

KIC 012153134

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})
012153134-01	OBS	No	335.617708	388.309730	396.1	6.489	7.7	7.3	0.99	6137	2.15	1.35

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012153134-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—MOD_NONUNIQ_ALT—MOD_POS_ALT—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.

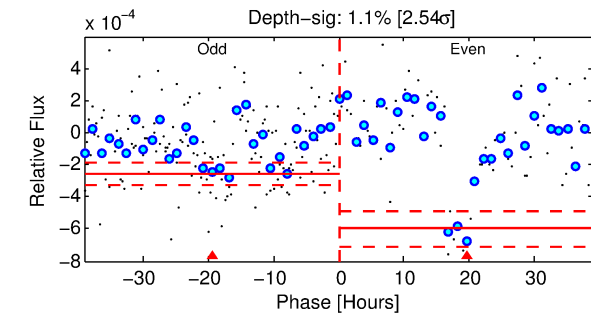
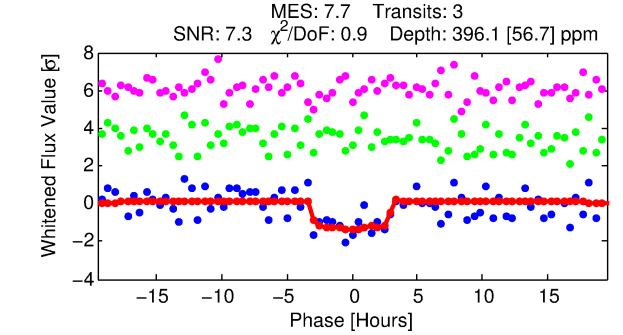
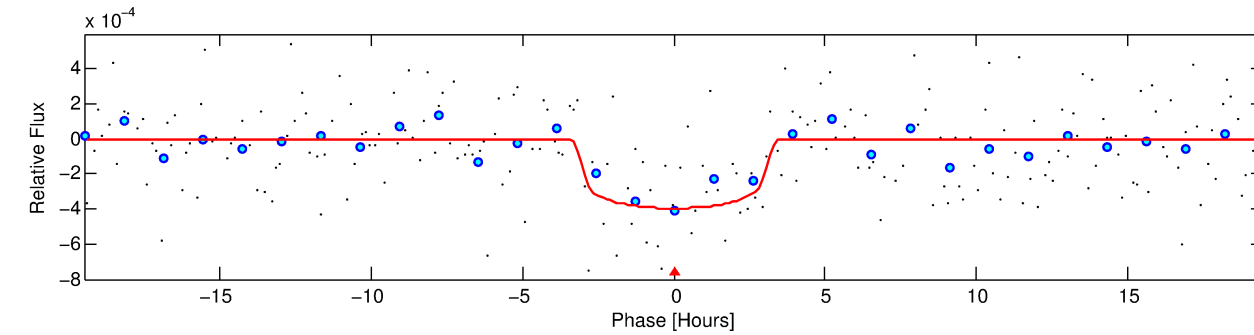
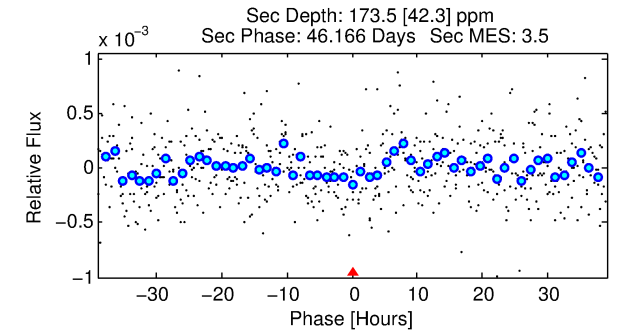
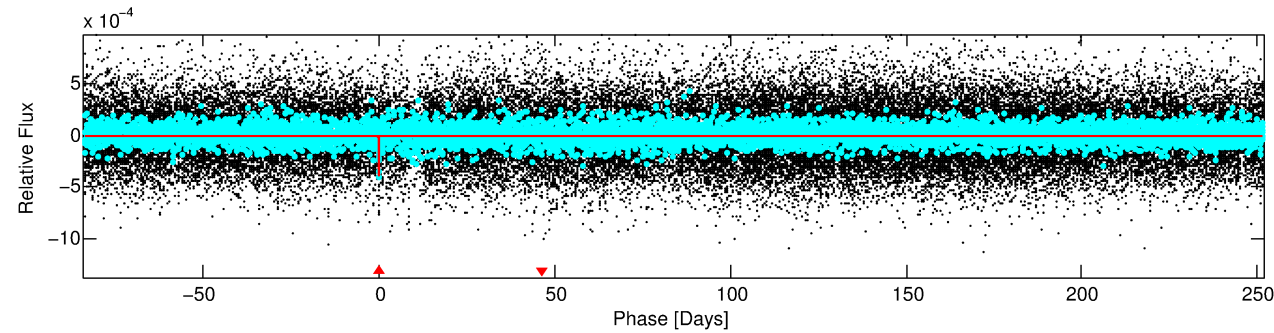
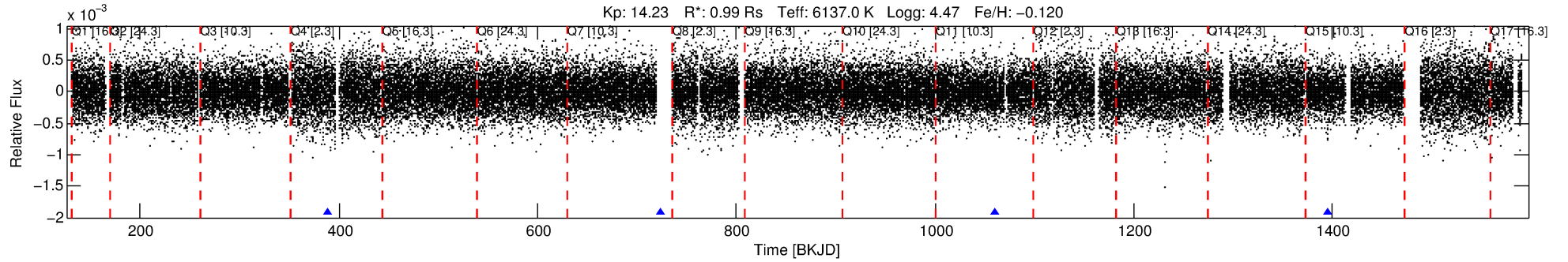
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012153134-01

No Significant Match Found

DV One-Page Summary

KIC: 12153134 Candidate: 1 of 1 Period: 335.618 d



DV Fit Results:

Period = 335.61771 [0.00693] d
Epoch = 388.3097 [0.0160] BKJD
Rp/R* = 0.0198 [0.0112]
a/R* = 273.96 [775.31]
b = 0.75 [1.68]
Seff = 1.35 [0.57]
Teq = 275 [29] K
Rp = 2.15 [1.40] Re
a = 0.9657 [0.2662] AU
Ag = 19332.35 [23662.19] [0.82σ]
Teffp = 5008 [1457] K [3.25σ]

