

KIC 009093763

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})
009093763-01	OBS	No	311.629369	298.660003	1364.4	3.098	9.7	5.9	0.27	3332	1.03	0.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009093763-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

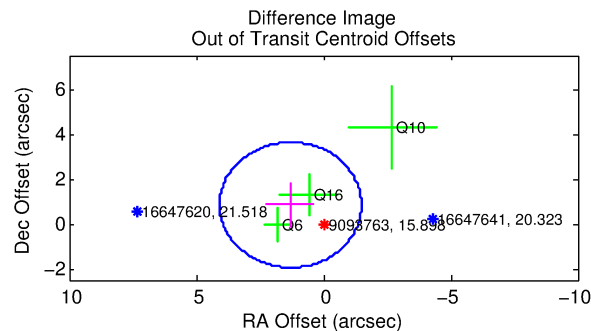
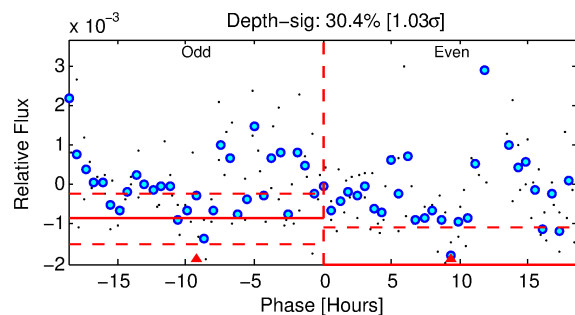
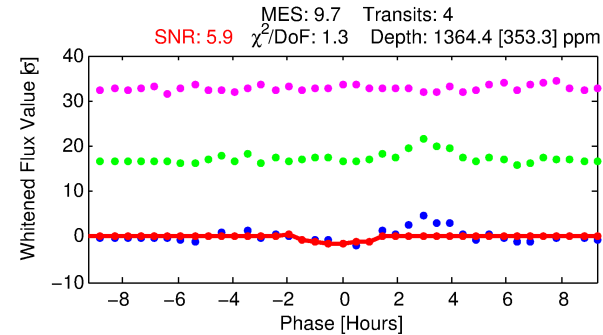
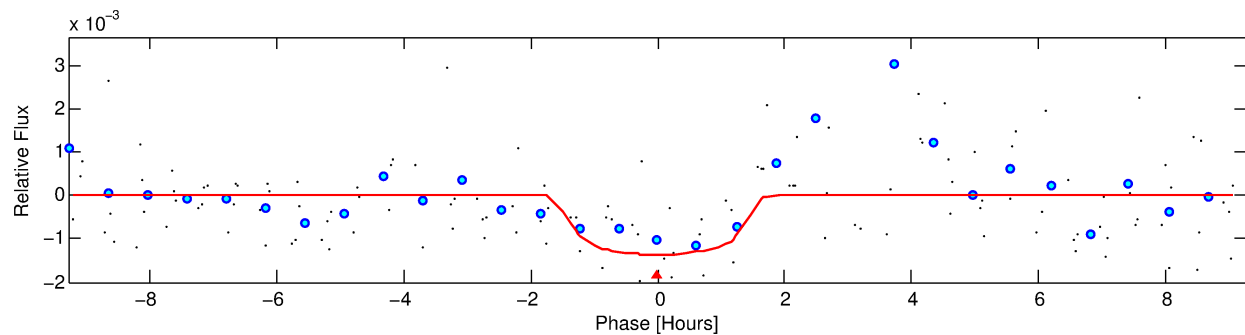
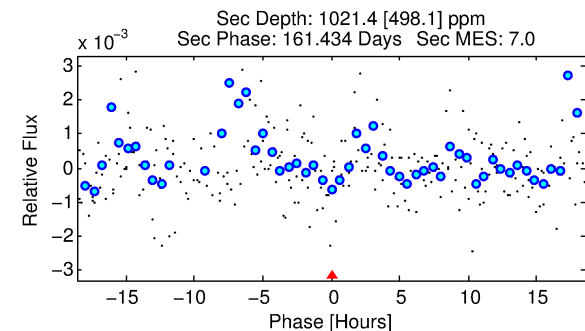
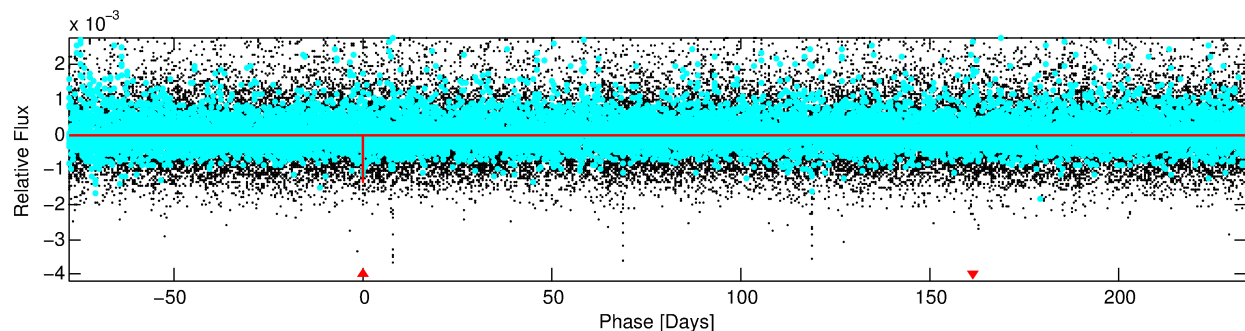
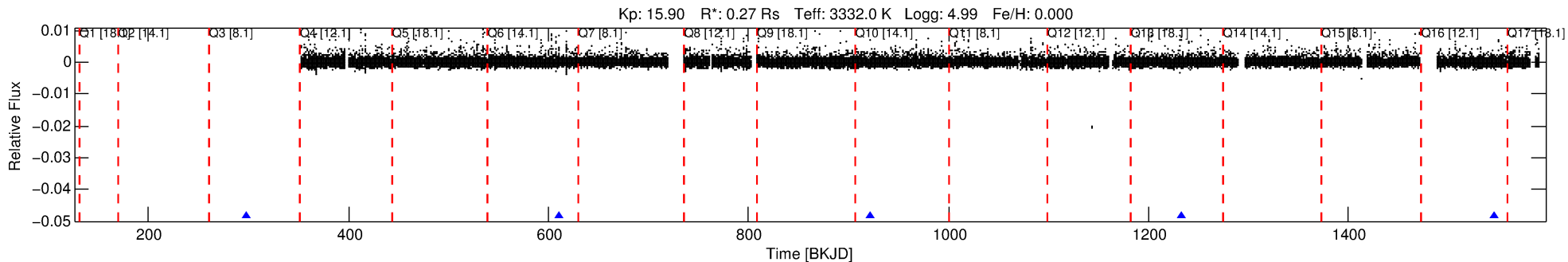
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009093763-01

No Significant Match Found

DV One-Page Summary

KIC: 9093763 Candidate: 1 of 1 Period: 311.629 d



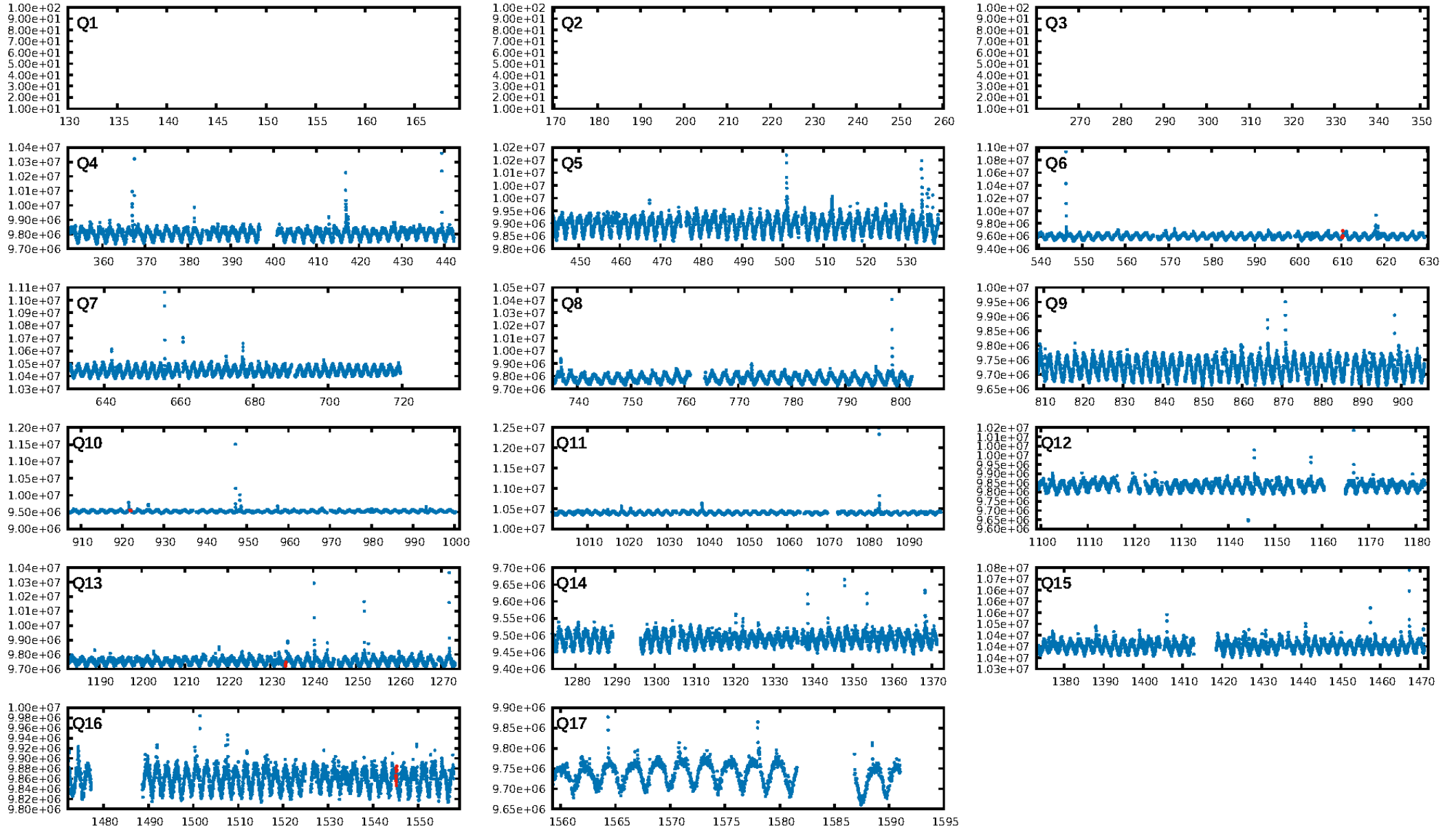
DV Fit Results:

Period = 311.62937 [0.00632] d
Epoch = 298.6600 [0.0161] BKJD
Rp/R* = 0.0355 [0.0516]
a/R* = 624.66 [3808.68]
b = 0.64 [5.64]
Seff = 0.02 [0.00]
Teq = 101 [3] K
Rp = 1.03 [1.50] Re
a = 0.5657 [0.0574] AU
Ag = 170780.34 [503575.32] [0.34σ]
Teffp = 3162 [2329] K [1.31σ]

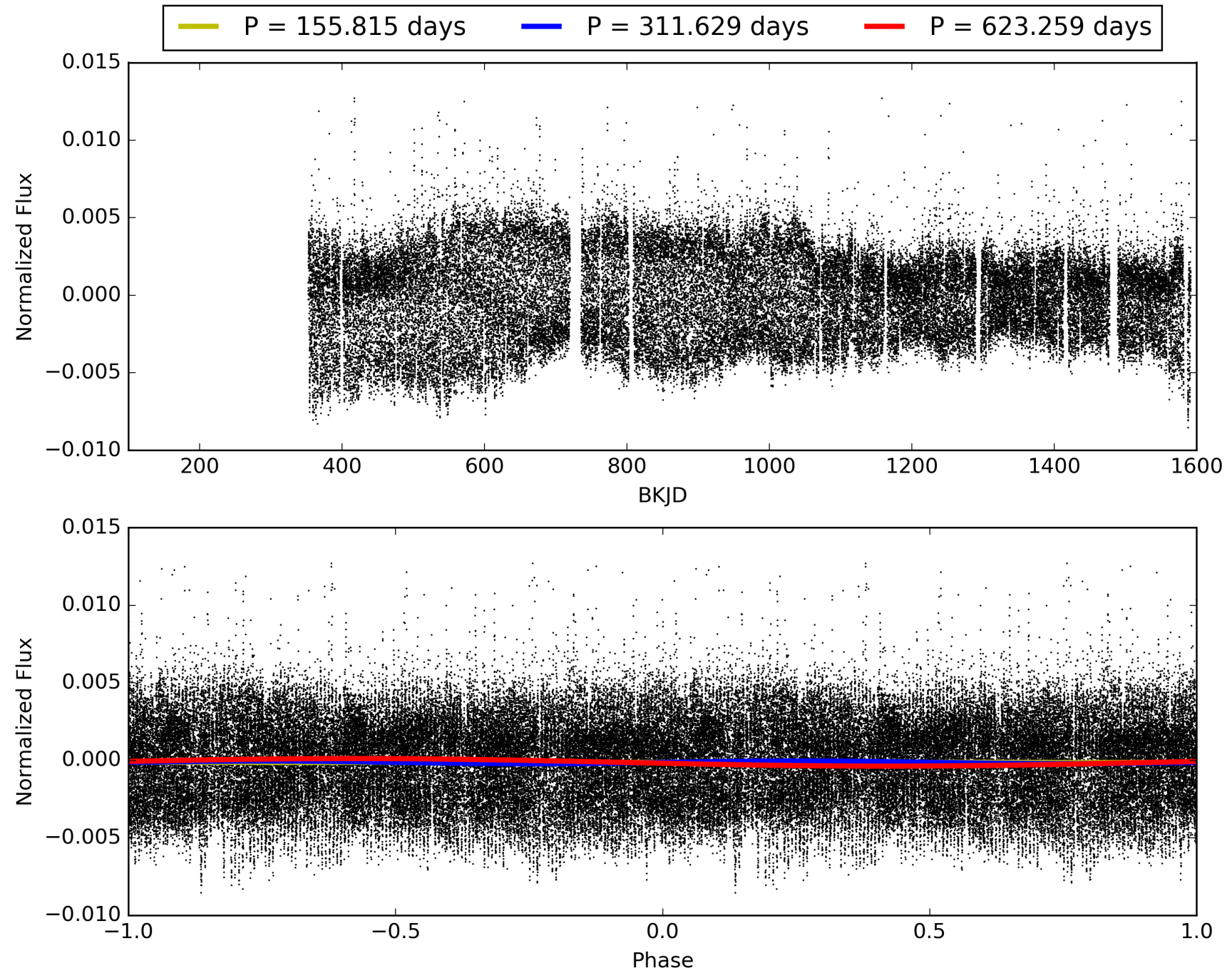
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 20.6%
ModelChiSquareGof-sig: 84.1%
Bootstrap-pfa: 3.02e-12
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -2.14
Centroid-sig: 30.4%
Centroid-so: 1.858 arcsec [1.05σ]
OotOffset-rm: 1.549 arcsec [1.67σ]
KicOffset-rm: 1.531 arcsec [1.65σ]
OotOffset-st: 2/0/1/0 [3]
KicOffset-st: 2/0/1/0 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [4/4]

