

KIC 008242899

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})
008242899-01	OBS	No	367.022335	238.707094	549.7	9.995	8.7	7.1	0.91	5960	2.24	0.93

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008242899-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST

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

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

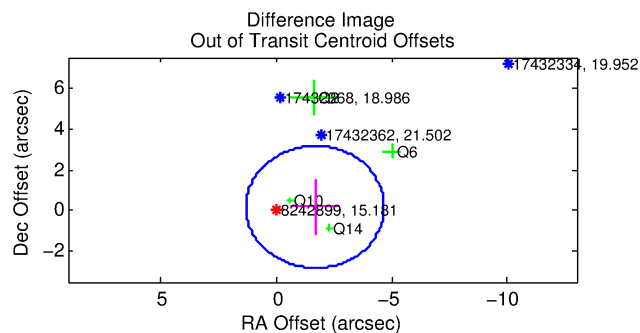
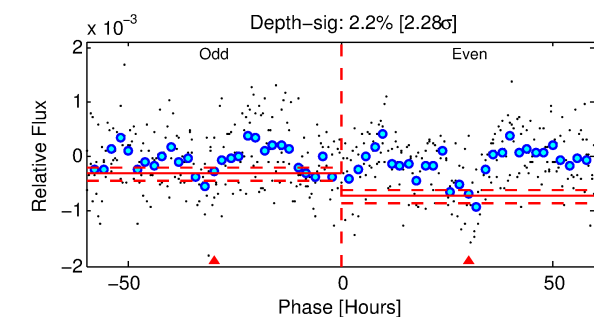
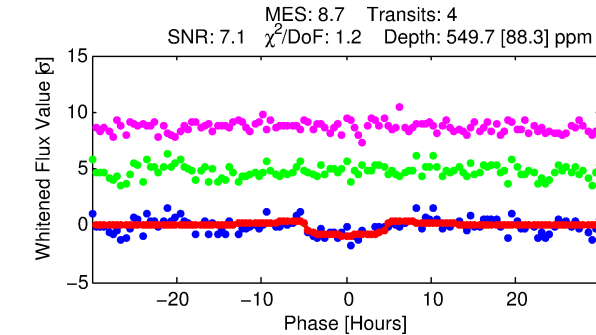
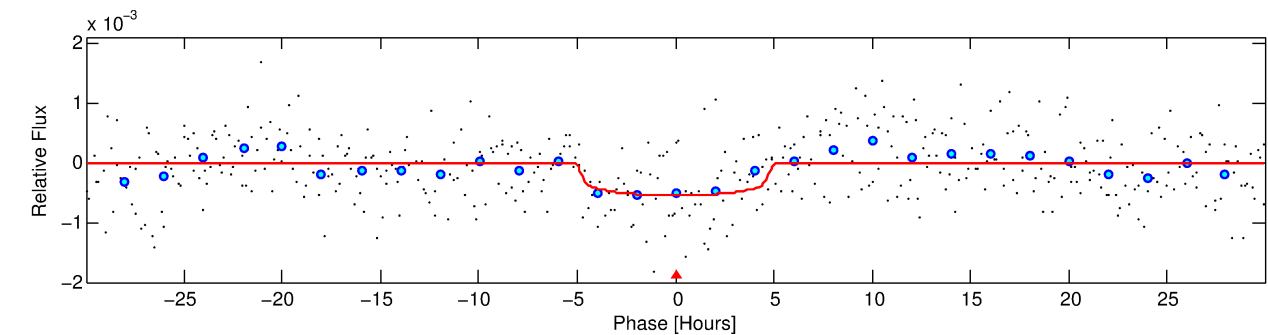
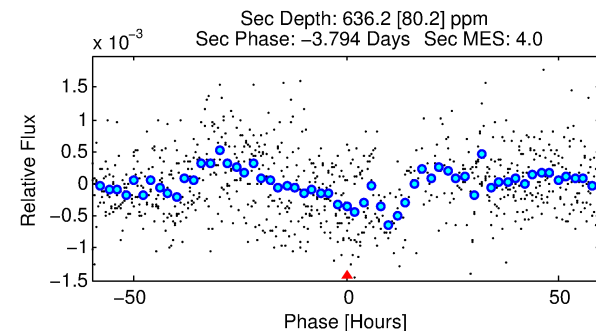
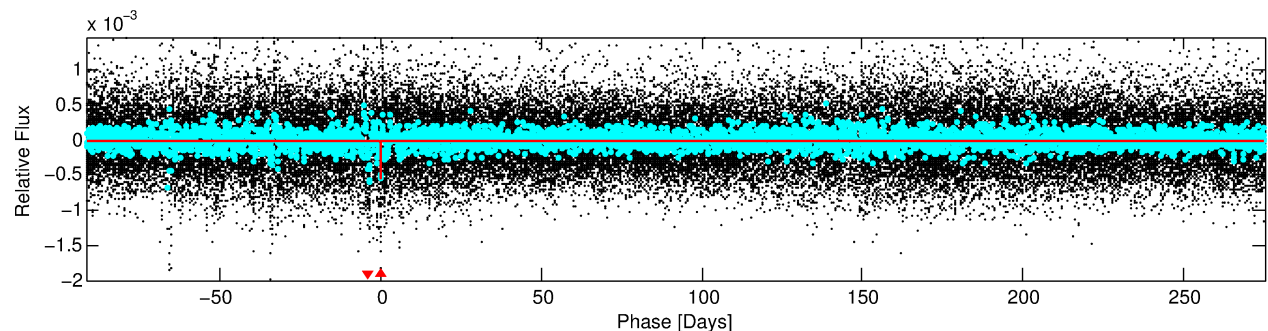
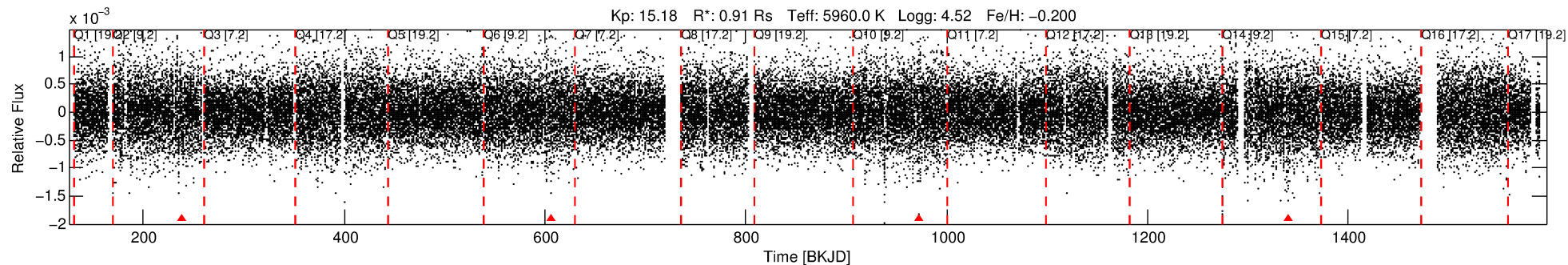
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008242899-01

No Significant Match Found

DV One-Page Summary

KIC: 8242899 Candidate: 1 of 1 Period: 367.022 d



DV Fit Results:

Period = 367.02234 [0.00920] d
Epoch = 238.7071 [0.0174] BKJD
Rp/R* = 0.0227 [0.0176]
a/R* = 220.92 [805.93]
b = 0.65 [3.25]
Seff = 0.93 [0.37]
Teq = 251 [25] K
Rp = 2.24 [1.86] Re
a = 0.9975 [0.2554] AU
Ag = 69317.56 [110973.60] [0.62 σ]
Teffp = 6286 [2454] K [2.46 σ]

