

KIC 005193439

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})
005193439-01	OBS	6538.01	129.846777	240.684341	165.7	13.196	7.7	8.8	1.03	6133	1.48	5.23

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005193439-01	OBS	PC	0.28	0	0	0	0	CENT_UNCERTAIN

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.

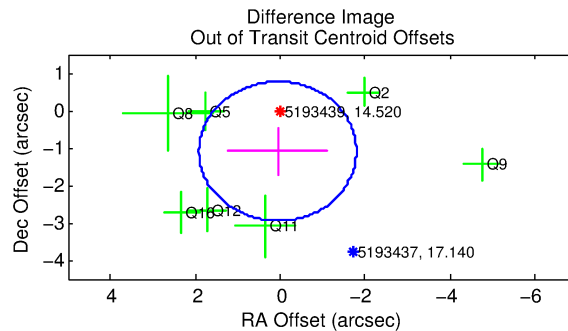
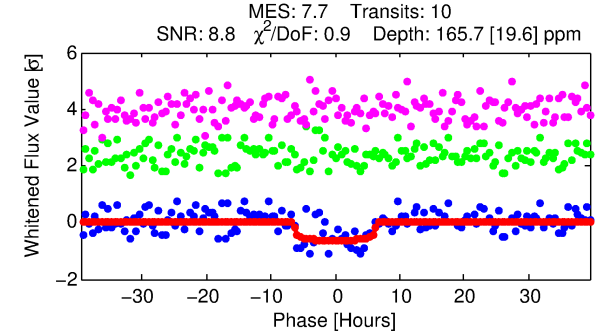
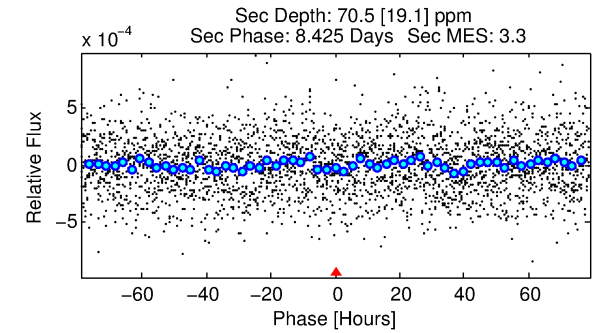
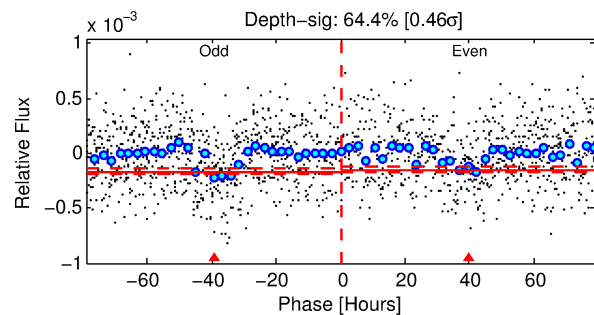
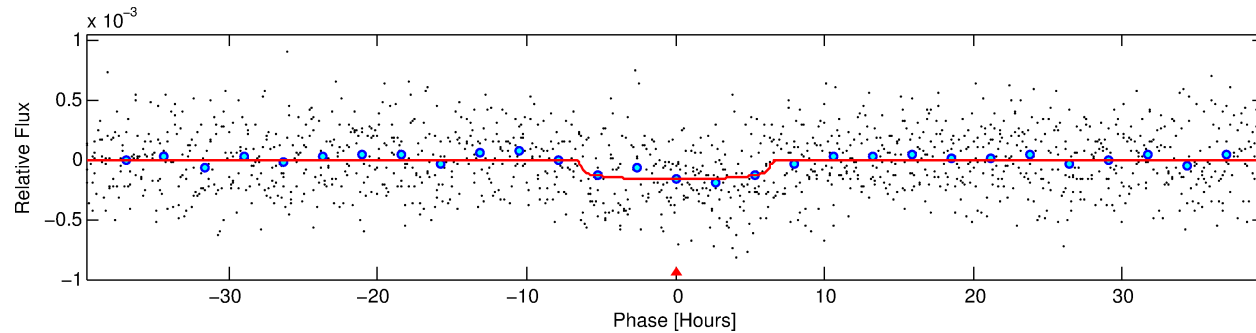
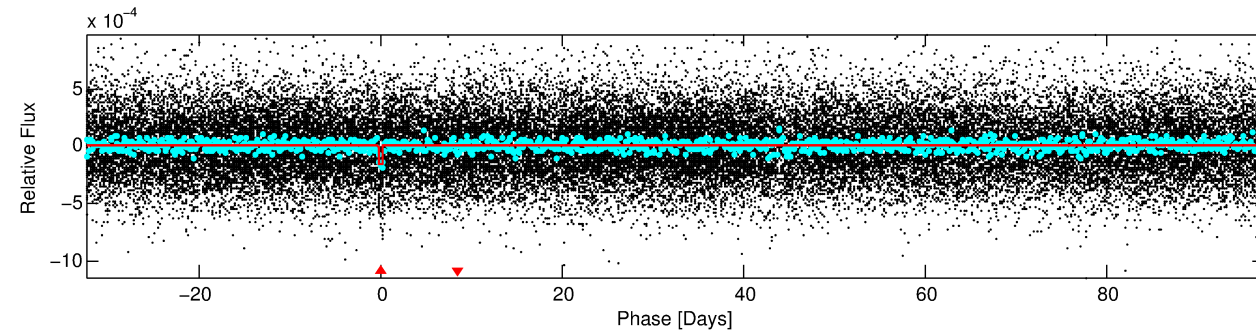
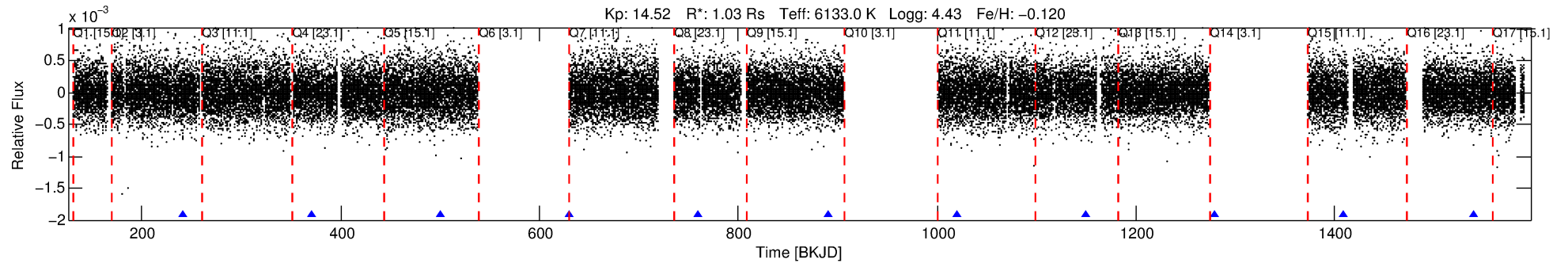
Ephemeris Match Information For 005193439-01

No Significant Match Found

DV One-Page Summary

KIC: 5193439 Candidate: 1 of 1 Period: 129.847 d

KOI: K06538.01 Corr: 0.954



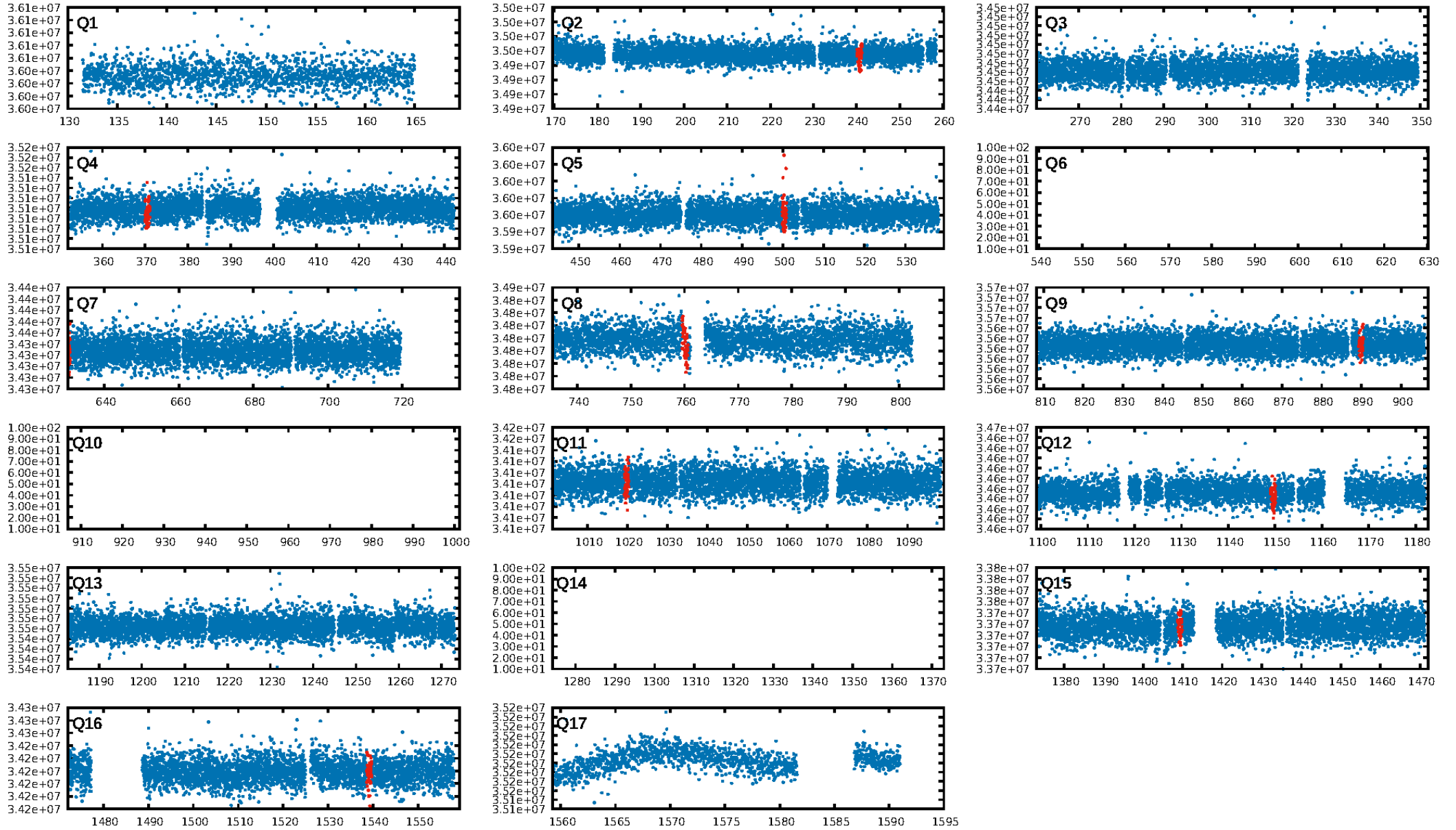
DV Fit Results:

Period = 129.84678 [0.00395] d
Epoch = 240.6843 [0.0237] BKJD
Rp/R* = 0.0131 [0.0048]
a/R* = 45.69 [85.38]
b = 0.81 [0.80]
Seff = 5.23 [2.25]
Teq = 386 [42] K
Rp = 1.48 [0.72] Re
a = 0.5083 [0.1385] AU
Ag = 4595.17 [4043.94] [1.14 σ]
Teff = 4908 [985] K [4.59 σ]

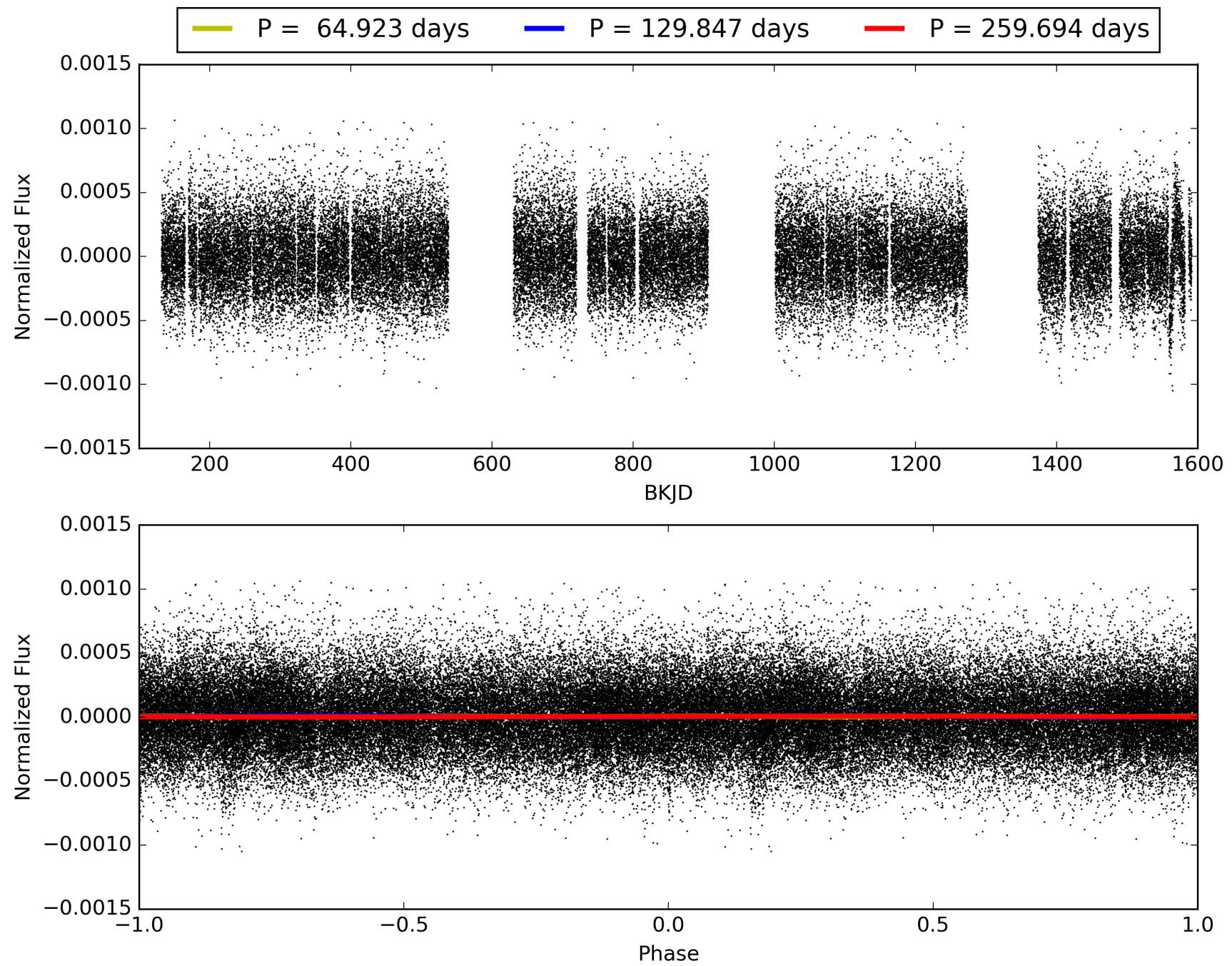
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 60.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 7.63e-15
RollingBand-fgt: 1.00 [10/10]
GhostDiagnostic-chr: 43.15
Centroid-sig: 49.7%
Centroid-so: 1.538 arcsec [0.95 σ]
OotOffset-rm: 1.090 arcsec [1.76 σ]
KicOffset-rm: 1.118 arcsec [1.92 σ]
OotOffset-st: 1/1/3/2 [7]
KicOffset-st: 1/1/3/2 [7]
DiffImageQuality-fgm: 0.86 [6/7]
DiffImageOverlap-fno: 1.00 [8/8]

