

KIC 005941885

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})
005941885-01	OBS	No	5.935907	134.440950	55.5	11.406	7.2	7.2	0.70	4986	0.62	84.39

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005941885-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_KIC_POS

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

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

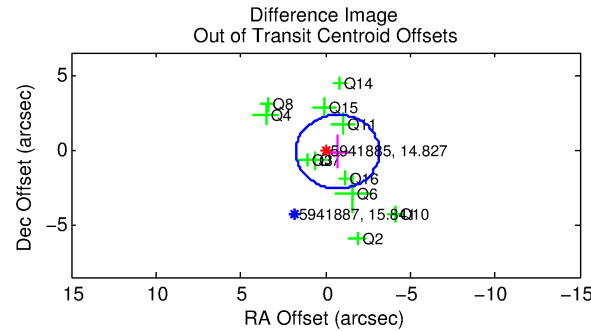
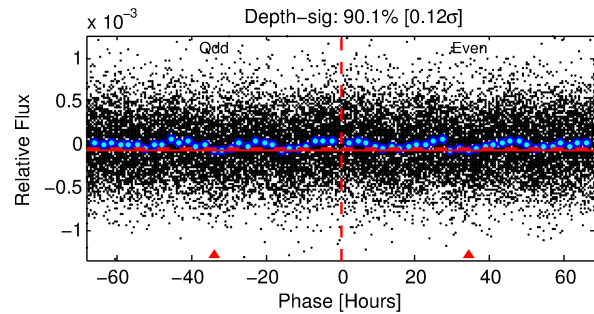
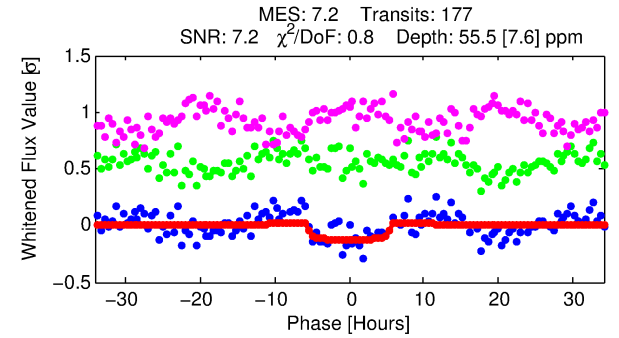
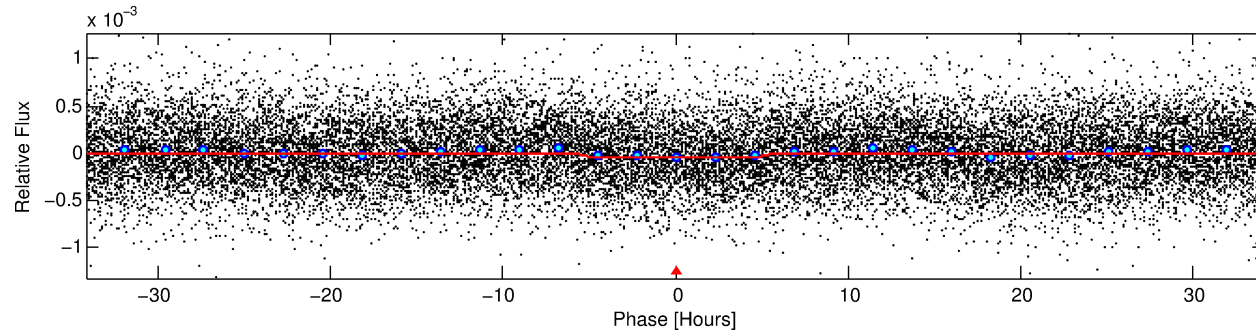
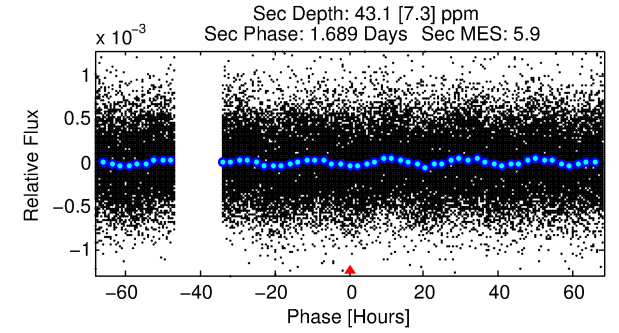
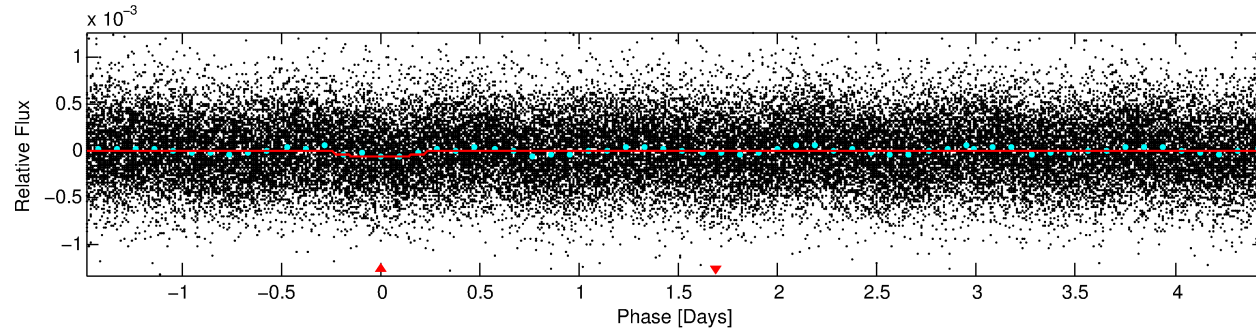
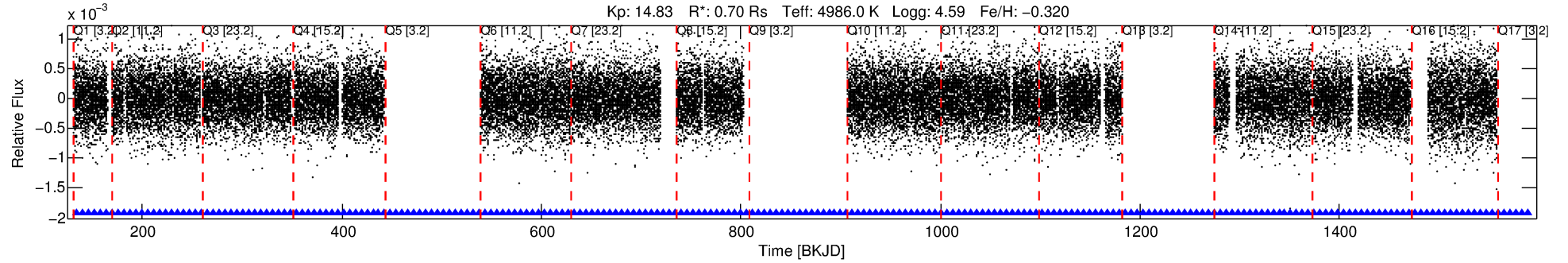
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005941885-01

No Significant Match Found

DV One-Page Summary

KIC: 5941885 Candidate: 1 of 1 Period: 5.936 d



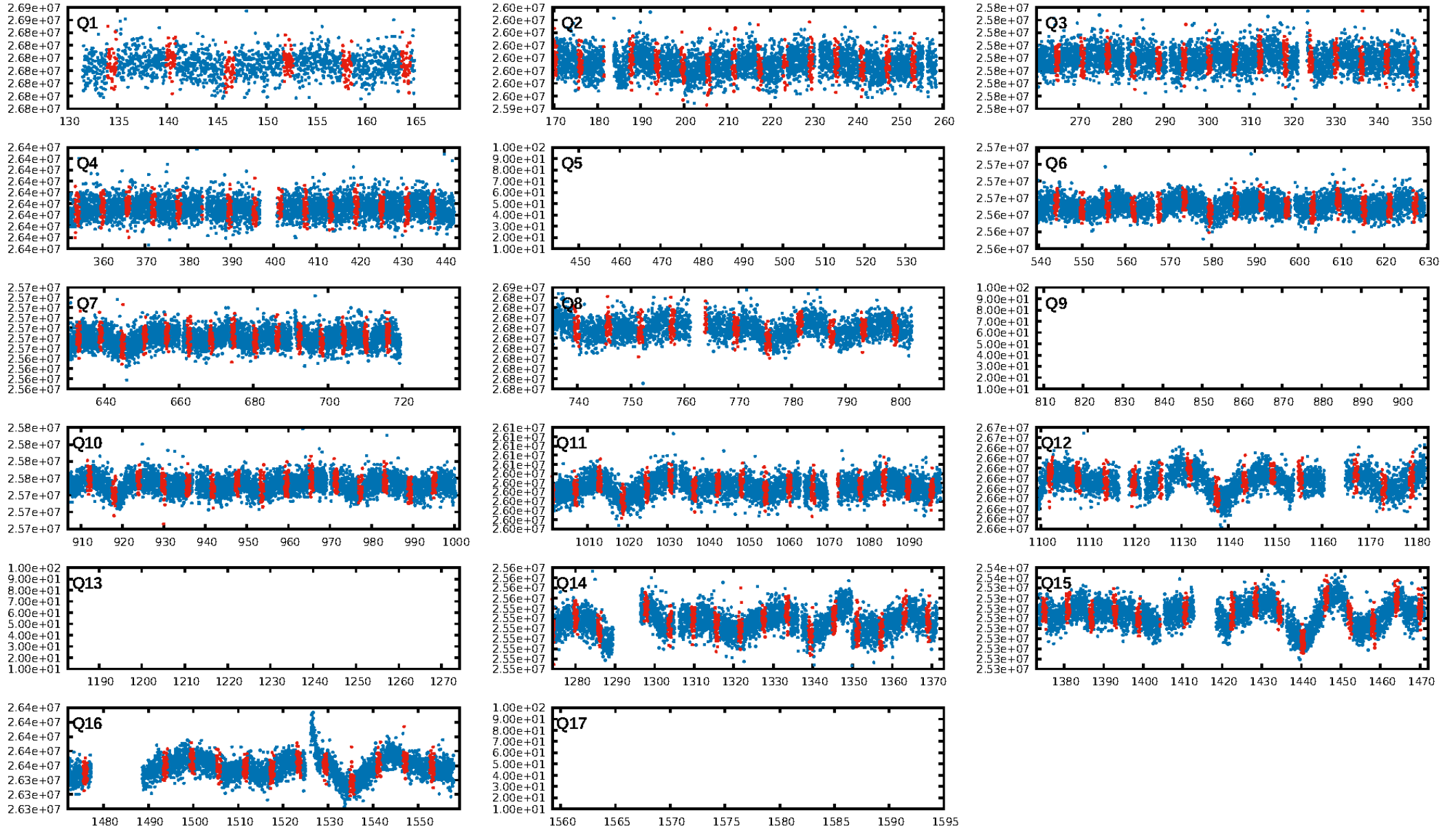
DV Fit Results:

Period = 5.93591 [0.00015] d
Epoch = 134.4409 [0.0179] BKJD
Rp/R* = 0.0080 [0.0036]
a/R* = 2.22 [3.19]
b = 0.87 [0.51]
Seff = 84.39 [13.69]
Teff = 773 [31] K
Rp = 0.62 [0.29] Re
a = 0.0570 [0.0045] AU
Ag = 202.33 [186.74] [1.08σ]
Teffp = 4507 [1042] K [3.58σ]

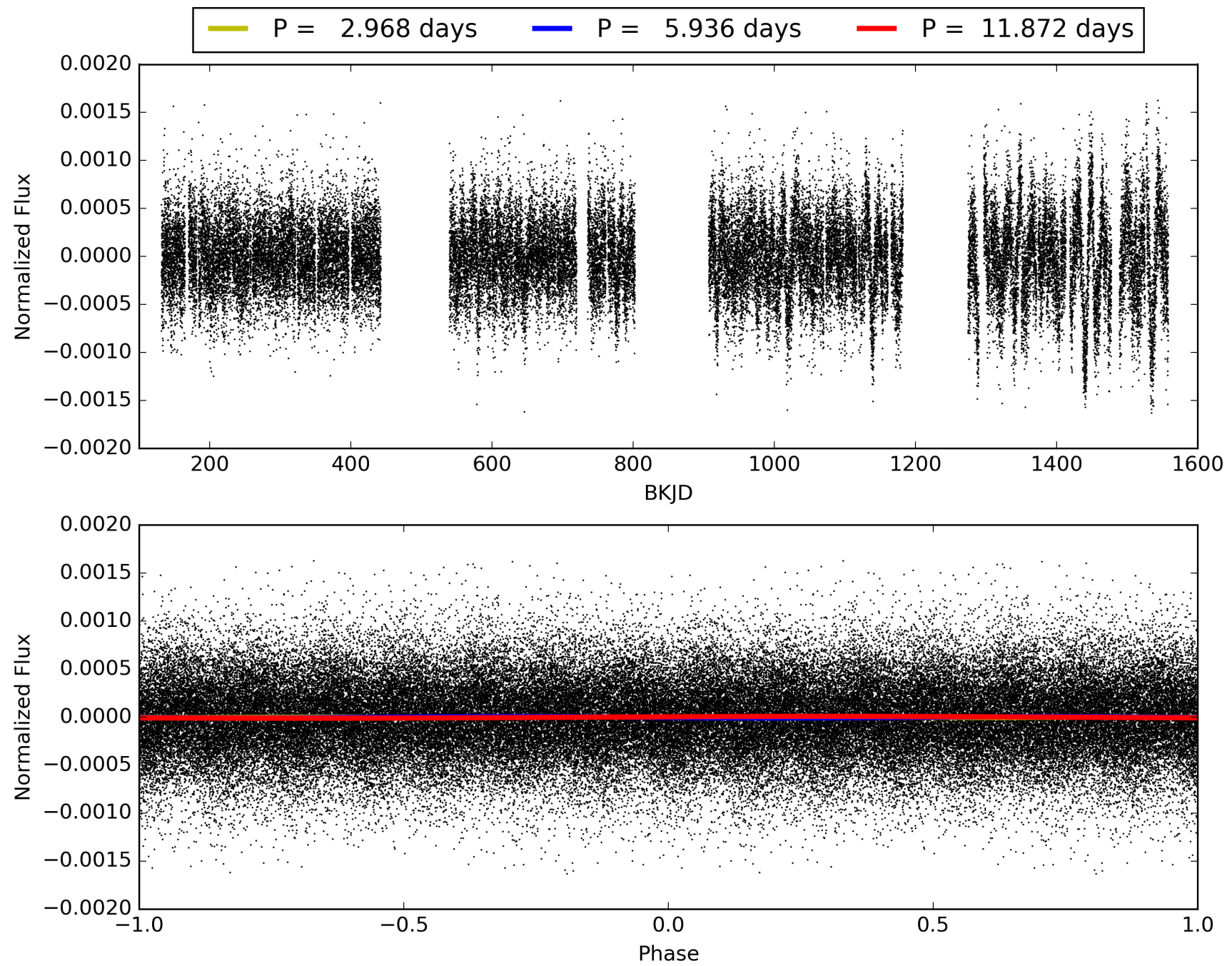
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.46e-12
RollingBand-fgt: 1.00 [171/171]
GhostDiagnostic-chr: 1.783
Centroid-sig: 99.2%
Centroid-so: 0.867 arcsec [0.67σ]
OotOffset-rm: 0.725 arcsec [0.88σ]
KicOffset-rm: 1.407 arcsec [1.22σ]
OotOffset-st: 4/4/3/0 [11]
KicOffset-st: 4/4/3/0 [11]
DiffImageQuality-fgm: 0.36 [4/11]
DiffImageOverlap-fno: 1.00 [13/13]

