

KIC 008330712

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})
008330712-01	OBS	No	0.874427	131.914419	86.7	3.486	9.0	8.4	1.78	7241	1.92	17548.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008330712-01	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.

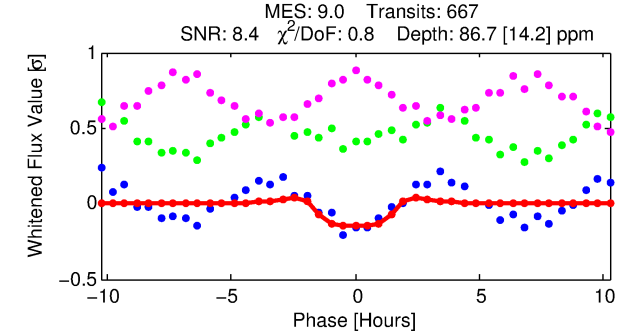
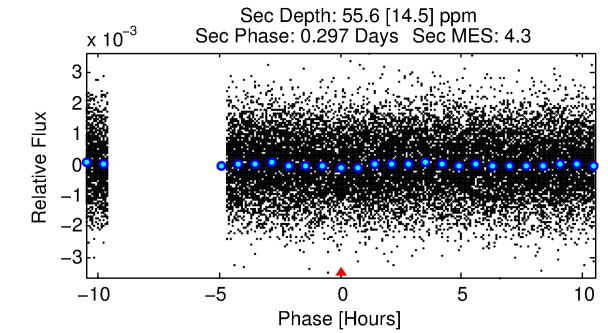
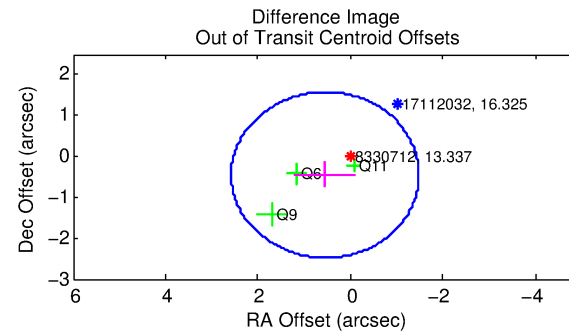
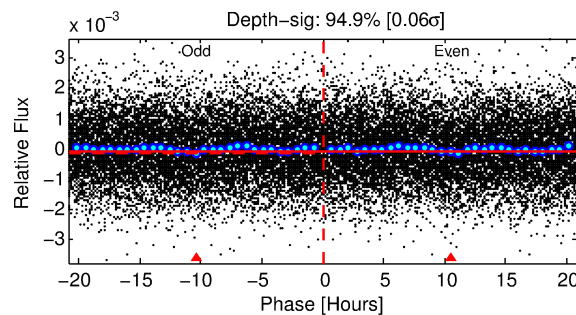
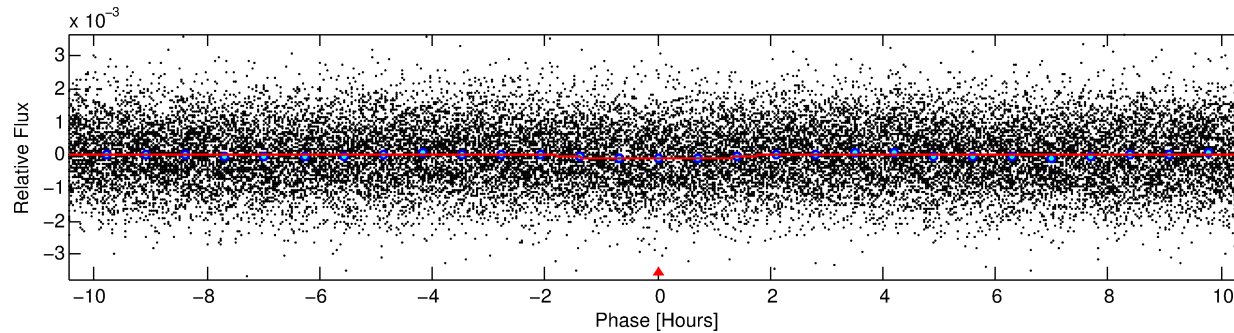
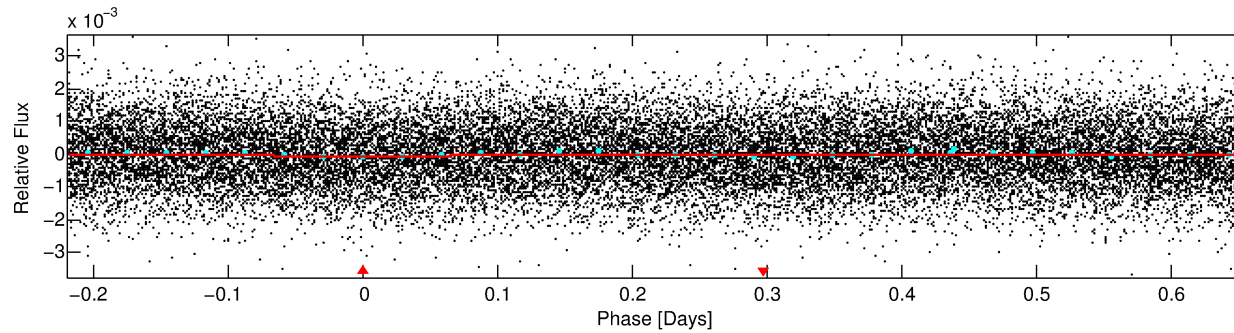
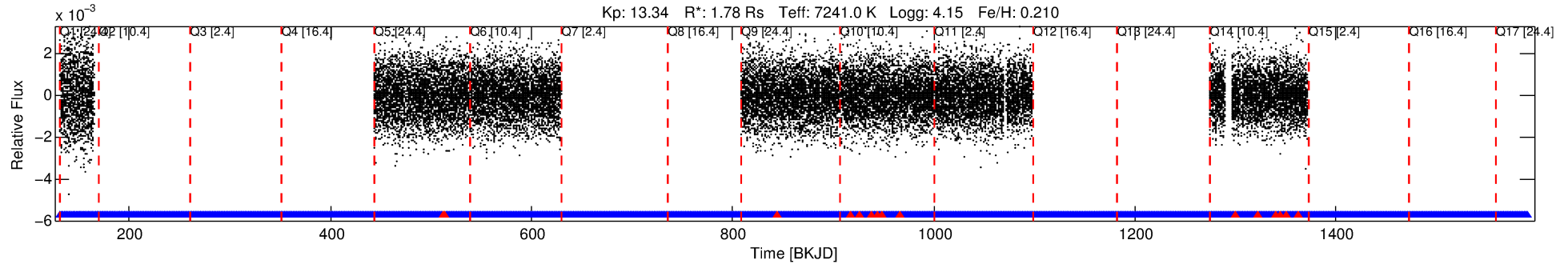
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008330712-01

No Significant Match Found

DV One-Page Summary

KIC: 8330712 Candidate: 1 of 1 Period: 0.874 d



DV Fit Results:

Period = 0.87443 [0.00001] d
Epoch = 131.9144 [0.0051] BKJD
Rp/R* = 0.0099 [0.0077]
a/R* = 1.29 [2.48]
b = 0.90 [1.05]
Seff = 17548.22 [7411.30]
Teq = 2935 [310] K
Rp = 1.92 [1.62] Re
a = 0.0211 [0.0056] AU
Ag = 3.68 [5.98] [0.45 σ]
Teffp = 6287 [2498] K [1.33 σ]

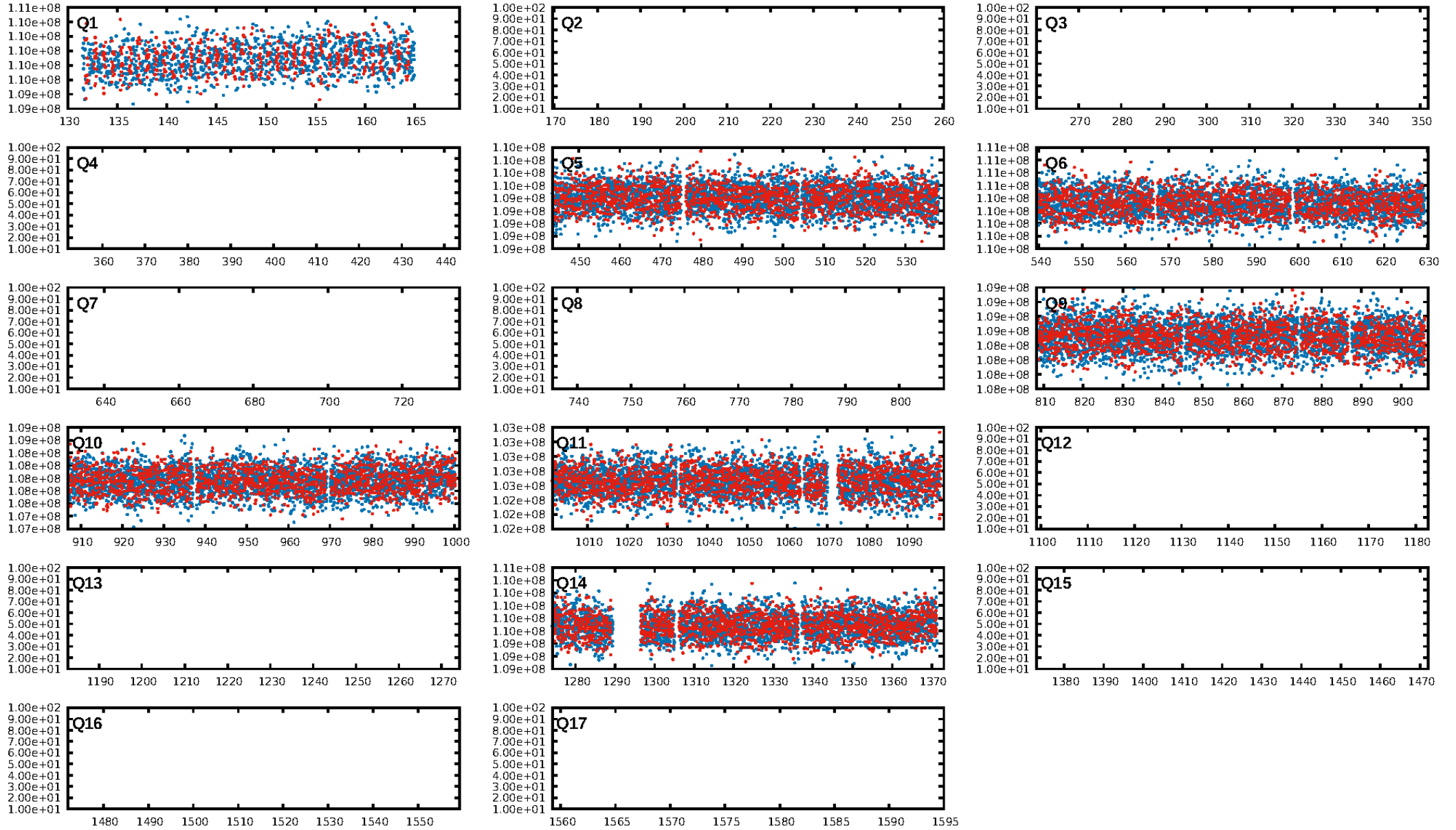
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.01e-25
RollingBand-fgt: 0.98 [614/629]
GhostDiagnostic-chr: 0.6188
Centroid-sig: N/A
Centroid-so: 0.854 arcsec [1.89 σ]
OotOffset-rm: 0.713 arcsec [1.05 σ]
KicOffset-rm: 0.547 arcsec [1.03 σ]
OotOffset-st: 1/1/0/1 [3]
KicOffset-st: 1/1/0/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [7/7]

