

KIC 010663738

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})
010663738-01	OBS	4698.01	8.527488	137.299028	87.1	3.760	9.3	8.5	1.19	6469	1.26	286.80

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010663738-01	OBS	PC	0.96	0	0	0	0	NO_COMMENT

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.

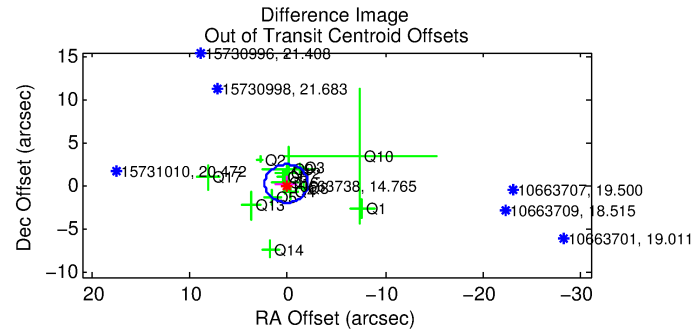
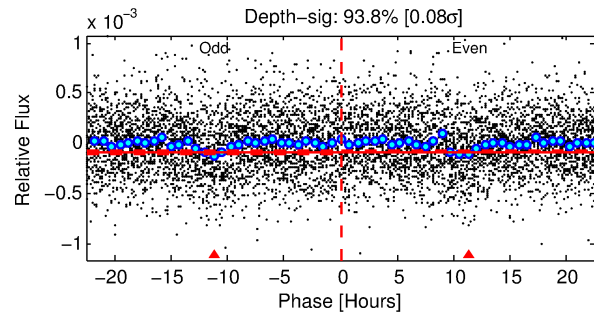
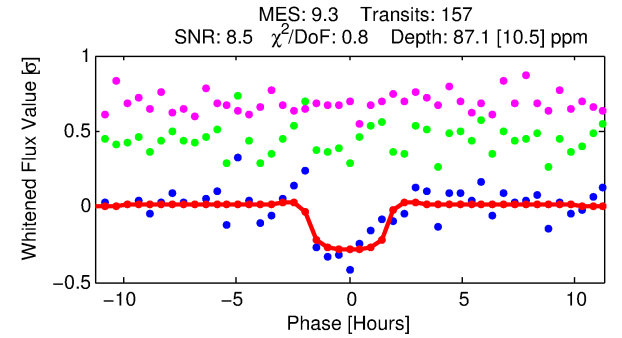
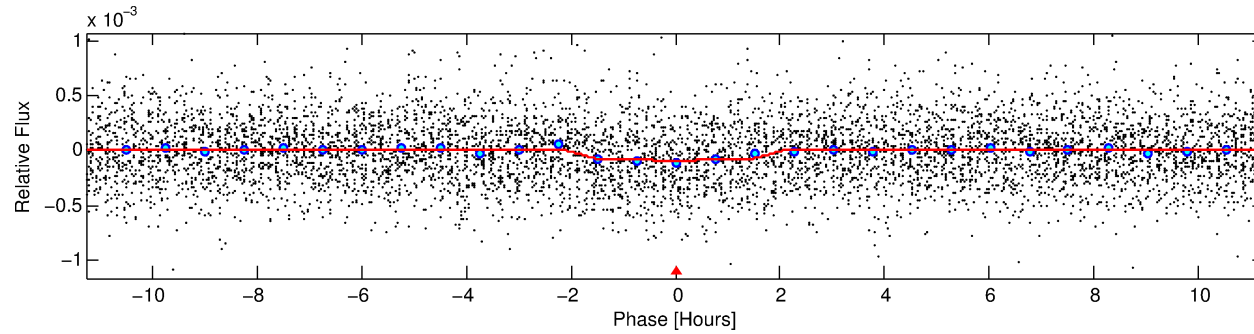
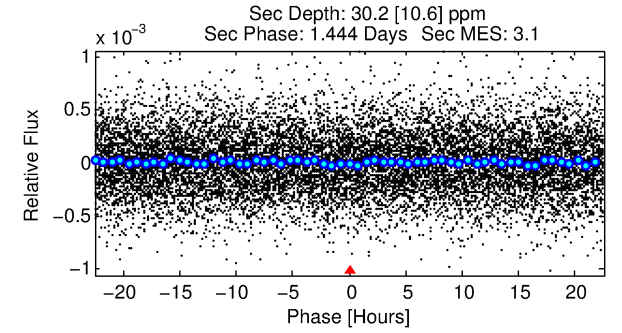
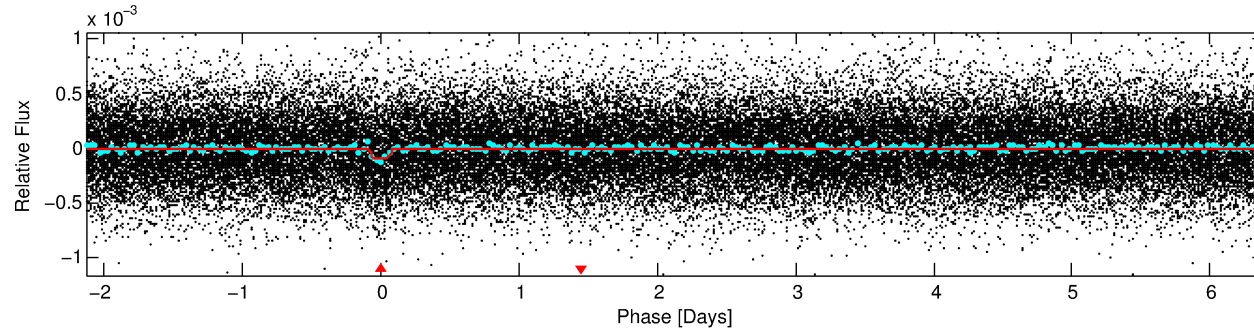
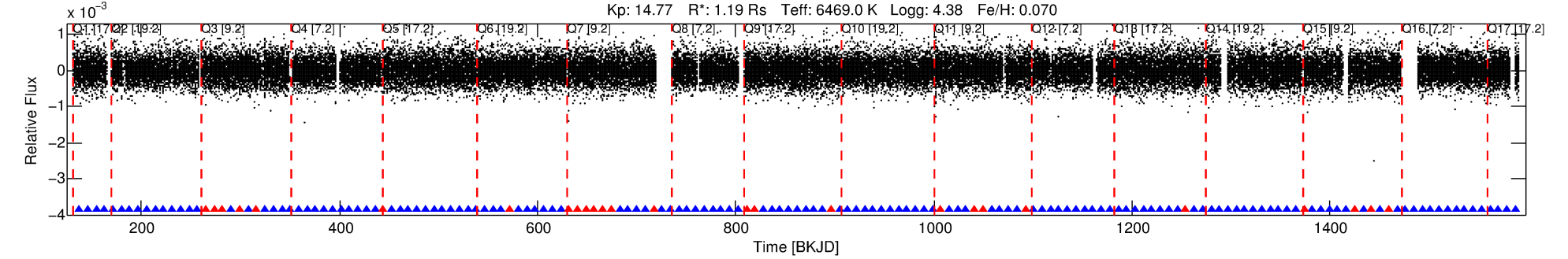
Ephemeris Match Information For 010663738-01

No Significant Match Found

DV One-Page Summary

KIC: 10663738 Candidate: 1 of 1 Period: 8.527 d

KOI: K04698.01 Corr: 0.881



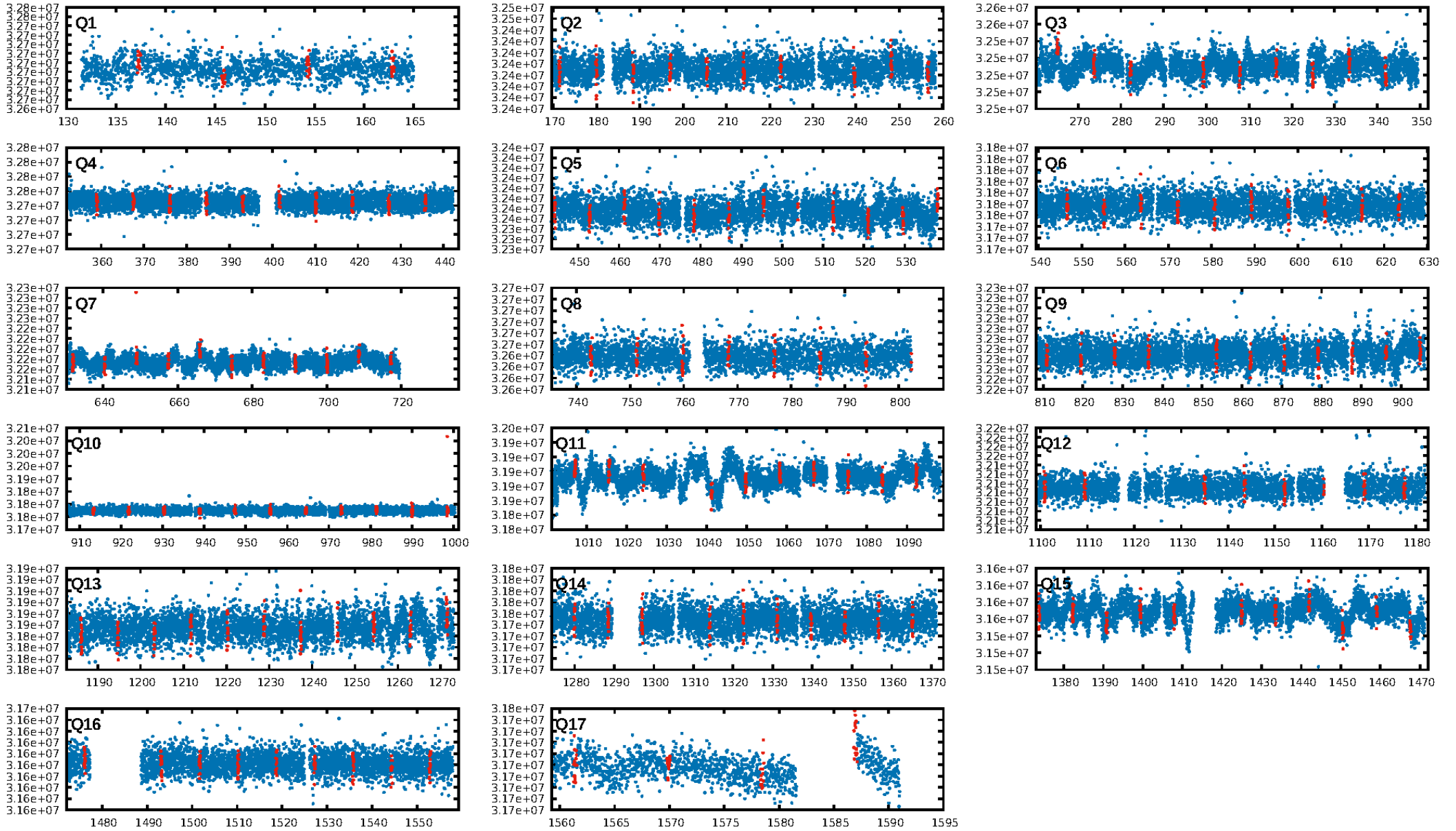
DV Fit Results:

Period = 8.52749 [0.00009] d
Epoch = 137.2990 [0.0084] BKJD
Rp/R* = 0.0097 [0.0056]
a/R* = 9.42 [29.35]
b = 0.85 [1.02]
Seff = 286.80 [126.40]
Teff = 1049 [116] K
Rp = 1.26 [0.85] Re
a = 0.0882 [0.0253] AU
Ag = 81.06 [103.30] [0.77σ]
Teffp = 4868 [1479] K [2.57σ]

