

KIC 004380283

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})
004380283-01	OBS	6412.01	0.872356	132.034153	232385.7	3.717	16342.8	8476.3	1.05	6240	63.89	4716.45

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004380283-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—DEEP_V_SHAPED

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 004380283-01

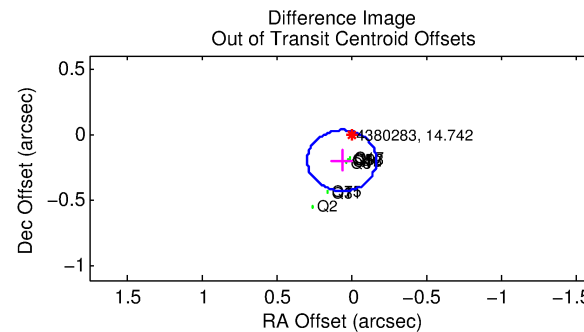
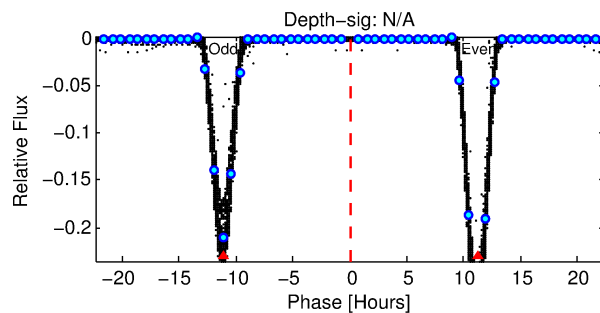
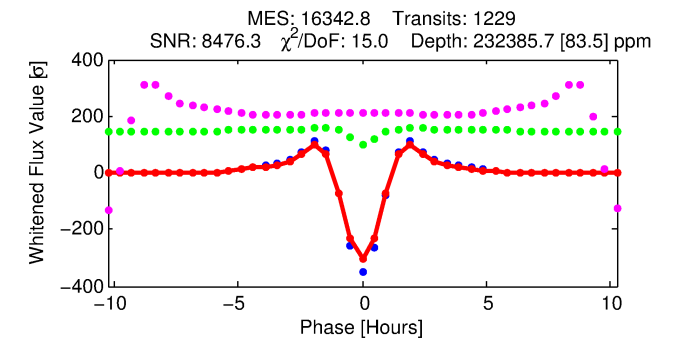
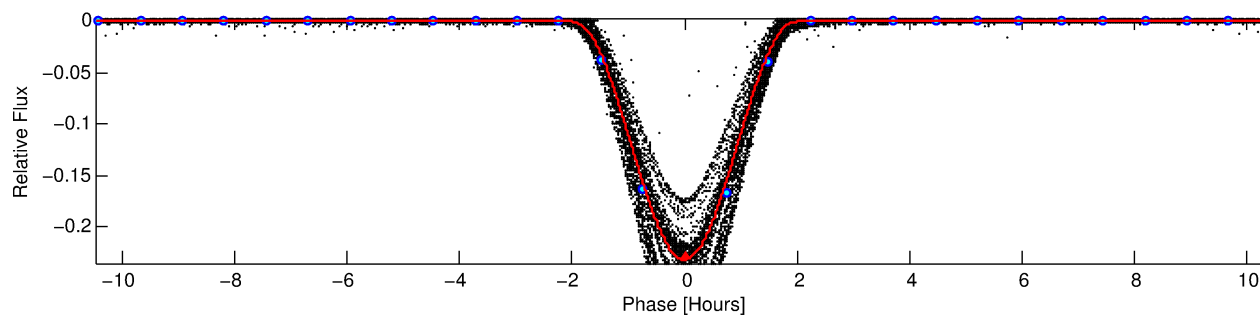
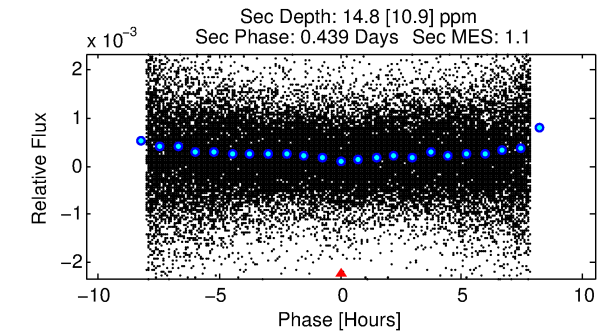
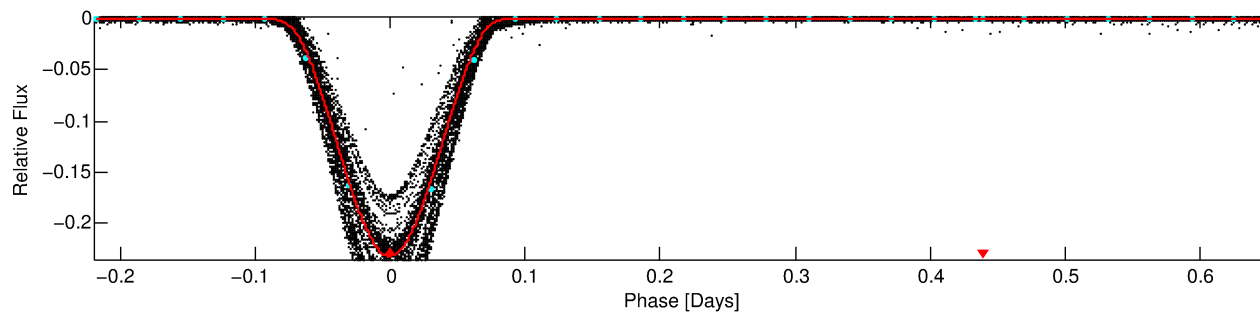
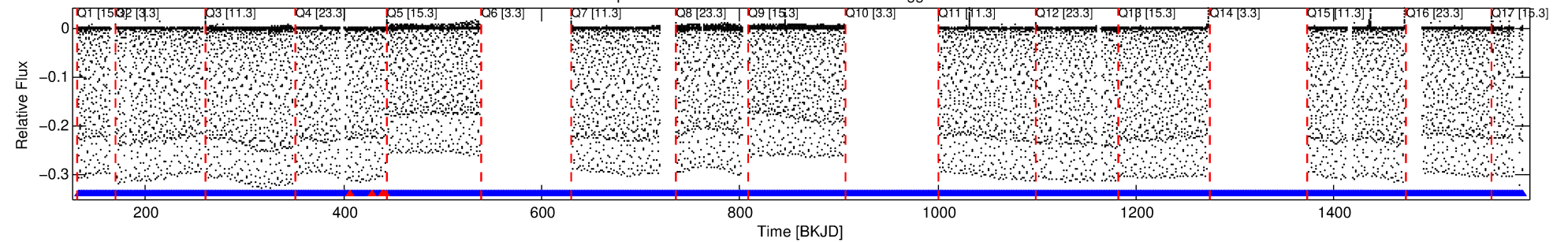
No Significant Match Found

DV One-Page Summary

KIC: 4380283 Candidate: 1 of 1 Period: 0.872 d

KOI: K06412.01 Corr: 0.983

Kp: 14.74 R*: 1.05 Rs Teff: 6240.0 K Logg: 4.39 Fe/H: -0.340



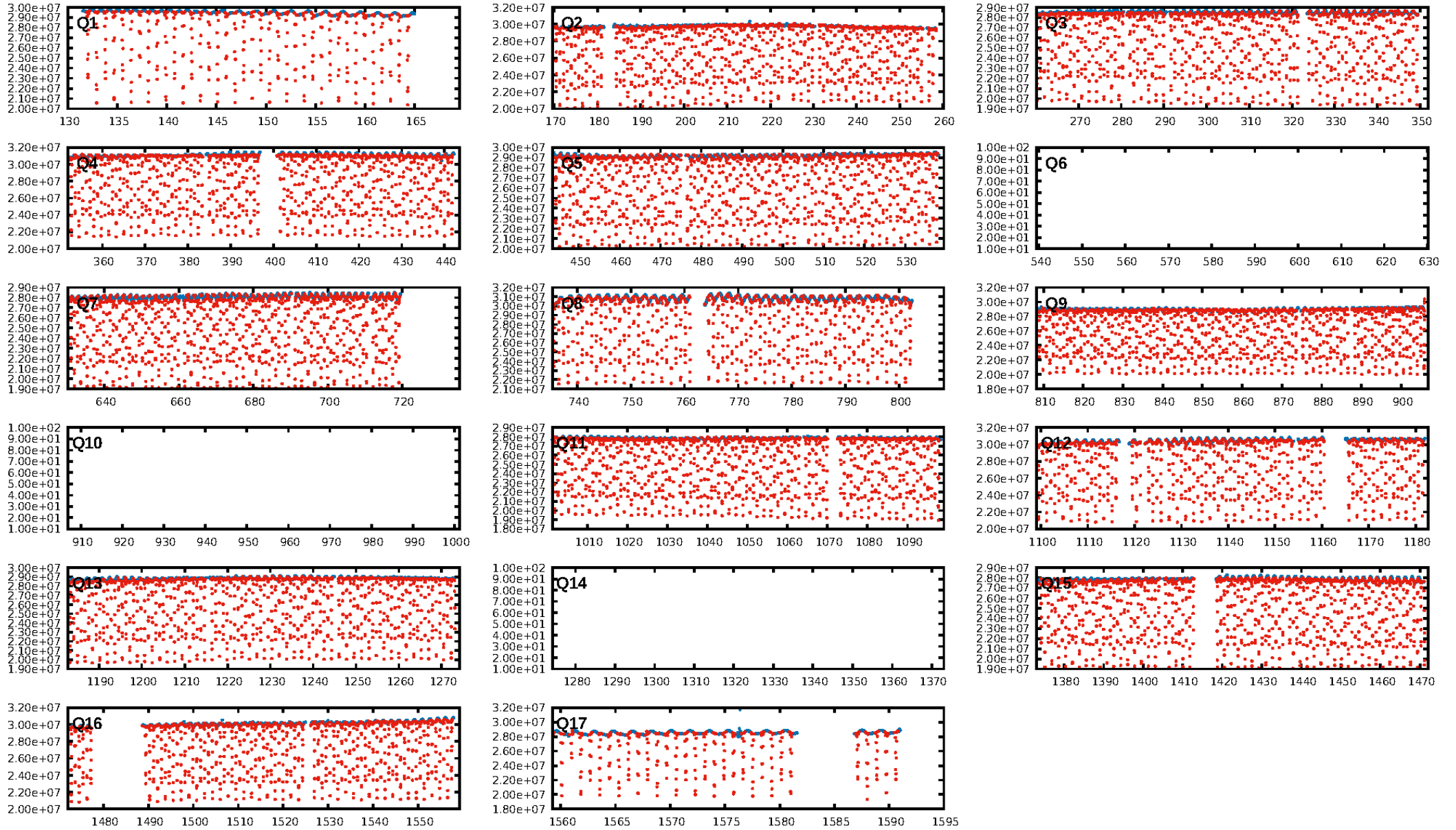
DV Fit Results:

Period = 0.87236 [0.00000] d
Epoch = 132.0342 [0.0000] BKJD
Rp/R* = 0.5587 [0.0197]
a/R* = 2.70 [0.02]
b = 0.73 [0.03]
Seff = 4716.45 [1818.75]
Teq = 2113 [204] K
Rp = 63.89 [19.15] Re
a = 0.0178 [0.0044] AU
Ag = 0.00 [0.00] [-1921.75σ]
Teffp = 517 [98] K [-7.06σ]

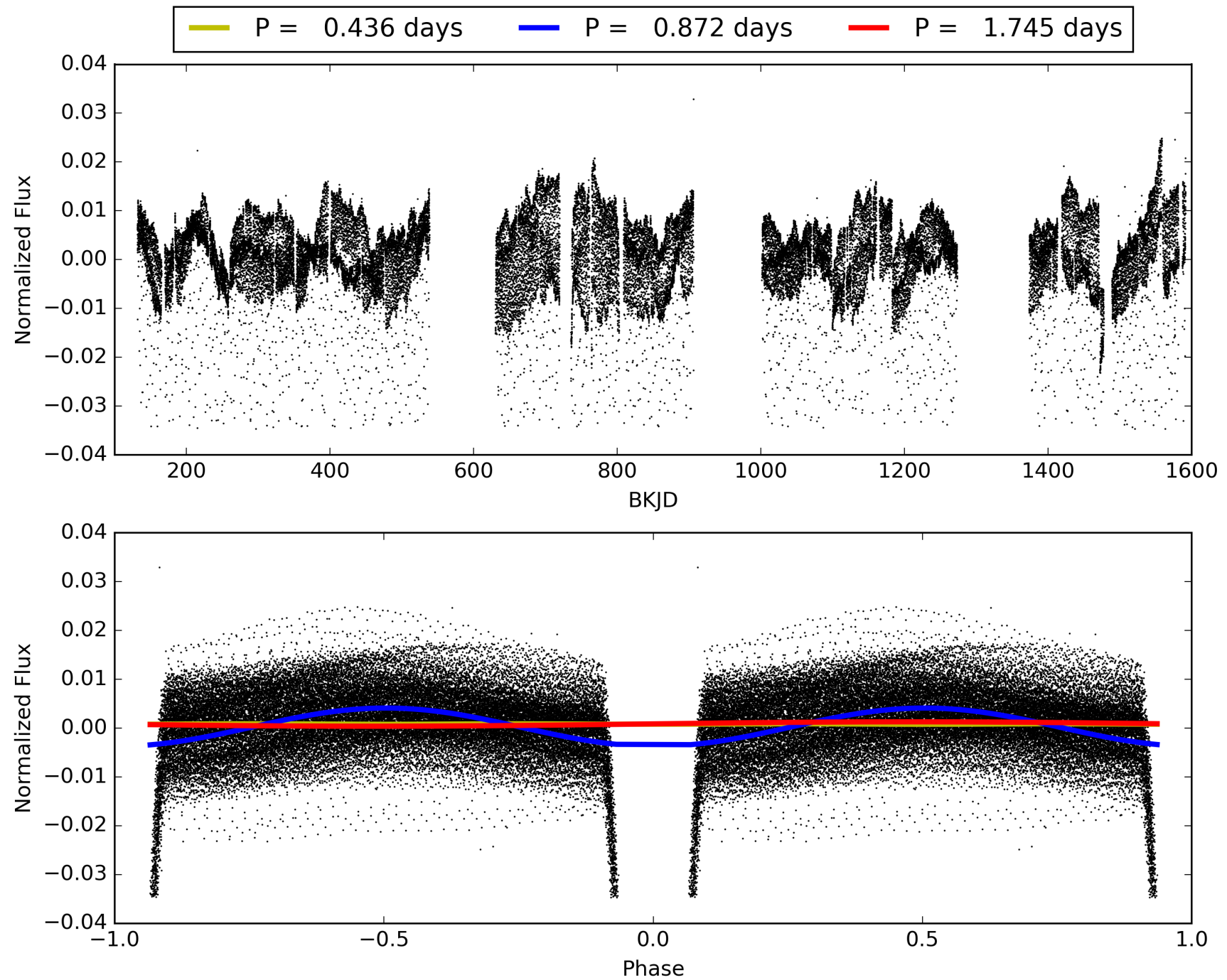
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1156/1160]
GhostDiagnostic-chr: 1.976
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.207 arcsec [2.68σ]
KicOffset-rm: 0.187 arcsec [2.76σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 004380283-01, PDC Light Curves

