

KIC 006104237

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})
006104237-01	OBS	No	1.991864	131.783779	57.1	2.686	7.1	5.9	0.72	4684	0.67	287.90

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006104237-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—HALO_GHOST

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

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

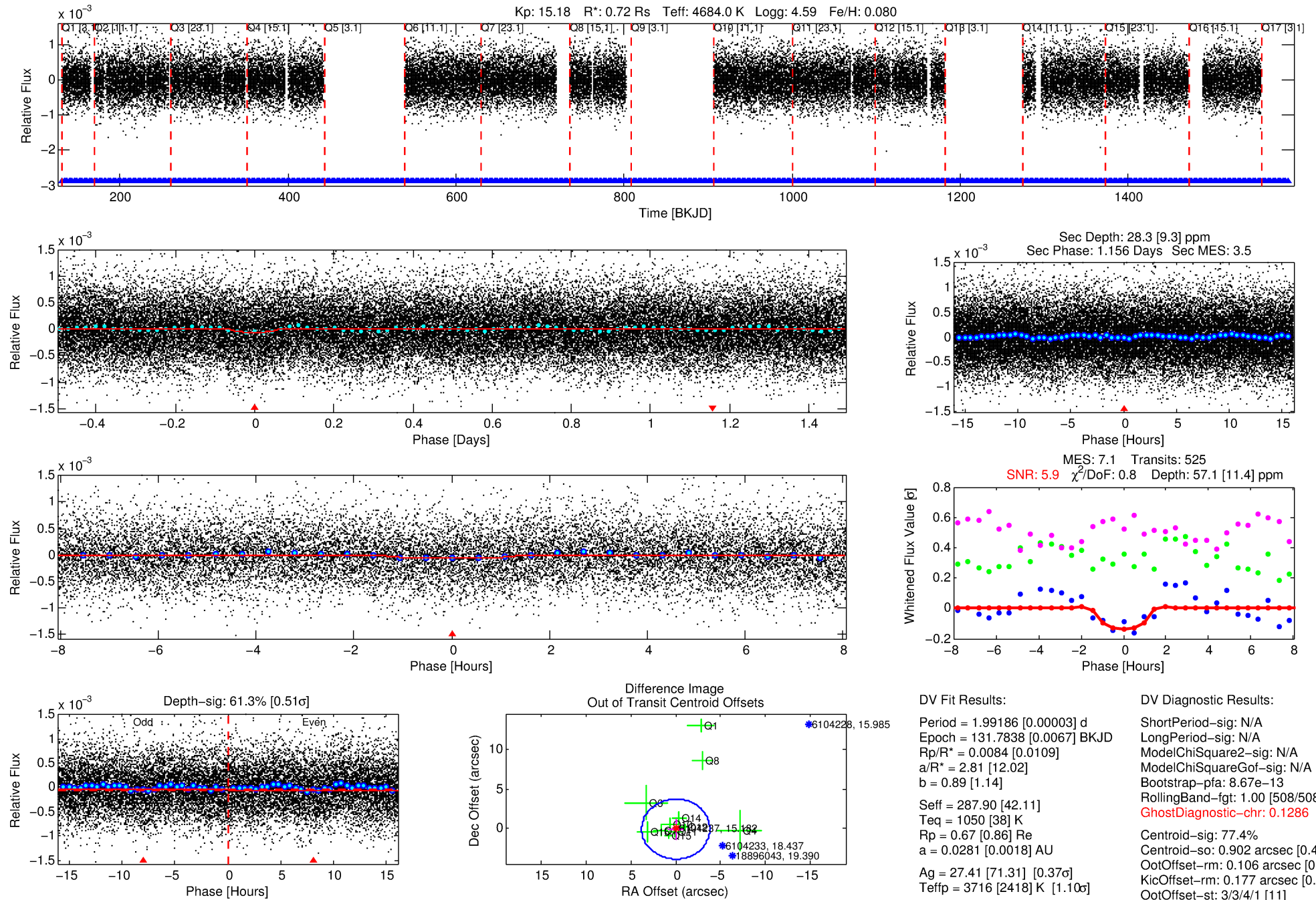
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006104237-01

No Significant Match Found

DV One-Page Summary

KIC: 6104237 Candidate: 1 of 1 Period: 1.992 d



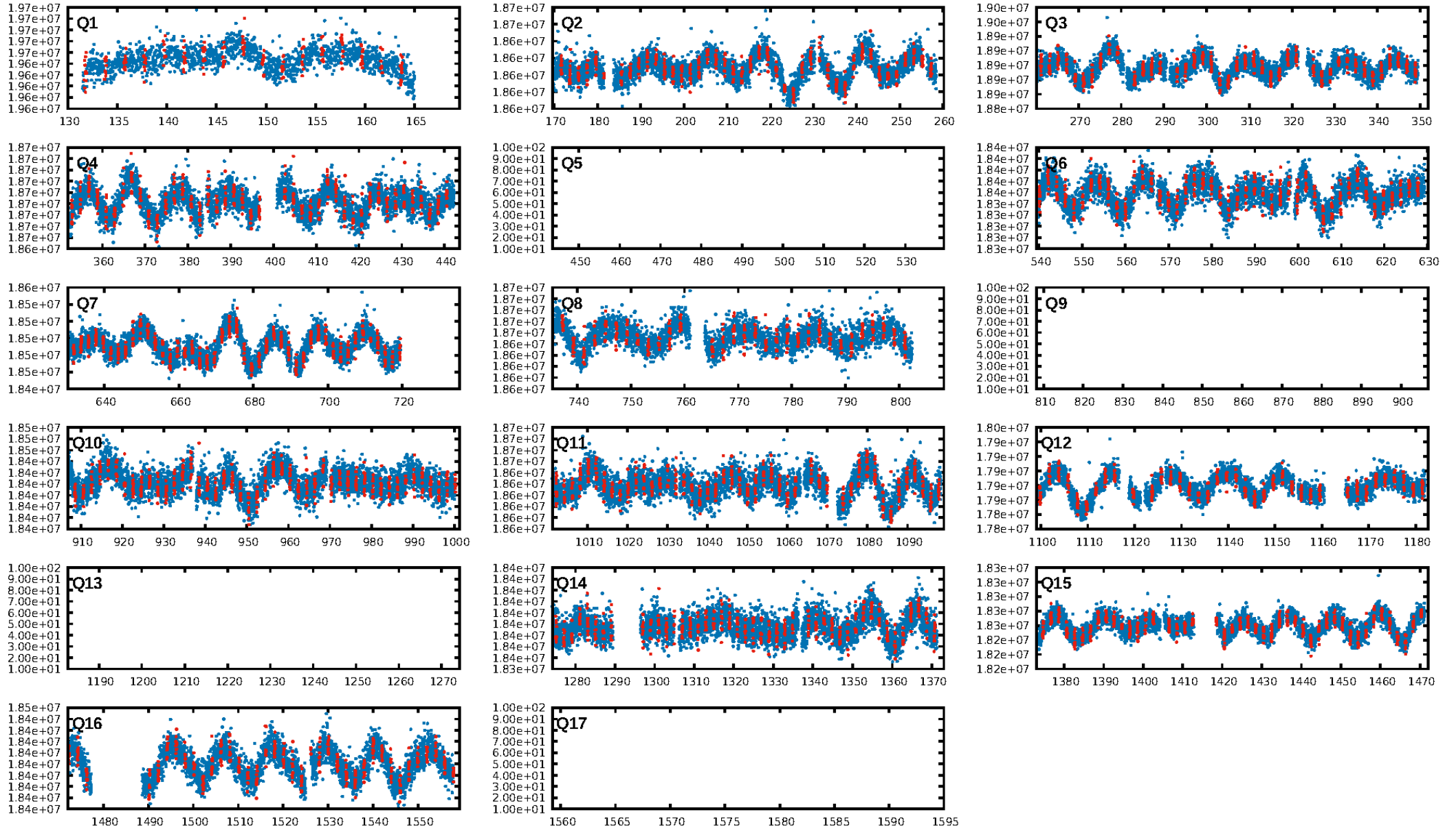
DV Fit Results:

Period = 1.99186 [0.00003] d
Epoch = 131.7838 [0.0067] BKJD
Rp/R* = 0.0084 [0.0109]
a/R* = 2.81 [12.02]
b = 0.89 [1.14]
Seff = 287.90 [42.11]
Teff = 1050 [38] K
Rp = 0.67 [0.86] Re
a = 0.0281 [0.0018] AU
Ag = 27.41 [71.31] [0.37 σ]
Teffp = 3716 [2418] K [1.10 σ]