TCE 005941885-01, PDC Light Curves

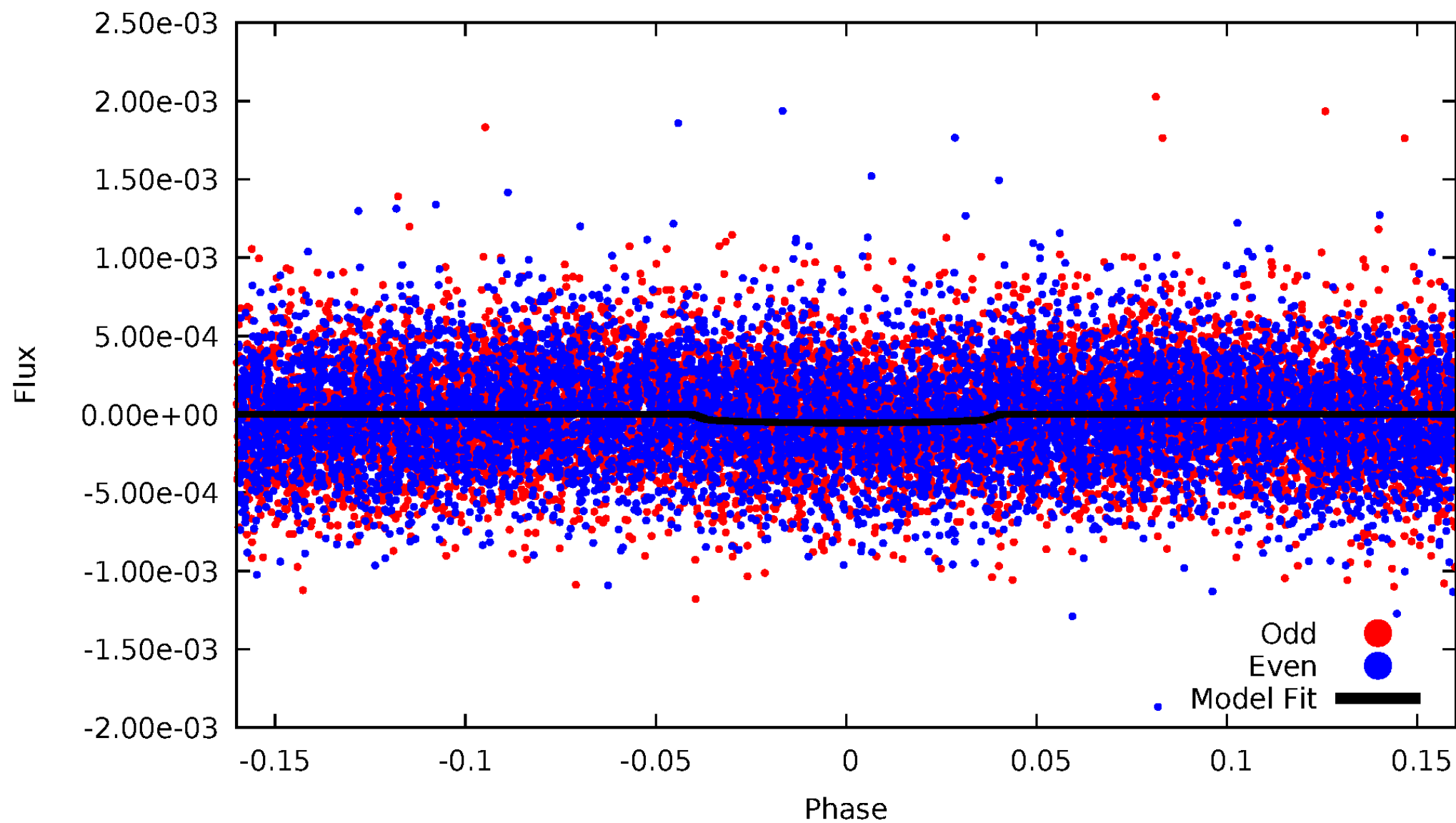


TCE 005941885-01



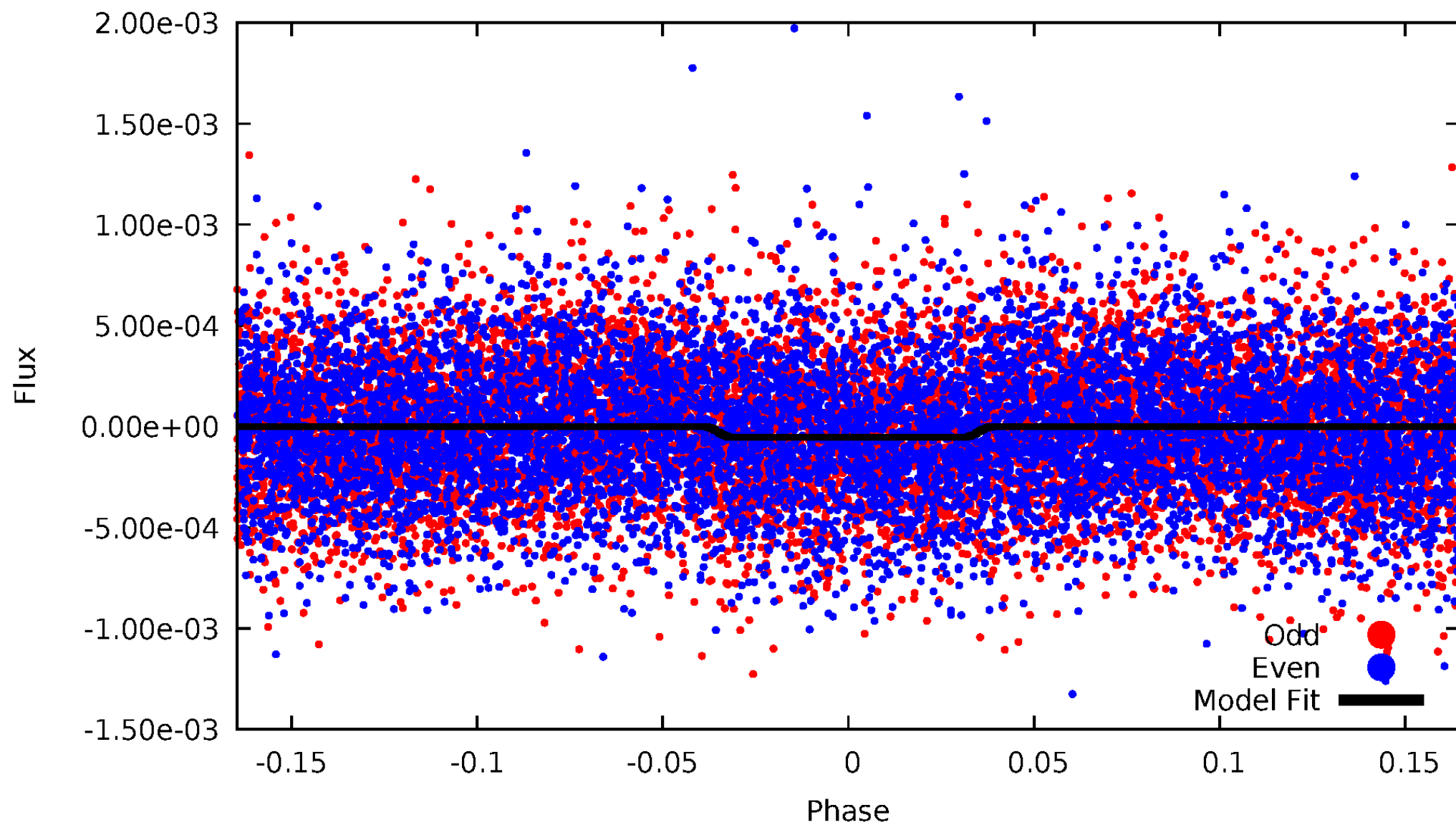
DV Odd/Even

TCE 005941885-01



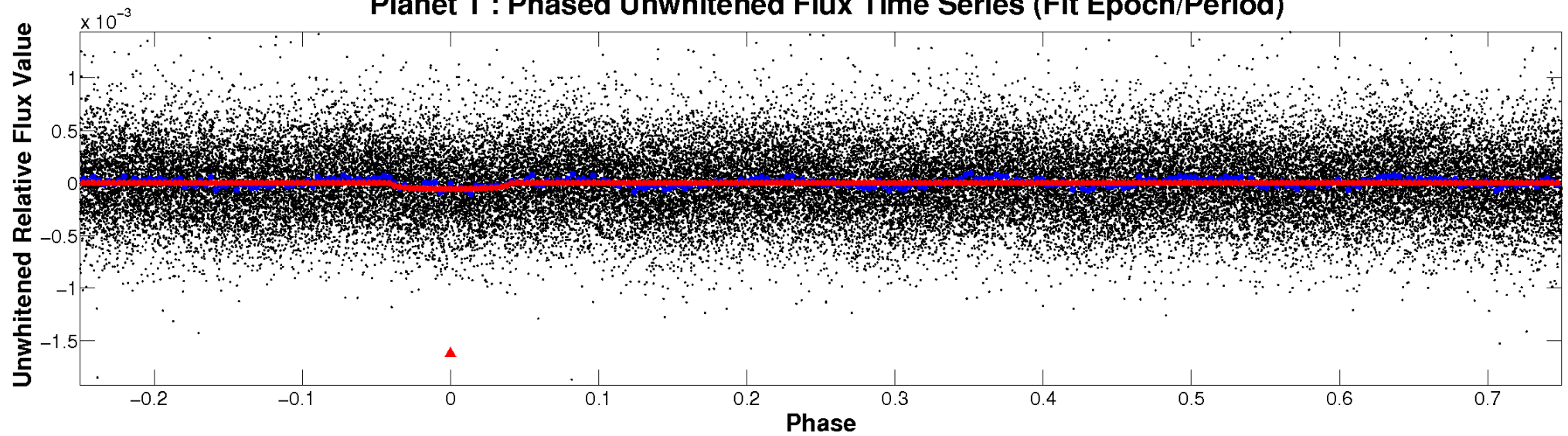
ALT Odd/Even

TCE 005941885-01

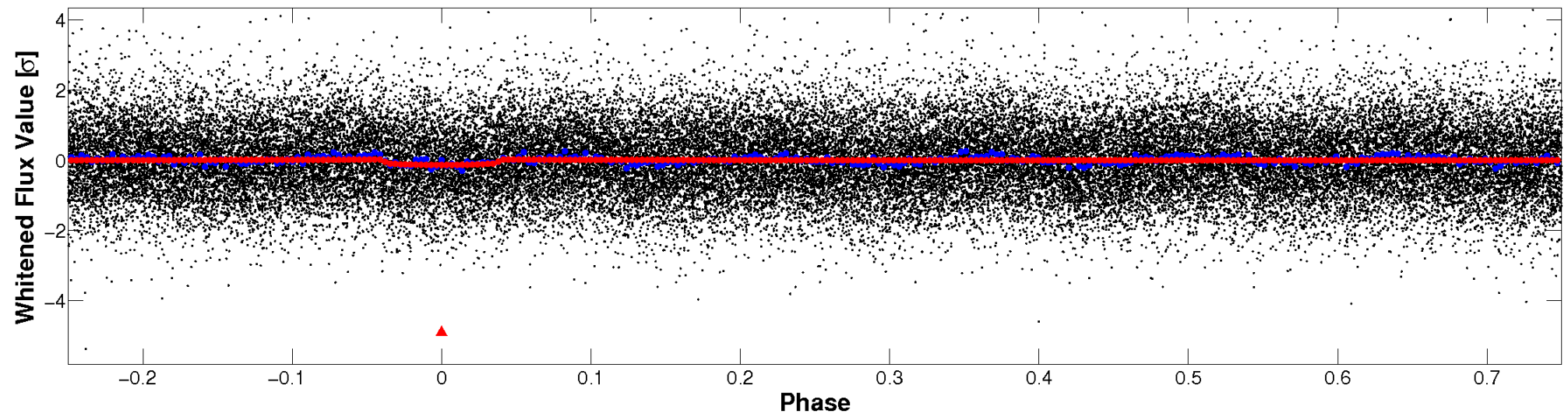


Non-Whitened Vs. Whitened Light Curve

