

KIC 007351012

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})
007351012-01	OBS	No	572.512232	278.444899	143.9	5.910	7.2	7.2	1.59	6363	2.19	1.84

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007351012-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—MOD_NONUNIQ_ALT—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.

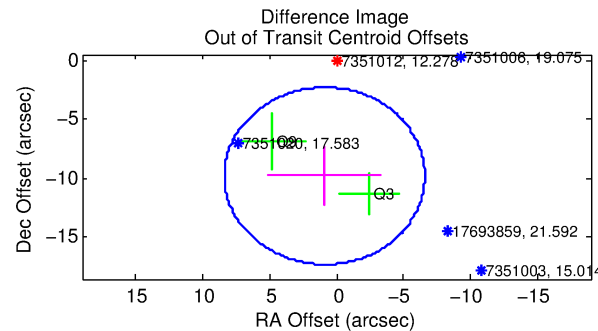
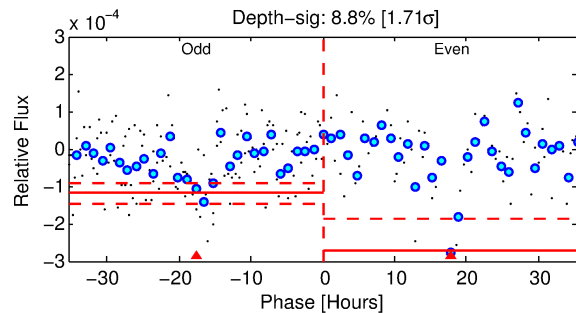
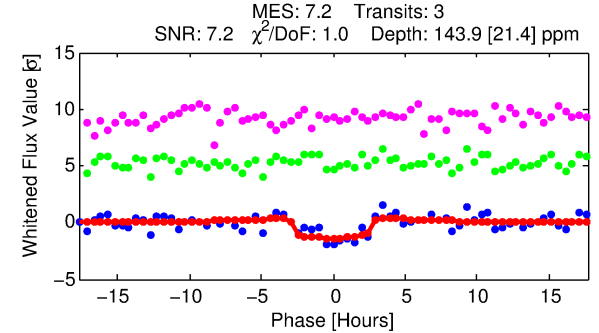
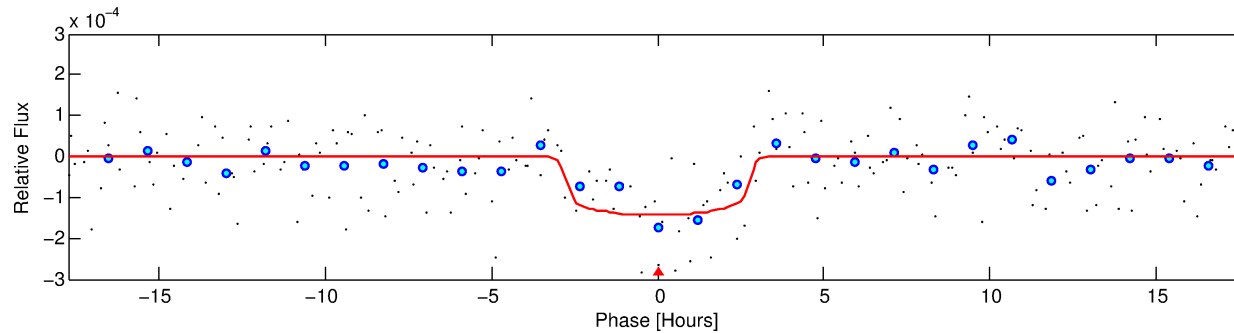
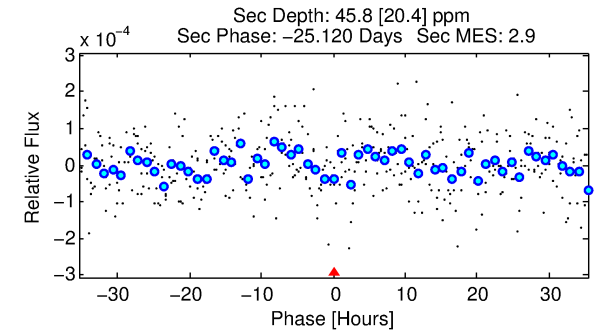
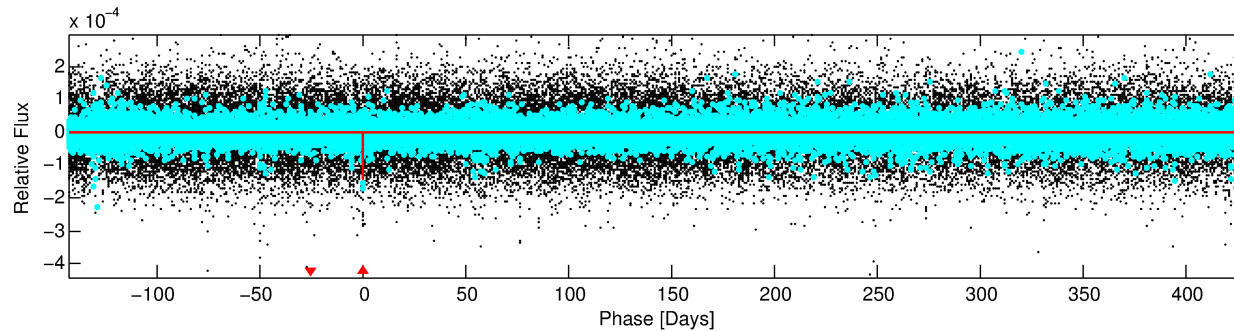
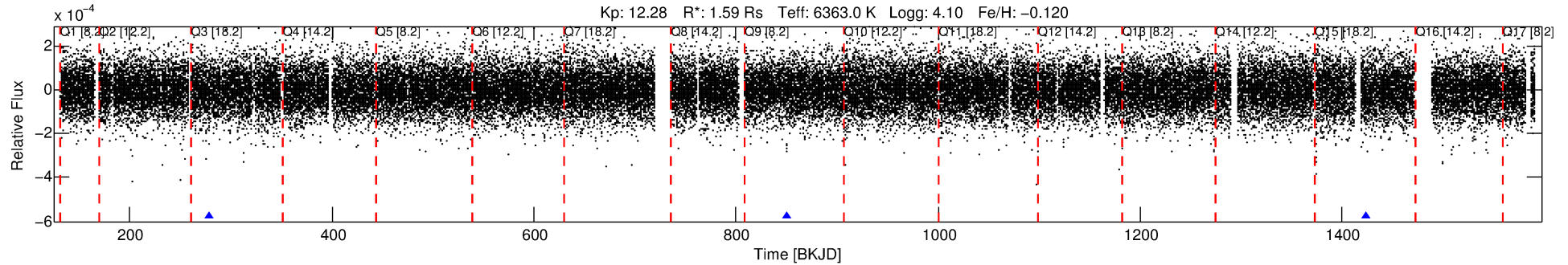
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007351012-01

No Significant Match Found

DV One-Page Summary

KIC: 7351012 Candidate: 1 of 1 Period: 572.512 d



DV Fit Results:

Period = 572.51223 [0.00956] d
Epoch = 278.4449 [0.0113] BKJD
Rp/R* = 0.0126 [0.0049]
a/R* = 377.93 [782.68]
b = 0.87 [0.56]
Seff = 1.84 [0.84]
Teq = 297 [34] K
Rp = 2.19 [1.07] Re
a = 1.4190 [0.3941] AU
Ag = 10579.14 [10496.59] [1.01σ]
Teffp = 4658 [1052] K [4.14σ]

