

KIC 008108450

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})
008108450-02	OBS	8273.01	386.785084	354.928951	792.4	15.989	7.9	7.7	0.85	5425	2.48	0.60

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008108450-02	OBS	FP	0.10	1	0	0	0	INDIV_TRANS_MARSHALL—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.

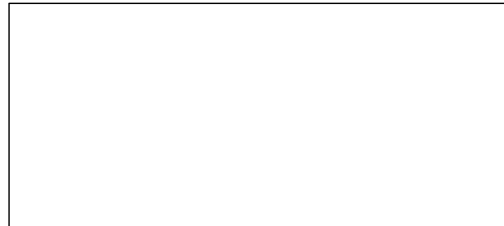
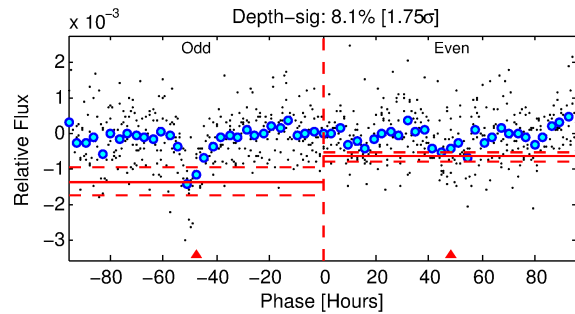
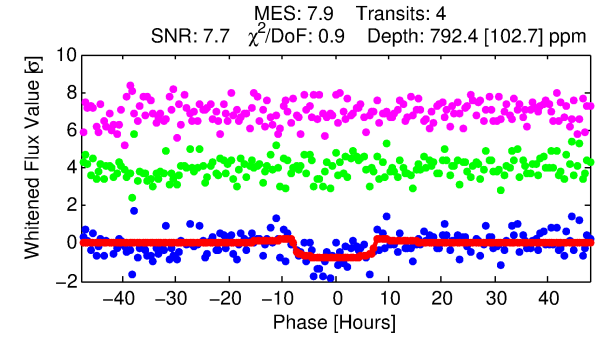
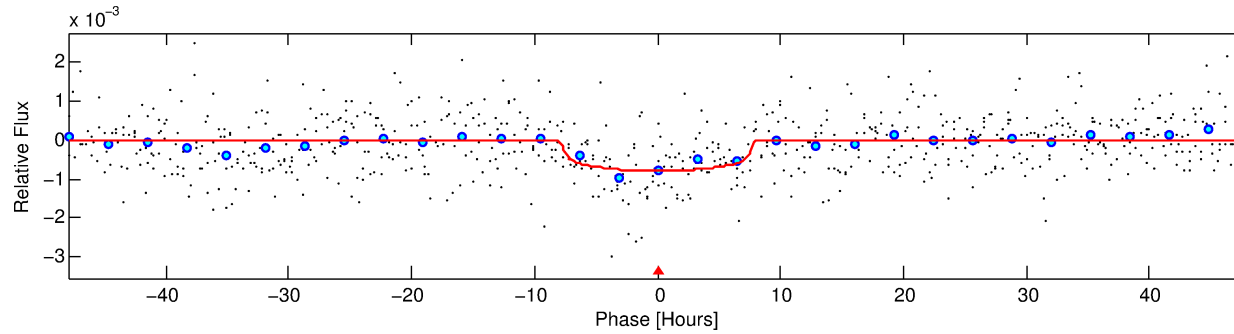
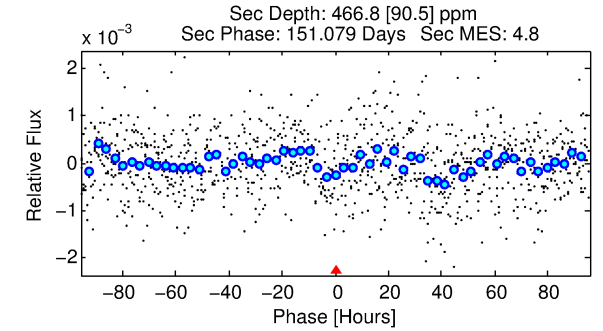
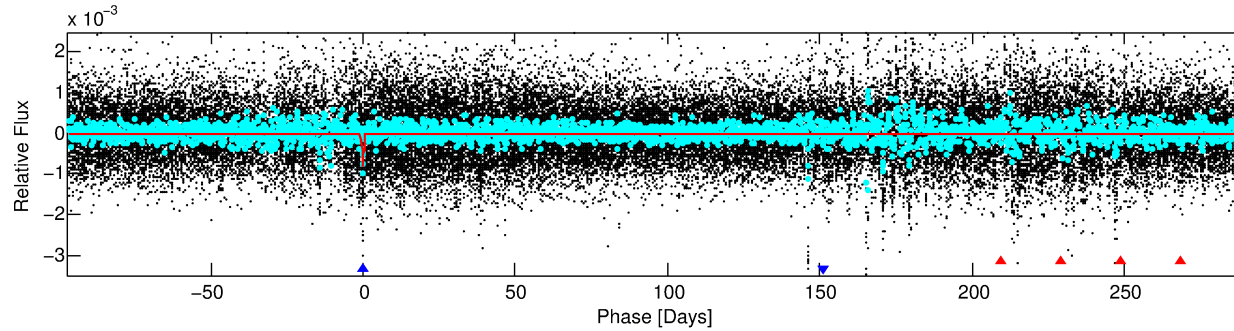
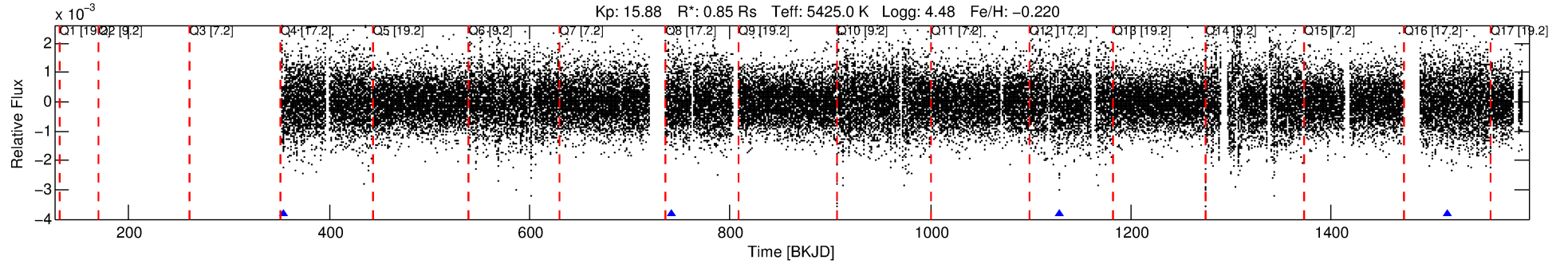
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008108450-02

No Significant Match Found

DV One-Page Summary

KIC: 8108450 Candidate: 2 of 2 Period: 386.785 d



DV Fit Results:

Period = 386.78508 [0.01154] d
Epoch = 354.9290 [0.0230] BKJD
Rp/R* = 0.0268 [0.0104]
a/R* = 153.08 [234.73]
b = 0.61 [1.61]
Seff = 0.60 [0.17]
Teq = 224 [16] K
Rp = 2.48 [1.07] Re
a = 0.9637 [0.1586] AU
Ag = 38865.19 [32419.98] [1.20σ]
Teffp = 4871 [985] K [4.72σ]

