

KIC 008112079

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})
008112079-01	OBS	No	493.560737	293.623387	503.9	10.342	7.2	6.8	1.17	6561	2.76	1.35

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008112079-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

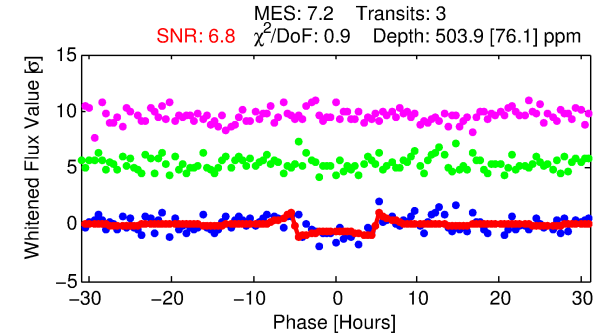
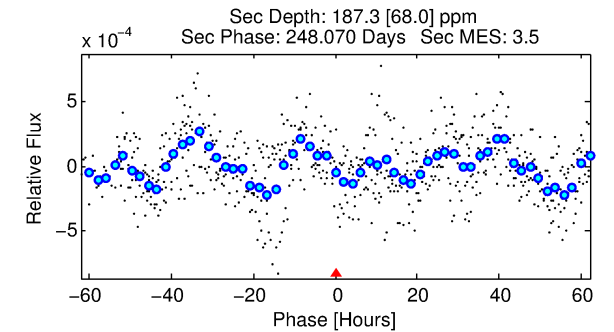
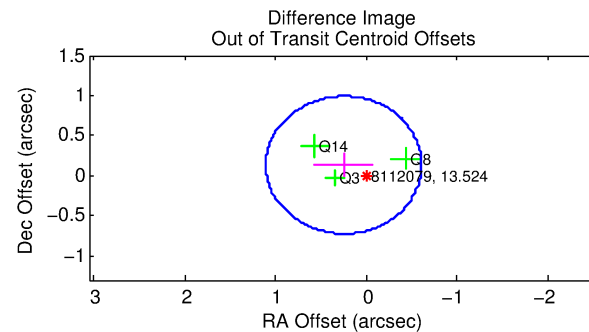
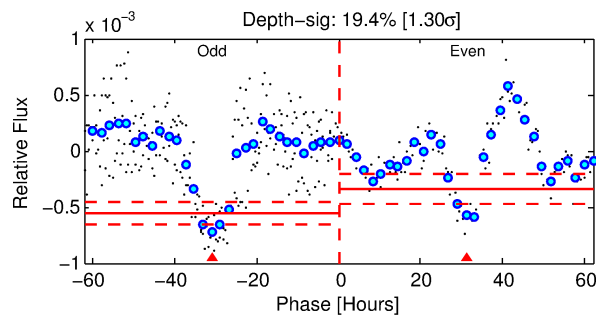
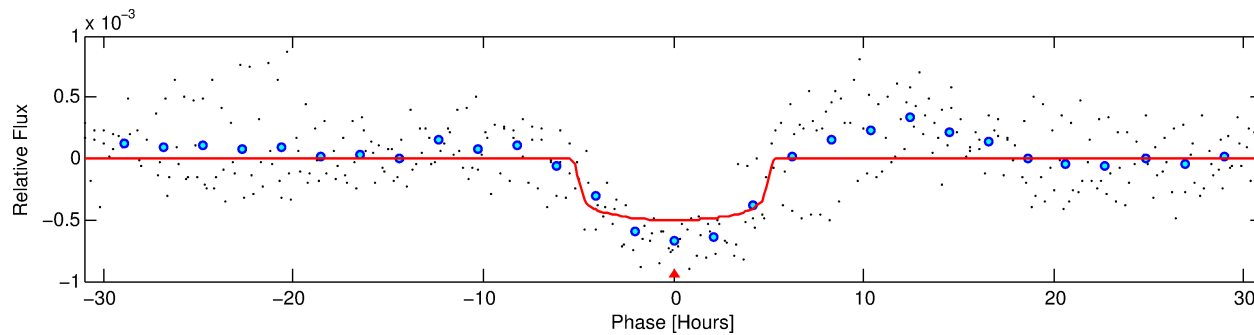
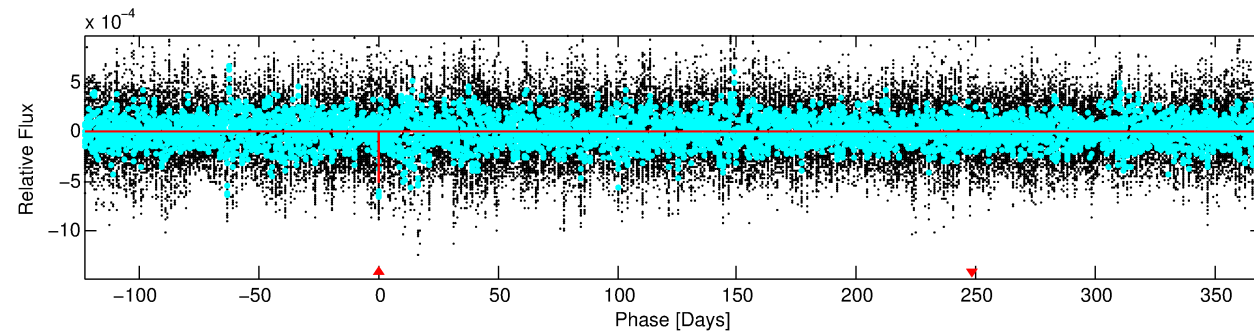
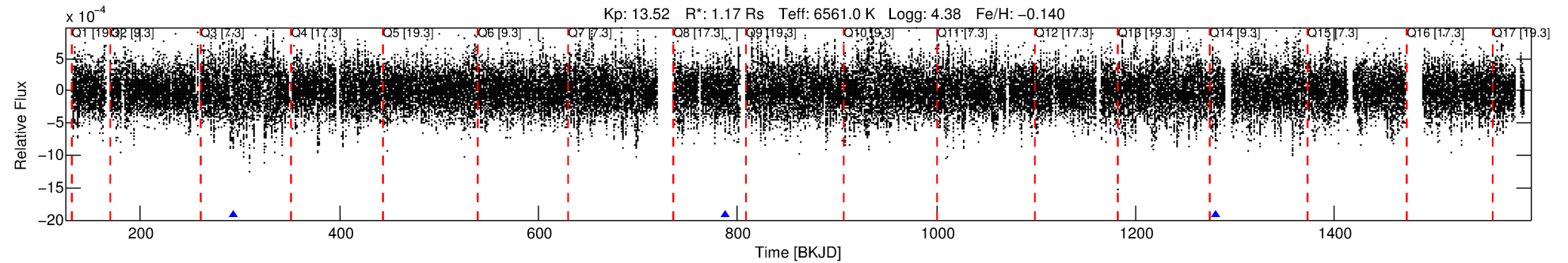
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008112079-01

No Significant Match Found

DV One-Page Summary

KIC: 8112079 Candidate: 1 of 1 Period: 493.561 d



DV Fit Results:

Period = 493.56074 [0.00646] d
Epoch = 293.6234 [0.0087] BKJD
Rp/R* = 0.0216 [0.0065]
a/R* = 297.97 [452.09]
b = 0.61 [1.55]
Seff = 1.36 [0.52]
Teff = 275 [27] K
Rp = 2.76 [1.18] Re
a = 1.2961 [0.3289] AU
Ag = 22698.54 [17933.86] [1.27 σ]
Teffp = 5221 [926] K [5.34 σ]

