

KIC 010338624

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})
010338624-01	OBS	No	1.261815	132.366373	5.7	10.105	8.6	4.8	2.44	7072	0.63	18067.57

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010338624-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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.

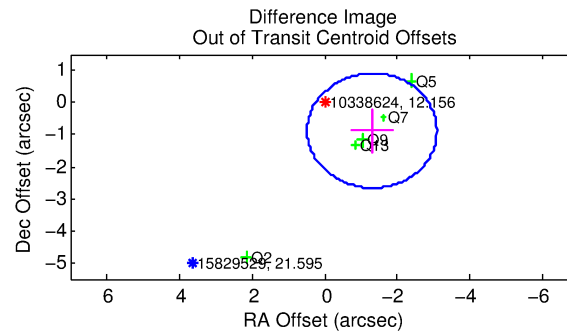
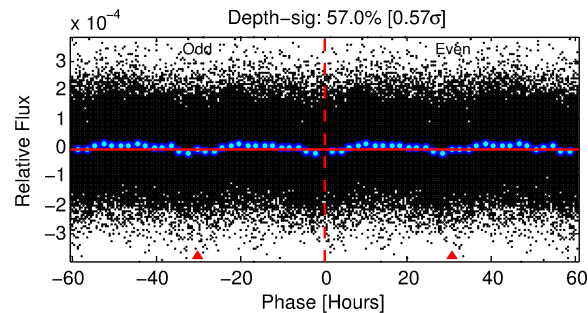
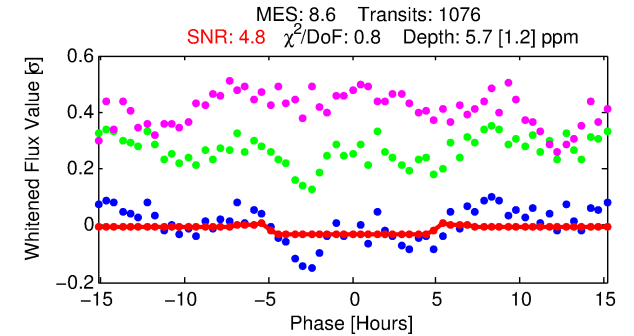
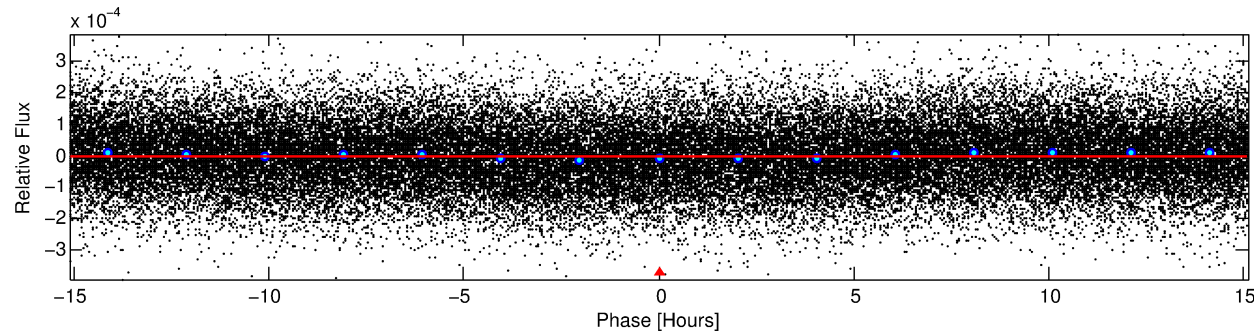
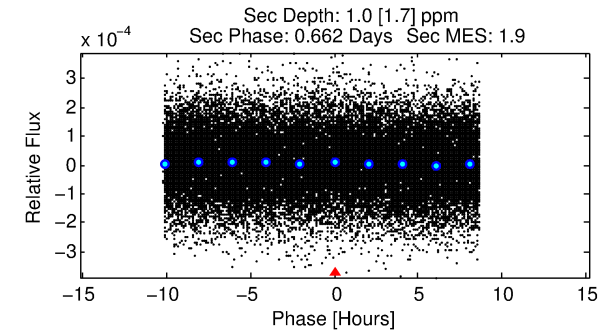
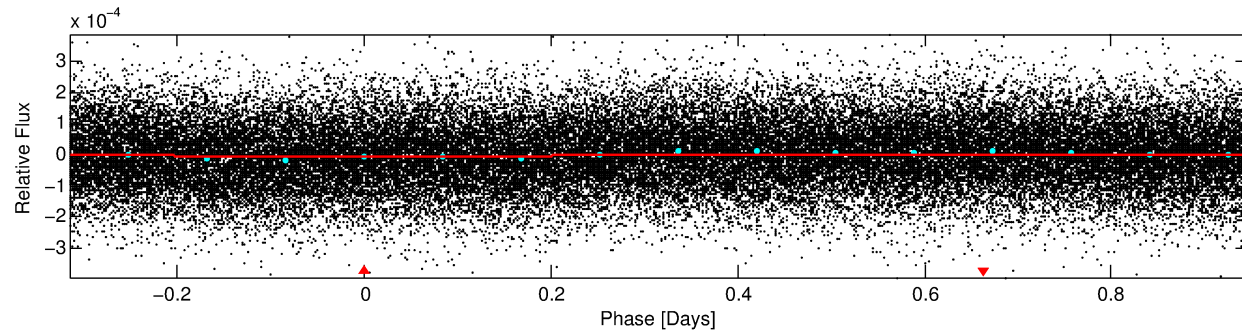
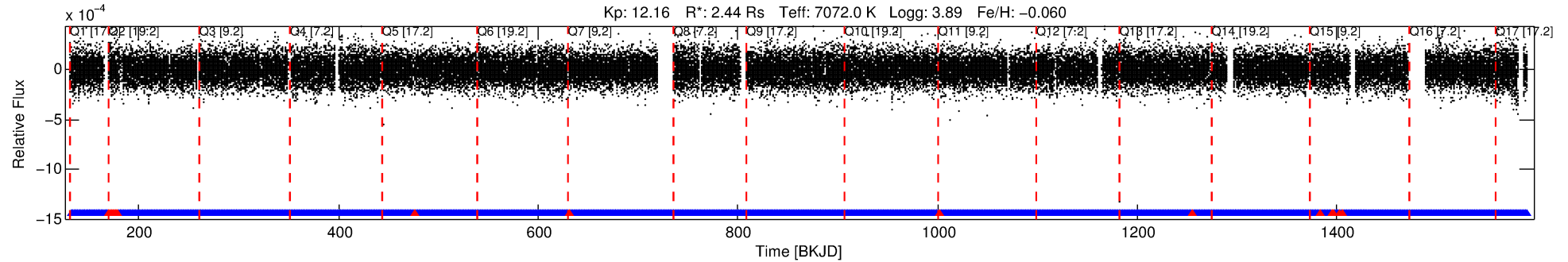
Ephemeris Match Information For 010338624-01

No Significant Match Found

DV One-Page Summary

KIC: 10338624 Candidate: 1 of 1 Period: 1.262 d

KOI: K03222 Corr: No Ephemeris Match



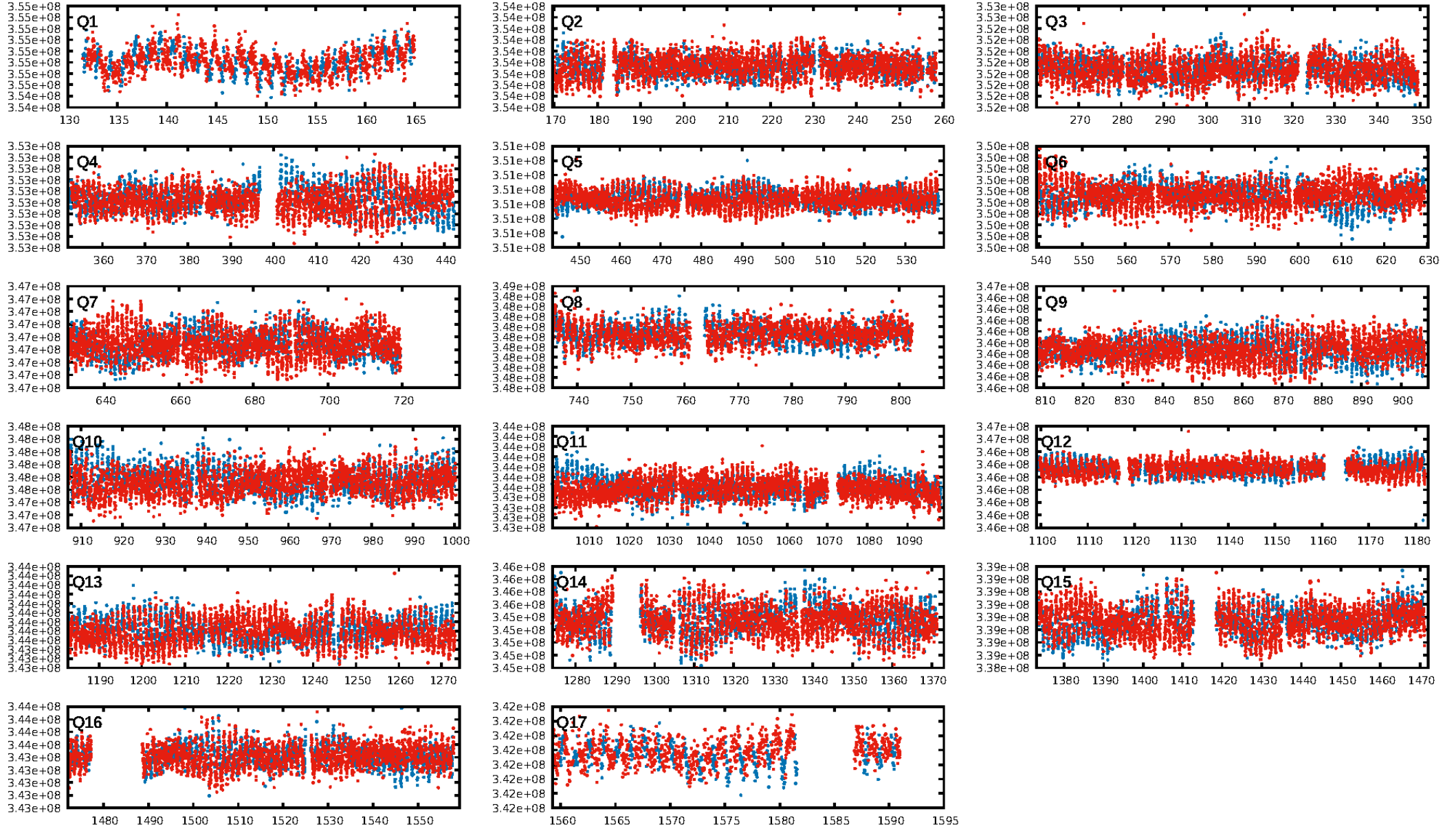
DV Fit Results:

Period = 1.26181 [0.00004] d
Epoch = 132.3664 [0.0122] BKJD
Rp/R* = 0.0024 [0.0021]
a/R* = 1.07 [0.79]
b = 0.74 [3.35]
Seff = 18067.57 [7609.54]
Teq = 2956 [311] K
Rp = 0.63 [0.60] Re
a = 0.0272 [0.0071] AU
Ag = 1.04 [2.56] [0.01σ]
Teffp = 4612 [2813] K [0.58σ]

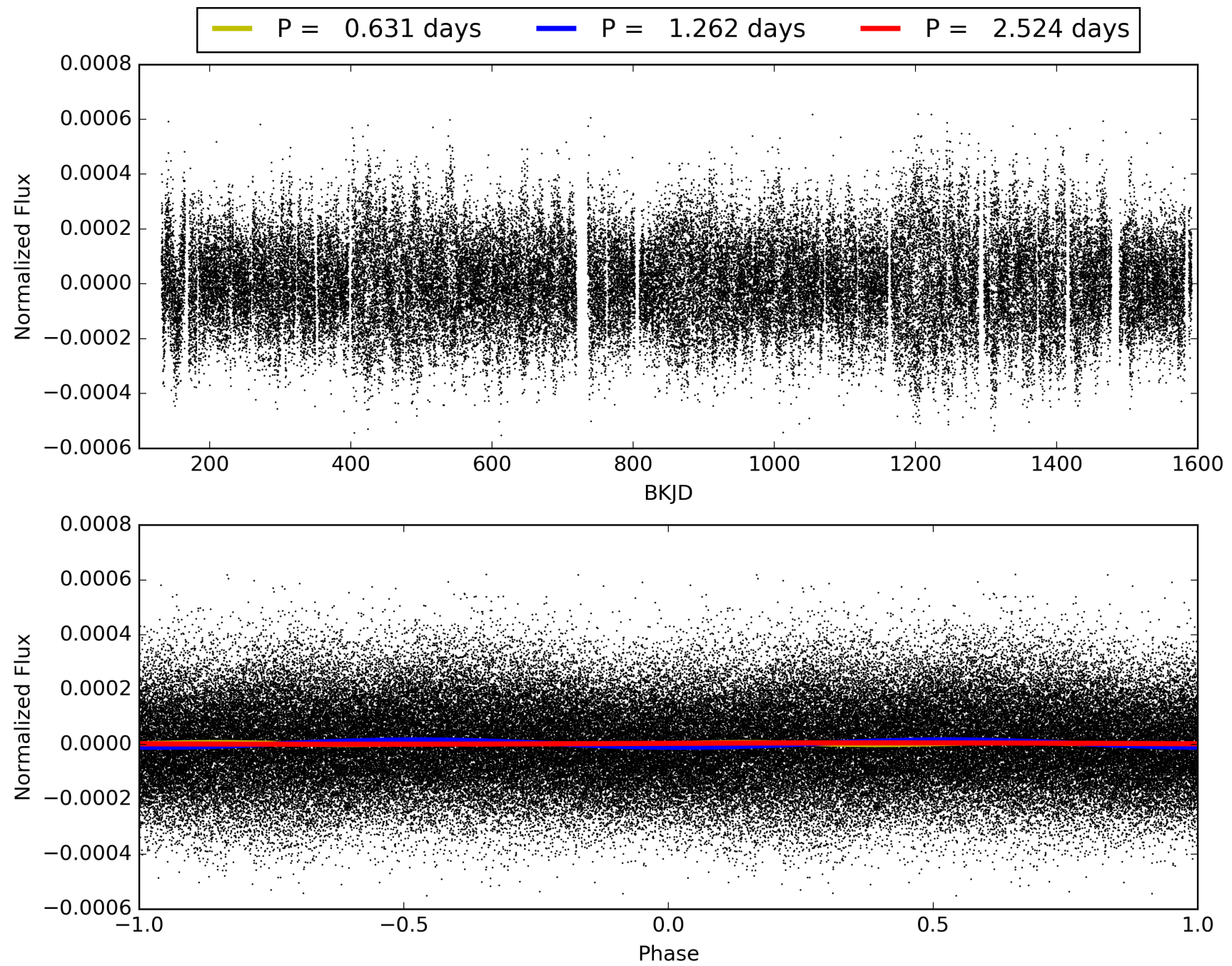
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.98 [1011/1027]
GhostDiagnostic-chr: 5.25
Centroid-sig: 1.3%
Centroid-so: 3.023 arcsec [2.18σ]
OotOffset-rm: 1.575 arcsec [2.65σ]
KicOffset-rm: 1.614 arcsec [2.71σ]
OotOffset-st: 1/1/0/3 [5]
KicOffset-st: 1/1/0/3 [5]
DiffImageQuality-fgm: 0.60 [3/5]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 010338624-01, PDC Light Curves