TCE 005193439-01, PDC Light Curves

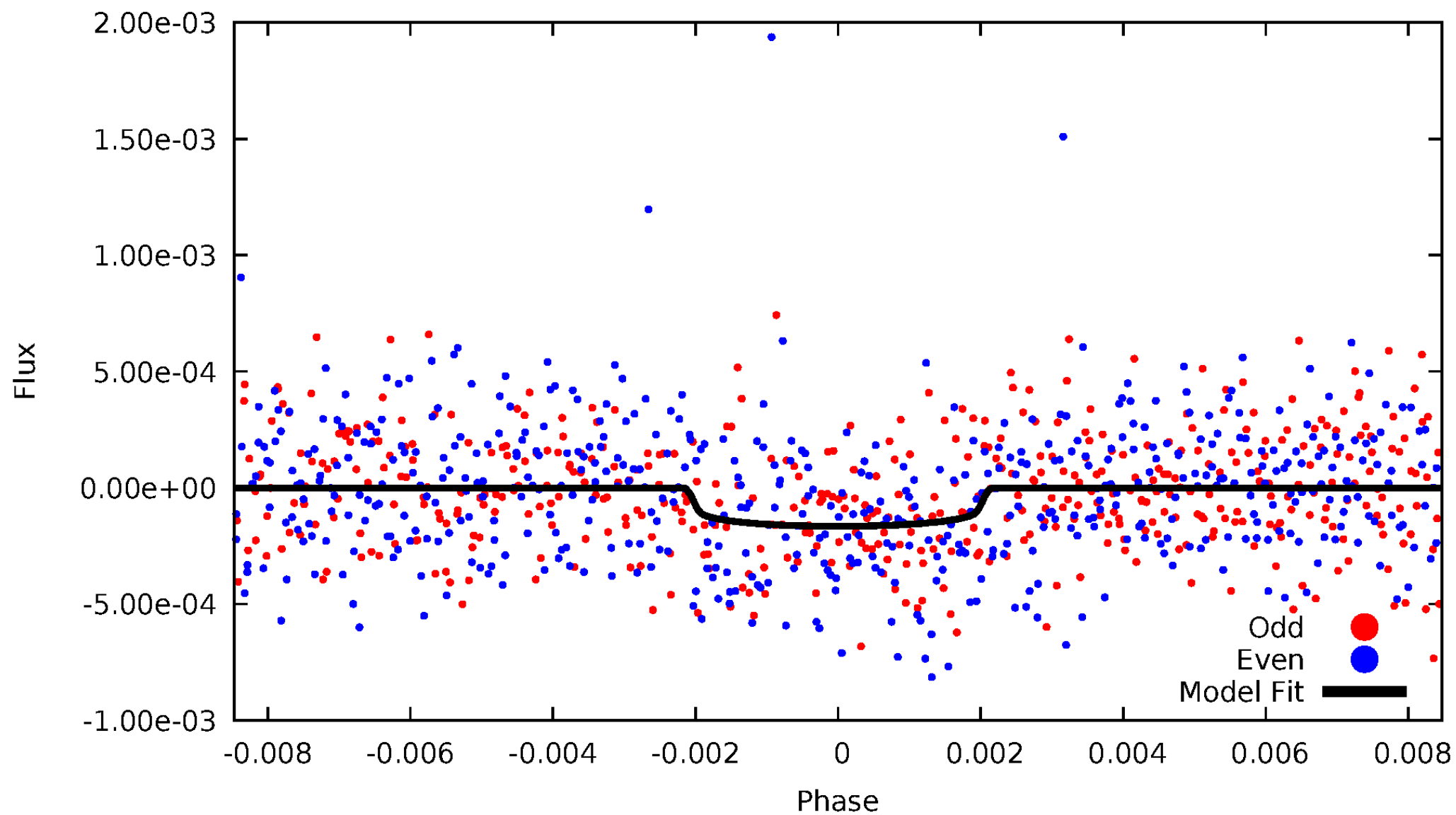


TCE 005193439-01



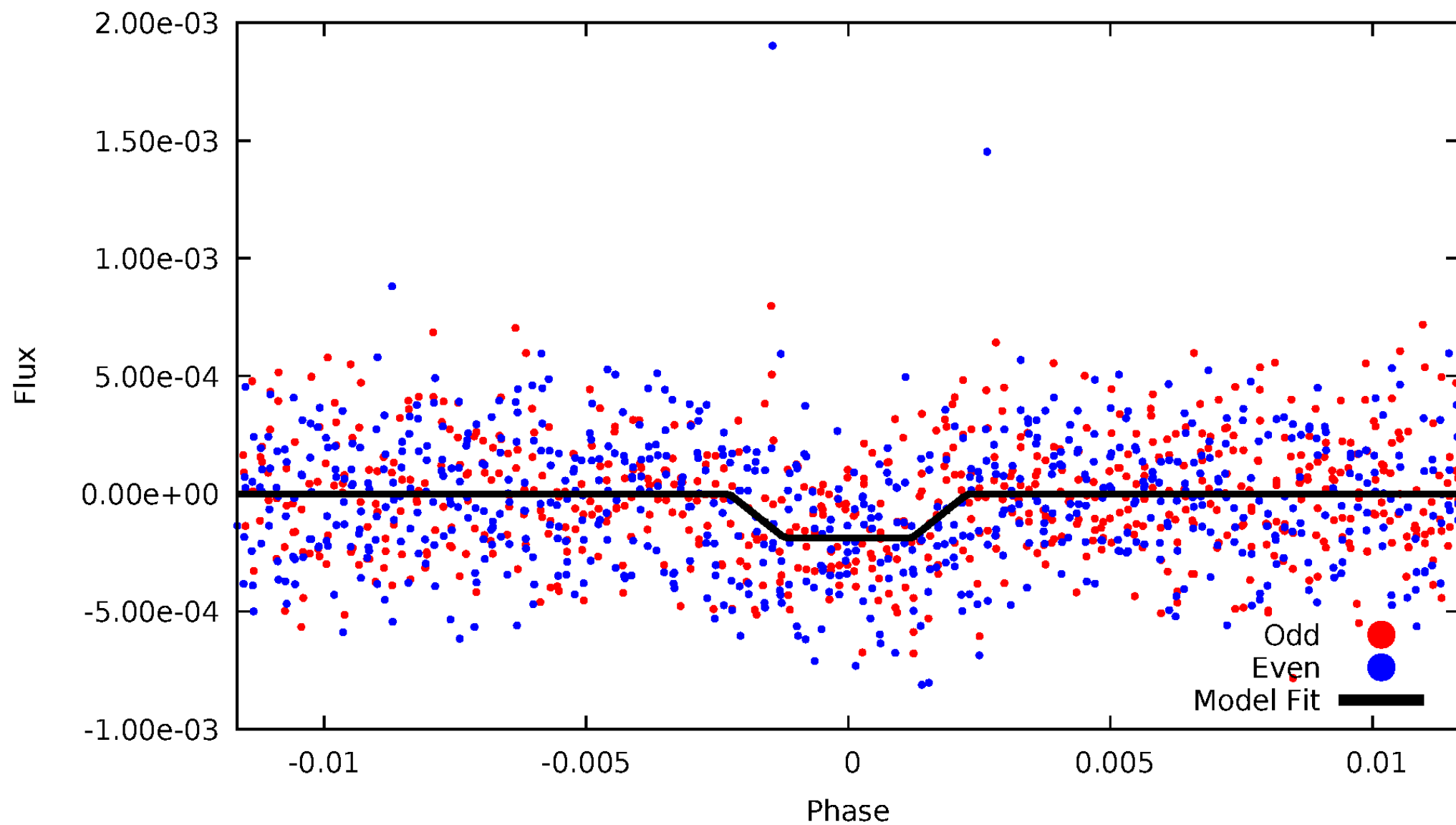
DV Odd/Even

TCE 005193439-01



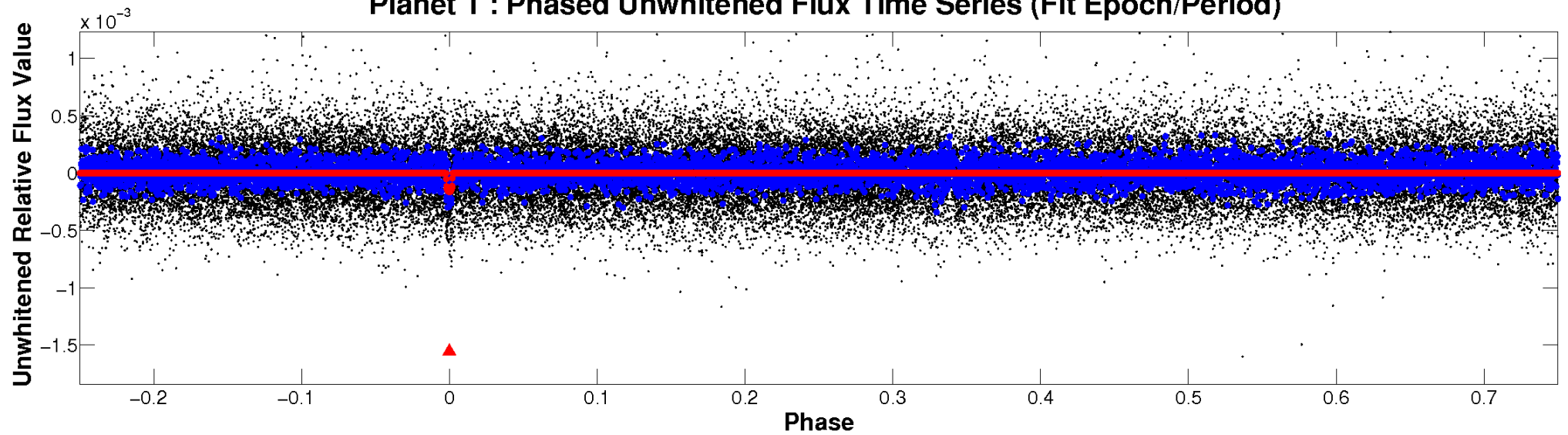
ALT Odd/Even

TCE 005193439-01

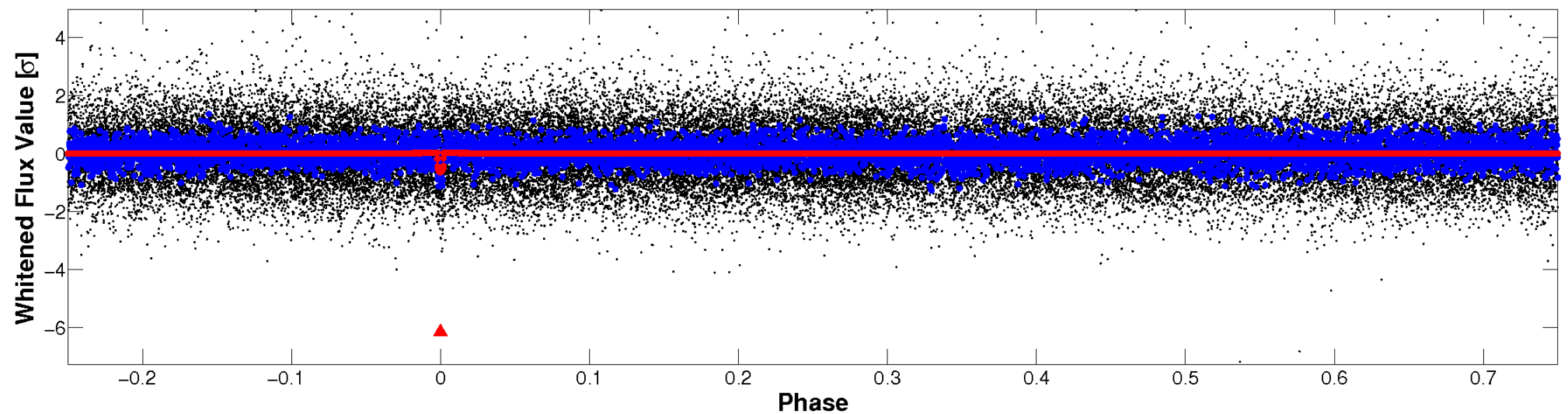


Non-Whitened Vs. Whitened Light Curve

