

KIC 010965008

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})
010965008-01	OBS	0536.01	81.169615	178.591166	1178.3	7.780	45.6	45.9	1.17	5460	4.17	8.56

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010965008-01	OBS	PC	0.92	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.

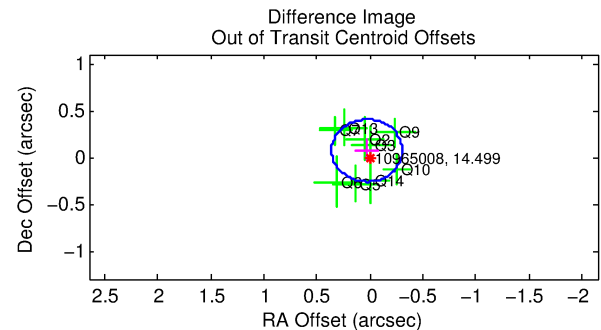
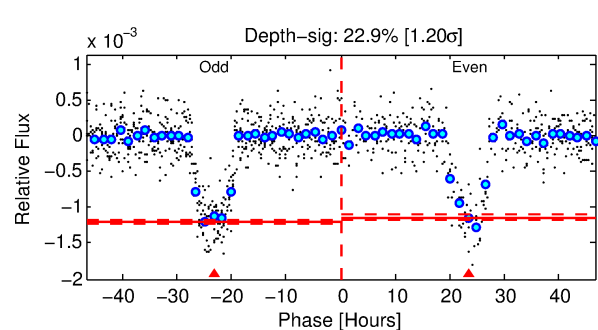
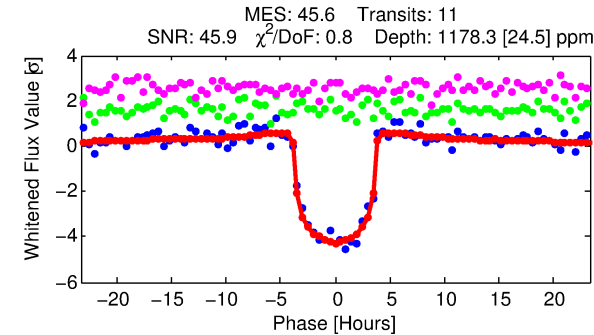
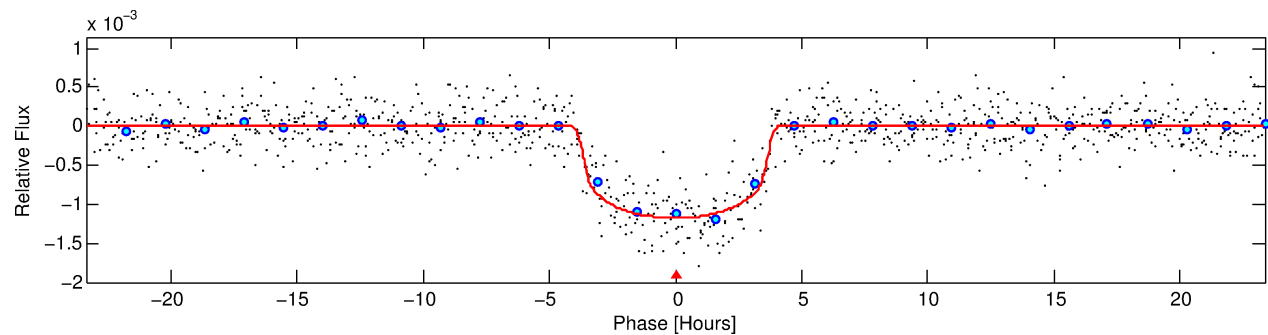
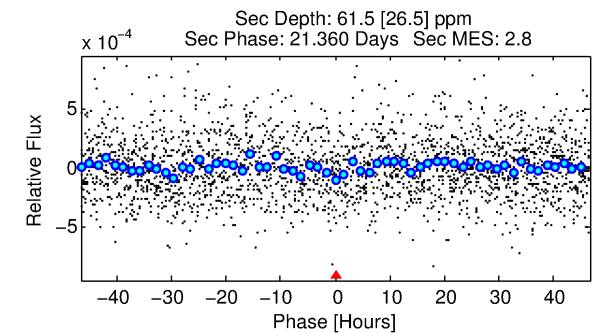
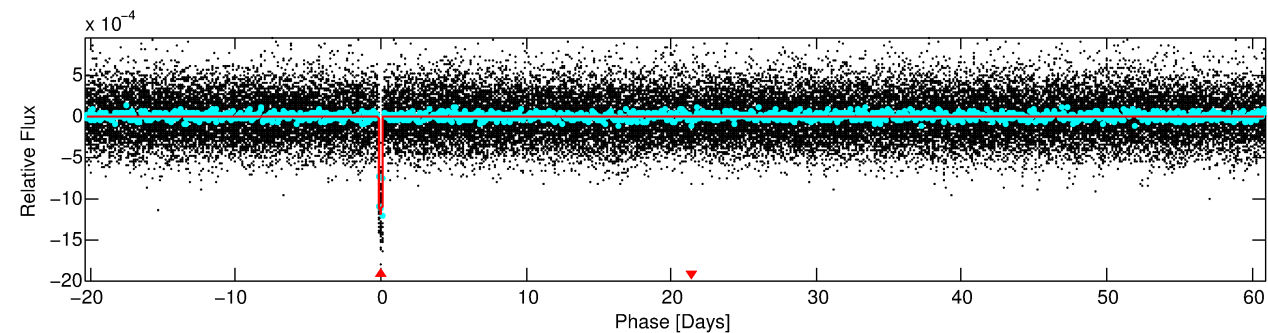
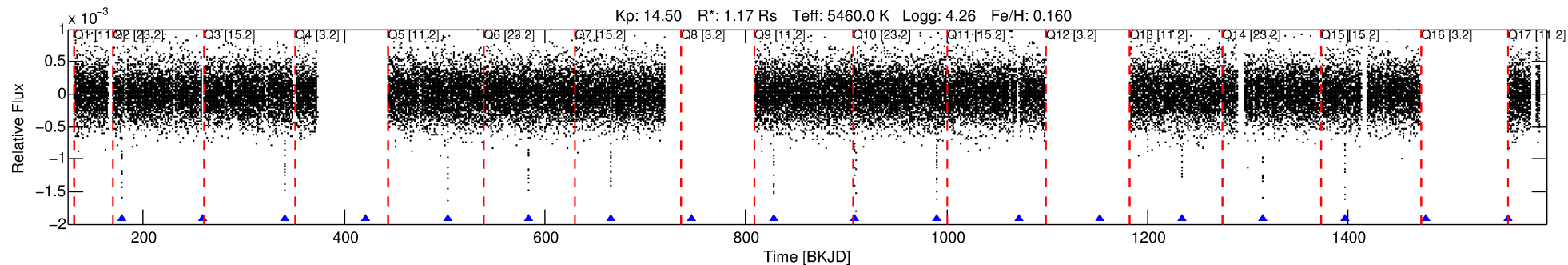
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010965008-01

No Significant Match Found

DV One-Page Summary

KIC: 10965008 Candidate: 1 of 1 Period: 81.170 d
KOI: K00536.01 Corr: 0.995



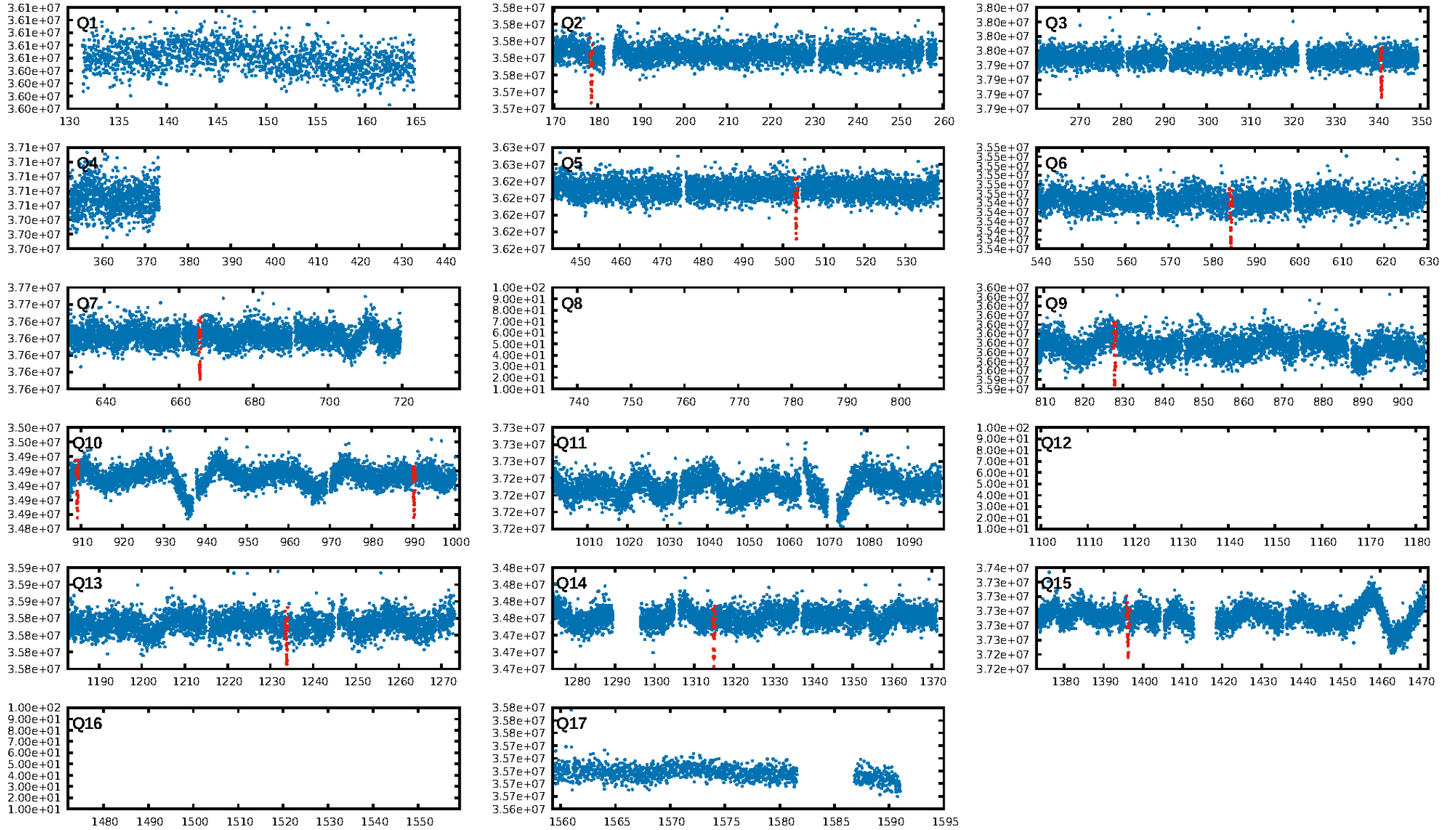
DV Fit Results:

Period = 81.16962 [0.00032] d
Epoch = 178.5912 [0.0029] BKJD
Rp/R* = 0.0328 [0.0044]
a/R* = 65.69 [33.74]
b = 0.62 [0.51]
Seff = 8.56 [2.72]
Teff = 436 [35] K
Rp = 4.17 [0.96] Re
a = 0.3552 [0.0676] AU
Ag = 245.71 [146.17] [1.67 σ]
Teffp = 2670 [340] K [6.53 σ]

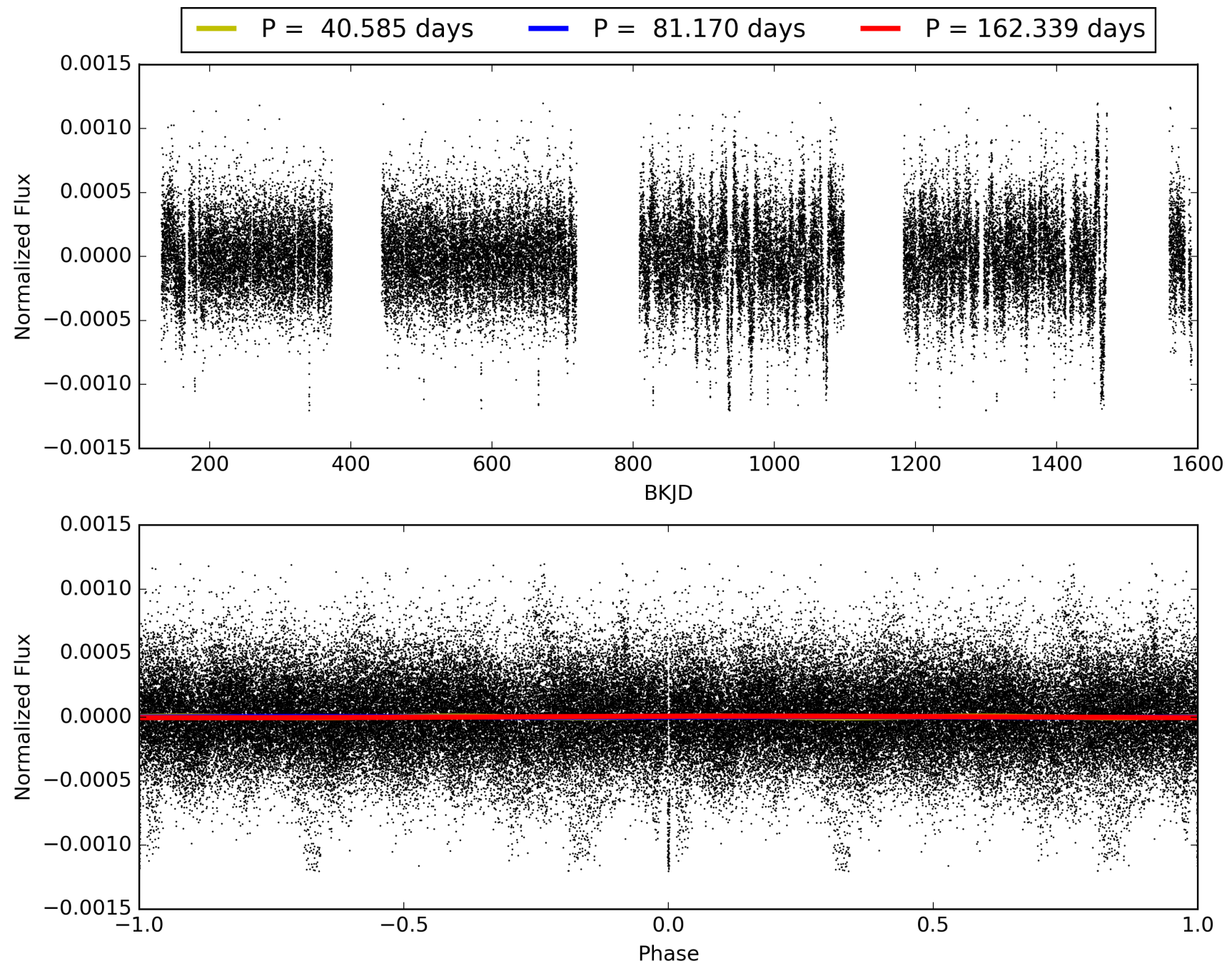
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 57.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [11/11]
GhostDiagnostic-chr: 5.943
Centroid-sig: 84.7%
Centroid-so: 0.279 arcsec [0.91 σ]
OotOffset-rm: 0.078 arcsec [0.70 σ]
KicOffset-rm: 0.037 arcsec [0.33 σ]
OotOffset-st: 4/2/0/3 [9]
KicOffset-st: 4/2/0/3 [9]
DiffImageQuality-fgm: 1.00 [9/9]
DiffImageOverlap-fno: 1.00 [9/9]

