

KIC 006209637

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})
006209637-01	OBS	No	0.734423	131.549377	13.3	2.274	7.9	5.6	1.54	6779	0.65	15355.57

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006209637-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_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 006209637-01

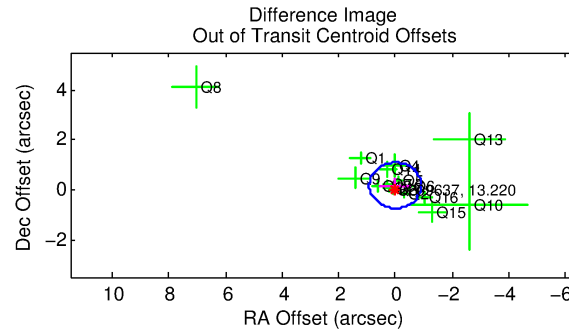
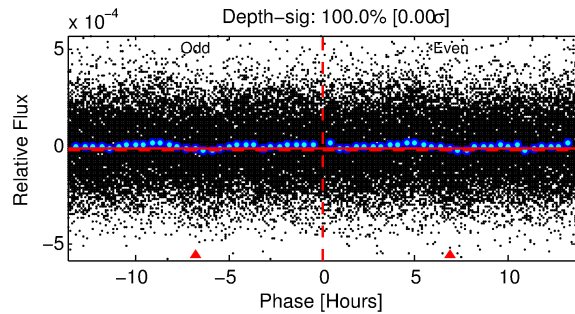
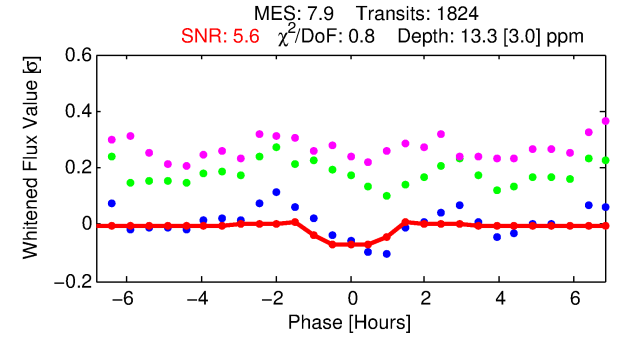
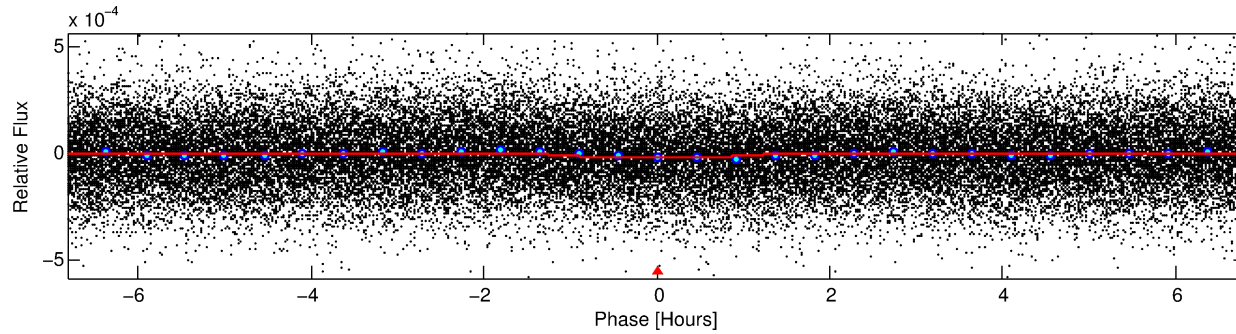
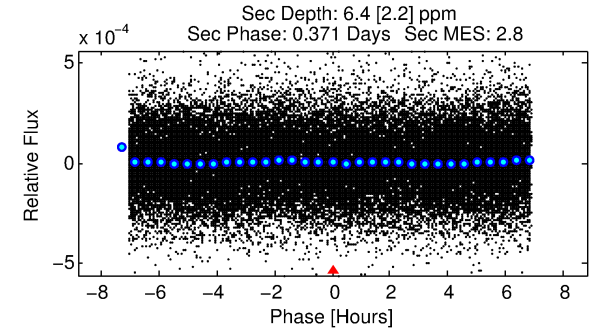
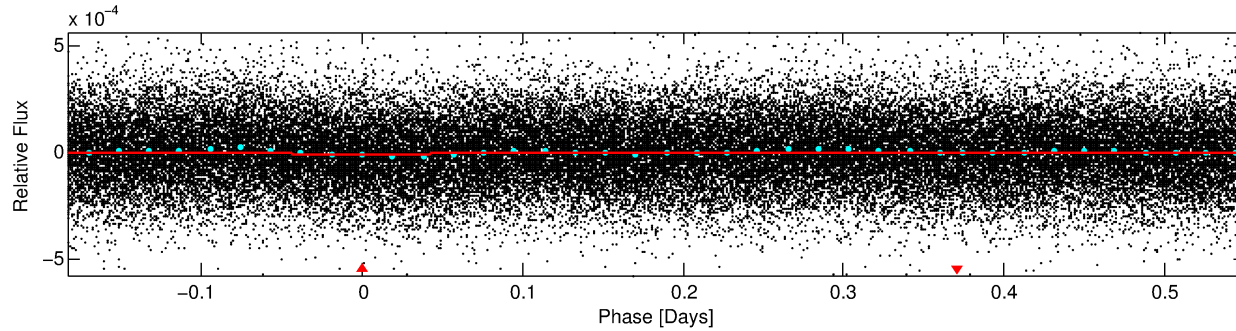
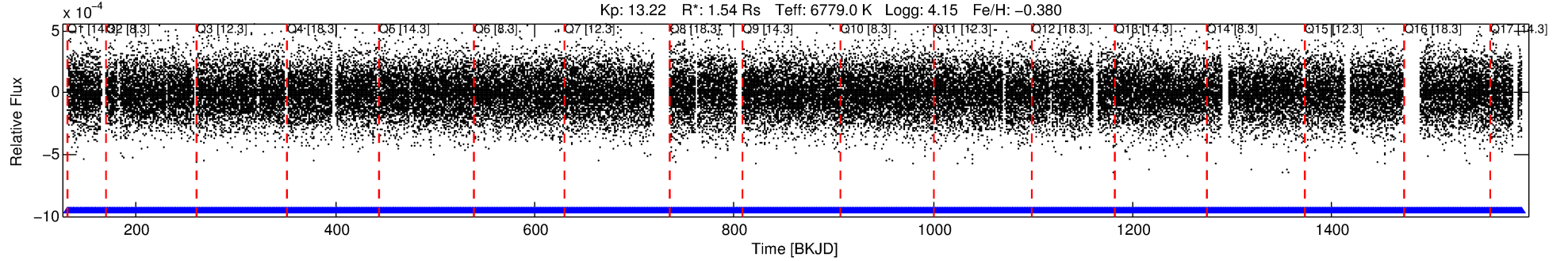
No Significant Match Found

DV One-Page Summary

KIC: 6209637 Candidate: 1 of 1 Period: 0.734 d

KOI: K01046 Corr: No Ephemeris Match

Kp: 13.22 R*: 1.54 Rs Teff: 6779.0 K Logg: 4.15 Fe/H: -0.380



DV Fit Results:

Period = 0.73442 [0.00002] d
Epoch = 131.5494 [0.0043] BKJD
Rp/R* = 0.0039 [0.0015]
a/R* = 1.44 [1.72]
b = 0.90 [0.49]
Seff = 15355.57 [6129.51]
Teq = 2839 [283] K
Rp = 0.65 [0.32] Re
a = 0.0171 [0.0042] AU
Ag = 2.41 [2.24] [0.63σ]
Teffp = 5469 [1185] K [2.16σ]

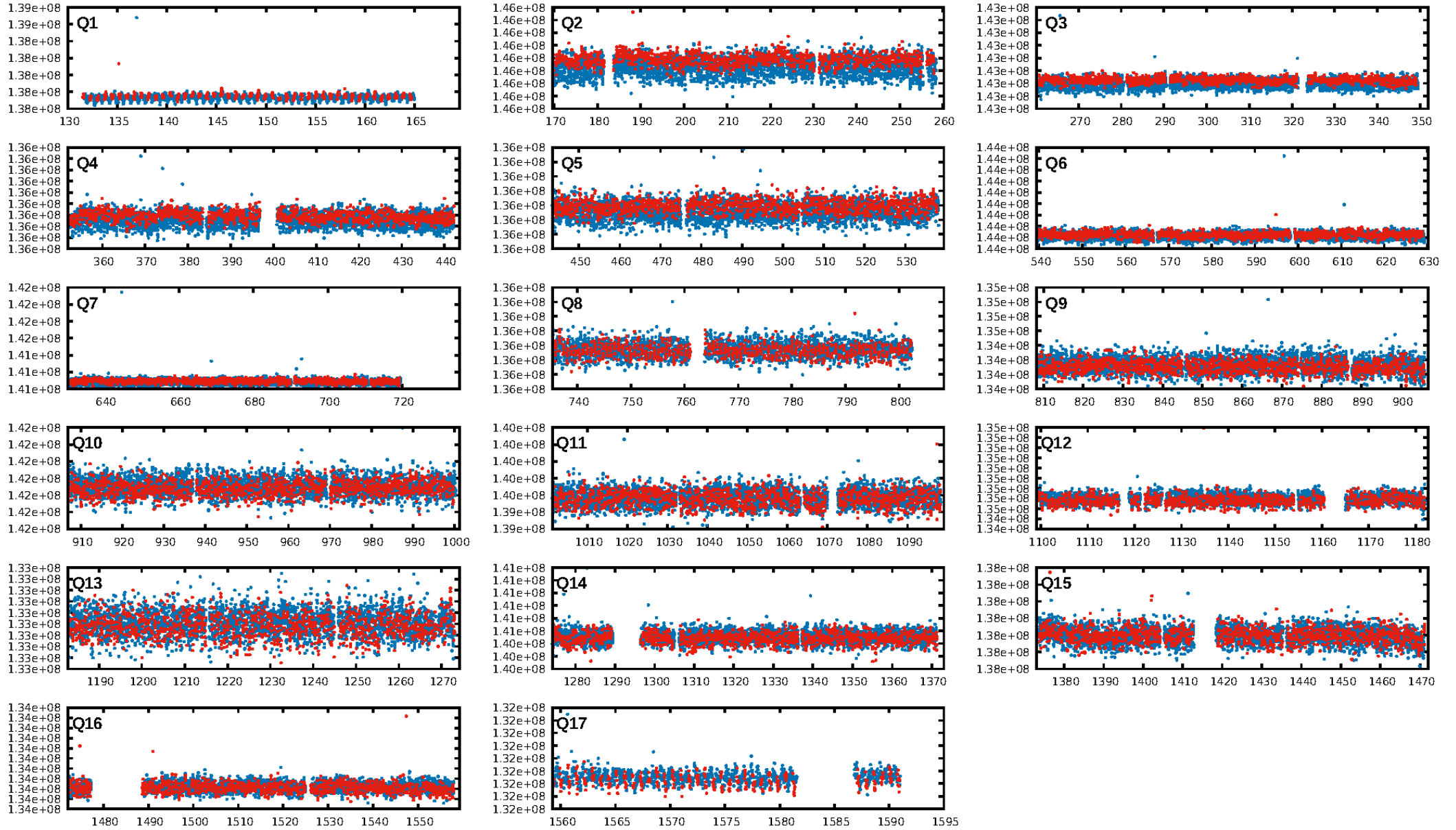
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.24e-13
RollingBand-fgt: 1.00 [1741/1741]
GhostDiagnostic-chr: 1.764
Centroid-sig: 0.0%
Centroid-so: 3.738 arcsec [2.65σ]
OotOffset-rm: 0.170 arcsec [0.56σ]
KicOffset-rm: 0.138 arcsec [0.41σ]
OotOffset-st: 4/3/4/5 [16]
KicOffset-st: 4/3/4/5 [16]
DiffImageQuality-fgm: 0.38 [6/16]
DiffImageOverlap-fno: 1.00 [17/17]