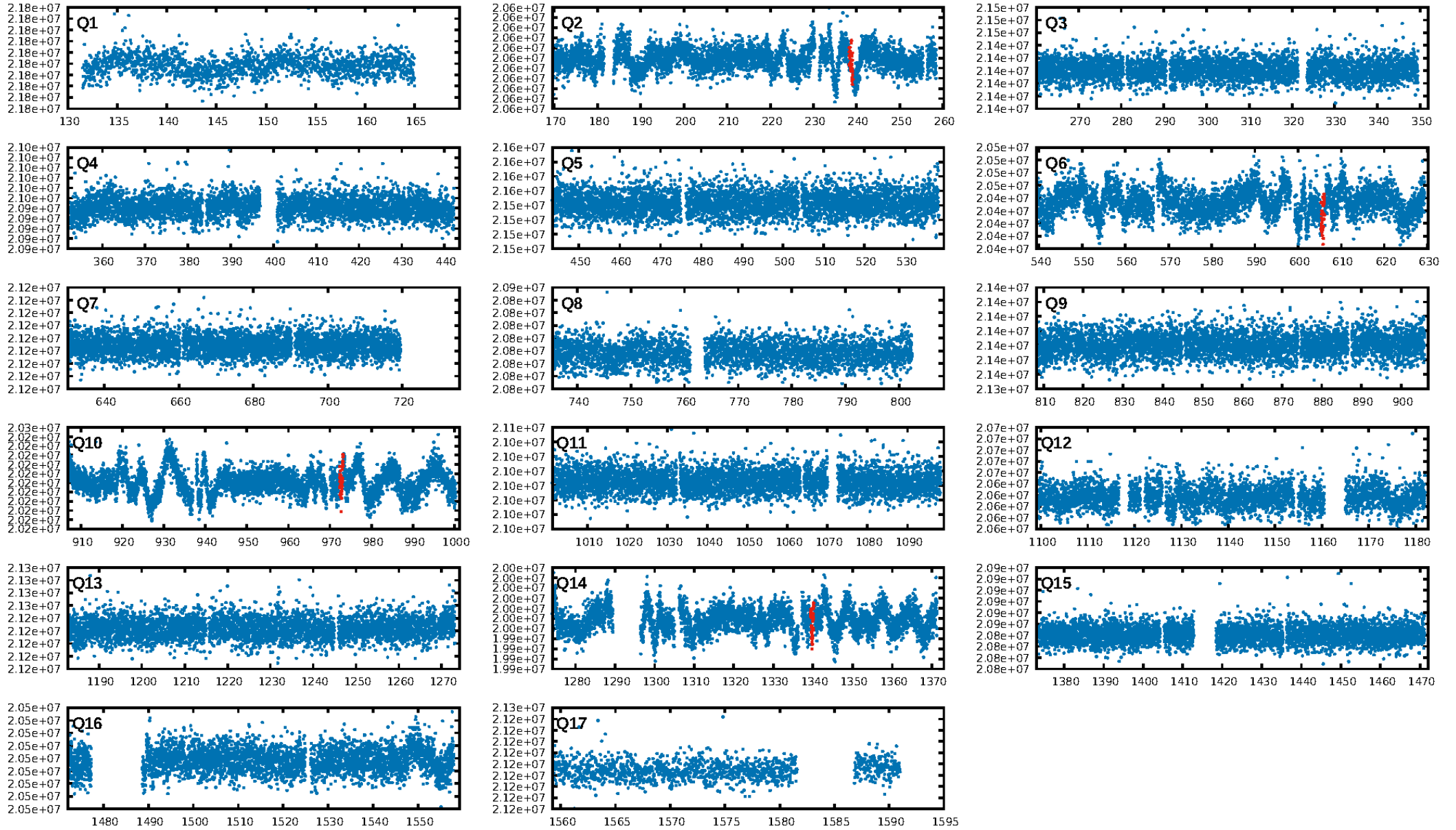
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 90.3%
Bootstrap-pfa: 2.61e-13
RollingBand-fgt: 0.00 [0/4]
GhostDiagnostic-chr: 0.1676
Centroid-sig: 18.5%
Centroid-so: 4.112 arcsec [1.46 σ]
OotOffset-rm: 1.687 arcsec [1.69 σ]
OotOffset-st: 4/0/0/0 [4]
KicOffset-rm: 1.700 arcsec [2.26 σ]
KicOffset-st: 4/0/0/0 [4]
DiffImageQuality-fgm: 0.25 [1/4]
DiffImageOverlap-fno: 1.00 [4/4]

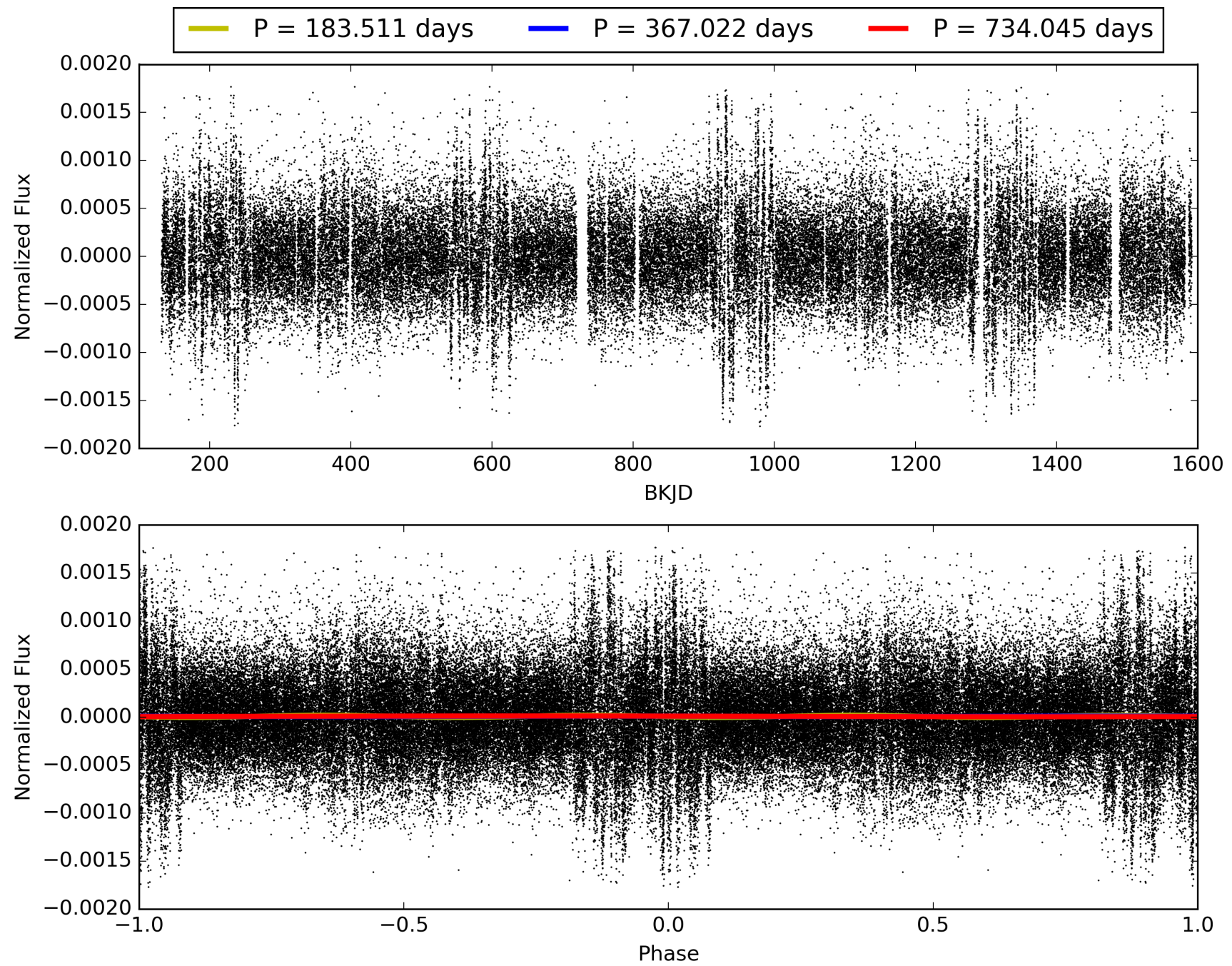
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:46:03 Z

