

KIC 009304842

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})
009304842-01	OBS	No	1.219330	132.020684	173.7	10.603	9.5	7.6	1.31	6487	1.77	4759.23

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009304842-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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 009304842-01

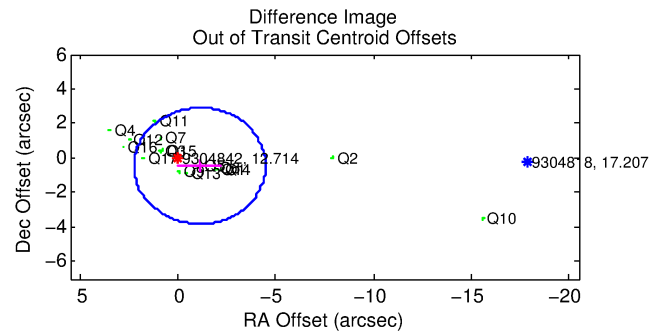
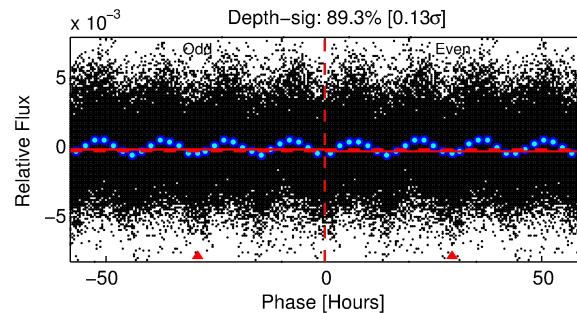
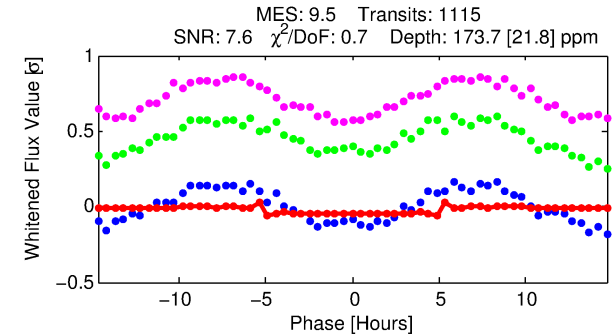
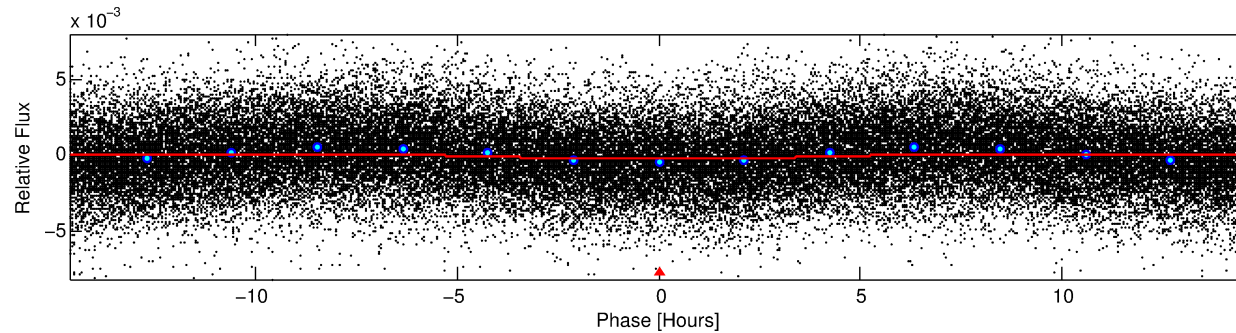
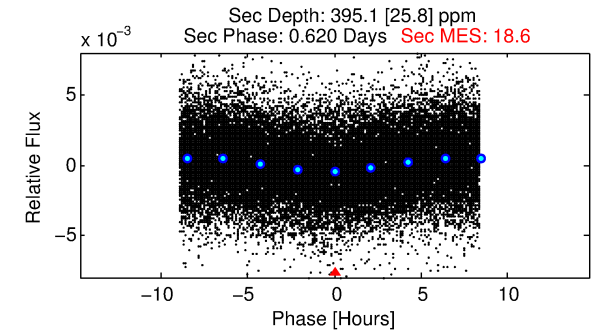
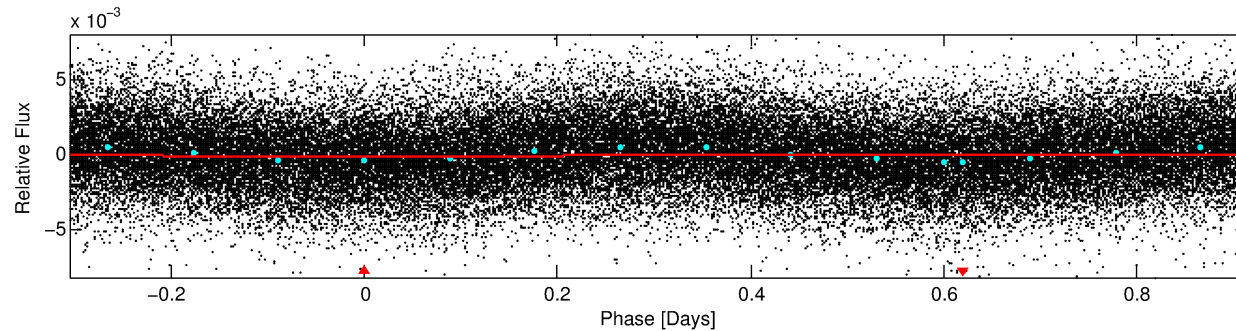
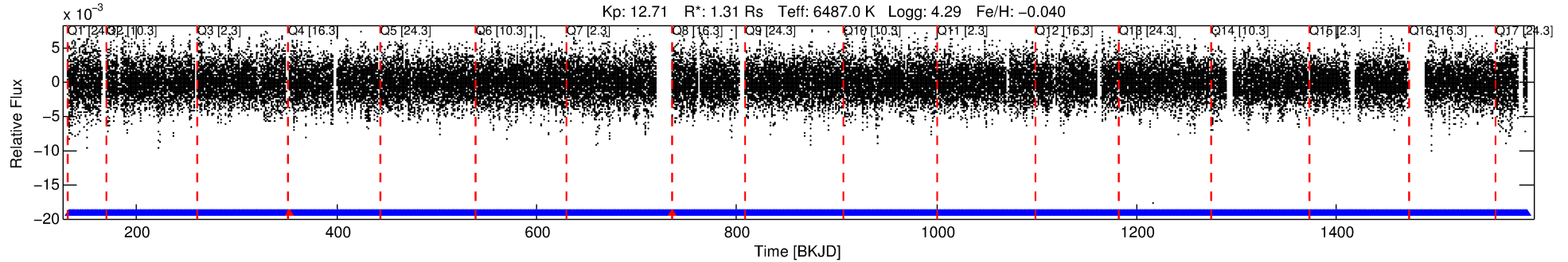
No Significant Match Found

DV One-Page Summary

KIC: 9304842 Candidate: 1 of 1 Period: 1.219 d

KOI: K06199 Corr: No Ephemeris Match

Kp: 12.71 R*: 1.31 Rs Teff: 6487.0 K Logg: 4.29 Fe/H: -0.040



DV Fit Results:

Period = 1.21933 [0.00002] d
Epoch = 132.0207 [0.0032] BKJD
Rp/R* = 0.0124 [0.0032]
a/R* = 1.09 [0.23]
b = 0.48 [2.08]
Seff = 4759.24 [1880.13]
Teq = 2118 [209] K
Rp = 1.77 [0.75] Re
a = 0.0238 [0.0064] AU
Ag = 39.35 [25.03] [1.53σ]
Teffp = 8201 [1090] K [5.48σ]

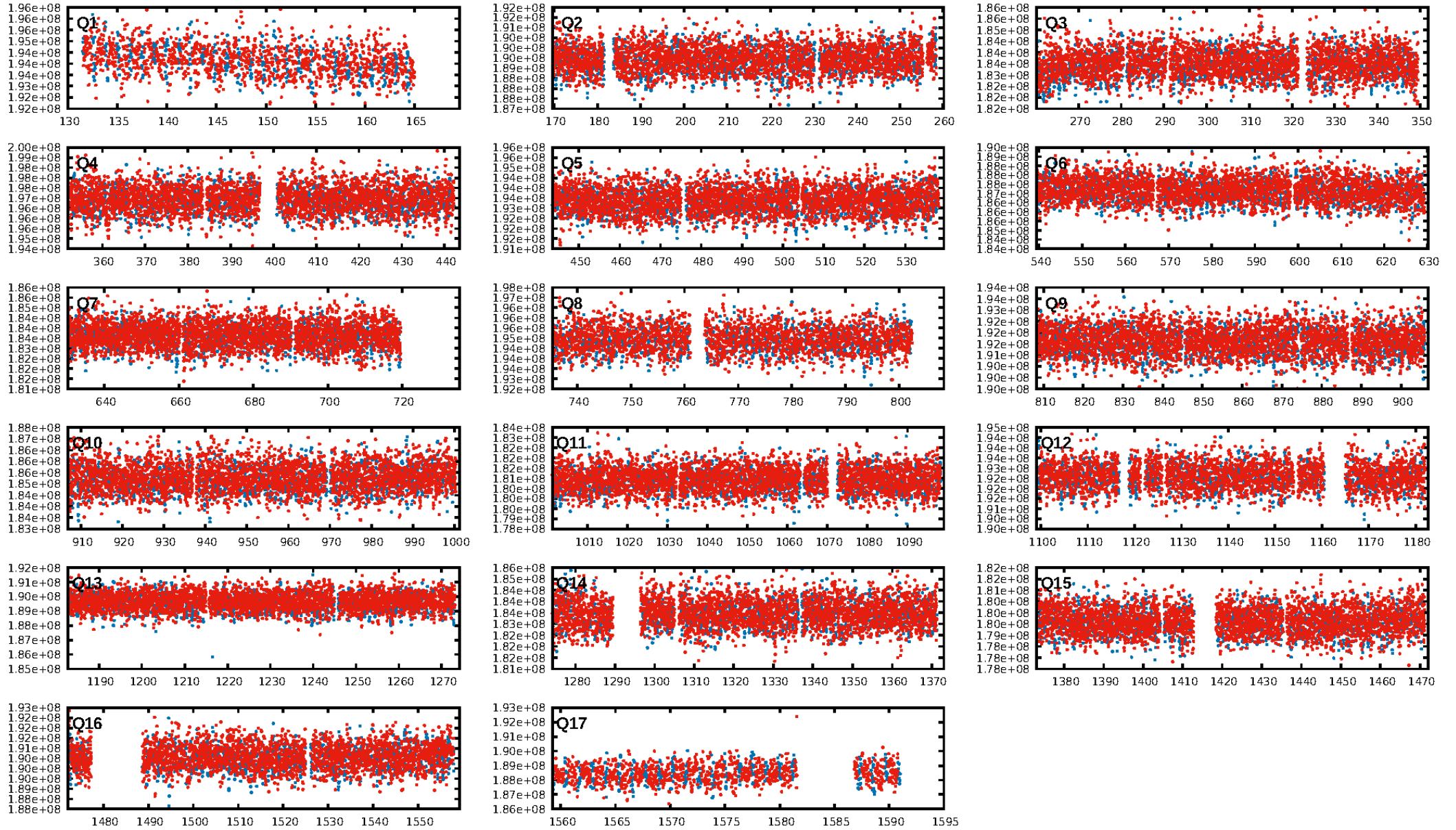
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1062/1064]
GhostDiagnostic-chr: 2.247
Centroid-sig: N/A
Centroid-so: 0.033 arcsec [0.39σ]
OotOffset-rm: 1.208 arcsec [1.08σ]
OotOffset-st: 4/4/3/5 [16]
KicOffset-rm: 1.244 arcsec [1.19σ]
KicOffset-st: 4/4/3/5 [16]
DiffImageQuality-fgm: 0.75 [12/16]
DiffImageOverlap-fno: 1.00 [17/17]

