

KIC 011231223

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})
011231223-01	OBS	No	343.316980	155.462898	168.6	2.197	14.1	7.8	137.15	3729	219.66	1548.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011231223-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA_TRACKER—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_SATURATED

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

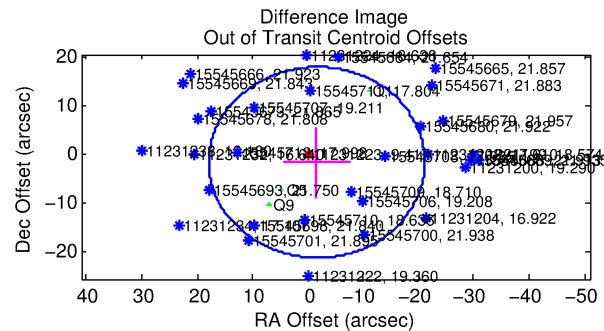
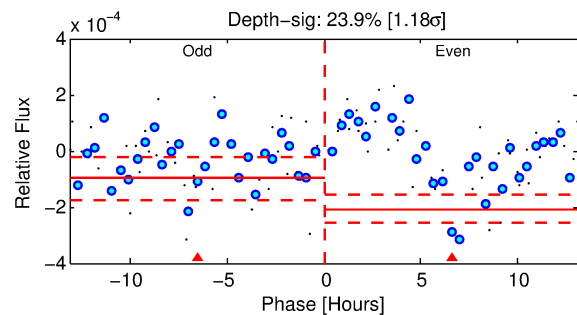
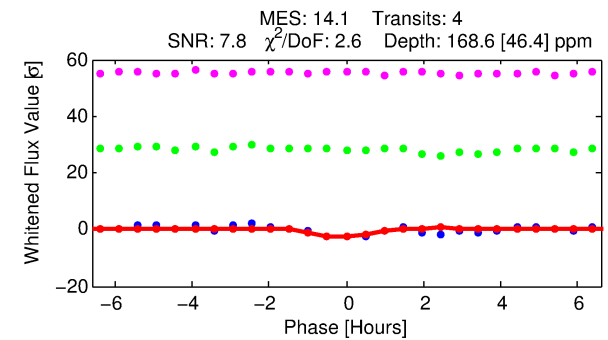
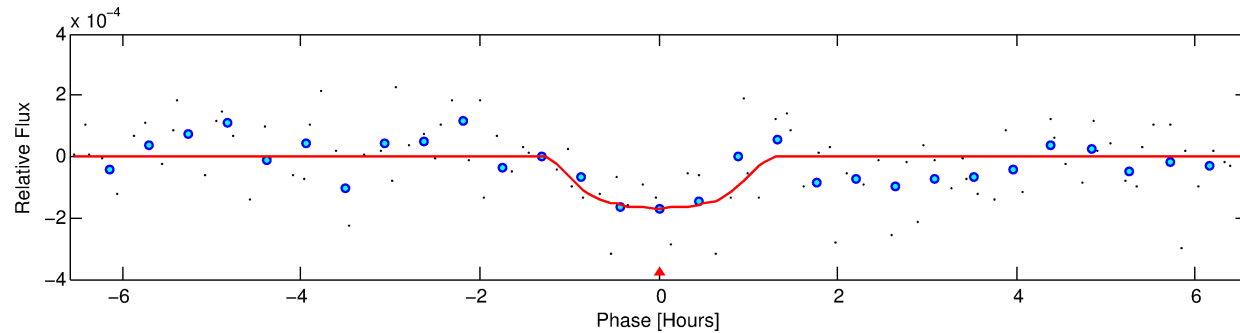
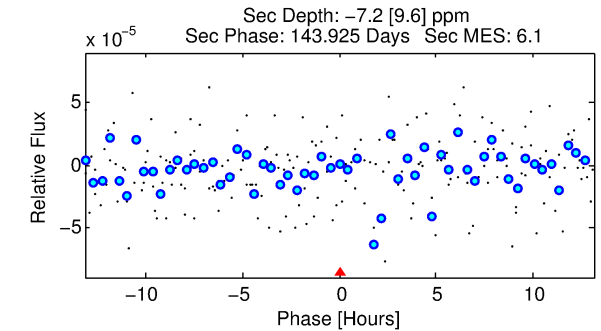
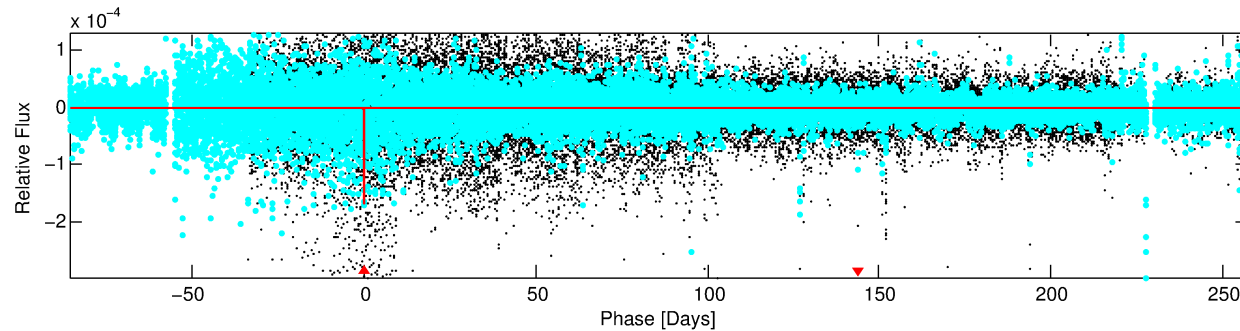
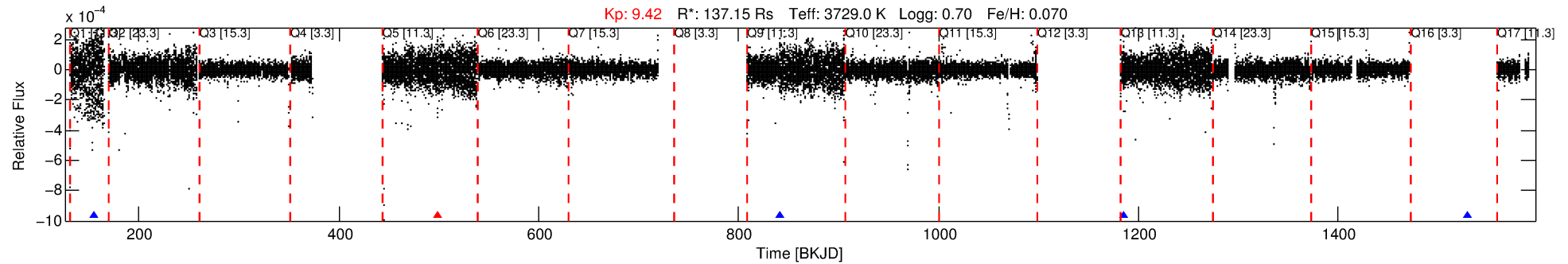
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011231223-01

No Significant Match Found

DV One-Page Summary

KIC: 11231223 Candidate: 1 of 1 Period: 343.317 d



DV Fit Results:

Period = 343.31698 [0.00495] d
Epoch = 155.4629 [0.0105] BKJD
Rp/R* = 0.0147 [0.0372]
a/R* = 617.62 [4680.24]
b = 0.87 [2.14]
Seff = 1548.13 [1112.39]
Teq = 1599 [287] K
Rp = 219.66 [573.45] Re
a = 1.4509 [0.7285] AU
Ag = N/A
Teffp = N/A

