

KIC 006383595

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})
006383595-01	OBS	No	2.815269	132.662875	17.6	8.316	7.9	5.8	4.28	6606	2.09	13590.83

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006383595-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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 006383595-01

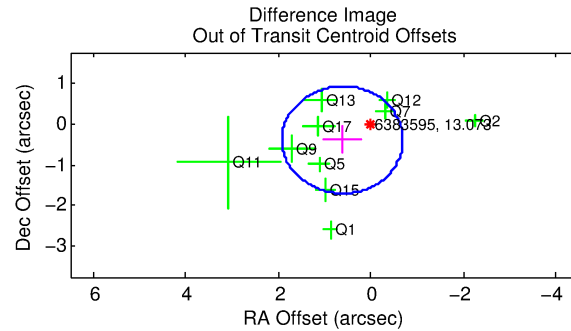
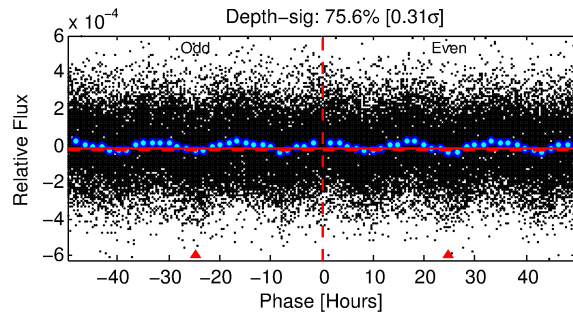
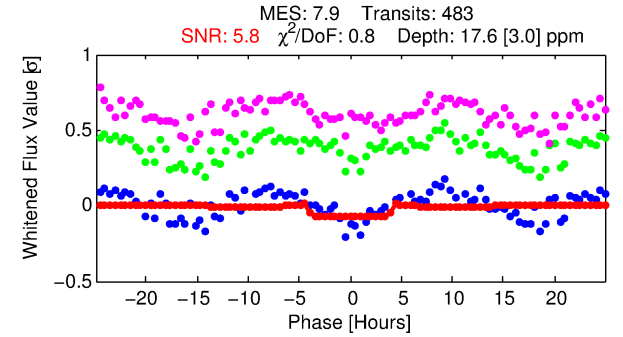
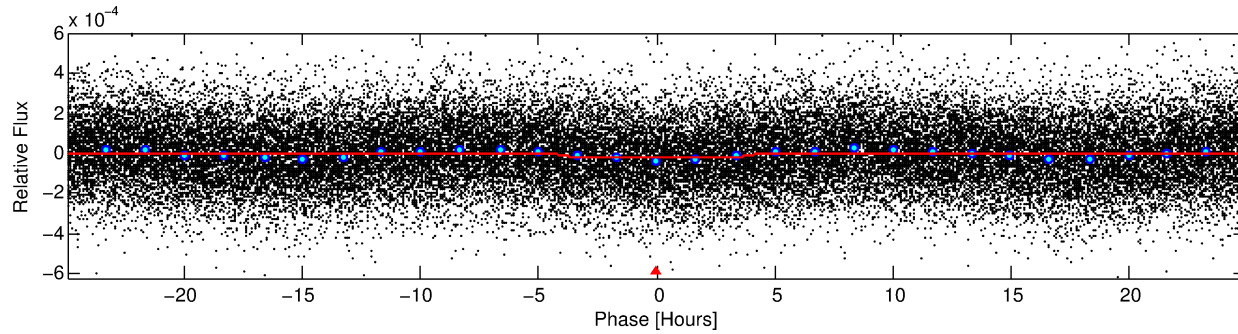
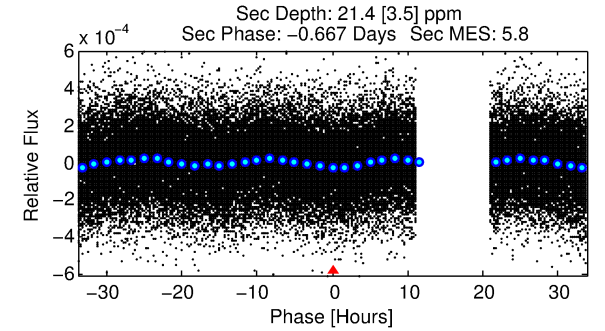
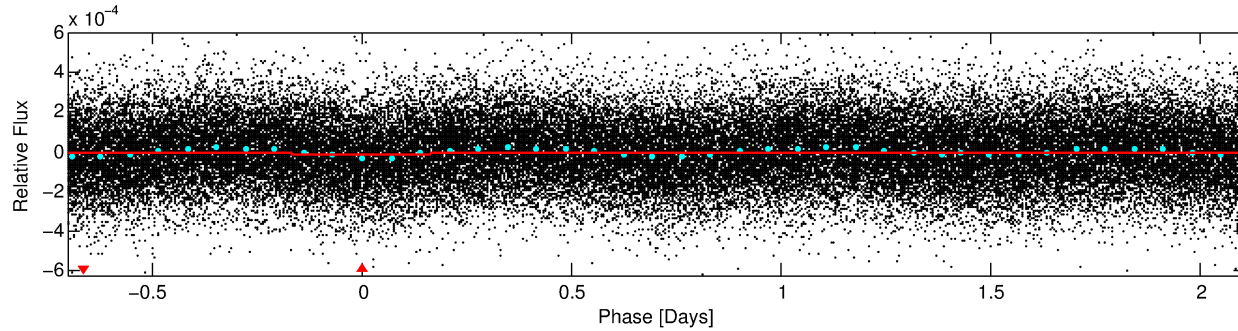
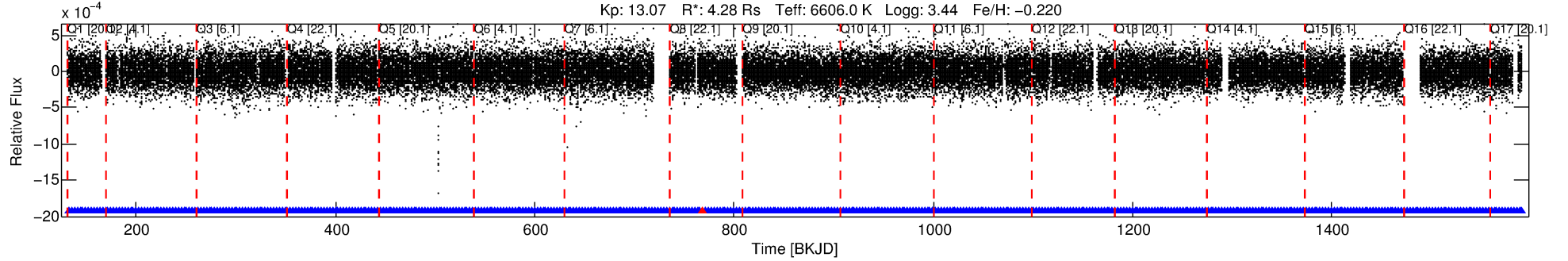
No Significant Match Found

DV One-Page Summary

KIC: 6383595 Candidate: 1 of 1 Period: 2.815 d

KOI: K04231 Corr: No Ephemeris Match

Kp: 13.07 R*: 4.28 Rs Teff: 6606.0 K Logg: 3.44 Fe/H: -0.220



DV Fit Results:

Period = 2.81527 [0.00005] d
Epoch = 132.6629 [0.0093] BKJD
Rp/R* = 0.0045 [0.0014]
a/R* = 1.49 [1.45]
b = 0.90 [0.38]
Seff = 13590.84 [8928.47]
Teq = 2753 [452] K
Rp = 2.09 [1.06] Re
a = 0.0479 [0.0191] AU
Ag = 6.18 [5.59] [0.93σ]
Teffp = 6713 [1082] K [3.38σ]

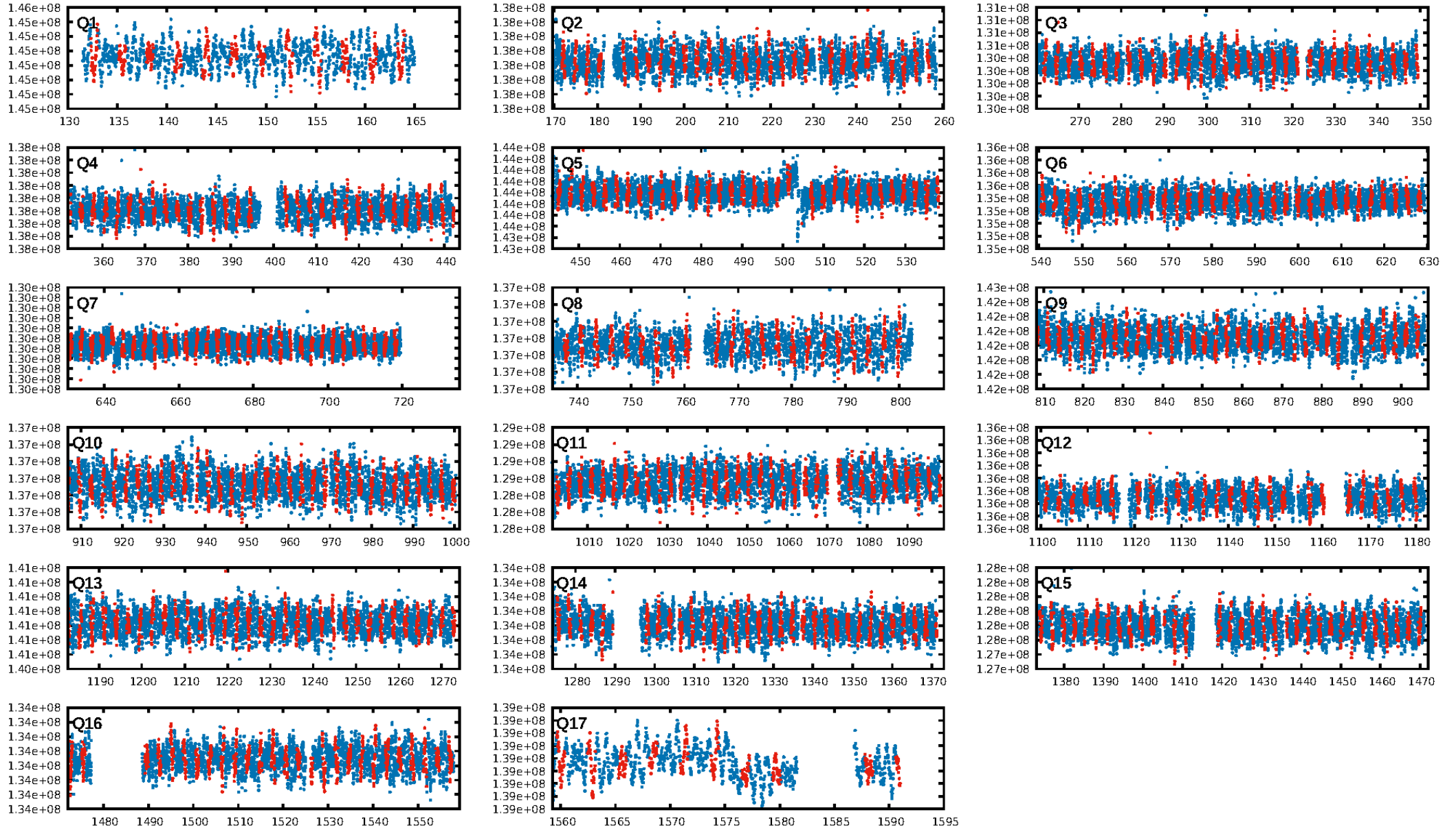
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.09e-13
RollingBand-fgt: 1.00 [460/461]
GhostDiagnostic-chr: 1.899
Centroid-sig: 0.1%
Centroid-so: 2.459 arcsec [1.96σ]
OotOffset-rm: 0.731 arcsec [1.68σ]
KicOffset-rm: 0.729 arcsec [1.70σ]
OotOffset-st: 1/3/1/5 [10]
KicOffset-st: 1/3/1/5 [10]
DiffImageQuality-fgm: 0.60 [6/10]
DiffImageOverlap-fno: 1.00 [17/17]

