

KIC 010978167

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})
010978167-01	OBS	No	370.634228	246.203510	317.8	24.880	7.7	6.8	1.82	6694	3.86	4.66

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010978167-01	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—INCONSISTENT_TRANS—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.

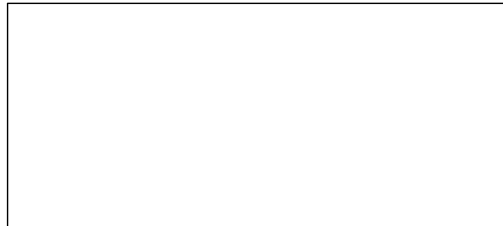
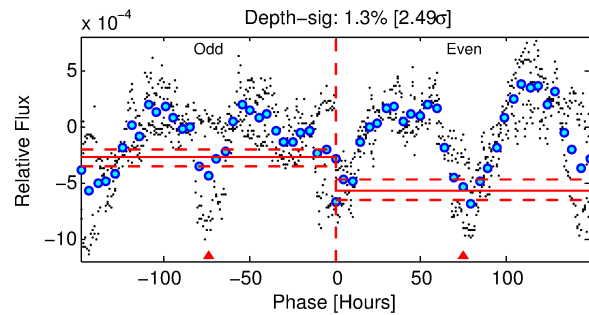
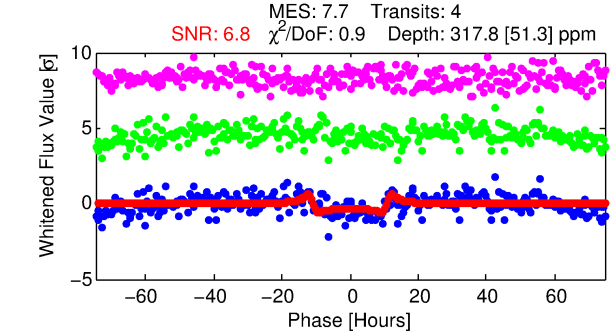
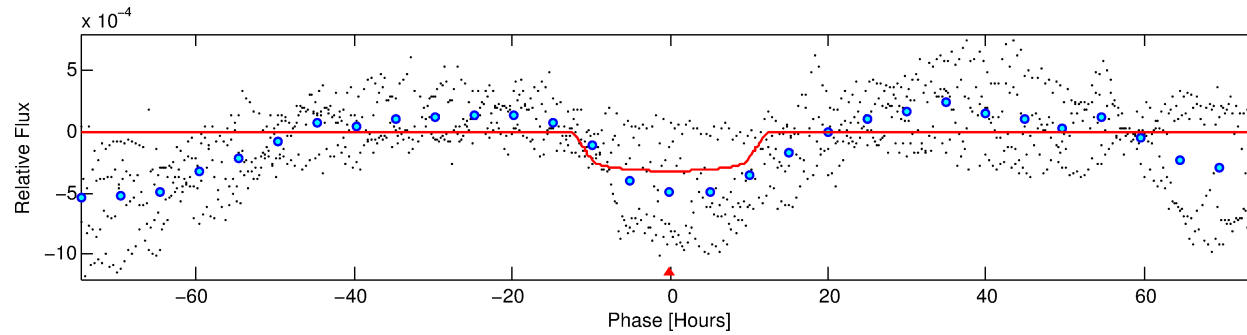
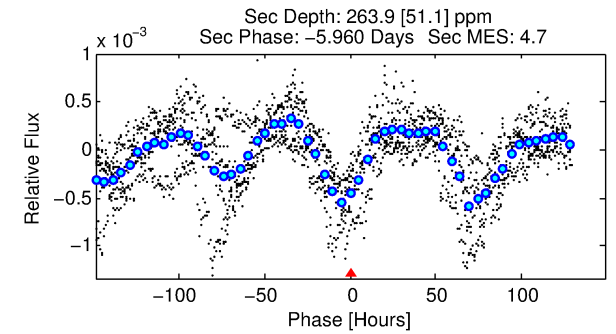
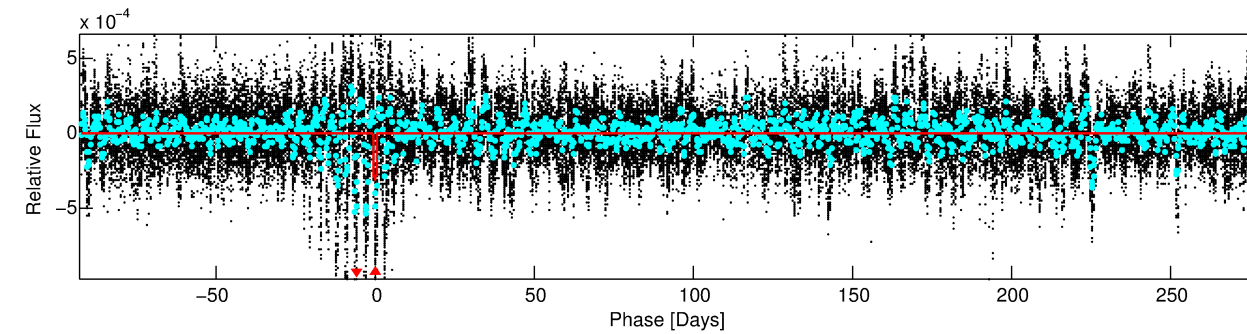
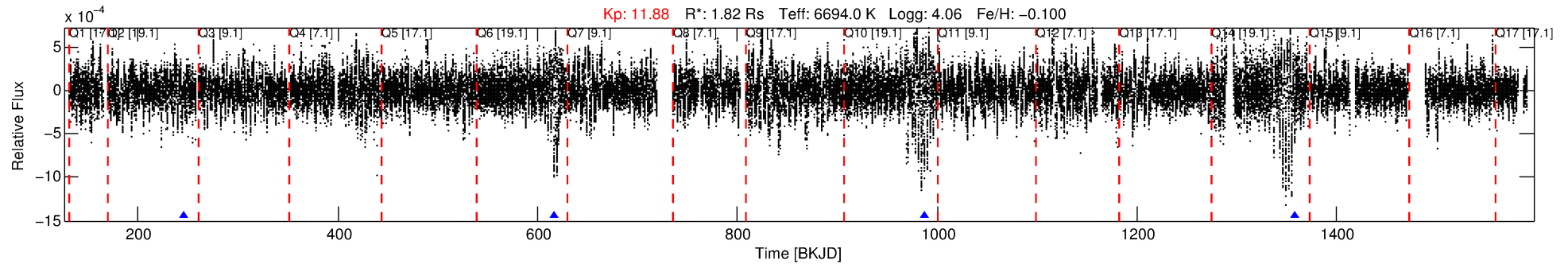
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010978167-01

No Significant Match Found

DV One-Page Summary

KIC: 10978167 Candidate: 1 of 1 Period: 370.634 d



DV Fit Results:

Period = 370.63423 [0.01146] d
Epoch = 246.2035 [0.0152] BKJD
Rp/R* = 0.0195 [0.0017]
a/R* = 48.94 [6.37]
b = 0.92 [0.02]
Seff = 4.66 [2.16]
Teq = 375 [43] K
Rp = 3.86 [1.31] Re
a = 1.1287 [0.3267] AU
Ag = 12413.16 [6304.68] [1.97σ]
Teffp = 6115 [461] K [12.39σ]

