

KIC 008242068

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})
008242068-01	OBS	No	532.134061	390.488010	930.3	21.745	9.5	10.3	1.11	6325	3.79	0.97

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008242068-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—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.

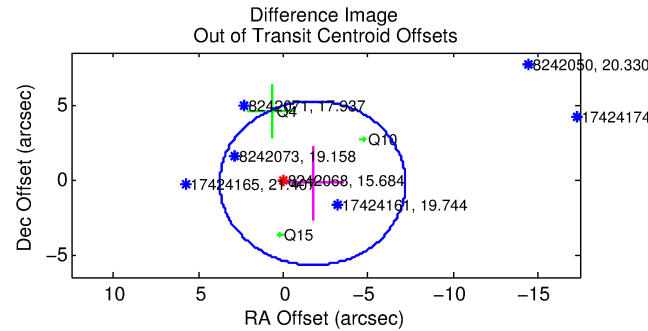
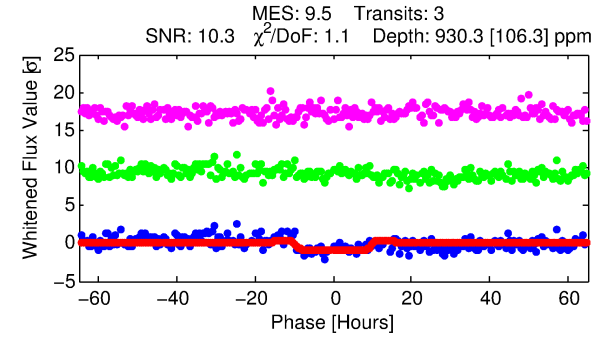
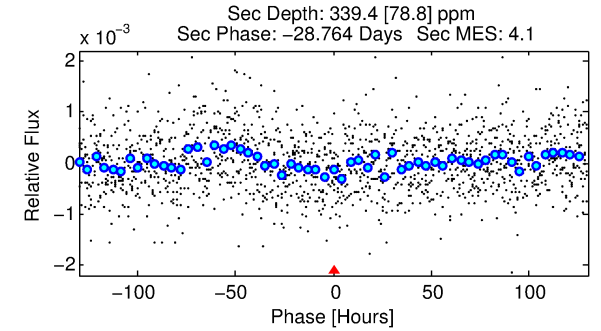
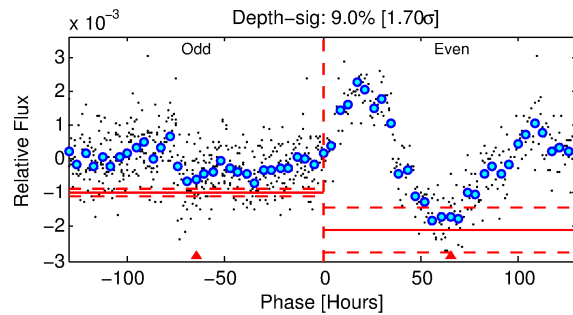
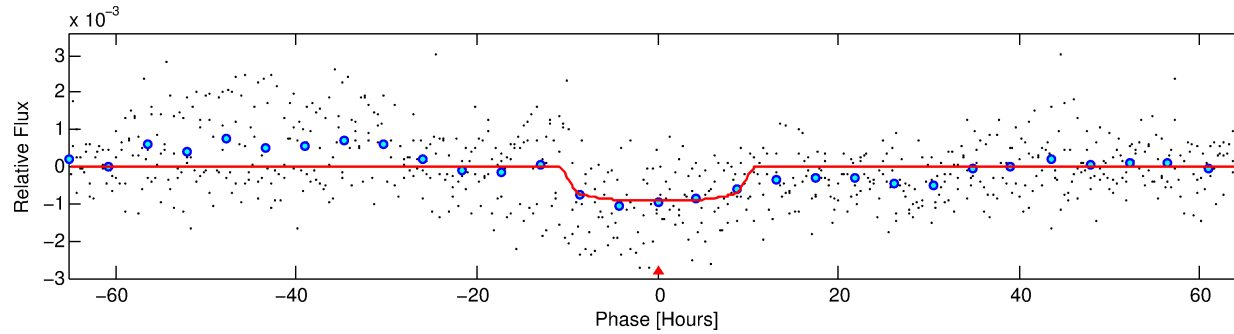
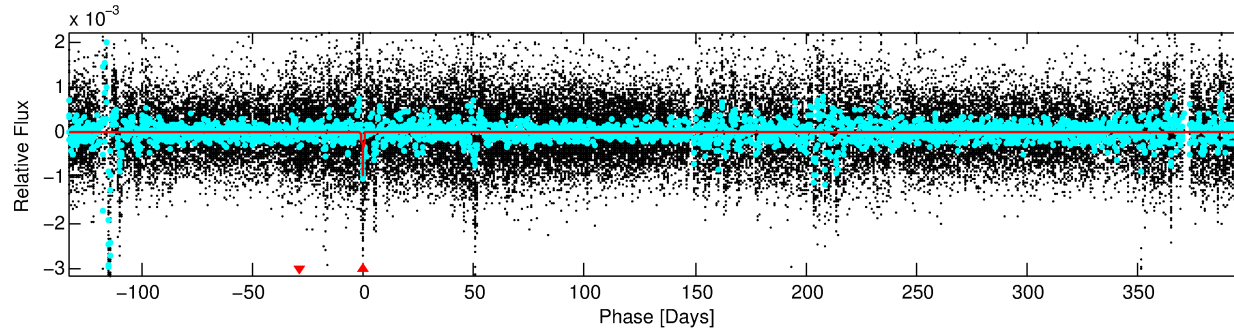
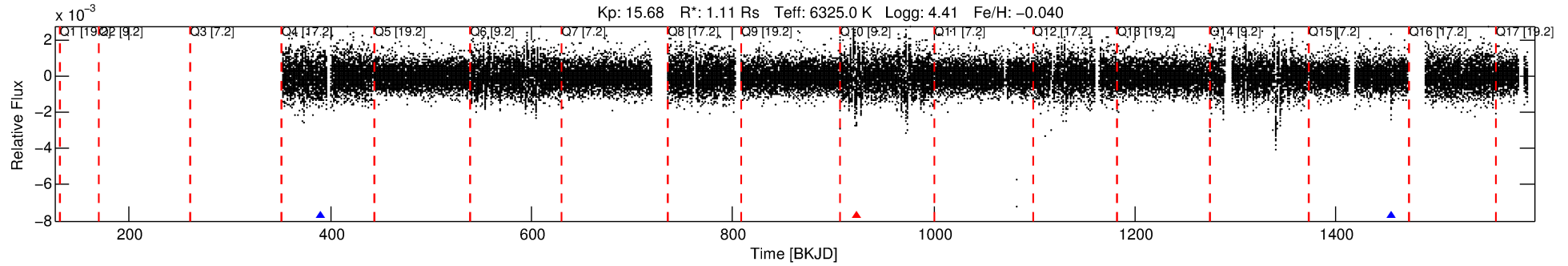
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008242068-01

No Significant Match Found

DV One-Page Summary

KIC: 8242068 Candidate: 1 of 1 Period: 532.134 d



DV Fit Results:

Period = 532.13406 [0.02040] d
Epoch = 390.4880 [0.0297] BKJD
Rp/R* = 0.0312 [0.0037]
a/R* = 115.96 [59.31]
b = 0.82 [0.20]
Seff = 0.97 [0.39]
Teq = 253 [25] K
Rp = 3.79 [1.26] Re
a = 1.3493 [0.3494] AU
Ag = 23663.04 [11800.77] [2.01 σ]
Teffp = 4857 [442] K [10.40 σ]

