

KIC 006124426

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})
006124426-01	OBS	No	0.591064	132.031455	11.2	5.647	12.8	4.9	2.66	5406	0.88	24598.90

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006124426-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_FEW_MEAS

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

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

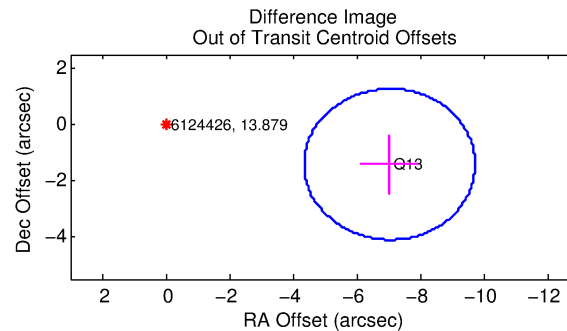
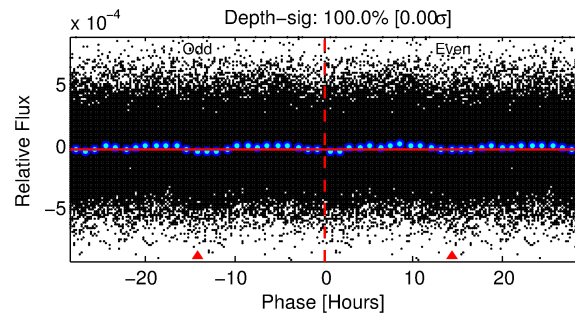
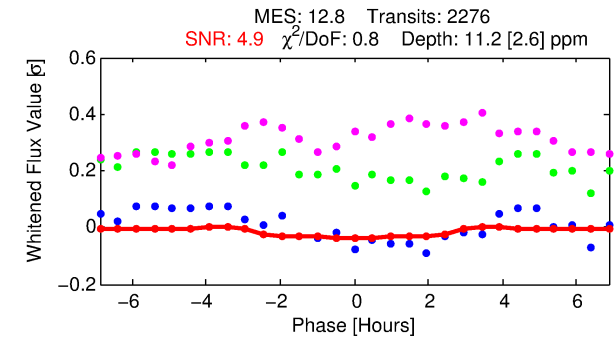
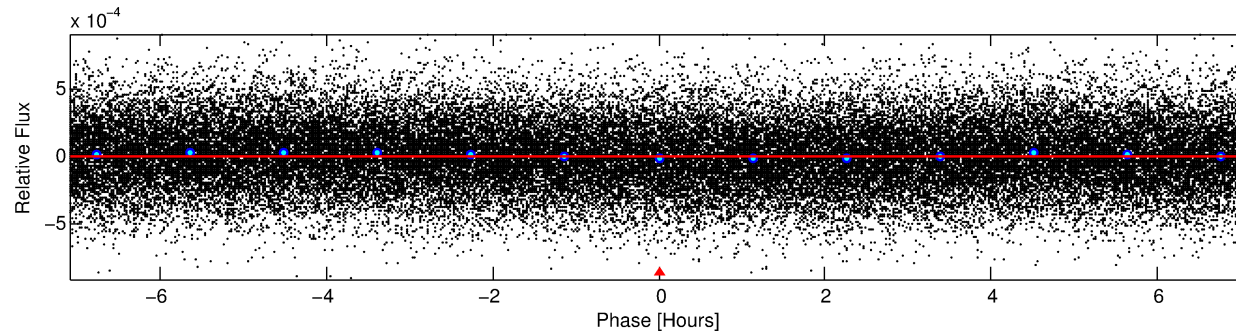
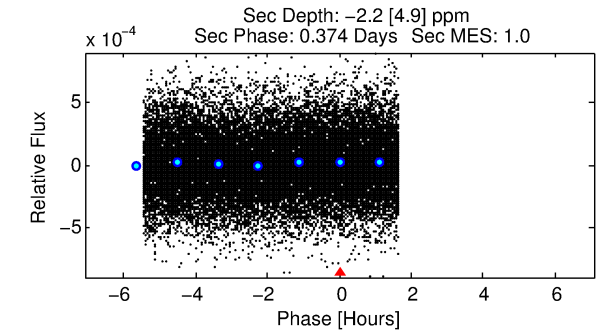
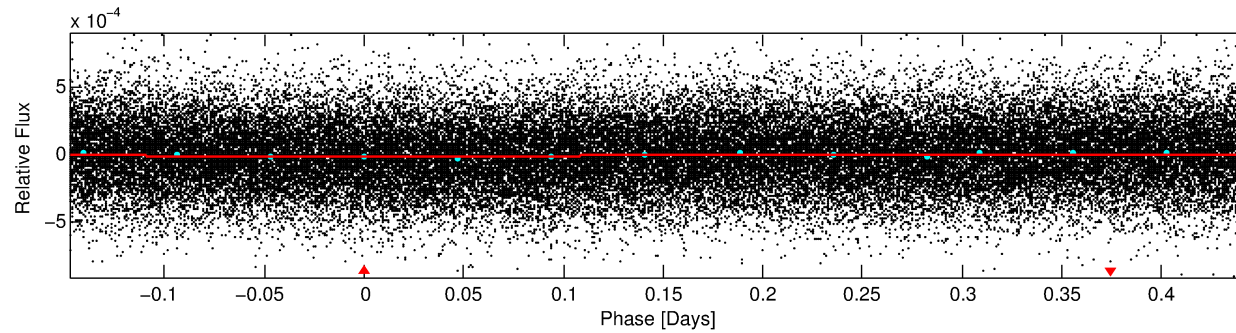
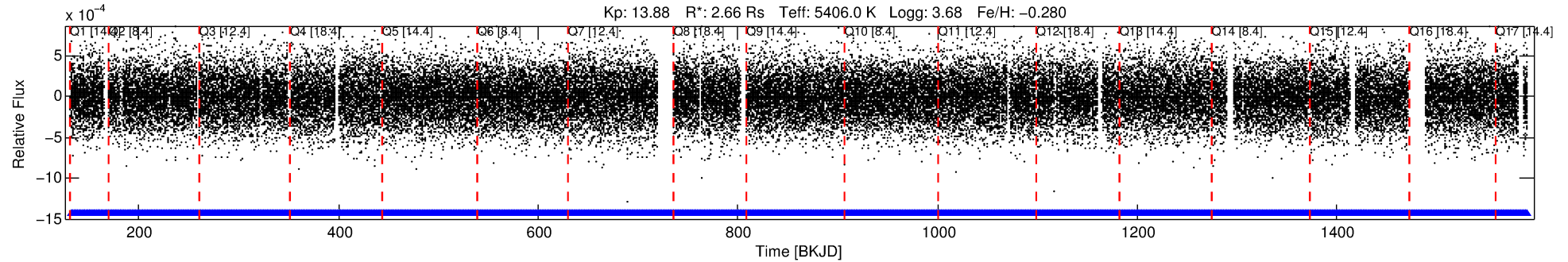
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006124426-01

No Significant Match Found

DV One-Page Summary

KIC: 6124426 Candidate: 1 of 1 Period: 0.591 d



DV Fit Results:

Period = 0.59106 [0.00002] d
Epoch = 132.0315 [0.0112] BKJD
Rp/R* = 0.0030 [0.0059]
a/R* = 1.06 [0.85]
b = 0.10 [81.13]
Seff = 24598.90 [33988.72]
Teff = 3193 [1103] K
Rp = 0.88 [1.80] Re
a = 0.0148 [0.0117] AU
Ag = N/A
Teffp = N/A

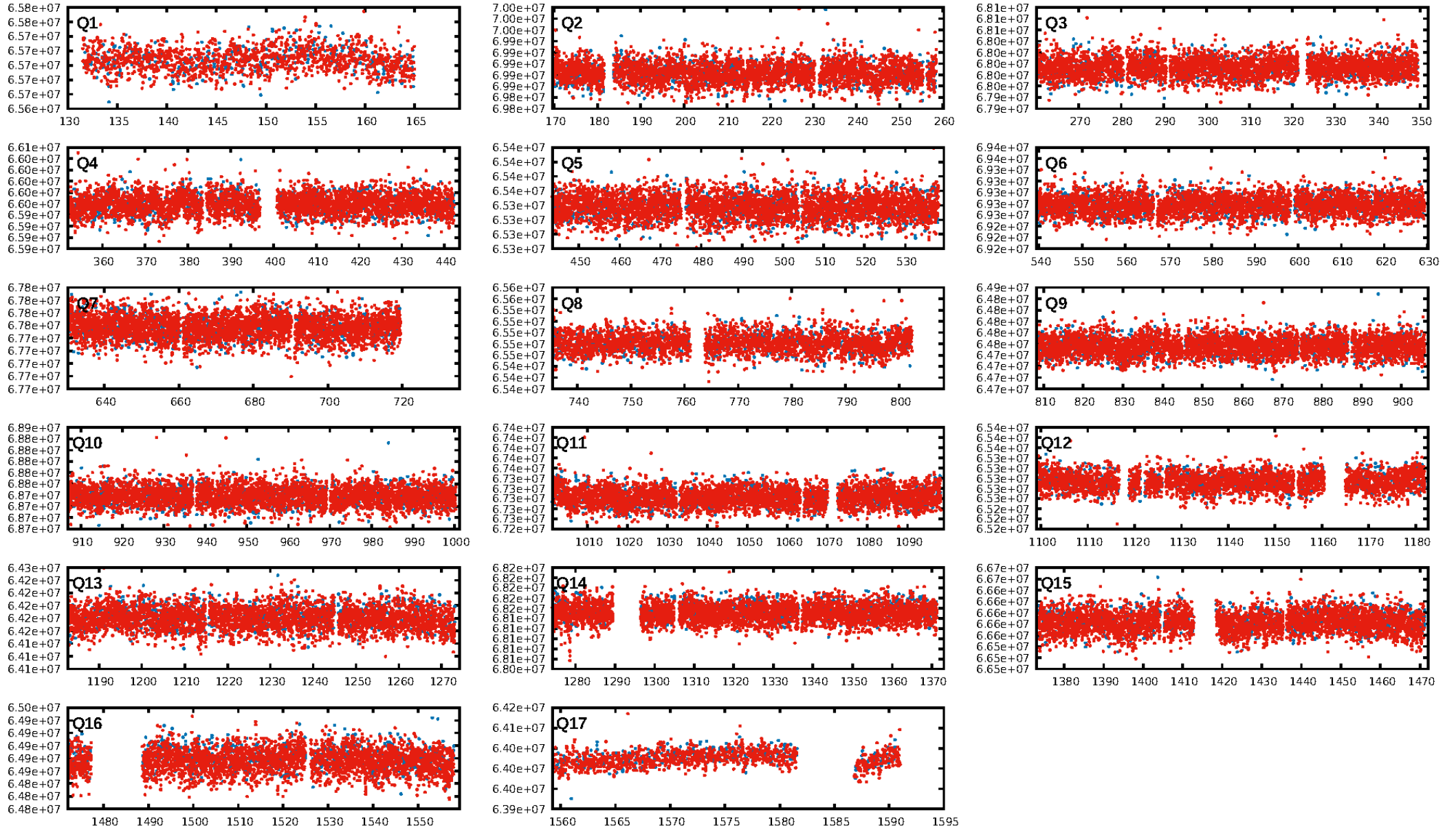
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2174/2174]
GhostDiagnostic-chr: 2.263
Centroid-sig: 0.7%
Centroid-so: 4.006 arcsec [2.25σ]
OotOffset-rm: 7.185 arcsec [8.02σ]
KicOffset-rm: 7.211 arcsec [8.05σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [17/17]

