

KIC 009245848

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})
009245848-01	OBS	No	1.008781	131.978363	13.8	3.482	7.7	7.5	3.36	6345	1.46	30827.99

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009245848-01	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.

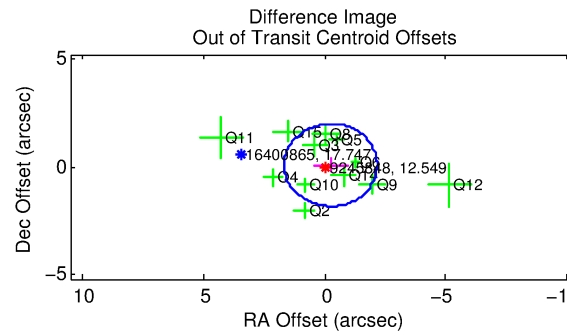
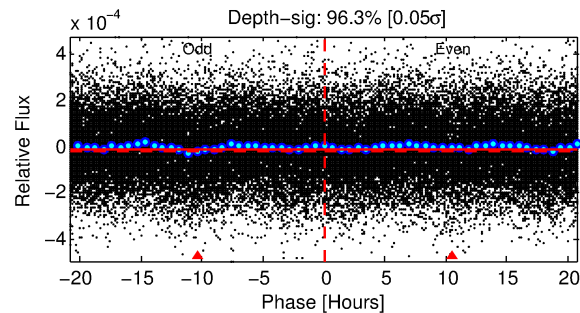
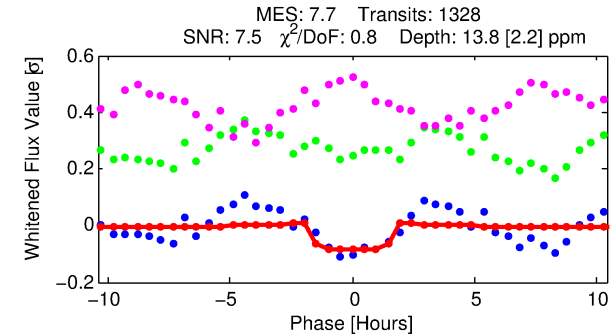
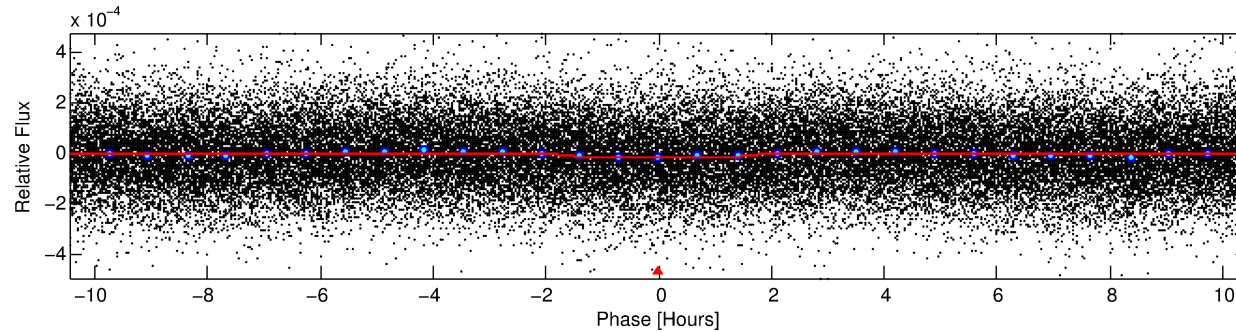
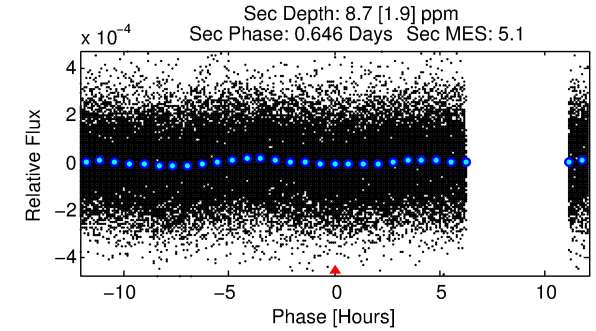
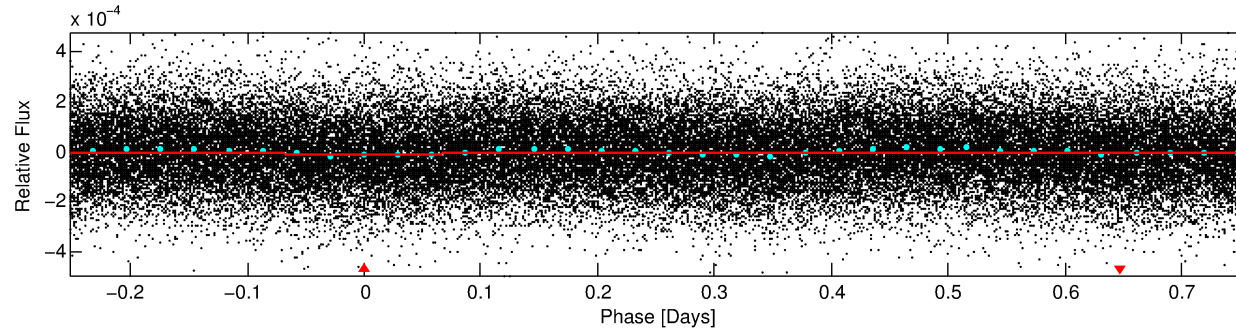
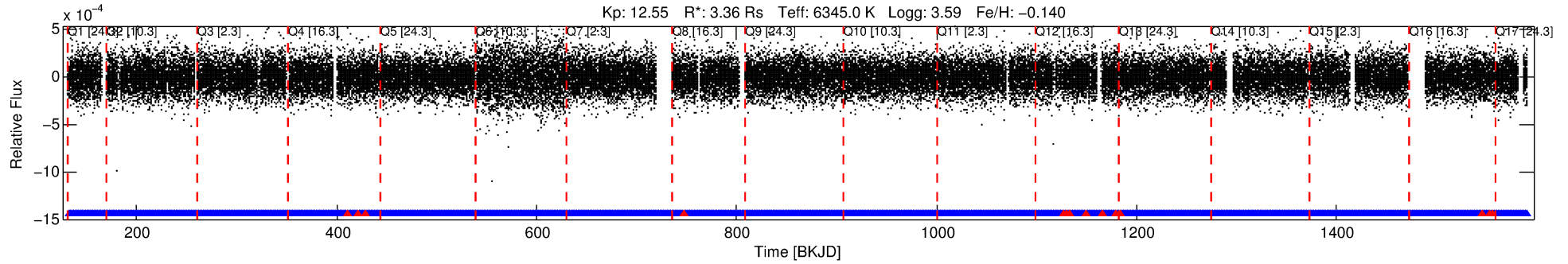
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009245848-01

No Significant Match Found

DV One-Page Summary

KIC: 9245848 Candidate: 1 of 1 Period: 1.009 d



DV Fit Results:

Period = 1.00878 [0.00002] d
Epoch = 131.9784 [0.0047] BKJD
Rp/R* = 0.0040 [0.0014]
a/R* = 1.36 [1.20]
b = 0.90 [0.41]
Seff = 30827.99 [17868.01]
Teq = 3379 [490] K
Rp = 1.46 [0.75] Re
a = 0.0230 [0.0083] AU
Ag = 1.20 [1.09] [0.18σ]
Teffp = 5463 [992] K [1.88σ]

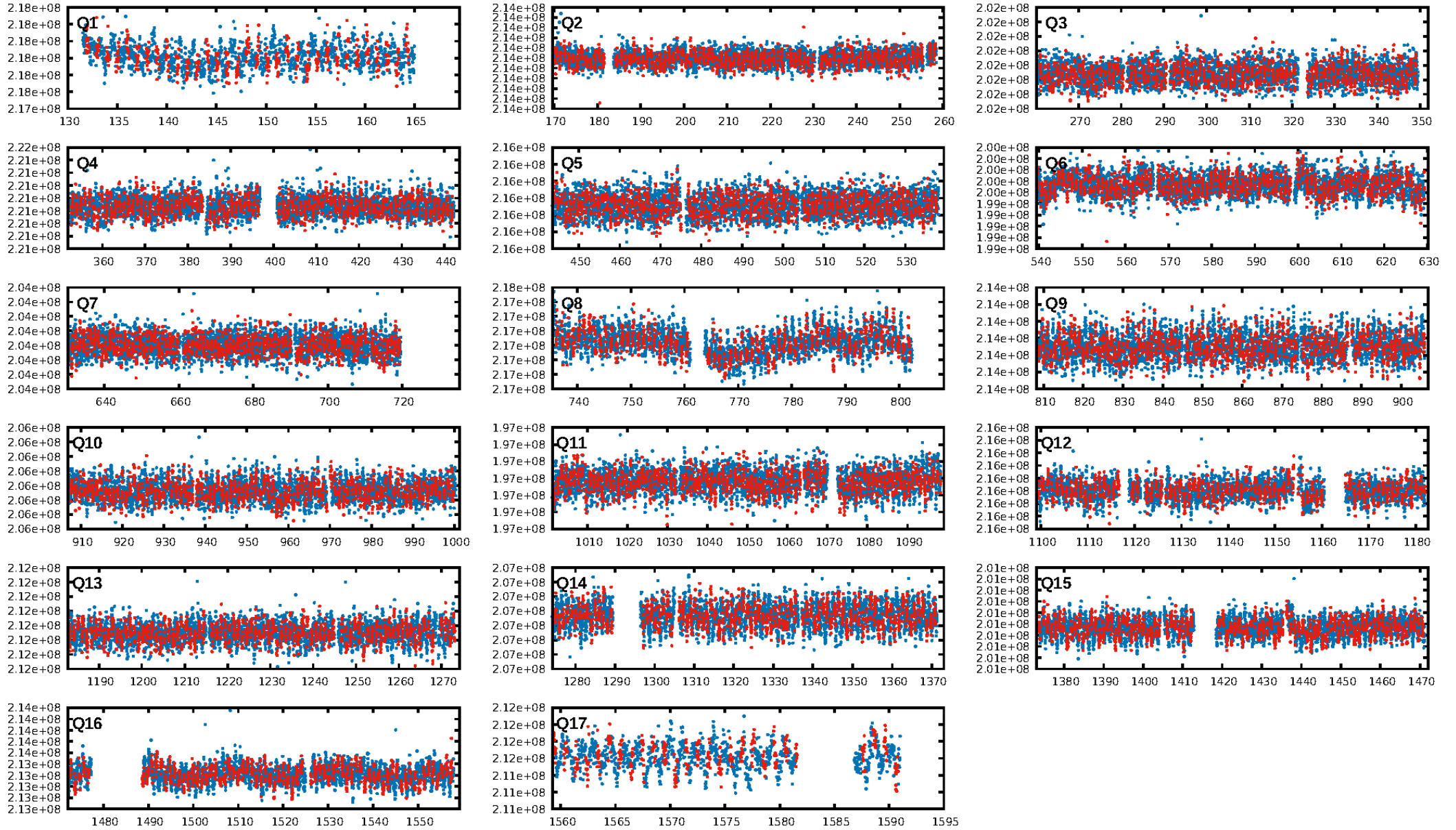
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.32e-12
RollingBand-fgt: 0.99 [1254/1268]
GhostDiagnostic-chr: 1.298
Centroid-sig: N/A
Centroid-so: 0.657 arcsec [0.54σ]
OotOffset-rm: 0.256 arcsec [0.40σ]
OotOffset-st: 4/3/3/2 [12]
KicOffset-rm: 0.346 arcsec [0.55σ]
KicOffset-st: 4/3/3/2 [12]
DiffImageQuality-fgm: 0.75 [9/12]
DiffImageOverlap-fno: 1.00 [17/17]