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

TCE 008242899-01, PDC Light Curves

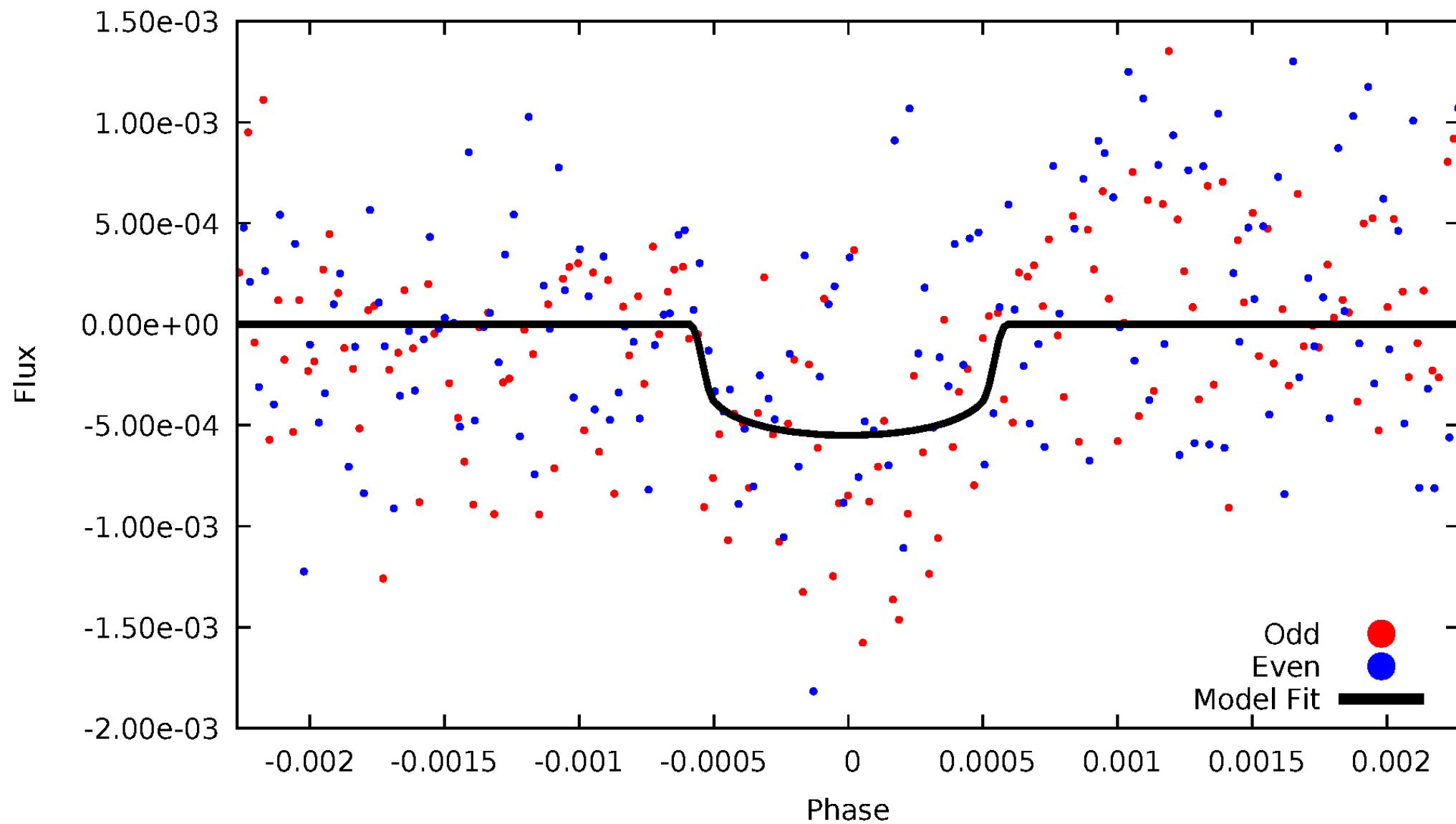


TCE 008242899-01



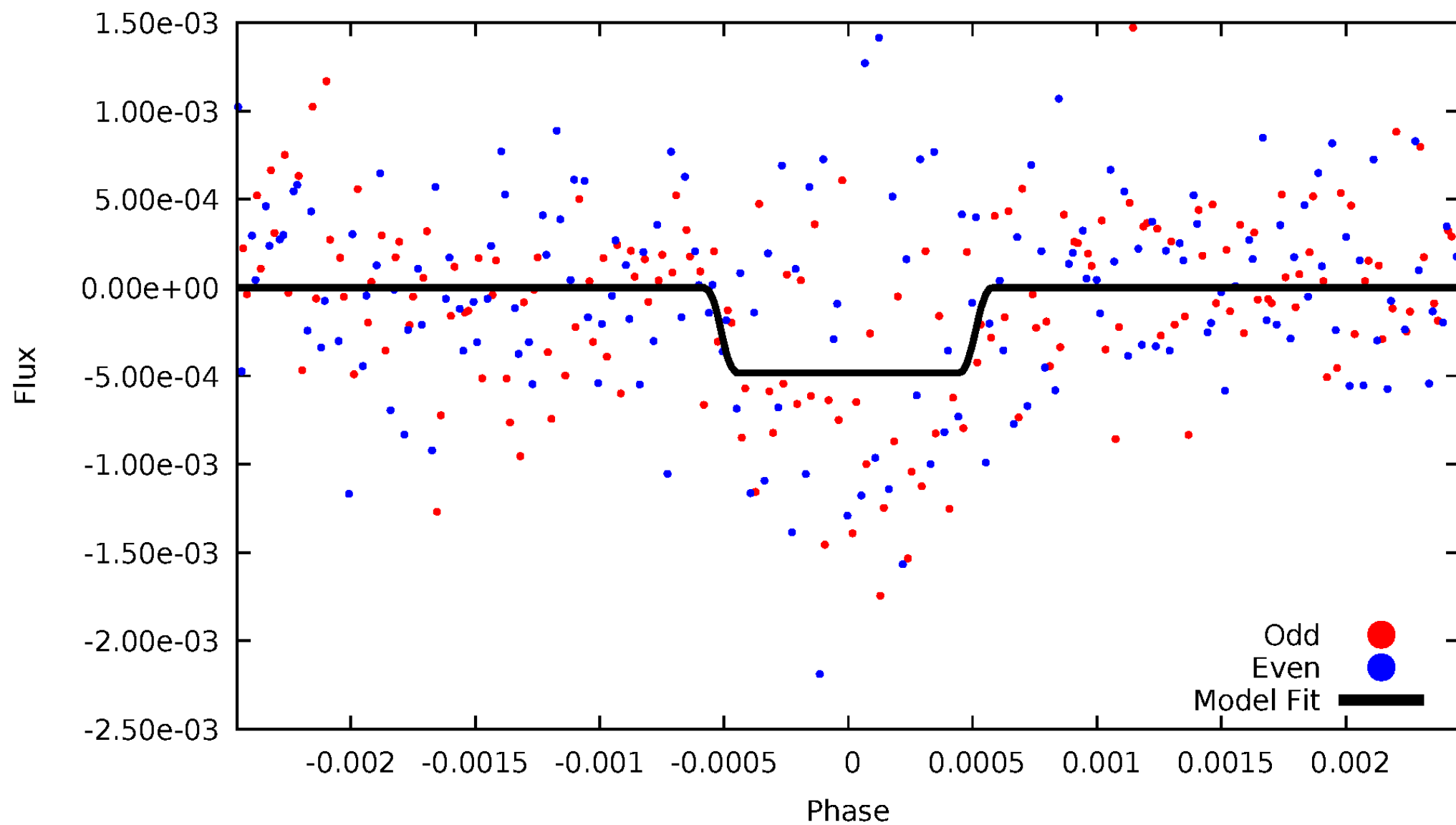
DV Odd/Even

TCE 008242899-01



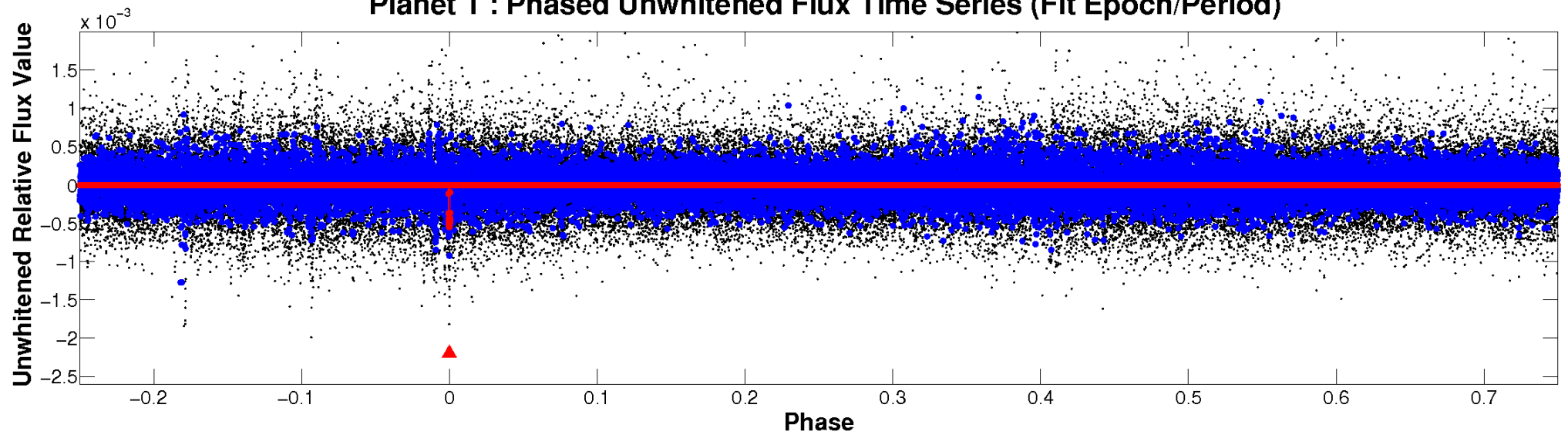
ALT Odd/Even

TCE 008242899-01

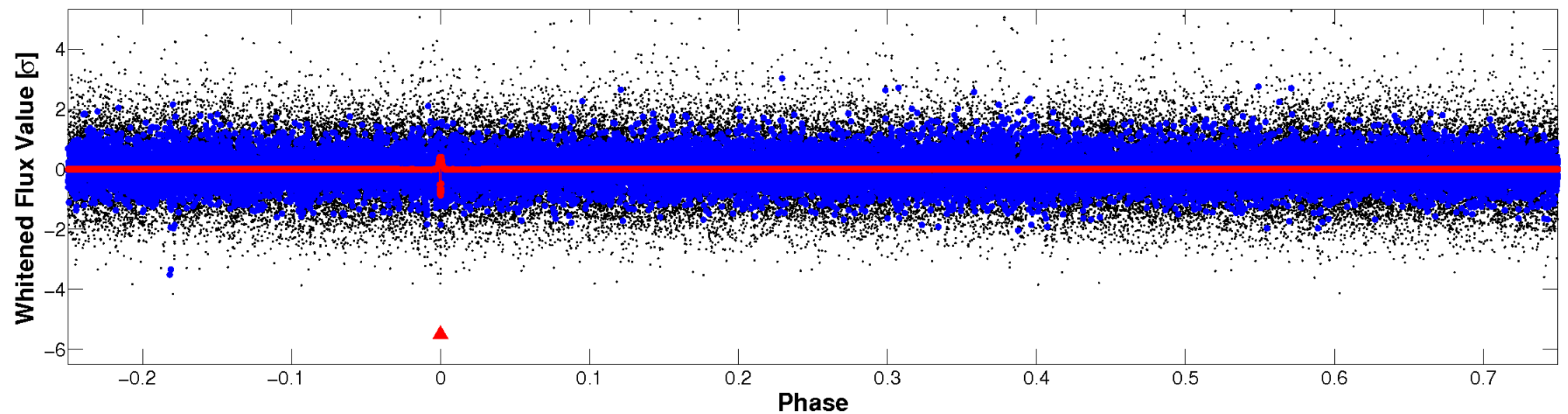


Non-Whitened Vs. Whitened Light Curve

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