TCE 010965008-01, PDC Light Curves

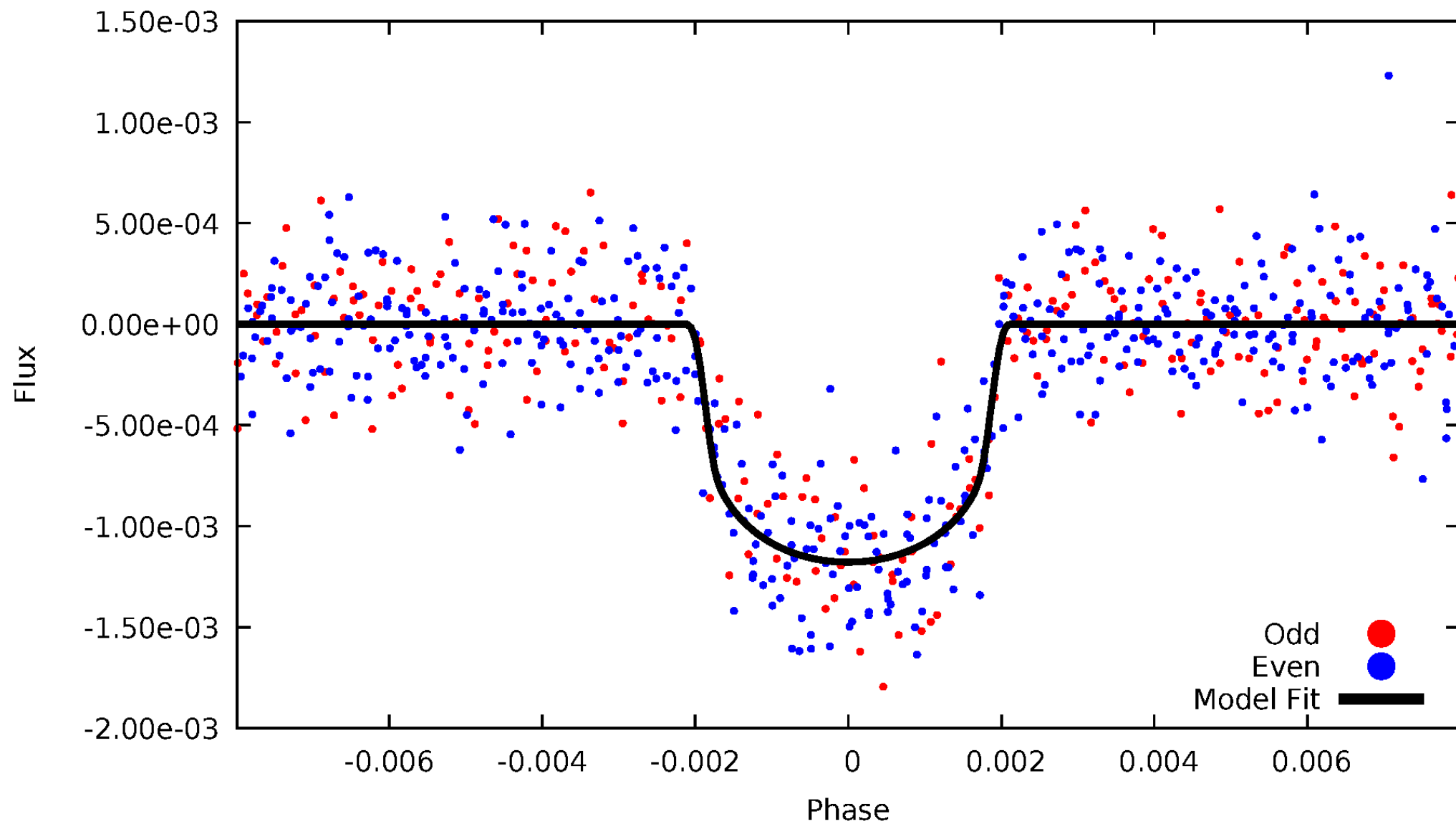


TCE 010965008-01



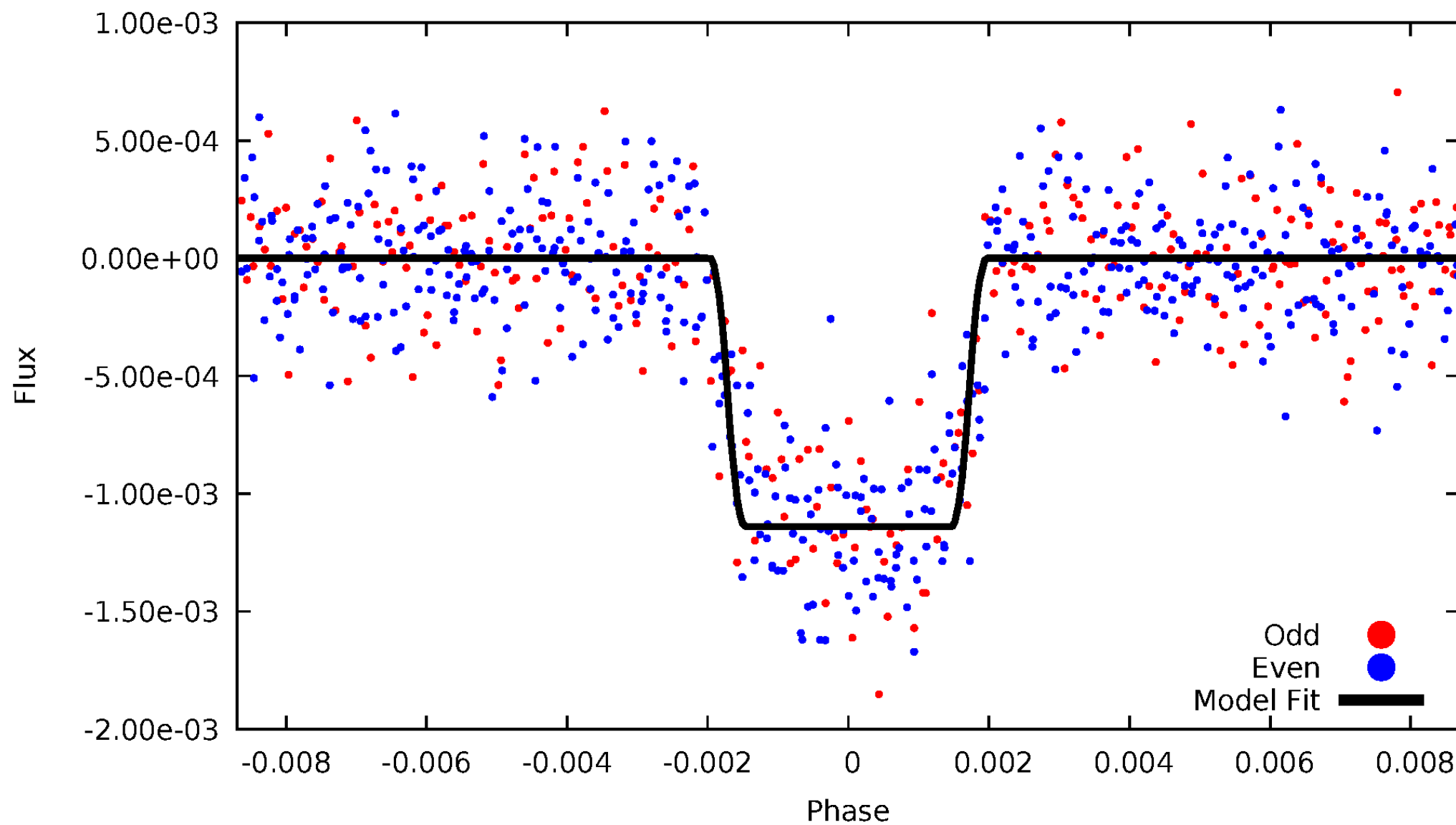
DV Odd/Even

TCE 010965008-01



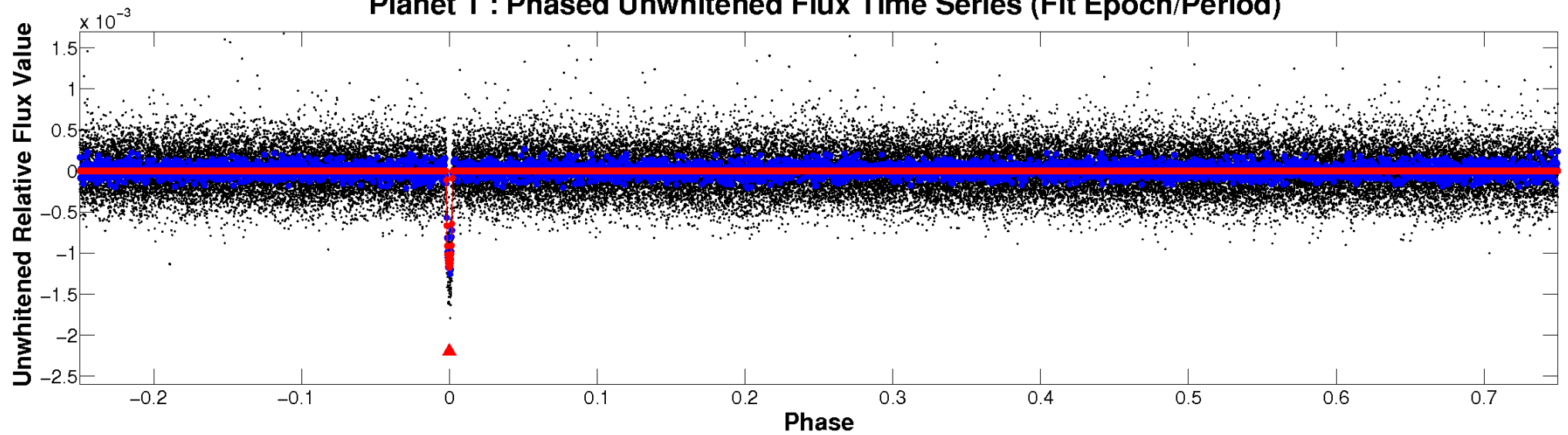
ALT Odd/Even

TCE 010965008-01

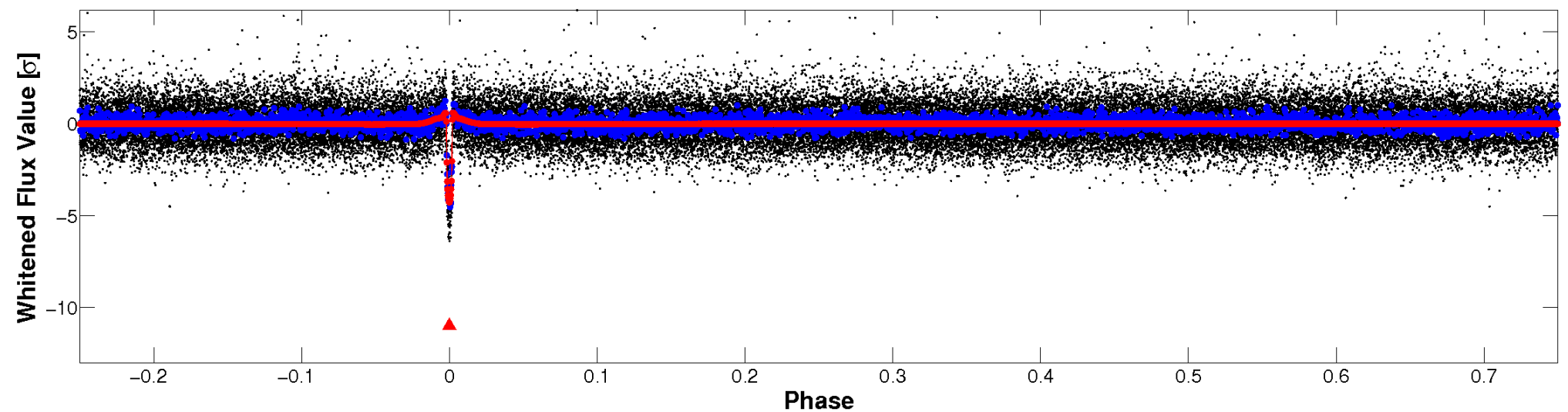


Non-Whitened Vs. Whitened Light Curve

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

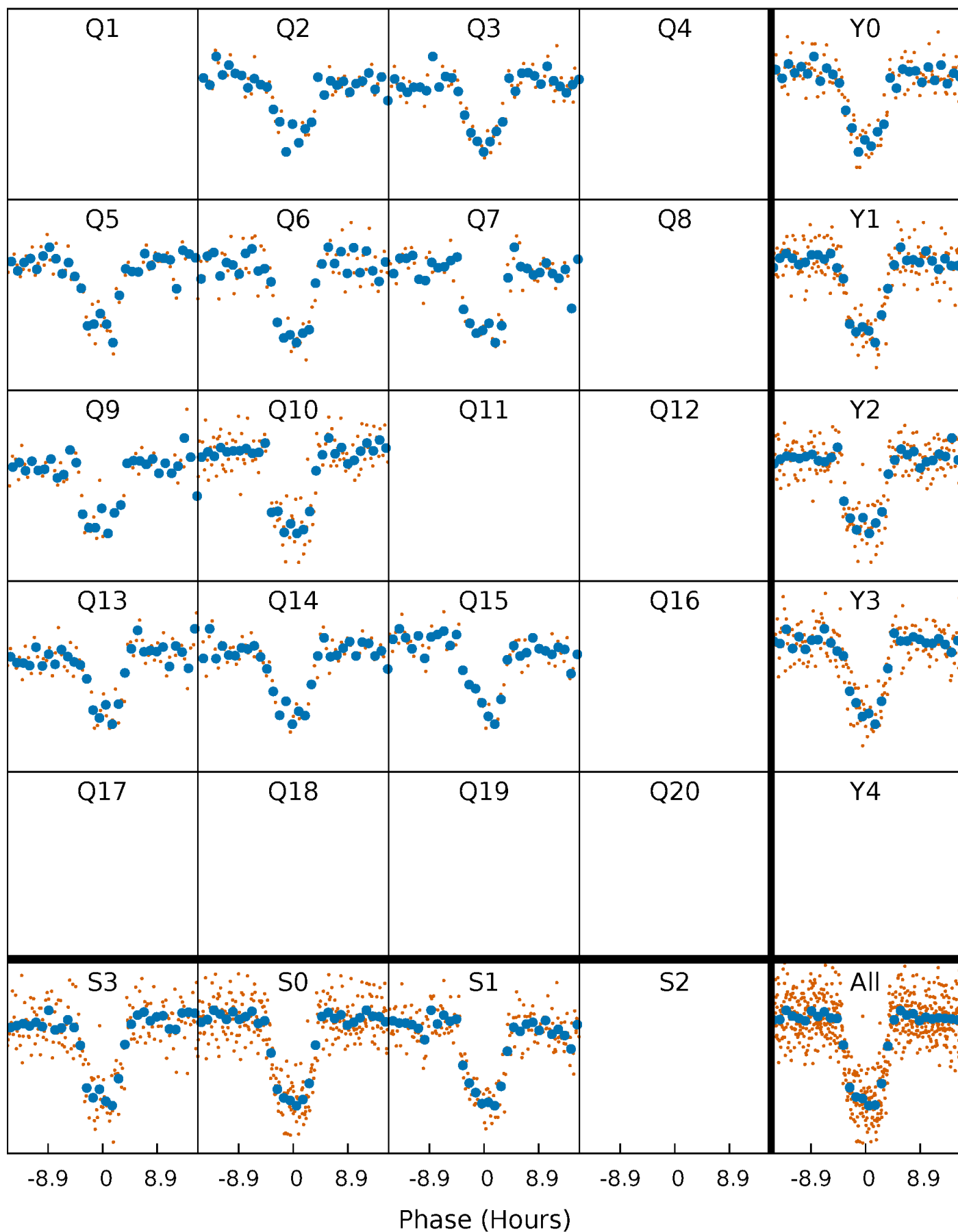


