

KIC 007352158

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})
007352158-01	OBS	No	353.543384	458.274352	259.2	7.970	7.5	8.9	1.90	6022	3.37	4.25

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007352158-01	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.

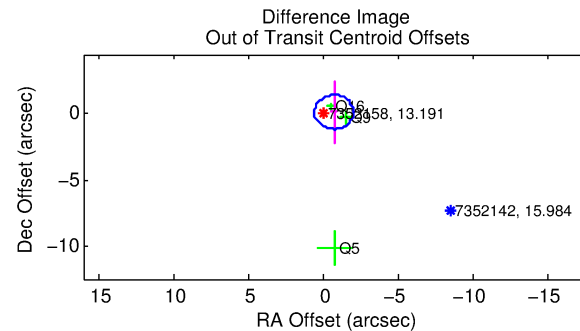
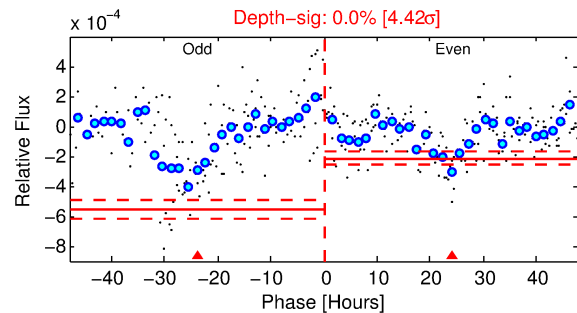
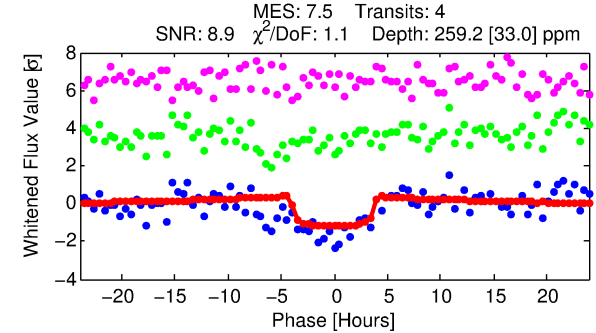
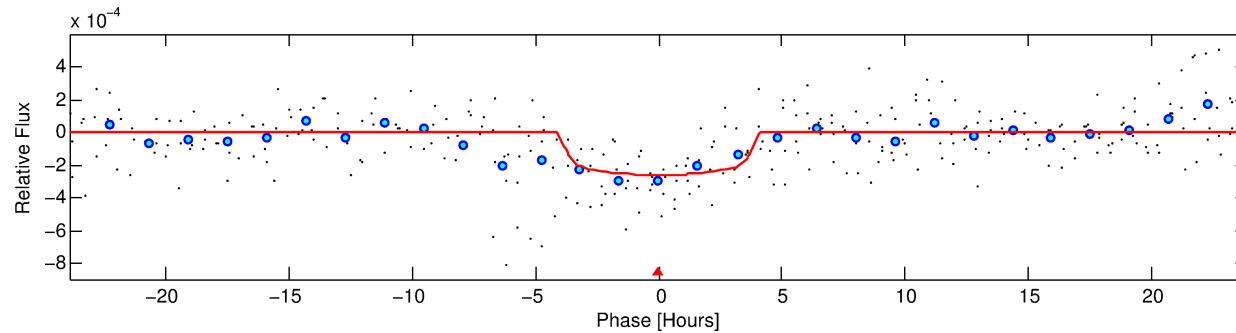
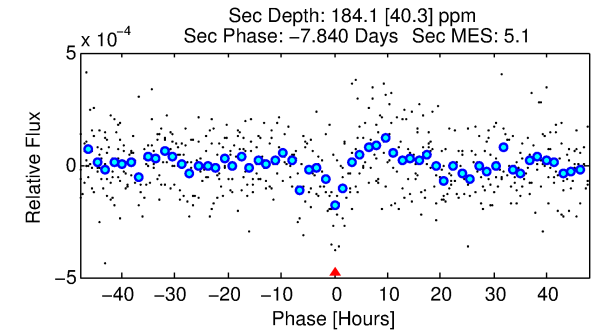
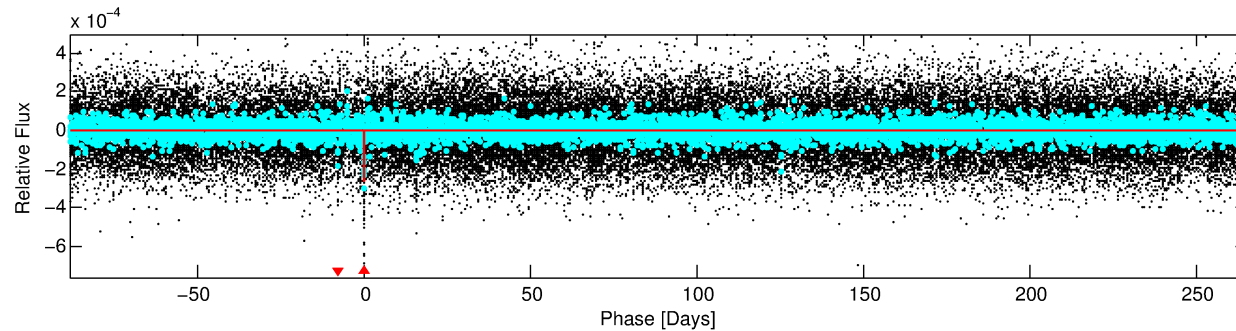
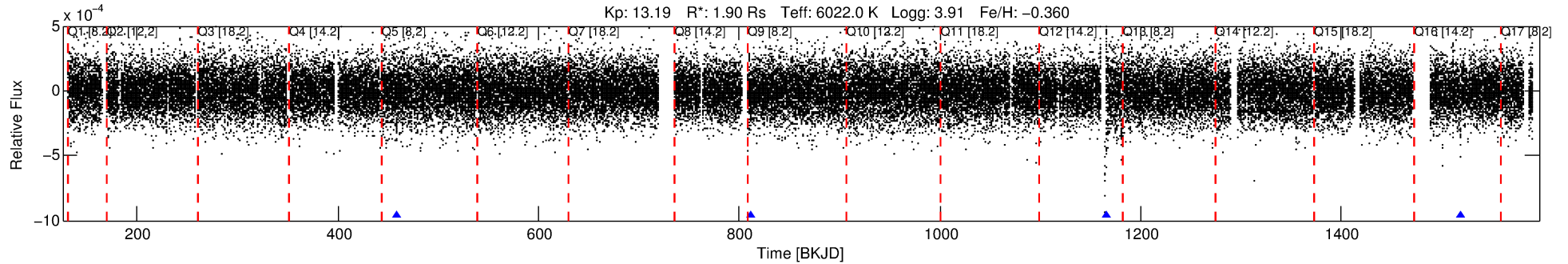
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007352158-01

No Significant Match Found

DV One-Page Summary

KIC: 7352158 Candidate: 1 of 1 Period: 353.543 d



DV Fit Results:

Period = 353.54338 [0.00832] d
Epoch = 458.2744 [0.0124] BKJD
Rp/R* = 0.0163 [0.0062]
a/R* = 215.37 [412.46]
b = 0.79 [0.90]
Seff = 4.25 [2.29]
Teq = 366 [49] K
Rp = 3.36 [1.72] Re
a = 0.9978 [0.3289] AU
Ag = 8907.79 [8443.92] [1.05σ]
Teffp = 5499 [1097] K [4.67σ]

