

KIC 010798838

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})
010798838-01	OBS	3449.01	62.127664	172.066441	37214.0	5.230	830.7	759.7	0.81	5344	25.68	6.16

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010798838-01	OBS	FP	0.00	0	1	0	0	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 010798838-01

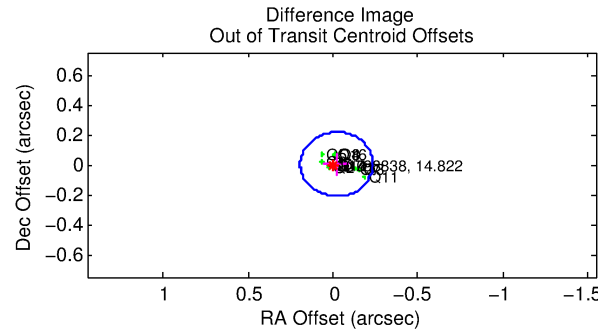
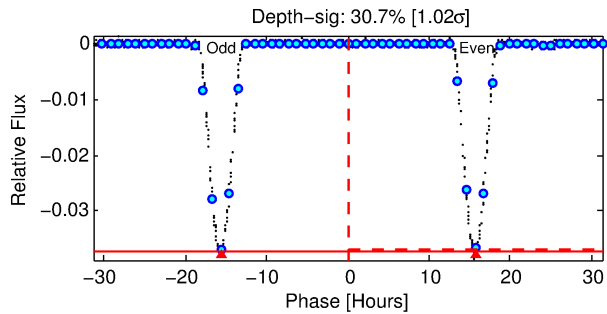
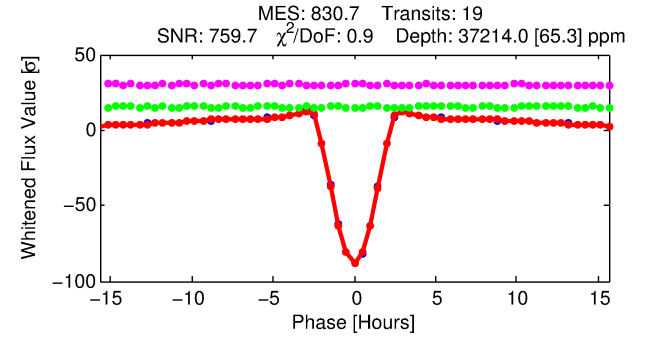
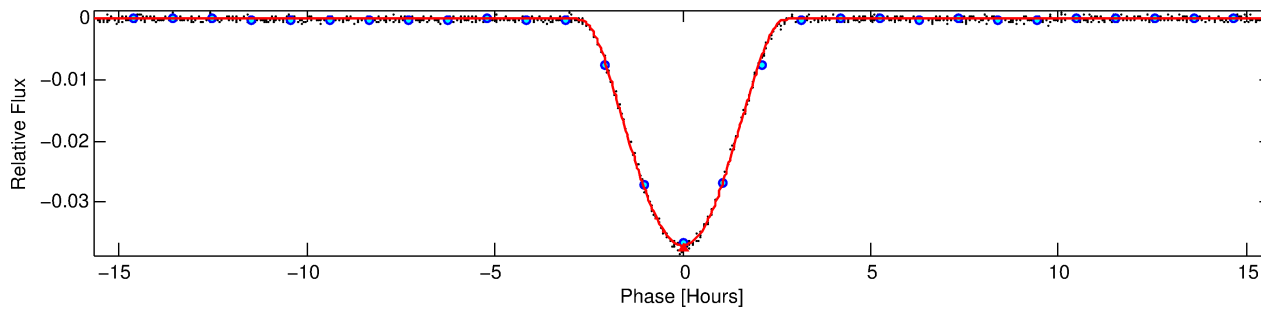
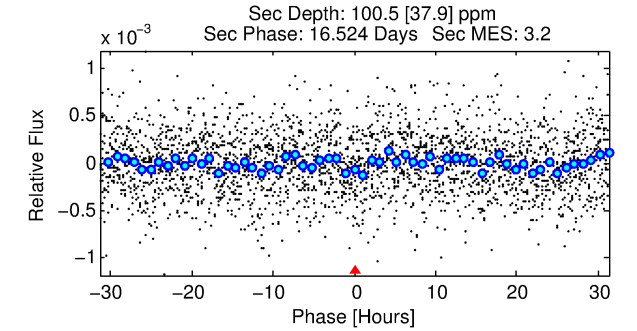
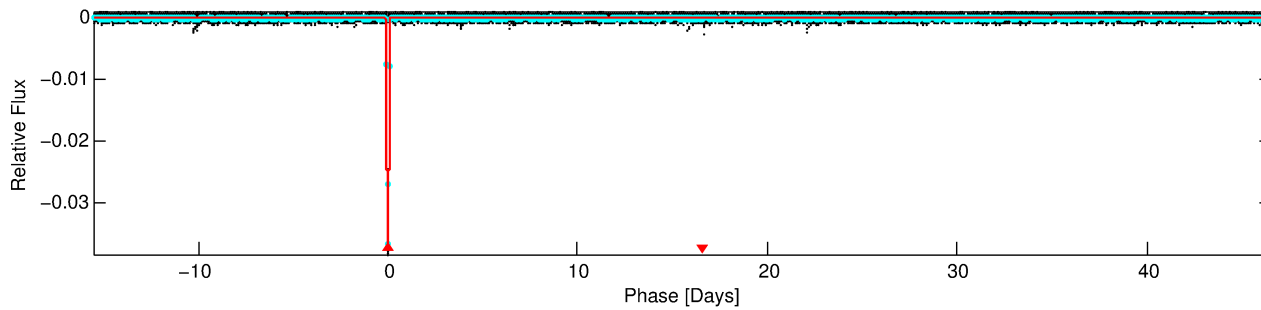
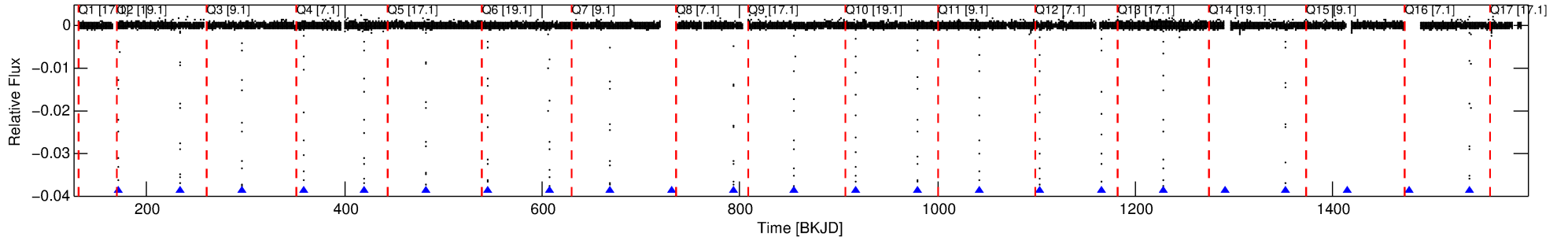
No Significant Match Found

DV One-Page Summary

KIC: 10798838 Candidate: 1 of 1 Period: 62.128 d

KOI: K03449.01 Corr: 0.997

Kp: 14.82 R*: 0.81 Rs Teff: 5344.0 K Logg: 4.49 Fe/H: -0.340



DV Fit Results:

Period = 62.12766 [0.00001] d
Epoch = 172.0664 [0.0001] BKJD
Rp/R* = 0.2917 [0.0218]
a/R* = 76.85 [0.34]
b = 0.98 [0.03]
Seff = 6.16 [1.70]
Teq = 402 [28] K
Rp = 25.68 [4.85] Re
a = 0.2778 [0.0443] AU
Ag = 6.47 [3.08] [1.78σ]
Teffp = 991 [105] K [5.44σ]

