

KIC 010751638

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})
010751638-01	OBS	No	0.561680	132.065545	15.6	4.178	7.9	2.3	0.96	6200	0.40	6709.95

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010751638-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_FEW_MEAS

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

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

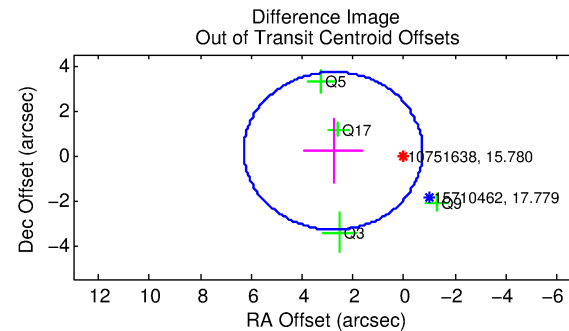
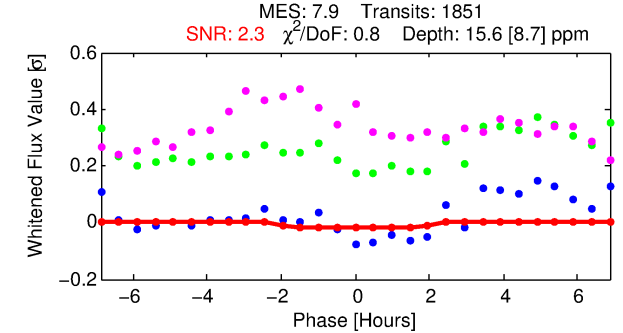
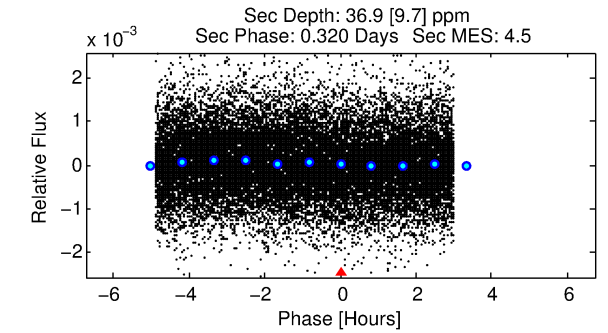
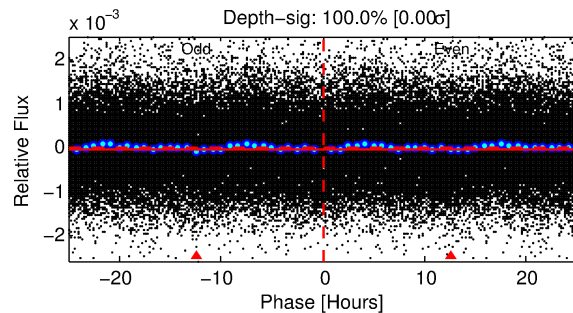
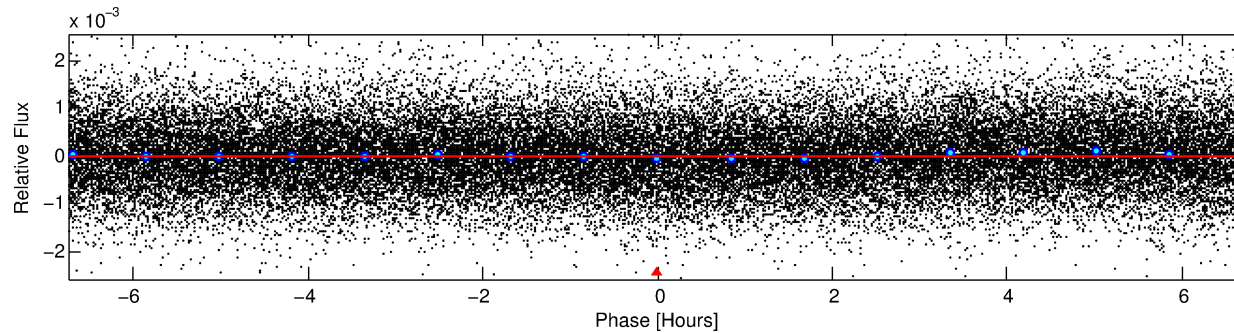
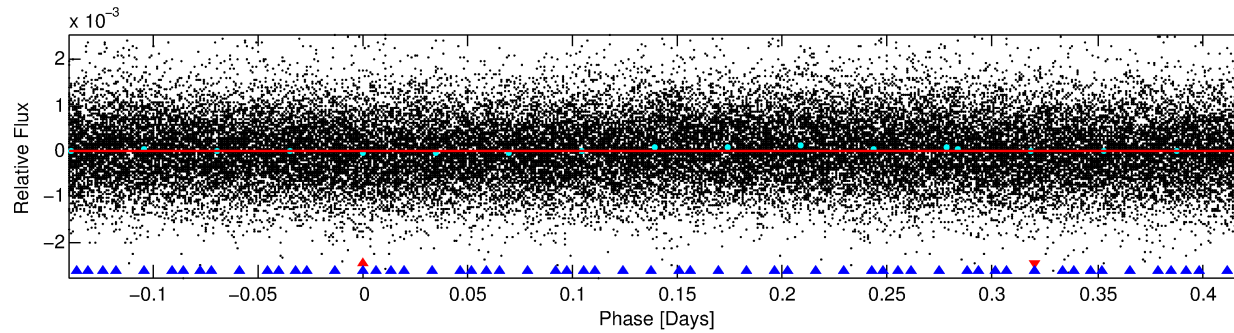
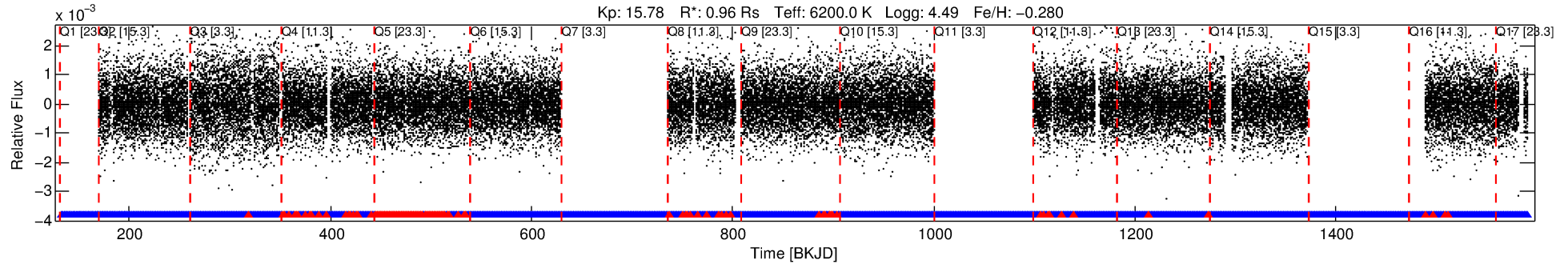
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010751638-01

No Significant Match Found

DV One-Page Summary

KIC: 10751638 Candidate: 1 of 2 Period: 0.562 d



DV Fit Results:

Period = 0.56168 [0.00005] d
Epoch = 132.0655 [0.0202] BKJD
Rp/R* = 0.0039 [0.0128]
a/R* = 1.12 [3.79]
b = 0.70 [12.74]
Seff = 6709.95 [2708.35]
Teq = 2308 [233] K
Rp = 0.40 [1.34] Re
a = 0.0135 [0.0035] AU
Ag = 22.45 [148.49] [0.14σ]
Teffp = 7767 [12824] K [0.43σ]

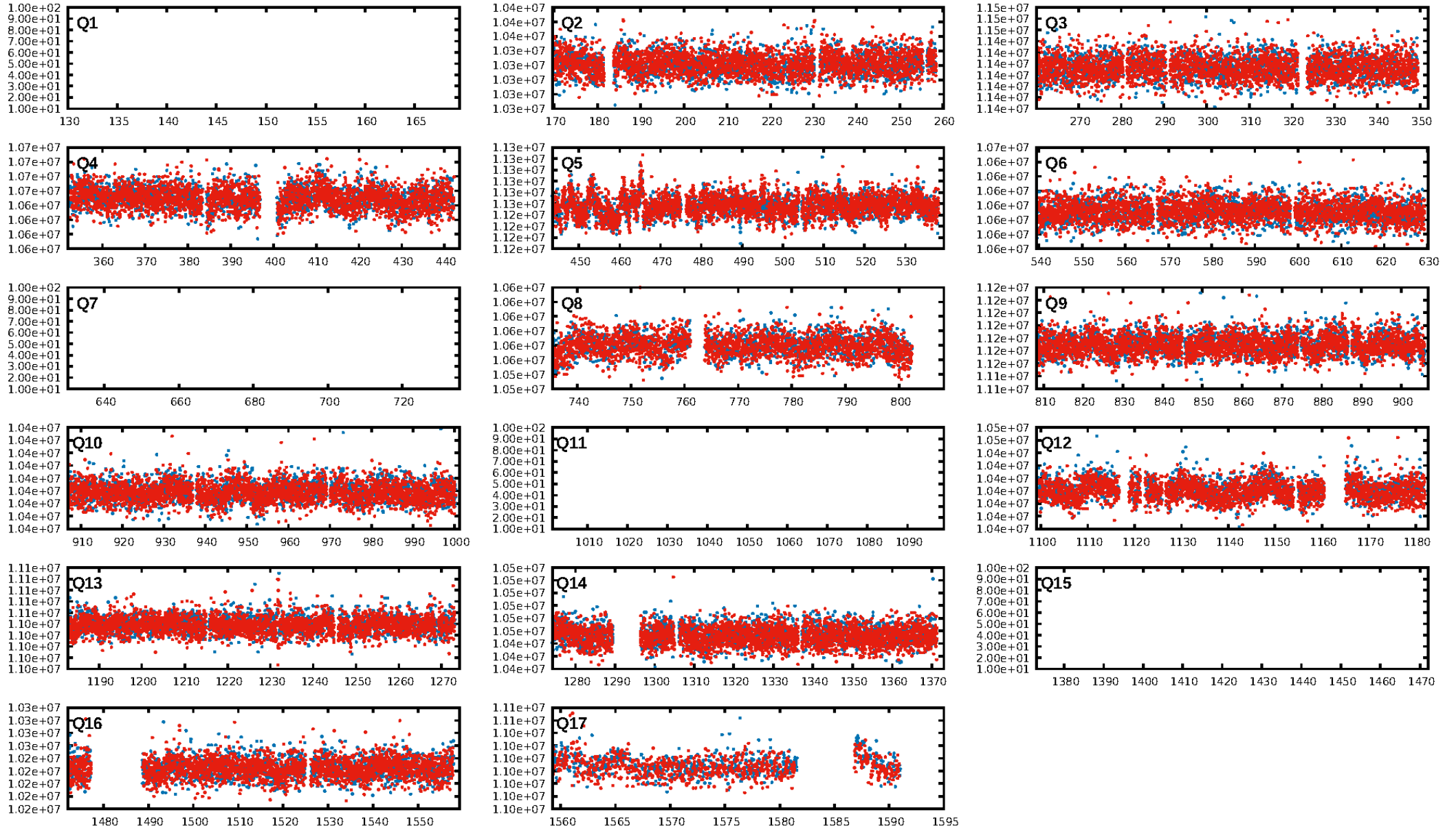
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [137.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 9.05e-07
RollingBand-fgt: 0.91 [1643/1803]
GhostDiagnostic-chr: 1.26
Centroid-sig: 0.1%
Centroid-so: 14.668 arcsec [1.96σ]
OotOffset-rm: 2.785 arcsec [2.38σ]
KicOffset-rm: 2.807 arcsec [4.47σ]
OotOffset-st: 0/1/0/3 [4]
KicOffset-st: 0/1/0/3 [4]
DiffImageQuality-fgm: 0.50 [2/4]
DiffImageOverlap-fno: 1.00 [13/13]

