

KIC 007346436

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})
007346436-01	OBS	No	417.761693	337.901045	323.8	16.467	7.2	6.6	0.88	5757	1.64	0.65

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007346436-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_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.

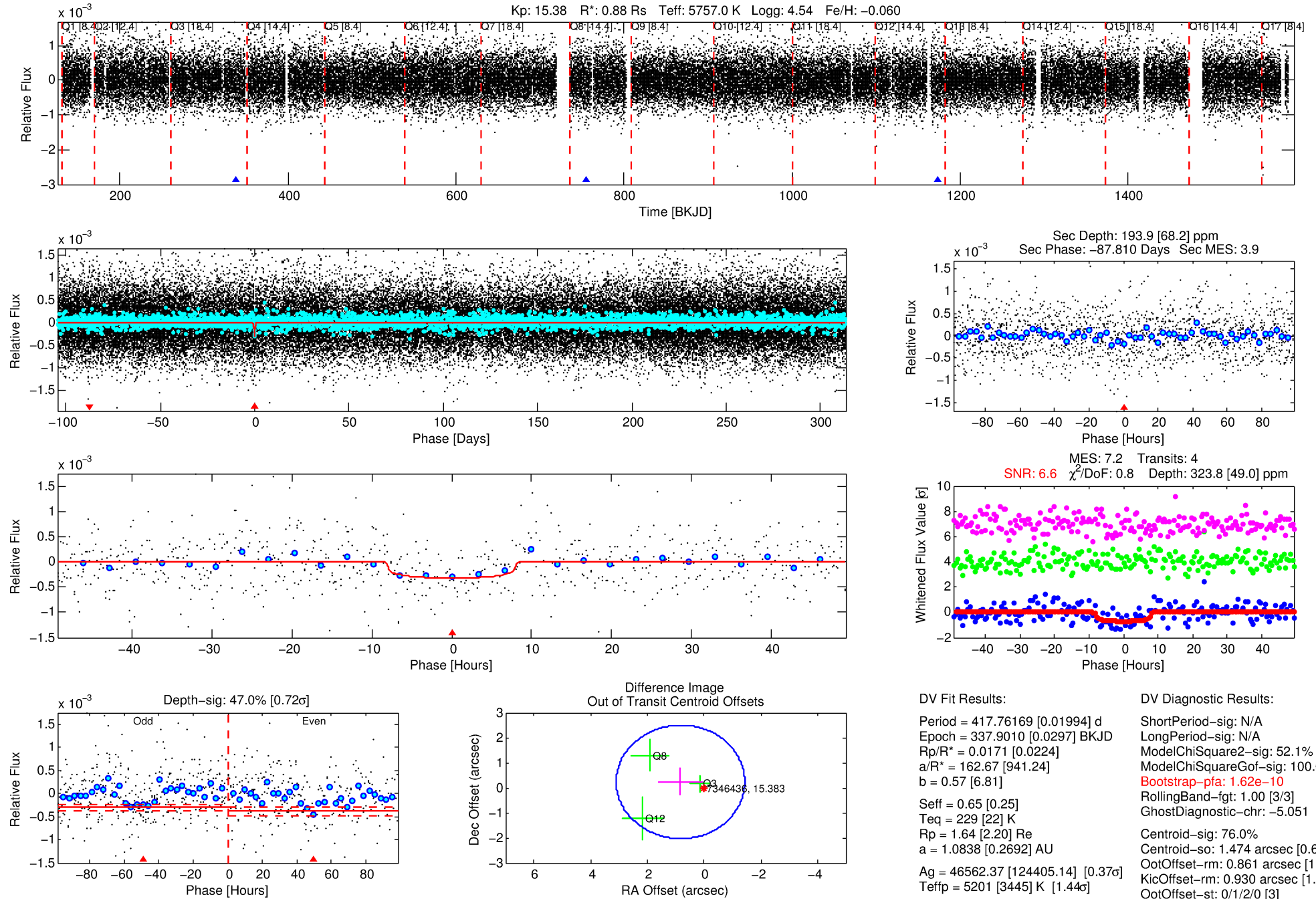
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007346436-01

No Significant Match Found

DV One-Page Summary

KIC: 7346436 Candidate: 1 of 1 Period: 417.762 d



DV Fit Results:

Period = 417.76169 [0.01994] d
Epoch = 337.9010 [0.0297] BKJD
Rp/R* = 0.0171 [0.0224]
a/R* = 162.67 [941.24]
b = 0.57 [6.81]
Seff = 0.65 [0.25]
Teff = 229 [22] K
Rp = 1.64 [2.20] Re
a = 1.0838 [0.2692] AU
Ag = 46562.37 [124405.14] [0.37 σ]
Teffp = 5201 [3445] K [1.44 σ]

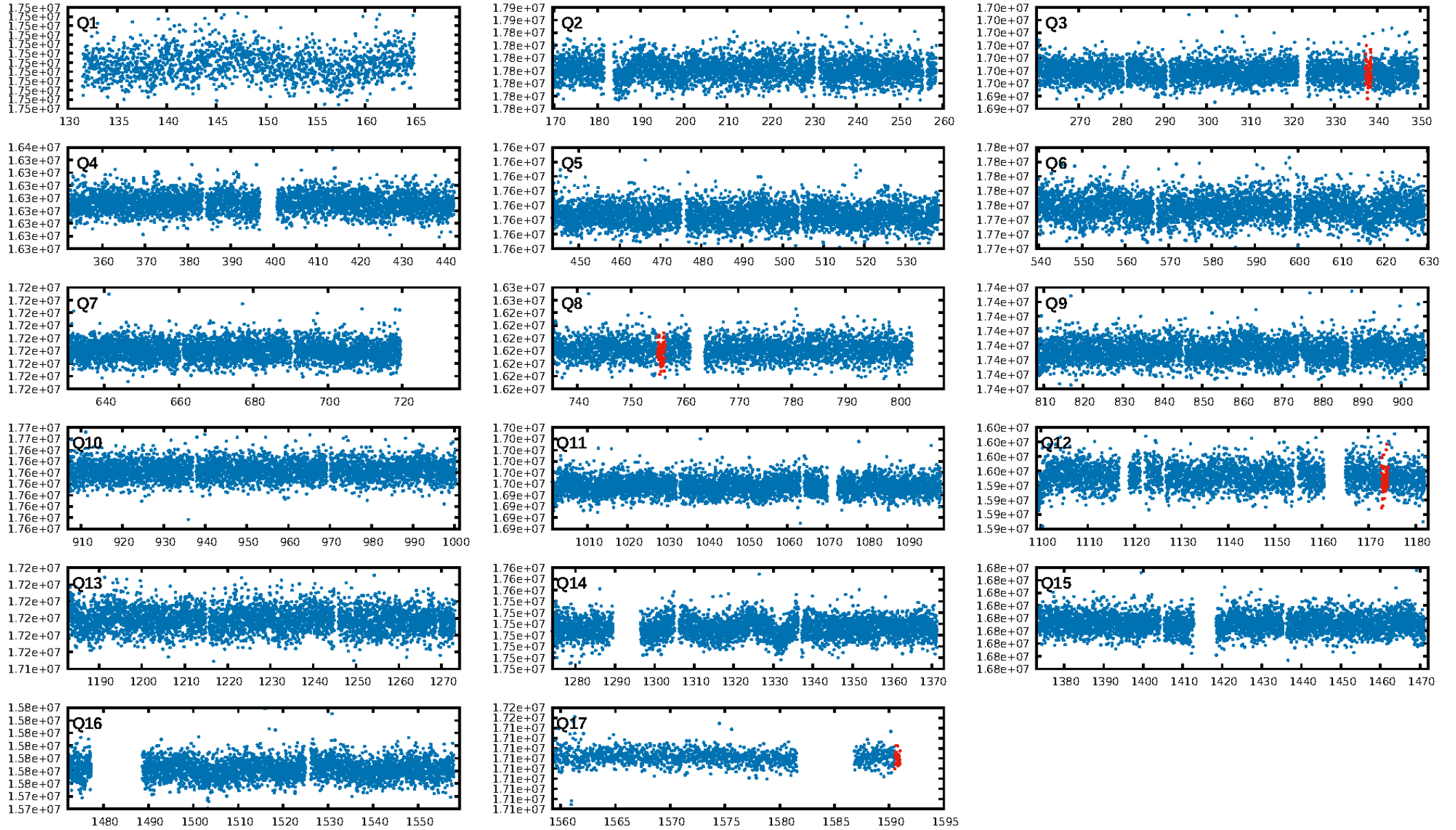
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 52.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.62e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -5.051
Centroid-sig: 76.0%
Centroid-so: 1.474 arcsec [0.60 σ]
OotOffset-rm: 0.861 arcsec [1.14 σ]
KicOffset-rm: 0.930 arcsec [1.24 σ]
OotOffset-st: 0/1/2/0 [3]
KicOffset-st: 0/1/2/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

