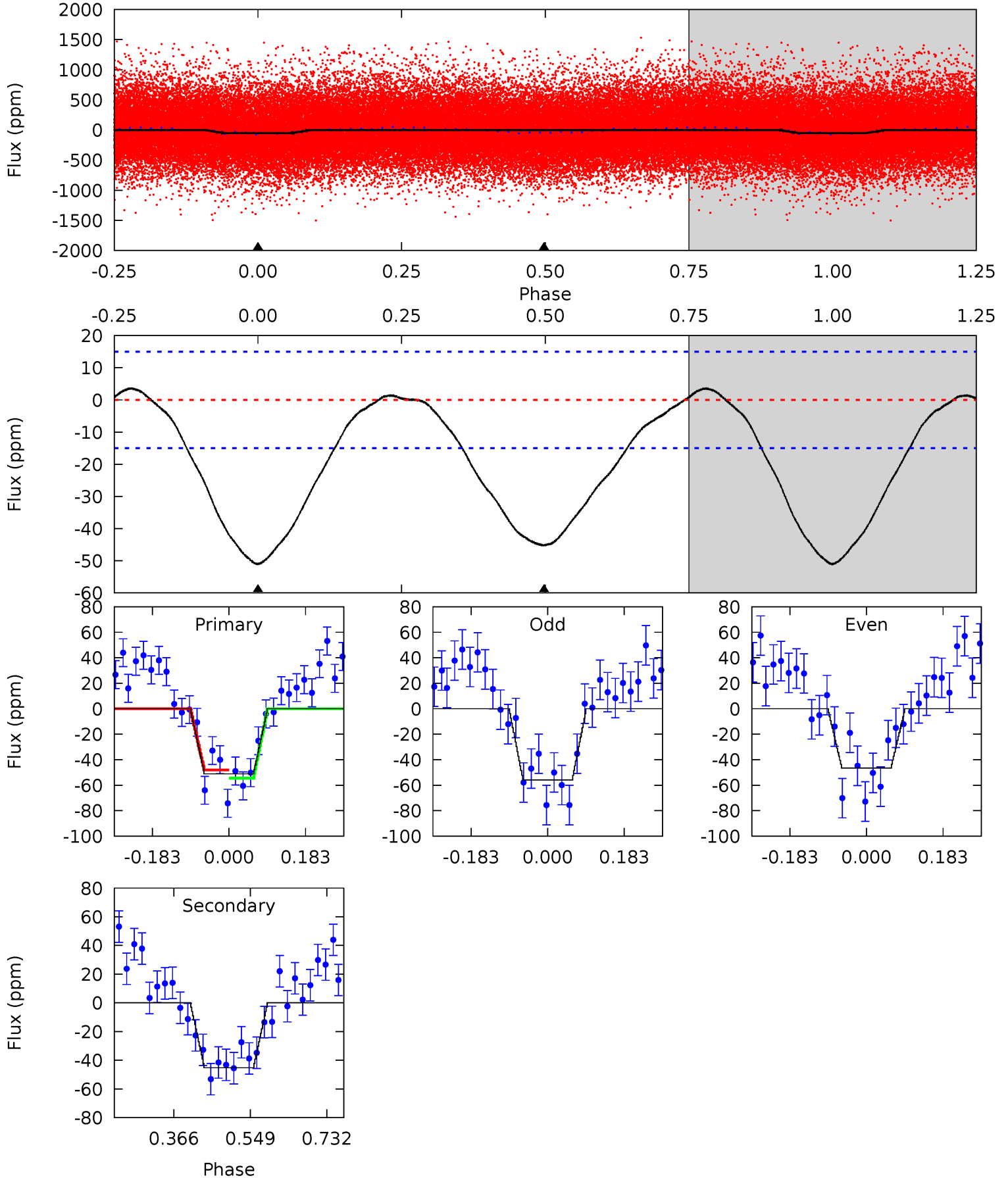
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.20	7.54	0	0	4.41	1.27	0.27	9.20	9.20	7.54	7.54	0.54	0.96	0.02	3.98



Alt Model-Shift Uniqueness Test

008618728-01, P = 0.608342 Days, E = 131.346825 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.1	13.4	0	0	4.44	1.33	0.77	15.1	15.1	13.4	13.4	1.39	0.97	0.07	0.96



Stellar Parameters For KIC 008618728

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5836^{+158}_{-158}	$4.578^{+0.044}_{-0.176}$	$-0.460^{+0.300}_{-0.300}$	$0.794^{+0.211}_{-0.056}$	$0.874^{+0.089}_{-0.089}$	$2.460^{+0.437}_{-1.188}$
	+3%/-3%	+1%/-4%	+65%/-65%	+27%/-7%	+10%/-10%	+18%/-48%
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 008618728-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-24 ± 3	$0.64^{+0.50}_{-0.39}$	2812^{+175}_{-115}	4910^{+2996}_{-1069}	$5.868^{+31.907}_{-4.073}$
Alt.	-45 ± 3	$0.70^{+0.54}_{-0.40}$	2806^{+148}_{-106}	5374^{+3166}_{-1145}	$8.837^{+37.890}_{-5.999}$

