

KIC 009214543

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})
009214543-01	OBS	No	352.548787	317.772001	664.4	6.065	7.7	7.4	0.70	5240	1.87	0.41

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009214543-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—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.

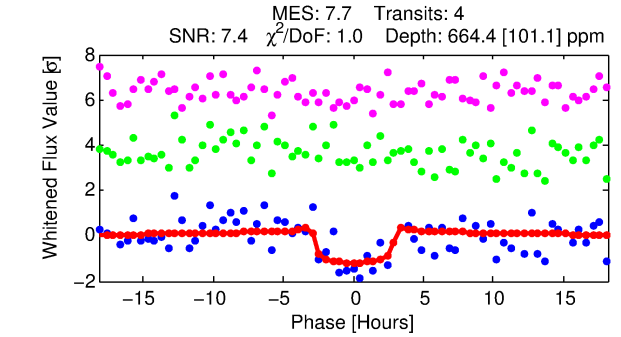
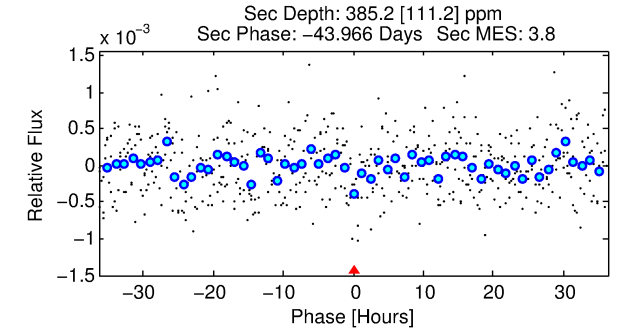
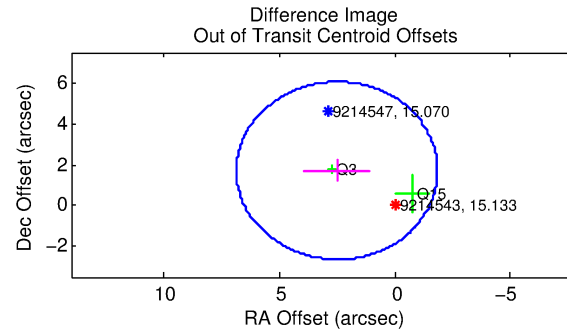
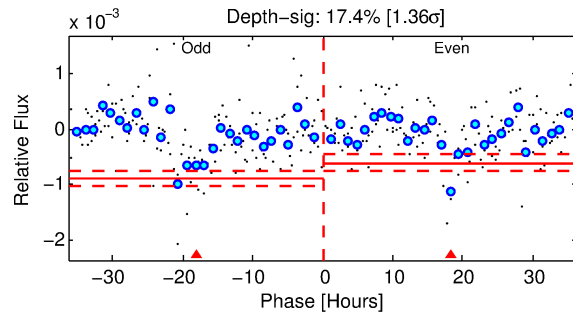
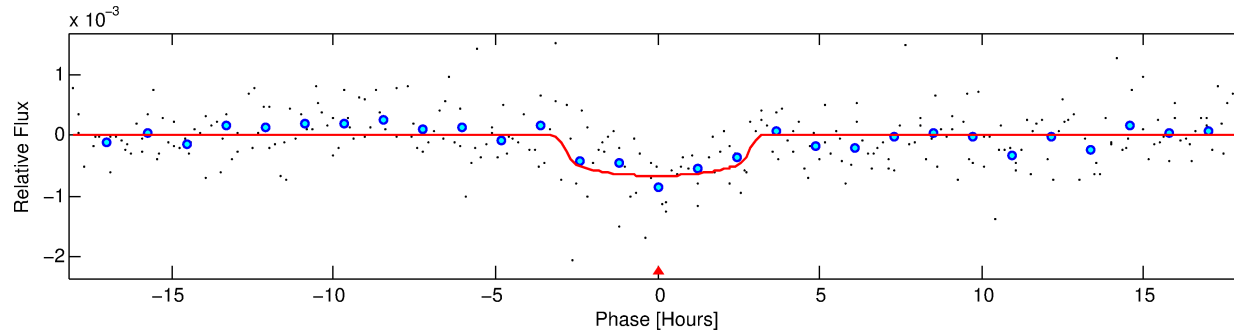
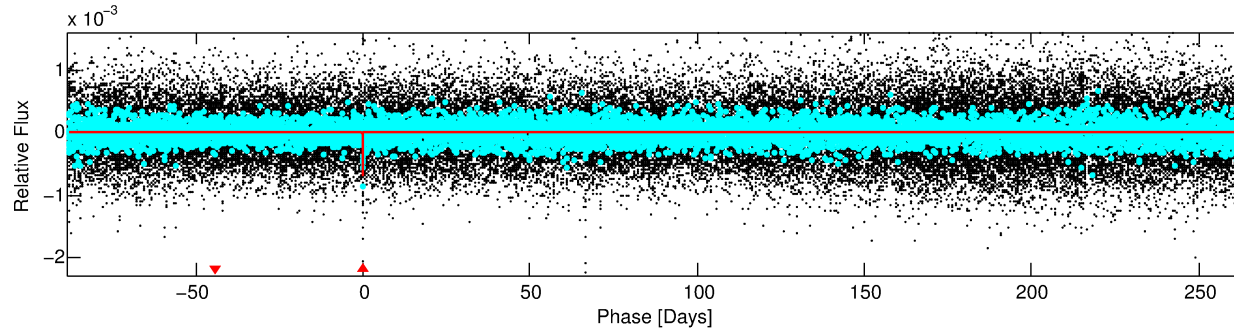
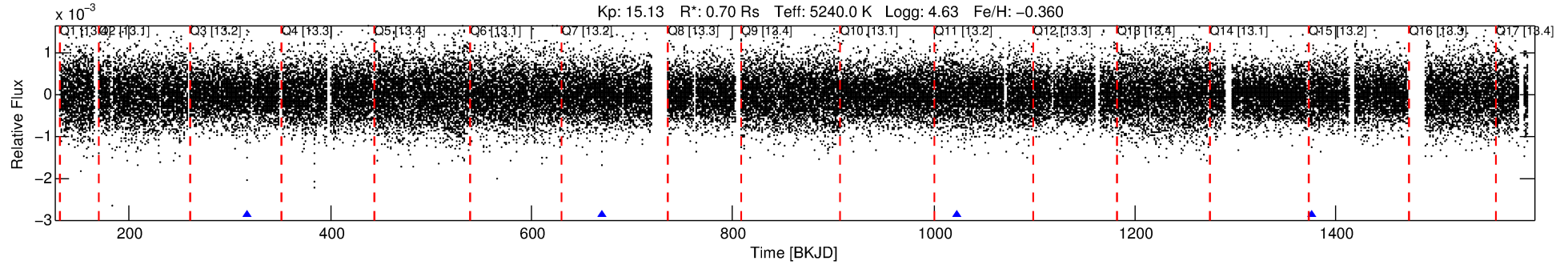
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009214543-01

No Significant Match Found

DV One-Page Summary

KIC: 9214543 Candidate: 1 of 1 Period: 352.549 d



DV Fit Results:

Period = 352.54879 [0.00724] d
Epoch = 317.7720 [0.0137] BKJD
Rp/R* = 0.0244 [0.0364]
a/R* = 371.28 [2151.08]
b = 0.59 [6.43]
Seff = 0.41 [0.08]
Teq = 204 [10] K
Rp = 1.87 [2.80] Re
a = 0.8984 [0.1018] AU
Ag = 48711.29 [146016.12] [0.33 σ]
Teffp = 4697 [3517] K [1.28 σ]