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



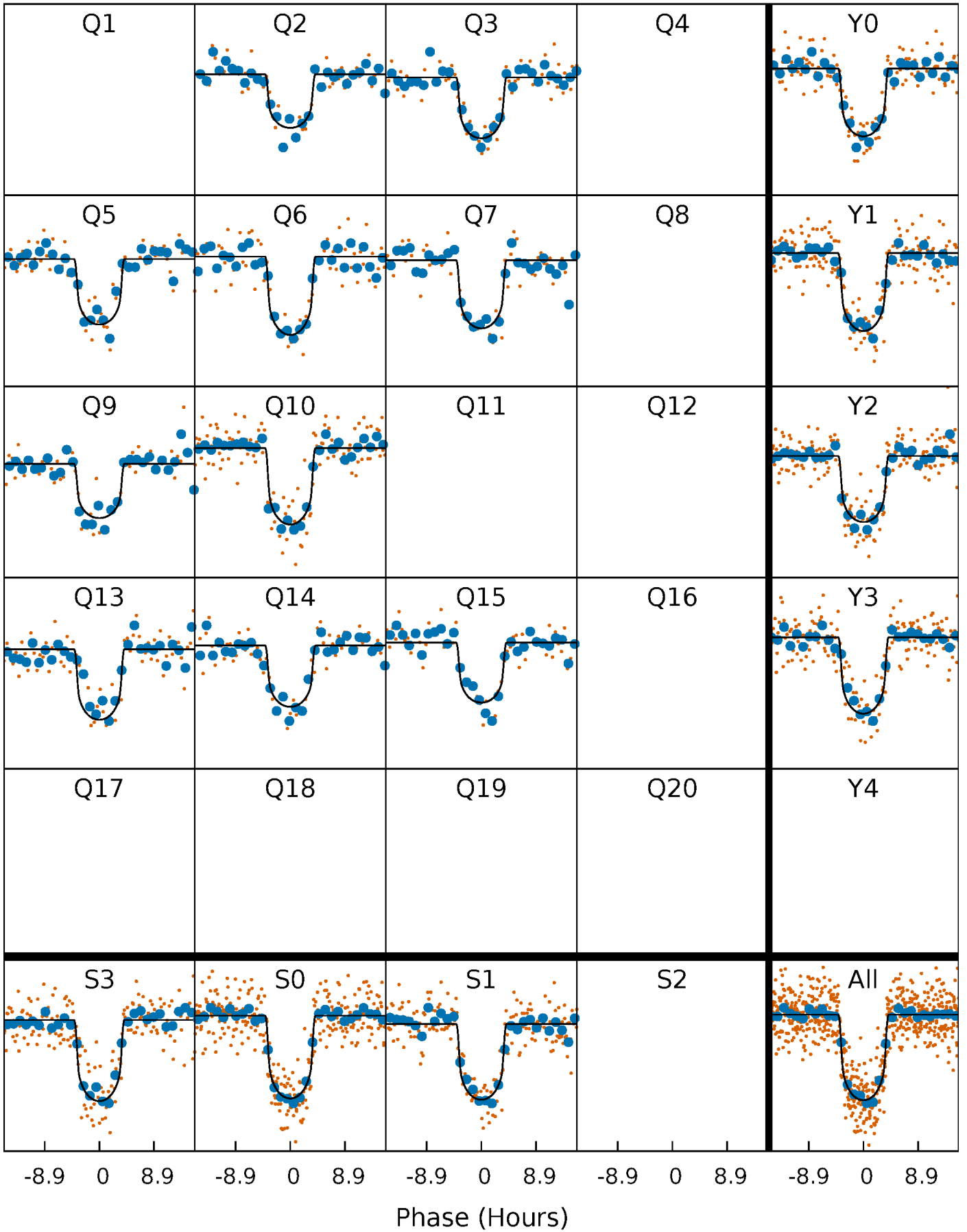
PDC Quarter-Phased Transit Curves

TCE 010965008-01 P= 81.169615 Days $T_0=178.591166$ (BKJD)



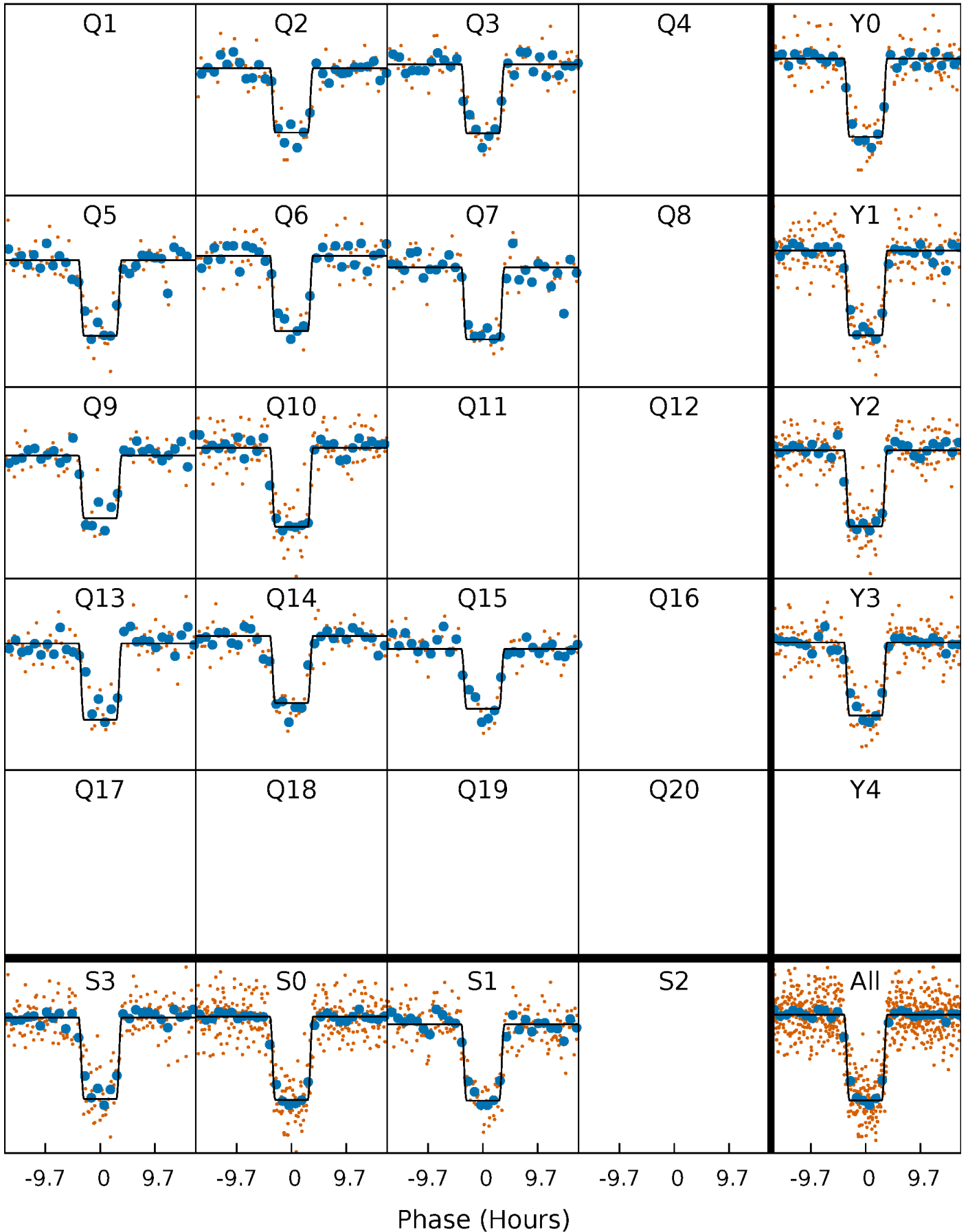
DV Quarter-Phased Transit Curves

TCE 010965008-01 P= 81.169615 Days $T_0=178.591166$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

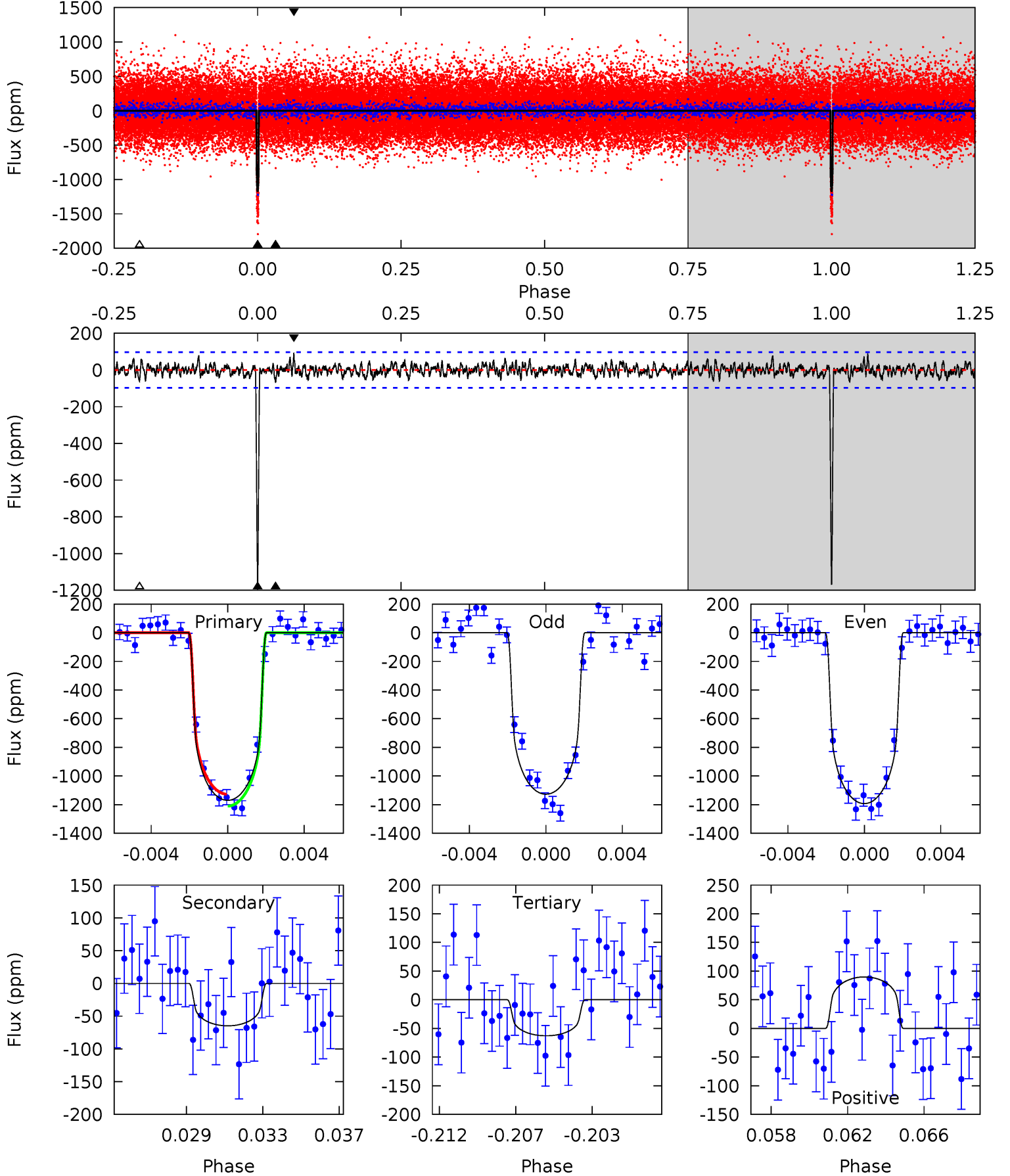
TCE 010965008-01 P= 81.170594 Days $T_0=178.584343$ (BKJD)