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

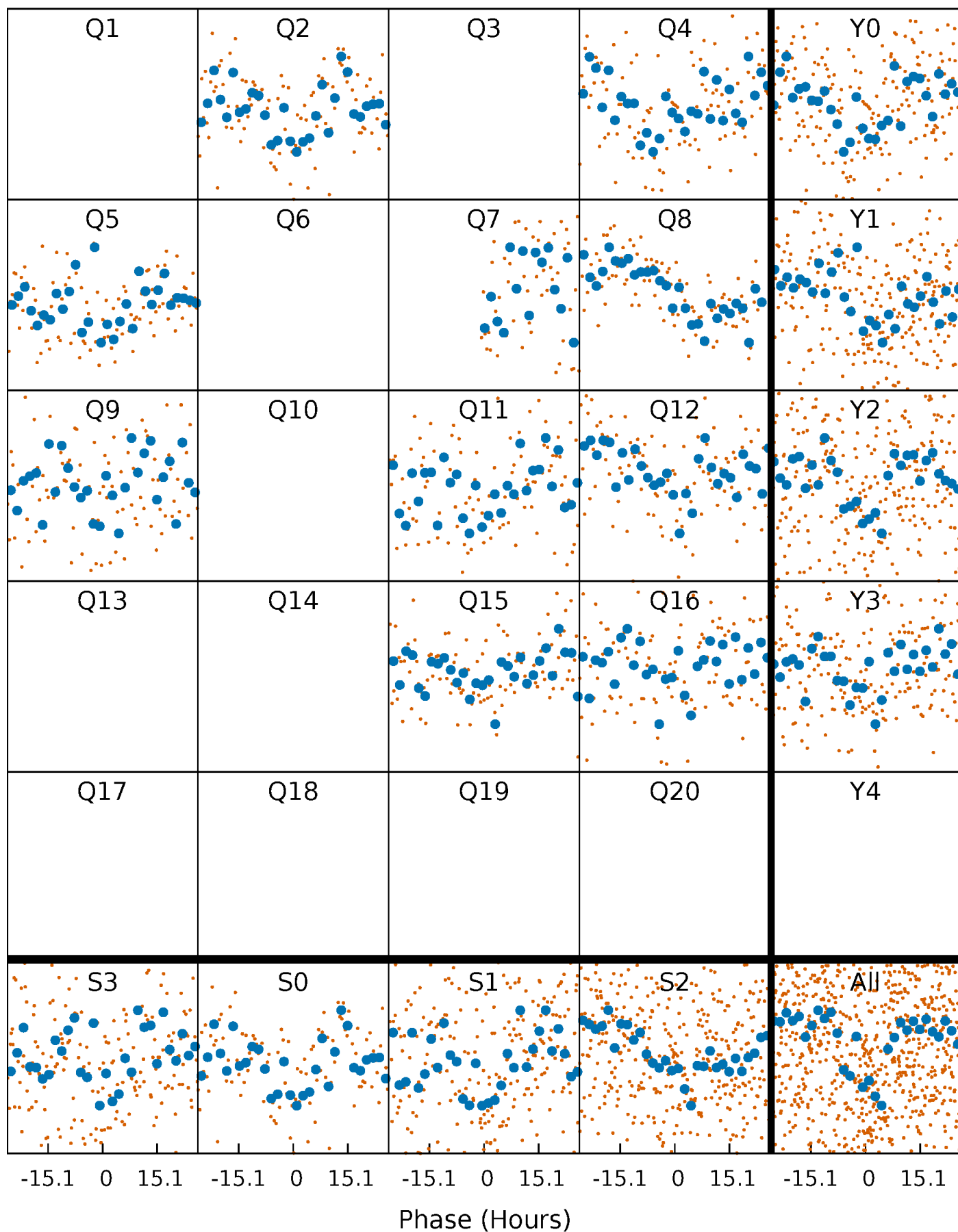


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



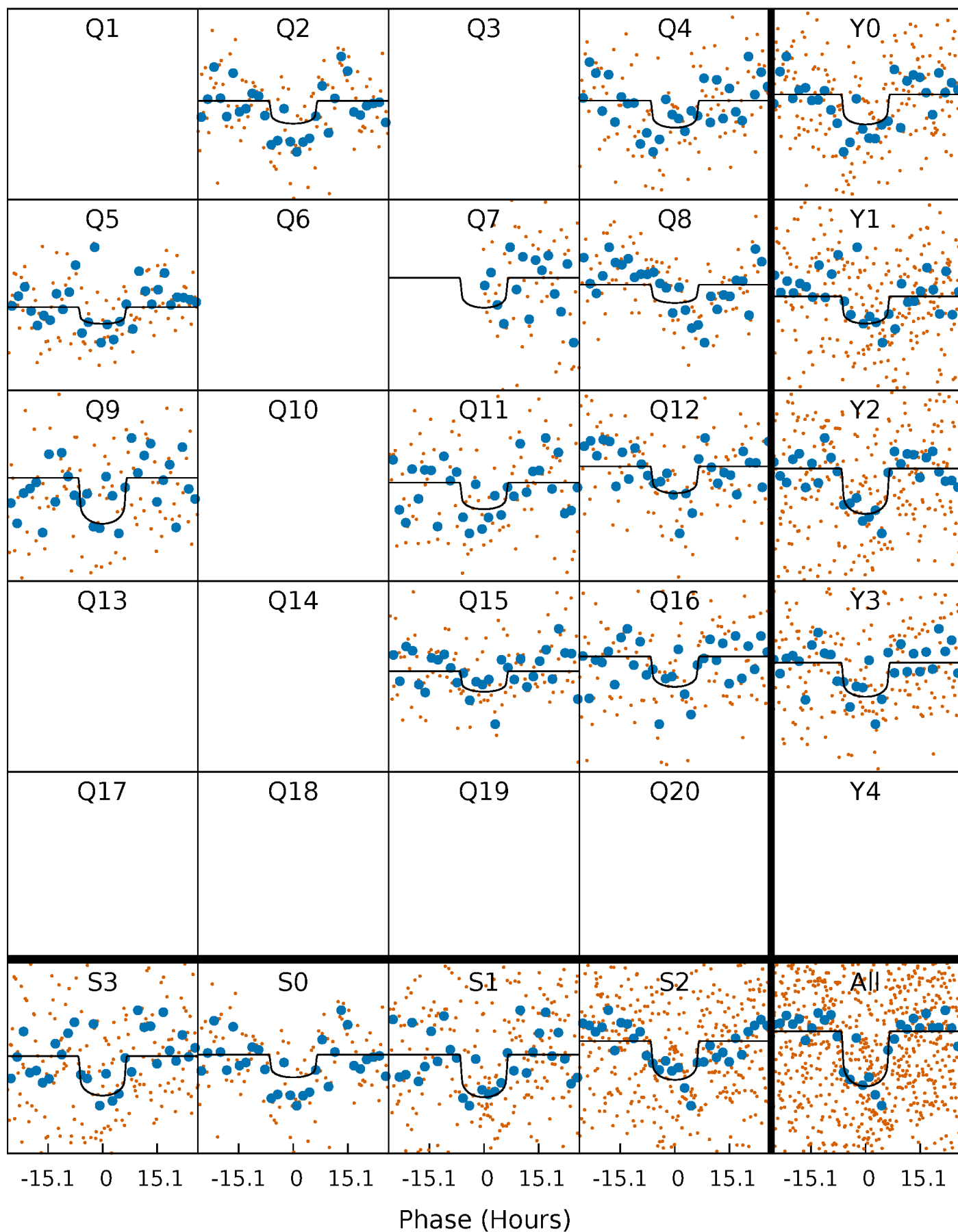
PDC Quarter-Phased Transit Curves

TCE 005193439-01 P=129.846777 Days $T_0=240.684341$ (BKJD)