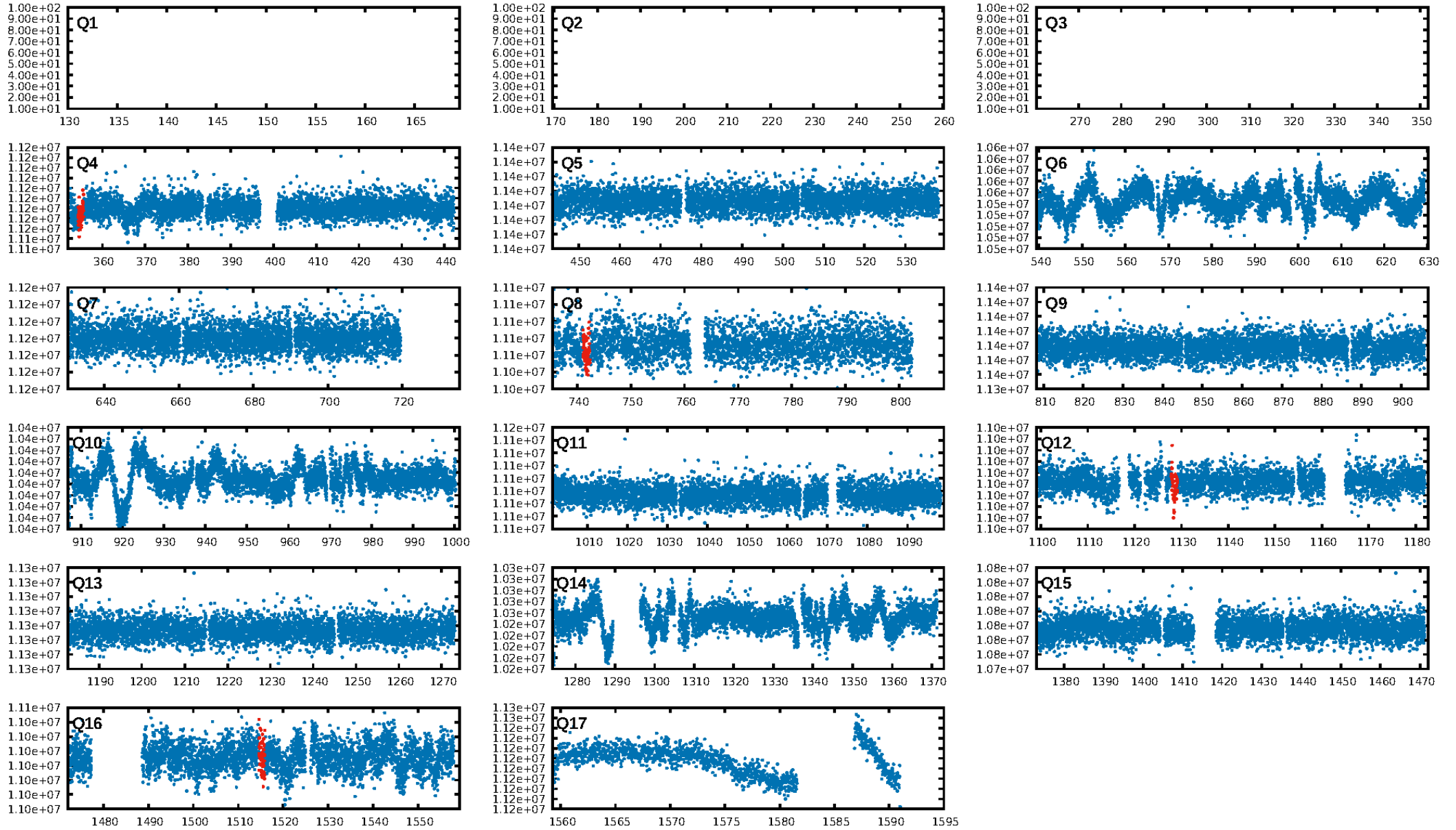
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [22.34σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 70.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.93e-10
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -2.978
Centroid-sig: 66.6%
Centroid-so: 2.281 arcsec [0.57σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [2/2]

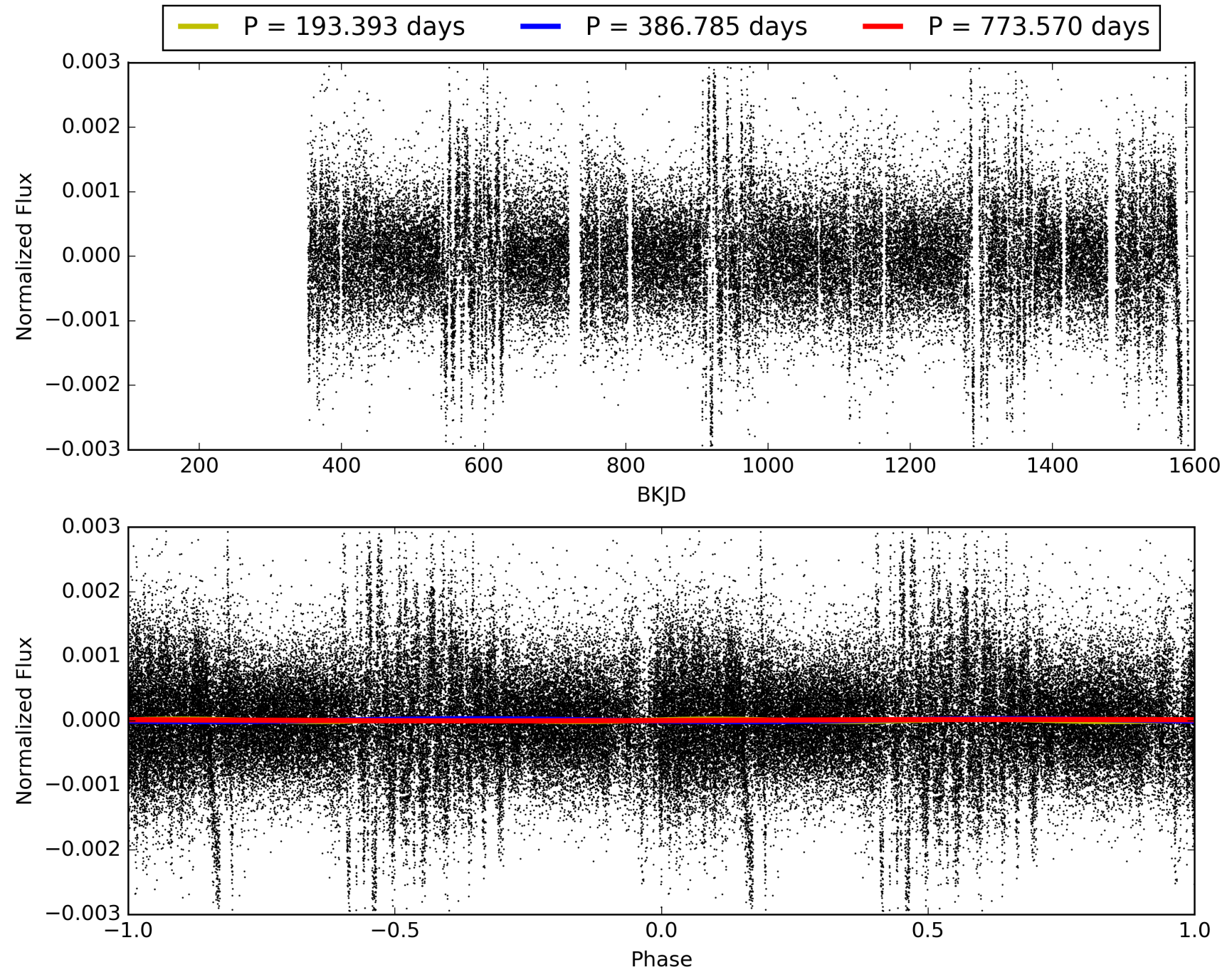
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 03:48:57 Z

