

KIC 009340411

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})
009340411-01	OBS	7162.01	5.158222	131.699854	33.0	8.750	8.4	8.5	3.35	5155	2.23	1722.94

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009340411-01	OBS	PC	0.98	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.

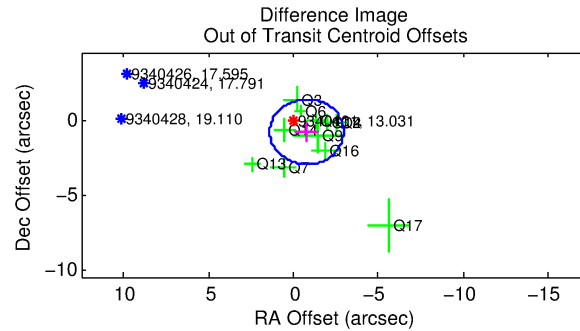
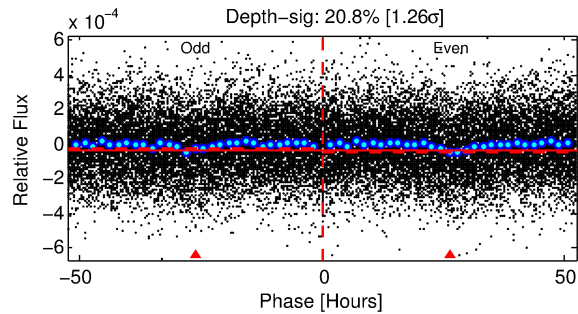
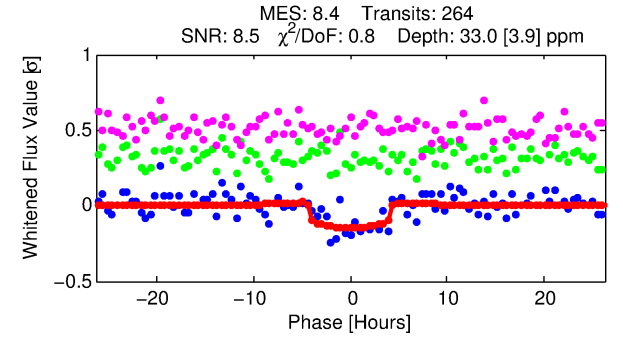
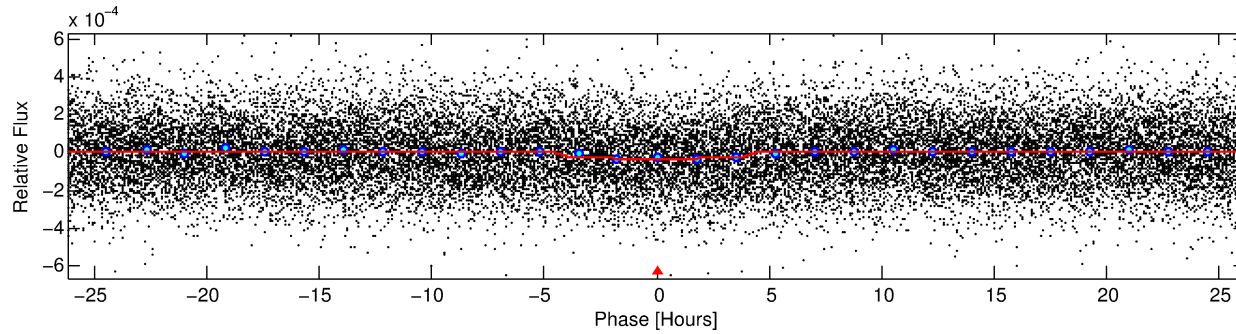
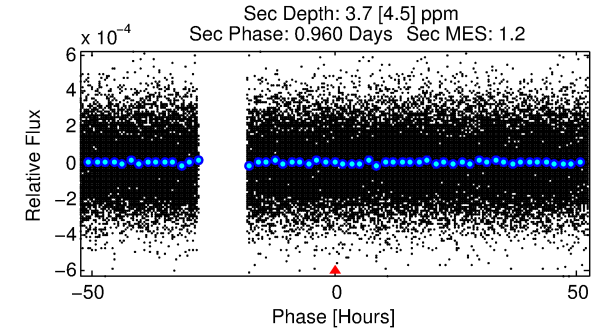
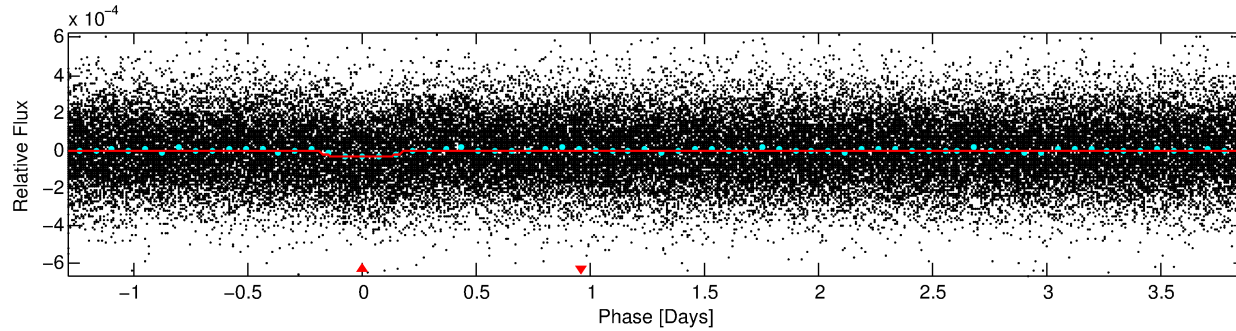
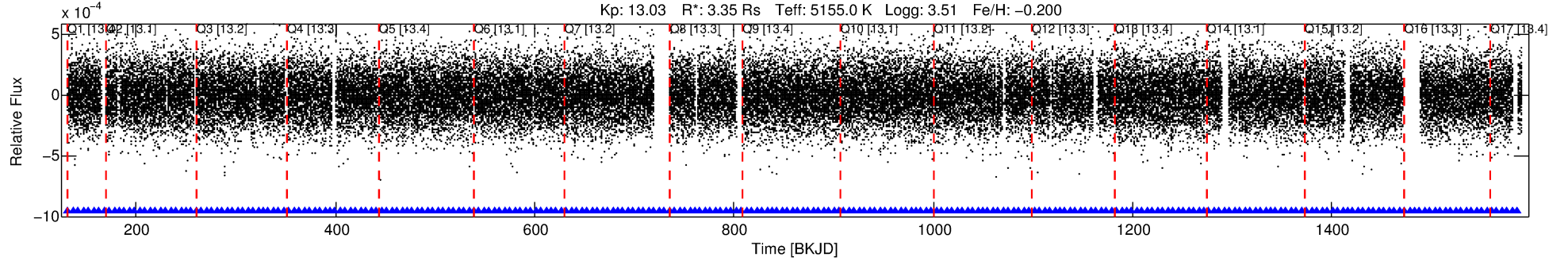
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009340411-01

No Significant Match Found

DV One-Page Summary

KIC: 9340411 Candidate: 1 of 1 Period: 5.158 d
KOI: K07162.01 Corr: 0.891



DV Fit Results:

Period = 5.15822 [0.00007] d
Epoch = 131.6999 [0.0102] BKJD
Rp/R* = 0.0061 [0.0026]
a/R* = 2.58 [3.89]
b = 0.85 [0.58]
Seff = 1722.94 [610.04]
Teq = 1643 [145] K
Rp = 2.23 [1.10] Re
a = 0.0643 [0.0141] AU
Ag = 1.71 [2.59] [0.28σ]
Teffp = 2905 [1074] K [1.17σ]

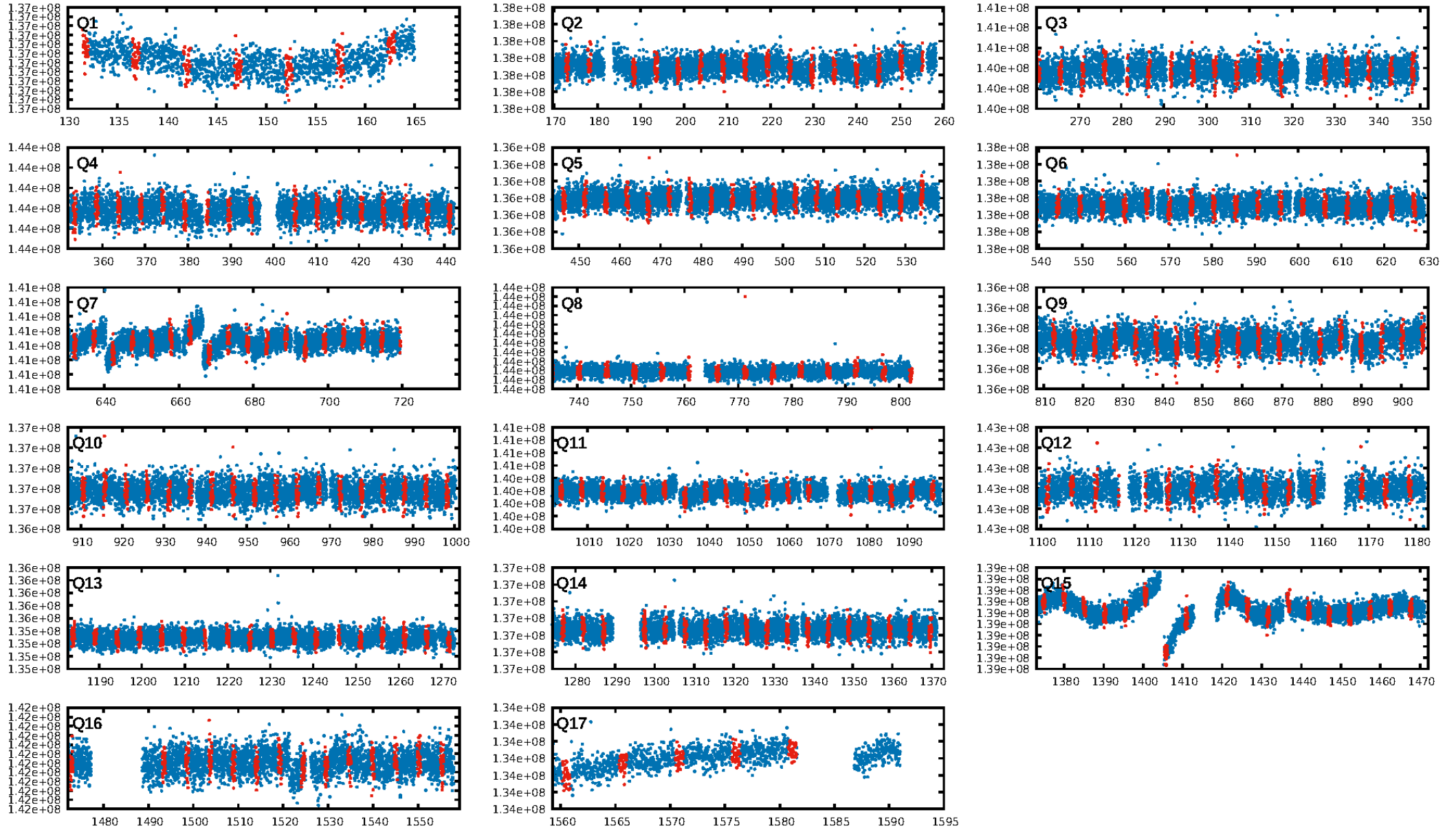
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.71e-16
RollingBand-fgt: 1.00 [252/252]
GhostDiagnostic-chr: 15.32
Centroid-sig: 5.0%
Centroid-so: 1.817 arcsec [1.86σ]
OotOffset-rm: 1.128 arcsec [1.56σ]
KicOffset-rm: 0.963 arcsec [1.57σ]
OotOffset-st: 3/2/3/3 [11]
KicOffset-st: 3/2/3/3 [11]
DiffImageQuality-fgm: 0.55 [6/11]
DiffImageOverlap-fno: 1.00 [17/17]