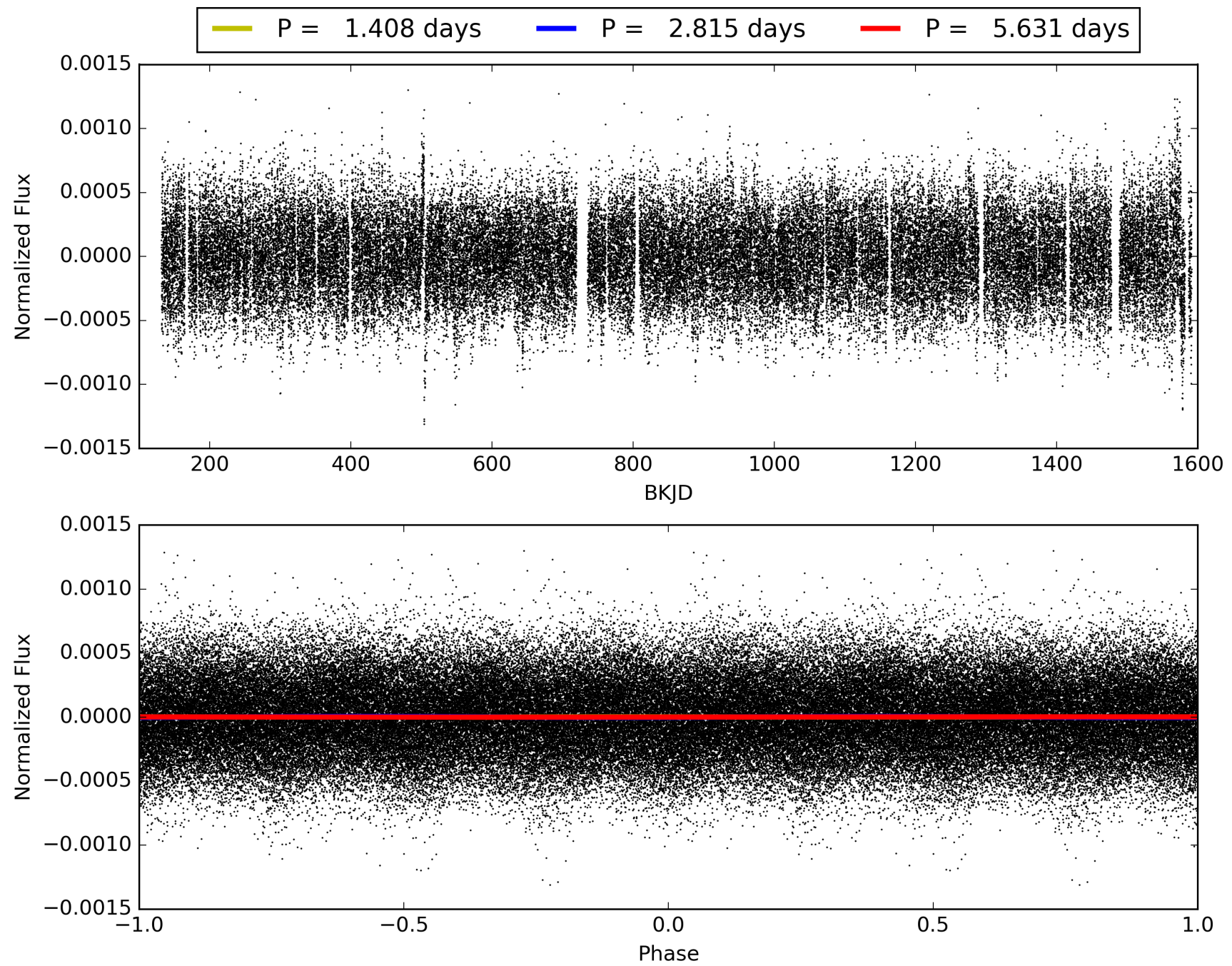
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:48:12 Z