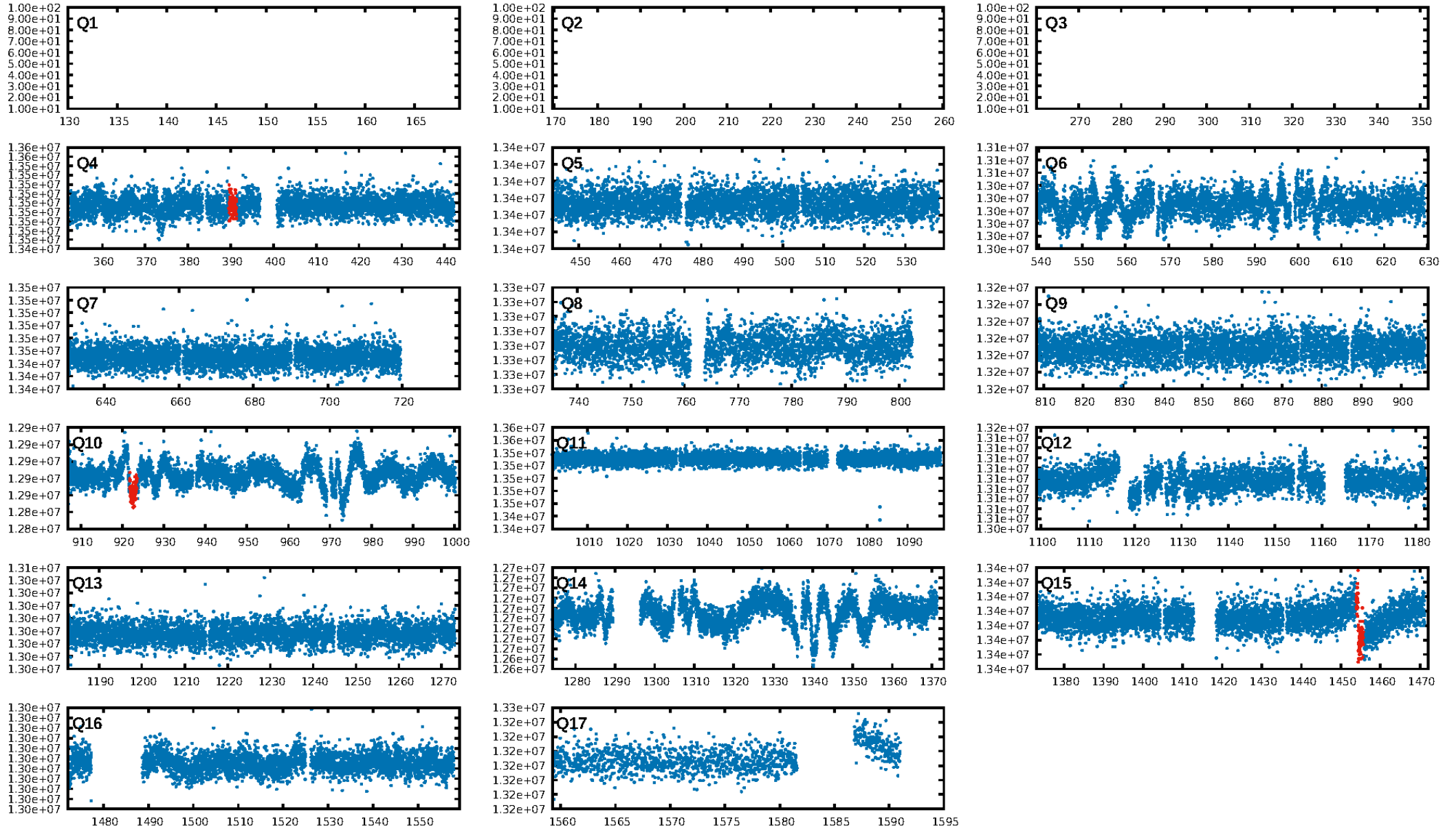
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 97.8%
Bootstrap-pfa: 1.27e-09
RollingBand-fgt: 0.67 [2/3]
GhostDiagnostic-chr: 3.356
Centroid-sig: 1.8%
Centroid-so: 2.928 arcsec [1.71 σ]
OotOffset-rm: 1.760 arcsec [0.96 σ]
KicOffset-rm: 1.782 arcsec [0.97 σ]
OotOffset-st: 1/1/1/0 [3]
KicOffset-st: 1/1/1/0 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

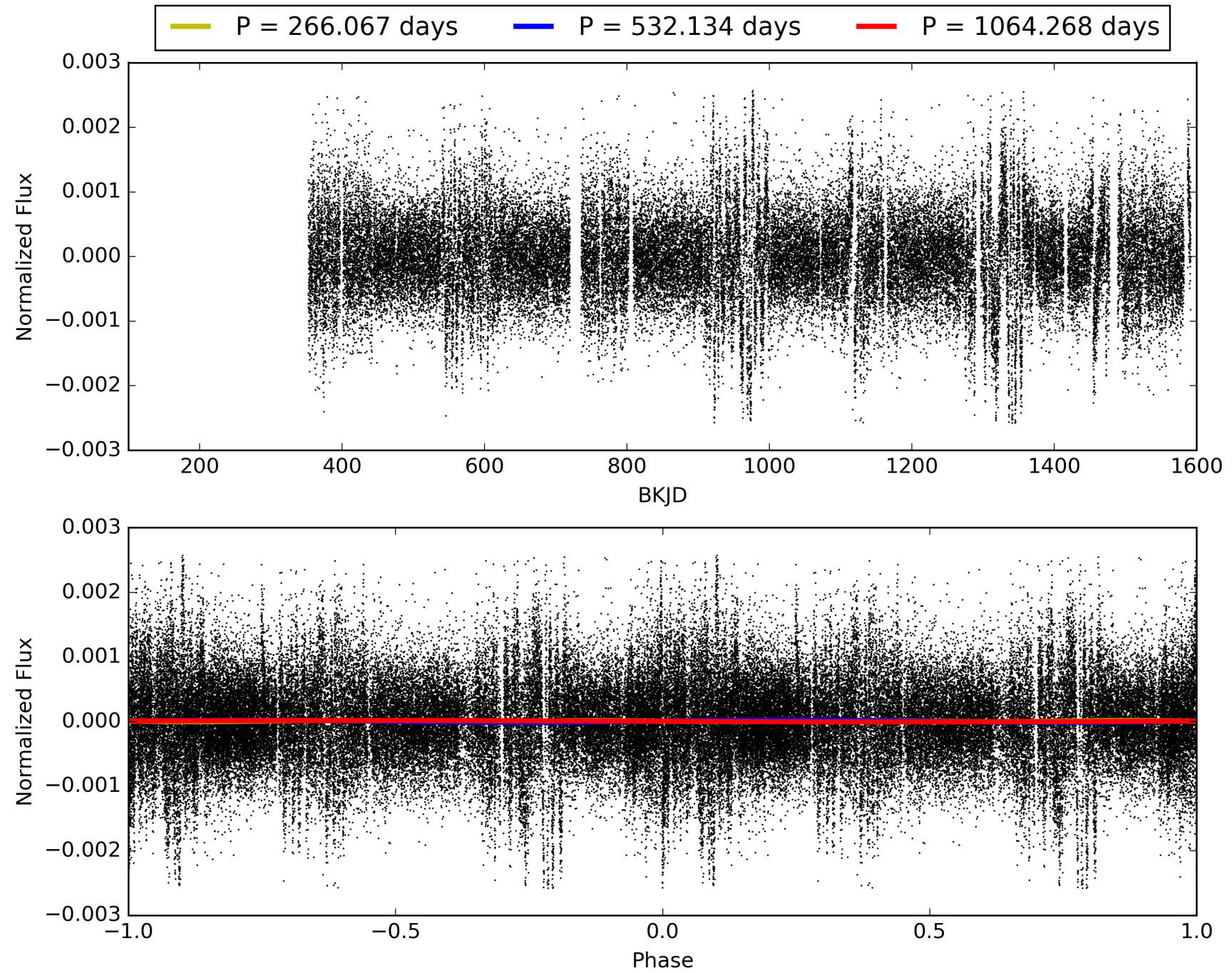
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 05:47:20 Z