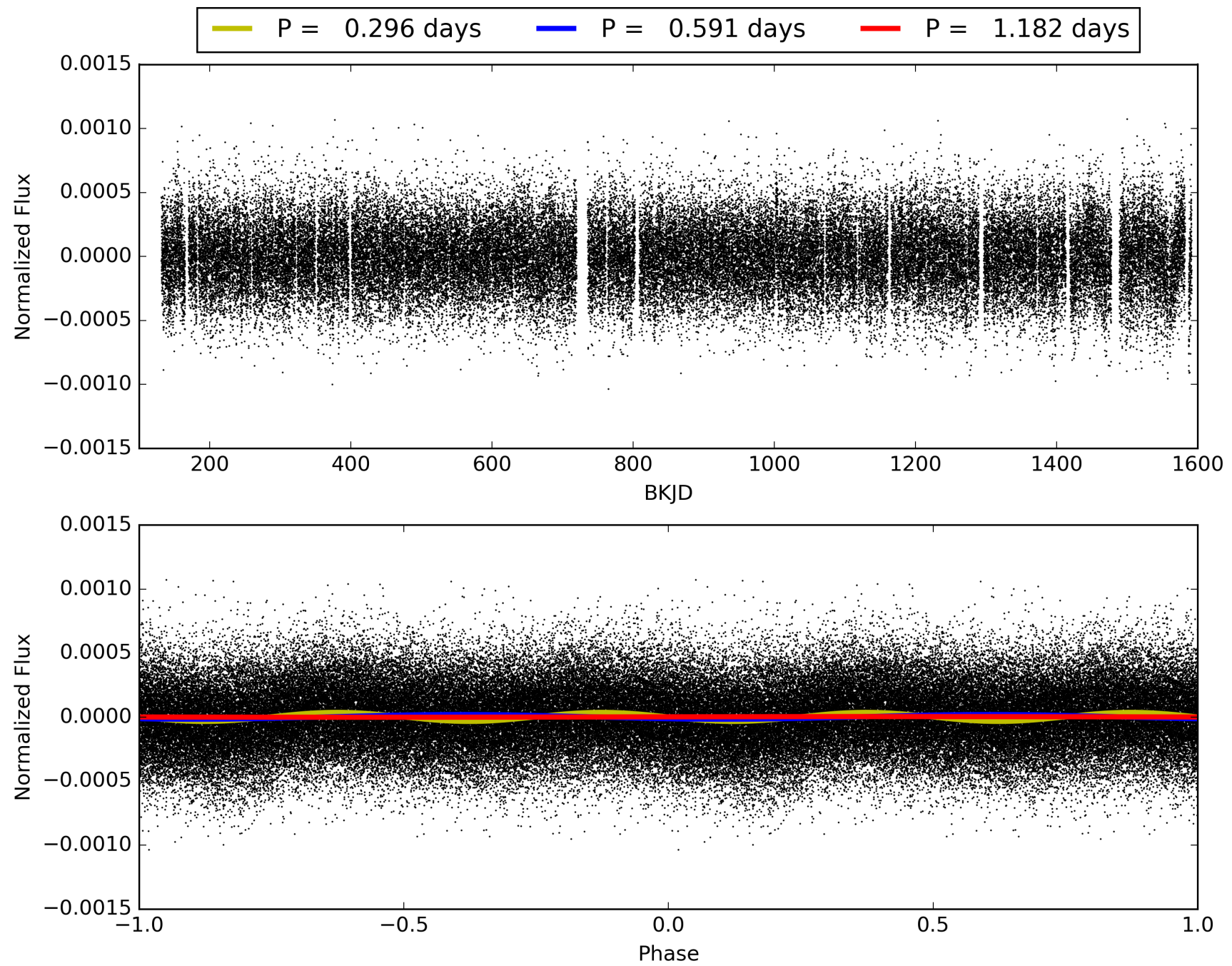
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 20:33:37 Z