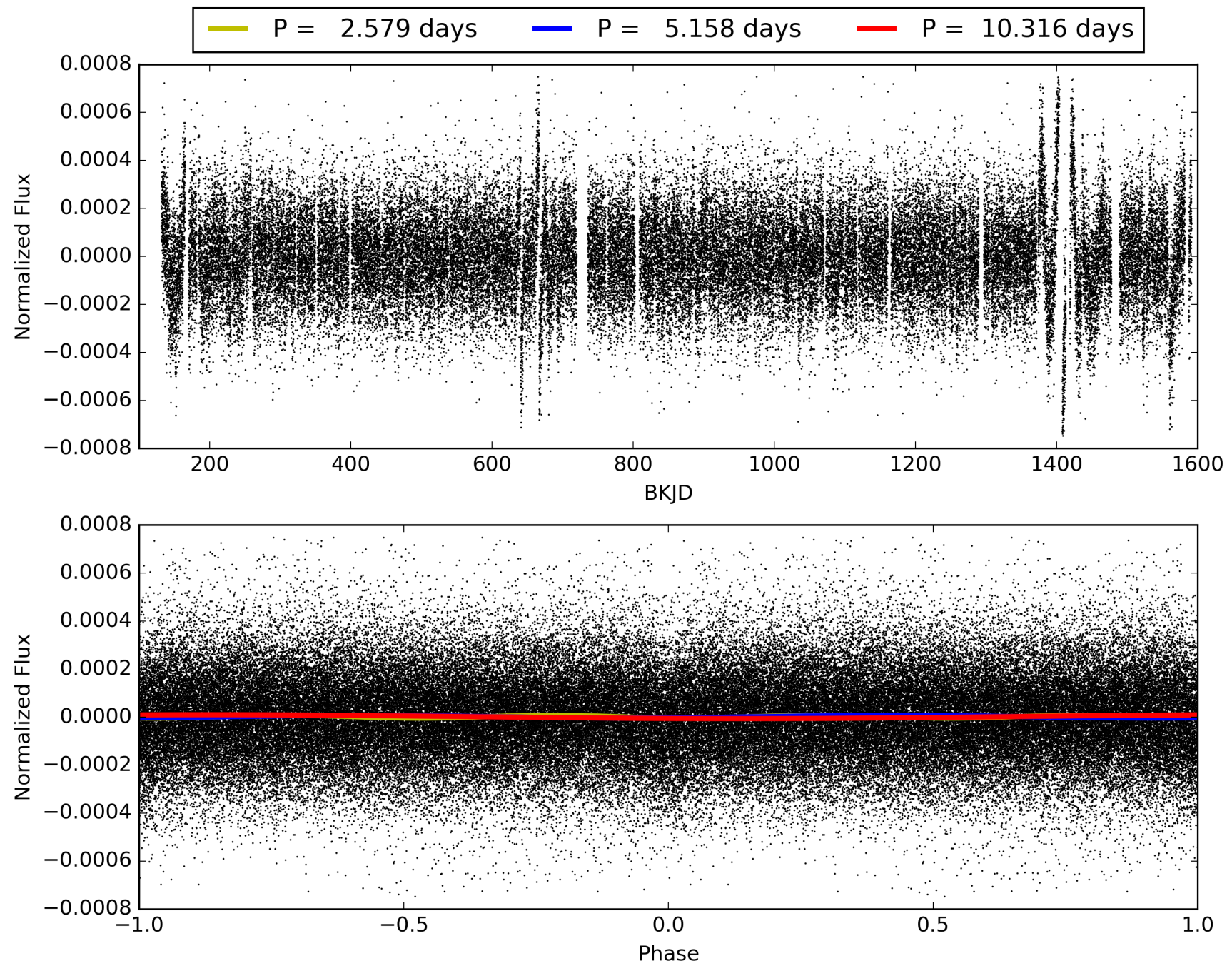
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:21:50 Z