TCE 009093763-01, PDC Light Curves

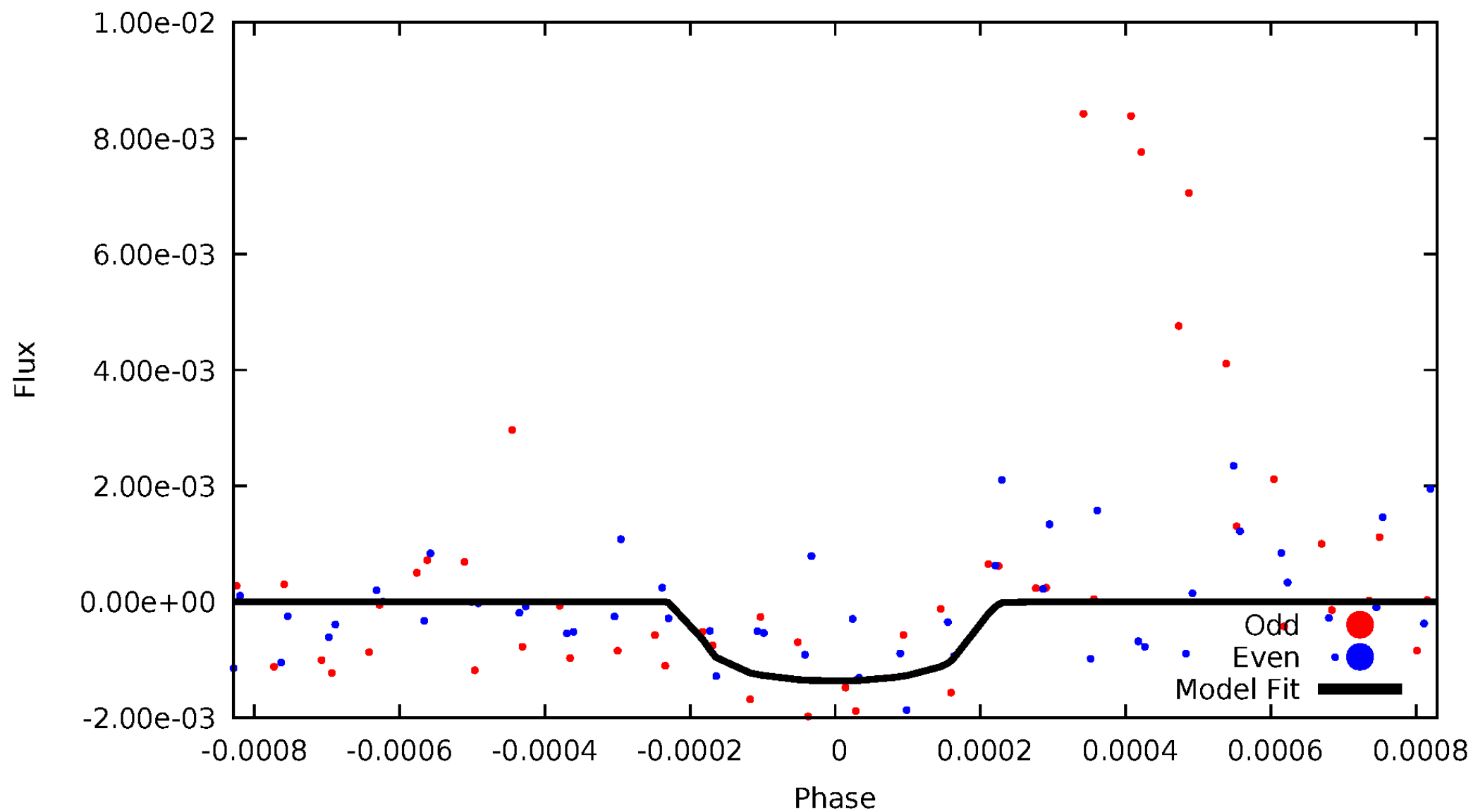


TCE 009093763-01



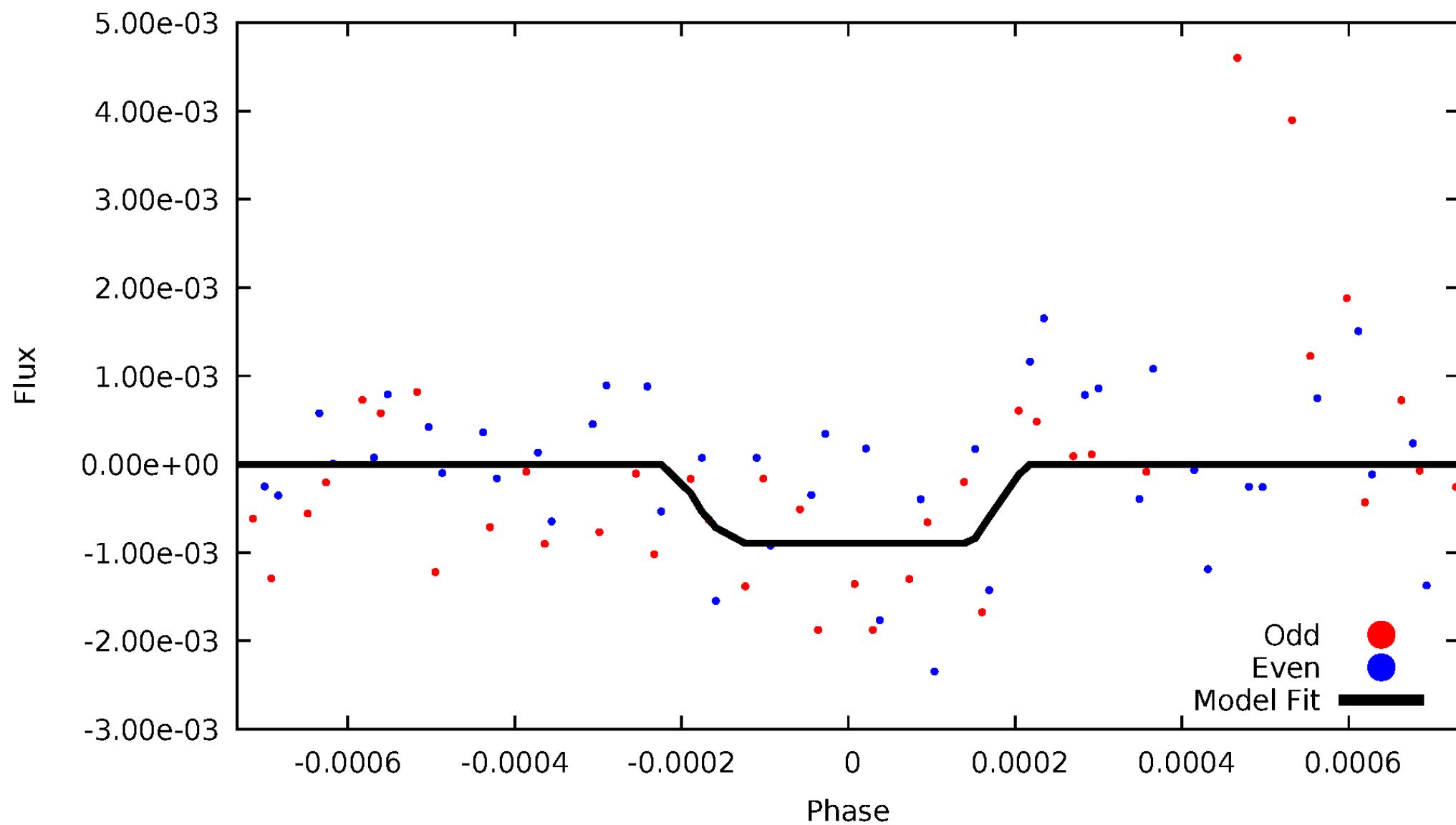
DV Odd/Even

TCE 009093763-01



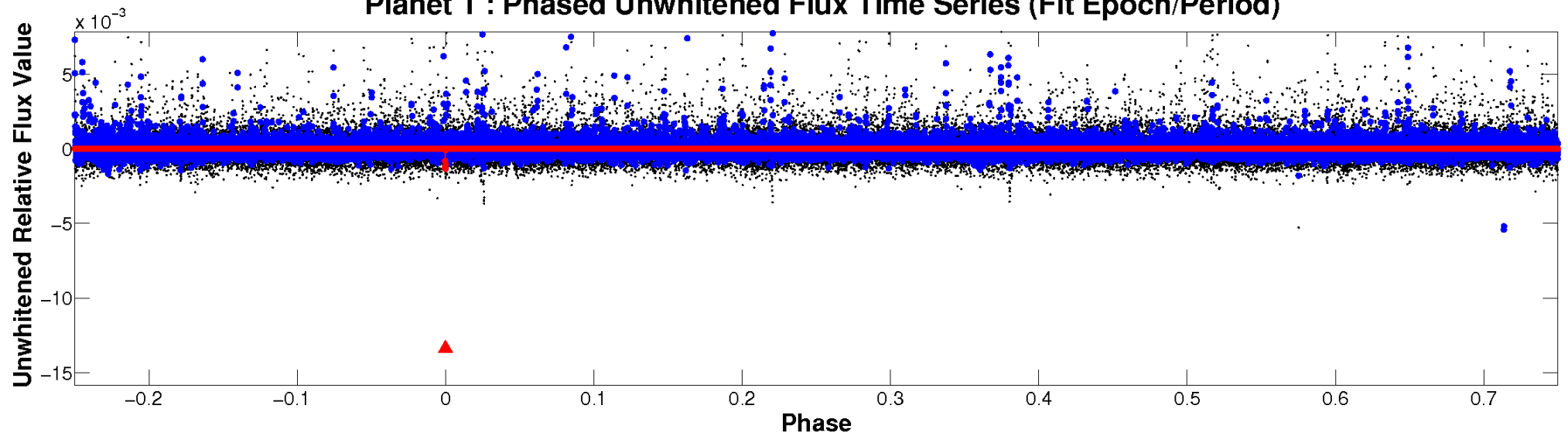
ALT Odd/Even

TCE 009093763-01

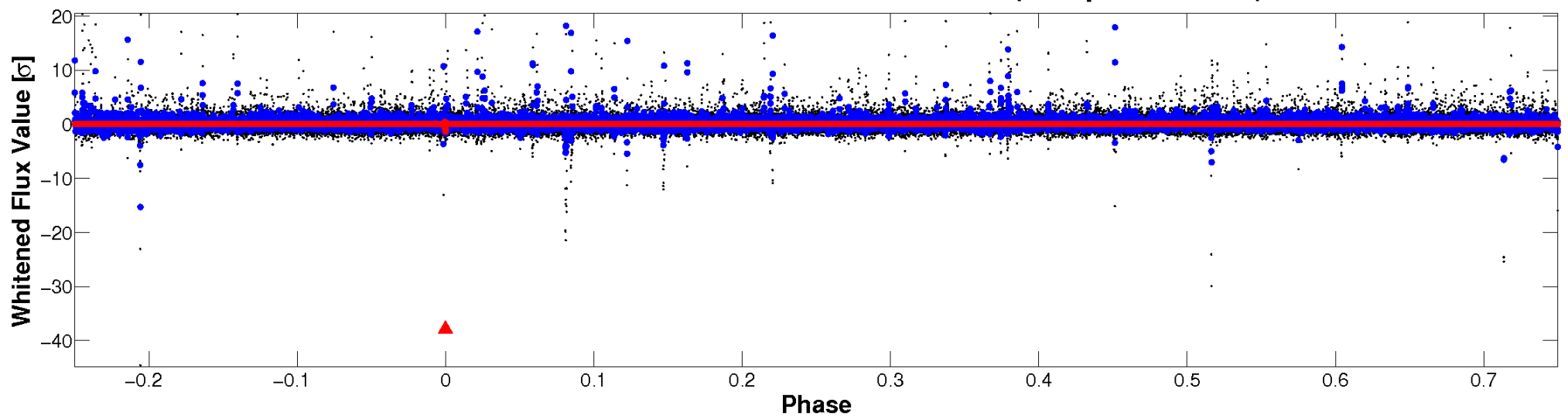


Non-Whitened Vs. Whitened Light Curve

