

KIC 007903215

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})
007903215-01	OBS	No	368.126530	234.316343	1441.3	25.867	11.9	14.0	0.97	6360	4.59	1.35

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007903215-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—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.

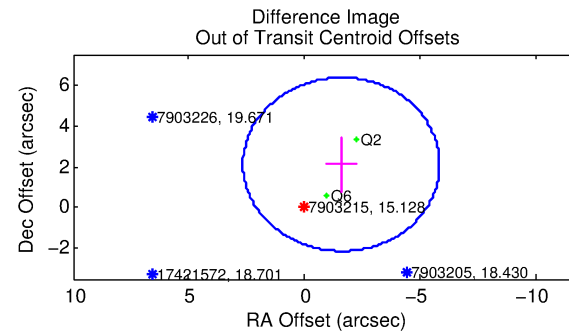
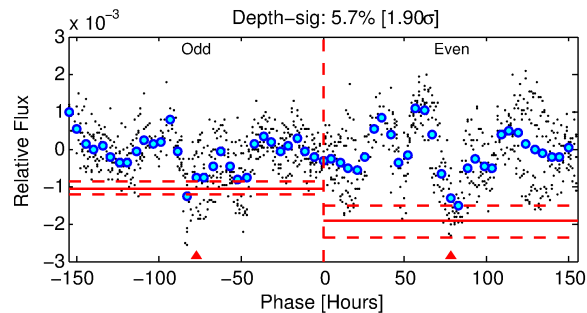
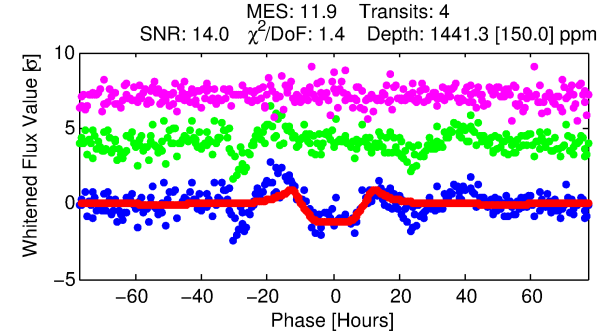
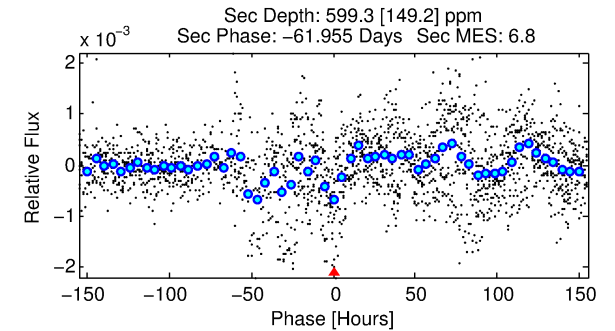
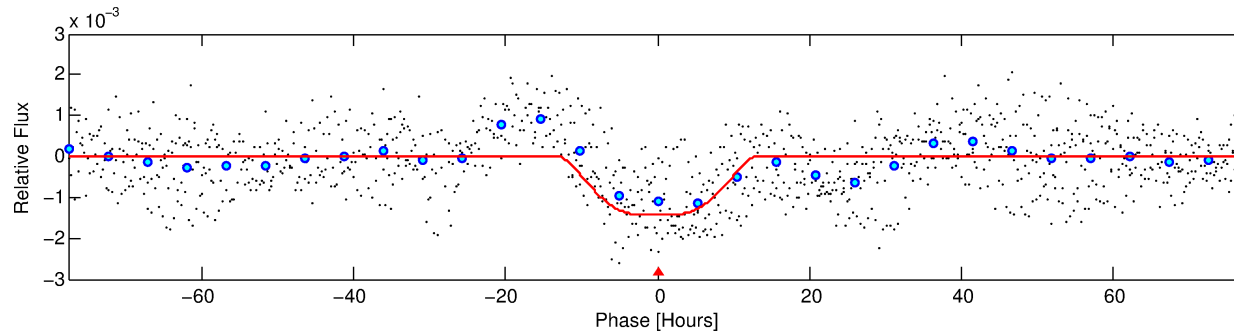
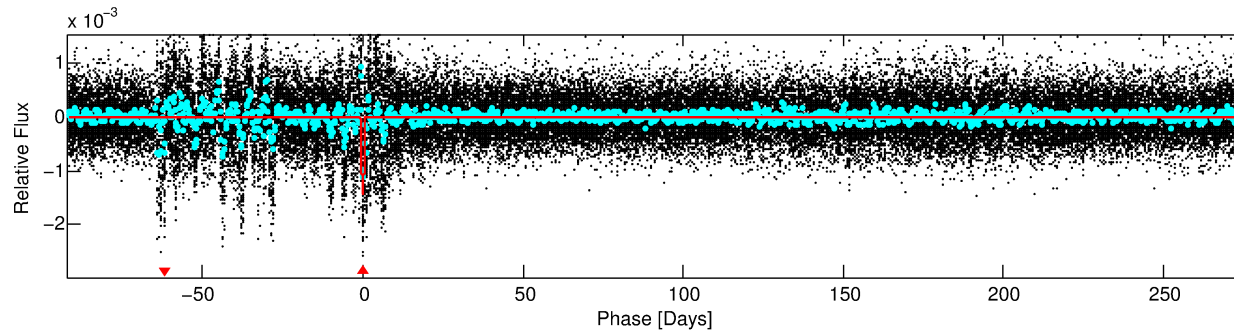
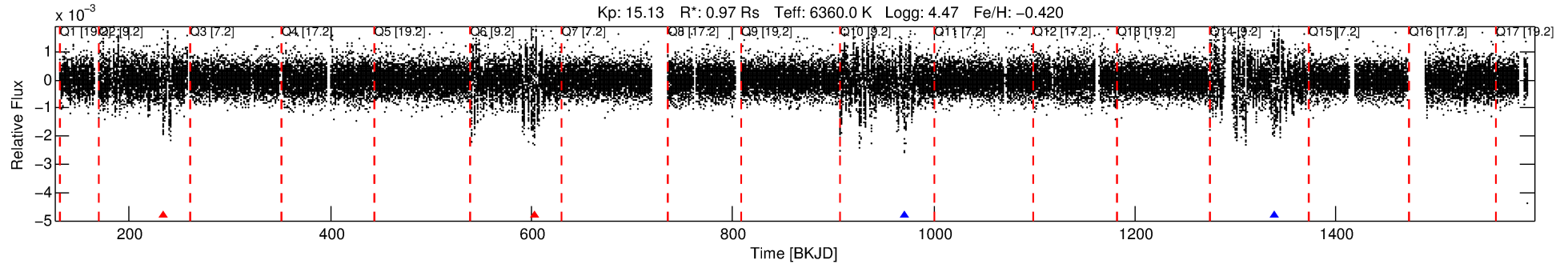
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007903215-01

No Significant Match Found

DV One-Page Summary

KIC: 7903215 Candidate: 1 of 1 Period: 368.127 d



DV Fit Results:

Period = 368.12653 [0.01533] d
Epoch = 234.3163 [0.0276] BKJD
Rp/R* = 0.0432 [0.0026]
a/R* = 47.19 [4.00]
b = 0.95 [0.01]
Seff = 1.36 [0.56]
Teq = 275 [29] K
Rp = 4.59 [1.45] Re
a = 1.0140 [0.2691] AU
Ag = 16074.65 [7698.70] [2.09σ]
Teff = 4790 [371] K [12.13σ]

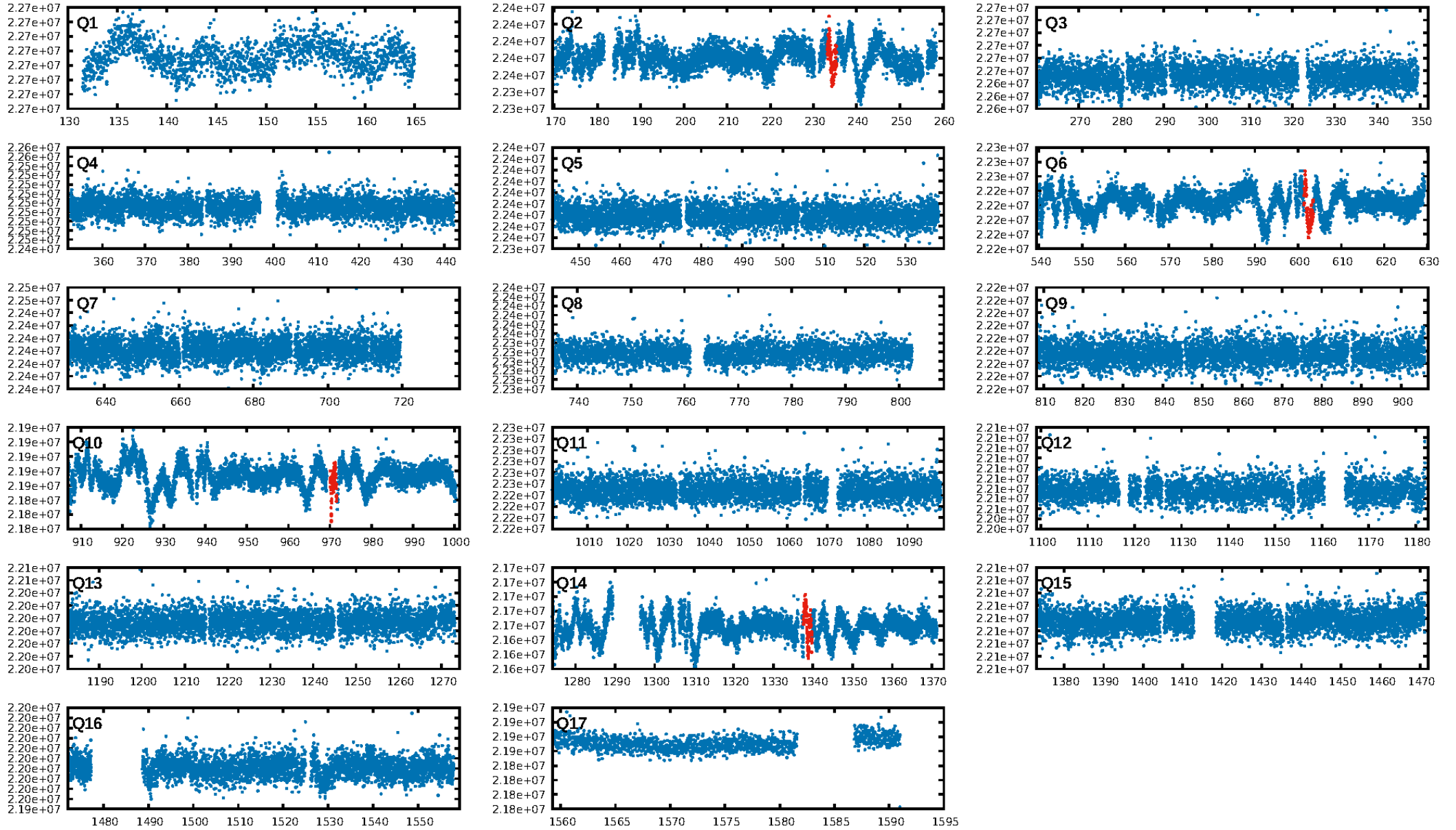
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 3.1%
ModelChiSquareGof-sig: 55.5%
Bootstrap-pfa: 2.94e-12
RollingBand-fgt: 0.50 [2/4]
GhostDiagnostic-chr: 1.674
Centroid-sig: 0.1%
Centroid-so: 4.533 arcsec [3.17σ]
OotOffset-rm: 2.647 arcsec [1.87σ]
KicOffset-rm: 2.670 arcsec [1.96σ]
OotOffset-st: 2/0/0/0 [2]
KicOffset-st: 2/0/0/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [2/2]

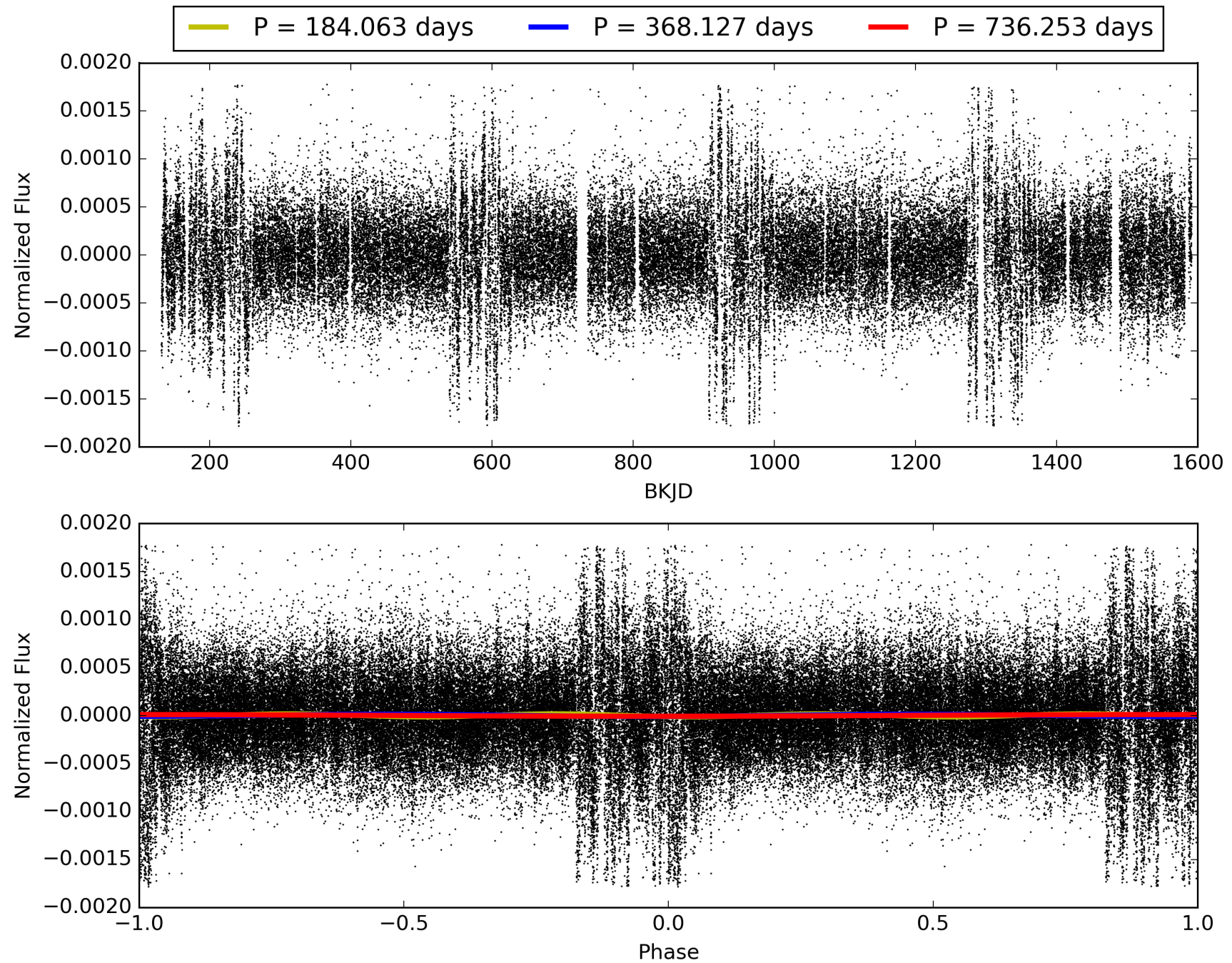
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 02:07:10 Z