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

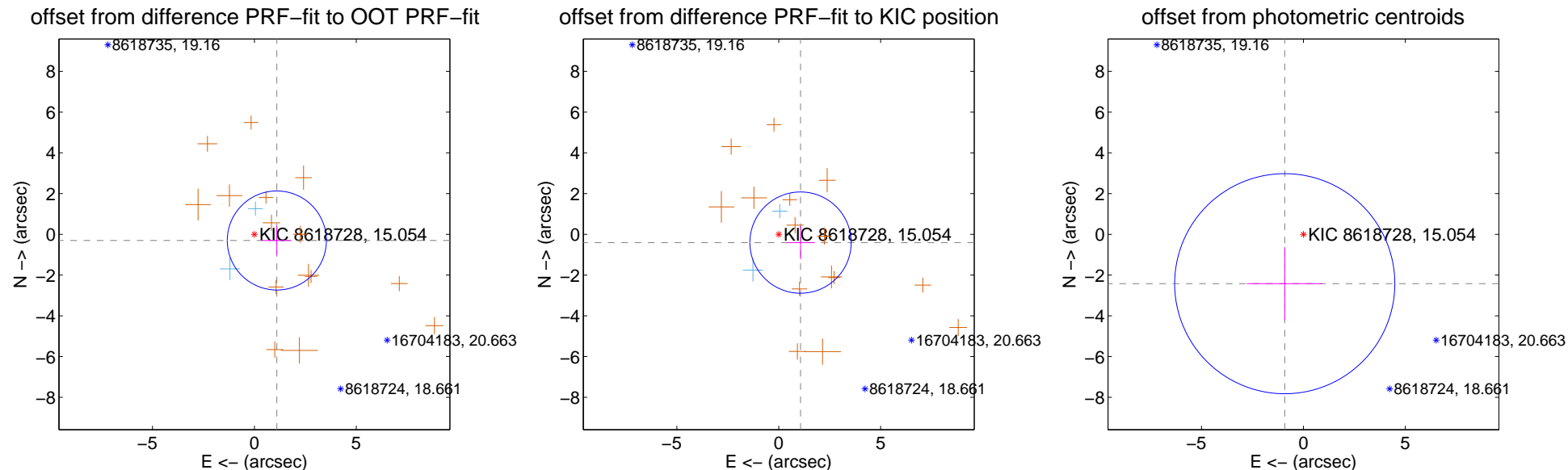
DV Centroid Data

Supplemental centroid analysis for 008618728-01. Kepler magnitude: 15.05. Transit SNR 7.57

