

KIC 010931805

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})
010931805-01	OBS	No	0.579611	131.679848	65.4	6.431	11.5	17.3	2.14	7945	1.75	59468.99

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010931805-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT

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

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

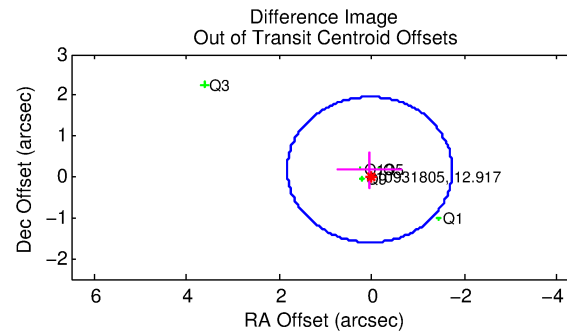
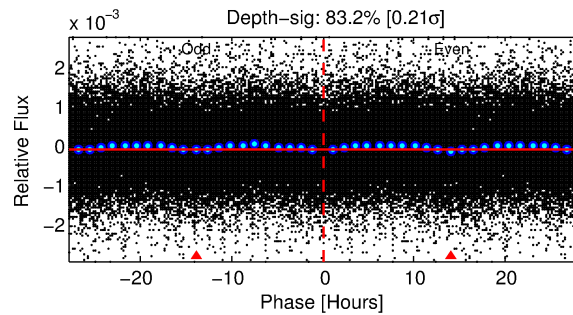
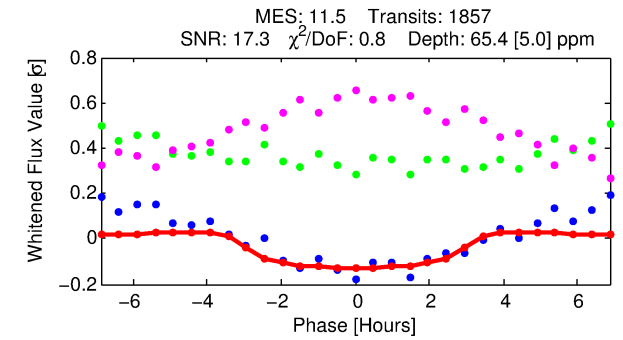
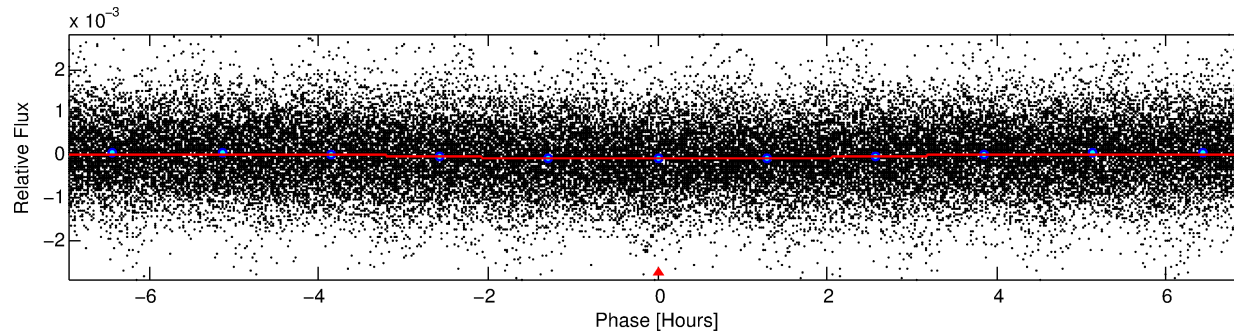
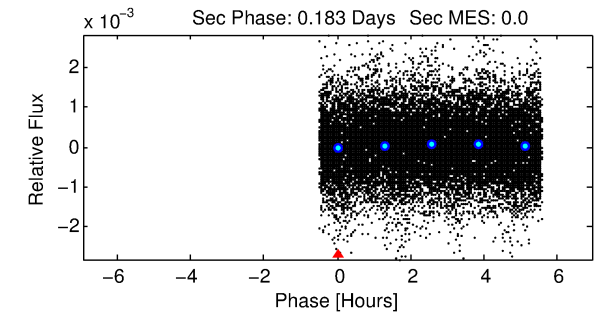
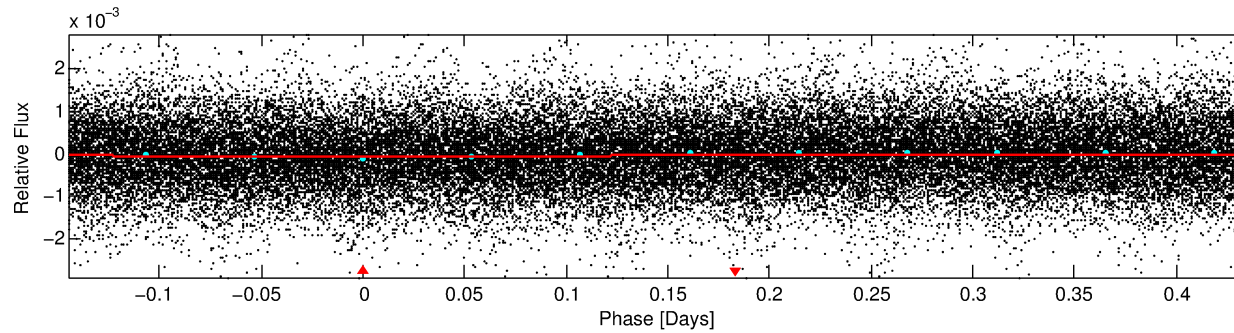
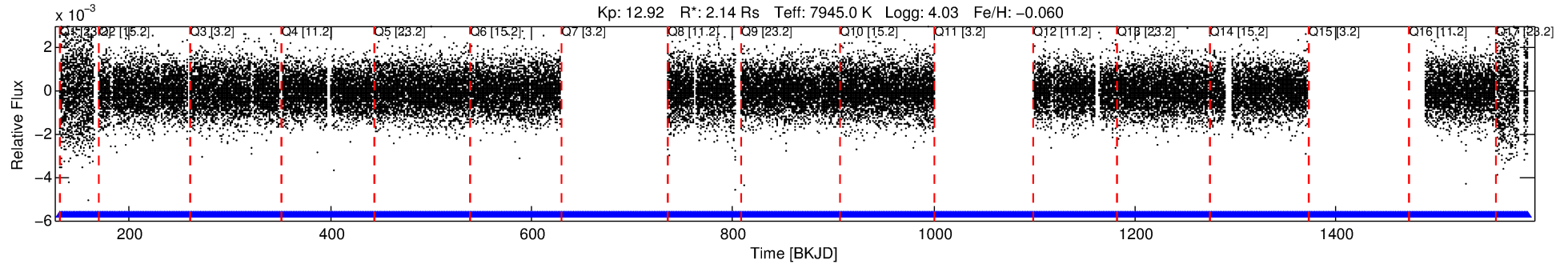
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010931805-01

No Significant Match Found

DV One-Page Summary

KIC: 10931805 Candidate: 1 of 1 Period: 0.580 d



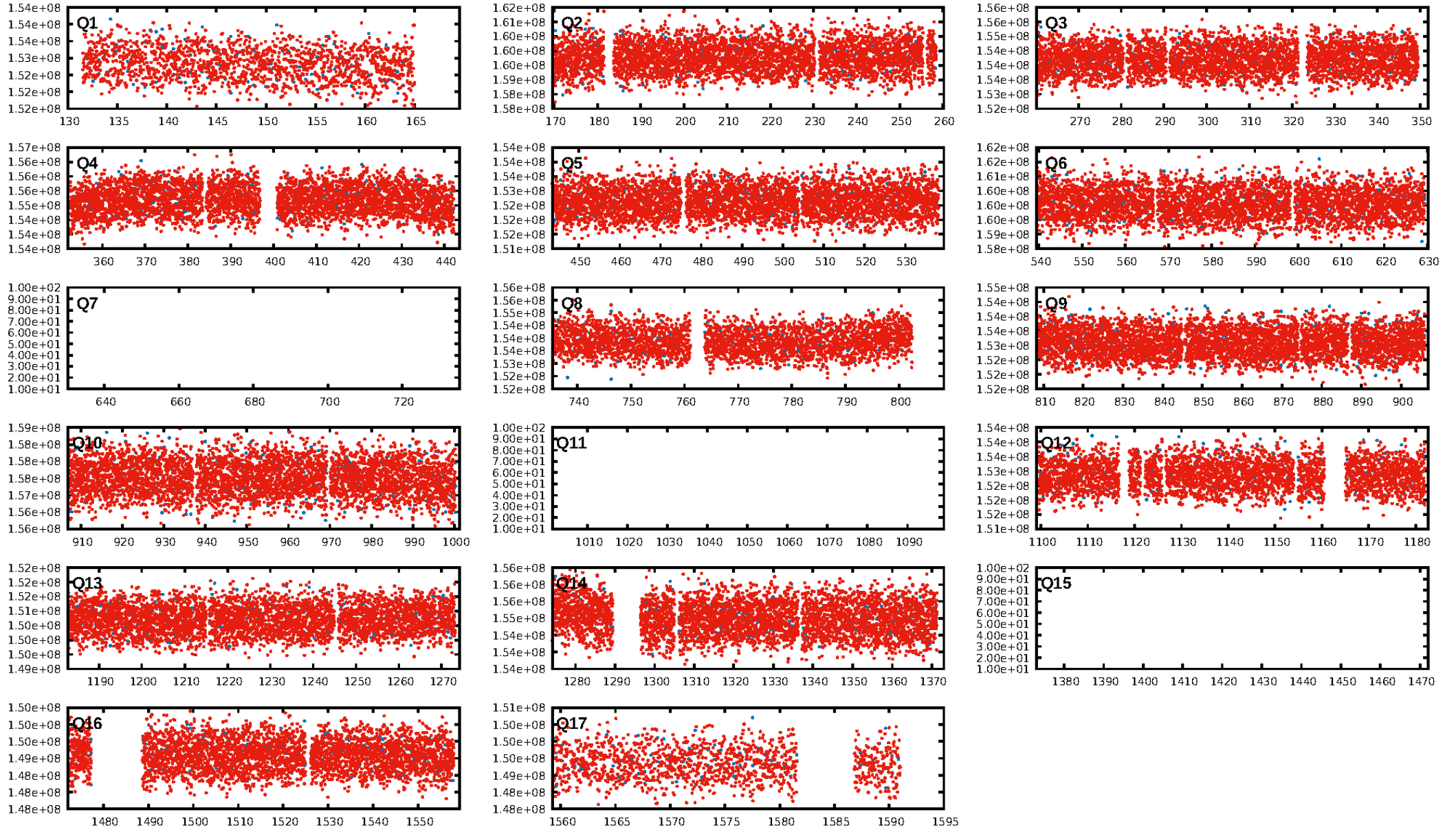
DV Fit Results:

