

KIC 008808227

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})
008808227-01	OBS	No	395.679776	518.342928	955.3	18.868	11.4	10.8	0.97	5836	2.99	0.83

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008808227-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—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.

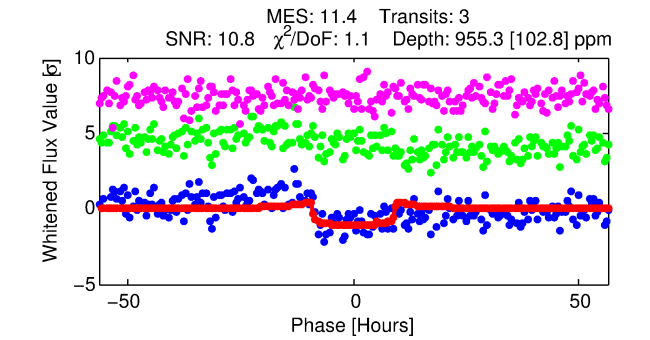
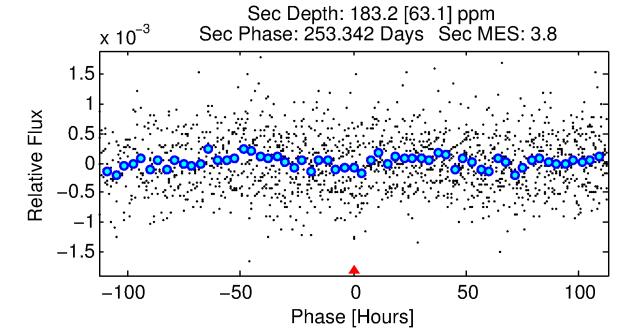
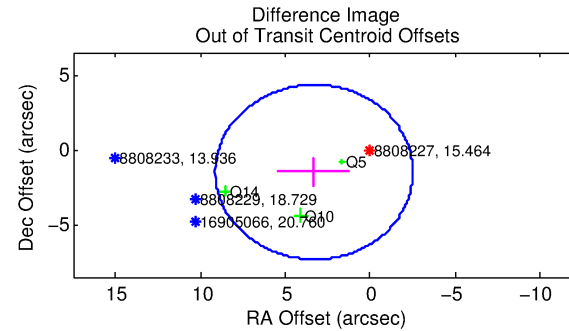
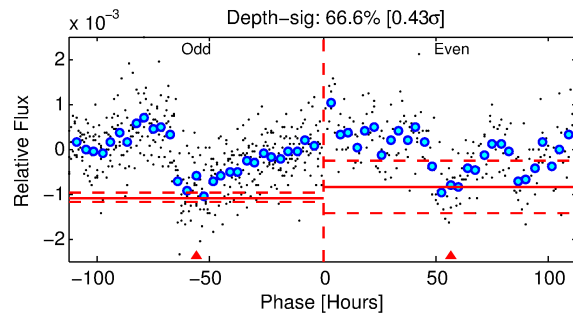
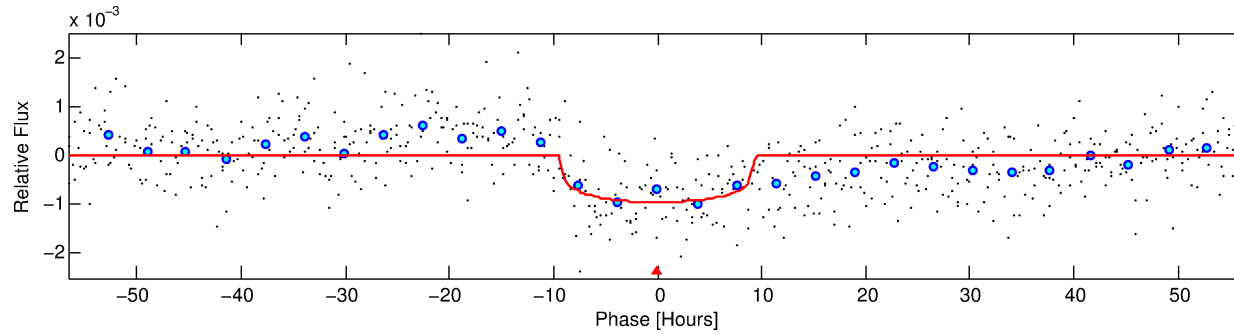
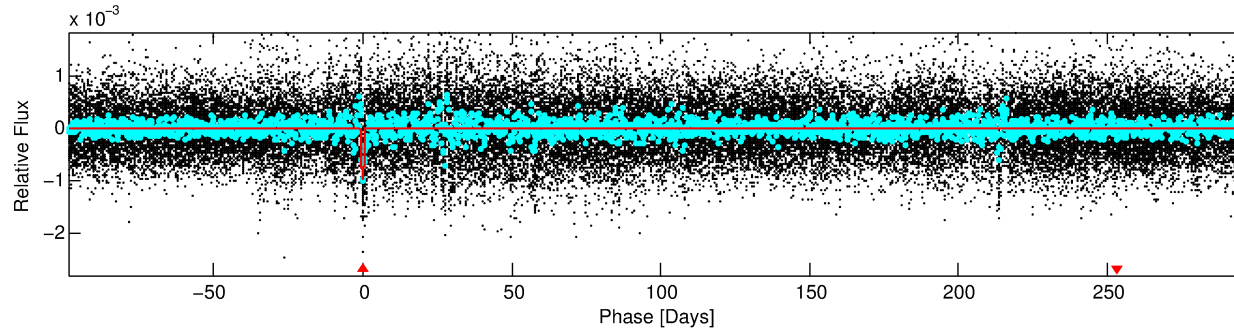
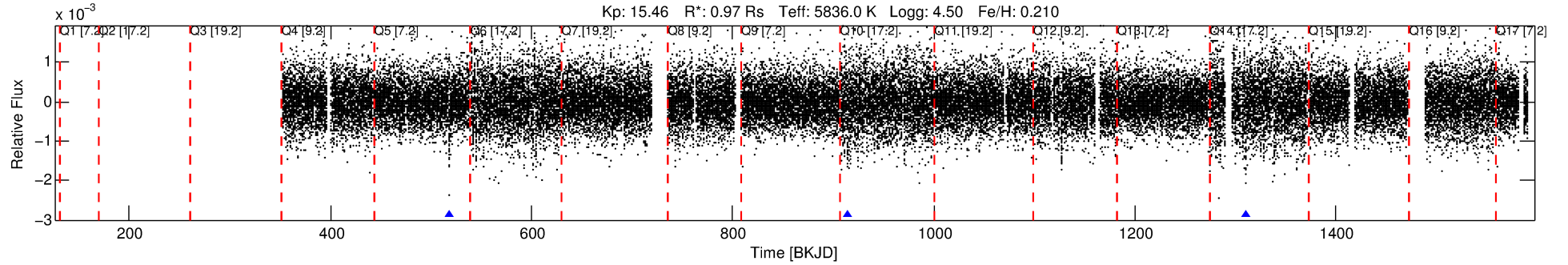
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008808227-01

No Significant Match Found

DV One-Page Summary

KIC: 8808227 Candidate: 1 of 1 Period: 395.680 d



DV Fit Results:

Period = 395.67978 [0.01368] d
Epoch = 518.3429 [0.0161] BKJD
Rp/R* = 0.0282 [0.0136]
a/R* = 158.92 [325.20]
b = 0.27 [7.05]
Seff = 0.83 [0.32]
Teq = 244 [23] K
Rp = 2.99 [1.66] Re
a = 1.0842 [0.2611] AU
Ag = 13282.29 [14365.93] [0.92σ]
Teffp = 4042 [1041] K [3.65σ]