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

TCE 008108450-02, PDC Light Curves

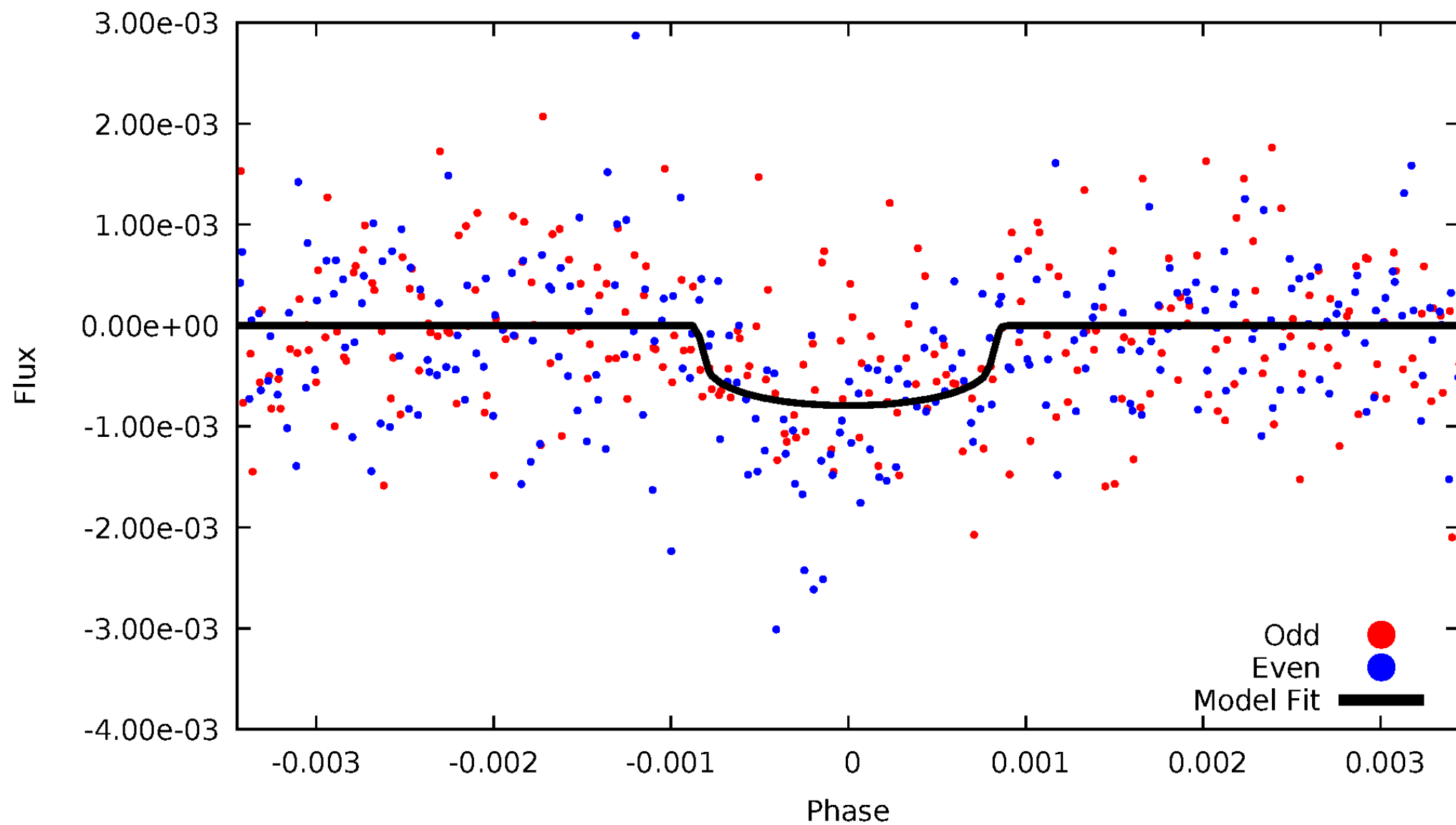


TCE 008108450-02



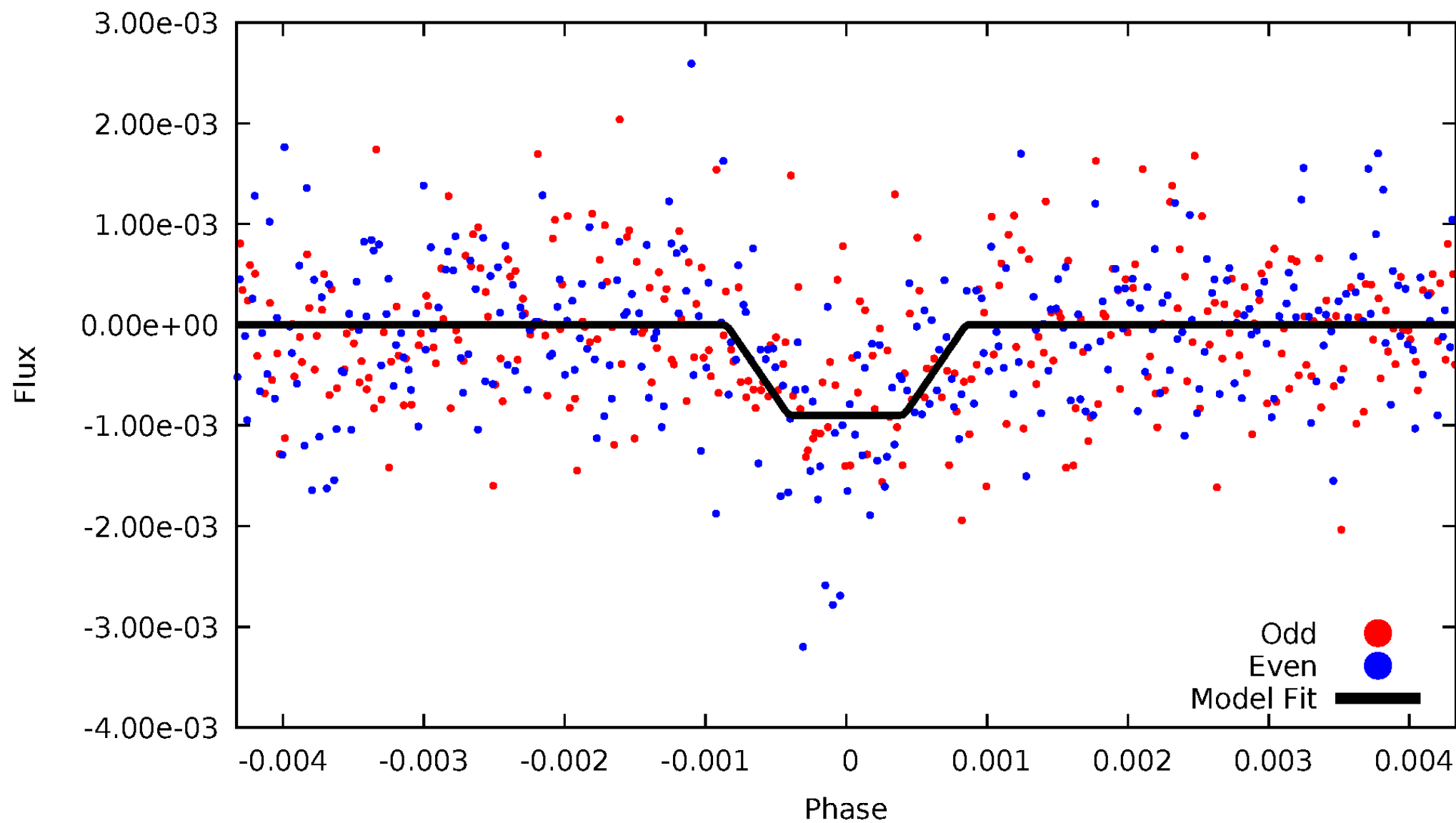
DV Odd/Even

TCE 008108450-02



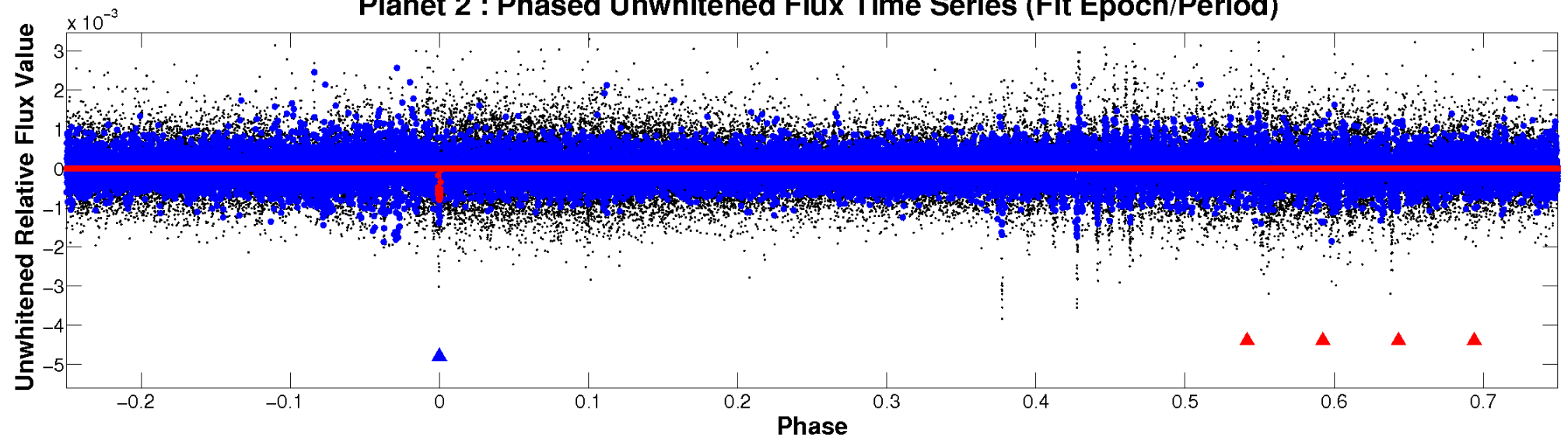
ALT Odd/Even

TCE 008108450-02

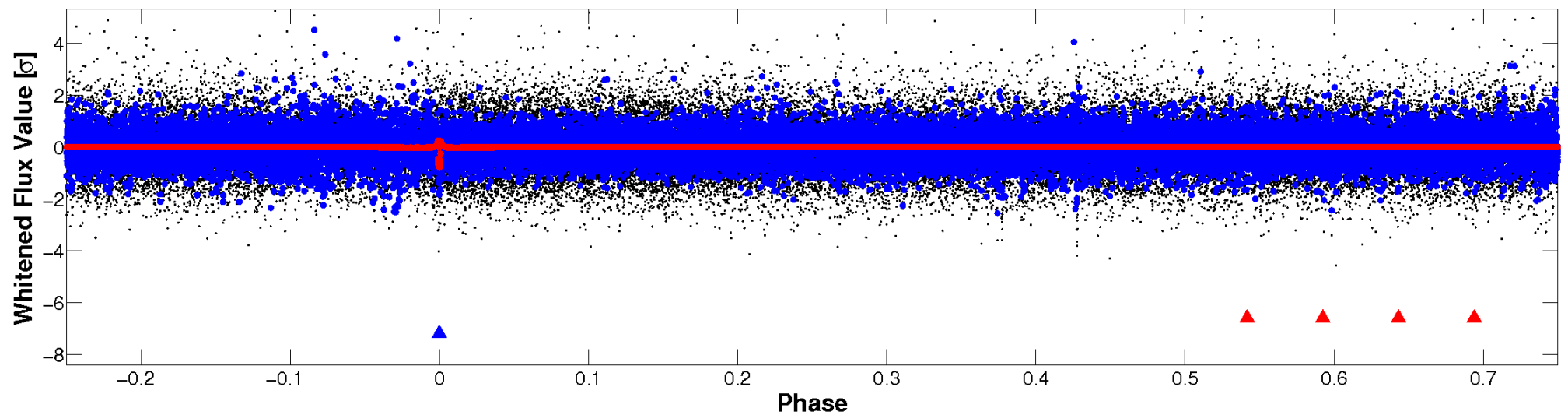


Non-Whitened Vs. Whitened Light Curve

Planet 2 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)



Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 008108450-02 $P=386.785084$ Days $T_0=354.928951$ (BKJD)



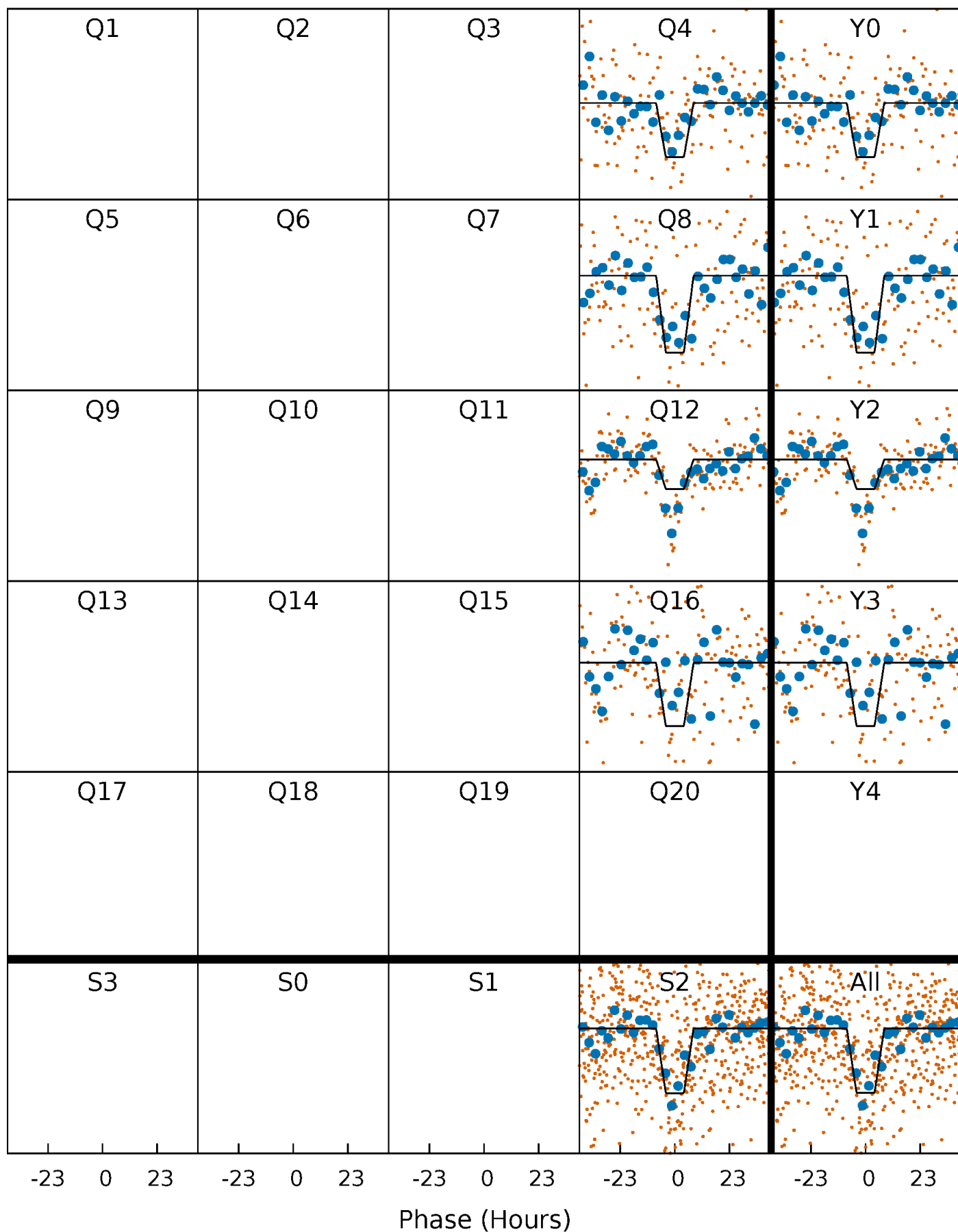
DV Quarter-Phased Transit Curves

TCE 008108450-02 $P=386.785084$ Days $T_0=354.928951$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

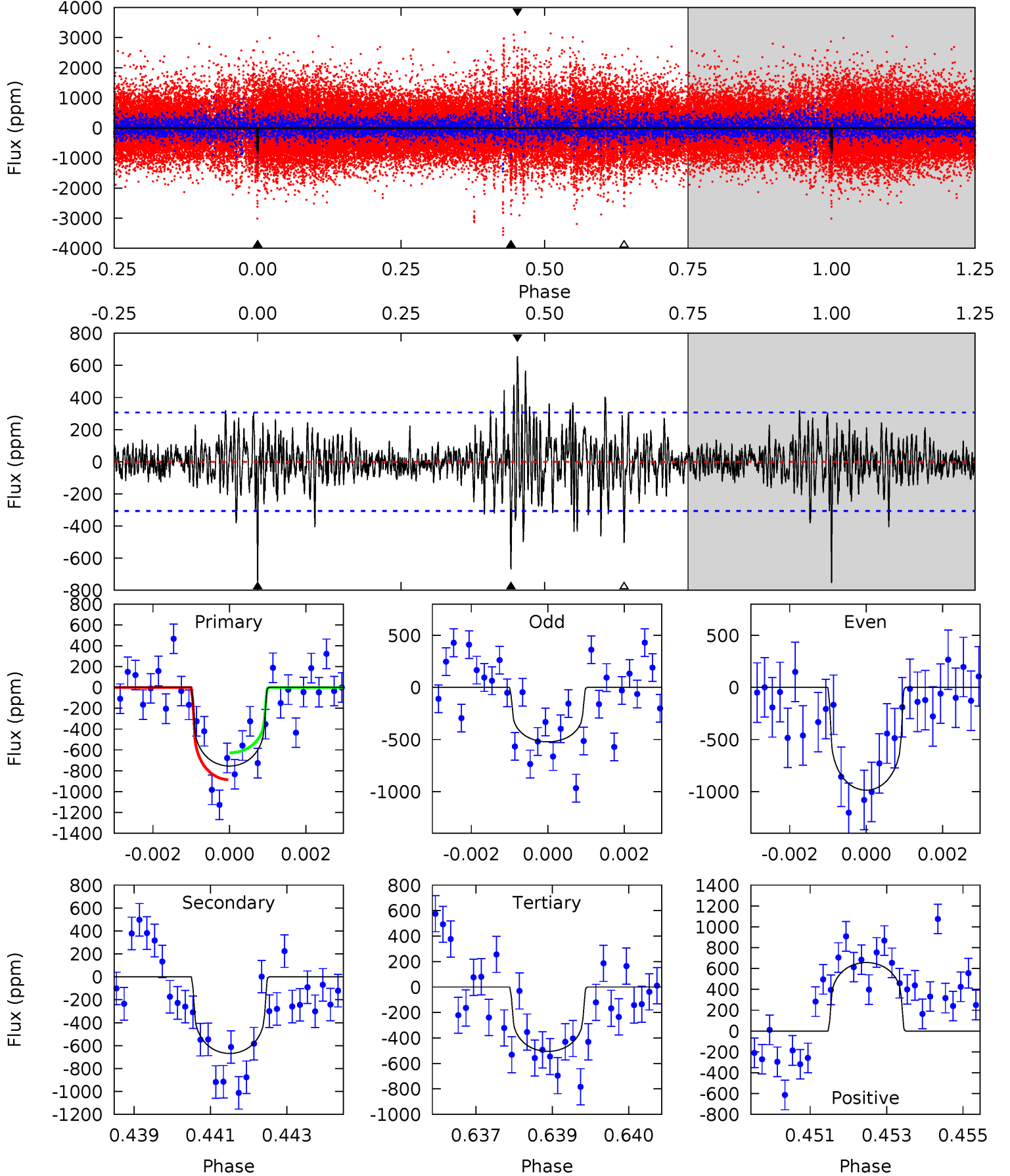
TCE 008108450-02 P=386.780046 Days $T_0=354.900733$ (BKJD)



