

KIC 009172627

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})
009172627-01	OBS	No	1.266303	131.828342	2.4	12.019	8.7	2.3	3.49	7570	0.58	42693.50

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009172627-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_FEW_DIFFS

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

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

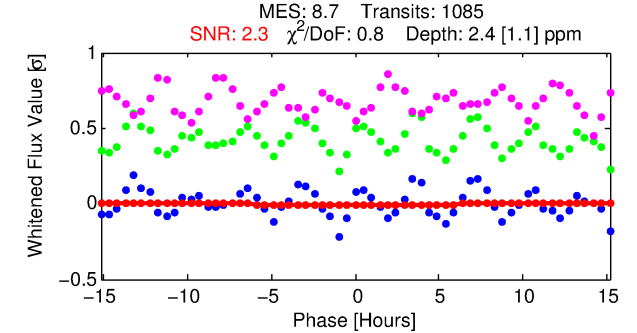
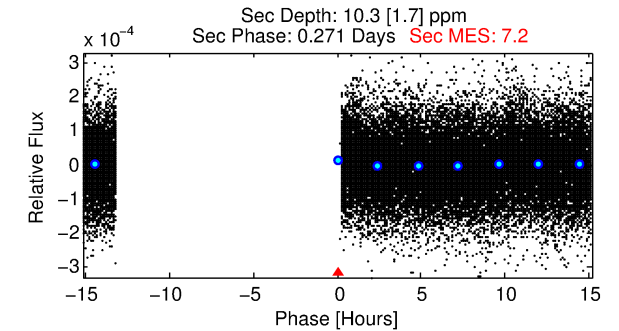
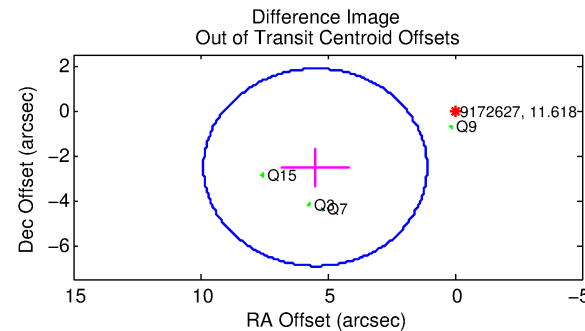
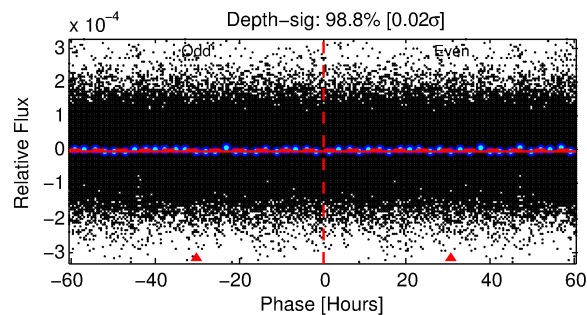
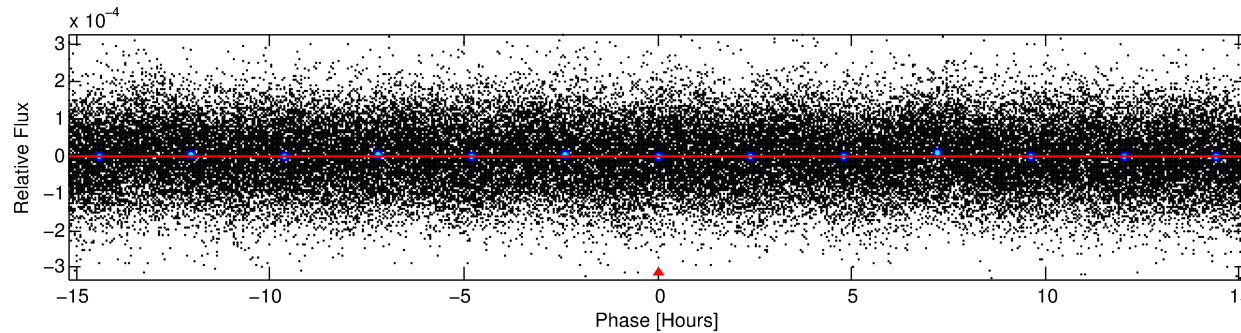
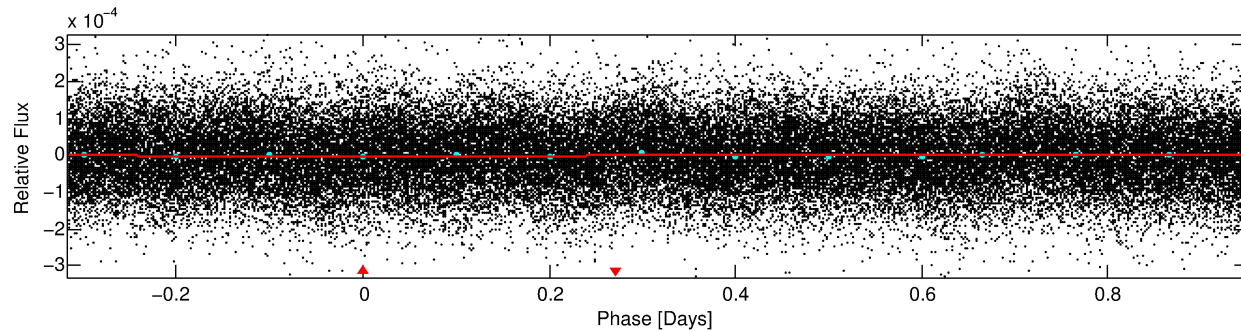
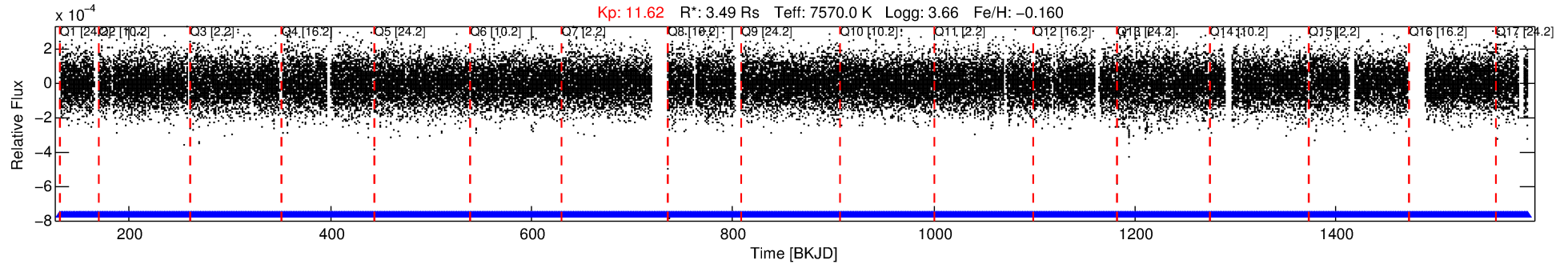
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009172627-01

No Significant Match Found

DV One-Page Summary

KIC: 9172627 Candidate: 1 of 1 Period: 1.266 d



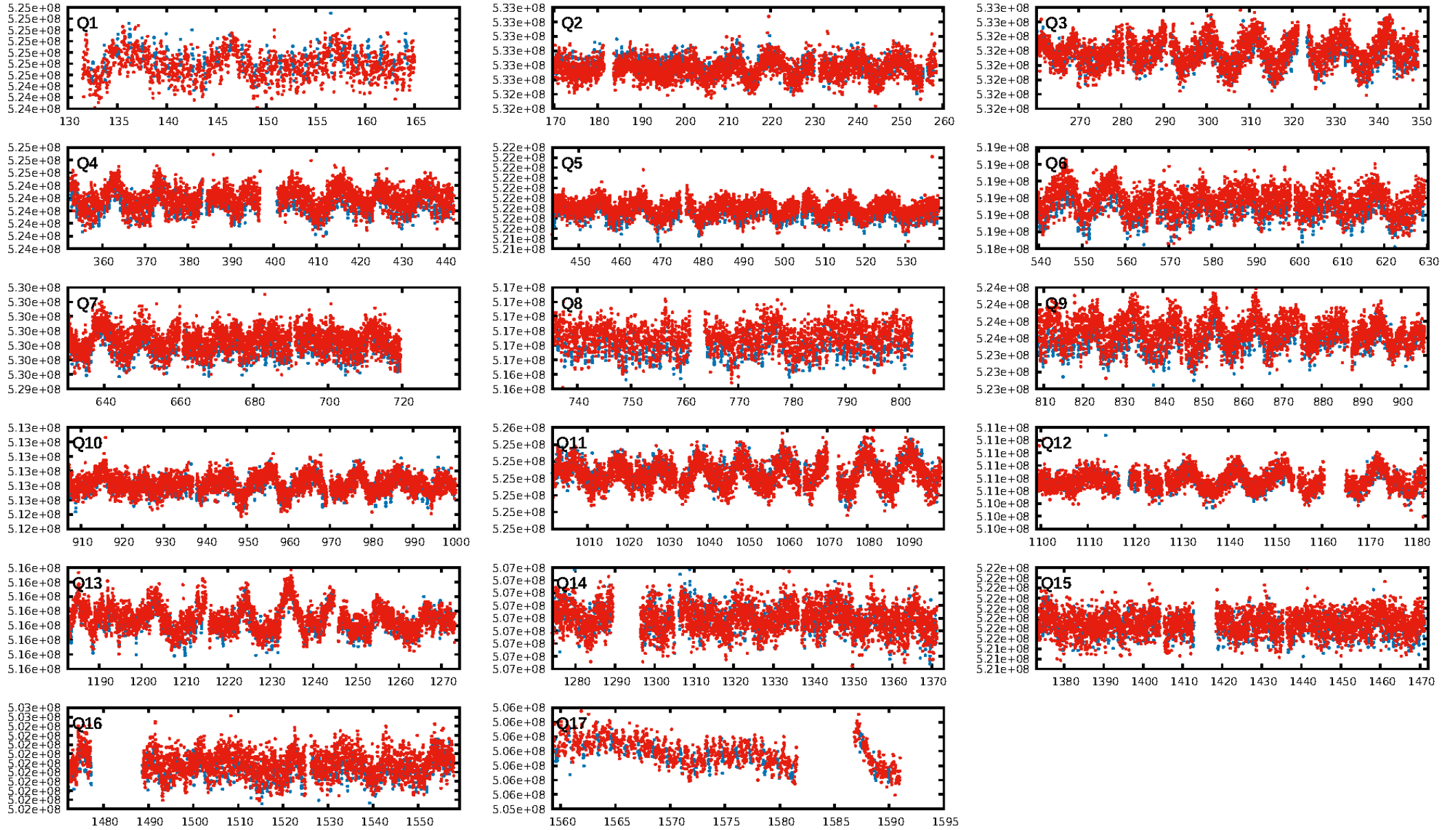
DV Fit Results:

Period = 1.26630 [0.00009] d
Epoch = 131.8283 [0.0233] BKJD
Rp/R* = 0.0015 [0.0029]
a/R* = 1.03 [0.64]
b = 0.70 [7.91]
Seff = 42693.50 [36477.27]
Teq = 3665 [783] K
Rp = 0.58 [1.13] Re
a = 0.0290 [0.0150] AU
Ag = 14.02 [53.99] [0.24 σ]
Teffp = 10965 [10316] K [0.71 σ]

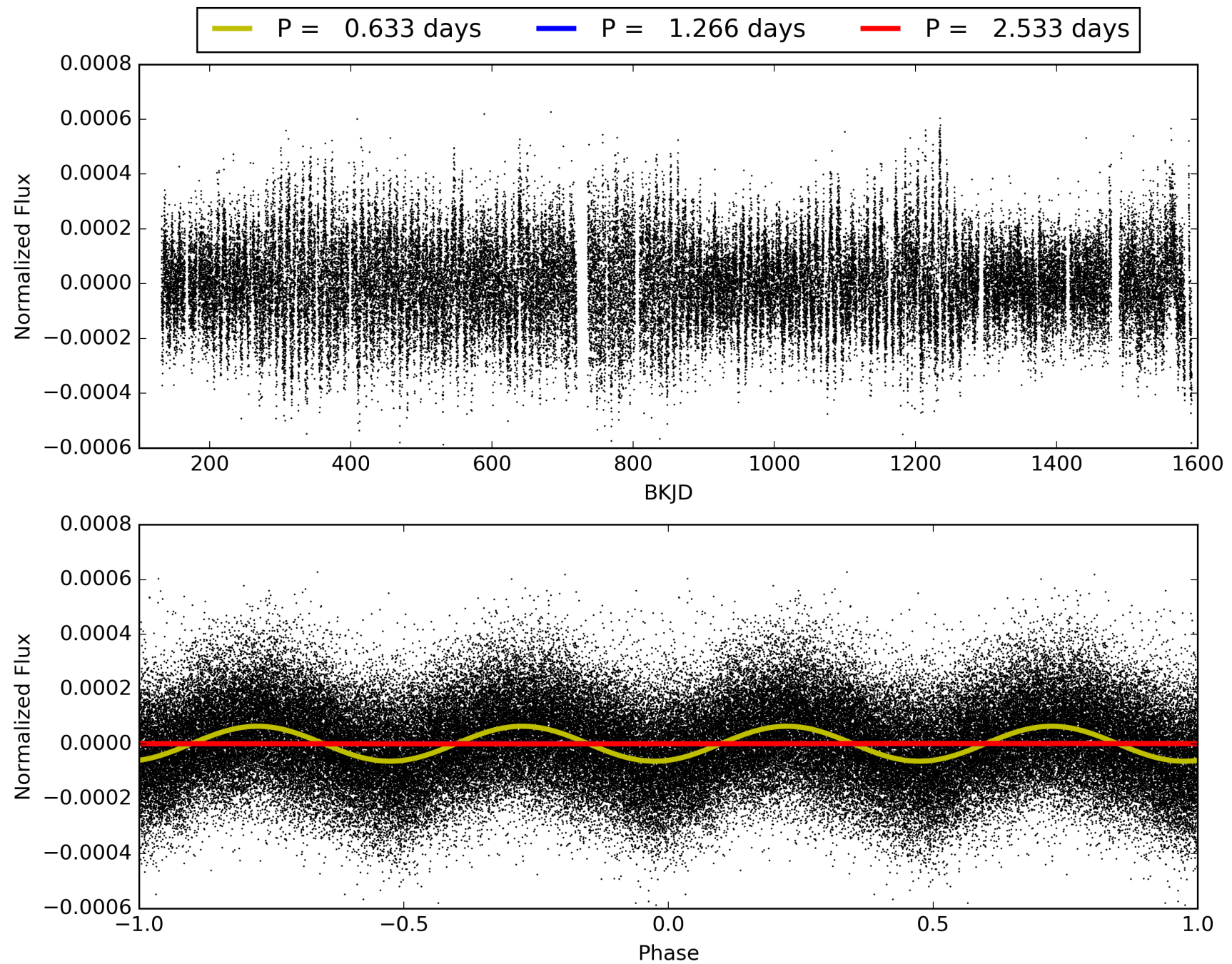
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1036/1036]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 6.031 arcsec [4.12 σ]
KicOffset-rm: 5.398 arcsec [3.16 σ]
OotOffset-st: 0/3/0/1 [4]
KicOffset-st: 0/3/0/1 [4]
DiffImageQuality-fgm: 0.25 [1/4]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 009172627-01, PDC Light Curves