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

TCE 009340411-01, PDC Light Curves

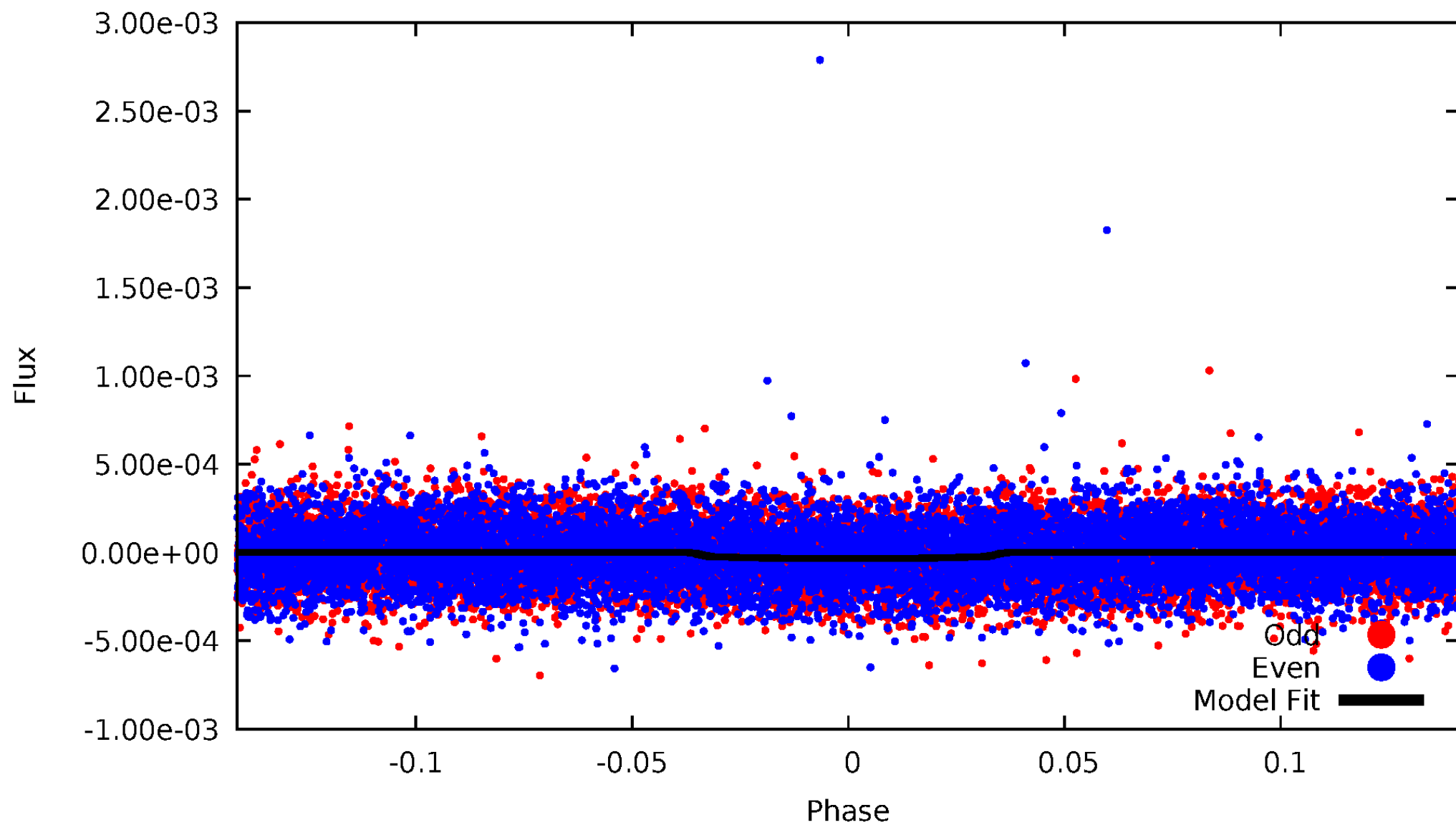


TCE 009340411-01



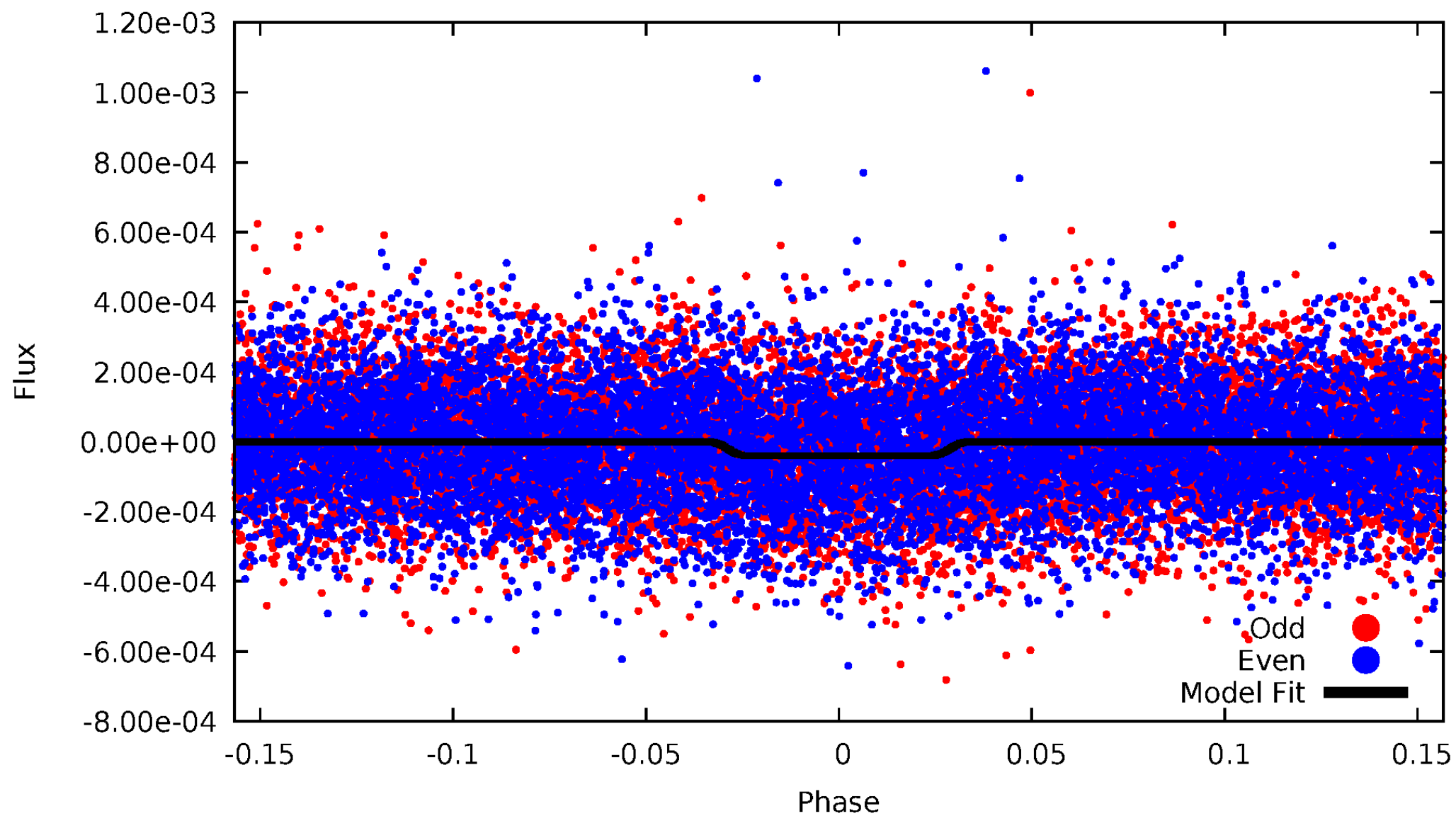
DV Odd/Even

TCE 009340411-01



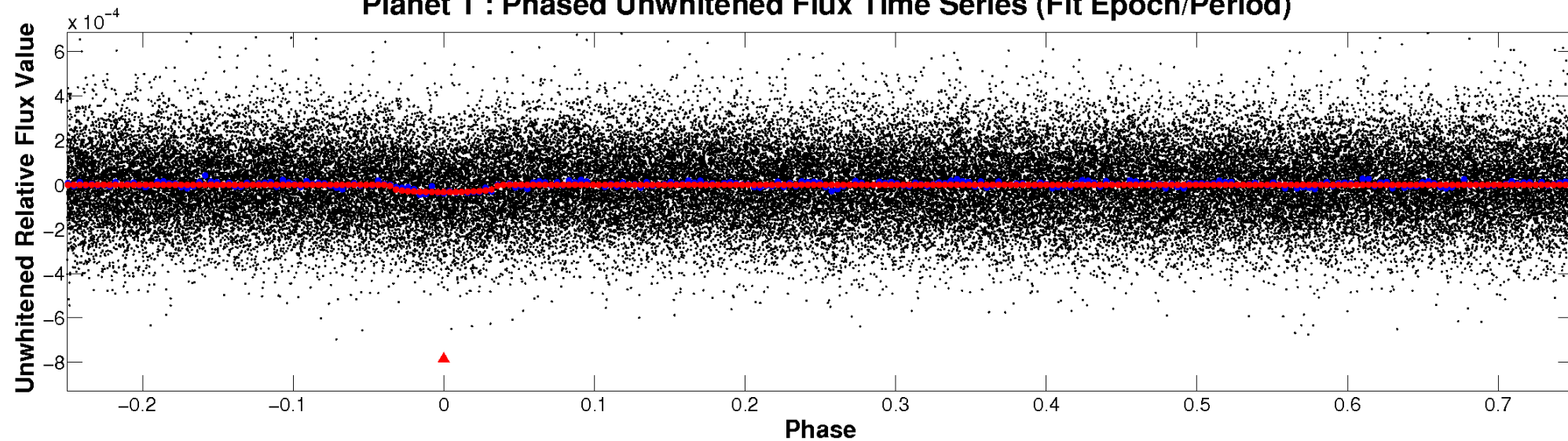
ALT Odd/Even

TCE 009340411-01

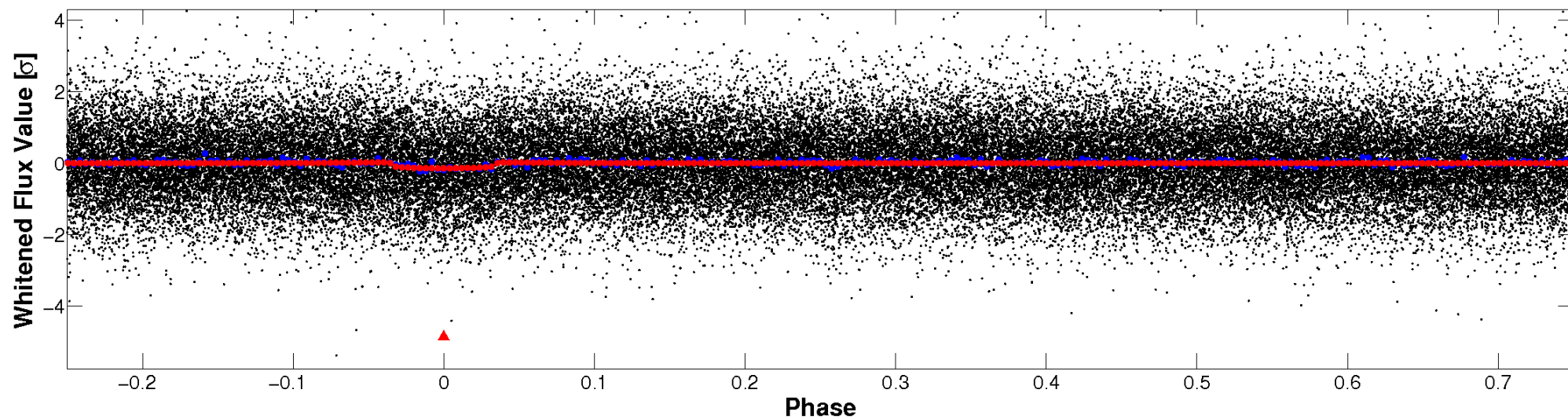


Non-Whitened Vs. Whitened Light Curve

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

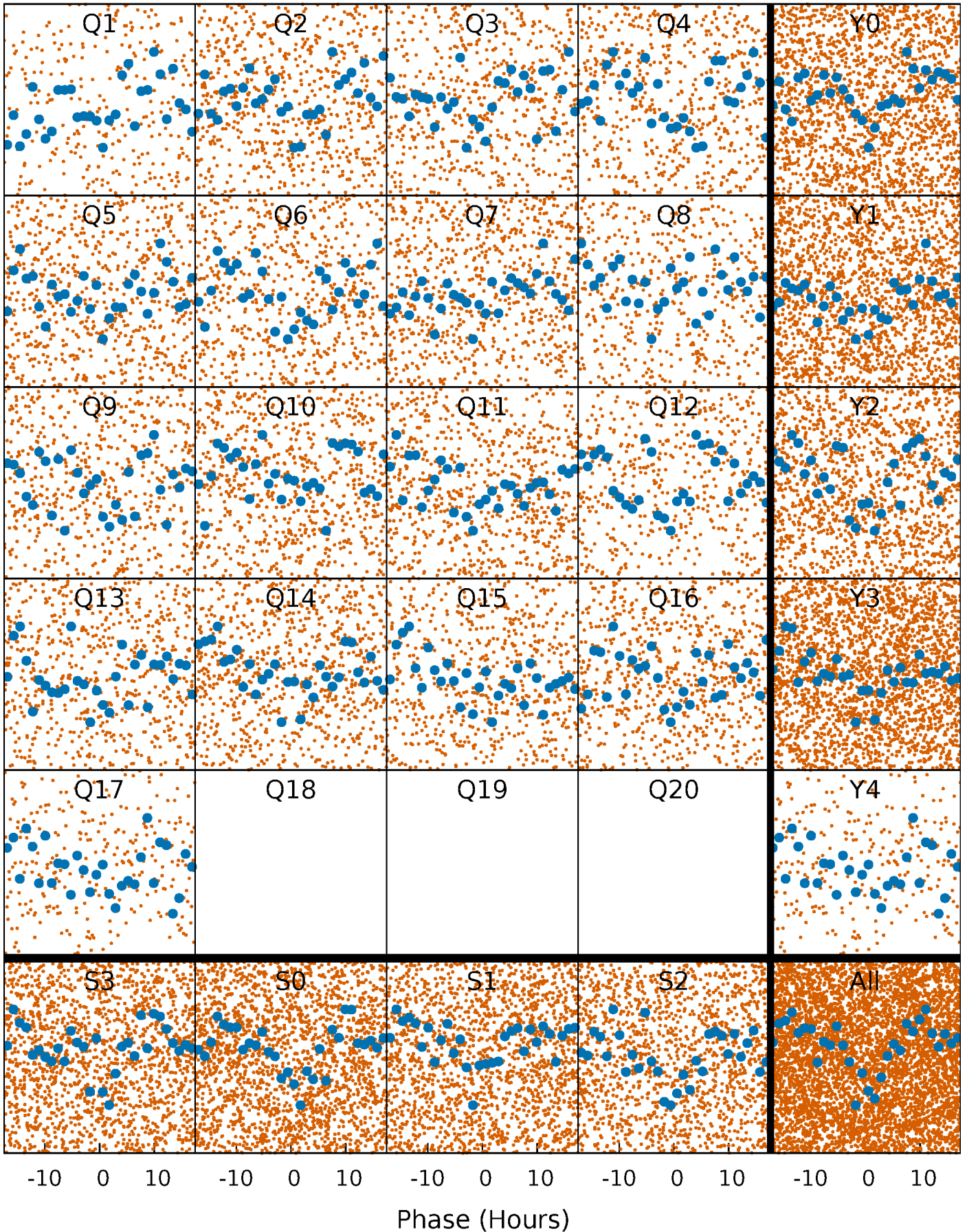


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



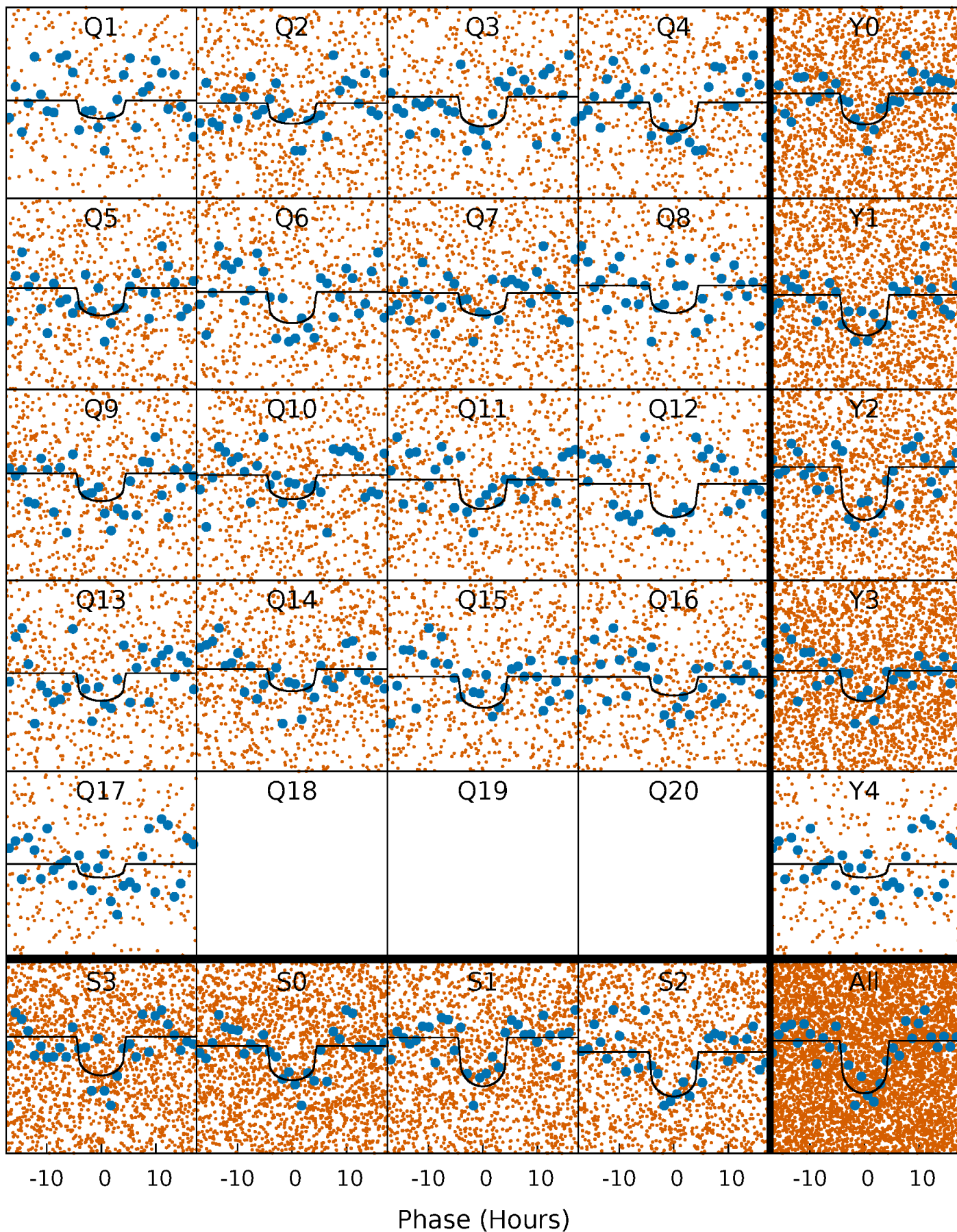
PDC Quarter-Phased Transit Curves

TCE 009340411-01 P= 5.158222 Days $T_0=131.699854$ (BKJD)