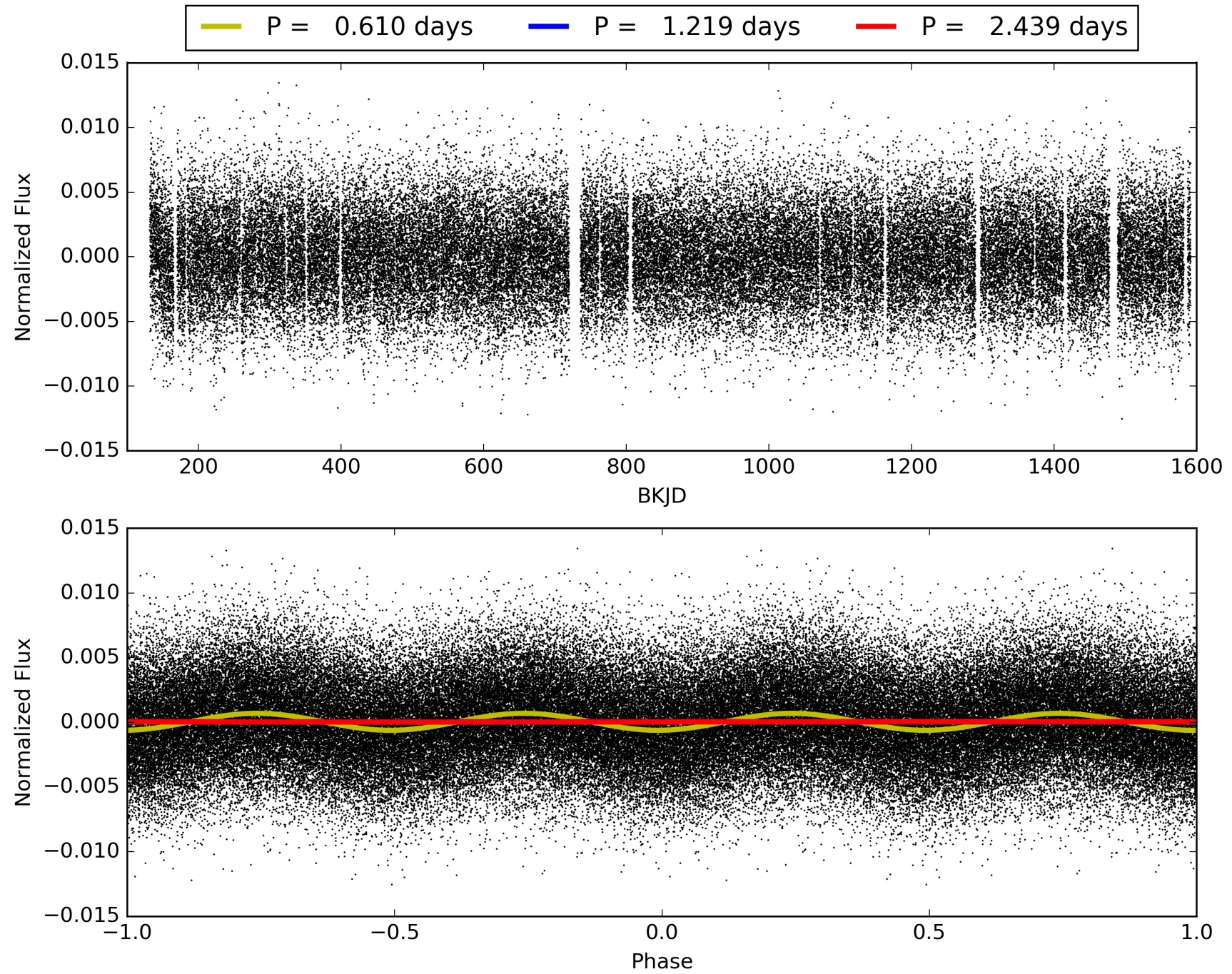
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 01:51:46 Z

