

KIC 010320278

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})
010320278-01	OBS	No	640.499616	271.246014	10403.8	31.988	13.4	25.6	0.53	4635	9.81	0.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010320278-01	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_POS_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.

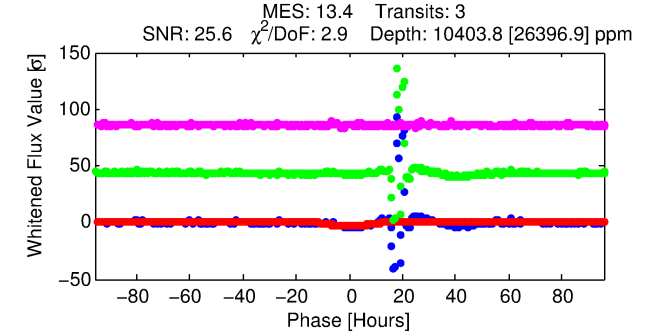
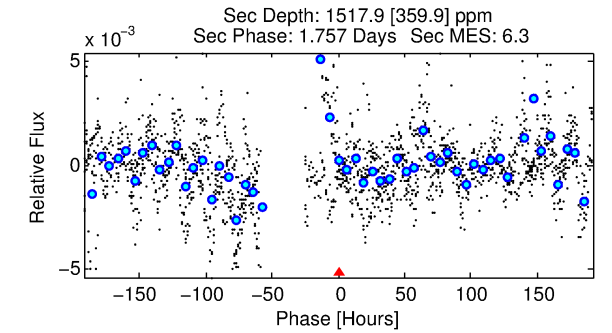
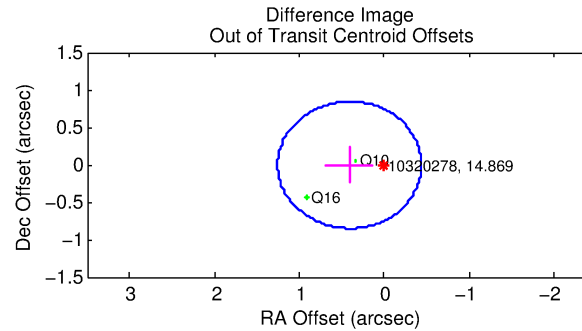
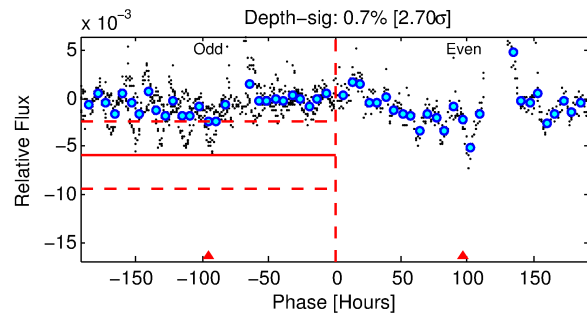
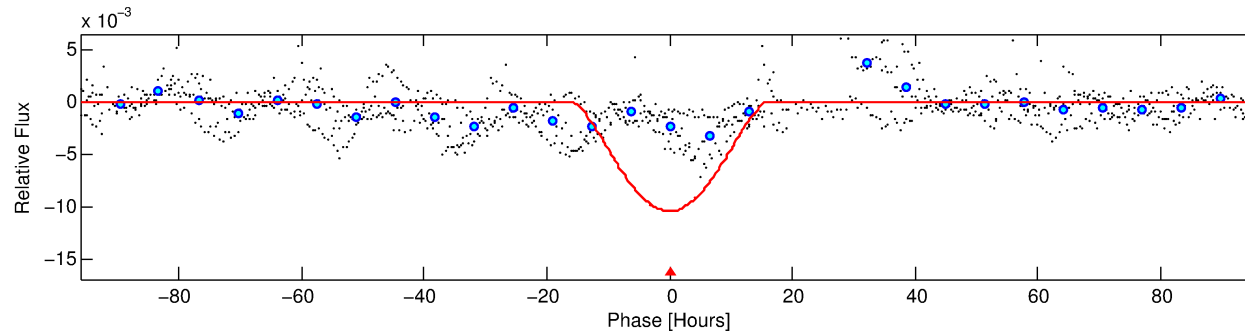
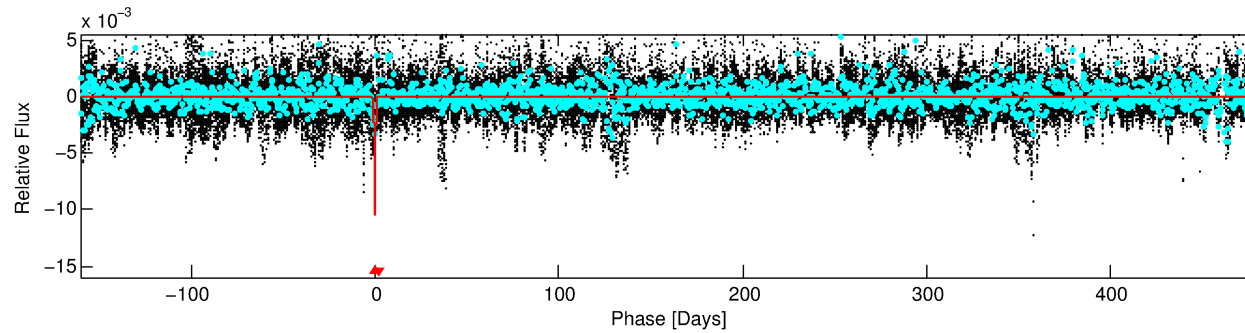
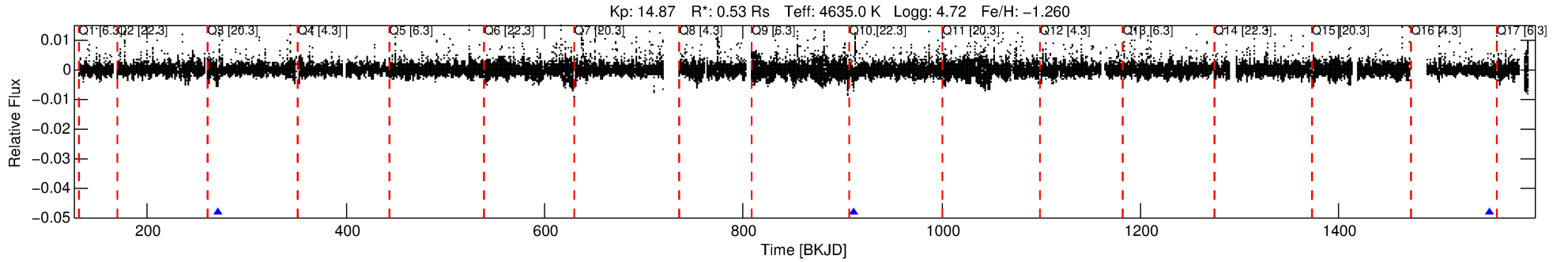
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010320278-01

No Significant Match Found

DV One-Page Summary

KIC: 10320278 Candidate: 1 of 1 Period: 640.500 d



DV Fit Results:

Period = 640.49962 [0.06208] d
Epoch = 271.2460 [0.0775] BKJD
Rp/R* = 0.1712 [1.1967]
a/R* = 93.28 [80.38]
b = 1.00 [1.37]
Seff = 0.08 [0.01]
Teq = 136 [5] K
Rp = 9.81 [68.56] Re
a = 1.1798 [0.0704] AU
Ag = 12080.20 [168894.68] [0.07σ]
Teffp = 2211 [7728] K [0.27σ]