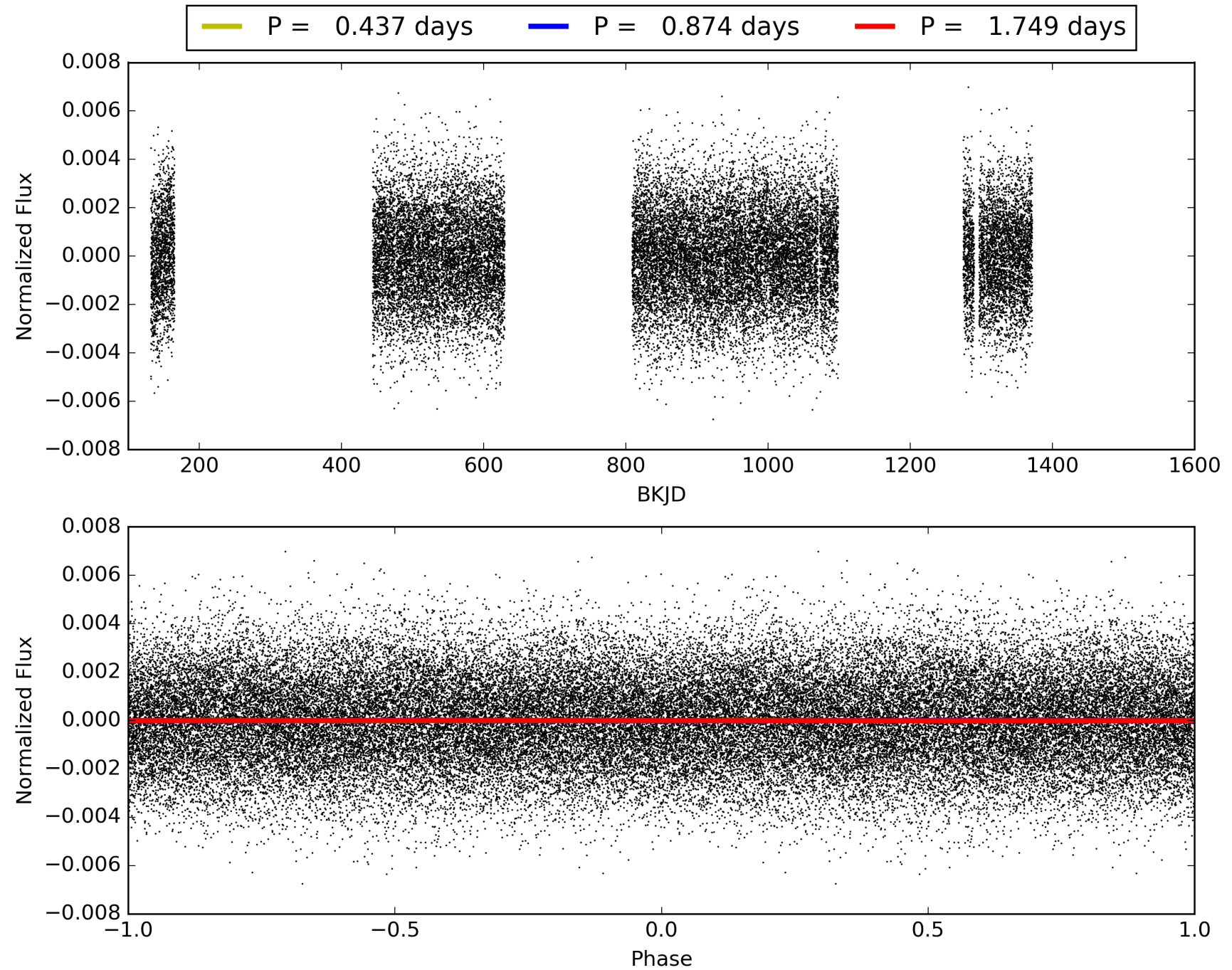
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 21:48:30 Z