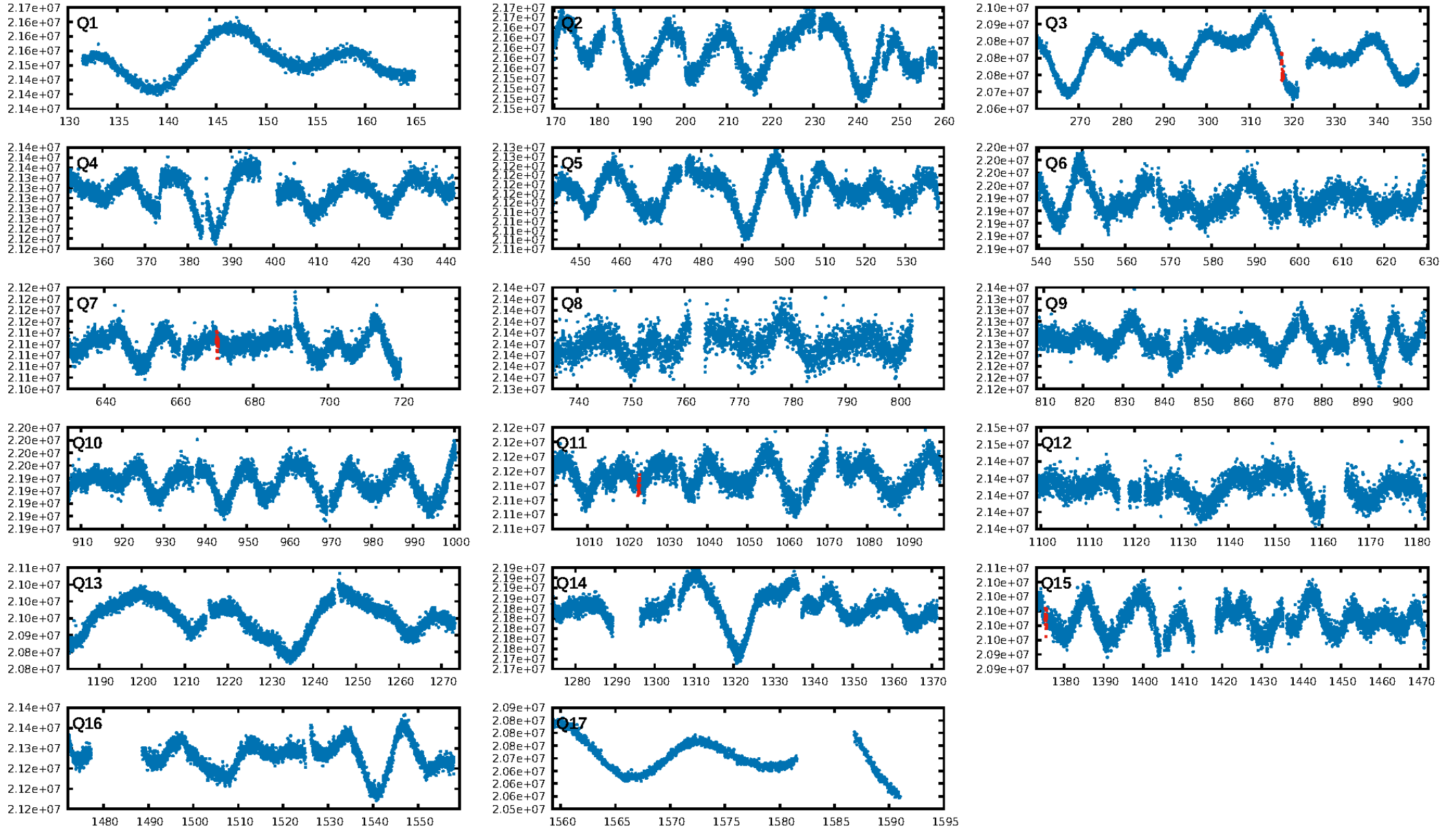
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 3.9%
ModelChiSquareGof-sig: 94.9%
Bootstrap-pfa: 2.16e-10
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 1.515
Centroid-sig: 0.1%
Centroid-so: 2.967 arcsec [2.11 σ]
OotOffset-rm: 3.026 arcsec [2.09 σ]
KicOffset-rm: 3.133 arcsec [1.74 σ]
OotOffset-st: 0/2/0/0 [2]
KicOffset-st: 0/2/0/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [4/4]

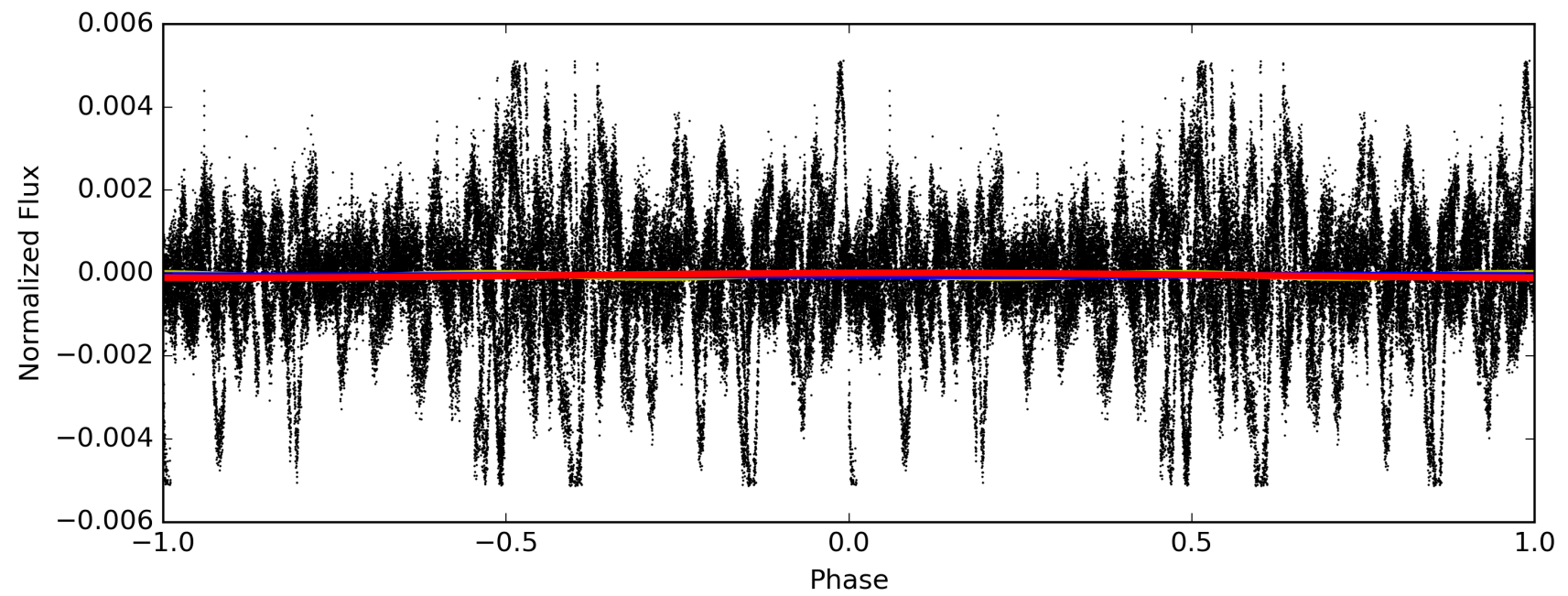
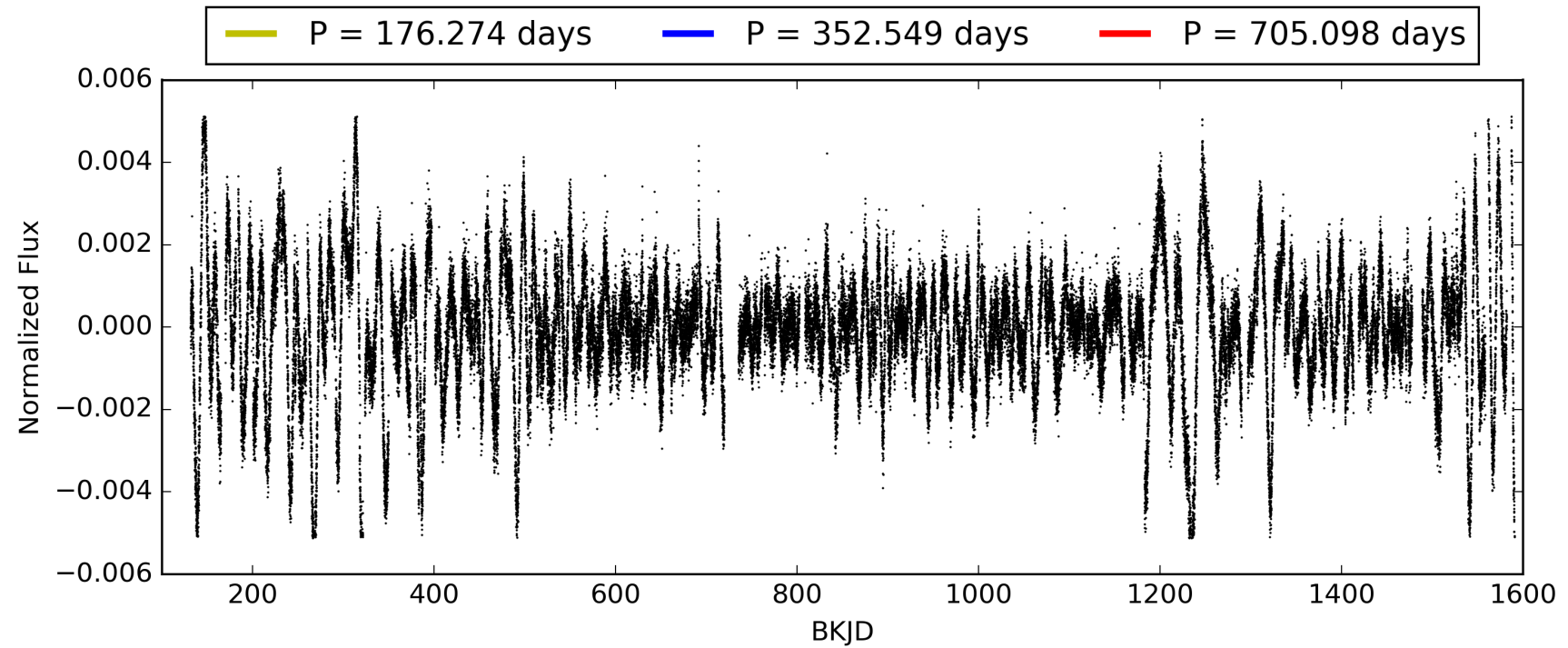
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:31:02 Z

