

KIC 008613236

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})
008613236-01	OBS	No	0.867816	132.192839	27.5	3.932	8.8	7.9	0.74	5684	0.41	2086.82

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008613236-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_UNRESOLVED_OFFSET

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

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

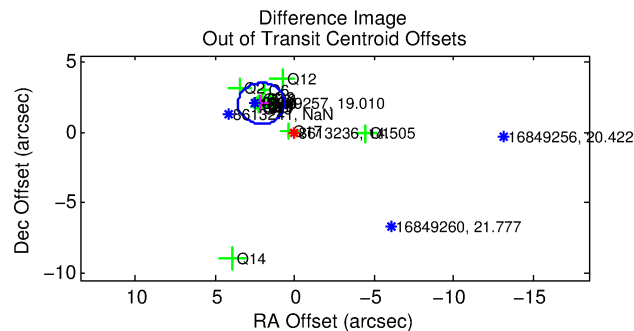
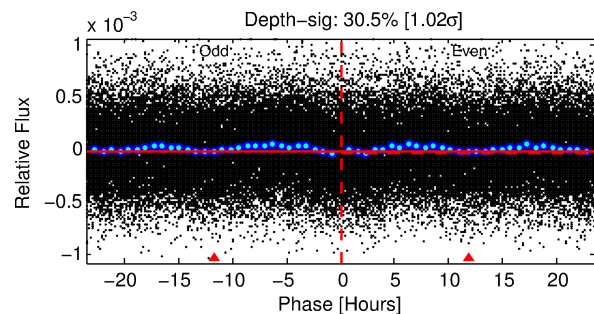
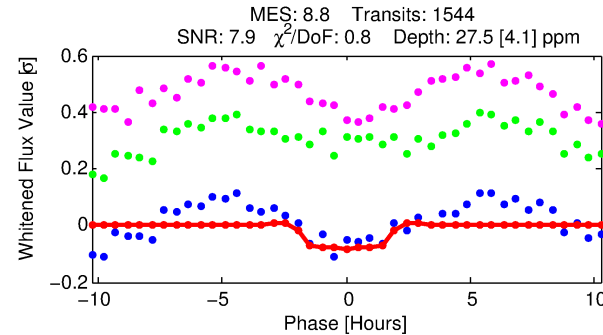
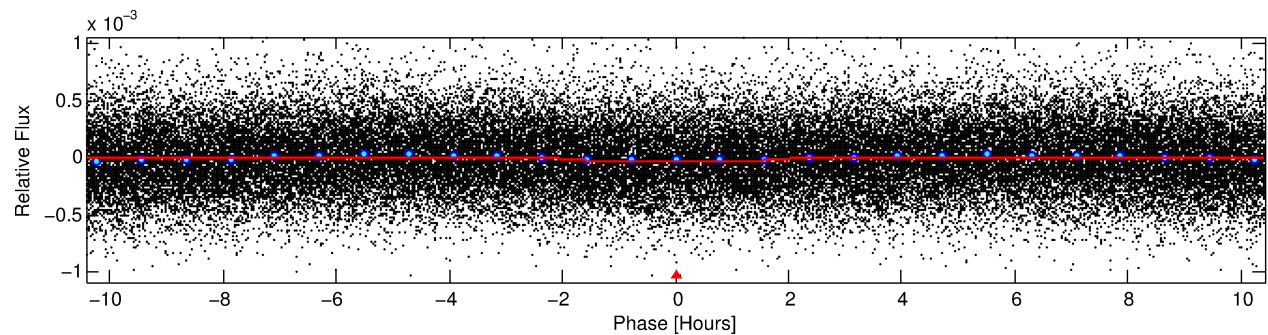
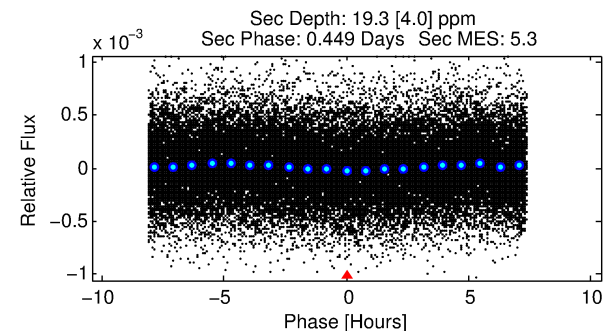
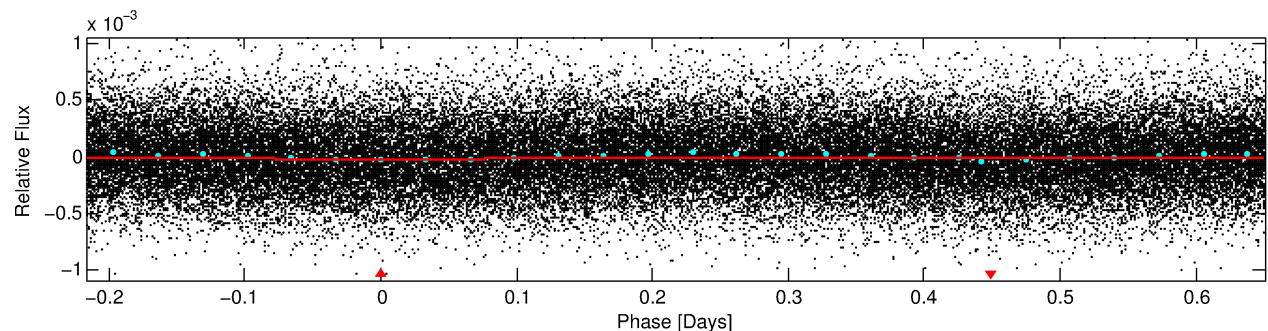
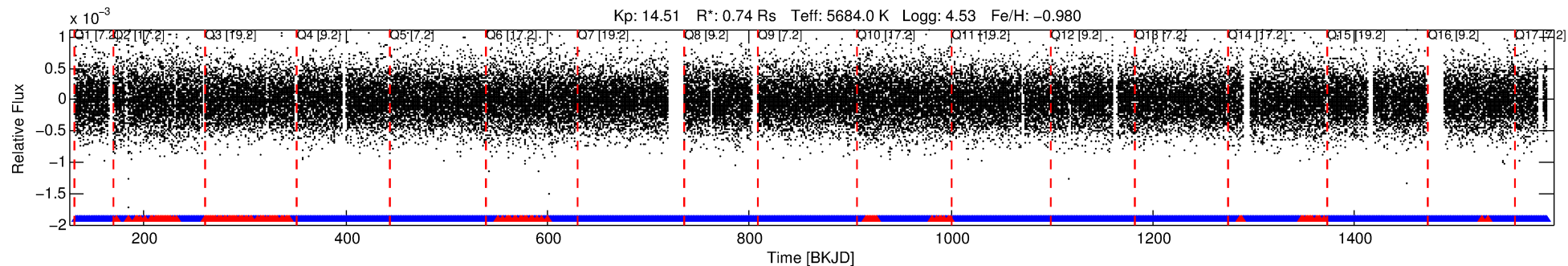
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008613236-01

No Significant Match Found

DV One-Page Summary

KIC: 8613236 Candidate: 1 of 1 Period: 0.868 d



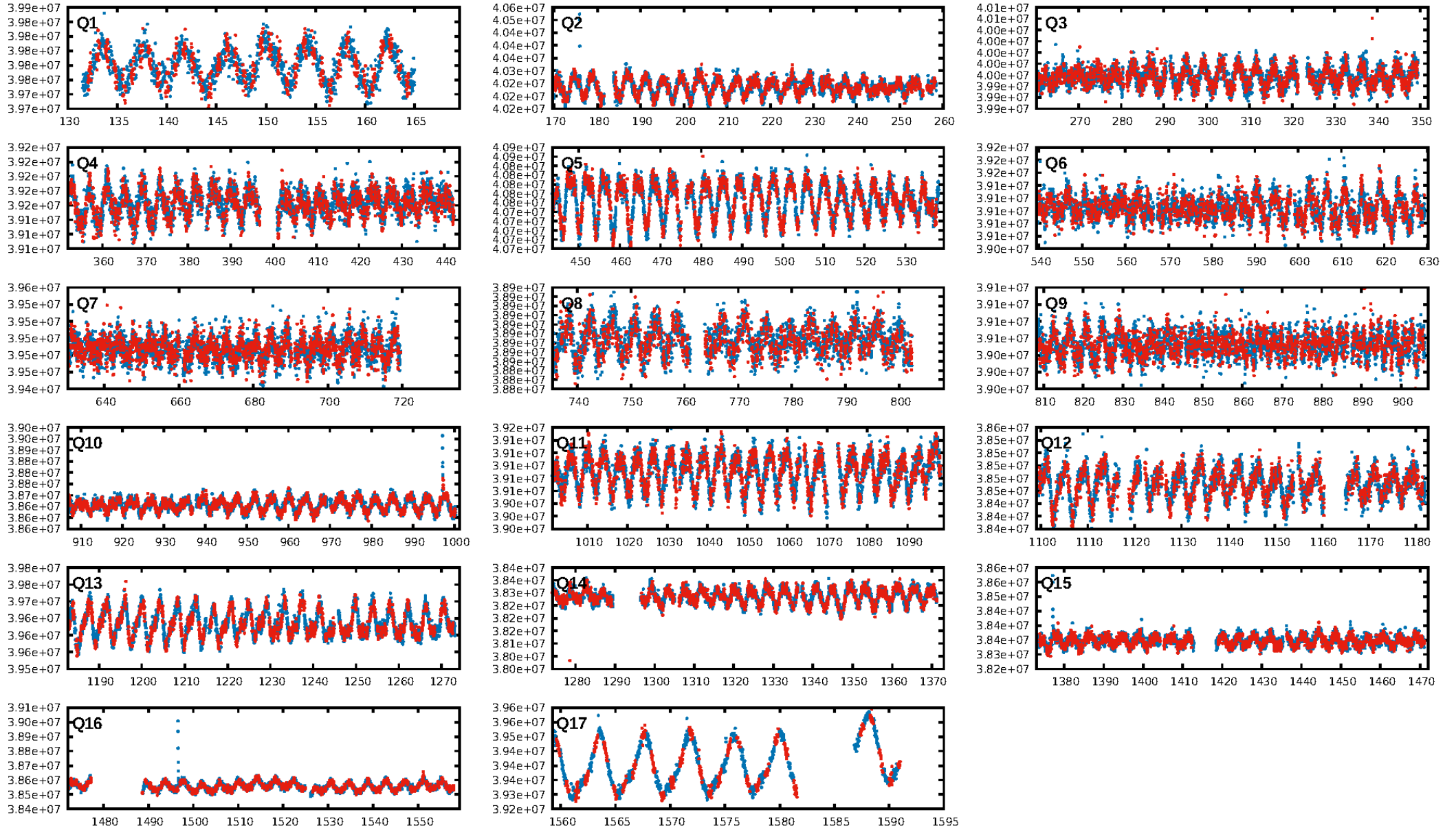
DV Fit Results:

Period = 0.86782 [0.00001] d
Epoch = 132.1928 [0.0052] BKJD
Rp/R* = 0.0051 [0.0023]
a/R* = 1.53 [2.04]
b = 0.64 [2.19]
Seff = 2086.82 [482.45]
Teff = 1723 [100] K
Rp = 0.41 [0.20] Re
a = 0.0157 [0.0020] AU
Ag = 15.53 [14.95] [0.97 σ]
Teffp = 5290 [1260] K [2.82 σ]