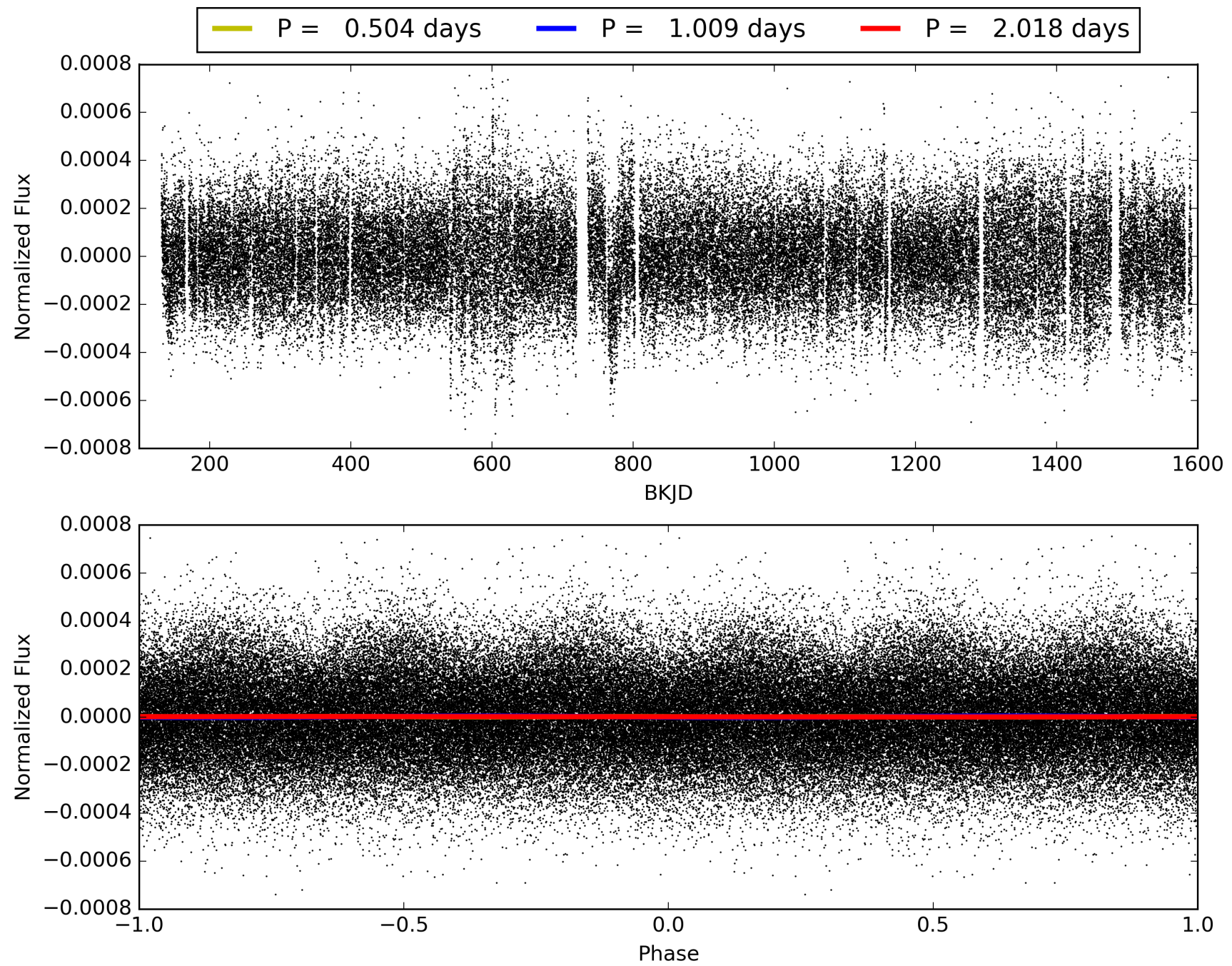
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:30:35 Z