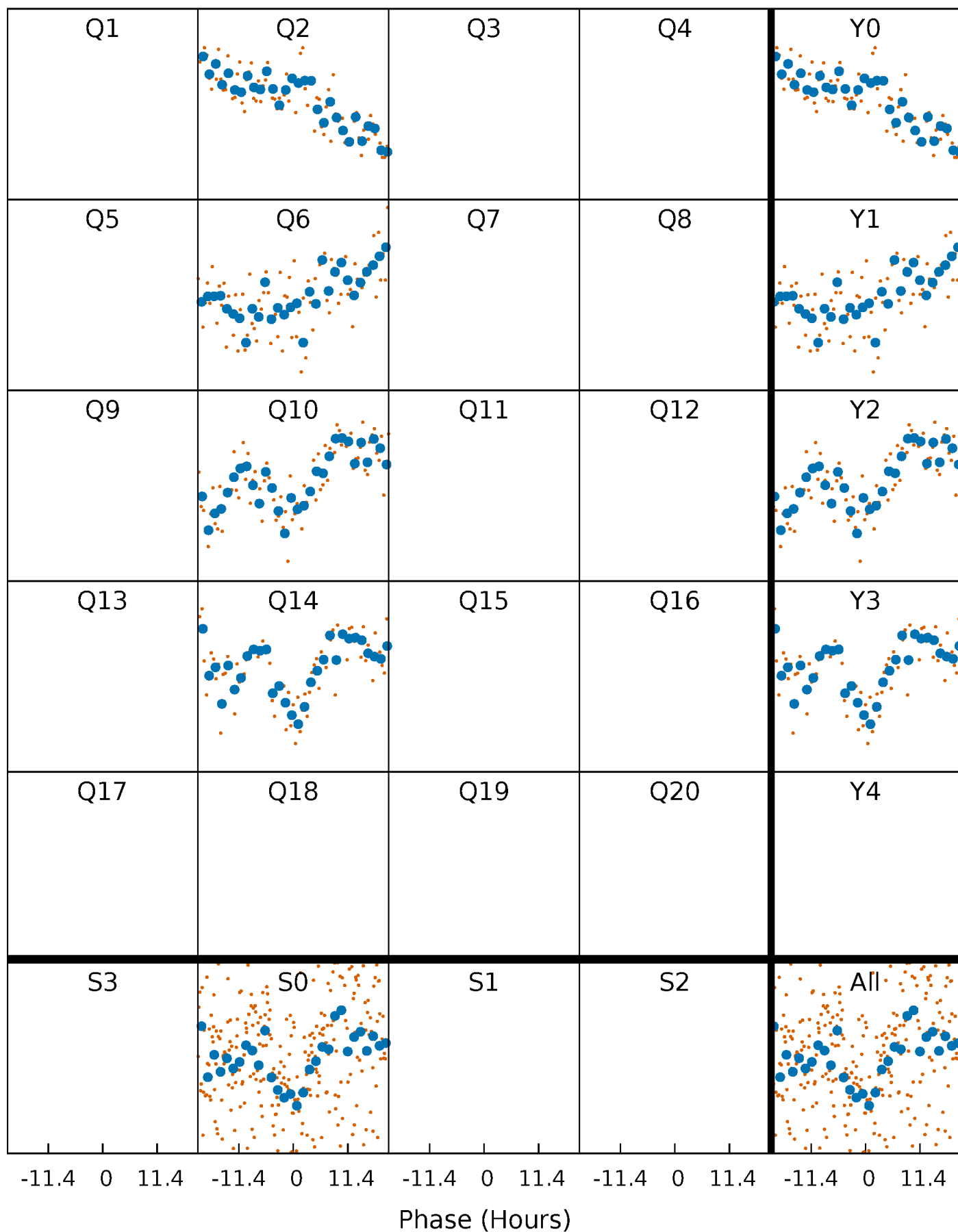


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



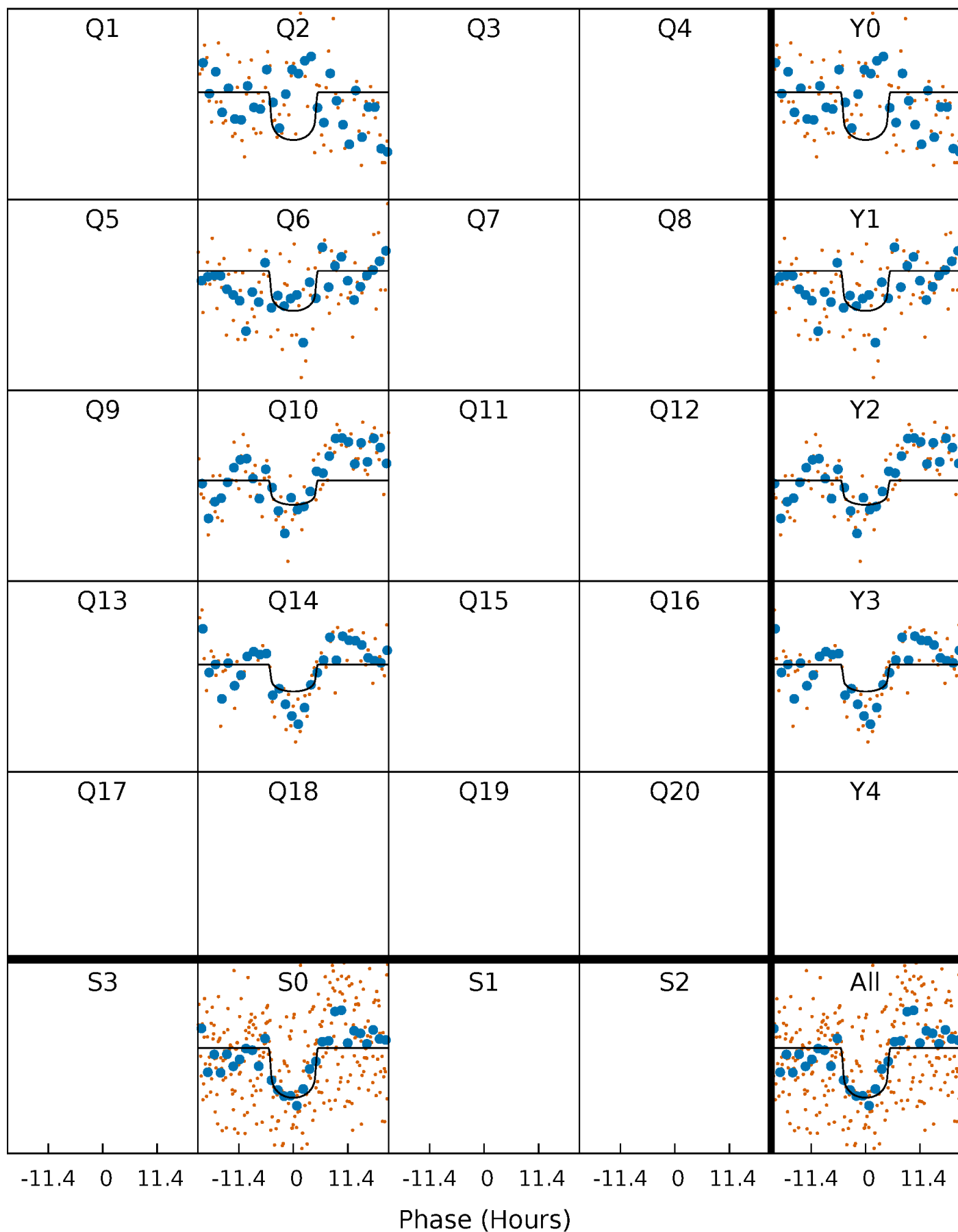
PDC Quarter-Phased Transit Curves

TCE 008242899-01 $P=367.022335$ Days $T_0=238.707094$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 008242899-01 P=367.022335 Days $T_0=238.707094$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

