

KIC 010223132

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})
010223132-01	OBS	No	389.599749	339.858681	103.3	1.034	8.6	2.3	41.13	4143	41.72	276.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010223132-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_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.

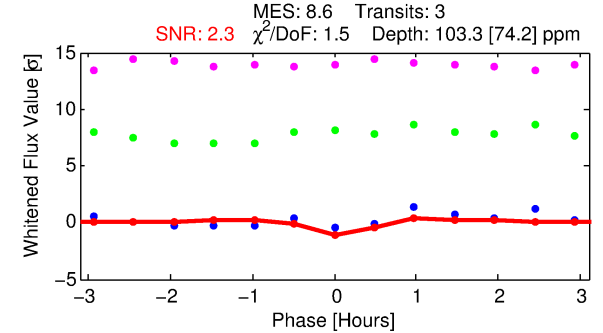
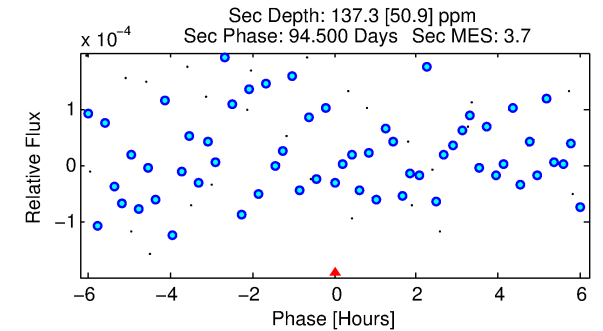
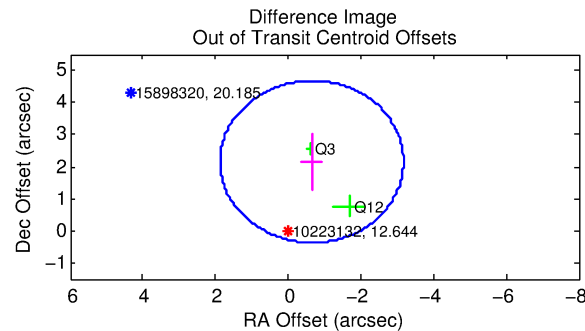
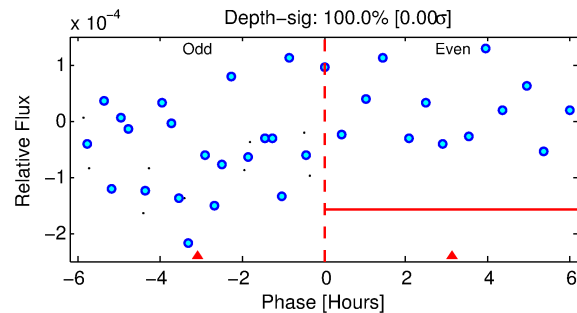
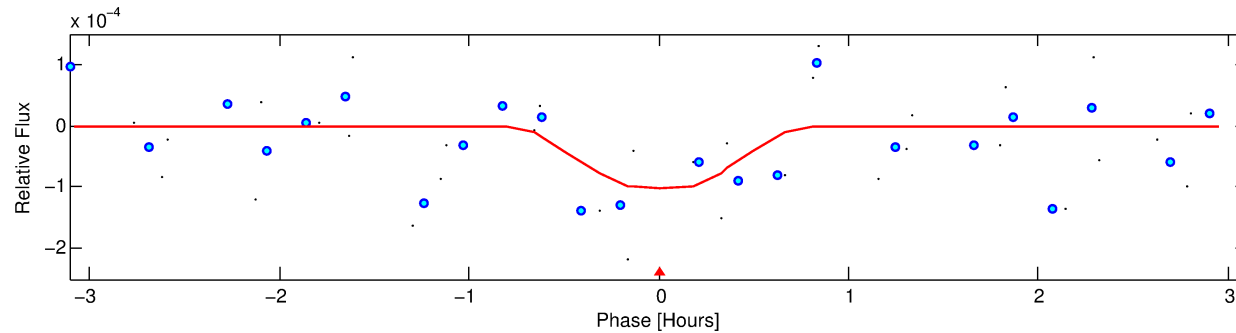
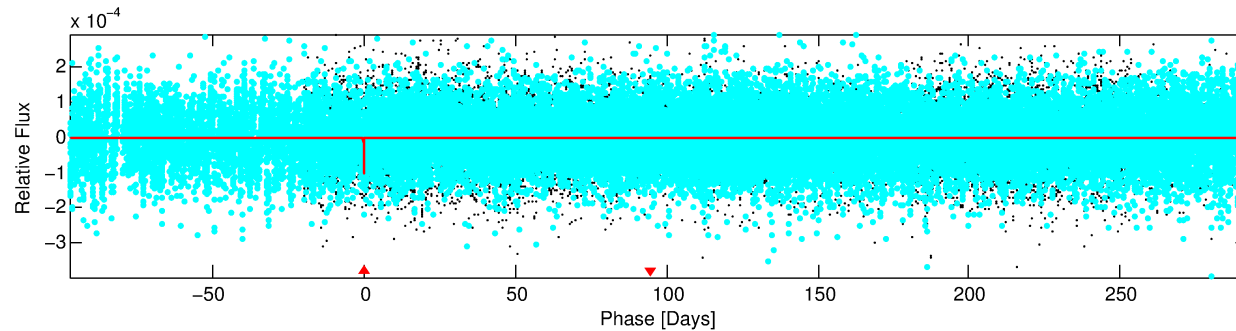
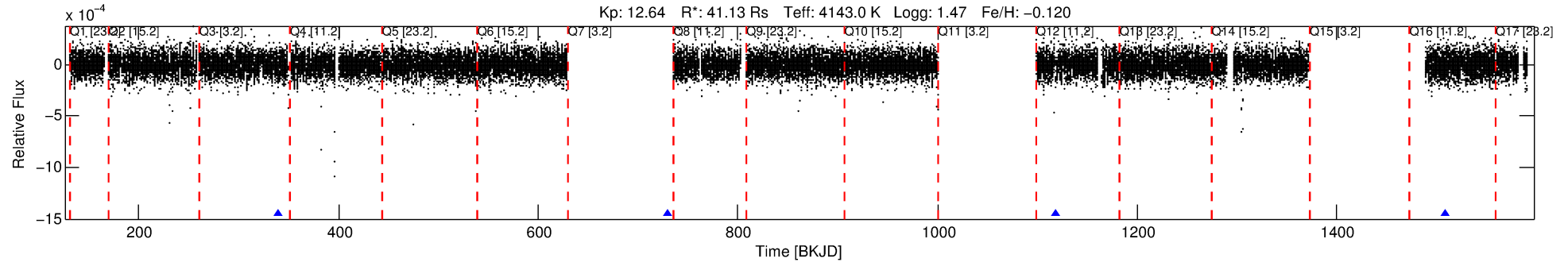
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010223132-01

No Significant Match Found

DV One-Page Summary

KIC: 10223132 Candidate: 1 of 1 Period: 389.600 d



DV Fit Results:

Period = 389.59975 [0.01680] d
Epoch = 339.8587 [0.0269] BKJD
Rp/R* = 0.0093 [0.1139]
a/R* = 2591.93 [80282.14]
b = 0.46 [56.55]
Seff = 276.33 [49.83]
Teq = 1040 [47] K
Rp = 41.72 [511.11] Re
a = 1.2712 [0.1753] AU
Ag = 70.16 [1719.12] [0.04 σ]
Teffp = 4652 [28499] K [0.13 σ]