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

TCE 009214543-01, PDC Light Curves

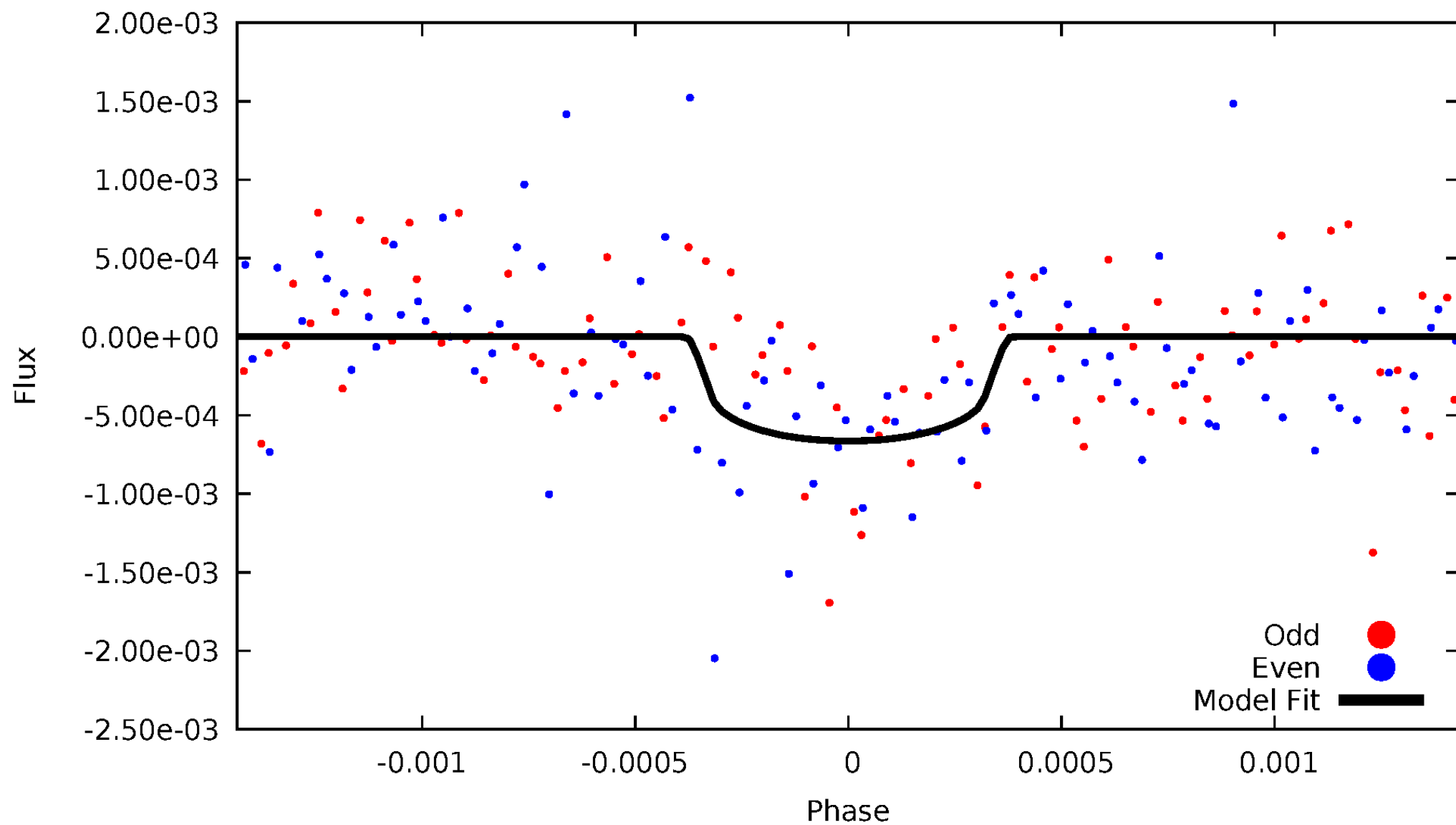


TCE 009214543-01



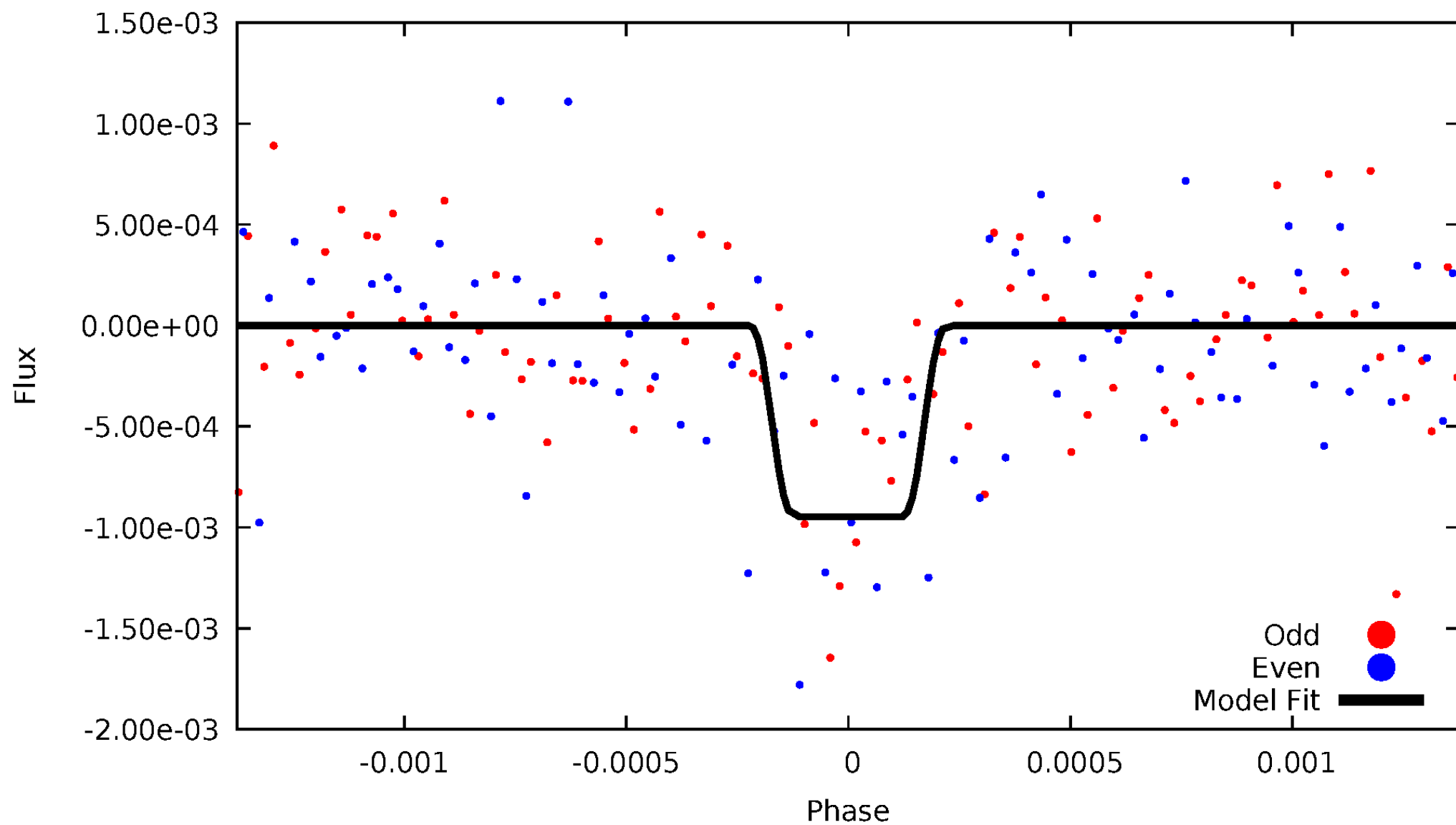
DV Odd/Even

TCE 009214543-01



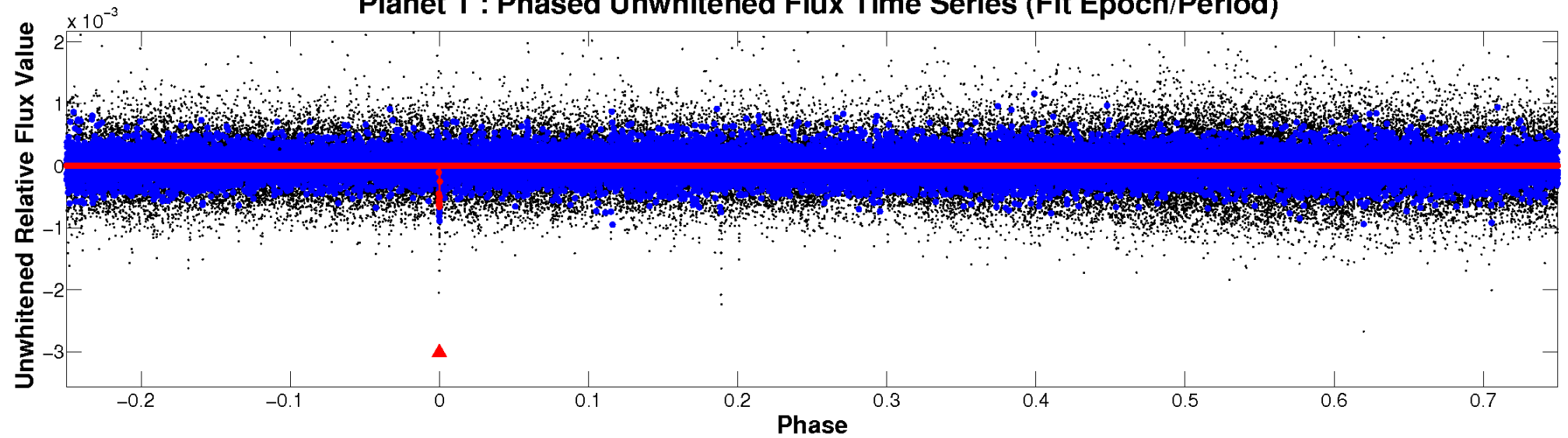
ALT Odd/Even

TCE 009214543-01