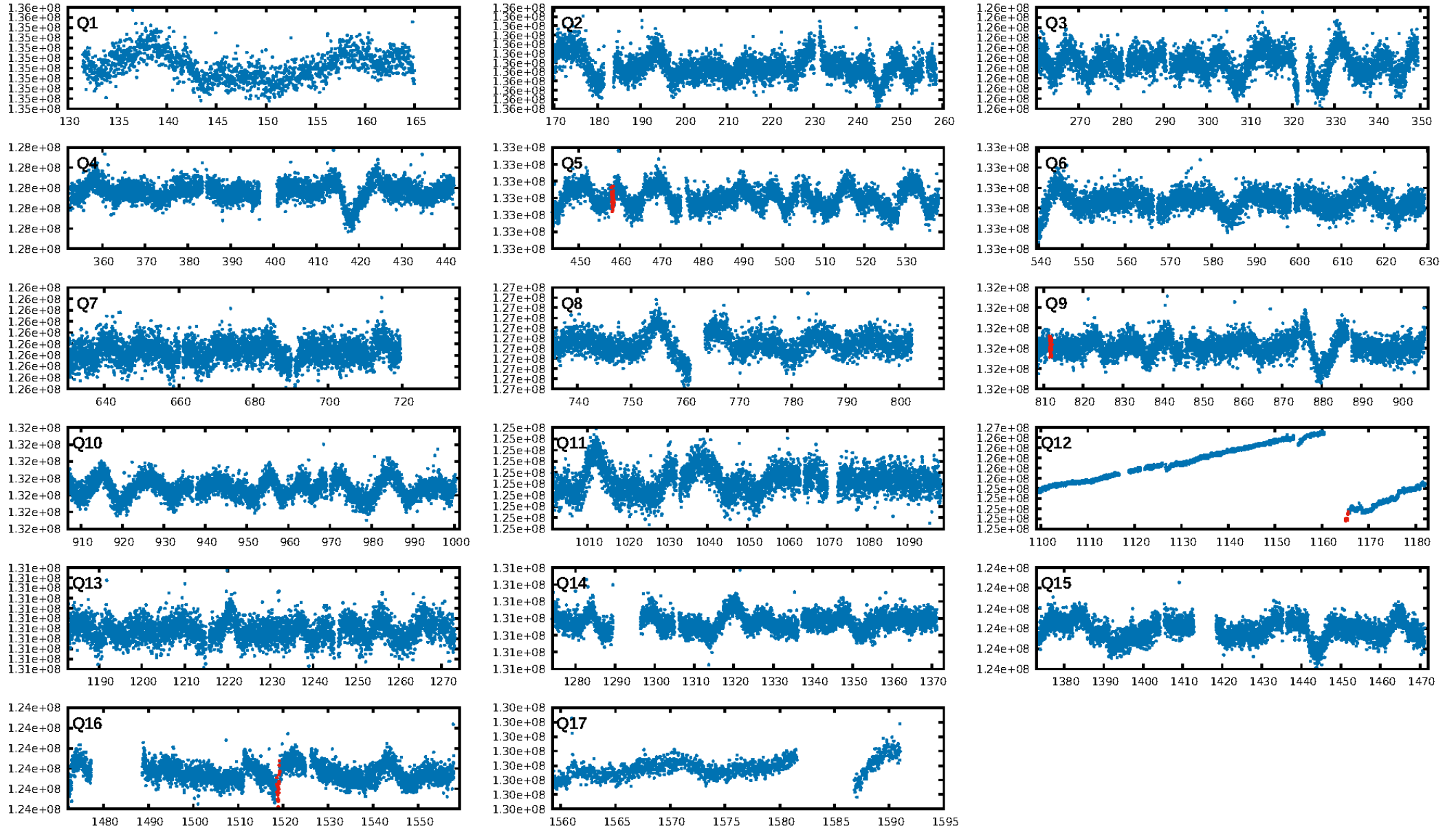
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
a/R* = 215.37 [412.46]
Bootstrap-pfa: 2.95e-10
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.7375
Centroid-sig: 2.8%
Centroid-so: 1.448 arcsec [1.55σ]
OotOffset-rm: 0.763 arcsec [1.76σ]
KicOffset-rm: 0.723 arcsec [1.68σ]
OotOffset-st: 0/0/1/2 [3]
KicOffset-st: 0/0/1/2 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

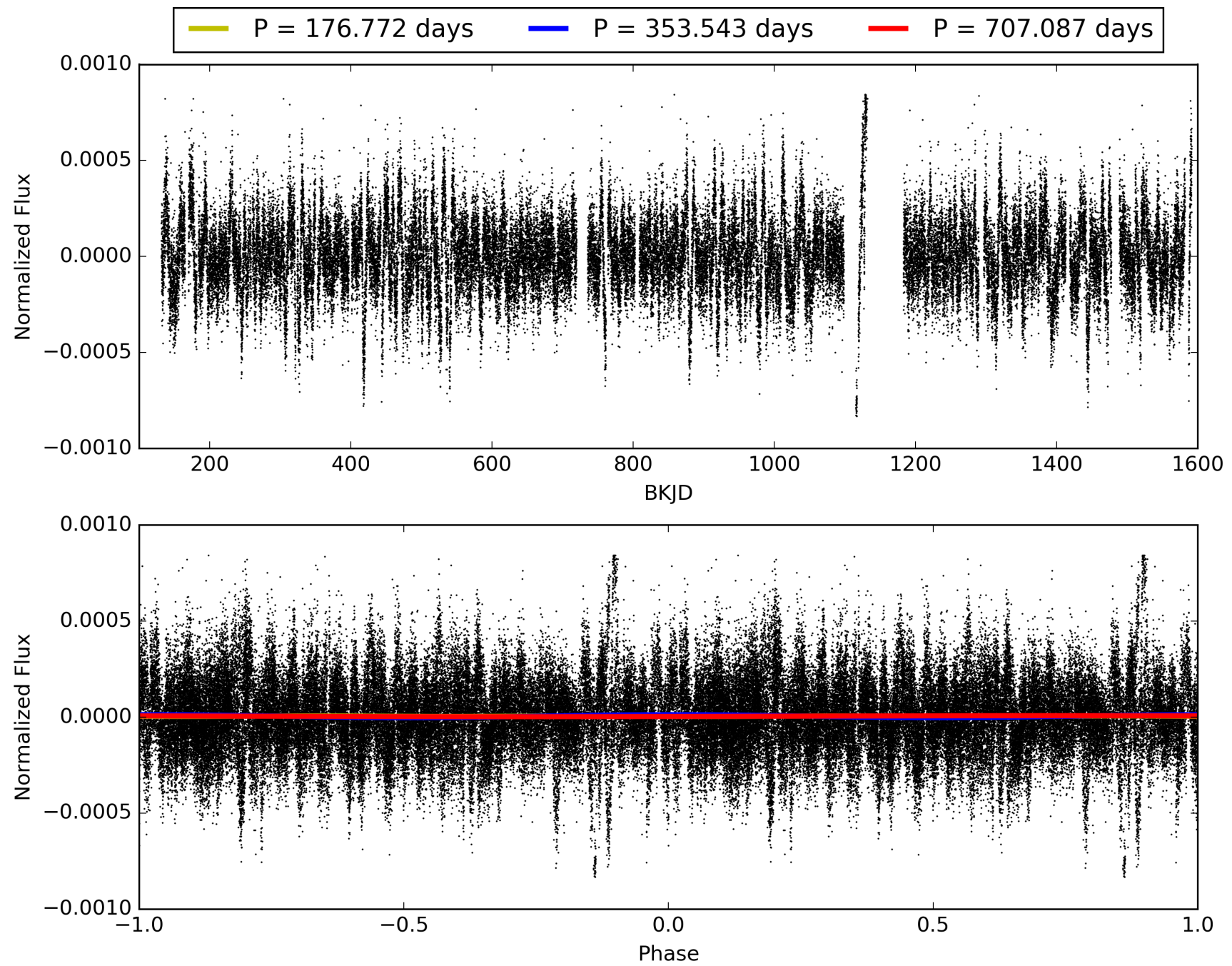
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 16:06:03 Z

