

KIC 007707742

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})
007707742-01	OBS	3998.01	0.758358	131.854744	174288.8	2.500	3029.0	-1.0	1.83	7131	78.09	22523.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007707742-01	OBS	FP	0.00	0	1	0	0	SWEET_EB—MOD_SEC_ALT—CENT_NOFITS

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 007707742-01

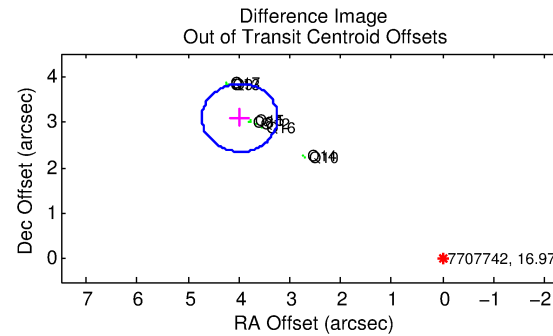
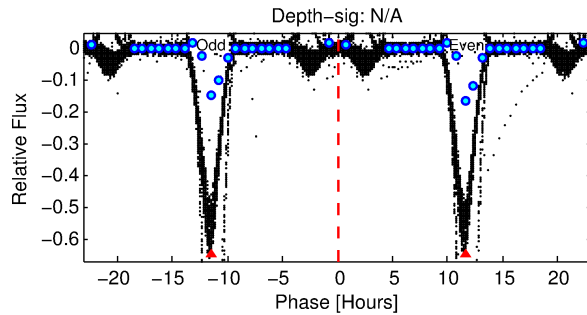
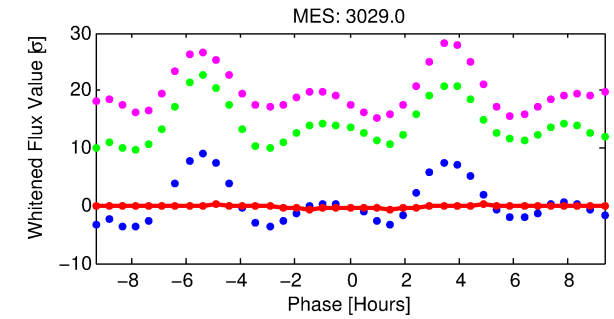
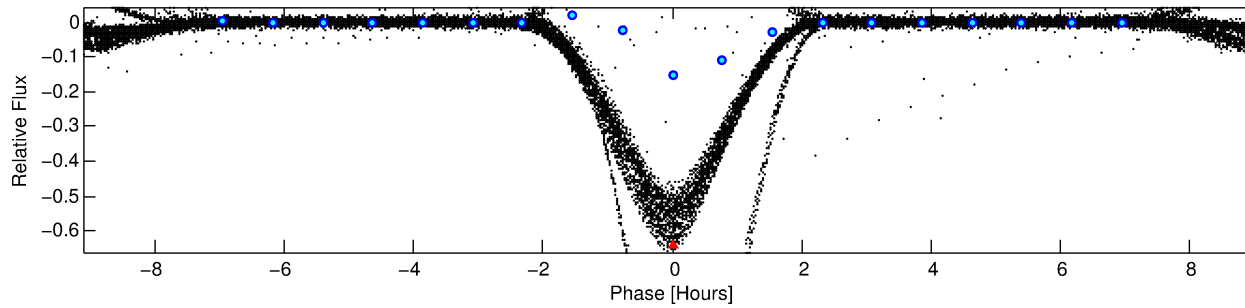
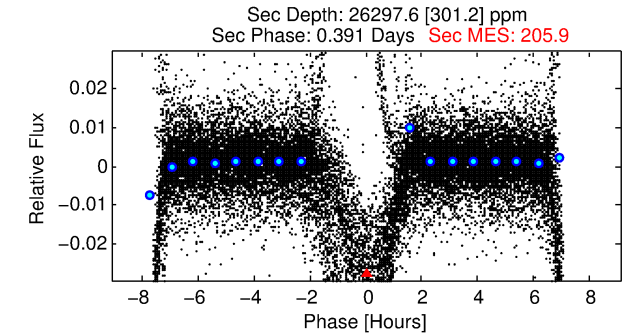
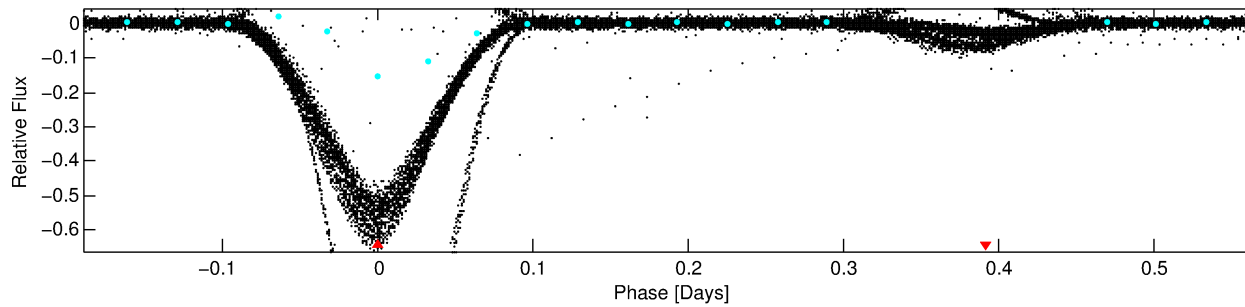
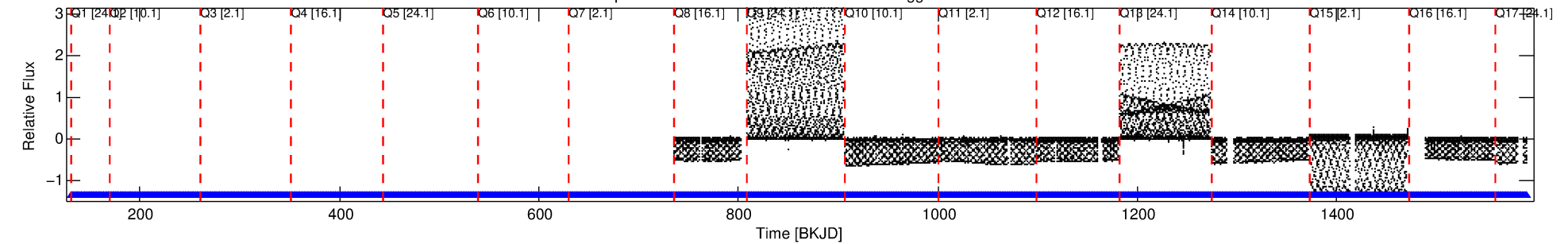
No Significant Match Found

DV One-Page Summary

KIC: 7707742 Candidate: 1 of 1 Period: 0.758 d

KOI: K03998.01 Corr: 0.761

Kp: 16.98 R*: 1.83 Rs Teff: 7131.0 K Logg: 4.08 Fe/H: -0.120



TPS TCE Results:

Period = 0.75836 d
Epoch = 131.8547 BKJD

DV fit results are unavailable

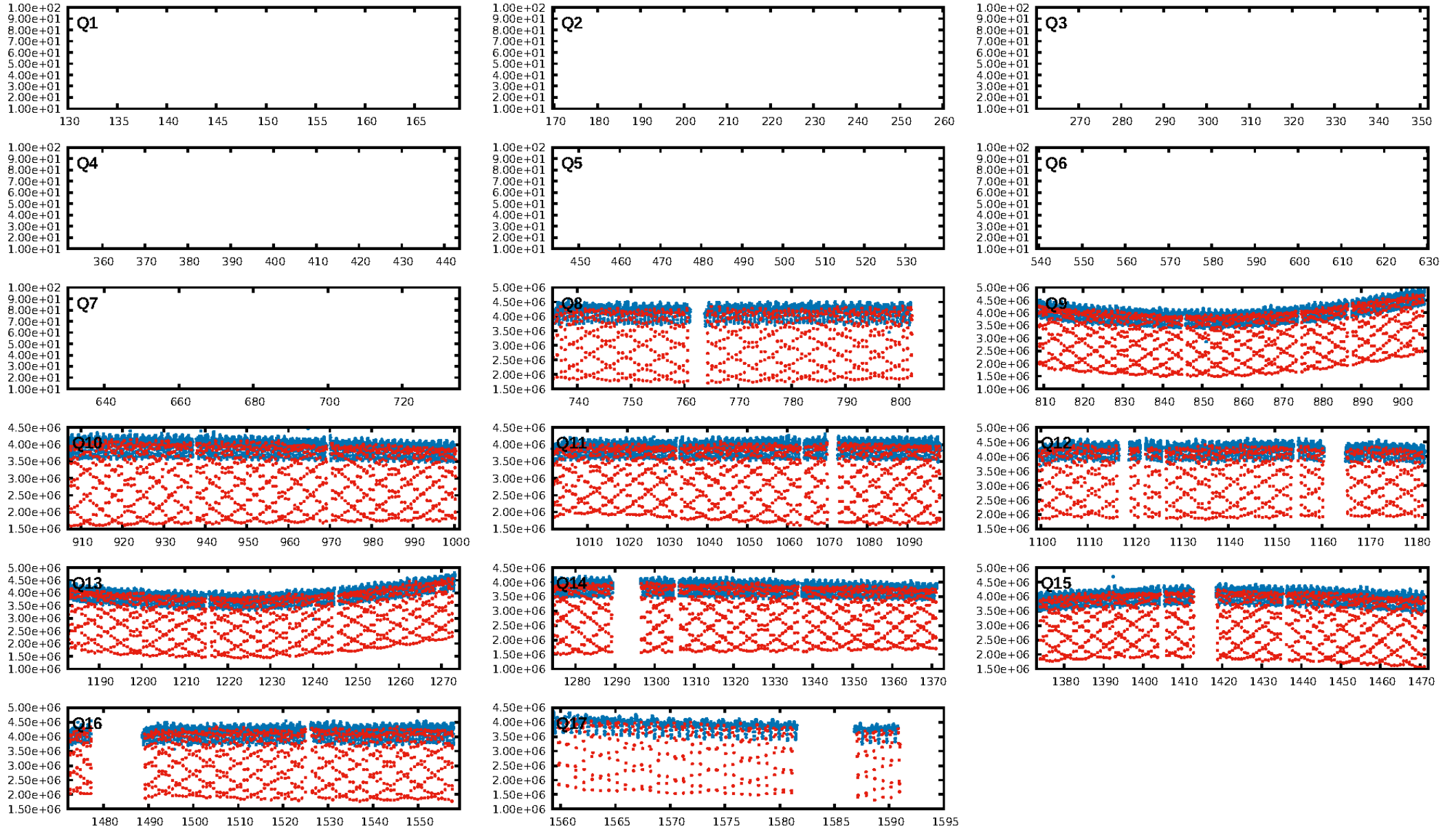
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [995/995]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 5.044 arcsec [20.32σ]
KicOffset-rm: 0.087 arcsec [1.25σ]
OotOffset-st: 2/2/3/3 [10]
KicOffset-st: 2/2/3/3 [10]
DiffImageQuality-fgm: 1.00 [10/10]
DiffImageOverlap-fno: 1.00 [10/10]

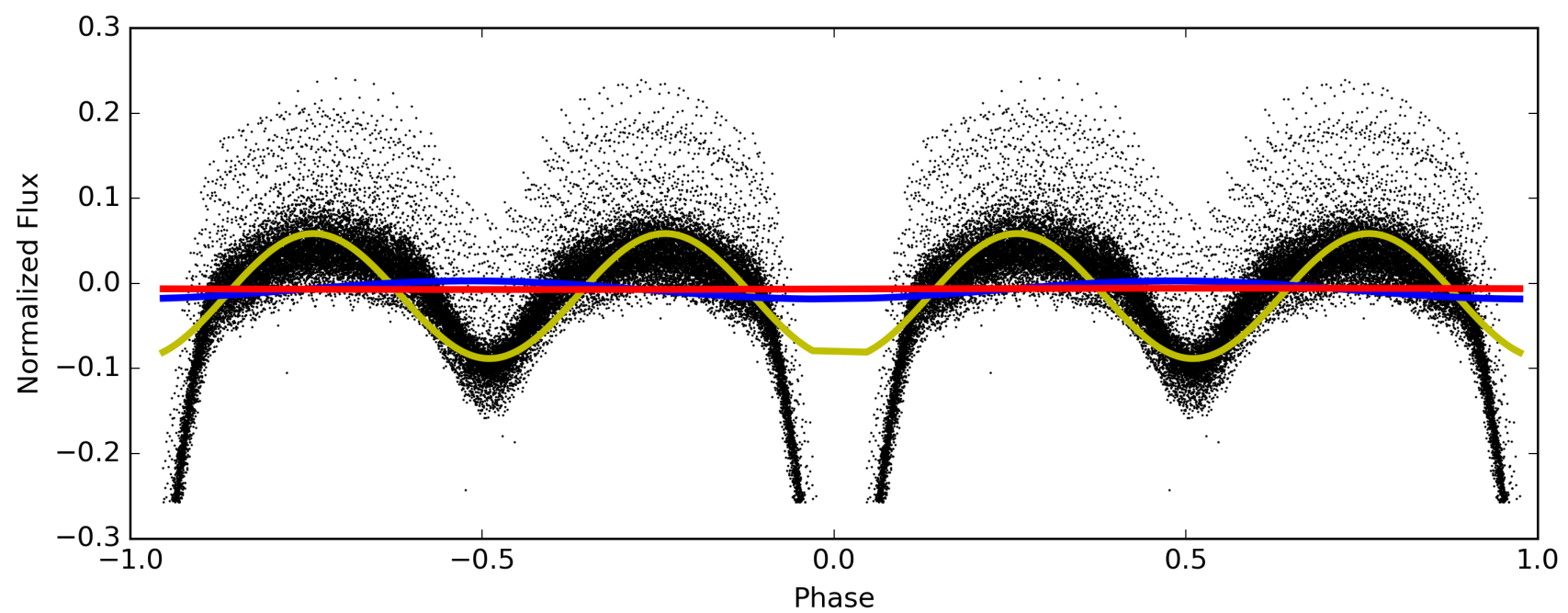
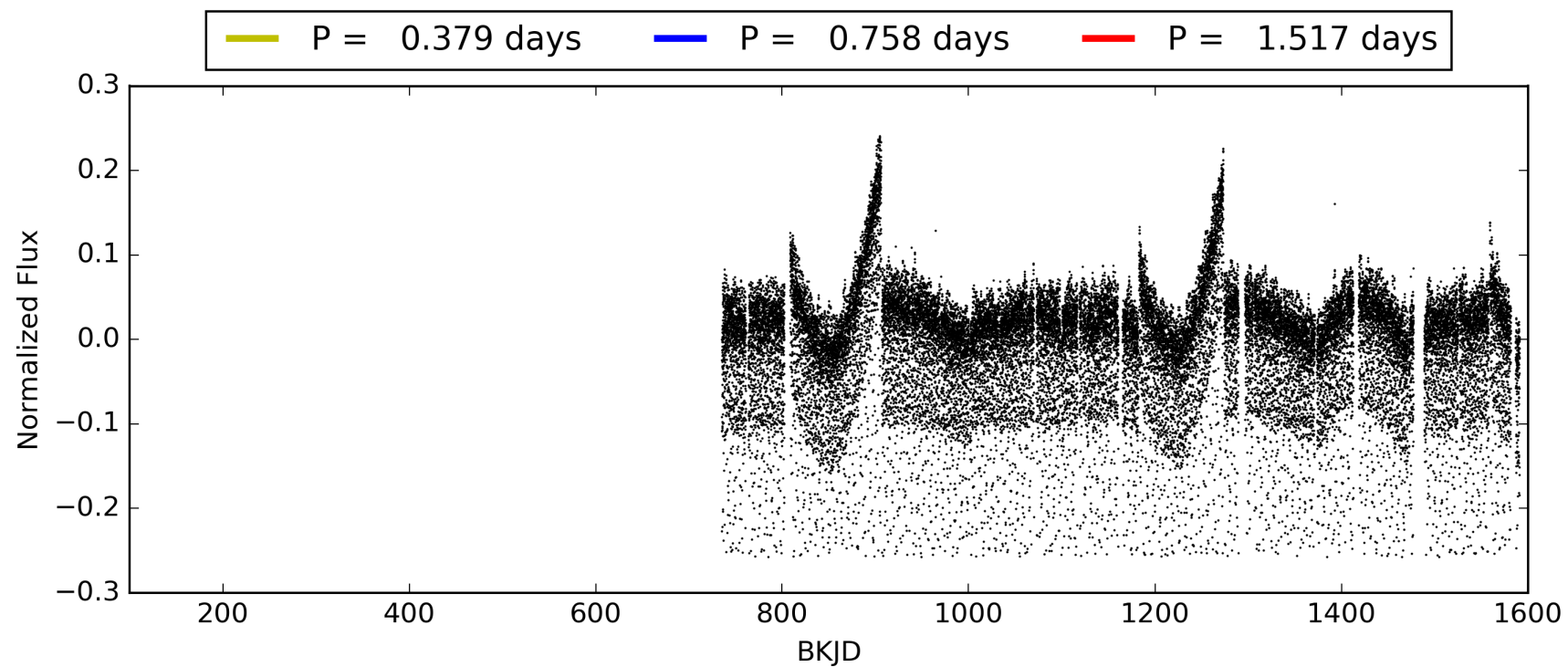
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 03:40:10 Z