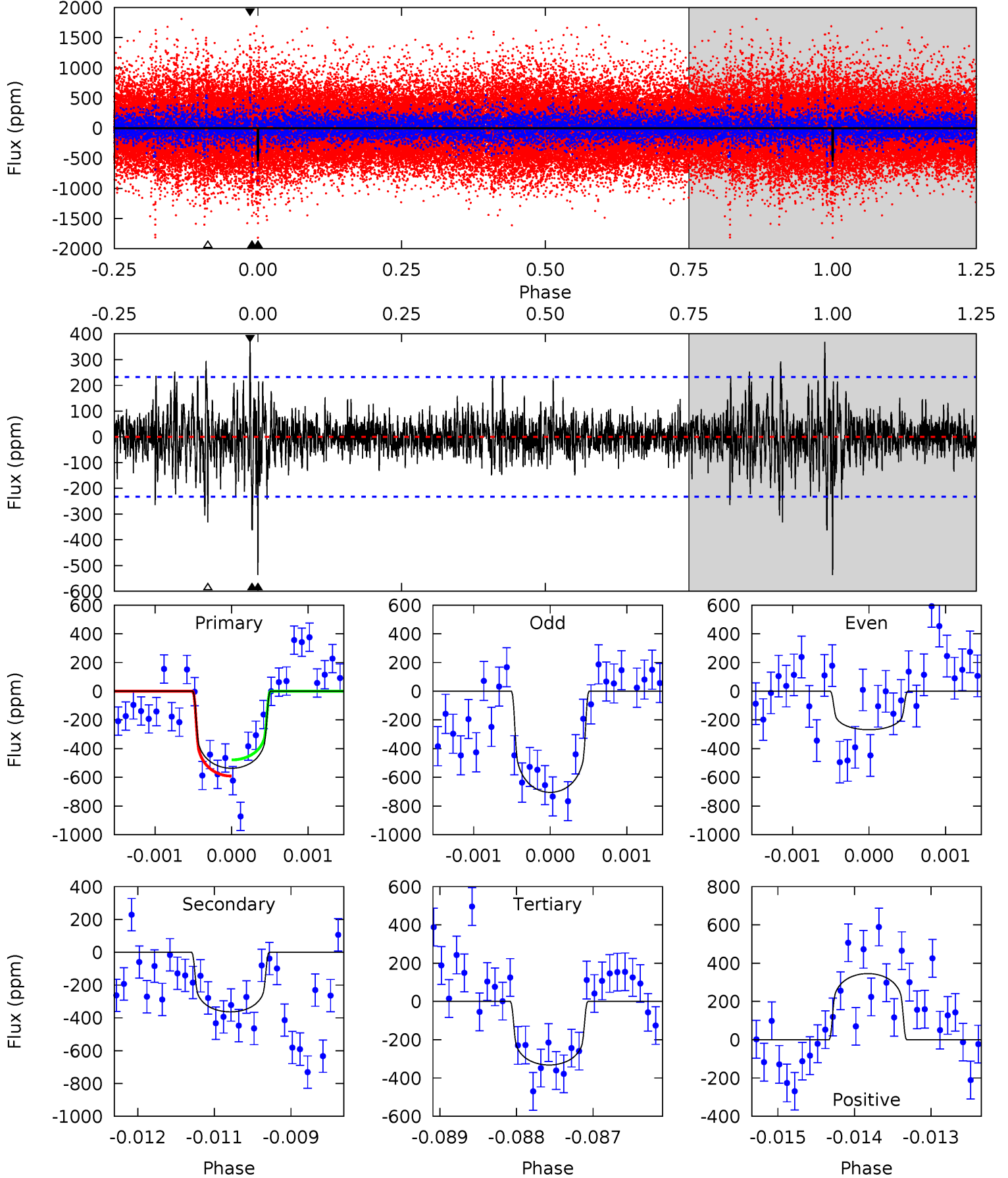
TCE 008242899-01 $P=367.000360$ Days $T_0=238.745765$ (BKJD)



DV Model-Shift Uniqueness Test

008242899-01, P = 367.022335 Days, E = 238.707094 Days

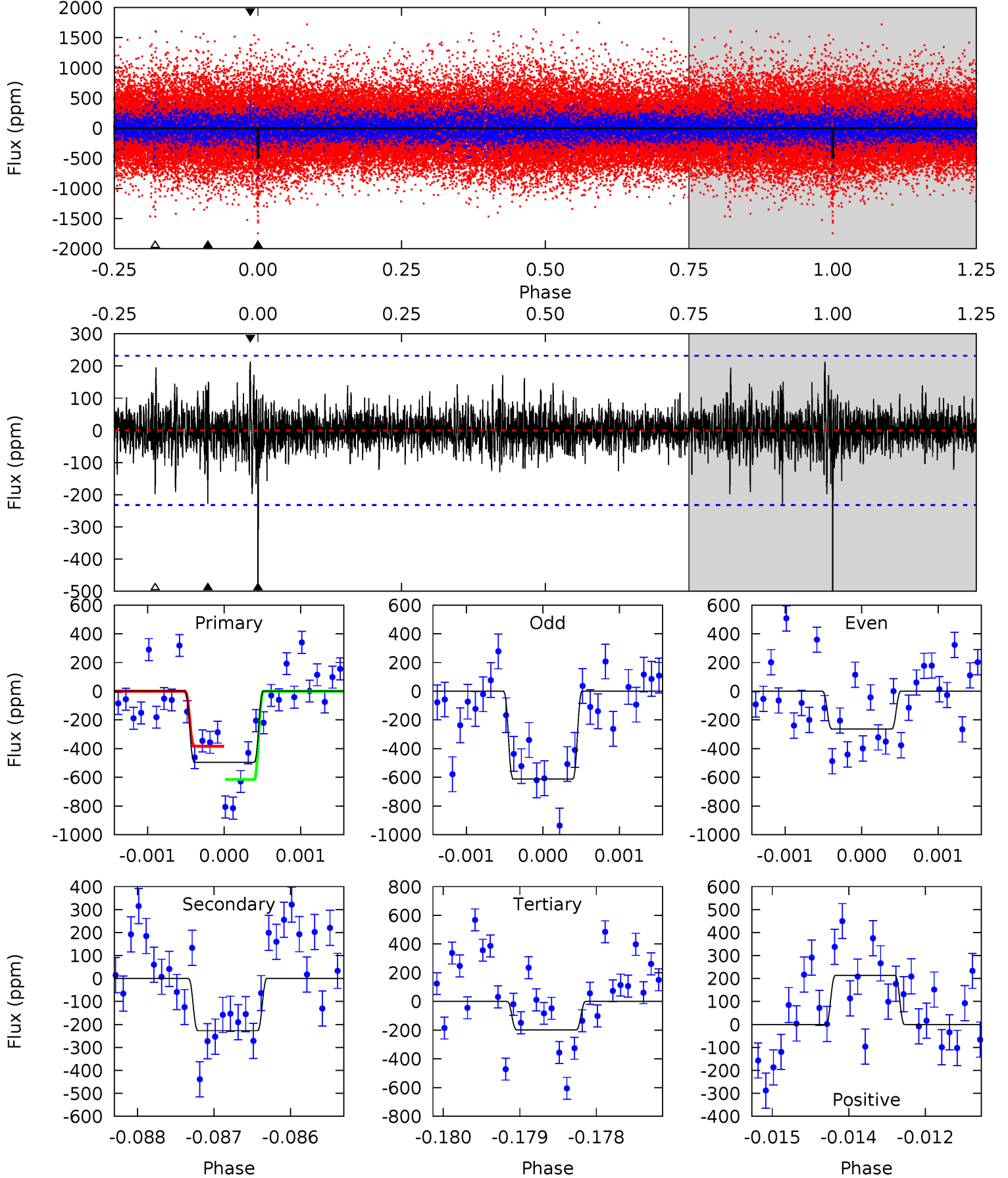
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.5	8.48	7.74	8.06	5.42	3.25	1.49	4.79	4.47	0.74	0.42	5.09	0.85	0.41	1.32



Alt Model-Shift Uniqueness Test

008242899-01, P = 367.000360 Days, E = 238.745765 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.6	5.32	4.63	5.00	5.43	3.25	1.01	6.99	6.62	0.69	0.32	4.13	0.74	0.30	2.71



Stellar Parameters For KIC 008242899

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5960^{+160}_{-196}	$4.516^{+0.052}_{-0.208}$	$-0.200^{+0.300}_{-0.300}$	$0.906^{+0.272}_{-0.091}$	$0.983^{+0.116}_{-0.129}$	$1.859^{+0.483}_{-0.963}$
	+3%/-3%	+1%/-5%	+150%/-150%	+30%/-10%	+12%/-13%	+26%/-52%
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 008242899-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-363 ± 43	$2.58^{+1.67}_{-1.40}$	357^{+24}_{-17}	5249^{+2627}_{-979}	$29125^{+115072}_{-18706}$
Alt.	-227 ± 43	$2.55^{+1.83}_{-1.48}$	357^{+24}_{-17}	4778^{+2312}_{-875}	18497^{+88477}_{-12311}

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 $A_{obs} \gg 1.0$

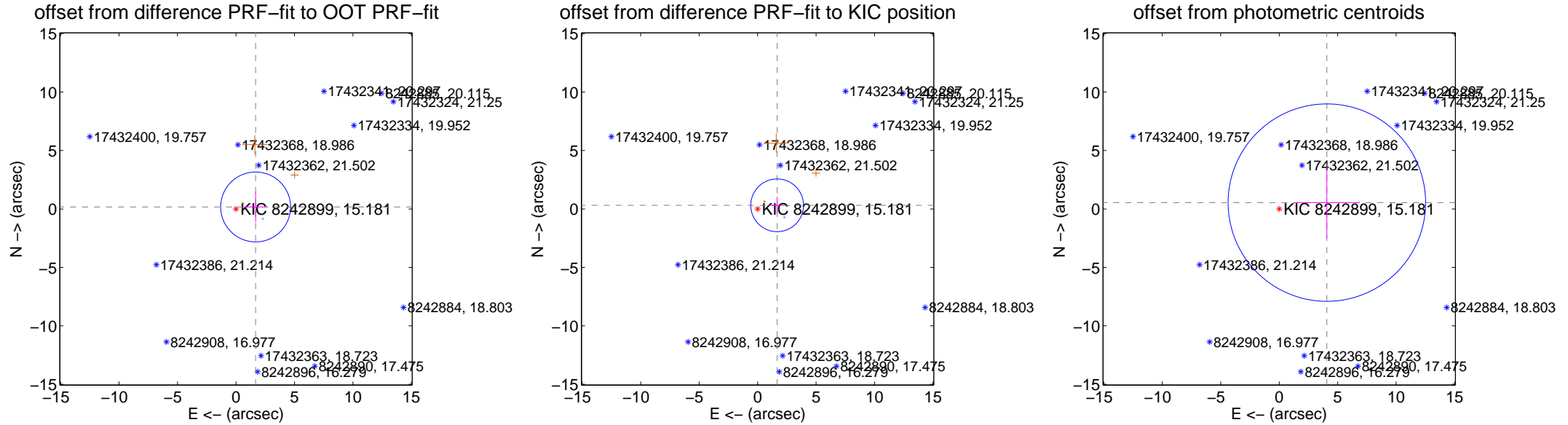
DV Centroid Data

Supplemental centroid analysis for 008242899-01. Kepler magnitude: 15.18. Transit SNR 7.13