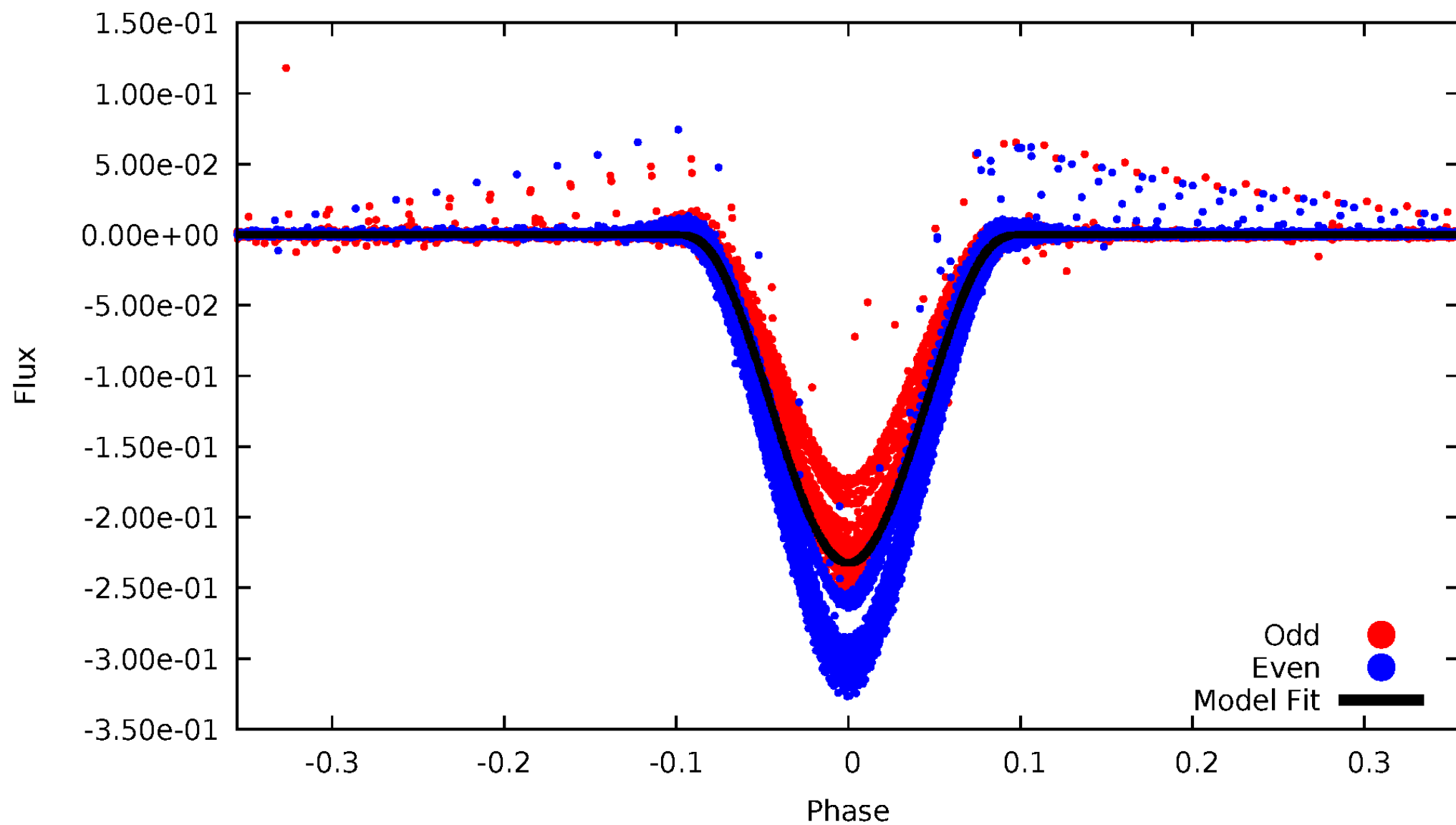


TCE 004380283-01



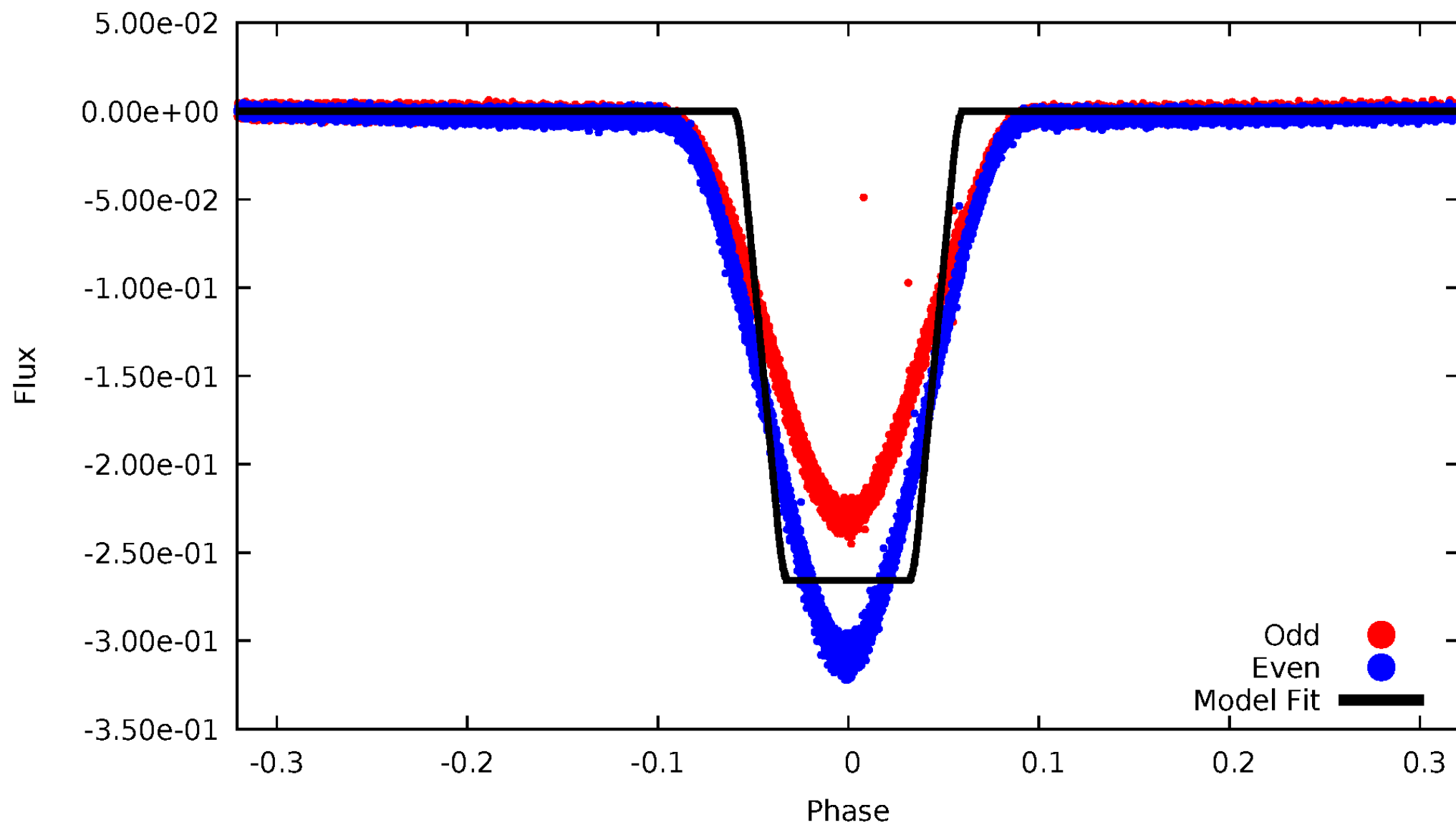
DV Odd/Even

TCE 004380283-01



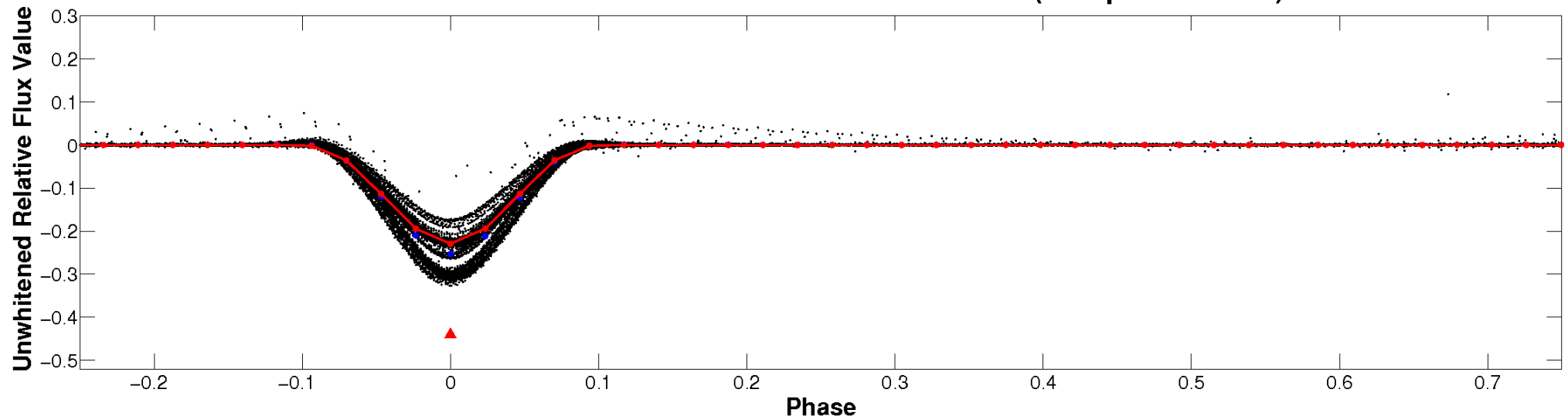
ALT Odd/Even

TCE 004380283-01

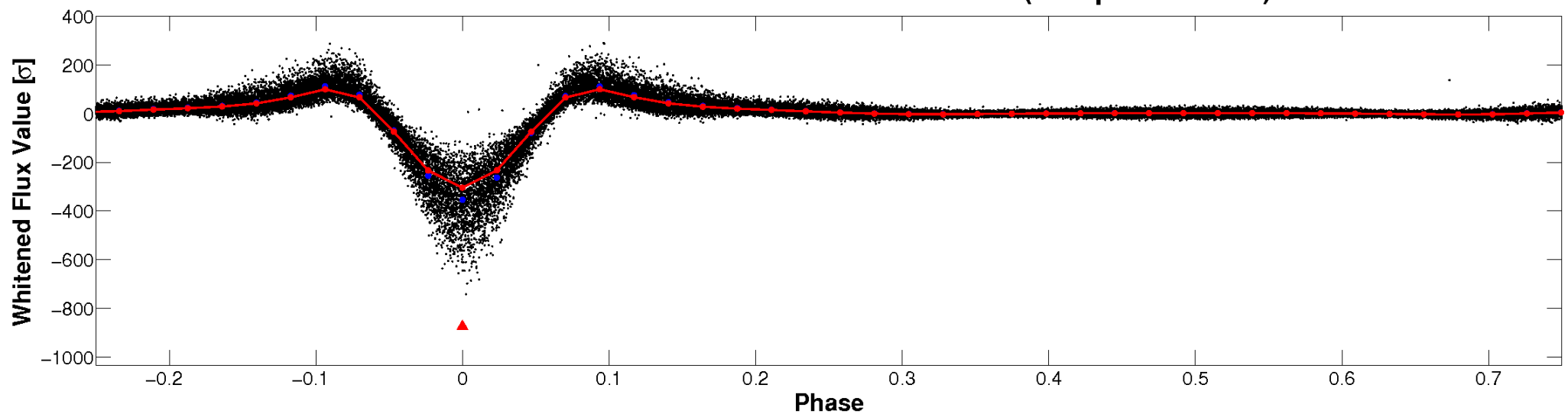


Non-Whitened Vs. Whitened Light Curve

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

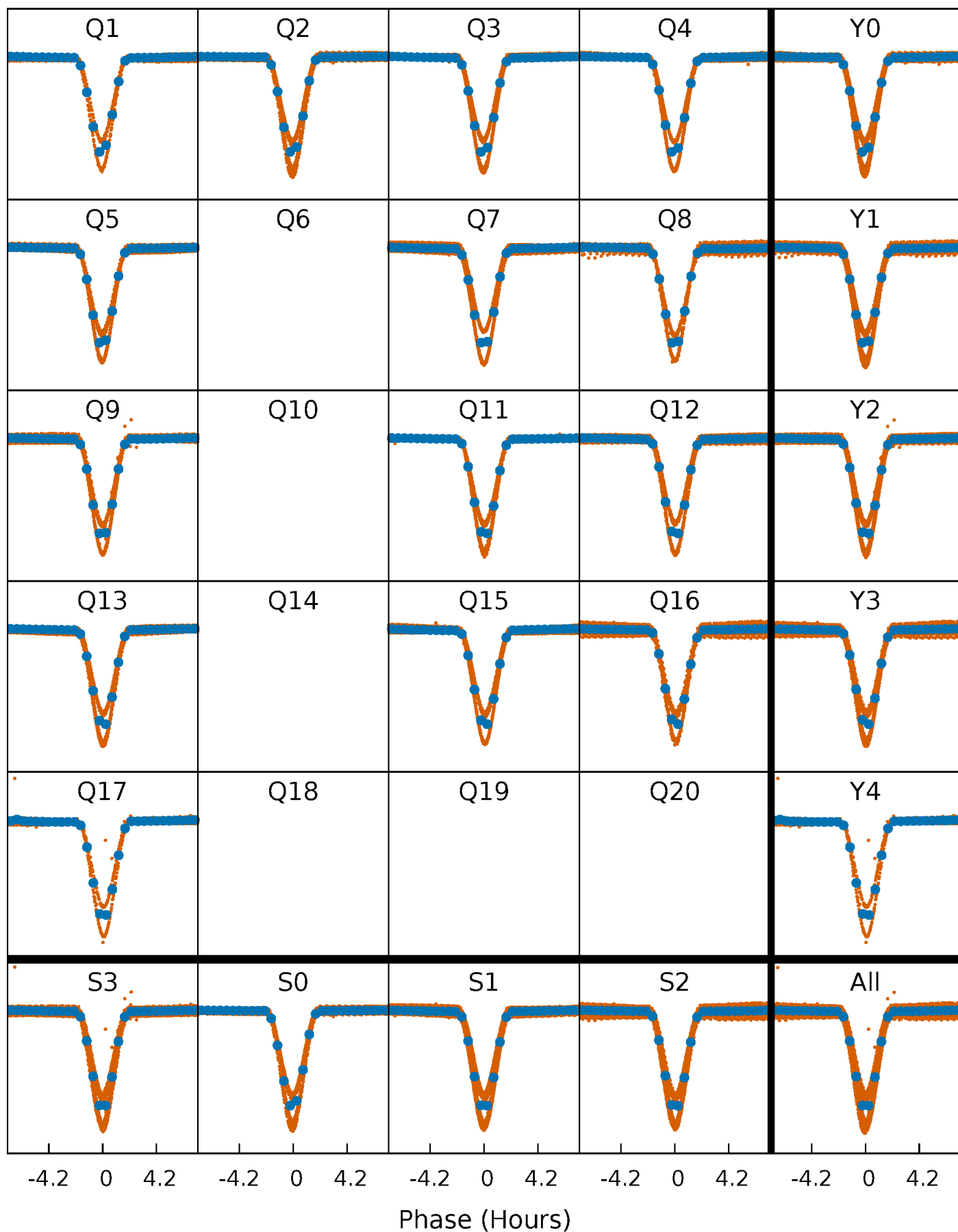