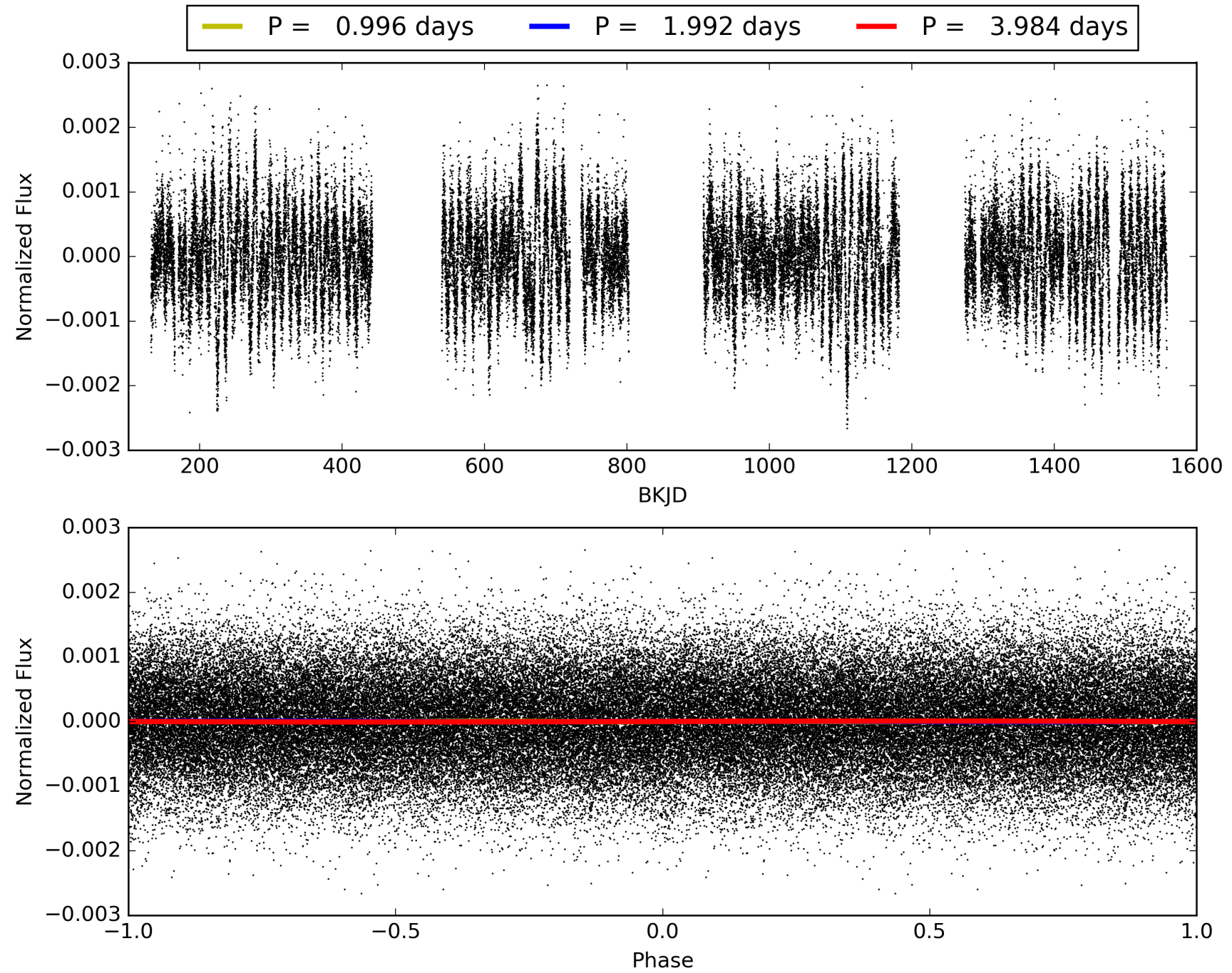
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 8.67e-13
RollingBand-fgt: 1.00 [508/508]
GhostDiagnostic-chr: 0.1286
Centroid-sig: 77.4%
Centroid-so: 0.902 arcsec [0.41 σ]
OotOffset-rm: 0.106 arcsec [0.08 σ]
KicOffset-rm: 0.177 arcsec [0.13 σ]
OotOffset-st: 3/3/4/1 [11]
KicOffset-st: 3/3/4/1 [11]
DiffImageQuality-fgm: 0.45 [5/11]
DiffImageOverlap-fno: 1.00 [13/13]

