

KIC 008742735

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})
008742735-01	OBS	8165.01	331.925486	289.579604	1028.6	11.060	8.1	8.8	0.80	5652	2.65	0.72

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008742735-01	OBS	FP	0.00	1	0	0	0	MOD_NONUNIQ_ALT—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.

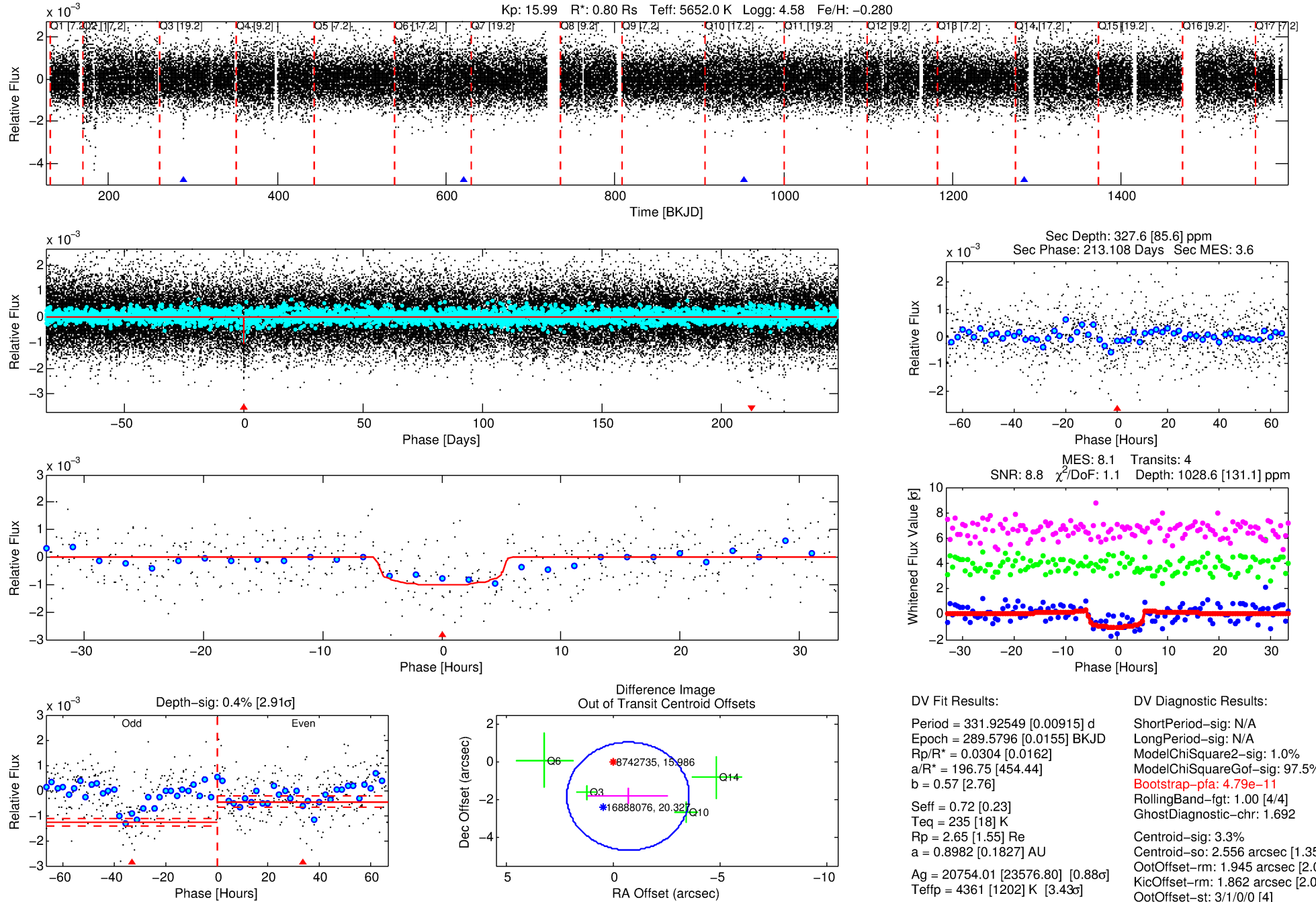
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008742735-01

No Significant Match Found

DV One-Page Summary

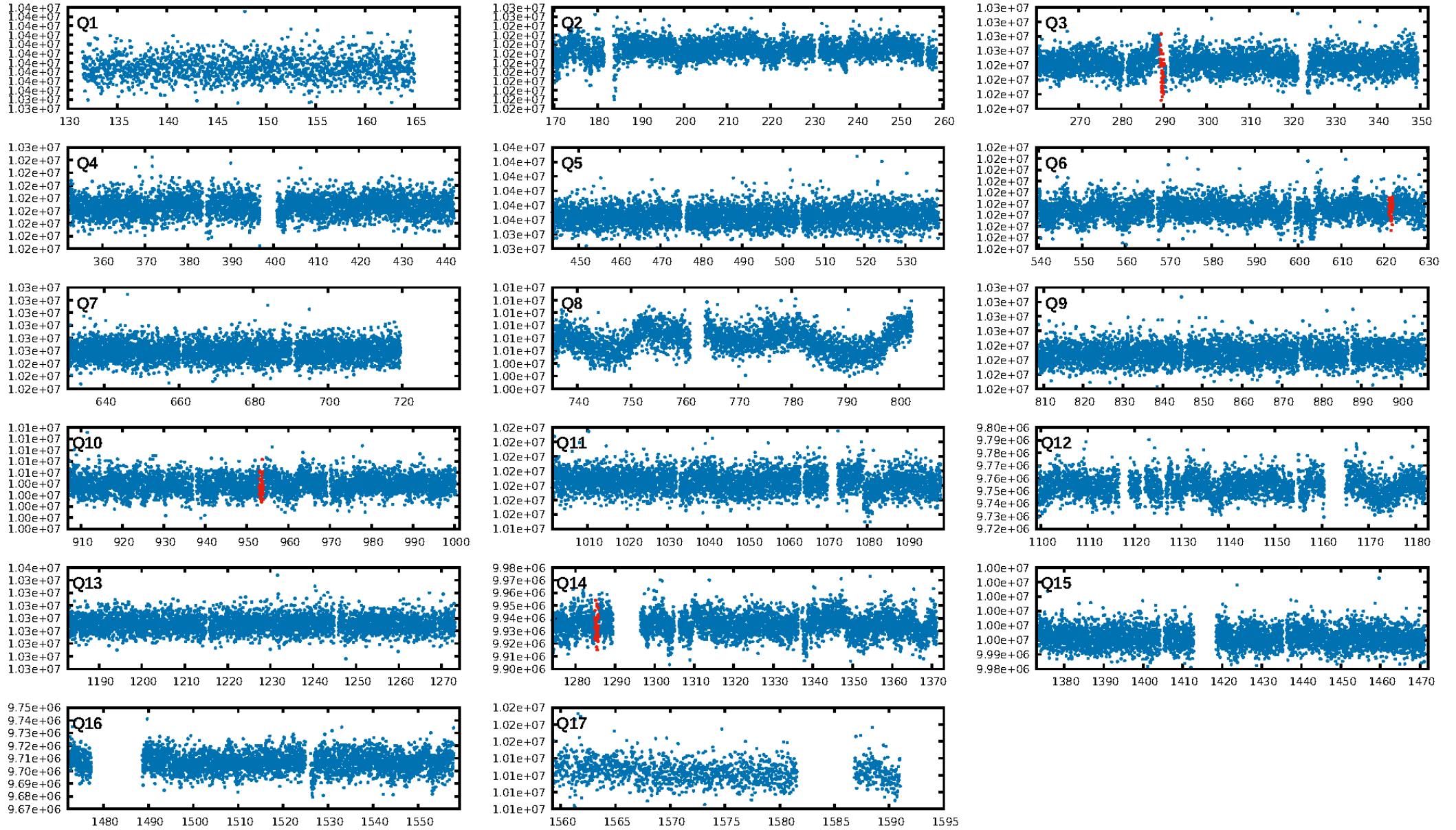
KIC: 8742735 Candidate: 1 of 1 Period: 331.925 d