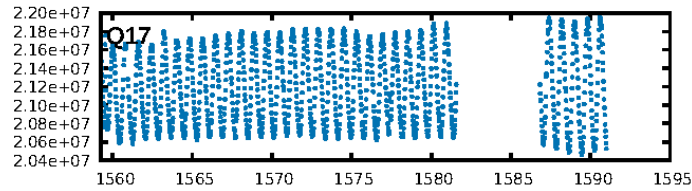
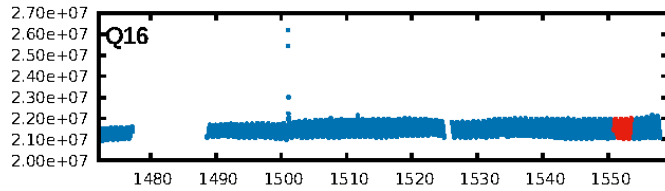
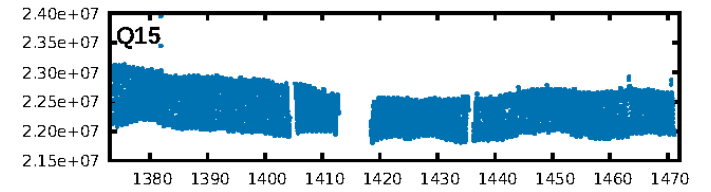
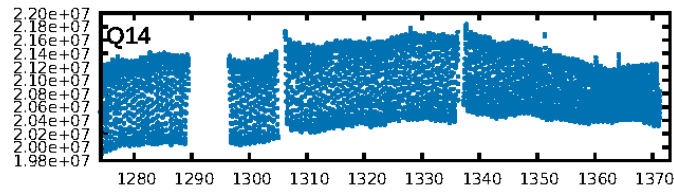
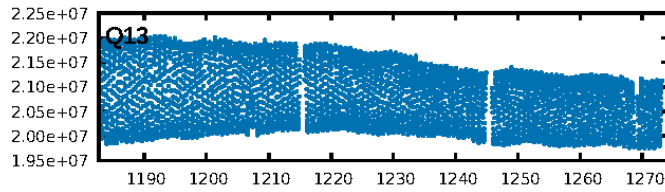
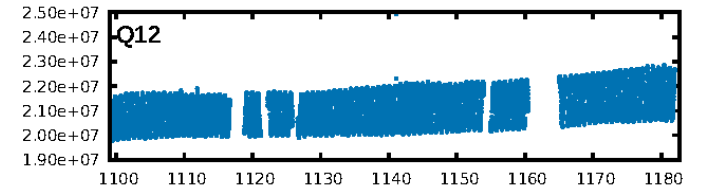
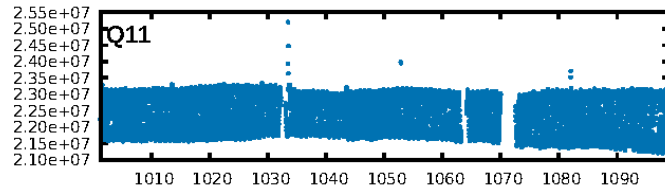
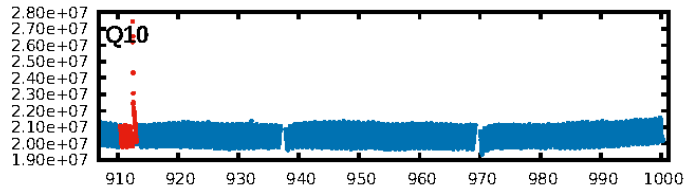
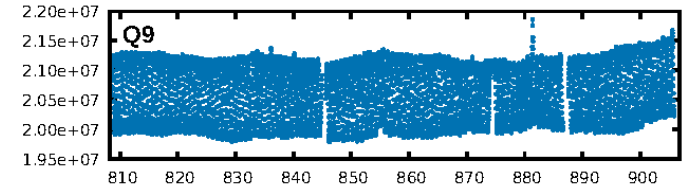
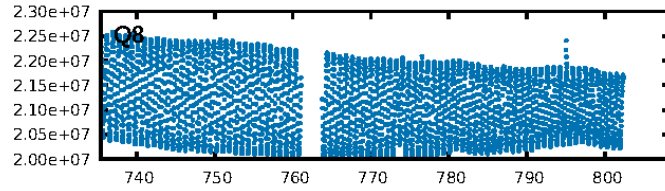
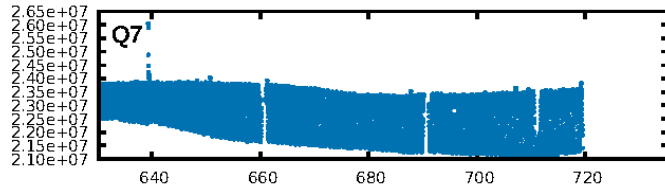
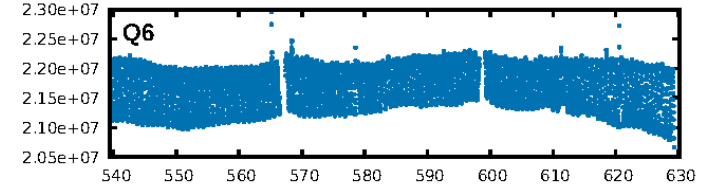
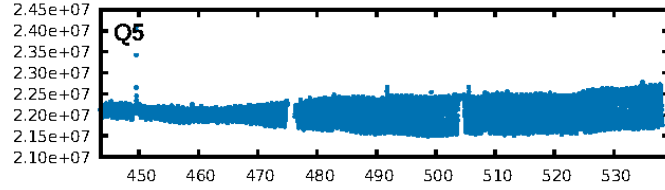
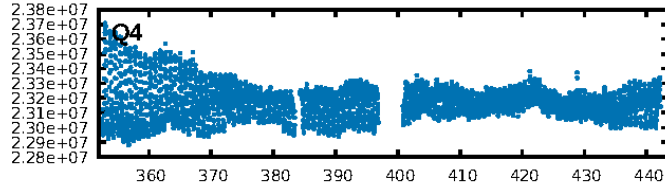
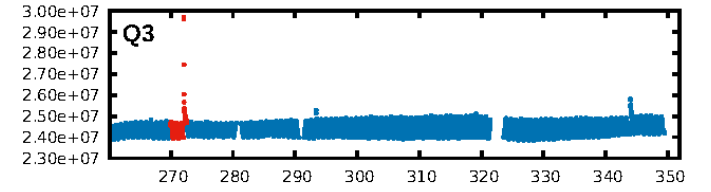
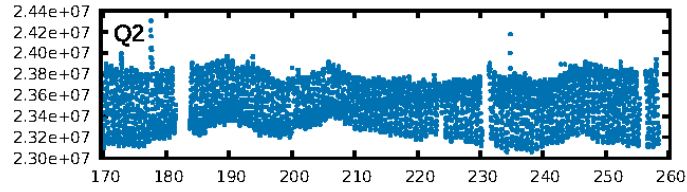
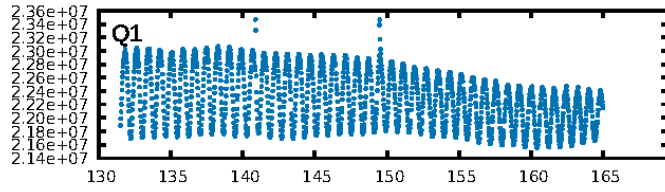
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: 3.52e-16
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -15.33
Centroid-sig: 52.5%
Centroid-so: 0.466 arcsec [8.21σ]
OotOffset-rm: 0.406 arcsec [1.44σ]
KicOffset-rm: 0.568 arcsec [3.11σ]
OotOffset-st: 1/0/1/0 [2]
KicOffset-st: 1/0/1/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