DV Model-Shift Uniqueness Test

008108450-02, P = 386.785084 Days, E = 354.928951 Days

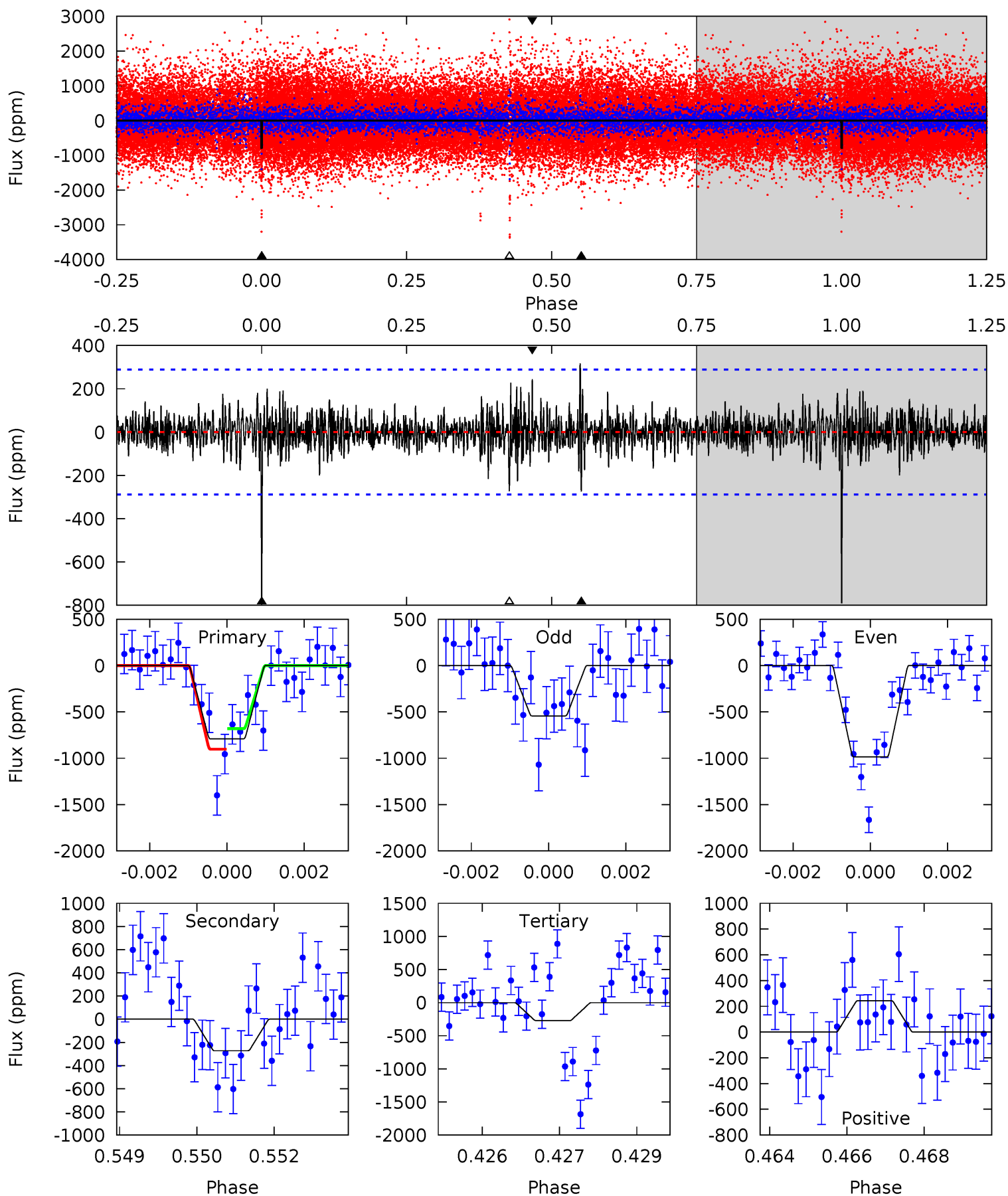
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.2	11.7	8.82	11.5	5.35	3.13	2.10	4.35	1.70	2.85	0.20	4.05	1.16	0.47	2.26



Alt Model-Shift Uniqueness Test

008108450-02, P = 386.780046 Days, E = 354.900733 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.7	5.05	5.03	4.52	5.35	3.13	1.09	9.64	10.1	0.02	0.53	4.10	1.24	0.29	2.06



Stellar Parameters For KIC 008108450

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5425^{+185}_{-185}	$4.484^{+0.104}_{-0.138}$	$-0.220^{+0.300}_{-0.300}$	$0.847^{+0.160}_{-0.107}$	$0.796^{+0.115}_{-0.067}$	$1.849^{+0.755}_{-0.696}$
	+3%/-3%	+2%/-3%	+136%/-136%	+19%/-13%	+14%/-8%	+41%/-38%
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 008108450-02 / KOI 8273.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-668 ± 57	$2.47^{+1.04}_{-0.94}$	315^{+18}_{-17}	5392^{+1476}_{-752}	57114^{+97558}_{-29757}
Alt.	-272 ± 54	$2.86^{+1.05}_{-1.09}$	314^{+19}_{-16}	4211^{+842}_{-470}	17344^{+24950}_{-8408}

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

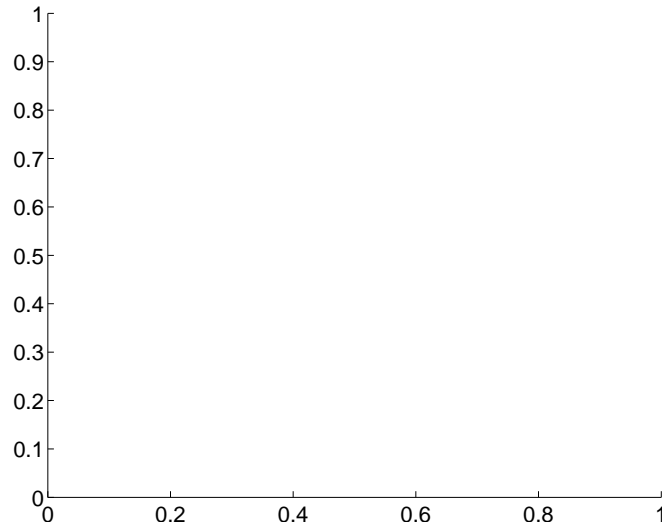
Supplemental centroid analysis for 008108450-02. Kepler magnitude: 15.88. Transit SNR 7.72

There are 0 quarters with good PRF difference image offsets

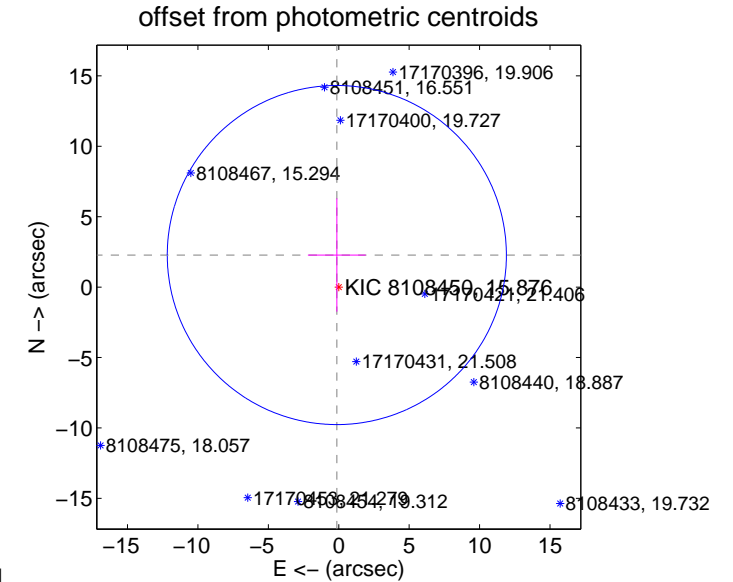
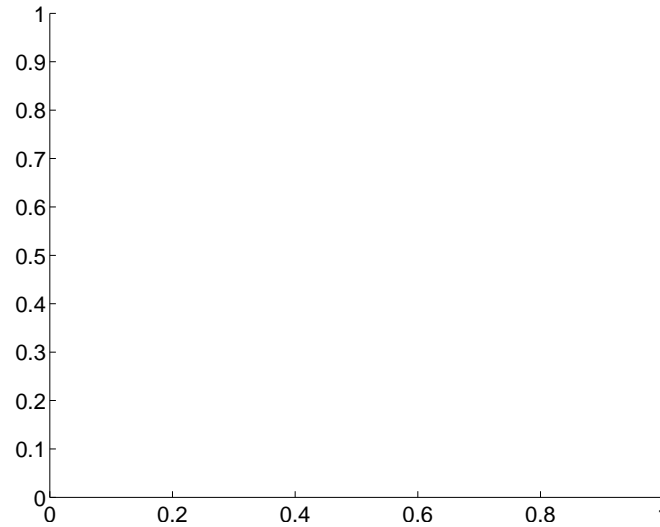
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	2.28 ± 4.01	0.57	0.14 ± 2.05	2.28 ± 4.02

