

KIC 007630229

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})
007630229-01	OBS	0683.01	278.124263	177.519099	2277.7	4.050	51.0	47.9	1.05	5799	5.91	1.58

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007630229-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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

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

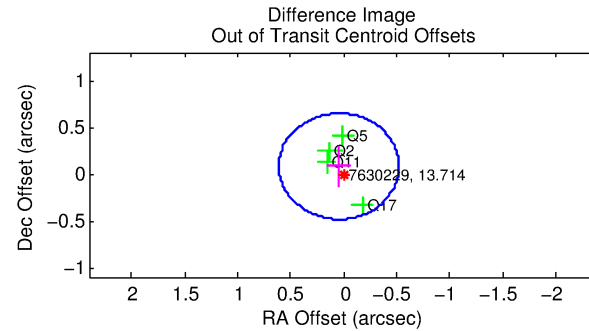
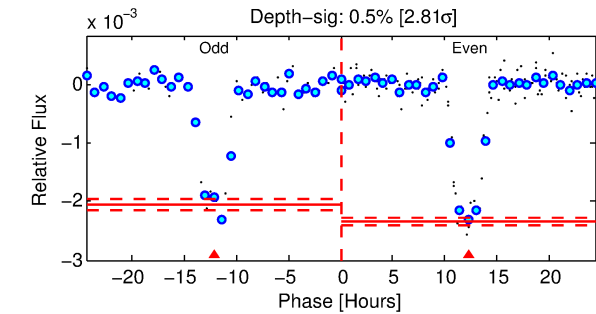
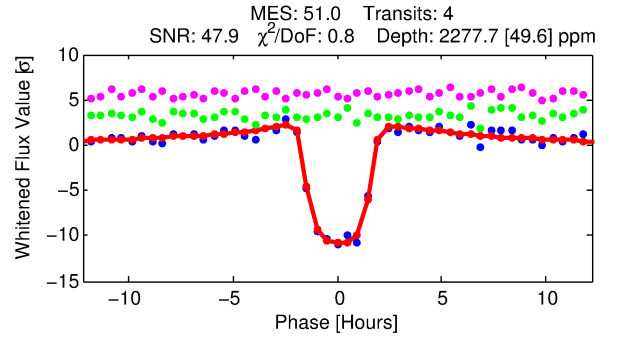
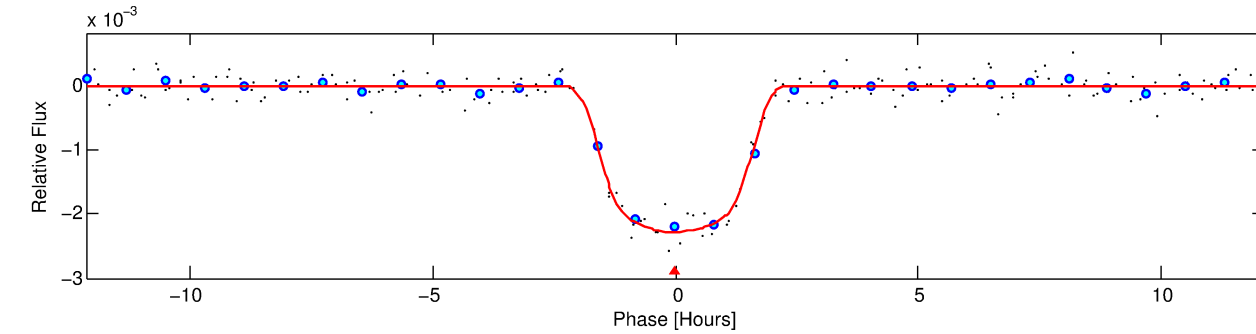
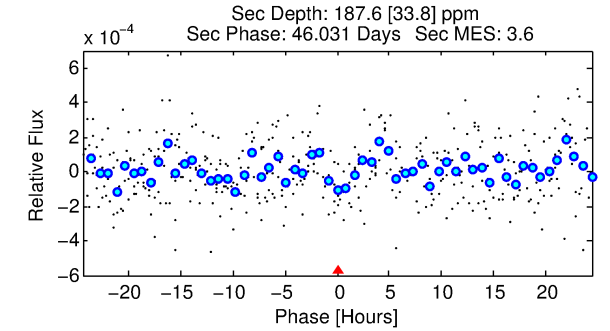
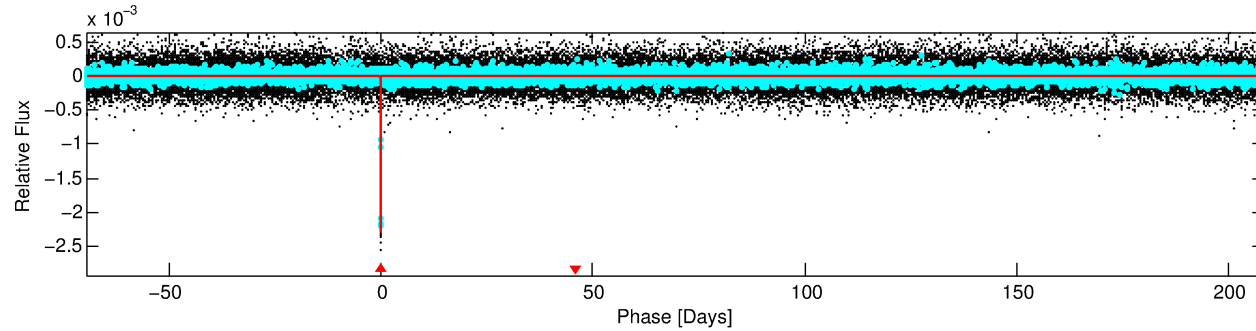
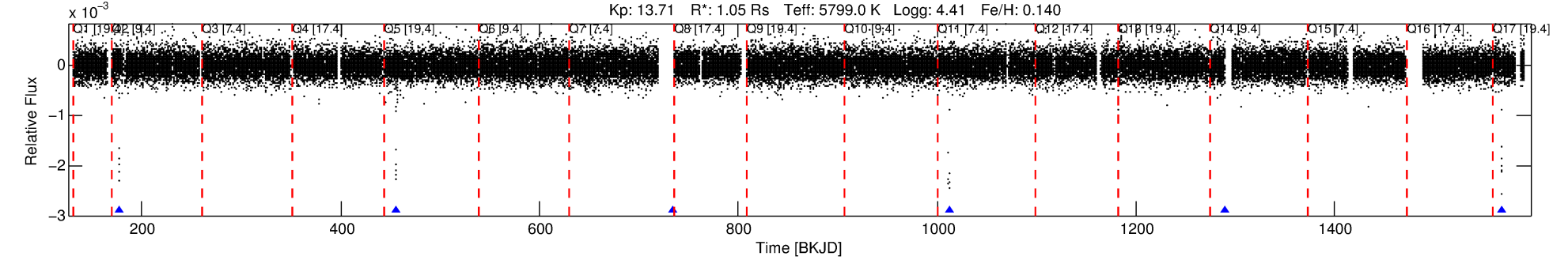
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007630229-01

No Significant Match Found

DV One-Page Summary

KIC: 7630229 Candidate: 1 of 1 Period: 278.124 d
KOI: K00683.01 Corr: 0.992



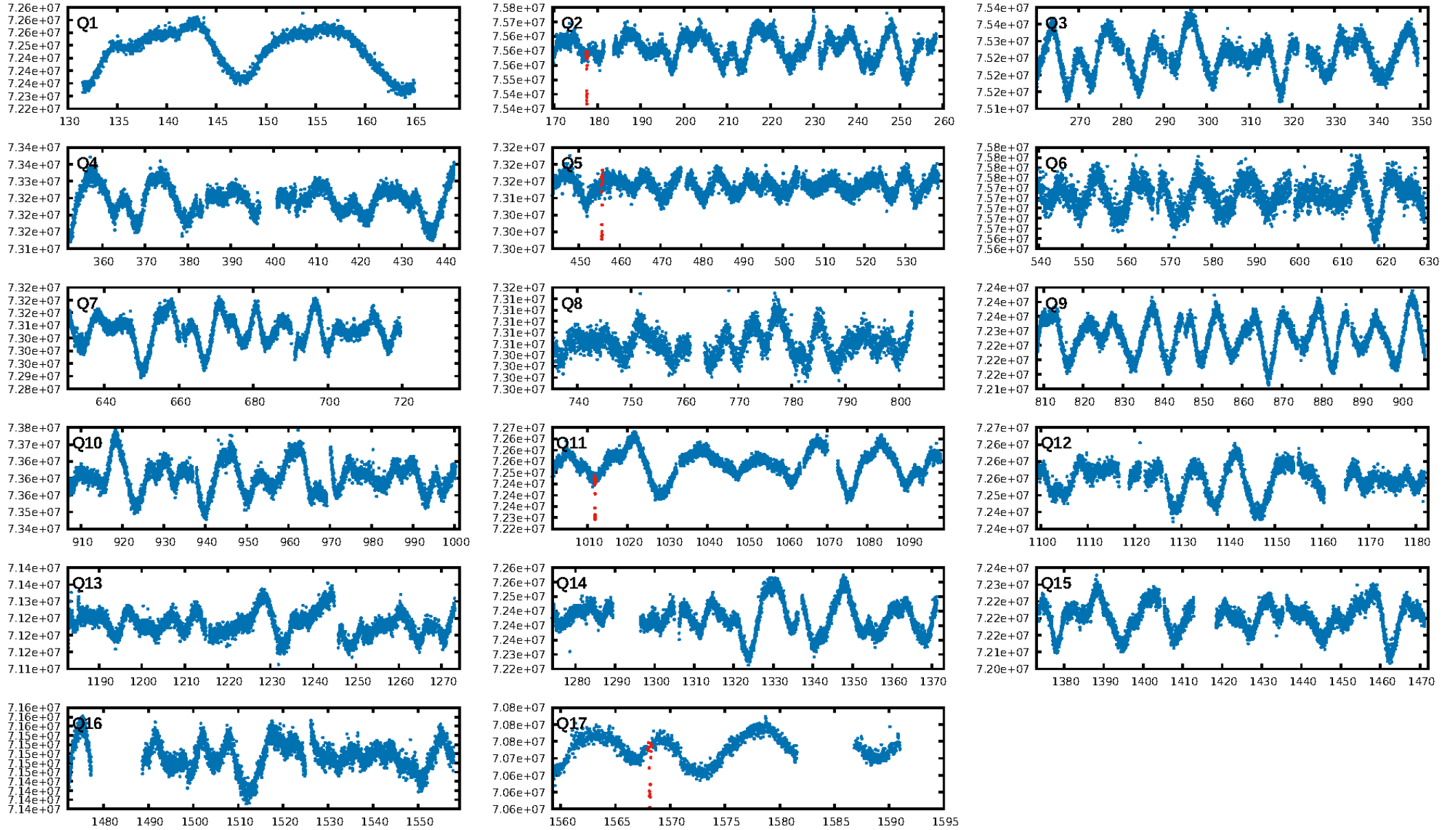
DV Fit Results:

Period = 278.12426 [0.00042] d
Epoch = 177.5191 [0.0013] BKJD
Rp/R* = 0.0516 [0.0013]
a/R* = 295.39 [24.43]
b = 0.89 [0.02]
Seff = 1.58 [0.36]
Teq = 286 [16] K
Rp = 5.91 [0.95] Re
a = 0.8420 [0.1195] AU
Ag = 2093.35 [598.74] [3.49 σ]
Teffp = 2988 [152] K [17.69 σ]

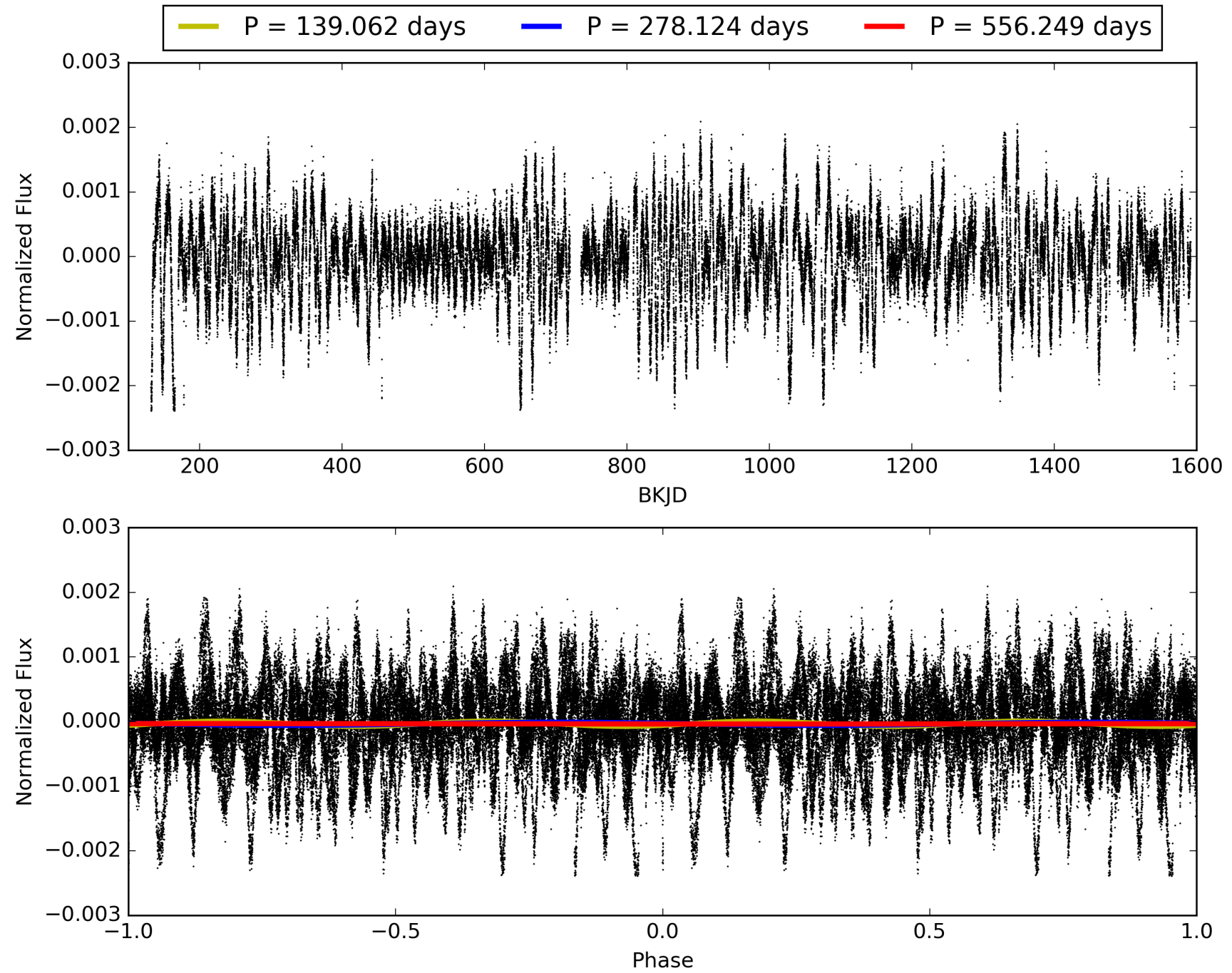
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 15.4%
ModelChiSquareGof-sig: 99.2%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 13.23
Centroid-sig: 6.1%
Centroid-so: 0.313 arcsec [1.35 σ]
OotOffset-rm: 0.093 arcsec [0.49 σ]
KicOffset-rm: 0.139 arcsec [0.72 σ]
OotOffset-st: 1/1/0/2 [4]
KicOffset-st: 1/1/0/2 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 1.00 [4/4]