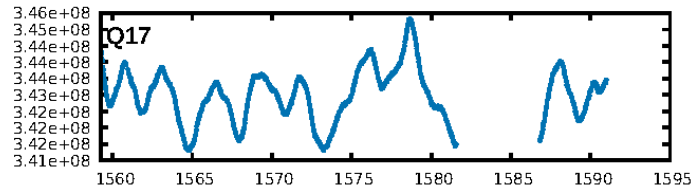
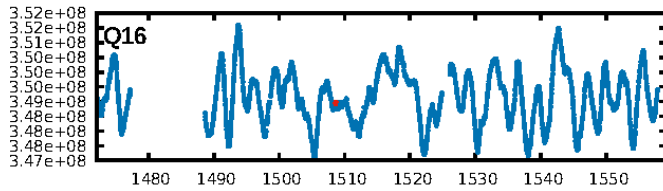
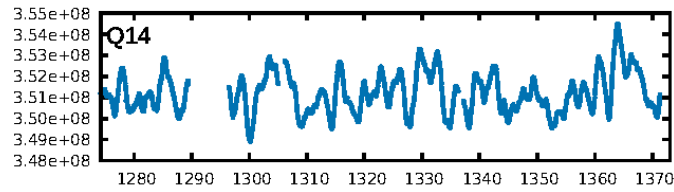
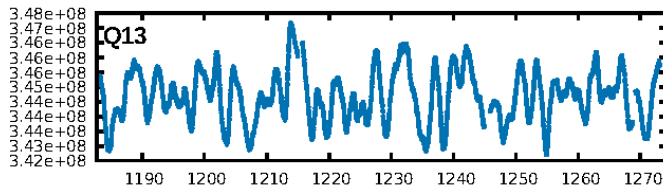
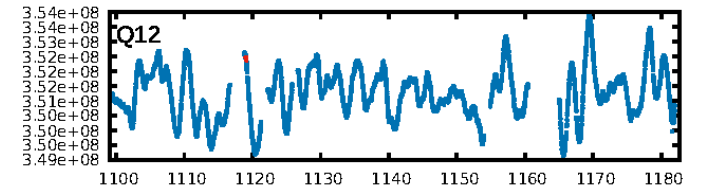
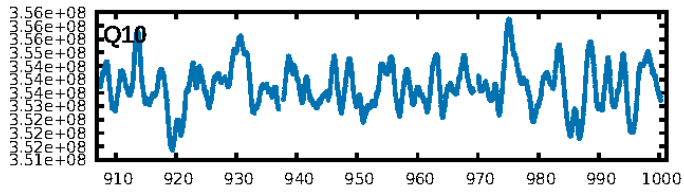
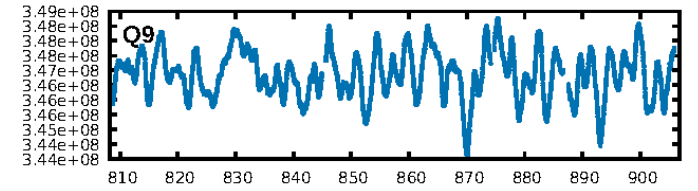
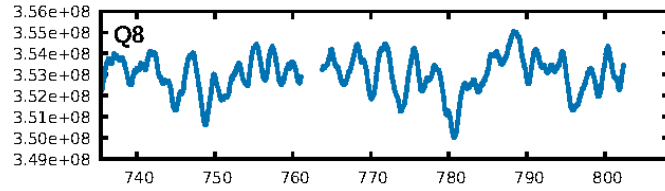
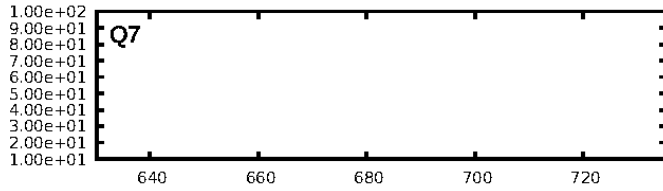
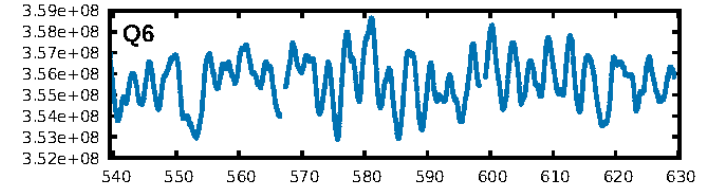
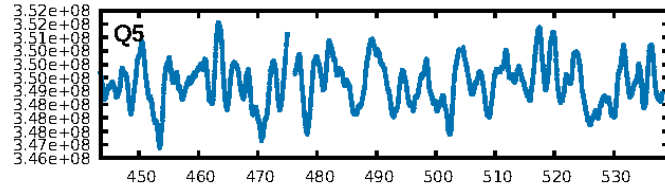
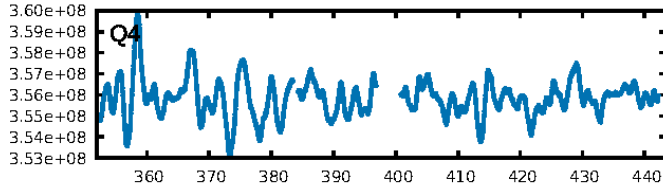
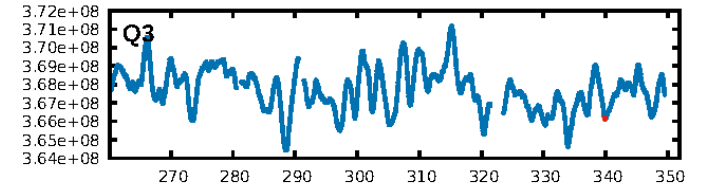
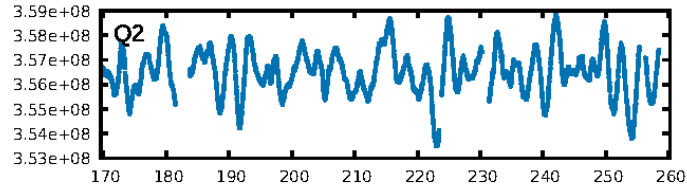
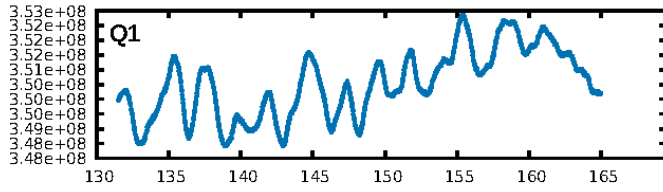
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 8.9%
ModelChiSquareGof-sig: 49.1%
Bootstrap-pfa: 1.24e-08
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.5
Centroid-sig: 22.5%
Centroid-so: 4.621 arcsec [1.10 σ]
OotOffset-rm: 2.248 arcsec [2.67 σ]
KicOffset-rm: 2.323 arcsec [2.63 σ]
OotOffset-st: 0/1/1/0 [2]
KicOffset-st: 0/1/1/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

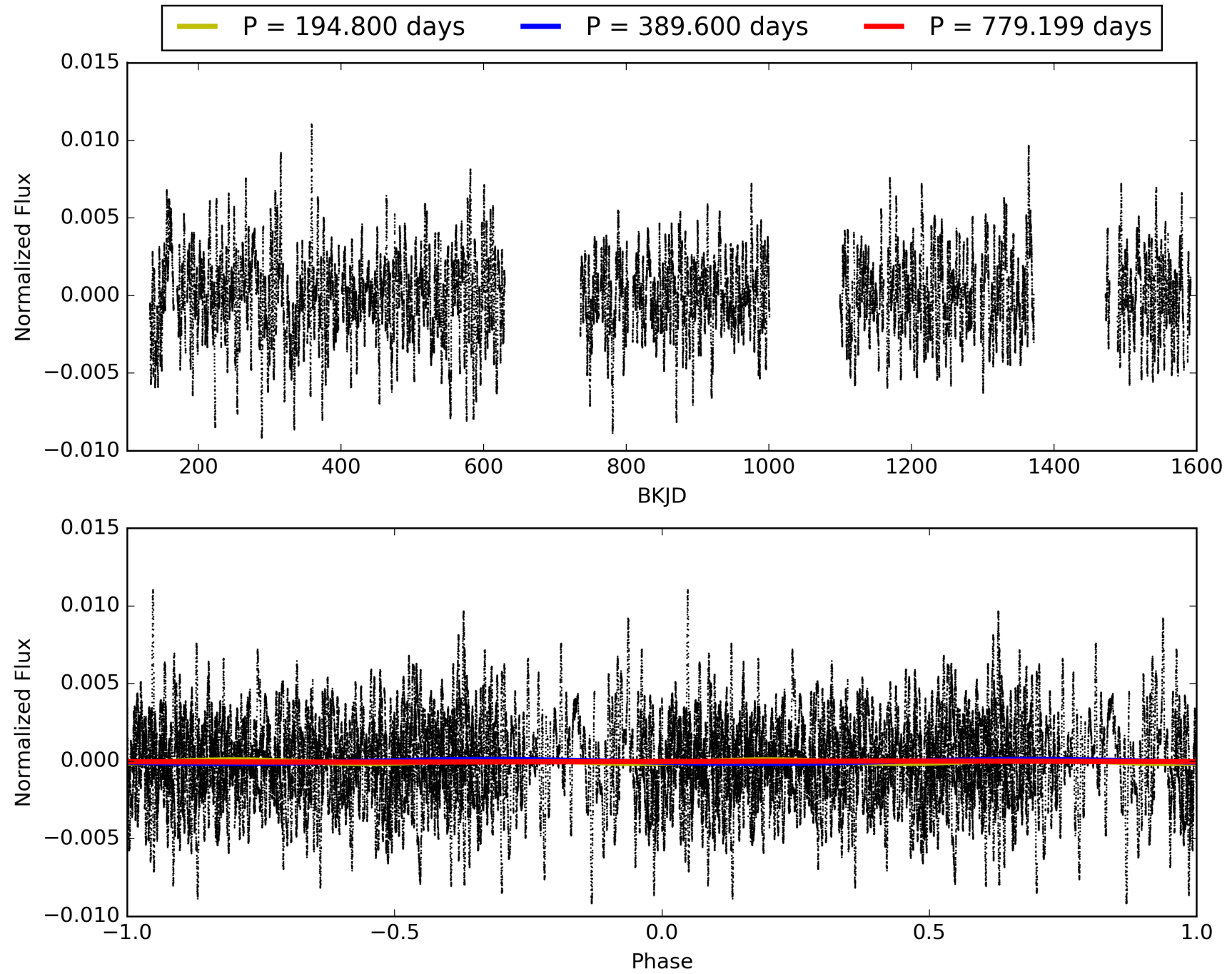
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:50:14 Z

