

KIC 005340878

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})
005340878-01	OBS	4199.01	0.539914	131.553069	89.2	1.194	15.0	17.5	0.84	5102	0.79	2901.17

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005340878-01	OBS	FP	0.15	0	1	0	0	MOD_SEC_ALT

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

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

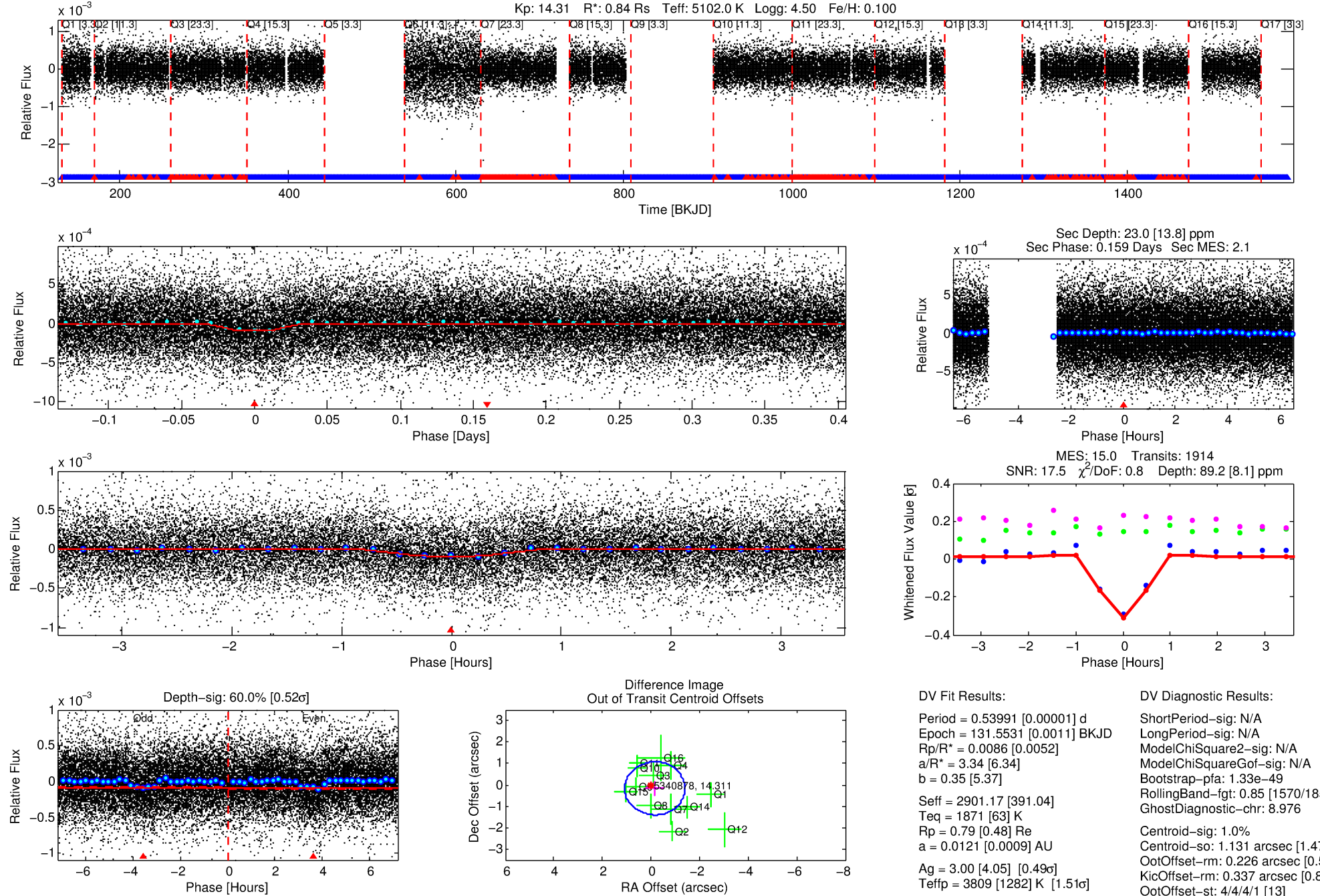
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005340878-01

No Significant Match Found

DV One-Page Summary

KIC: 5340878 Candidate: 1 of 1 Period: 0.540 d
KOI: K04199.01 Corr: 0.975



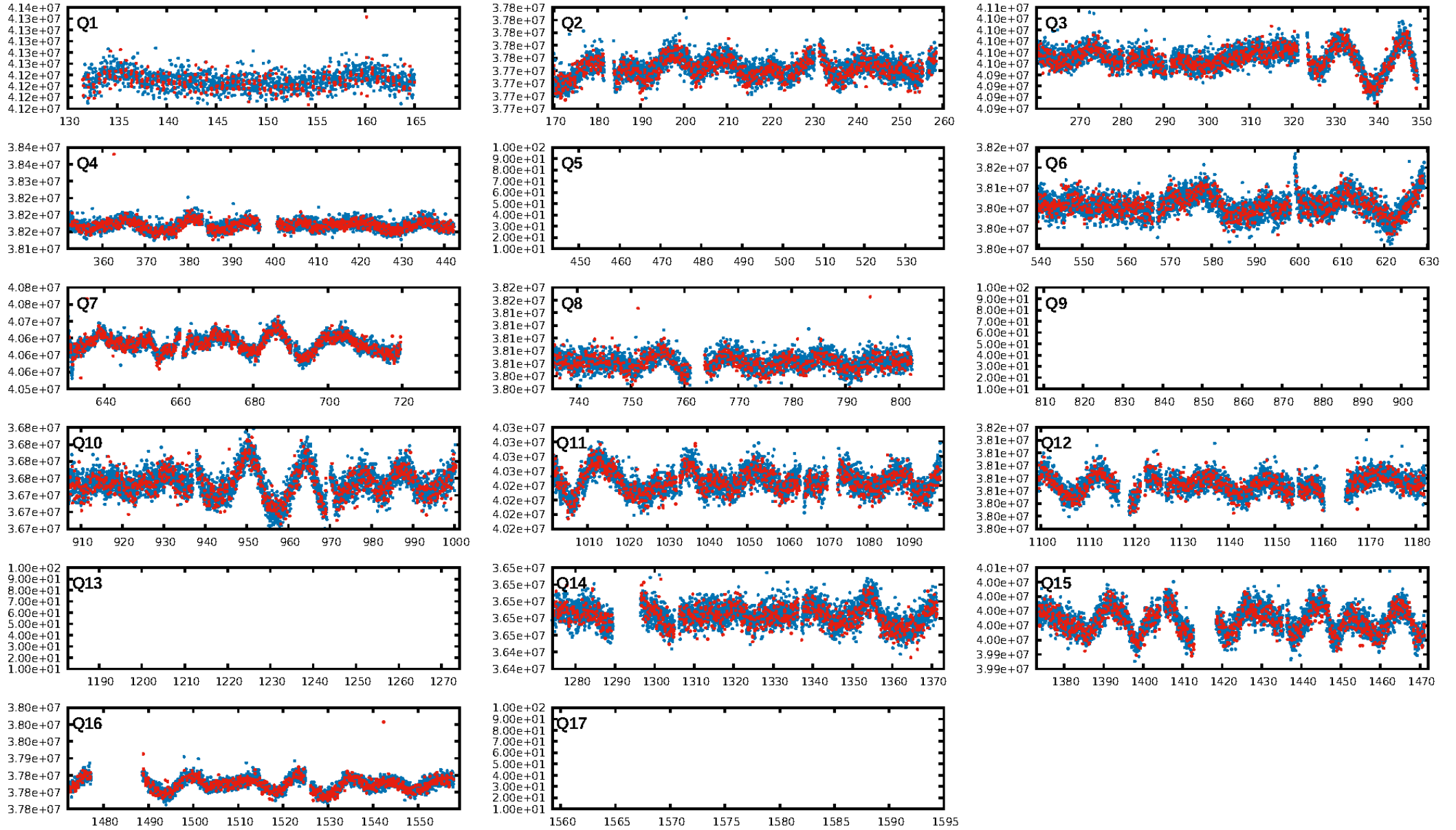
DV Fit Results:

Period = 0.53991 [0.00001] d
Epoch = 131.5531 [0.0011] BKJD
Rp/R* = 0.0086 [0.0052]
a/R* = 3.34 [6.34]
b = 0.35 [5.37]
Seff = 2901.17 [391.04]
Teff = 1871 [63] K
Rp = 0.79 [0.48] Re
a = 0.0121 [0.0009] AU
Ag = 3.00 [4.05] [0.49σ]
Teffp = 3809 [1282] K [1.51σ]

