

KIC 011393633

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})
011393633-01	OBS	No	178.020604	216.452593	280.7	8.703	7.2	6.0	0.79	5564	1.43	1.51

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011393633-01	OBS	FP	0.01	1	0	0	0	INDIV_TRANS_MARSHALL—MOD_NONUNIQ_ALT—MOD_POS_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 011393633-01

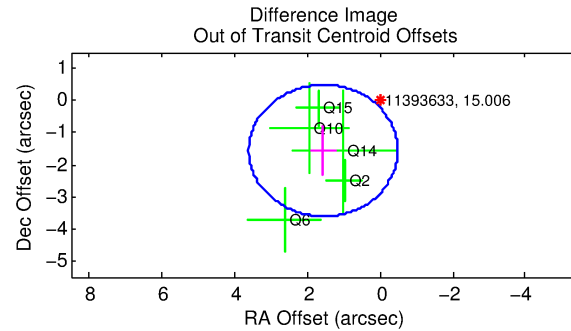
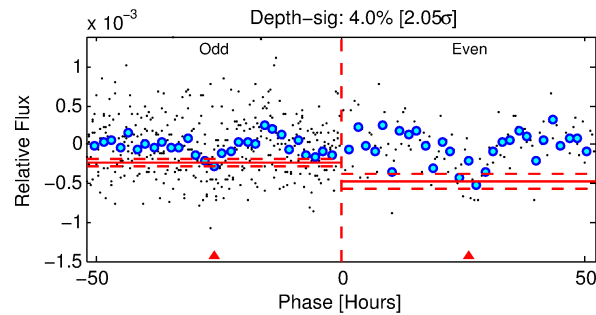
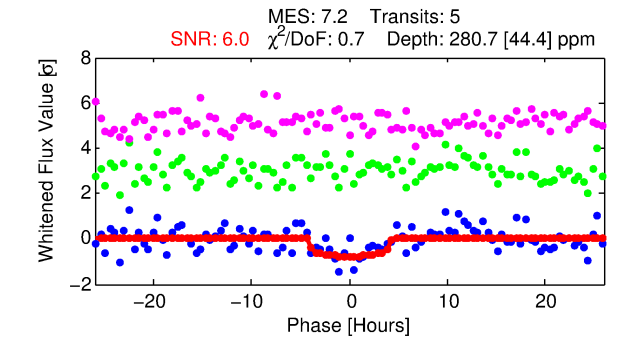
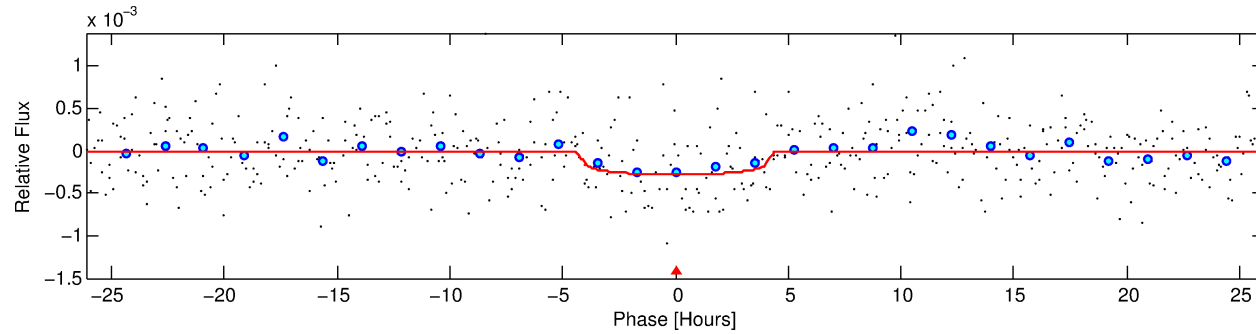
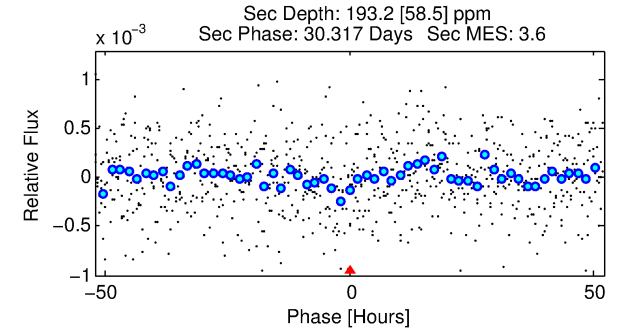
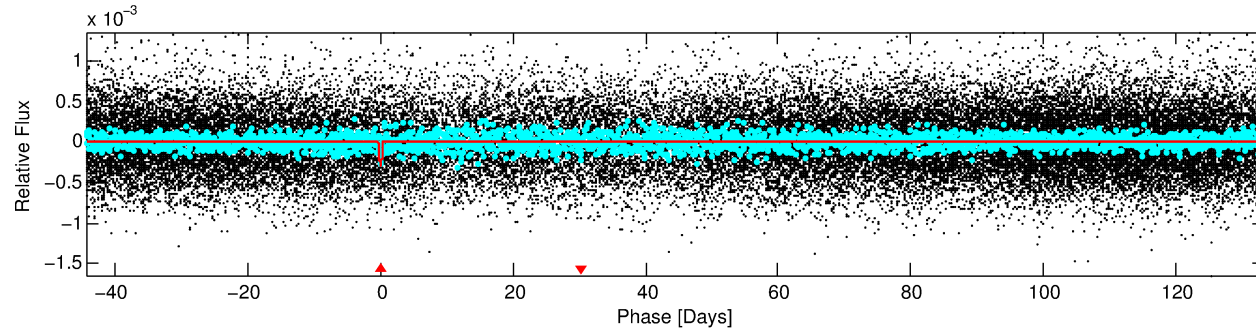
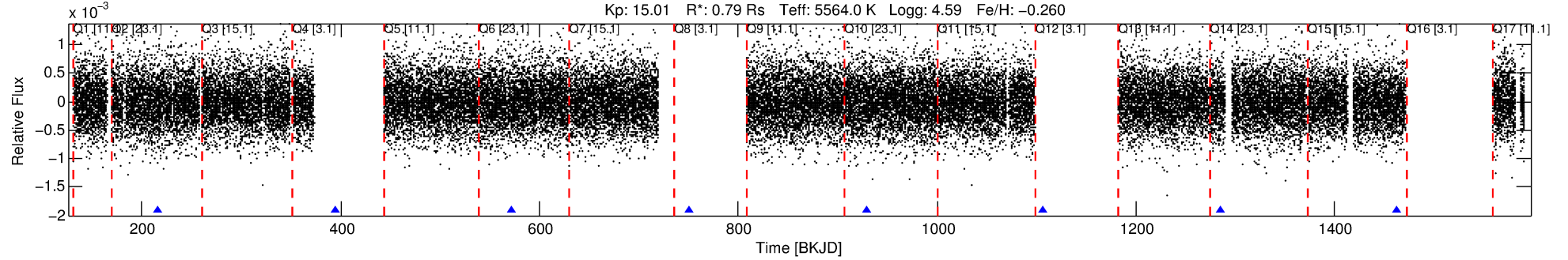
No Significant Match Found

DV One-Page Summary

KIC: 11393633 Candidate: 1 of 1 Period: 178.021 d

KOI: K05893 Corr: No Ephemeris Match

Kp: 15.01 R*: 0.79 Rs Teff: 5564.0 K Logg: 4.59 Fe/H: -0.260



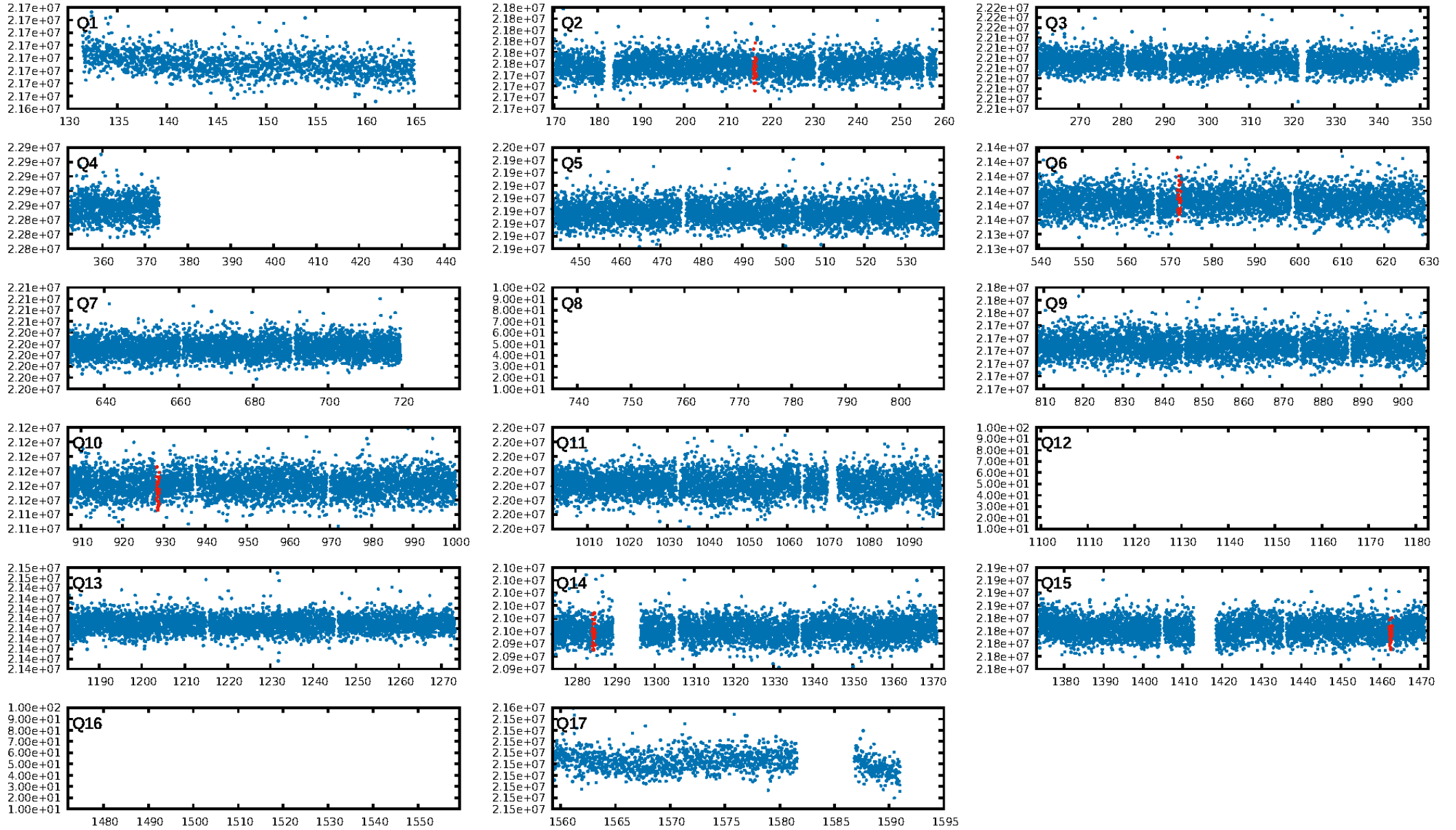
DV Fit Results:

Period = 178.02060 [0.00528] d
Epoch = 216.4526 [0.0252] BKJD
Rp/R* = 0.0167 [0.0142]
a/R* = 106.64 [390.81]
b = 0.75 [2.13]
Seff = 1.51 [0.44]
Teff = 283 [21] K
Rp = 1.43 [1.25] Re
a = 0.5910 [0.1087] AU
Ag = 18142.03 [31606.65] [0.57σ]
Teffp = 5076 [2190] K [2.19σ]

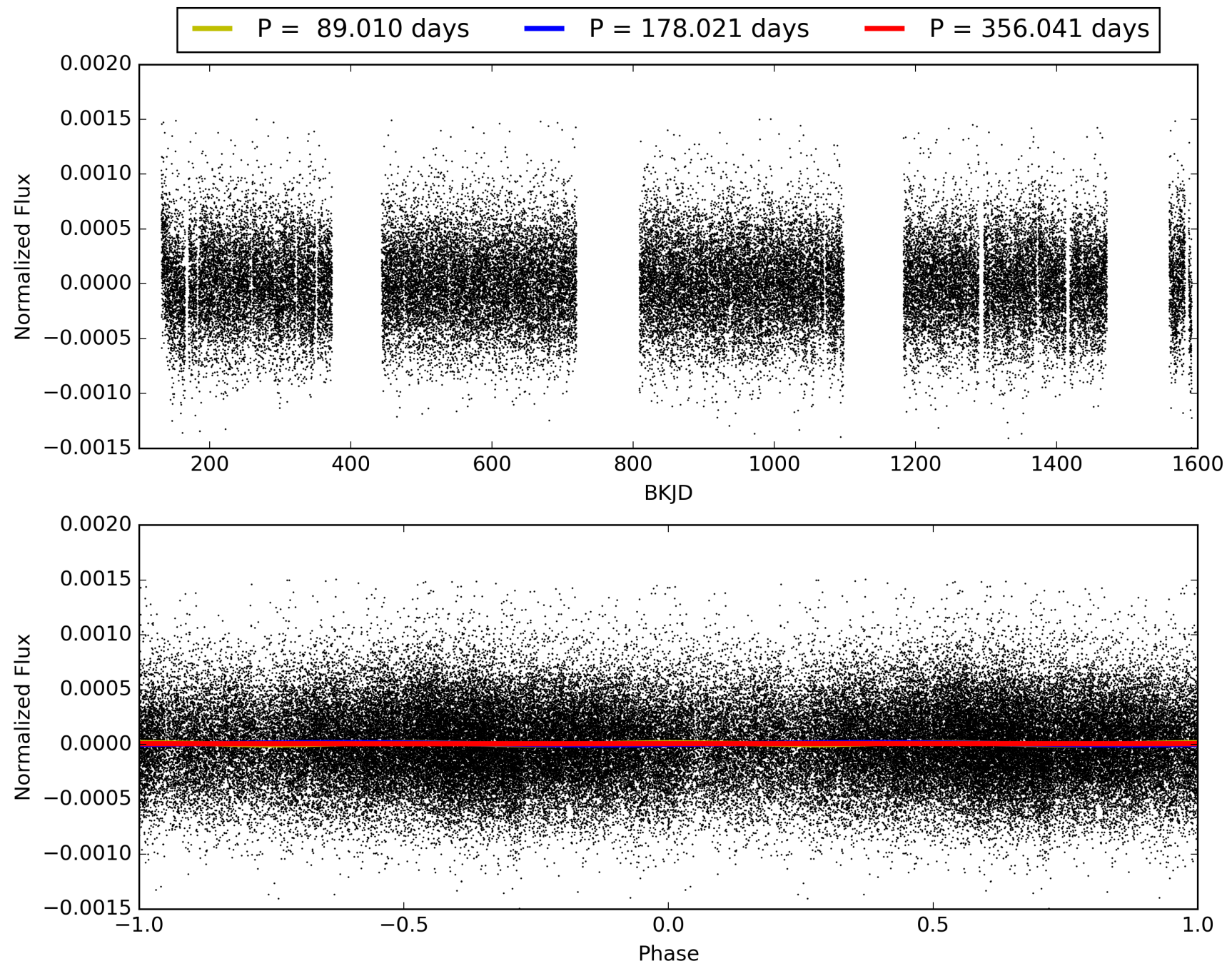
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 12.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.87e-12
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 11.92
Centroid-sig: 31.0%
Centroid-so: 4.086 arcsec [1.39σ]
OotOffset-rm: 2.208 arcsec [3.23σ]
KicOffset-rm: 1.991 arcsec [3.62σ]
OotOffset-st: 4/1/0/0 [5]
KicOffset-st: 4/1/0/0 [5]
DiffImageQuality-fgm: 0.40 [2/5]
DiffImageOverlap-fno: 1.00 [5/5]