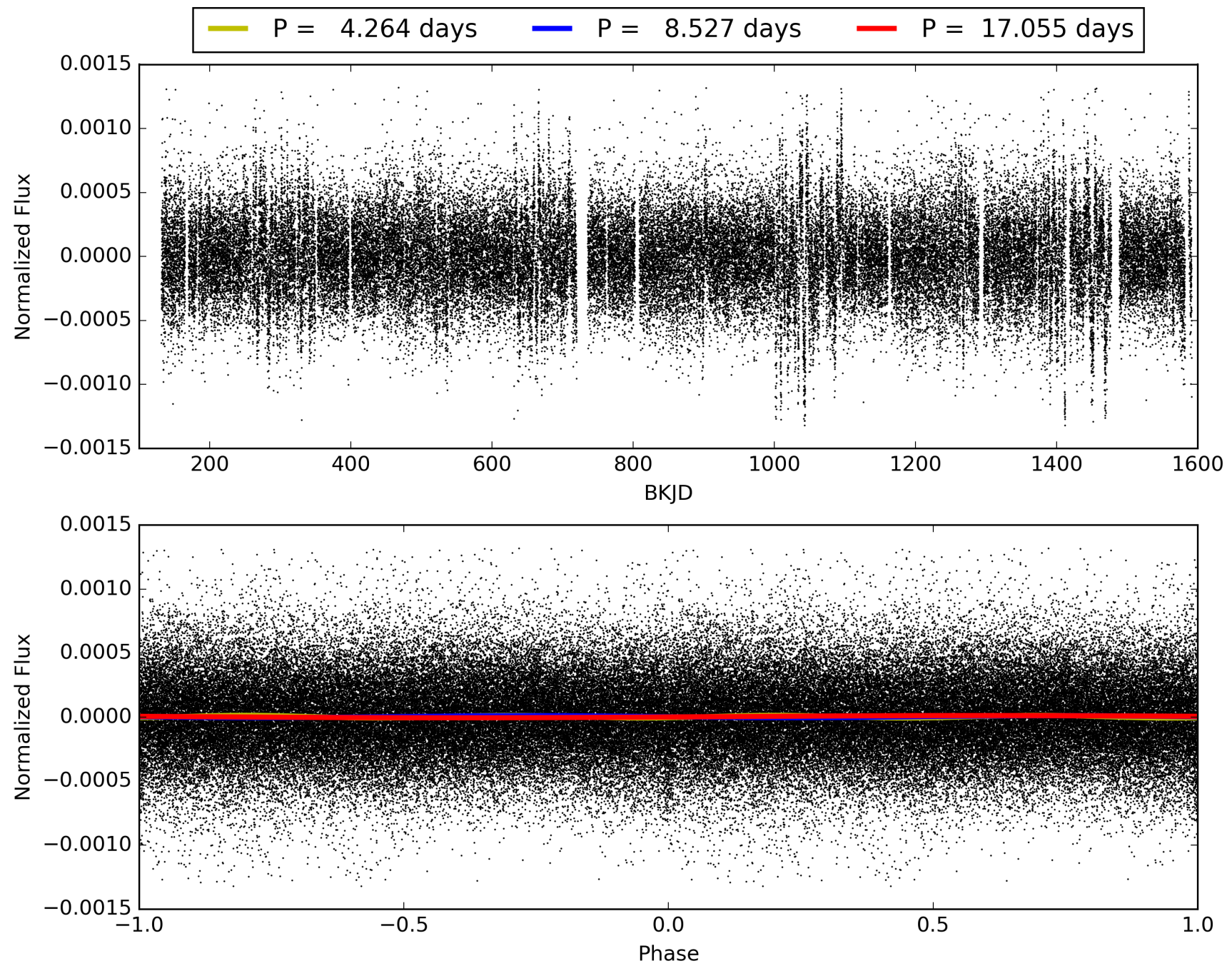
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 92.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.90e-20
RollingBand-fgt: 0.83 [123/149]
GhostDiagnostic-chr: 5.993
Centroid-sig: 1.6%
Centroid-so: 2.909 arcsec [1.62σ]
OotOffset-rm: 0.339 arcsec [0.46σ]
KicOffset-rm: 0.324 arcsec [0.38σ]
OotOffset-st: 4/1/4/5 [14]
KicOffset-st: 4/1/4/5 [14]
DiffImageQuality-fgm: 0.50 [7/14]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 010663738-01, PDC Light Curves