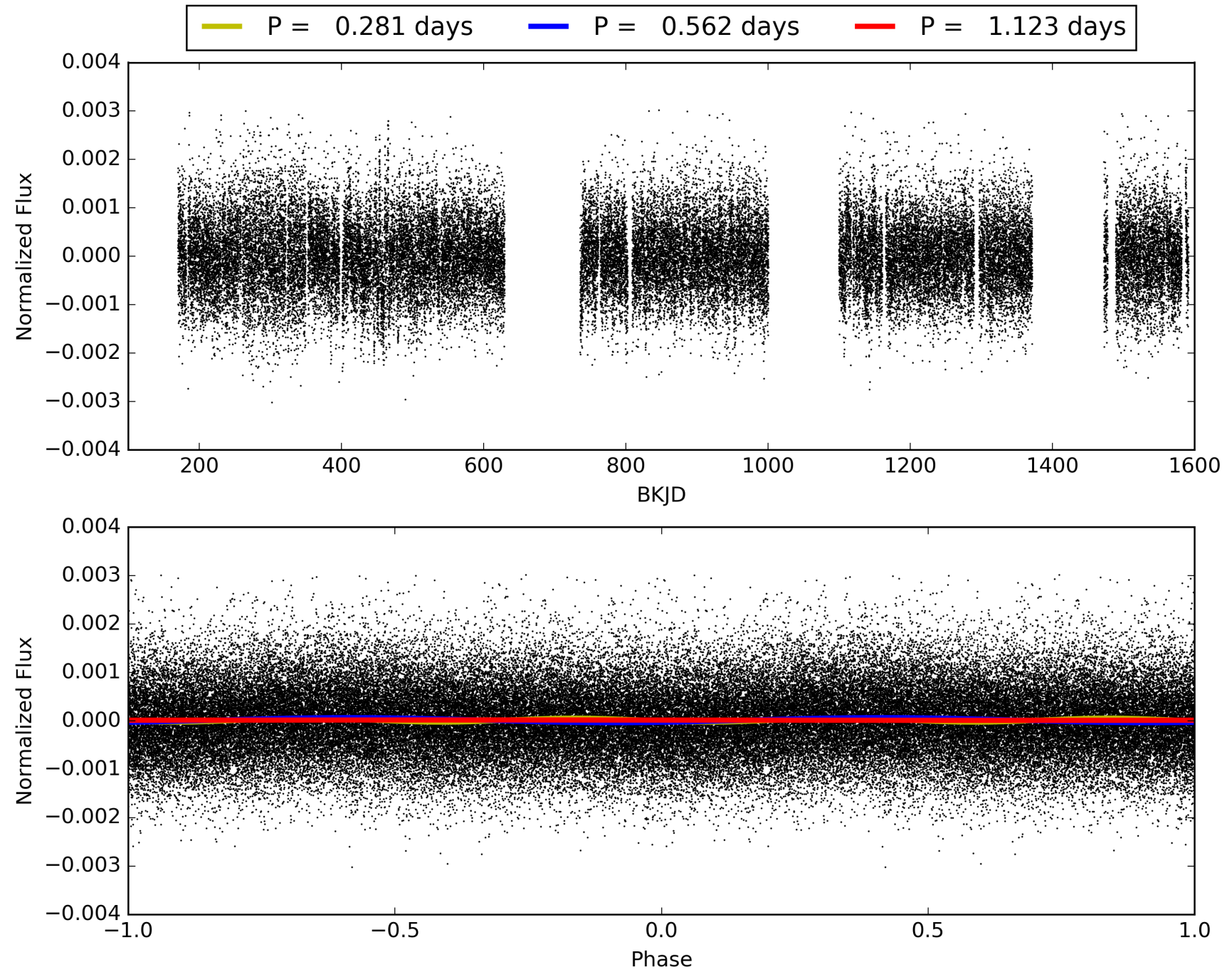
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 09:58:32 Z