TCE 006104237-01, PDC Light Curves

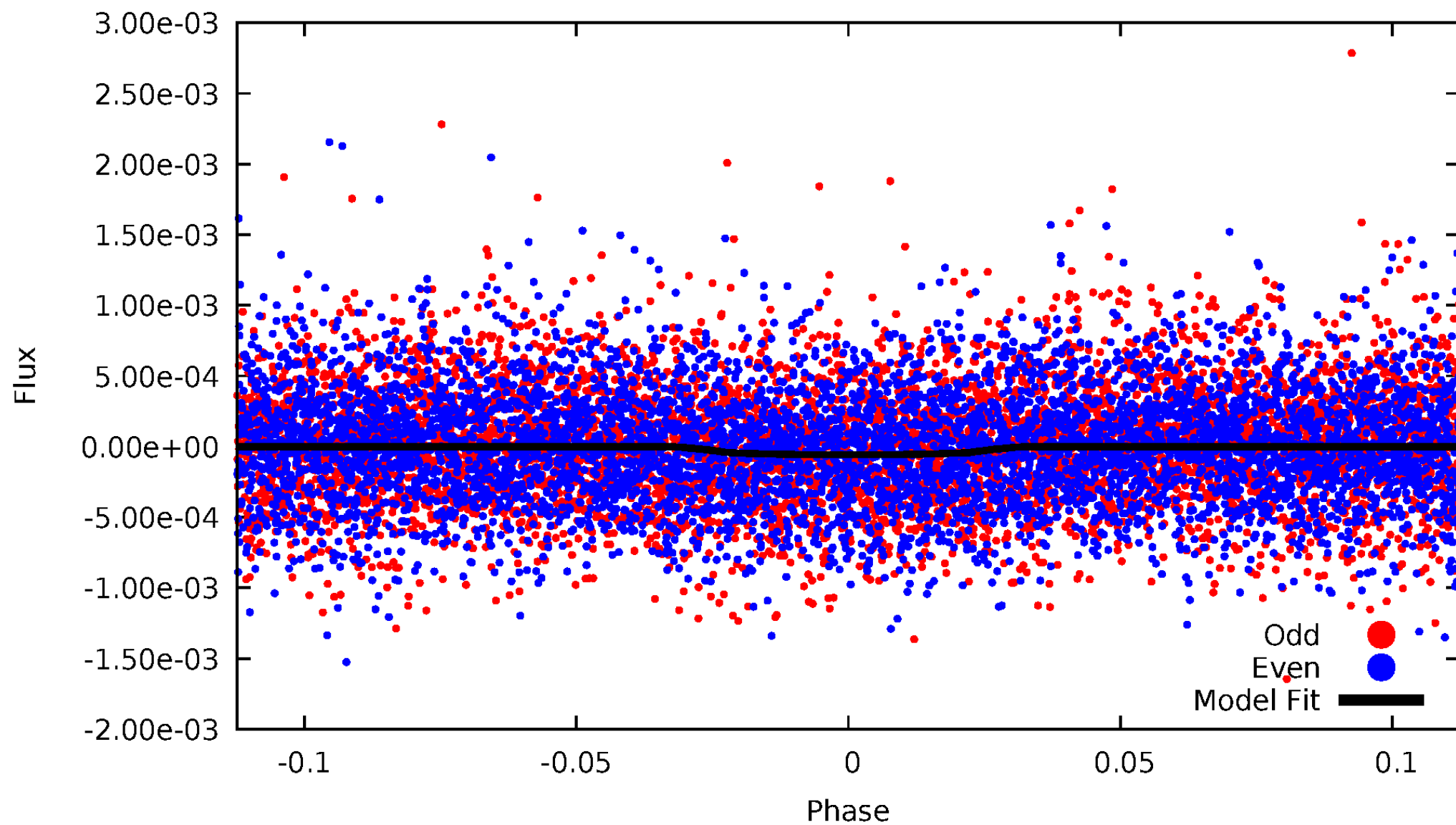


TCE 006104237-01



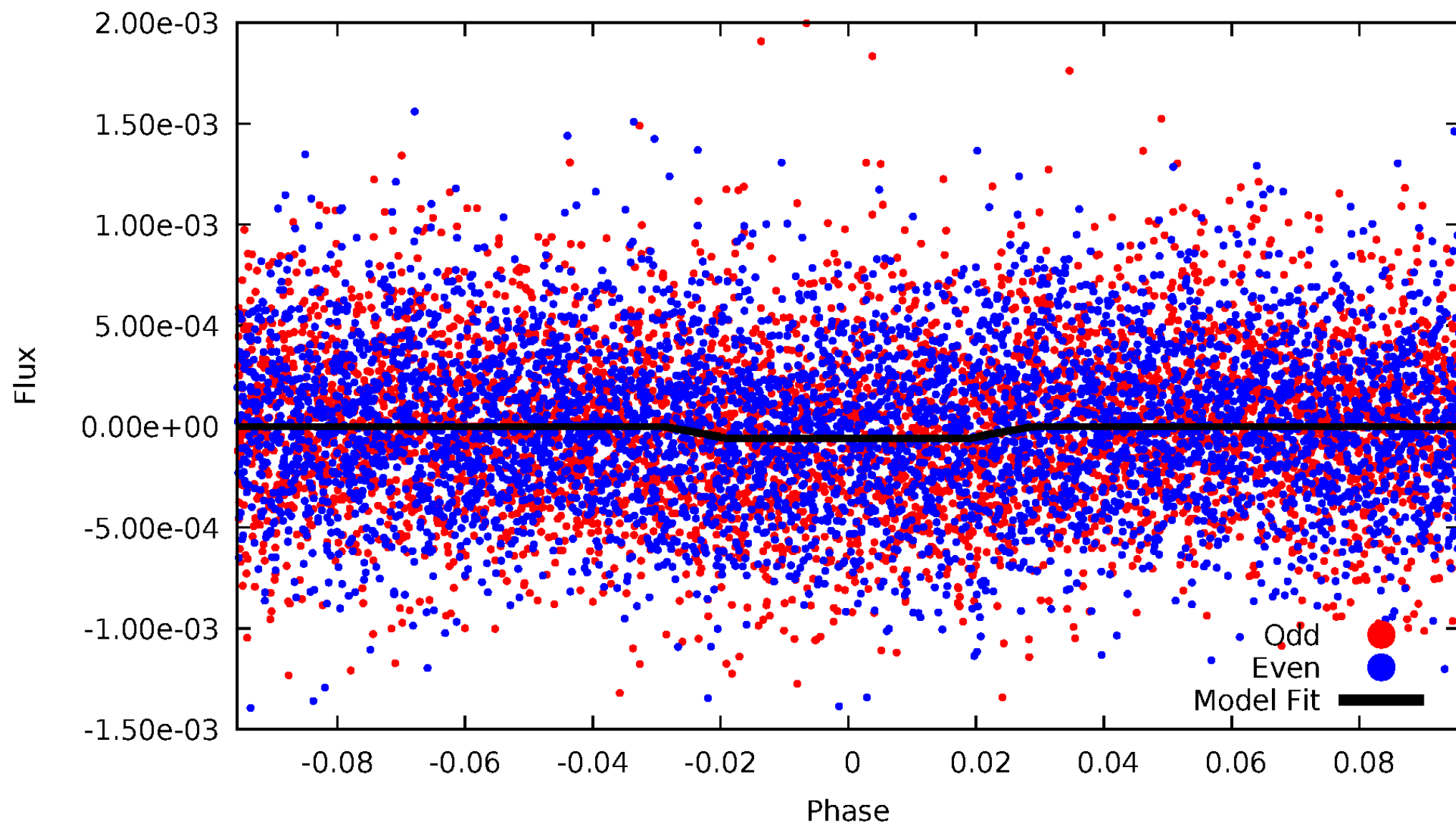
DV Odd/Even

TCE 006104237-01

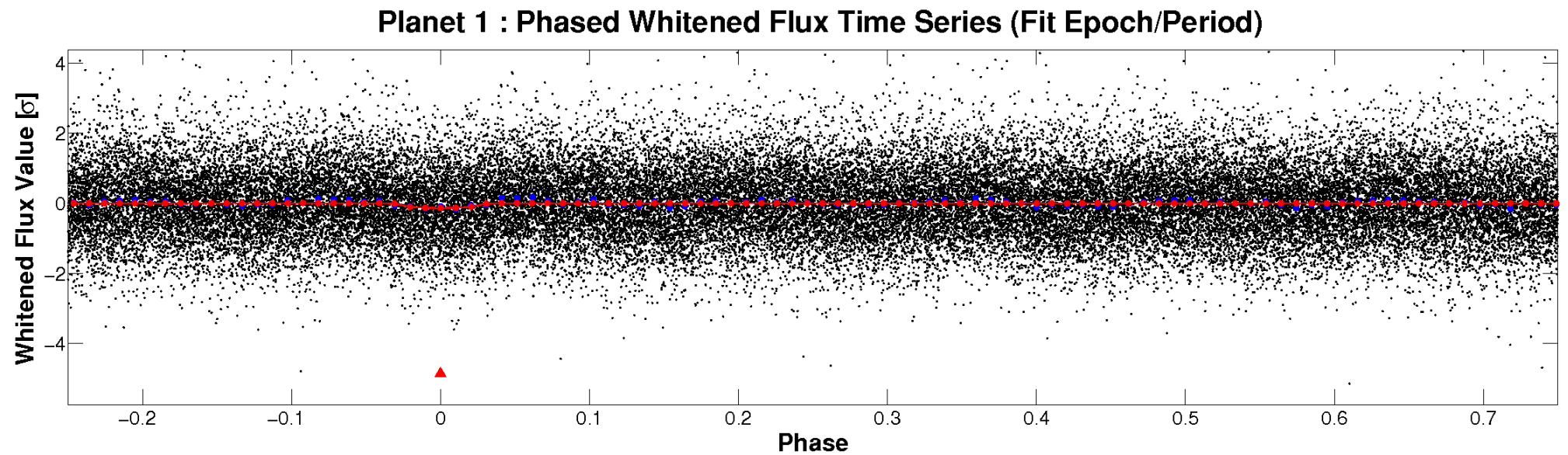
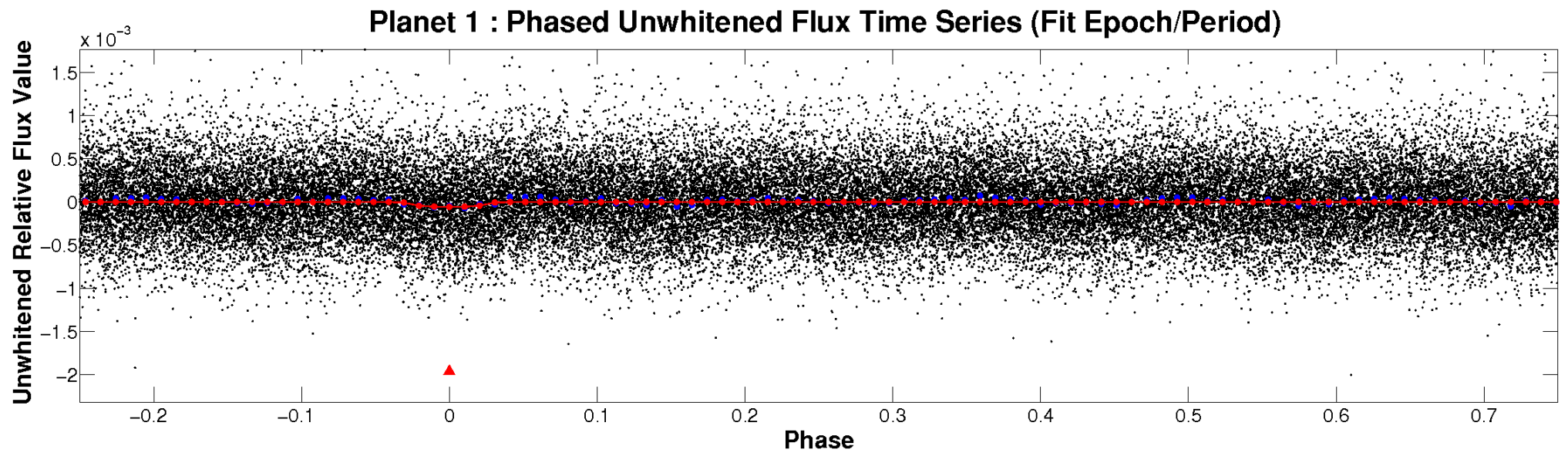