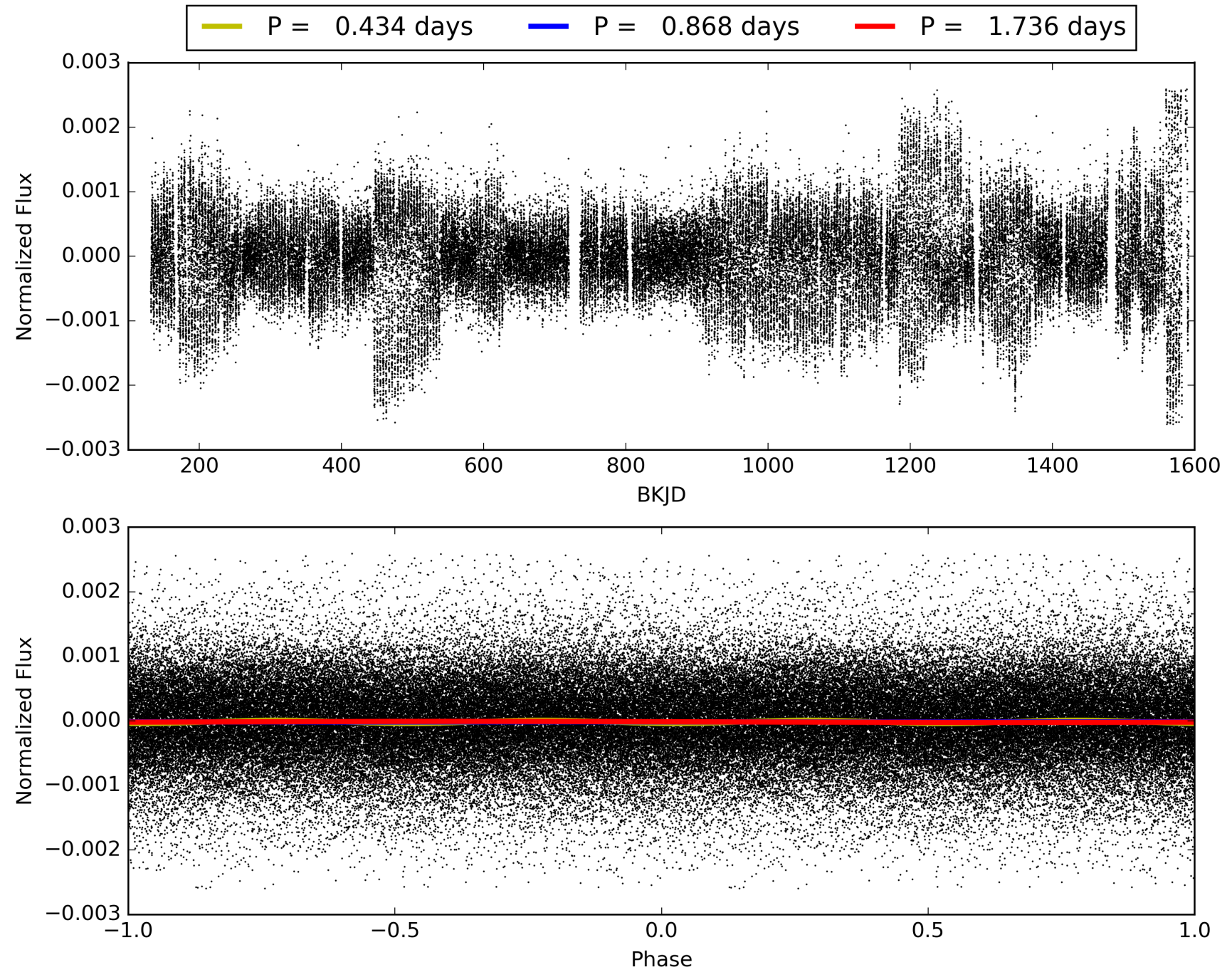
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 8.27e-13
RollingBand-fgt: 0.91 [1346/1475]
GhostDiagnostic-chr: 0.7146
Centroid-sig: 0.1%
Centroid-so: 3.509 arcsec [2.21 σ]
OotOffset-rm: 2.960 arcsec [6.06 σ]
KicOffset-rm: 3.093 arcsec [6.32 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.76 [13/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008613236-01, PDC Light Curves