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

TCE 006124426-01, PDC Light Curves

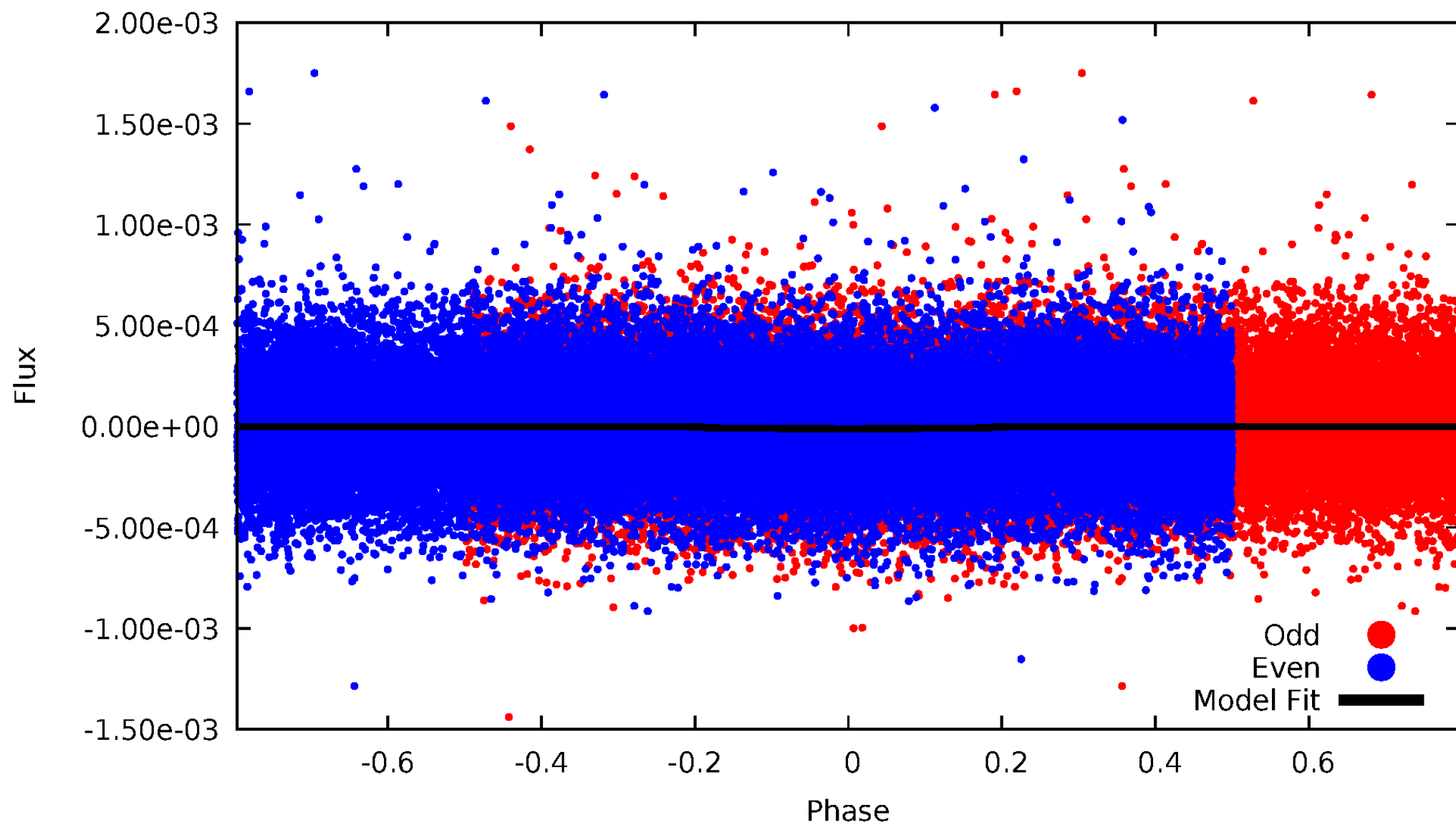


TCE 006124426-01



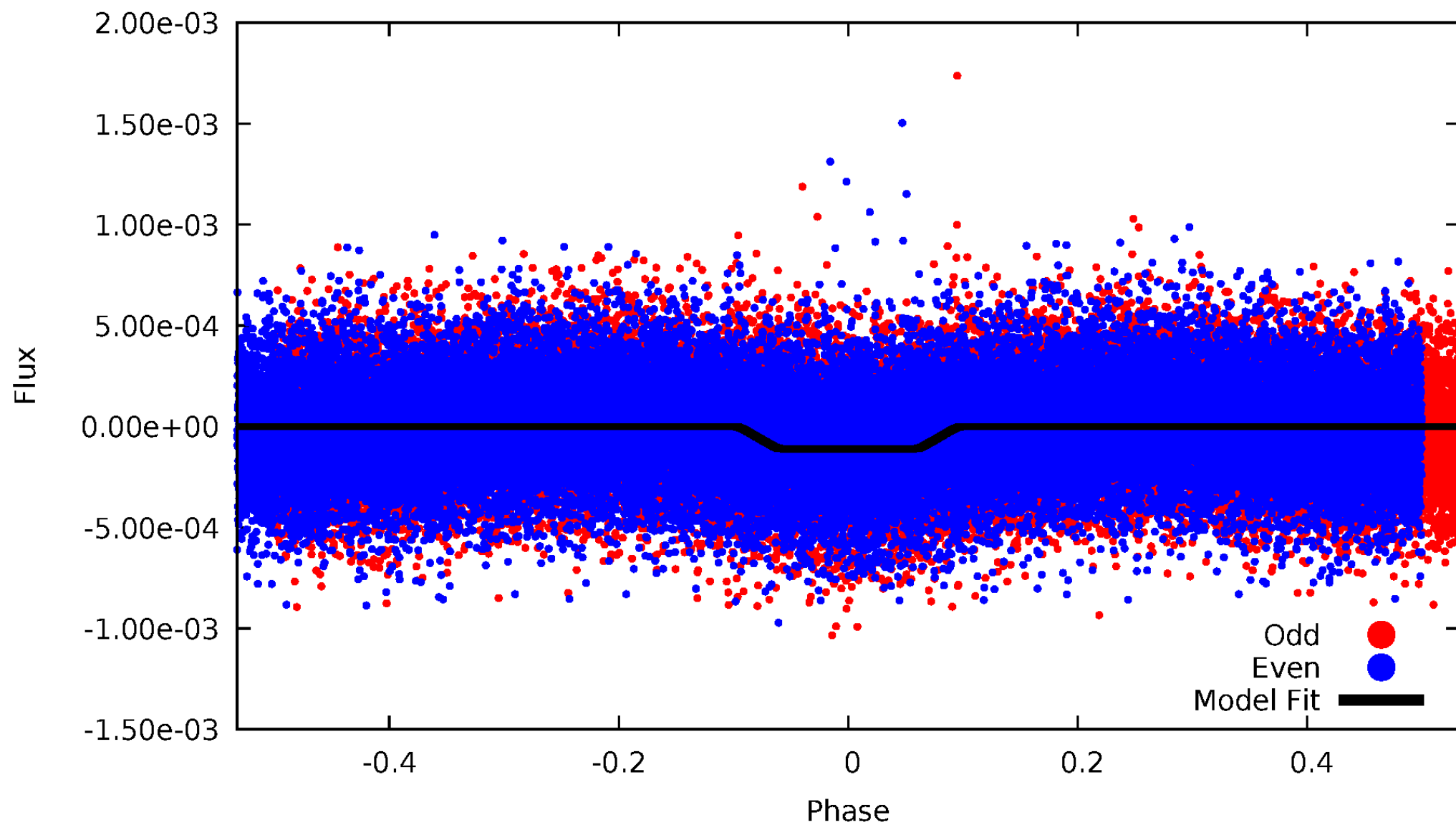
DV Odd/Even

TCE 006124426-01

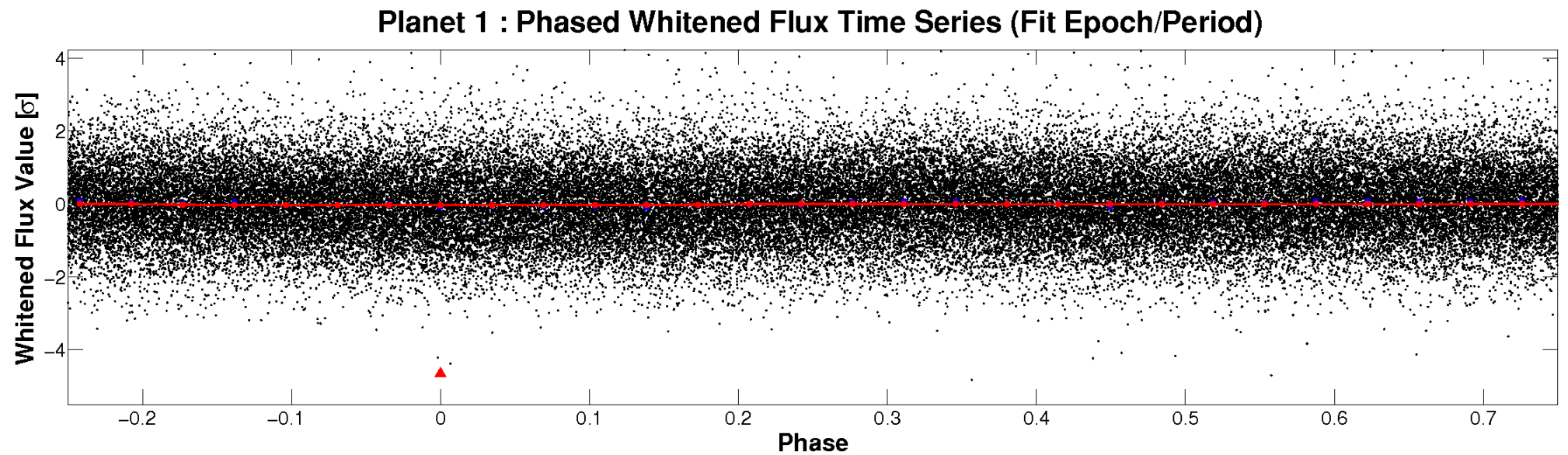
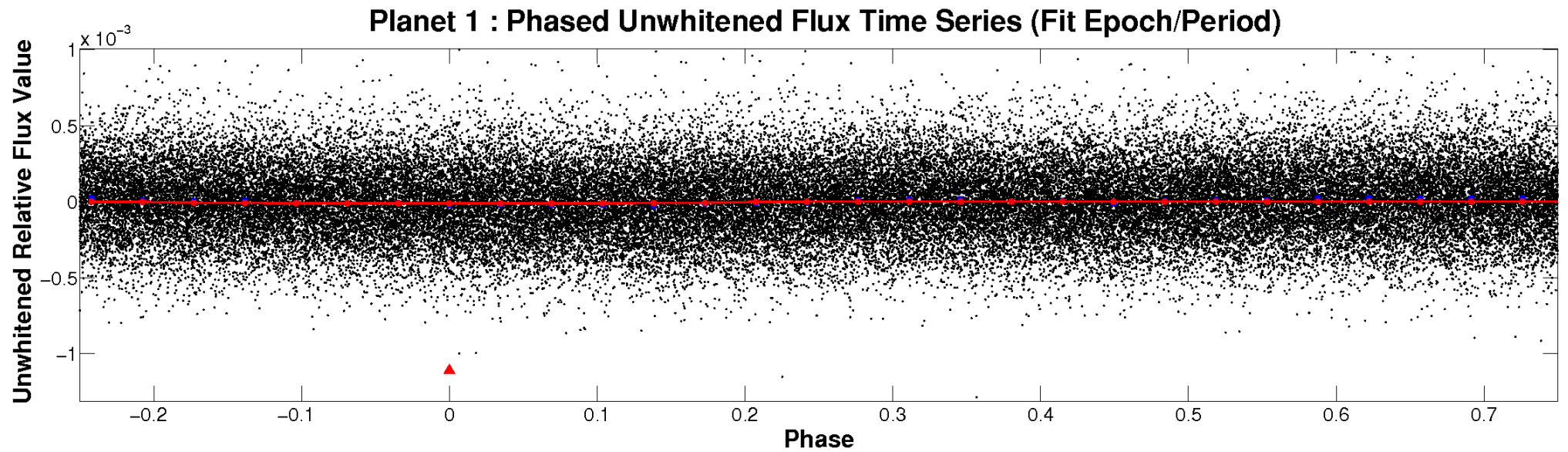


ALT Odd/Even

TCE 006124426-01

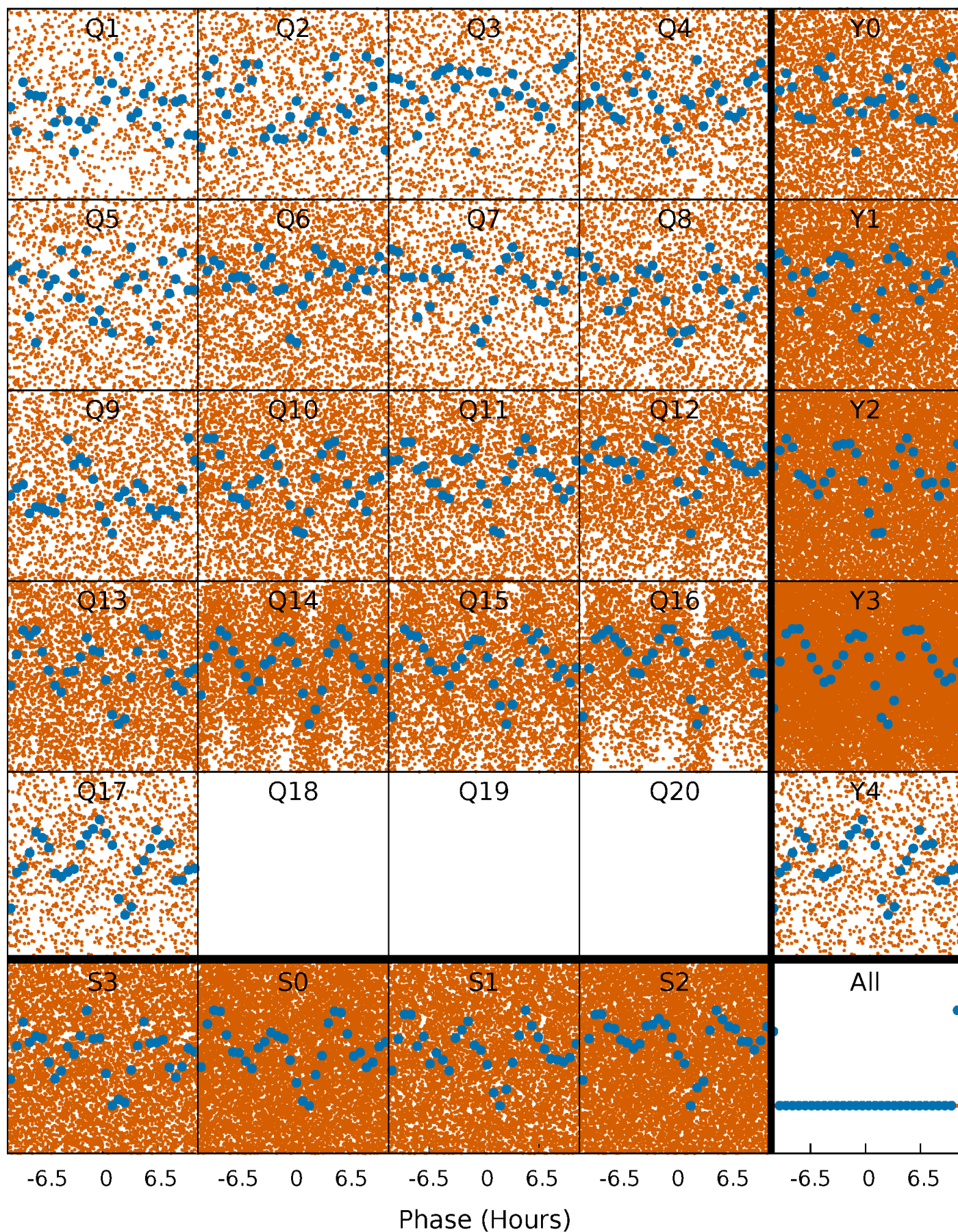


Non-Whitened Vs. Whitened Light Curve



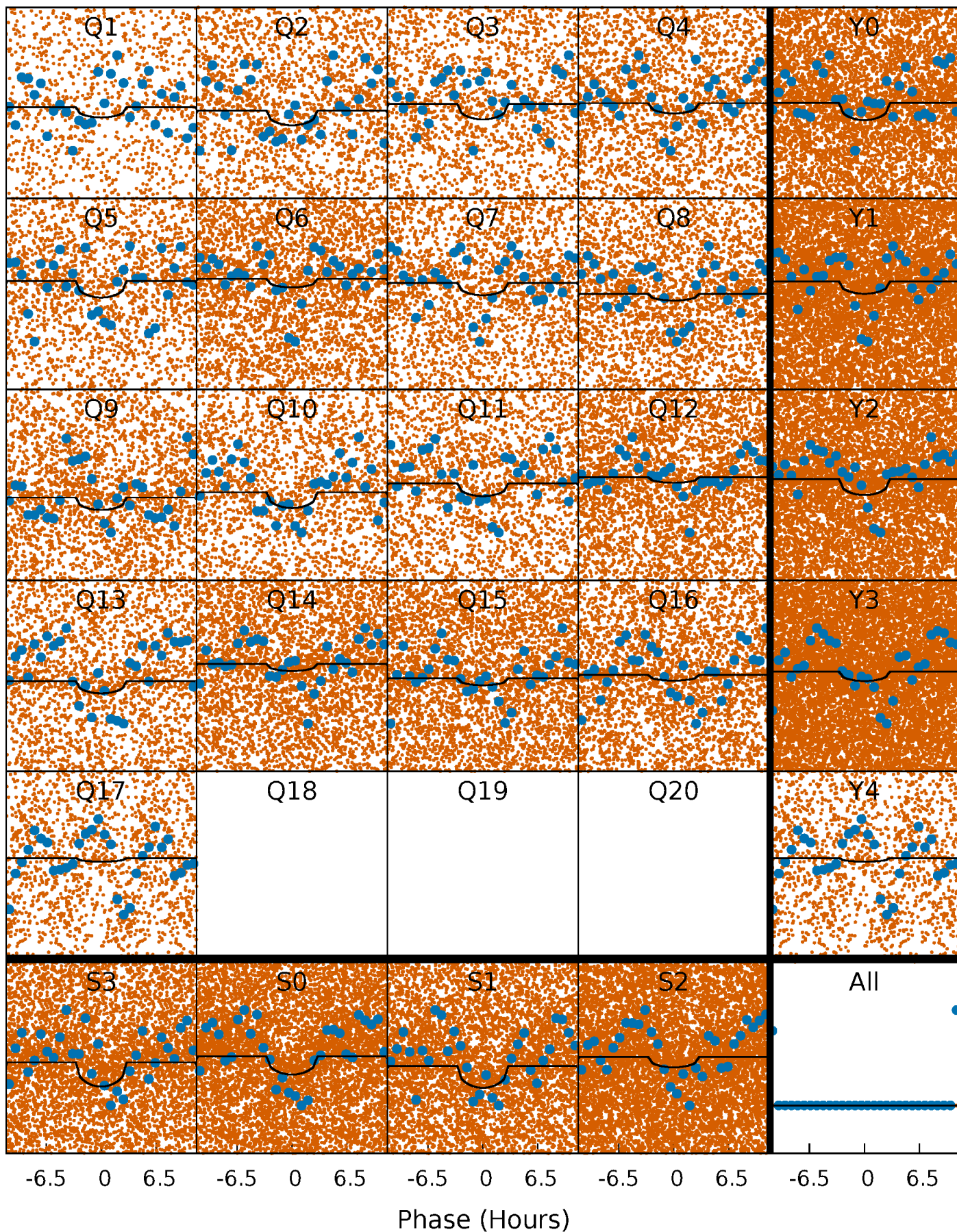
PDC Quarter-Phased Transit Curves

TCE 006124426-01 P= 0.591064 Days $T_0=132.031455$ (BKJD)