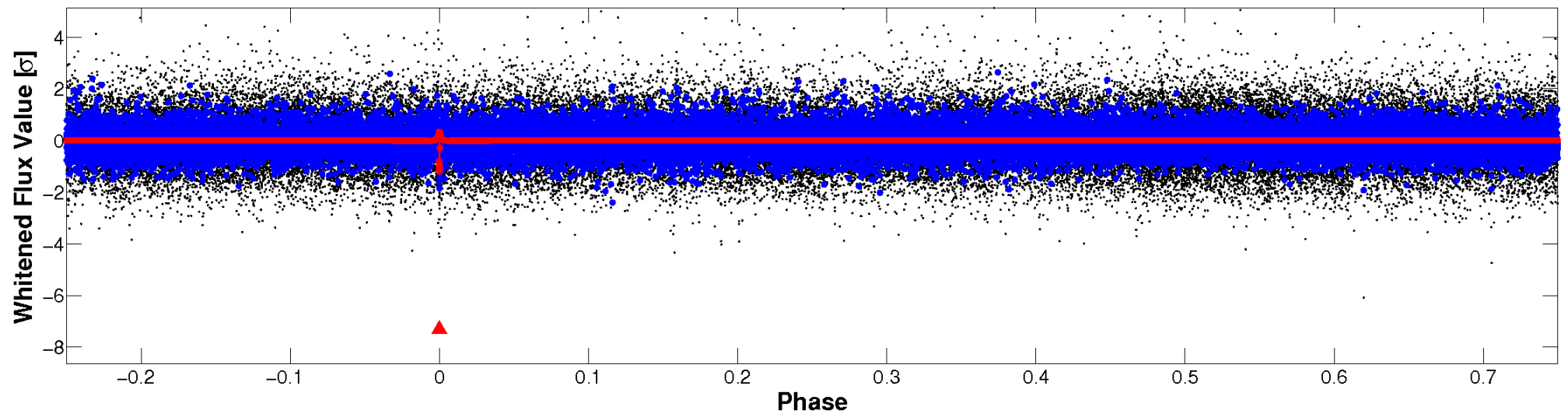


Non-Whitened Vs. Whitened Light Curve

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

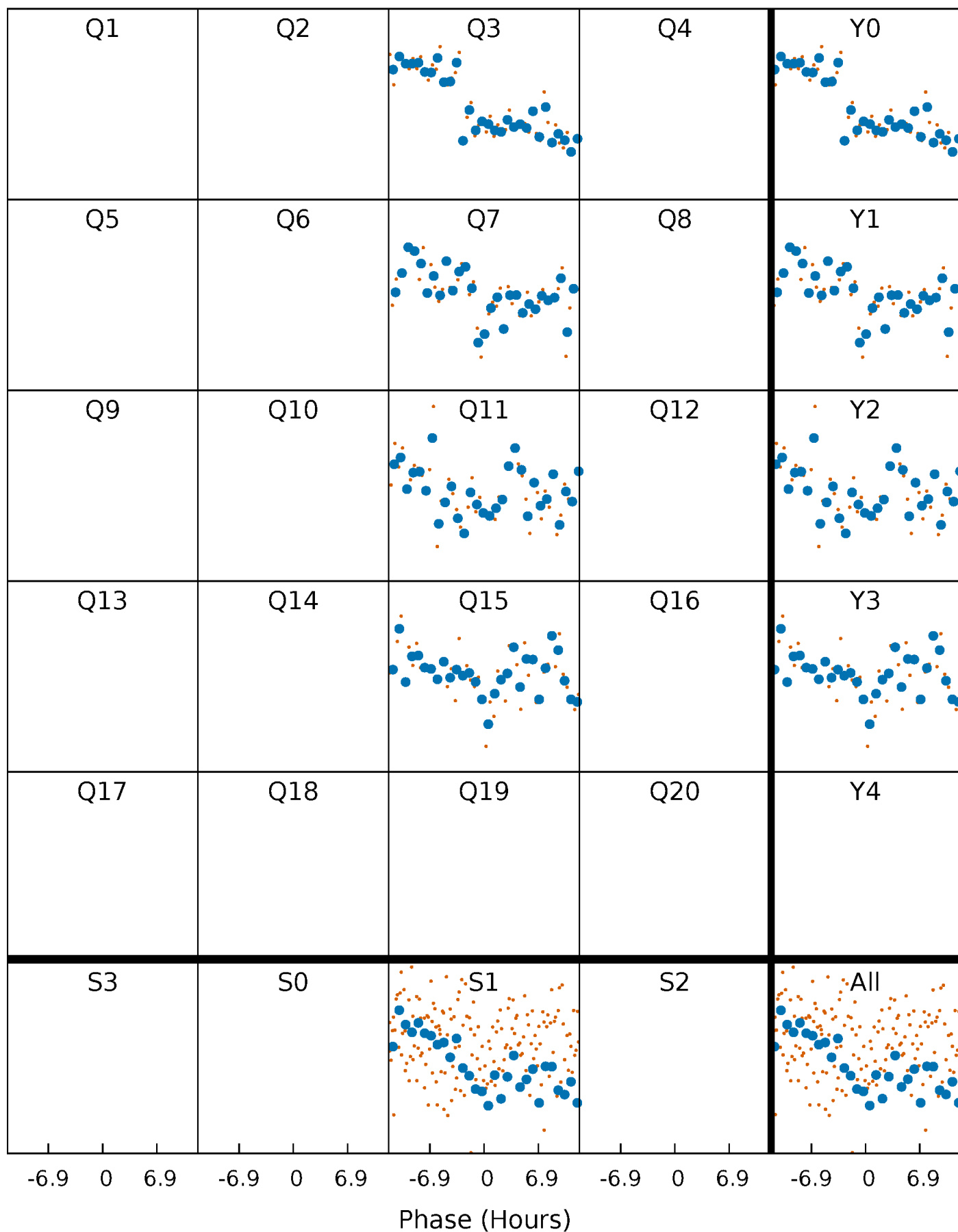


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



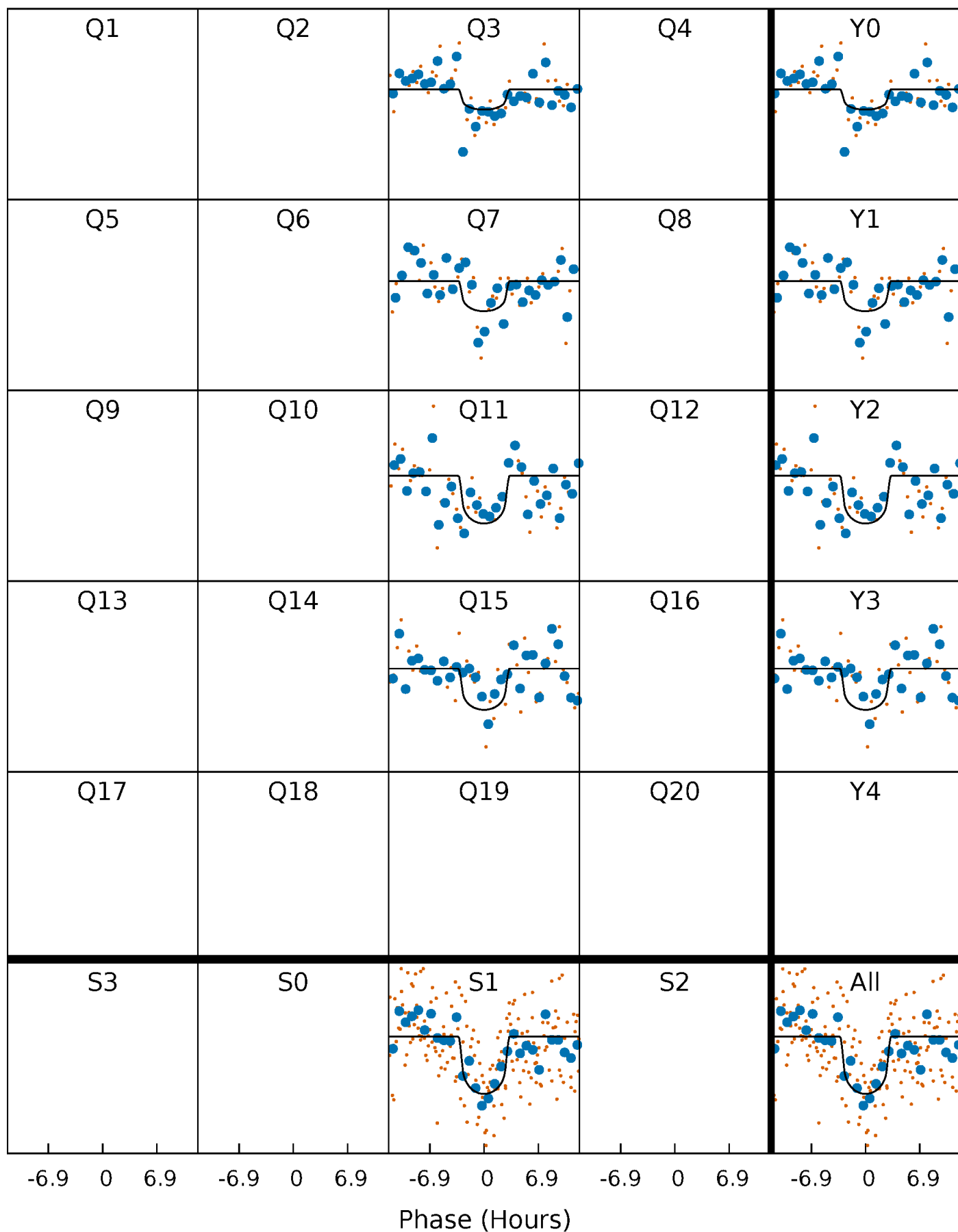
PDC Quarter-Phased Transit Curves