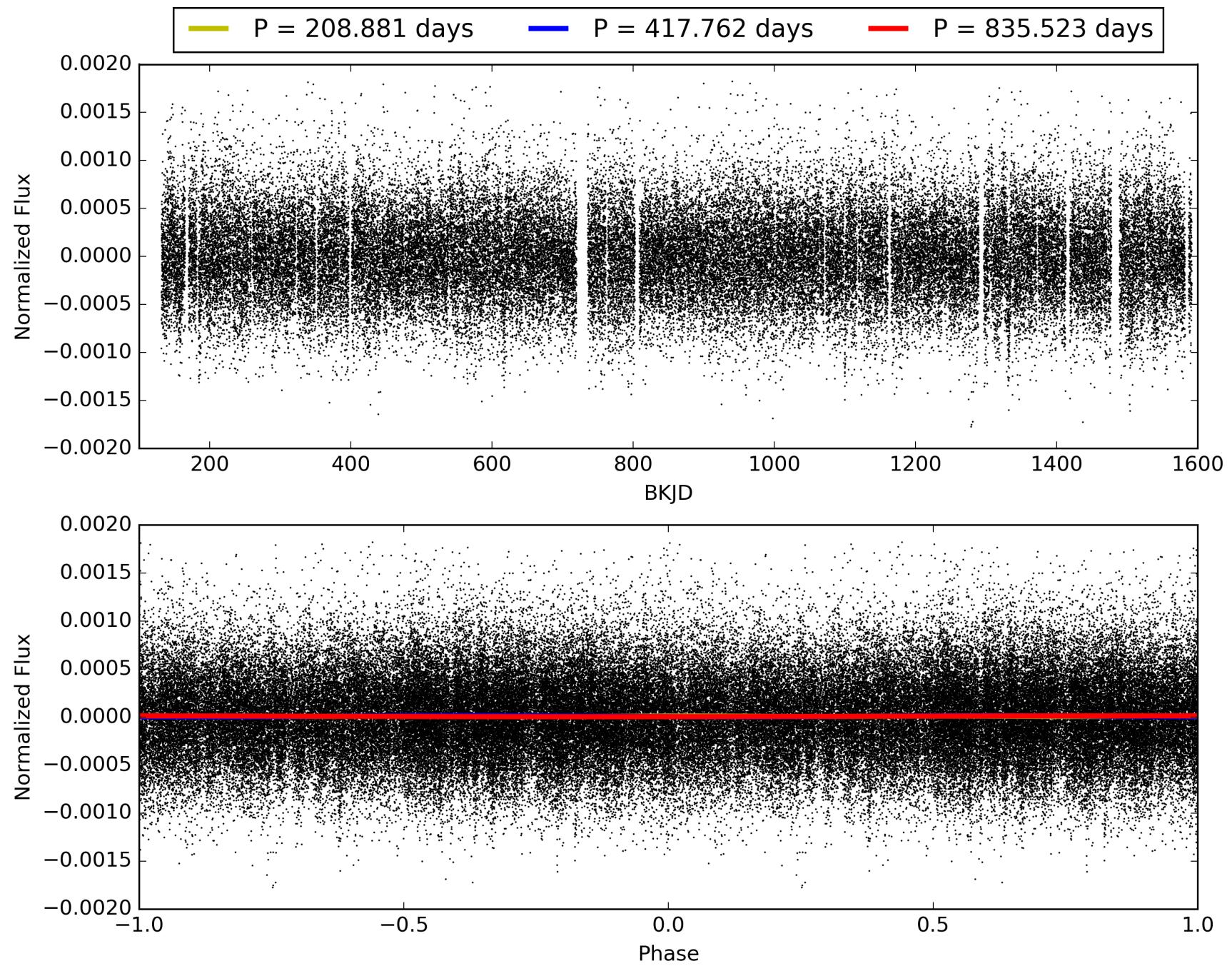
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:19:55 Z