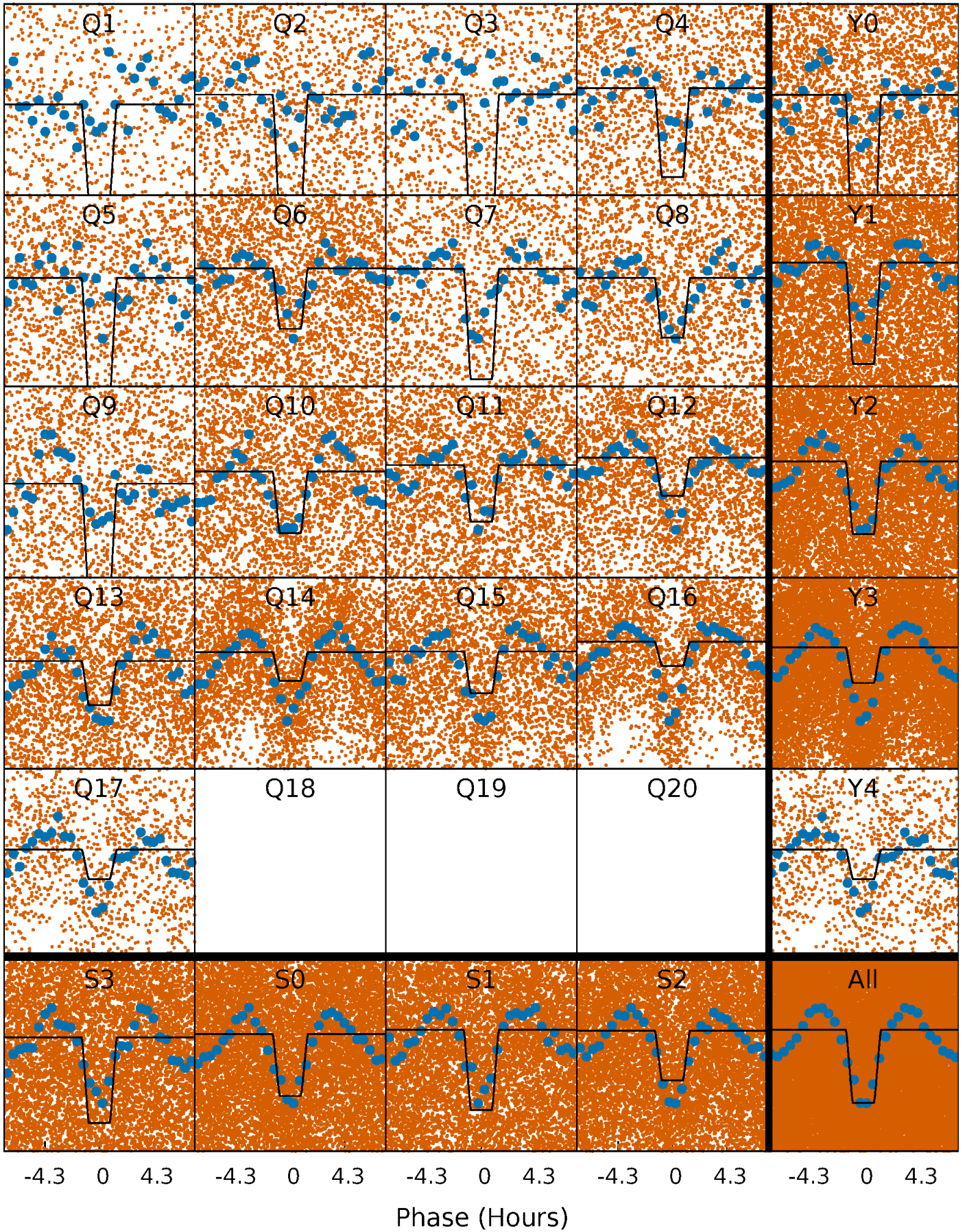
DV Quarter-Phased Transit Curves

TCE 006124426-01 P= 0.591064 Days $T_0=132.031455$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

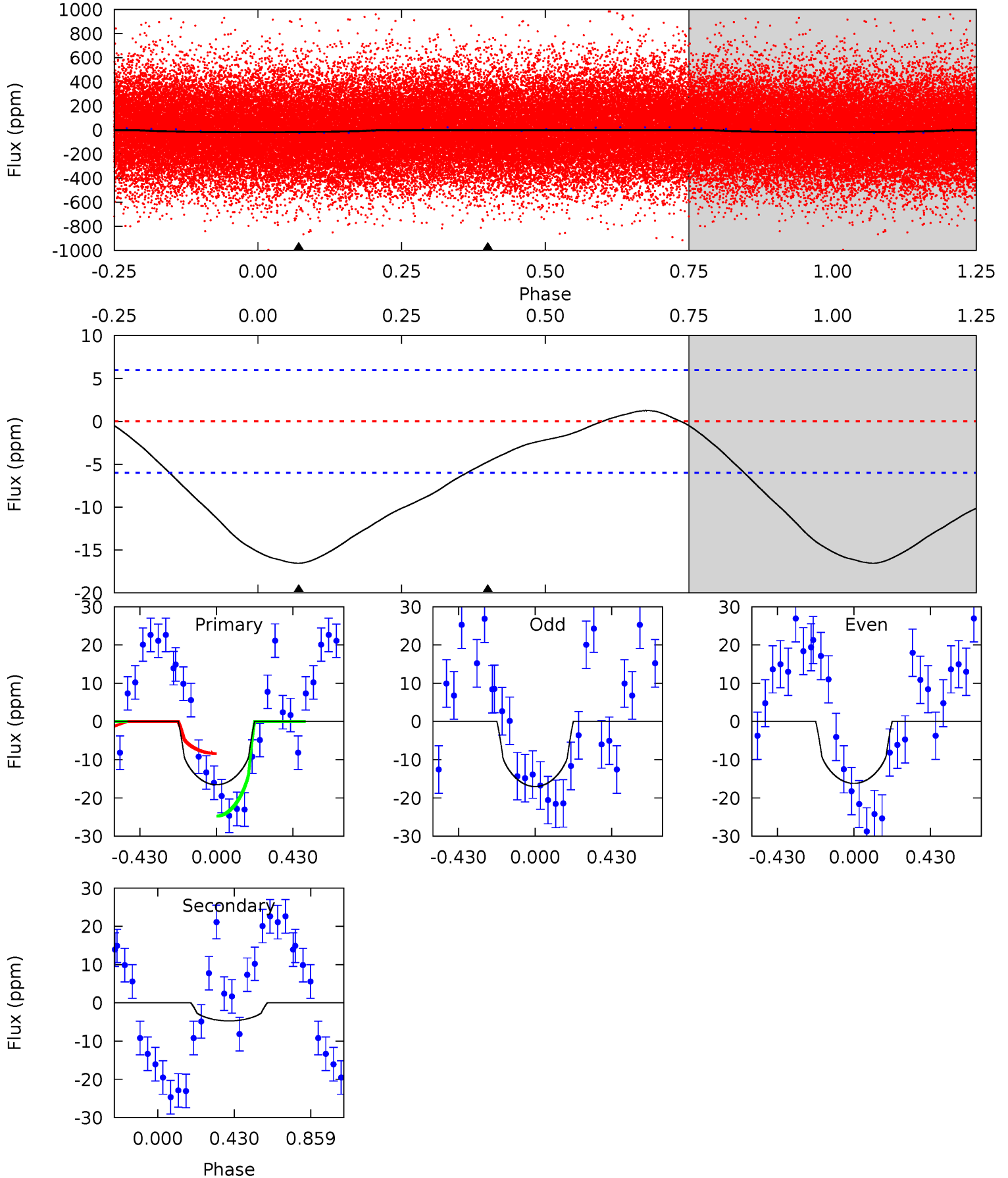
TCE 006124426-01 P= 0.591143 Days $T_0=131.964076$ (BKJD)



DV Model-Shift Uniqueness Test

006124426-01, P = 0.591064 Days, E = 131.440391 Days

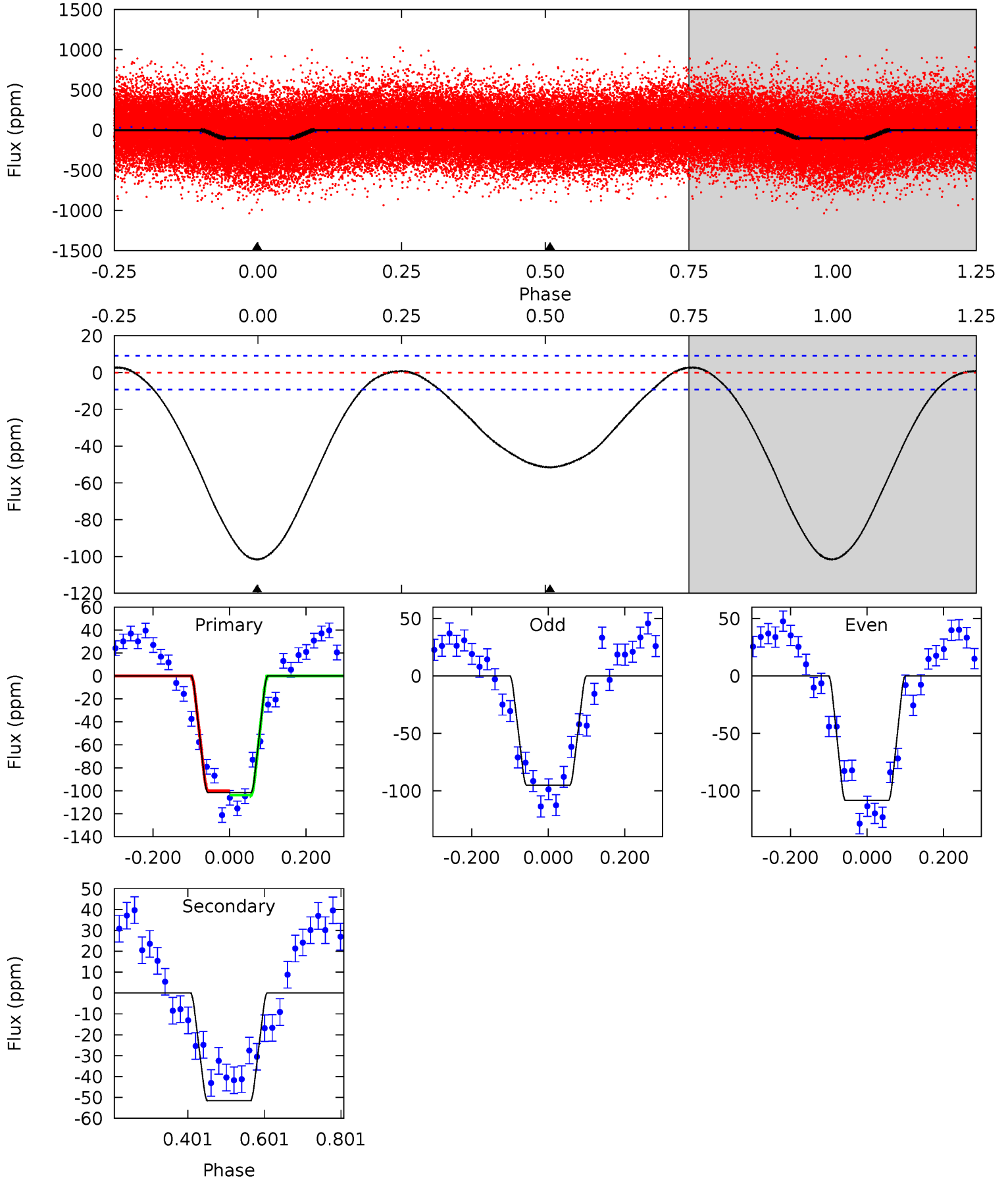
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.7	3.34	0	0	4.25	0.79	0.76	11.7	11.7	3.34	3.34	0.29	1.12	0.07	5.87