There is no PRF-fit offset from OOT-fit

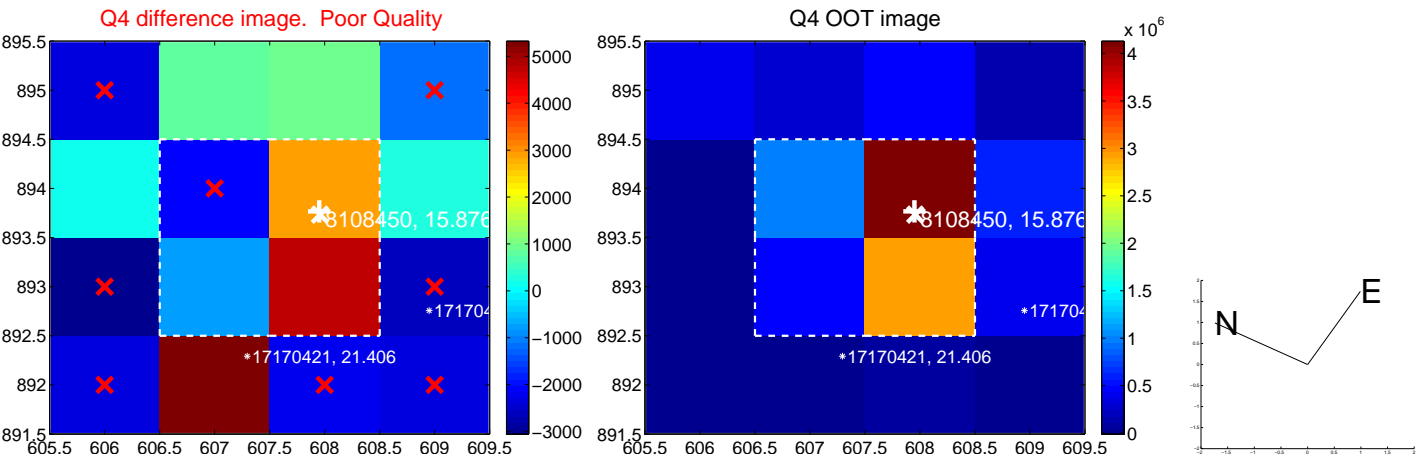
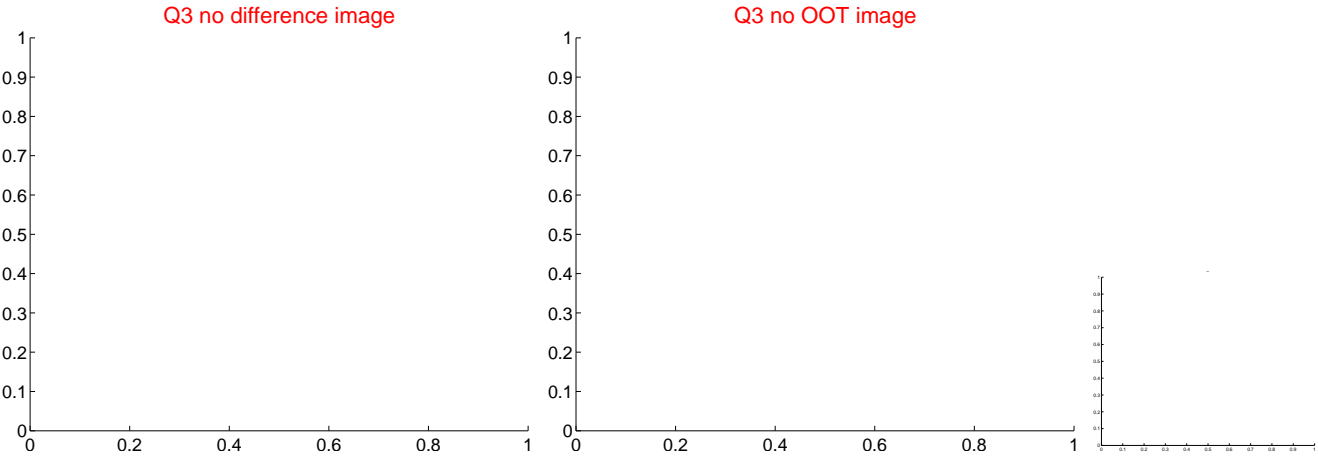
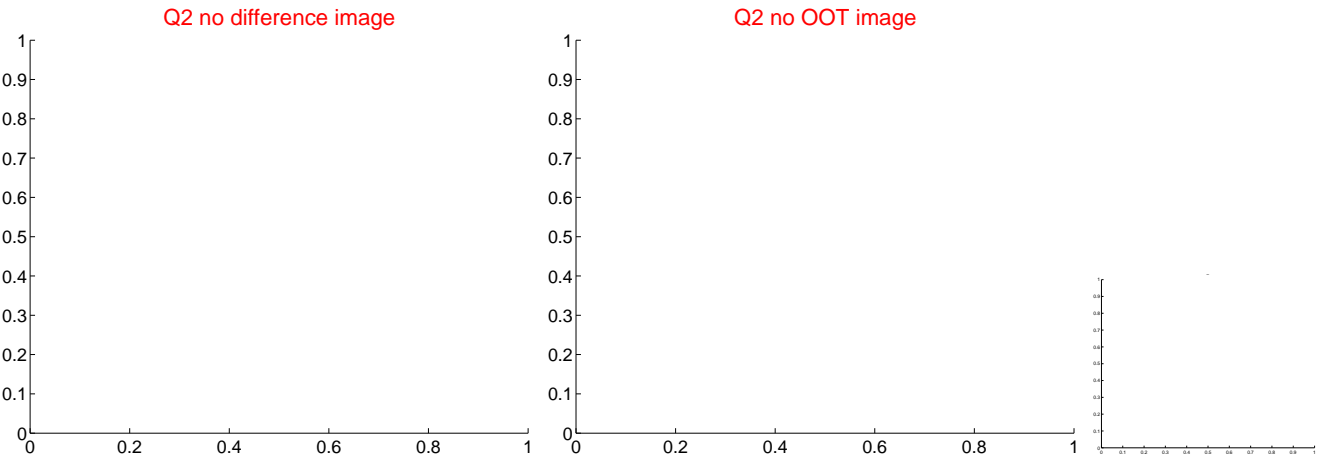
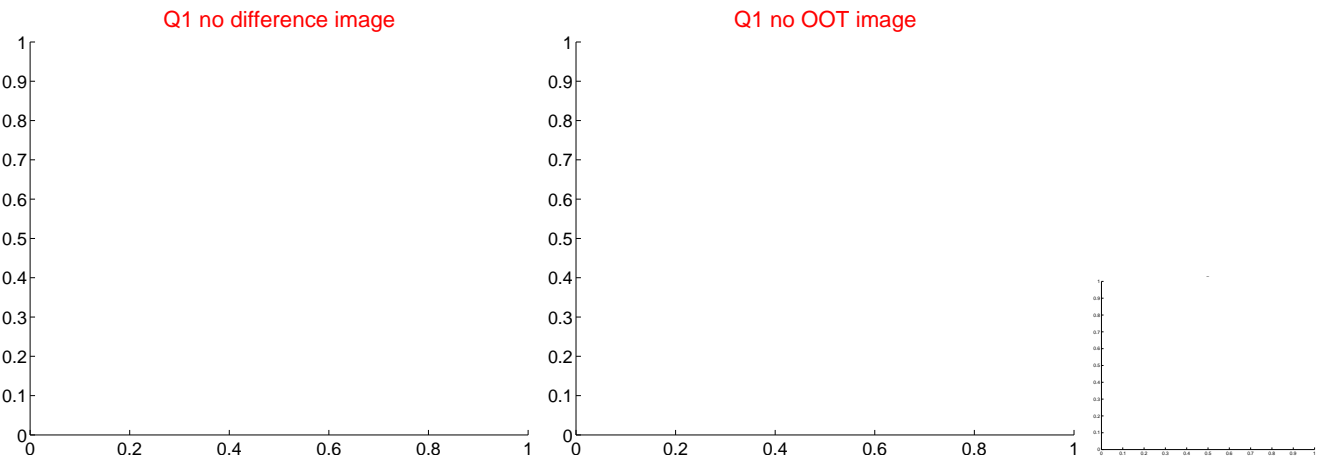