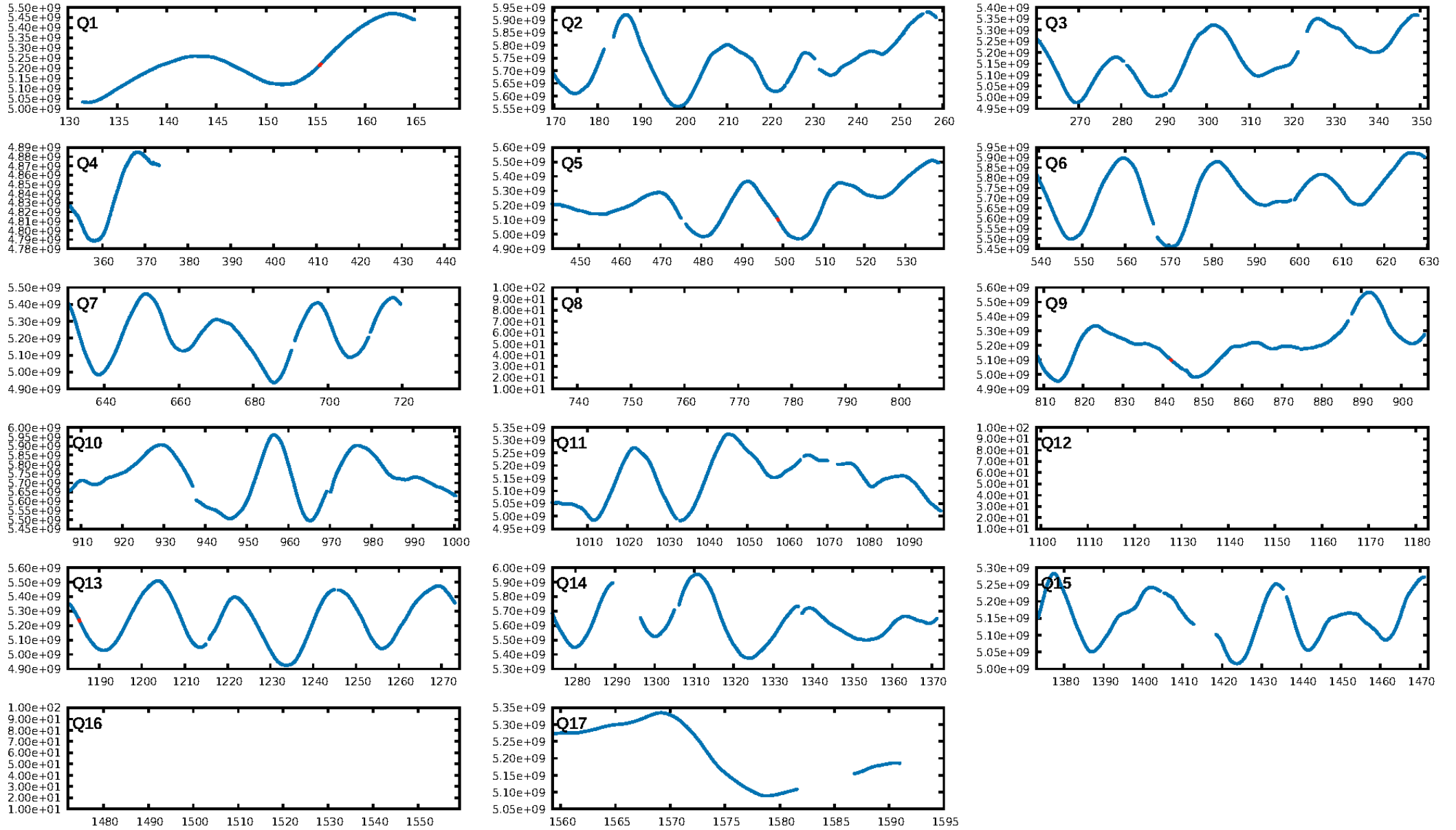
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 6.0%
ModelChiSquareGo-sig: 8.9%
Bootstrap-pfa: 4.54e-09
RollingBand-fgt: 0.67 [2/3]
GhostDiagnostic-chr: N/A
Centroid-sig: 48.7%
Centroid-so: 2.602 arcsec [1.09 σ]
OotOffset-rm: 2.285 arcsec [0.35 σ]
KicOffset-rm: 2.576 arcsec [0.39 σ]
OotOffset-st: 0/0/0/3 [3]
KicOffset-st: 0/0/0/3 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

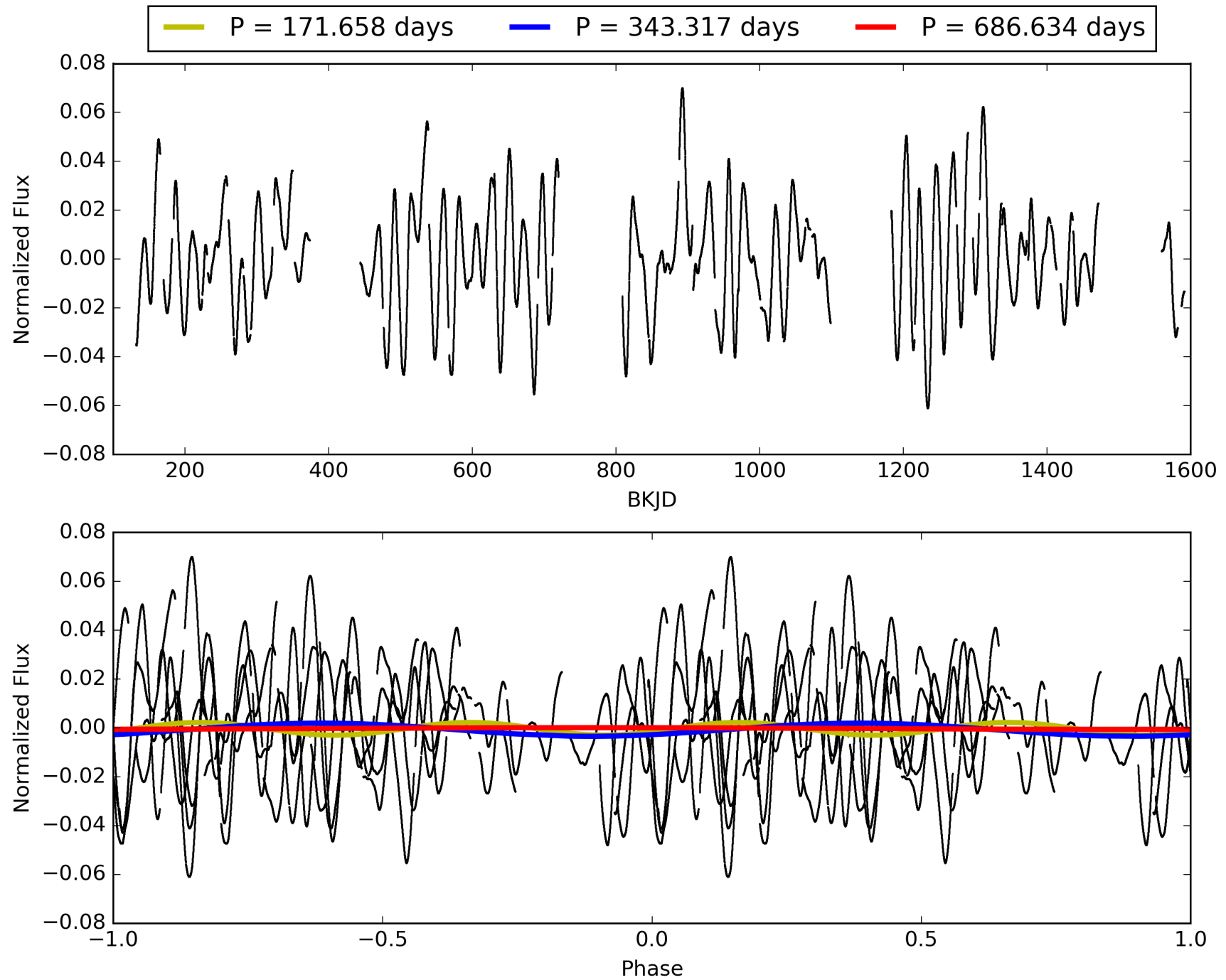
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 04:41:51 Z