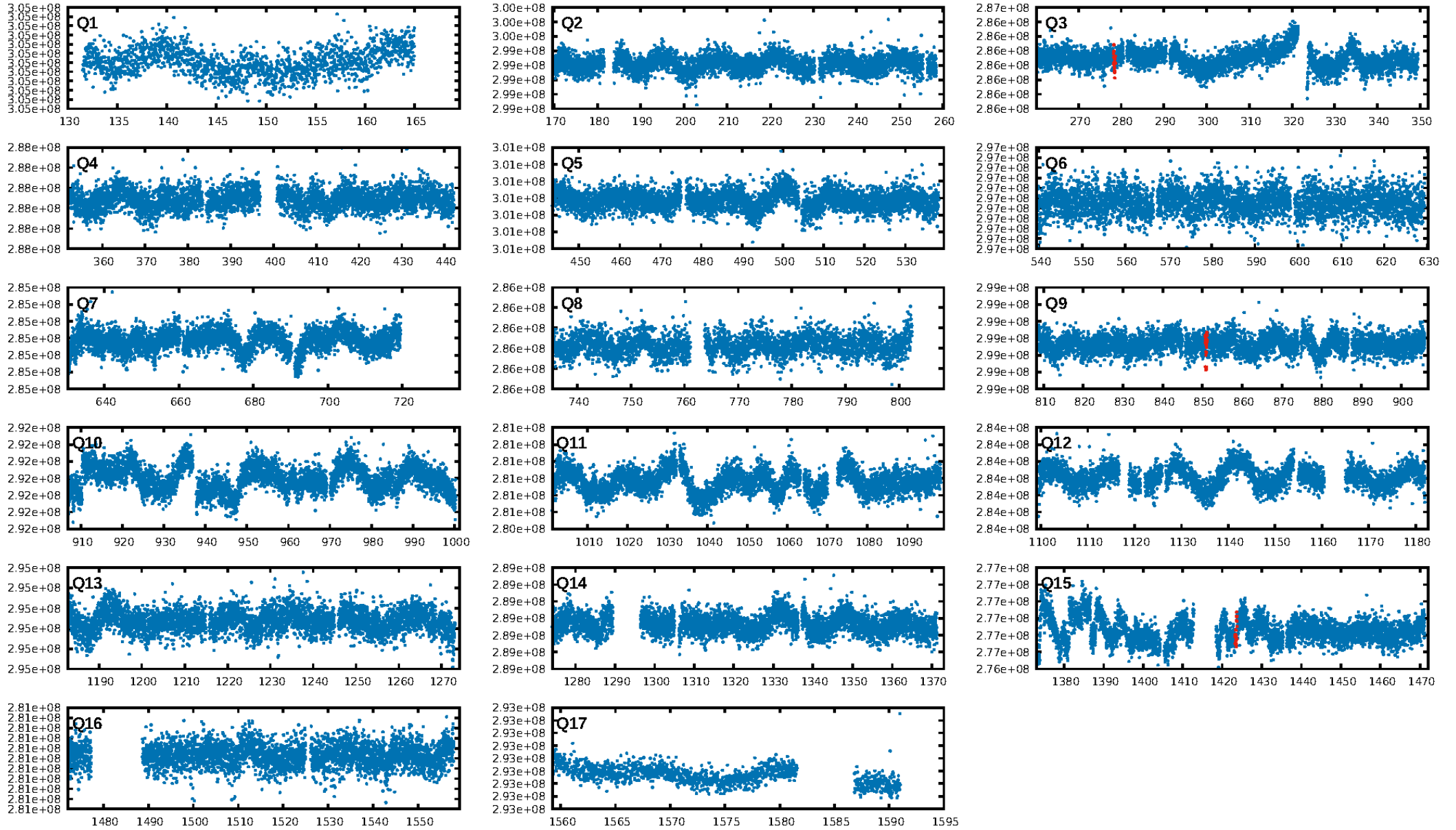
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 76.4%
ModelChiSquareGof-sig: 92.1%
Bootstrap-pfa: 9.77e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -7.372
Centroid-sig: 12.9%
Centroid-so: 2.004 arcsec [1.17σ]
OotOffset-rm: 9.828 arcsec [3.94σ]
KicOffset-rm: 9.699 arcsec [3.86σ]
OotOffset-st: 0/1/0/1 [2]
KicOffset-st: 0/1/0/1 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [3/3]

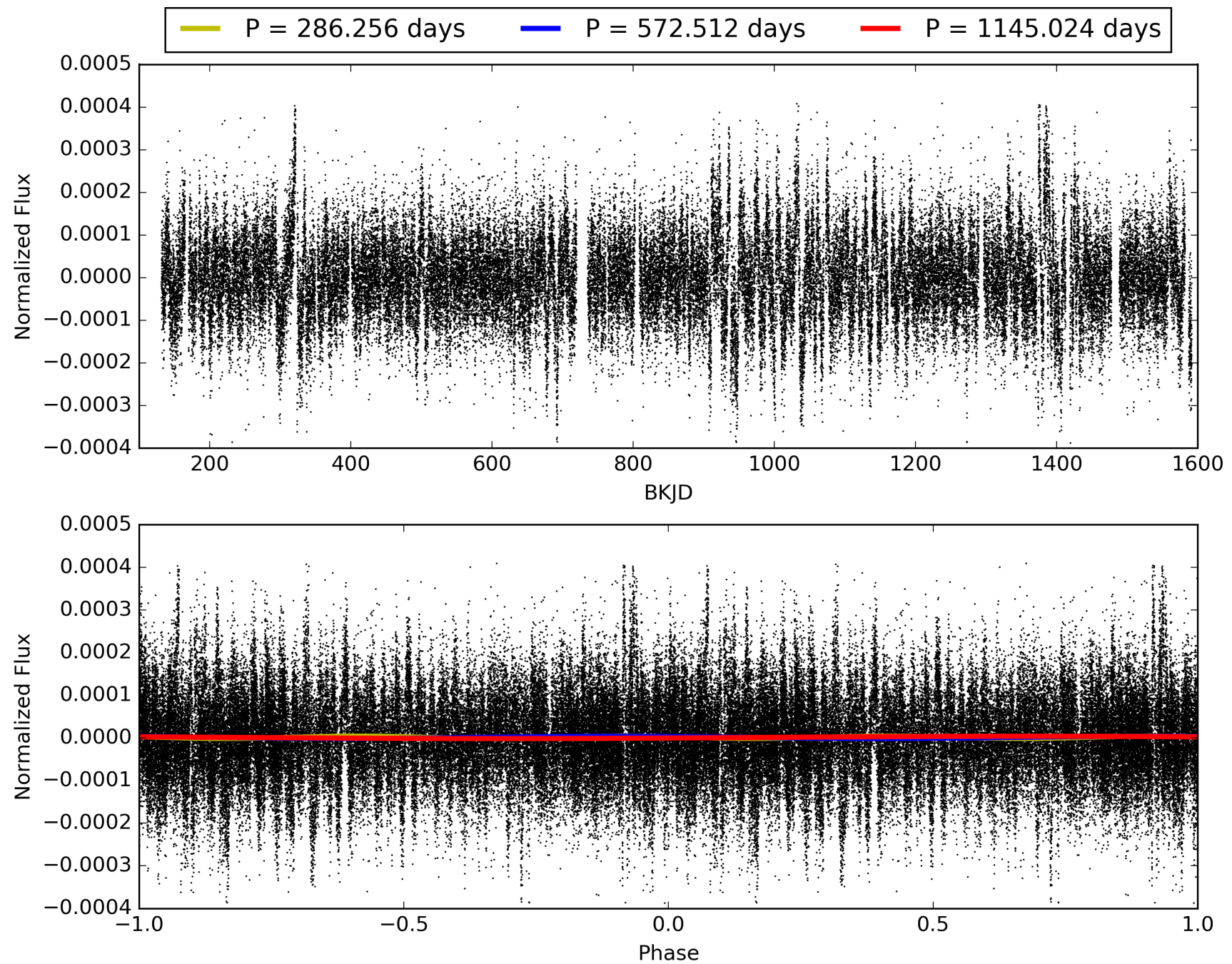
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 14:51:27 Z