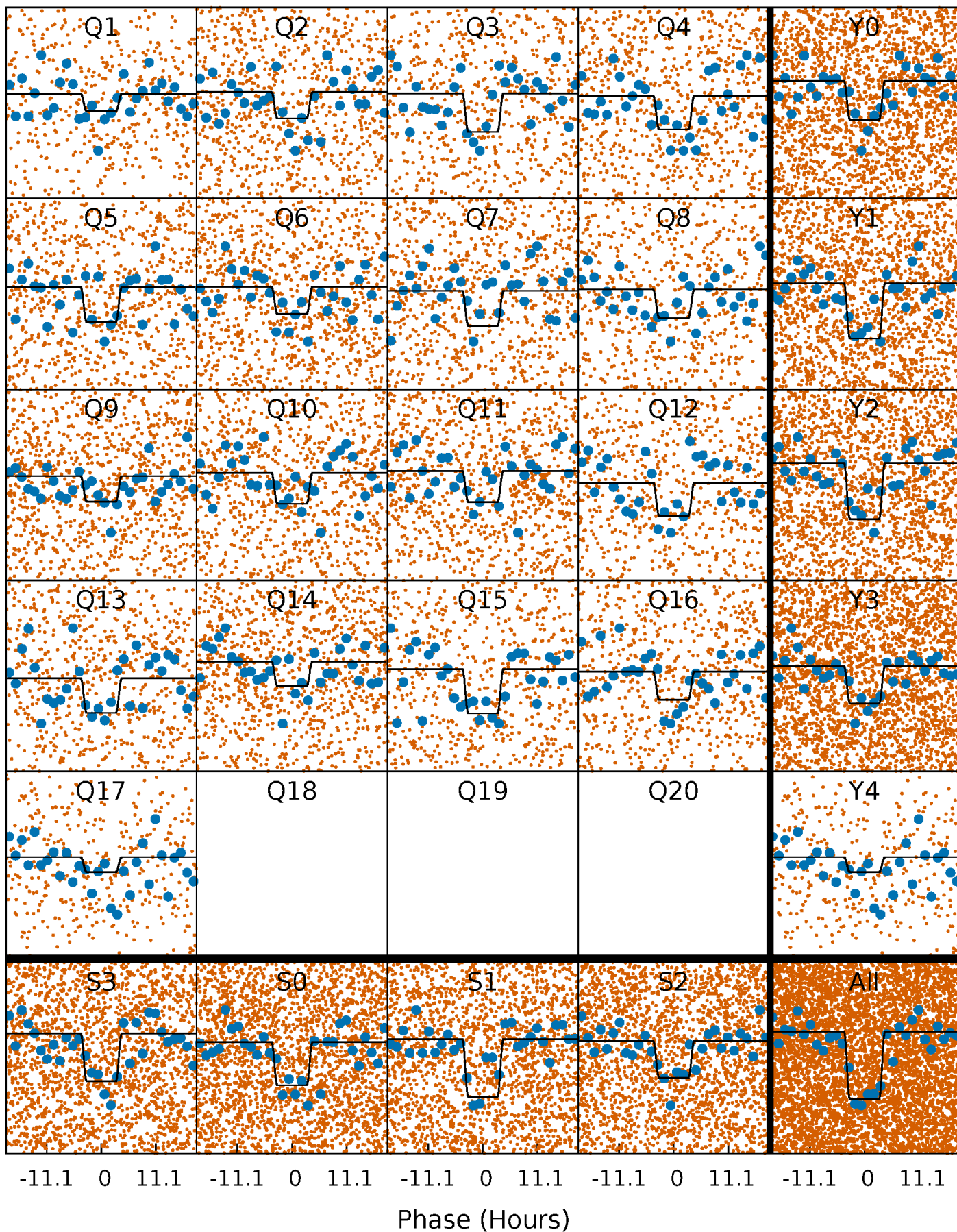
DV Quarter-Phased Transit Curves

TCE 009340411-01 P= 5.158222 Days $T_0=131.699854$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

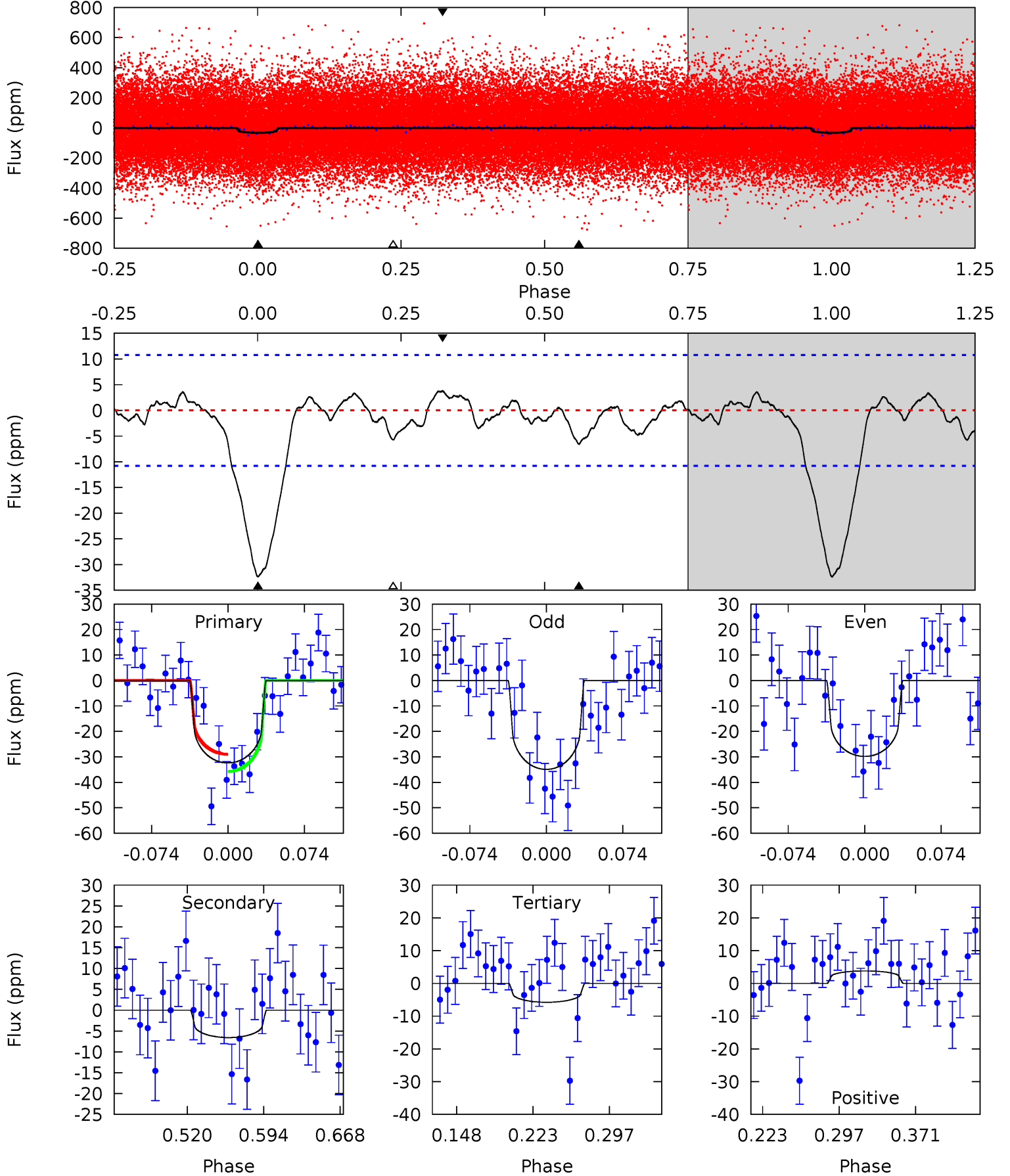
TCE 009340411-01 P= 5.158198 Days $T_0=131.716643$ (BKJD)



DV Model-Shift Uniqueness Test

009340411-01, P = 5.158222 Days, E = 126.541632 Days

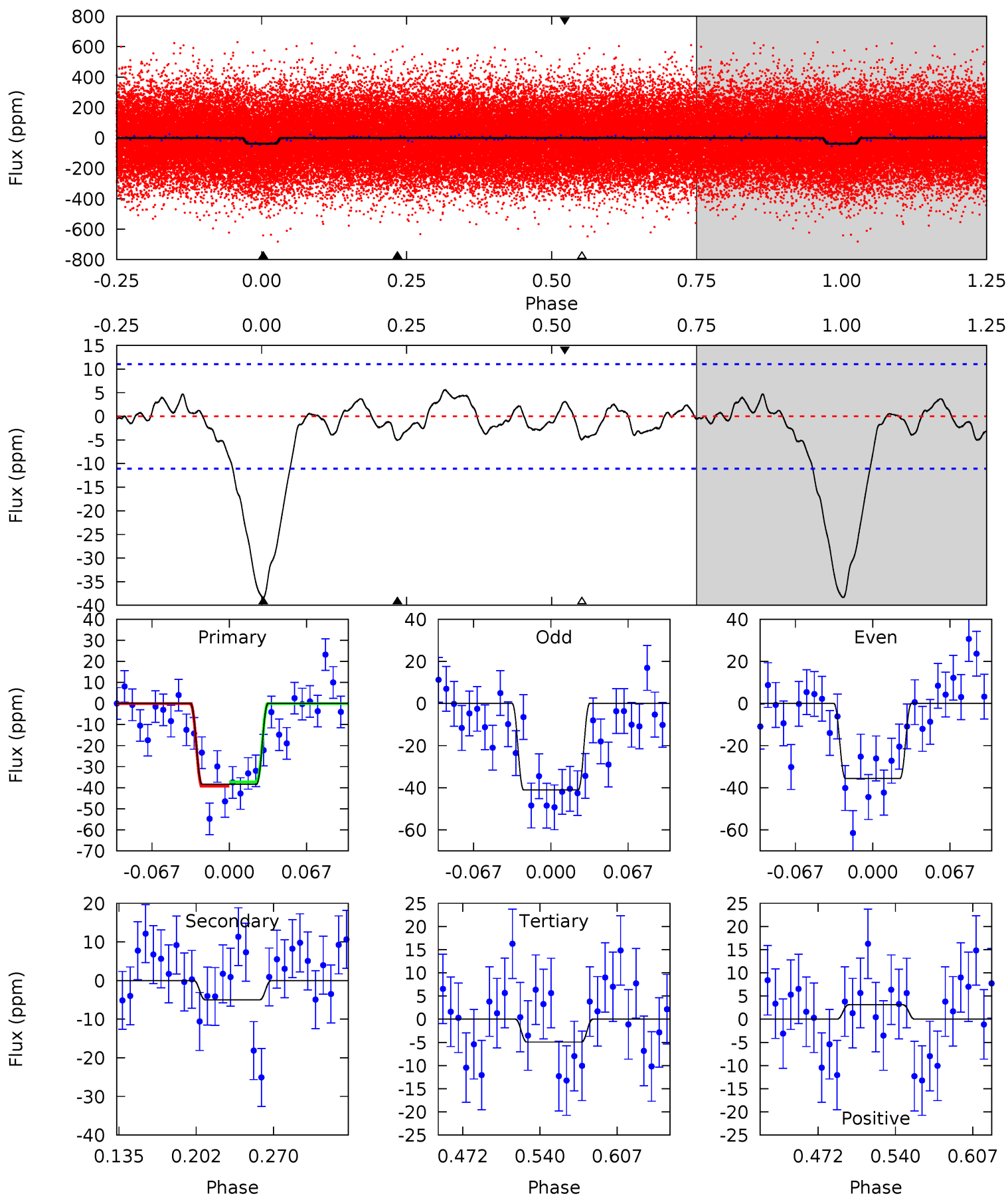
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.9	2.82	2.48	1.63	4.63	1.79	0.95	11.4	12.3	0.35	1.19	1.10	0.98	0.11	1.46