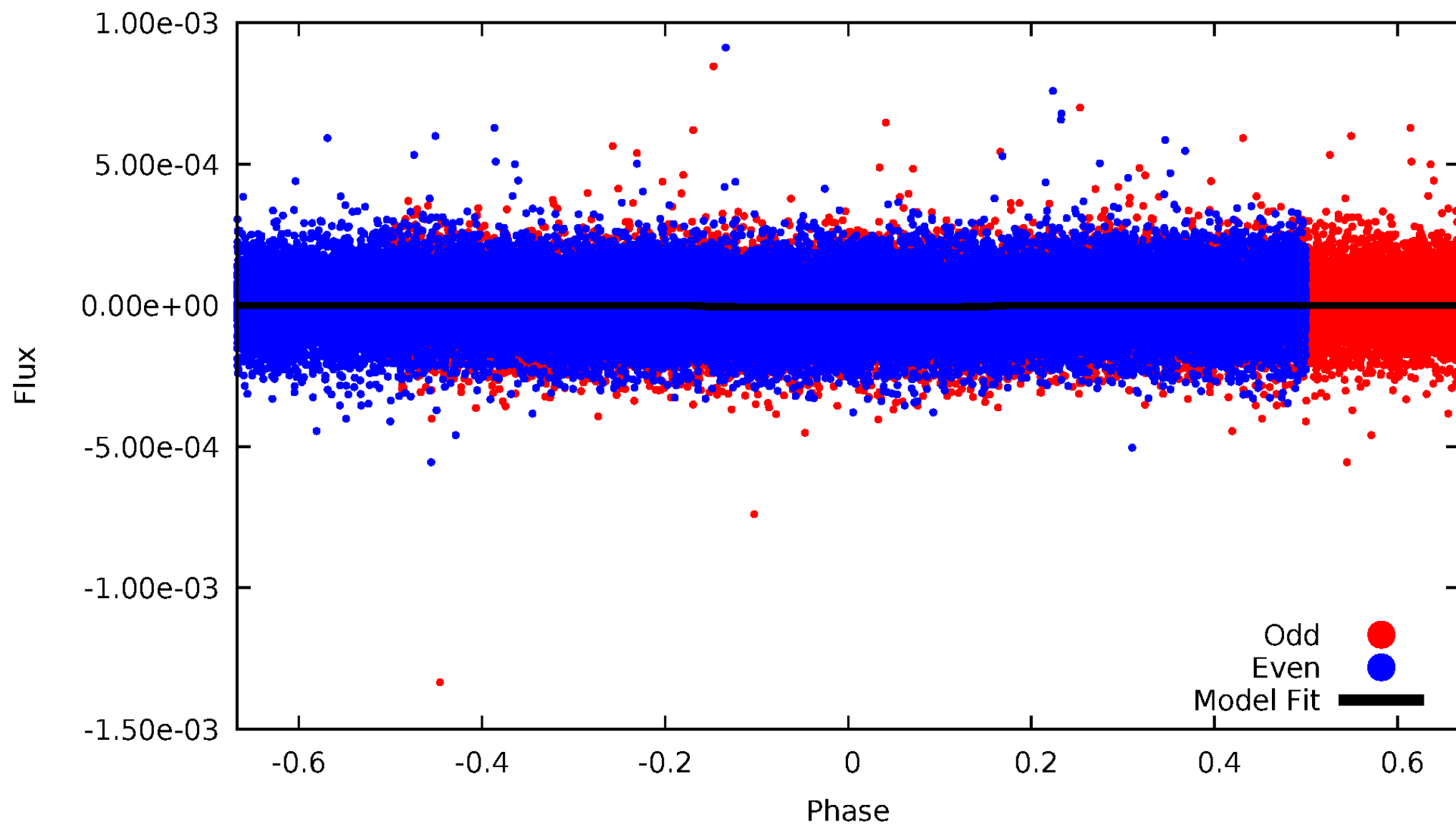


TCE 010338624-01



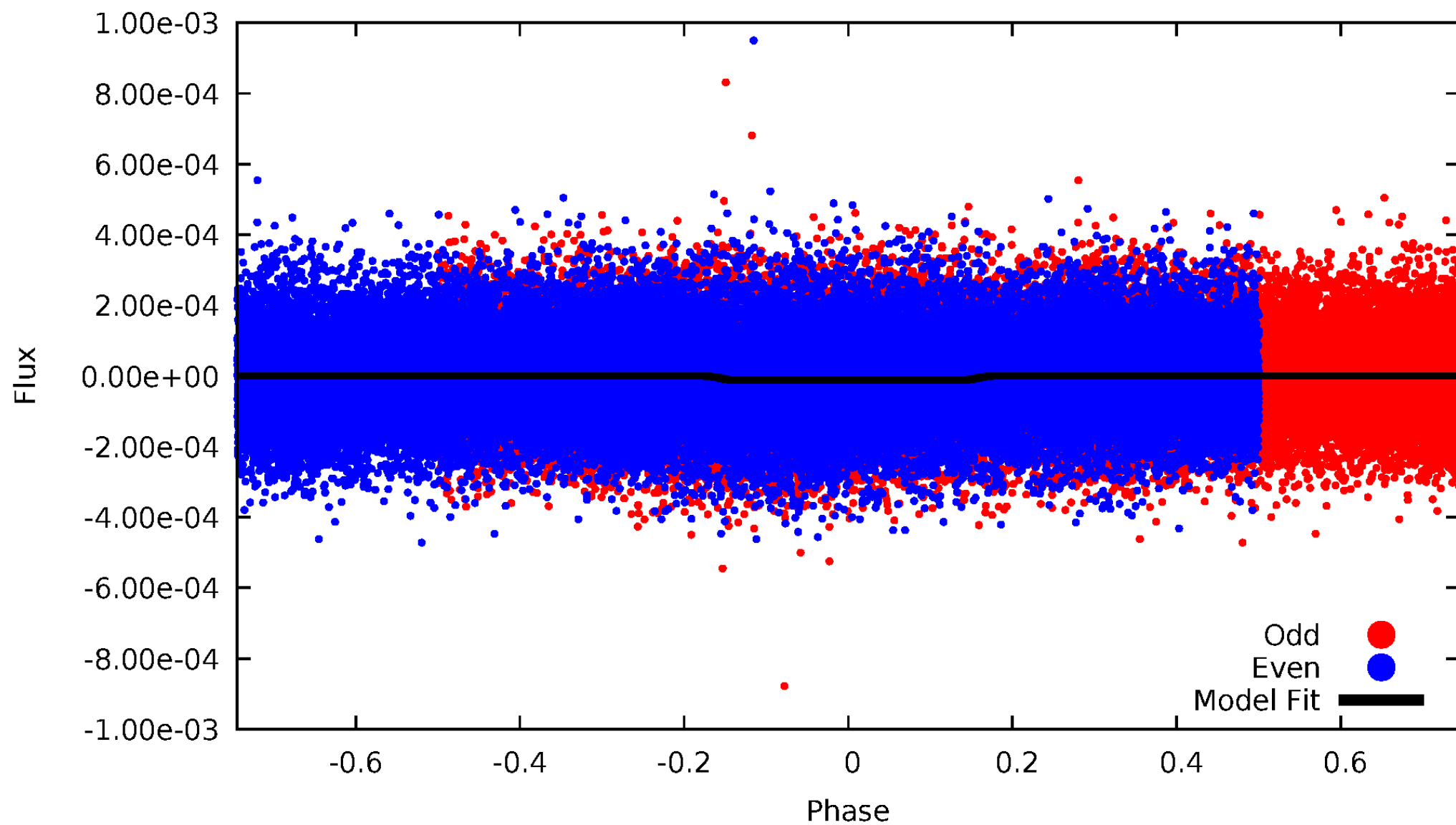
DV Odd/Even

TCE 010338624-01



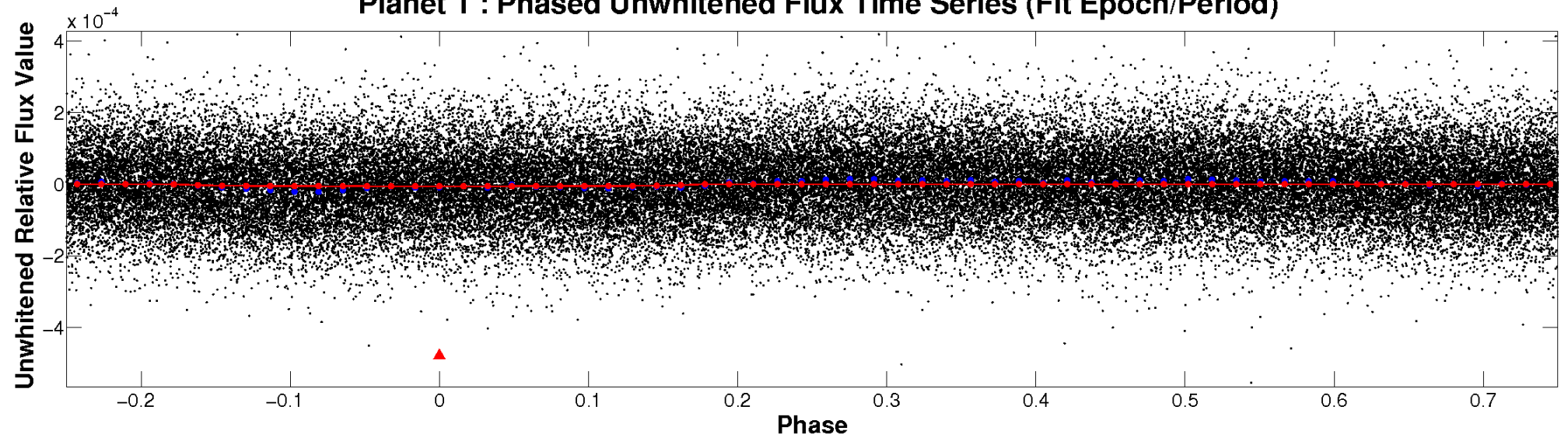
ALT Odd/Even

TCE 010338624-01

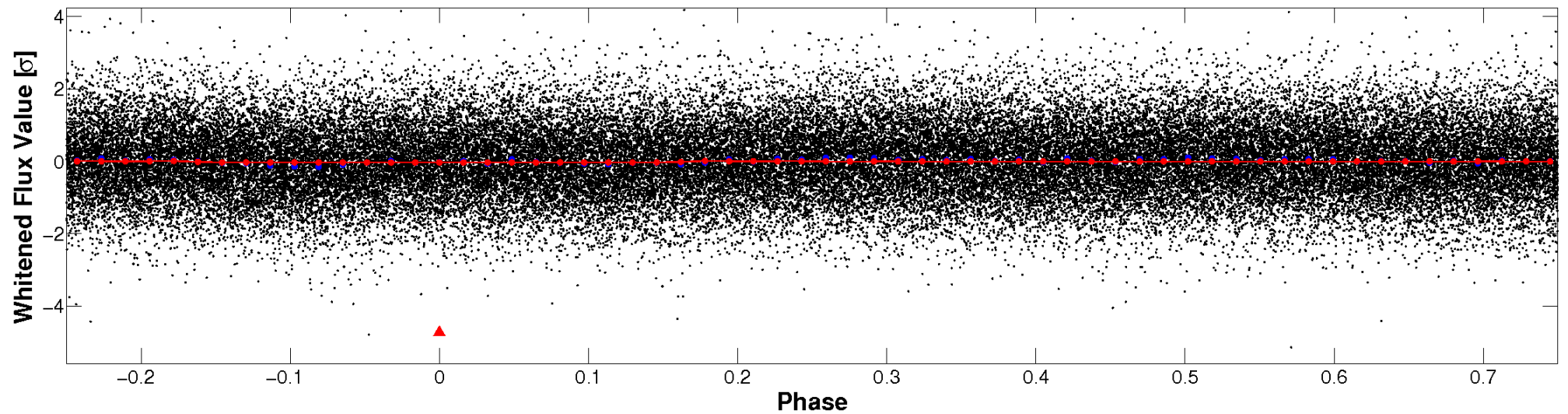


Non-Whitened Vs. Whitened Light Curve

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

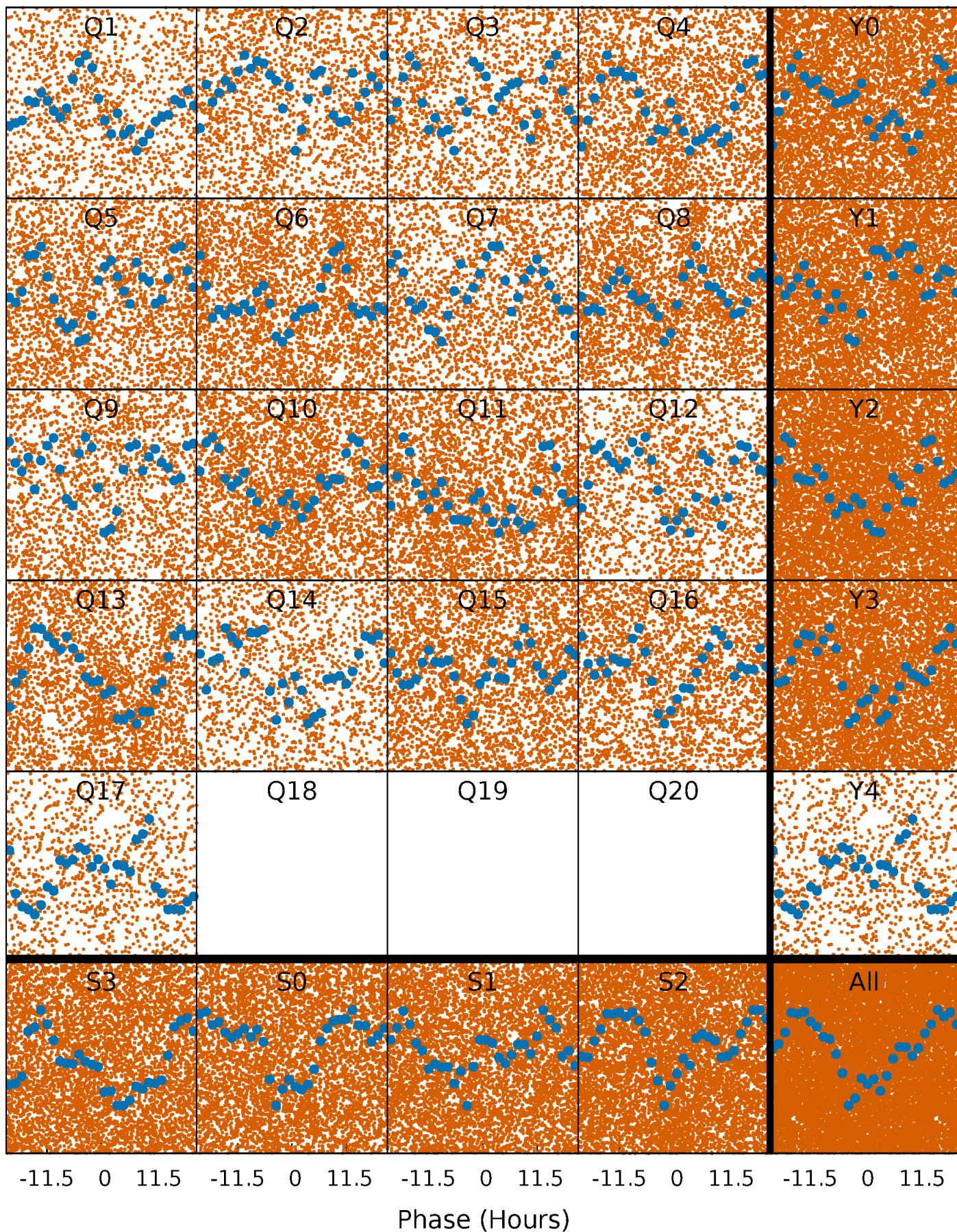