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

TCE 007352158-01, PDC Light Curves

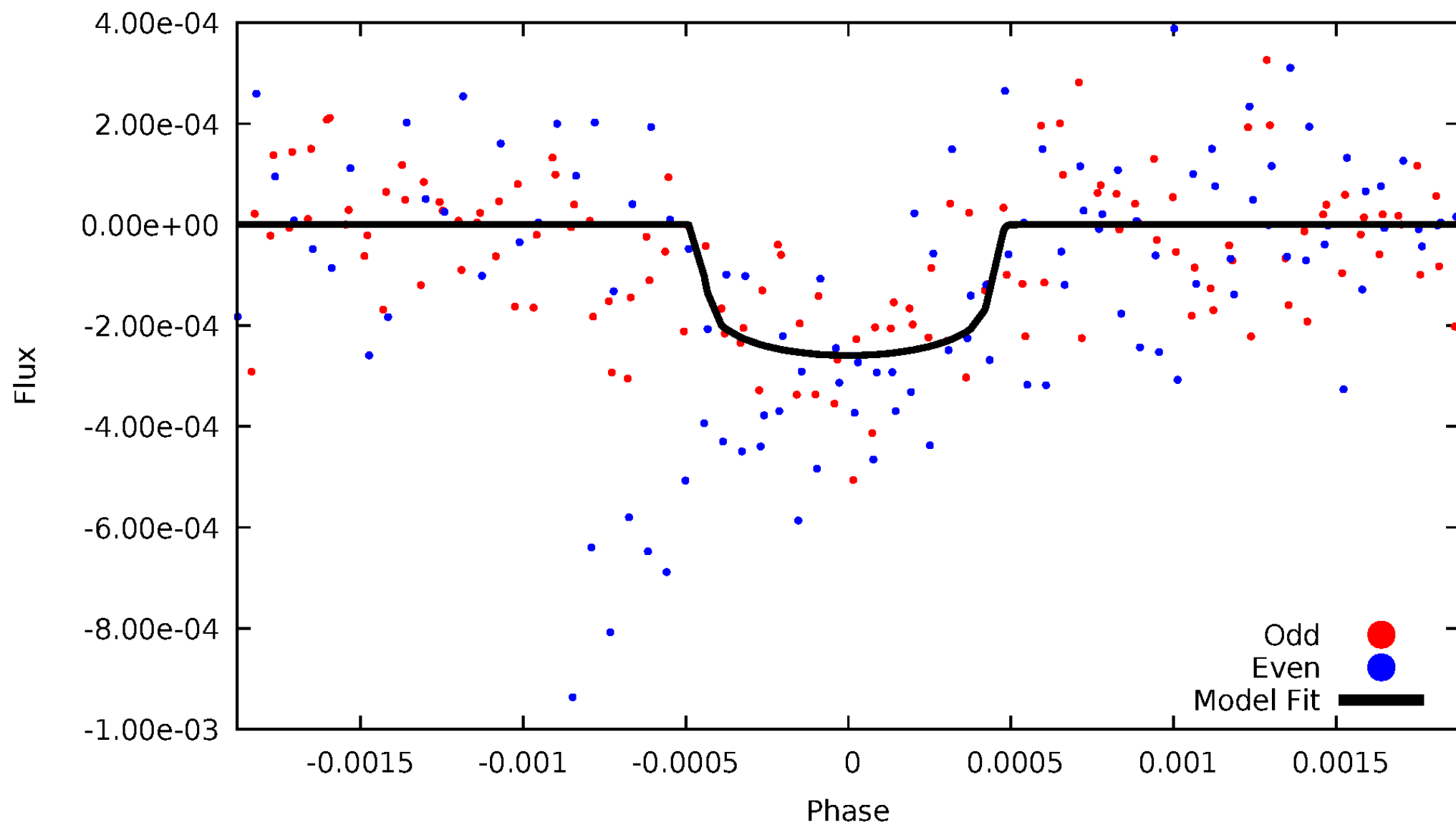


TCE 007352158-01



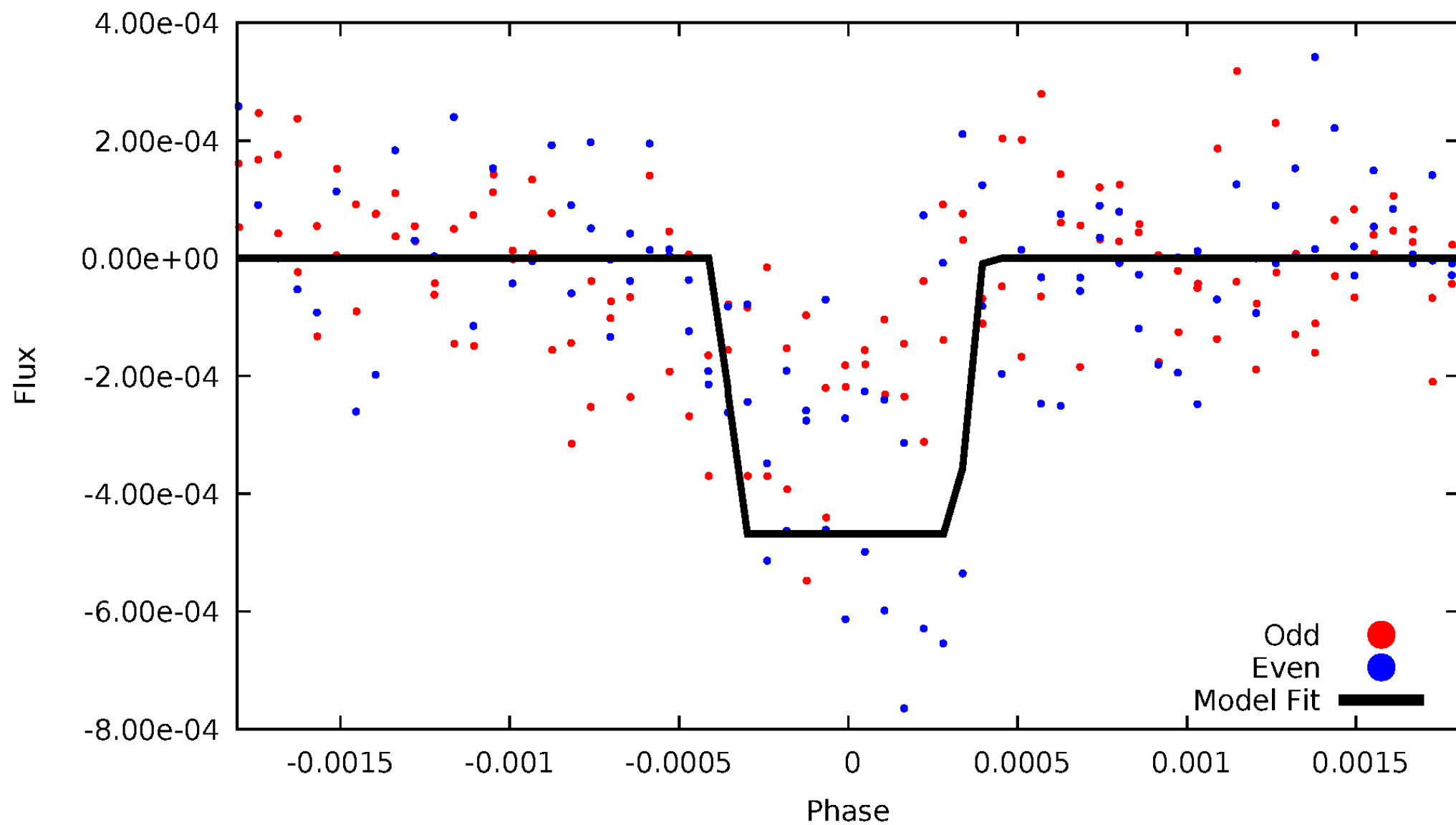
DV Odd/Even

TCE 007352158-01



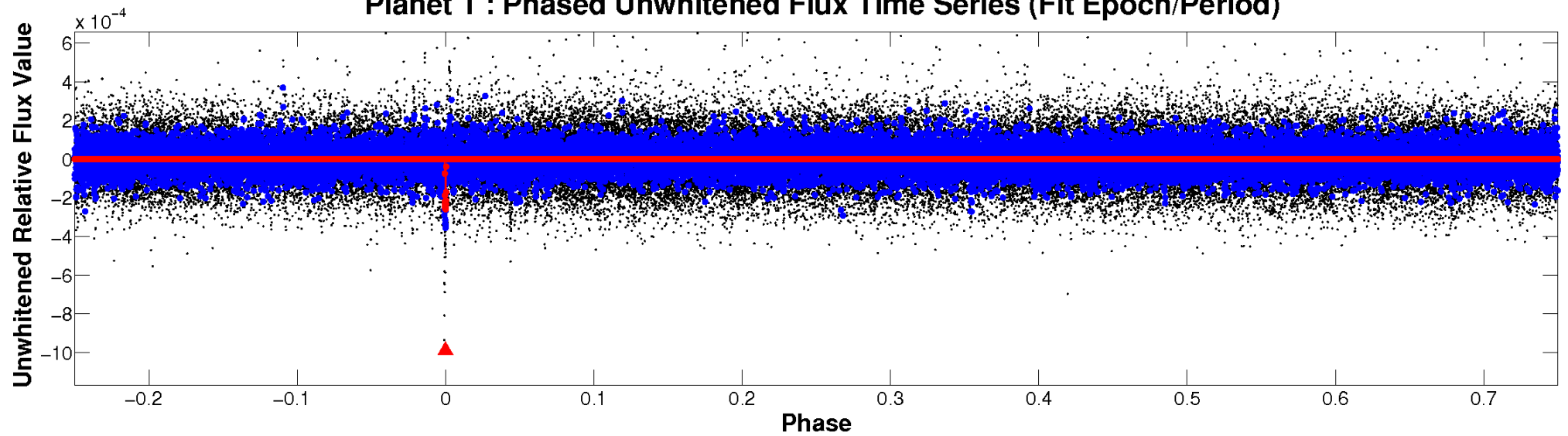
ALT Odd/Even

TCE 007352158-01