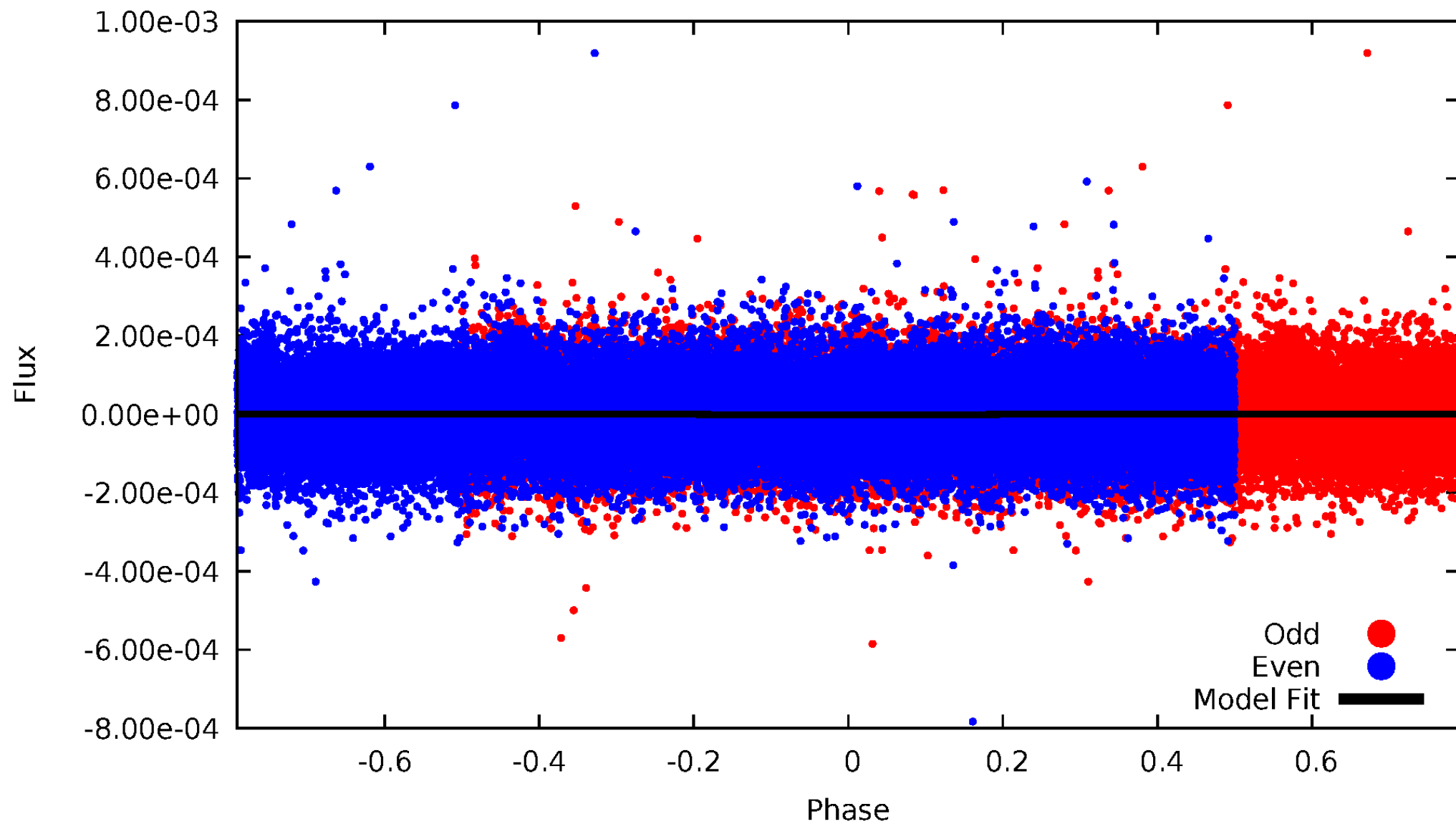


TCE 009172627-01



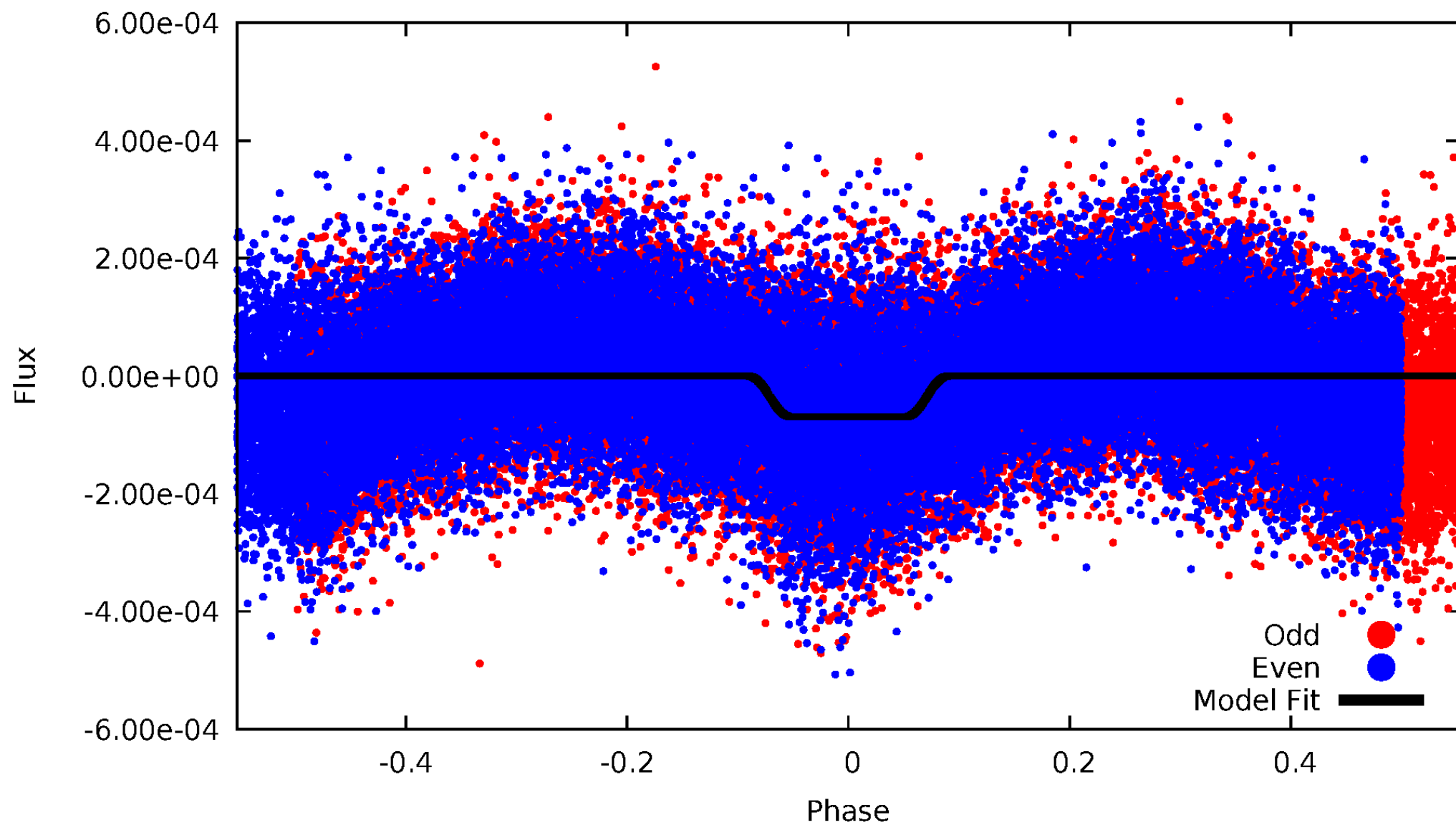
DV Odd/Even

TCE 009172627-01



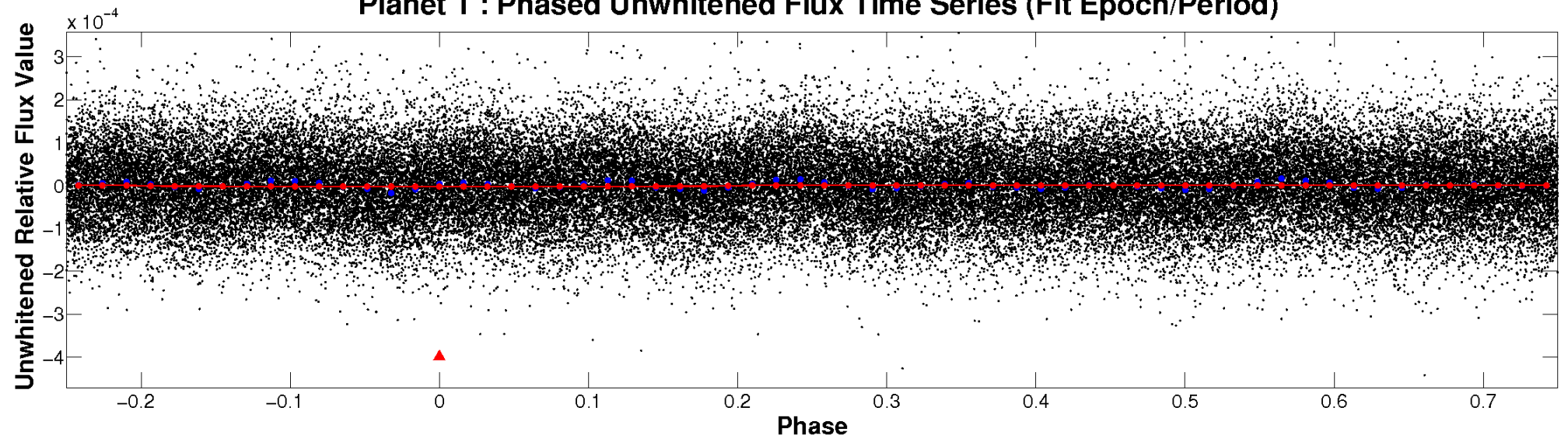
ALT Odd/Even

TCE 009172627-01

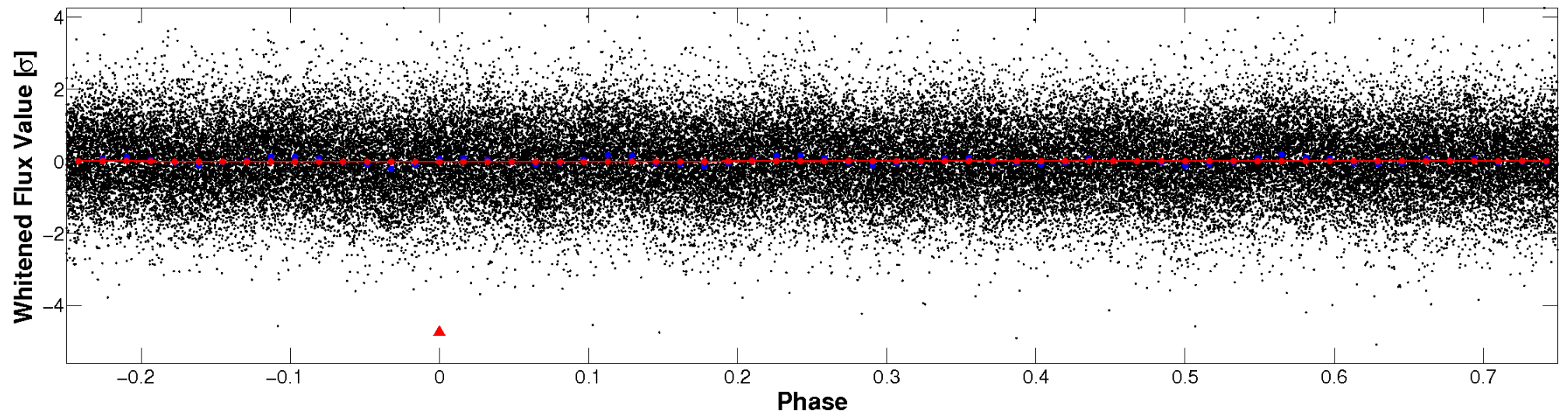


Non-Whitened Vs. Whitened Light Curve