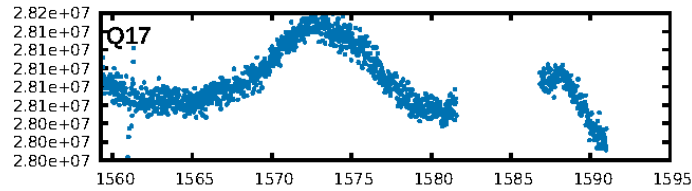
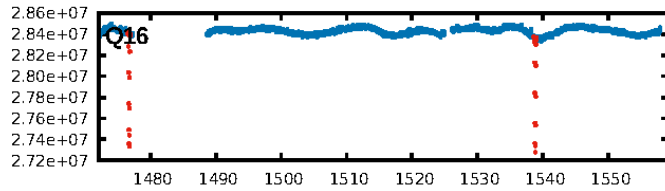
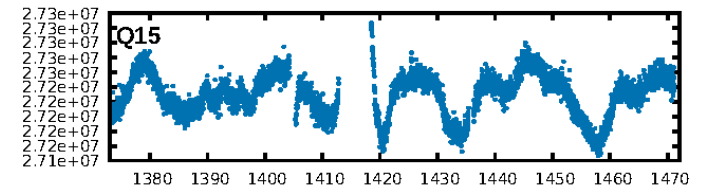
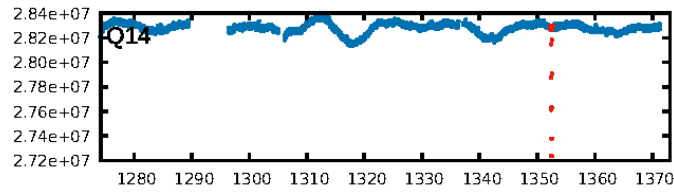
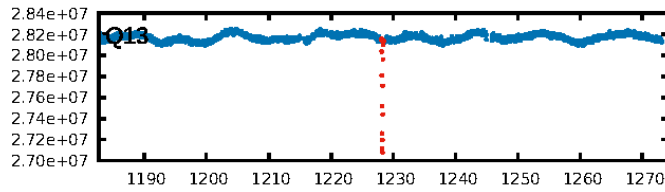
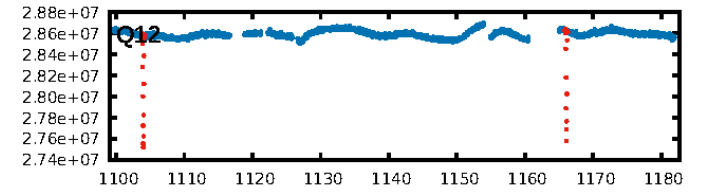
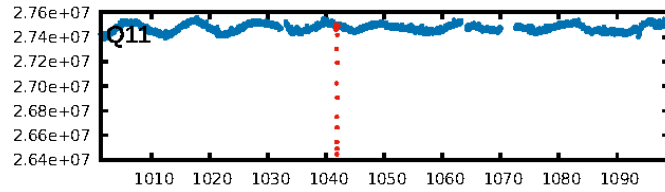
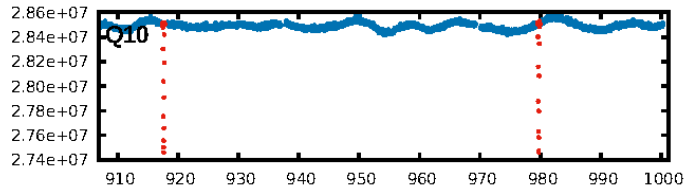
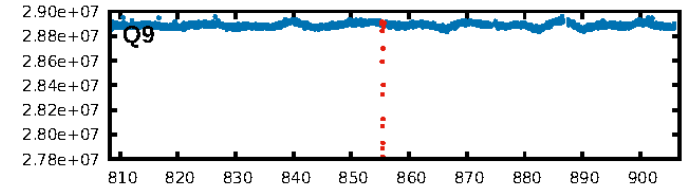
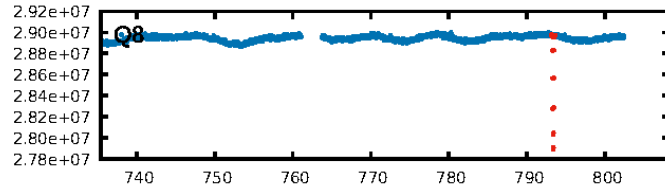
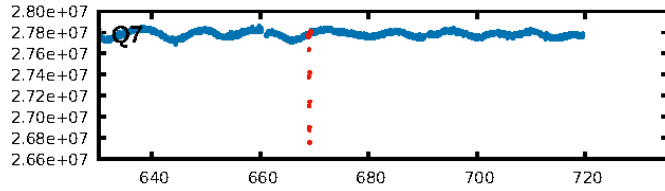
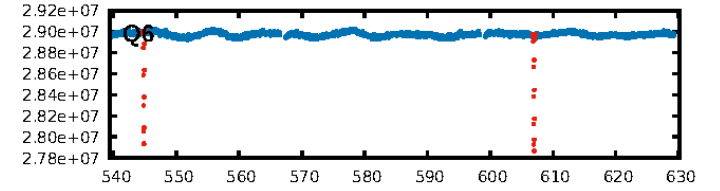
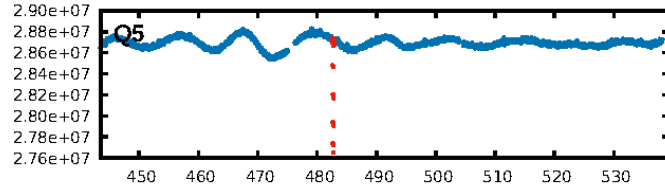
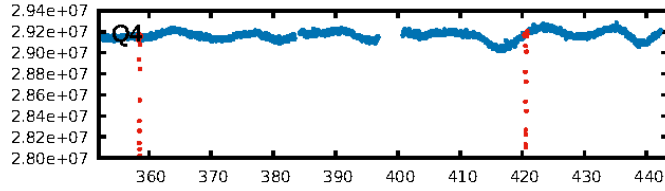
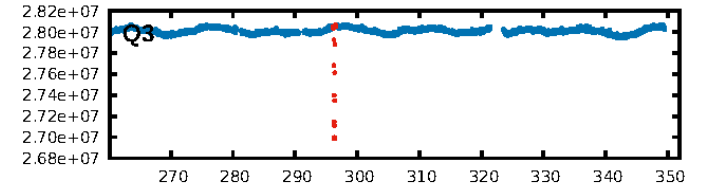
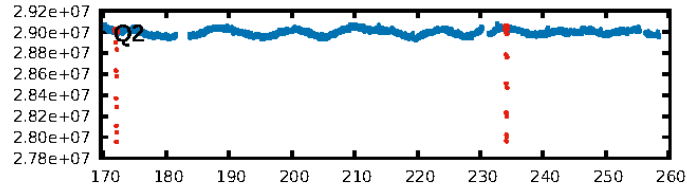
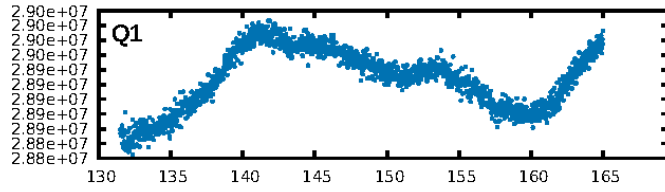
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.2%
ModelChiSquareGof-sig: 99.4%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [19/19]
GhostDiagnostic-chr: 5.726
Centroid-sig: 0.0%
Centroid-so: 0.108 arcsec [9.75σ]
OotOffset-rm: 0.021 arcsec [0.29σ]
KicOffset-rm: 0.076 arcsec [1.04σ]
OotOffset-st: 4/3/3/2 [12]
KicOffset-st: 4/3/3/2 [12]
DiffImageQuality-fgm: 1.00 [12/12]
DiffImageOverlap-fno: 1.00 [12/12]

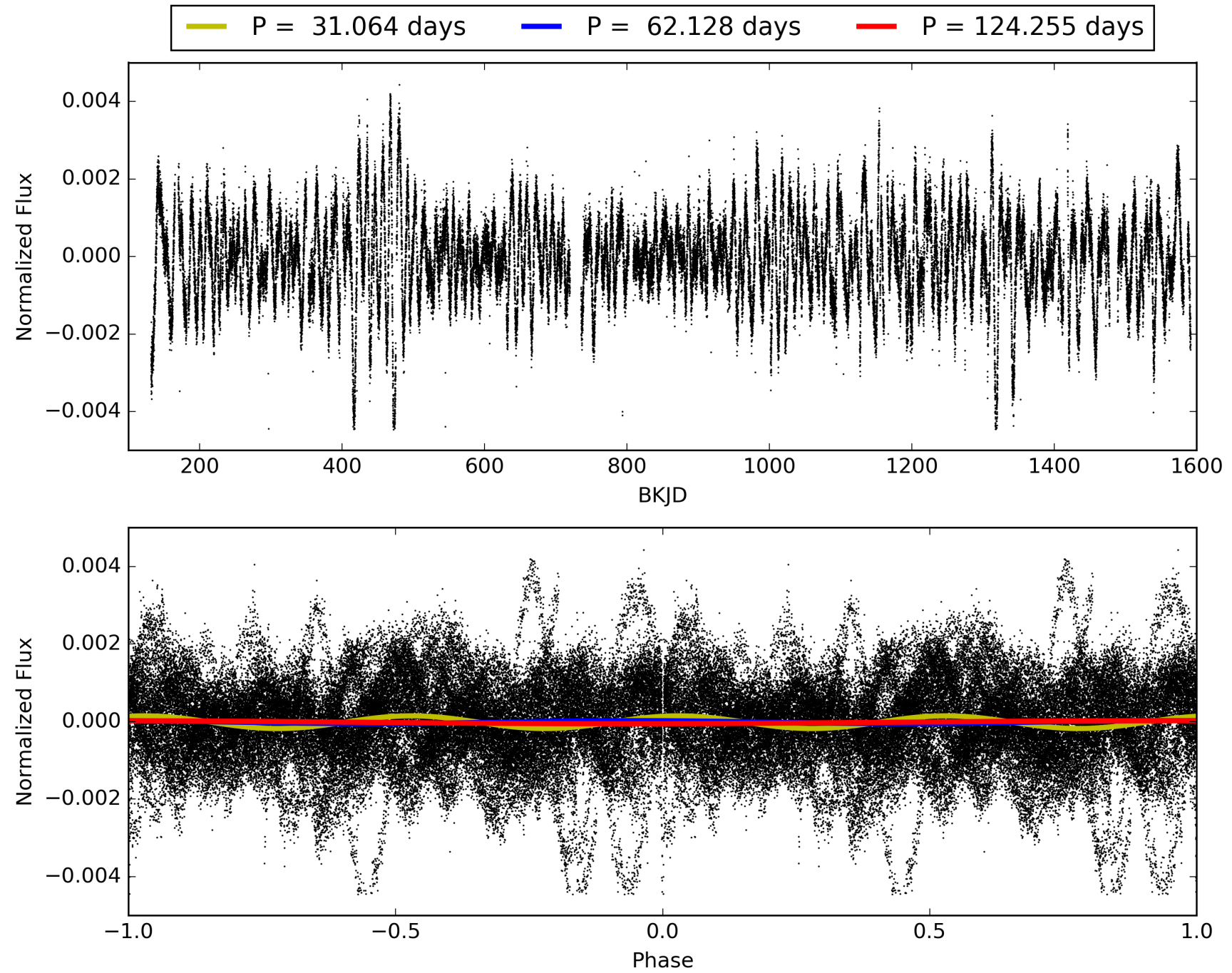
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:05:33 Z