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



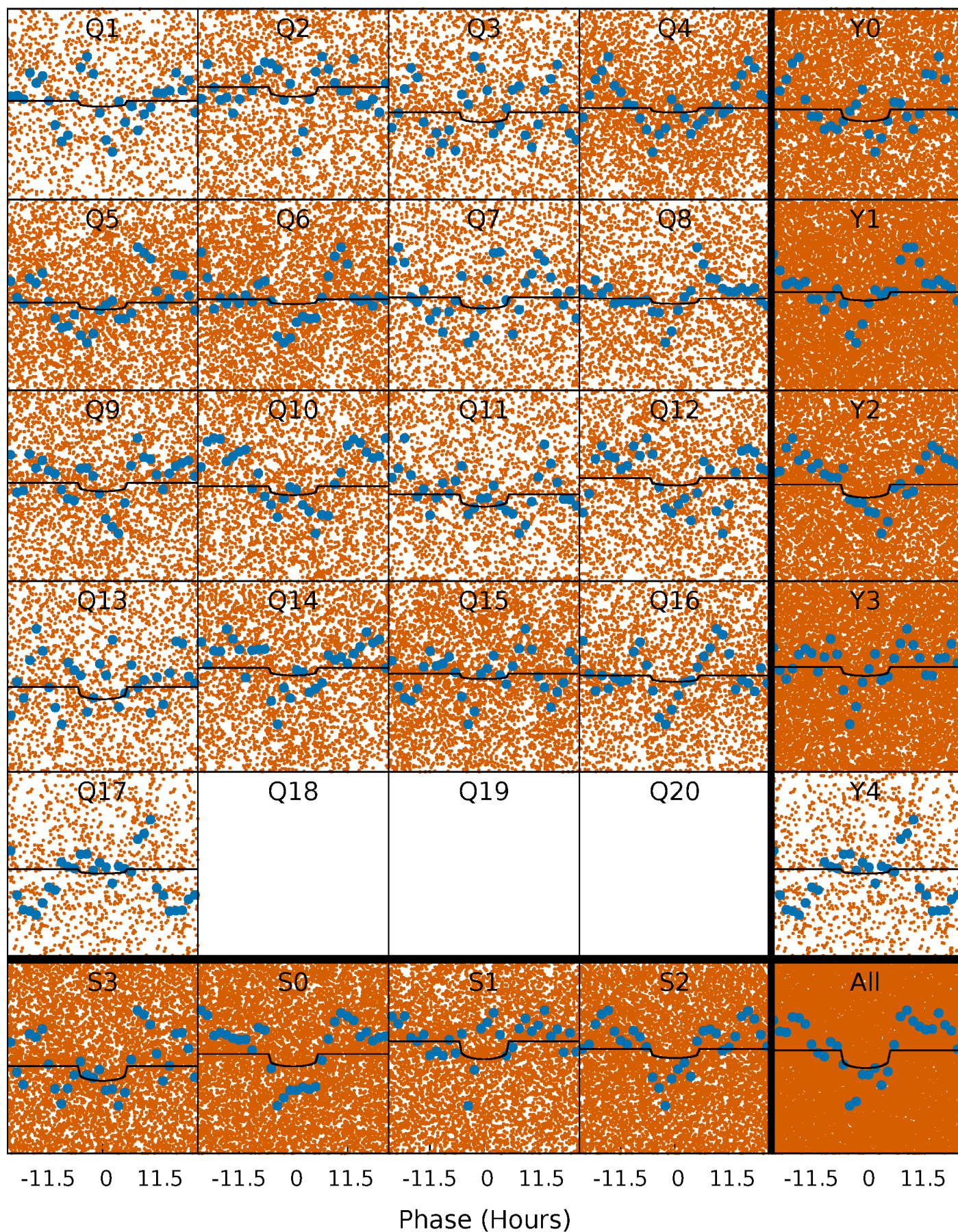
PDC Quarter-Phased Transit Curves

TCE 010338624-01 P= 1.261815 Days $T_0=132.366373$ (BKJD)



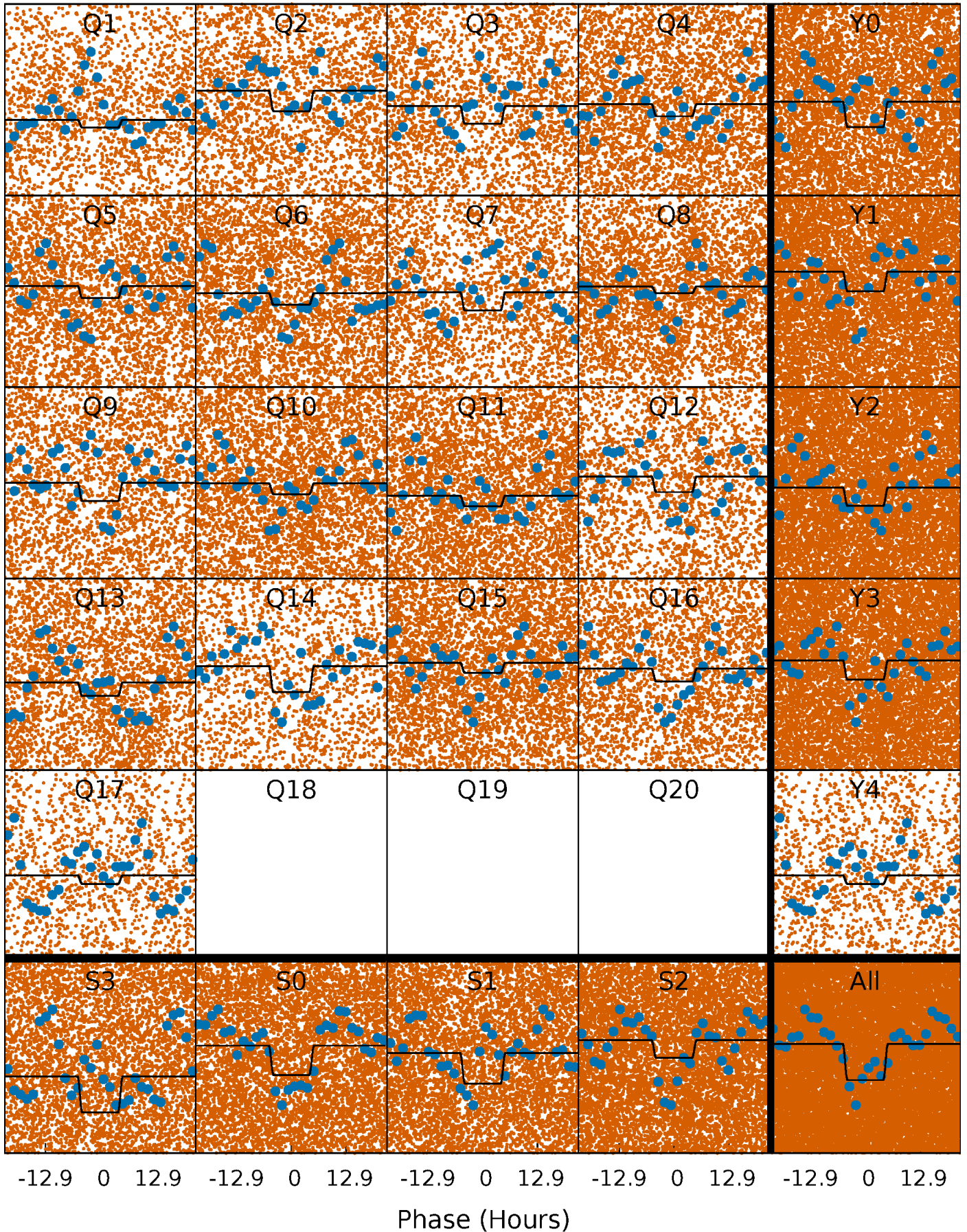
DV Quarter-Phased Transit Curves

TCE 010338624-01 P= 1.261815 Days $T_0=132.366373$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