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

TCE 009245848-01, PDC Light Curves

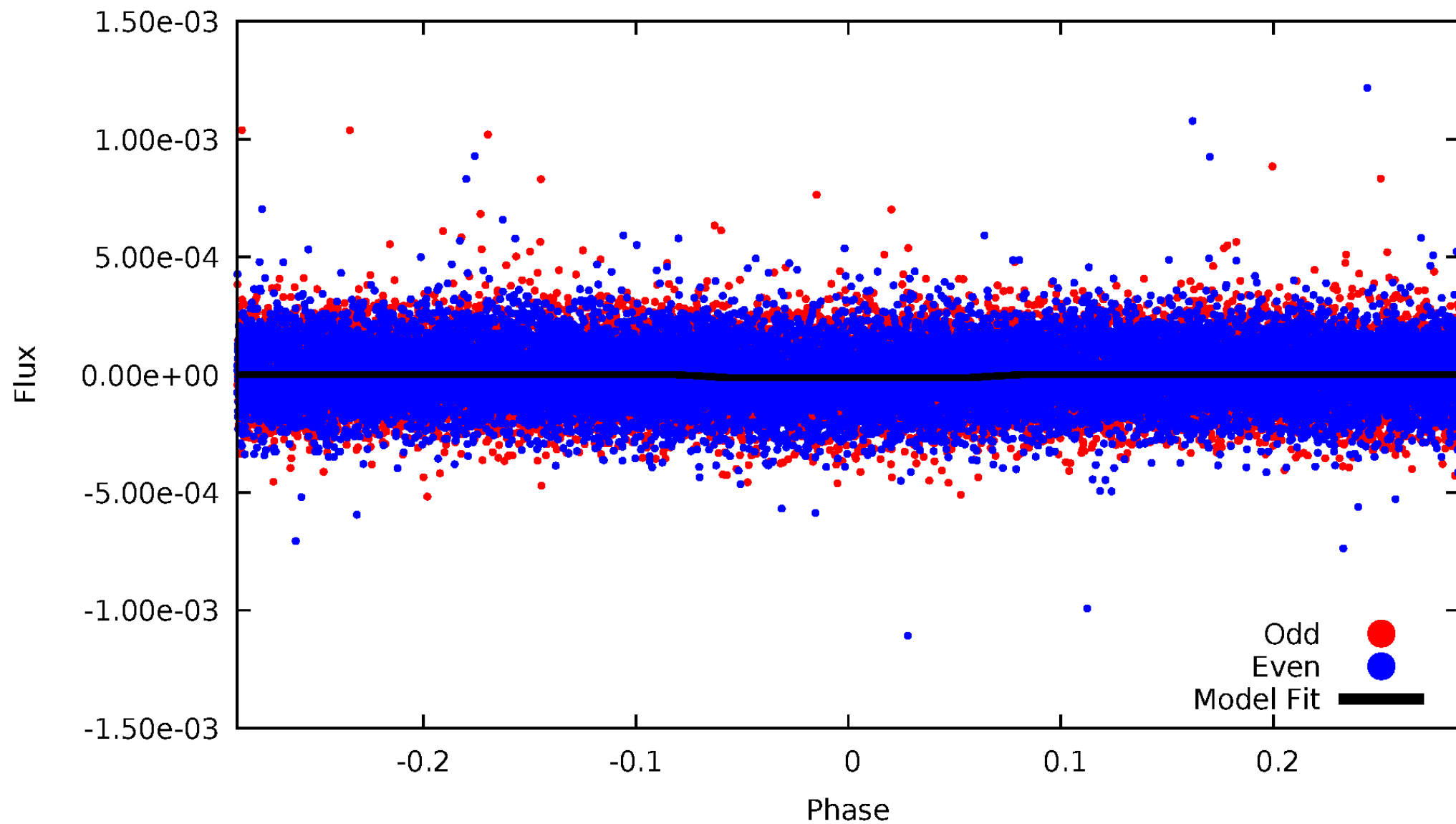


TCE 009245848-01



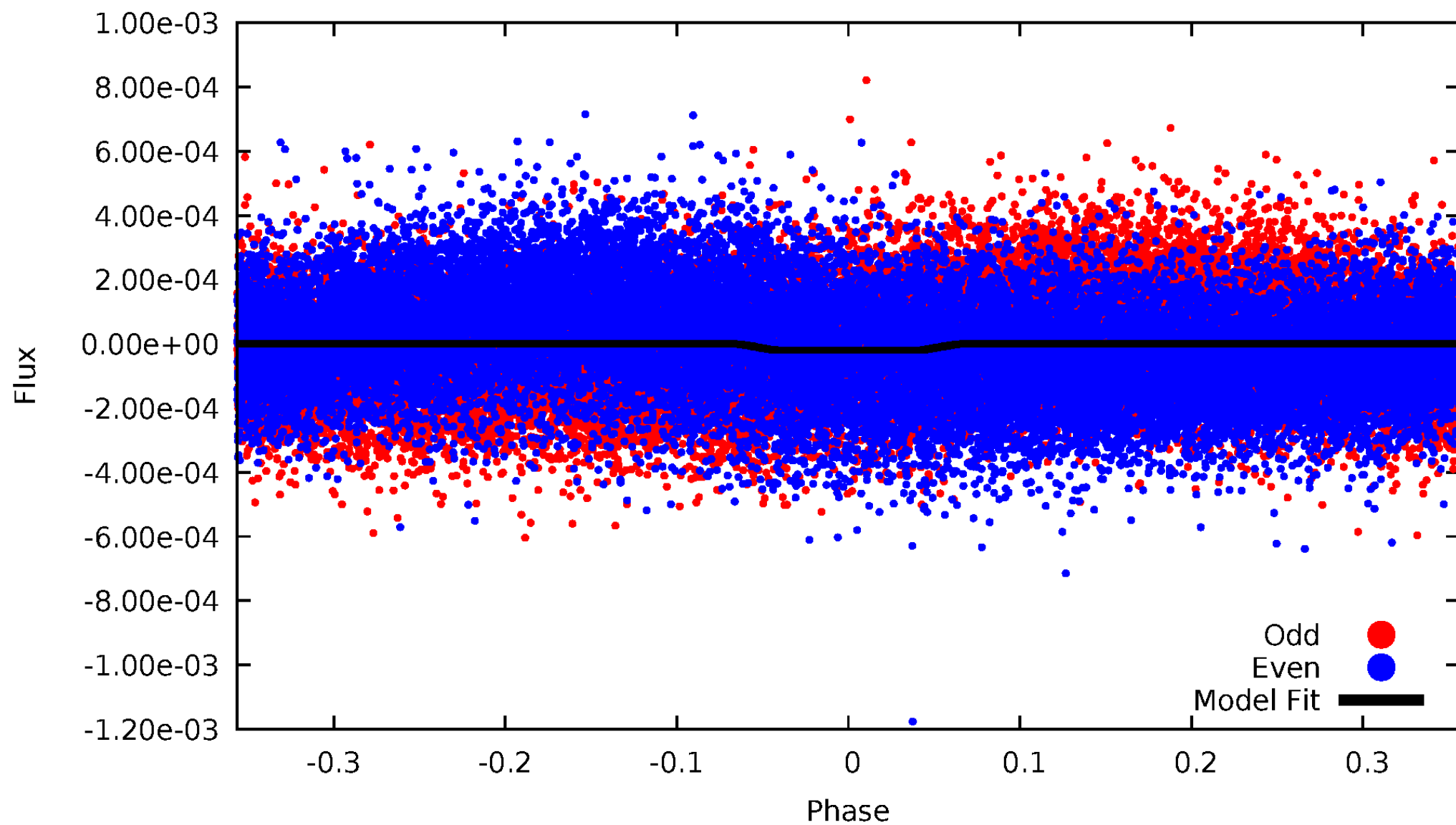
DV Odd/Even

TCE 009245848-01



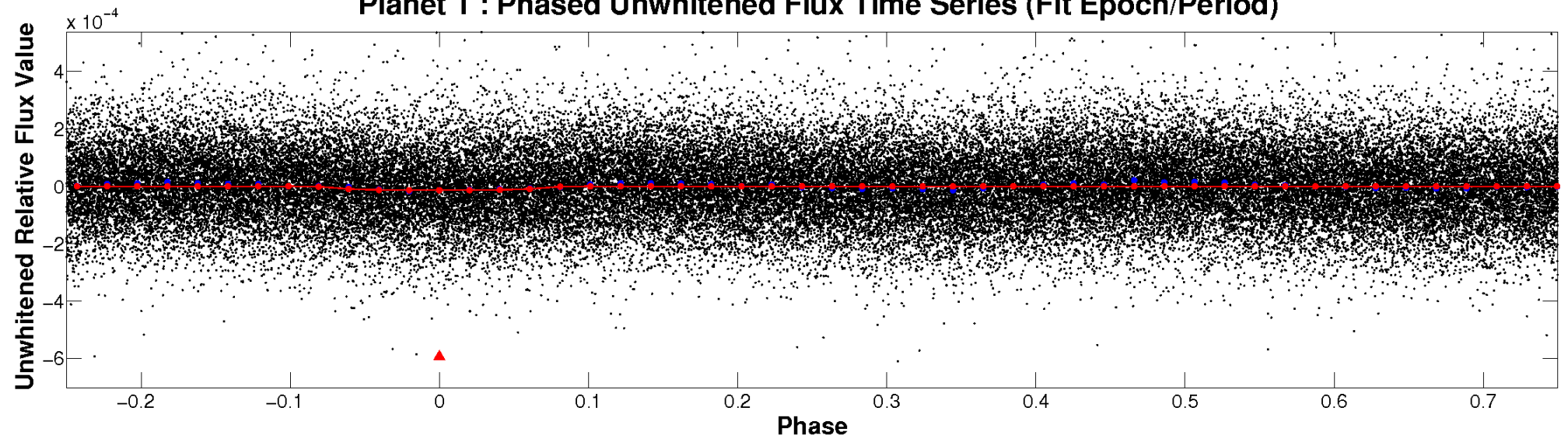
ALT Odd/Even

TCE 009245848-01

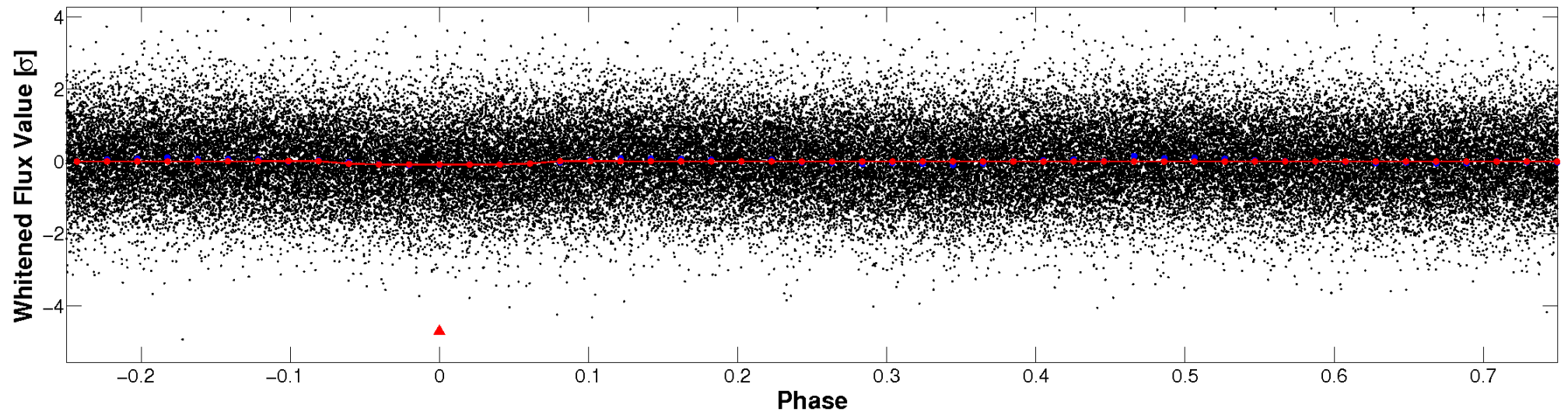


Non-Whitened Vs. Whitened Light Curve

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

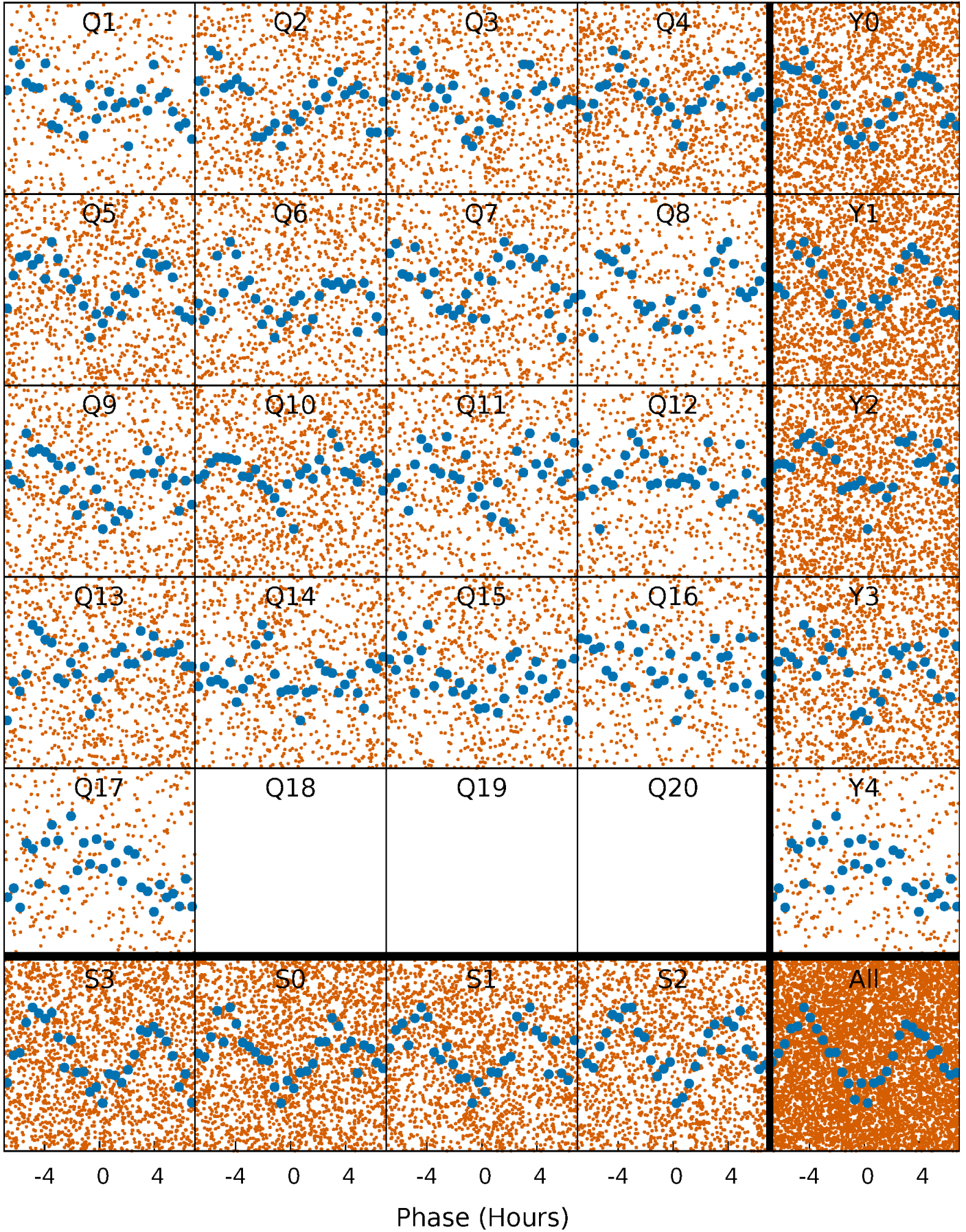


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



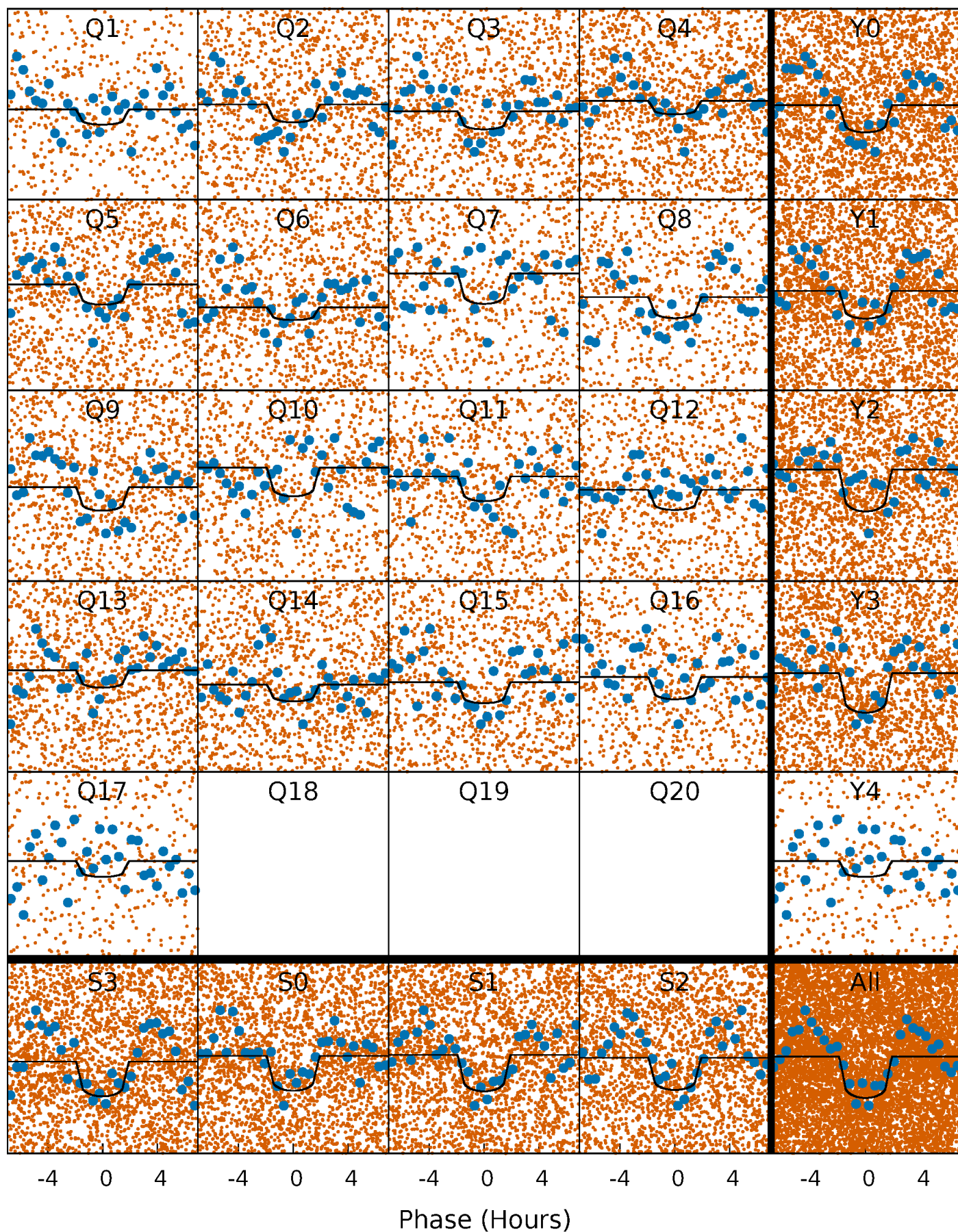
PDC Quarter-Phased Transit Curves

TCE 009245848-01 P= 1.008781 Days $T_0=131.978363$ (BKJD)