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

TCE 010798838-01, PDC Light Curves

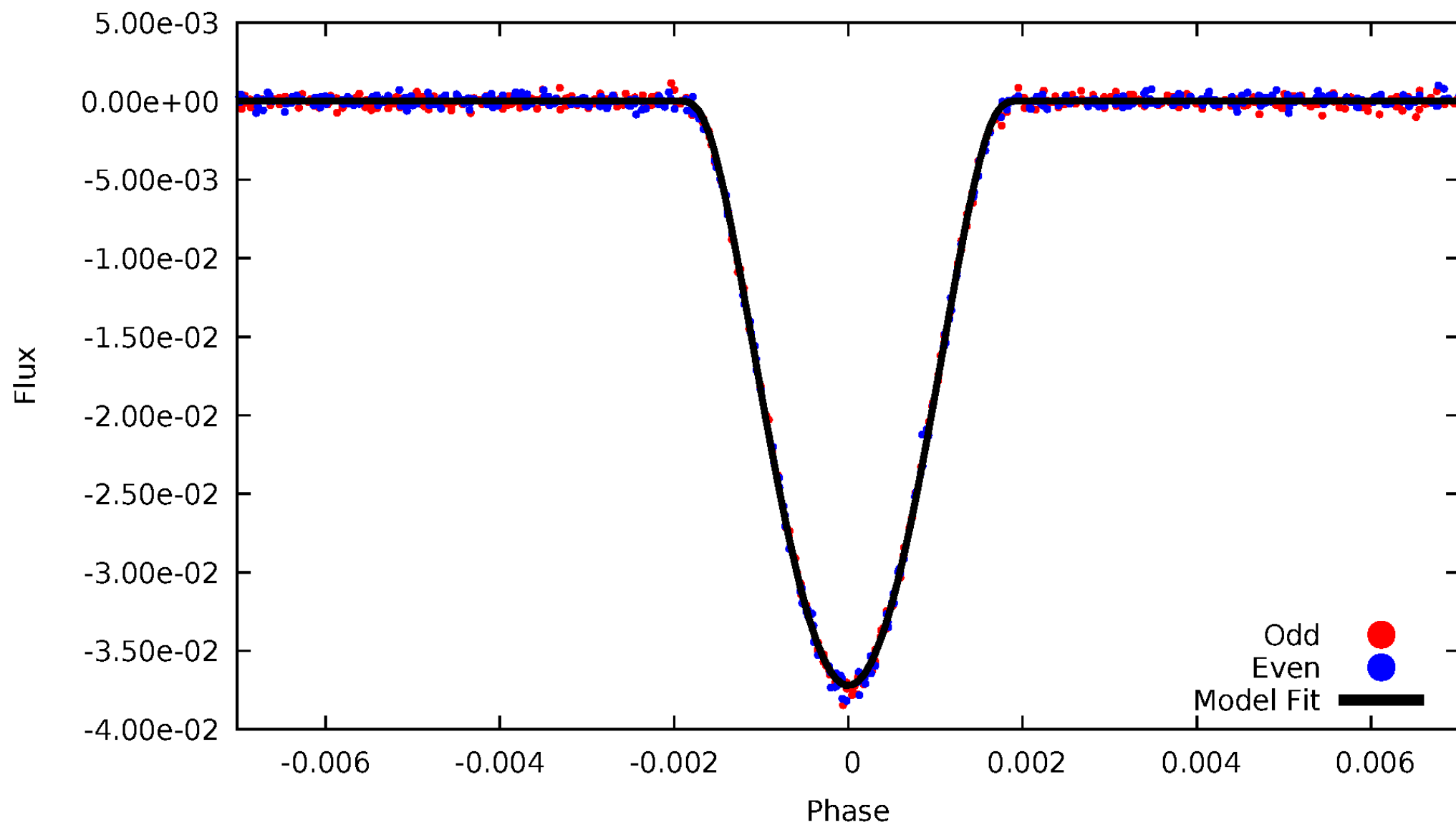


TCE 010798838-01



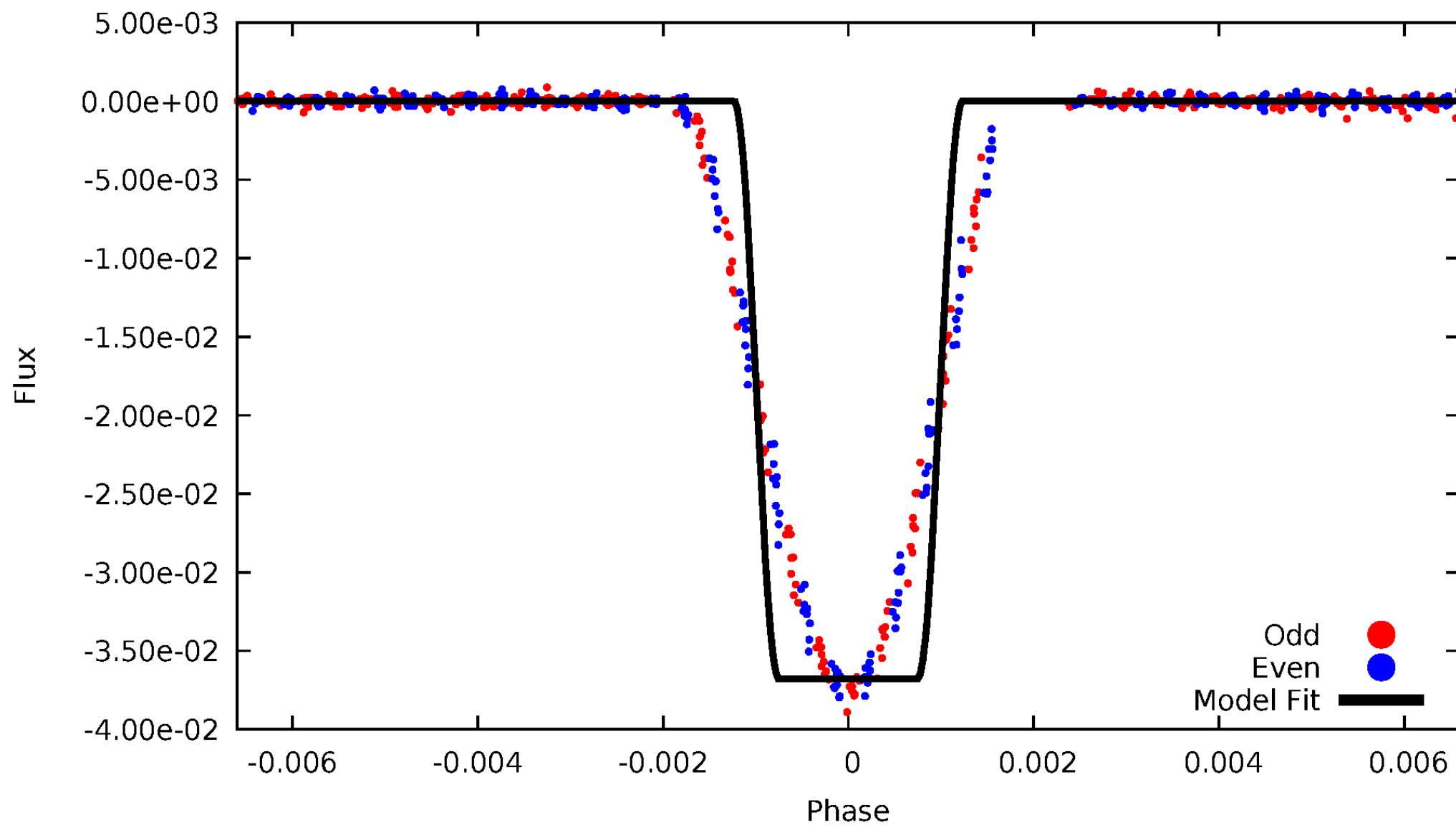
DV Odd/Even

TCE 010798838-01



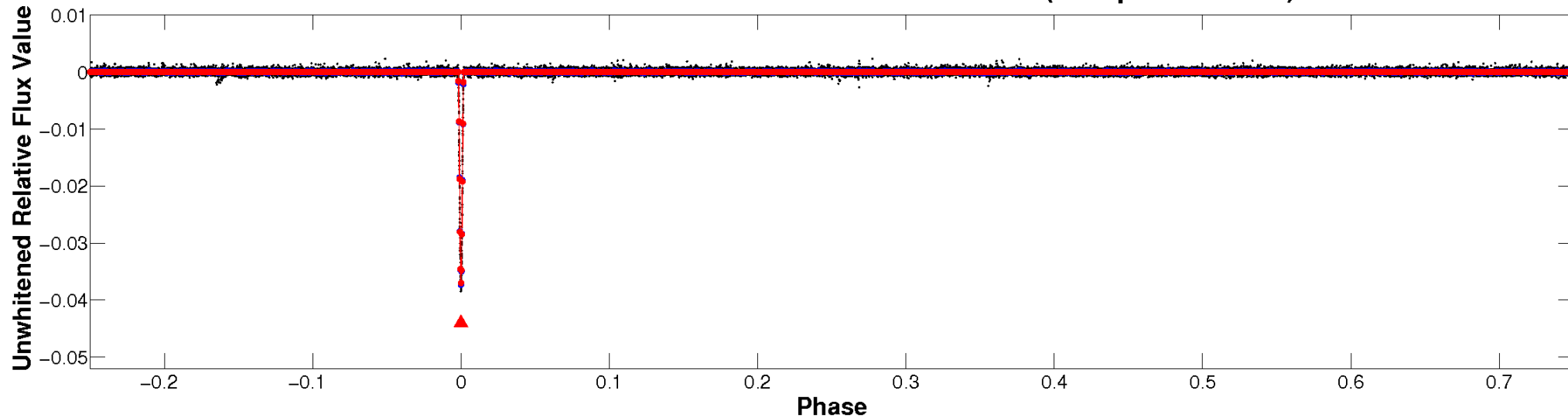
ALT Odd/Even

TCE 010798838-01

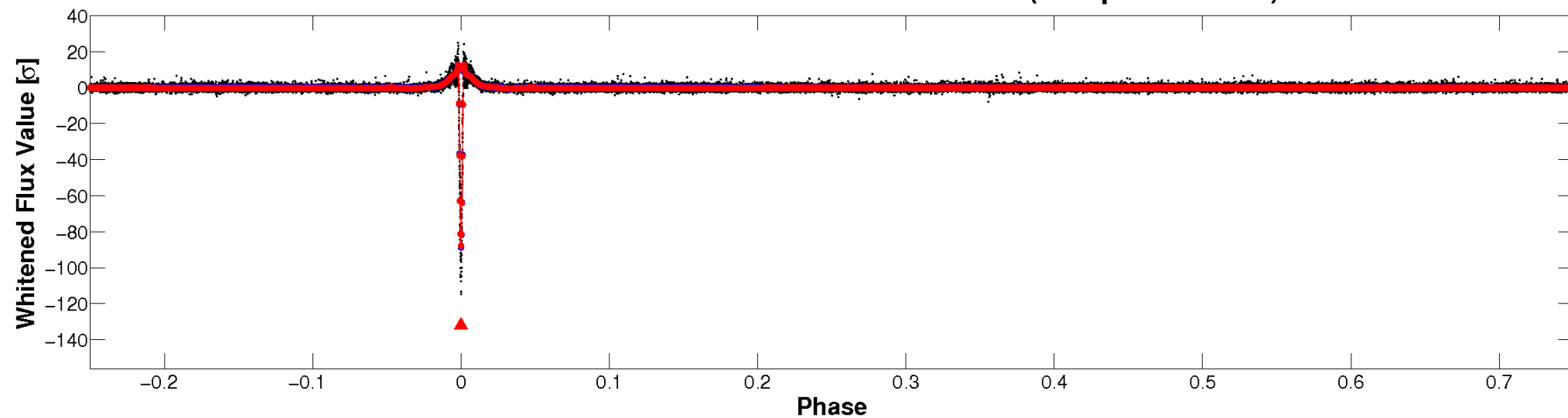


