

KIC 004077678

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})
004077678-01	OBS	No	0.748330	131.656345	1.8	3.122	9.4	0.2	1.75	7313	0.29	22405.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004077678-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV

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

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

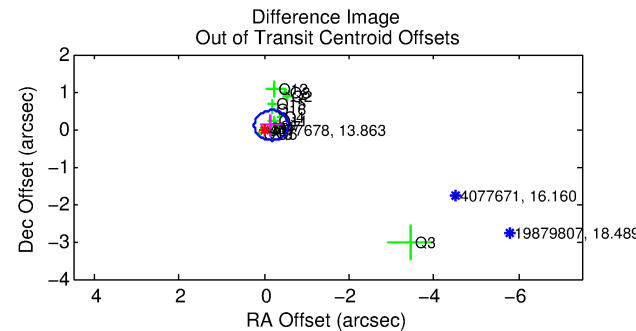
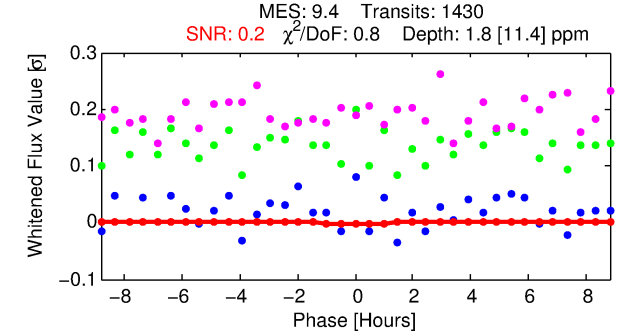
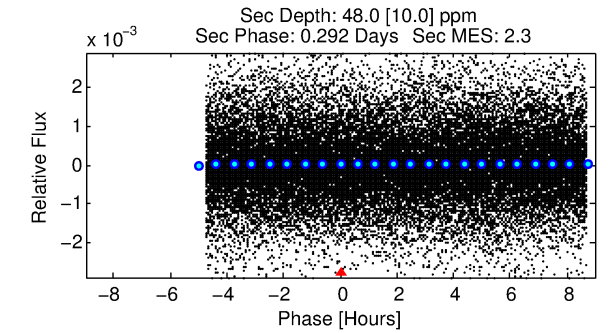
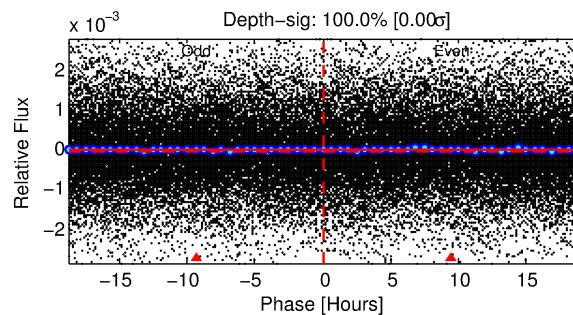
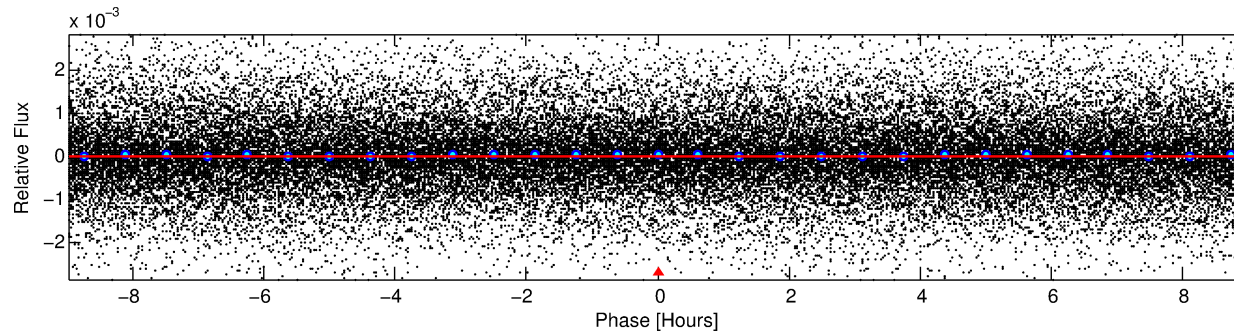
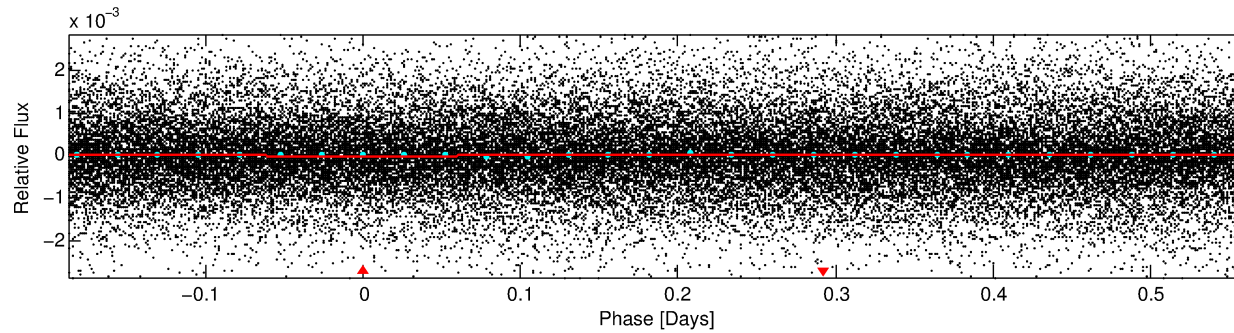
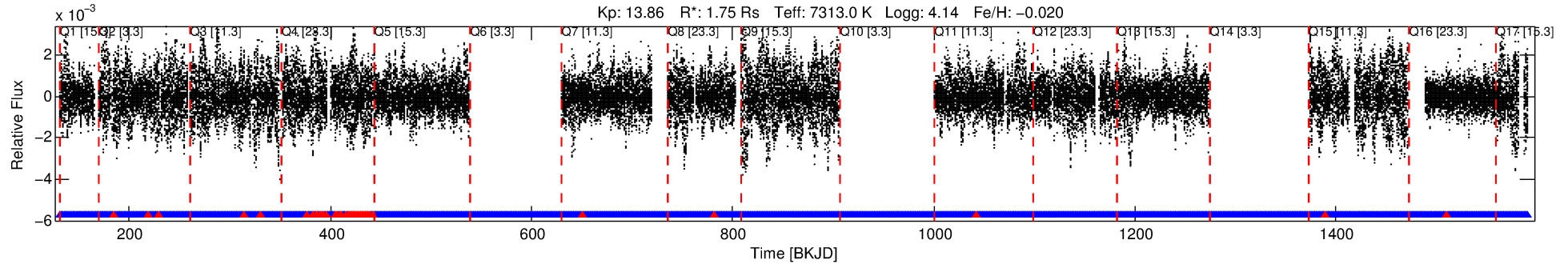
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004077678-01

No Significant Match Found

DV One-Page Summary

KIC: 4077678 Candidate: 1 of 1 Period: 0.748 d



DV Fit Results:

Period = 0.74833 [0.00046] d
Epoch = 131.6563 [0.0736] BKJD
Rp/R* = 0.0015 [0.0066]
a/R* = 1.13 [5.05]
b = 0.95 [2.15]
Seff = 22405.24 [9337.64]
Teq = 3120 [325] K
Rp = 0.29 [1.26] Re
a = 0.0187 [0.0049] AU
Ag = 111.49 [975.71] [0.11σ]
Teffp = 15673 [34269] K [0.37σ]