Alt Model-Shift Uniqueness Test

009340411-01, P = 5.158198 Days, E = 126.558445 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.1	2.09	2.07	1.30	4.65	1.83	1.05	14.0	14.8	0.02	0.79	1.15	1.02	0.13	0.42



Stellar Parameters For KIC 009340411

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5155^{+116}_{-142}	$3.511^{+0.192}_{-0.157}$	$-0.200^{+0.200}_{-0.250}$	$3.355^{+0.668}_{-0.817}$	$1.331^{+0.147}_{-0.343}$	$0.050^{+0.049}_{-0.022}$
	+2%/-3%	+5%/-4%	+100%/-125%	+20%/-24%	+11%/-26%	+99%/-43%
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 009340411-01 / KOI 7162.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-7 ± 2	$2.22^{+1.05}_{-0.94}$	2300^{+139}_{-145}	3585^{+872}_{-475}	$2.748^{+6.127}_{-1.547}$
Alt.	-5 ± 2	$2.27^{+0.97}_{-1.01}$	2294^{+149}_{-162}	3367^{+820}_{-560}	$2.020^{+4.805}_{-1.287}$

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

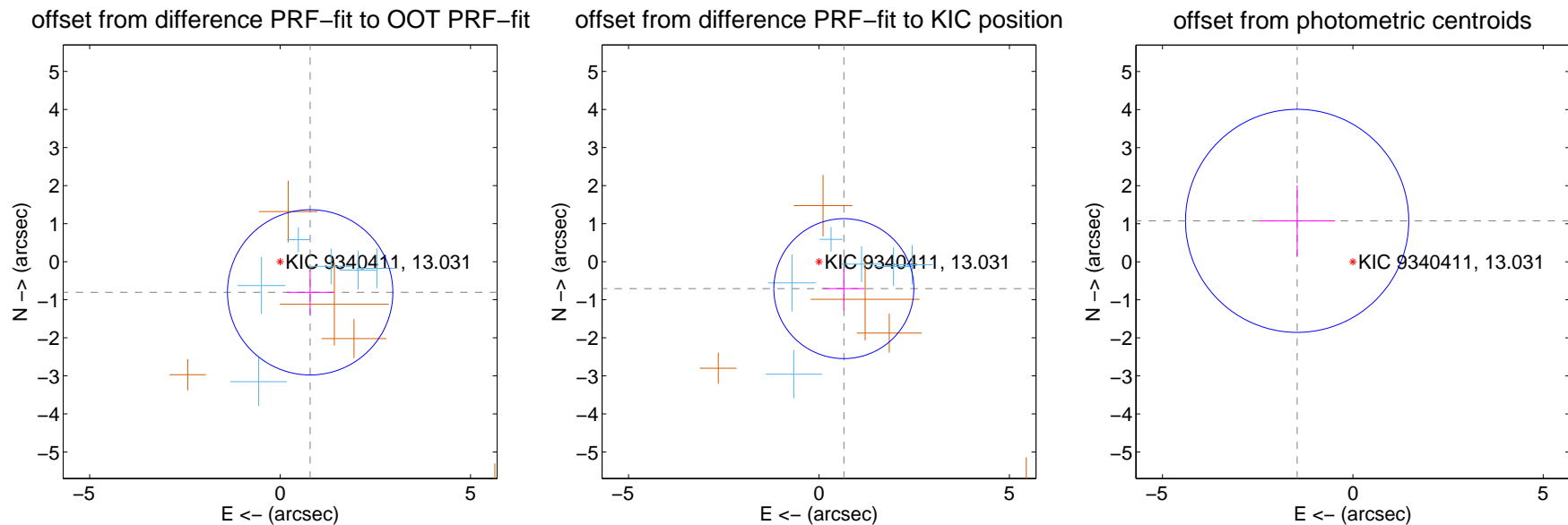
DV Centroid Data

Supplemental centroid analysis for 009340411-01. Kepler magnitude: 13.03. Transit SNR 8.51

There are 6 quarters with good PRF difference image offsets

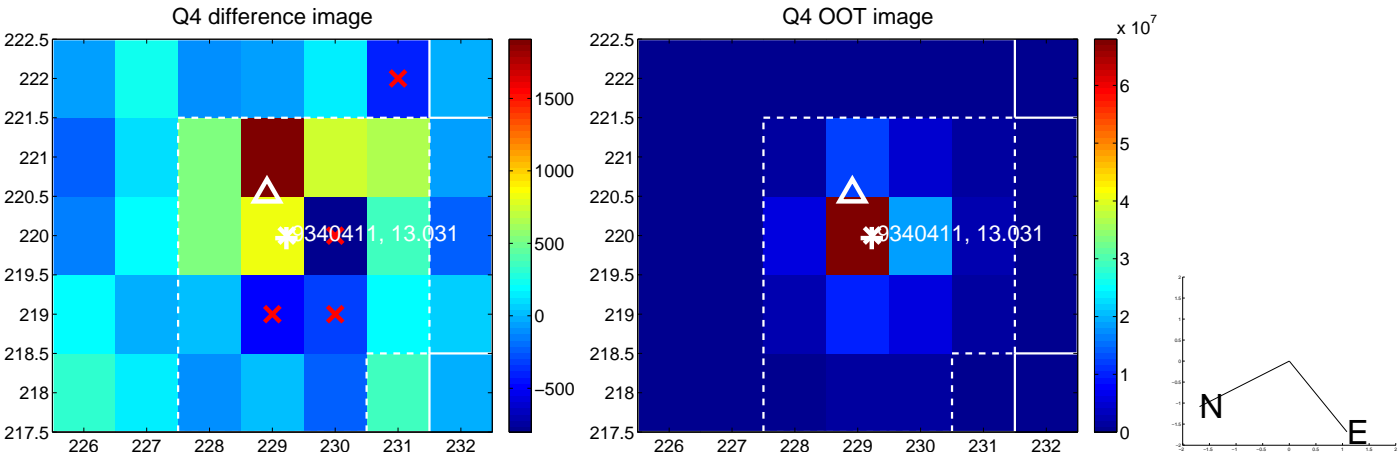
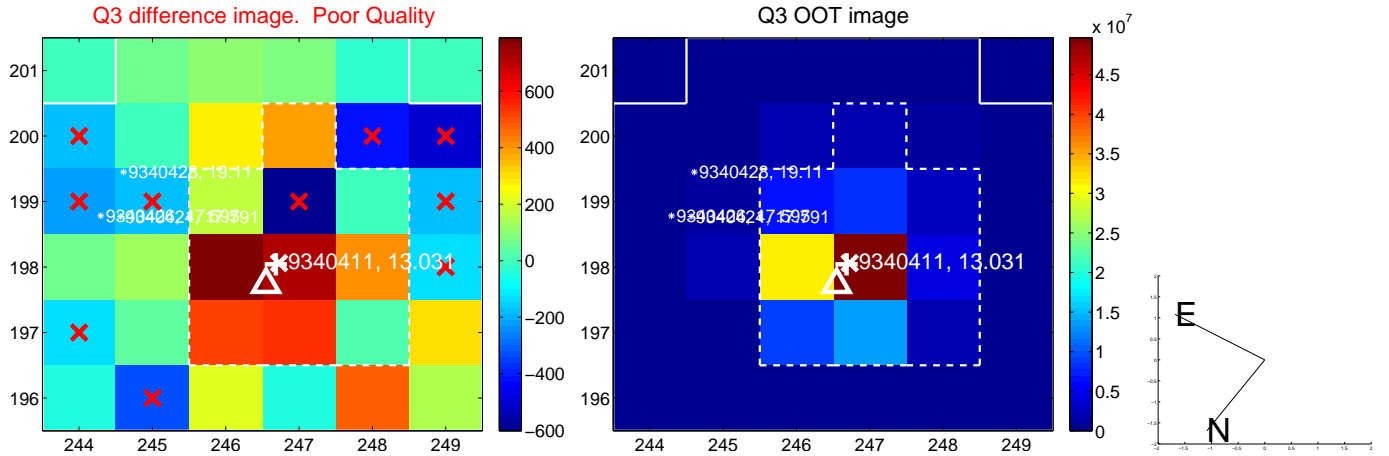
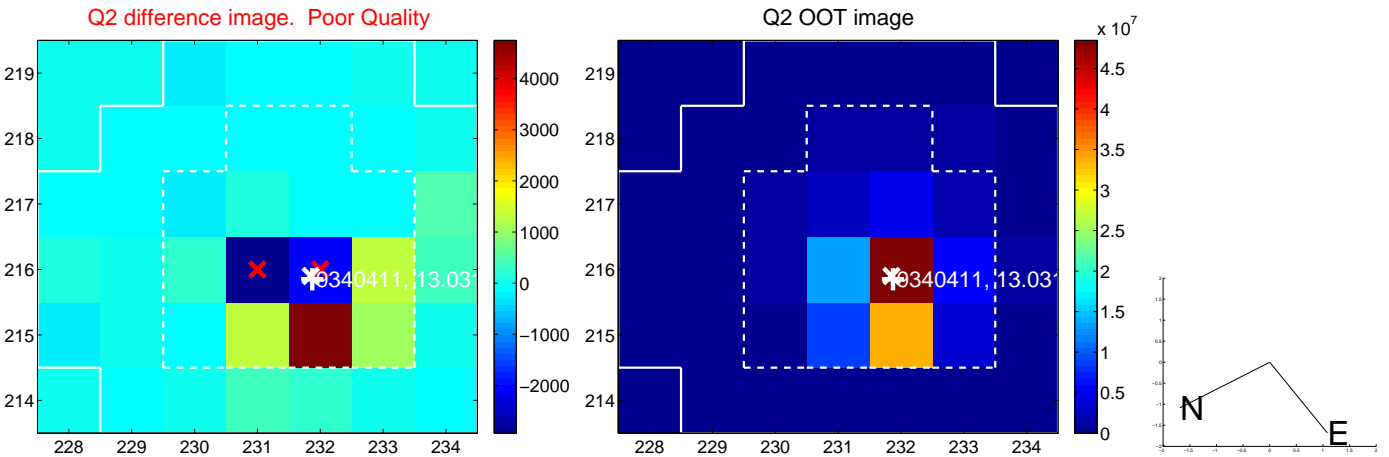
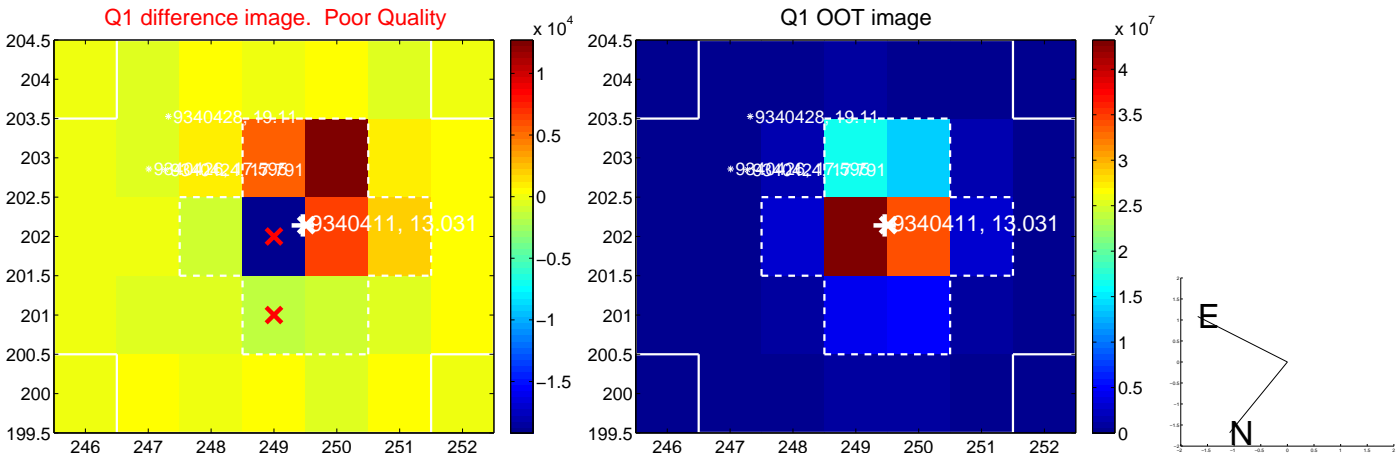
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.128 ± 0.724	1.56	-0.790 ± 0.615	-0.805 ± 0.589
PRF-fit source offset from KIC position	0.963 ± 0.613	1.57	-0.653 ± 0.547	-0.708 ± 0.568
photometric centroid source offset	1.82 ± 0.98	1.86	1.46 ± 1.00	1.08 ± 0.94