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

TCE 010751638-01, PDC Light Curves

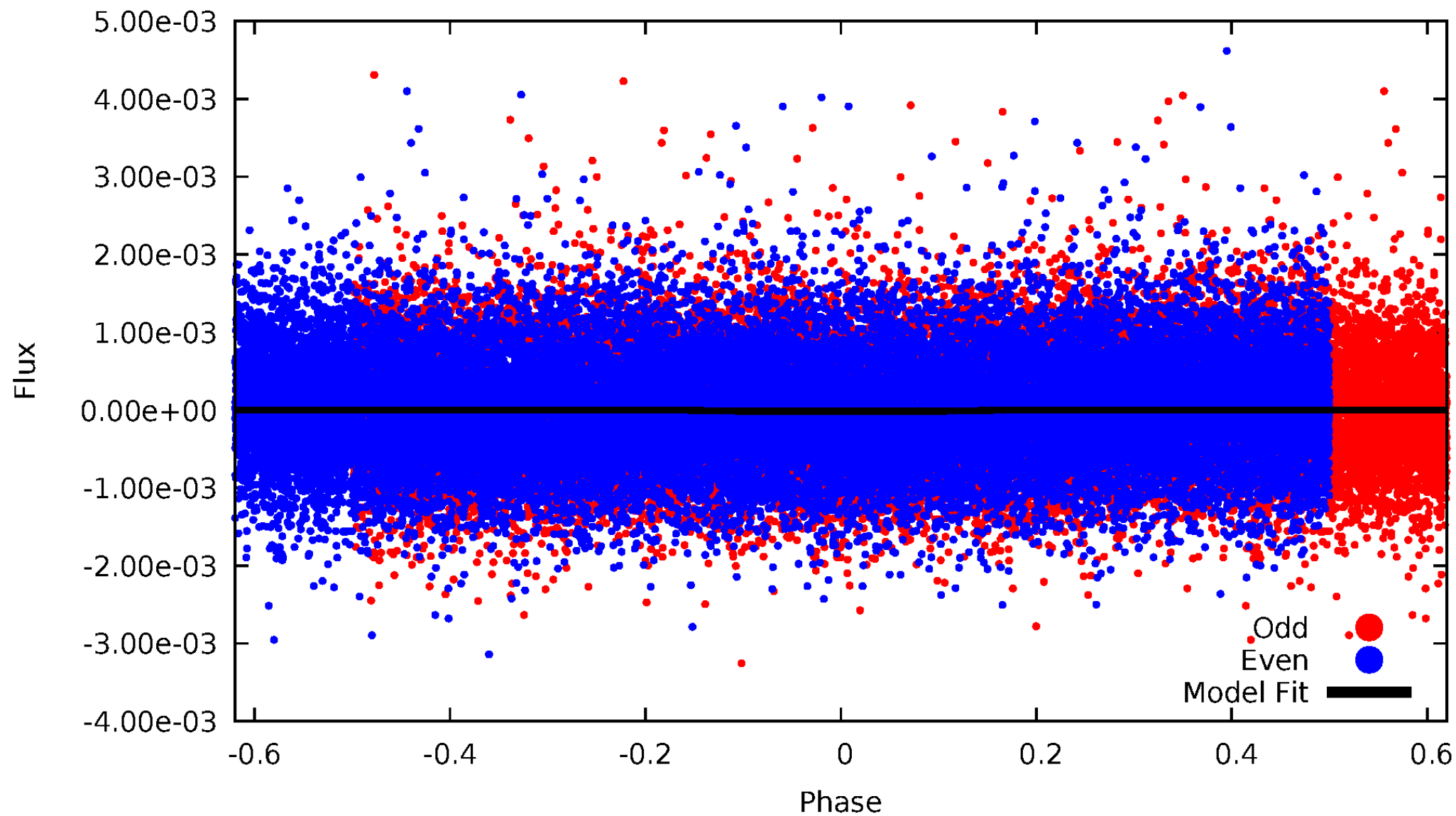


TCE 010751638-01



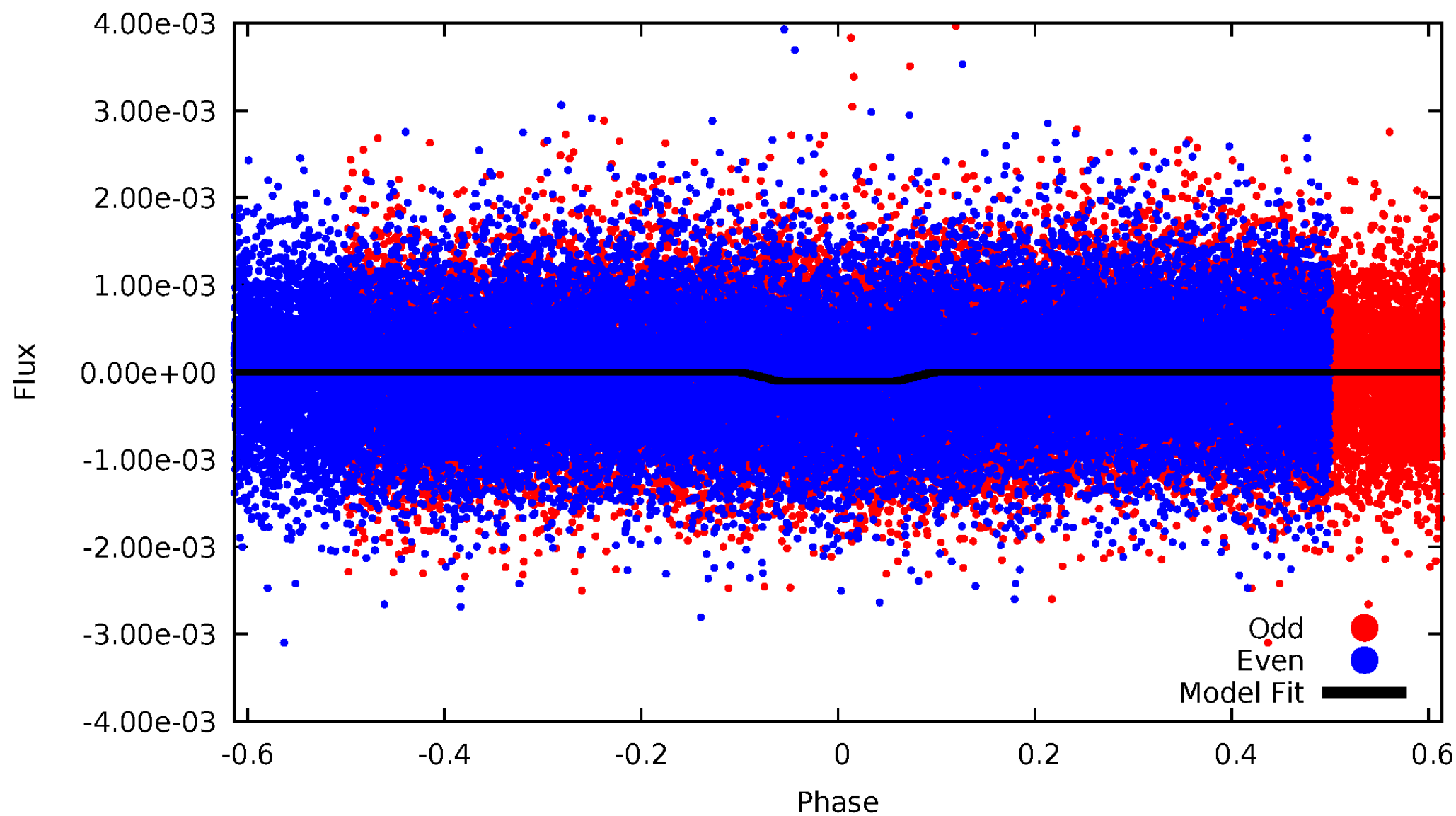
DV Odd/Even

TCE 010751638-01



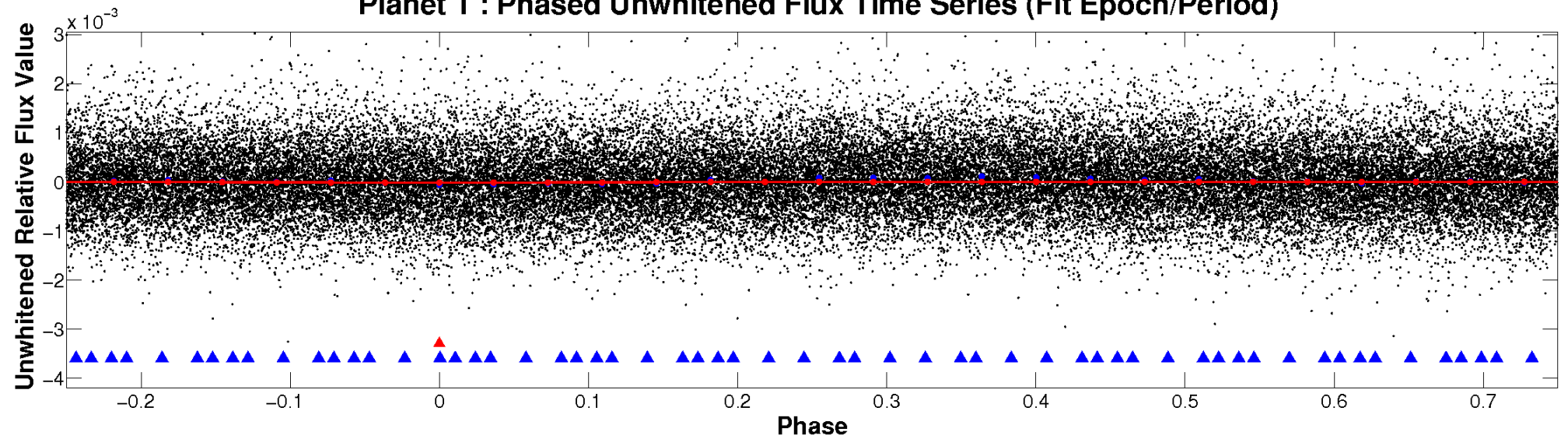
ALT Odd/Even

TCE 010751638-01

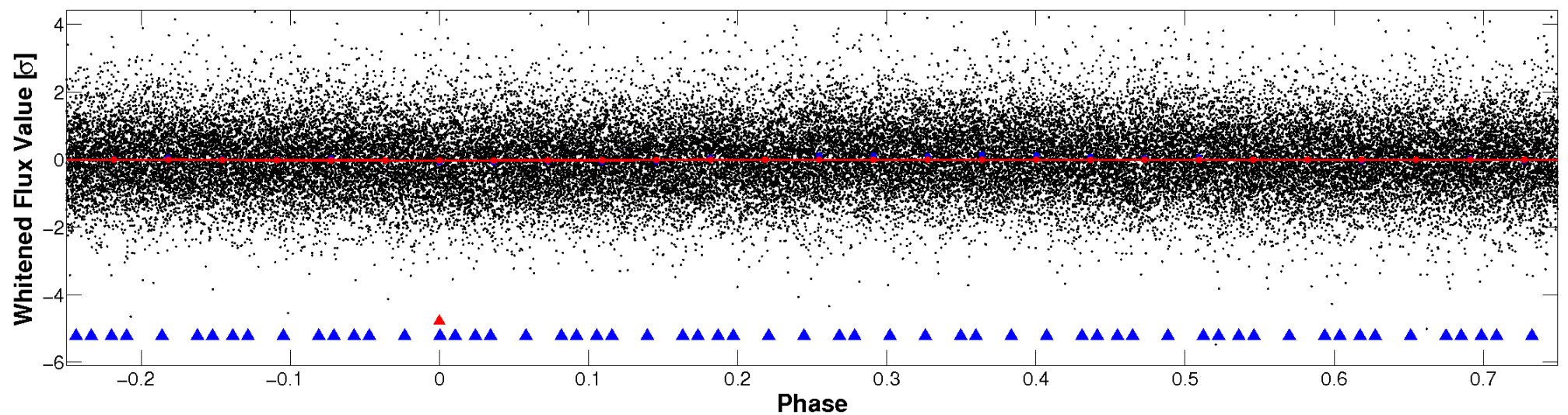


Non-Whitened Vs. Whitened Light Curve

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