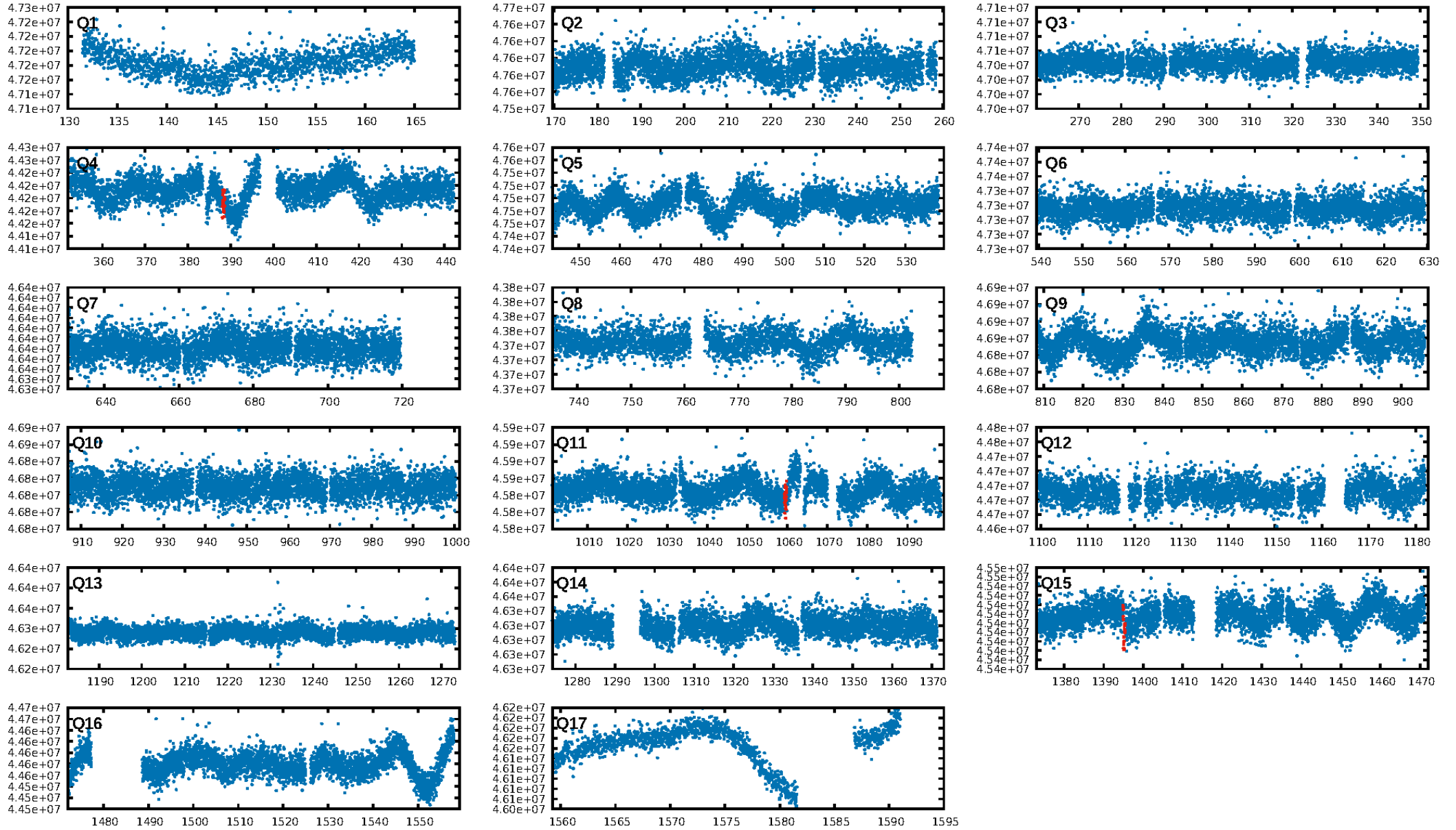
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 19.3%
ModelChiSquareGof-sig: 99.8%
Bootstrap-pfa: 2.22e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 10.92
Centroid-sig: 38.9%
Centroid-so: 1.475 arcsec [1.06σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [3/3]

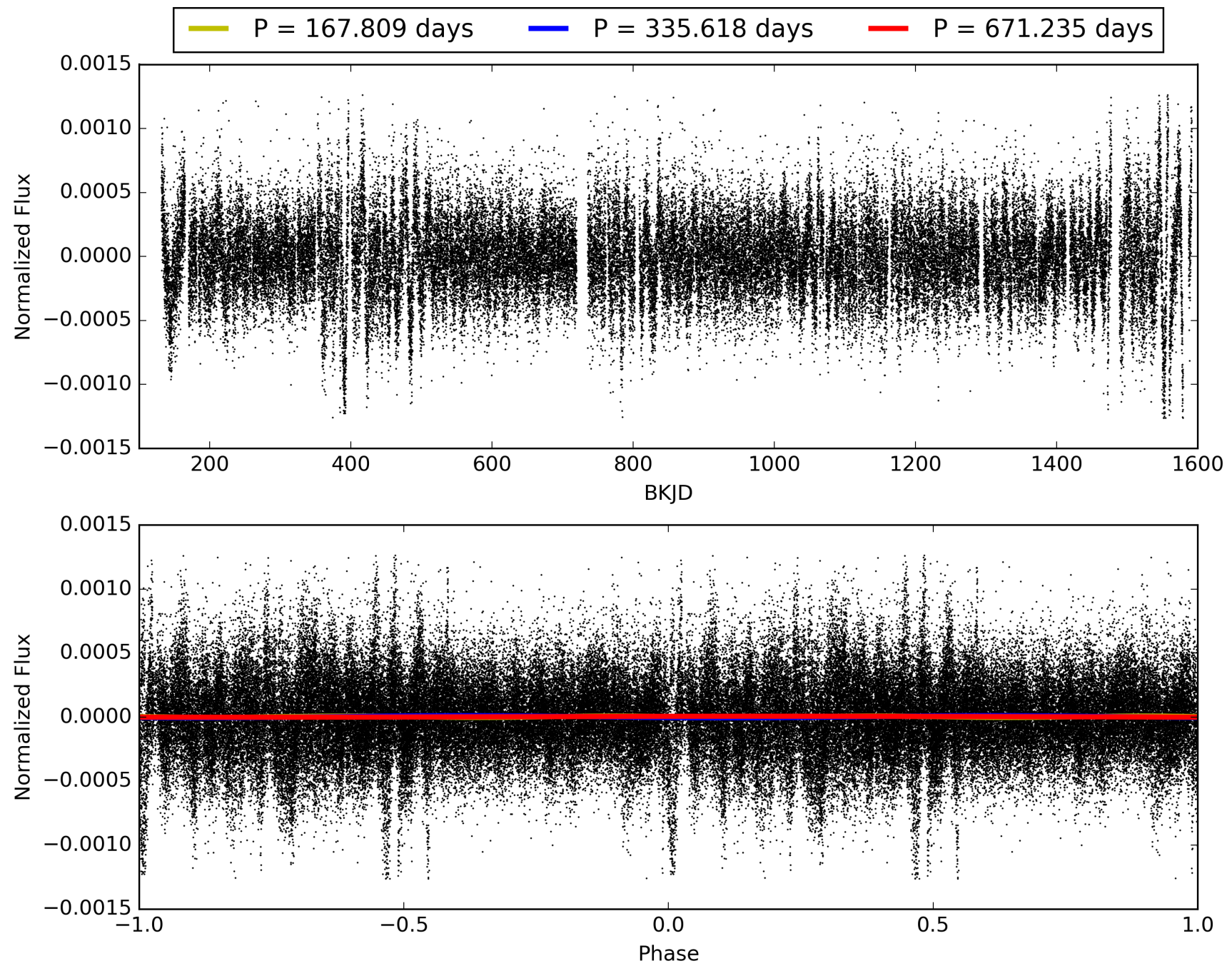
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 19:51:55 Z