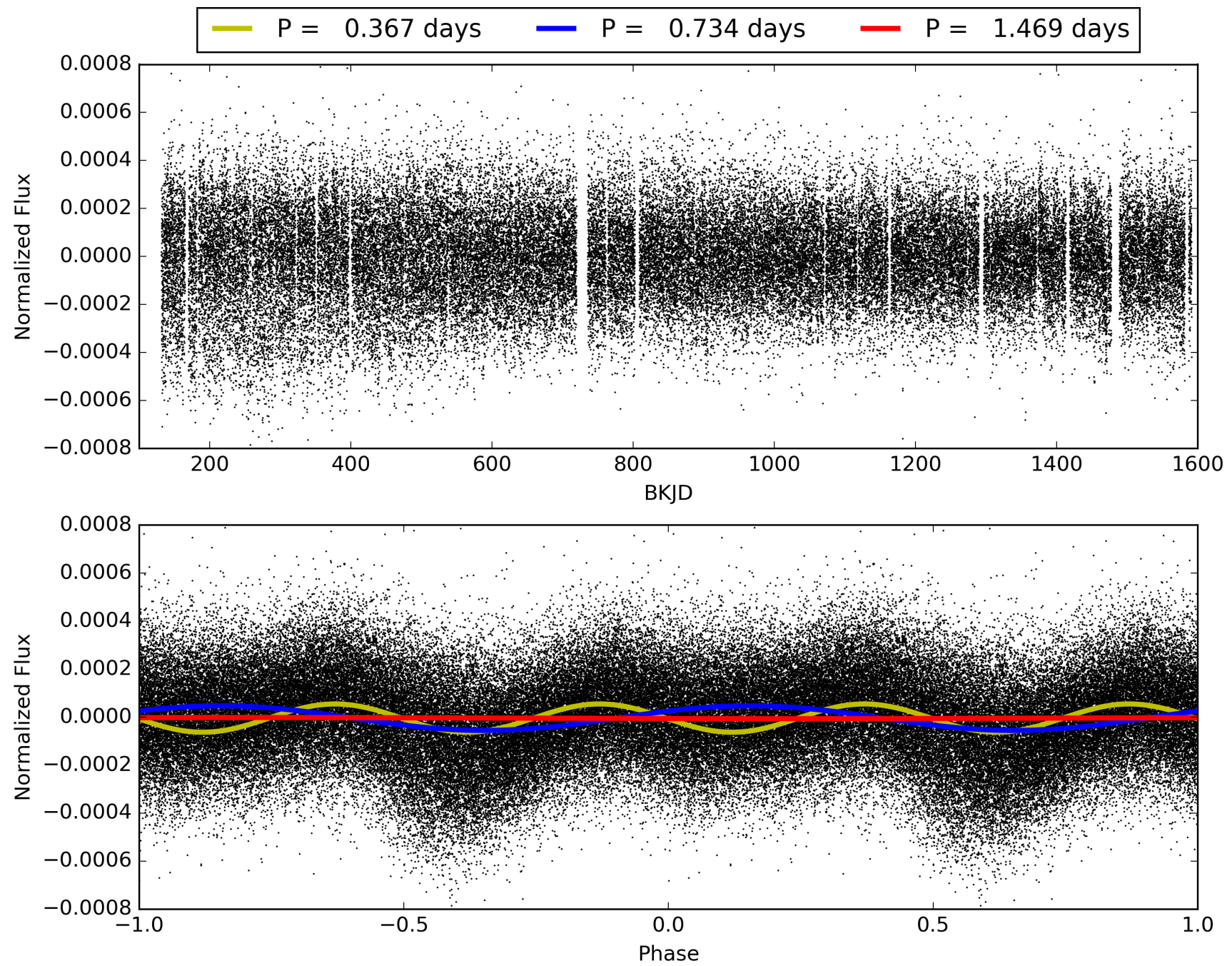
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 19:02:41 Z