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

TCE 007903215-01, PDC Light Curves

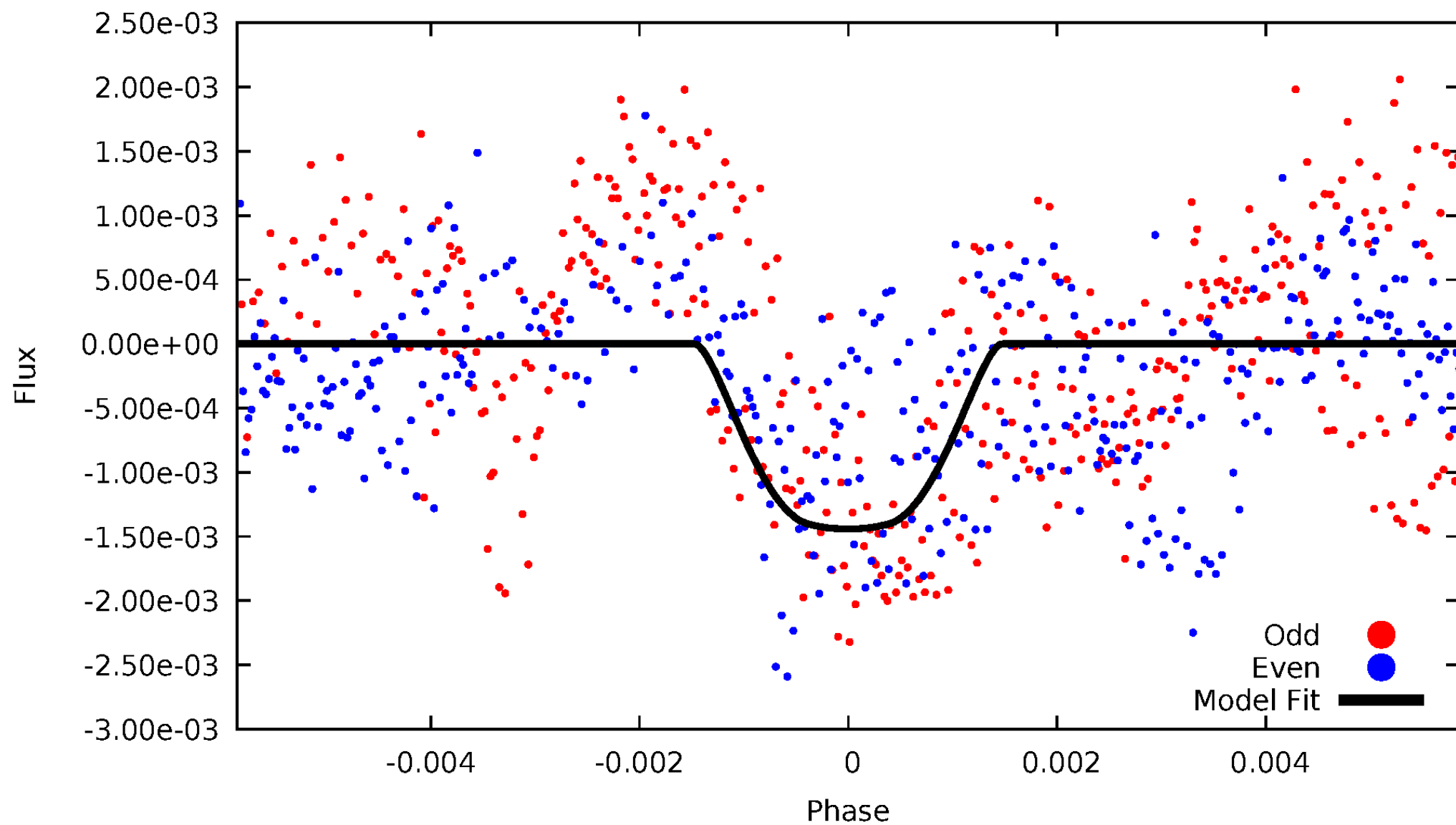


TCE 007903215-01



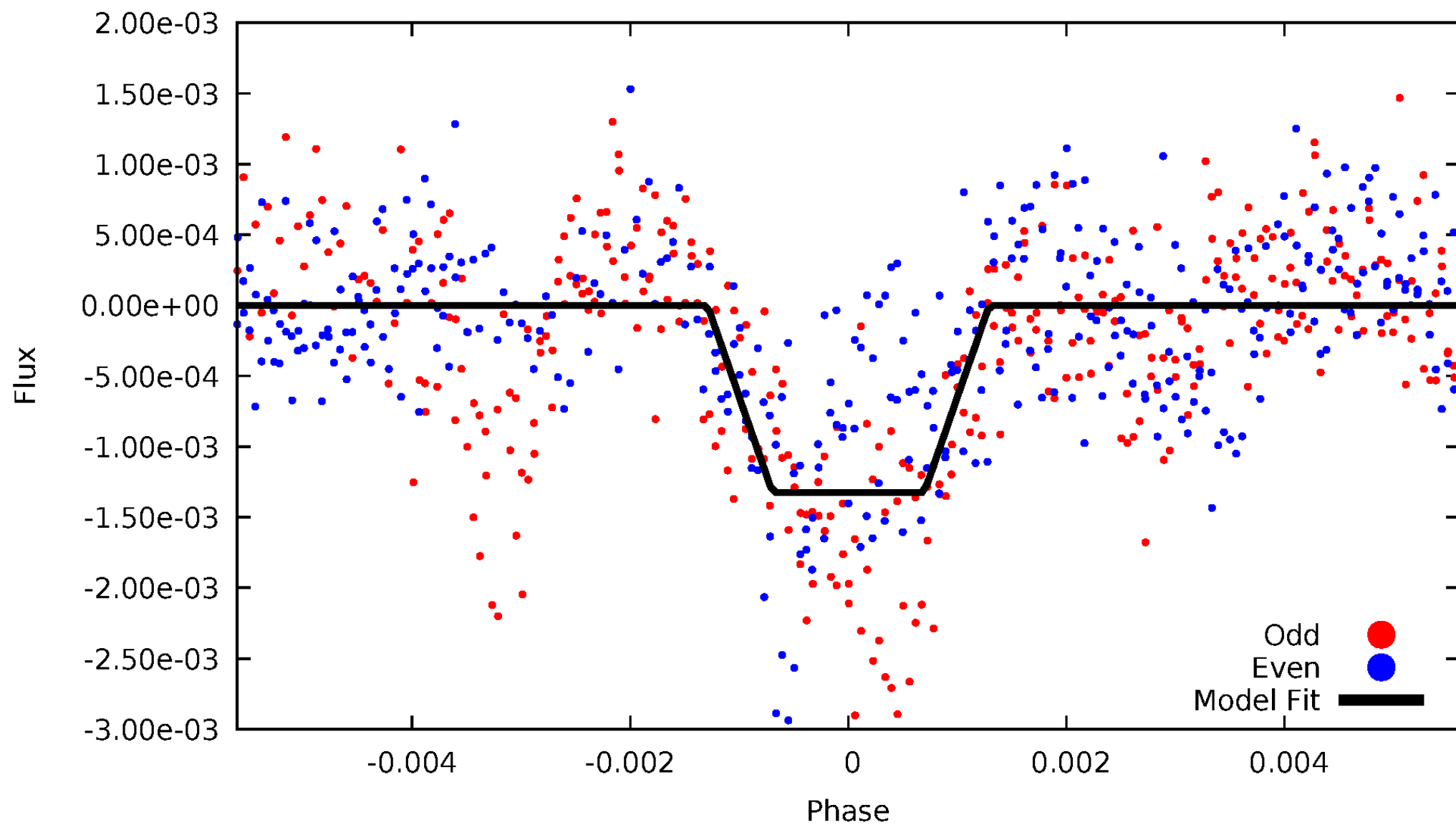
DV Odd/Even

TCE 007903215-01



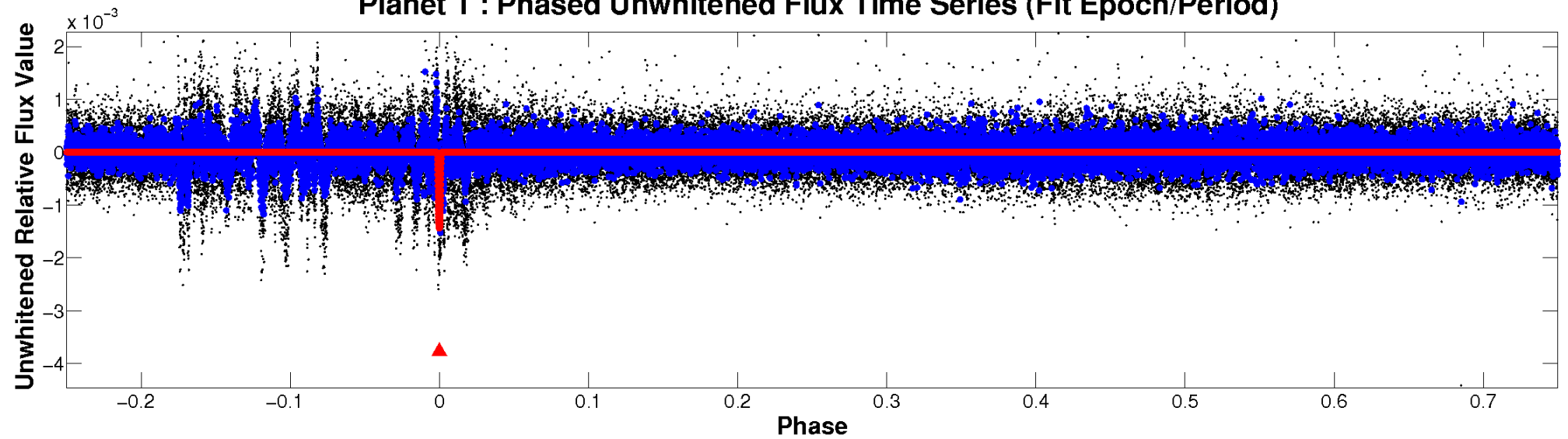
ALT Odd/Even

TCE 007903215-01