TCE 007630229-01, PDC Light Curves

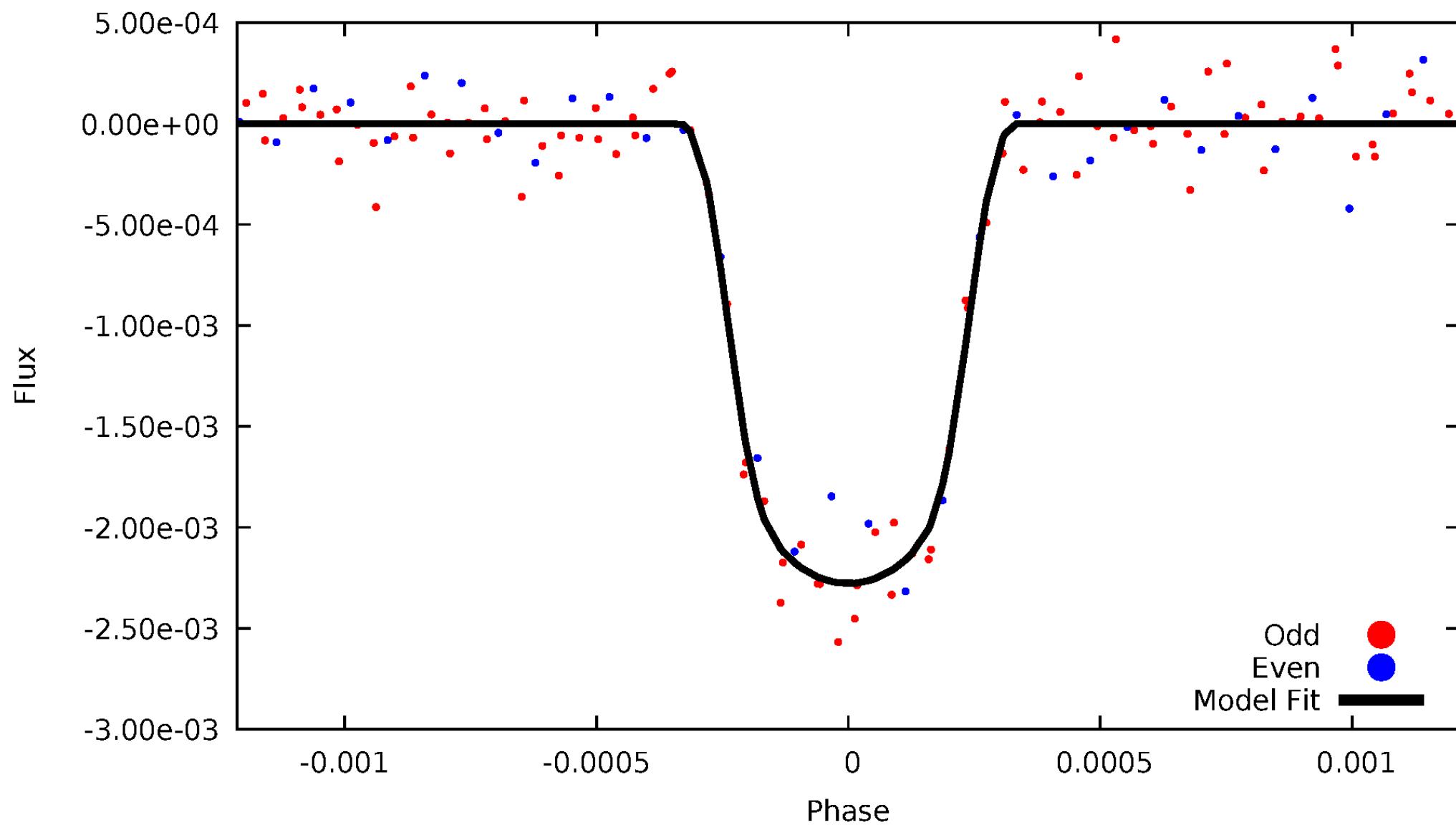


TCE 007630229-01



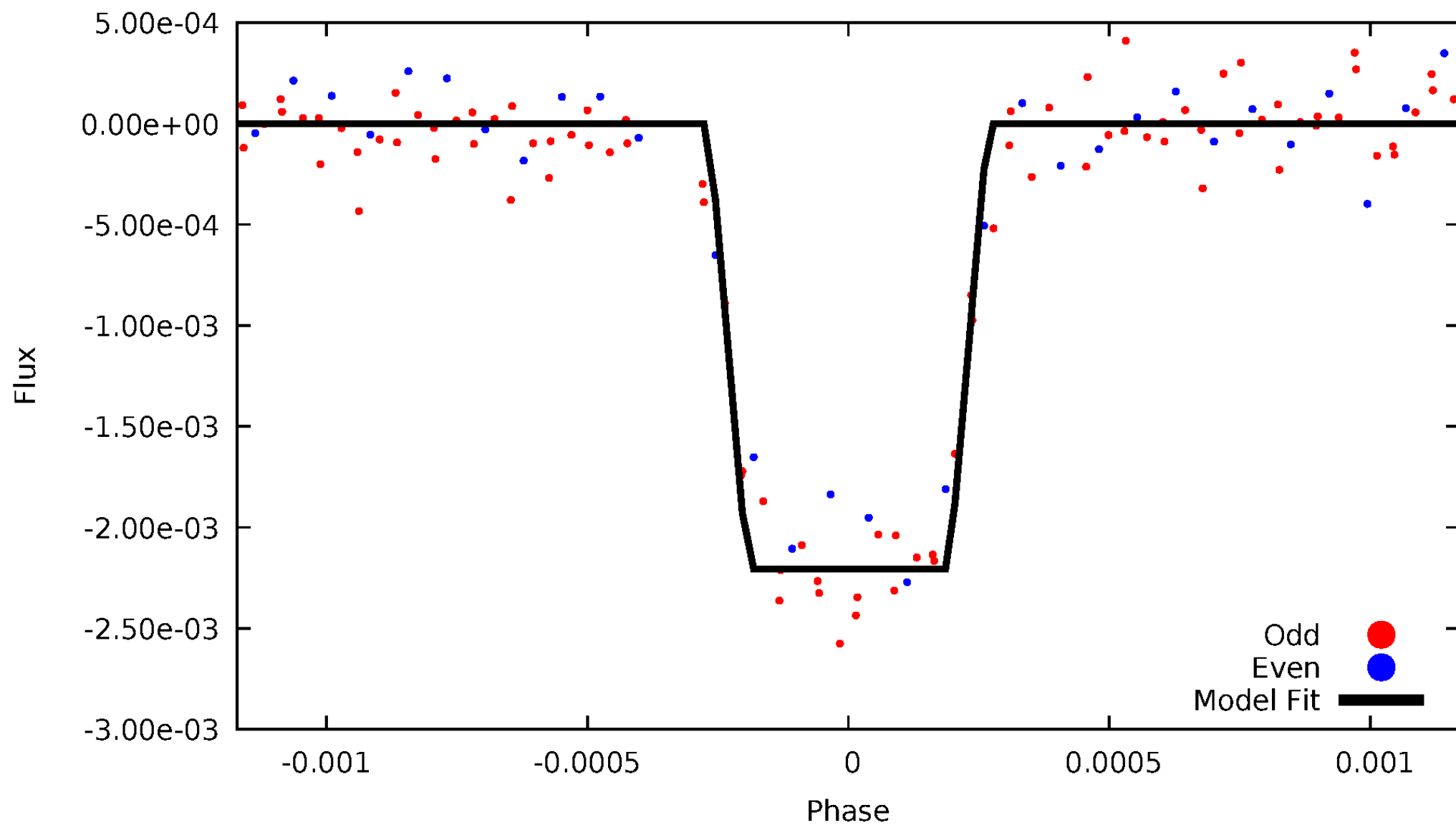
DV Odd/Even

TCE 007630229-01



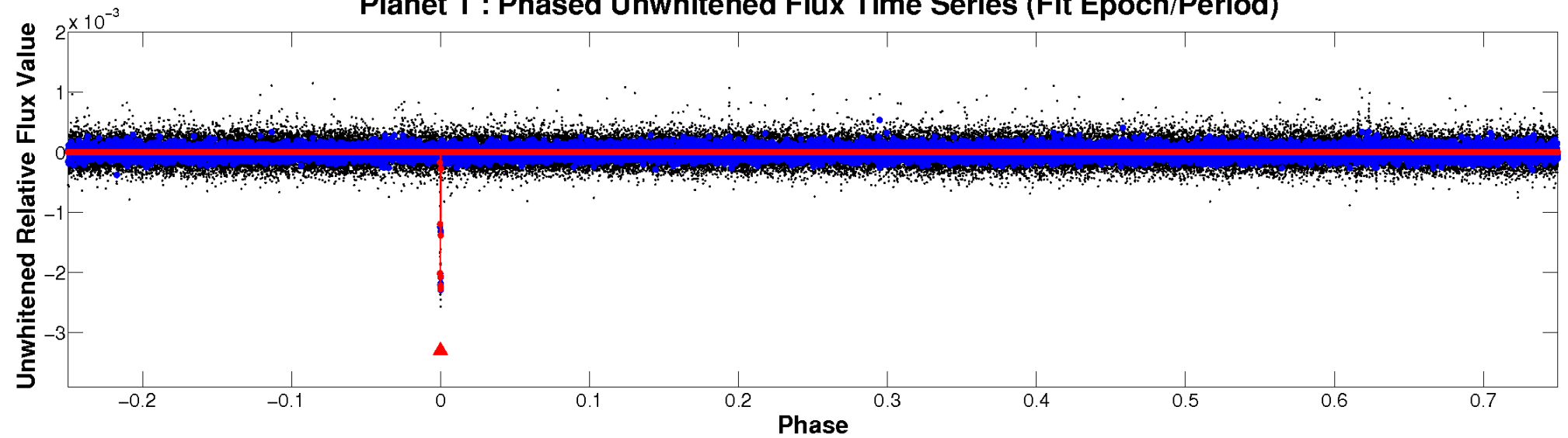
ALT Odd/Even

TCE 007630229-01

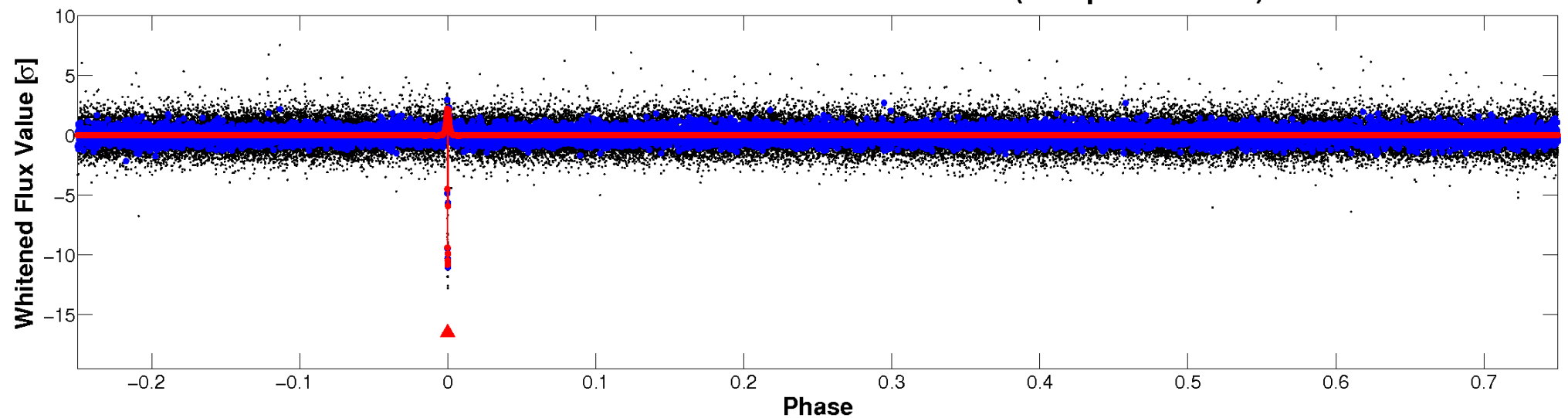


Non-Whitened Vs. Whitened Light Curve