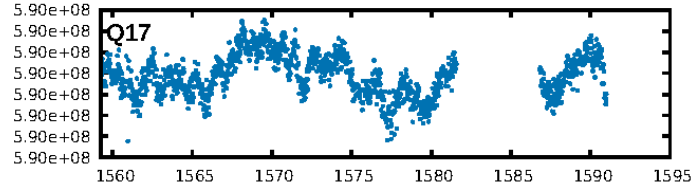
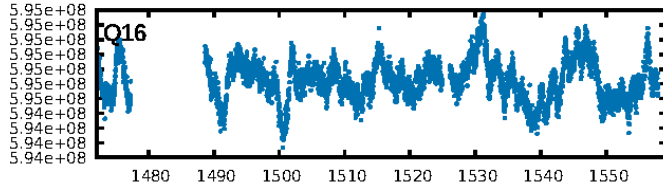
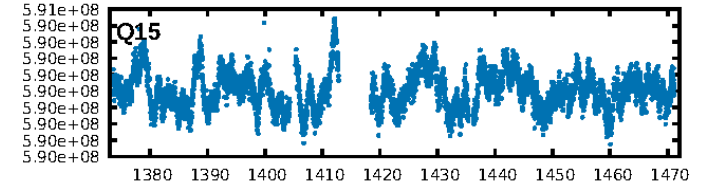
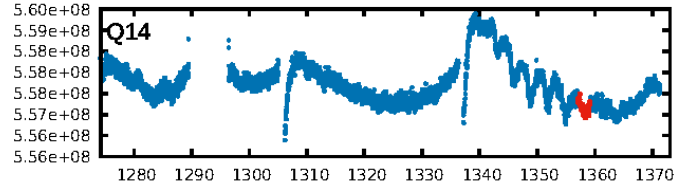
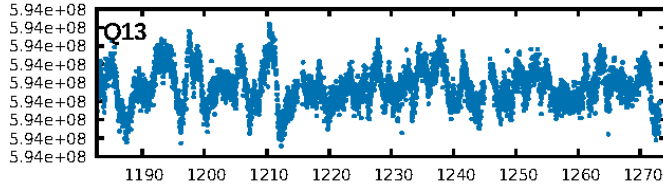
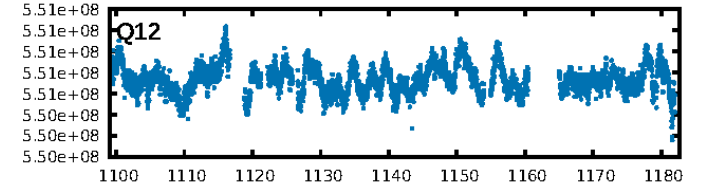
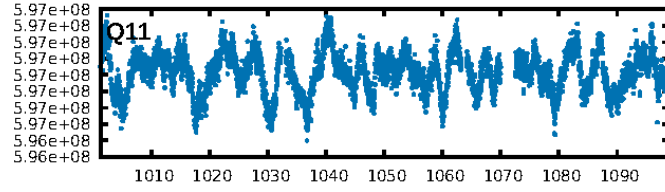
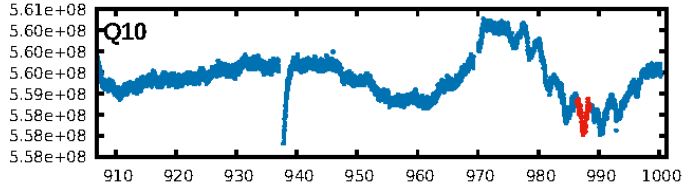
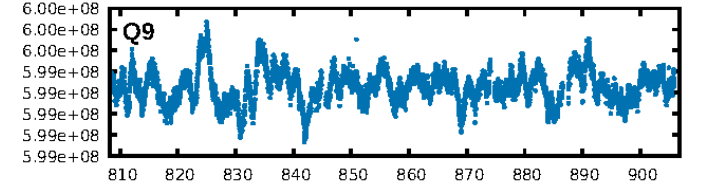
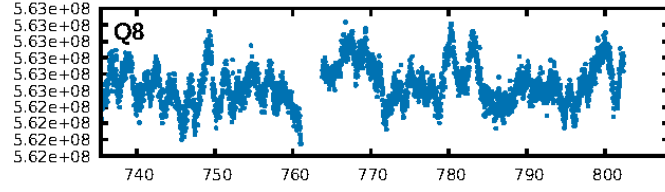
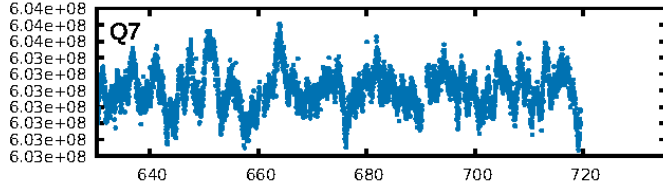
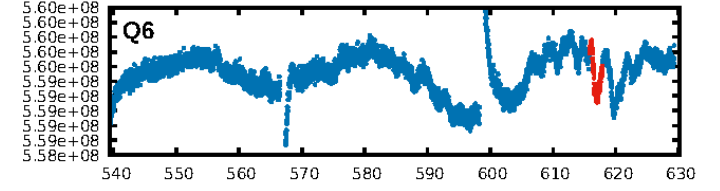
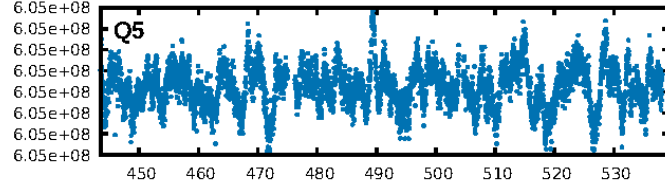
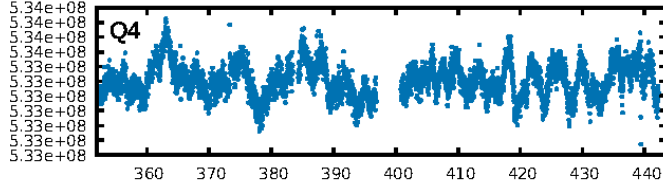
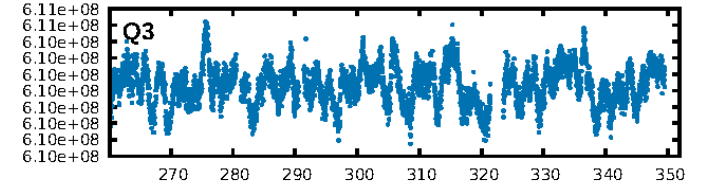
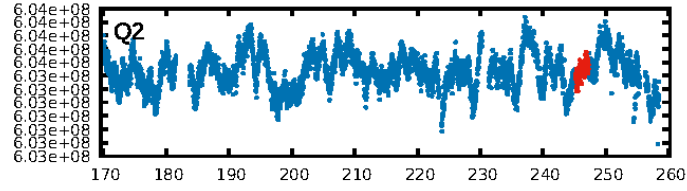
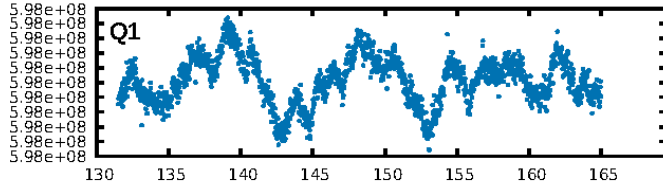
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 3.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.07e-10
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.7036
Centroid-sig: 2.8%
Centroid-so: 1.380 arcsec [1.31σ]
OotOffset-rm: N/A
OotOffset-st: 0/0/0 [0]
KicOffset-rm: N/A
KicOffset-st: 0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [3/3]

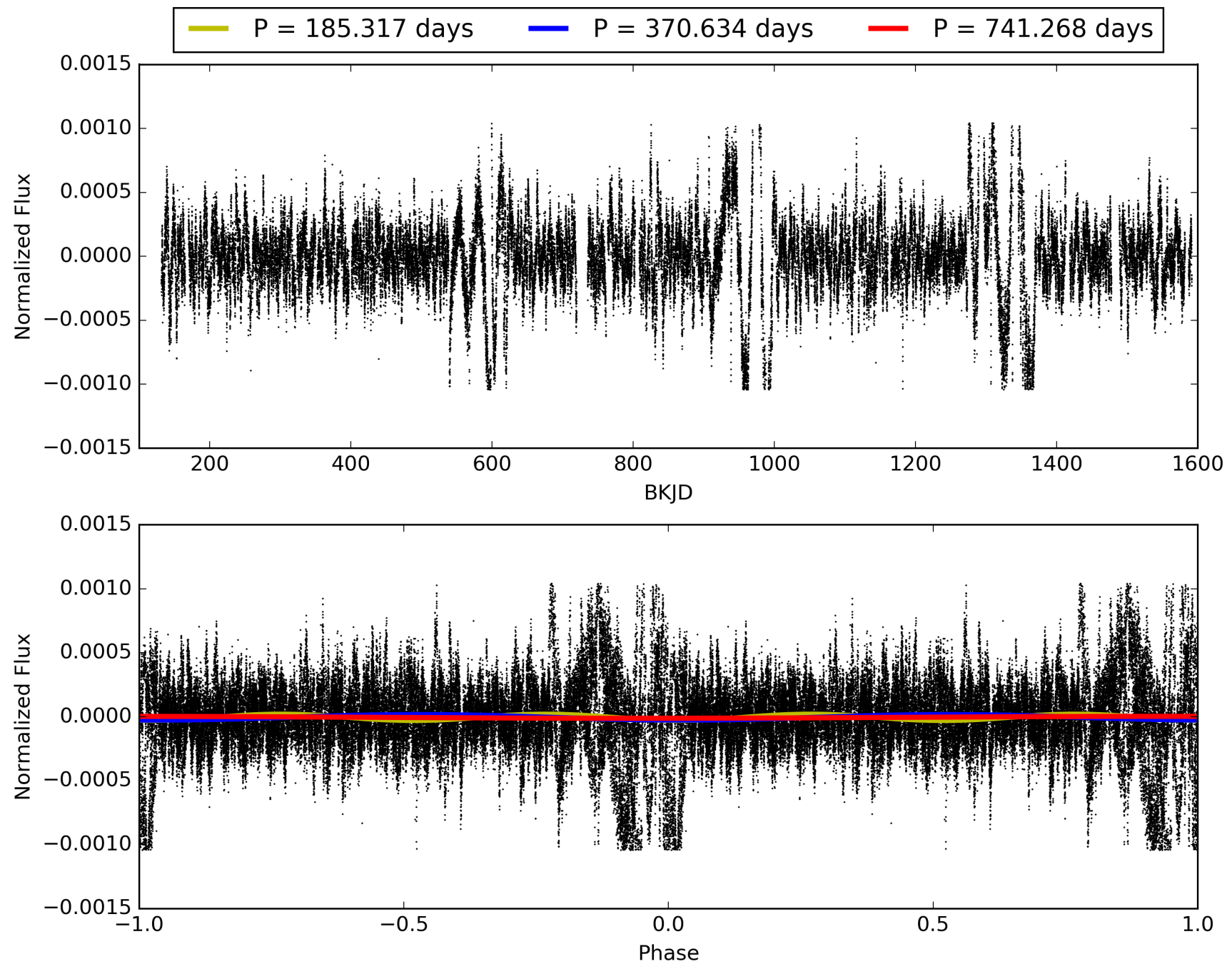
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 22:07:38 Z