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

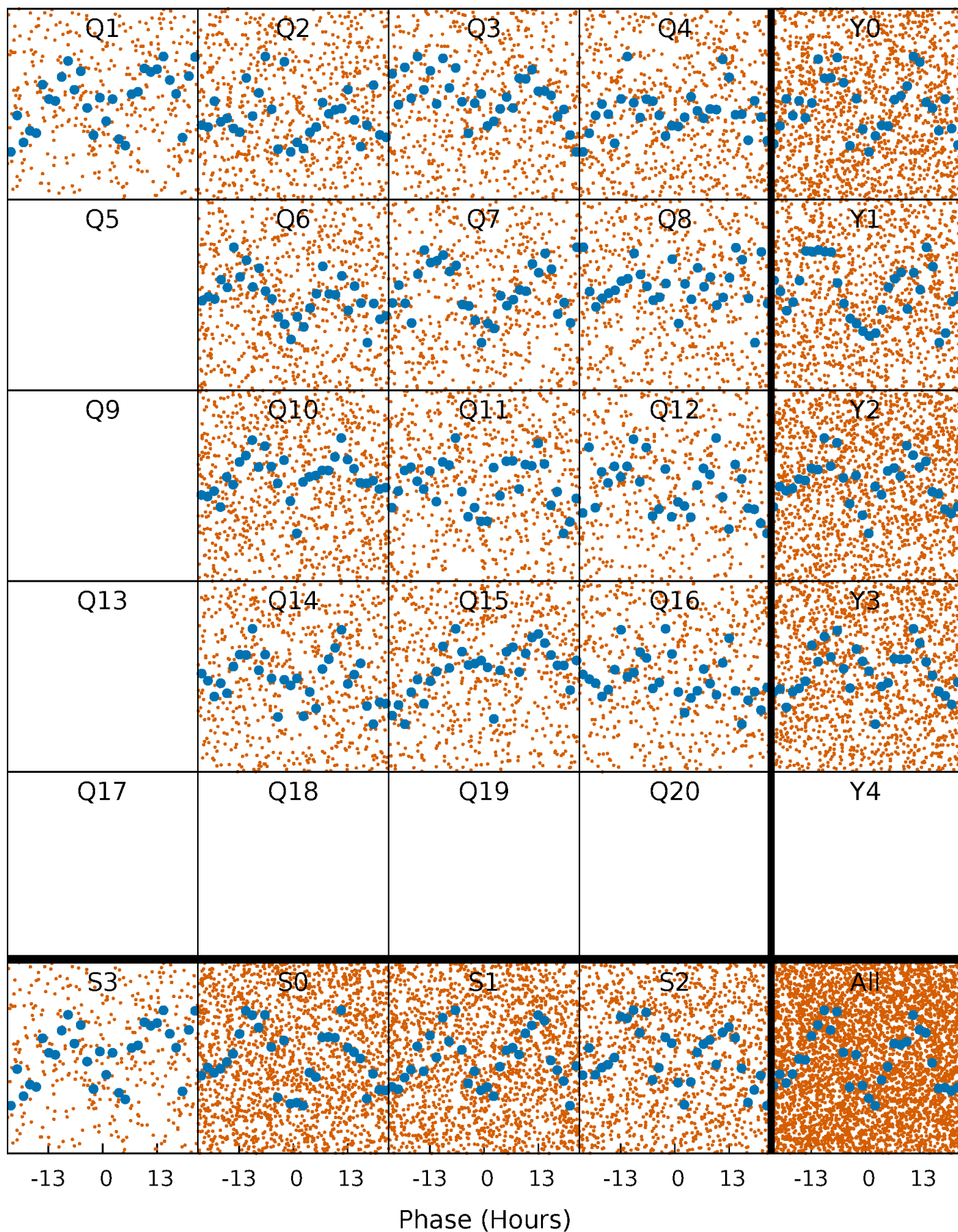


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



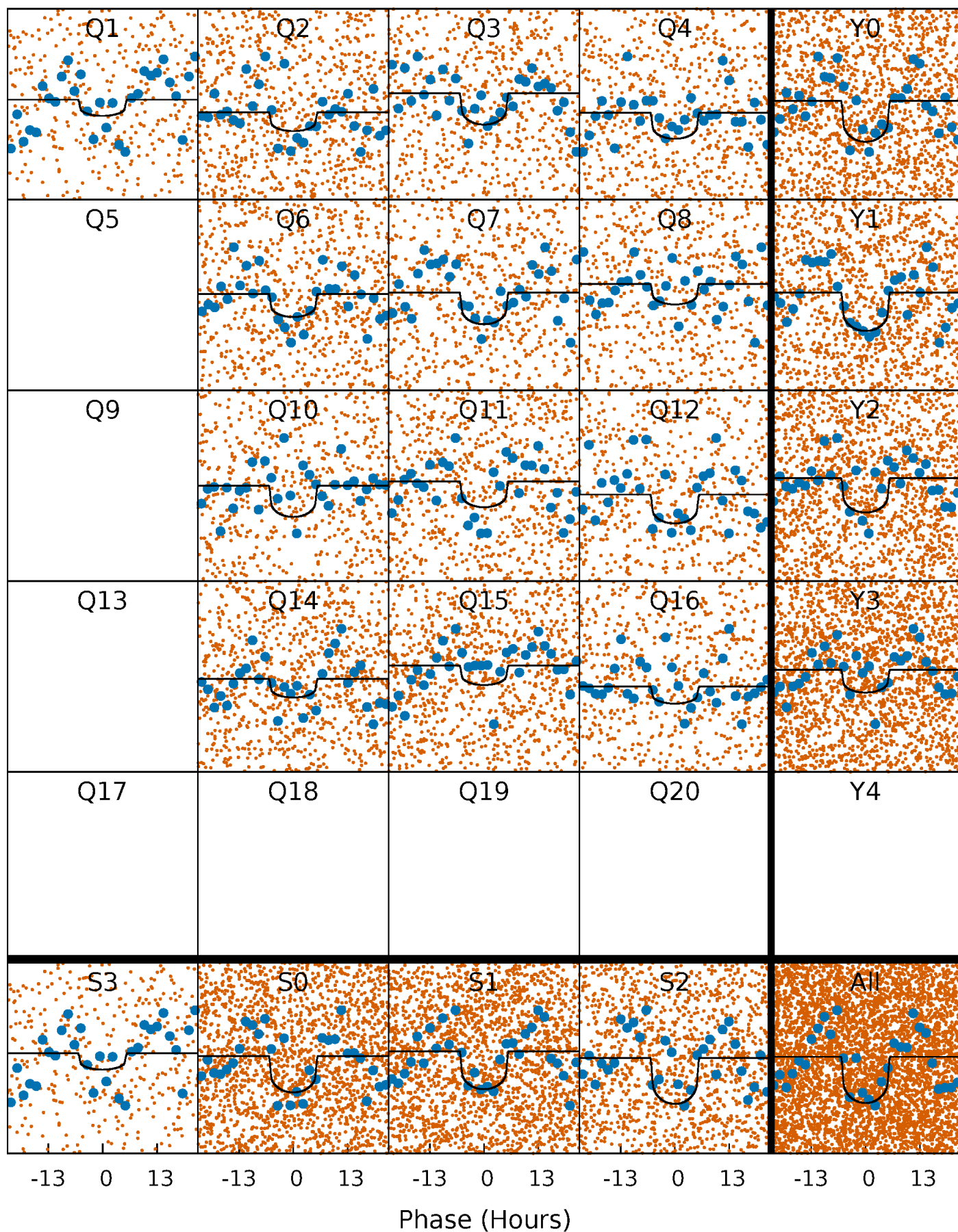
PDC Quarter-Phased Transit Curves

TCE 005941885-01 P= 5.935907 Days $T_0=134.440950$ (BKJD)