TCE 011393633-01, PDC Light Curves

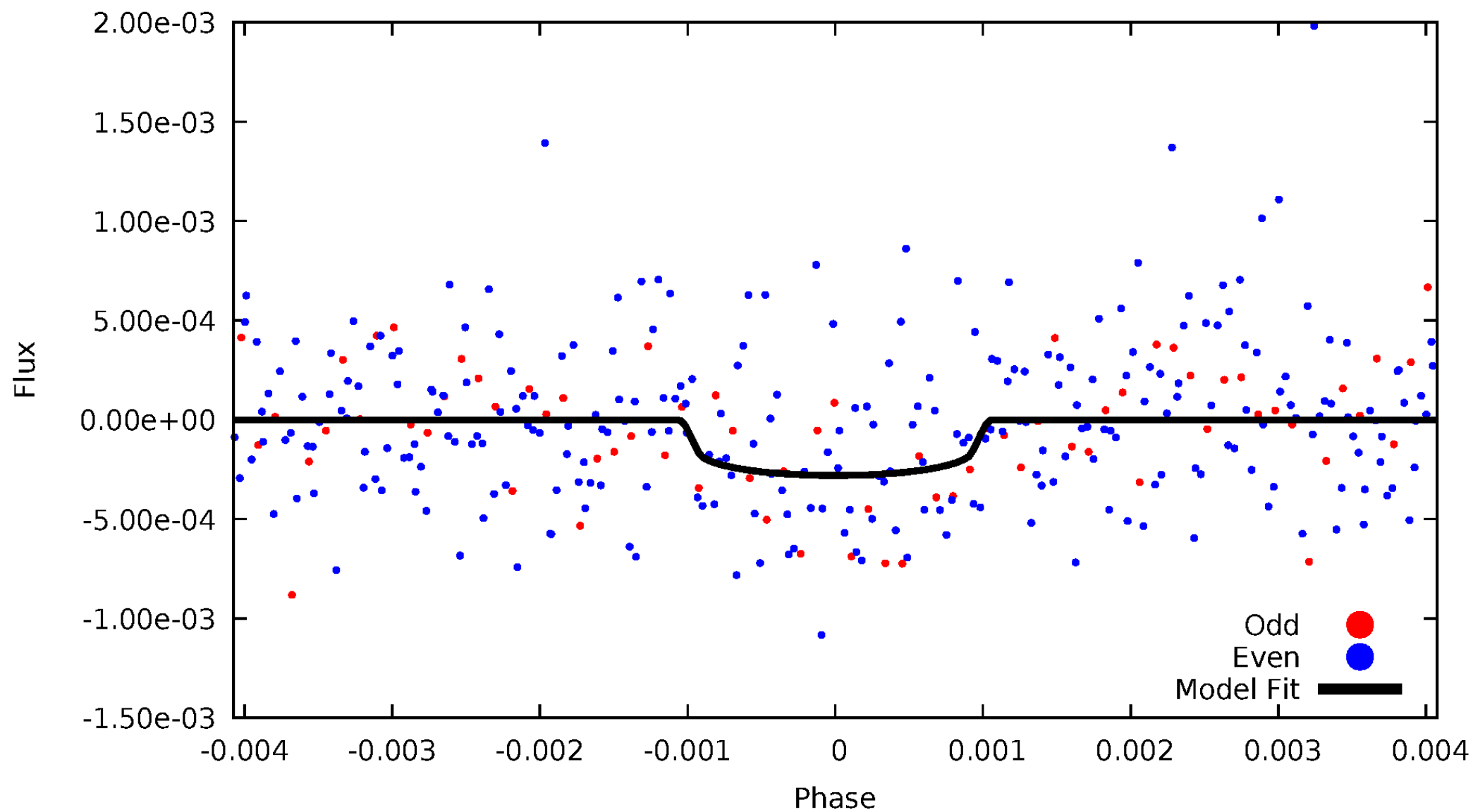


TCE 011393633-01



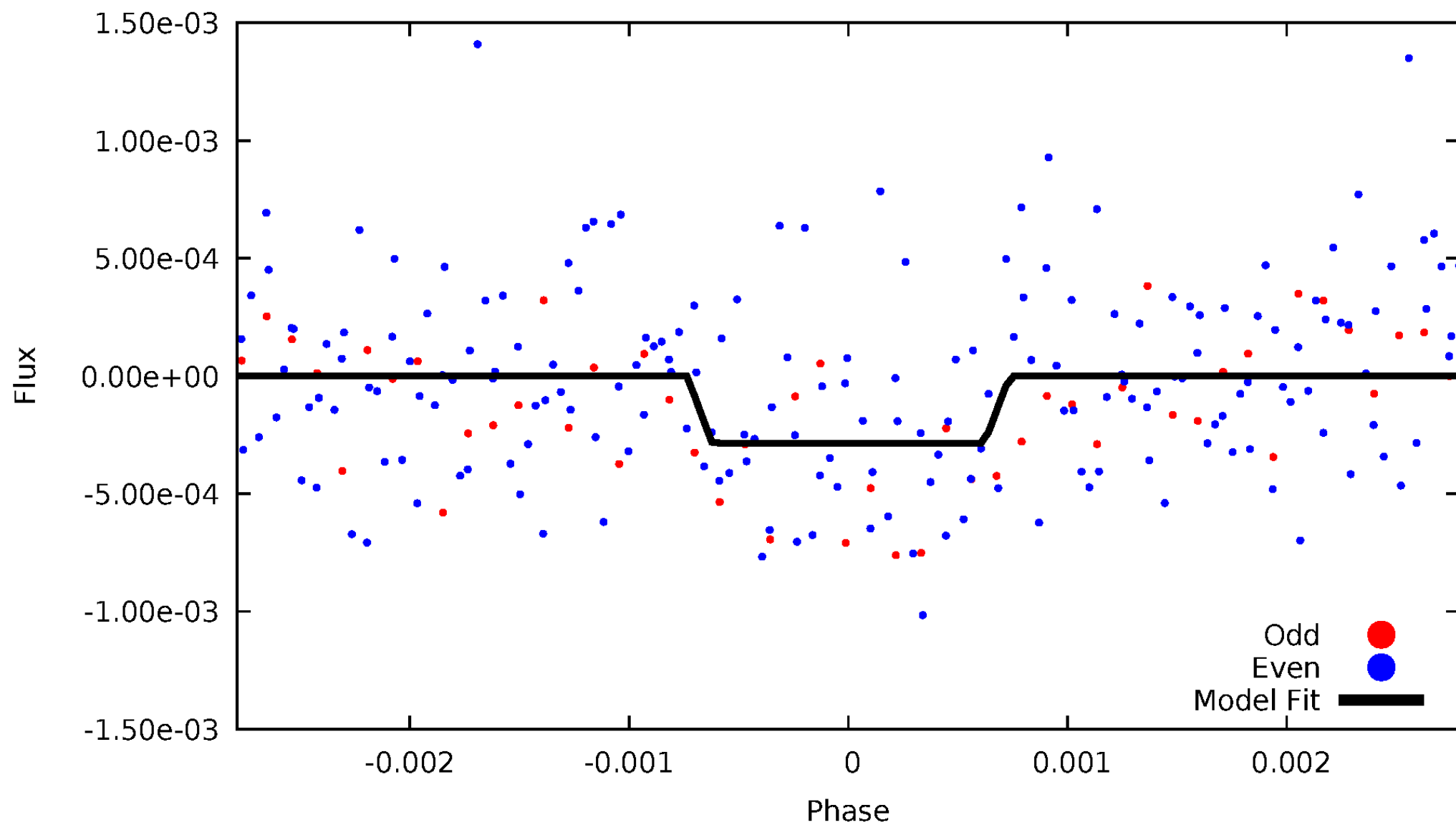
DV Odd/Even

TCE 011393633-01



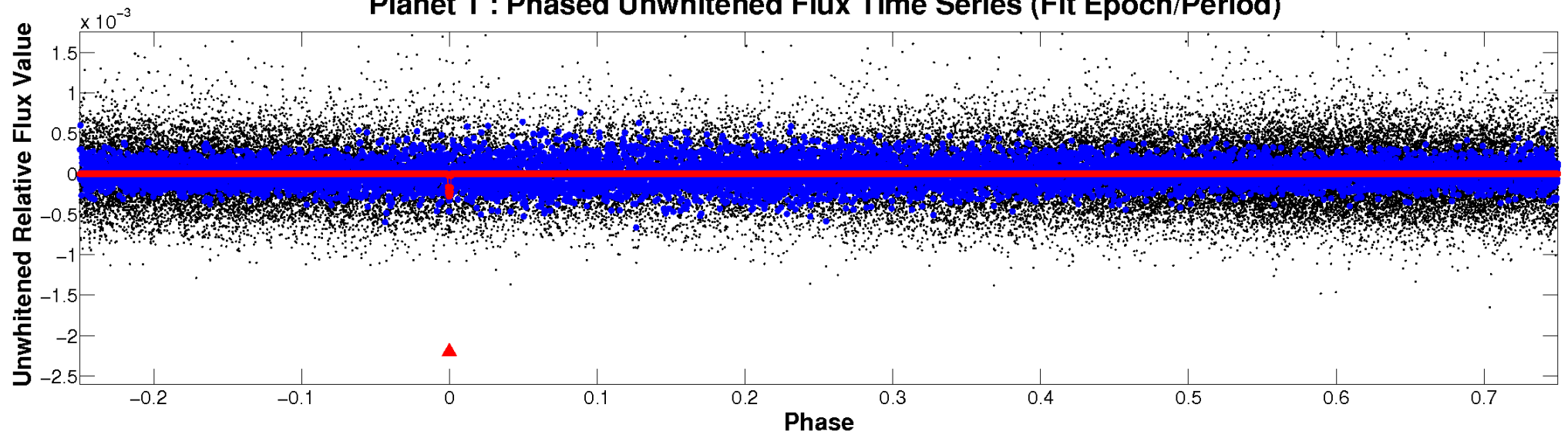
ALT Odd/Even

TCE 011393633-01

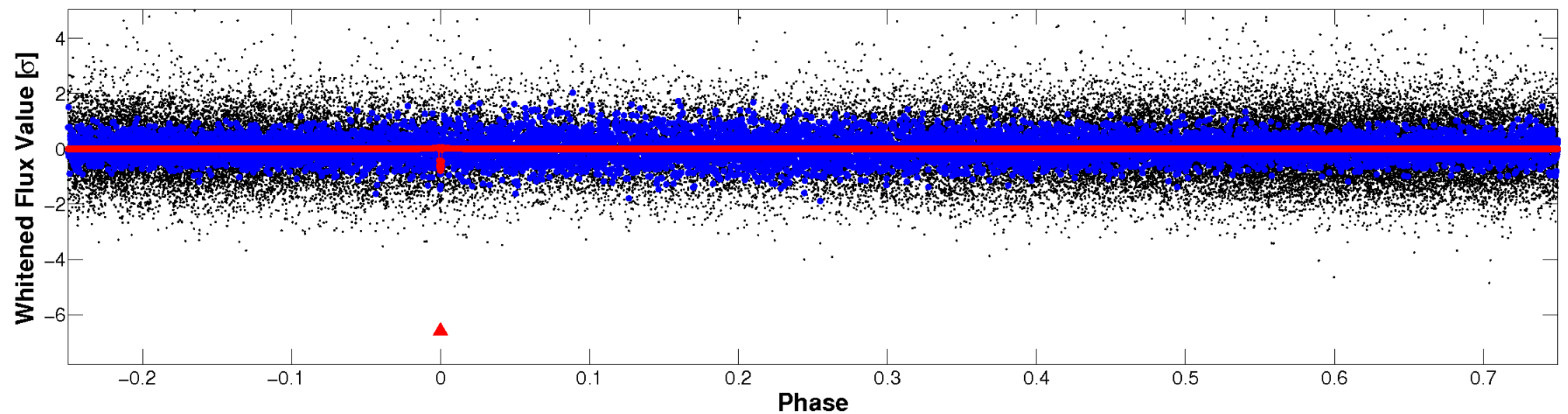


Non-Whitened Vs. Whitened Light Curve

