

KIC 009763612

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})
009763612-01	OBS	3465.01	16.050704	141.732140	96.8	3.528	10.3	10.8	0.85	5428	1.12	37.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009763612-01	OBS	FP	0.00	0	0	1	0	HALO_GHOST

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

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

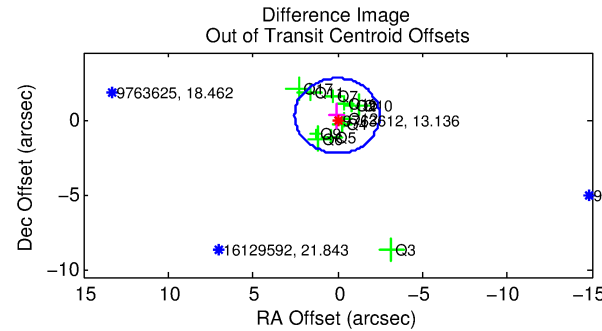
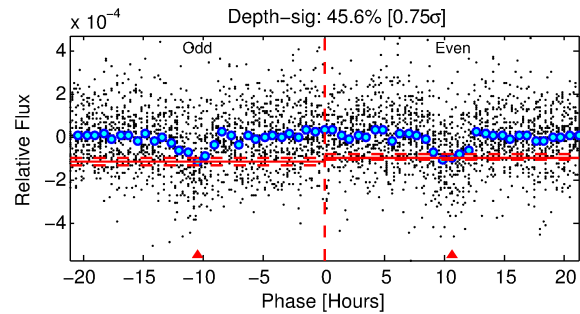
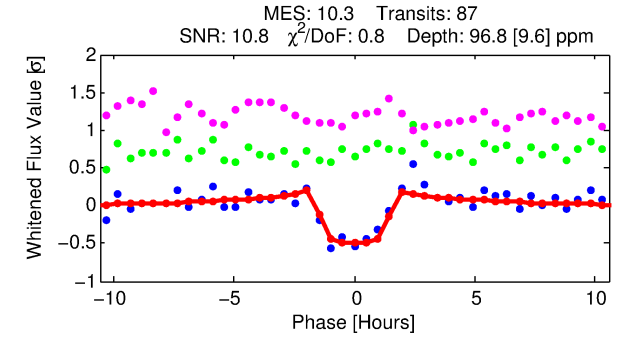
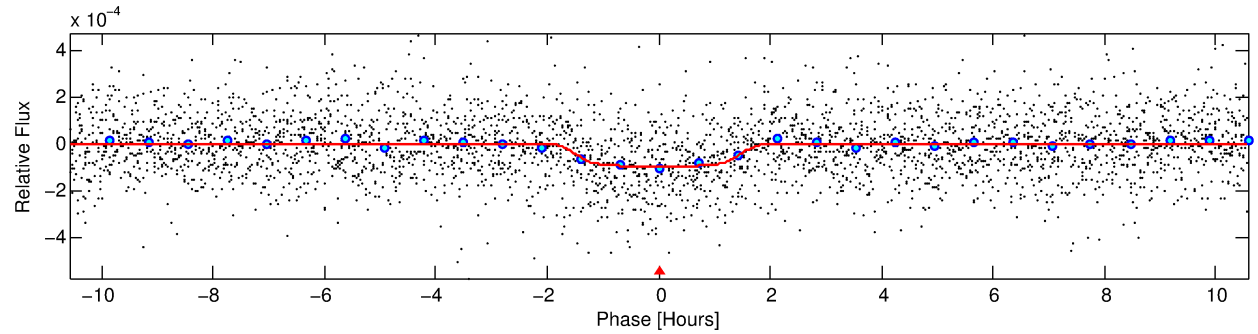
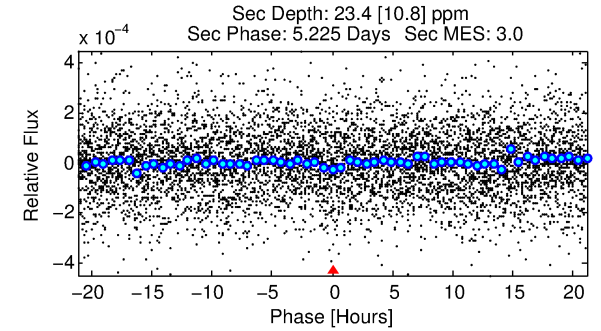
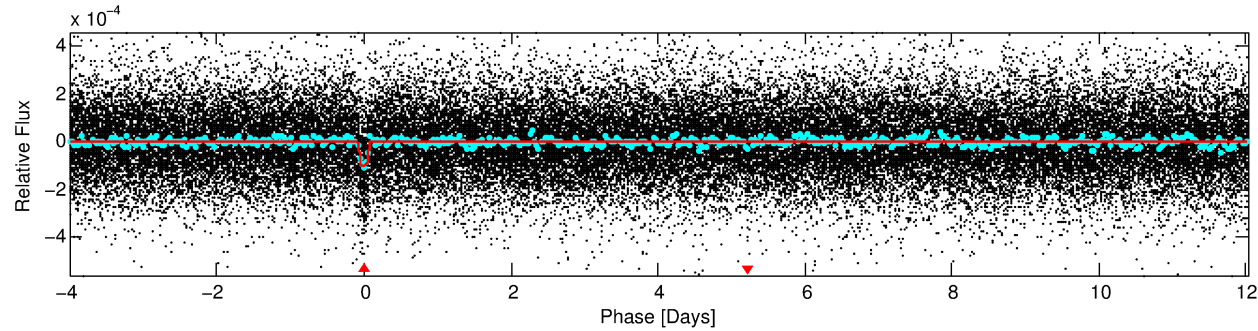
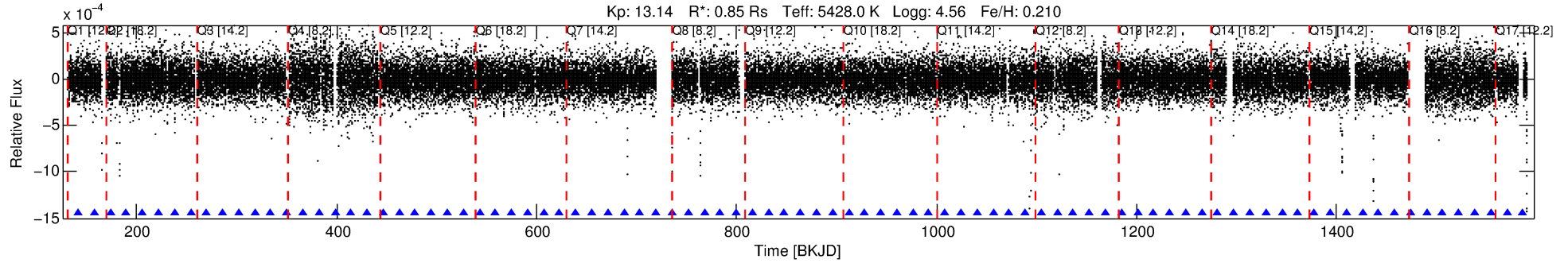
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009763612-01

No Significant Match Found

DV One-Page Summary

KIC: 9763612 Candidate: 1 of 1 Period: 16.051 d
KOI: K03465.01 Corr: 0.913



DV Fit Results:

Period = 16.05070 [0.00011] d
Epoch = 141.7321 [0.0057] BKJD
Rp/R* = 0.0120 [0.0016]
a/R* = 10.86 [5.97]
b = 0.96 [0.04]
Seff = 37.22 [4.87]
Teq = 630 [21] K
Rp = 1.12 [0.17] Re
a = 0.1233 [0.0090] AU
Ag = 156.19 [84.48] [1.84σ]
Teffp = 3442 [457] K [6.14σ]