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

TCE 009304842-01, PDC Light Curves

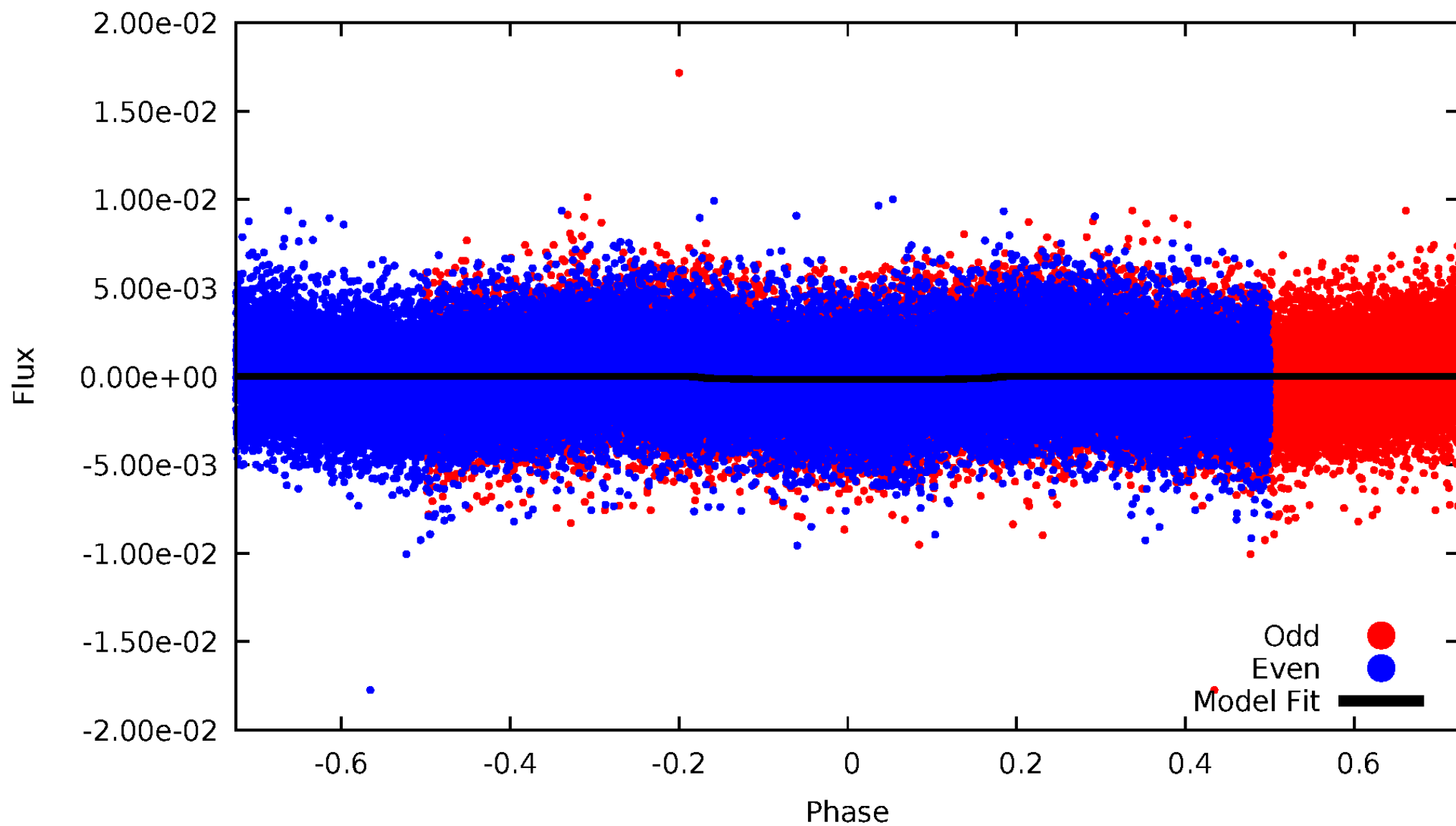


TCE 009304842-01



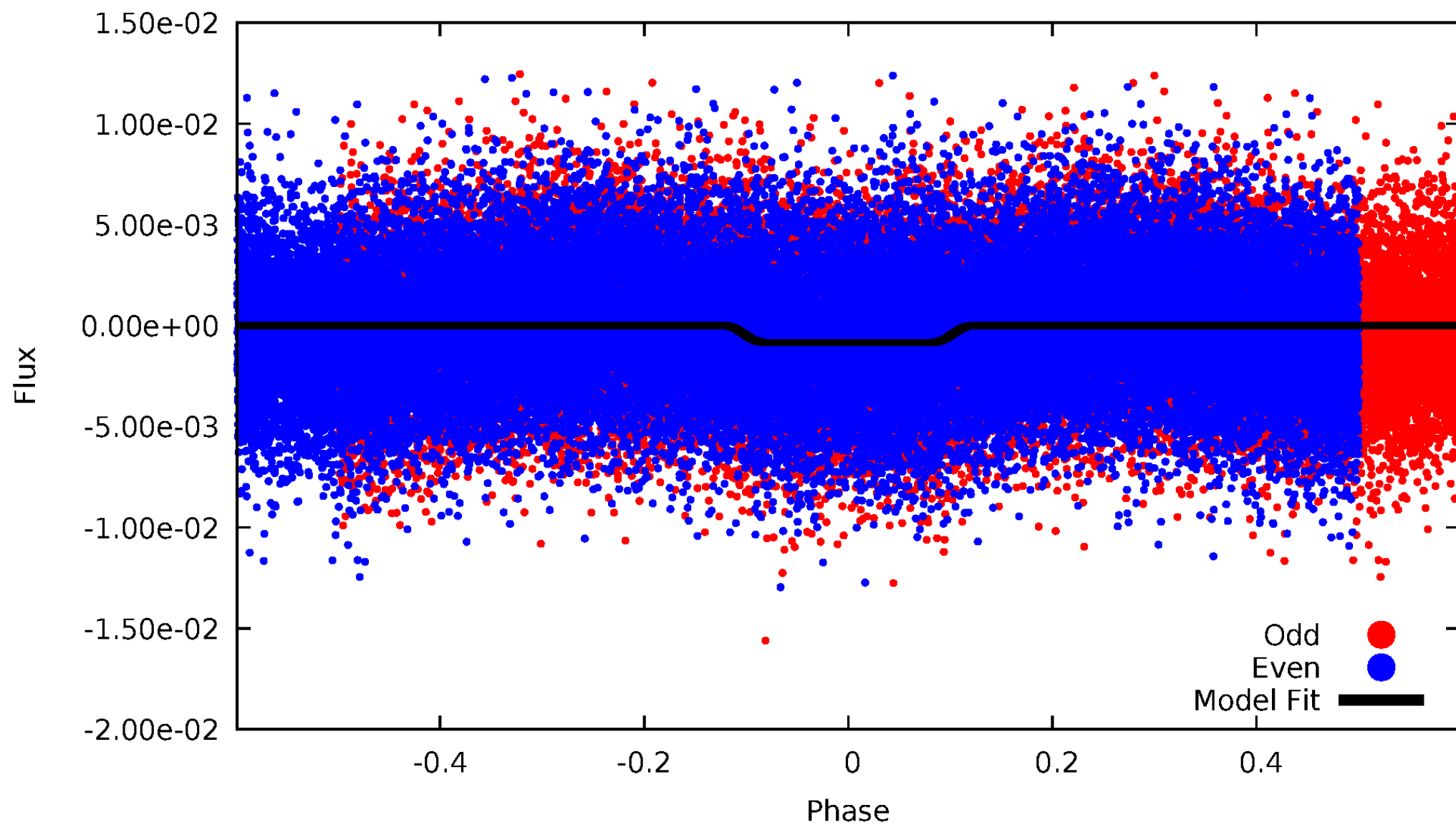
DV Odd/Even

TCE 009304842-01

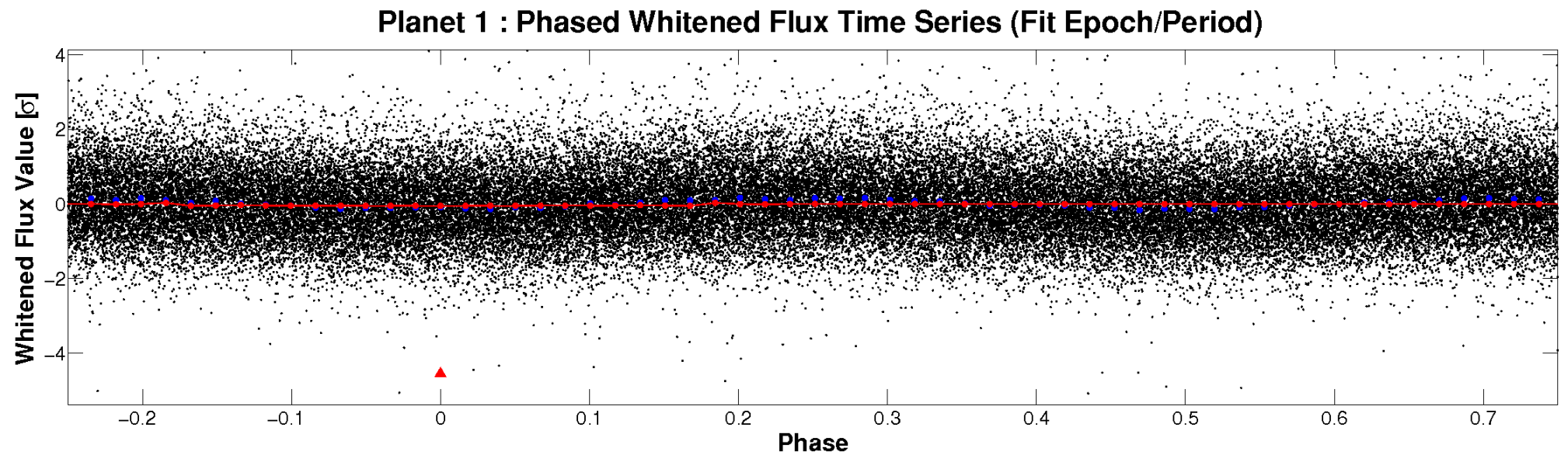
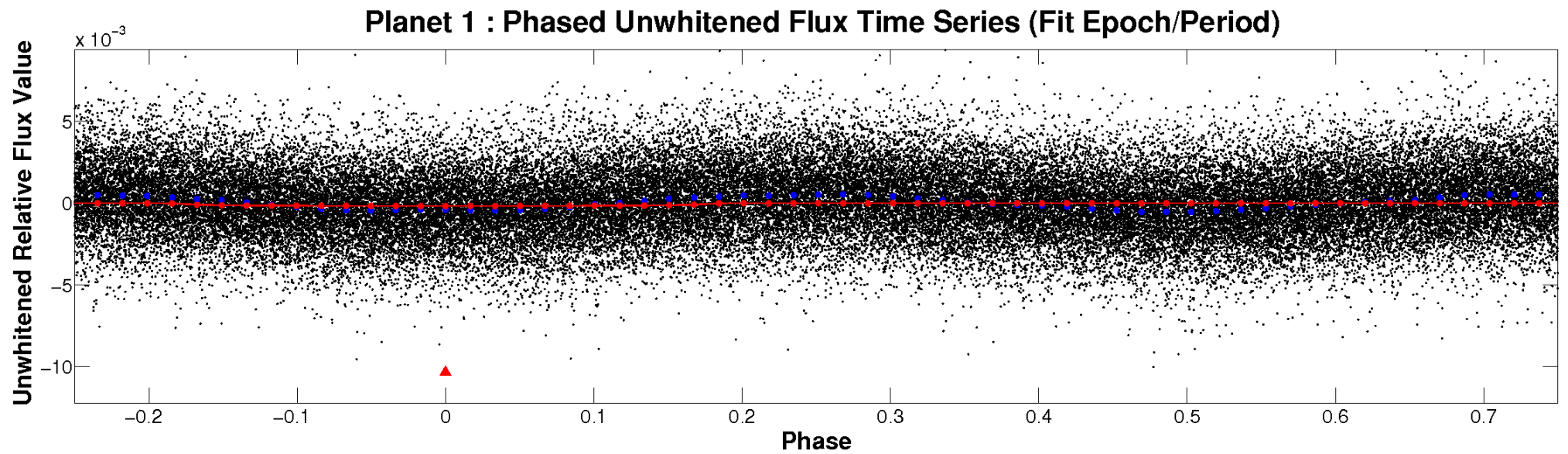