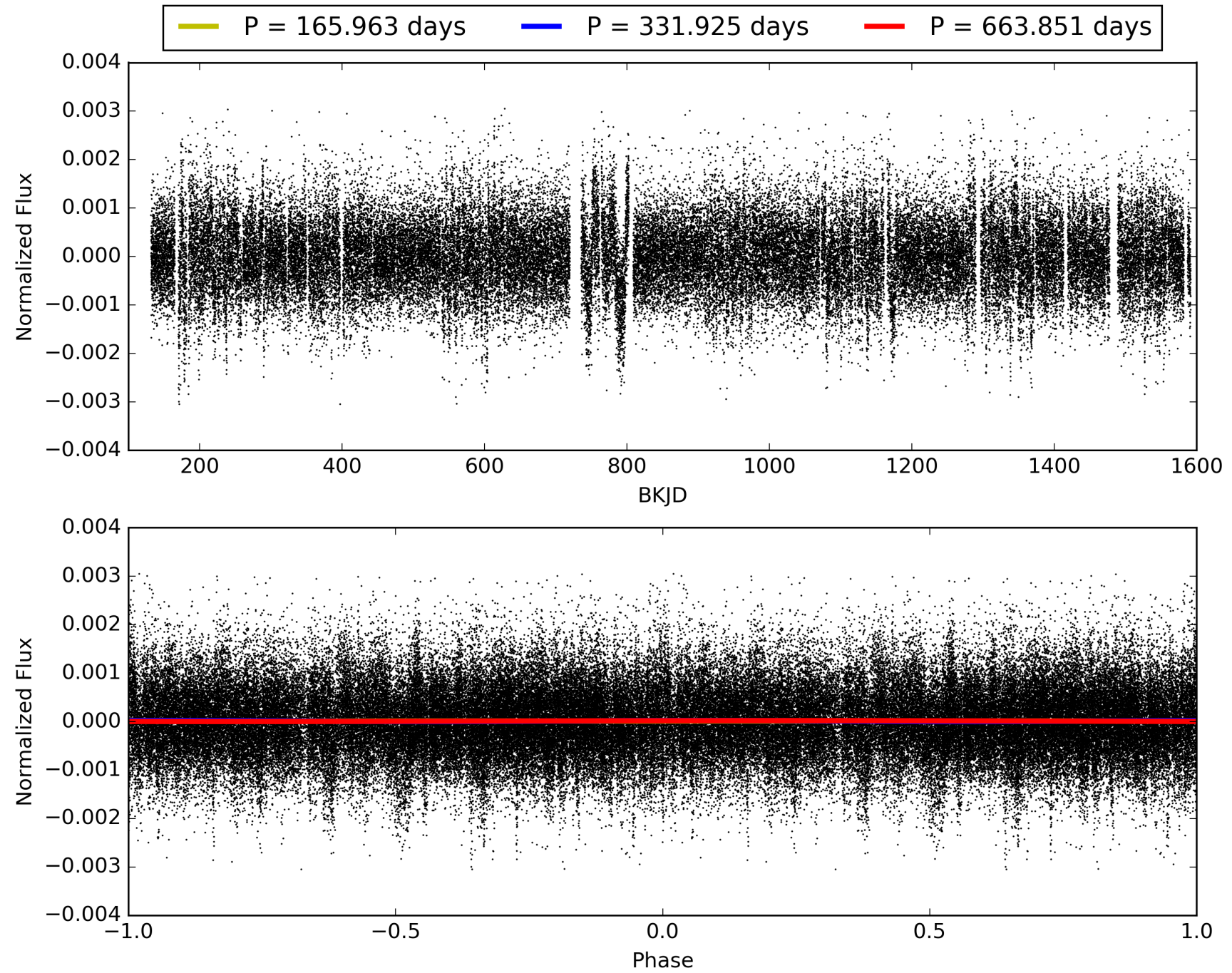
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 19:59:11 Z