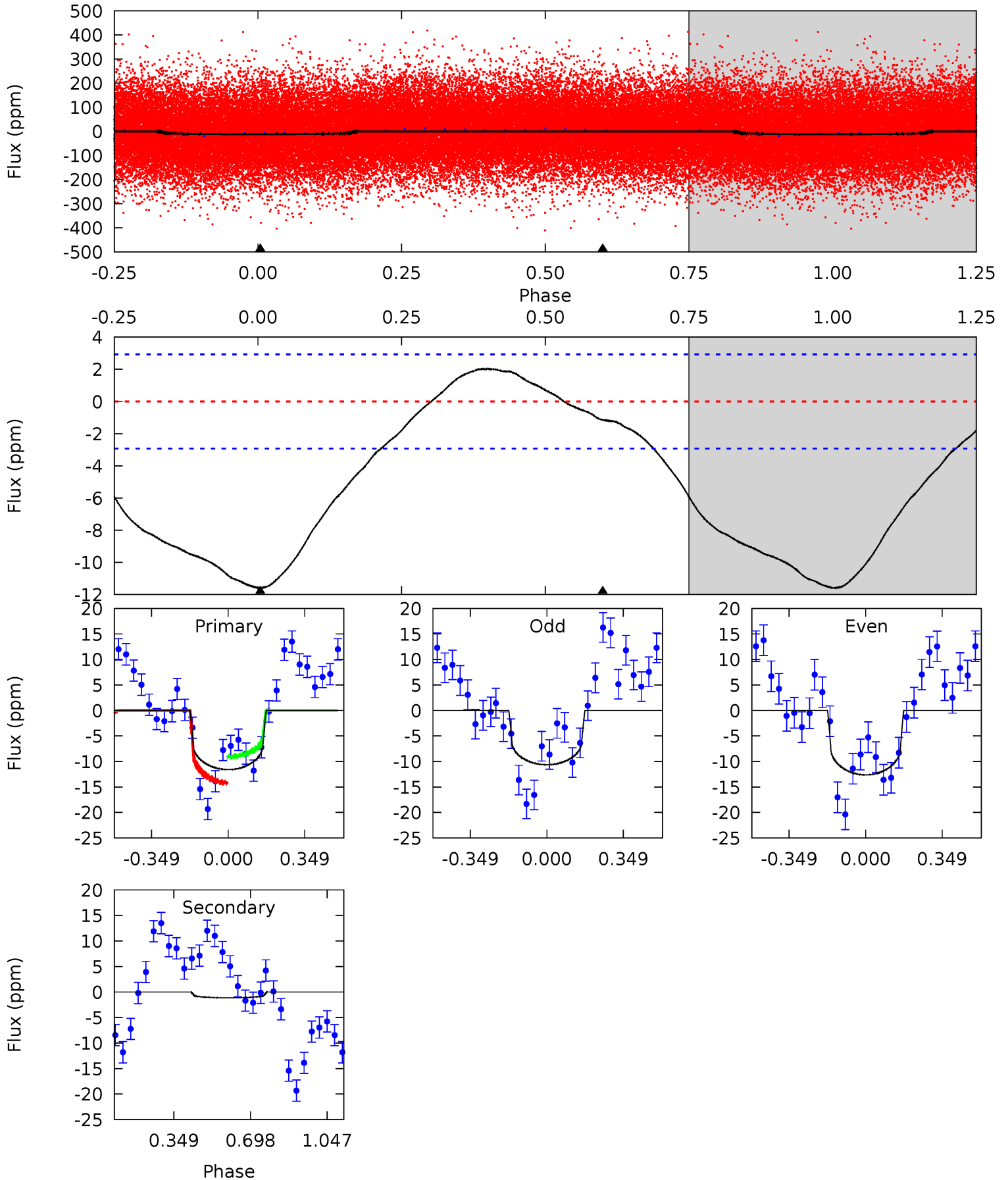
TCE 010338624-01 P= 1.261833 Days $T_0=132.326415$ (BKJD)



DV Model-Shift Uniqueness Test

010338624-01, P = 1.261815 Days, E = 131.104558 Days

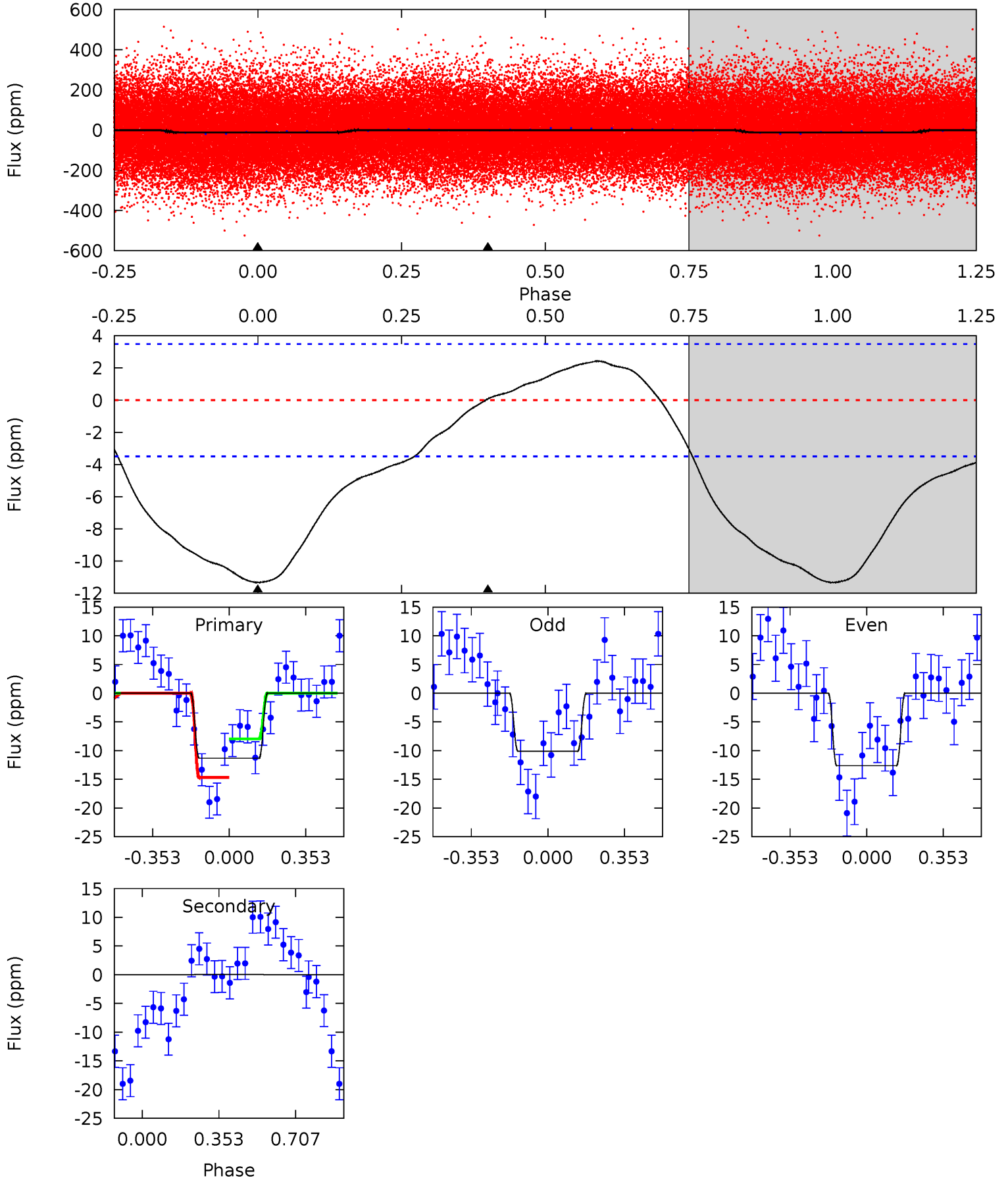
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.0	1.68	0	0	4.30	0.94	1.41	17.0	17.0	1.68	1.68	1.46	0.92	0.15	3.87



Alt Model-Shift Uniqueness Test

010338624-01, P = 1.261833 Days, E = 131.064582 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.9	-0.09	0	0	4.29	0.93	1.78	13.9	13.9	-0.09	-0.09	1.56	0.71	0.18	4.10



Stellar Parameters For KIC 010338624

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7072^{+190}_{-232}	$3.889^{+0.227}_{-0.122}$	$-0.060^{+0.250}_{-0.300}$	$2.442^{+0.481}_{-0.721}$	$1.682^{+0.162}_{-0.301}$	$0.163^{+0.218}_{-0.059}$
	+3%/-3%	+6%/-3%	+417%/-500%	+20%/-30%	+10%/-18%	+134%/-36%
Source	PHO1	FLK73	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 010338624-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1 ± 1	$0.69^{+0.54}_{-0.42}$	4082^{+244}_{-288}	4120^{+3075}_{-7279}	$0.855^{+5.924}_{-0.662}$
Alt.	0 ± 1	$0.89^{+0.59}_{-0.49}$	4108^{+273}_{-291}	-3720^{+7310}_{-778}	$0.012^{+0.560}_{-0.511}$

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

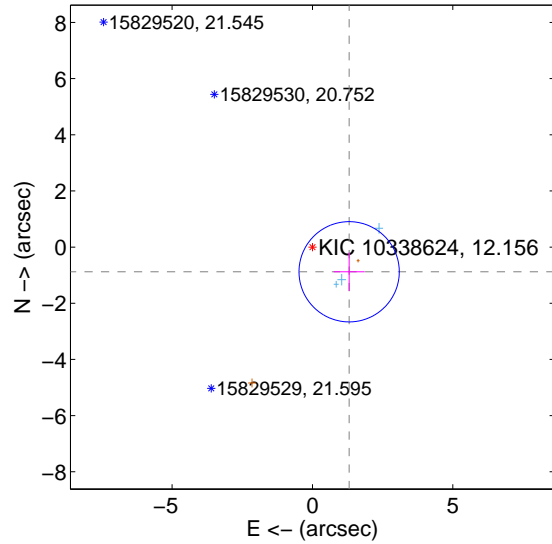
Supplemental centroid analysis for 010338624-01. Kepler magnitude: 12.16. Transit SNR 4.84

There are 3 quarters with good PRF difference image offsets

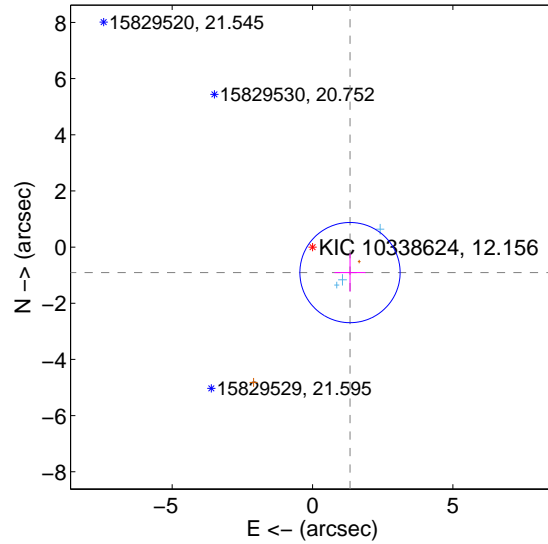
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.575 ± 0.595	2.65	-1.307 ± 0.551	-0.879 ± 0.683
PRF-fit source offset from KIC position	1.614 ± 0.595	2.71	-1.335 ± 0.553	-0.908 ± 0.676
photometric centroid source offset	3.02 ± 1.39	2.18	-2.97 ± 1.39	-0.54 ± 1.25

