

KIC 009474067

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})
009474067-01	OBS	No	0.611075	131.780189	23.2	1.551	8.5	7.0	1.06	6542	0.60	8738.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009474067-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET

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

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

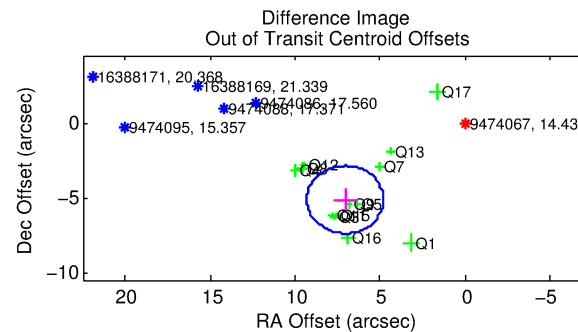
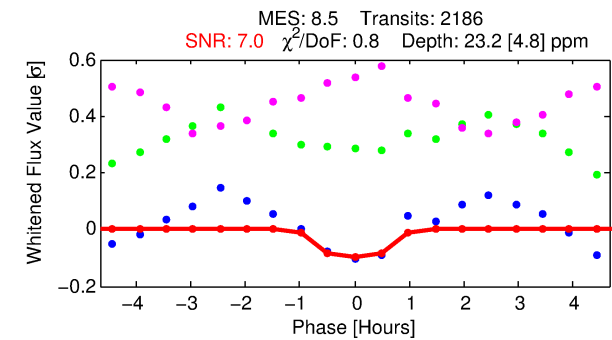
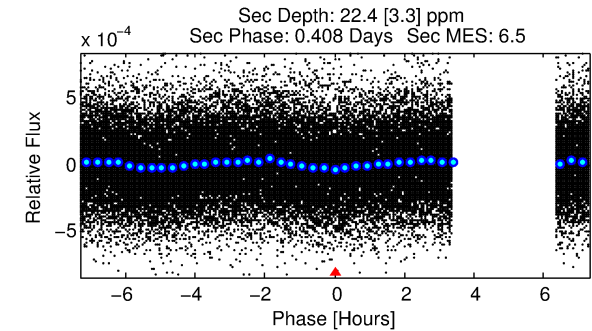
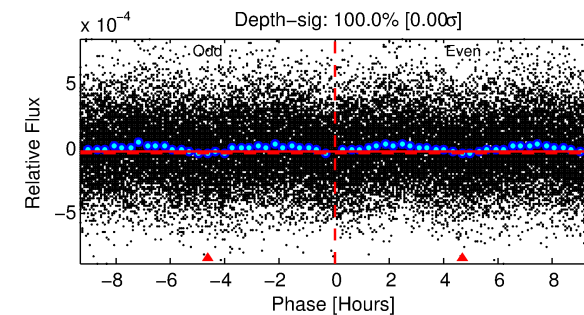
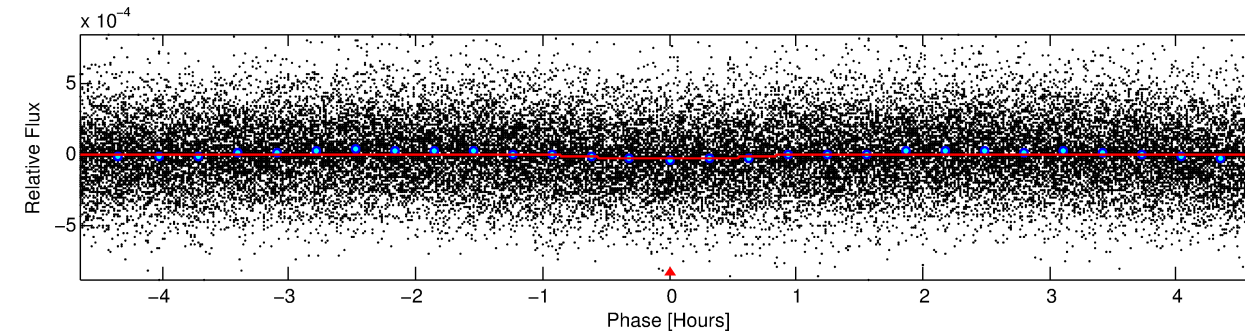
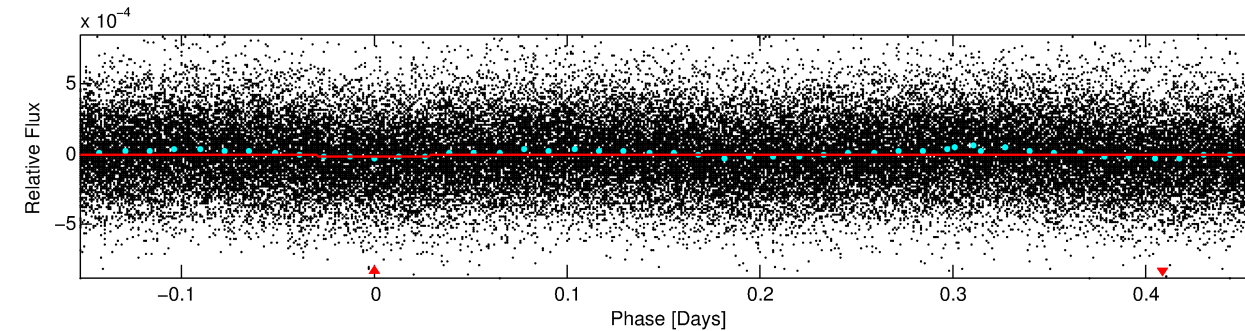
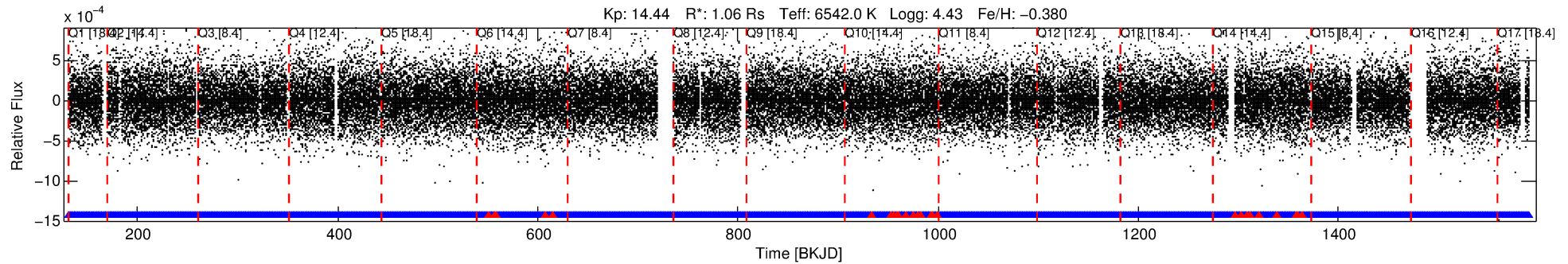
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009474067-01

No Significant Match Found

DV One-Page Summary

KIC: 9474067 Candidate: 1 of 1 Period: 0.611 d



DV Fit Results:

Period = 0.61107 [0.00002] d
Epoch = 131.7802 [0.0034] BKJD
Rp/R* = 0.0052 [0.0018]
a/R* = 1.64 [2.03]
b = 0.90 [0.42]
Seff = 8738.18 [3081.05]
Teq = 2465 [217] K
Rp = 0.60 [0.26] Re
a = 0.0145 [0.0033] AU
Ag = 7.27 [5.69] [1.10 σ]
Teffp = 6260 [1130] K [3.30 σ]

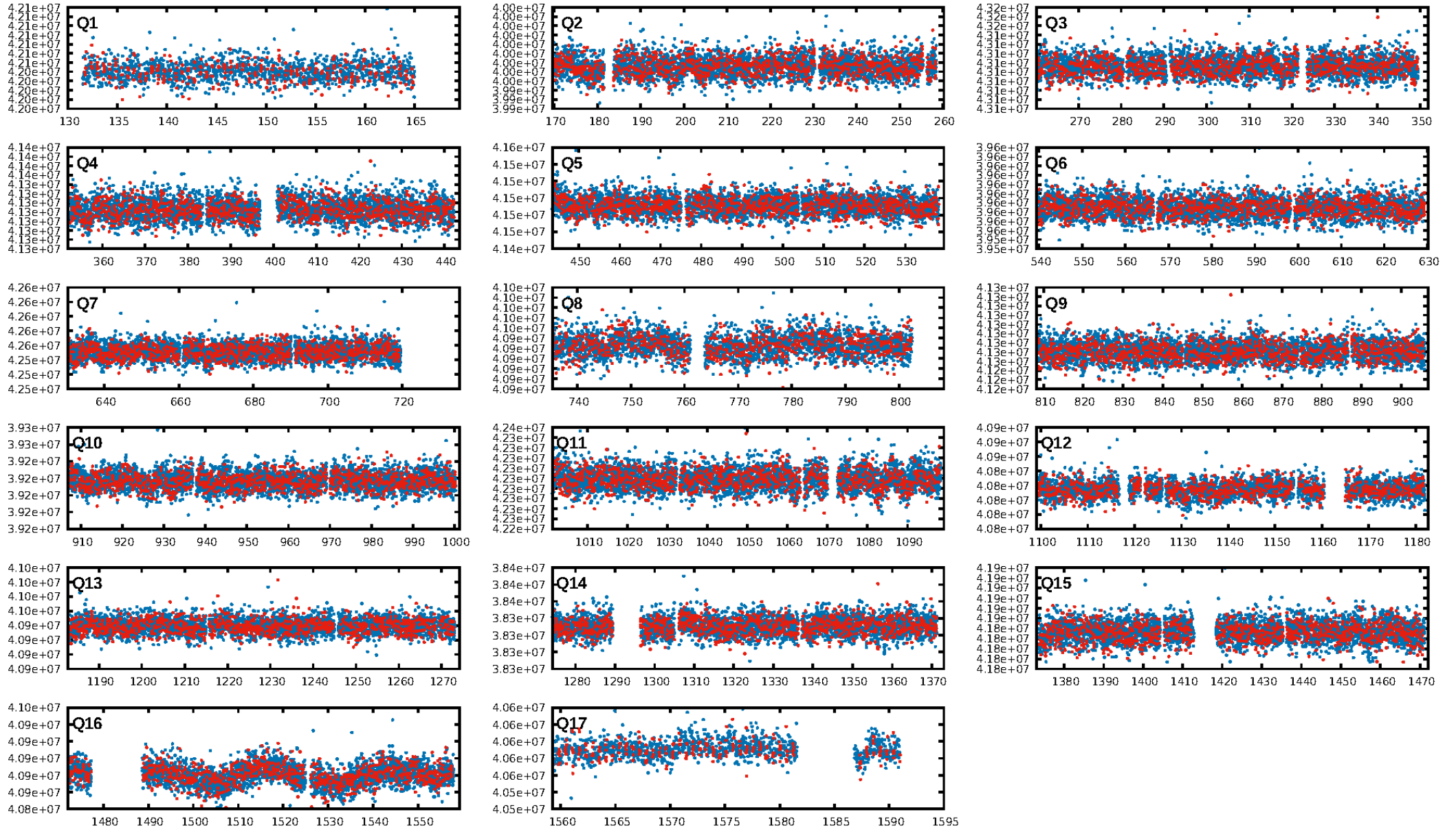
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.98e-16
RollingBand-fgt: 0.99 [2061/2087]
GhostDiagnostic-chr: -32.72
Centroid-sig: 0.0%
Centroid-so: 7.711 arcsec [4.02 σ]
OotOffset-rm: 8.720 arcsec [11.58 σ]
KicOffset-rm: 8.774 arcsec [10.86 σ]
OotOffset-st: 0/4/4/5 [13]
KicOffset-st: 0/4/4/5 [13]
DiffImageQuality-fgm: 0.54 [7/13]
DiffImageOverlap-fno: 1.00 [17/17]