There is no PRF-fit offset from KIC

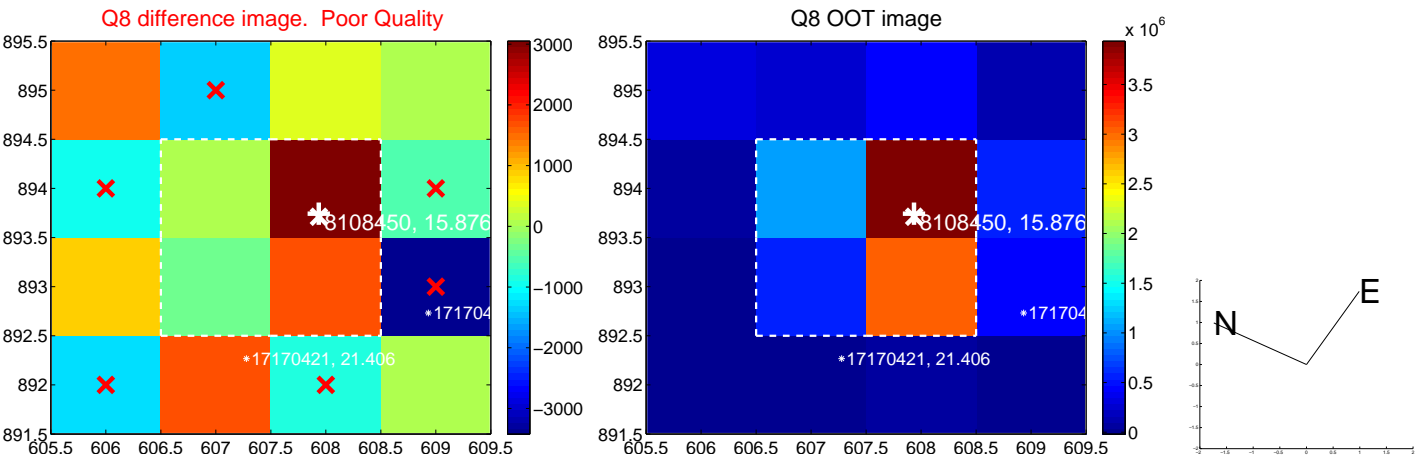
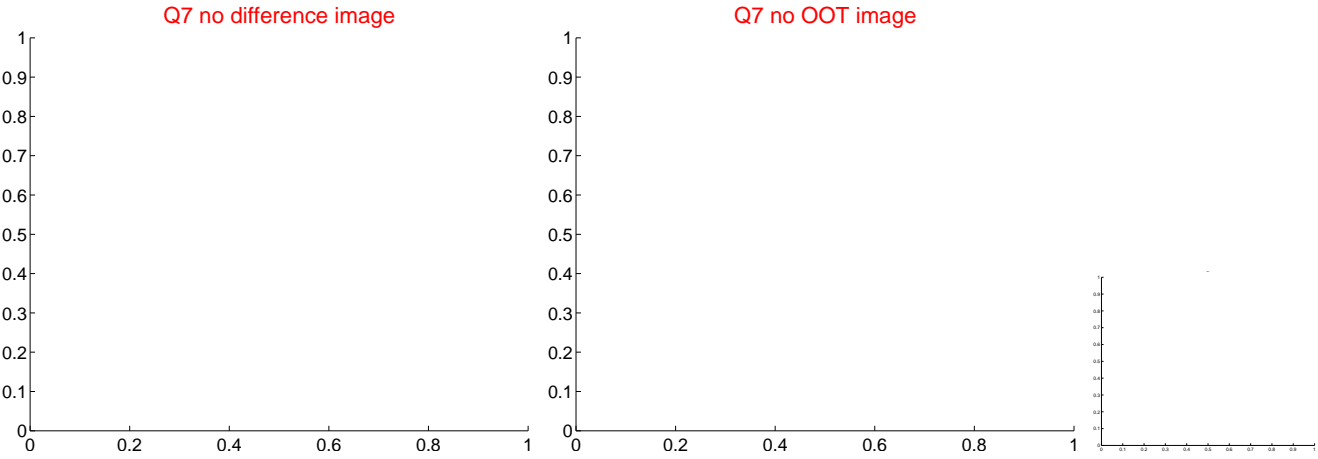
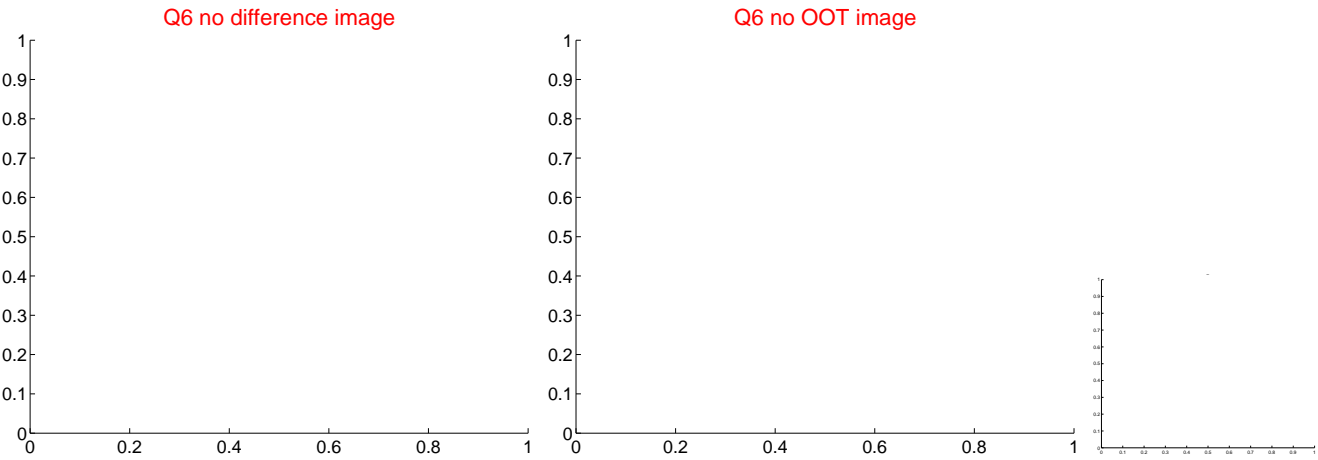
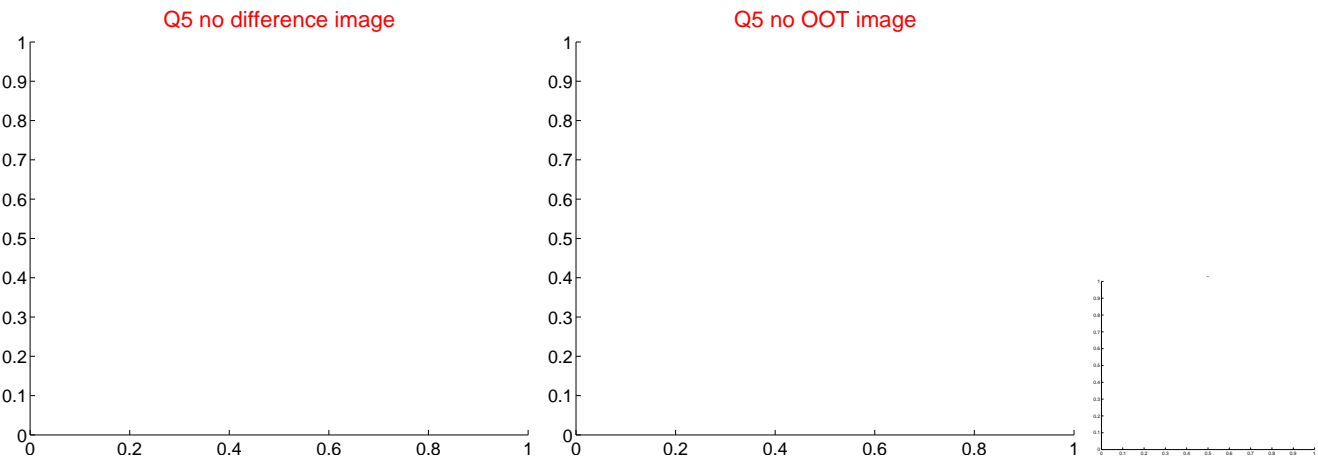


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . 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 ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