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



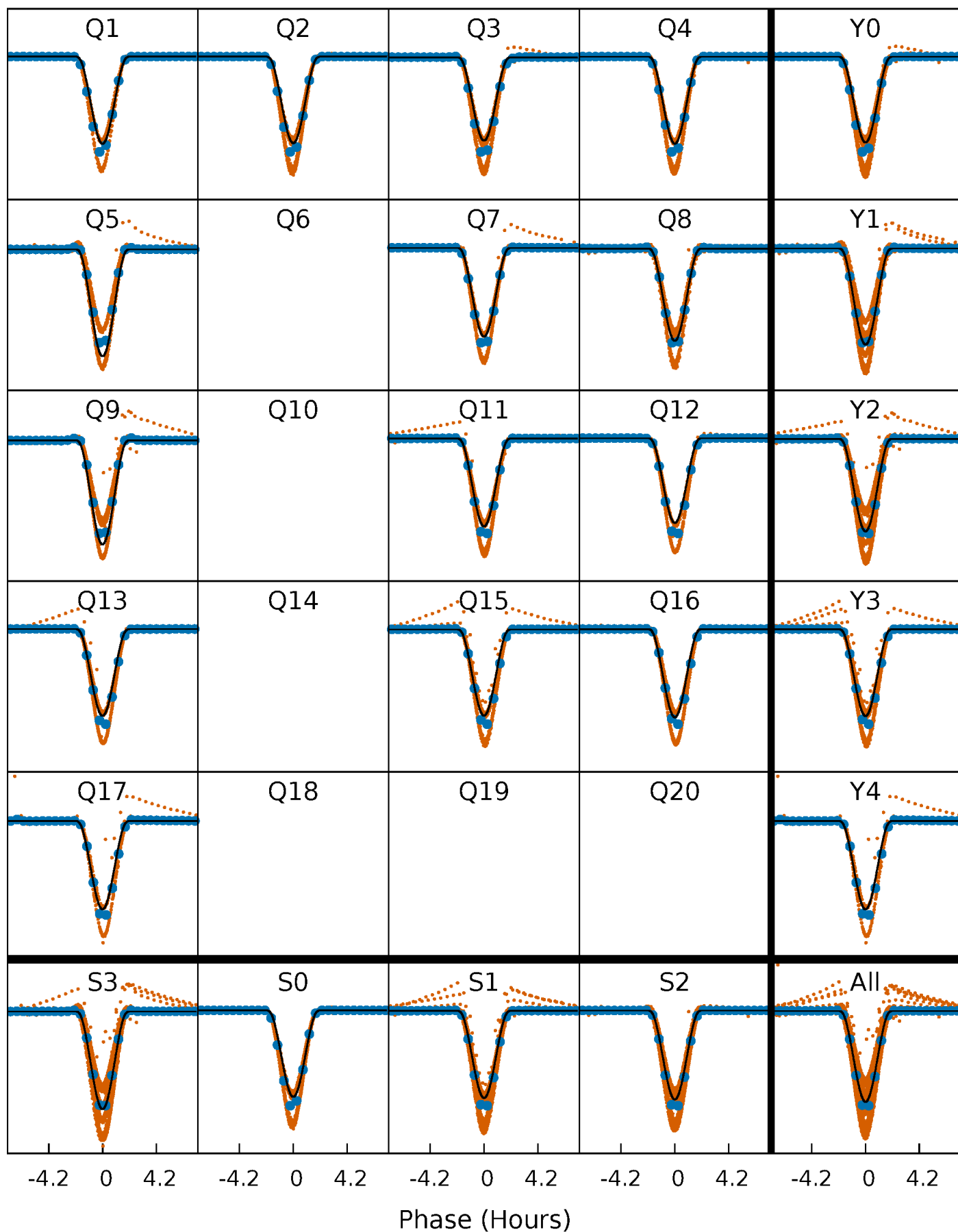
PDC Quarter-Phased Transit Curves

TCE 004380283-01 P= 0.872356 Days $T_0=132.034153$ (BKJD)



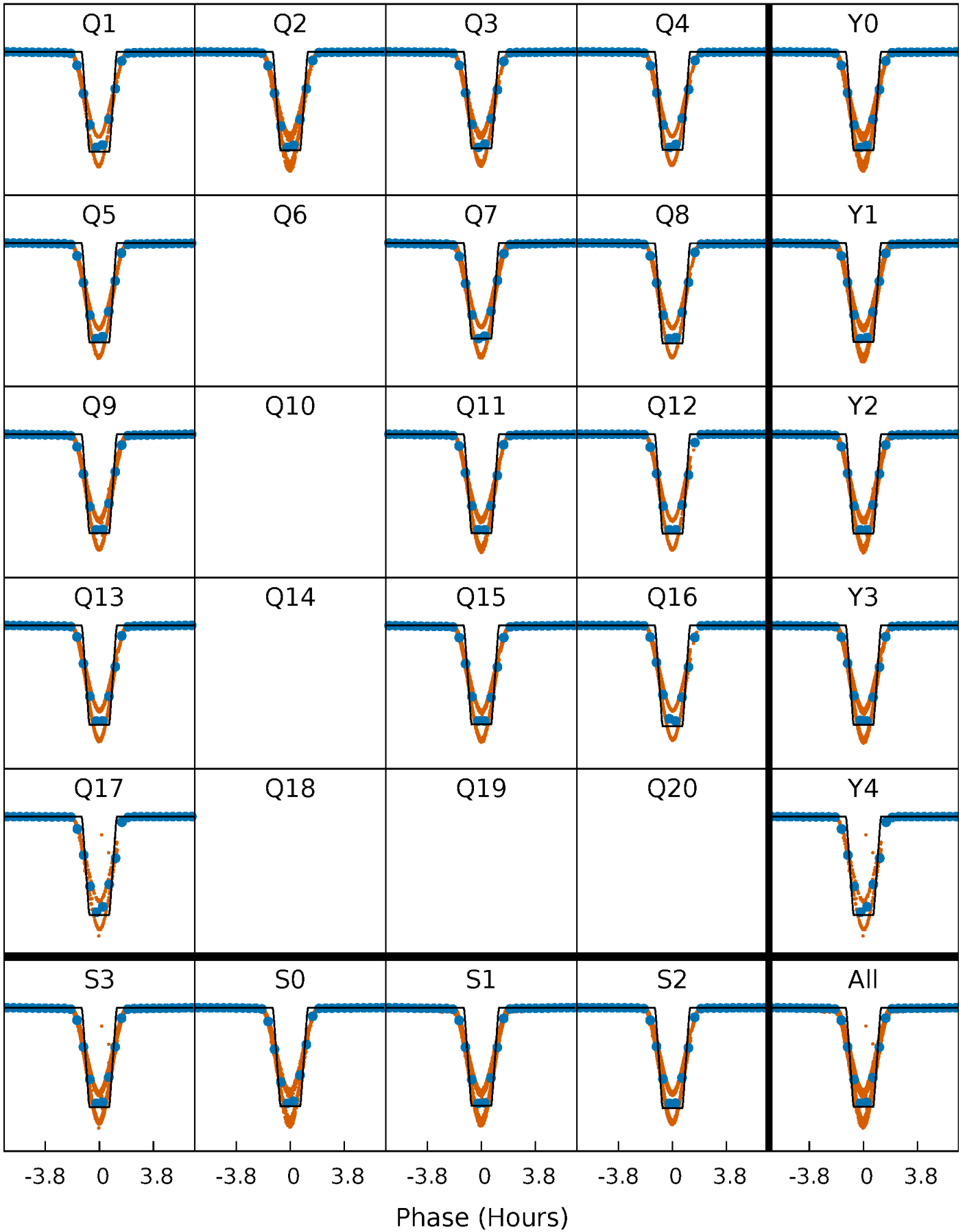
DV Quarter-Phased Transit Curves

TCE 004380283-01 P= 0.872356 Days $T_0=132.034153$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

