

KIC 006846544

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})
006846544-01	OBS	8127.01	499.895475	319.305404	157.6	12.614	7.2	6.4	1.81	6486	2.41	3.07

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006846544-01	OBS	FP	0.04	1	0	0	0	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.

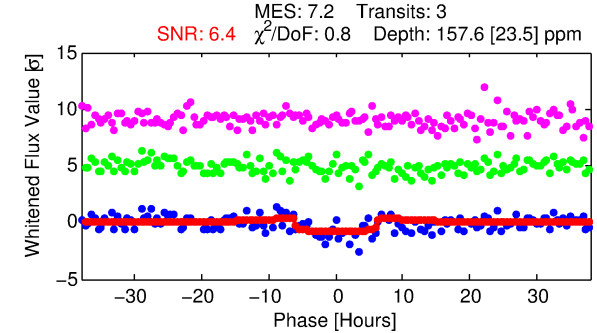
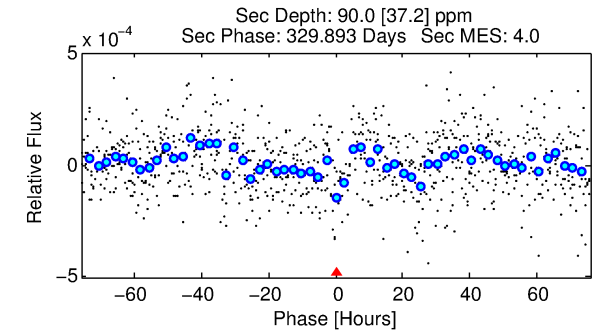
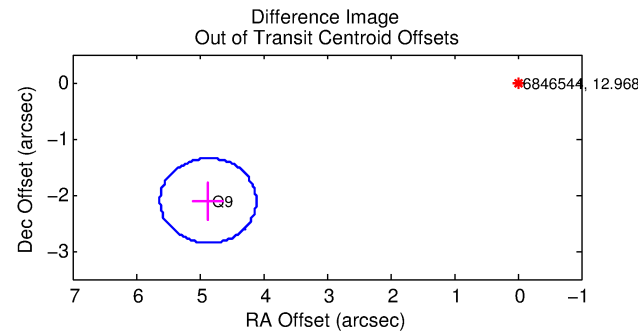
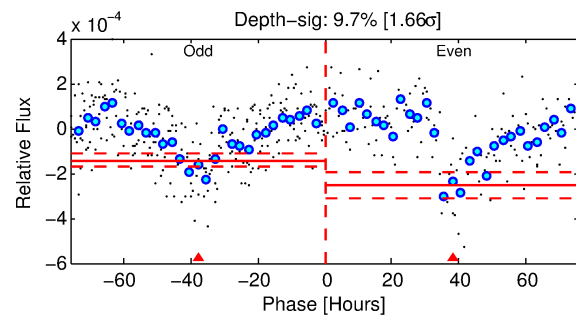
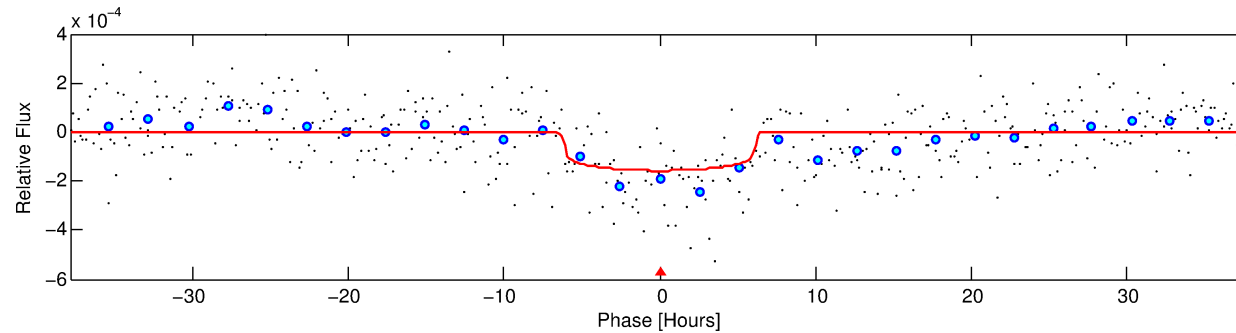
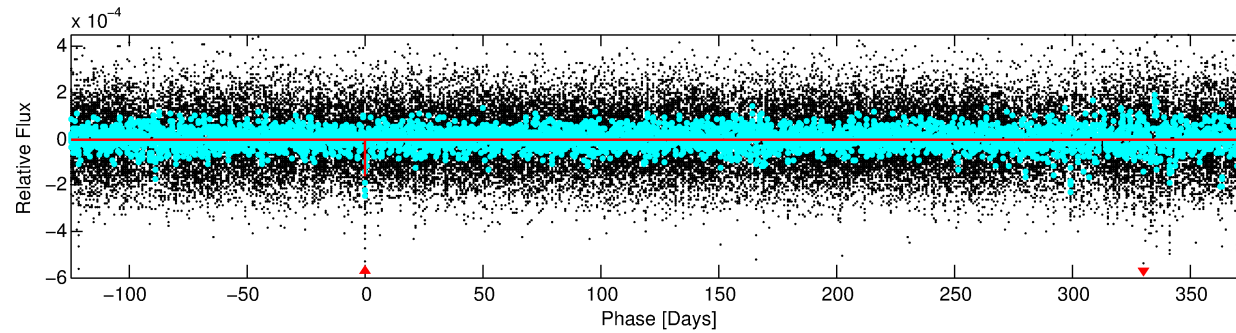
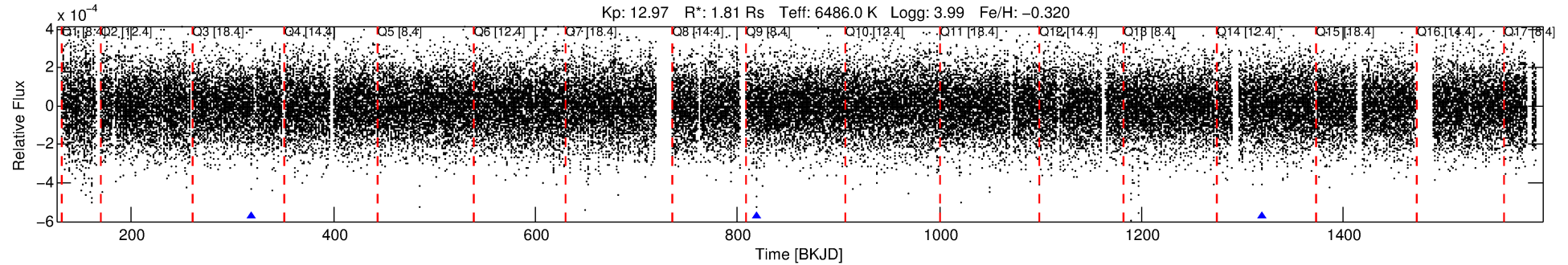
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006846544-01

No Significant Match Found

DV One-Page Summary

KIC: 6846544 Candidate: 1 of 1 Period: 499.895 d



DV Fit Results:

Period = 499.89548 [0.01229] d
Epoch = 319.3054 [0.0143] BKJD
Rp/R* = 0.0122 [0.0063]
a/R* = 232.61 [640.80]
b = 0.66 [2.38]
Seff = 3.07 [1.34]
Teq = 338 [37] K
Rp = 2.41 [1.41] Re
a = 1.3013 [0.3448] AU
Ag = 14409.02 [17055.88] [0.84 σ]
Teff = 5720 [1589] K [3.39 σ]