Non-Whitened Vs. Whitened Light Curve

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

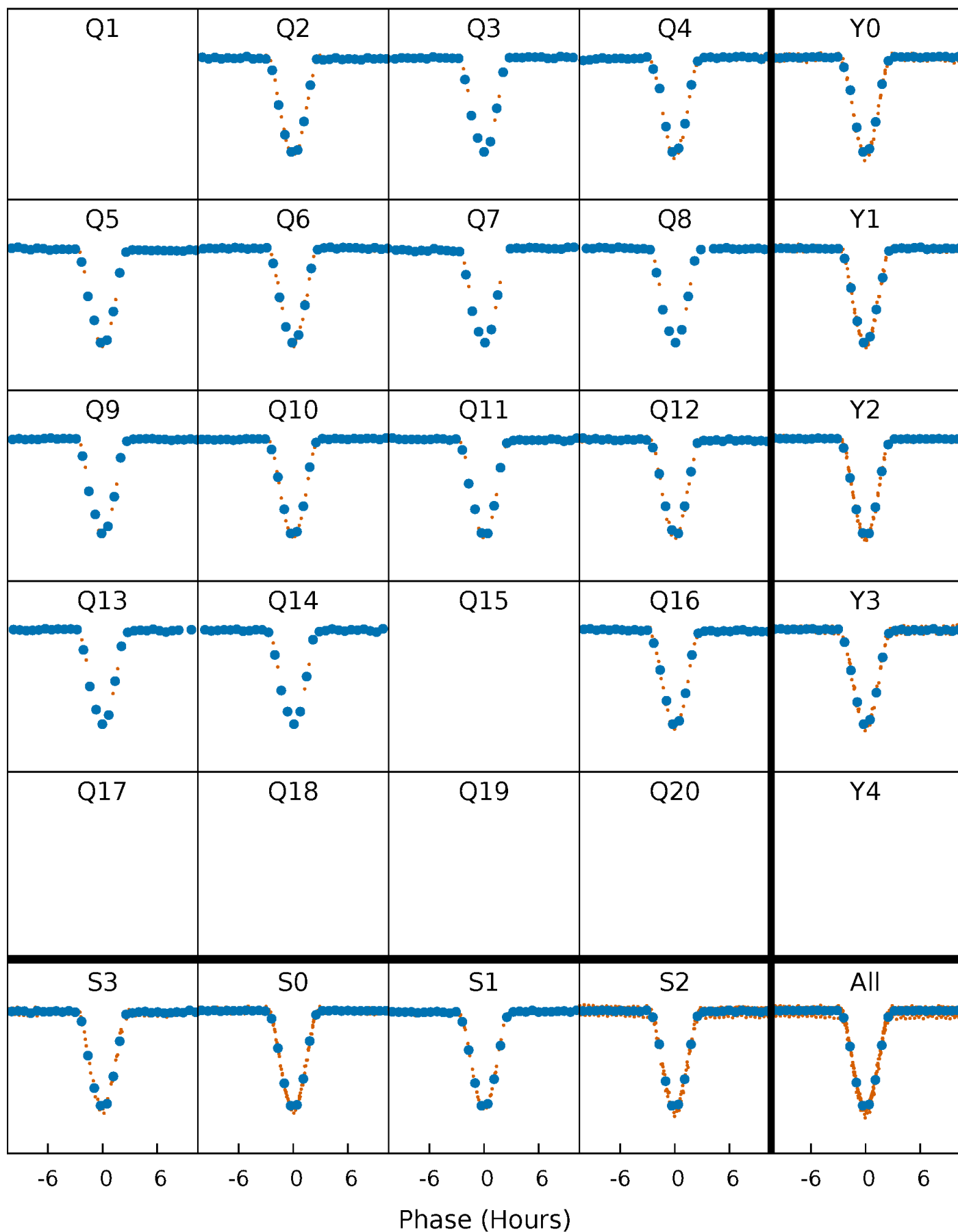


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



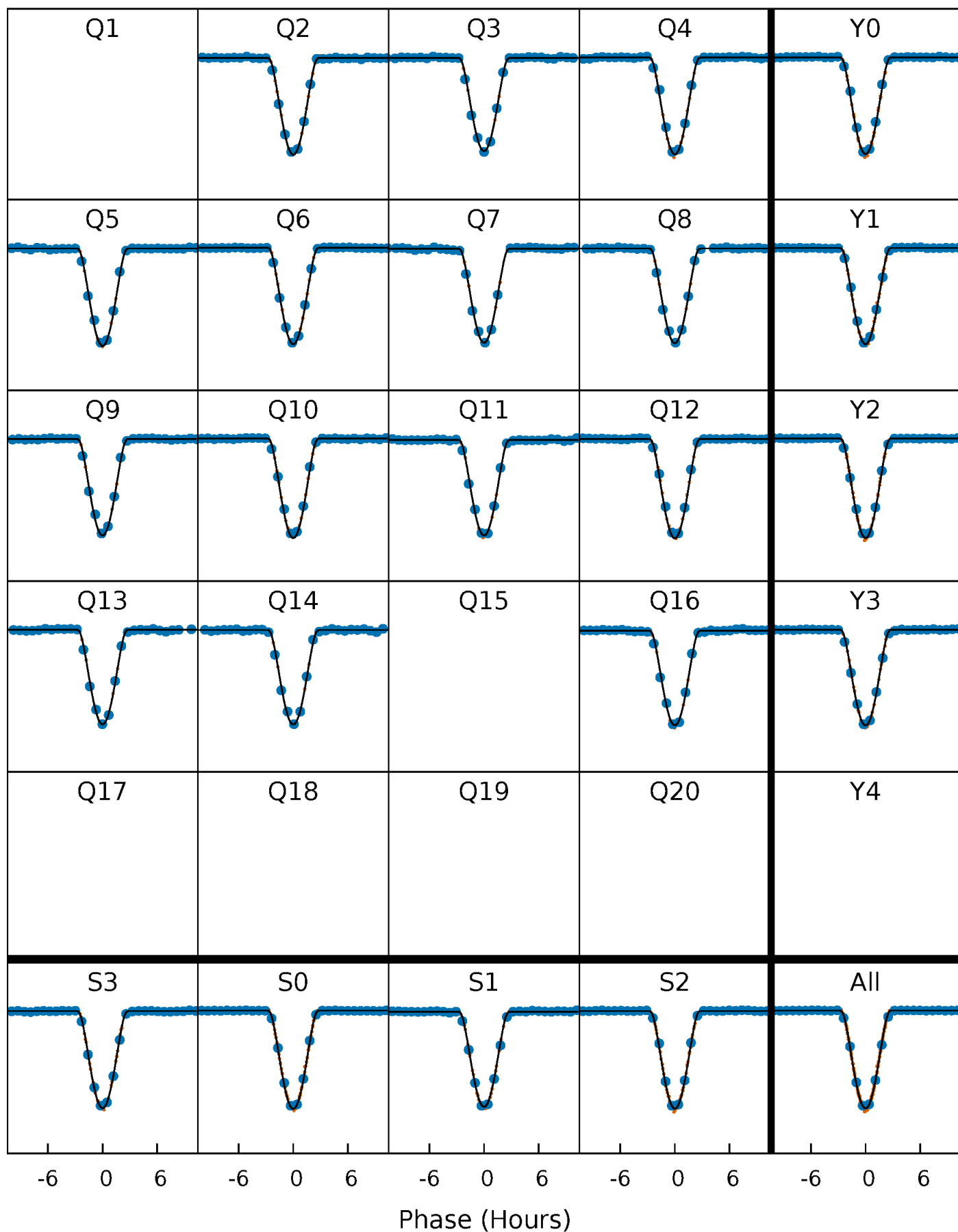
PDC Quarter-Phased Transit Curves

TCE 010798838-01 P= 62.127664 Days $T_0=172.066440$ (BKJD)