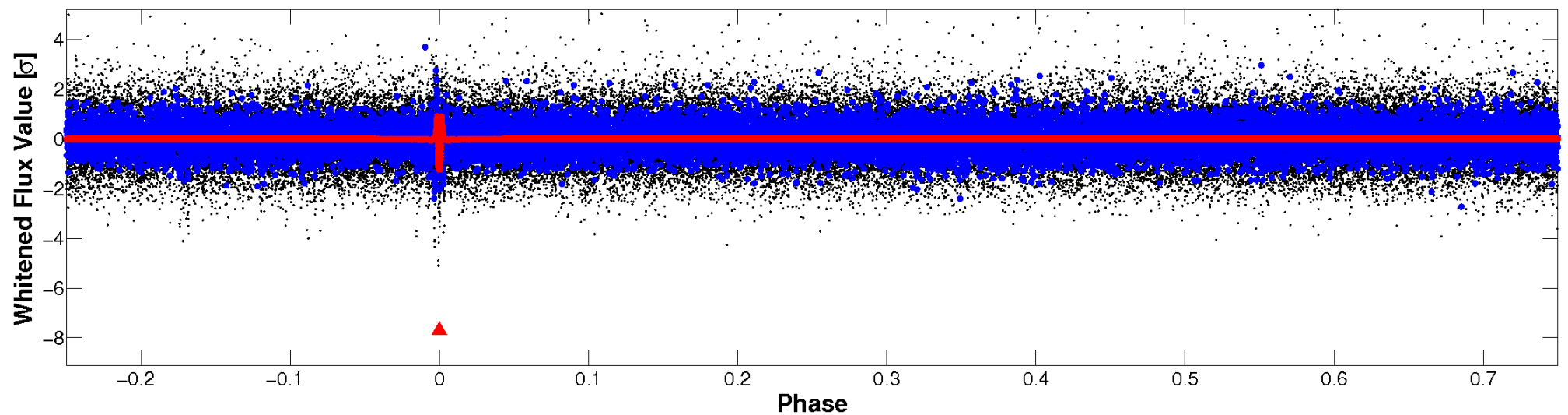


Non-Whitened Vs. Whitened Light Curve

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



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



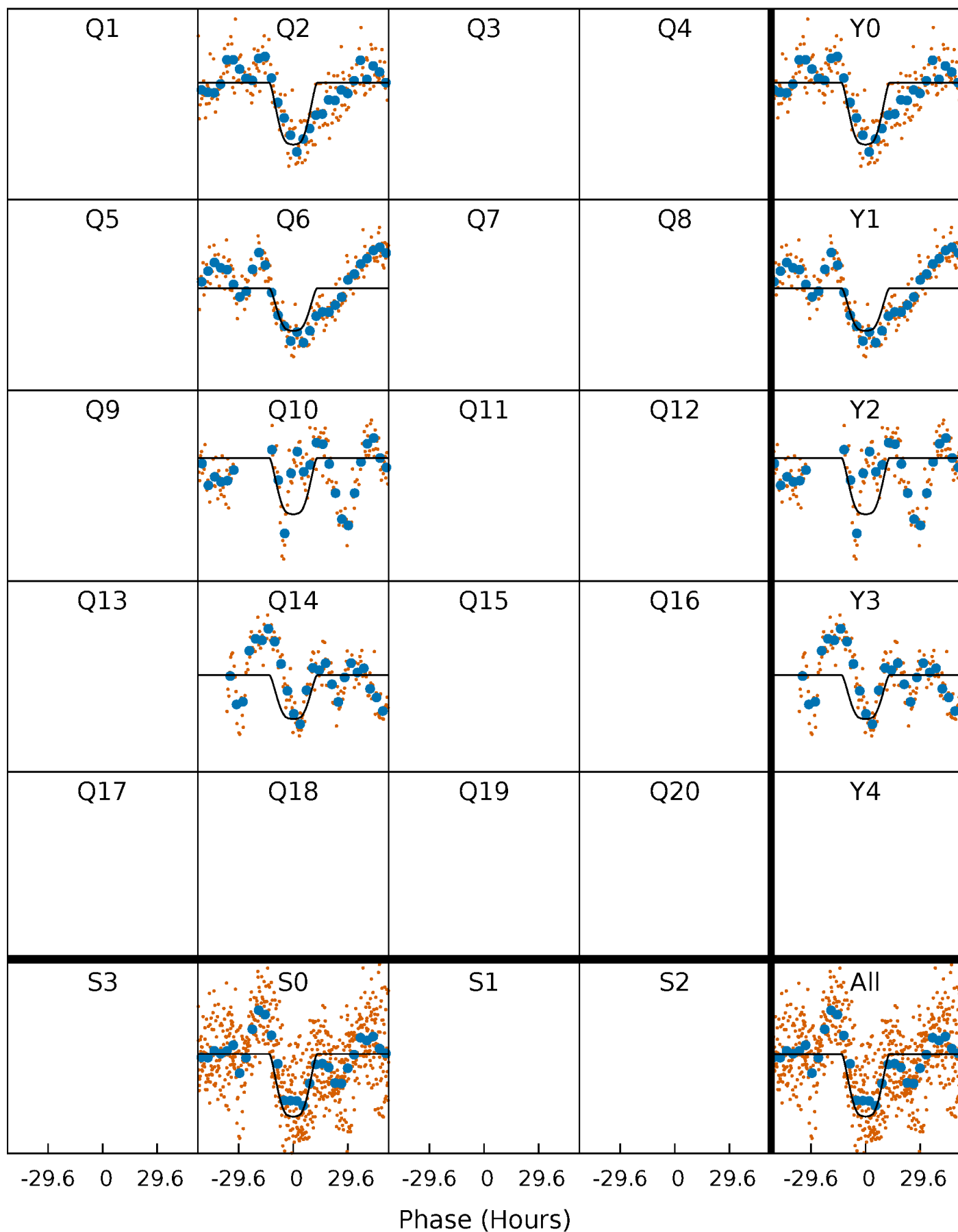
PDC Quarter-Phased Transit Curves