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

TCE 007346436-01, PDC Light Curves

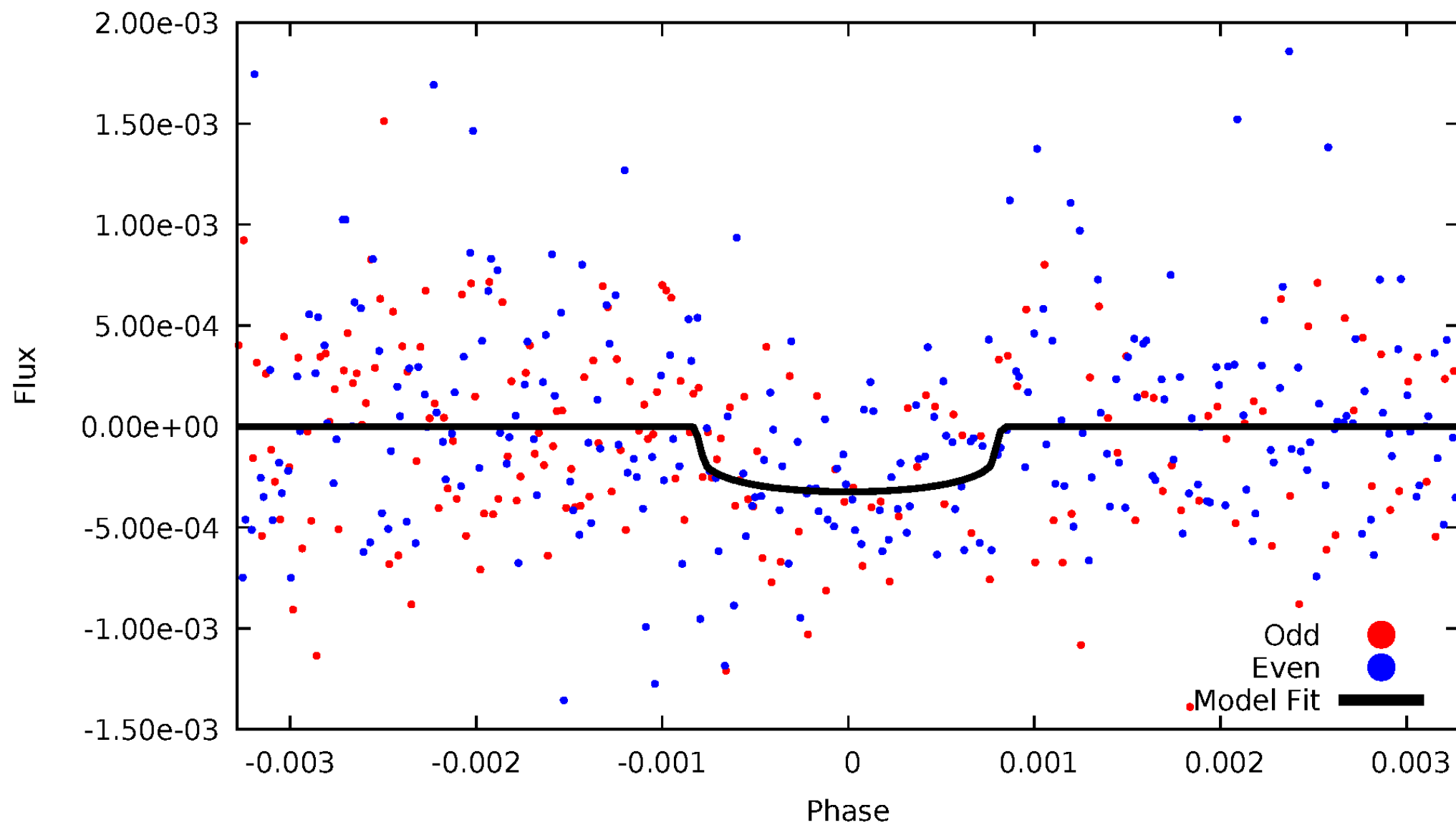


TCE 007346436-01



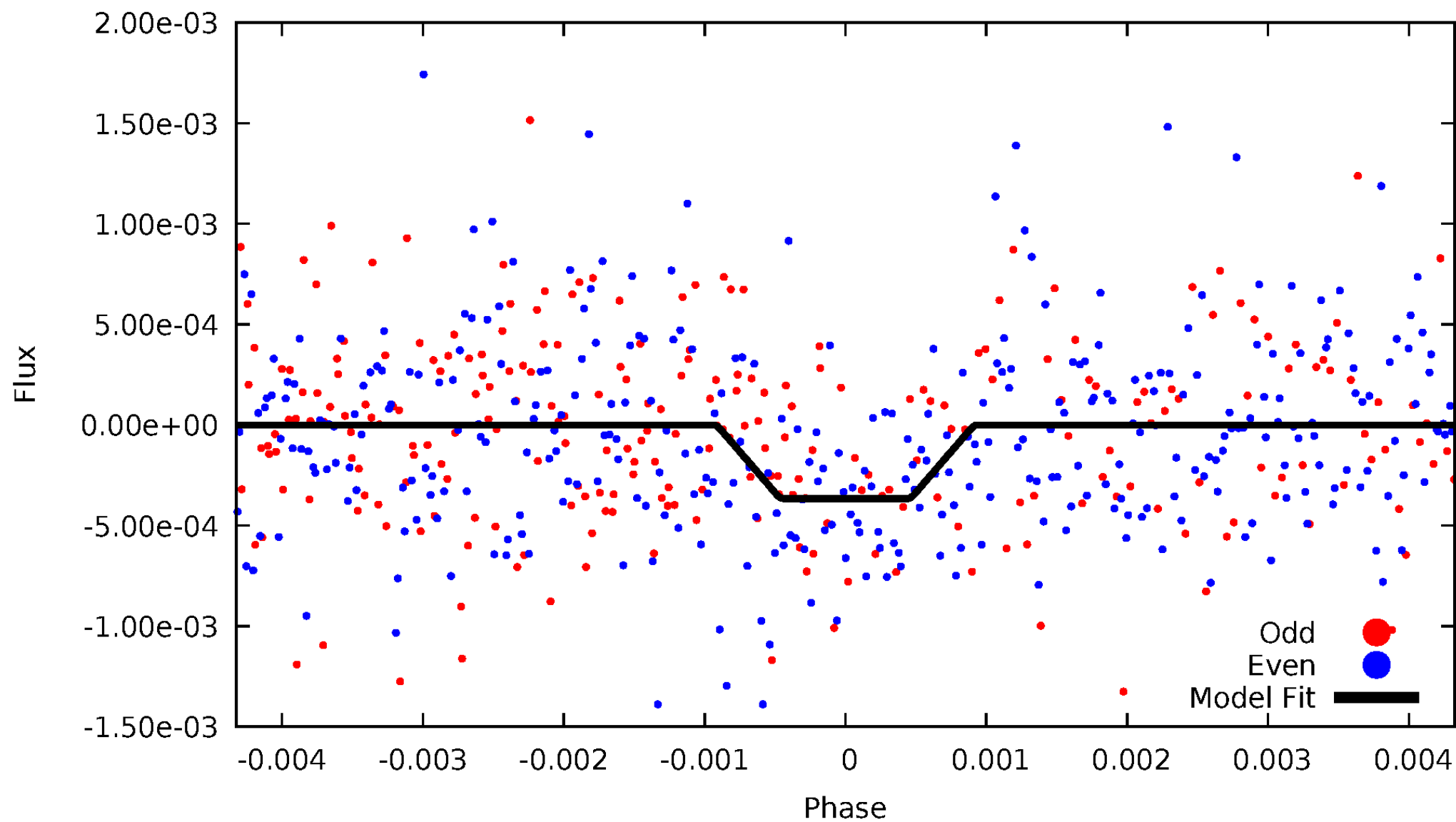
DV Odd/Even

TCE 007346436-01



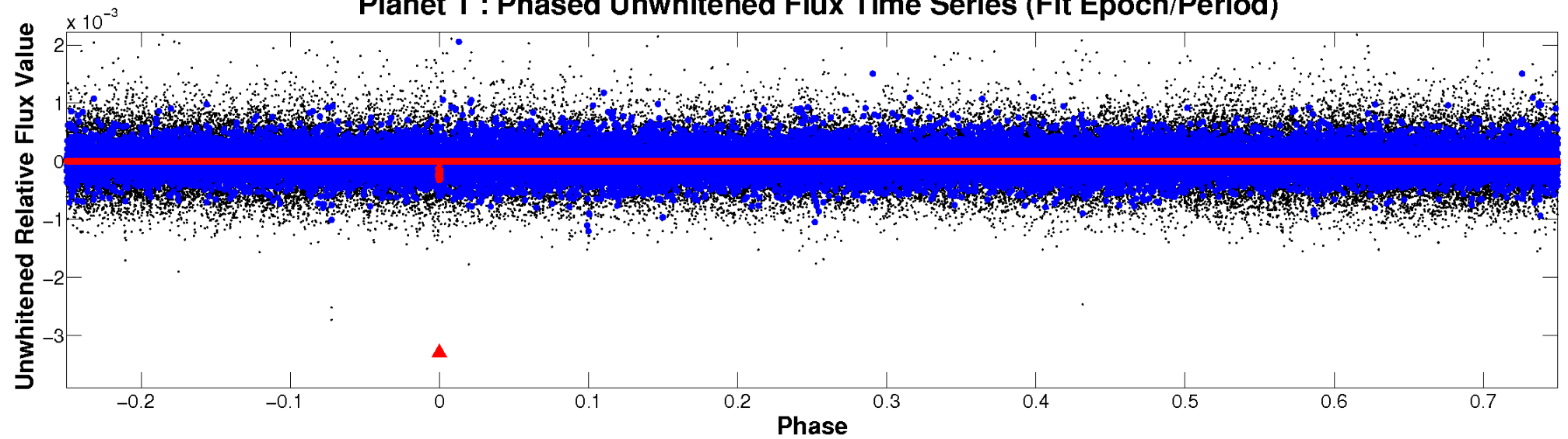
ALT Odd/Even

TCE 007346436-01

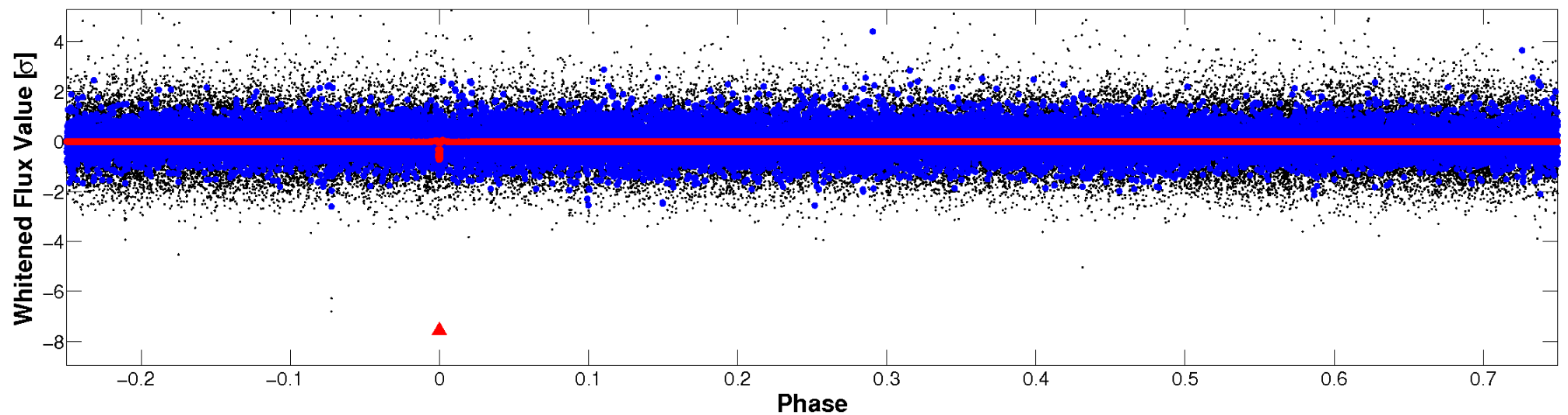