Period = 0.57961 [0.00001] d
Epoch = 131.6798 [0.0045] BKJD
Rp/R* = 0.0075 [0.0060]
a/R* = 1.01 [0.12]
b = 0.05 [91.80]
Seff = 59468.99 [23217.30]
Teq = 3982 [389] K
Rp = 1.75 [1.48] Re
a = 0.0166 [0.0038] AU
Ag = N/A
Teffp = N/A

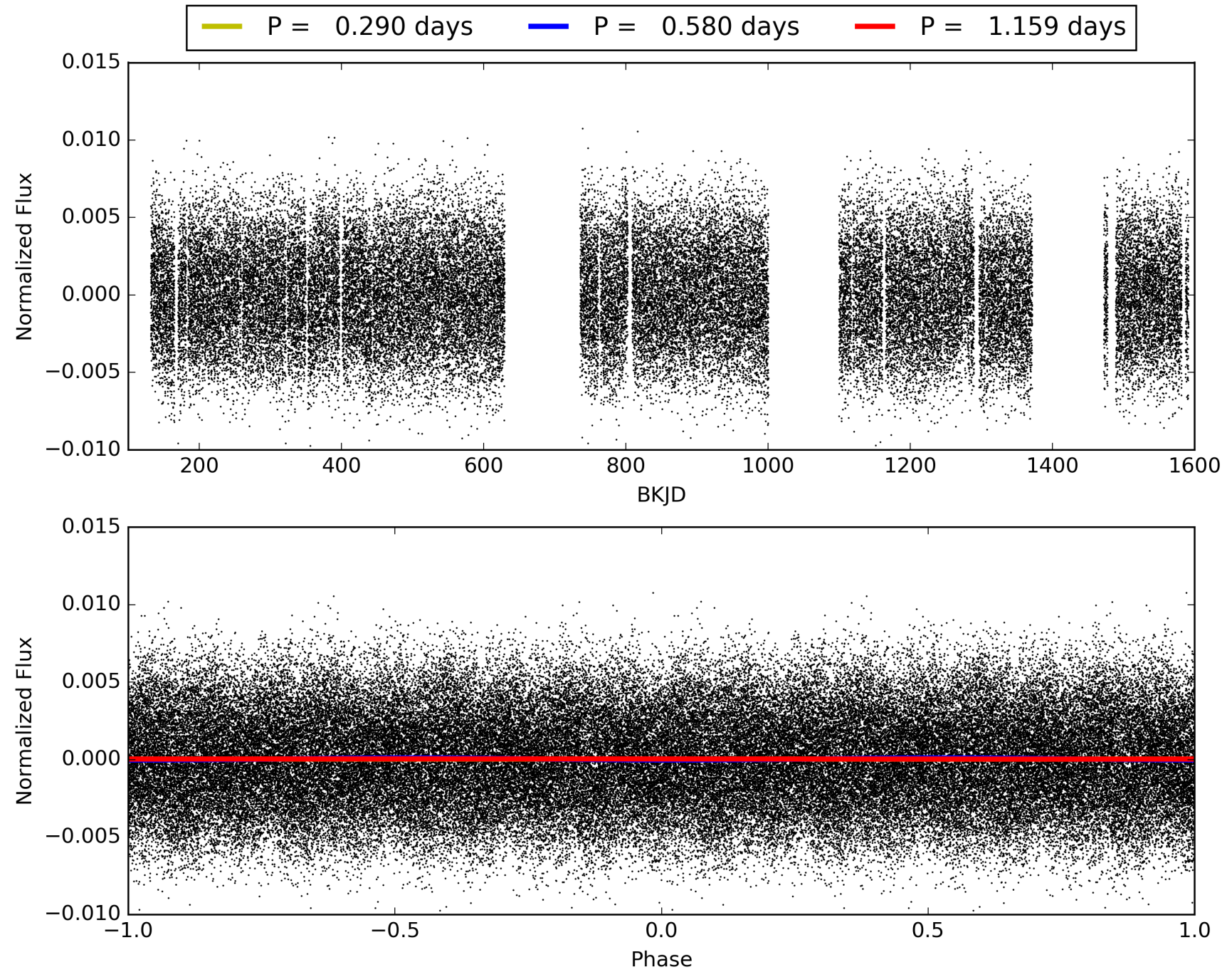
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1752/1752]
GhostDiagnostic-chr: 2.219
Centroid-sig: 6.3%
Centroid-so: 0.340 arcsec [1.93σ]
OotOffset-rm: 0.181 arcsec [0.30σ]
KicOffset-rm: 0.197 arcsec [0.52σ]
OotOffset-st: 0/1/0/4 [5]
KicOffset-st: 0/1/0/4 [5]
DiffImageQuality-fgm: 0.80 [4/5]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 010931805-01, PDC Light Curves