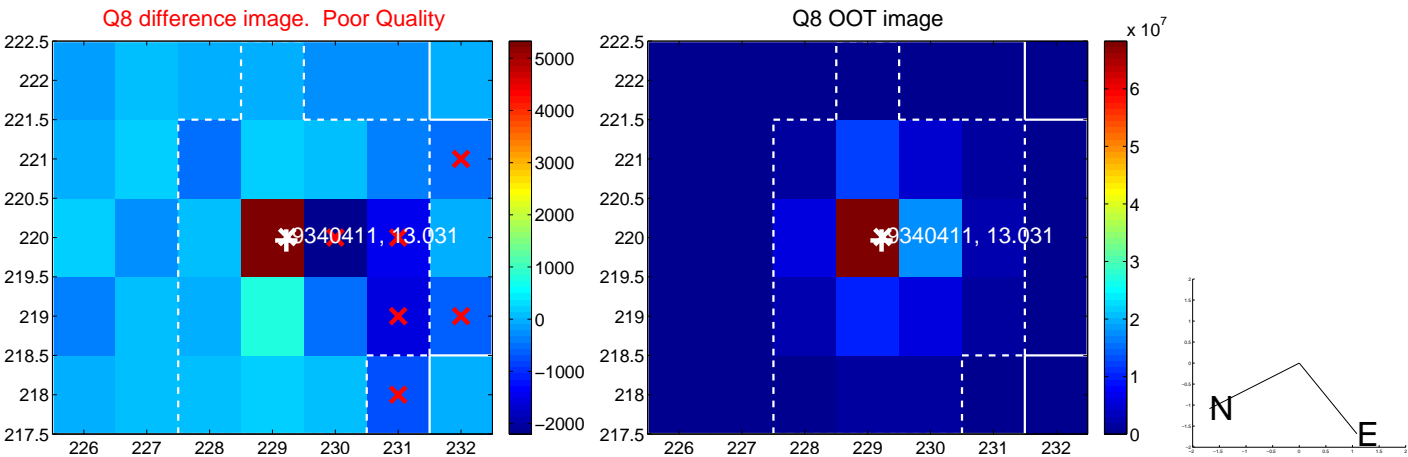
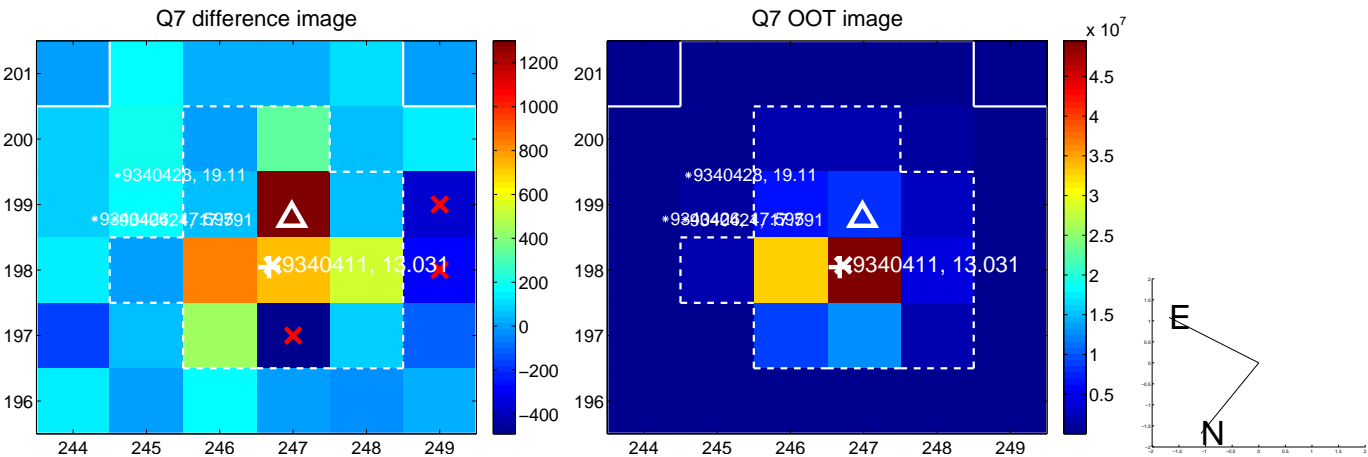
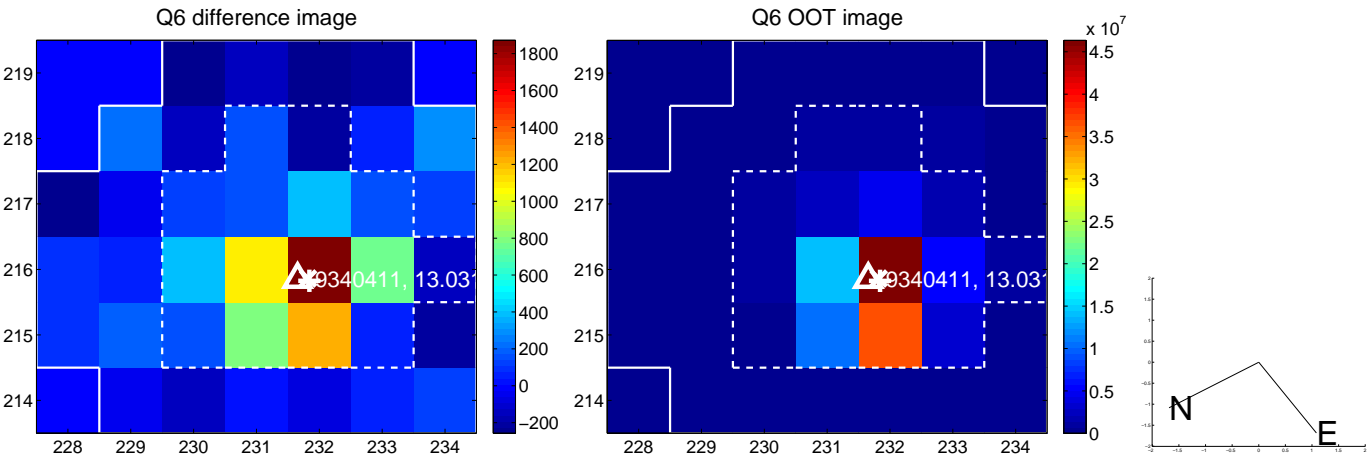
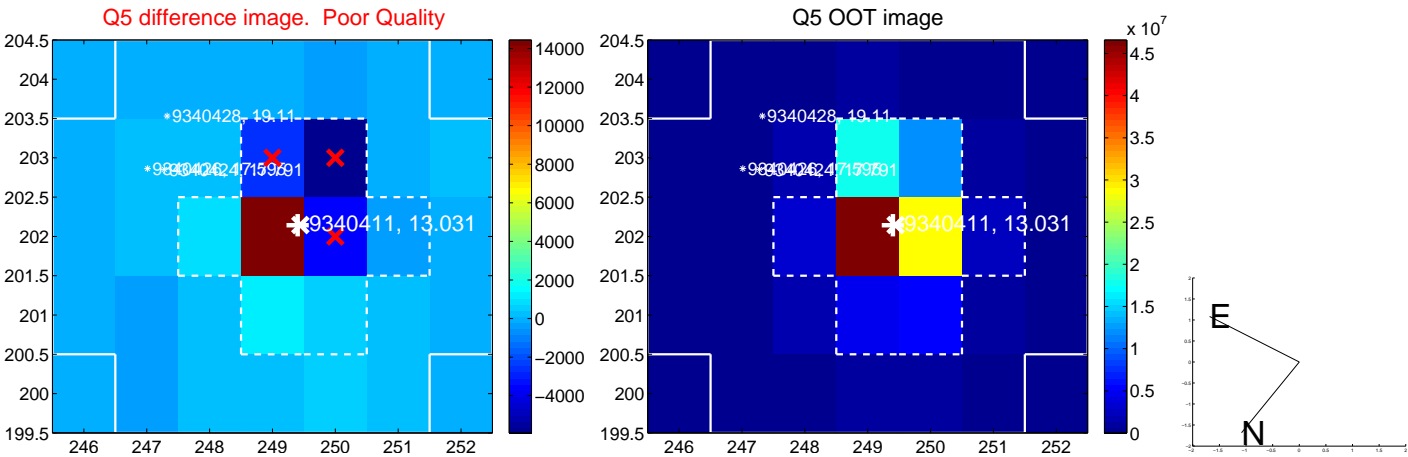