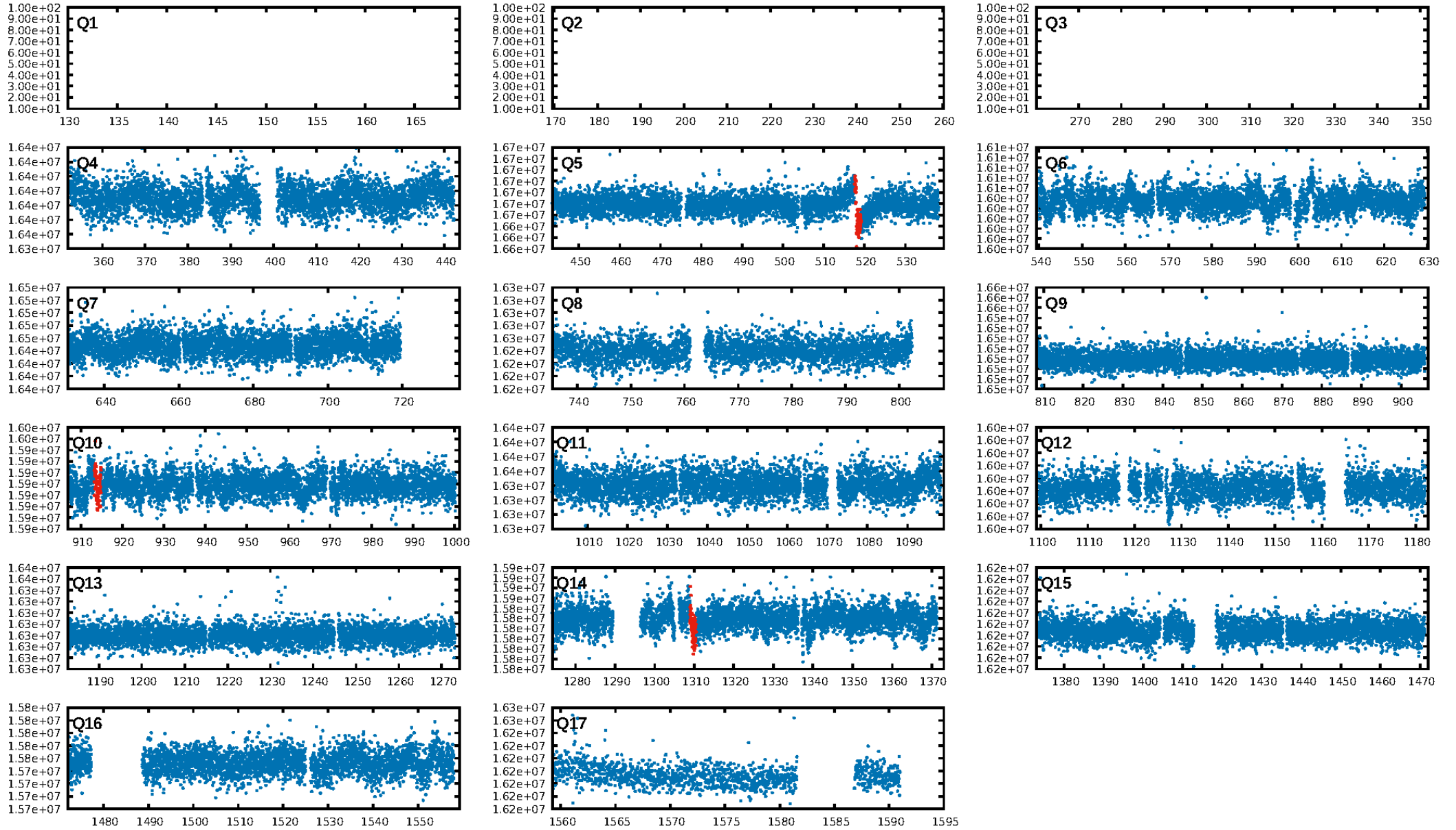
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 10.4%
ModelChiSquareGof-sig: 99.6%
Bootstrap-pfa: 1.56e-18
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -1.531
Centroid-sig: 59.7%
Centroid-so: 1.288 arcsec [1.26σ]
OotOffset-rm: 3.618 arcsec [1.86σ]
OotOffset-st: 2/0/0/1 [3]
KicOffset-rm: 3.613 arcsec [1.73σ]
KicOffset-st: 2/0/0/1 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

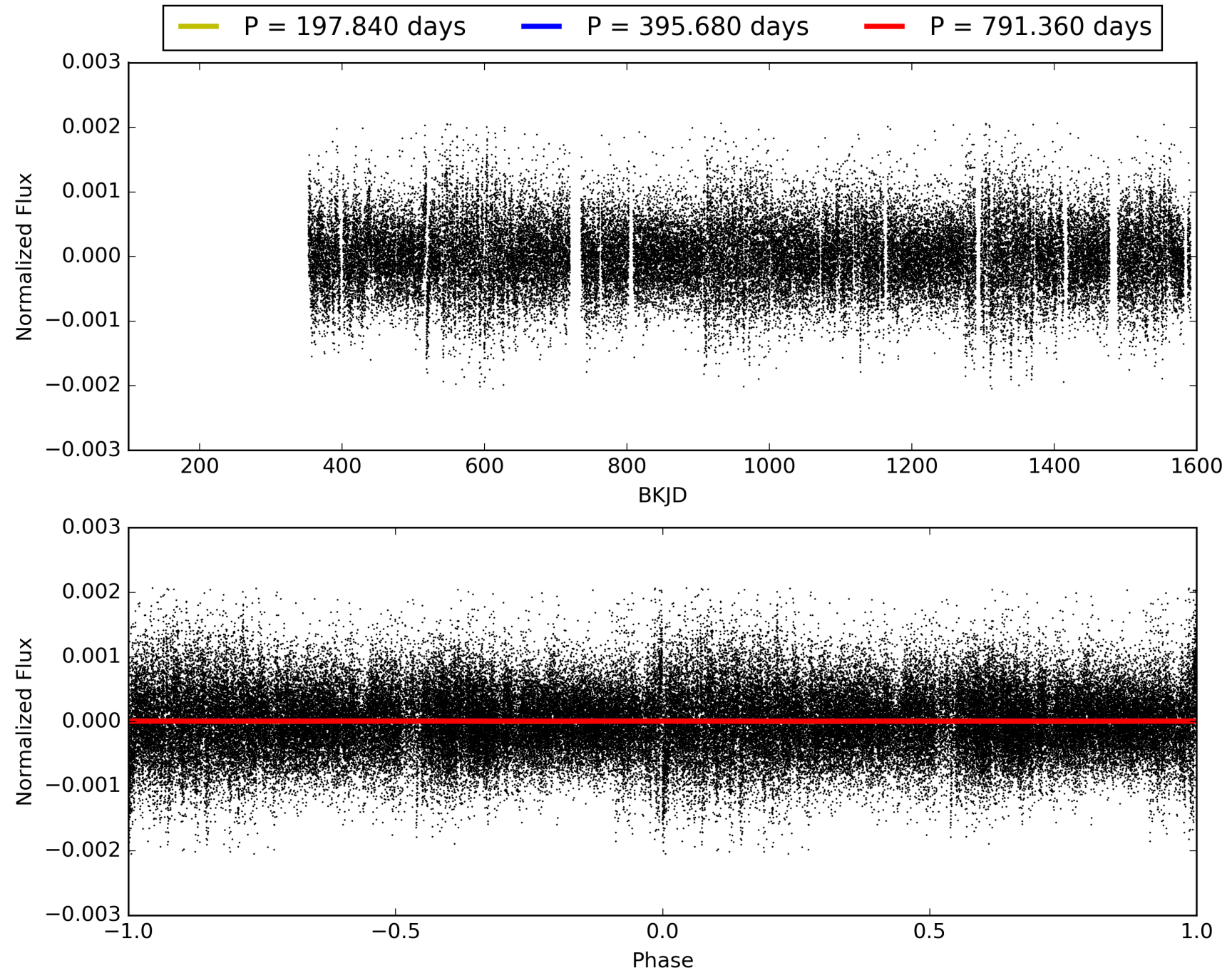
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:53:06 Z