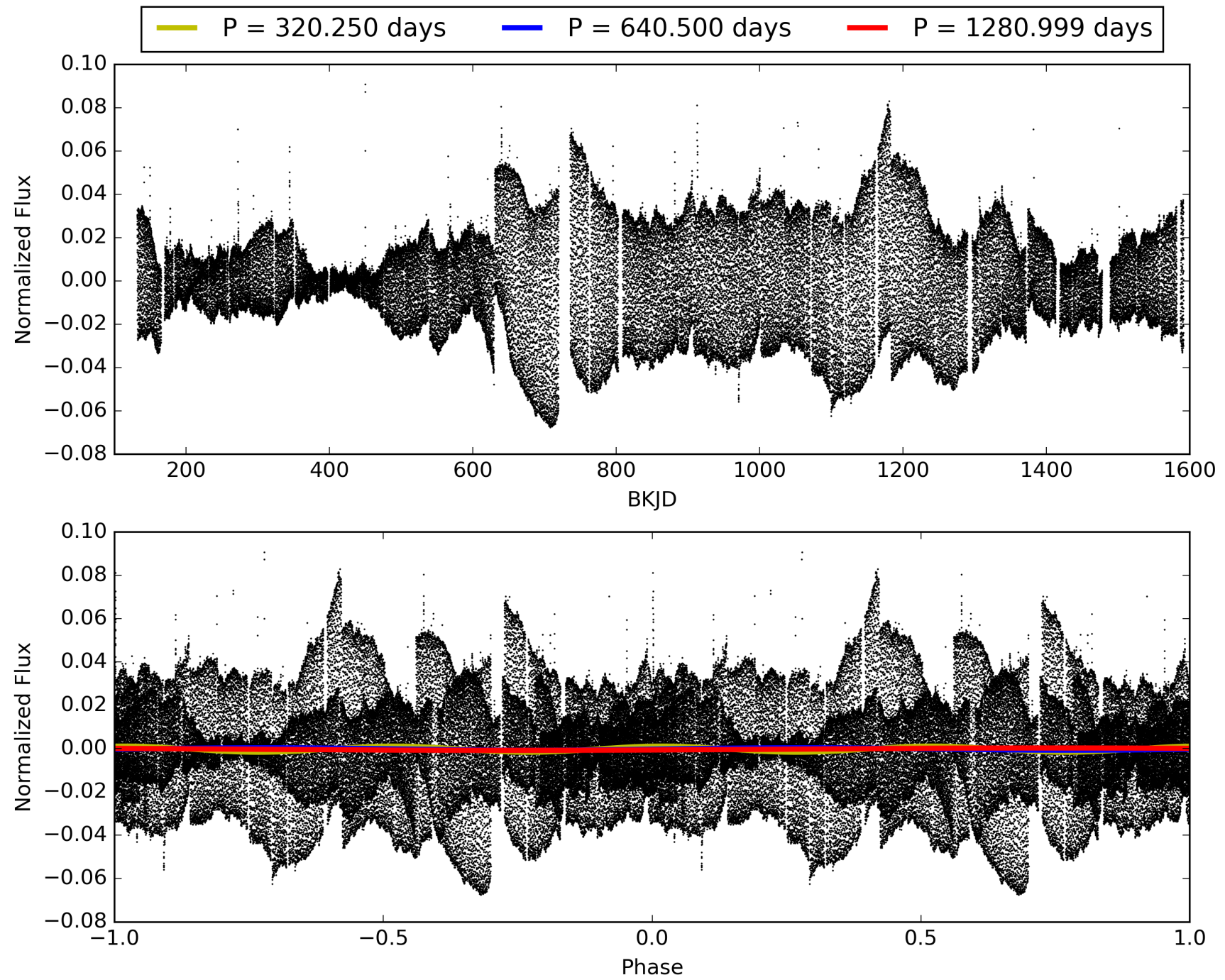
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 17:04:59 Z