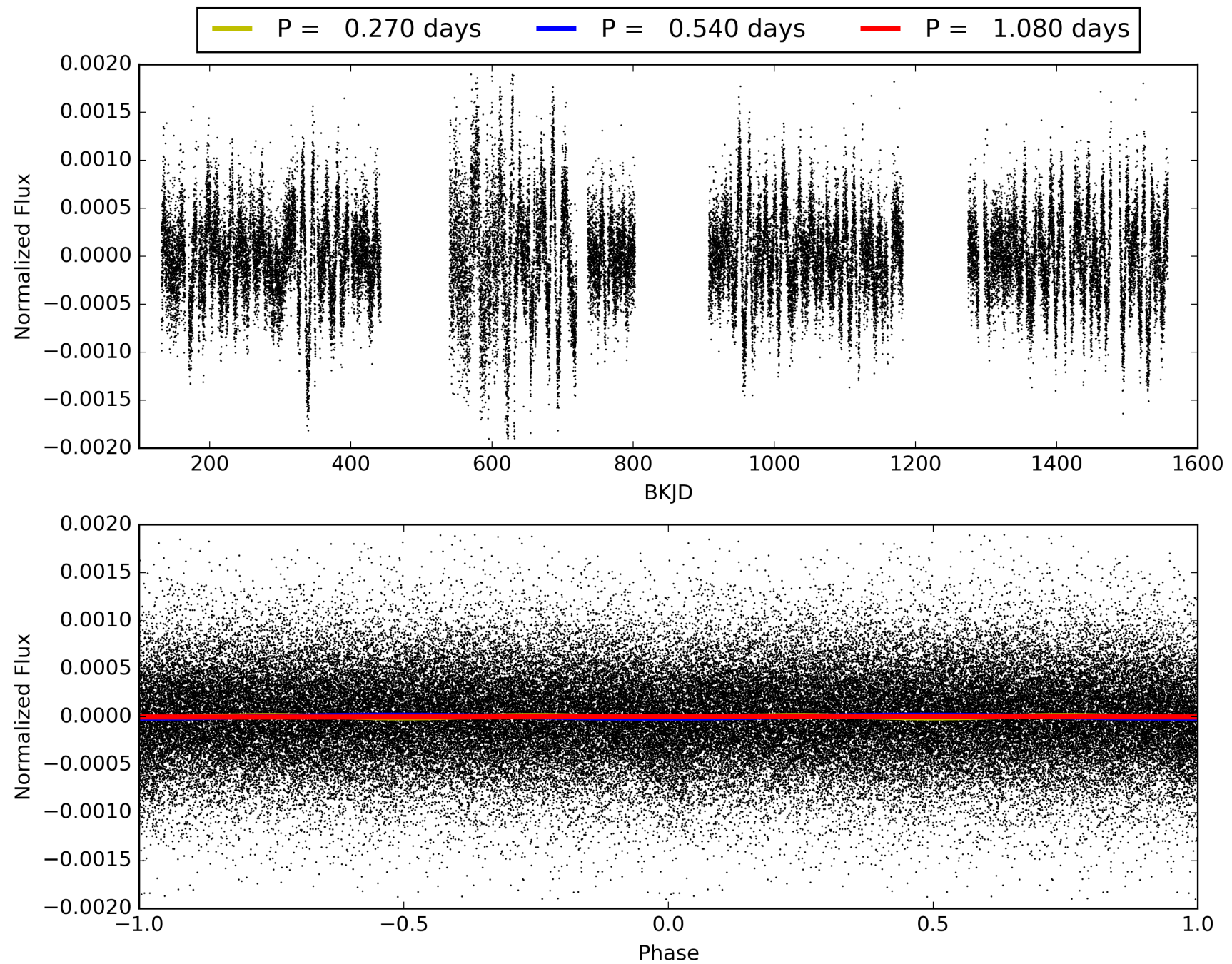
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.33e-49
RollingBand-fgt: 0.85 [1570/1852]
GhostDiagnostic-chr: 8.976
Centroid-sig: 1.0%
Centroid-so: 1.131 arcsec [1.47σ]
OotOffset-rm: 0.226 arcsec [0.55σ]
KicOffset-rm: 0.337 arcsec [0.83σ]
OotOffset-st: 4/4/4/1 [13]
KicOffset-st: 4/4/4/1 [13]
DiffImageQuality-fgm: 0.85 [11/13]
DiffImageOverlap-fno: 1.00 [13/13]