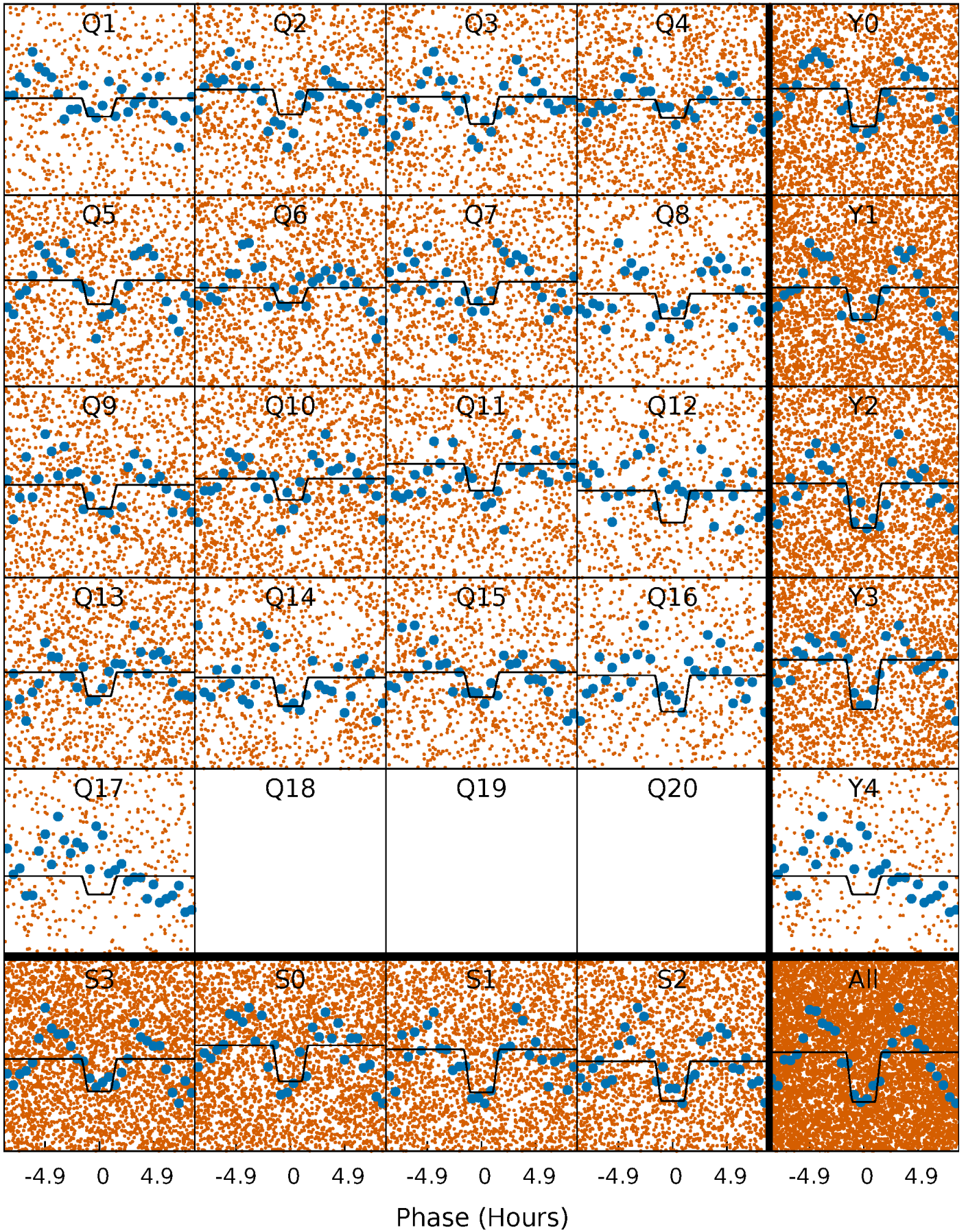
DV Quarter-Phased Transit Curves

TCE 009245848-01 P= 1.008781 Days $T_0=131.978363$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

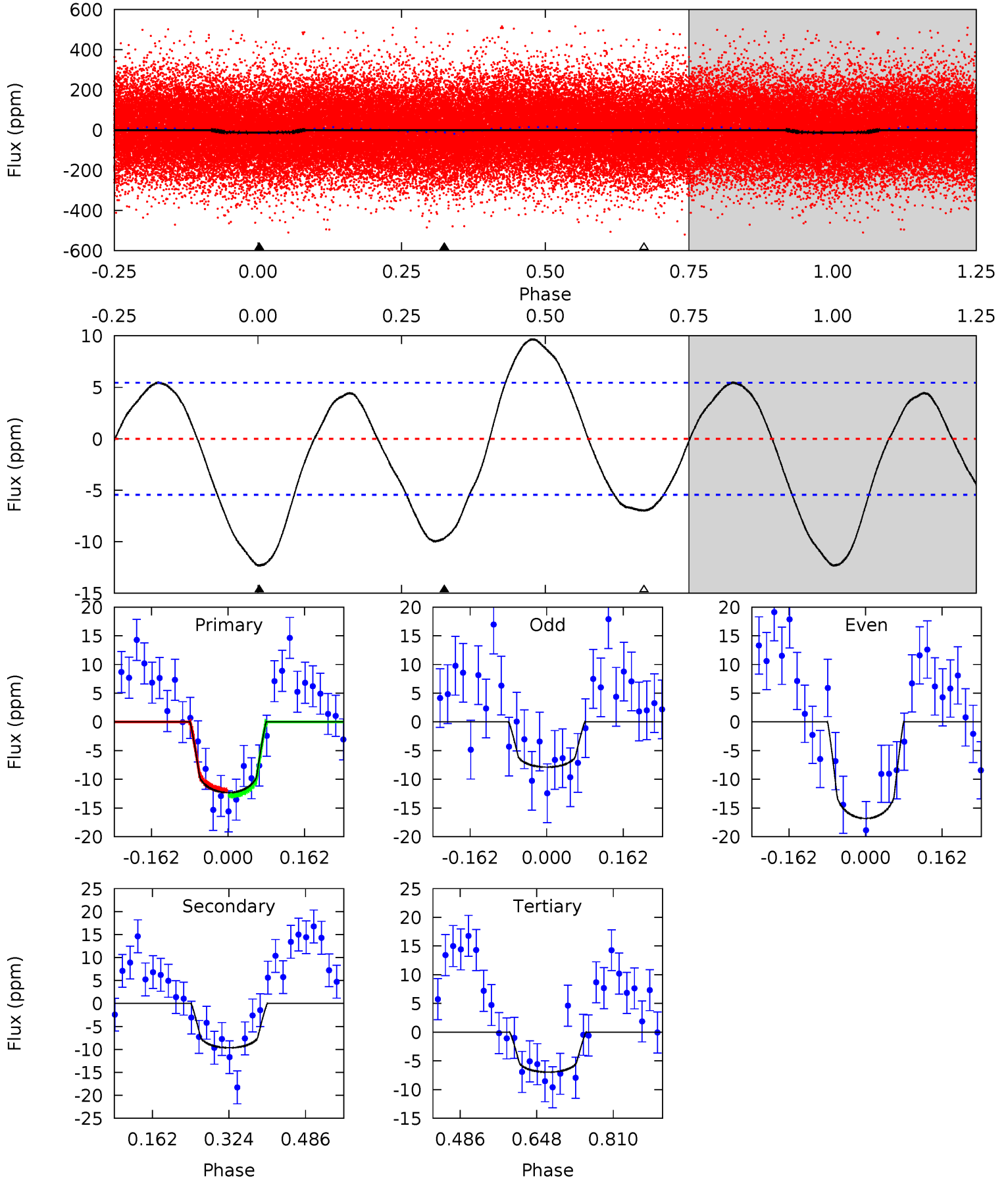
TCE 009245848-01 P= 1.008801 Days $T_0=131.960441$ (BKJD)