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

TCE 008330712-01, PDC Light Curves

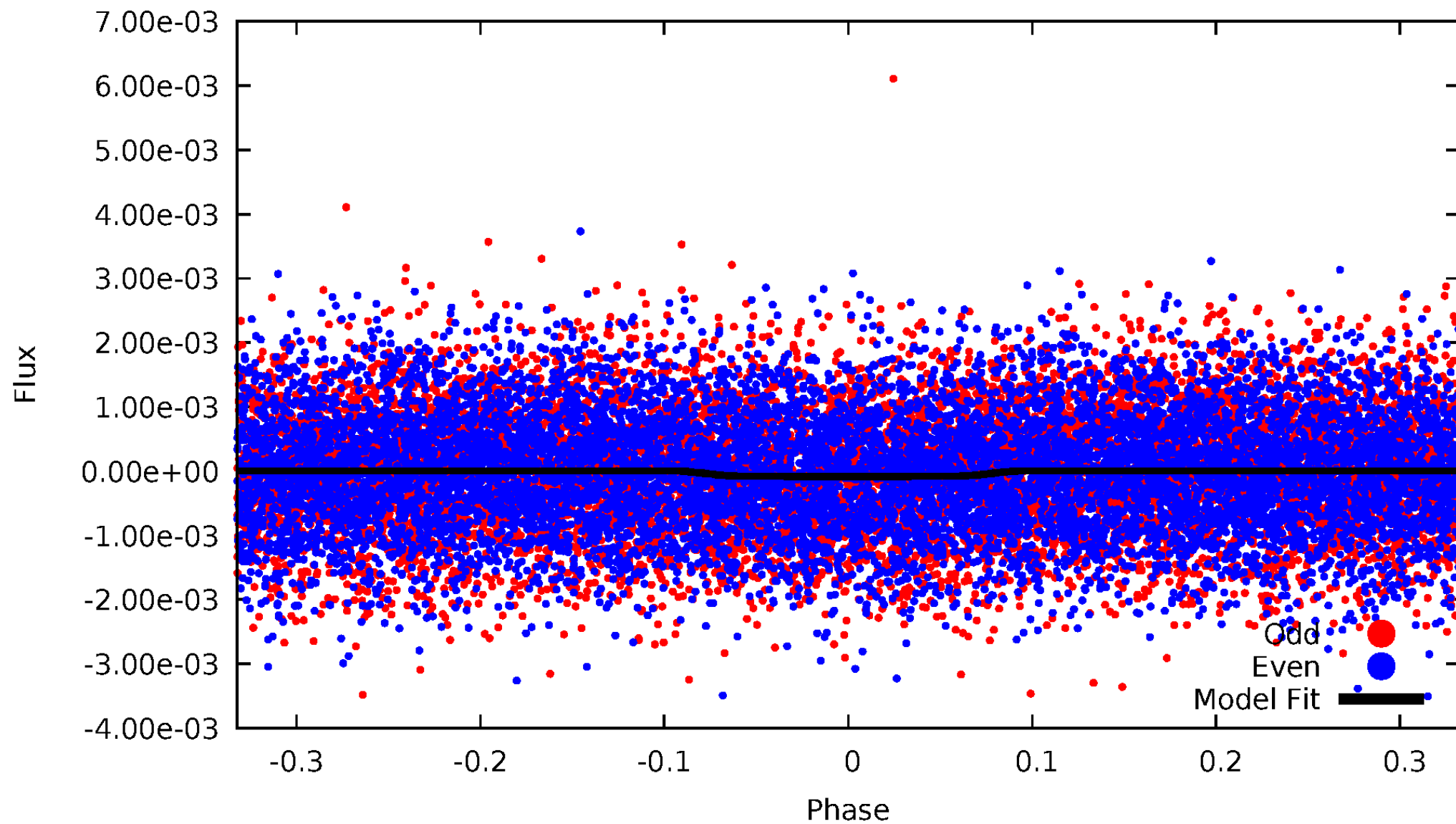


TCE 008330712-01



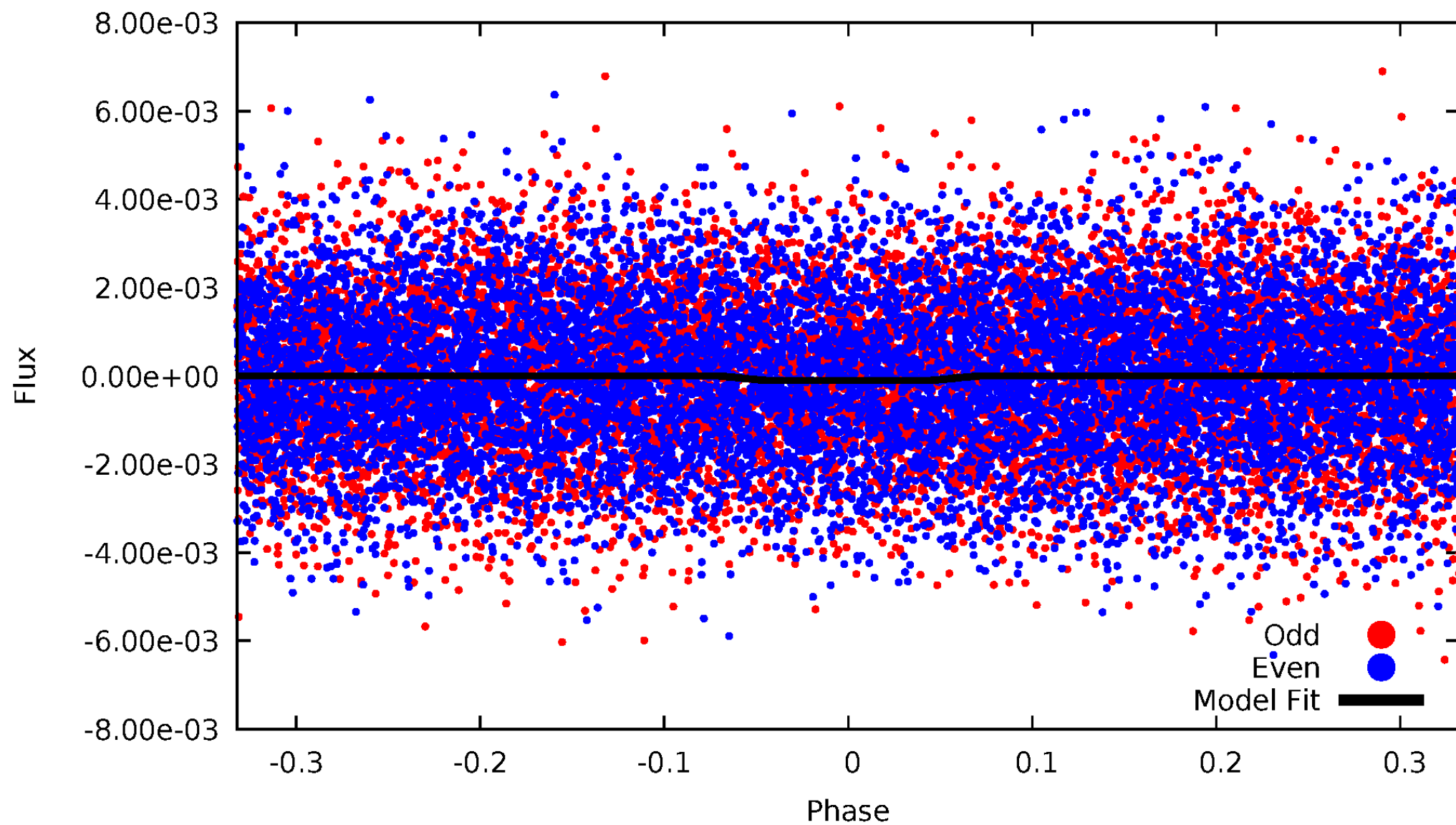
DV Odd/Even

TCE 008330712-01



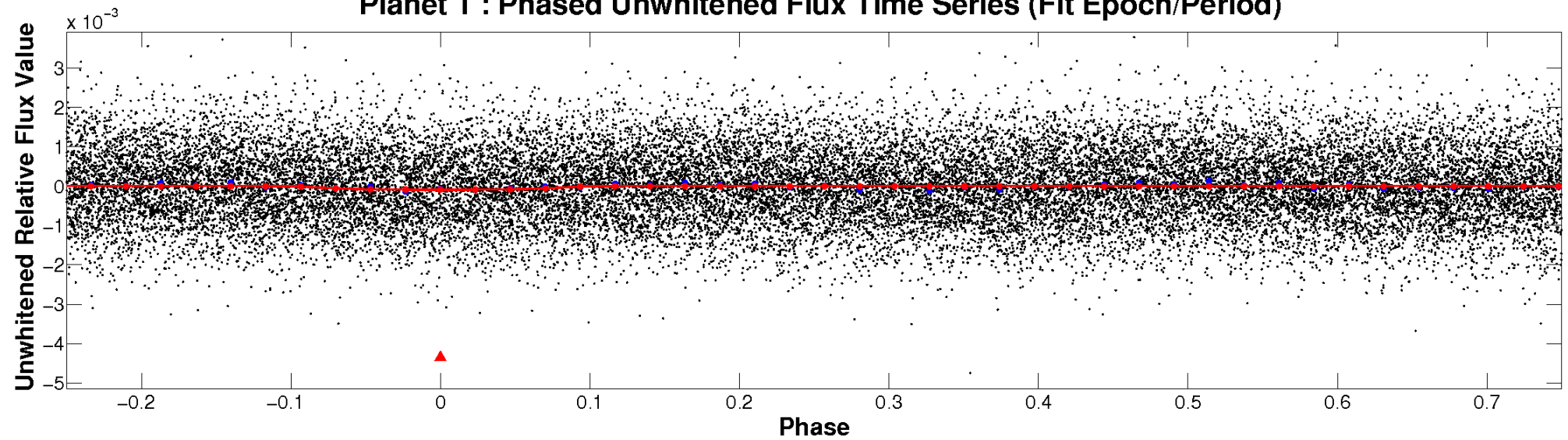
ALT Odd/Even

TCE 008330712-01

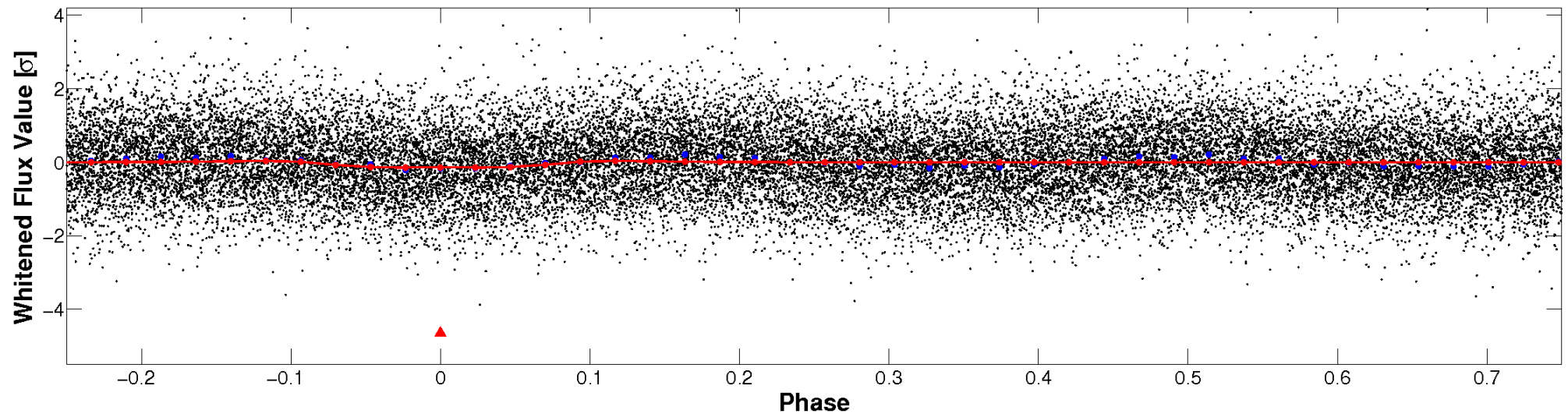


Non-Whitened Vs. Whitened Light Curve

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

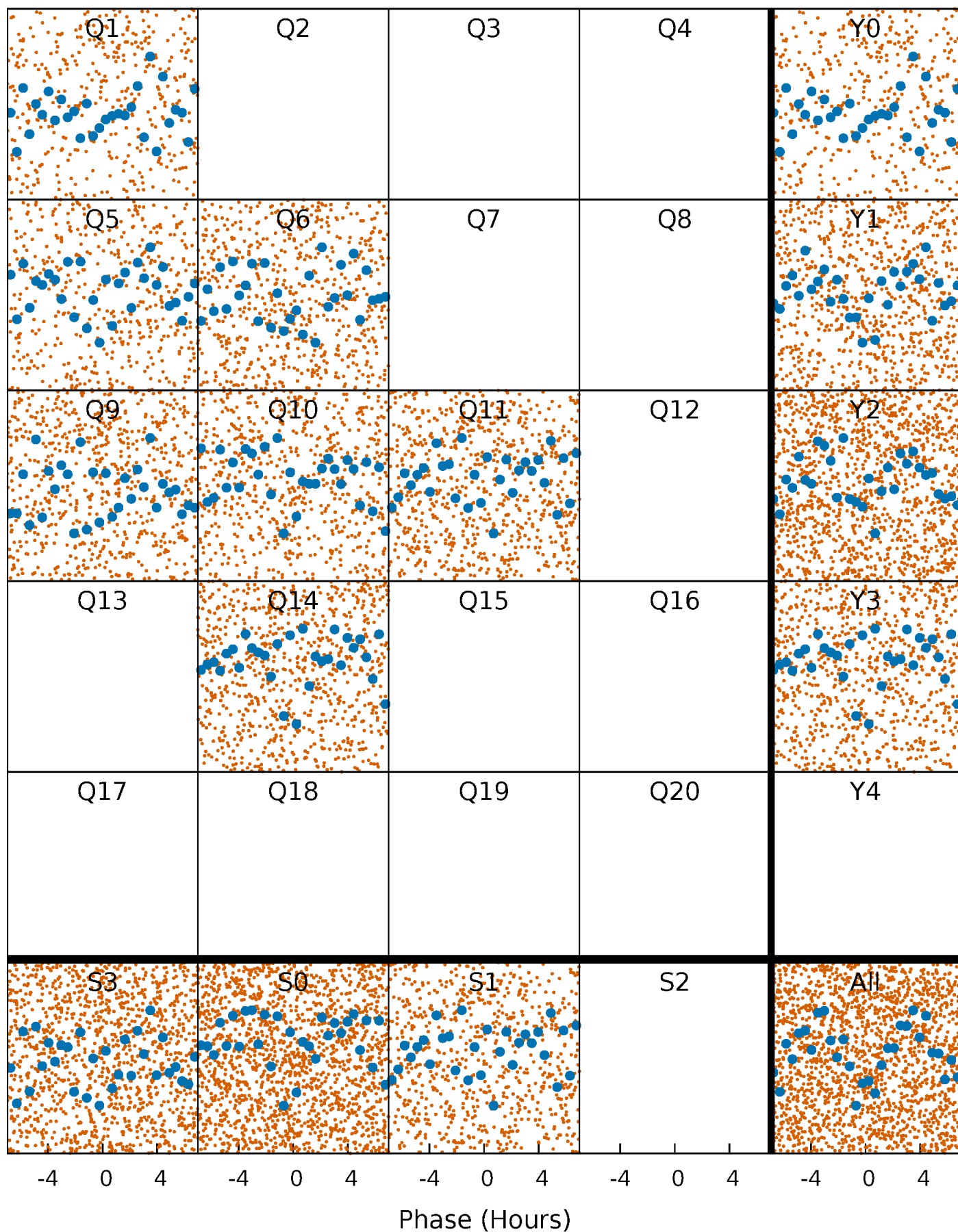