TCE 005340878-01, PDC Light Curves

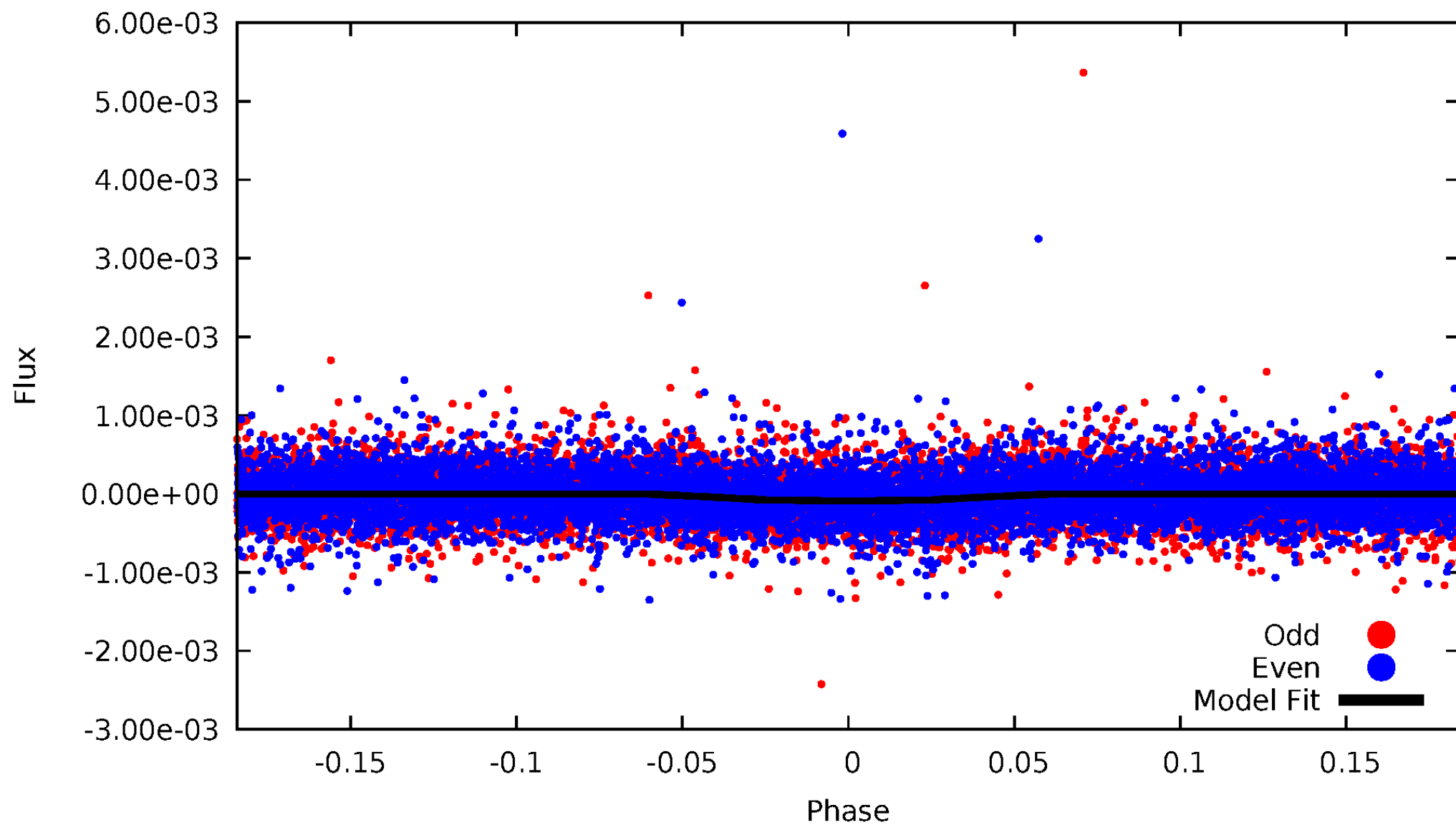


TCE 005340878-01



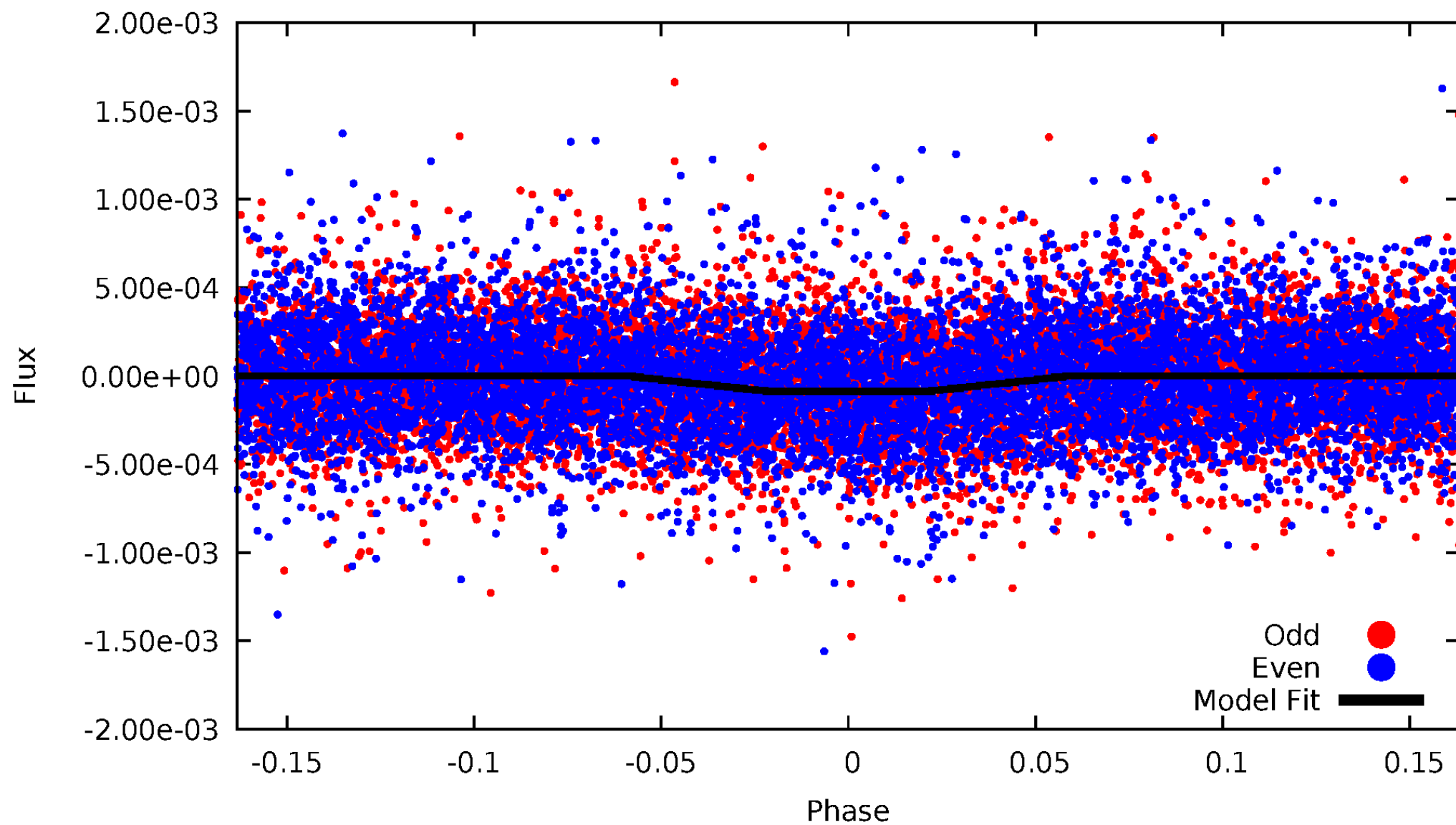
DV Odd/Even

TCE 005340878-01



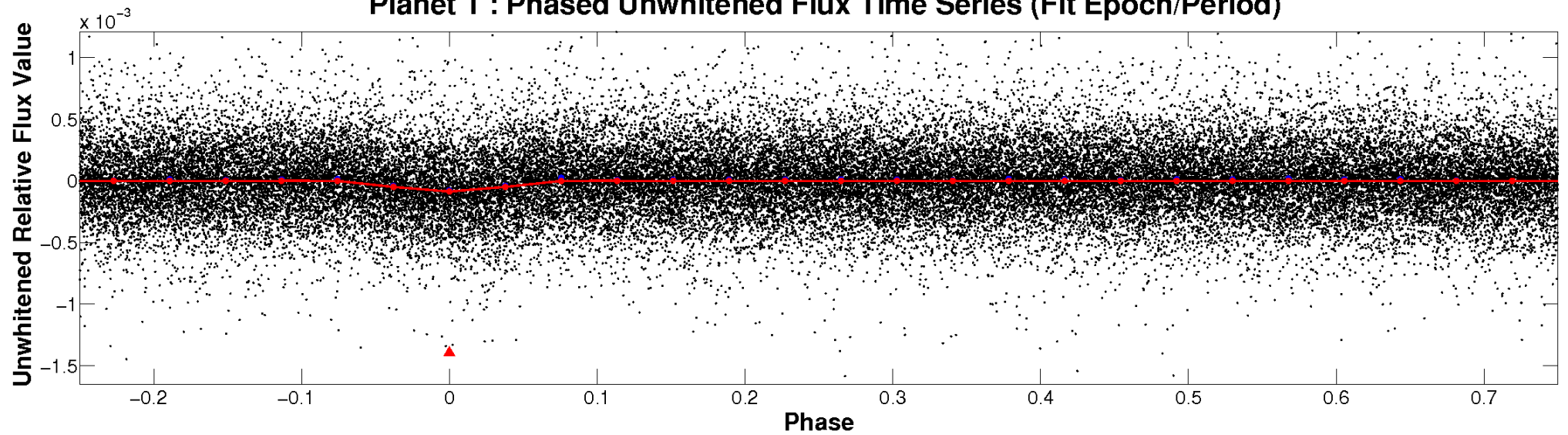
ALT Odd/Even

TCE 005340878-01

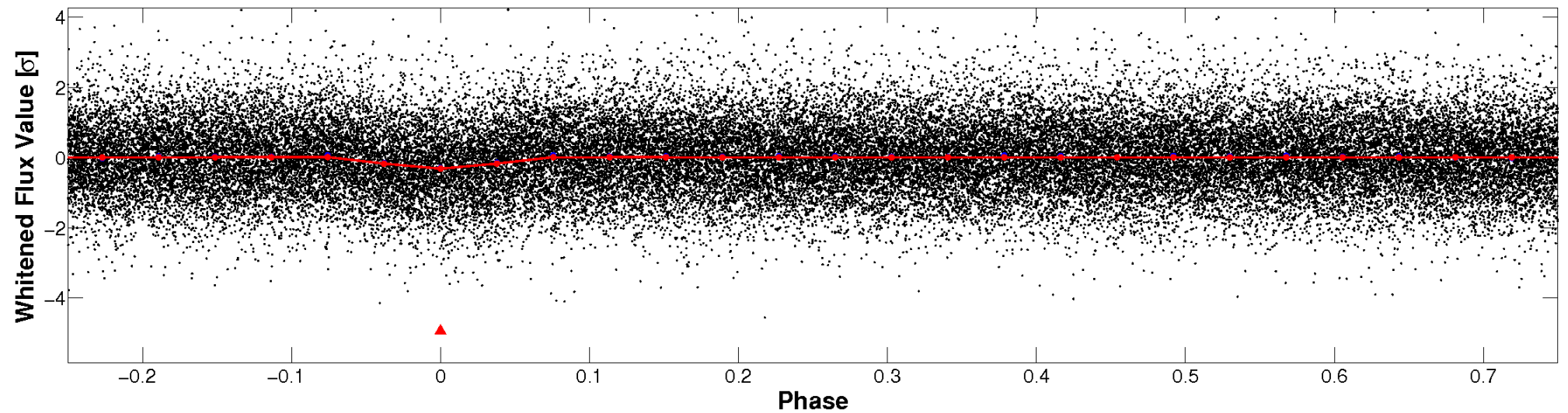


Non-Whitened Vs. Whitened Light Curve