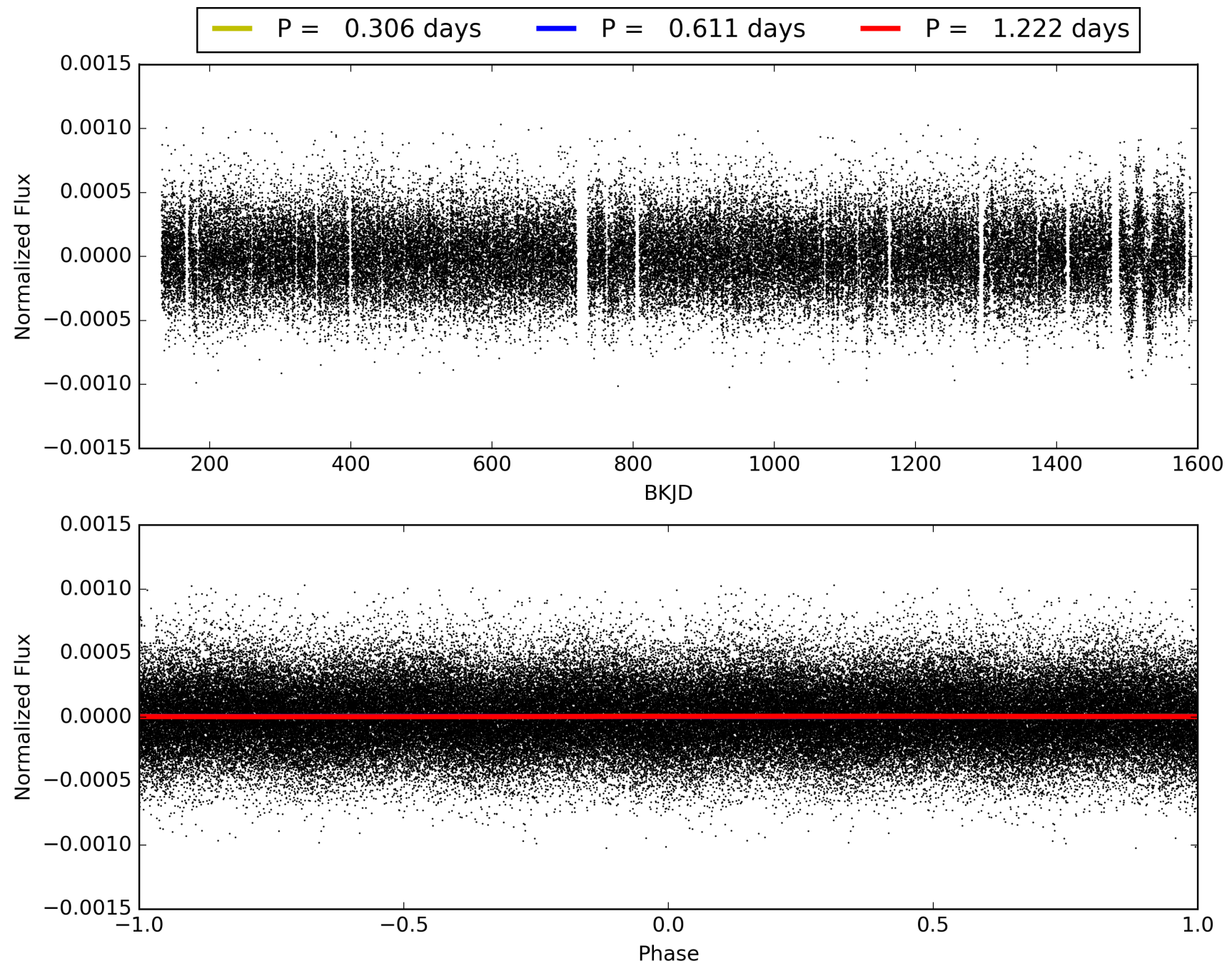
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 08:14:12 Z