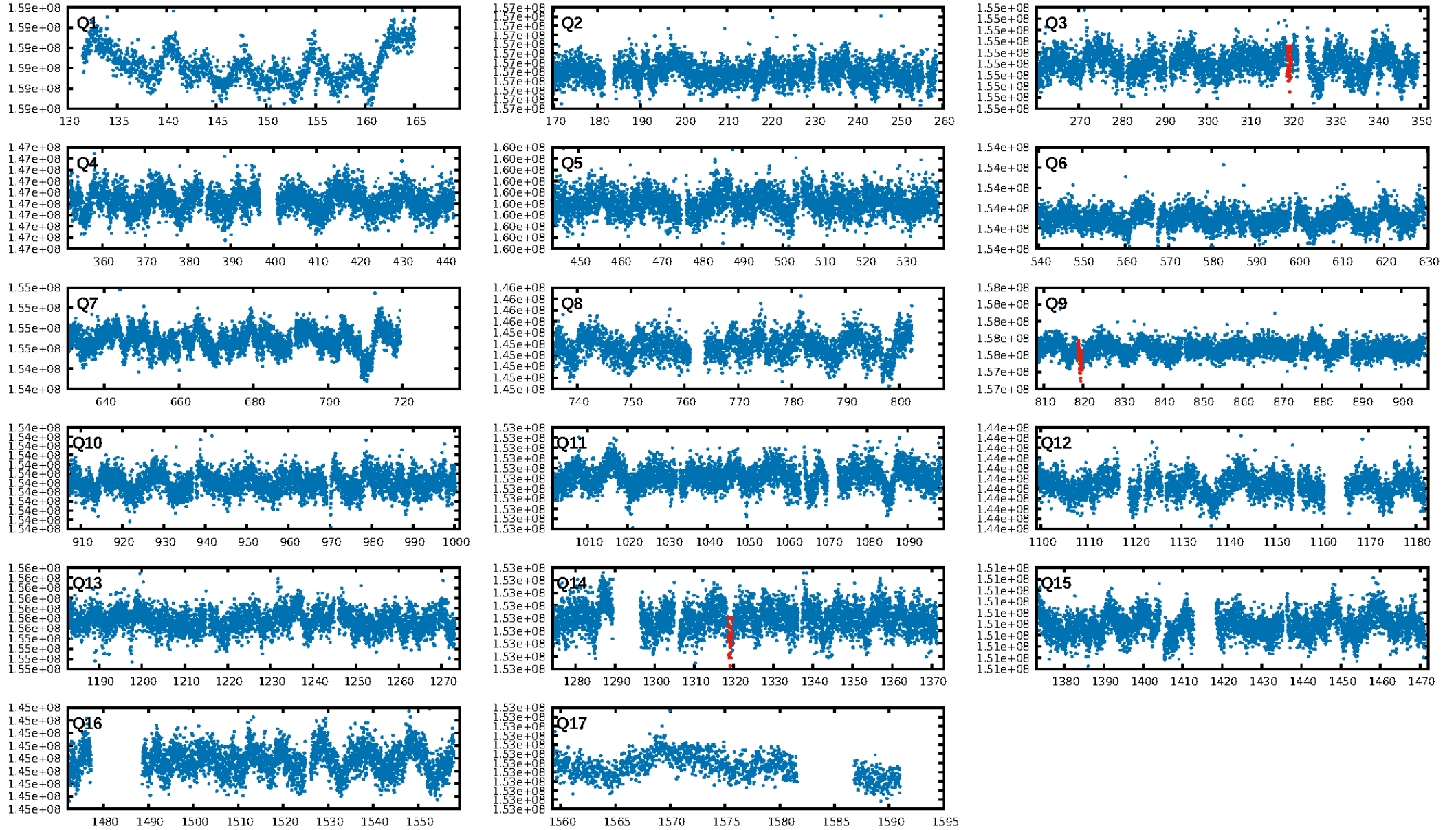
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 83.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.13e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.8279
Centroid-sig: 44.0%
Centroid-so: 4.076 arcsec [0.90 σ]
OotOffset-rm: 5.302 arcsec [21.07 σ]
KicOffset-rm: 5.703 arcsec [22.89 σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [3/3]

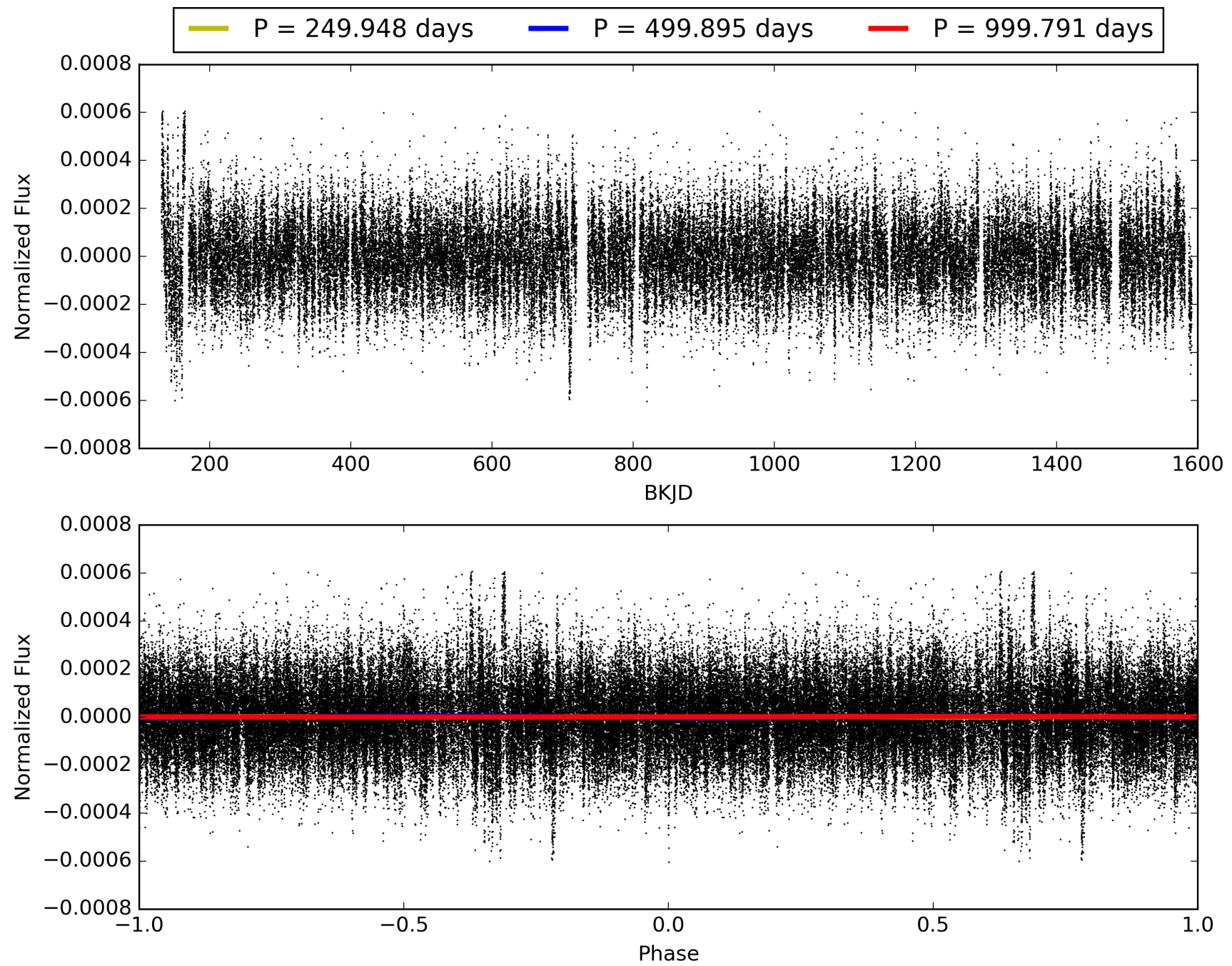
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:16:13 Z