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

TCE 010978167-01, PDC Light Curves

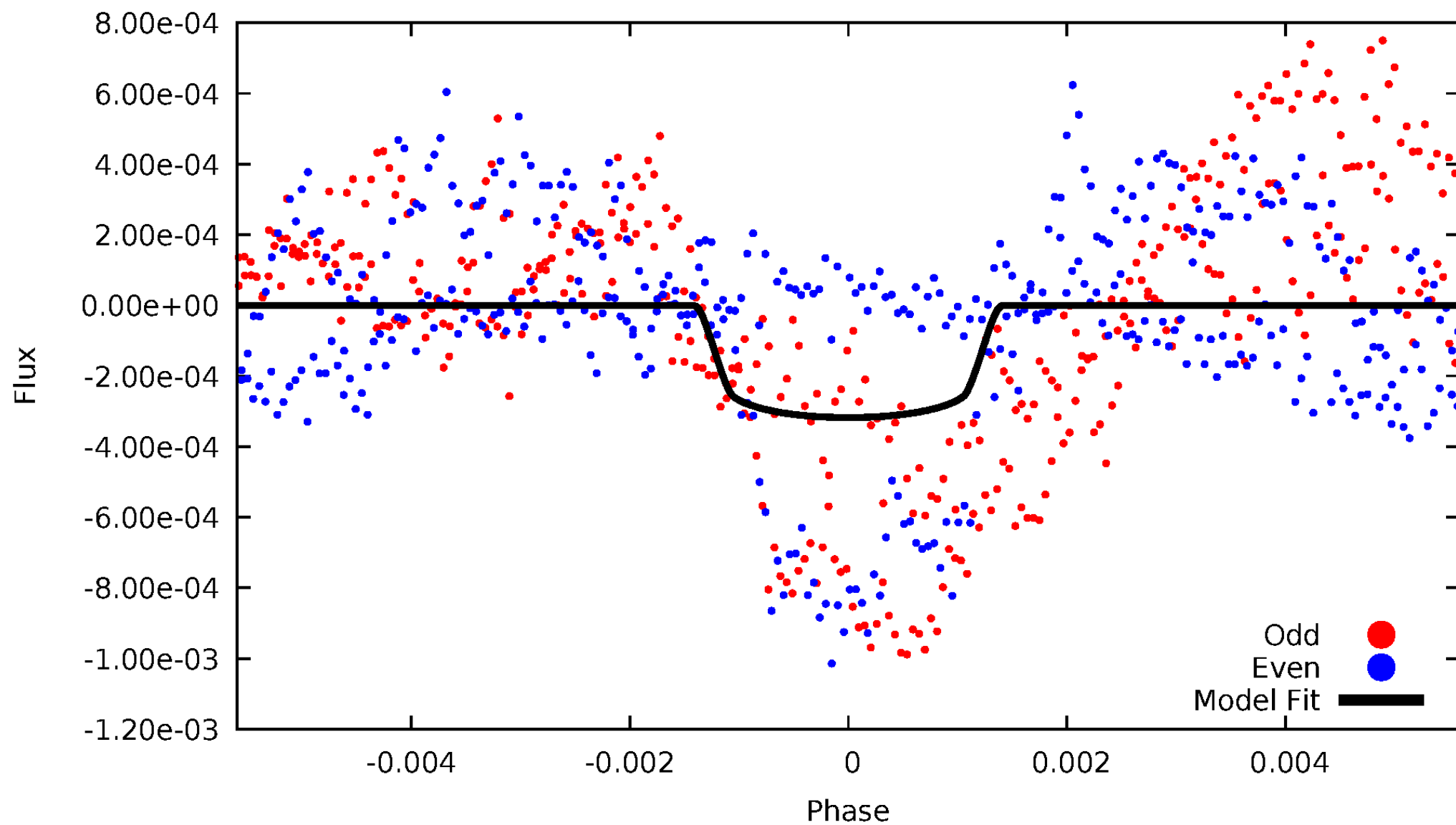


TCE 010978167-01



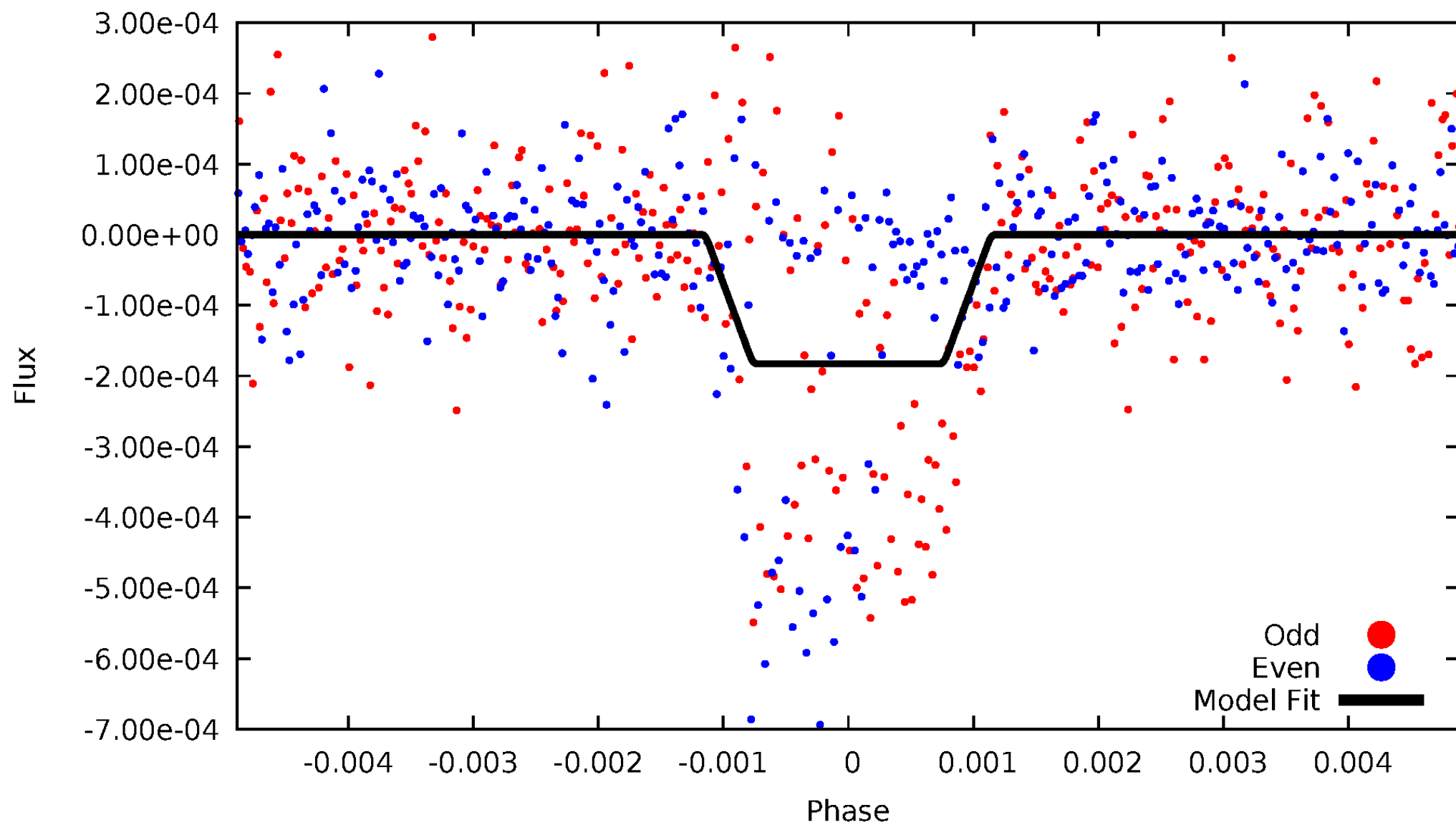
DV Odd/Even

TCE 010978167-01



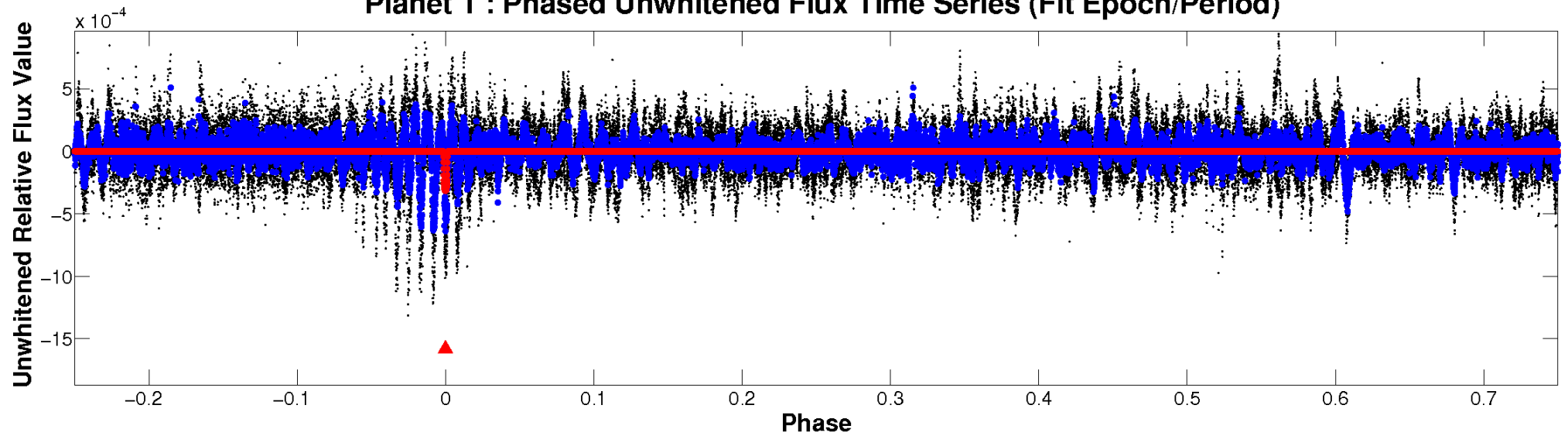
ALT Odd/Even