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

TCE 010223132-01, PDC Light Curves

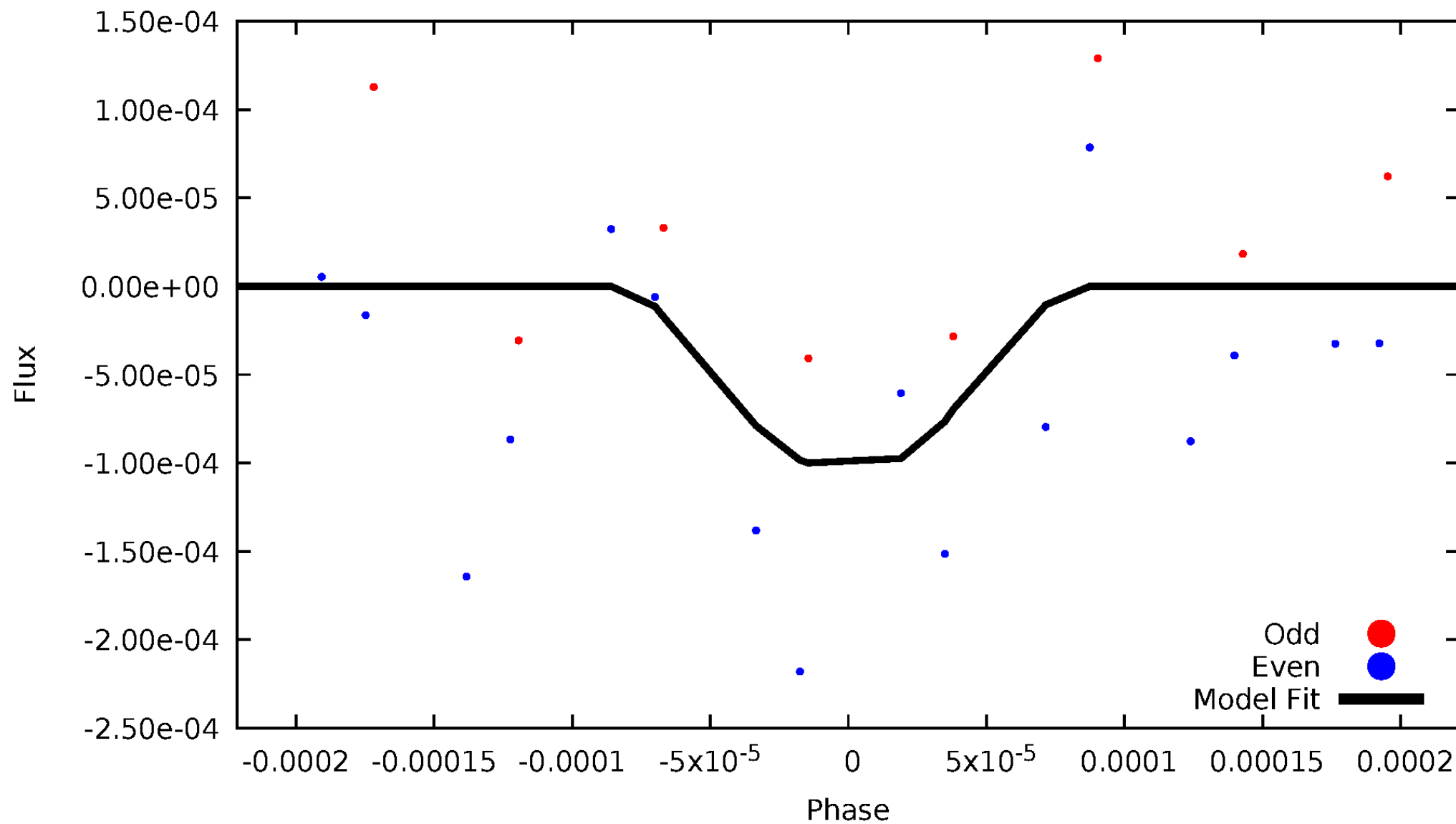


TCE 010223132-01



