

KIC 007826659

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})
007826659-01	OBS	2686.01	211.034413	279.126959	1967.9	6.834	59.0	55.6	0.69	4658	3.08	0.51

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007826659-01	OBS	PC	1.00	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.

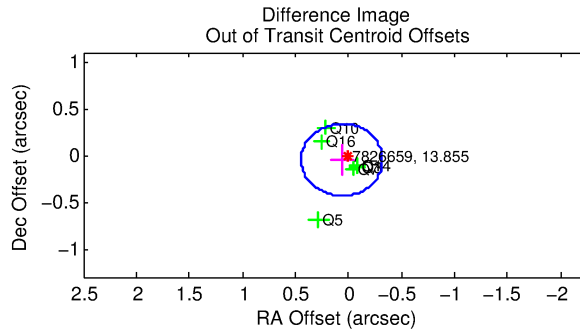
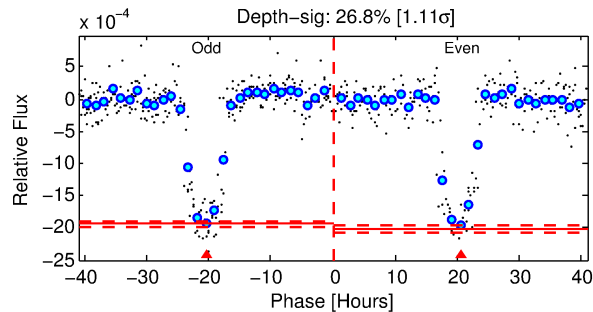
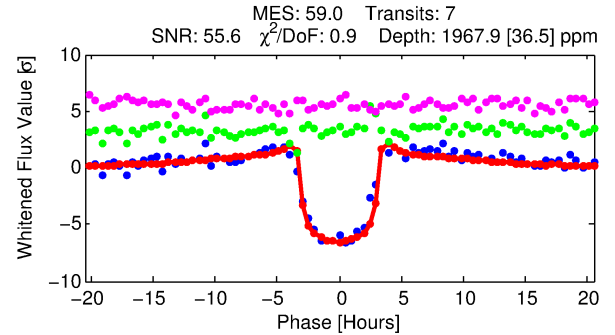
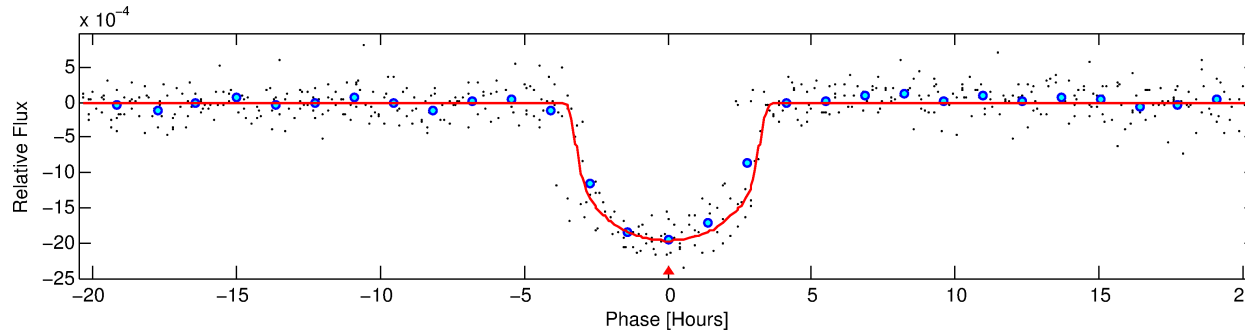
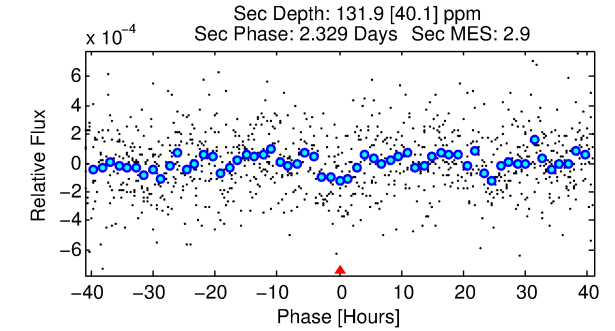
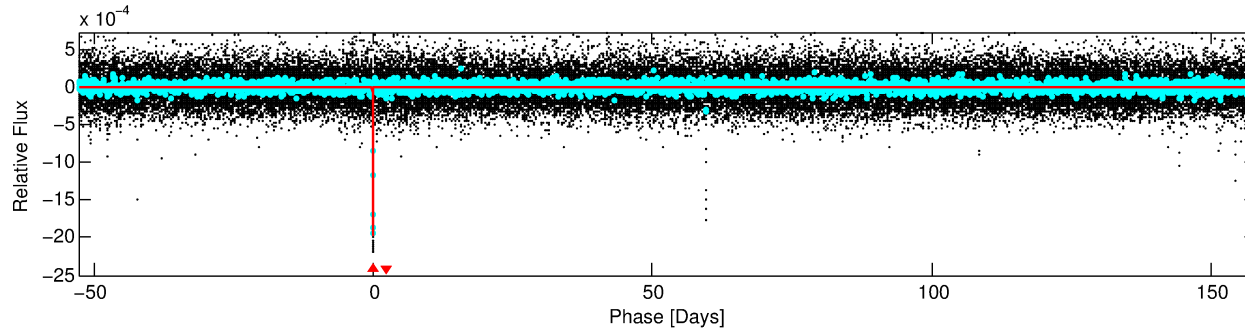
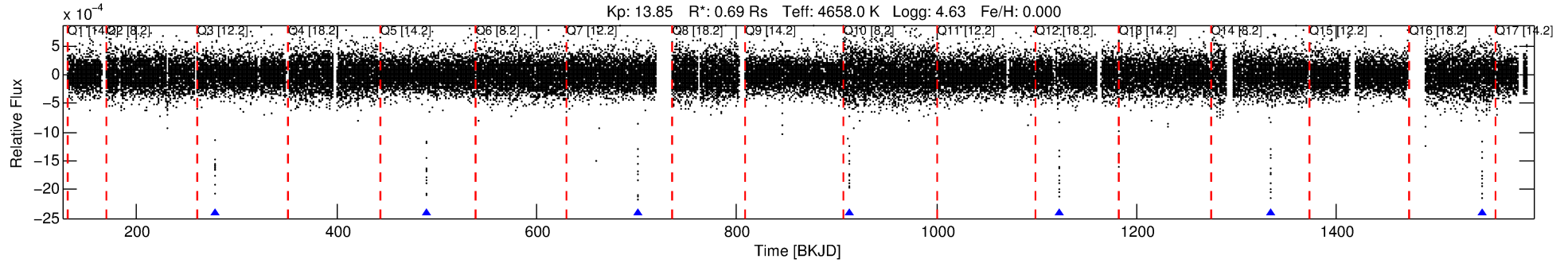
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007826659-01