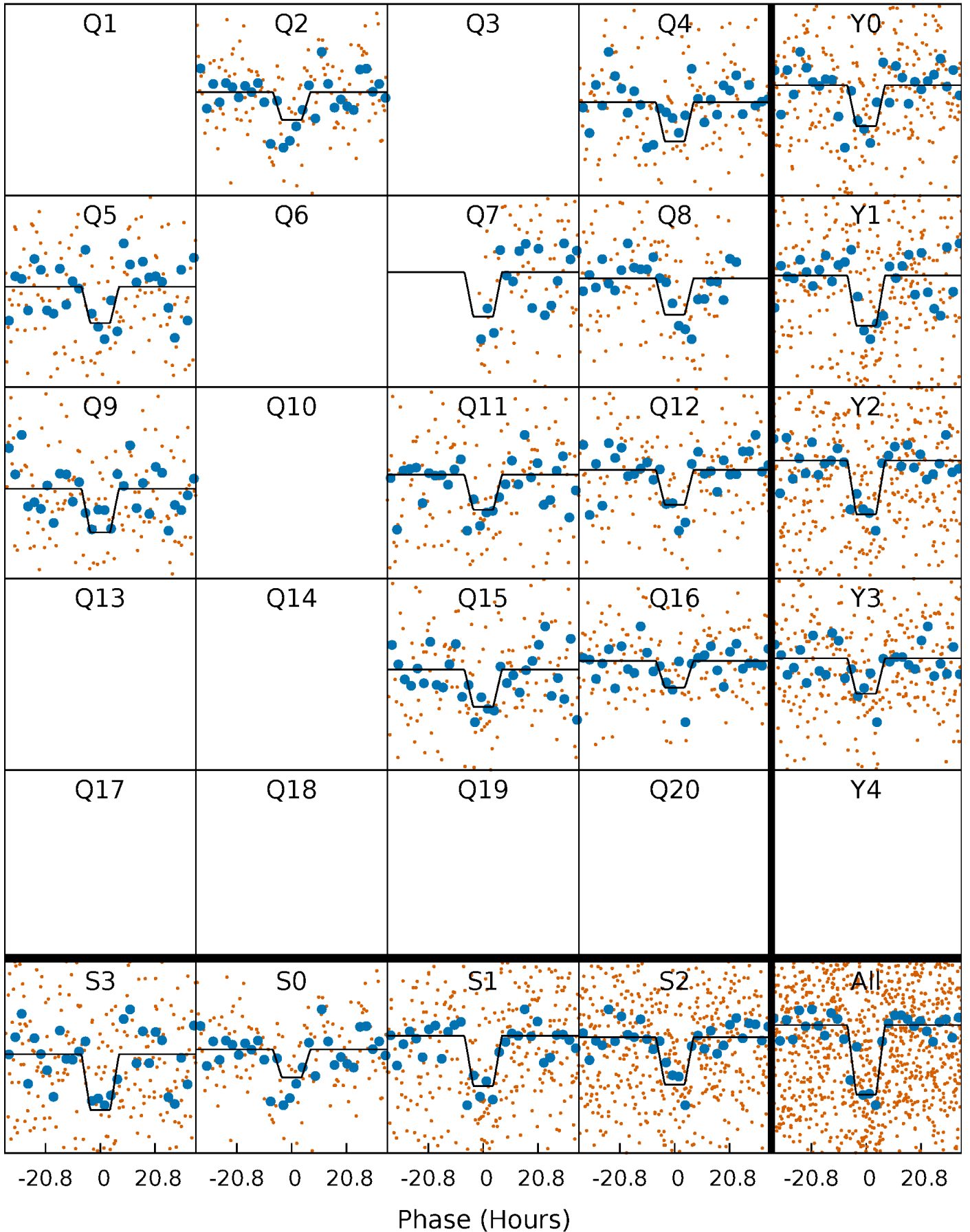
DV Quarter-Phased Transit Curves

TCE 005193439-01 P=129.846777 Days $T_0=240.684341$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

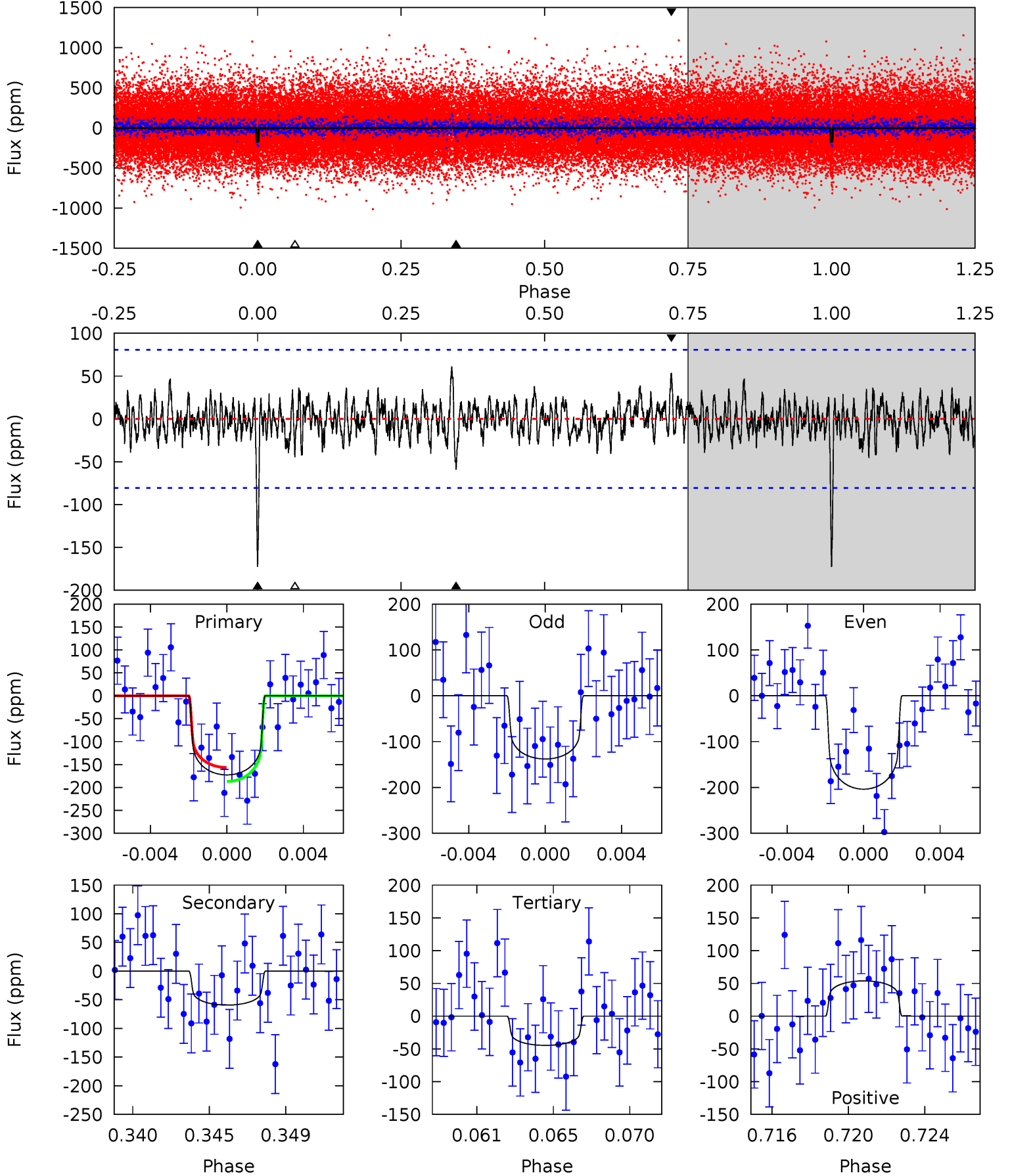
TCE 005193439-01 P=129.834840 Days $T_0=240.774980$ (BKJD)



DV Model-Shift Uniqueness Test

005193439-01, P = 129.846777 Days, E = 110.837564 Days

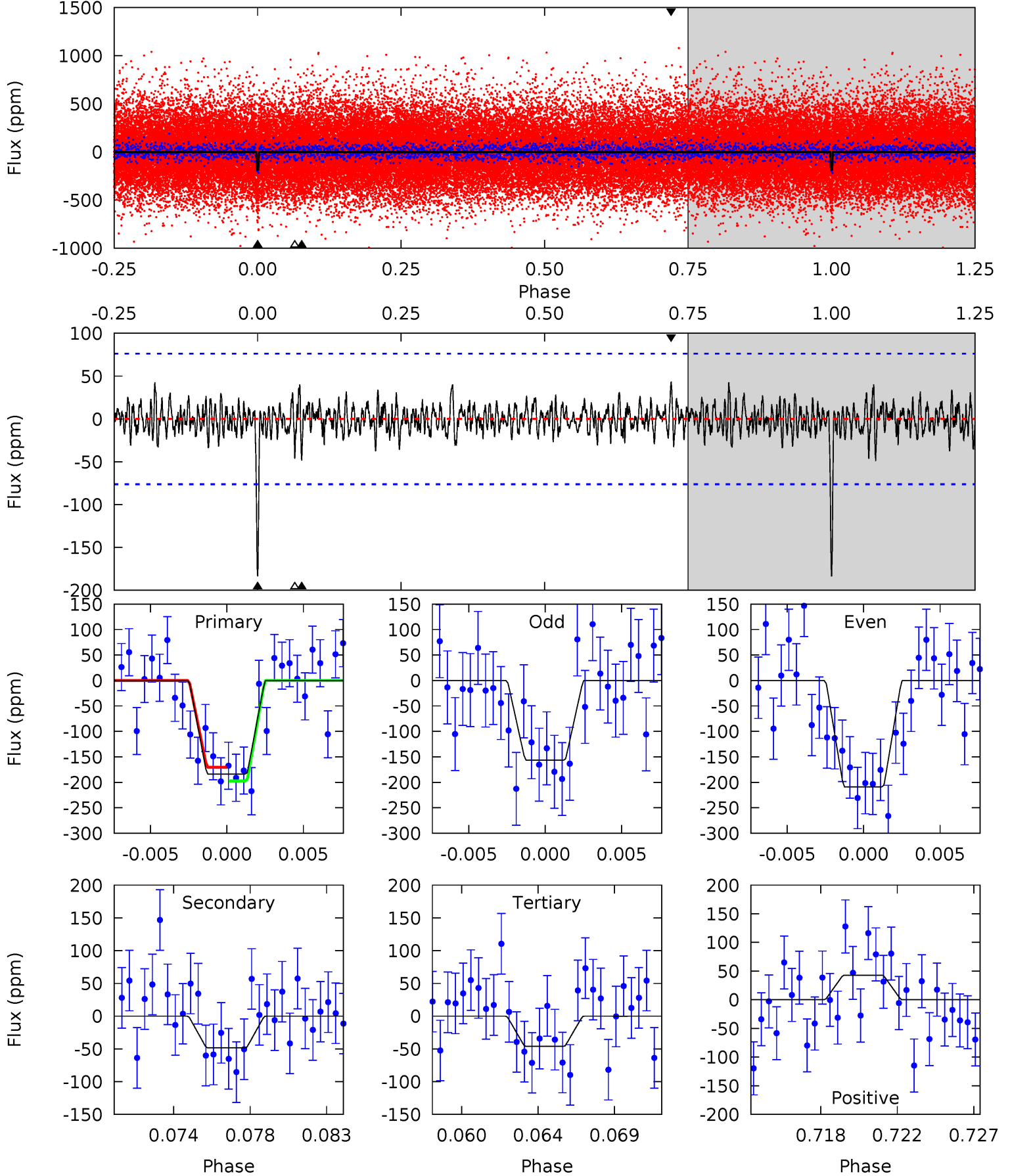
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.1	3.81	2.87	3.46	5.18	2.85	1.01	8.23	7.64	0.94	0.35	2.11	1.08	0.26	0.98