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

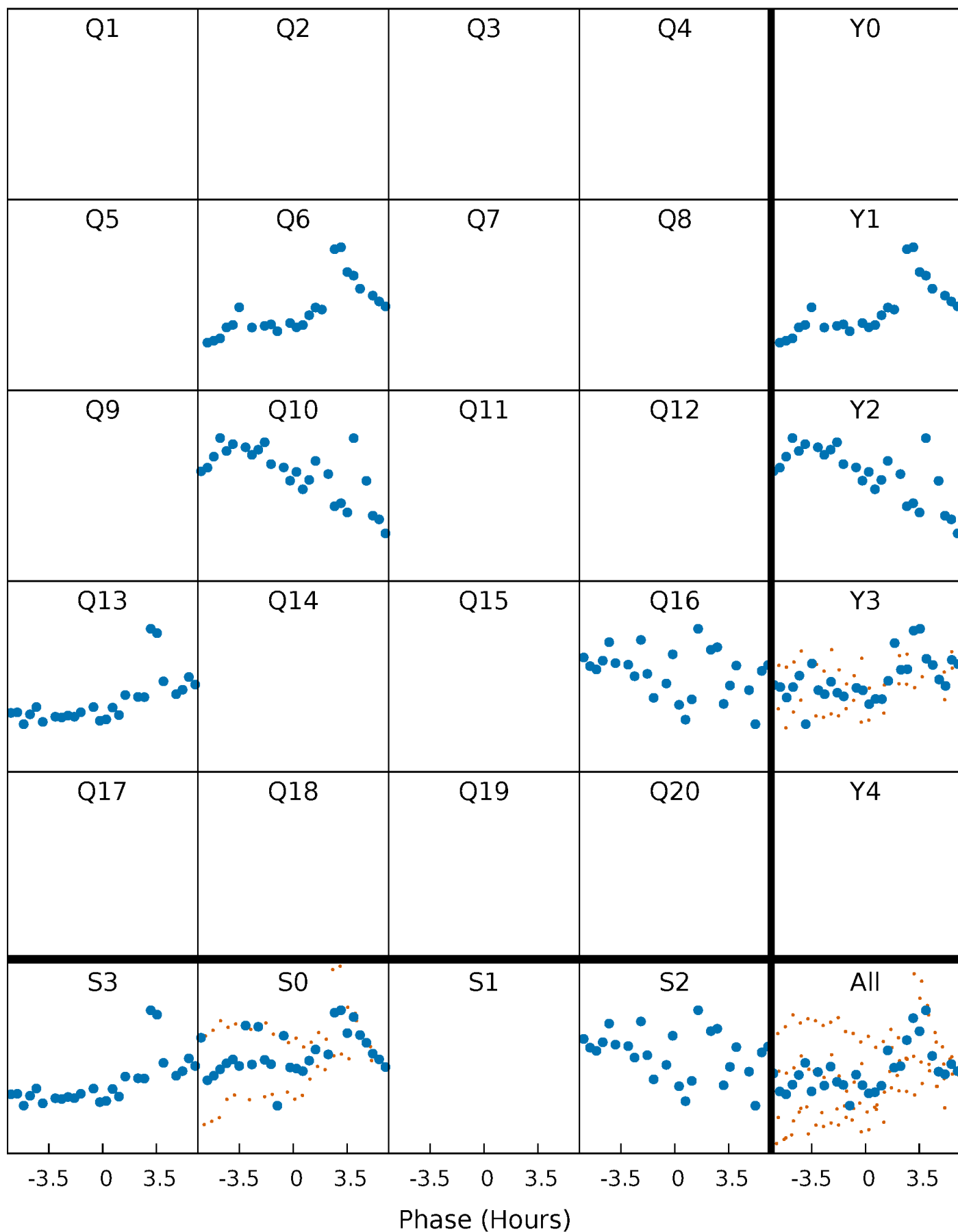


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



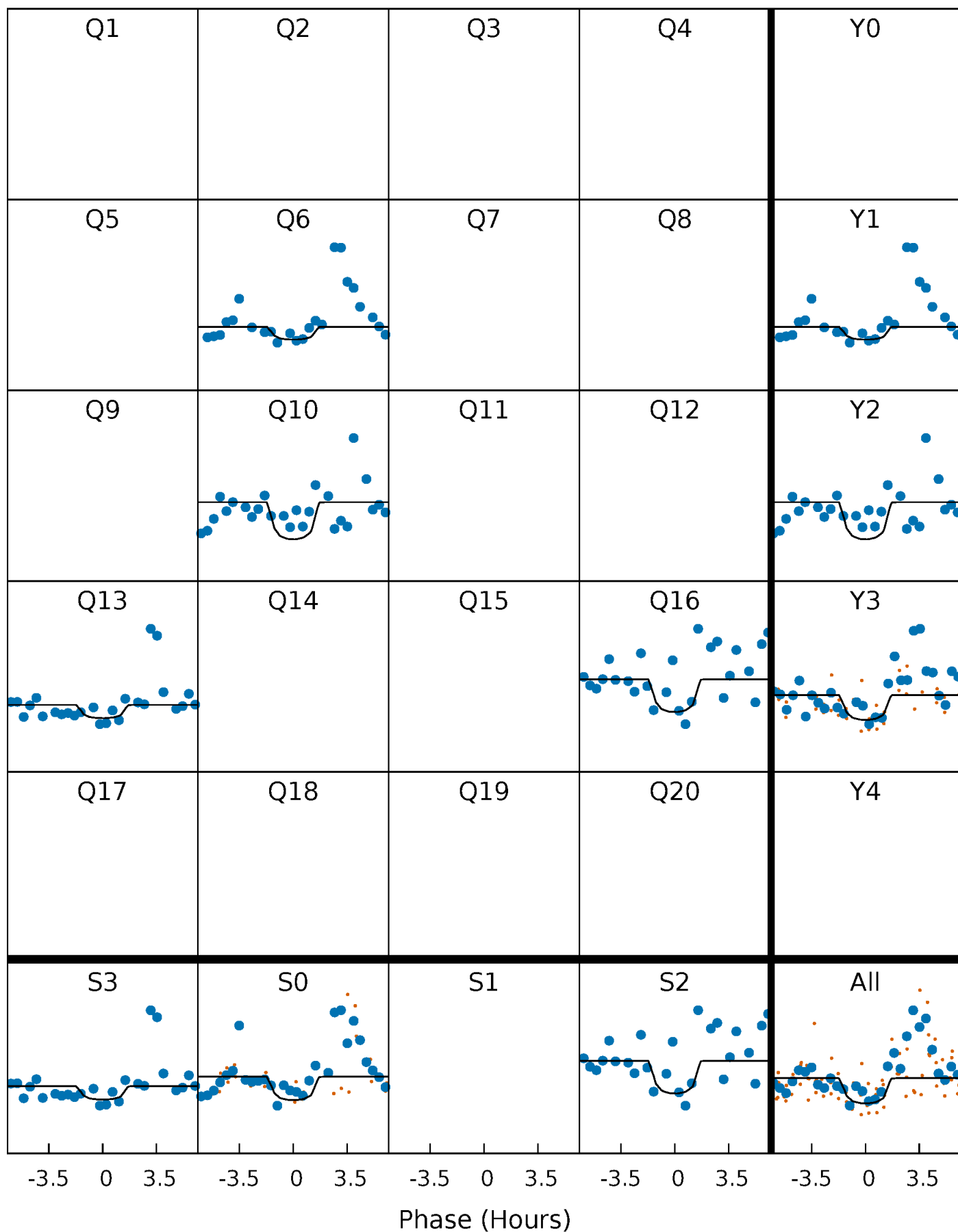
PDC Quarter-Phased Transit Curves

TCE 009093763-01 P=311.629369 Days $T_0=298.660003$ (BKJD)