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

TCE 008808227-01, PDC Light Curves

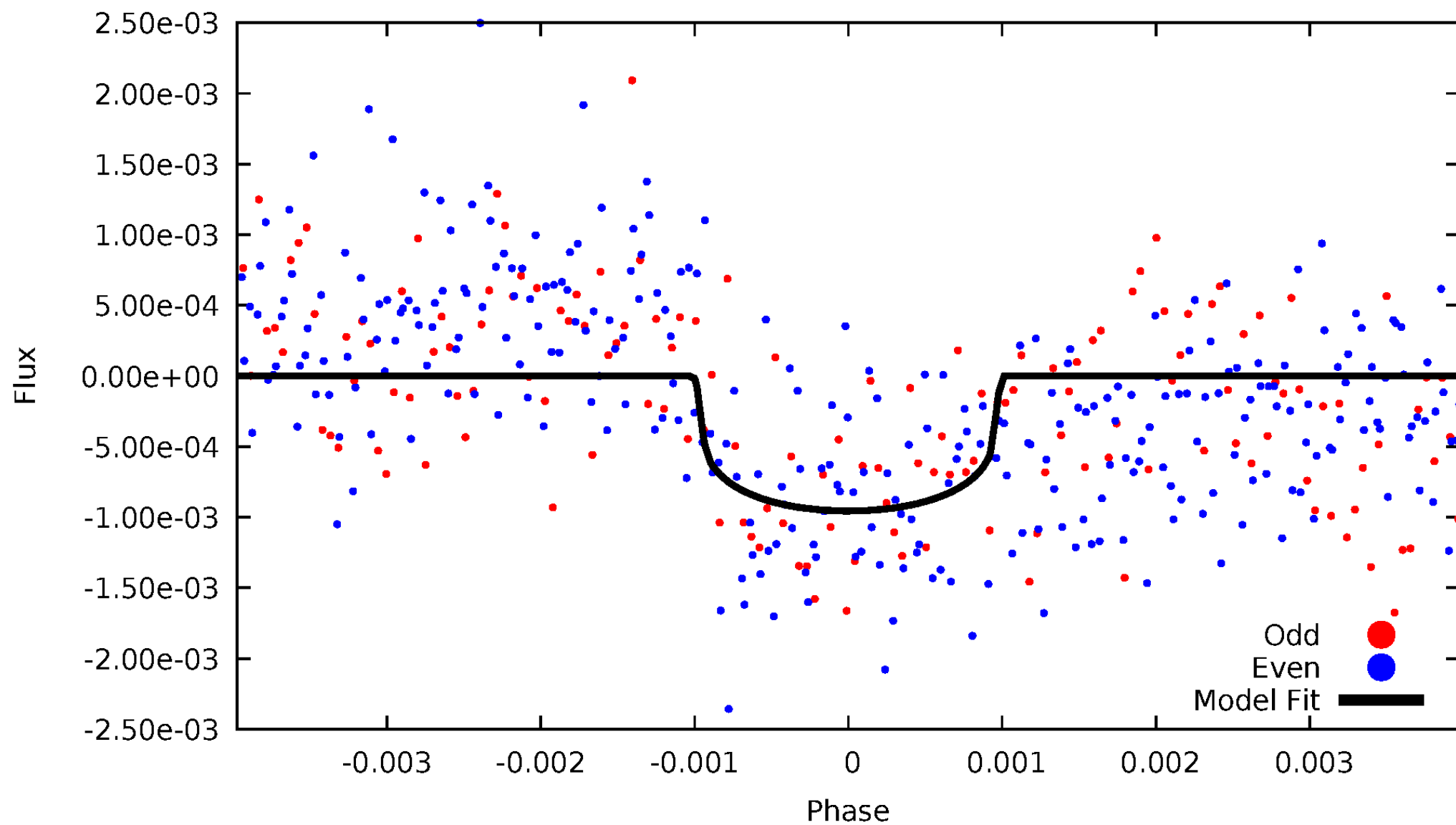


TCE 008808227-01



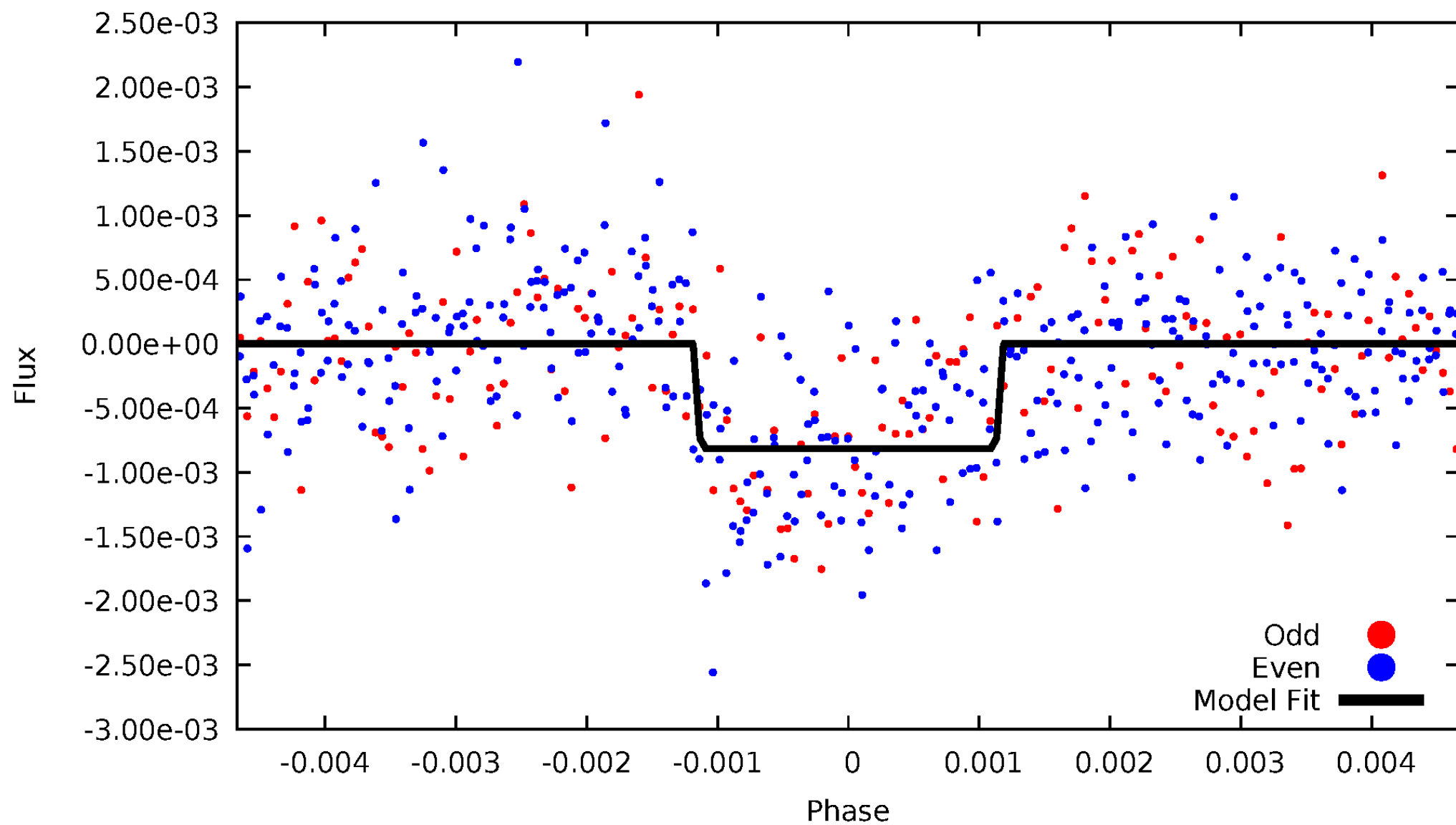
DV Odd/Even

TCE 008808227-01

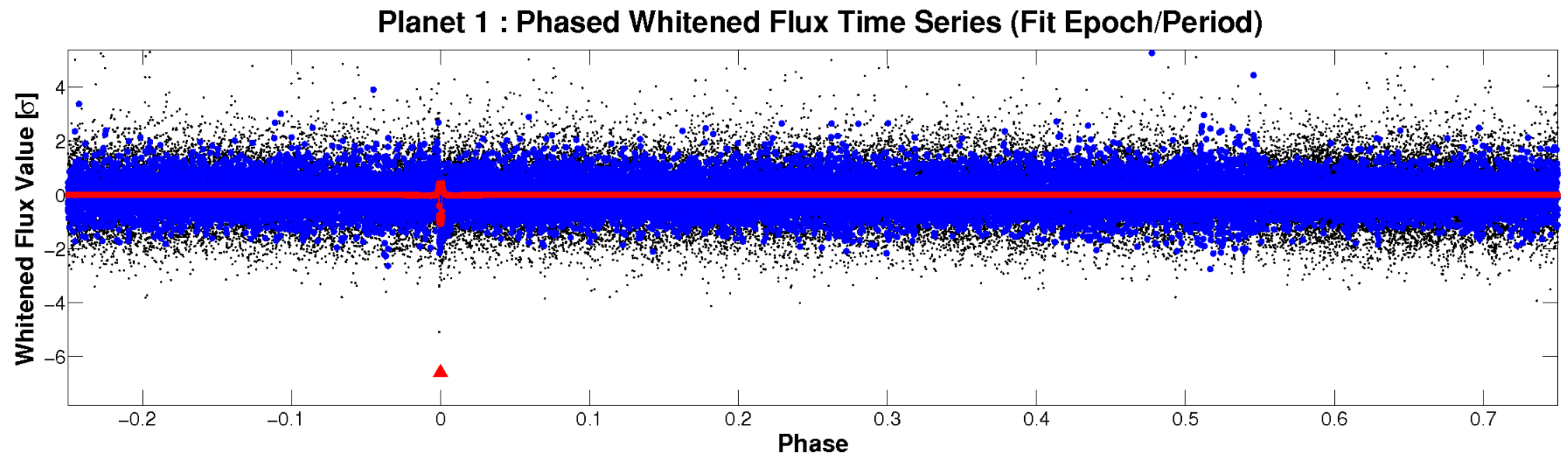
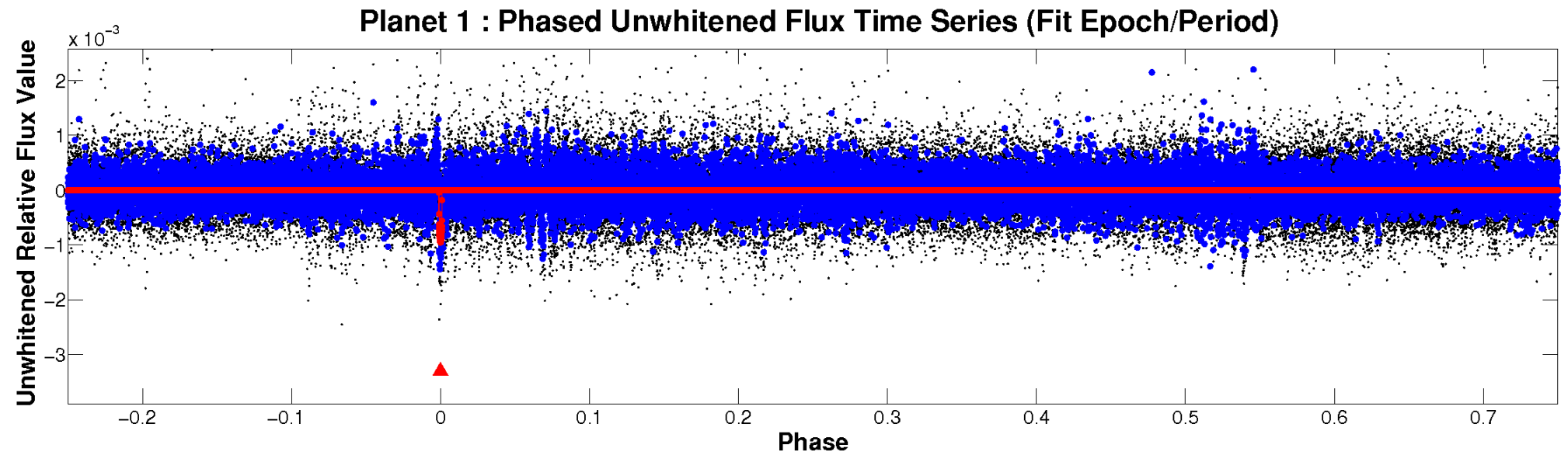