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

TCE 006383595-01, PDC Light Curves

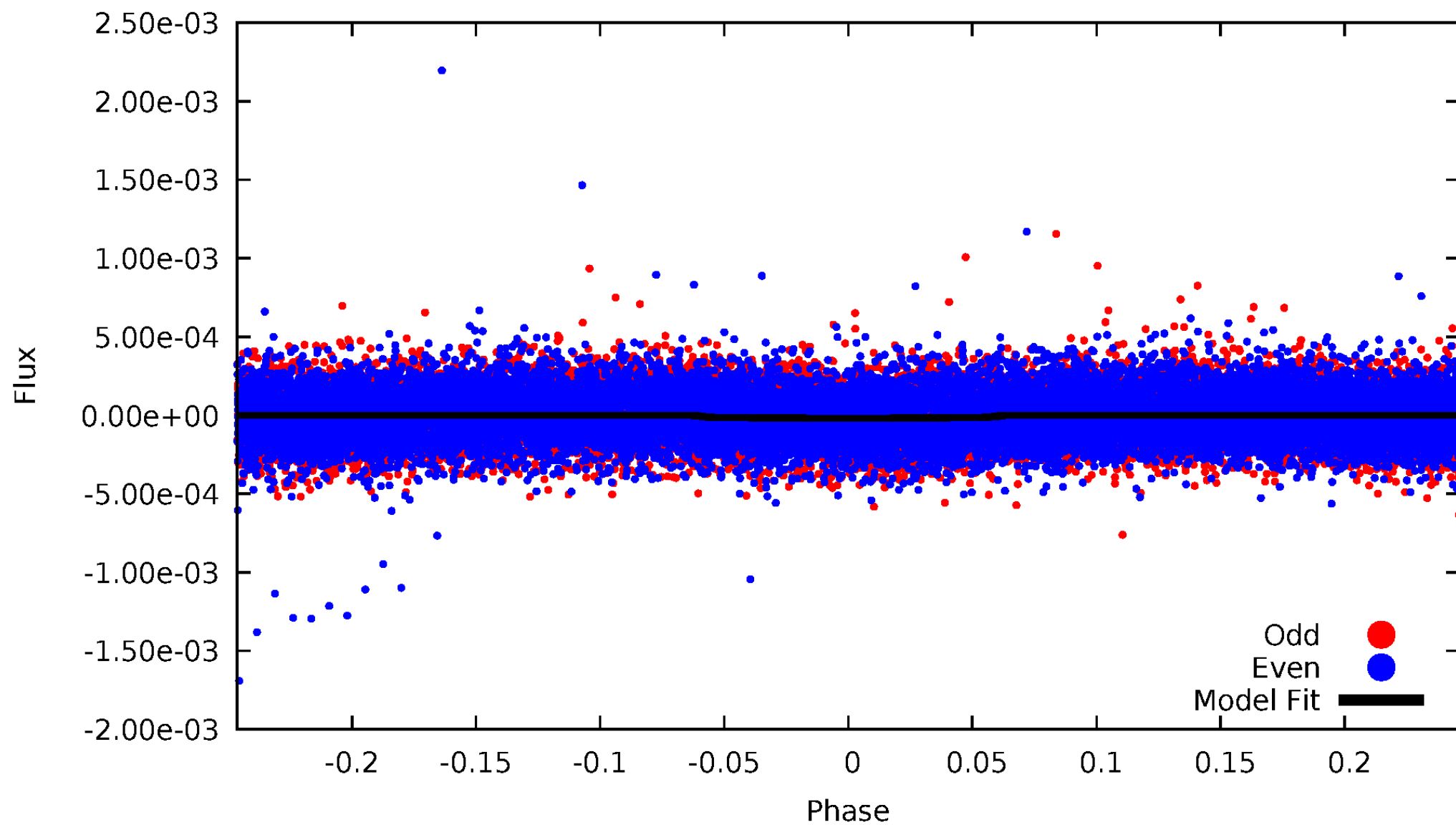


TCE 006383595-01



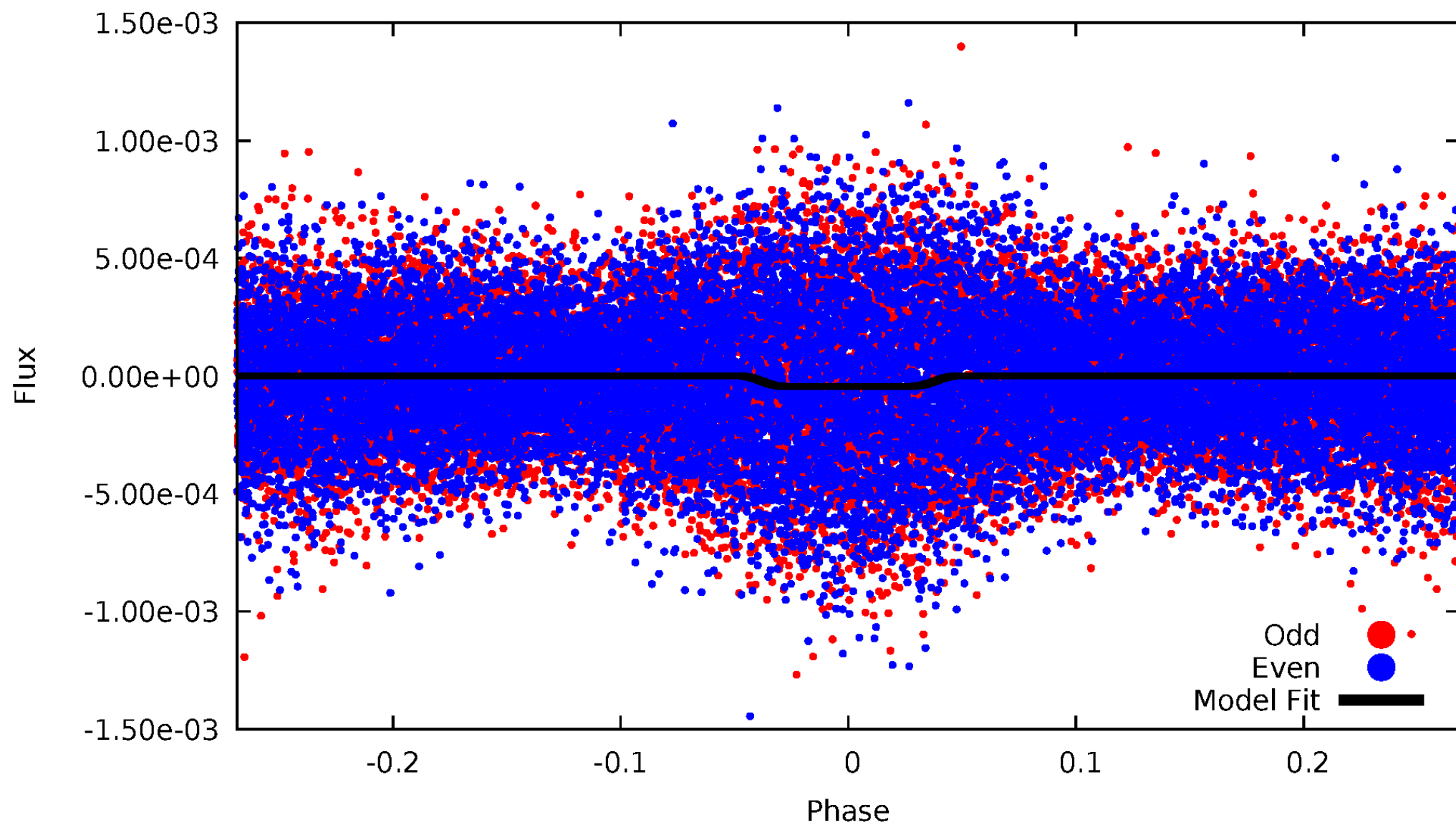
DV Odd/Even

TCE 006383595-01



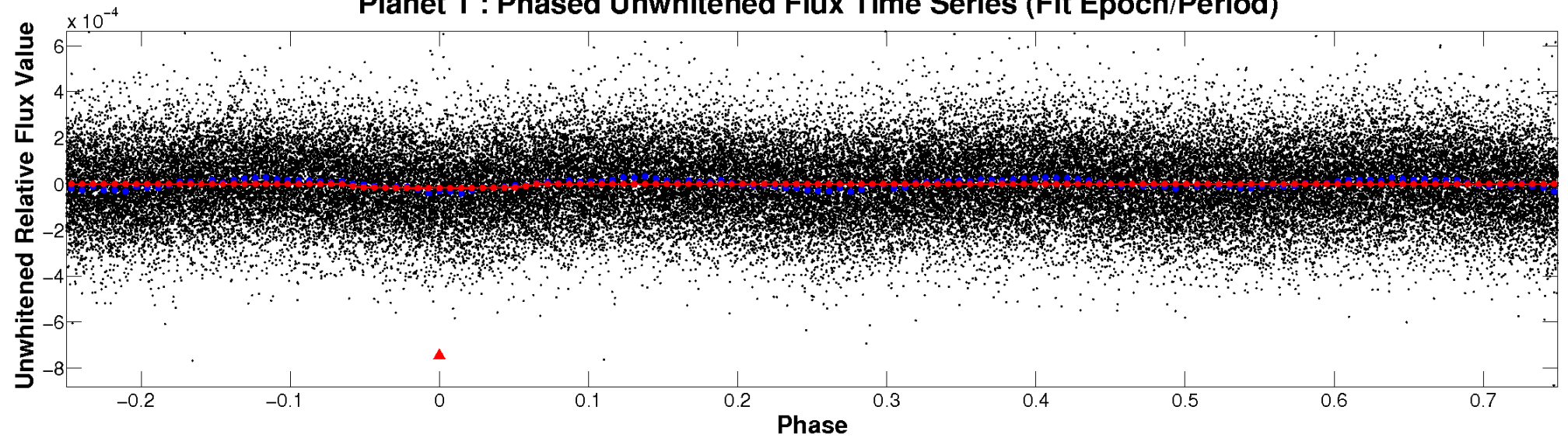
ALT Odd/Even

TCE 006383595-01

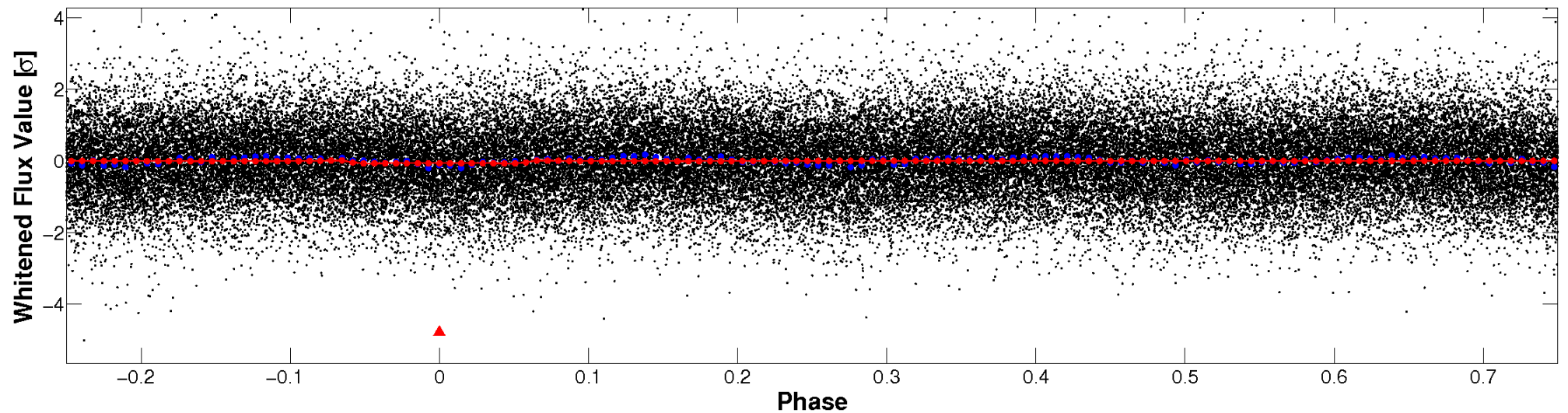


Non-Whitened Vs. Whitened Light Curve

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

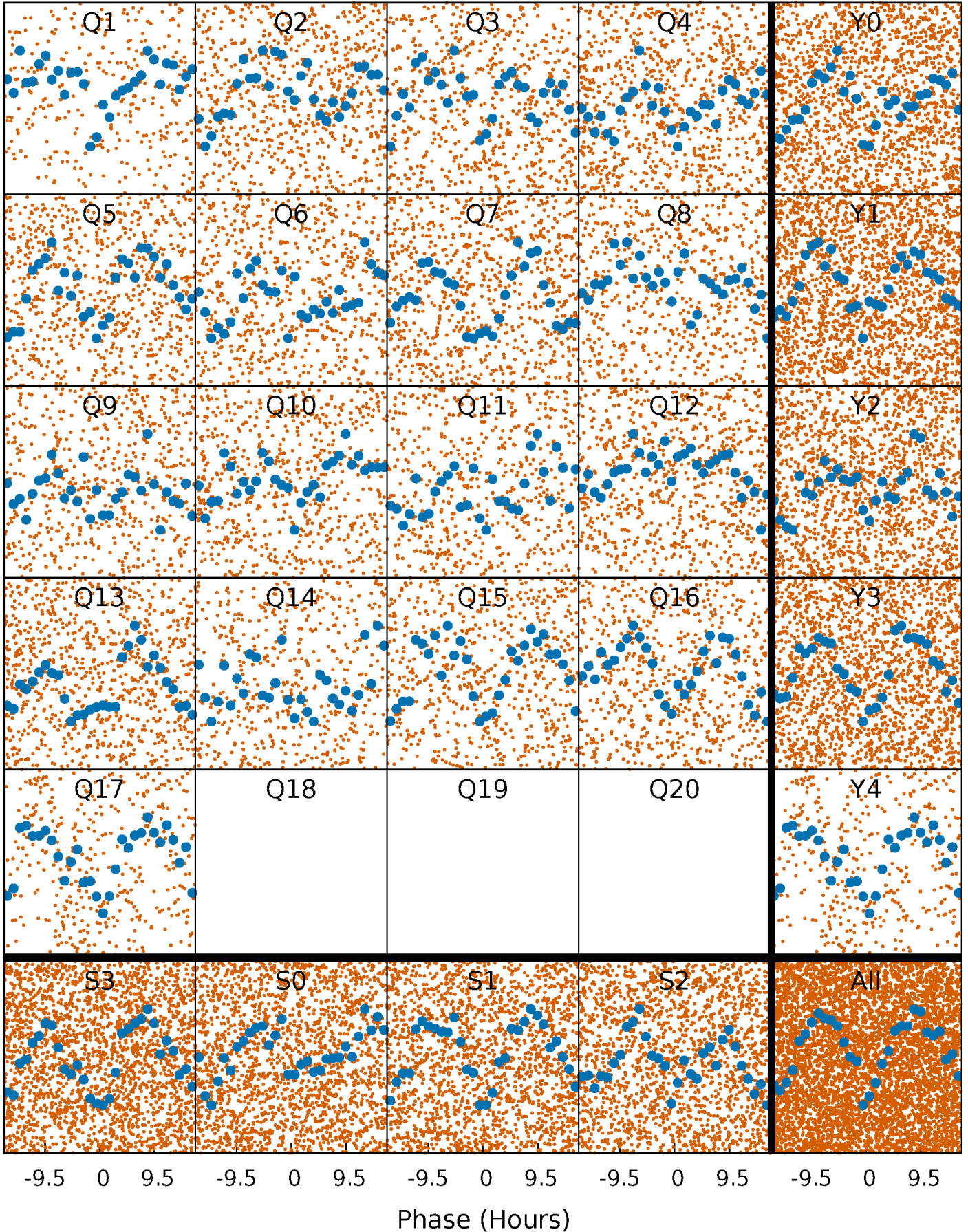