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

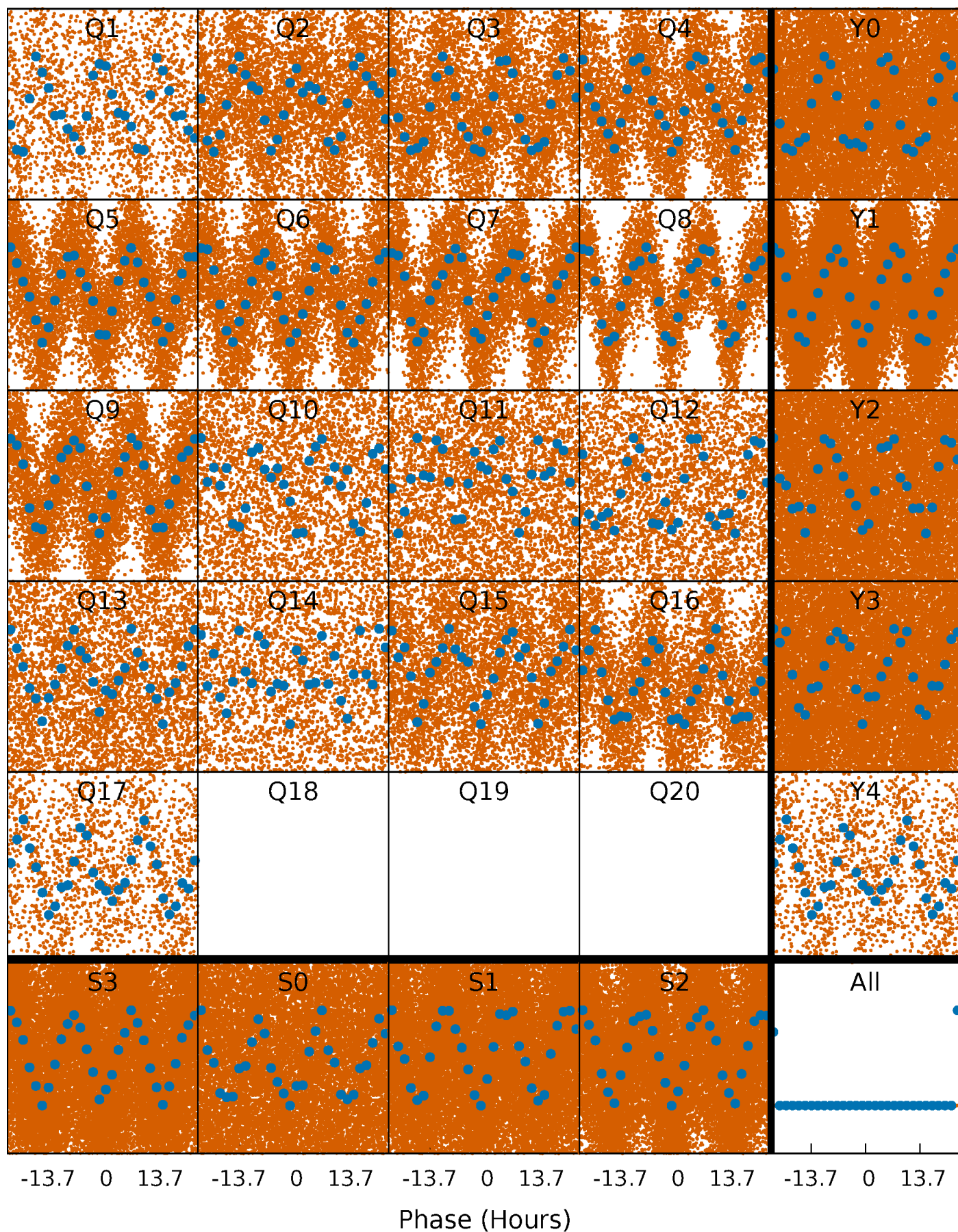


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



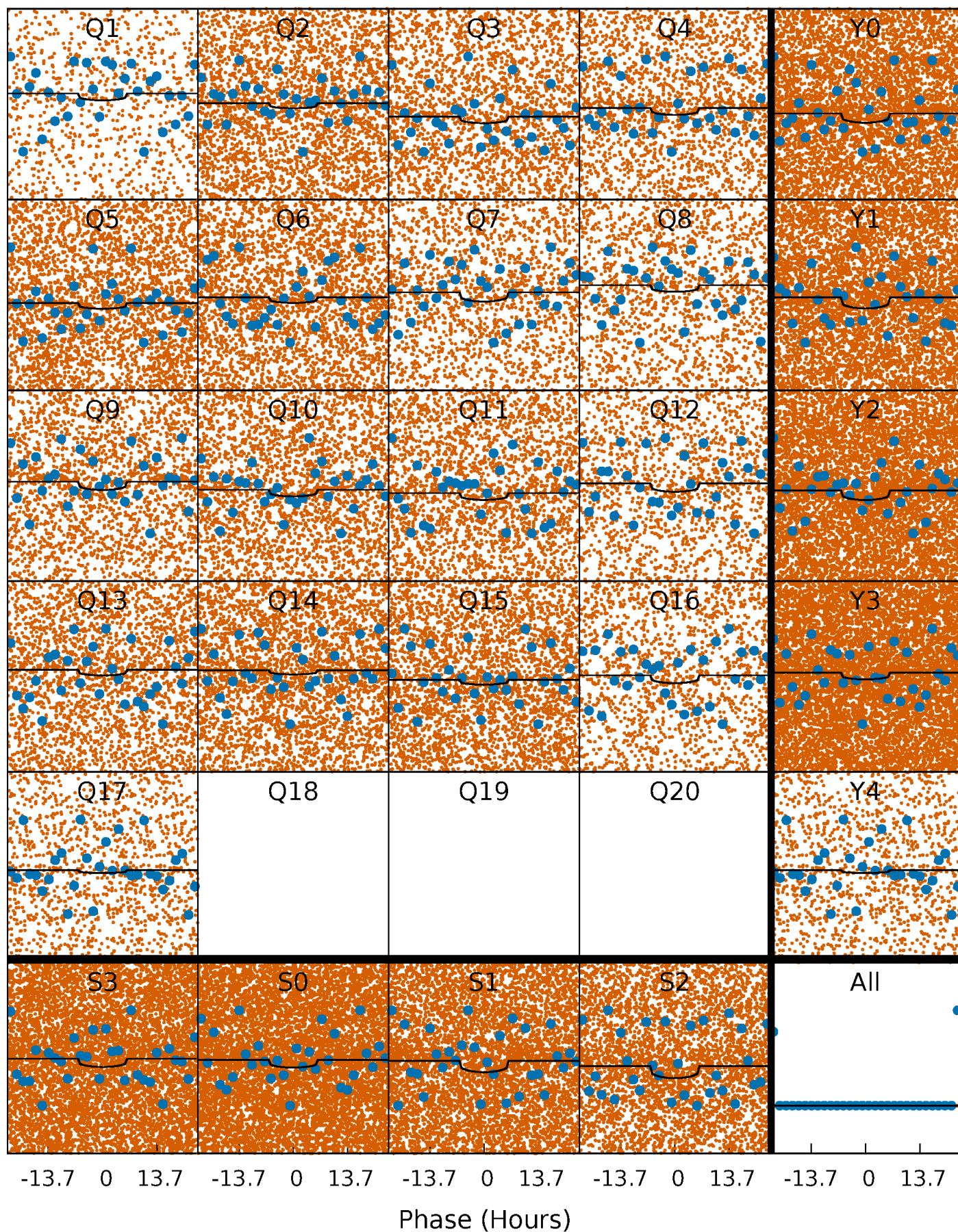
PDC Quarter-Phased Transit Curves

TCE 009172627-01 P= 1.266303 Days $T_0=131.828342$ (BKJD)