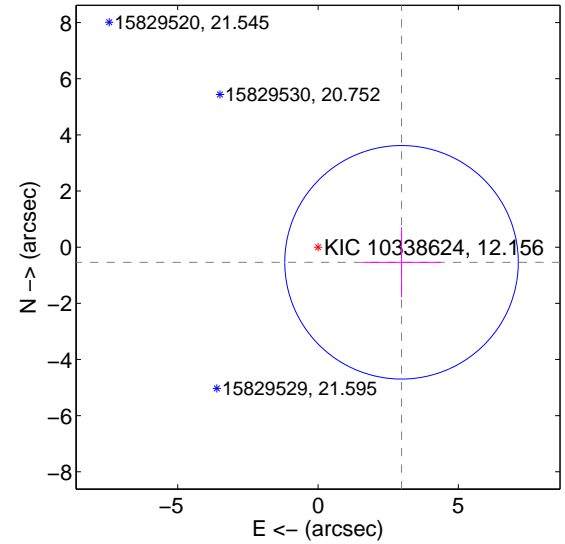
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

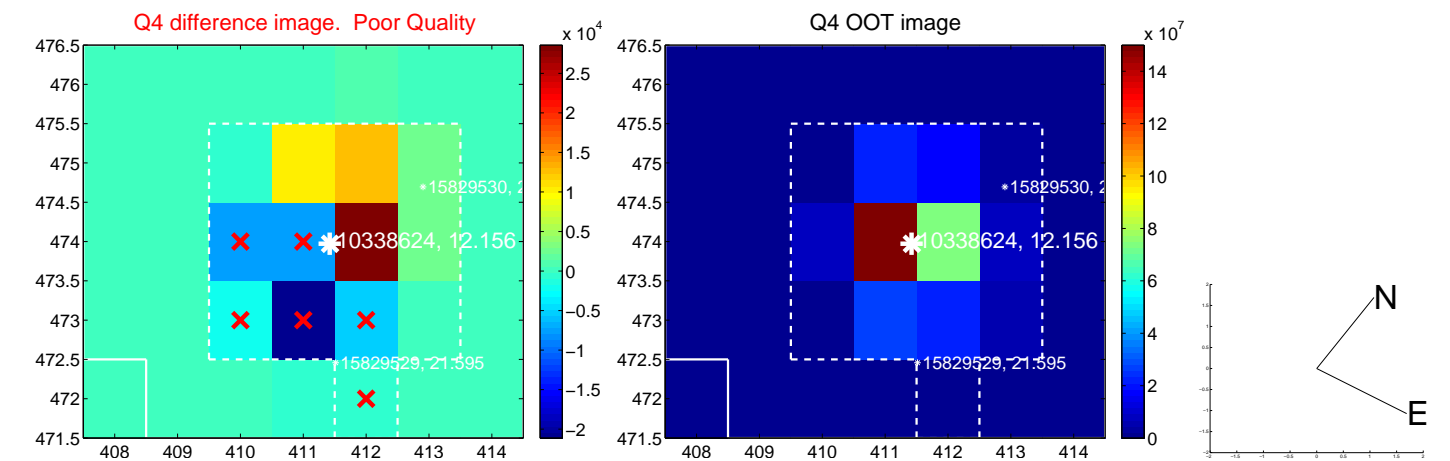
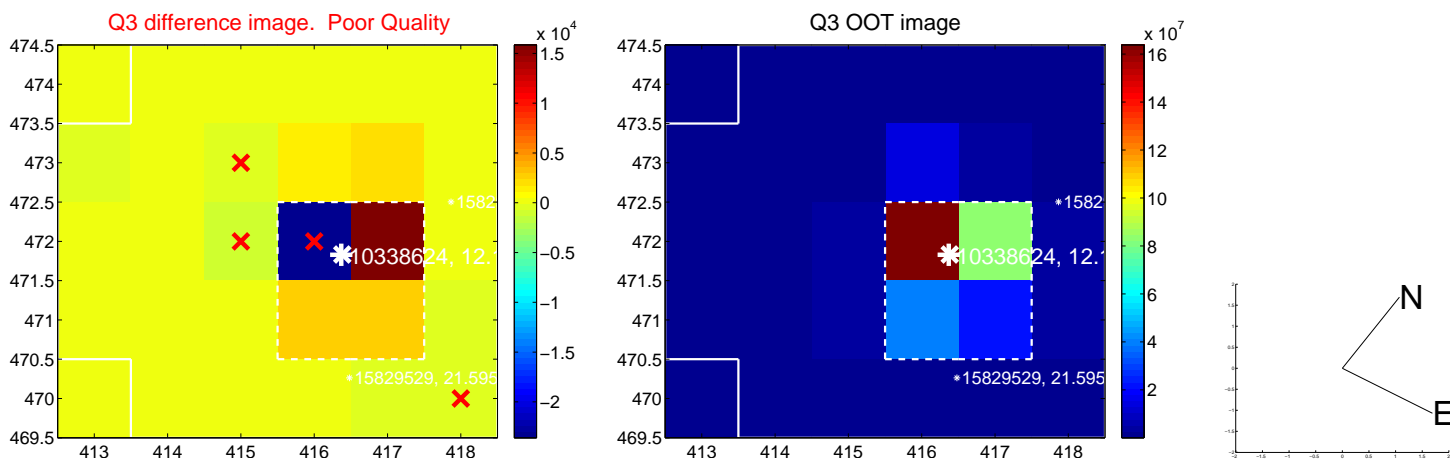
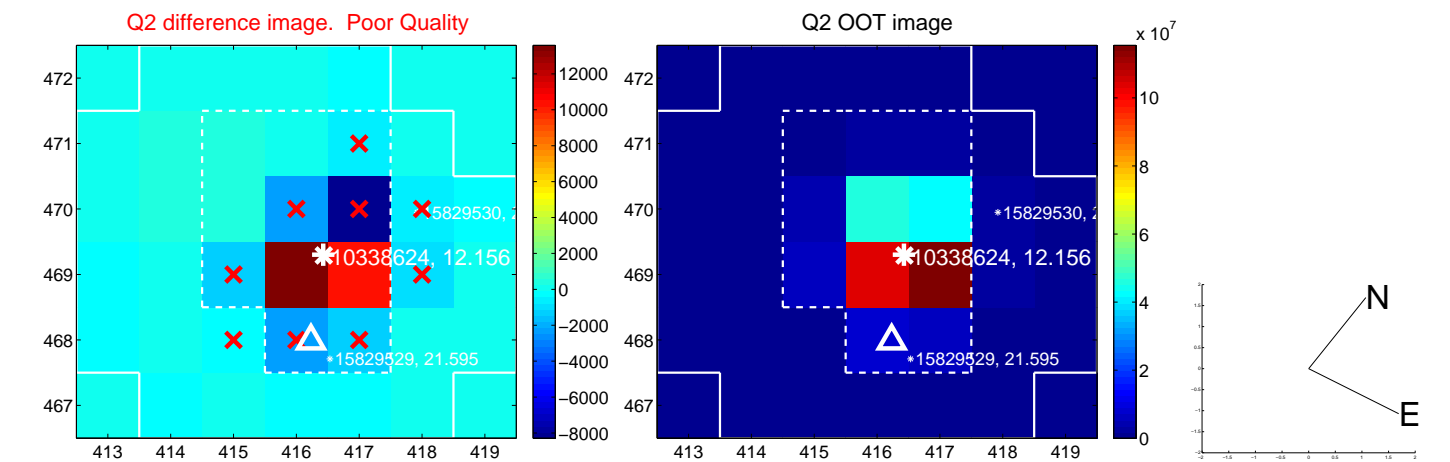
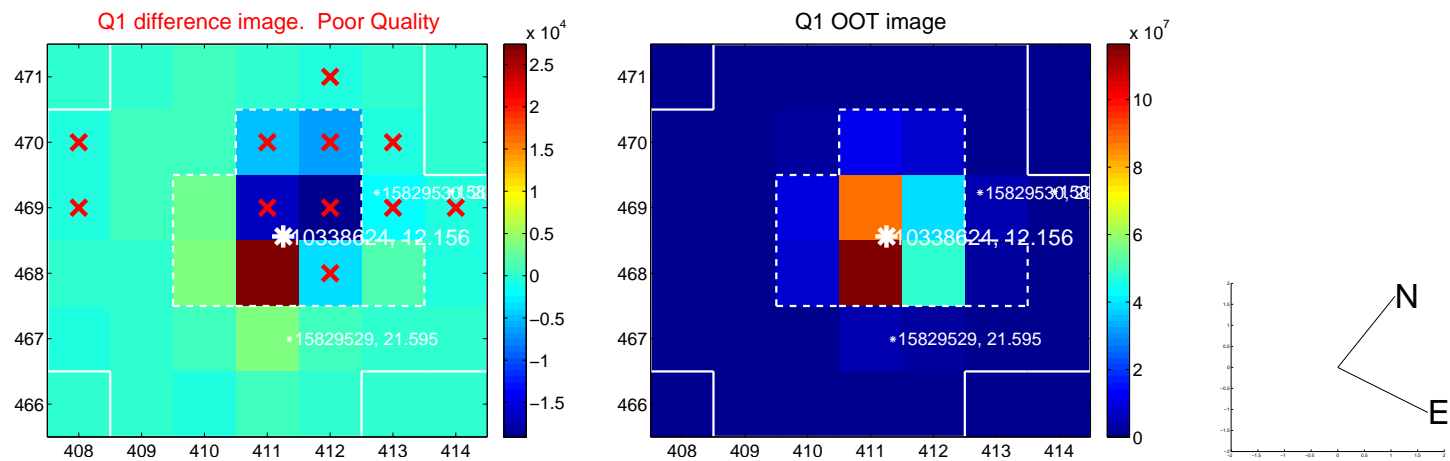