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

TCE 008742735-01, PDC Light Curves

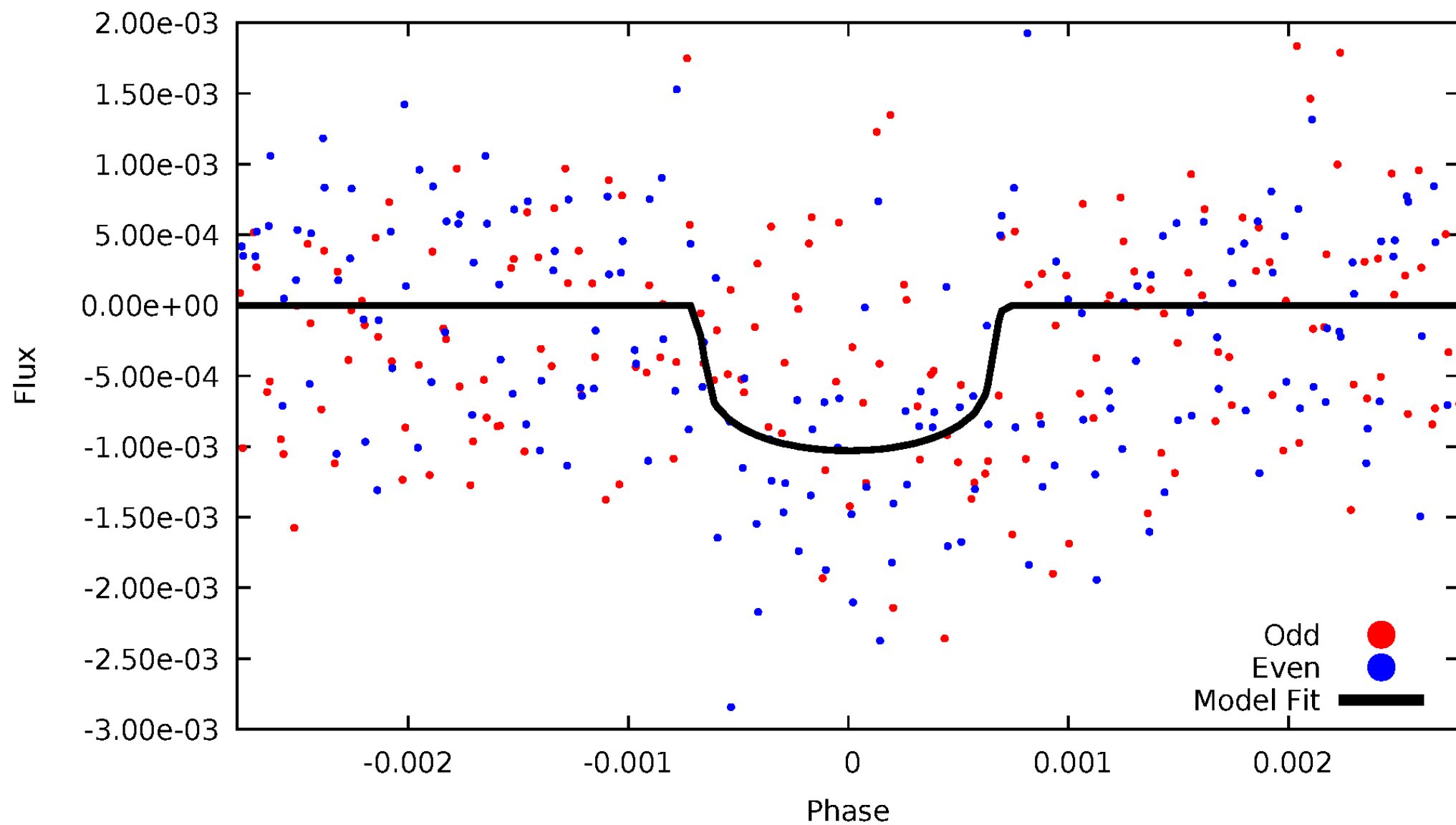


TCE 008742735-01



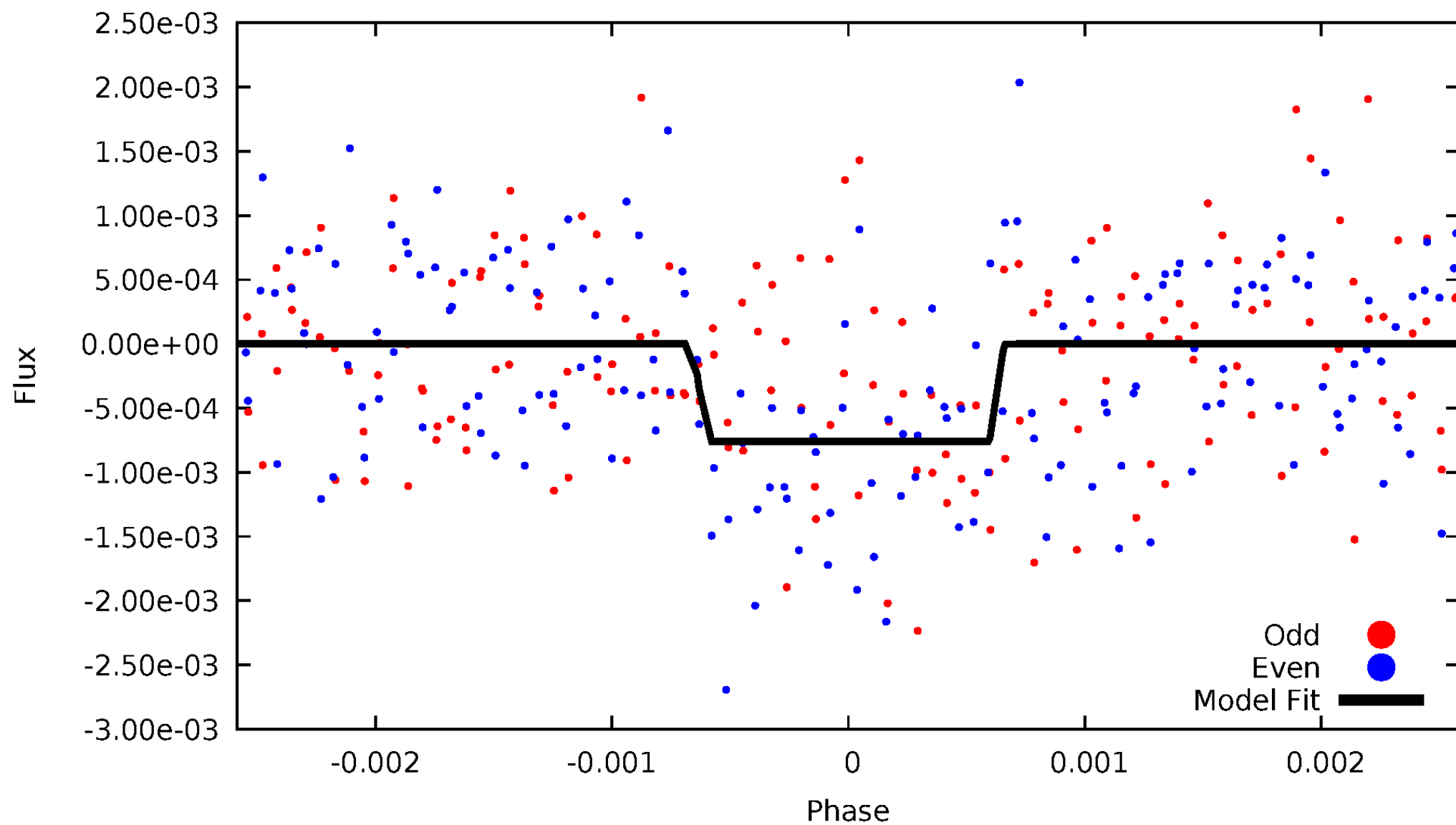
DV Odd/Even

TCE 008742735-01

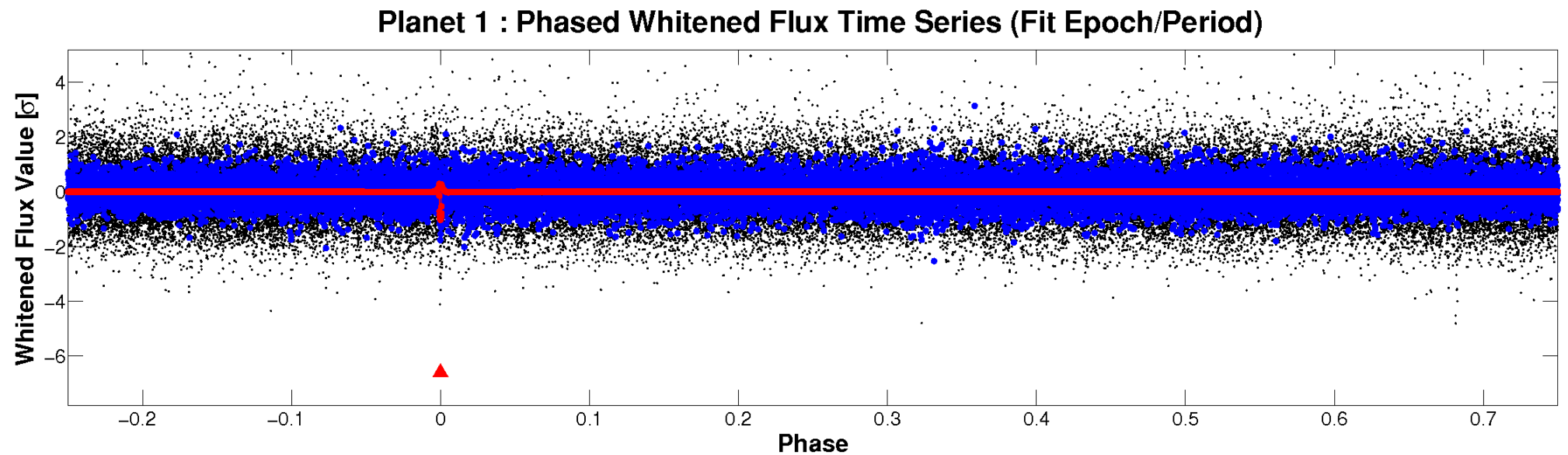
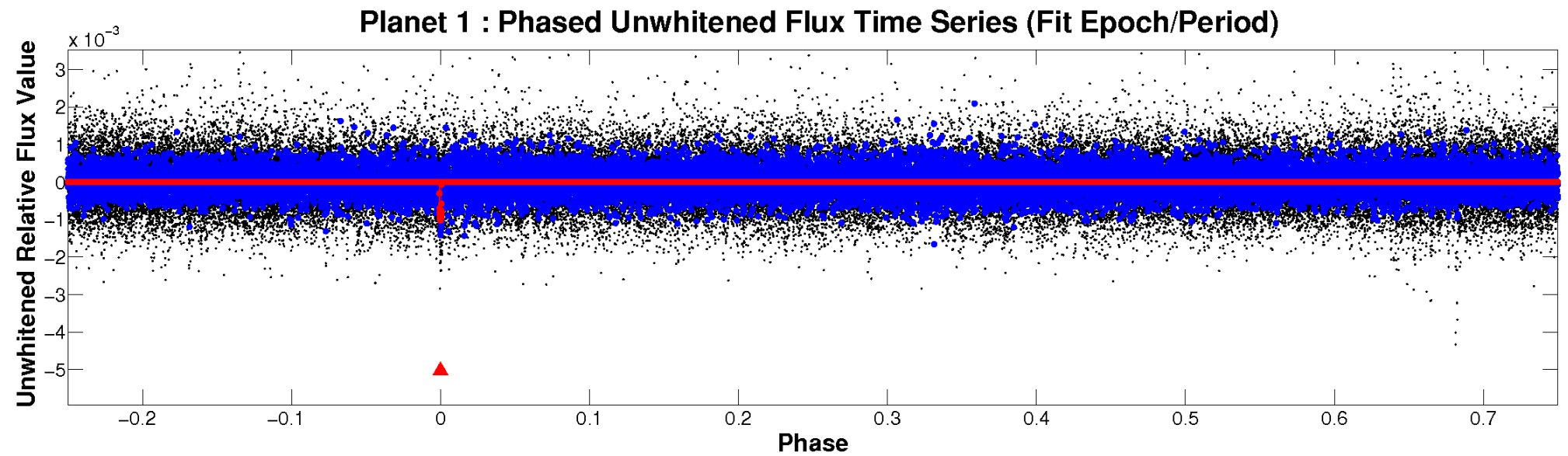