ALT Odd/Even

TCE 009304842-01

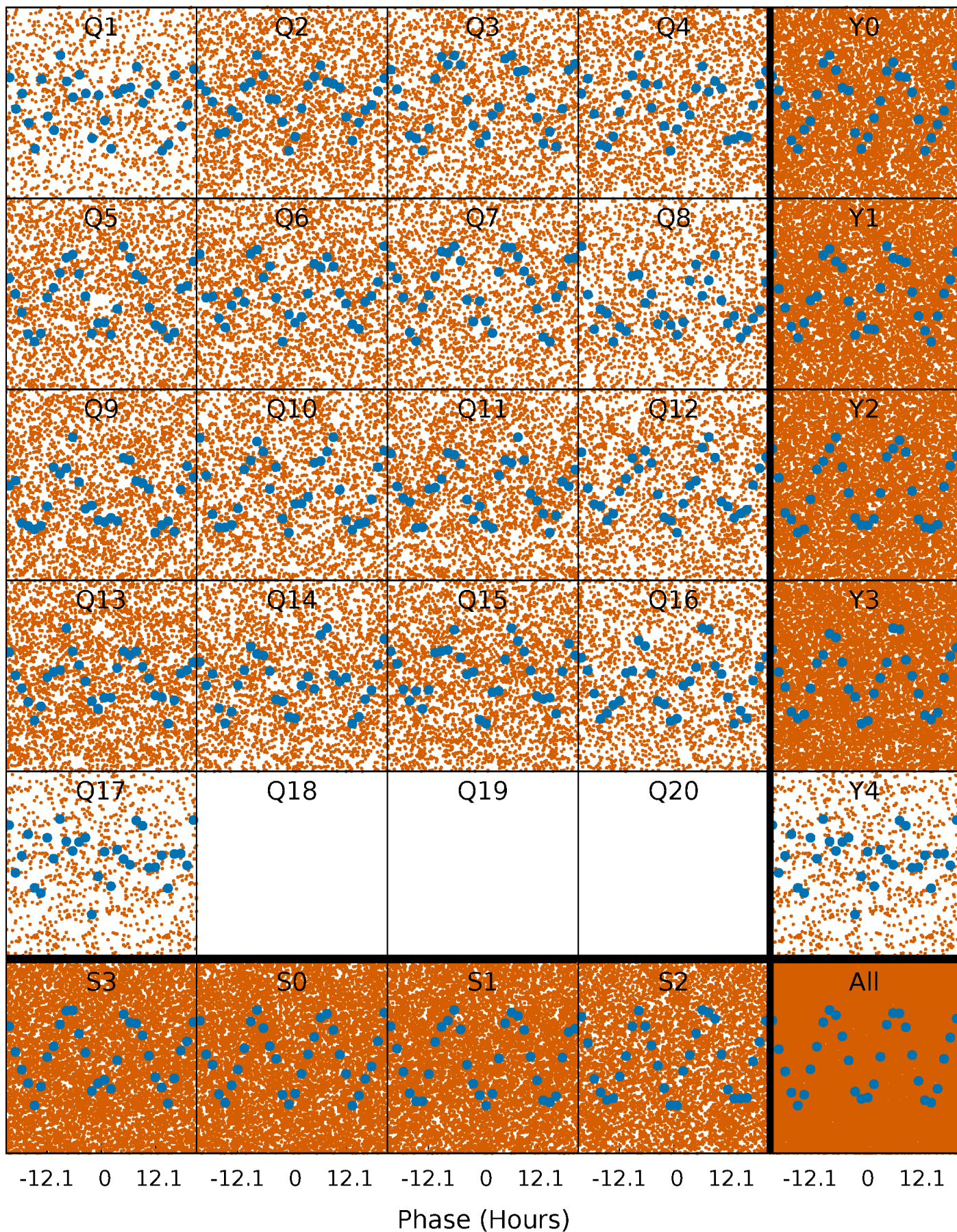


Non-Whitened Vs. Whitened Light Curve



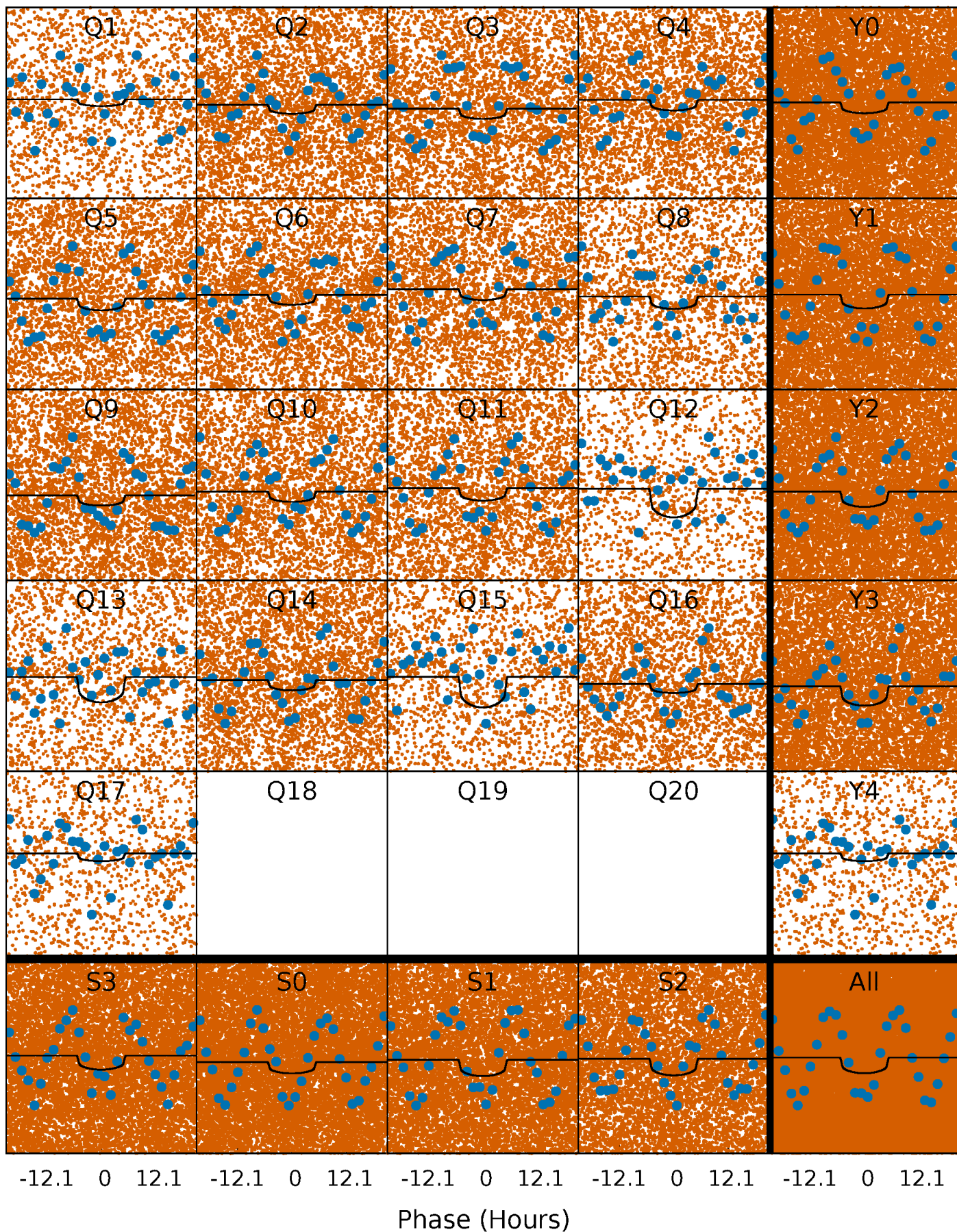
PDC Quarter-Phased Transit Curves

TCE 009304842-01 P= 1.219330 Days $T_0=132.020684$ (BKJD)



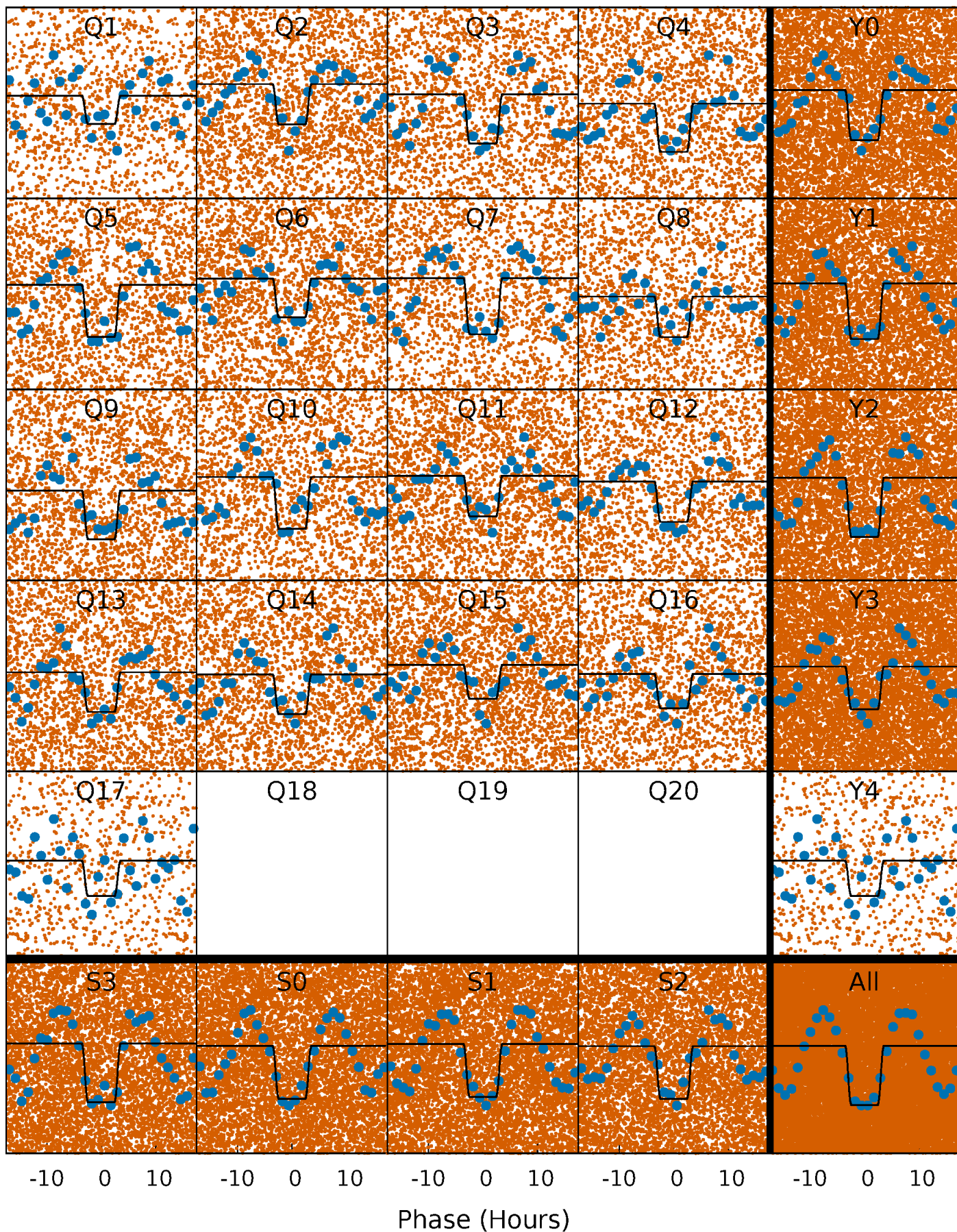
DV Quarter-Phased Transit Curves

TCE 009304842-01 P= 1.219330 Days $T_0=132.020684$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