ALT Odd/Even

TCE 006104237-01

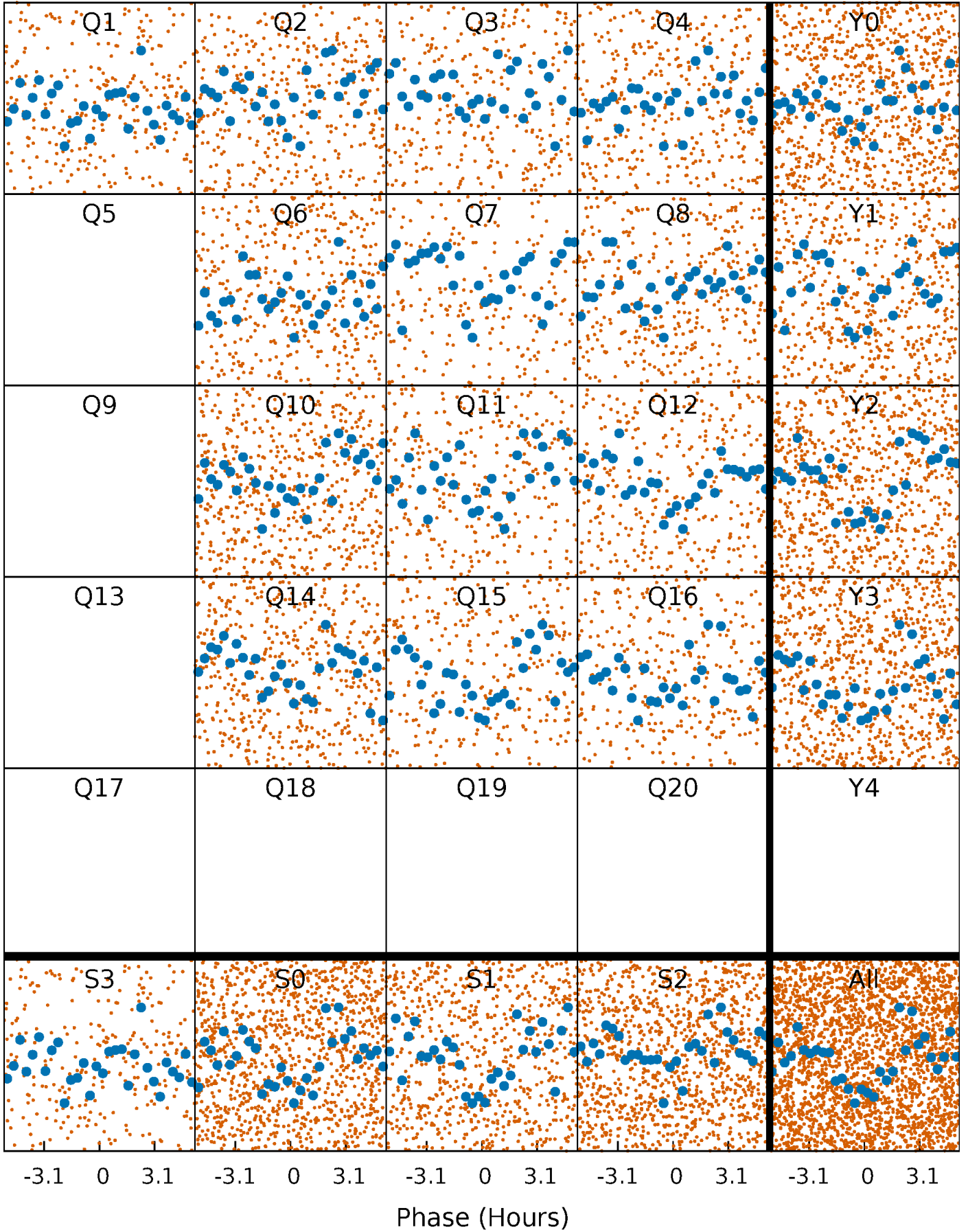


Non-Whitened Vs. Whitened Light Curve



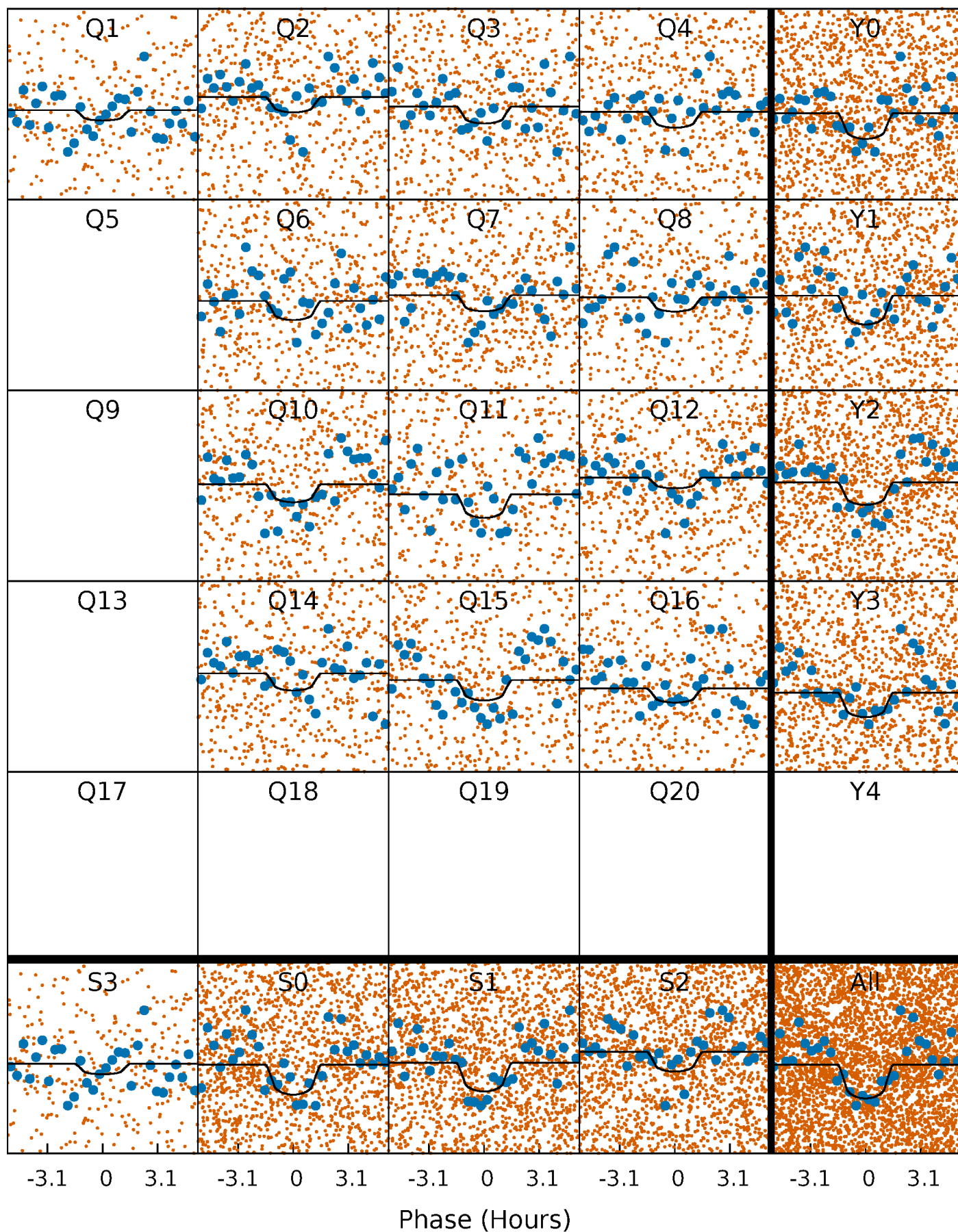
PDC Quarter-Phased Transit Curves

TCE 006104237-01 P= 1.991864 Days $T_0=131.783779$ (BKJD)



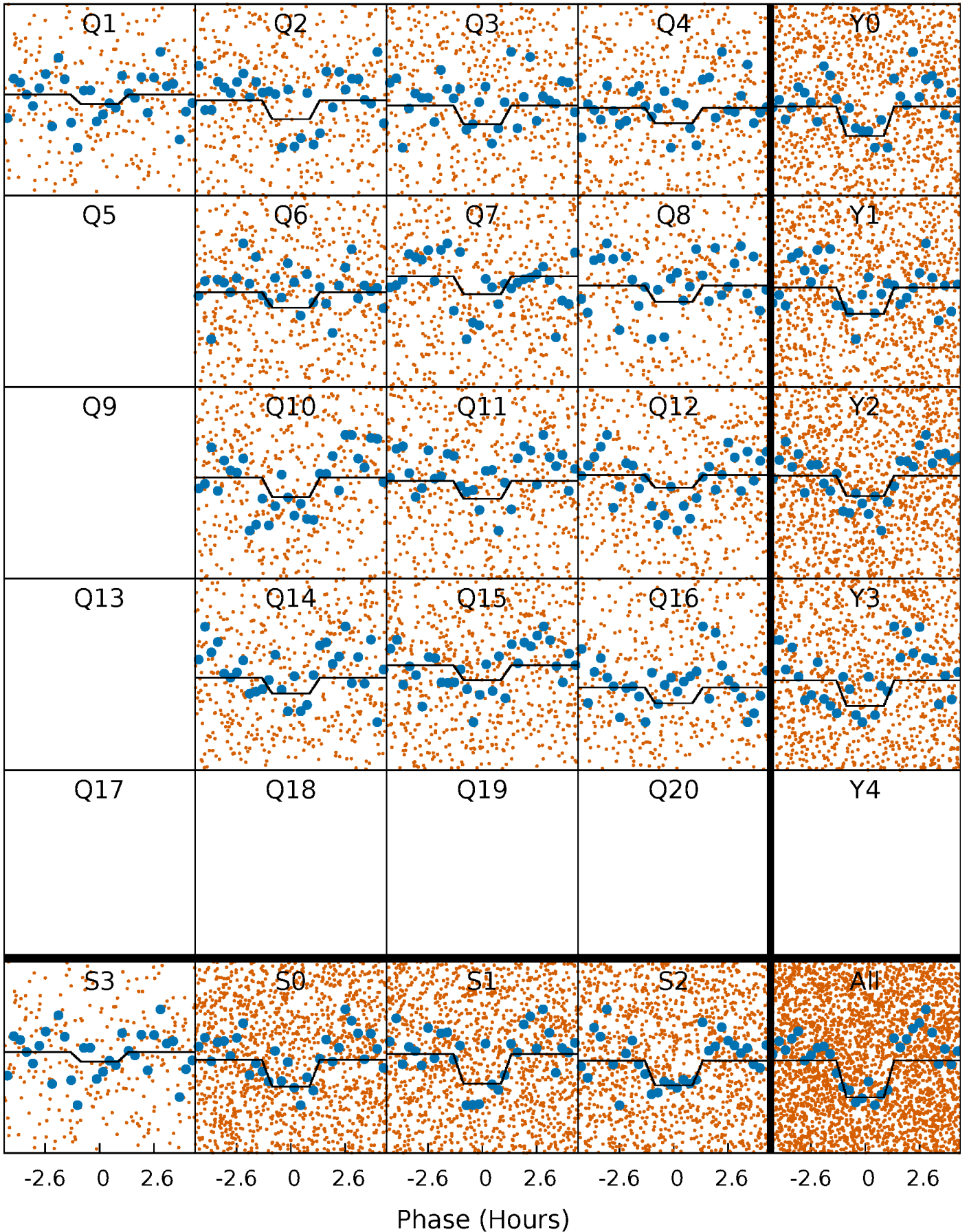
DV Quarter-Phased Transit Curves

TCE 006104237-01 P= 1.991864 Days $T_0=131.783779$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