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

TCE 008242068-01, PDC Light Curves

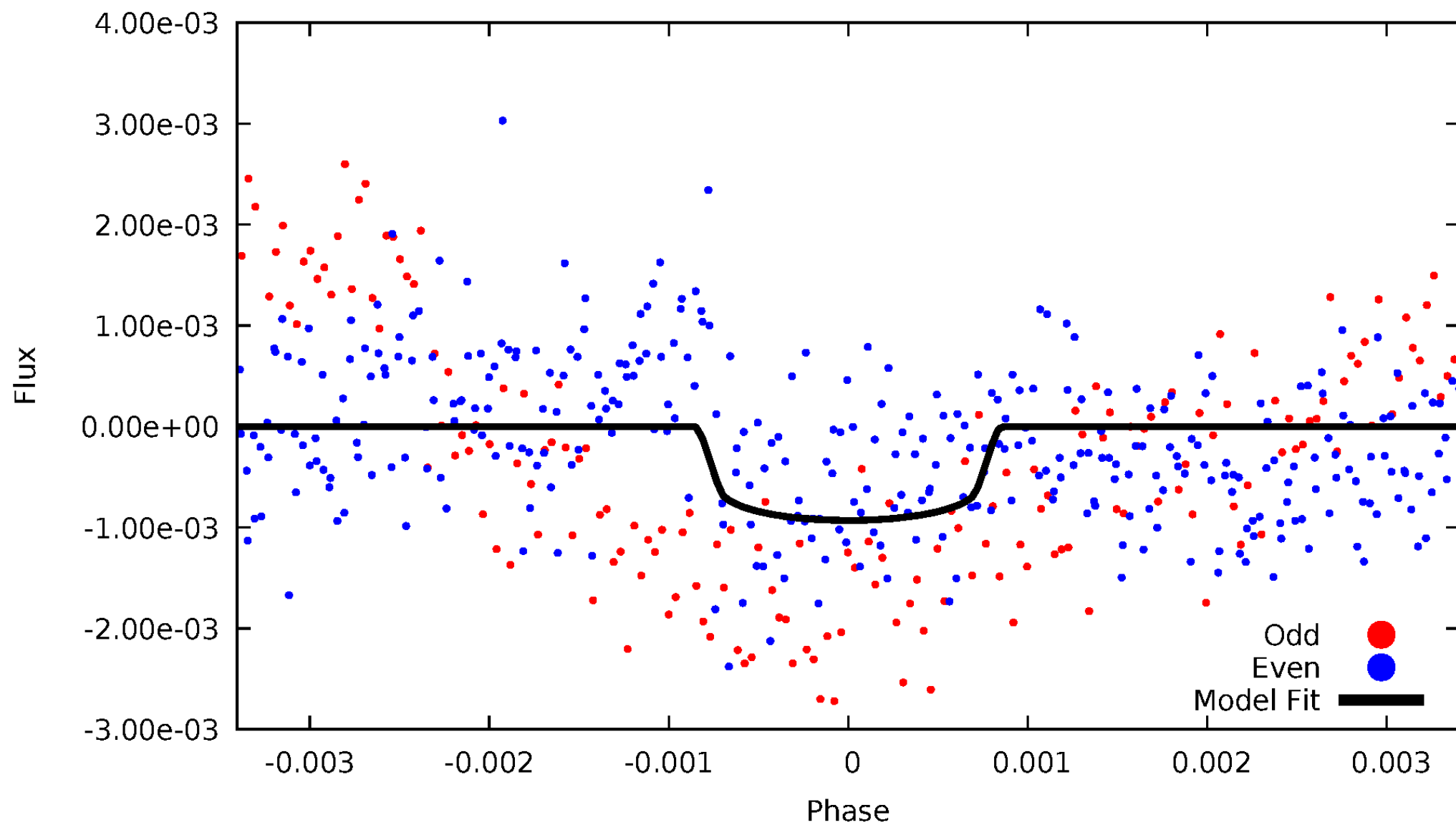


TCE 008242068-01



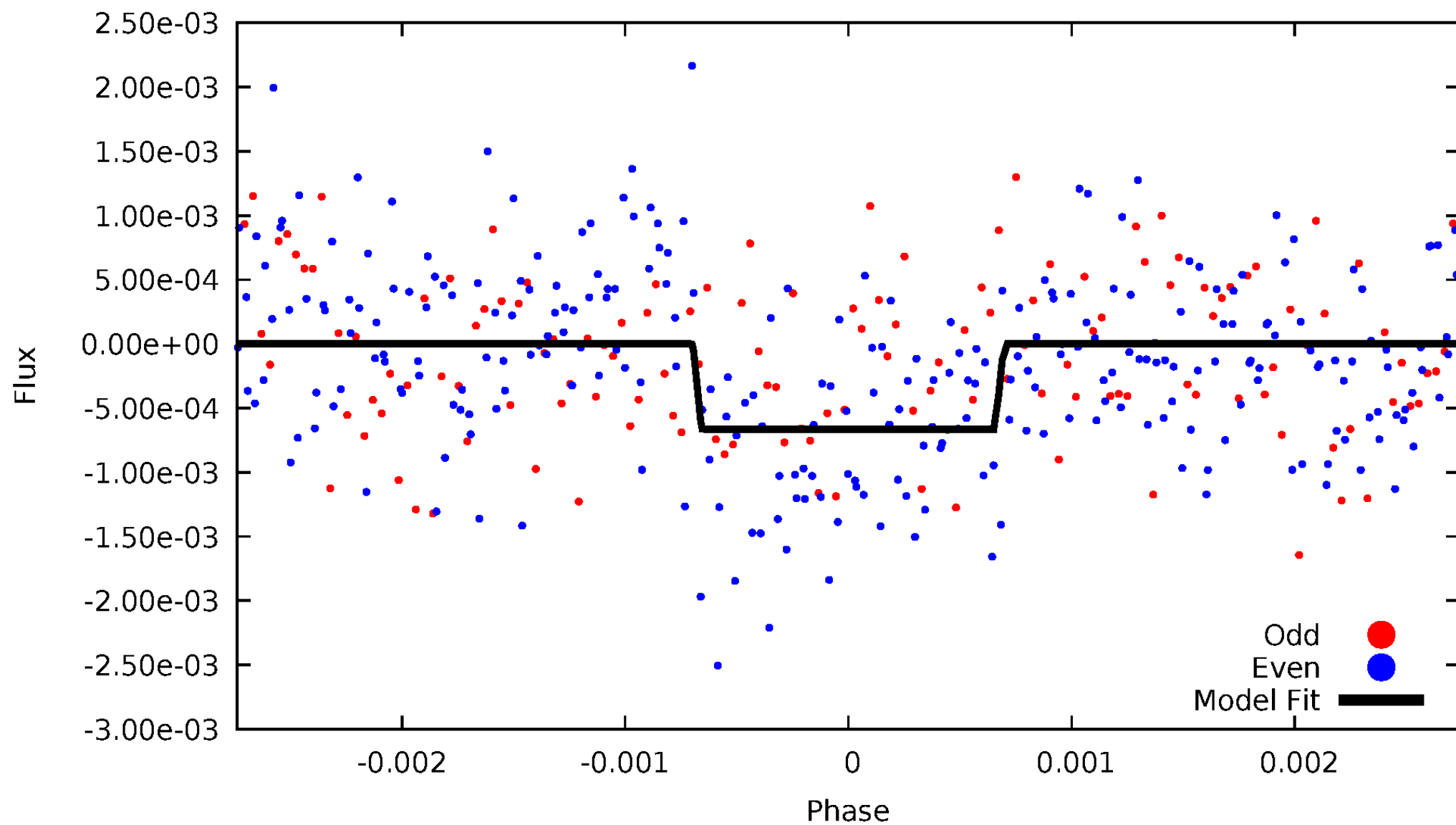
DV Odd/Even

TCE 008242068-01

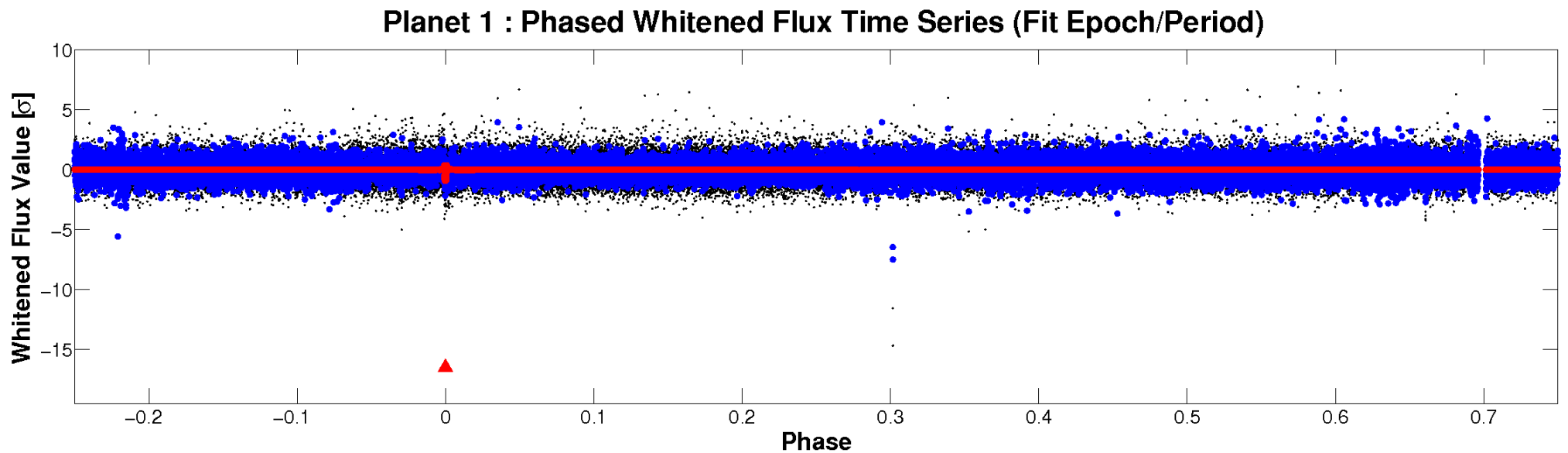
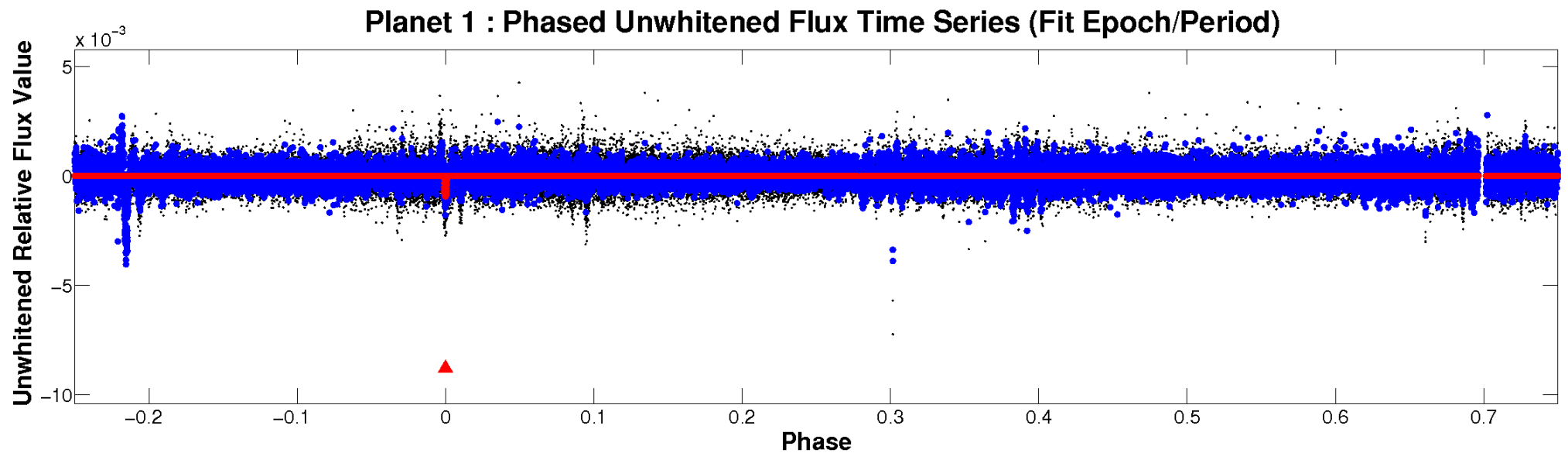


ALT Odd/Even

TCE 008242068-01