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

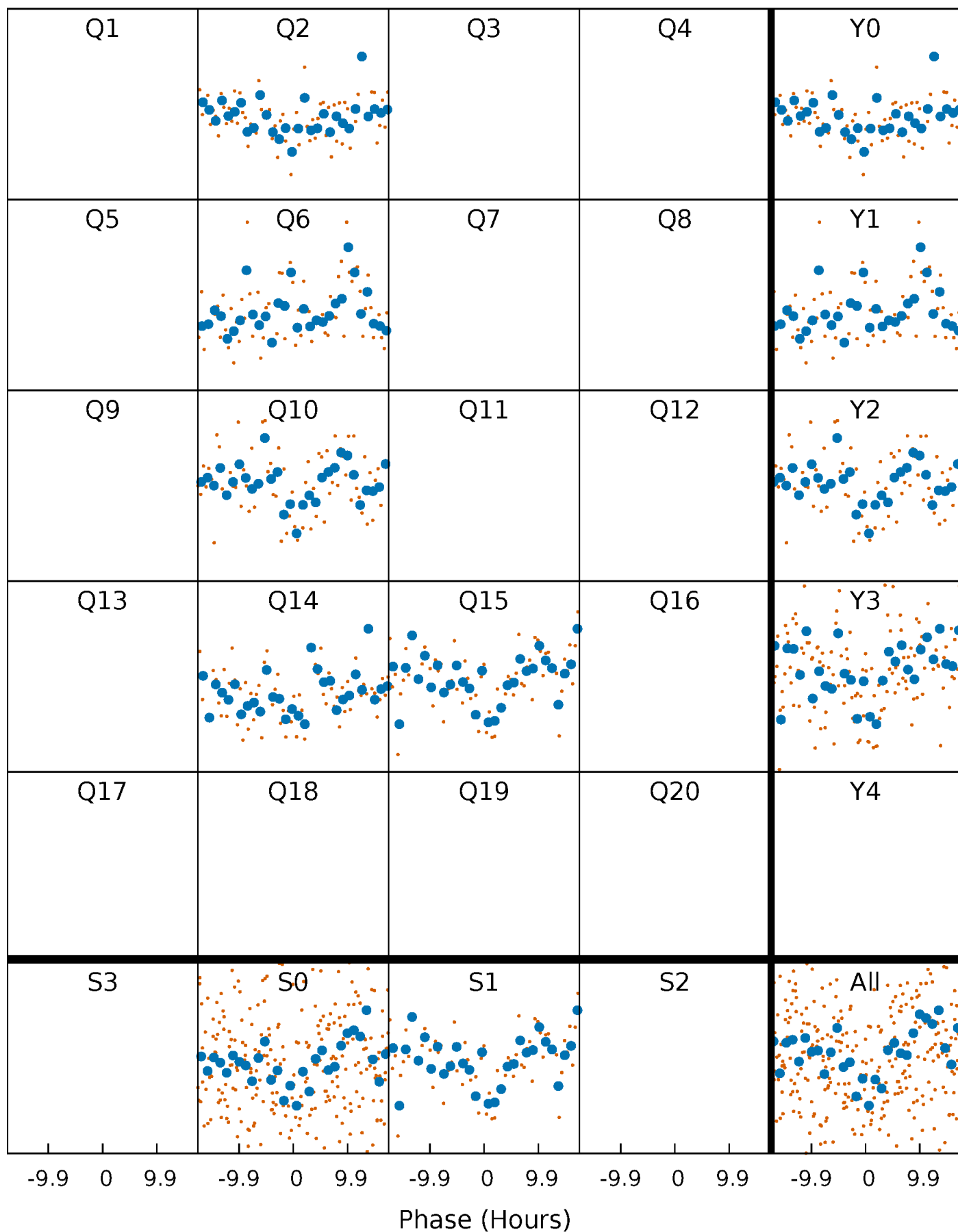


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



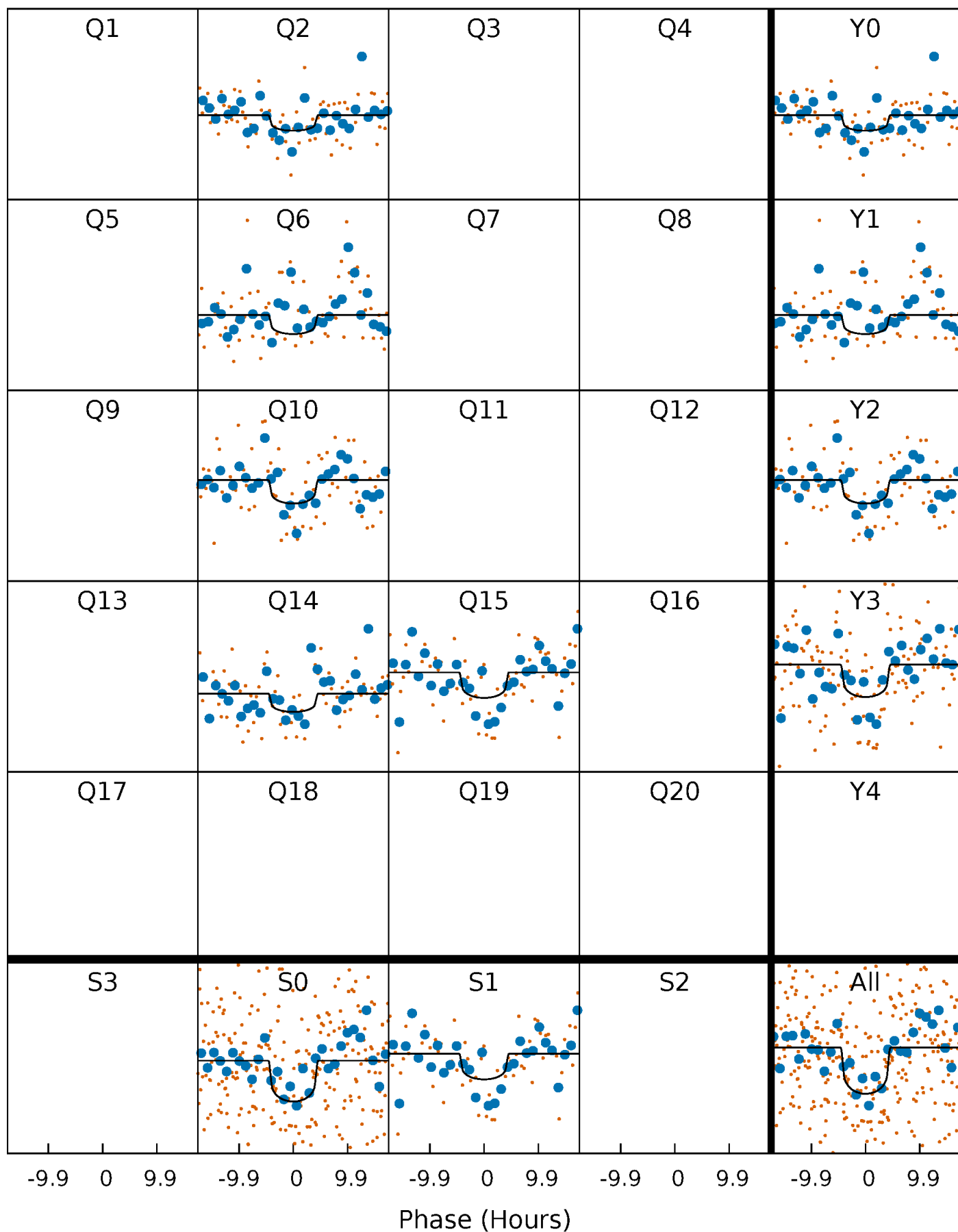
PDC Quarter-Phased Transit Curves

TCE 011393633-01 P=178.020604 Days $T_0=216.452593$ (BKJD)