No Significant Match Found

DV One-Page Summary

KIC: 7826659 Candidate: 1 of 1 Period: 211.034 d
KOI: K02686.01 Corr: 0.975



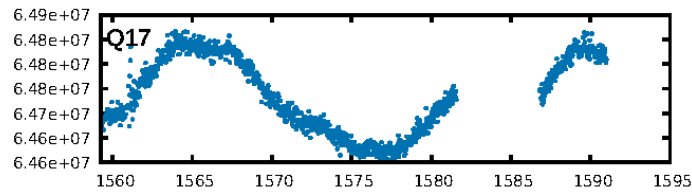
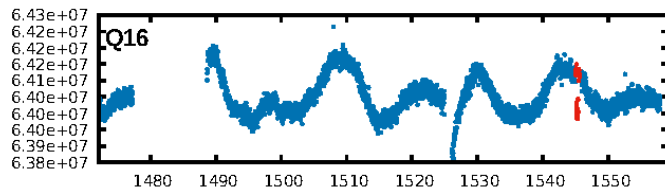
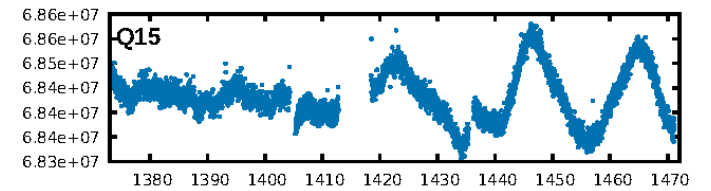
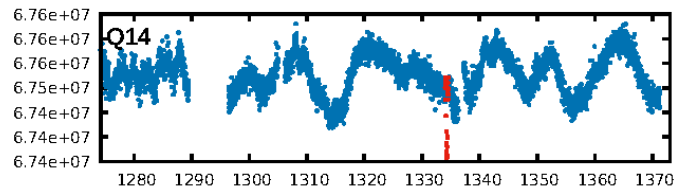
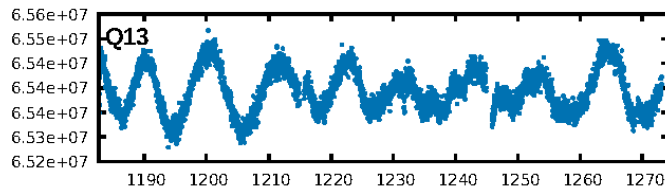
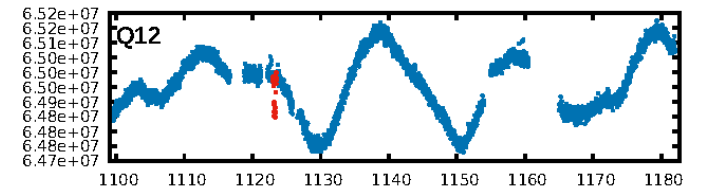
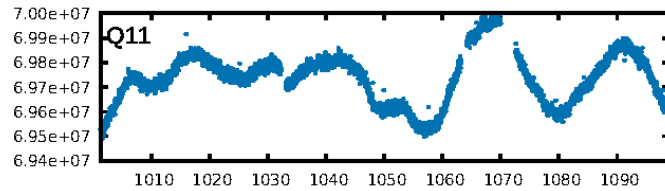
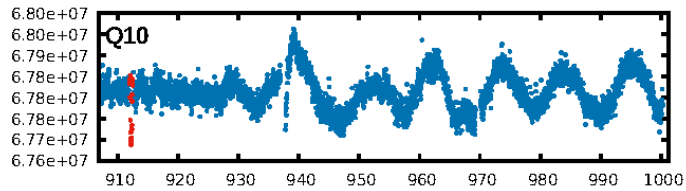
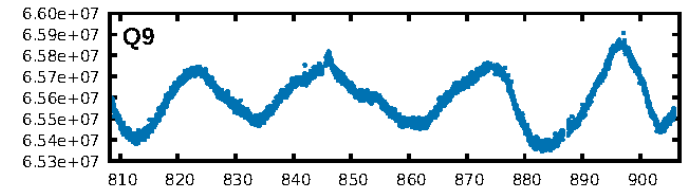
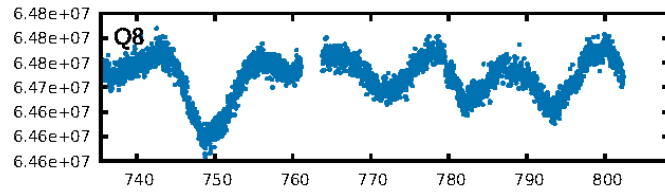
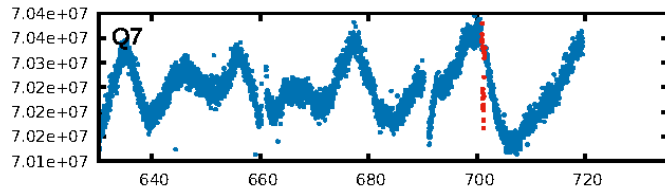
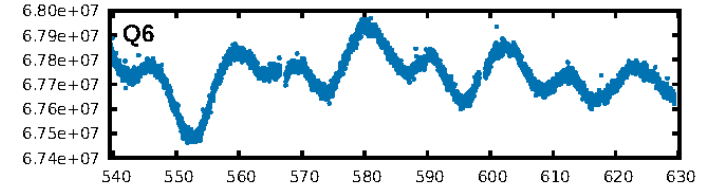
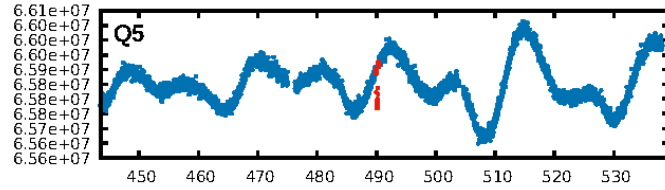
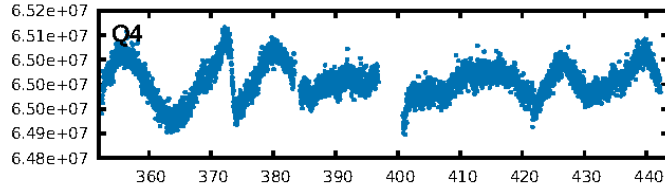
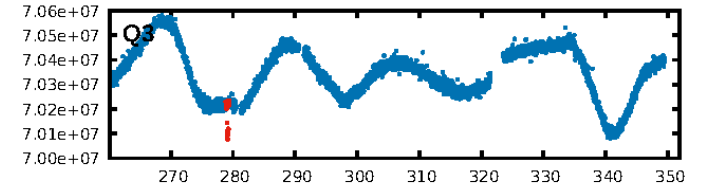
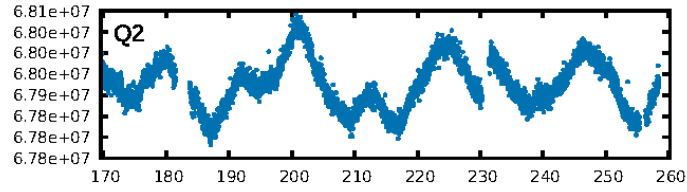
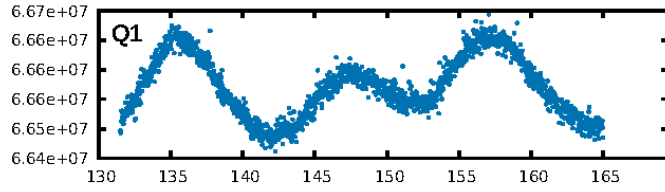
DV Fit Results:

Period = 211.03441 [0.00055] d
Epoch = 279.1270 [0.0019] BKJD
Rp/R* = 0.0411 [0.0047]
a/R* = 211.14 [74.39]
b = 0.53 [0.49]
Seff = 0.51 [0.06]
Teq = 215 [6] K
Rp = 3.08 [0.40] Re
a = 0.6263 [0.0326] AU
Ag = 3007.34 [1169.65] [2.57 σ]
Teffp = 2462 [240] K [9.37 σ]

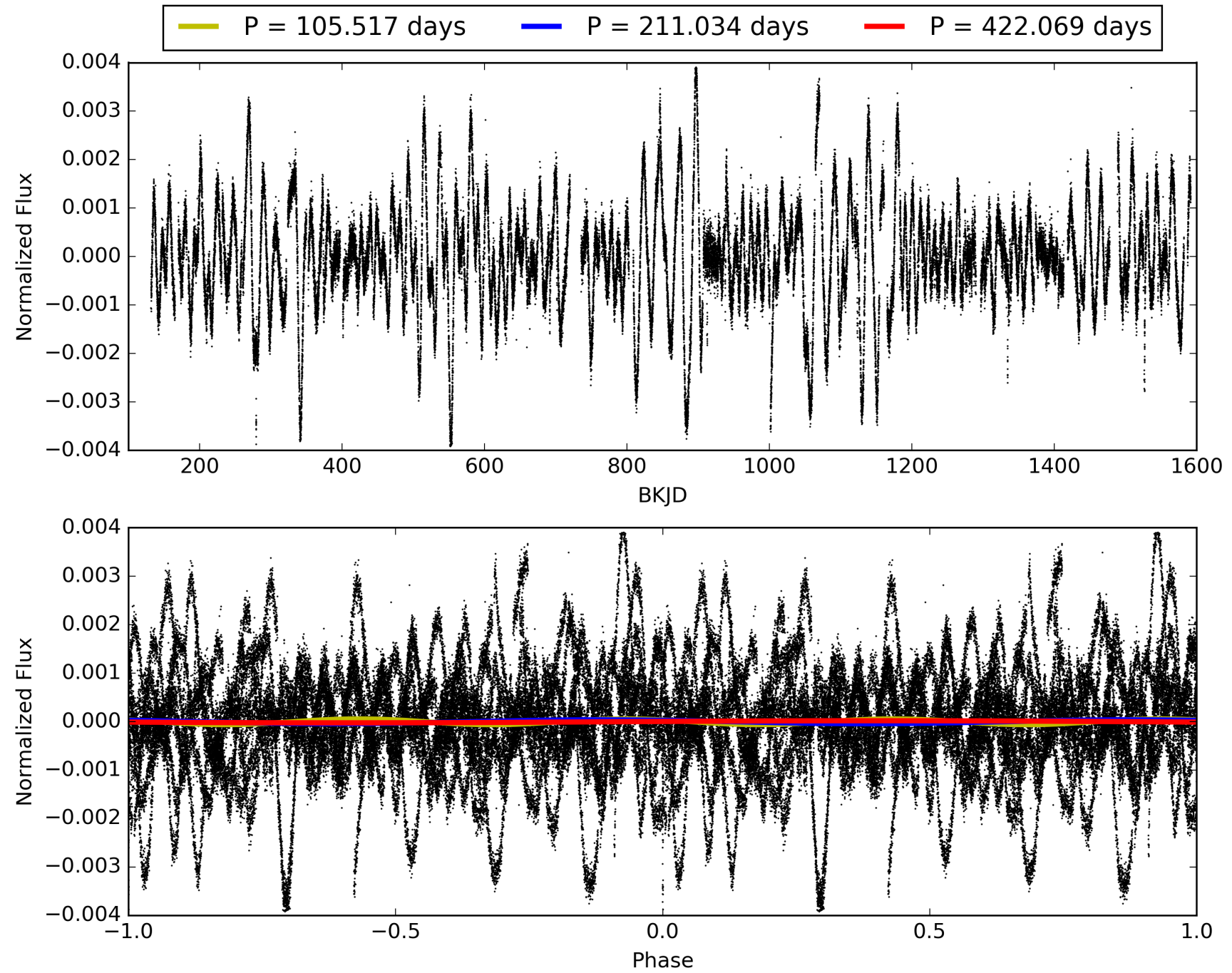
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 54.7%
ModelChiSquareGof-sig: 99.4%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: 5.648
Centroid-sig: 7.6%
Centroid-so: 0.330 arcsec [1.97 σ]
OotOffset-rm: 0.079 arcsec [0.61 σ]
KicOffset-rm: 0.225 arcsec [1.81 σ]
OotOffset-st: 2/2/1/1 [6]
KicOffset-st: 2/2/1/1 [6]
DiffImageQuality-fgm: 1.00 [6/6]
DiffImageOverlap-fno: 1.00 [6/6]