ALT Odd/Even

TCE 008808227-01



Non-Whitened Vs. Whitened Light Curve



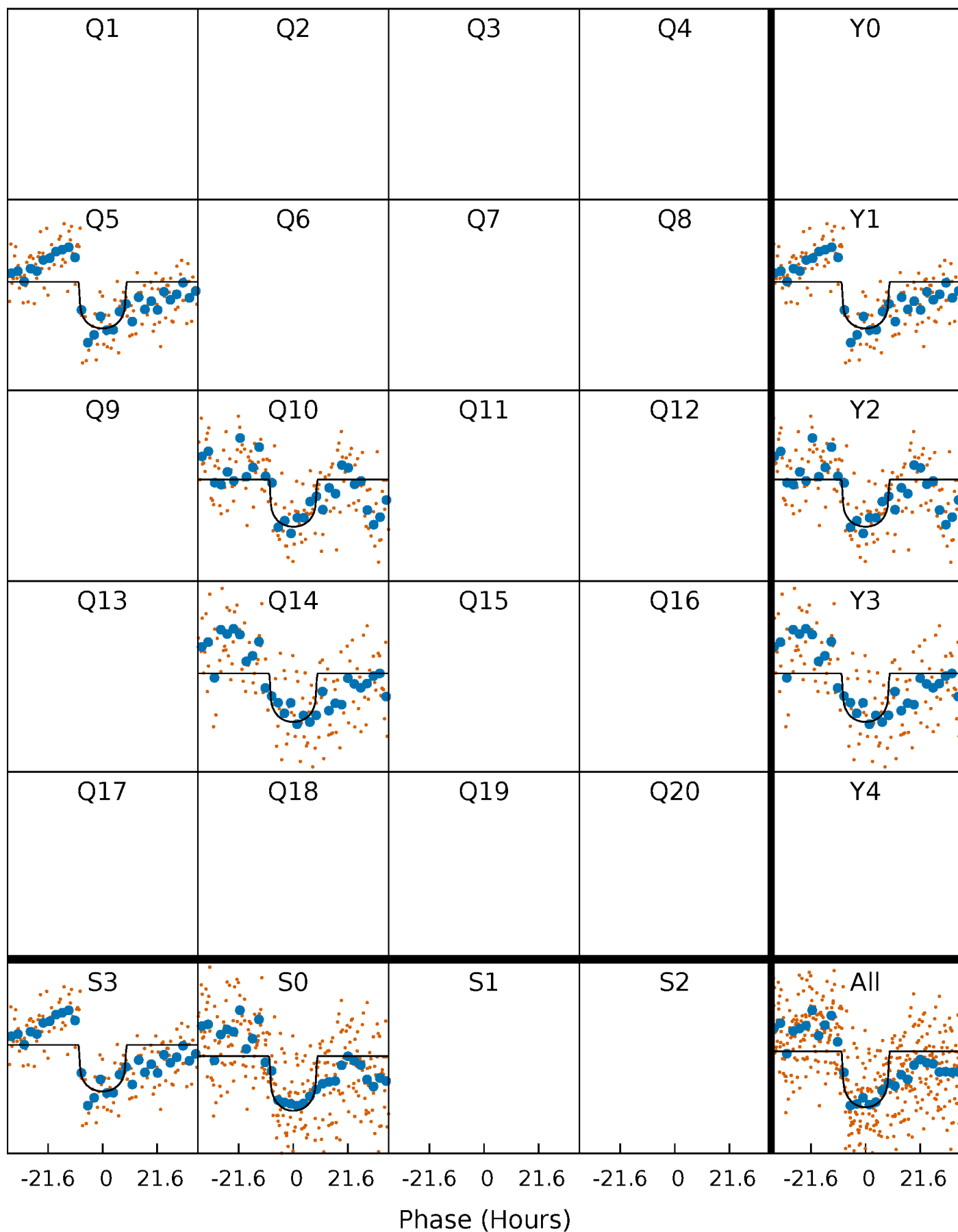
PDC Quarter-Phased Transit Curves

TCE 008808227-01 $P=395.679776$ Days $T_0=518.342928$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 008808227-01 P=395.679776 Days $T_0=518.342928$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

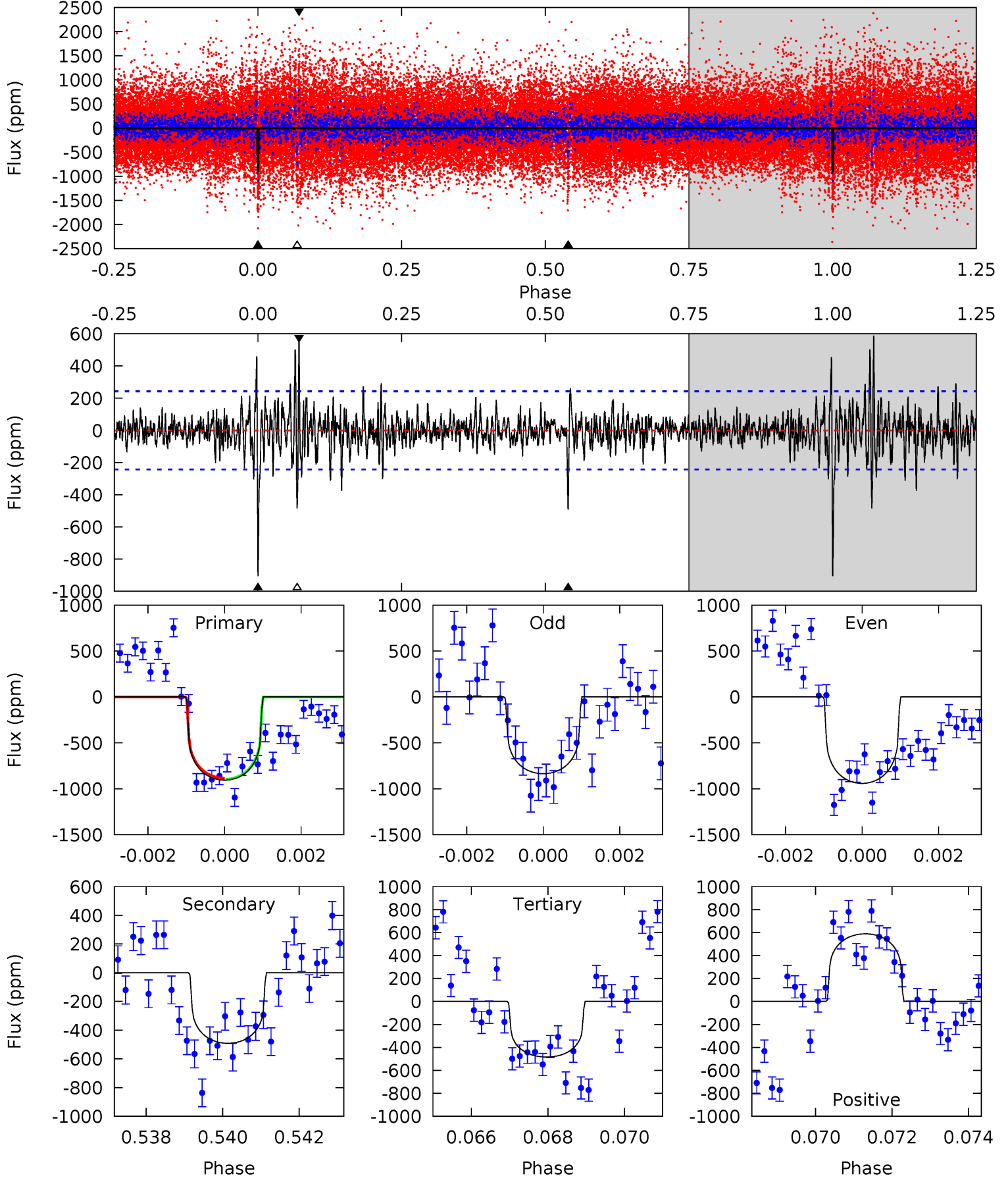
TCE 008808227-01 P=395.655022 Days $T_0=518.444893$ (BKJD)