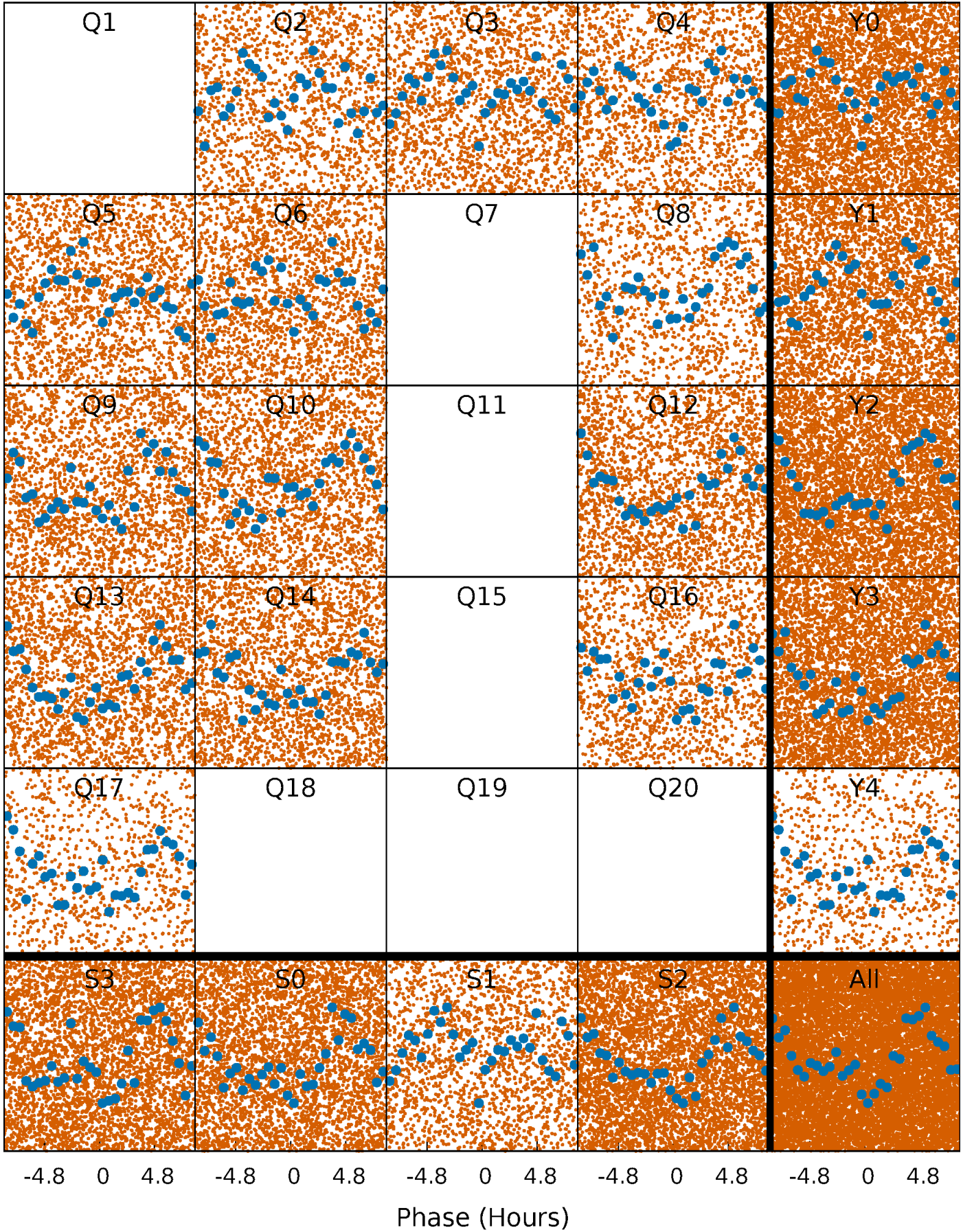


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



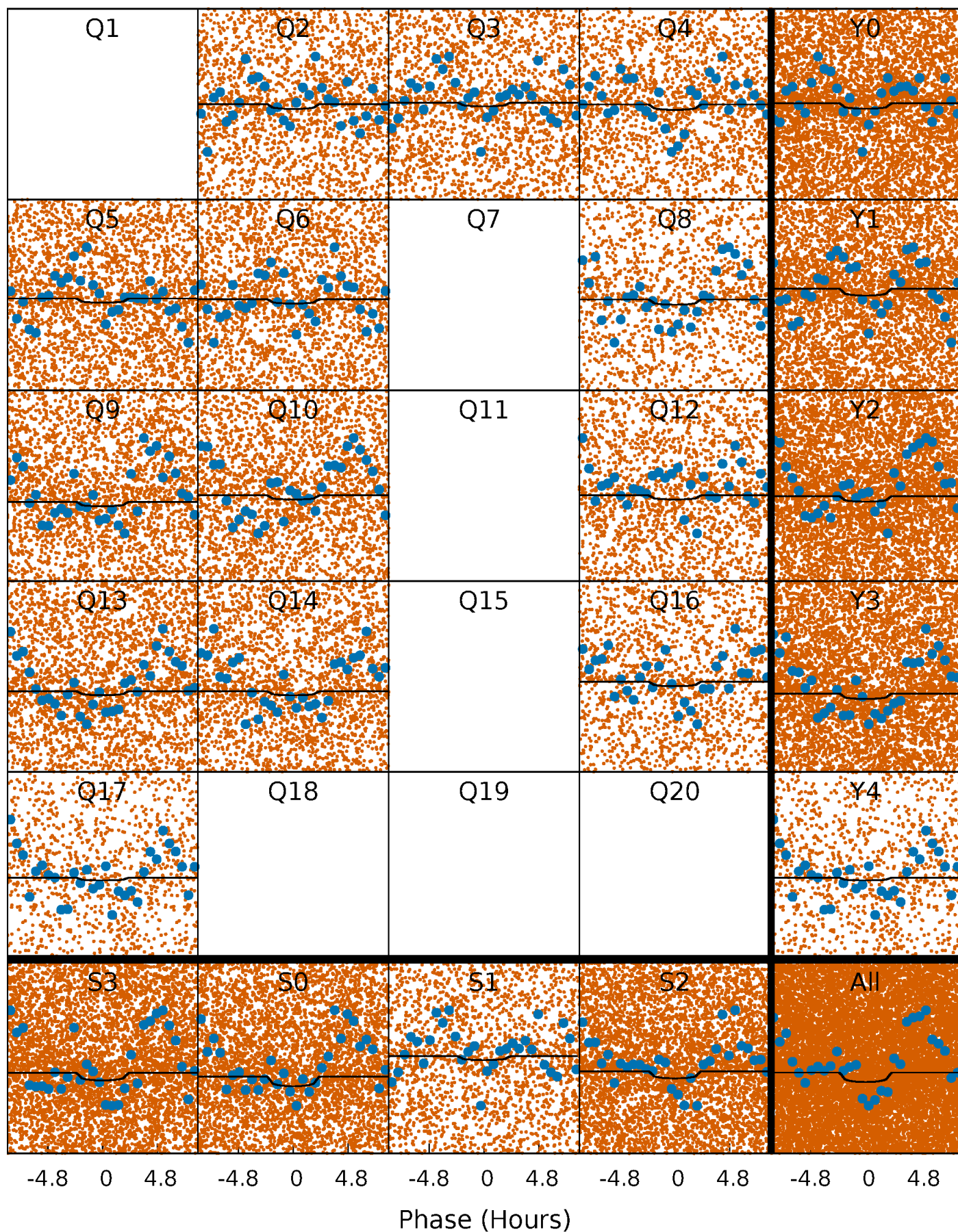
PDC Quarter-Phased Transit Curves

TCE 010751638-01 P= 0.561680 Days $T_0=132.065545$ (BKJD)



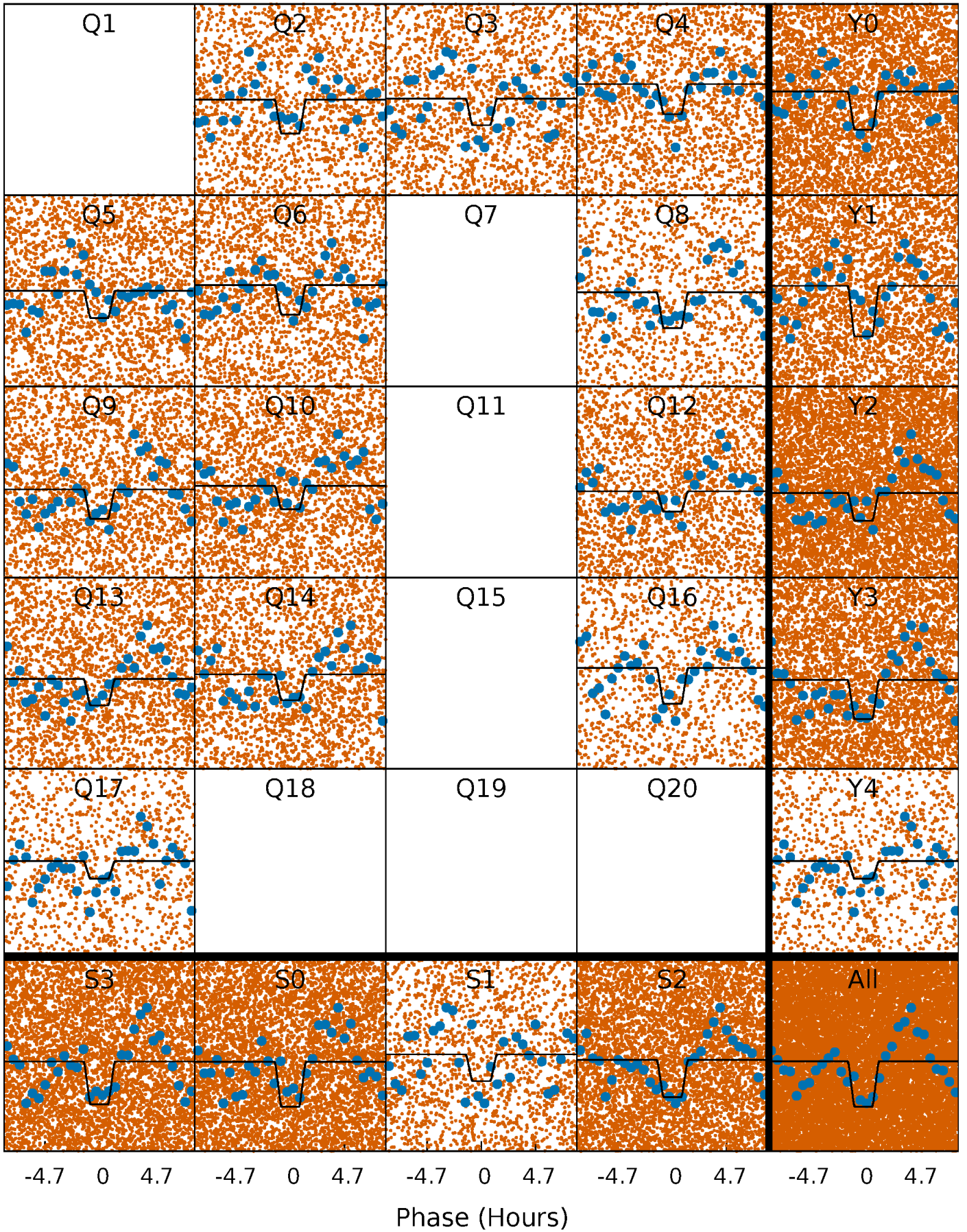
DV Quarter-Phased Transit Curves

TCE 010751638-01 P= 0.561680 Days $T_0=132.065545$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