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

TCE 007707742-01, PDC Light Curves

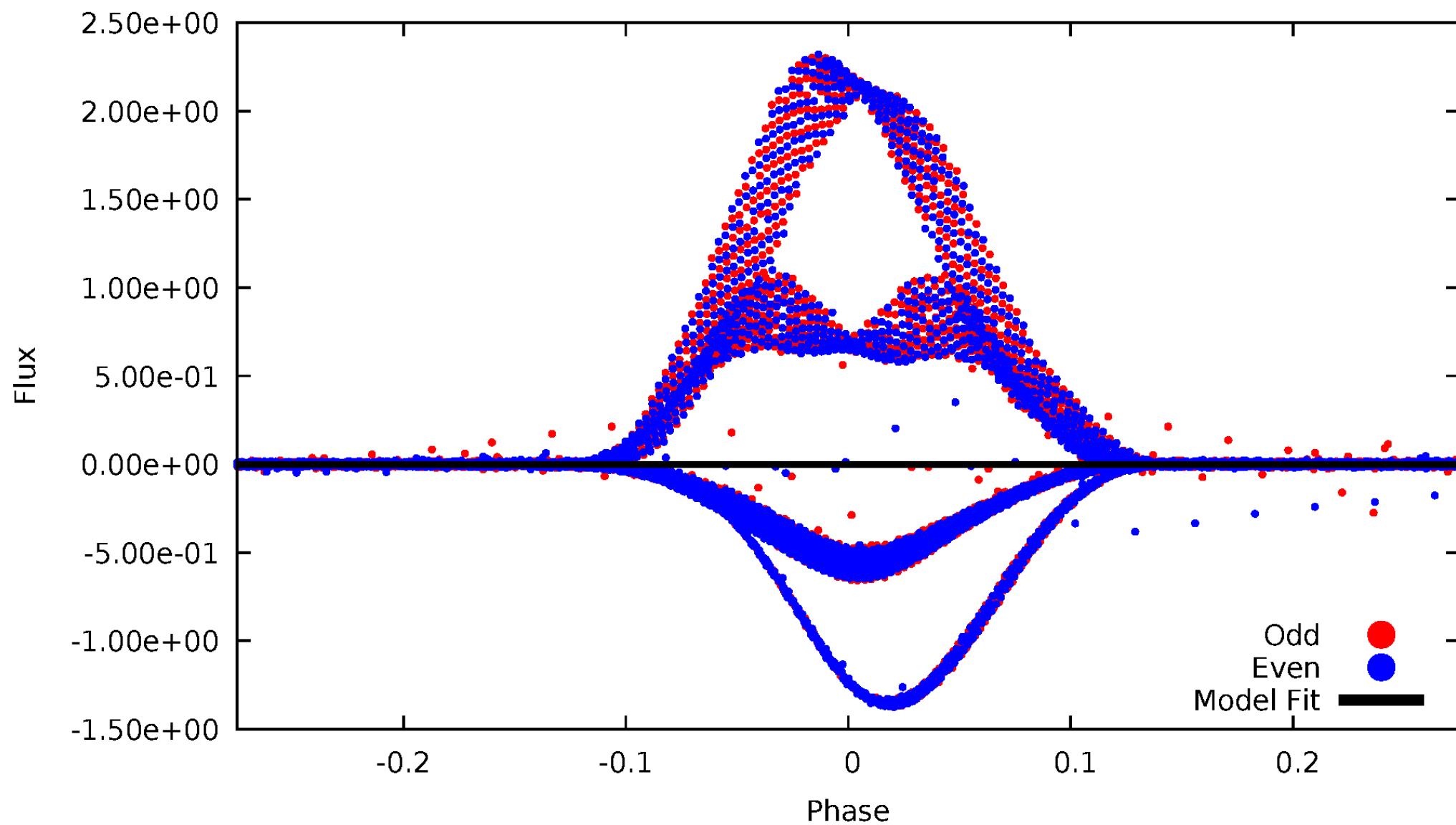


TCE 007707742-01



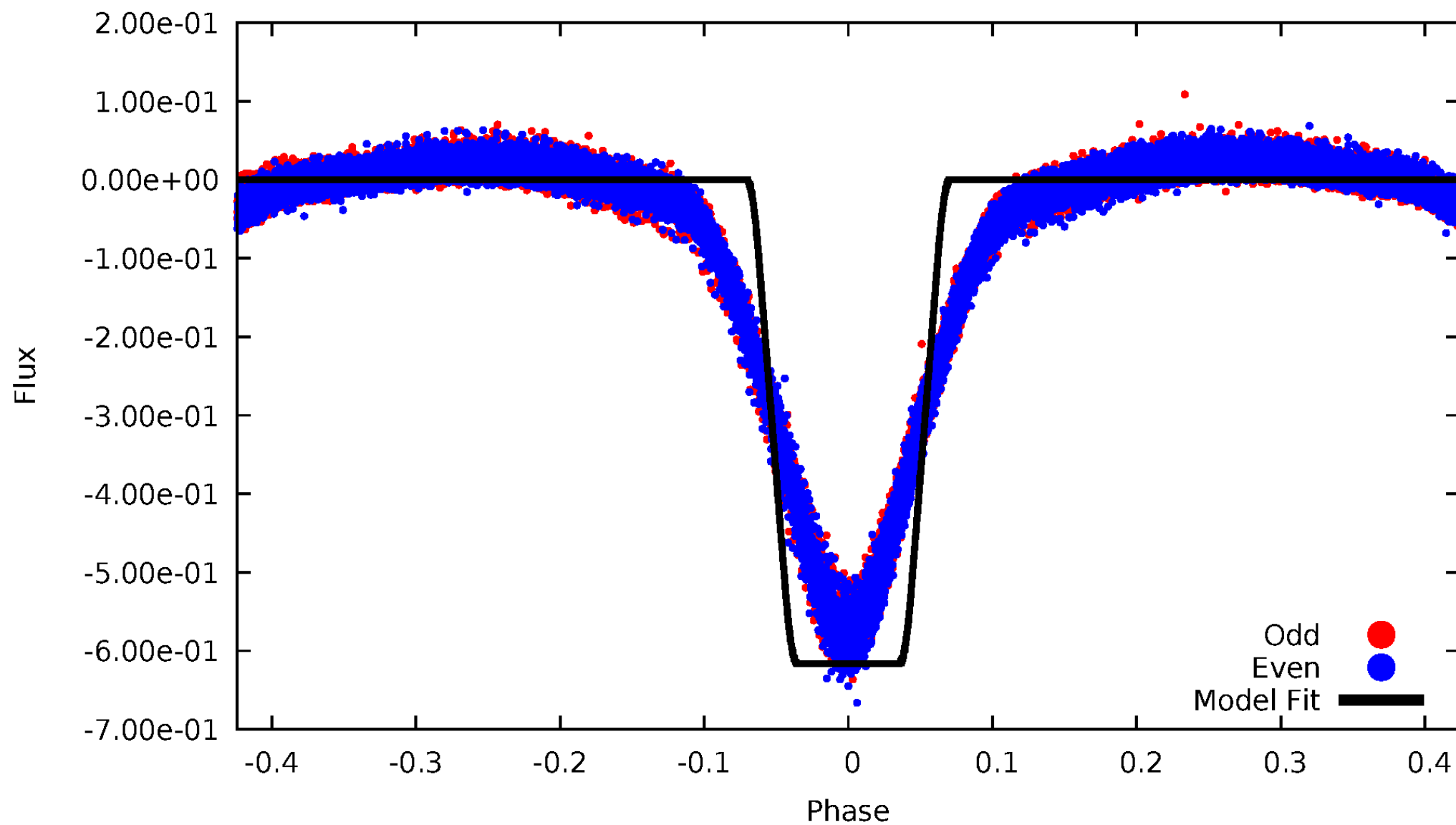
DV Odd/Even

TCE 007707742-01



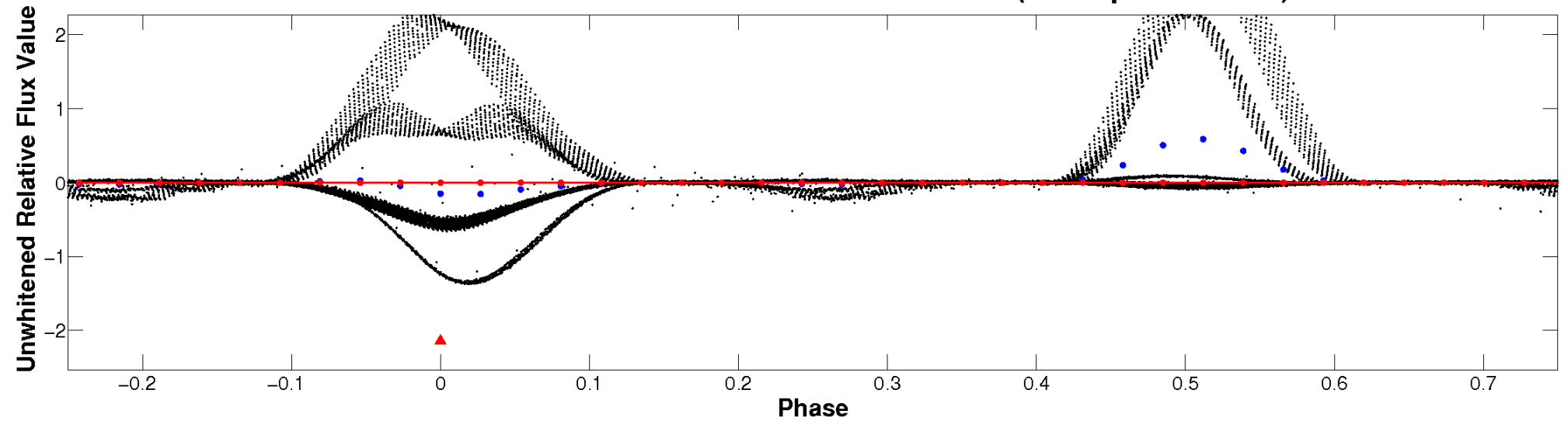
ALT Odd/Even

TCE 007707742-01

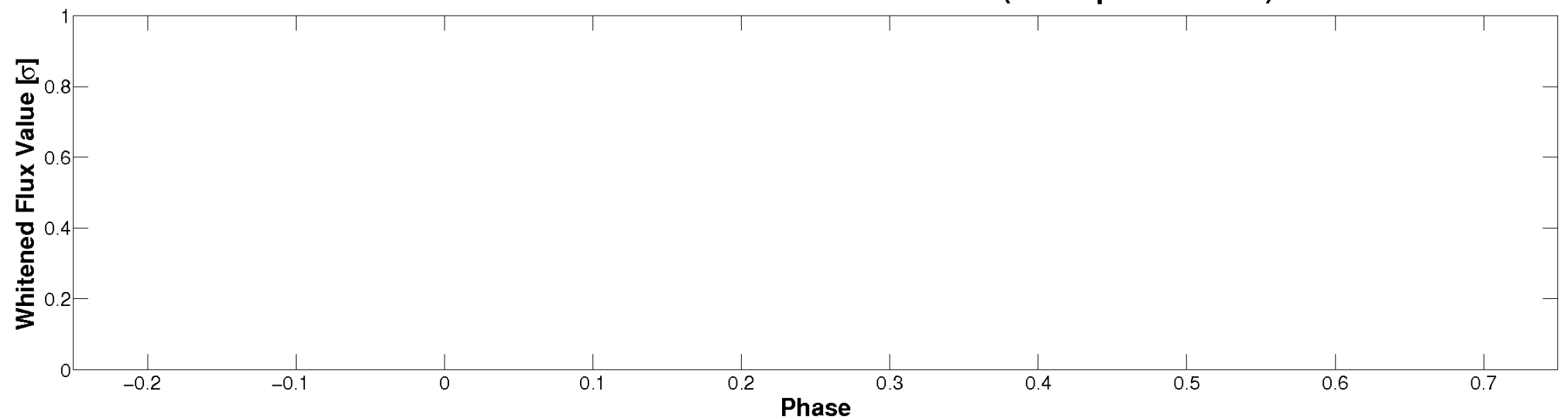