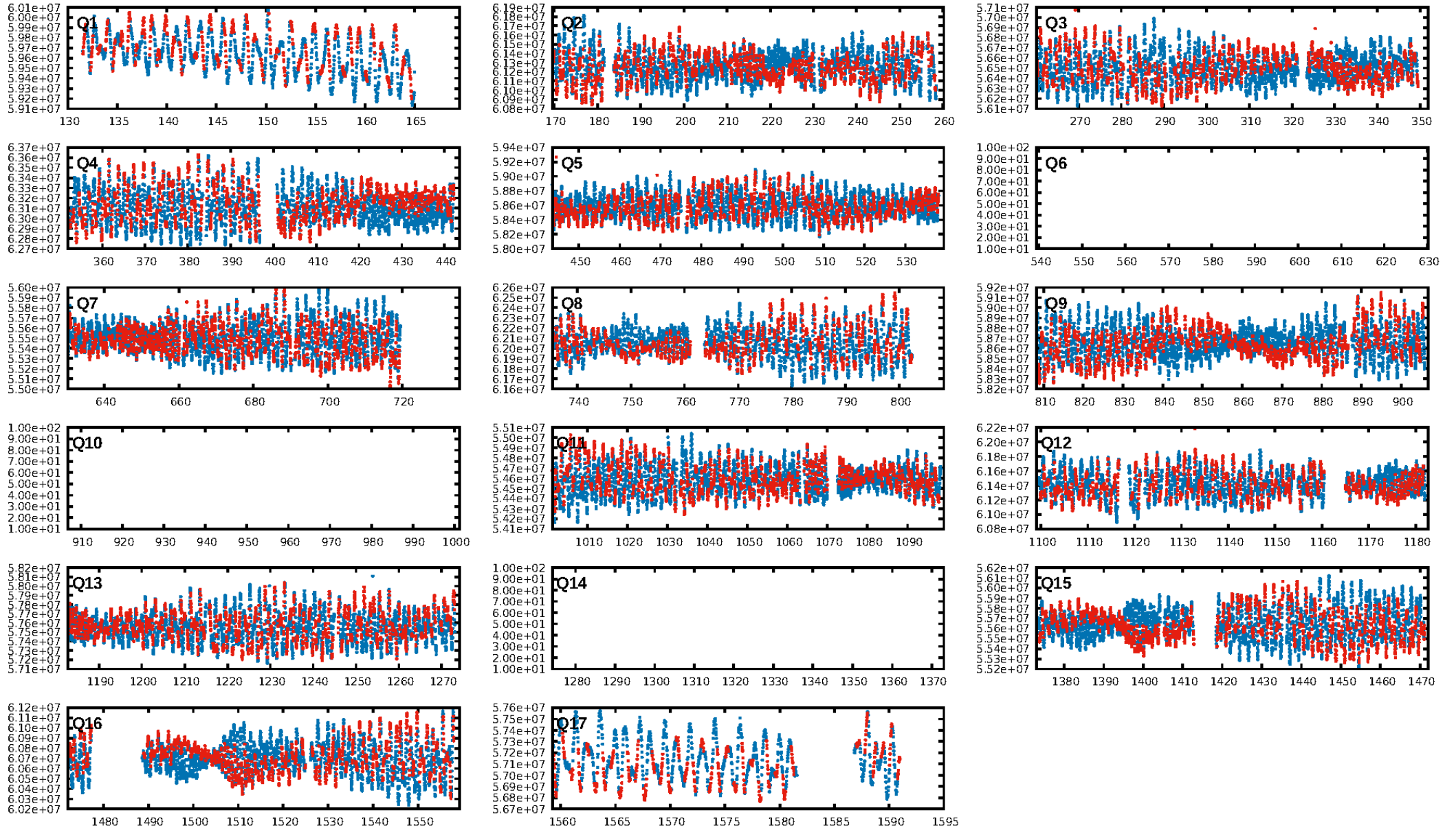
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 8.79e-22
RollingBand-fgt: 0.96 [1297/1349]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.202 arcsec [1.50σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-rm: 0.260 arcsec [1.40σ]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 0.50 [7/14]
DiffImageOverlap-fno: 1.00 [14/14]

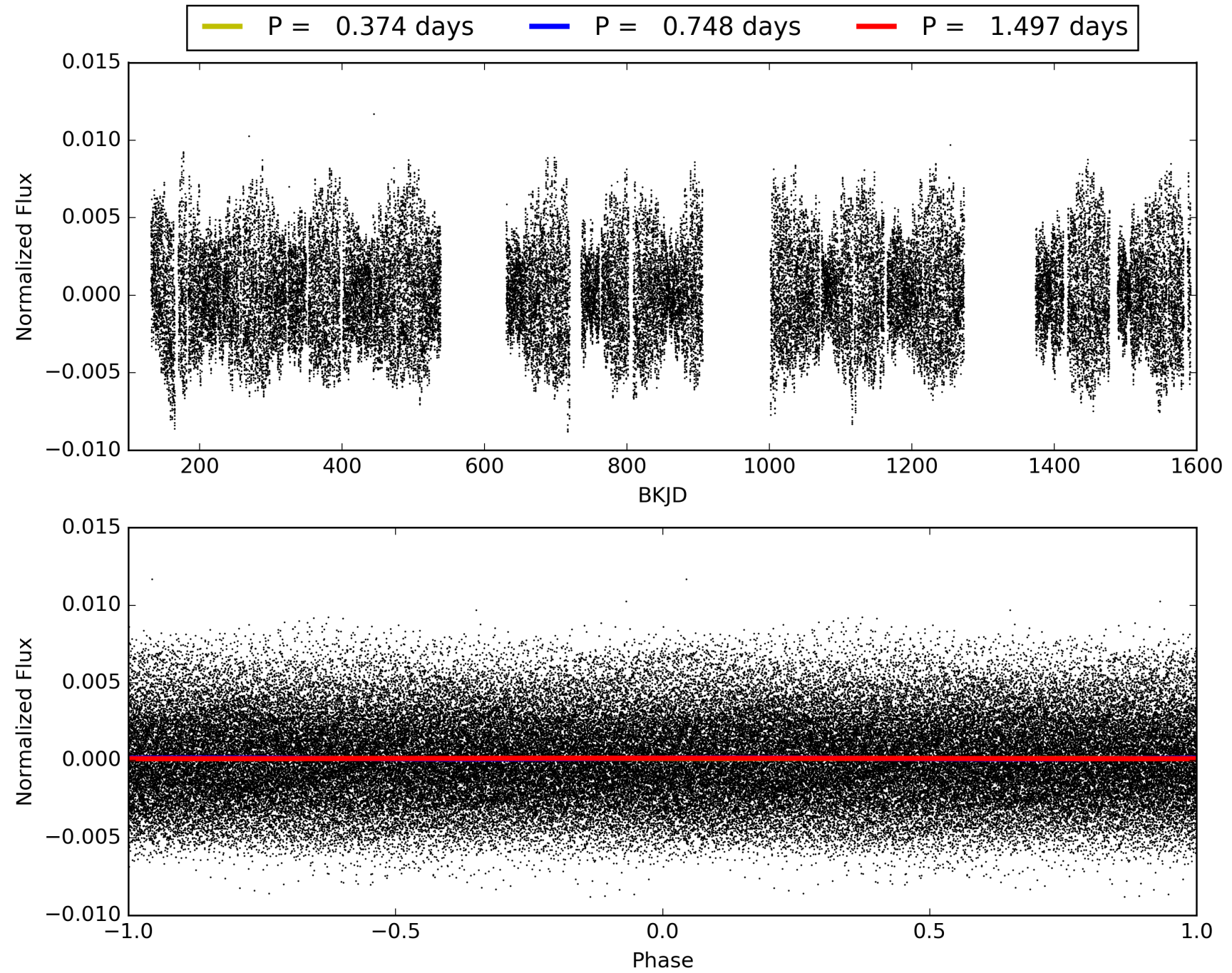
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 00:40:14 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 004077678-01, PDC Light Curves