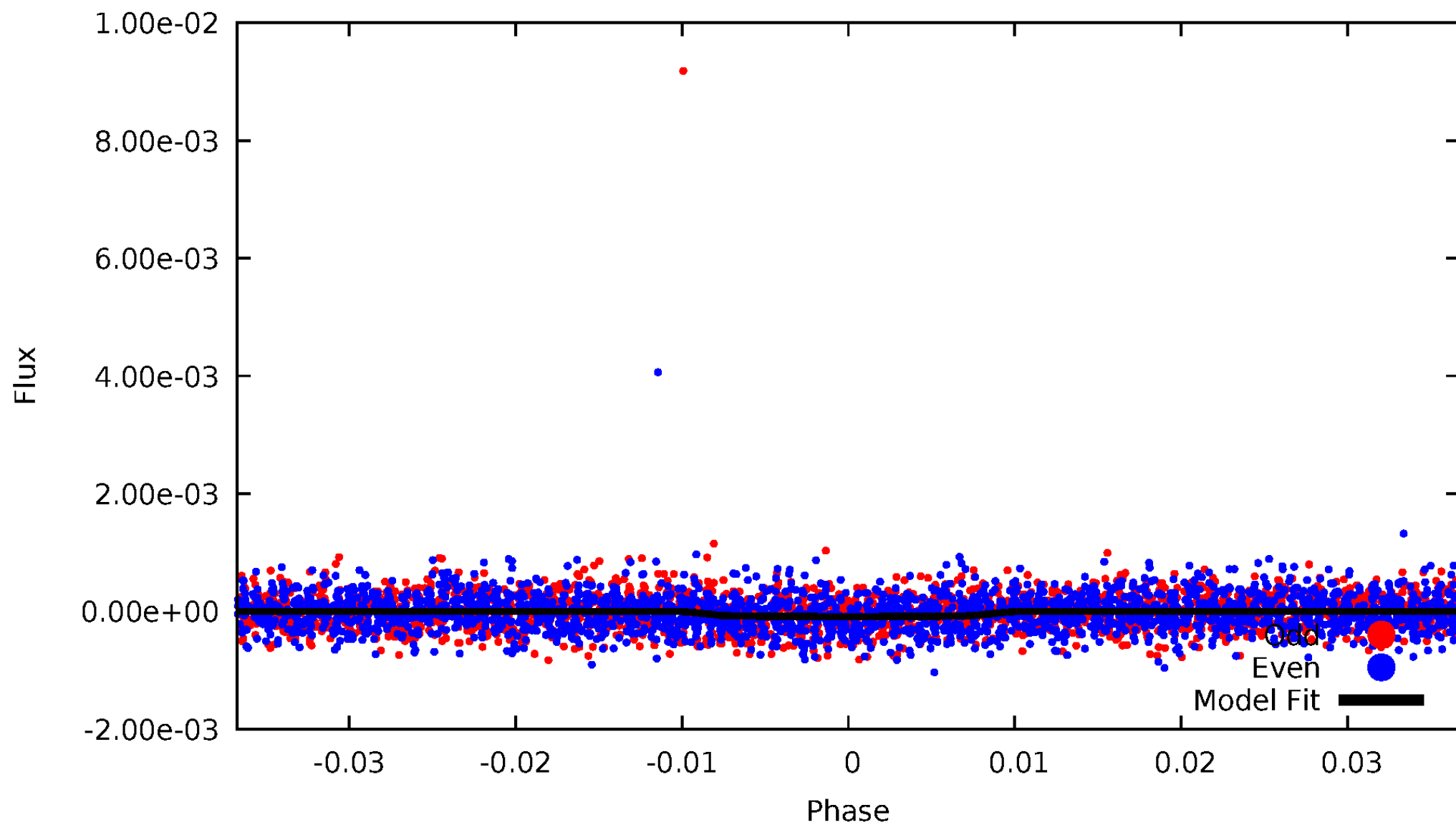


TCE 010663738-01



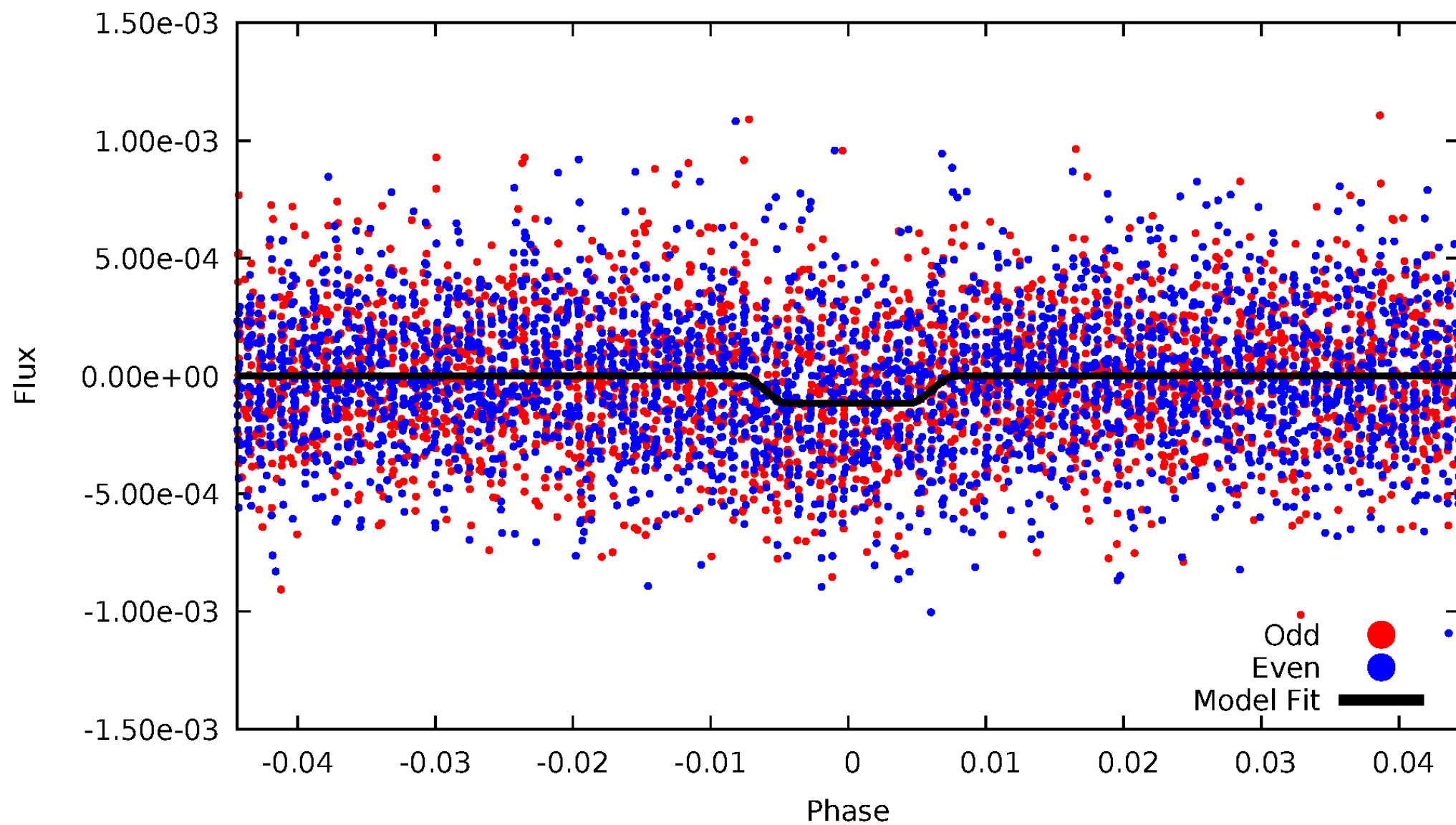
DV Odd/Even

TCE 010663738-01

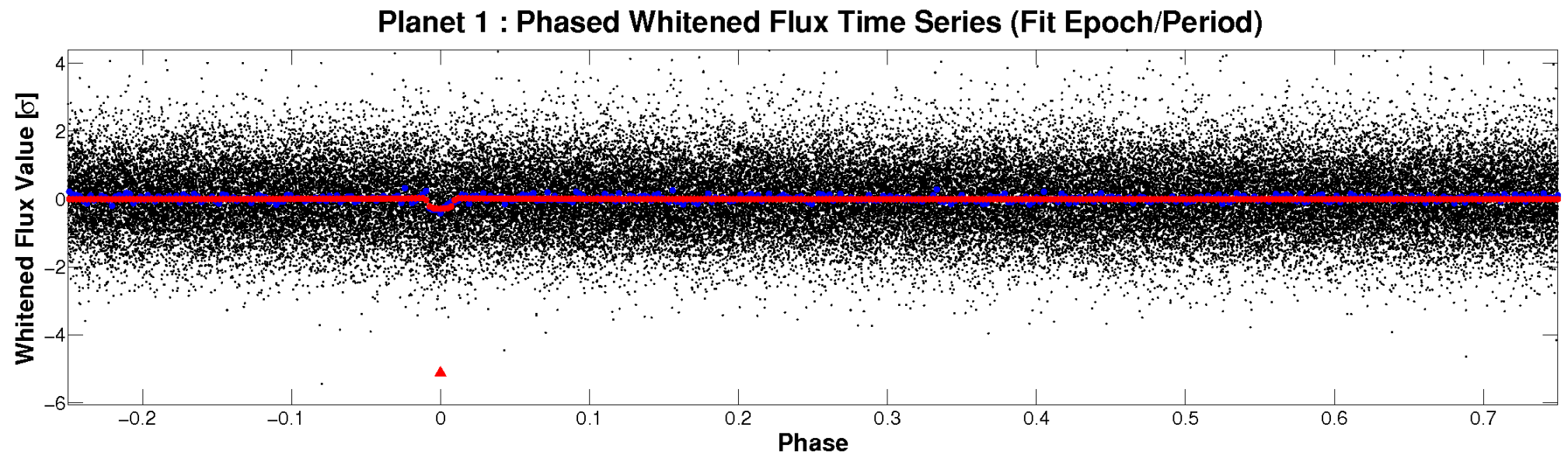
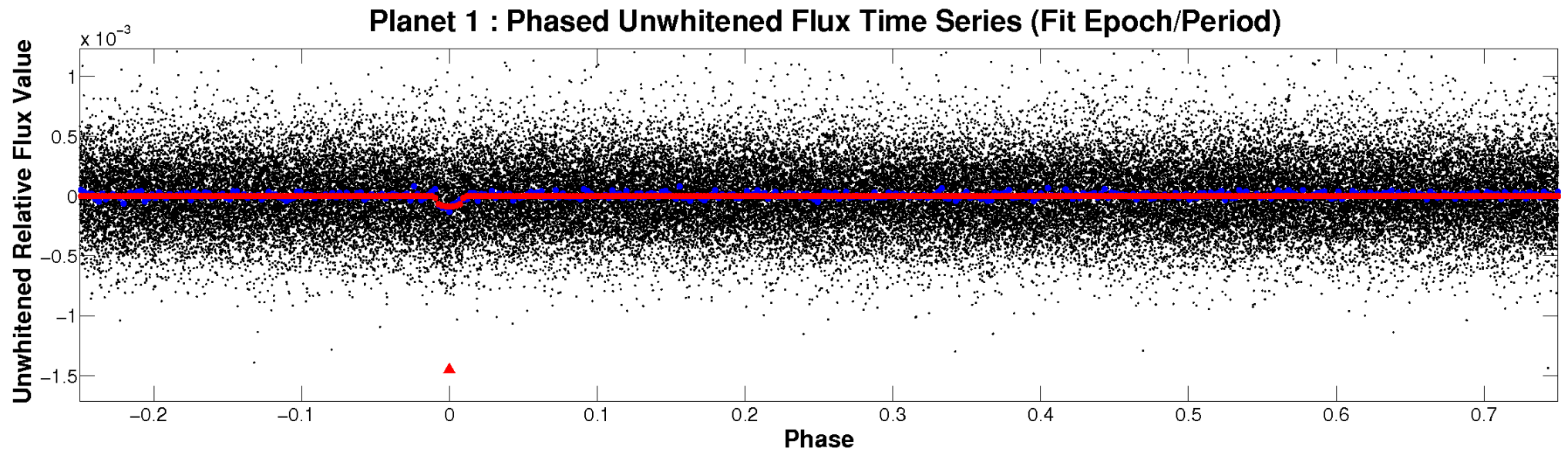


ALT Odd/Even

TCE 010663738-01

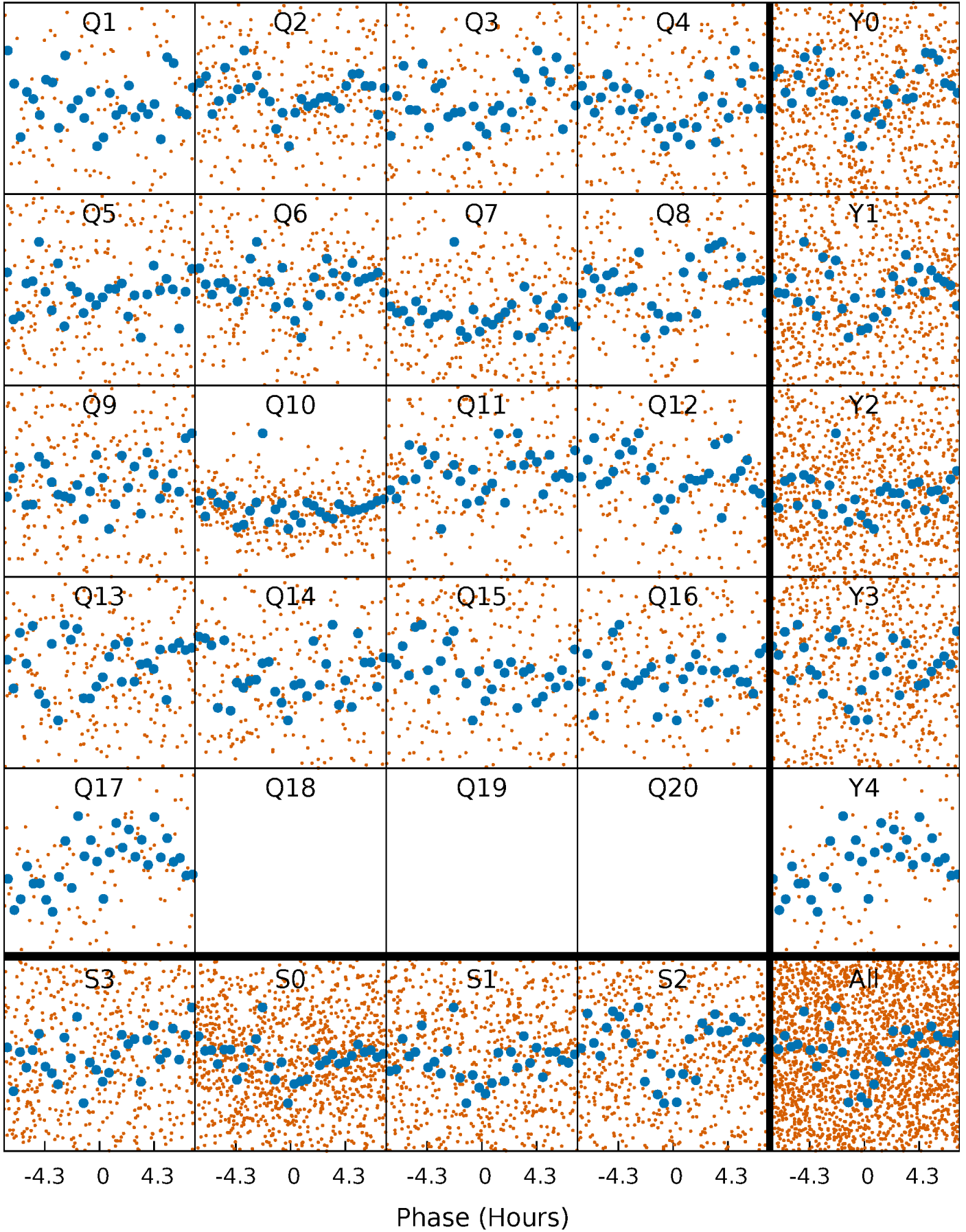


Non-Whitened Vs. Whitened Light Curve



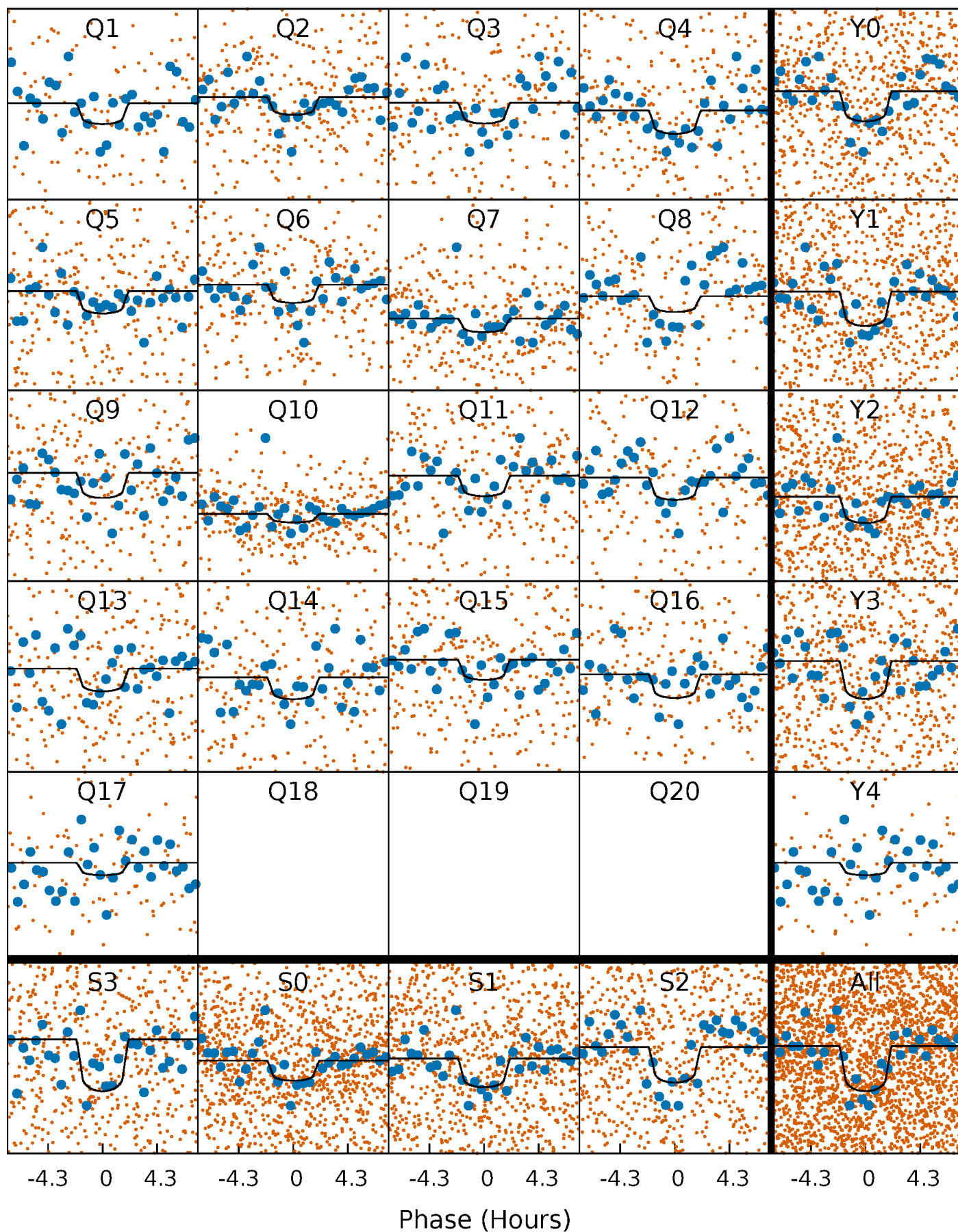
PDC Quarter-Phased Transit Curves

TCE 010663738-01 P= 8.527488 Days $T_0=137.299028$ (BKJD)