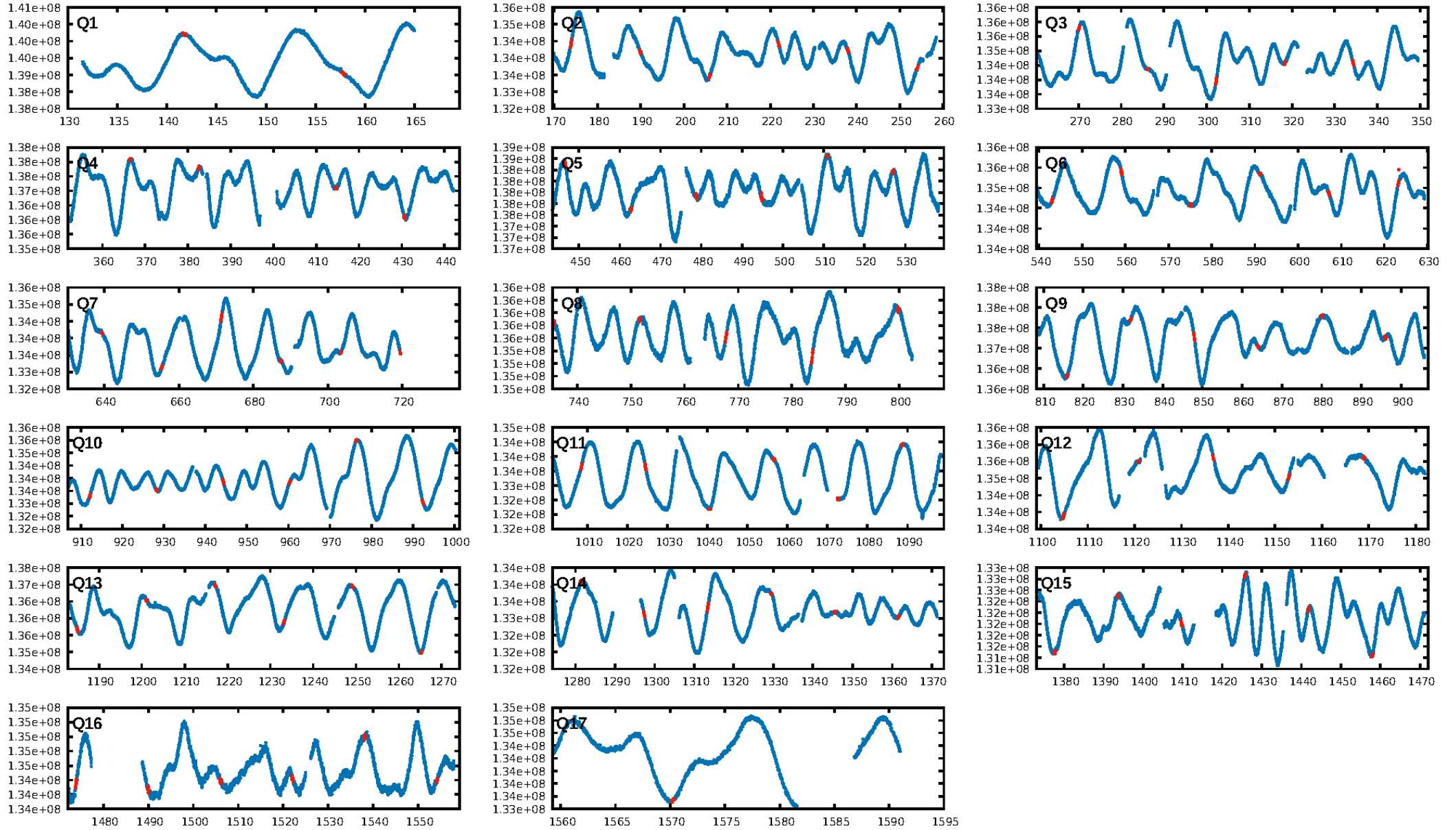
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.36e-21
RollingBand-fgt: 1.00 [84/84]
GhostDiagnostic-chr: 0.1366
Centroid-sig: N/A
Centroid-so: 0.959 arcsec [1.20σ]
OotOffset-rm: 0.270 arcsec [0.32σ]
KicOffset-rm: 0.523 arcsec [0.57σ]
OotOffset-st: 3/3/3/3 [12]
KicOffset-st: 3/3/3/3 [12]
DiffImageQuality-fgm: 0.75 [9/12]
DiffImageOverlap-fno: 1.00 [17/17]

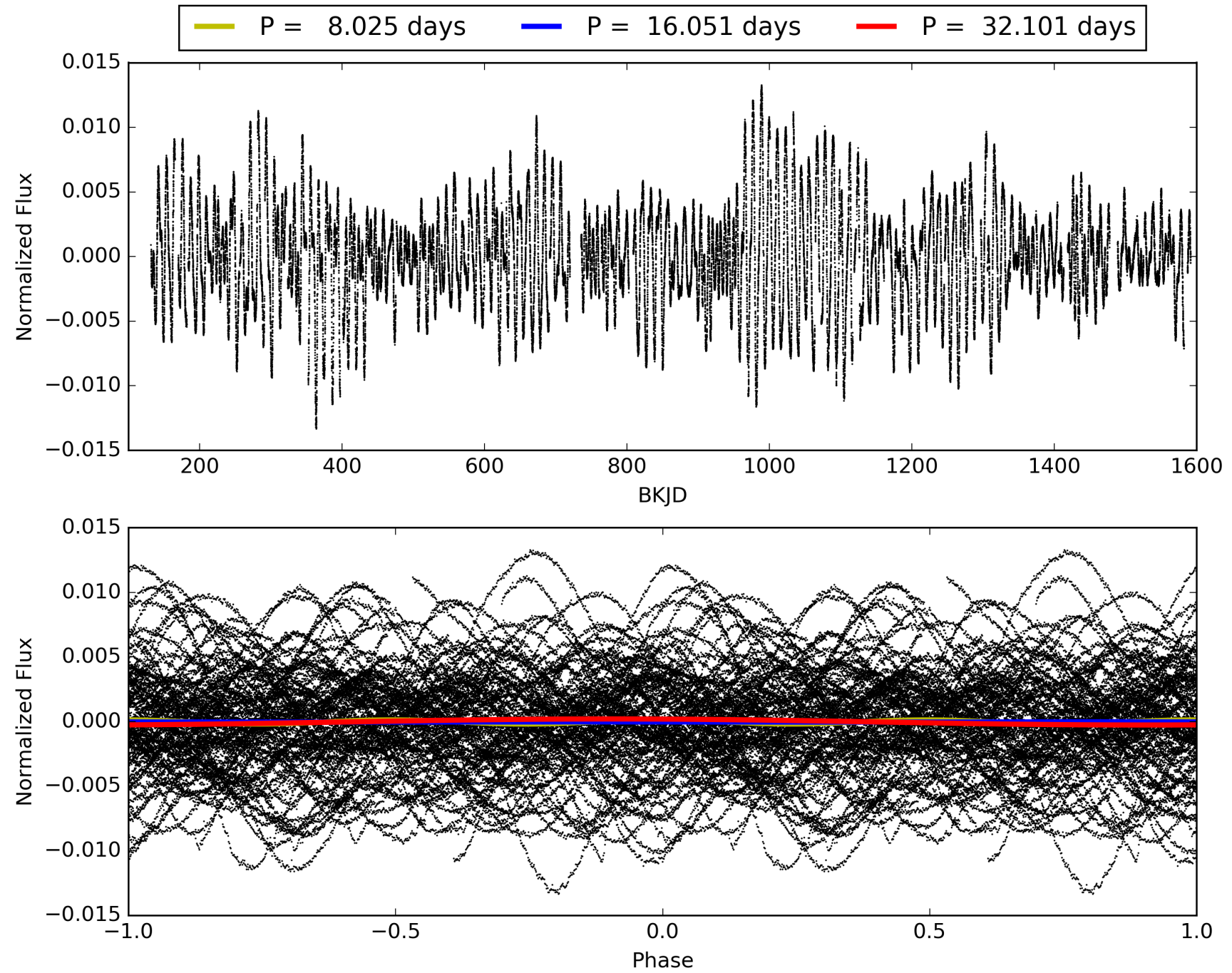
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 23:39:09 Z