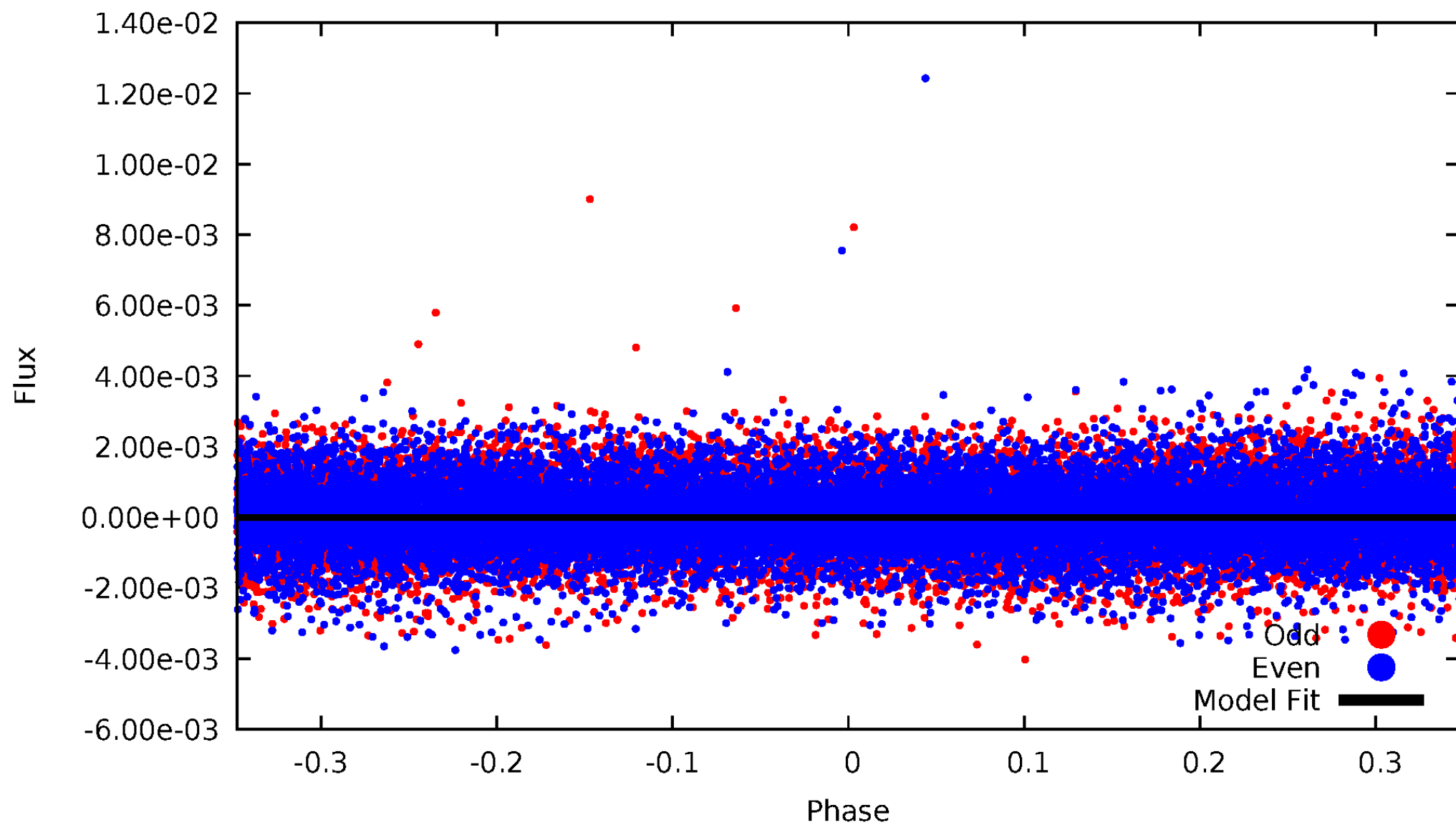


TCE 004077678-01



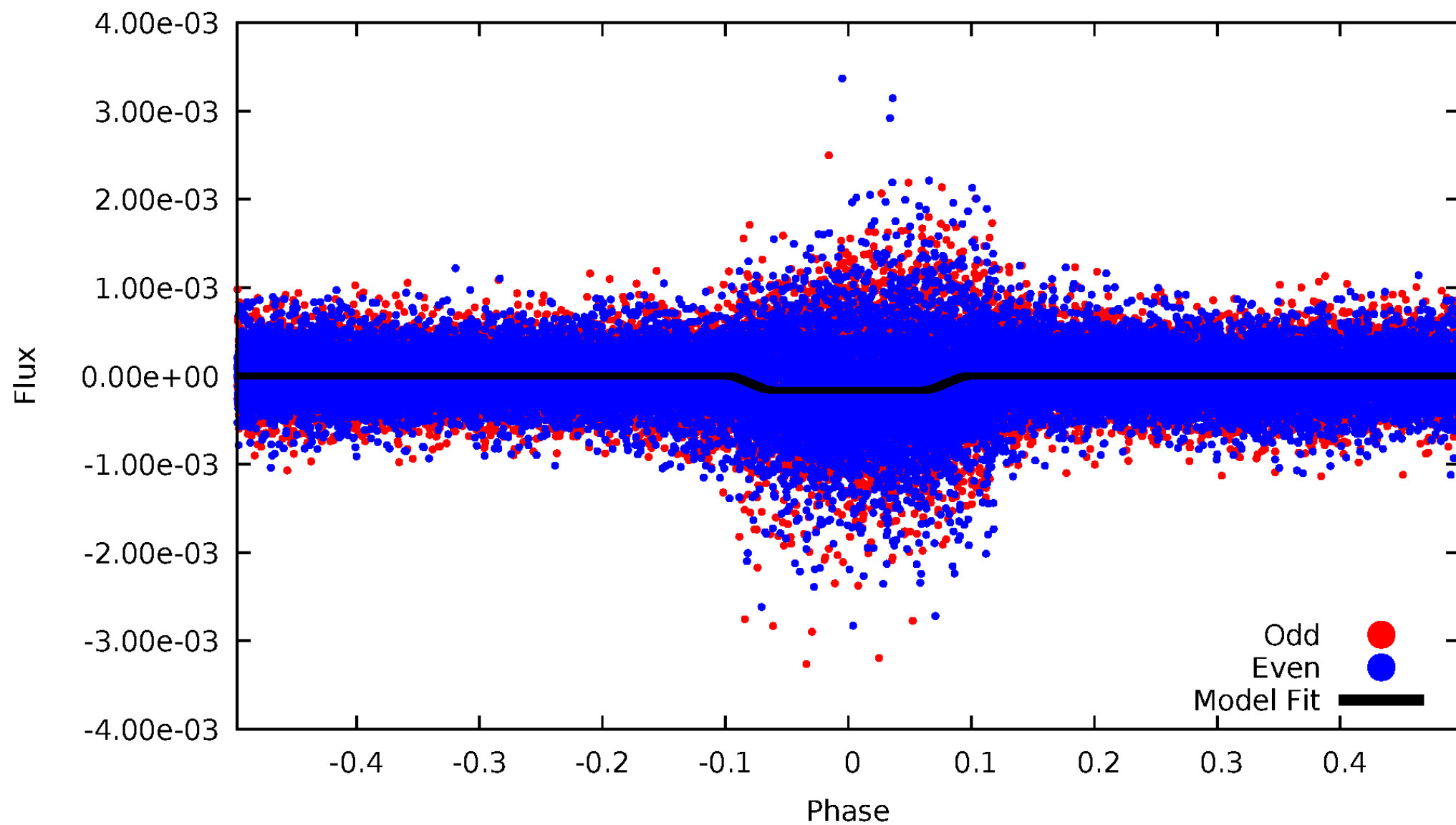
DV Odd/Even

TCE 004077678-01

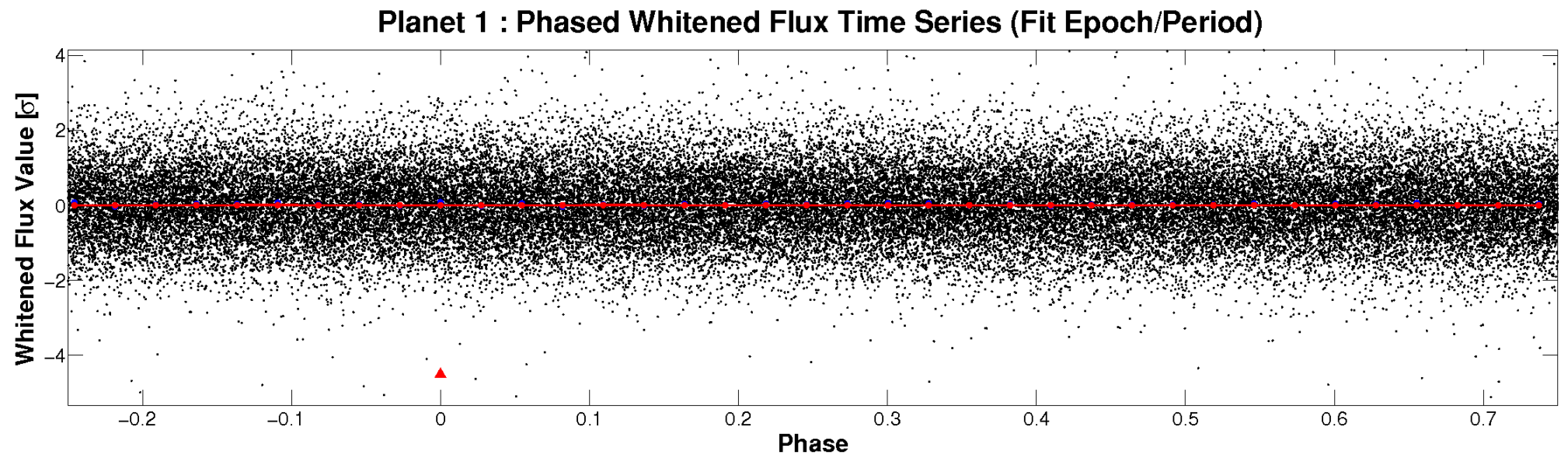
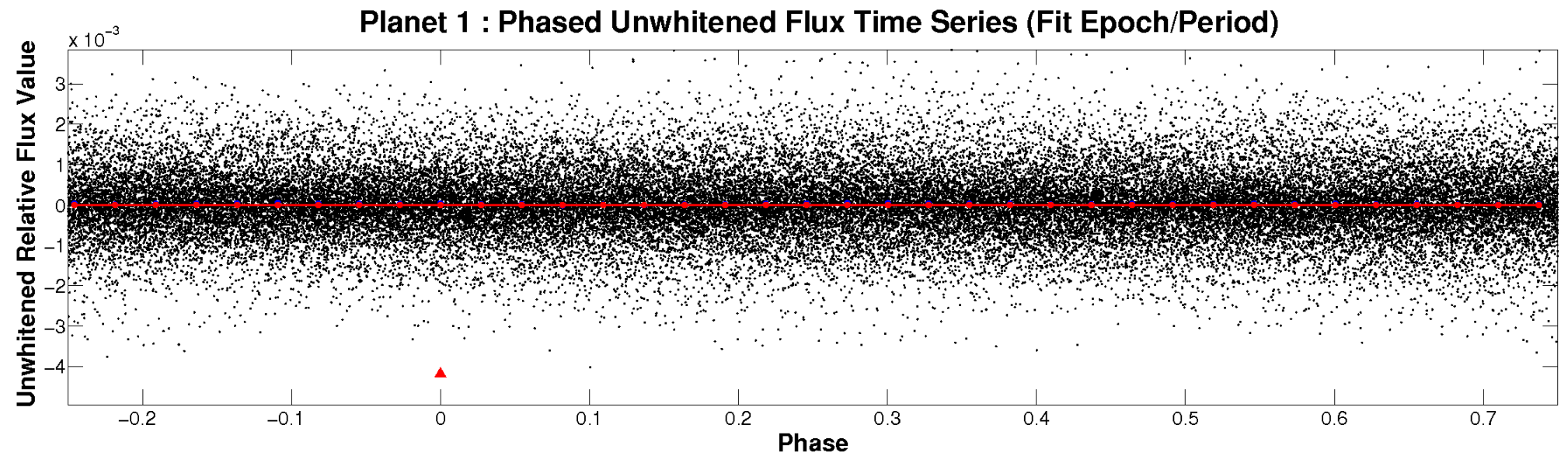