TCE 007826659-01, PDC Light Curves

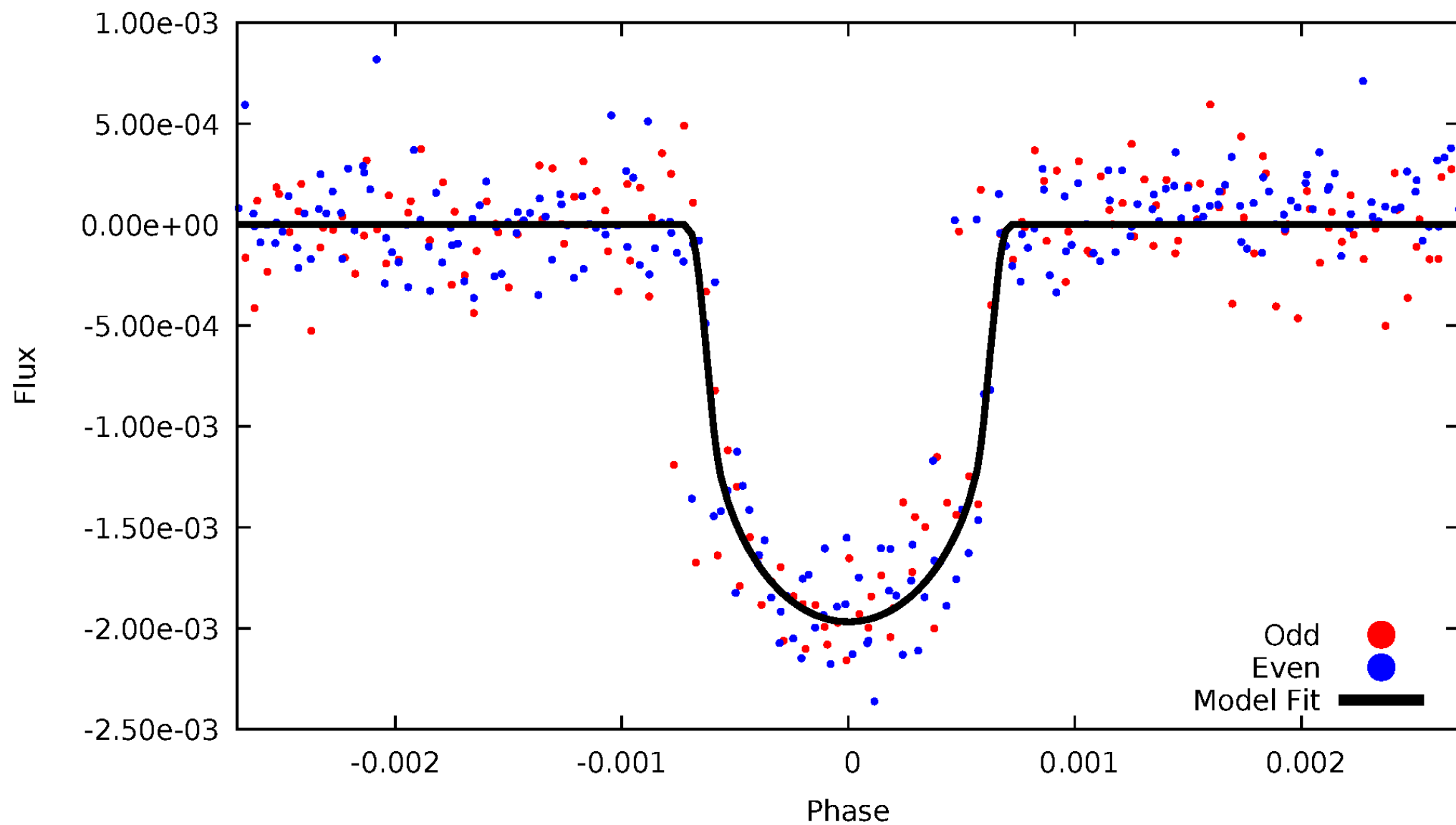


TCE 007826659-01



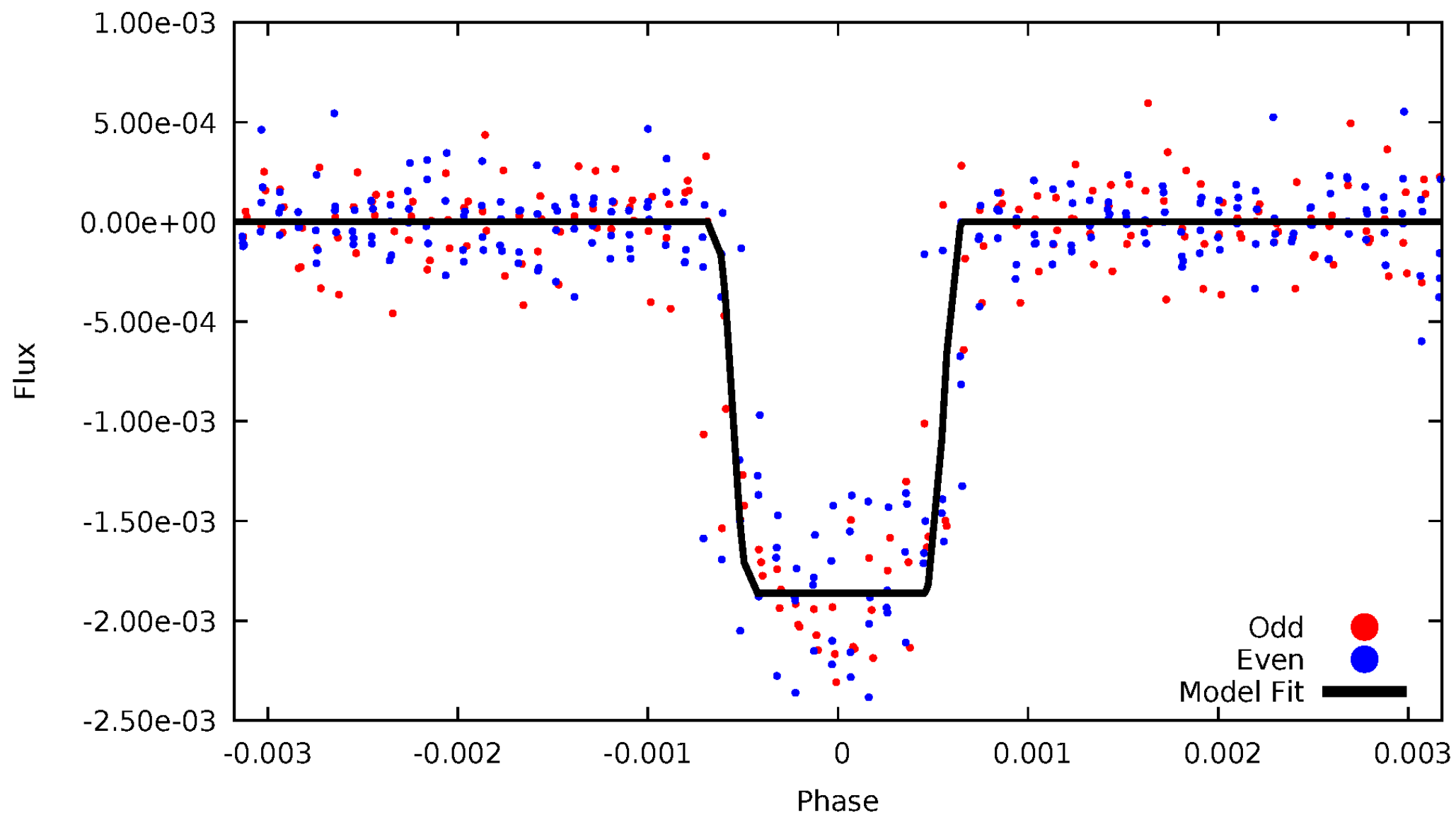
DV Odd/Even

TCE 007826659-01



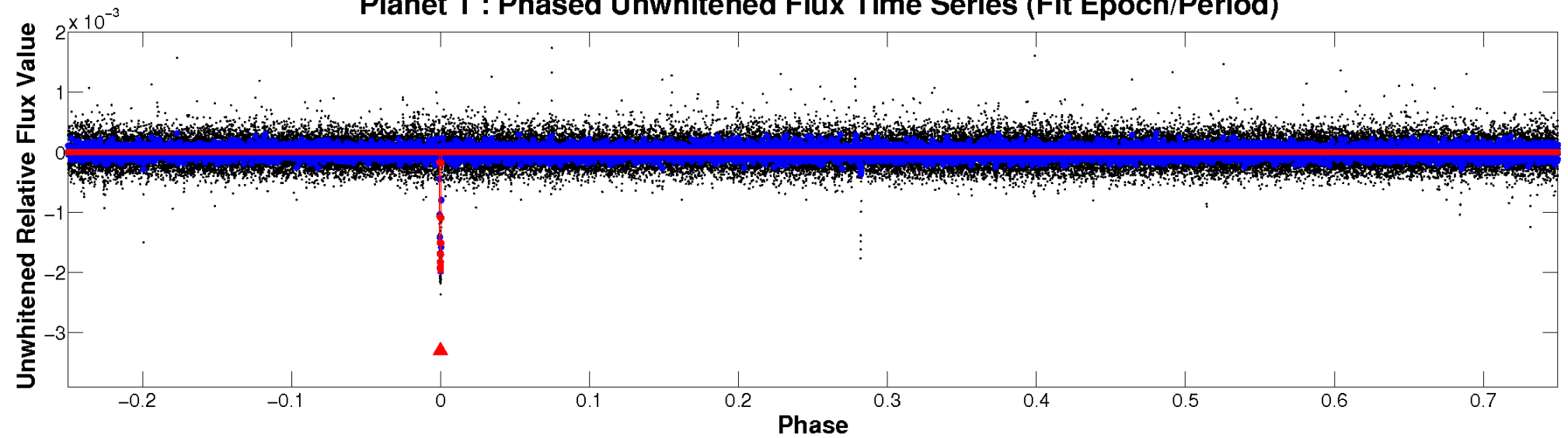
ALT Odd/Even

TCE 007826659-01