There are 1 quarters with good PRF difference image offsets

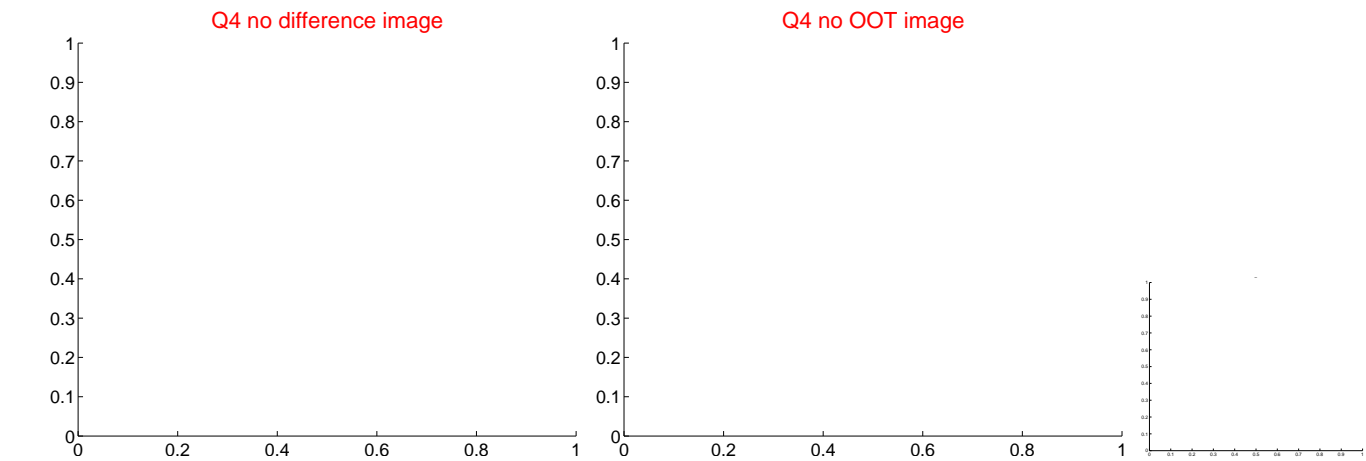
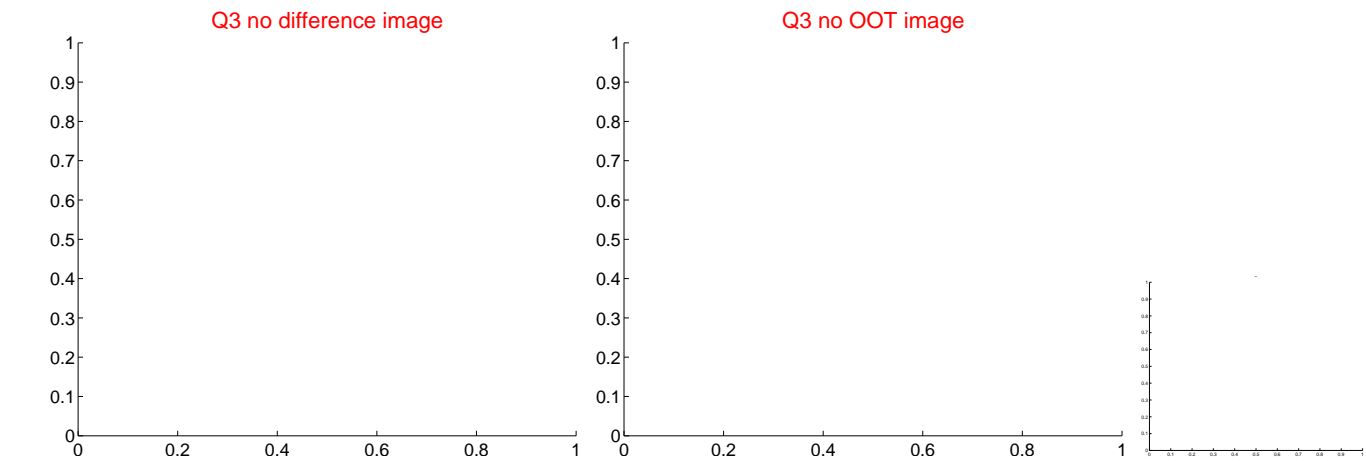
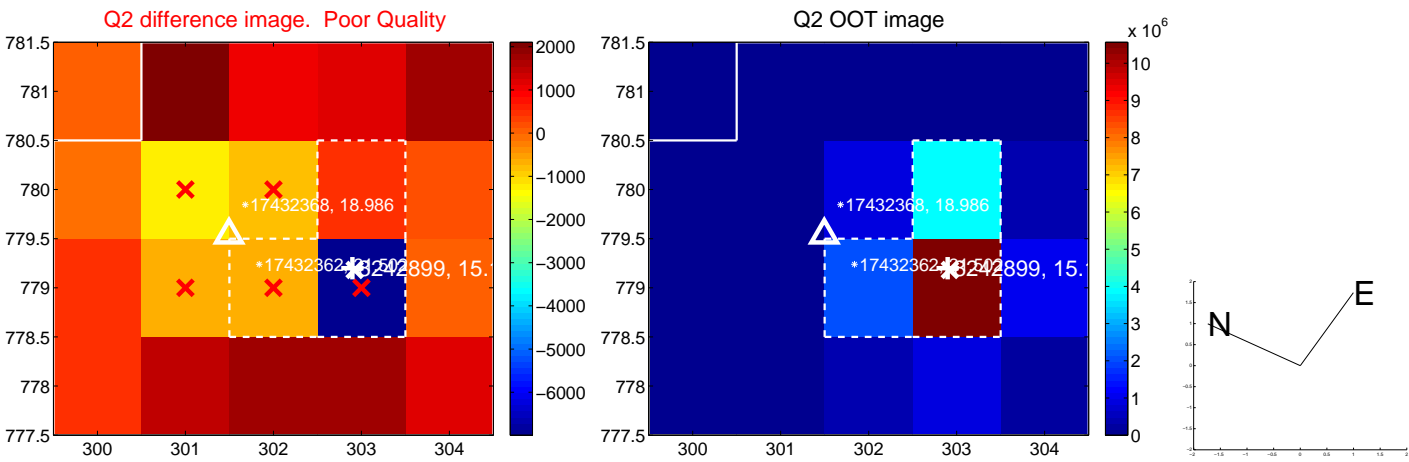
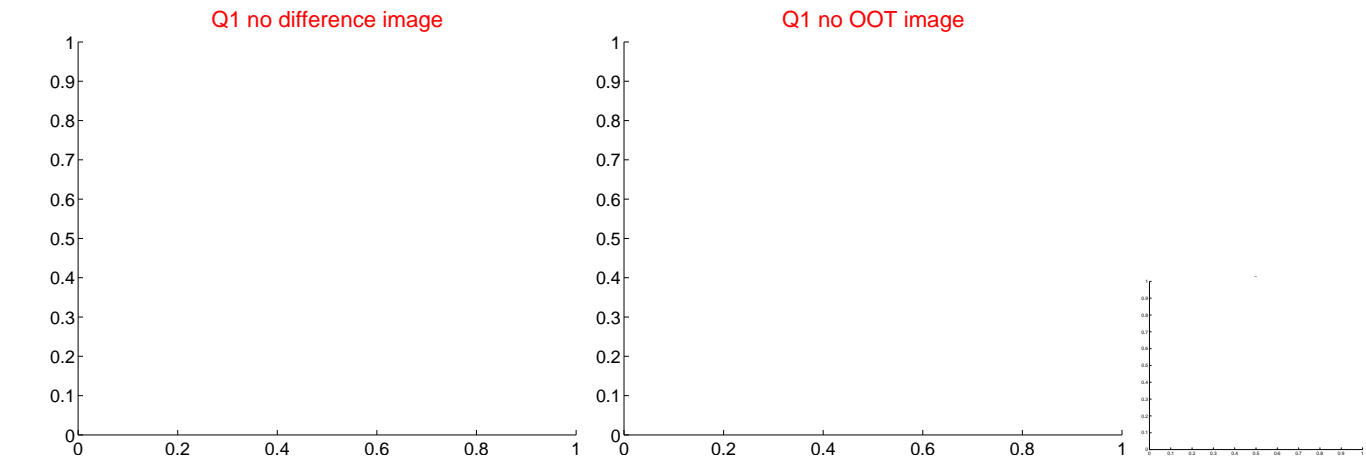
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.687 ± 0.996	1.69	-1.679 ± 0.984	0.170 ± 1.298
PRF-fit source offset from KIC position	1.700 ± 0.752	2.26	-1.672 ± 0.753	0.311 ± 0.726
photometric centroid source offset	4.11 ± 2.82	1.46	-4.08 ± 2.81	0.54 ± 3.02

