

KIC 008750094

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})
008750094-01	OBS	7086.01	0.563352	131.748841	31.2	6.760	8.5	6.4	0.84	5662	0.56	3812.88

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008750094-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_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.

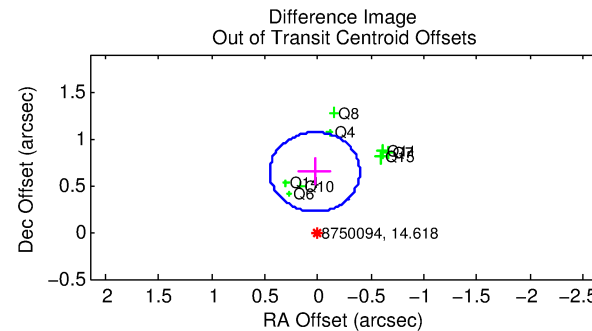
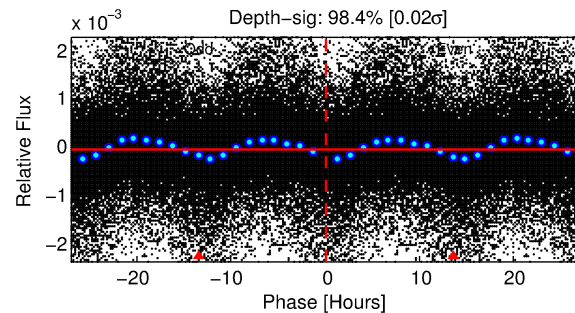
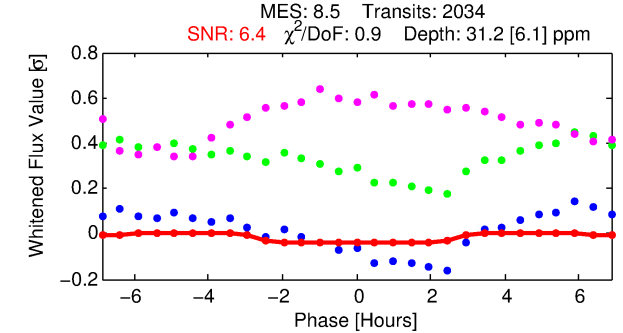
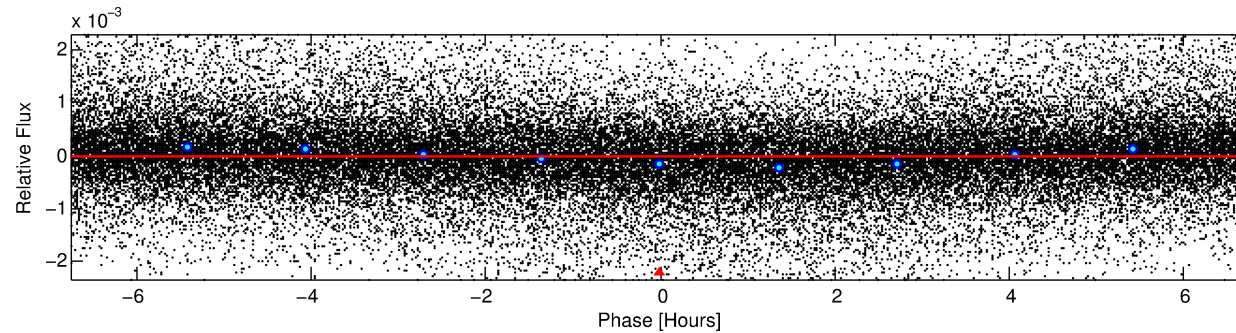
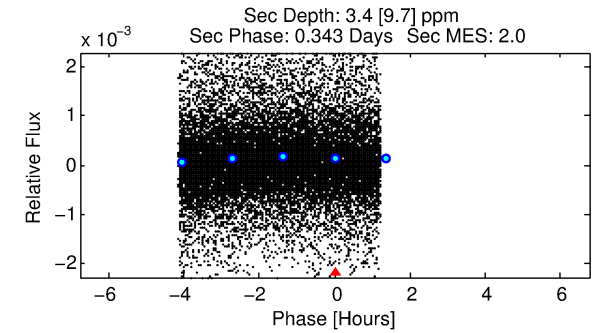
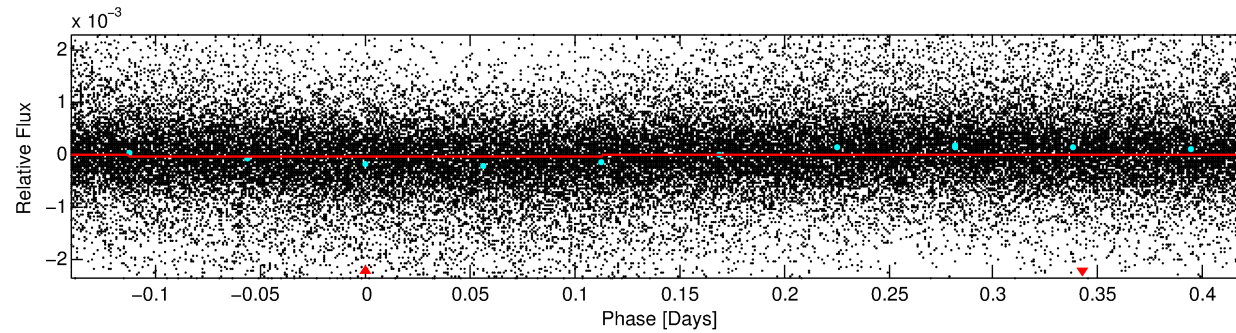
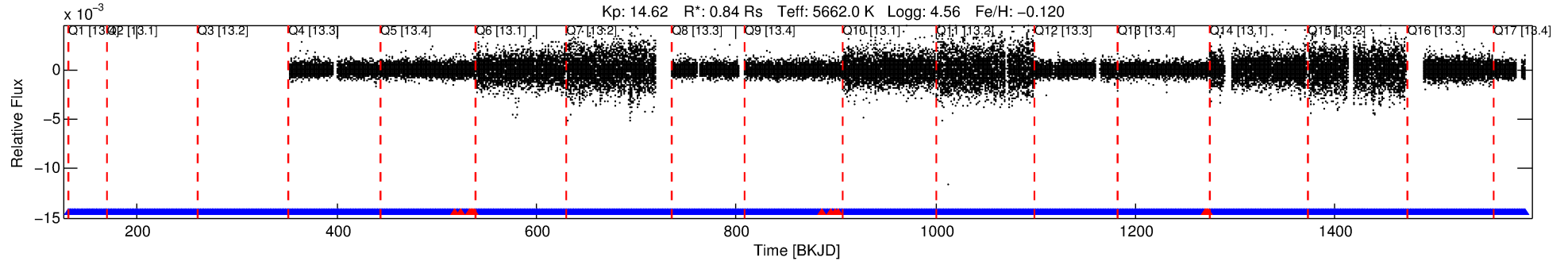
Ephemeris Match Information For 008750094-01

No Significant Match Found

DV One-Page Summary

KIC: 8750094 Candidate: 1 of 1 Period: 0.563 d
KOI: K07086 Corr: No Ephemeris Match

Kp: 14.62 R*: 0.84 Rs Teff: 5662.0 K Logg: 4.56 Fe/H: -0.120



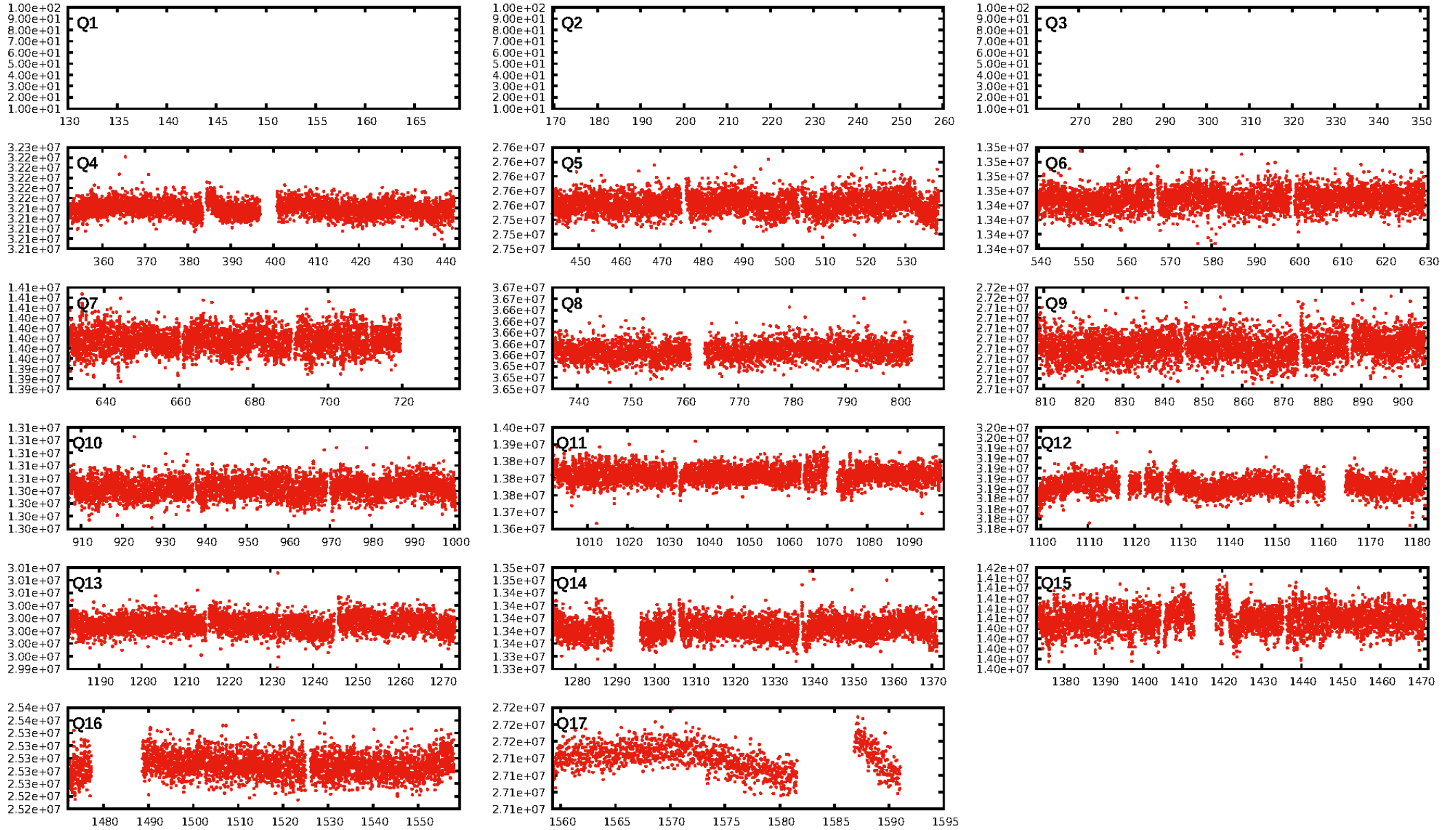
DV Fit Results:

Period = 0.56335 [0.00002] d
Epoch = 131.7488 [0.0108] BKJD
Rp/R* = 0.0061 [0.0017]
a/R* = 1.01 [0.01]
b = 0.90 [0.27]
Seff = 3812.88 [1324.91]
Teq = 2004 [174] K
Rp = 0.56 [0.21] Re
a = 0.0131 [0.0029] AU
Ag = 1.02 [3.00] [0.01σ]
Teffp = 3113 [2277] K [0.49σ]

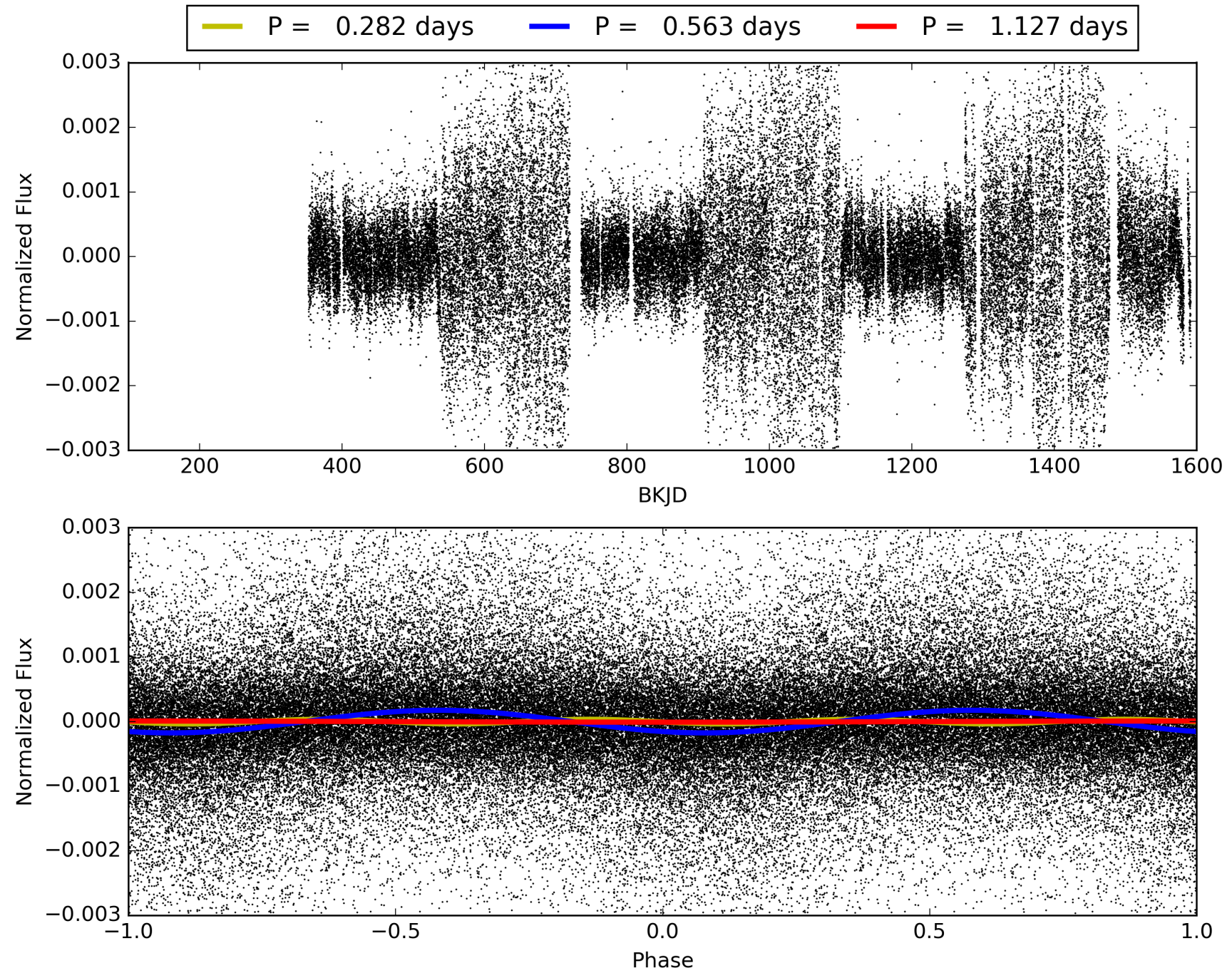
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.99 [1967/1986]
GhostDiagnostic-chr: -1.438
Centroid-sig: 0.0%
Centroid-so: 11.258 arcsec [25.50σ]
OotOffset-rm: 0.645 arcsec [4.56σ]
KicOffset-rm: 6.422 arcsec [40.99σ]
OotOffset-st: 3/3/2/0 [8]
KicOffset-st: 3/3/2/0 [8]
DiffImageQuality-fgm: 1.00 [8/8]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 008750094-01, PDC Light Curves