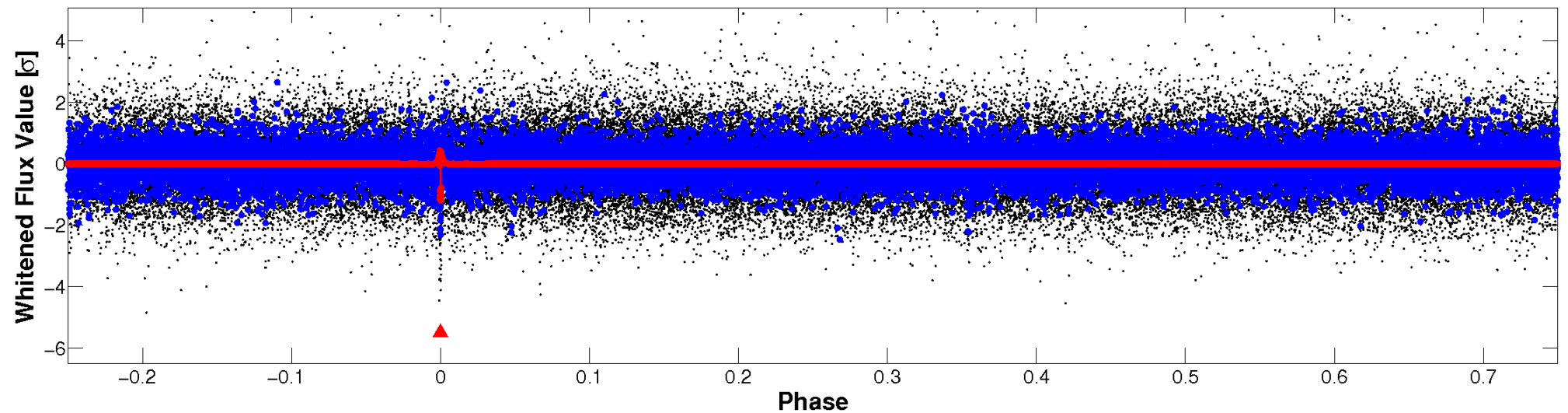


Non-Whitened Vs. Whitened Light Curve

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



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



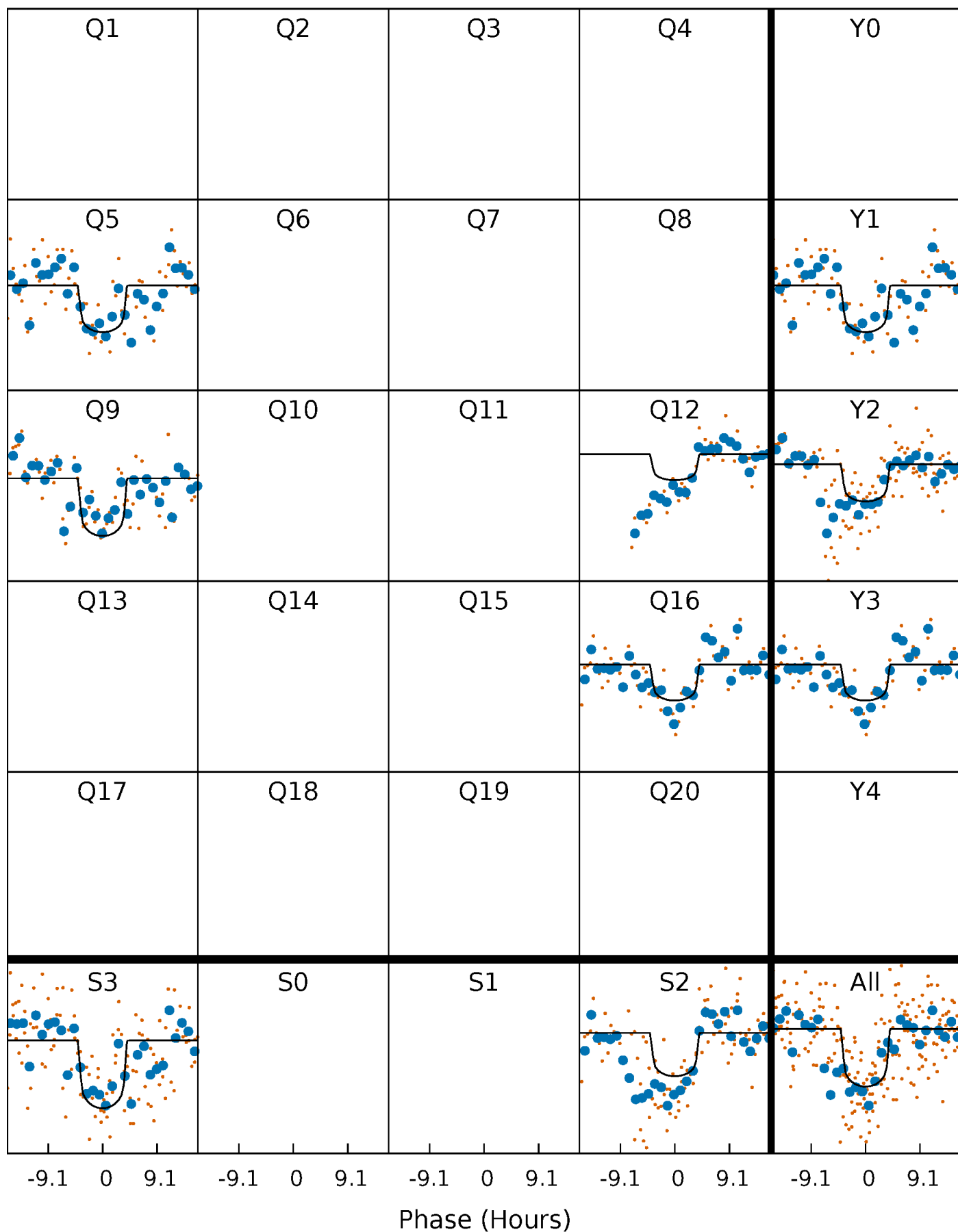
PDC Quarter-Phased Transit Curves

TCE 007352158-01 P=353.543384 Days $T_0=458.274352$ (BKJD)