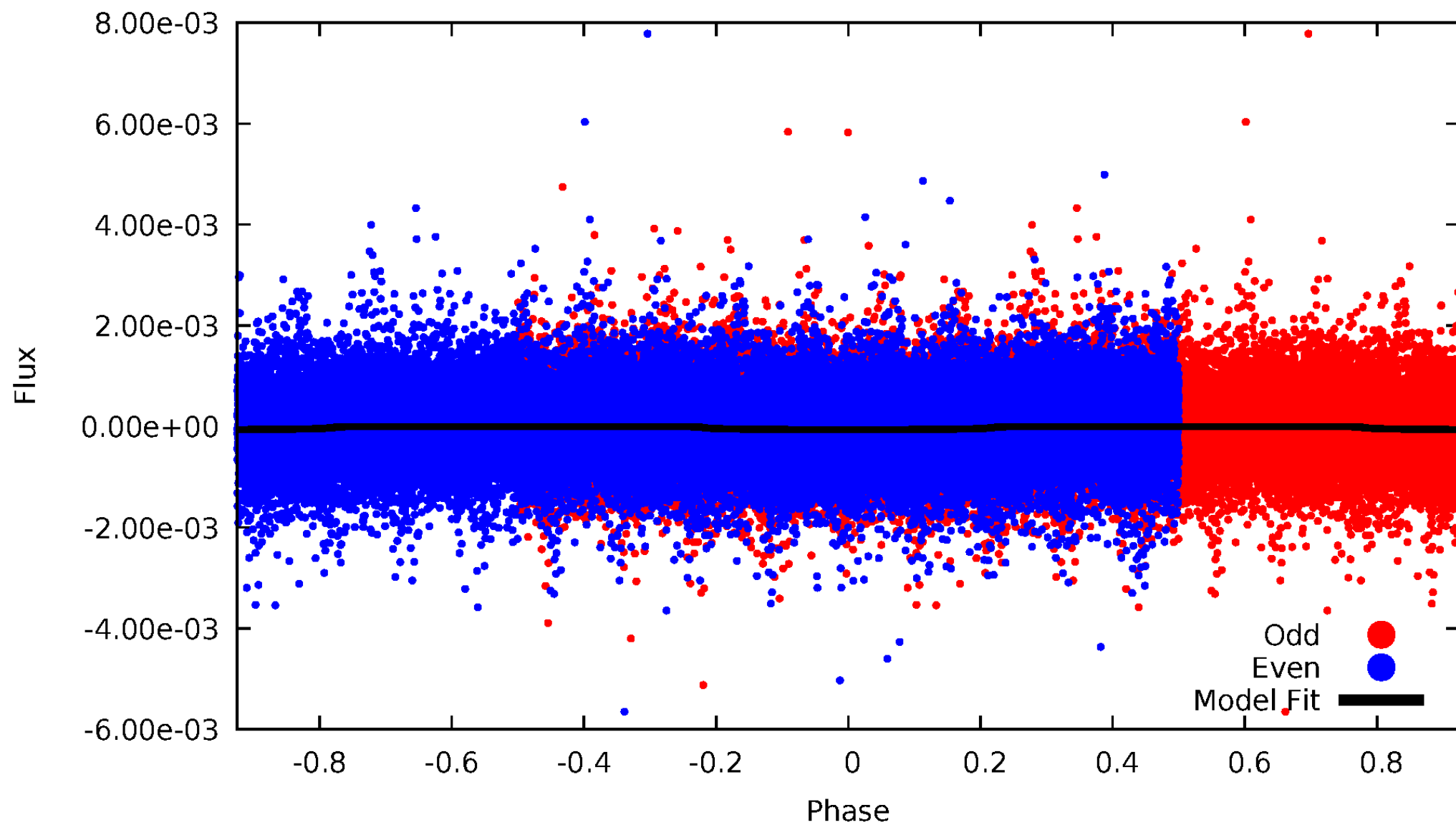


TCE 010931805-01



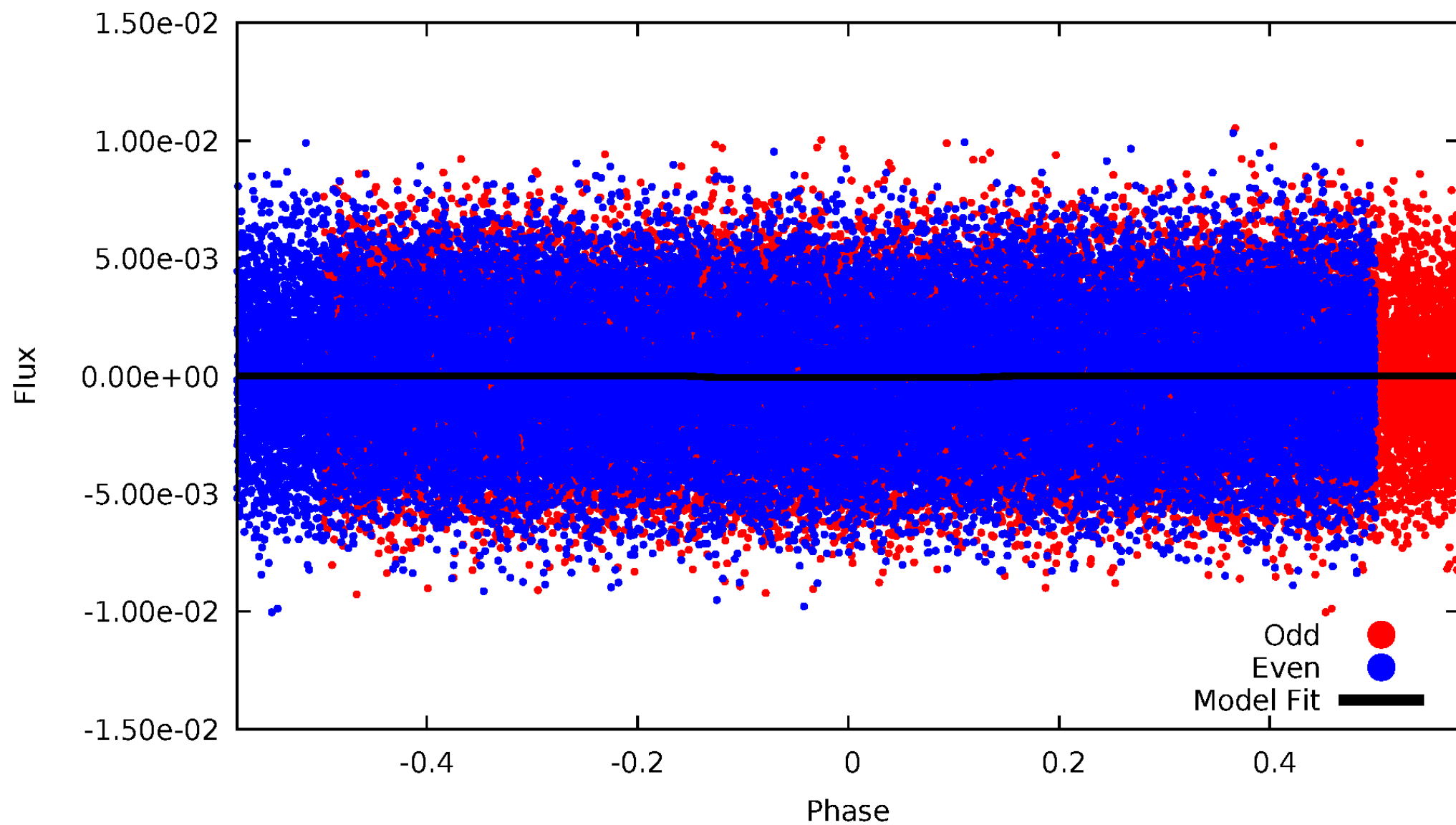
DV Odd/Even

TCE 010931805-01



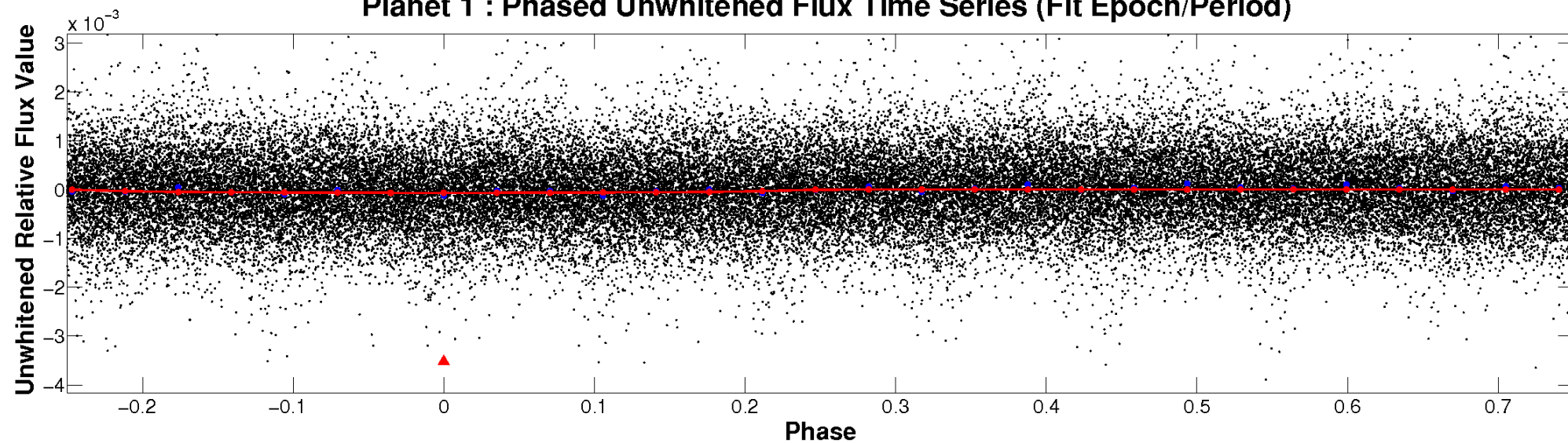
ALT Odd/Even

TCE 010931805-01

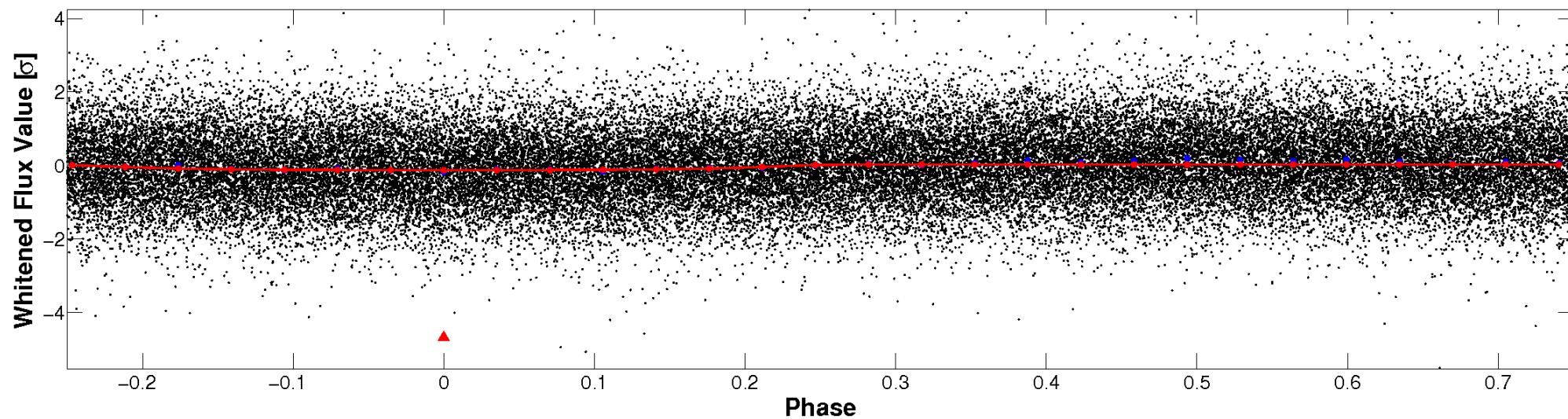


Non-Whitened Vs. Whitened Light Curve

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

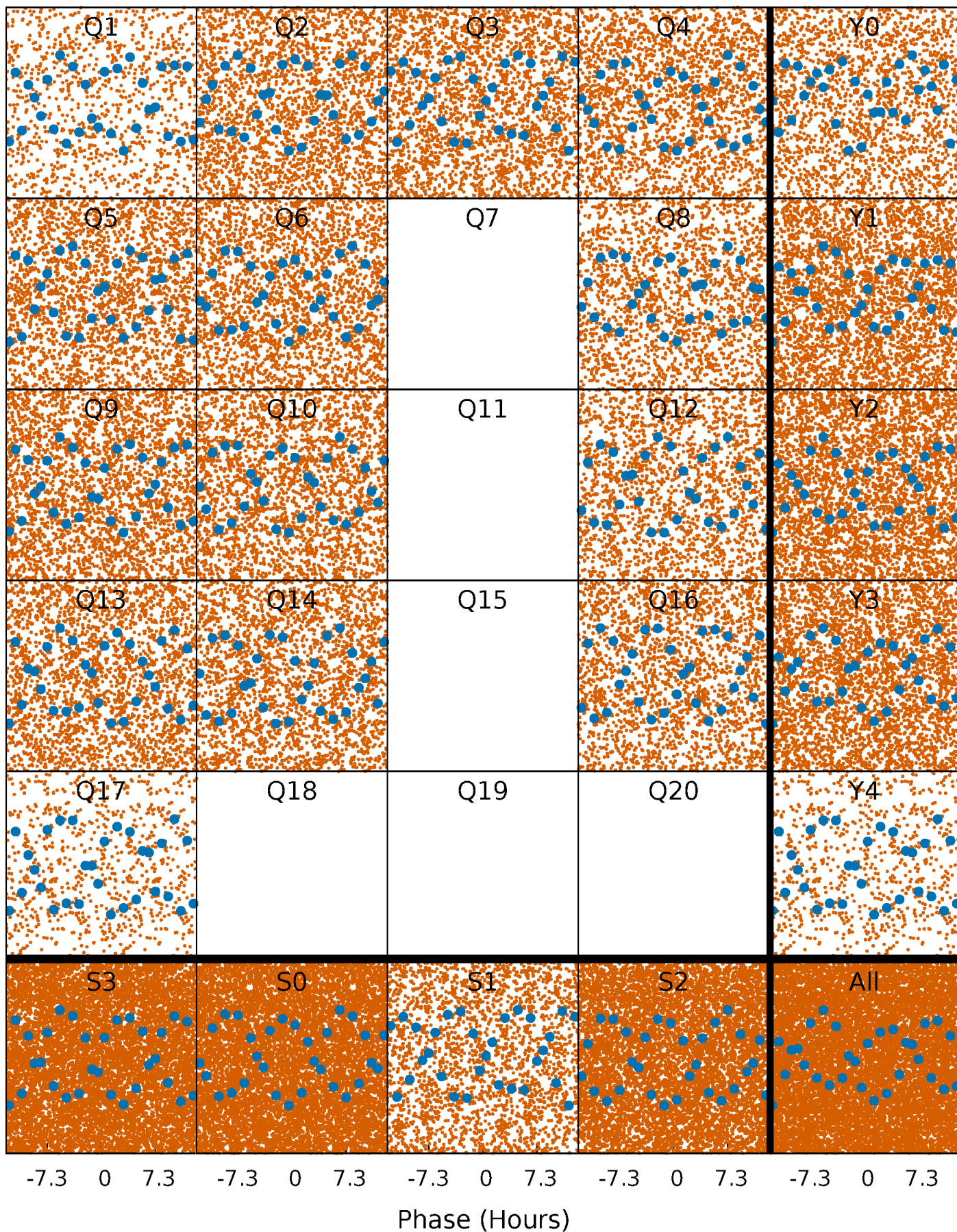


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