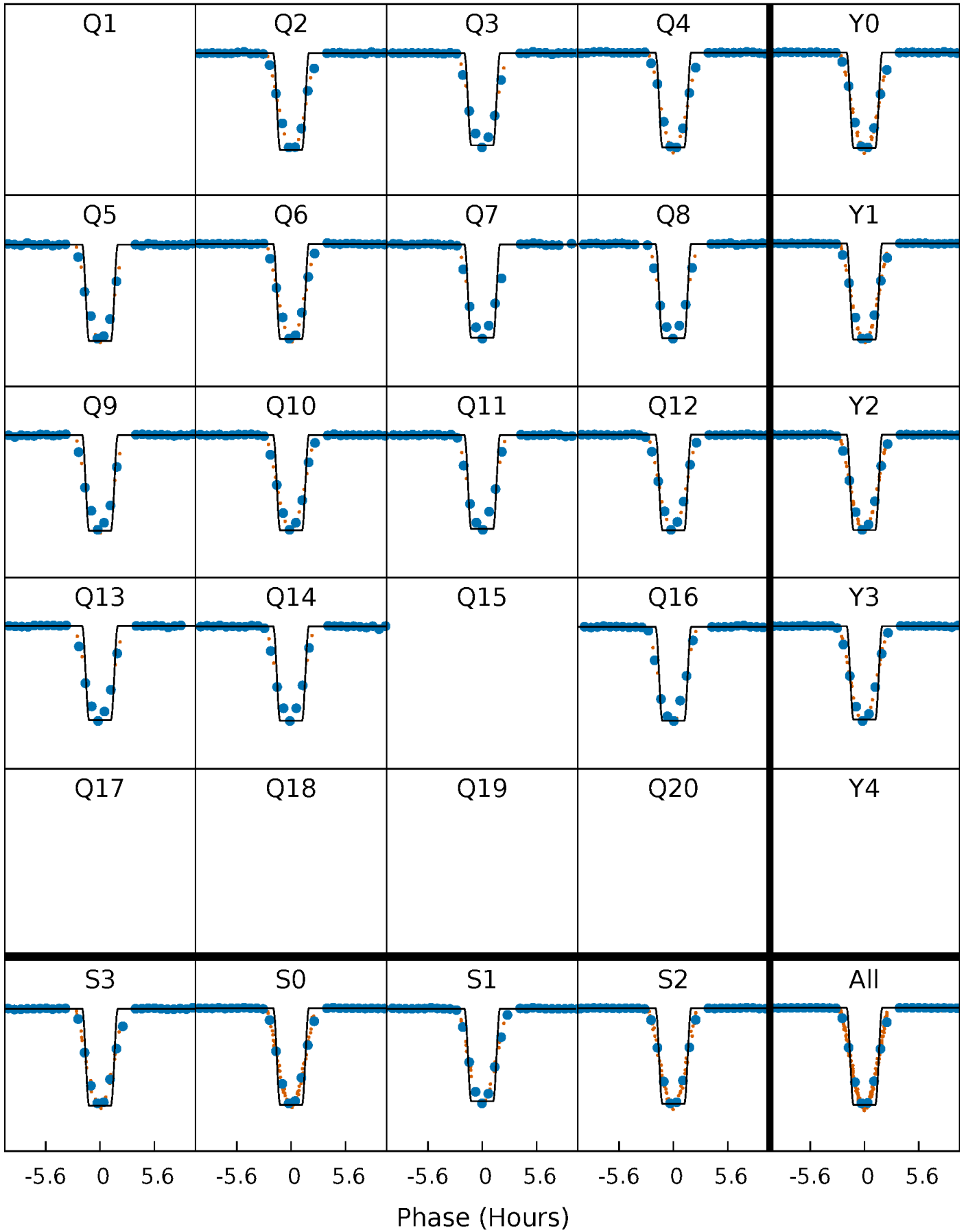
DV Quarter-Phased Transit Curves

TCE 010798838-01 P= 62.127664 Days $T_0=172.066440$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

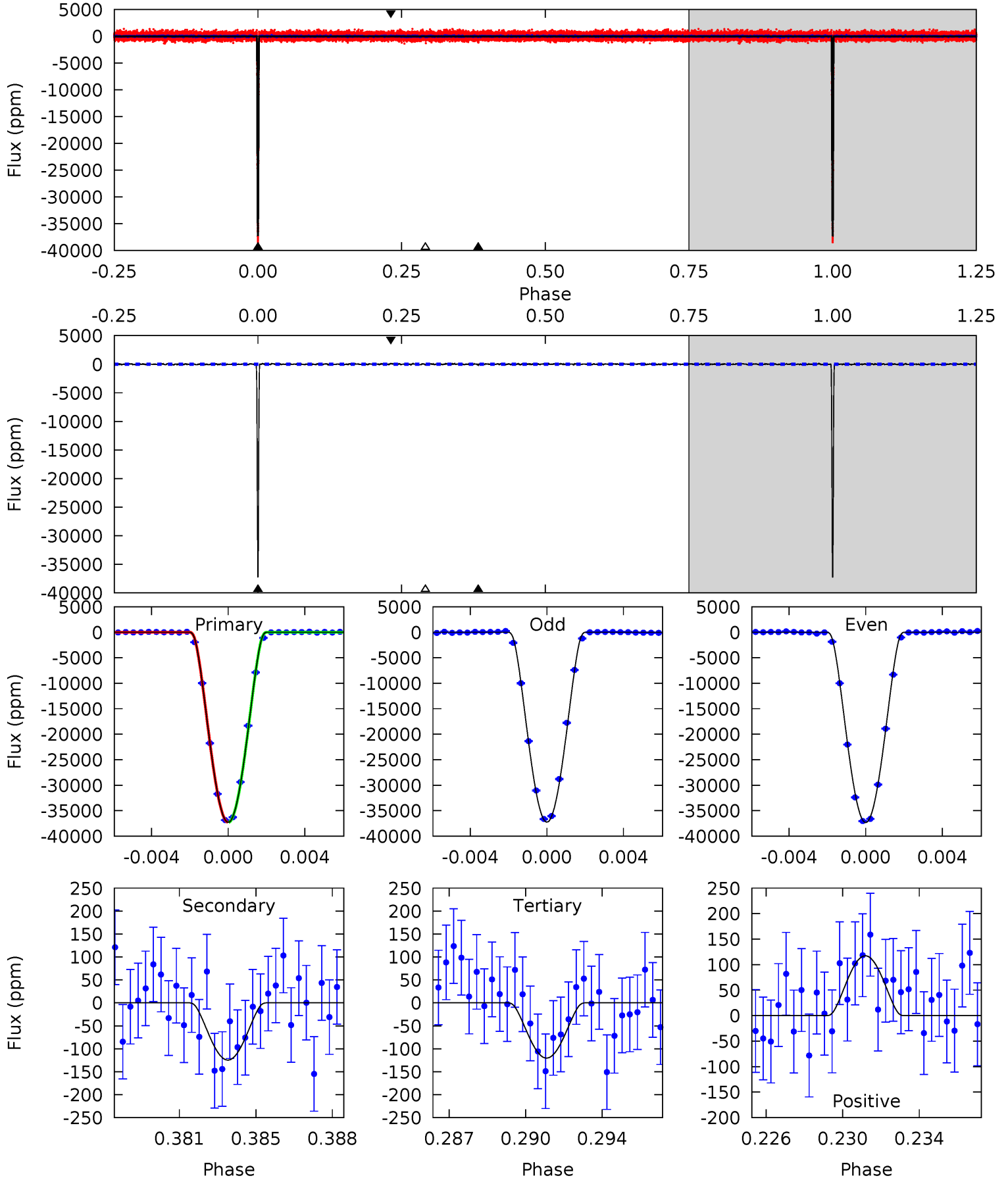
TCE 010798838-01 P= 62.128070 Days $T_0=172.062427$ (BKJD)



DV Model-Shift Uniqueness Test

010798838-01, P = 62.127664 Days, E = 109.938776 Days

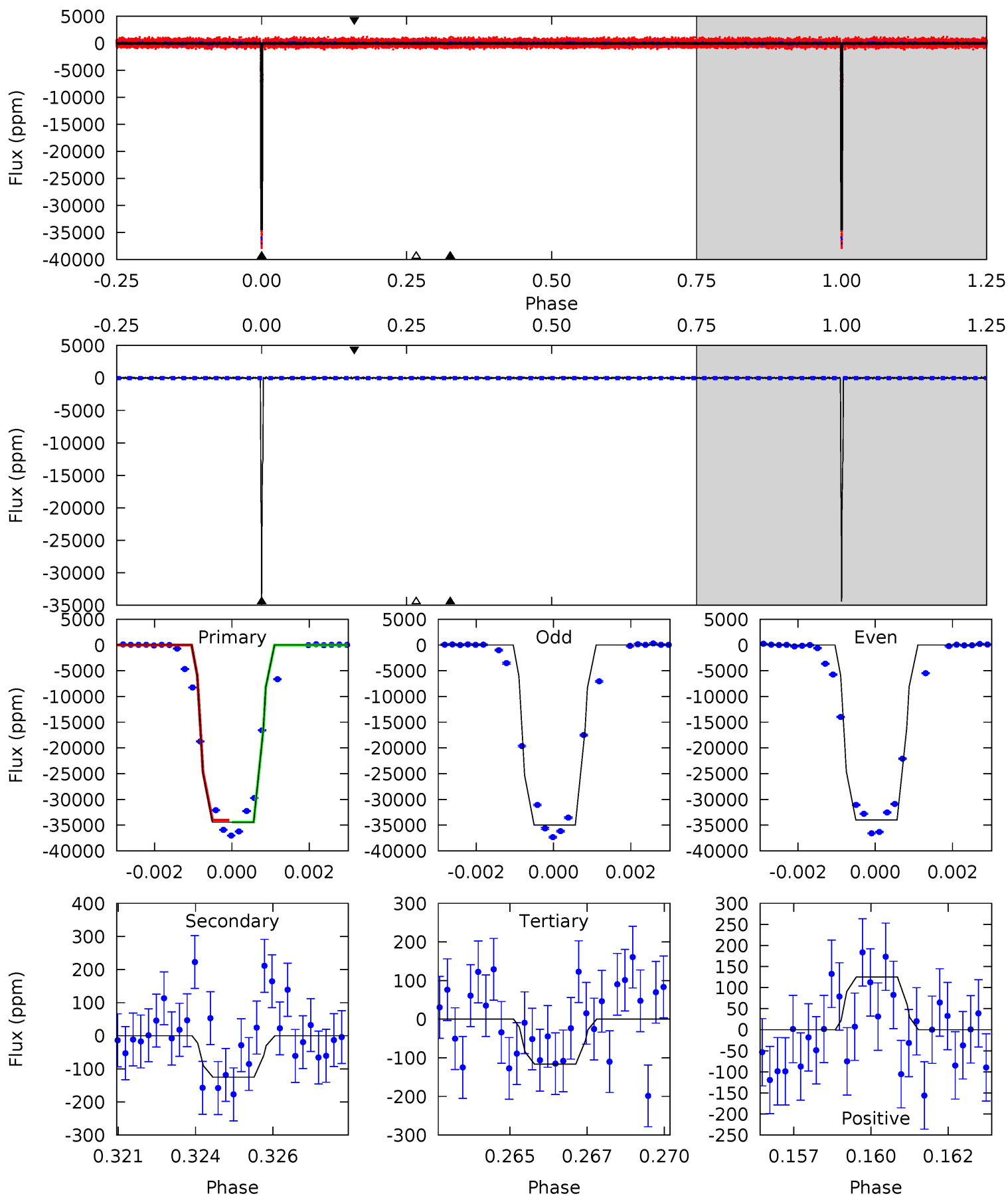
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1752	5.86	5.65	5.51	5.21	2.90	1.99	1746	1746	0.21	0.35	1.82	1.00	0.00	0.27



Alt Model-Shift Uniqueness Test

010798838-01, P = 62.128070 Days, E = 109.934357 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1049	3.81	3.55	3.81	5.29	3.03	3.64	1045	1045	0.26	-0.00	14.6	0.99	0.00	0