Non-Whitened Vs. Whitened Light Curve

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 007346436-01 P=417.761693 Days $T_0=337.901045$ (BKJD)



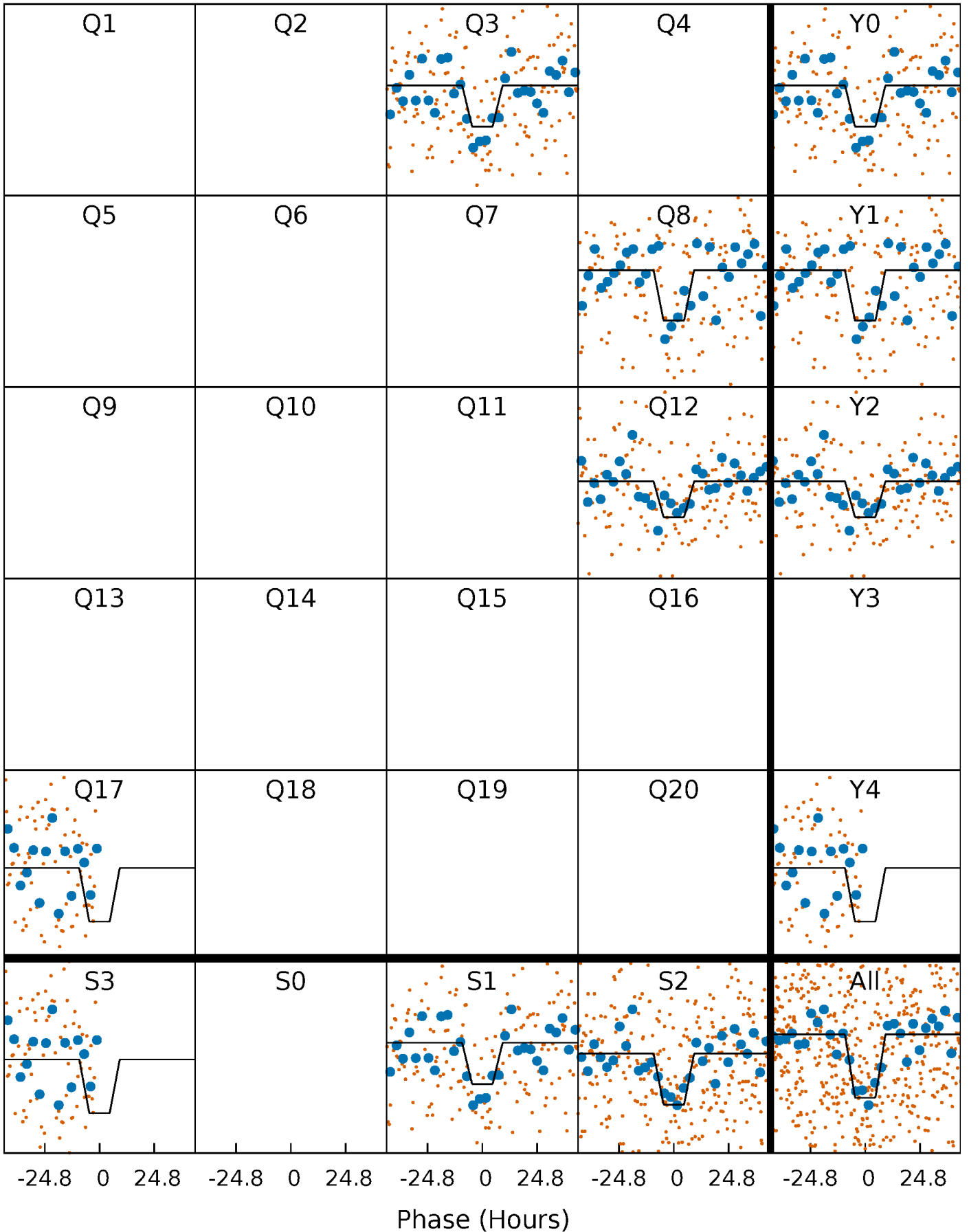
DV Quarter-Phased Transit Curves

TCE 007346436-01 P=417.761693 Days $T_0=337.901045$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