ALT Odd/Even

TCE 008742735-01



Non-Whitened Vs. Whitened Light Curve



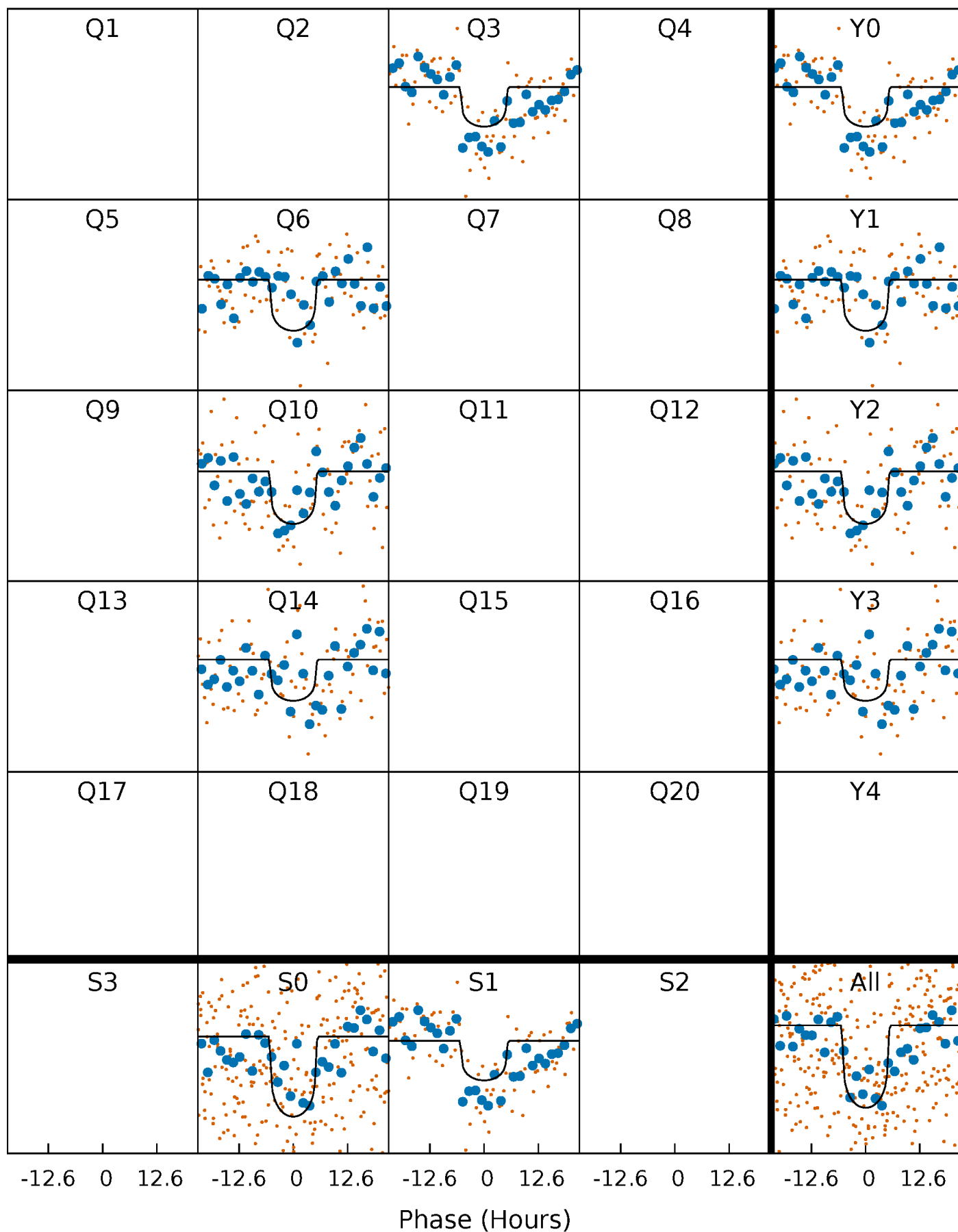
PDC Quarter-Phased Transit Curves

TCE 008742735-01 P=331.925486 Days $T_0=289.579604$ (BKJD)



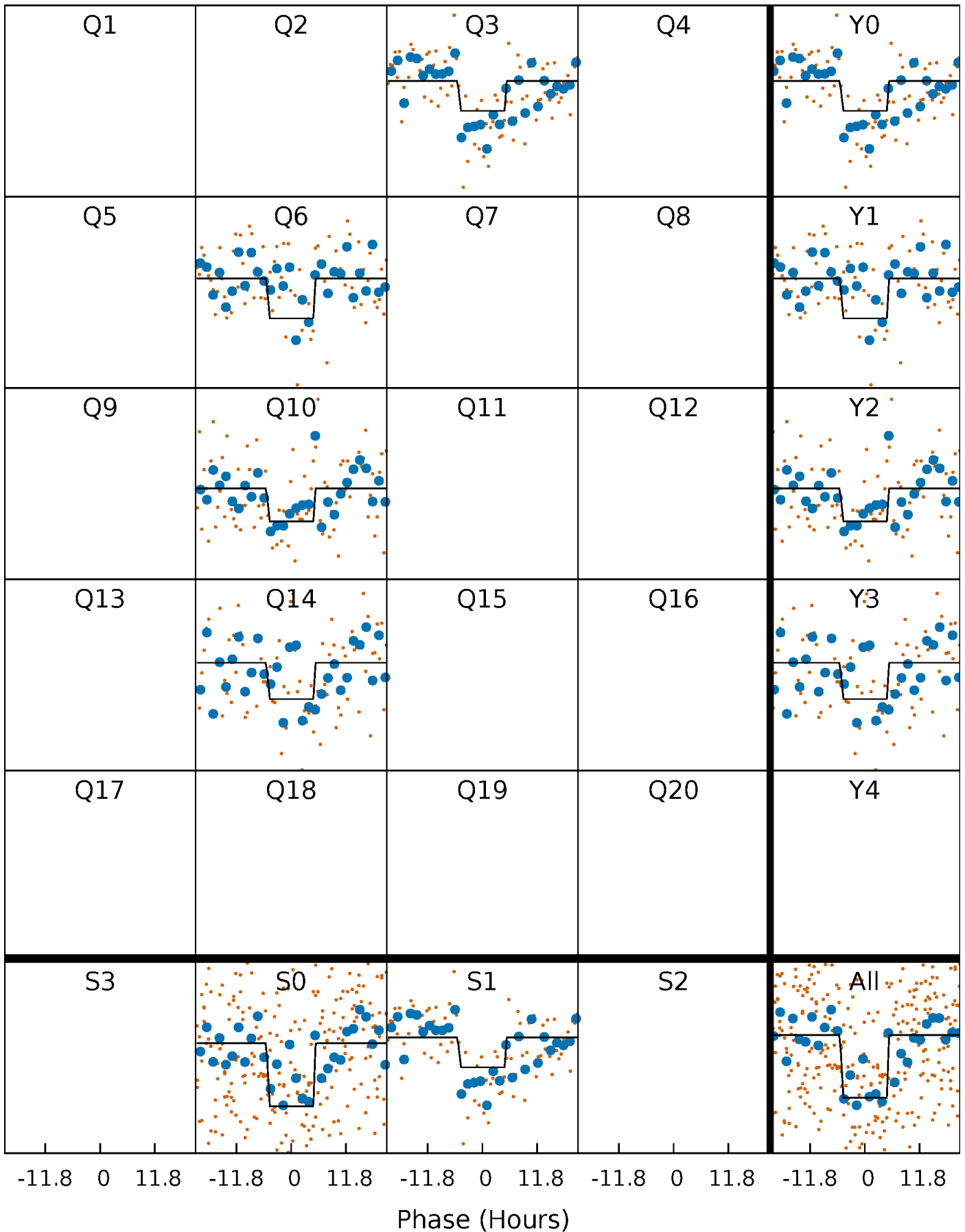
DV Quarter-Phased Transit Curves

TCE 008742735-01 P=331.925486 Days $T_0=289.579604$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

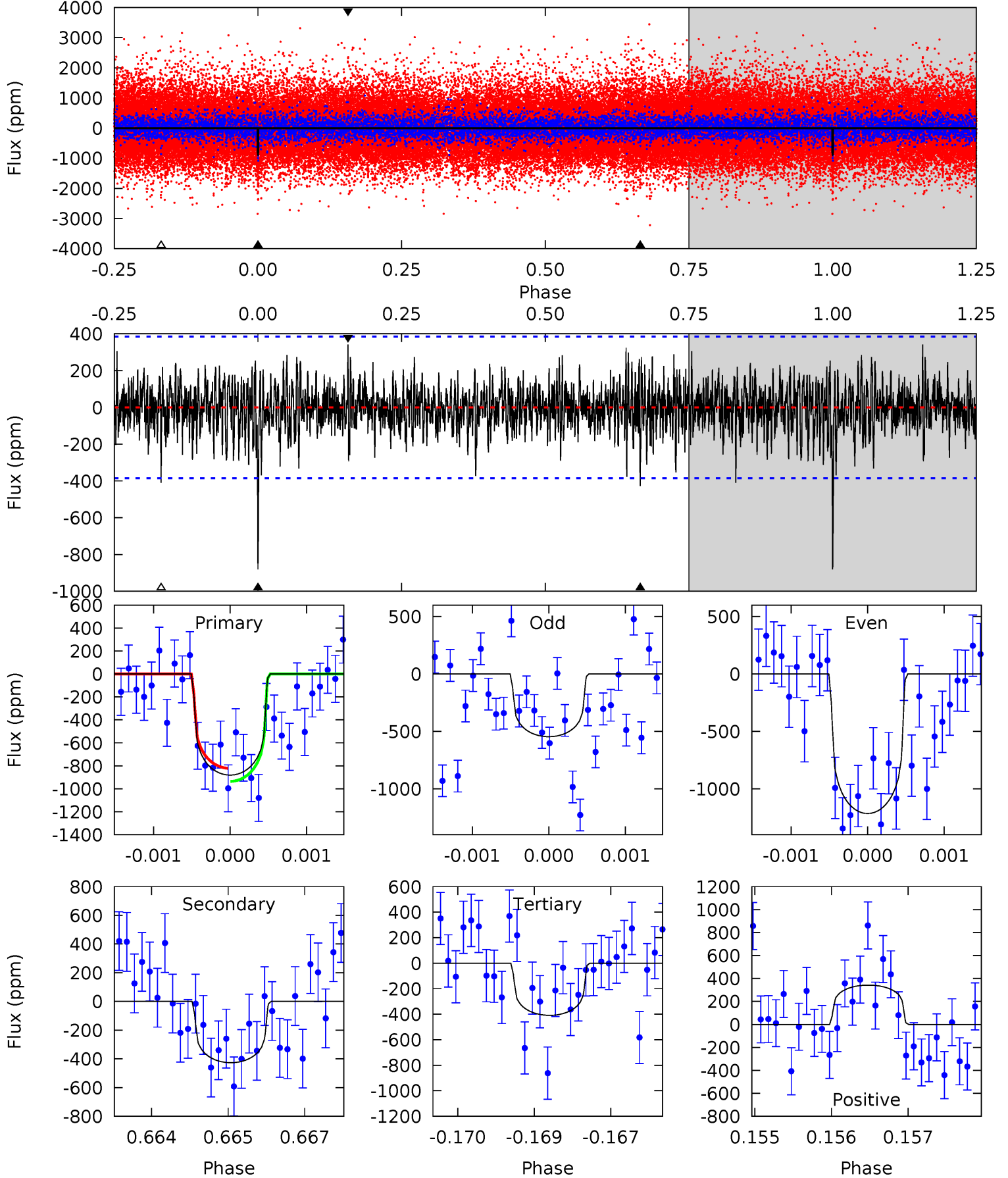
TCE 008742735-01 P=331.943182 Days $T_0=289.574138$ (BKJD)