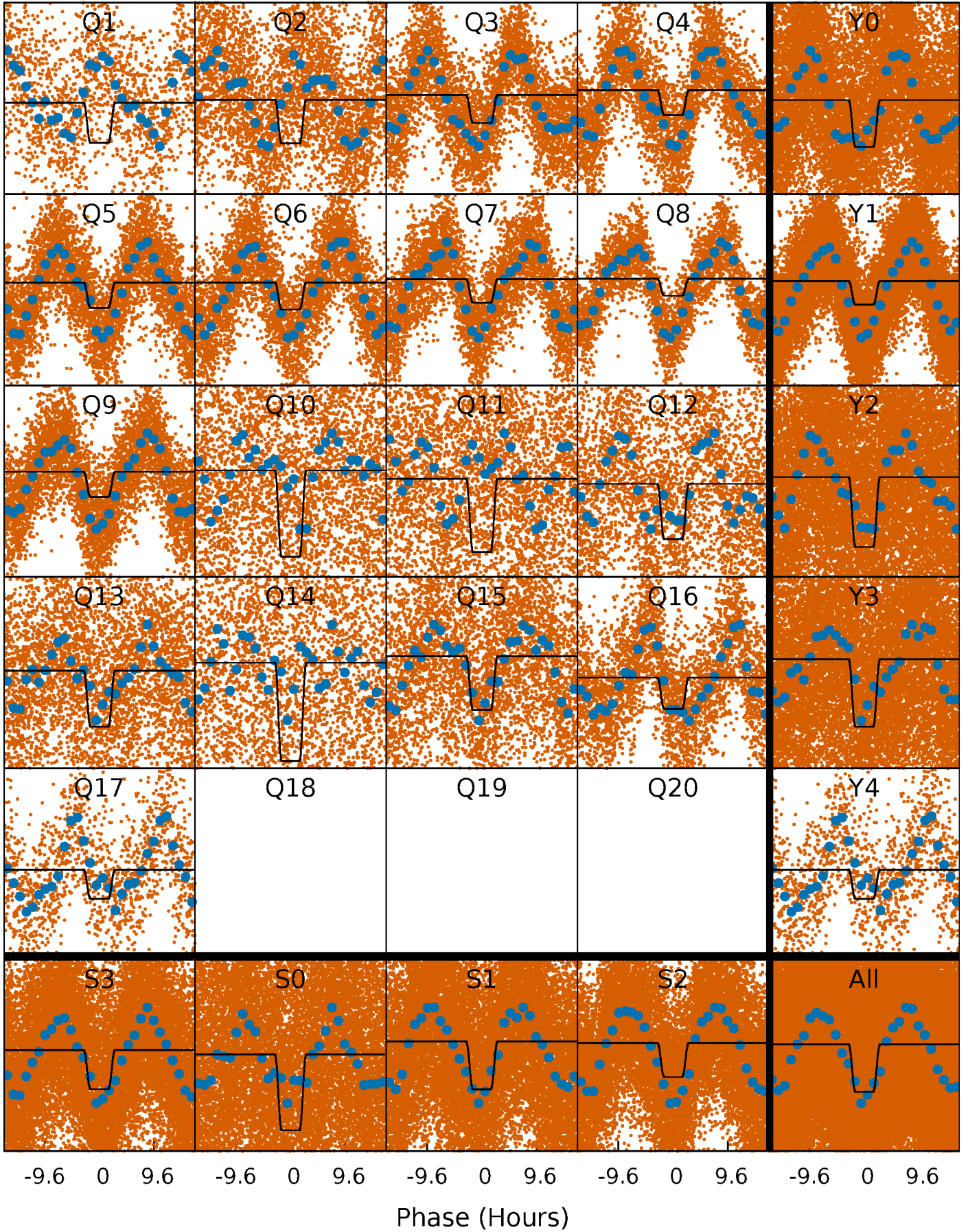
DV Quarter-Phased Transit Curves

TCE 009172627-01 P= 1.266303 Days $T_0=131.828342$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

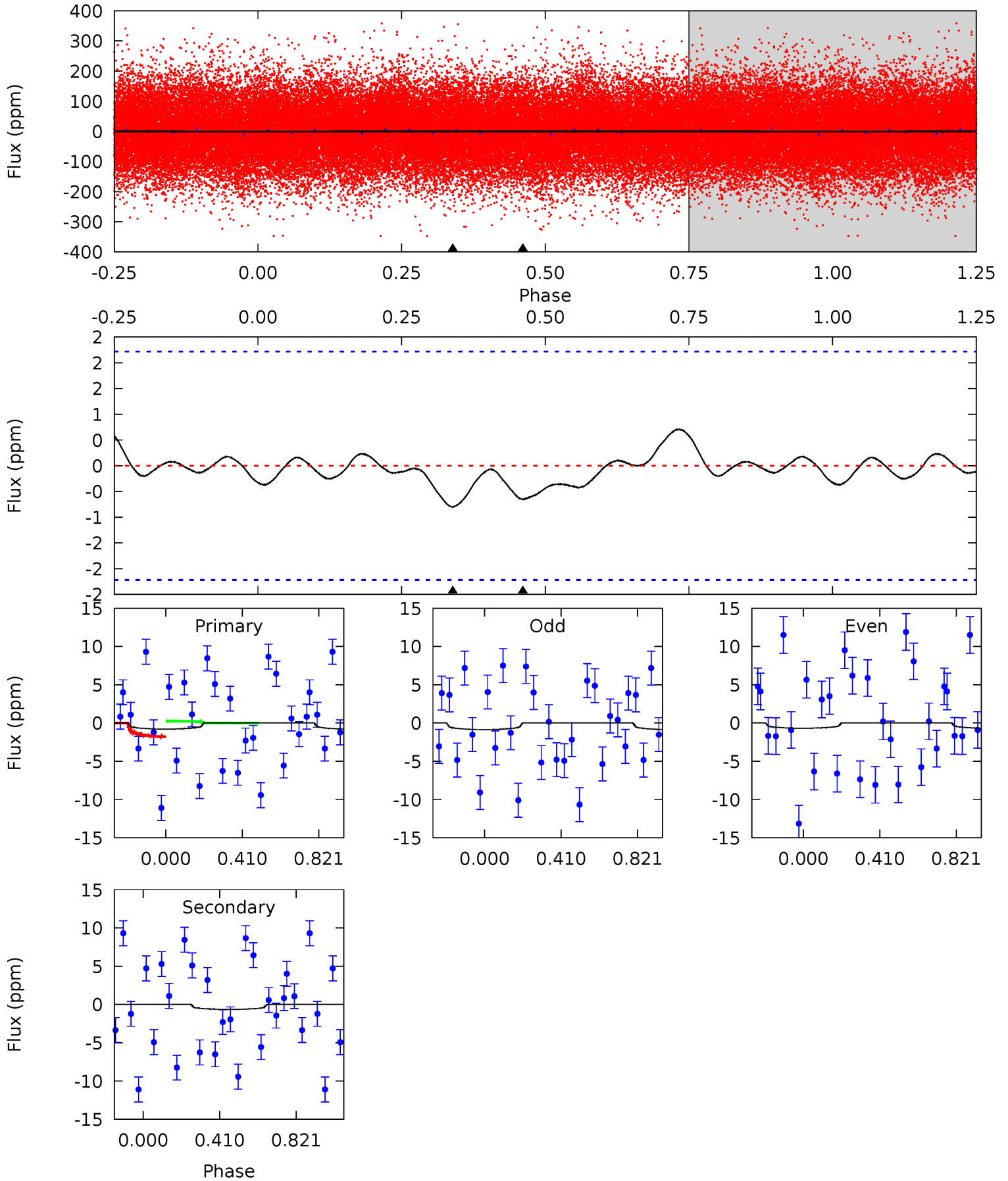
TCE 009172627-01 P= 1.266292 Days $T_0=131.805104$ (BKJD)



DV Model-Shift Uniqueness Test

009172627-01, P = 1.266303 Days, E = 130.562039 Days

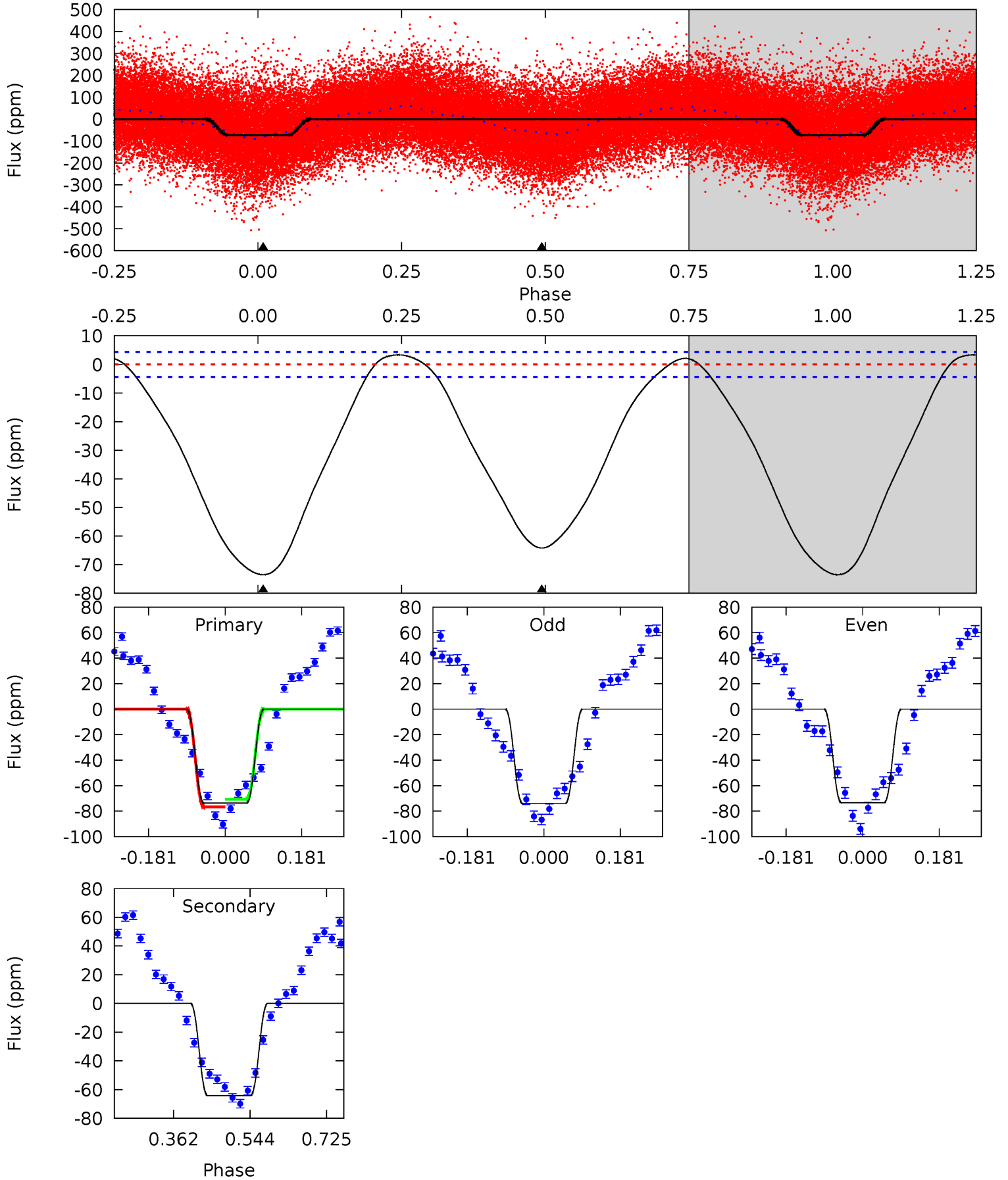
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.53	1.25	0	0	4.26	0.82	0.19	1.53	1.53	1.25	1.25	0.18	0.39	0.47	1.48