DV Model-Shift Uniqueness Test

010965008-01, P = 81.169615 Days, E = 97.421551 Days

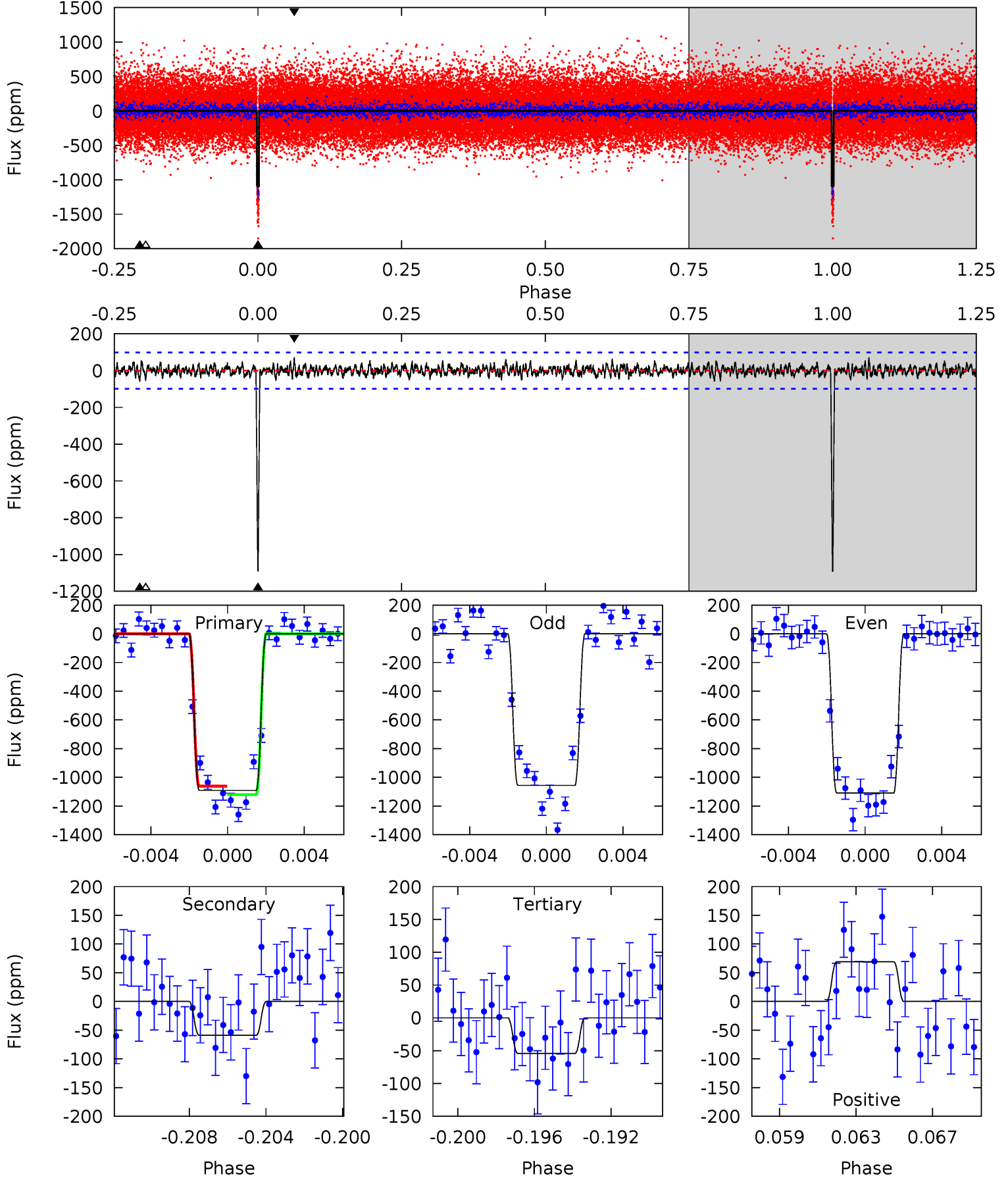
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
62.6	3.47	3.36	4.81	5.19	2.87	1.20	59.3	57.8	0.11	-1.34	1.67	0.98	0.07	2.22



Alt Model-Shift Uniqueness Test

010965008-01, P = 81.170594 Days, E = 97.413749 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
57.4	3.10	2.86	3.62	5.20	2.88	1.00	54.5	53.8	0.24	-0.53	1.35	0.99	0.06	1.54



Stellar Parameters For KIC 010965008

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5460^{+81}_{-65}	$4.263^{+0.186}_{-0.124}$	$0.160^{+0.150}_{-0.100}$	$1.165^{+0.200}_{-0.220}$	$0.907^{+0.065}_{-0.038}$	$0.807^{+0.674}_{-0.291}$
	+1%/-1%	+4%/-3%	+94%/-62%	+17%/-19%	+7%/-4%	+84%/-36%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 010965008-01 / KOI 0536.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-65 ± 19	$4.14^{+0.71}_{-0.74}$	609^{+29}_{-36}	3266^{+194}_{-204}	264^{+155}_{-98}
Alt.	-59 ± 19	$4.28^{+0.73}_{-0.71}$	609^{+30}_{-32}	3198^{+191}_{-216}	225^{+128}_{-90}

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 $A_{obs} \gg 1.0$

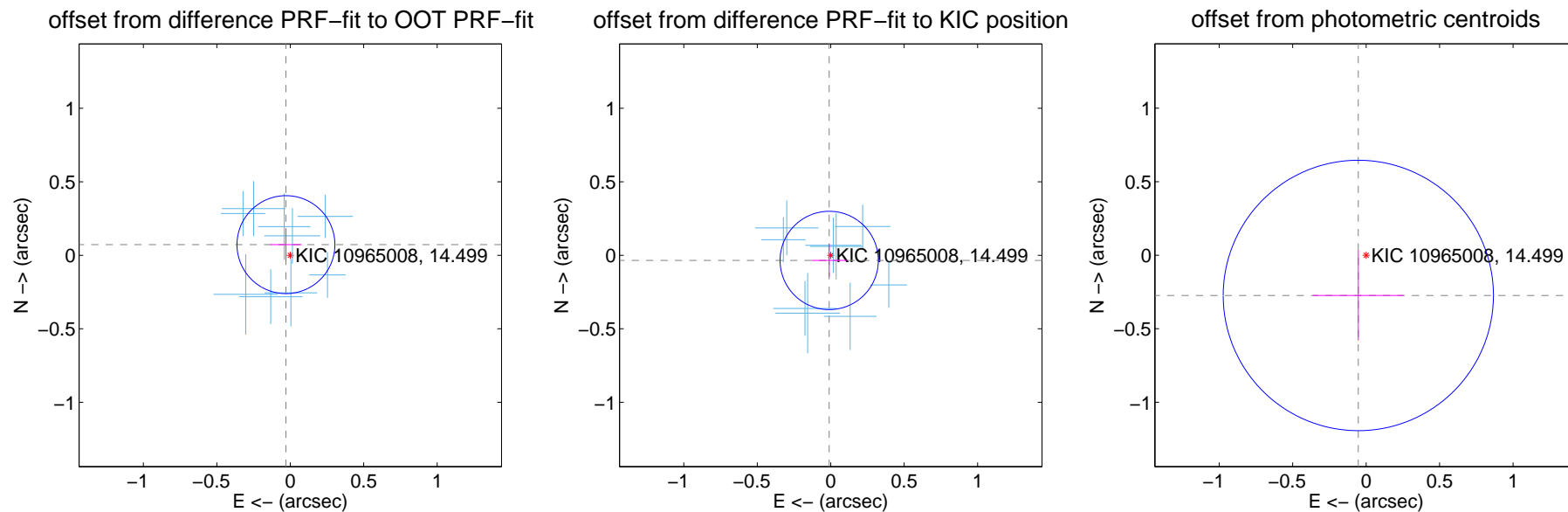
DV Centroid Data

Supplemental centroid analysis for 010965008-01. Kepler magnitude: 14.50. Transit SNR 45.95

There are 9 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.078 ± 0.111	0.70	0.029 ± 0.107	0.072 ± 0.112
PRF-fit source offset from KIC position	0.037 ± 0.111	0.33	0.010 ± 0.119	-0.035 ± 0.111
photometric centroid source offset	0.28 ± 0.31	0.91	0.05 ± 0.31	-0.27 ± 0.31



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.