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

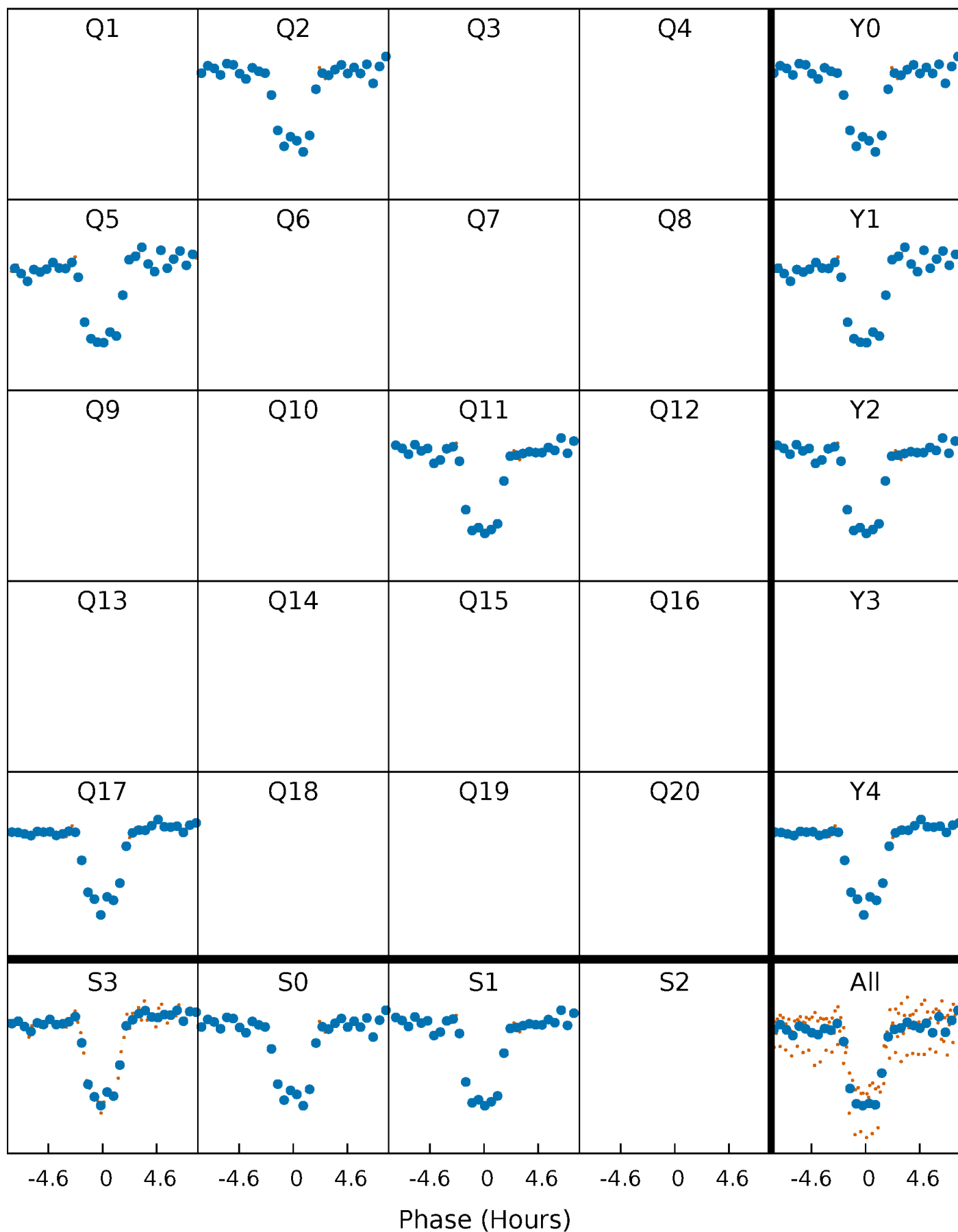


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



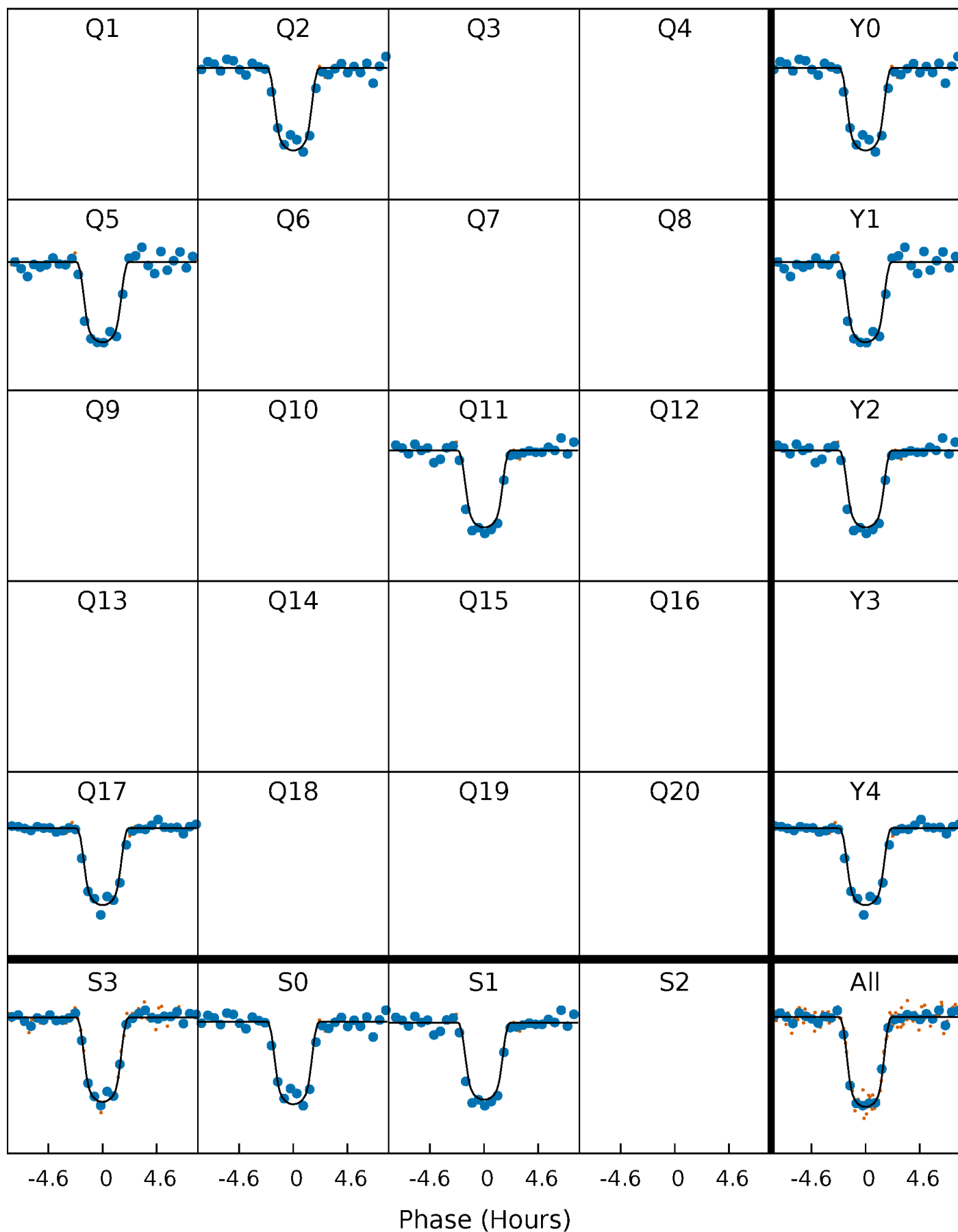
PDC Quarter-Phased Transit Curves

TCE 007630229-01 P=278.124263 Days $T_0=177.519099$ (BKJD)