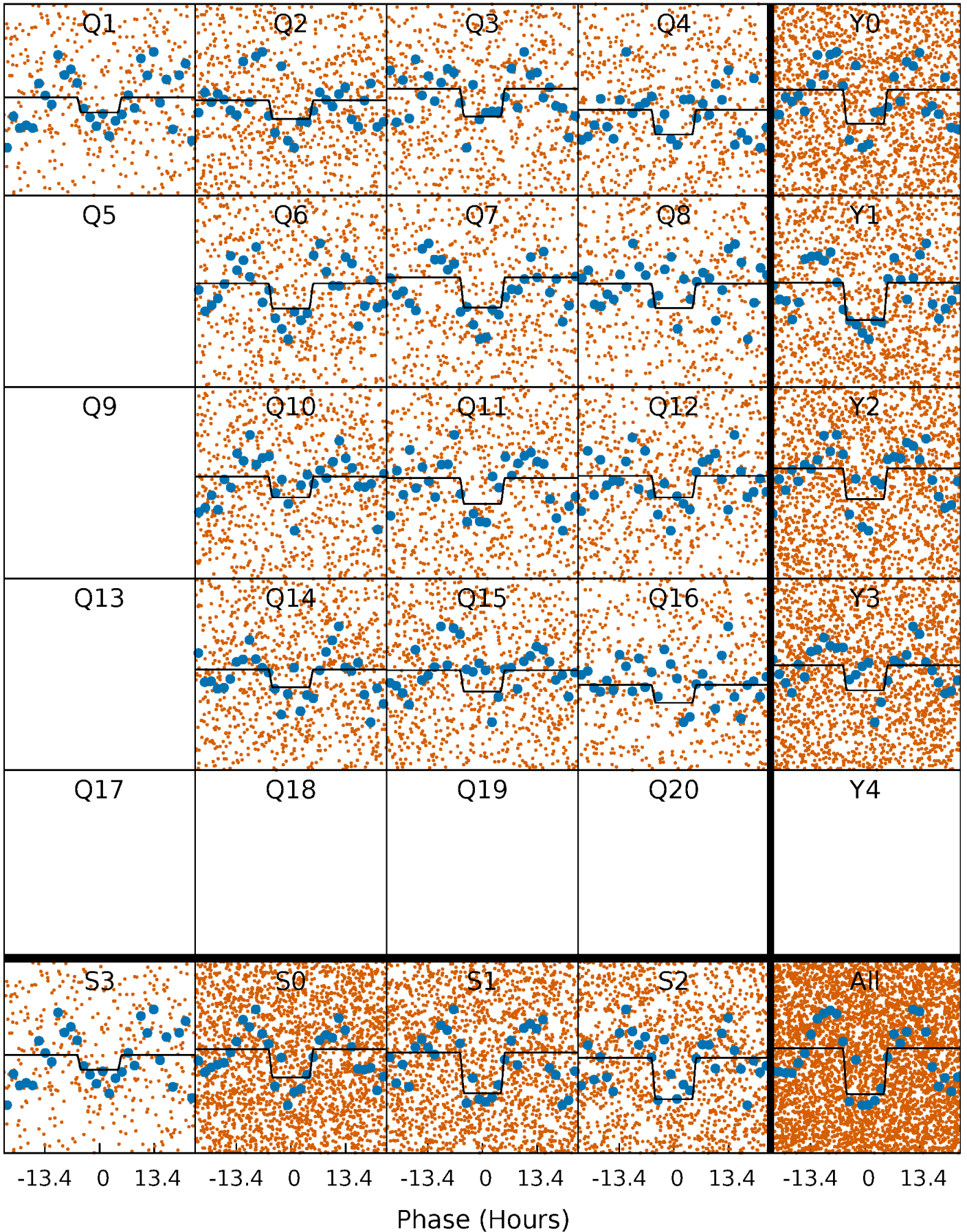
DV Quarter-Phased Transit Curves

TCE 005941885-01 P= 5.935907 Days $T_0=134.440950$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

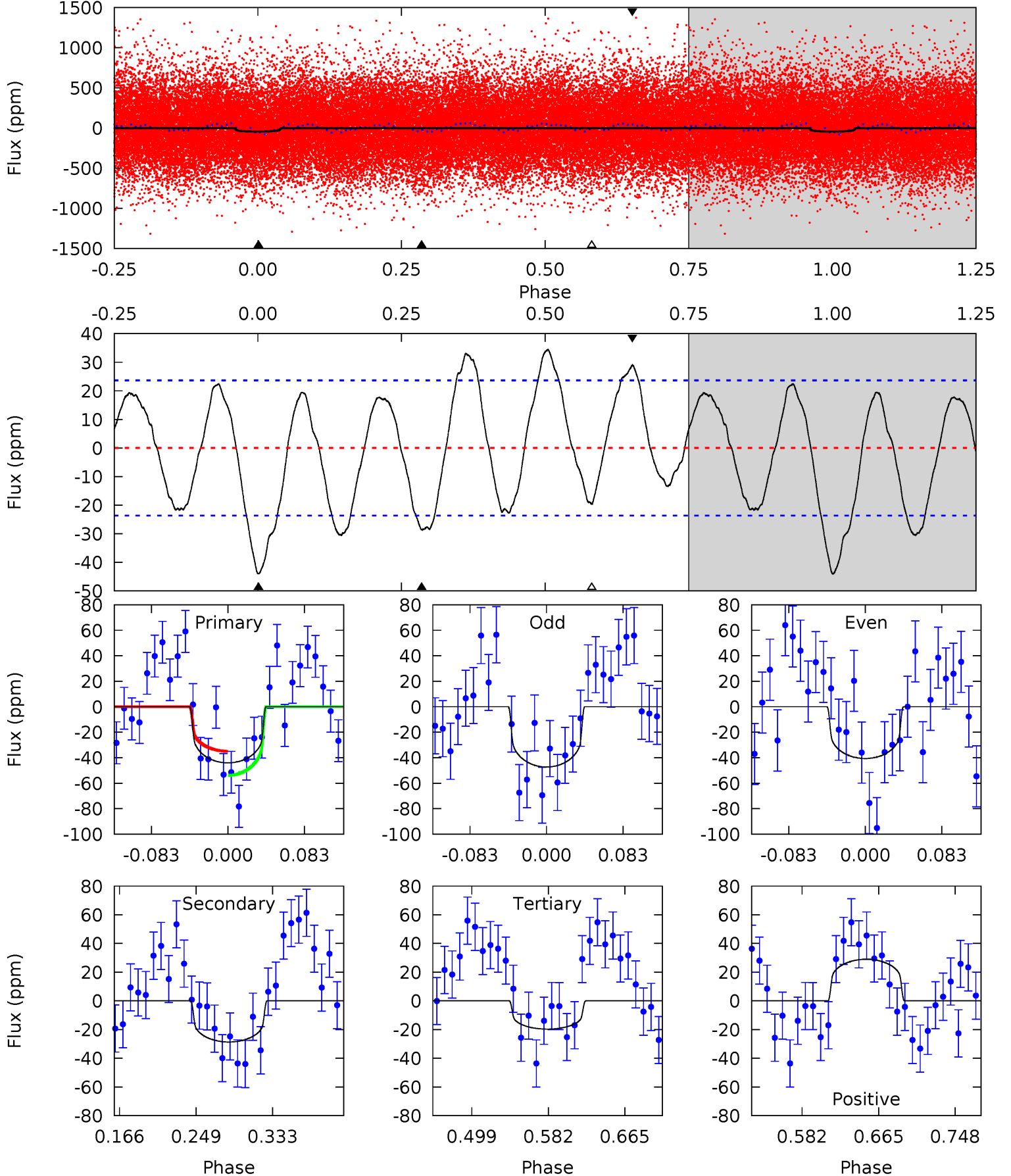
TCE 005941885-01 P= 5.935761 Days $T_0=134.463066$ (BKJD)



DV Model-Shift Uniqueness Test

005941885-01, P = 5.935907 Days, E = 128.505043 Days

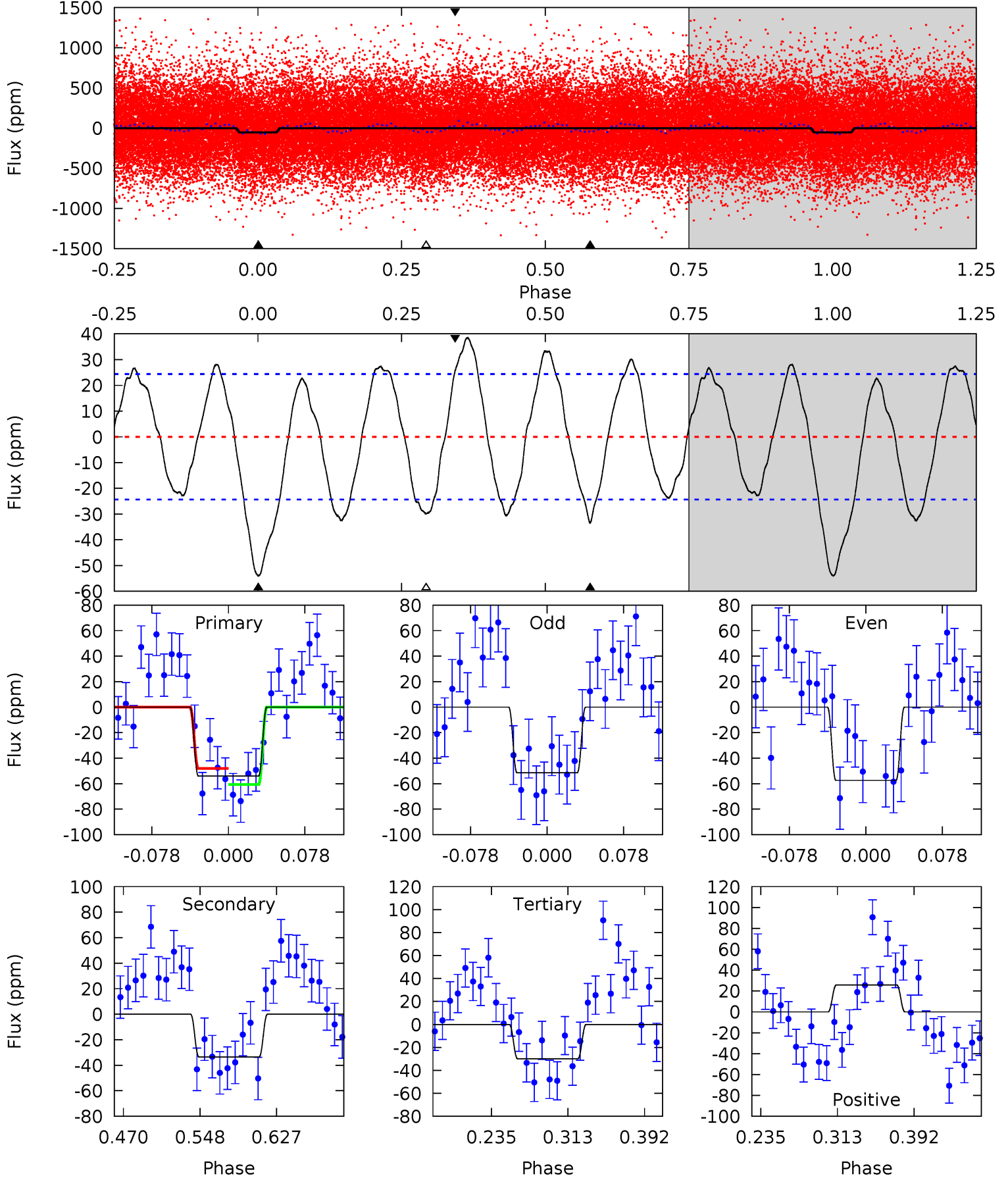
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.58	5.59	3.83	5.65	4.60	1.73	3.31	4.74	2.93	1.75	-0.06	0.65	0.84	0.44	1.84