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

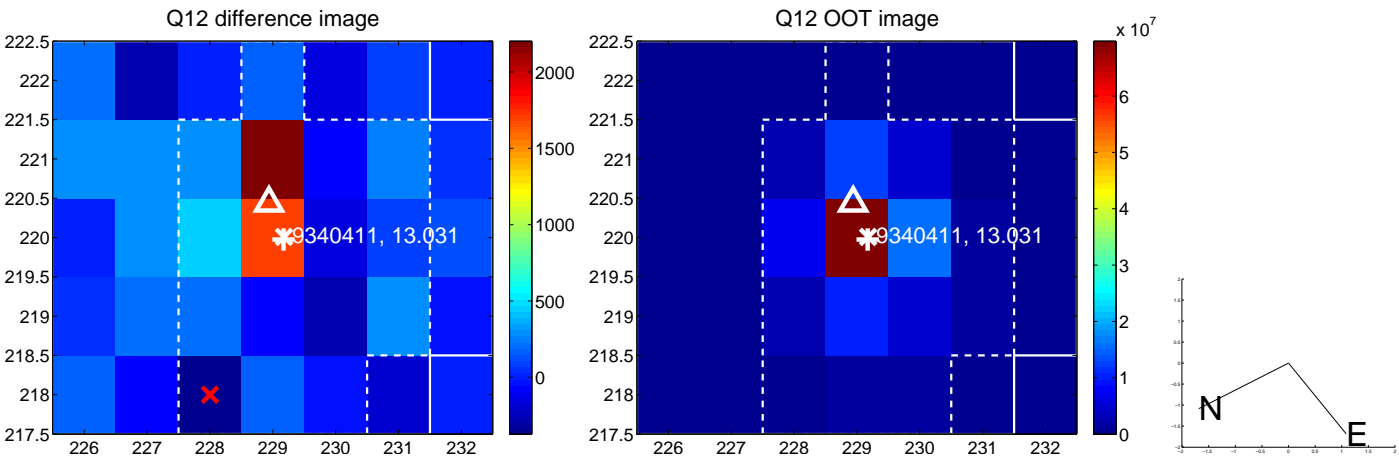
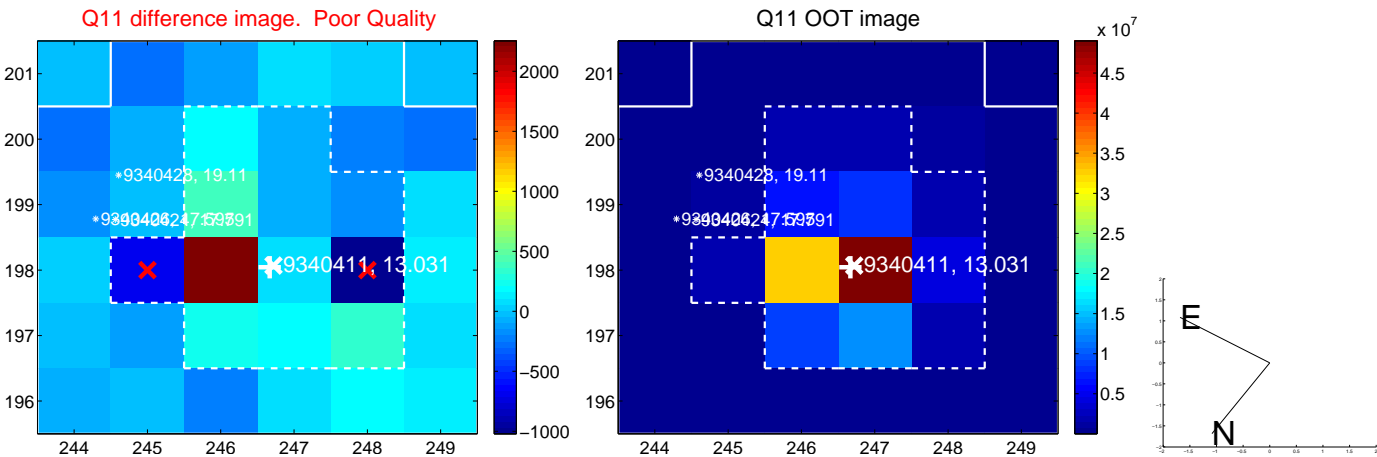
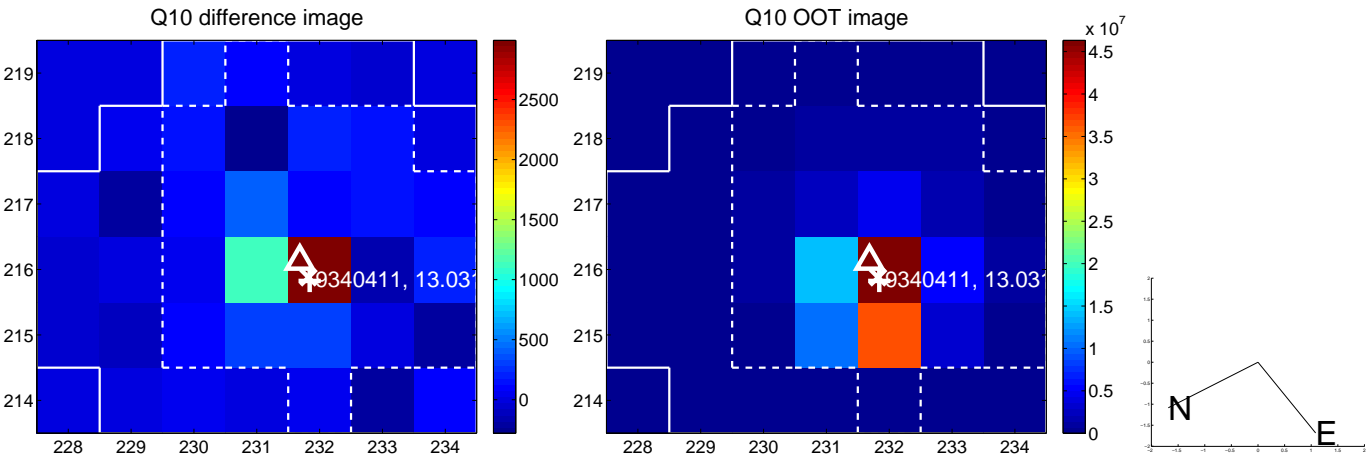
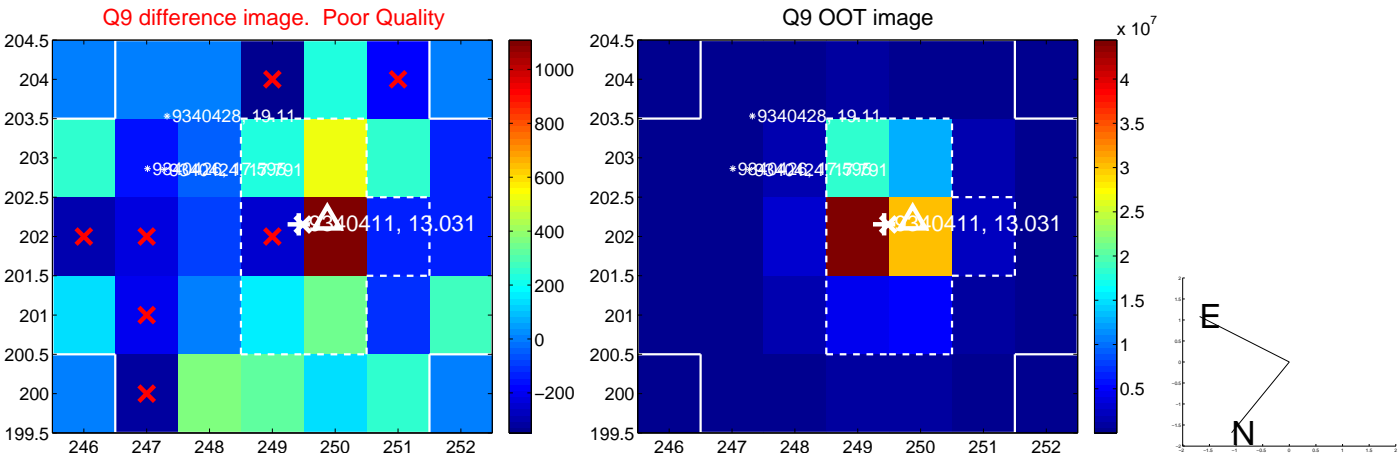
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