TCE 009214543-01 P=352.548787 Days $T_0=317.772000$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 009214543-01 P=352.548787 Days $T_0=317.772000$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

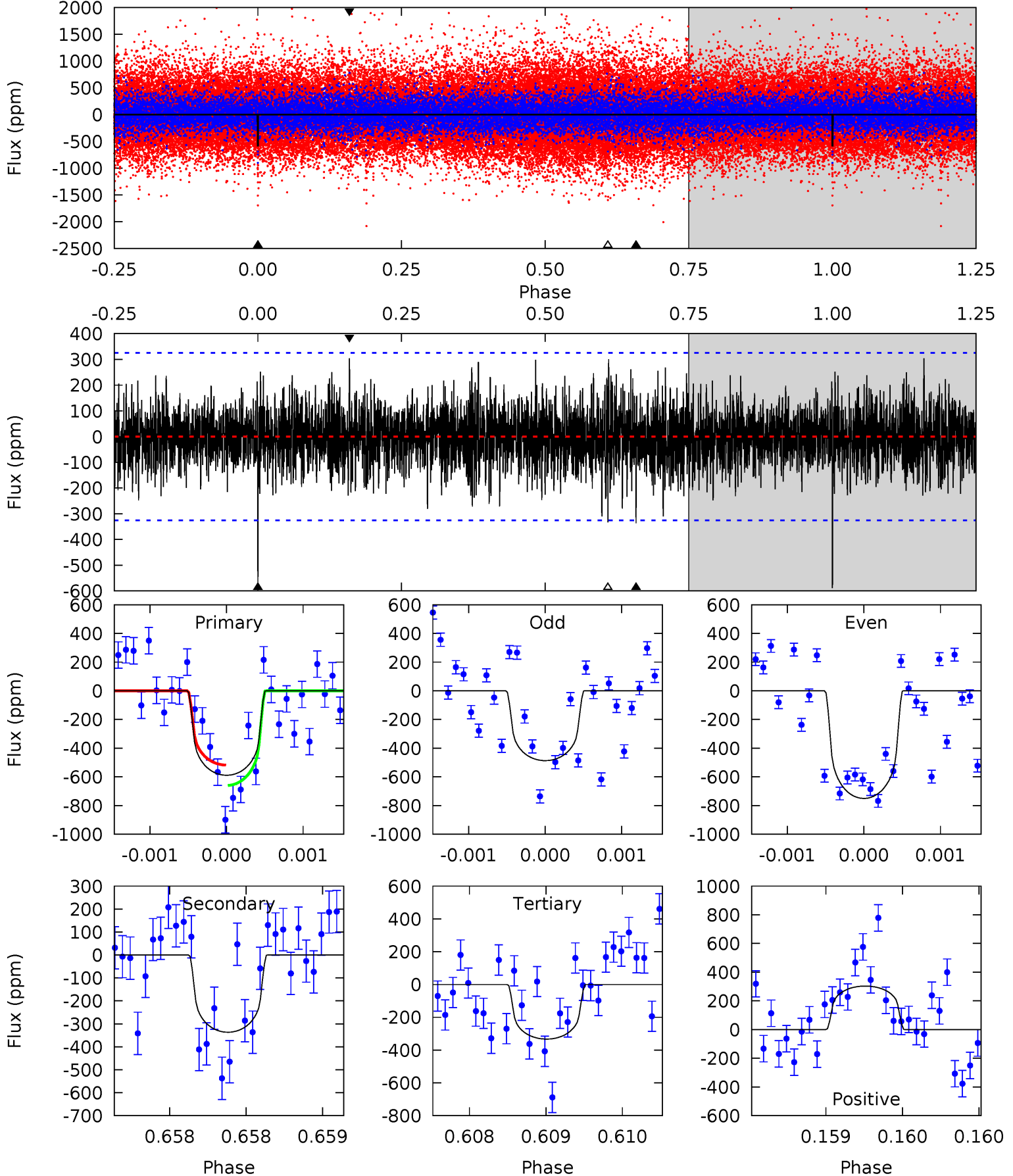
TCE 009214543-01 P=352.558244 Days $T_0=317.761280$ (BKJD)