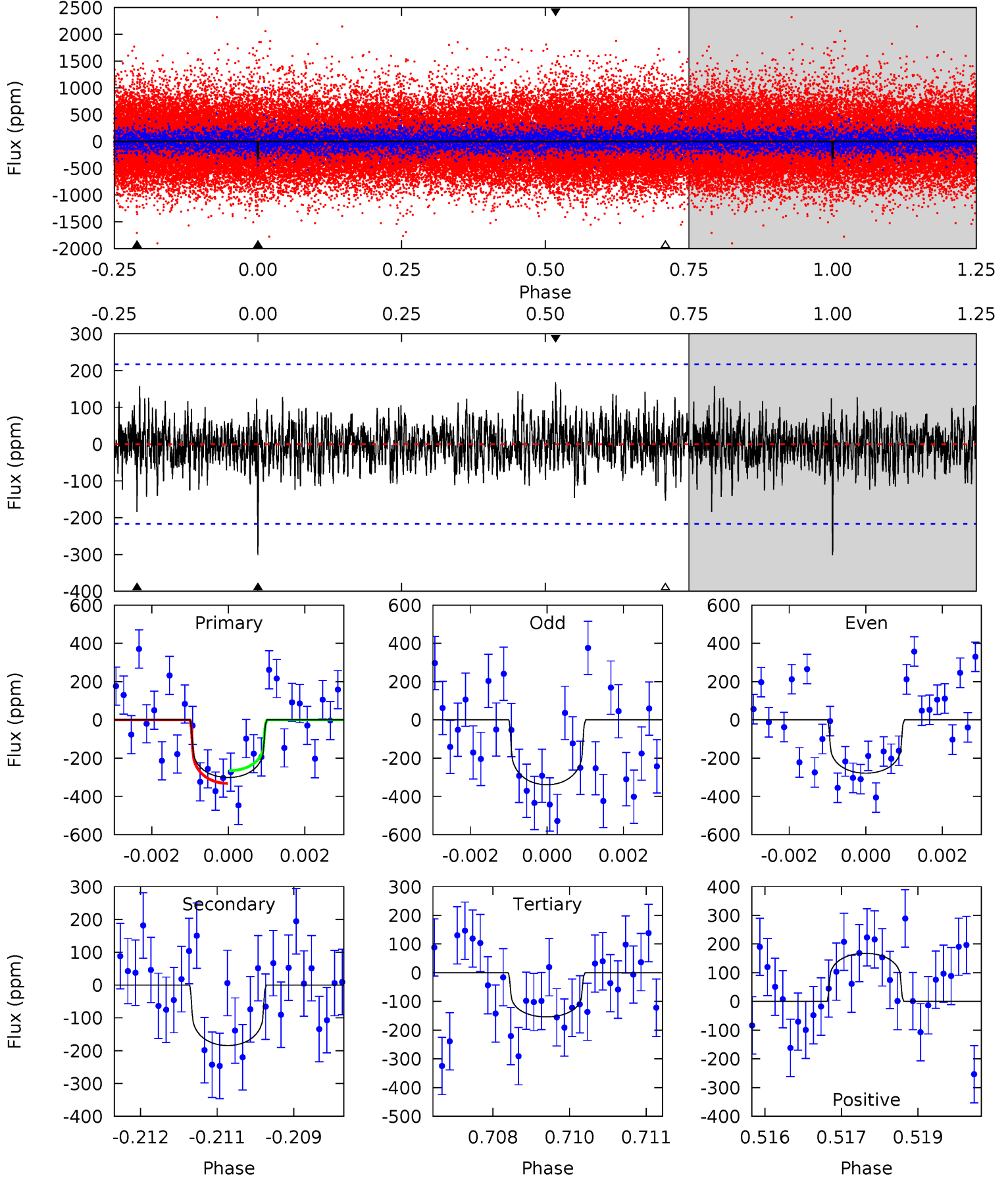
TCE 007346436-01 P=417.736889 Days $T_0=337.868469$ (BKJD)



DV Model-Shift Uniqueness Test

007346436-01, P = 417.761693 Days, E = 337.901045 Days

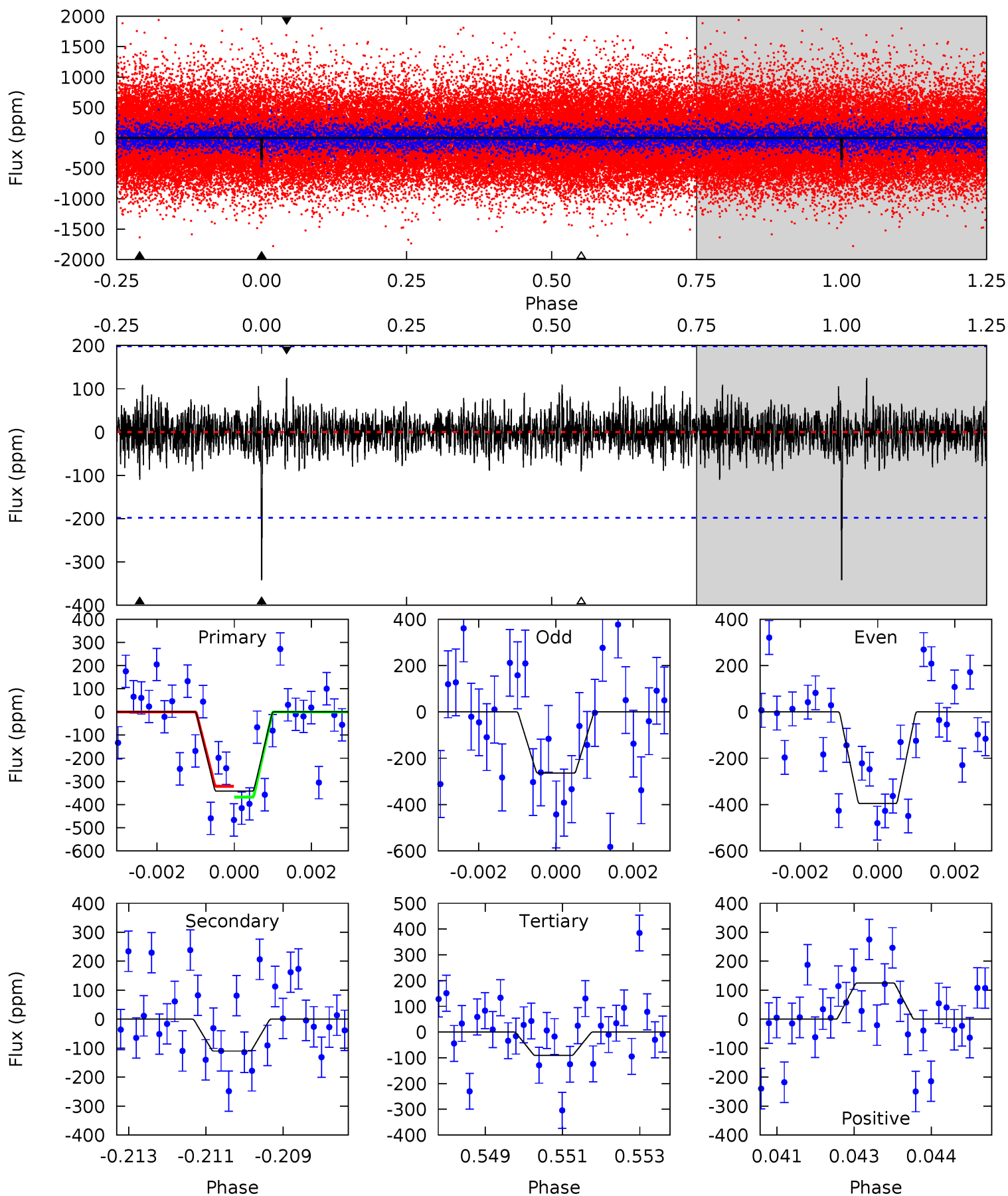
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.44	4.55	3.80	4.14	5.36	3.14	1.12	3.64	3.30	0.76	0.41	0.72	1.06	0.36	0.82