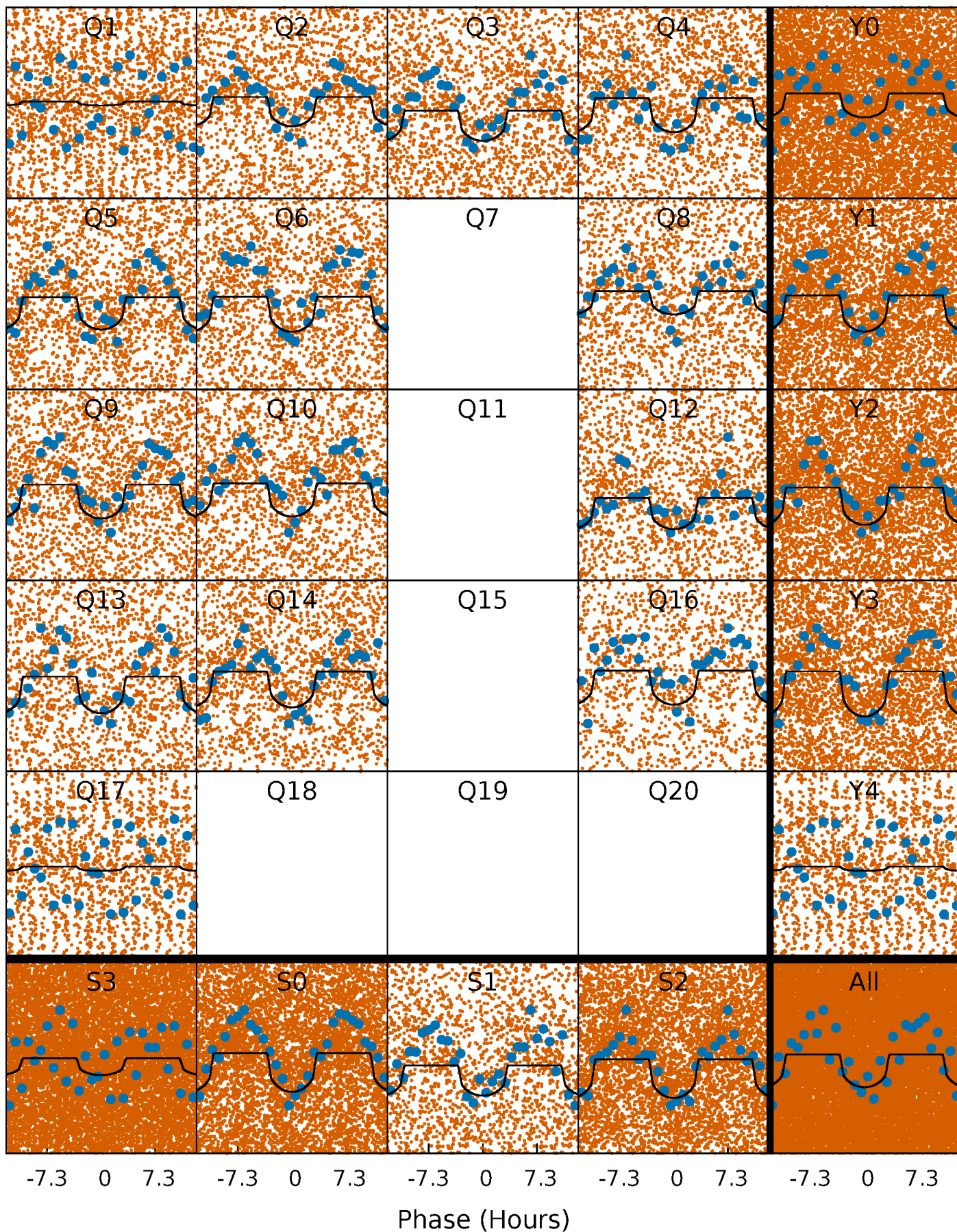
PDC Quarter-Phased Transit Curves

TCE 010931805-01 P= 0.579611 Days $T_0=131.679848$ (BKJD)



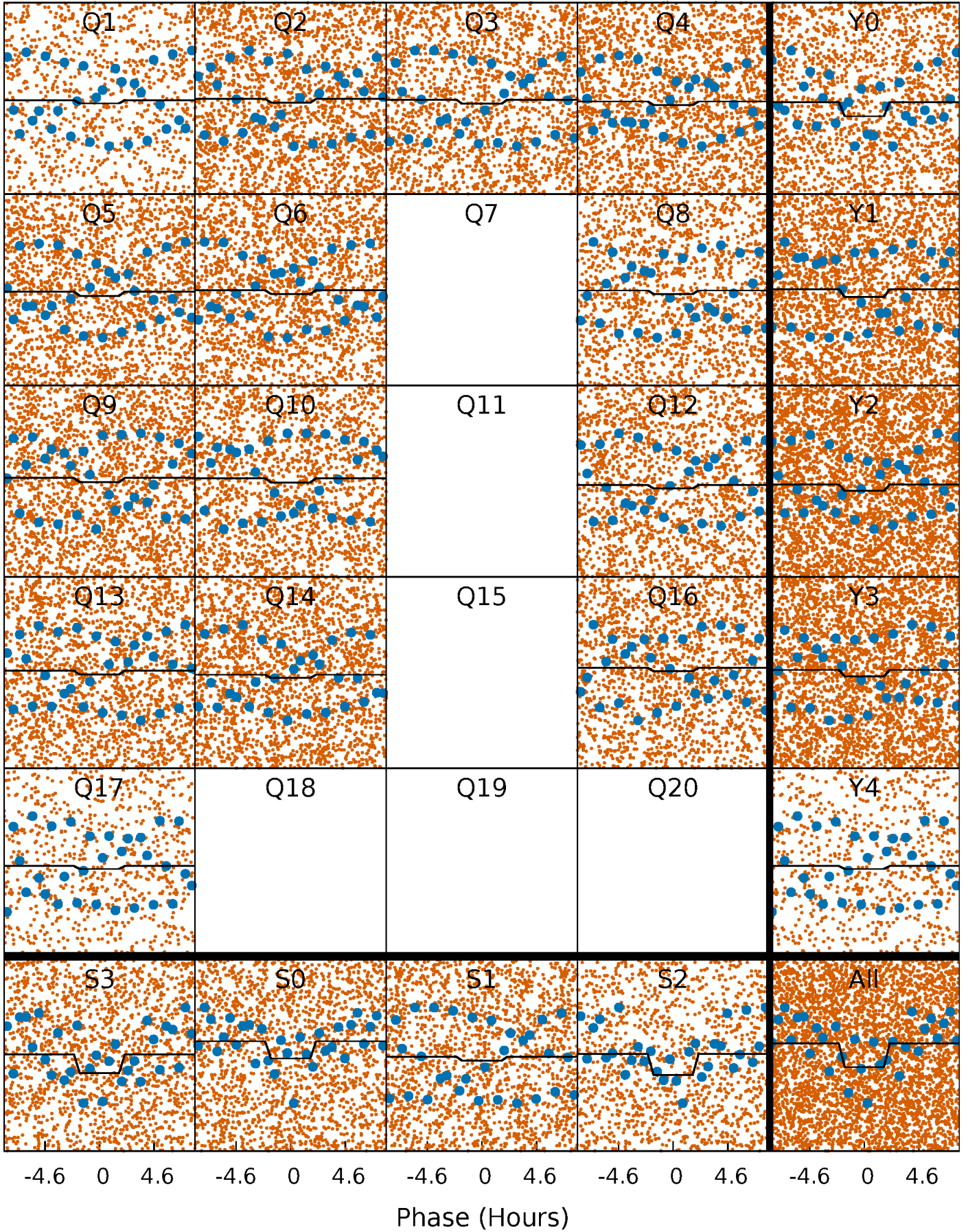
DV Quarter-Phased Transit Curves

TCE 010931805-01 P= 0.579611 Days $T_0=131.679848$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

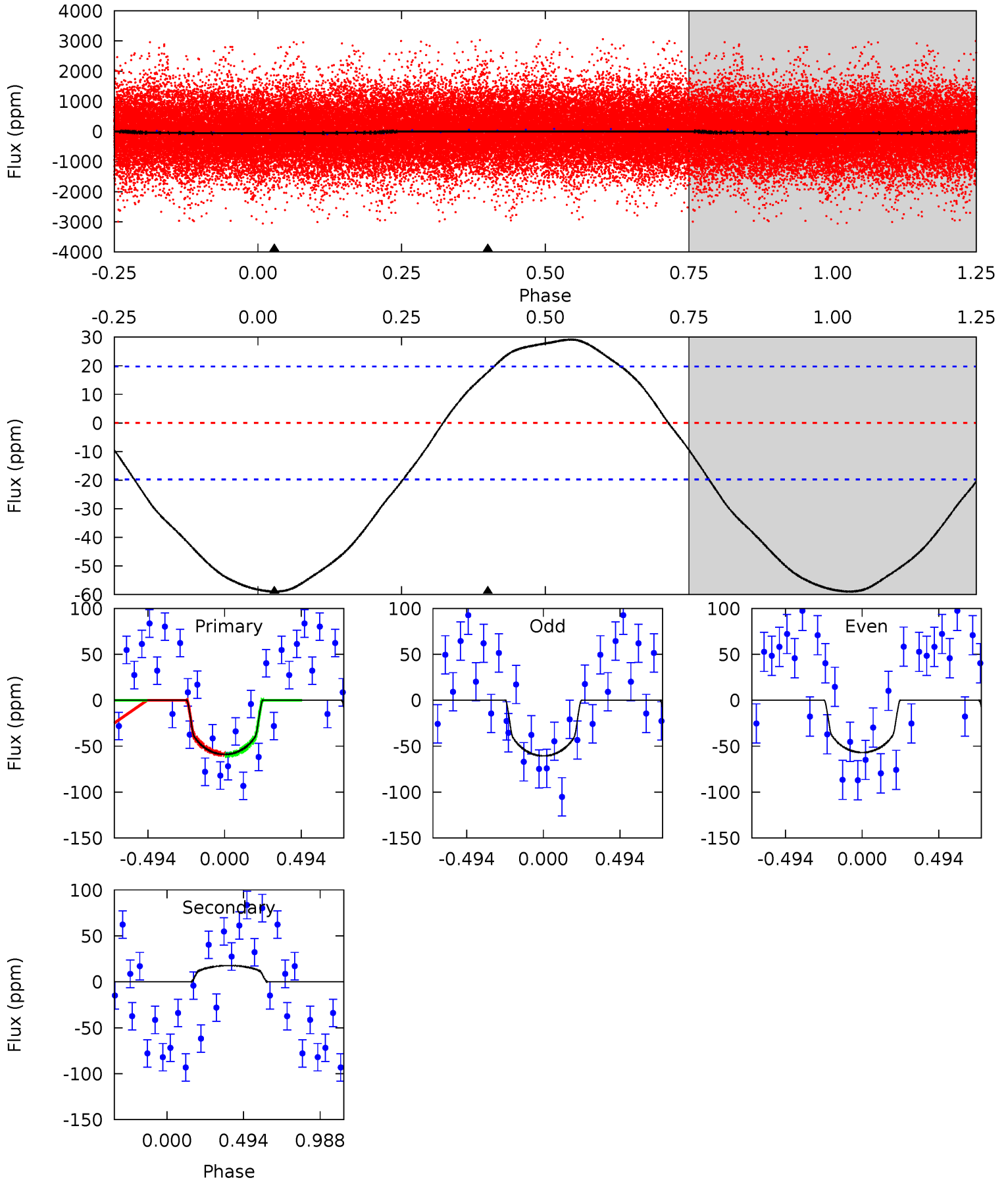
TCE 010931805-01 P= 0.579654 Days $T_0=131.640421$ (BKJD)