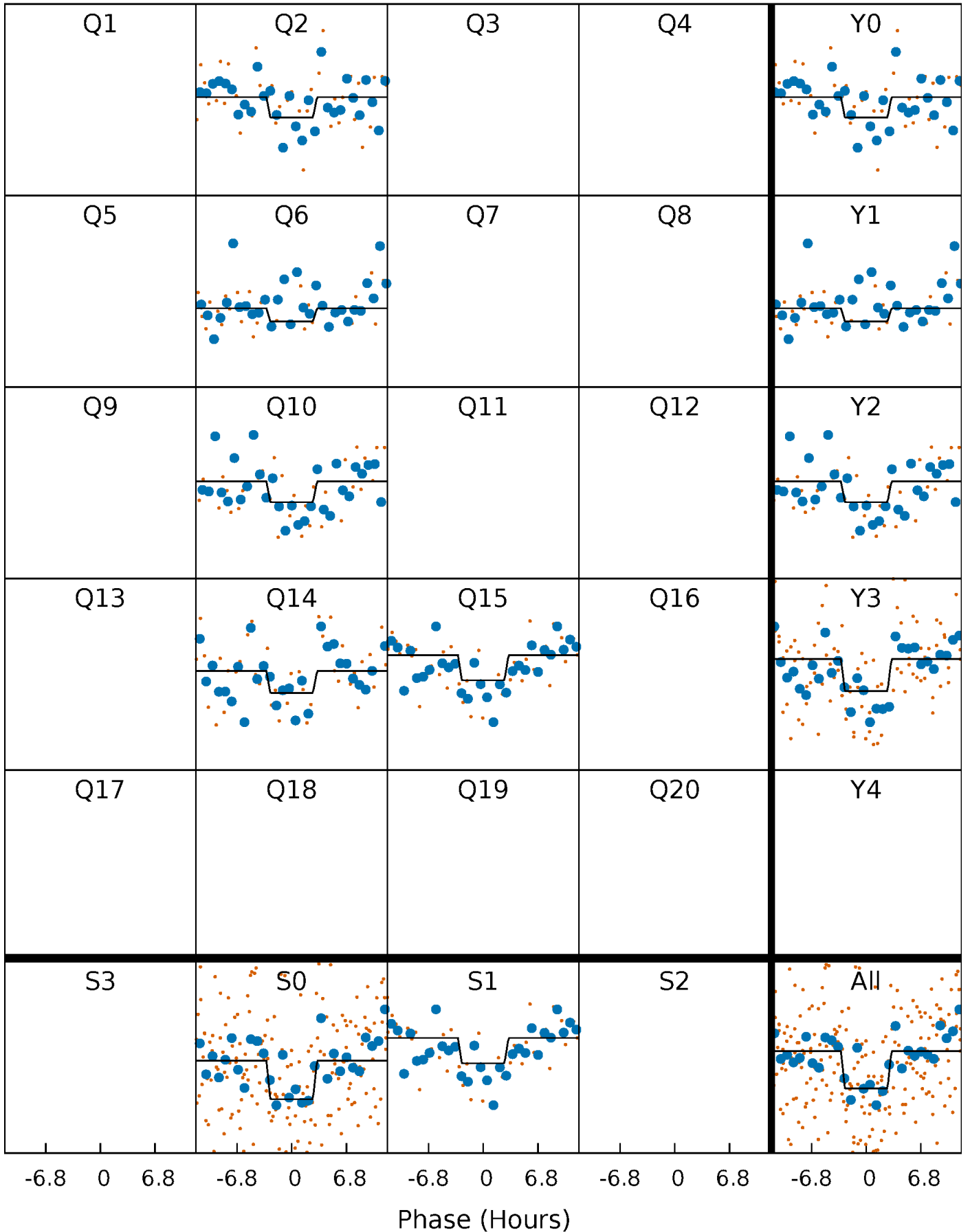
DV Quarter-Phased Transit Curves

TCE 011393633-01 P=178.020604 Days $T_0=216.452593$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

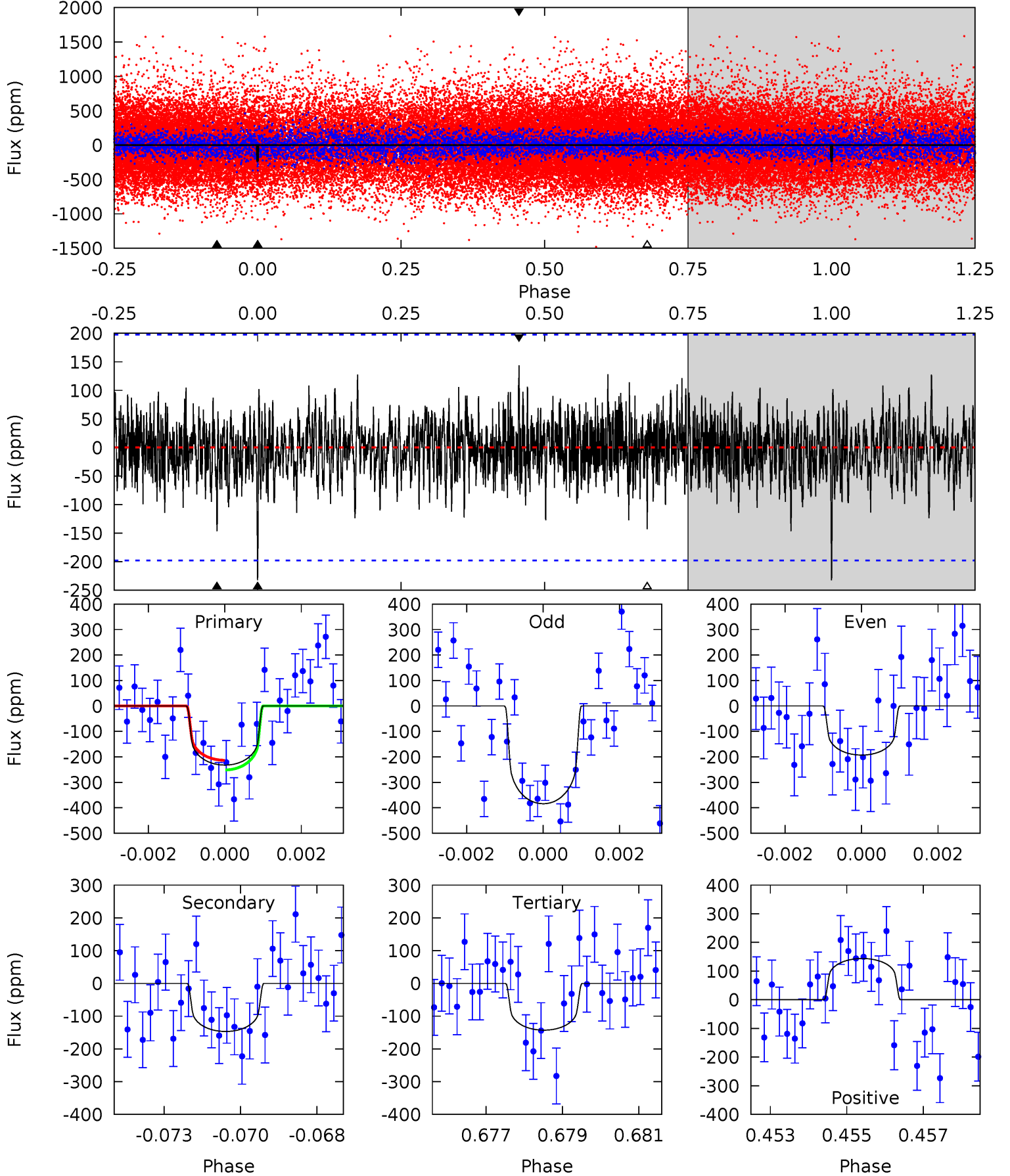
TCE 011393633-01 P=178.034760 Days $T_0=216.375293$ (BKJD)



DV Model-Shift Uniqueness Test

011393633-01, $P = 178.020604$ Days, $E = 38.431989$ Days

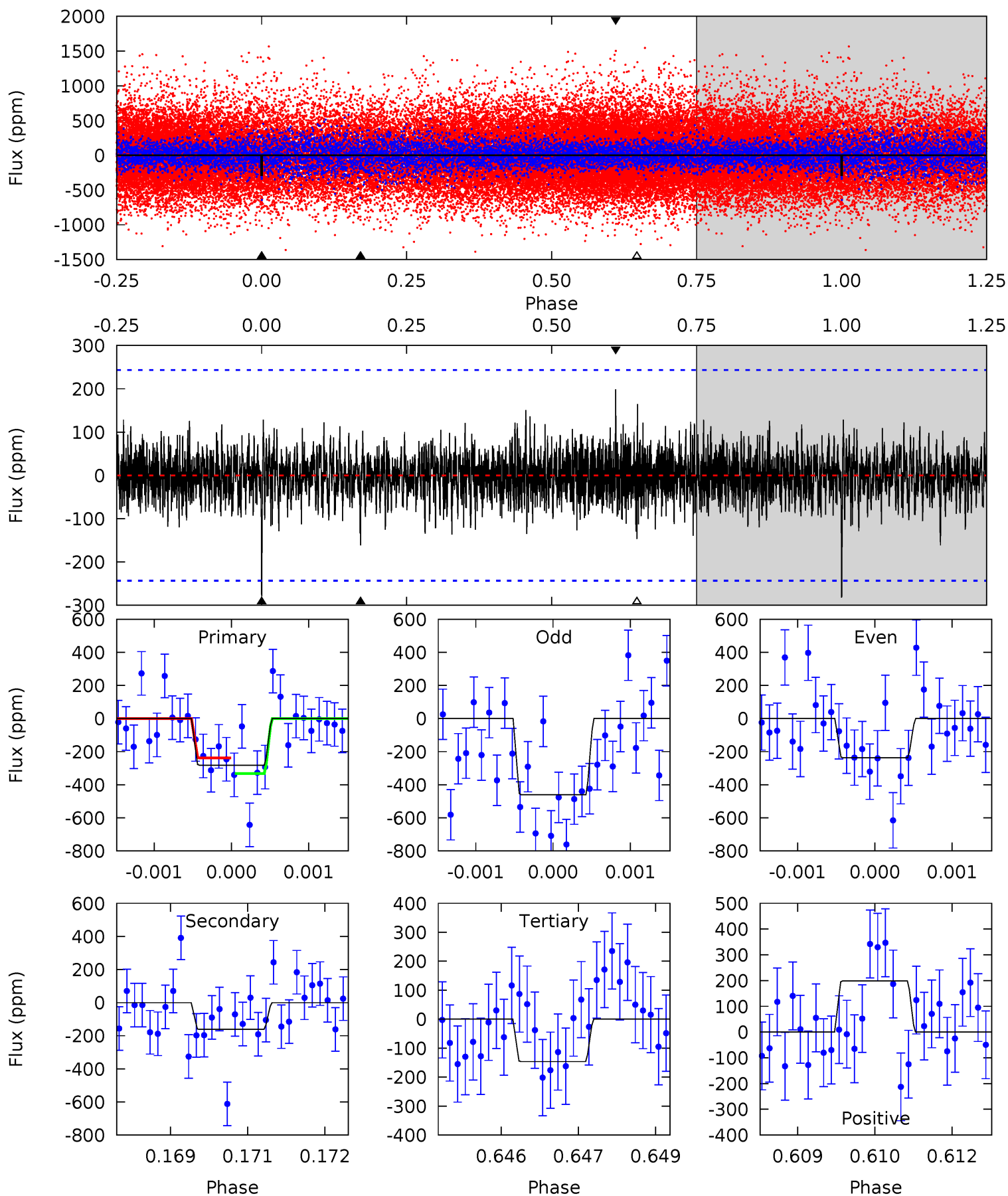
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.24	3.94	3.84	3.86	5.31	3.07	1.06	2.40	2.37	0.11	0.08	2.09	0.90	0.38	0.51