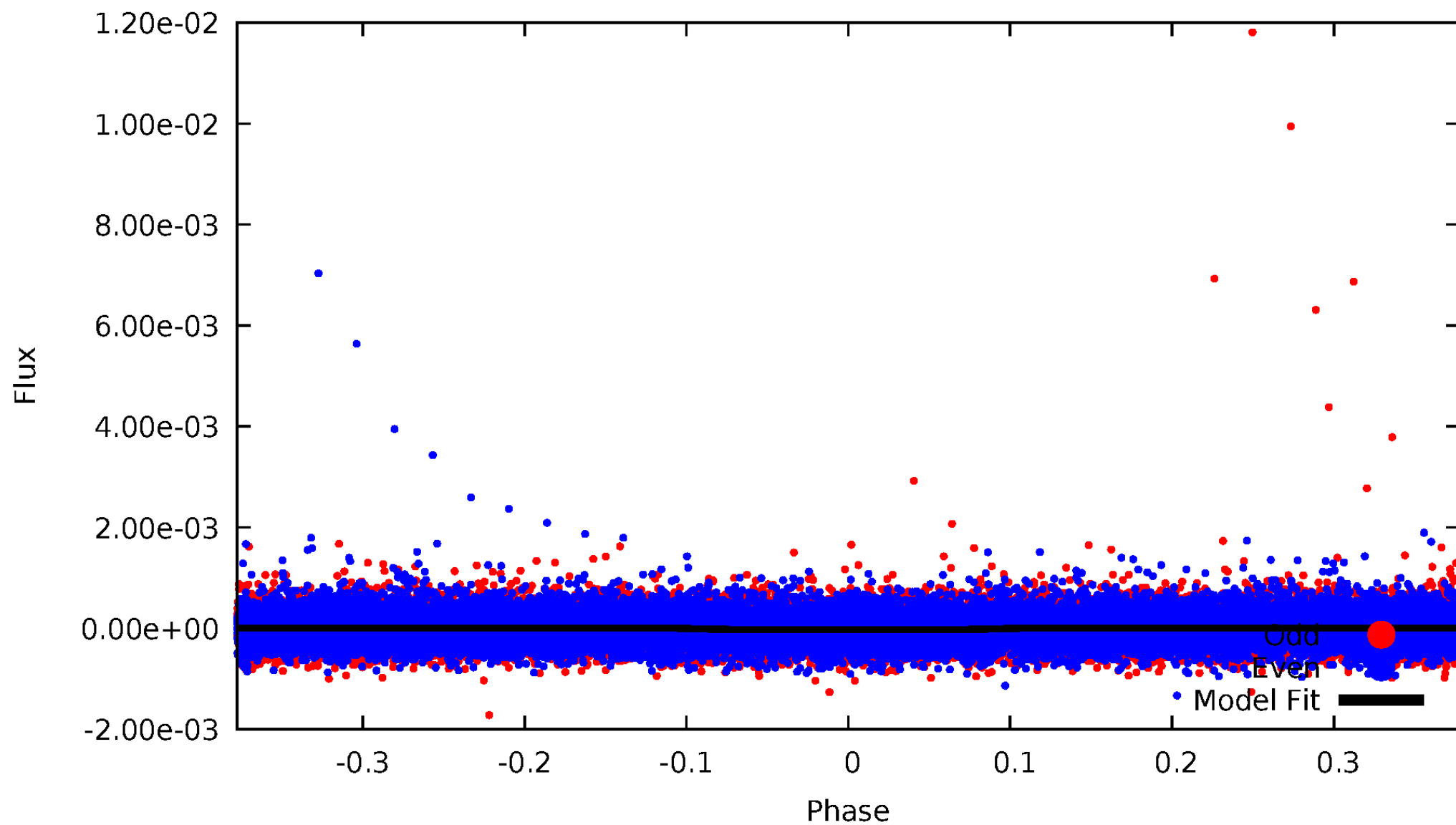


TCE 008613236-01



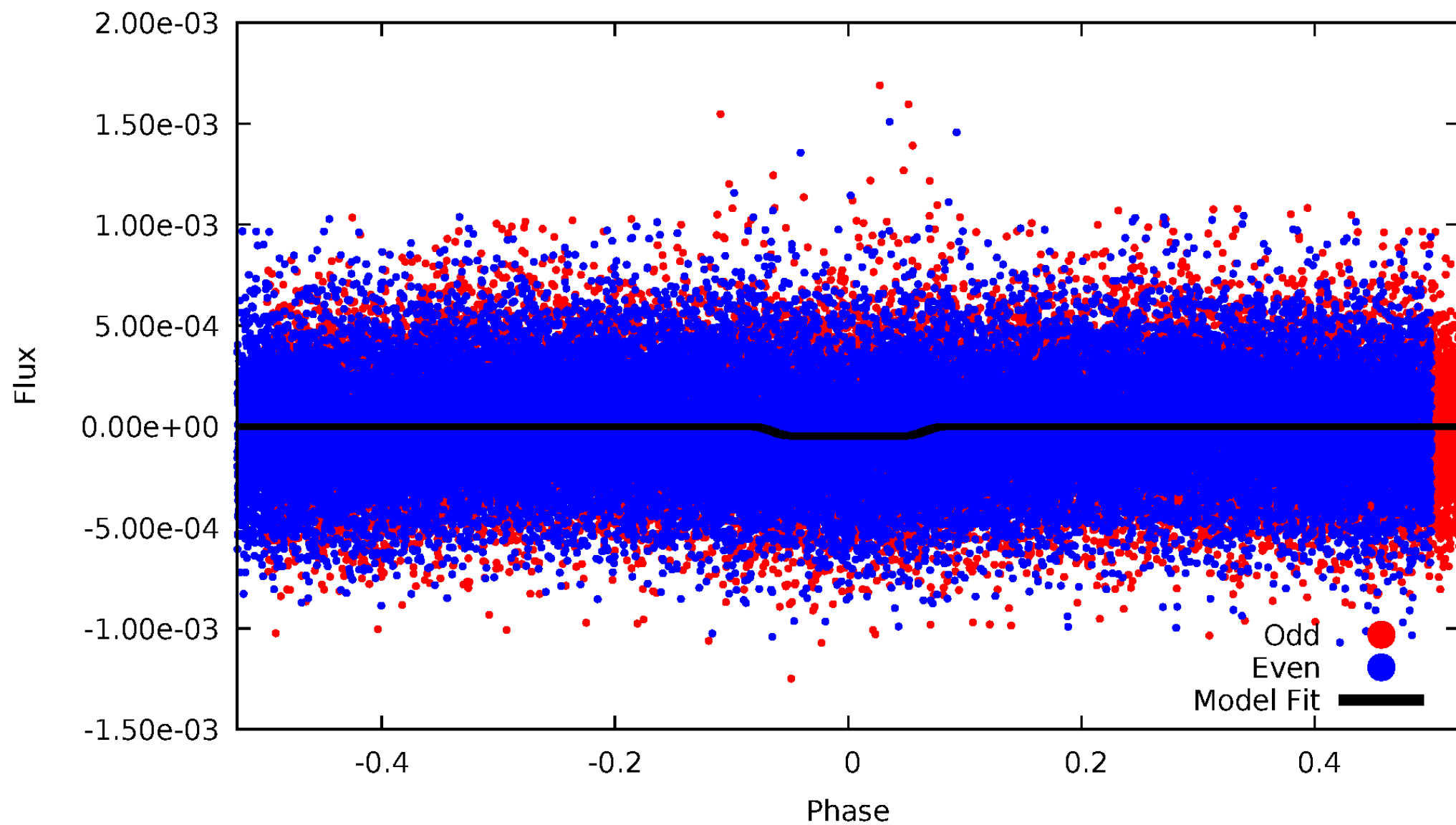
DV Odd/Even

TCE 008613236-01



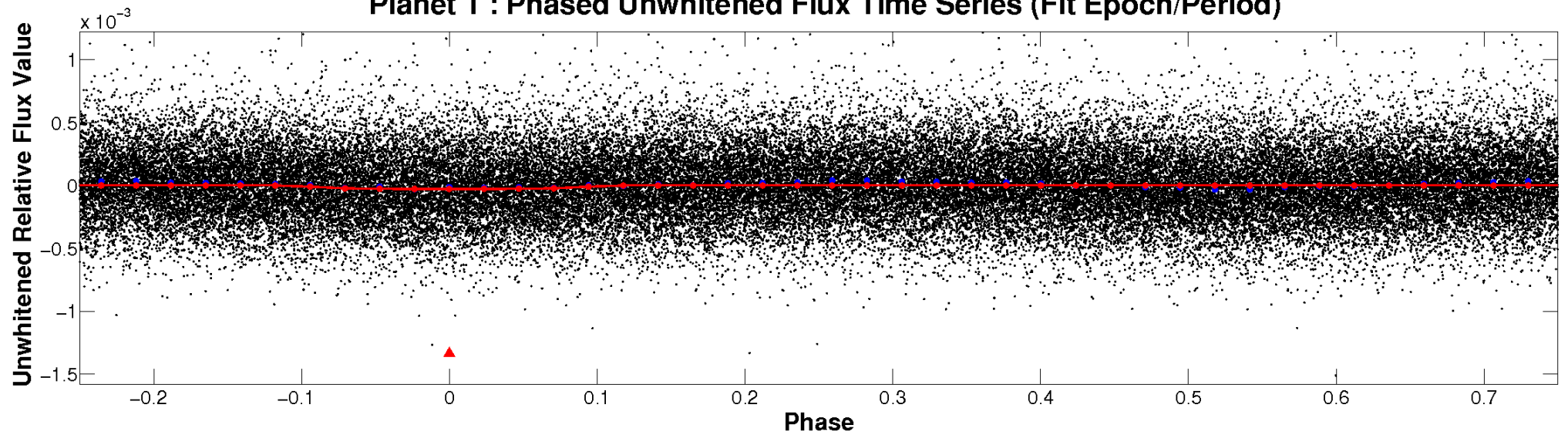
ALT Odd/Even

TCE 008613236-01

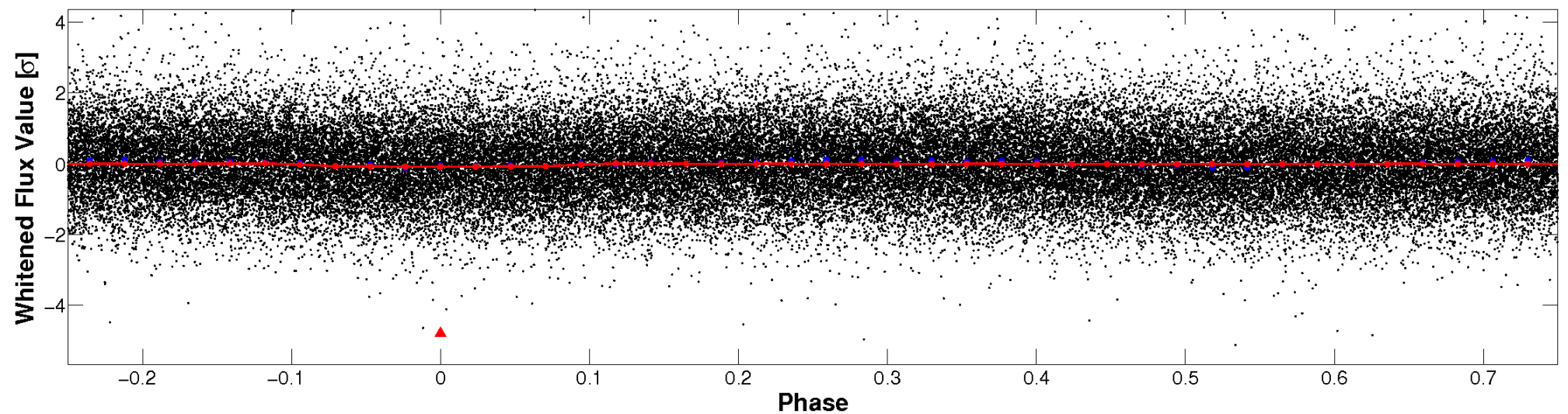


Non-Whitened Vs. Whitened Light Curve

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

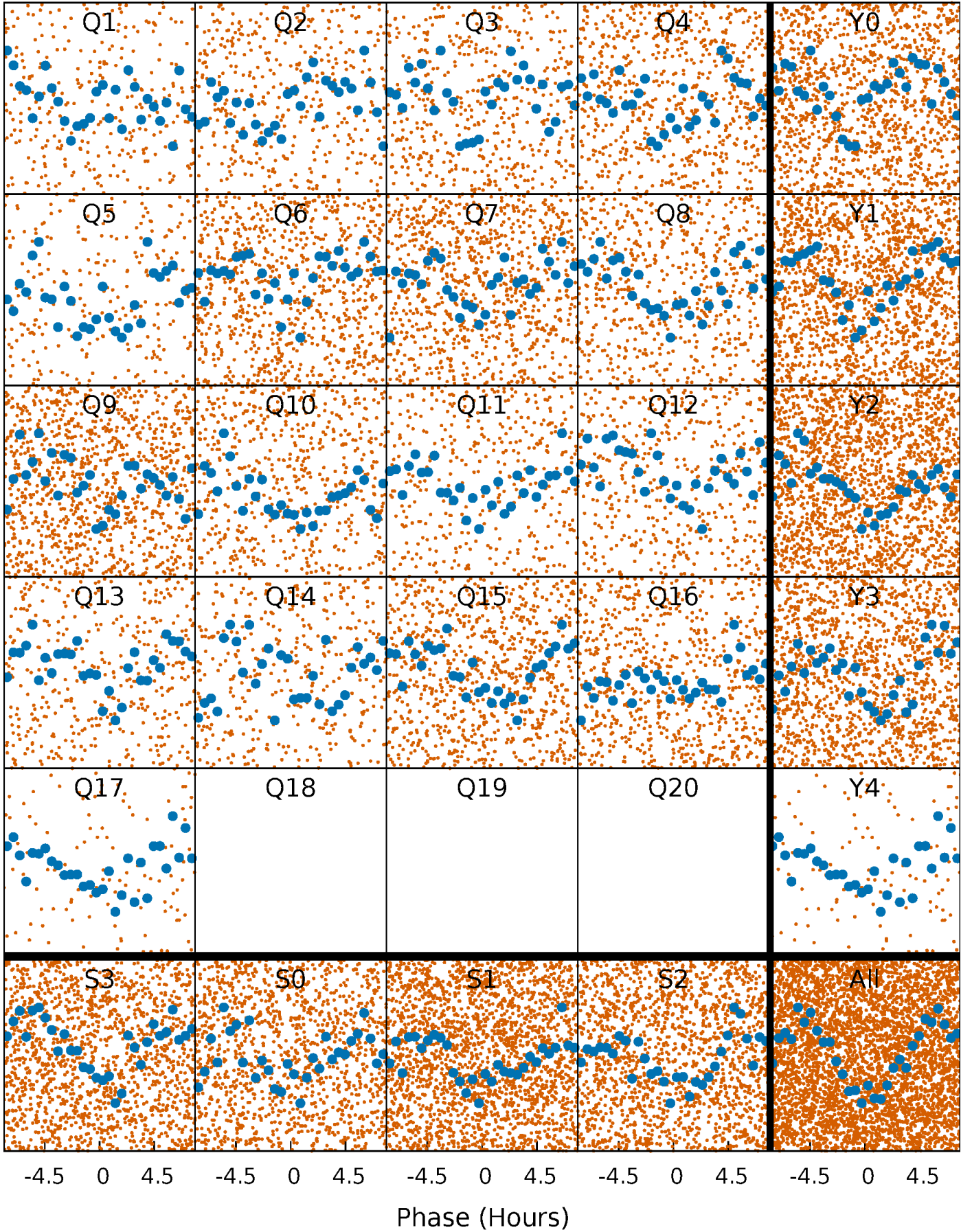


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



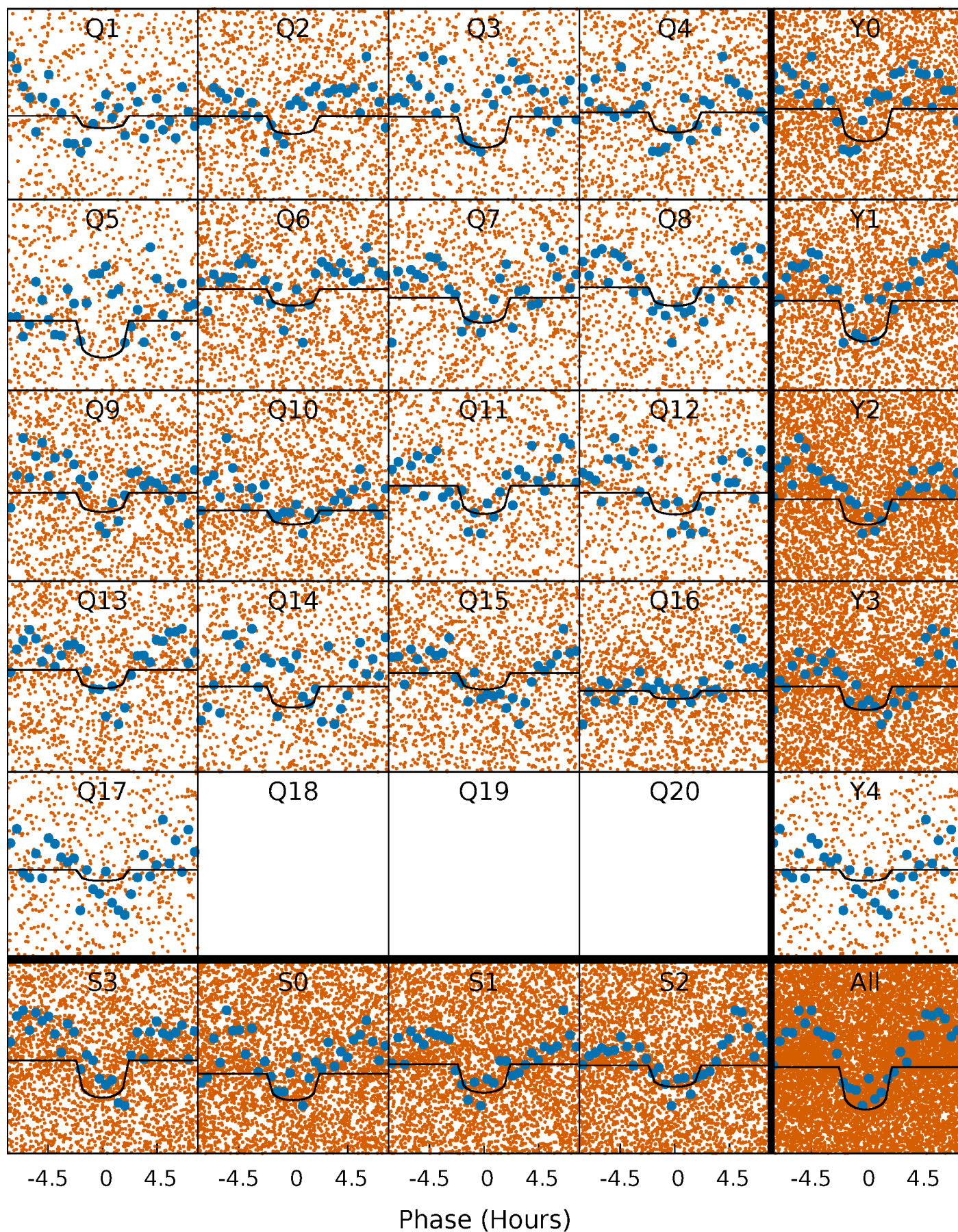
PDC Quarter-Phased Transit Curves

TCE 008613236-01 P= 0.867816 Days $T_0=132.192839$ (BKJD)