Alt Model-Shift Uniqueness Test

005193439-01, P = 129.834840 Days, E = 110.940140 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.5	3.28	3.14	2.91	5.17	2.83	0.87	9.34	9.56	0.15	0.37	1.78	0.96	0.19	0.91



Stellar Parameters For KIC 005193439

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6133^{+193}_{-257}	$4.427^{+0.072}_{-0.217}$	$-0.120^{+0.250}_{-0.300}$	$1.032^{+0.334}_{-0.119}$	$1.035^{+0.153}_{-0.139}$	$1.326^{+0.496}_{-0.694}$
	+3%/-4%	+2%/-5%	+208%/-250%	+32%/-12%	+15%/-13%	+37%/-52%
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 005193439-01 / KOI 6538.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-59 ± 16	$1.52^{+0.64}_{-0.55}$	547^{+43}_{-30}	4791^{+1179}_{-627}	3574^{+5525}_{-1976}
Alt.	-48 ± 15	$1.62^{+0.65}_{-0.62}$	544^{+40}_{-31}	4459^{+996}_{-558}	2475^{+4171}_{-1319}

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 $A_{obs} \gg 1.0$

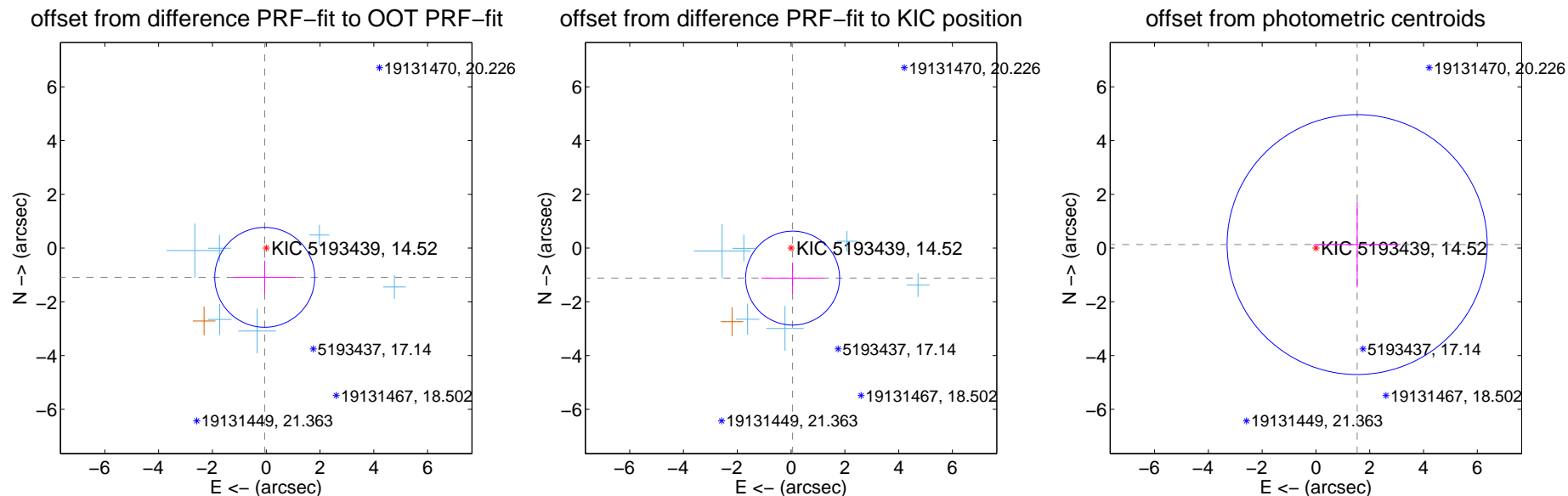
DV Centroid Data

Supplemental centroid analysis for 005193439-01. Kepler magnitude: 14.52. Transit SNR 8.81

There are 6 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.090 ± 0.619	1.76	0.056 ± 1.176	-1.089 ± 0.617
PRF-fit source offset from KIC position	1.118 ± 0.582	1.92	-0.058 ± 1.154	-1.117 ± 0.580
photometric centroid source offset	1.54 ± 1.61	0.95	-1.53 ± 1.61	0.13 ± 1.59



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.