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

TCE 012153134-01, PDC Light Curves

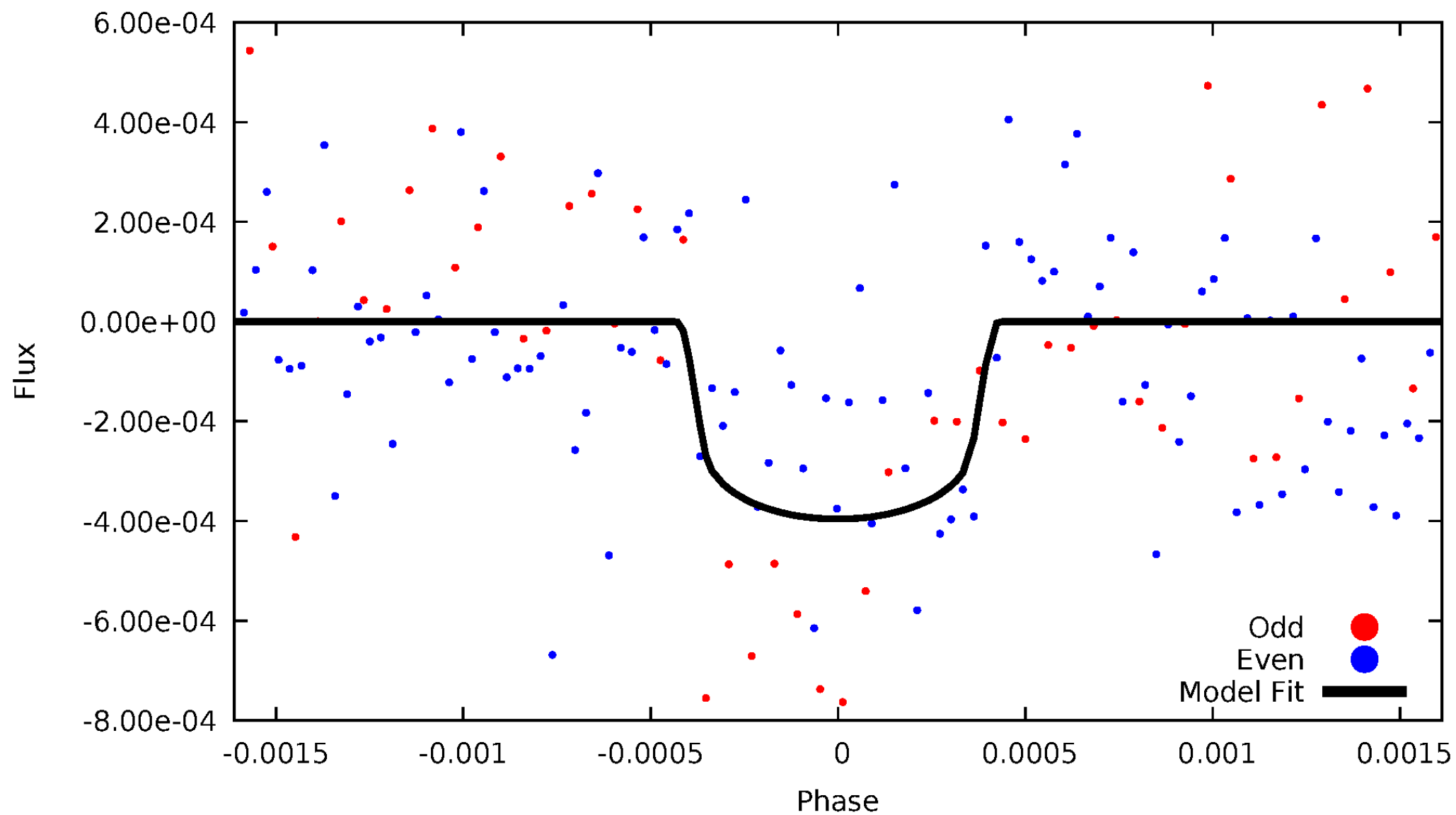


TCE 012153134-01



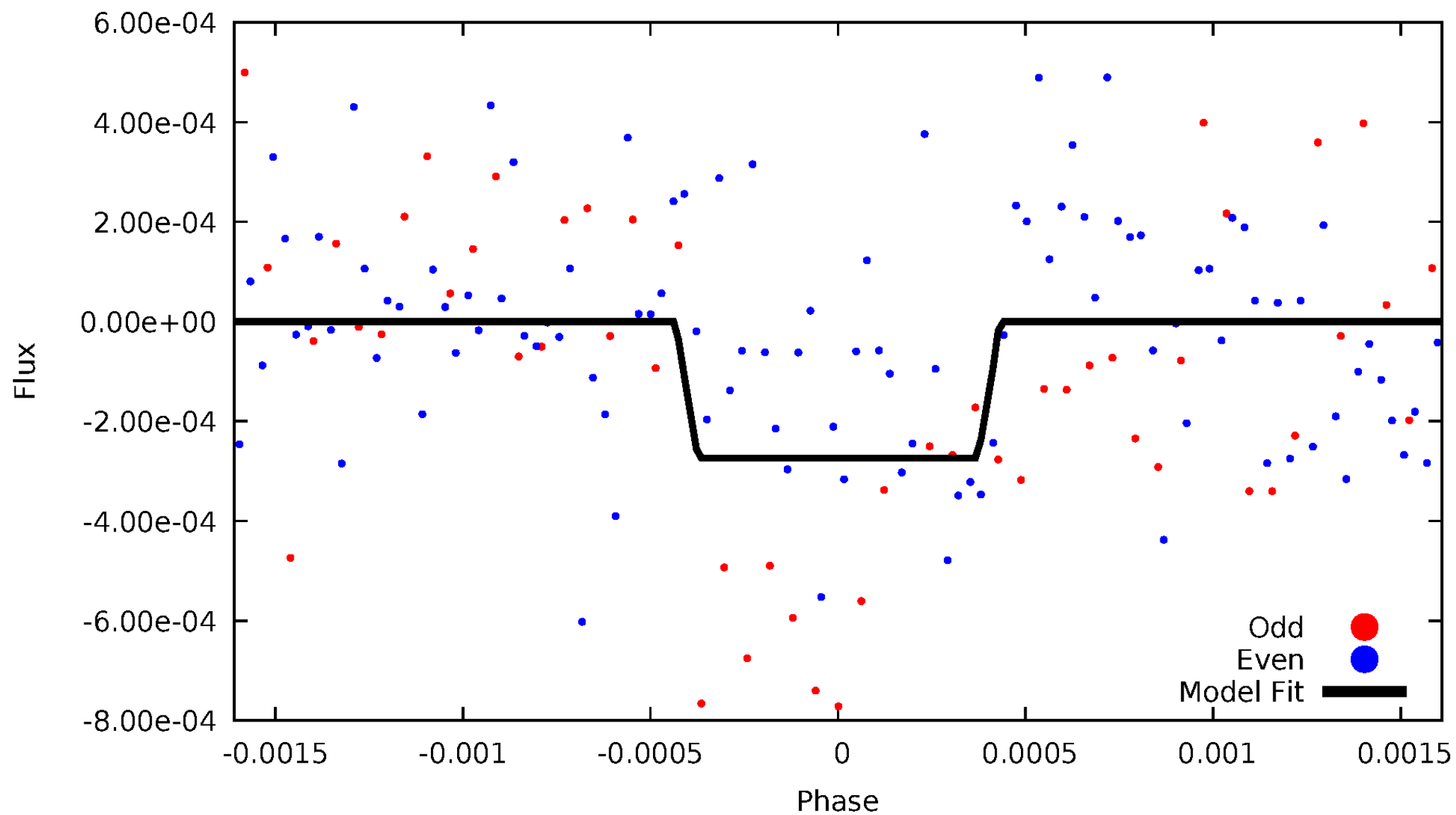
DV Odd/Even

TCE 012153134-01



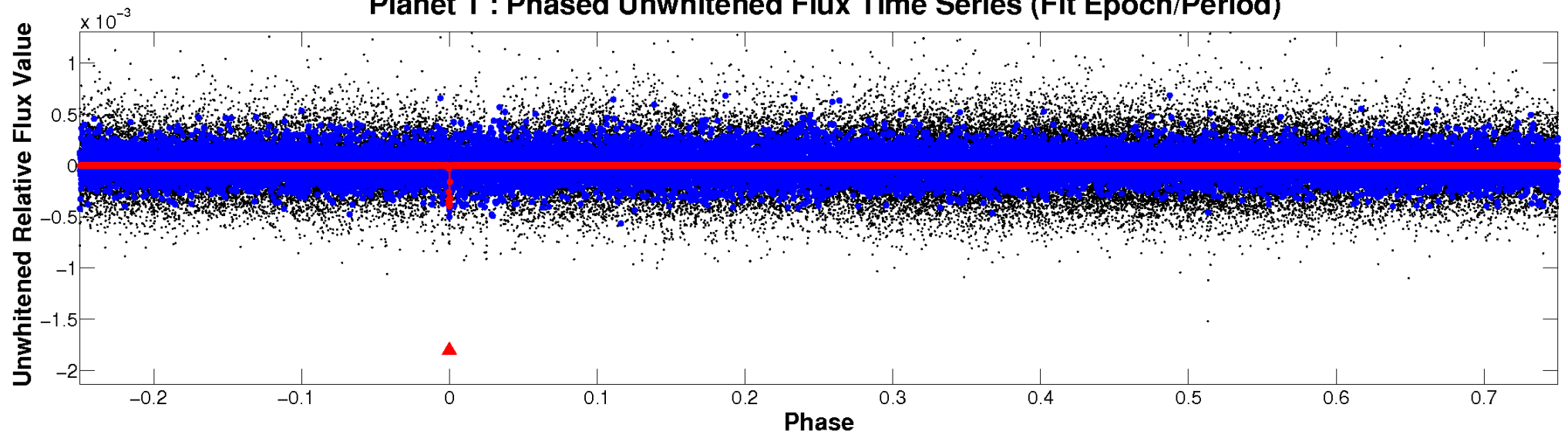
ALT Odd/Even

TCE 012153134-01

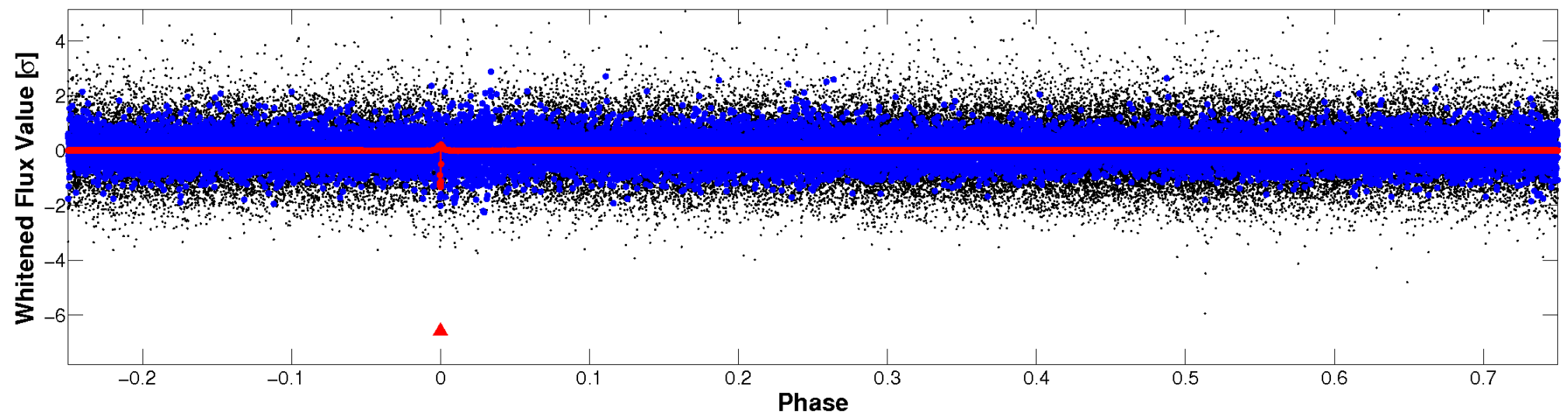