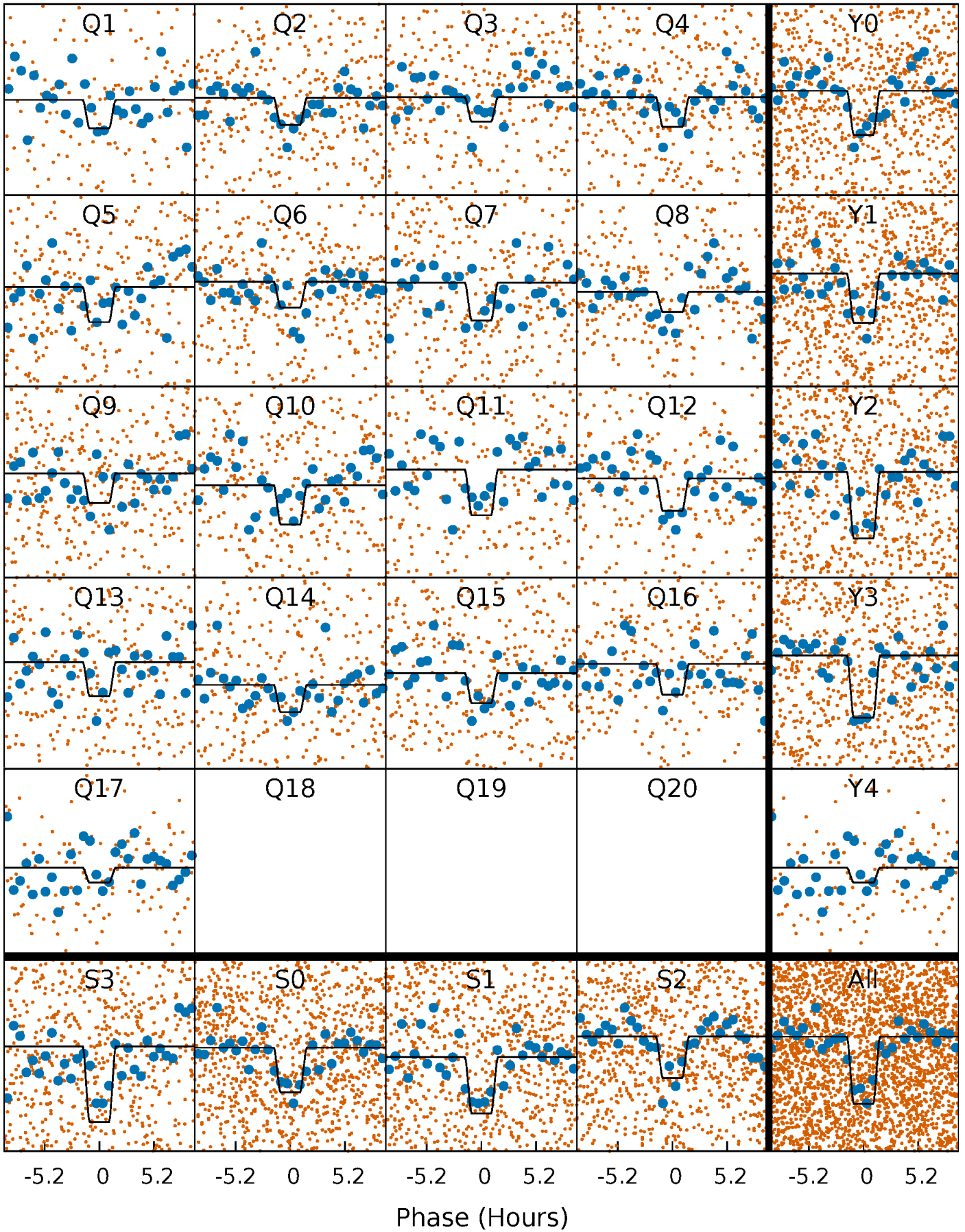
DV Quarter-Phased Transit Curves

TCE 010663738-01 P= 8.527488 Days $T_0=137.299028$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

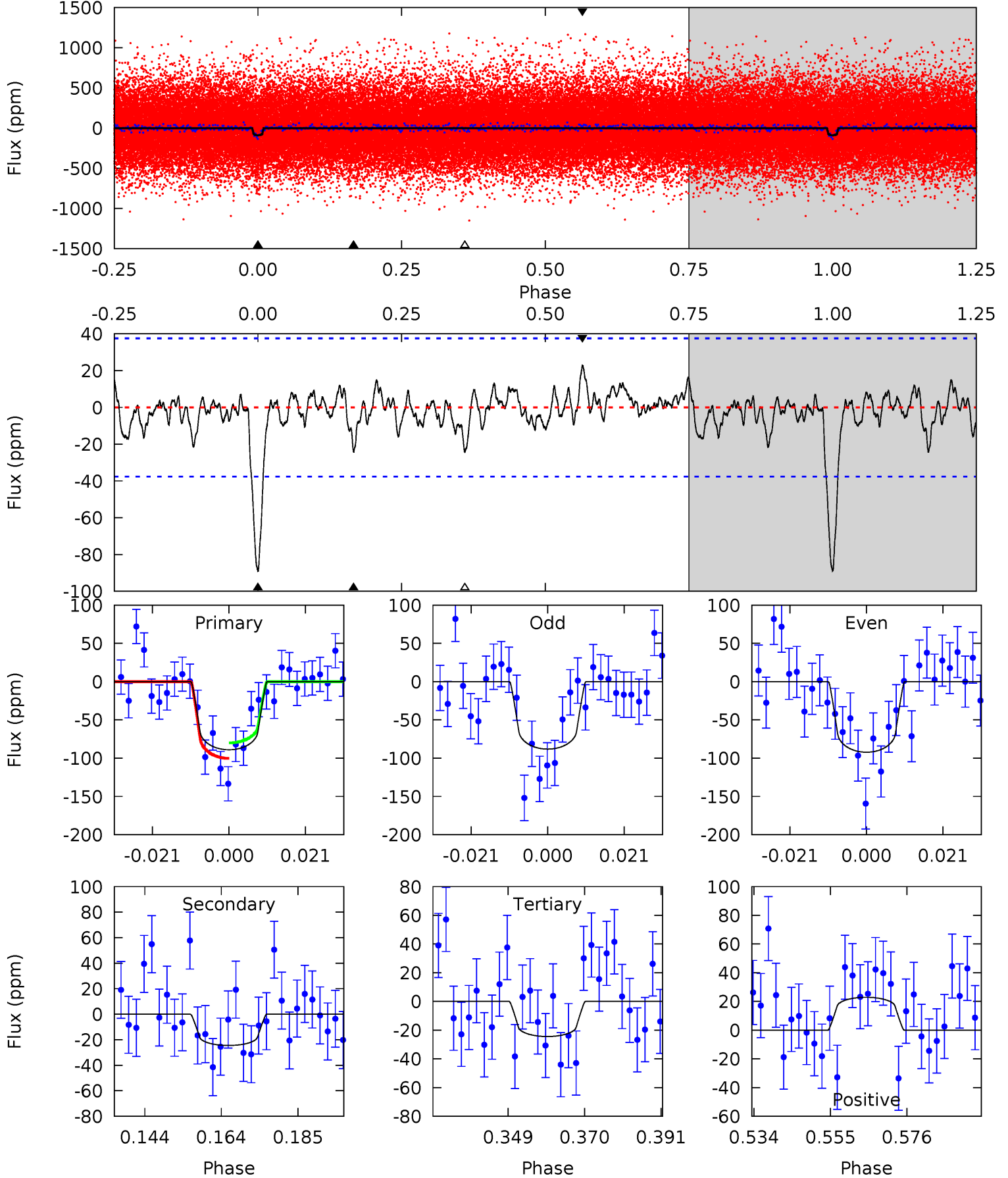
TCE 010663738-01 P= 8.527473 Days $T_0=137.293408$ (BKJD)



DV Model-Shift Uniqueness Test

010663738-01, P = 8.527488 Days, E = 128.771540 Days

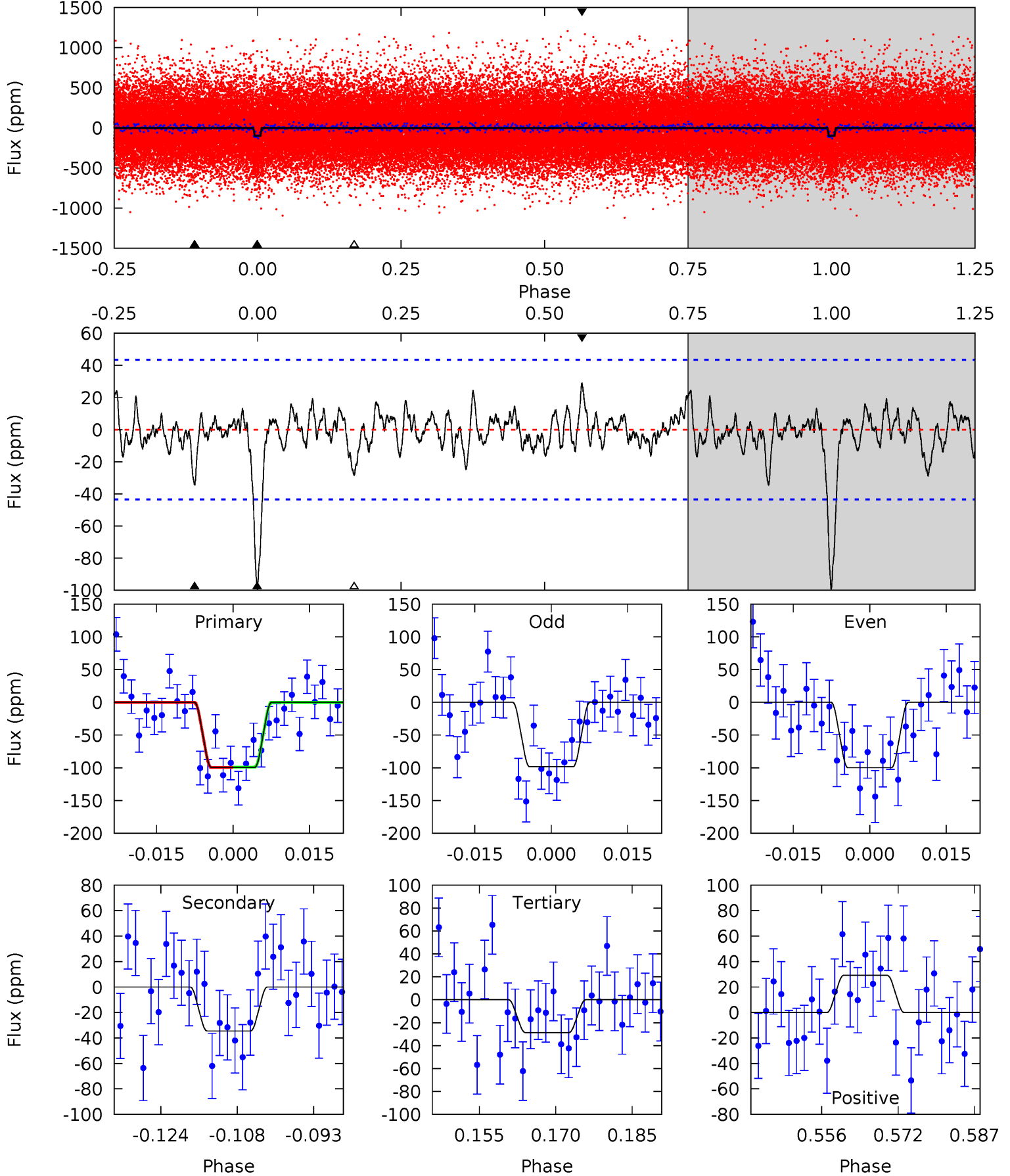
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.6	3.18	3.17	2.98	4.89	2.32	0.94	8.40	8.60	0.01	0.21	0.27	0.96	0.20	1.32