DV Model-Shift Uniqueness Test

008808227-01, P = 395.679776 Days, E = 122.663152 Days

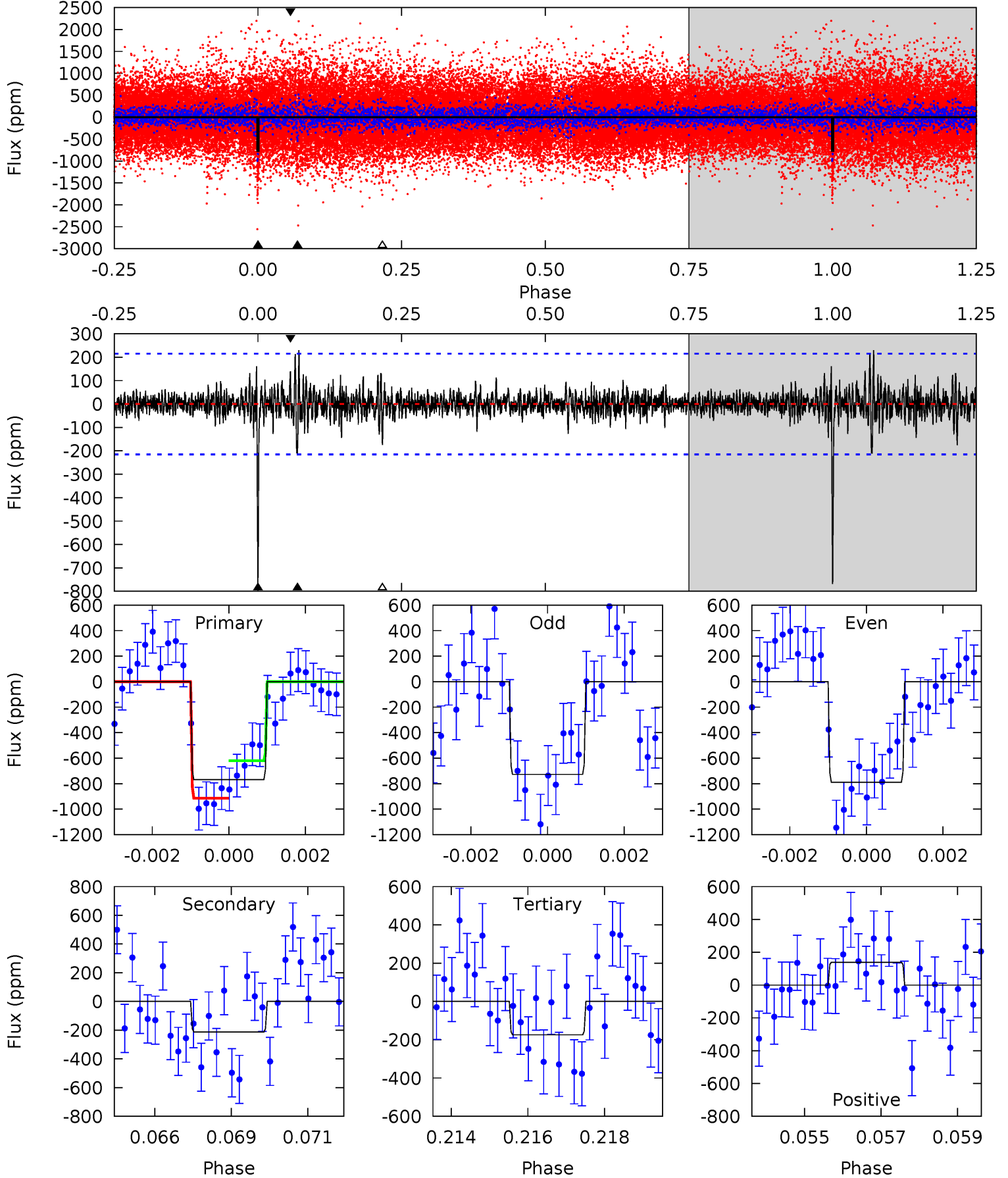
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.9	10.8	10.6	12.9	5.33	3.09	1.89	9.24	6.94	0.17	-2.14	1.10	1.06	0.39	0.14



Alt Model-Shift Uniqueness Test

008808227-01, P = 395.655022 Days, E = 122.789871 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.9	5.21	4.30	3.42	5.30	3.04	0.88	14.6	15.5	0.91	1.79	0.72	1.06	0.23	3.60



Stellar Parameters For KIC 008808227

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5836^{+182}_{-203}	$4.500^{+0.037}_{-0.200}$	$0.210^{+0.200}_{-0.300}$	$0.970^{+0.270}_{-0.096}$	$1.087^{+0.112}_{-0.150}$	$1.676^{+0.339}_{-0.875}$
	+3%/-3%	+1%/-4%	+95%/-143%	+28%/-10%	+10%/-14%	+20%/-52%
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 008808227-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-492 ± 46	$3.13^{+1.55}_{-1.45}$	351^{+24}_{-16}	5226^{+1861}_{-788}	31872^{+72838}_{-18008}
Alt.	-212 ± 41	$3.16^{+1.69}_{-1.45}$	349^{+24}_{-18}	4353^{+1386}_{-597}	13519^{+32454}_{-7987}

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

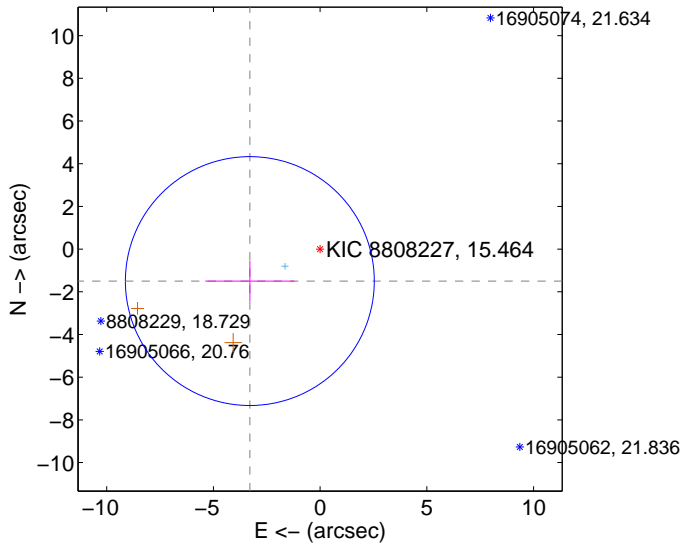
Supplemental centroid analysis for 008808227-01. Kepler magnitude: 15.46. Transit SNR 10.82