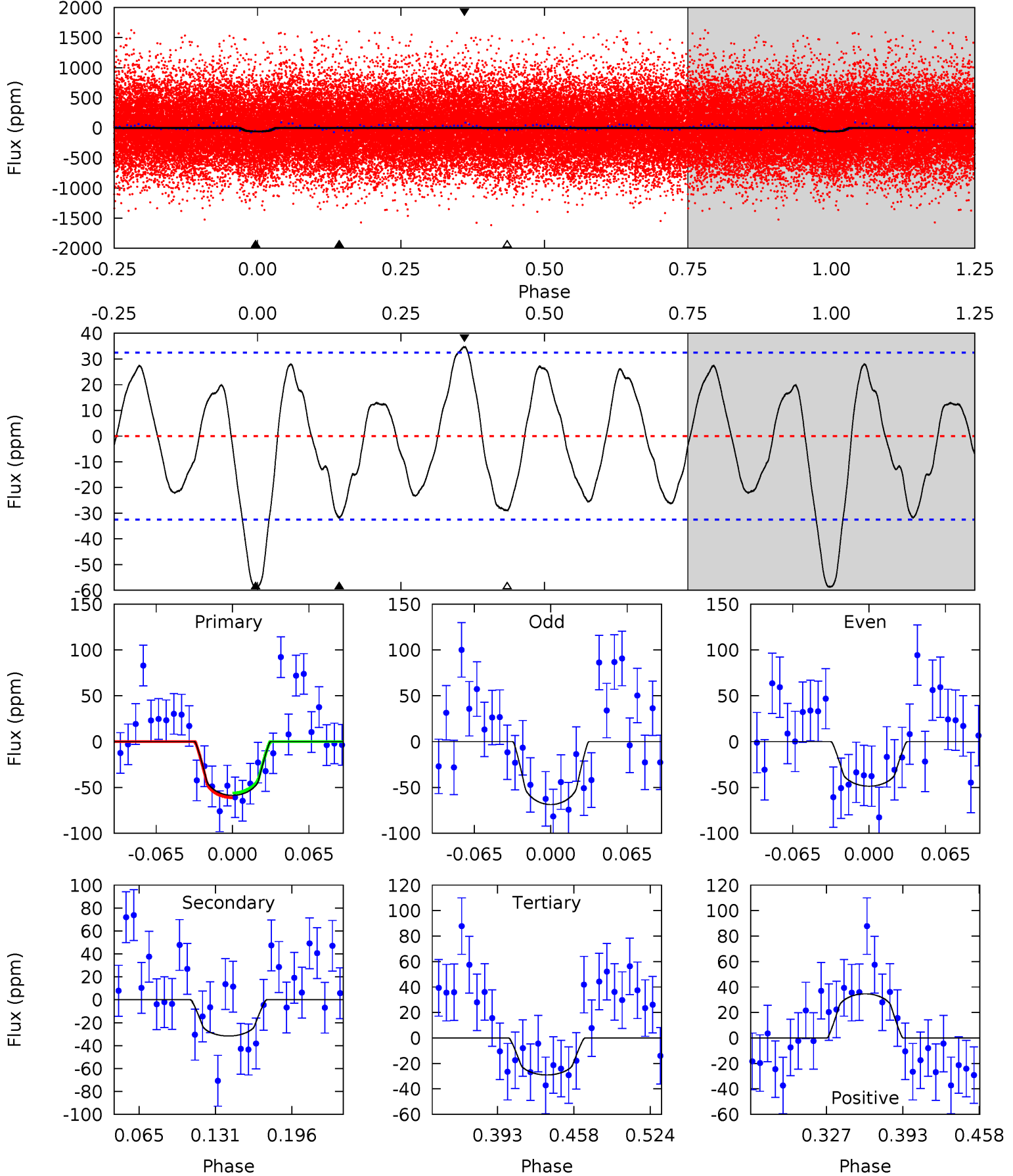
TCE 006104237-01 P= 1.991937 Days $T_0=131.756672$ (BKJD)



DV Model-Shift Uniqueness Test

006104237-01, P = 1.991864 Days, E = 129.791915 Days

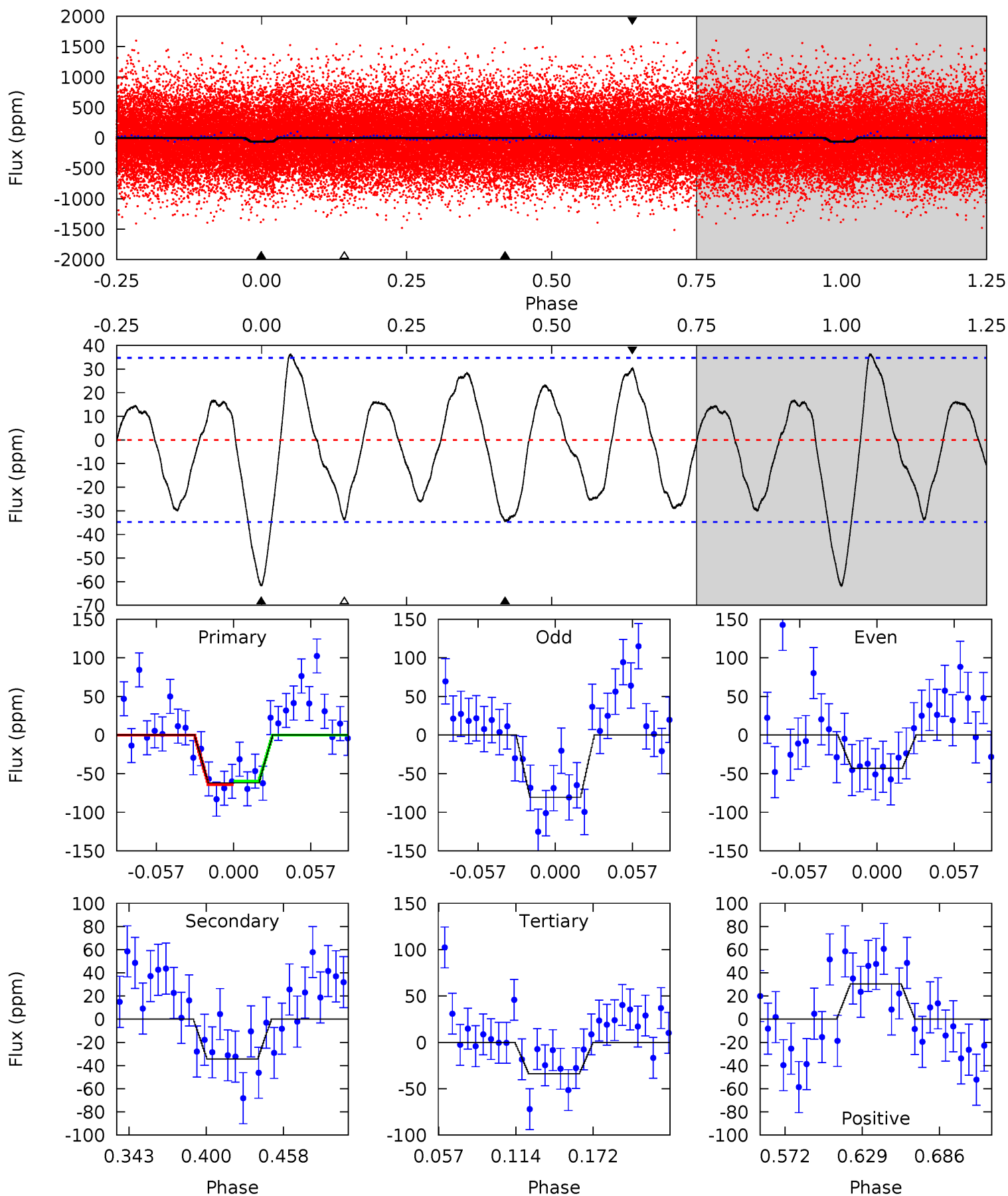
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.40	4.53	4.16	4.97	4.65	1.84	2.60	4.24	3.43	0.38	-0.44	1.43	0.97	0.37	0.36



Alt Model-Shift Uniqueness Test

006104237-01, P = 1.991937 Days, E = 129.764735 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.33	4.64	4.56	4.10	4.68	1.90	2.38	3.77	4.23	0.07	0.54	2.53	0.93	0.37	0.29