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

TCE 007351012-01, PDC Light Curves

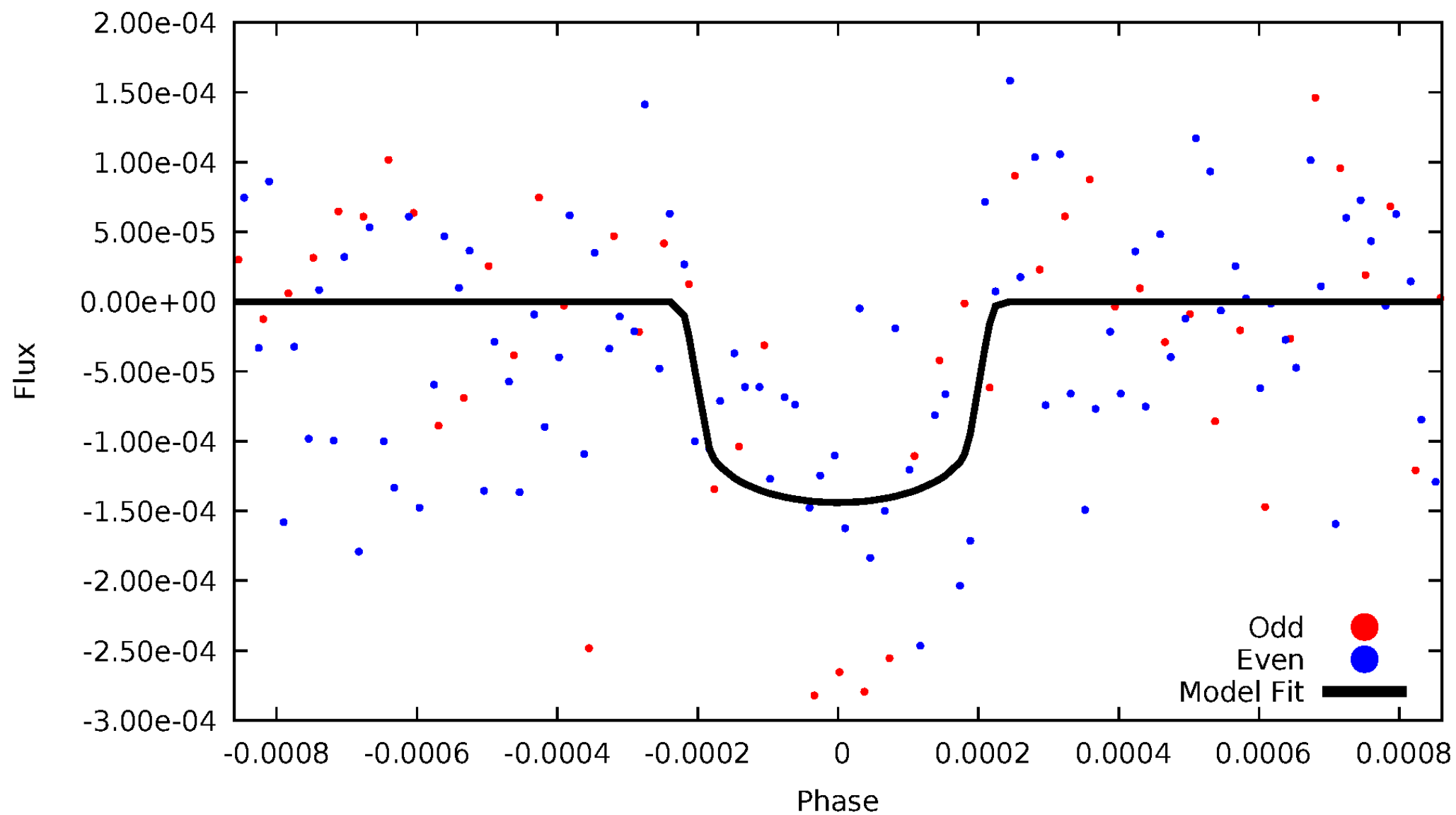


TCE 007351012-01



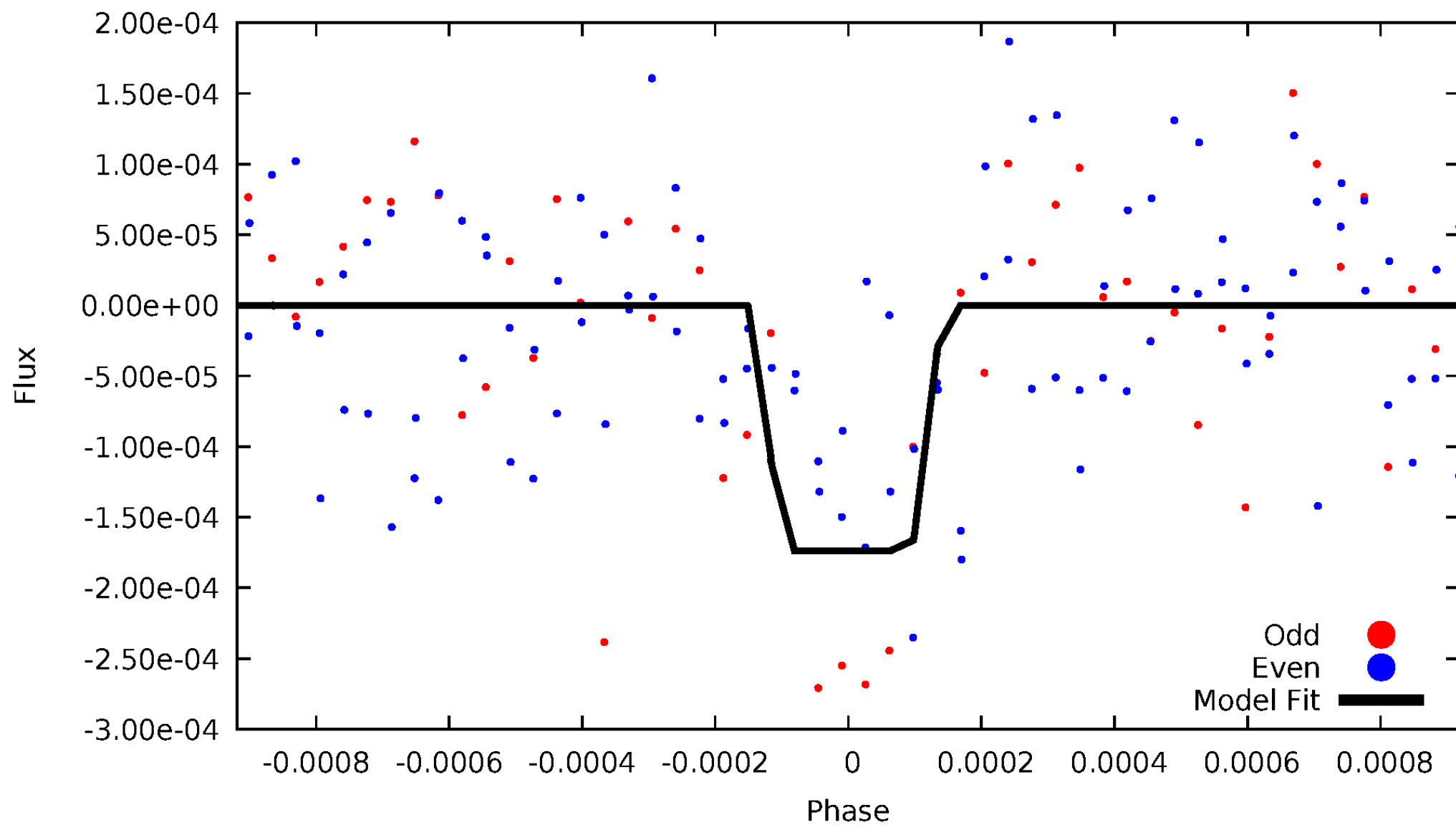
DV Odd/Even

TCE 007351012-01



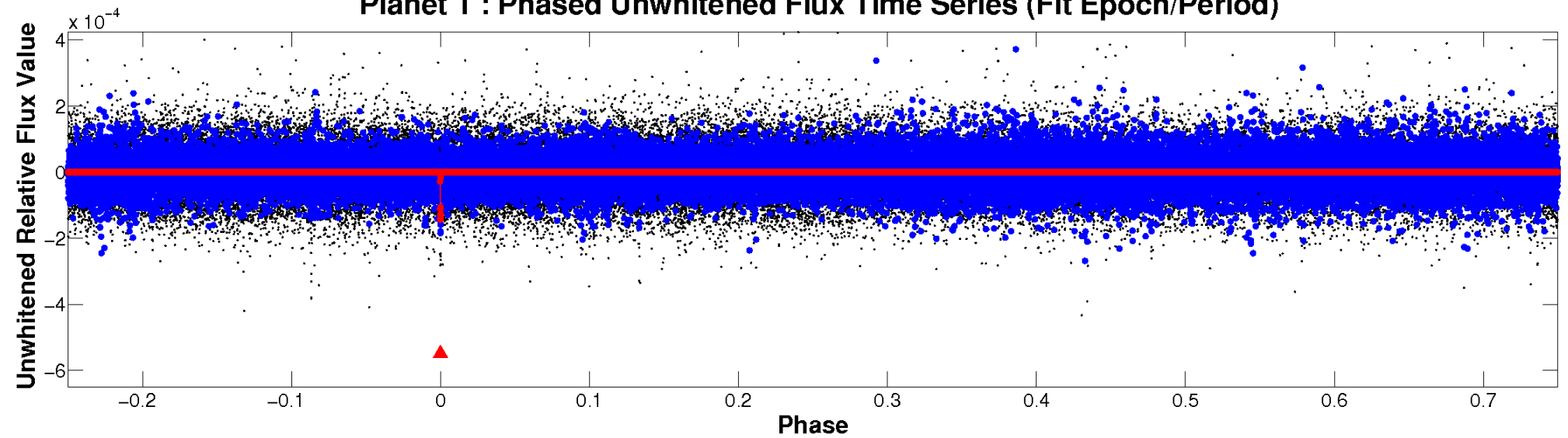