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

TCE 011231223-01, PDC Light Curves

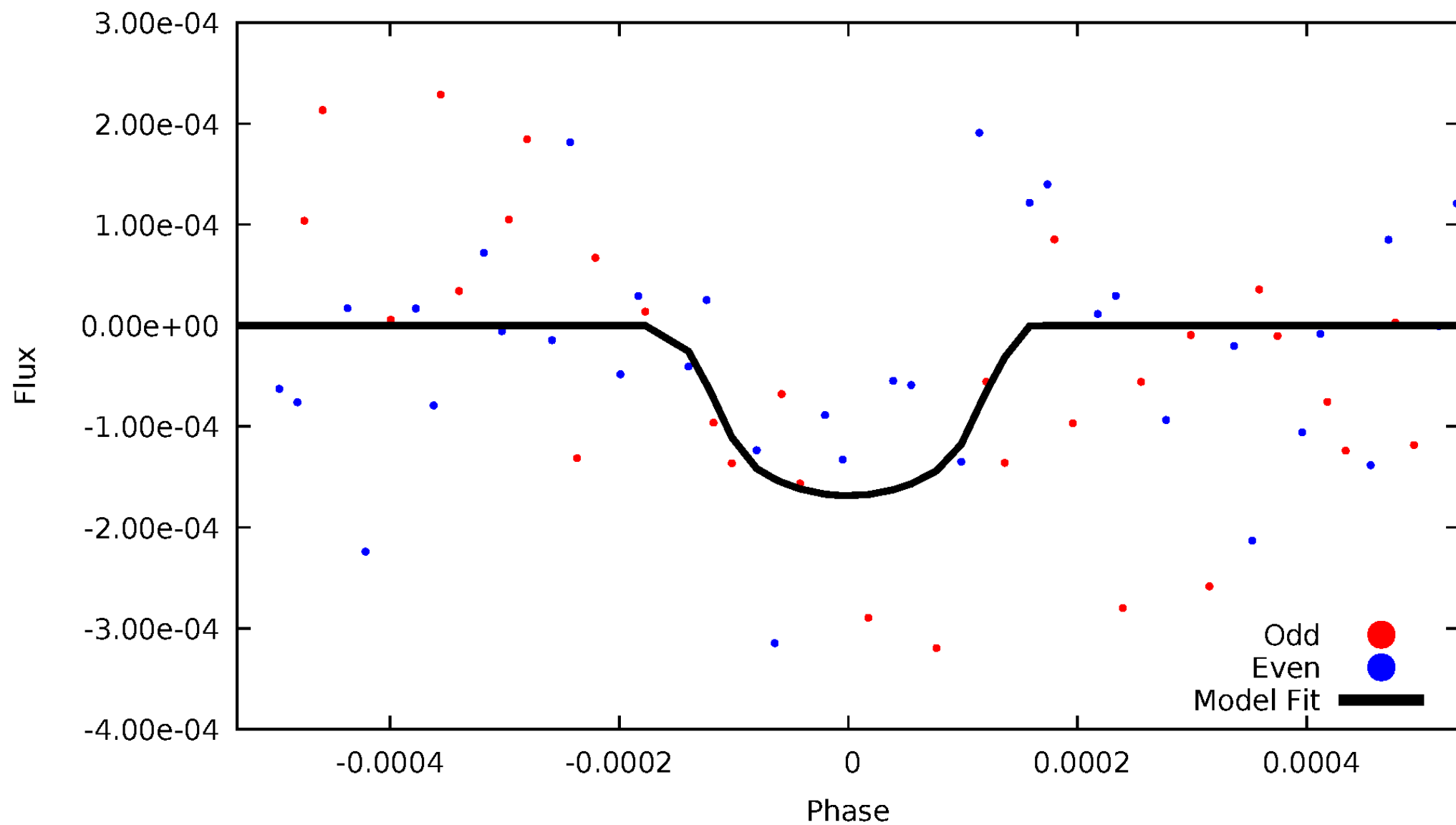


TCE 011231223-01



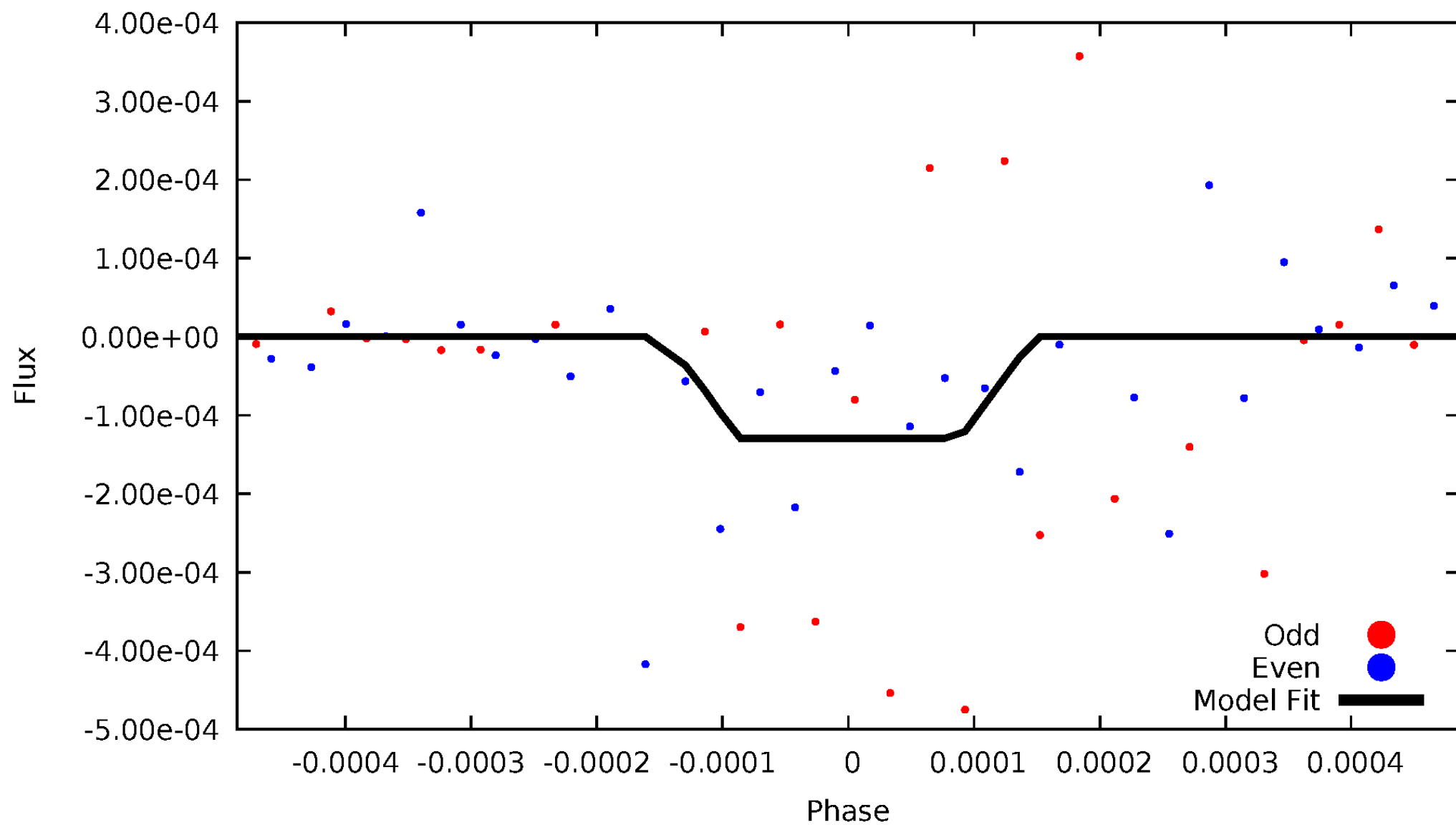
DV Odd/Even

TCE 011231223-01



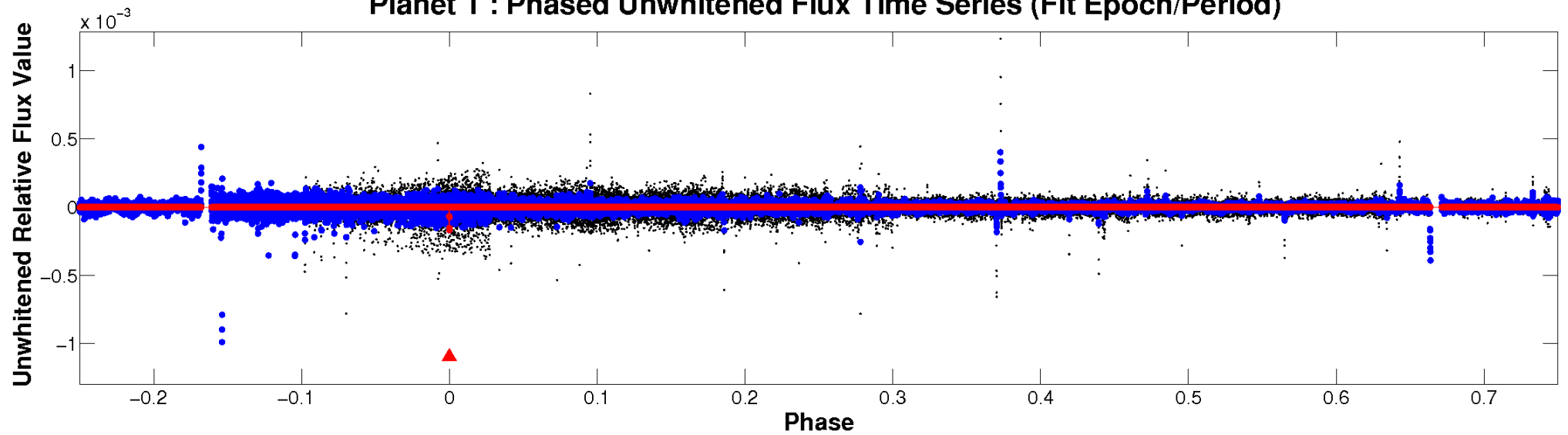
ALT Odd/Even

TCE 011231223-01