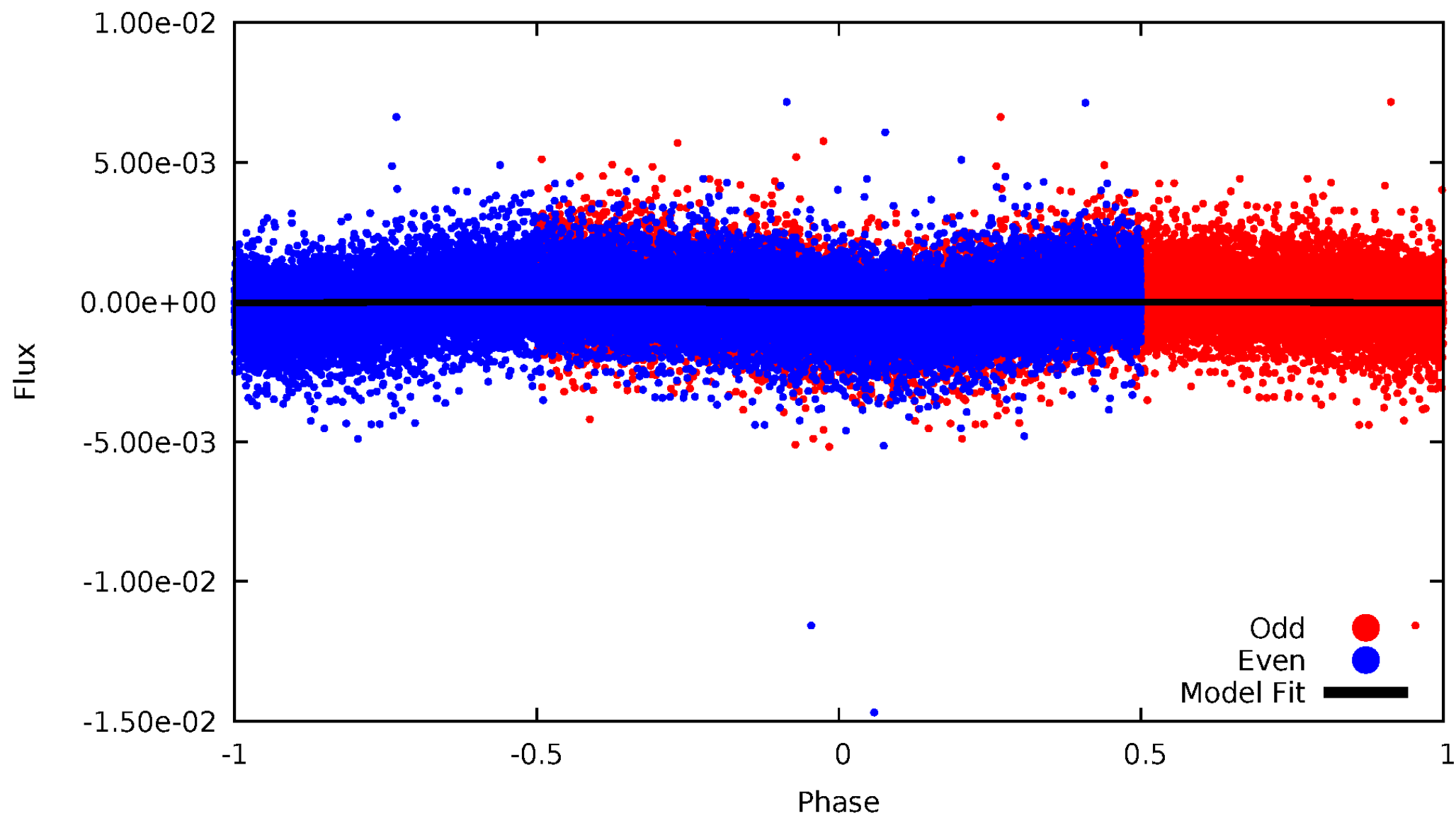


TCE 008750094-01



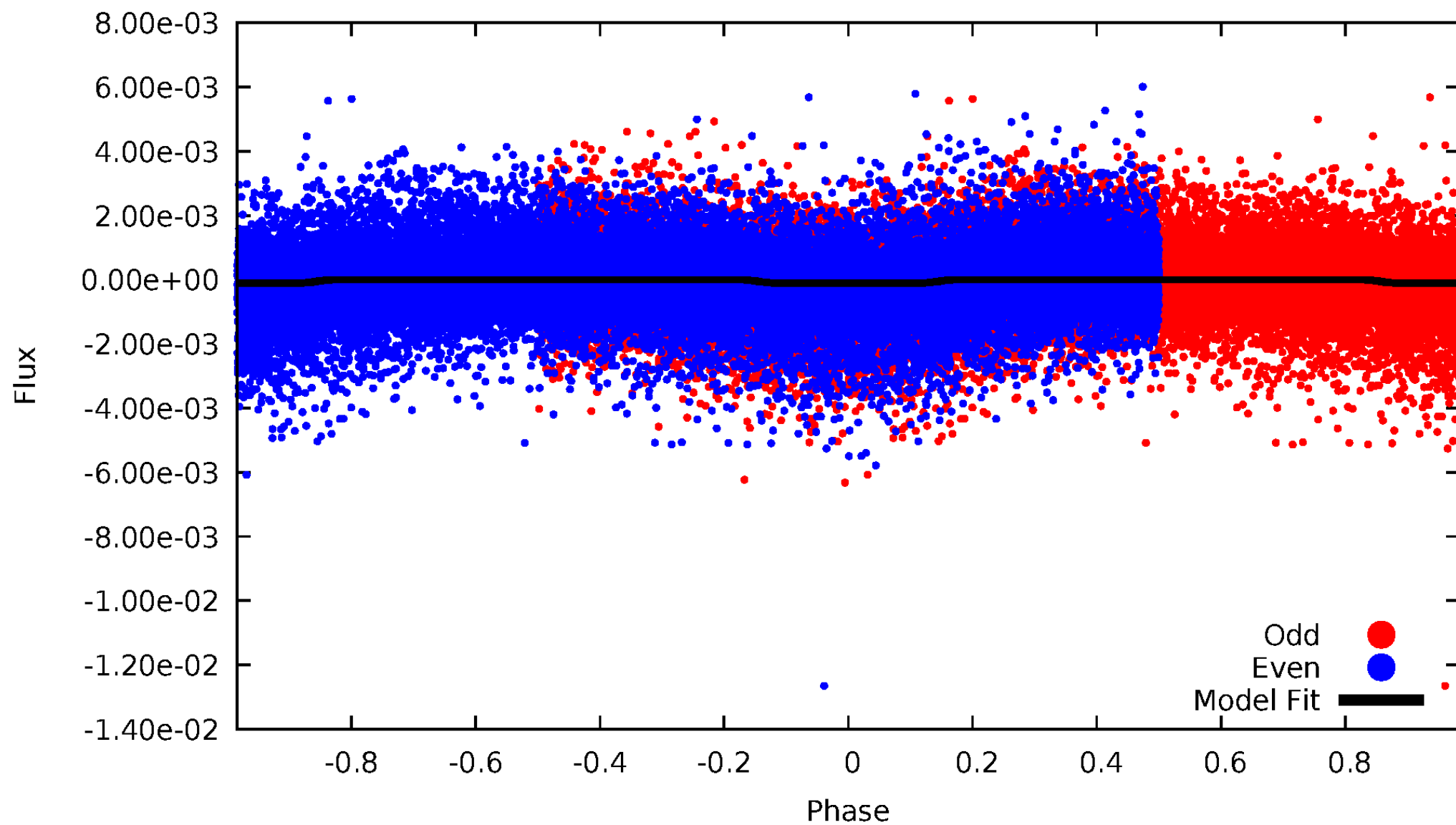
DV Odd/Even

TCE 008750094-01



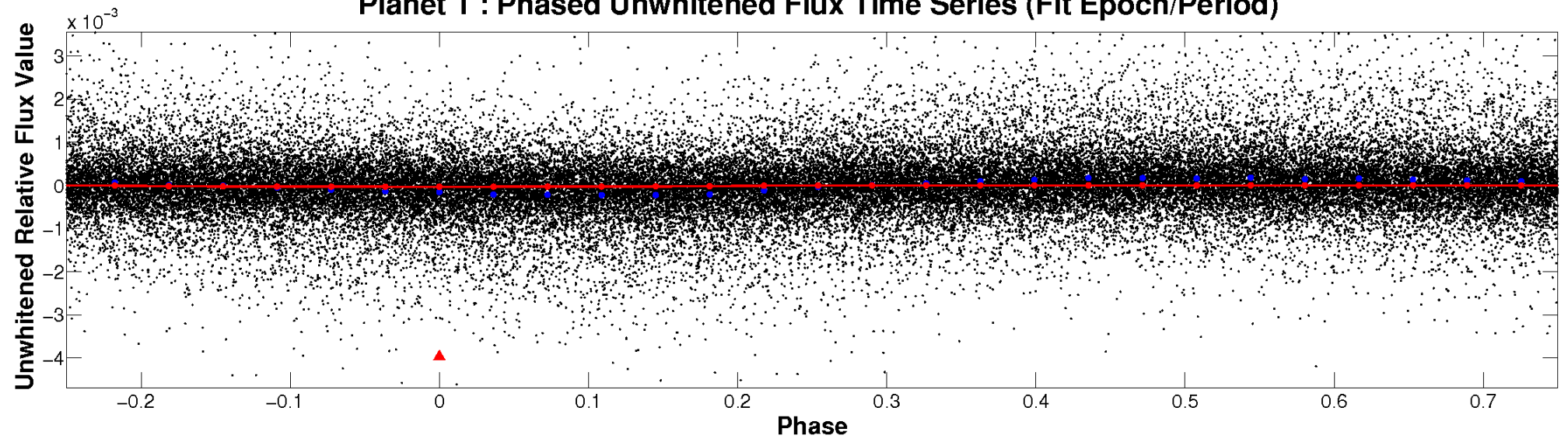
ALT Odd/Even

TCE 008750094-01

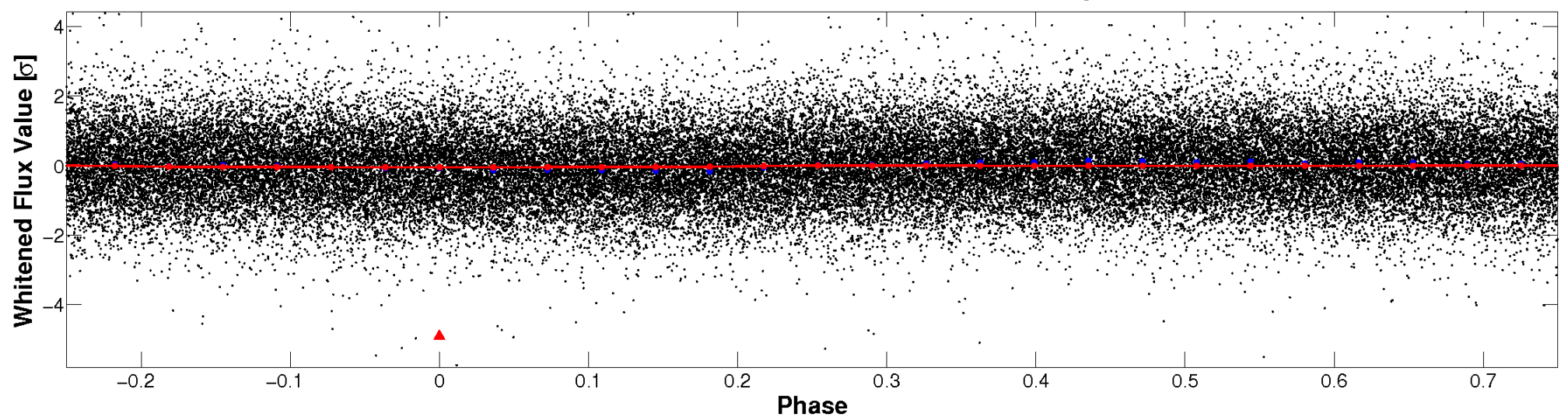


Non-Whitened Vs. Whitened Light Curve

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

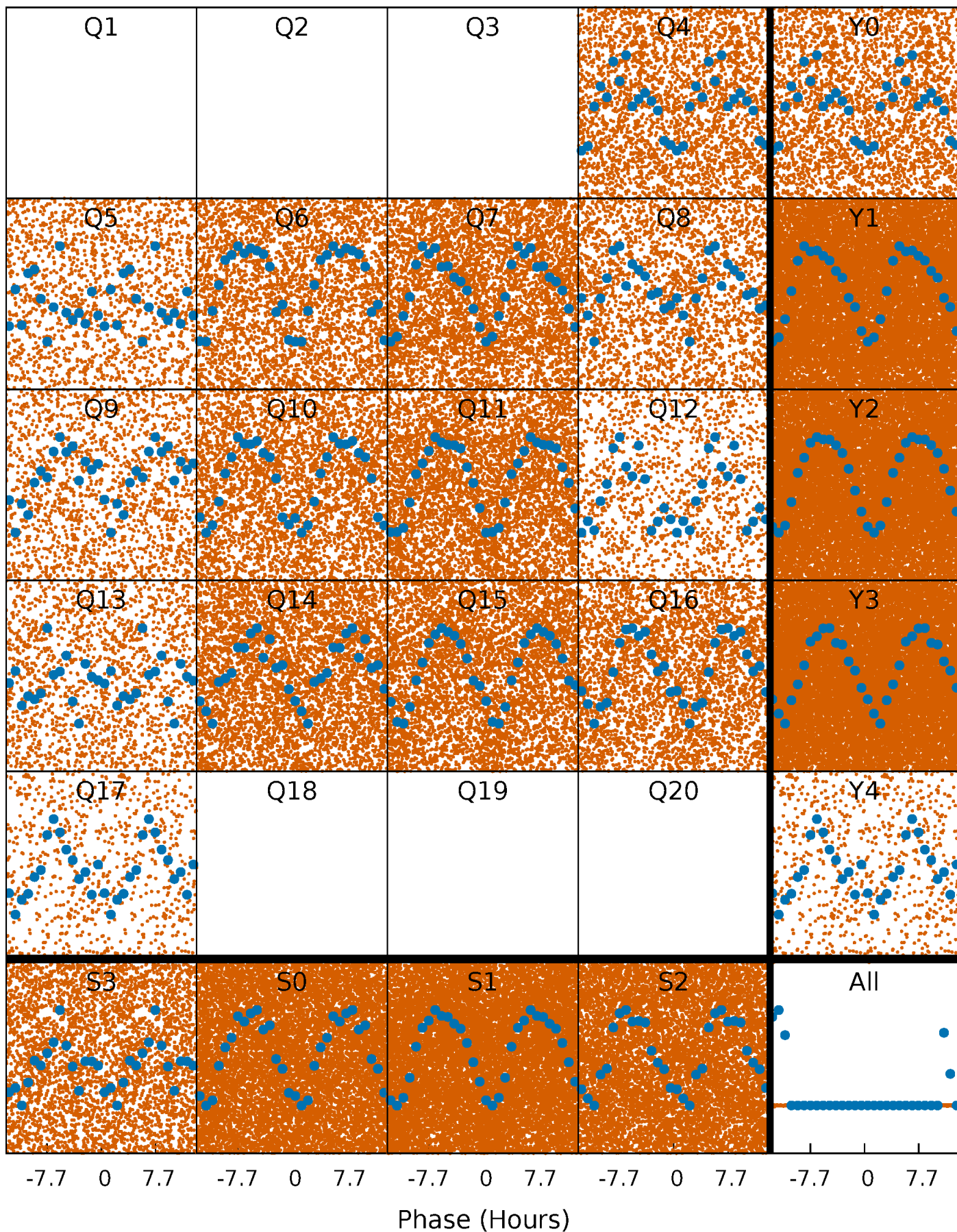


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