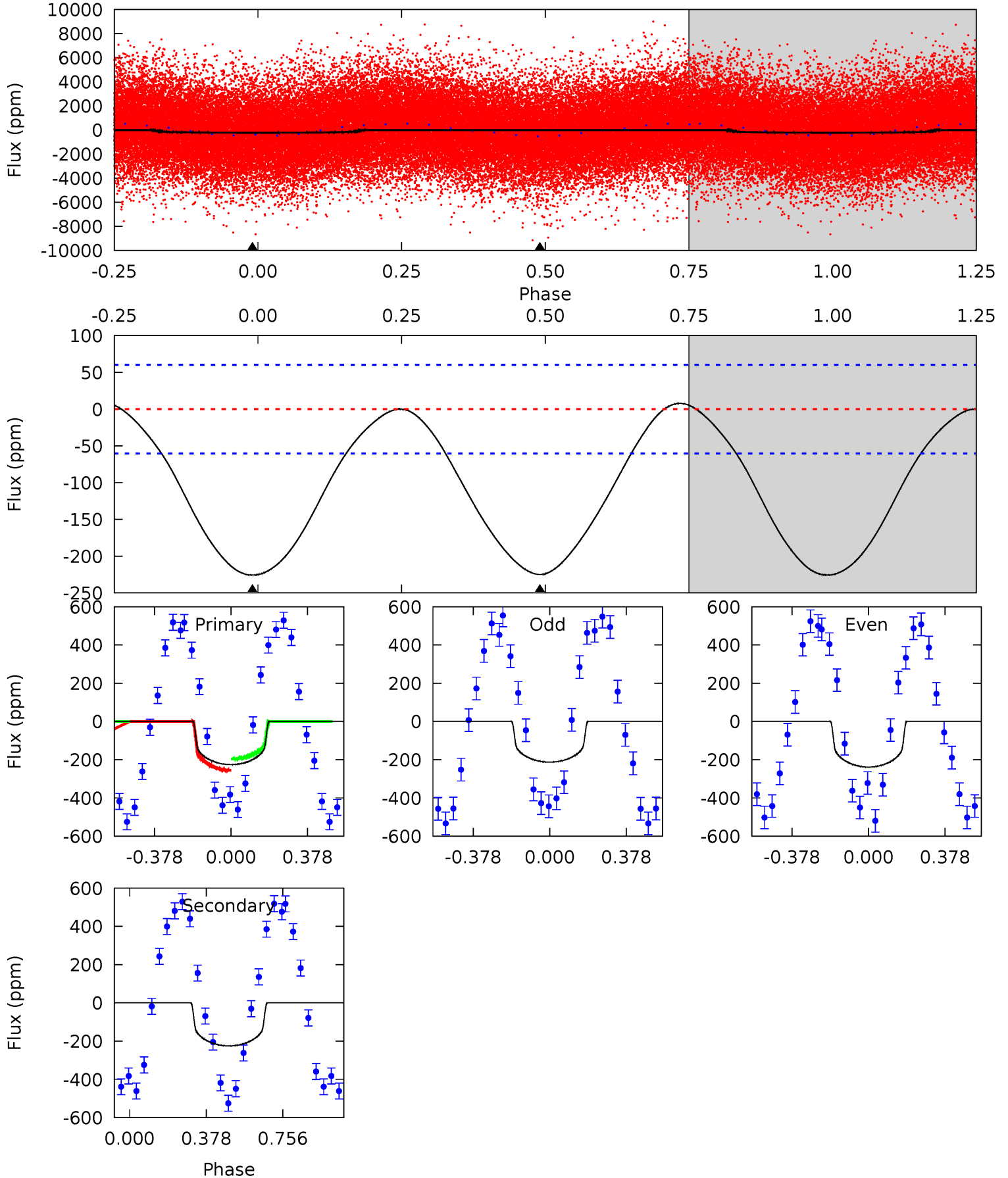
TCE 009304842-01 P= 1.219341 Days $T_0=132.007505$ (BKJD)



DV Model-Shift Uniqueness Test

009304842-01, P = 1.219330 Days, E = 130.801354 Days

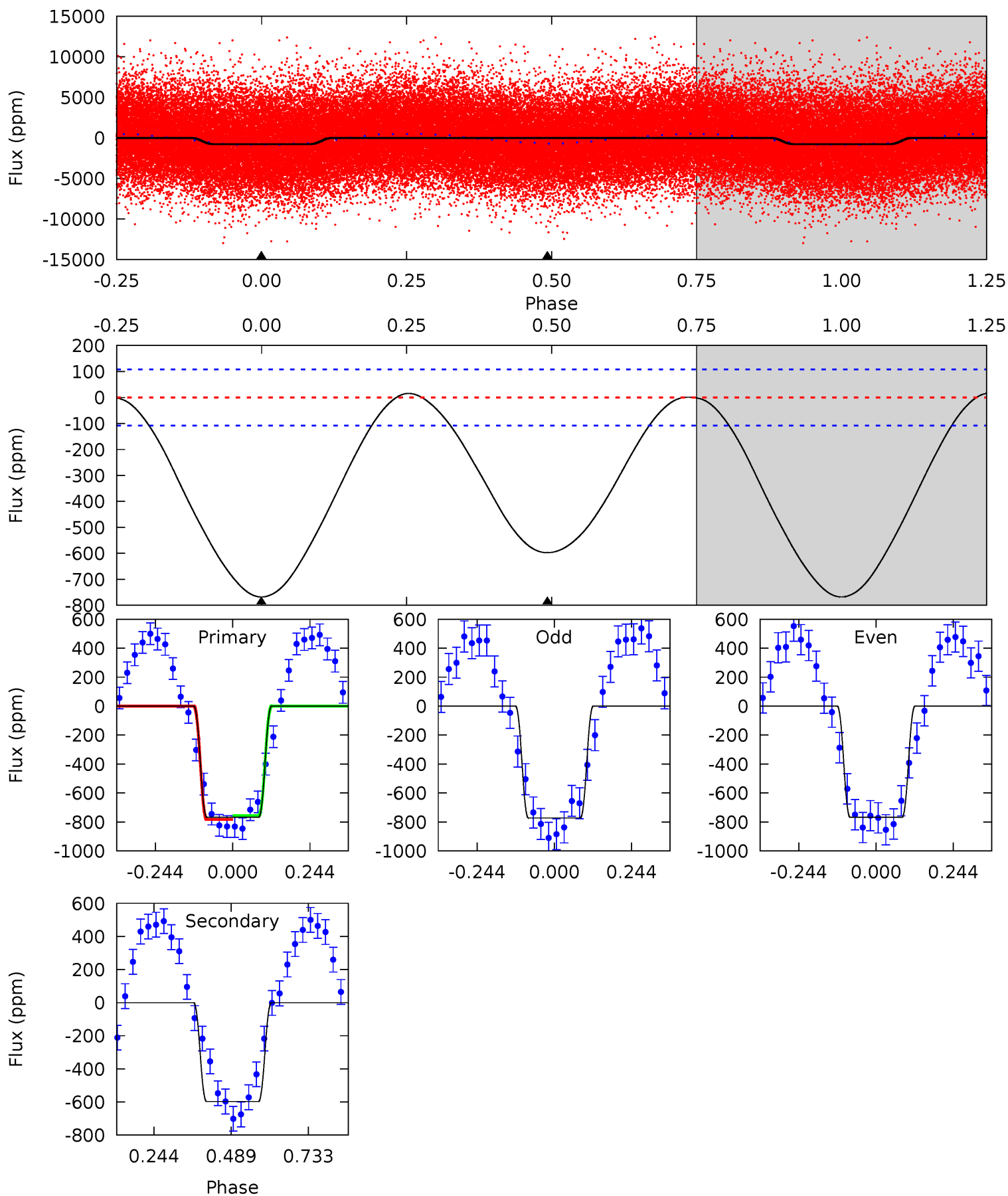
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.0	15.9	0	0	4.28	0.88	0.33	16.0	16.0	15.9	15.9	0.94	1.09	0.03	2.25



Alt Model-Shift Uniqueness Test

009304842-01, P = 1.219341 Days, E = 130.788164 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.1	24.2	0	0	4.37	1.16	0.41	31.1	31.1	24.2	24.2	0.09	1.05	0.02	0.53



Stellar Parameters For KIC 009304842

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6487^{+153}_{-211}	$4.291^{+0.105}_{-0.195}$	$-0.040^{+0.250}_{-0.300}$	$1.306^{+0.436}_{-0.218}$	$1.215^{+0.181}_{-0.181}$	$0.769^{+0.371}_{-0.398}$
	+2%/-3%	+2%/-5%	+625%/-750%	+33%/-17%	+15%/-15%	+48%/-52%
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 009304842-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-225 ± 14	$1.81^{+0.53}_{-0.51}$	2986^{+222}_{-160}	7154^{+1482}_{-875}	21^{+20}_{-8}
Alt.	-598 ± 25	$4.23^{+0.84}_{-0.66}$	2993^{+250}_{-172}	5897^{+387}_{-356}	10^{+4}_{-3}

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 $A_{obs} \gg 1.0$

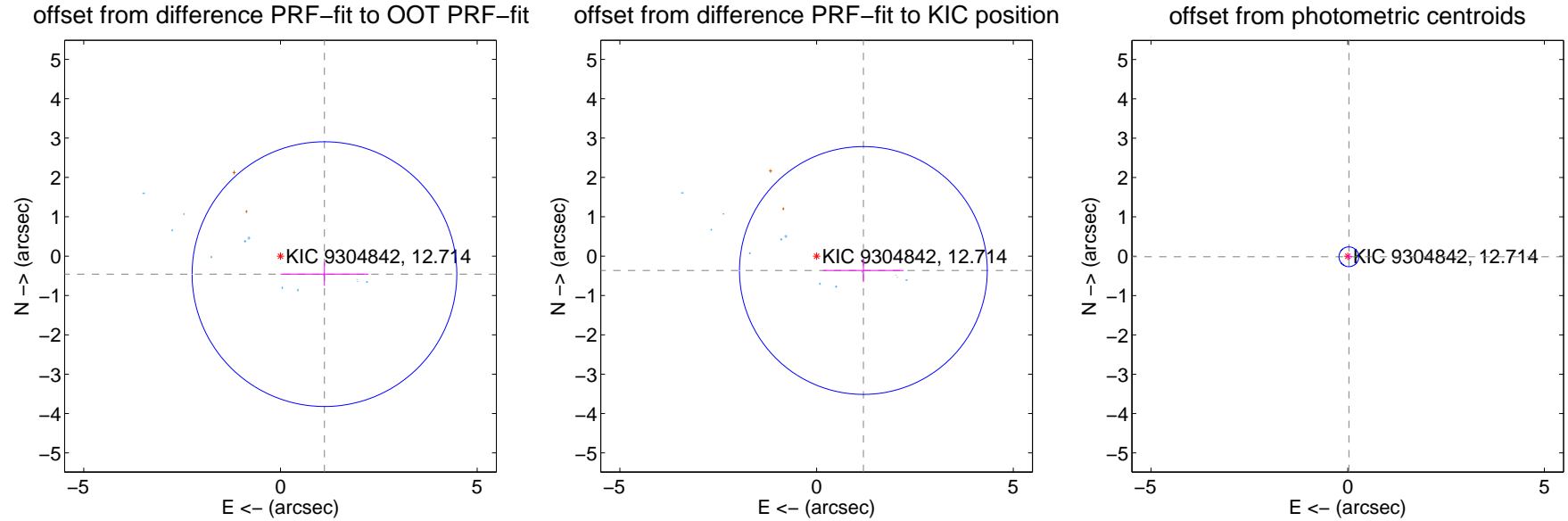
DV Centroid Data

Supplemental centroid analysis for 009304842-01. Kepler magnitude: 12.71. Transit SNR 7.61