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



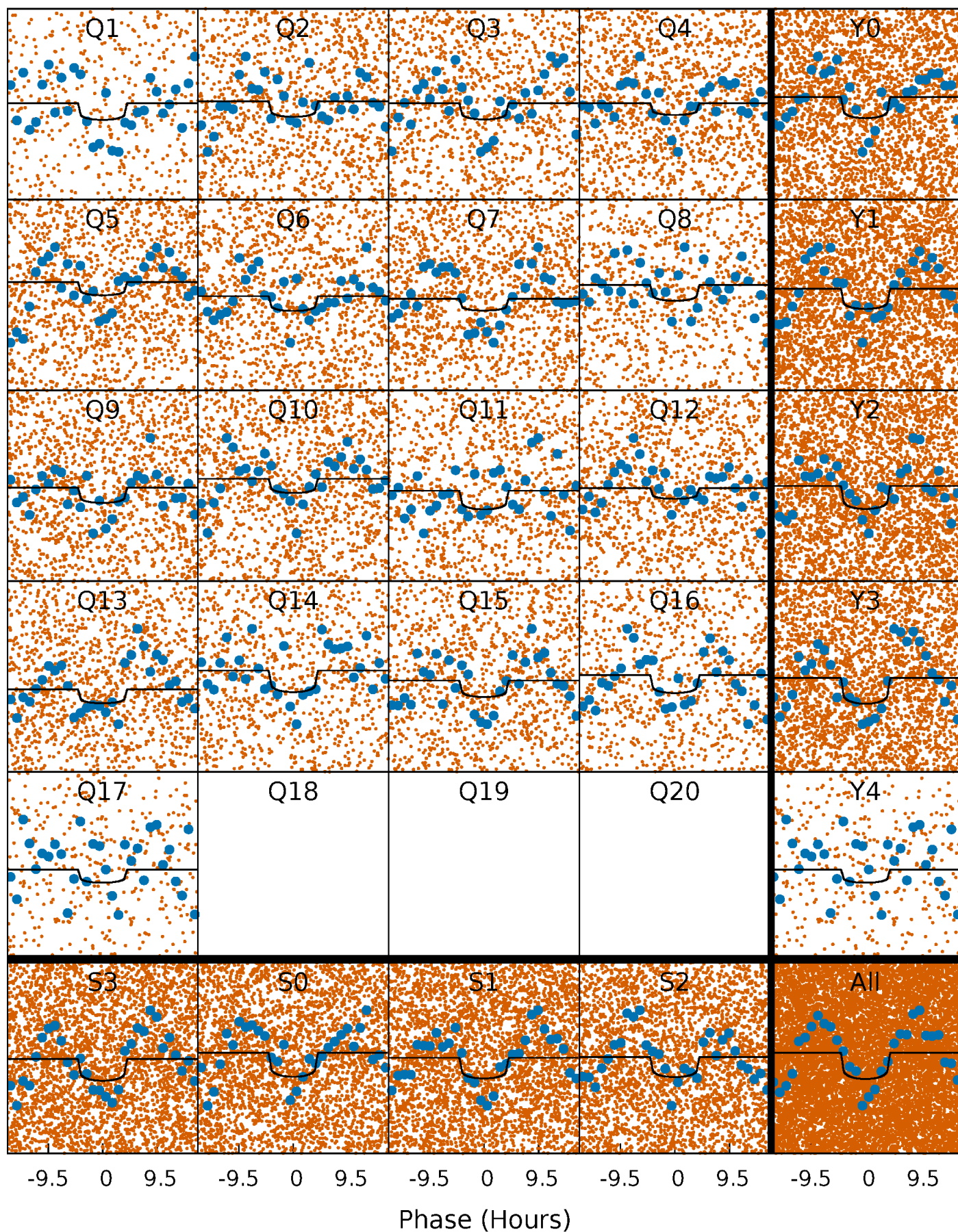
PDC Quarter-Phased Transit Curves

TCE 006383595-01 P= 2.815269 Days $T_0=132.662874$ (BKJD)



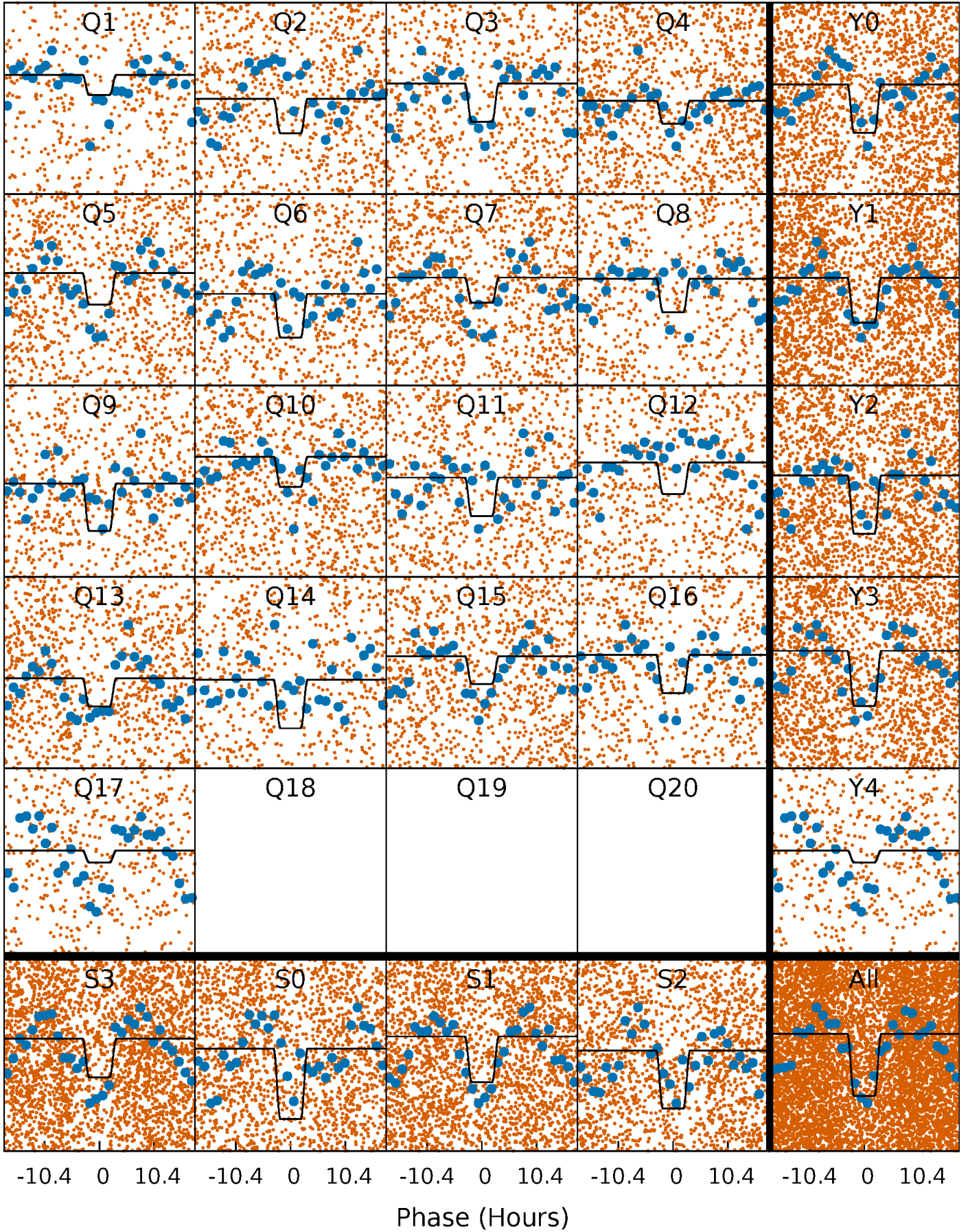
DV Quarter-Phased Transit Curves

TCE 006383595-01 P= 2.815269 Days $T_0=132.662874$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

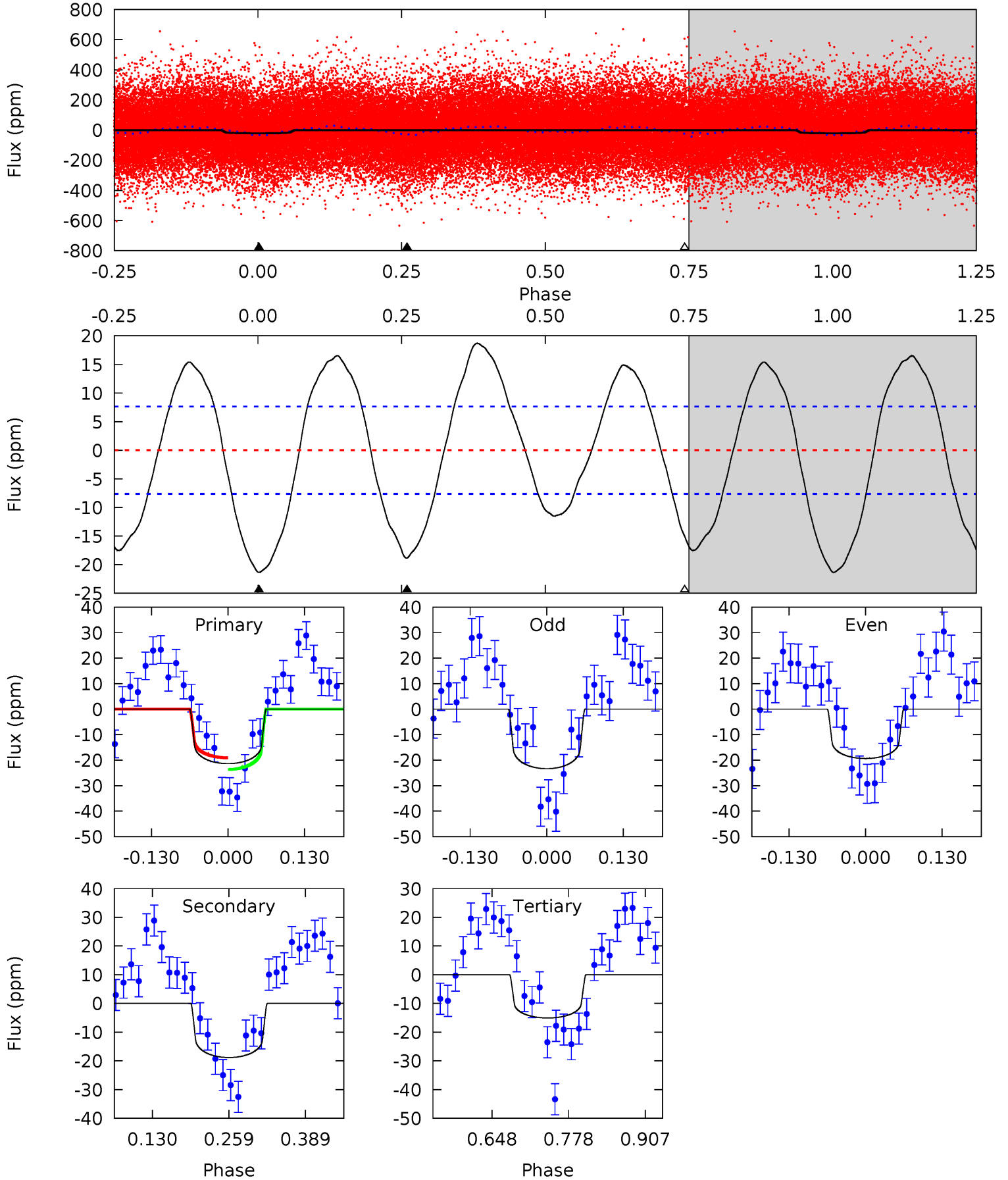
TCE 006383595-01 P= 2.815389 Days $T_0=132.652001$ (BKJD)