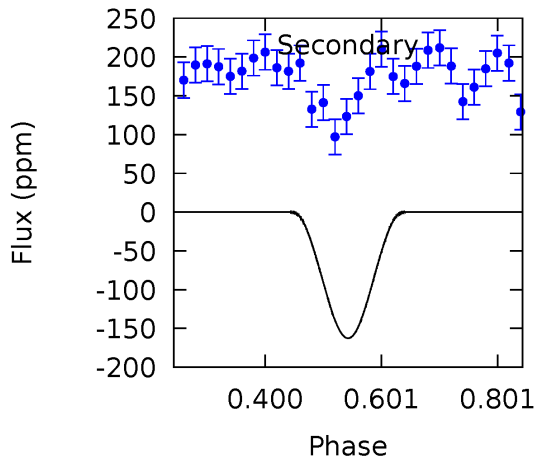
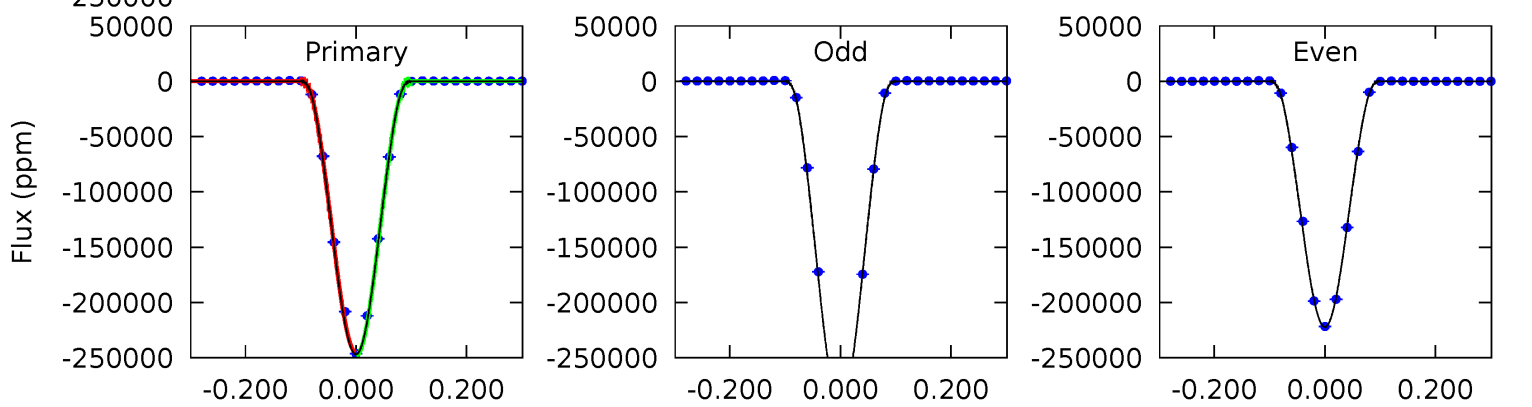
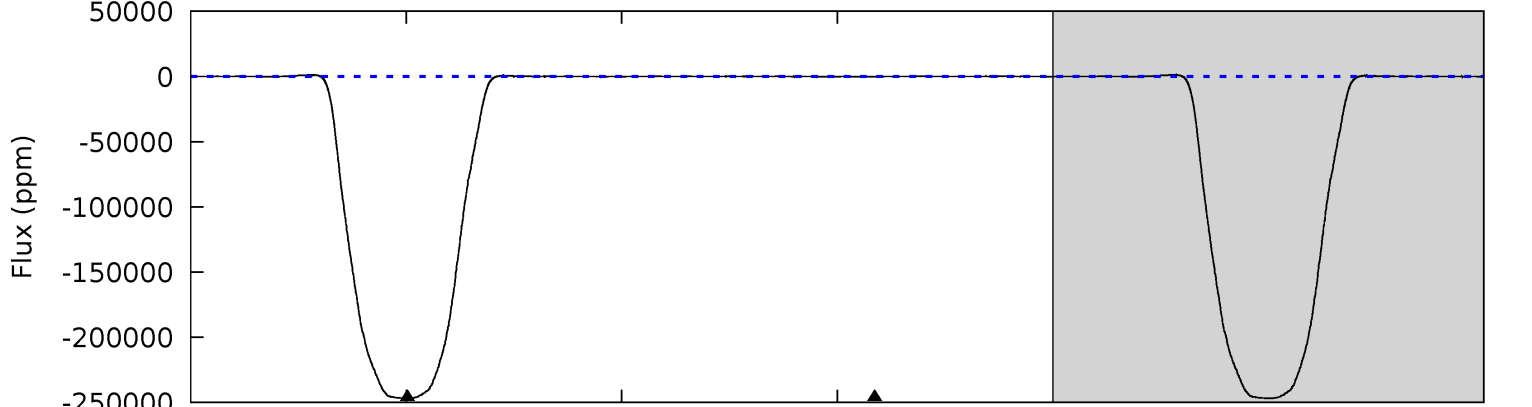
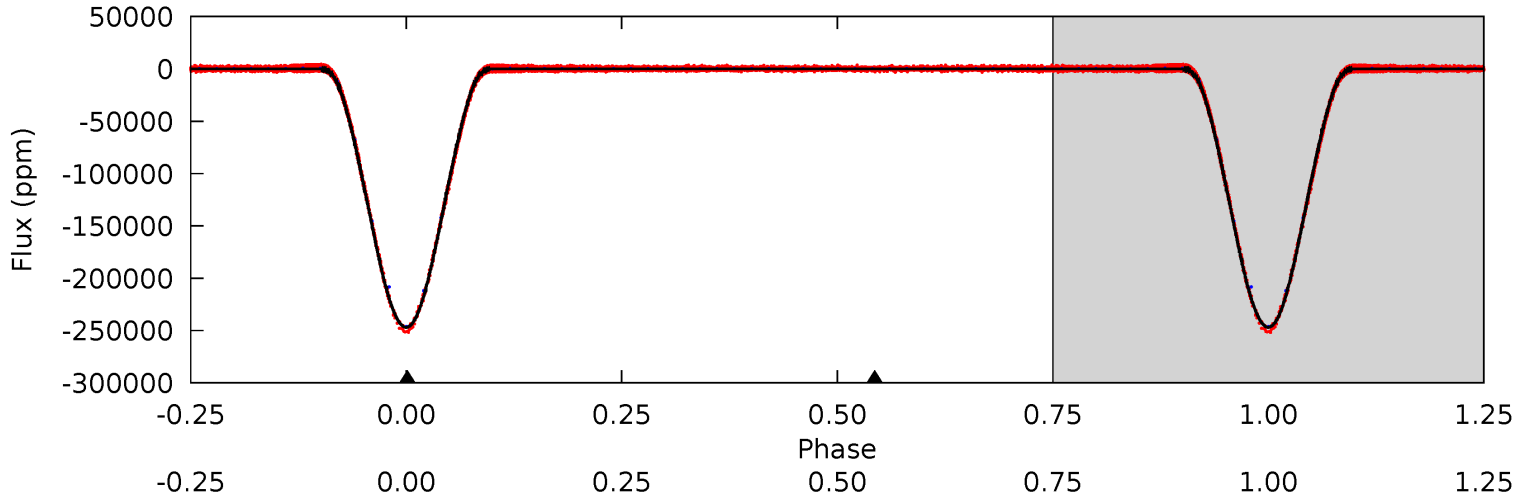
TCE 004380283-01 P= 0.872358 Days $T_0=132.032928$ (BKJD)



DV Model-Shift Uniqueness Test

004380283-01, P = 0.872356 Days, E = 131.161797 Days

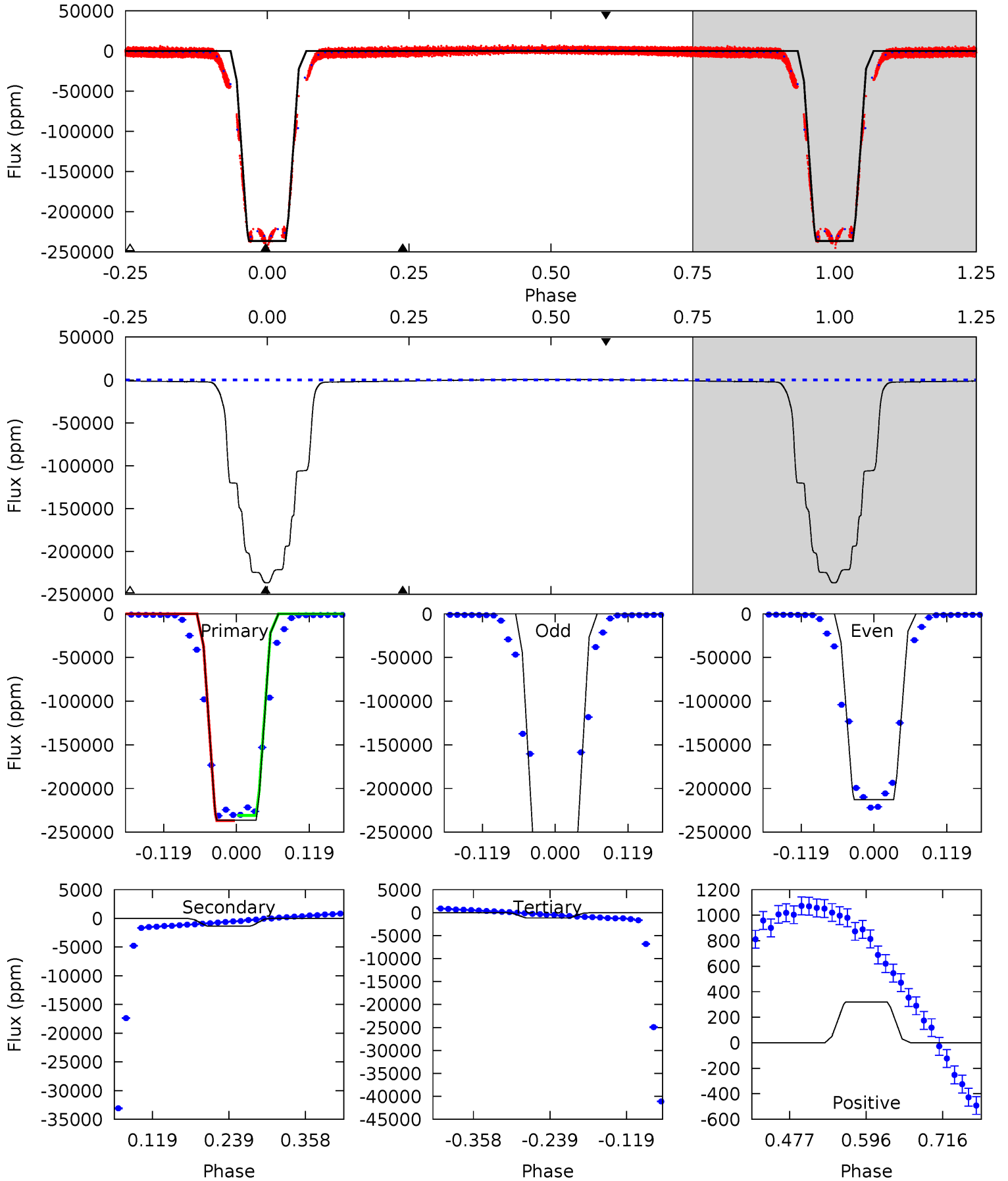
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16108	10.6	0	0	4.42	1.28	2.45	16108	16108	10.6	10.6	2538	1.03	0.00	0