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

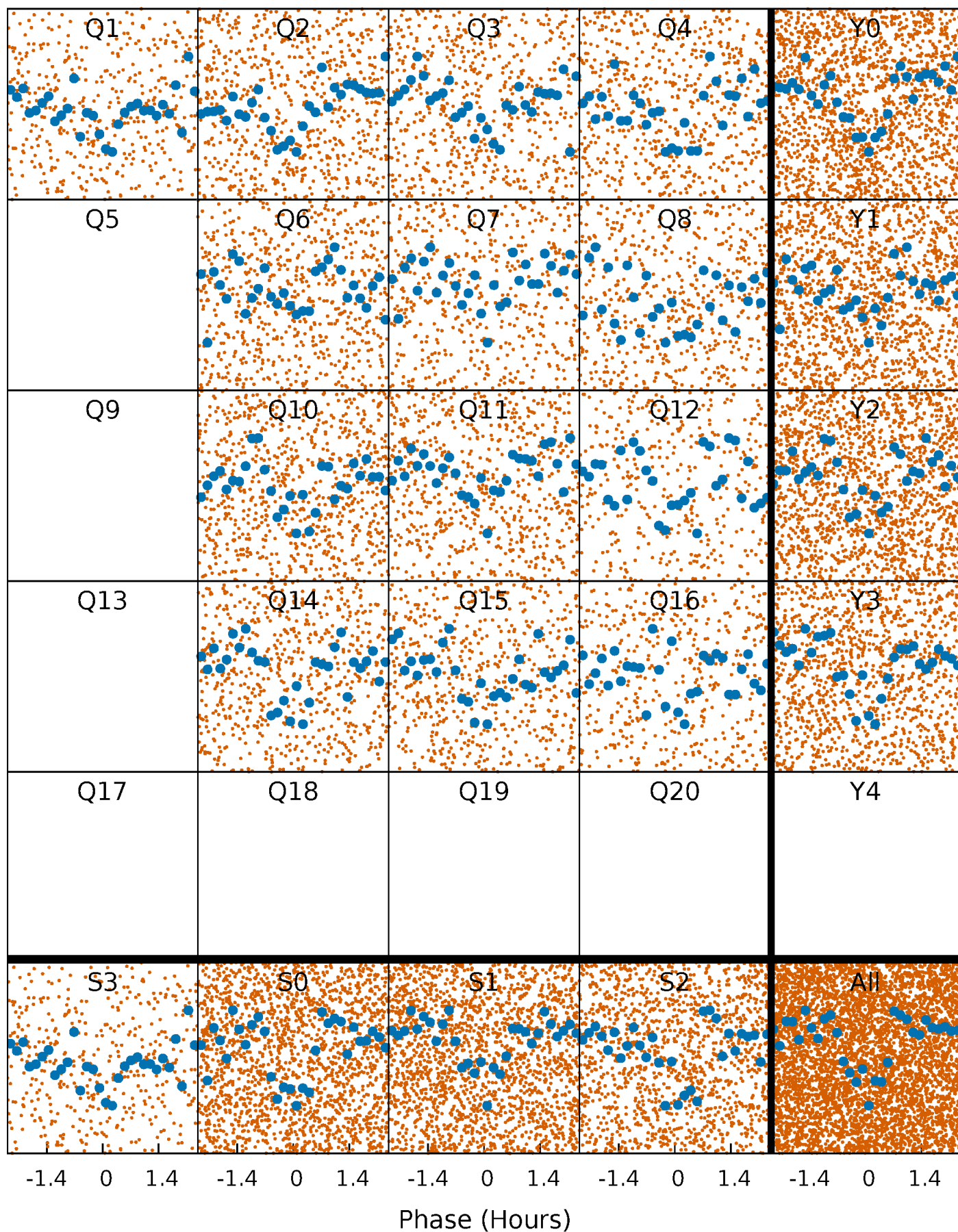


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



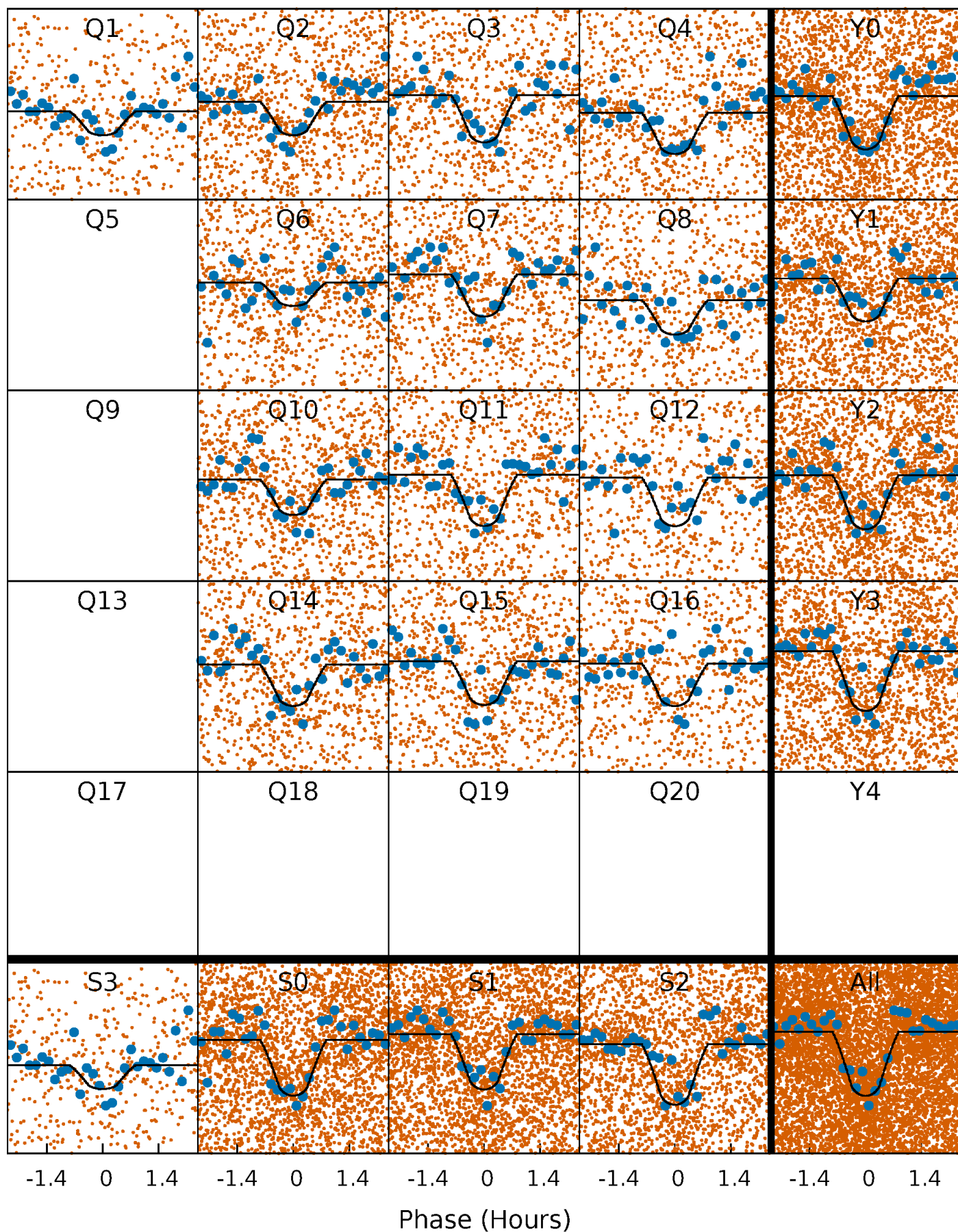
PDC Quarter-Phased Transit Curves

TCE 005340878-01 P= 0.539914 Days $T_0=131.553069$ (BKJD)