TCE 007903215-01 P=368.126530 Days $T_0=234.316343$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 007903215-01 P=368.126530 Days $T_0=234.316343$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

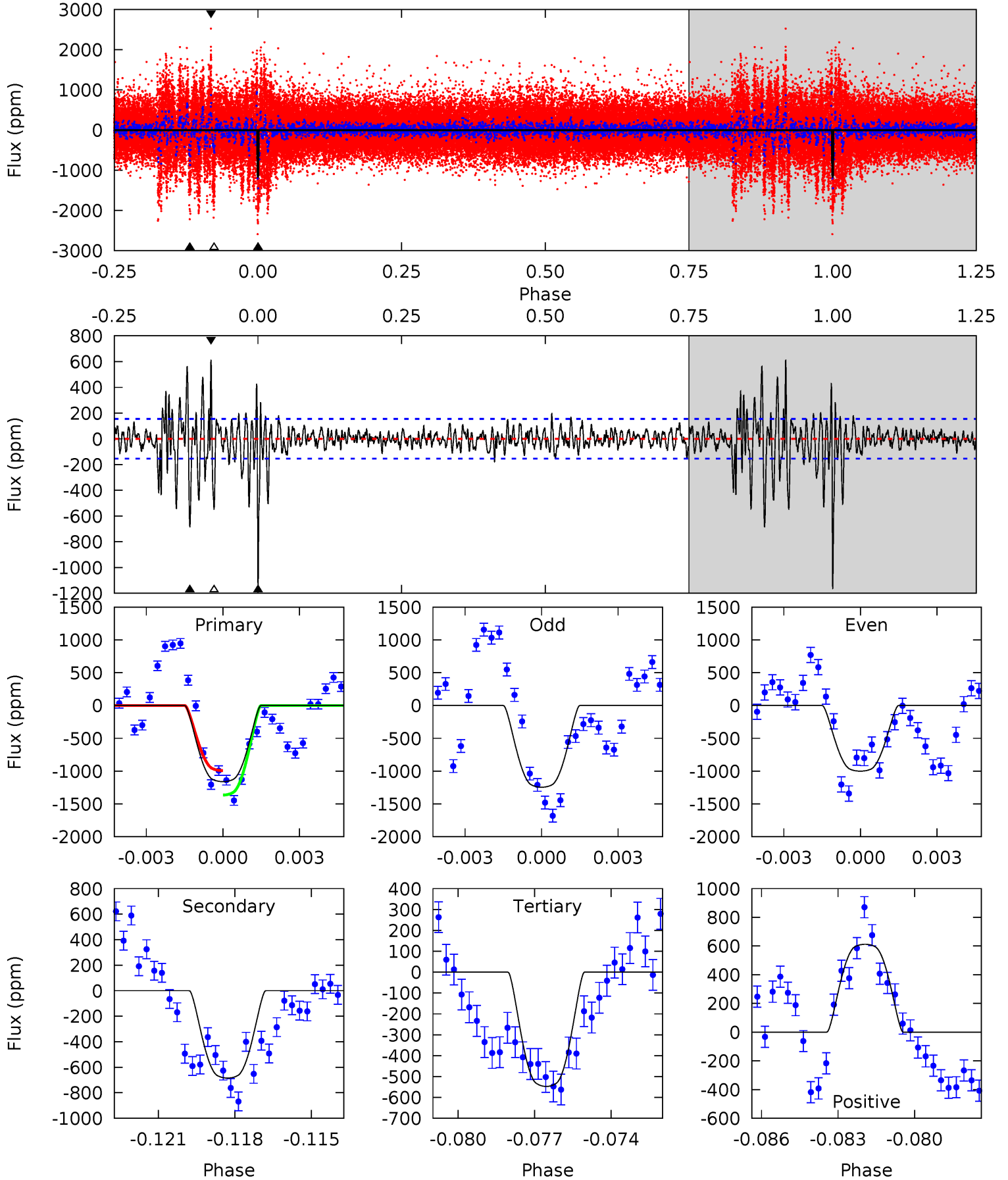
TCE 007903215-01 P=368.110583 Days $T_0=234.336012$ (BKJD)