DV Model-Shift Uniqueness Test

010931805-01, P = 0.579611 Days, E = 131.100237 Days

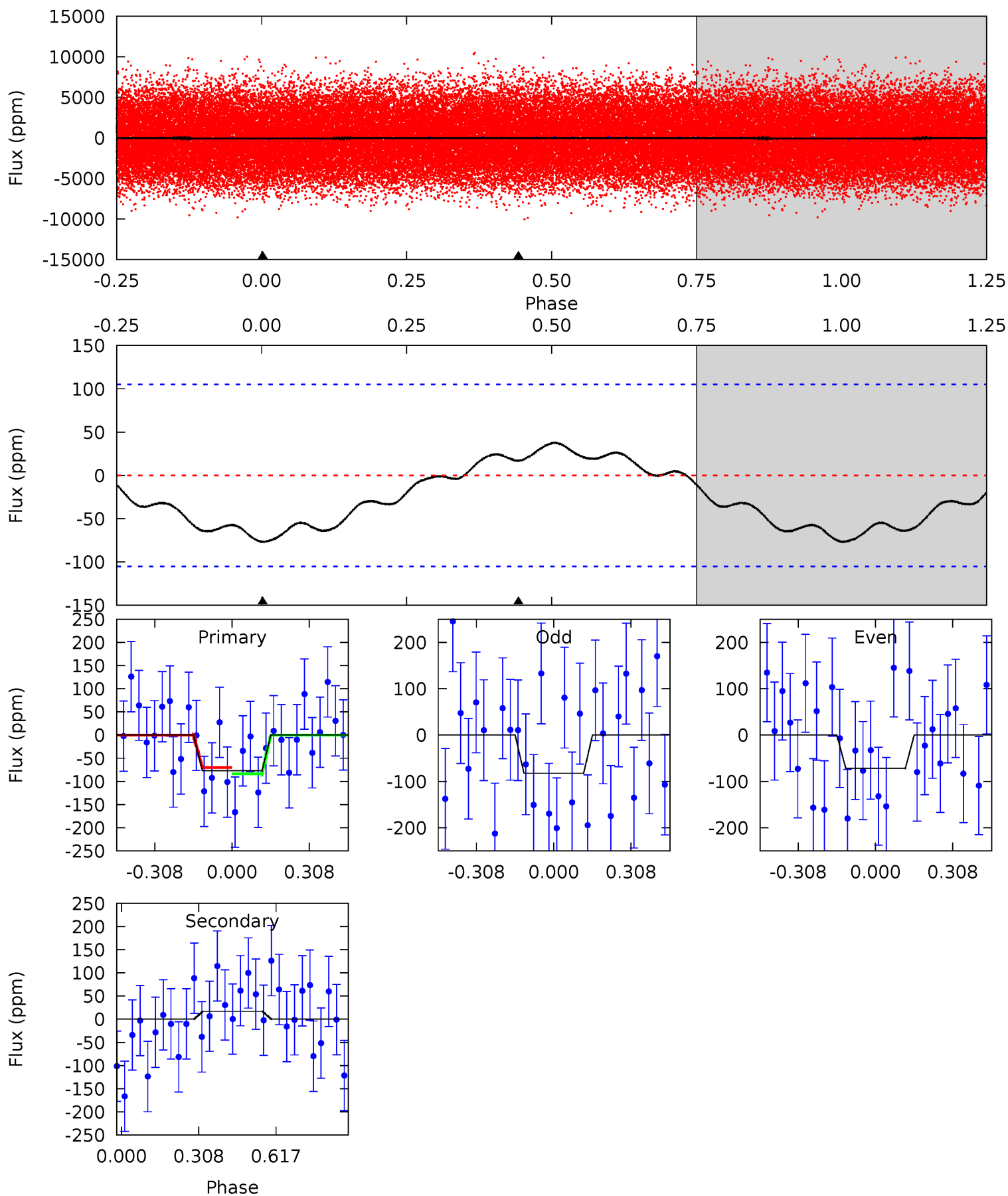
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.6	-3.78	0	0	4.22	0.68	1.70	12.6	12.6	-3.78	-3.78	0.39	1.04	0.33	0.13



Alt Model-Shift Uniqueness Test

010931805-01, P = 0.579654 Days, E = 131.060767 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.16	-0.69	0	0	4.32	1.02	0.38	3.16	3.16	-0.69	-0.69	0.22	0.98	0.33	0.29



Stellar Parameters For KIC 010931805

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7945^{+185}_{-340}	$4.034^{+0.198}_{-0.149}$	$-0.060^{+0.150}_{-0.400}$	$2.137^{+0.460}_{-0.562}$	$1.802^{+0.123}_{-0.368}$	$0.260^{+0.302}_{-0.104}$
	+2%/-4%	+5%/-4%	+250%/-667%	+22%/-26%	+7%/-20%	+116%/-40%
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 010931805-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	18 ± 5	$1.89^{+1.24}_{-1.10}$	5515^{+387}_{-417}	-5938^{+791}_{-3156}	$-0.676^{+0.436}_{-3.423}$
Alt.	17 ± 24	$1.98^{+1.34}_{-1.16}$	5518^{+385}_{-422}	-5687^{+2086}_{-2954}	$-0.485^{+0.718}_{-3.277}$

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 $A_{obs} \gg 1.0$

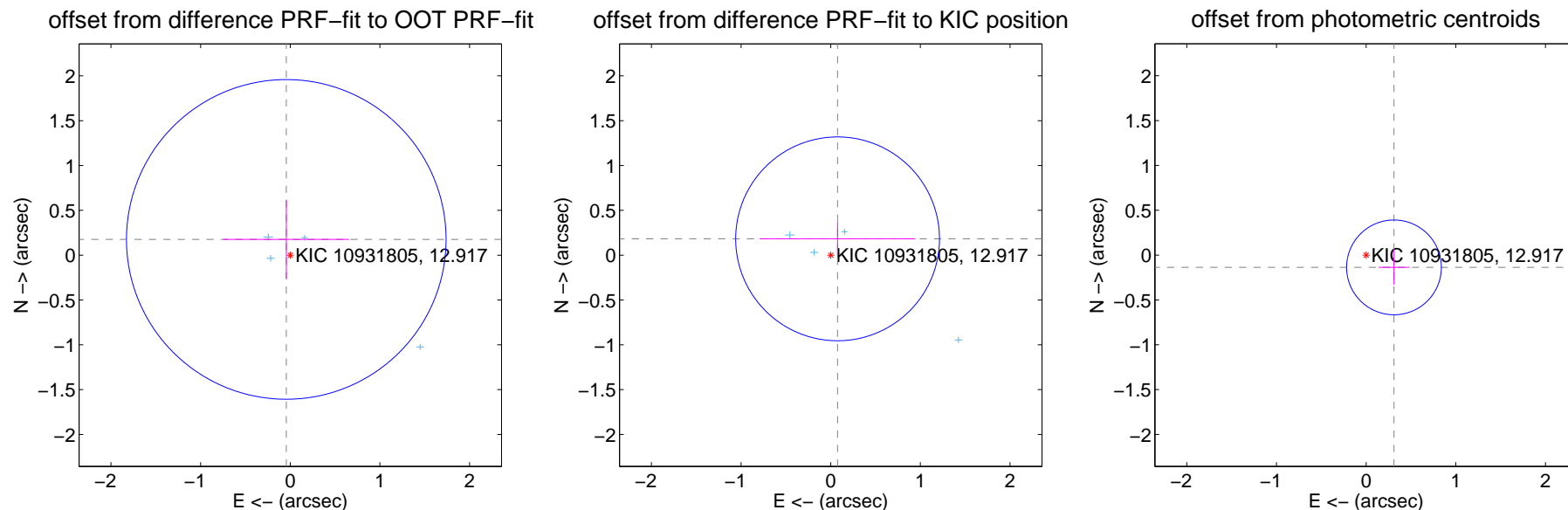
DV Centroid Data

Supplemental centroid analysis for 010931805-01. Kepler magnitude: 12.92. Transit SNR 17.30