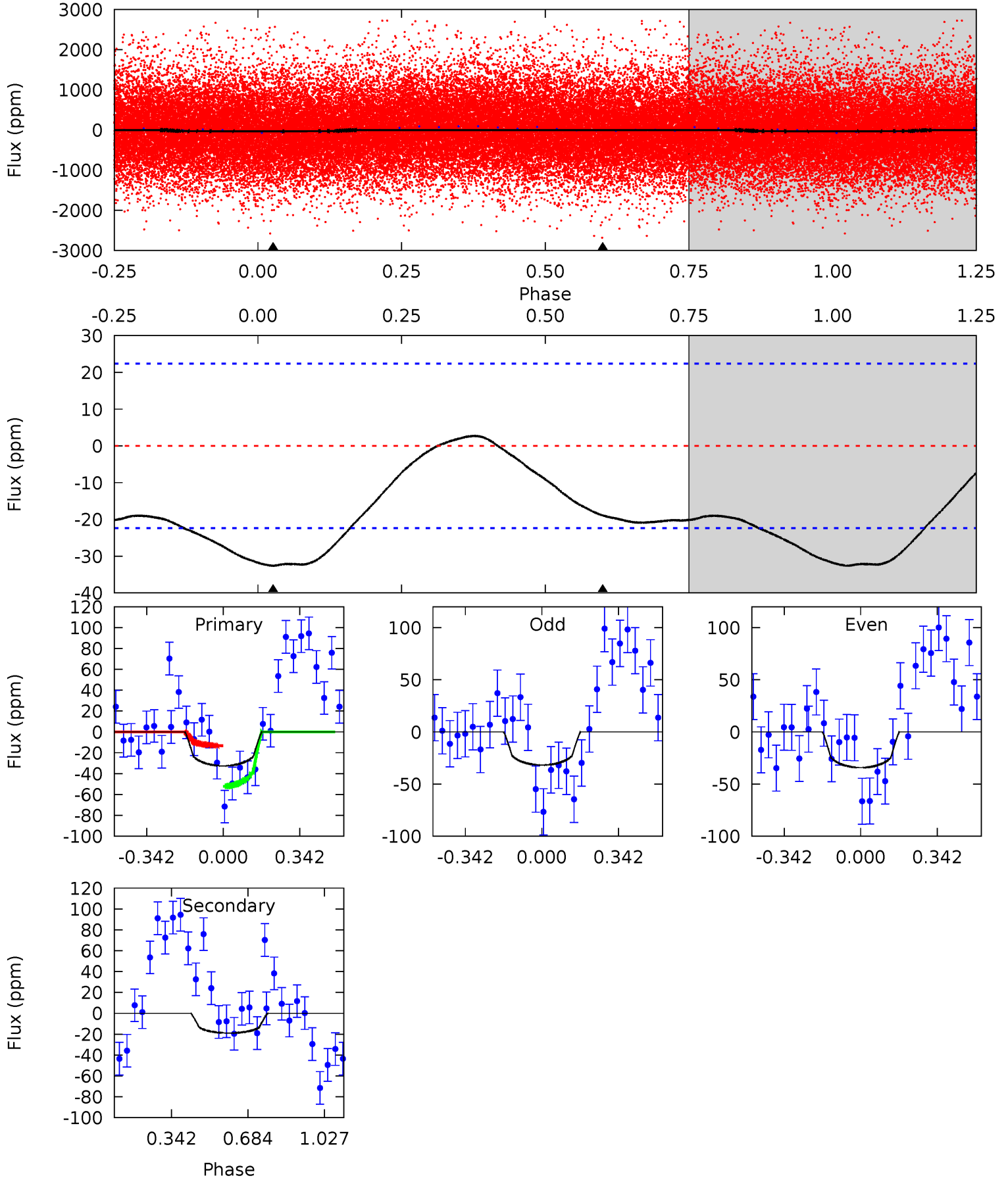
TCE 010751638-01 P= 0.561718 Days $T_0=132.044325$ (BKJD)



DV Model-Shift Uniqueness Test

010751638-01, P = 0.561680 Days, E = 132.065545 Days

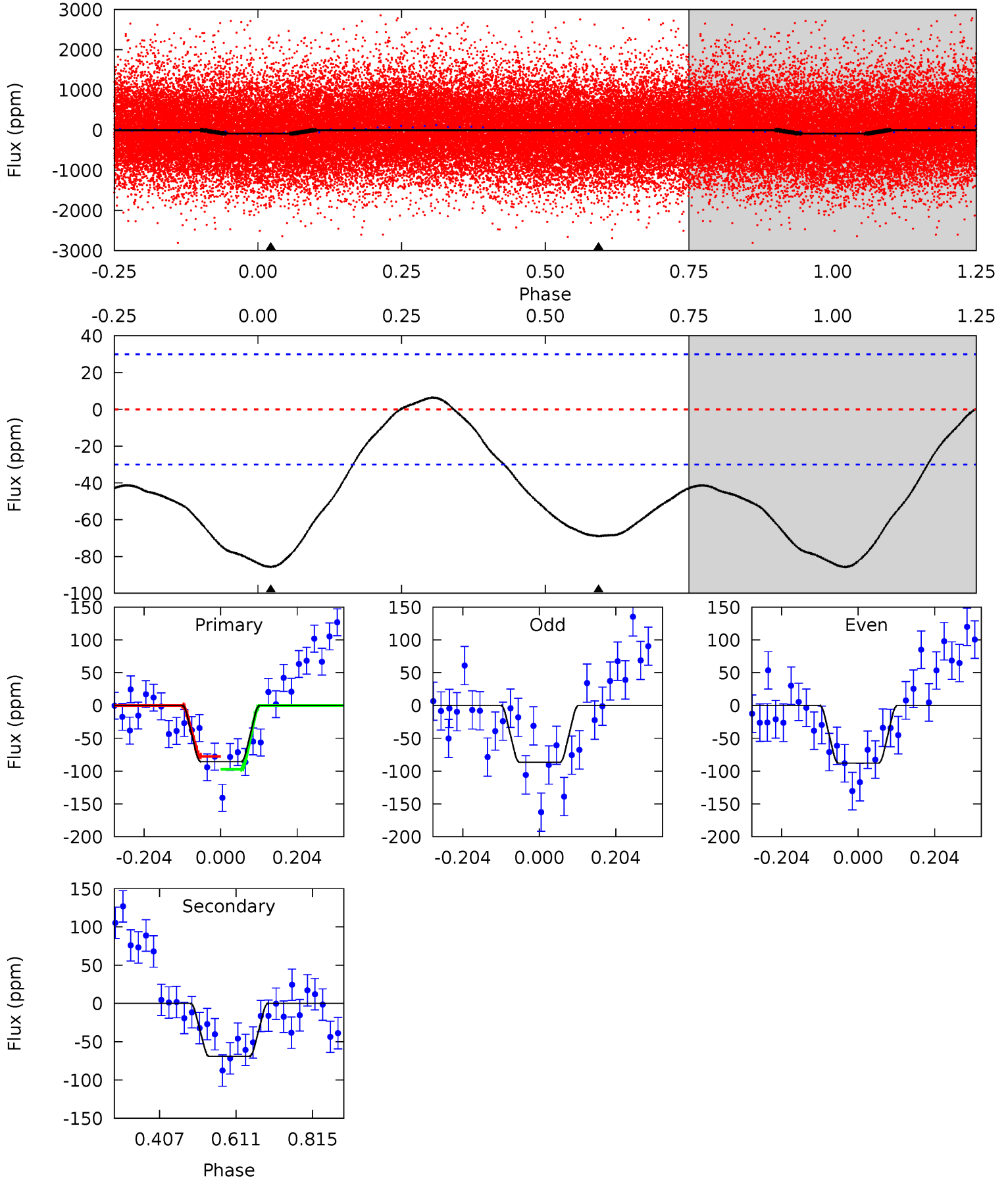
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.27	3.64	0	0	4.30	0.95	0.45	6.27	6.27	3.64	3.64	0.24	0.72	0.08	3.73



Alt Model-Shift Uniqueness Test

010751638-01, P = 0.561718 Days, E = 132.044325 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.6	10.1	0	0	4.41	1.27	2.27	12.6	12.6	10.1	10.1	0.07	0.92	0.07	1.42



Stellar Parameters For KIC 010751638

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6200^{+197}_{-219}	$4.488^{+0.052}_{-0.208}$	$-0.280^{+0.250}_{-0.300}$	$0.958^{+0.291}_{-0.097}$	$1.029^{+0.129}_{-0.144}$	$1.650^{+0.444}_{-0.838}$
	+3%/-4%	+1%/-5%	+89%/-107%	+30%/-10%	+13%/-14%	+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 010751638-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-19 ± 5	$1.12^{+1.17}_{-0.71}$	3293^{+247}_{-176}	4104^{+2322}_{-1686}	$1.464^{+8.270}_{-1.128}$
Alt.	-69 ± 7	$1.44^{+1.28}_{-0.89}$	3291^{+246}_{-164}	4849^{+3230}_{-1205}	$3.211^{+18.252}_{-2.287}$

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 $A_{\text{obs}} \gg 1.0$

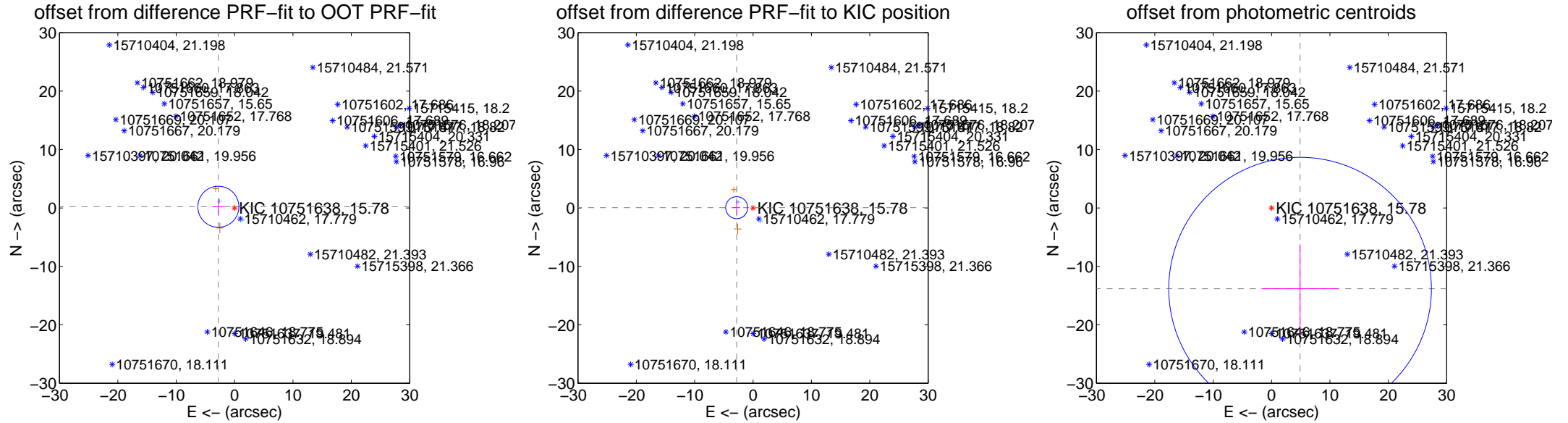
DV Centroid Data

Supplemental centroid analysis for 010751638-01. Kepler magnitude: 15.78. Transit SNR 2.25