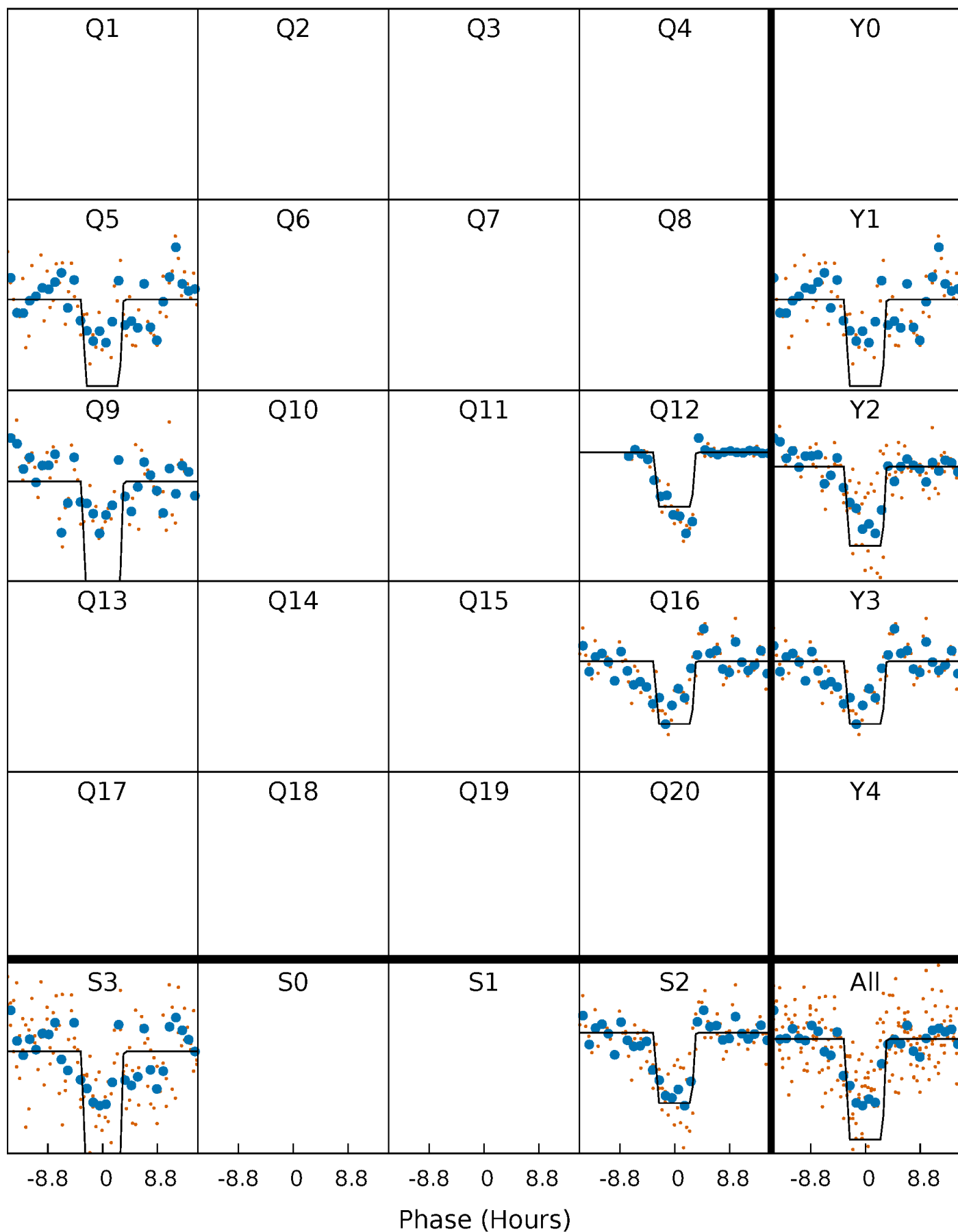
DV Quarter-Phased Transit Curves

TCE 007352158-01 P=353.543384 Days $T_0=458.274352$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

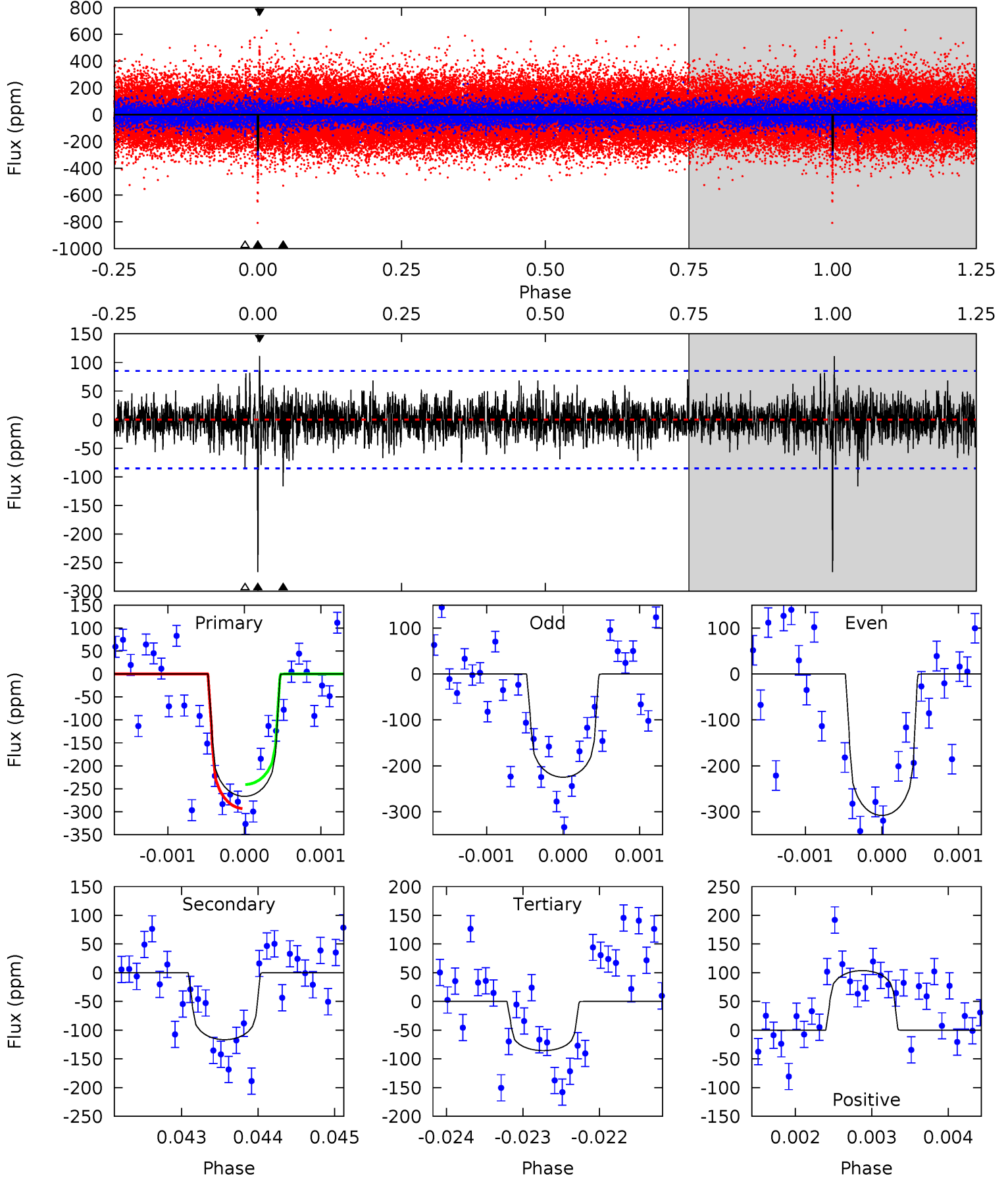
TCE 007352158-01 P=353.561889 Days $T_0=458.267688$ (BKJD)