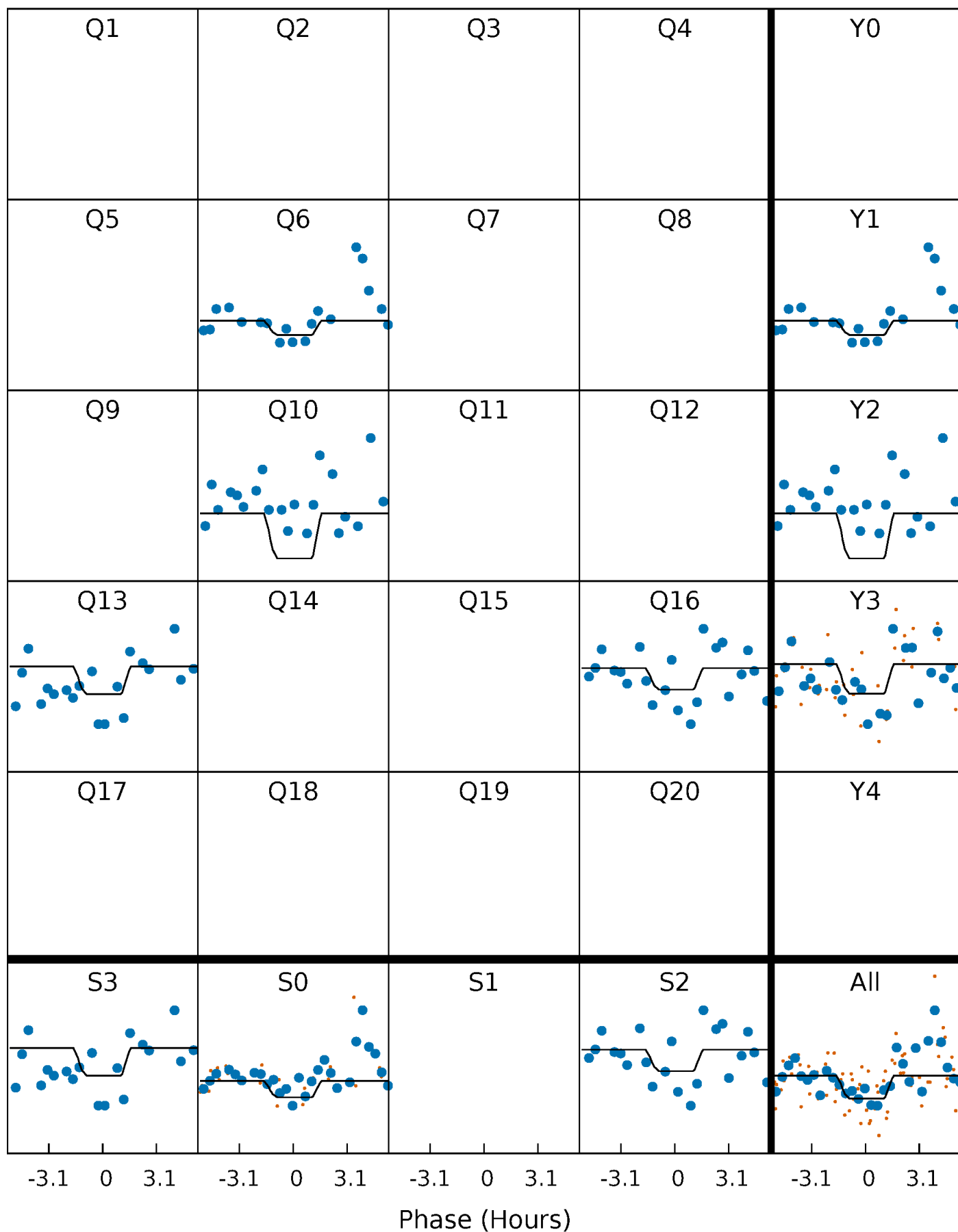
DV Quarter-Phased Transit Curves

TCE 009093763-01 P=311.629369 Days $T_0=298.660003$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

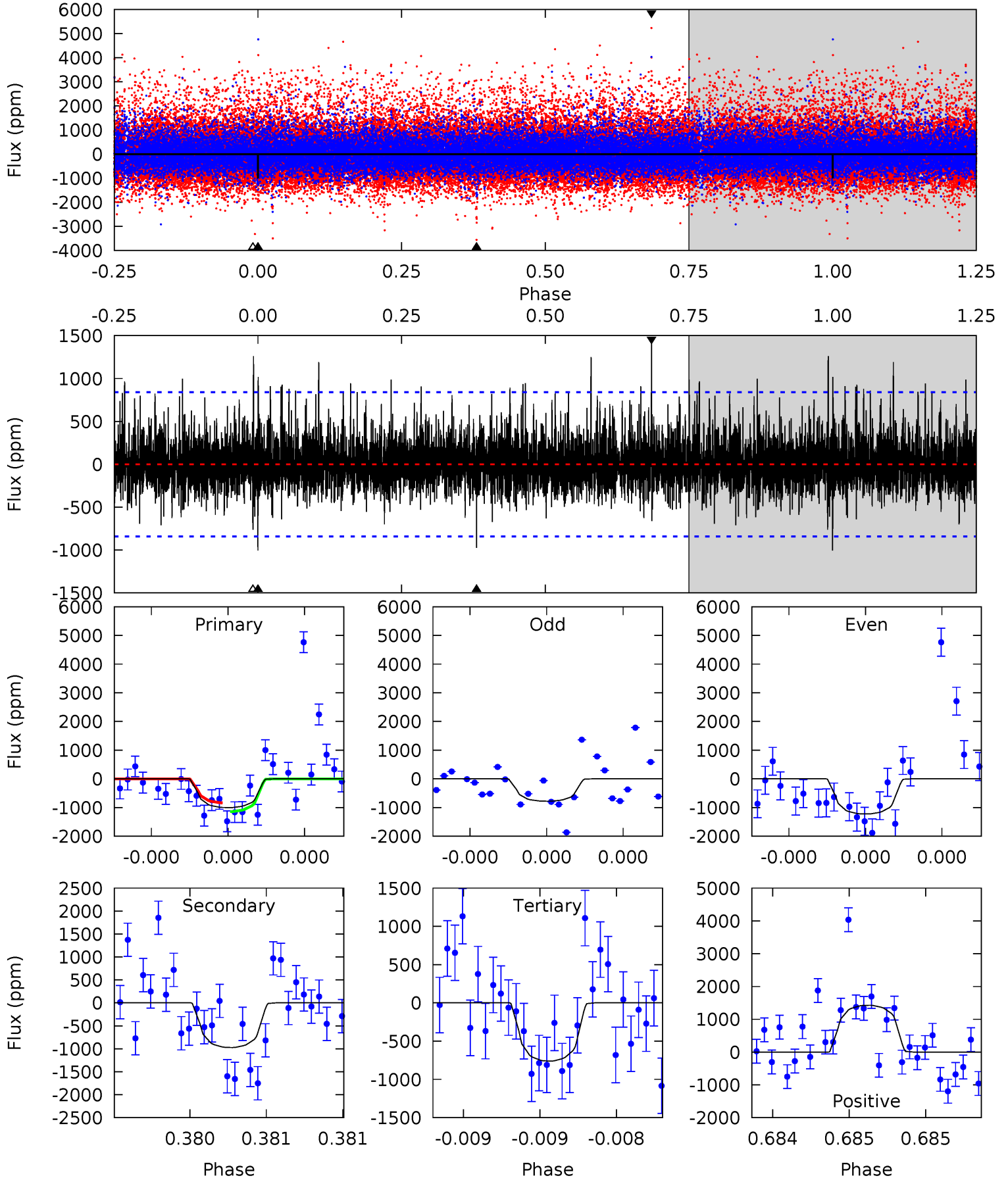
TCE 009093763-01 P=311.628174 Days $T_0=298.663221$ (BKJD)