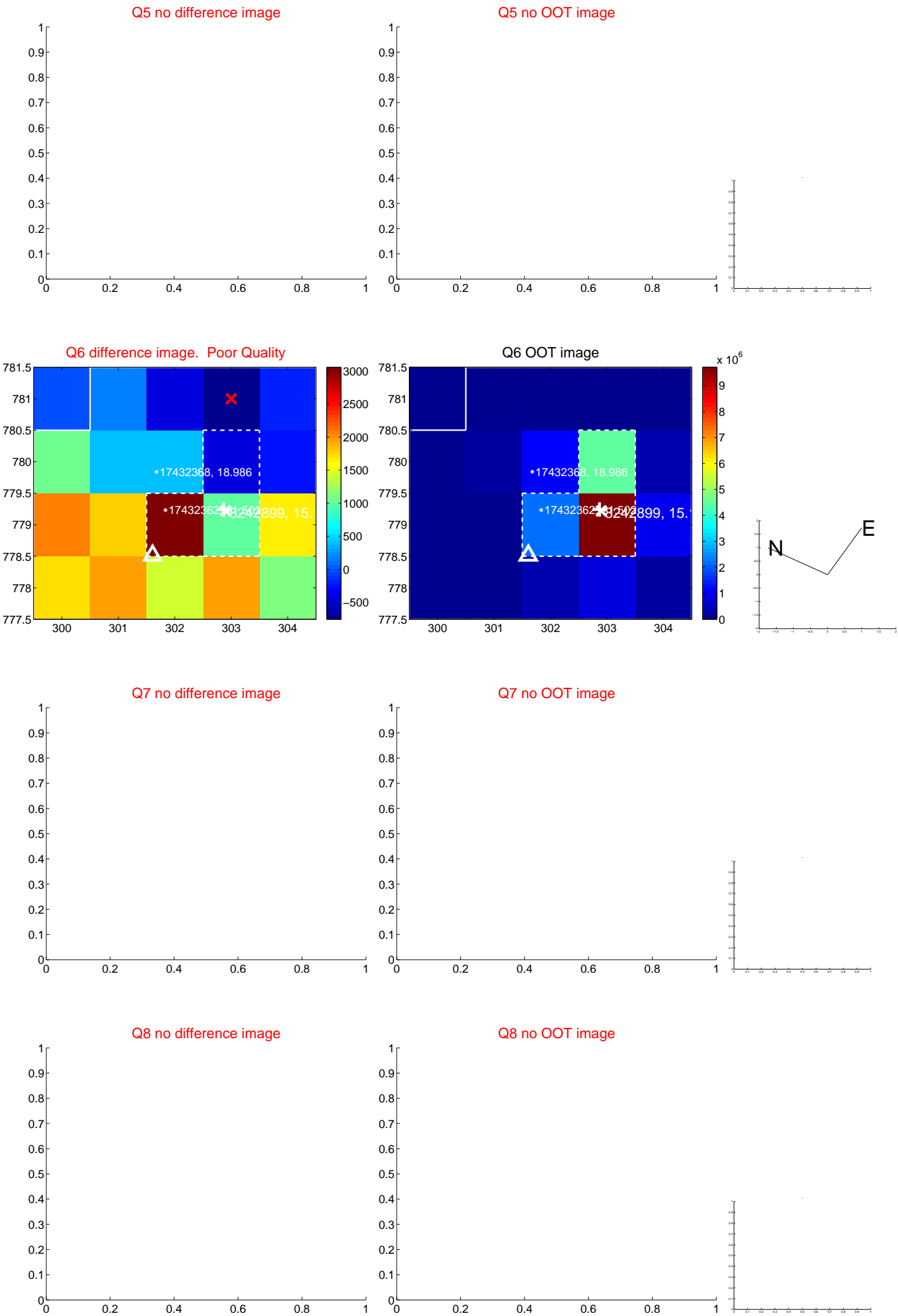


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

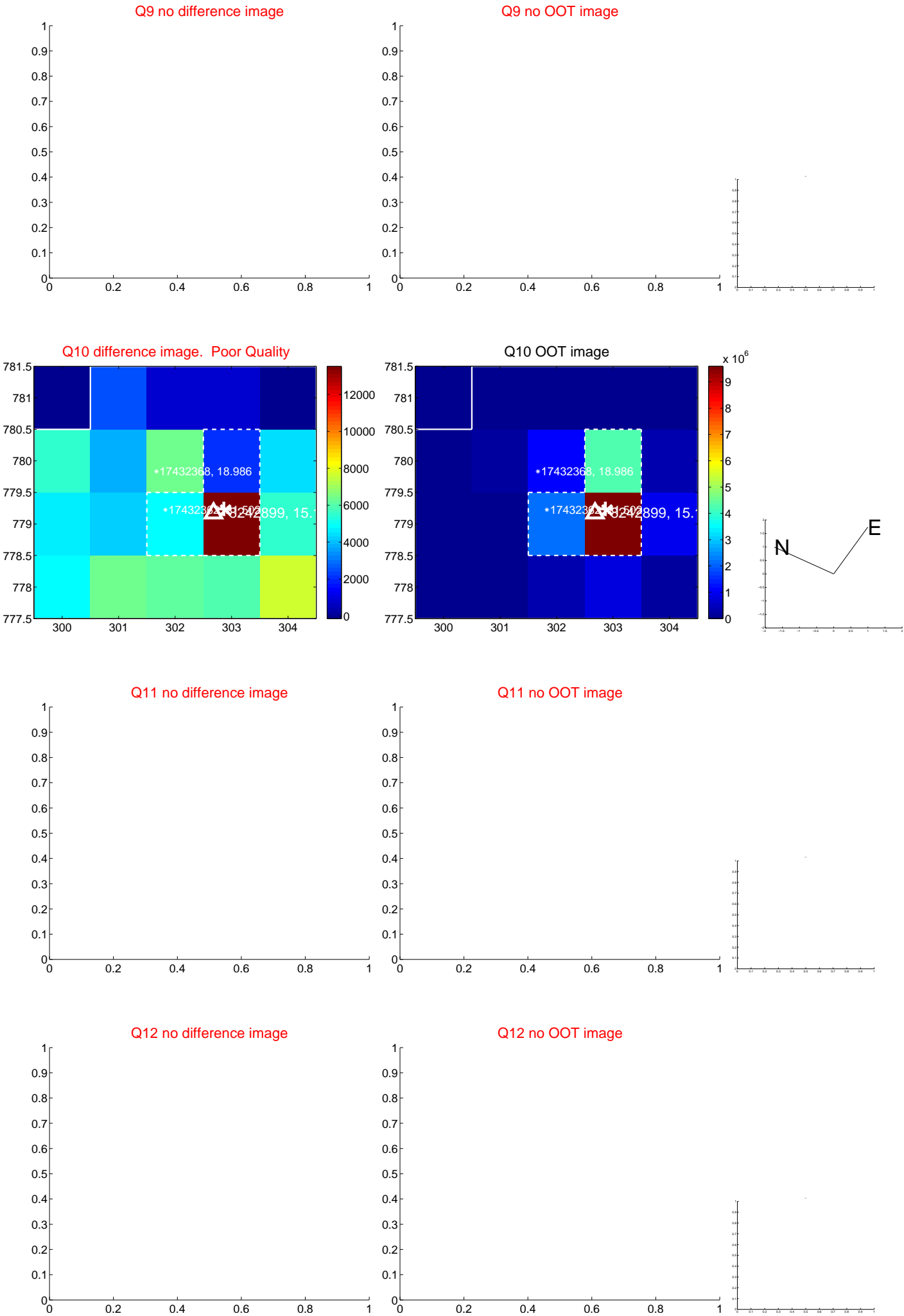
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