TCE 010978167-01

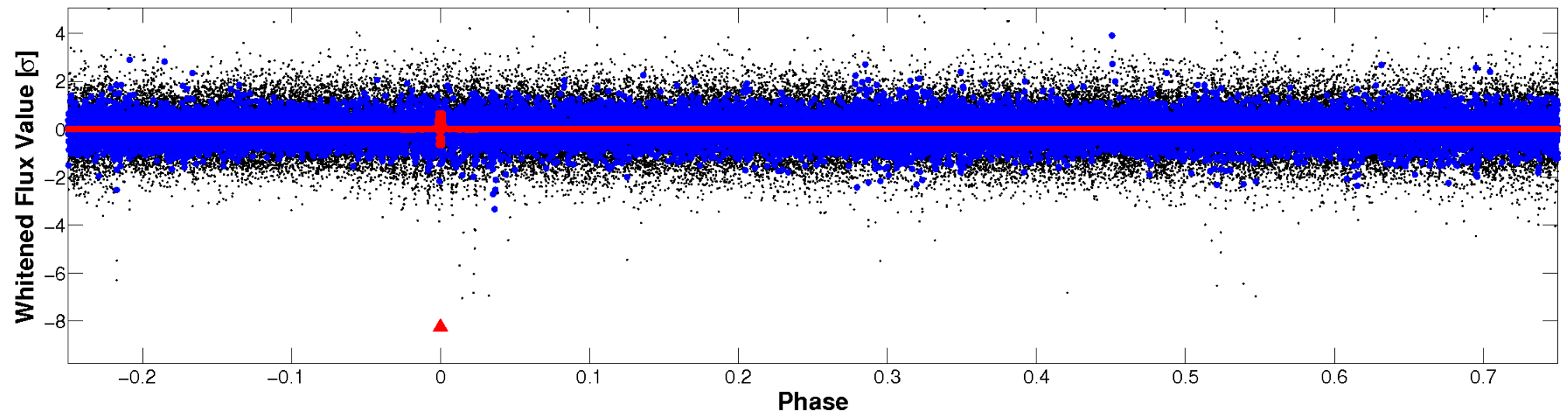


Non-Whitened Vs. Whitened Light Curve

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

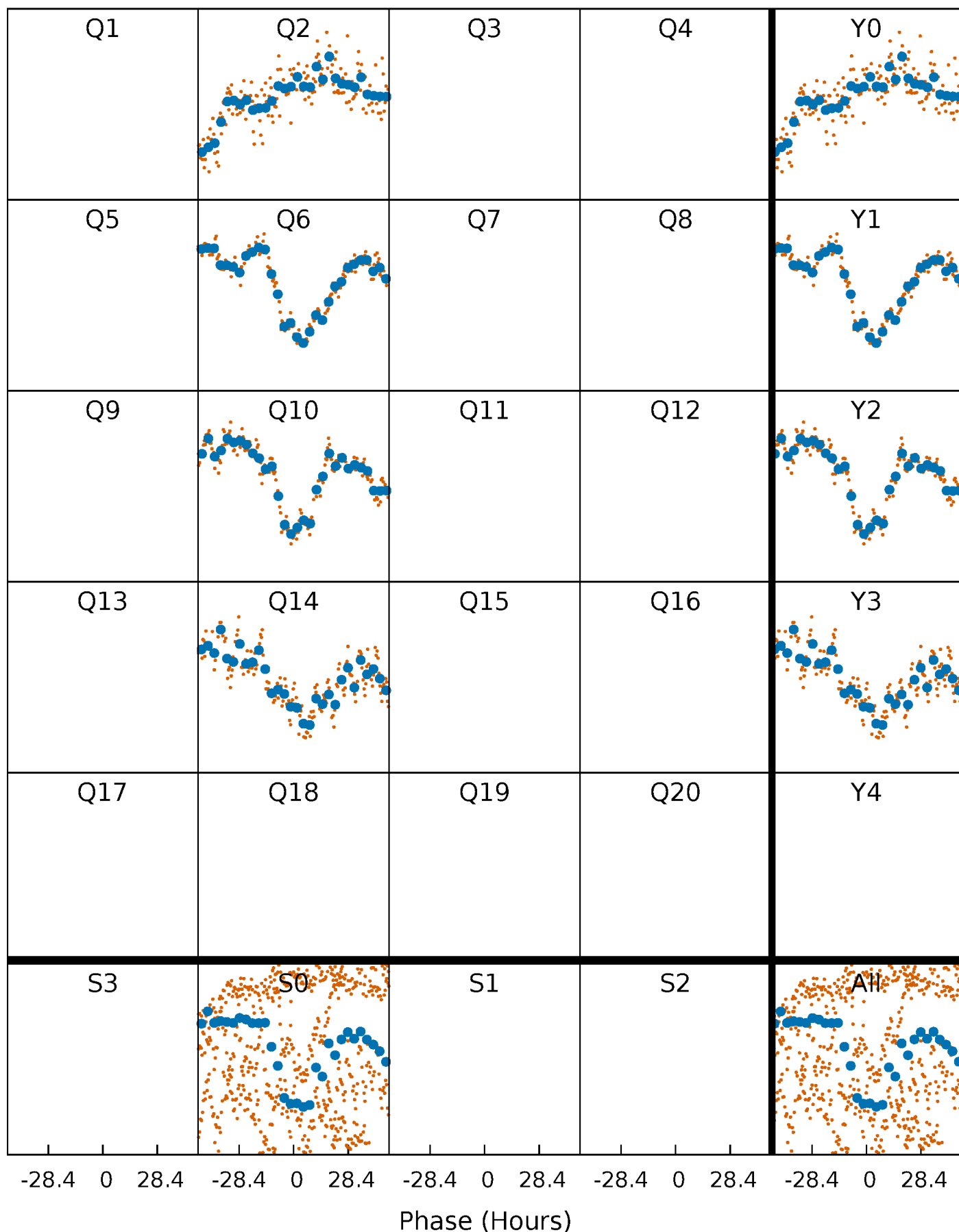


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



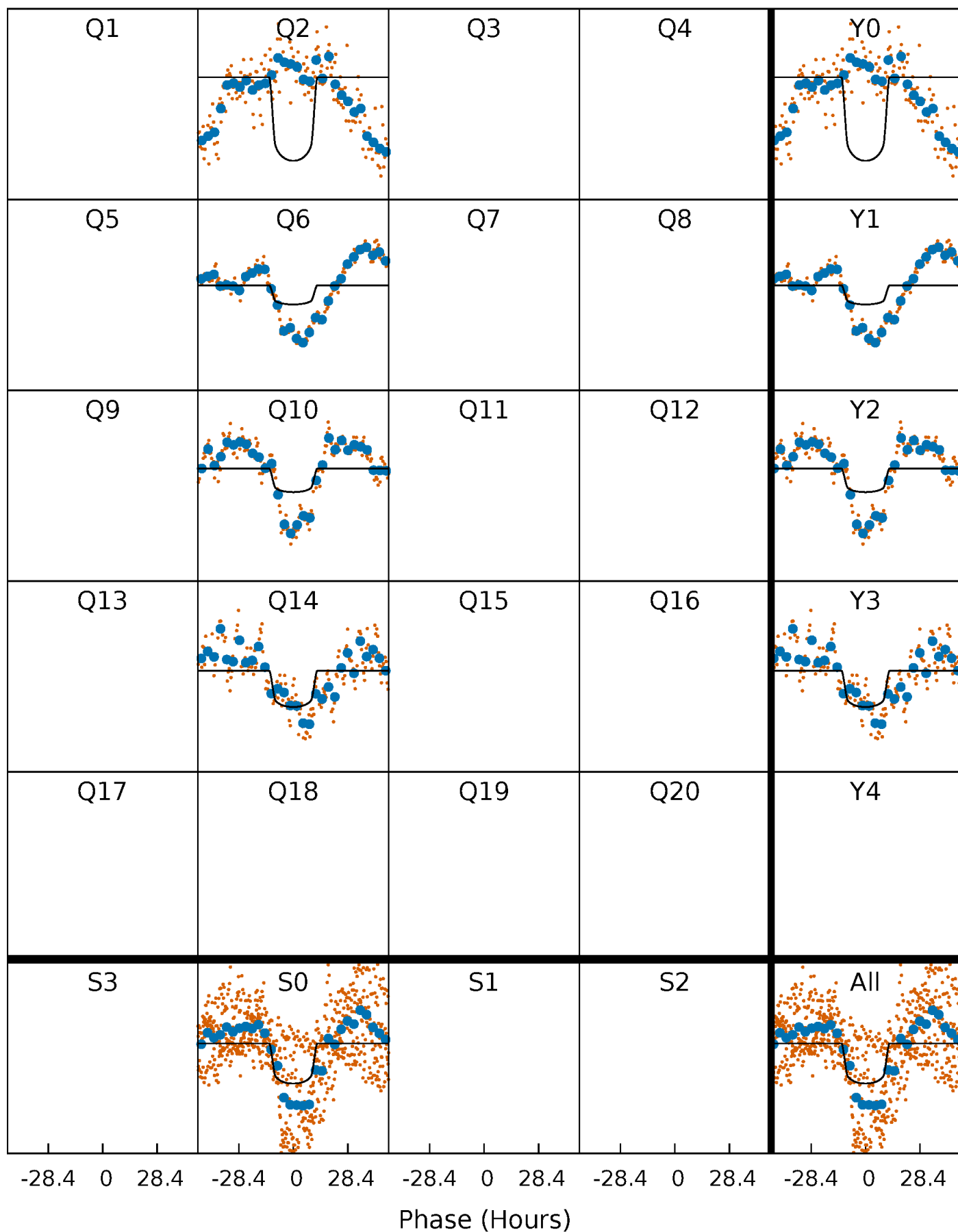