There are 4 quarters with good PRF difference image offsets

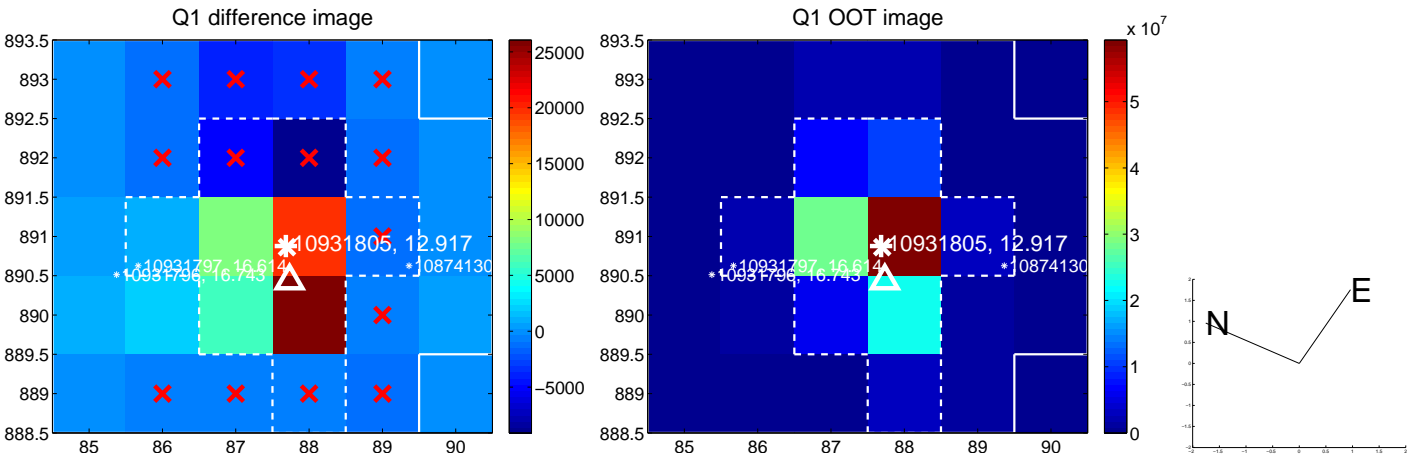
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.181 ± 0.594	0.30	0.044 ± 0.701	0.176 ± 0.439
PRF-fit source offset from KIC position	0.197 ± 0.379	0.52	-0.077 ± 0.868	0.182 ± 0.189
photometric centroid source offset	0.34 ± 0.18	1.93	-0.31 ± 0.17	-0.14 ± 0.20

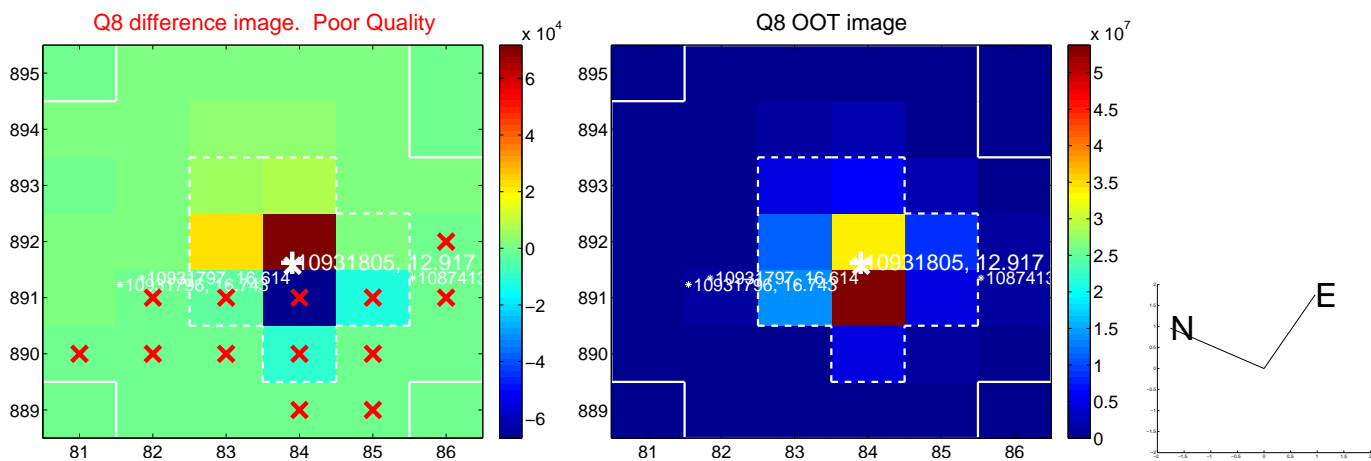
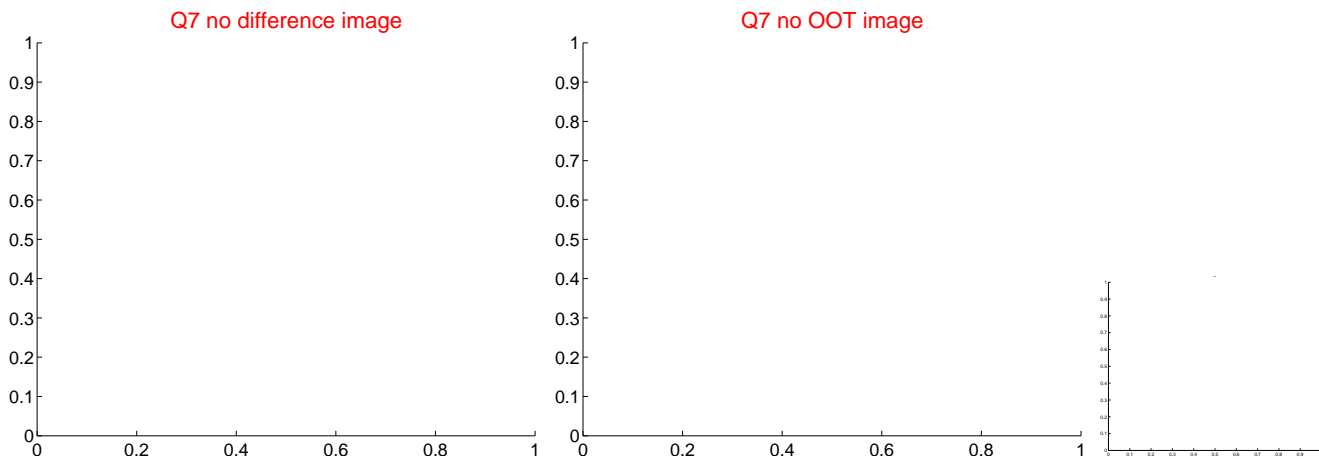
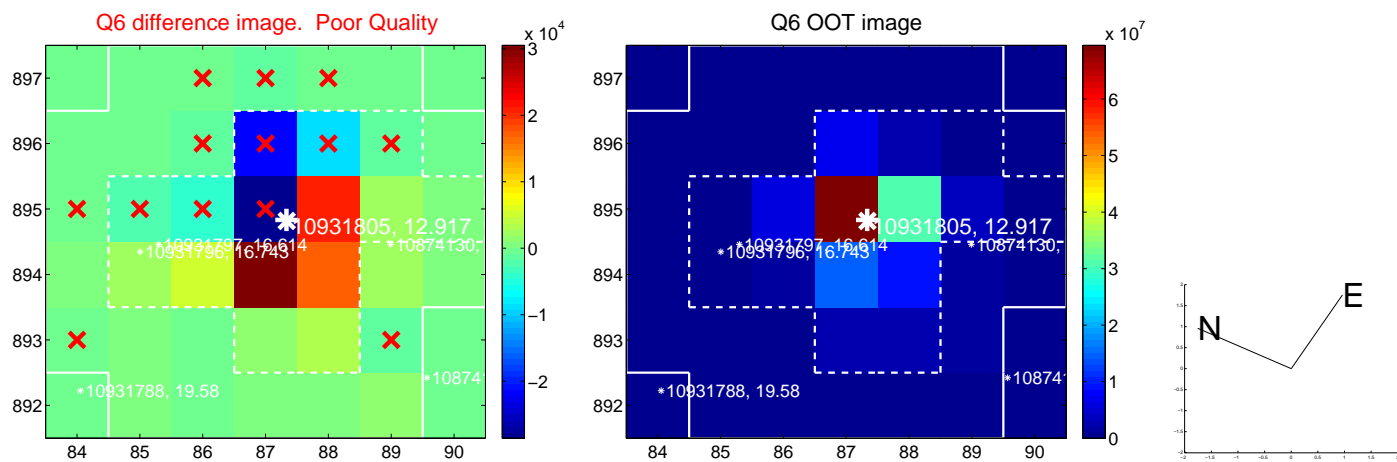
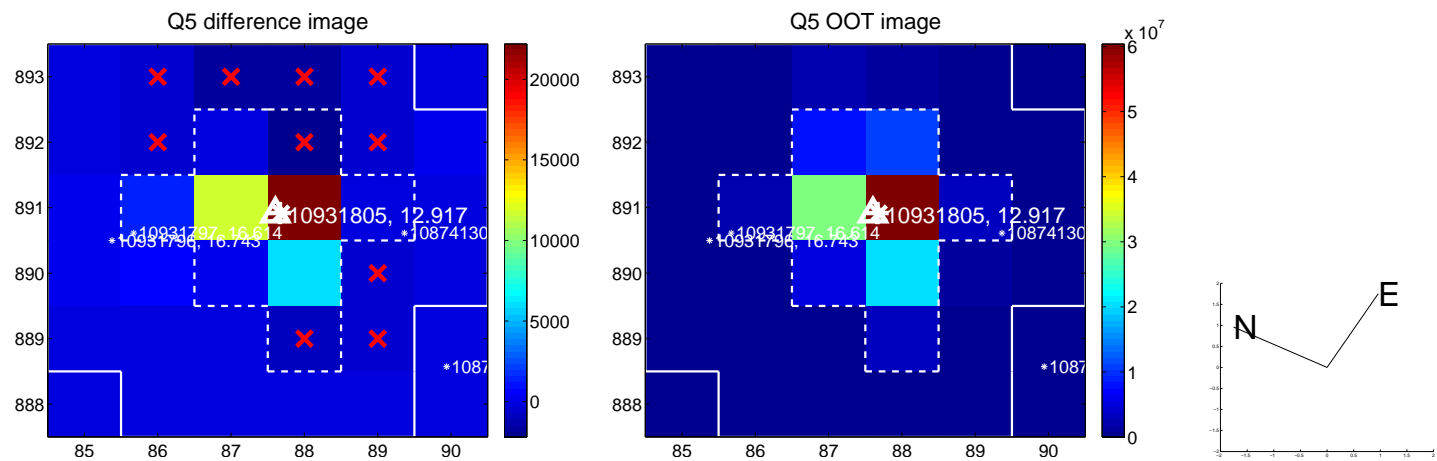