Non-Whitened Vs. Whitened Light Curve

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

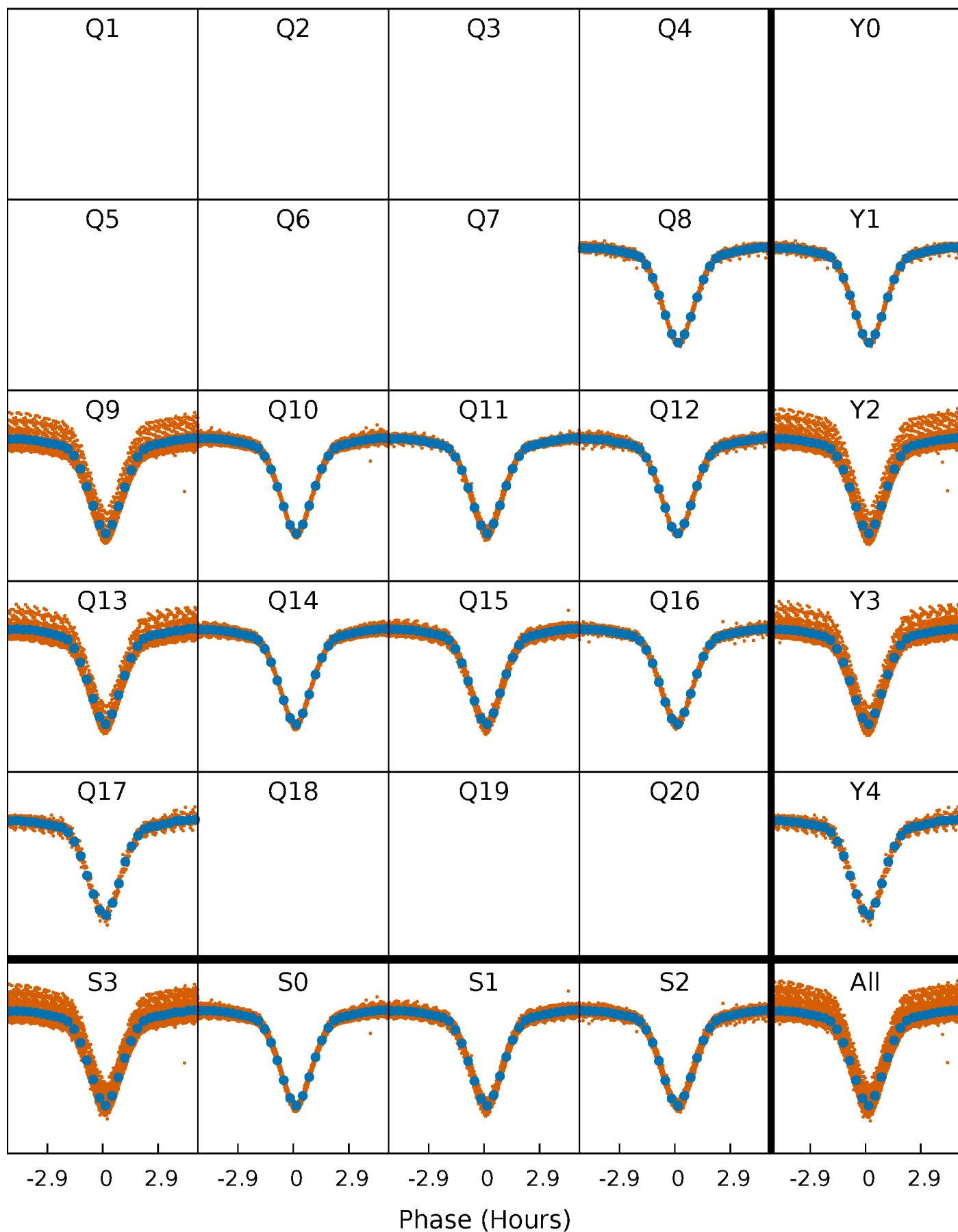


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



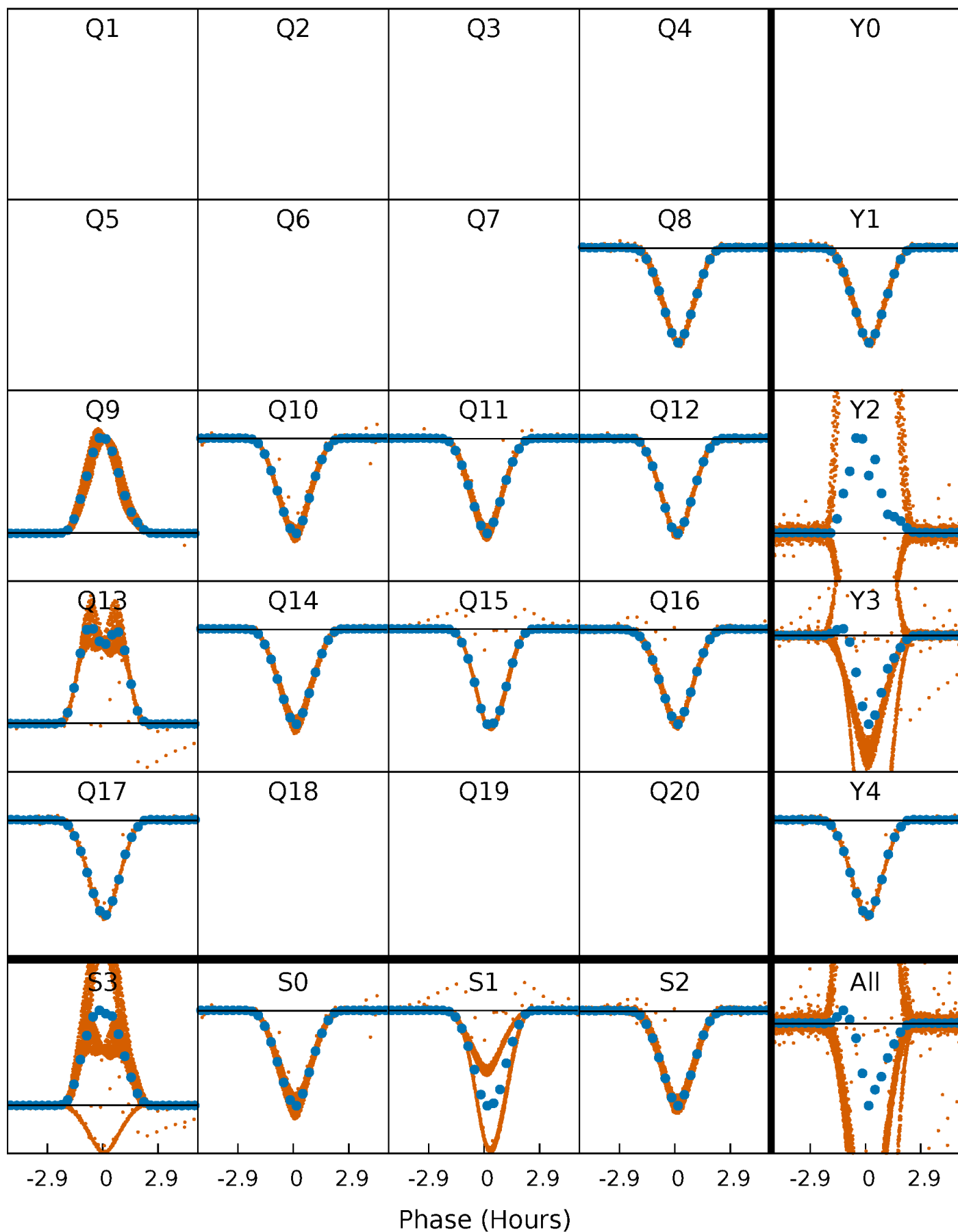
PDC Quarter-Phased Transit Curves

TCE 007707742-01 P= 0.758358 Days $T_0=131.854744$ (BKJD)