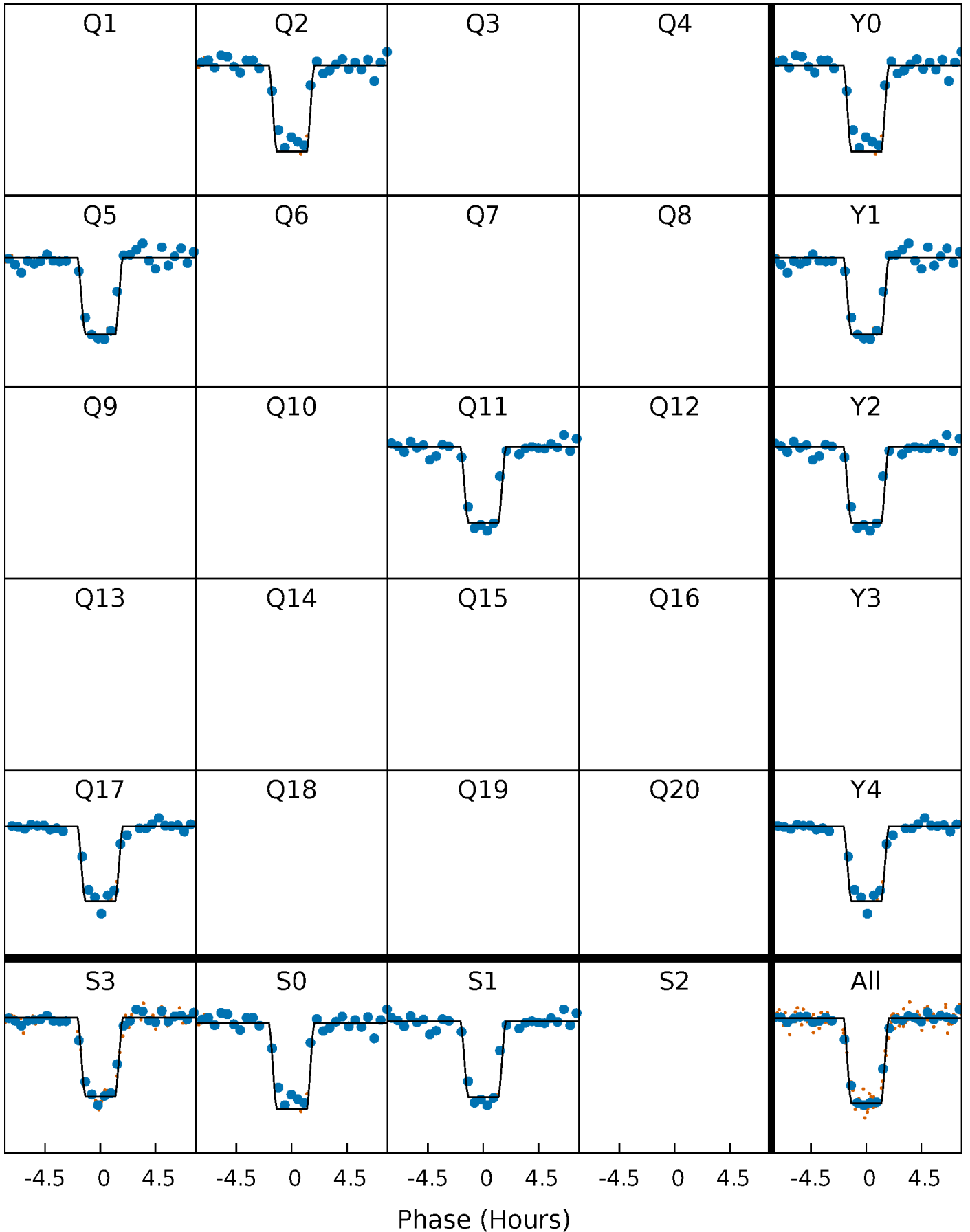
DV Quarter-Phased Transit Curves

TCE 007630229-01 P=278.124263 Days $T_0=177.519099$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

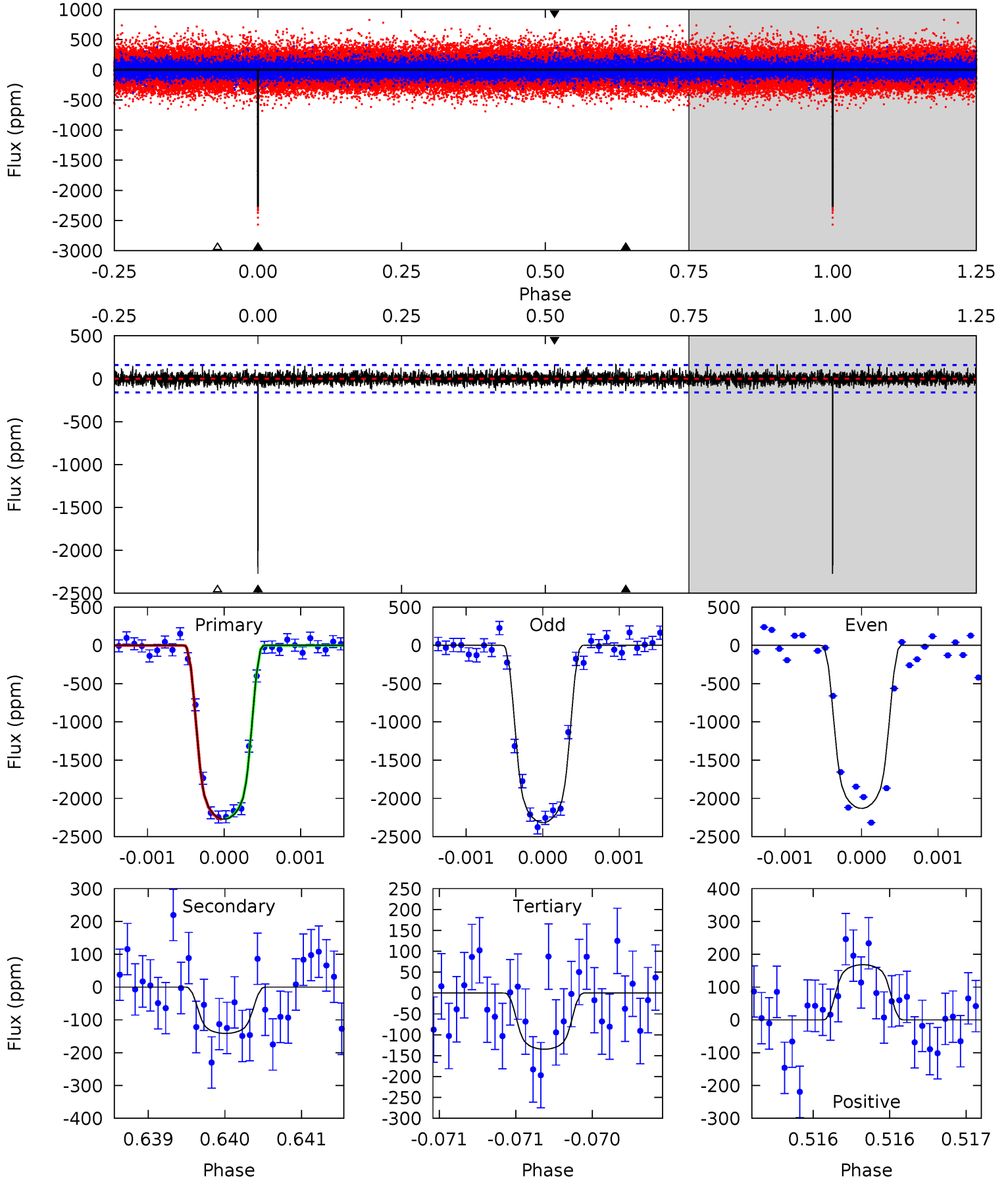
TCE 007630229-01 P=278.123999 Days $T_0=177.519307$ (BKJD)



DV Model-Shift Uniqueness Test

007630229-01, P = 278.124263 Days, E = 177.519099 Days

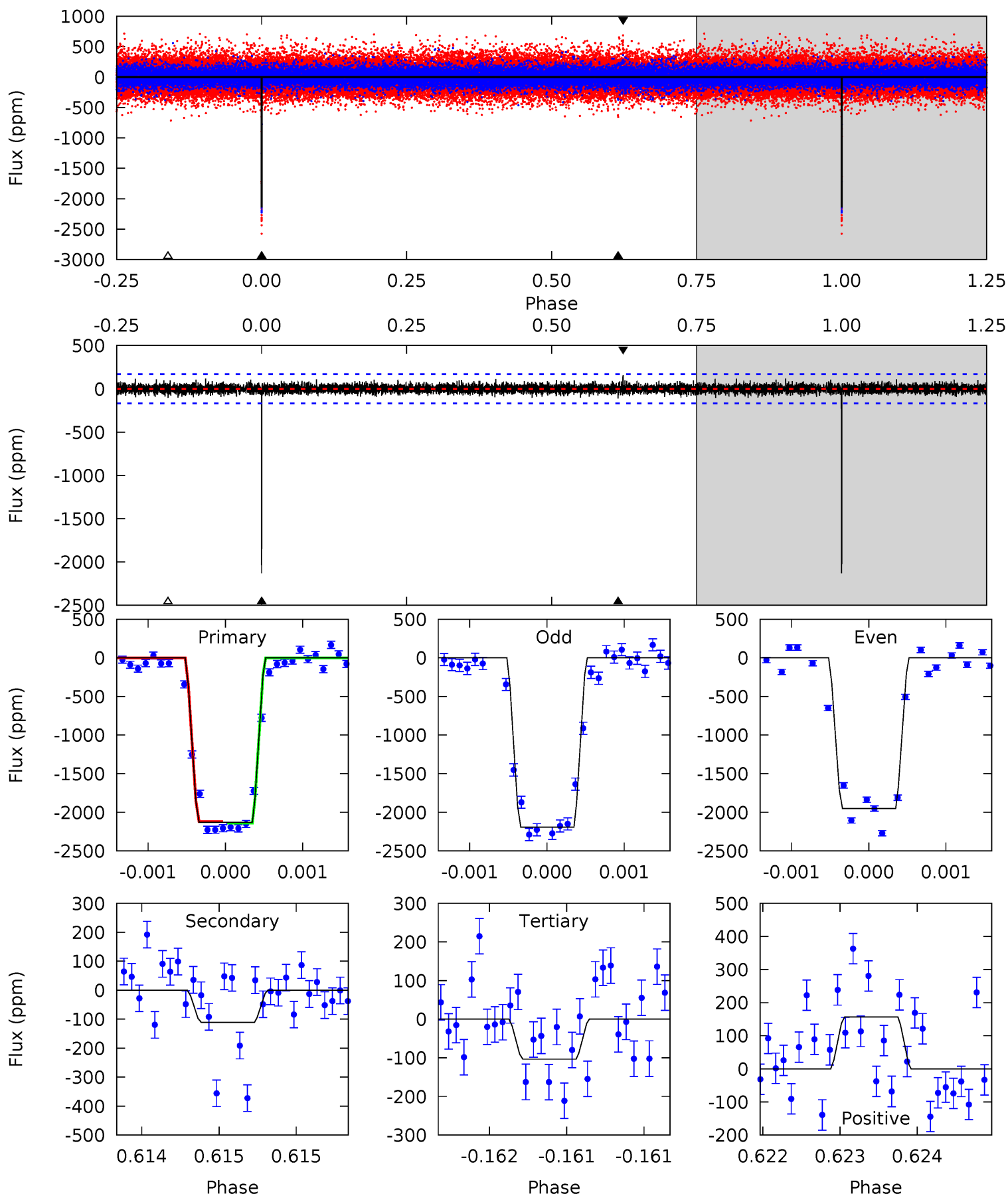
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
78.4	4.88	4.64	5.80	5.53	3.41	1.42	73.7	72.6	0.23	-0.92	2.70	1.00	0.07	0.14