There are 12 quarters with good PRF difference image offsets

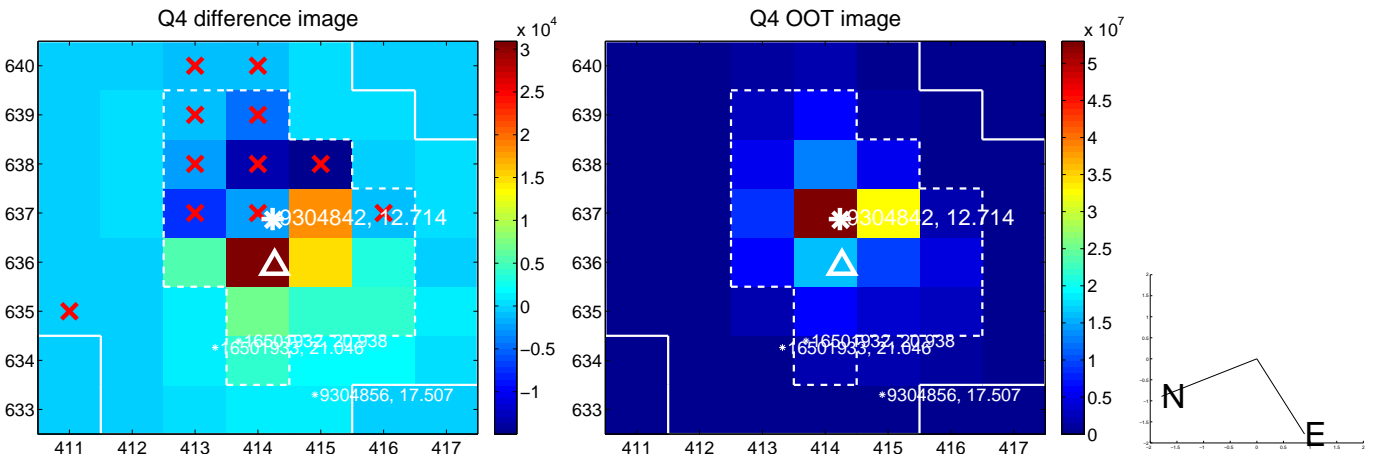
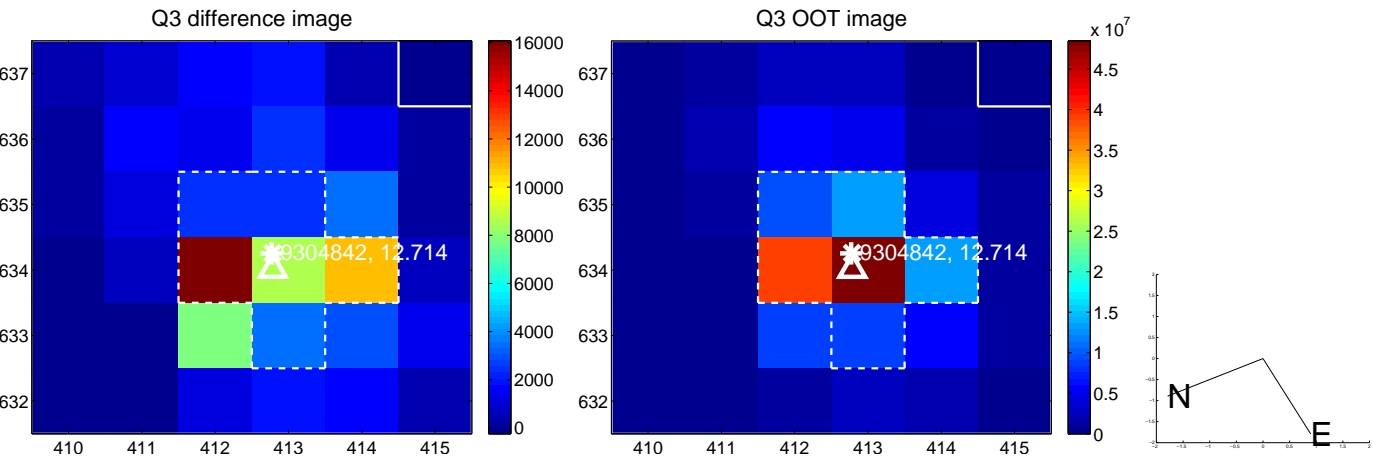
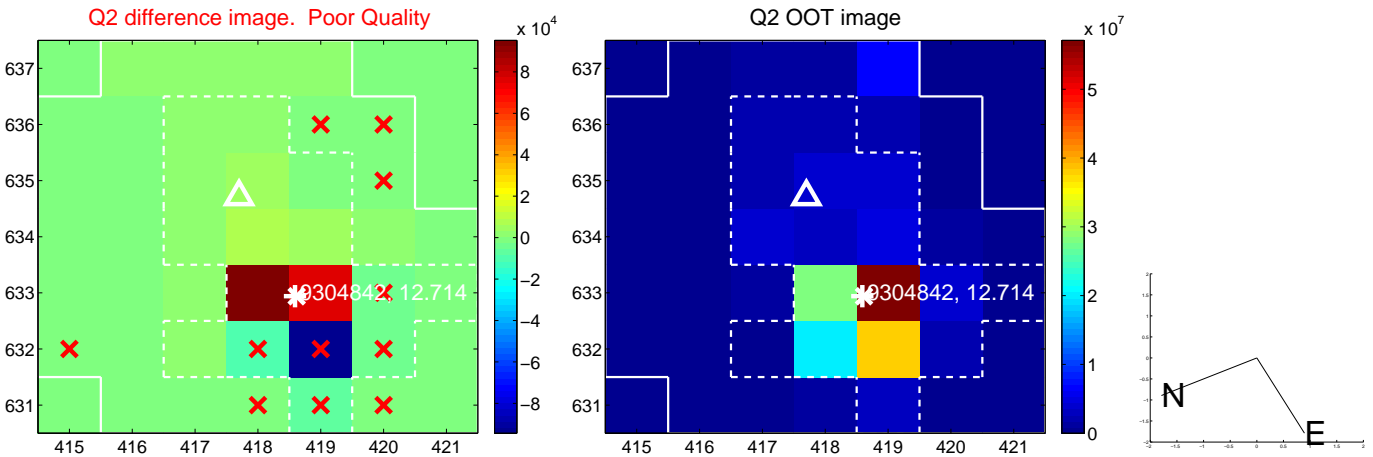
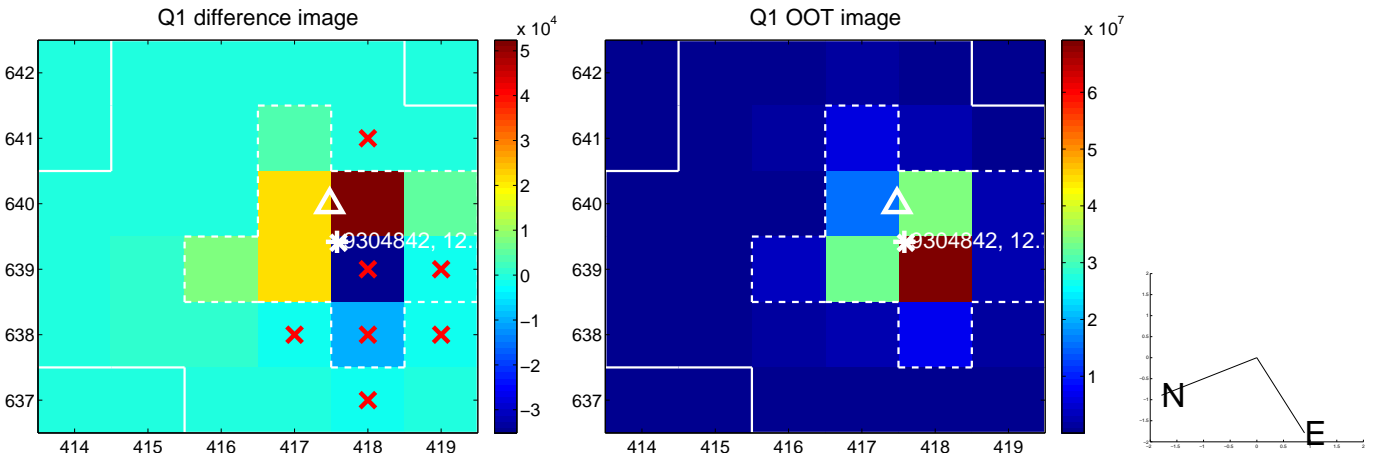
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.208 ± 1.121	1.08	-1.118 ± 1.116	-0.458 ± 0.297
PRF-fit source offset from KIC position	1.244 ± 1.050	1.19	-1.190 ± 1.025	-0.365 ± 0.295
photometric centroid source offset	0.03 ± 0.08	0.39	-0.03 ± 0.09	-0.01 ± 0.08