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

TCE 006846544-01, PDC Light Curves

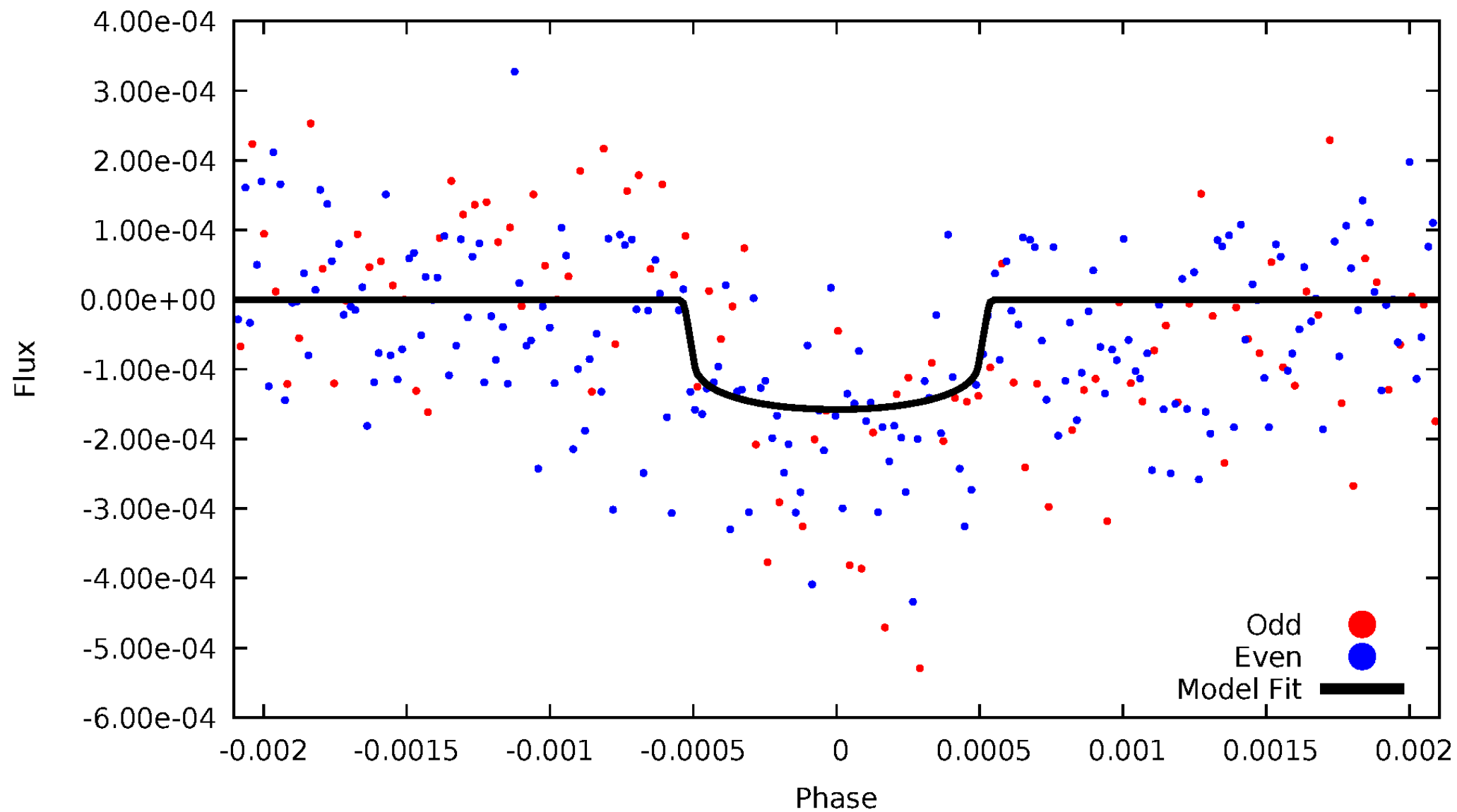


TCE 006846544-01



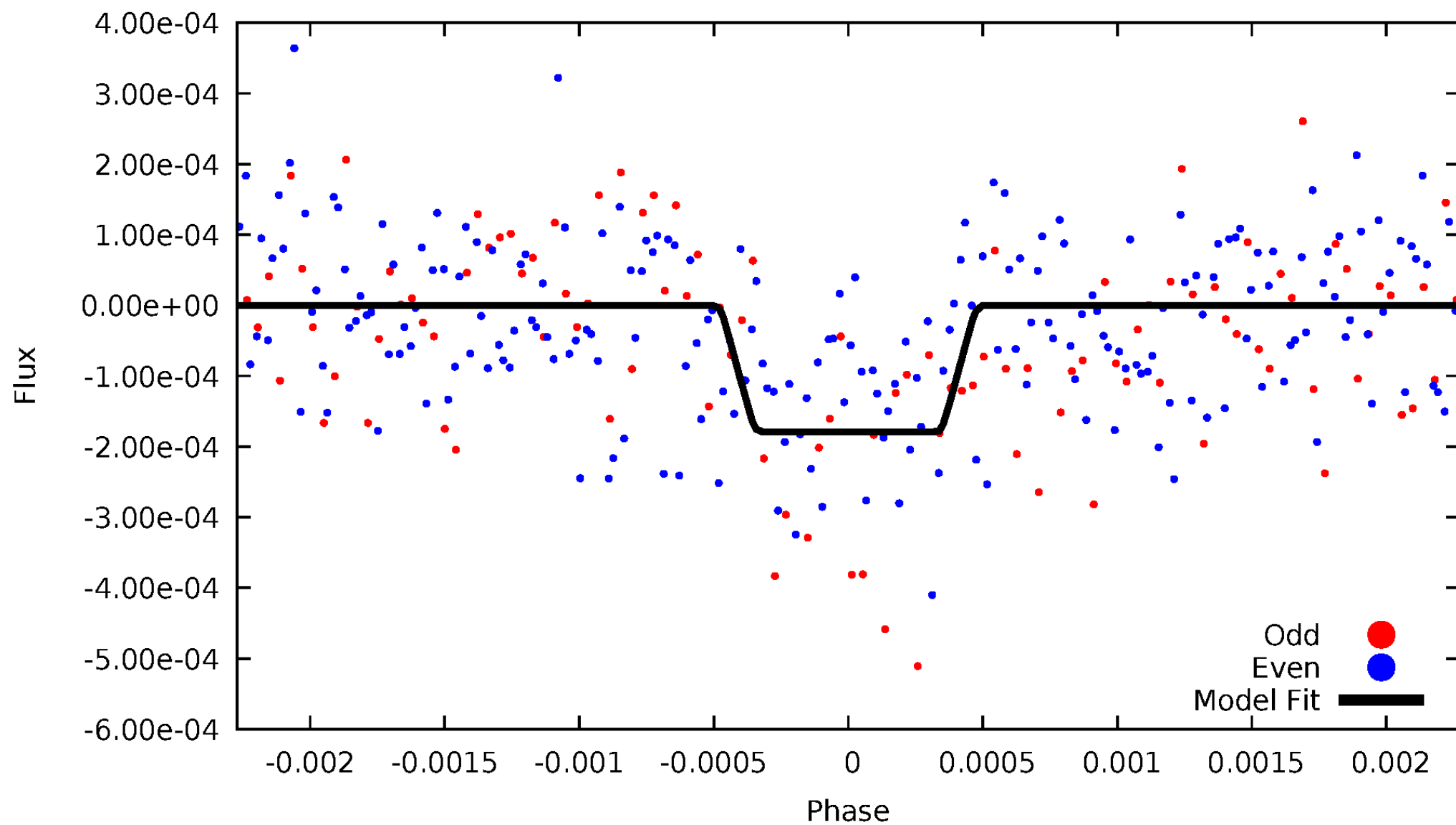
DV Odd/Even

TCE 006846544-01



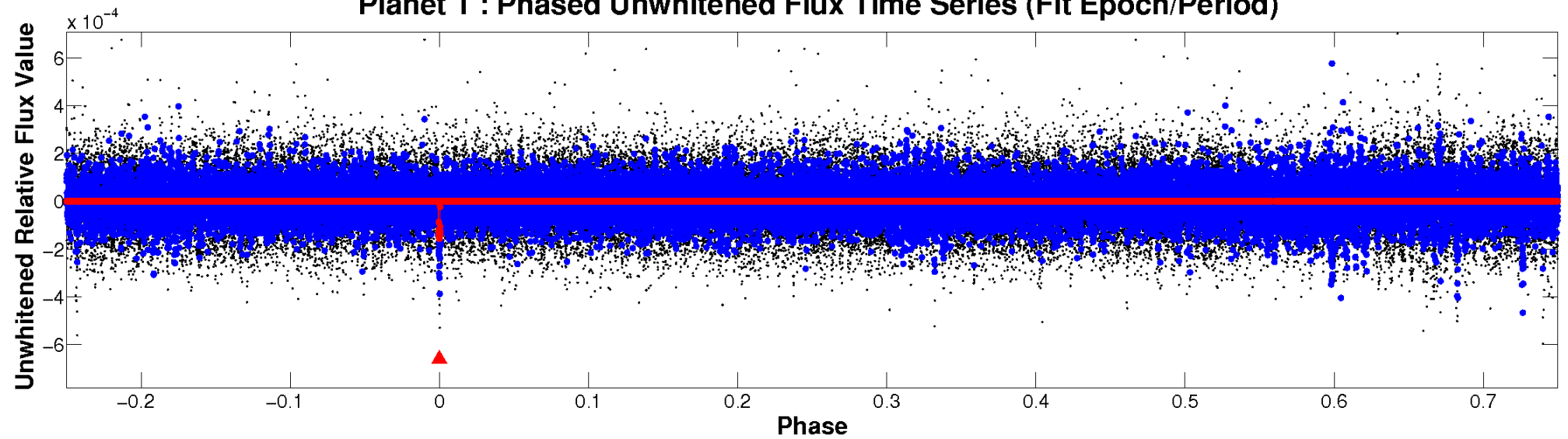
ALT Odd/Even

TCE 006846544-01

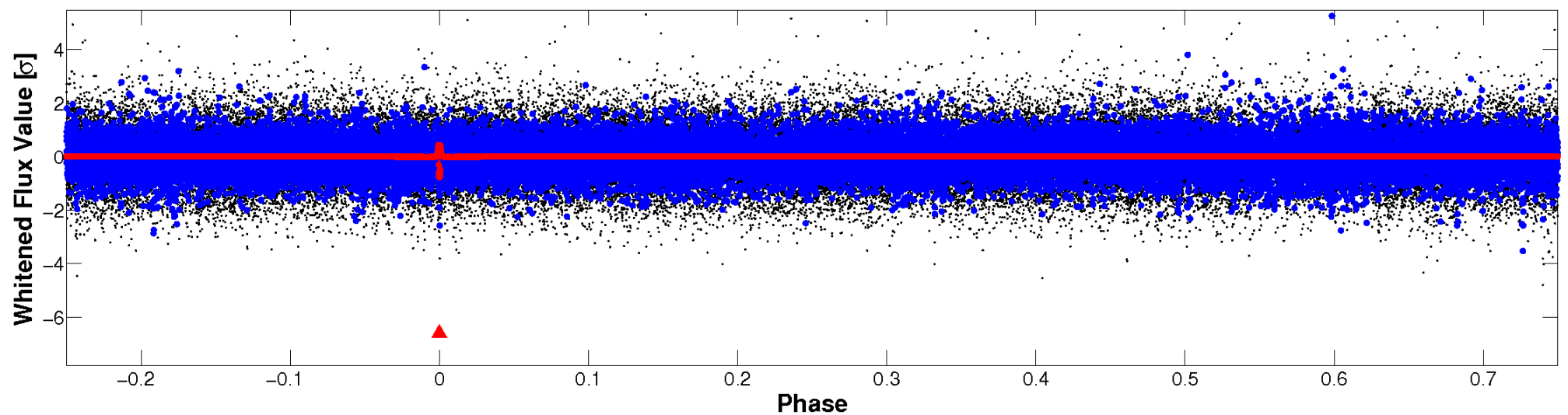


Non-Whitened Vs. Whitened Light Curve