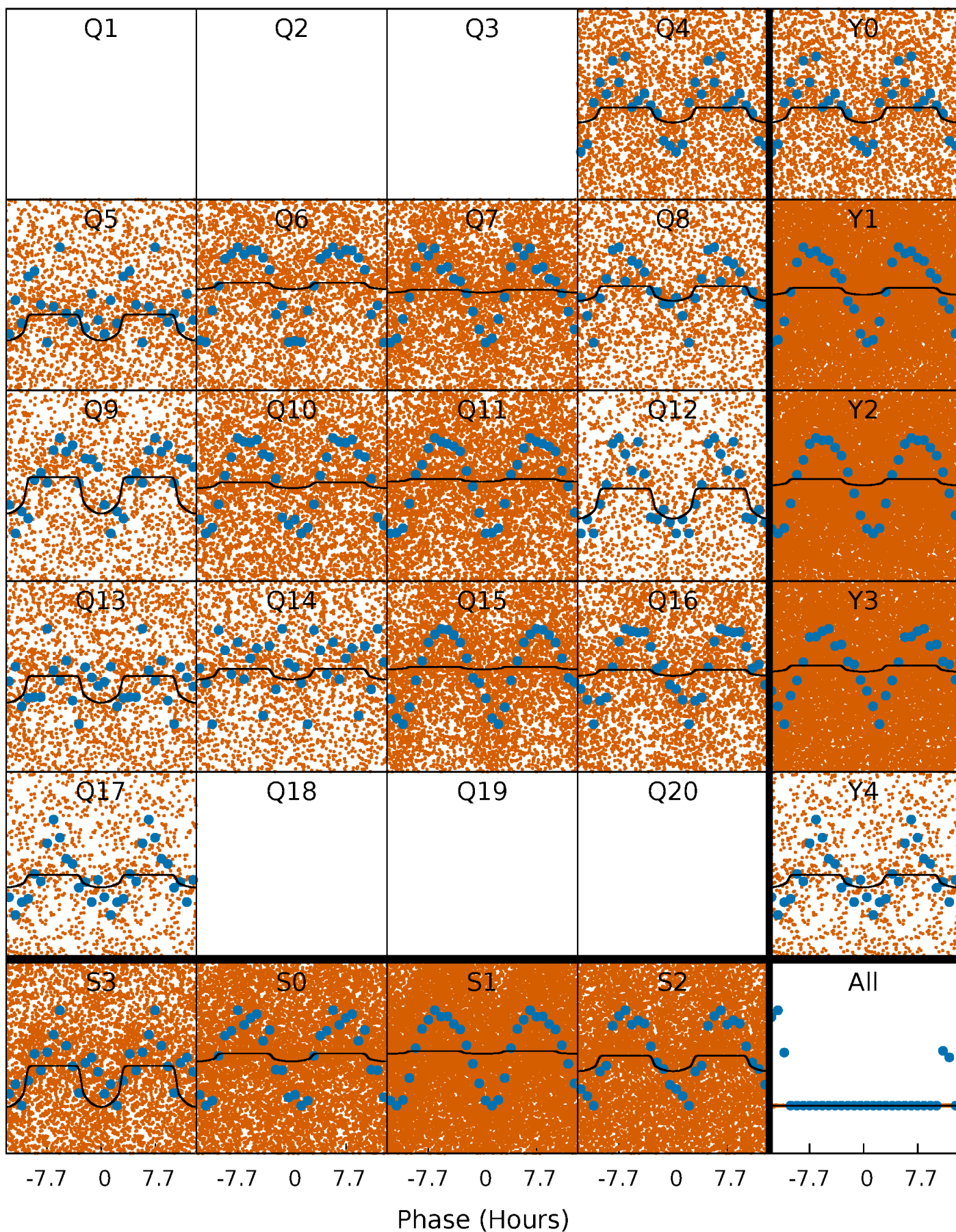
PDC Quarter-Phased Transit Curves

TCE 008750094-01 P= 0.563352 Days $T_0=131.748841$ (BKJD)



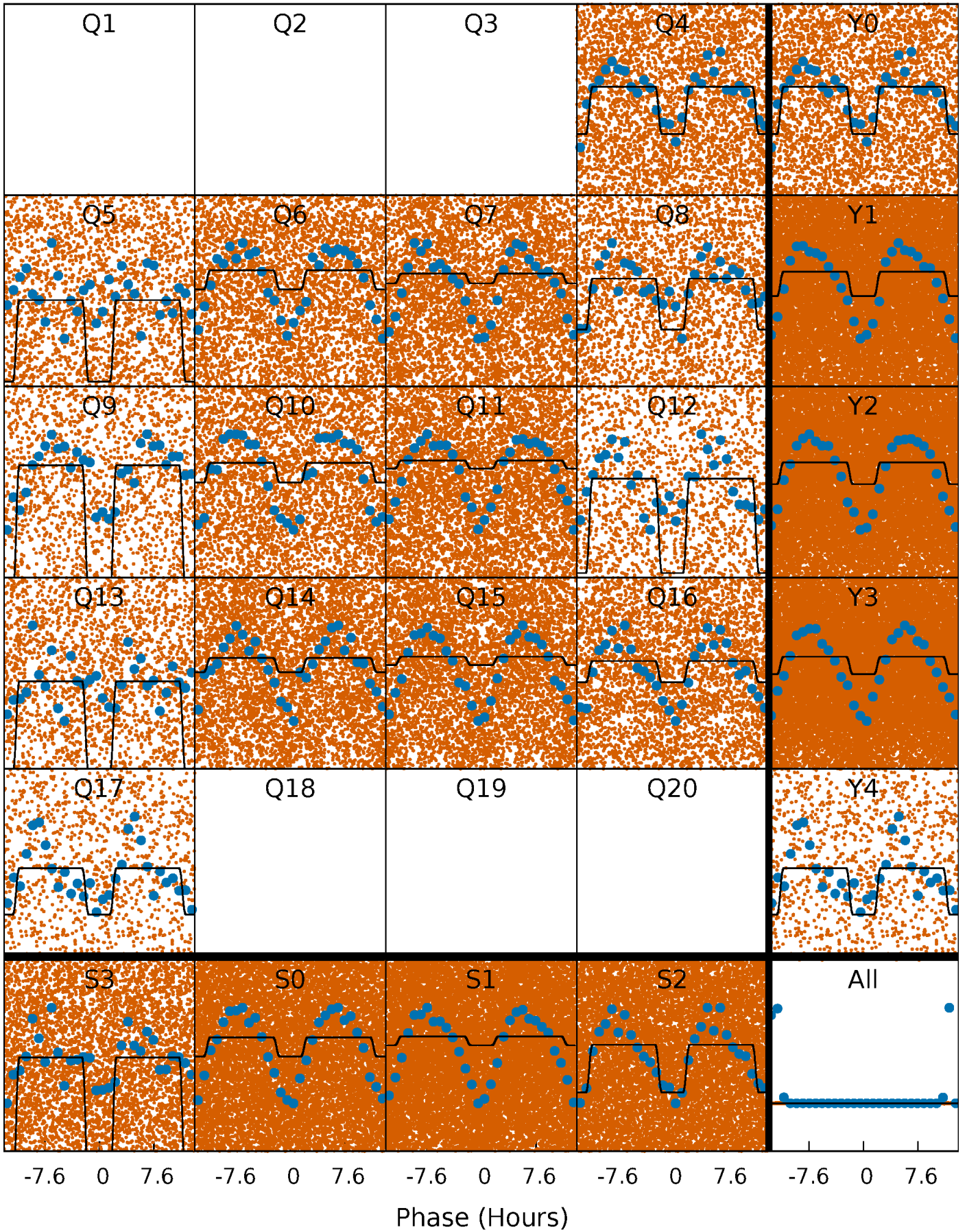
DV Quarter-Phased Transit Curves

TCE 008750094-01 P= 0.563352 Days $T_0=131.748841$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

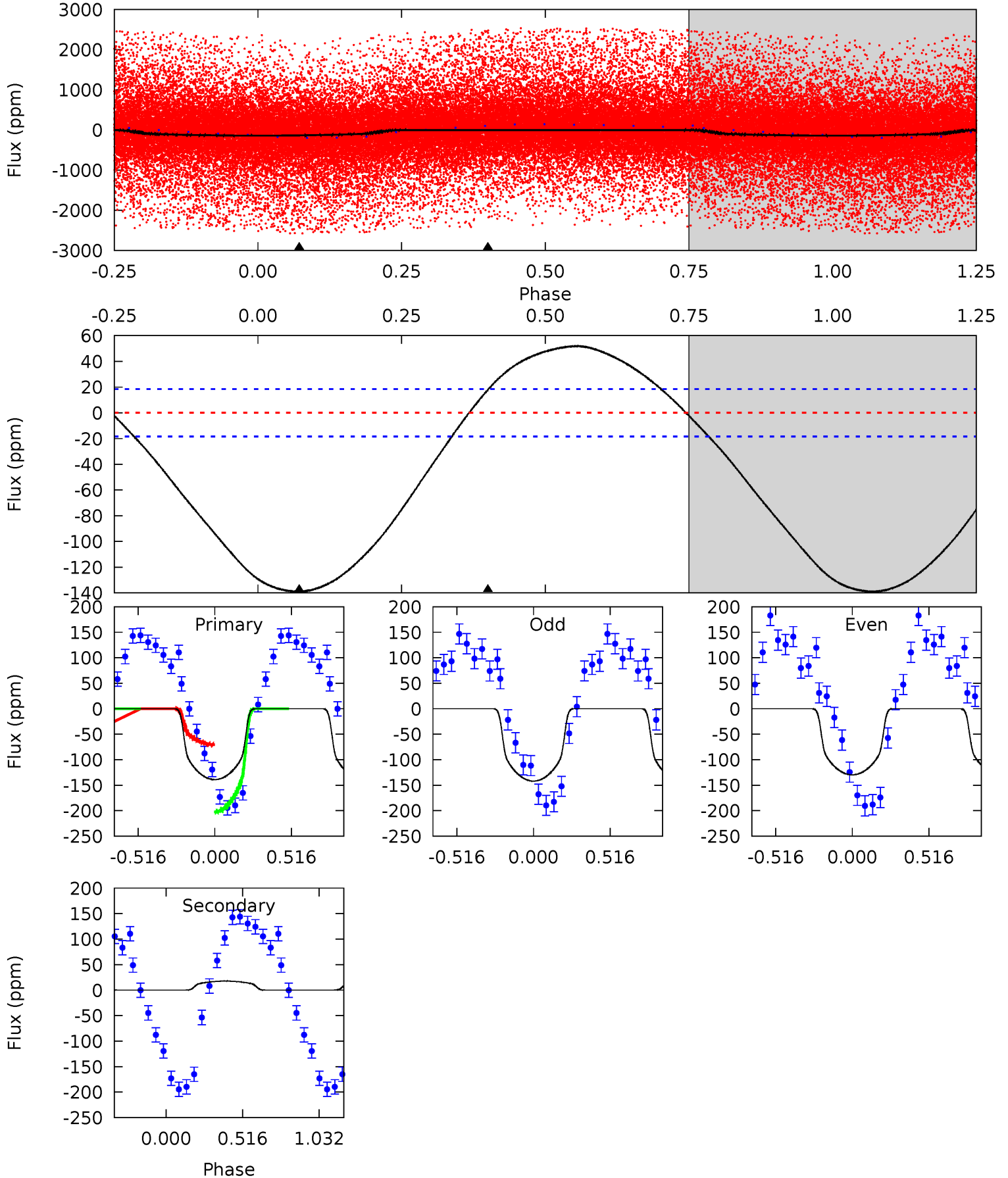
TCE 008750094-01 P= 0.563395 Days $T_0=131.736183$ (BKJD)