Alt Model-Shift Uniqueness Test

006124426-01, P = 0.591143 Days, E = 131.372933 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
48.7	24.7	0	0	4.42	1.28	1.11	48.7	48.7	24.7	24.7	3.16	1.02	0.03	0.92



Stellar Parameters For KIC 006124426

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5406^{+189}_{-170}	$3.684^{+0.848}_{-0.212}$	$-0.280^{+0.350}_{-0.250}$	$2.661^{+0.949}_{-1.763}$	$1.248^{+0.168}_{-0.392}$	$0.093^{+1.876}_{-0.048}$
	+3%/-3%	+23%/-6%	+125%/-89%	+36%/-66%	+13%/-31%	+2012%/-51%
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 006124426-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-5 ± 1	$1.26^{+1.37}_{-0.92}$	4356^{+498}_{-798}	2802^{+3147}_{-6613}	$0.347^{+4.104}_{-0.273}$
Alt.	-52 ± 2	$2.74^{+2.02}_{-1.59}$	4368^{+486}_{-810}	4112^{+2133}_{-6962}	$0.799^{+3.729}_{-0.532}$

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

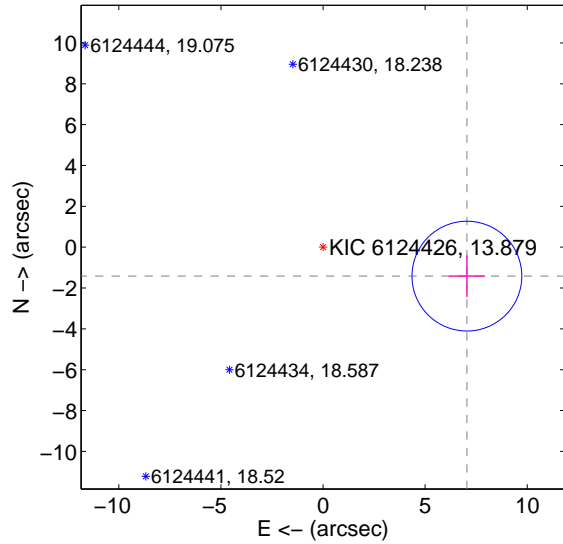
Supplemental centroid analysis for 006124426-01. Kepler magnitude: 13.88. Transit SNR 4.89

There are 0 quarters with good PRF difference image offsets

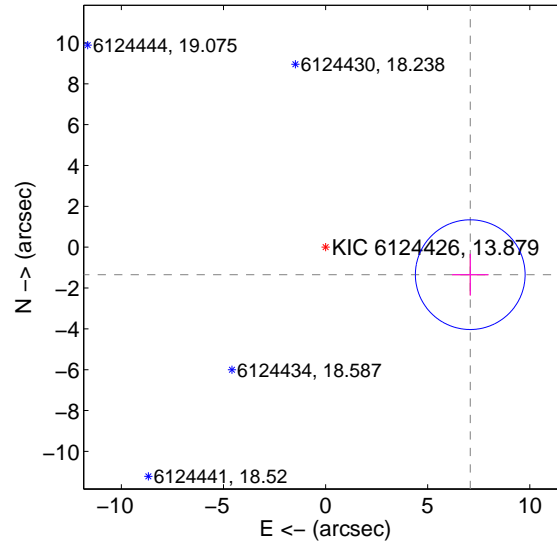
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.185 ± 0.896	8.02	-7.044 ± 0.891	-1.418 ± 1.018
PRF-fit source offset from KIC position	7.211 ± 0.895	8.05	-7.084 ± 0.891	-1.346 ± 1.018
photometric centroid source offset	4.01 ± 1.78	2.25	-3.94 ± 1.78	-0.71 ± 1.77

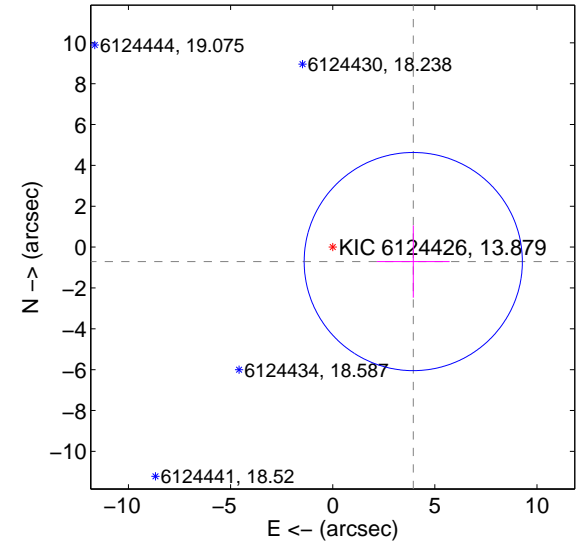
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

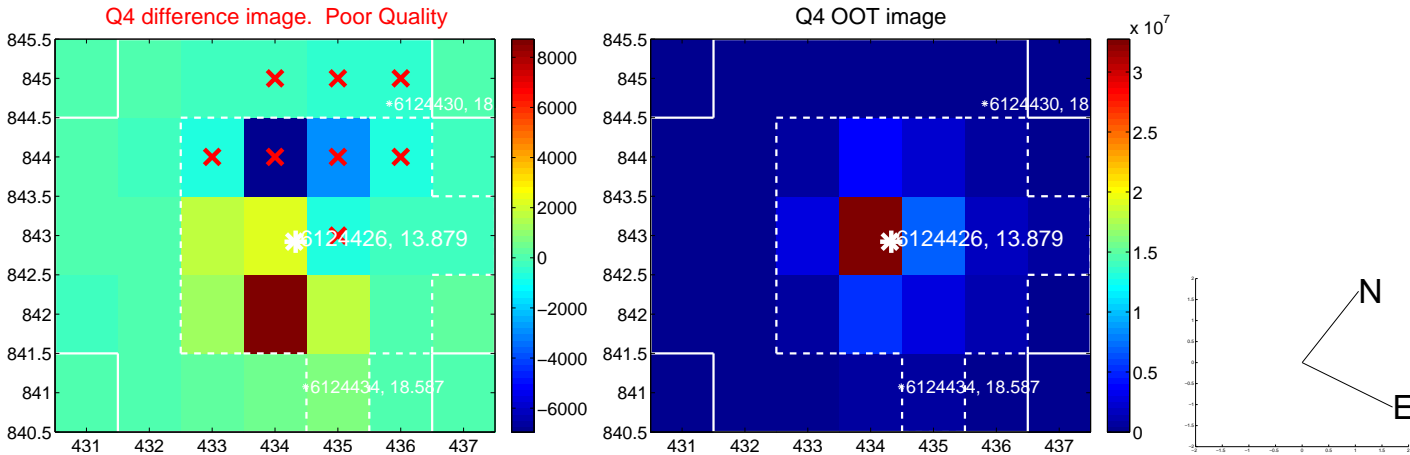
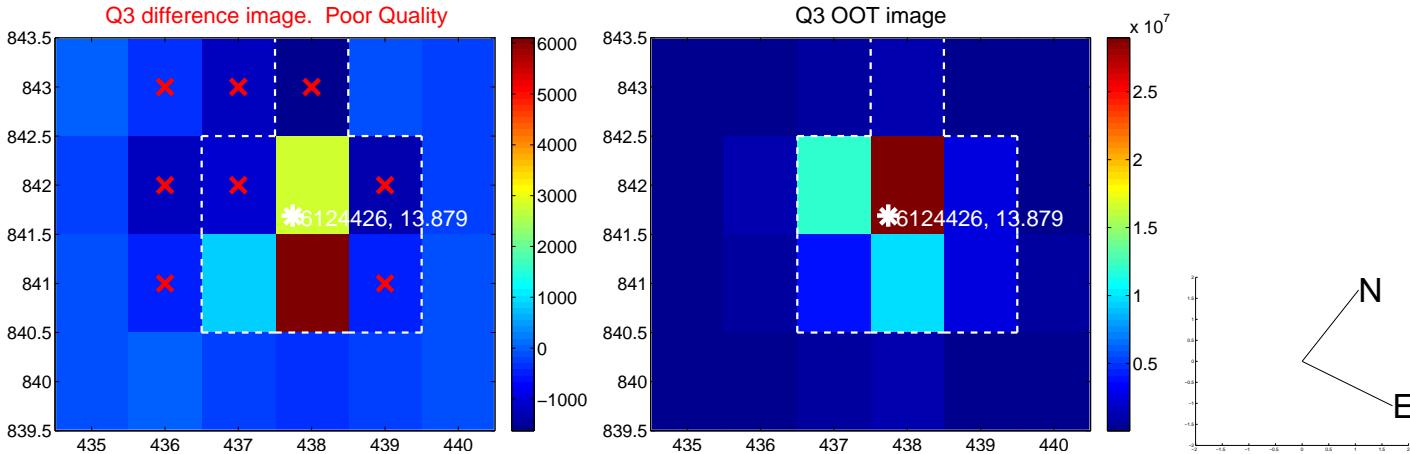
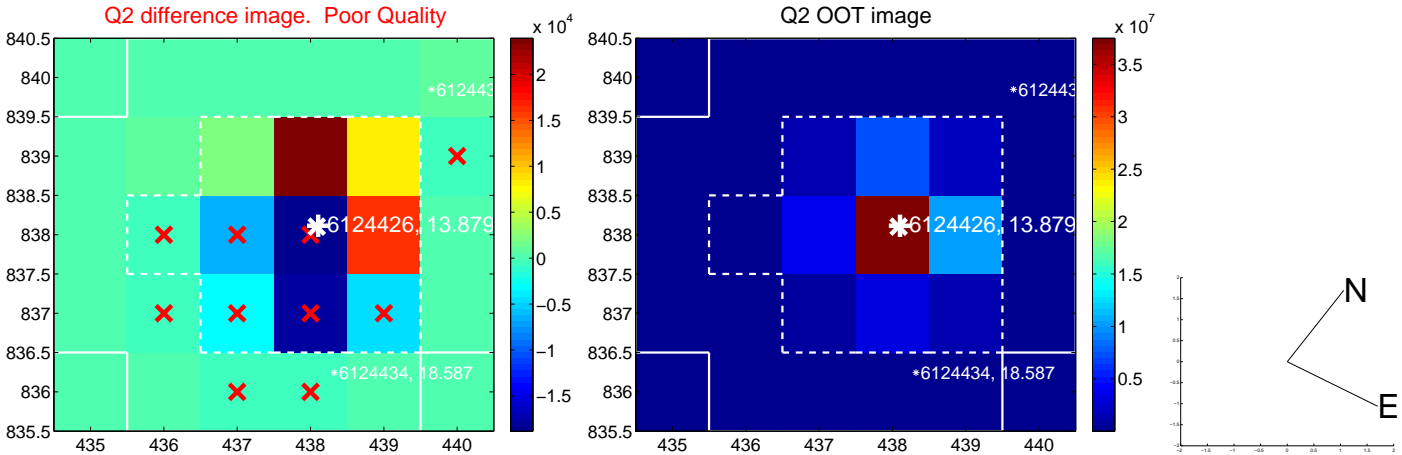
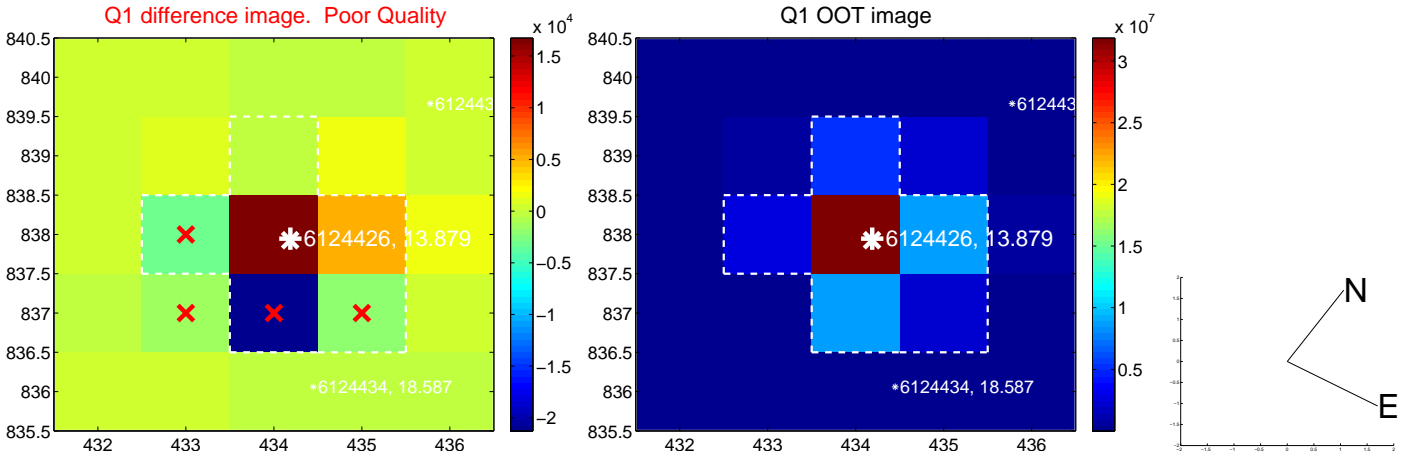