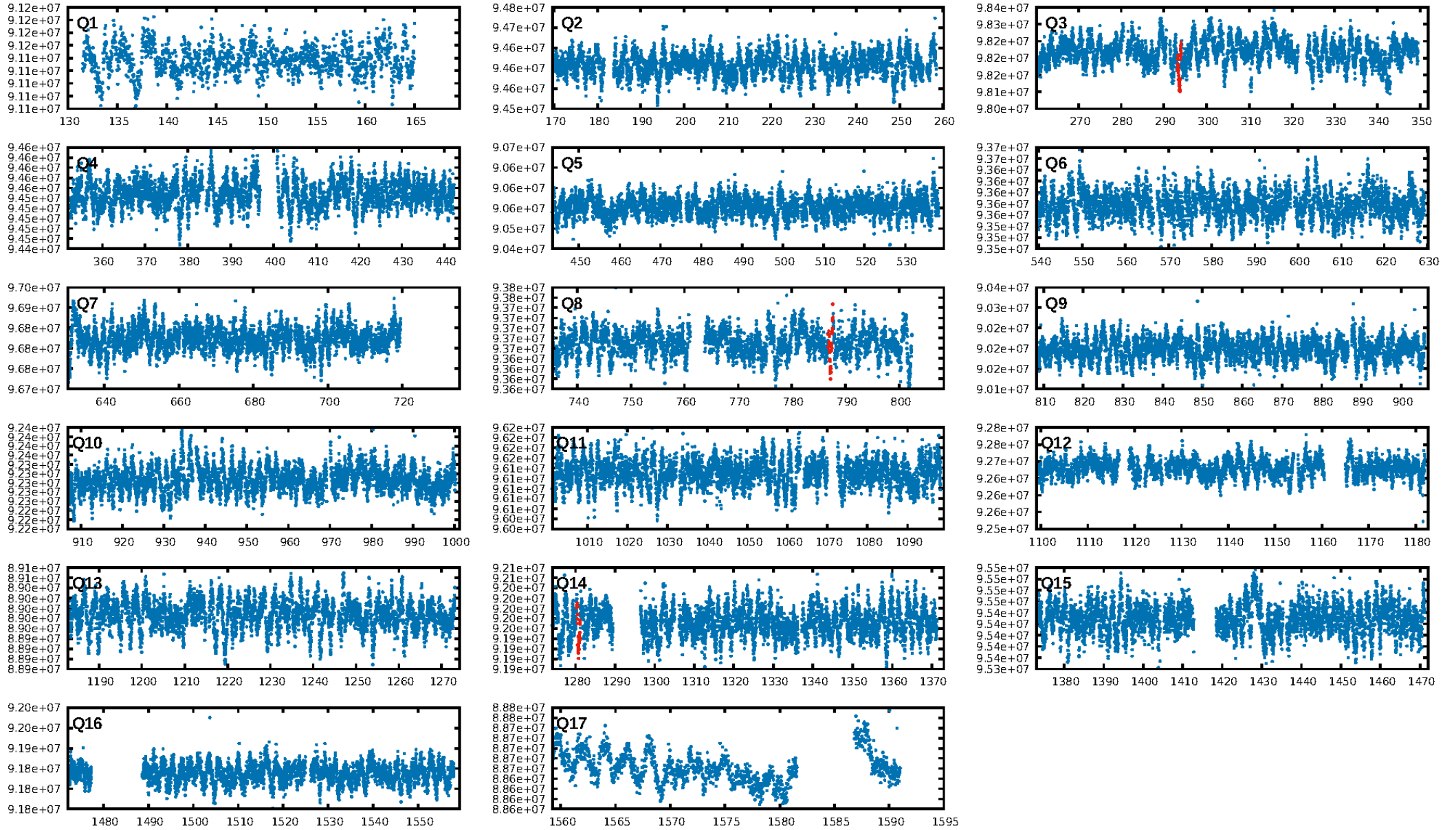
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 36.6%
ModelChiSquareGof-sig: 99.3%
Bootstrap-pfa: 2.61e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -2.404
Centroid-sig: 0.2%
Centroid-so: 0.347 arcsec [0.49 σ]
OotOffset-rm: 0.281 arcsec [0.98 σ]
KicOffset-rm: 0.200 arcsec [0.70 σ]
OotOffset-st: 1/1/1/0 [3]
KicOffset-st: 1/1/1/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

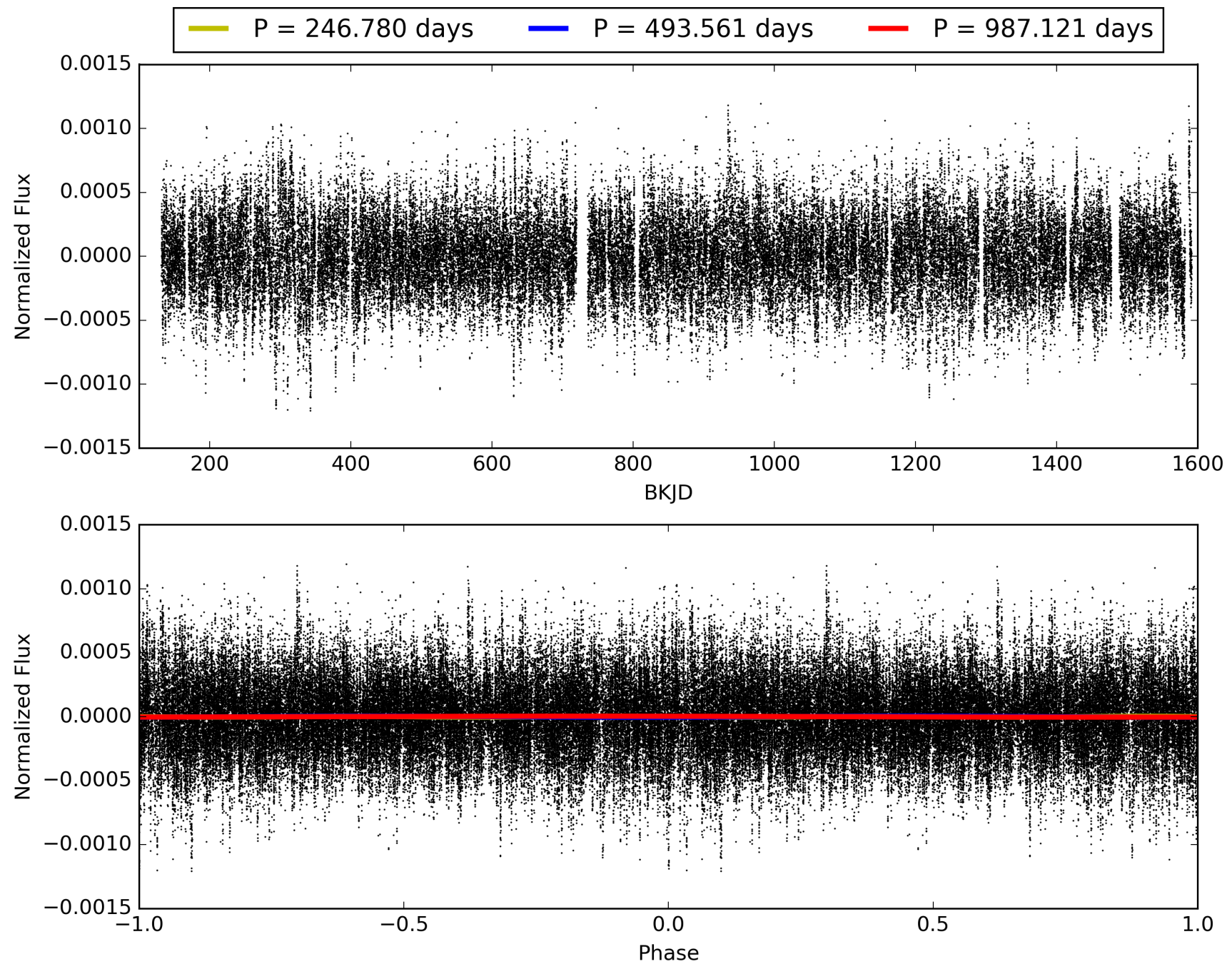
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:50:04 Z