Stellar Parameters For KIC 006104237

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4684^{+139}_{-139}	$4.588^{+0.042}_{-0.032}$	$0.080^{+0.250}_{-0.300}$	$0.725^{+0.046}_{-0.061}$	$0.742^{+0.058}_{-0.058}$	$2.746^{+0.529}_{-0.330}$
	+3%/-3%	+1%/-1%	+312%/-375%	+6%/-8%	+8%/-8%	+19%/-12%
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 006104237-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-32 ± 7	$0.87^{+0.80}_{-0.56}$	1467^{+48}_{-48}	3647^{+1837}_{-675}	18^{+130}_{-13}
Alt.	-34 ± 7	$0.88^{+0.77}_{-0.56}$	1464^{+50}_{-48}	3686^{+1805}_{-672}	20^{+128}_{-14}

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

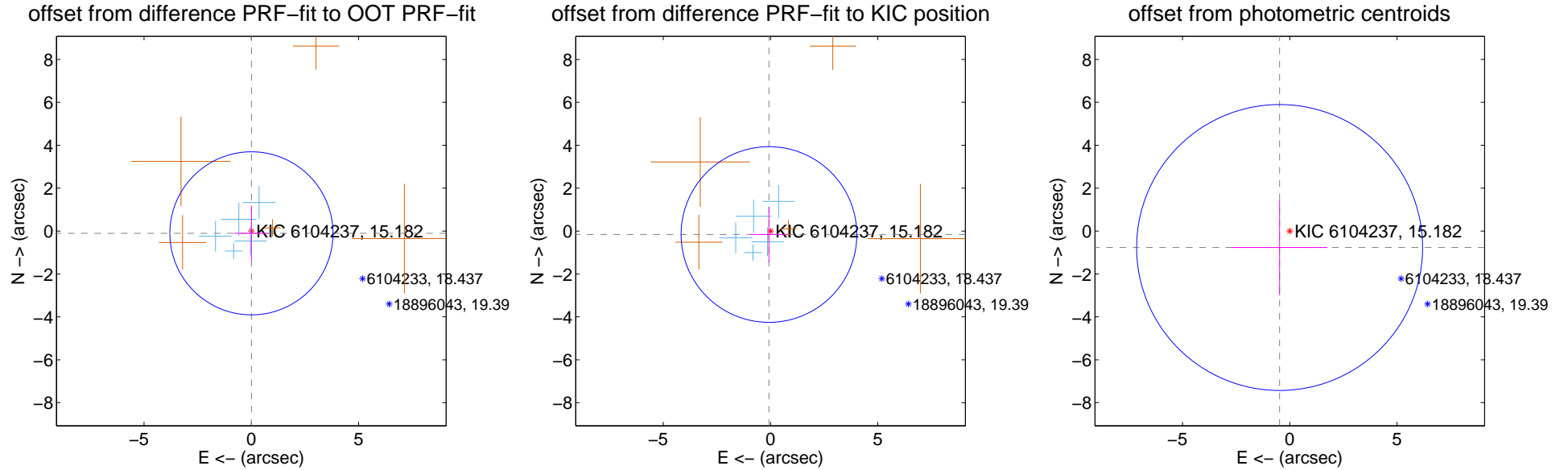
DV Centroid Data

Supplemental centroid analysis for 006104237-01. Kepler magnitude: 15.18. Transit SNR 5.93

There are 5 quarters with good PRF difference image offsets

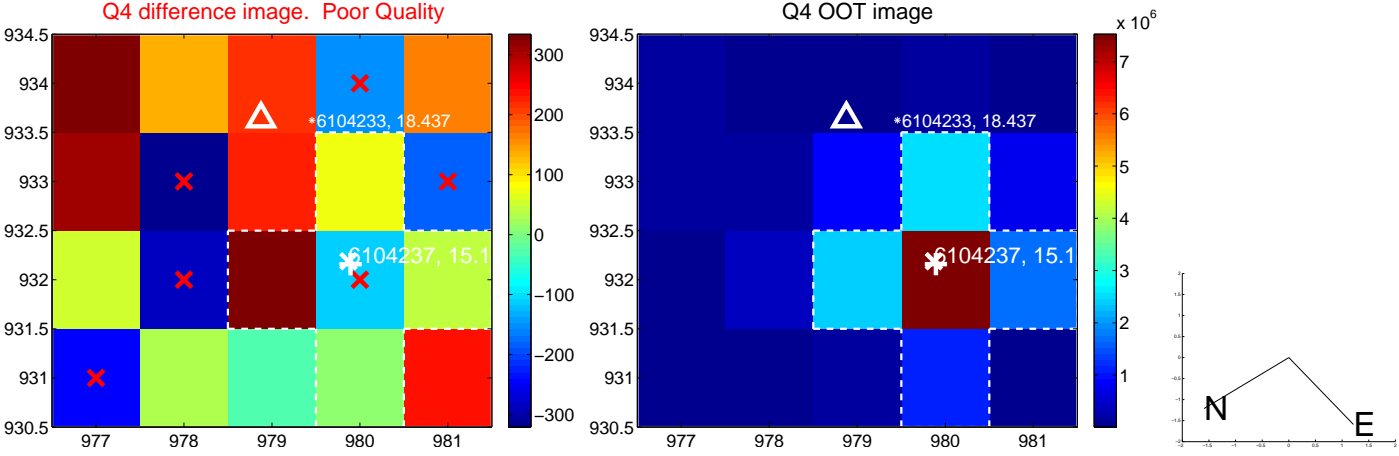
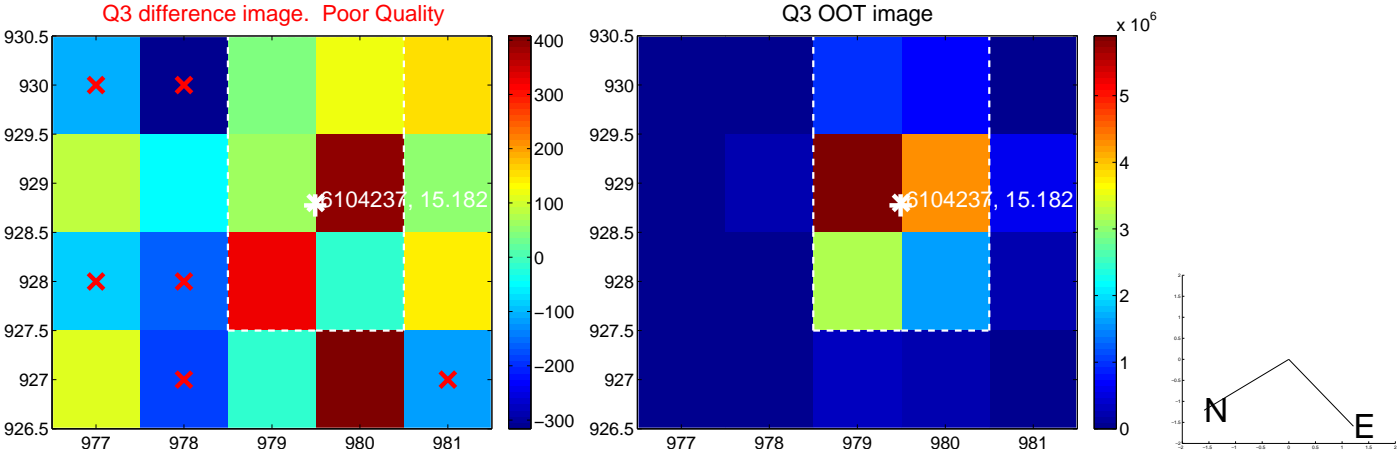
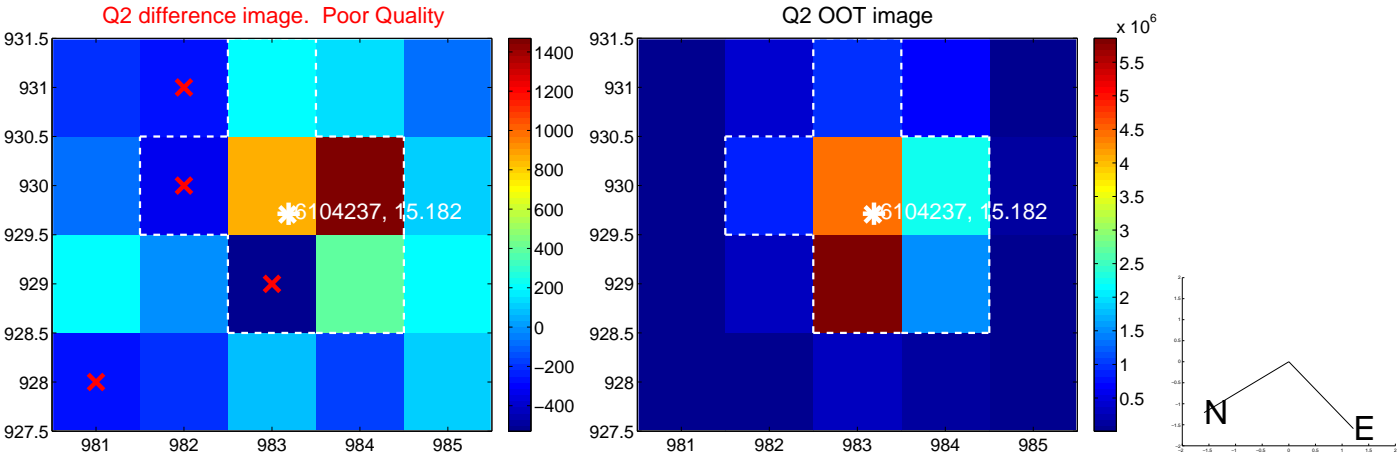
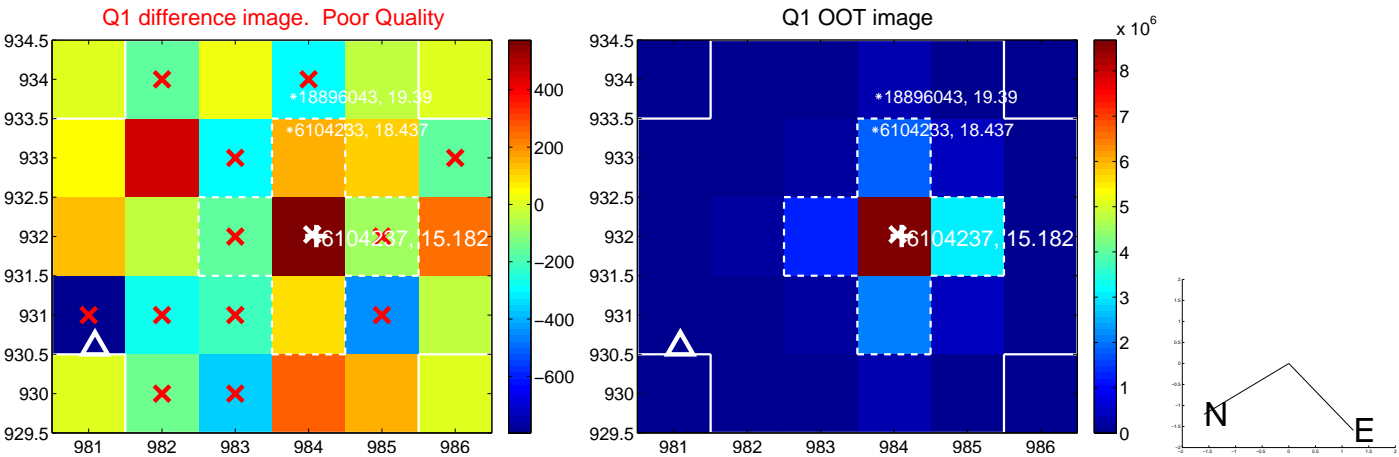
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.106 ± 1.267	0.08	-0.006 ± 0.795	-0.106 ± 1.288
PRF-fit source offset from KIC position	0.177 ± 1.365	0.13	0.073 ± 0.870	-0.161 ± 1.284
photometric centroid source offset	0.90 ± 2.22	0.41	0.47 ± 2.22	-0.77 ± 2.22

