

KIC 007700578

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})
007700578-01	OBS	6908.01	1.507034	132.156827	18688.7	2.500	890.7	-1.0	1.75	6919	24.19	7572.94

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007700578-01	OBS	FP	0.00	1	0	0	1	LPP_DV—CENT_NOFITS—EPHEM_MATCH

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 007700578-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
007700578-01	7700578	007700590-01	7700590	1:1	9.2	1	3	14.85	14.15	1.01	Direct-PRF	0	3.80	4.22

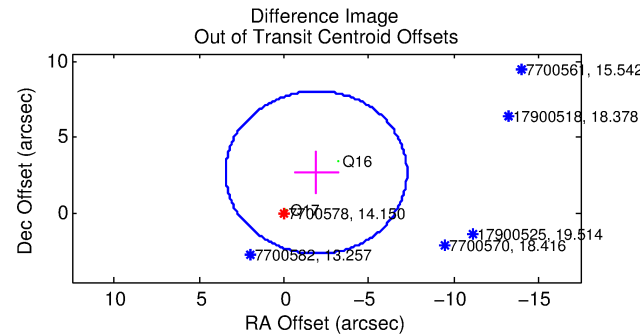
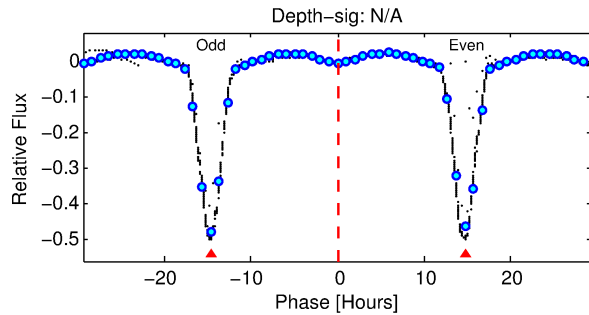
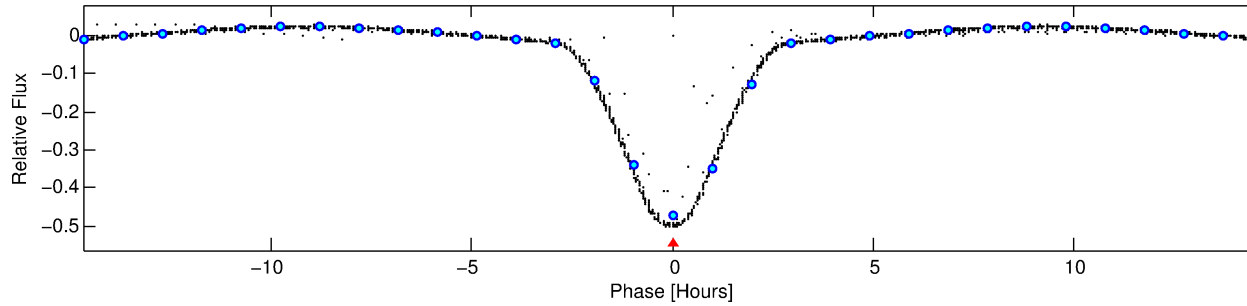
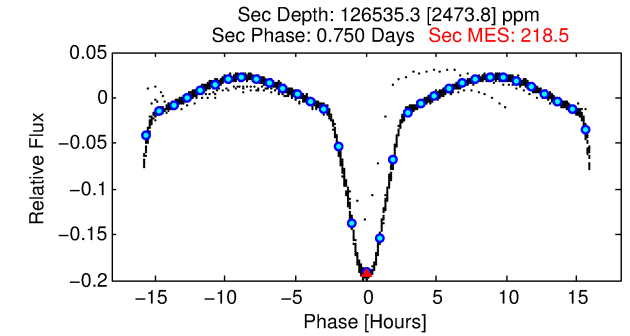
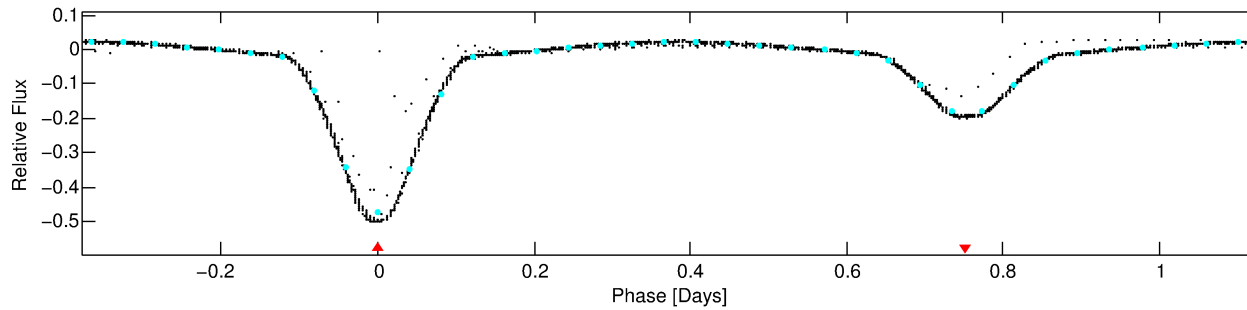
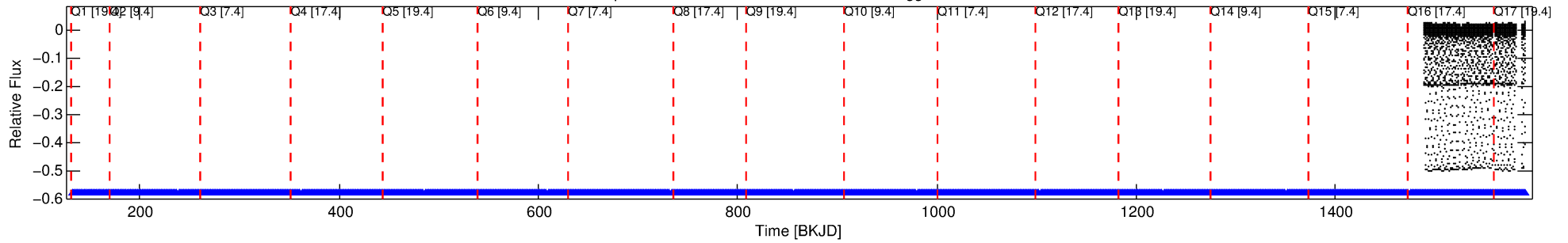
Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 7700578 Candidate: 1 of 1 Period: 1.507 d

KOI: K06908 Corr: No Ephemeris Match

Kp: 14.15 R*: 1.75 Rs Teff: 6919.0 K Logg: 4.10 Fe/H: -0.160



TPS TCE Results:

Period = 1.50703 d
Epoch = 132.1568 BKJD

DV fit results are unavailable

DV Diagnostic Results:

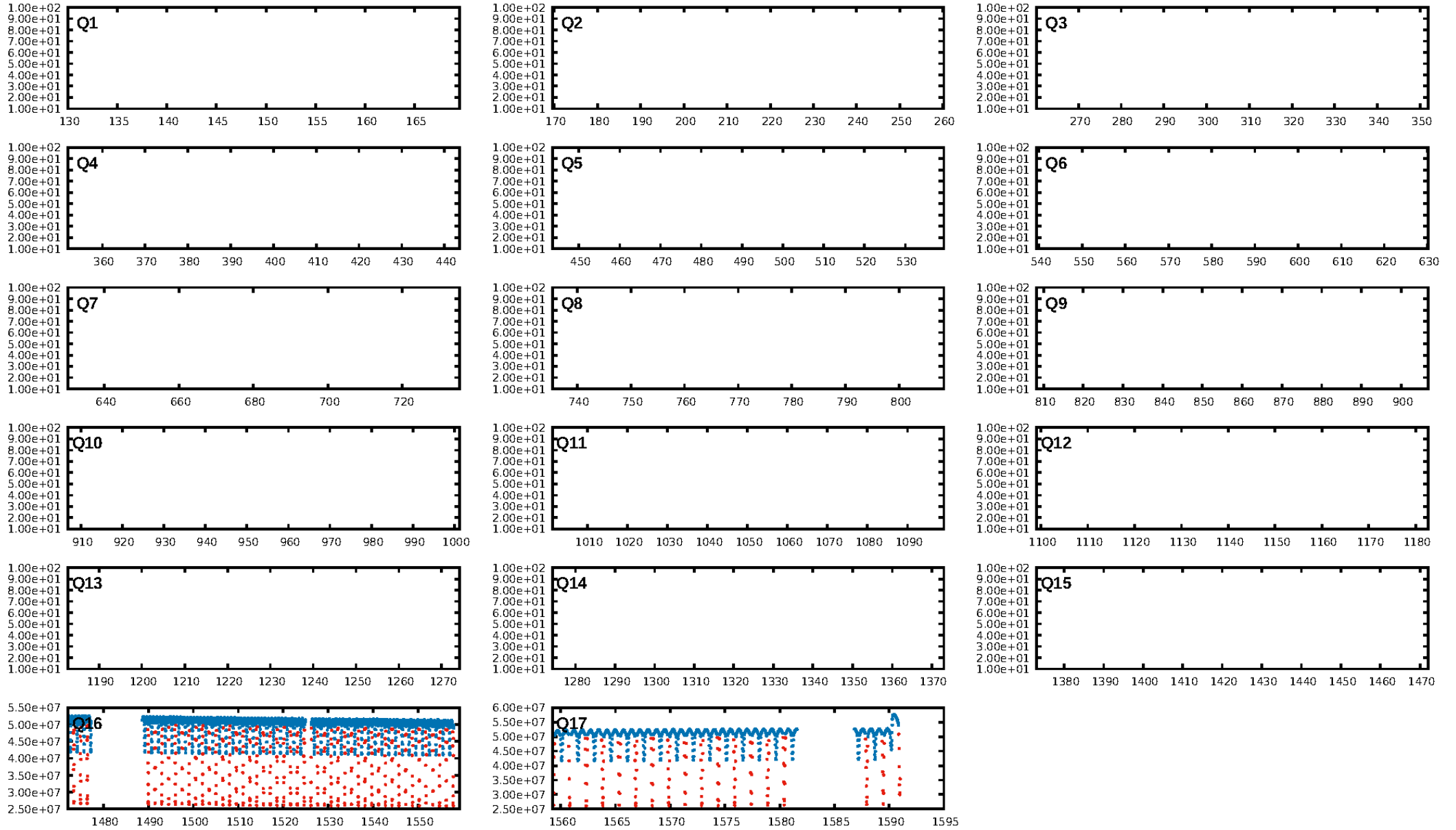
ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [46/46]
GhostDiagnostic-chr: 0.8305