ALT Odd/Even

TCE 004077678-01

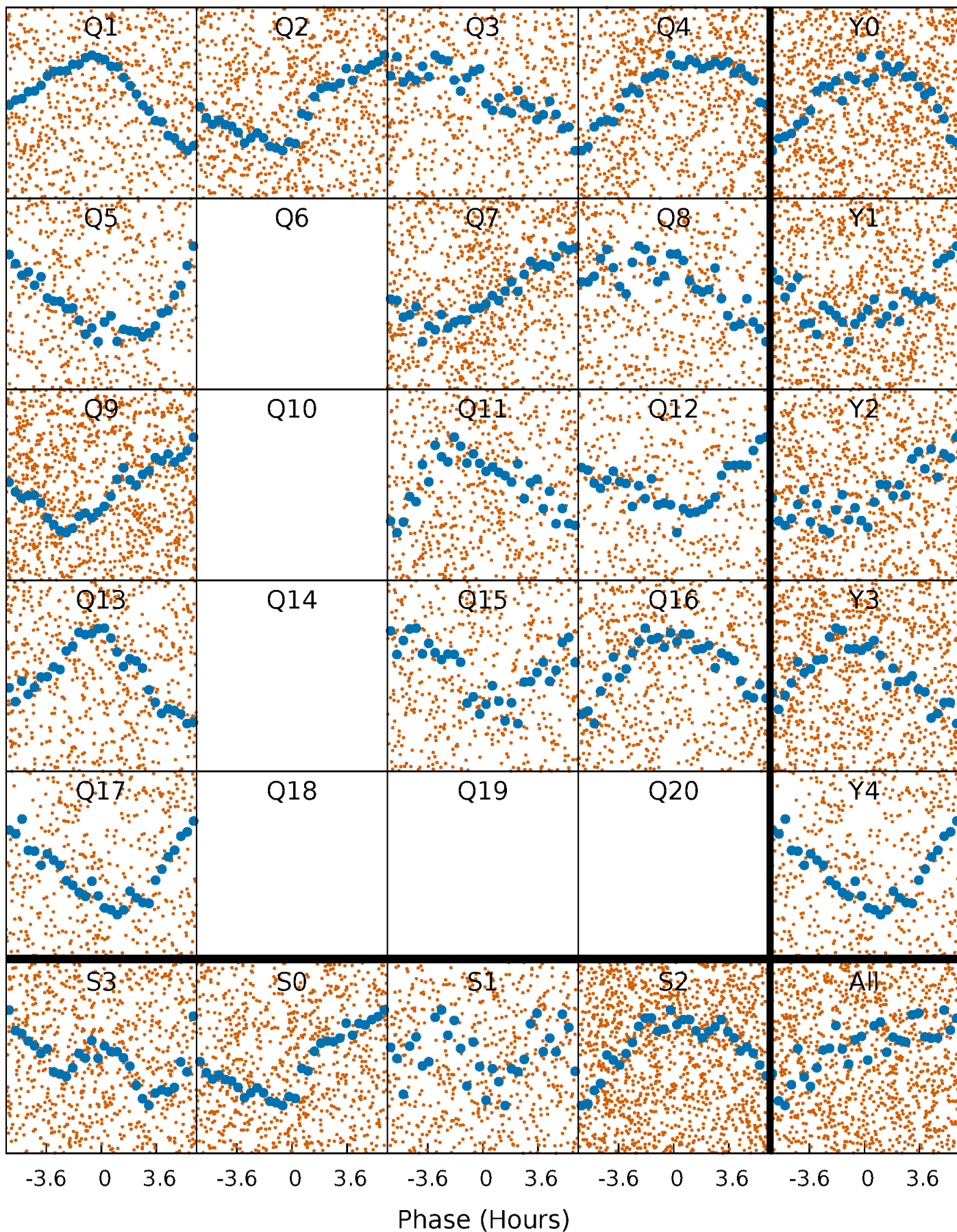


Non-Whitened Vs. Whitened Light Curve



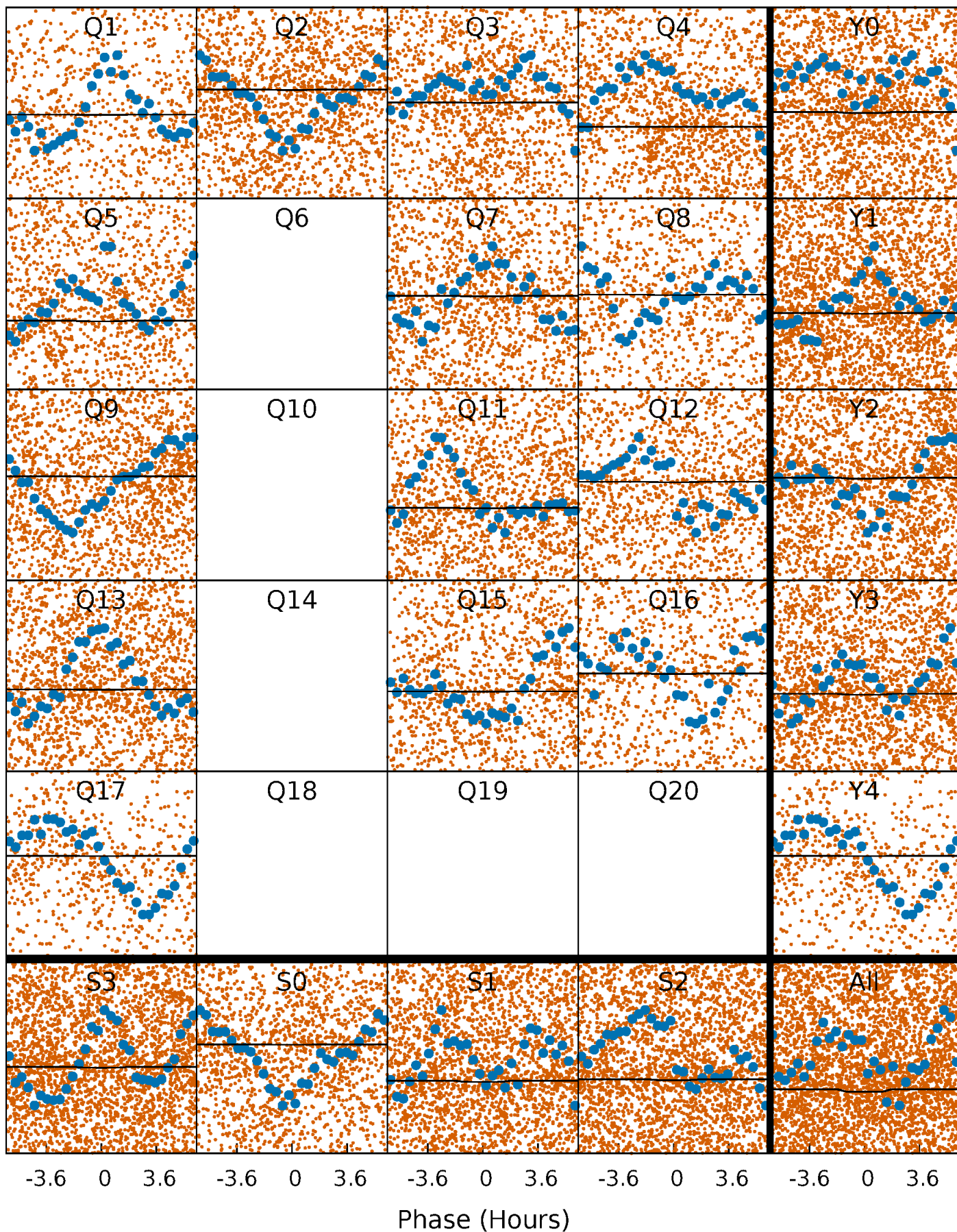
PDC Quarter-Phased Transit Curves

TCE 004077678-01 P= 0.748330 Days $T_0=131.656345$ (BKJD)