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



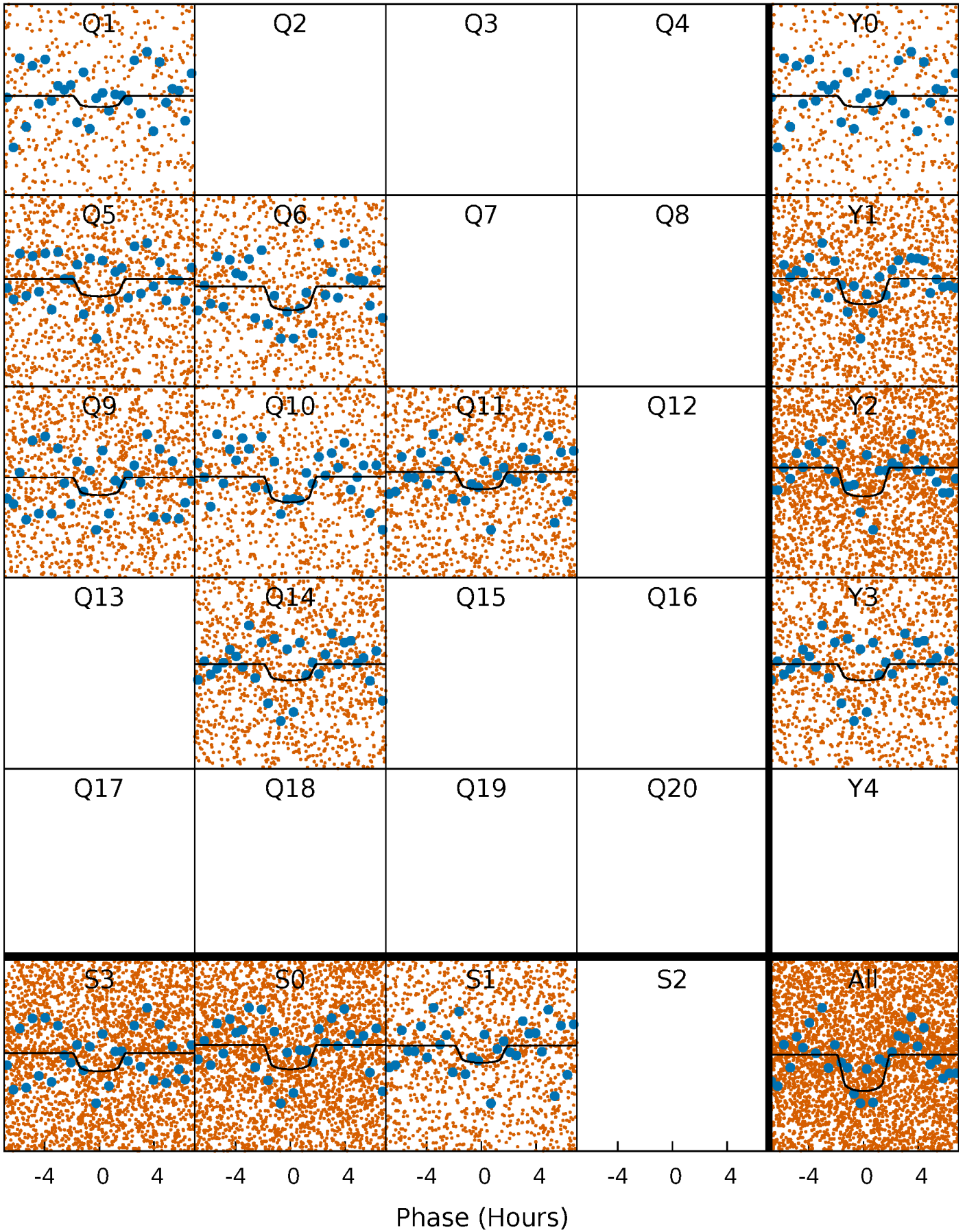
PDC Quarter-Phased Transit Curves

TCE 008330712-01 P= 0.874427 Days $T_0=131.914420$ (BKJD)



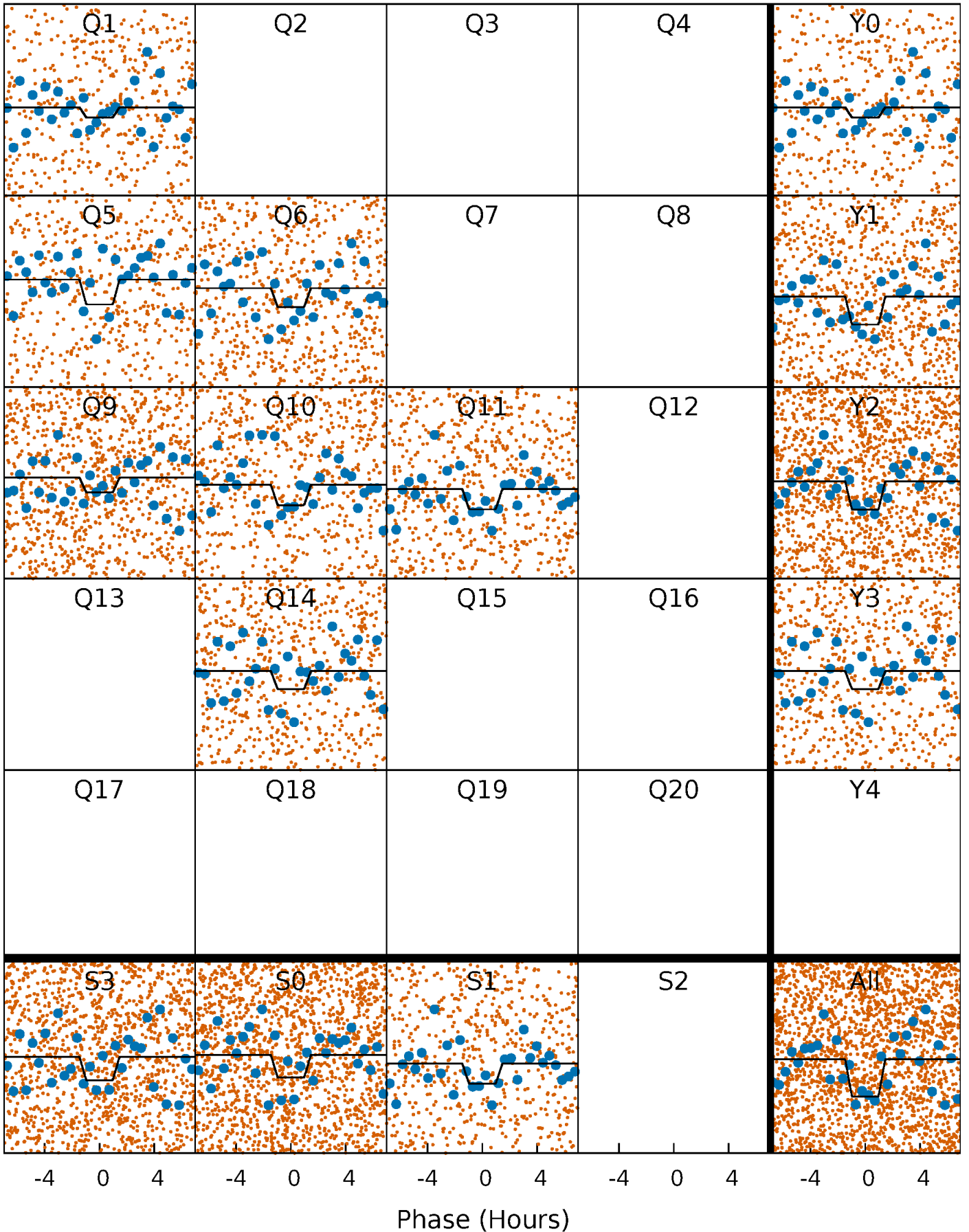
DV Quarter-Phased Transit Curves

TCE 008330712-01 P= 0.874427 Days $T_0=131.914420$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

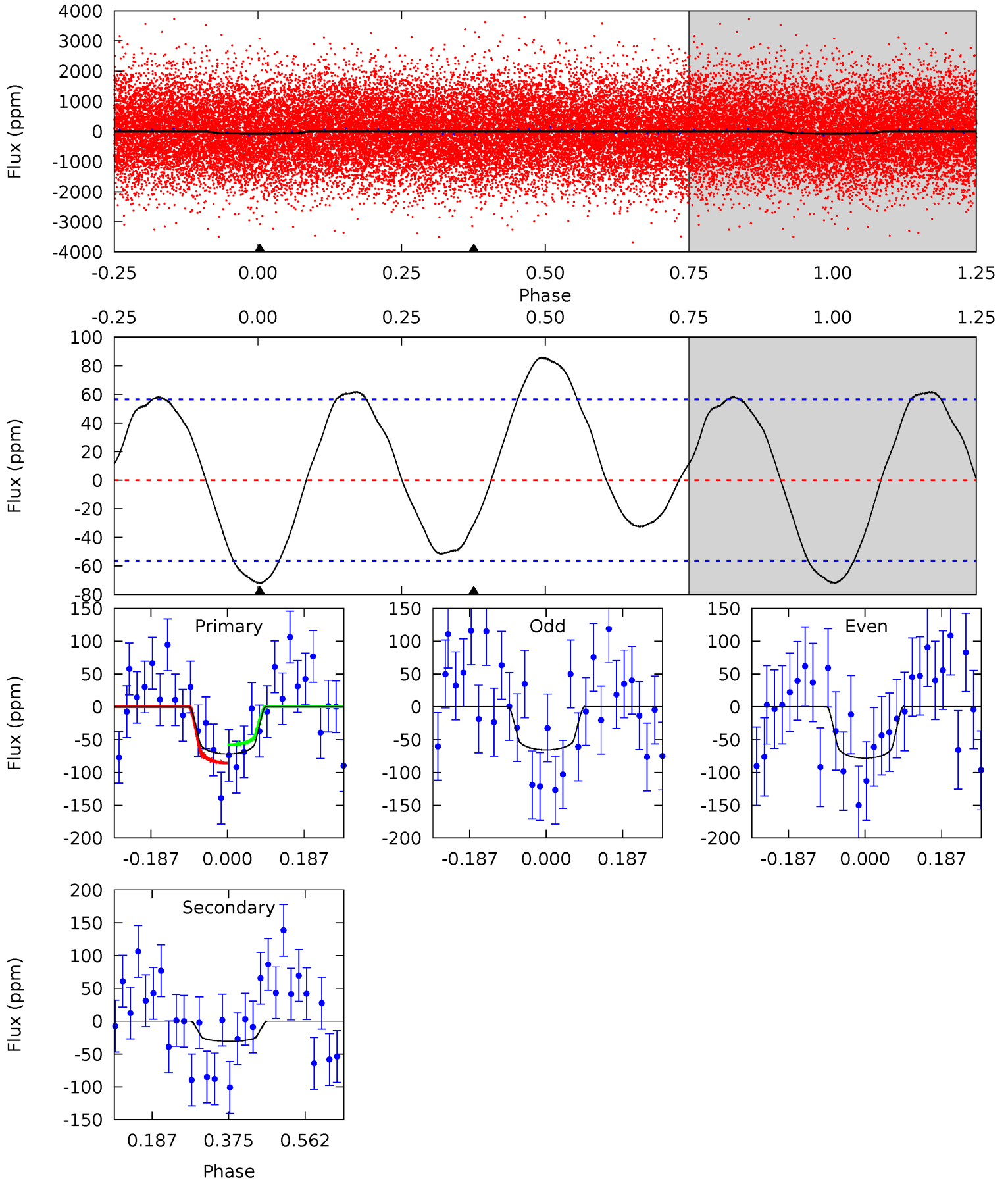
TCE 008330712-01 P= 0.874430 Days $T_0=131.914356$ (BKJD)