There are 2 quarters with good PRF difference image offsets

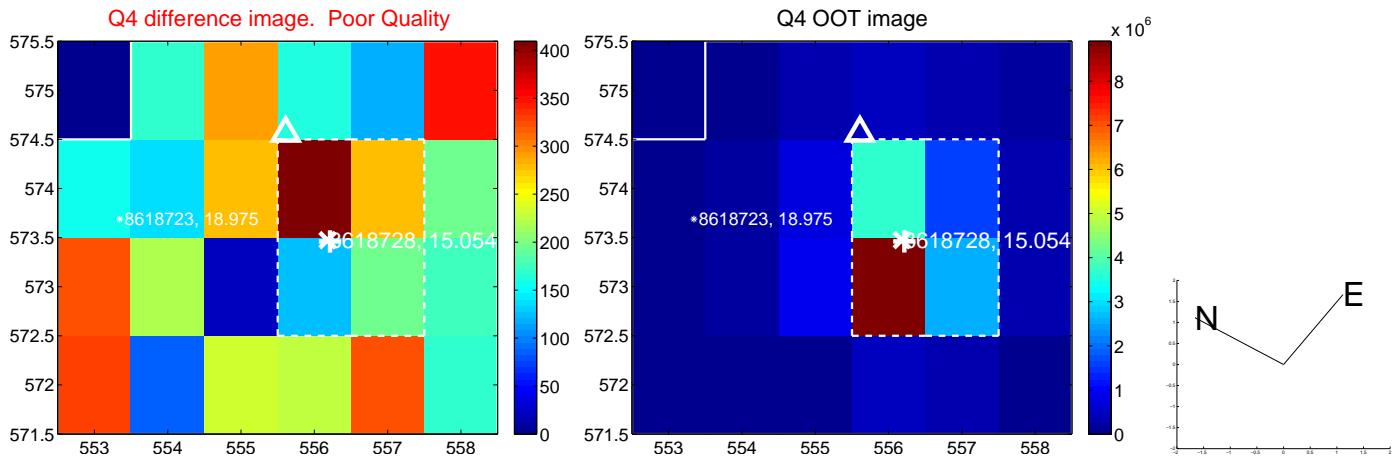
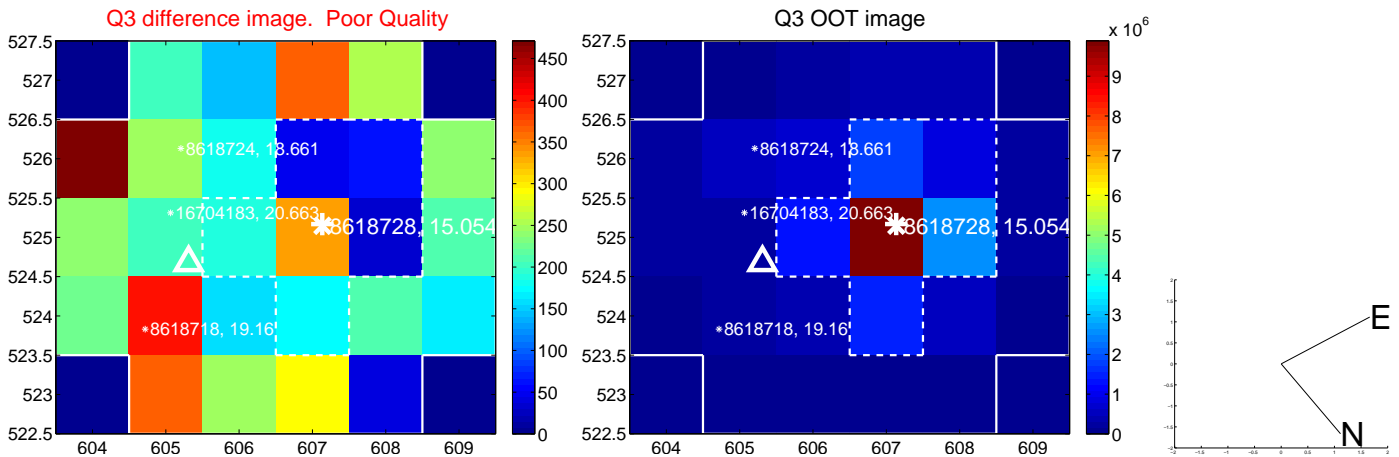
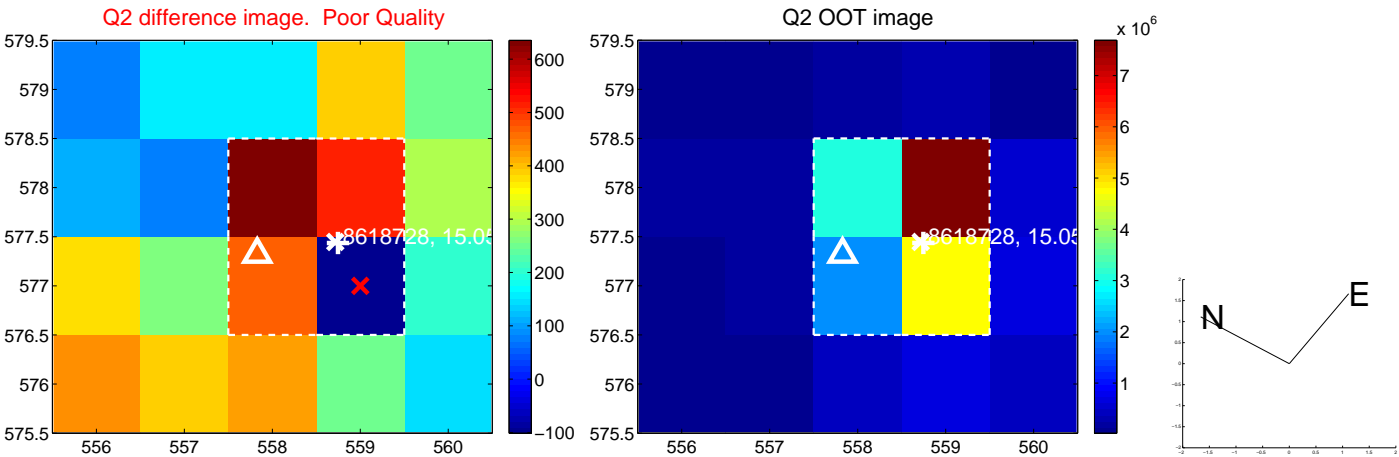
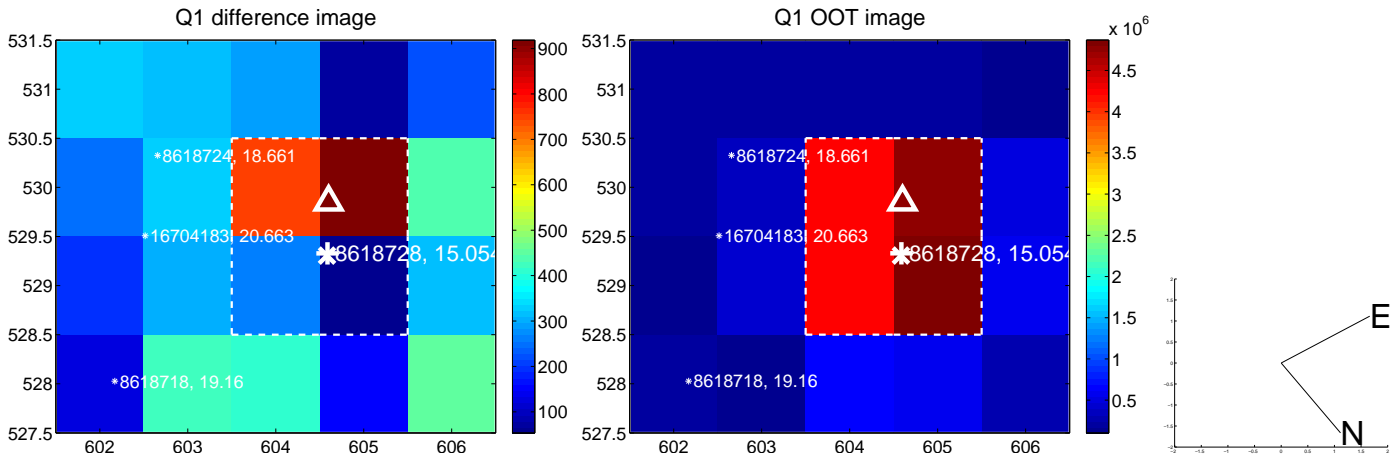
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.142 ± 0.811	1.41	-1.101 ± 0.714	-0.302 ± 0.717
PRF-fit source offset from KIC position	1.143 ± 0.828	1.38	-1.069 ± 0.693	-0.406 ± 0.813
photometric centroid source offset	2.59 ± 1.80	1.44	0.92 ± 1.85	-2.42 ± 1.79