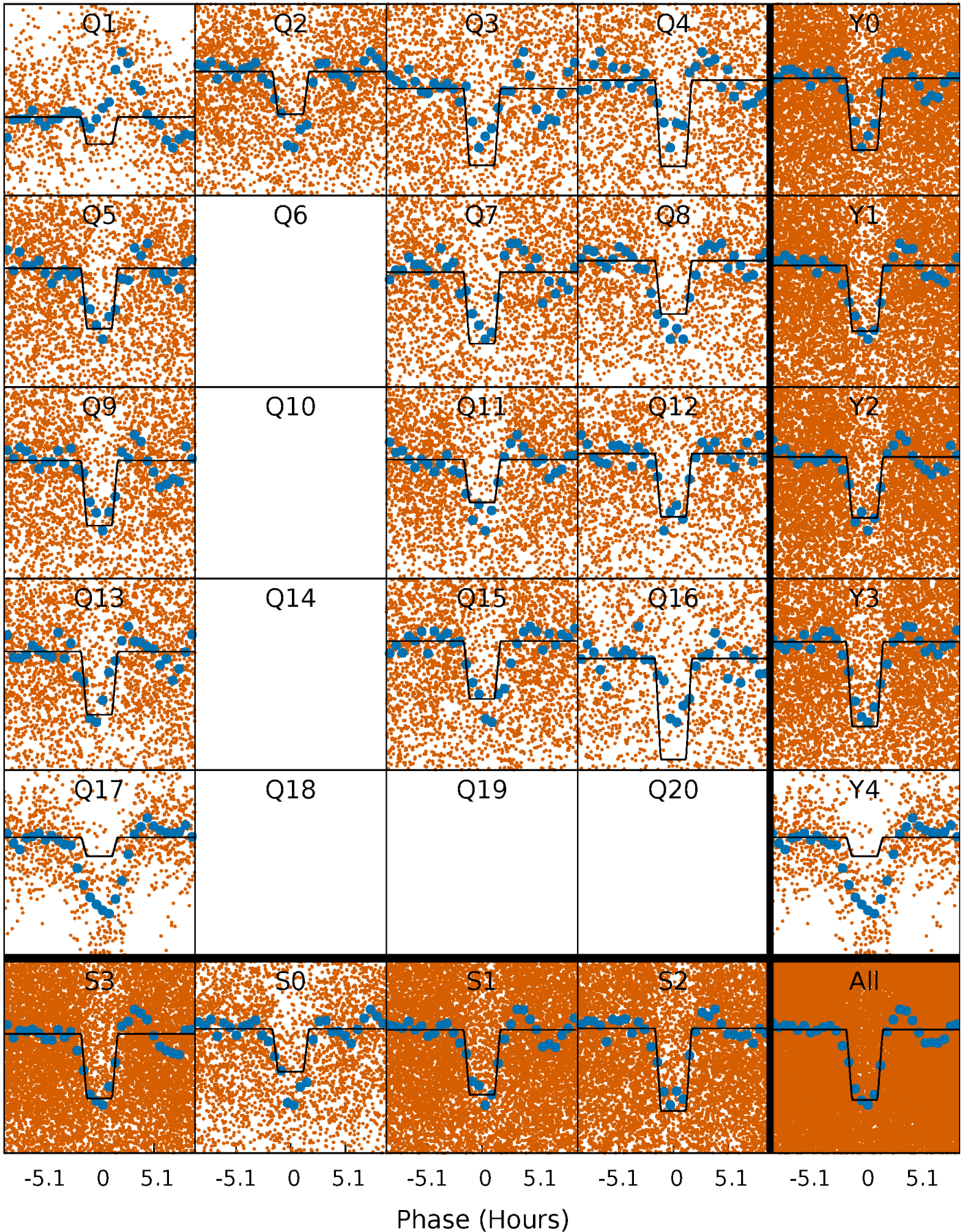
DV Quarter-Phased Transit Curves

TCE 004077678-01 P= 0.748330 Days $T_0=131.656345$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

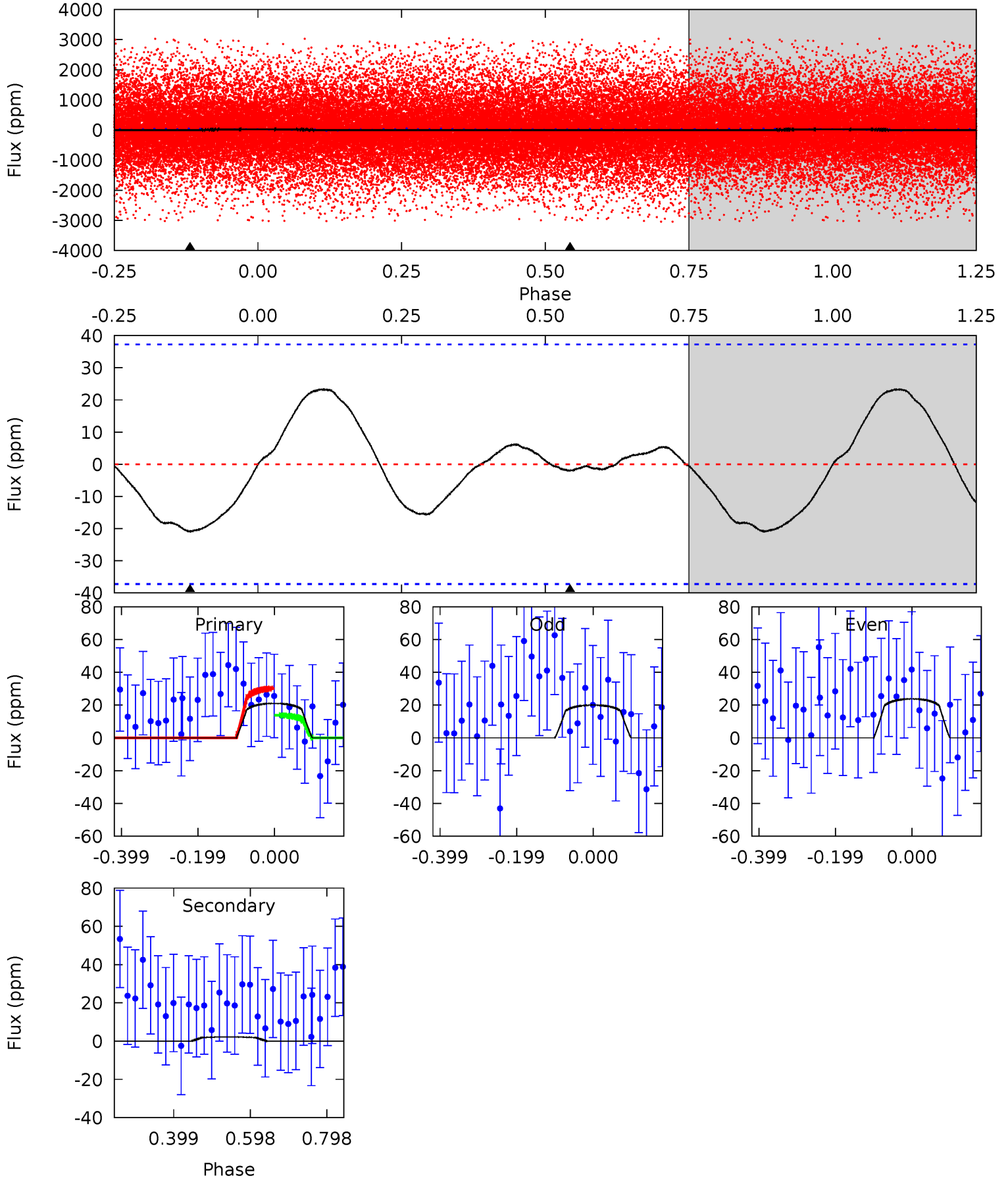
TCE 004077678-01 P= 0.748819 Days $T_0=131.562144$ (BKJD)