Stellar Parameters For KIC 010798838

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5344^{+160}_{-144}	$4.494^{+0.117}_{-0.143}$	$-0.340^{+0.350}_{-0.300}$	$0.807^{+0.140}_{-0.105}$	$0.740^{+0.115}_{-0.054}$	$1.985^{+0.913}_{-0.685}$
	+3%/-3%	+3%/-3%	+103%/-88%	+17%/-13%	+16%/-7%	+46%/-35%
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 010798838-01 / KOI 3449.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-125 ± 21	$26.02^{+3.46}_{-2.91}$	563^{+31}_{-30}	2023^{+56}_{-54}	$7.912^{+2.485}_{-2.228}$
Alt.	-125 ± 33	$17.13^{+2.68}_{-2.25}$	564^{+30}_{-28}	2216^{+94}_{-90}	18^{+7}_{-6}

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

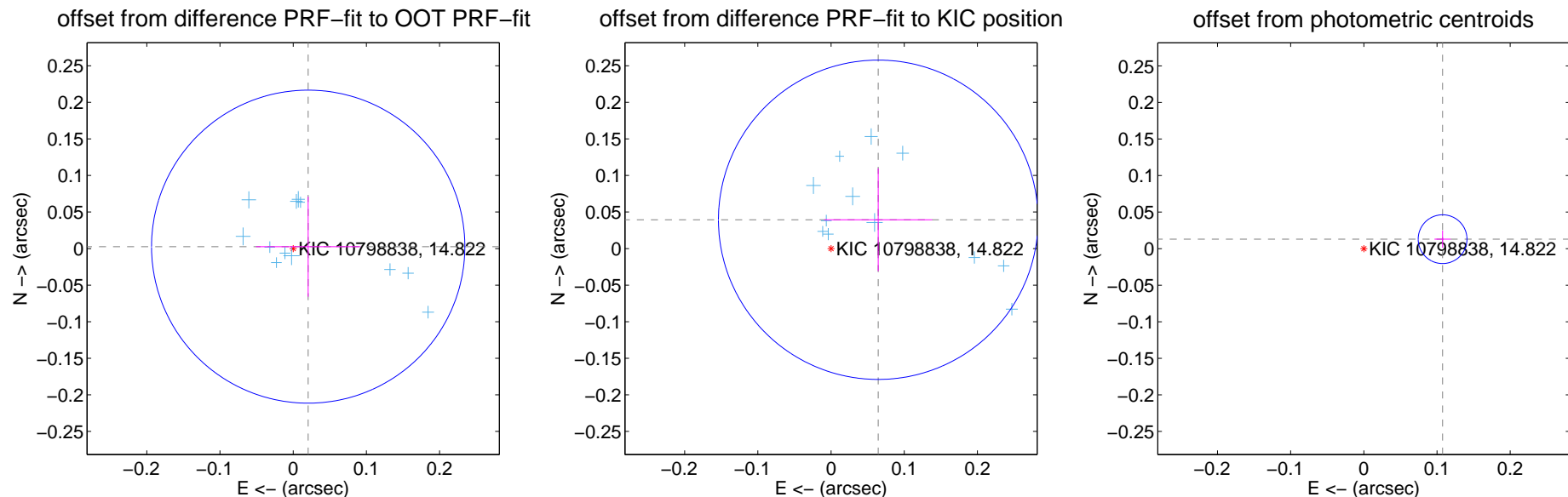
DV Centroid Data

Supplemental centroid analysis for 010798838-01. Kepler magnitude: 14.82. Transit SNR 759.70

There are 12 quarters with good PRF difference image offsets

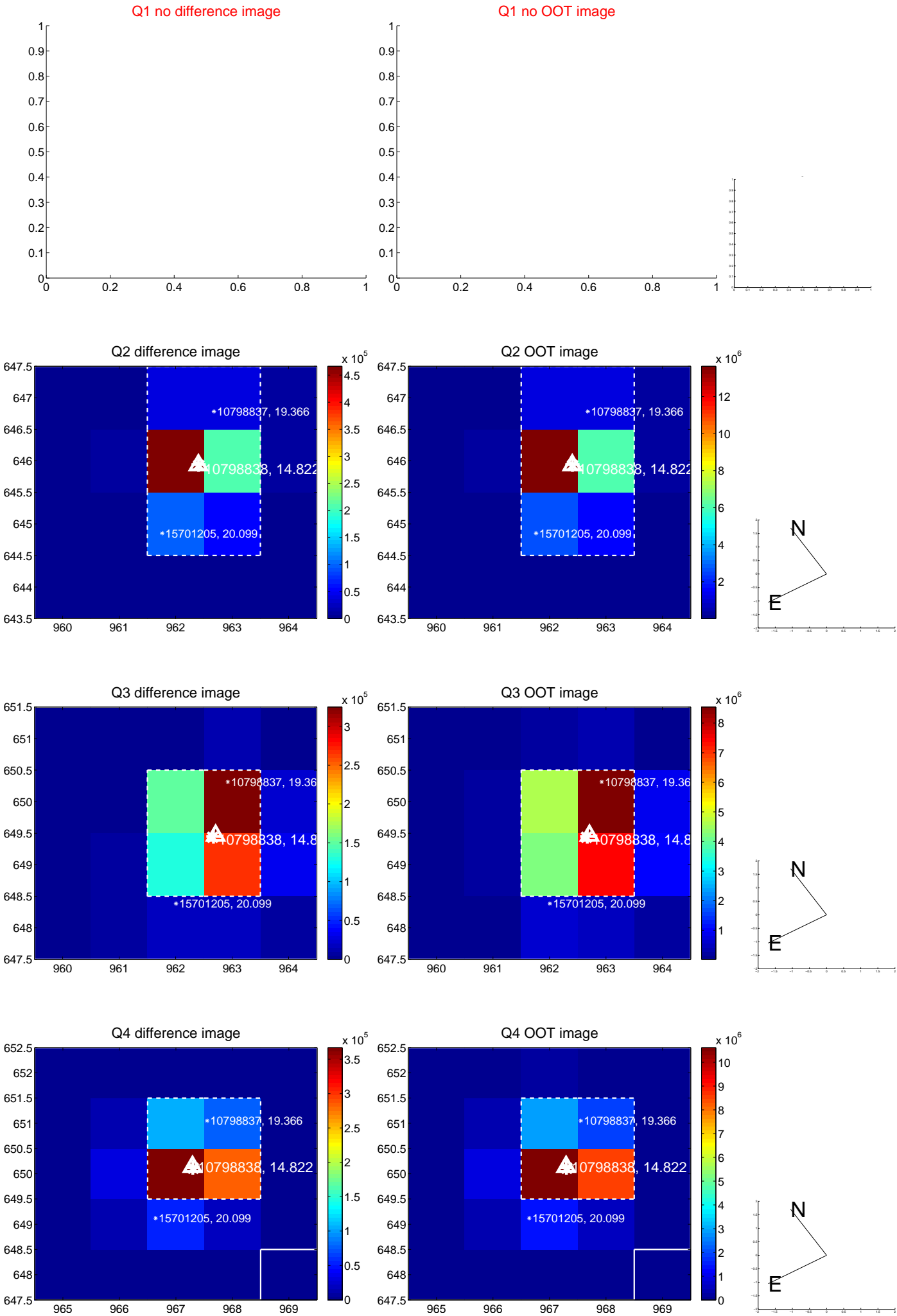
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.021 ± 0.071	0.29	-0.020 ± 0.071	0.003 ± 0.068
PRF-fit source offset from KIC position	0.076 ± 0.073	1.04	-0.065 ± 0.074	0.039 ± 0.070
photometric centroid source offset	0.11 ± 0.01	9.75	-0.11 ± 0.01	0.01 ± 0.01