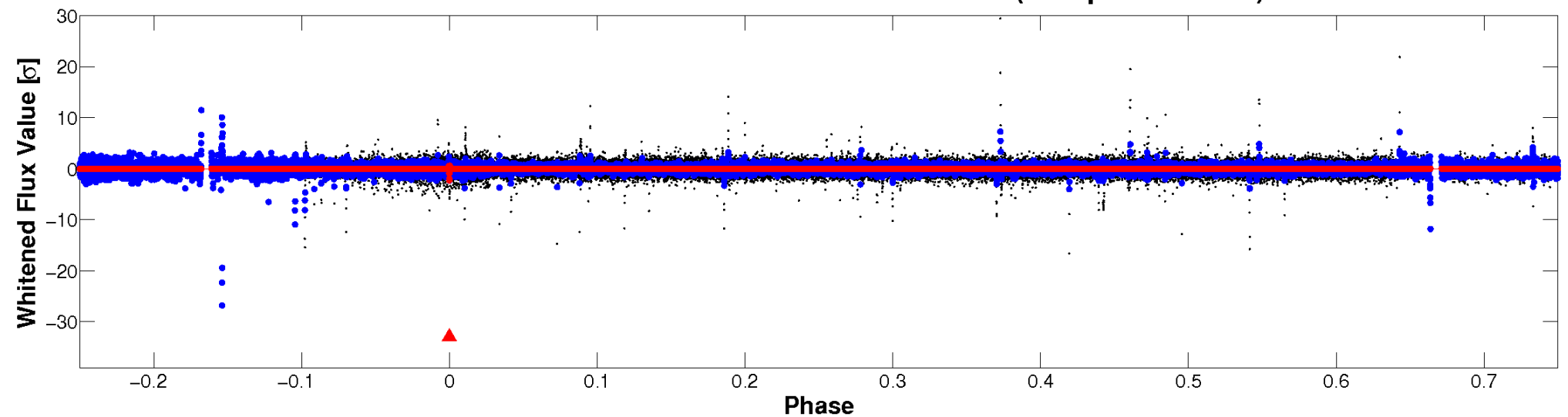


Non-Whitened Vs. Whitened Light Curve

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

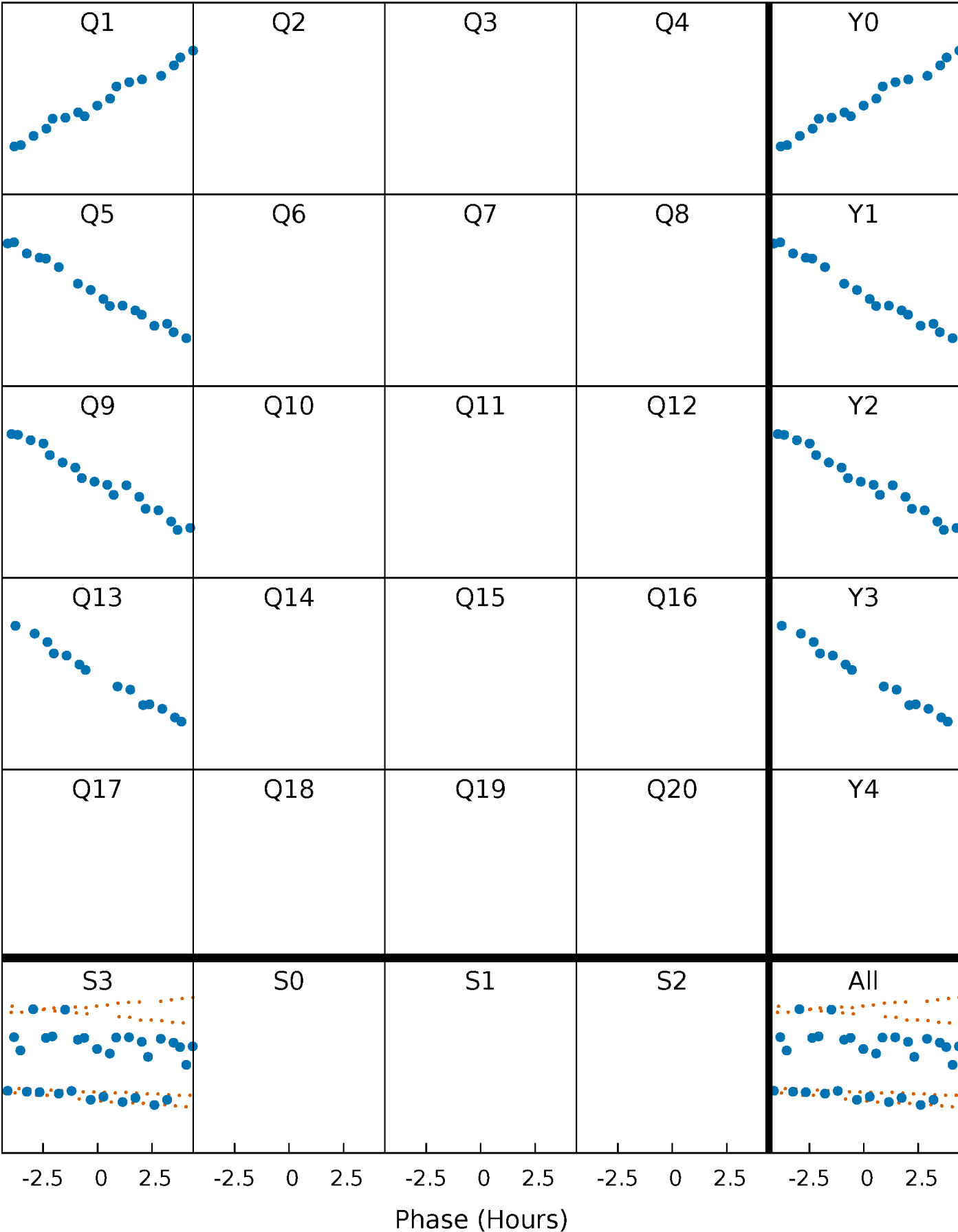


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



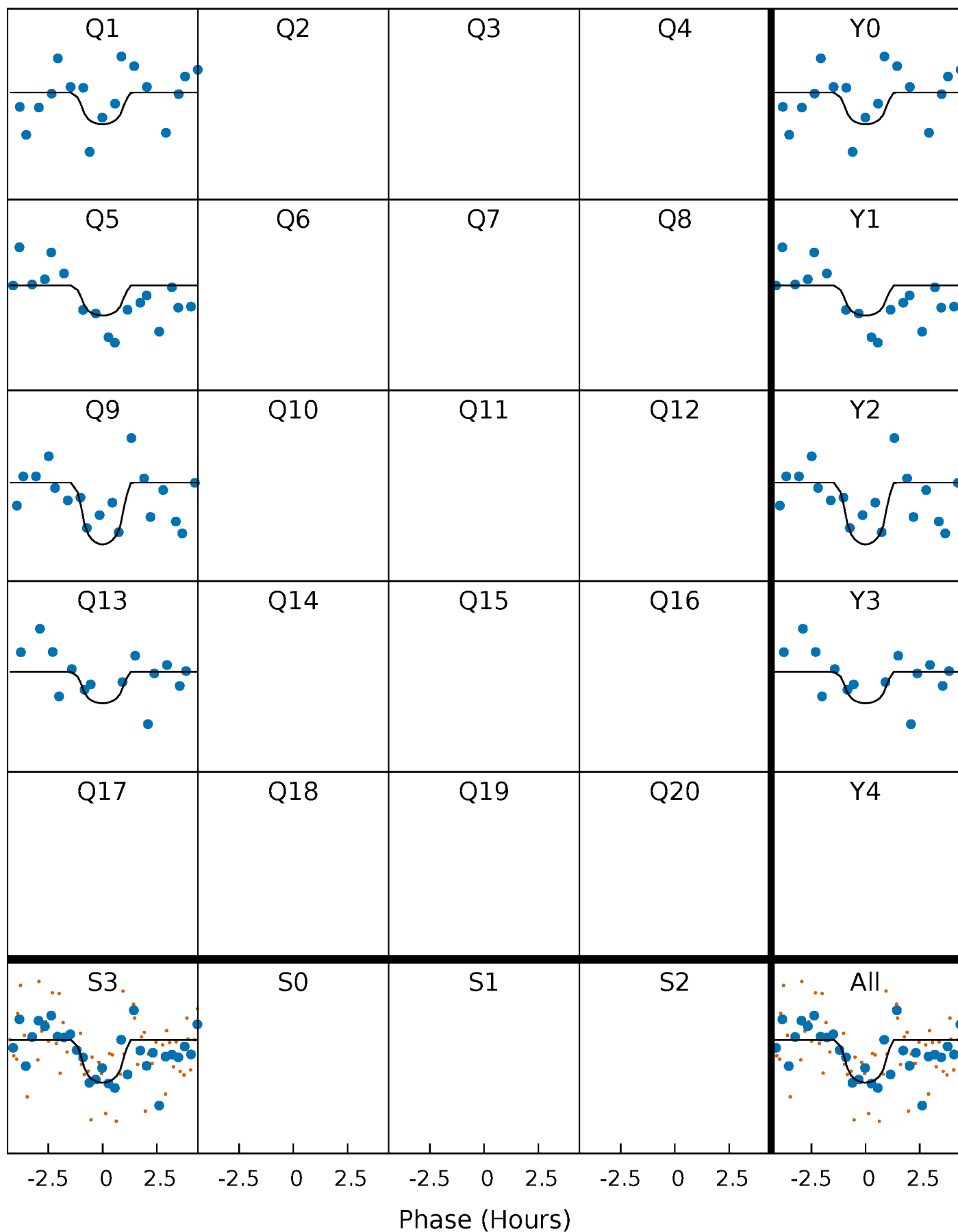
PDC Quarter-Phased Transit Curves