offset from photometric centroids

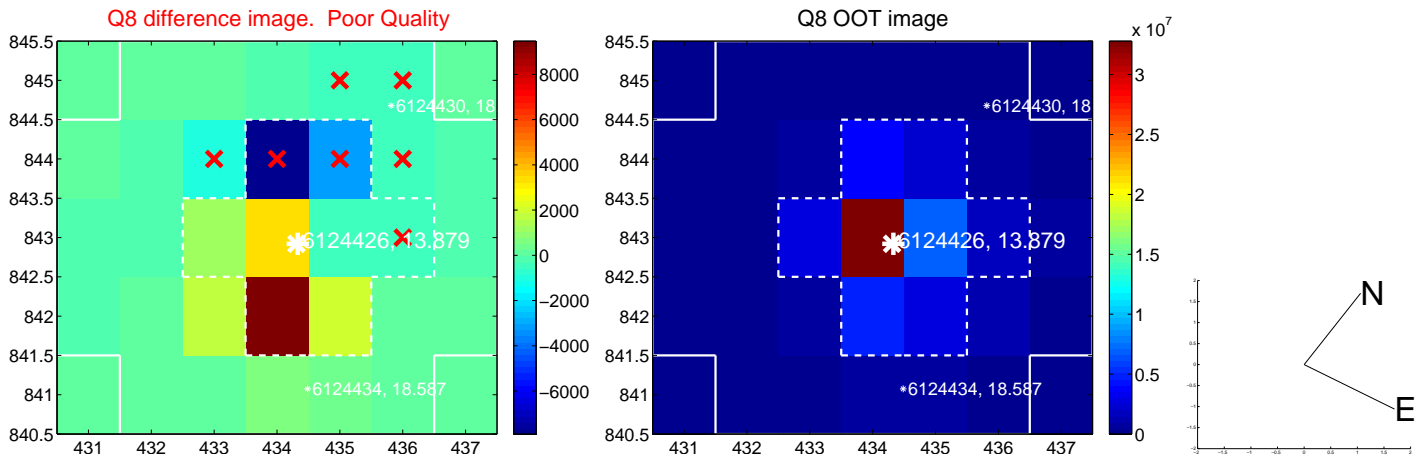
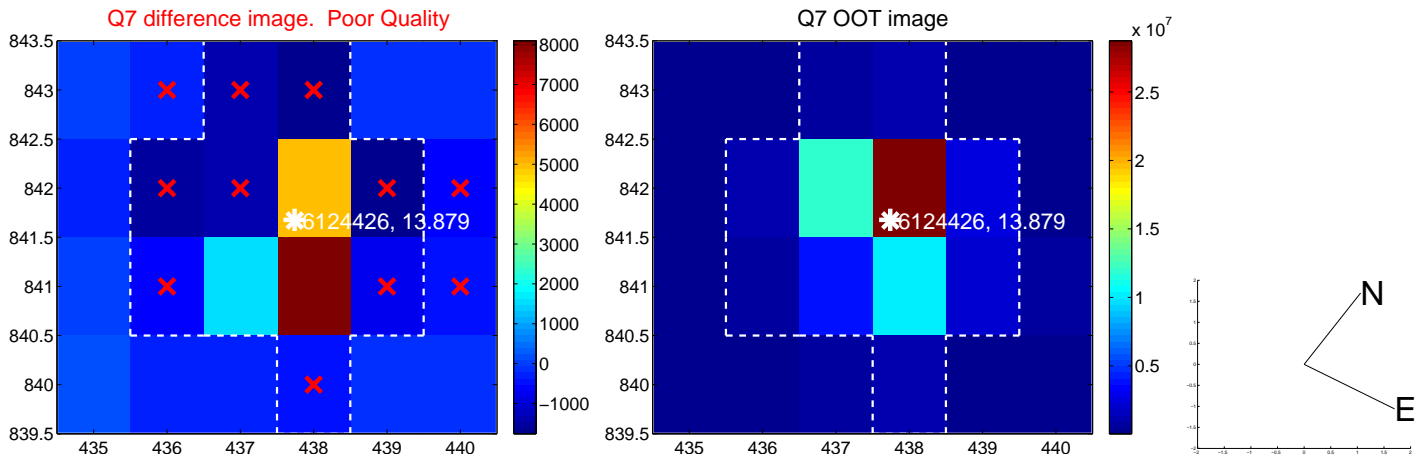
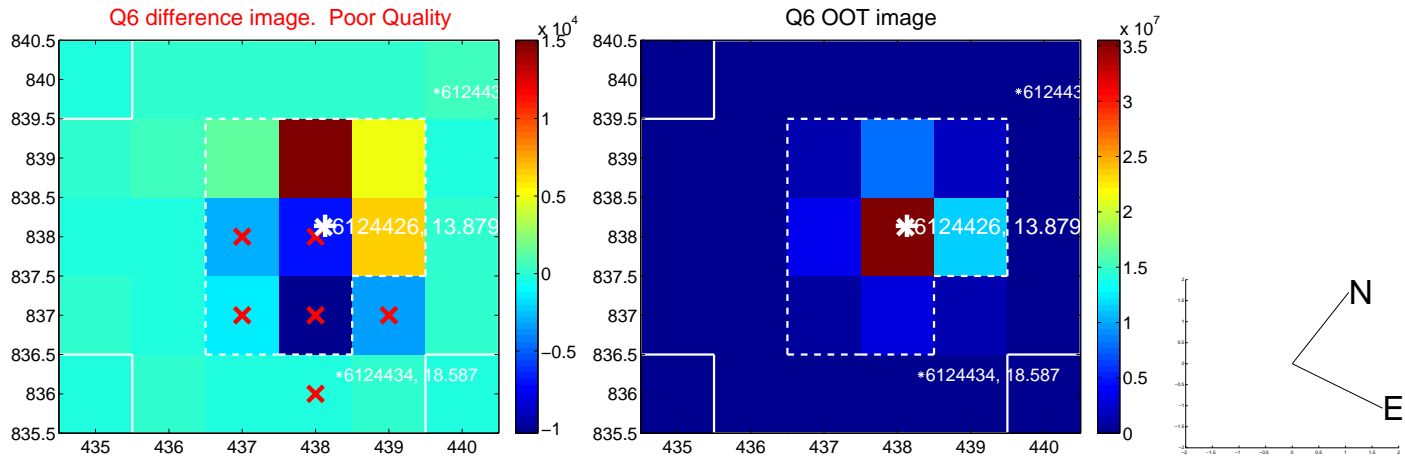
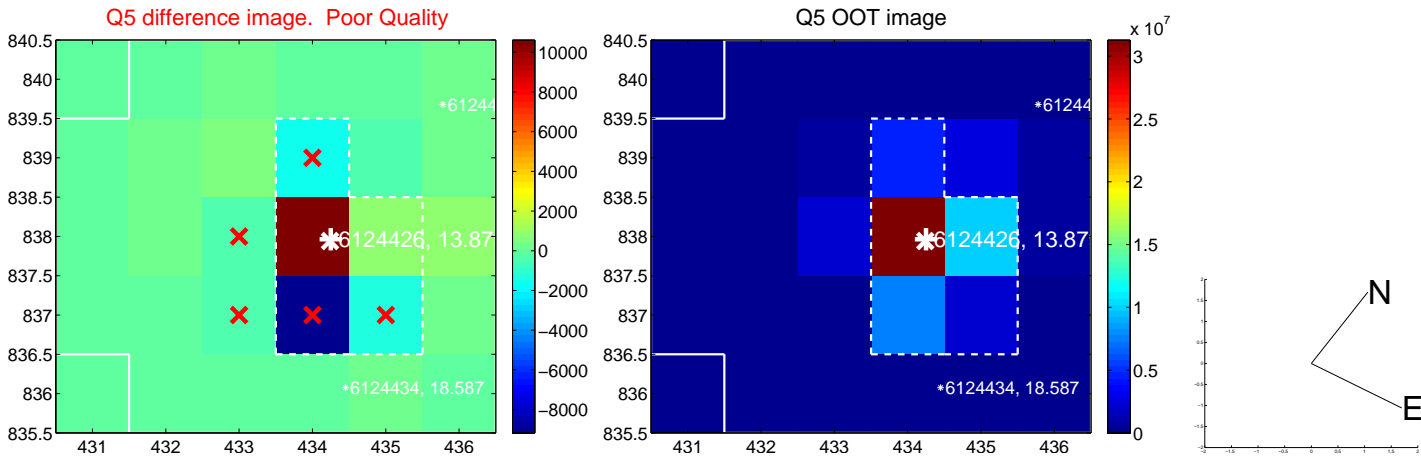