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

TCE 006209637-01, PDC Light Curves

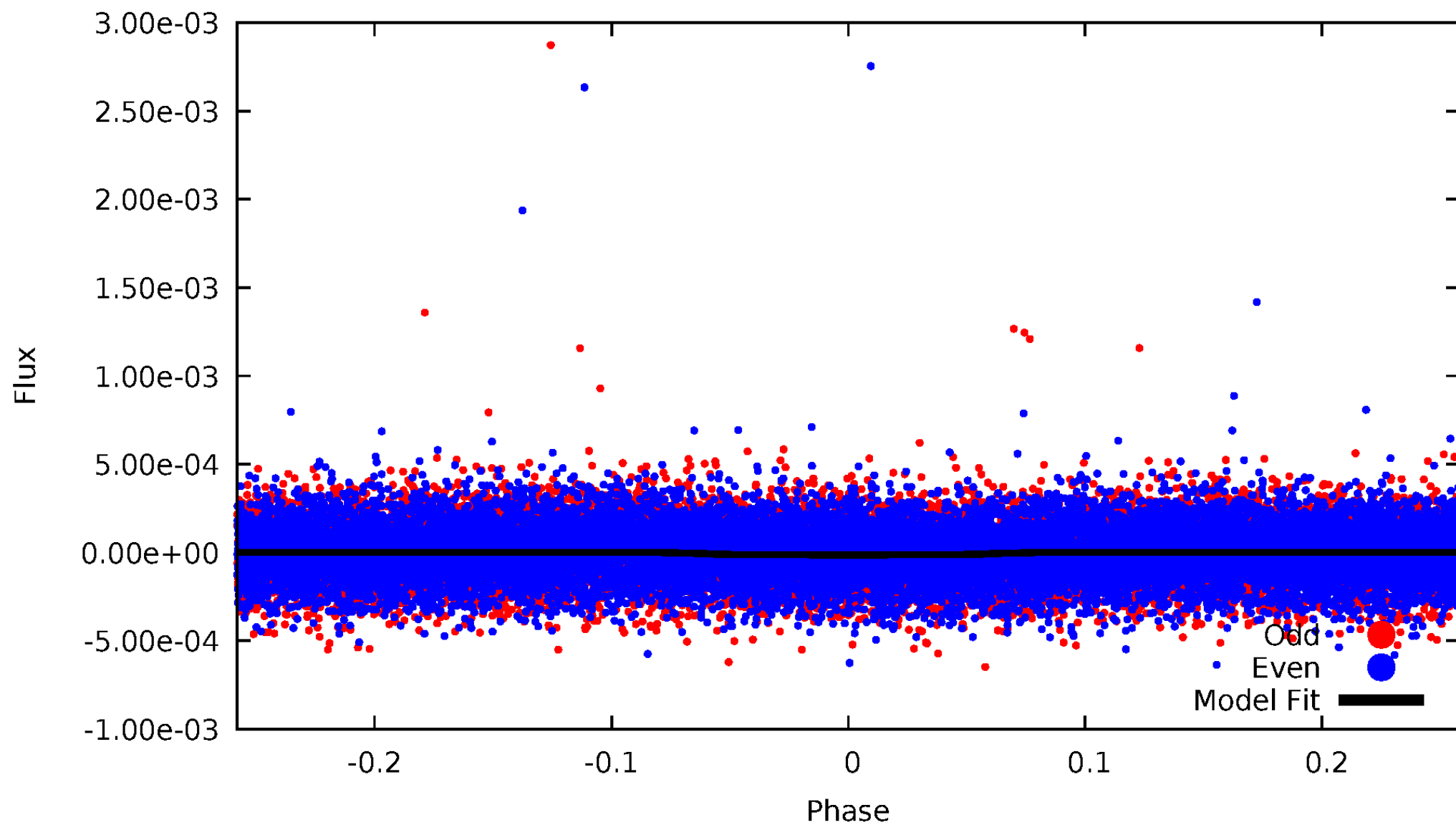


TCE 006209637-01



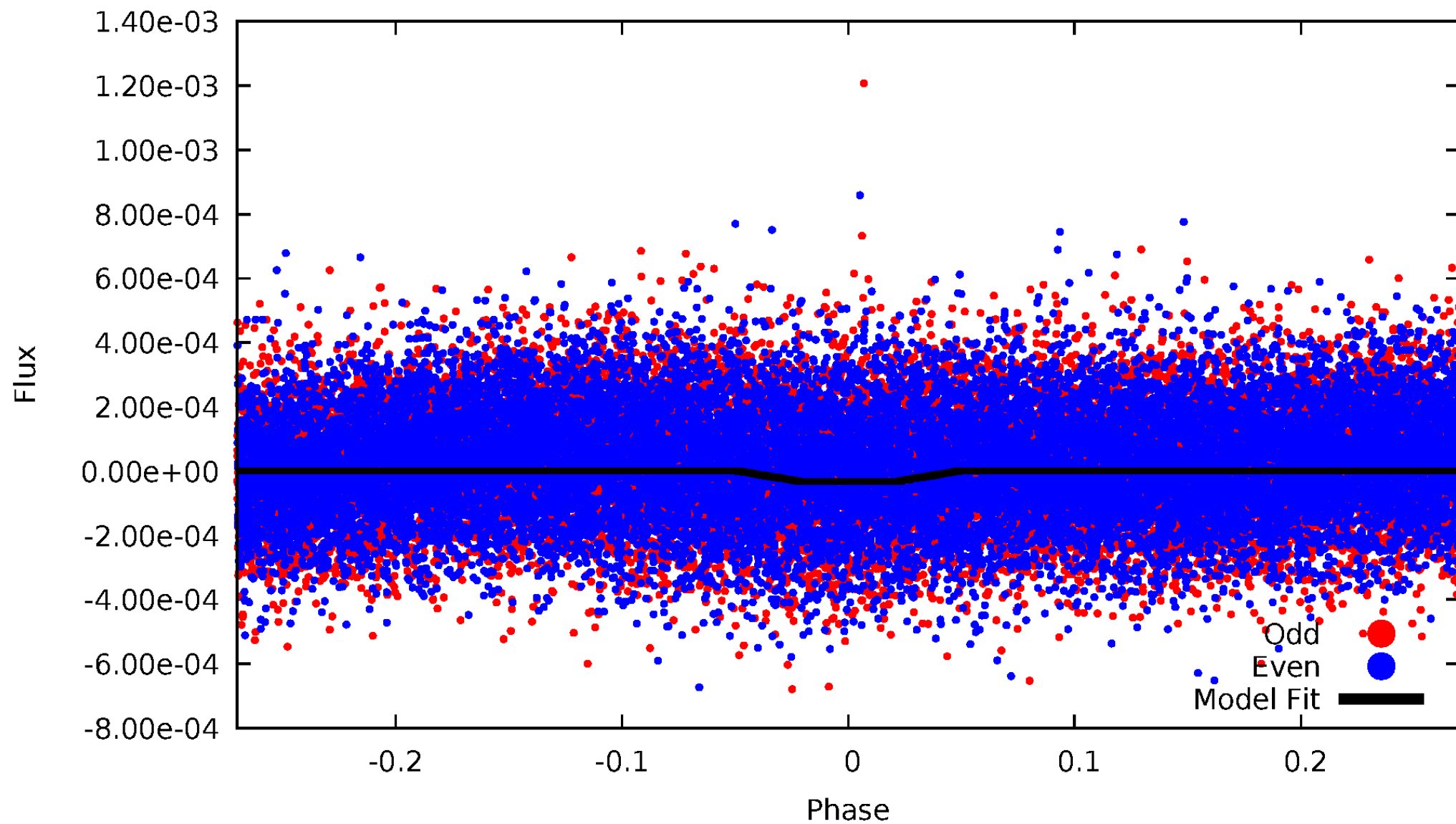
DV Odd/Even

TCE 006209637-01

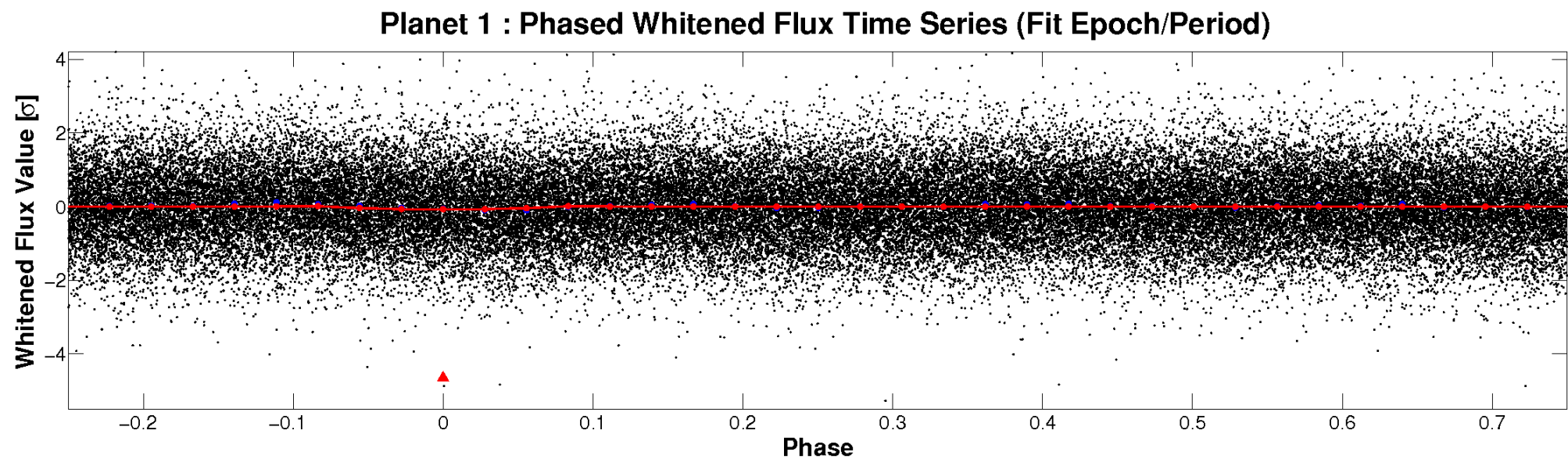
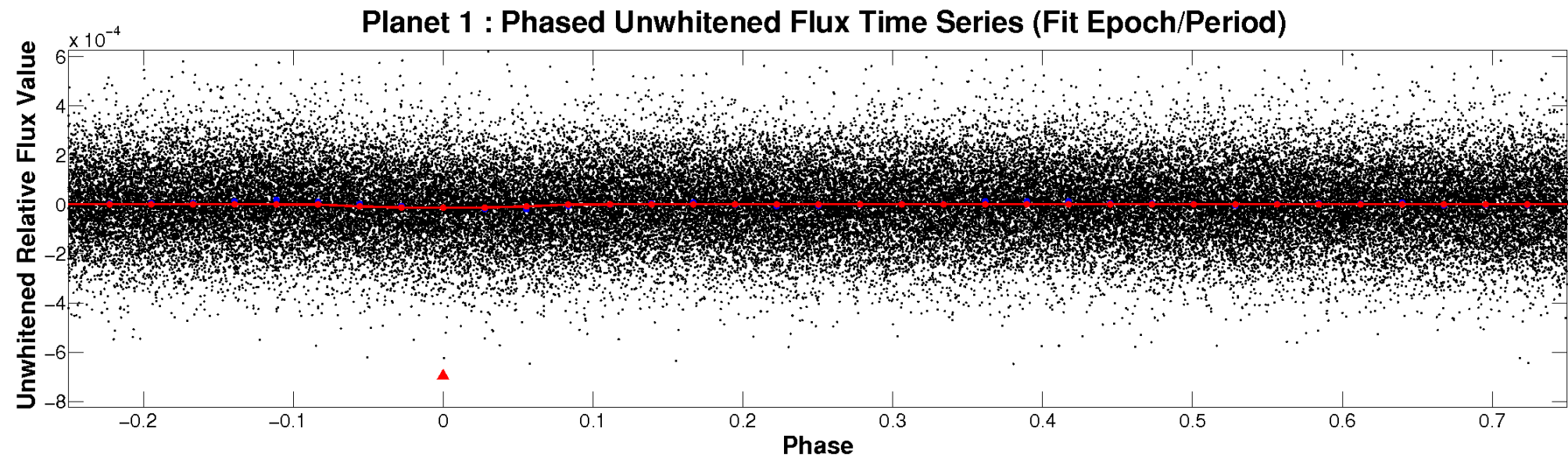


ALT Odd/Even

TCE 006209637-01

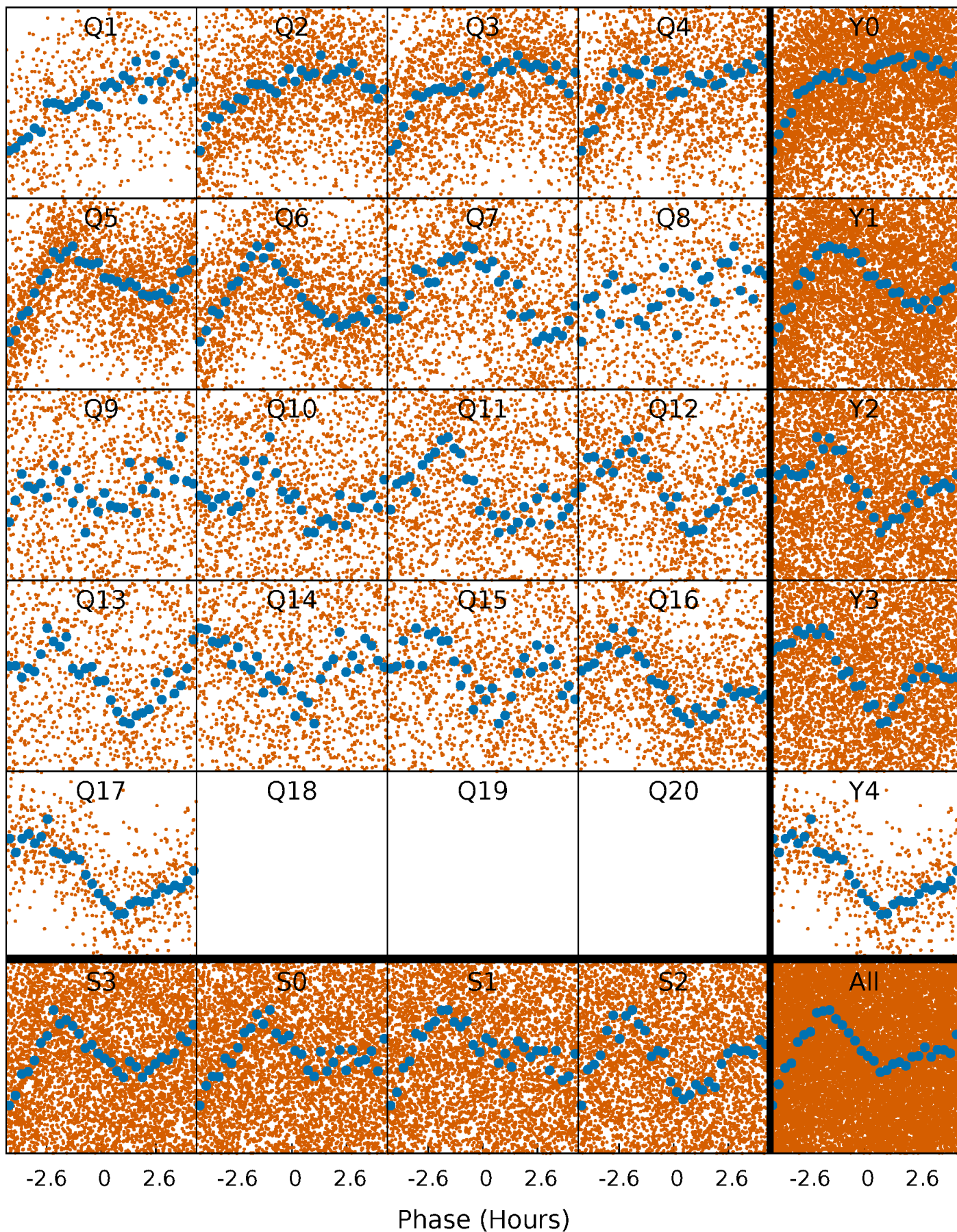


Non-Whitened Vs. Whitened Light Curve



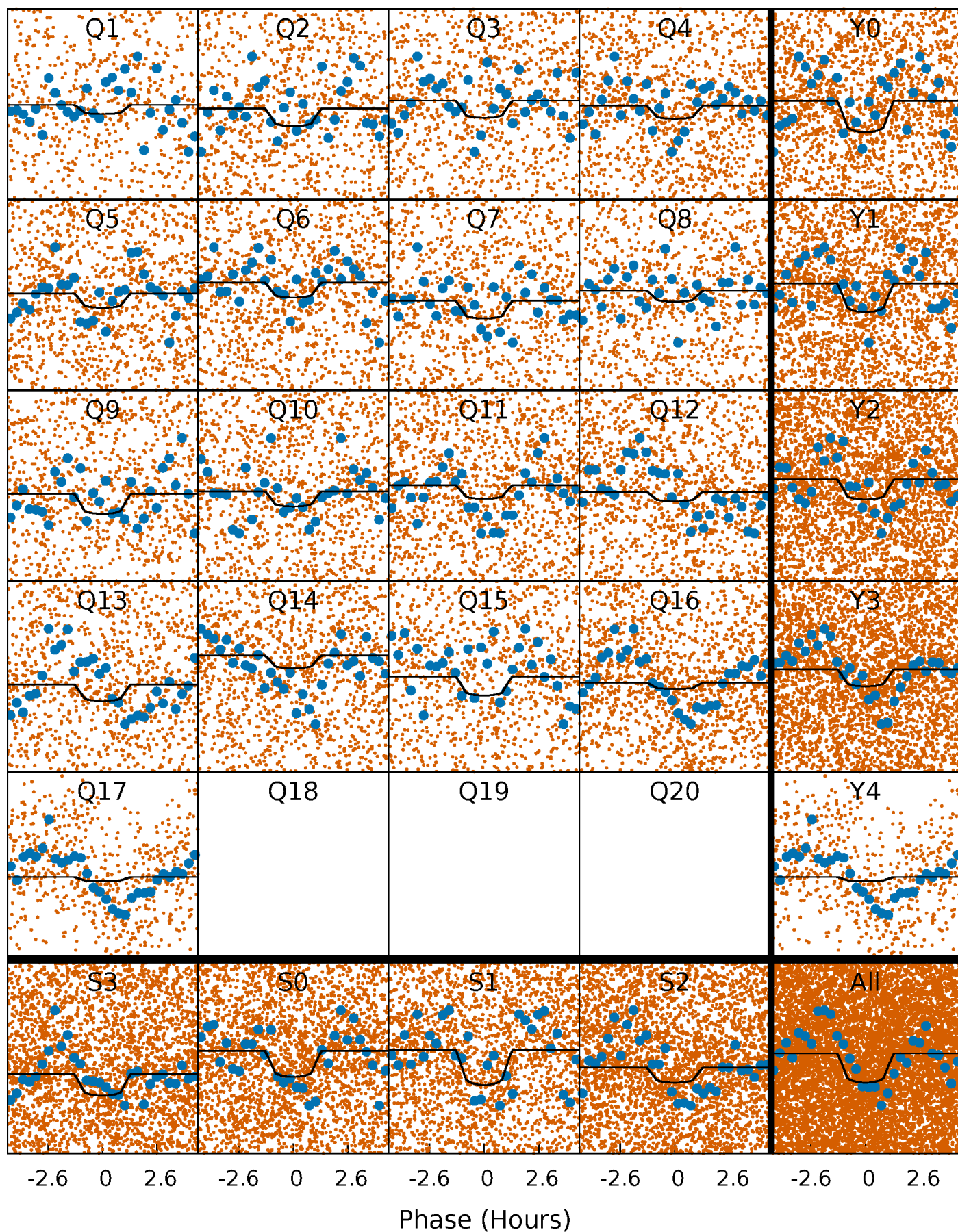
PDC Quarter-Phased Transit Curves

TCE 006209637-01 P= 0.734423 Days $T_0=131.549377$ (BKJD)