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

TCE 009763612-01, PDC Light Curves

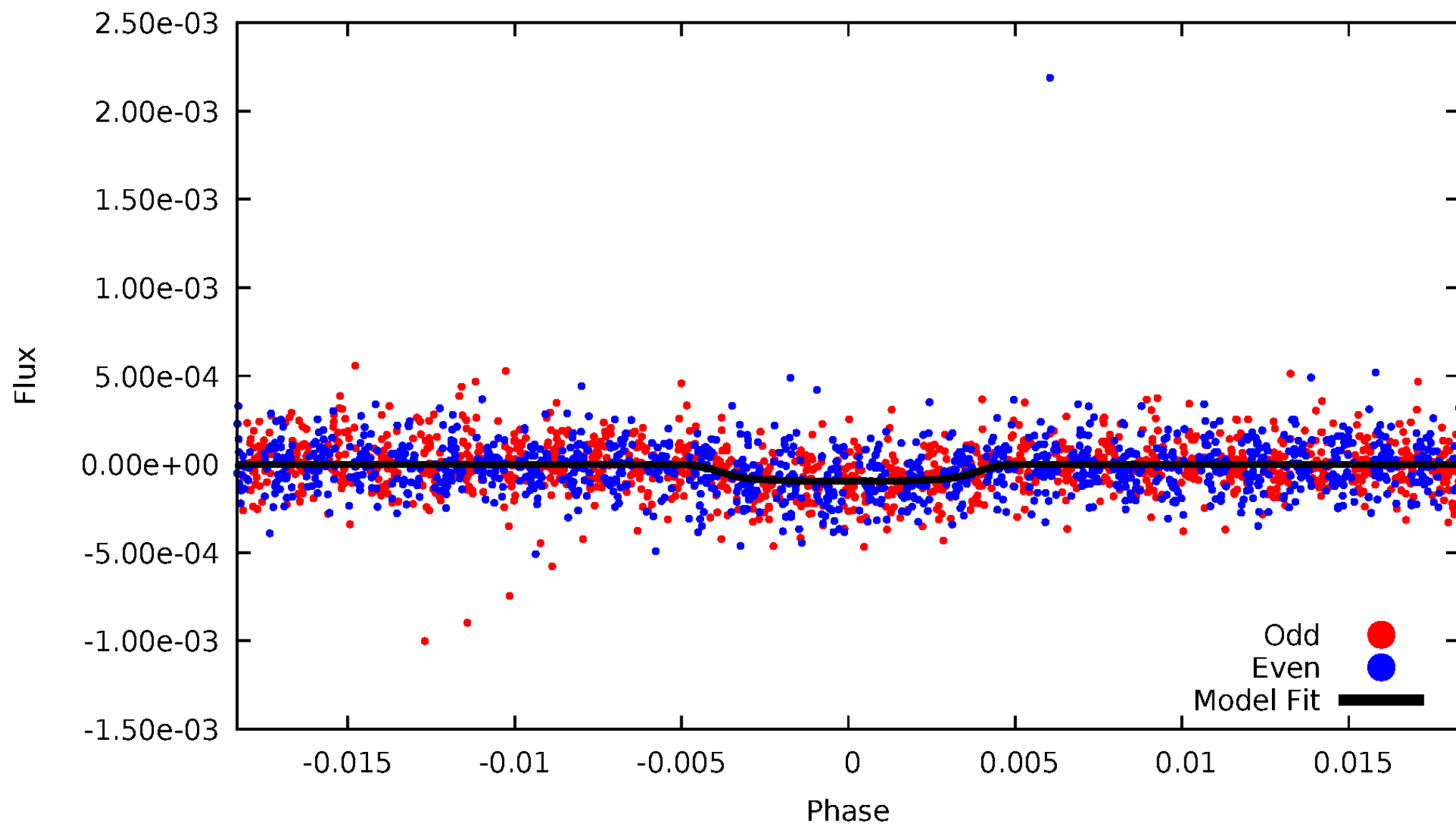


TCE 009763612-01



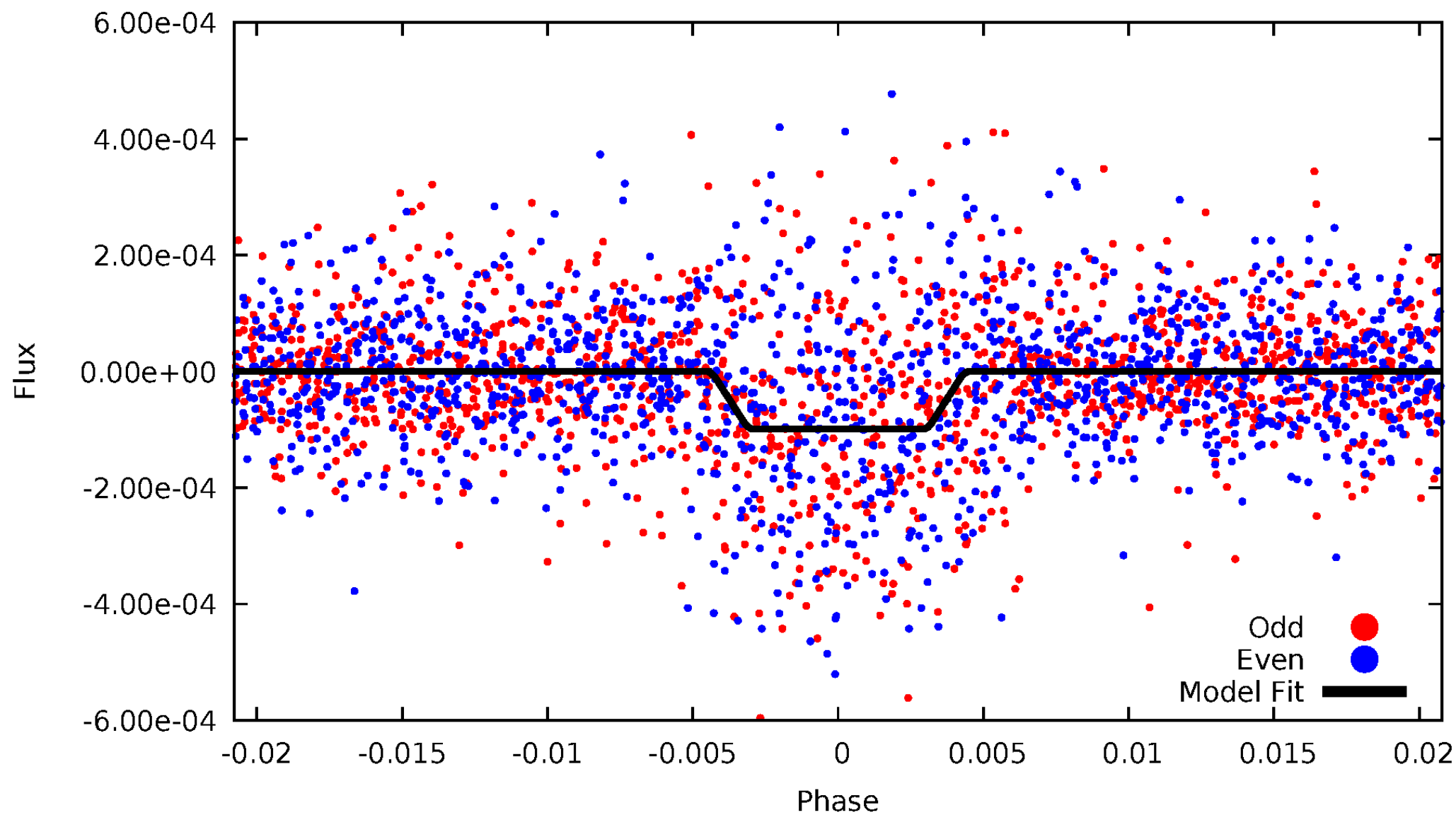
DV Odd/Even

TCE 009763612-01



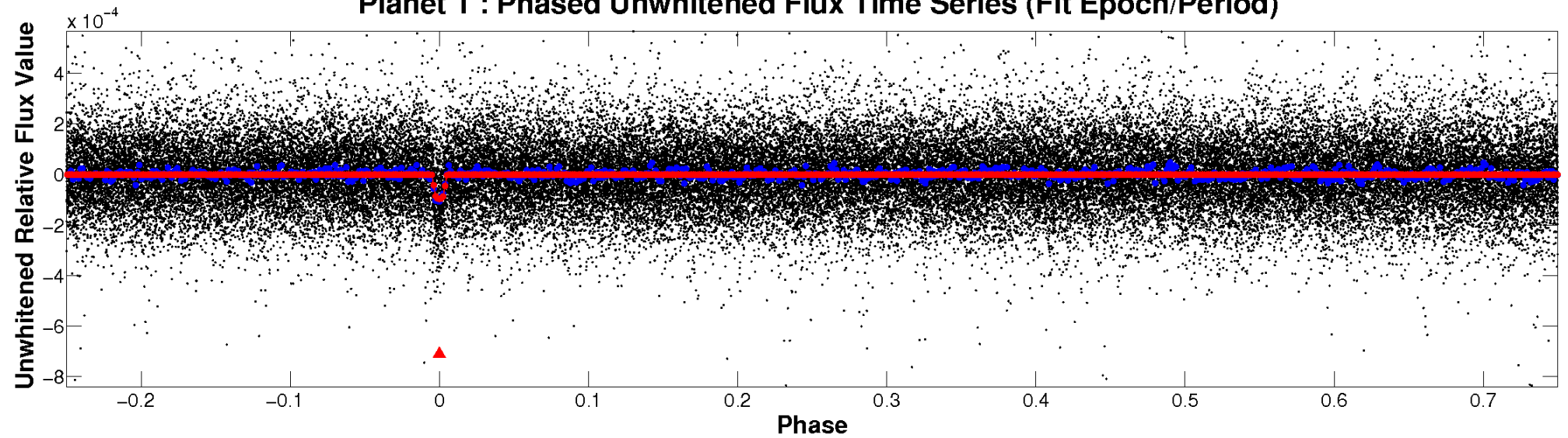
ALT Odd/Even

TCE 009763612-01

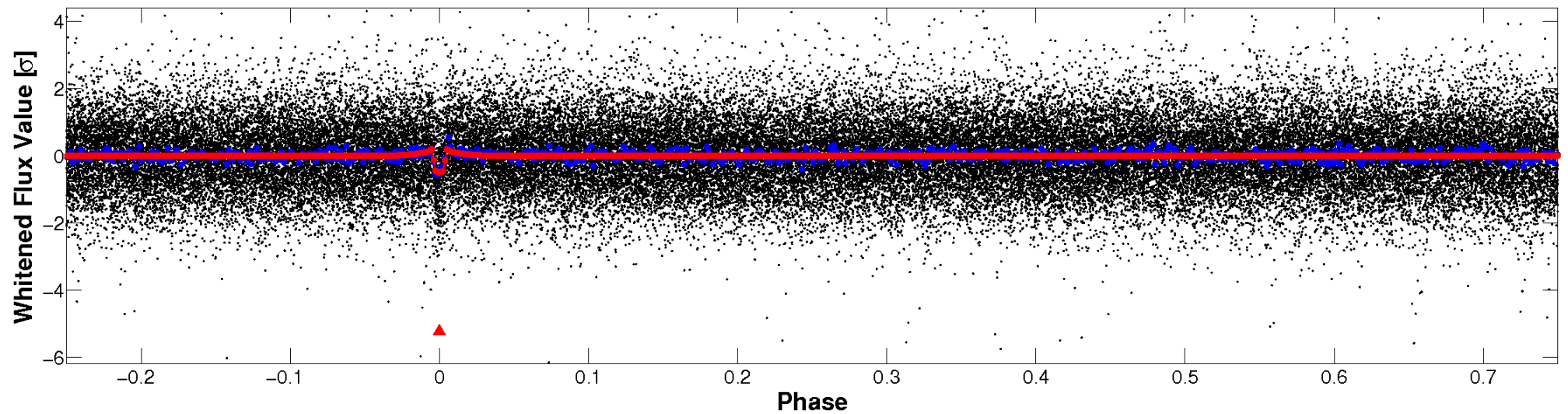