DV Model-Shift Uniqueness Test

009093763-01, P = 311.629369 Days, E = 298.660003 Days

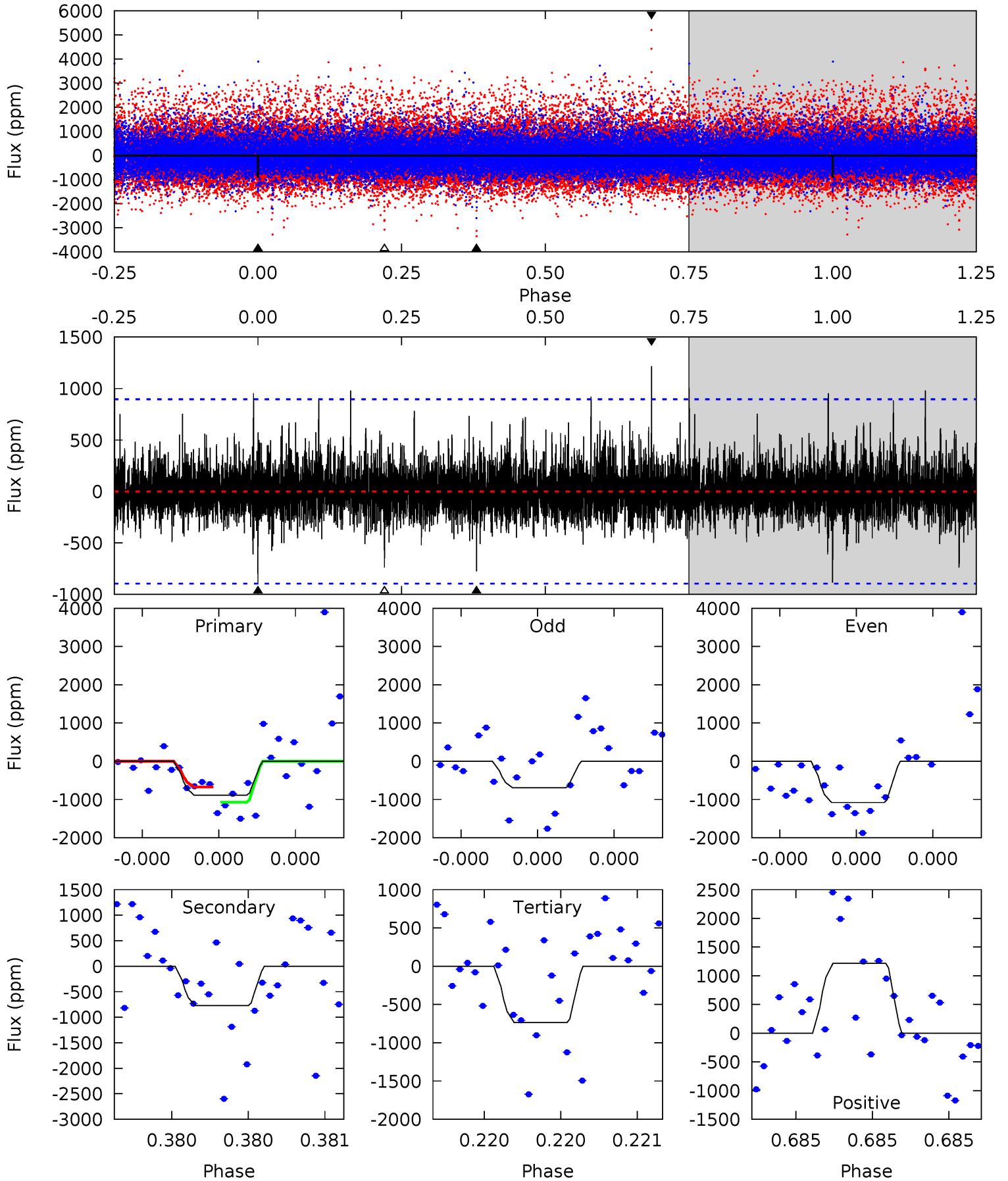
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.66	6.46	5.06	9.48	5.59	3.50	1.55	1.61	-2.82	1.41	-3.02	1.34	0.99	0.59	1.02



Alt Model-Shift Uniqueness Test

009093763-01, P = 311.628174 Days, E = 298.663221 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.56	4.86	4.63	7.64	5.62	3.55	1.13	0.94	-2.08	0.23	-2.78	1.18	0.83	0.58	1.25



Stellar Parameters For KIC 009093763

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3332^{+43}_{-36}	$4.987^{+0.044}_{-0.040}$	$0.000^{+0.100}_{-0.100}$	$0.265^{+0.038}_{-0.027}$	$0.248^{+0.045}_{-0.030}$	$18.820^{+4.559}_{-3.663}$
	+1%/-1%	+1%/-1%	+inf%/-inf%	+14%/-10%	+18%/-12%	+24%/-19%
Source	PHO2	PHO2	PHO2	DSEP		

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

Secondary Eclipse Parameters for KIC 009093763-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-973 ± 151	$1.58^{+1.32}_{-1.10}$	141^{+3}_{-3}	2829^{+1313}_{-383}	$68833^{+679543}_{-48034}$
Alt.	-773 ± 159	$1.40^{+1.20}_{-0.94}$	140^{+3}_{-3}	2830^{+1106}_{-412}	$67506^{+508573}_{-47552}$

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

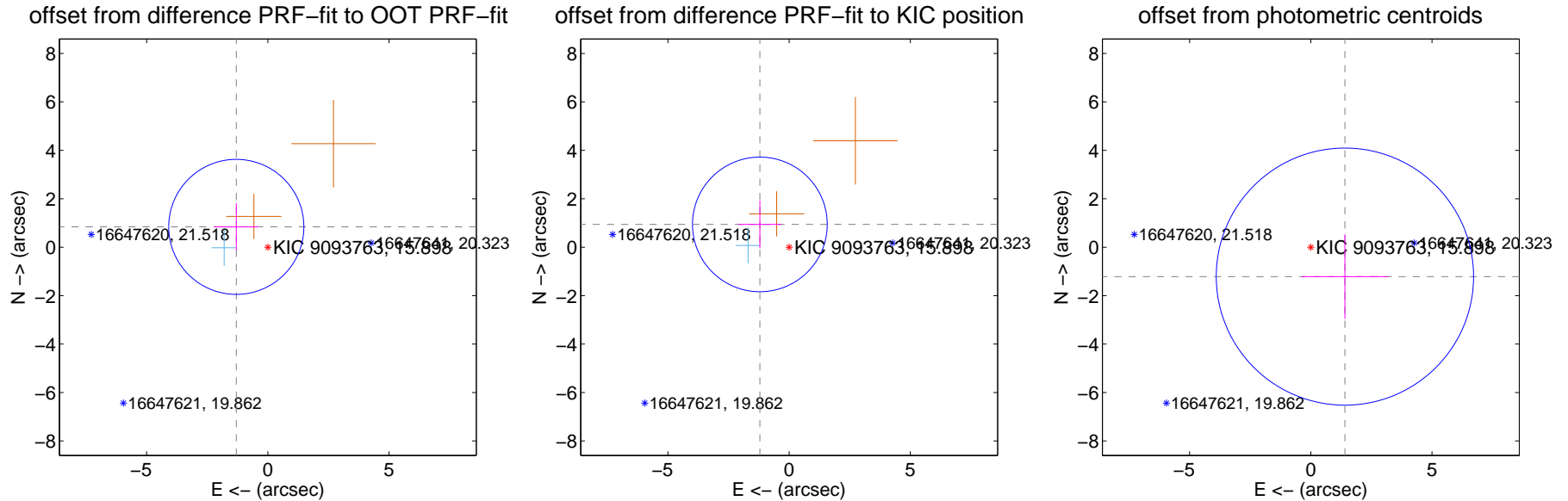
DV Centroid Data

Supplemental centroid analysis for 009093763-01. Kepler magnitude: 15.90. Transit SNR 5.95

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.549 ± 0.929	1.67	1.301 ± 0.909	0.840 ± 0.977
PRF-fit source offset from KIC position	1.531 ± 0.927	1.65	1.208 ± 0.891	0.941 ± 0.983
photometric centroid source offset	1.86 ± 1.77	1.05	-1.41 ± 1.79	-1.21 ± 1.74



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.



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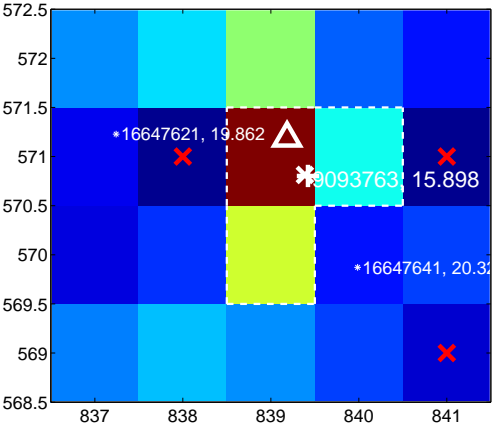
Q5 no difference image



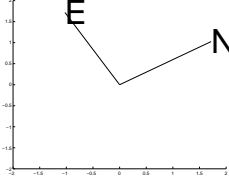
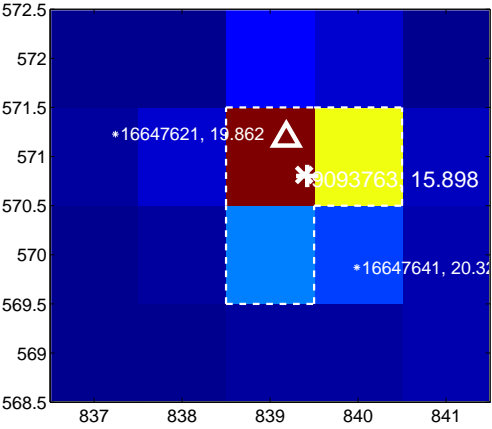
Q5 no OOT image