ALT Odd/Even

TCE 007351012-01

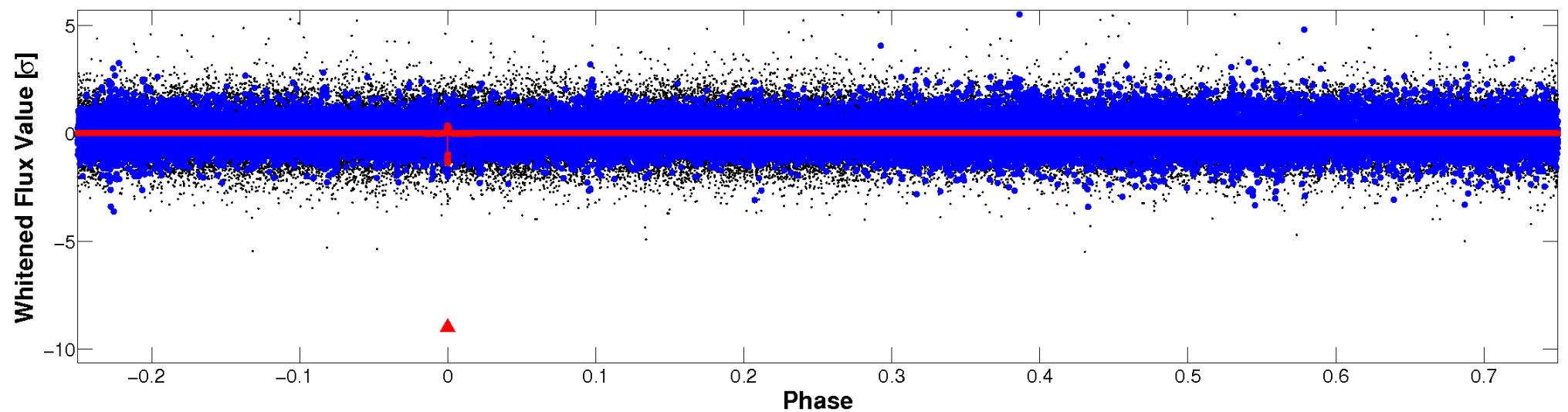


Non-Whitened Vs. Whitened Light Curve

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

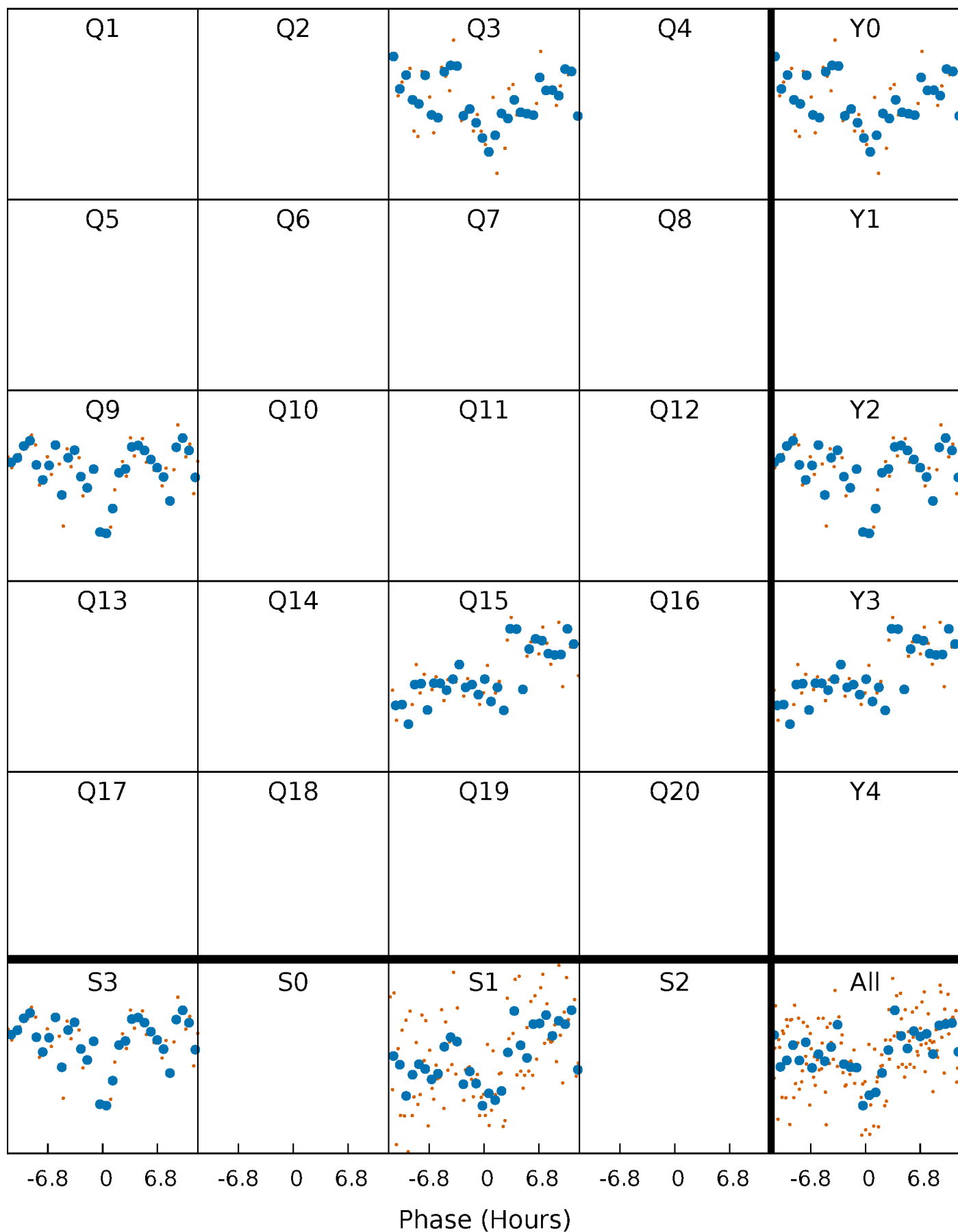