Non-Whitened Vs. Whitened Light Curve

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

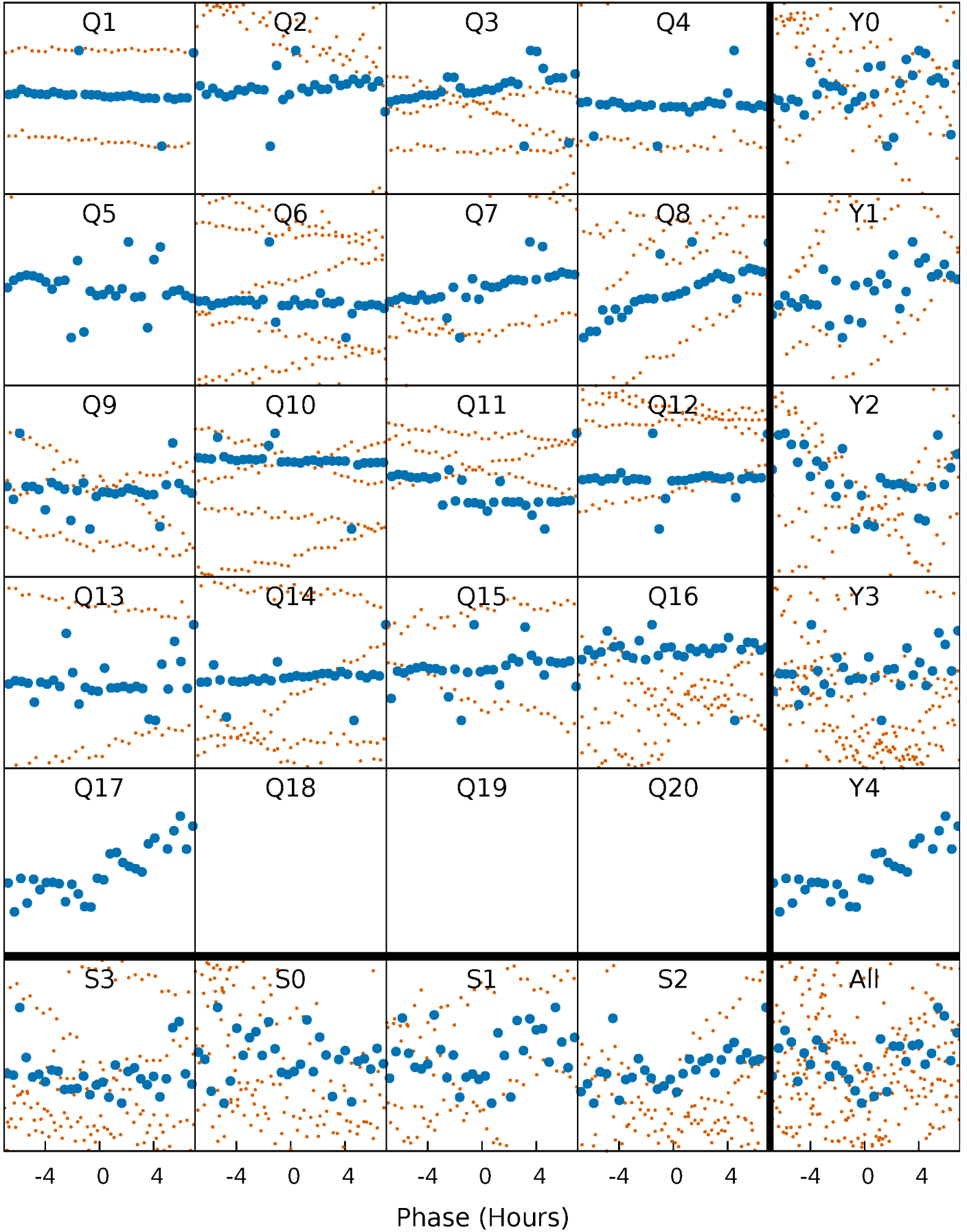


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



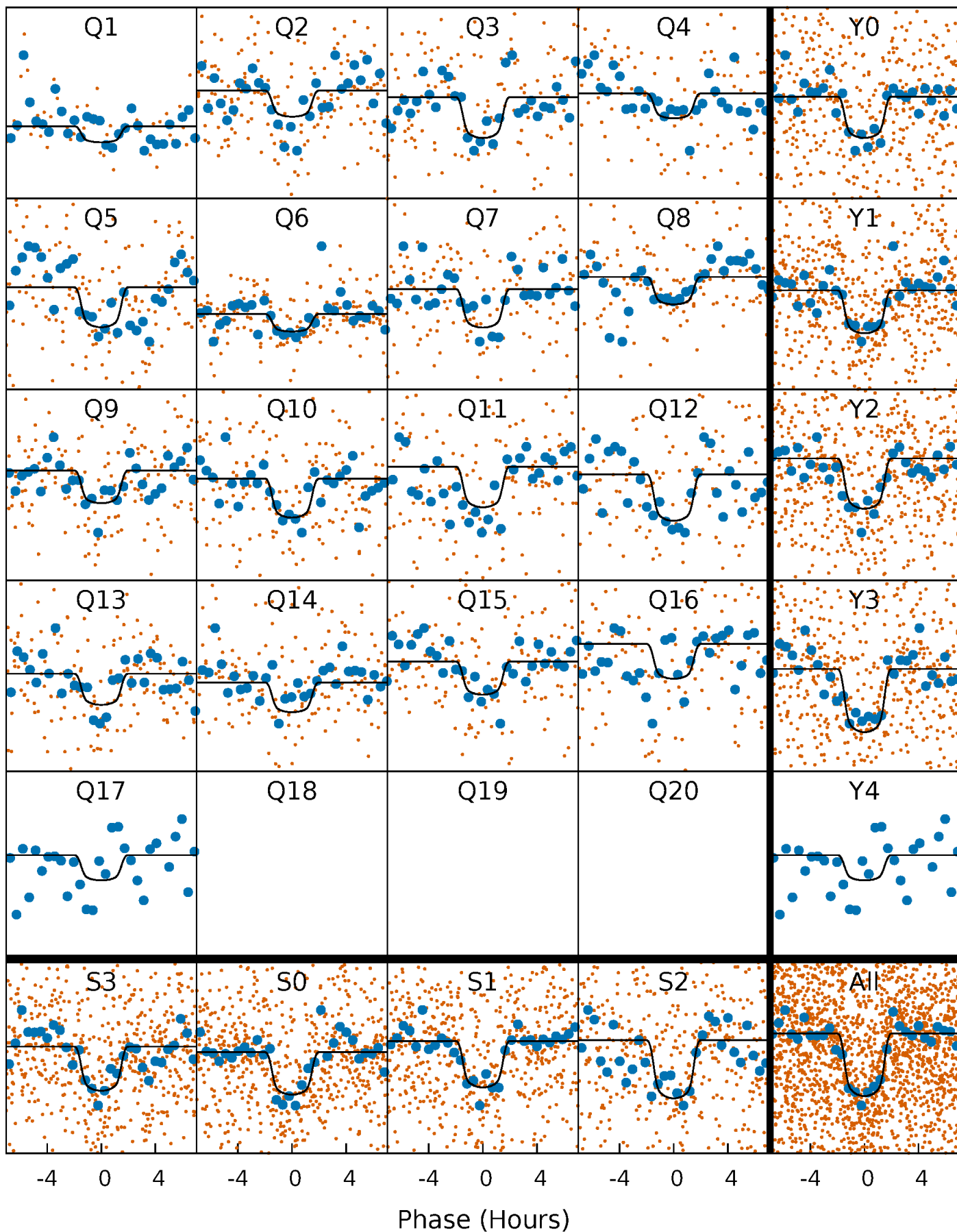
PDC Quarter-Phased Transit Curves

TCE 009763612-01 P= 16.050704 Days $T_0=141.732140$ (BKJD)