DV Model-Shift Uniqueness Test

009245848-01, P = 1.008781 Days, E = 130.969582 Days

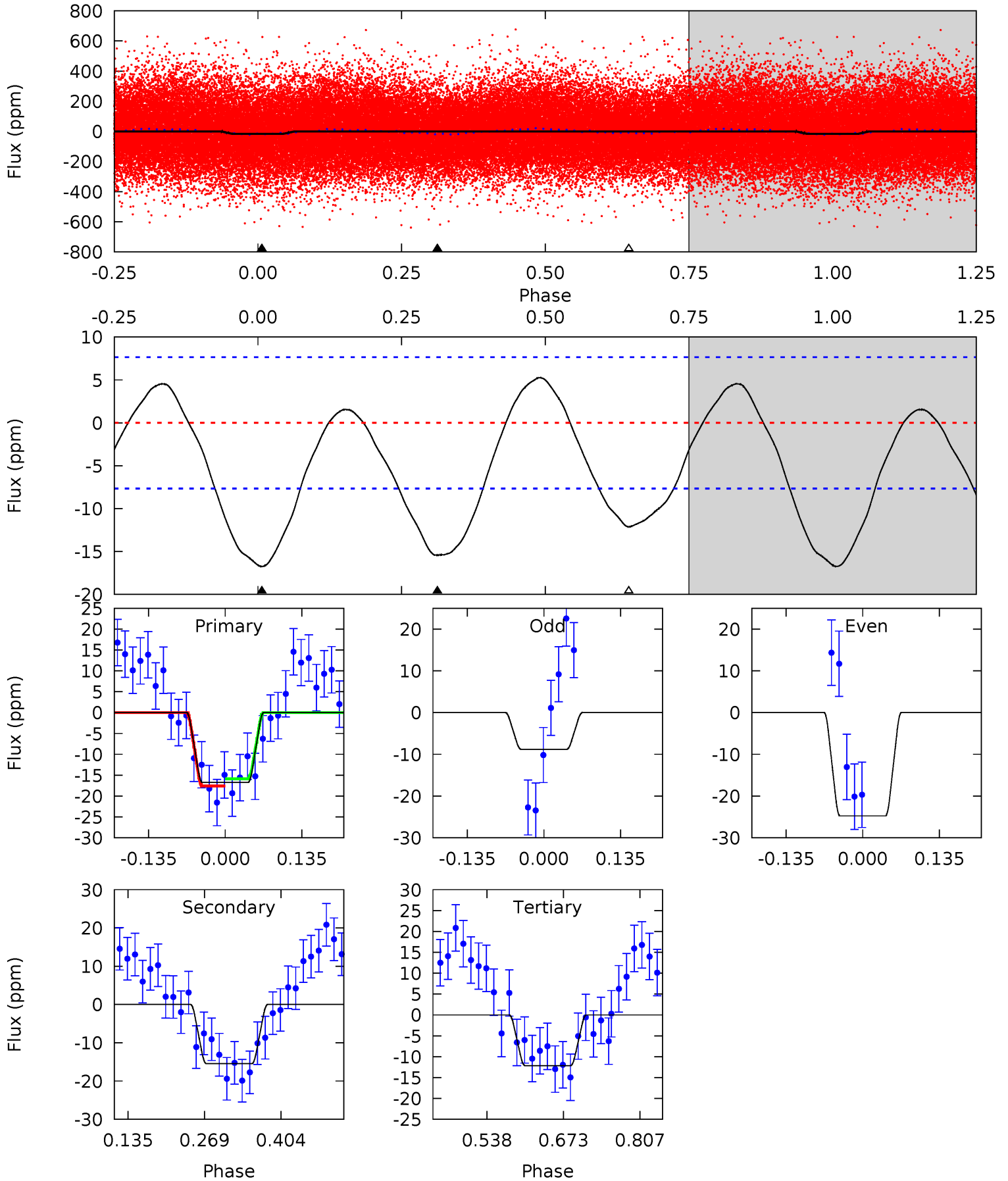
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.1	7.92	5.72	0	4.46	1.40	4.31	4.39	10.1	2.20	7.92	3.67	1.03	0.44	0.36



Alt Model-Shift Uniqueness Test

009245848-01, P = 1.008801 Days, E = 130.951640 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.83	9.07	7.13	0	4.50	1.50	3.52	2.70	9.83	1.94	9.07	4.52	1.43	0.24	0.50



Stellar Parameters For KIC 009245848

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6345^{+192}_{-192}	$3.591^{+0.330}_{-0.110}$	$-0.140^{+0.350}_{-0.300}$	$3.358^{+0.427}_{-1.281}$	$1.603^{+0.202}_{-0.375}$	$0.060^{+0.151}_{-0.016}$
	+3%/-3%	+9%/-3%	+250%/-214%	+13%/-38%	+13%/-23%	+253%/-28%
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 009245848-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-10 ± 1	$1.37^{+0.54}_{-0.51}$	4667^{+285}_{-462}	5312^{+1454}_{-865}	$1.479^{+2.358}_{-0.723}$
Alt.	-15 ± 2	$1.49^{+0.53}_{-0.54}$	4652^{+289}_{-457}	5750^{+1601}_{-797}	$2.004^{+2.847}_{-0.944}$

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

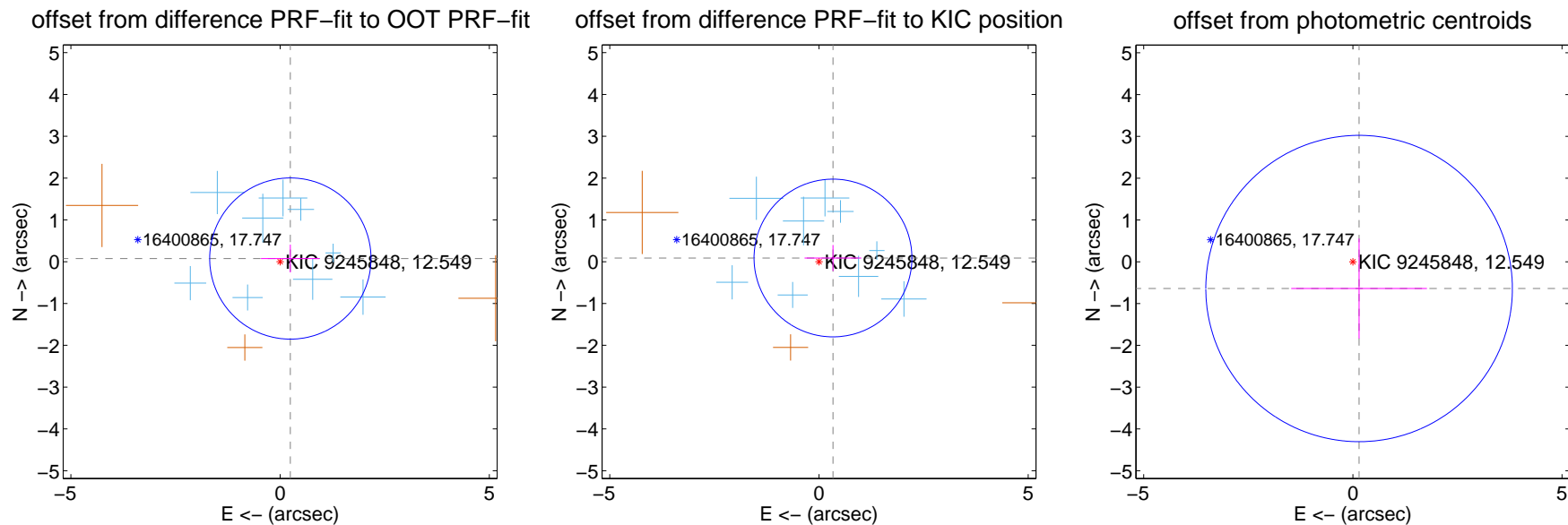
DV Centroid Data

Supplemental centroid analysis for 009245848-01. Kepler magnitude: 12.55. Transit SNR 7.46

There are 9 quarters with good PRF difference image offsets

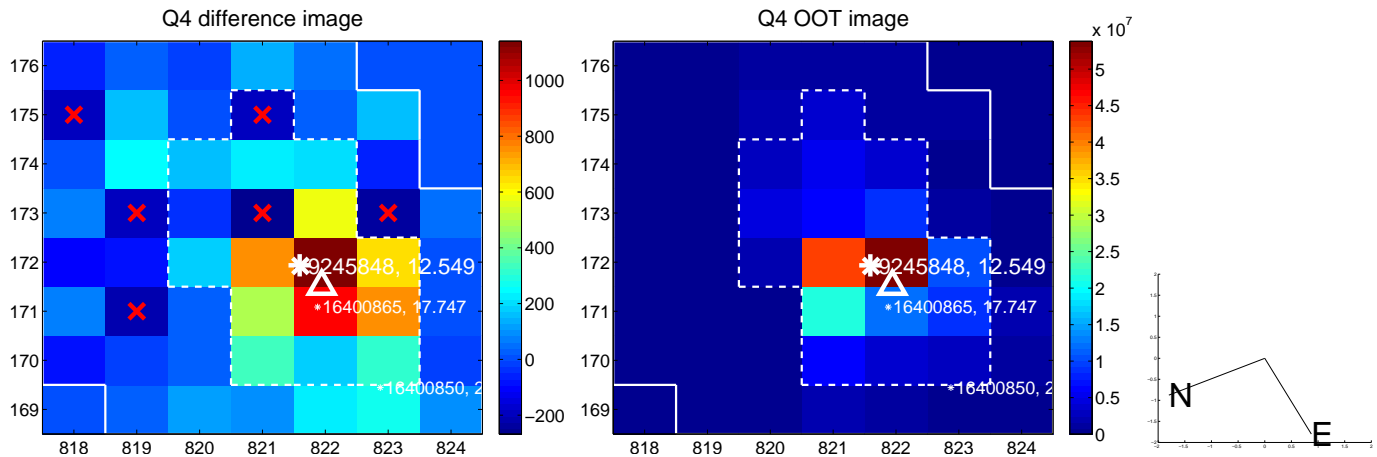
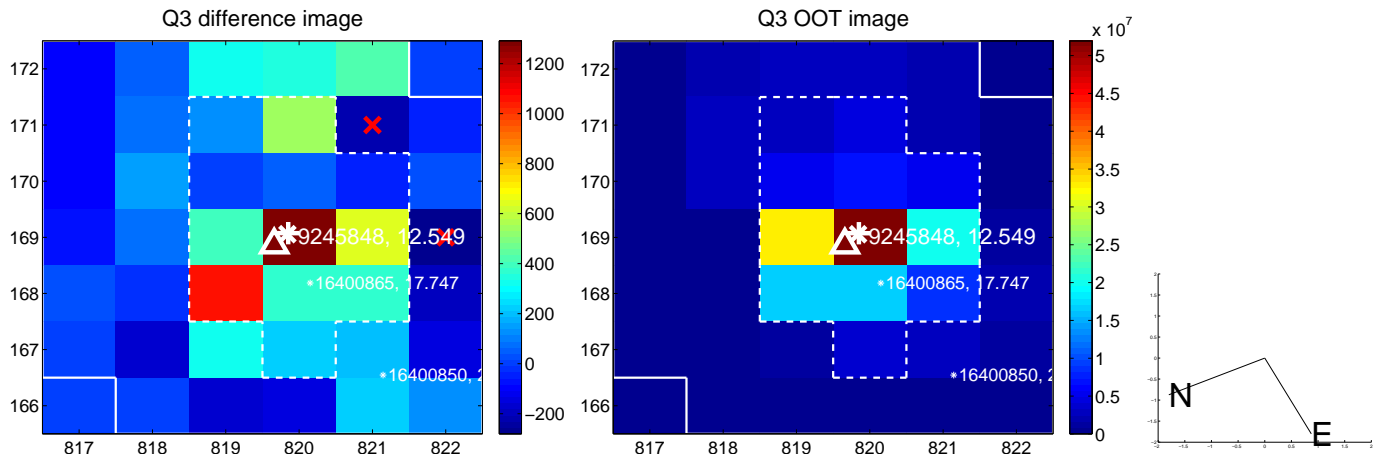
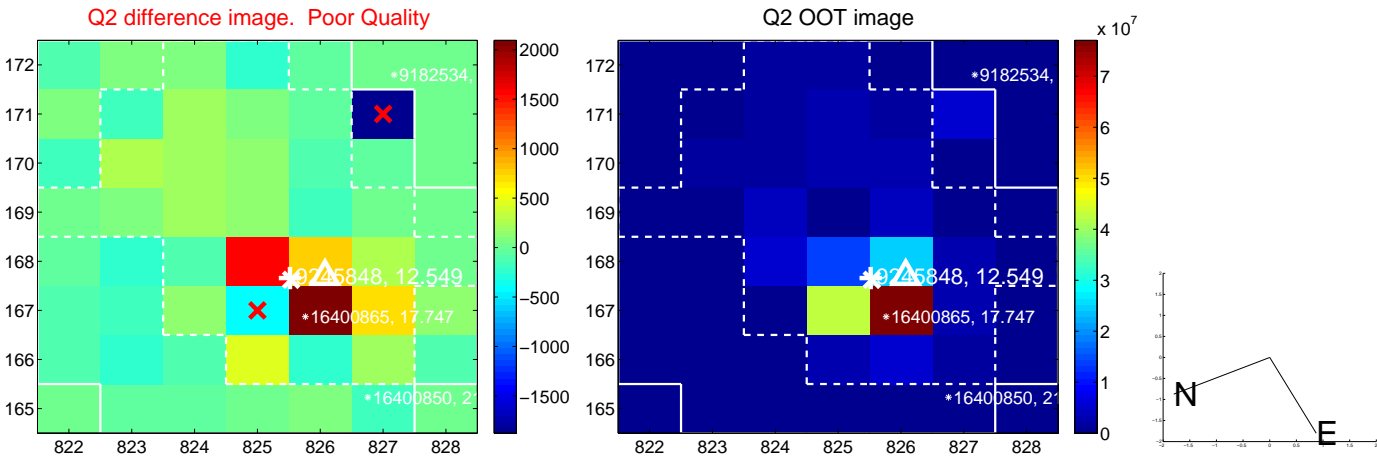
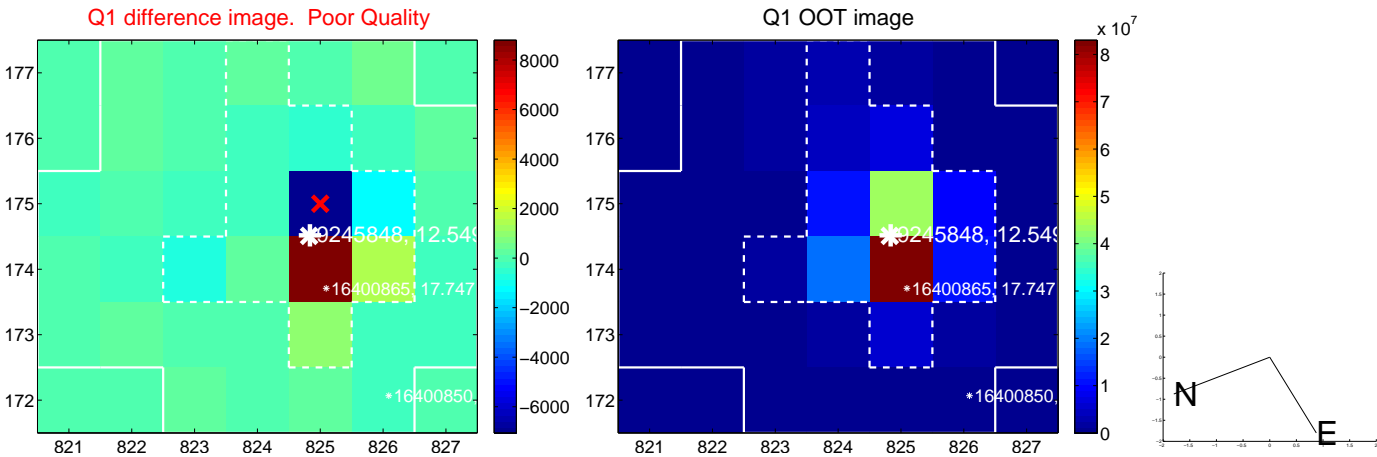
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.256 ± 0.643	0.40	-0.245 ± 0.702	0.076 ± 0.332
PRF-fit source offset from KIC position	0.346 ± 0.629	0.55	-0.334 ± 0.679	0.088 ± 0.312
photometric centroid source offset	0.66 ± 1.22	0.54	-0.15 ± 1.62	-0.64 ± 1.20