DV Model-Shift Uniqueness Test

008330712-01, P = 0.874427 Days, E = 131.039993 Days

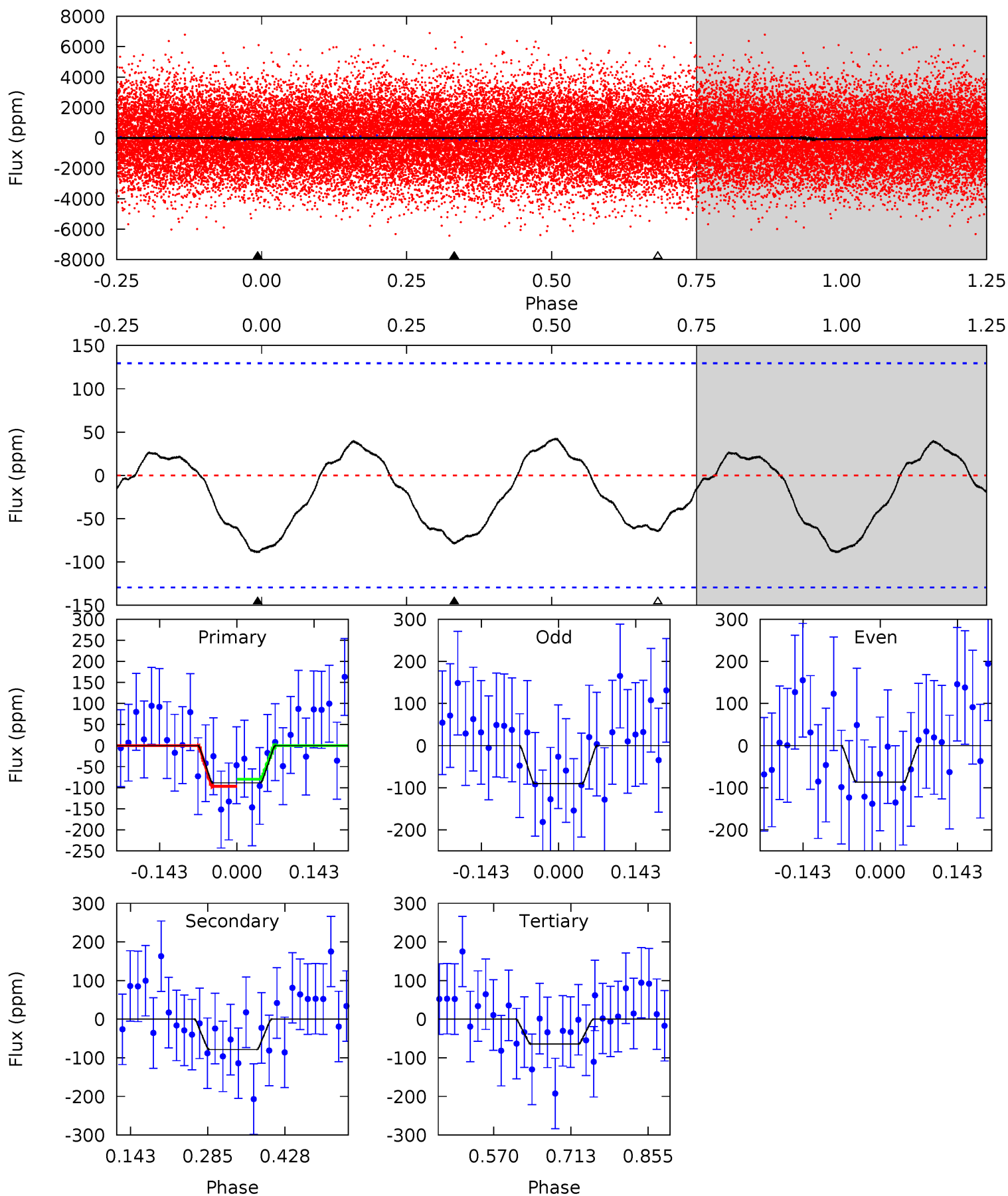
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.64	2.41	0	0	4.43	1.32	2.33	5.64	5.64	2.41	2.41	0.50	0.86	0.54	1.09



Alt Model-Shift Uniqueness Test

008330712-01, P = 0.874430 Days, E = 131.039926 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.07	2.73	2.23	0	4.49	1.47	1.23	0.84	3.07	0.50	2.73	0.07	0.86	0.32	0.30



Stellar Parameters For KIC 008330712

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7241^{+200}_{-343}	$4.151^{+0.087}_{-0.203}$	$0.210^{+0.150}_{-0.350}$	$1.781^{+0.569}_{-0.306}$	$1.639^{+0.204}_{-0.226}$	$0.409^{+0.195}_{-0.209}$
	+3%/-5%	+2%/-5%	+71%/-167%	+32%/-17%	+12%/-14%	+48%/-51%
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 008330712-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-31 ± 13	$2.22^{+1.52}_{-1.27}$	4156^{+307}_{-254}	4754^{+2928}_{-1451}	$1.336^{+6.574}_{-0.912}$
Alt.	-79 ± 29	$2.17^{+1.55}_{-1.27}$	4154^{+305}_{-260}	6292^{+5069}_{-1688}	$3.797^{+20.297}_{-2.634}$

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

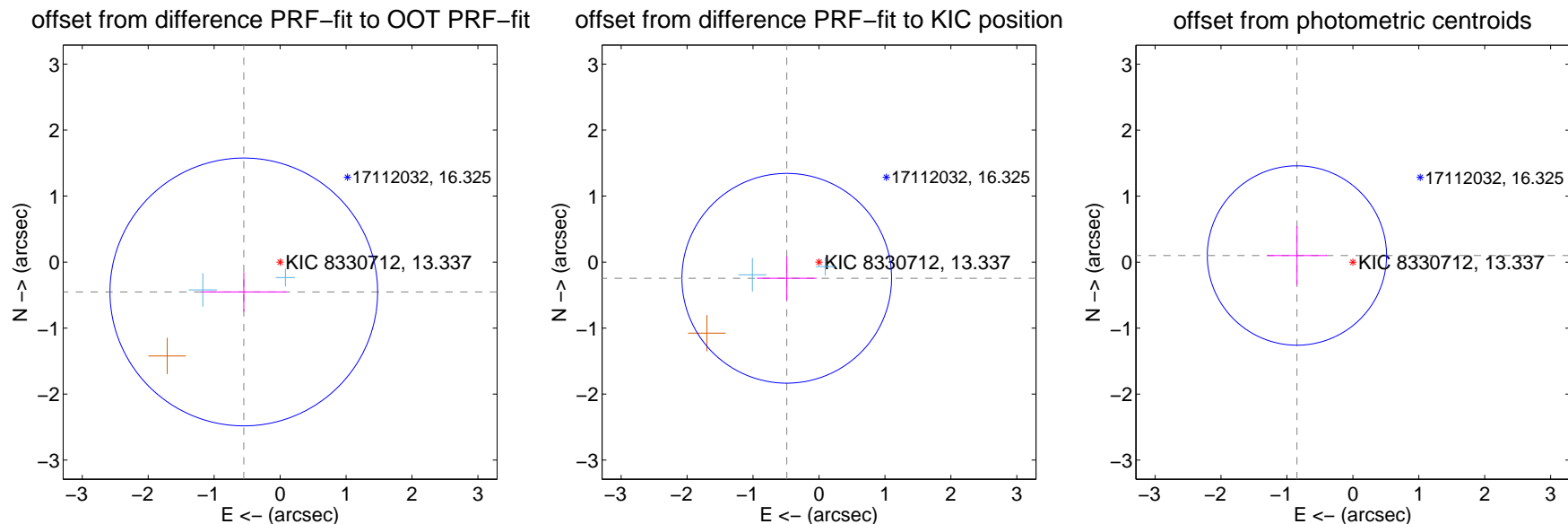
DV Centroid Data

Supplemental centroid analysis for 008330712-01. Kepler magnitude: 13.34. Transit SNR 8.39