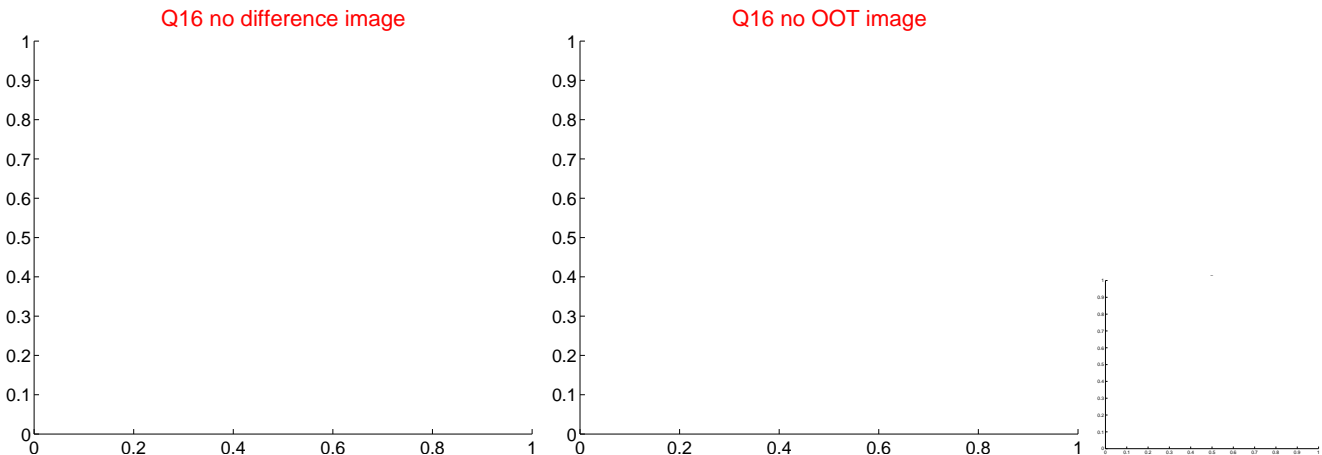
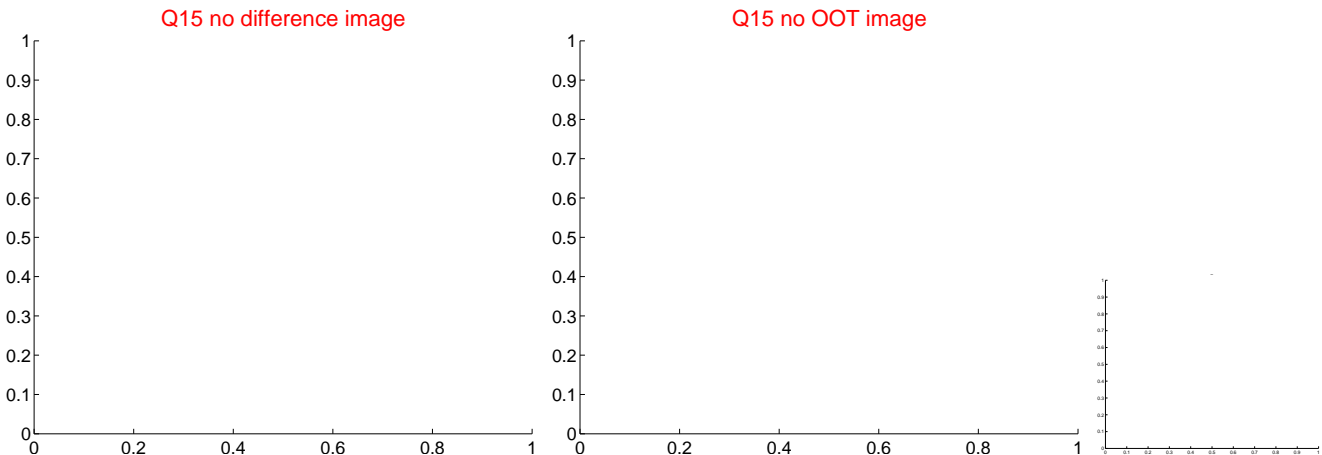
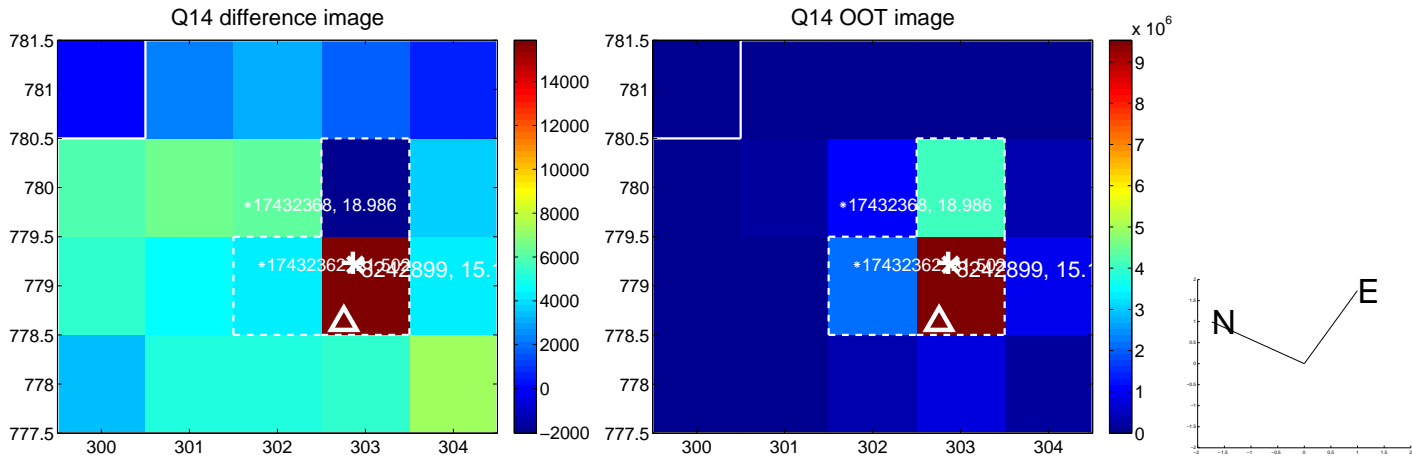
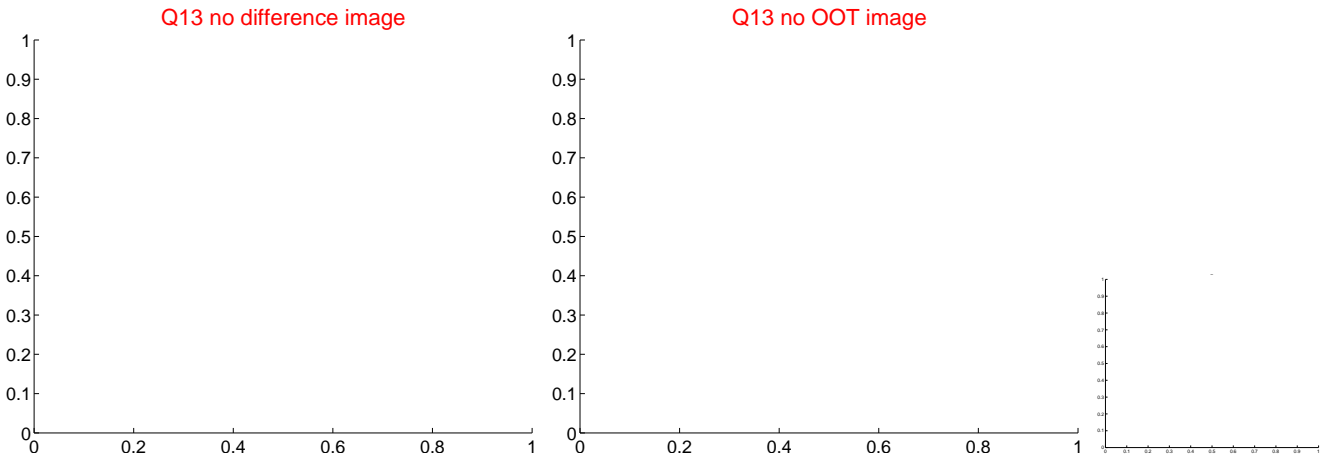
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



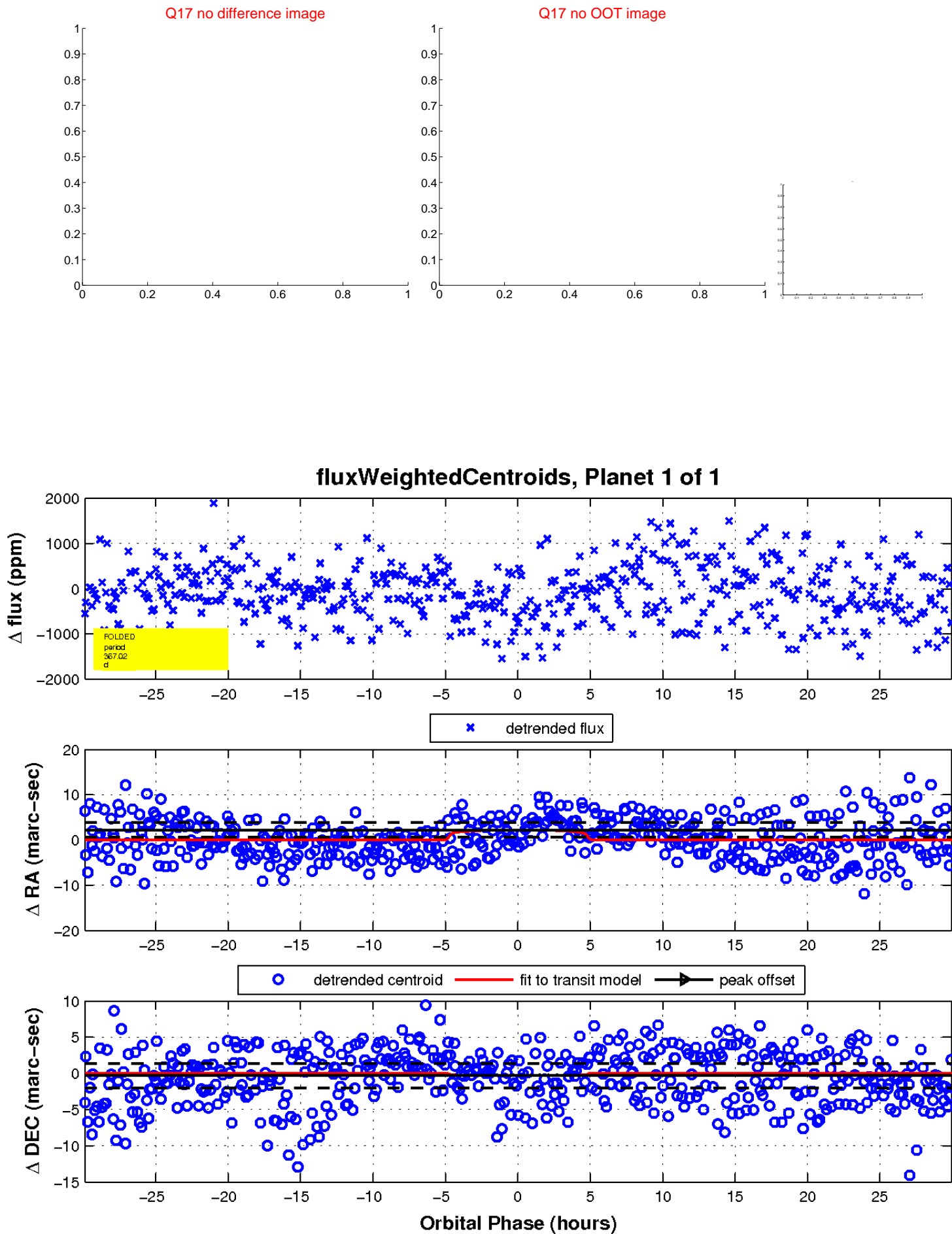
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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