There are 1 quarters with good PRF difference image offsets

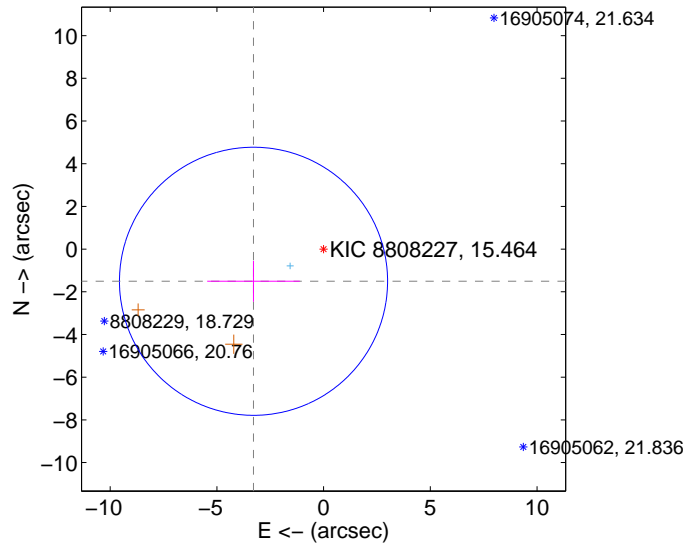
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.618 ± 1.943	1.86	3.294 ± 2.090	-1.498 ± 0.953
PRF-fit source offset from KIC position	3.613 ± 2.093	1.73	3.284 ± 2.168	-1.507 ± 0.957
photometric centroid source offset	1.29 ± 1.02	1.26	1.09 ± 1.01	-0.68 ± 1.03

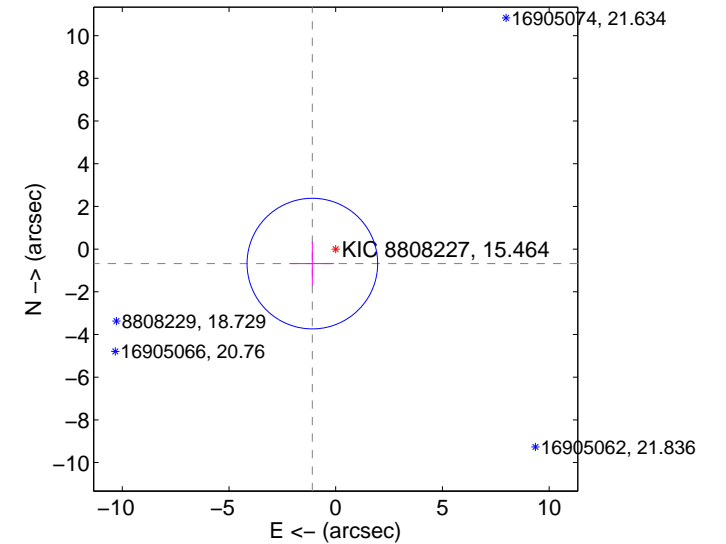
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

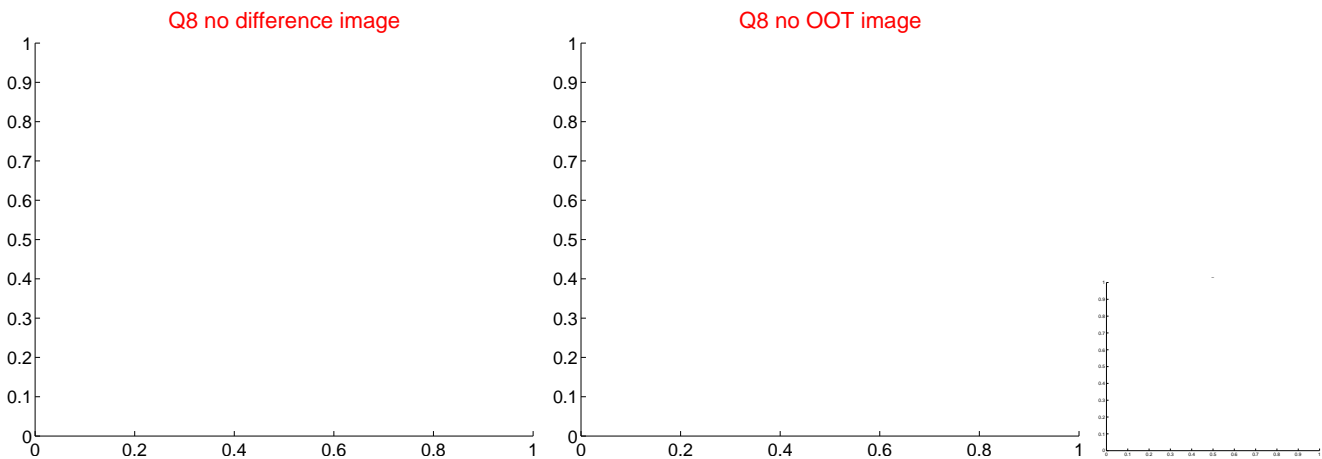
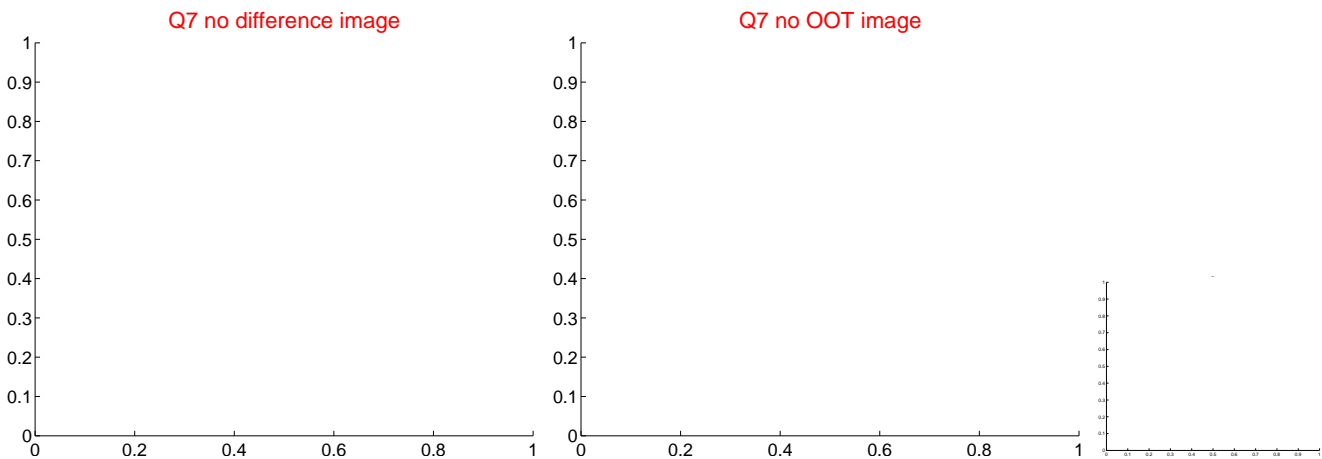
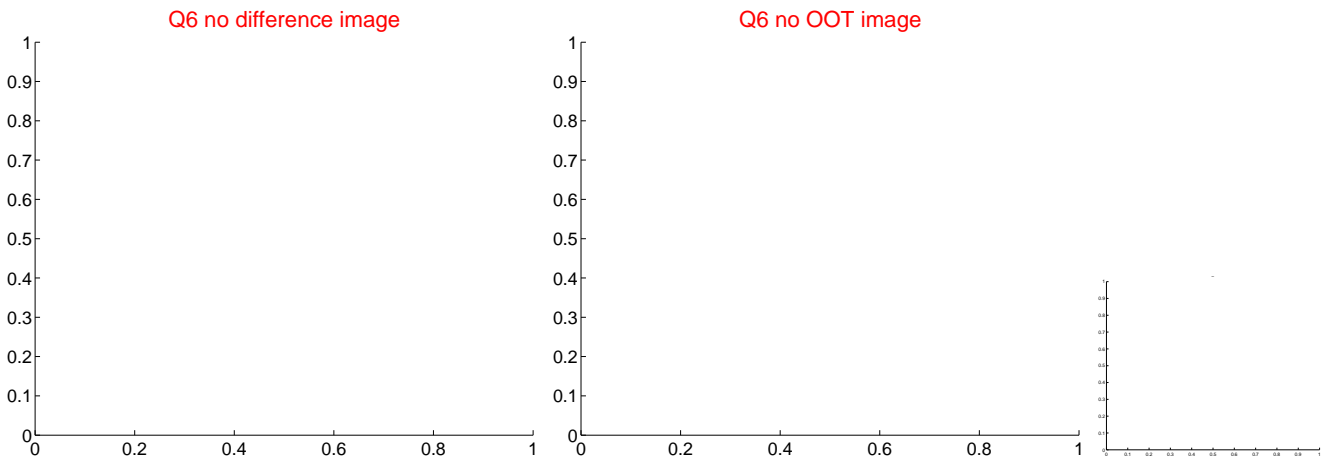
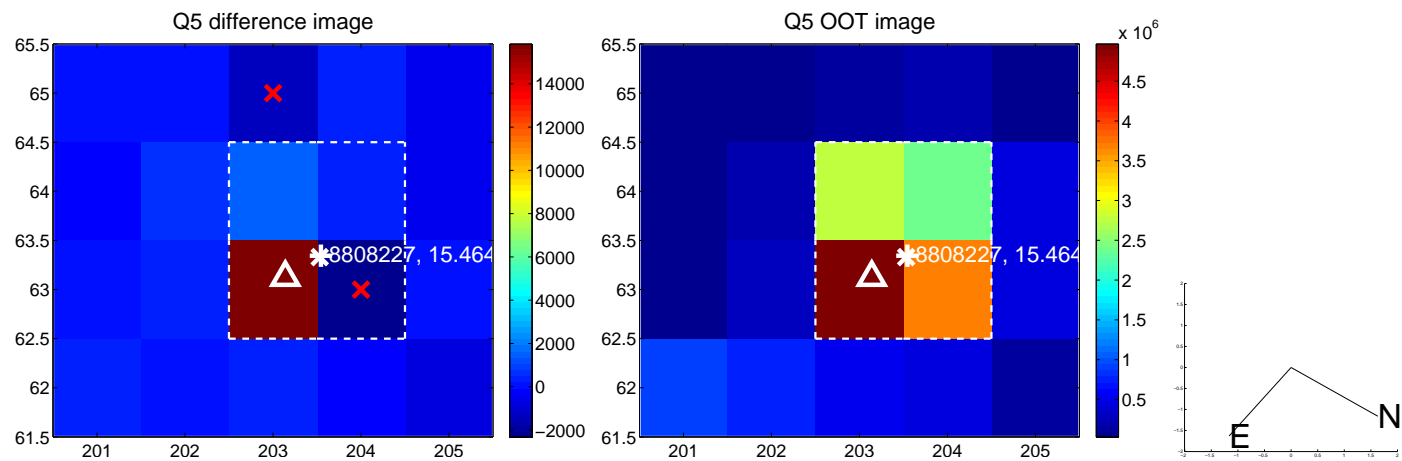