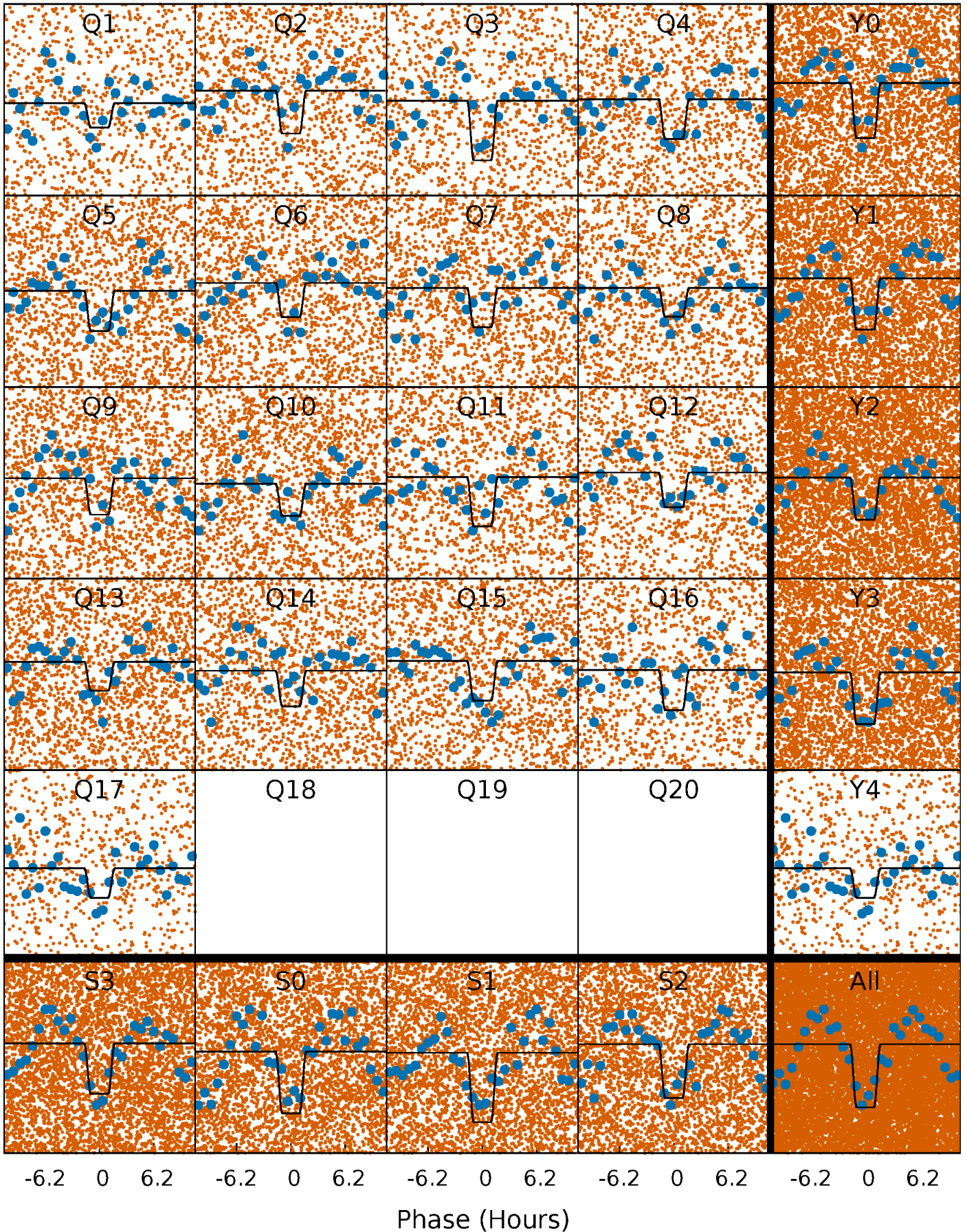
DV Quarter-Phased Transit Curves

TCE 008613236-01 P= 0.867816 Days $T_0=132.192839$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

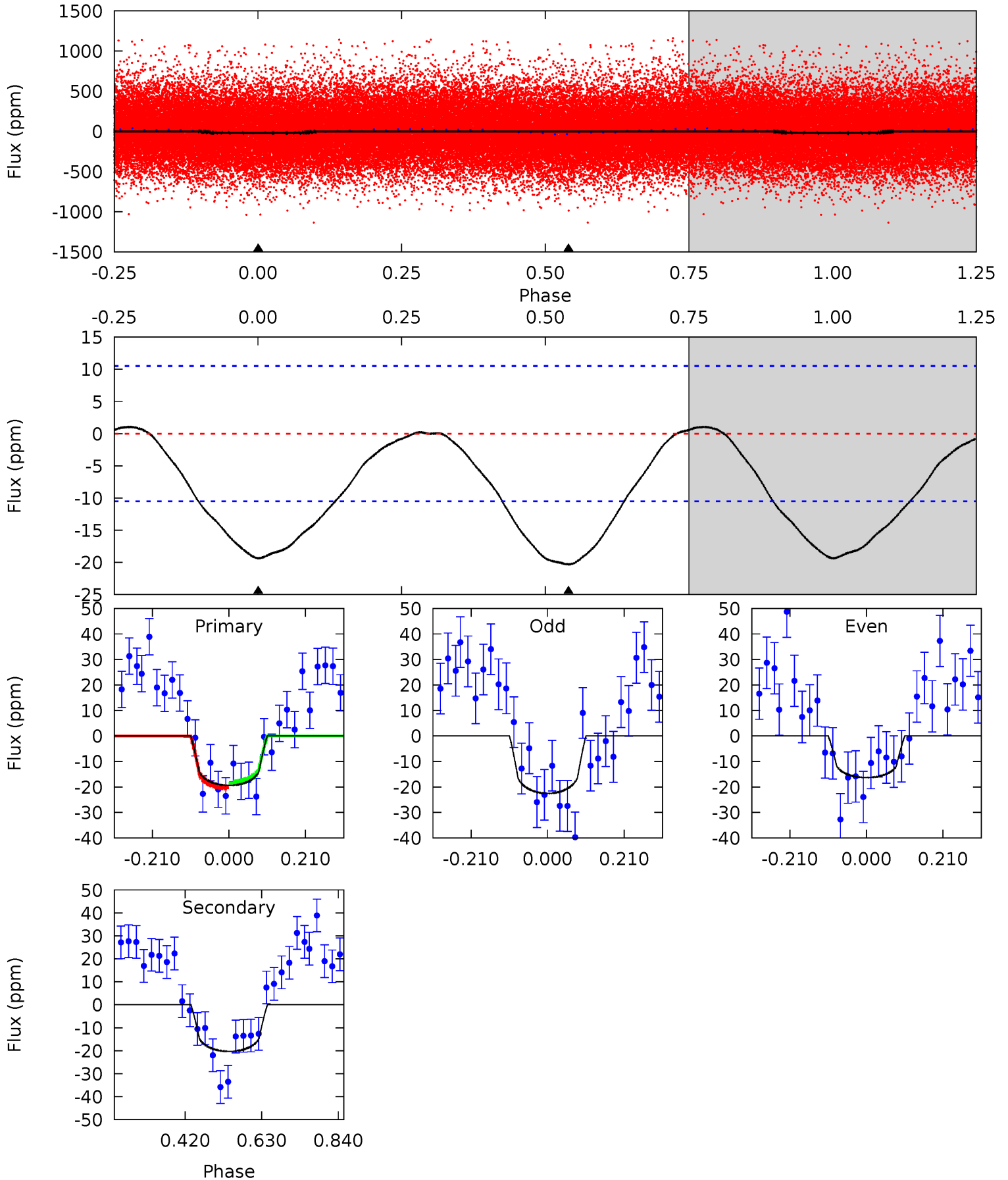
TCE 008613236-01 P= 0.867896 Days $T_0=132.135392$ (BKJD)



DV Model-Shift Uniqueness Test

008613236-01, P = 0.867816 Days, E = 131.325023 Days

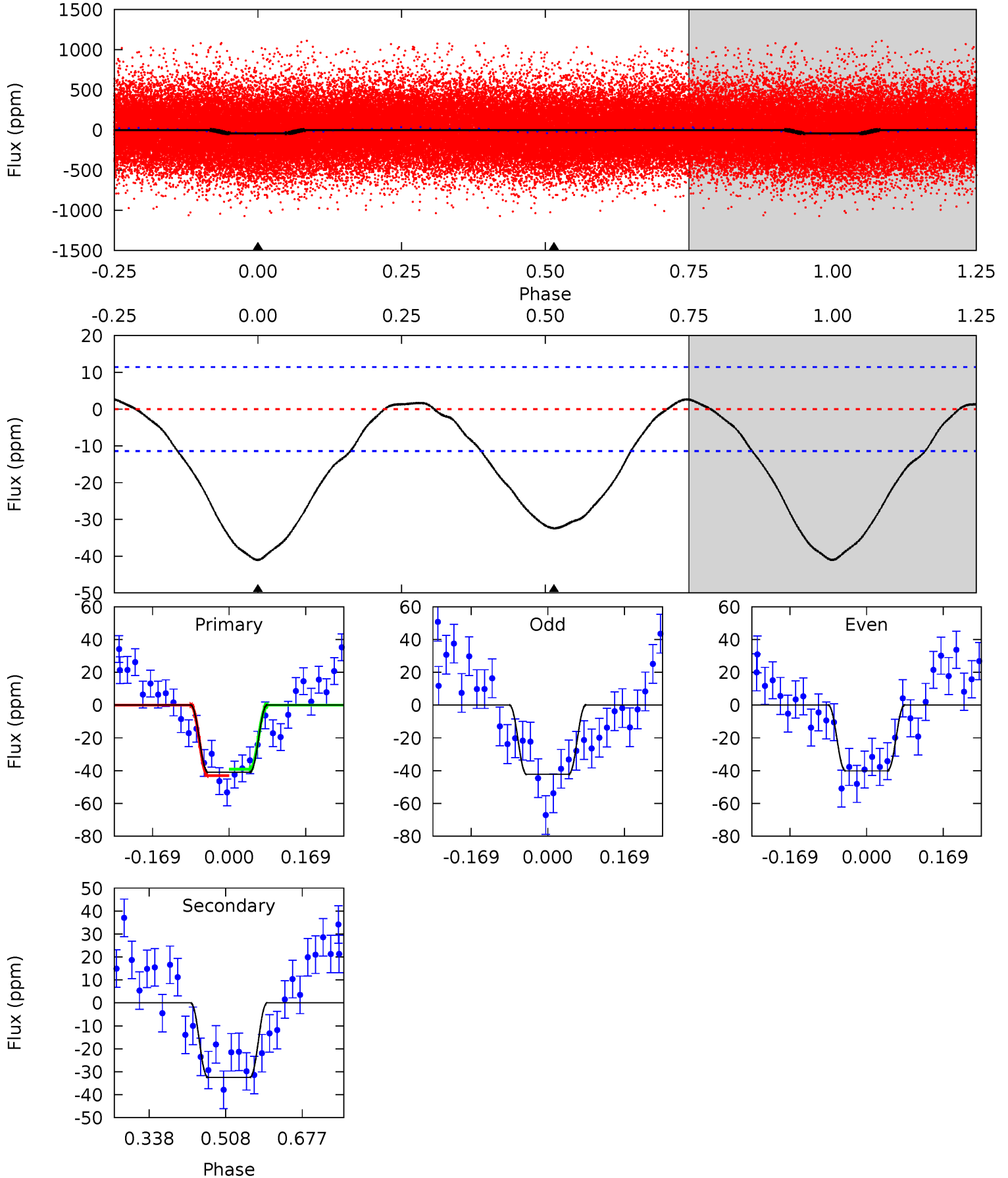
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.12	8.51	0	0	4.41	1.25	0.41	8.12	8.12	8.51	8.51	1.32	0.79	0.05	0.38