Non-Whitened Vs. Whitened Light Curve

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

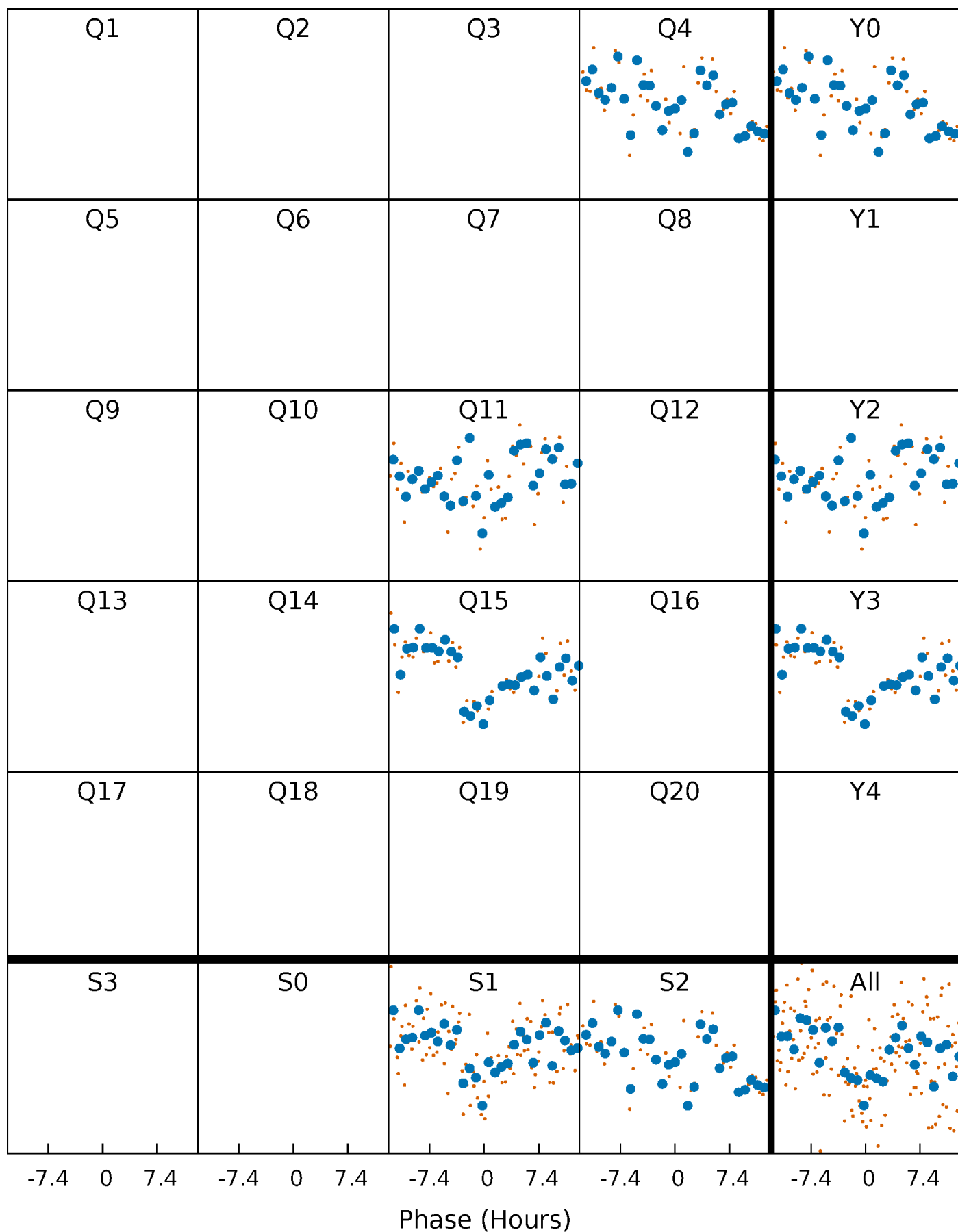


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



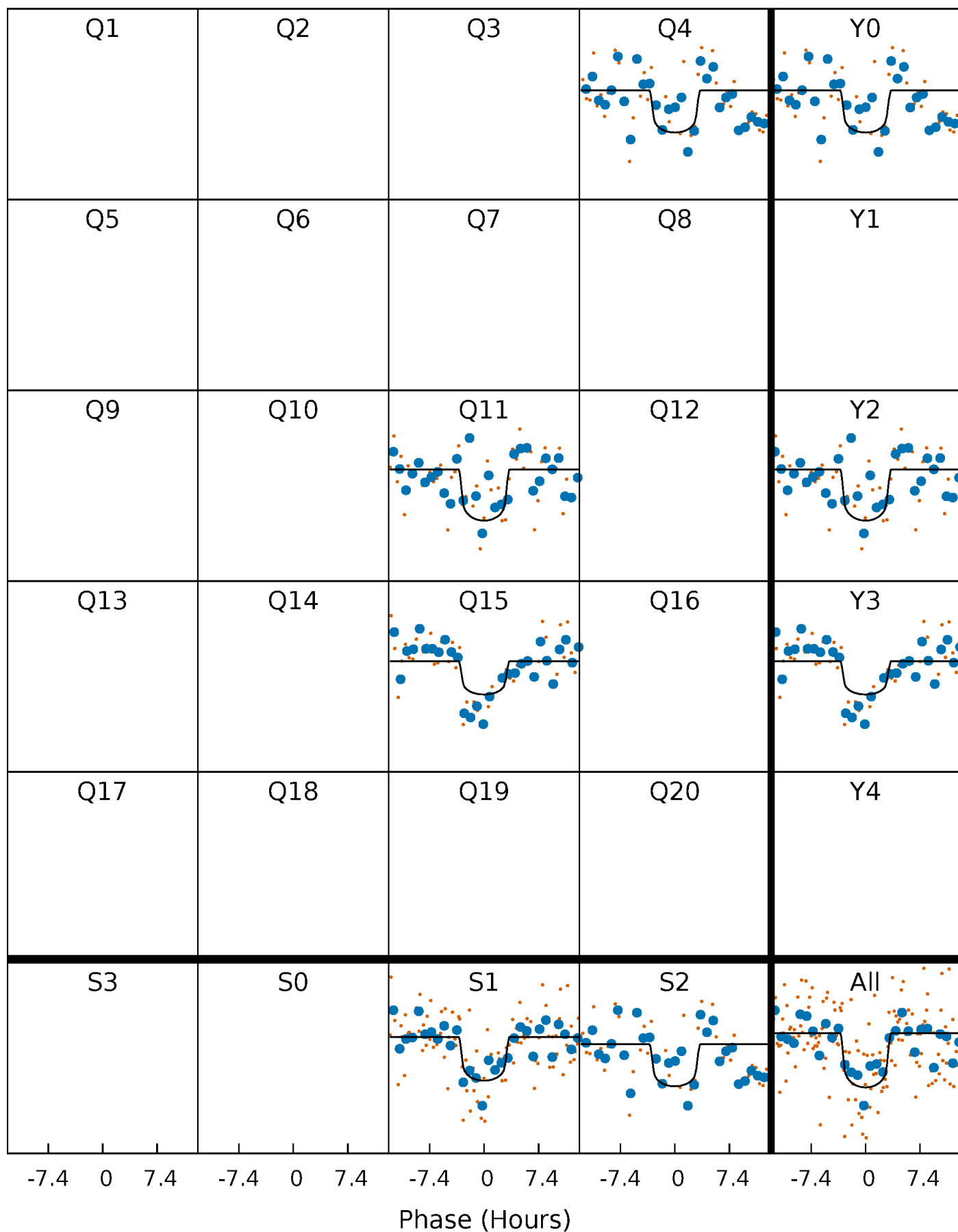
PDC Quarter-Phased Transit Curves

TCE 012153134-01 P=335.617708 Days $T_0=388.309730$ (BKJD)