There are 2 quarters with good PRF difference image offsets

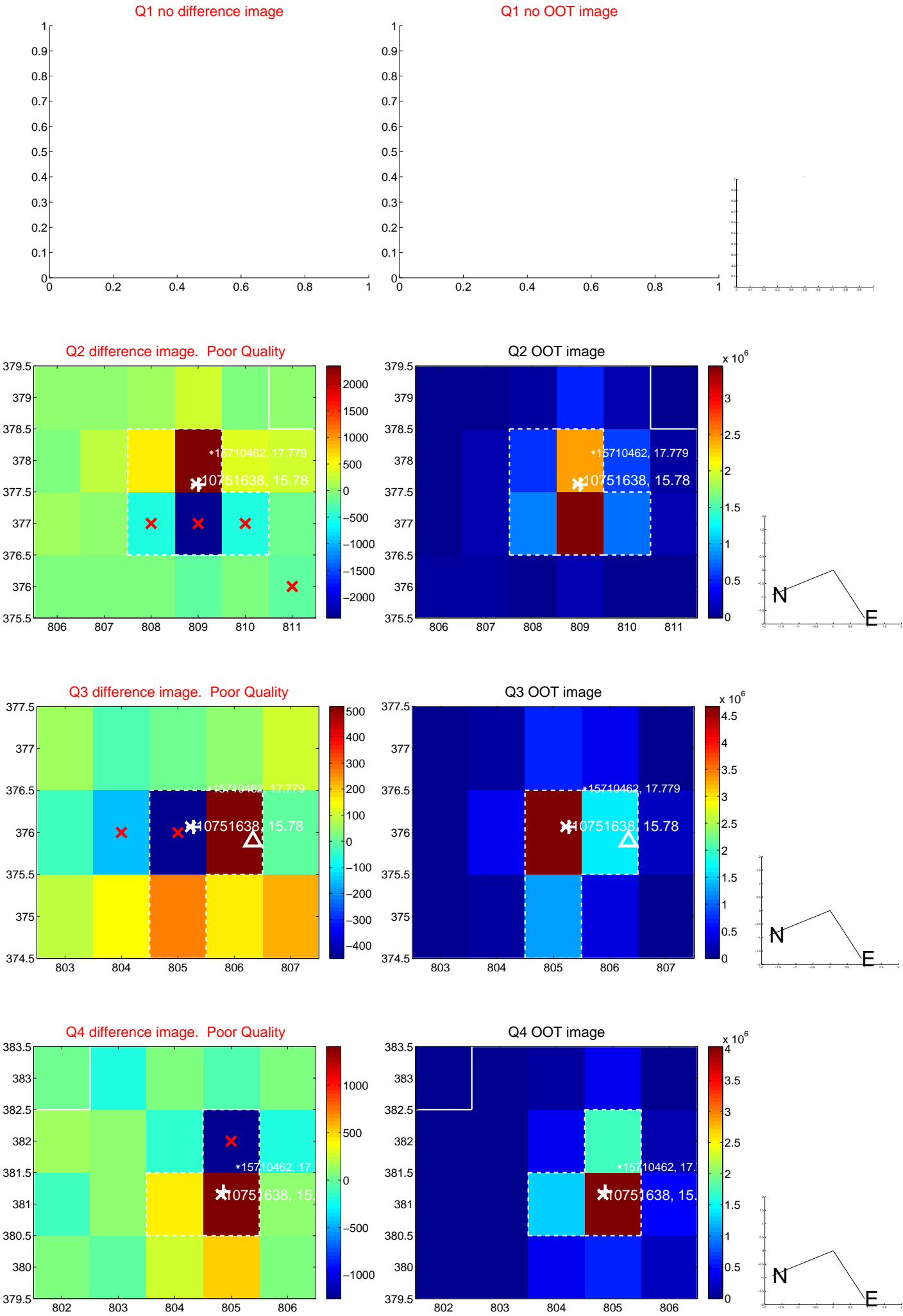
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.785 ± 1.171	2.38	2.778 ± 1.107	0.201 ± 1.406
PRF-fit source offset from KIC position	2.807 ± 0.628	4.47	2.806 ± 0.626	0.050 ± 1.282
photometric centroid source offset	14.67 ± 7.50	1.96	-4.89 ± 6.59	-13.83 ± 7.60

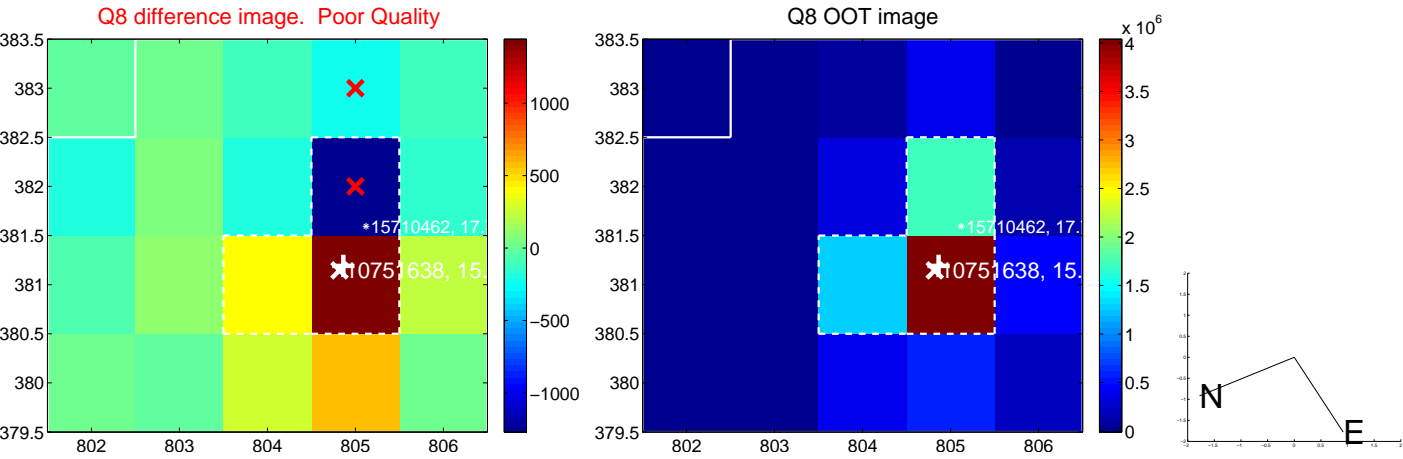
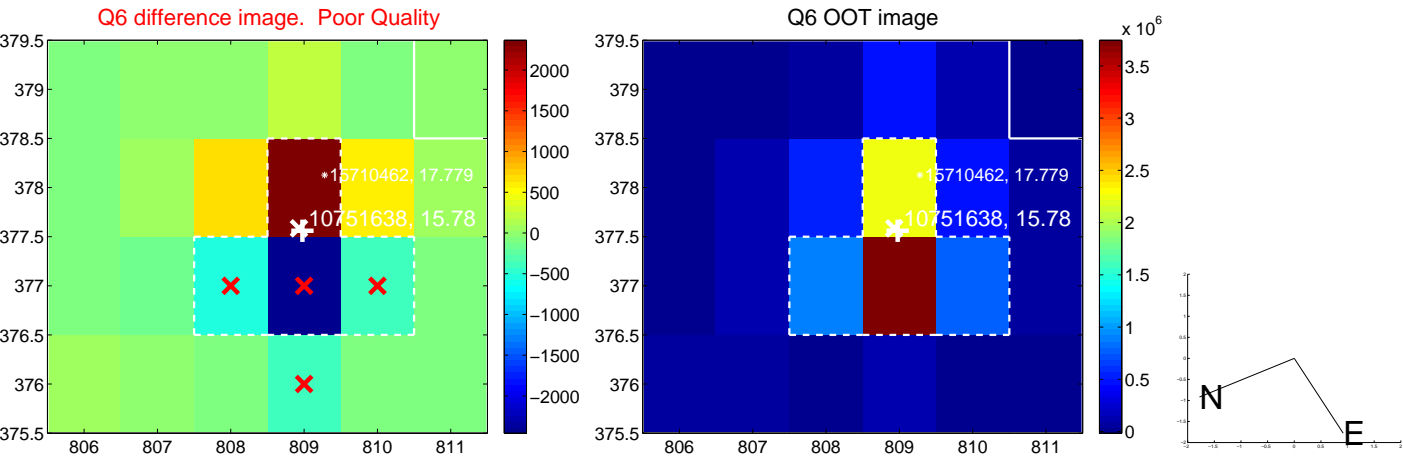
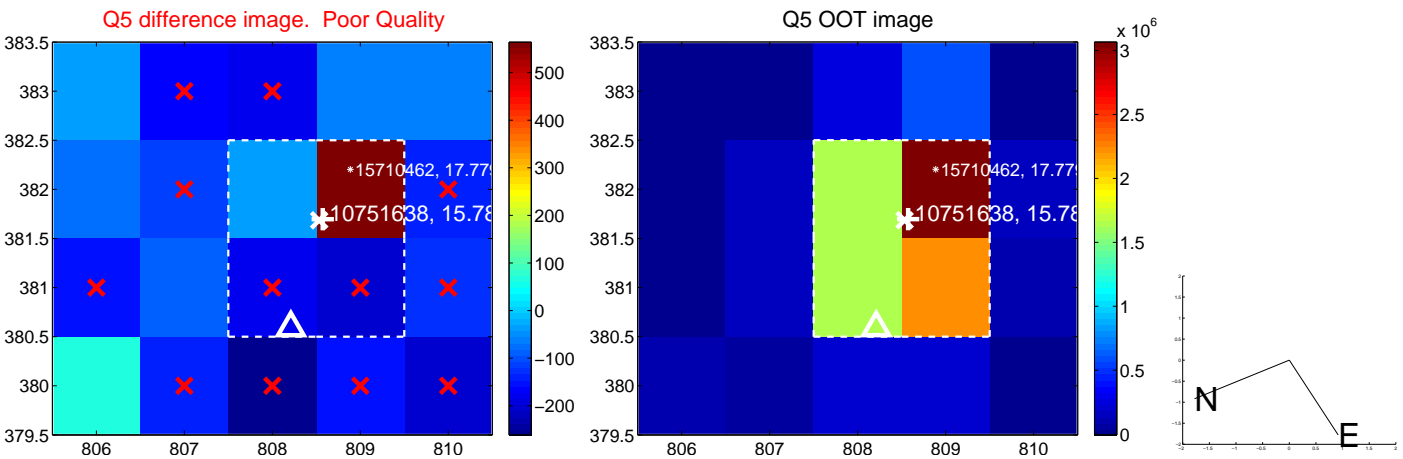