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

TCE 008112079-01, PDC Light Curves

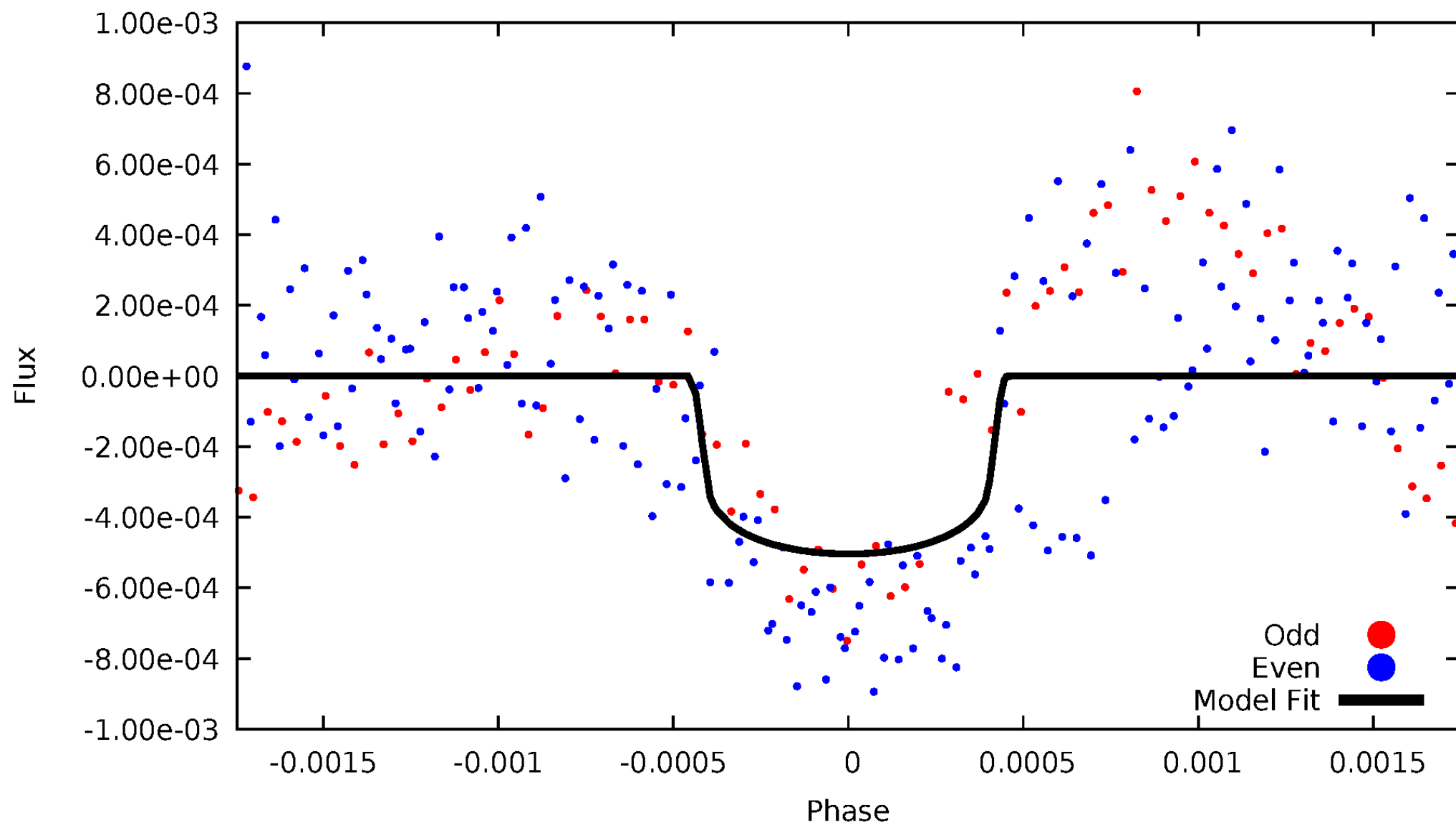


TCE 008112079-01



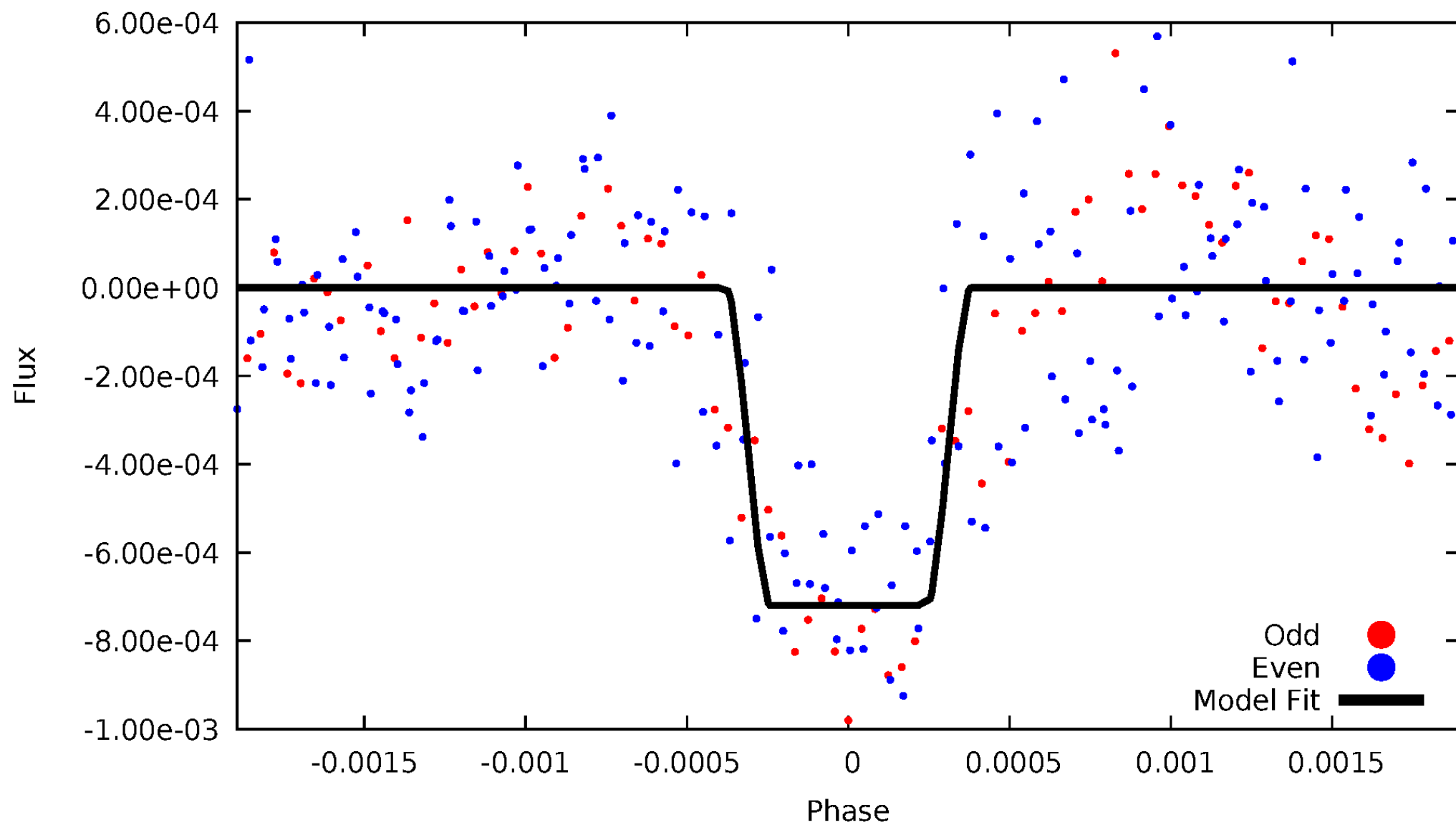
DV Odd/Even

TCE 008112079-01

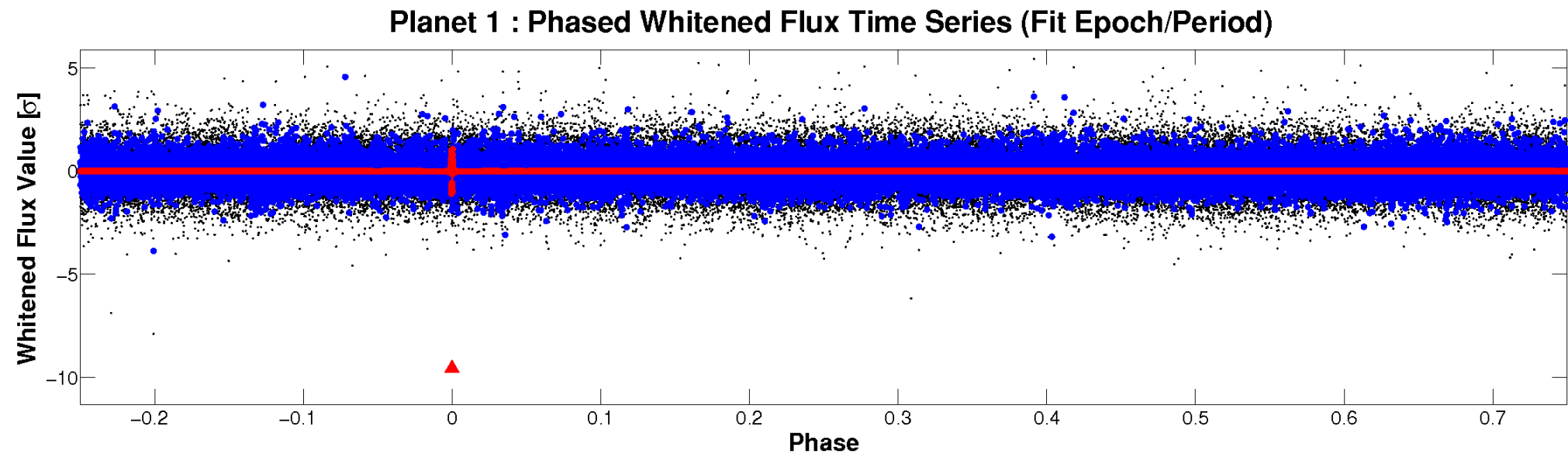
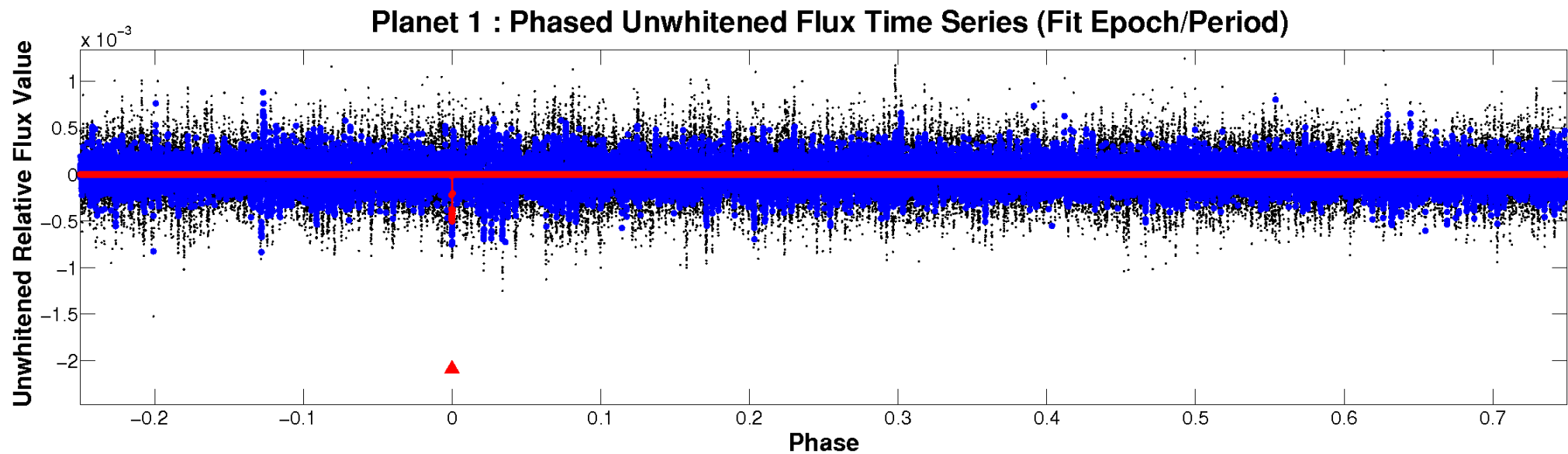