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

TCE 009474067-01, PDC Light Curves

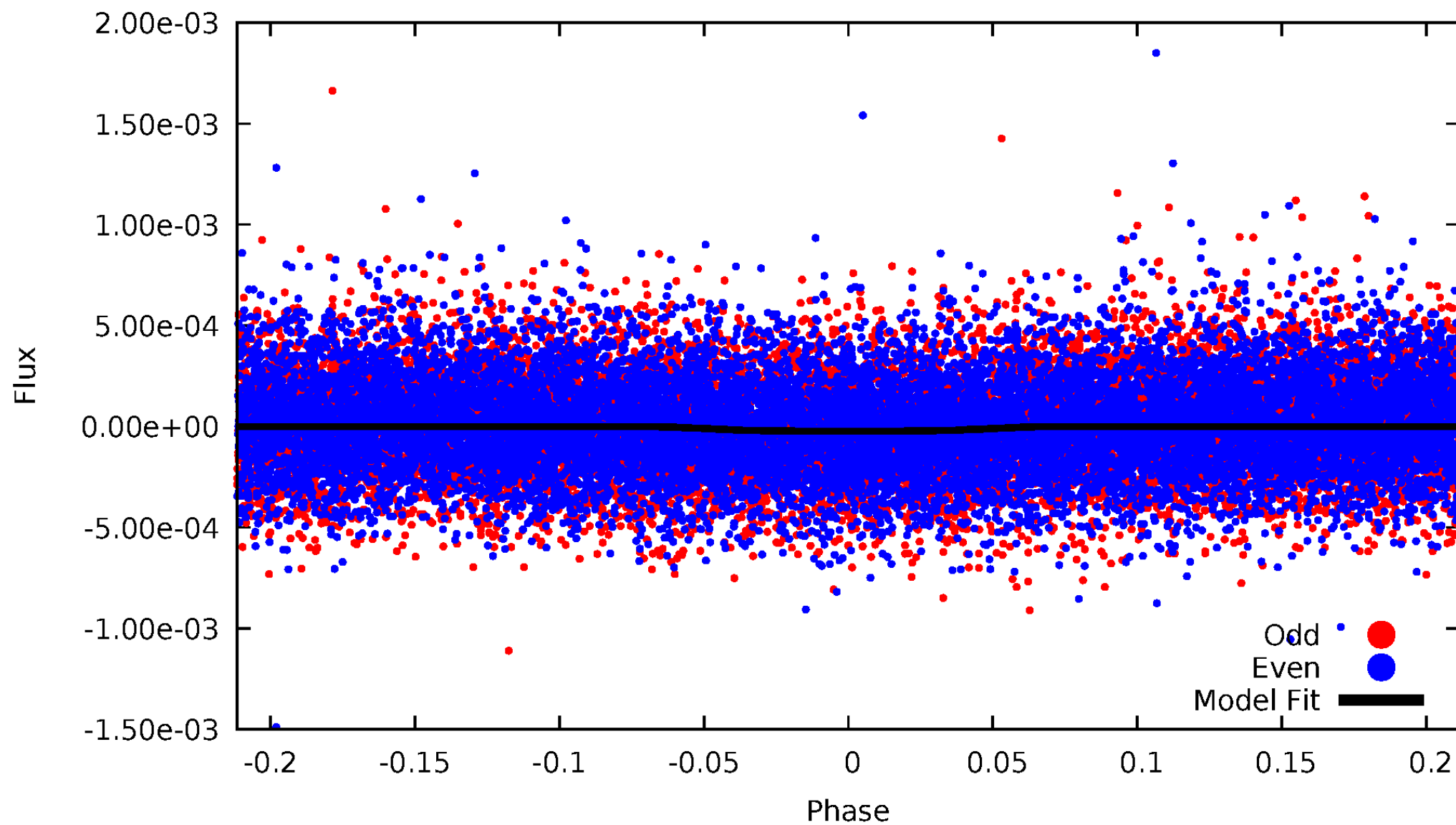


TCE 009474067-01



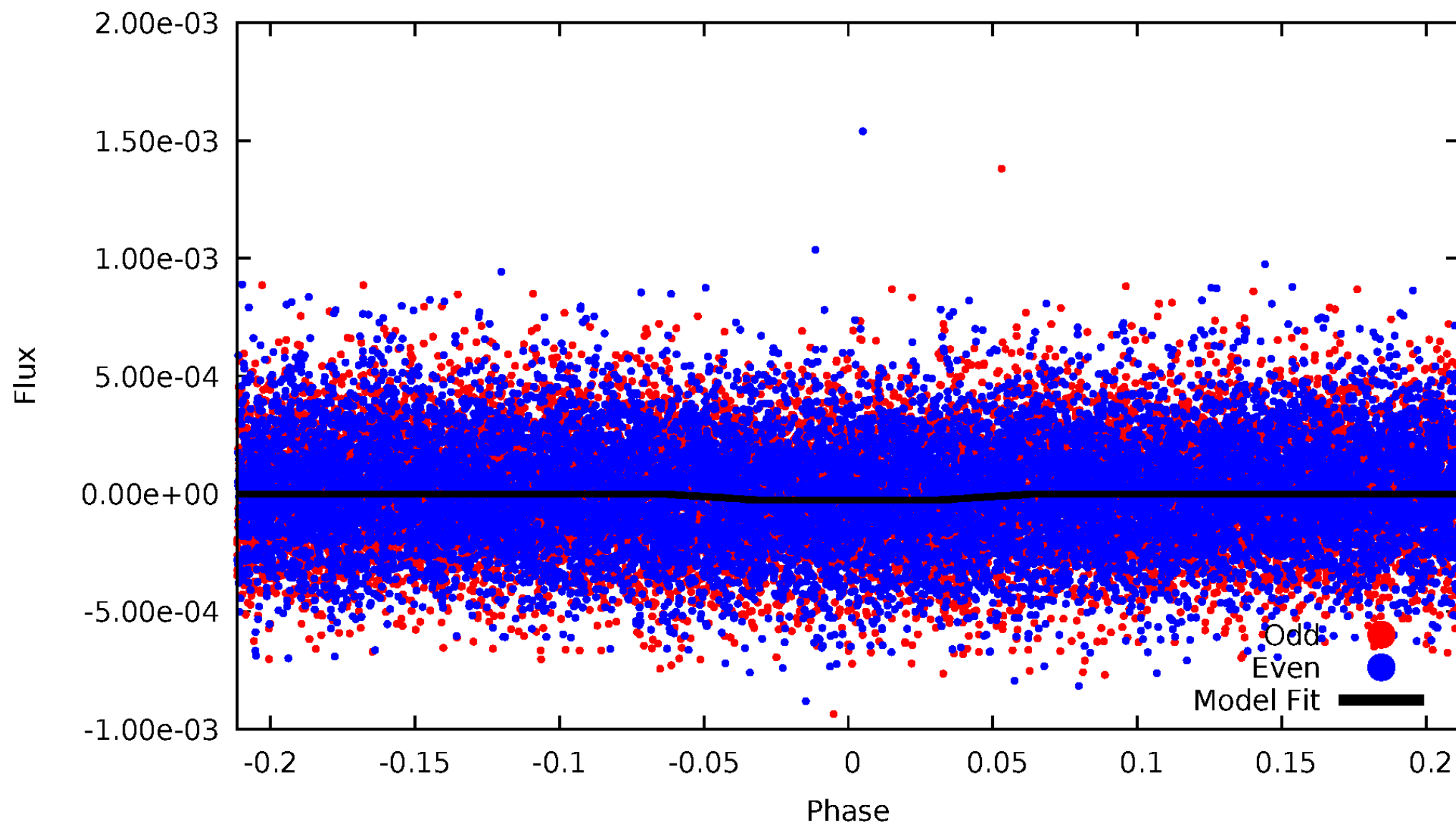
DV Odd/Even

TCE 009474067-01



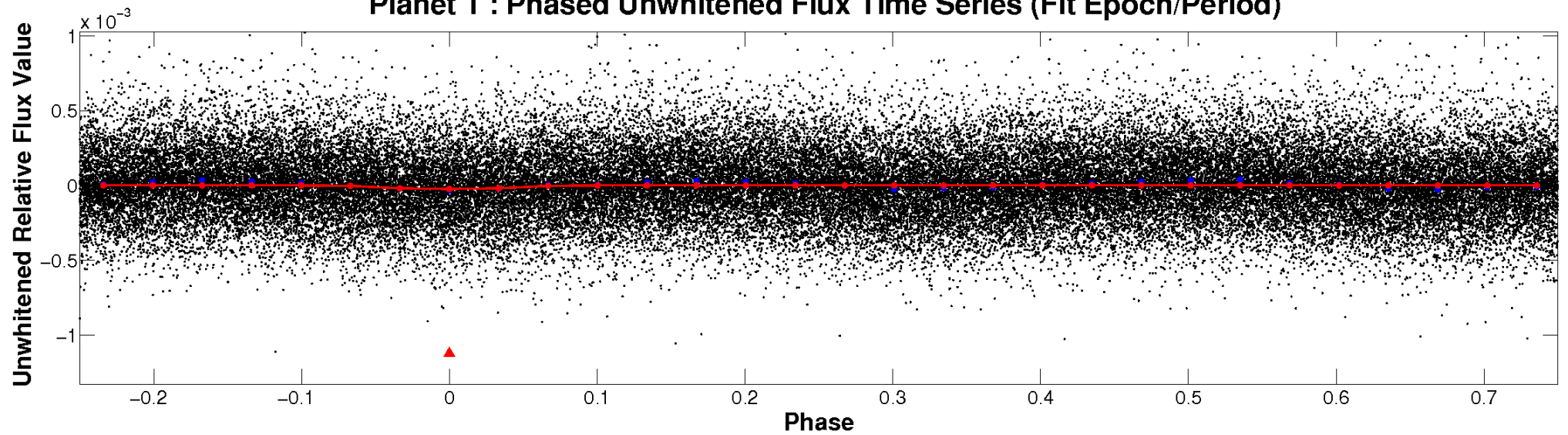
ALT Odd/Even

TCE 009474067-01

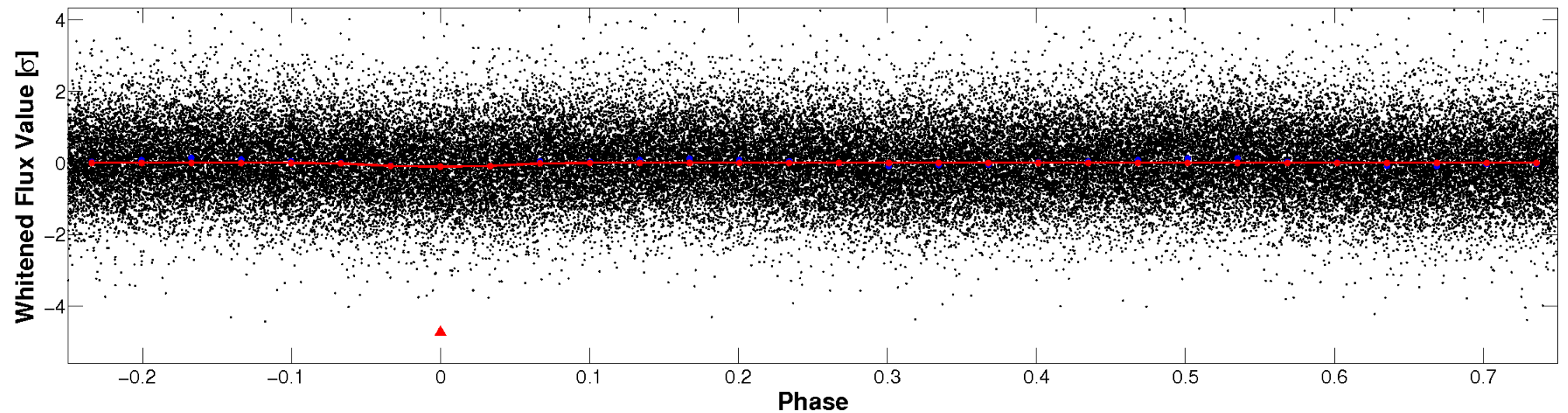


Non-Whitened Vs. Whitened Light Curve

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