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

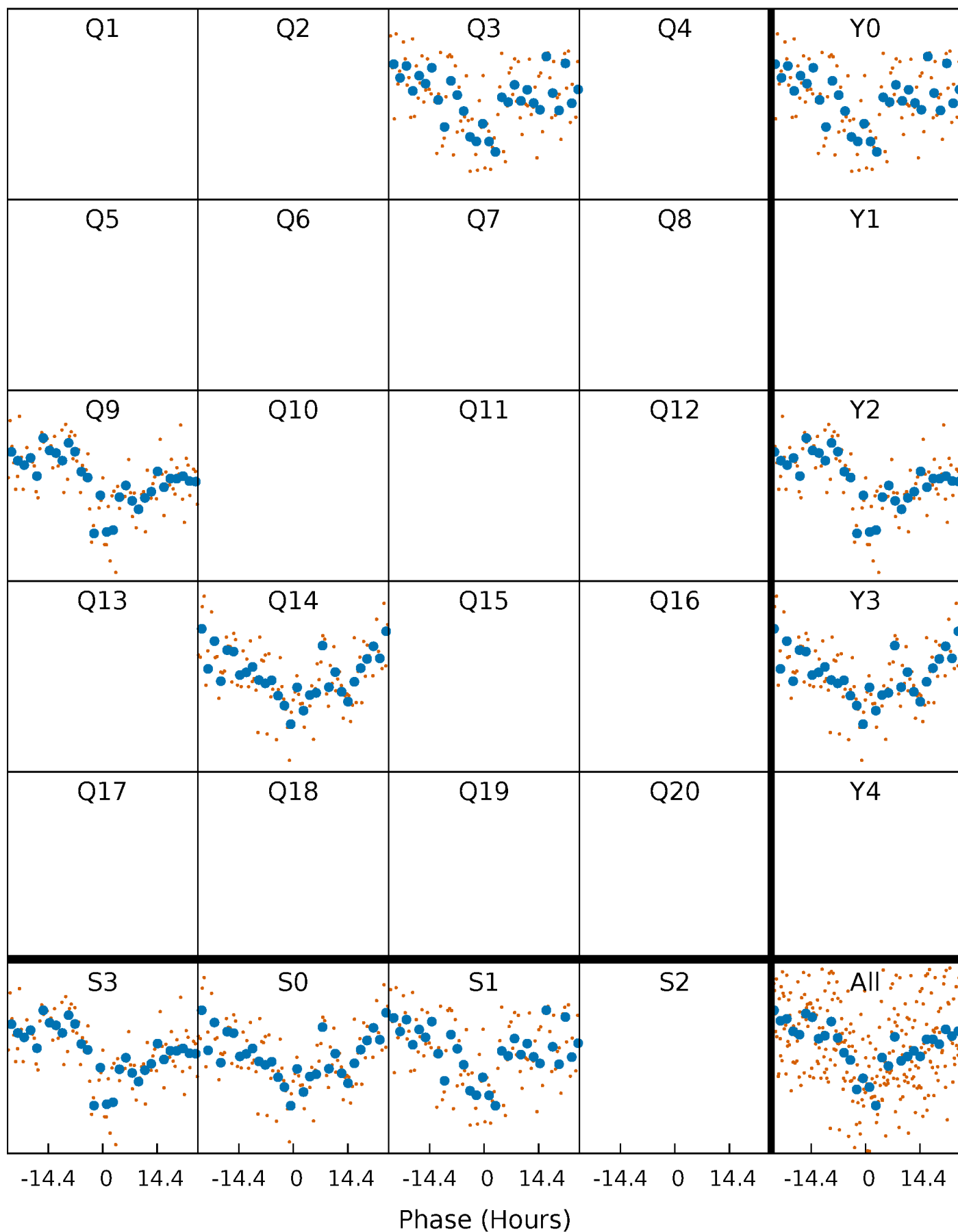


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 006846544-01 P=499.895475 Days $T_0=319.305404$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 006846544-01 P=499.895475 Days $T_0=319.305404$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