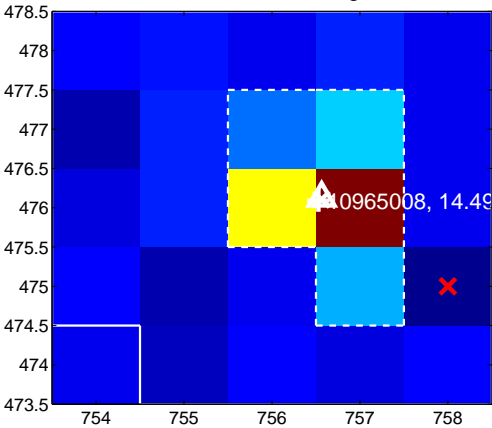
Q1 no difference image



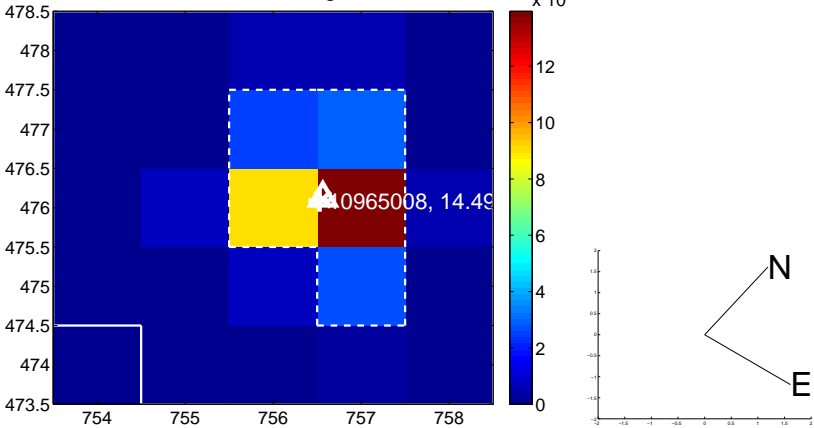
Q1 no OOT image



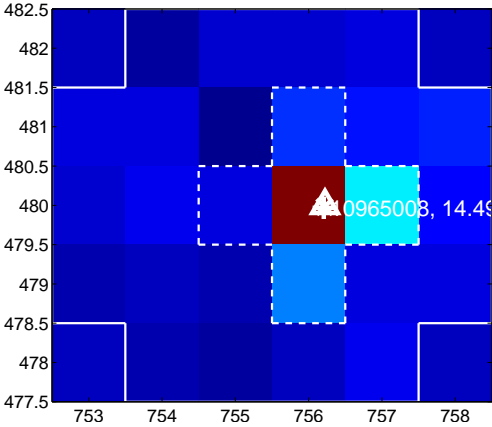
Q2 difference image



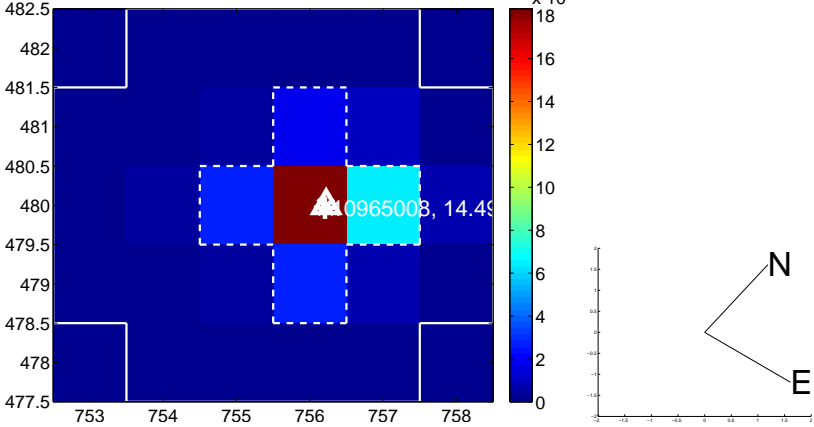
Q2 OOT image



Q3 difference image



Q3 OOT image



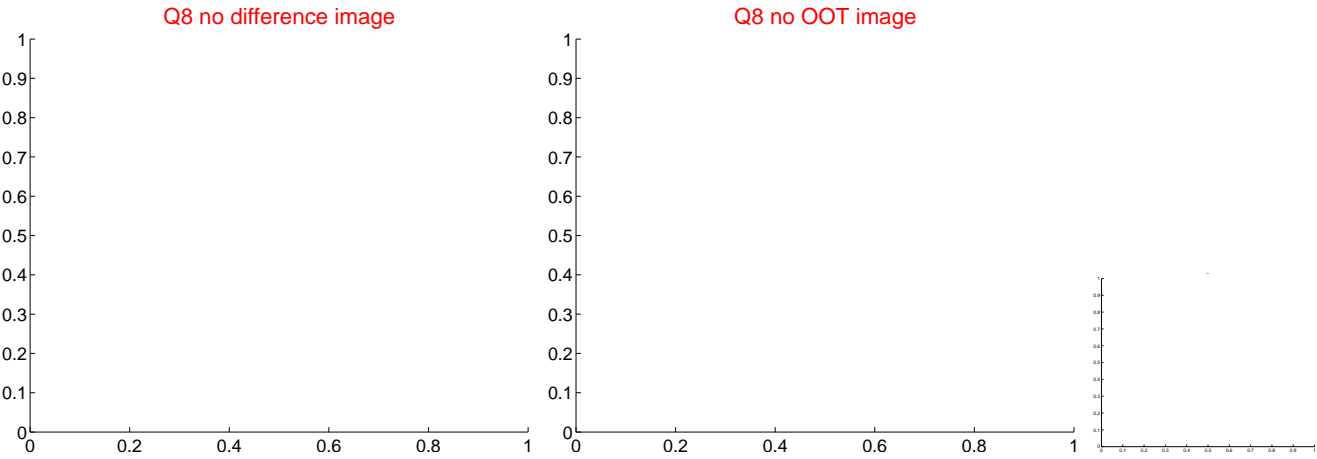
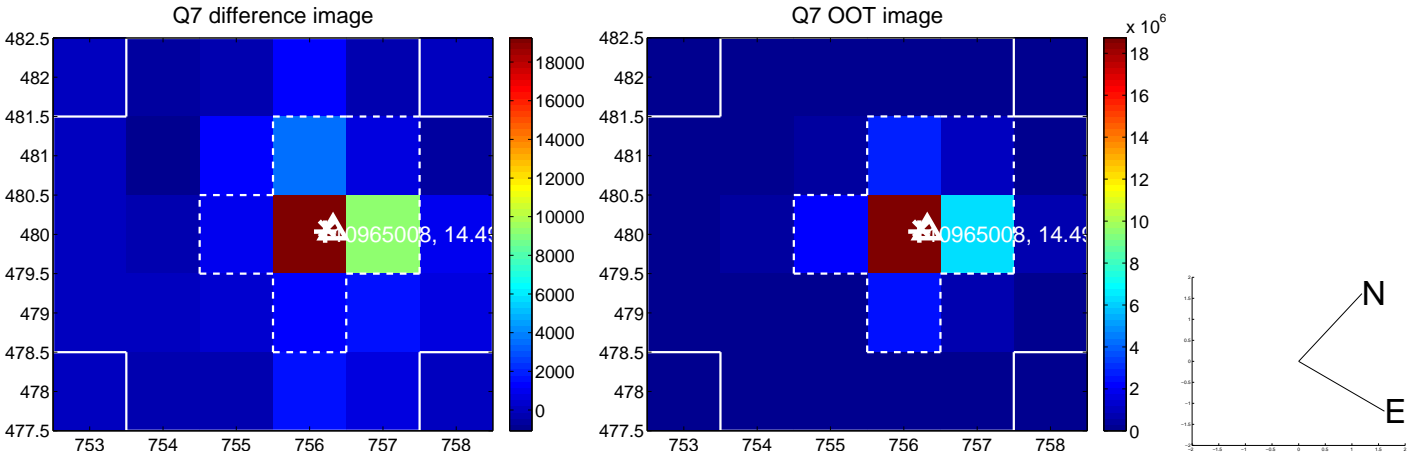
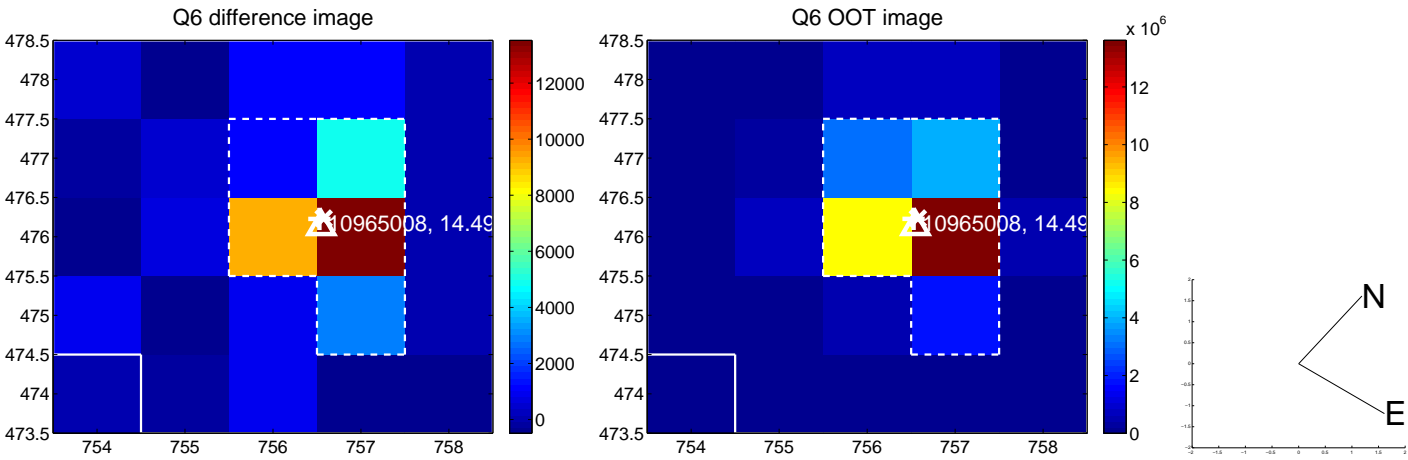
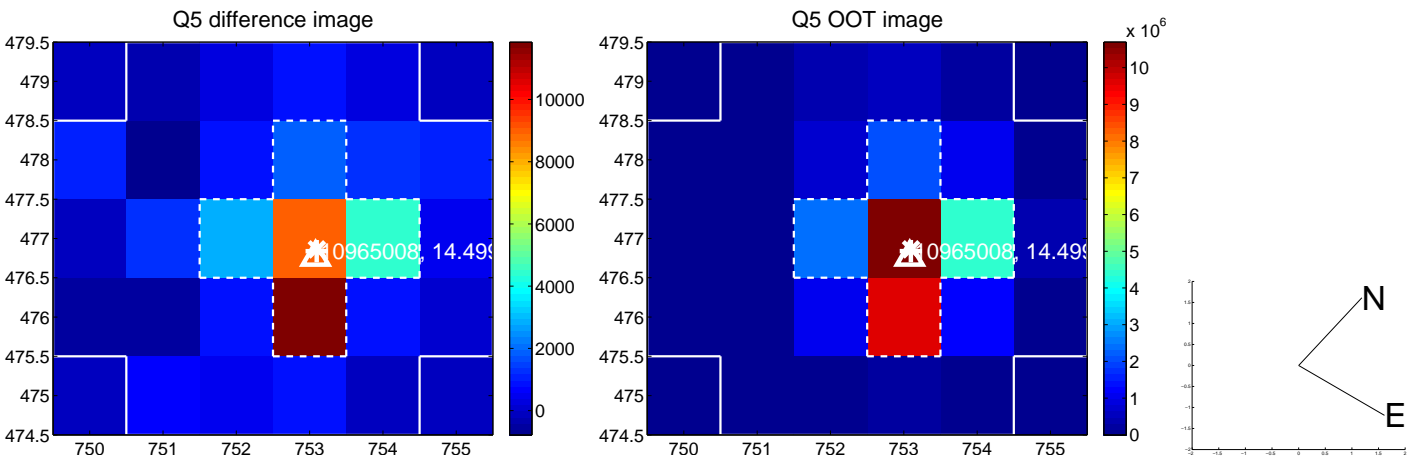
Q4 no difference image