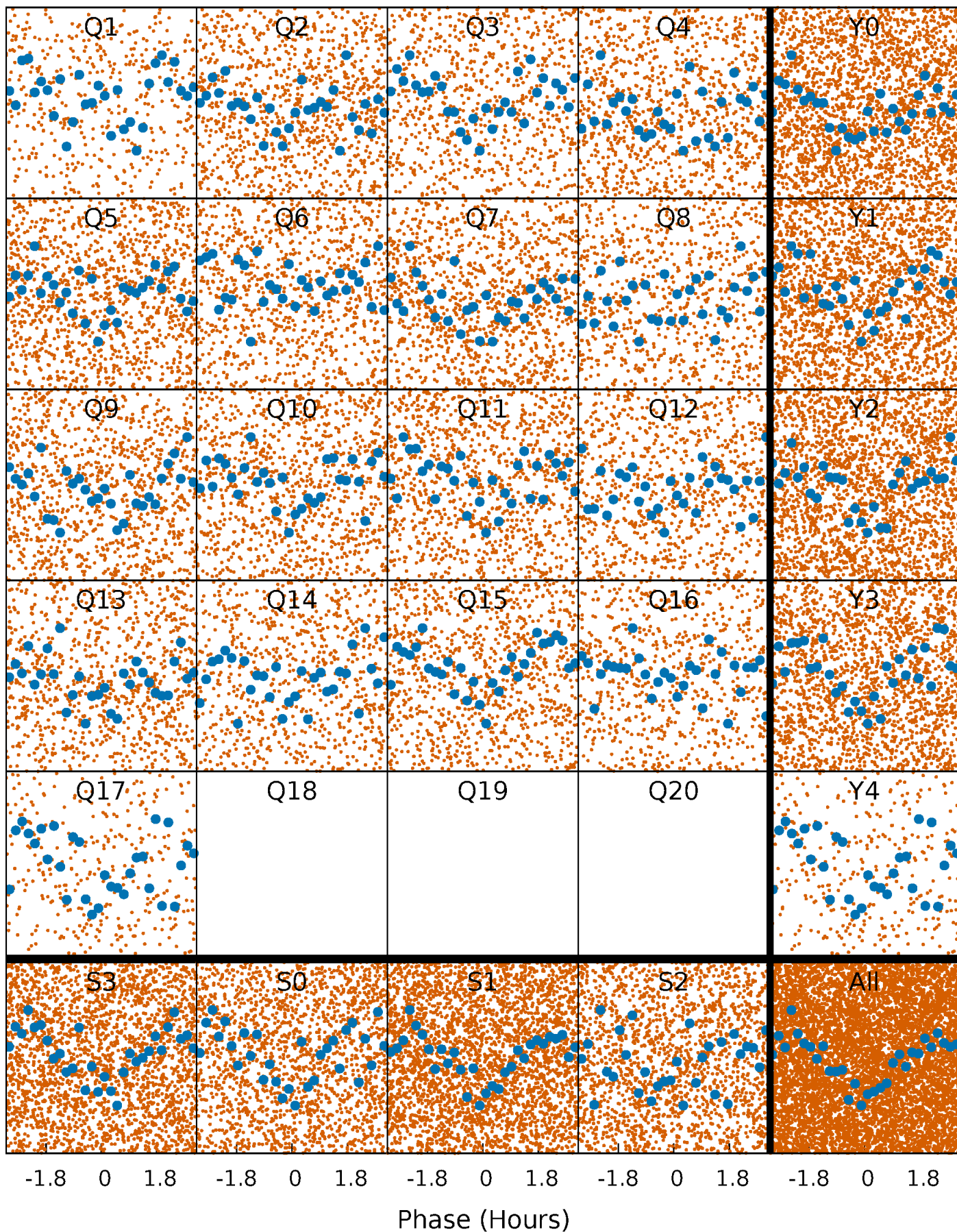


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



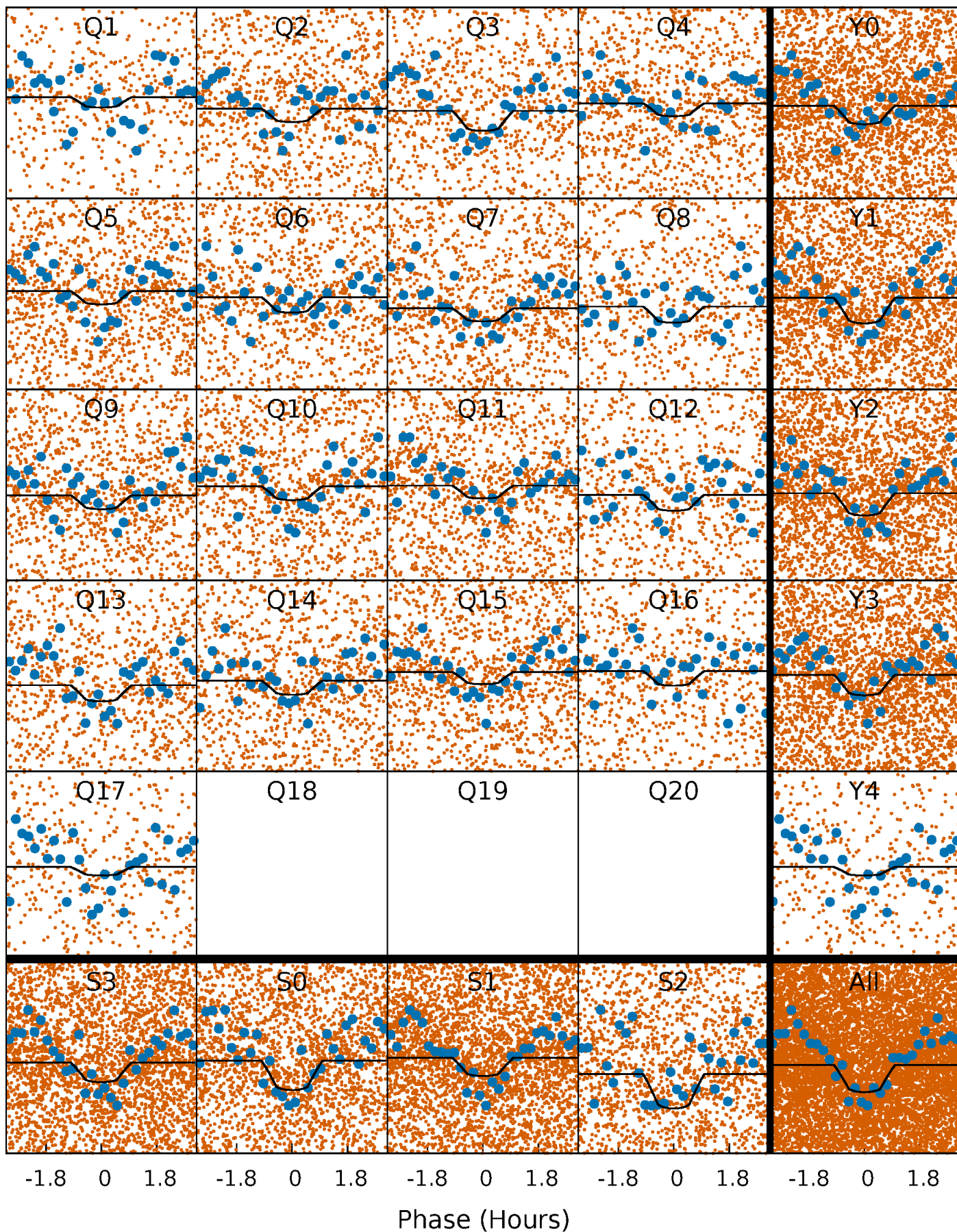
PDC Quarter-Phased Transit Curves

TCE 009474067-01 P= 0.611075 Days $T_0=131.780189$ (BKJD)



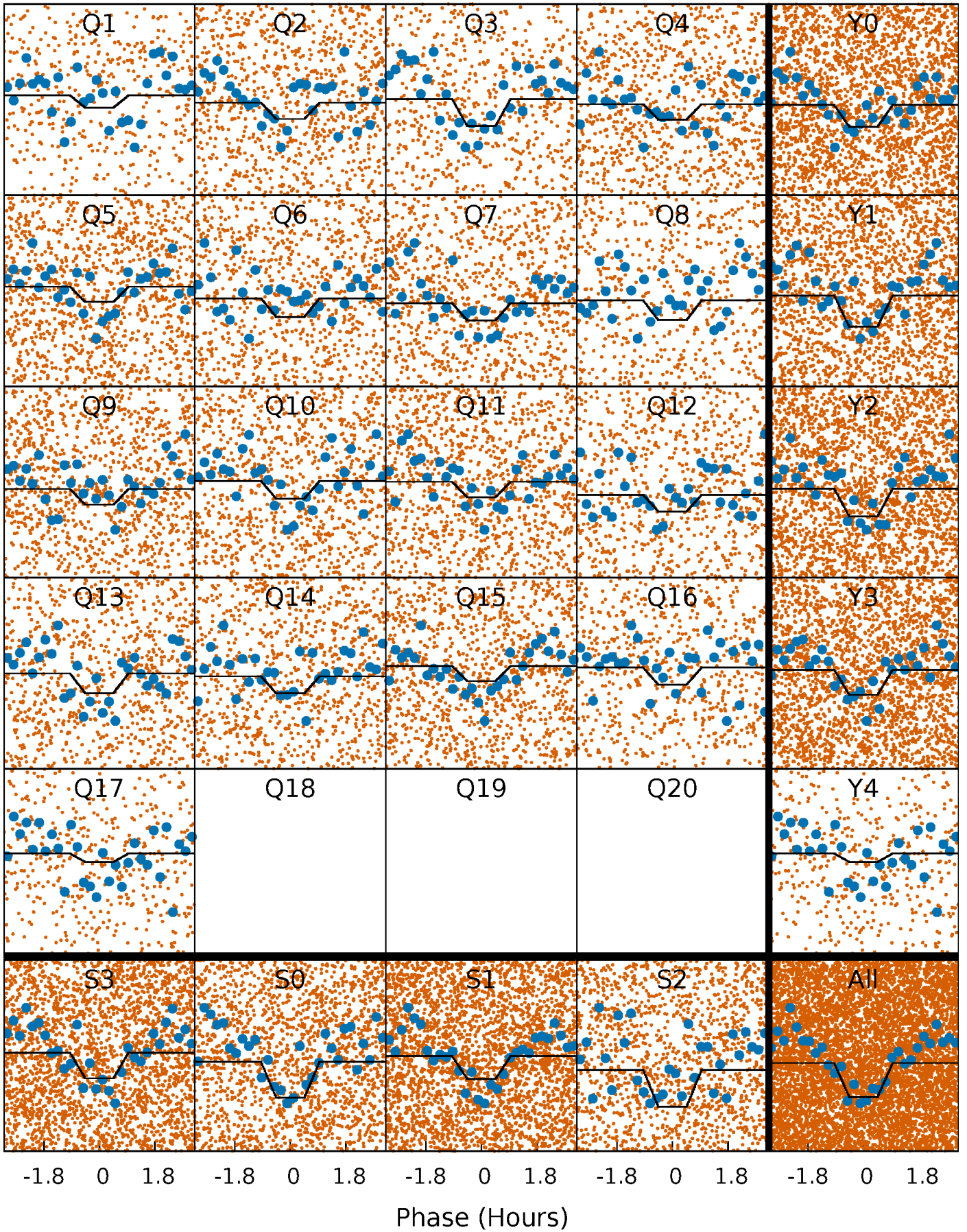
DV Quarter-Phased Transit Curves

TCE 009474067-01 P= 0.611075 Days $T_0=131.780189$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