ALT Odd/Even

TCE 008112079-01

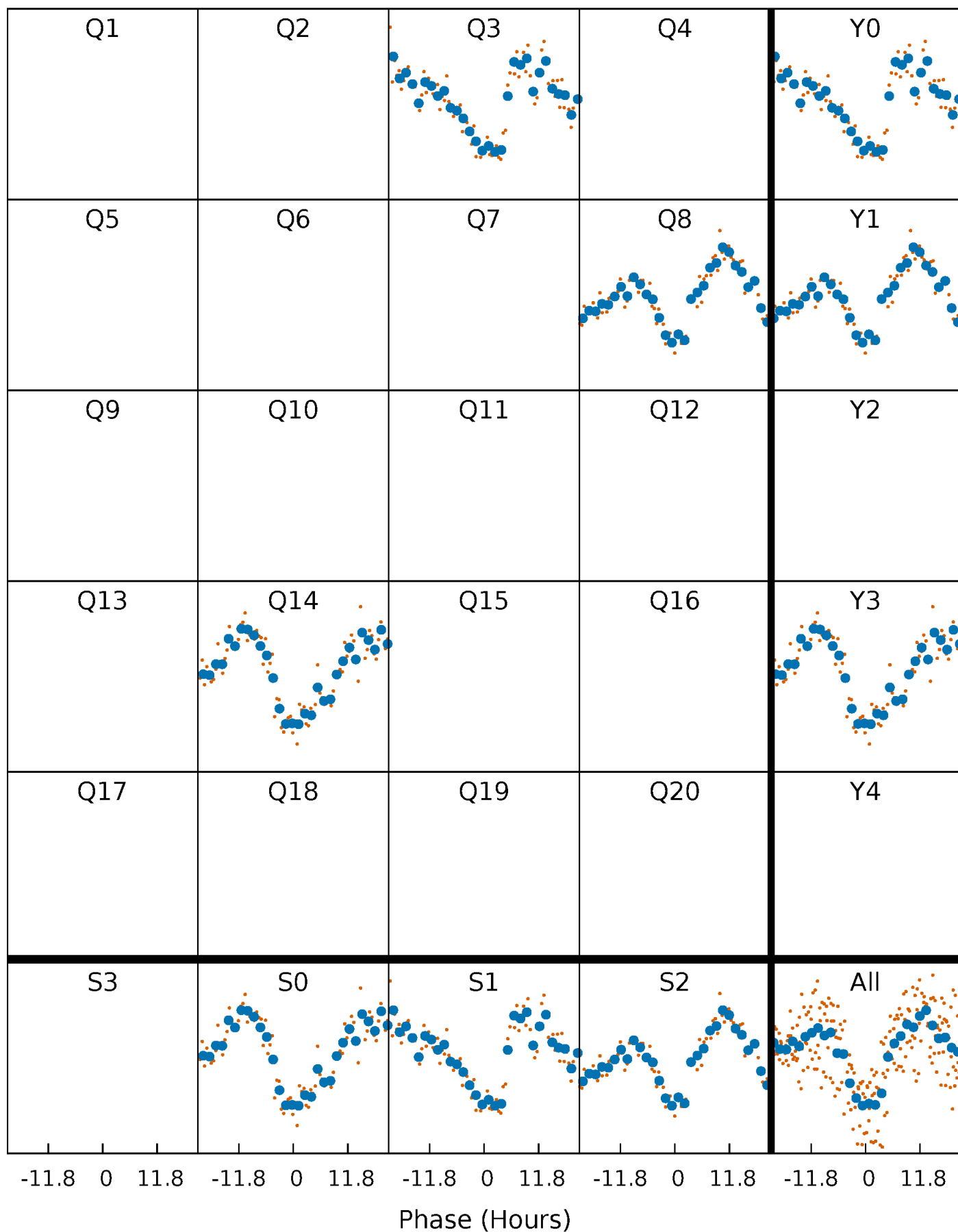


Non-Whitened Vs. Whitened Light Curve



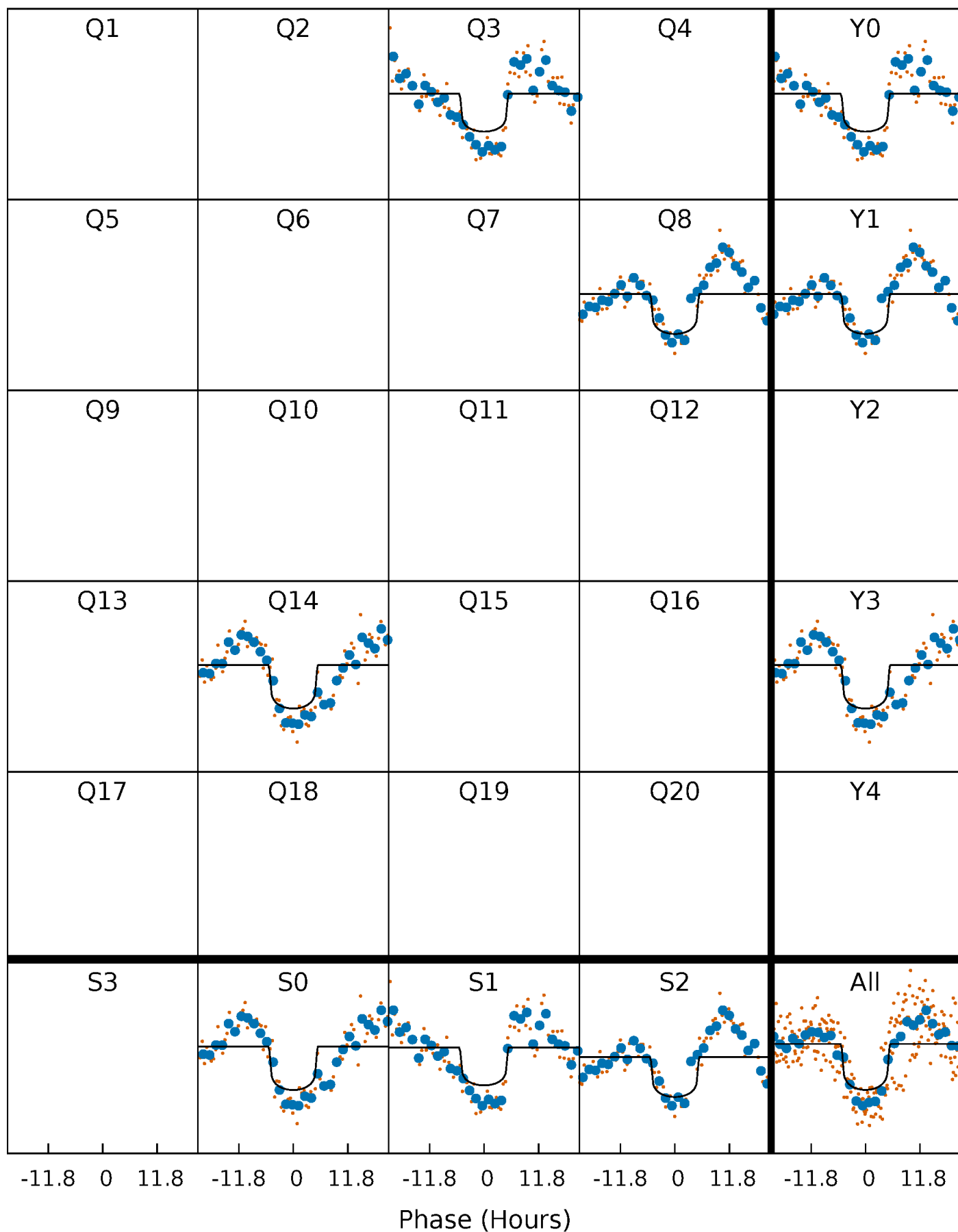
PDC Quarter-Phased Transit Curves

TCE 008112079-01 P=493.560737 Days $T_0=293.623387$ (BKJD)