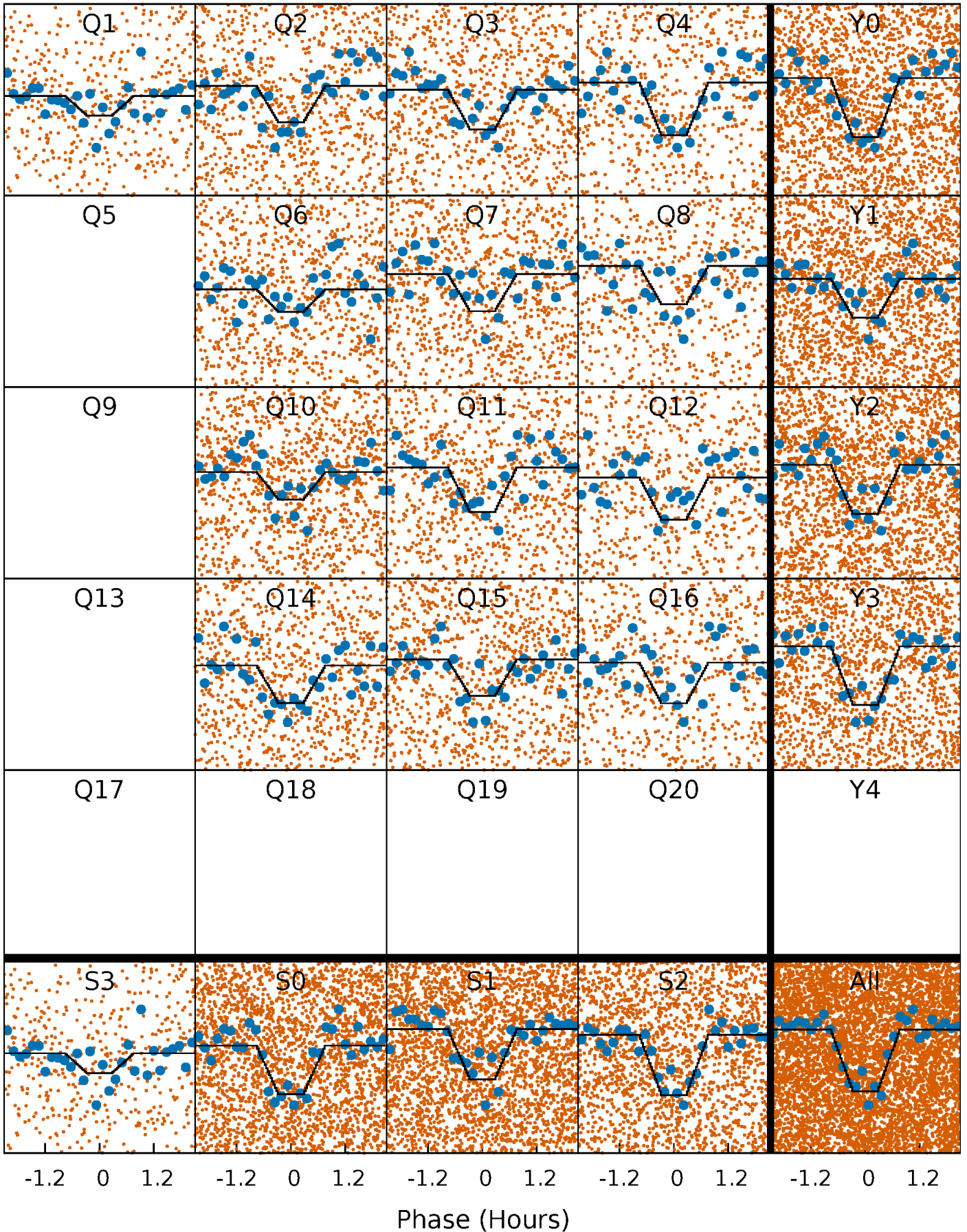
DV Quarter-Phased Transit Curves

TCE 005340878-01 P= 0.539914 Days $T_0=131.553069$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

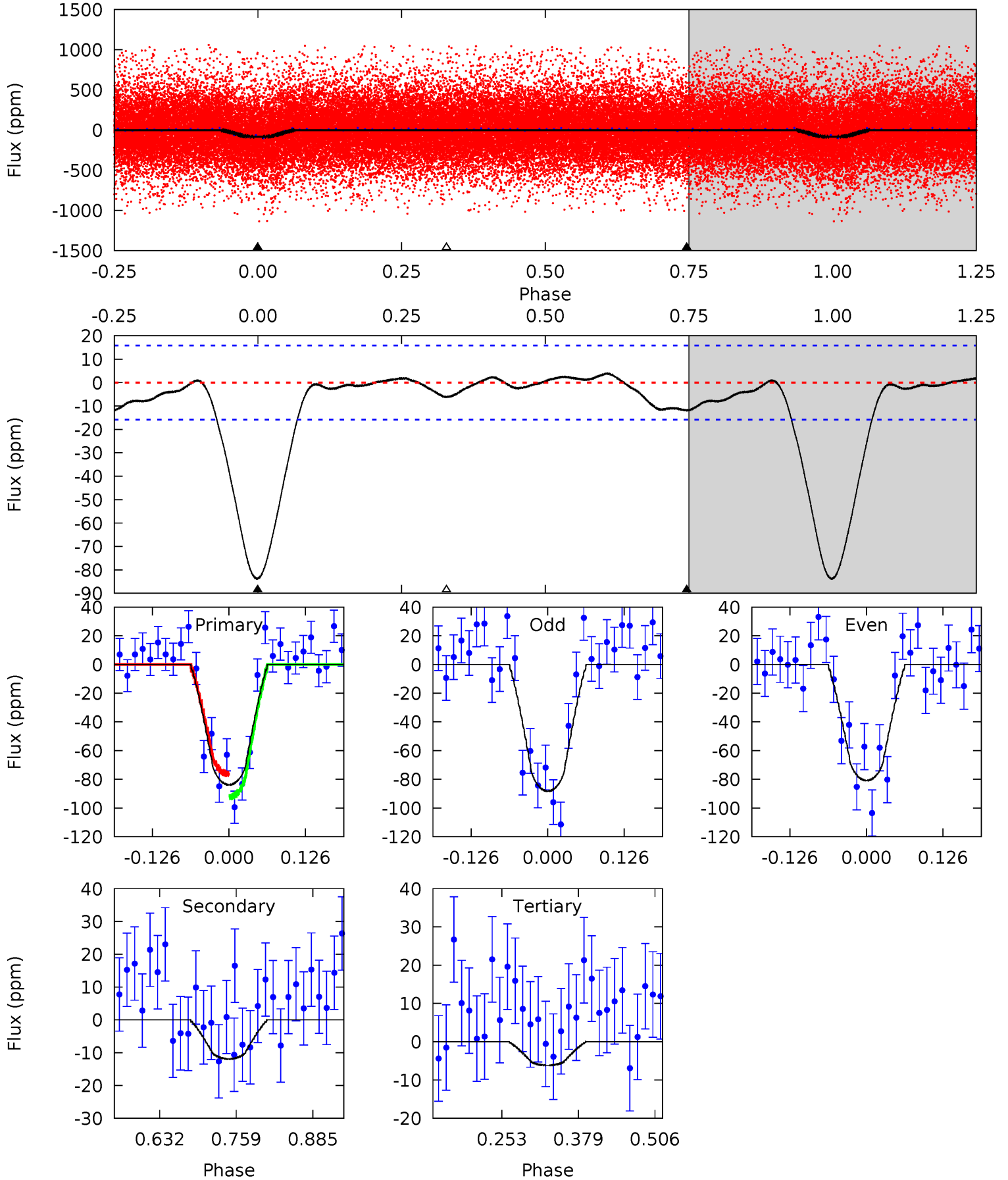
TCE 005340878-01 P= 0.539914 Days $T_0=131.554088$ (BKJD)



DV Model-Shift Uniqueness Test

005340878-01, P = 0.539914 Days, E = 131.013155 Days

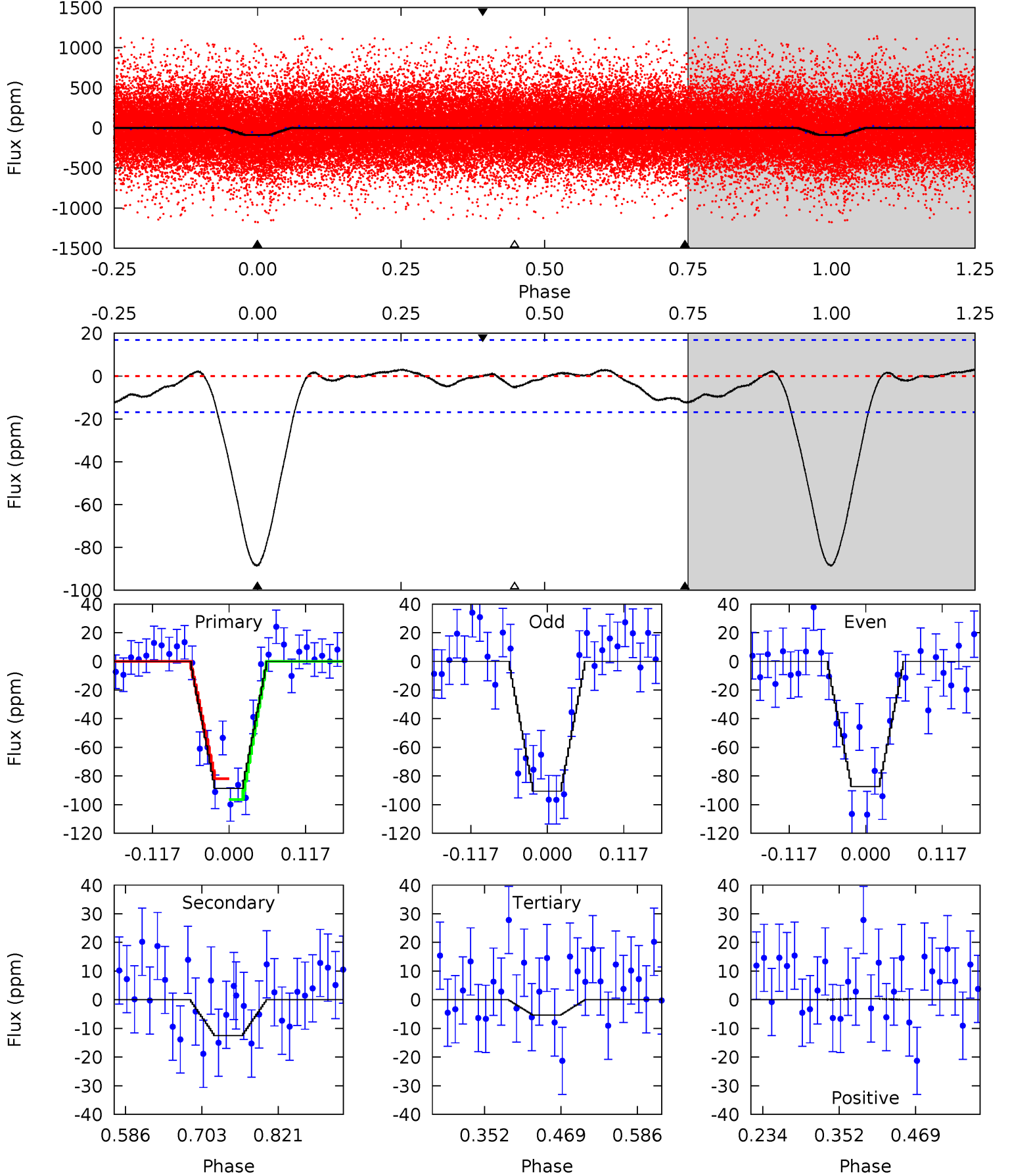
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.9	3.39	1.76	0	4.52	1.53	0.66	22.1	23.9	1.63	3.39	1.06	0.93	0.05	2.31