DV Model-Shift Uniqueness Test

006383595-01, P = 2.815269 Days, E = 129.847605 Days

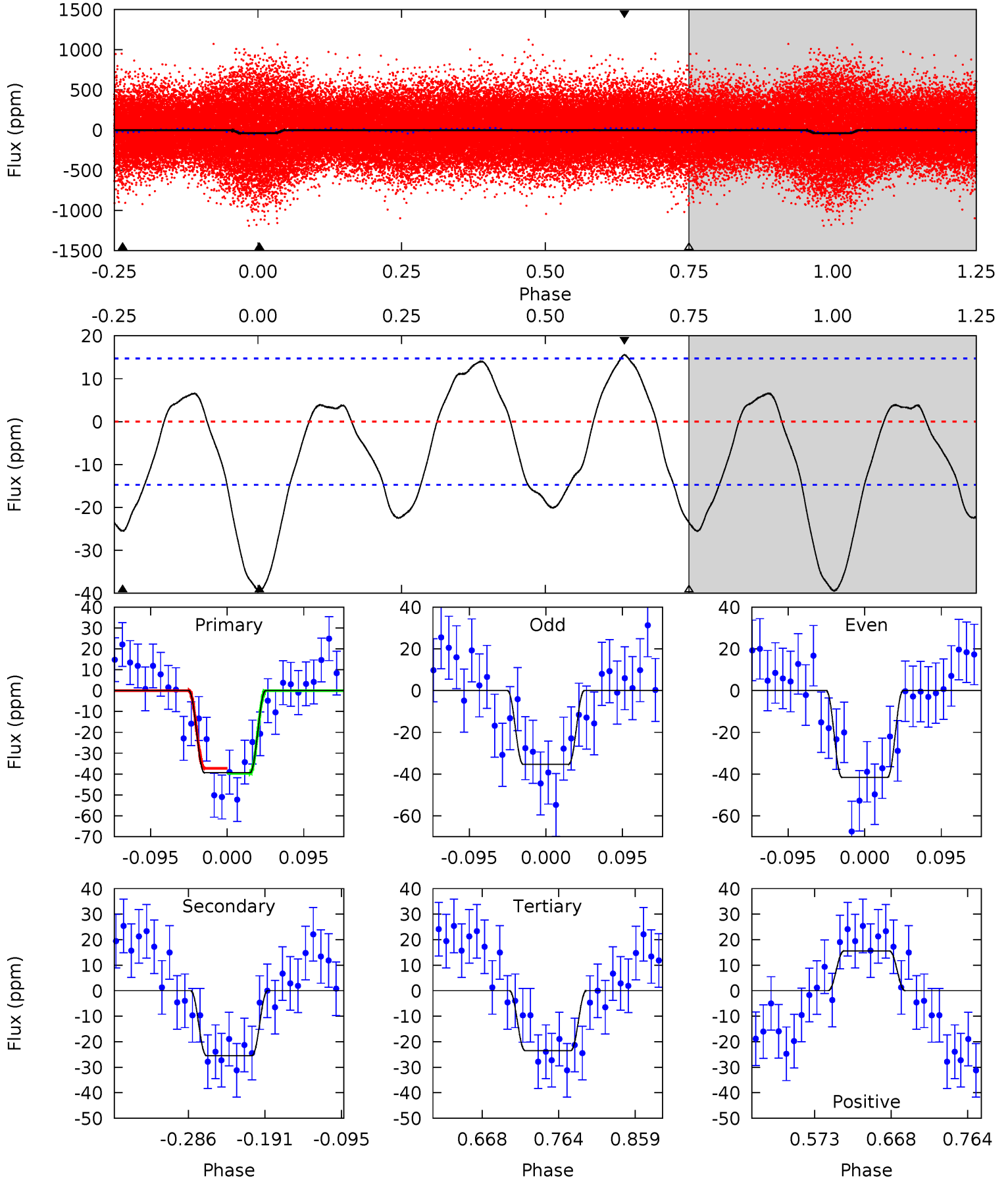
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.6	11.1	8.89	0	4.51	1.52	6.23	3.72	12.6	2.23	11.1	1.17	0.99	0.47	1.36



Alt Model-Shift Uniqueness Test

006383595-01, P = 2.815389 Days, E = 129.836612 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.2	7.91	7.31	4.84	4.57	1.67	3.63	4.93	7.40	0.61	3.08	0.97	1.00	0.28	0.38



Stellar Parameters For KIC 006383595

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6606^{+179}_{-199}	$3.443^{+0.382}_{-0.090}$	$-0.220^{+0.350}_{-0.300}$	$4.275^{+0.578}_{-1.735}$	$1.852^{+0.107}_{-0.428}$	$0.033^{+0.099}_{-0.010}$
	+3%/-3%	+11%/-3%	+159%/-136%	+14%/-41%	+6%/-23%	+295%/-29%
Source	PHO1	FLK73	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 006383595-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-19 ± 2	$1.89^{+0.75}_{-0.67}$	3766^{+221}_{-401}	6437^{+1568}_{-899}	$6.468^{+8.836}_{-3.177}$
Alt.	-25 ± 3	$2.79^{+0.76}_{-0.76}$	3754^{+235}_{-401}	5647^{+795}_{-537}	$4.025^{+3.438}_{-1.550}$

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

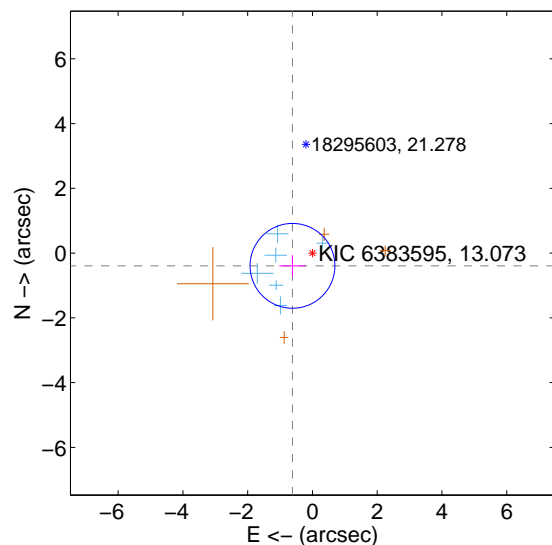
Supplemental centroid analysis for 006383595-01. Kepler magnitude: 13.07. Transit SNR 5.84

There are 6 quarters with good PRF difference image offsets

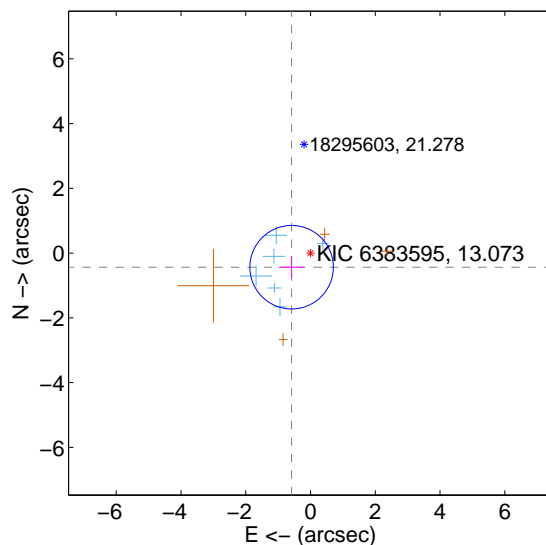
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.731 ± 0.437	1.68	0.617 ± 0.409	-0.393 ± 0.329
PRF-fit source offset from KIC position	0.729 ± 0.430	1.70	0.584 ± 0.396	-0.436 ± 0.350
photometric centroid source offset	2.46 ± 1.26	1.96	-0.67 ± 1.25	-2.37 ± 1.26

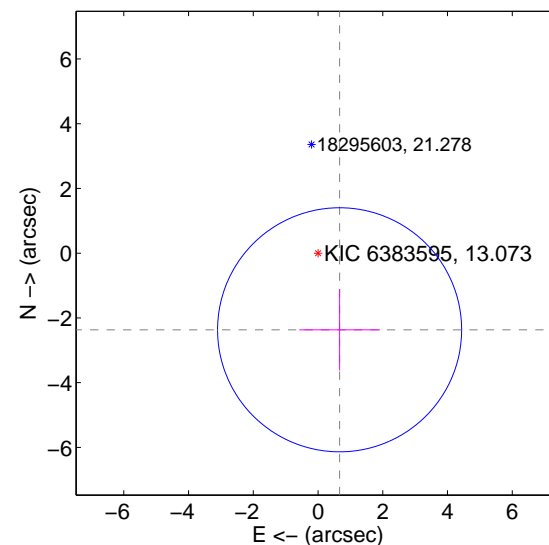
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