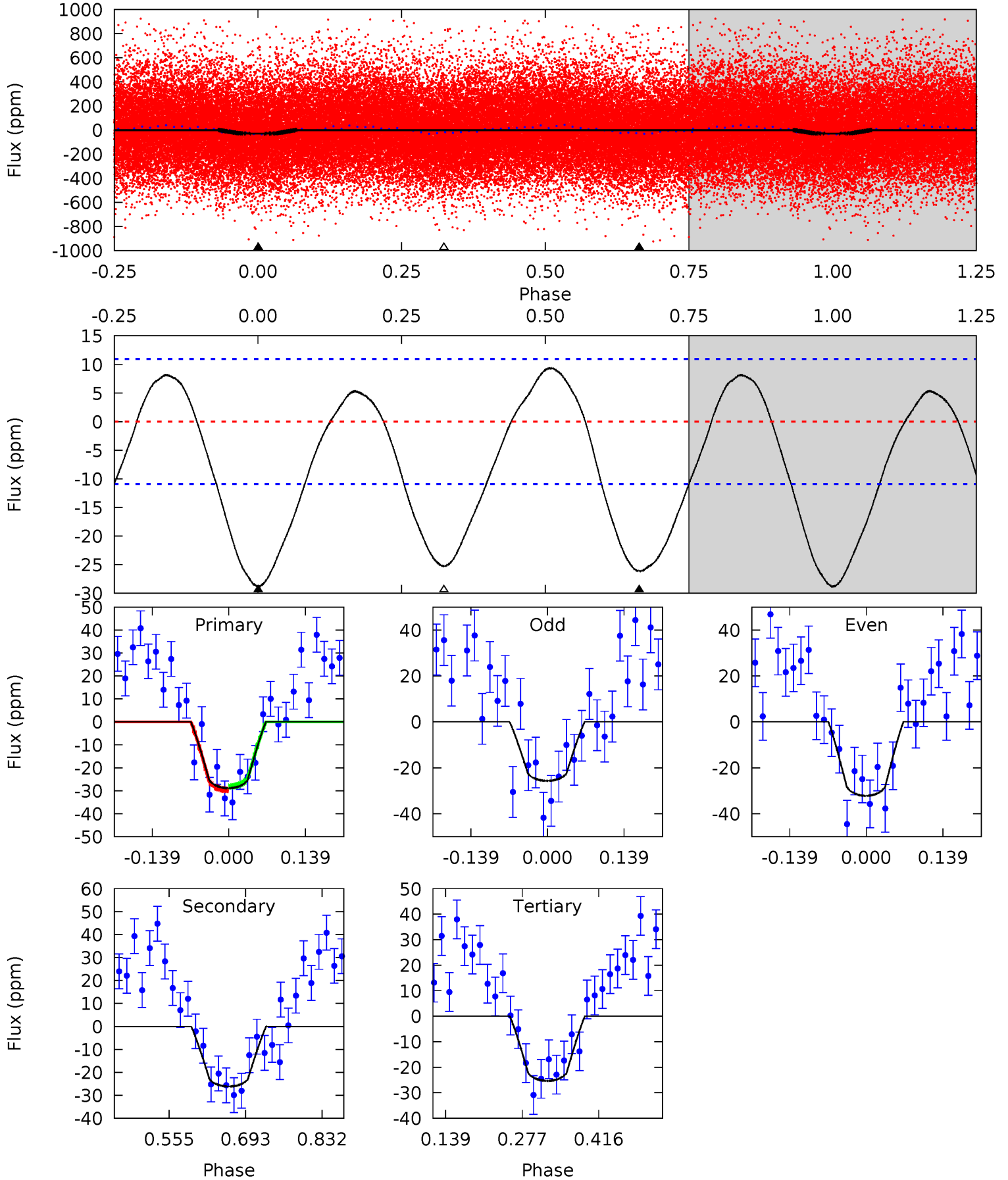
TCE 009474067-01 P= 0.611075 Days $T_0=131.780189$ (BKJD)



DV Model-Shift Uniqueness Test

009474067-01, P = 0.611075 Days, E = 131.169114 Days

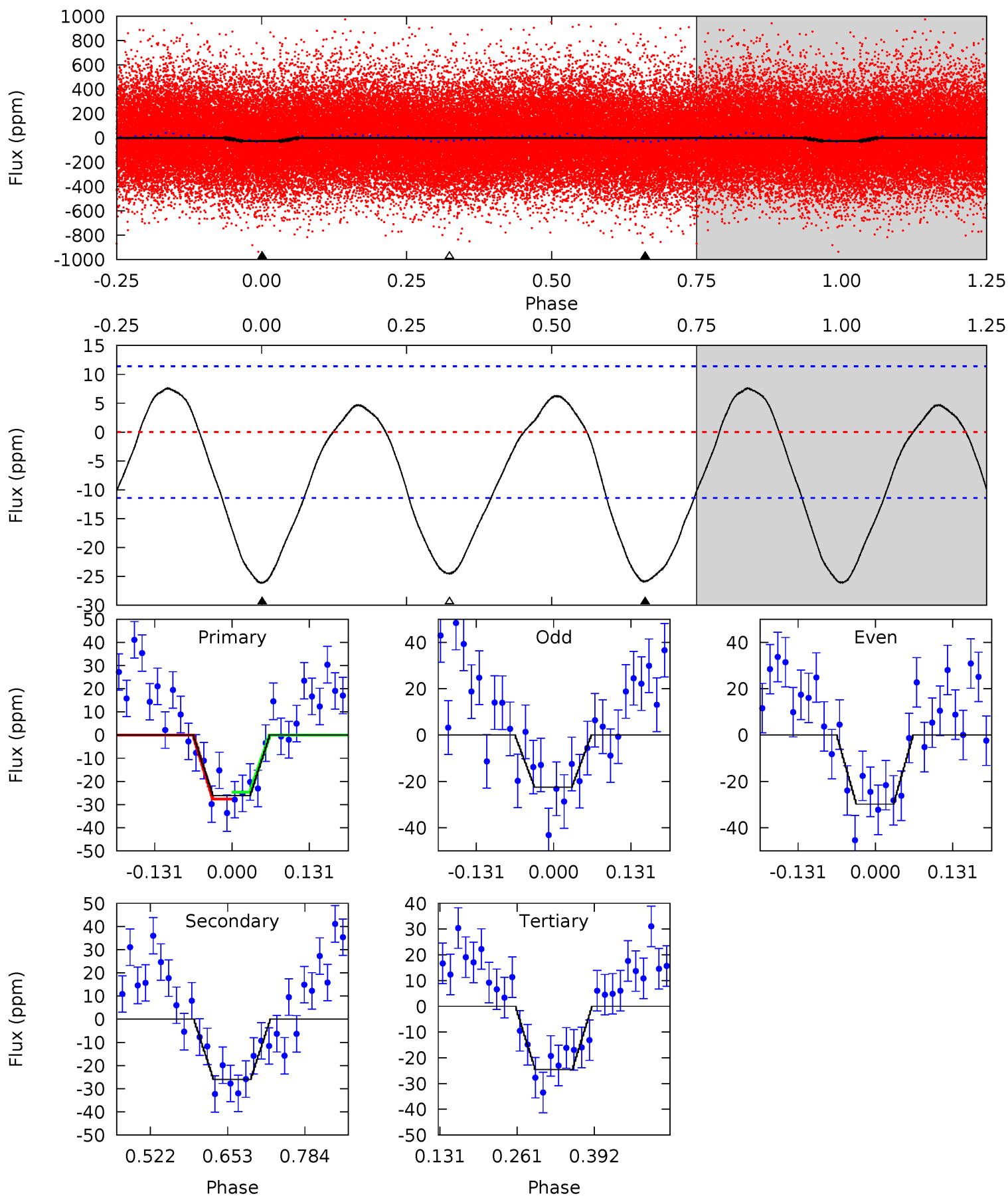
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.9	10.8	10.4	0	4.50	1.48	4.77	1.45	11.9	0.33	10.8	1.35	1.01	0.25	0.30



Alt Model-Shift Uniqueness Test

009474067-01, P = 0.611075 Days, E = 131.169114 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	10.2	9.70	0	4.51	1.51	4.20	0.63	10.3	0.55	10.2	1.44	1.09	0.23	0.58



Stellar Parameters For KIC 009474067

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6542^{+147}_{-212}	$4.427^{+0.060}_{-0.180}$	$-0.380^{+0.250}_{-0.300}$	$1.061^{+0.281}_{-0.121}$	$1.096^{+0.146}_{-0.131}$	$1.292^{+0.408}_{-0.647}$
	+2%/-3%	+1%/-4%	+66%/-79%	+26%/-11%	+13%/-12%	+32%/-50%
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 009474067-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-26 ± 2	$0.62^{+0.24}_{-0.22}$	3491^{+241}_{-161}	6436^{+1724}_{-975}	$7.727^{+9.855}_{-3.618}$
Alt.	-26 ± 3	$0.63^{+0.25}_{-0.23}$	3493^{+217}_{-159}	6373^{+1957}_{-929}	$7.653^{+10.868}_{-3.727}$