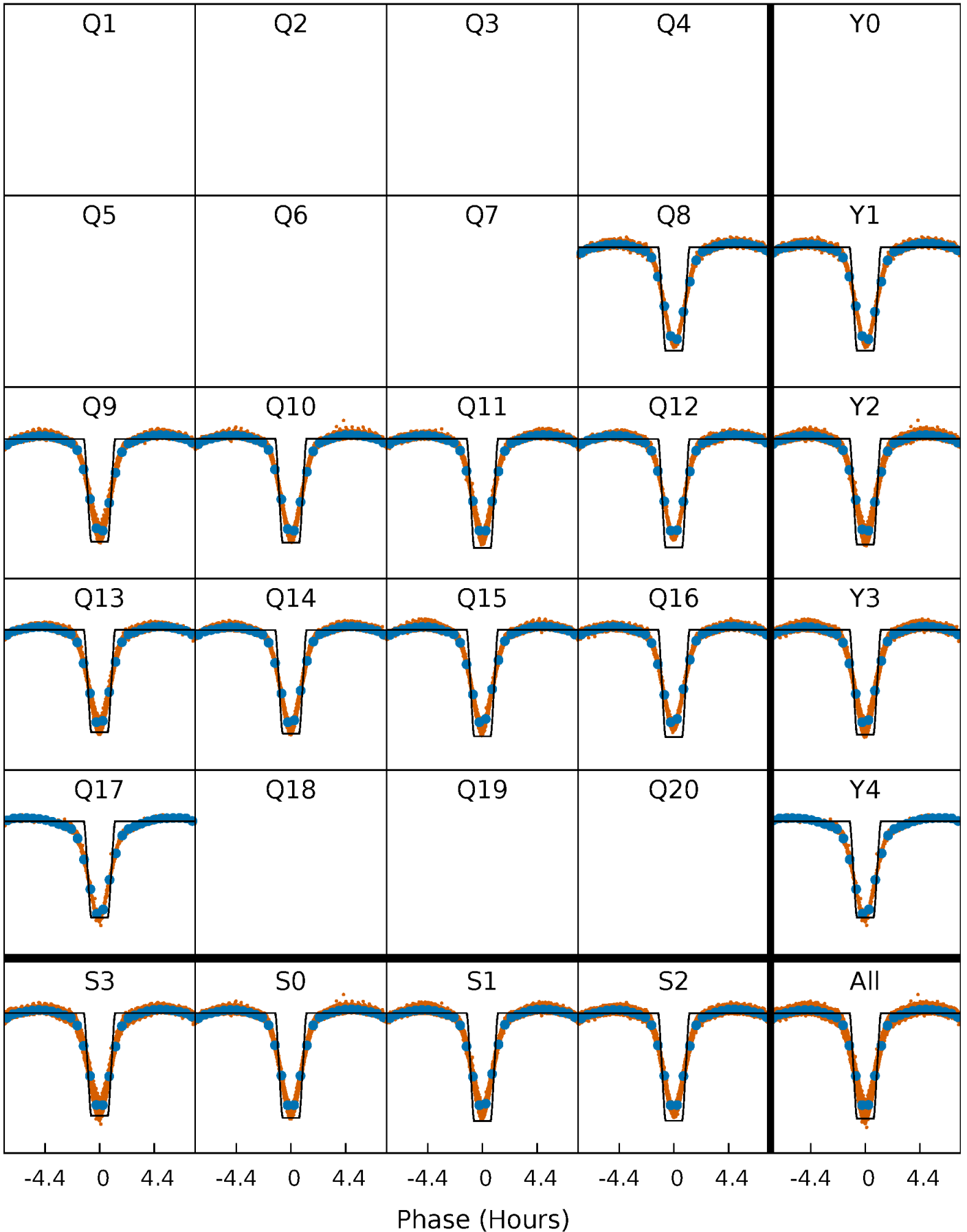
DV Quarter-Phased Transit Curves

TCE 007707742-01 P= 0.758358 Days $T_0=131.854744$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

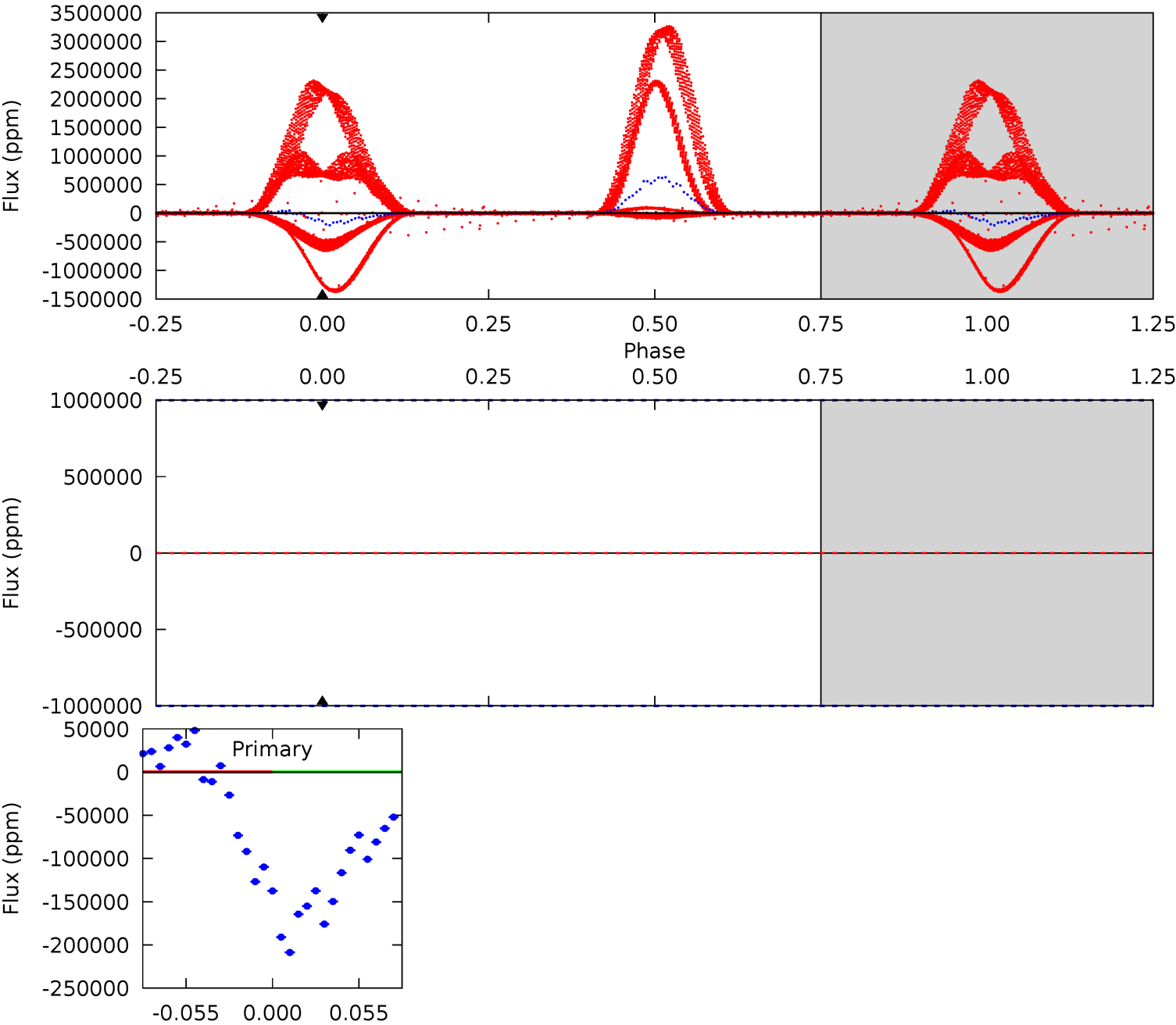
TCE 007707742-01 P= 0.758358 Days $T_0=131.860588$ (BKJD)