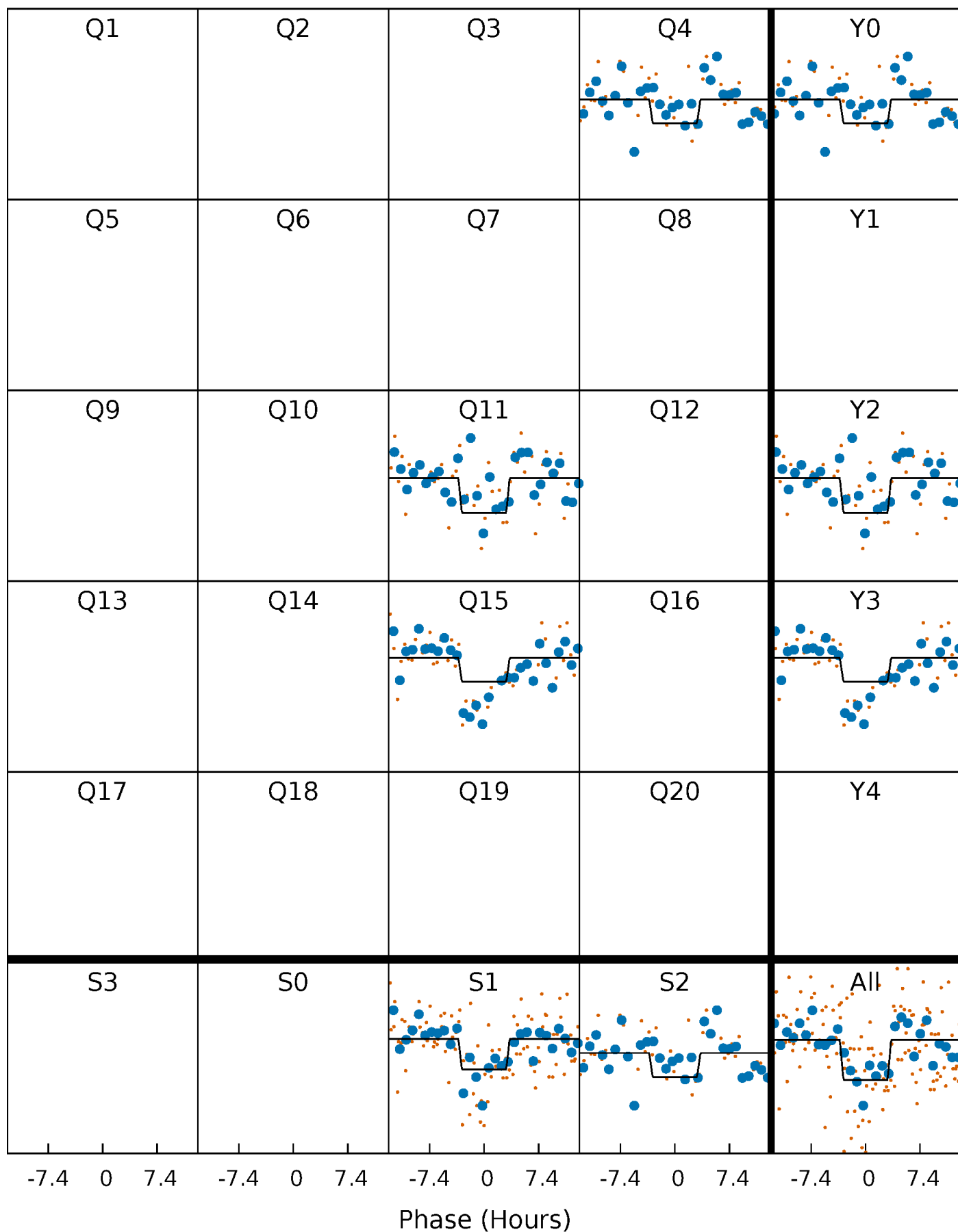
DV Quarter-Phased Transit Curves

TCE 012153134-01 P=335.617708 Days $T_0=388.309730$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

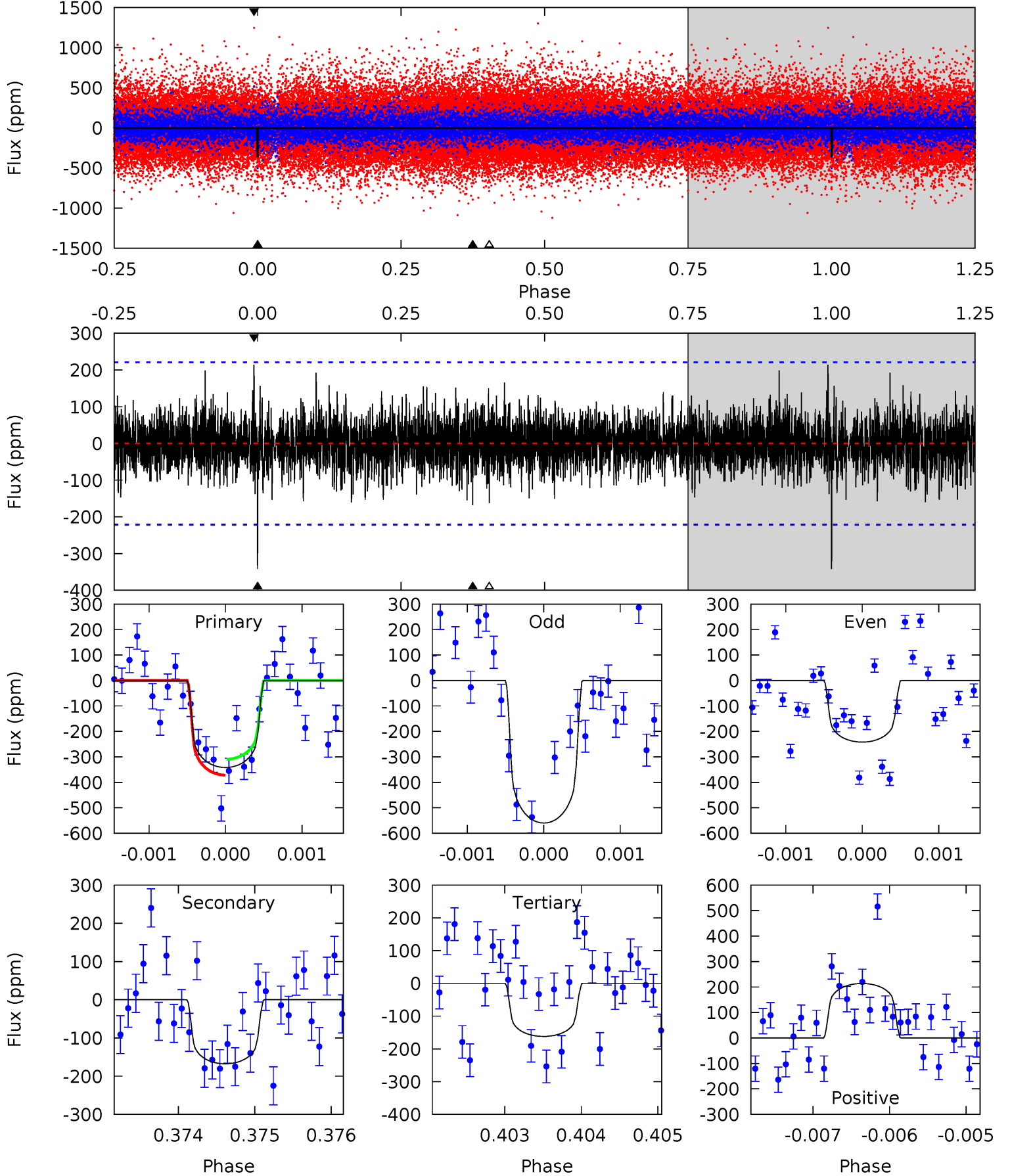
TCE 012153134-01 P=335.628034 Days $T_0=388.282772$ (BKJD)