Alt Model-Shift Uniqueness Test

007630229-01, $P = 278.123999$ Days, $E = 177.519307$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
70.4	3.67	3.42	5.18	5.56	3.46	1.00	67.0	65.3	0.25	-1.51	3.41	0.99	0.07	0.31



Stellar Parameters For KIC 007630229

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	5799^{+104}_{-116}	$4.408^{+0.066}_{-0.123}$	$0.140^{+0.150}_{-0.150}$	$1.050^{+0.167}_{-0.090}$	$1.028^{+0.069}_{-0.069}$	$1.252^{+0.335}_{-0.448}$
	+2%/-2%	+1%/-3%	+107%/-107%	+16%/-9%	+7%/-7%	+27%/-36%
Source	SPE59	SPE59	SPE59	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 007630229-01 / KOI 0683.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-141 ± 29	$5.94^{+0.58}_{-0.34}$	401^{+18}_{-14}	3323^{+112}_{-121}	1514^{+426}_{-386}
Alt.	-111 ± 30	$5.45^{+0.47}_{-0.35}$	402^{+17}_{-13}	3298^{+131}_{-154}	1414^{+459}_{-408}

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 $A_{obs} \gg 1.0$

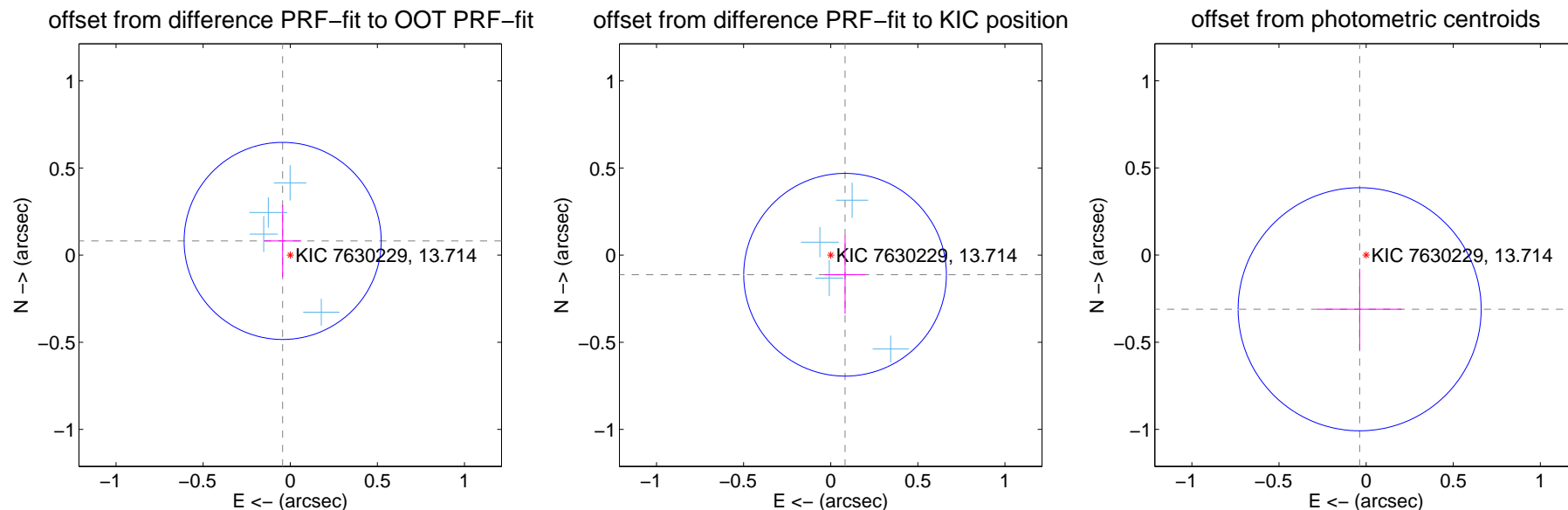
DV Centroid Data

Supplemental centroid analysis for 007630229-01. Kepler magnitude: 13.71. Transit SNR 47.94

There are 4 quarters with good PRF difference image offsets

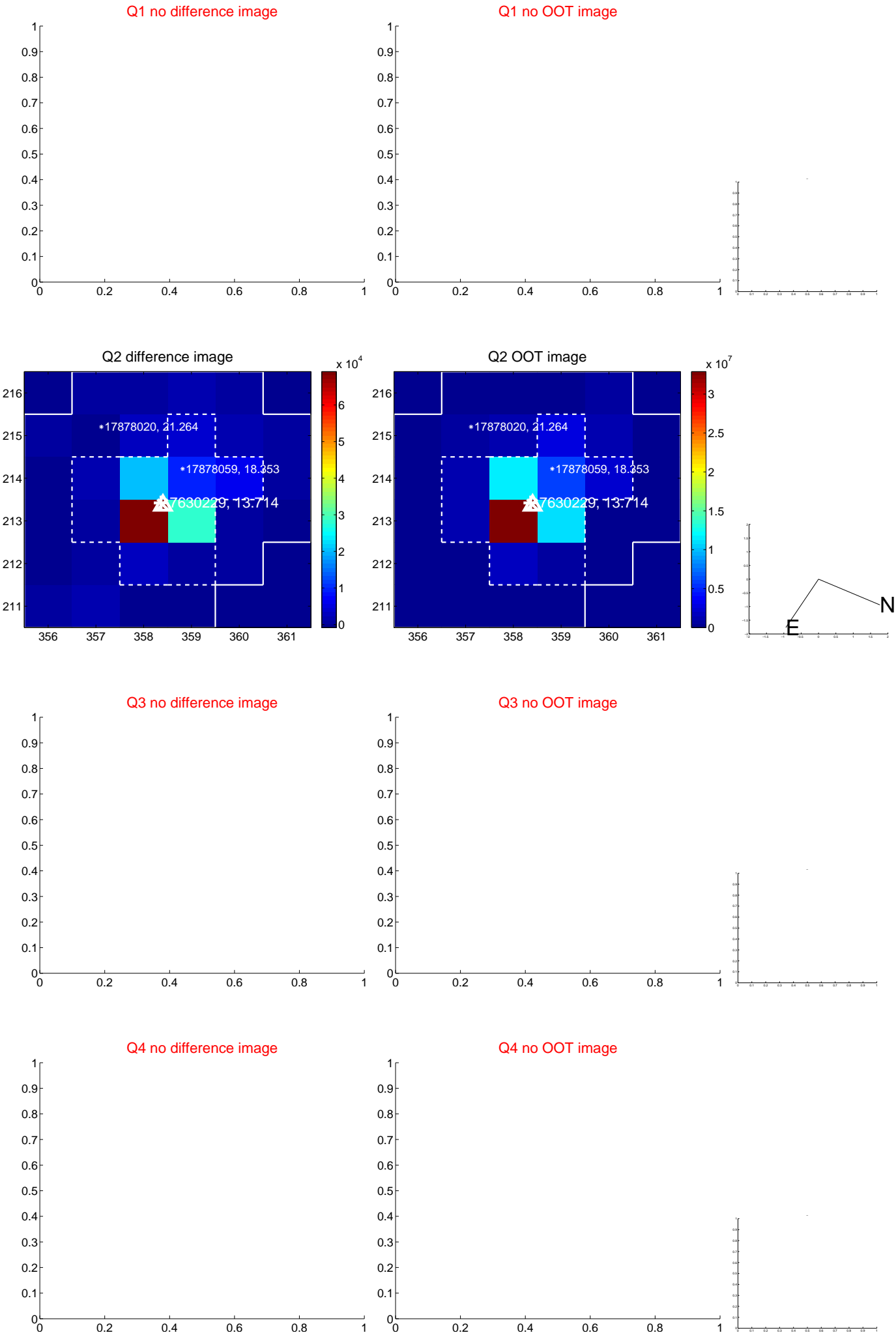
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.093 ± 0.189	0.49	0.044 ± 0.107	0.082 ± 0.206
PRF-fit source offset from KIC position	0.139 ± 0.194	0.72	-0.082 ± 0.117	-0.113 ± 0.225
photometric centroid source offset	0.31 ± 0.23	1.35	0.04 ± 0.24	-0.31 ± 0.23