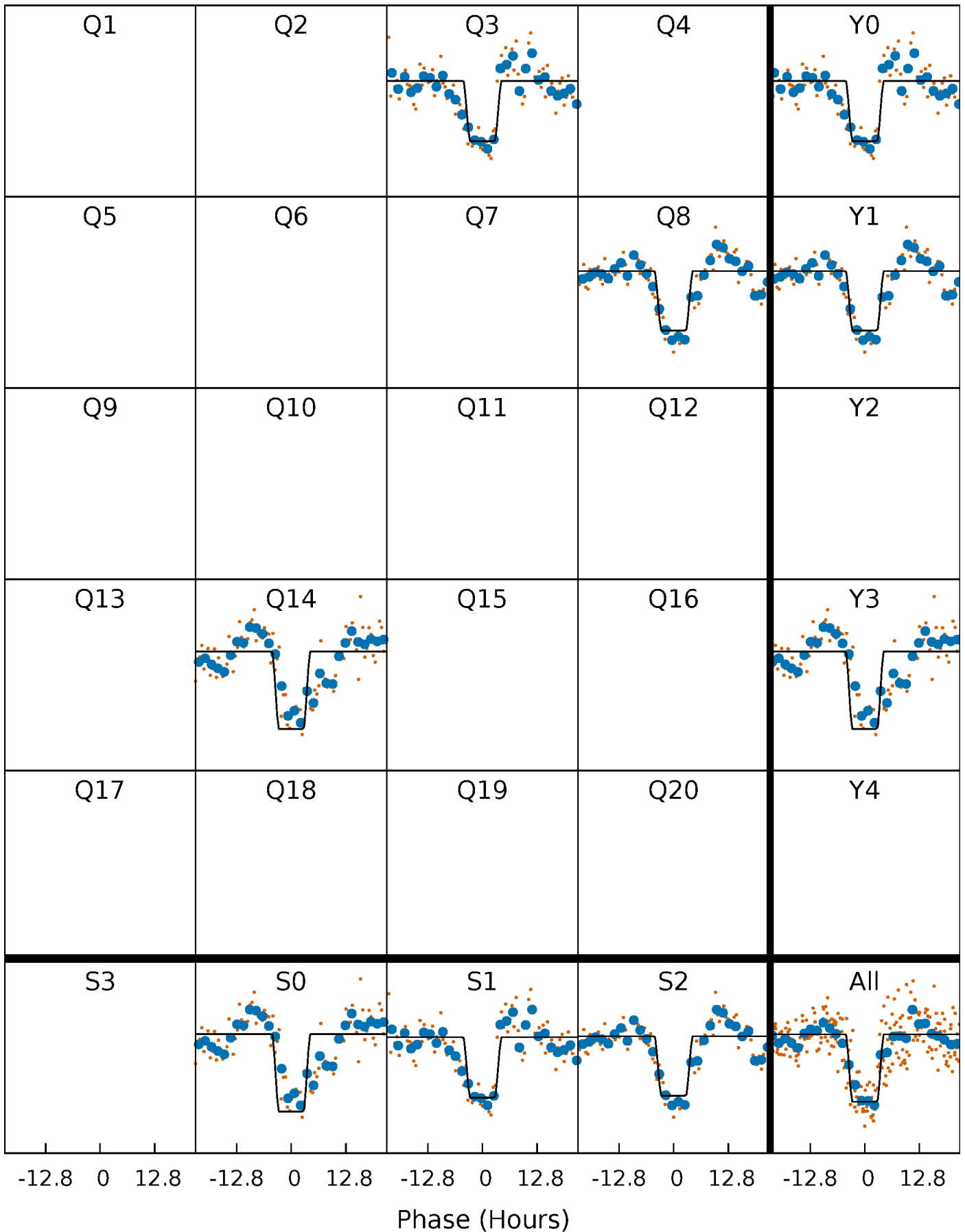
DV Quarter-Phased Transit Curves

TCE 008112079-01 P=493.560737 Days $T_0=293.623387$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

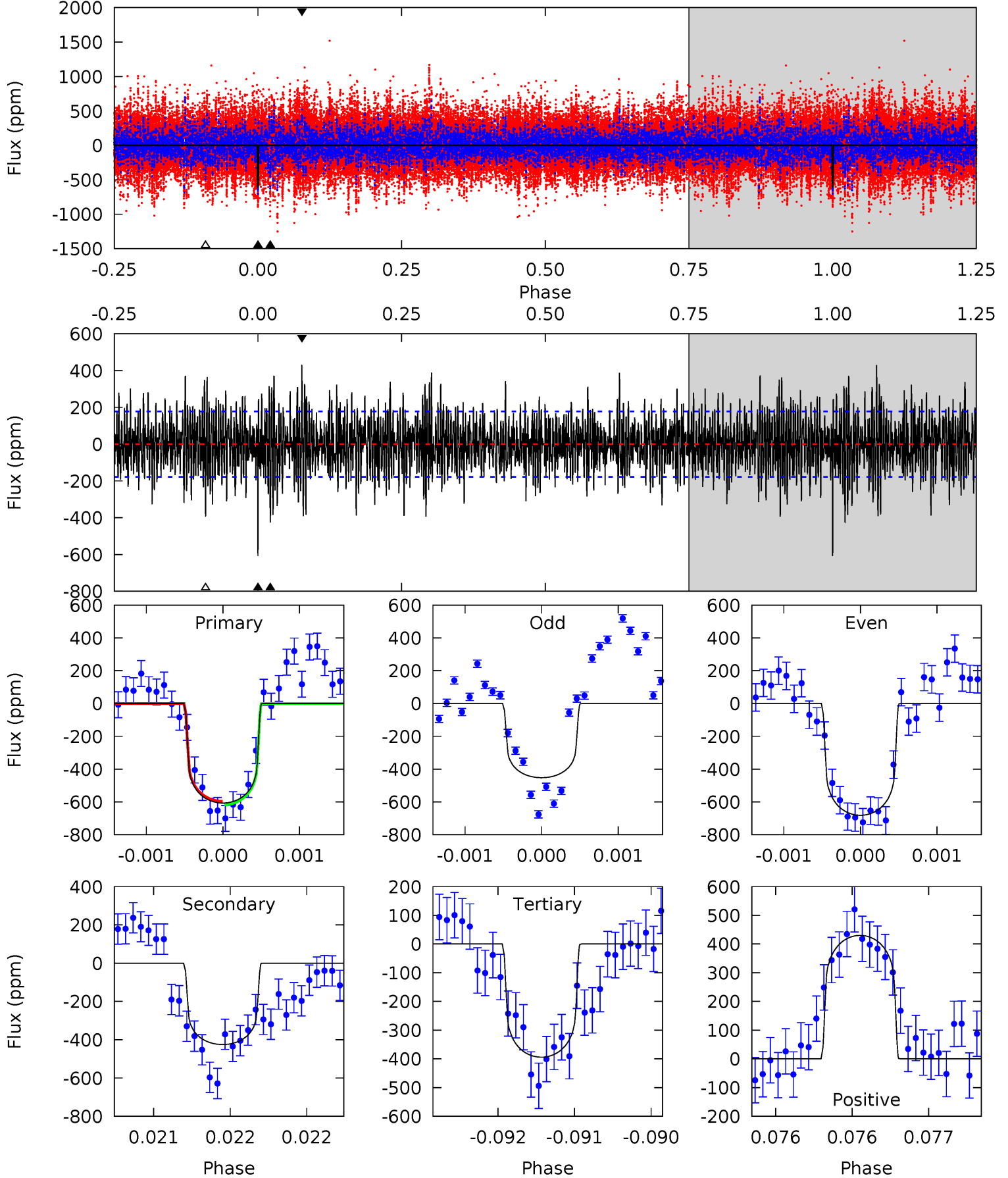
TCE 008112079-01 P=493.490907 Days $T_0=293.691620$ (BKJD)



DV Model-Shift Uniqueness Test

008112079-01, P = 493.560737 Days, E = 293.623387 Days

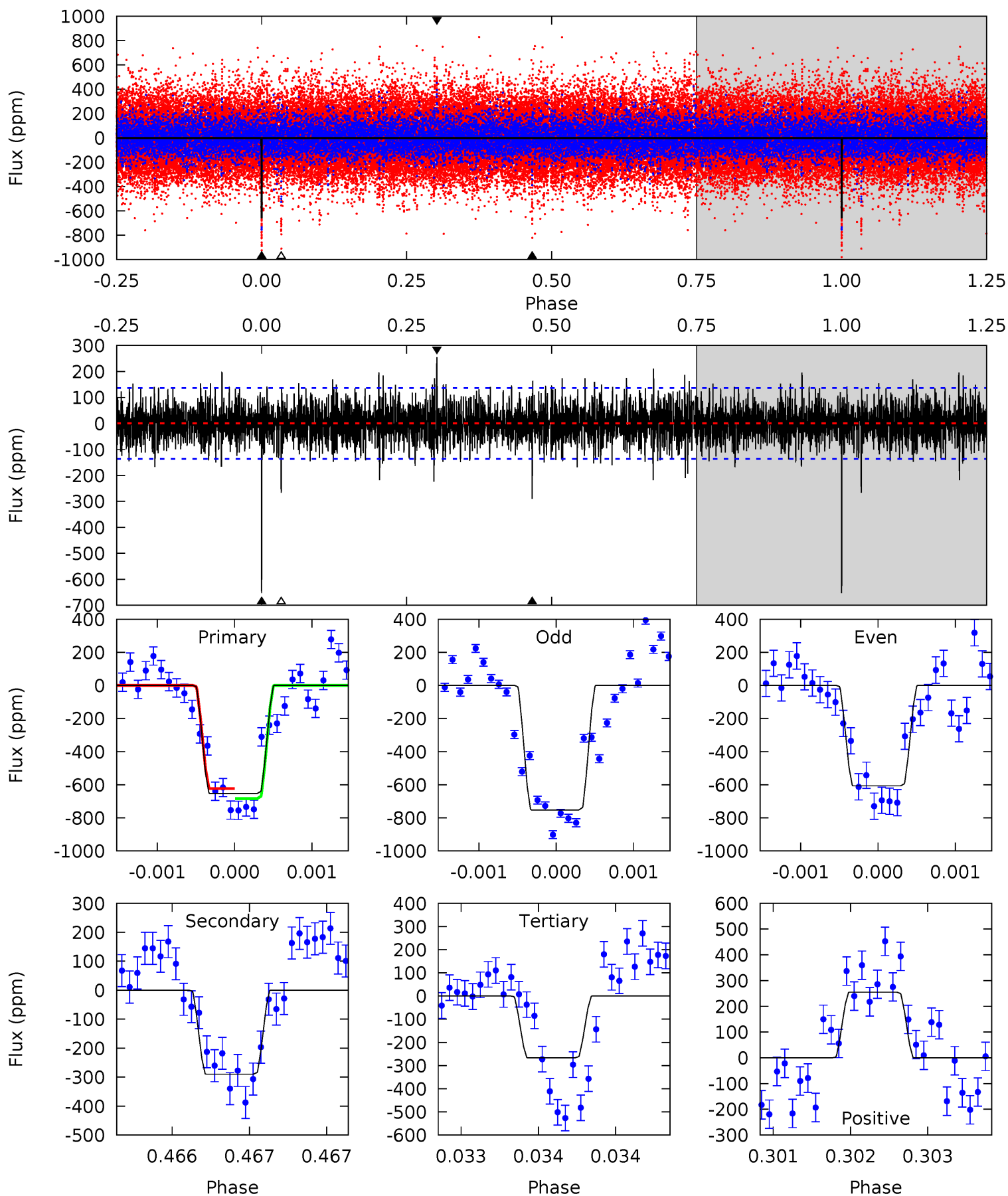
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.6	13.0	12.1	13.2	5.47	3.32	3.76	6.53	5.42	0.95	-0.15	3.33	0.96	0.41	0.33