Centroid-sig: 0.0%
Centroid-so: 0.937 arcsec [168.50σ]
OotOffset-rm: 3.303 arcsec [1.85σ]
KicOffset-rm: 0.142 arcsec [2.07σ]
OotOffset-st: 0/0/1/1 [2]
KicOffset-st: 0/0/1/1 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

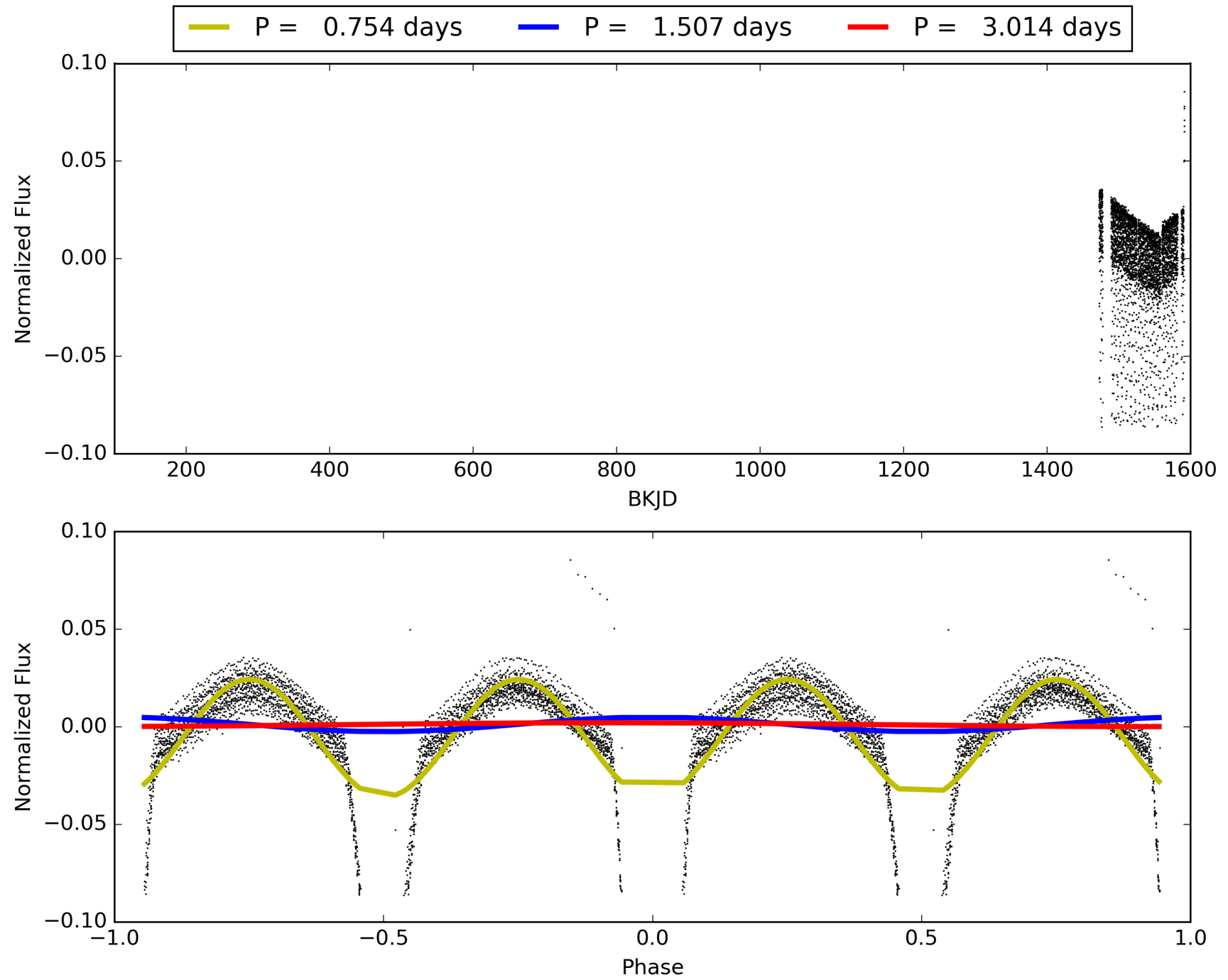
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 05:32:07 Z