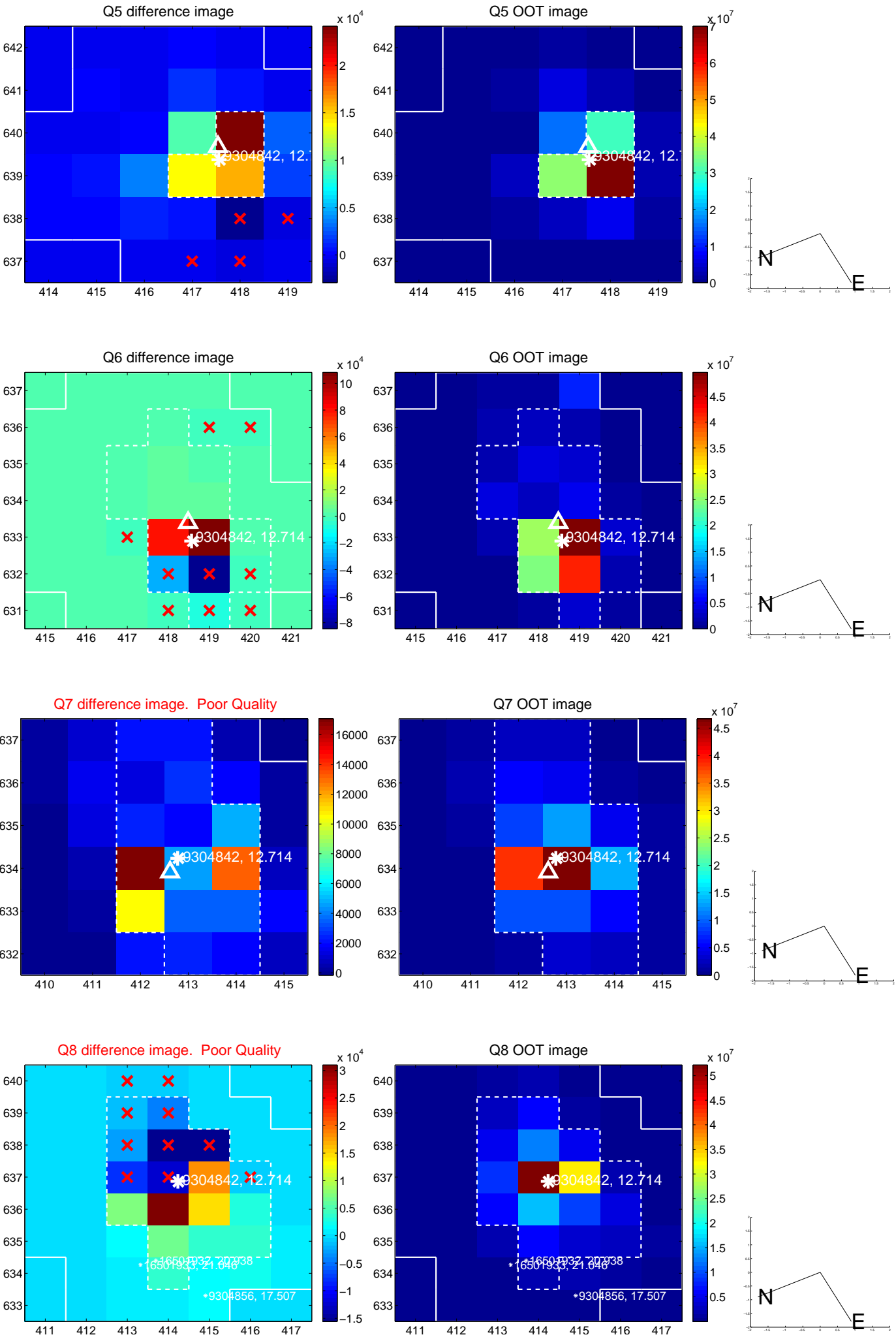


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

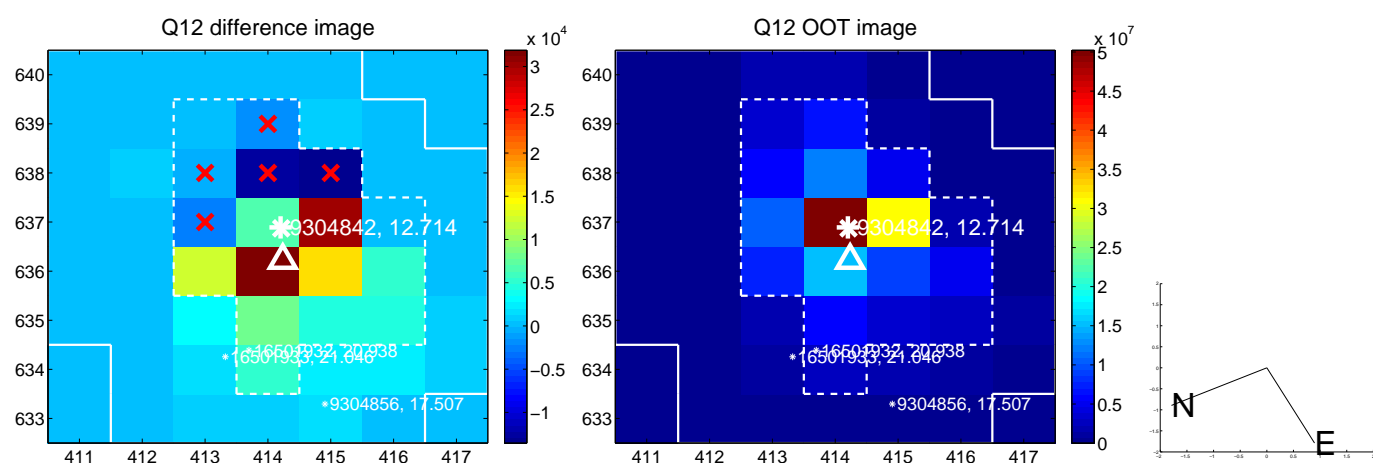
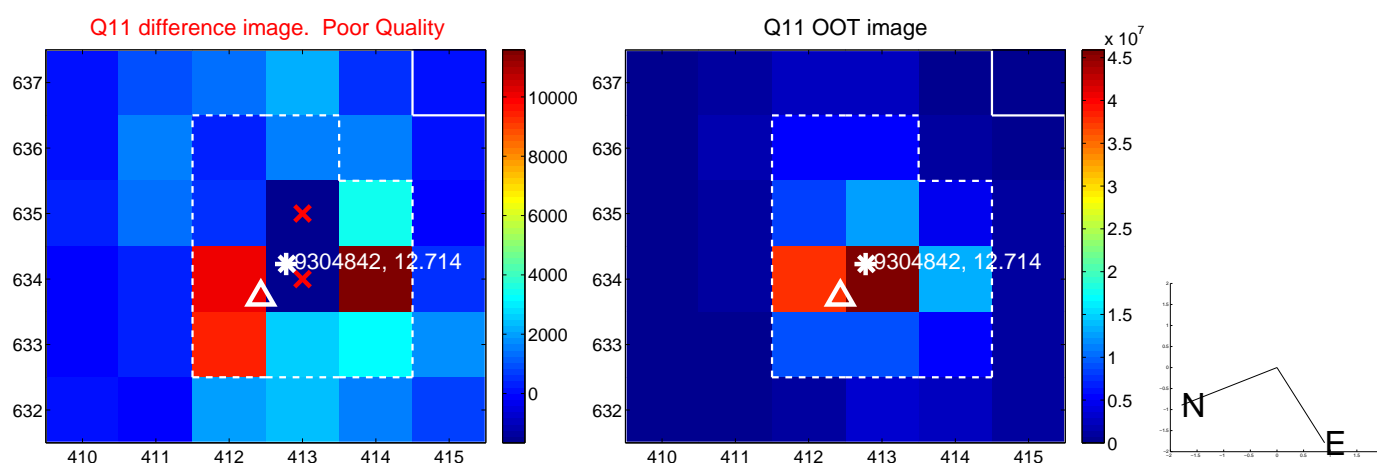
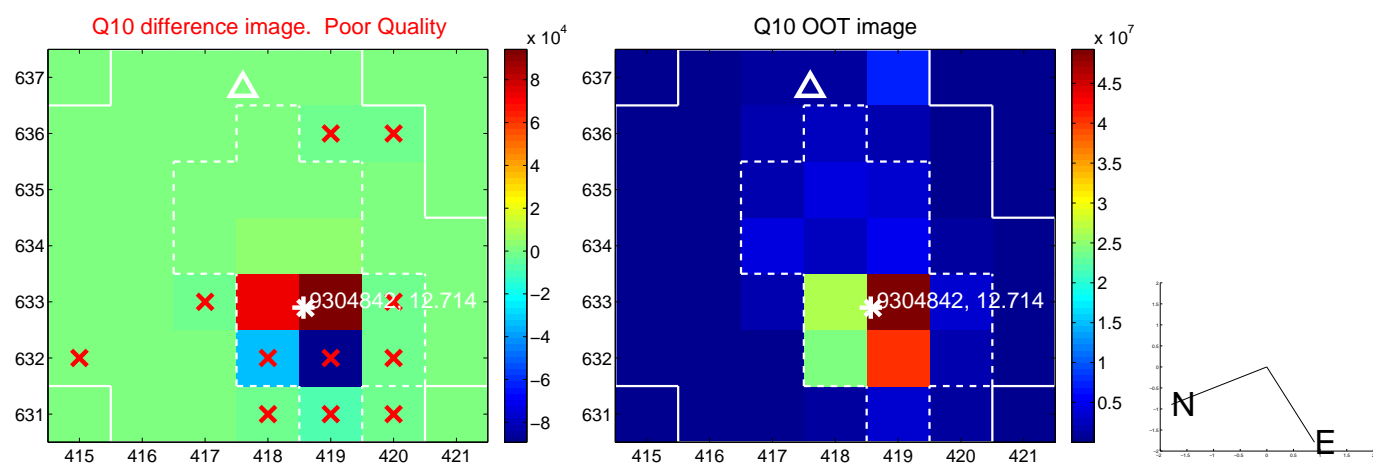
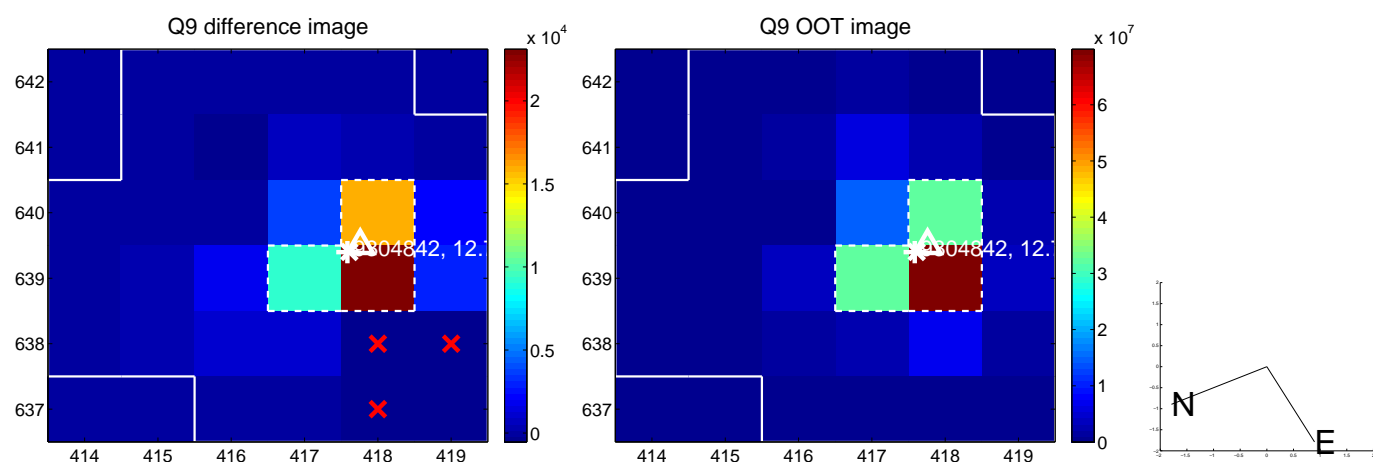
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