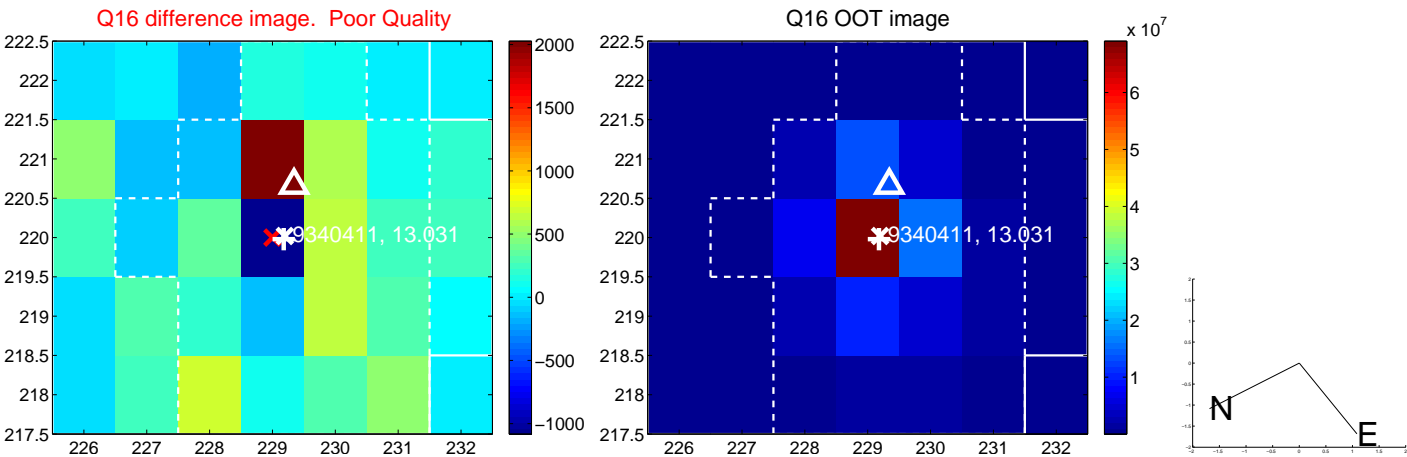
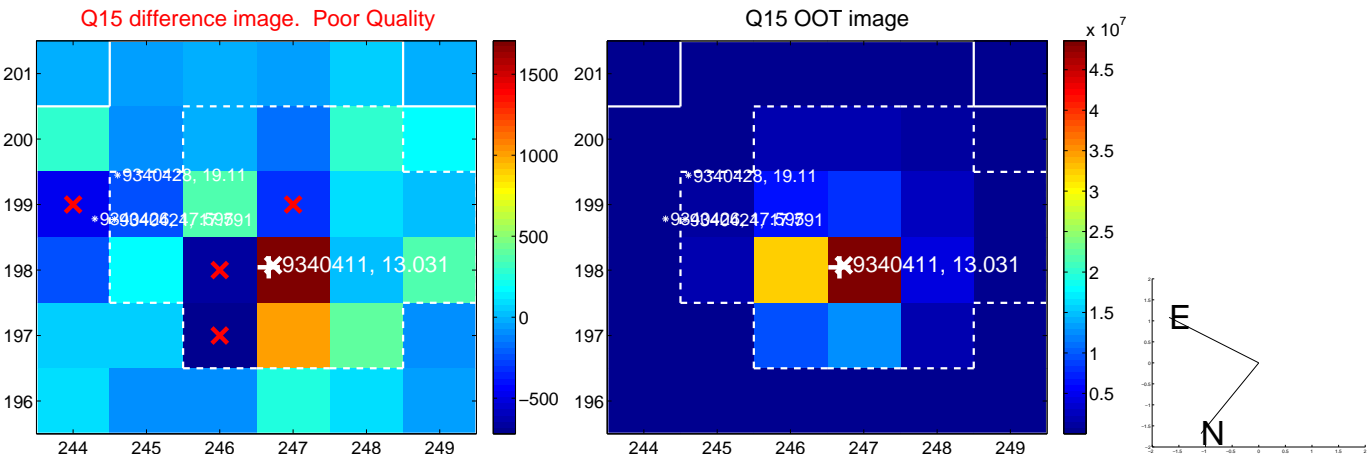
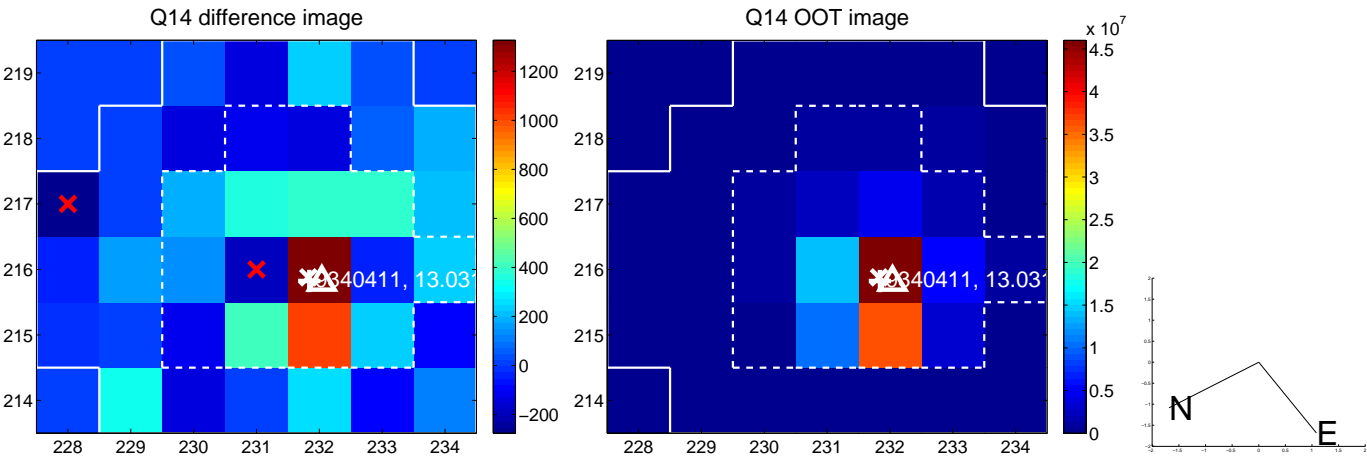
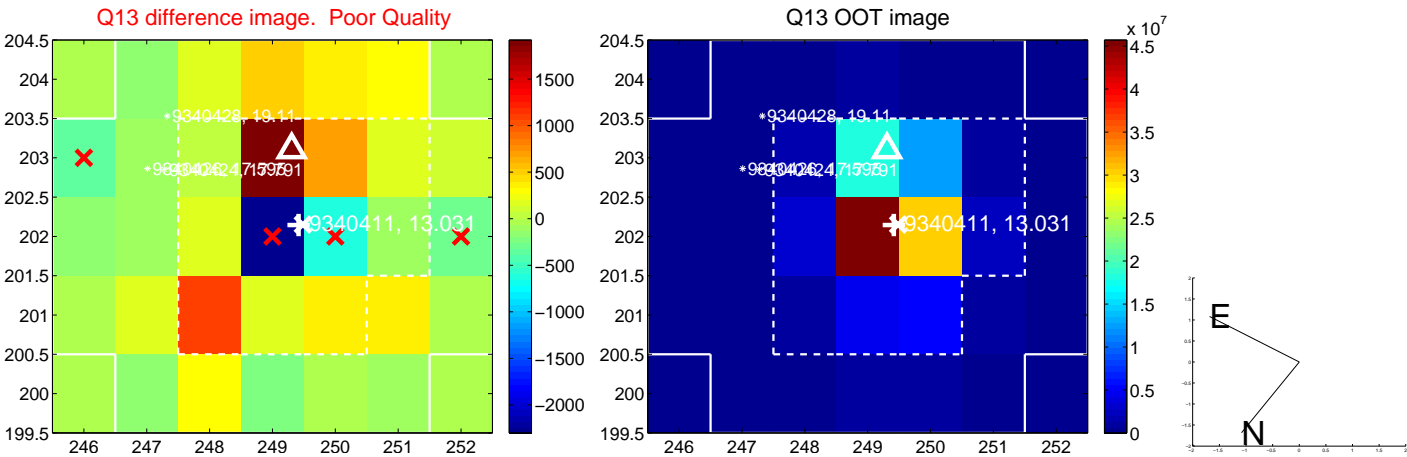
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



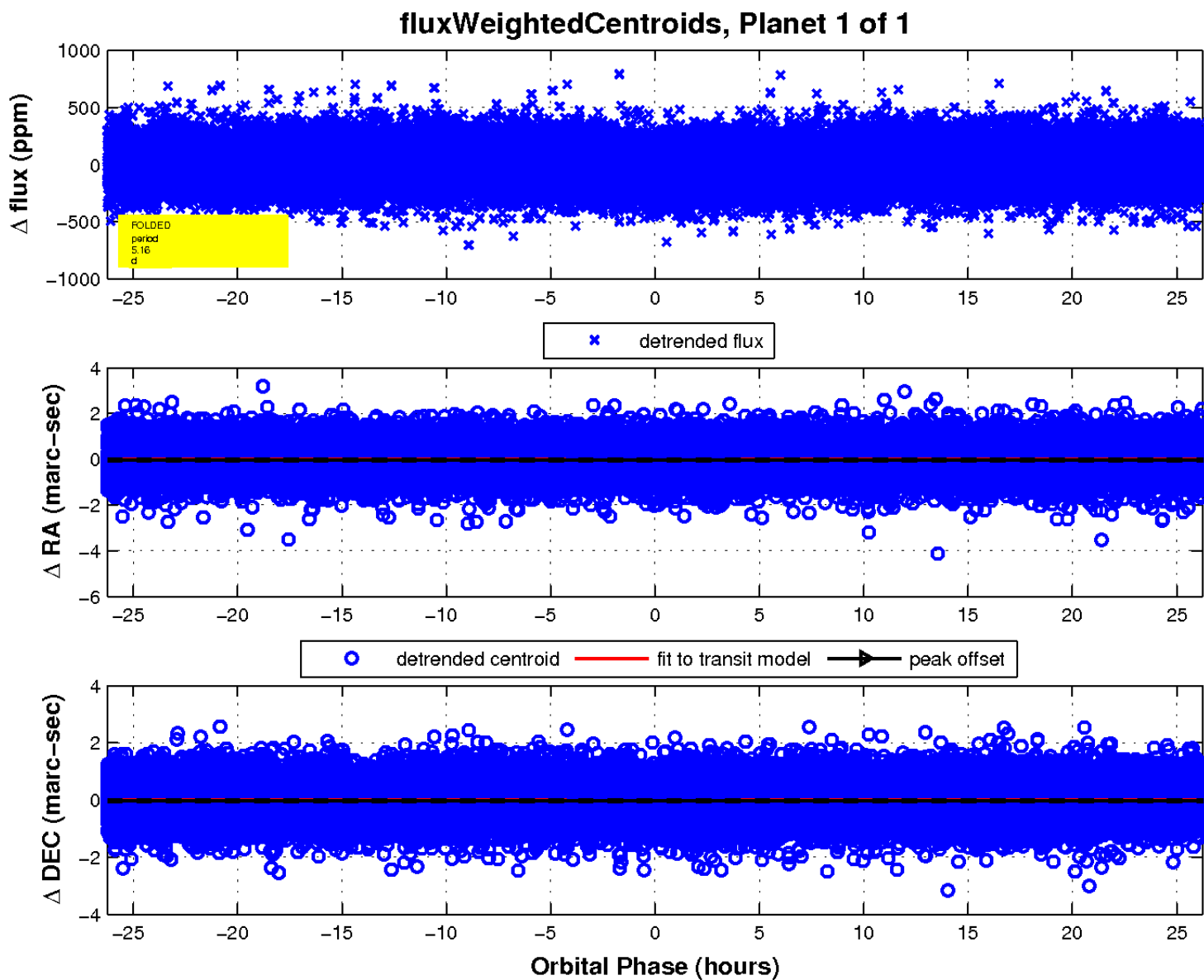
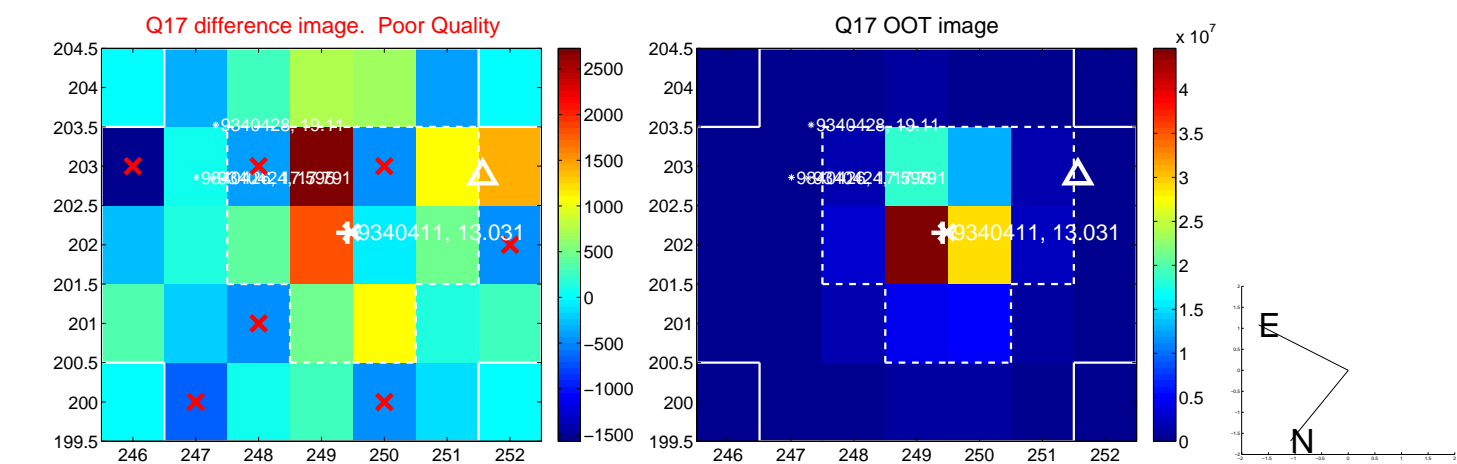
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