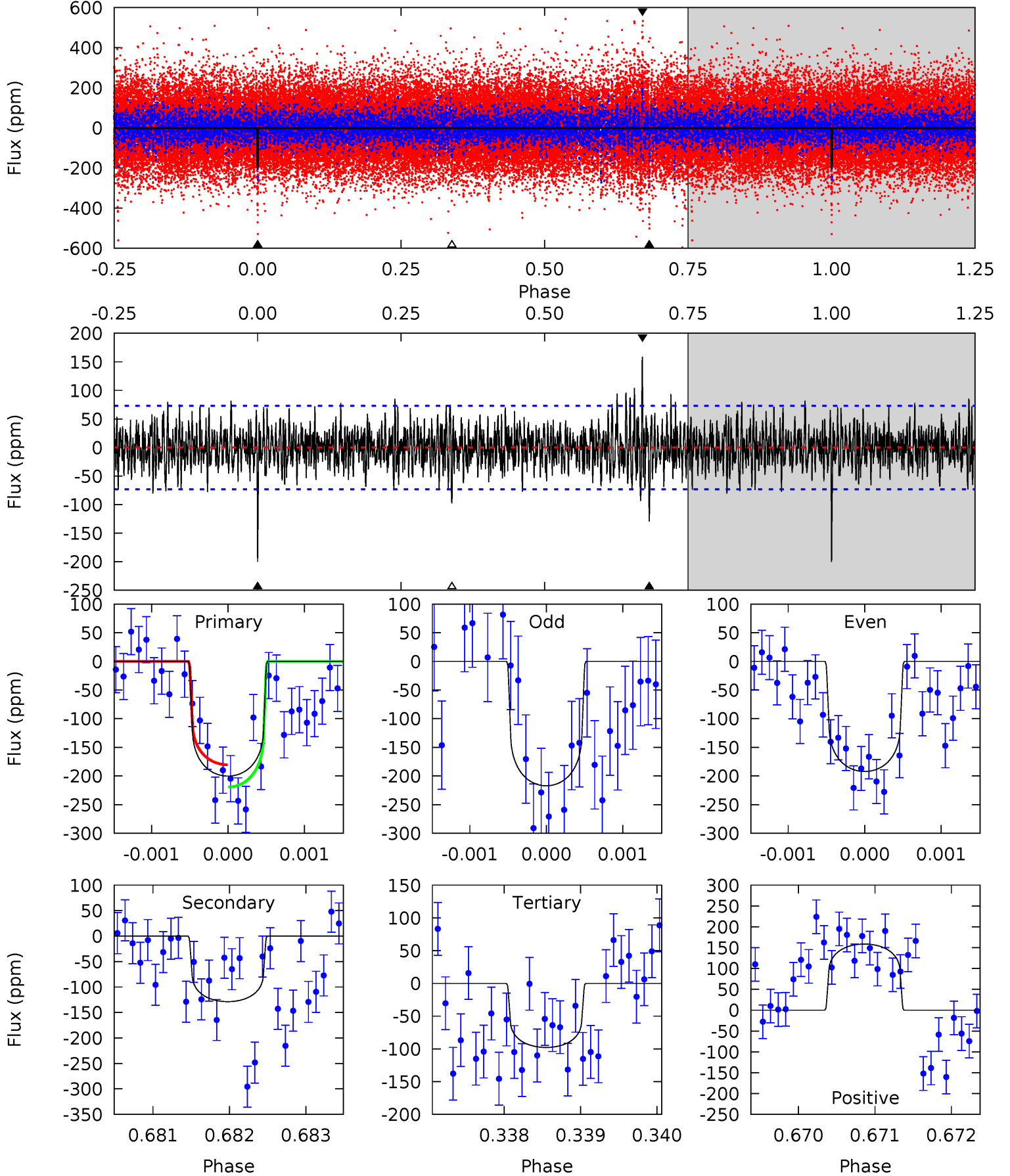
TCE 006846544-01 P=499.934290 Days $T_0=319.282909$ (BKJD)



DV Model-Shift Uniqueness Test

006846544-01, P = 499.895475 Days, E = 319.305404 Days

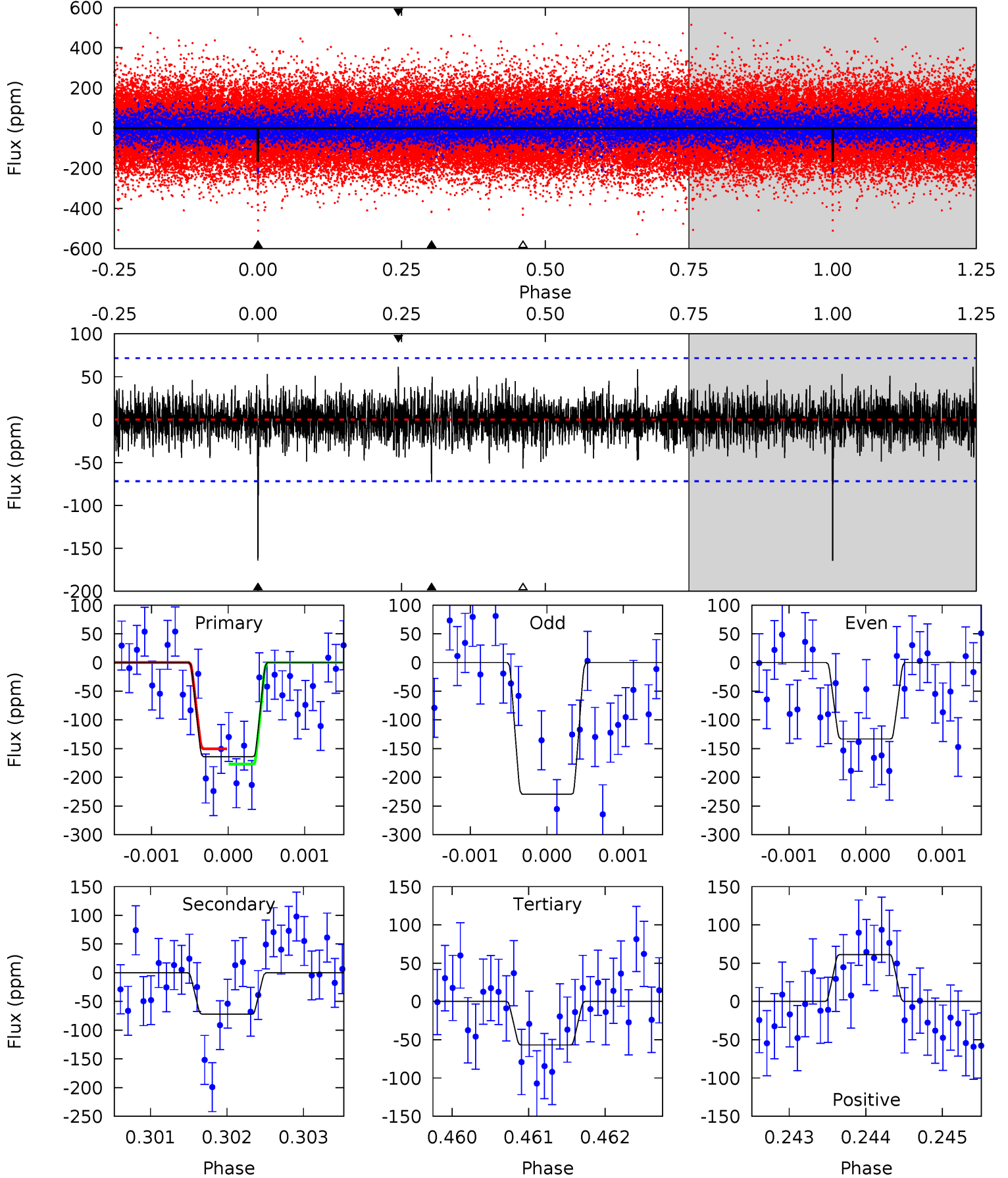
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.9	9.58	7.28	11.8	5.44	3.27	2.11	7.62	3.09	2.30	-2.23	0.86	1.02	0.44	1.44