offset from photometric centroids

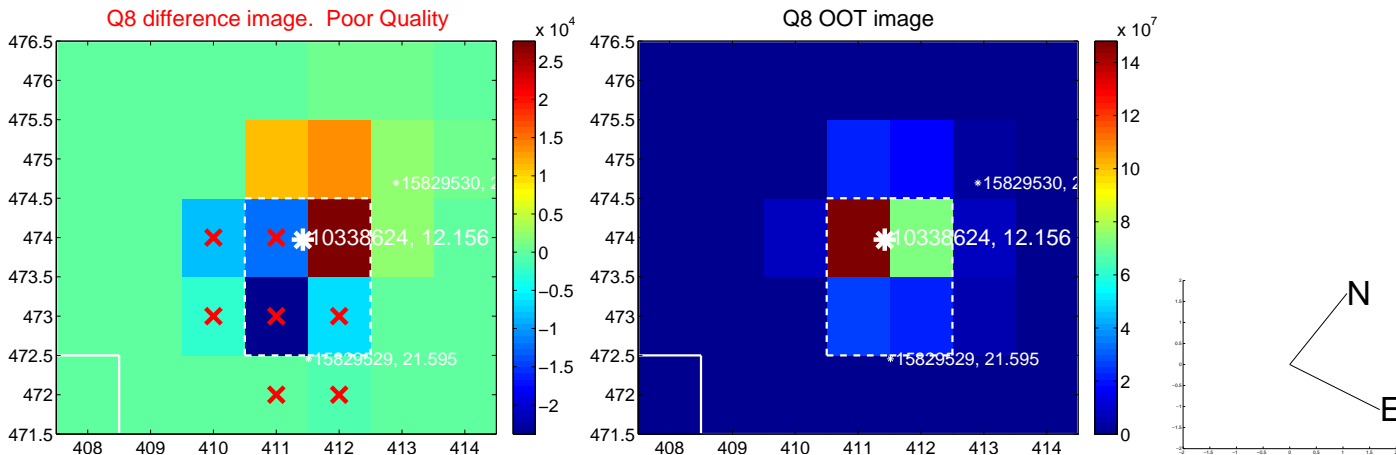
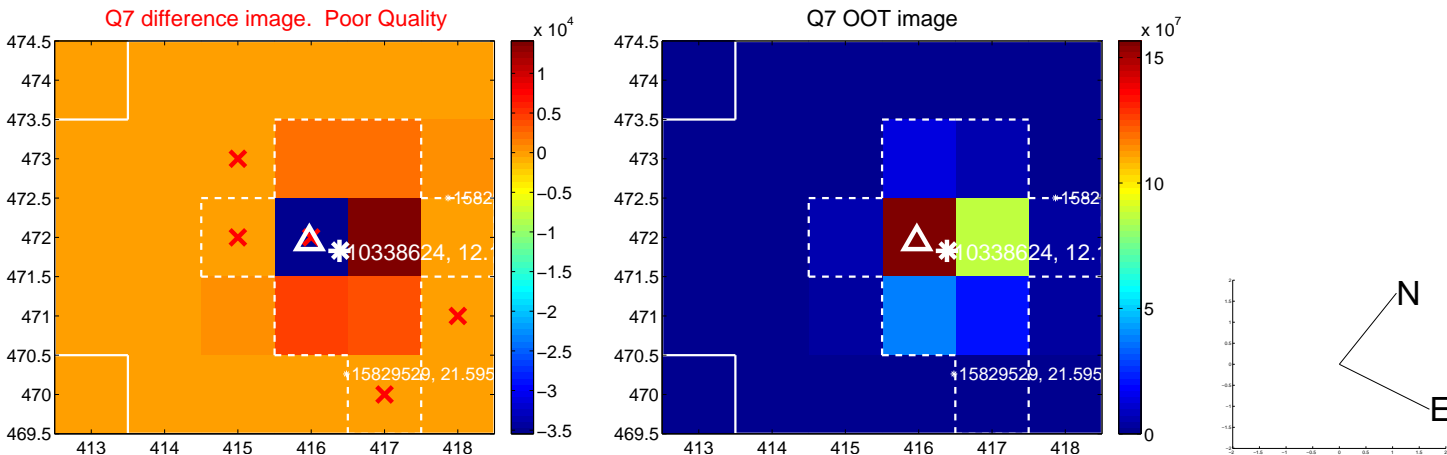
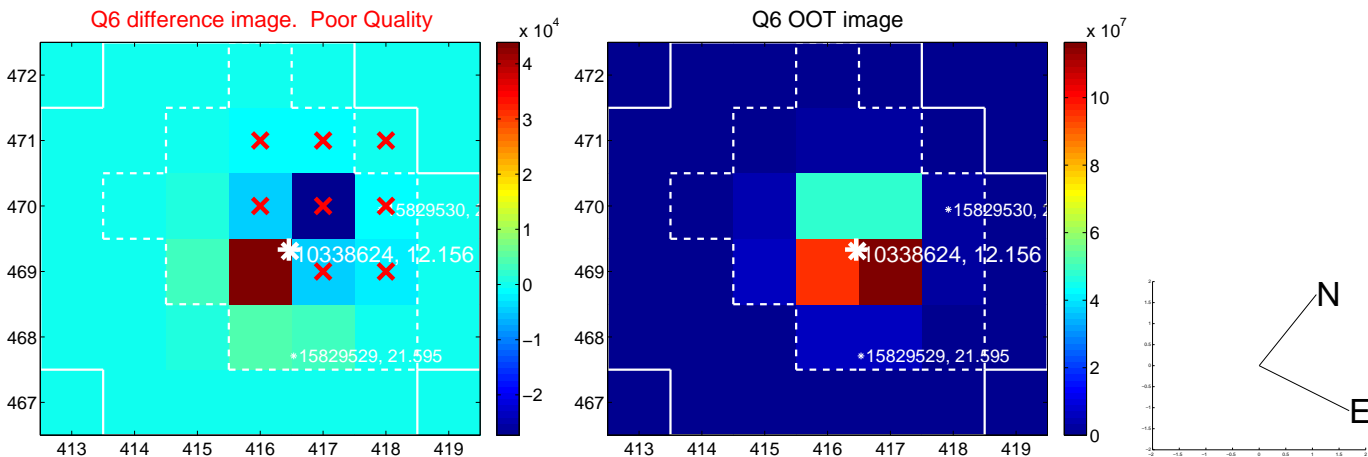
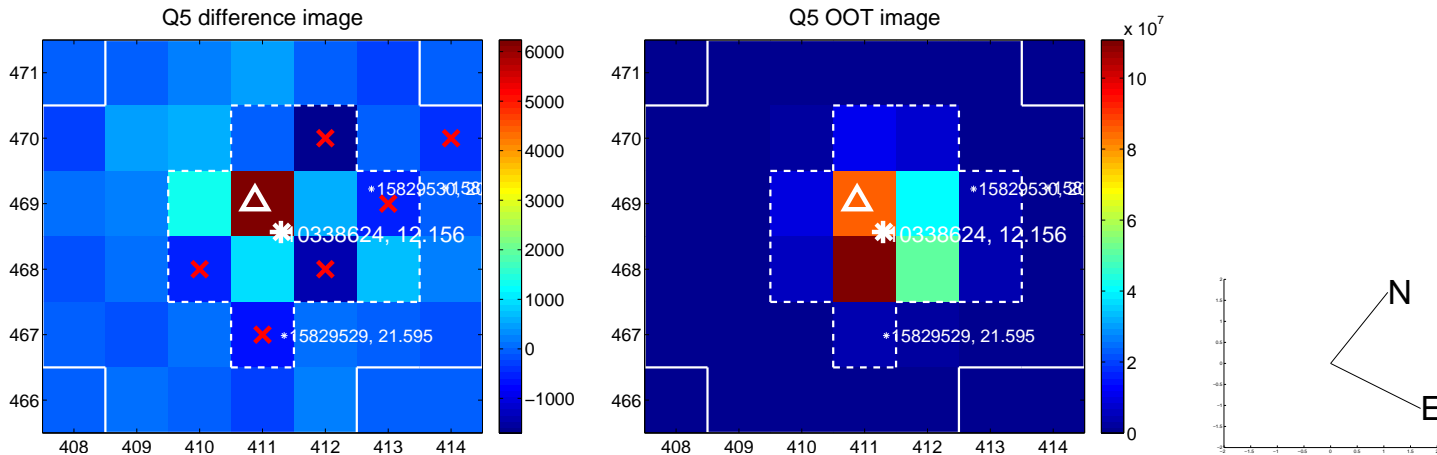


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

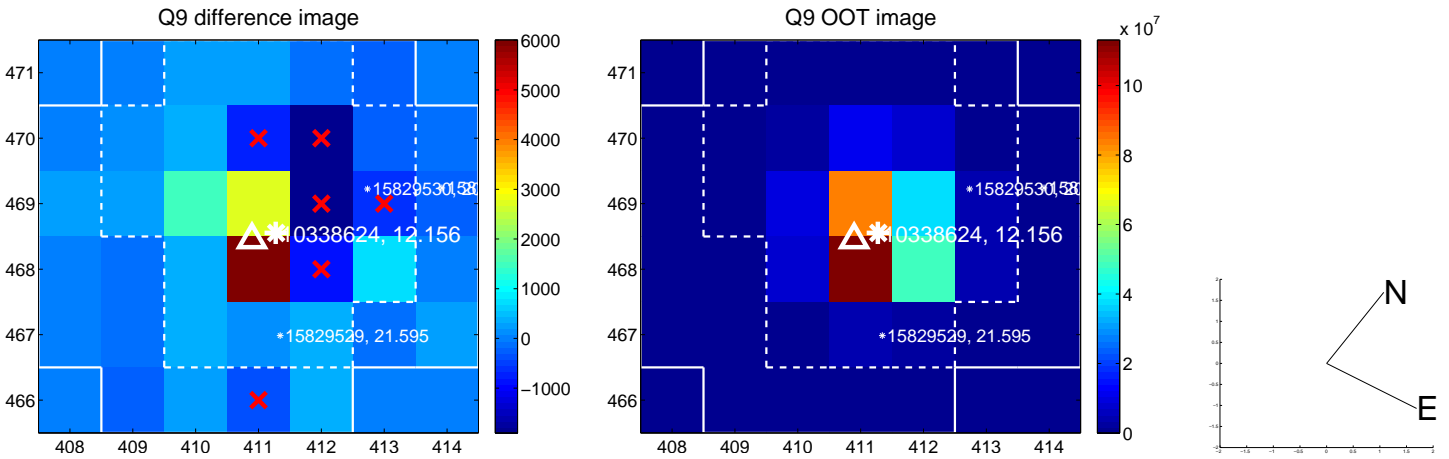
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