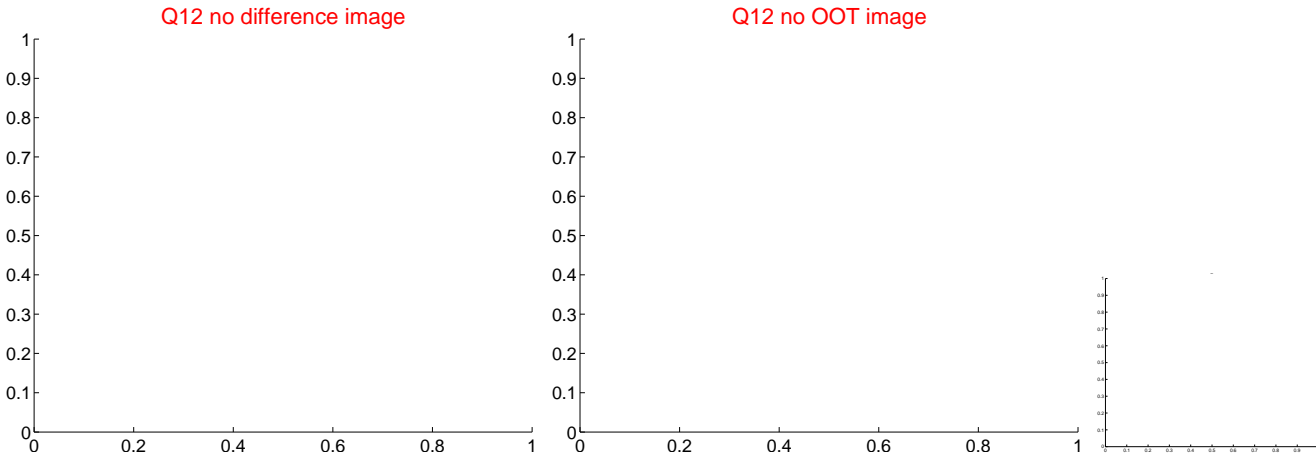
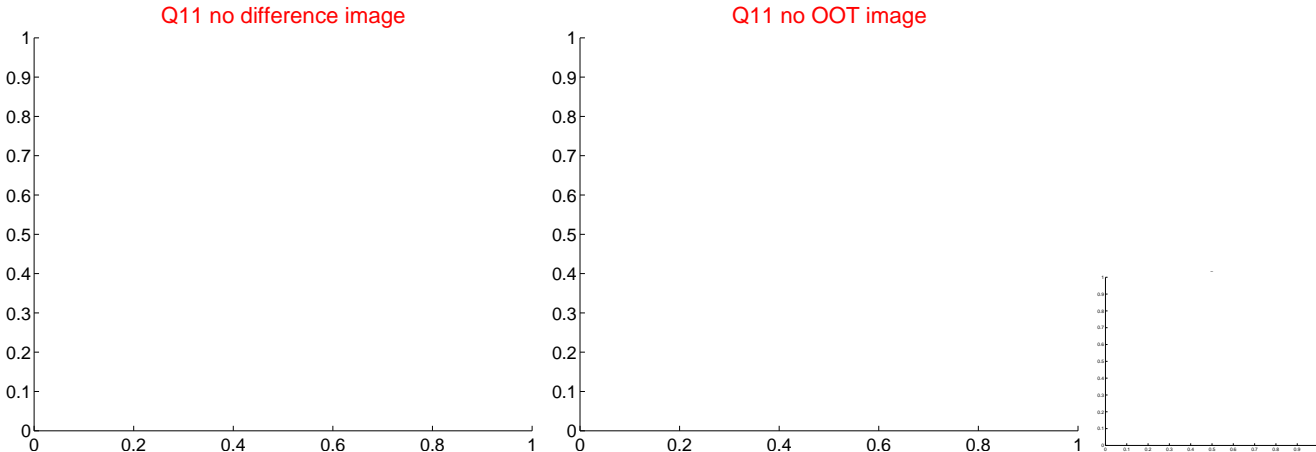
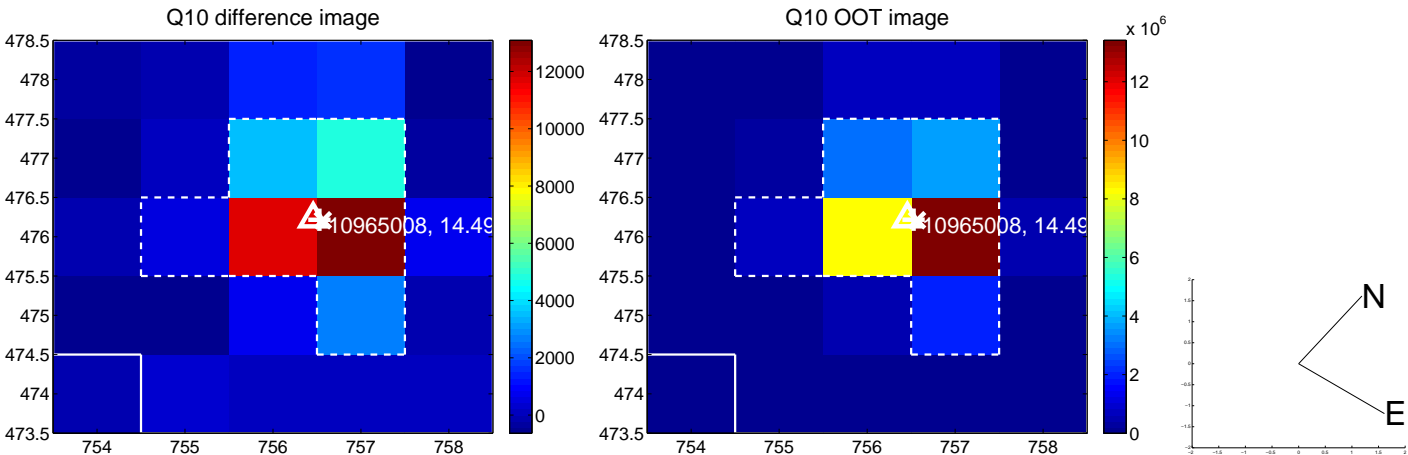
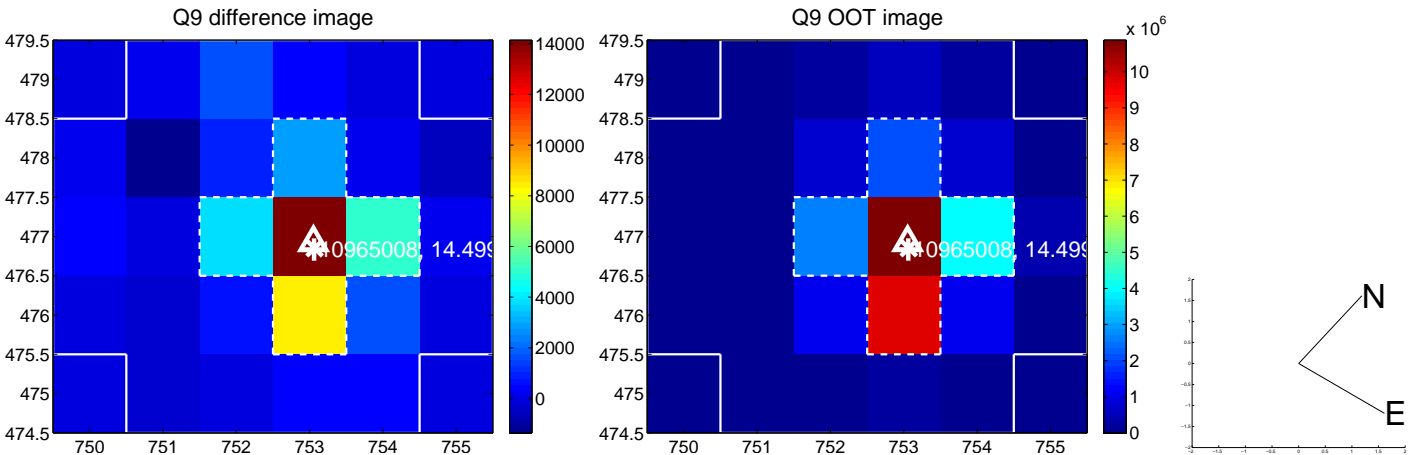
Q4 no OOT image