TCE 011231223-01 P=343.316980 Days T₀=155.462898 (BKJD)



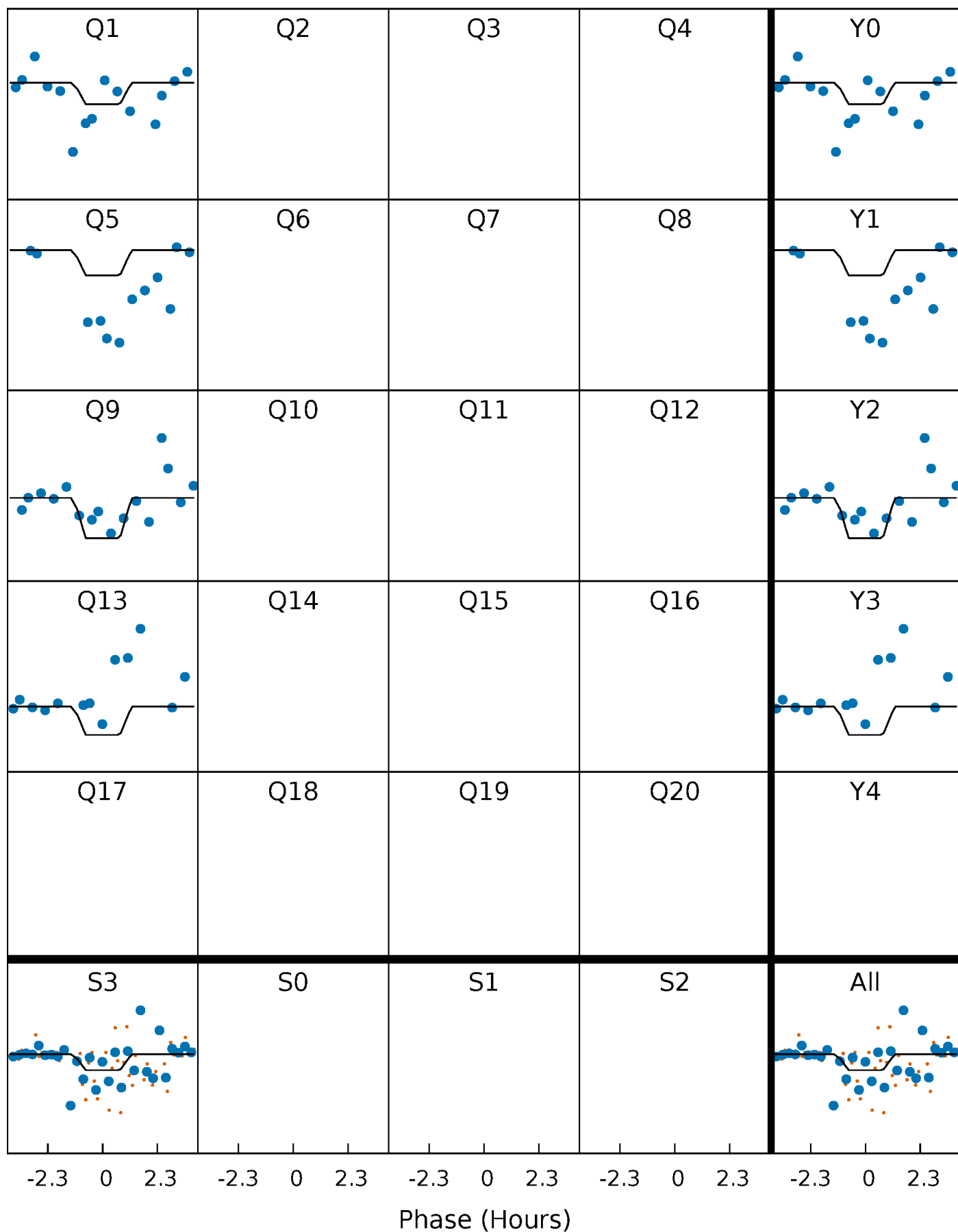
DV Quarter-Phased Transit Curves

TCE 011231223-01 P=343.316980 Days $T_0=155.462898$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

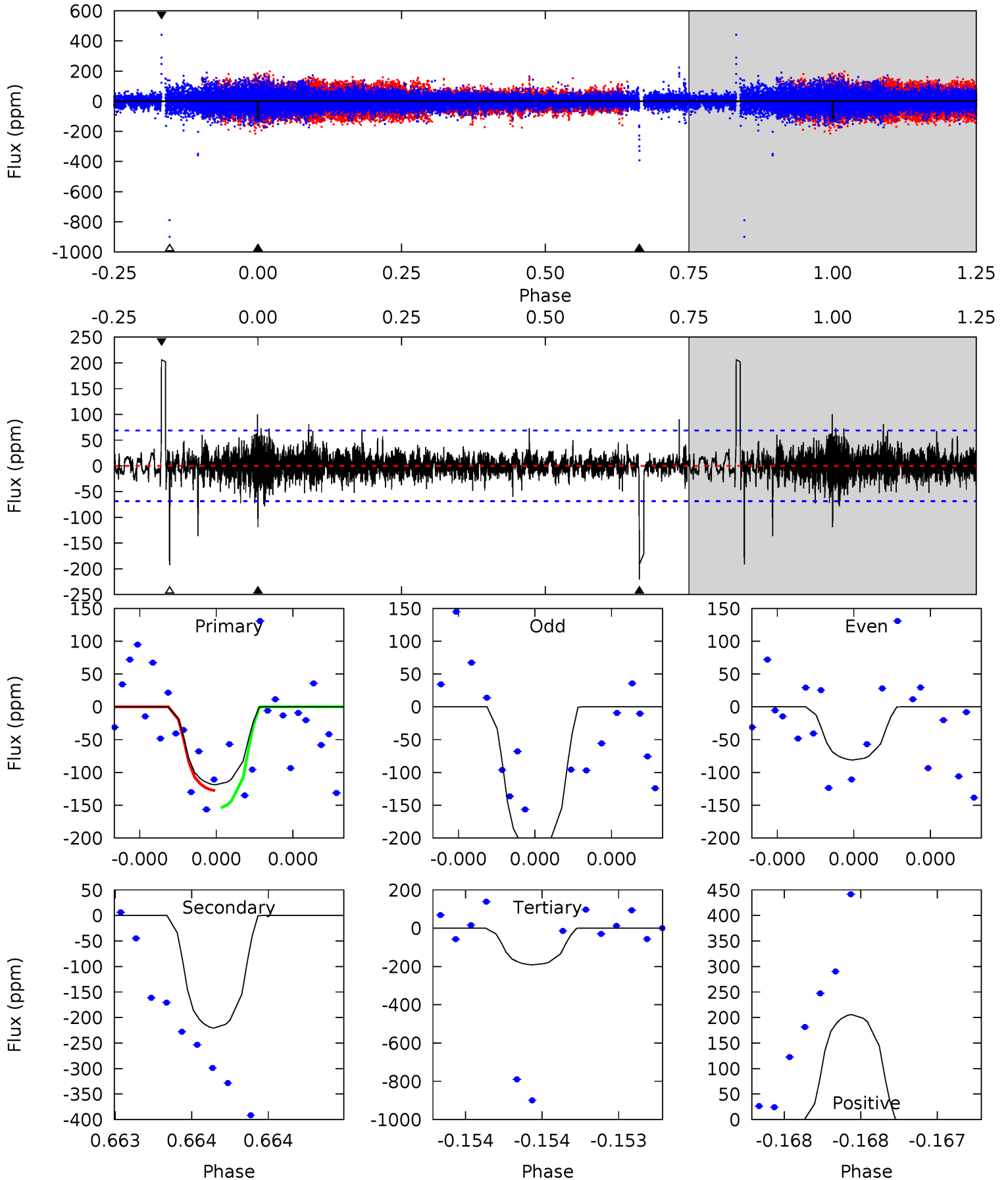
TCE 011231223-01 P=343.278182 Days $T_0=155.496249$ (BKJD)