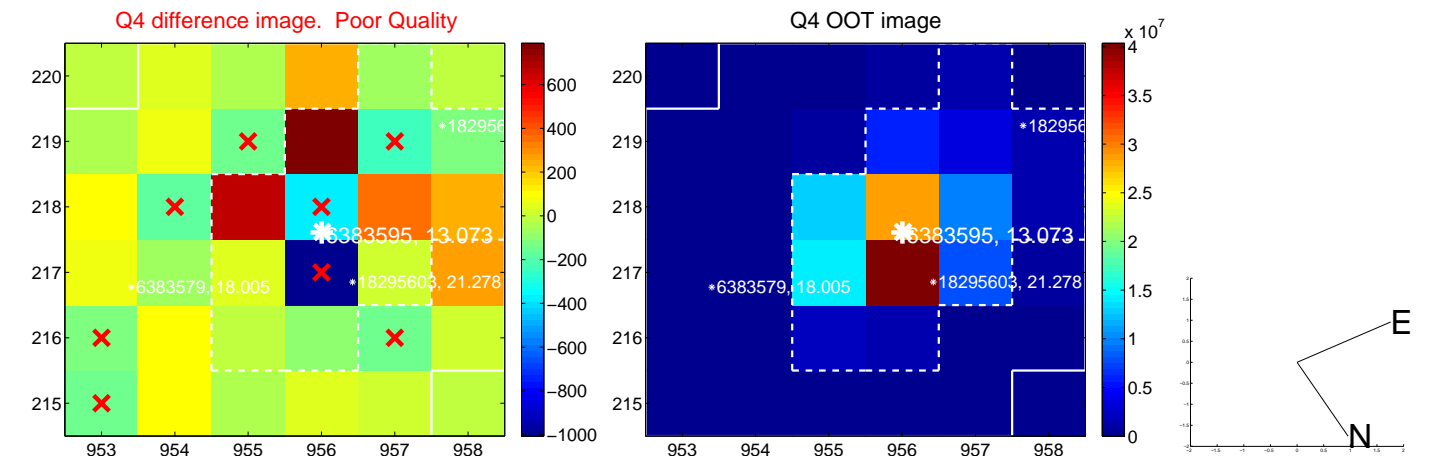
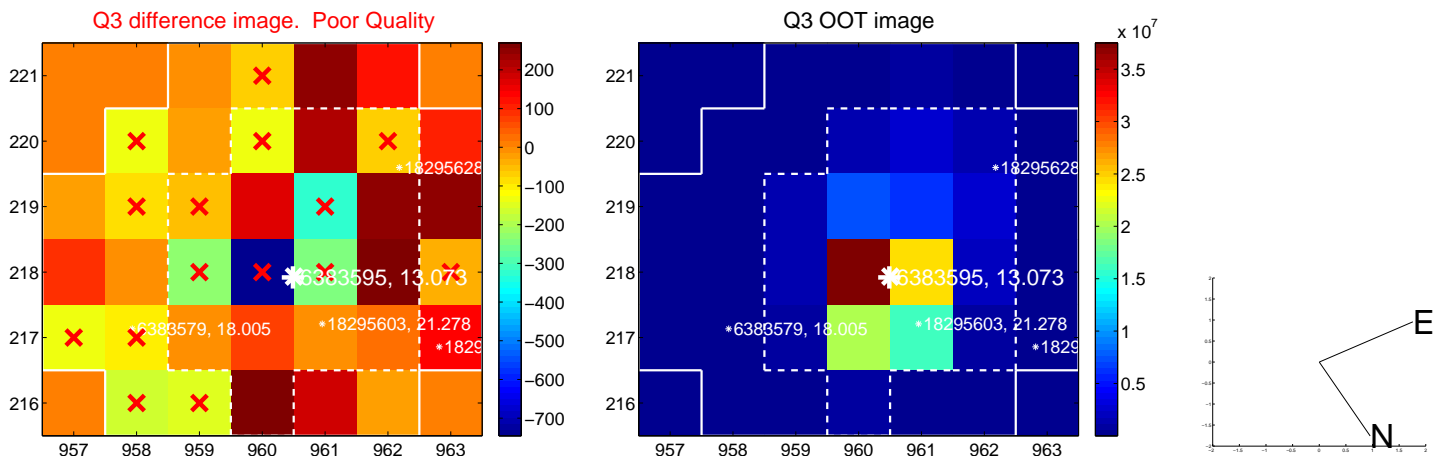
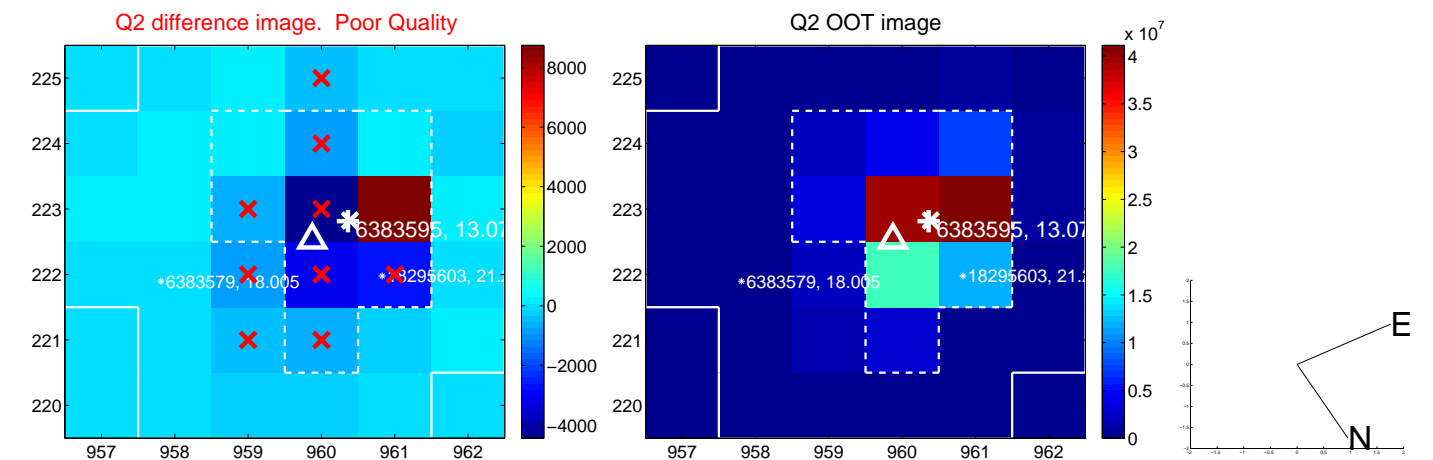
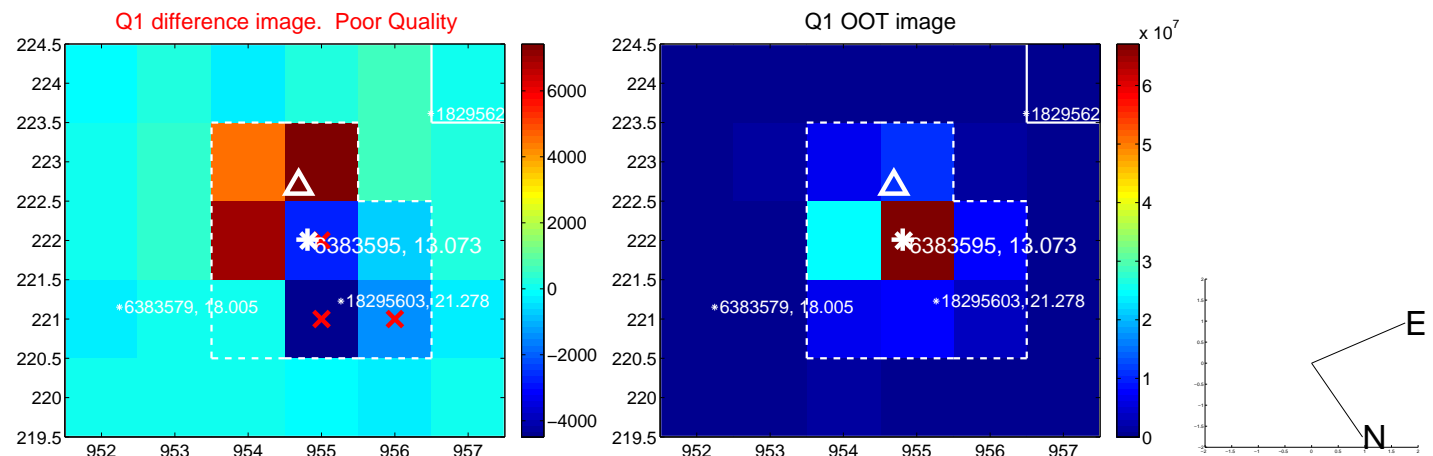