DV Model-Shift Uniqueness Test

007903215-01, P = 368.126530 Days, E = 234.316343 Days

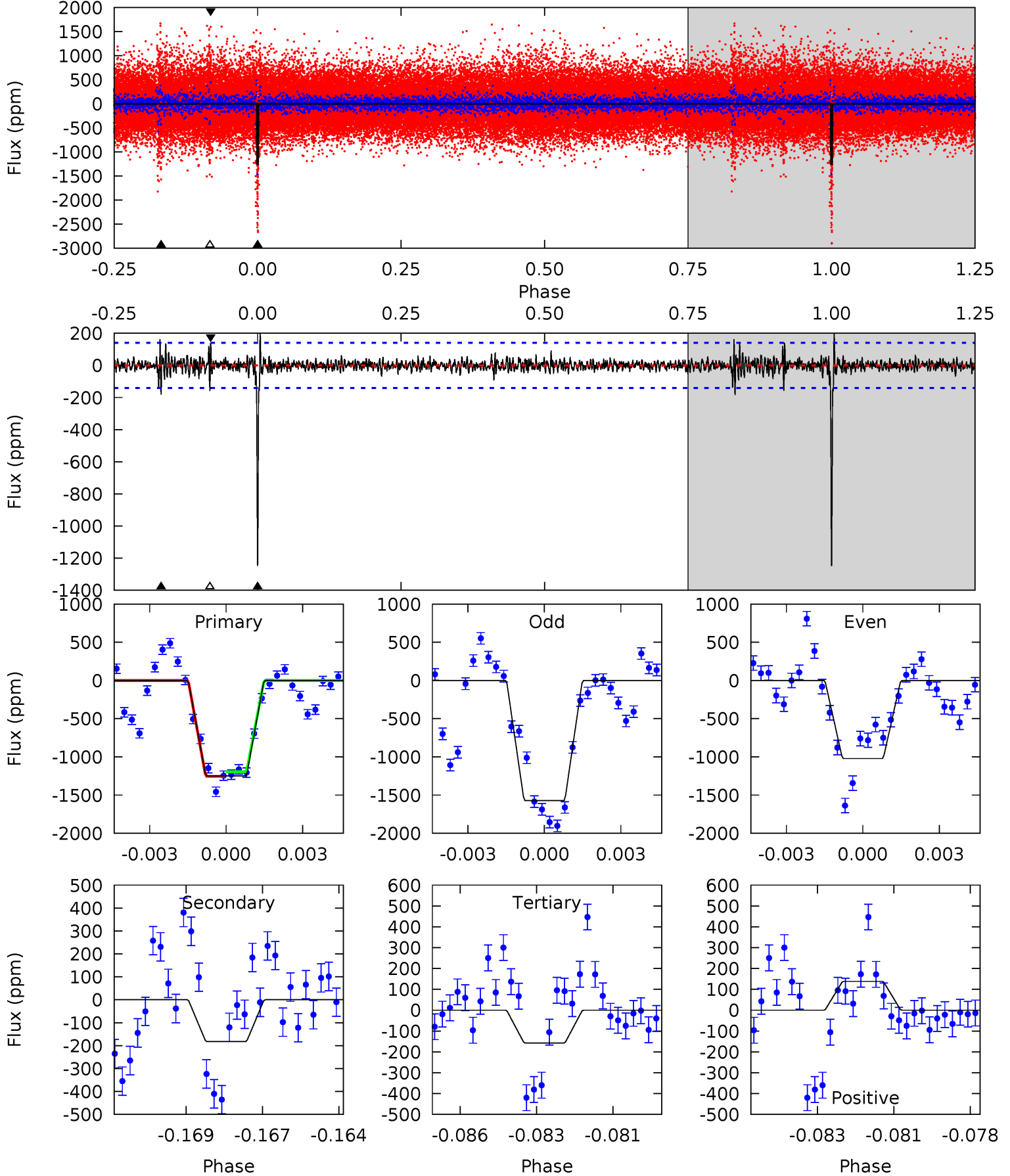
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
39.5	23.3	18.6	20.8	5.26	2.97	3.63	20.9	18.7	4.67	2.47	4.22	1.09	0.35	6.30



Alt Model-Shift Uniqueness Test

007903215-01, P = 368.110583 Days, E = 234.336012 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
46.9	6.84	5.92	5.19	5.28	3.01	0.96	40.9	41.7	0.92	1.65	10.4	1.06	0.14	1.09



Stellar Parameters For KIC 007903215

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6360^{+177}_{-222}	$4.471^{+0.054}_{-0.216}$	$-0.420^{+0.300}_{-0.350}$	$0.975^{+0.303}_{-0.101}$	$1.025^{+0.142}_{-0.128}$	$1.559^{+0.456}_{-0.843}$
	+3%/-3%	+1%/-5%	+71%/-83%	+31%/-10%	+14%/-12%	+29%/-54%
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 007903215-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-685 ± 29	$4.76^{+0.89}_{-0.48}$	393^{+30}_{-20}	5022^{+199}_{-189}	16741^{+3714}_{-4570}
Alt.	-182 ± 27	$4.06^{+0.64}_{-0.48}$	392^{+29}_{-19}	4125^{+195}_{-178}	5998^{+2051}_{-1576}

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

DV Centroid Data

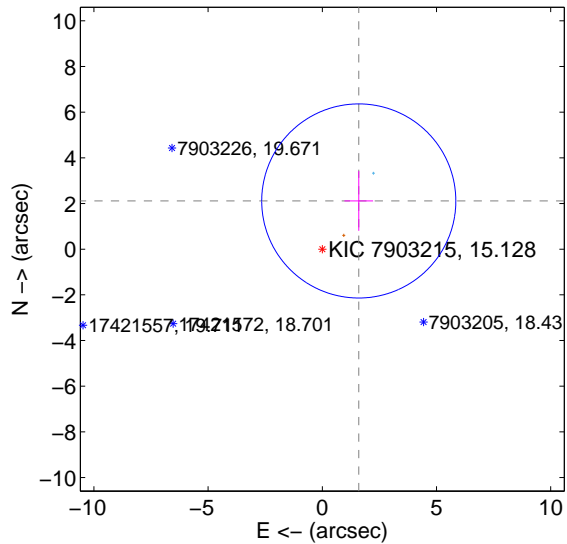
Supplemental centroid analysis for 007903215-01. Kepler magnitude: 15.13. Transit SNR 13.97