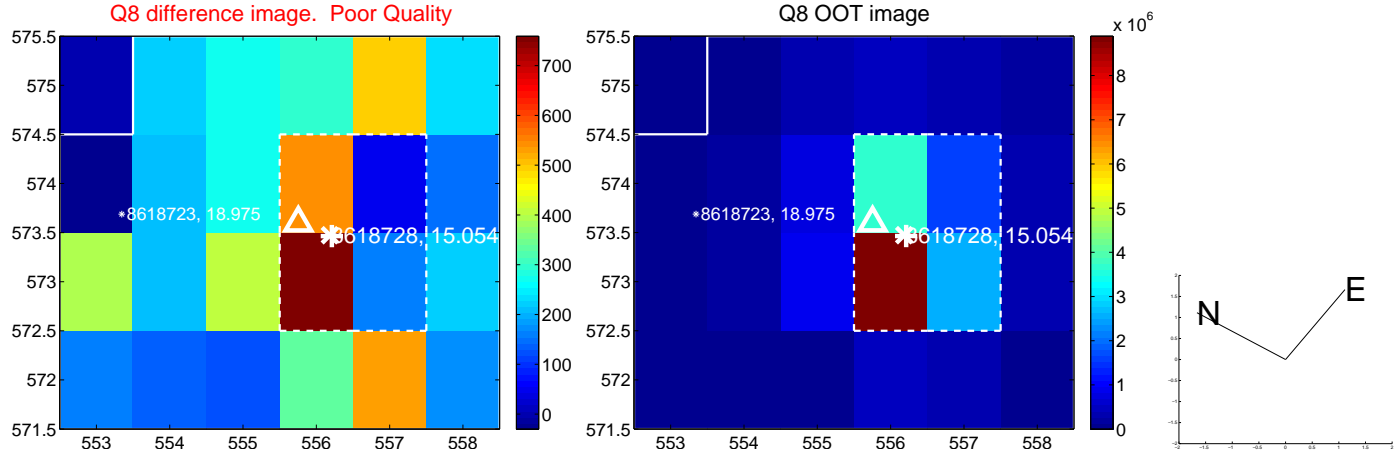
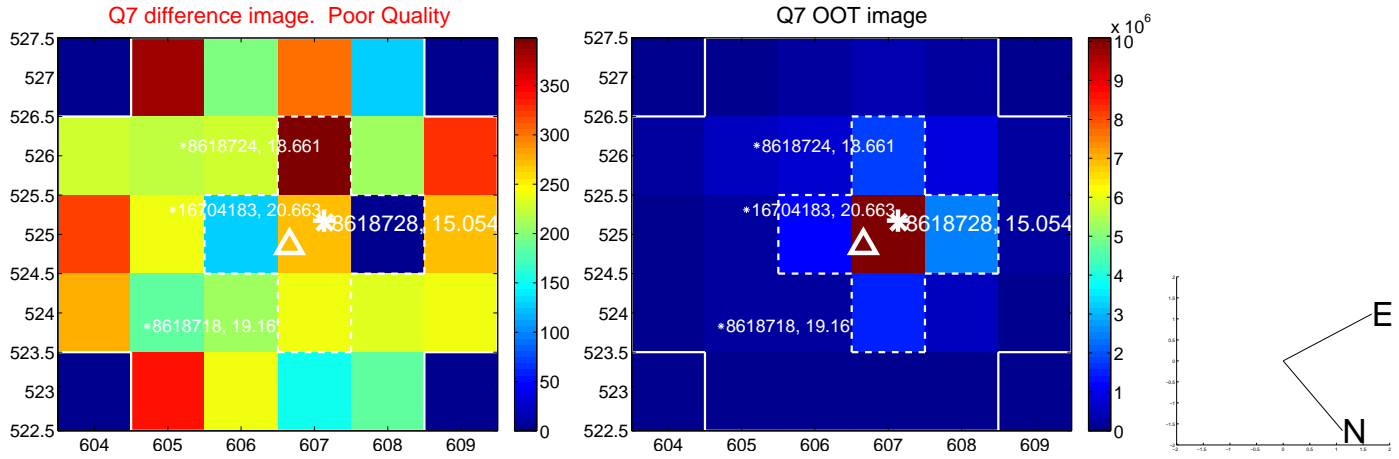
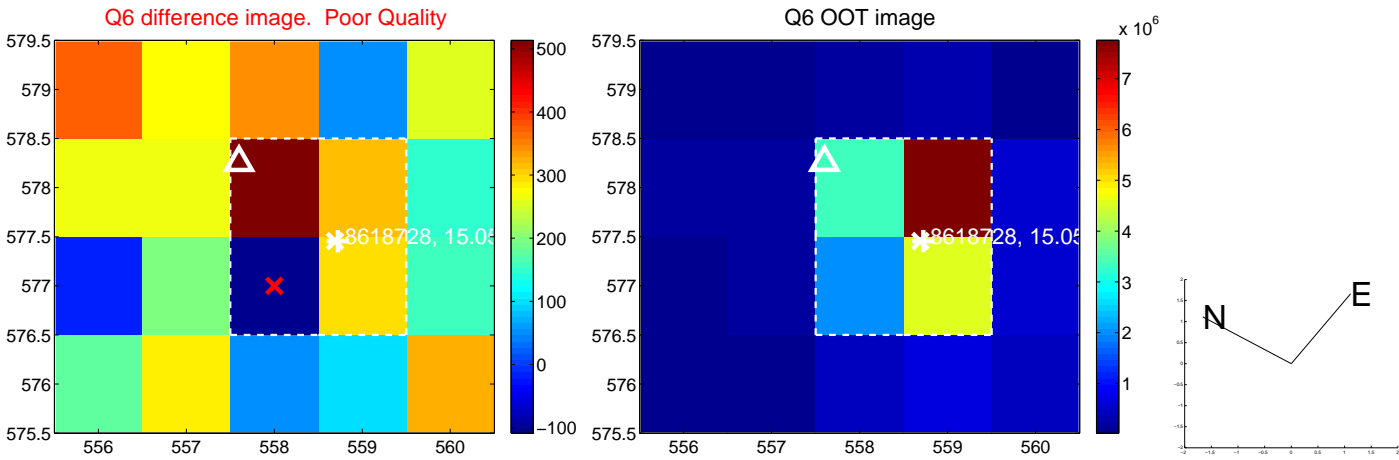
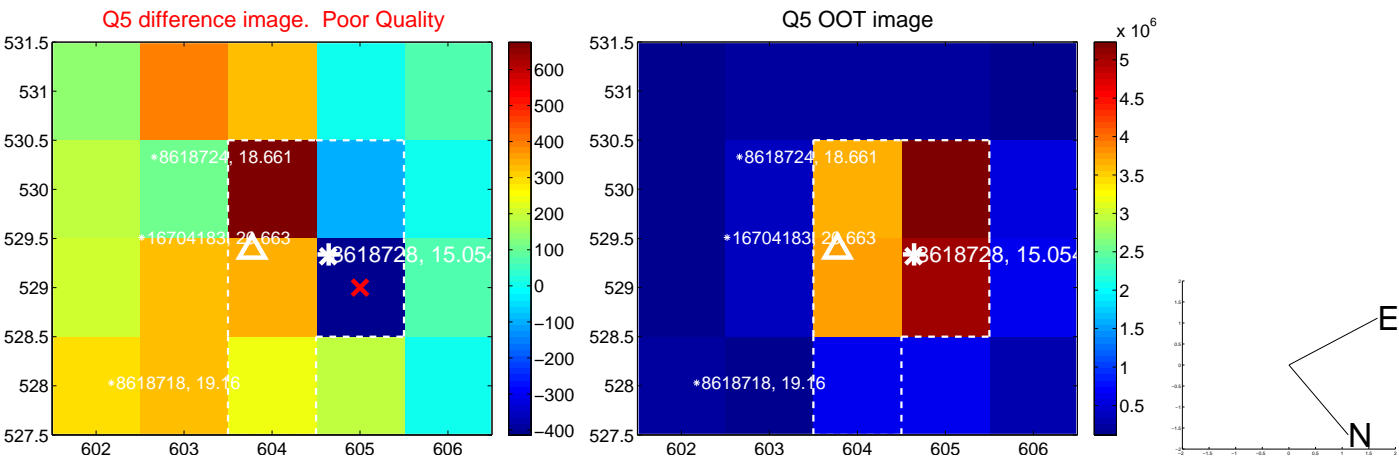