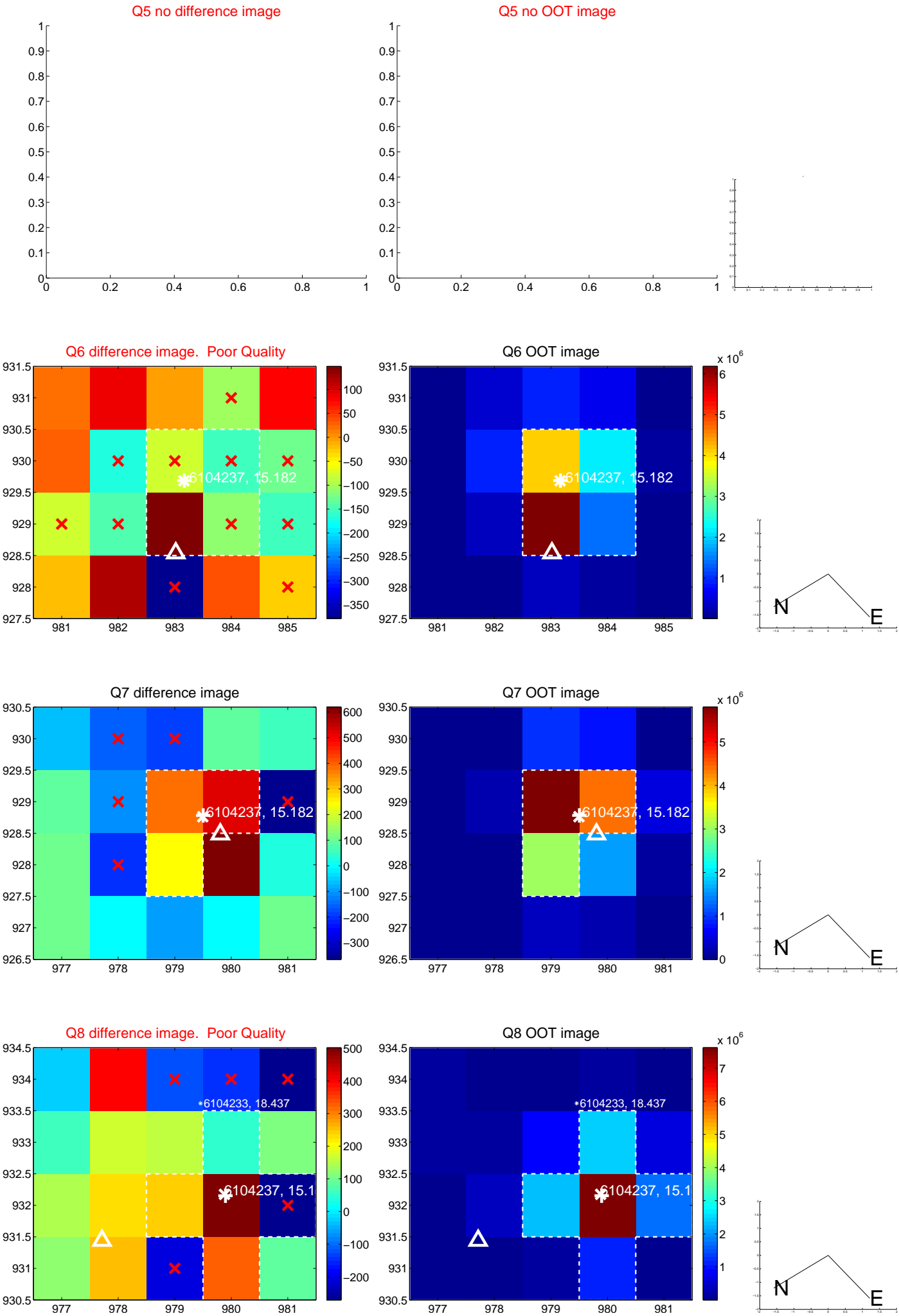


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

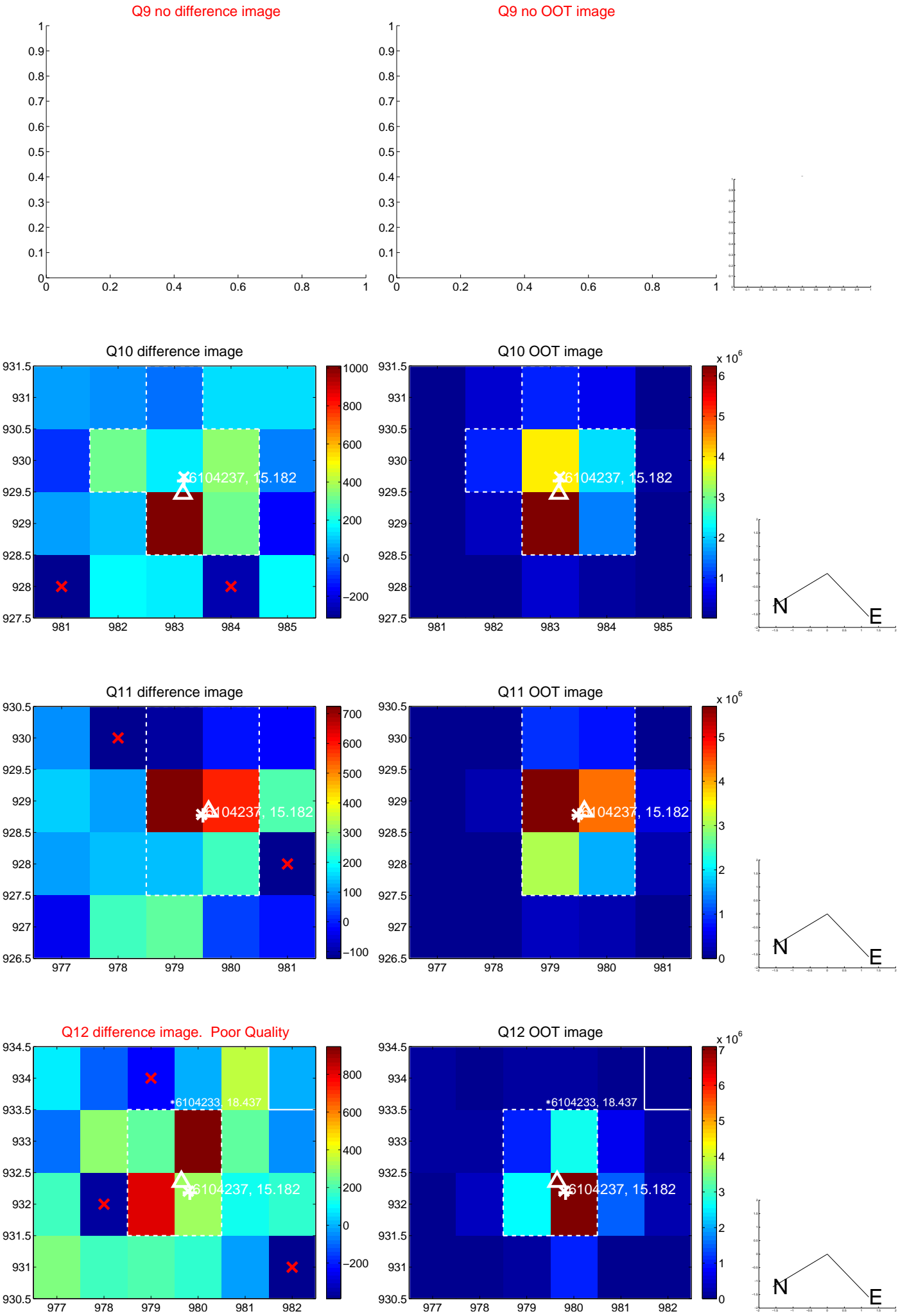
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