Alt Model-Shift Uniqueness Test

009172627-01, P = 1.266292 Days, E = 130.538812 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
74.8	65.3	0	0	4.44	1.34	4.62	74.8	74.8	65.3	65.3	0.31	1.06	0.04	2.97



Stellar Parameters For KIC 009172627

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7570^{+209}_{-314}	$3.658^{+0.495}_{-0.055}$	$-0.160^{+0.200}_{-0.300}$	$3.489^{+0.435}_{-1.851}$	$2.021^{+0.104}_{-0.554}$	$0.067^{+0.347}_{-0.013}$
	+3%/-4%	+14%/-2%	+125%/-188%	+12%/-53%	+5%/-27%	+517%/-20%
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 009172627-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1 ± 1	$0.82^{+0.88}_{-0.57}$	4858^{+357}_{-631}	3081^{+3714}_{-7185}	$0.352^{+3.476}_{-0.305}$
Alt.	-64 ± 1	$2.55^{+1.25}_{-1.02}$	4819^{+396}_{-650}	7319^{+2528}_{-1303}	$4.350^{+7.502}_{-2.365}$

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 $A_{obs} \gg 1.0$

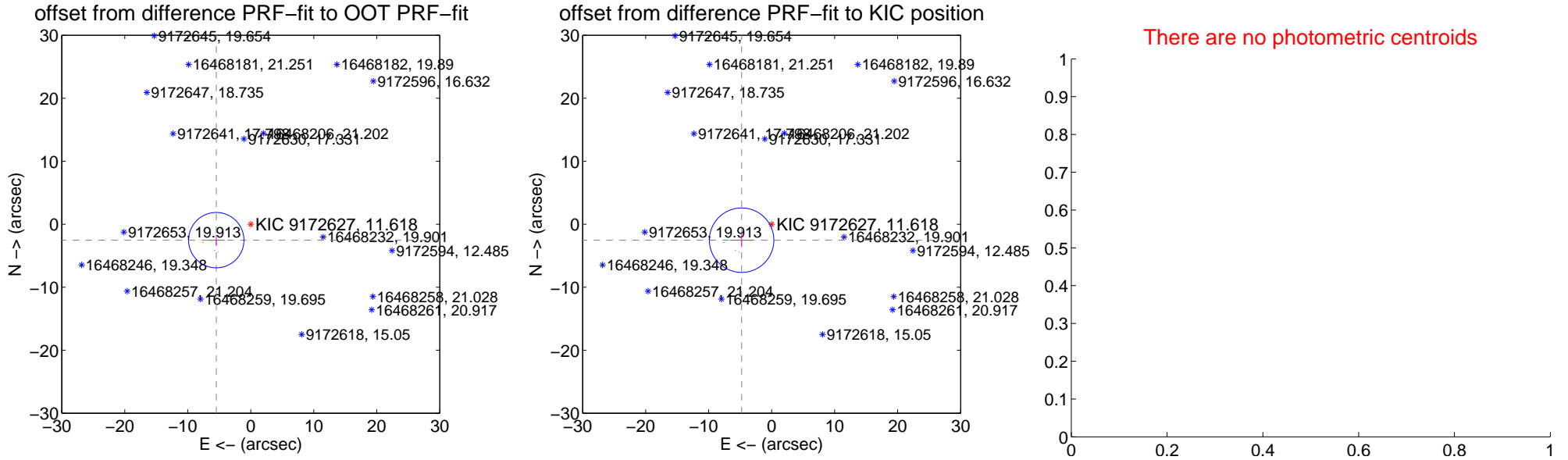
DV Centroid Data

Supplemental centroid analysis for 009172627-01. **Kepler magnitude: 11.62.** Transit SNR 2.34

There are 1 quarters with good PRF difference image offsets

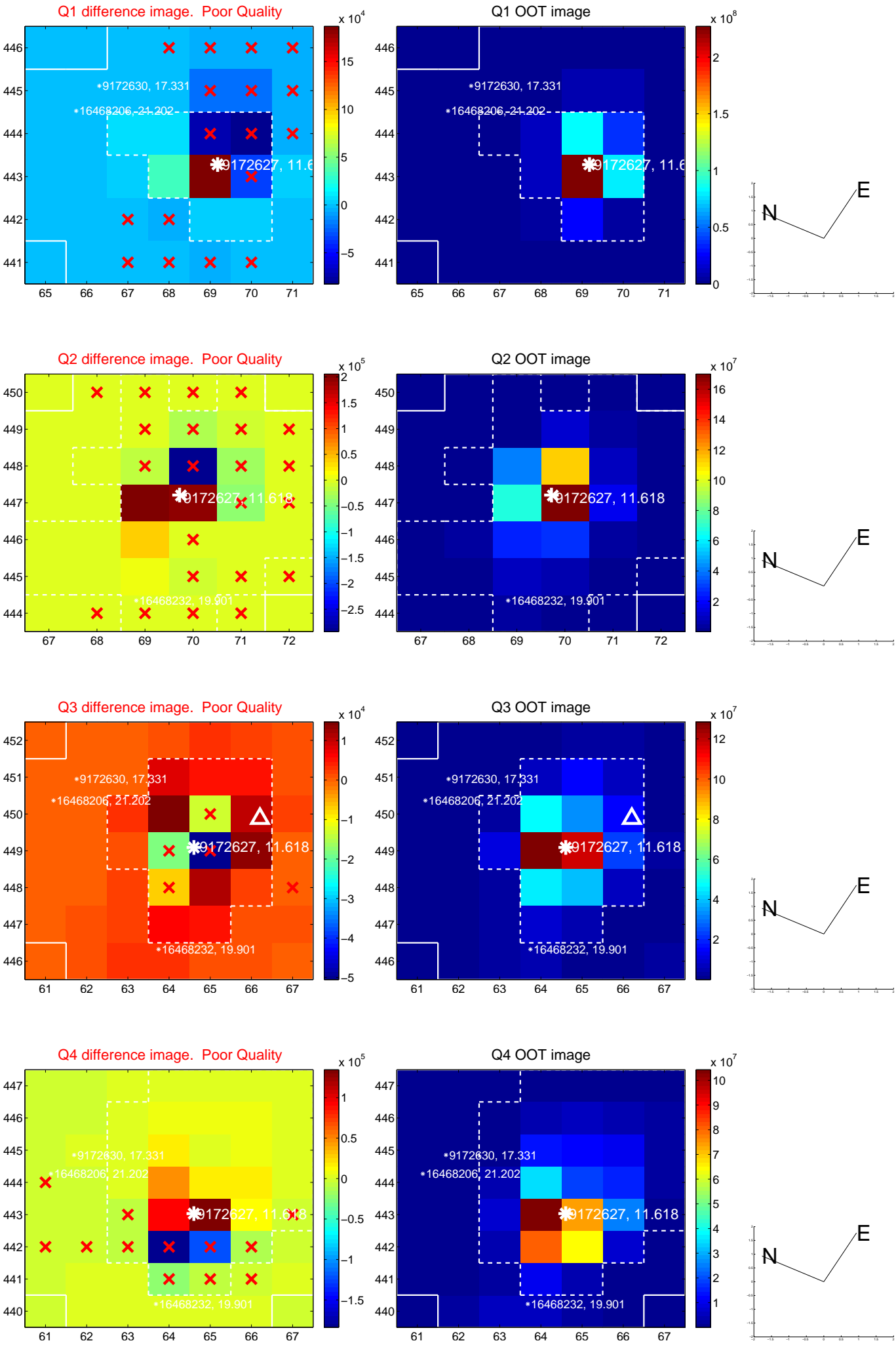
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.031 ± 1.465	4.12	5.476 ± 1.295	-2.528 ± 0.846
PRF-fit source offset from KIC position	5.398 ± 1.706	3.16	4.767 ± 1.834	-2.533 ± 1.138
photometric centroid source offset	—	—	—	—