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000 are from the UKIRT catalog.

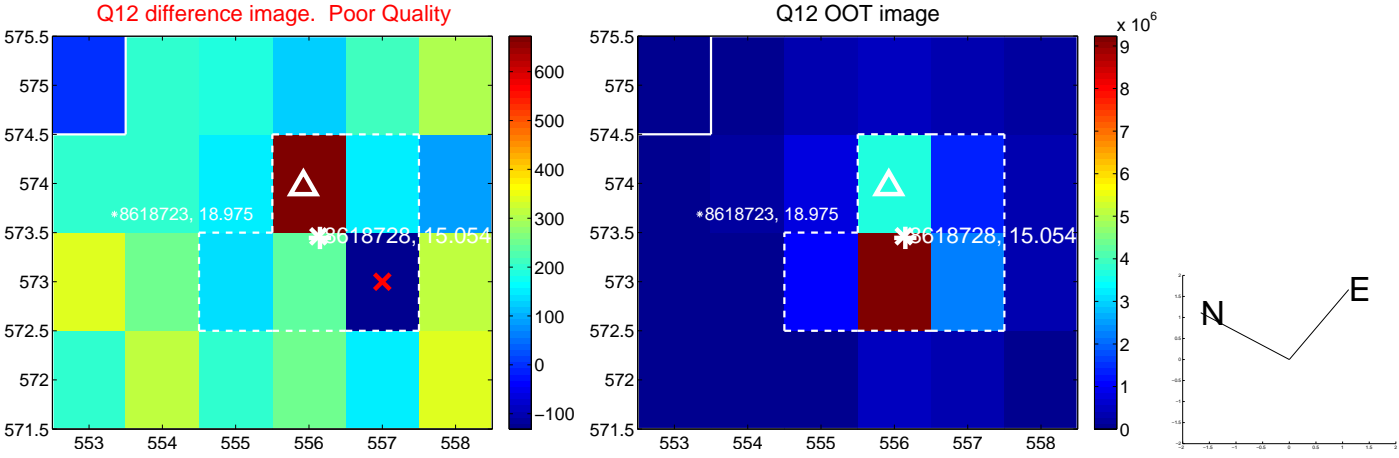
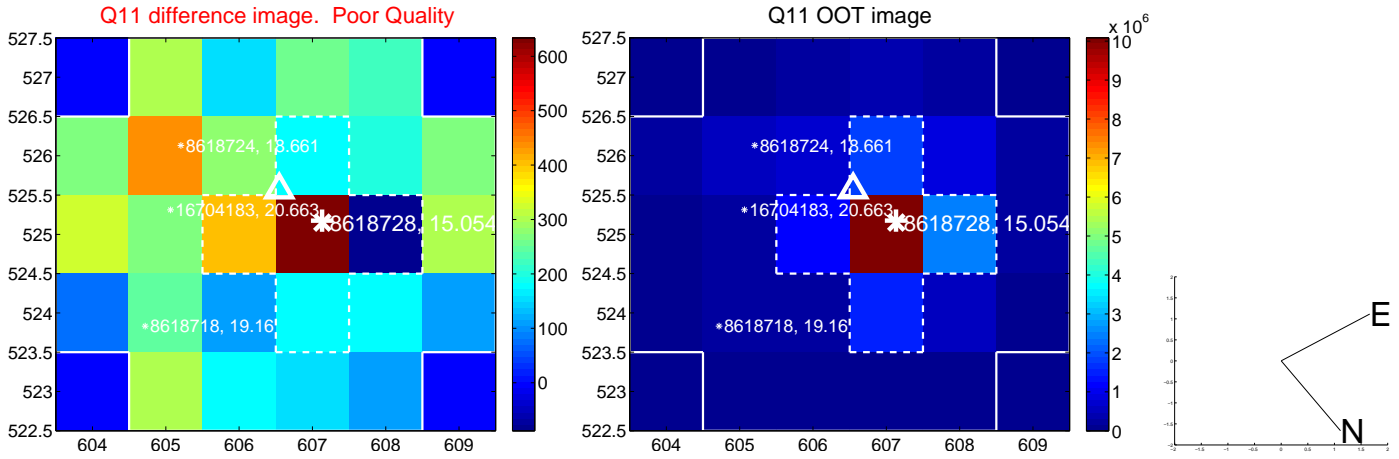
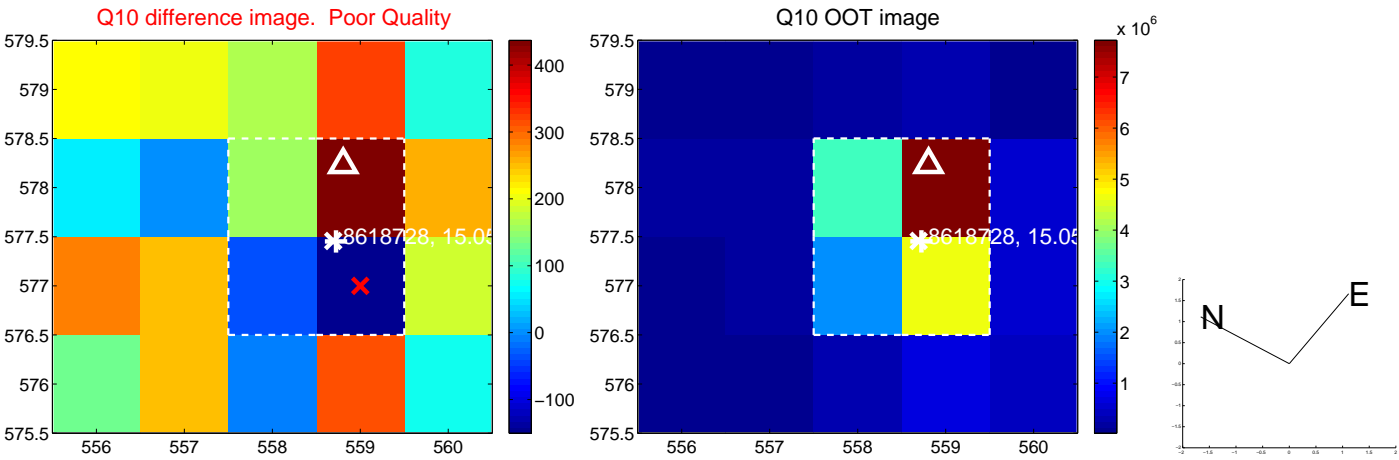
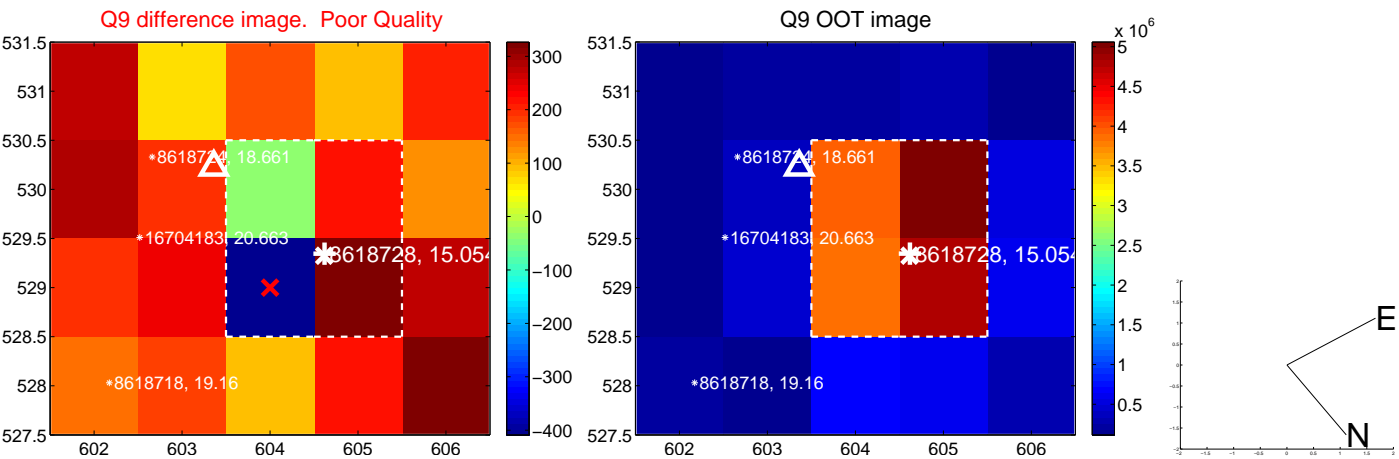
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