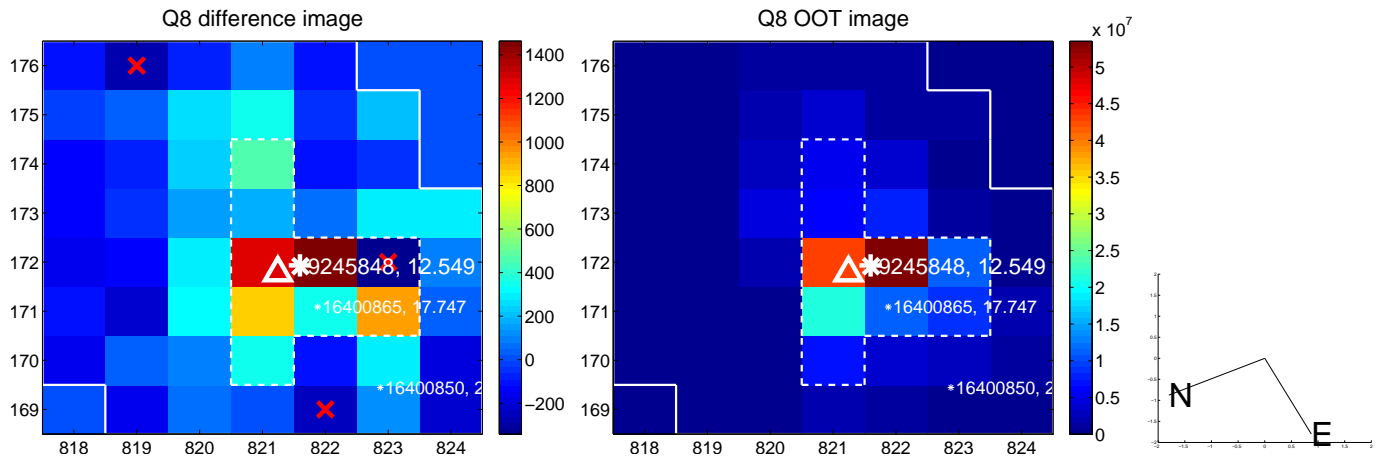
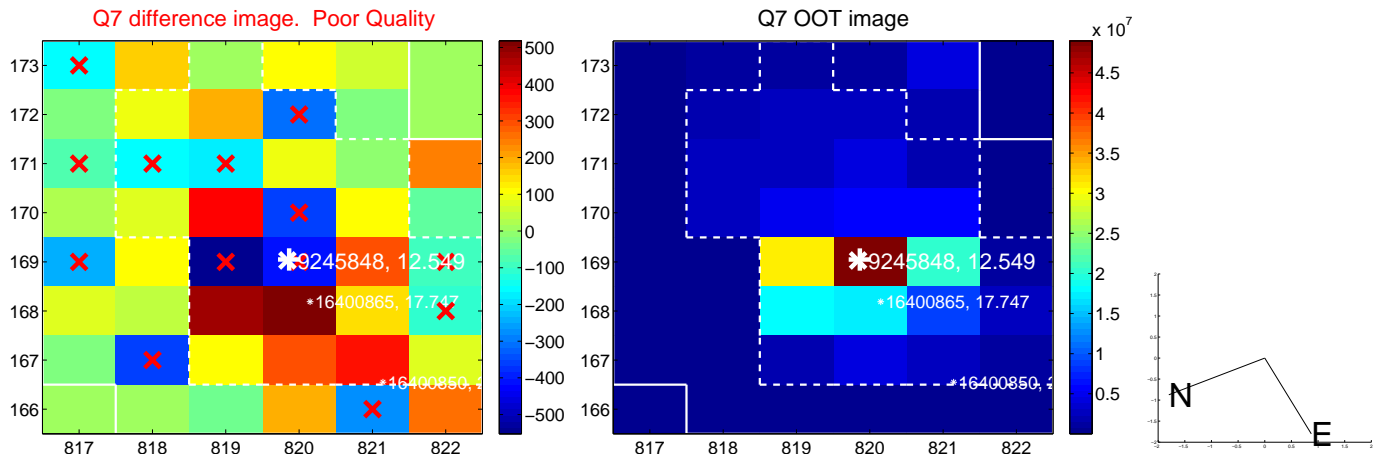
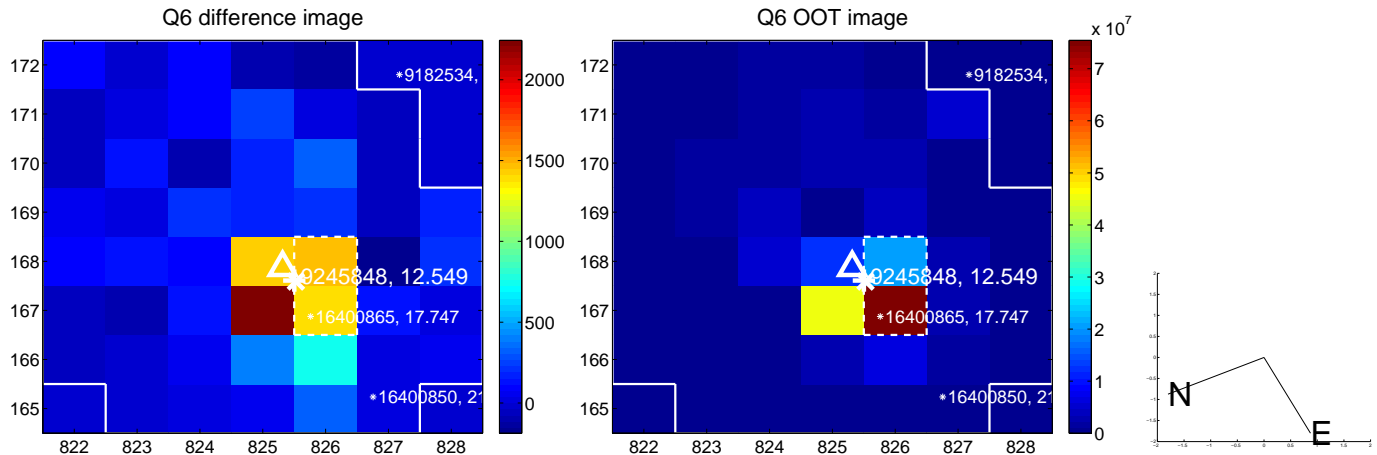
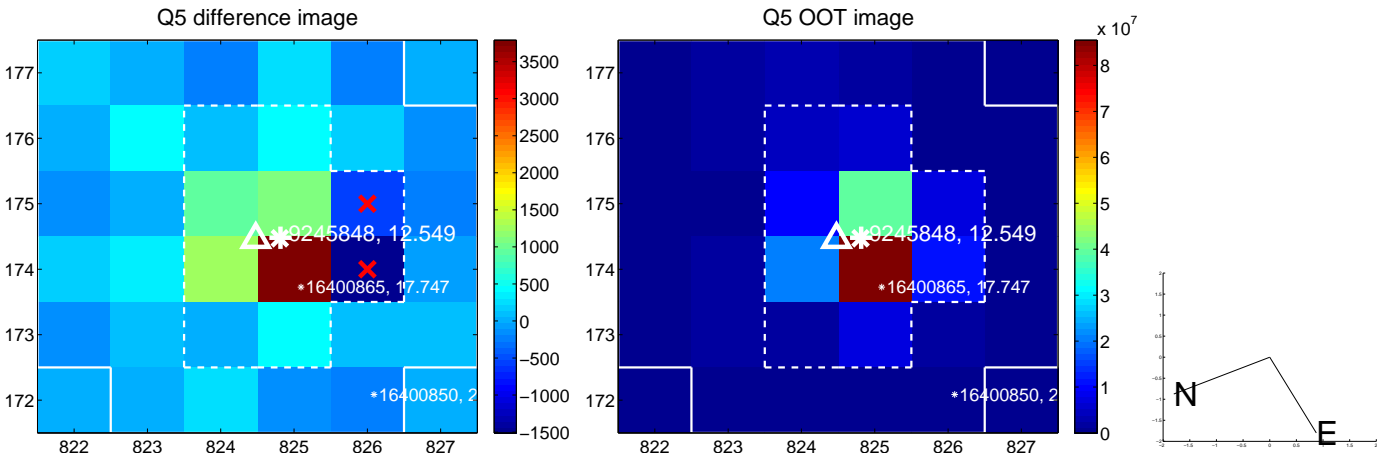