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

TCE 010320278-01, PDC Light Curves

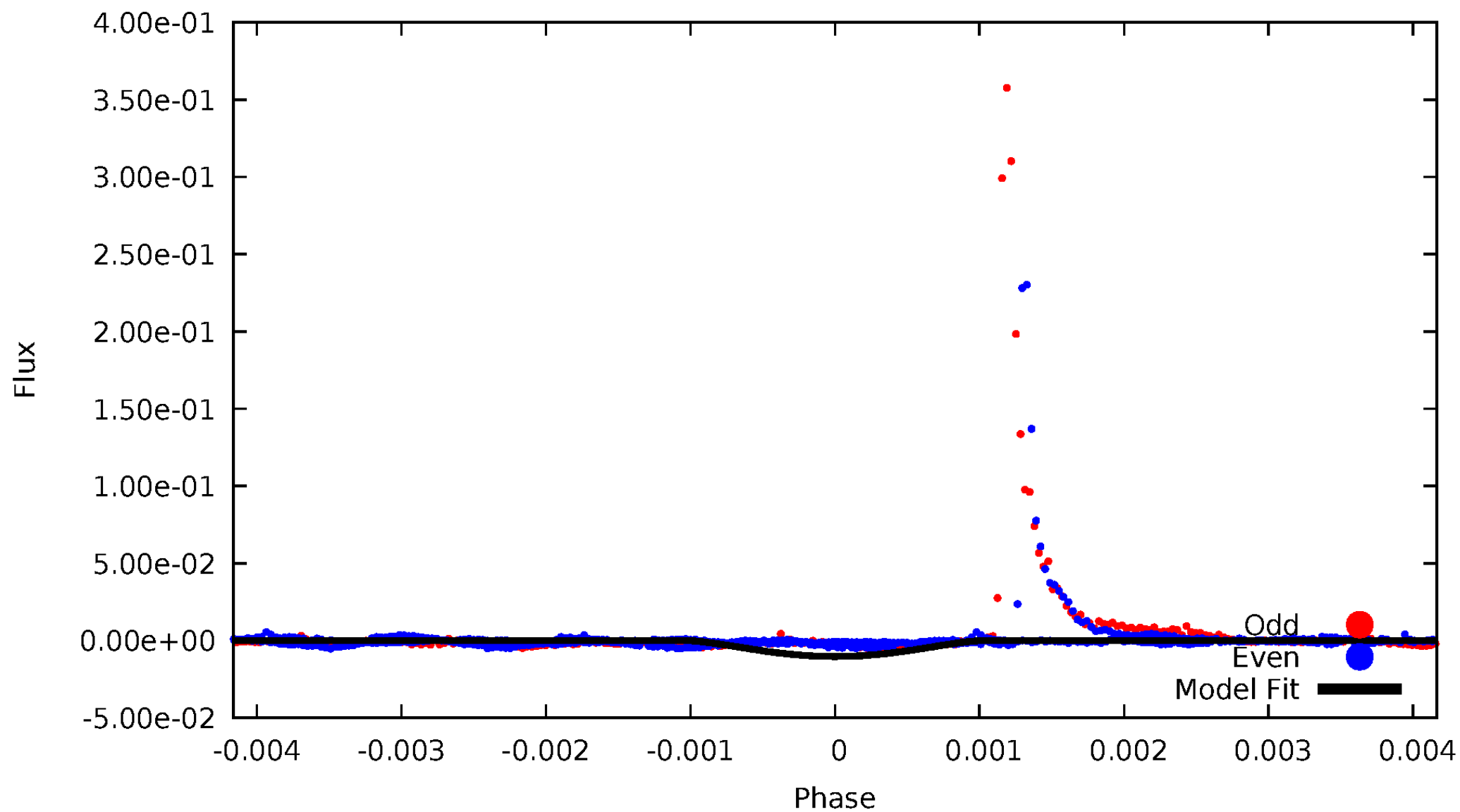


TCE 010320278-01



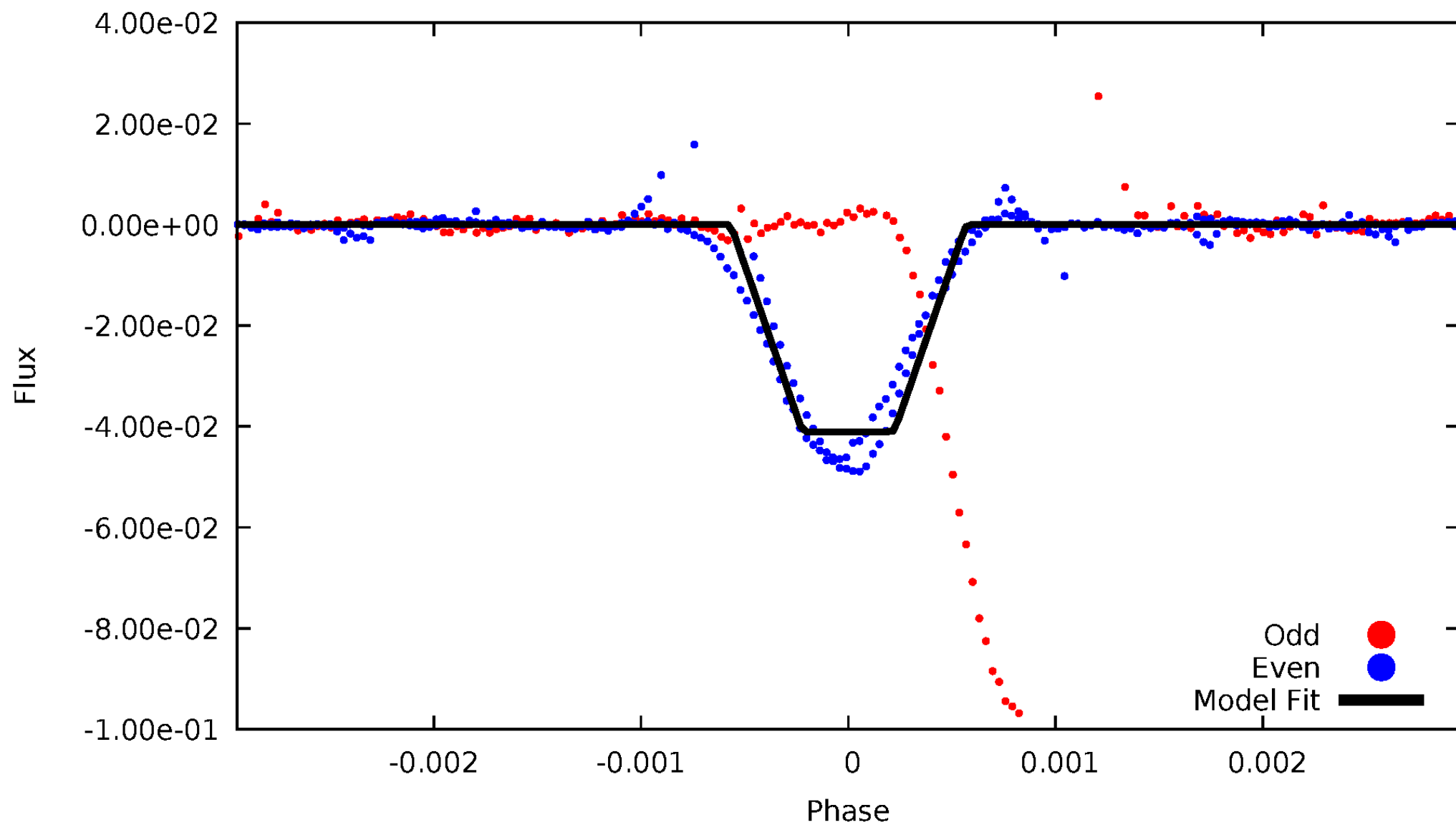
DV Odd/Even

TCE 010320278-01



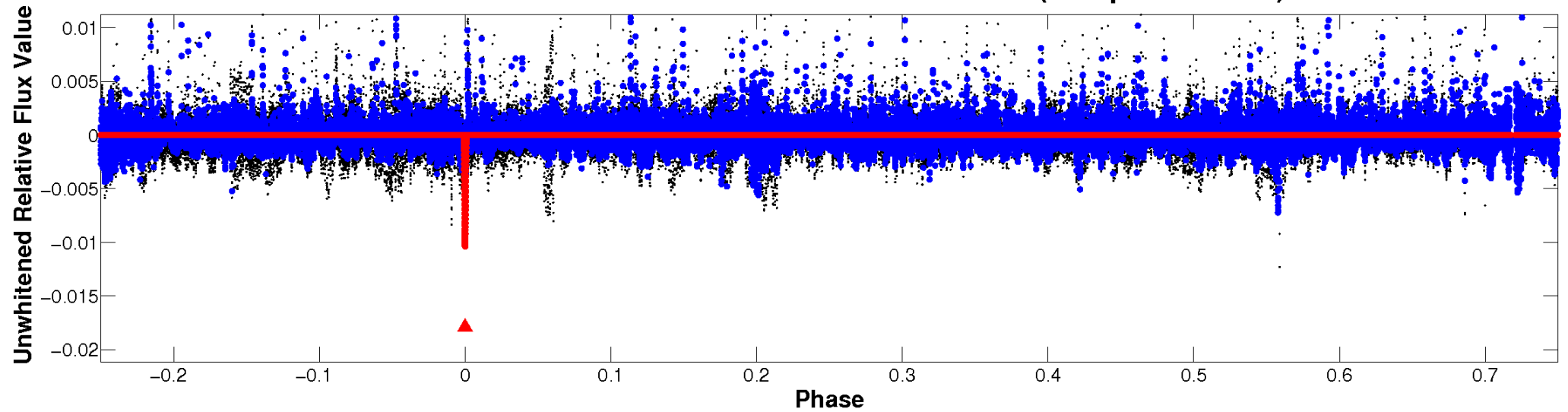
ALT Odd/Even

TCE 010320278-01

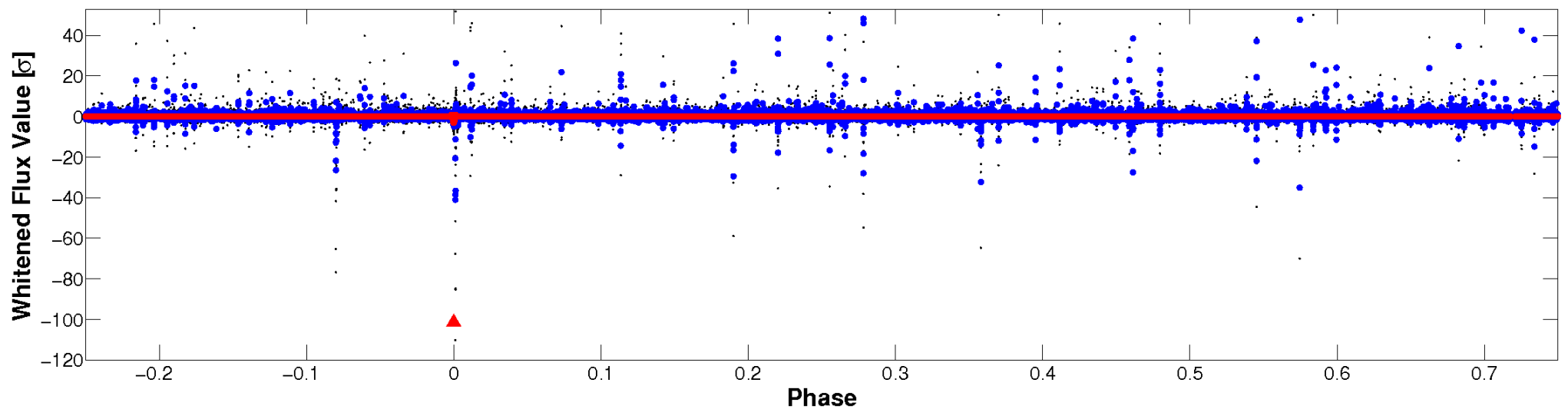