Alt Model-Shift Uniqueness Test

005941885-01, P = 5.935761 Days, E = 128.527305 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.2	6.34	5.66	4.89	4.62	1.76	3.78	4.57	5.33	0.68	1.45	0.56	1.01	0.42	1.19



Stellar Parameters For KIC 005941885

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4986^{+151}_{-136}	$4.589^{+0.055}_{-0.045}$	$-0.320^{+0.300}_{-0.300}$	$0.704^{+0.071}_{-0.065}$	$0.702^{+0.085}_{-0.050}$	$2.829^{+0.728}_{-0.484}$
	+3%/-3%	+1%/-1%	+94%/-94%	+10%/-9%	+12%/-7%	+26%/-17%
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 005941885-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-29 ± 5	$0.63^{+0.28}_{-0.28}$	1077^{+38}_{-38}	4229^{+1068}_{-533}	132^{+288}_{-71}
Alt.	-33 ± 5	$0.56^{+0.27}_{-0.25}$	1079^{+39}_{-34}	4549^{+1260}_{-639}	197^{+384}_{-111}

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 $A_{obs} \gg 1.0$

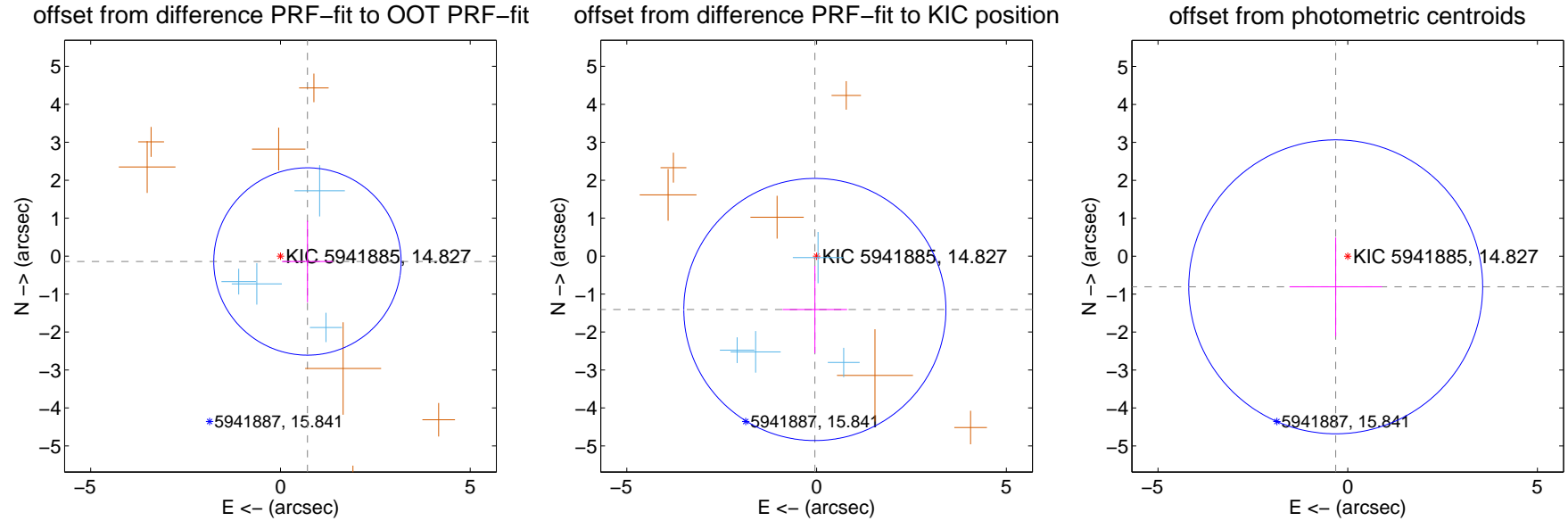
DV Centroid Data

Supplemental centroid analysis for 005941885-01. Kepler magnitude: 14.83. Transit SNR 7.23

There are 4 quarters with good PRF difference image offsets

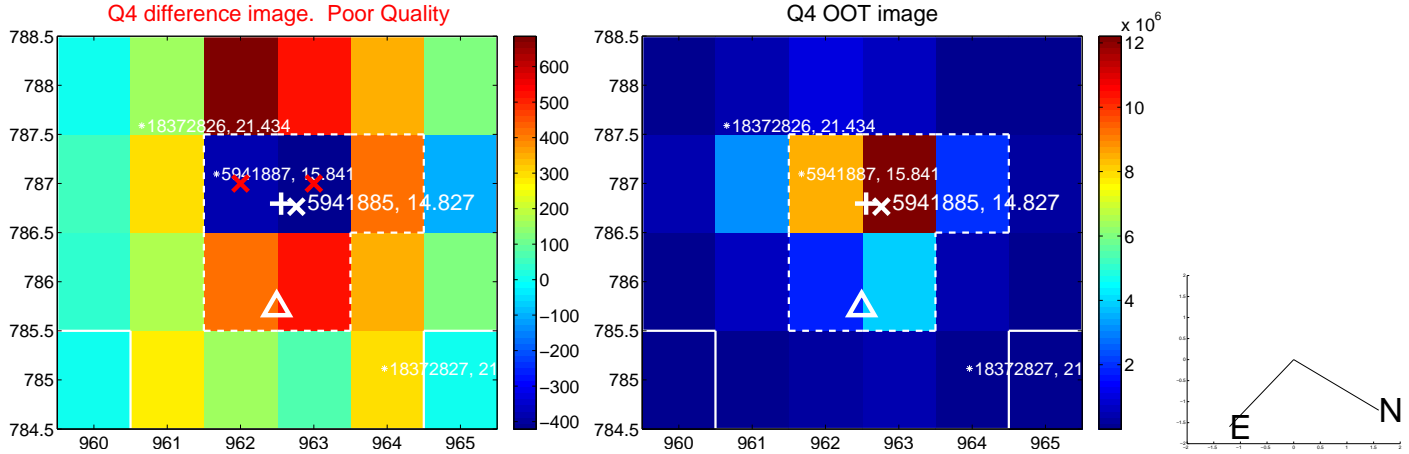
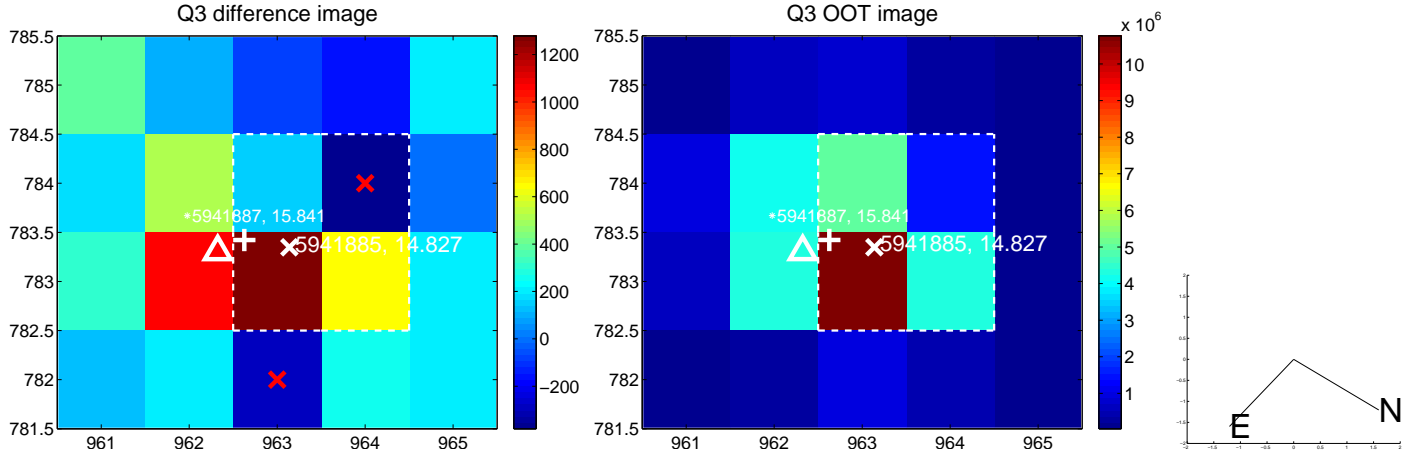
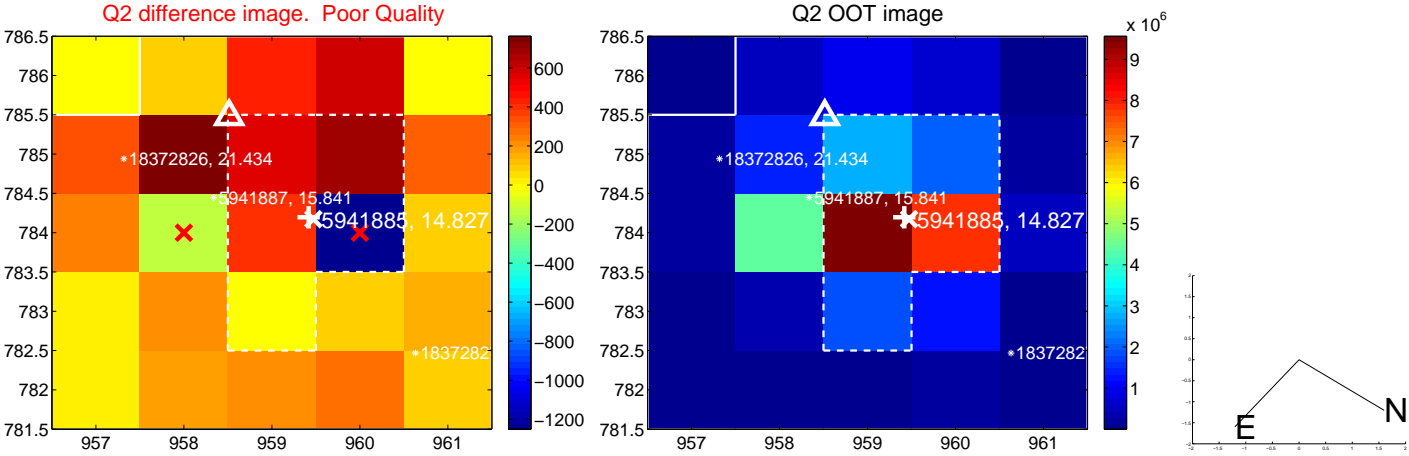
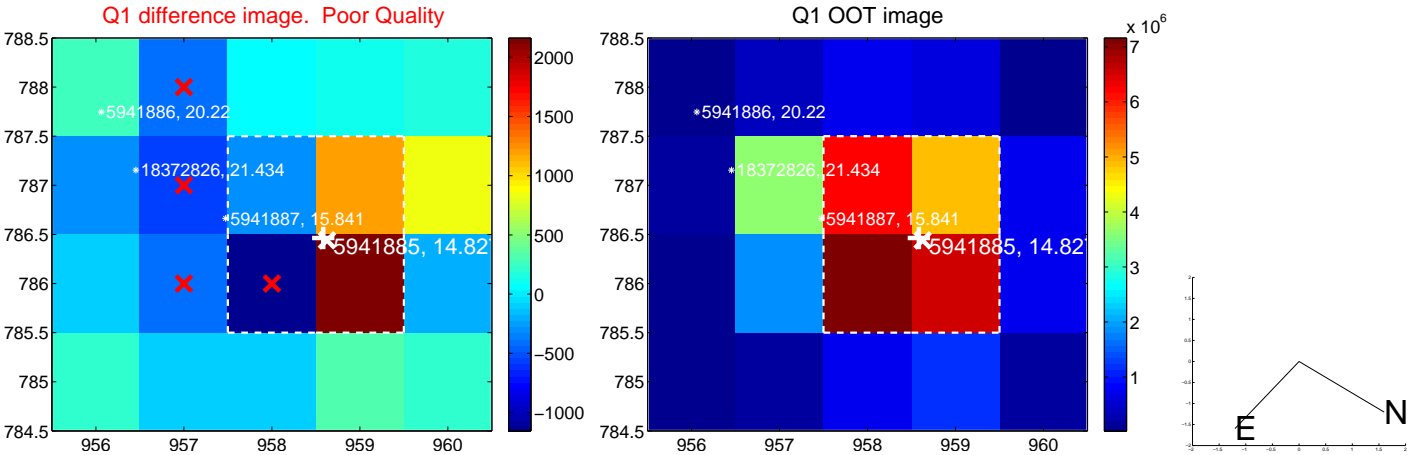
The direct PRF centroid is offset from the target star catalog position by about 1.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.725 ± 0.823	0.88	-0.711 ± 0.673	-0.141 ± 1.074
PRF-fit source offset from KIC position	1.407 ± 1.151	1.22	0.045 ± 0.847	-1.406 ± 1.151
photometric centroid source offset	0.87 ± 1.29	0.67	0.32 ± 1.22	-0.81 ± 1.30