Alt Model-Shift Uniqueness Test

007346436-01, P = 417.736889 Days, E = 337.868469 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.22	2.97	2.44	3.36	5.34	3.11	0.84	6.78	5.86	0.52	-0.40	1.74	1.13	0.27	0.62



Stellar Parameters For KIC 007346436

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5757^{+156}_{-173}	$4.536^{+0.037}_{-0.200}$	$-0.060^{+0.250}_{-0.300}$	$0.881^{+0.258}_{-0.086}$	$0.974^{+0.102}_{-0.114}$	$2.003^{+0.396}_{-1.022}$
	+3%/-3%	+1%/-4%	+417%/-500%	+29%/-10%	+10%/-12%	+20%/-51%
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 007346436-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-184 ± 40	$2.39^{+2.16}_{-1.57}$	327^{+23}_{-14}	4523^{+3175}_{-902}	$19968^{+170780}_{-14583}$
Alt.	-110 ± 37	$2.58^{+2.18}_{-1.59}$	329^{+22}_{-16}	3968^{+1988}_{-731}	9790^{+61899}_{-6975}

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

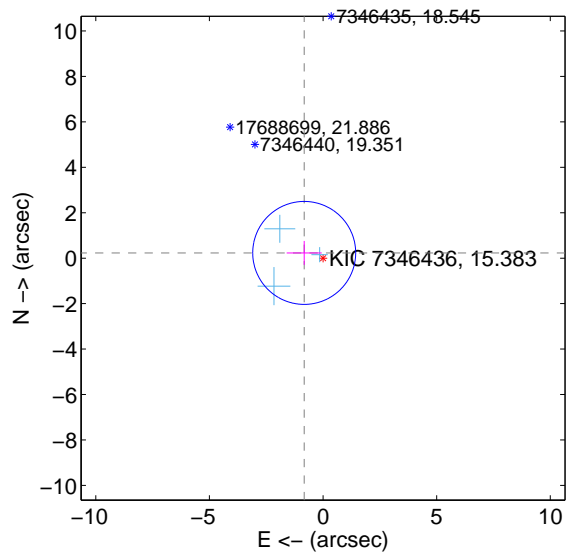
Supplemental centroid analysis for 007346436-01. Kepler magnitude: 15.38. Transit SNR 6.57

There are 3 quarters with good PRF difference image offsets

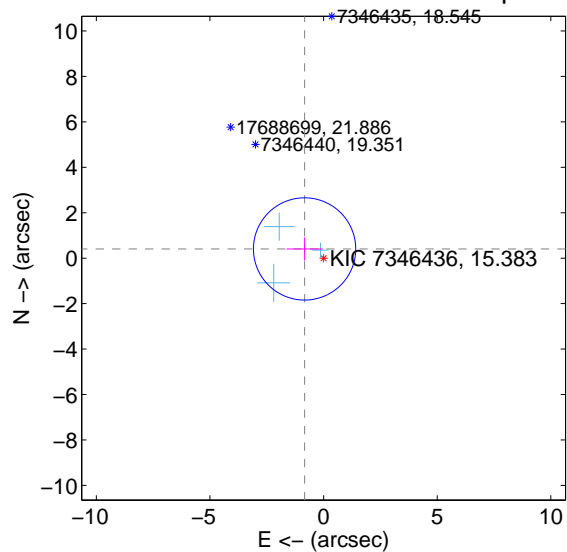
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.861 ± 0.755	1.14	0.829 ± 0.770	0.231 ± 0.527
PRF-fit source offset from KIC position	0.930 ± 0.750	1.24	0.836 ± 0.796	0.406 ± 0.512
photometric centroid source offset	1.47 ± 2.47	0.60	-1.04 ± 2.42	1.04 ± 2.51

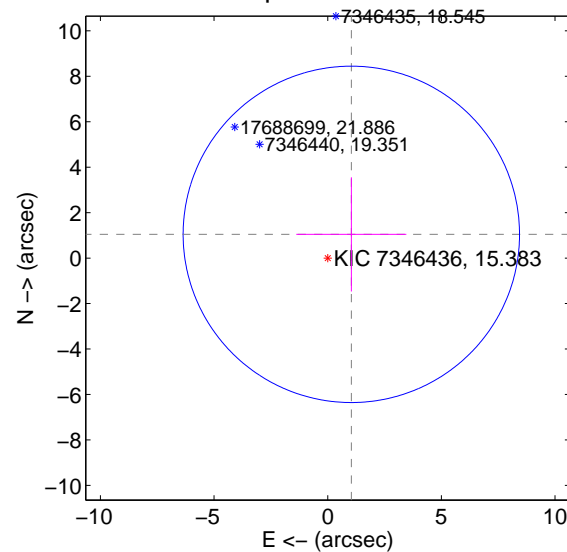
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