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

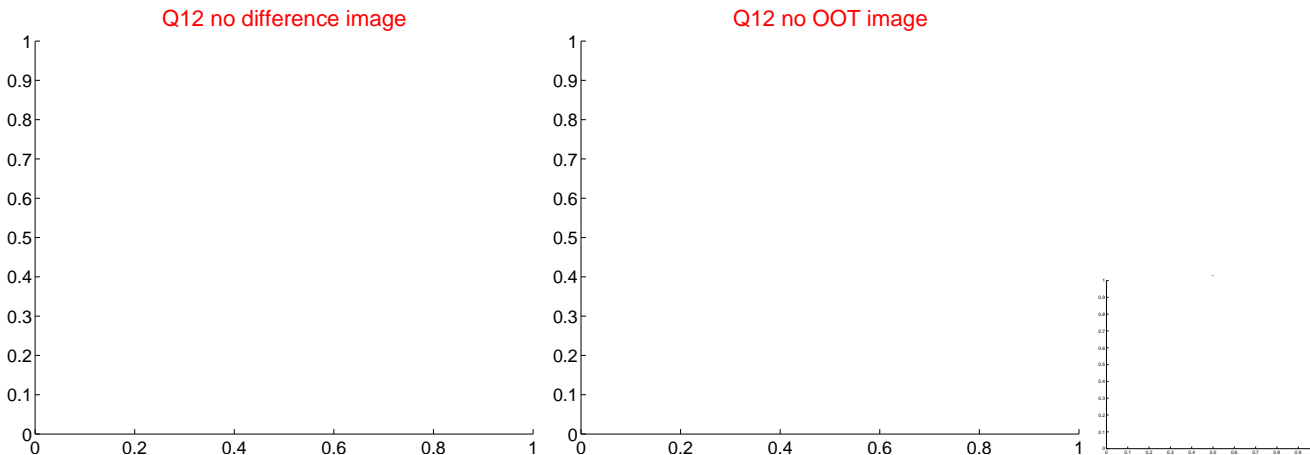
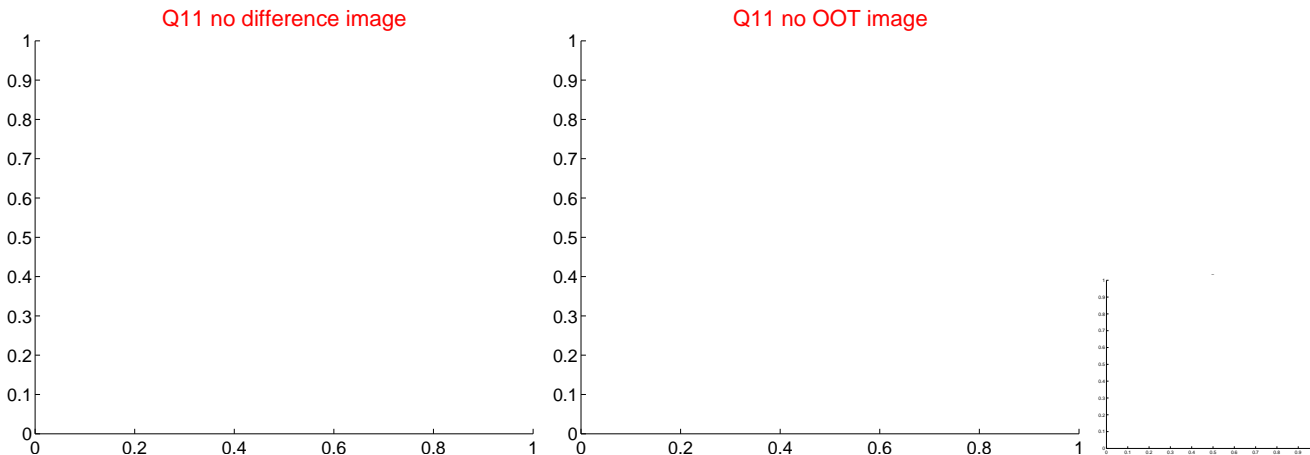
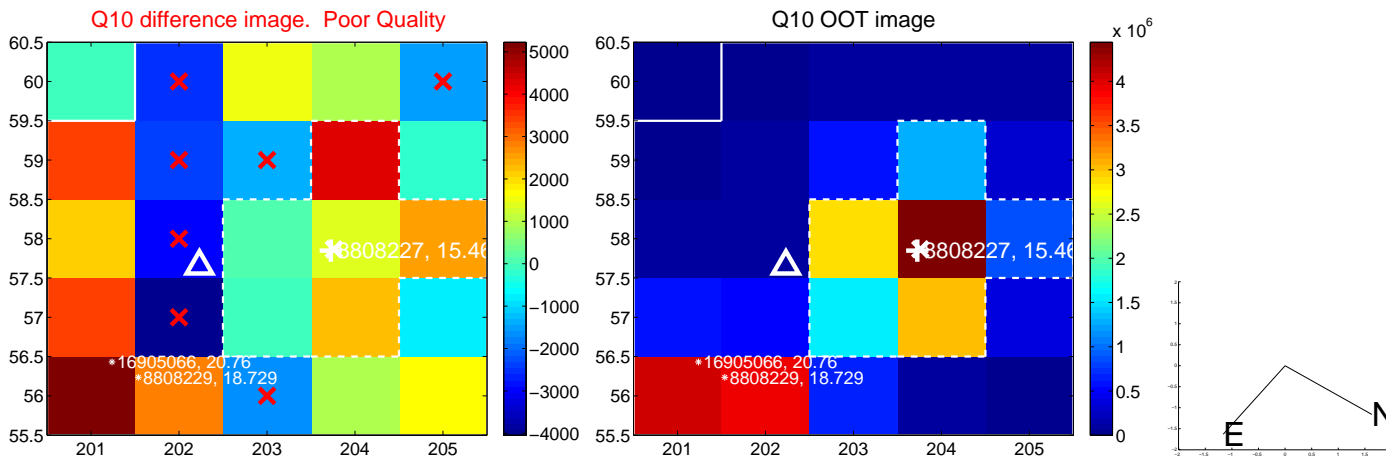
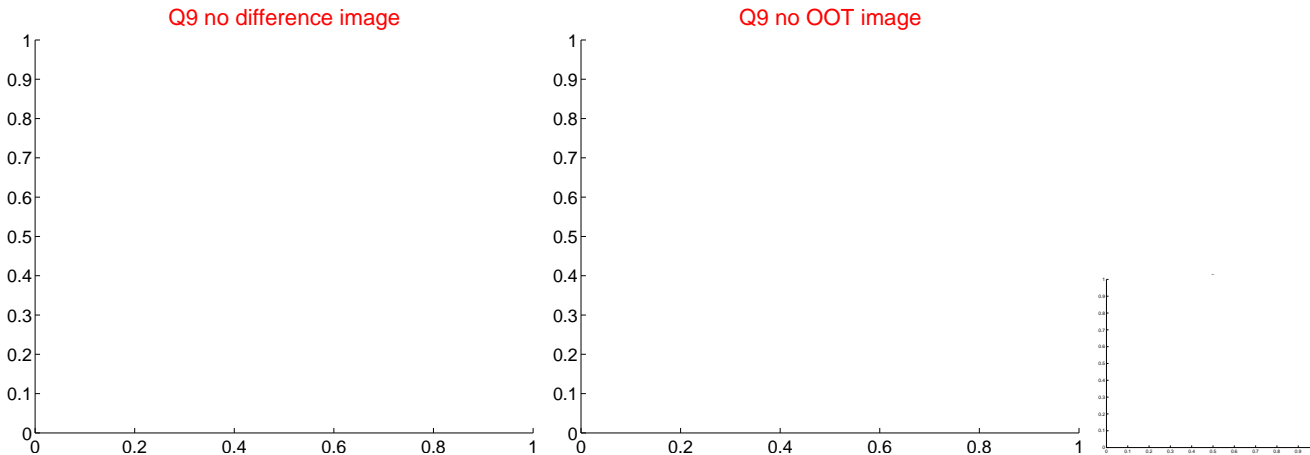
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