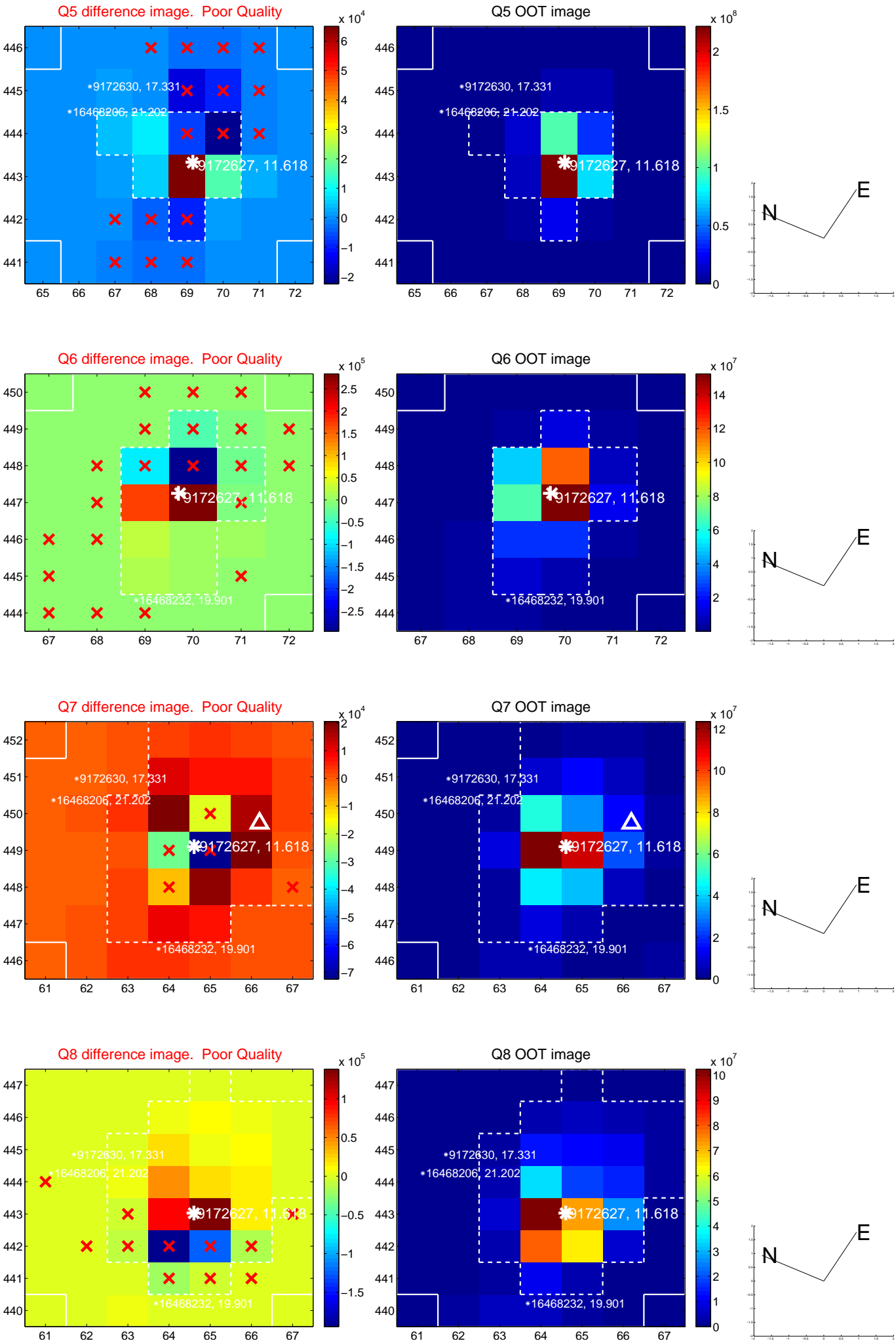


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

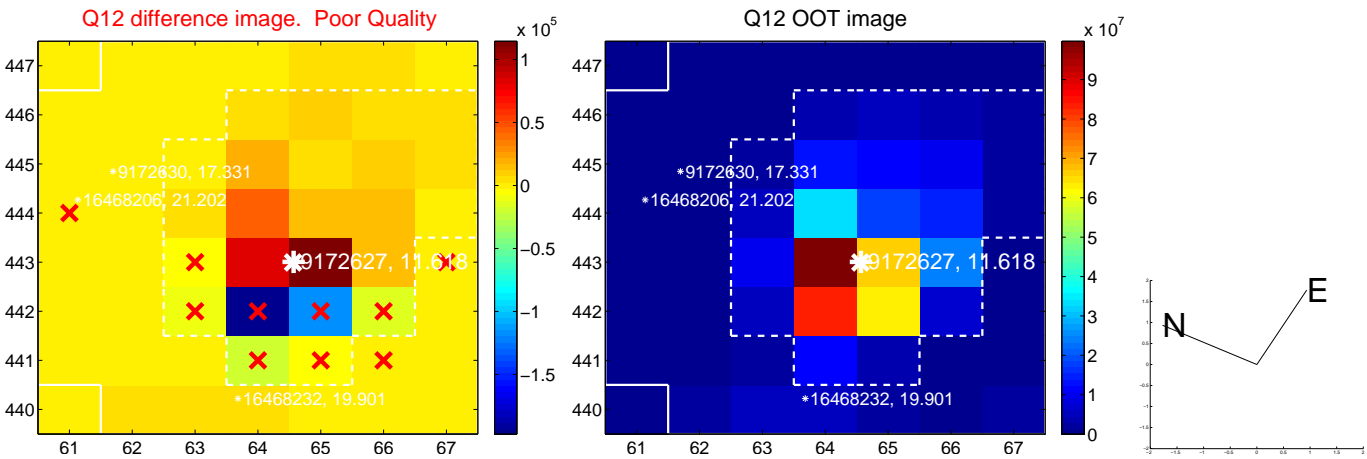
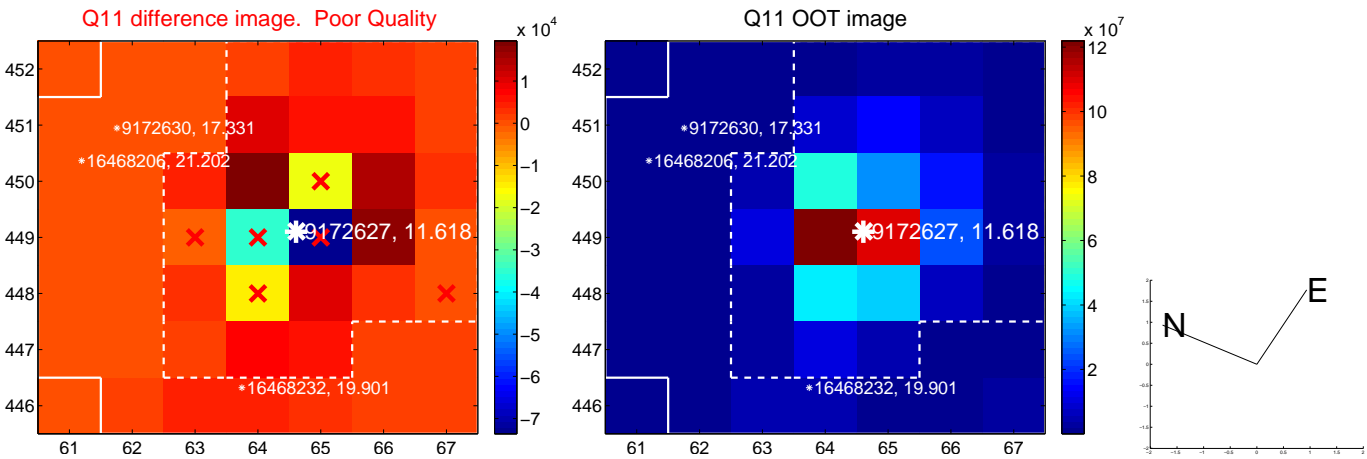
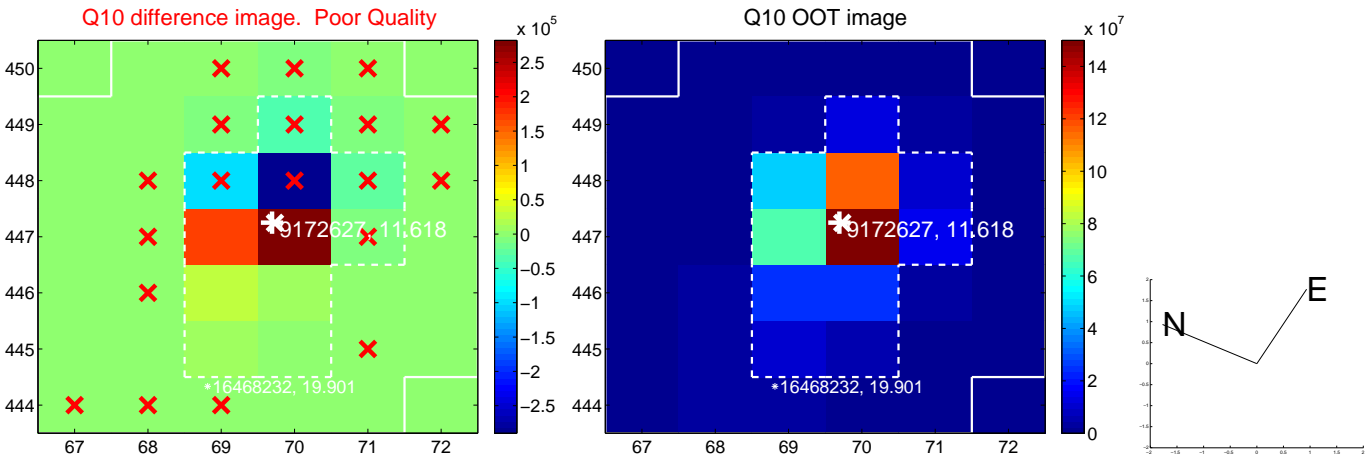
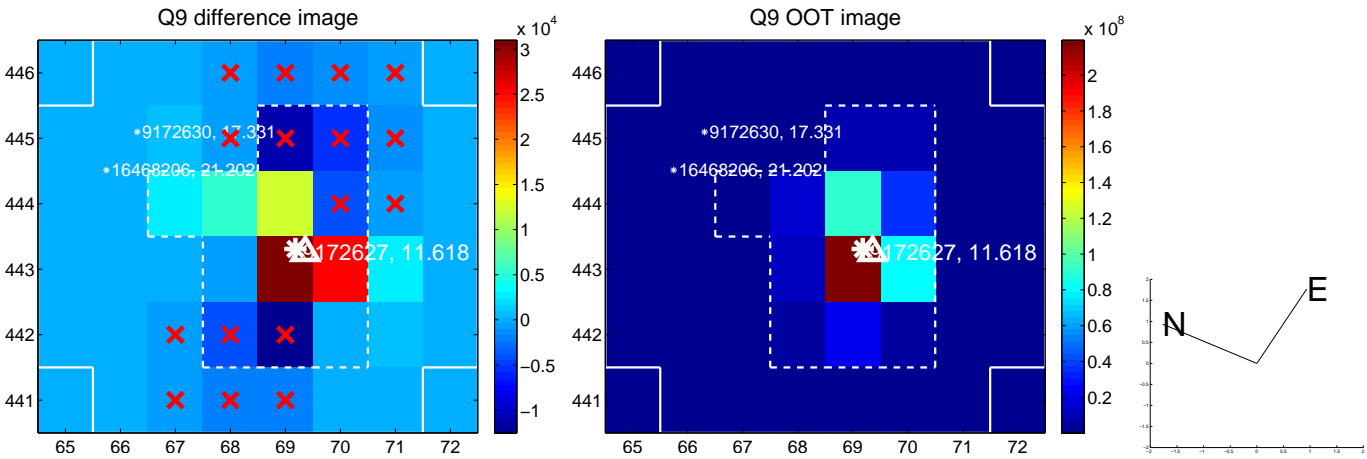
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