Alt Model-Shift Uniqueness Test

006846544-01, P = 499.934290 Days, E = 319.282909 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	5.49	4.32	4.67	5.45	3.30	1.16	8.16	7.82	1.17	0.83	3.44	1.00	0.27	1.02



Stellar Parameters For KIC 006846544

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6486^{+155}_{-175}	$3.992^{+0.247}_{-0.133}$	$-0.320^{+0.300}_{-0.250}$	$1.812^{+0.411}_{-0.503}$	$1.174^{+0.206}_{-0.169}$	$0.278^{+0.416}_{-0.108}$
	+2%/-3%	+6%/-3%	+94%/-78%	+23%/-28%	+18%/-14%	+149%/-39%
Source	PHO1	FLK73	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 006846544-01 / KOI 8127.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-129 ± 13	$2.33^{+1.29}_{-1.10}$	467^{+28}_{-36}	6191^{+2990}_{-1096}	22041^{+57828}_{-13038}
Alt.	-72 ± 13	$2.62^{+1.35}_{-1.20}$	468^{+31}_{-35}	5223^{+1793}_{-821}	9712^{+26255}_{-5454}

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 $A_{obs} \gg 1.0$

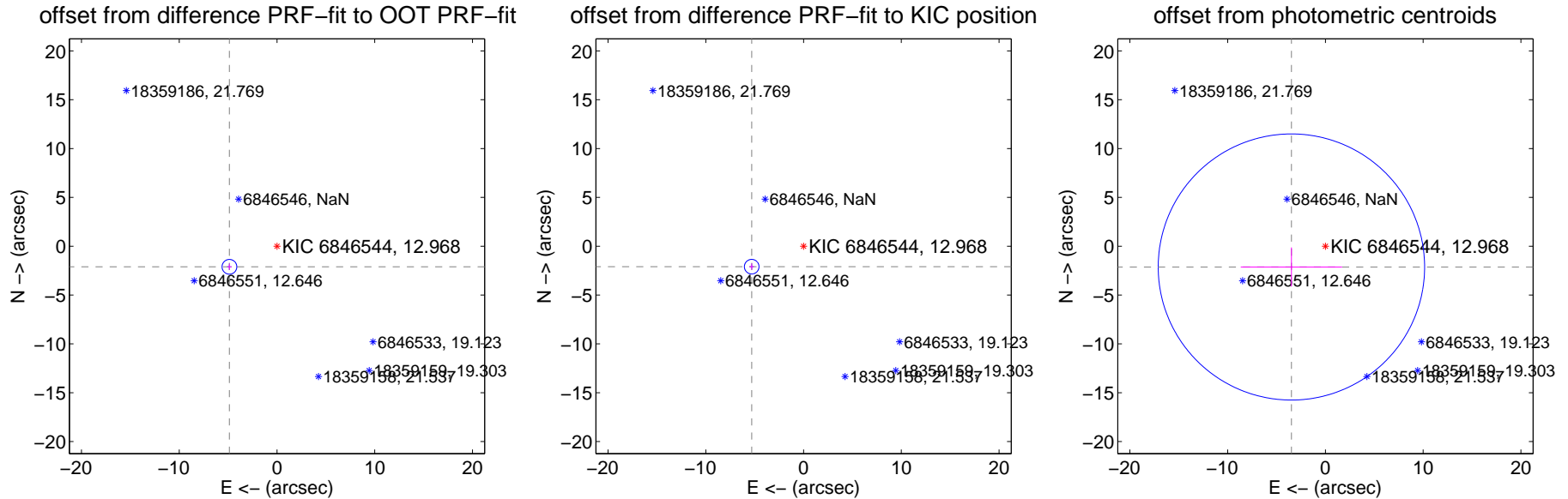
DV Centroid Data

Supplemental centroid analysis for 006846544-01. Kepler magnitude: 12.97. Transit SNR 6.42

There are 1 quarters with good PRF difference image offsets

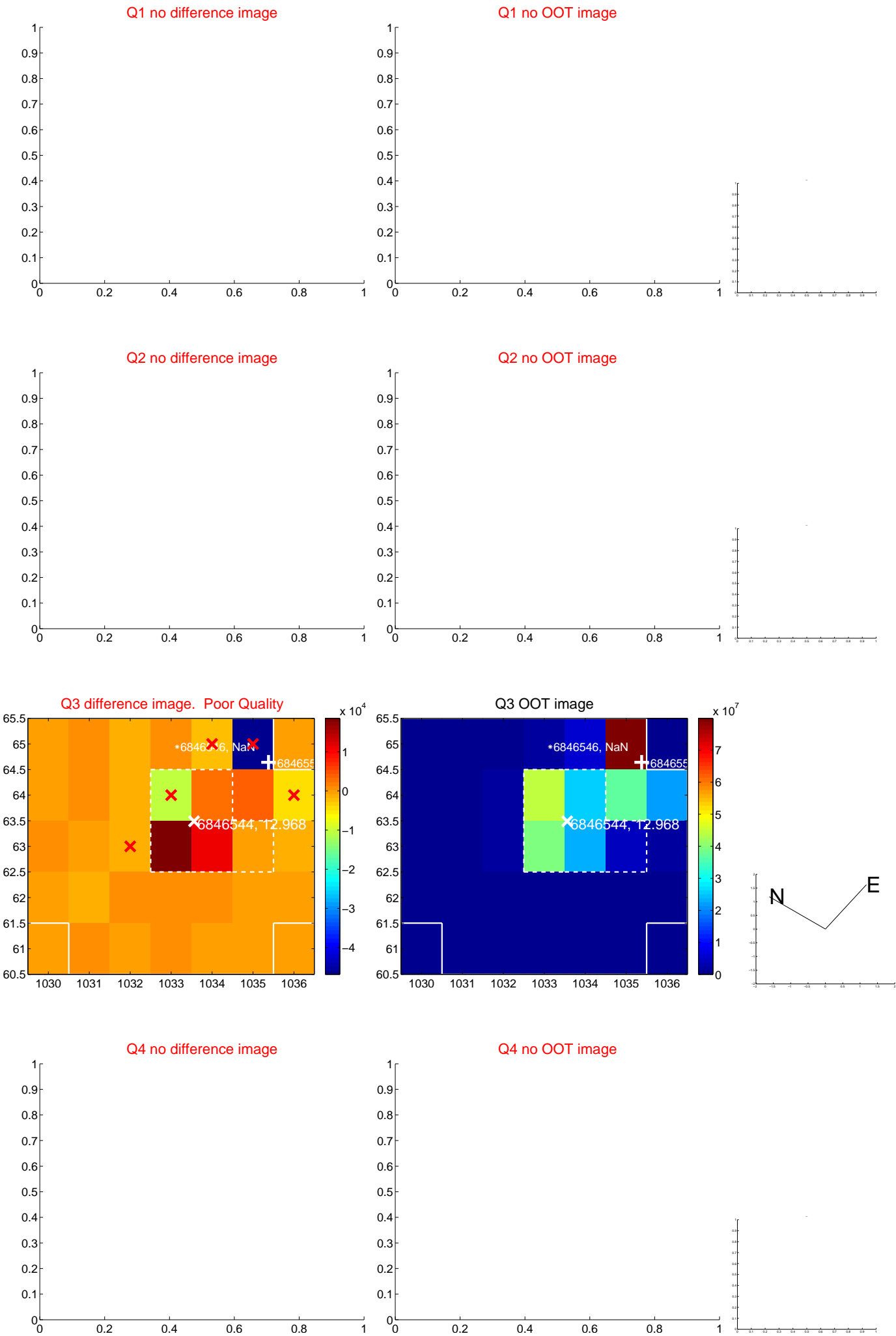
The direct PRF centroid is offset from the target star catalog position by about 0.44 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.302 ± 0.252	21.07	4.865 ± 0.235	-2.108 ± 0.328
PRF-fit source offset from KIC position	5.703 ± 0.249	22.89	5.304 ± 0.235	-2.094 ± 0.328
photometric centroid source offset	4.08 ± 4.54	0.90	3.48 ± 5.18	-2.13 ± 2.00



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.