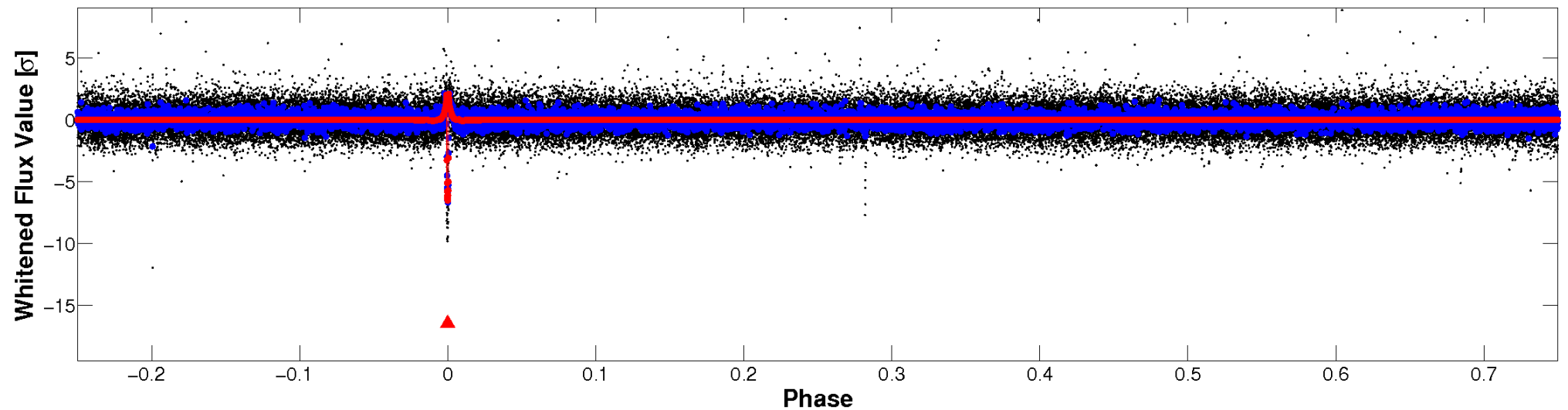


Non-Whitened Vs. Whitened Light Curve

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

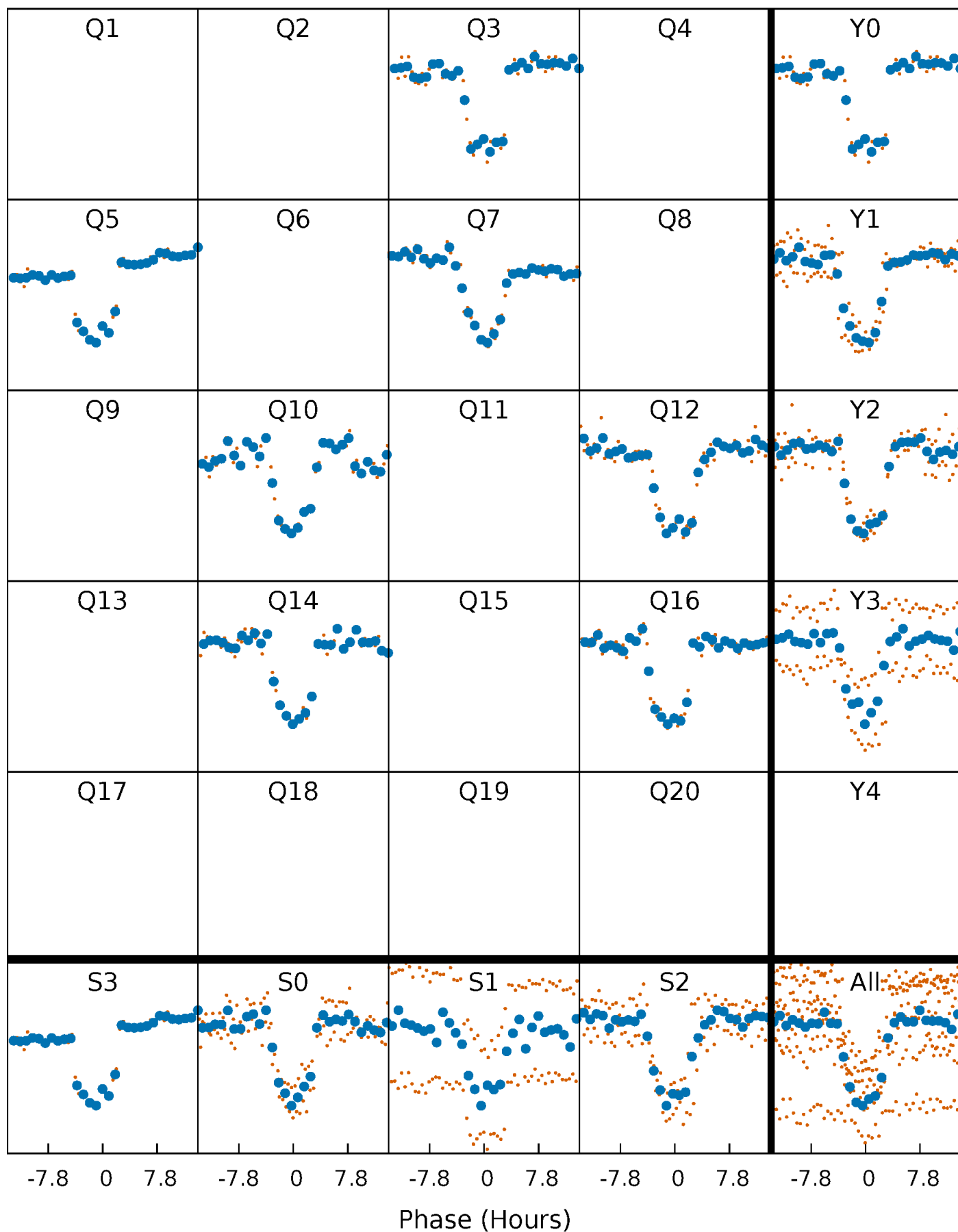


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



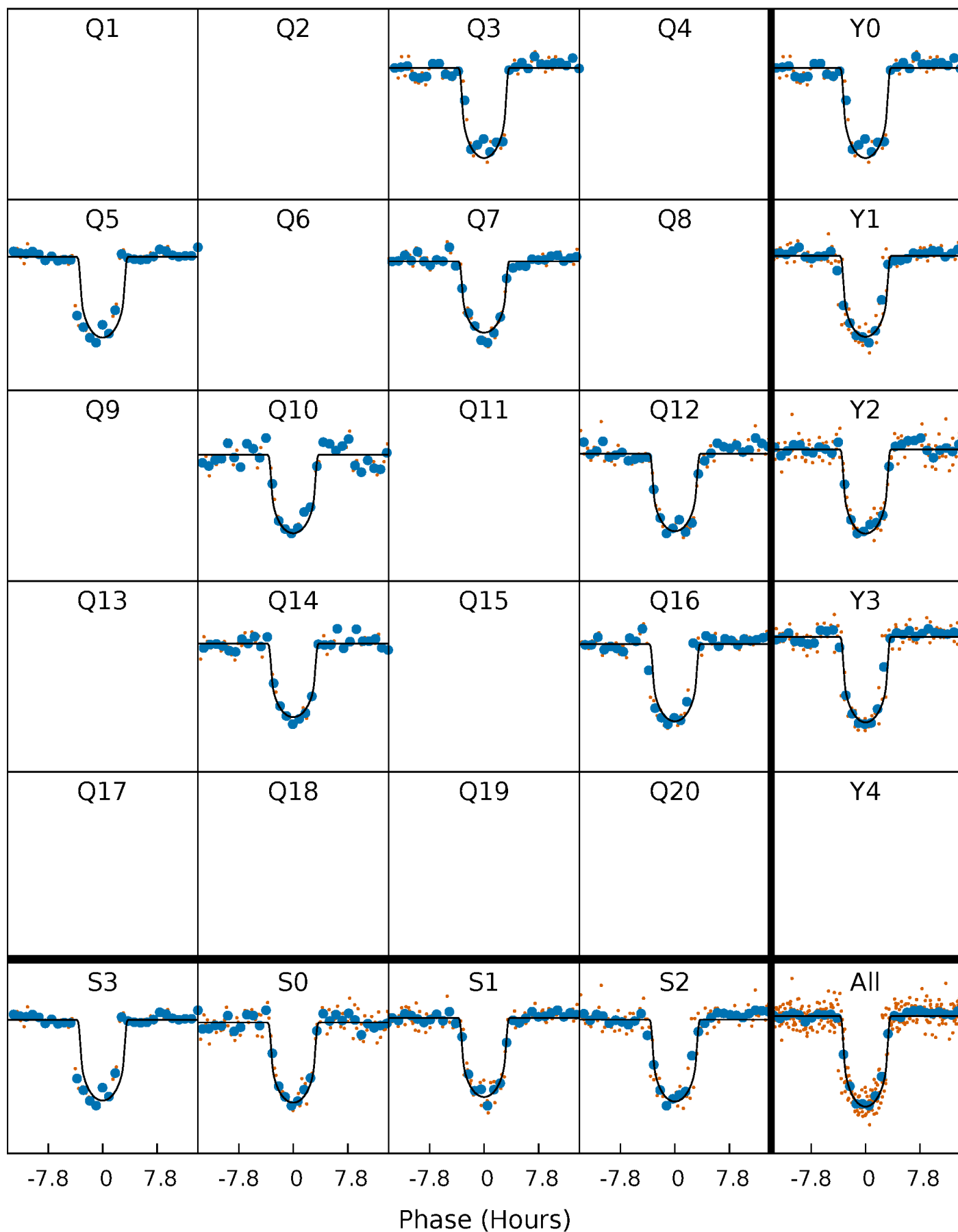