PDC Quarter-Phased Transit Curves

TCE 010978167-01 P=370.634229 Days $T_0=246.203510$ (BKJD)



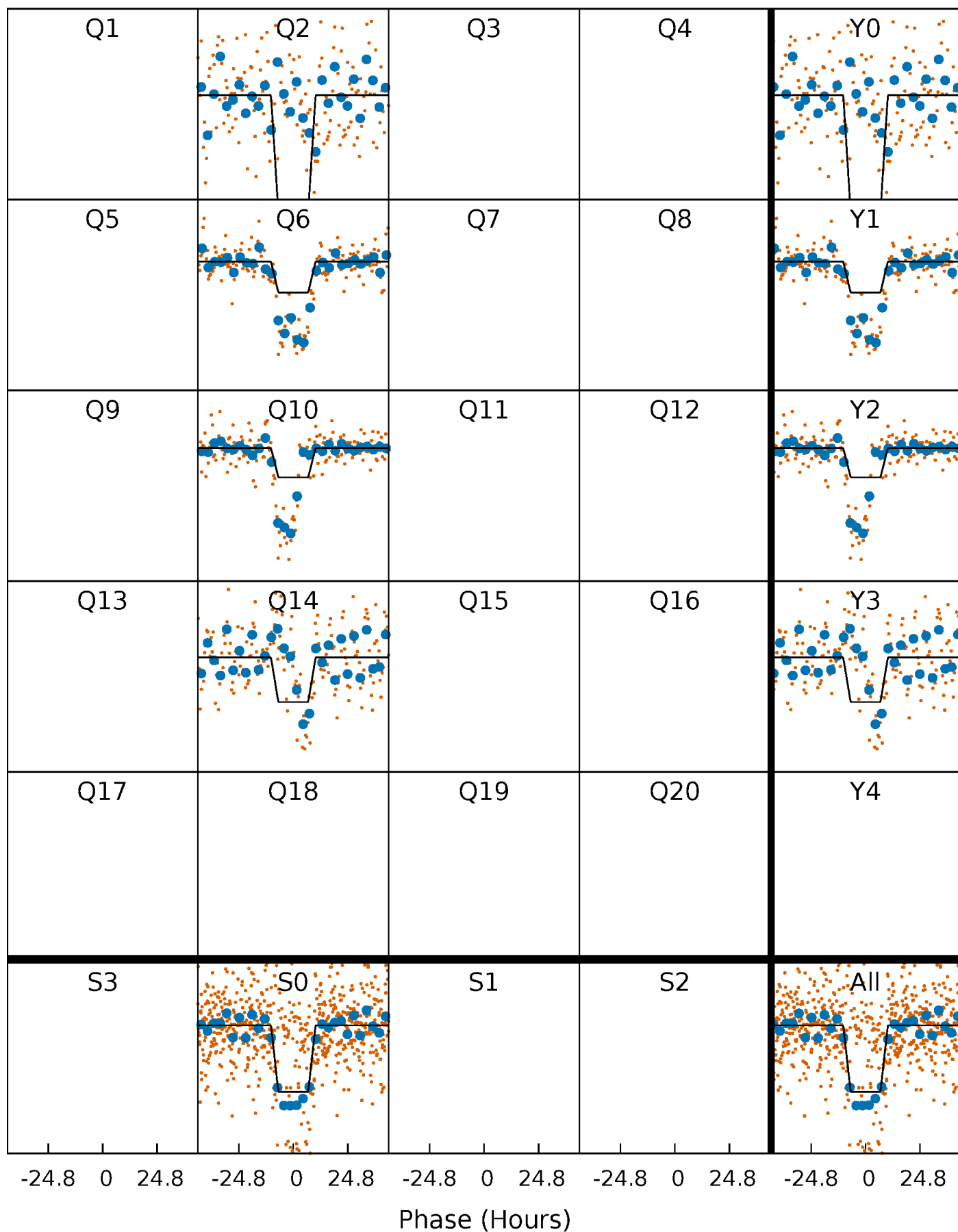
DV Quarter-Phased Transit Curves

TCE 010978167-01 P=370.634229 Days $T_0=246.203510$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