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

TCE 007700578-01, PDC Light Curves

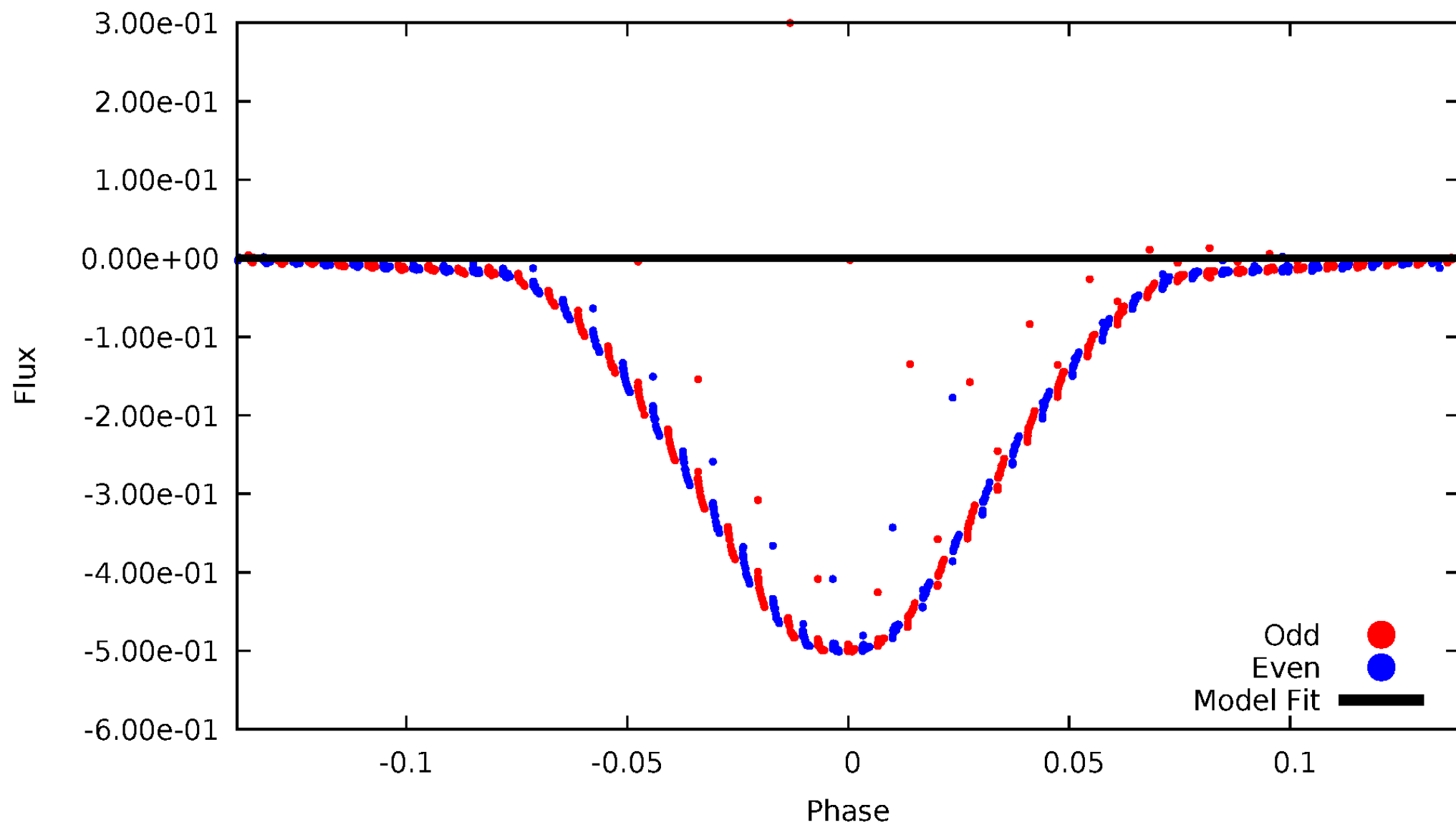


TCE 007700578-01



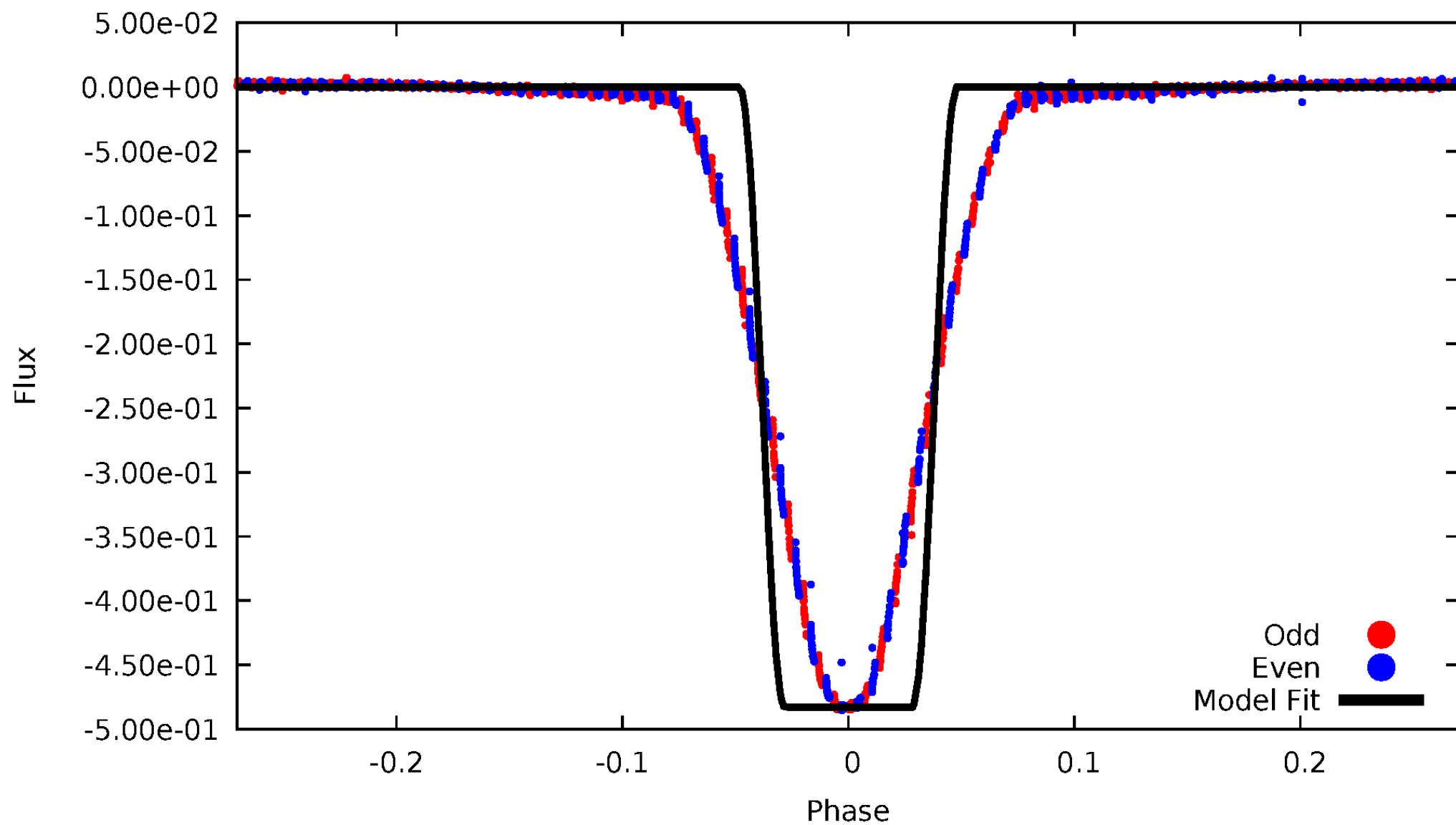
DV Odd/Even

TCE 007700578-01



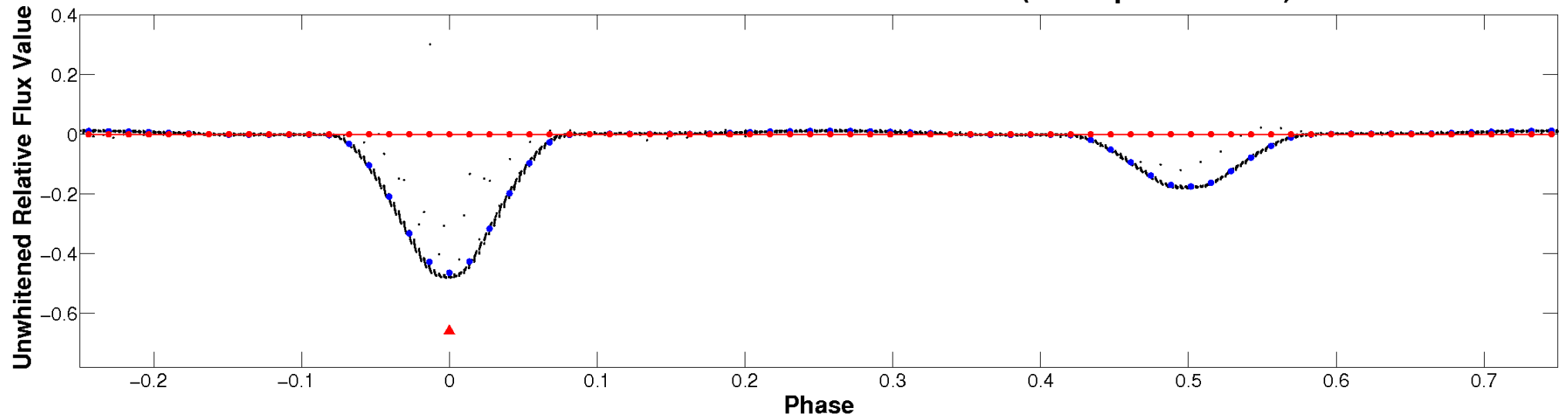
ALT Odd/Even

TCE 007700578-01

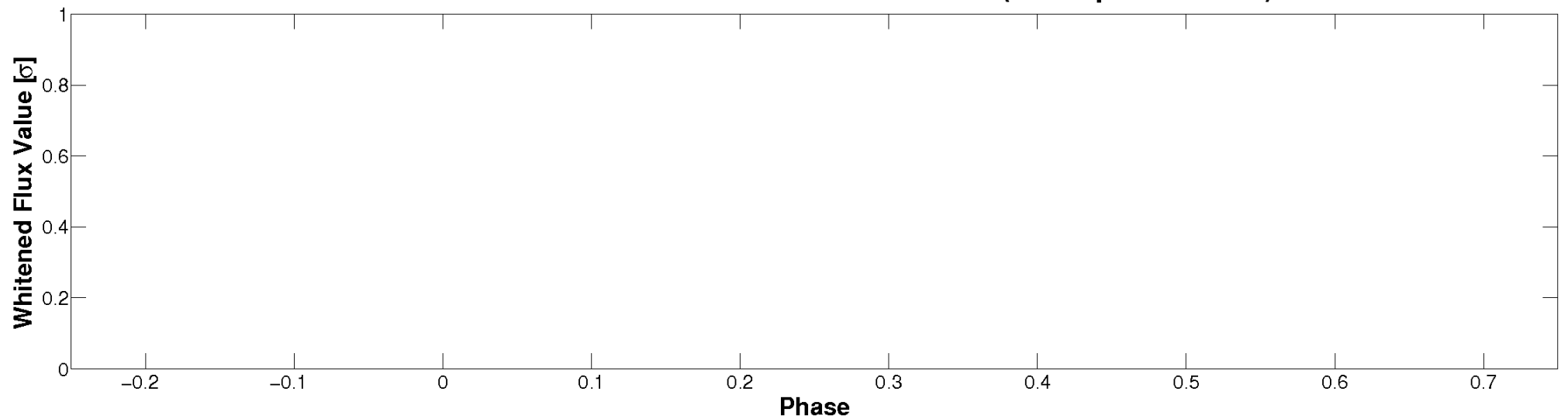


Non-Whitened Vs. Whitened Light Curve

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