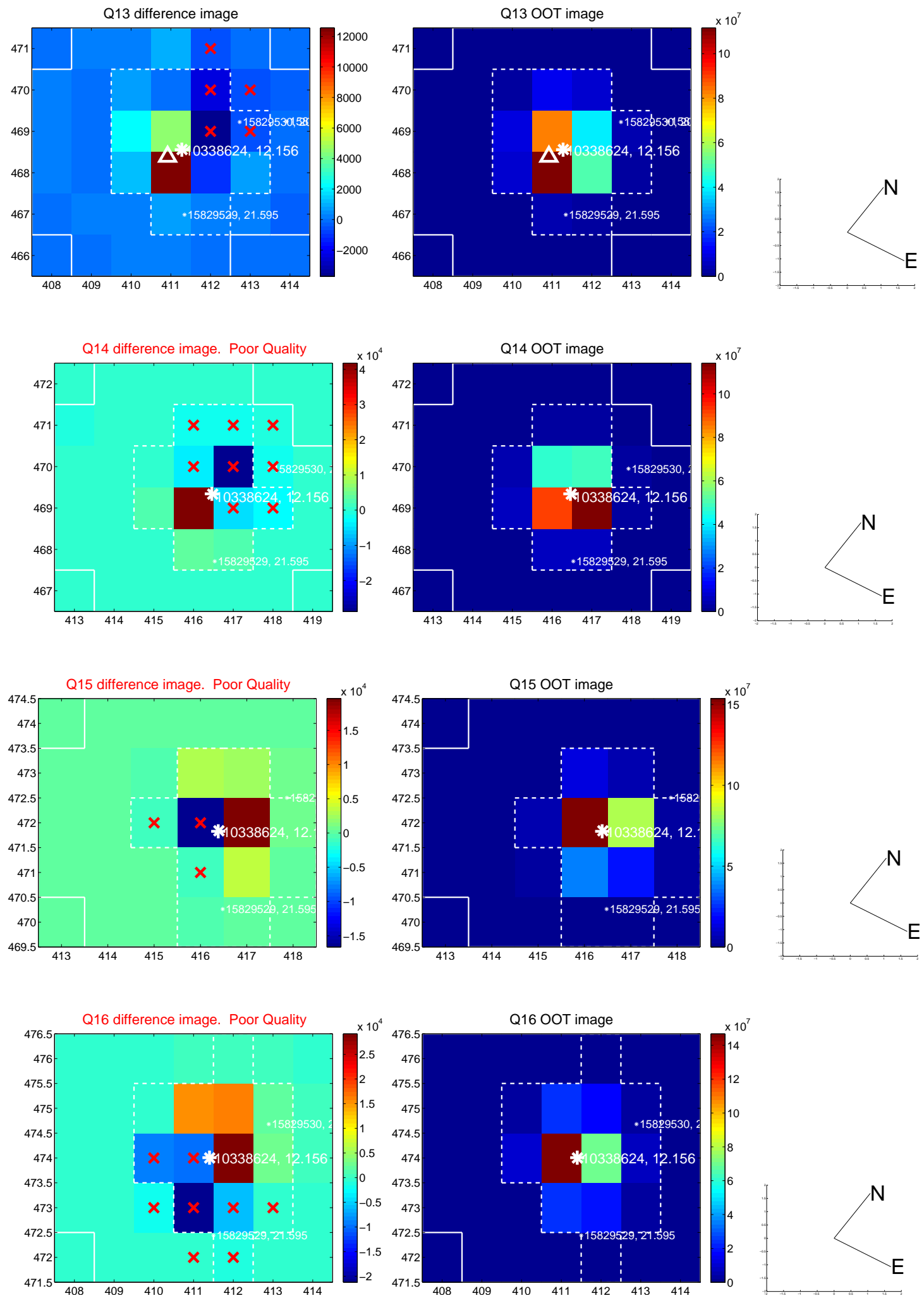
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



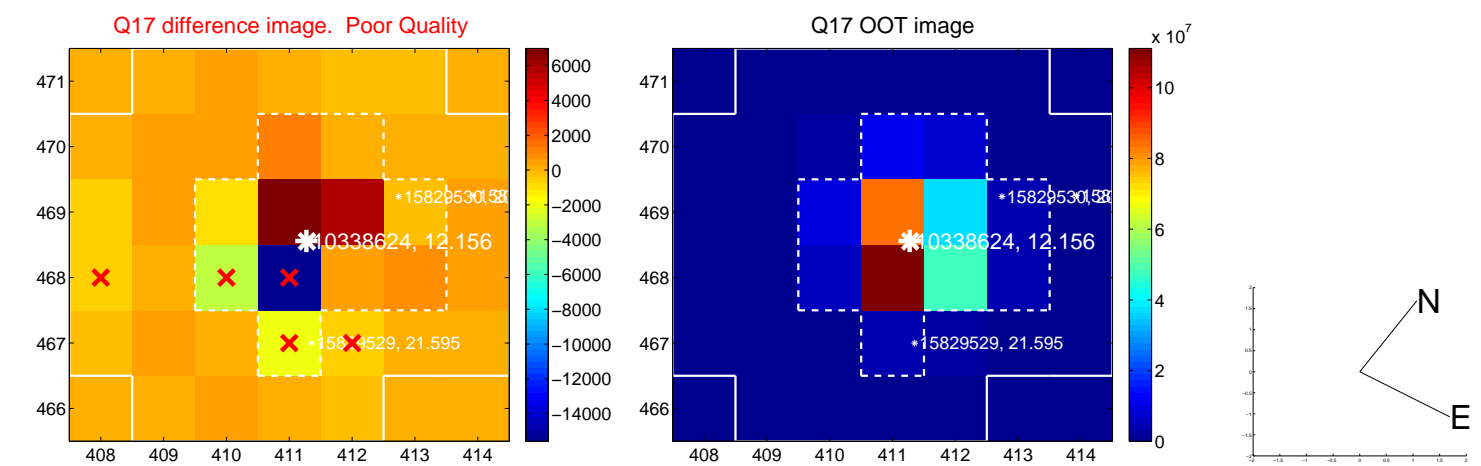
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



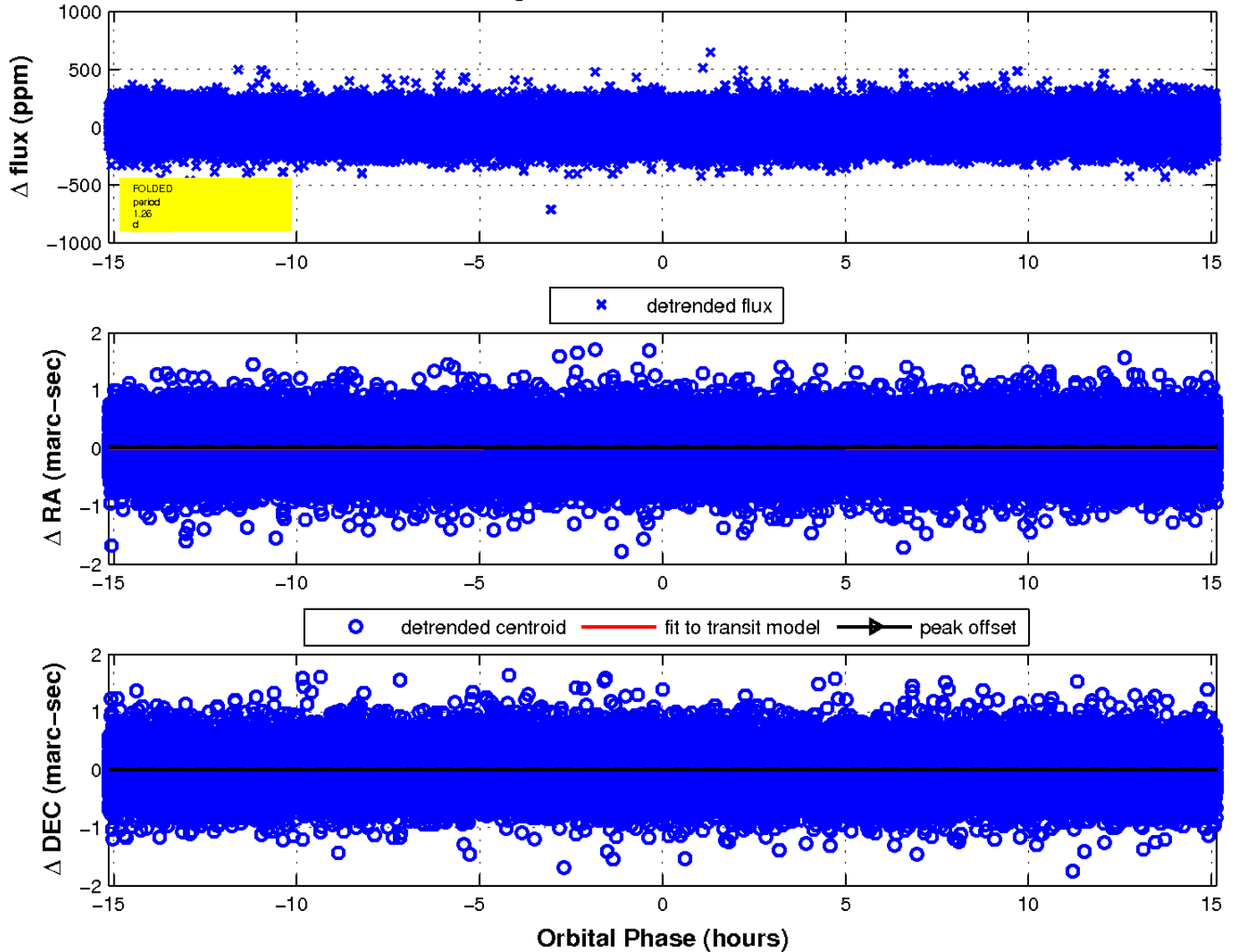
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