Non-Whitened Vs. Whitened Light Curve

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

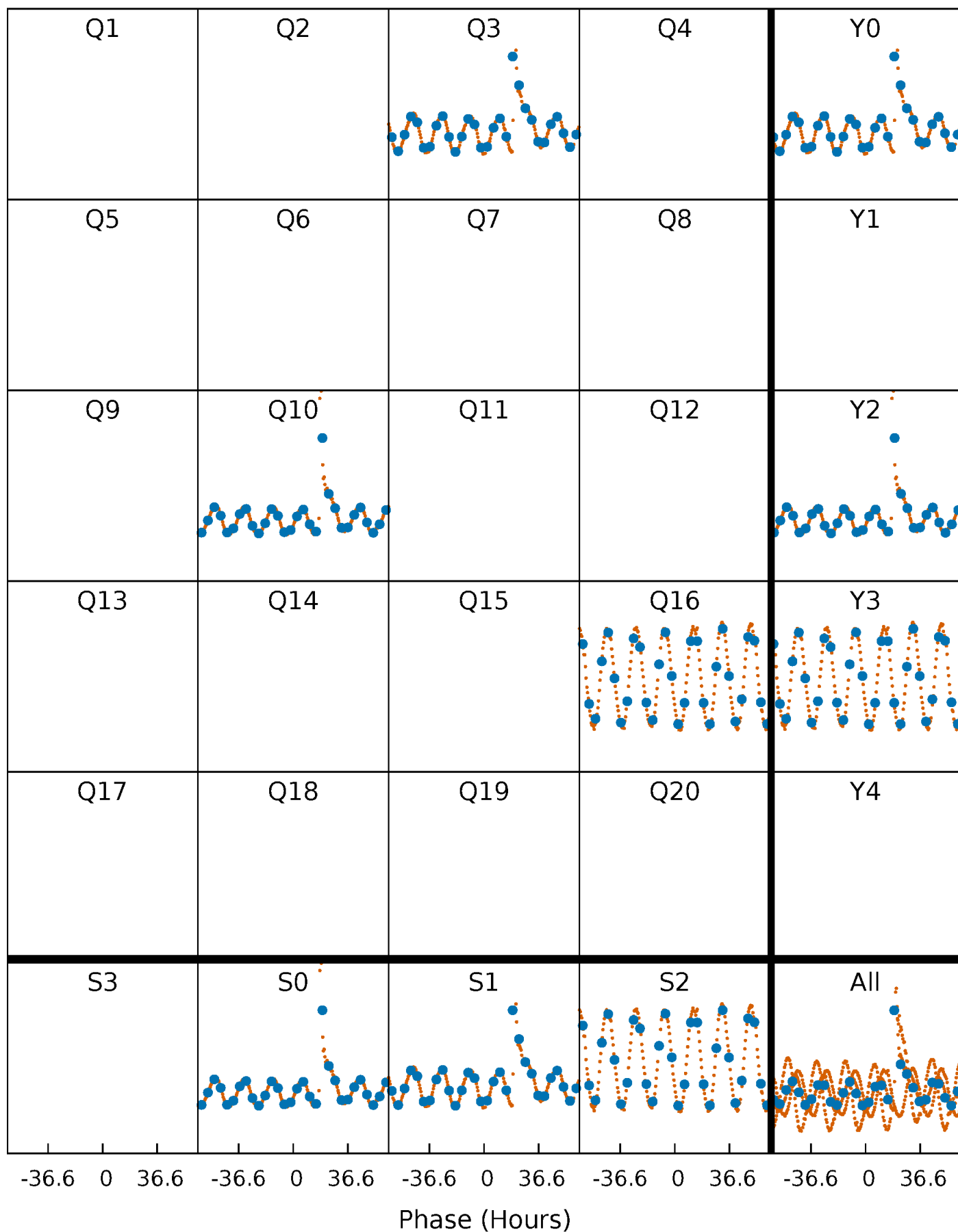


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



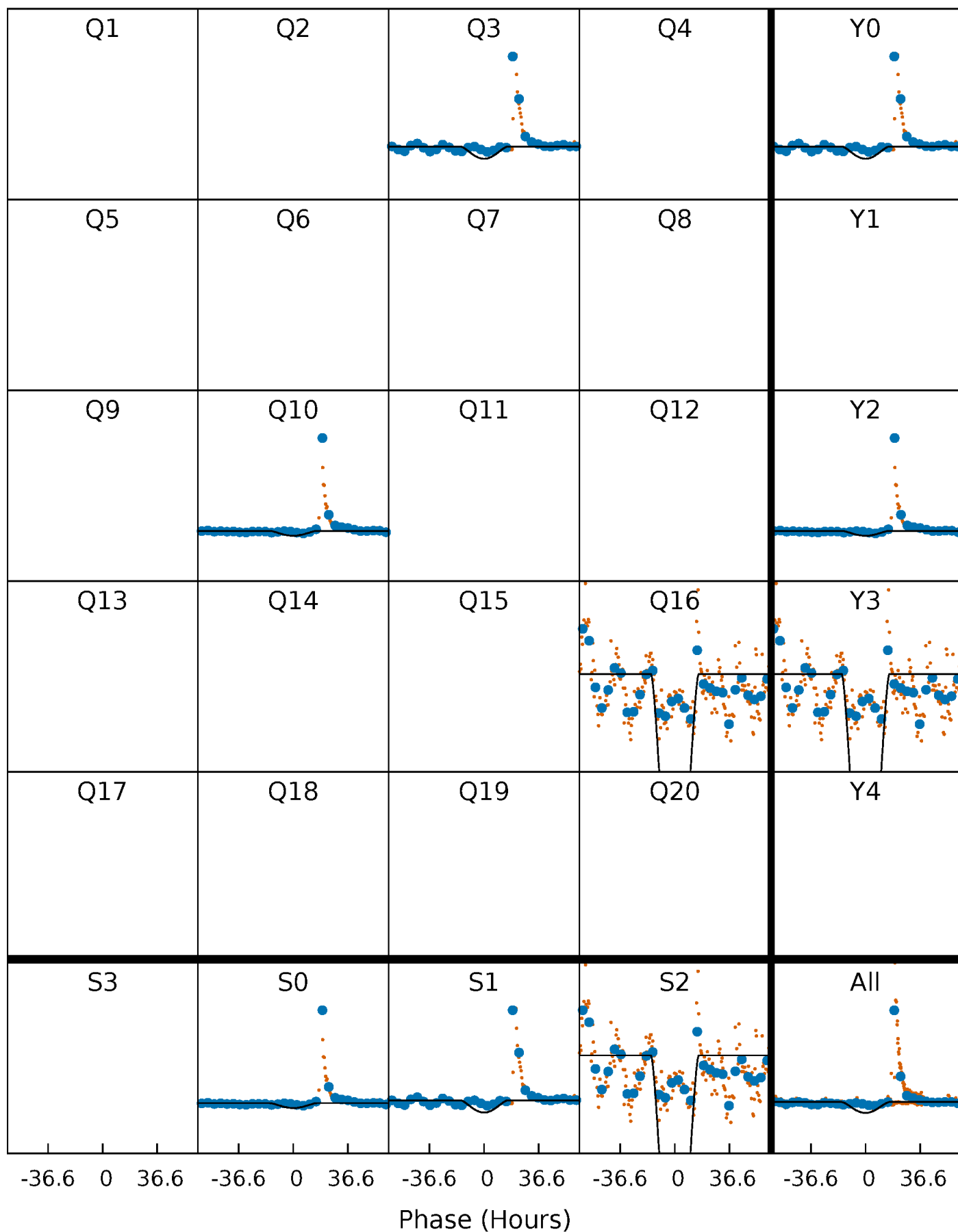
PDC Quarter-Phased Transit Curves

TCE 010320278-01 P=640.499616 Days $T_0=271.246014$ (BKJD)