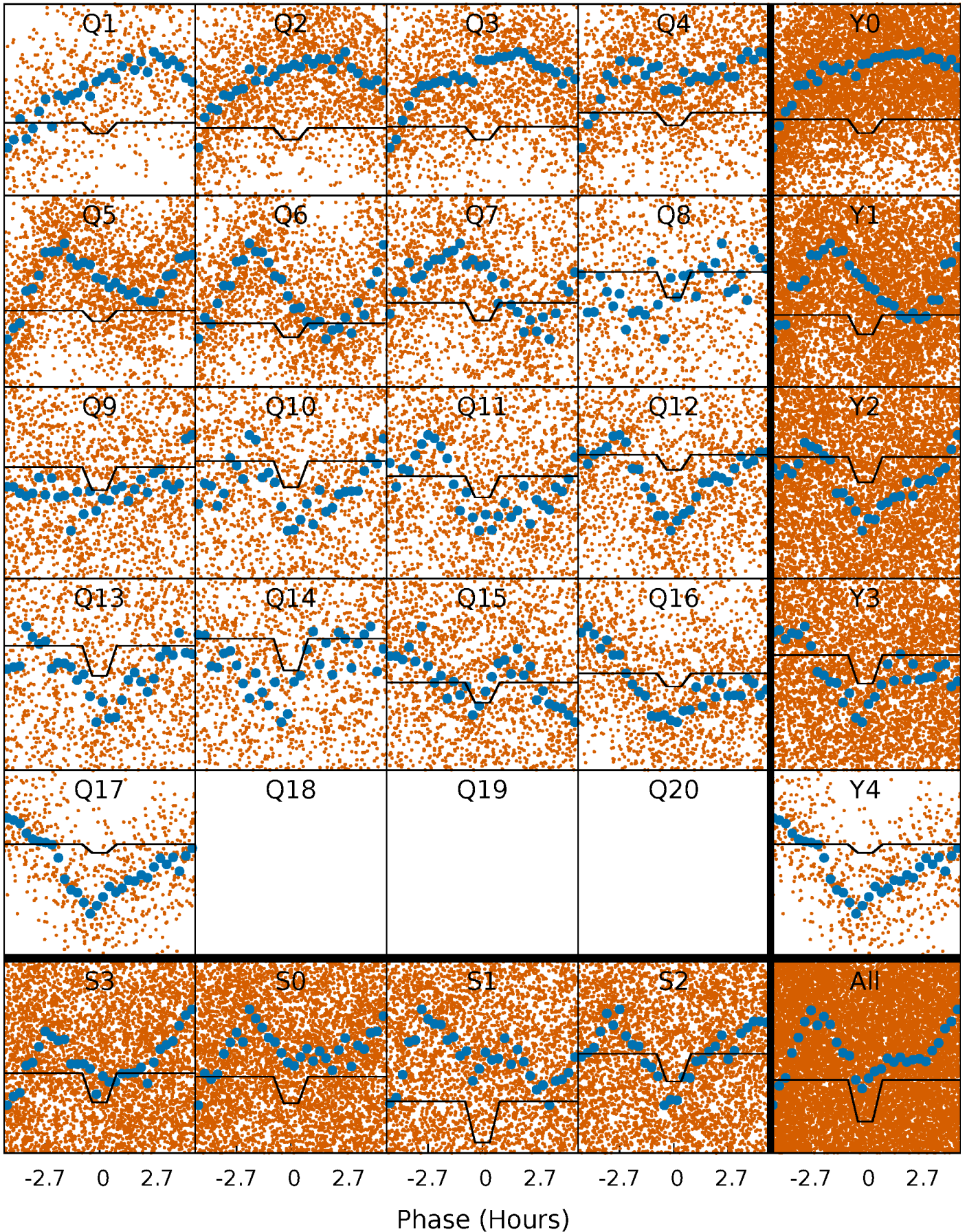
DV Quarter-Phased Transit Curves

TCE 006209637-01 P= 0.734423 Days $T_0=131.549377$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

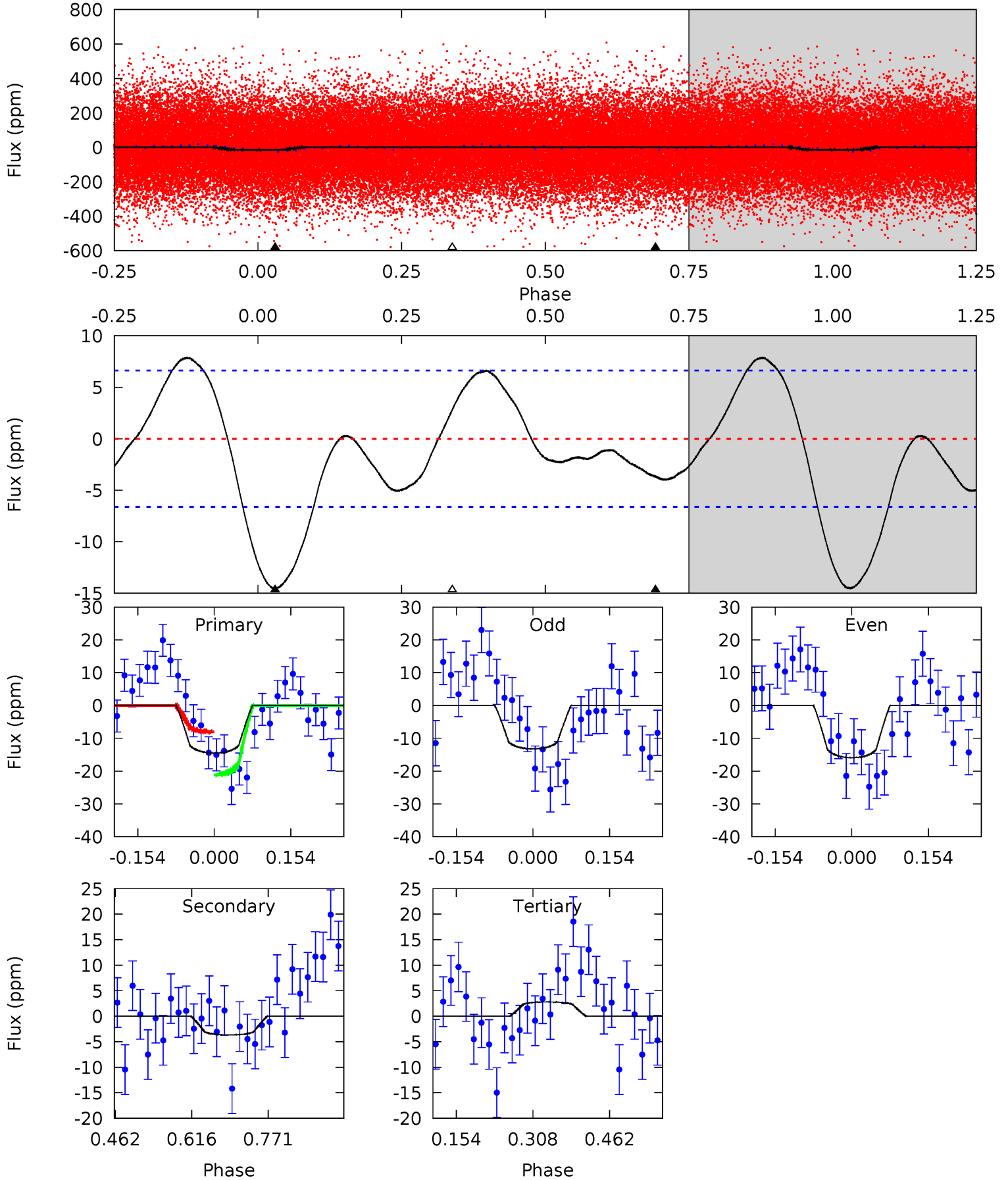
TCE 006209637-01 P= 0.734451 Days $T_0=131.550927$ (BKJD)