DV Model-Shift Uniqueness Test

011231223-01, P = 343.316980 Days, E = 155.462898 Days

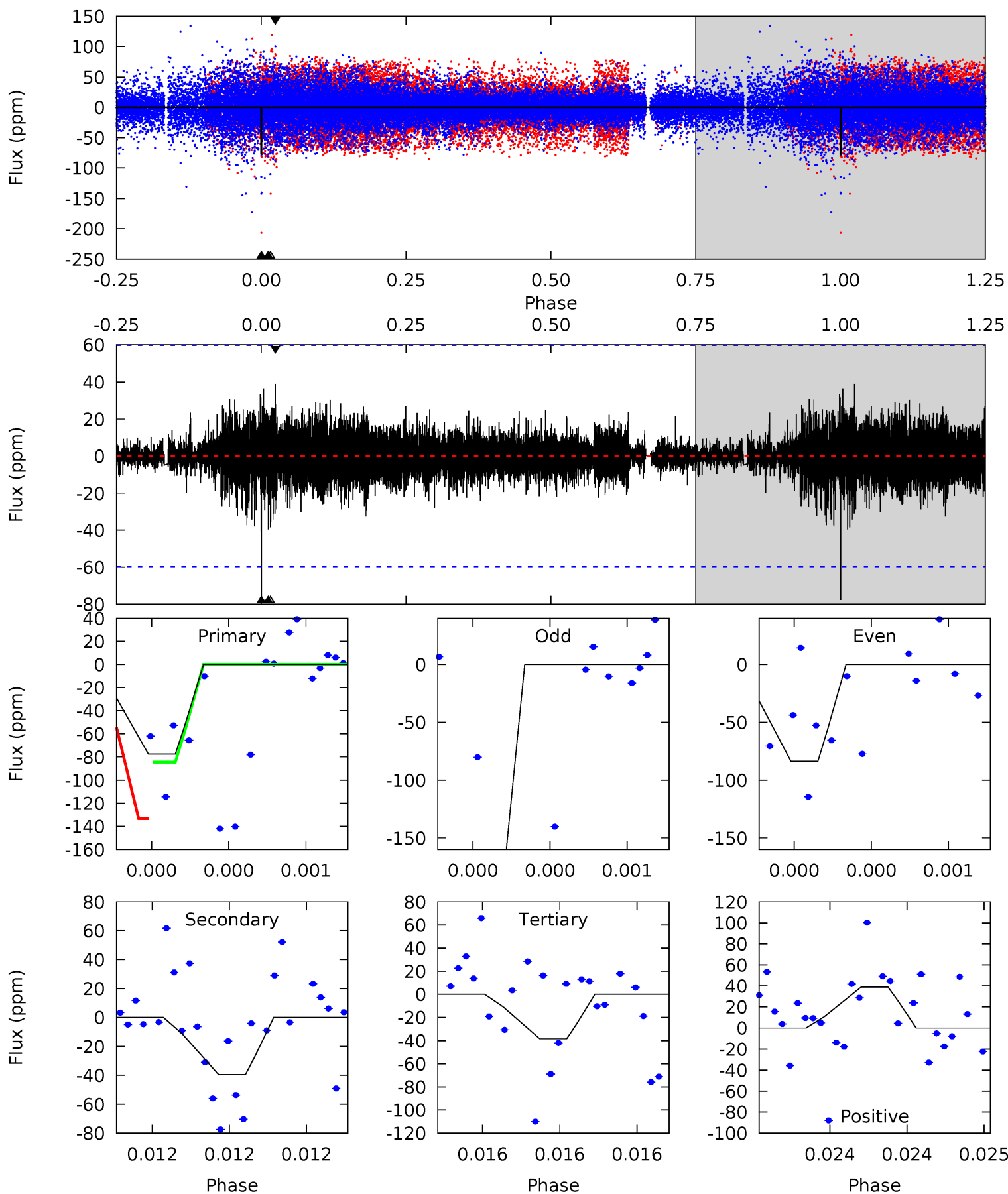
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.82	18.2	15.8	17.0	5.67	3.63	1.24	-5.99	-7.18	2.42	1.23	6.43	1.30	0.48	1.16



Alt Model-Shift Uniqueness Test

011231223-01, P = 343.278182 Days, E = 155.496249 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.37	3.75	3.65	3.70	5.69	3.66	0.65	3.72	3.68	0.10	0.06	10.3	1.32	0.33	2.60



Stellar Parameters For KIC 011231223

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3729^{+74}_{-74}	$0.702^{+0.382}_{-0.153}$	$0.070^{+0.200}_{-0.300}$	$137.153^{+19.731}_{-83.856}$	$3.454^{+0.119}_{-2.263}$	$0.000^{+0.000}_{-0.000}$
	+2%/-2%	+54%/-22%	+286%/-429%	+14%/-61%	+3%/-66%	+431%/-34%
Source	SPE14	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 011231223-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-221 ± 12	$425.42^{+449.53}_{-288.76}$	2248^{+123}_{-253}	2885^{+1417}_{-1020}	$1.330^{+11.481}_{-1.003}$
Alt.	-40 ± 11	$432.35^{+427.88}_{-309.62}$	2241^{+129}_{-272}	-2052^{+5227}_{-394}	$0.230^{+2.449}_{-0.178}$

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 $A_{obs} \gg 1.0$

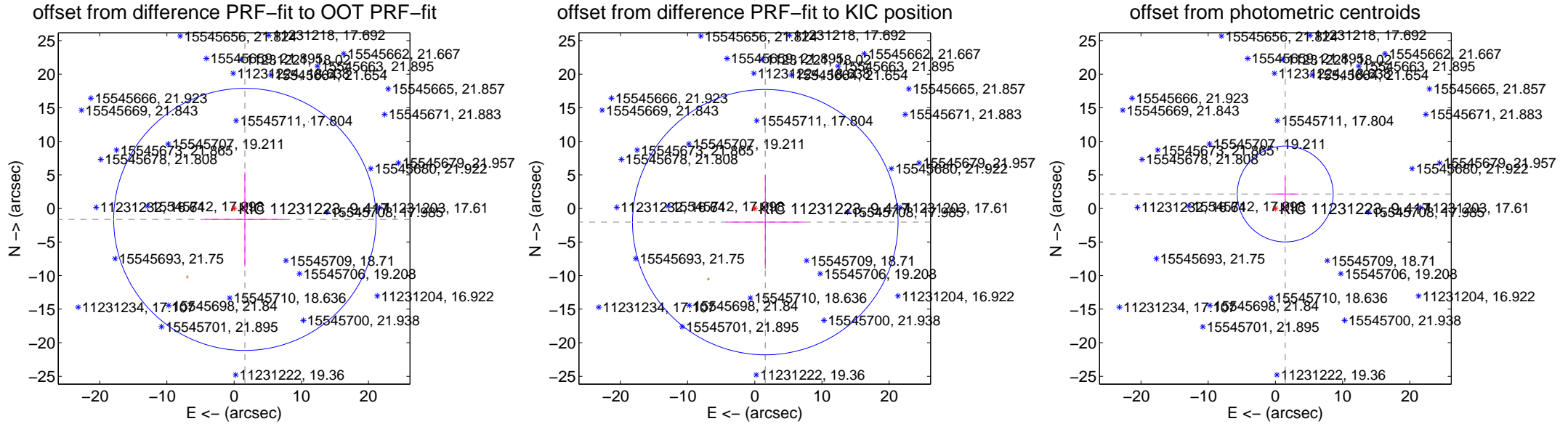
DV Centroid Data

Supplemental centroid analysis for 011231223-01. **Kepler magnitude: 9.42.** Transit SNR 7.77