DV Model-Shift Uniqueness Test

009214543-01, P = 352.548787 Days, E = 317.772000 Days

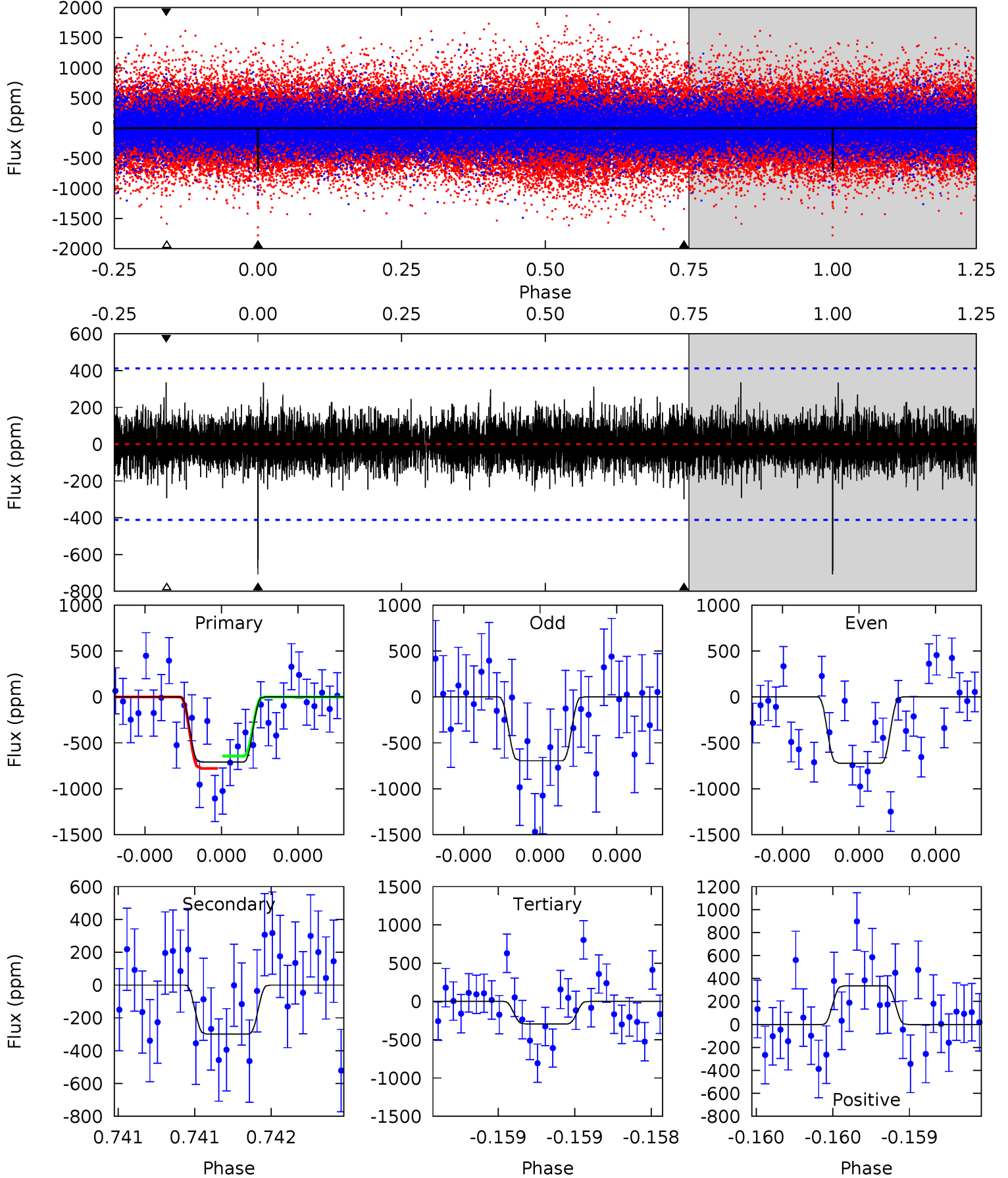
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.95	5.69	5.63	5.12	5.50	3.37	1.44	4.32	4.82	0.06	0.56	2.23	1.17	0.34	1.20



Alt Model-Shift Uniqueness Test

009214543-01, P = 352.558244 Days, E = 317.761280 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.64	4.07	3.99	4.57	5.61	3.53	1.03	5.66	5.07	0.08	-0.51	0.19	1.02	0.32	0.91



Stellar Parameters For KIC 009214543

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5240^{+142}_{-142}	$4.635^{+0.033}_{-0.088}$	$-0.360^{+0.300}_{-0.300}$	$0.703^{+0.096}_{-0.056}$	$0.783^{+0.067}_{-0.084}$	$3.180^{+0.469}_{-0.872}$
	+3%/-3%	+1%/-2%	+83%/-83%	+14%/-8%	+9%/-11%	+15%/-27%
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 009214543-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-337 ± 59	$3.00^{+2.55}_{-2.00}$	289^{+11}_{-10}	3903^{+2342}_{-687}	$16512^{+136977}_{-11881}$
Alt.	-299 ± 73	$3.17^{+2.52}_{-2.12}$	289^{+11}_{-10}	3728^{+2102}_{-600}	$12463^{+103684}_{-8521}$

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 $A_{obs} \gg 1.0$

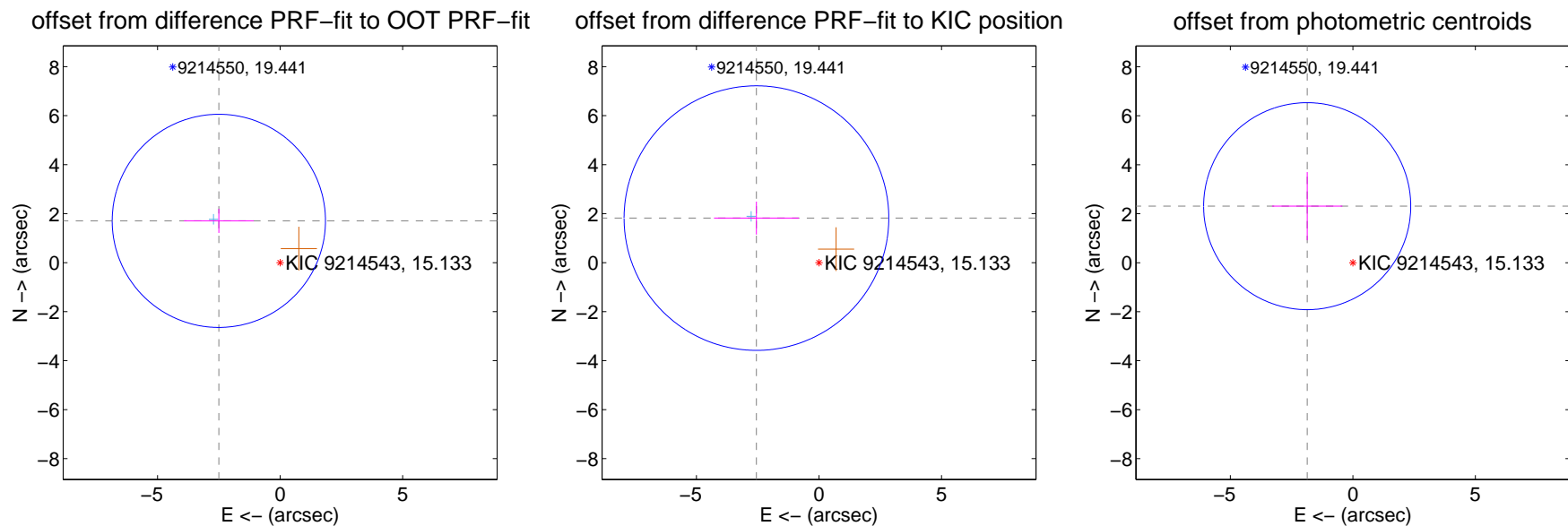
DV Centroid Data

Supplemental centroid analysis for 009214543-01. Kepler magnitude: 15.13. Transit SNR 7.36