DV Model-Shift Uniqueness Test

007707742-01, P = 0.758358 Days, E = 131.854744 Days

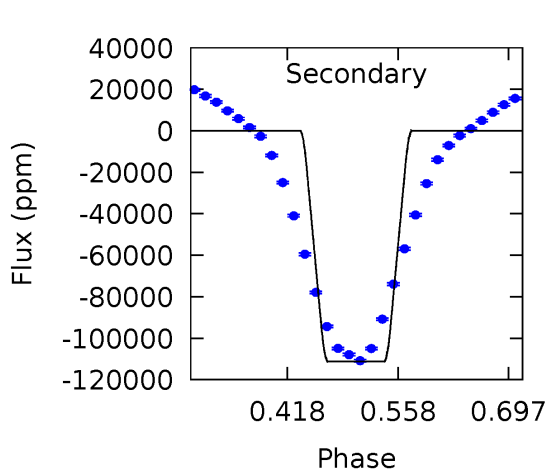
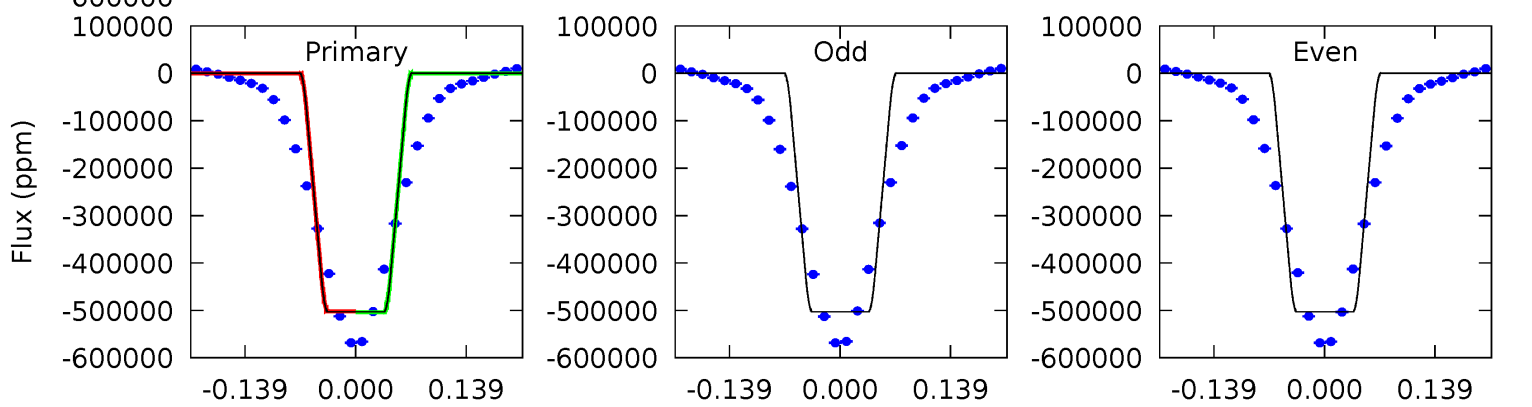
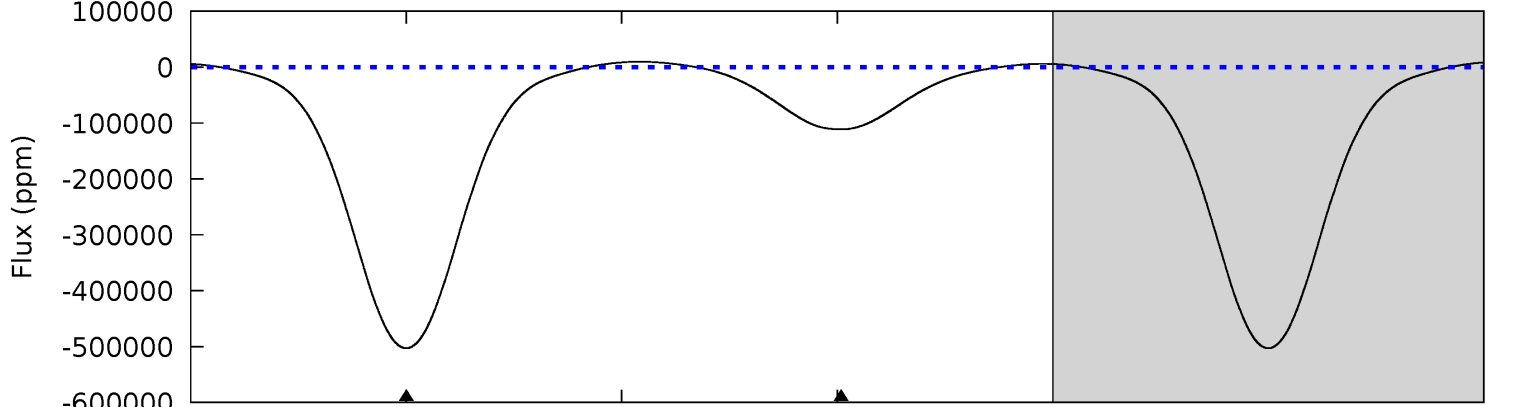
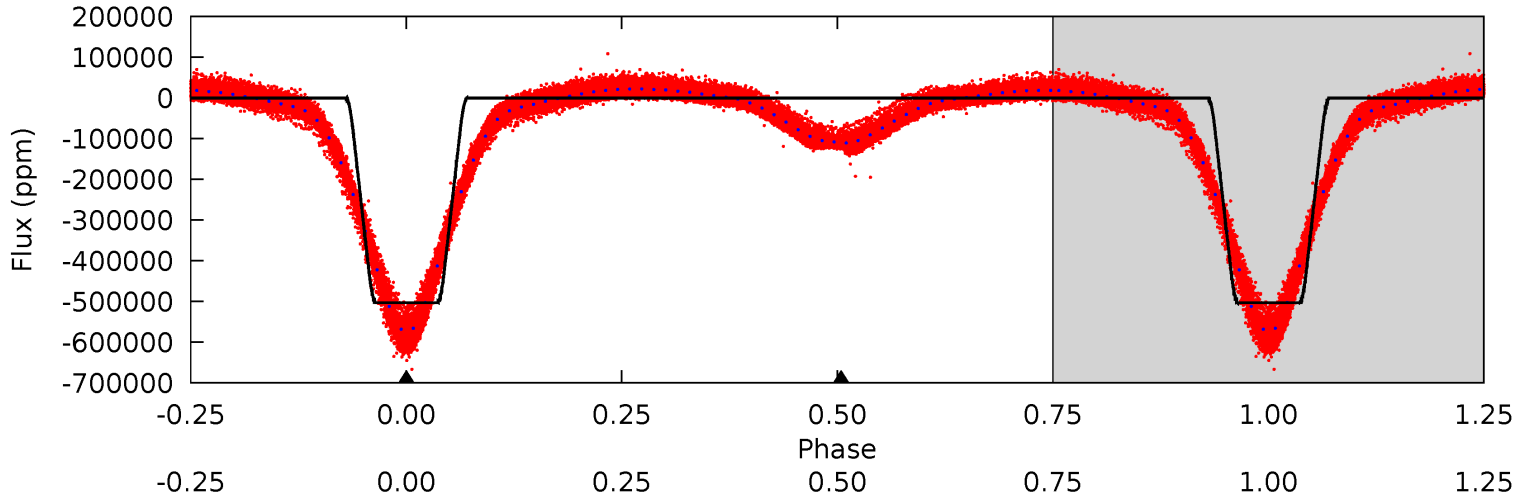
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

007707742-01, P = 0.758358 Days, E = 131.860588 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1884	416.3	0	0	4.49	1.48	43.9	1884	1884	416.3	416.3	0.01	1.00	0.02	2.60



Stellar Parameters For KIC 007707742

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7131^{+200}_{-314}	$4.084^{+0.180}_{-0.180}$	$-0.120^{+0.250}_{-0.350}$	$1.830^{+0.539}_{-0.490}$	$1.483^{+0.209}_{-0.255}$	$0.341^{+0.332}_{-0.168}$
	$+3\%/-4\%$	$+4\%/-4\%$	$+208\%/-292\%$	$+29\%/-27\%$	$+14\%/-17\%$	$+97\%/-49\%$
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 007707742-01 / KOI 3998.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$78.03^{+26.76}_{-21.21}$	4389^{+327}_{-340}	-3314^{+9700}_{-3120}	$0.197^{+3.194}_{-3.143}$
Alt.	-111150 ± 267	$157.75^{+35.57}_{-30.05}$	4356^{+353}_{-338}	4460^{+361}_{-353}	$0.929^{+0.475}_{-0.289}$