Alt Model-Shift Uniqueness Test

008613236-01, P = 0.867896 Days, E = 131.267496 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	12.6	0	0	4.45	1.37	1.00	16.0	16.0	12.6	12.6	0.43	0.77	0.06	0.78



Stellar Parameters For KIC 008613236

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5684^{+186}_{-169}	$4.533^{+0.105}_{-0.105}$	$-0.980^{+0.300}_{-0.300}$	$0.741^{+0.113}_{-0.084}$	$0.684^{+0.080}_{-0.025}$	$2.367^{+1.005}_{-0.761}$
	+3%/-3%	+2%/-2%	+31%/-31%	+15%/-11%	+12%/-4%	+42%/-32%
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 008613236-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-20 ± 2	$0.41^{+0.20}_{-0.18}$	2406^{+125}_{-108}	5364^{+1769}_{-815}	16^{+33}_{-9}
Alt.	-32 ± 3	$0.56^{+0.20}_{-0.18}$	2400^{+124}_{-106}	5165^{+1123}_{-601}	14^{+18}_{-7}

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 $A_{obs} \gg 1.0$

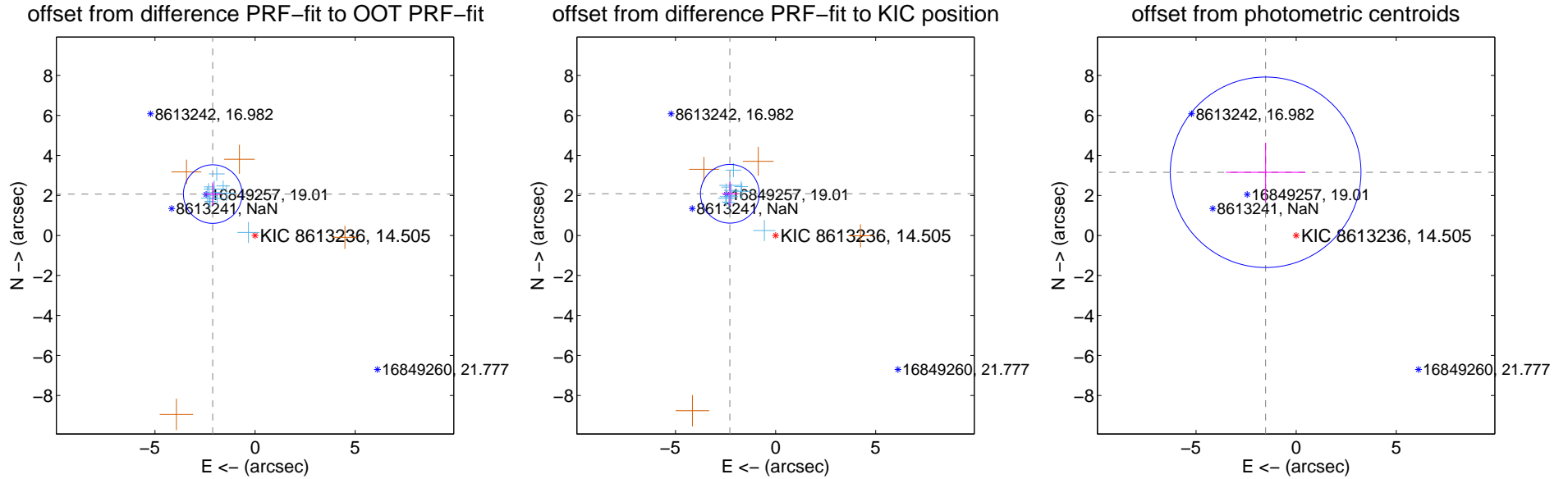
DV Centroid Data

Supplemental centroid analysis for 008613236-01. Kepler magnitude: 14.51. Transit SNR 7.91

There are 13 quarters with good PRF difference image offsets

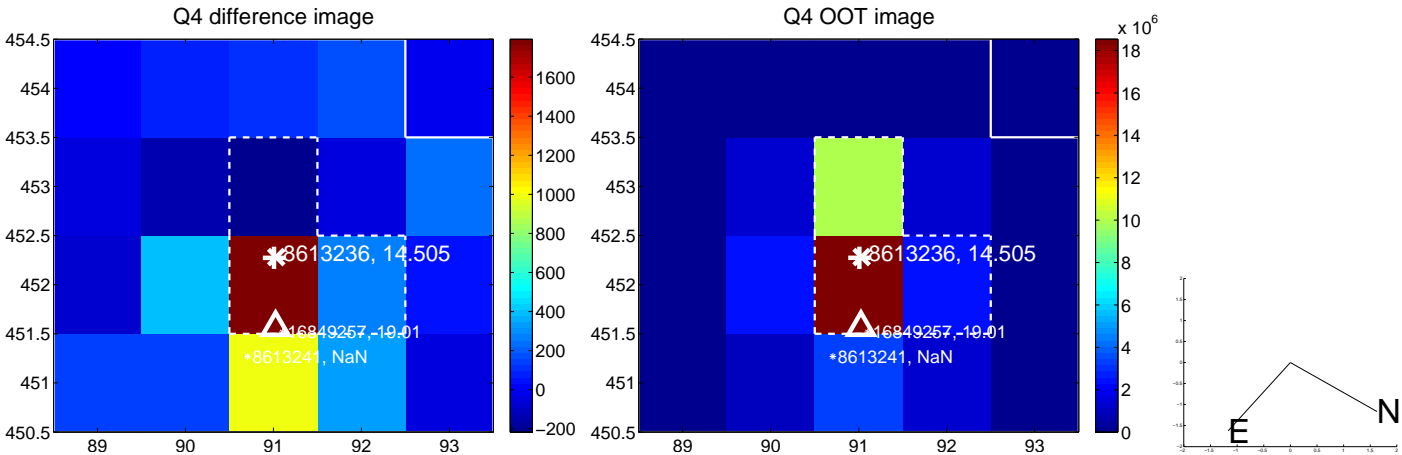
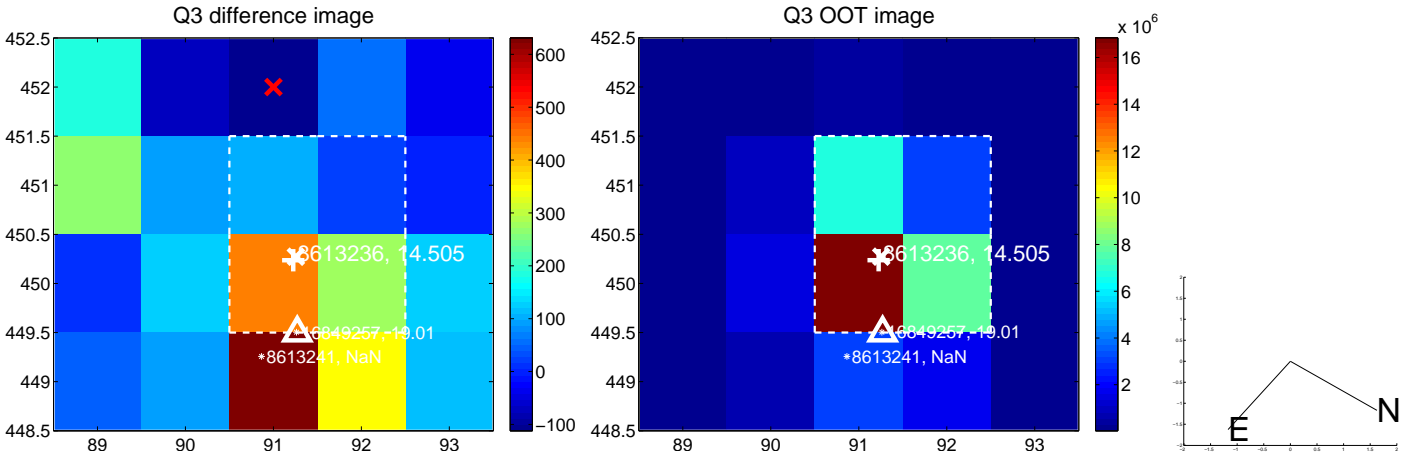
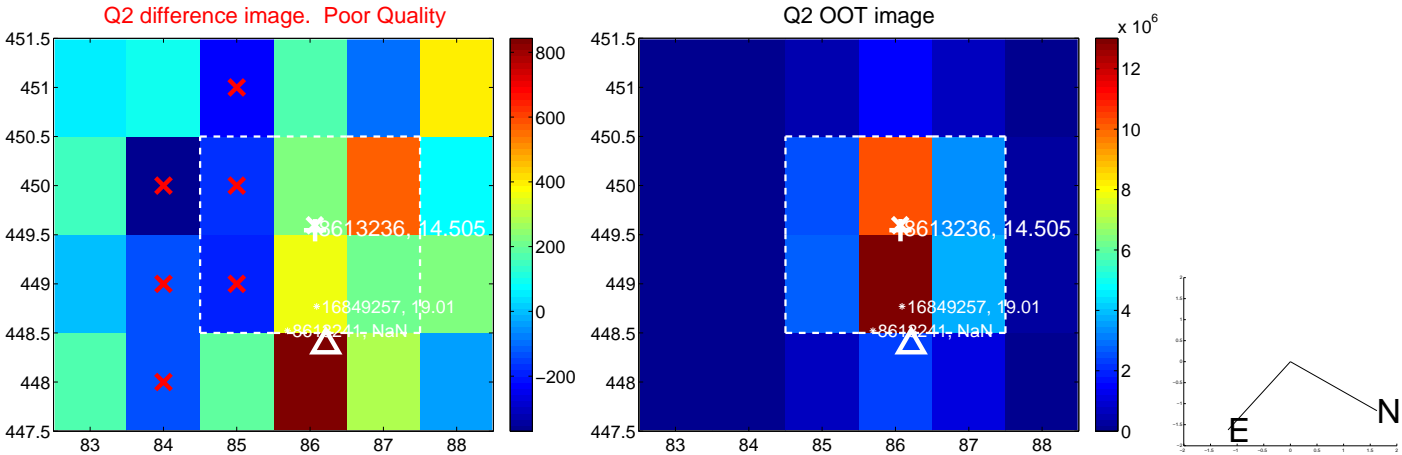
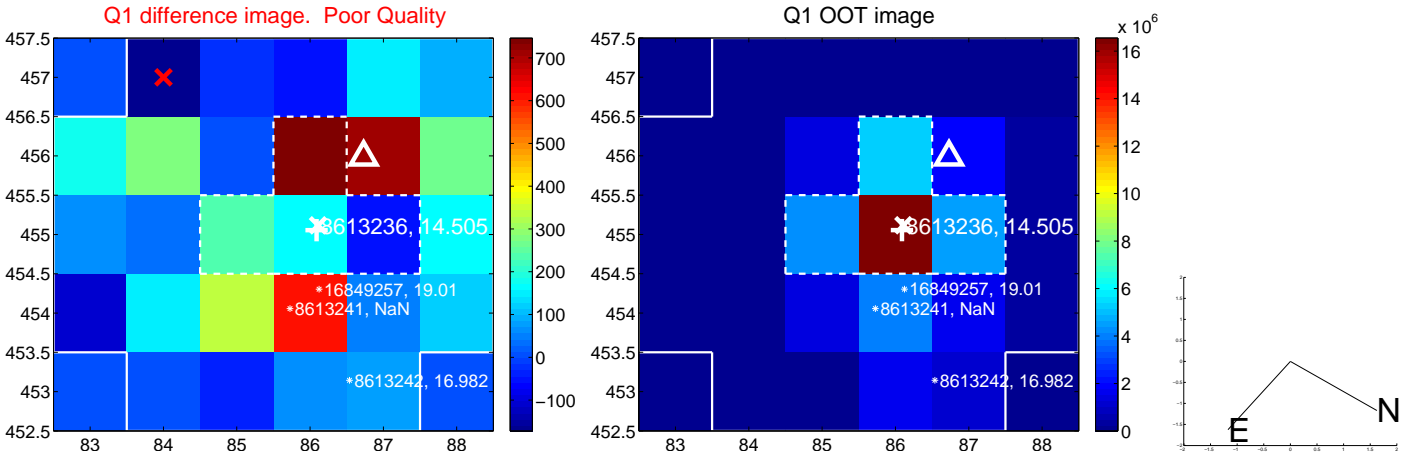
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.960 \pm 0.488	6.06	2.115 \pm 0.405	2.070 \pm 0.591
PRF-fit source offset from KIC position	3.093 \pm 0.489	6.32	2.284 \pm 0.412	2.086 \pm 0.607
photometric centroid source offset	3.51 \pm 1.59	2.21	1.52 \pm 1.98	3.16 \pm 1.48