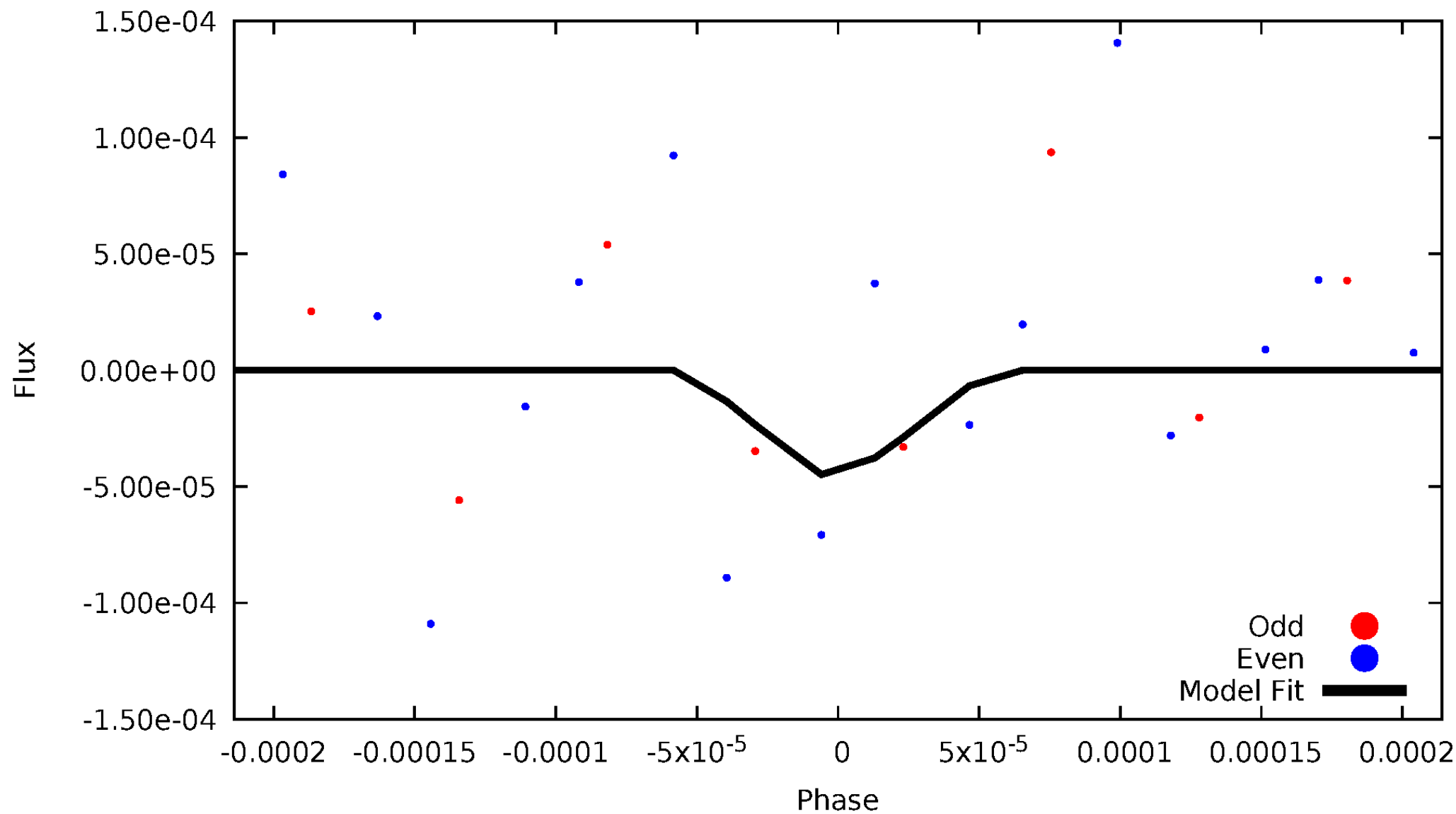
DV Odd/Even

TCE 010223132-01

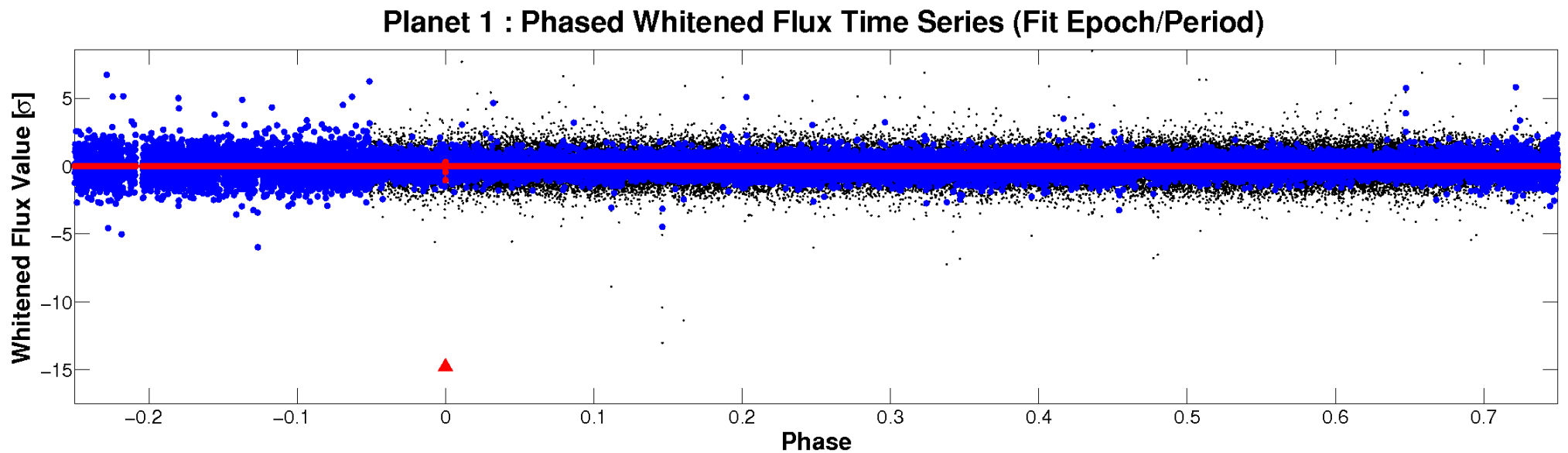
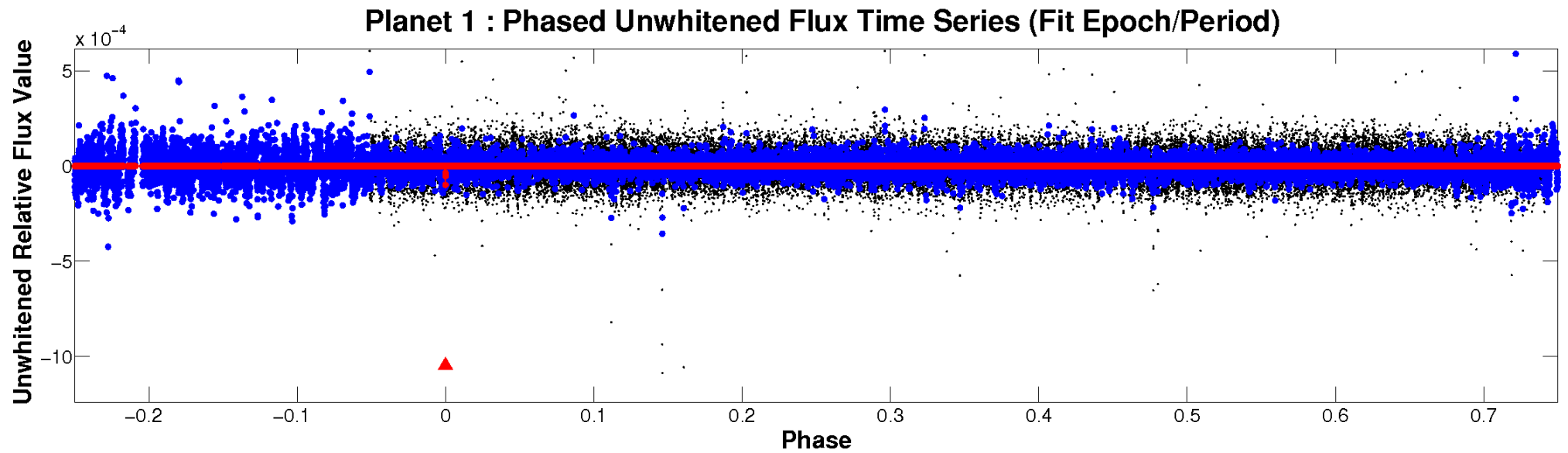