DV Model-Shift Uniqueness Test

008750094-01, P = 0.563352 Days, E = 131.748841 Days

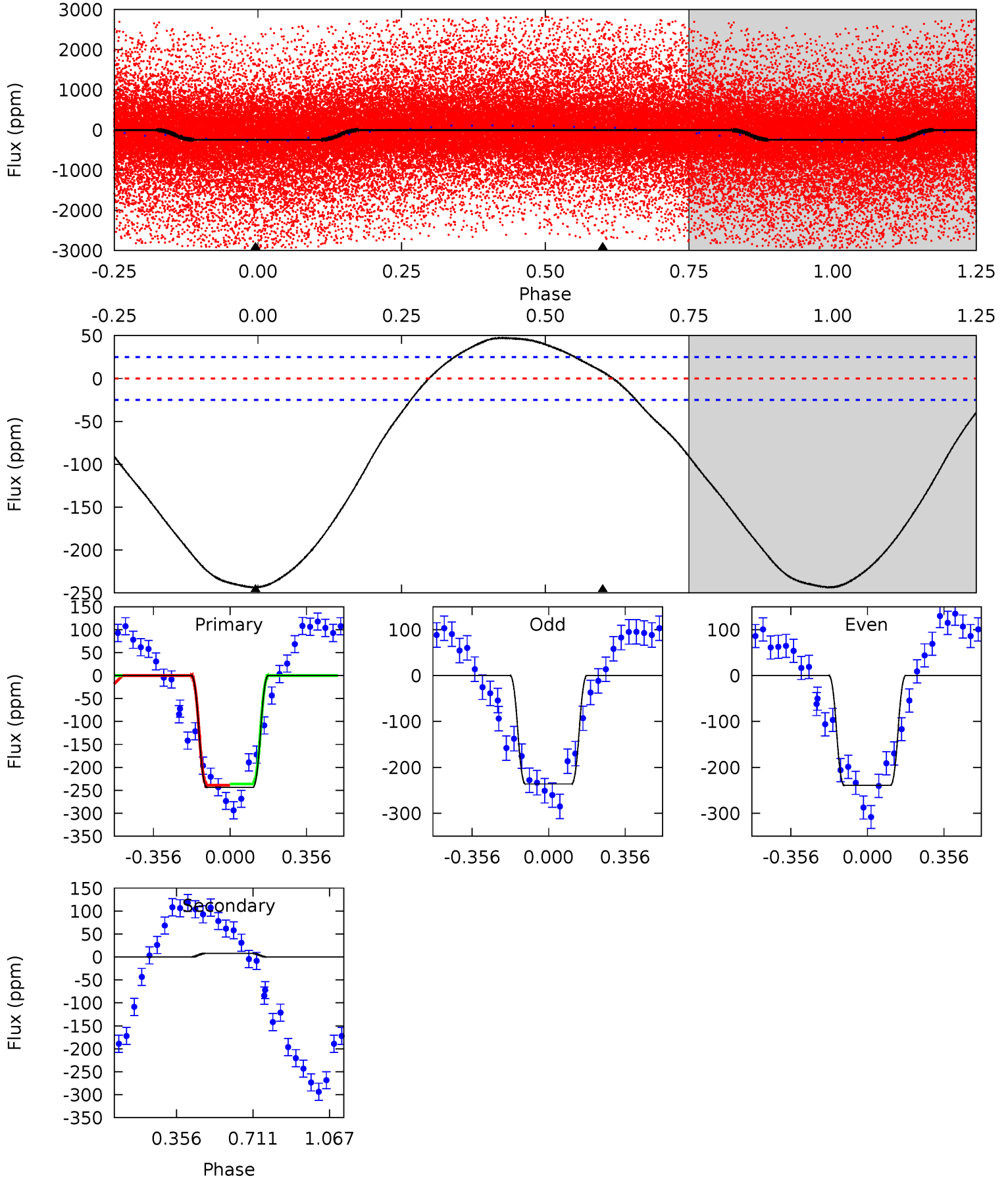
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.7	-4.04	0	0	4.21	0.65	3.06	31.7	31.7	-4.04	-4.04	1.41	1.43	0.27	15.4



Alt Model-Shift Uniqueness Test

008750094-01, P = 0.563395 Days, E = 131.736183 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
41.7	-1.31	0	0	4.29	0.92	3.54	41.7	41.7	-1.31	-1.31	0.26	2.11	0.16	0.22



Stellar Parameters For KIC 008750094

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5662^{+169}_{-186}	$4.560^{+0.033}_{-0.176}$	$-0.120^{+0.300}_{-0.300}$	$0.840^{+0.220}_{-0.073}$	$0.937^{+0.094}_{-0.115}$	$2.228^{+0.399}_{-1.025}$
	+3%/-3%	+1%/-4%	+250%/-250%	+26%/-9%	+10%/-12%	+18%/-46%
Source	KIC0	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 008750094-01 / KOI 7086.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	18 ± 4	$0.59^{+0.17}_{-0.17}$	2871^{+179}_{-131}	-4854^{+492}_{-777}	$-4.621^{+2.127}_{-4.859}$
Alt.	8 ± 6	$1.02^{+0.20}_{-0.18}$	2862^{+185}_{-121}	-3590^{+431}_{-337}	$-0.688^{+0.578}_{-0.624}$

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 $A_{obs} \gg 1.0$

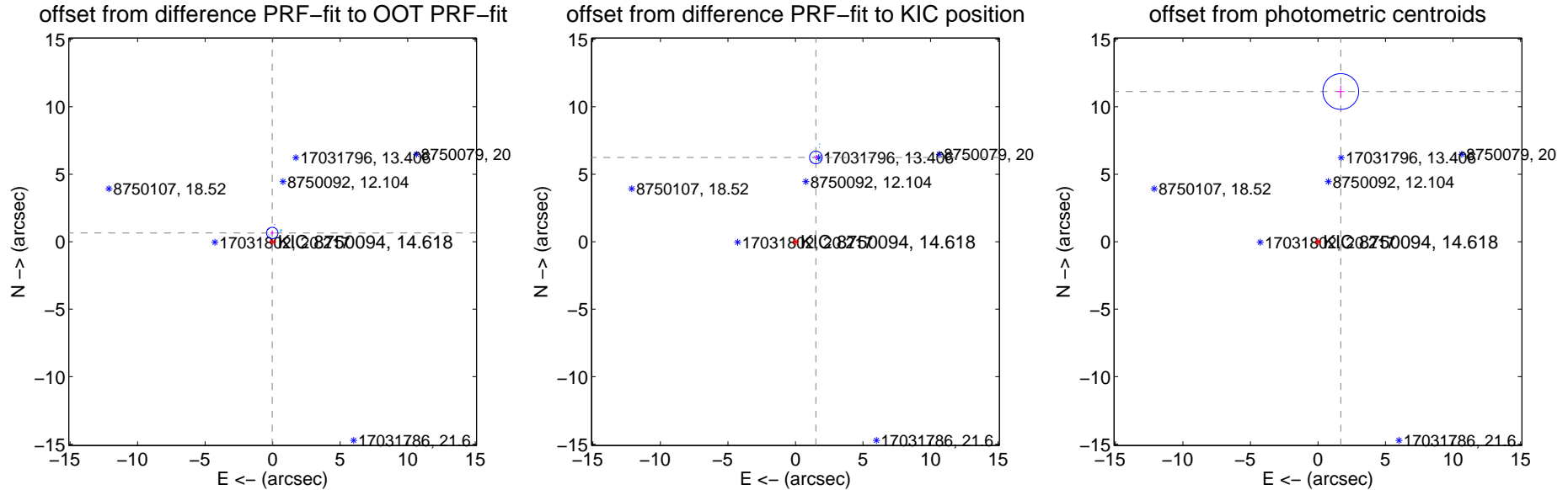
DV Centroid Data

Supplemental centroid analysis for 008750094-01. Kepler magnitude: 14.62. Transit SNR 6.37

There are 8 quarters with good PRF difference image offsets

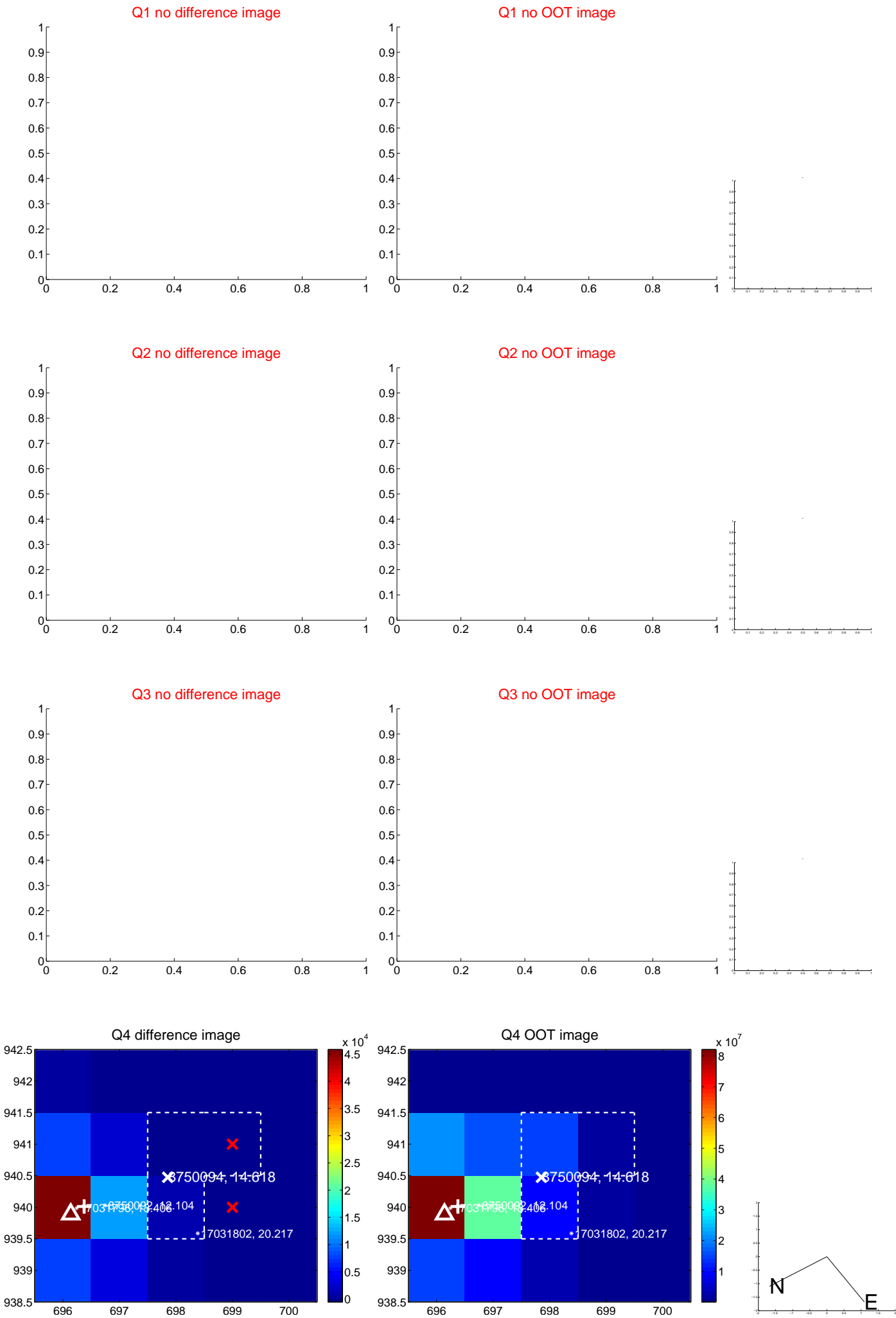
The OOT PRF centroid is offset from the target star catalog position by about 5.35 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.645 ± 0.141	4.56	0.029 ± 0.147	0.644 ± 0.141
PRF-fit source offset from KIC position	6.422 ± 0.157	40.99	-1.513 ± 0.111	6.241 ± 0.153
photometric centroid source offset	11.26 ± 0.44	25.50	-1.69 ± 0.28	11.13 ± 0.44