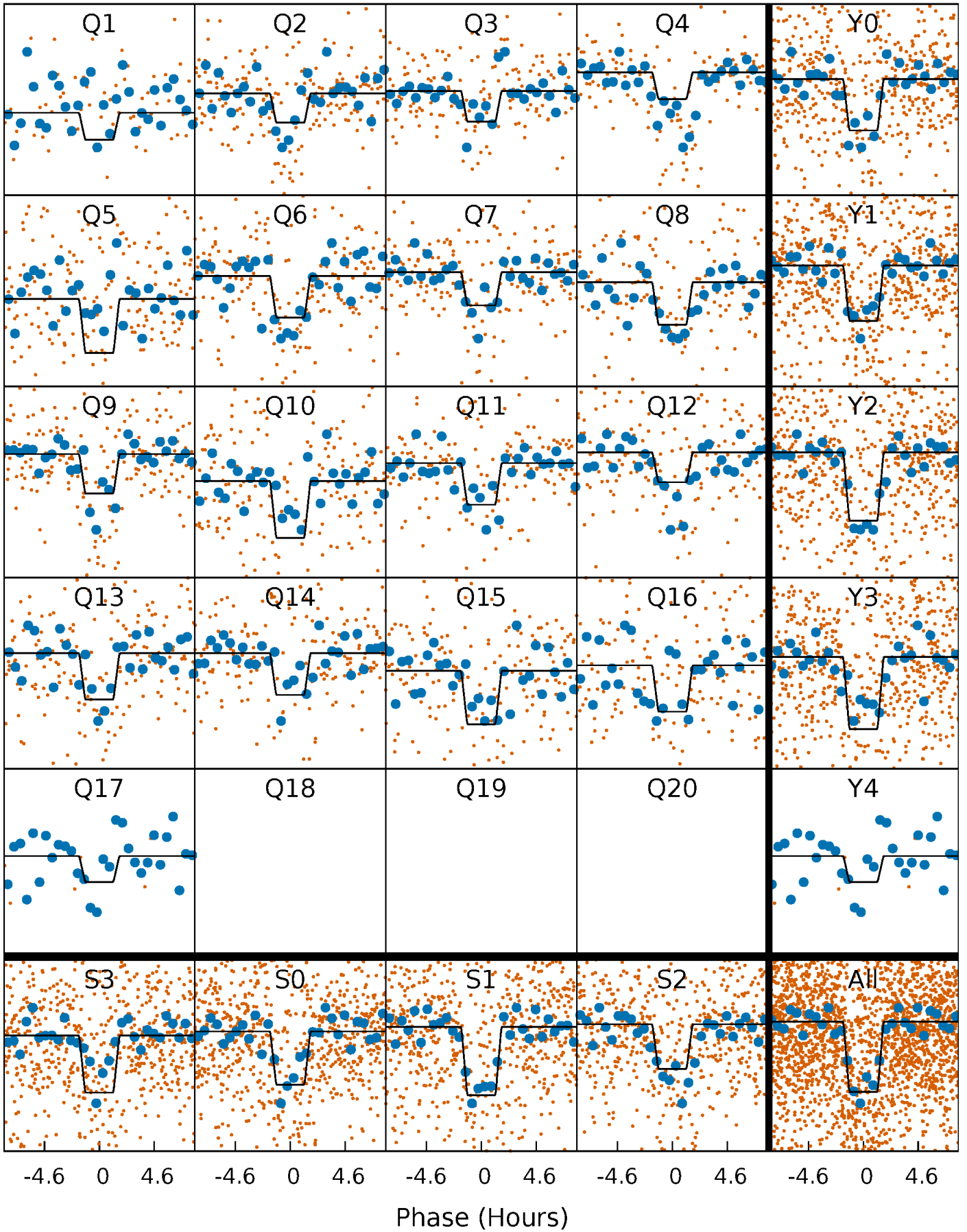
DV Quarter-Phased Transit Curves

TCE 009763612-01 P= 16.050704 Days $T_0=141.732140$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

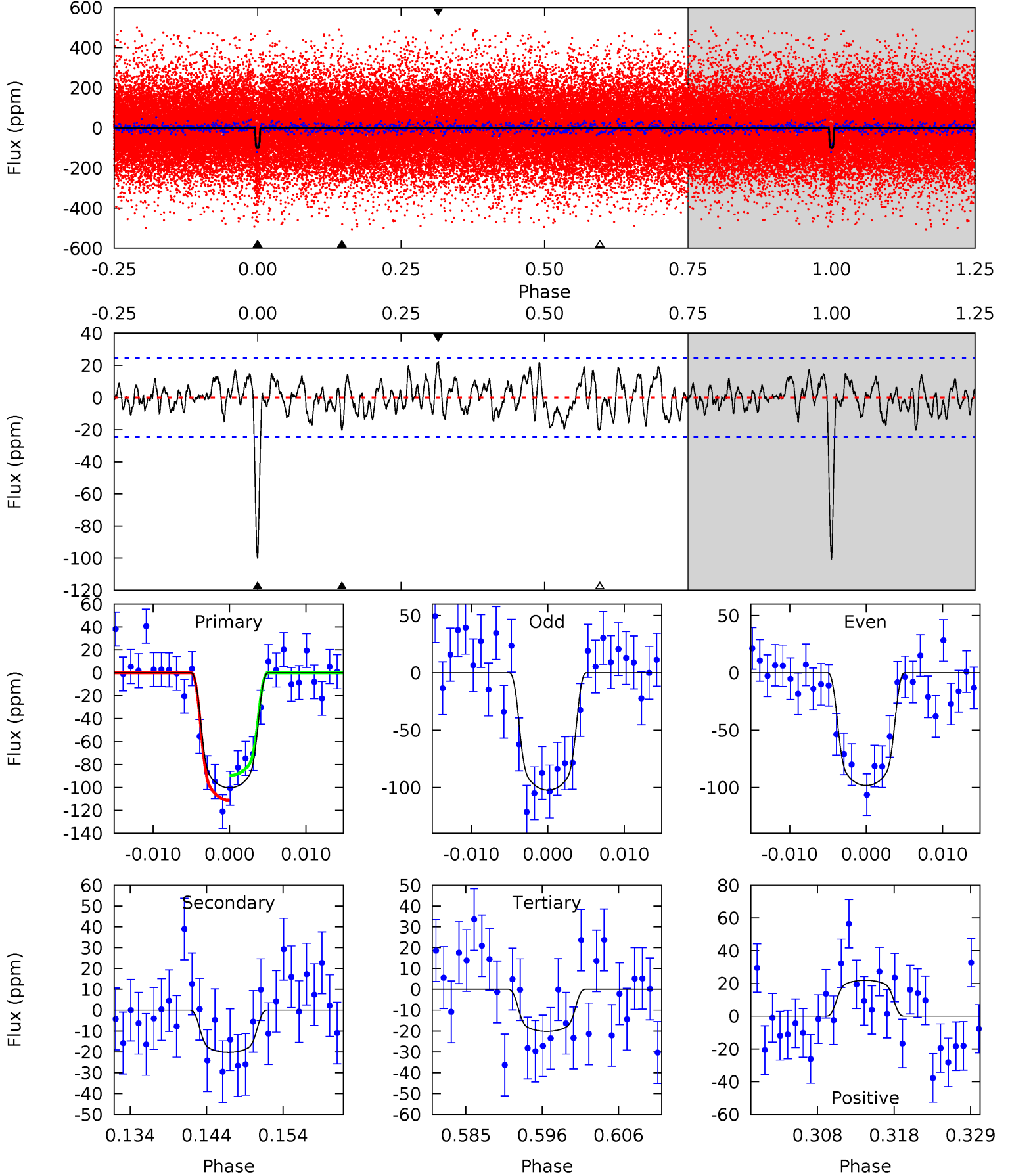
TCE 009763612-01 P= 16.050348 Days $T_0=141.742985$ (BKJD)



DV Model-Shift Uniqueness Test

009763612-01, $P = 16.050704$ Days, $E = 125.681436$ Days

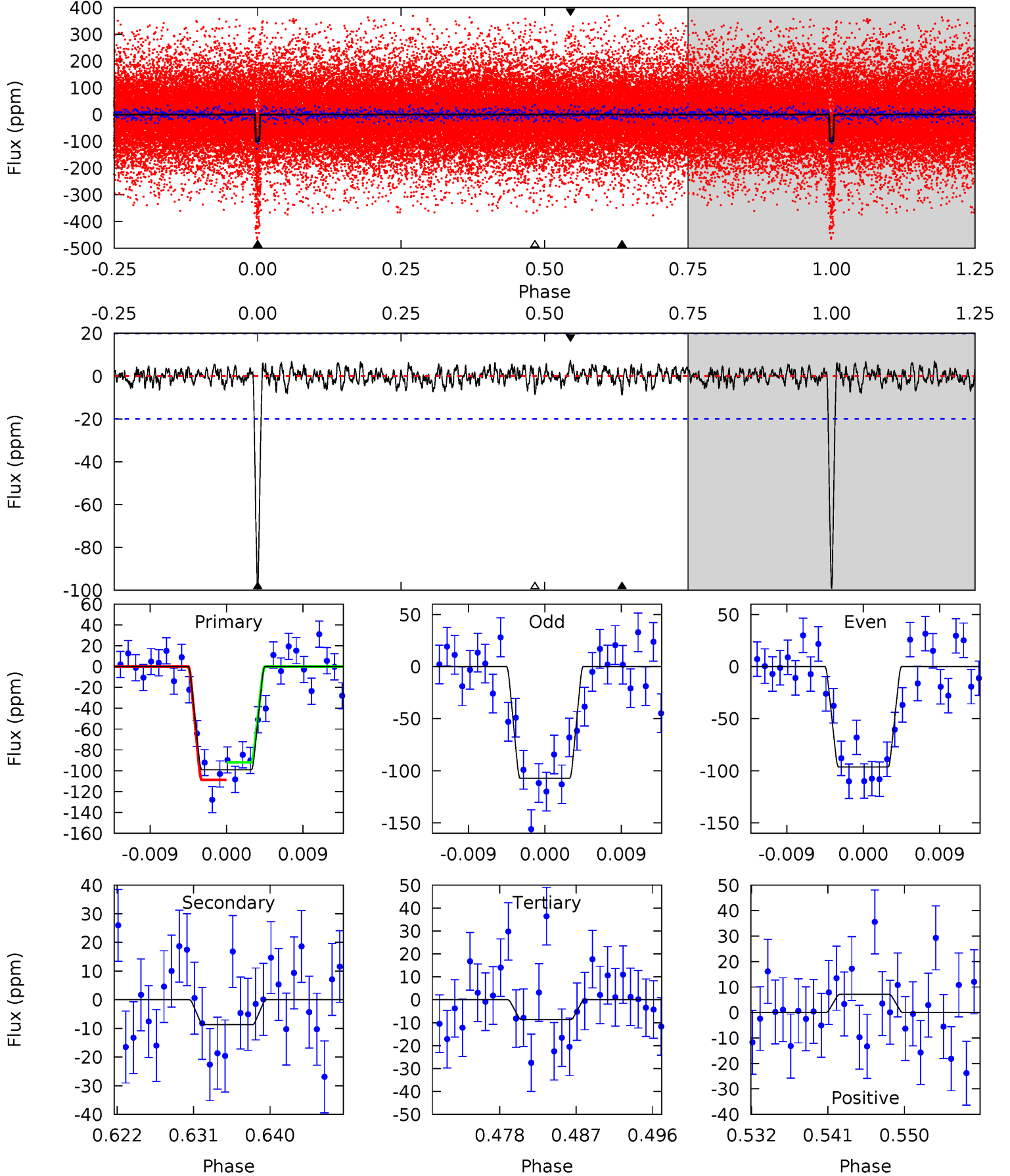
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.6	4.16	4.15	4.51	5.02	2.57	1.72	16.5	16.1	0.01	-0.34	0.41	0.99	0.18	2.23