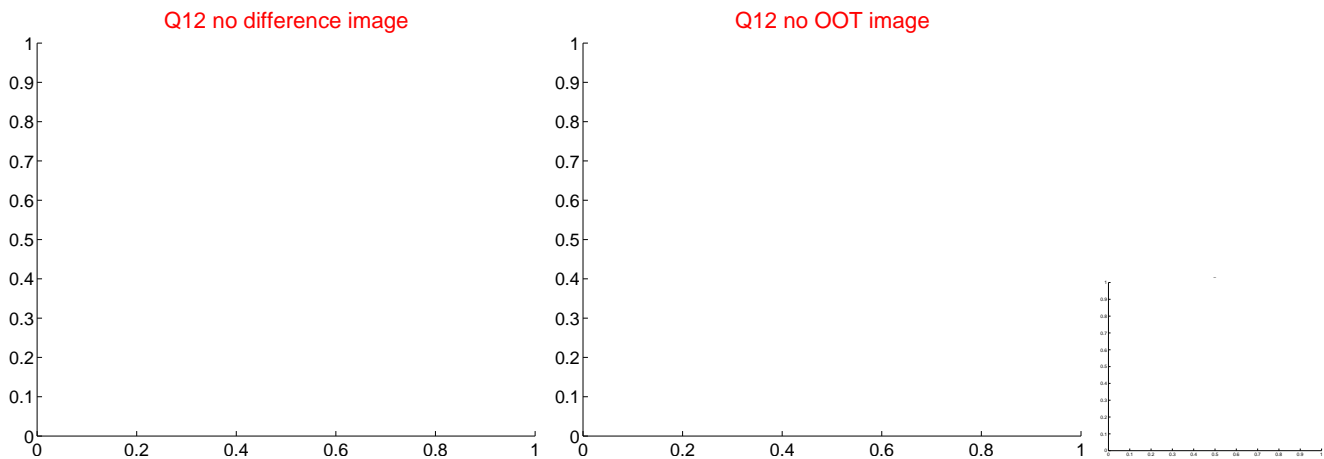
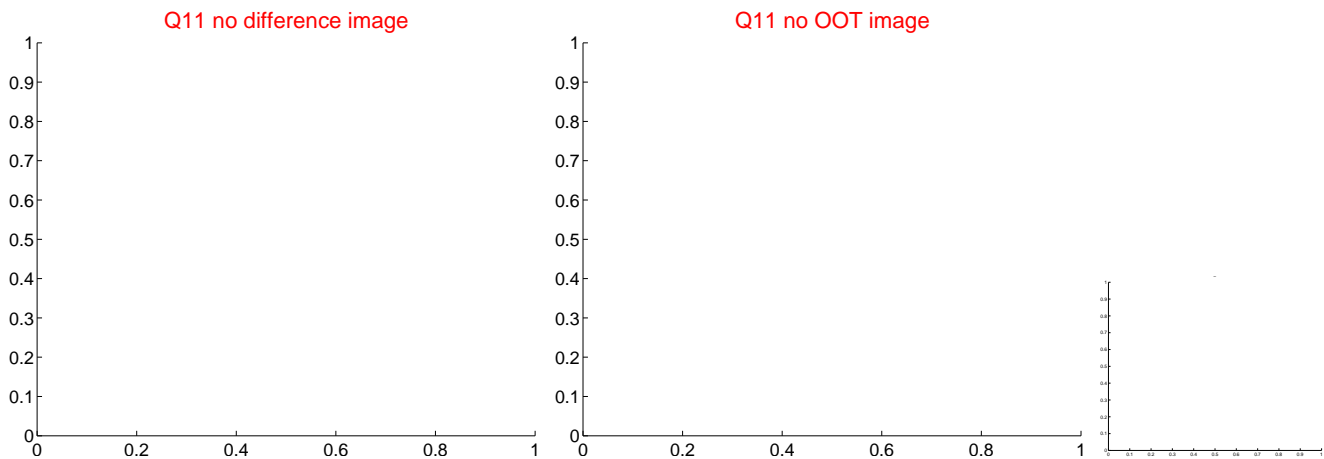
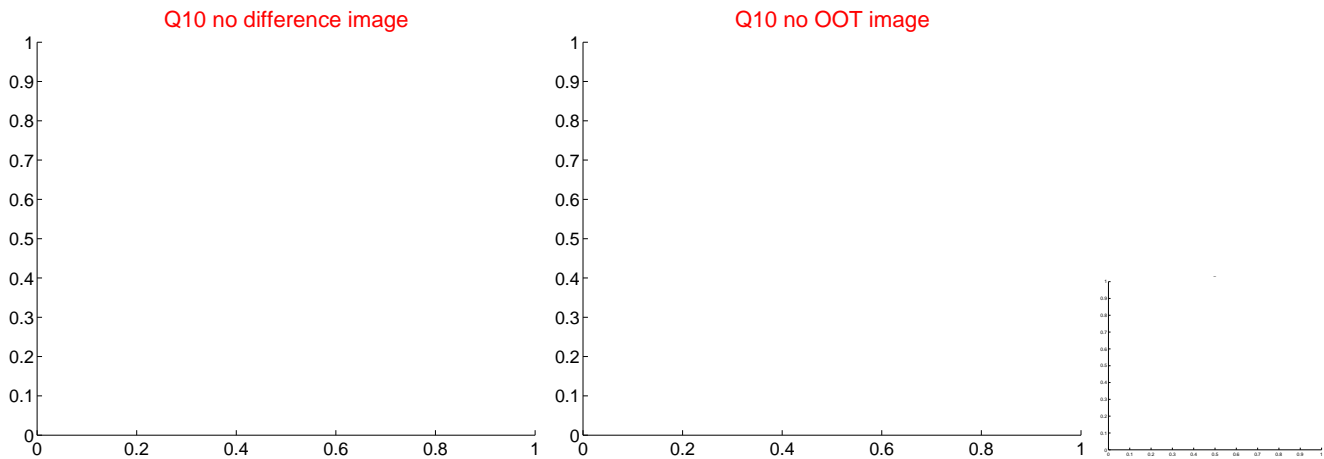
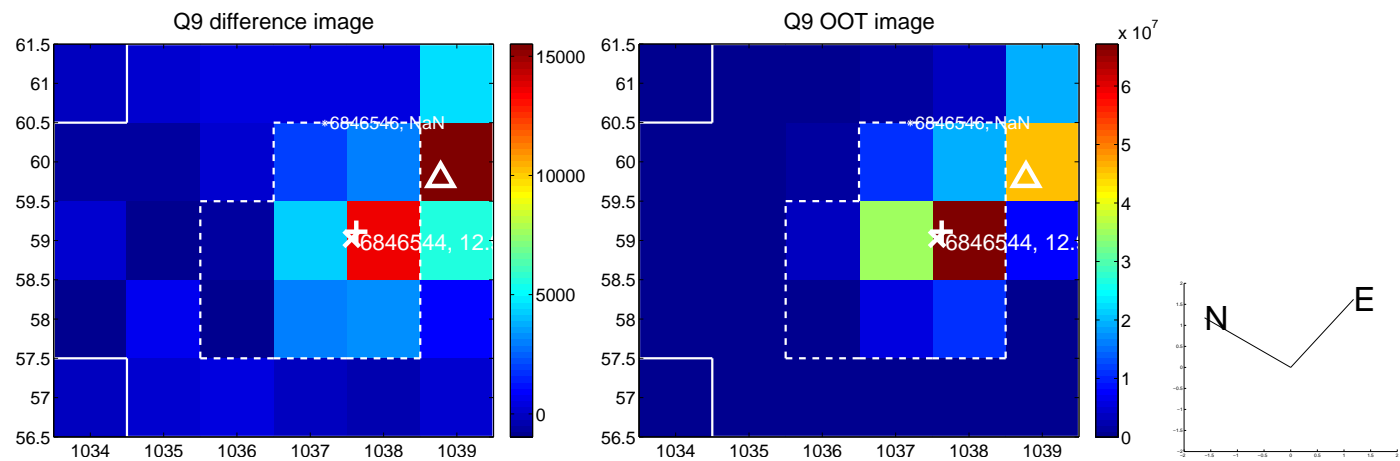
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