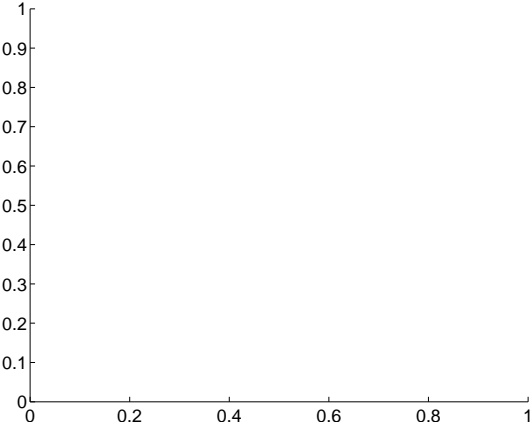
Q6 difference image



Q6 OOT image



Q7 no difference image



Q7 no OOT image



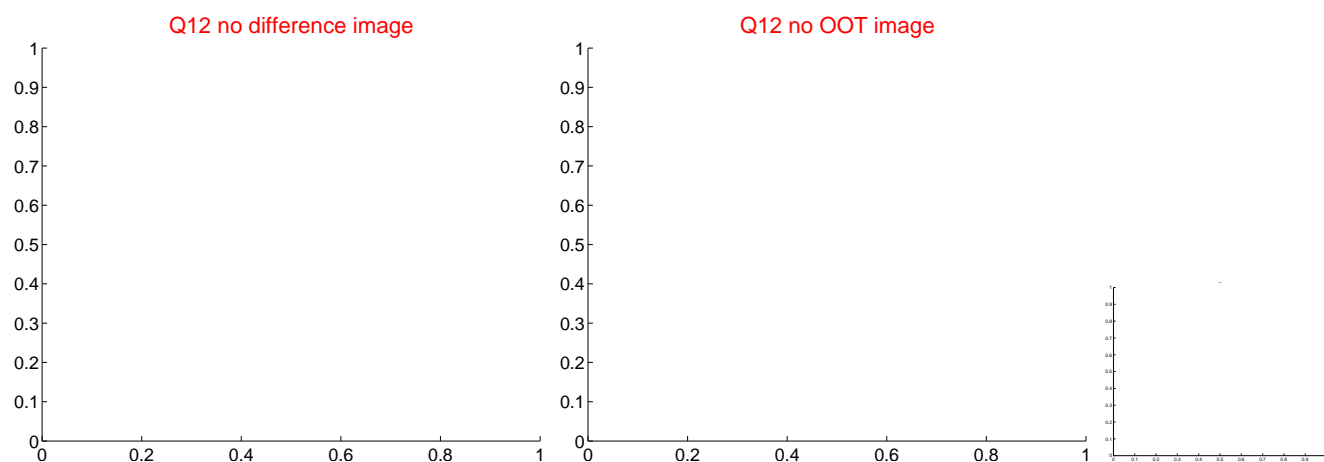
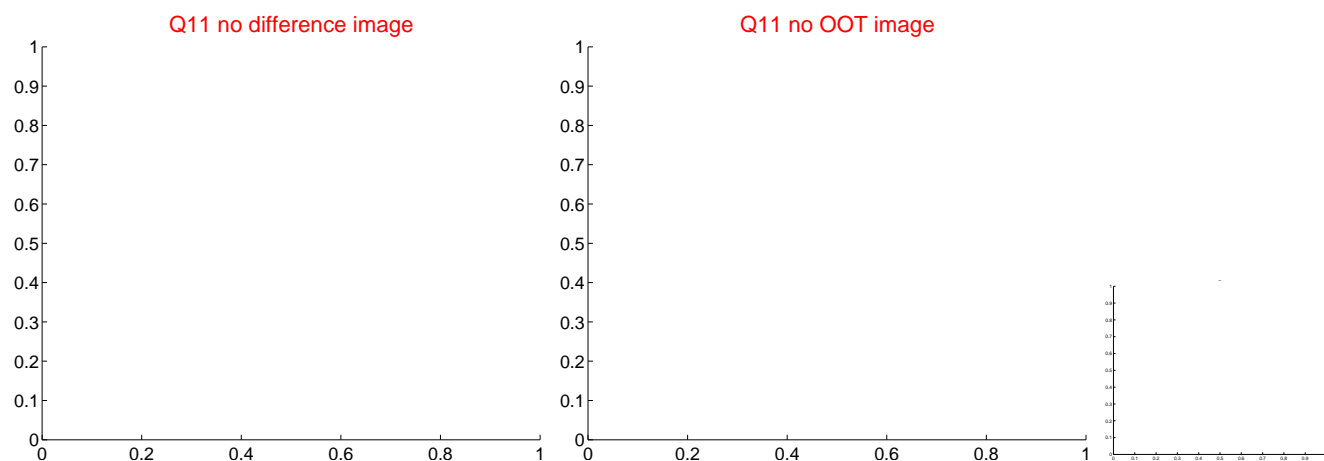
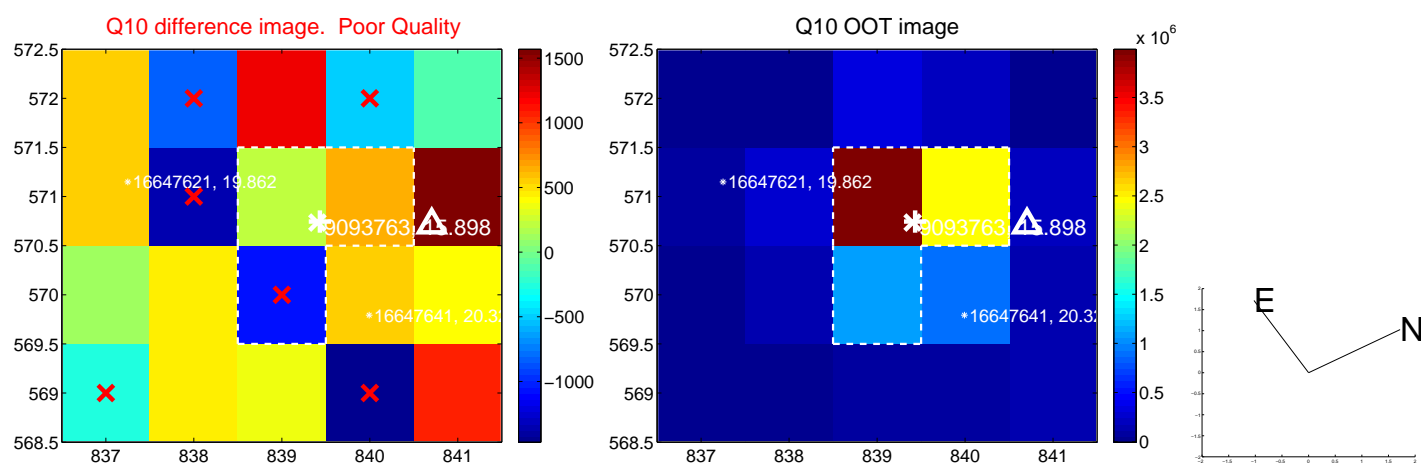
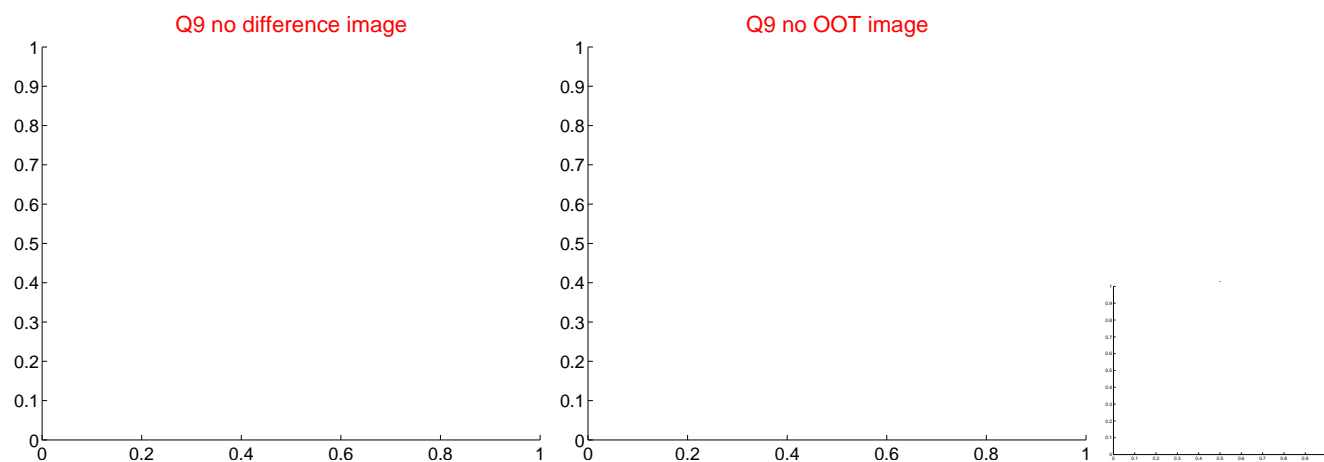
Q8 no difference image