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 007351012-01 P=572.512232 Days $T_0=278.444899$ (BKJD)



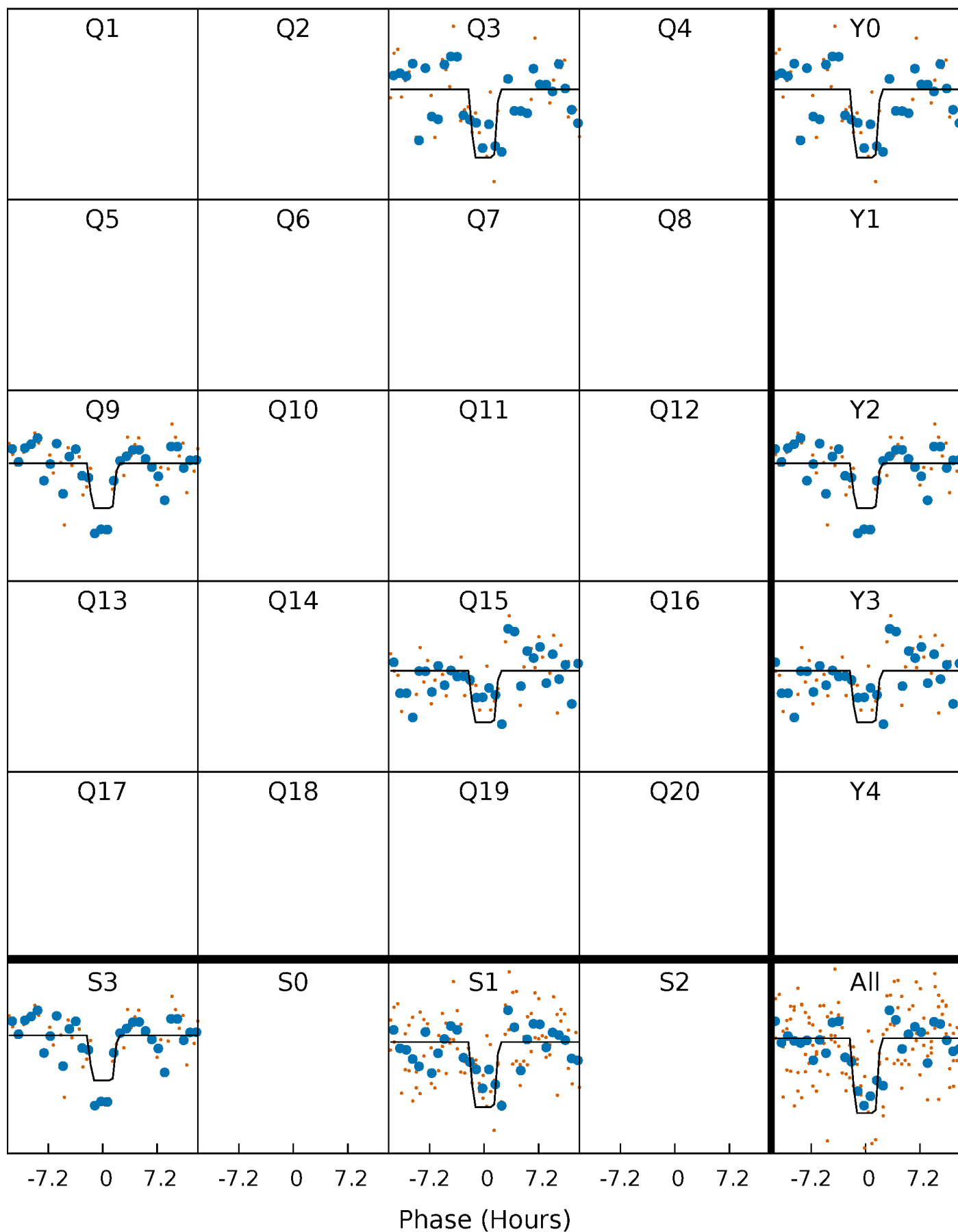
DV Quarter-Phased Transit Curves

TCE 007351012-01 P=572.512232 Days $T_0=278.444899$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