DV Model-Shift Uniqueness Test

004077678-01, P = 0.748330 Days, E = 130.908015 Days

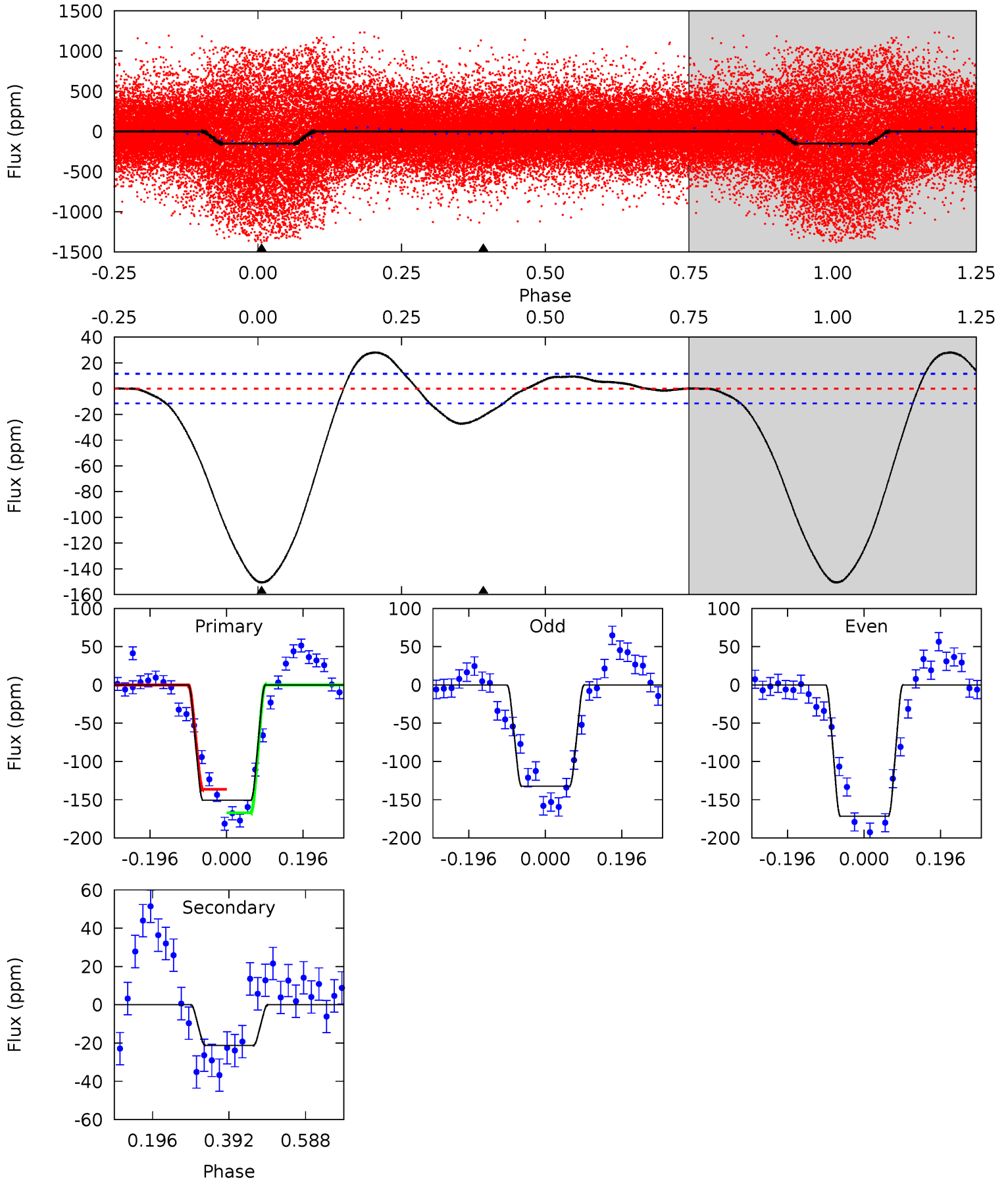
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.49	0.26	0	0	4.42	1.28	1.78	2.49	2.49	0.26	0.26	0.23	3.08	0.53	0.99



Alt Model-Shift Uniqueness Test

004077678-01, P = 0.748819 Days, E = 130.813325 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
58.1	8.21	0	0	4.42	1.29	0.96	58.1	58.1	8.21	8.21	7.55	1.00	0.16	5.83



Stellar Parameters For KIC 004077678

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7313^{+228}_{-330}	$4.144^{+0.124}_{-0.202}$	$-0.020^{+0.200}_{-0.350}$	$1.745^{+0.555}_{-0.370}$	$1.546^{+0.219}_{-0.241}$	$0.410^{+0.251}_{-0.209}$
	+3%/-5%	+3%/-5%	+1000%/-1750%	+32%/-21%	+14%/-16%	+61%/-51%
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 004077678-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-2 ± 8	$1.00^{+1.04}_{-0.71}$	4373^{+353}_{-268}	-2936^{+9940}_{-2432}	$0.242^{+4.457}_{-1.422}$
Alt.	-21 ± 3	$2.51^{+1.50}_{-1.23}$	4398^{+351}_{-295}	3984^{+1807}_{-6912}	$0.639^{+1.718}_{-0.378}$

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 $A_{obs} \gg 1.0$

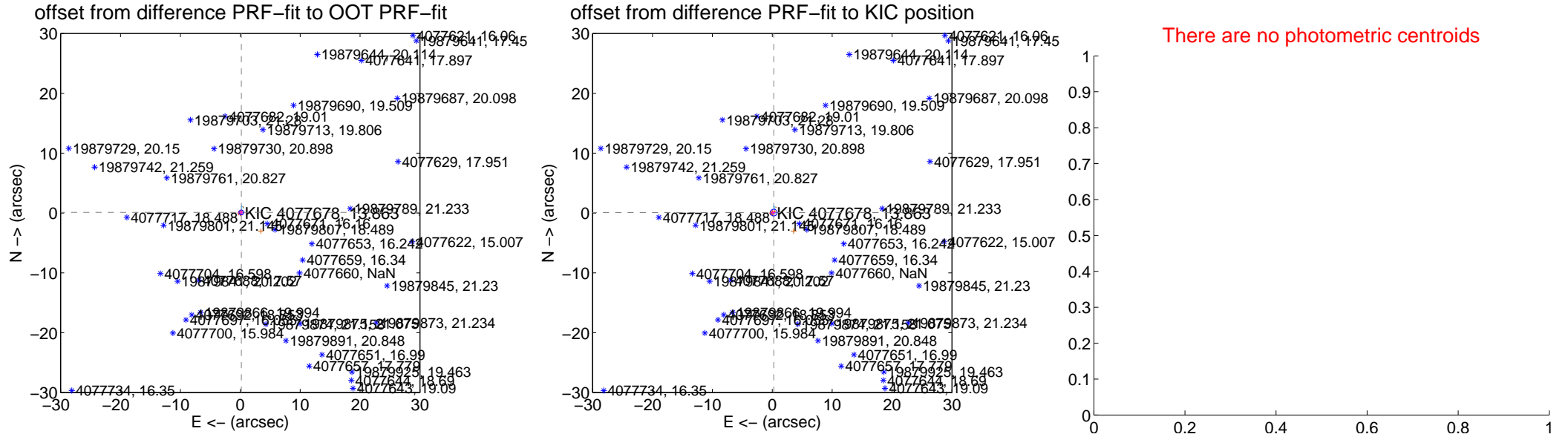
DV Centroid Data

Supplemental centroid analysis for 004077678-01. Kepler magnitude: 13.86. Transit SNR 0.20