There are 2 quarters with good PRF difference image offsets

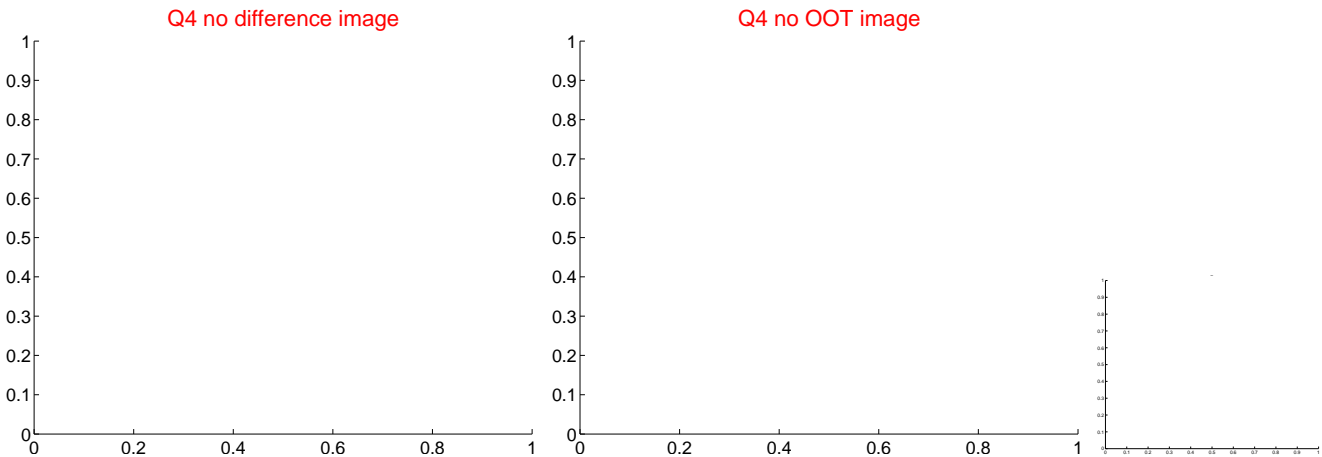
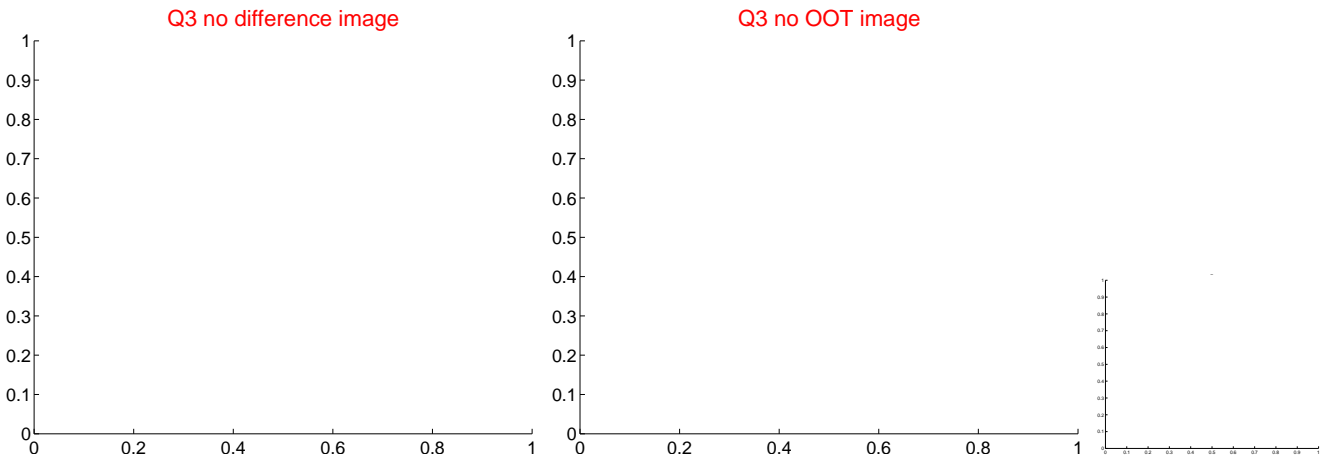
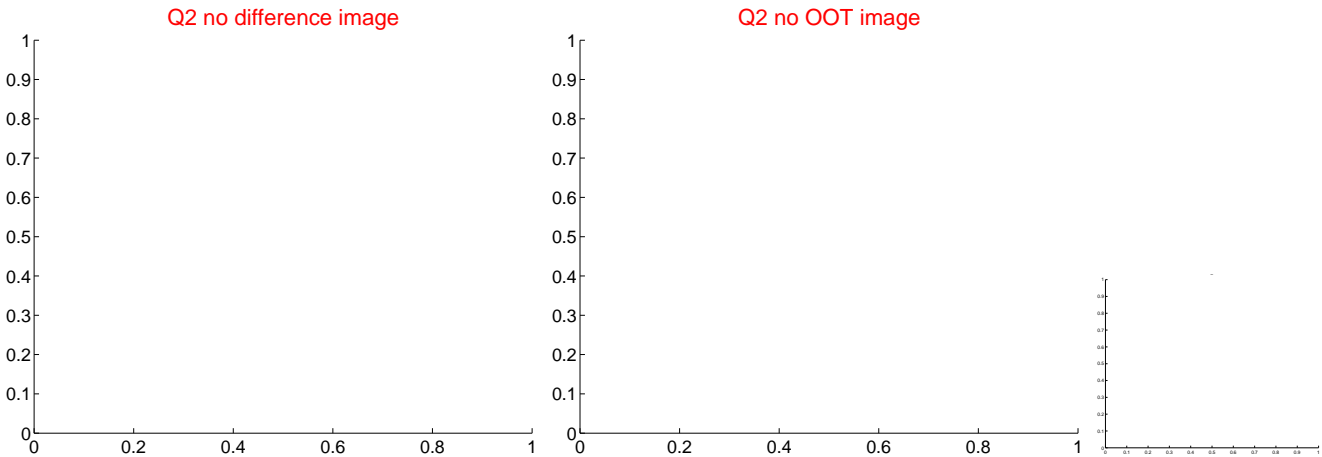
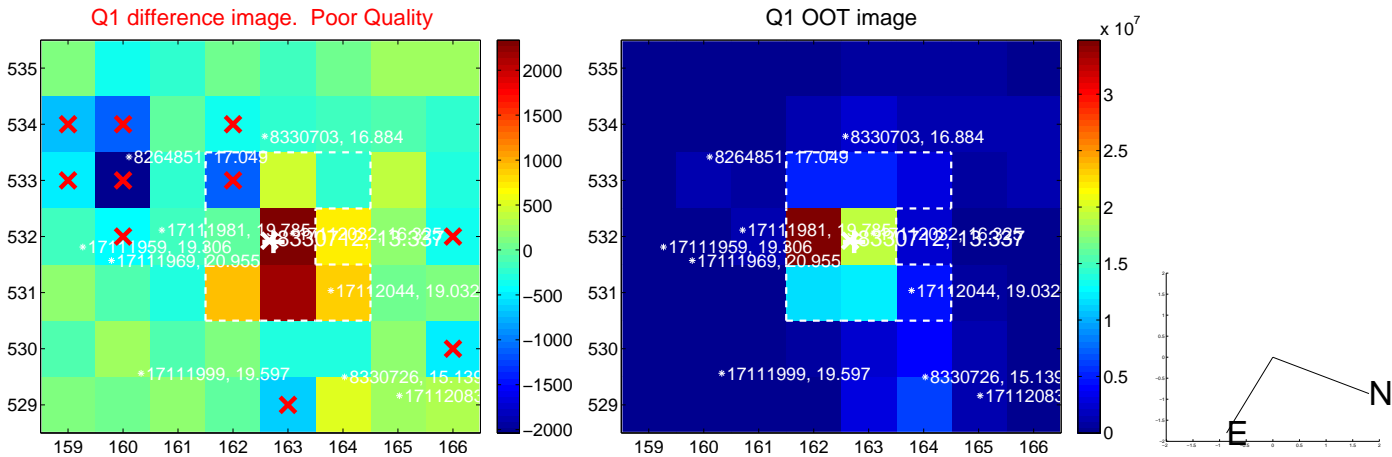
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.713 ± 0.676	1.05	0.551 ± 0.651	-0.453 ± 0.297
PRF-fit source offset from KIC position	0.547 ± 0.530	1.03	0.489 ± 0.452	-0.245 ± 0.330
photometric centroid source offset	0.85 ± 0.45	1.89	0.85 ± 0.45	0.10 ± 0.45

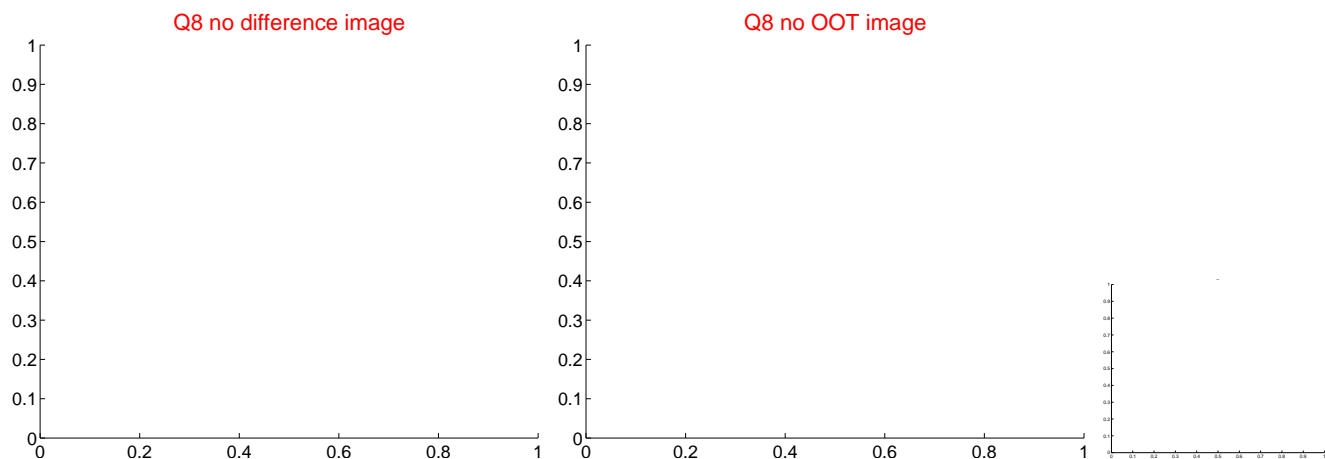
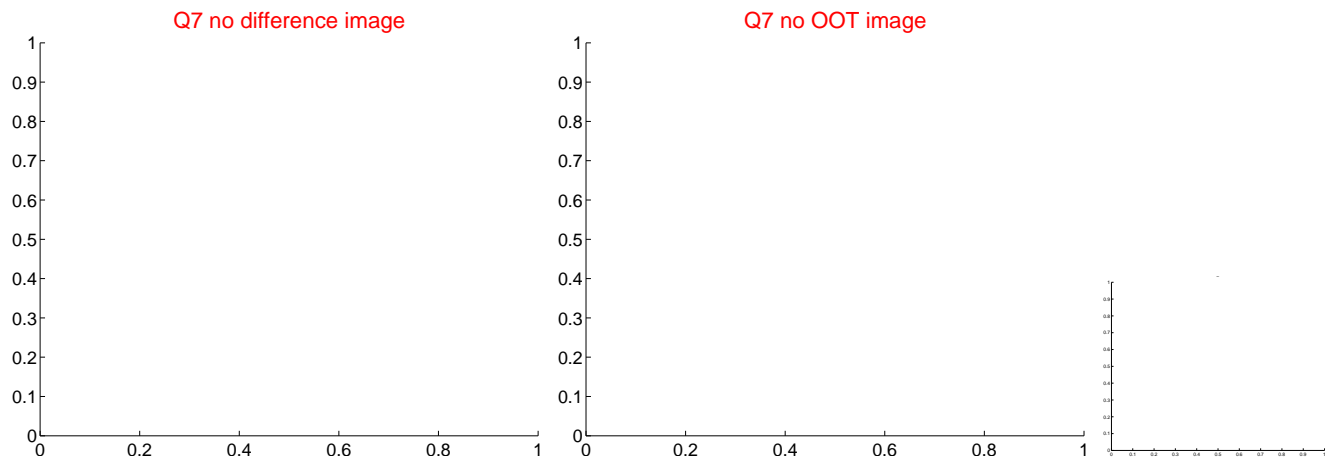
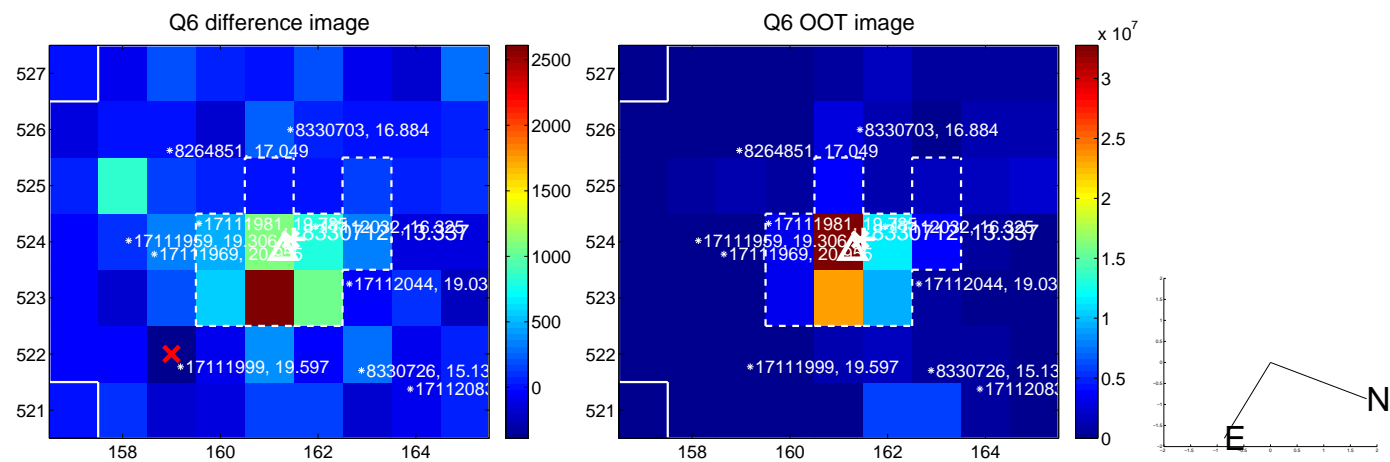
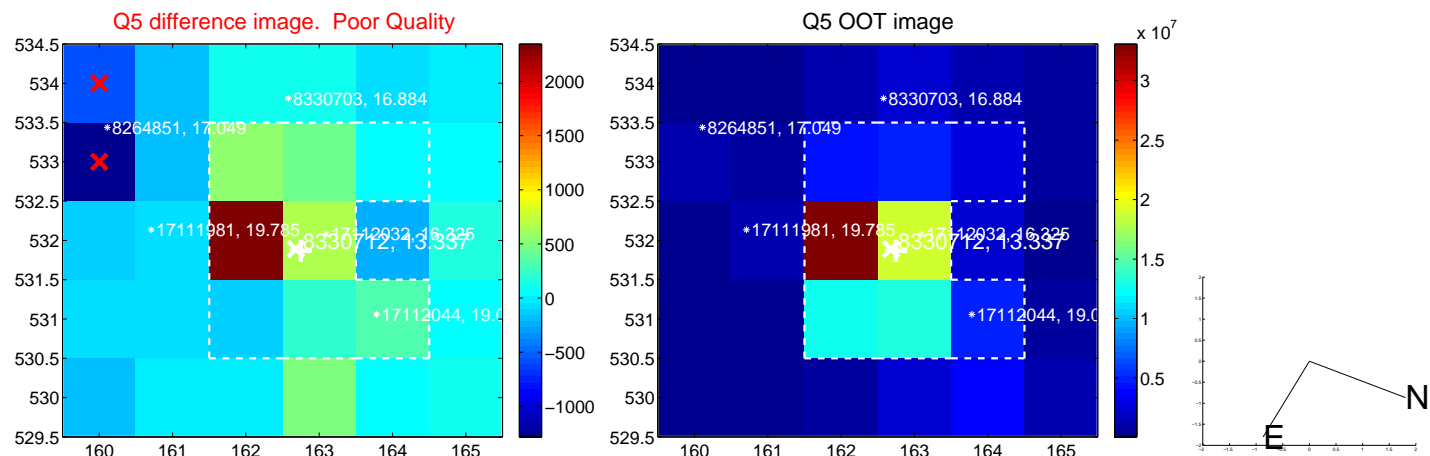