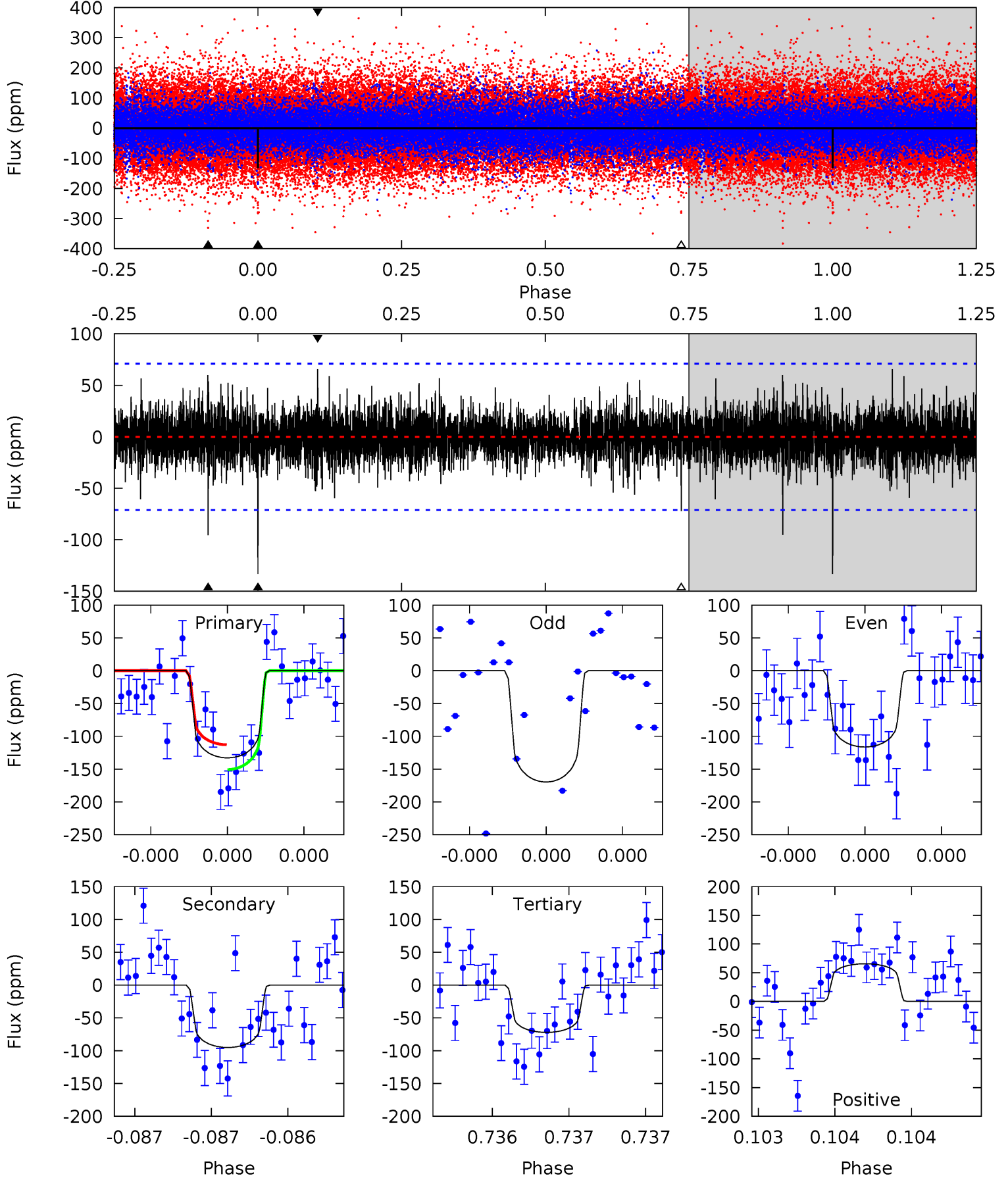
TCE 007351012-01 P=572.507484 Days $T_0=278.456259$ (BKJD)



DV Model-Shift Uniqueness Test

007351012-01, P = 572.512232 Days, E = 278.444899 Days

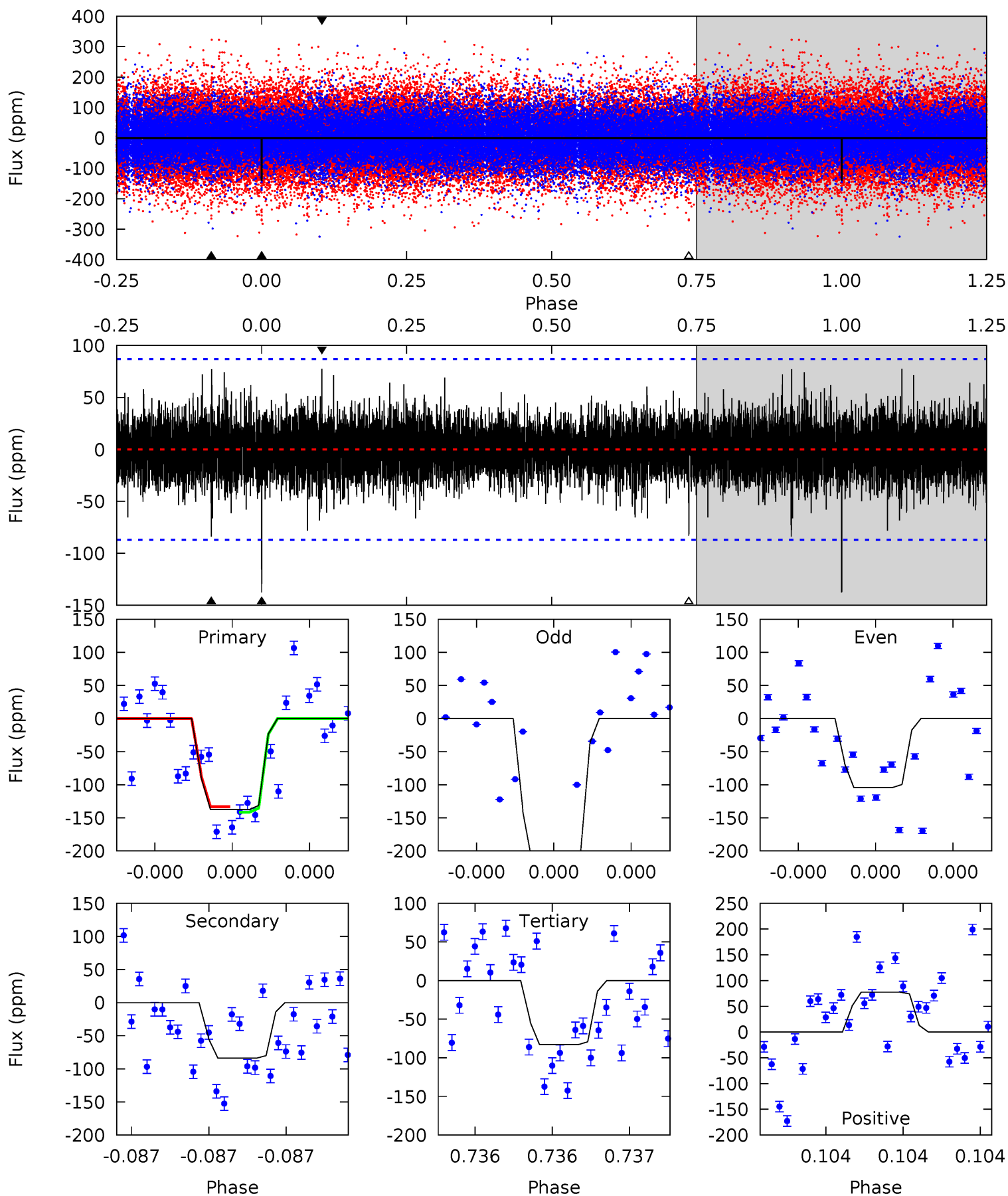
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.5	7.49	5.68	5.17	5.59	3.51	1.21	4.79	5.30	1.81	2.32	1.98	1.03	0.33	1.49



Alt Model-Shift Uniqueness Test

007351012-01, P = 572.507484 Days, E = 278.456259 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.96	5.46	5.40	5.05	5.67	3.63	1.15	3.55	3.90	0.06	0.41	3.45	1.12	0.36	0.27



Stellar Parameters For KIC 007351012

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6363^{+181}_{-227}	$4.101^{+0.252}_{-0.168}$	$-0.120^{+0.250}_{-0.300}$	$1.589^{+0.475}_{-0.475}$	$1.161^{+0.209}_{-0.157}$	$0.408^{+0.630}_{-0.188}$
	+3%/-4%	+6%/-4%	+208%/-250%	+30%/-30%	+18%/-14%	+154%/-46%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 007351012-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-95 ± 13	$2.16^{+0.92}_{-0.87}$	413^{+31}_{-33}	5603^{+1614}_{-739}	23262^{+40744}_{-12012}
Alt.	-84 ± 15	$2.24^{+0.87}_{-0.86}$	412^{+32}_{-37}	5325^{+1291}_{-693}	18315^{+31770}_{-8980}