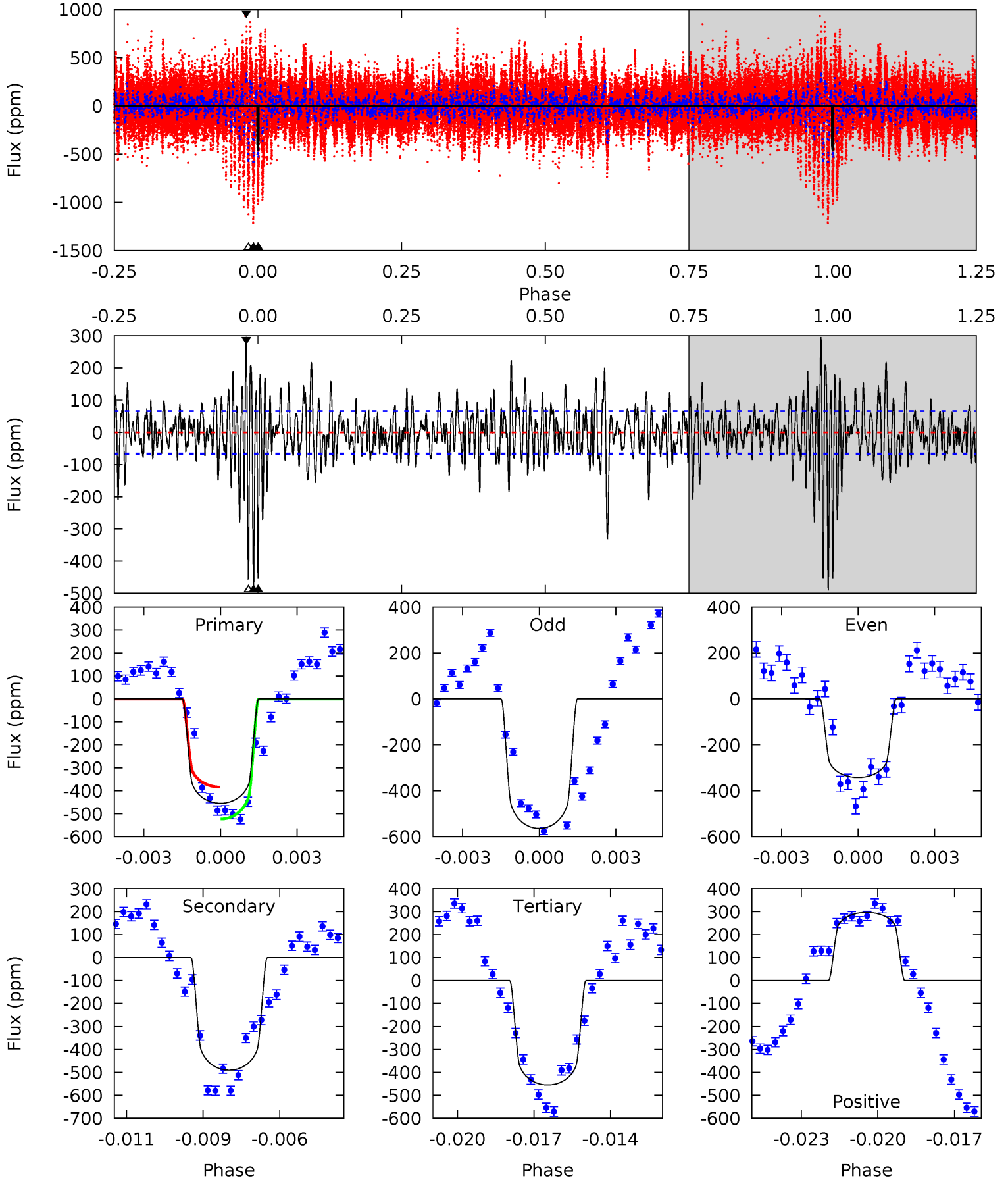
TCE 010978167-01 P=370.651156 Days $T_0=246.197071$ (BKJD)



DV Model-Shift Uniqueness Test

010978167-01, P = 370.634229 Days, E = 246.203510 Days

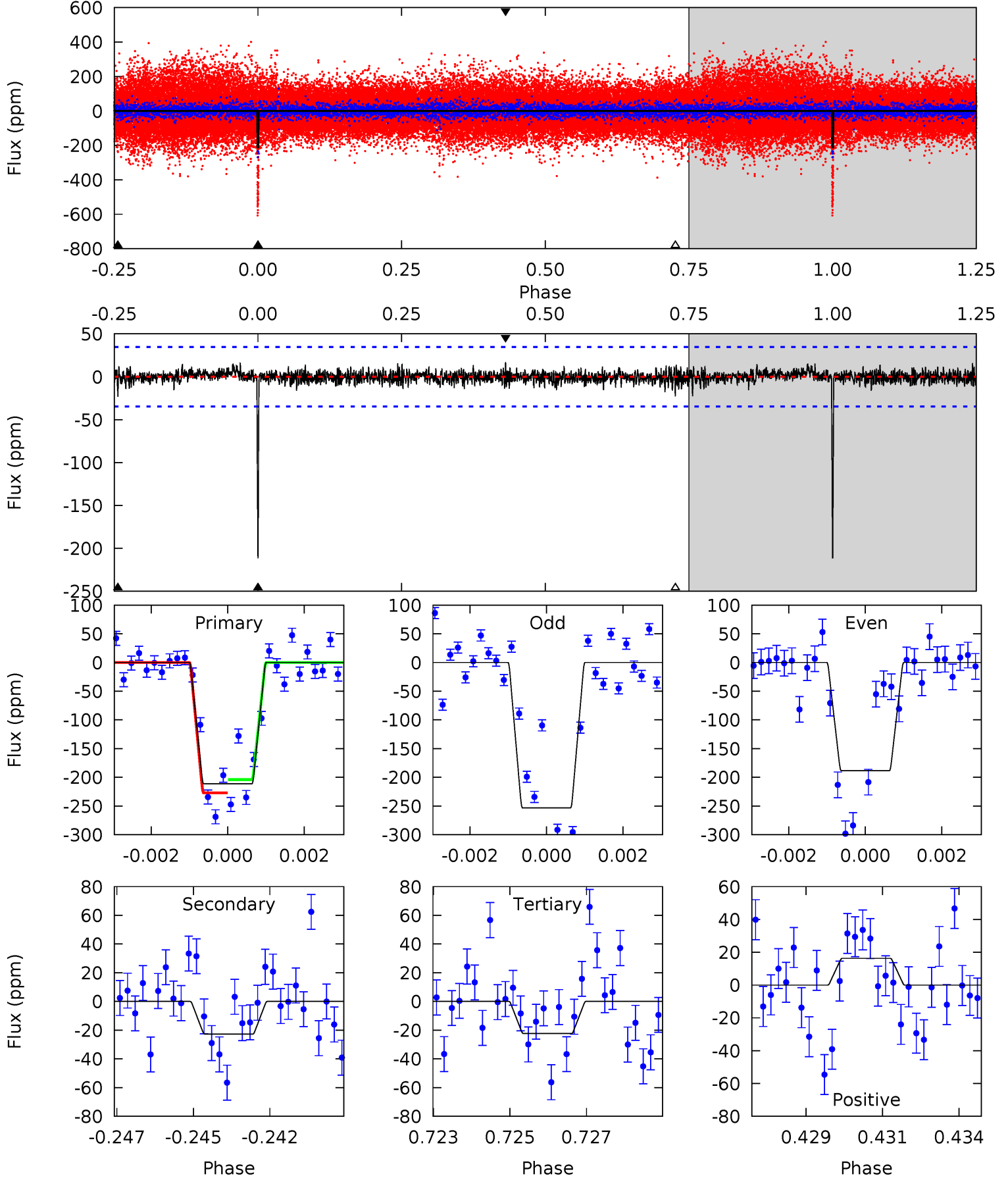
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
35.9	38.8	36.0	23.4	5.26	2.98	5.95	-0.05	12.5	2.80	15.4	8.68	0.86	0.38	5.50



Alt Model-Shift Uniqueness Test

010978167-01, P = 370.651156 Days, E = 246.197071 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
32.2	3.46	3.41	2.48	5.30	3.04	0.73	28.8	29.8	0.05	0.97	5.00	1.01	0.07	1.75



Stellar Parameters For KIC 010978167

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6694^{+187}_{-258}	$4.064^{+0.246}_{-0.164}$	$-0.100^{+0.250}_{-0.300}$	$1.817^{+0.544}_{-0.598}$	$1.401^{+0.204}_{-0.272}$	$0.329^{+0.462}_{-0.157}$
	+3%/-4%	+6%/-4%	+250%/-300%	+30%/-33%	+15%/-19%	+140%/-48%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 010978167-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-490 ± 13	$3.79^{+0.68}_{-0.66}$	517^{+39}_{-42}	7147^{+462}_{-442}	23901^{+10014}_{-6547}
Alt.	-23 ± 7	$2.63^{+0.59}_{-0.54}$	521^{+41}_{-48}	4188^{+314}_{-303}	2241^{+1412}_{-905}