Alt Model-Shift Uniqueness Test

008112079-01, P = 493.490907 Days, E = 293.691620 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.4	11.7	10.8	10.3	5.50	3.37	2.33	15.6	16.1	0.93	1.40	2.75	0.92	0.28	1.23



Stellar Parameters For KIC 008112079

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6561^{+149}_{-198}	$4.377^{+0.062}_{-0.200}$	$-0.140^{+0.250}_{-0.300}$	$1.171^{+0.355}_{-0.152}$	$1.194^{+0.164}_{-0.164}$	$1.046^{+0.291}_{-0.549}$
	+2%/-3%	+1%/-5%	+179%/-214%	+30%/-13%	+14%/-14%	+28%/-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 008112079-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-425 ± 33	$2.84^{+0.98}_{-0.88}$	390^{+28}_{-18}	6445^{+1430}_{-846}	48084^{+51216}_{-21487}
Alt.	-290 ± 25	$3.55^{+1.11}_{-0.90}$	393^{+27}_{-18}	5263^{+755}_{-484}	20646^{+17446}_{-8285}

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 $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

DV Centroid Data

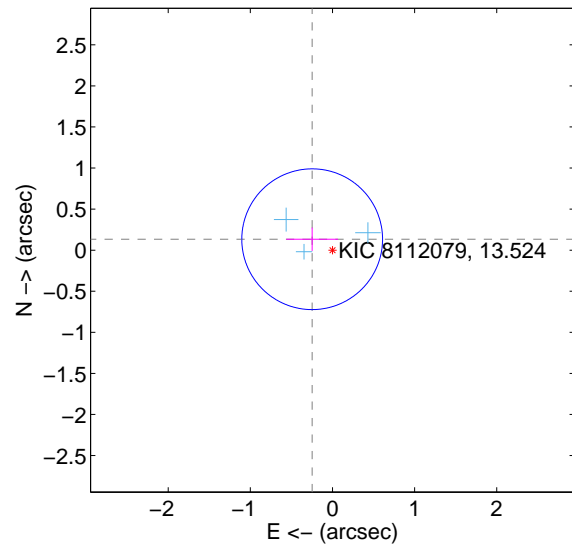
Supplemental centroid analysis for 008112079-01. Kepler magnitude: 13.52. Transit SNR 6.77

There are 3 quarters with good PRF difference image offsets

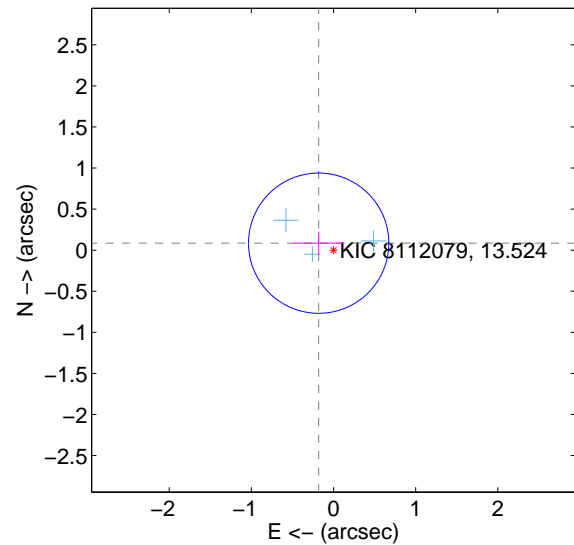
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.281 ± 0.286	0.98	0.247 ± 0.315	0.133 ± 0.142
PRF-fit source offset from KIC position	0.200 ± 0.285	0.70	0.181 ± 0.308	0.085 ± 0.140
photometric centroid source offset	0.35 ± 0.70	0.49	-0.29 ± 0.49	0.19 ± 1.04

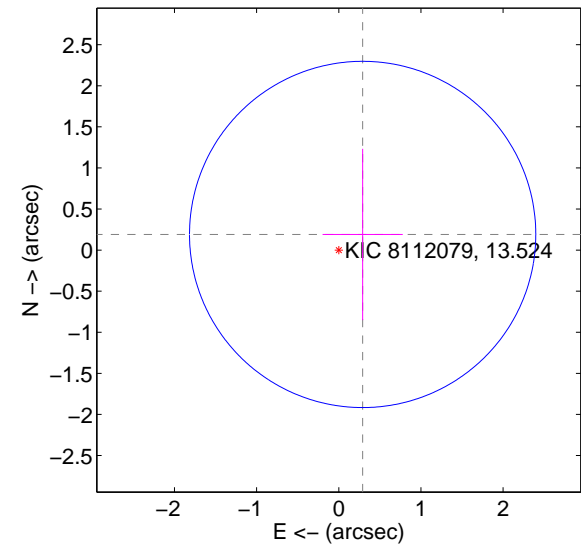
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



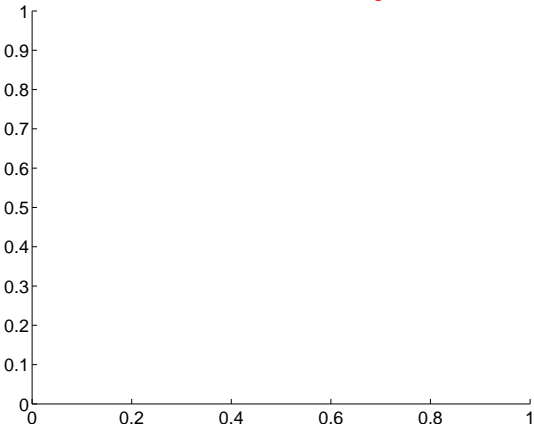
offset from photometric centroids



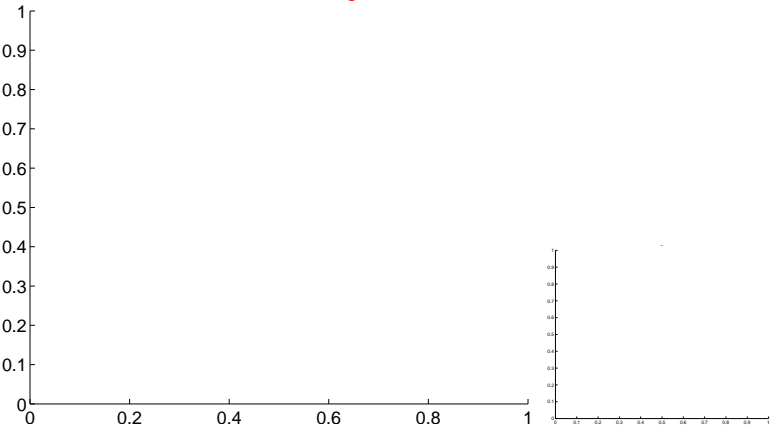
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