Alt Model-Shift Uniqueness Test

004380283-01, P = 0.872358 Days, E = 131.160570 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3729	21.5	18.3	5.05	4.53	1.56	14.2	3711	3724	3.21	16.5	938.6	0.96	0.00	0



Stellar Parameters For KIC 004380283

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6240^{+175}_{-219}	$4.391^{+0.090}_{-0.195}$	$-0.340^{+0.300}_{-0.300}$	$1.048^{+0.312}_{-0.156}$	$0.983^{+0.147}_{-0.107}$	$1.202^{+0.583}_{-0.632}$
	+3%/-4%	+2%/-4%	+88%/-88%	+30%/-15%	+15%/-11%	+48%/-53%
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 004380283-01 / KOI 6412.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-163 ± 15	$65.38^{+10.16}_{-6.12}$	2991^{+226}_{-167}	-3078^{+101}_{-138}	$0.007^{+0.001}_{-0.002}$
Alt.	-1366 ± 63	$60.57^{+10.35}_{-6.38}$	2990^{+233}_{-157}	-2979^{+103}_{-161}	$0.065^{+0.014}_{-0.017}$

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

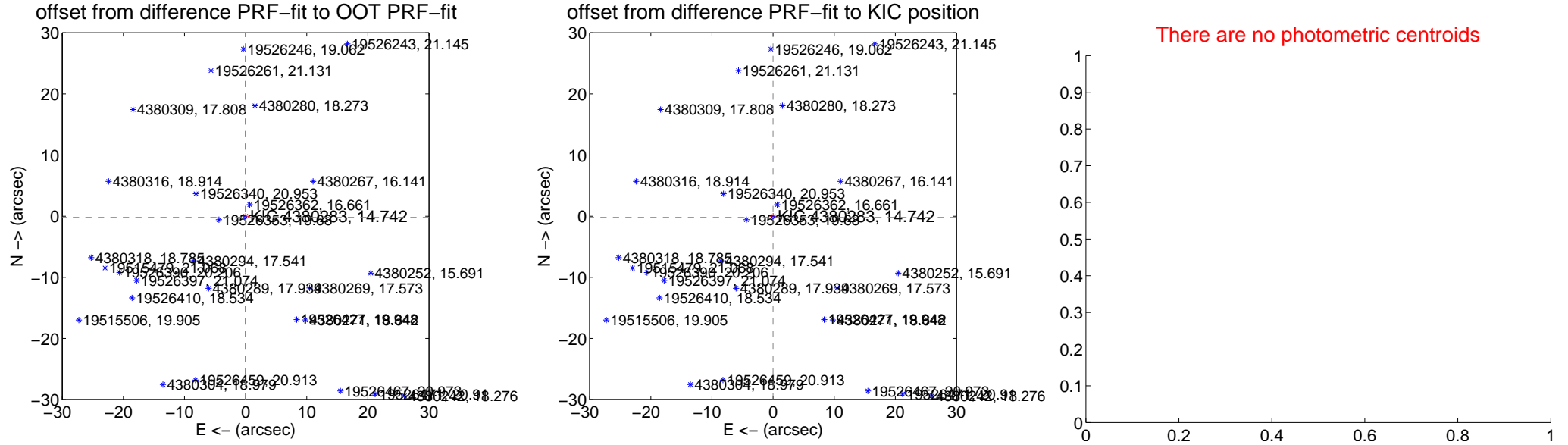
DV Centroid Data

Supplemental centroid analysis for 004380283-01. Kepler magnitude: 14.74. Transit SNR 8476.35

There are 14 quarters with good PRF difference image offsets

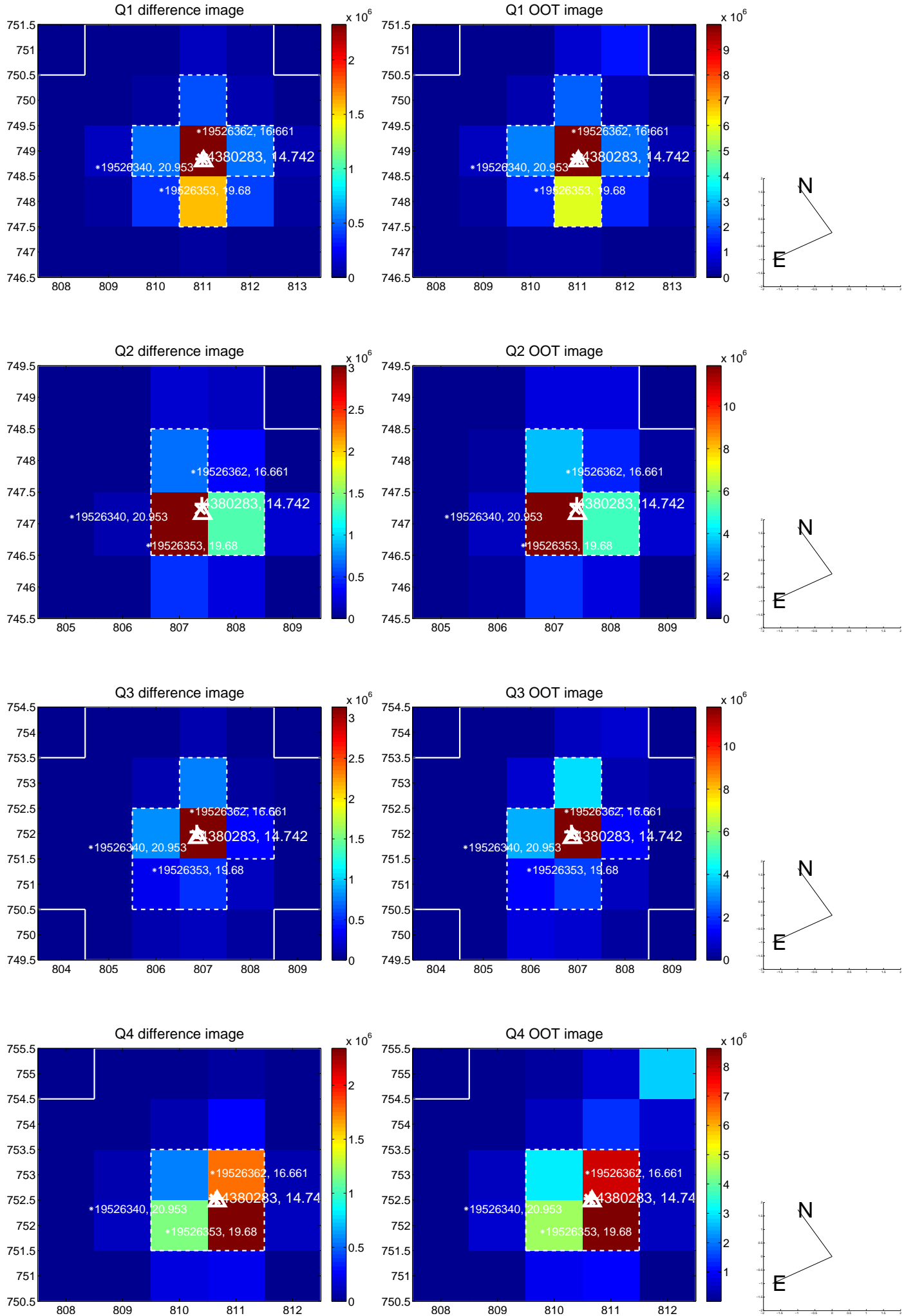
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.207 ± 0.077	2.68	0.062 ± 0.070	-0.197 ± 0.075
PRF-fit source offset from KIC position	0.187 ± 0.068	2.76	0.003 ± 0.067	-0.187 ± 0.068
photometric centroid source offset	—	—	—	—