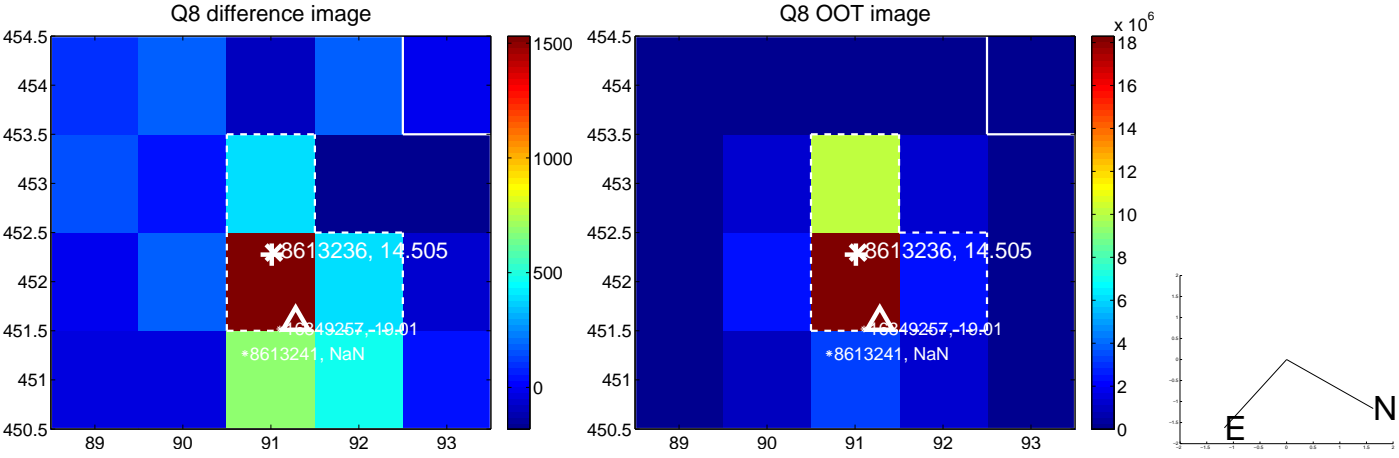
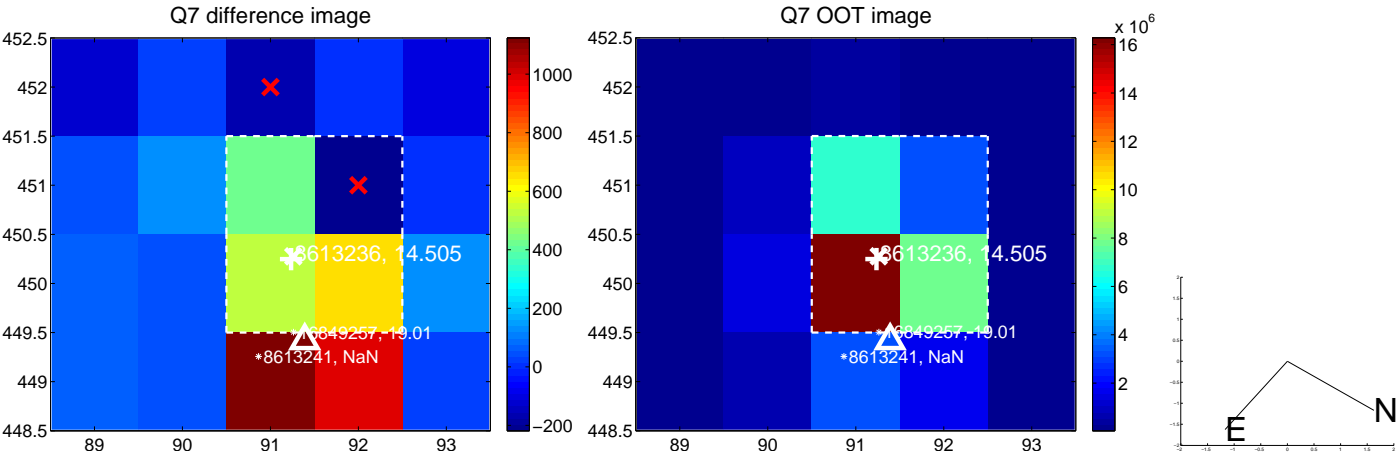
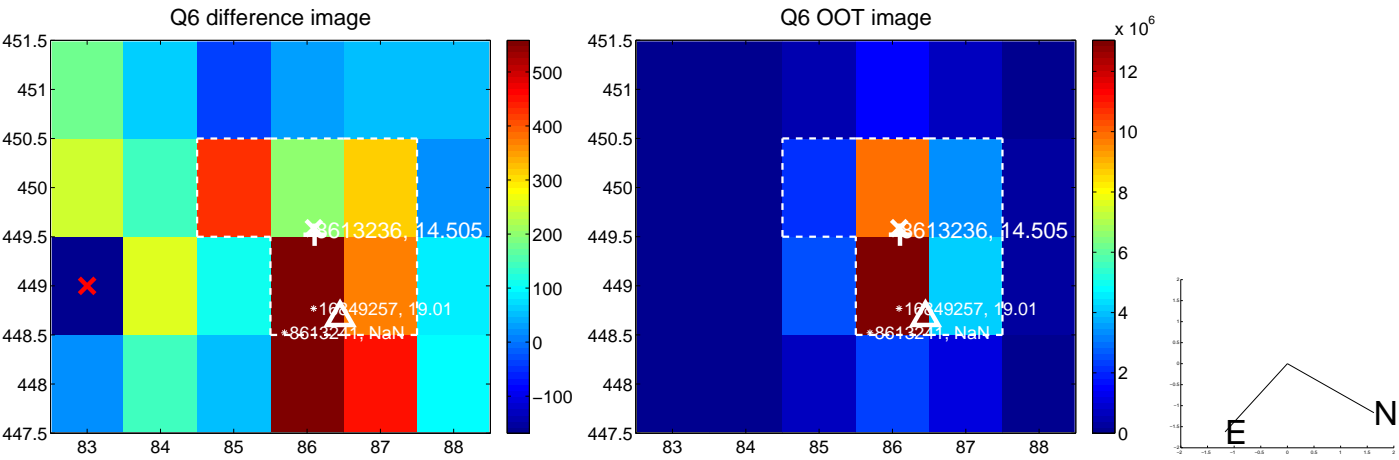
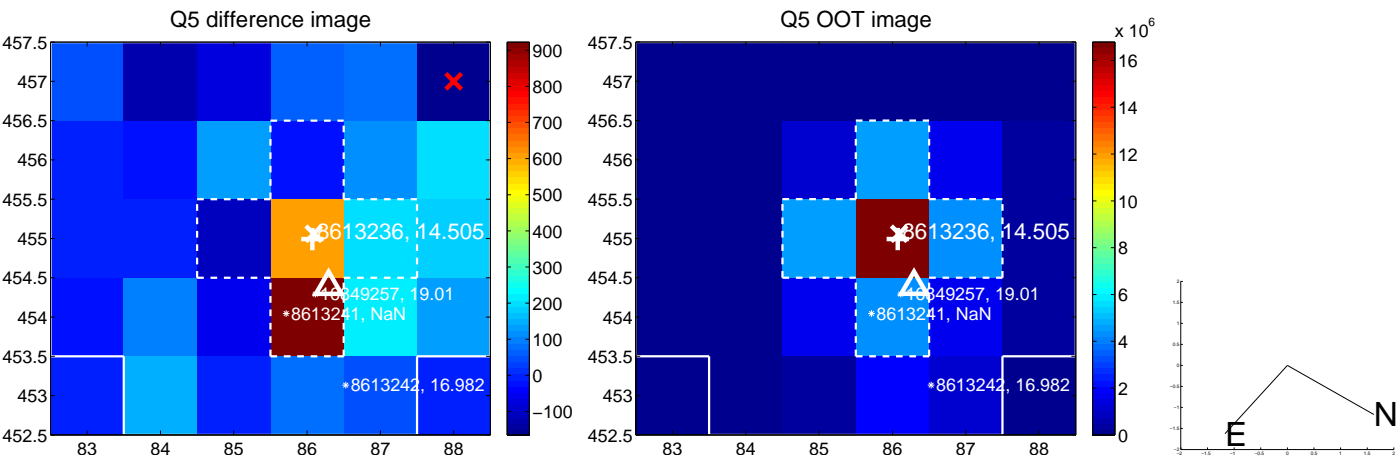