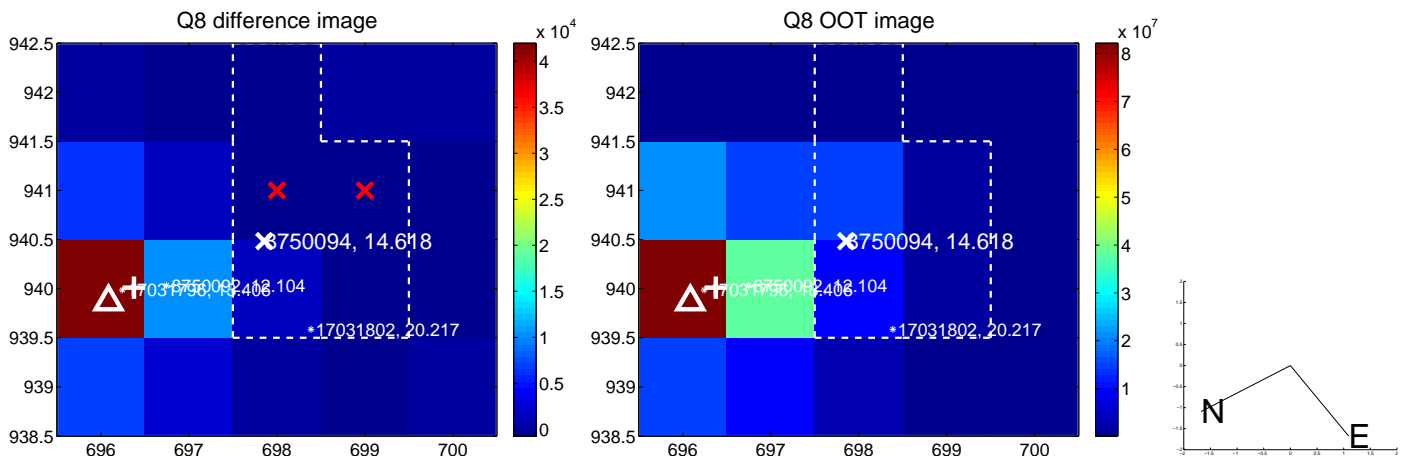
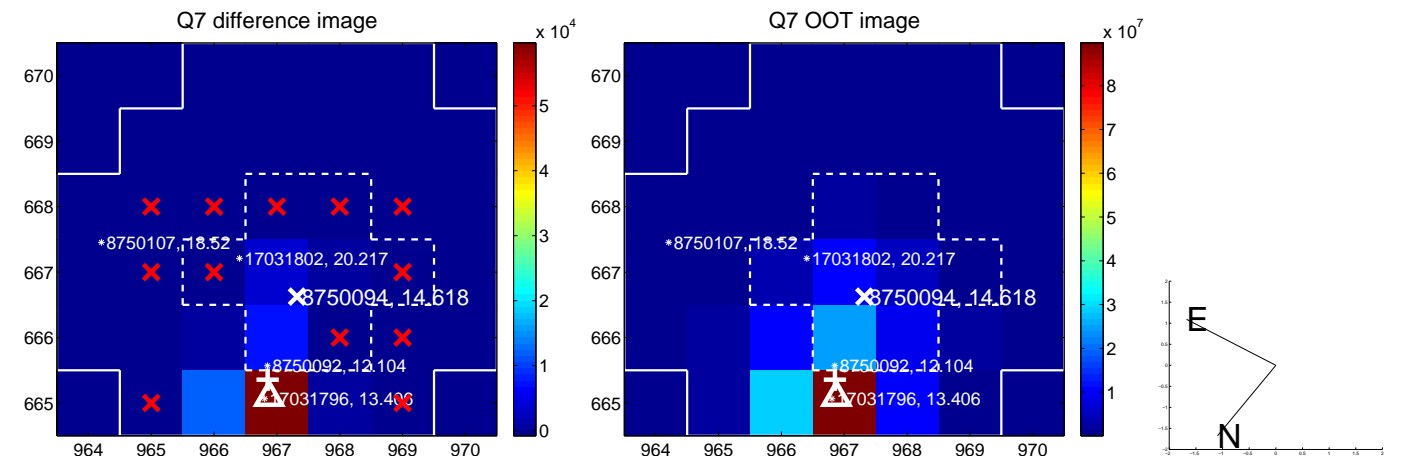
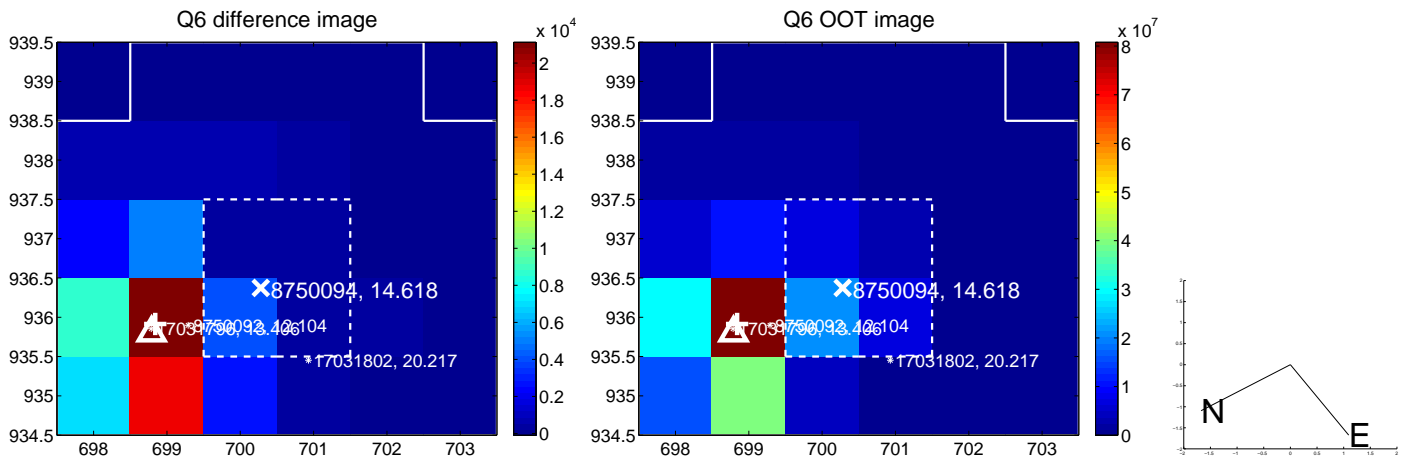
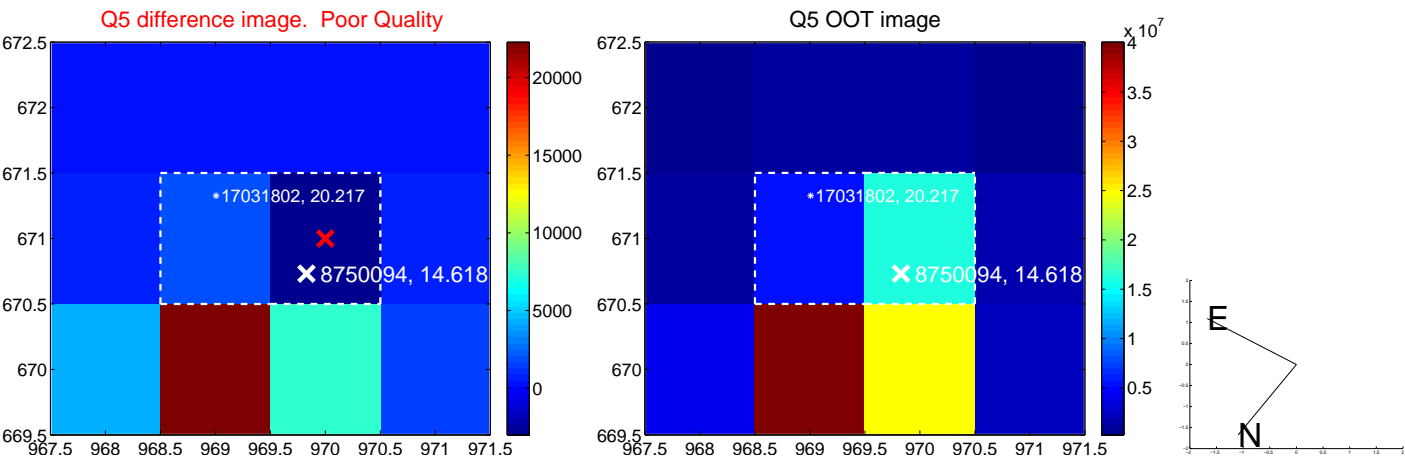