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

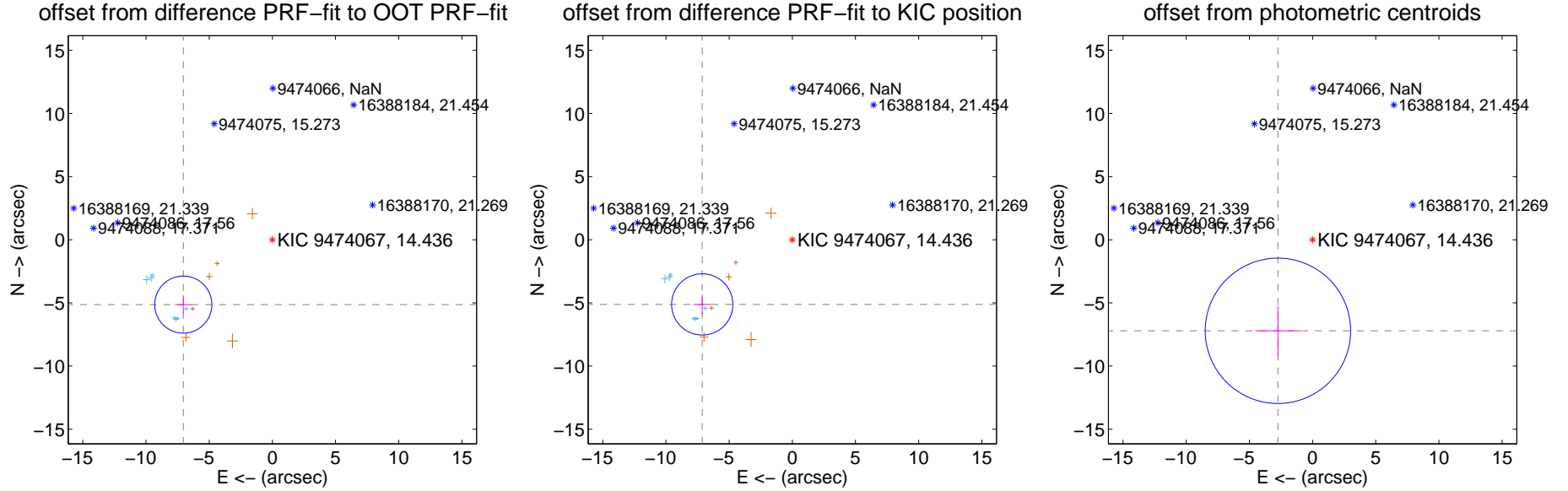
DV Centroid Data

Supplemental centroid analysis for 009474067-01. Kepler magnitude: 14.44. Transit SNR 7.02

There are 7 quarters with good PRF difference image offsets

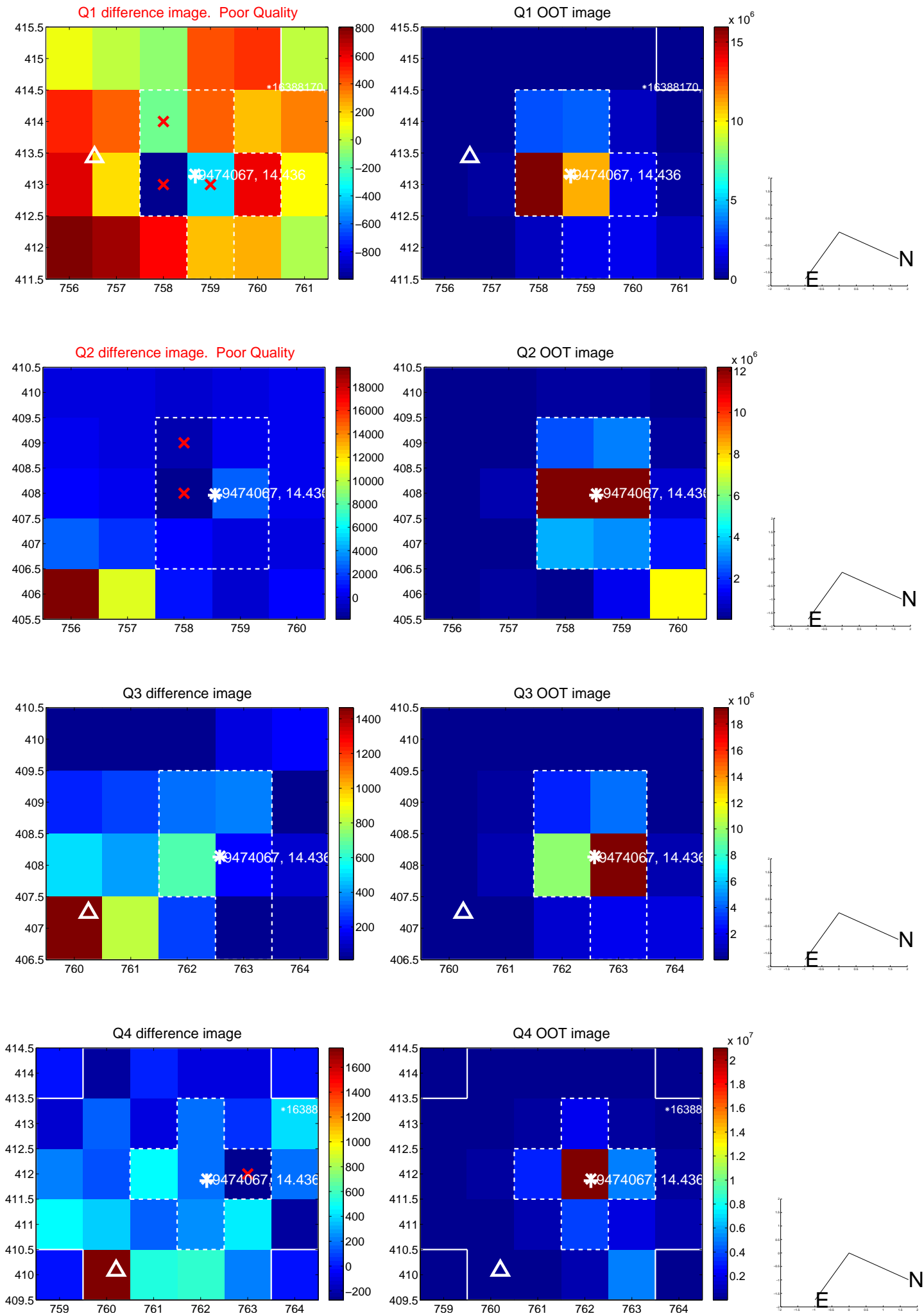
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	8.720 ± 0.753	11.58	7.048 ± 0.663	-5.134 ± 0.740
PRF-fit source offset from KIC position	8.774 ± 0.808	10.86	7.126 ± 0.704	-5.120 ± 0.757
photometric centroid source offset	7.71 ± 1.92	4.02	2.74 ± 1.79	-7.21 ± 1.94