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

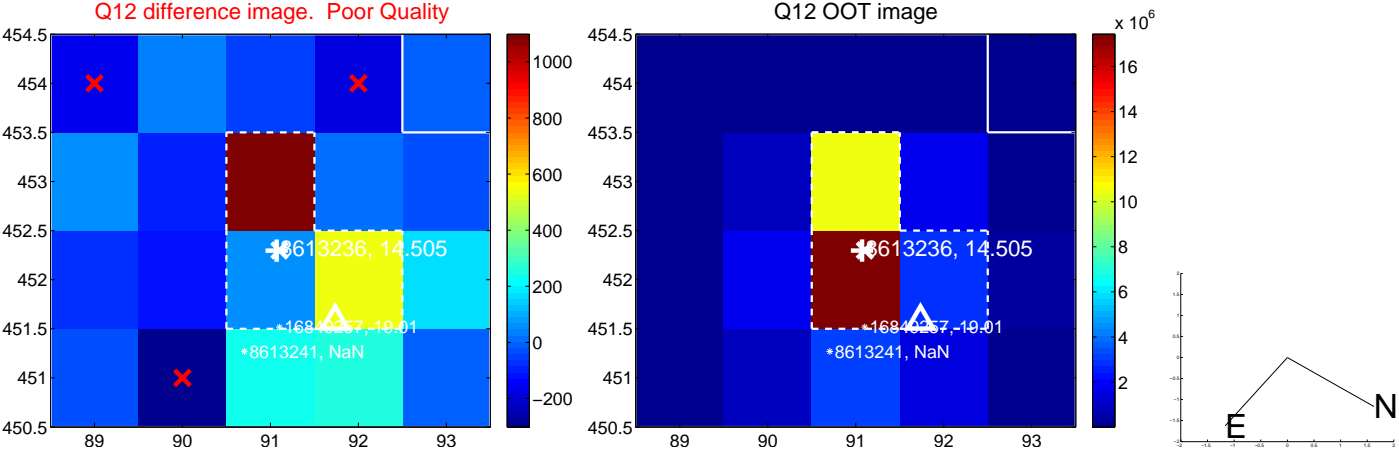
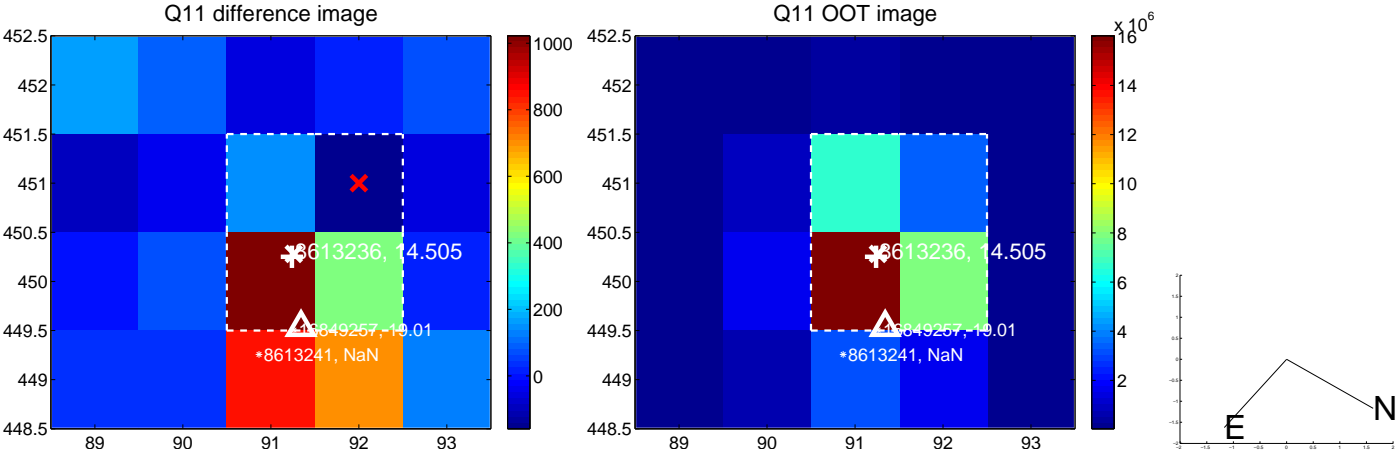
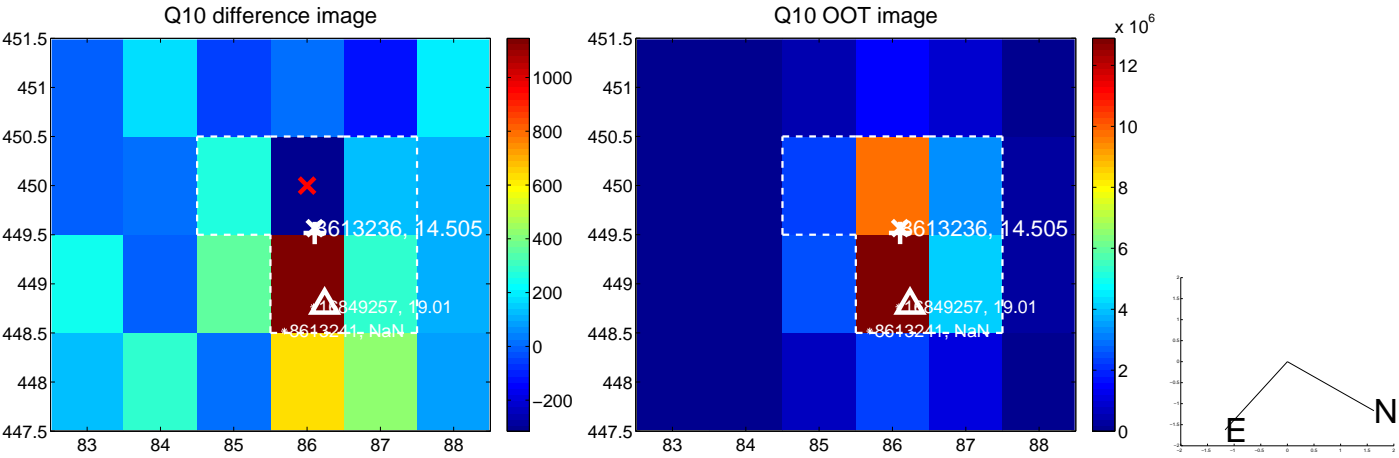
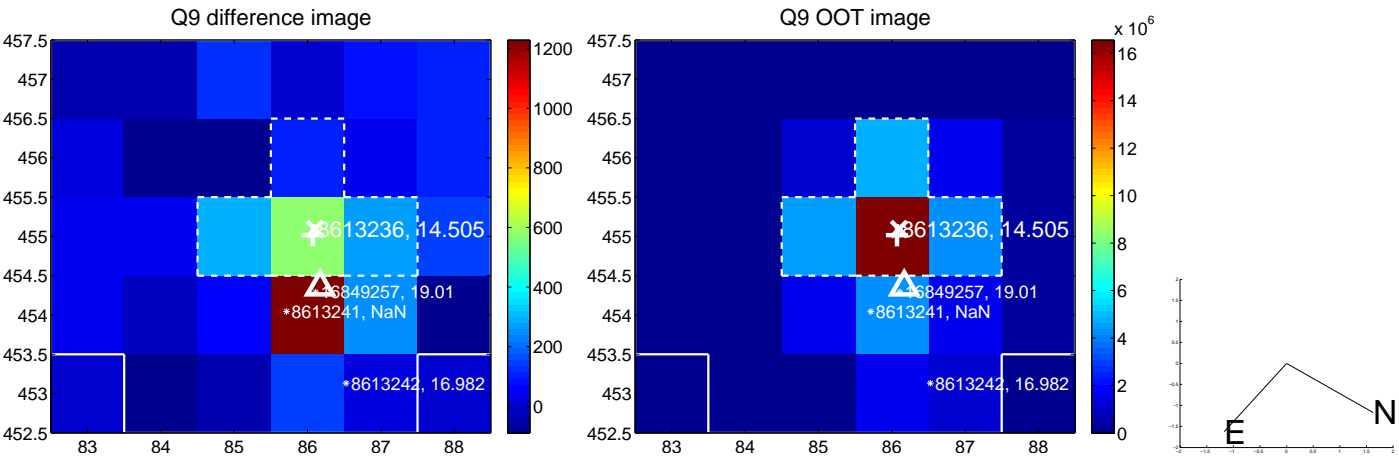
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