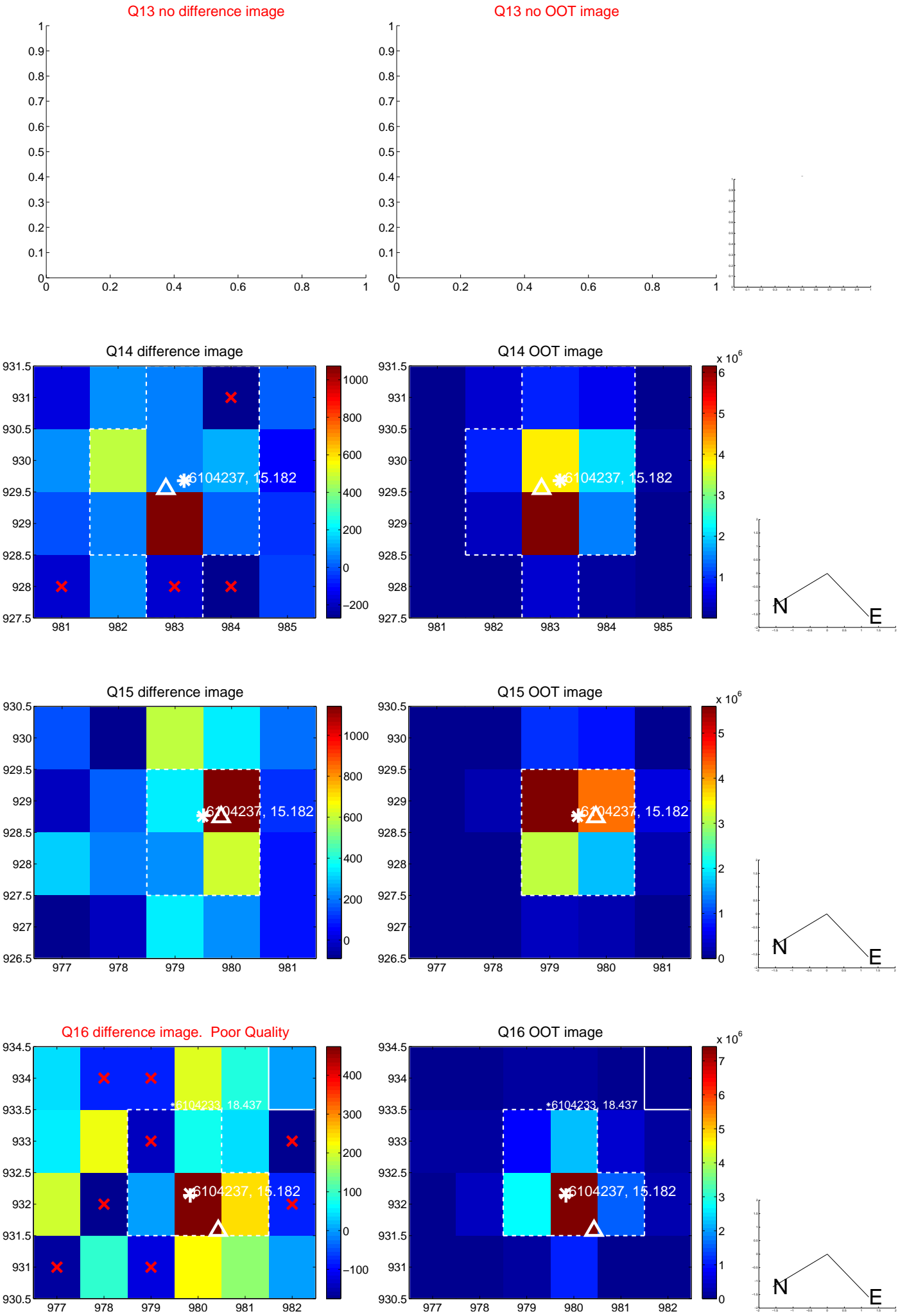
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



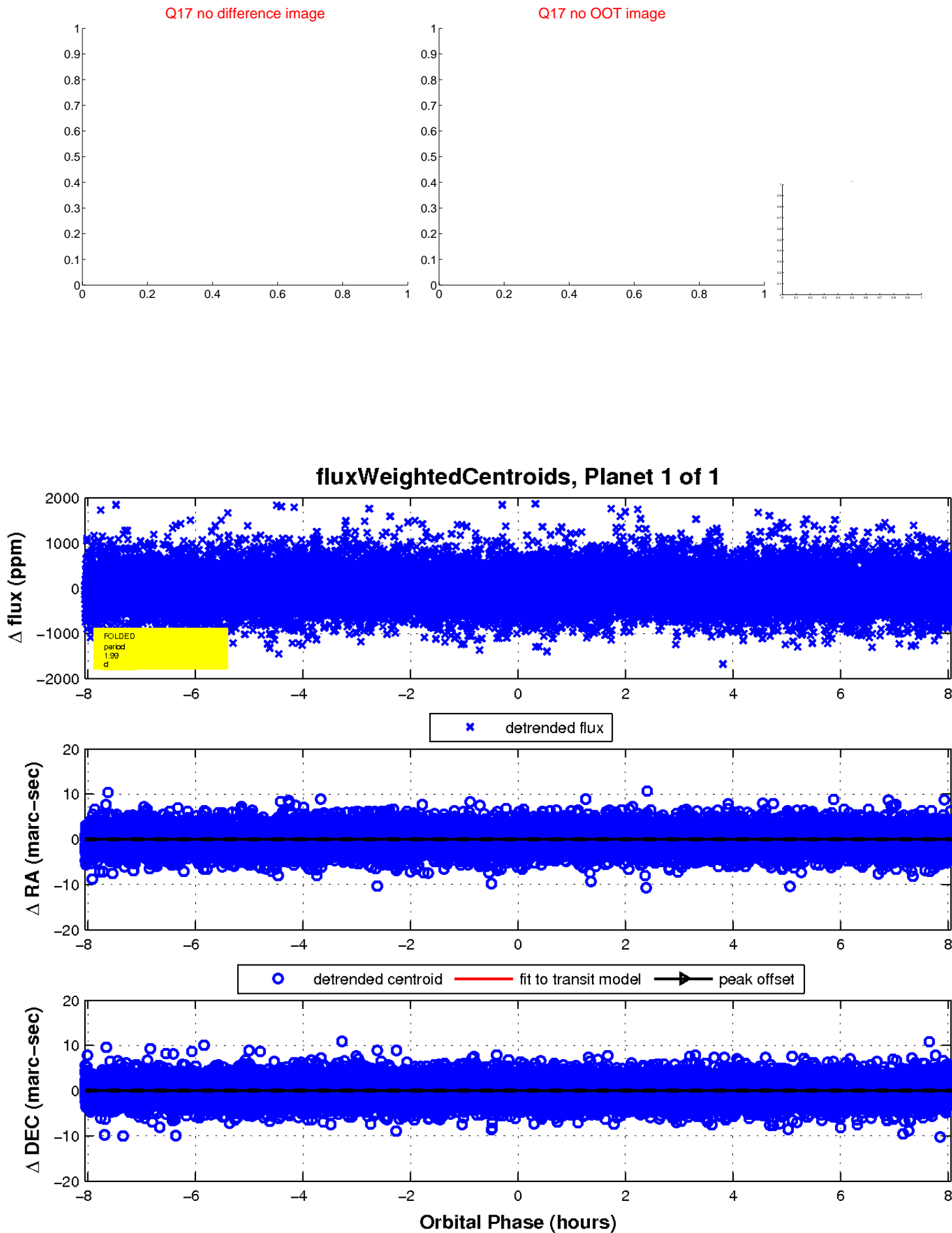
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