There are 1 quarters with good PRF difference image offsets

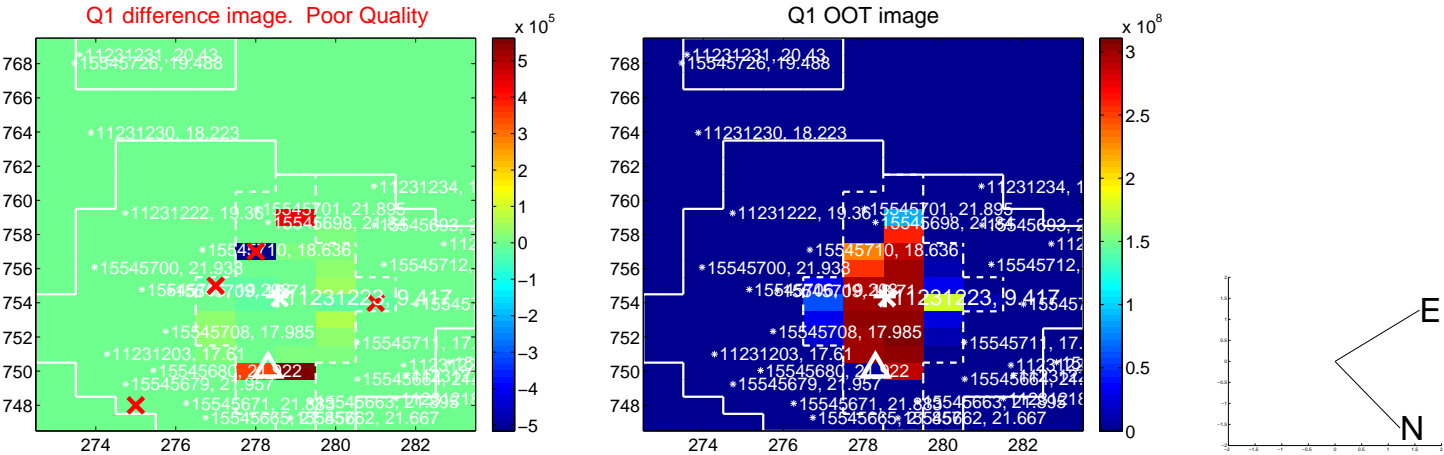
The direct PRF centroid is offset from the target star catalog position by about 0.30 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.285 ± 6.509	0.35	-1.602 ± 5.916	-1.629 ± 7.036
PRF-fit source offset from KIC position	2.576 ± 6.588	0.39	-1.571 ± 5.866	-2.042 ± 6.980
photometric centroid source offset	2.60 ± 2.38	1.09	-1.46 ± 1.99	2.15 ± 2.54

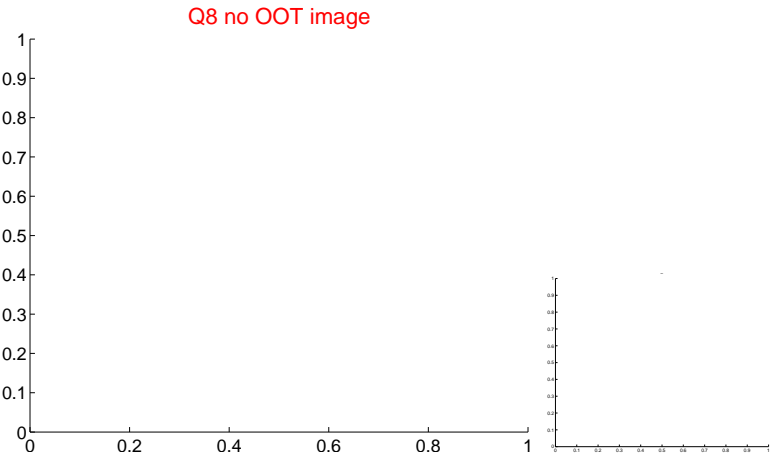
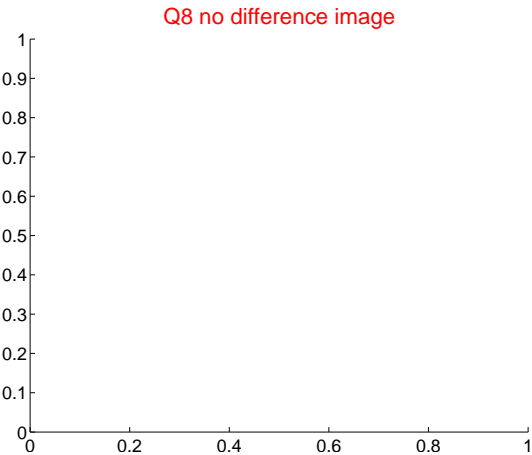
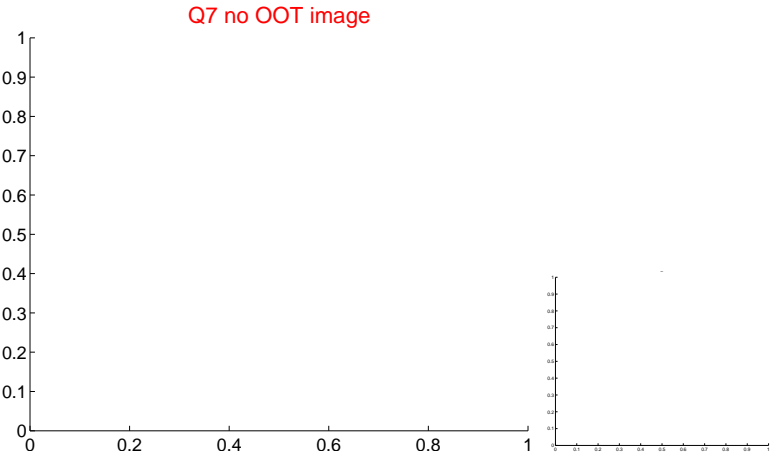
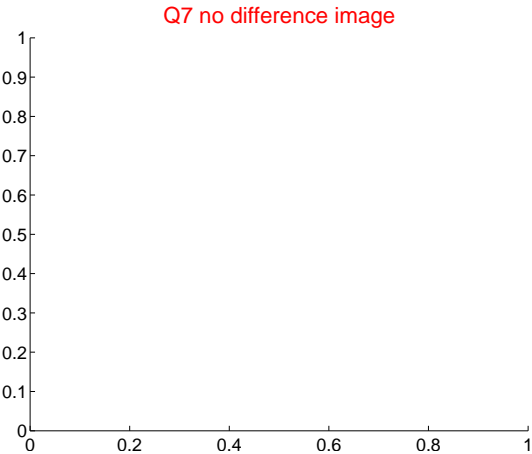
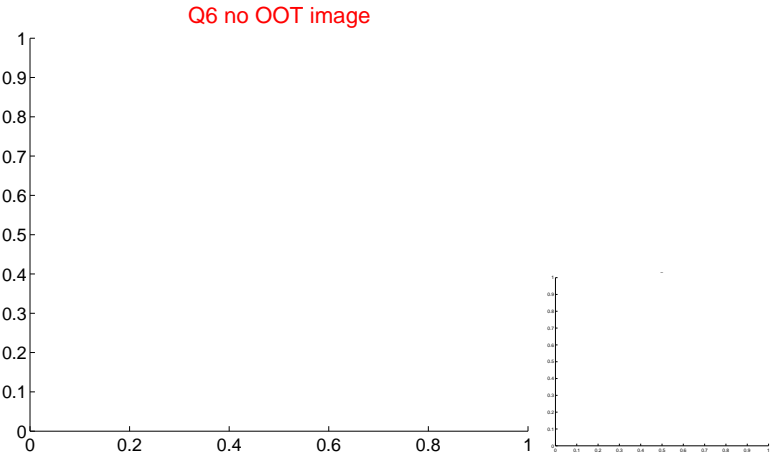
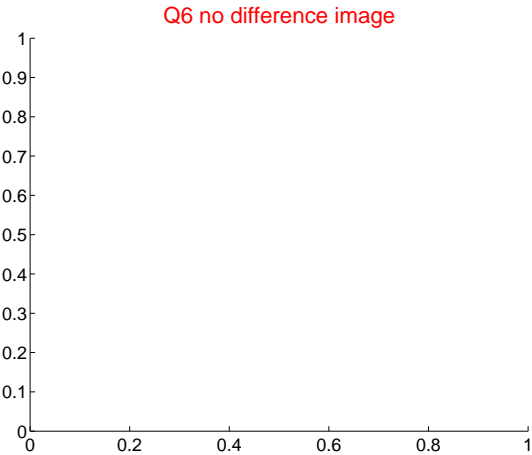
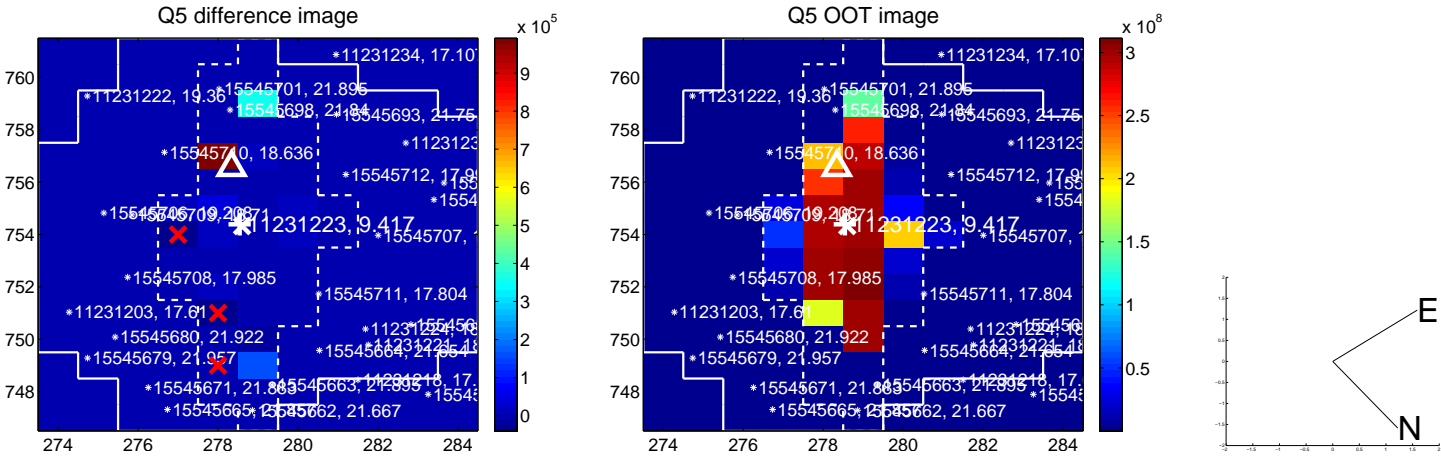