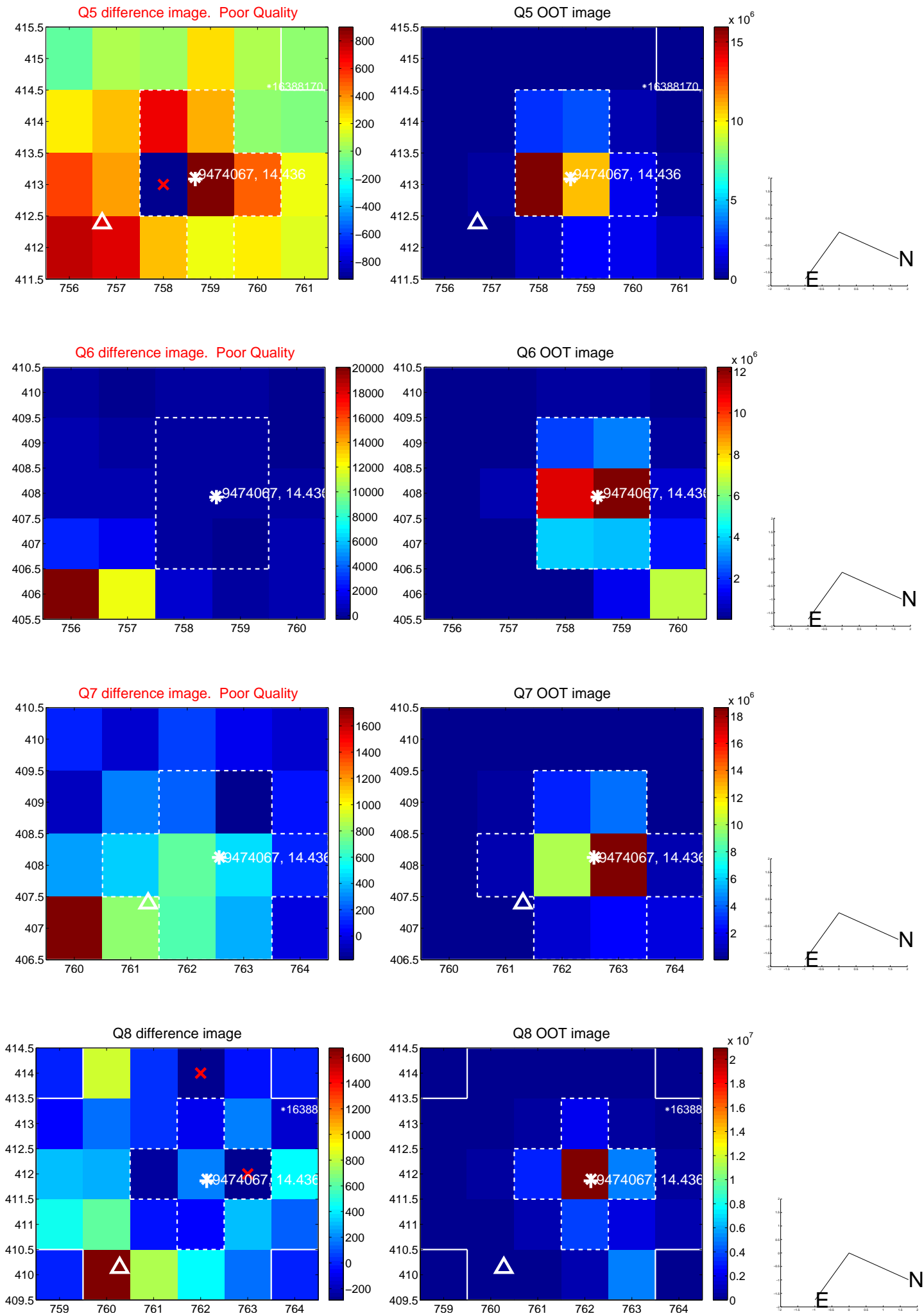


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

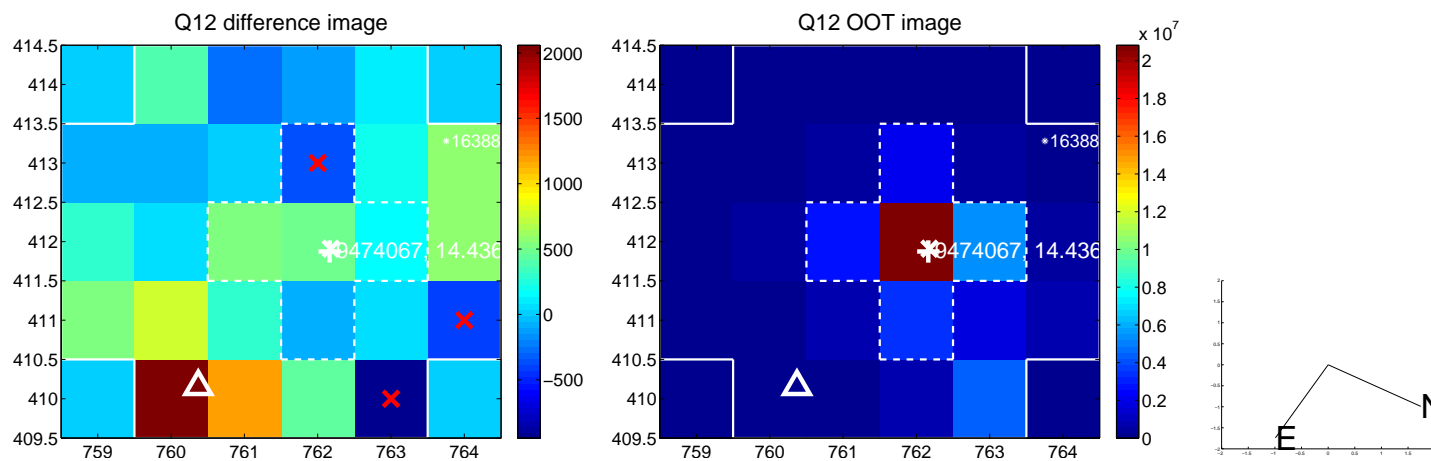
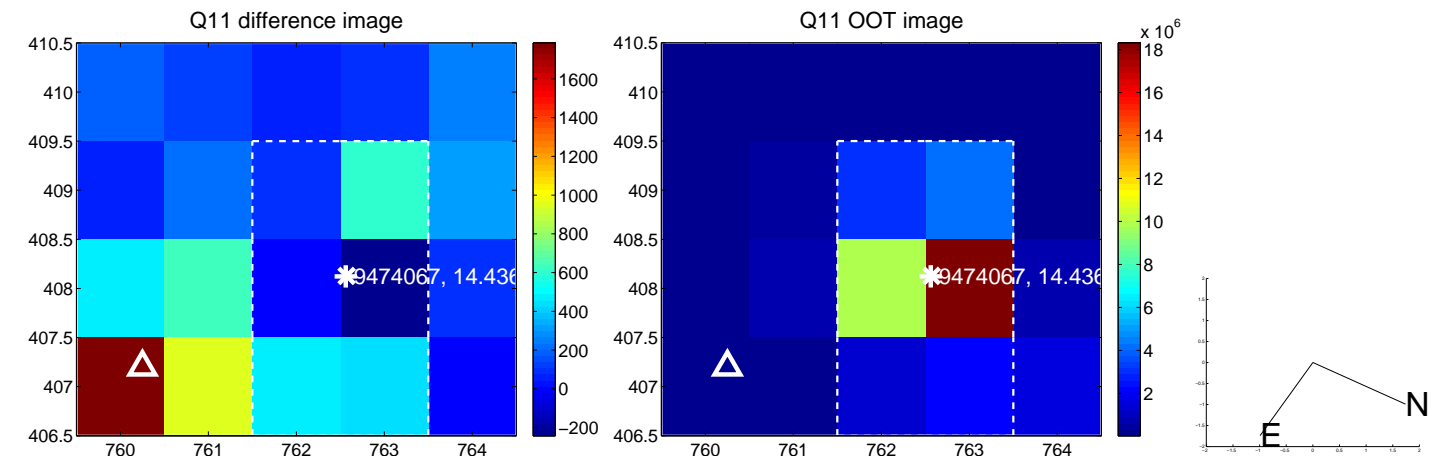
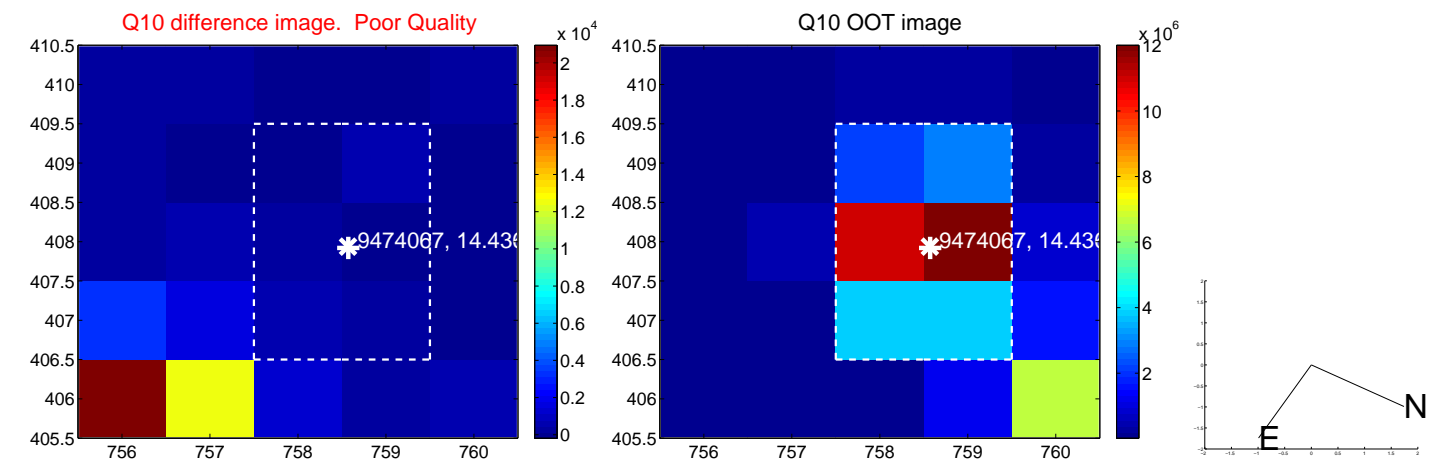
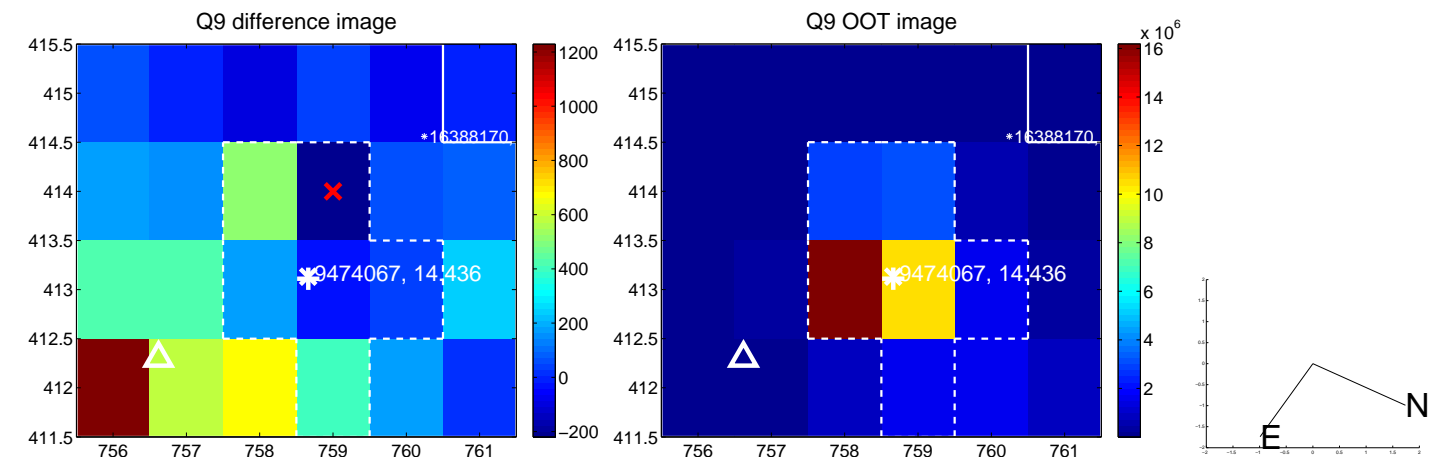
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