Alt Model-Shift Uniqueness Test

005340878-01, P = 0.539914 Days, E = 131.014174 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.8	3.35	1.44	0.08	4.53	1.57	0.56	22.3	23.7	1.91	3.27	0.43	0.96	0.04	1.96



Stellar Parameters For KIC 005340878

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5102^{+84}_{-76}	$4.502^{+0.070}_{-0.035}$	$0.100^{+0.150}_{-0.150}$	$0.837^{+0.044}_{-0.060}$	$0.811^{+0.056}_{-0.030}$	$1.948^{+0.488}_{-0.221}$
	+2%/-1%	+2%/-1%	+150%/-150%	+5%/-7%	+7%/-4%	+25%/-11%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 005340878-01 / KOI 4199.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-12 ± 4	$0.79^{+0.48}_{-0.40}$	2604^{+58}_{-63}	3468^{+1103}_{-700}	$1.492^{+4.761}_{-0.941}$
Alt.	-12 ± 4	$0.86^{+0.45}_{-0.44}$	2605^{+63}_{-66}	3389^{+1080}_{-663}	$1.296^{+4.117}_{-0.771}$

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 $A_{obs} \gg 1.0$

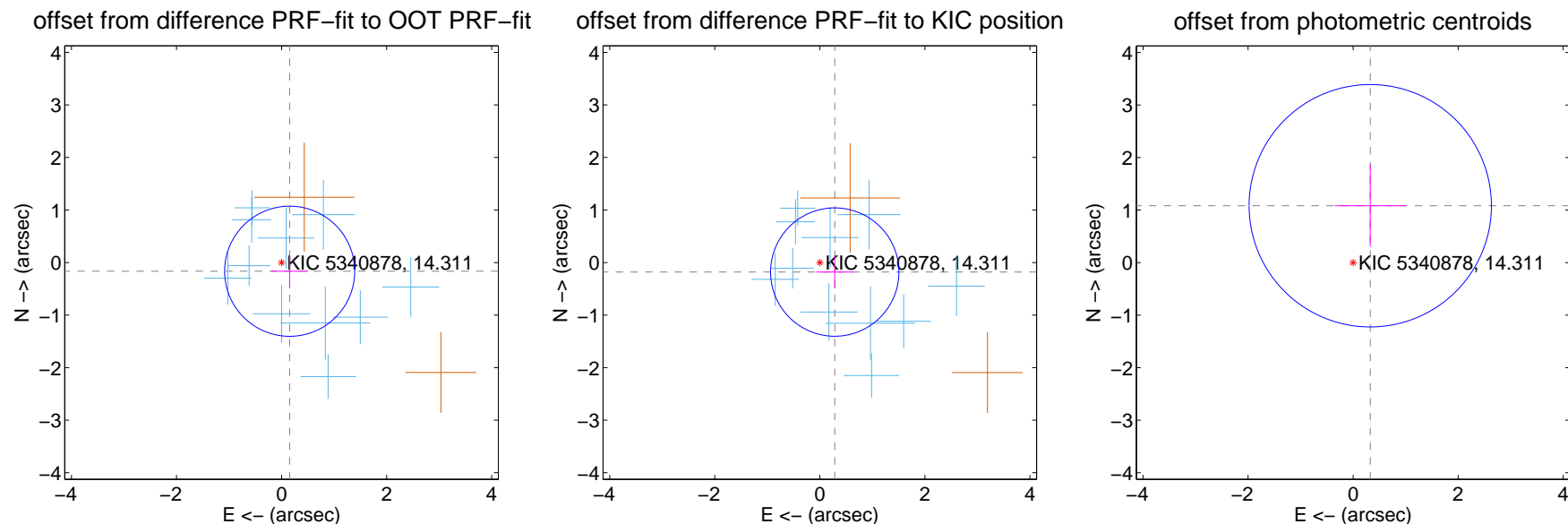
DV Centroid Data

Supplemental centroid analysis for 005340878-01. Kepler magnitude: 14.31. Transit SNR 17.54

There are 11 quarters with good PRF difference image offsets

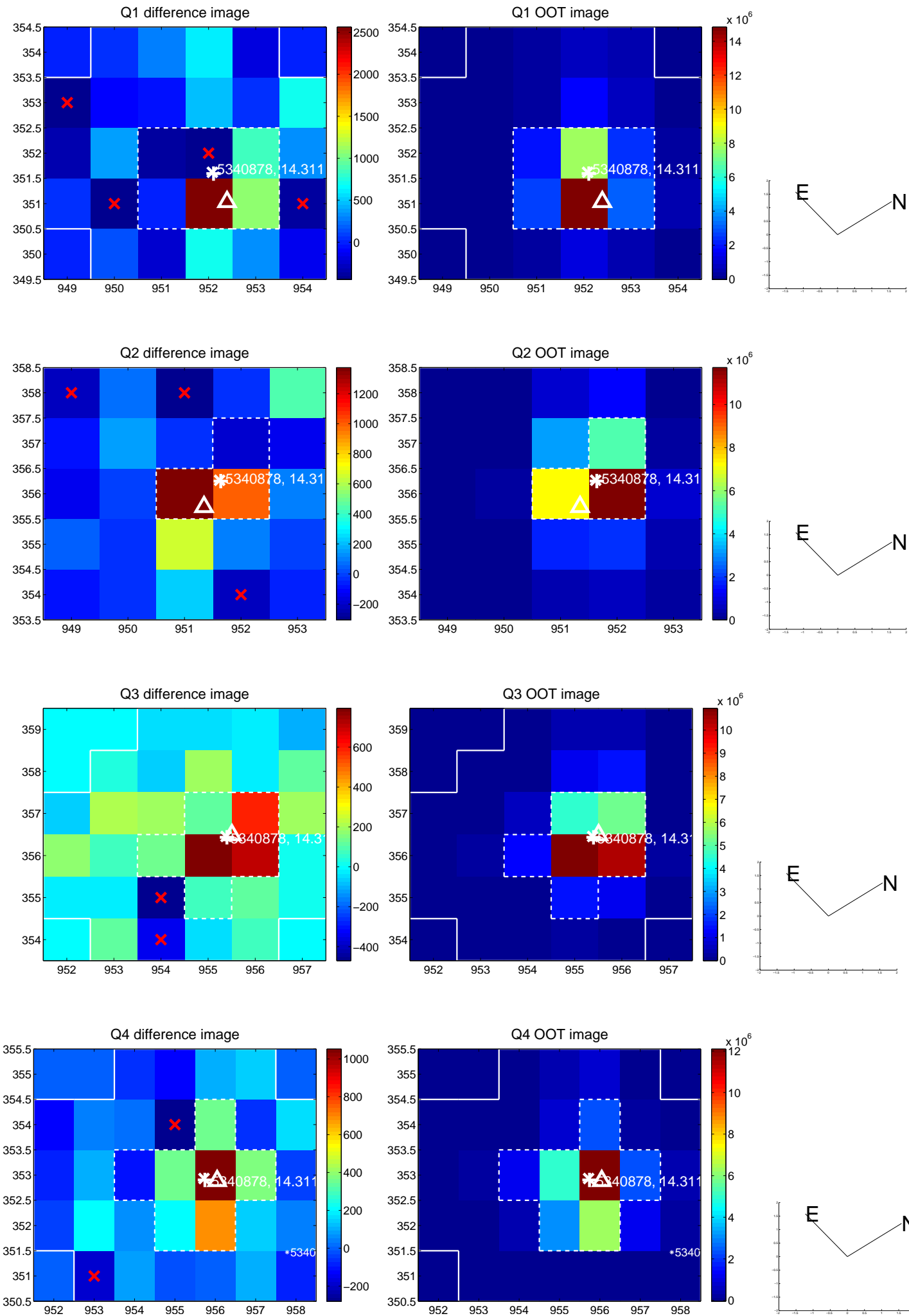
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.226 ± 0.413	0.55	-0.154 ± 0.350	-0.166 ± 0.322
PRF-fit source offset from KIC position	0.337 ± 0.407	0.83	-0.284 ± 0.353	-0.181 ± 0.314
photometric centroid source offset	1.13 ± 0.77	1.47	-0.33 ± 0.68	1.08 ± 0.78



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.