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

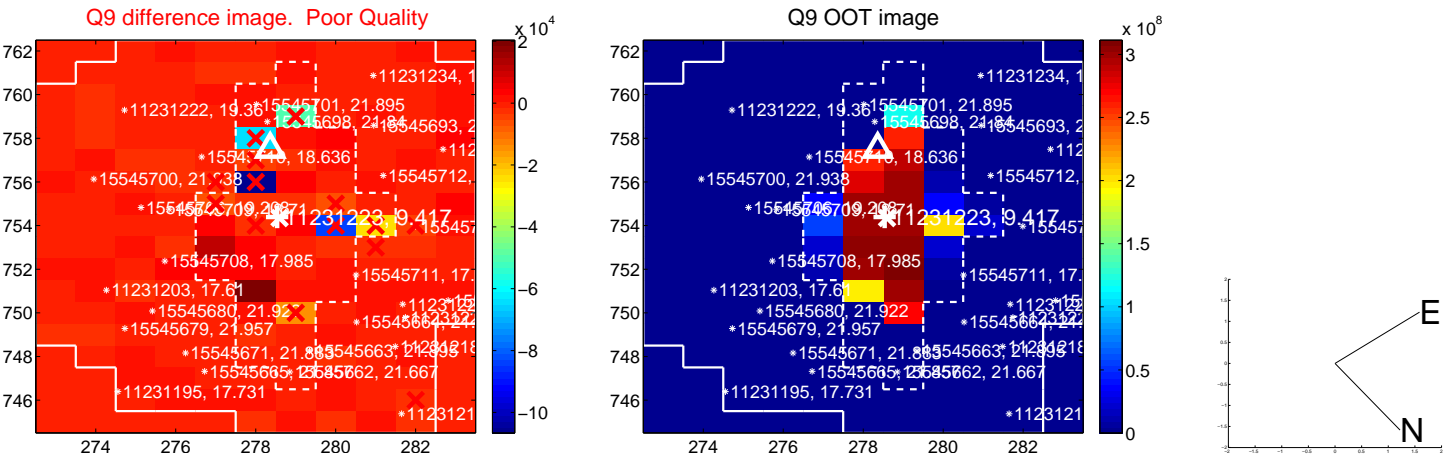
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



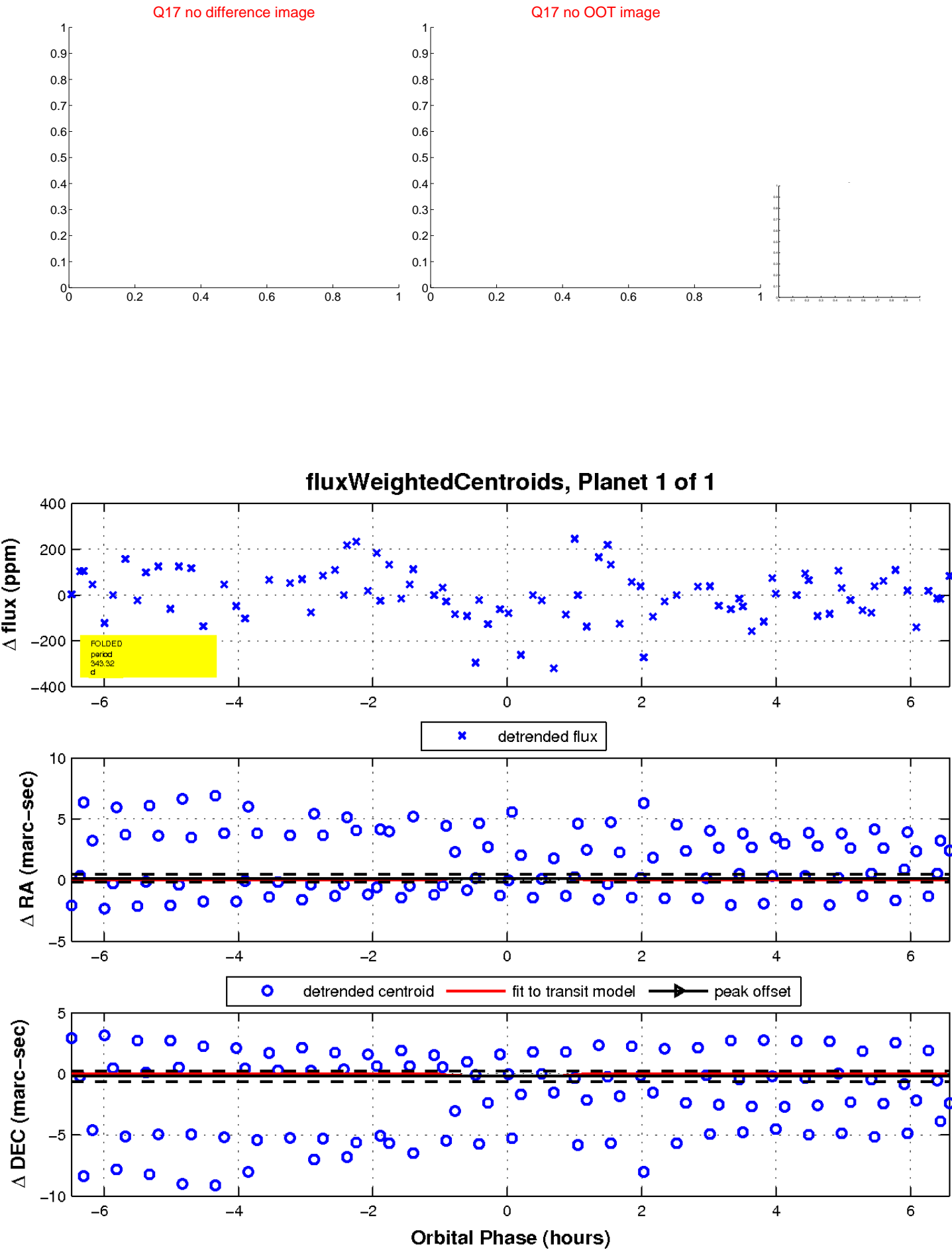
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