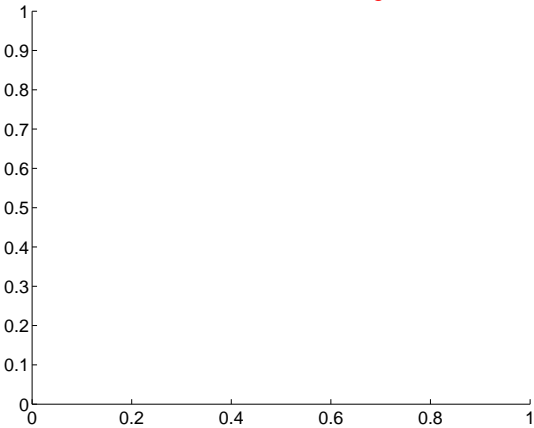
Q1 no difference image



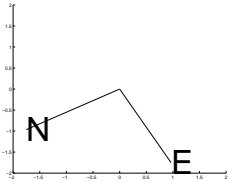
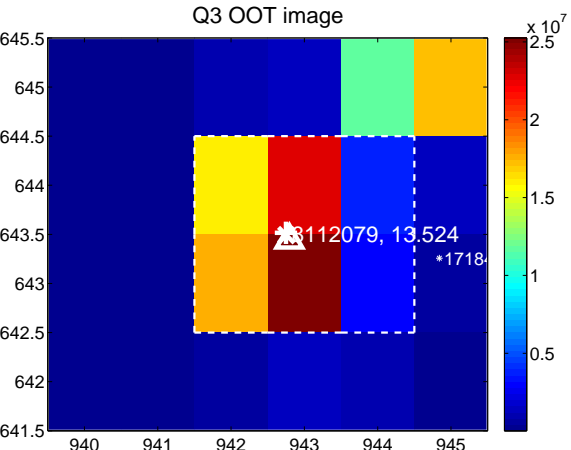
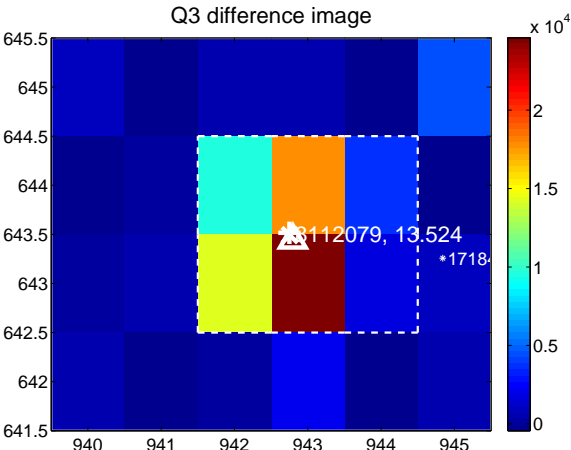
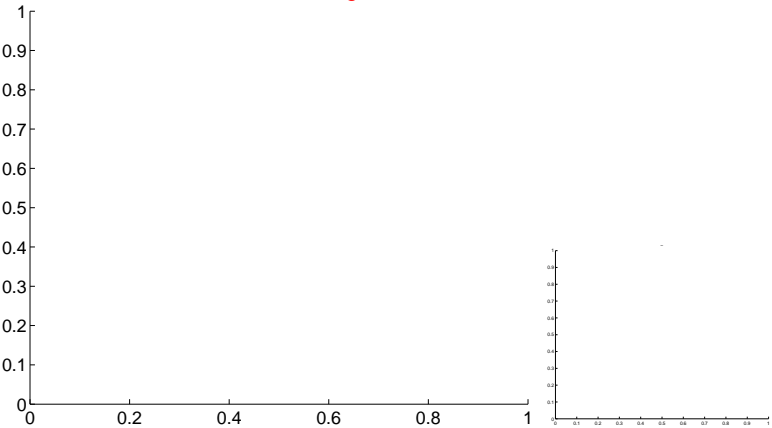
Q1 no OOT image