DV Model-Shift Uniqueness Test

007352158-01, P = 353.543384 Days, E = 104.730968 Days

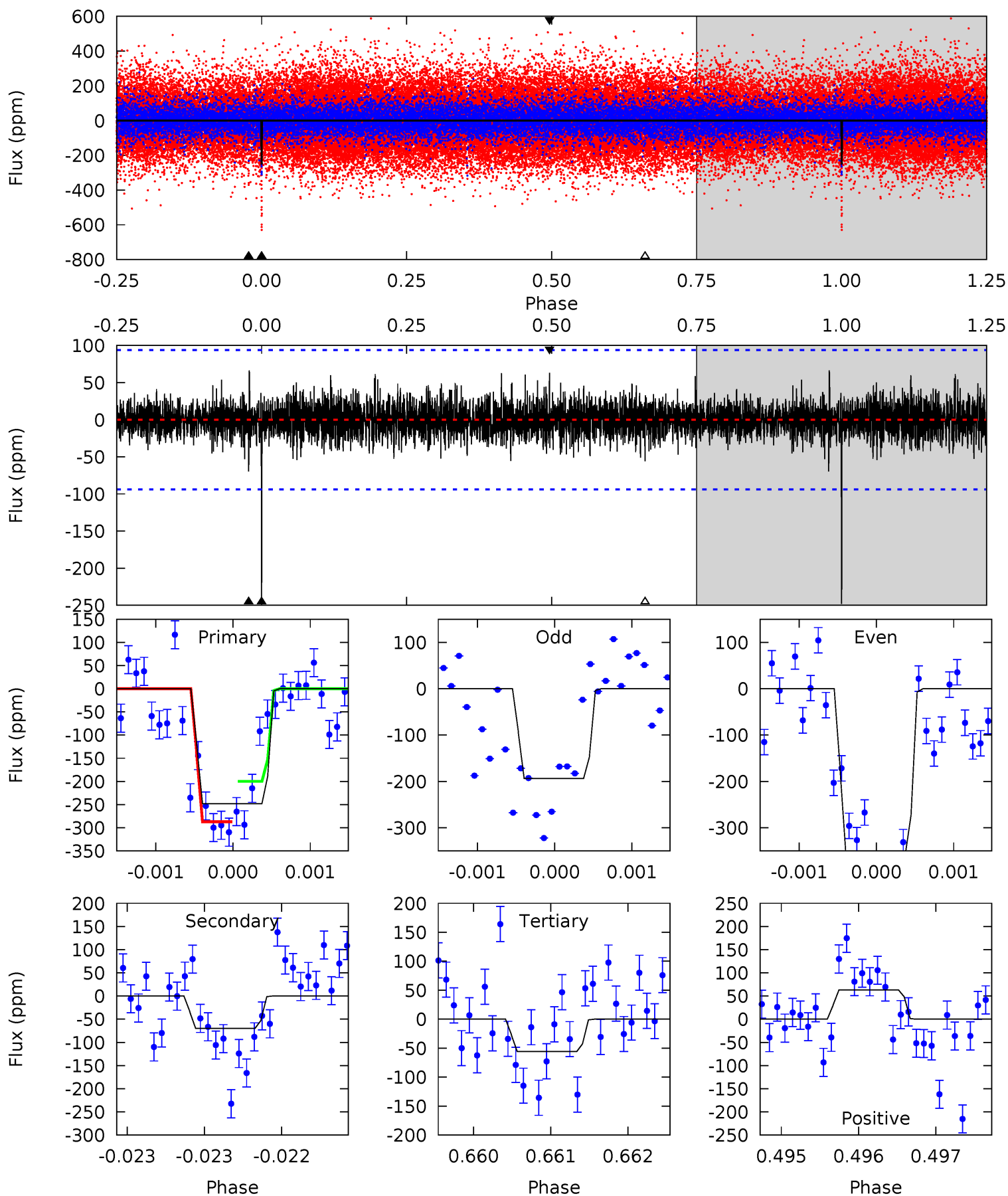
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.0	7.44	5.47	6.62	5.45	3.28	1.35	11.6	10.4	1.98	0.82	2.65	1.07	0.29	1.67



Alt Model-Shift Uniqueness Test

007352158-01, $P = 353.561889$ Days, $E = 104.705799$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.5	4.08	3.27	3.71	5.50	3.37	0.94	11.3	10.8	0.80	0.37	4.83	1.20	0.21	2.55



Stellar Parameters For KIC 007352158

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6022^{+180}_{-162}	$3.908^{+0.308}_{-0.103}$	$-0.360^{+0.350}_{-0.250}$	$1.895^{+0.352}_{-0.653}$	$1.060^{+0.177}_{-0.177}$	$0.219^{+0.460}_{-0.068}$
	+3%/-3%	+8%/-3%	+97%/-69%	+19%/-34%	+17%/-17%	+210%/-31%
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 007352158-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-117 ± 16	$3.17^{+1.42}_{-1.30}$	502^{+31}_{-45}	4973^{+1174}_{-600}	6349^{+10392}_{-3293}
Alt.	-70 ± 17	$4.15^{+1.40}_{-1.25}$	501^{+32}_{-46}	4032^{+595}_{-364}	2147^{+2455}_{-973}

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 $A_{obs} \gg 1.0$

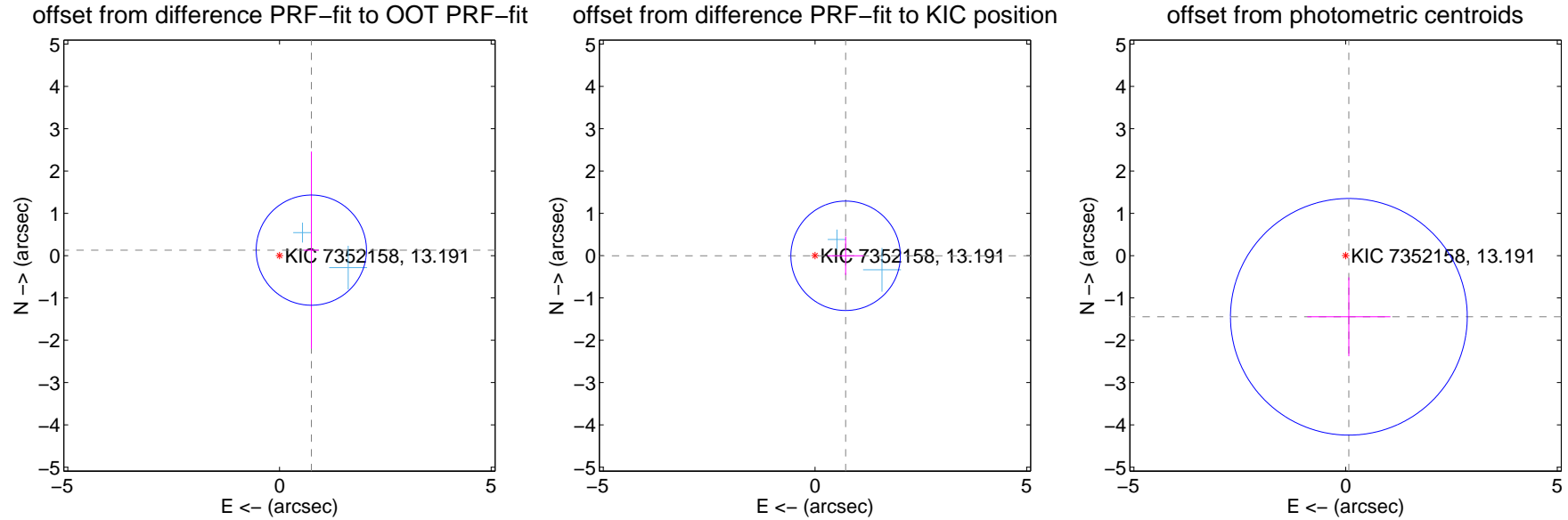
DV Centroid Data

Supplemental centroid analysis for 007352158-01. Kepler magnitude: 13.19. Transit SNR 8.95