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

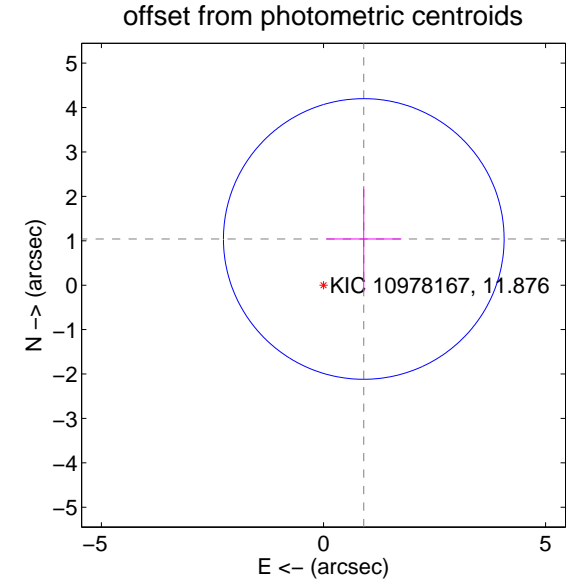
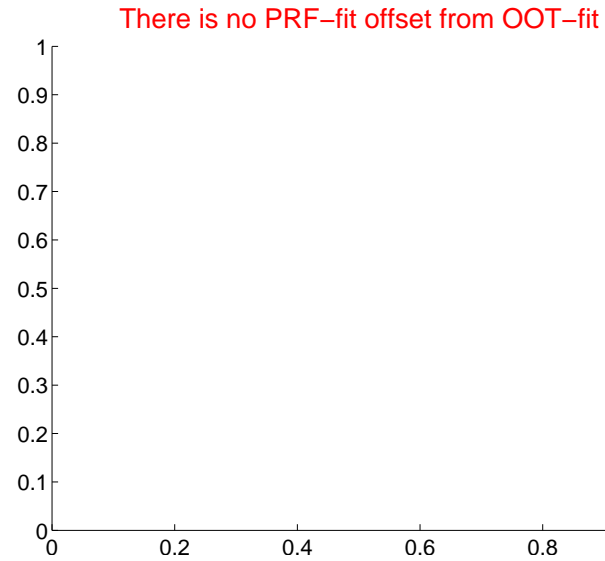
DV Centroid Data

Supplemental centroid analysis for 010978167-01. **Kepler magnitude: 11.88.** Transit SNR 6.76

There are 0 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	1.38 ± 1.05	1.31	-0.91 ± 0.85	1.04 ± 1.19

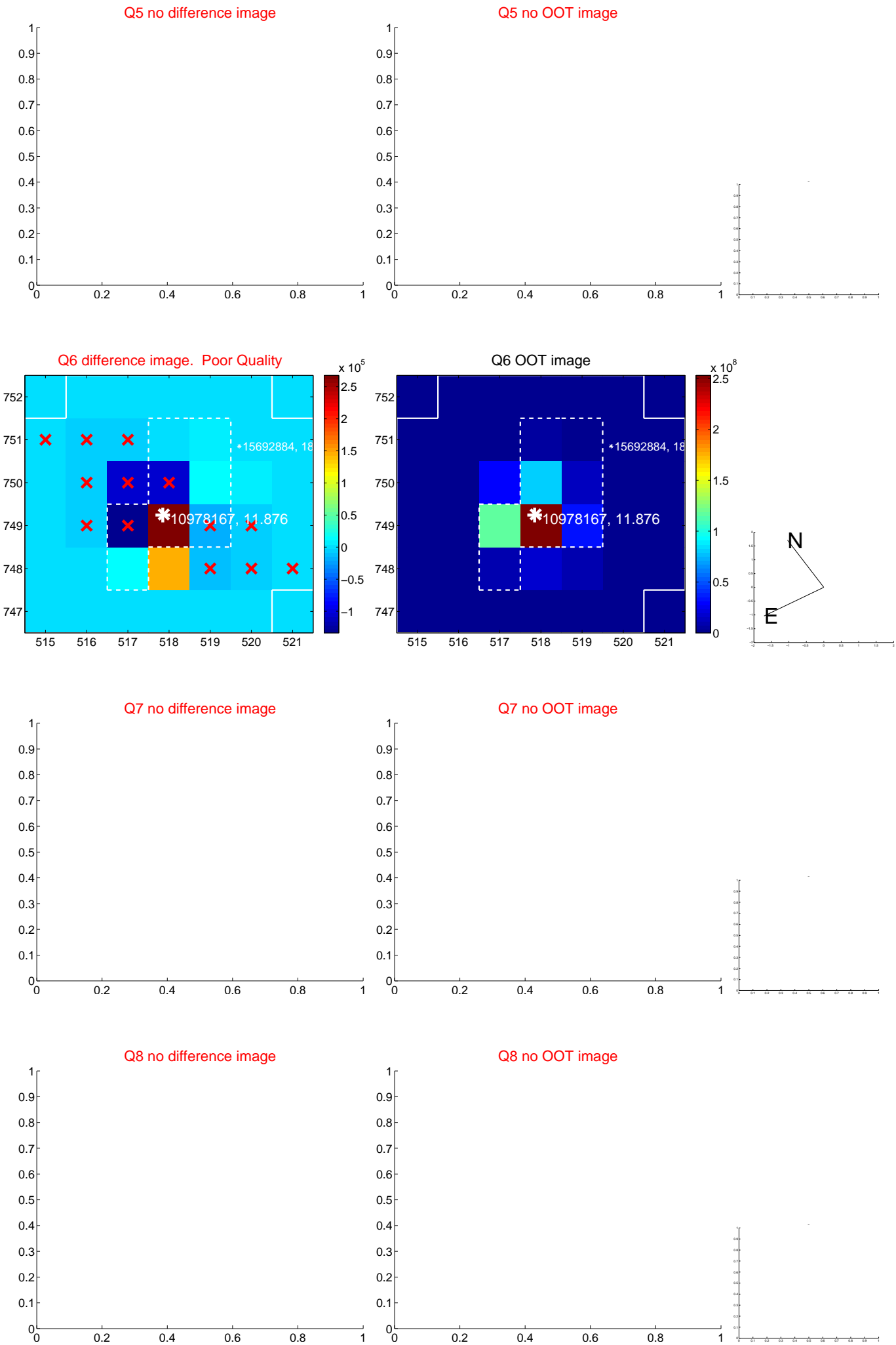


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

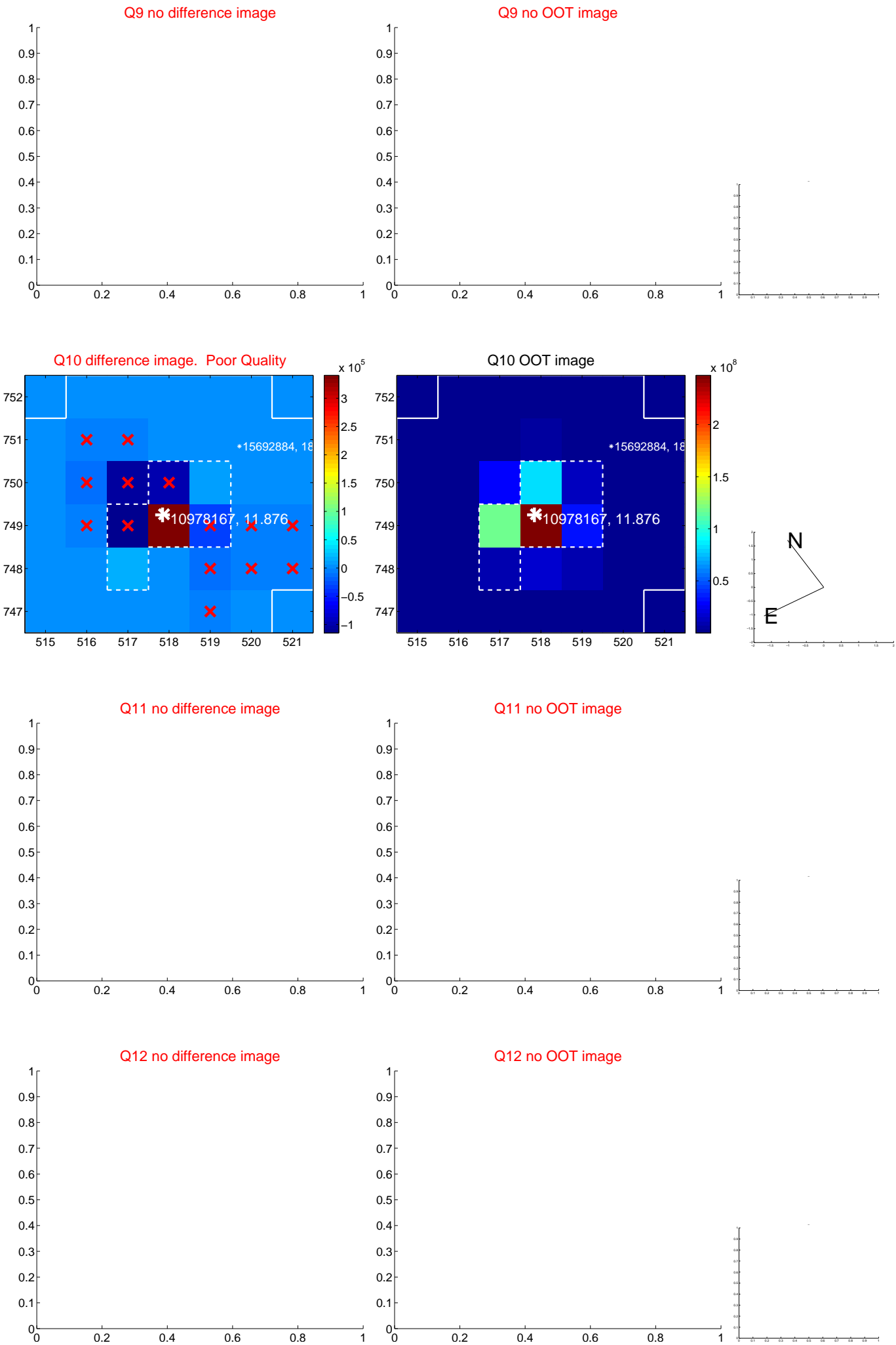
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