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 $A_{\text{obs}} \gg 1.0$

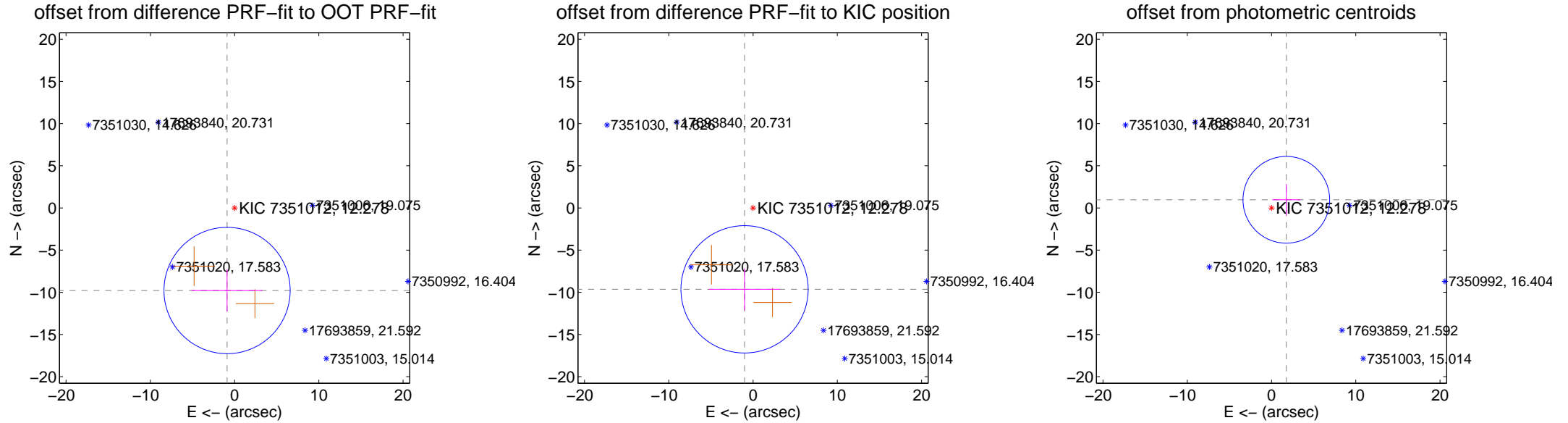
DV Centroid Data

Supplemental centroid analysis for 007351012-01. Kepler magnitude: 12.28. Transit SNR 7.23

There are 0 quarters with good PRF difference image offsets

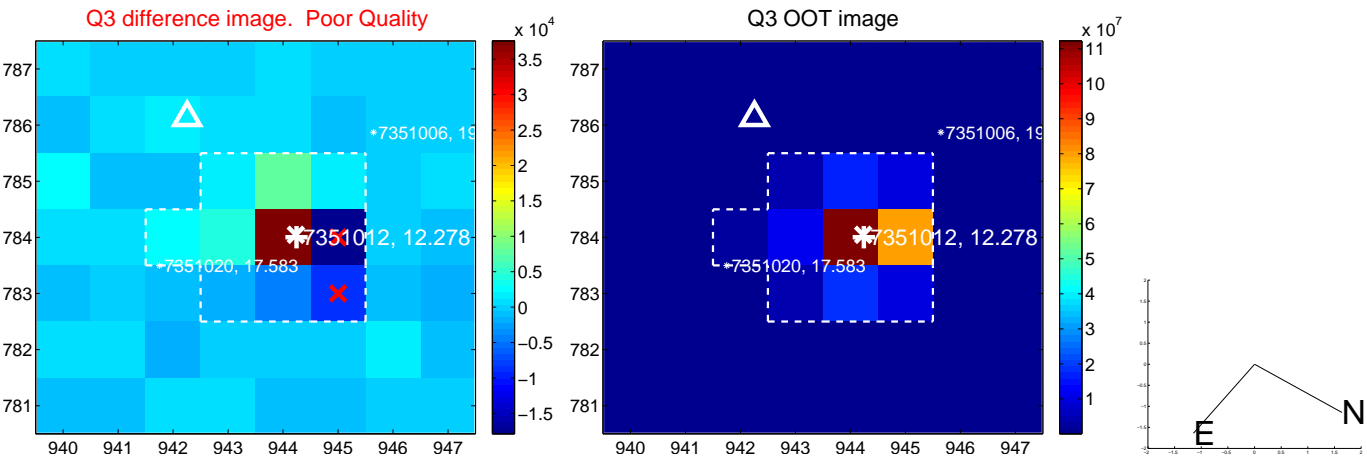
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	9.828 ± 2.495	3.94	0.891 ± 4.203	-9.787 ± 2.476
PRF-fit source offset from KIC position	9.699 ± 2.516	3.86	1.008 ± 4.213	-9.646 ± 2.491
photometric centroid source offset	2.00 ± 1.71	1.17	-1.76 ± 1.67	0.97 ± 1.85



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.

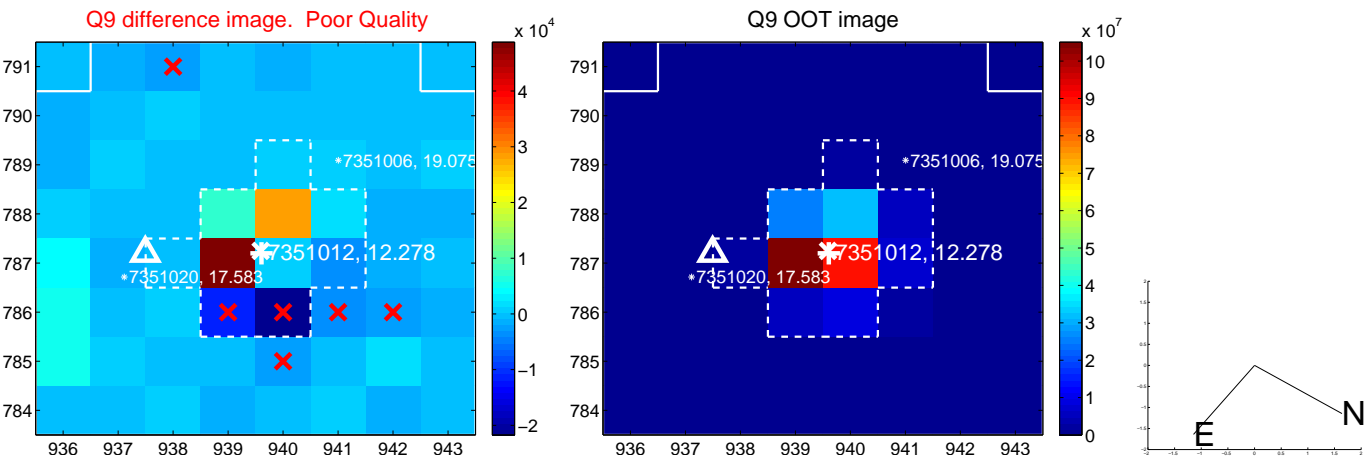
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