ALT Odd/Even

TCE 010223132-01

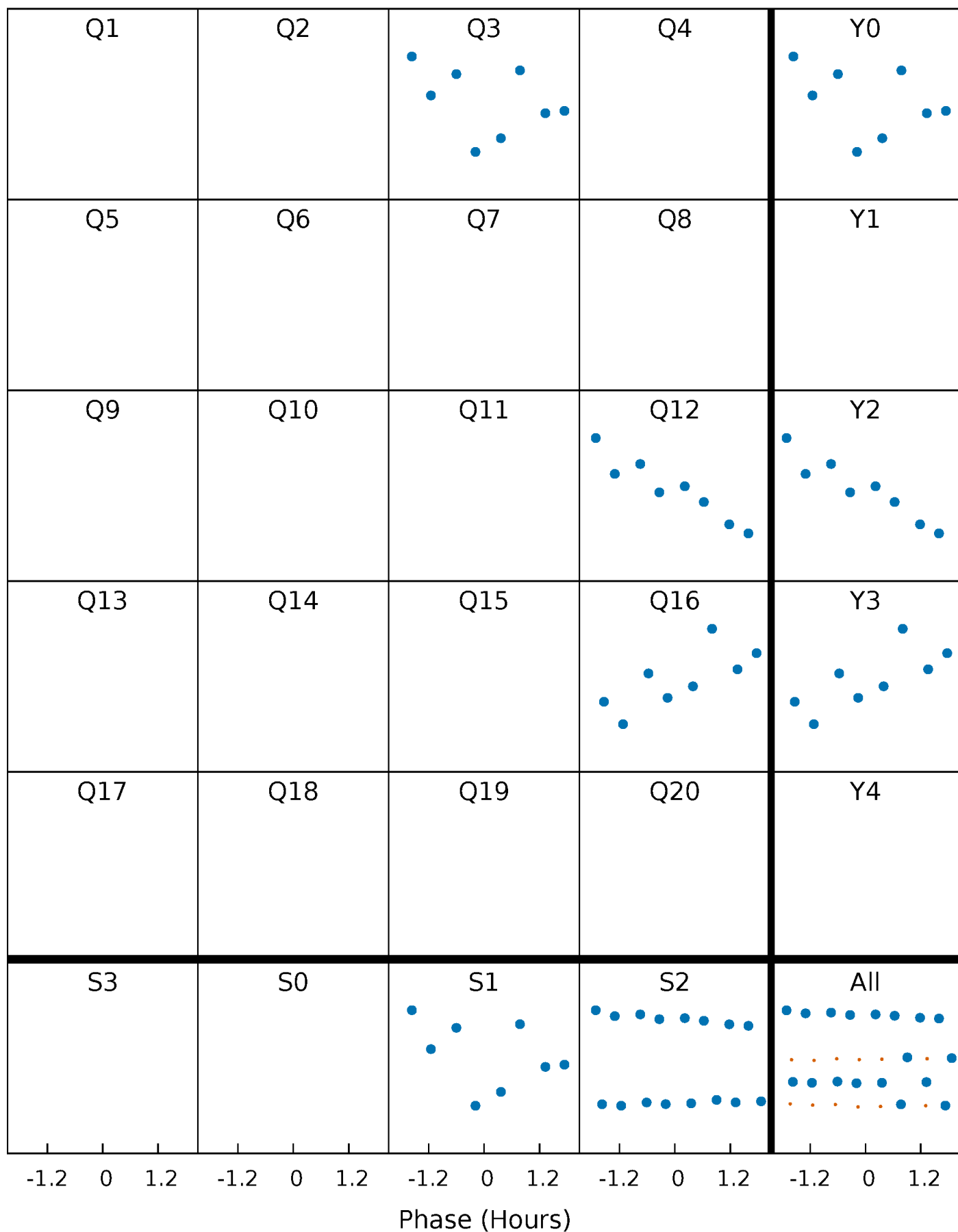


Non-Whitened Vs. Whitened Light Curve



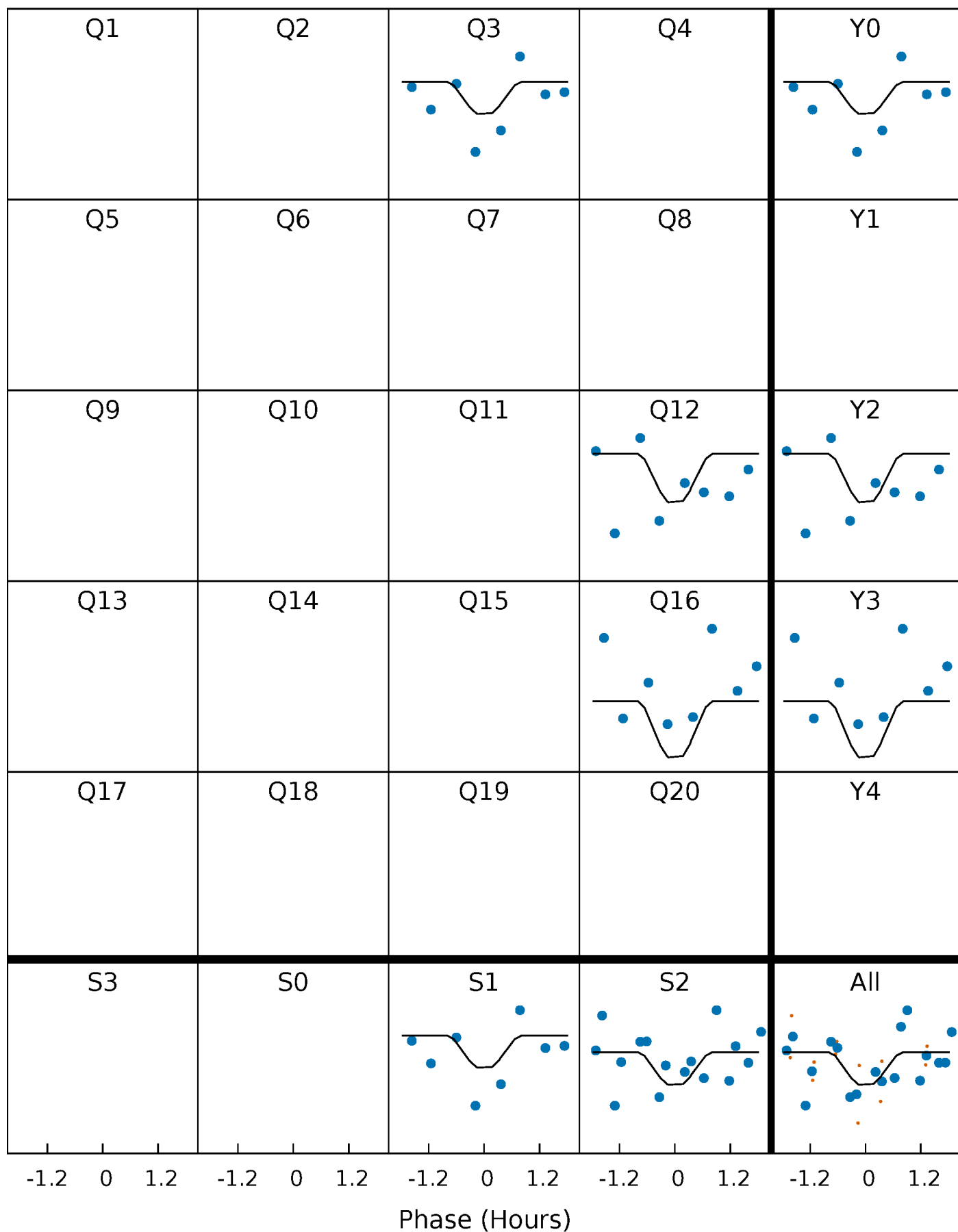
PDC Quarter-Phased Transit Curves

TCE 010223132-01 P=389.599749 Days $T_0=339.858681$ (BKJD)



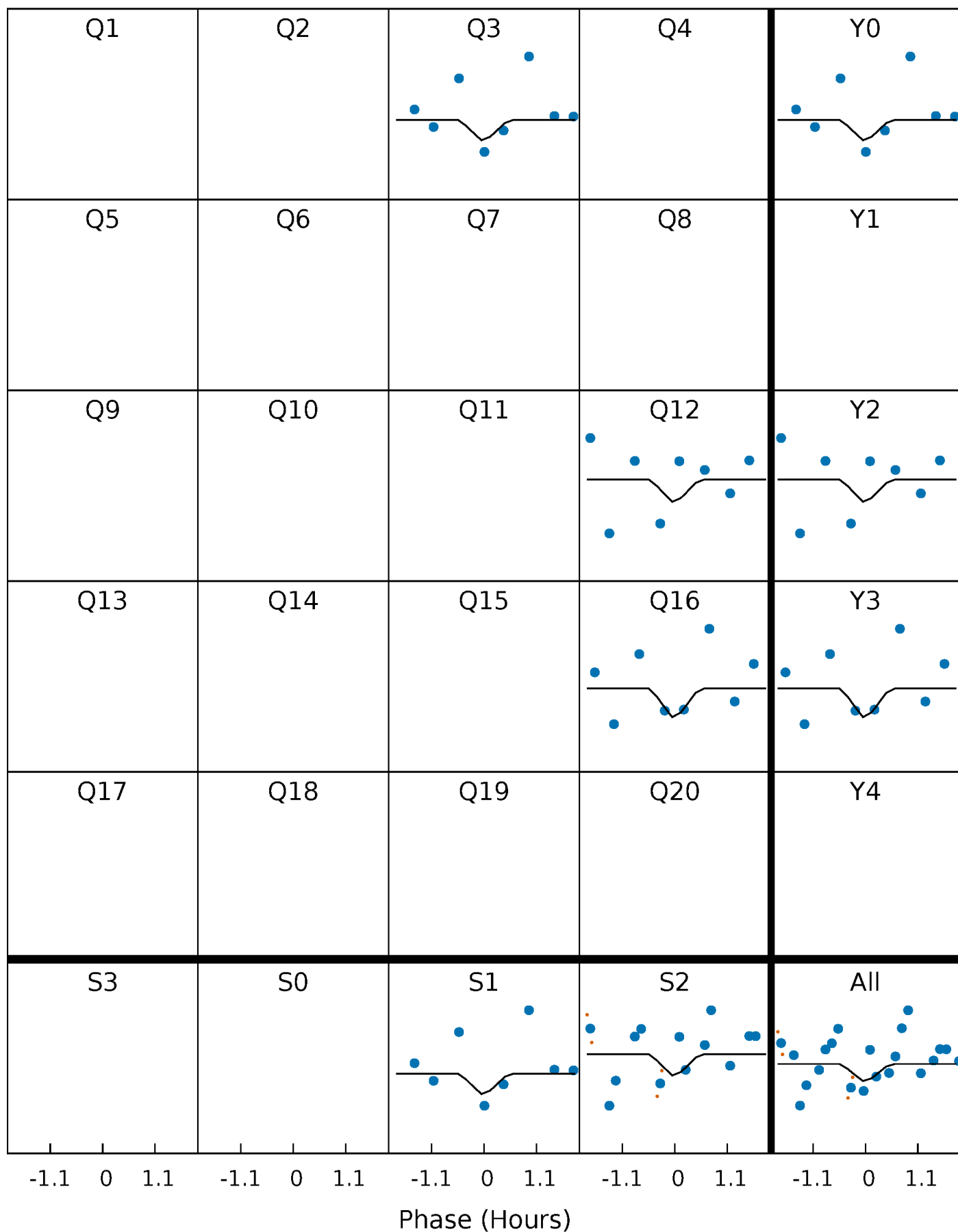
DV Quarter-Phased Transit Curves

TCE 010223132-01 P=389.599749 Days $T_0=339.858681$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