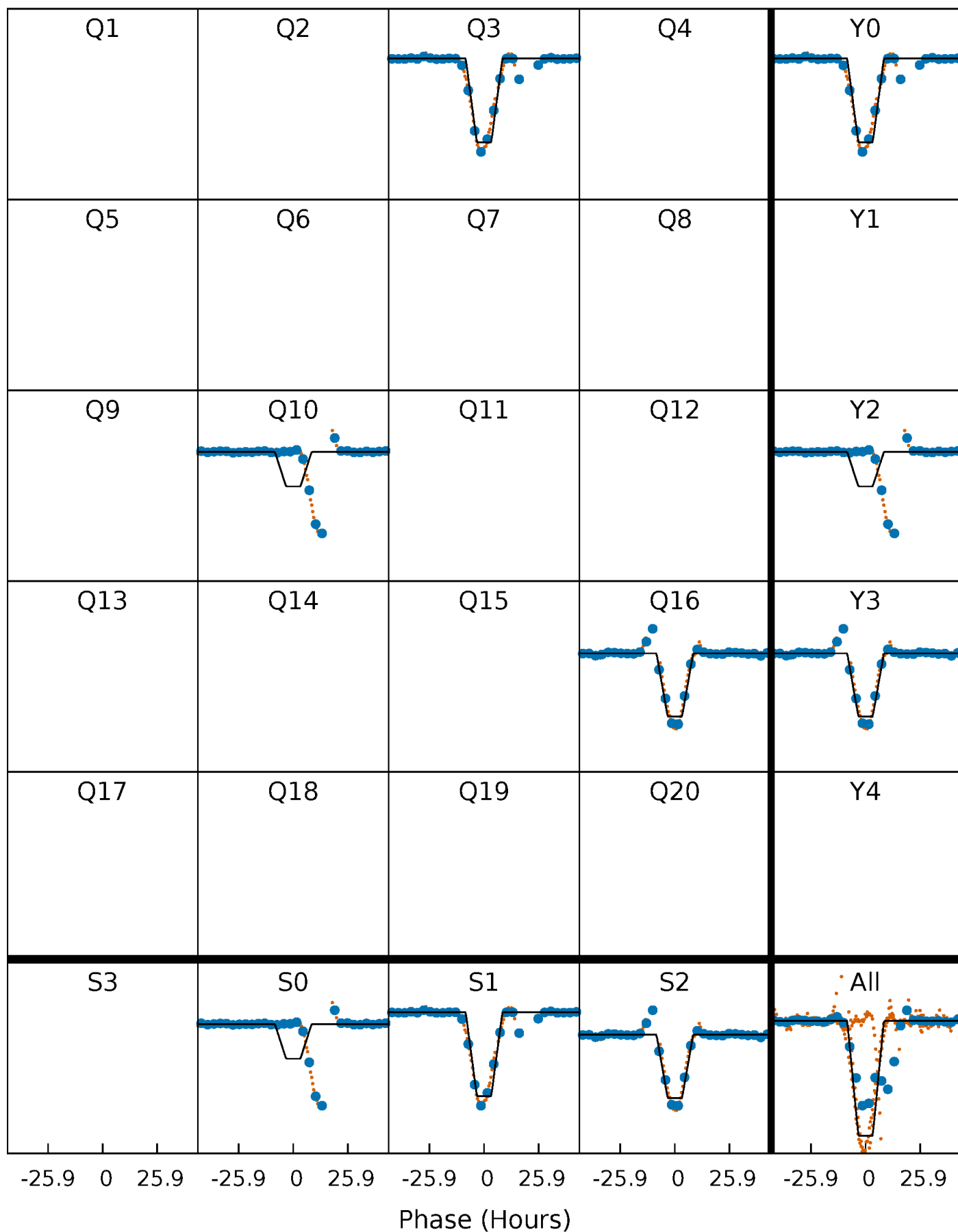
DV Quarter-Phased Transit Curves

TCE 010320278-01 P=640.499616 Days $T_0=271.246014$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

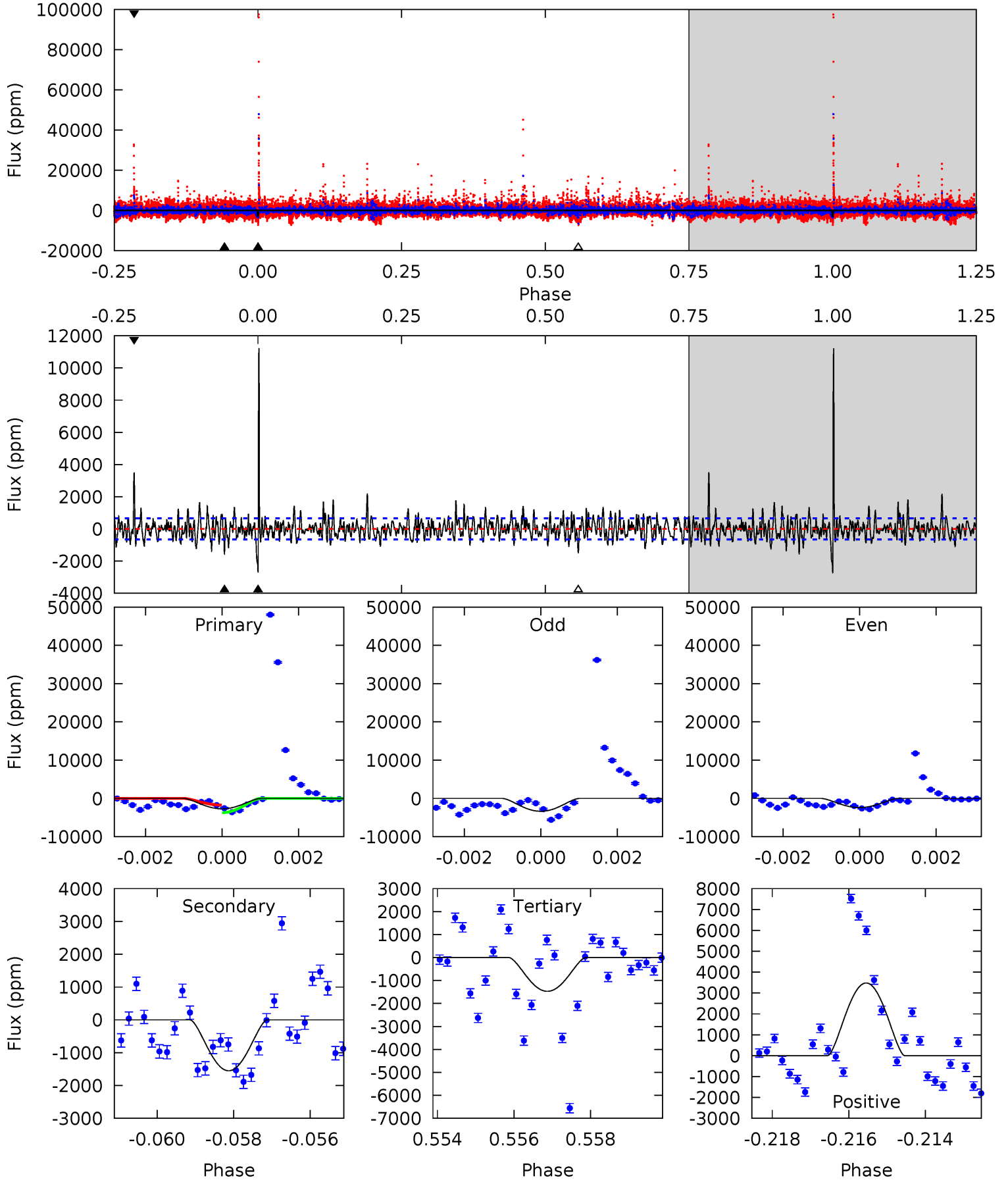
TCE 010320278-01 P=640.551239 Days $T_0=271.284798$ (BKJD)



DV Model-Shift Uniqueness Test

010320278-01, P = 640.499616 Days, E = 271.246014 Days

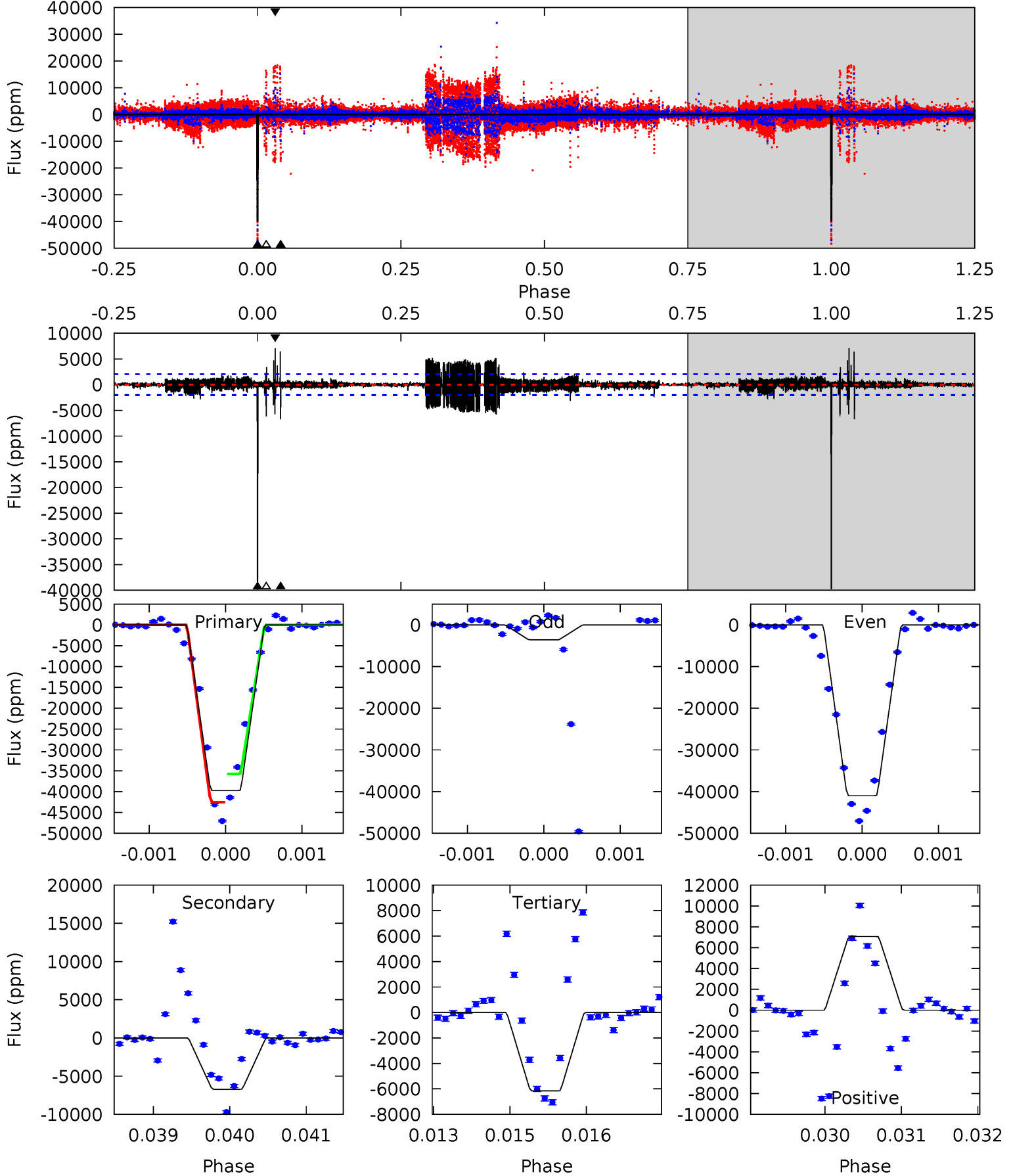
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.0	12.6	11.9	28.2	5.32	3.08	4.20	10.1	-6.19	0.64	-15.6	2.70	0.88	0.81	8.01