Alt Model-Shift Uniqueness Test

010663738-01, P = 8.527473 Days, E = 128.765935 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.3	3.92	3.25	3.31	4.94	2.42	1.01	8.01	7.95	0.66	0.60	0.09	1.02	0.23	0.03



Stellar Parameters For KIC 010663738

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6469^{+158}_{-248}	$4.385^{+0.056}_{-0.224}$	$0.070^{+0.250}_{-0.300}$	$1.193^{+0.410}_{-0.137}$	$1.260^{+0.165}_{-0.184}$	$1.047^{+0.310}_{-0.561}$
	+2%/-4%	+1%/-5%	+357%/-429%	+34%/-11%	+13%/-15%	+30%/-54%
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 010663738-01 / KOI 4698.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-24 ± 8	$1.37^{+0.83}_{-0.75}$	1501^{+121}_{-81}	4667^{+2092}_{-800}	56^{+214}_{-36}
Alt.	-34 ± 9	$1.49^{+0.79}_{-0.68}$	1501^{+107}_{-85}	4801^{+1544}_{-778}	62^{+146}_{-36}

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

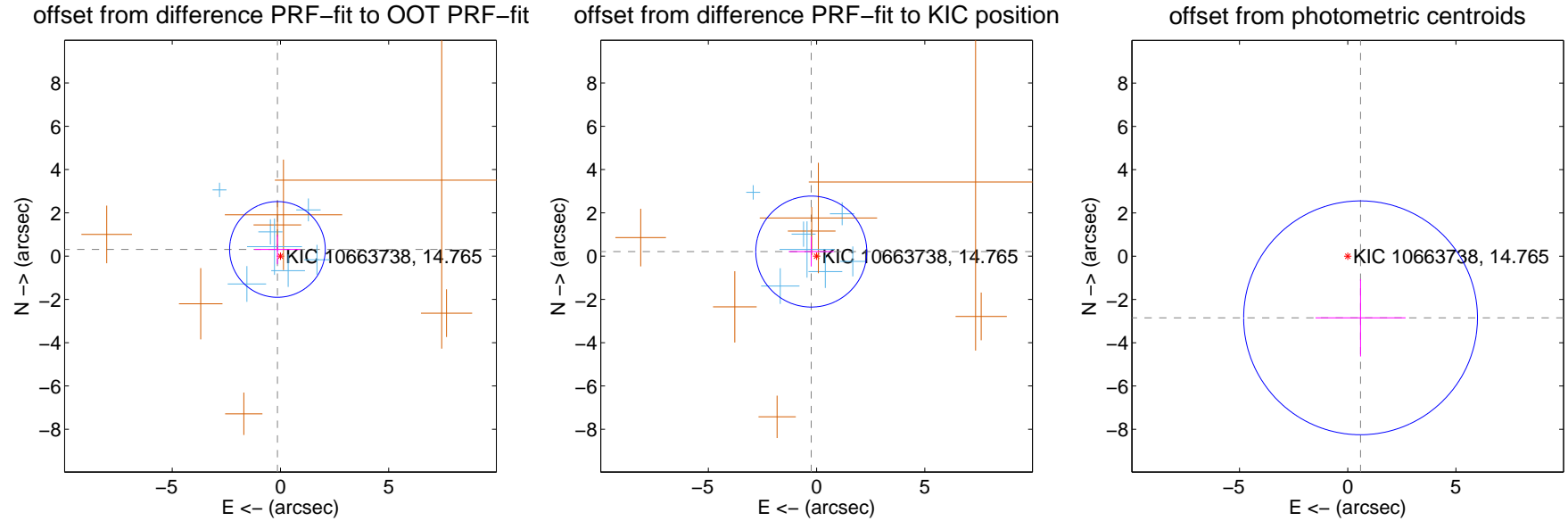
DV Centroid Data

Supplemental centroid analysis for 010663738-01. Kepler magnitude: 14.77. Transit SNR 8.50

There are 7 quarters with good PRF difference image offsets

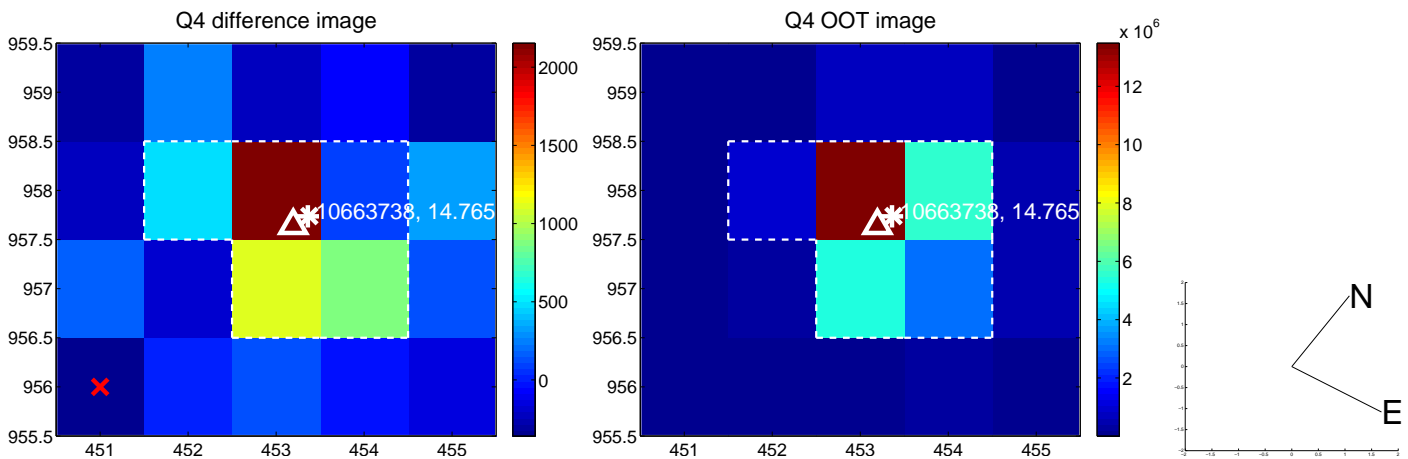
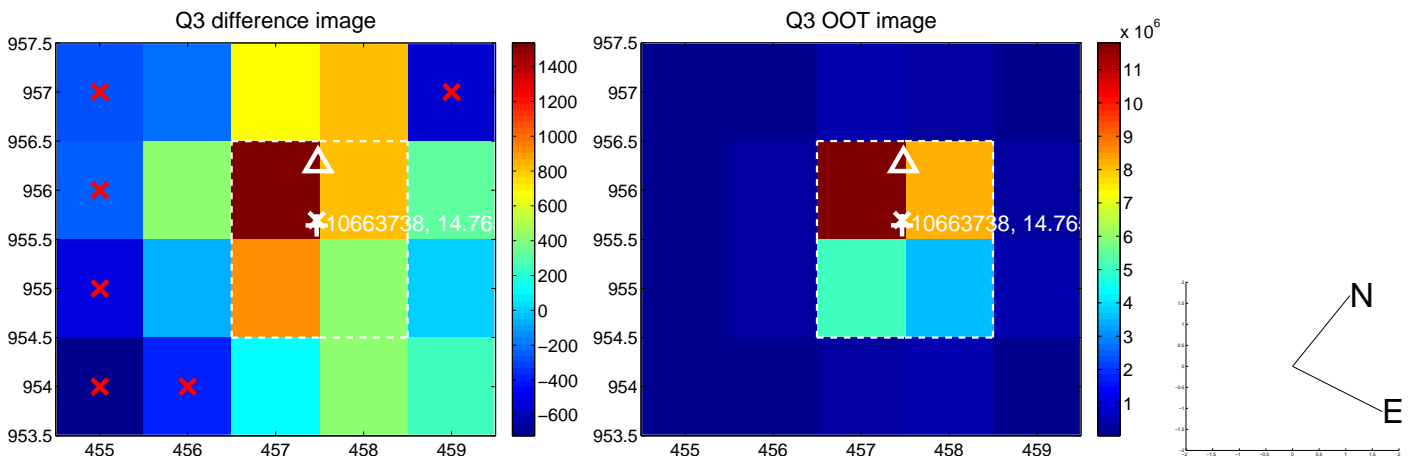
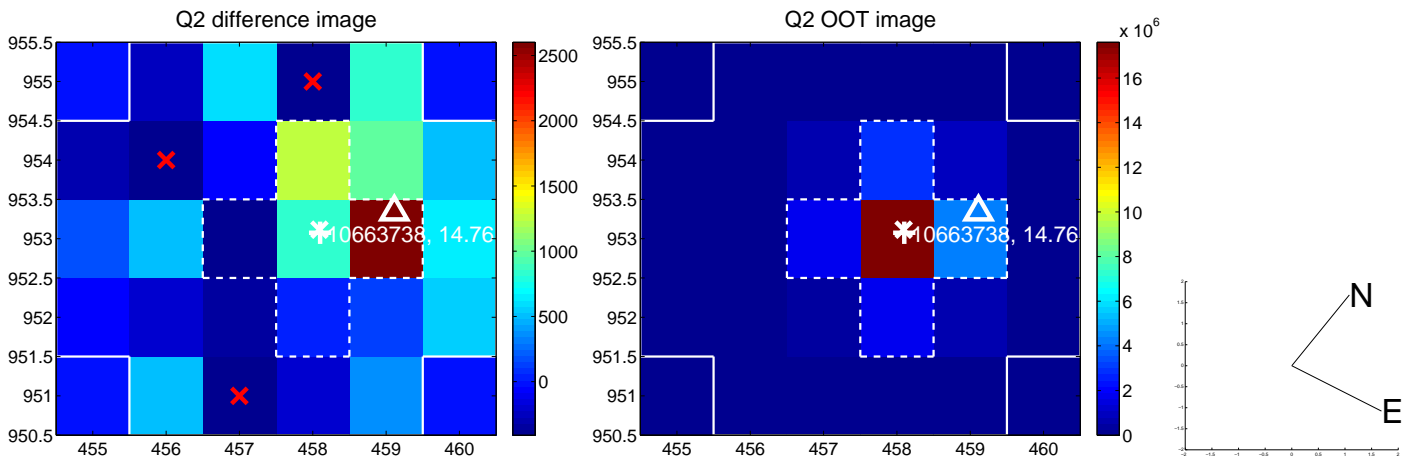
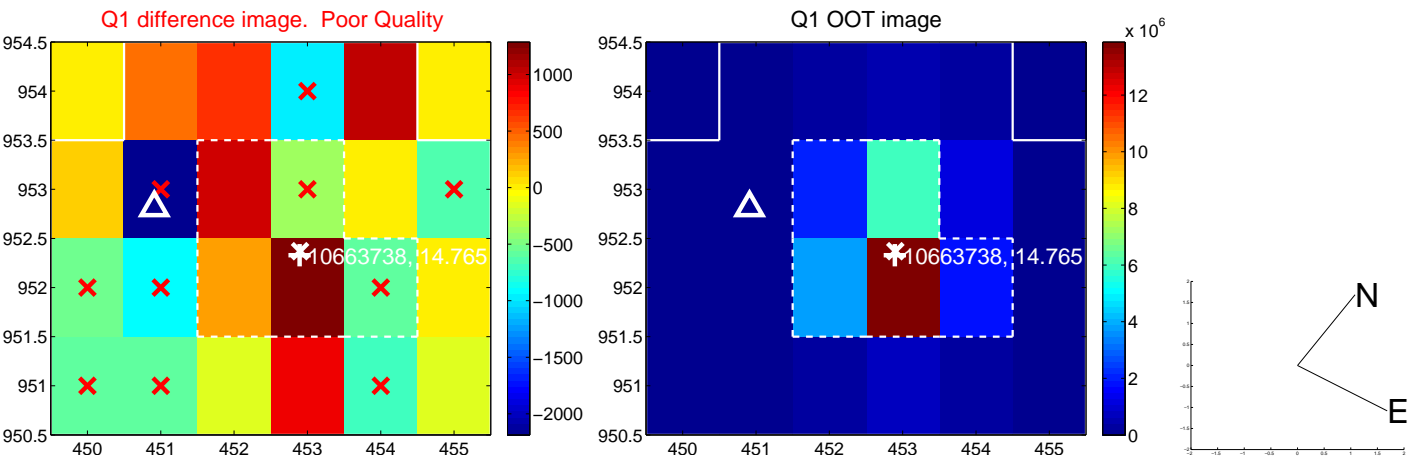
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.339 ± 0.737	0.46	0.139 ± 1.052	0.309 ± 0.682
PRF-fit source offset from KIC position	0.324 ± 0.855	0.38	0.246 ± 1.041	0.211 ± 0.687
photometric centroid source offset	2.91 ± 1.80	1.62	-0.59 ± 2.08	-2.85 ± 1.79