There are 1 quarters with good PRF difference image offsets

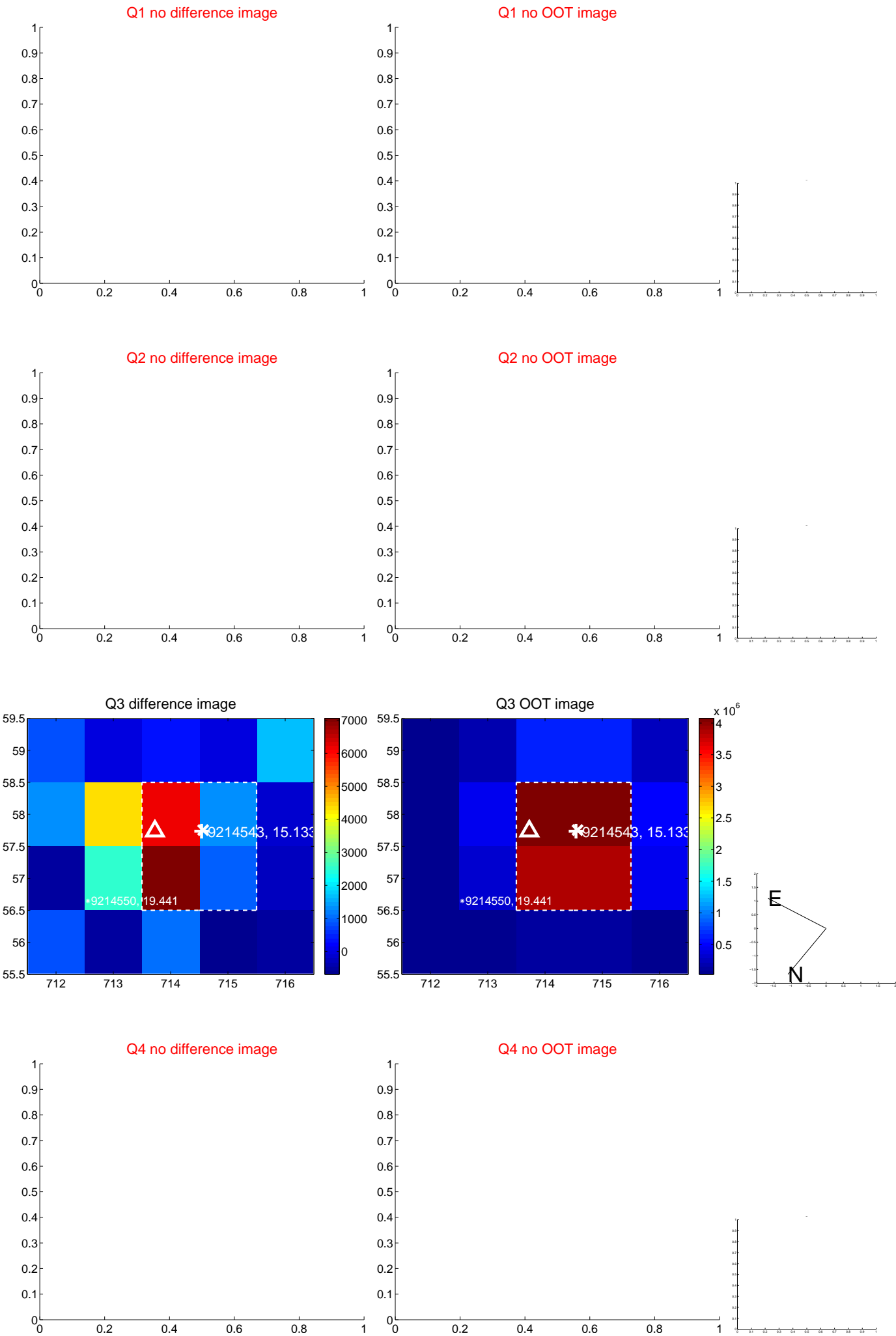
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.026 ± 1.450	2.09	2.500 ± 1.422	1.705 ± 0.493
PRF-fit source offset from KIC position	3.133 ± 1.800	1.74	2.552 ± 1.733	1.818 ± 0.673
photometric centroid source offset	2.97 ± 1.41	2.11	1.86 ± 1.44	2.31 ± 1.39

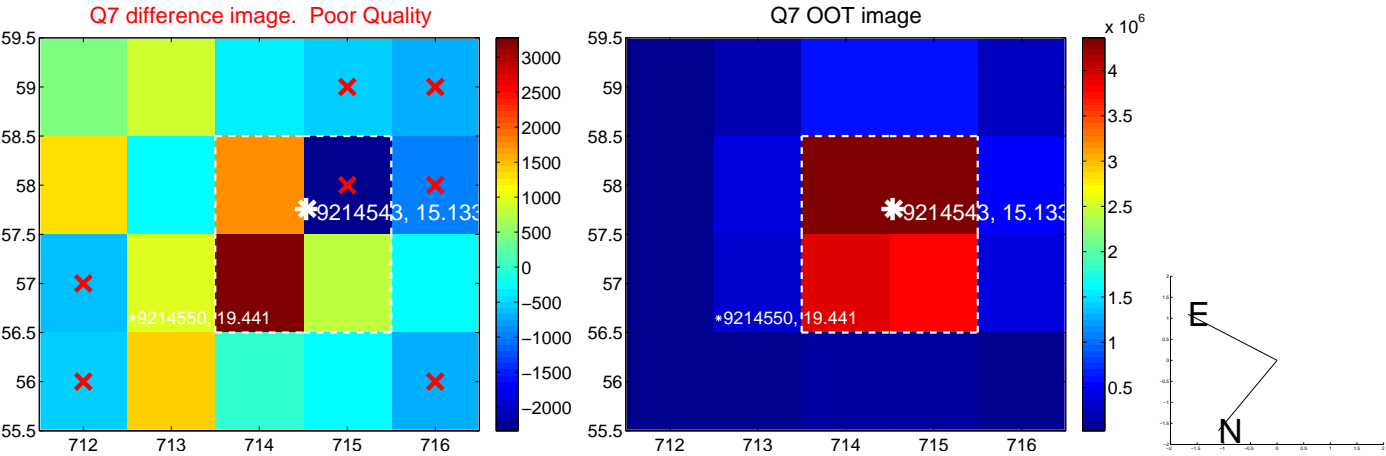


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

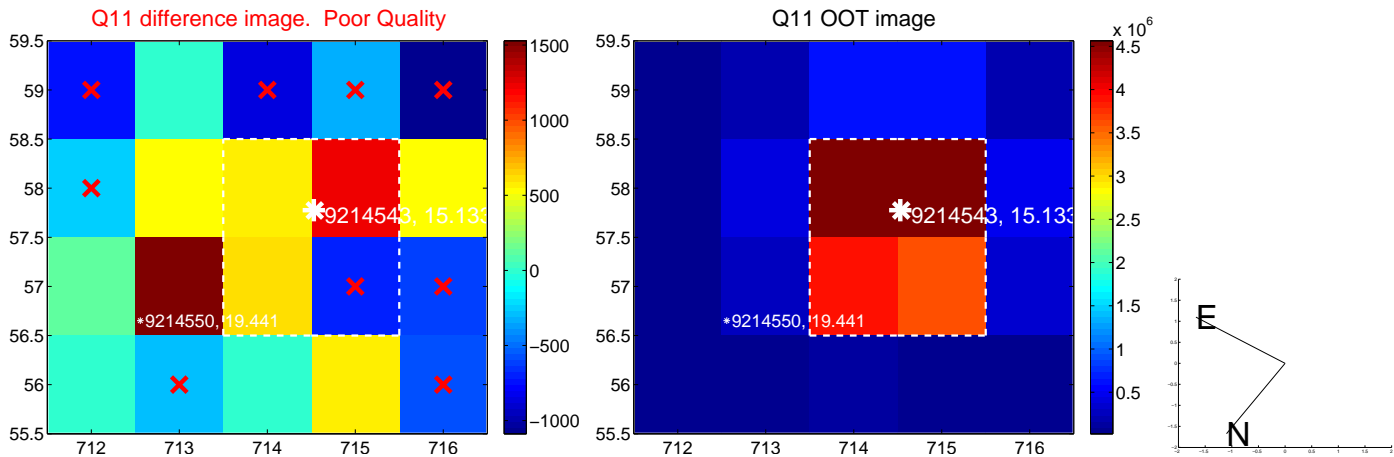
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