DV Model-Shift Uniqueness Test

006209637-01, P = 0.734423 Days, E = 130.814954 Days

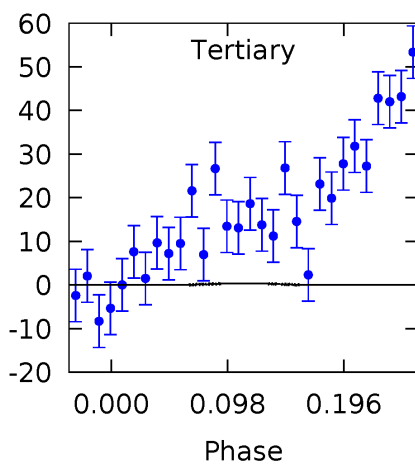
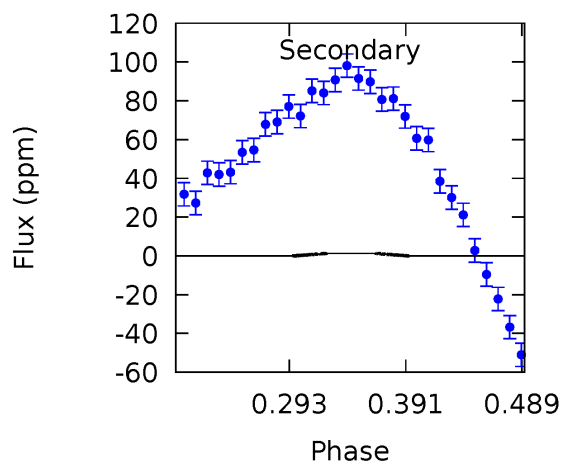
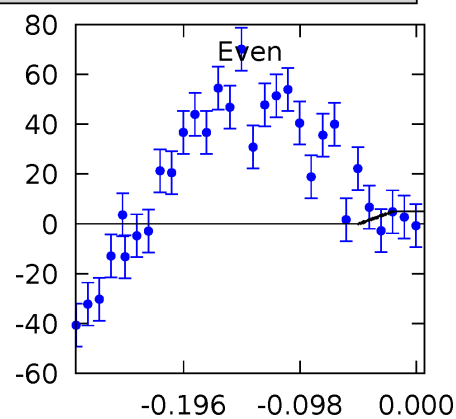
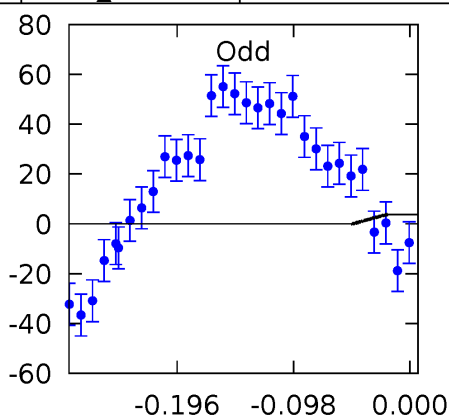
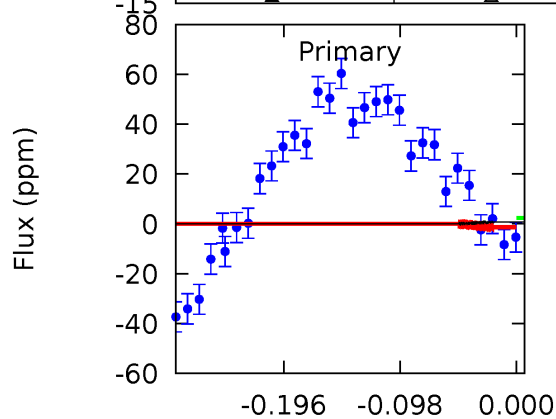
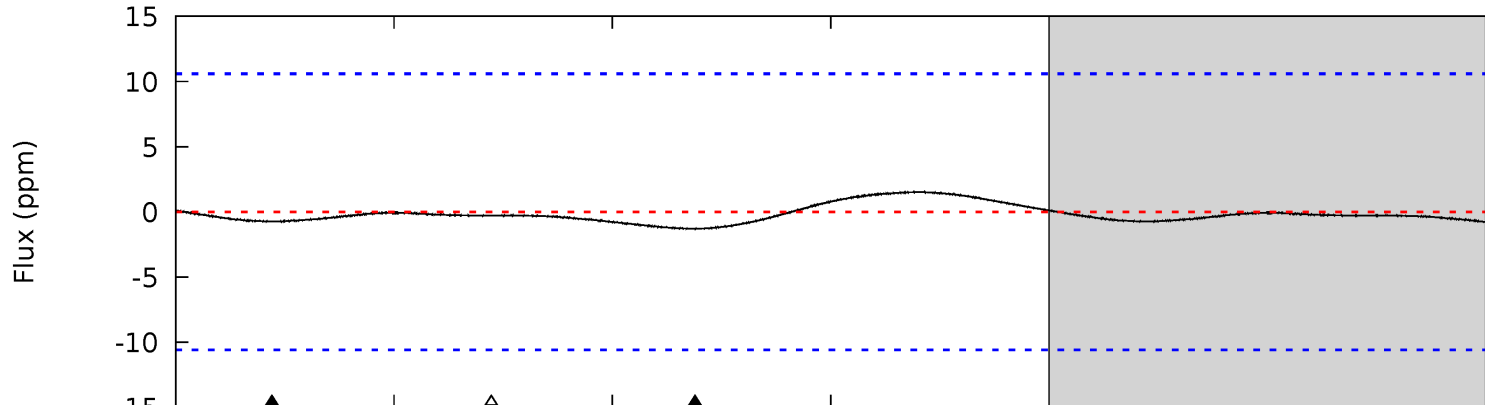
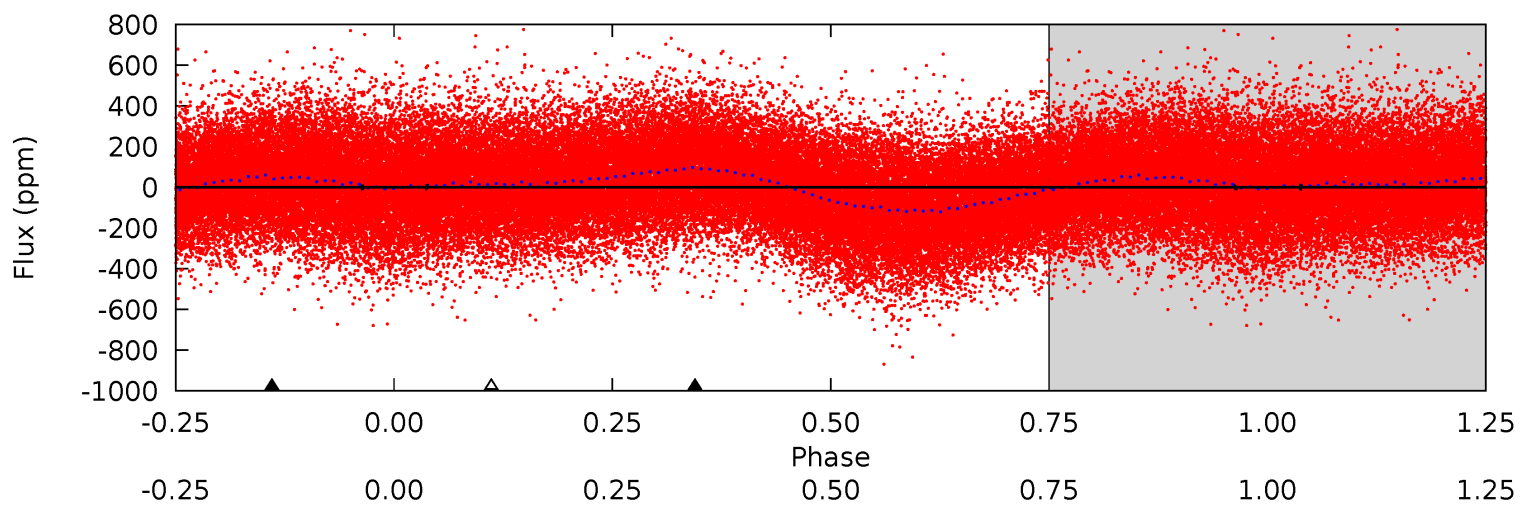
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.80	2.48	-1.89	0	4.47	1.43	2.81	11.7	9.80	4.37	2.48	0.91	1.33	0.35	4.42



Alt Model-Shift Uniqueness Test

006209637-01, P = 0.734451 Days, E = 130.816476 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.32	0.56	0.13	0	4.57	1.66	0.30	0.19	0.32	0.43	0.56	0.27	-1.56	0.54	0.23



Stellar Parameters For KIC 006209637

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6779^{+214}_{-262}	$4.154^{+0.204}_{-0.167}$	$-0.380^{+0.250}_{-0.300}$	$1.538^{+0.446}_{-0.406}$	$1.234^{+0.182}_{-0.203}$	$0.477^{+0.548}_{-0.223}$
	+3%/-4%	+5%/-4%	+66%/-79%	+29%/-26%	+15%/-16%	+115%/-47%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 006209637-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-4 ± 1	$0.64^{+0.27}_{-0.27}$	3962^{+270}_{-332}	4506^{+1553}_{-897}	$1.321^{+2.803}_{-0.760}$
Alt.	-1 ± 2	$0.93^{+0.31}_{-0.27}$	3943^{+295}_{-303}	-3092^{+6995}_{-879}	$0.203^{+0.563}_{-0.376}$

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

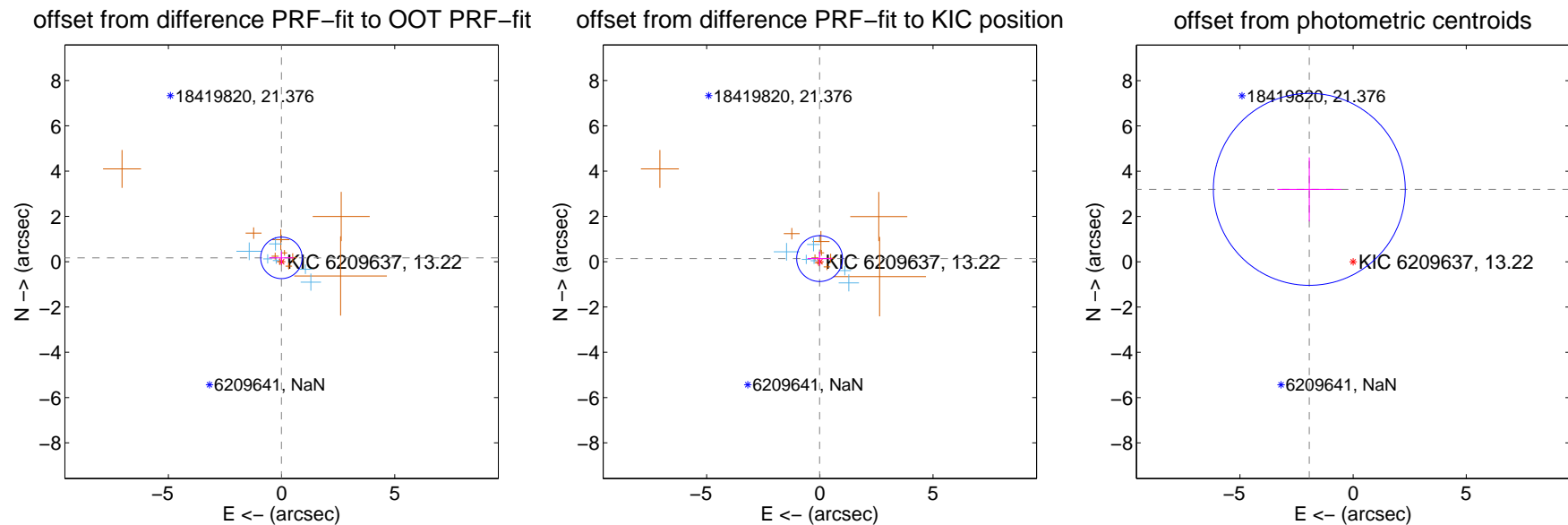
DV Centroid Data

Supplemental centroid analysis for 006209637-01. Kepler magnitude: 13.22. Transit SNR 5.64