DV Model-Shift Uniqueness Test

012153134-01, P = 335.617708 Days, E = 52.692022 Days

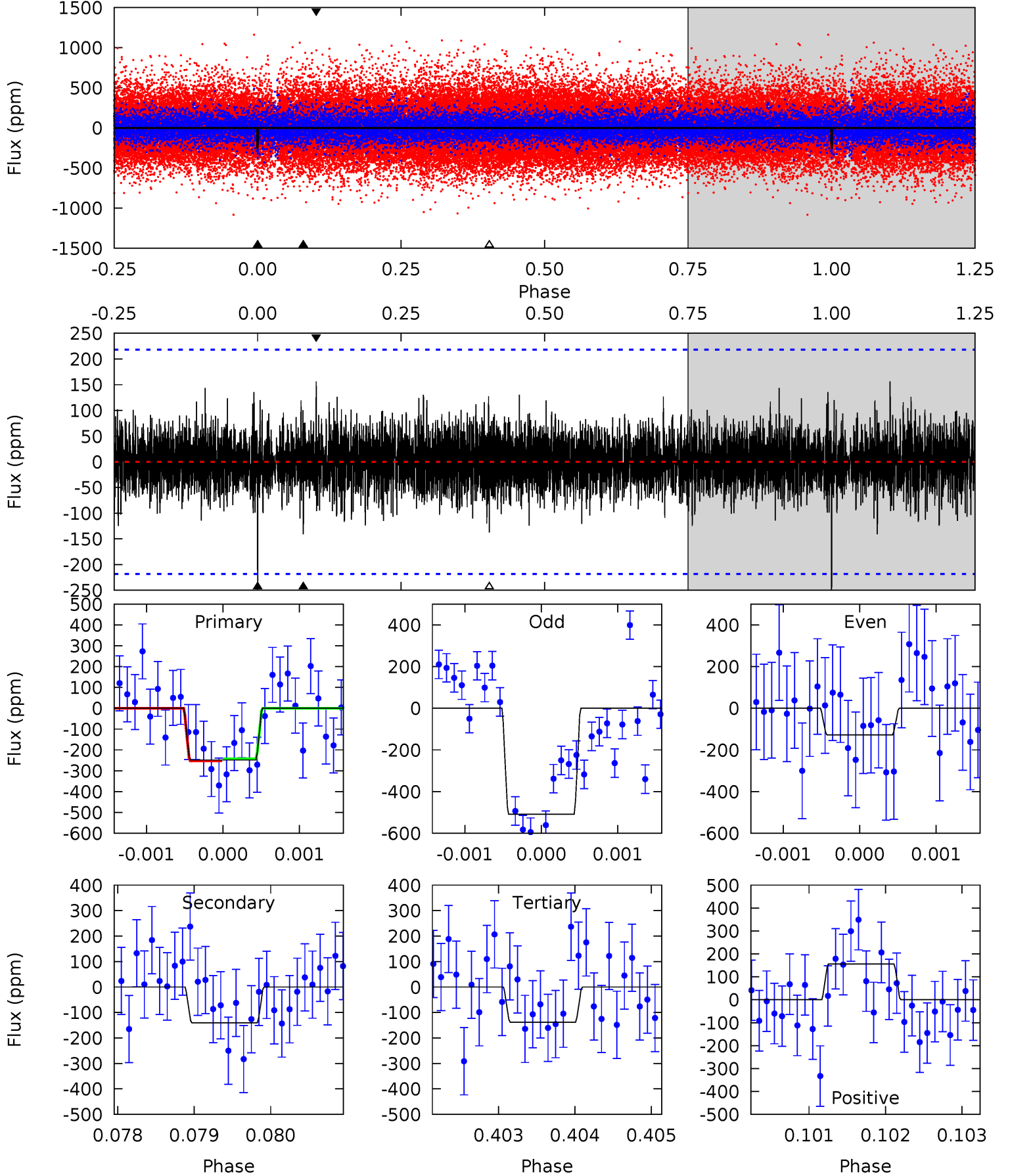
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.47	4.16	4.02	5.30	5.48	3.34	1.15	4.46	3.17	0.14	-1.15	3.62	1.42	0.38	0.77



Alt Model-Shift Uniqueness Test

012153134-01, P = 335.628034 Days, E = 52.654738 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.24	3.53	3.46	3.93	5.48	3.34	0.91	2.78	2.31	0.07	-0.40	4.50	1.62	0.39	0.12



Stellar Parameters For KIC 012153134

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6137^{+171}_{-214}	$4.471^{+0.052}_{-0.221}$	$-0.120^{+0.300}_{-0.300}$	$0.994^{+0.324}_{-0.108}$	$1.067^{+0.139}_{-0.139}$	$1.529^{+0.419}_{-0.782}$
	+3%/-3%	+1%/-5%	+250%/-250%	+33%/-11%	+13%/-13%	+27%/-51%
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 012153134-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-168 ± 40	$2.33^{+1.27}_{-1.25}$	393^{+27}_{-21}	4970^{+2223}_{-809}	15863^{+57682}_{-9738}
Alt.	-141 ± 40	$1.94^{+1.31}_{-1.10}$	392^{+31}_{-20}	5197^{+2996}_{-1011}	19059^{+79555}_{-12931}

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 012153134-01. Kepler magnitude: 14.23. Transit SNR 7.27

There are 0 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	1.48 ± 1.40	1.06	-1.31 ± 1.41	0.68 ± 1.33