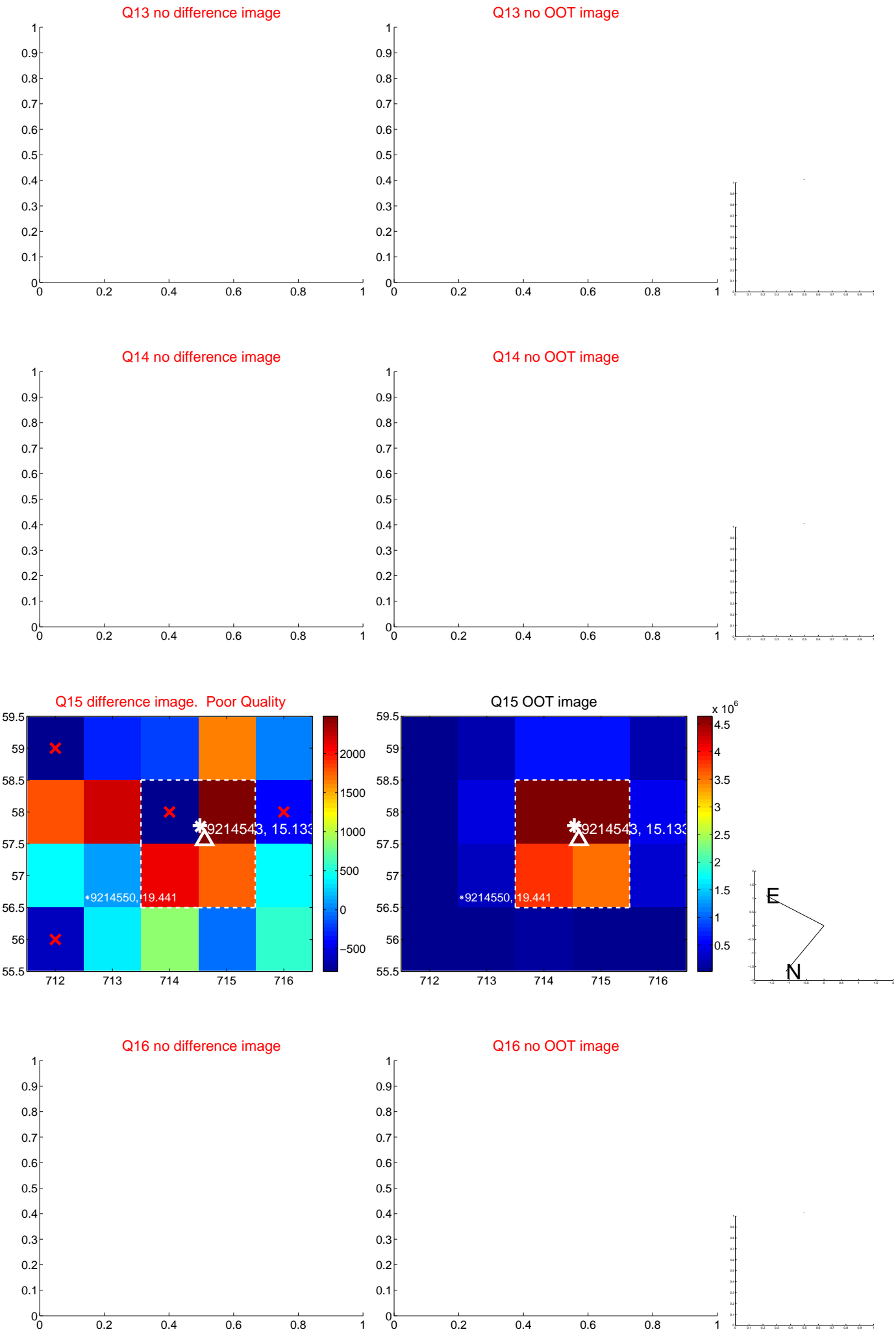
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



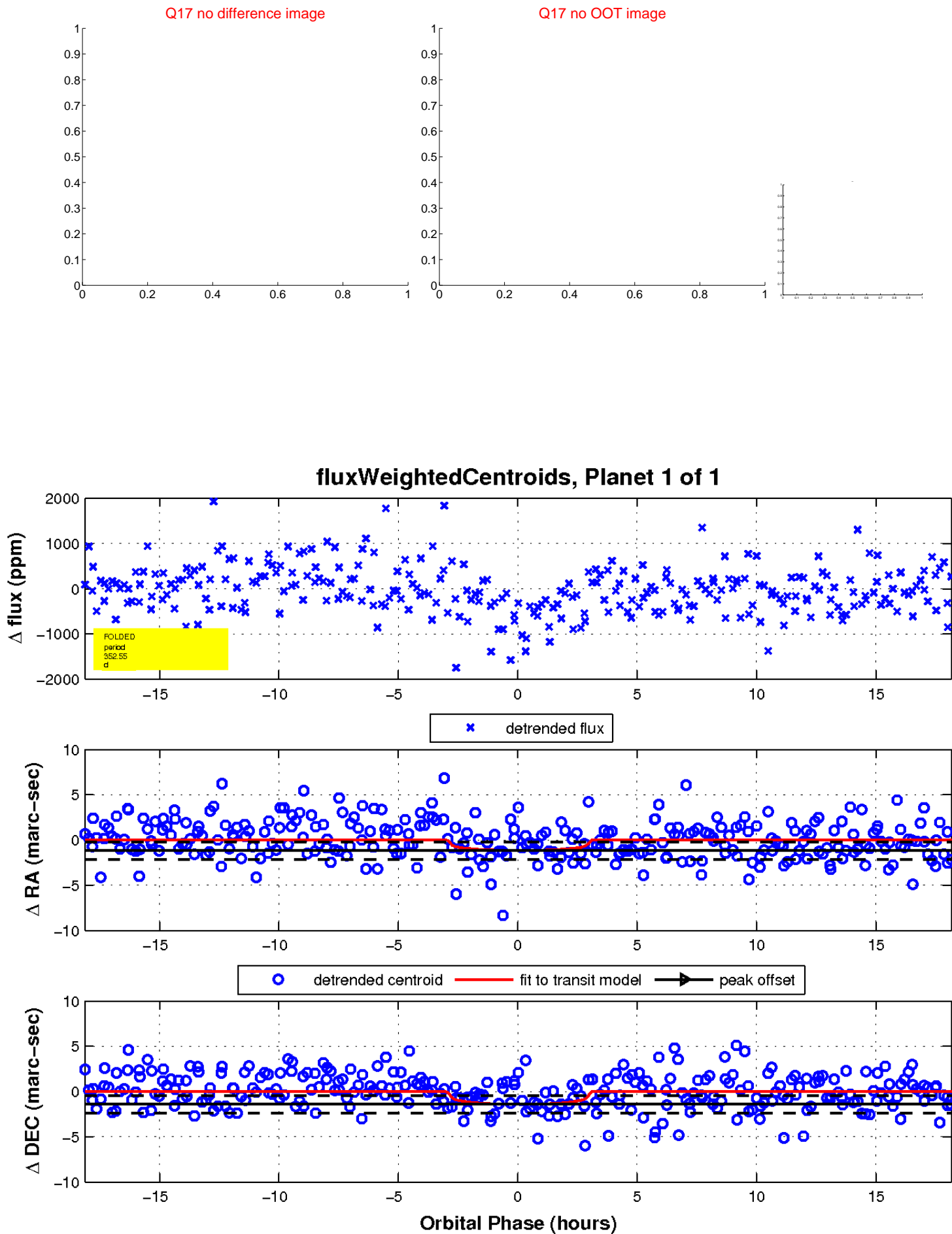
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



white ×: 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.



UKIRT Image

Declination