There are 6 quarters with good PRF difference image offsets

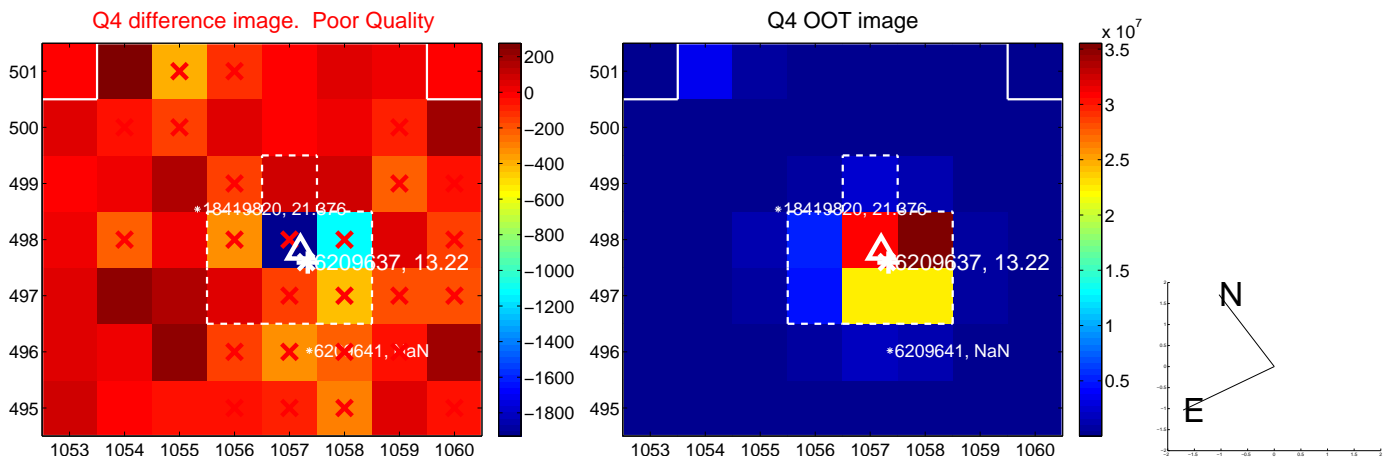
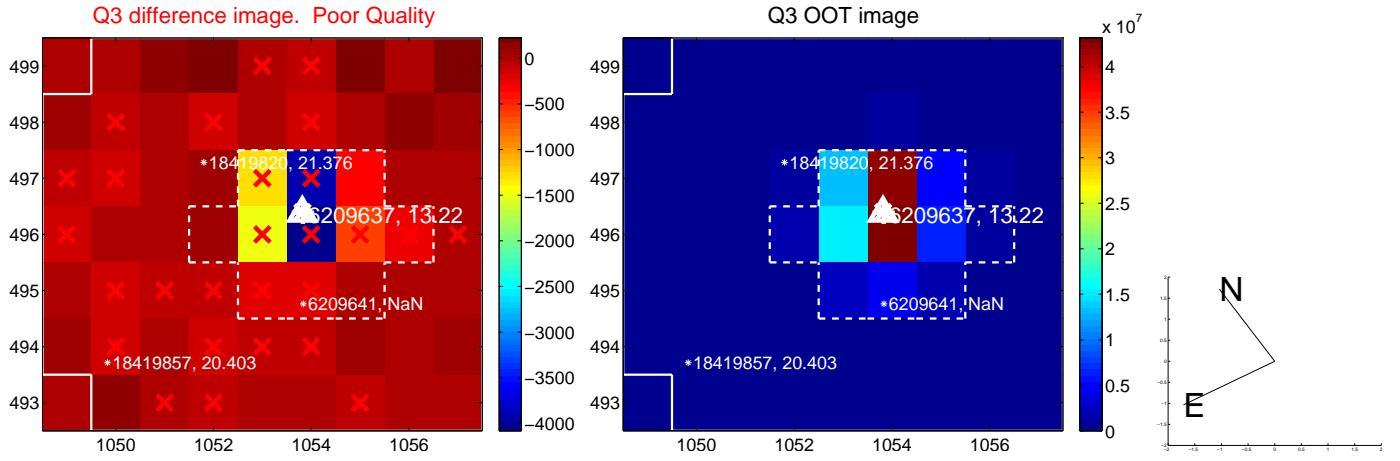
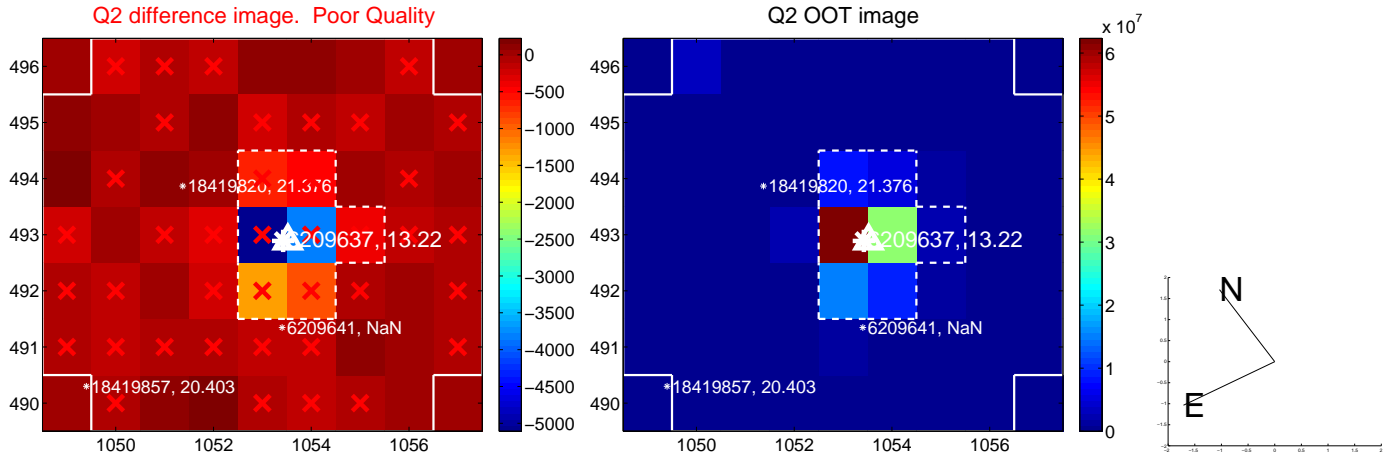
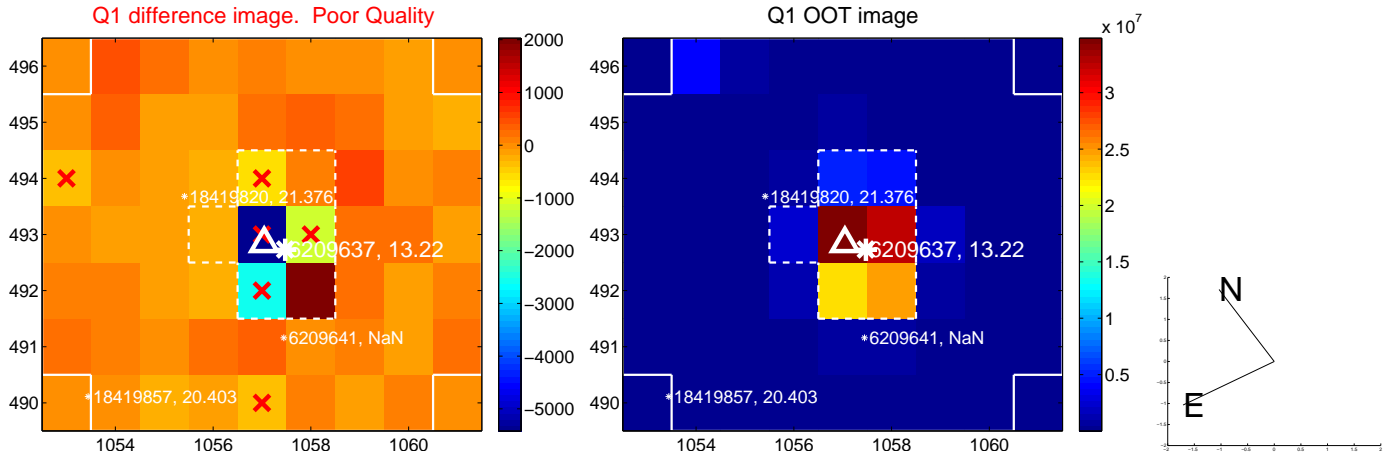
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.170 ± 0.305	0.56	0.006 ± 0.533	0.170 ± 0.292
PRF-fit source offset from KIC position	0.138 ± 0.337	0.41	0.010 ± 0.537	0.138 ± 0.307
photometric centroid source offset	3.74 ± 1.41	2.65	1.94 ± 1.41	3.20 ± 1.41

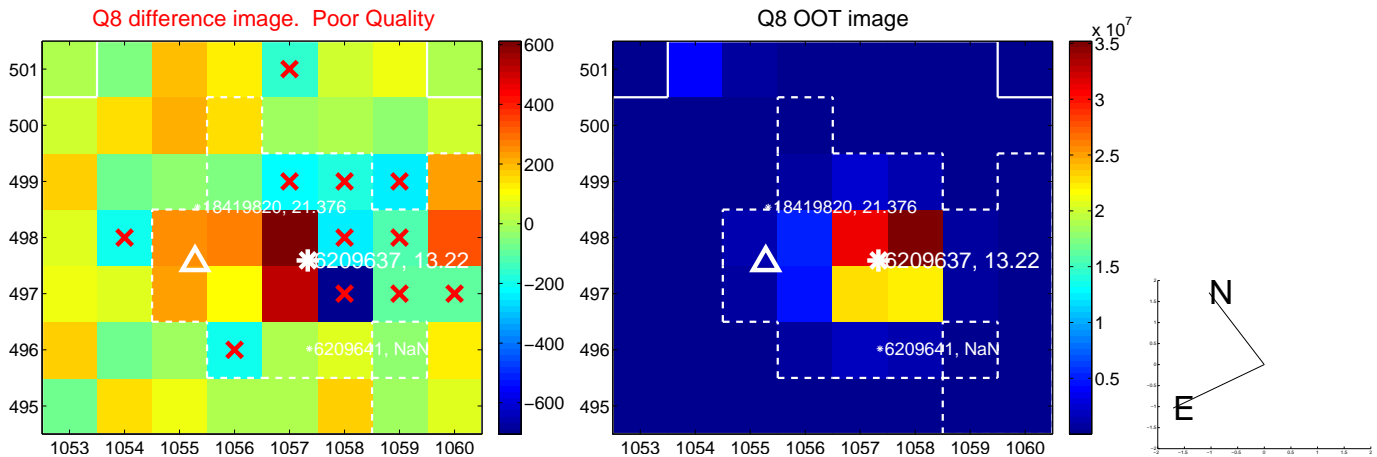
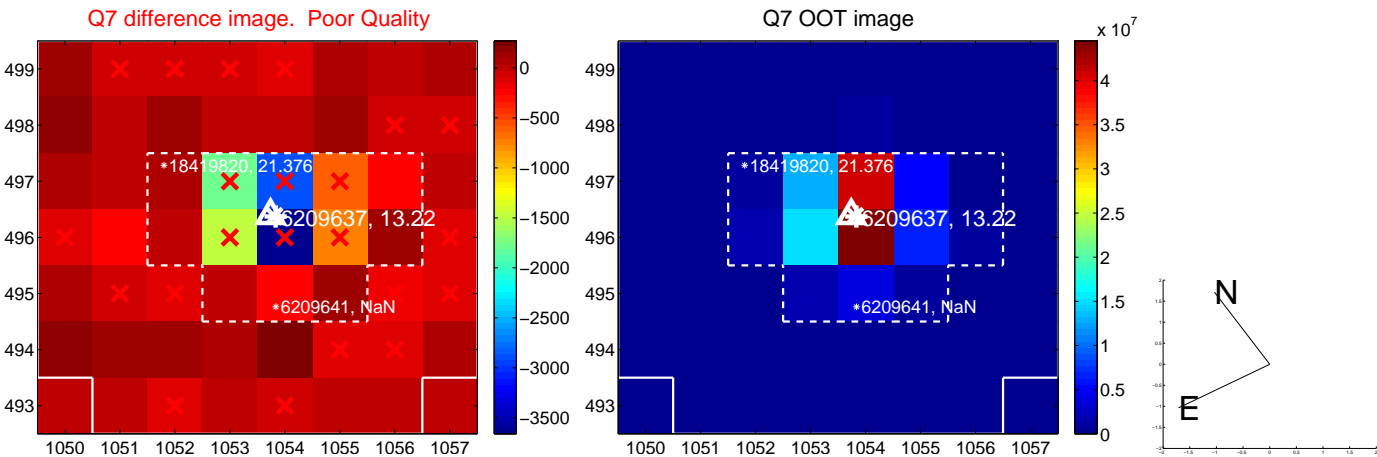
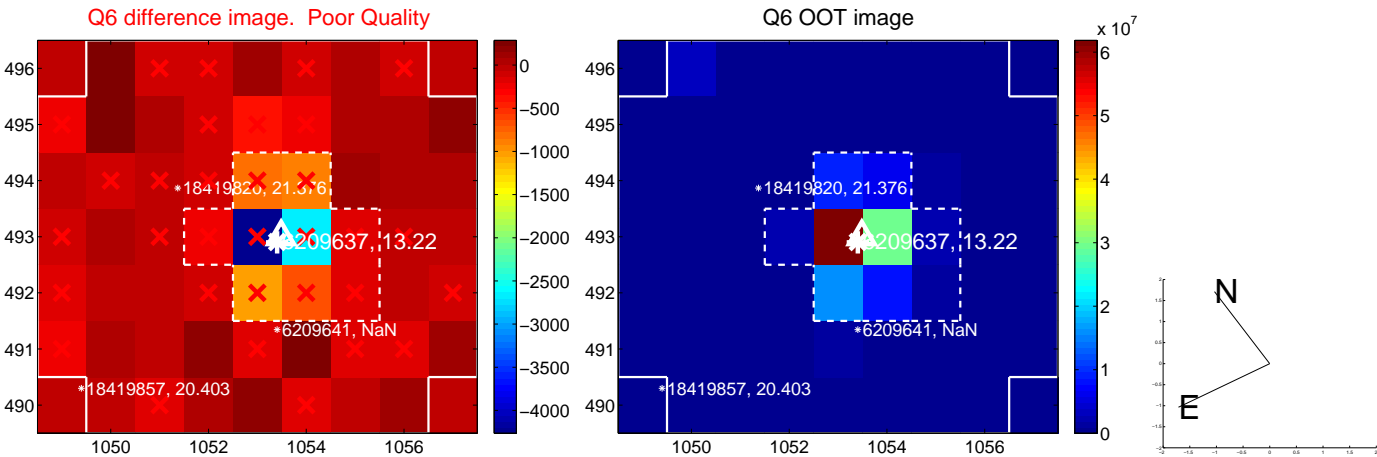
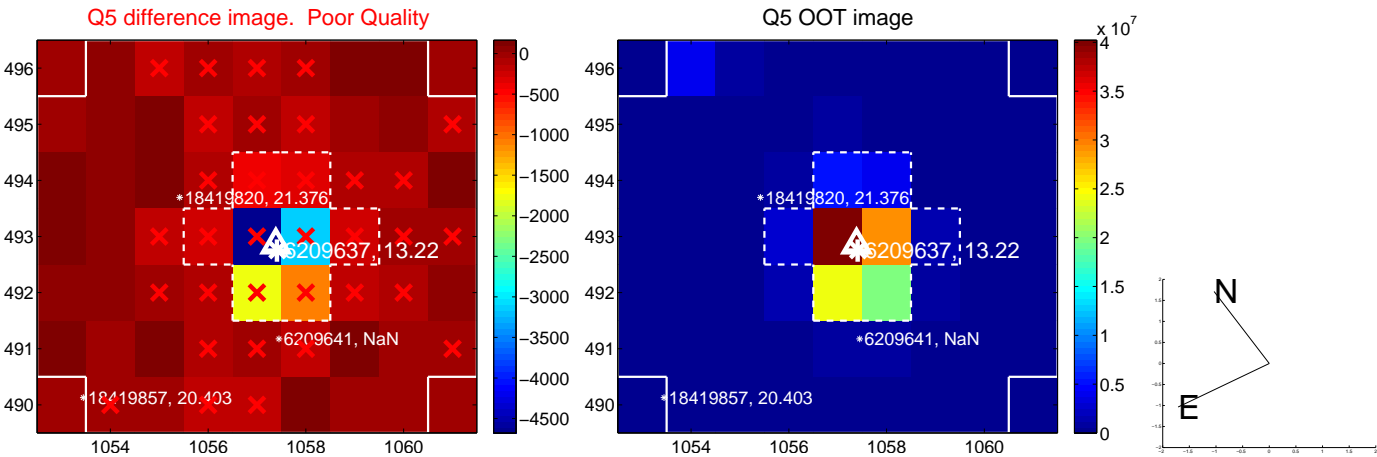