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

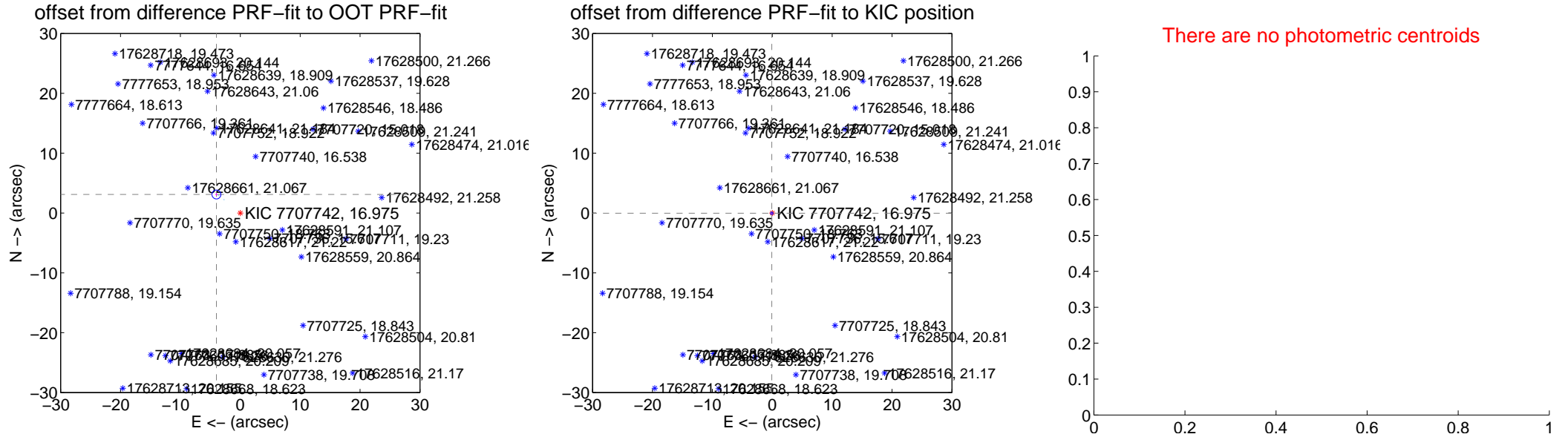
DV Centroid Data

Supplemental centroid analysis for 007707742-01. Kepler magnitude: 16.98. Transit SNR -1.00

There are 10 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 5.74 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.044 \pm 0.248	20.32	3.982 \pm 0.184	3.096 \pm 0.185
PRF-fit source offset from KIC position	0.087 \pm 0.069	1.25	0.078 \pm 0.070	-0.037 \pm 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.

Q5 no difference image



Q5 no OOT image



Q6 no difference image



Q6 no OOT image



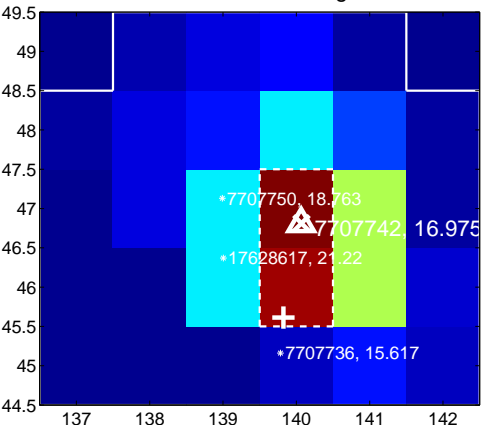
Q7 no difference image



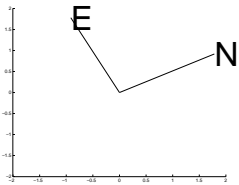
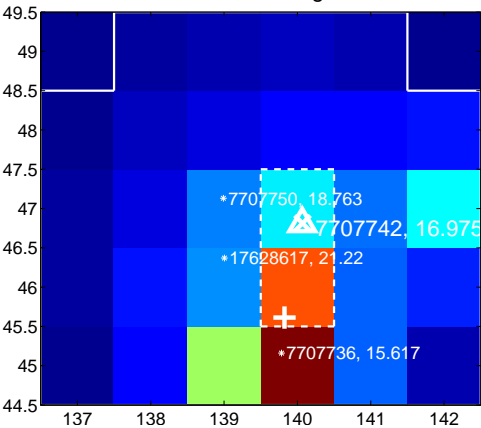
Q7 no OOT image



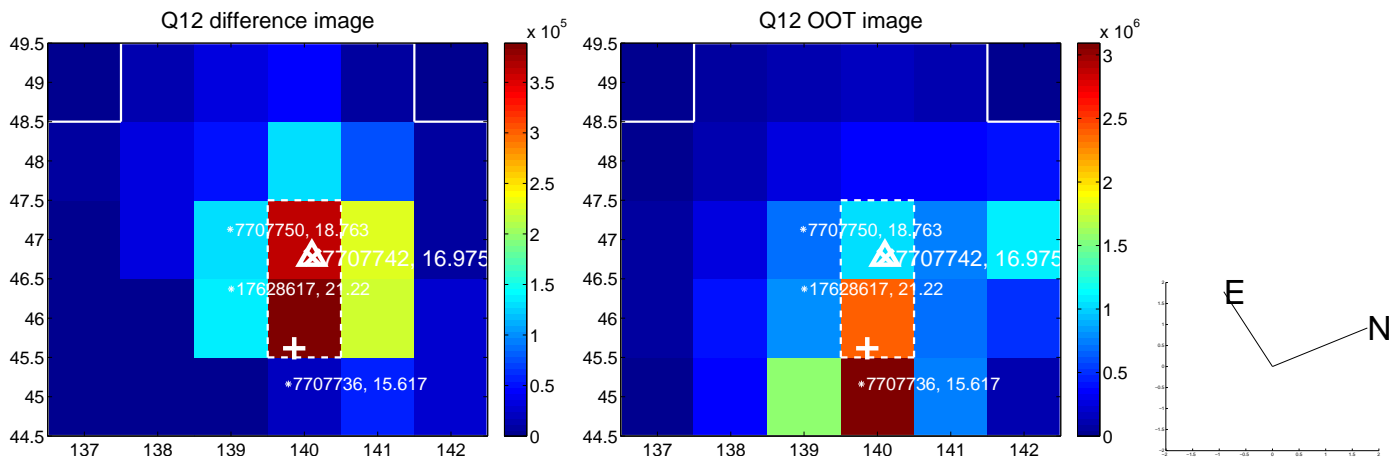
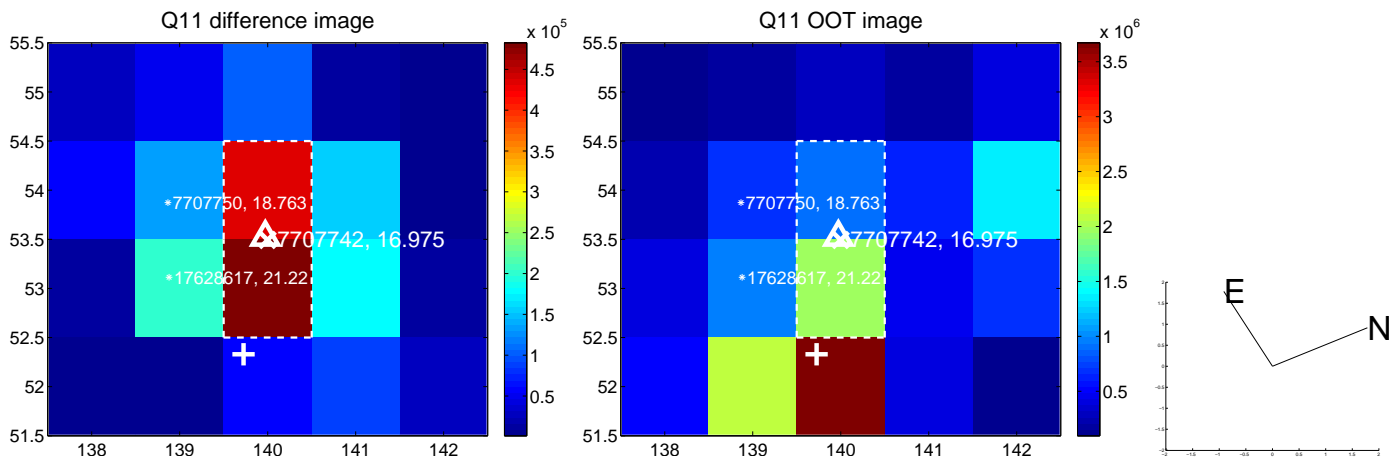
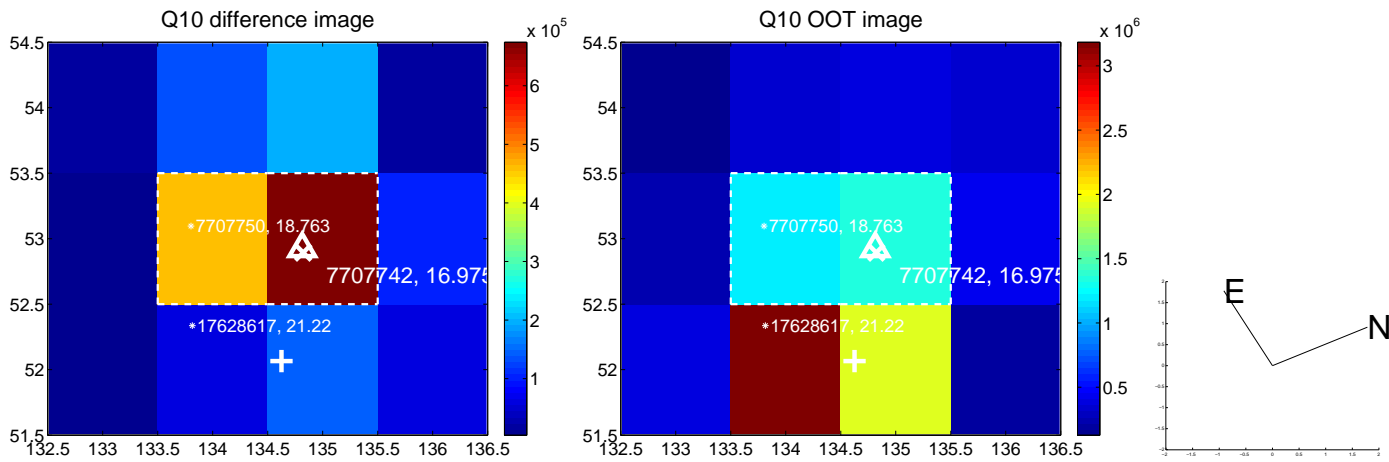
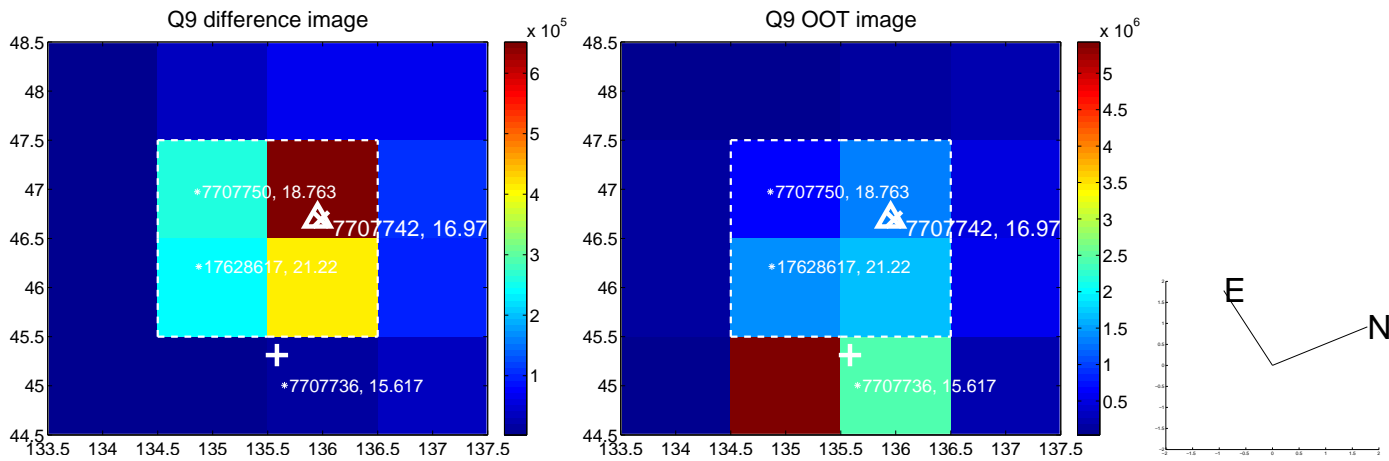
Q8 difference image