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

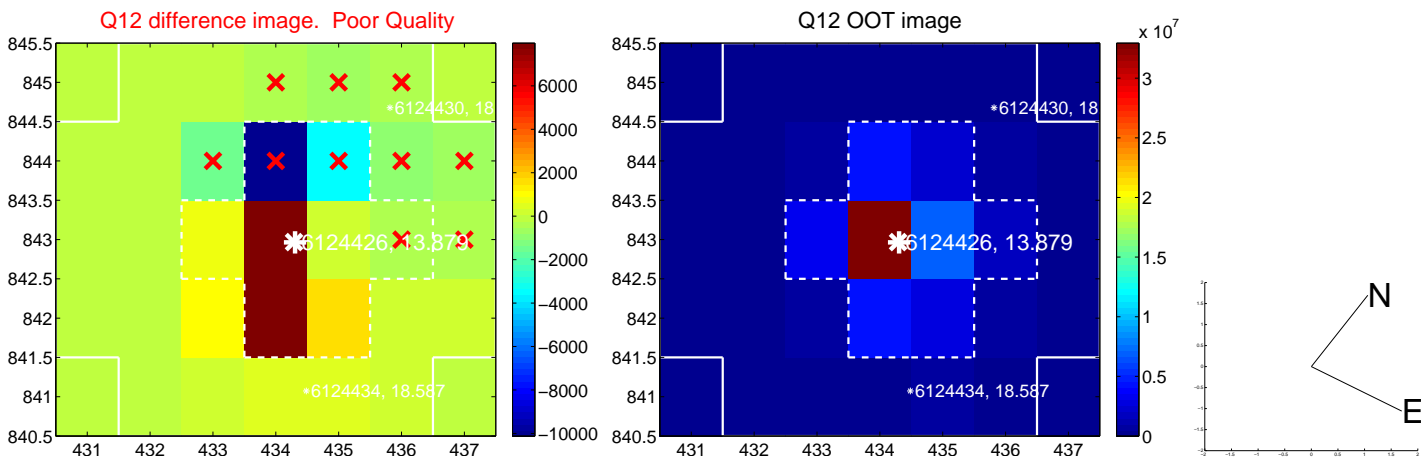
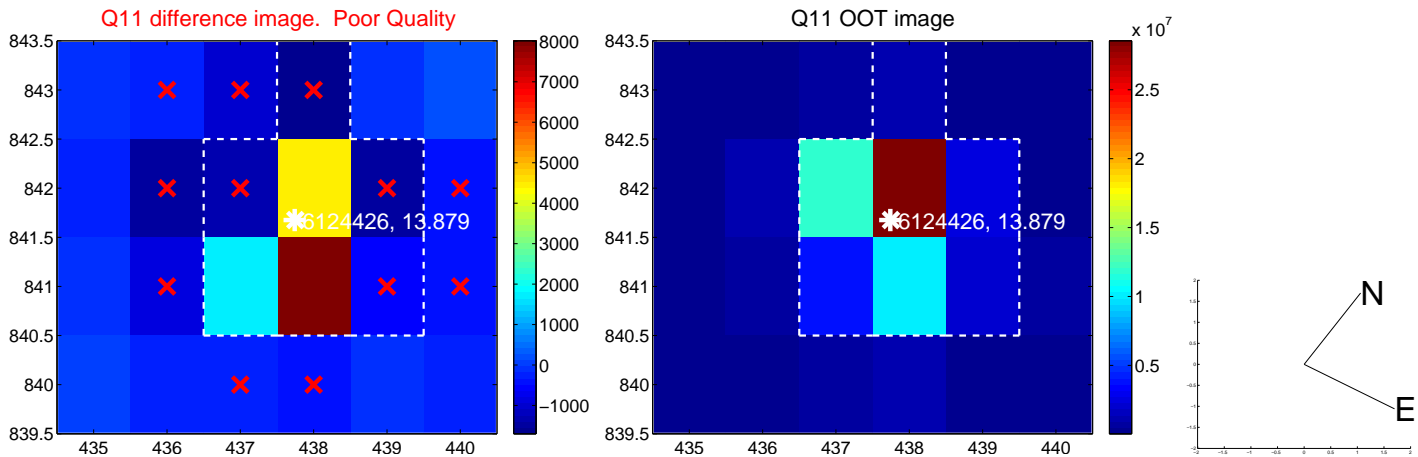
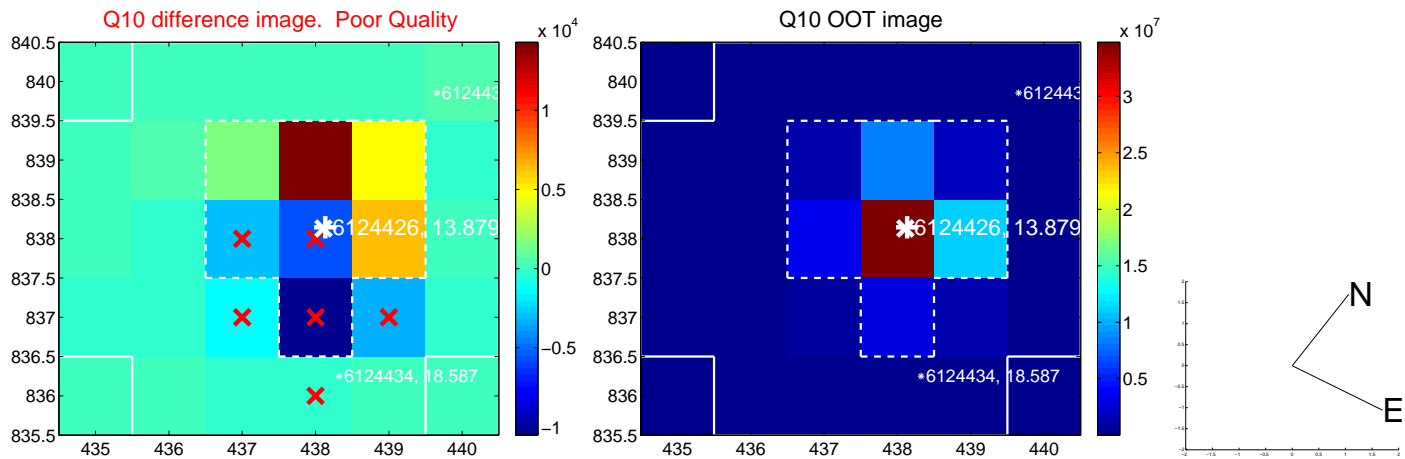
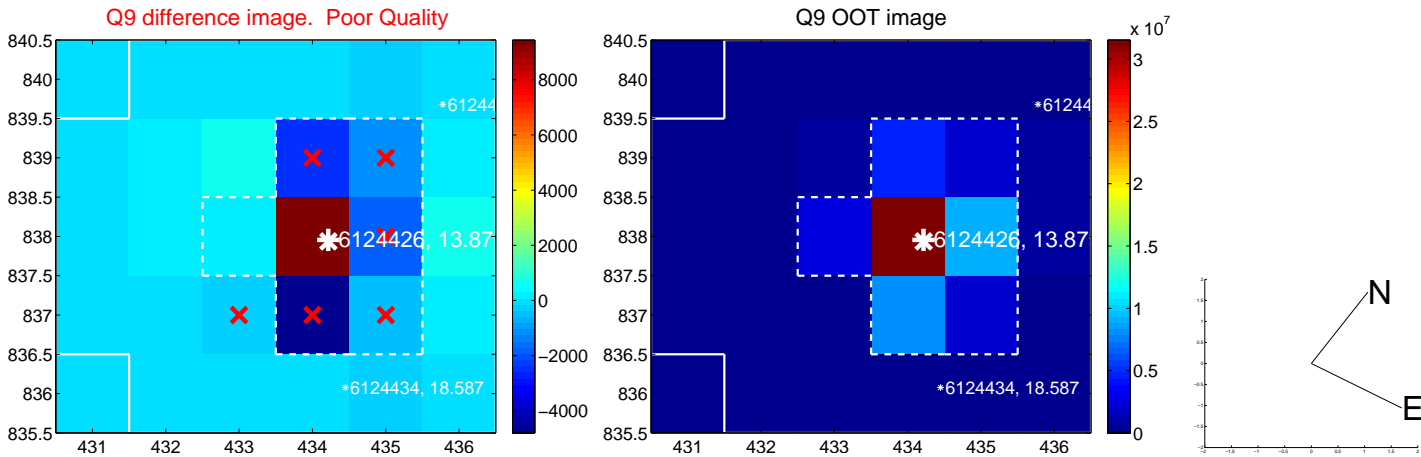
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