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

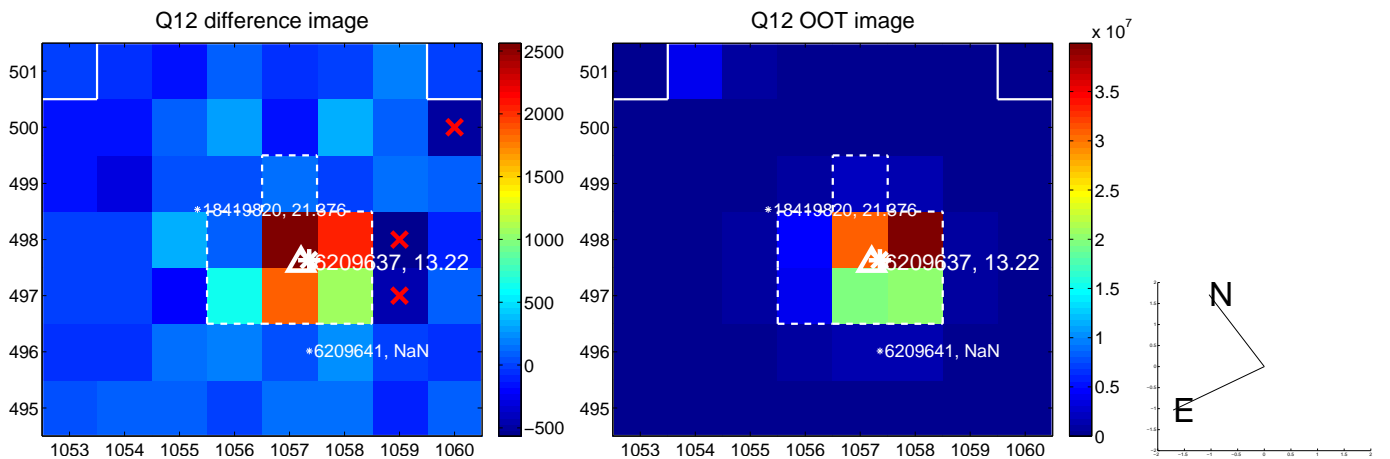
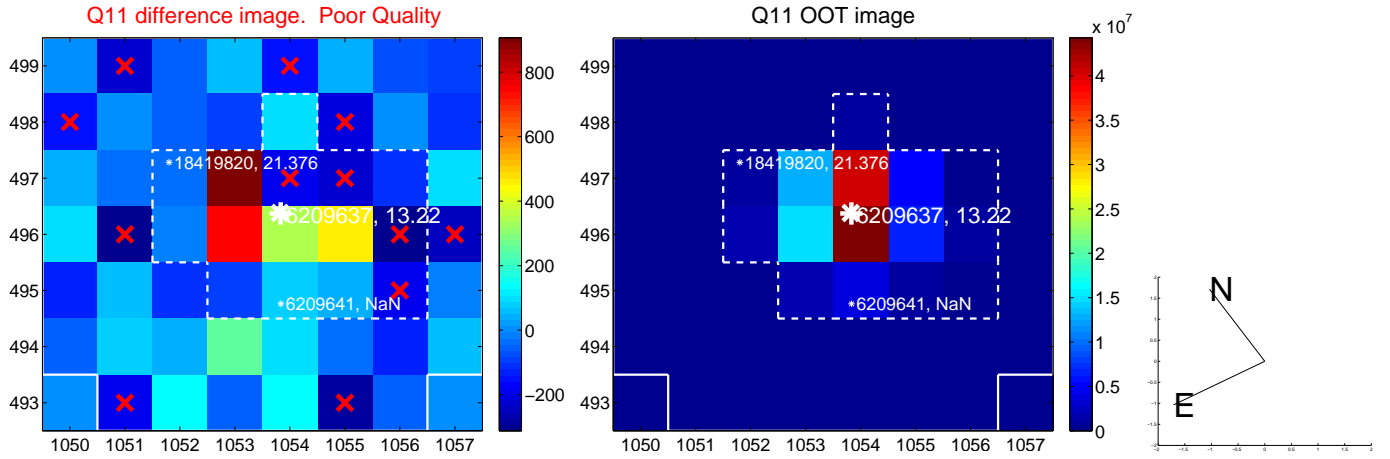
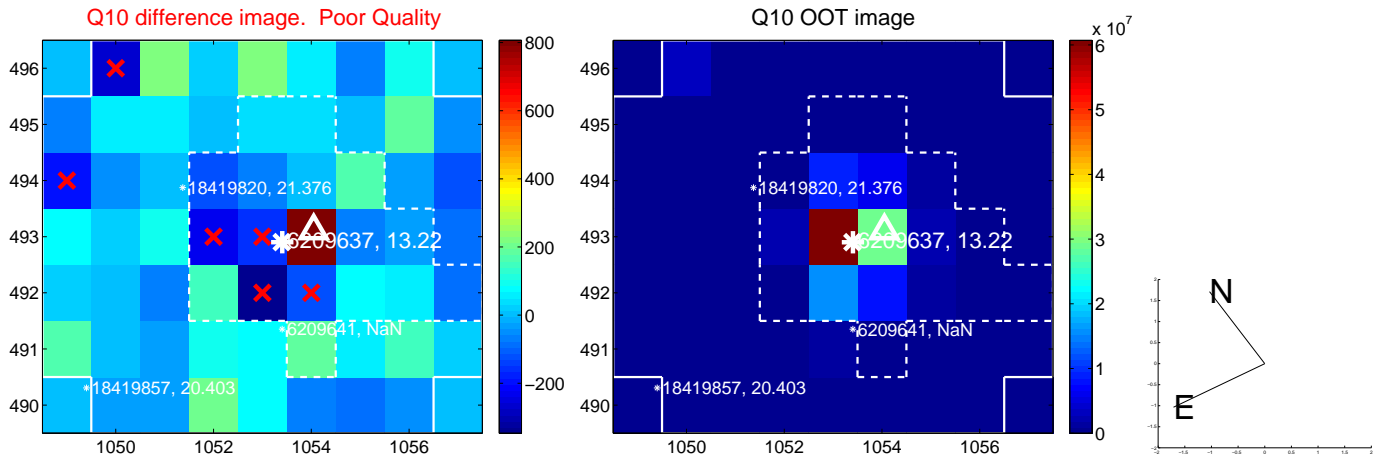
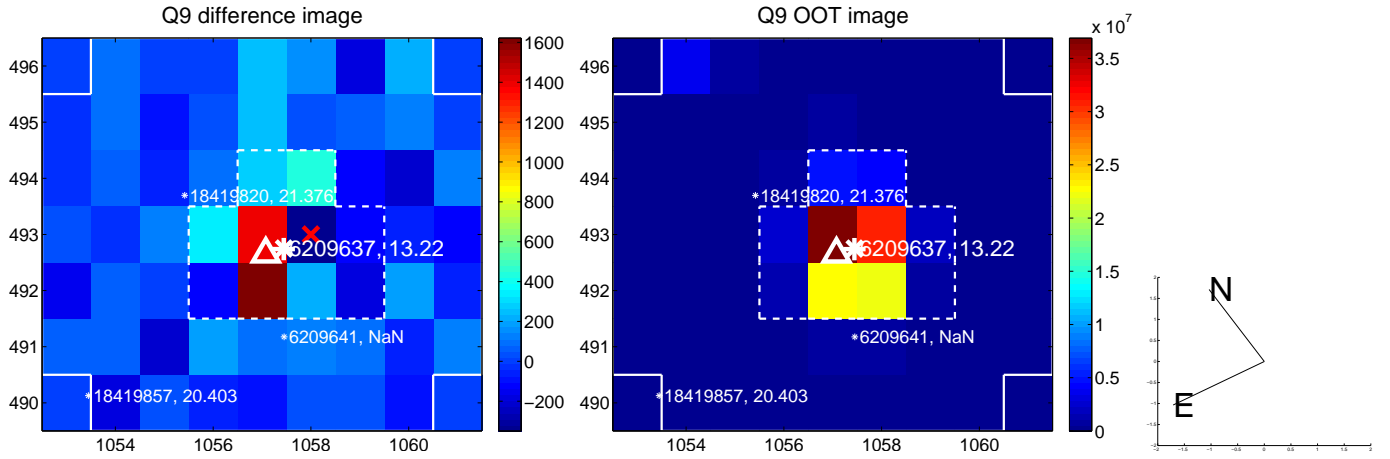
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