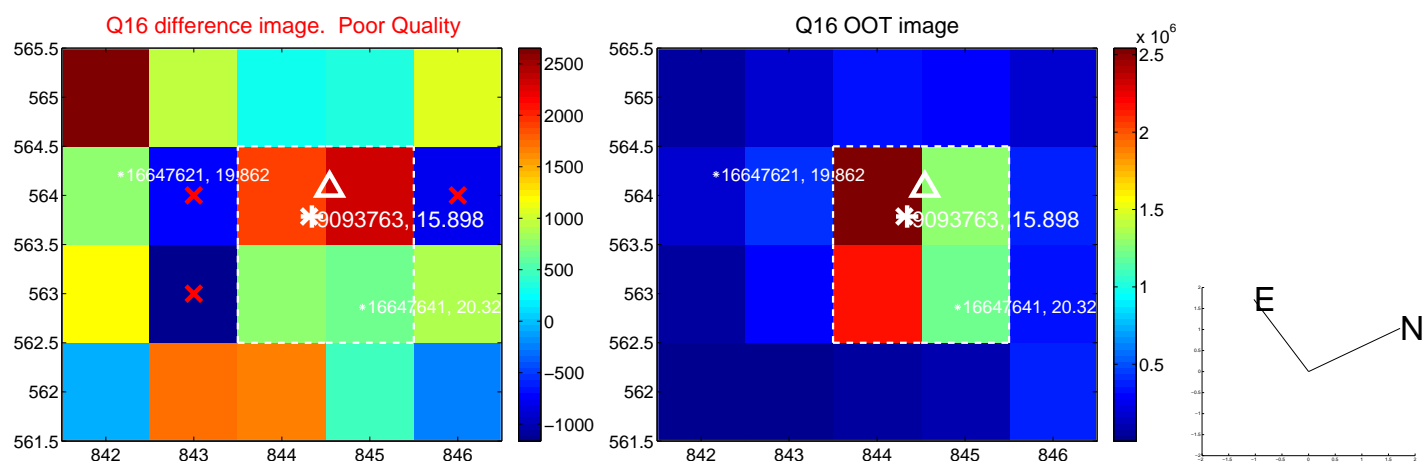
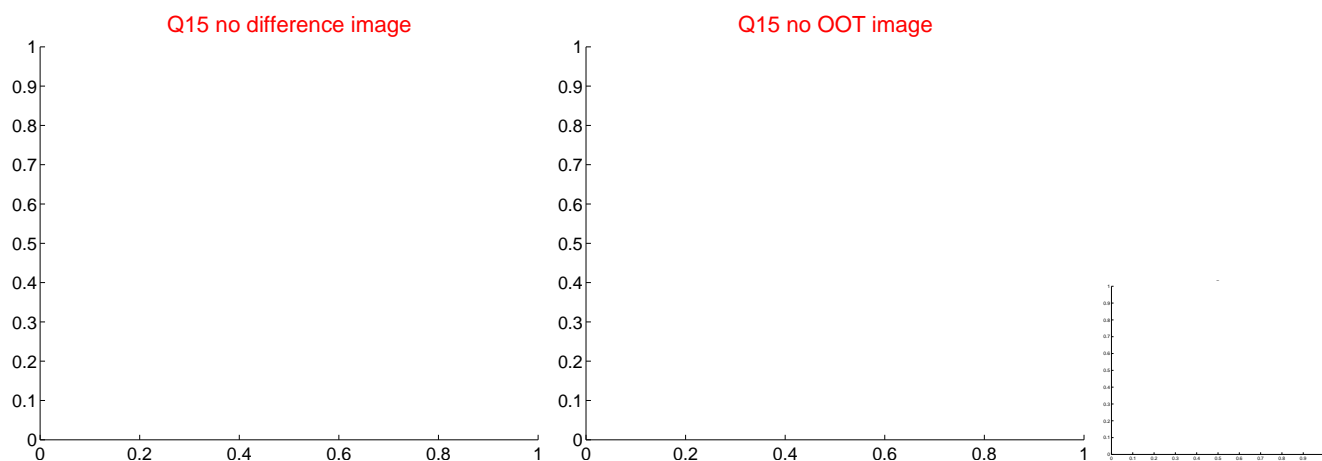
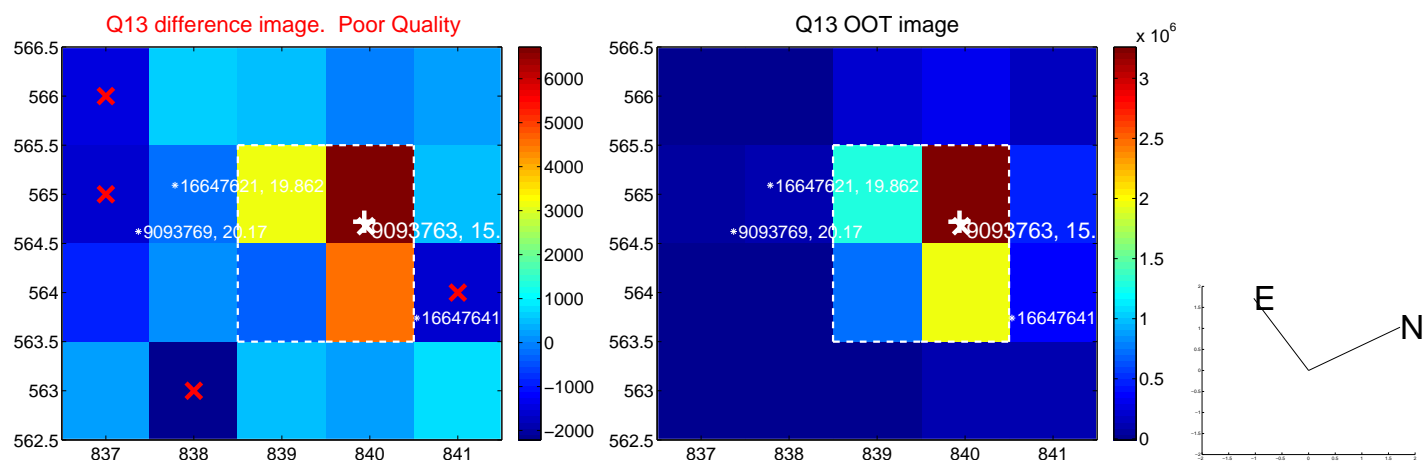
Q8 no OOT image



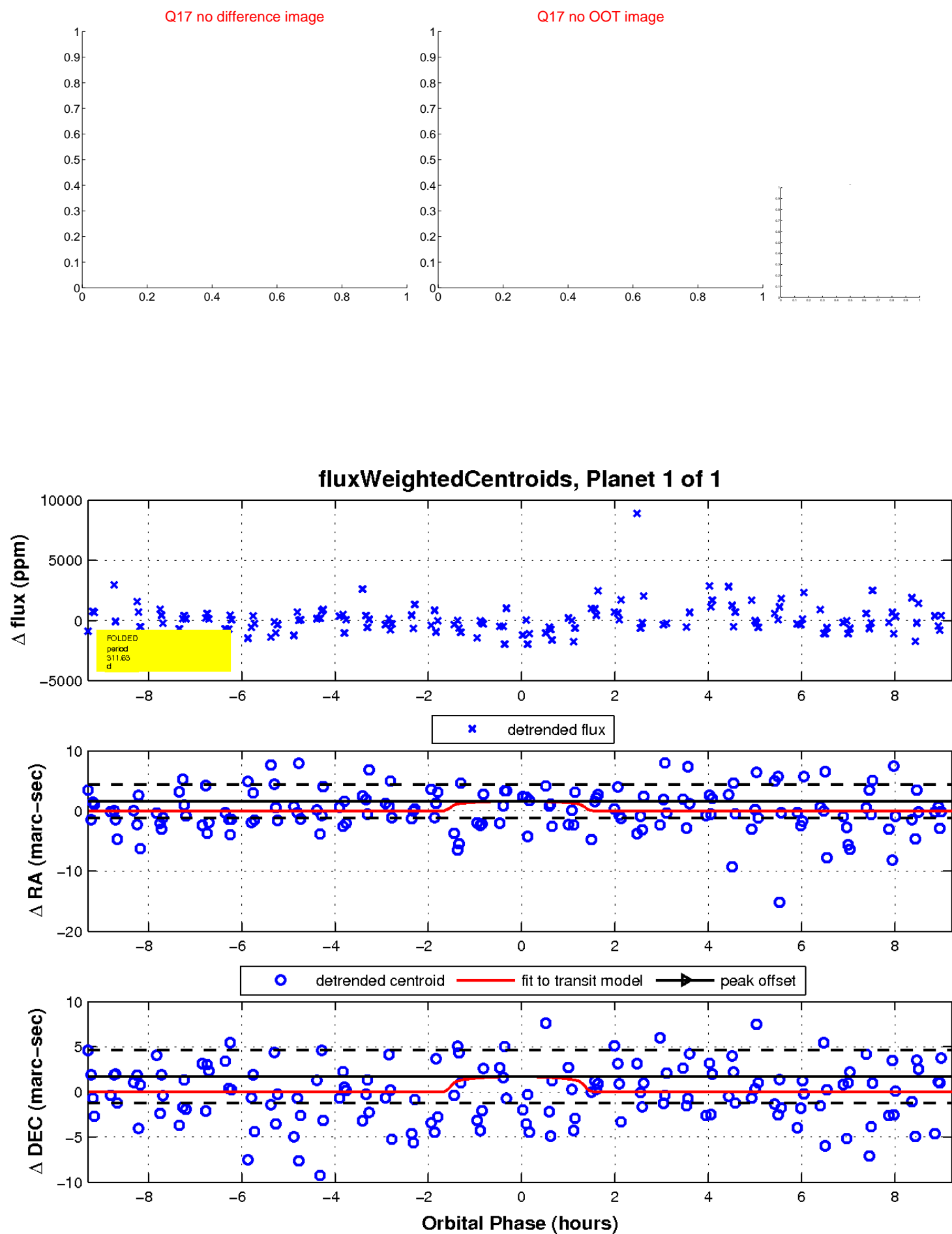
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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UKIRT Image

Declination