Alt Model-Shift Uniqueness Test

011393633-01, $P = 178.034760$ Days, $E = 38.340533$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.25	3.58	3.24	4.40	5.39	3.19	0.93	3.01	1.85	0.34	-0.82	2.07	0.77	0.41	1.03



Stellar Parameters For KIC 011393633

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5564^{+167}_{-150}	$4.587^{+0.036}_{-0.144}$	$-0.260^{+0.300}_{-0.300}$	$0.785^{+0.173}_{-0.058}$	$0.878^{+0.080}_{-0.100}$	$2.558^{+0.475}_{-1.019}$
	+3%/-3%	+1%/-3%	+115%/-115%	+22%/-7%	+9%/-11%	+19%/-40%
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 011393633-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-147 ± 37	$1.69^{+1.20}_{-0.98}$	402^{+21}_{-17}	4603^{+2067}_{-840}	9883^{+41138}_{-6588}
Alt.	-162 ± 45	$1.76^{+1.19}_{-1.00}$	402^{+22}_{-17}	4580^{+2124}_{-777}	9539^{+43730}_{-6062}

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

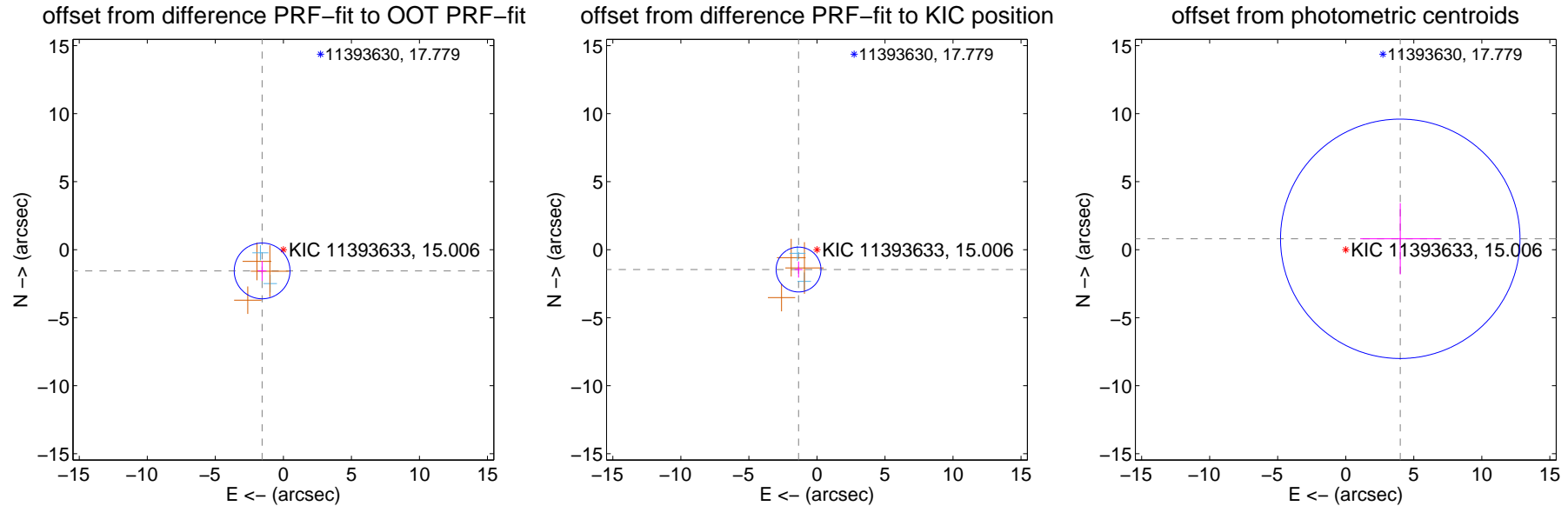
DV Centroid Data

Supplemental centroid analysis for 011393633-01. Kepler magnitude: 15.01. Transit SNR 6.00

There are 2 quarters with good PRF difference image offsets

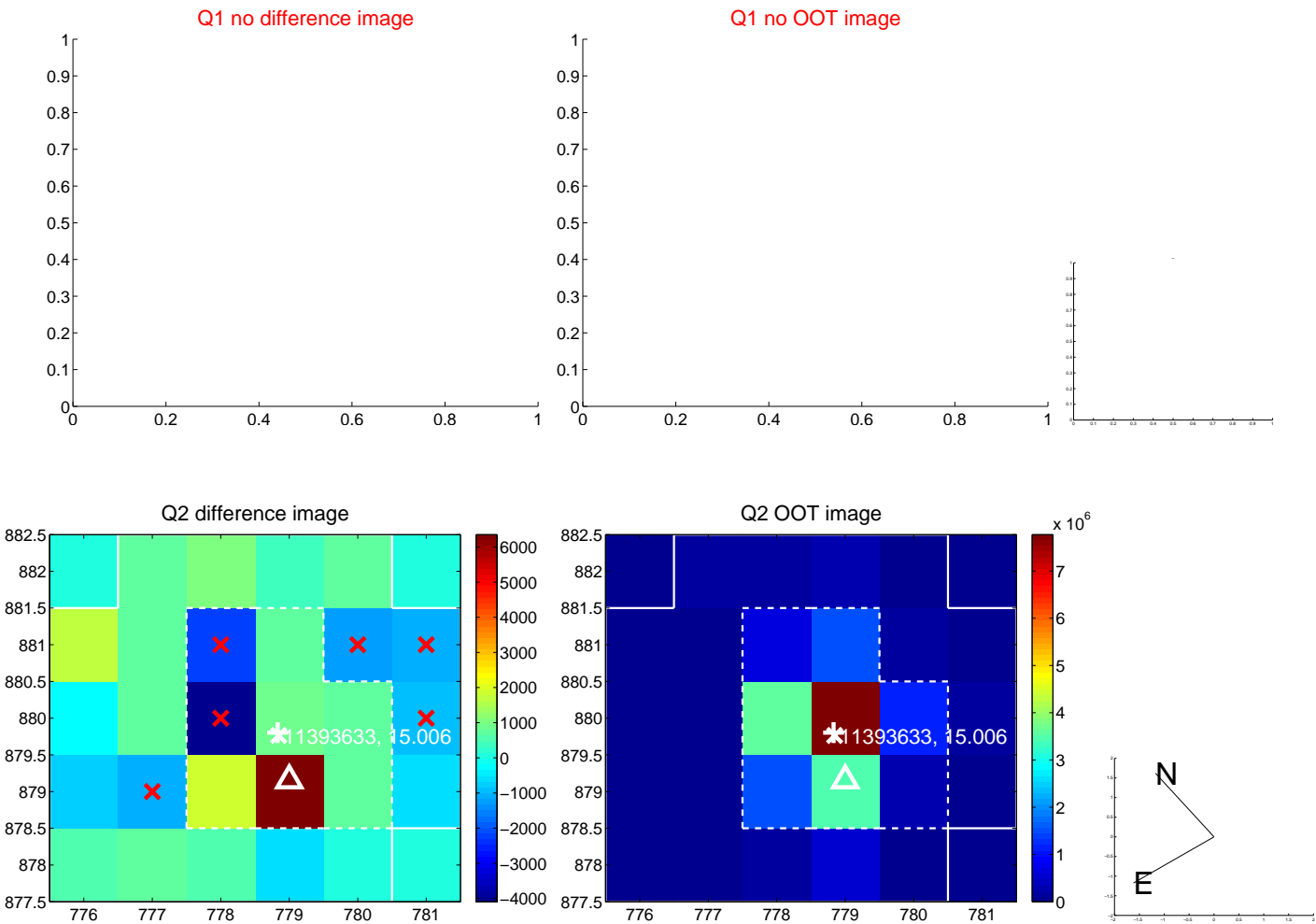
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.208 ± 0.683	3.23	1.562 ± 0.324	-1.561 ± 0.732
PRF-fit source offset from KIC position	1.991 ± 0.550	3.62	1.353 ± 0.287	-1.460 ± 0.593
photometric centroid source offset	4.09 ± 2.93	1.39	-4.01 ± 2.95	0.80 ± 2.62