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

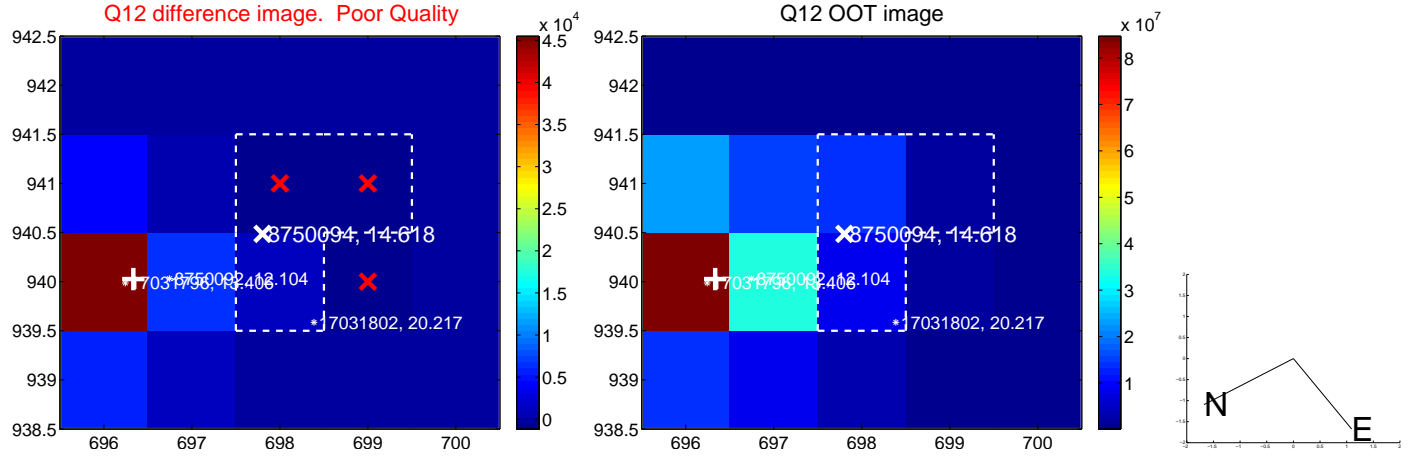
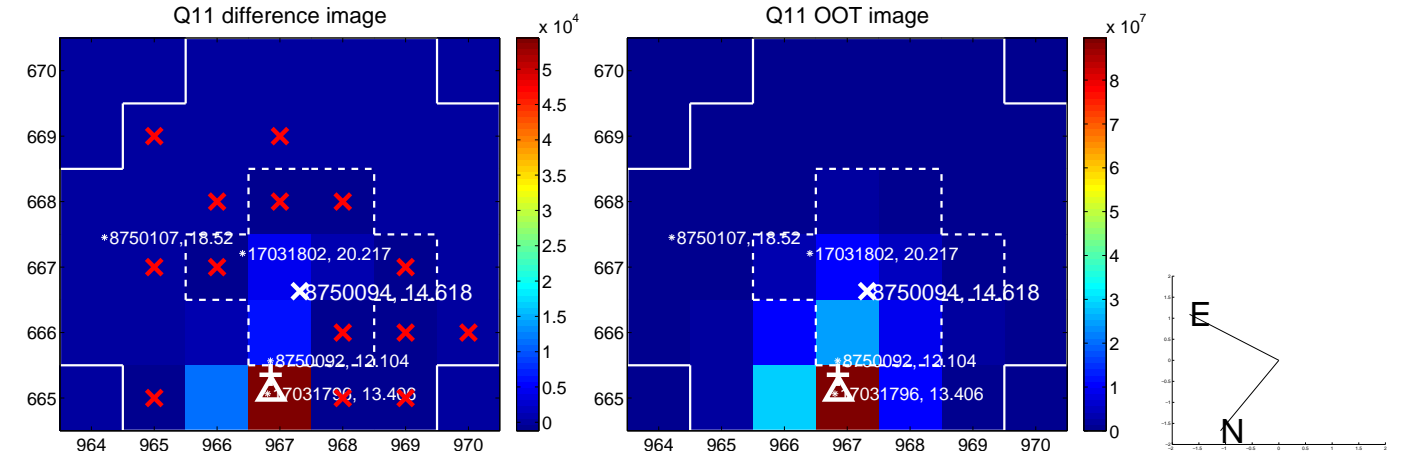
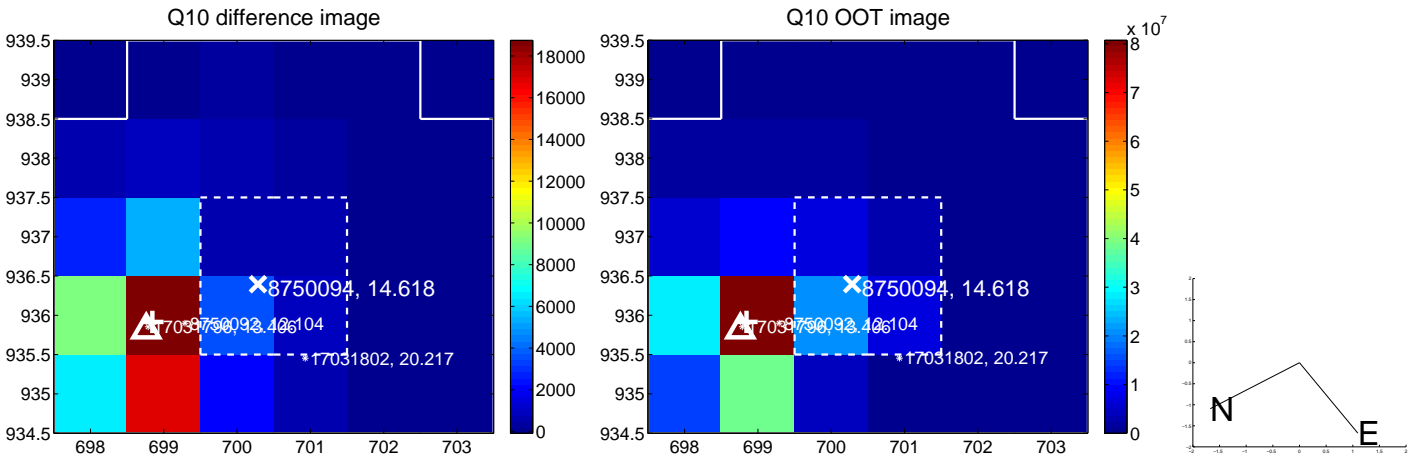
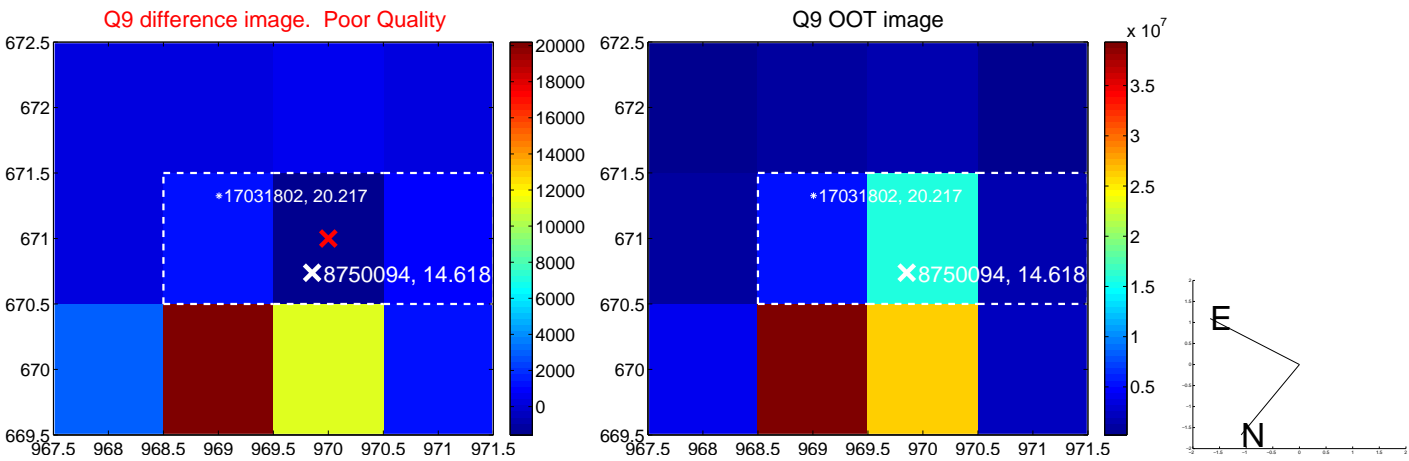
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