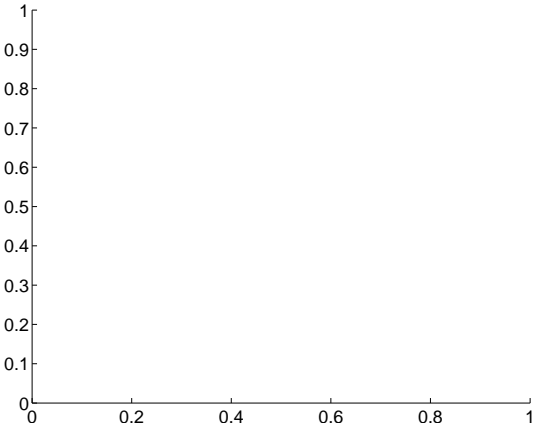
Q2 no difference image



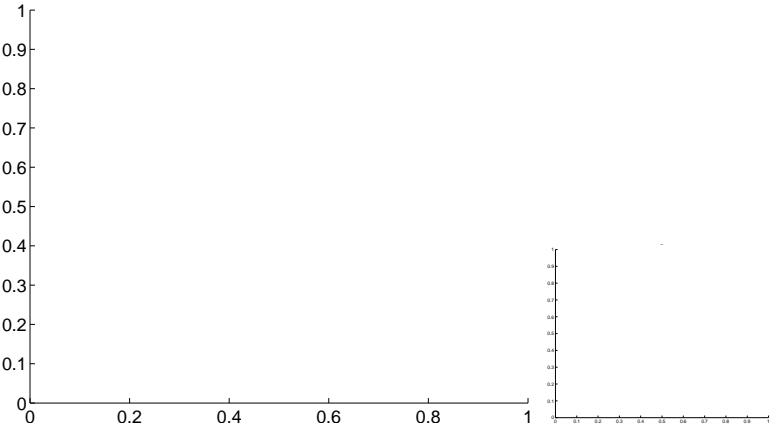
Q2 no OOT image



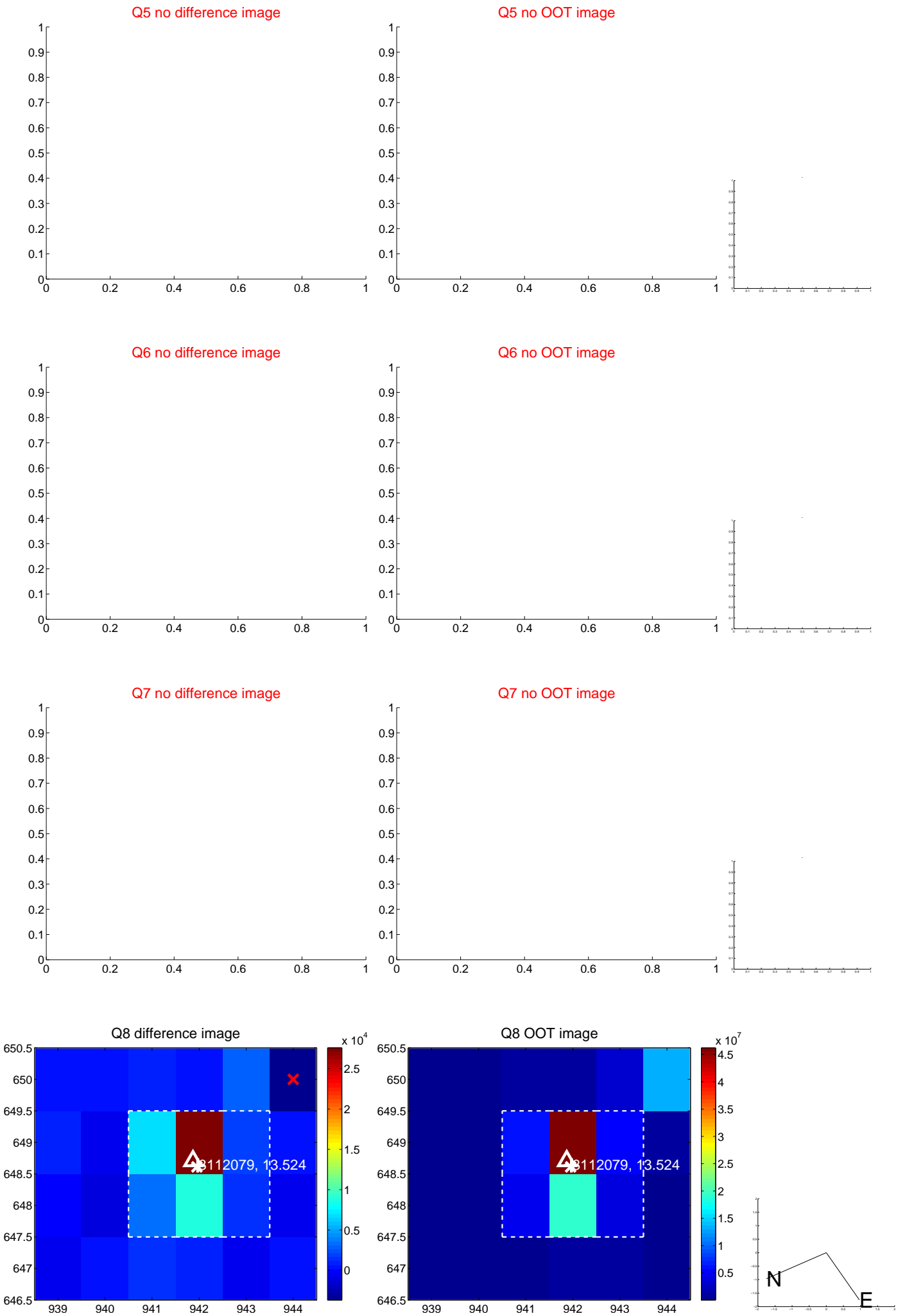
Q4 no difference image



Q4 no OOT image



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

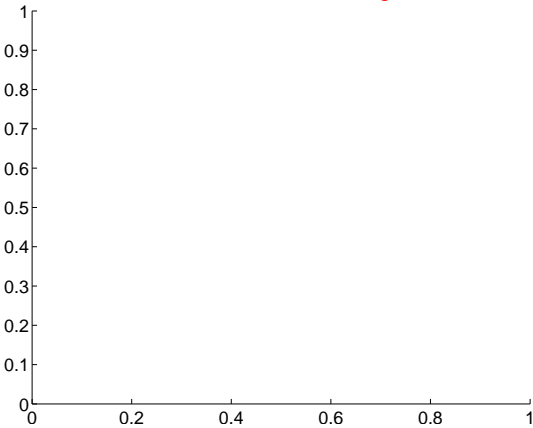


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

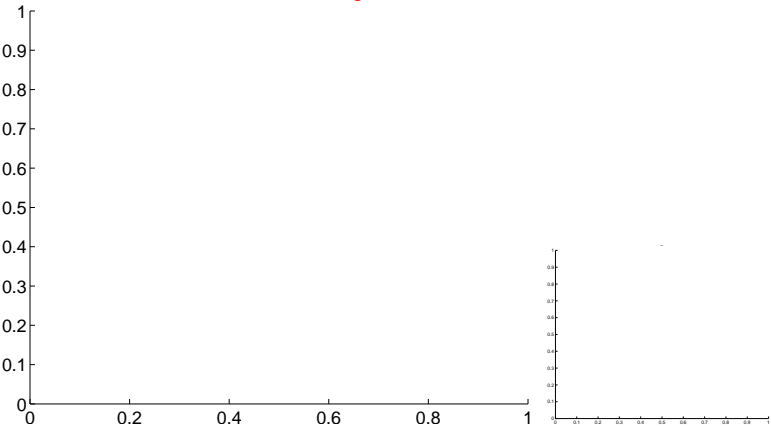


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

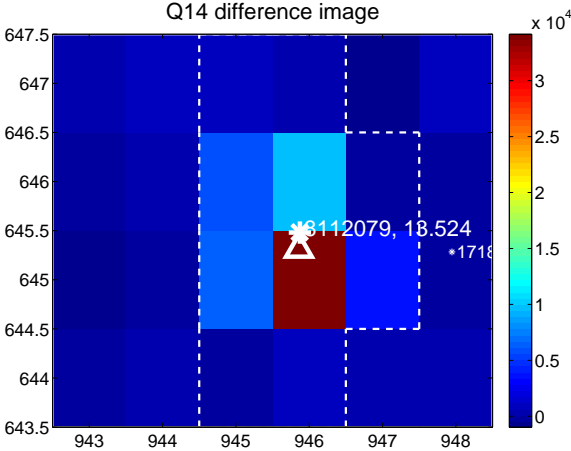
Q13 no difference image



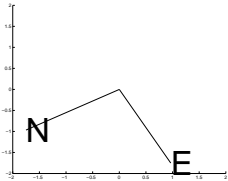
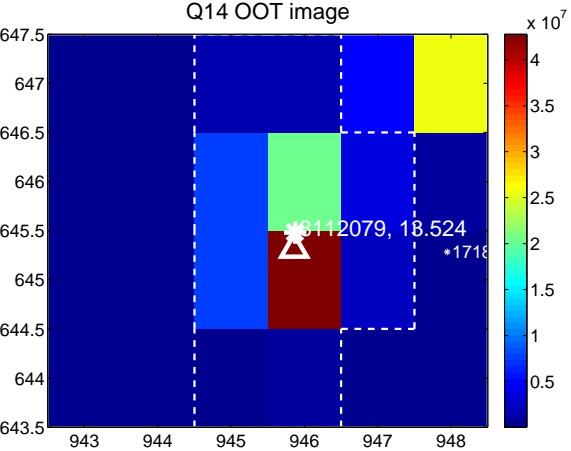
Q13 no OOT image



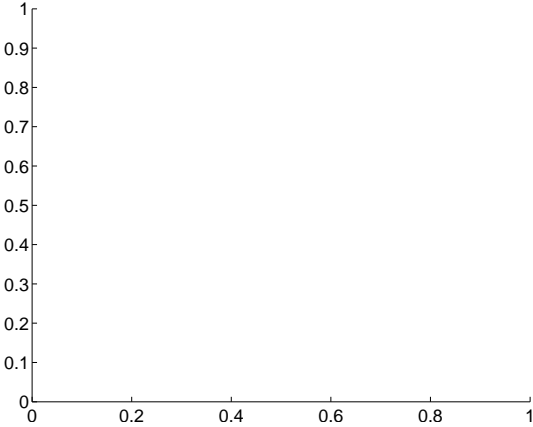
Q14 difference image



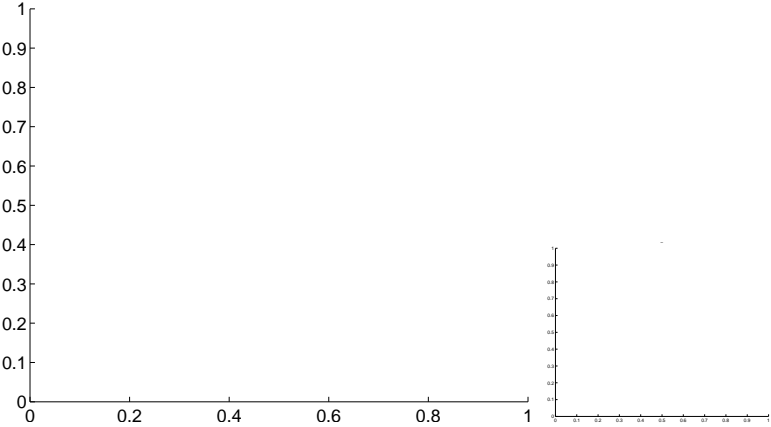
Q14 OOT image



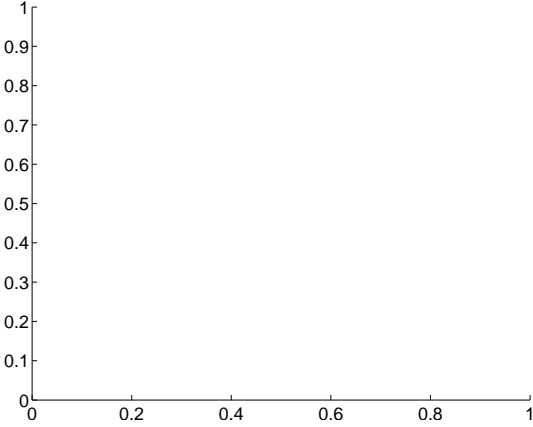
Q15 no difference image



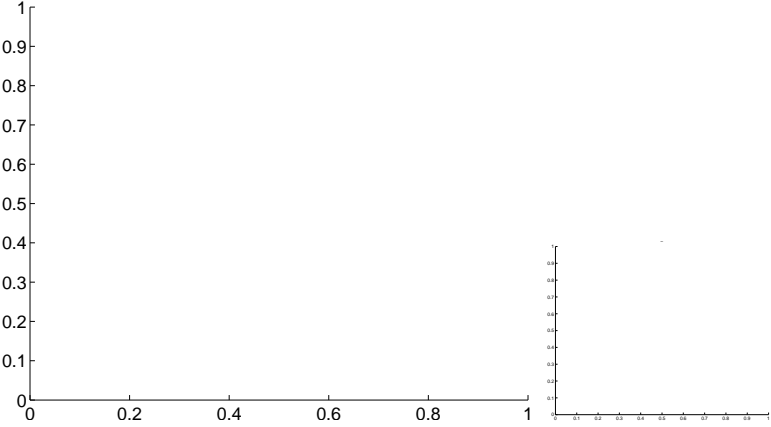
Q15 no OOT image



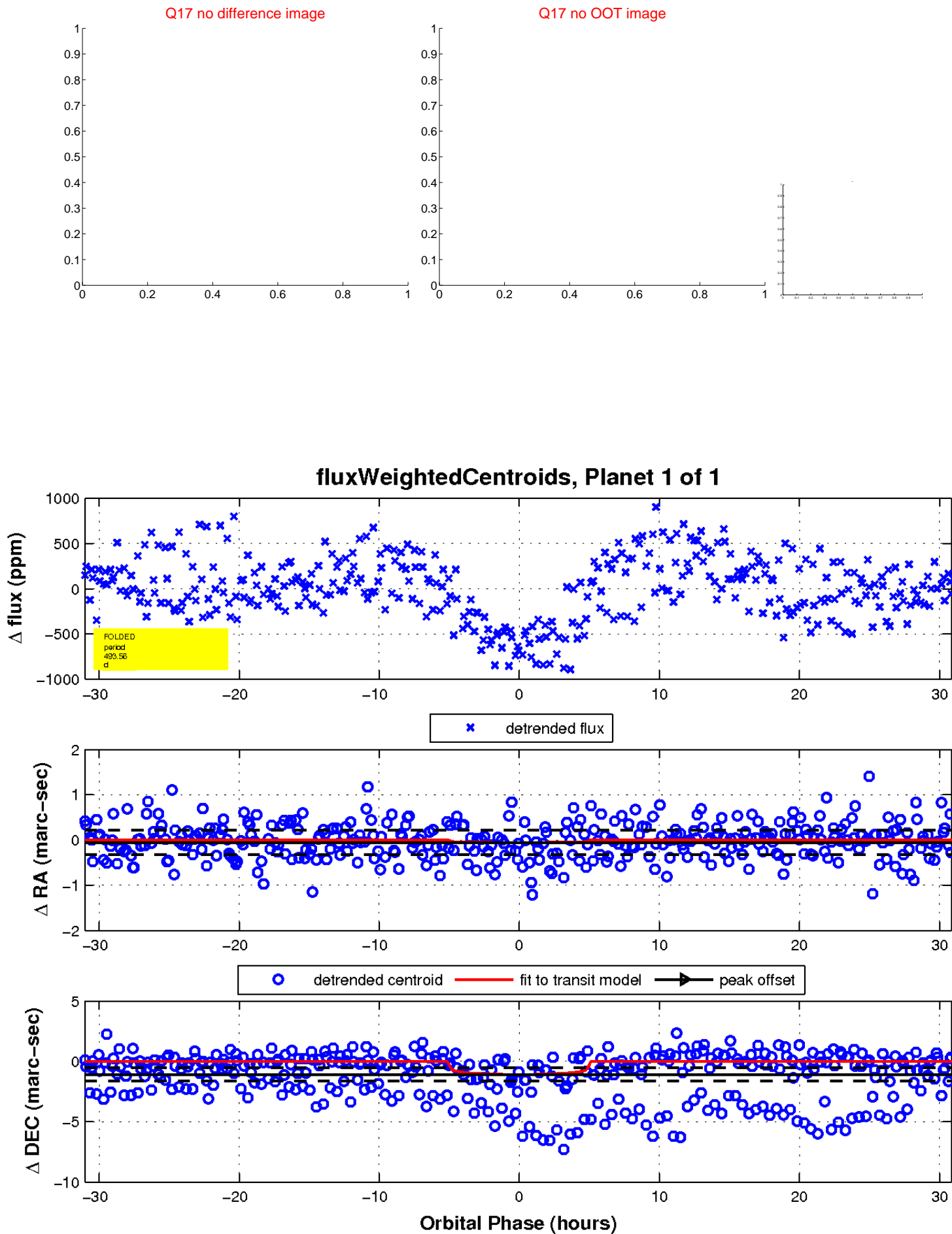
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