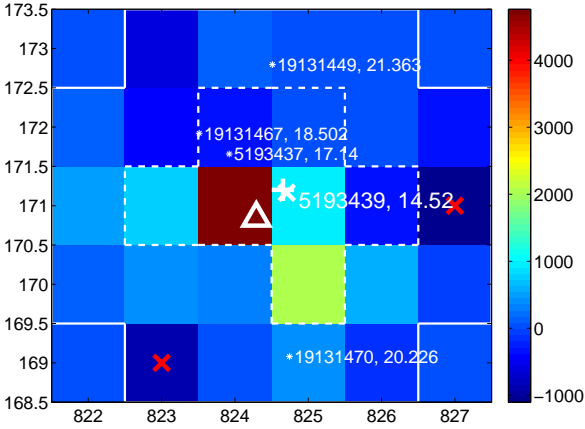
Q1 no difference image



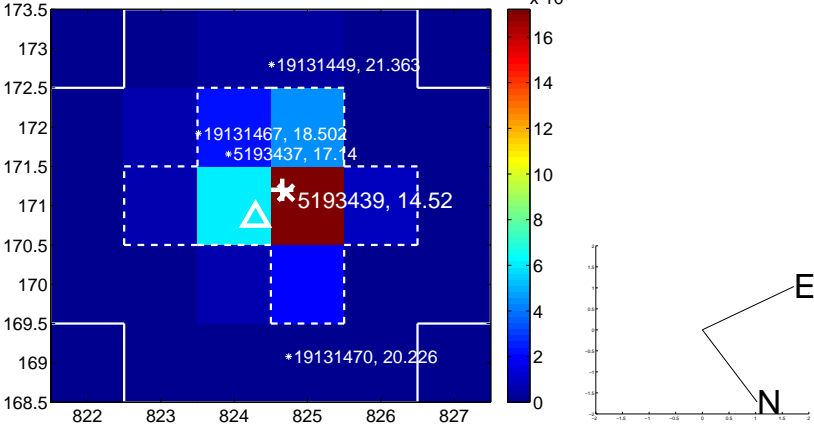
Q1 no OOT image



Q2 difference image



Q2 OOT image



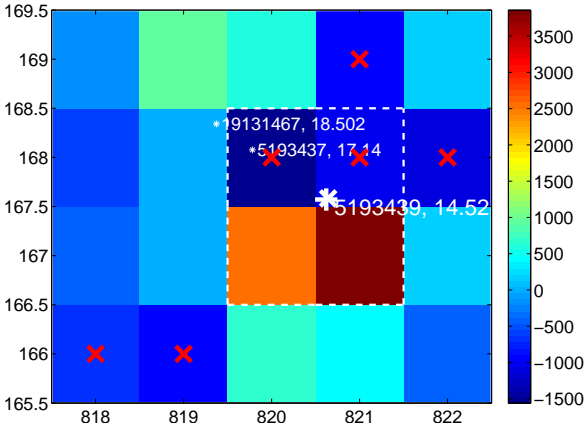
Q3 no difference image



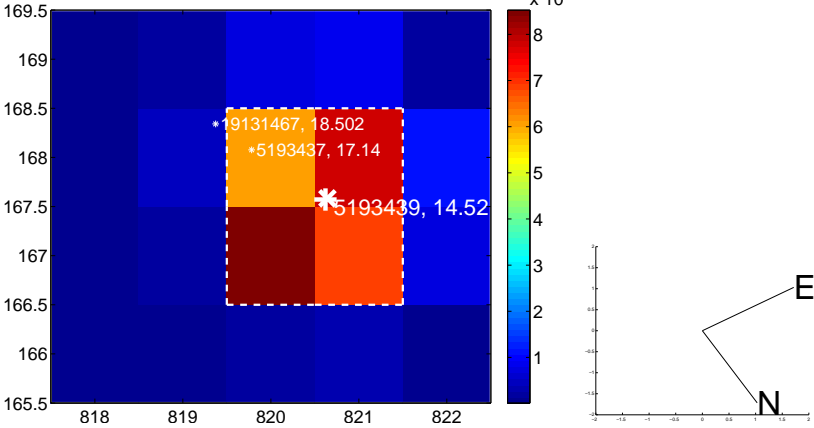
Q3 no OOT image



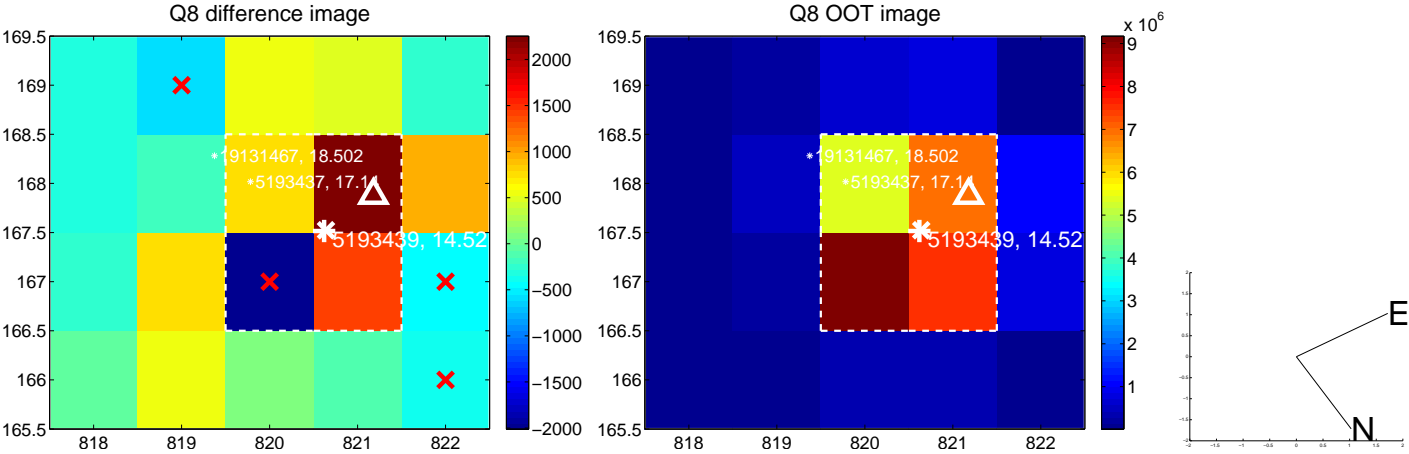
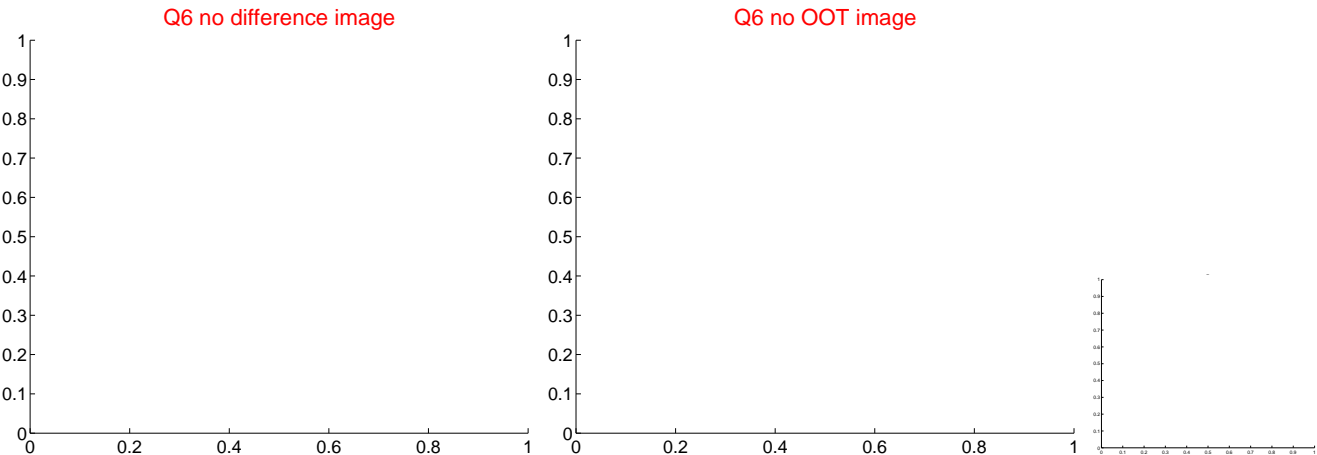
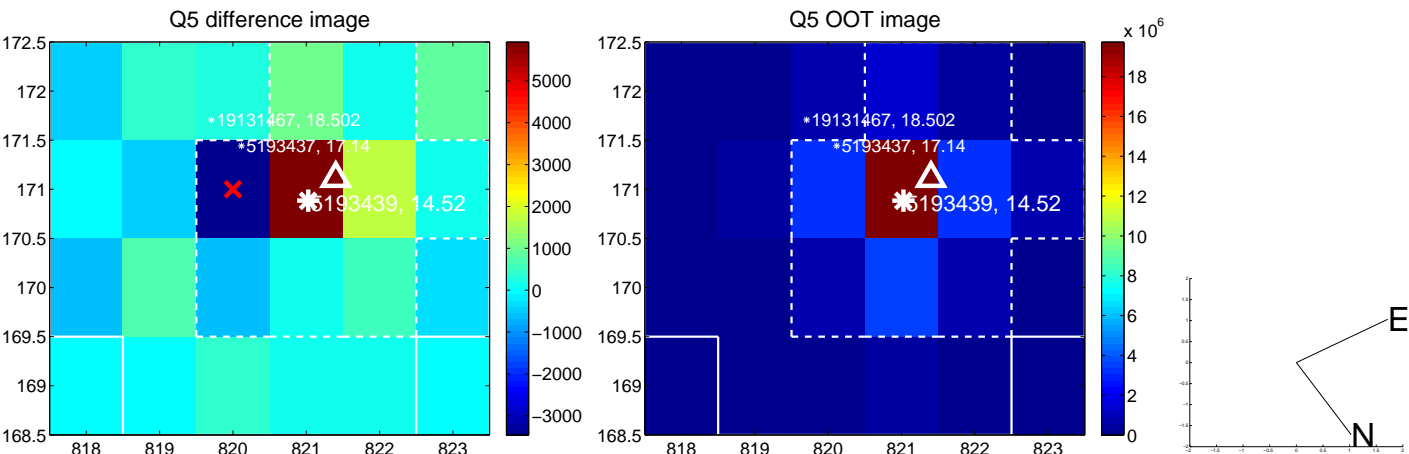
Q4 difference image. Poor Quality



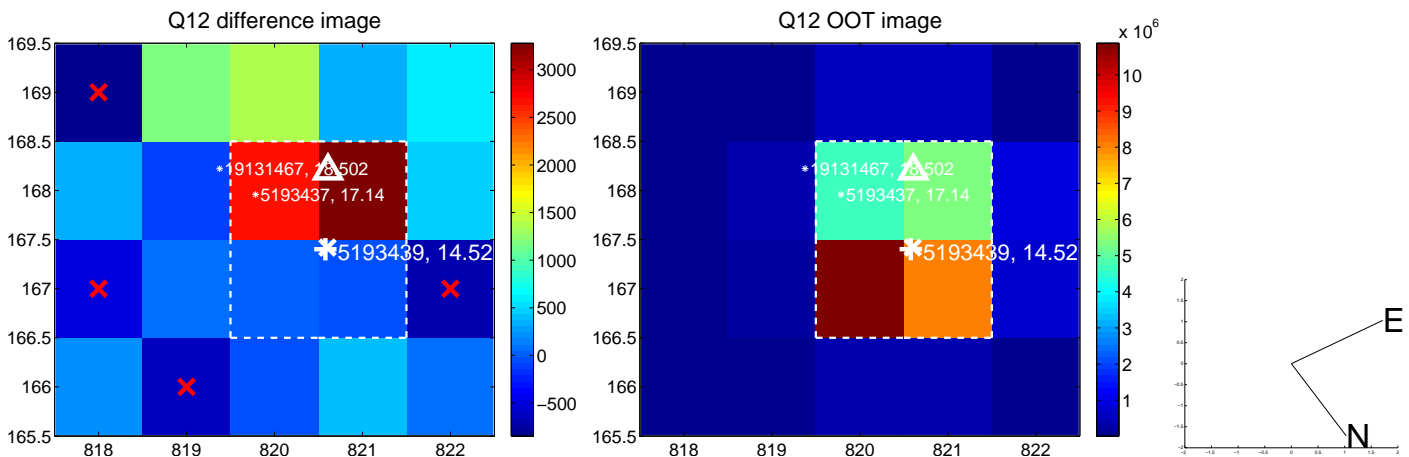
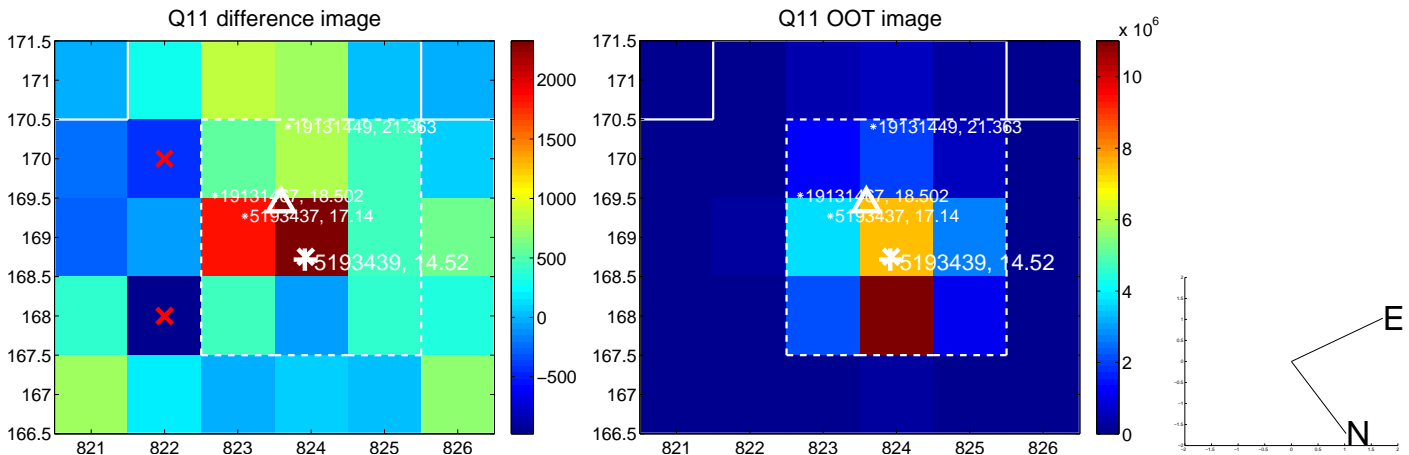
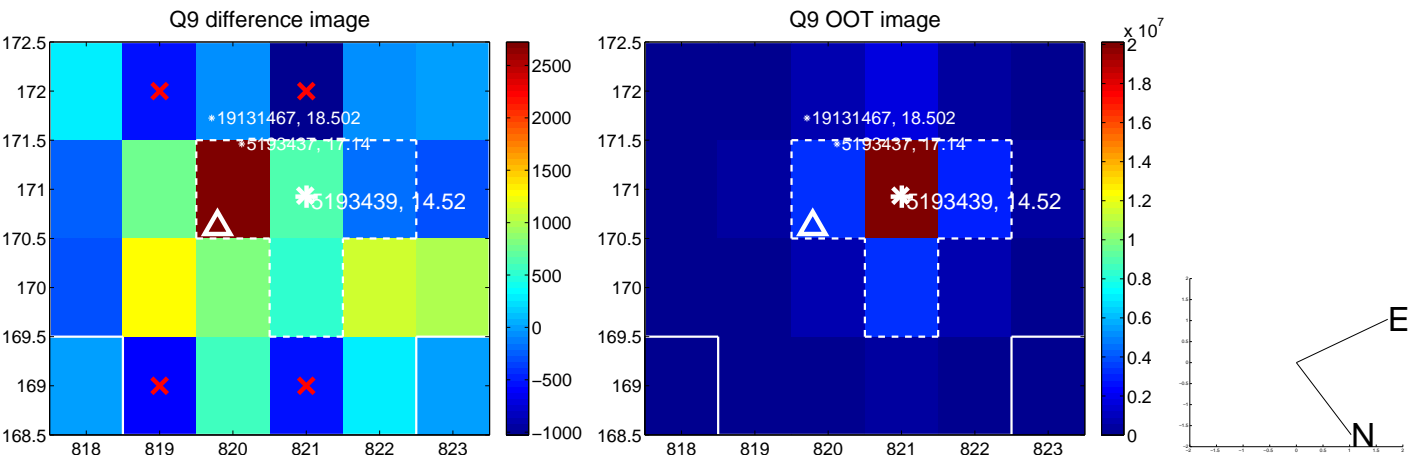
Q4 OOT image