There are 7 quarters with good PRF difference image offsets

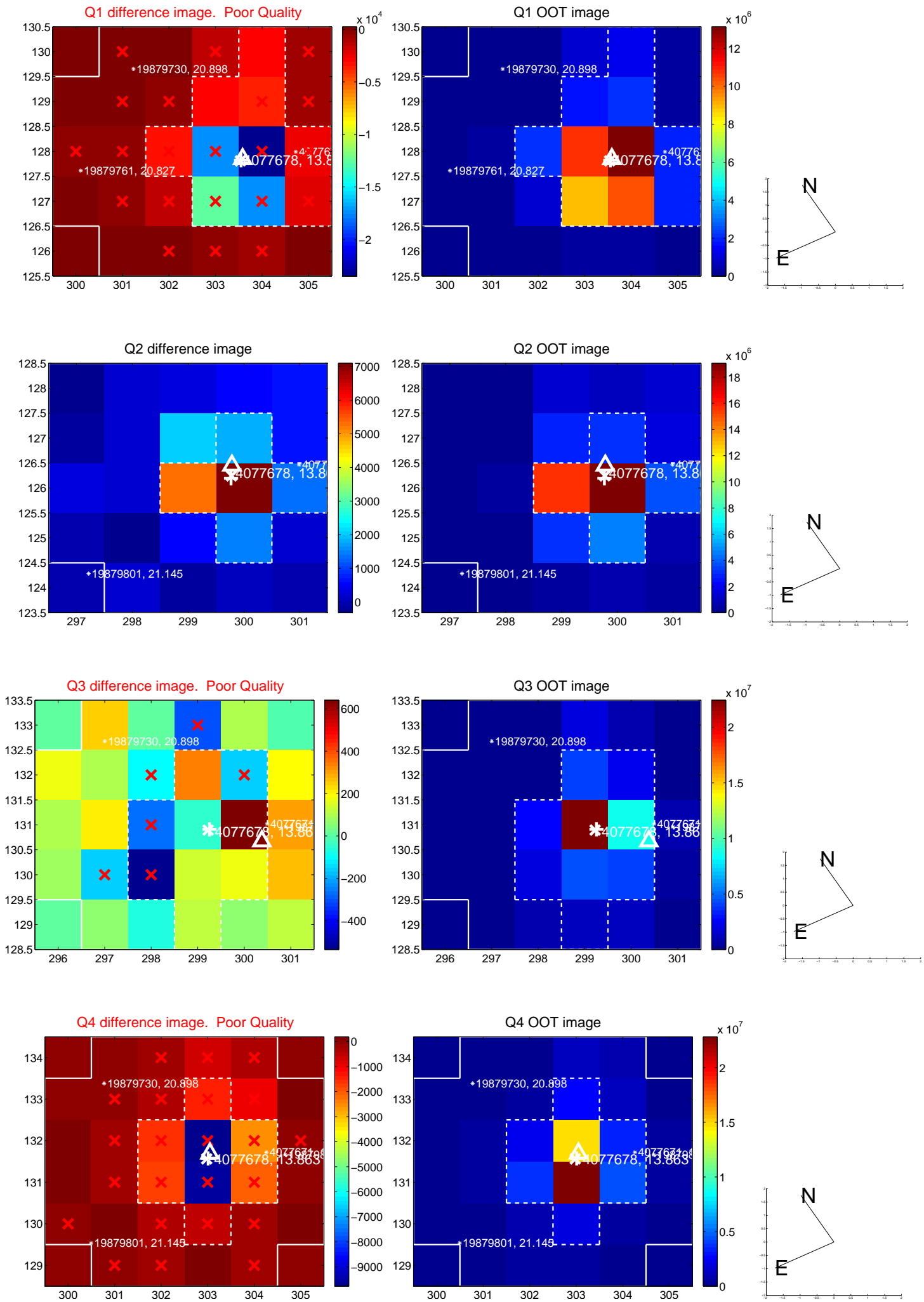
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.202 ± 0.135	1.50	-0.174 ± 0.252	0.102 ± 0.289
PRF-fit source offset from KIC position	0.260 ± 0.186	1.40	-0.250 ± 0.250	0.073 ± 0.262
photometric centroid source offset	—	—	—	—