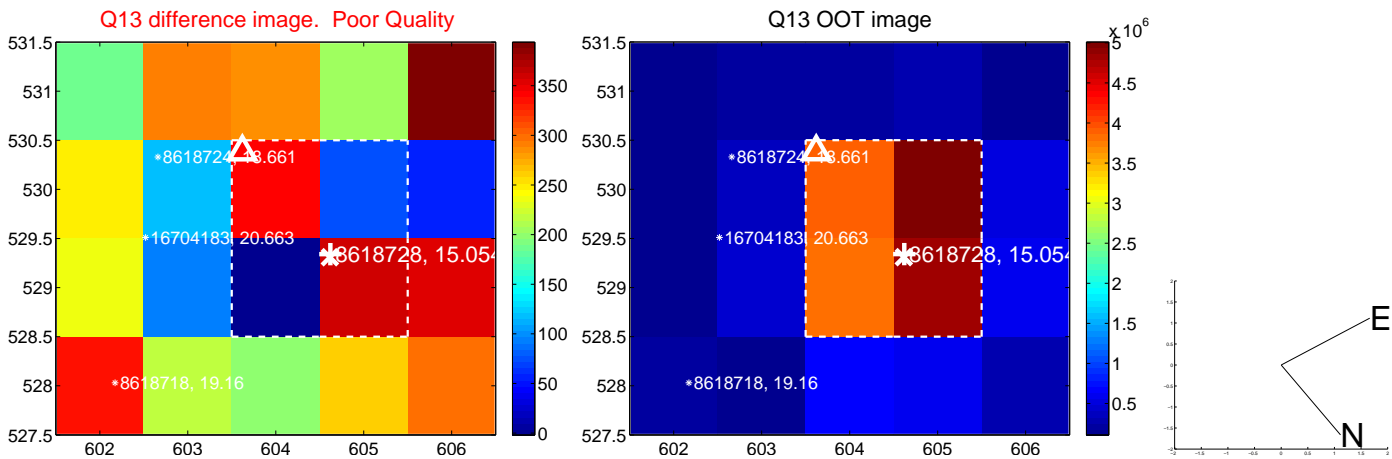
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