Alt Model-Shift Uniqueness Test

009763612-01, $P = 16.050348$ Days, $E = 125.692637$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.1	2.19	2.18	1.80	5.05	2.61	0.71	22.9	23.3	0.02	0.39	1.36	1.06	0.07	2.11



Stellar Parameters For KIC 009763612

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5428^{+73}_{-81}	$4.563^{+0.014}_{-0.068}$	$0.210^{+0.100}_{-0.200}$	$0.853^{+0.066}_{-0.035}$	$0.971^{+0.028}_{-0.080}$	$2.202^{+0.171}_{-0.470}$
	+1%/-1%	+0%/-1%	+48%/-95%	+8%/-4%	+3%/-8%	+8%/-21%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 009763612-01 / KOI 3465.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-20 ± 5	$1.13^{+0.16}_{-0.15}$	888^{+21}_{-17}	3697^{+252}_{-199}	128^{+54}_{-39}
Alt.	-9 ± 4	$0.94^{+0.16}_{-0.14}$	888^{+20}_{-17}	3421^{+299}_{-335}	78^{+57}_{-39}

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 $A_{obs} \gg 1.0$

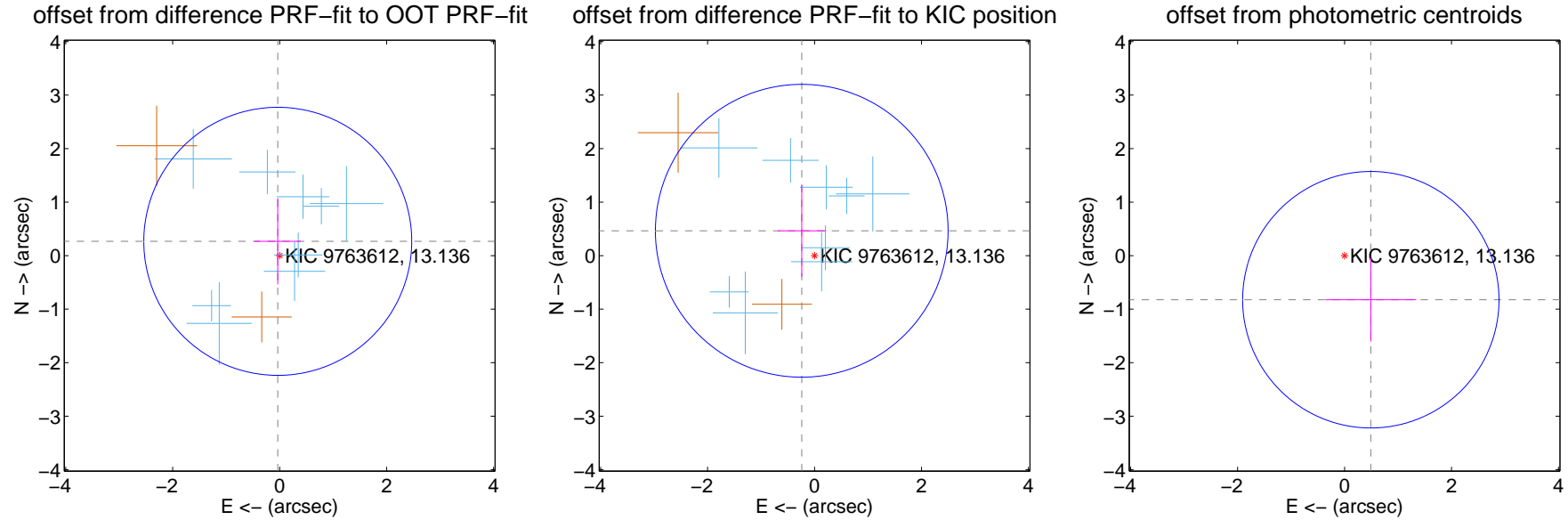
DV Centroid Data

Supplemental centroid analysis for 009763612-01. Kepler magnitude: 13.14. Transit SNR 10.75

There are 9 quarters with good PRF difference image offsets

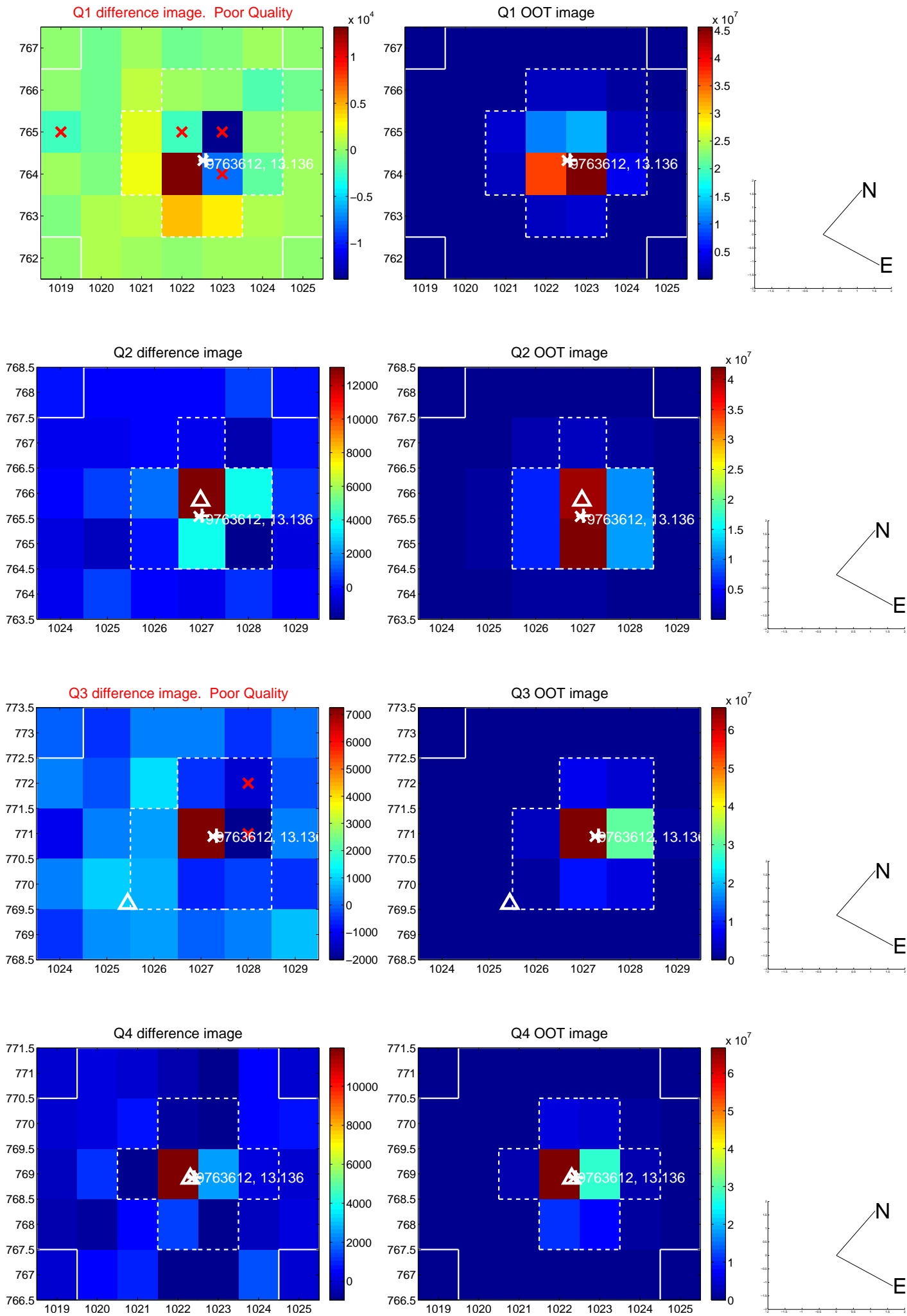
The direct PRF centroid is offset from the target star catalog position by about 0.35 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.270 ± 0.835	0.32	0.035 ± 0.432	0.267 ± 0.806
PRF-fit source offset from KIC position	0.523 ± 0.912	0.57	0.240 ± 0.448	0.465 ± 0.859
photometric centroid source offset	0.96 ± 0.80	1.20	-0.49 ± 0.85	-0.82 ± 0.78