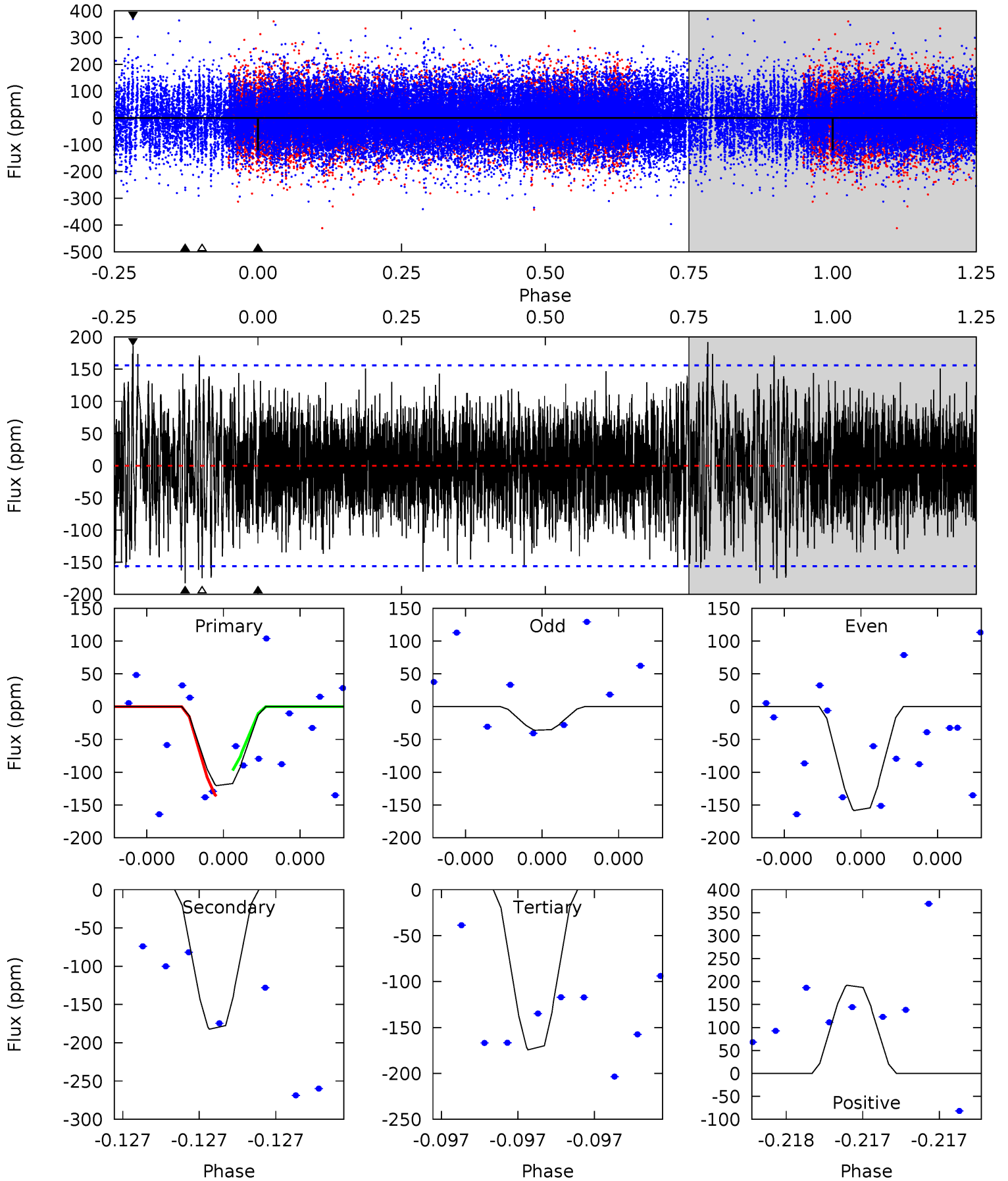
TCE 010223132-01 P=389.603193 Days $T_0=339.854142$ (BKJD)



DV Model-Shift Uniqueness Test

010223132-01, P = 389.599749 Days, E = 339.858681 Days

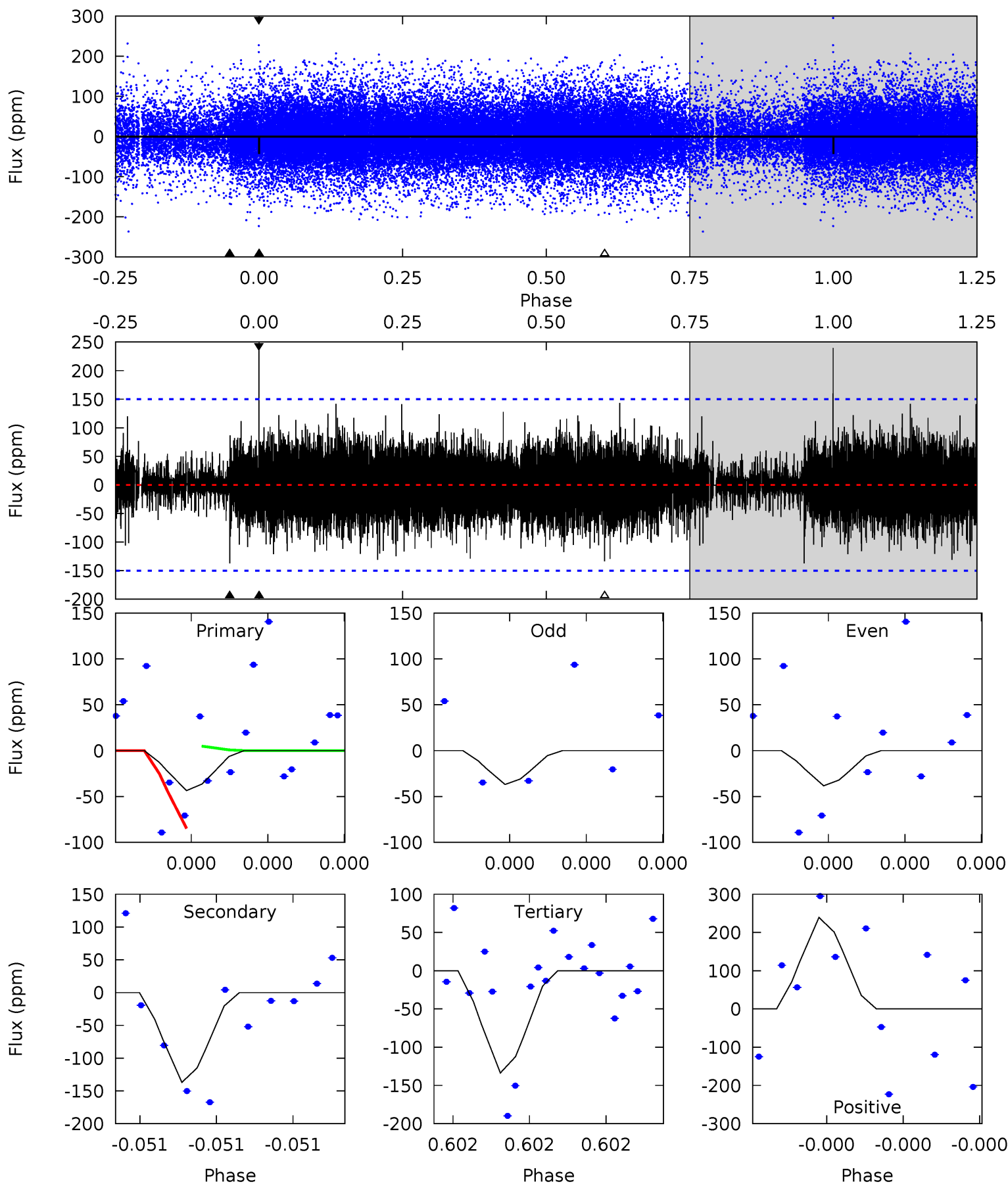
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.45	6.74	6.45	7.10	5.77	3.78	1.58	-1.99	-2.64	0.29	-0.36	2.28	1.07	0.51	0.72



Alt Model-Shift Uniqueness Test

010223132-01, P = 389.603193 Days, E = 339.854142 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.70	5.35	5.22	9.34	5.86	3.90	1.17	-3.52	-7.64	0.13	-4.00	0.03	0.72	0.64	1.37



Stellar Parameters For KIC 010223132

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4143^{+93}_{-113}	$1.466^{+0.030}_{-0.030}$	$-0.120^{+0.200}_{-0.250}$	$41.130^{+1.481}_{-8.390}$	$1.803^{+0.036}_{-0.685}$	$0.000^{+0.000}_{-0.000}$
	+2%/-3%	+2%/-2%	+167%/-208%	+4%/-20%	+2%/-38%	+32%/-9%
Source	PHO54	AST54	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 010223132-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-182 ± 27	$344.09^{+384.42}_{-254.15}$	1454^{+39}_{-44}	2401^{+1174}_{-999}	$1.345^{+17.542}_{-1.042}$
Alt.	-137 ± 26	$359.28^{+349.45}_{-246.92}$	1452^{+42}_{-44}	2265^{+936}_{-4077}	$0.932^{+8.447}_{-0.705}$

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 $A_{obs} \gg 1.0$

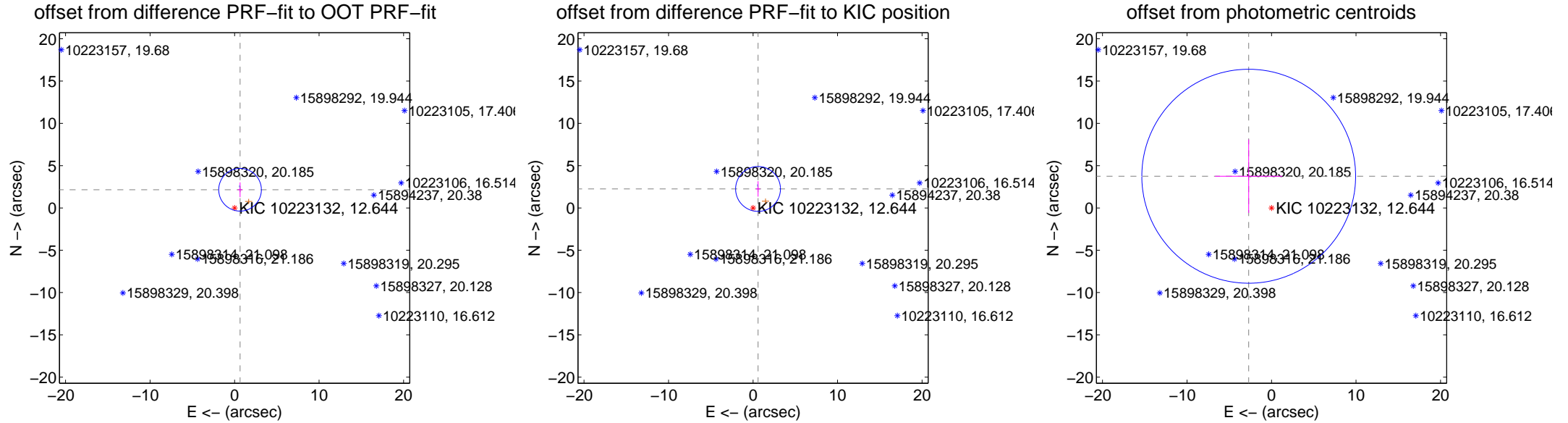
DV Centroid Data

Supplemental centroid analysis for 010223132-01. Kepler magnitude: 12.64. Transit SNR 2.27

There are 1 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.248 ± 0.841	2.67	-0.648 ± 0.282	2.153 ± 0.874
PRF-fit source offset from KIC position	2.323 ± 0.884	2.63	-0.591 ± 0.247	2.247 ± 0.912
photometric centroid source offset	4.62 ± 4.22	1.10	2.70 ± 3.98	3.75 ± 4.33



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.