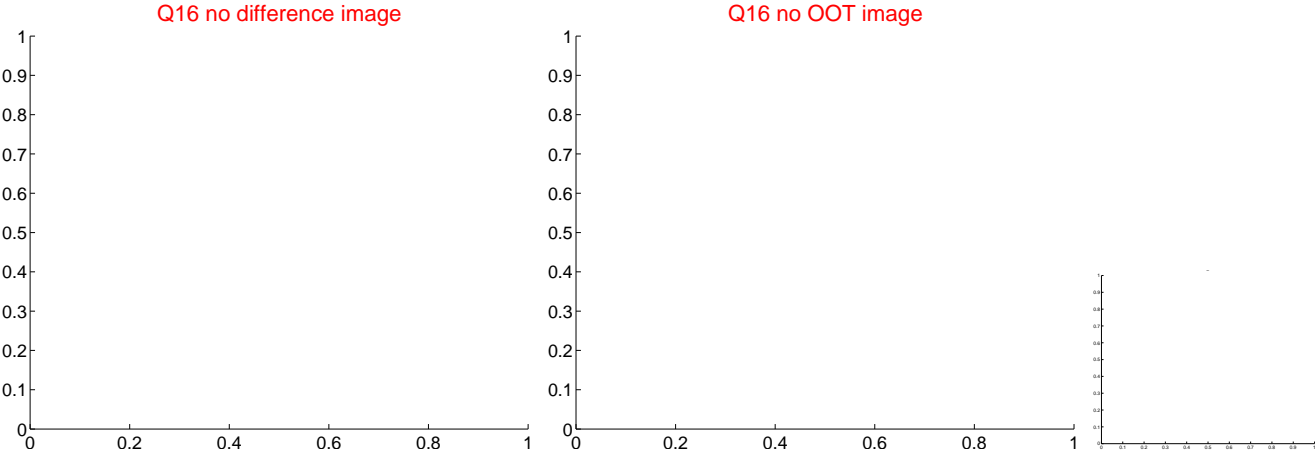
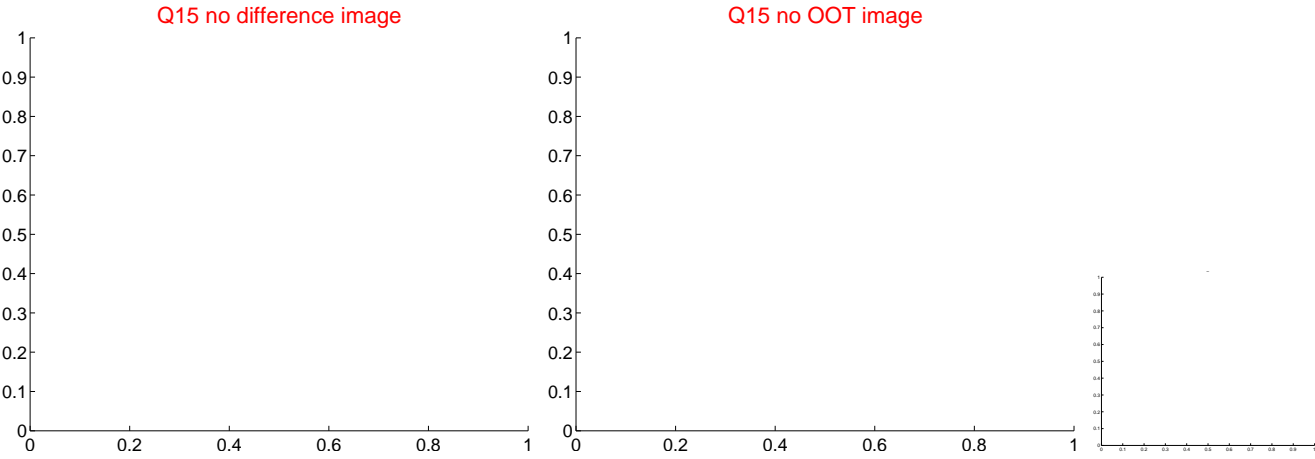
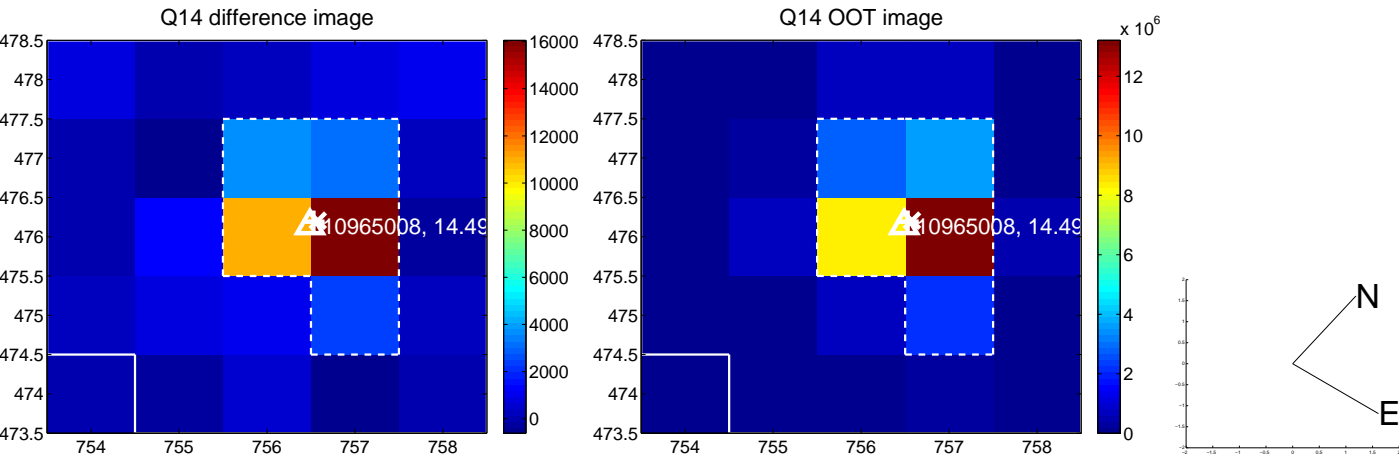
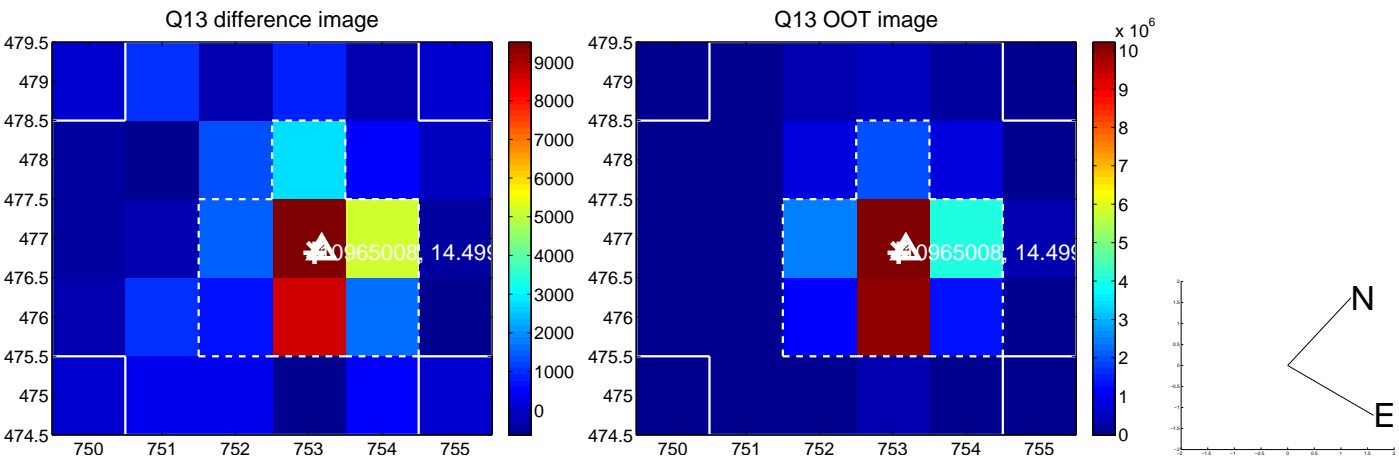
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



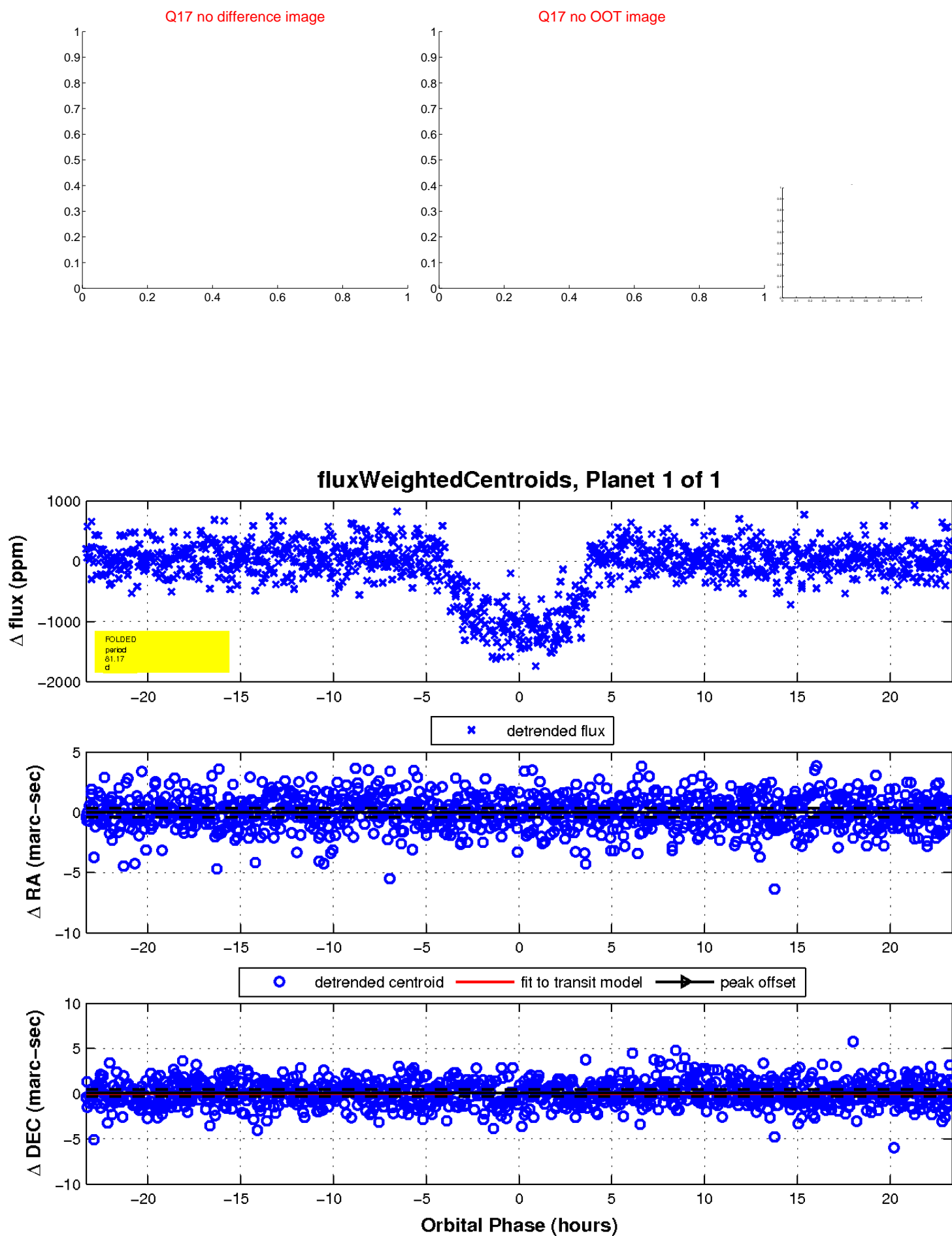
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



UKIRT Image

Declination