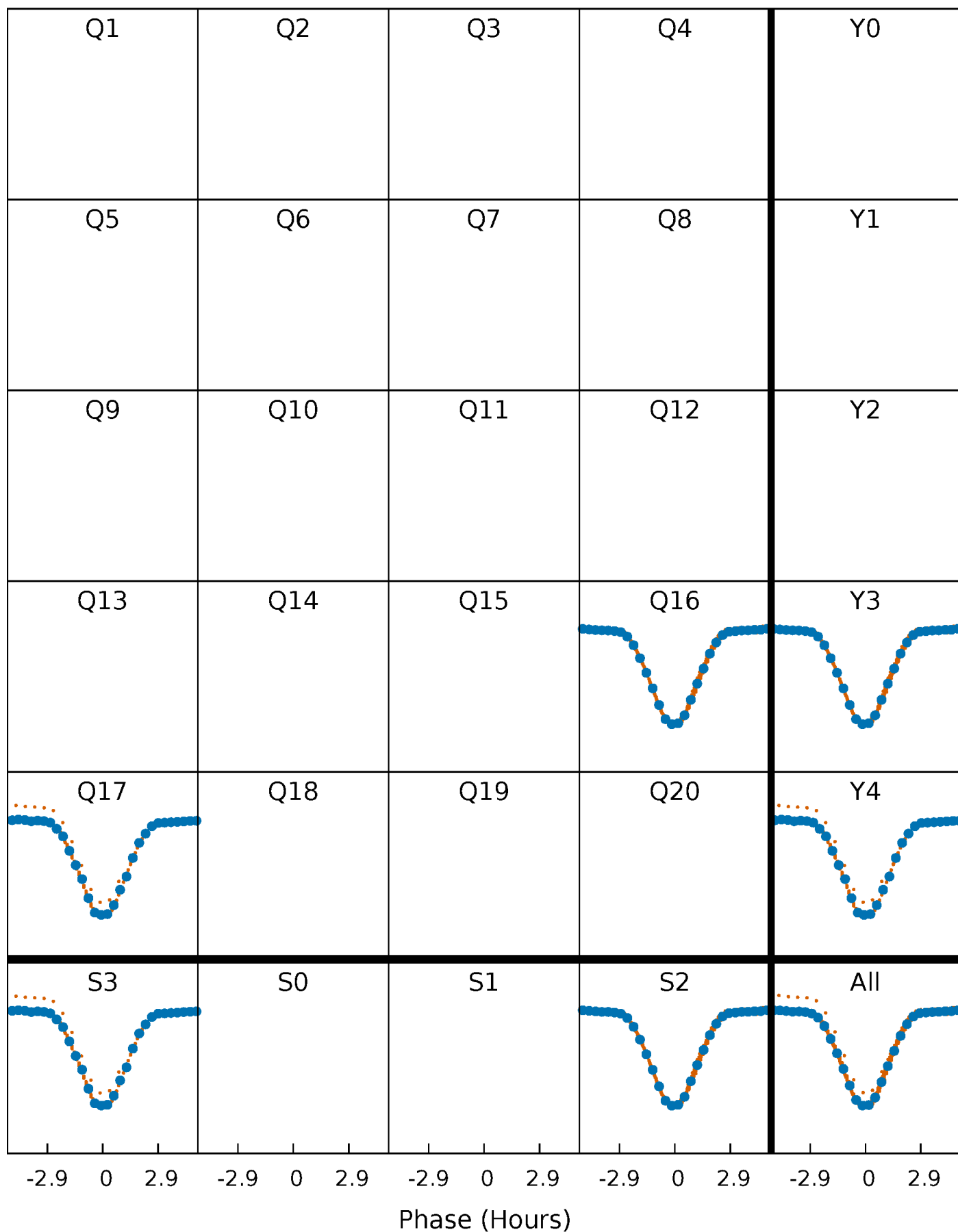


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



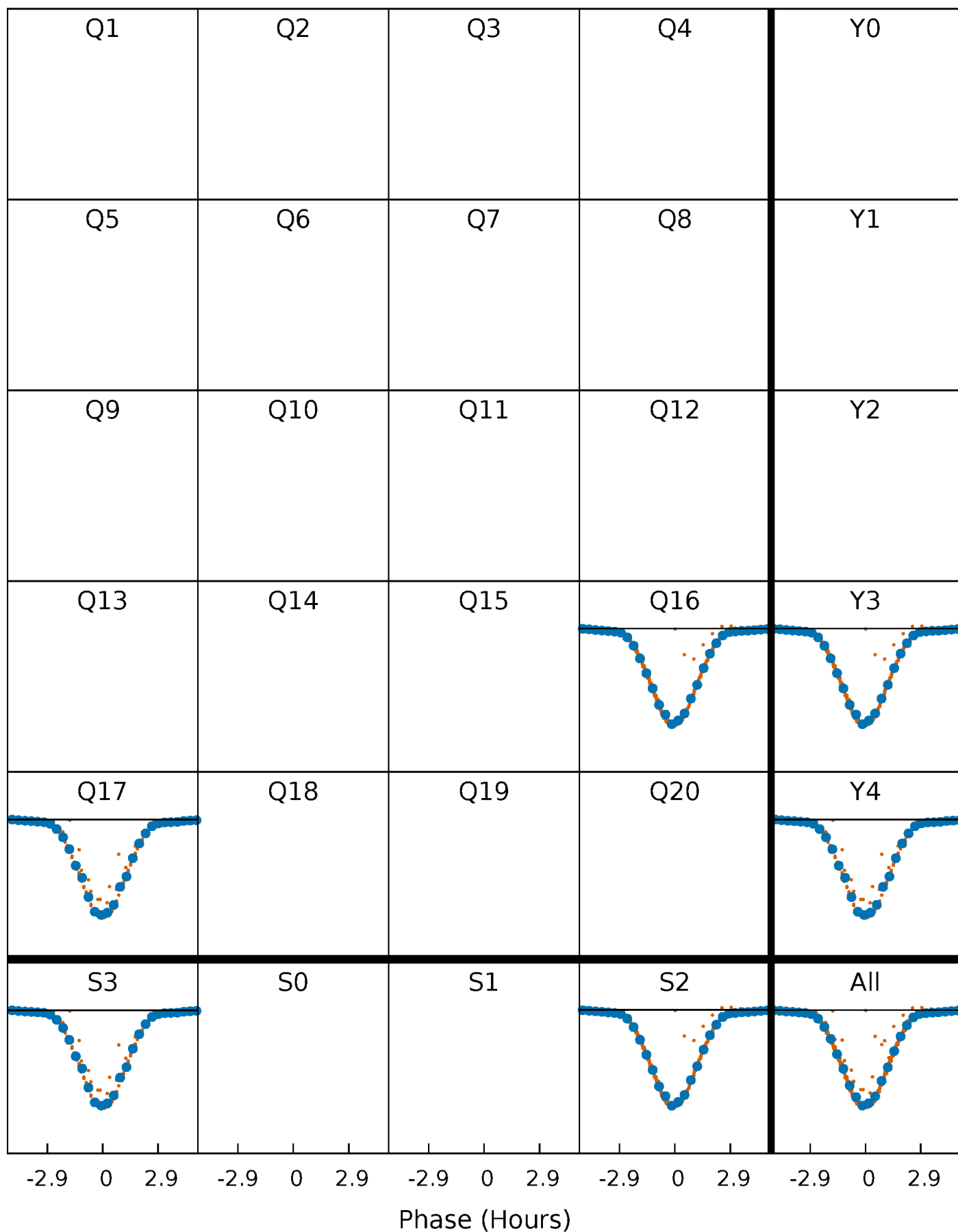
PDC Quarter-Phased Transit Curves

TCE 007700578-01 P= 1.507034 Days $T_0=132.156827$ (BKJD)



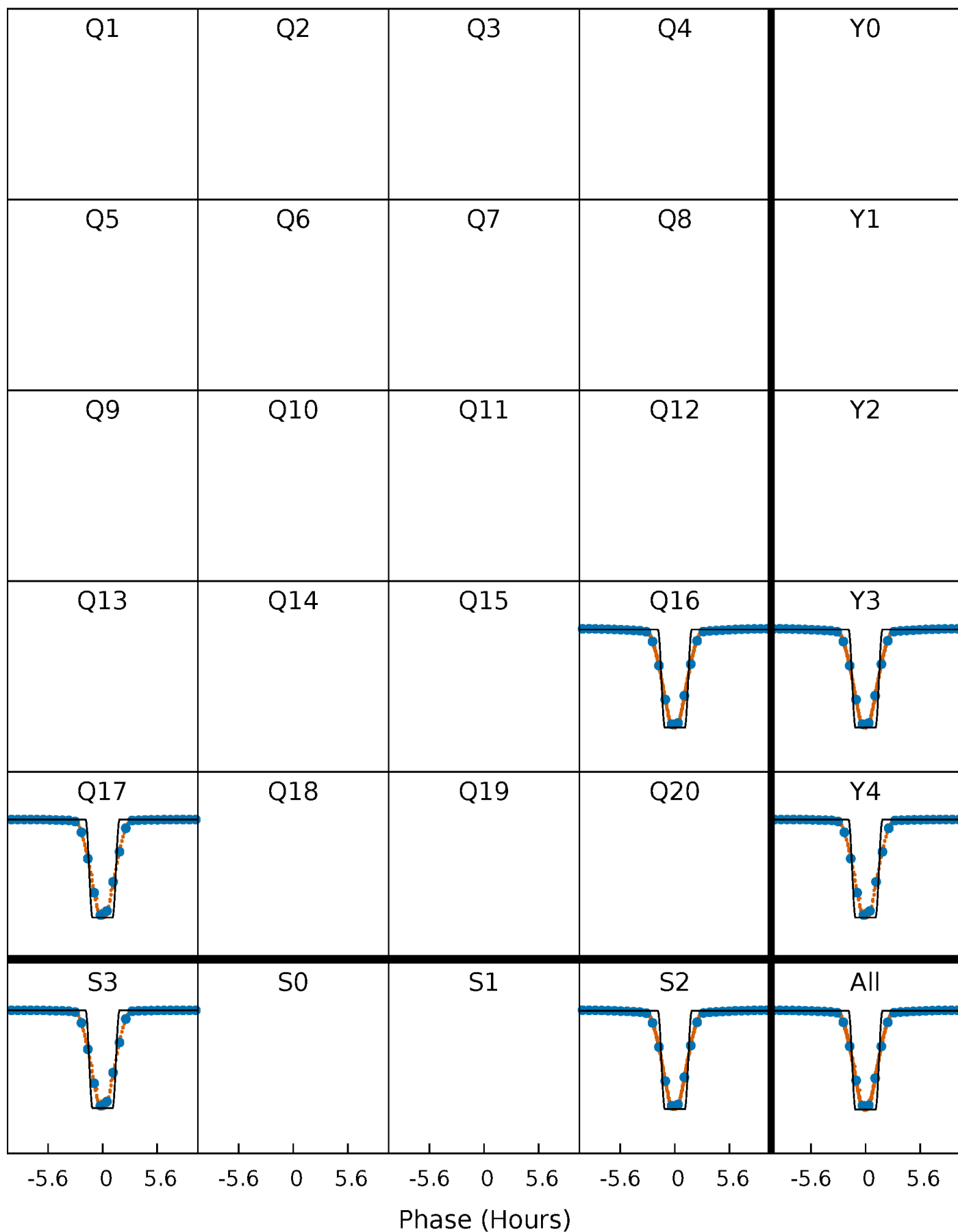
DV Quarter-Phased Transit Curves

TCE 007700578-01 P= 1.507034 Days $T_0=132.156827$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