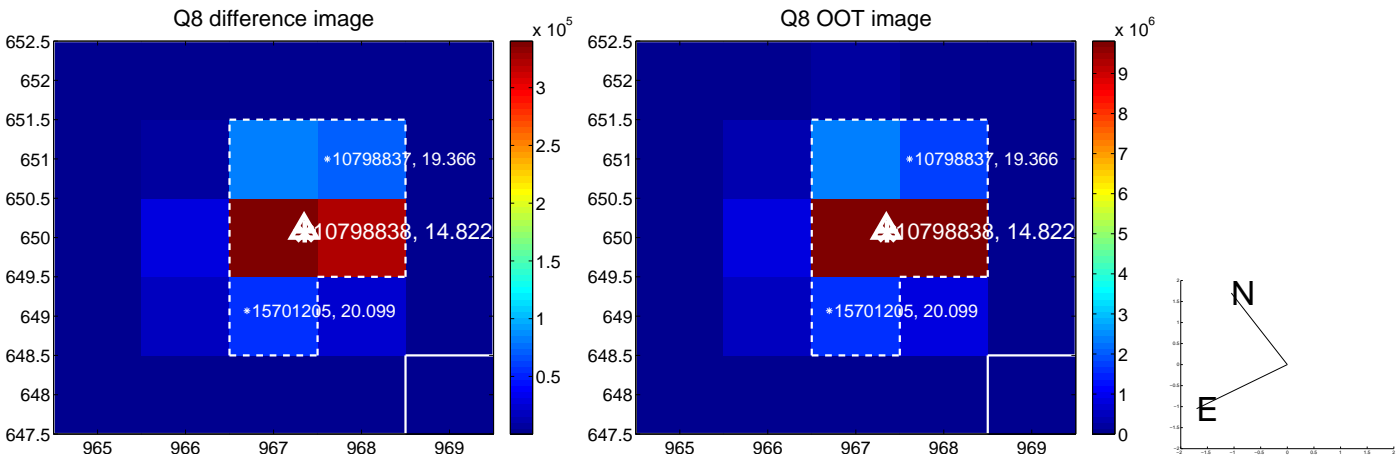
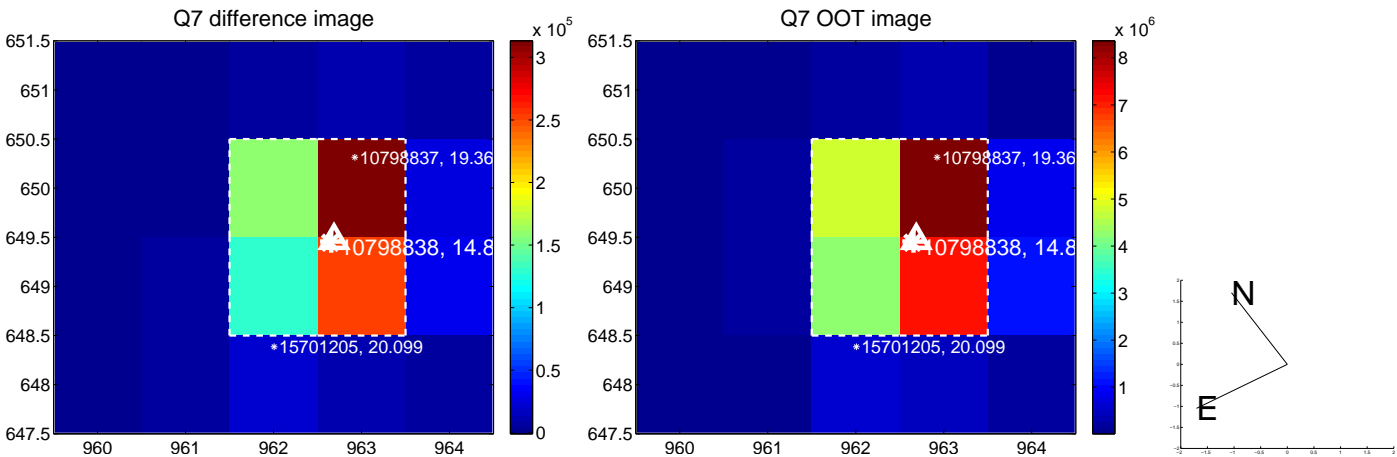
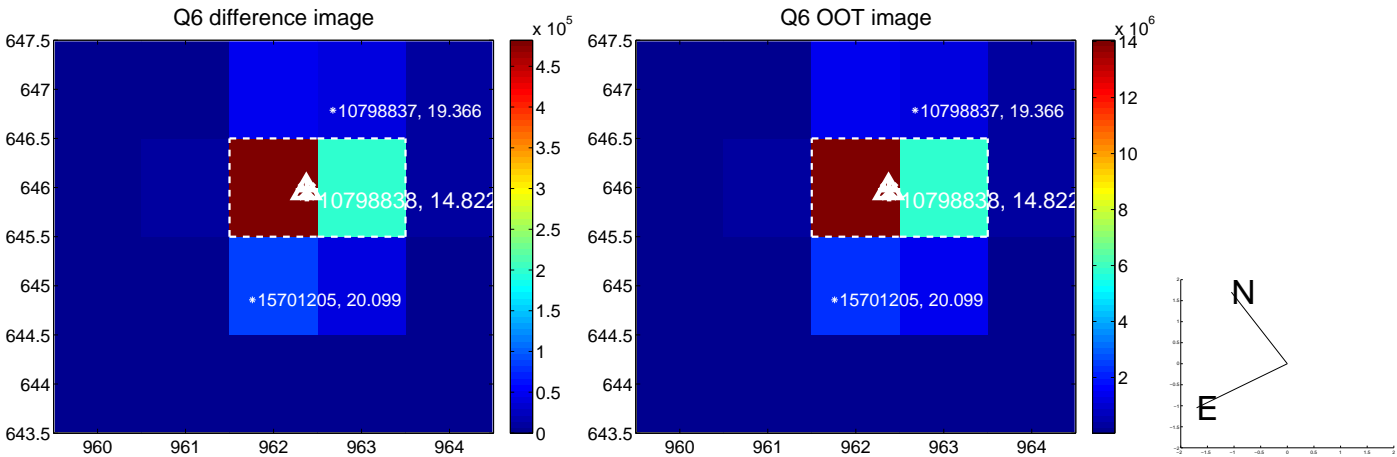
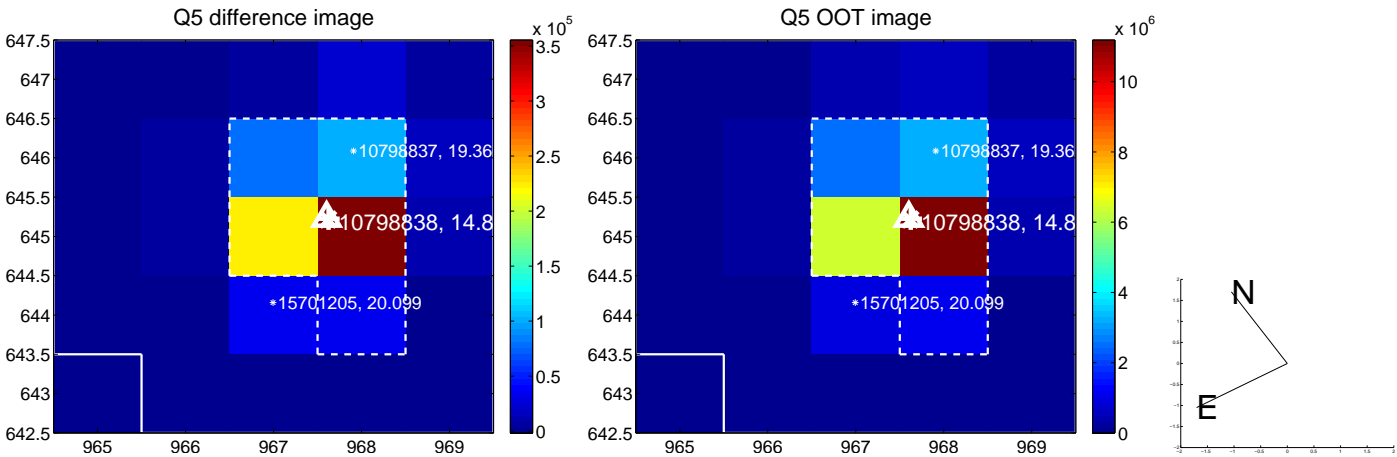


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

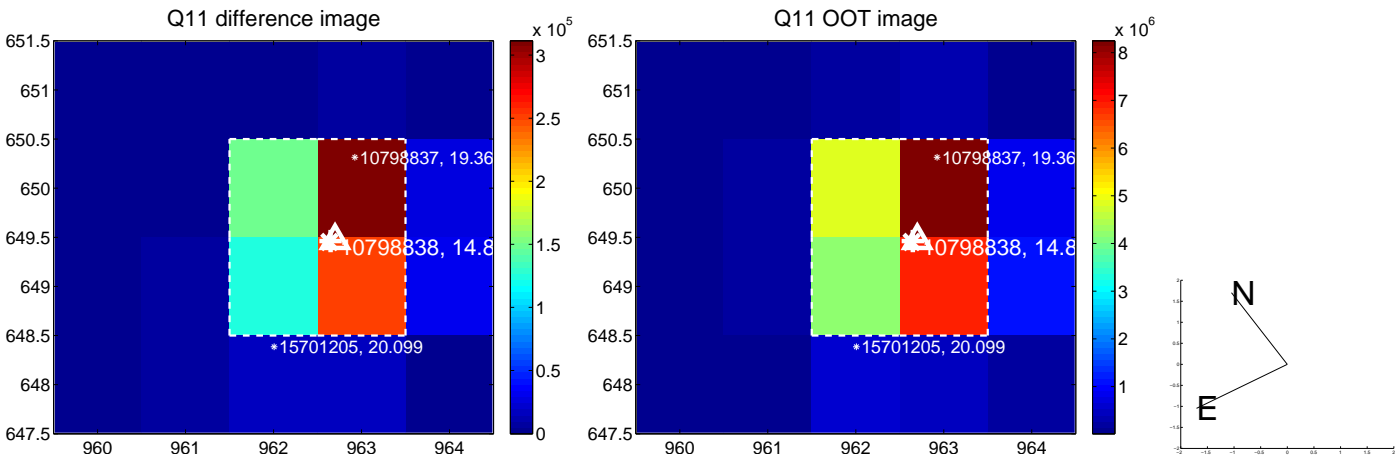
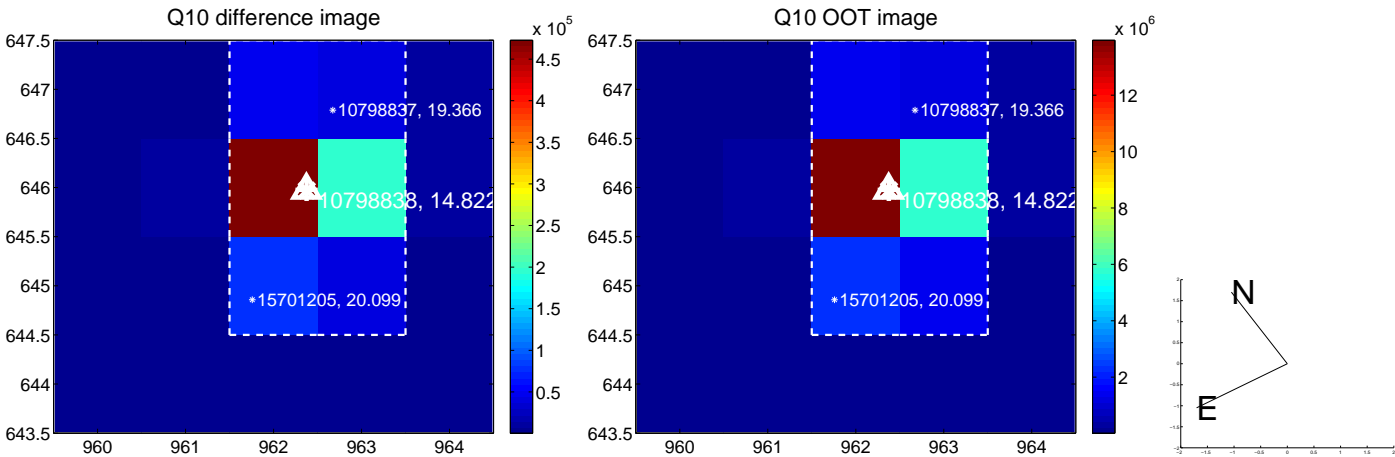
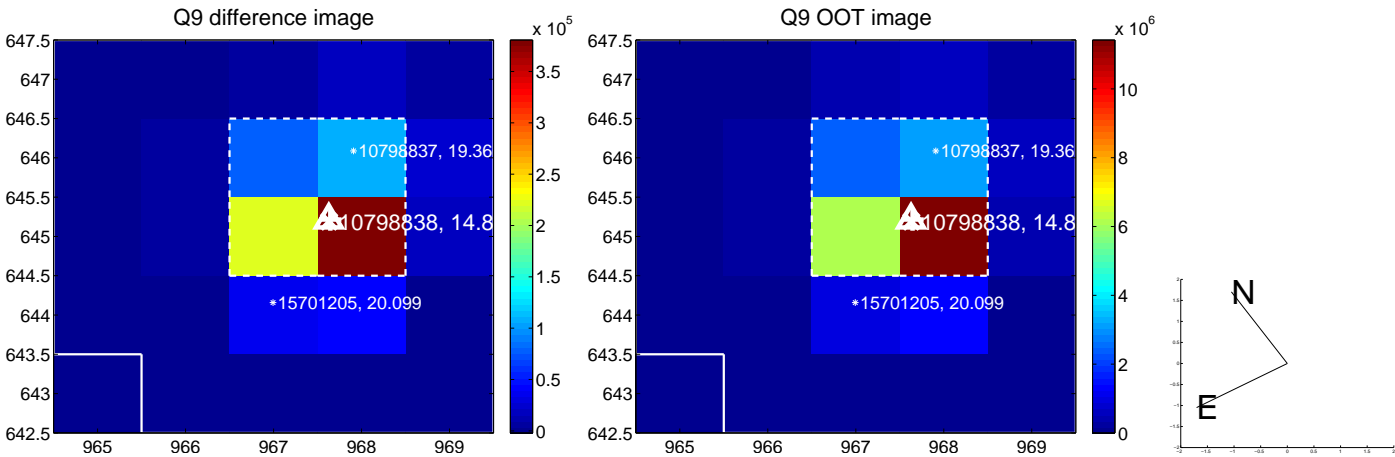
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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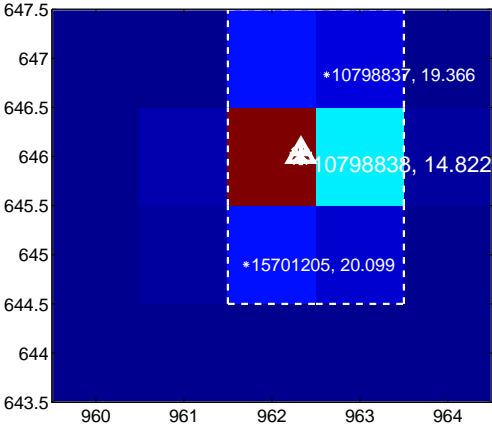
Q13 no difference image