Q1 no difference image



Q1 no OOT image



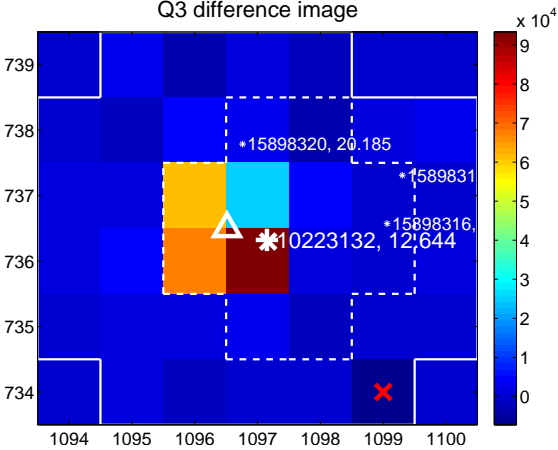
Q2 no difference image



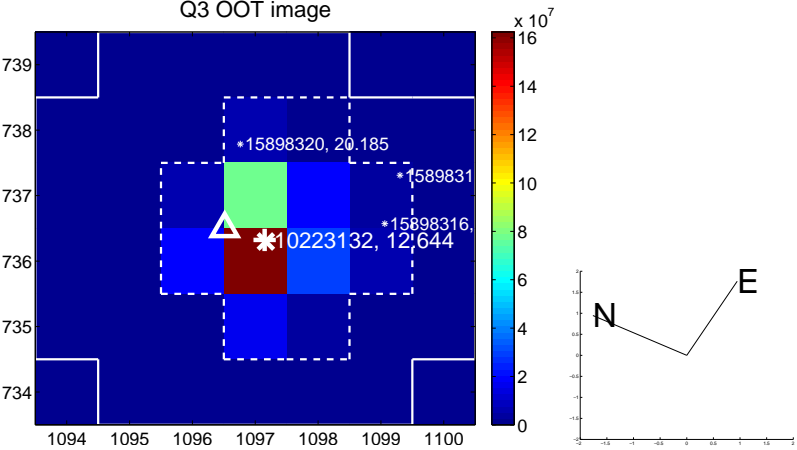
Q2 no OOT image



Q3 difference image



Q3 OOT image



Q4 no difference image



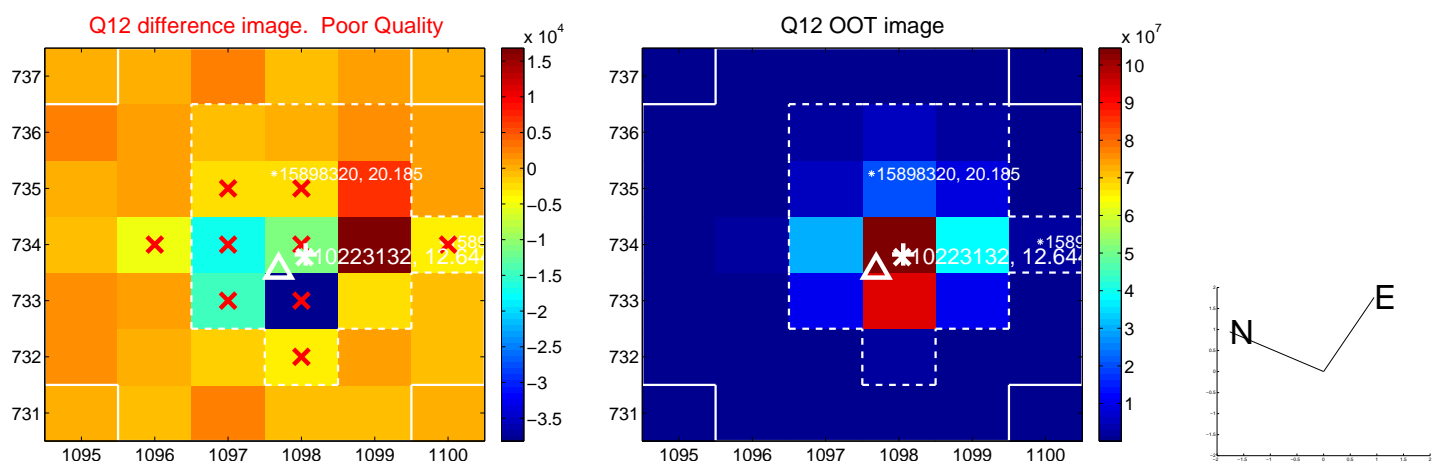
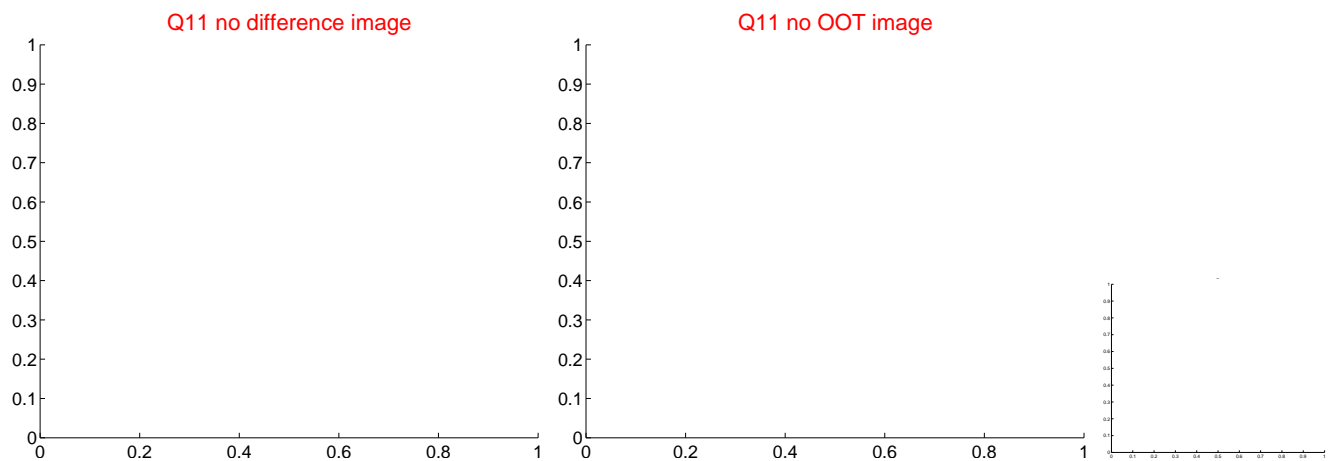
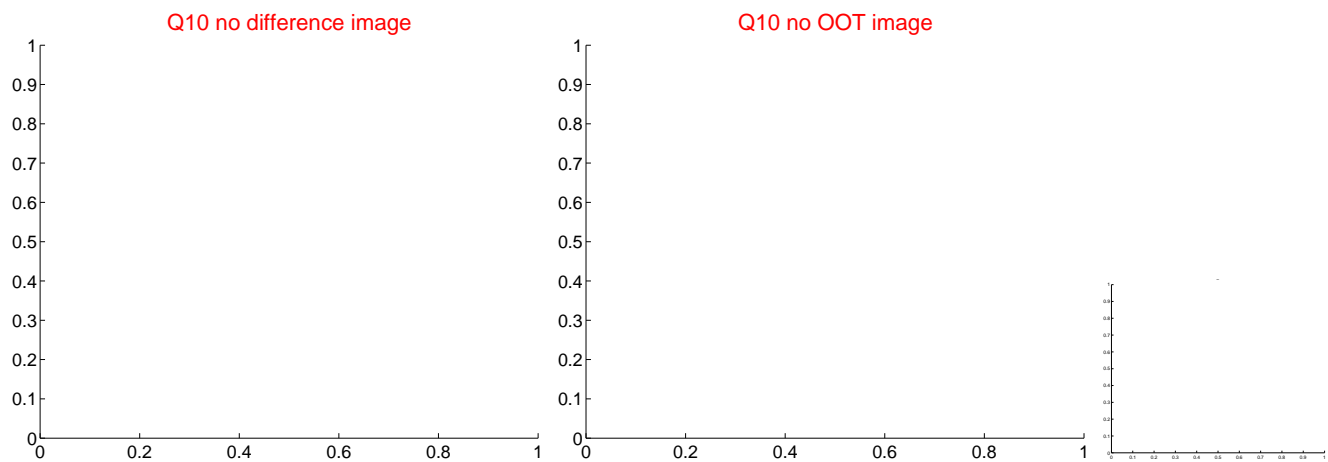
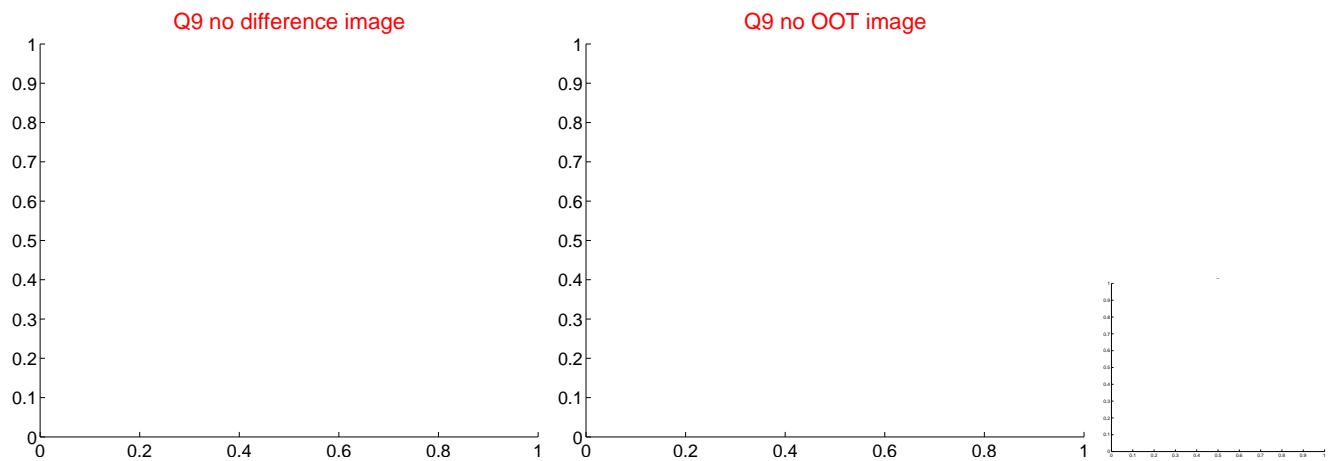
Q4 no OOT image