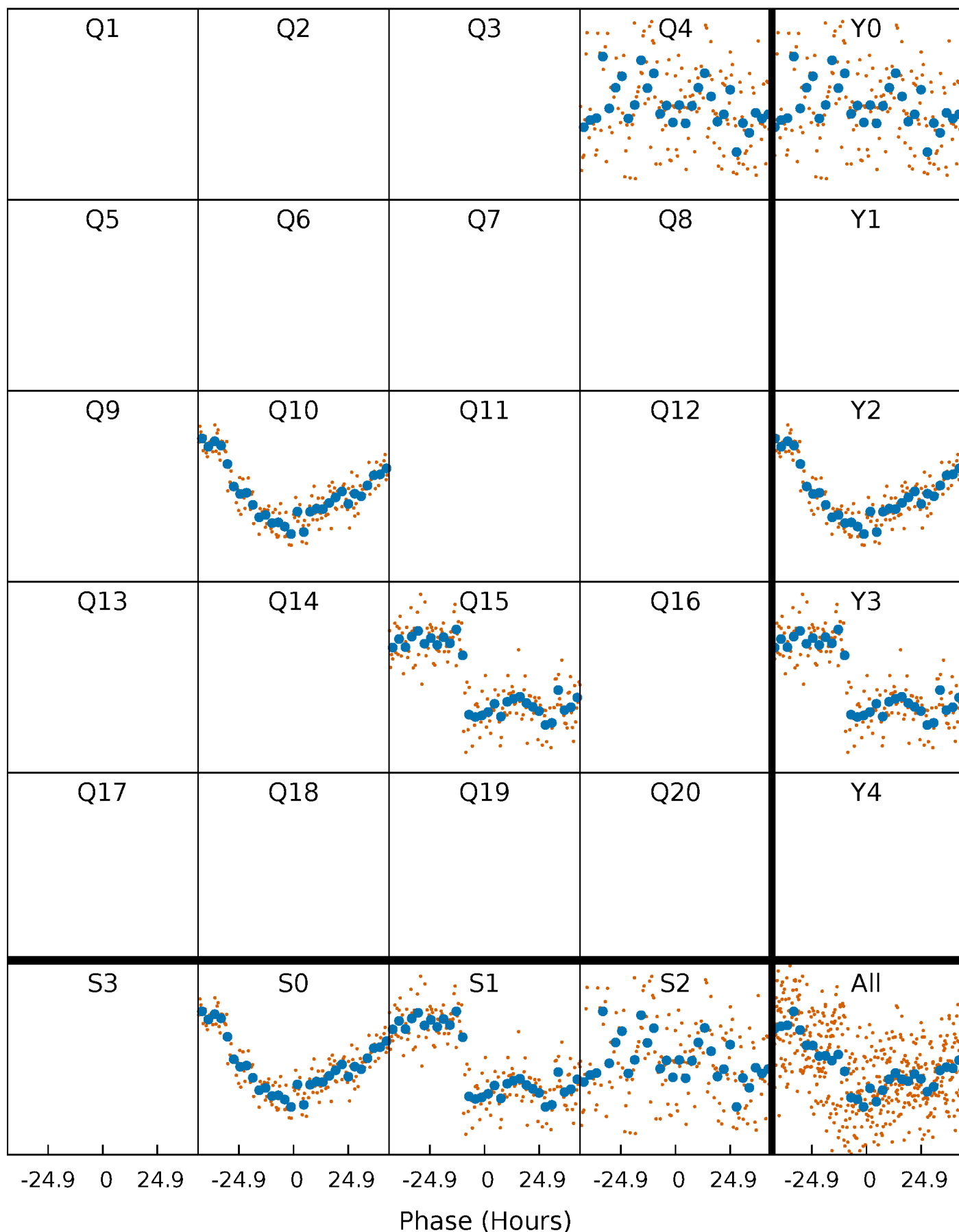


Non-Whitened Vs. Whitened Light Curve



PDC Quarter-Phased Transit Curves

TCE 008242068-01 P=532.134061 Days $T_0=390.488010$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 008242068-01 P=532.134061 Days $T_0=390.488010$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