PDC Quarter-Phased Transit Curves

TCE 007826659-01 P=211.034413 Days $T_0=279.126959$ (BKJD)



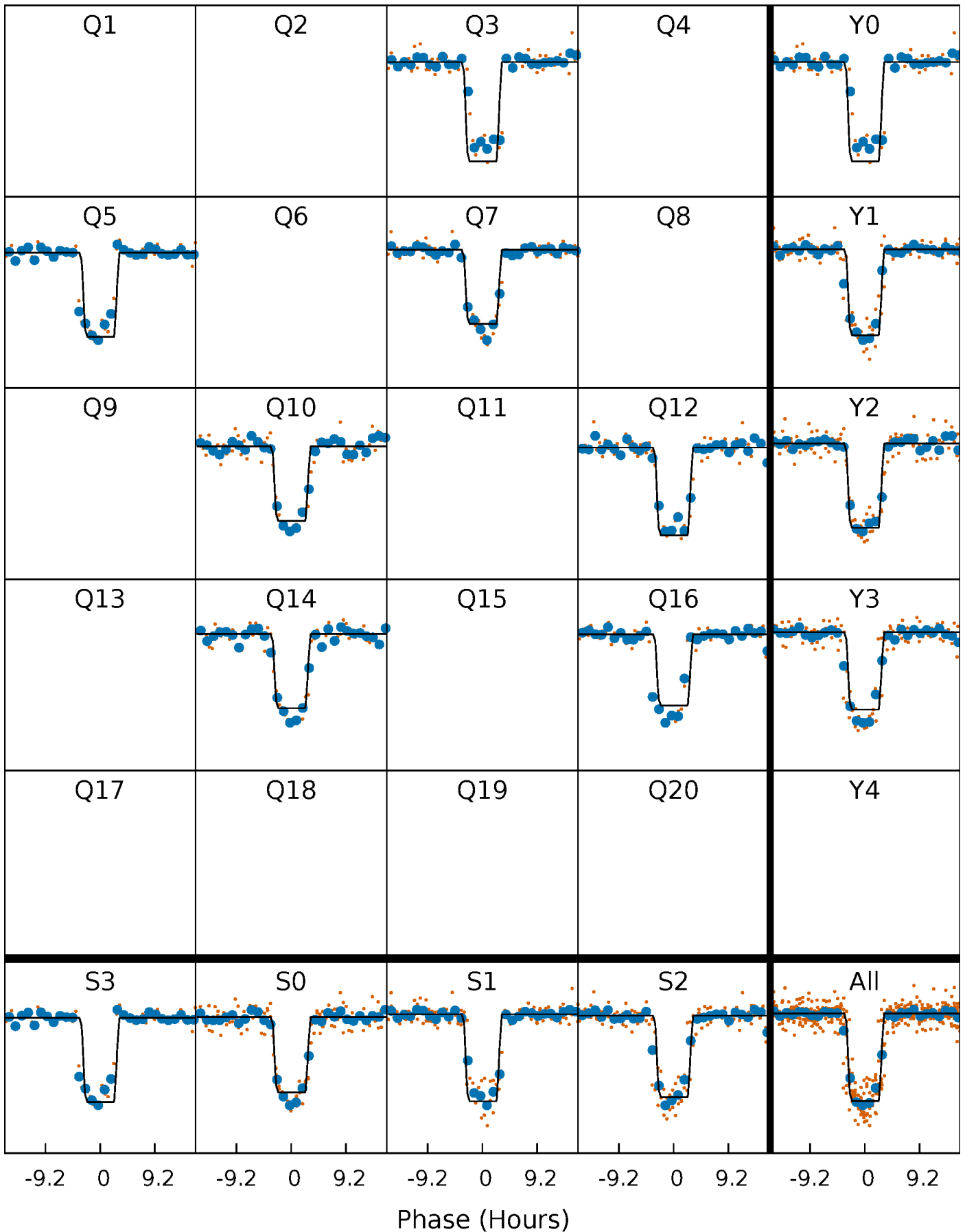
DV Quarter-Phased Transit Curves

TCE 007826659-01 P=211.034413 Days $T_0=279.126959$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