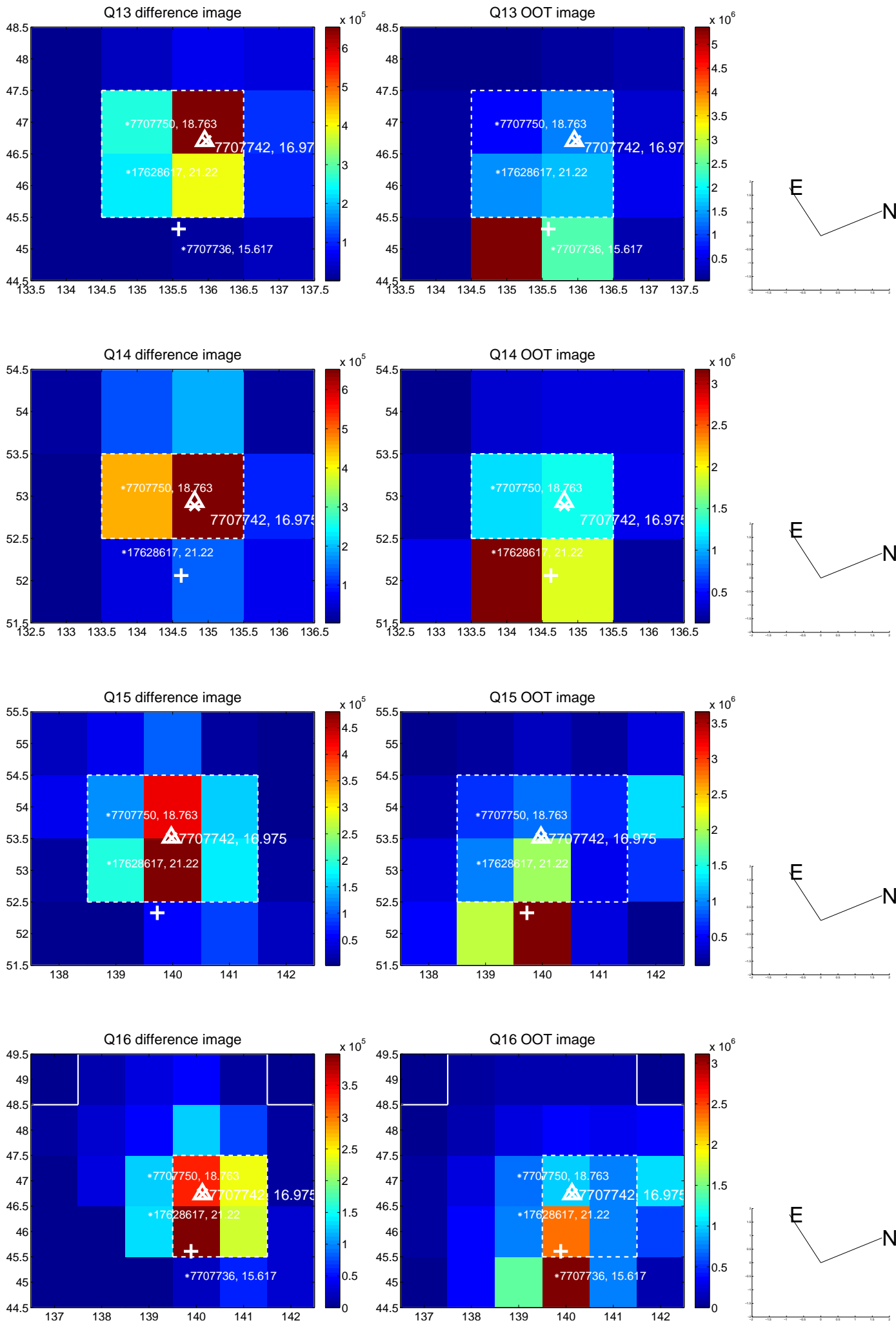
Q8 OOT image



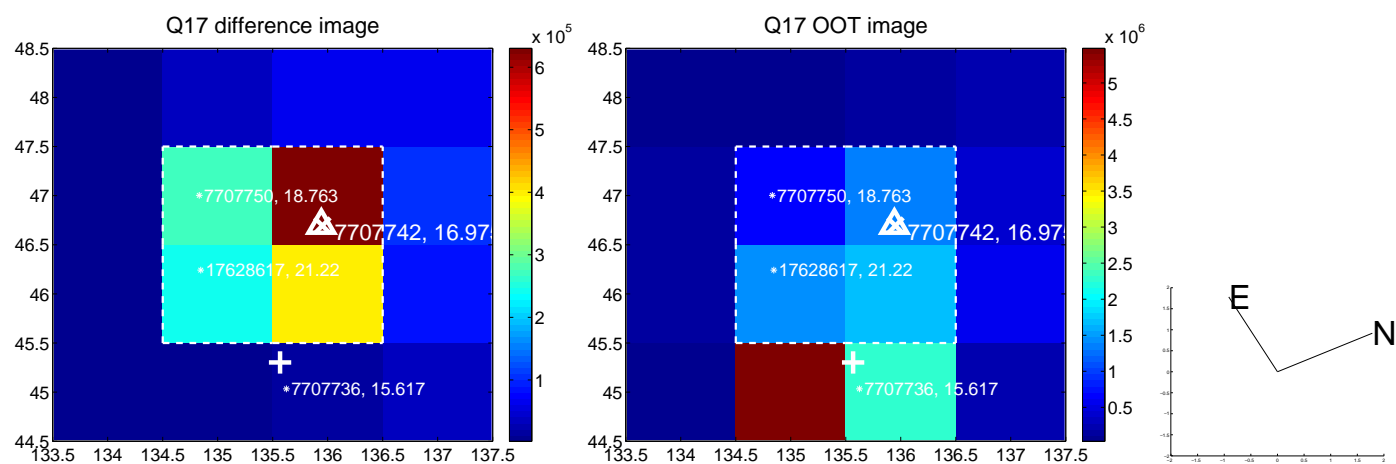
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