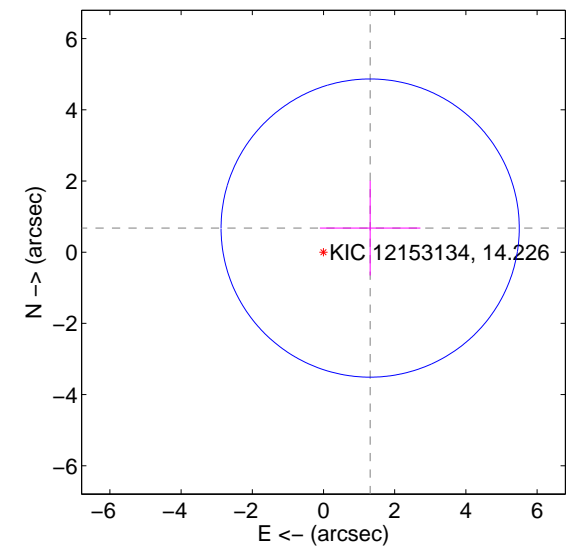
There is no PRF-fit offset from OOT-fit



There is no PRF-fit offset from KIC

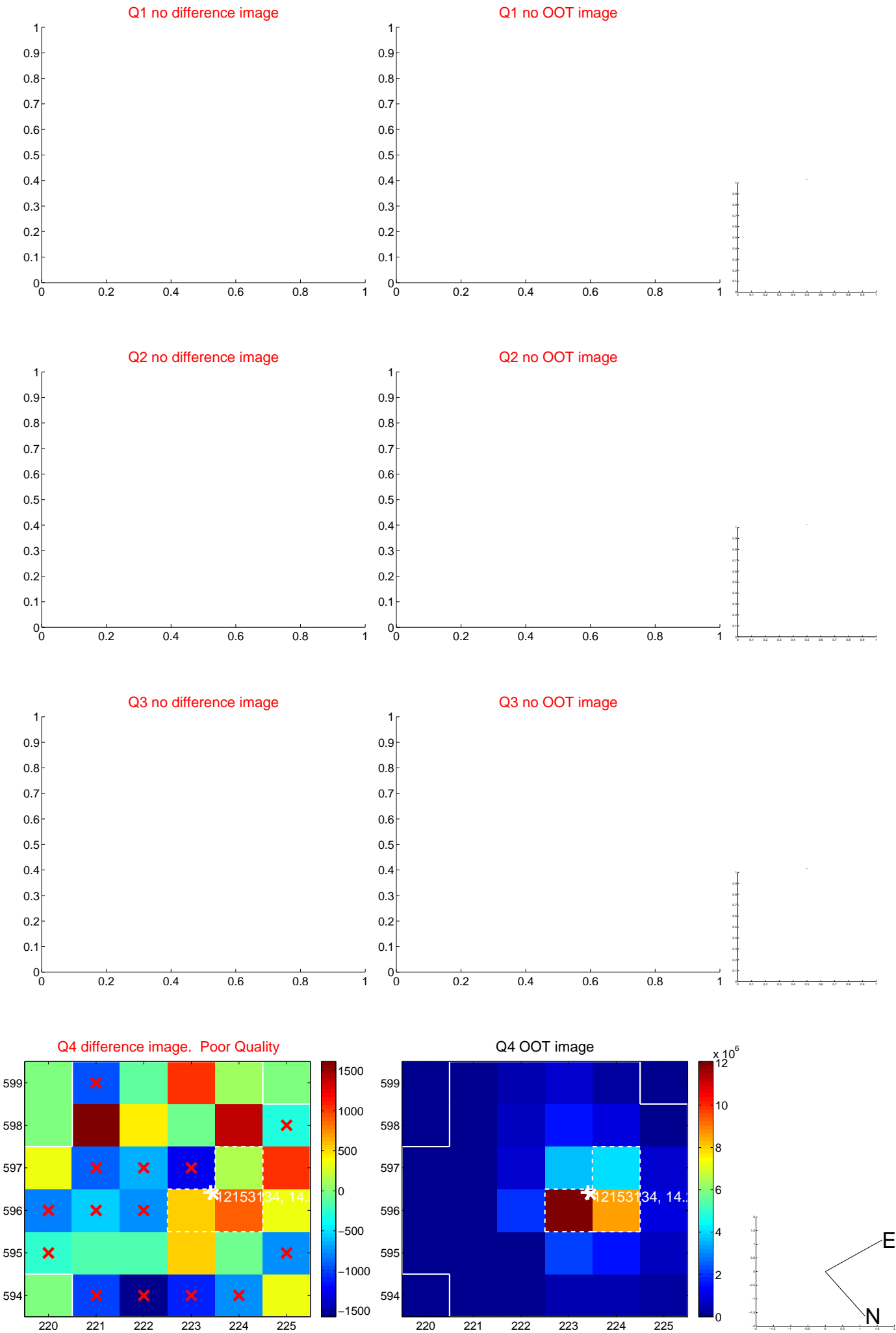


offset from photometric centroids



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.

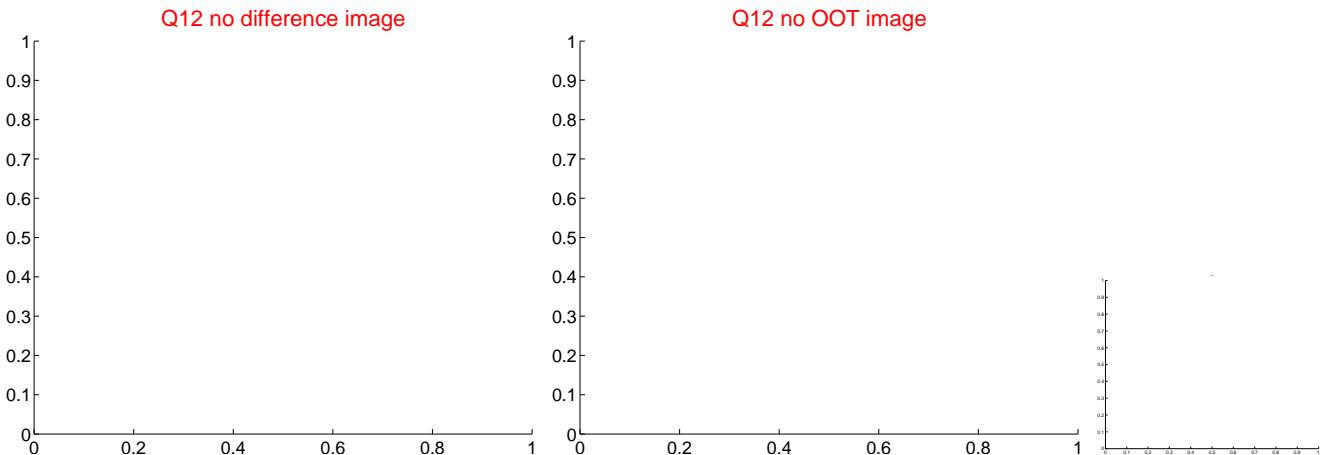
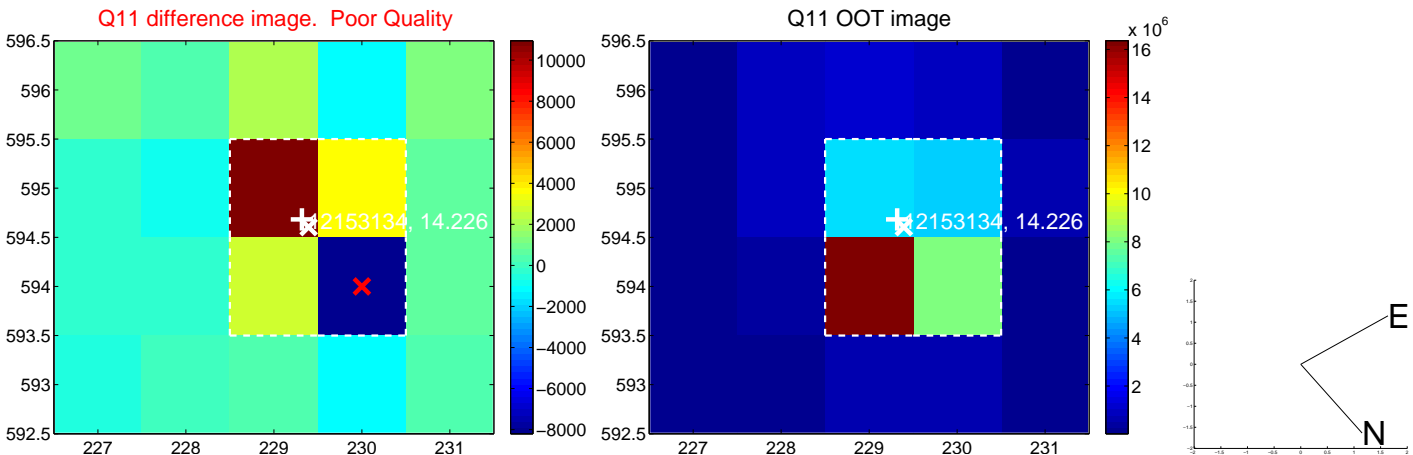
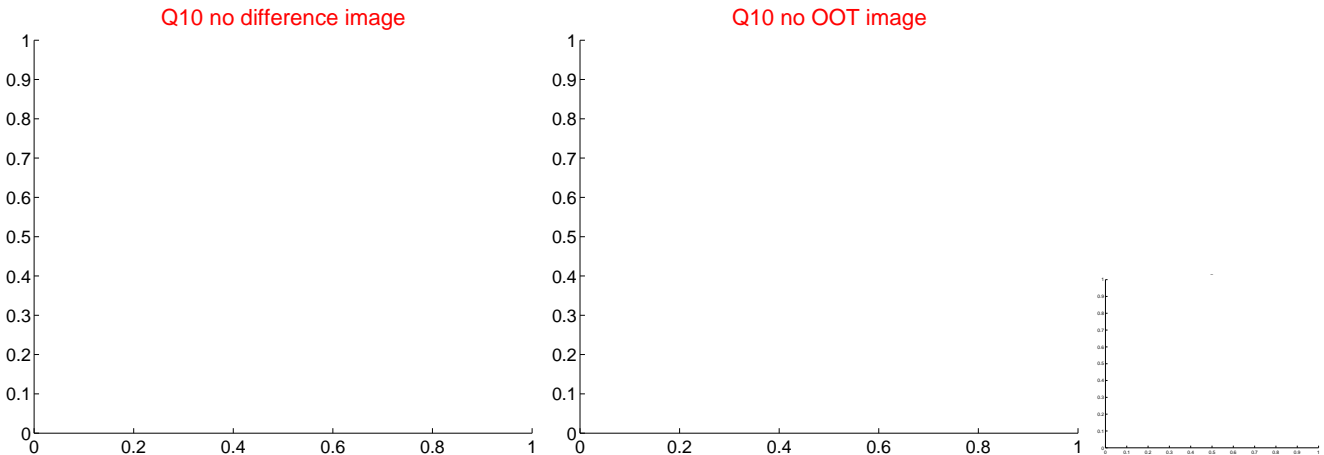
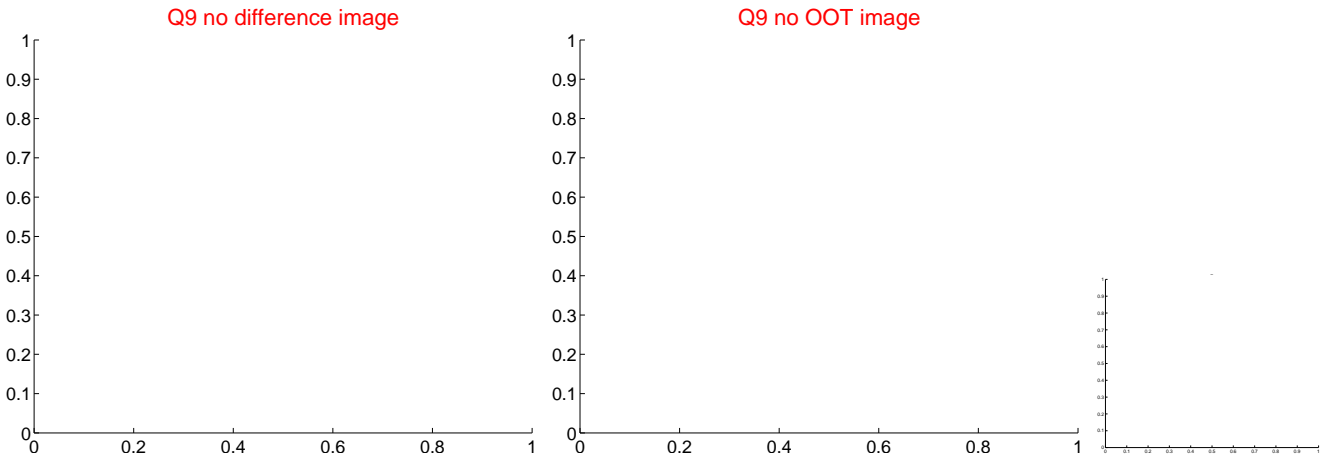
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