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.763 ± 0.434	1.76	-0.752 ± 0.180	0.130 ± 2.329
PRF-fit source offset from KIC position	0.723 ± 0.431	1.68	-0.723 ± 0.431	-0.004 ± 0.453
photometric centroid source offset	1.45 ± 0.93	1.55	-0.08 ± 0.98	-1.45 ± 0.93

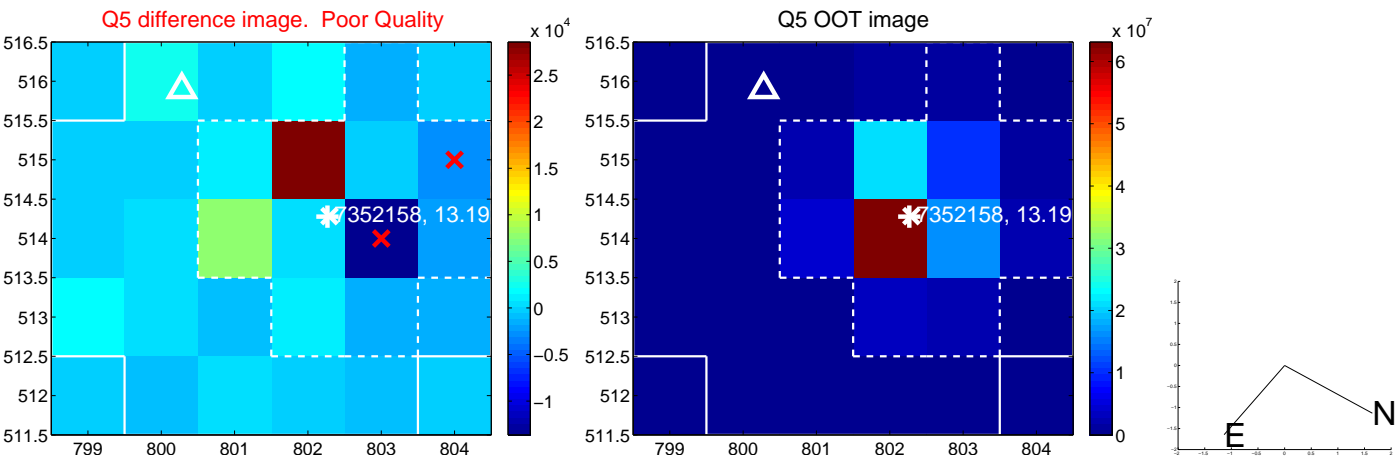


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

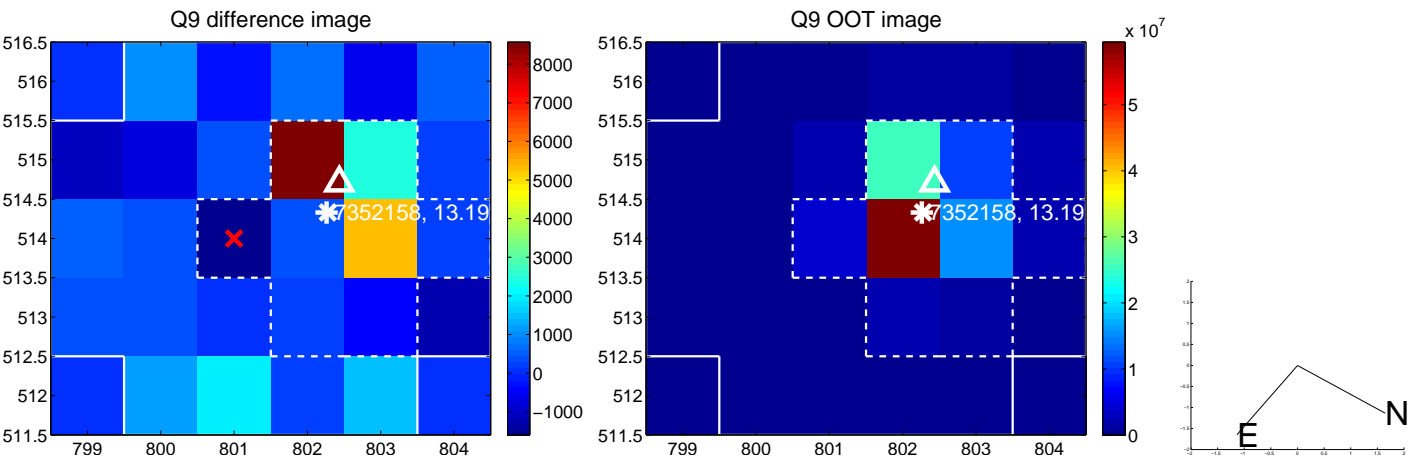
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