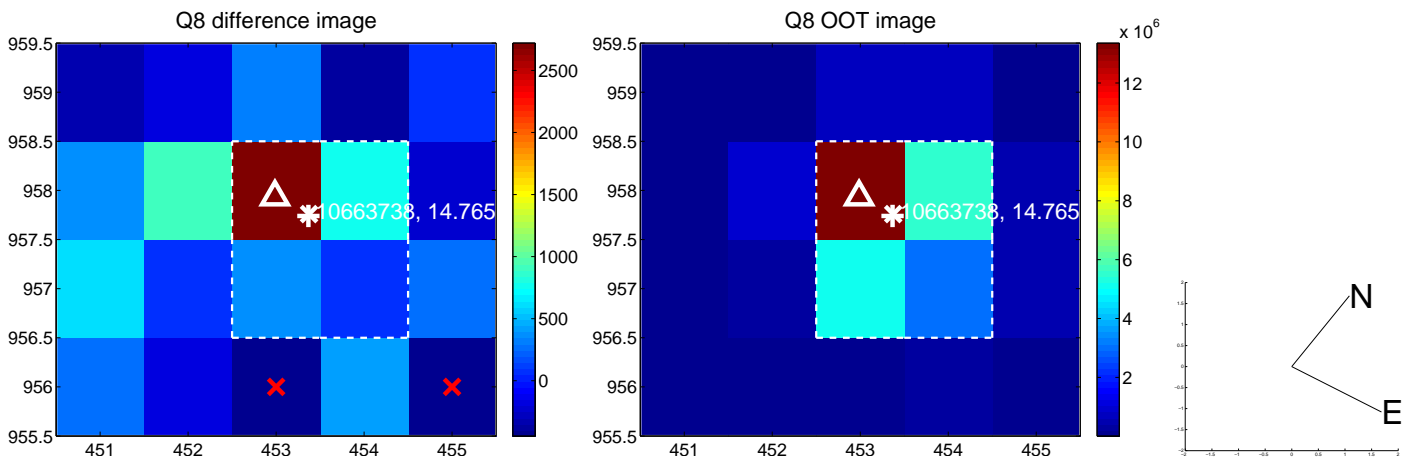
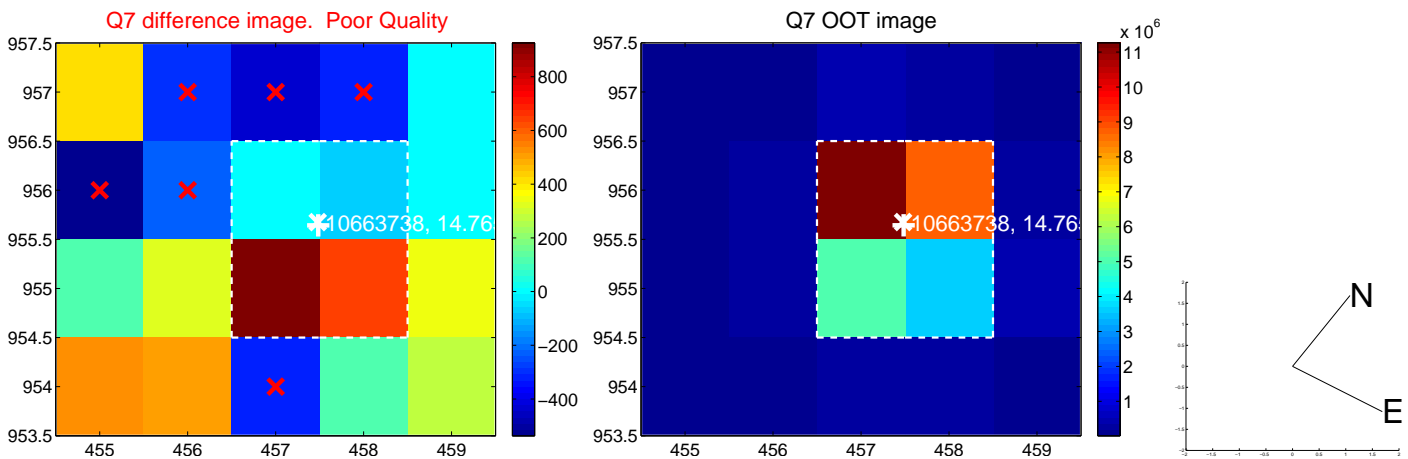
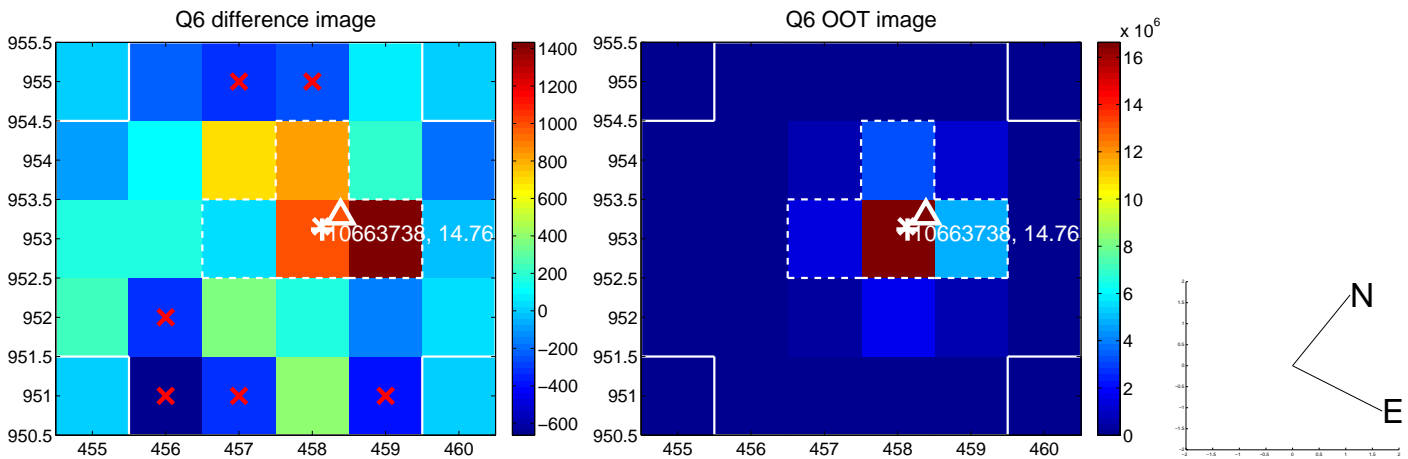
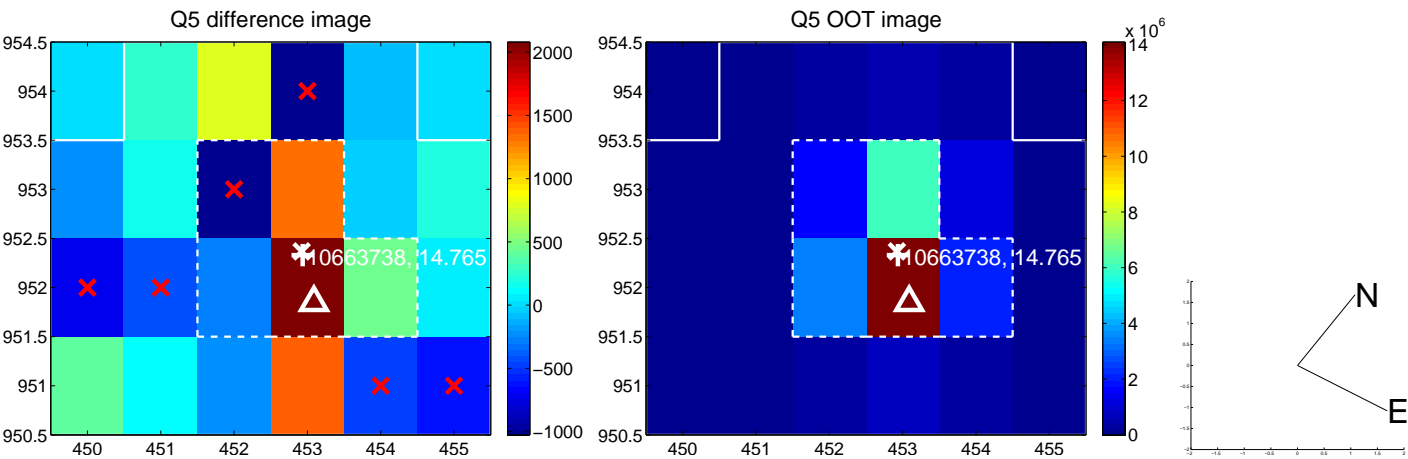