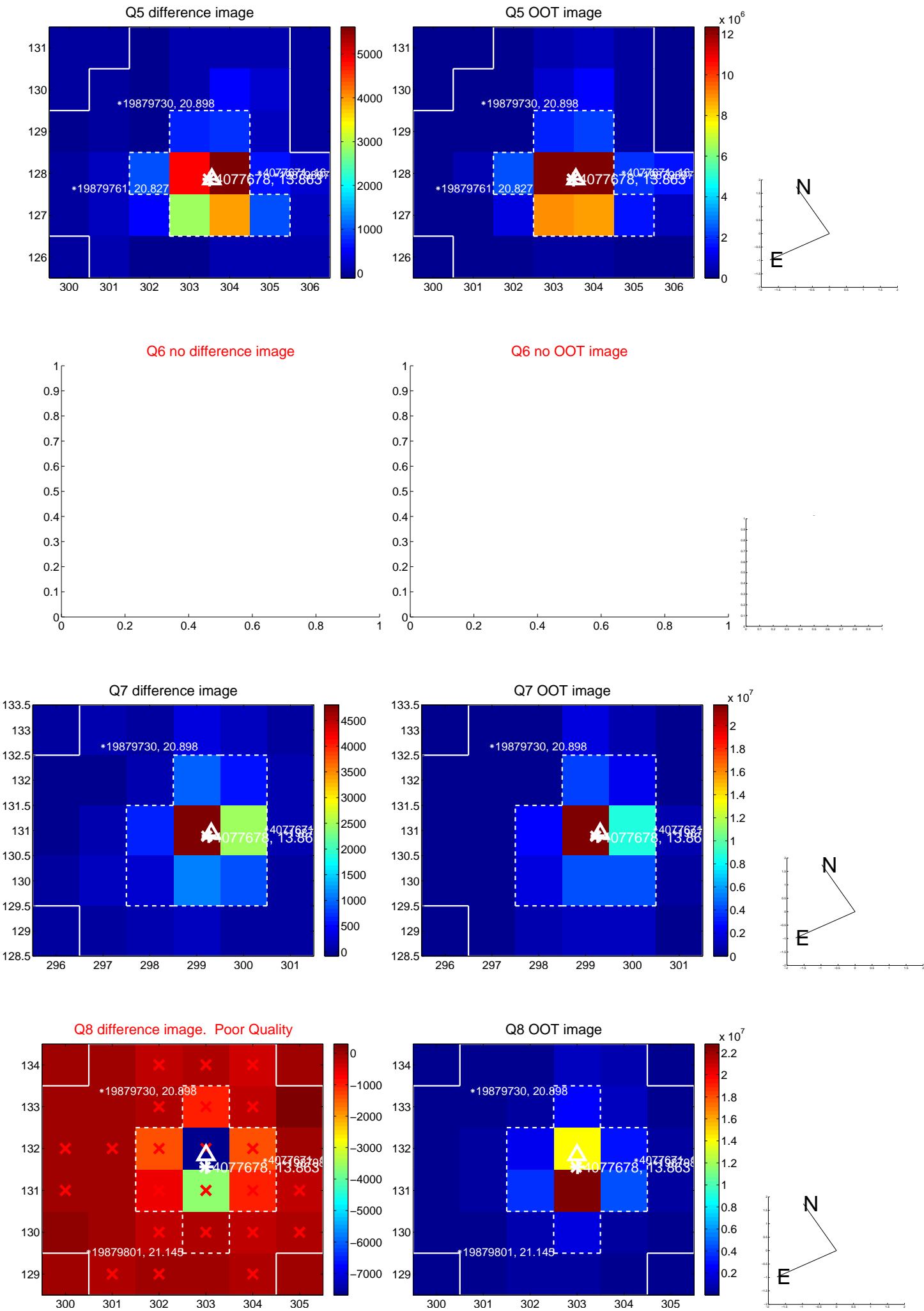


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

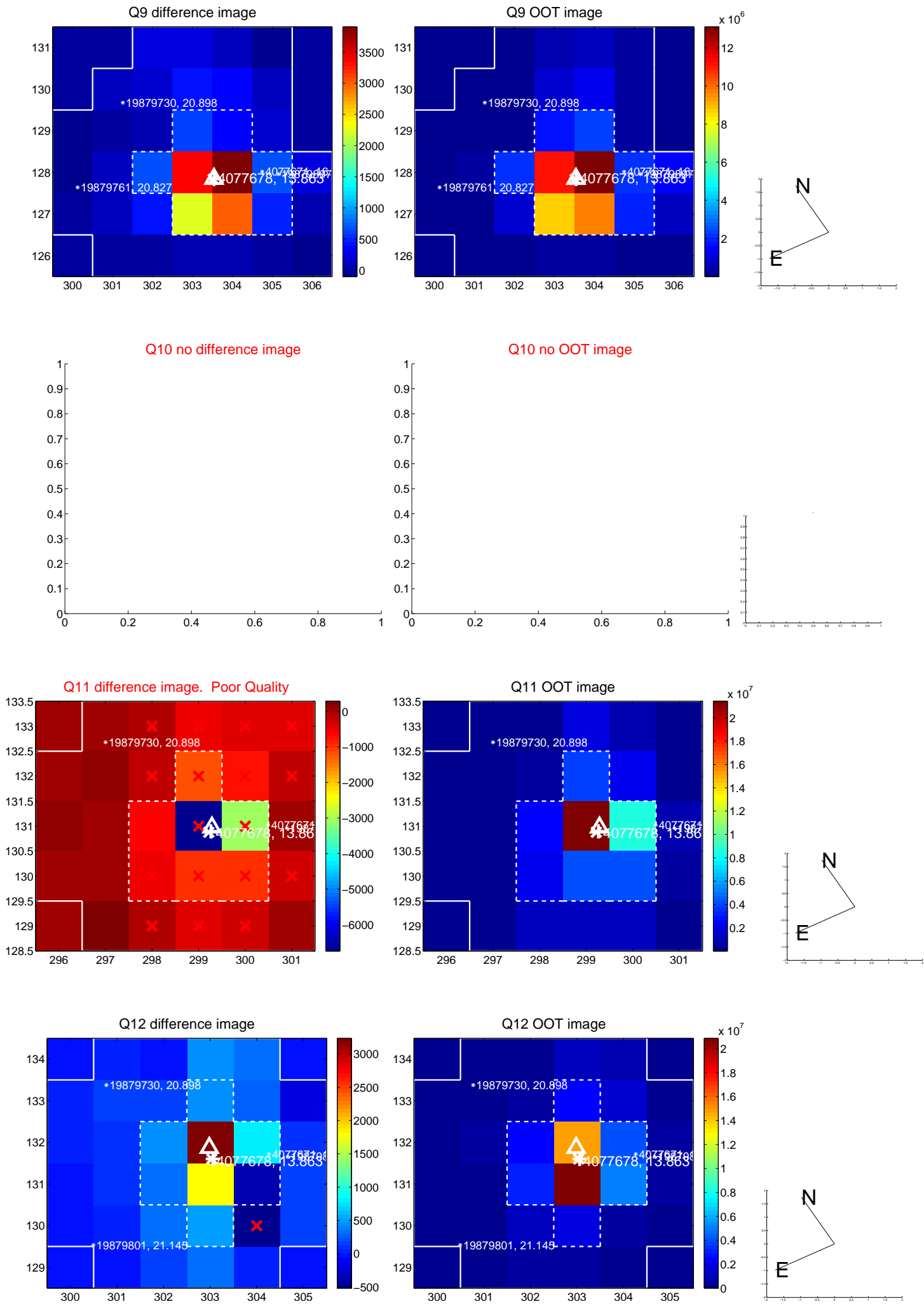
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



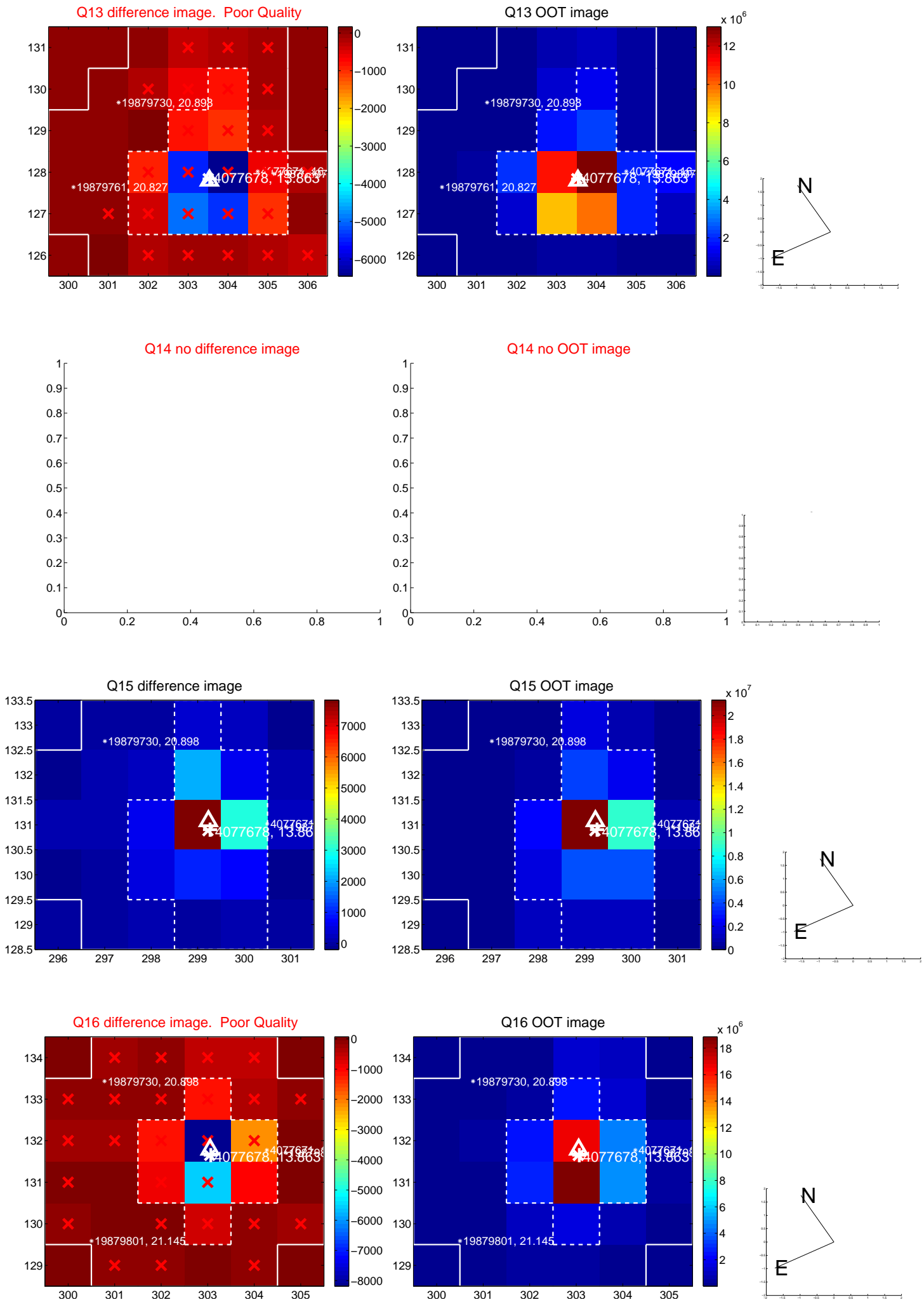
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



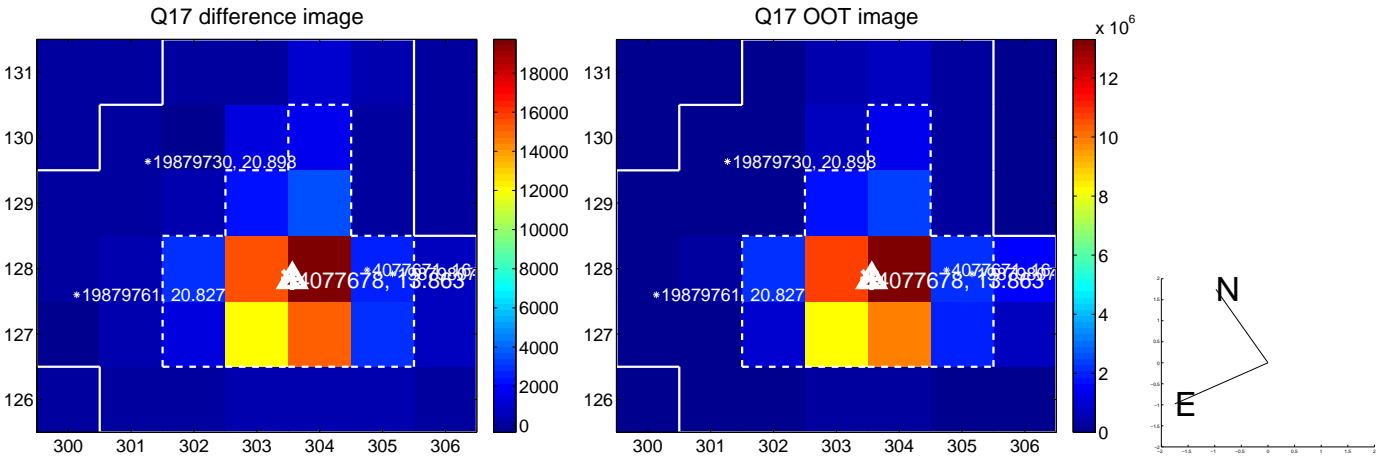
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



folded centroid time series figure for this object.

UKIRT Image

Declination