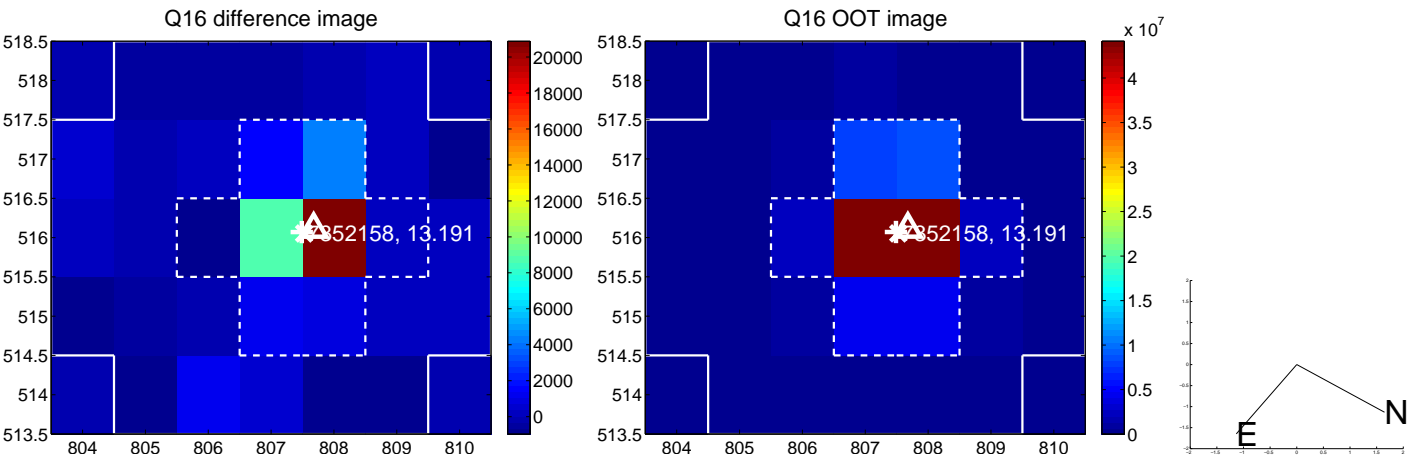
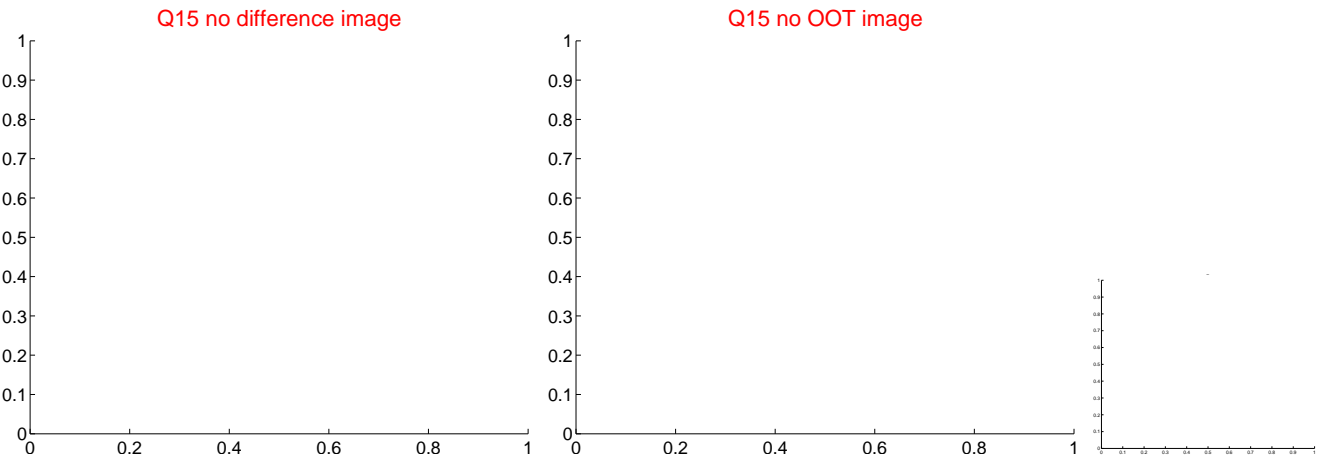
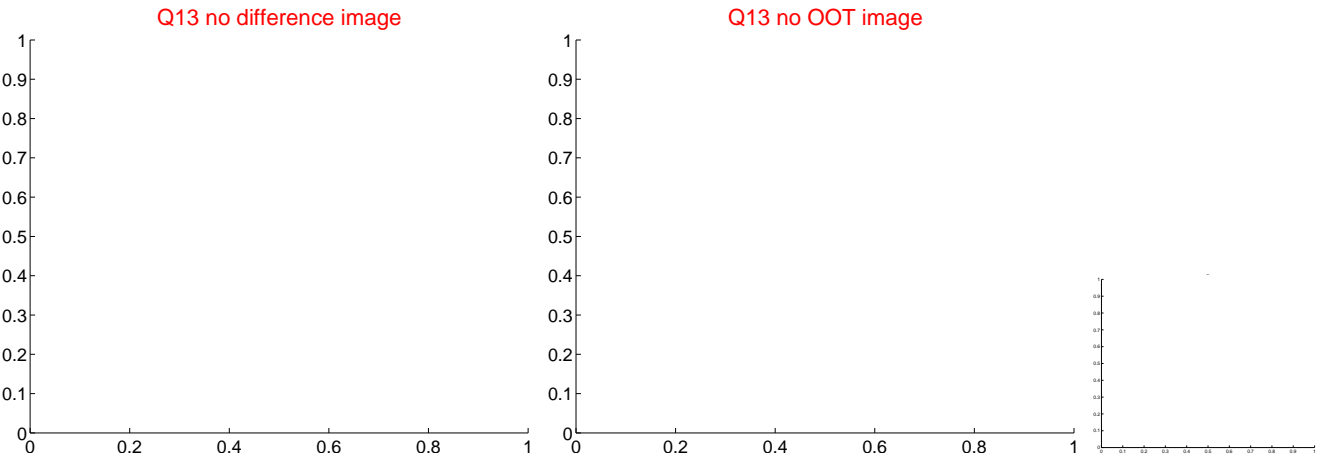
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



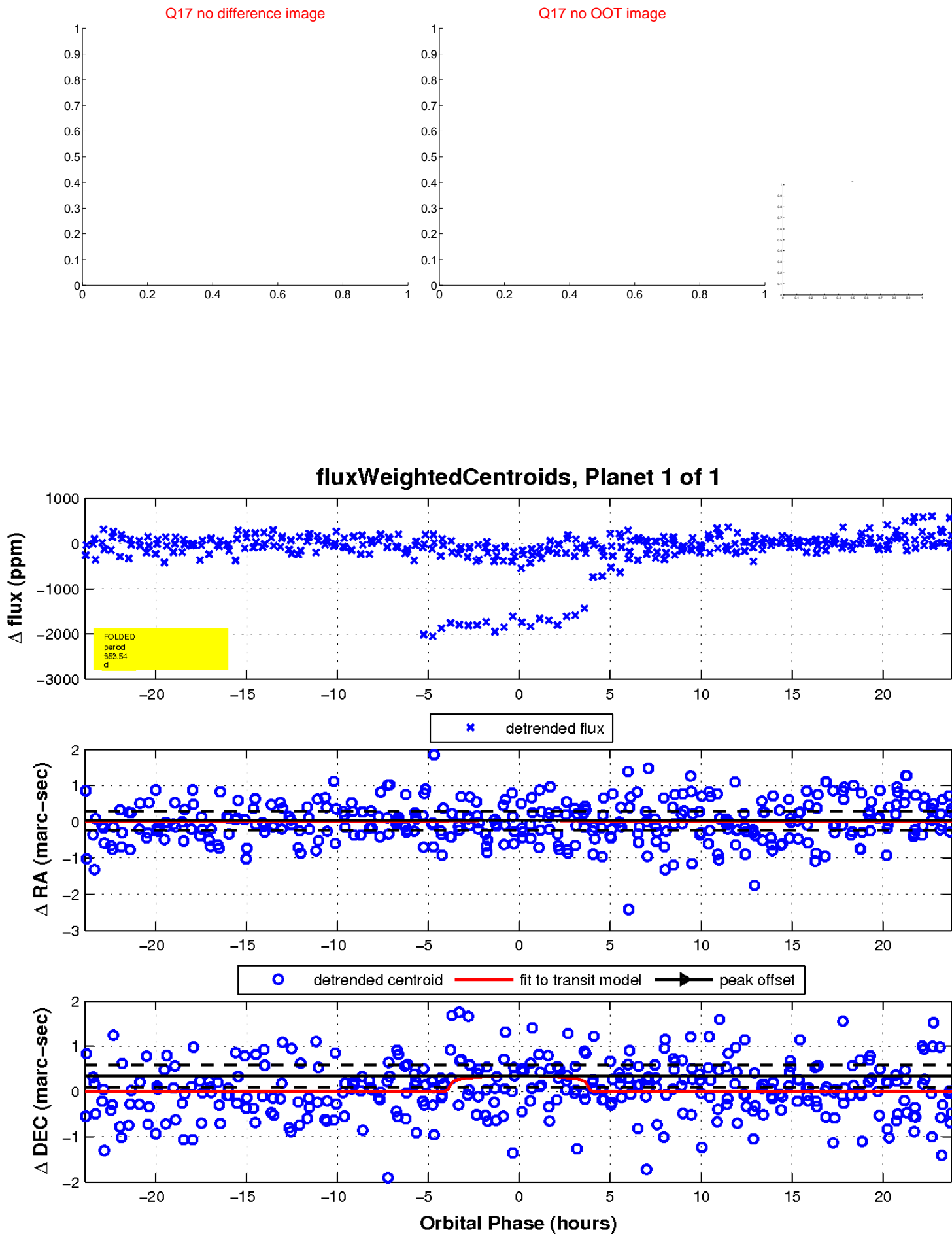
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UKIRT Image

Declination