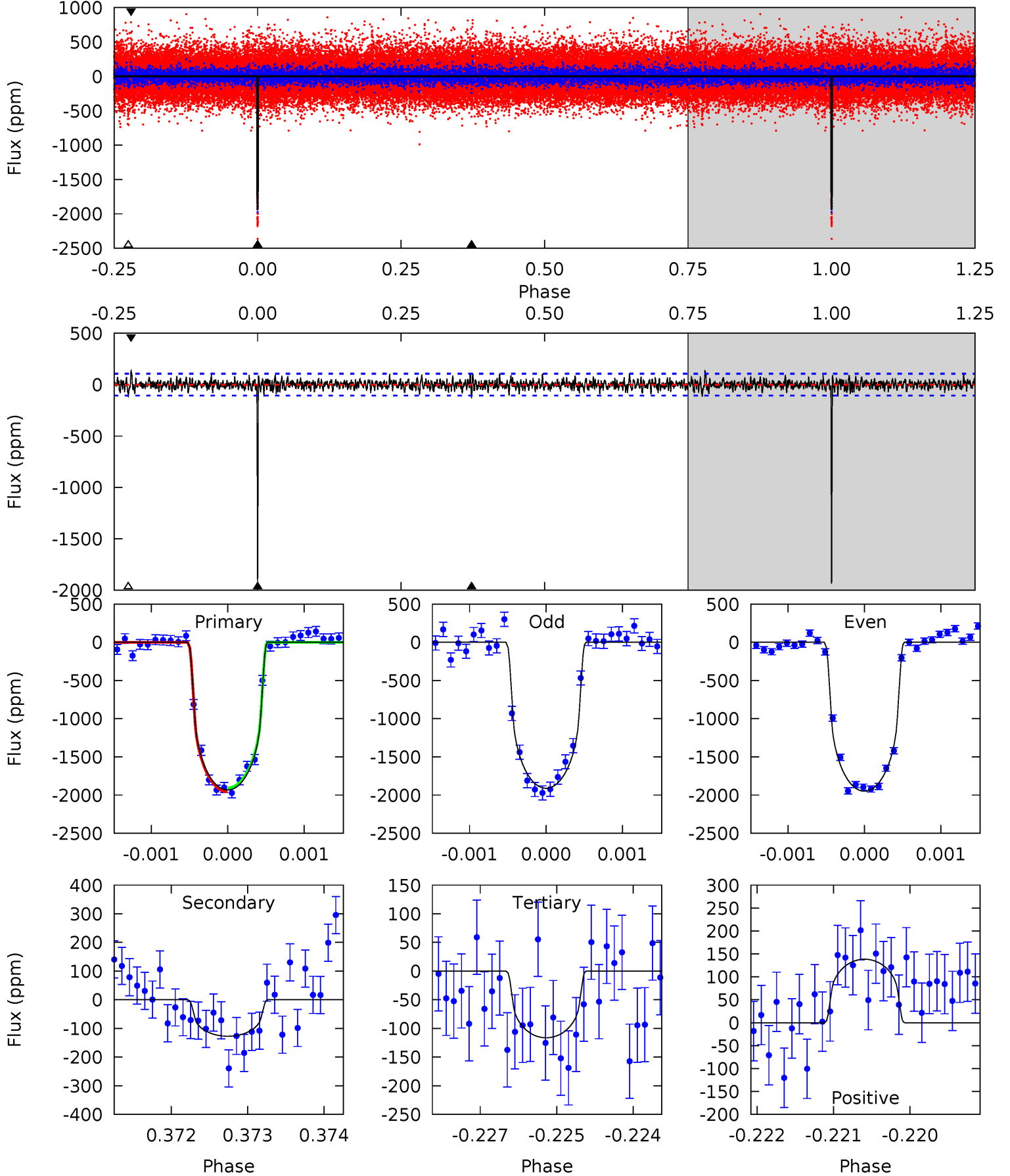
TCE 007826659-01 P=211.037808 Days $T_0=279.110204$ (BKJD)



DV Model-Shift Uniqueness Test

007826659-01, P = 211.034413 Days, E = 68.092546 Days

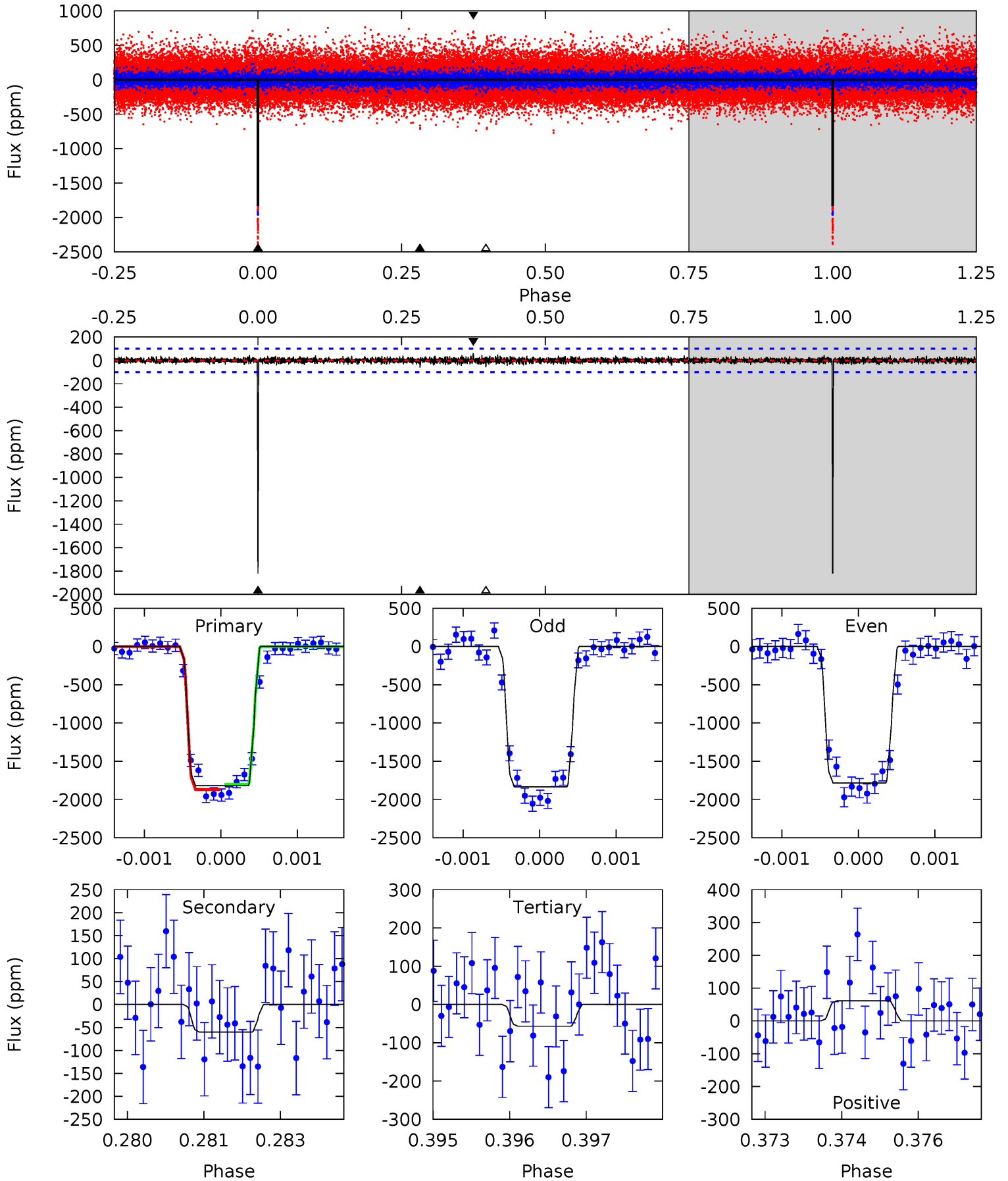
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
98.3	6.48	5.91	7.03	5.39	3.20	1.60	92.4	91.2	0.56	-0.56	0.96	1.05	0.07	1.27