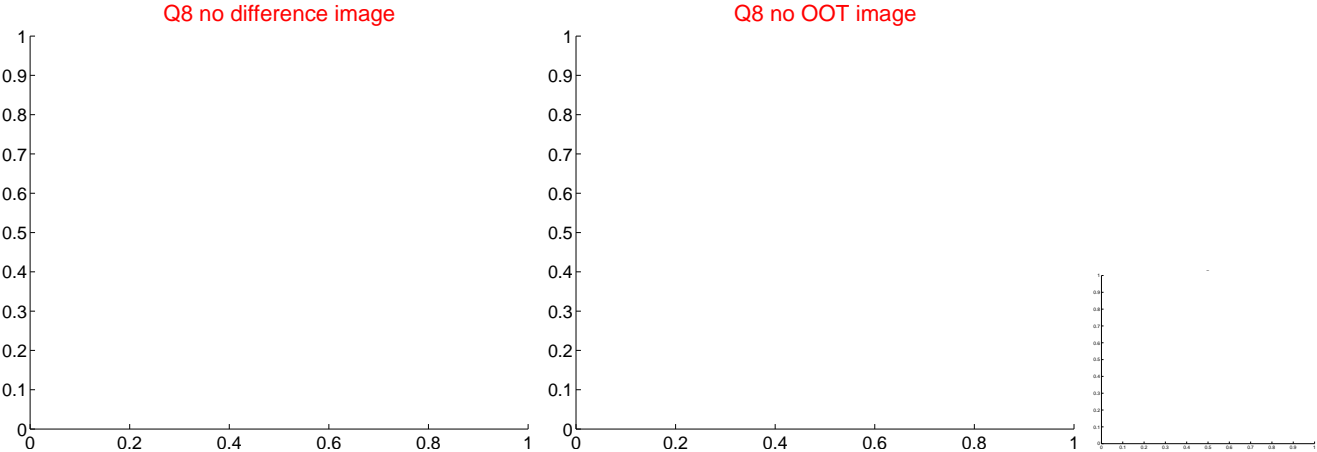
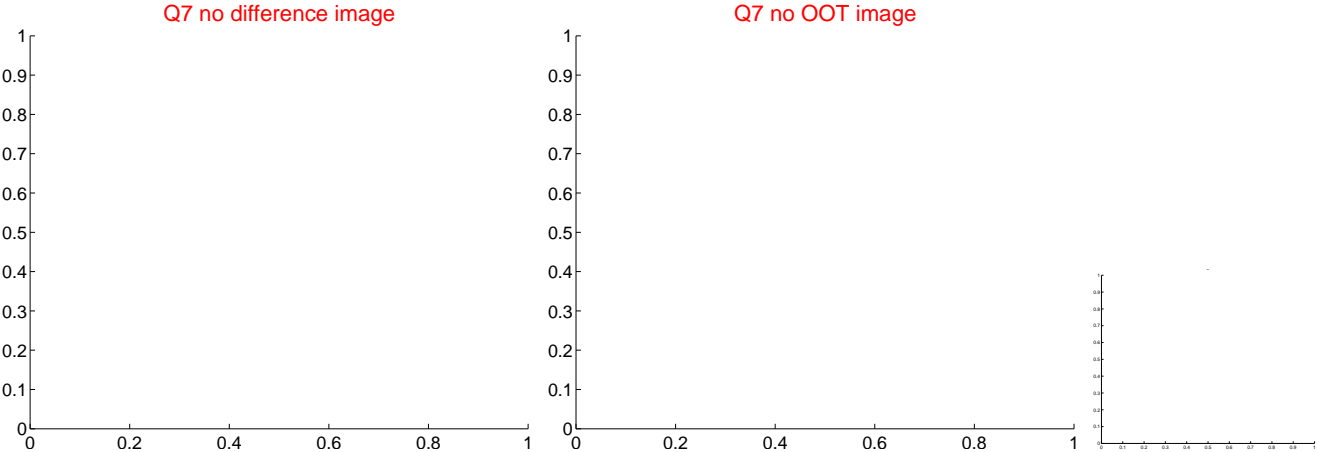
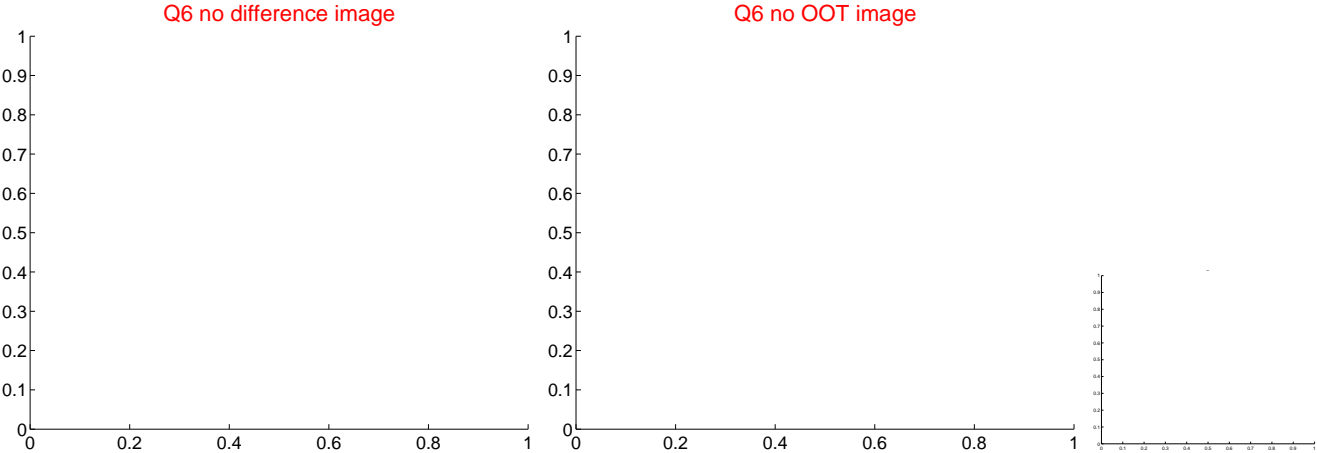
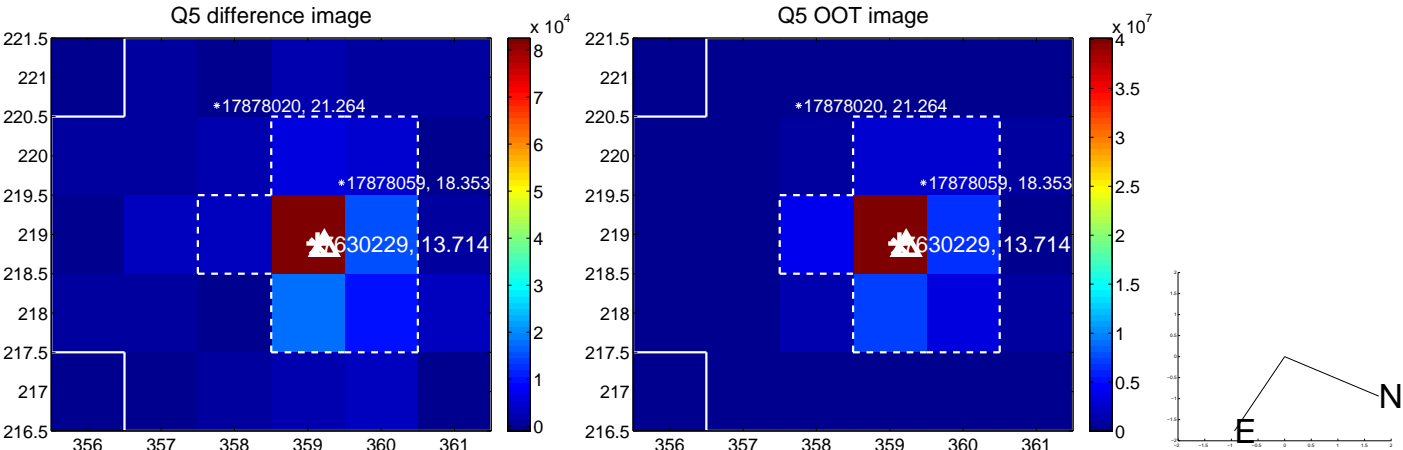