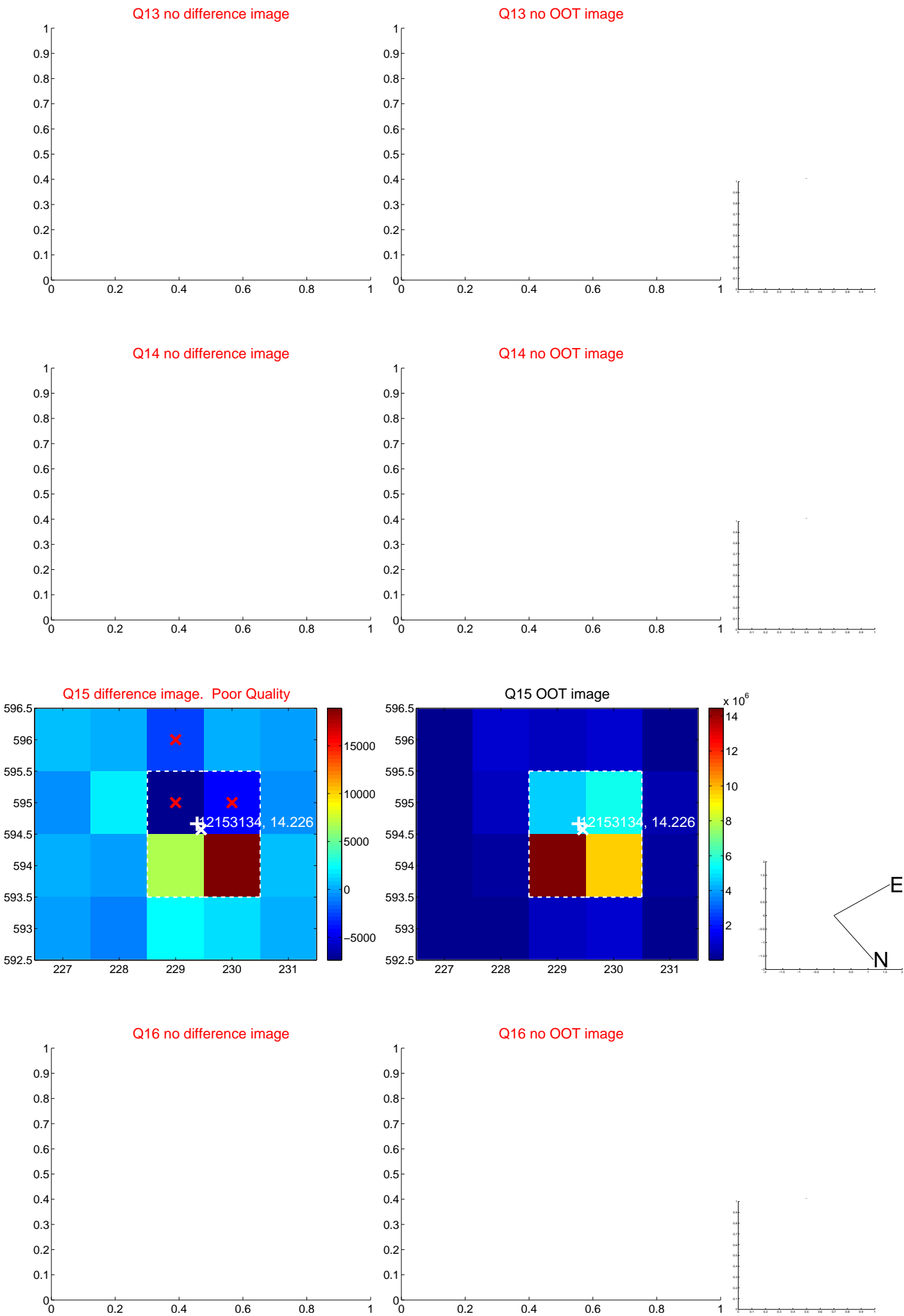
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



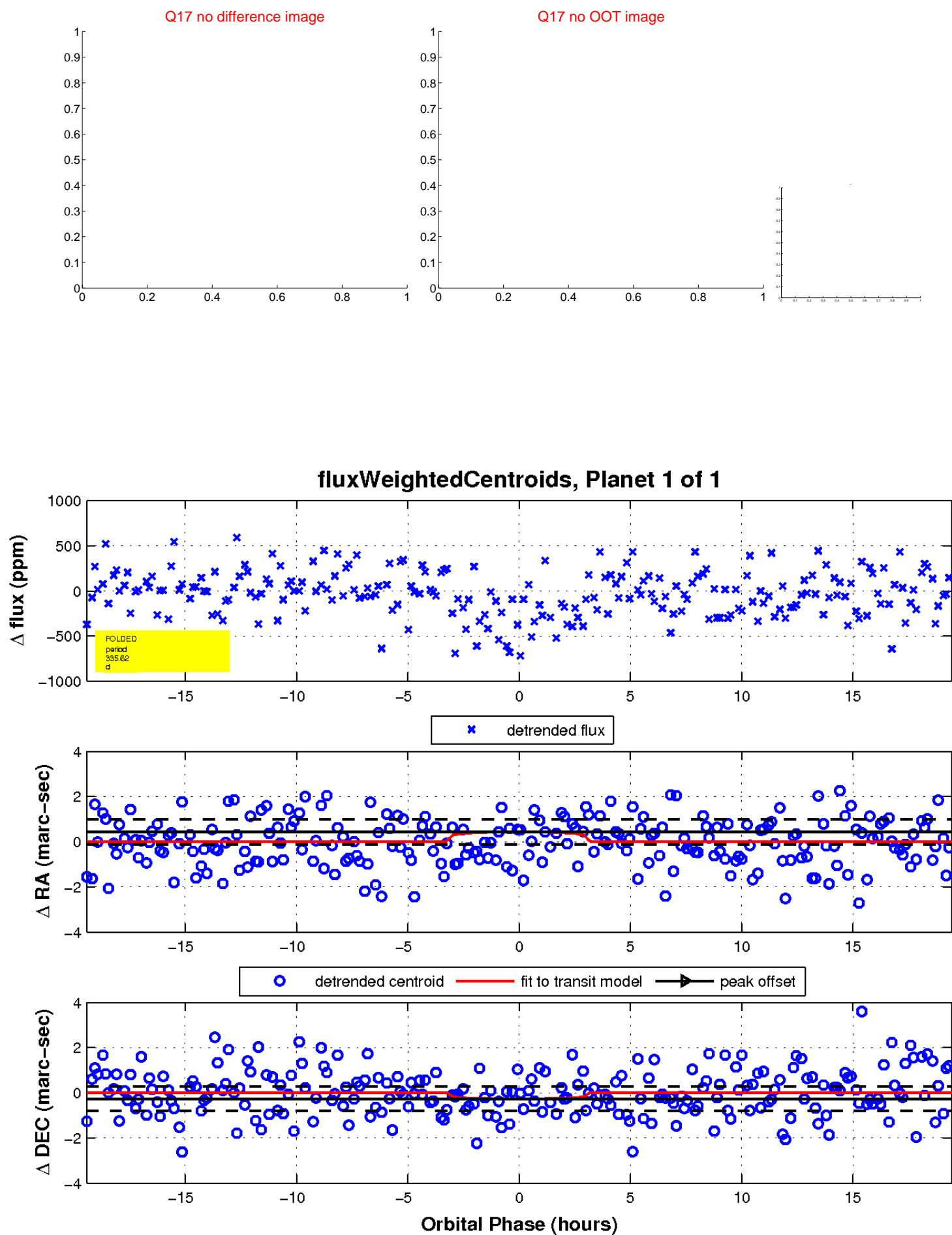
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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