DV Model-Shift Uniqueness Test

008742735-01, P = 331.925486 Days, E = 289.579604 Days

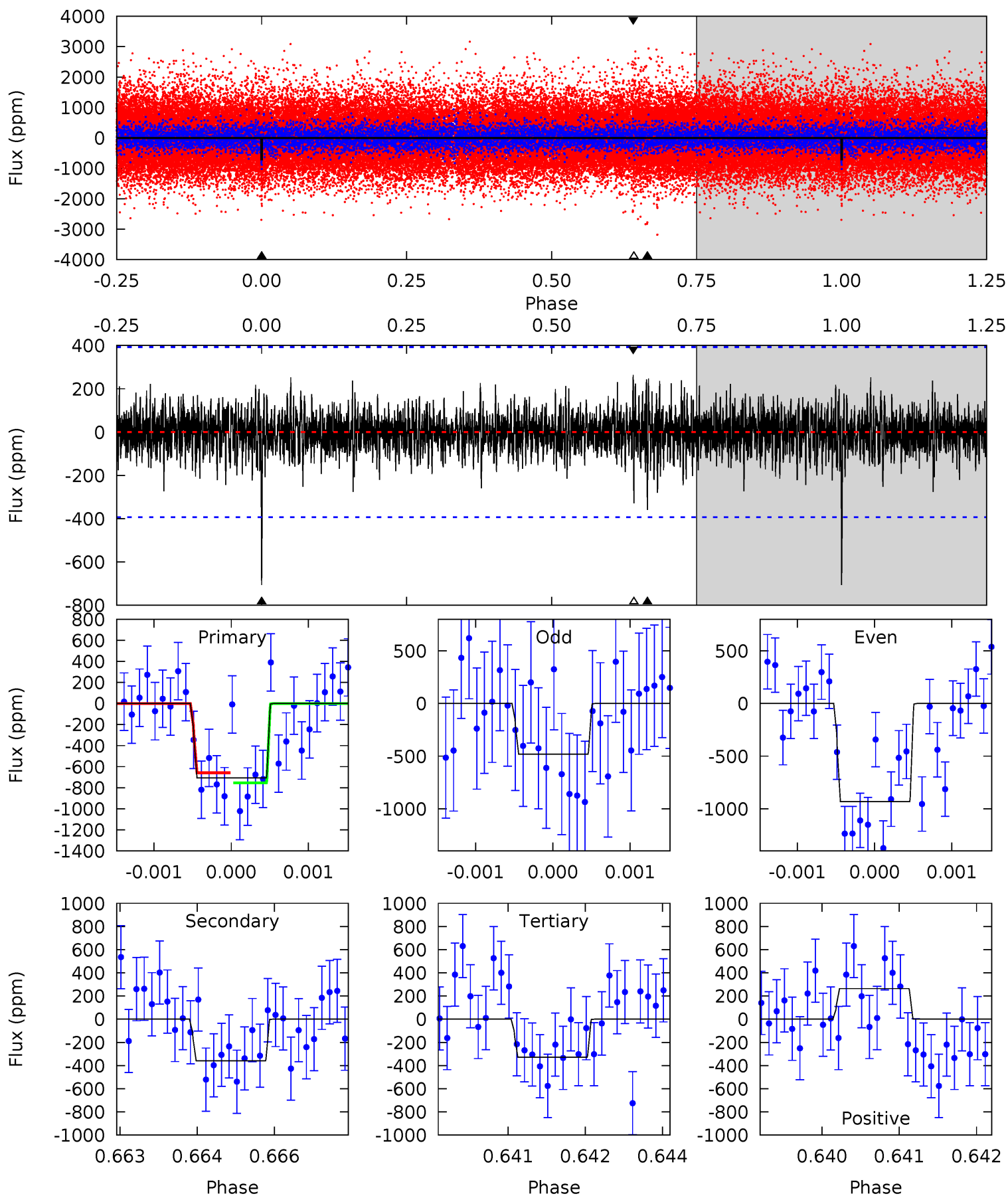
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.3	5.96	5.71	4.78	5.39	3.19	1.41	6.60	7.53	0.25	1.18	4.68	1.21	0.28	0.79



Alt Model-Shift Uniqueness Test

008742735-01, P = 331.943182 Days, E = 289.574138 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.70	4.94	4.51	3.63	5.40	3.22	1.00	5.19	6.07	0.43	1.31	3.10	1.23	0.27	0.66



Stellar Parameters For KIC 008742735

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5652^{+152}_{-152}	$4.577^{+0.040}_{-0.160}$	$-0.280^{+0.300}_{-0.300}$	$0.798^{+0.194}_{-0.065}$	$0.888^{+0.088}_{-0.107}$	$2.459^{+0.493}_{-1.036}$
	+3%/-3%	+1%/-3%	+107%/-107%	+24%/-8%	+10%/-12%	+20%/-42%
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 008742735-01 / KOI 8165.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-427 ± 72	$2.74^{+1.63}_{-1.26}$	335^{+19}_{-13}	4762^{+1604}_{-756}	23882^{+59055}_{-14171}
Alt.	-359 ± 73	$2.57^{+1.50}_{-1.36}$	334^{+19}_{-13}	4756^{+1892}_{-799}	23123^{+84417}_{-14261}

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

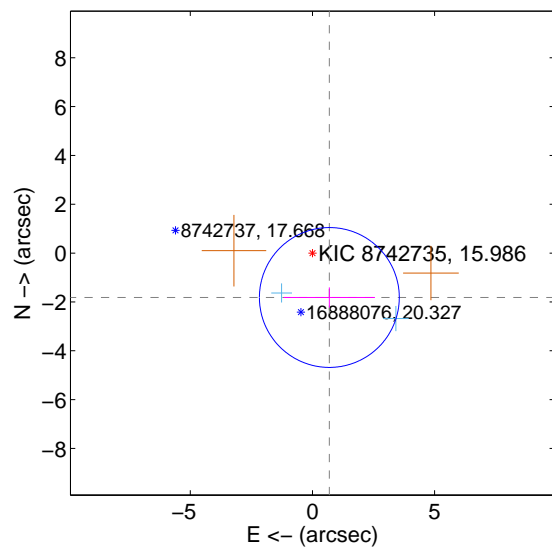
Supplemental centroid analysis for 008742735-01. Kepler magnitude: 15.99. Transit SNR 8.76

There are 2 quarters with good PRF difference image offsets

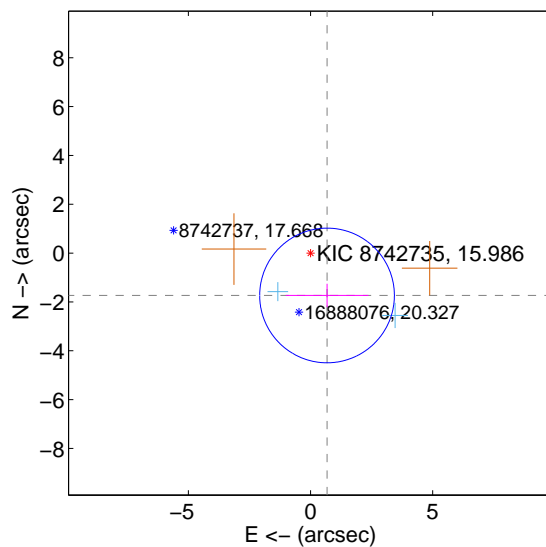
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.945 ± 0.954	2.04	-0.692 ± 1.865	-1.817 ± 0.413
PRF-fit source offset from KIC position	1.862 ± 0.919	2.03	-0.676 ± 1.693	-1.735 ± 0.482
photometric centroid source offset	2.56 ± 1.90	1.35	0.73 ± 1.78	-2.45 ± 1.91