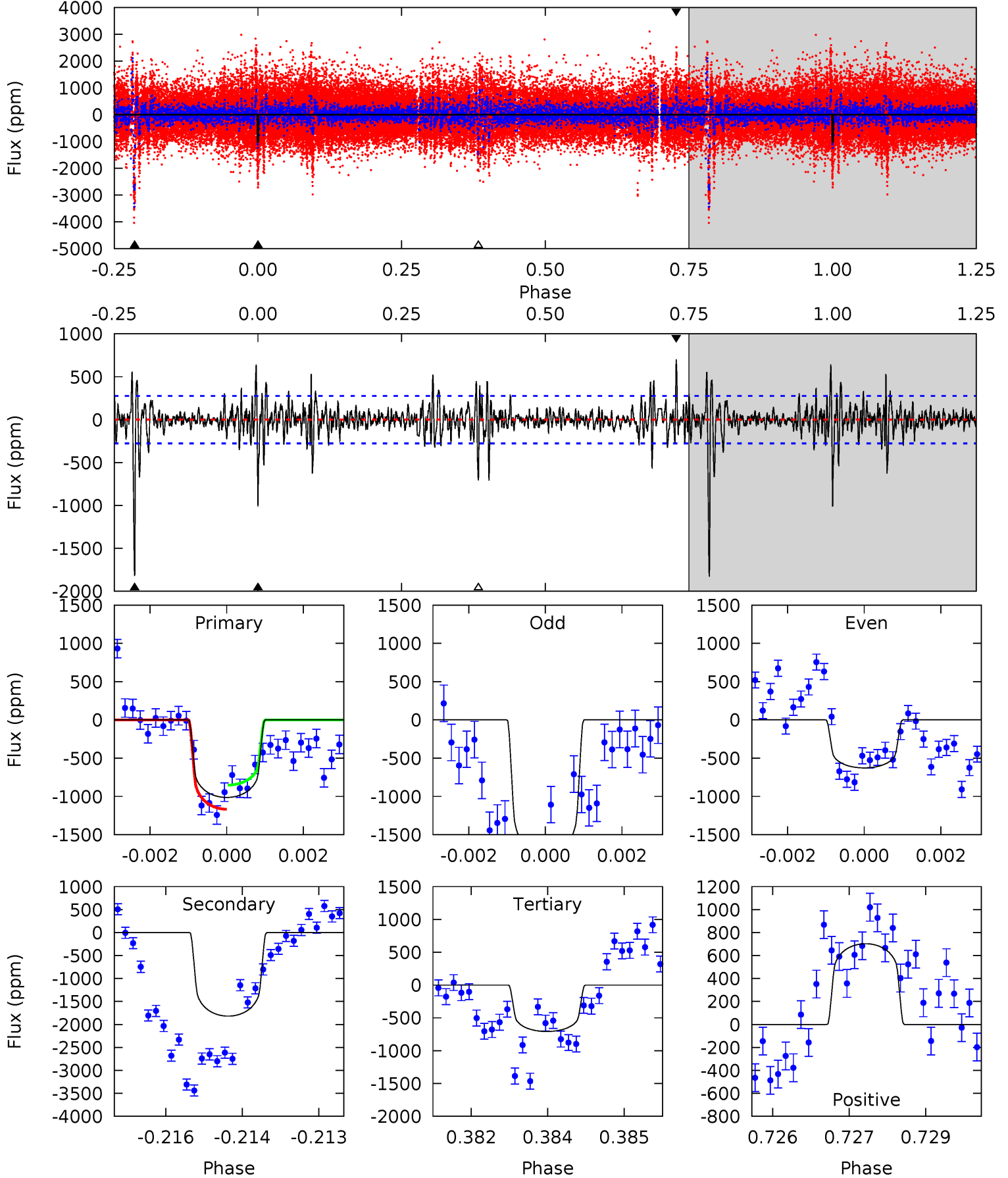
TCE 008242068-01 P=532.103525 Days $T_0=390.506209$ (BKJD)



DV Model-Shift Uniqueness Test

008242068-01, P = 532.134061 Days, E = 390.488010 Days

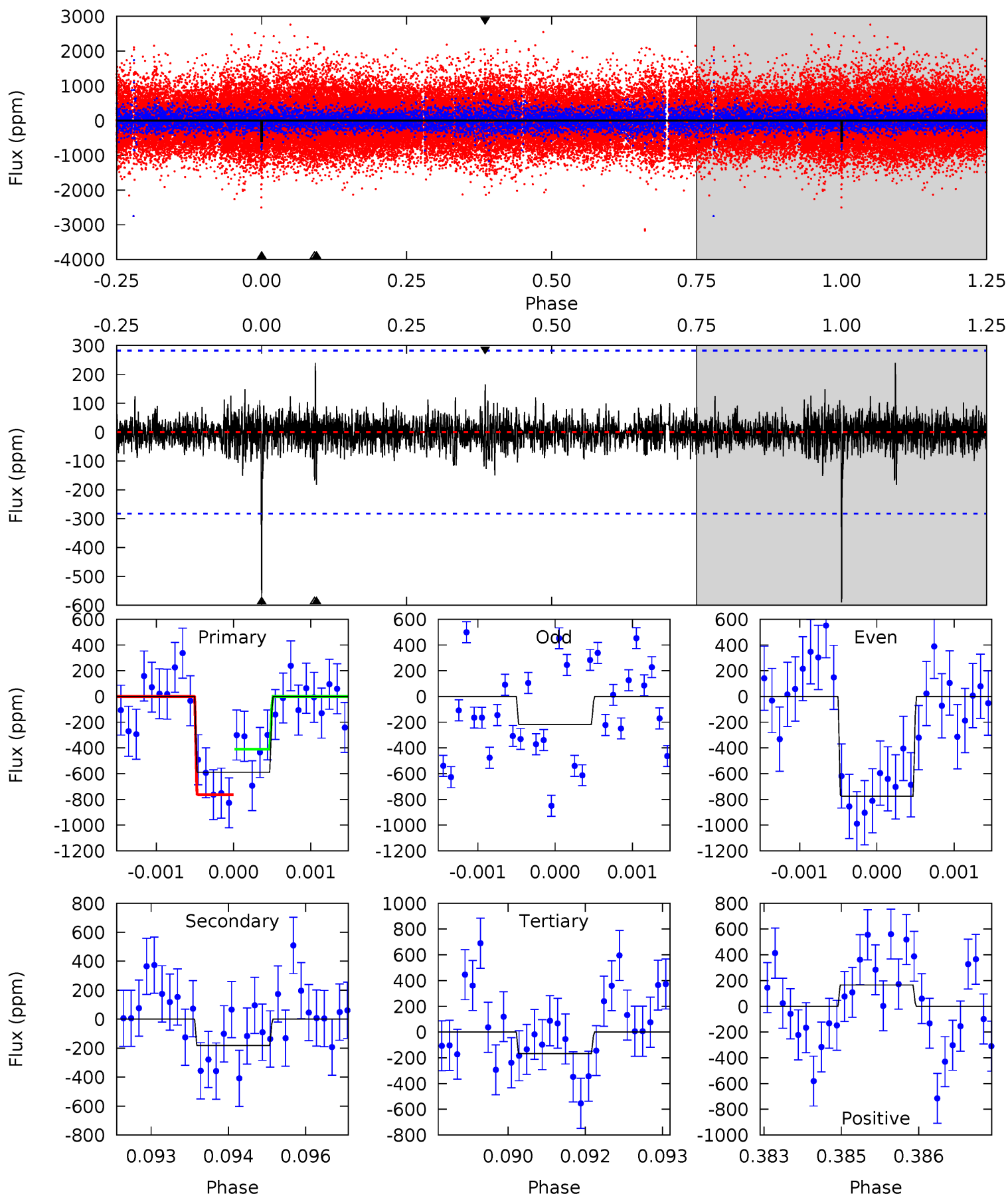
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.6	35.3	13.7	13.6	5.35	3.13	2.72	5.92	6.02	21.6	21.7	10.7	0.92	0.28	3.05



Alt Model-Shift Uniqueness Test

008242068-01, P = 532.103525 Days, E = 390.506209 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.3	3.48	3.19	3.17	5.39	3.20	0.69	8.07	8.09	0.29	0.31	5.04	1.41	0.29	3.38



Stellar Parameters For KIC 008242068

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6325^{+174}_{-239}	$4.409^{+0.067}_{-0.202}$	$-0.040^{+0.250}_{-0.300}$	$1.112^{+0.346}_{-0.148}$	$1.157^{+0.152}_{-0.169}$	$1.184^{+0.414}_{-0.592}$
	+3%/-4%	+2%/-5%	+625%/-750%	+31%/-13%	+13%/-15%	+35%/-50%
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 008242068-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1819 ± 52	$3.95^{+0.79}_{-0.62}$	360^{+26}_{-20}	7462^{+678}_{-560}	116282^{+40933}_{-33391}
Alt.	-182 ± 52	$3.25^{+0.68}_{-0.58}$	359^{+26}_{-18}	4690^{+439}_{-412}	16334^{+10737}_{-6180}

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

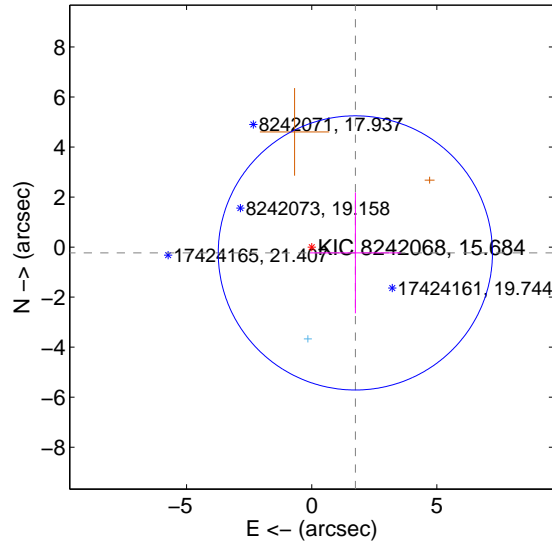
Supplemental centroid analysis for 008242068-01. Kepler magnitude: 15.68. Transit SNR 10.32