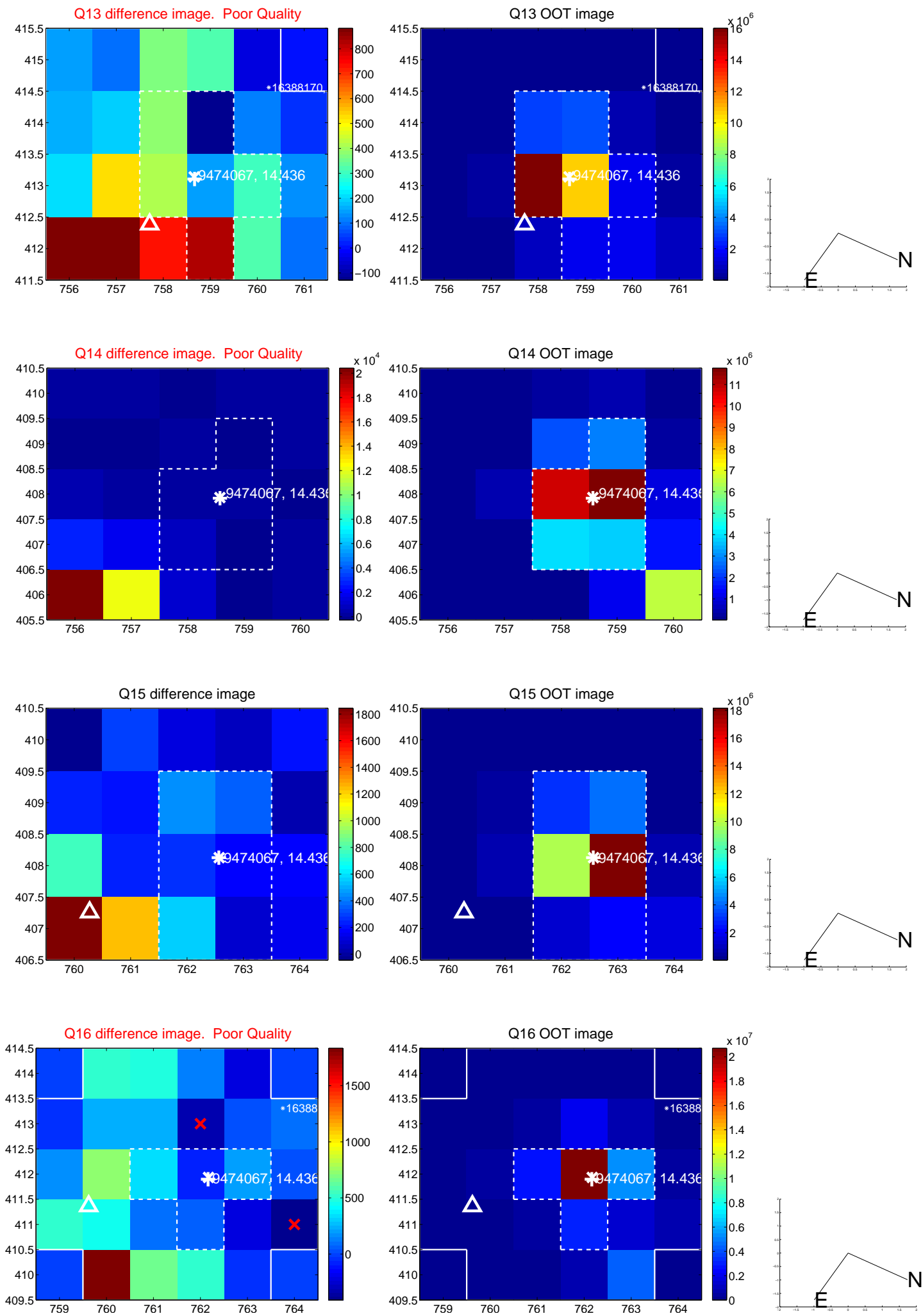
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



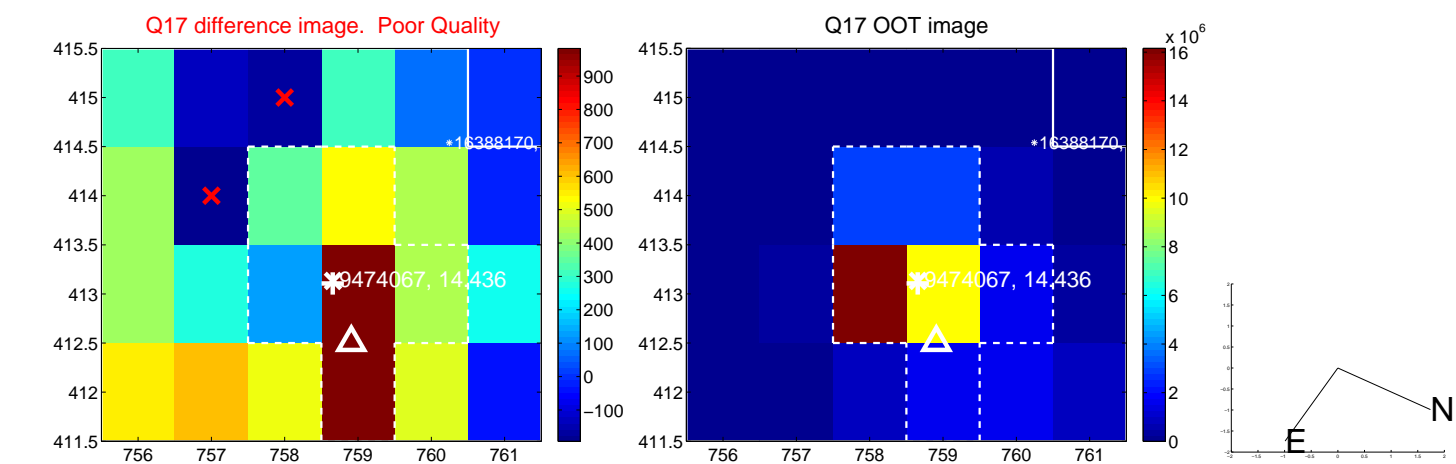
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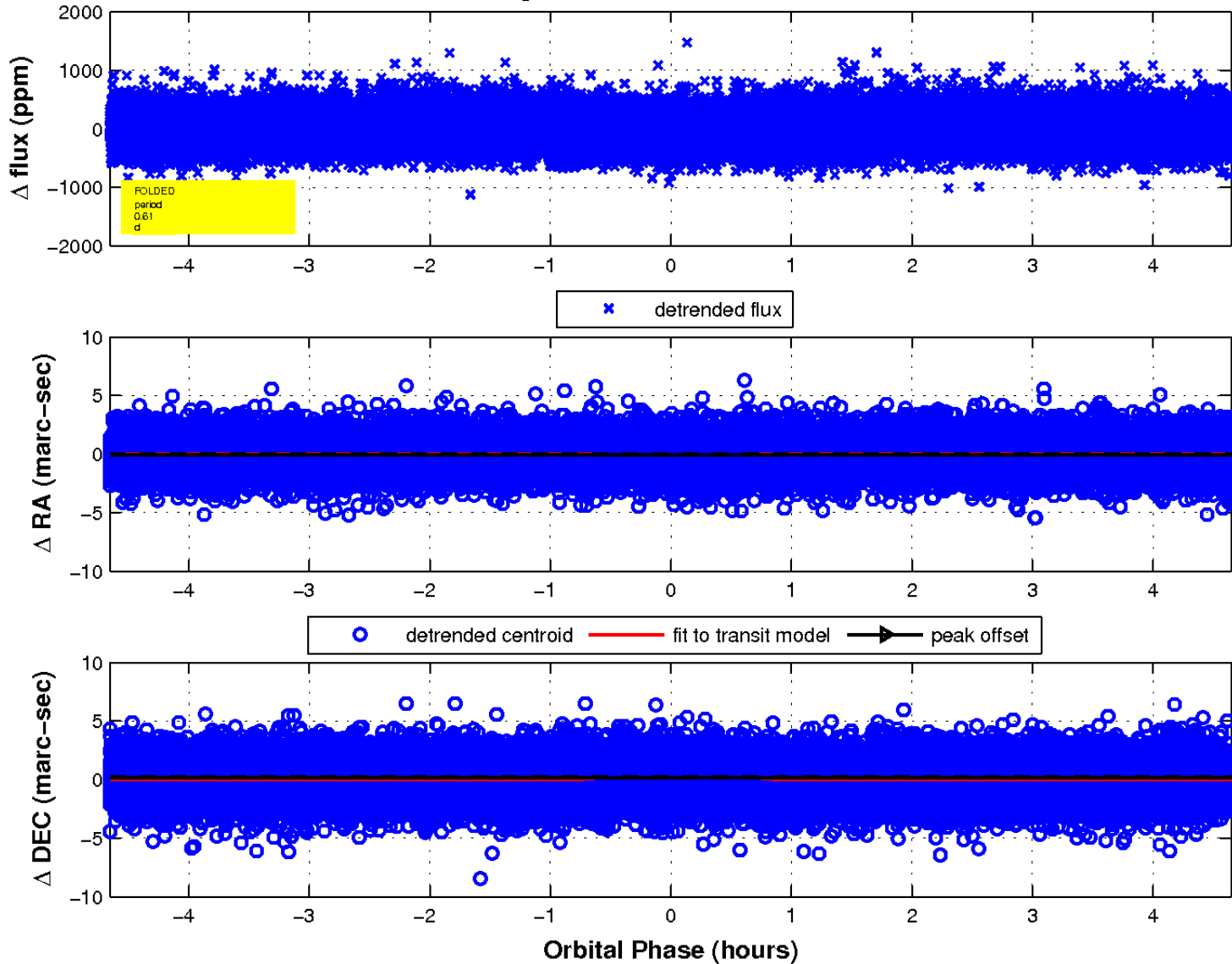
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