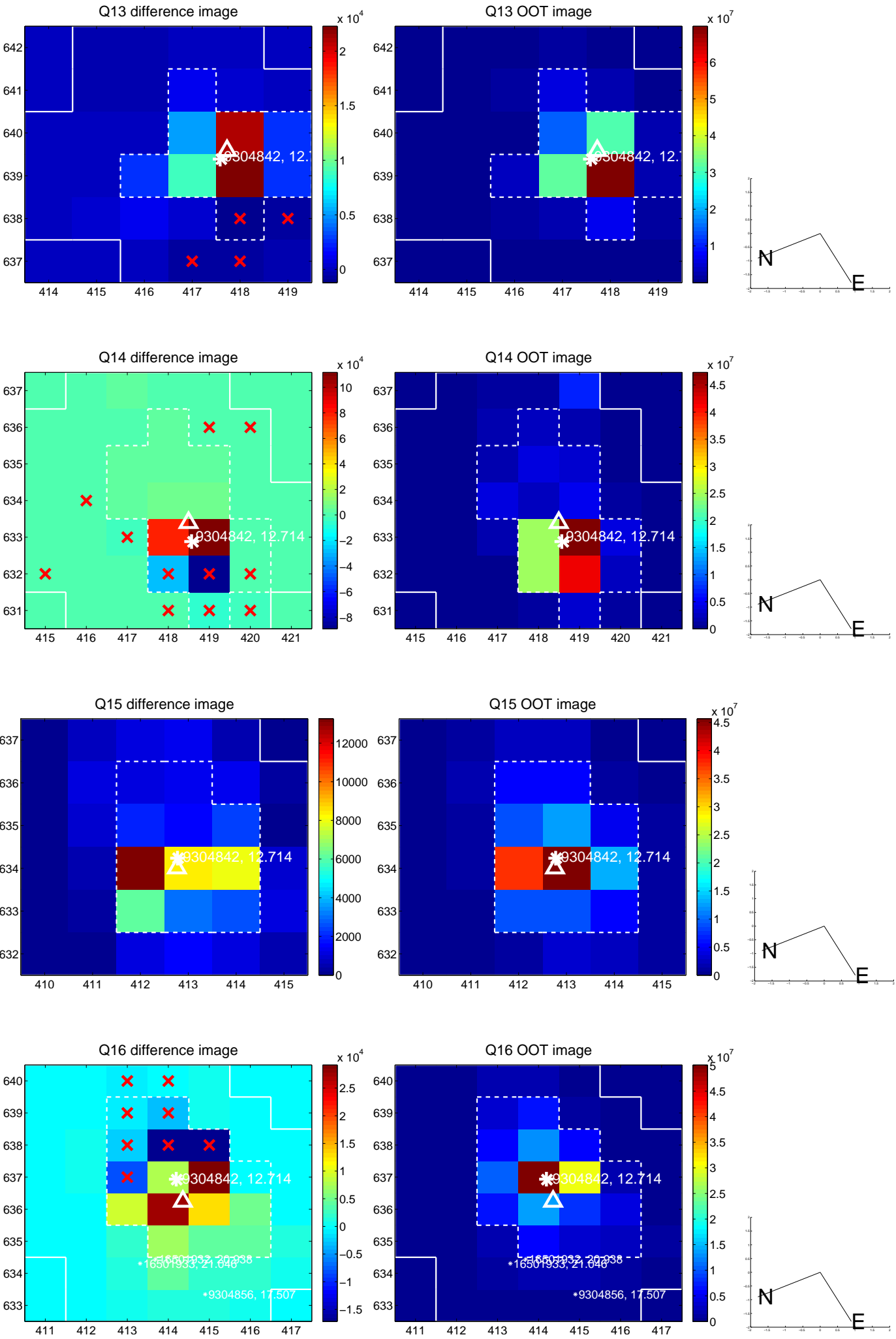
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



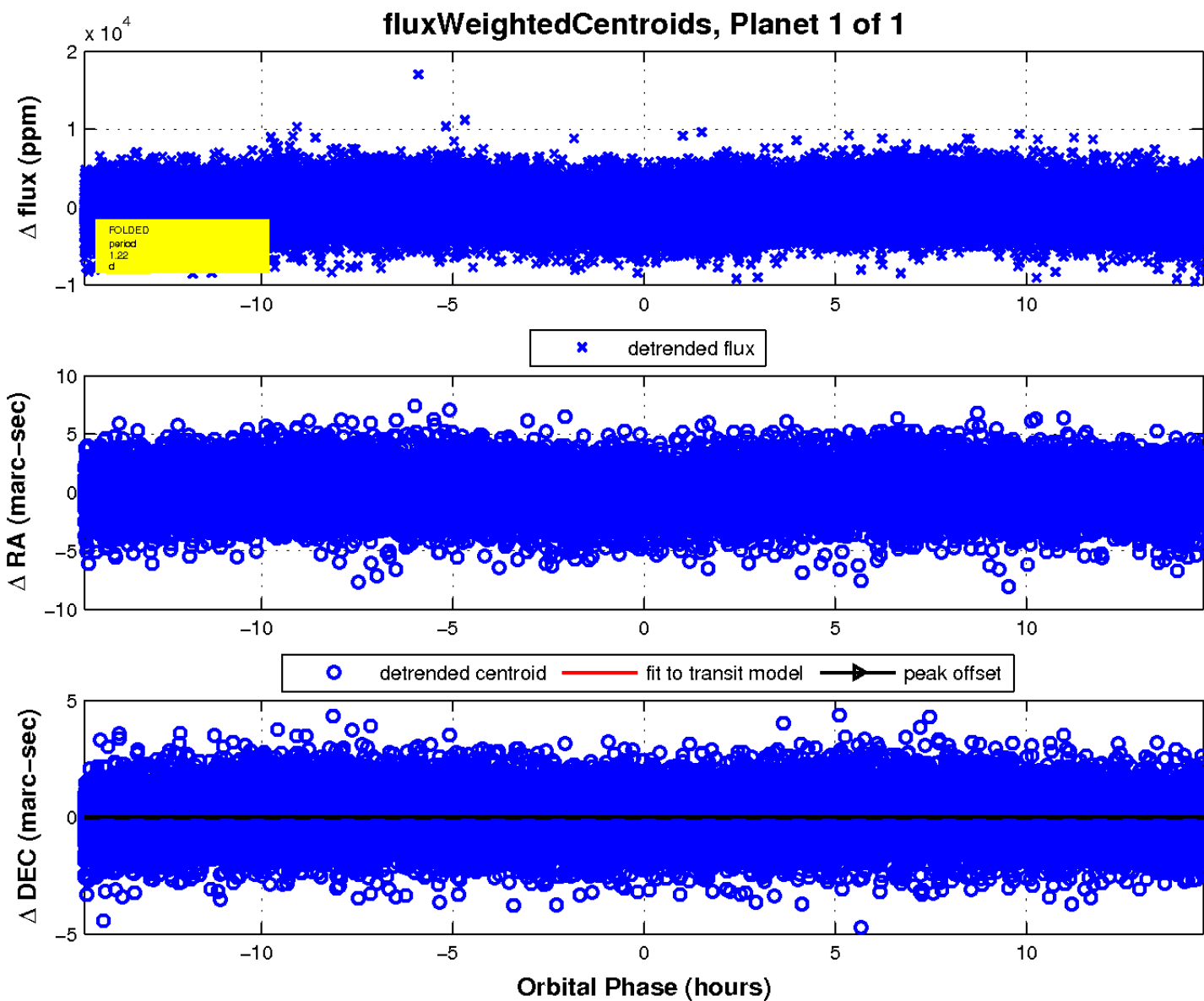
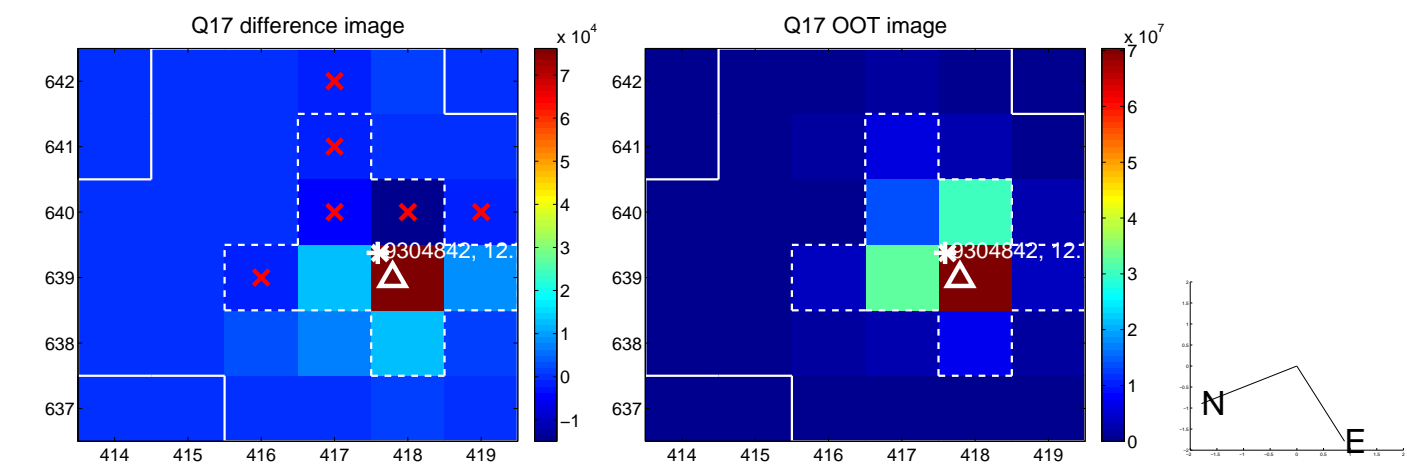
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