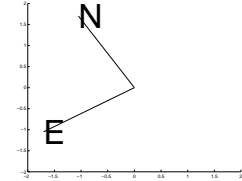
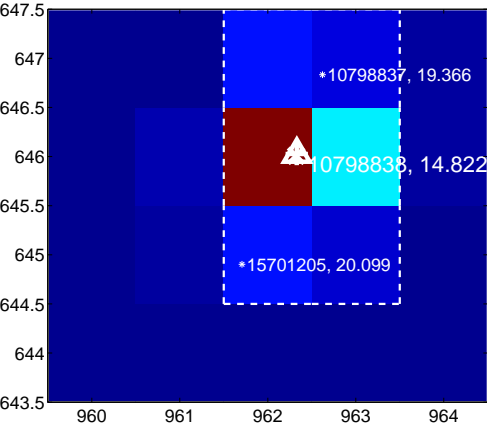
Q13 no OOT image



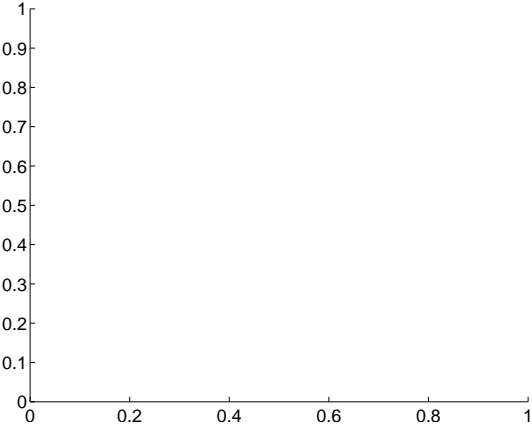
Q14 difference image



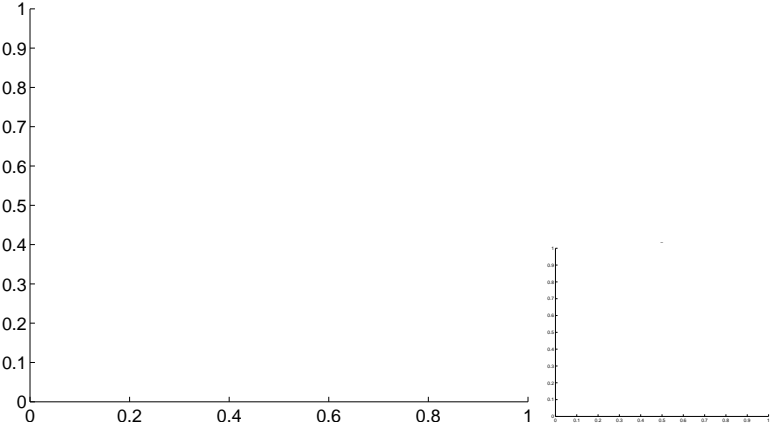
Q14 OOT image



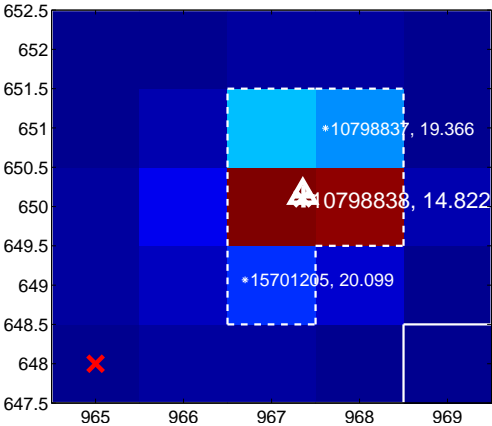
Q15 no difference image



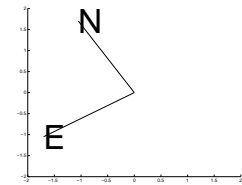
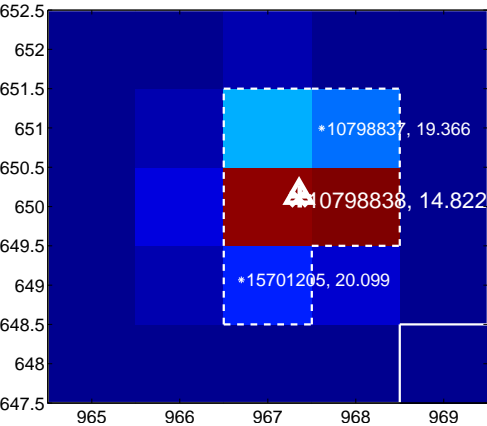
Q15 no OOT image



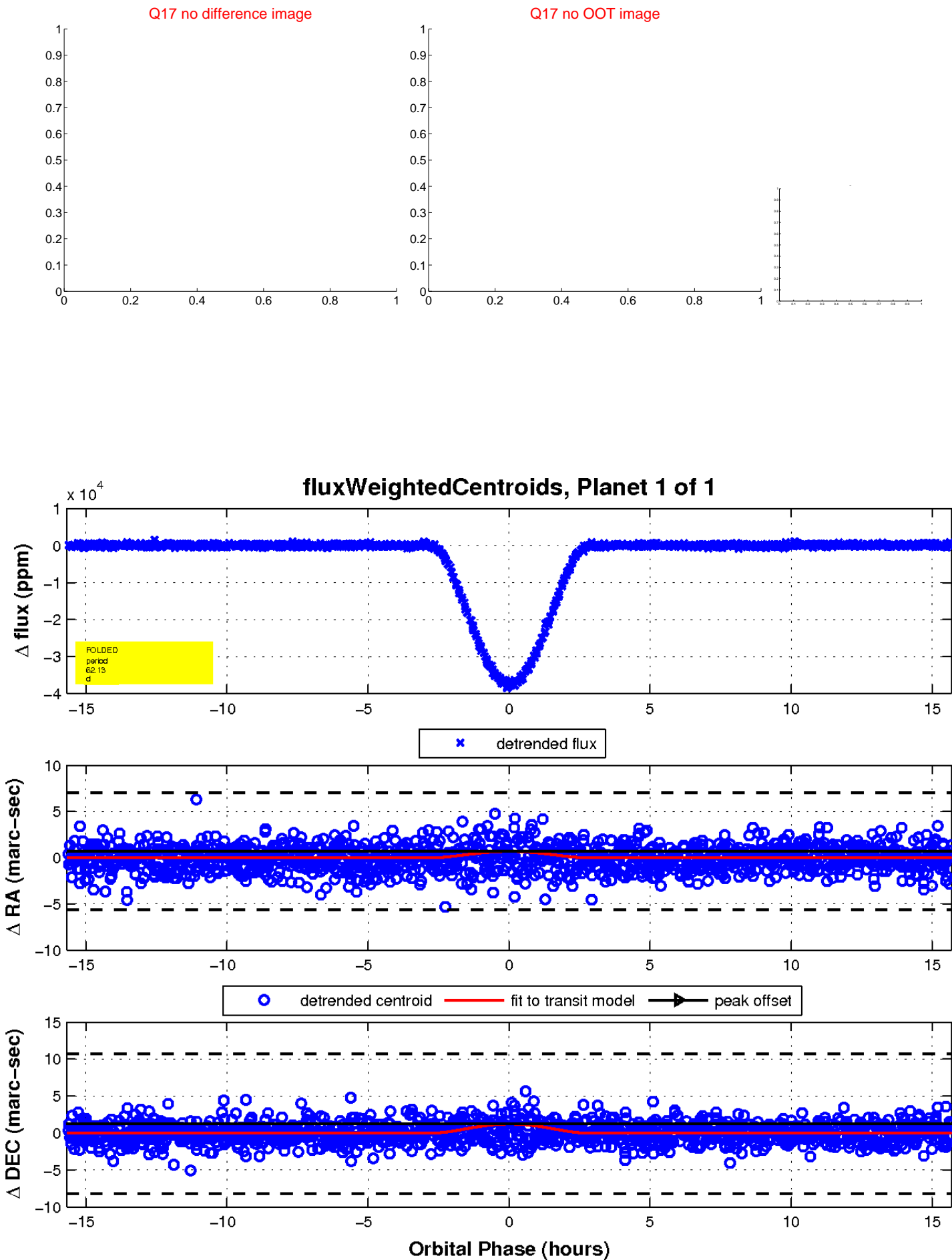
Q16 difference image



Q16 OOT image



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



UKIRT Image

Declination