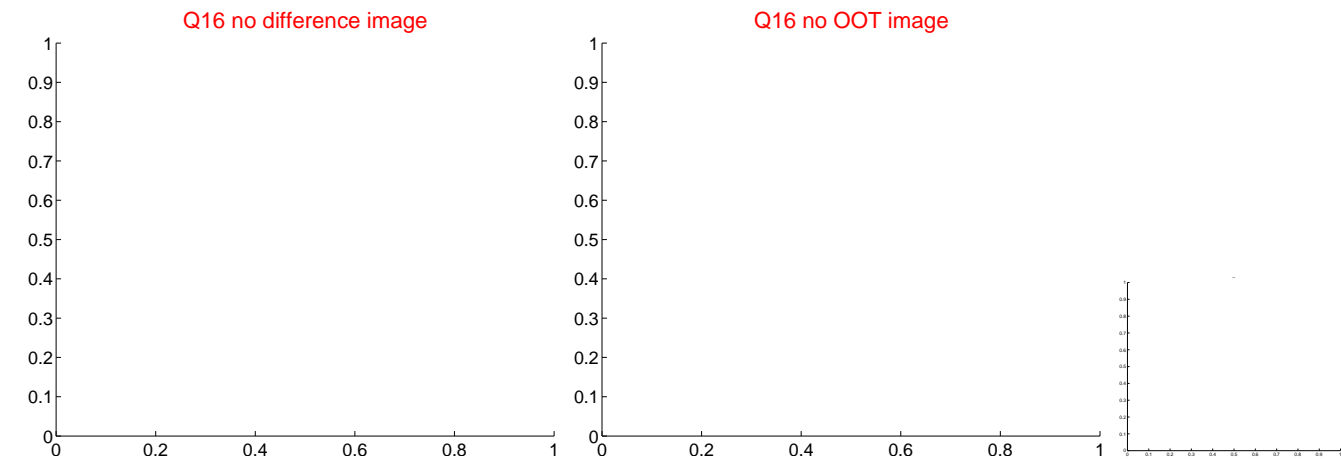
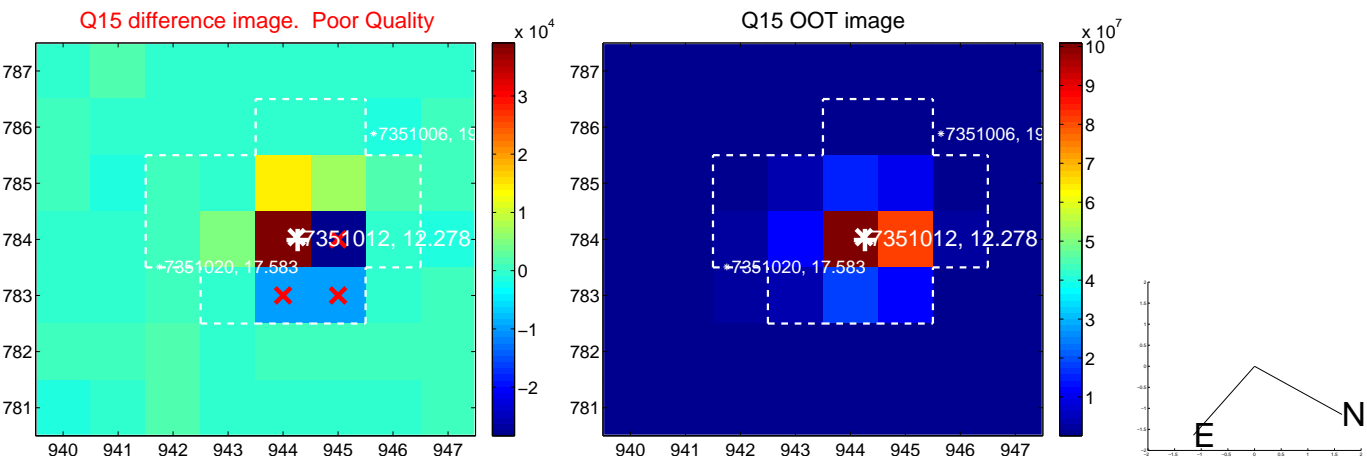
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



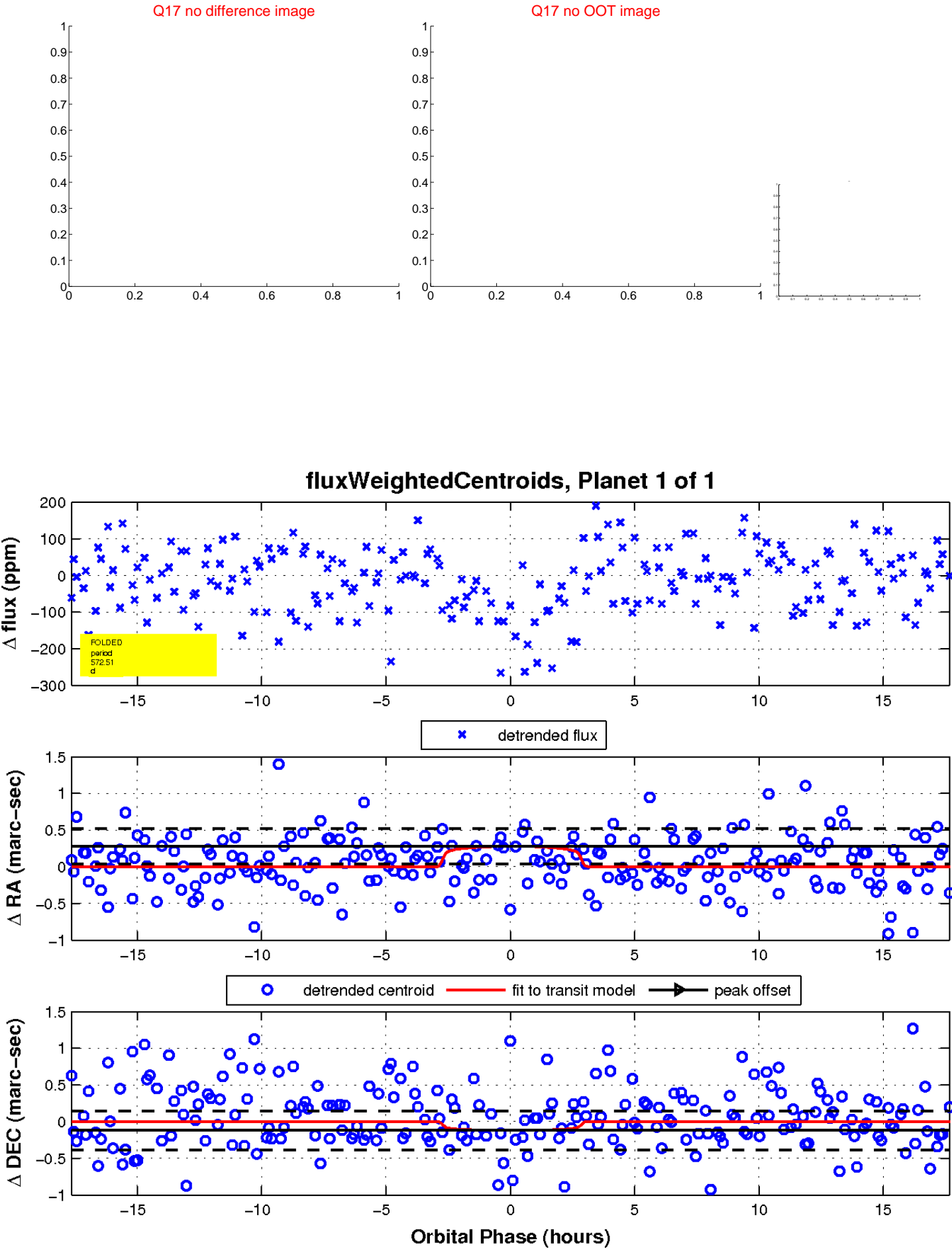
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