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

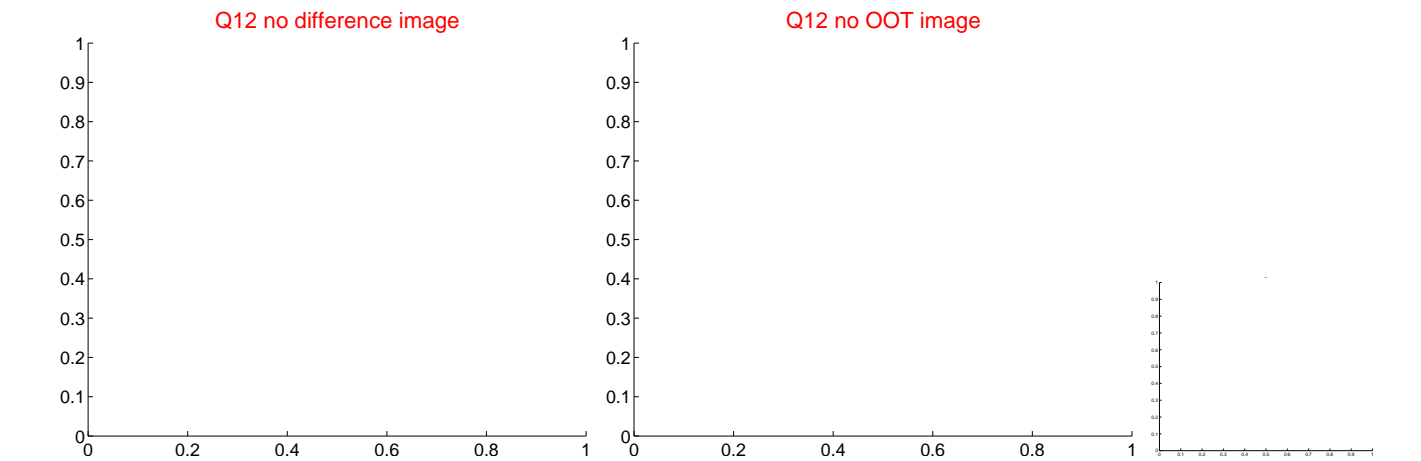
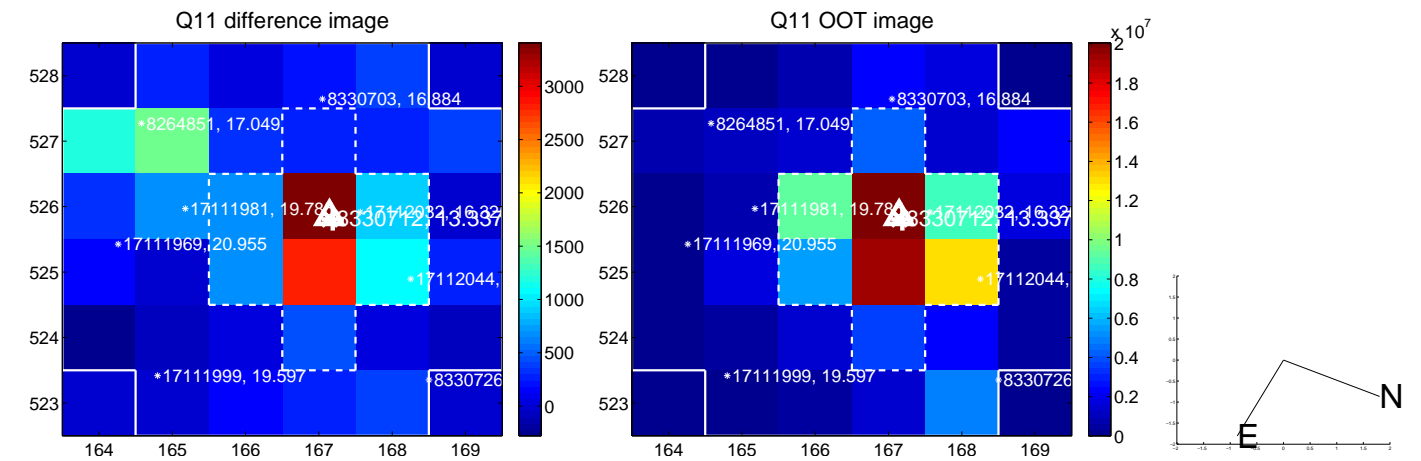
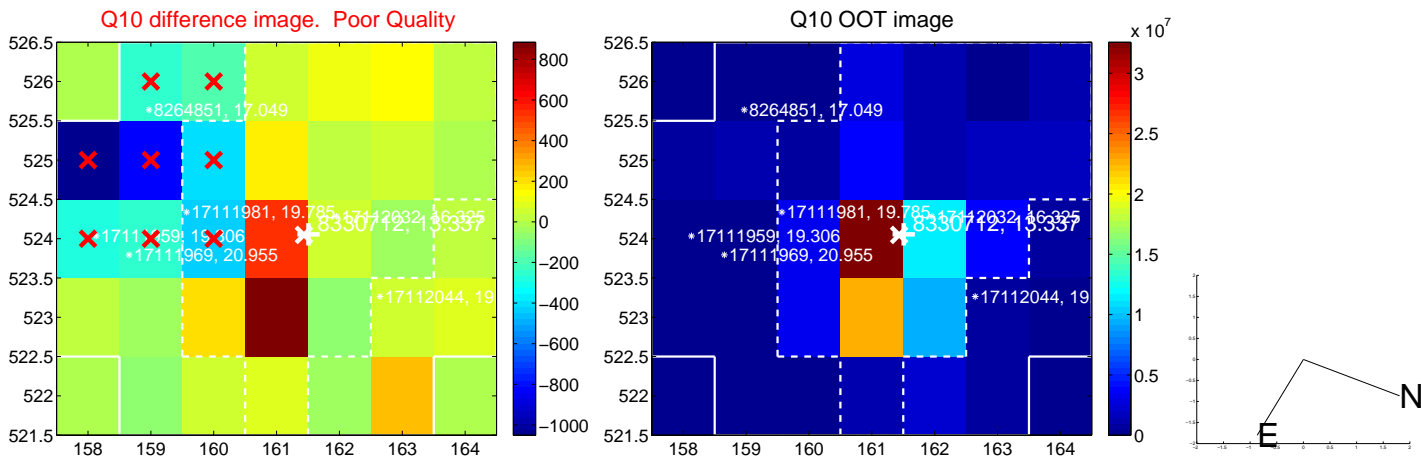
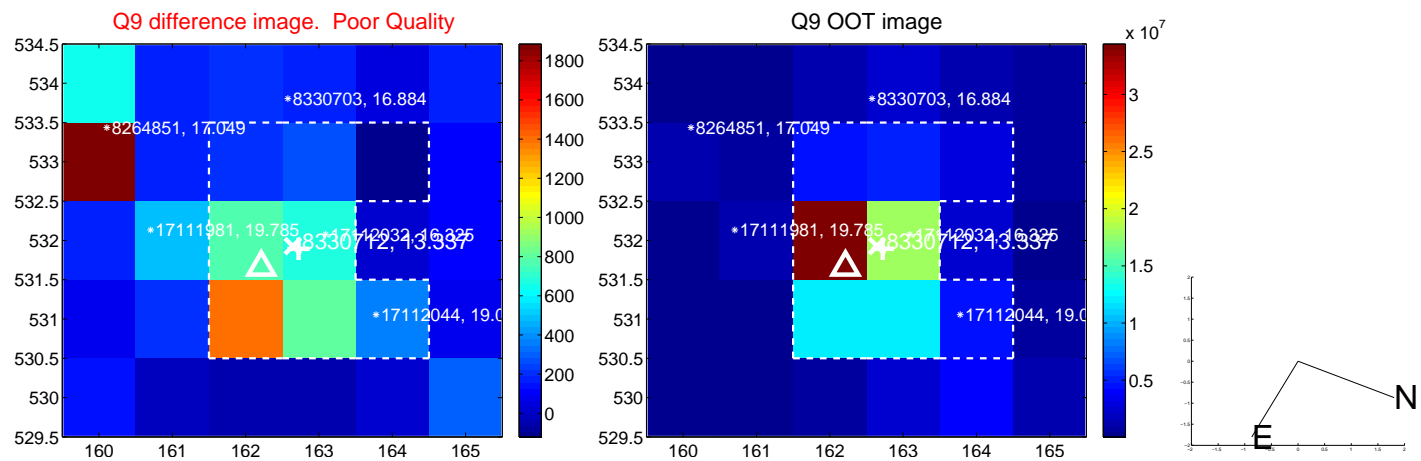
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