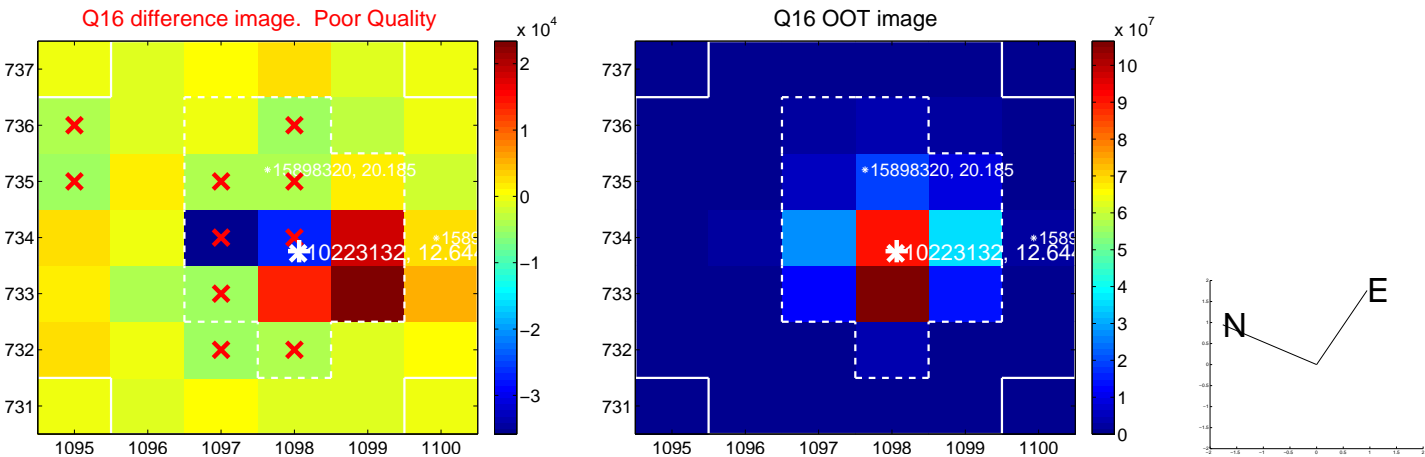
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



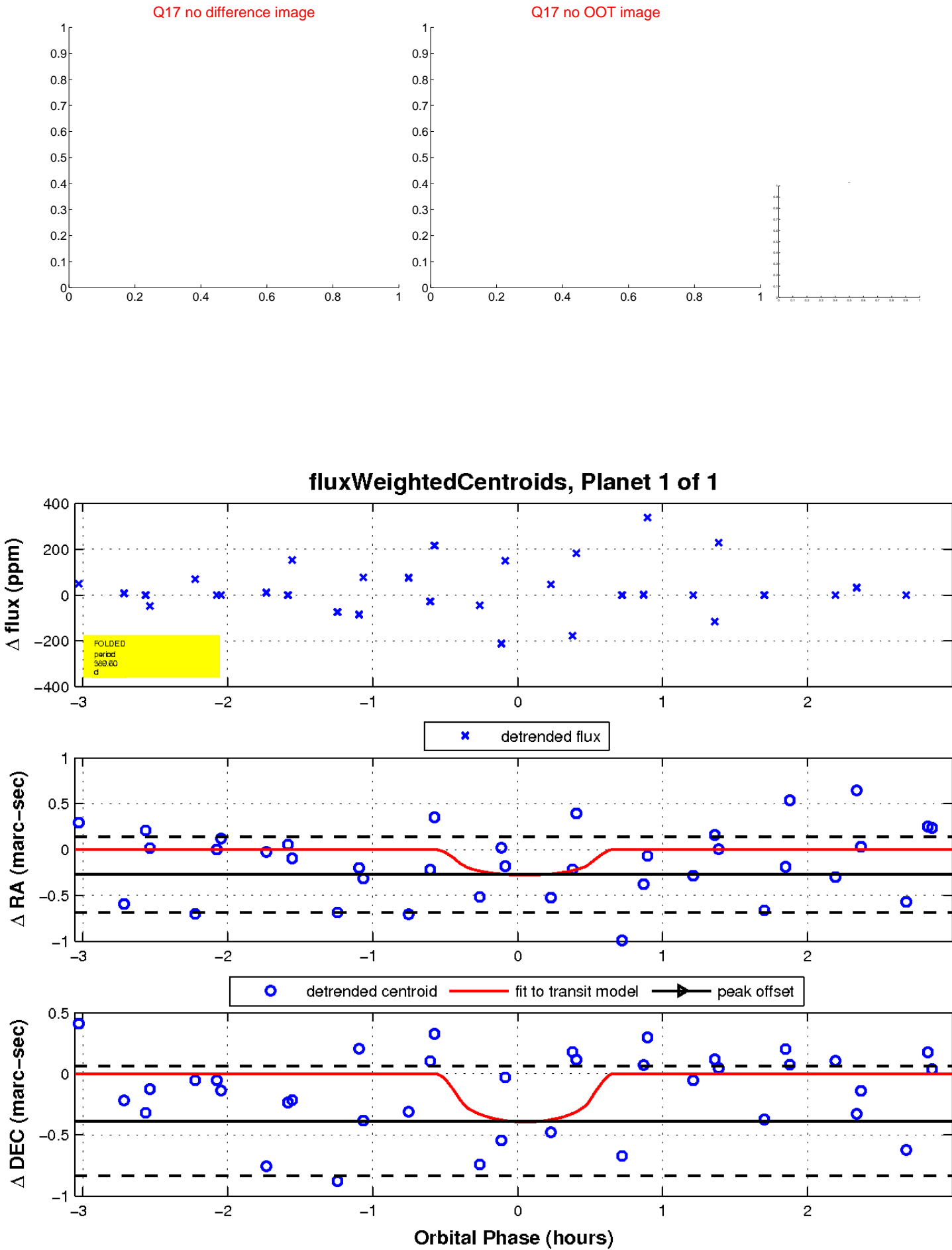
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