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

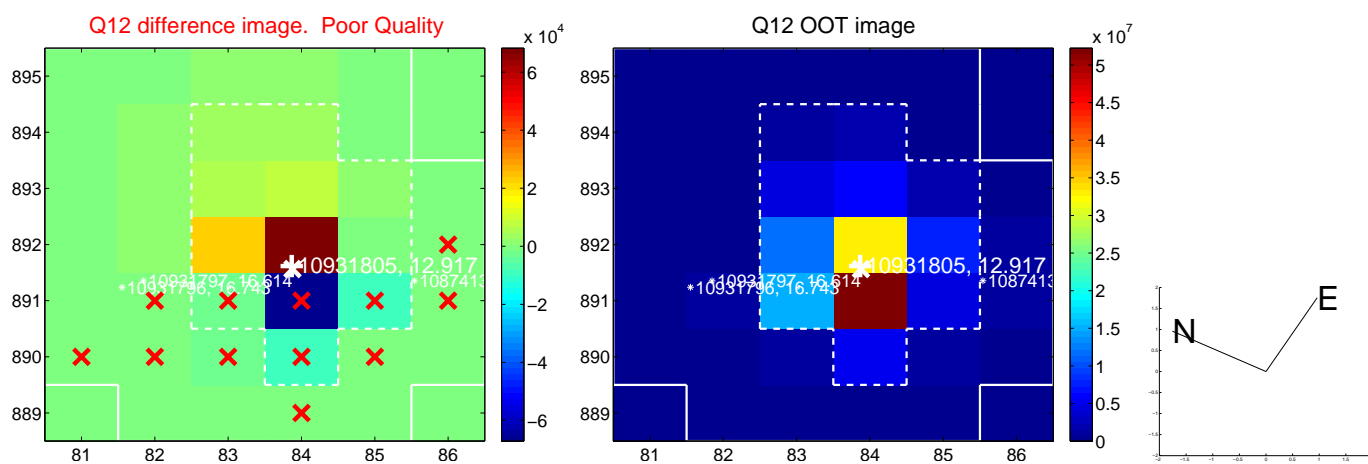
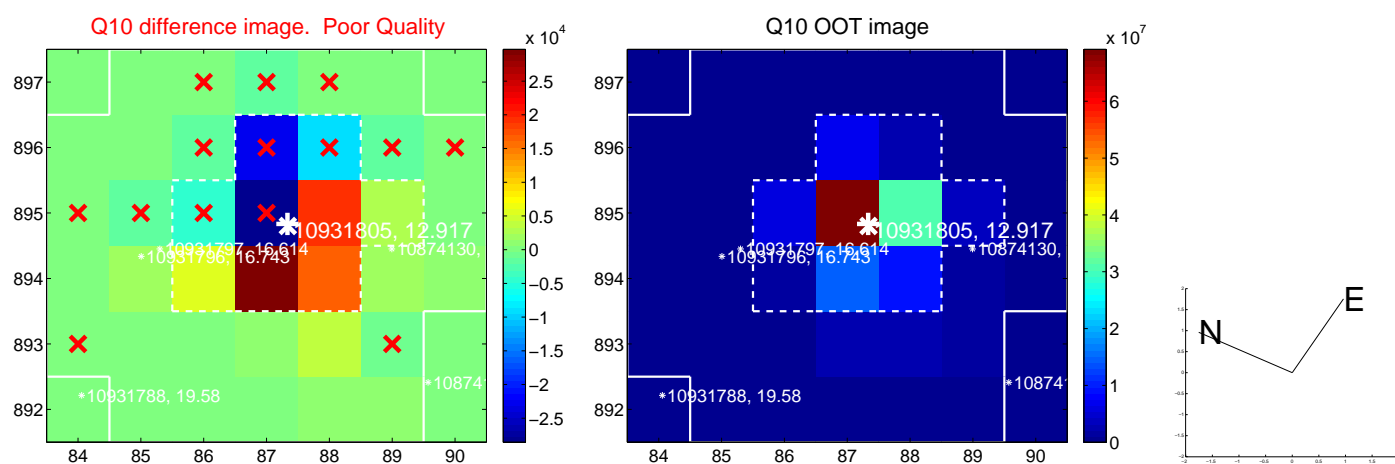
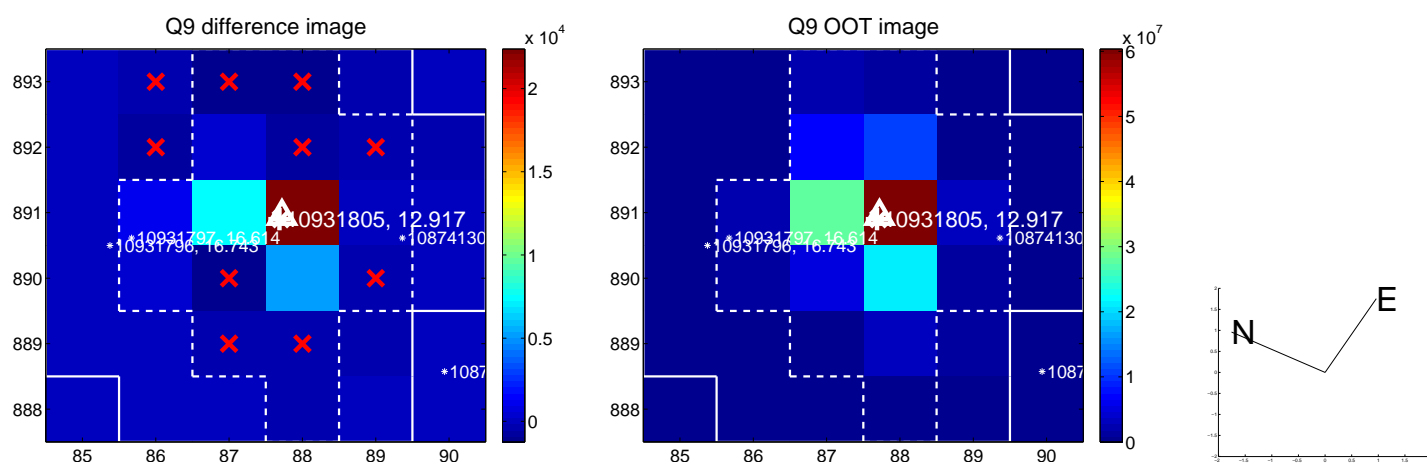
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