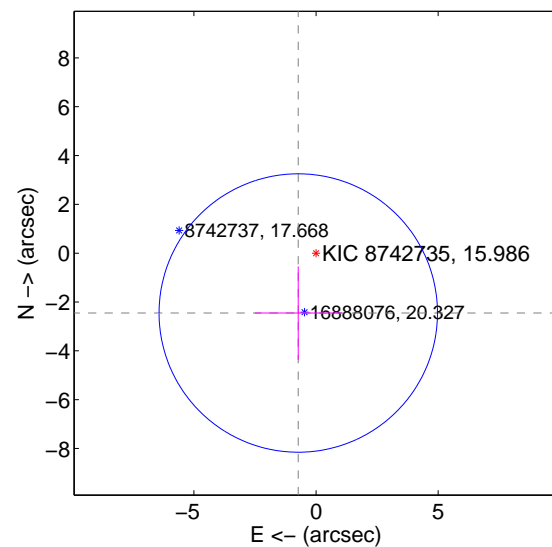
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

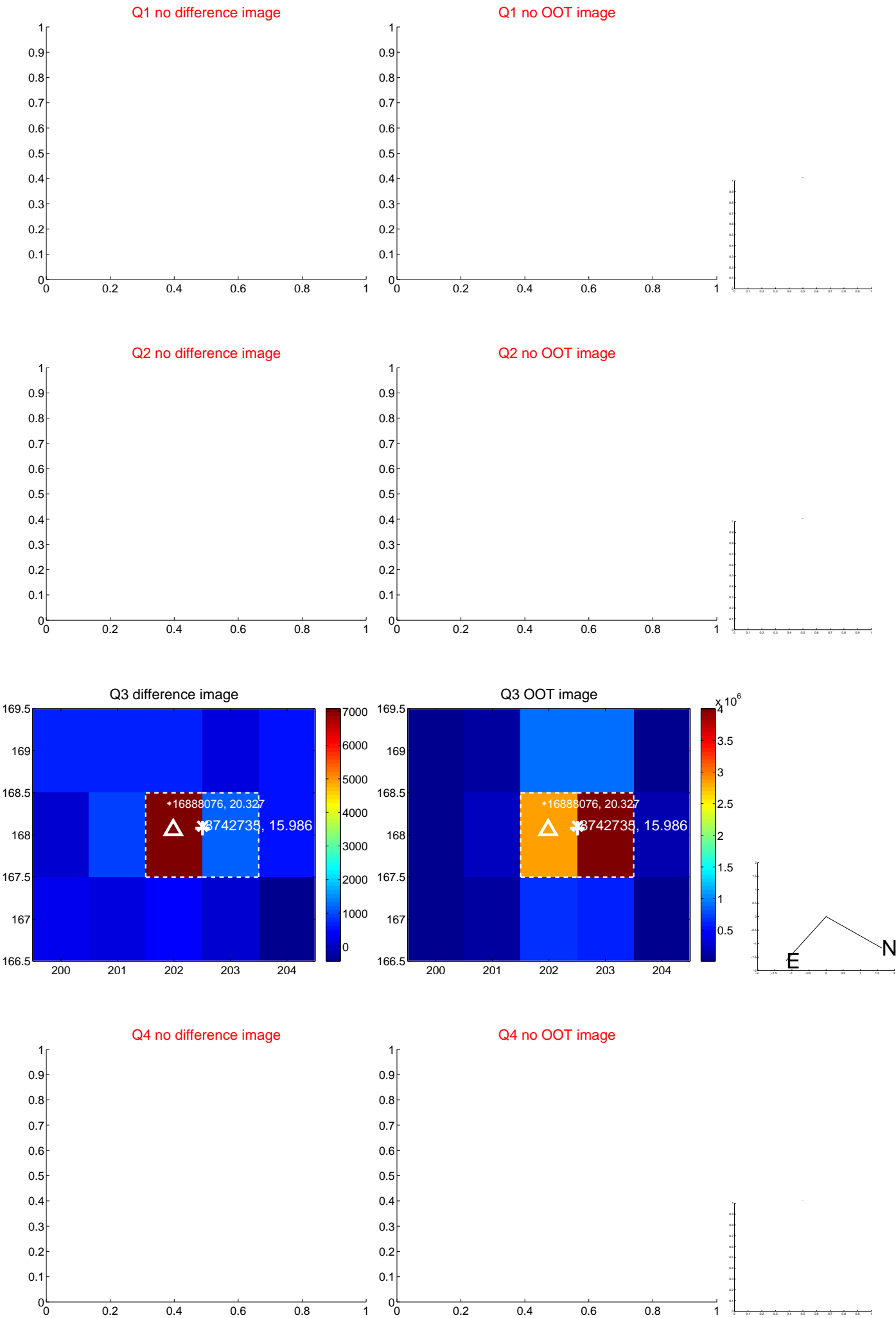


offset from photometric centroids

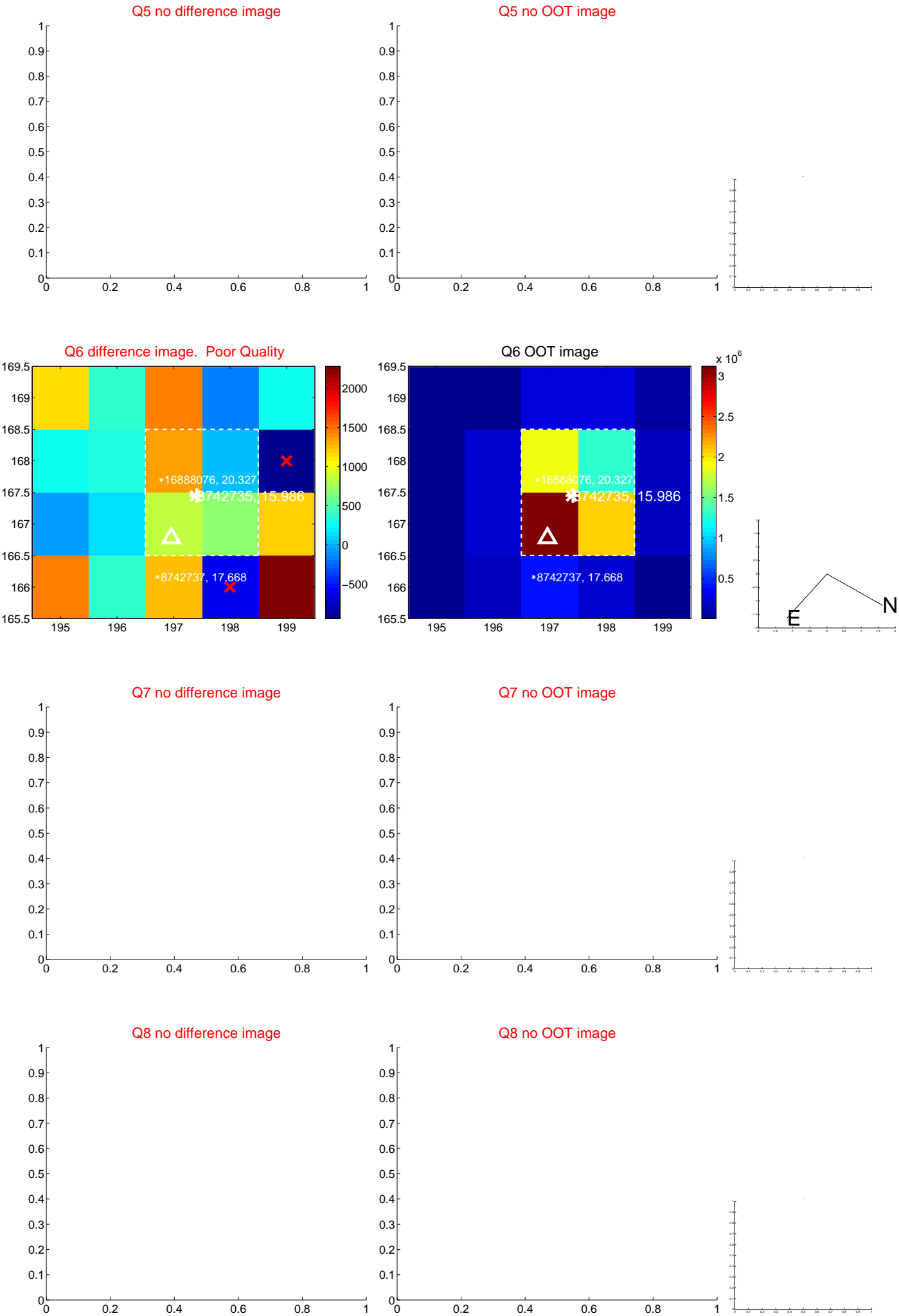


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

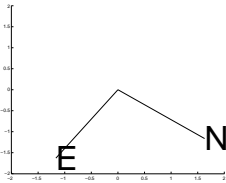
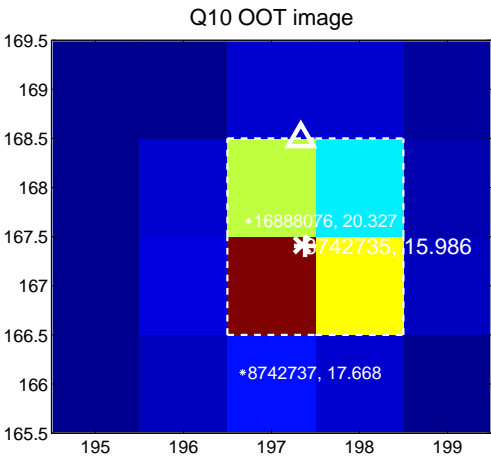
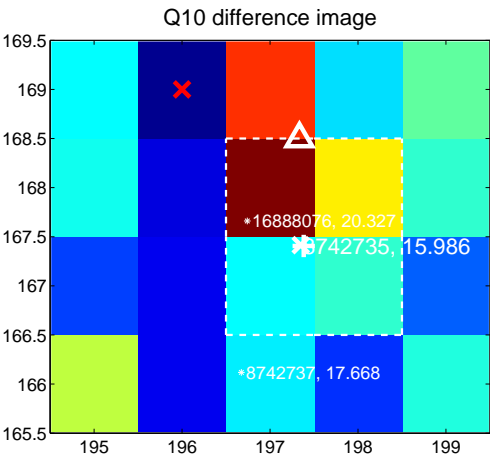