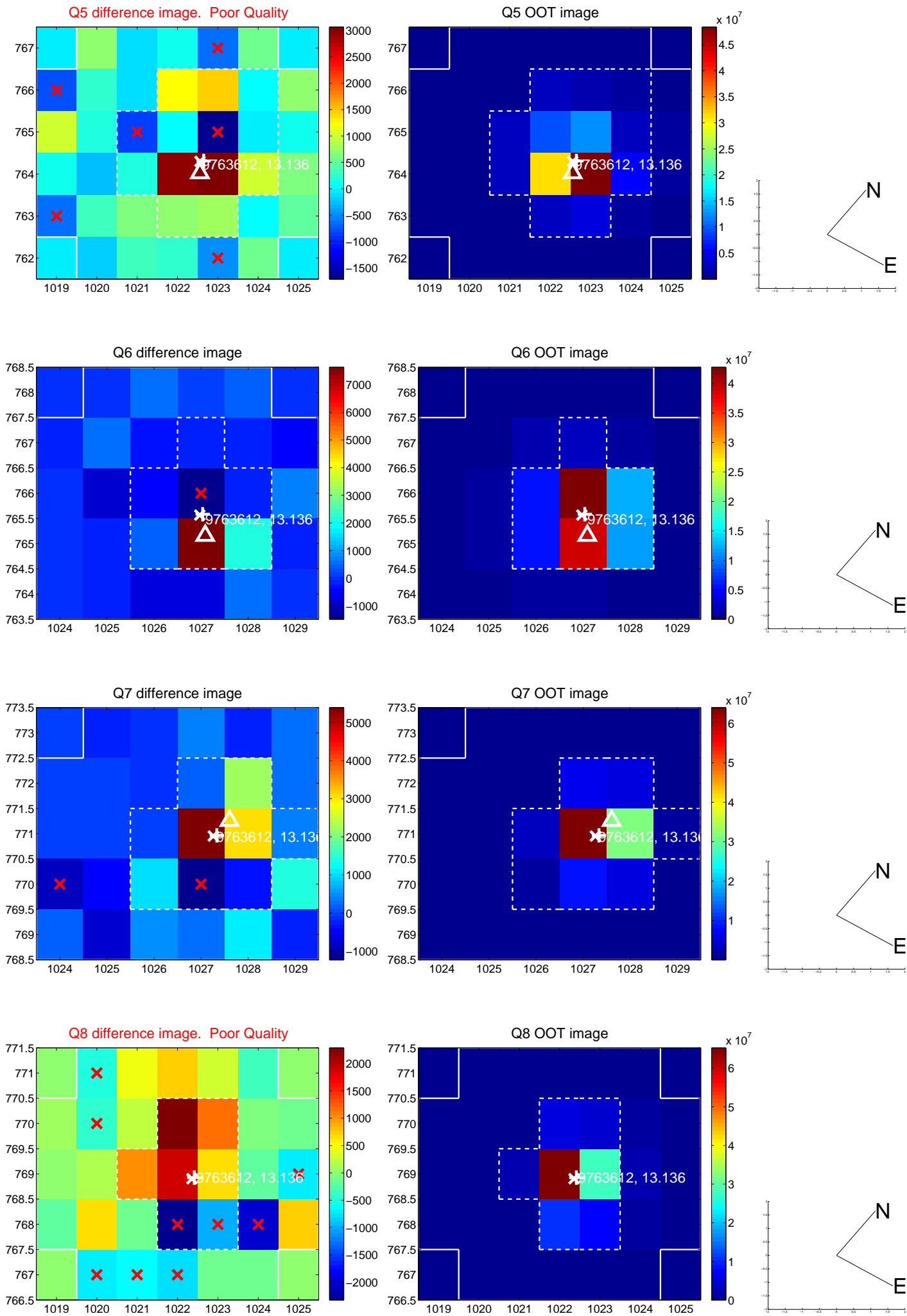


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

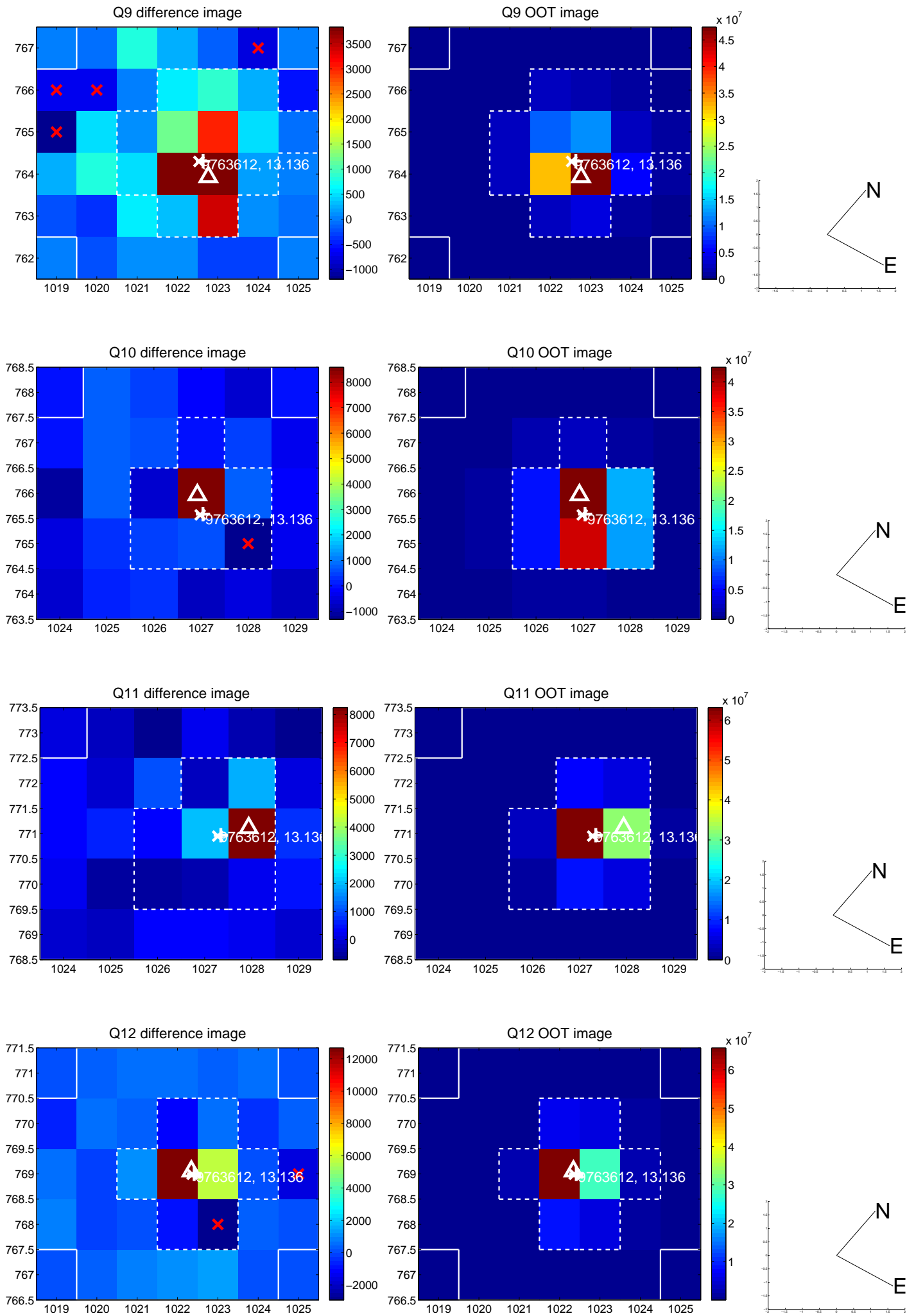
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