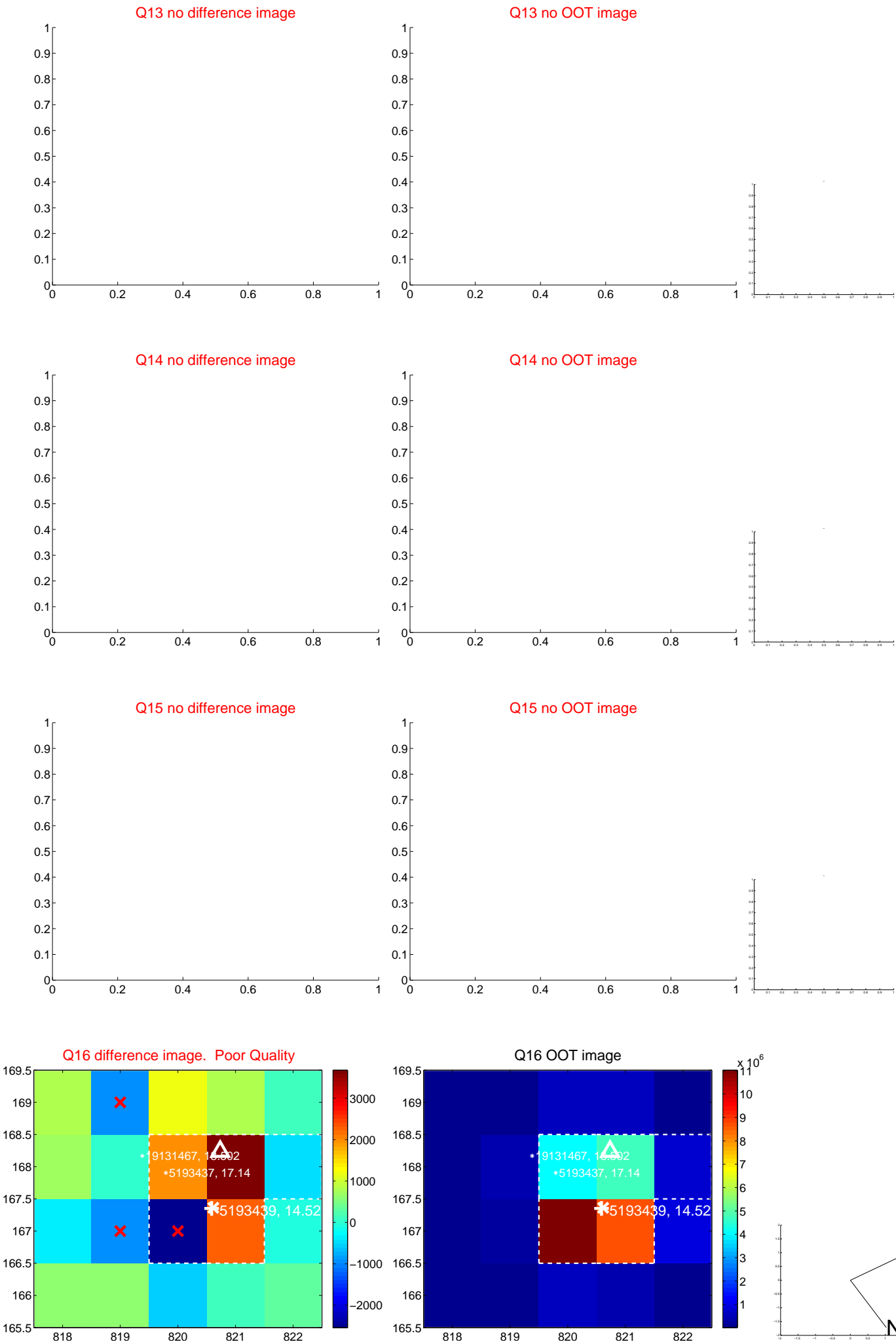
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



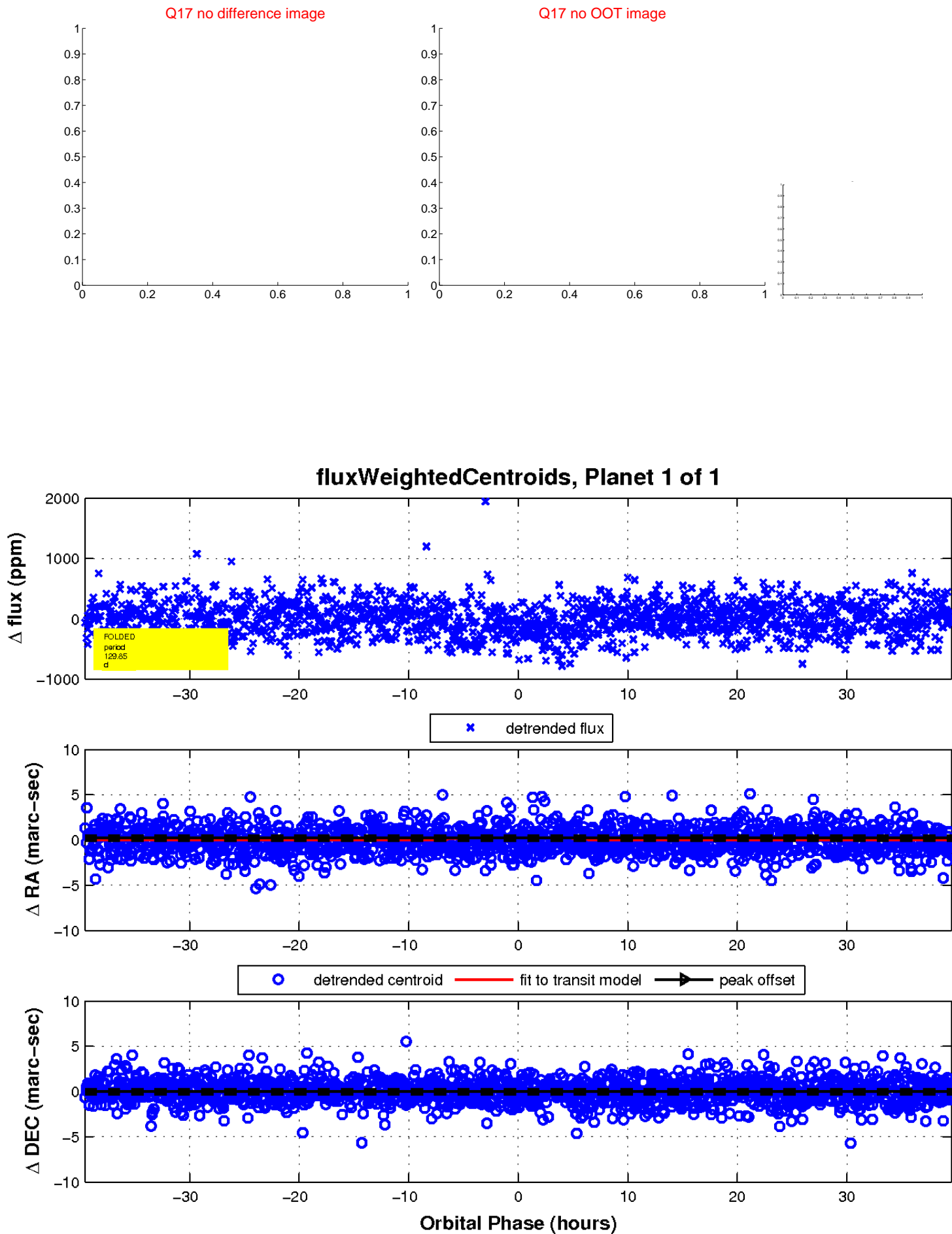
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: 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.



UKIRT Image