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

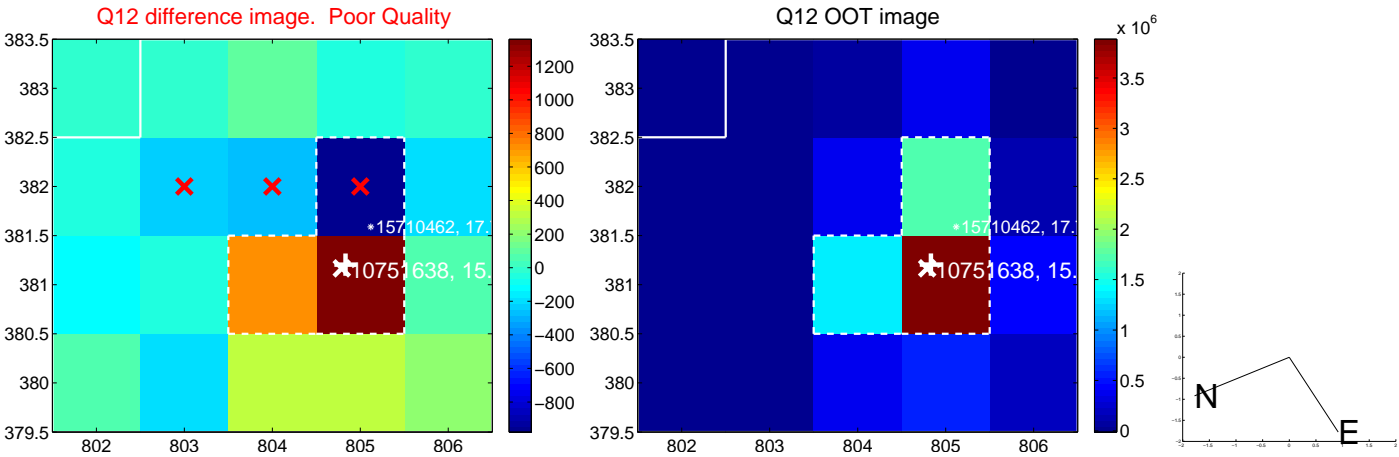
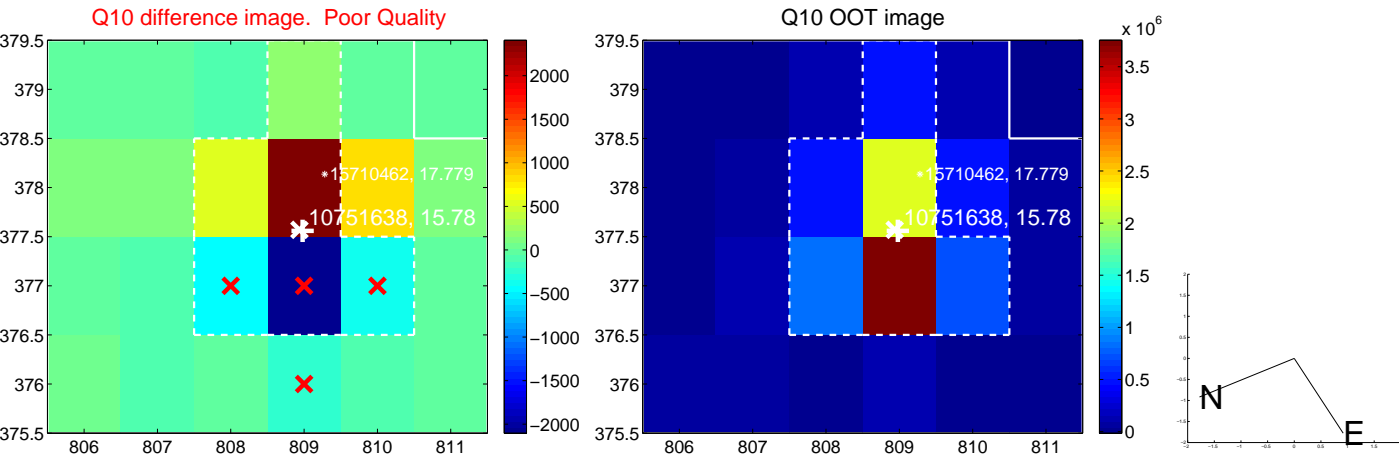
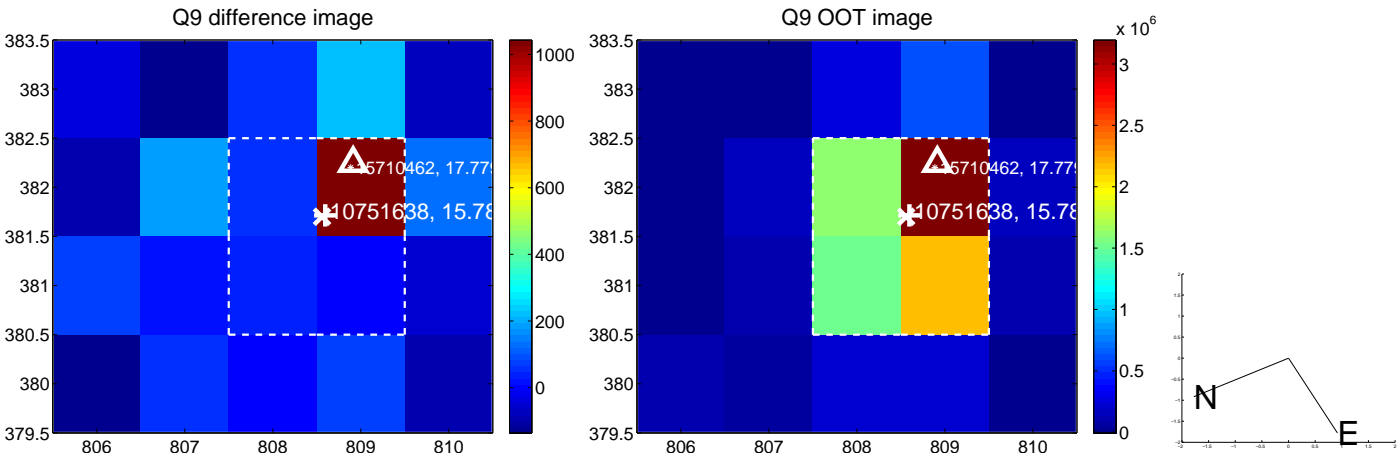
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