There are 1 quarters with good PRF difference image offsets

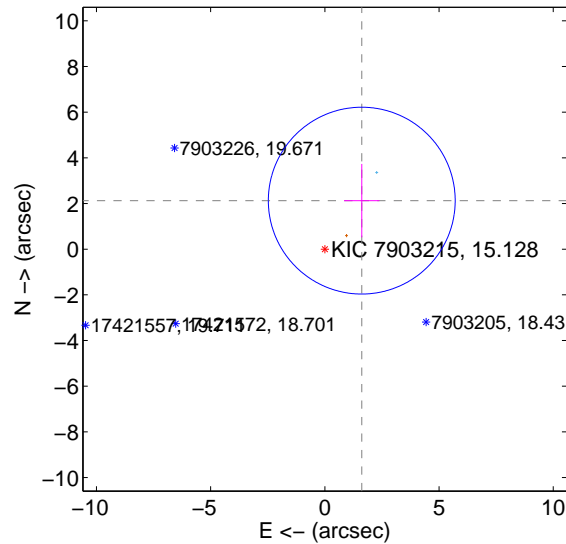
The direct PRF centroid is offset from the target star catalog position by about 0.01 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.647 ± 1.417	1.87	-1.597 ± 0.626	2.111 ± 1.305
PRF-fit source offset from KIC position	2.670 ± 1.364	1.96	-1.616 ± 0.775	2.126 ± 1.608
photometric centroid source offset	4.53 ± 1.43	3.17	-4.19 ± 1.43	-1.72 ± 1.45

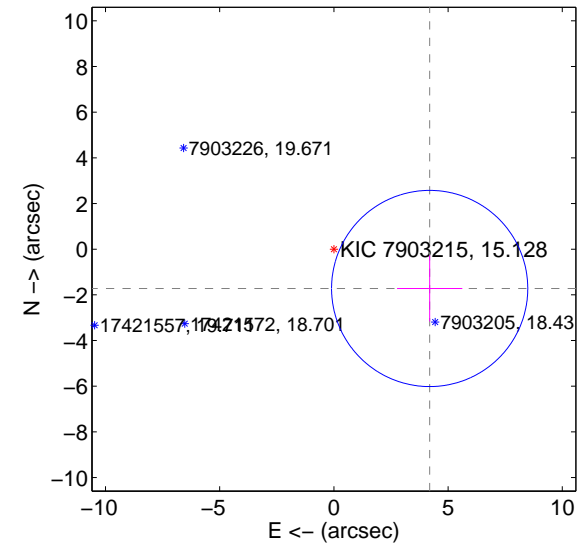
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