offset from photometric centroids

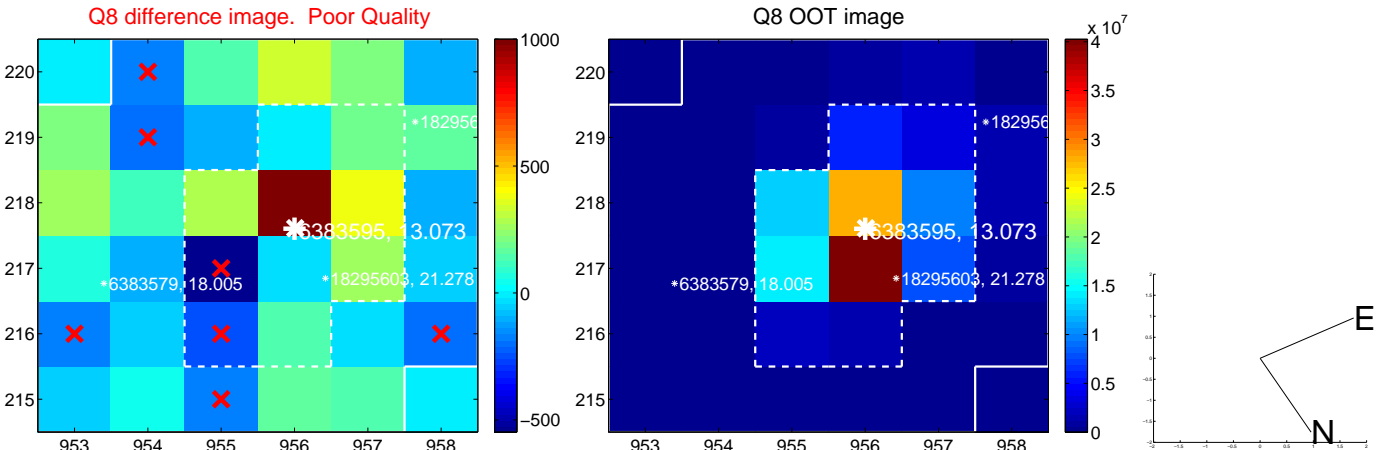
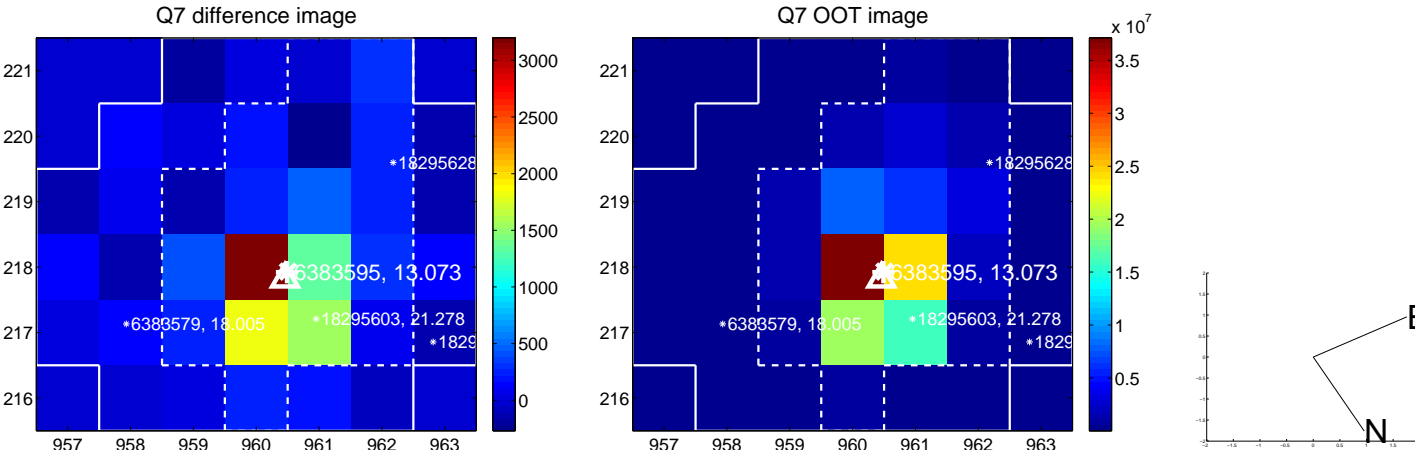
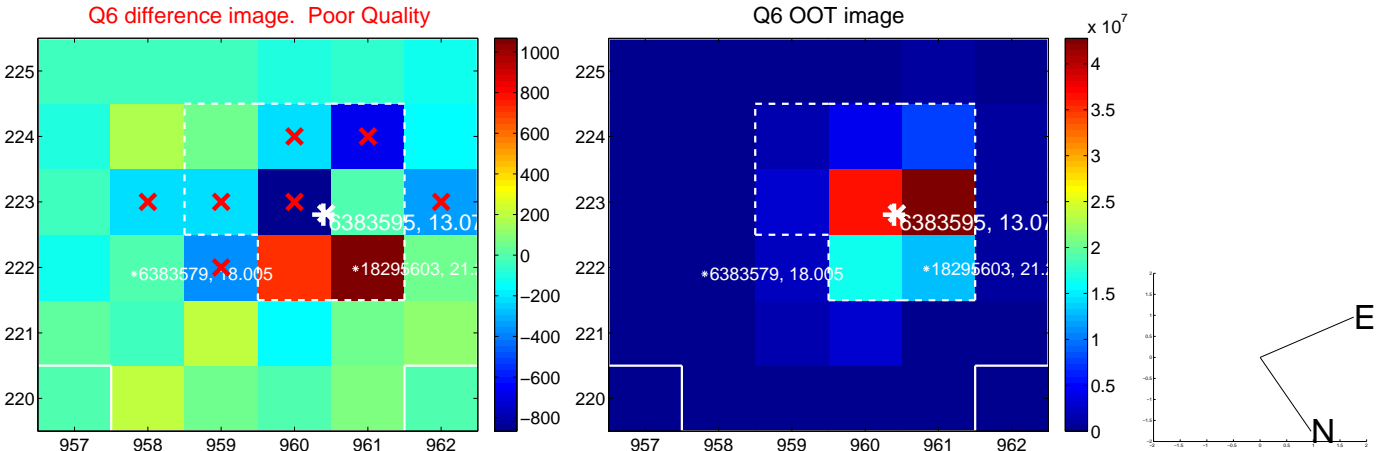
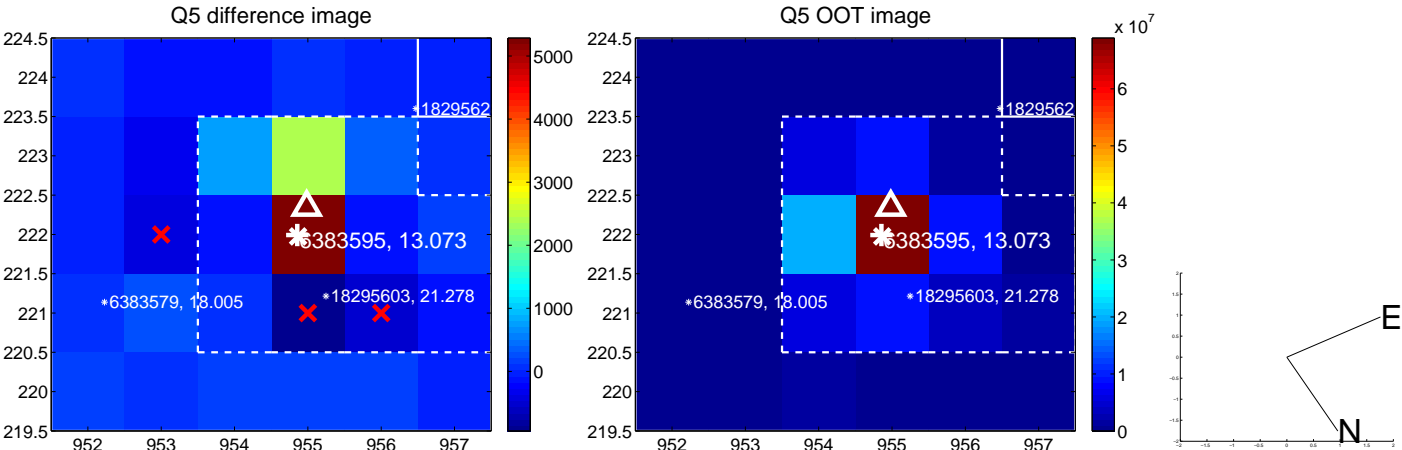