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

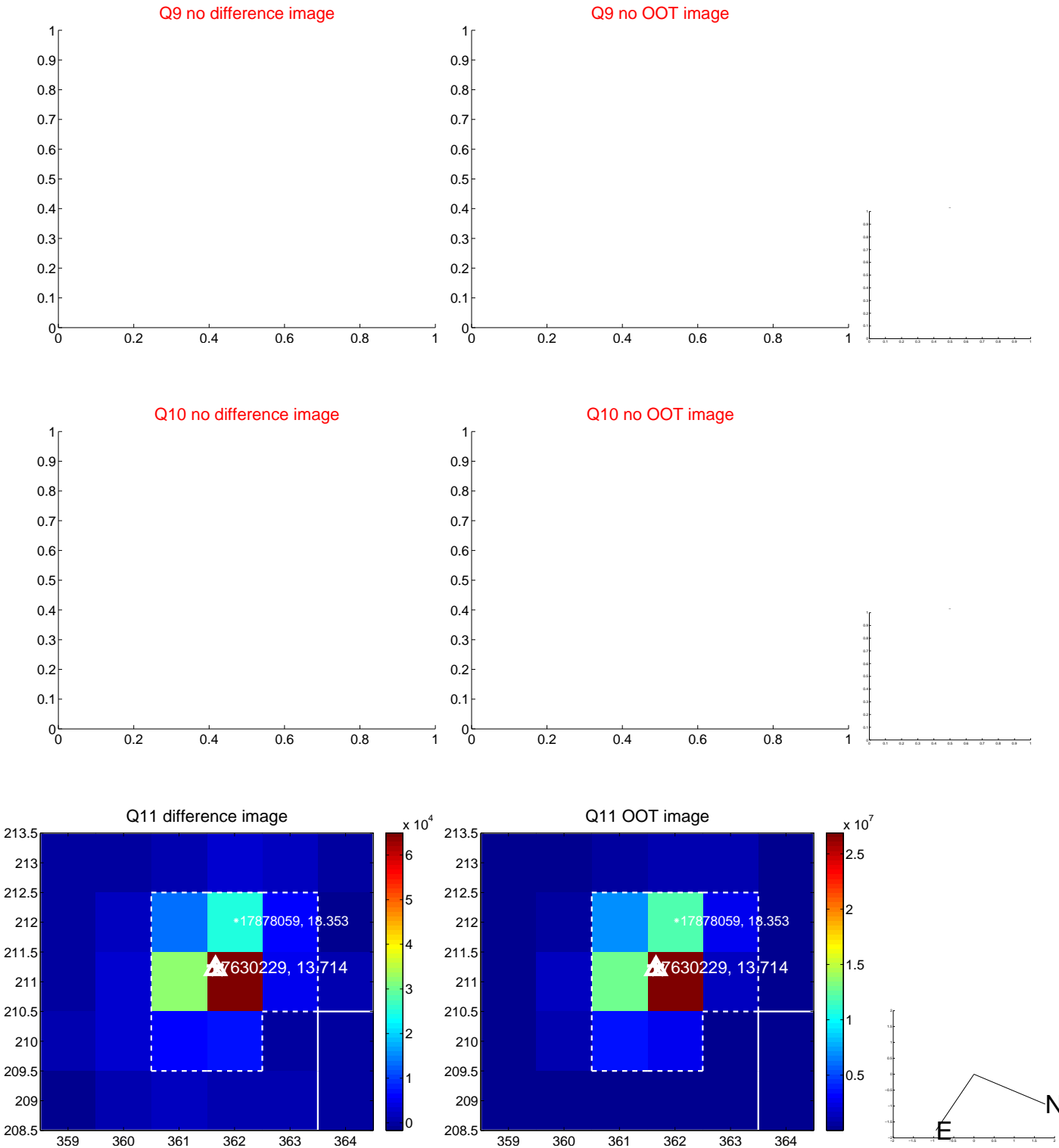
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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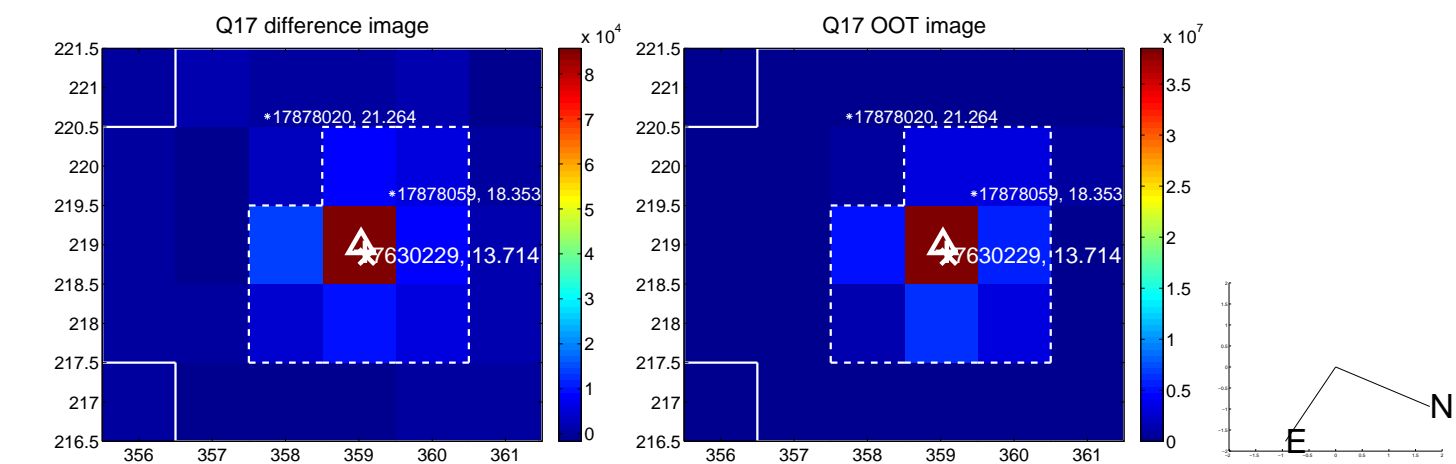
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



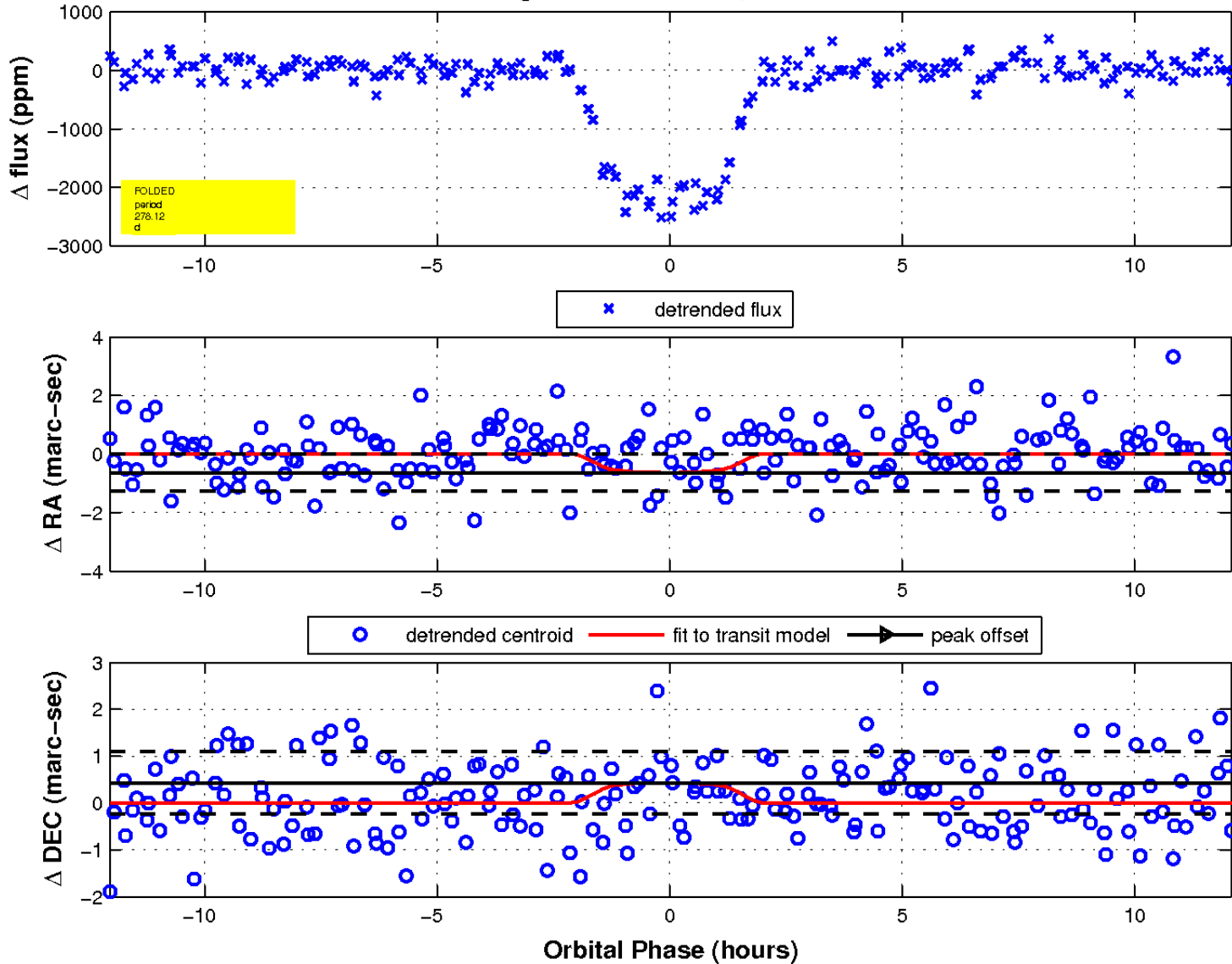
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