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

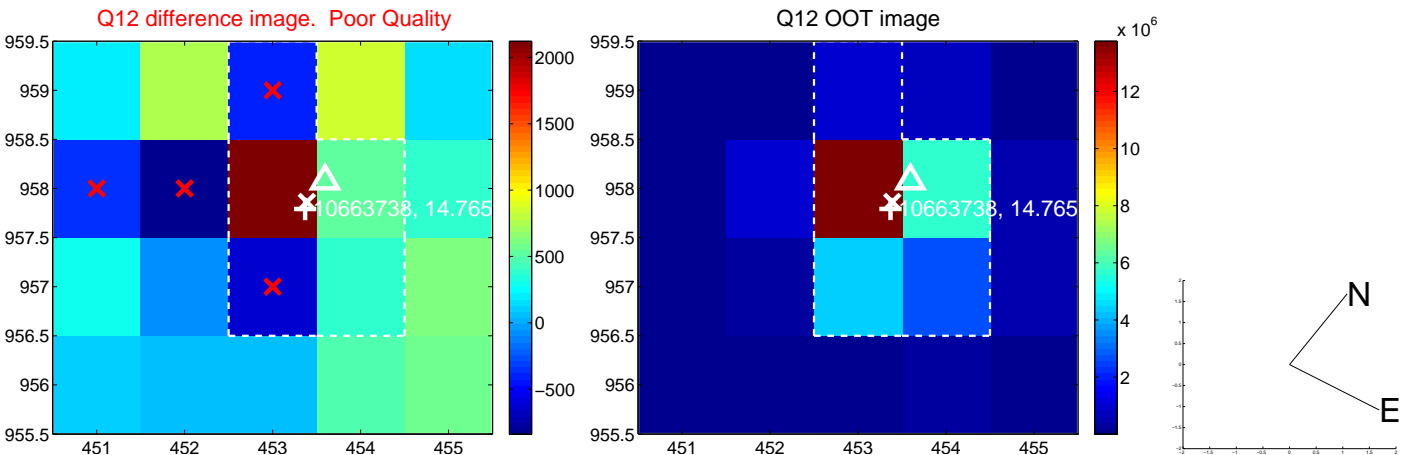
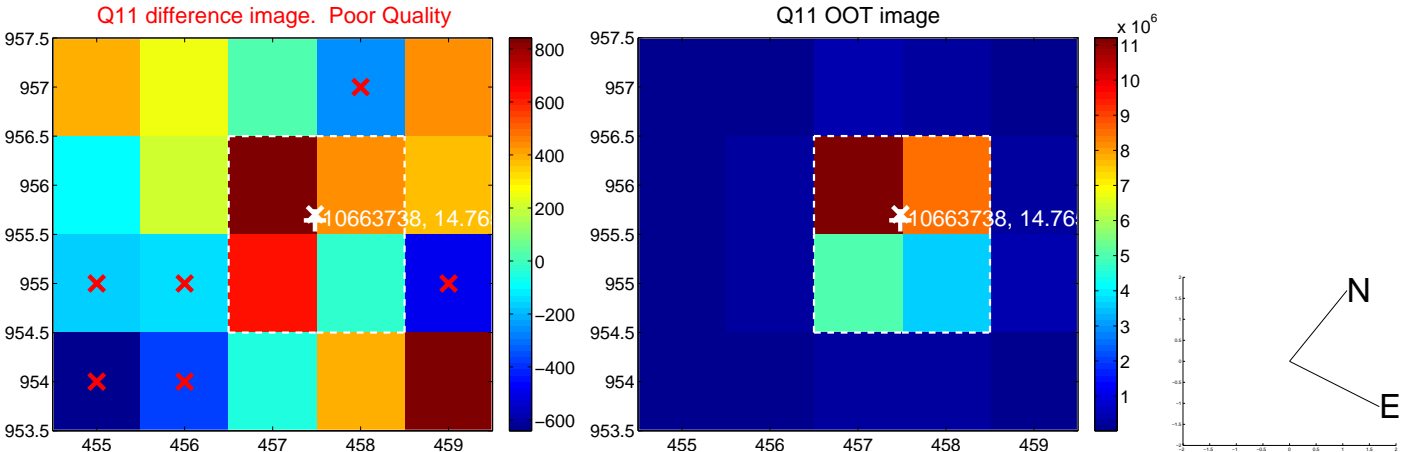
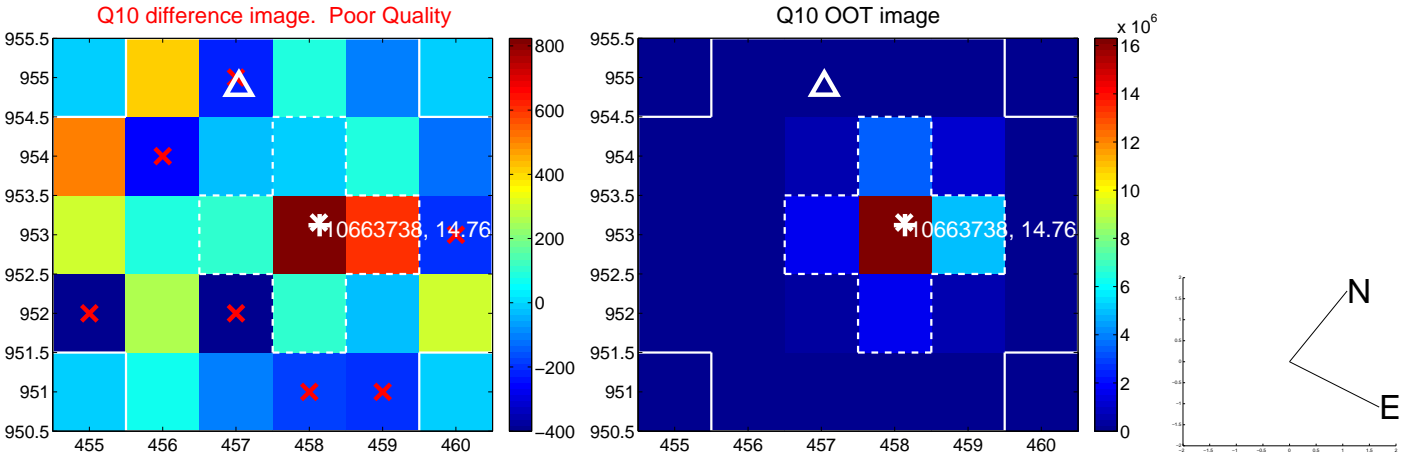
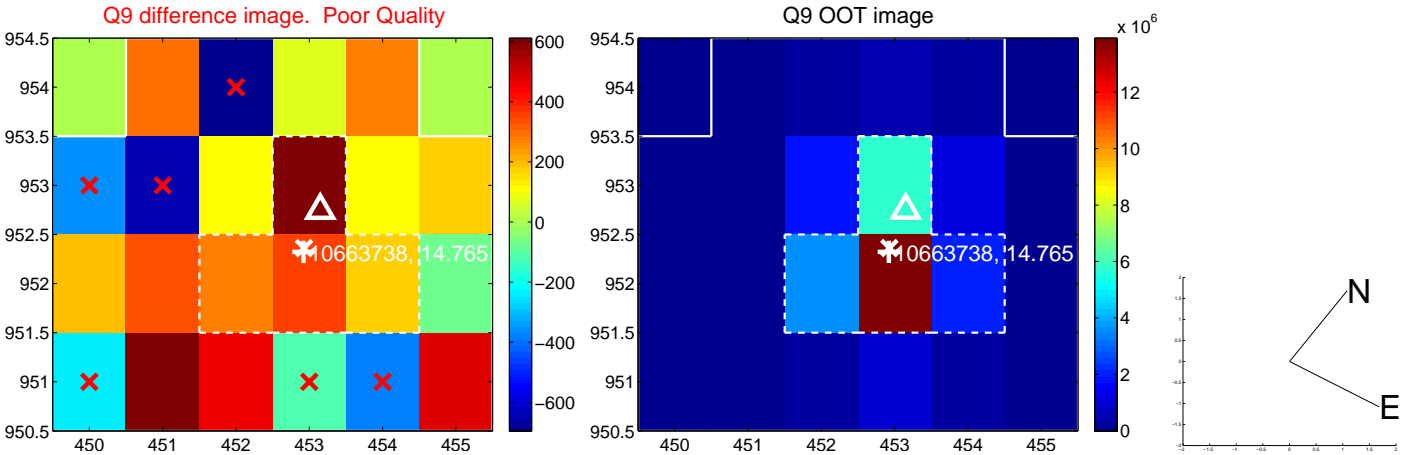
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