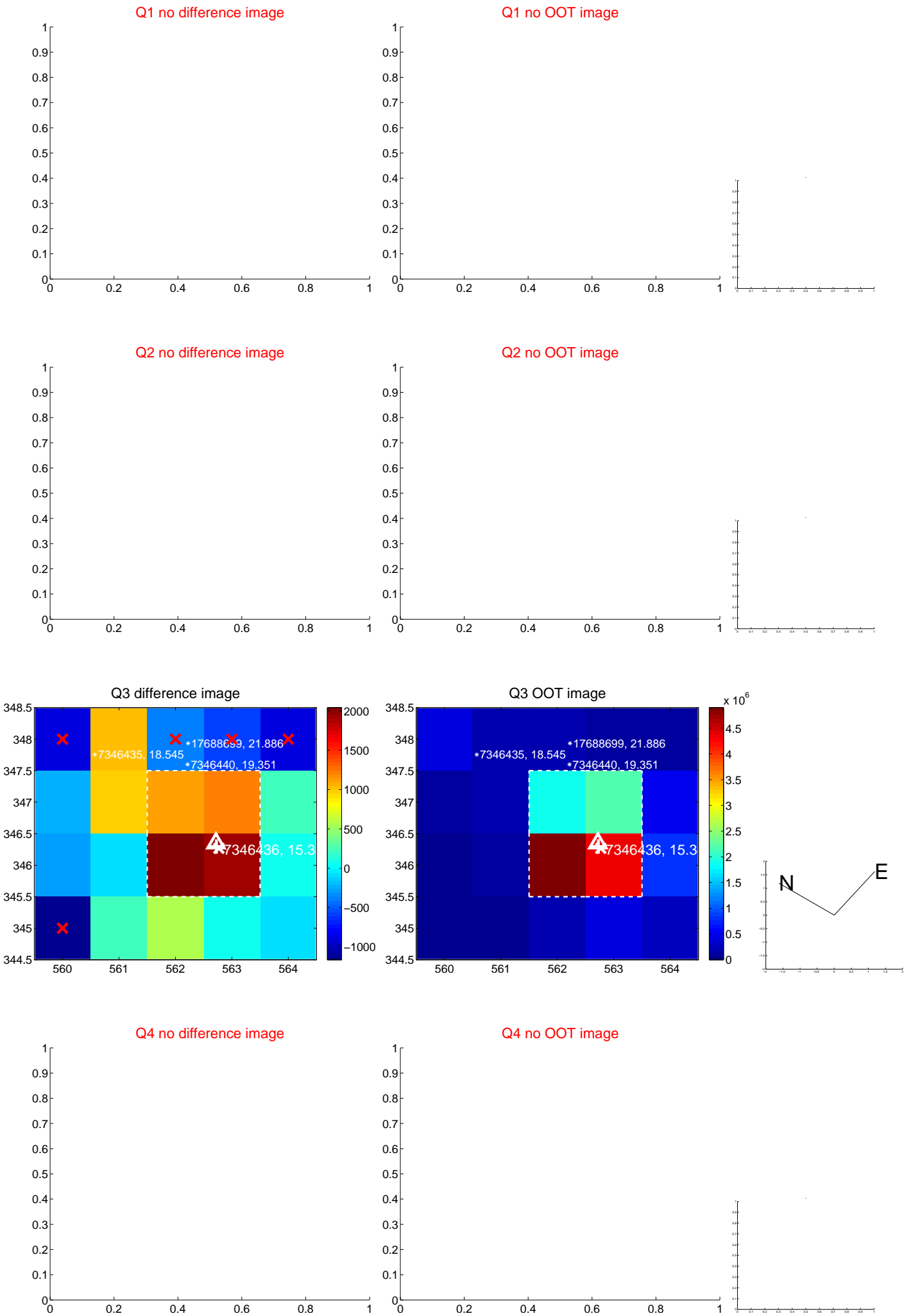


offset from photometric centroids

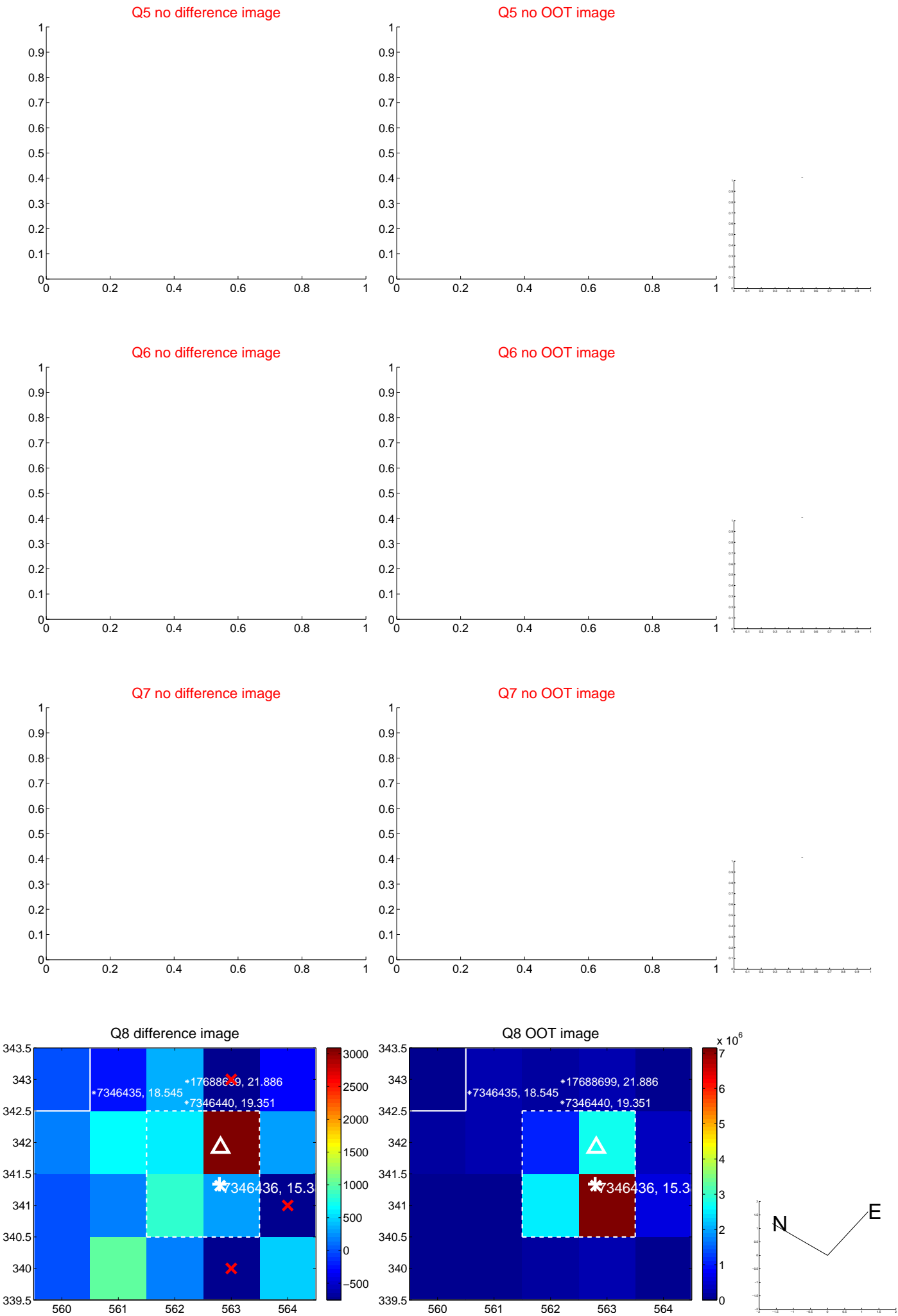


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