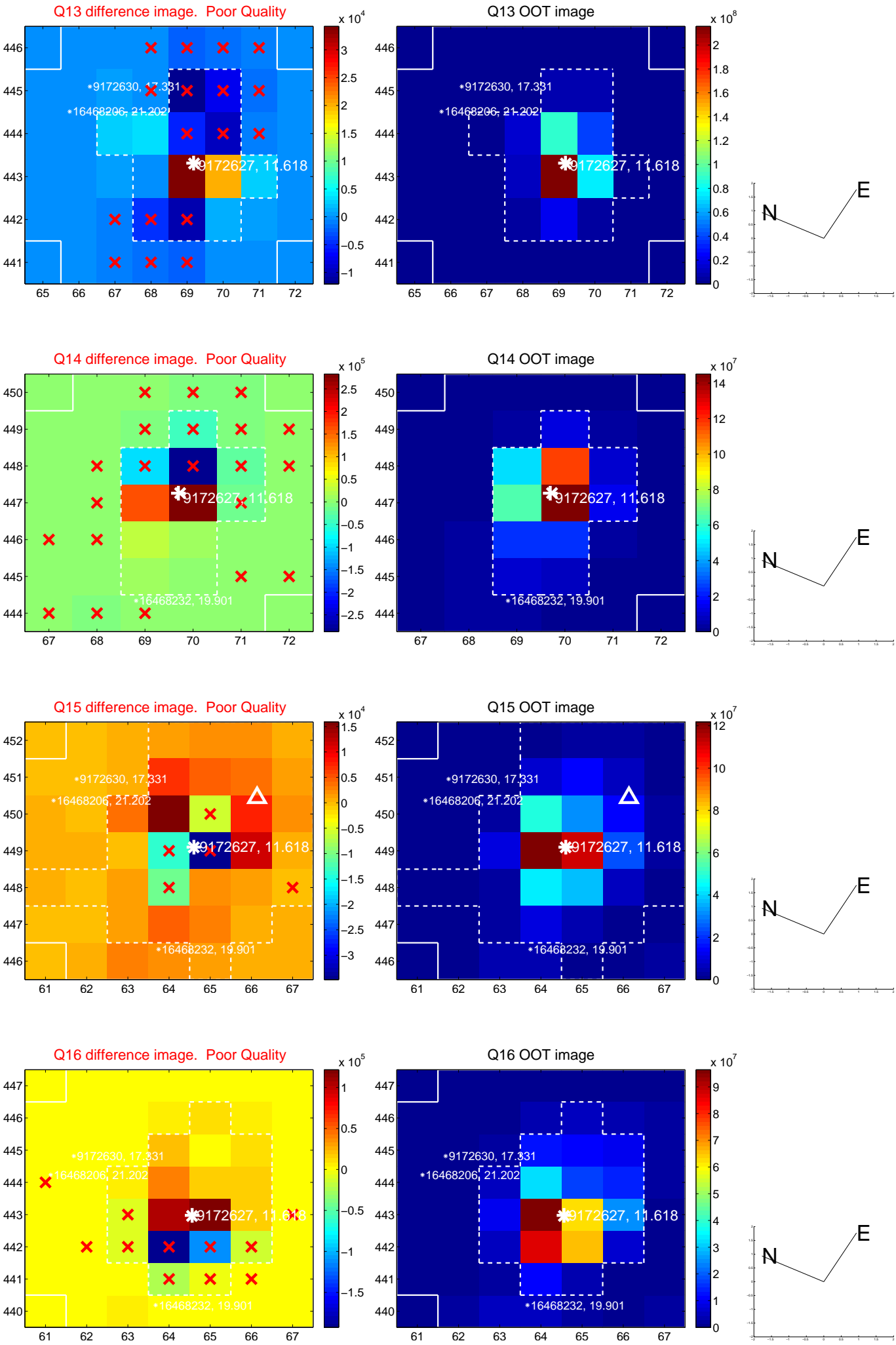
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



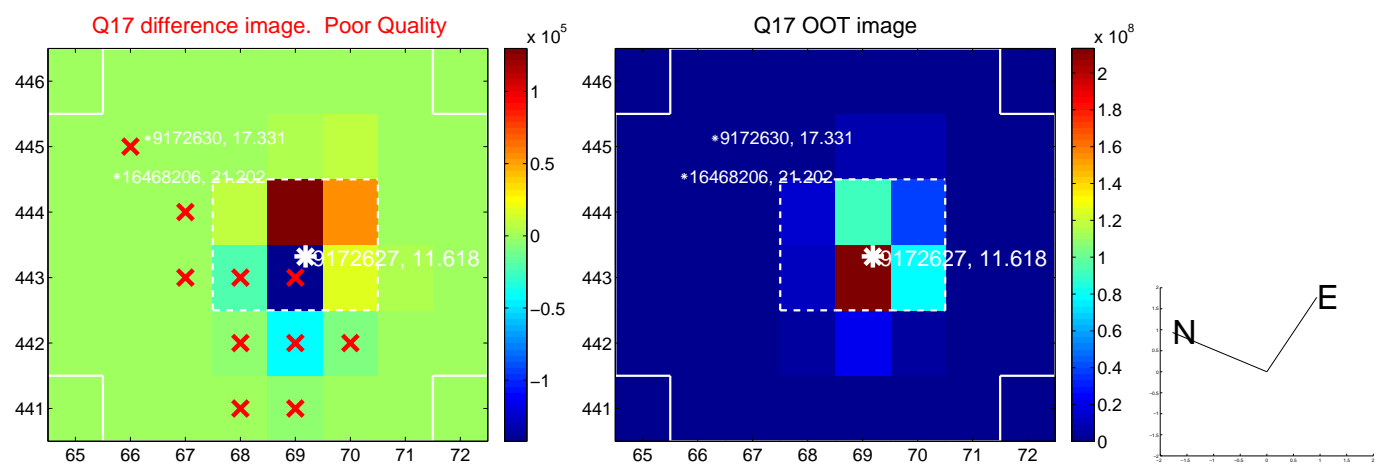
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



folded centroid time series figure for this object.

UKIRT Image

Declination