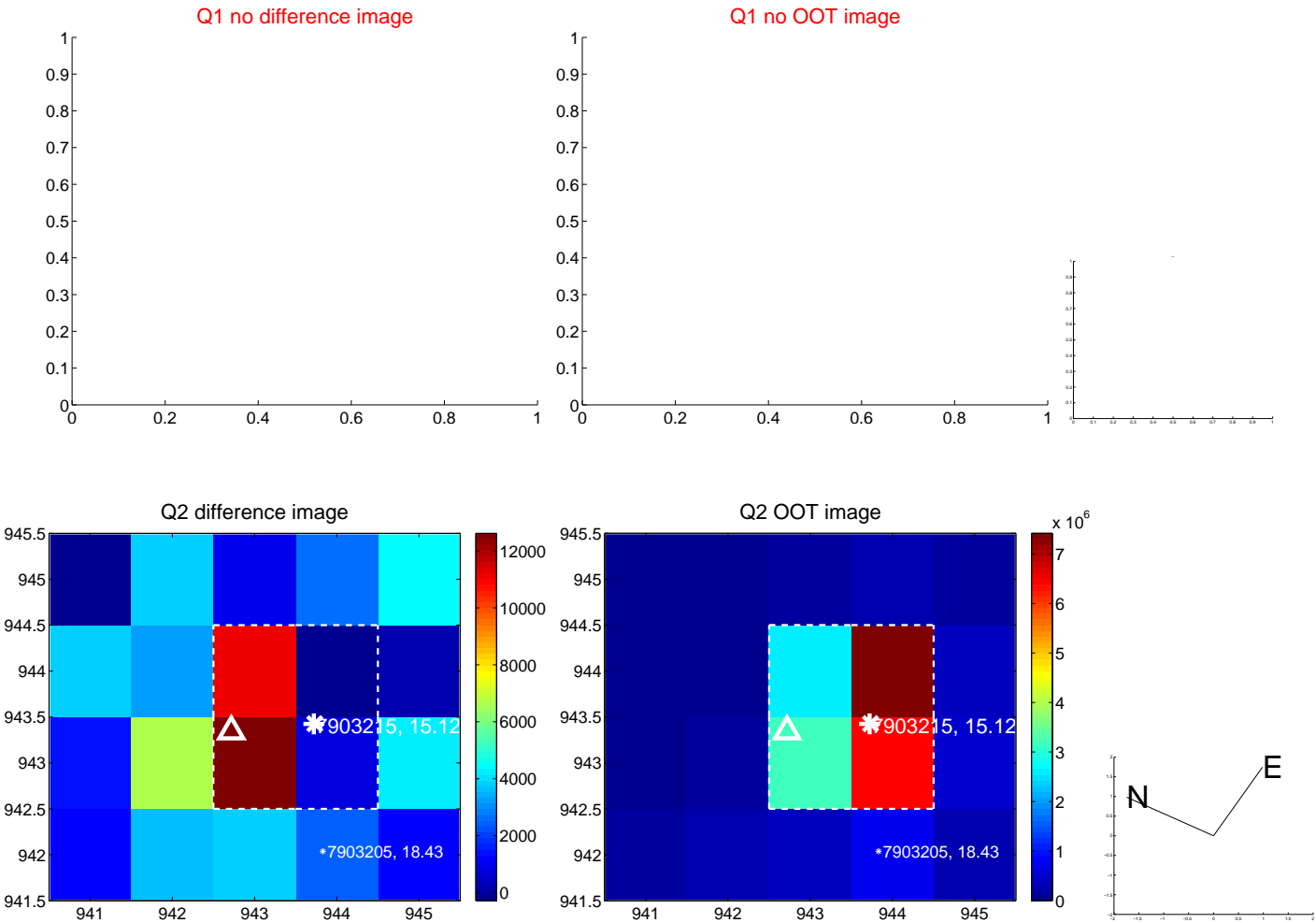


offset from photometric centroids

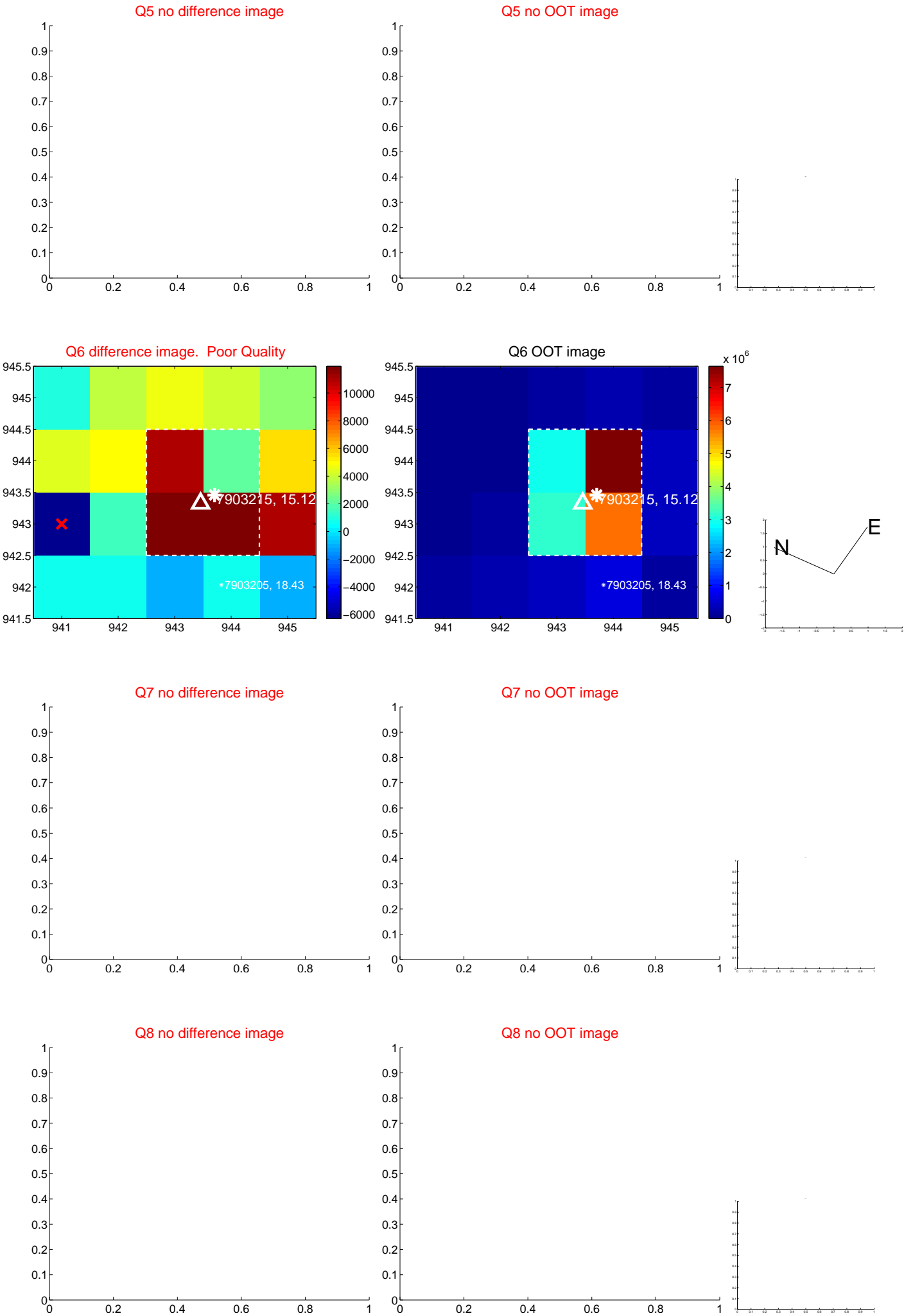


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



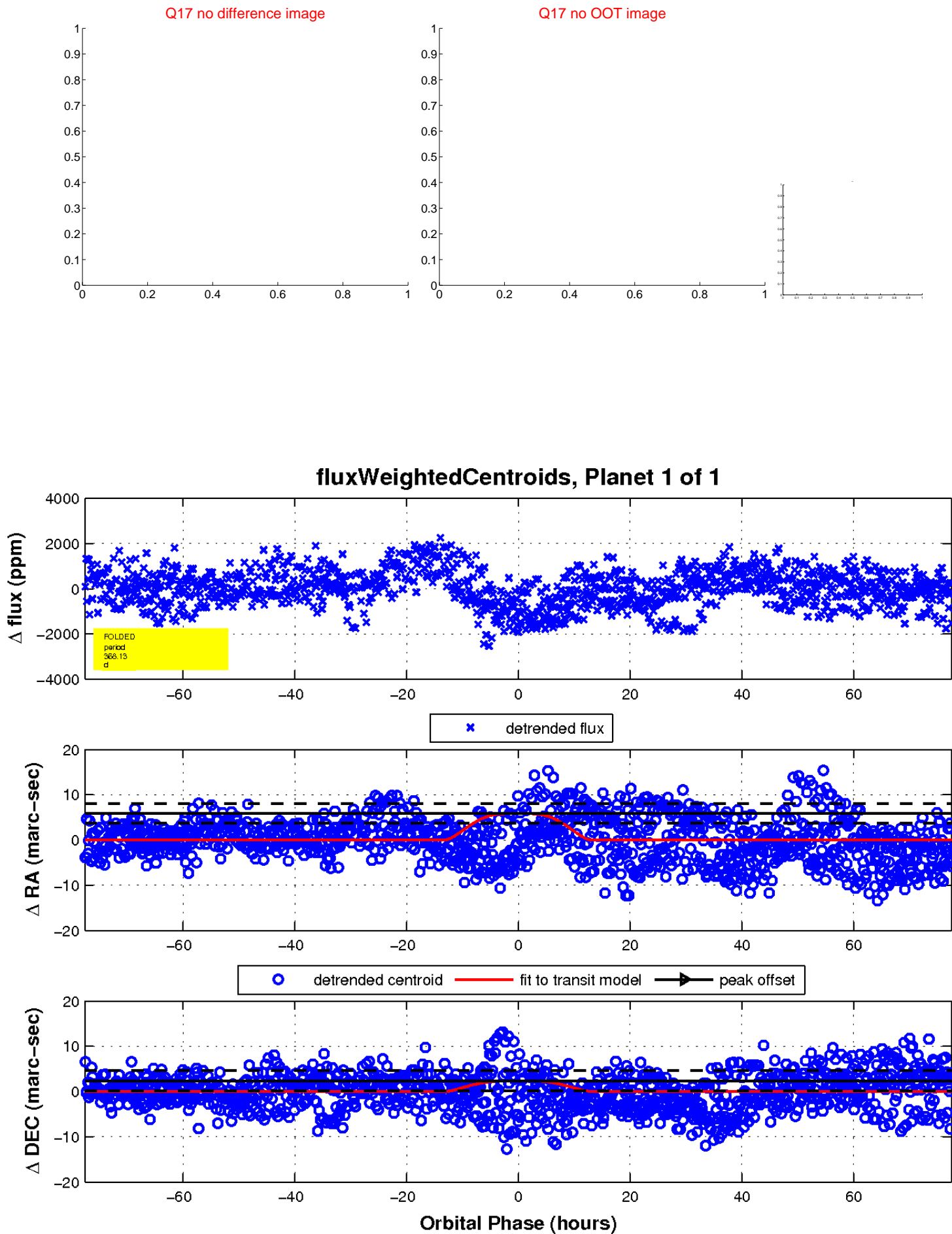
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