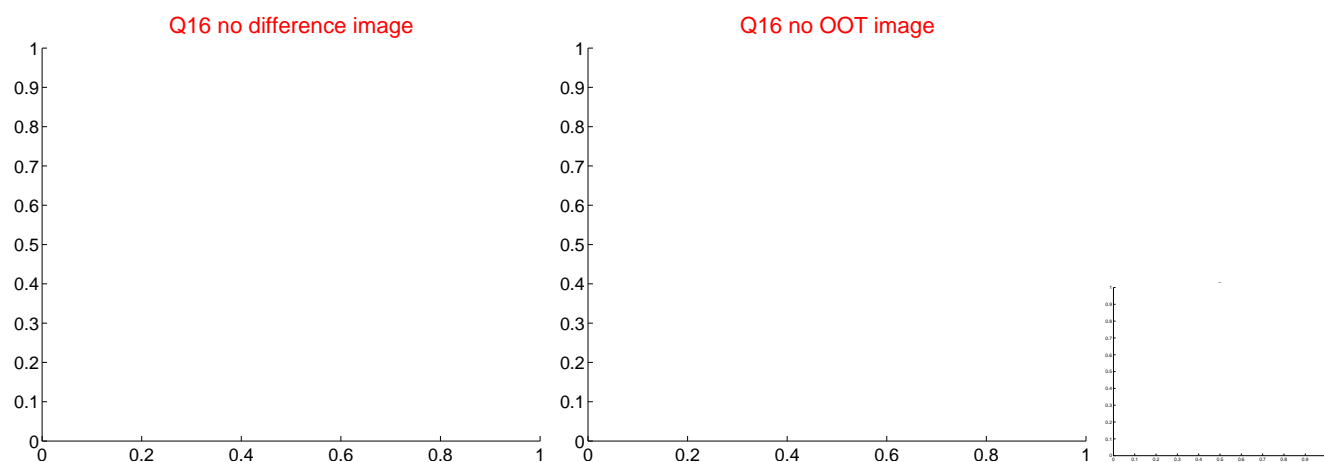
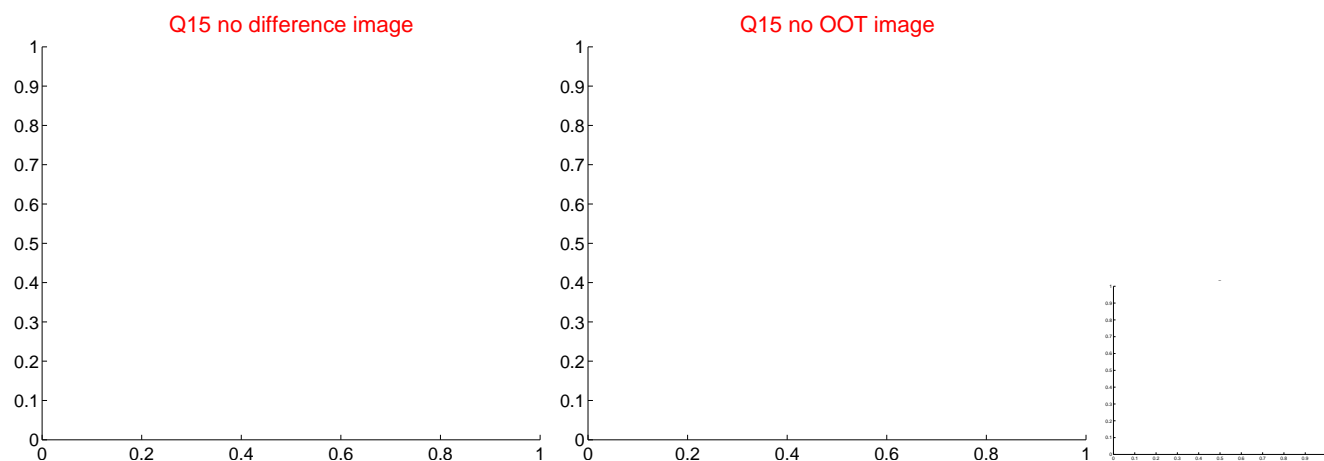
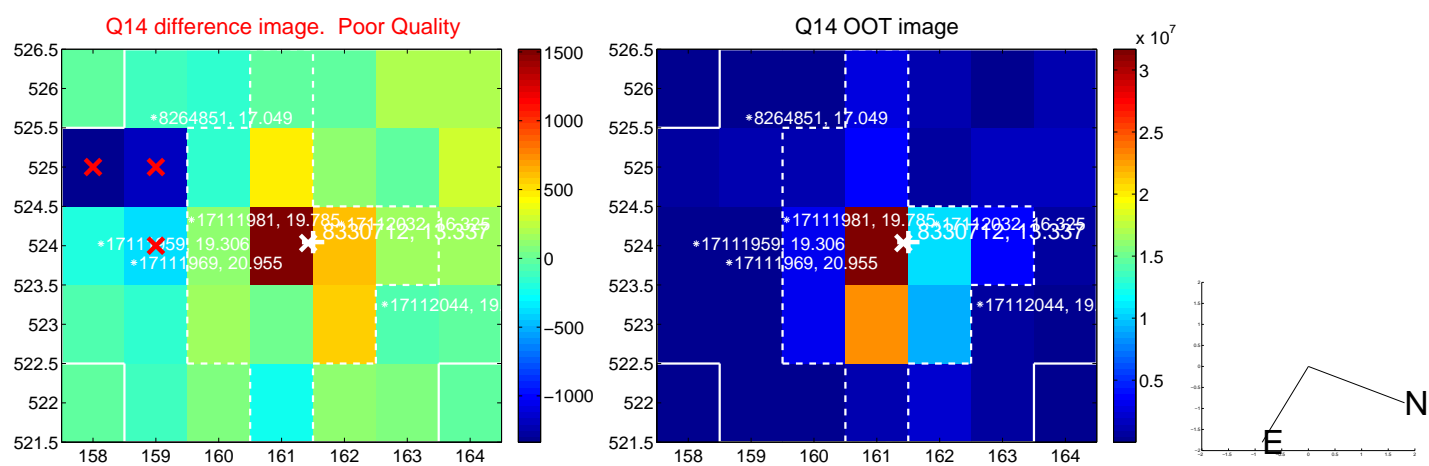
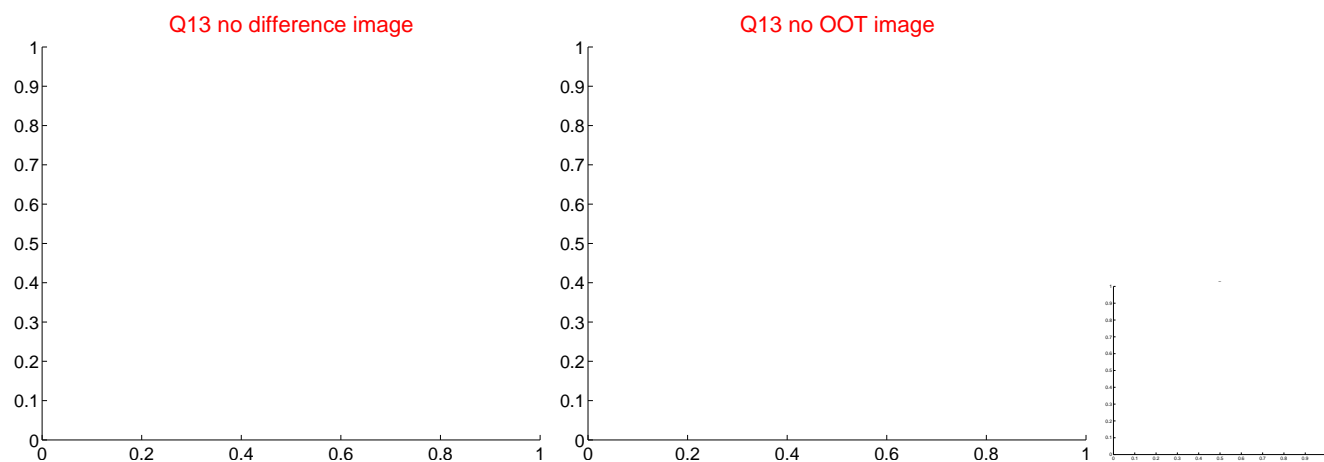
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



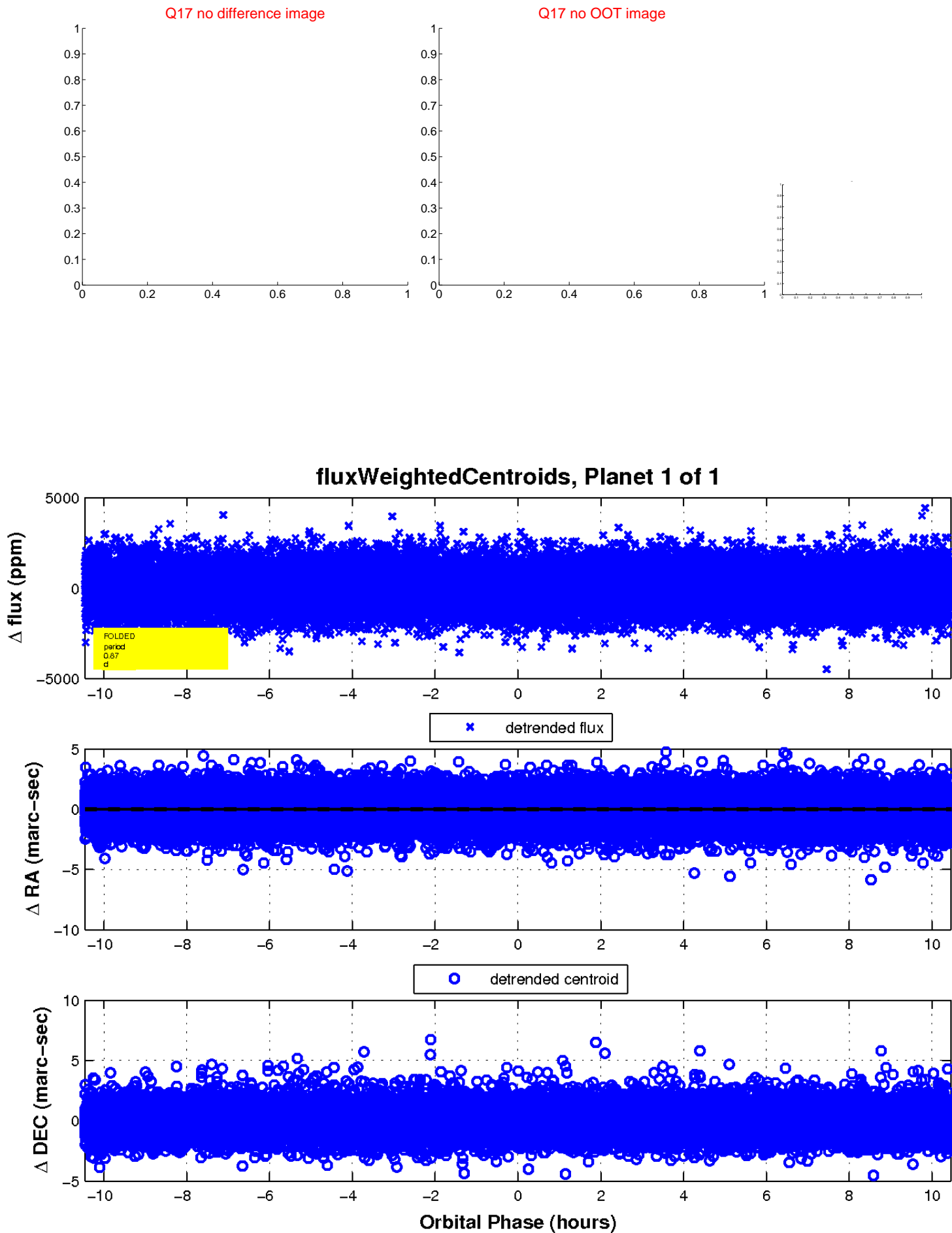
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