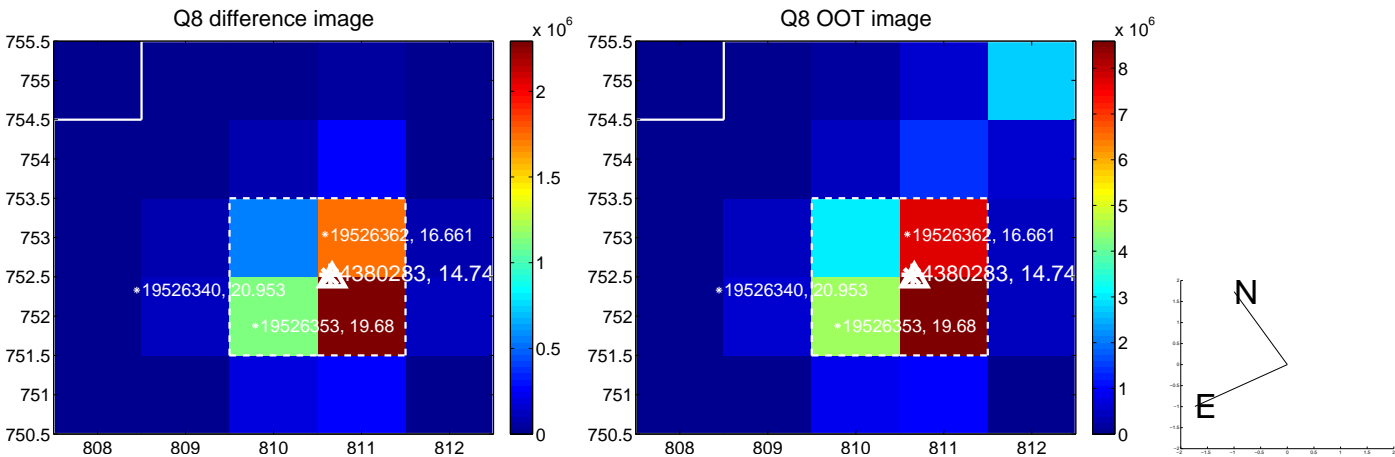
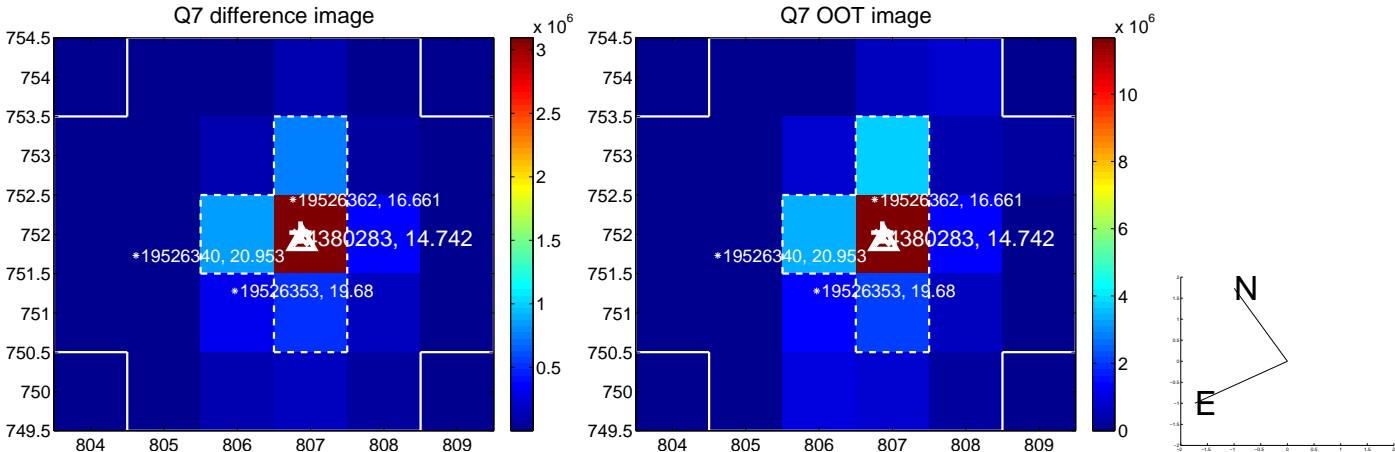
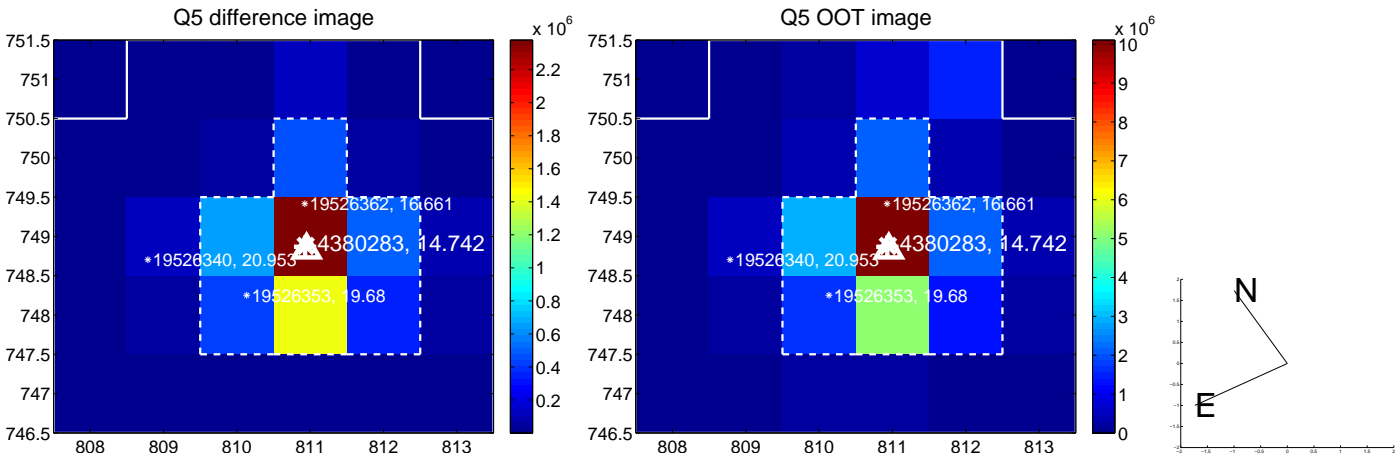


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

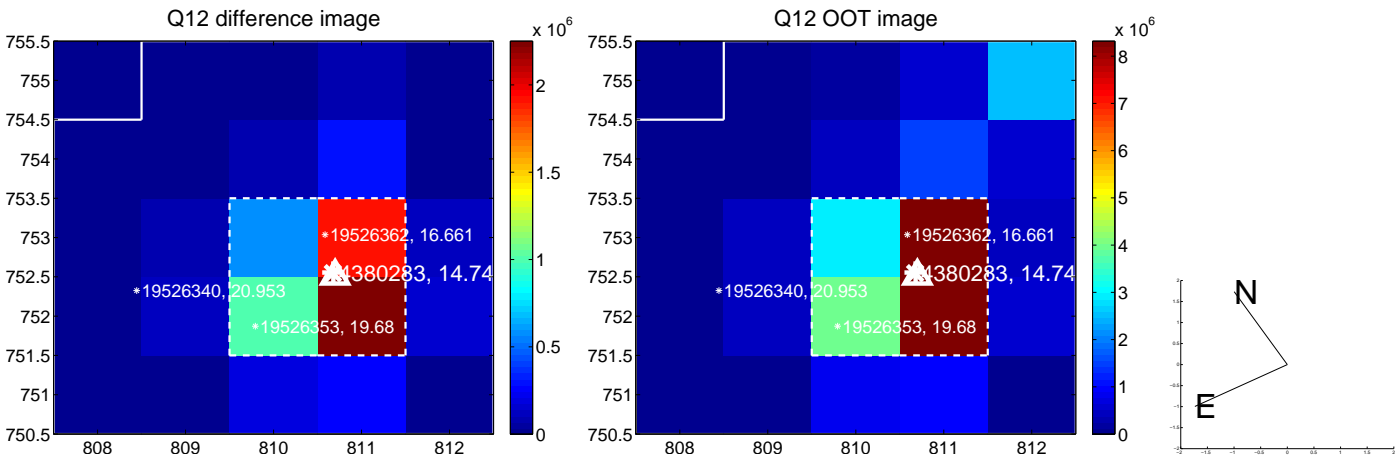
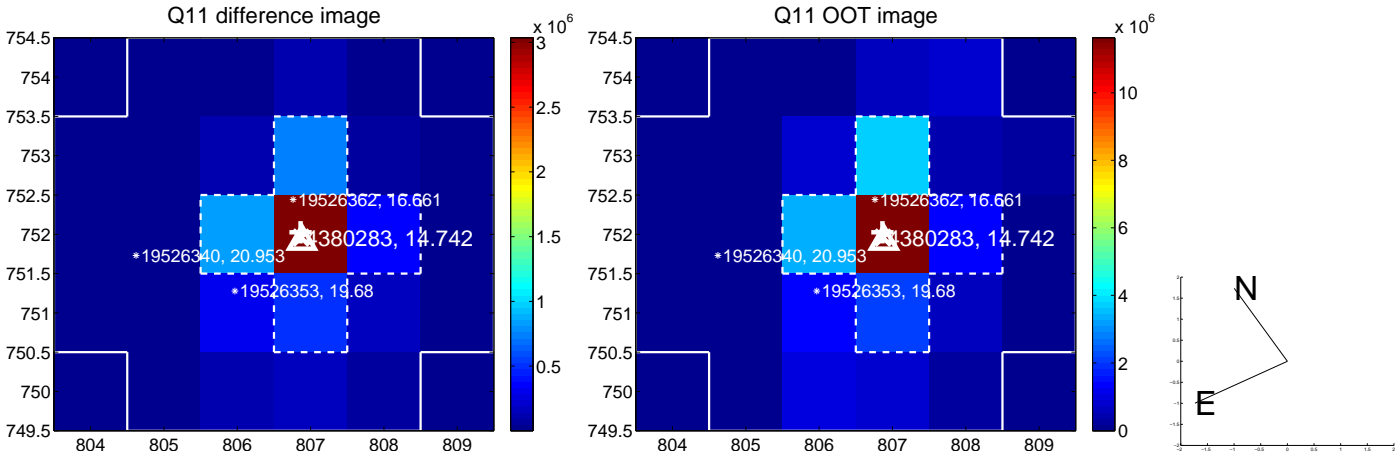
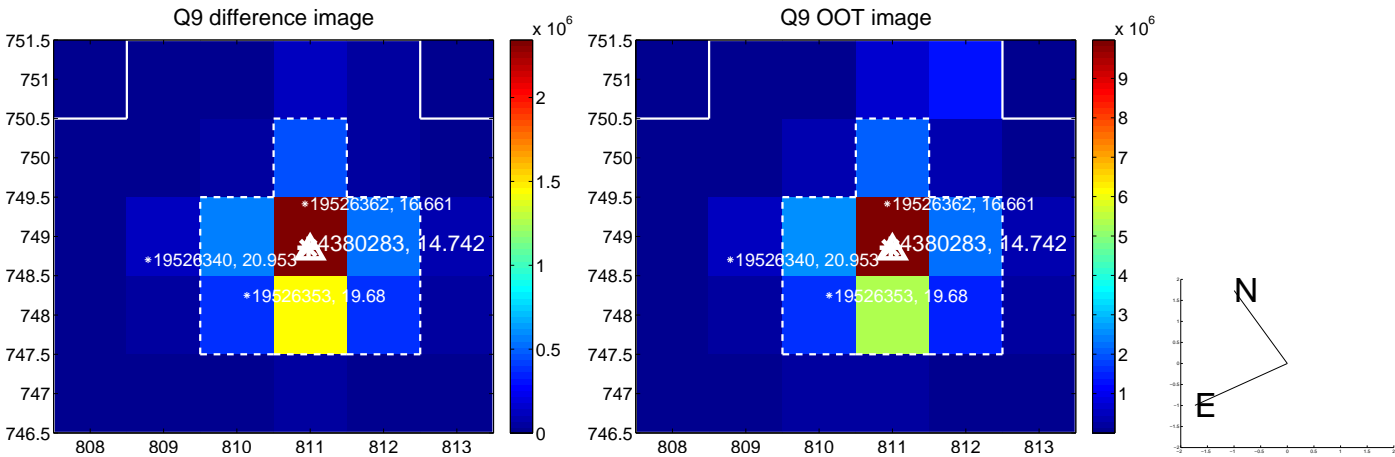
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