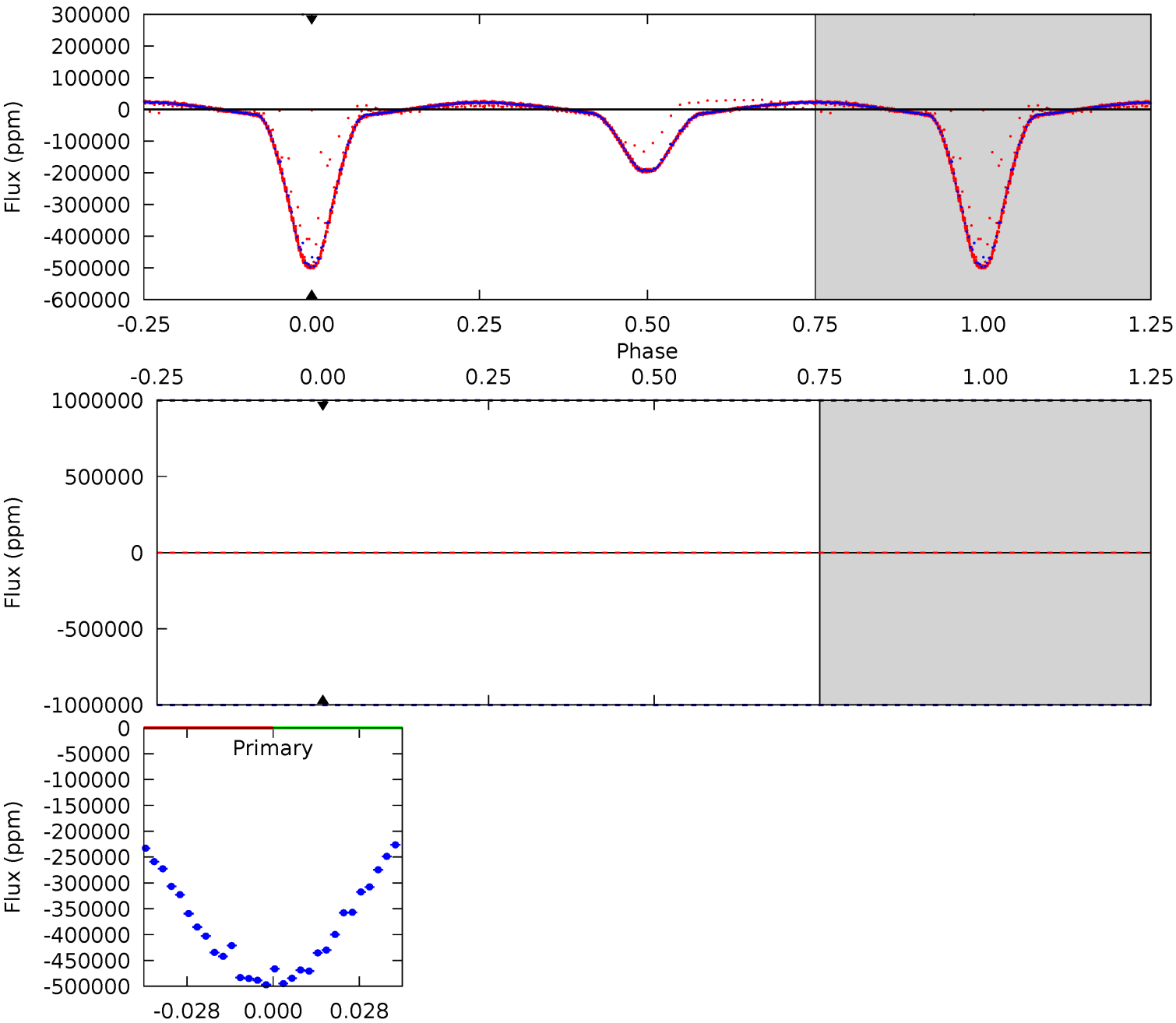
TCE 007700578-01 P= 1.507034 Days $T_0=132.156014$ (BKJD)