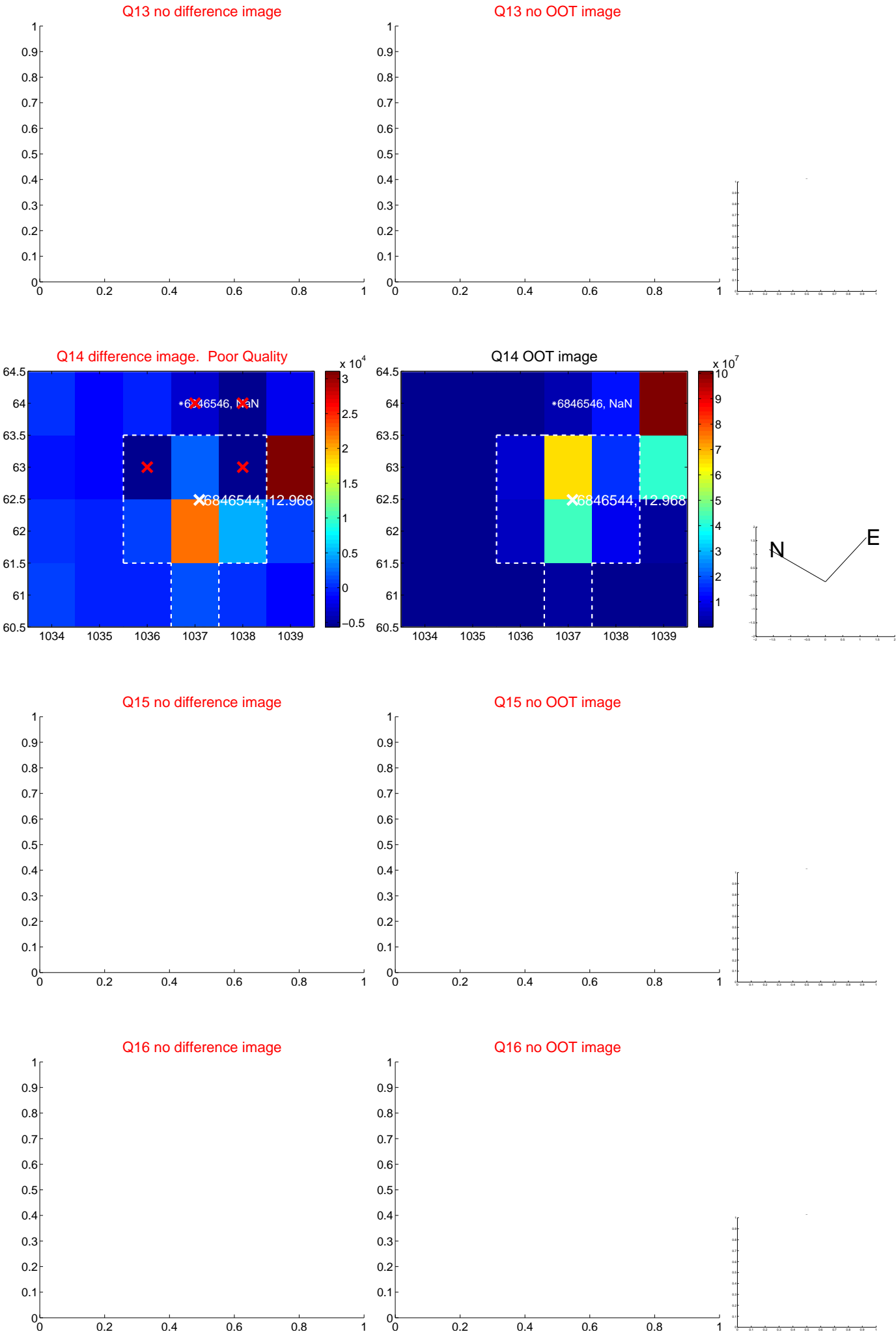
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



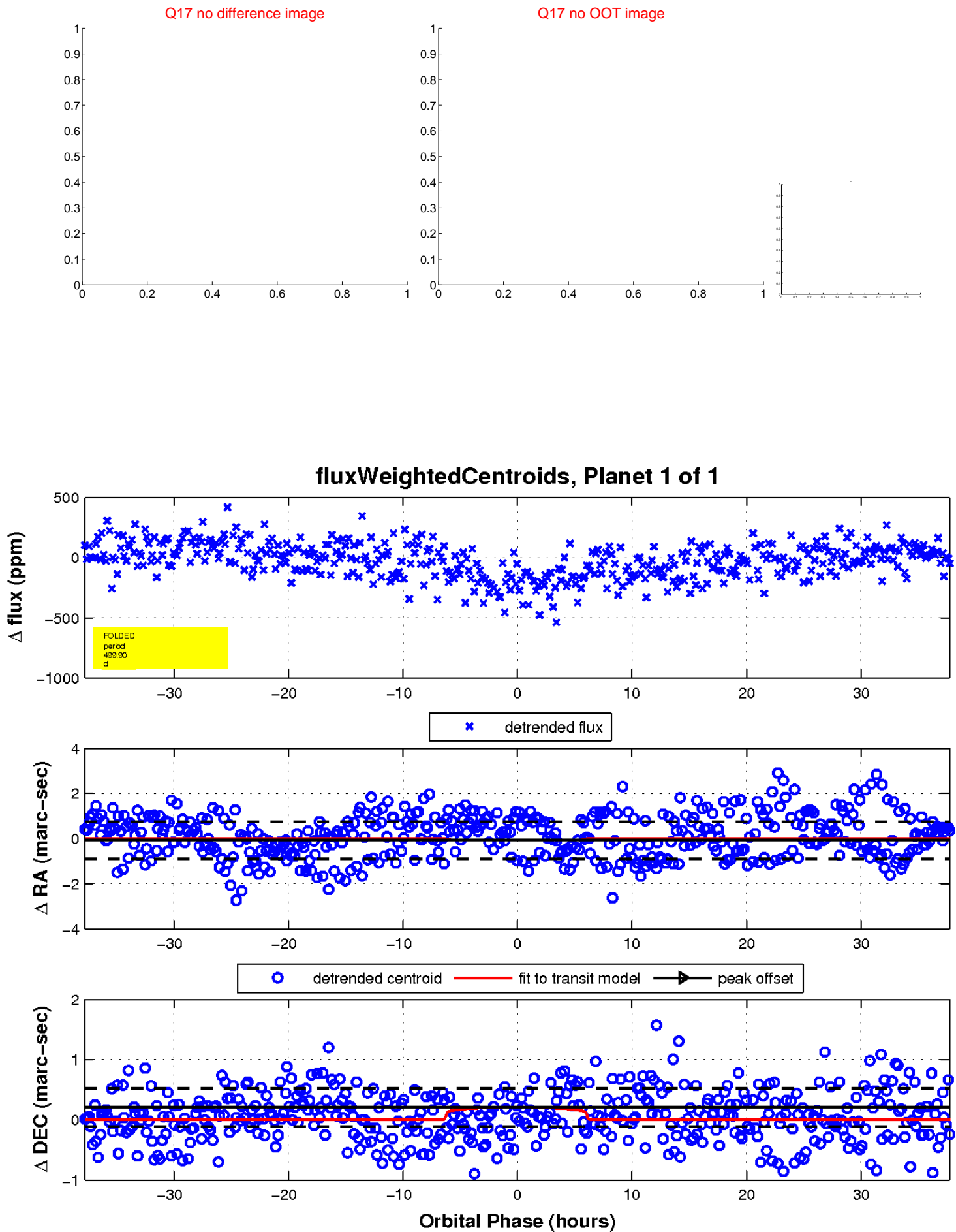
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