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

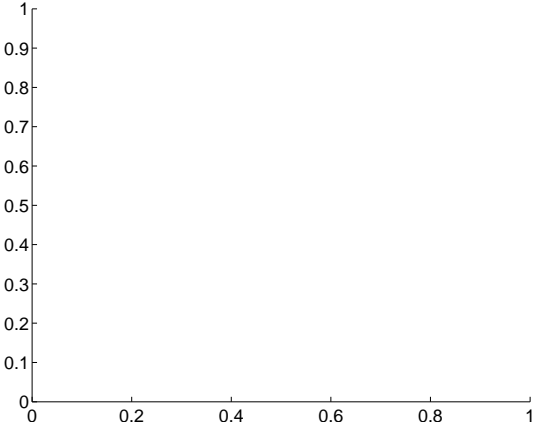
Q9 no difference image



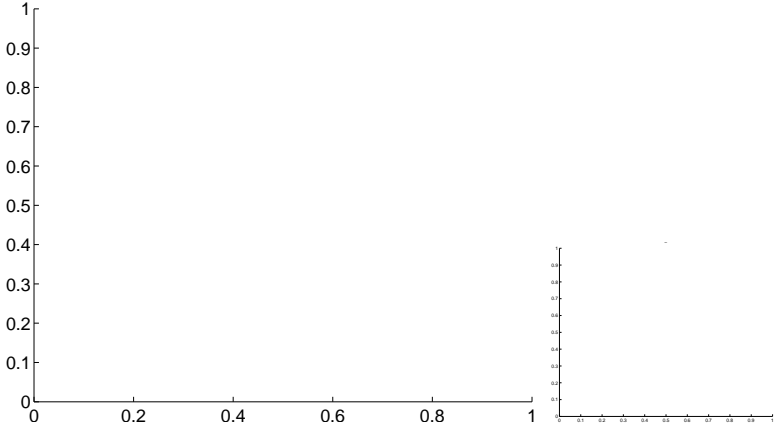
Q9 no OOT image



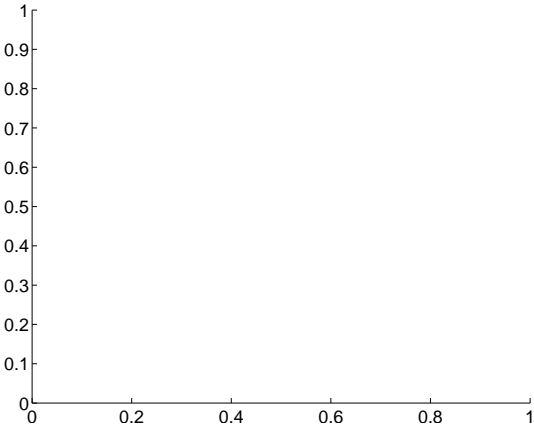
Q11 no difference image



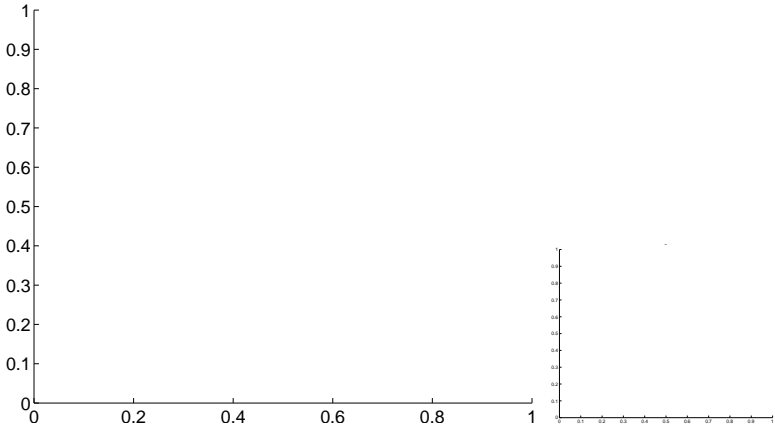
Q11 no OOT image



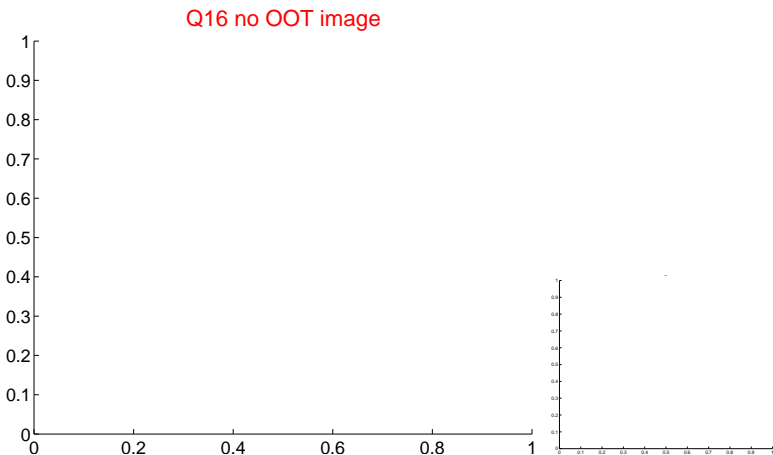
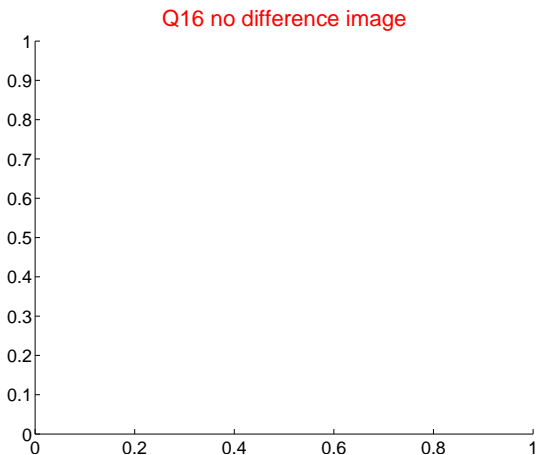