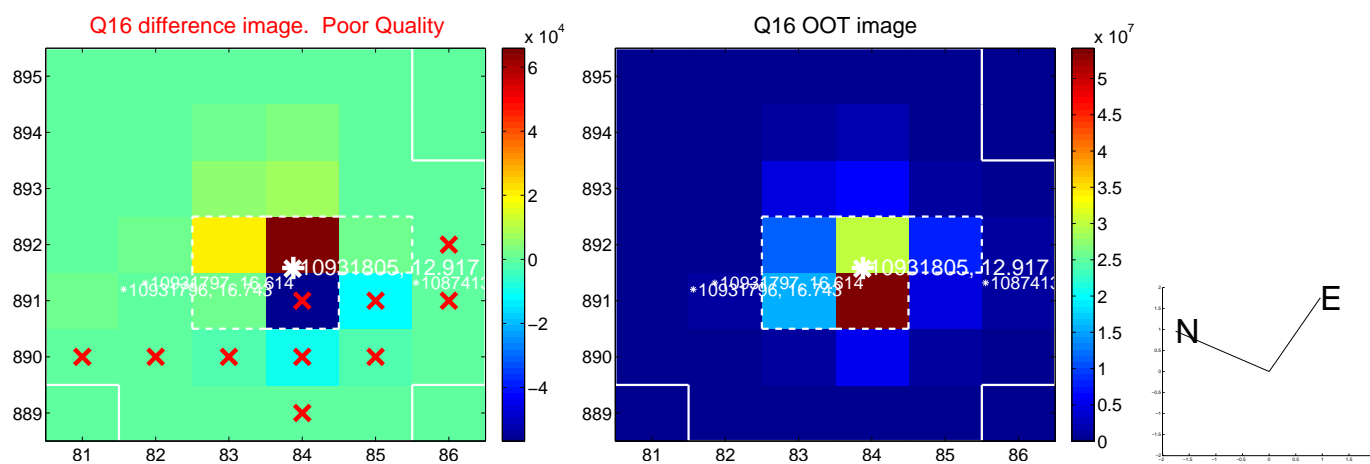
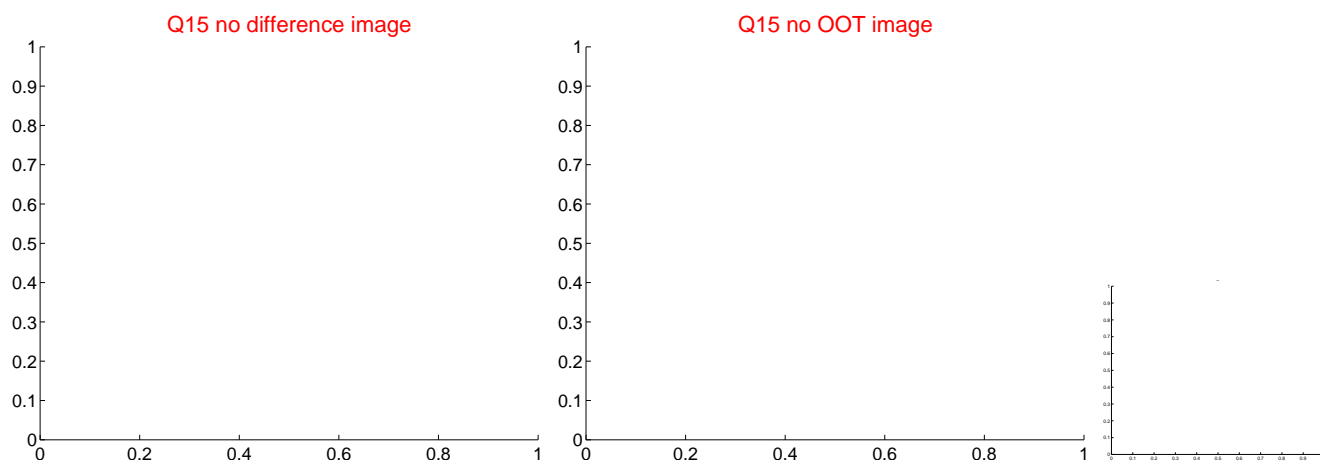
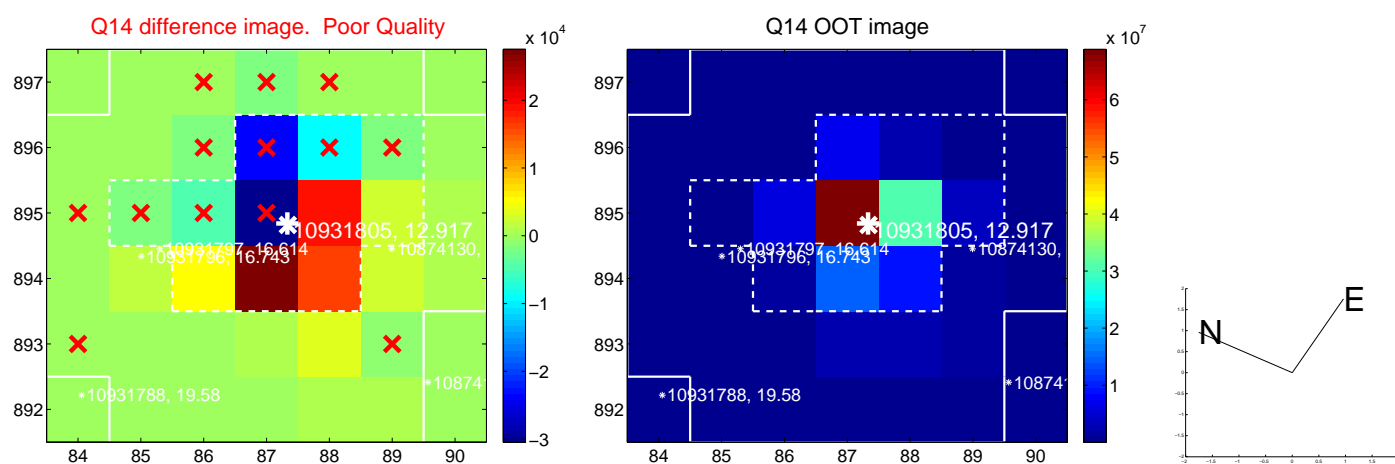
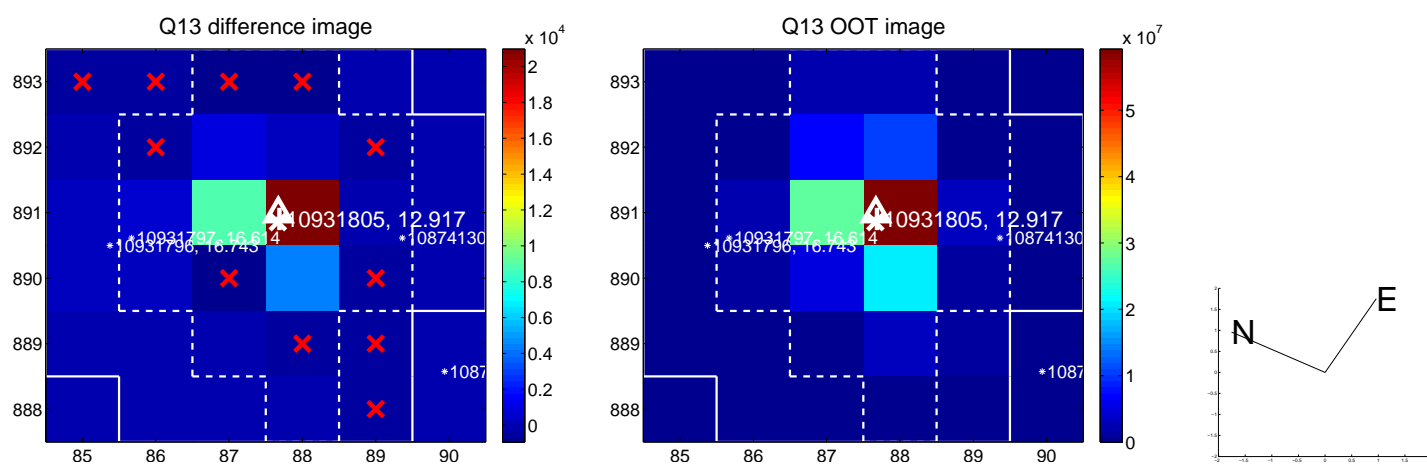
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



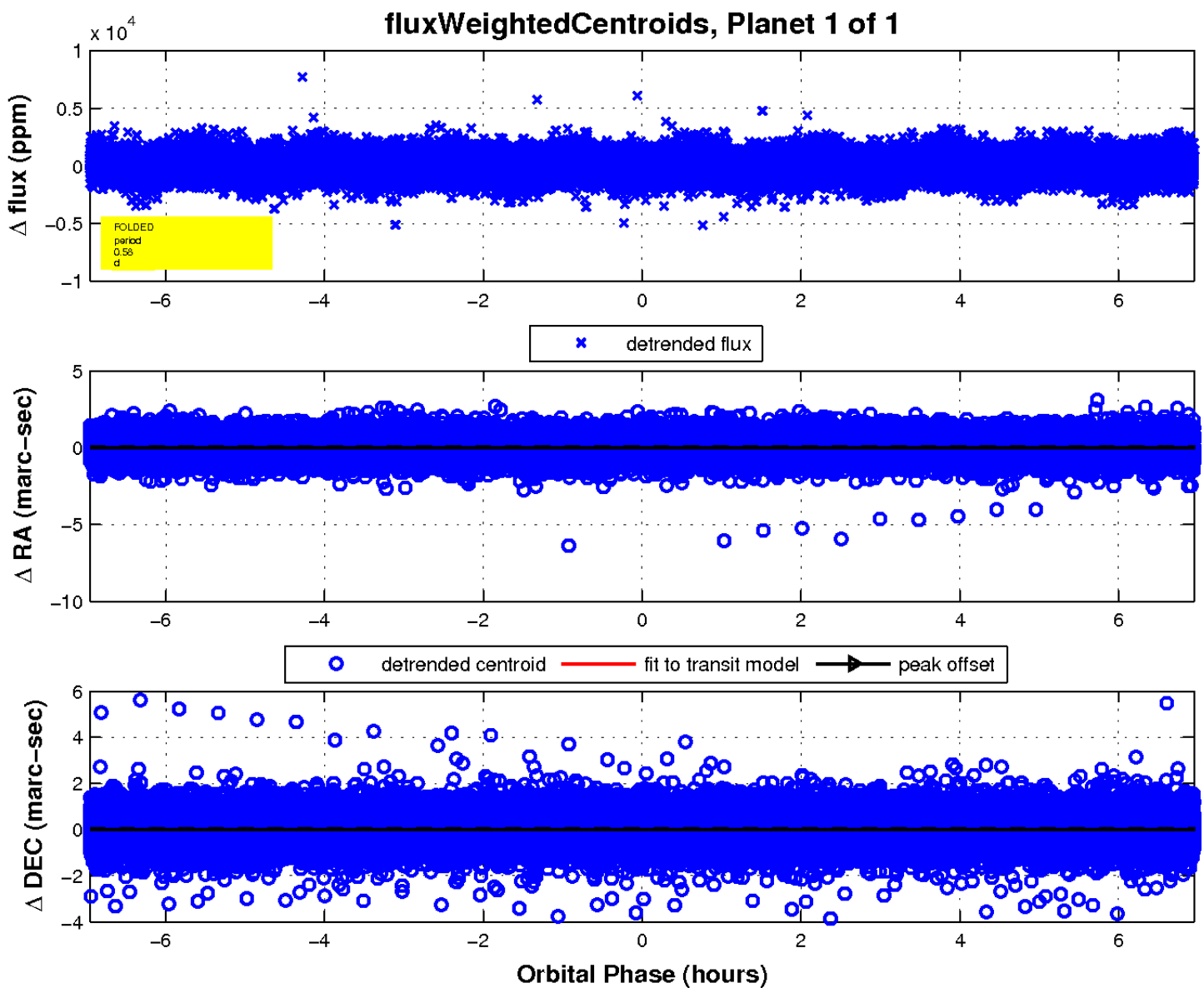
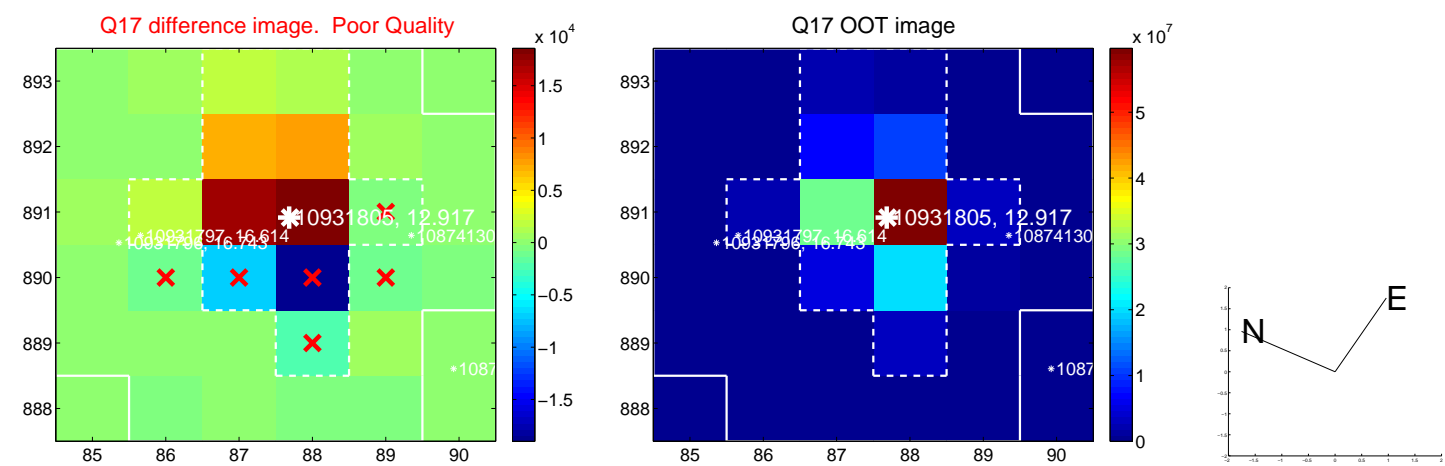
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