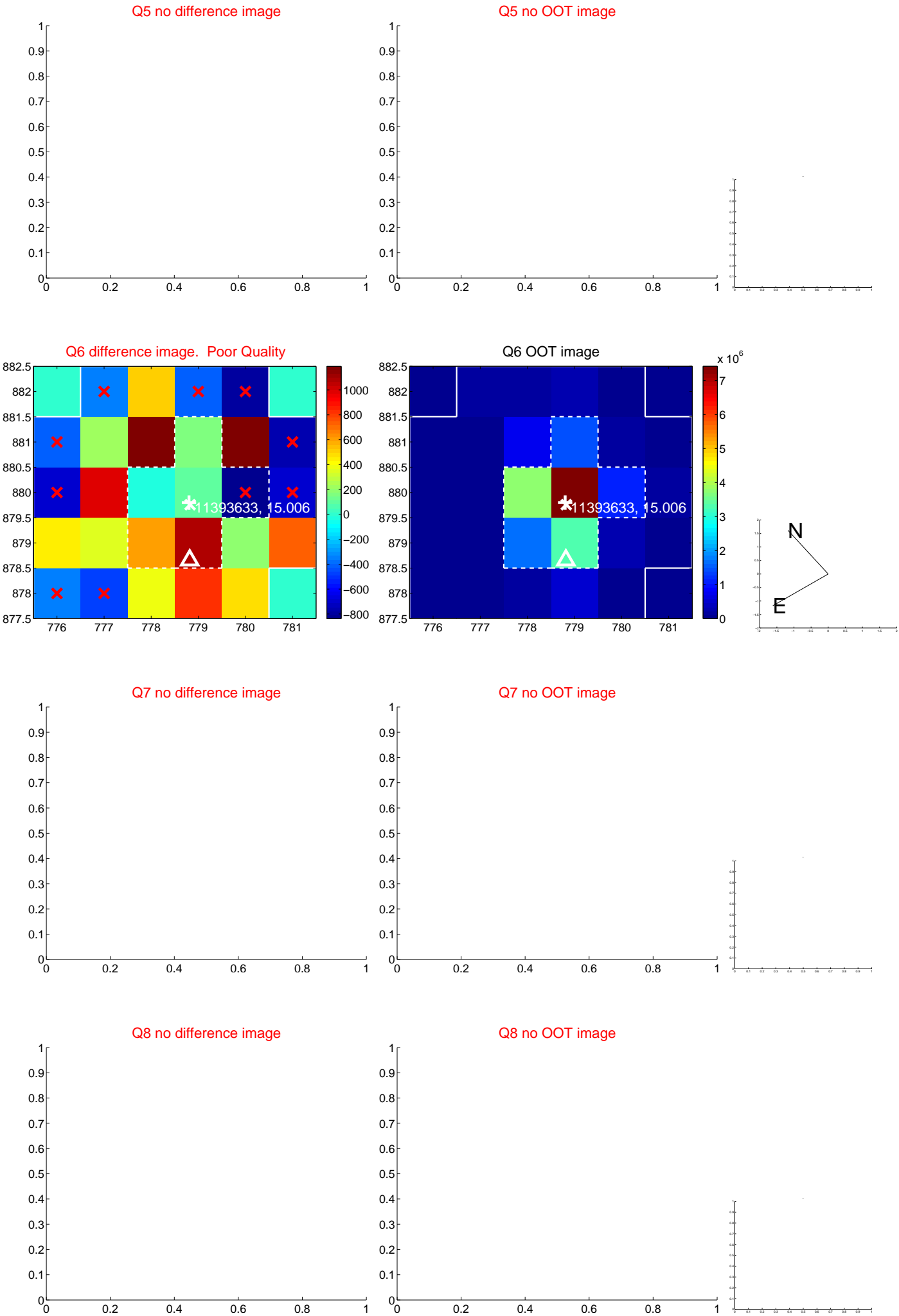


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

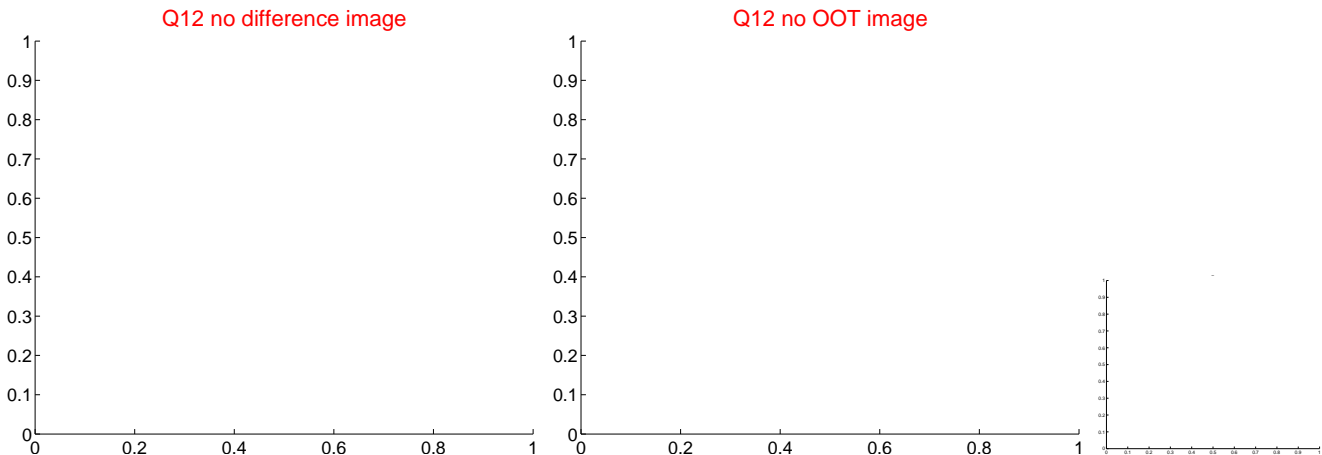
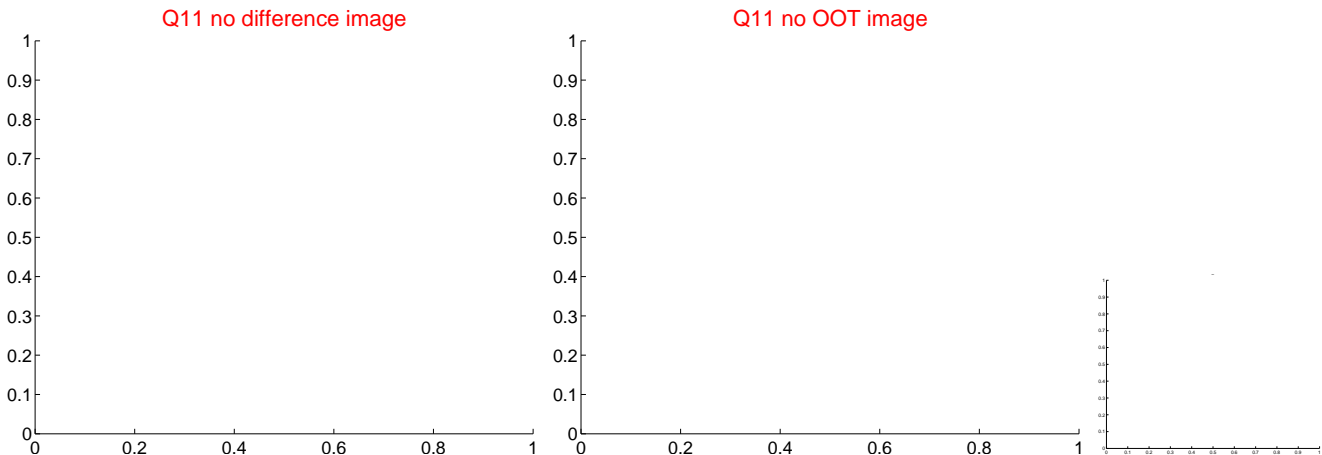
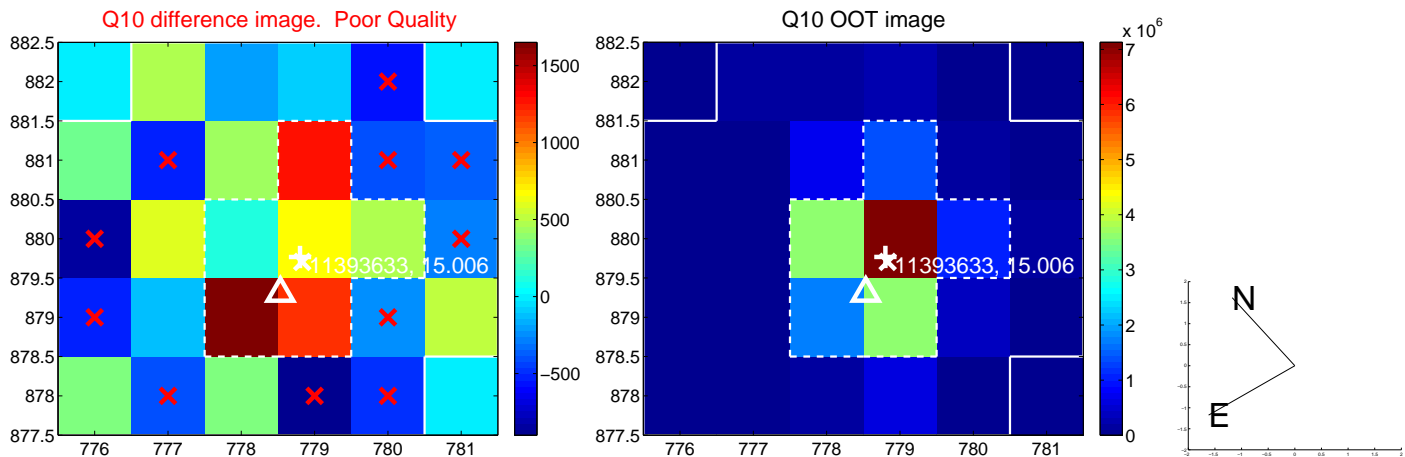
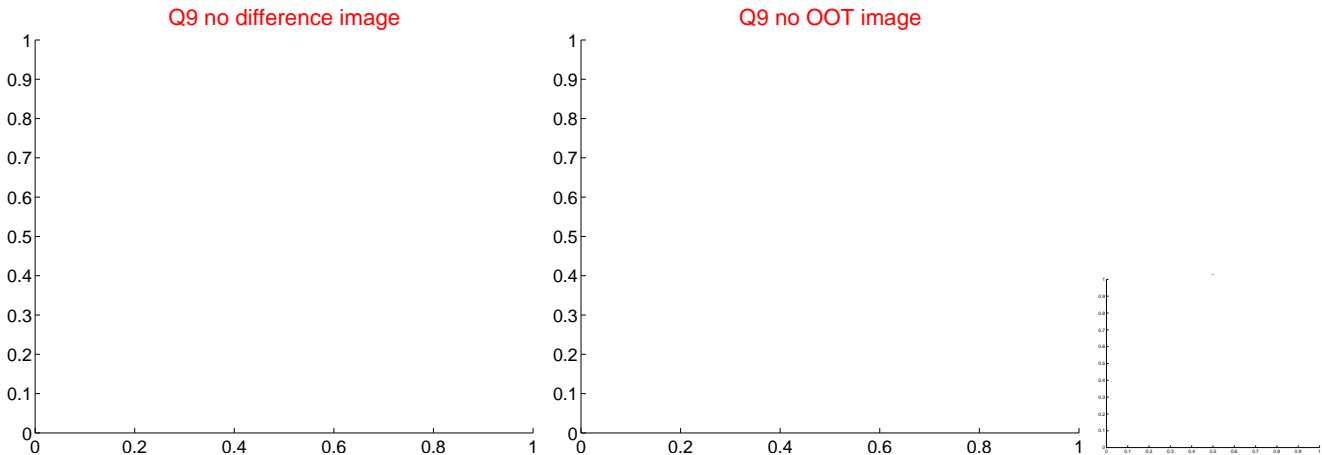
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