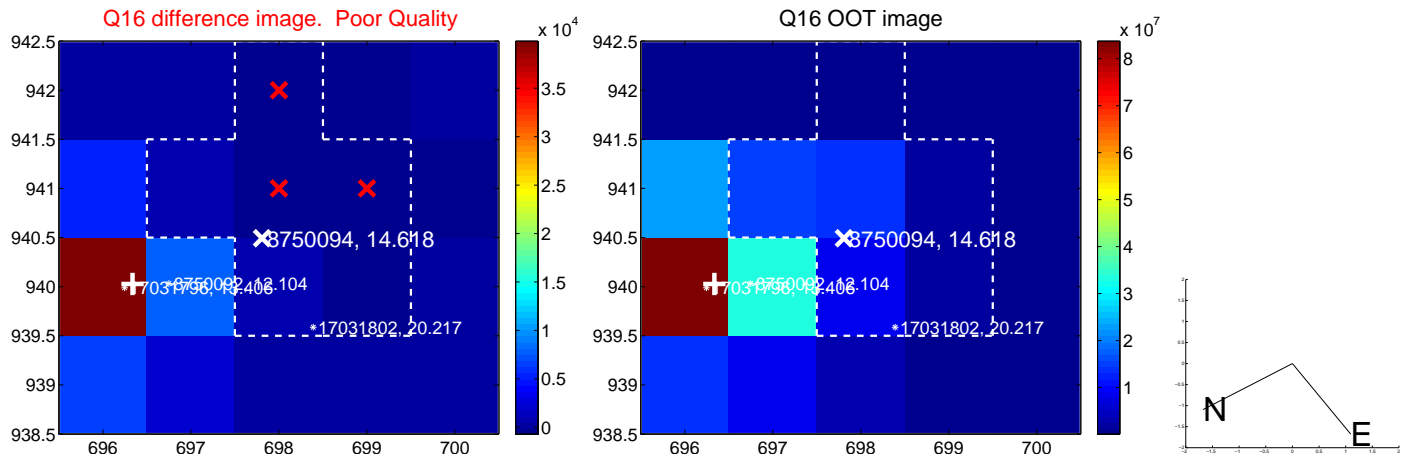
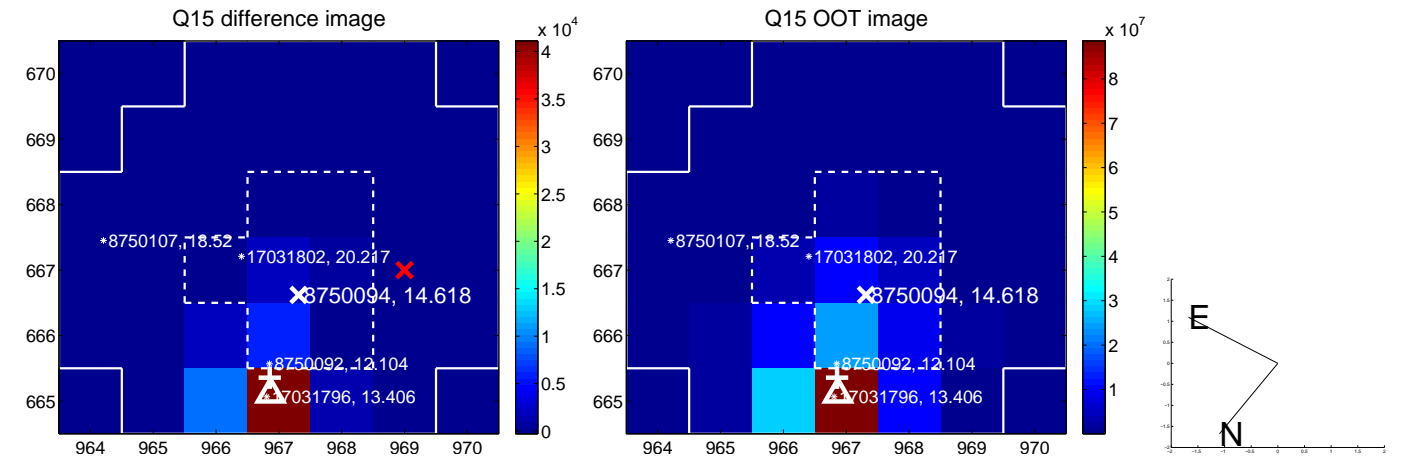
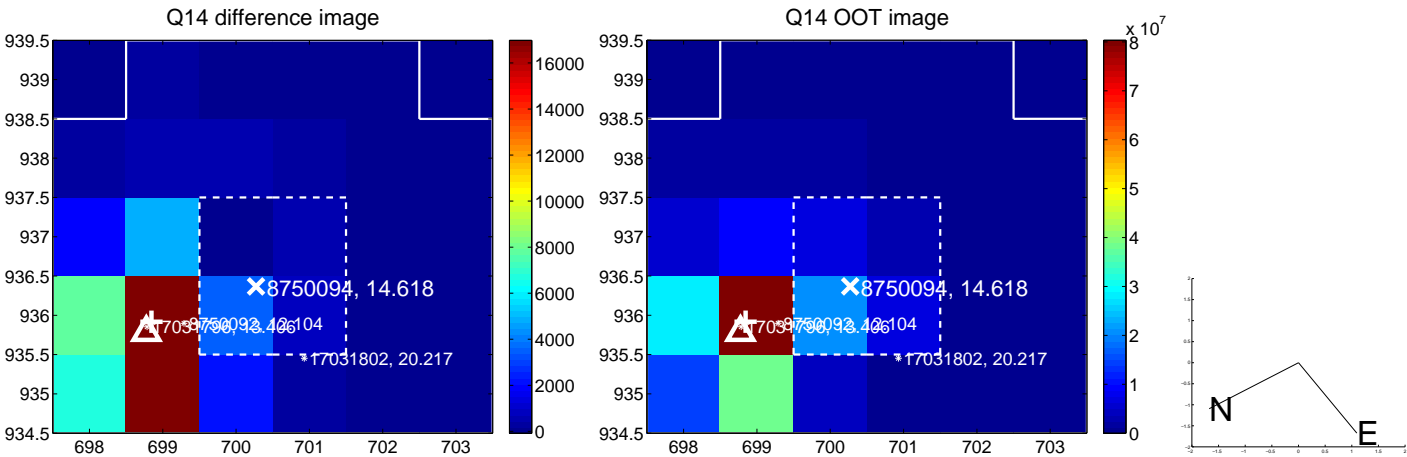
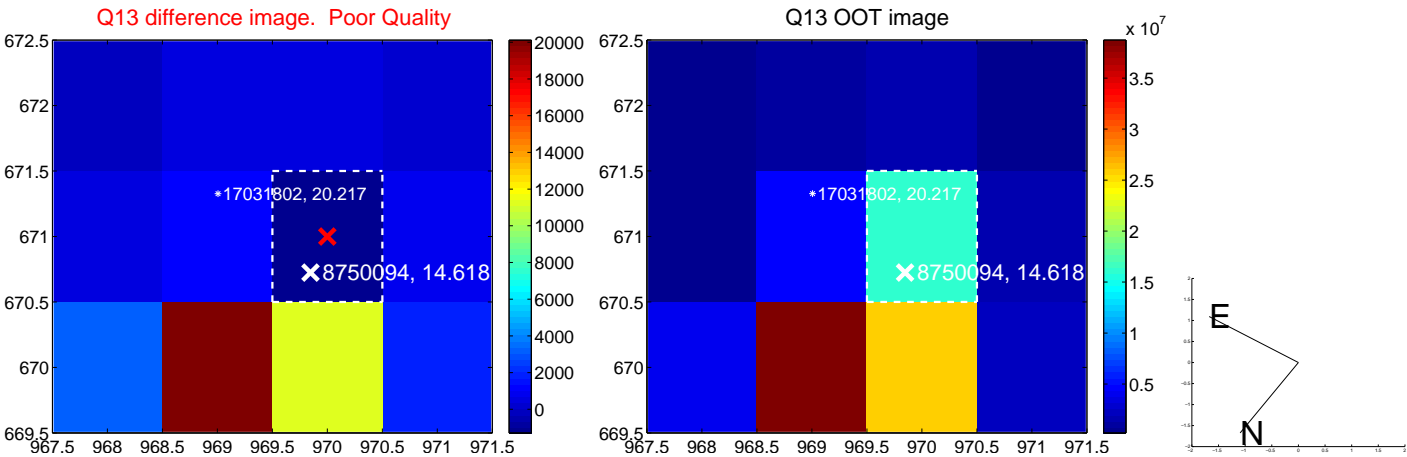
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



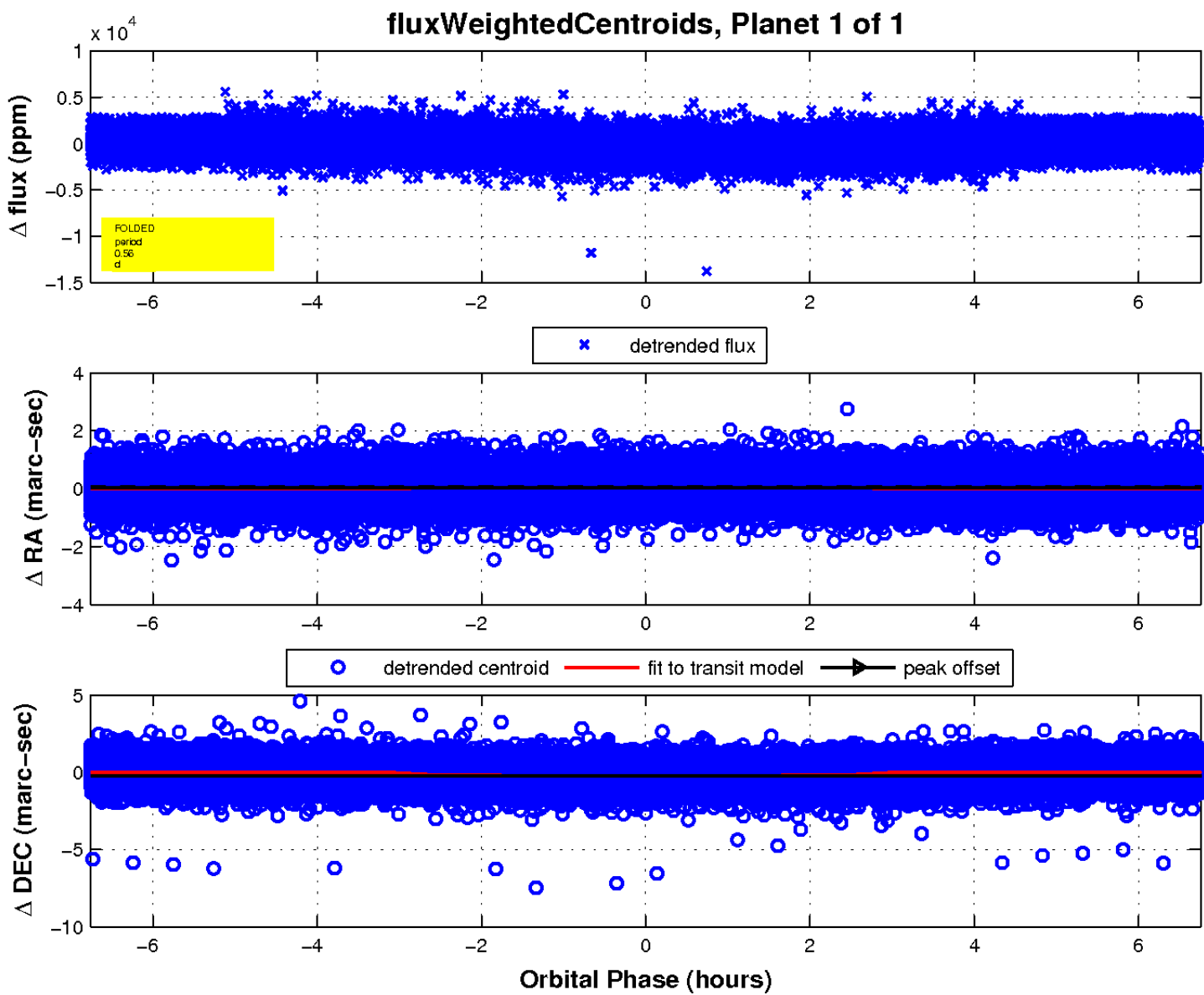
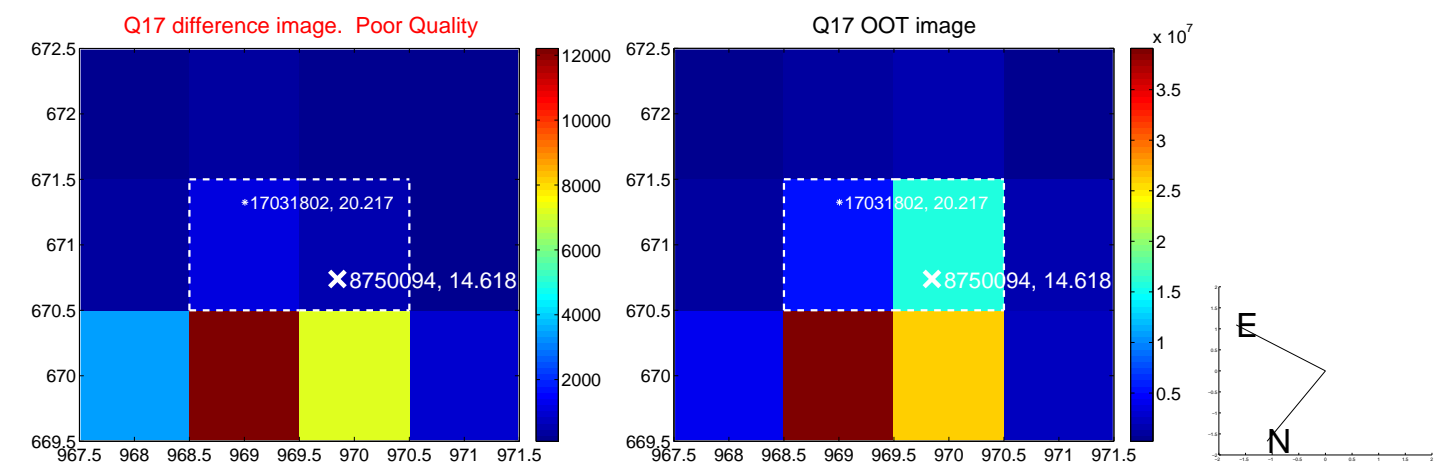
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