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

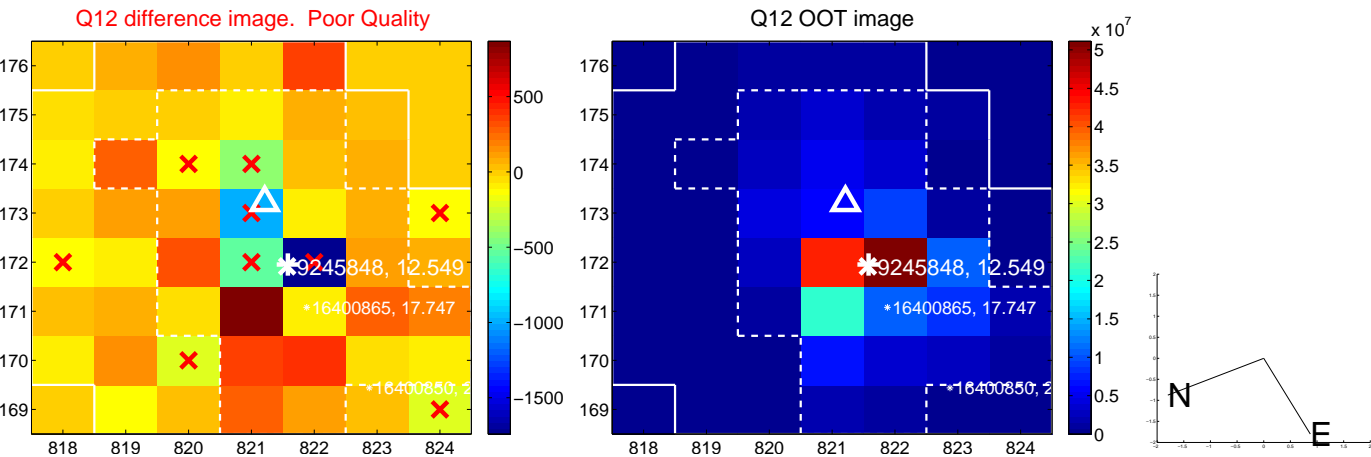
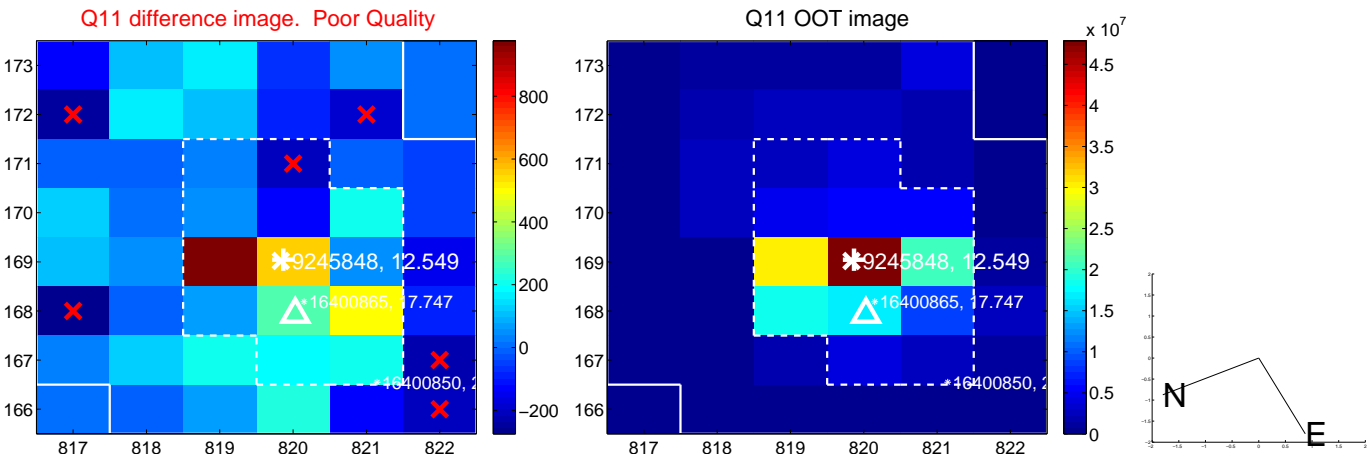
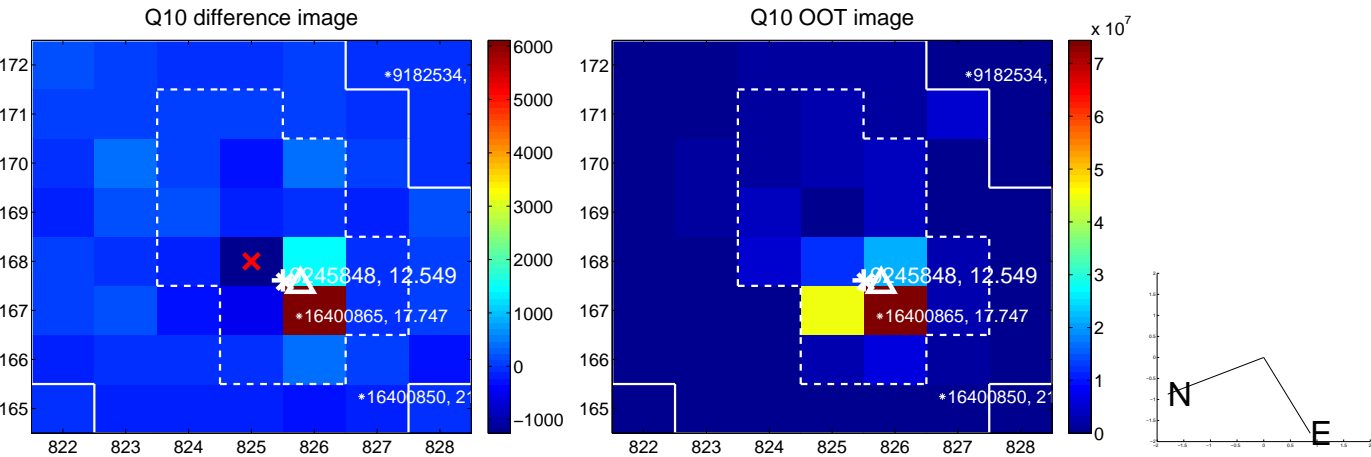
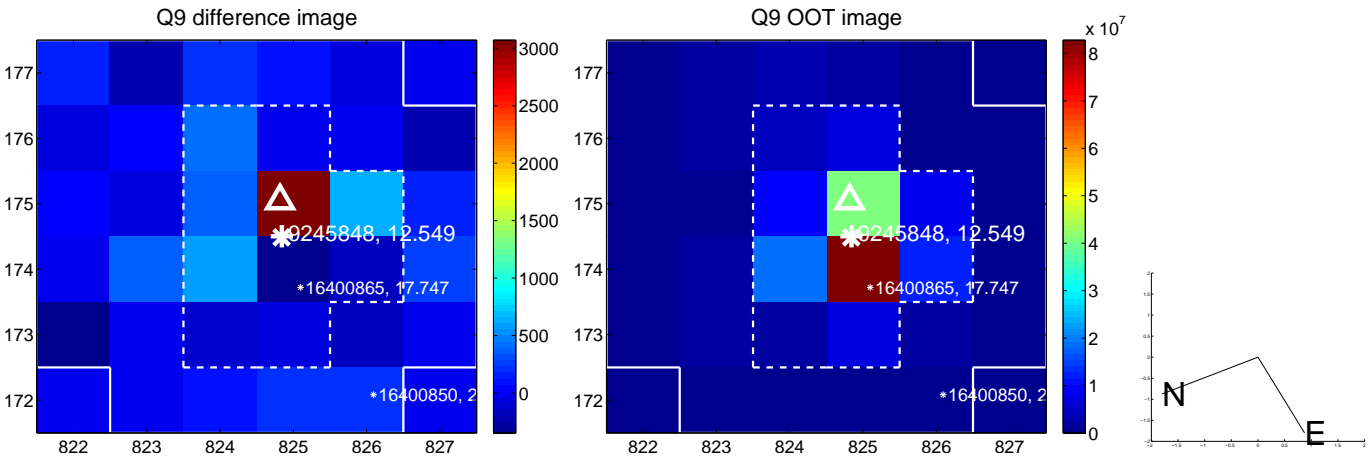
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