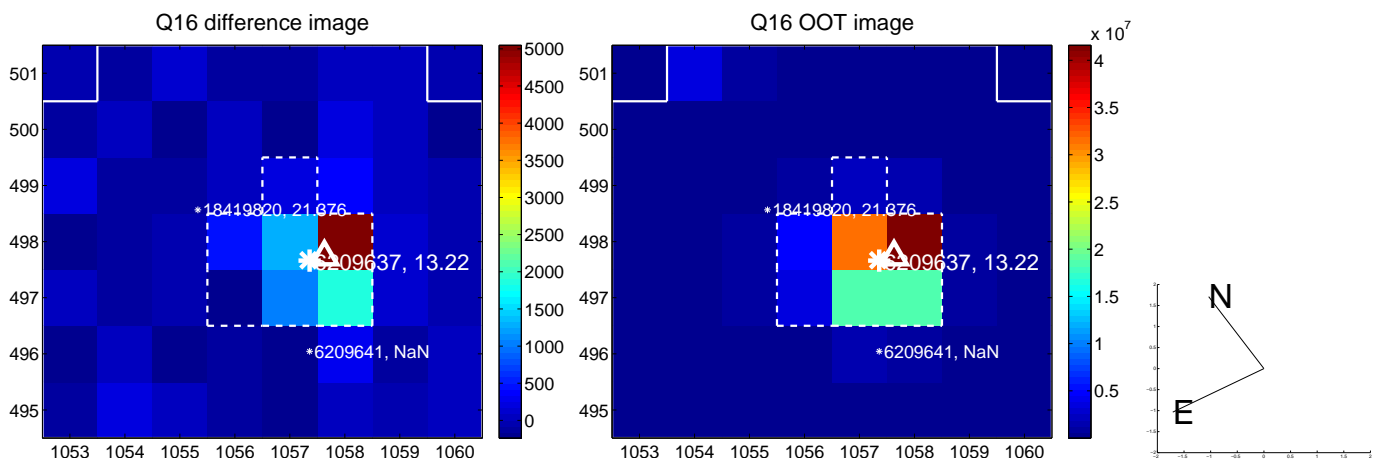
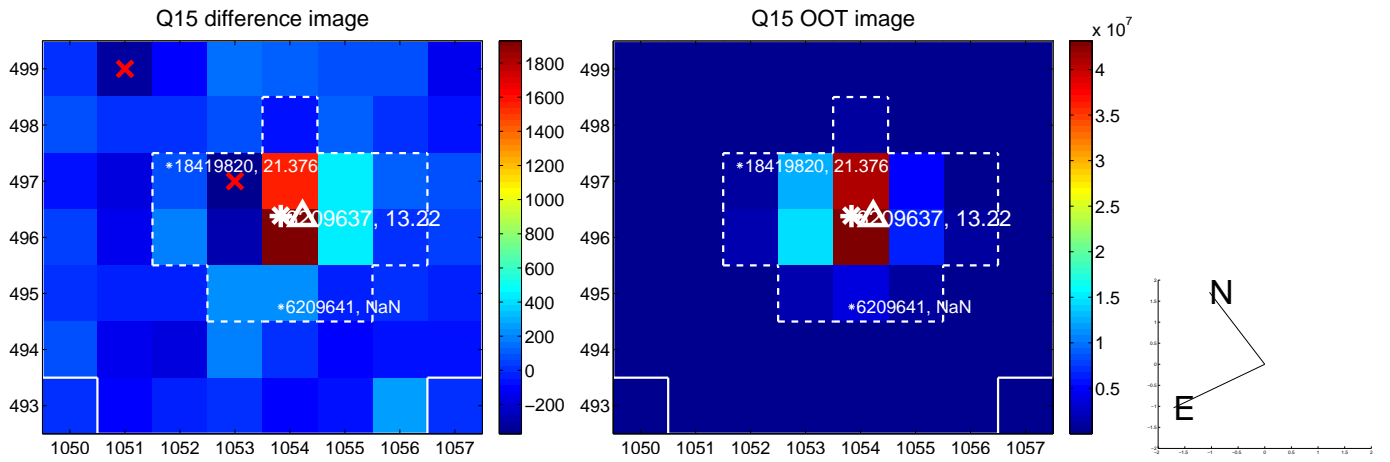
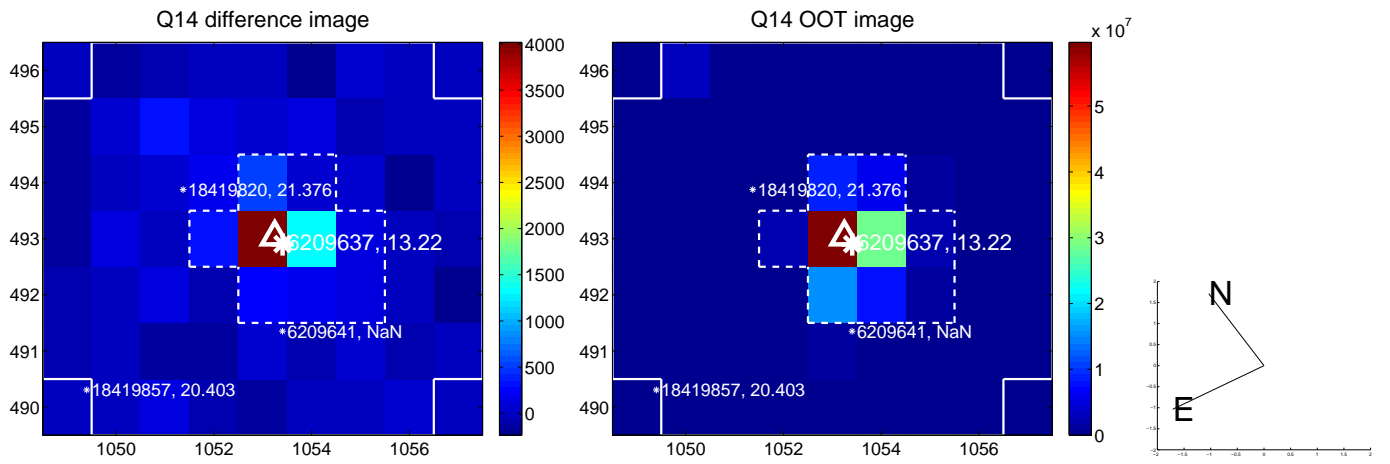
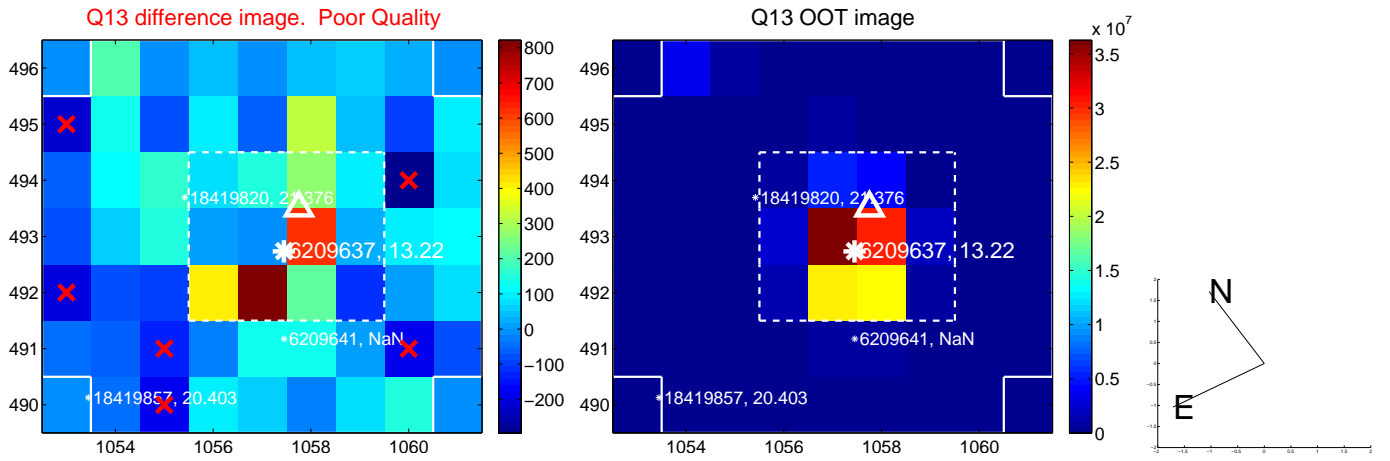
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



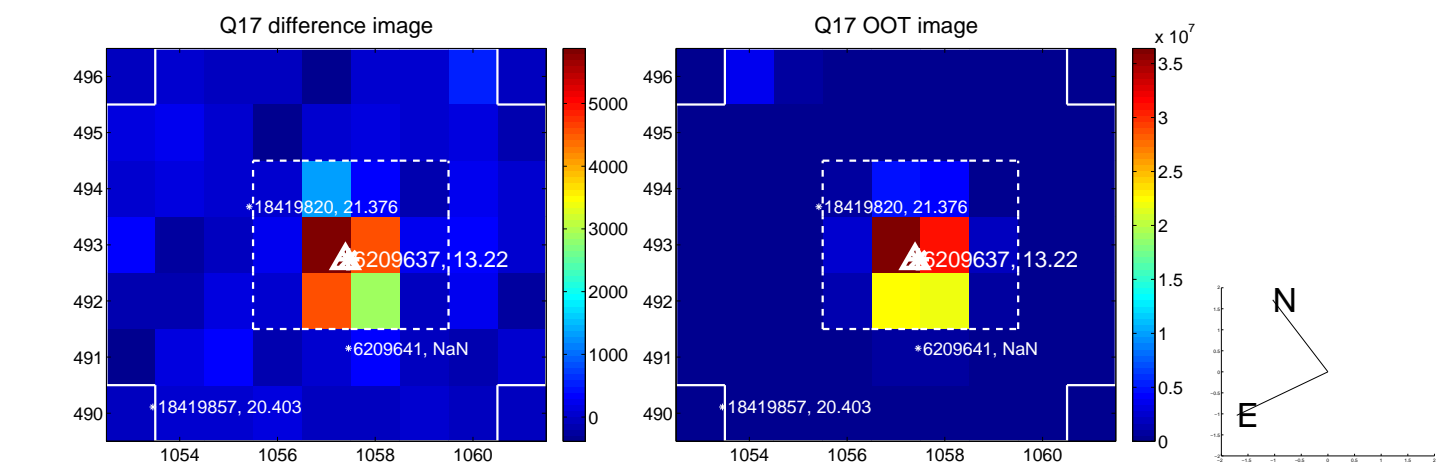
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



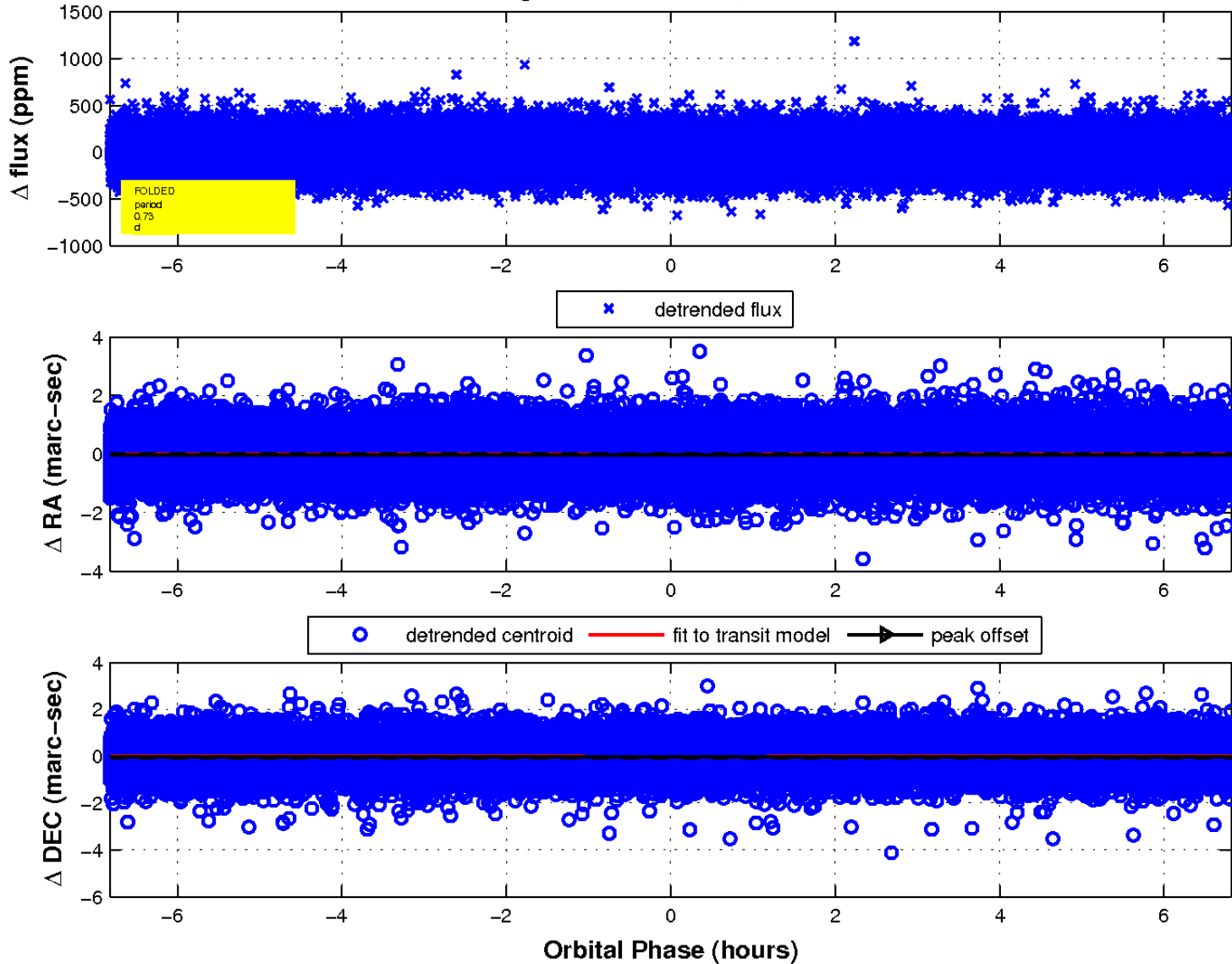
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