DV Model-Shift Uniqueness Test

007700578-01, P = 1.507034 Days, E = 132.156827 Days

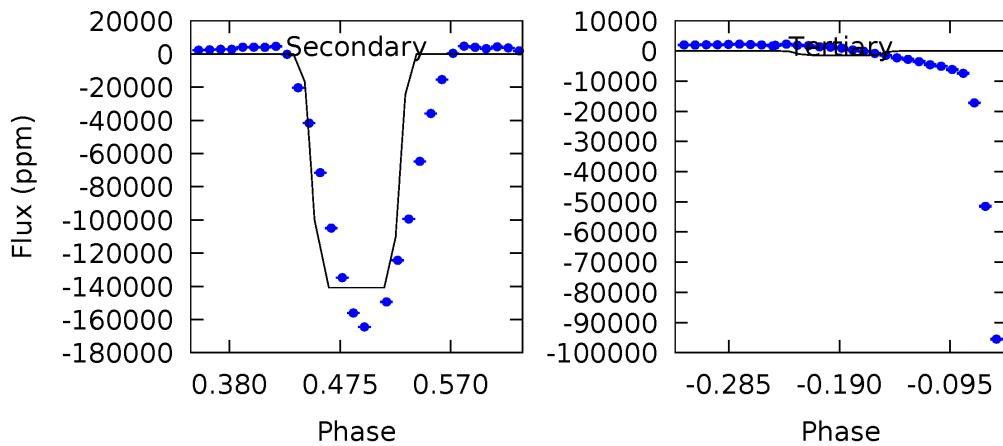
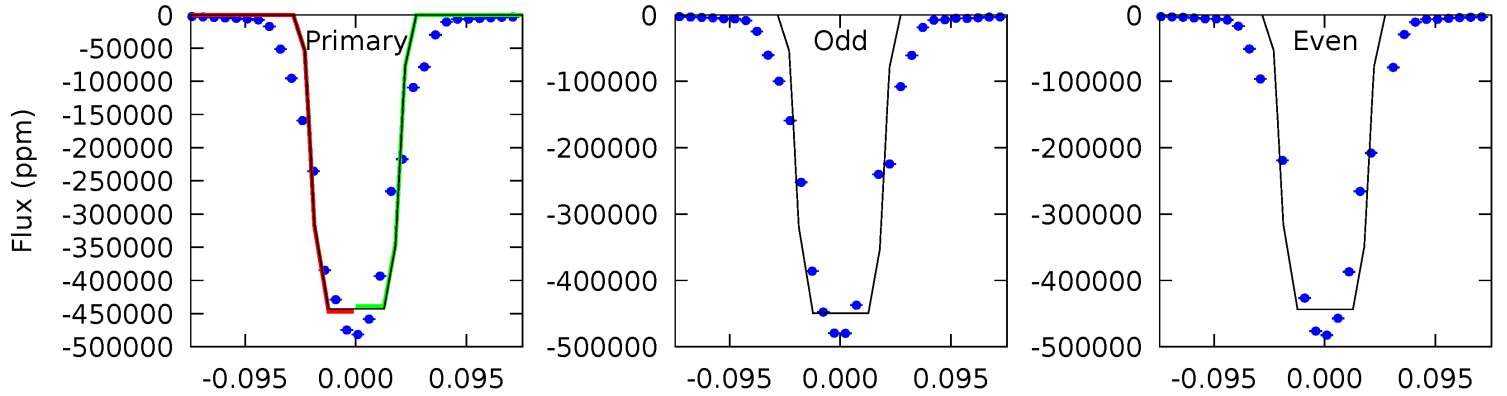
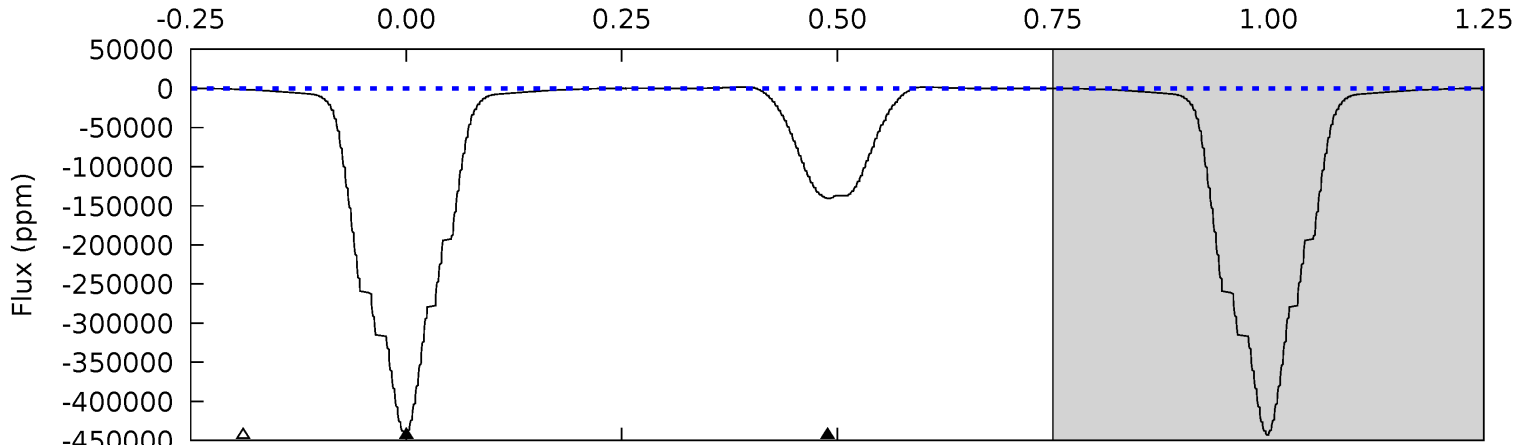
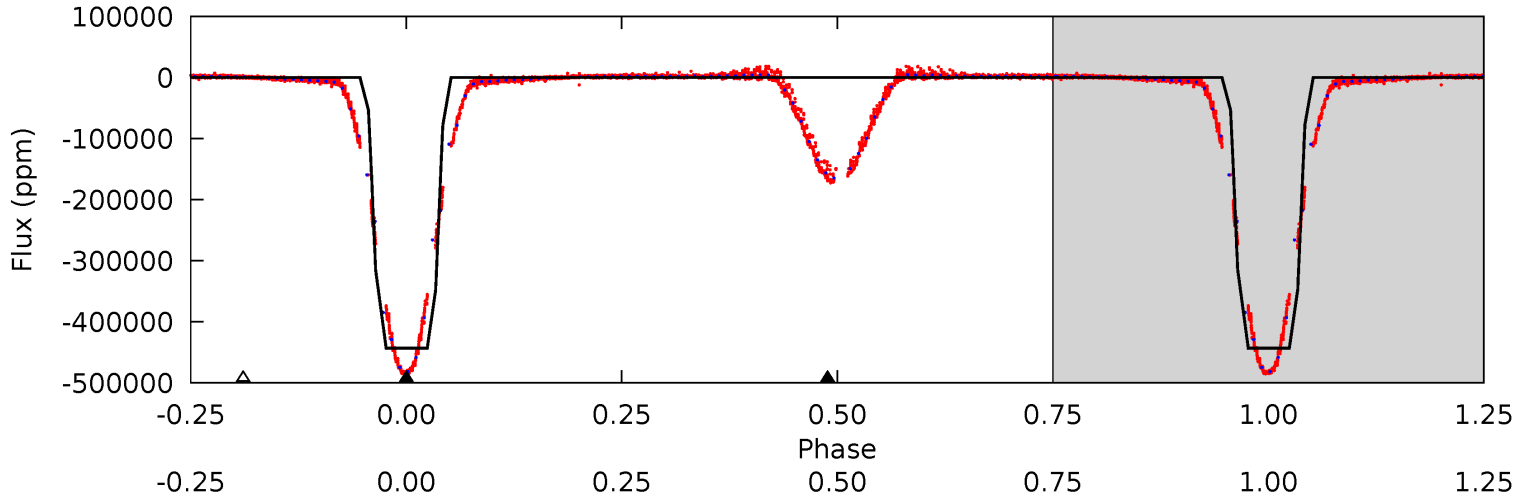
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

007700578-01, P = 1.507034 Days, E = 132.156014 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2347	745.7	7.70	0	4.58	1.67	14.4	2339	2347	738.0	745.7	14.6	1.00	0.00	21.7



Stellar Parameters For KIC 007700578

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6919^{+190}_{-309}	$4.099^{+0.190}_{-0.171}$	$-0.160^{+0.250}_{-0.350}$	$1.748^{+0.505}_{-0.454}$	$1.406^{+0.202}_{-0.269}$	$0.371^{+0.438}_{-0.174}$
	+3%/-4%	+5%/-4%	+156%/-219%	+29%/-26%	+14%/-19%	+118%/-47%
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 007700578-01 / KOI 6908.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$26.92^{+18.87}_{-17.06}$	3299^{+252}_{-257}	3751^{+10200}_{-17046}	$0.891^{+100.681}_{-80.977}$
Alt.	-140766 ± 189	$131.08^{+32.84}_{-25.35}$	3308^{+263}_{-254}	5176^{+455}_{-333}	$4.330^{+2.149}_{-1.452}$

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

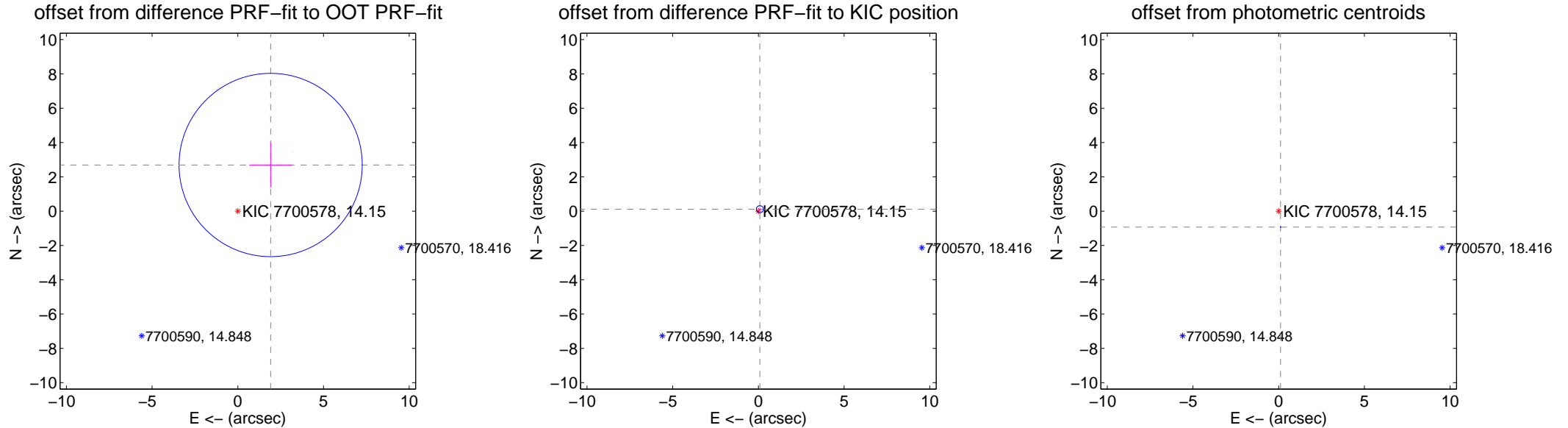
DV Centroid Data

Supplemental centroid analysis for 007700578-01. Kepler magnitude: 14.15. Transit SNR -1.00

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.303 ± 1.781	1.85	-1.915 ± 1.251	2.691 ± 1.297
PRF-fit source offset from KIC position	0.142 ± 0.069	2.07	-0.088 ± 0.067	0.112 ± 0.070
photometric centroid source offset	0.94 ± 0.01	168.50	-0.11 ± 0.00	-0.93 ± 0.01