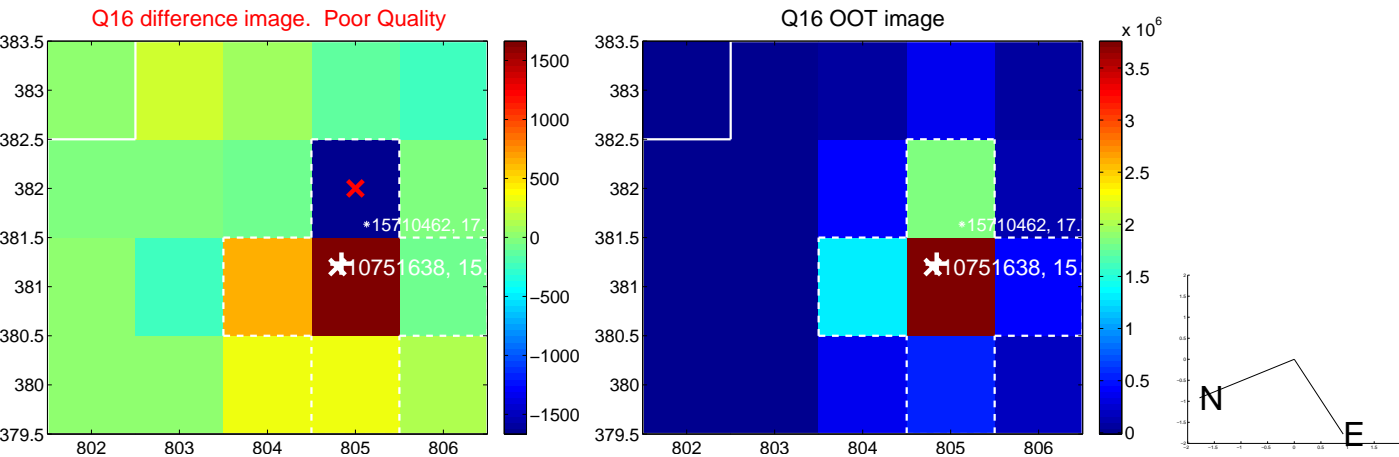
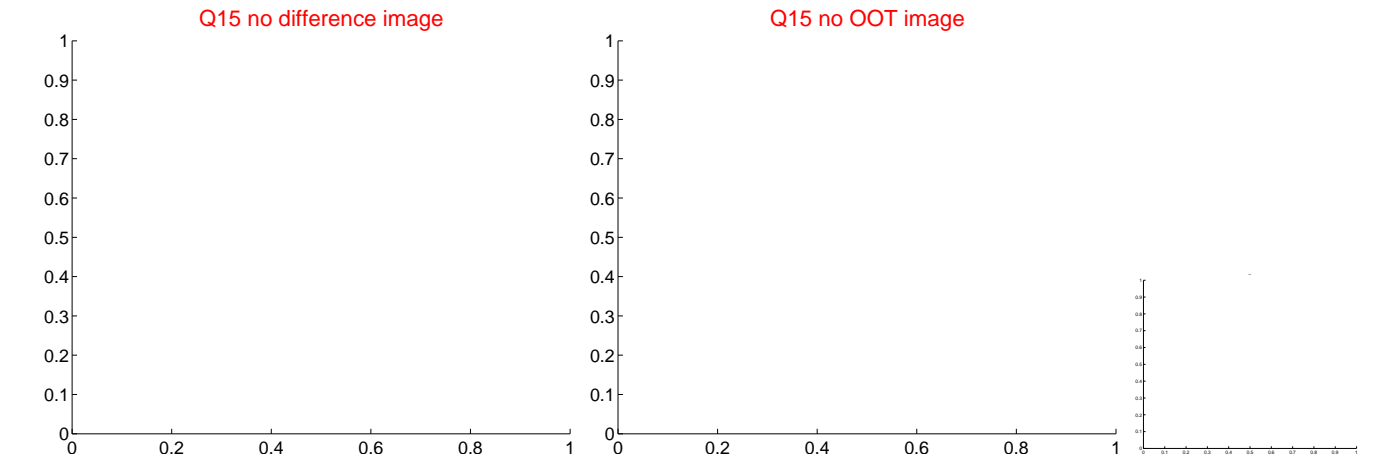
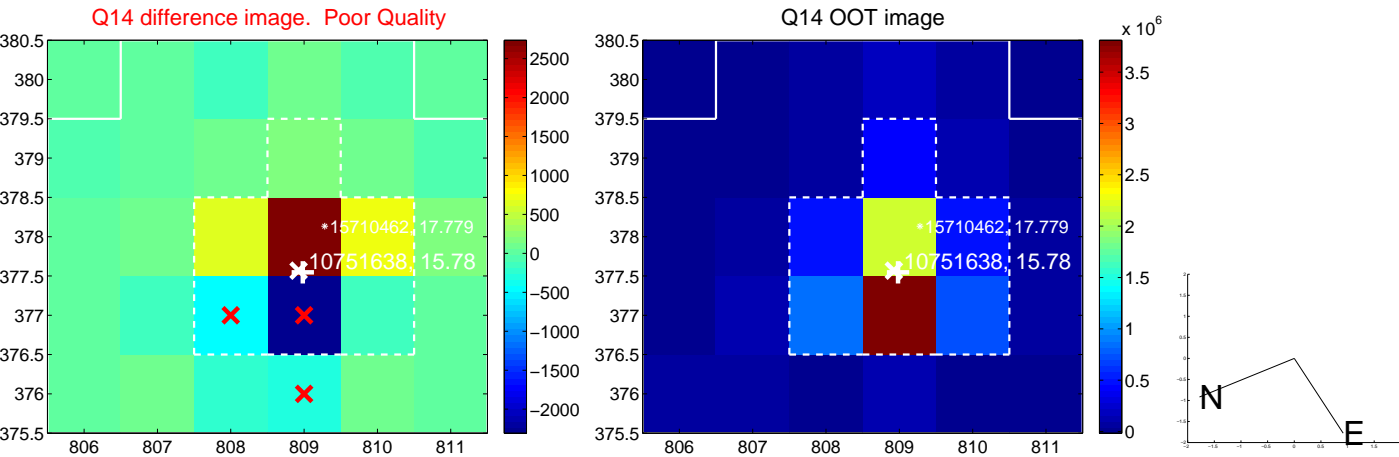
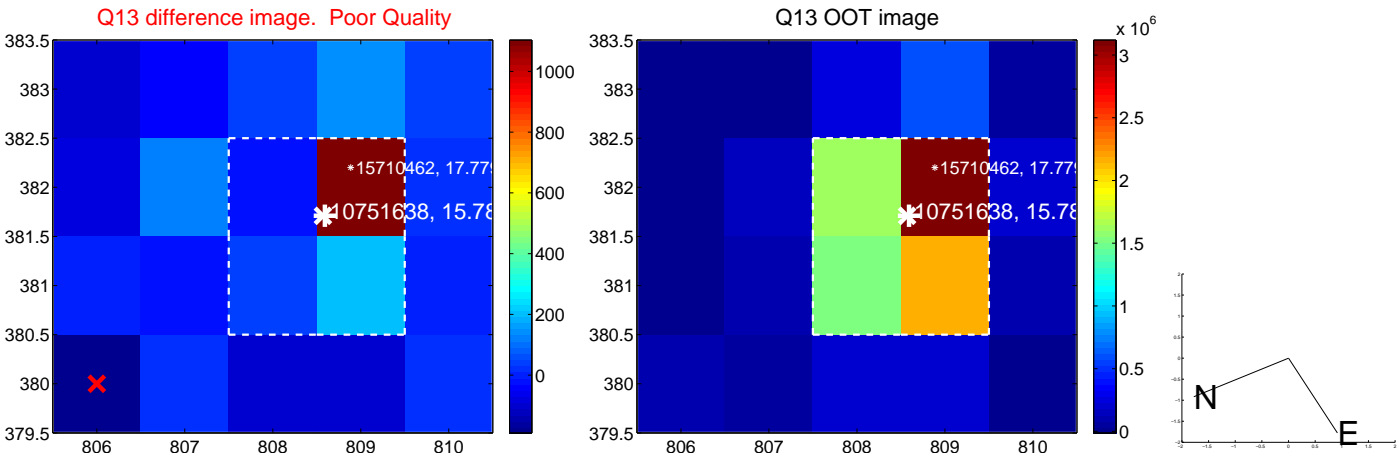
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



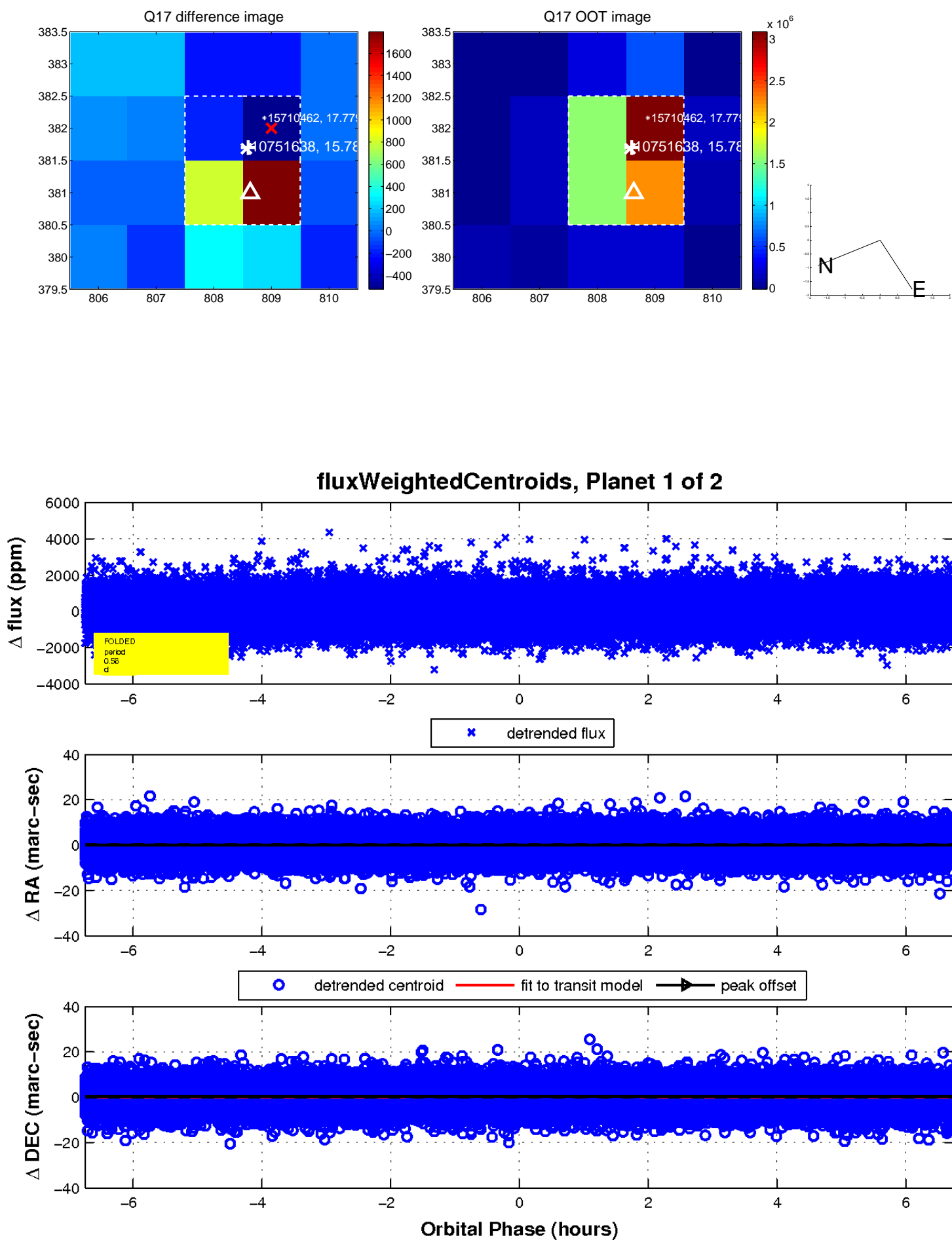
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