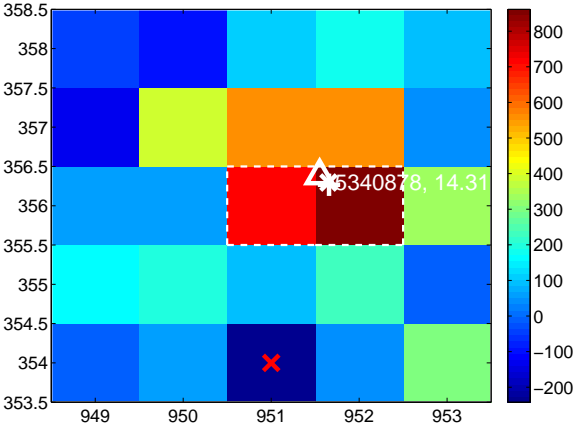
Q5 no difference image



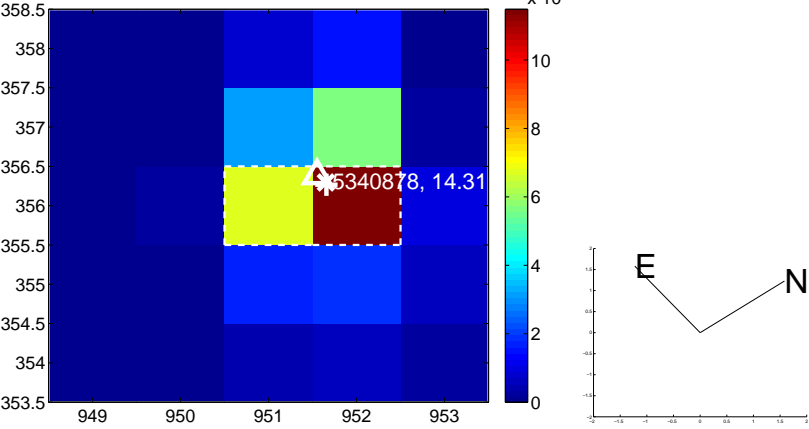
Q5 no OOT image



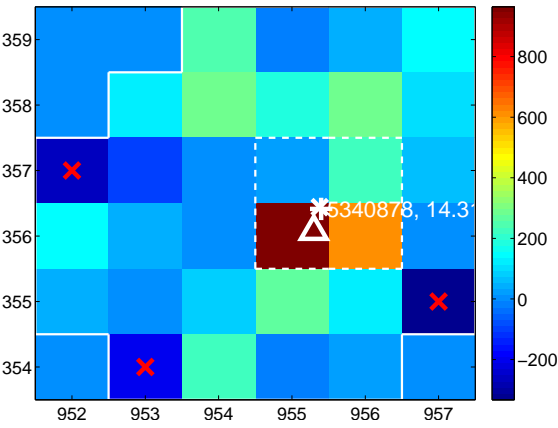
Q6 difference image



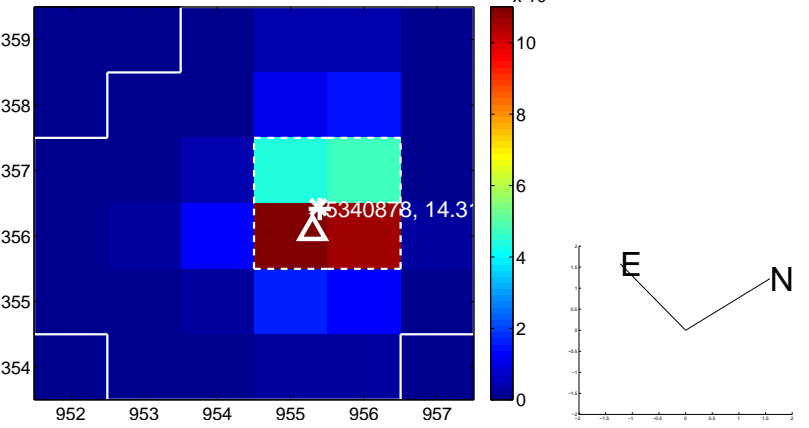
Q6 OOT image



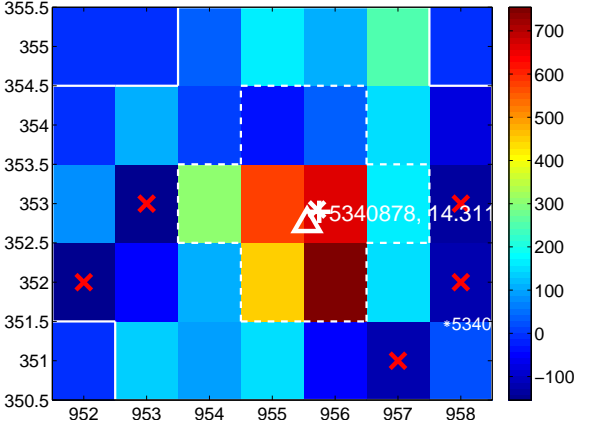