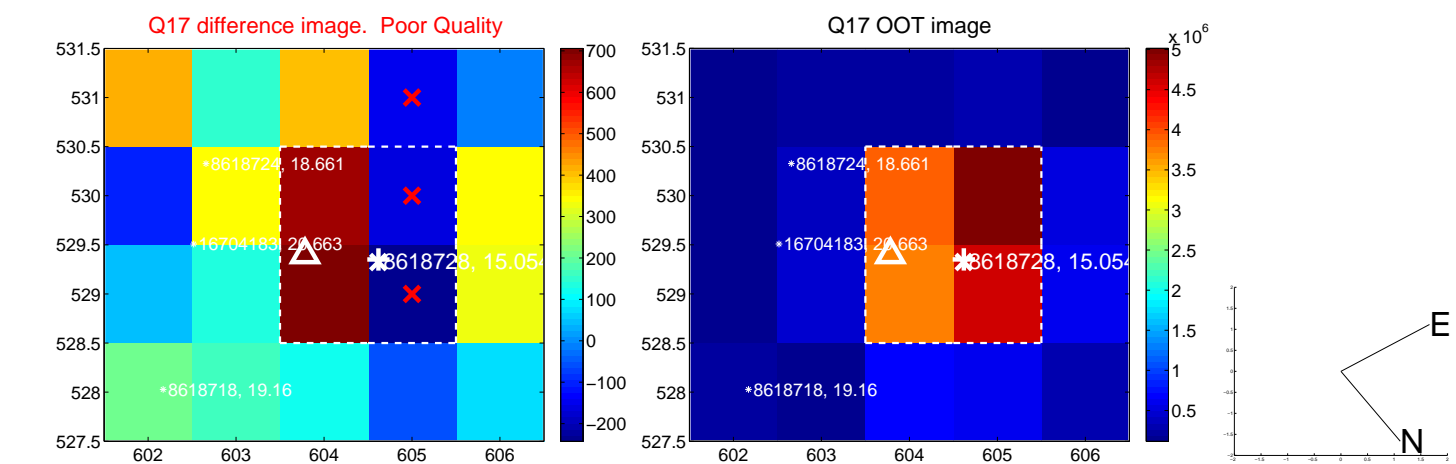
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



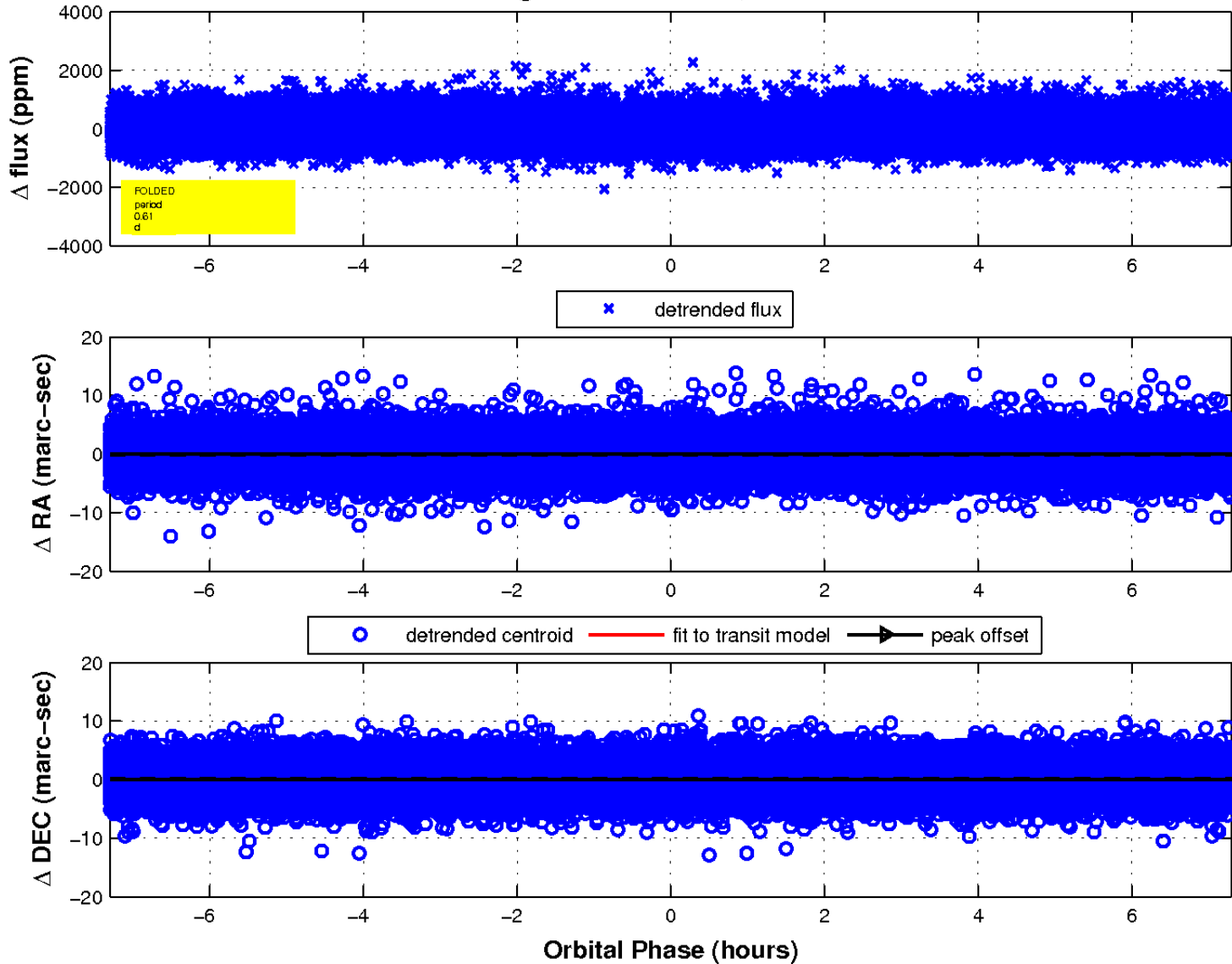
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