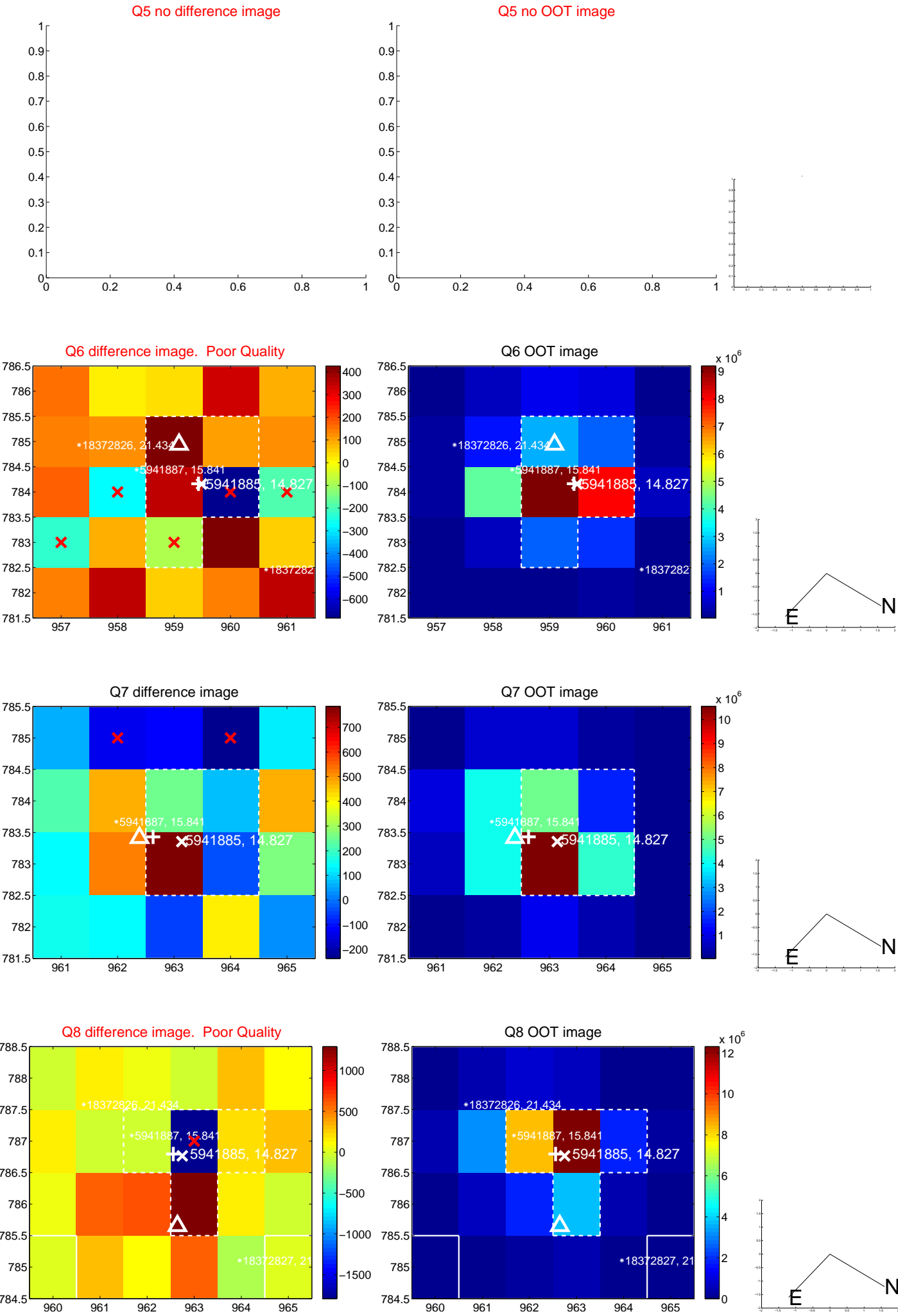


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

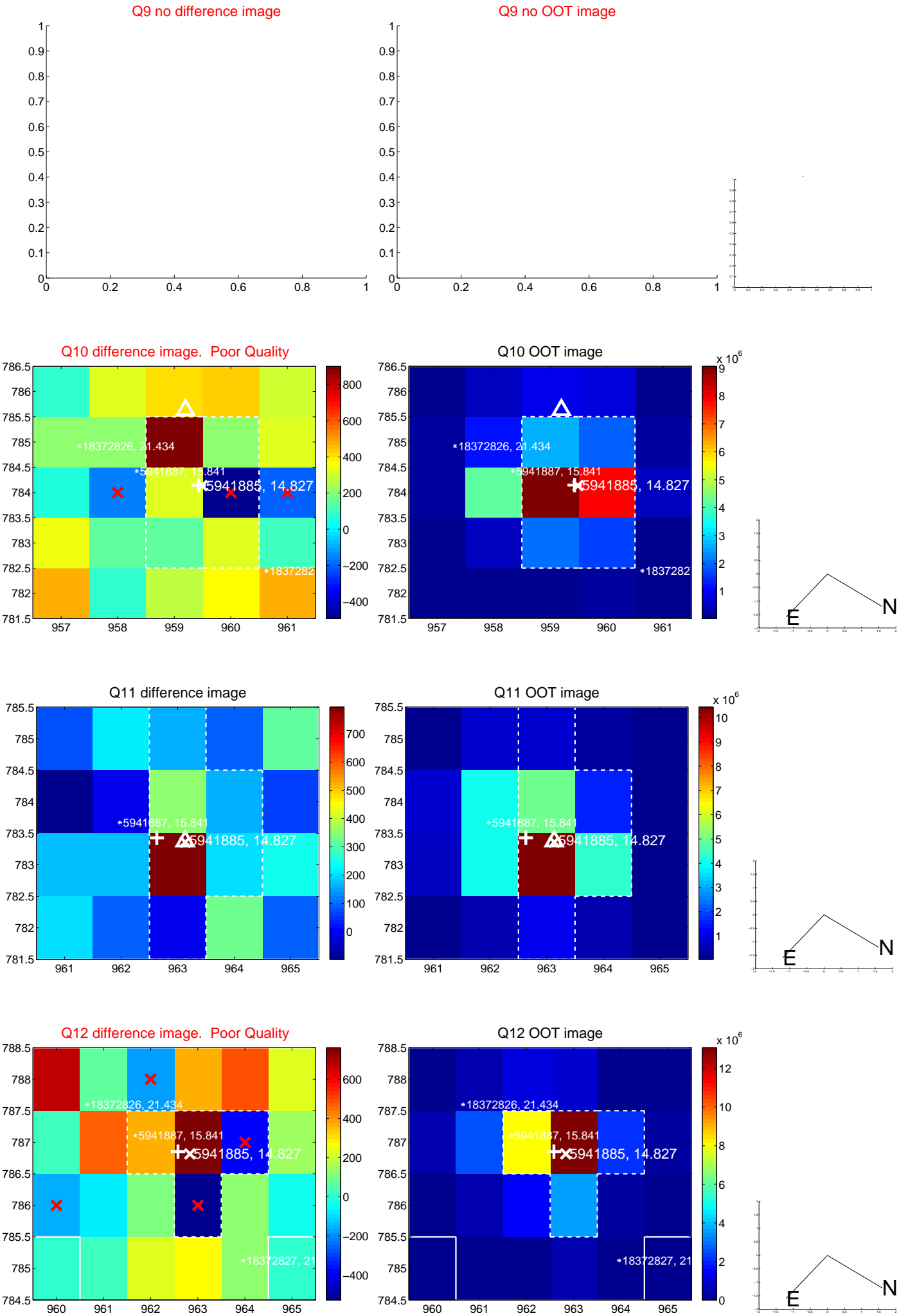
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