Q7 difference image



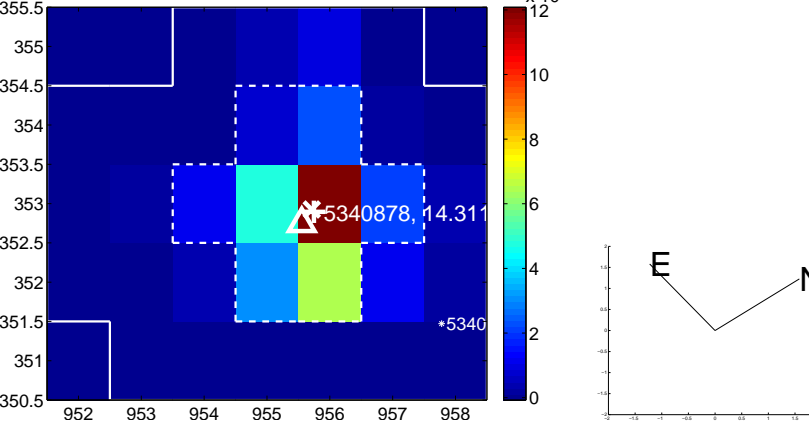
Q7 OOT image



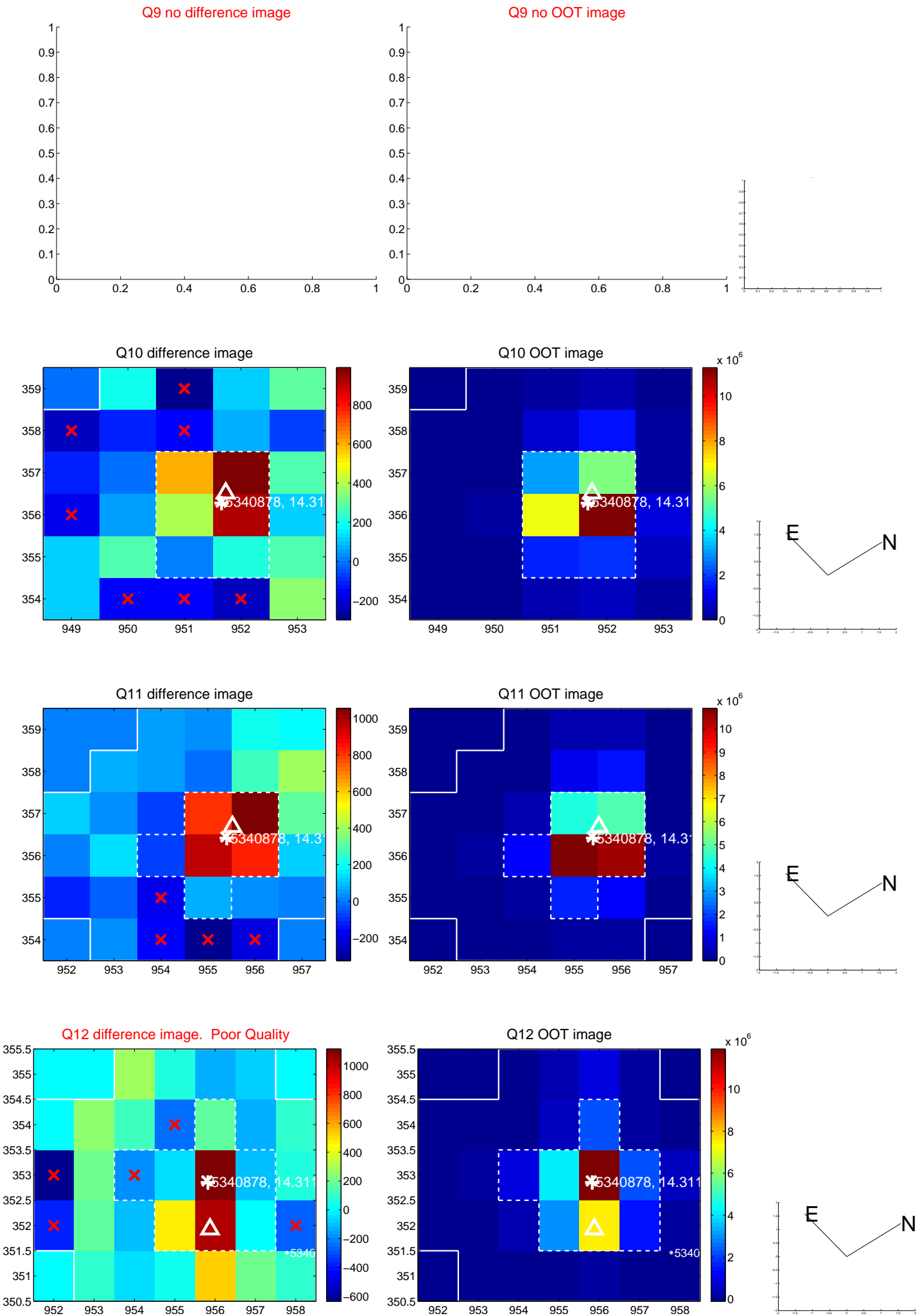
Q8 difference image



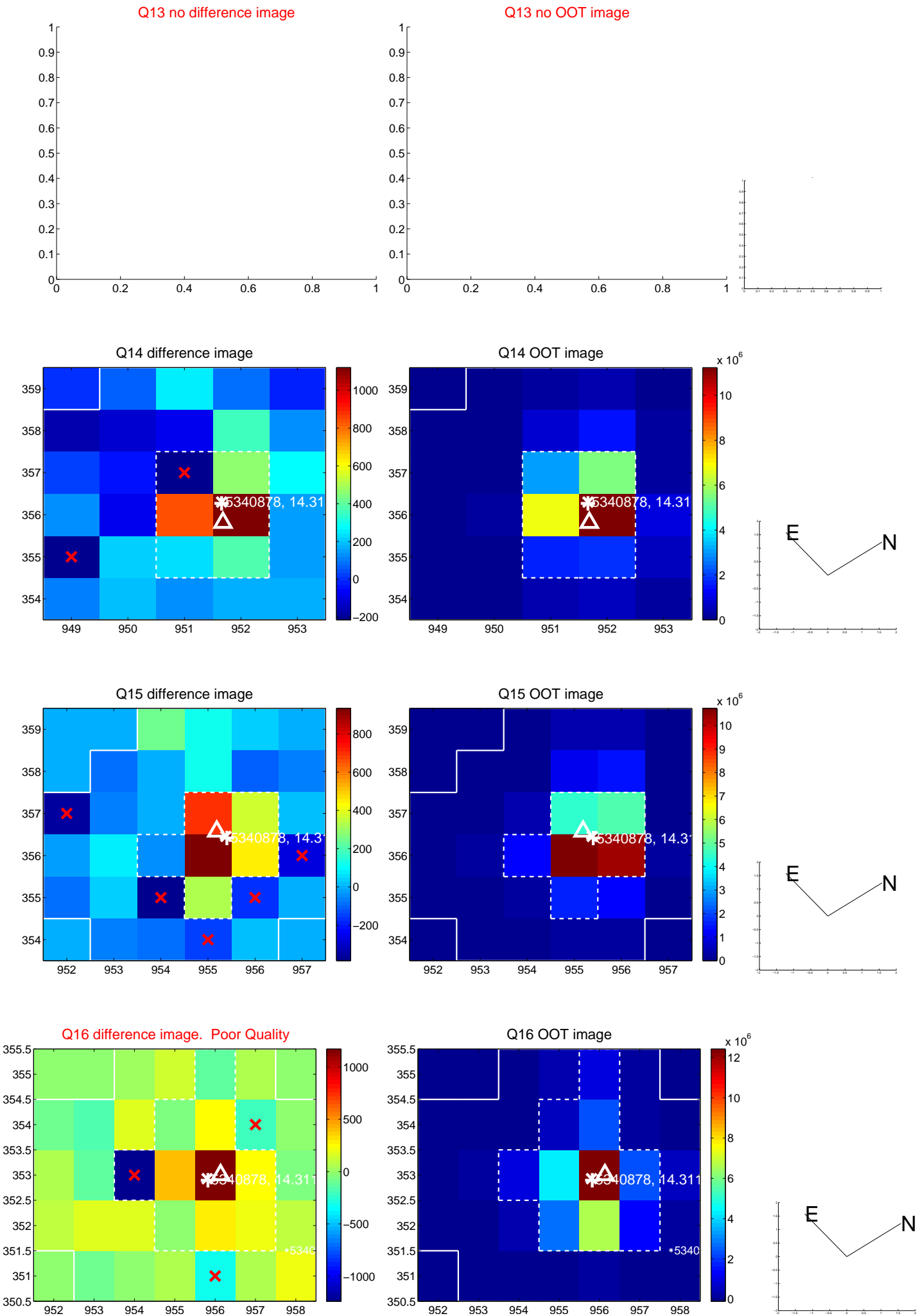
Q8 OOT image



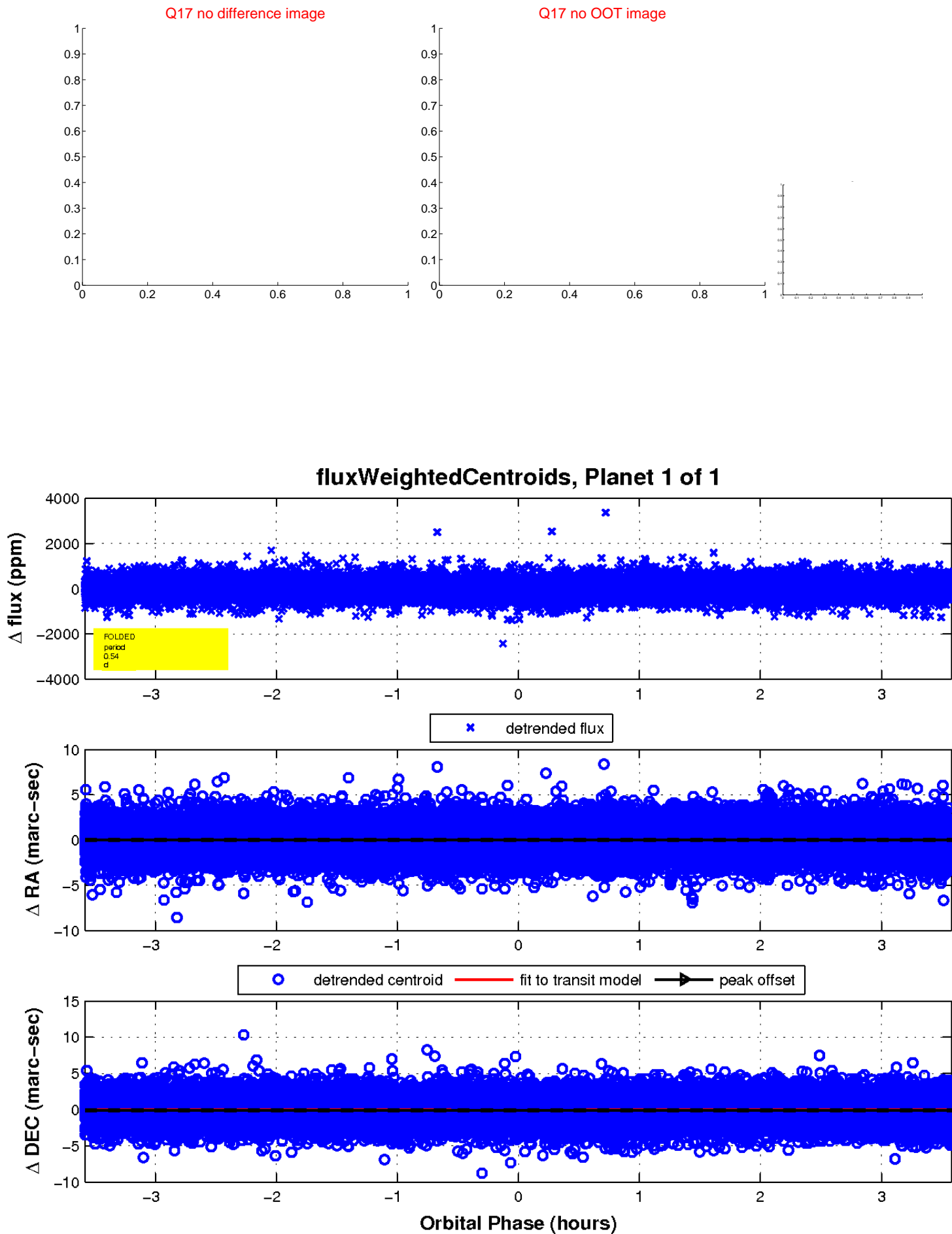
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