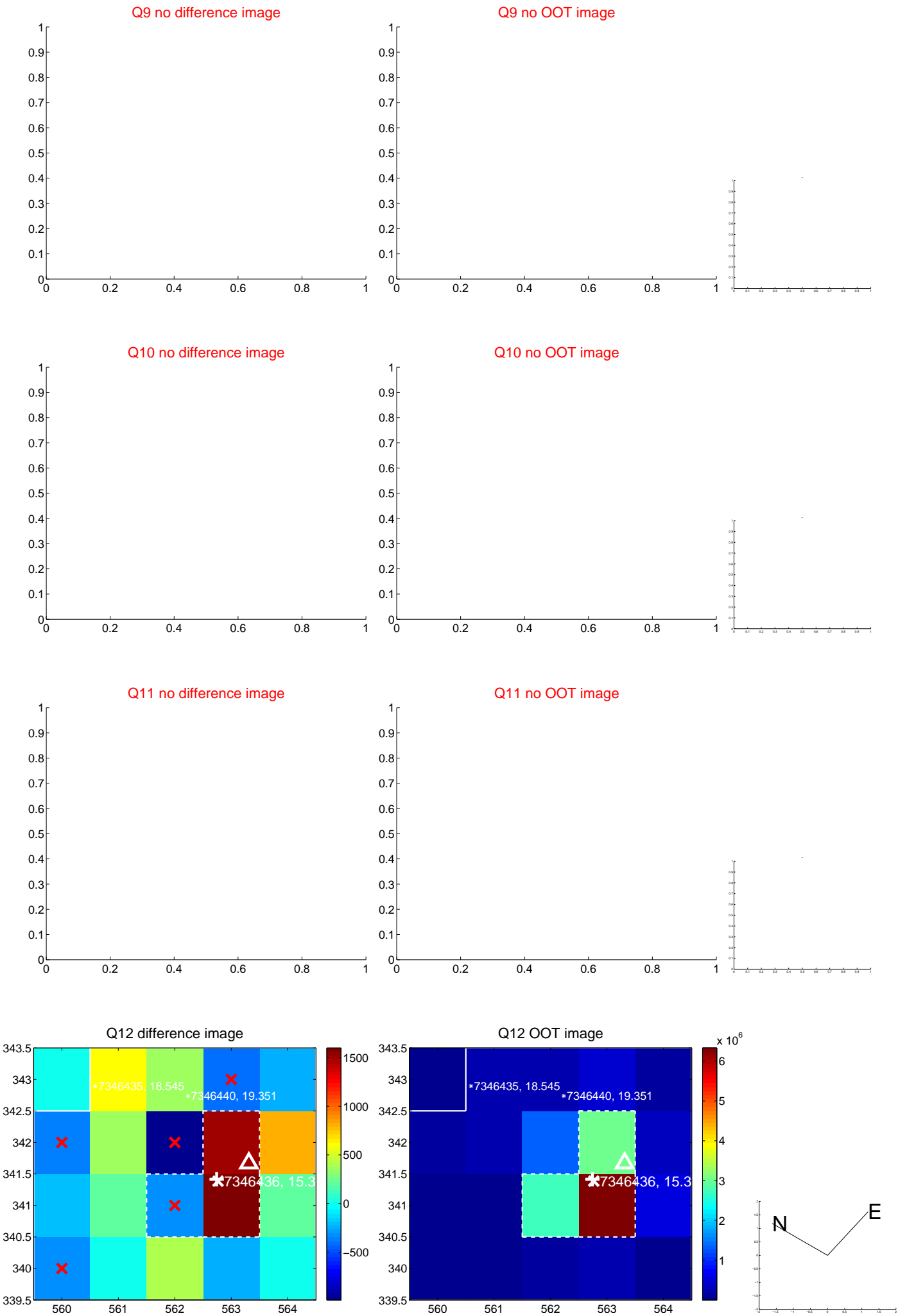
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



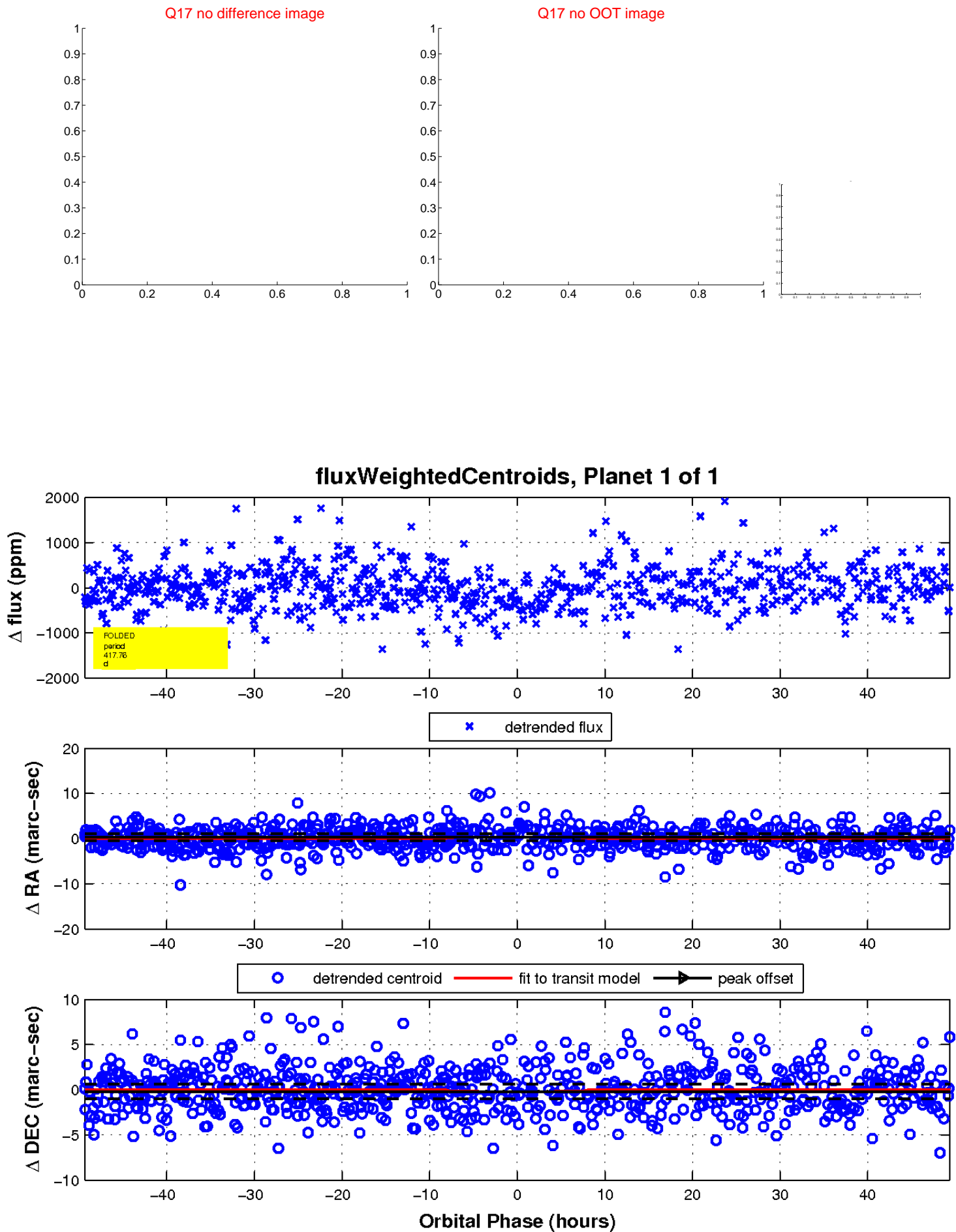
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