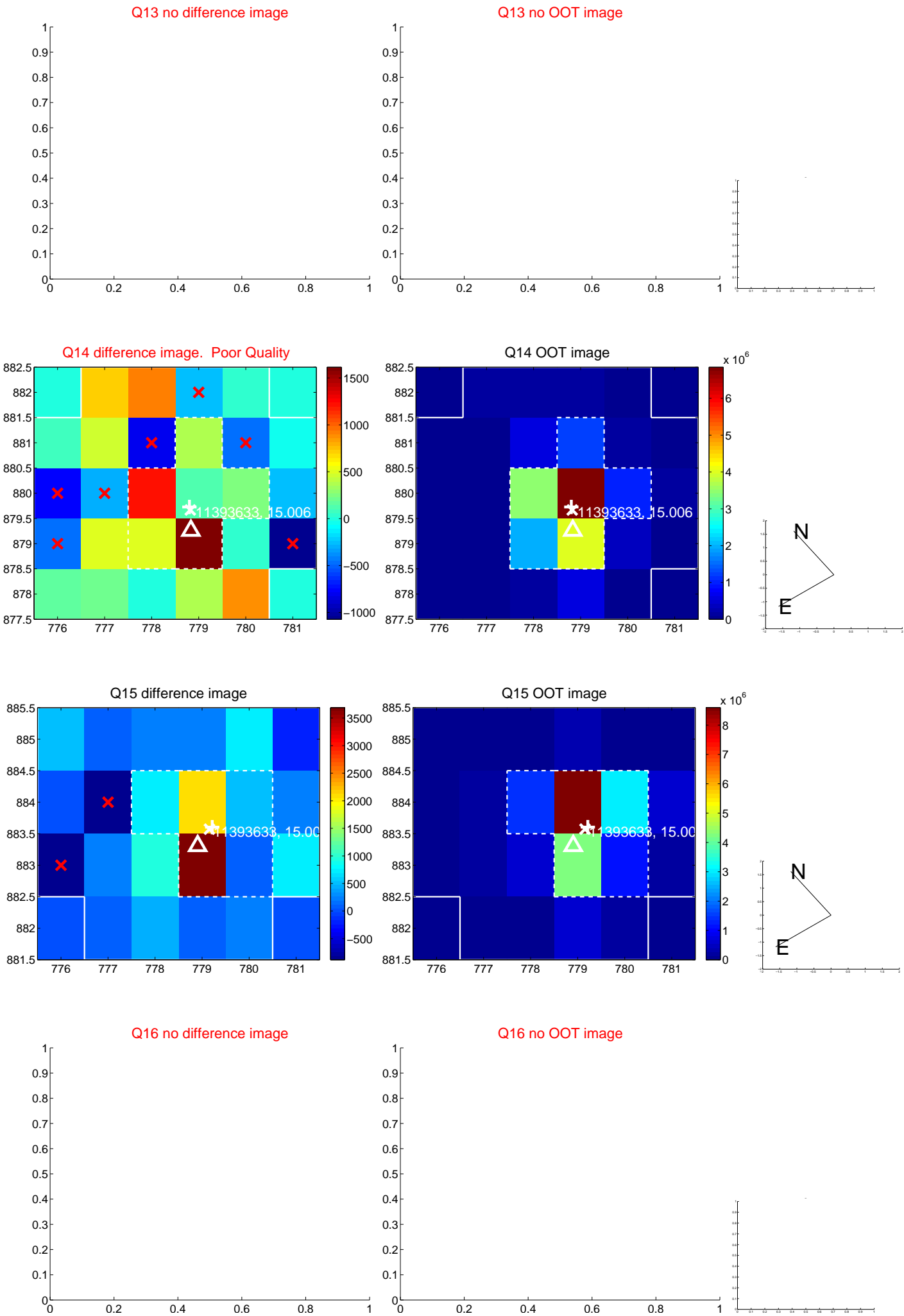
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



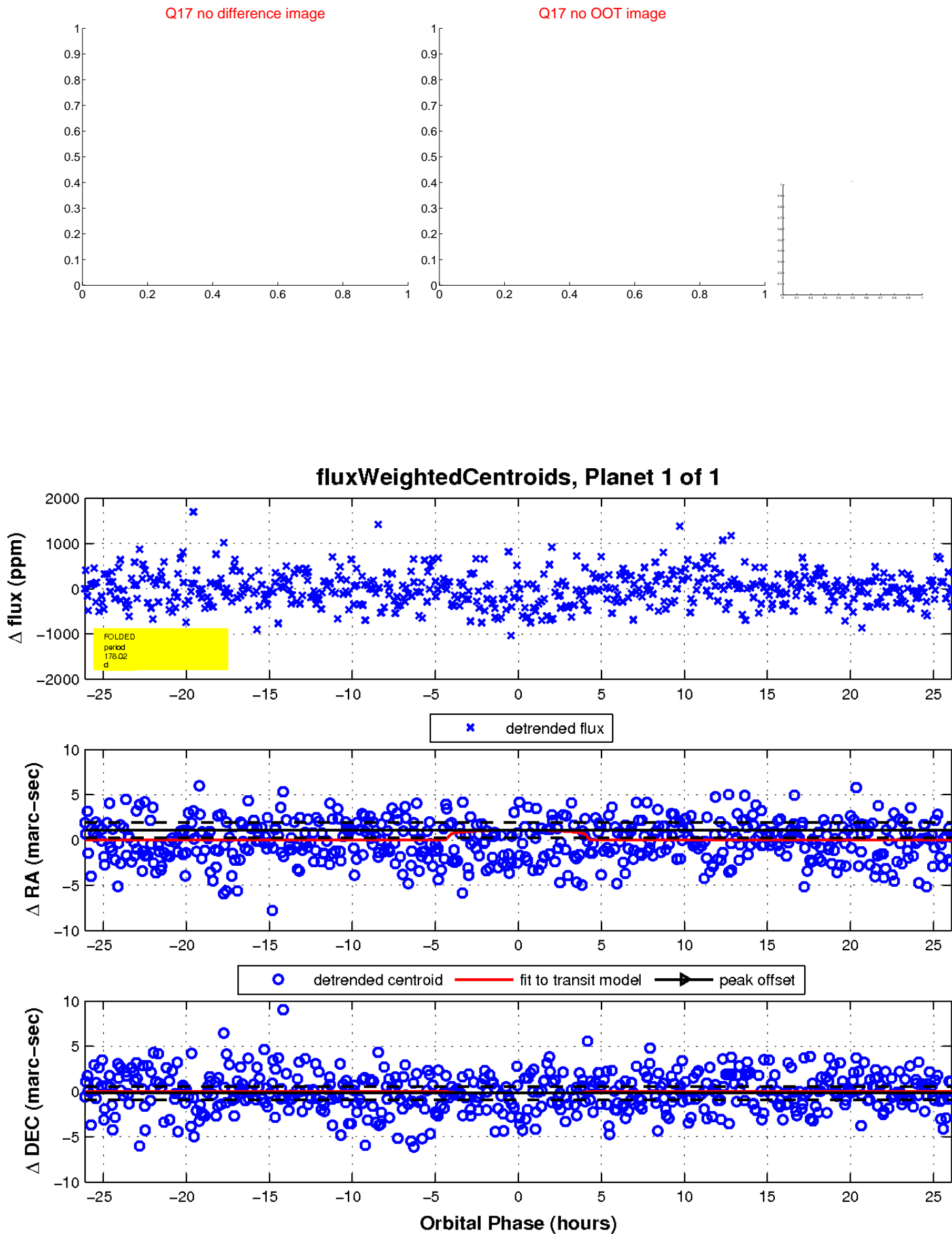
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



UKIRT Image

Declination