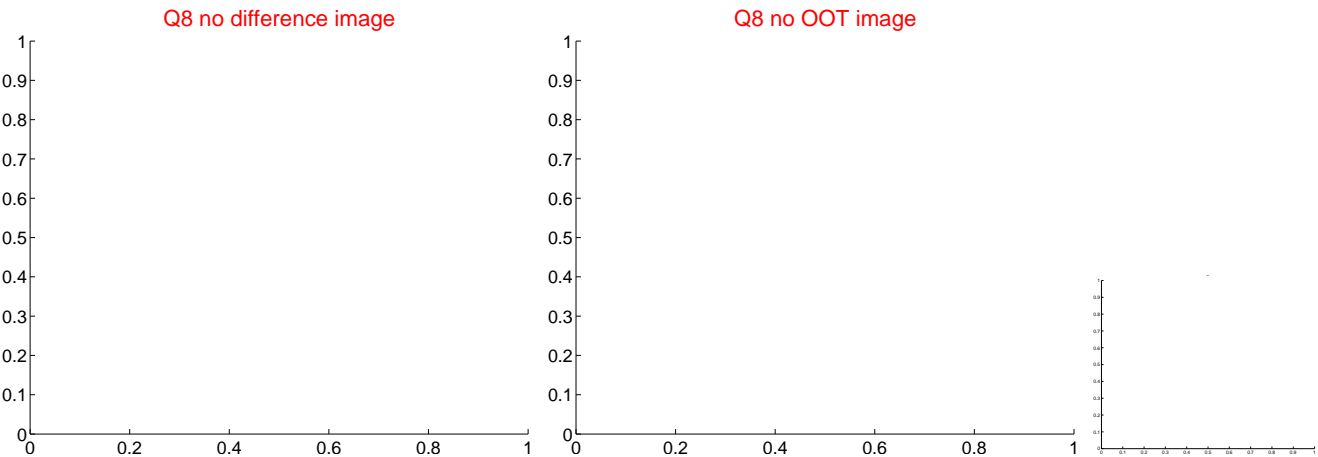
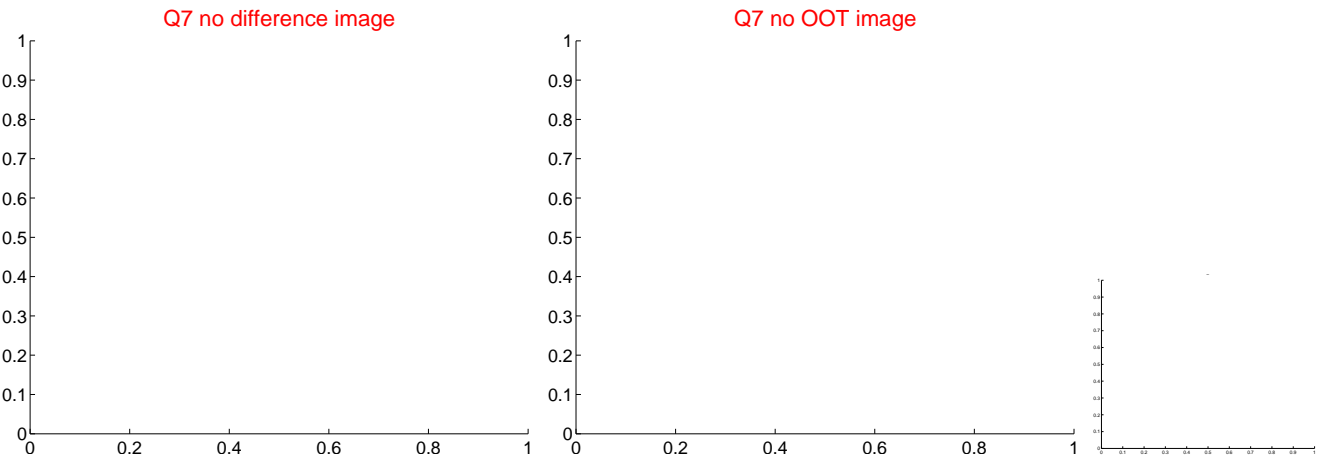
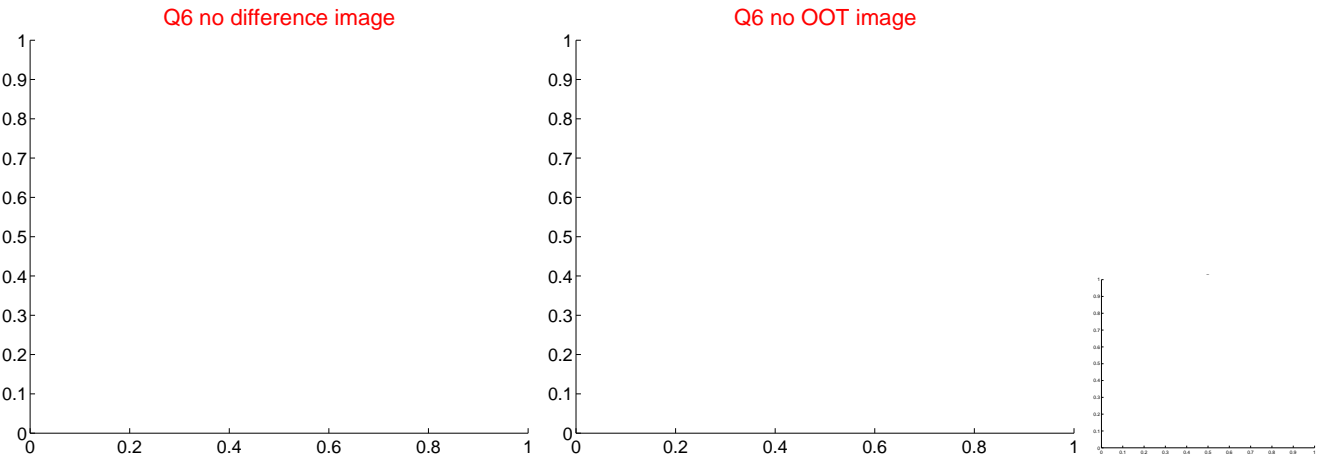
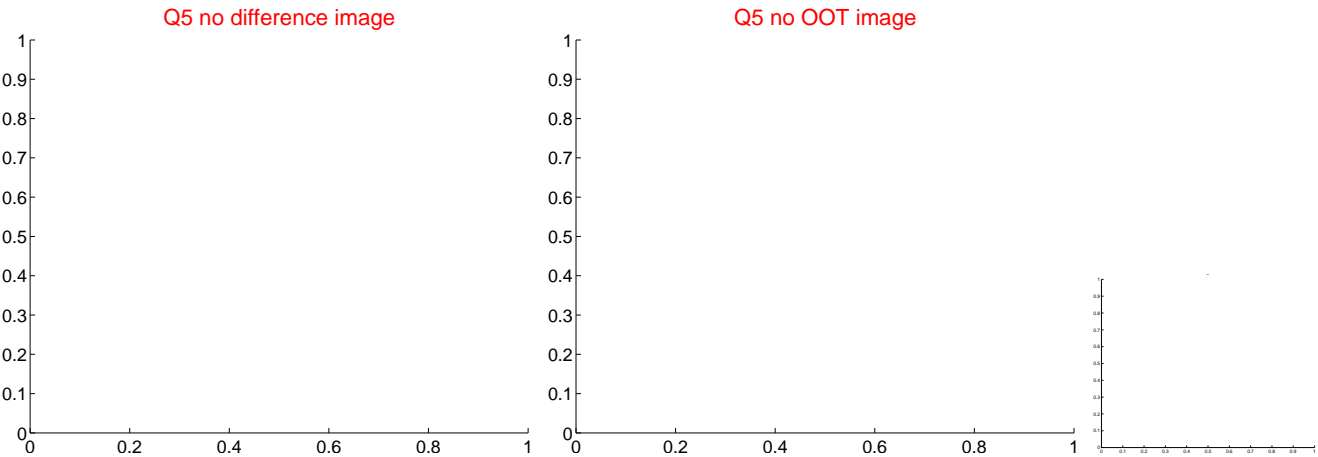