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

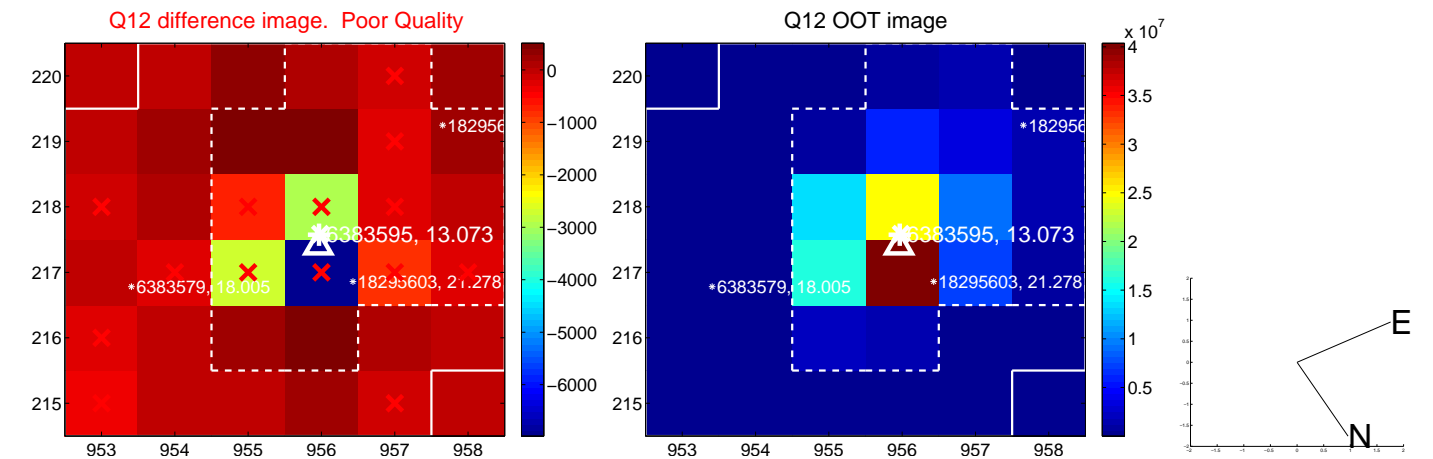
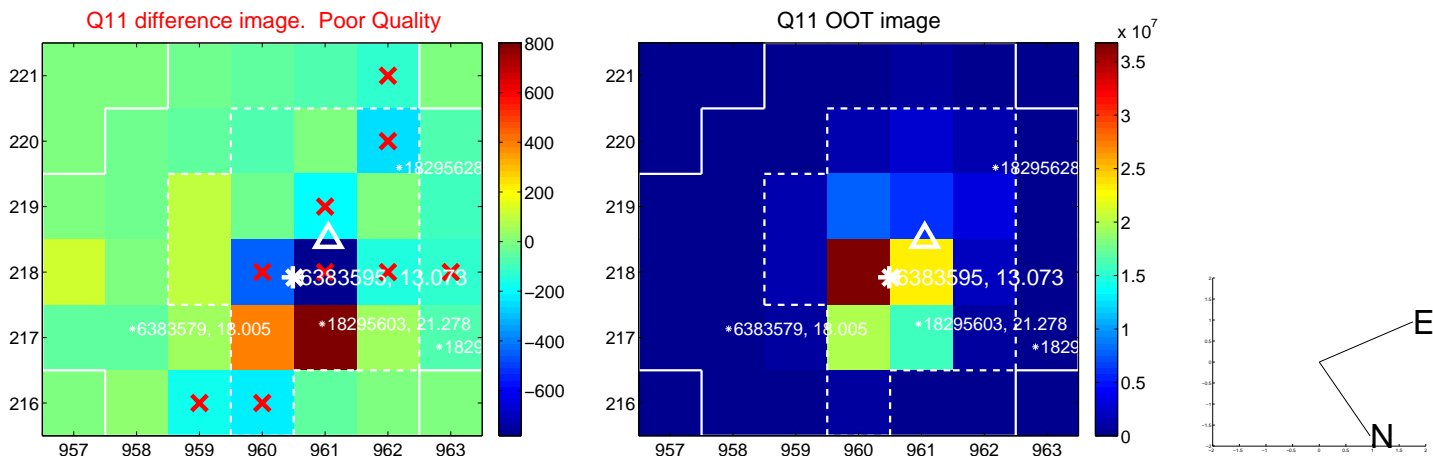
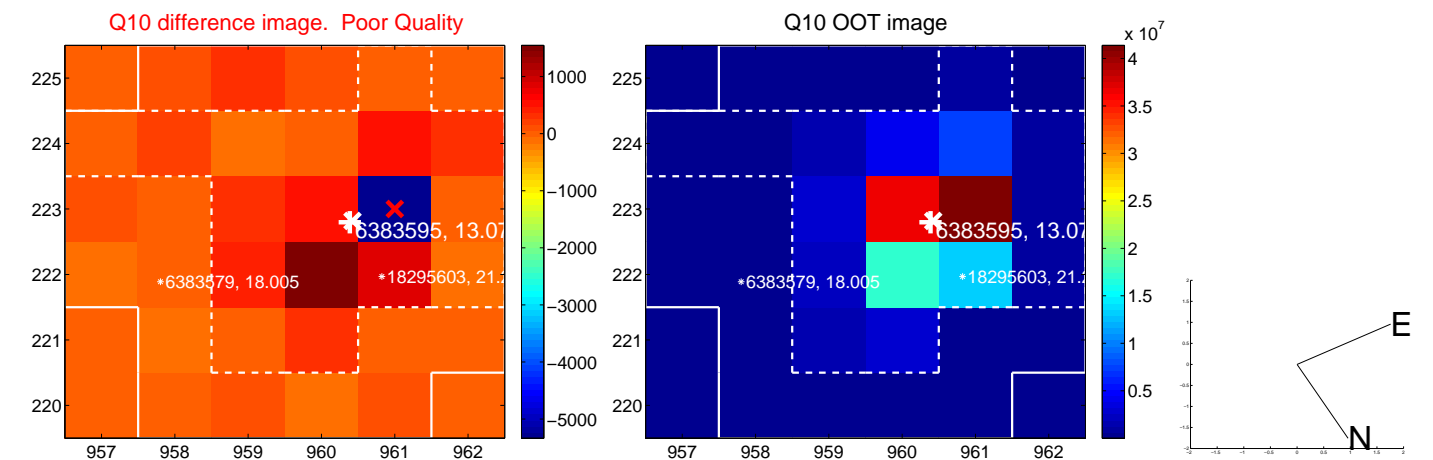
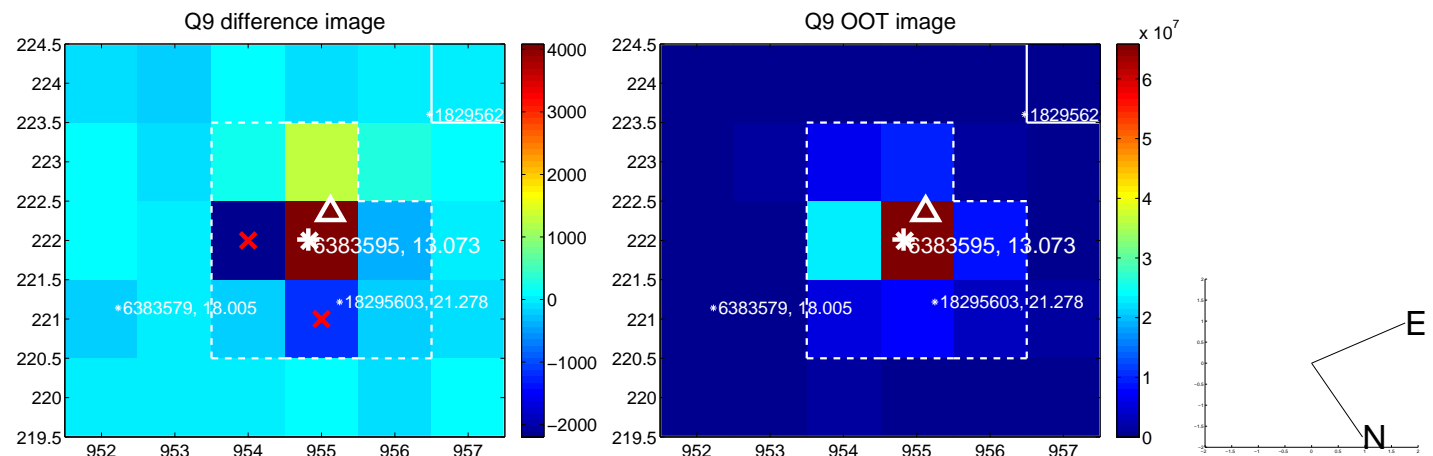
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



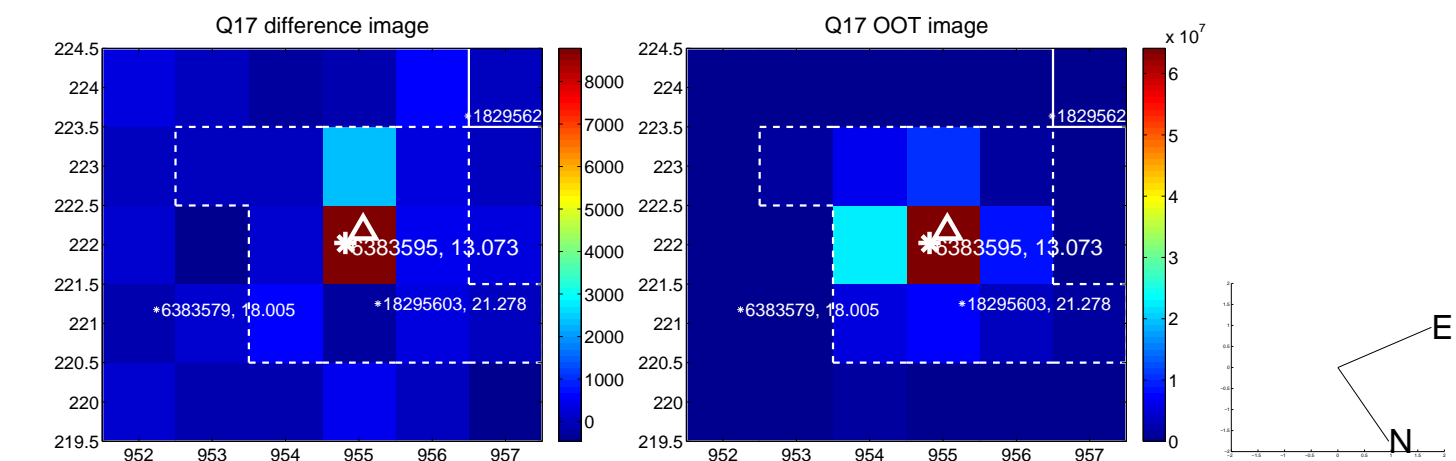
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



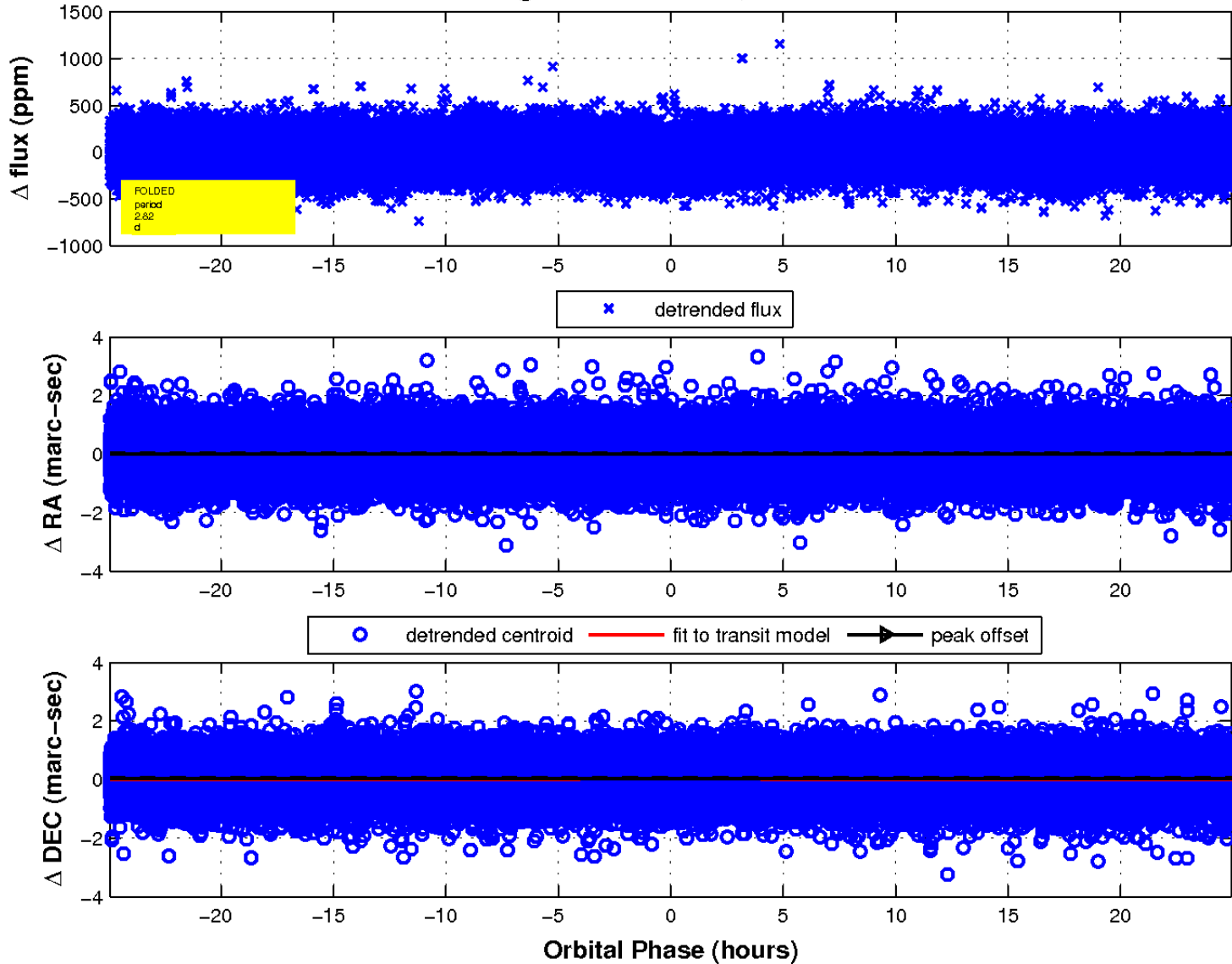
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