There are 1 quarters with good PRF difference image offsets

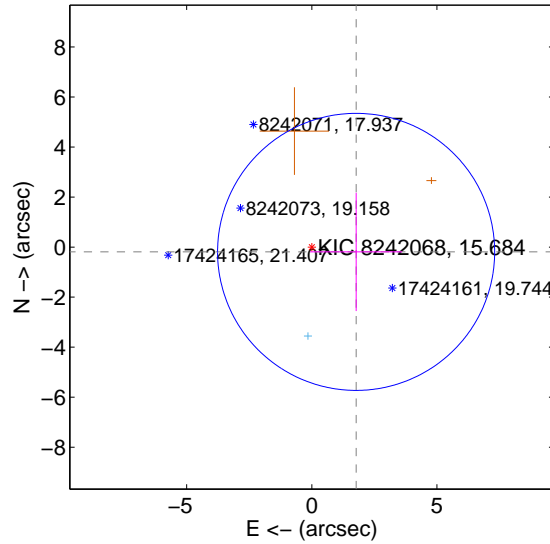
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.760 ± 1.826	0.96	-1.744 ± 1.814	-0.233 ± 2.413
PRF-fit source offset from KIC position	1.782 ± 1.845	0.97	-1.771 ± 1.838	-0.191 ± 2.365
photometric centroid source offset	2.93 ± 1.71	1.71	2.33 ± 1.51	-1.77 ± 2.01

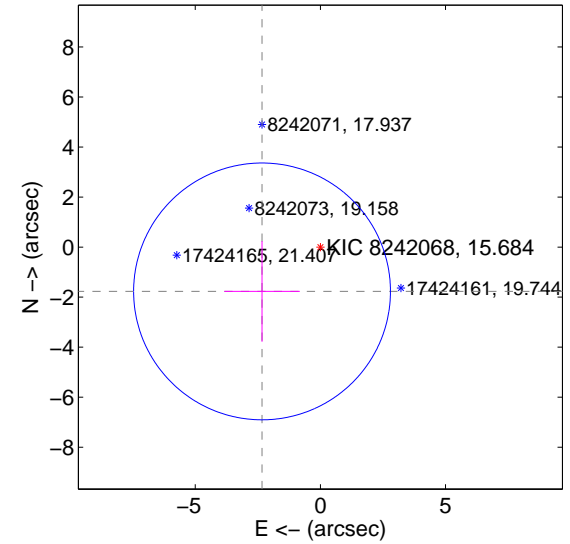
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