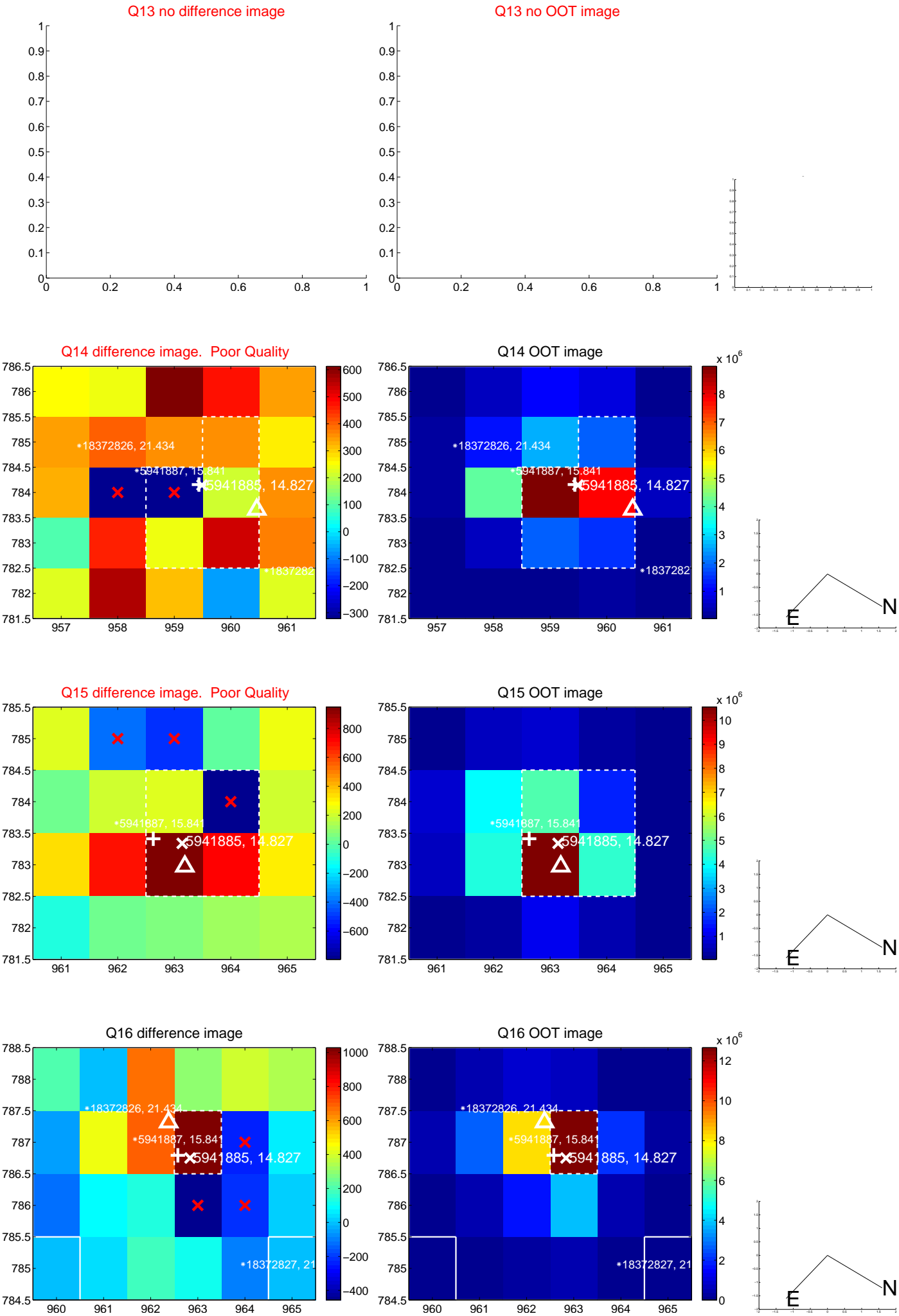
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



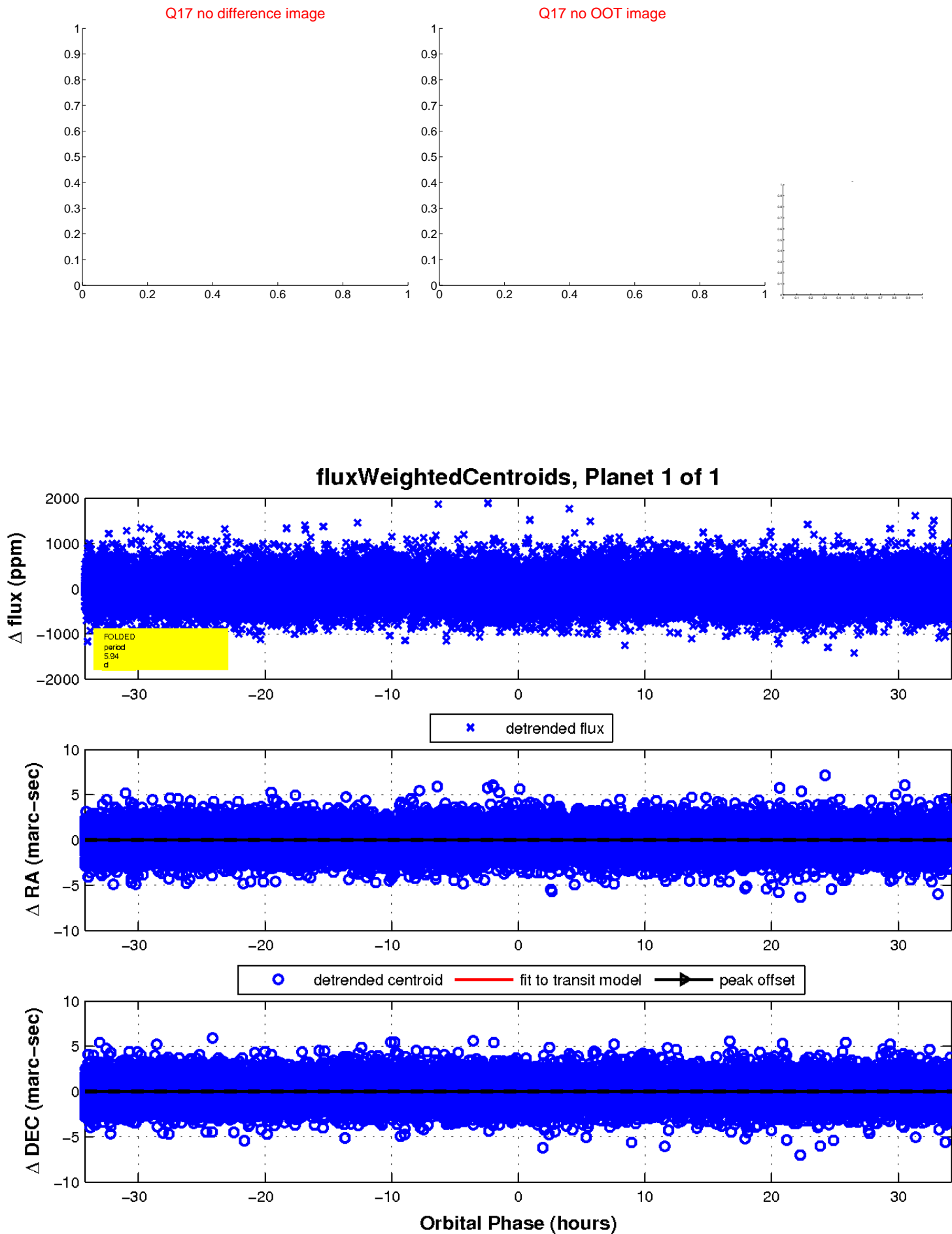
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