Alt Model-Shift Uniqueness Test

010320278-01, P = 640.551239 Days, E = 271.284798 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
106.4	18.0	16.5	18.9	5.43	3.26	3.20	89.9	87.5	1.50	-0.94	51.9	0.70	0.15	0



Stellar Parameters For KIC 010320278

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4635^{+139}_{-139}	$4.725^{+0.048}_{-0.028}$	$-1.260^{+0.300}_{-0.300}$	$0.525^{+0.029}_{-0.037}$	$0.534^{+0.036}_{-0.025}$	$5.193^{+0.932}_{-0.587}$
	+3%/-3%	+1%/-1%	+24%/-24%	+6%/-7%	+7%/-5%	+18%/-11%
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 010320278-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1551 ± 123	$48.17^{+51.23}_{-34.60}$	190^{+7}_{-6}	1973^{+663}_{-261}	525^{+5986}_{-406}
Alt.	-6718 ± 374	$49.62^{+49.49}_{-33.39}$	190^{+6}_{-7}	2308^{+790}_{-329}	2158^{+17736}_{-1632}

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

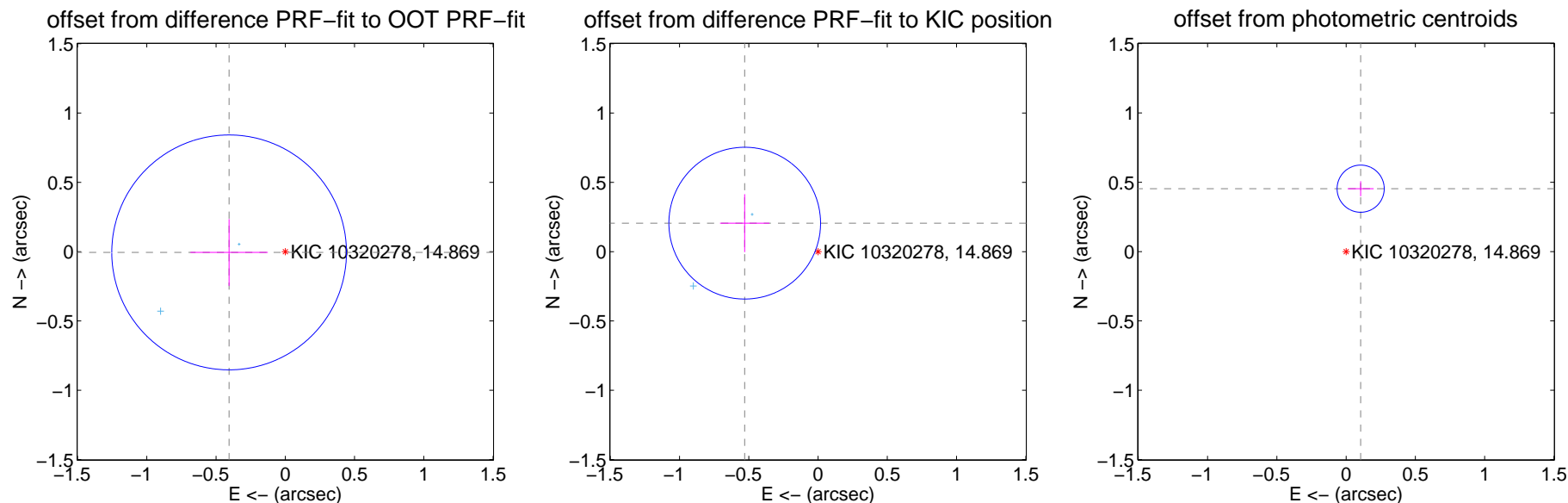
DV Centroid Data

Supplemental centroid analysis for 010320278-01. Kepler magnitude: 14.87. Transit SNR 25.62

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.406 ± 0.282	1.44	0.406 ± 0.279	-0.005 ± 0.241
PRF-fit source offset from KIC position	0.568 ± 0.182	3.11	0.529 ± 0.178	0.206 ± 0.209
photometric centroid source offset	0.47 ± 0.06	8.21	-0.10 ± 0.09	0.45 ± 0.05



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.

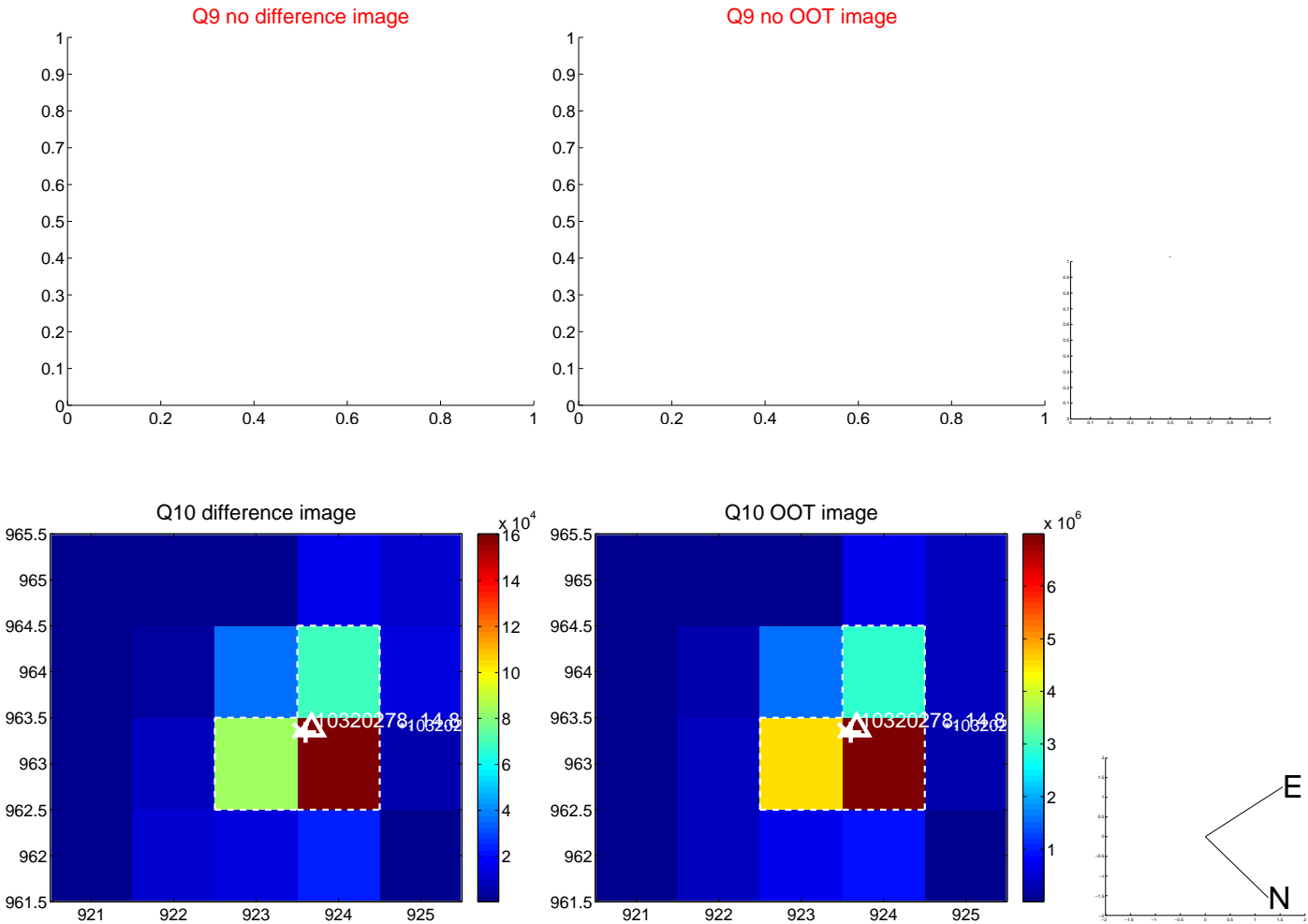
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