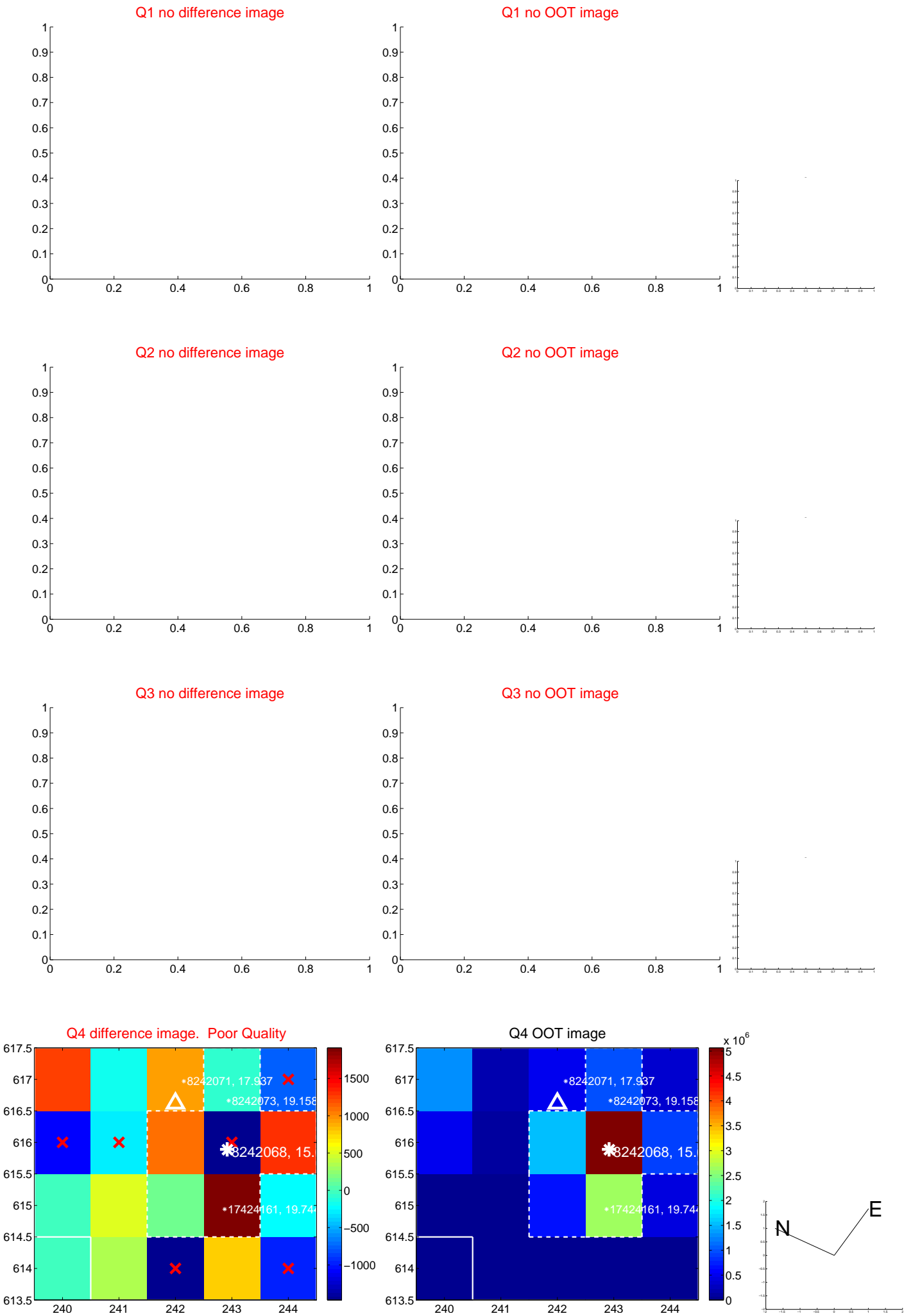


offset from photometric centroids

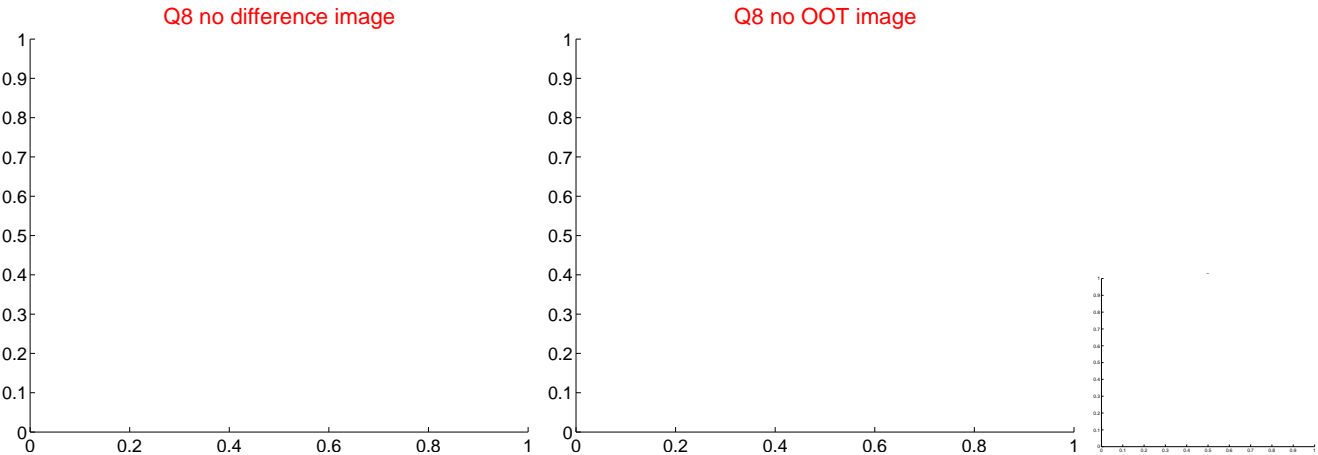
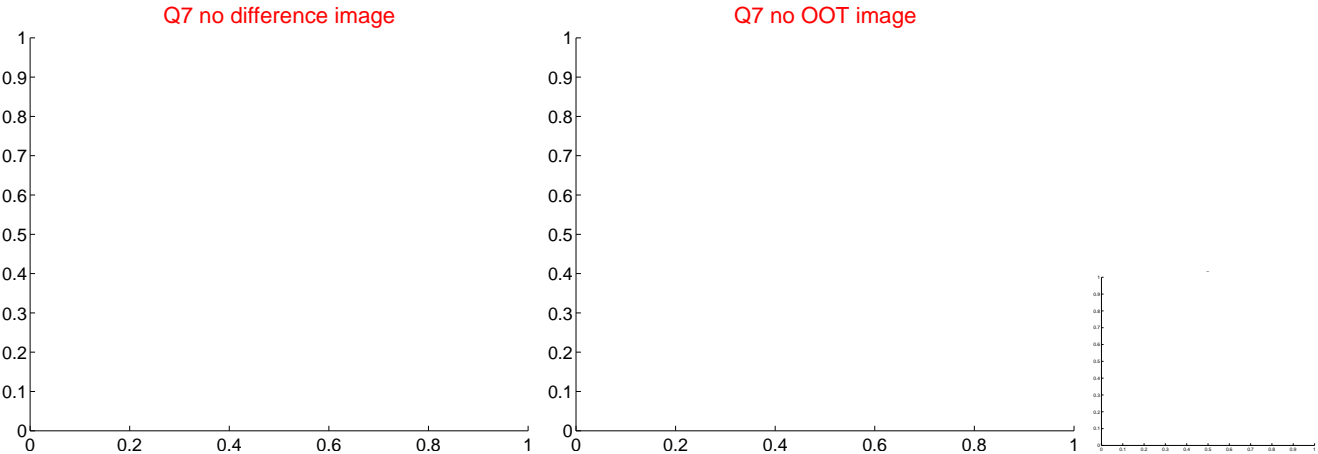
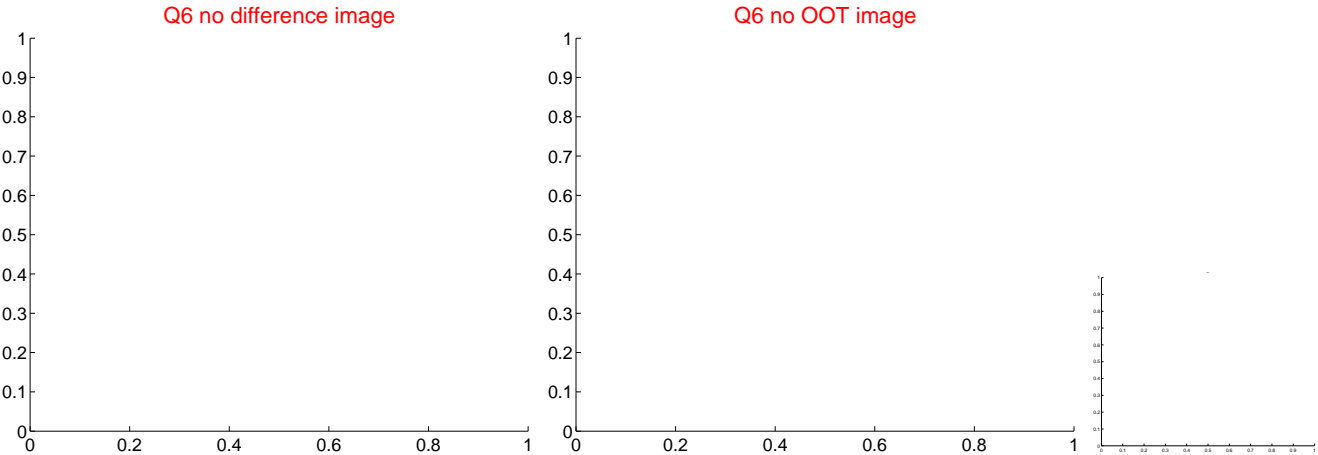
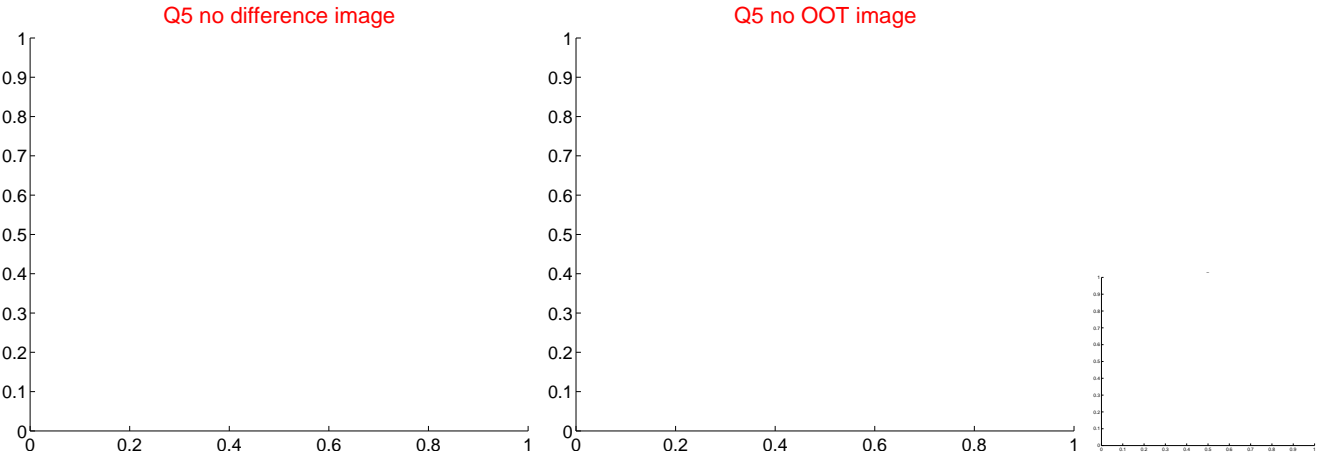


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

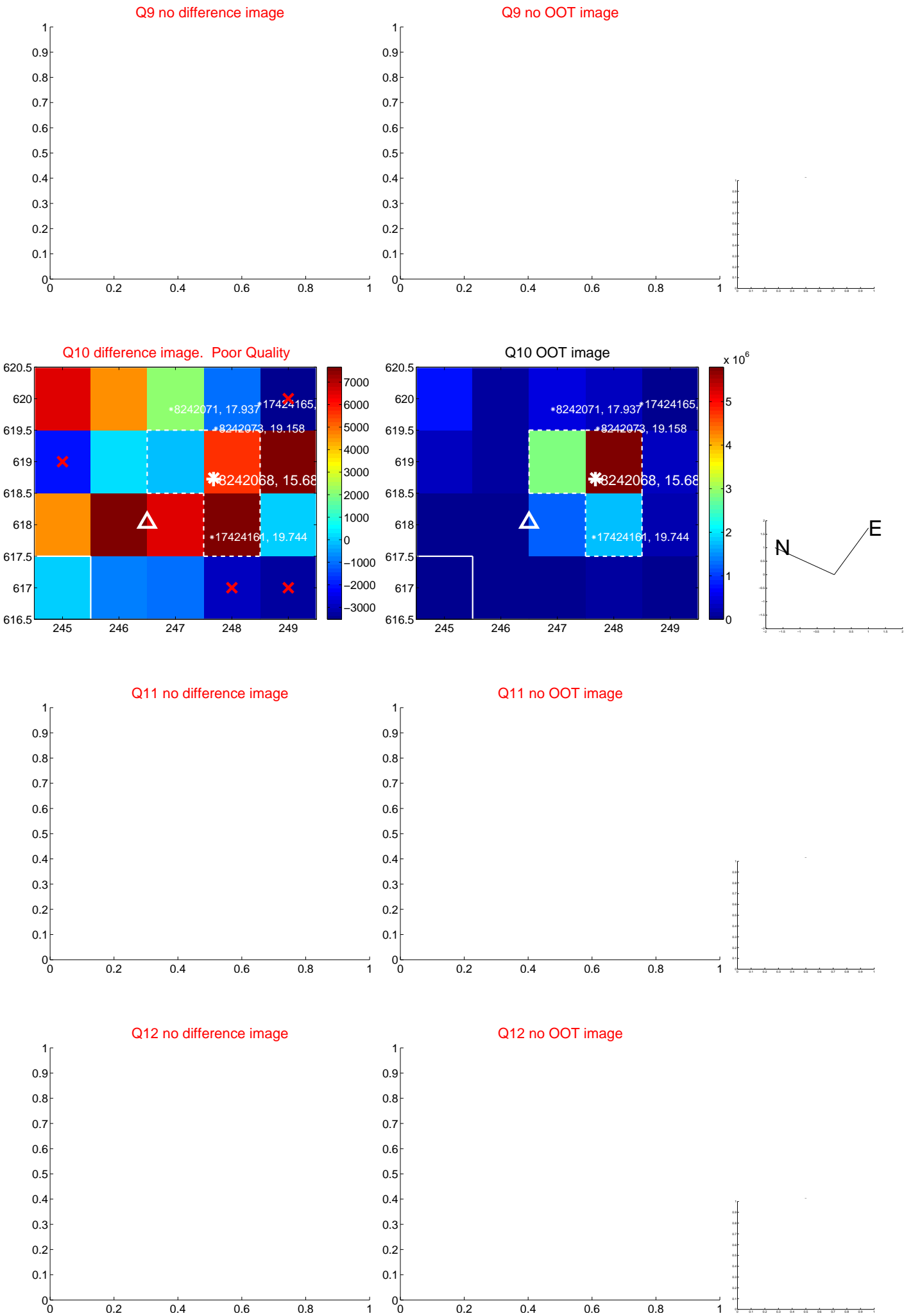
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