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



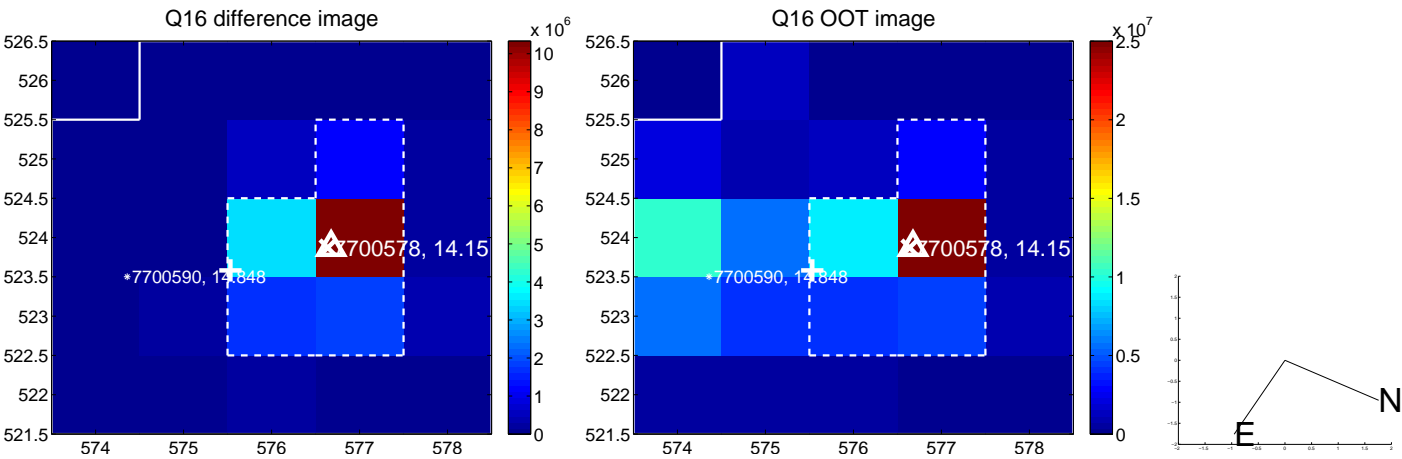
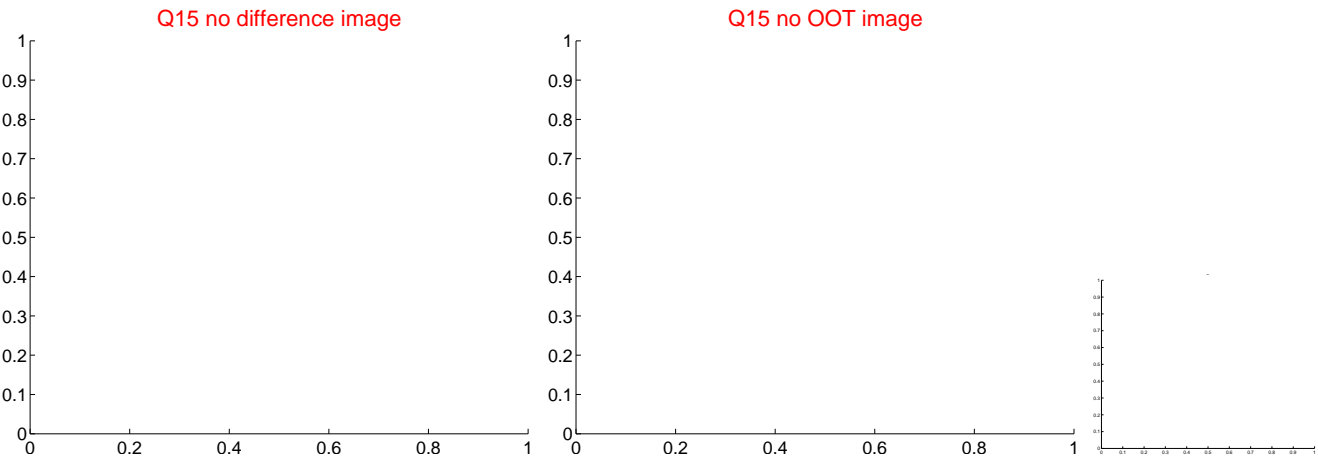
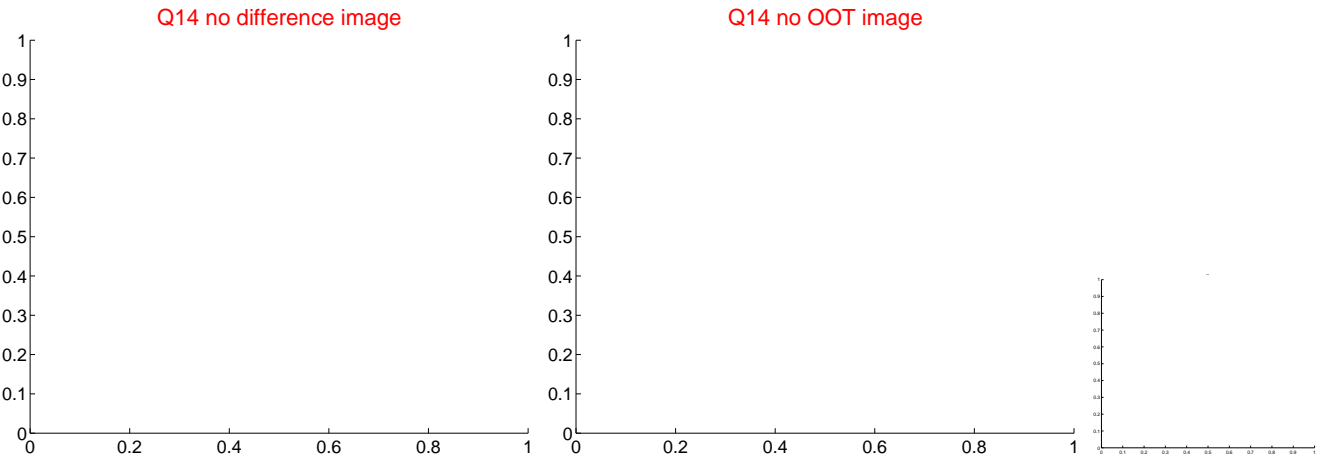
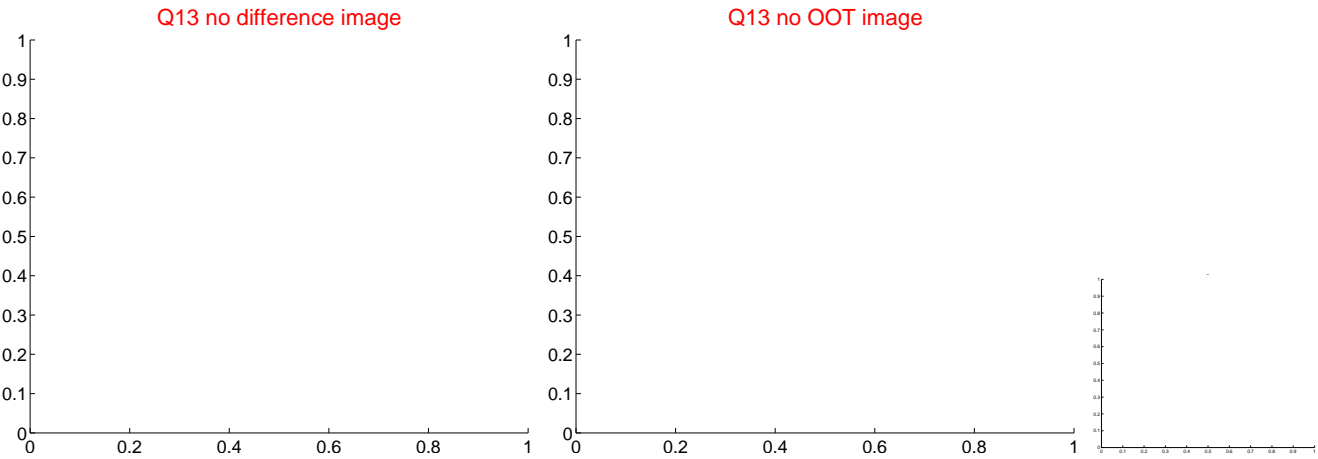
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



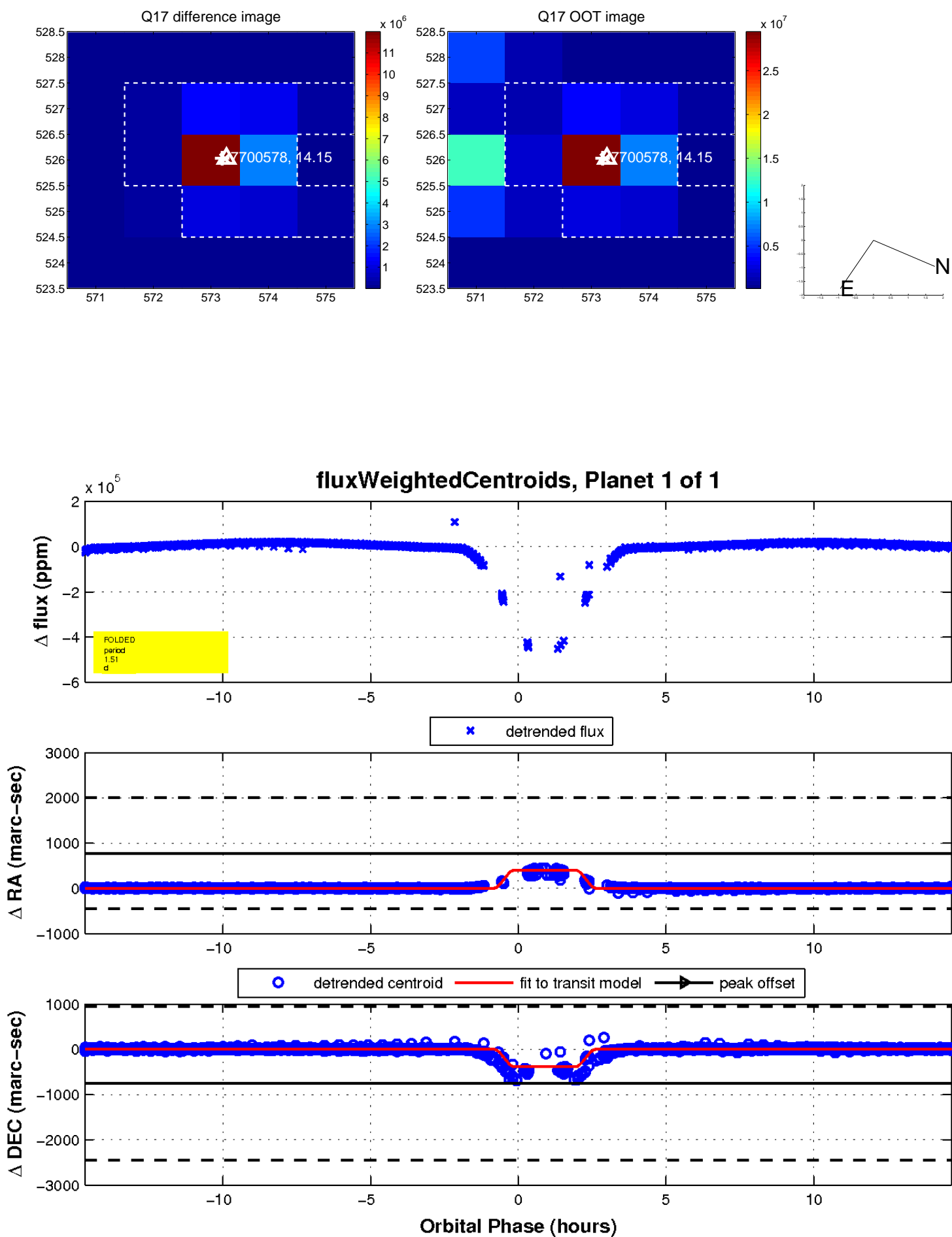
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: 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

Declination