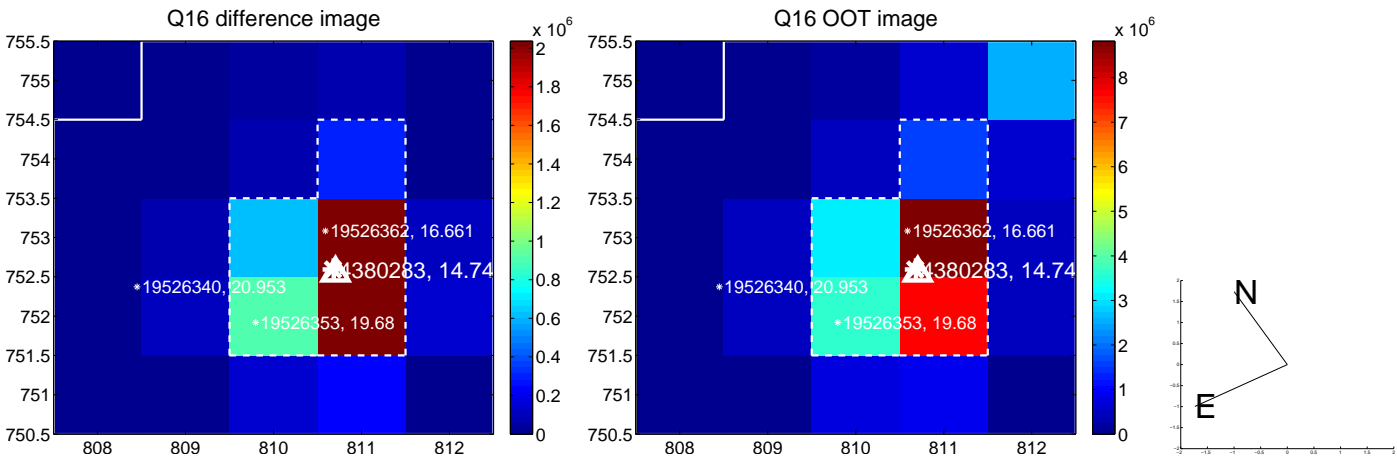
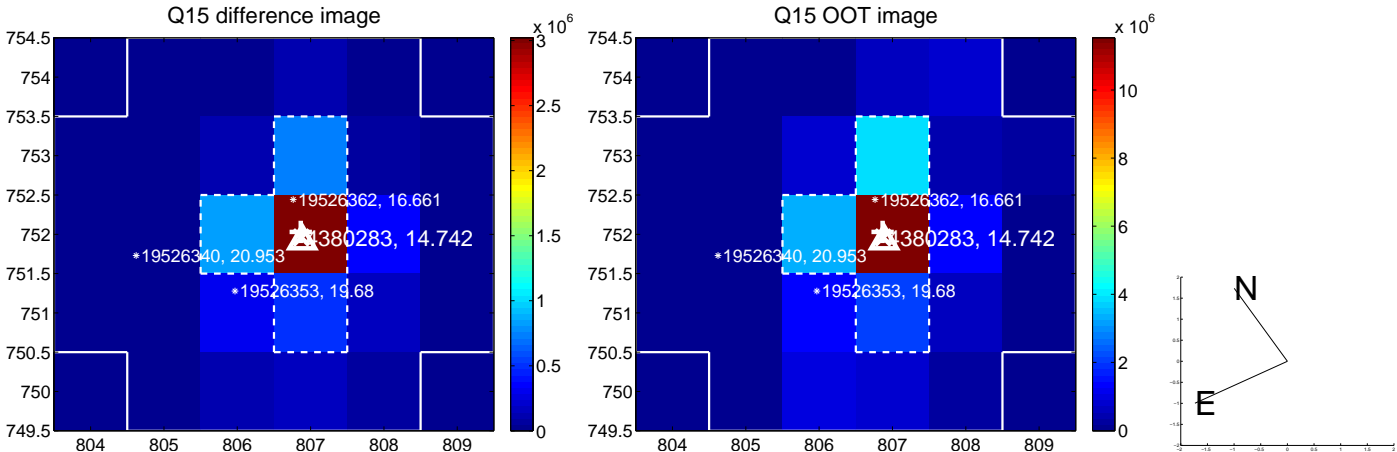
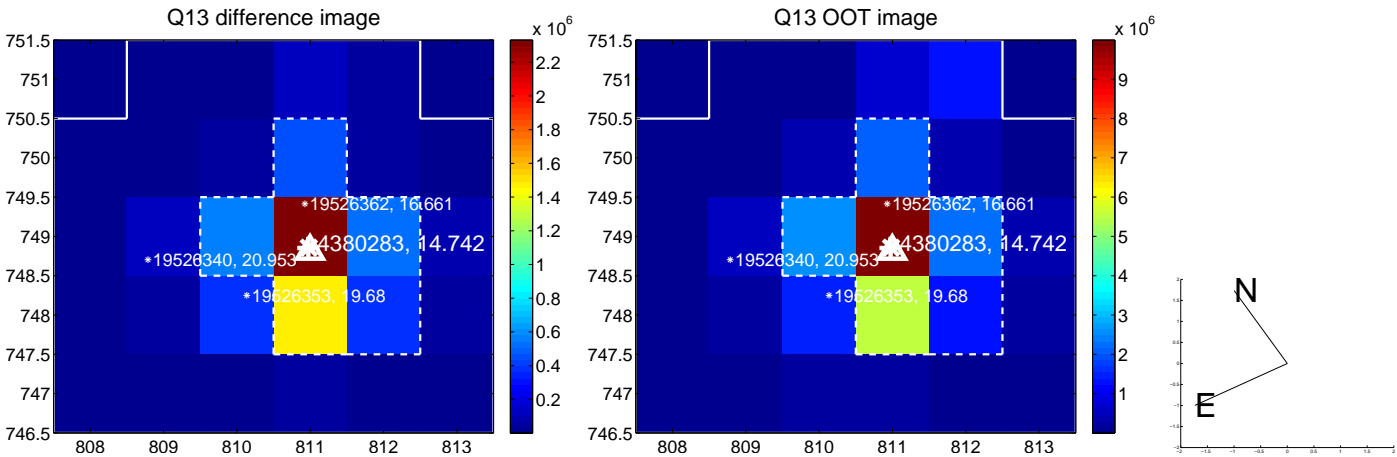
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



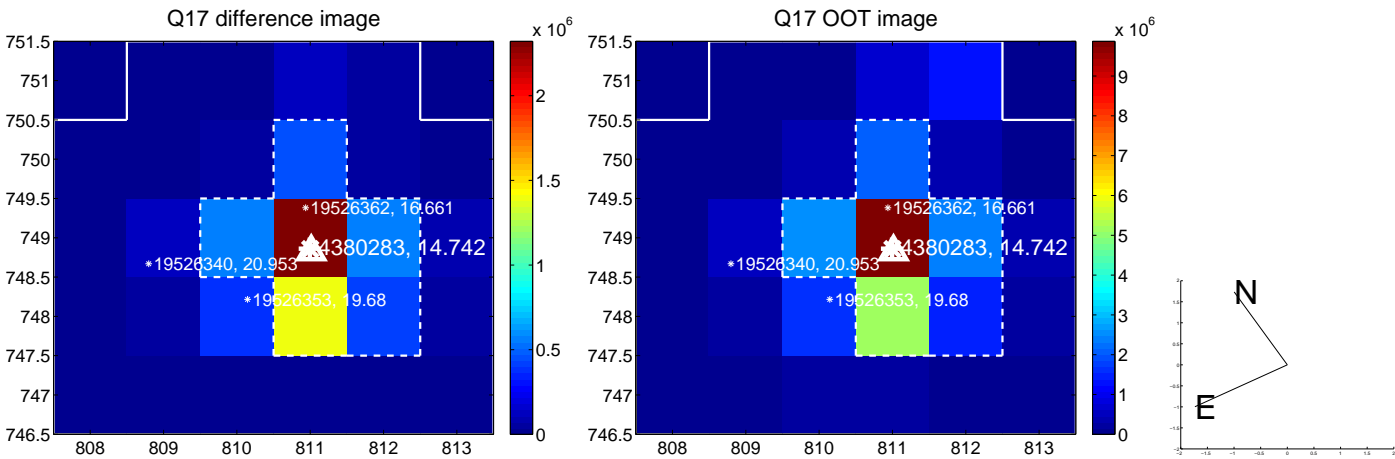
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