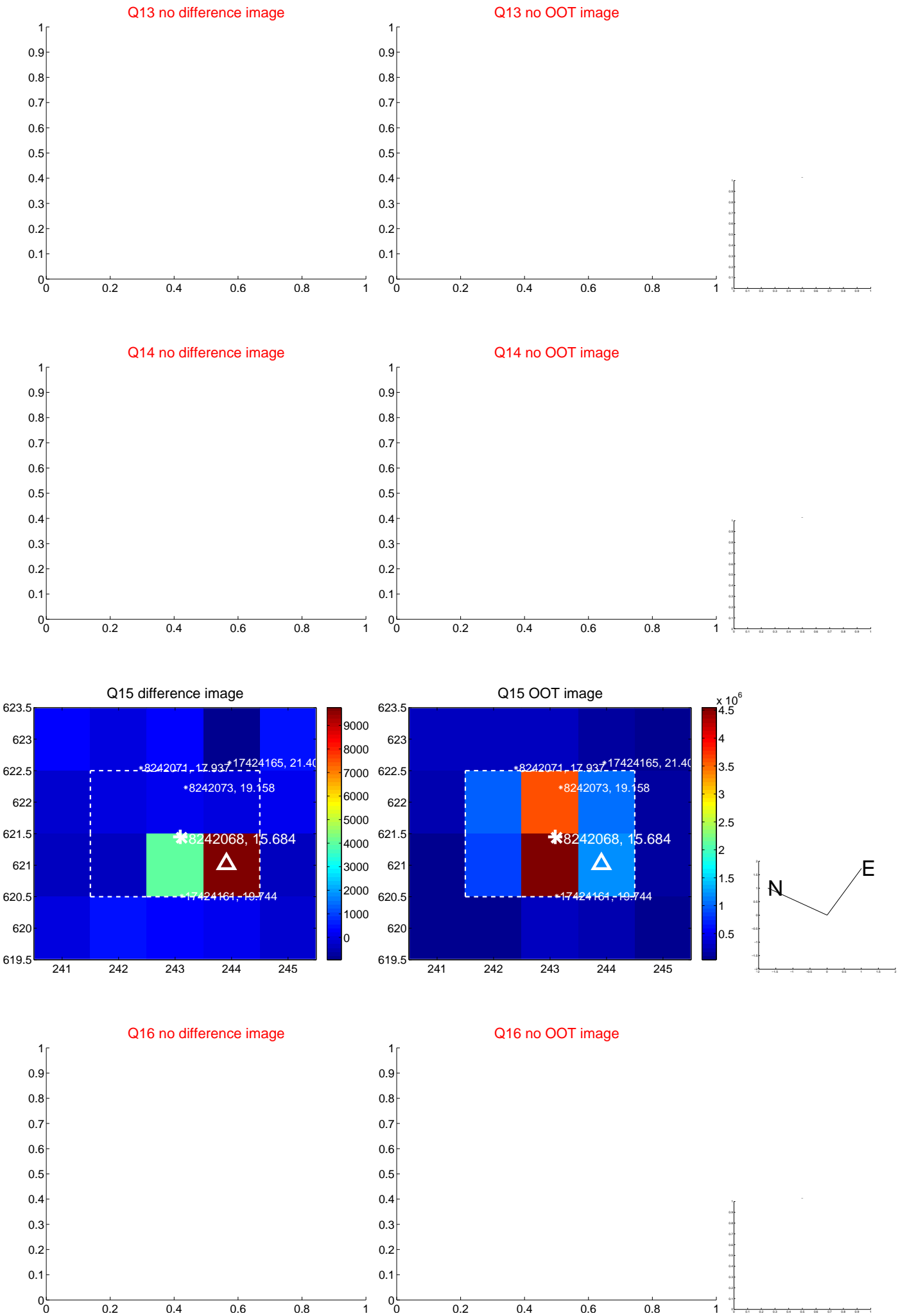
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



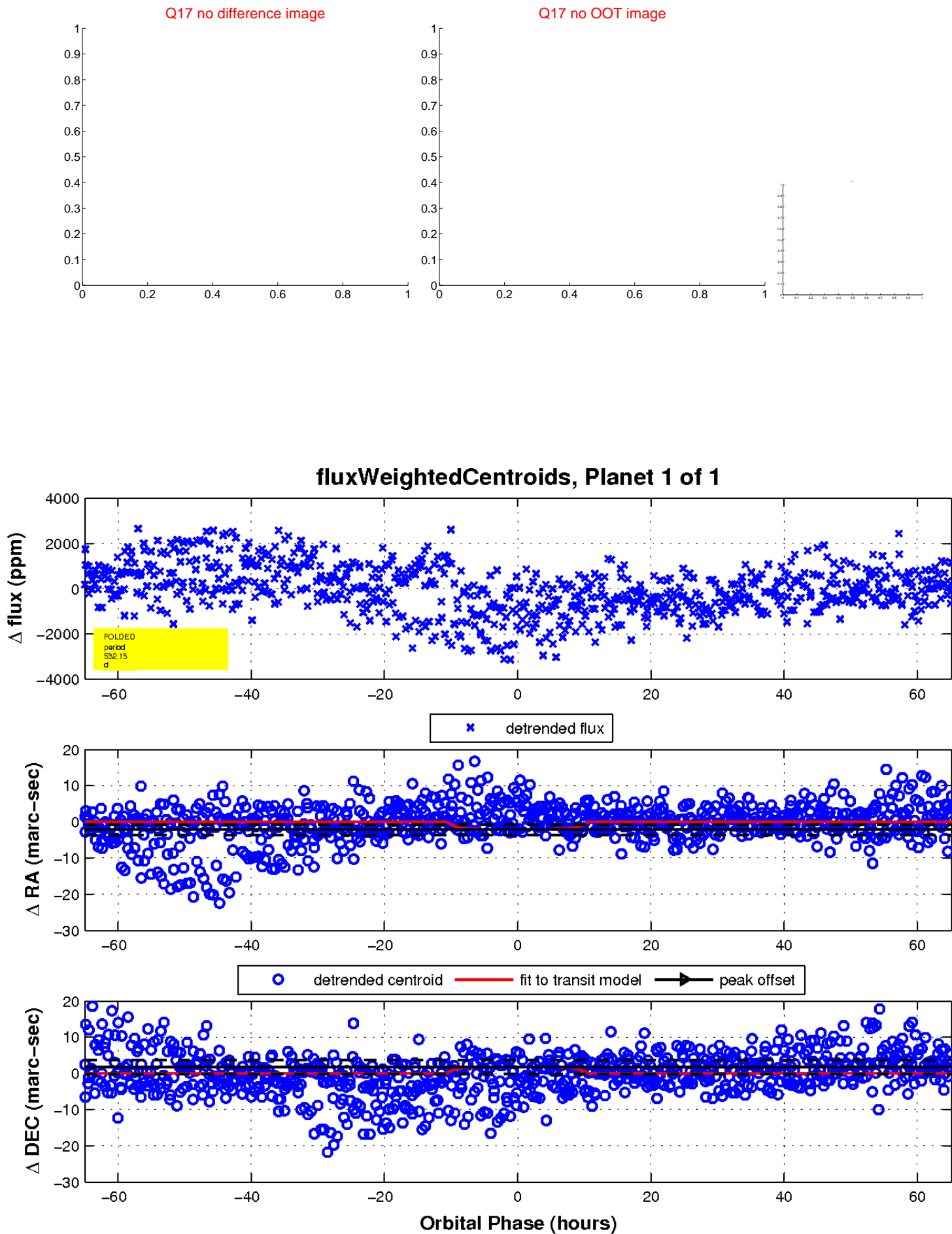
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