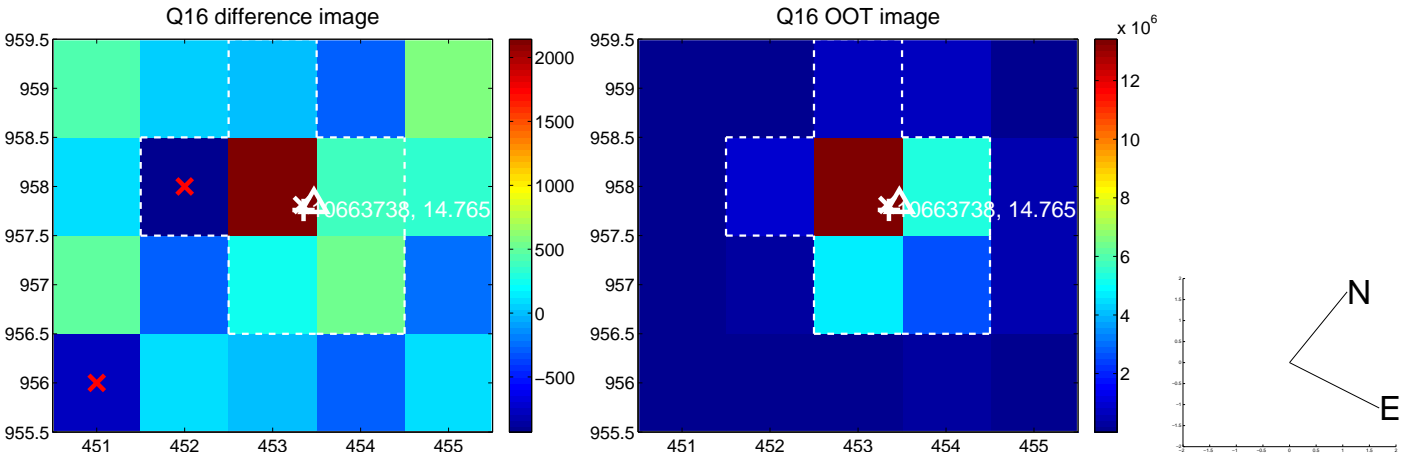
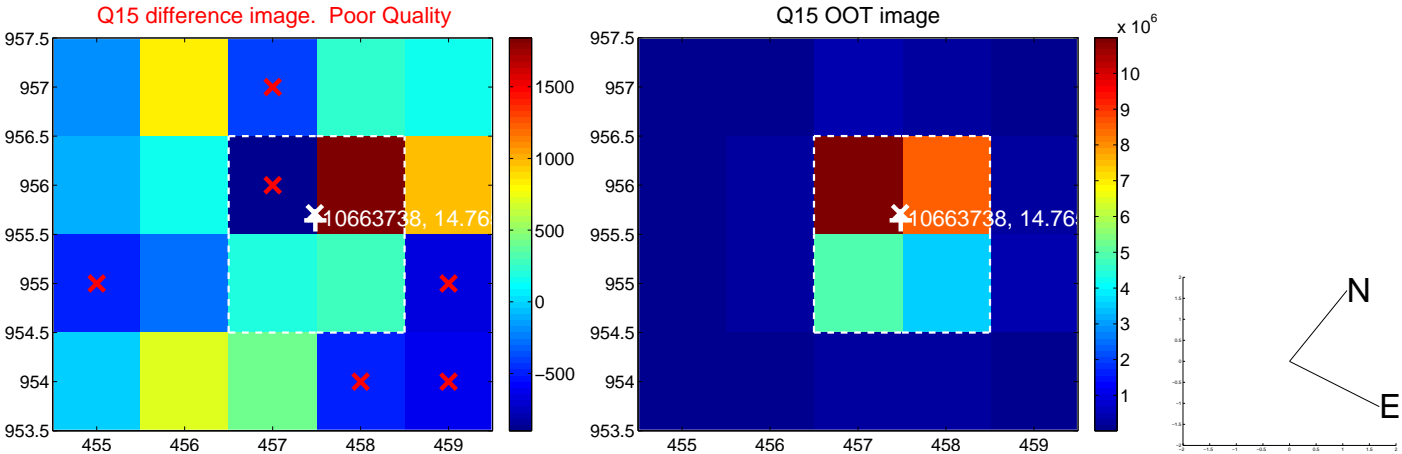
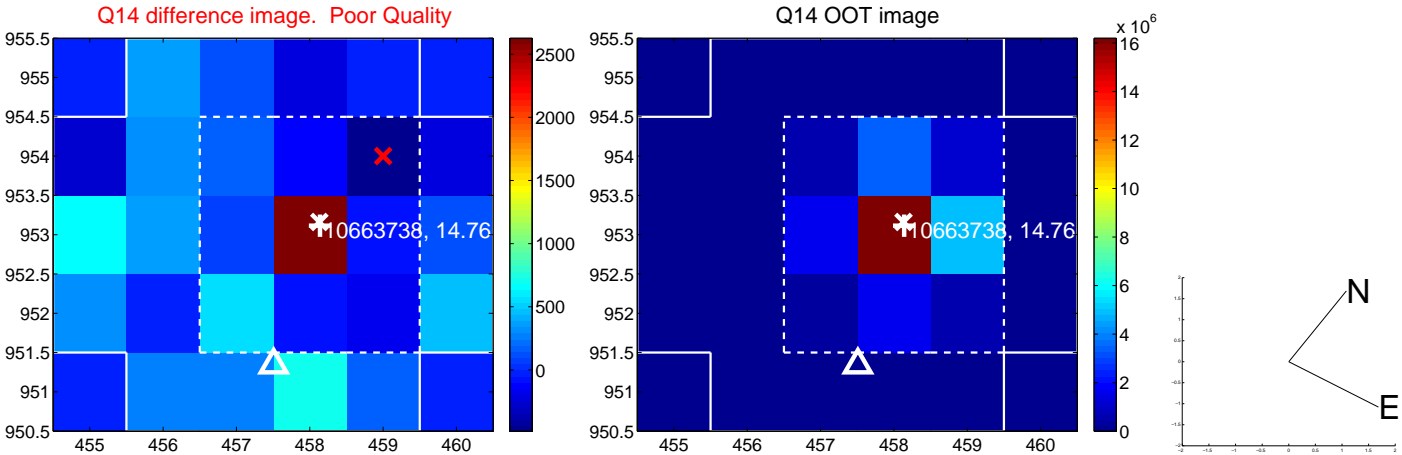
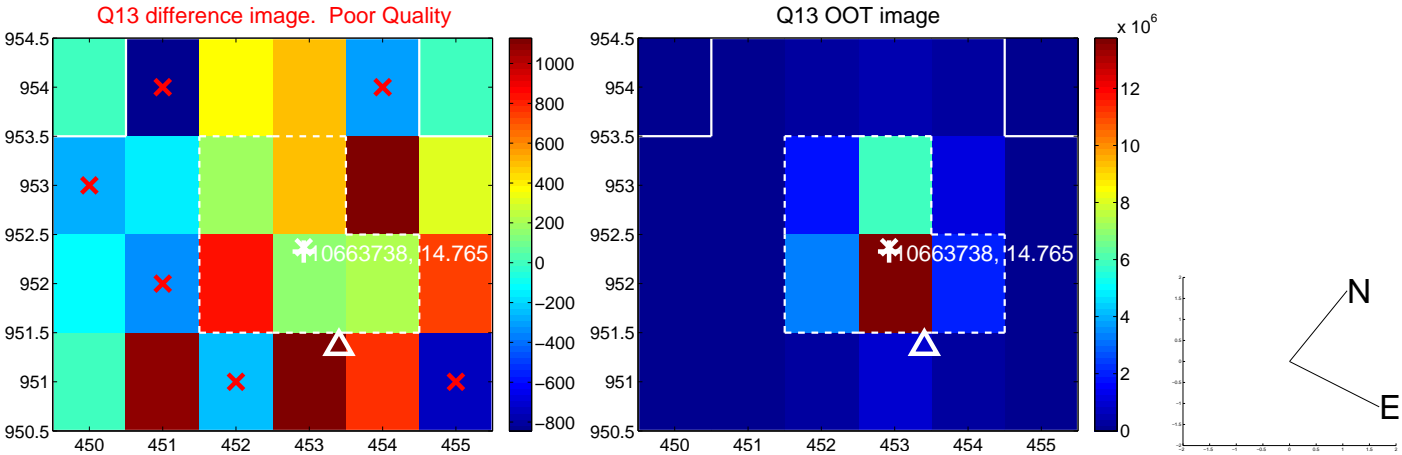
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



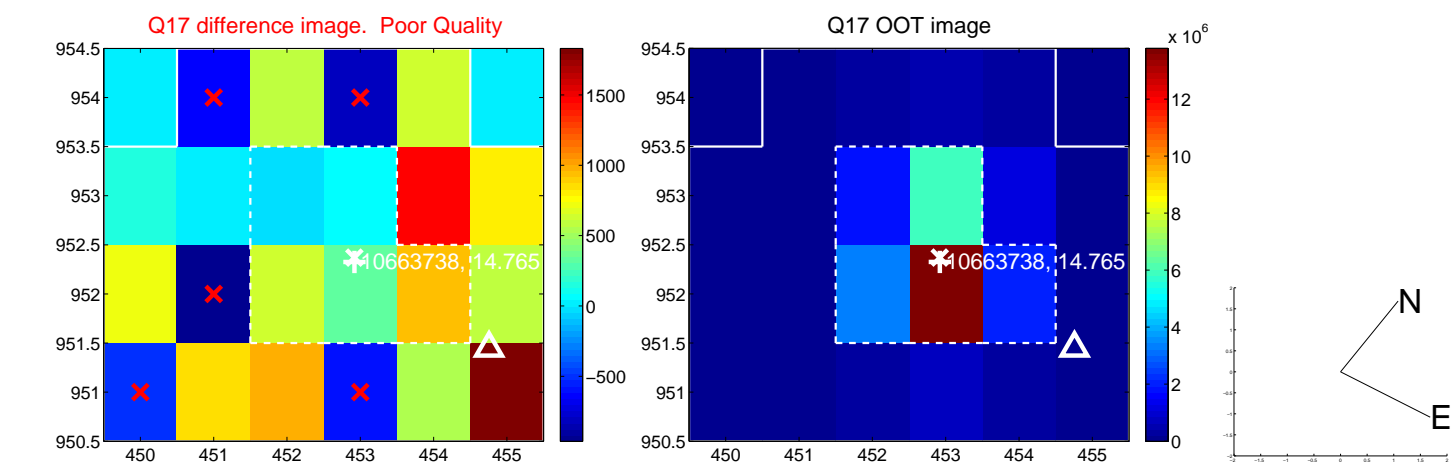
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



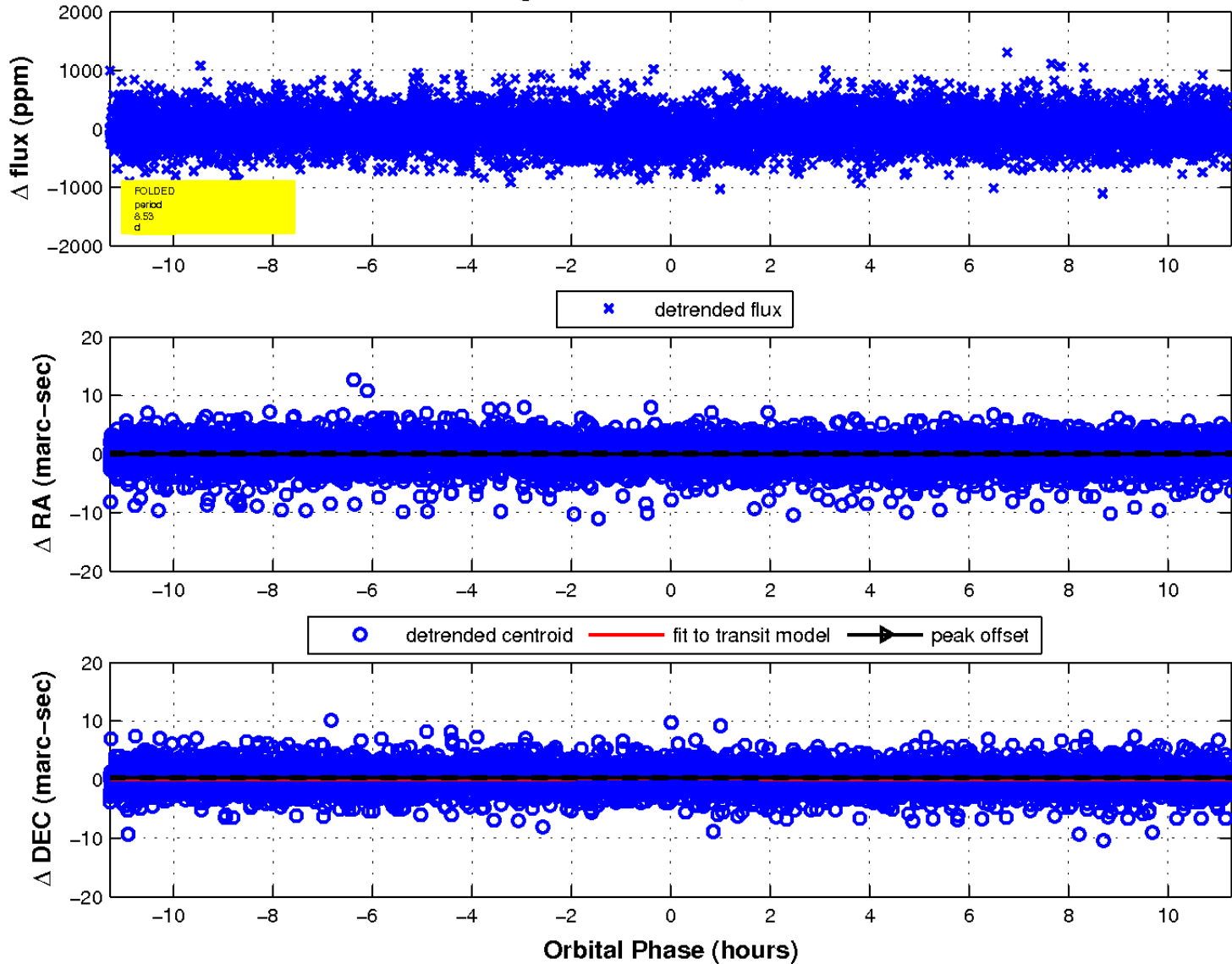
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