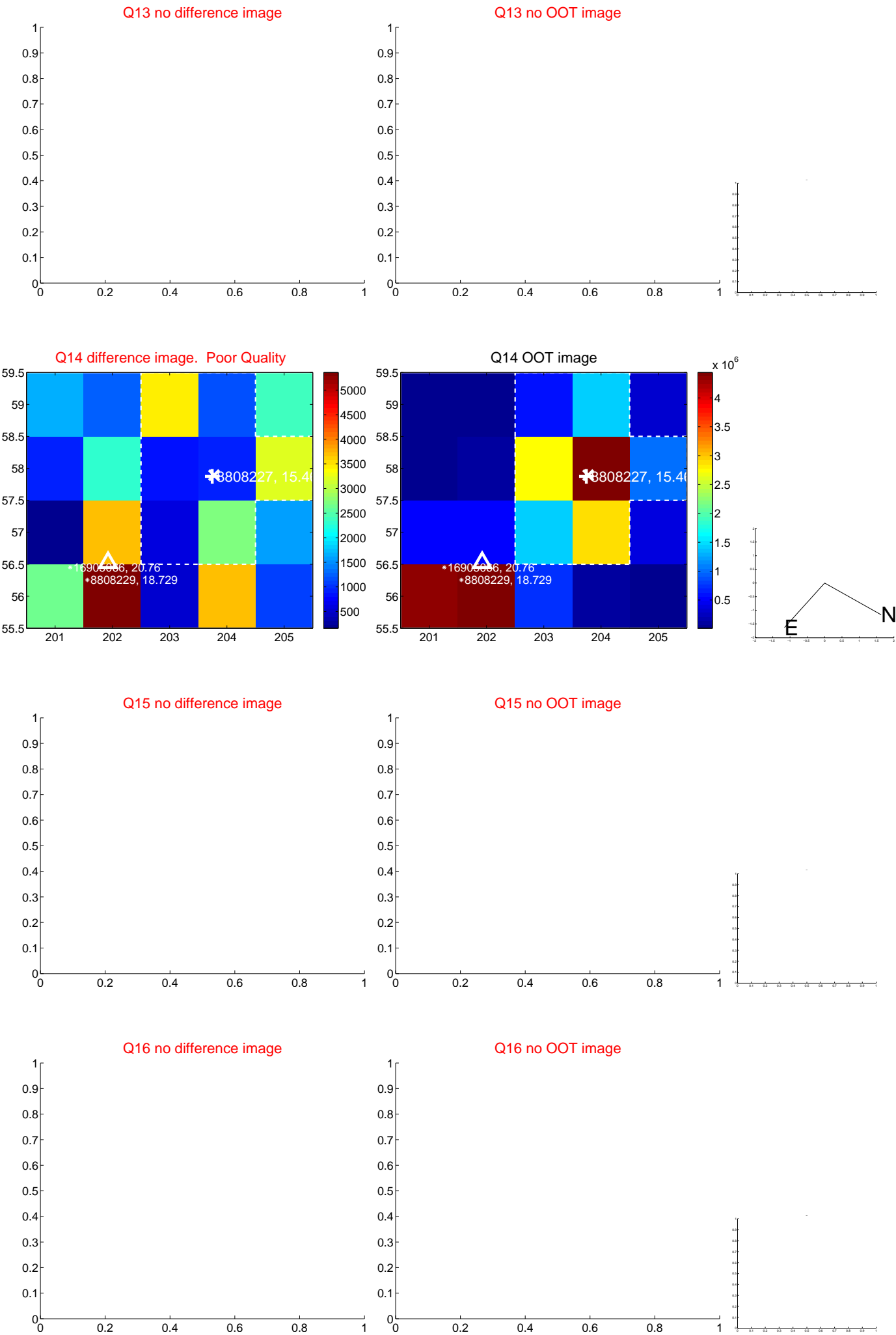
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



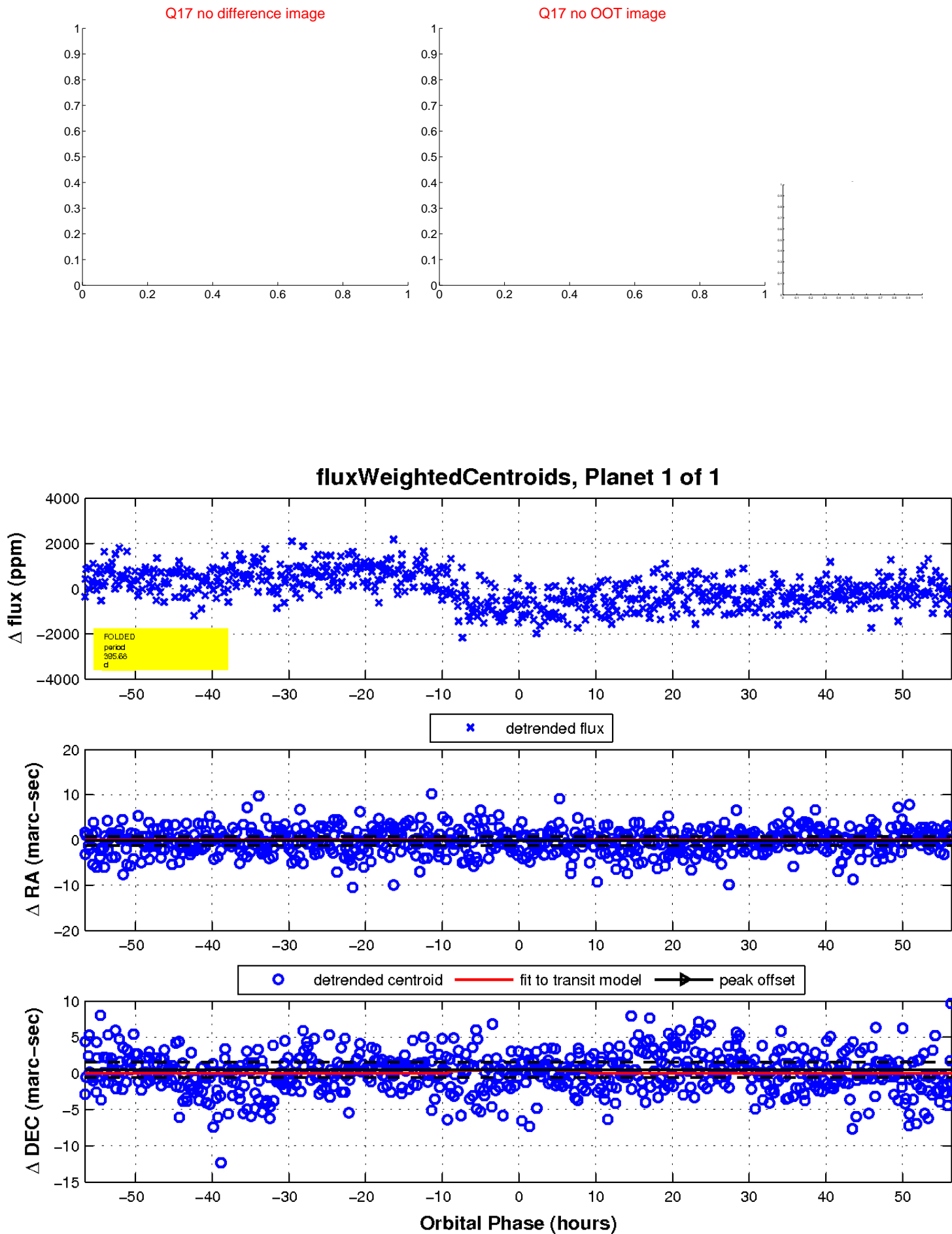
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



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



UKIRT Image

Declination