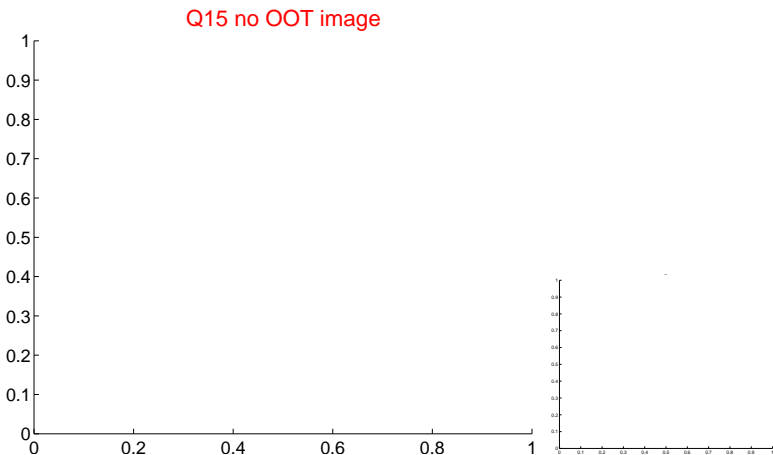
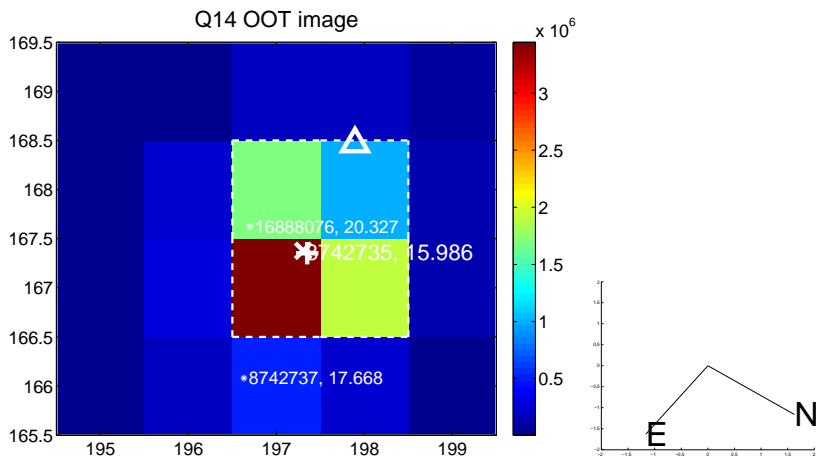
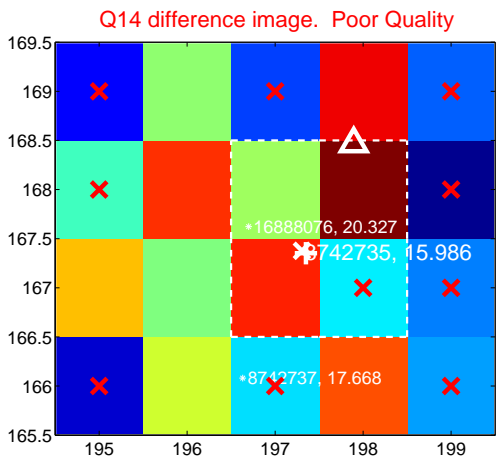
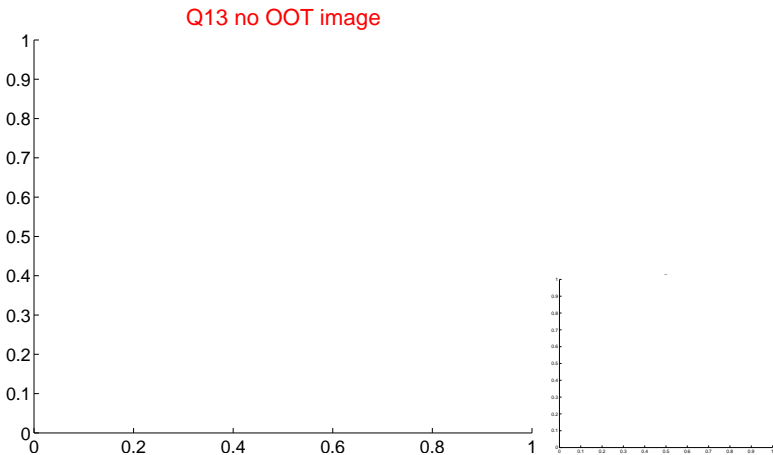
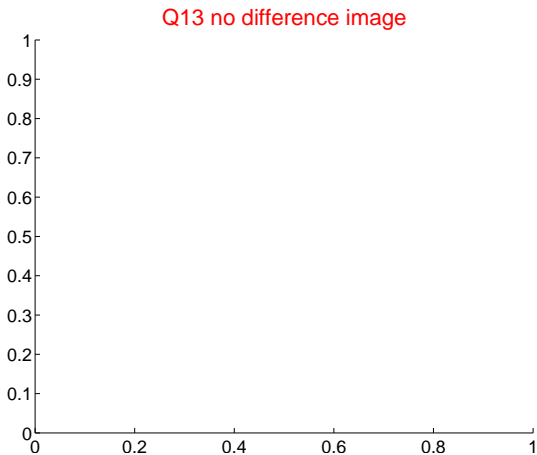
Q12 no difference image



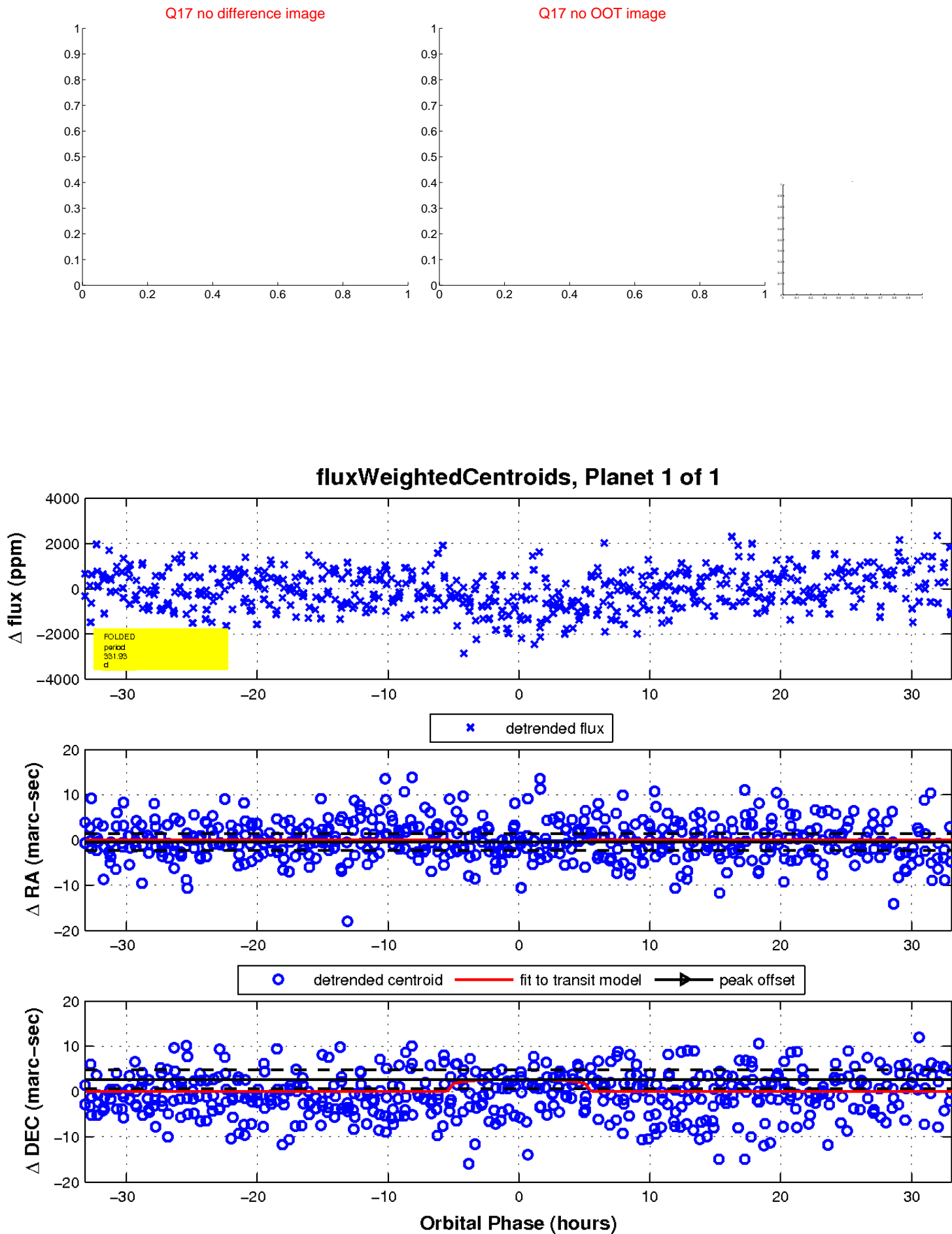
Q12 no OOT image



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



UKIRT Image

Declination