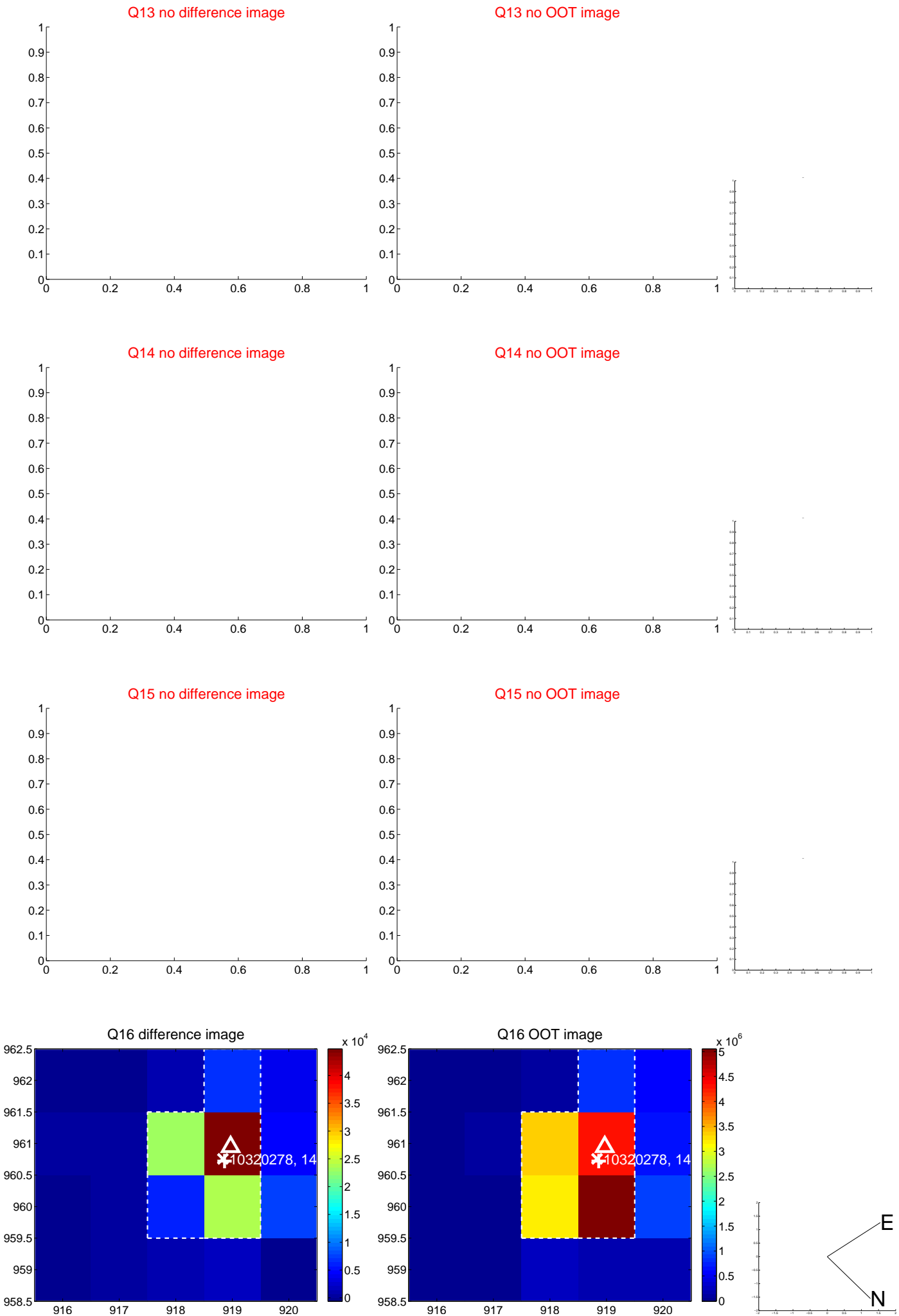
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



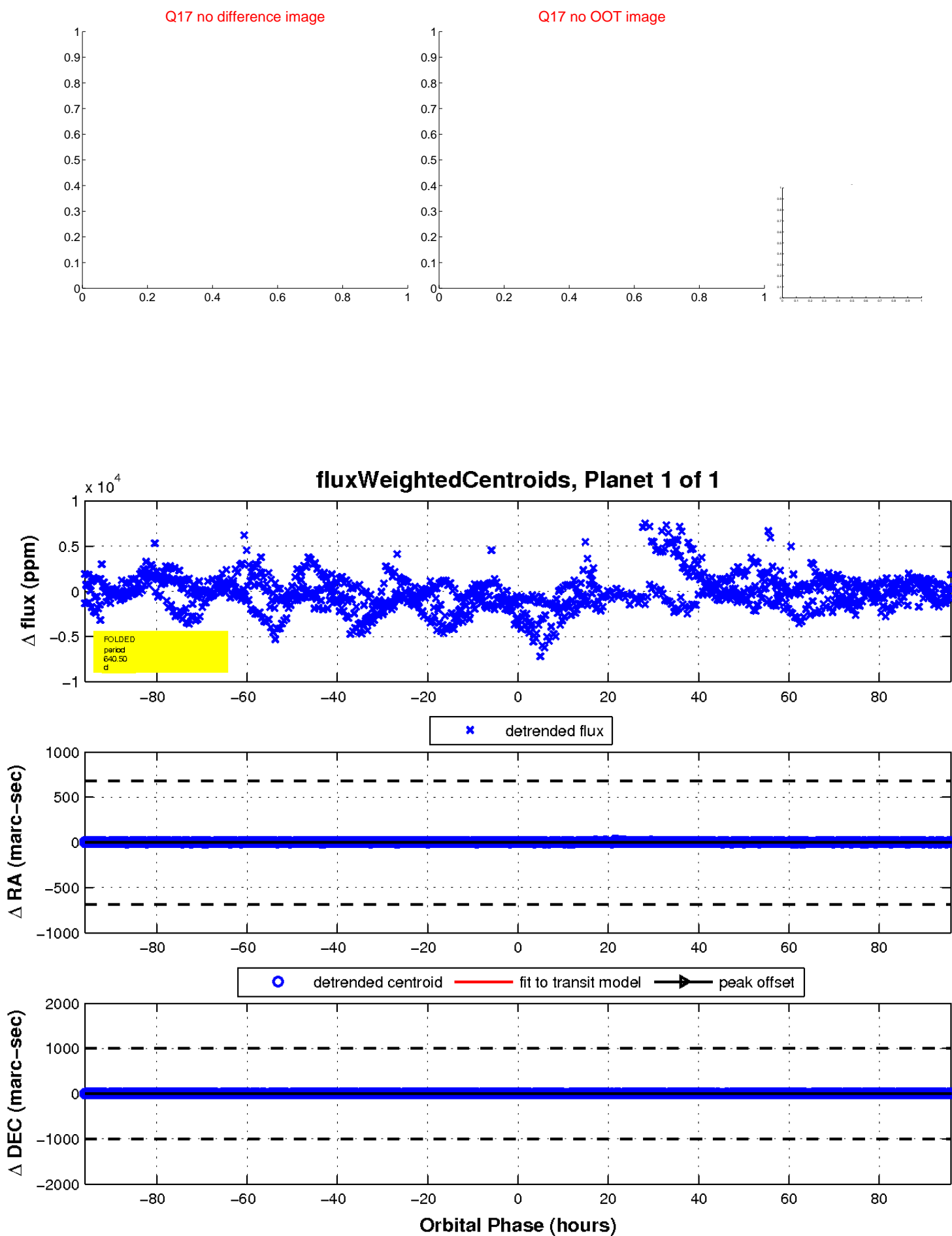
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