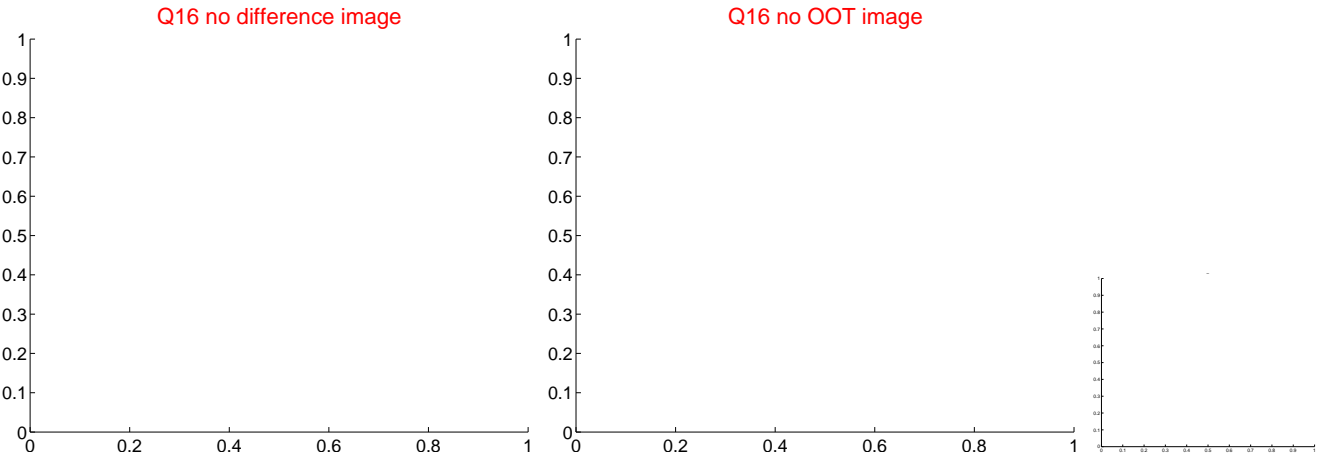
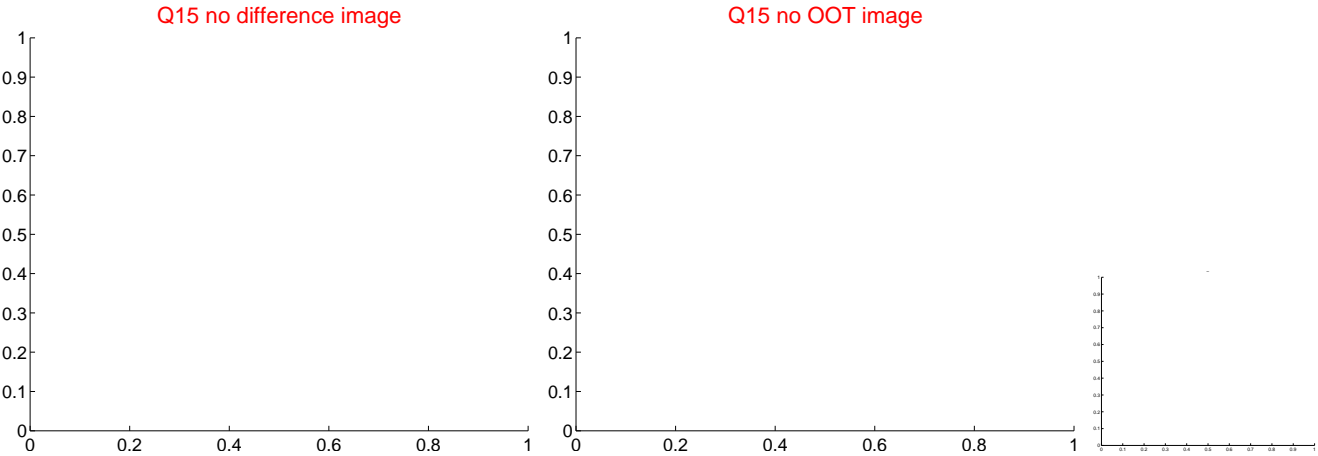
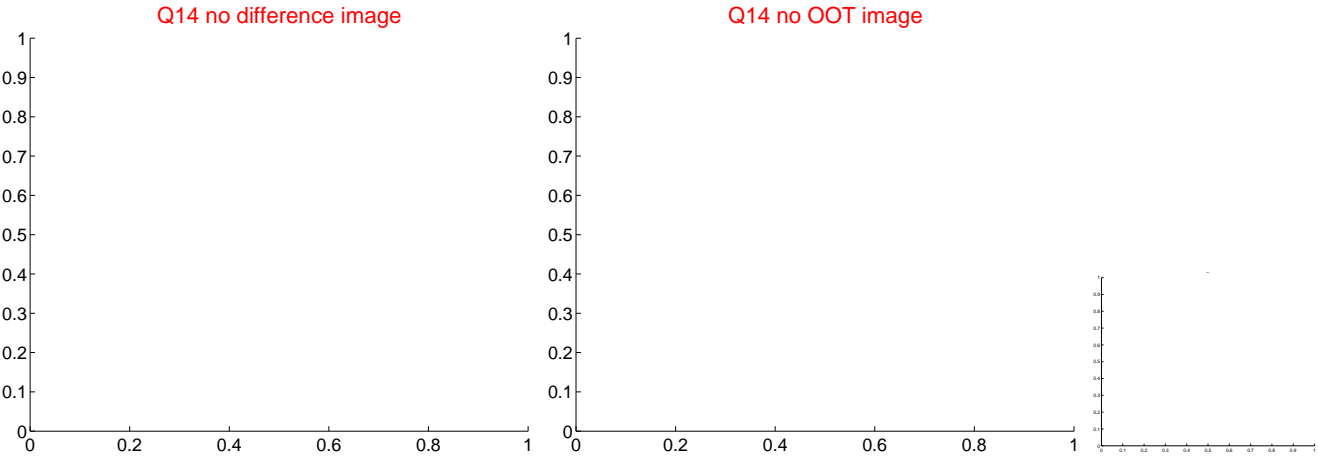
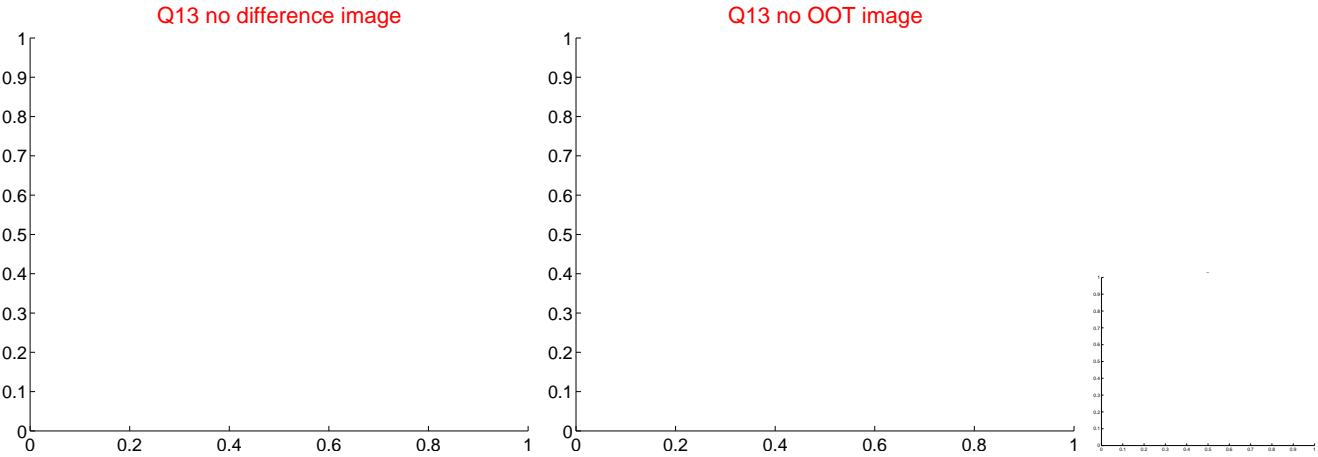
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



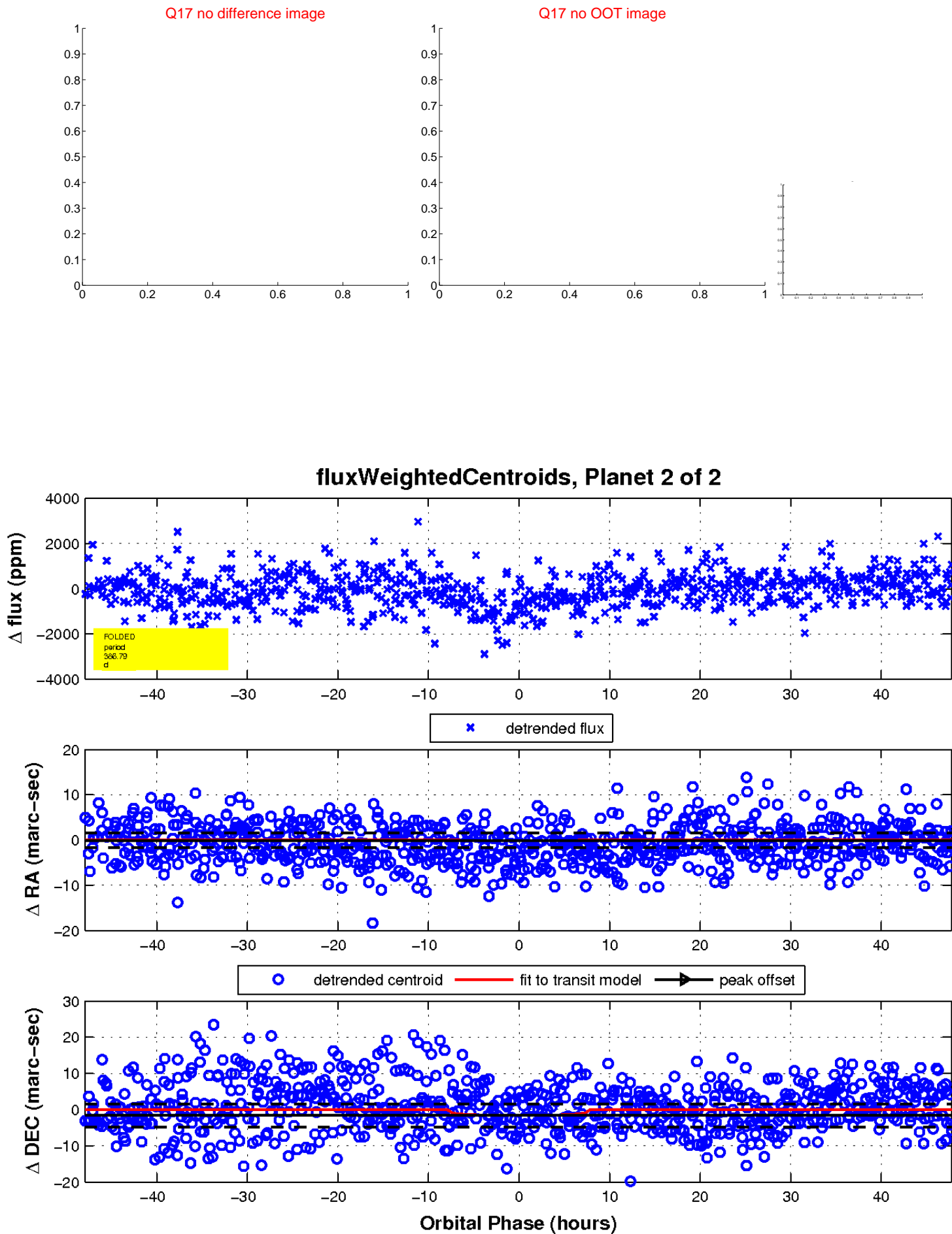
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