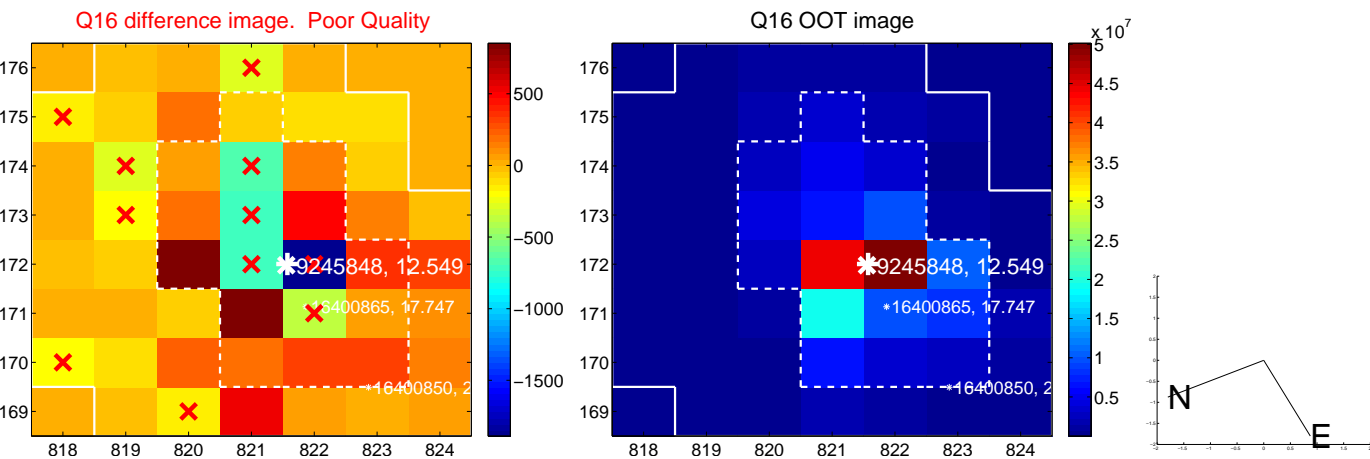
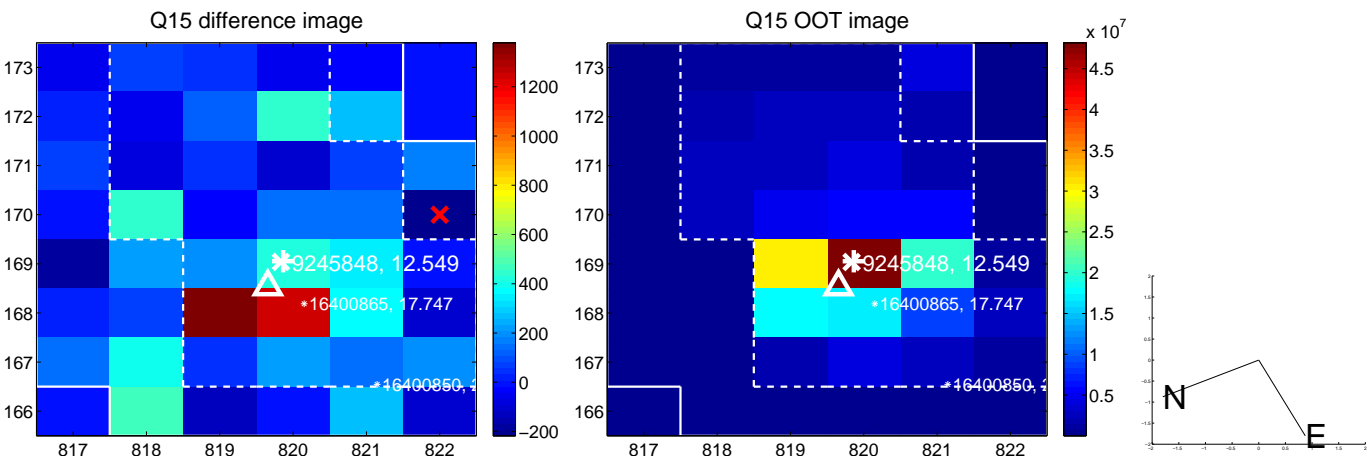
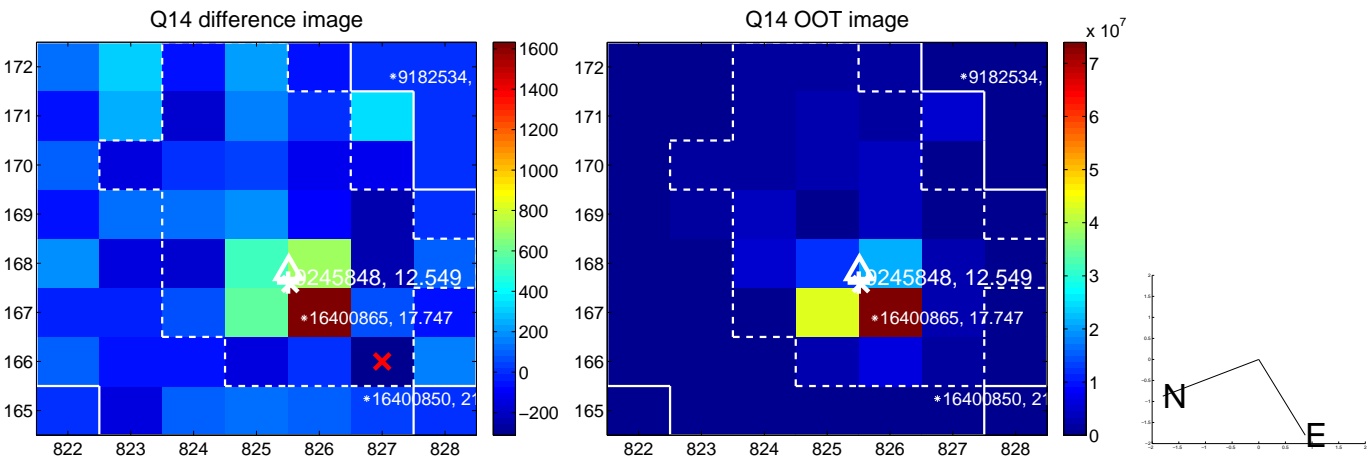
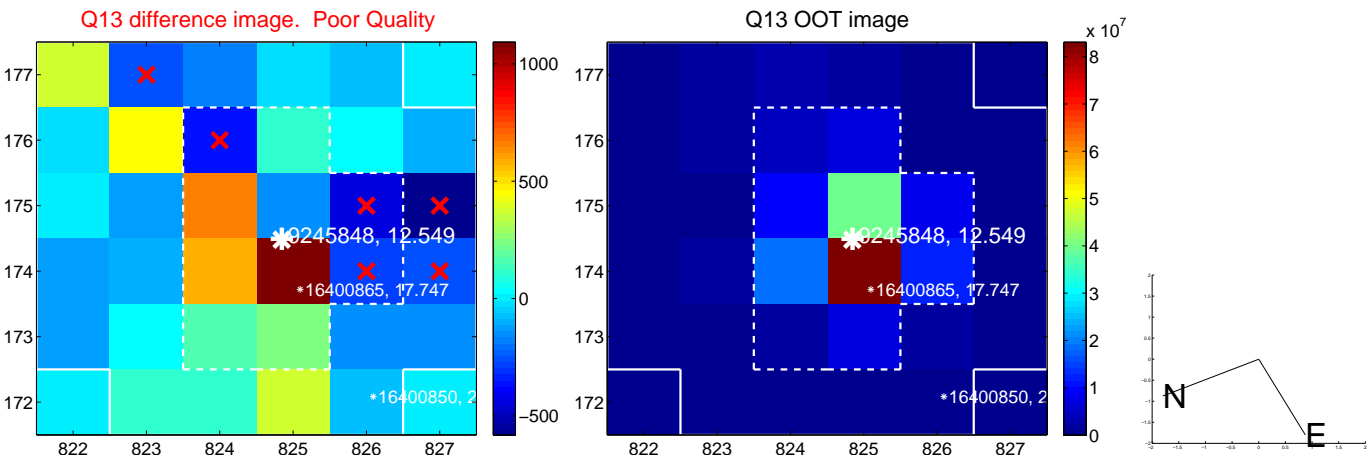
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



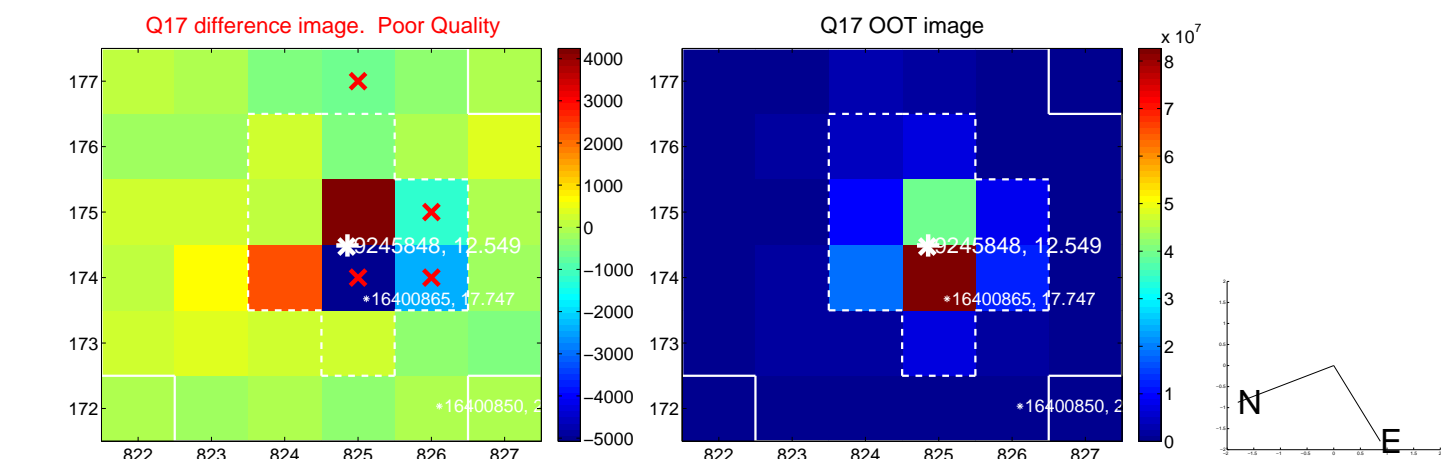
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



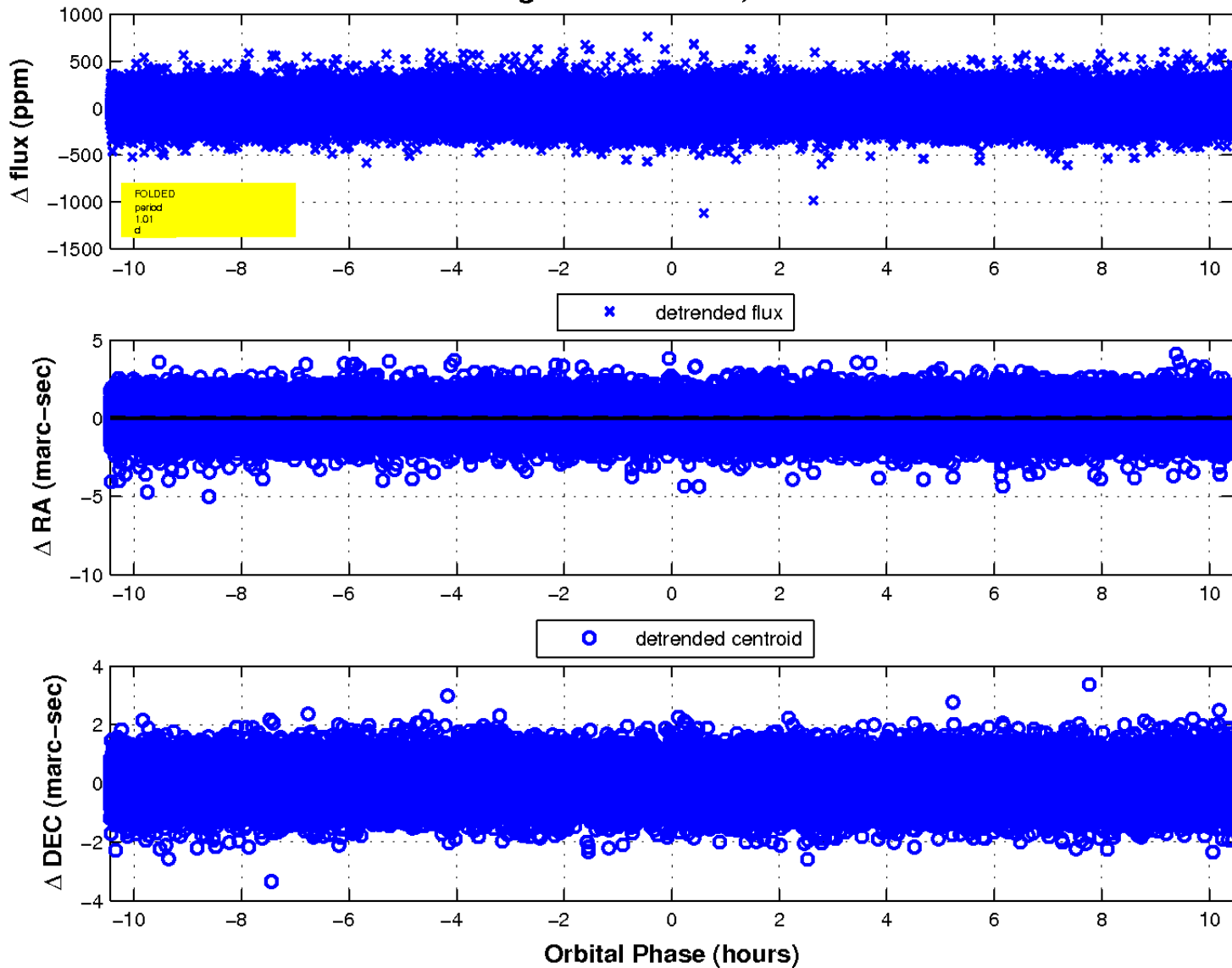
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