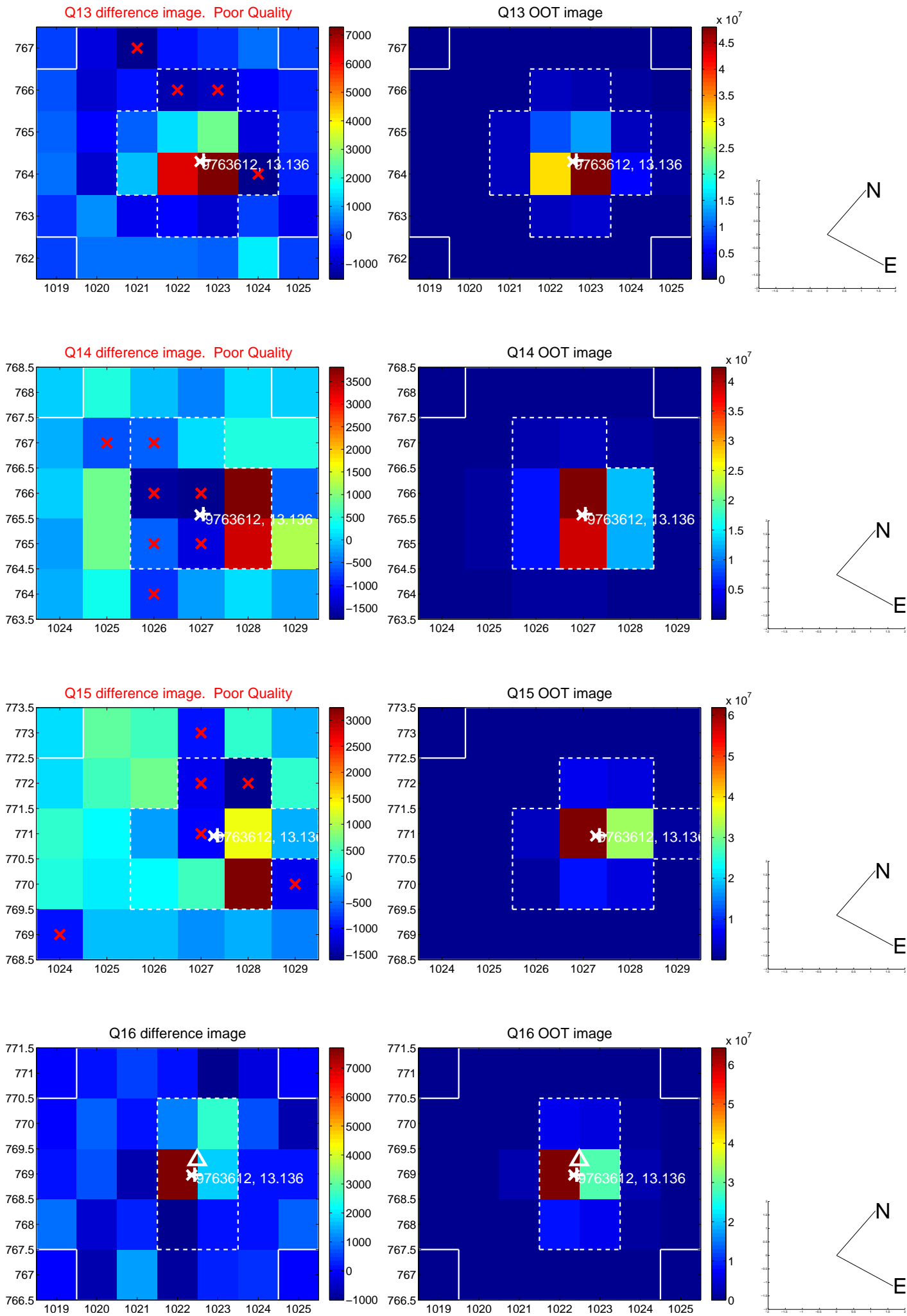
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



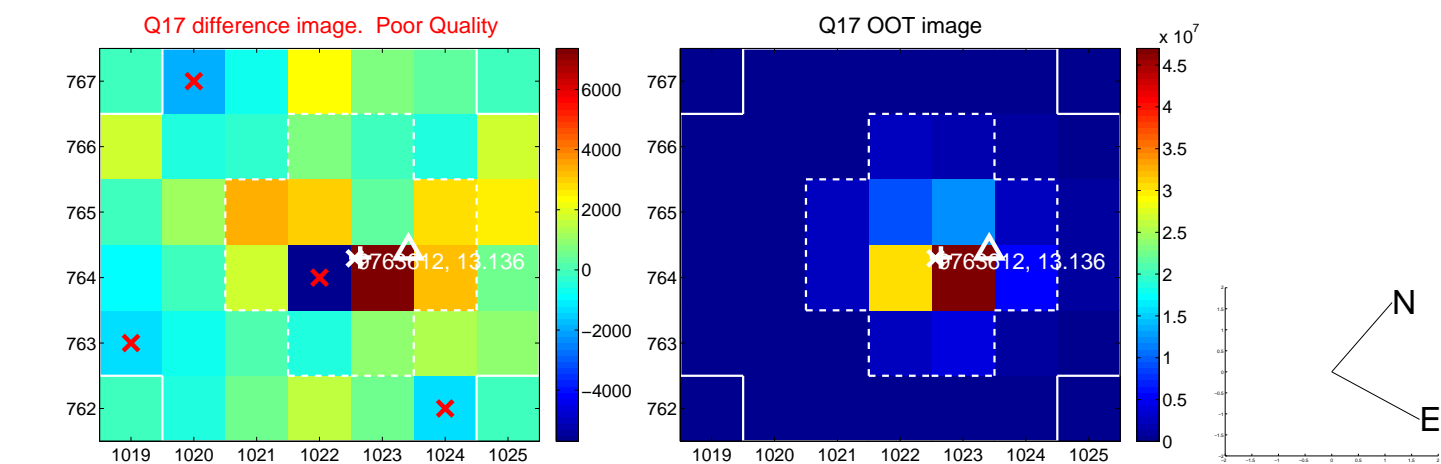
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



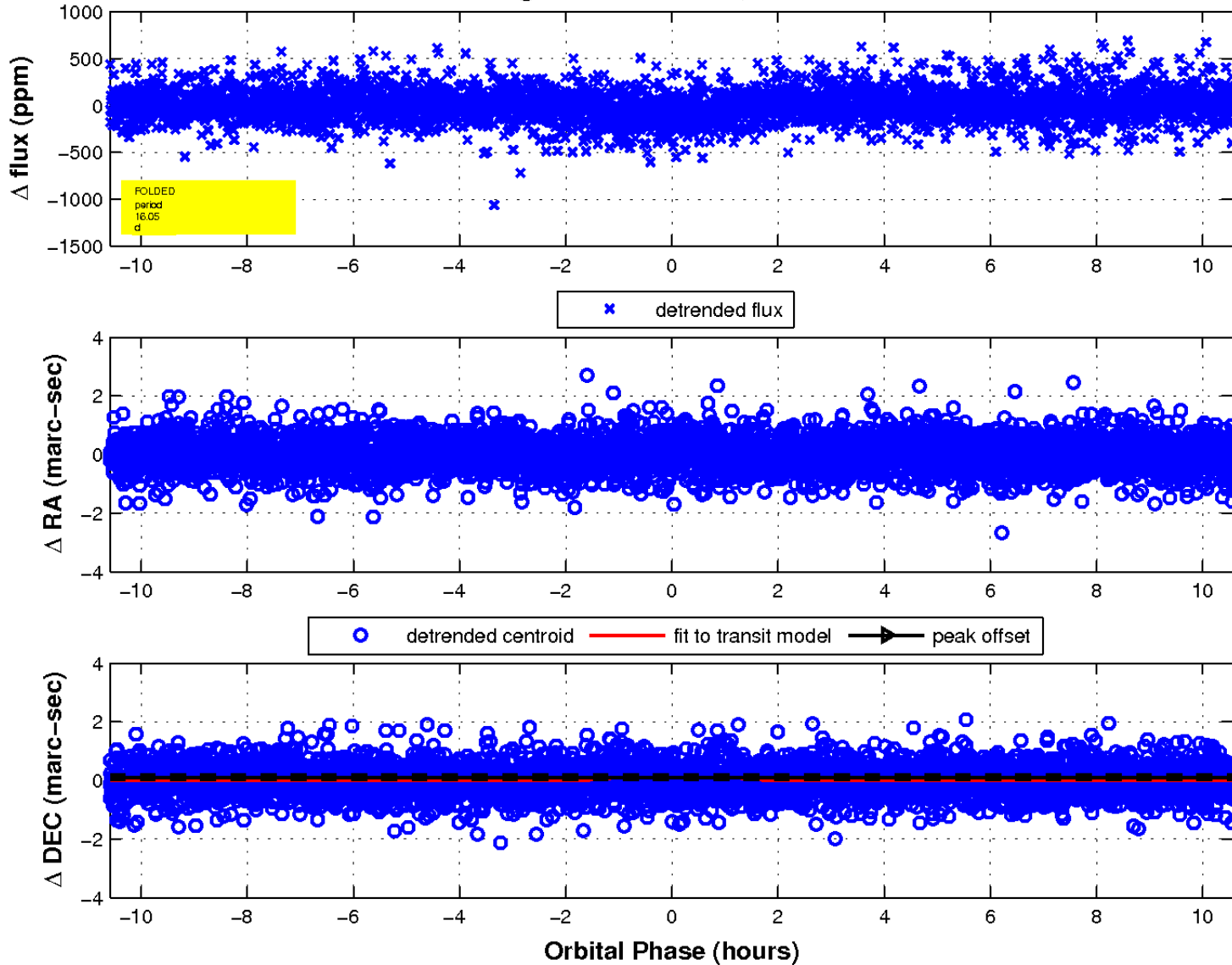
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