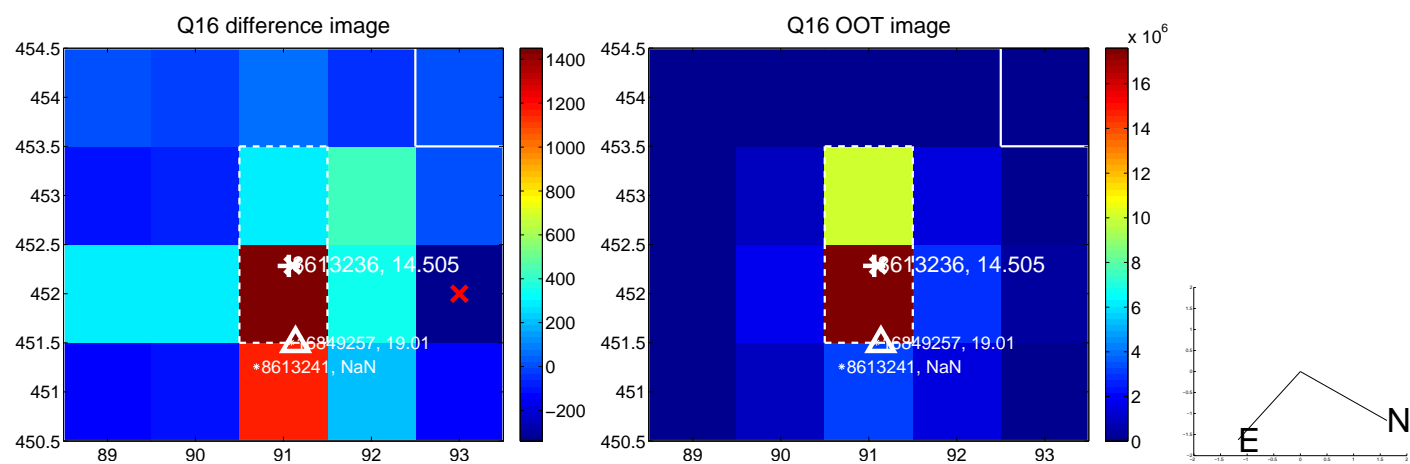
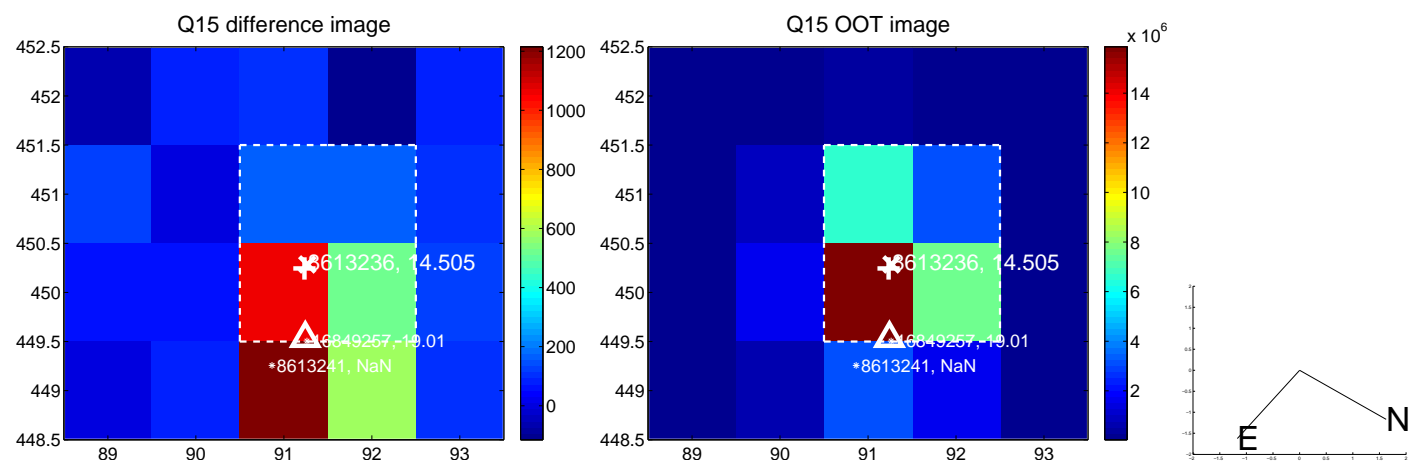
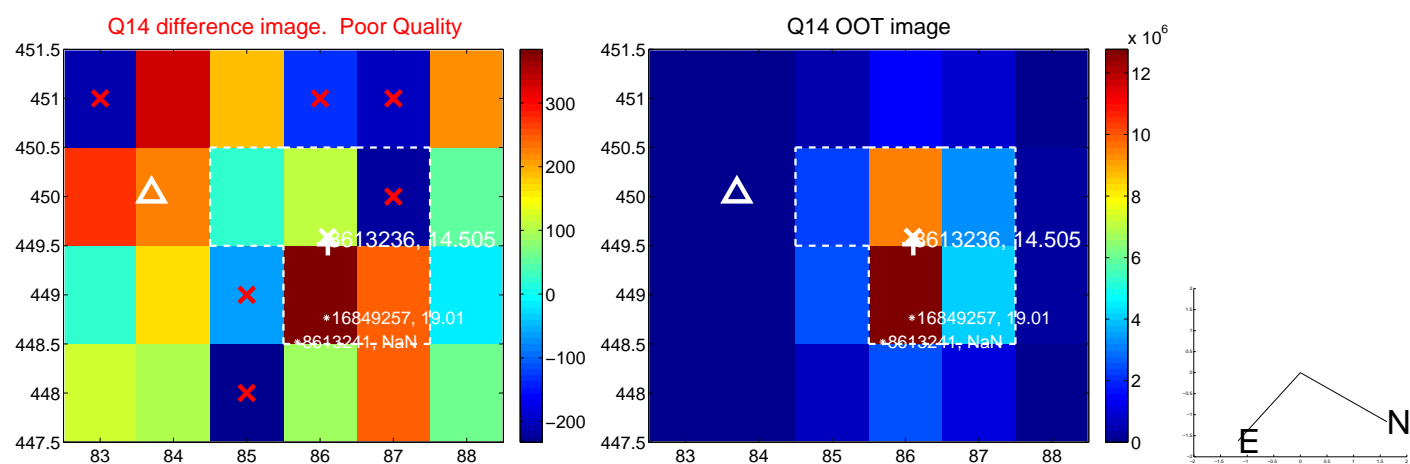
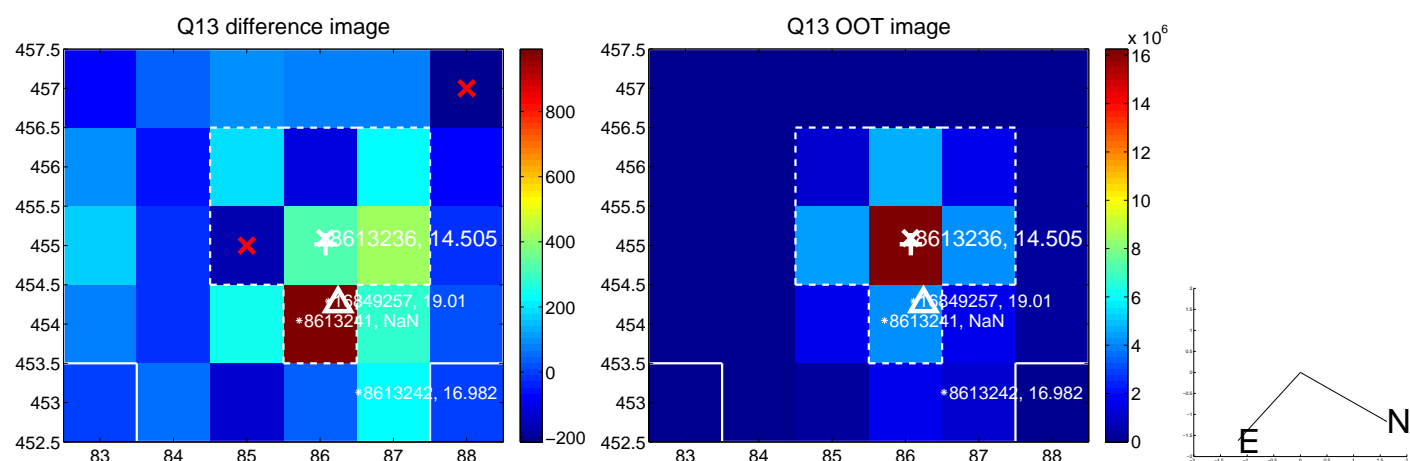
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



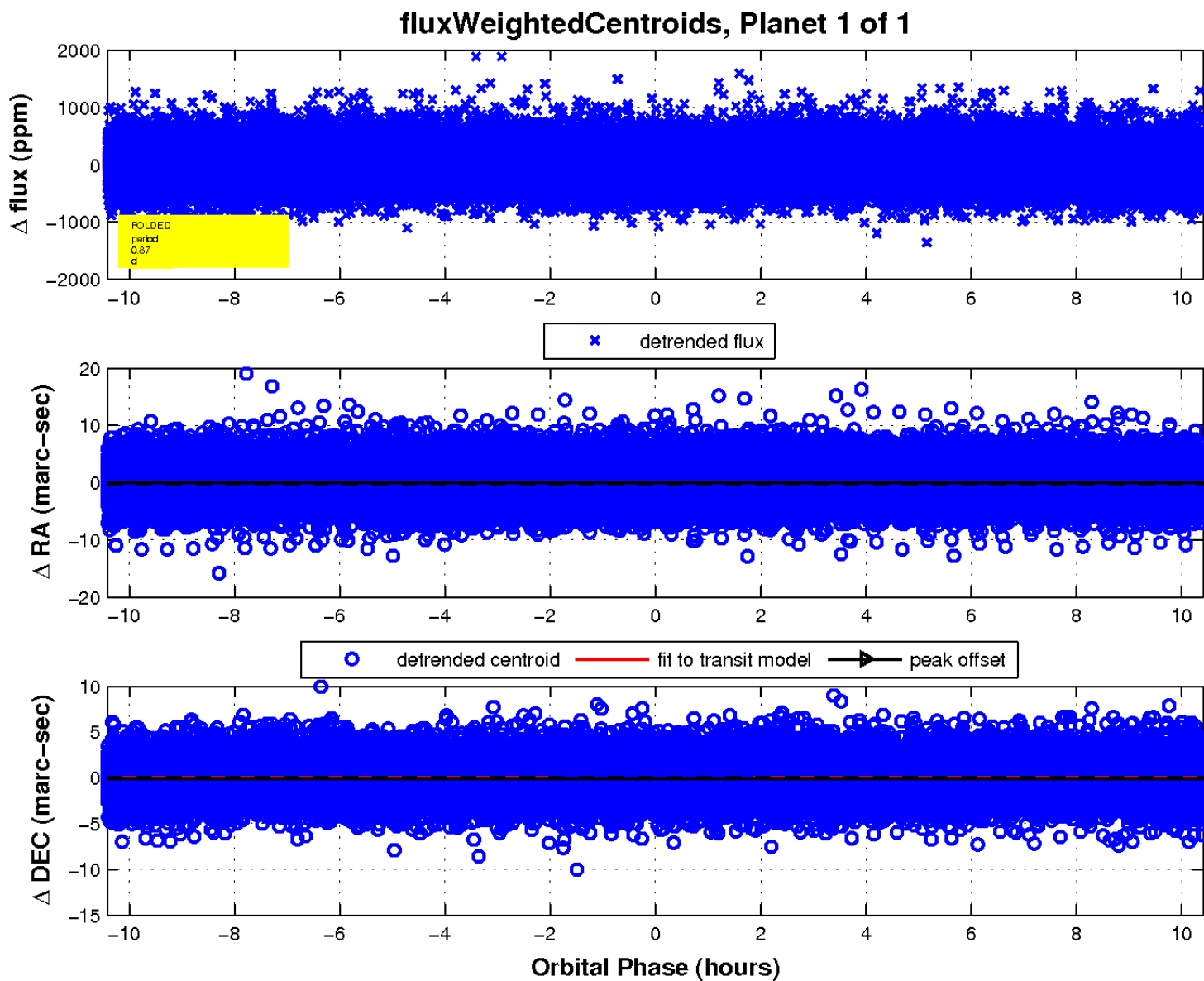
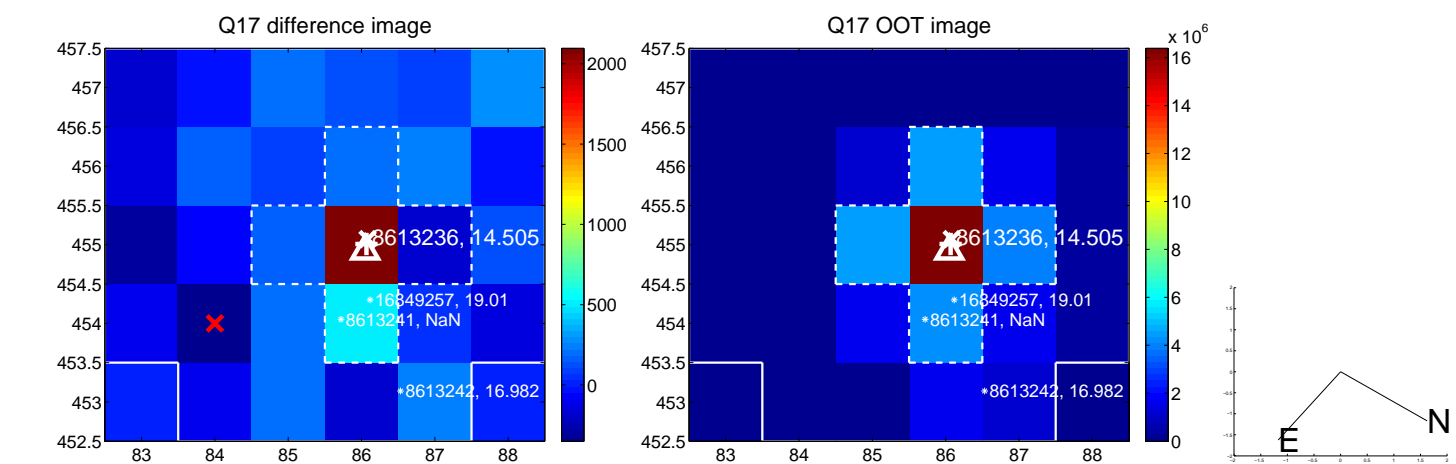
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UKIRT Image

Declination