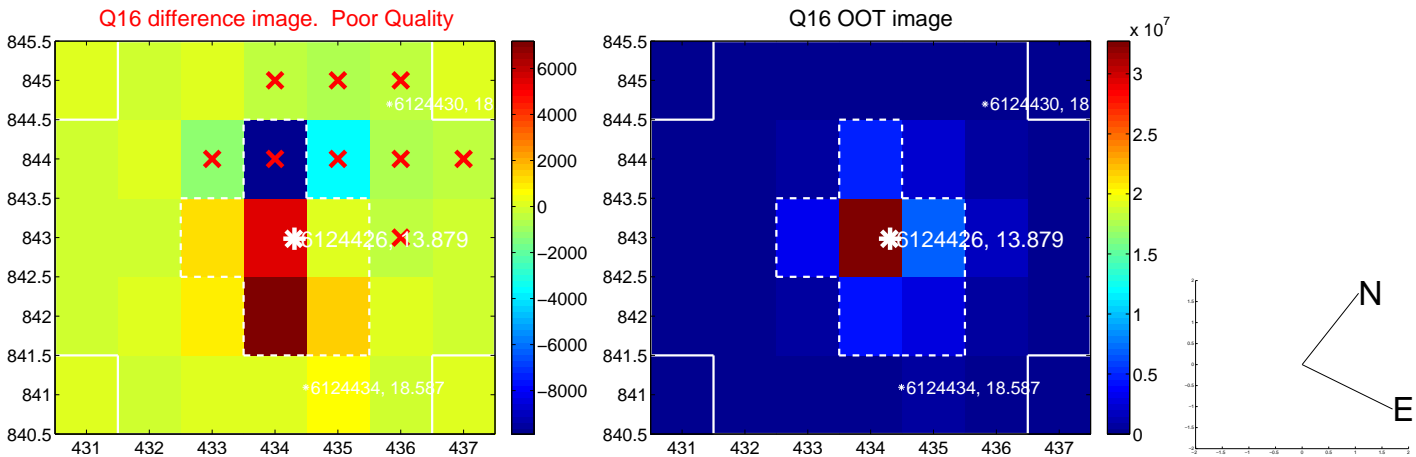
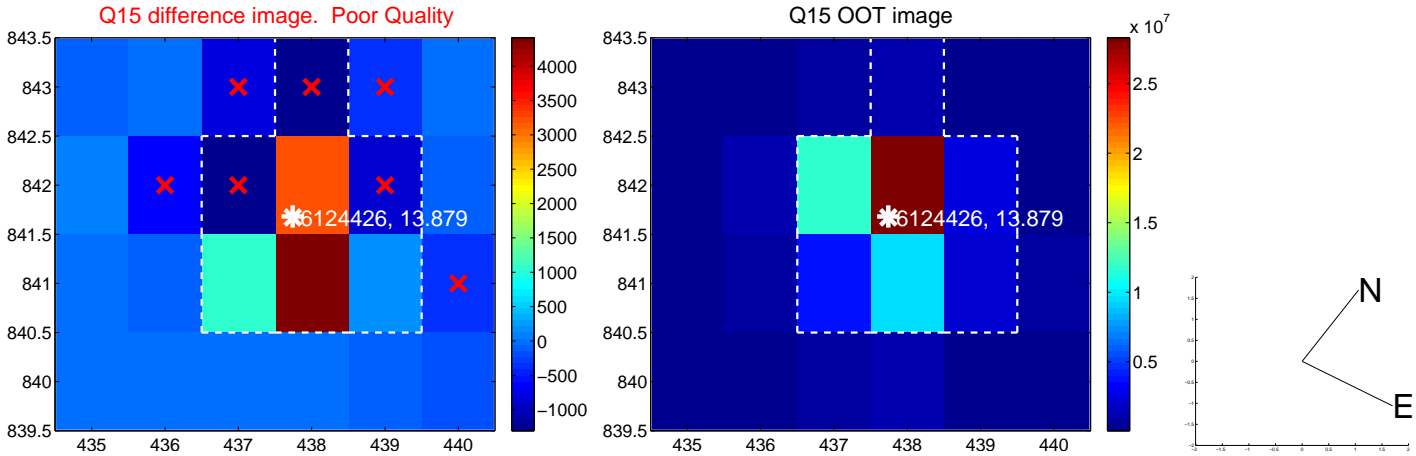
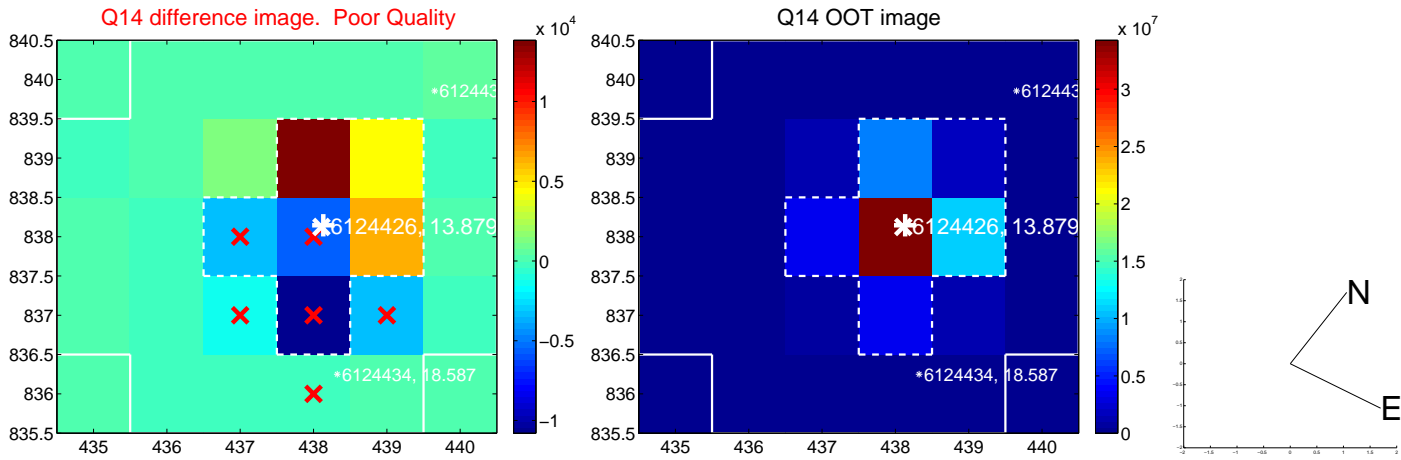
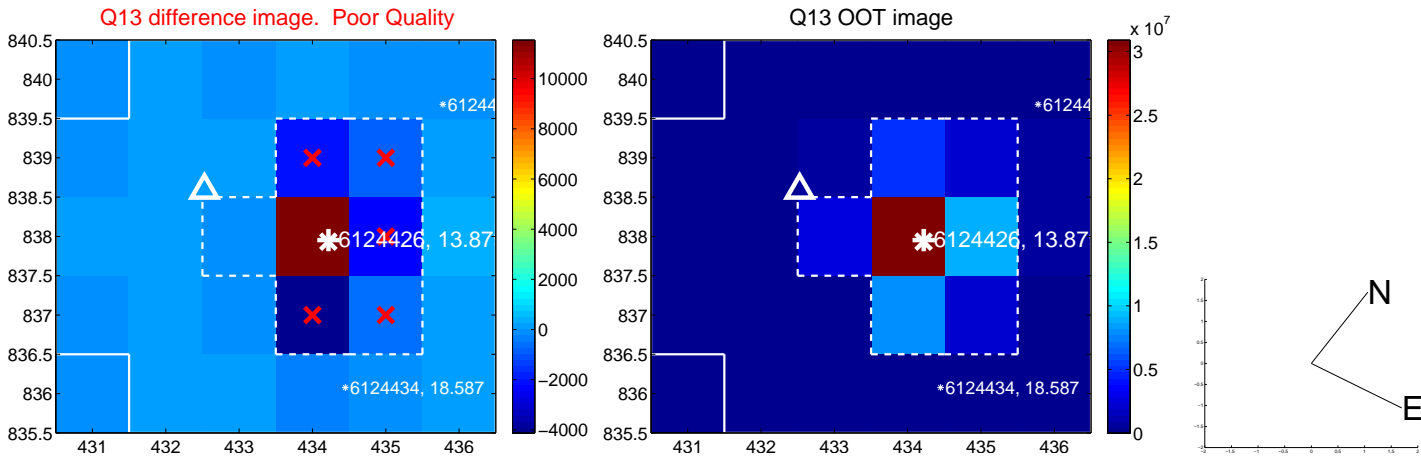
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



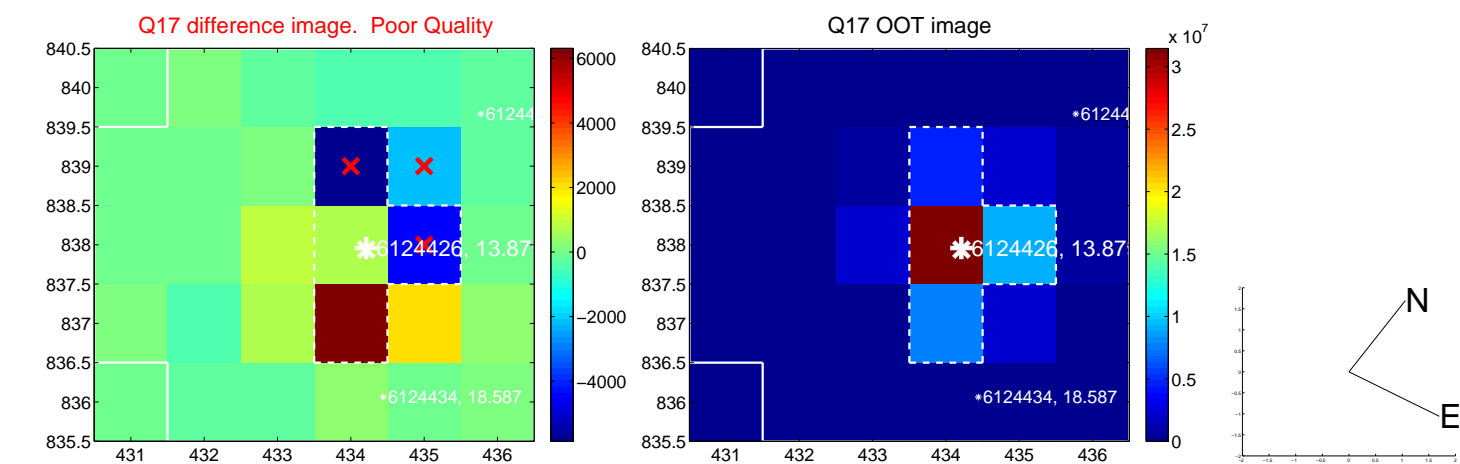
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



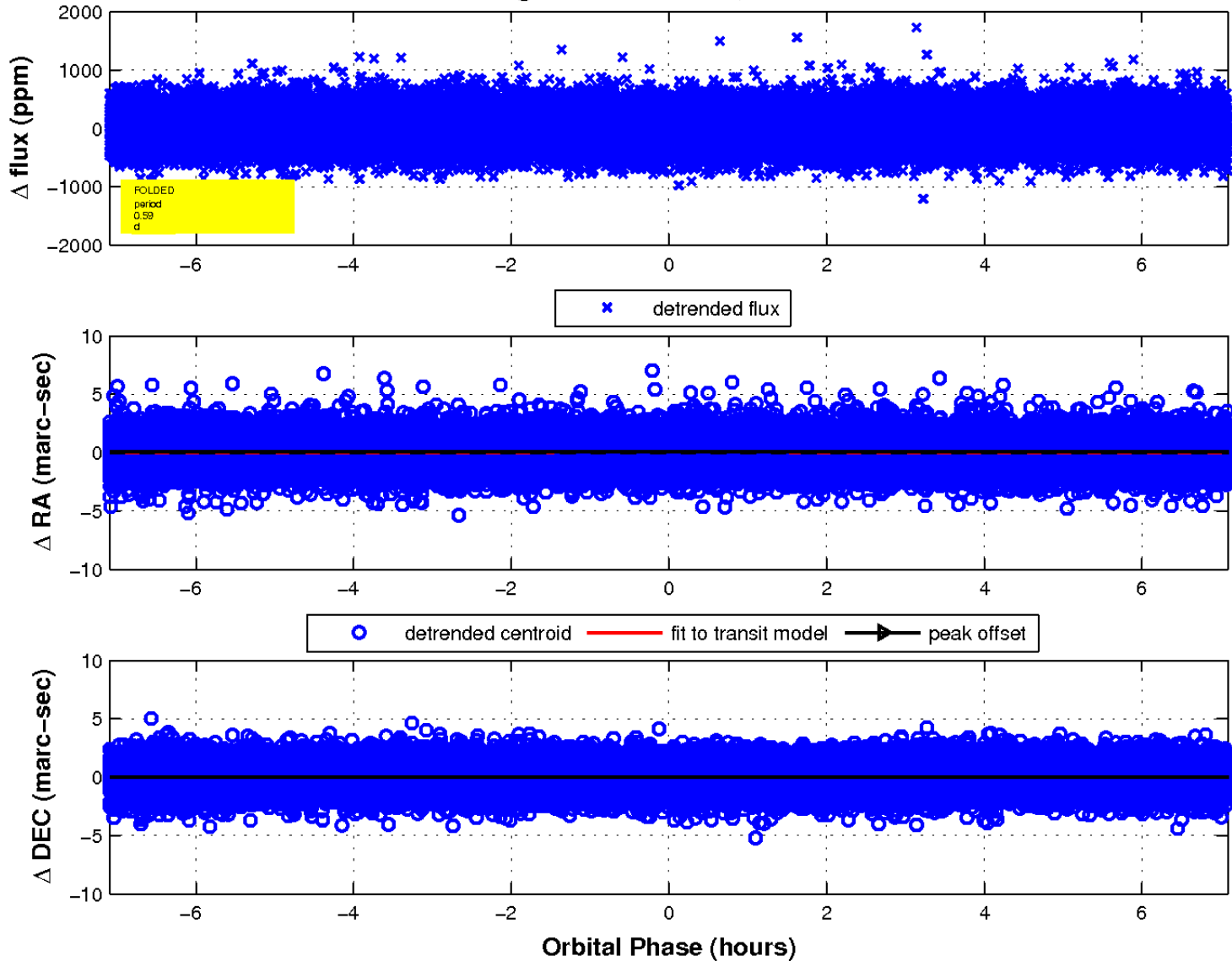
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