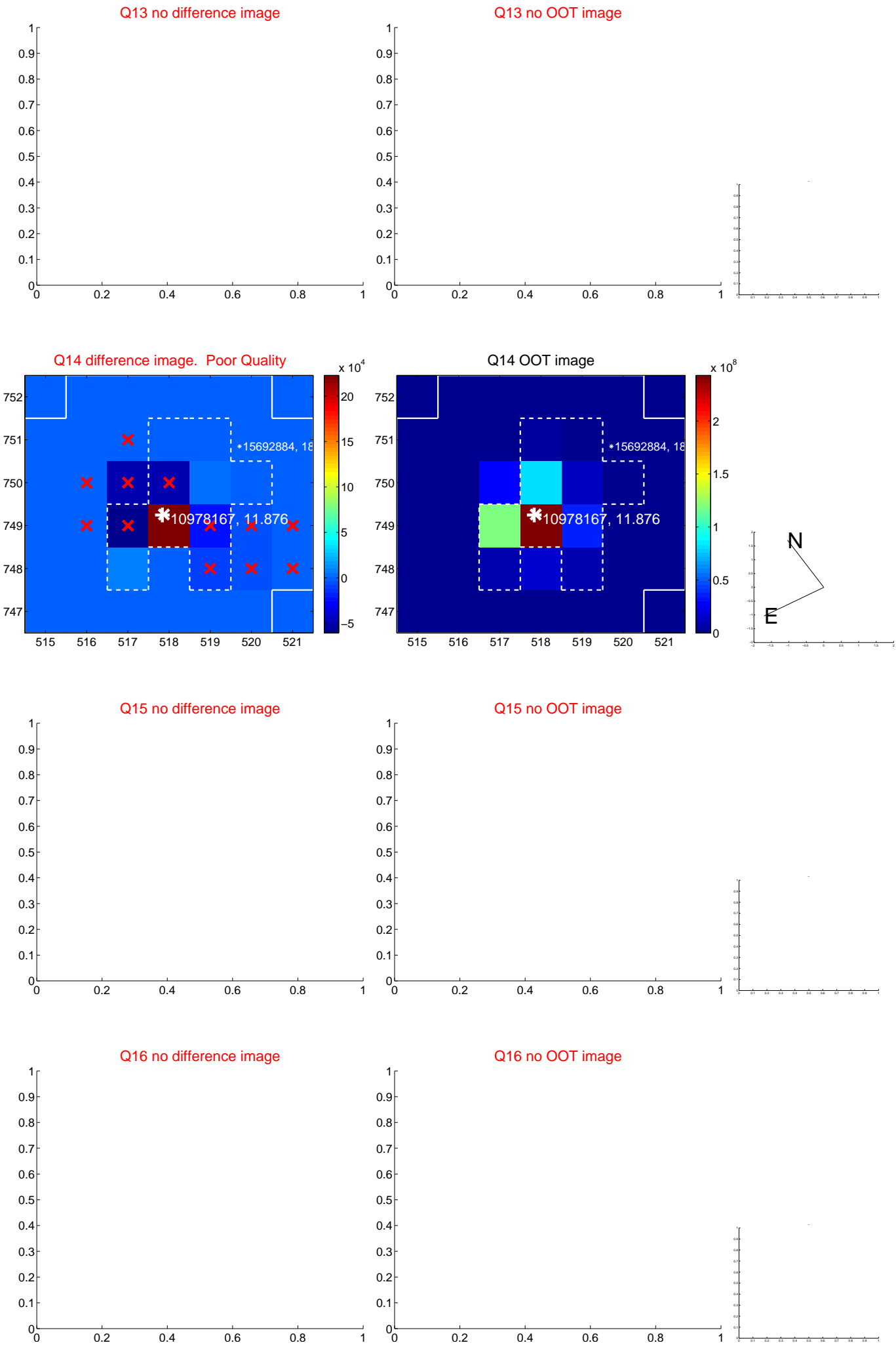
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



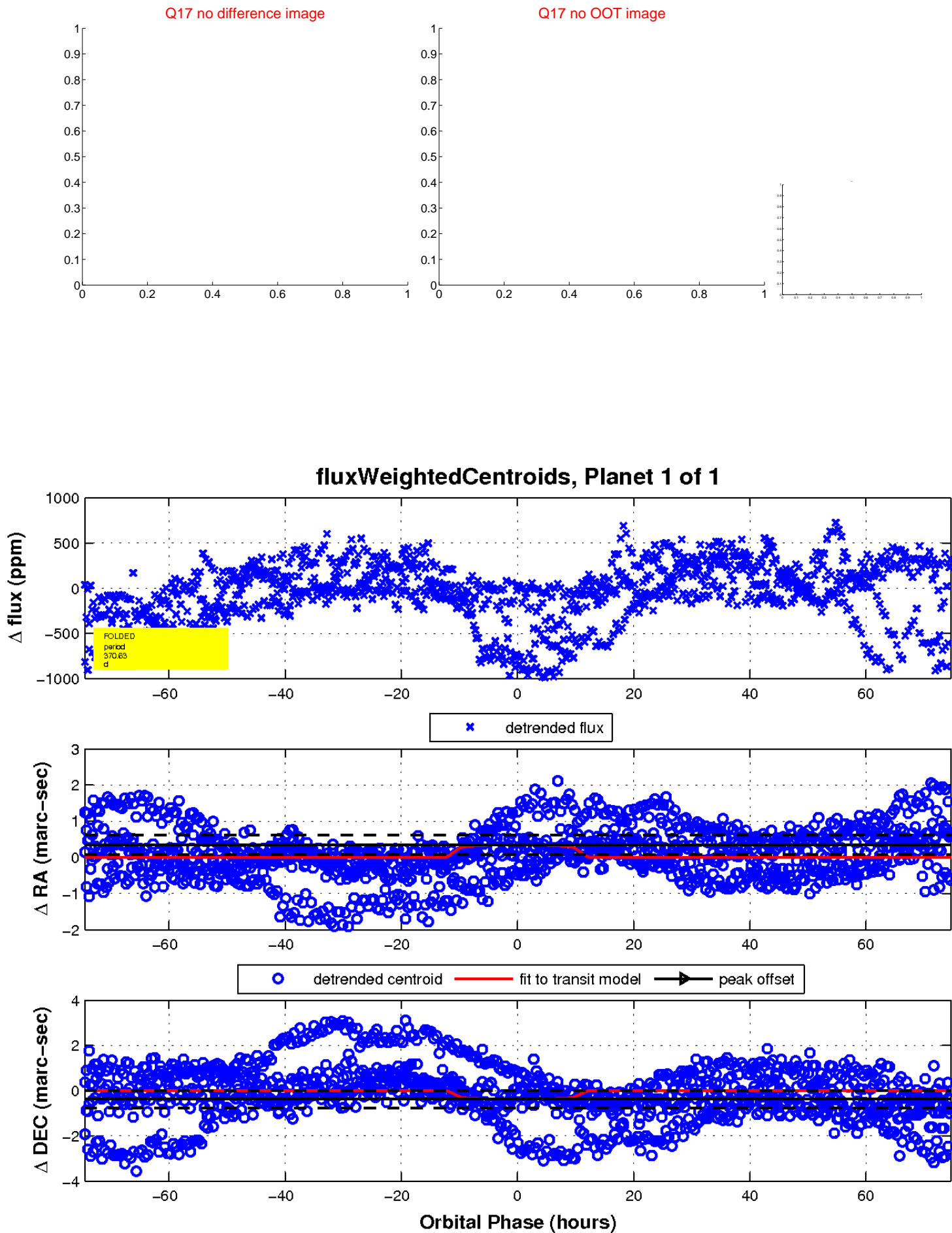
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