Alt Model-Shift Uniqueness Test

007826659-01, P = 211.037808 Days, E = 68.072396 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
98.0	3.23	3.06	3.29	5.41	3.22	0.66	95.0	94.7	0.17	-0.06	1.30	0.95	0.03	1.75



Stellar Parameters For KIC 007826659

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4658^{+93}_{-93}	$4.632^{+0.015}_{-0.042}$	$0.000^{+0.150}_{-0.150}$	$0.686^{+0.042}_{-0.025}$	$0.743^{+0.032}_{-0.043}$	$3.246^{+0.271}_{-0.450}$
	+2%/-2%	+0%/-1%	+inf%/-inf%	+6%/-4%	+4%/-6%	+8%/-14%
Source	SPE57	SPE57	SPE57	DSEP		

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

Secondary Eclipse Parameters for KIC 007826659-01 / KOI 2686.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-127 ± 20	$3.12^{+0.38}_{-0.36}$	302^{+7}_{-7}	3017^{+140}_{-121}	2800^{+953}_{-671}
Alt.	-60 ± 19	$3.27^{+0.41}_{-0.37}$	303^{+7}_{-7}	2689^{+143}_{-147}	1193^{+554}_{-409}

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 $A_{obs} \gg 1.0$

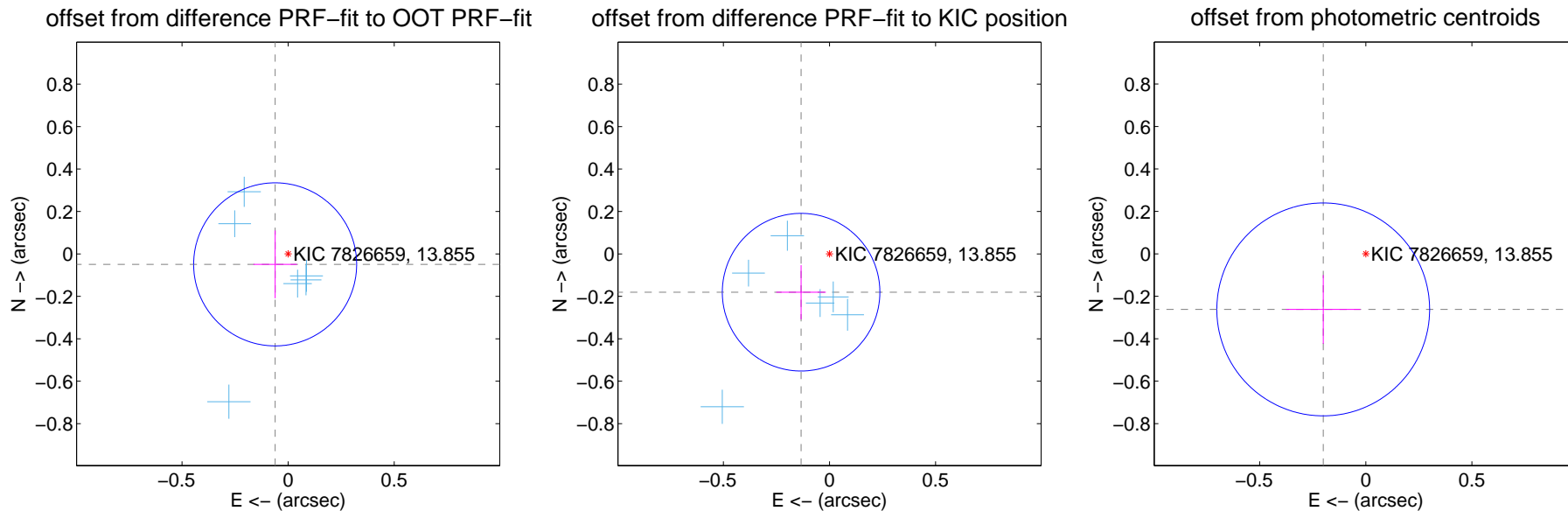
DV Centroid Data

Supplemental centroid analysis for 007826659-01. Kepler magnitude: 13.86. Transit SNR 55.56

There are 6 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

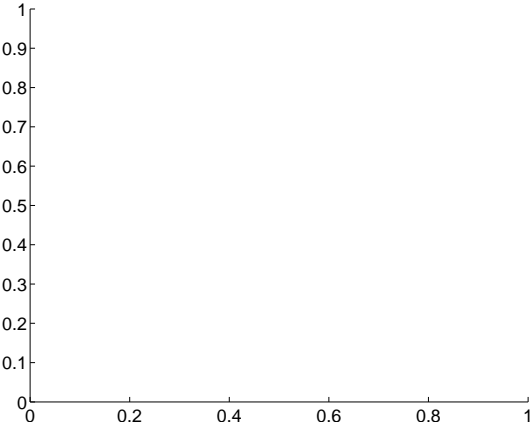
	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.079 ± 0.128	0.61	0.061 ± 0.102	-0.049 ± 0.160
PRF-fit source offset from KIC position	0.225 ± 0.124	1.81	0.134 ± 0.117	-0.180 ± 0.127
photometric centroid source offset	0.33 ± 0.17	1.97	0.20 ± 0.18	-0.26 ± 0.16



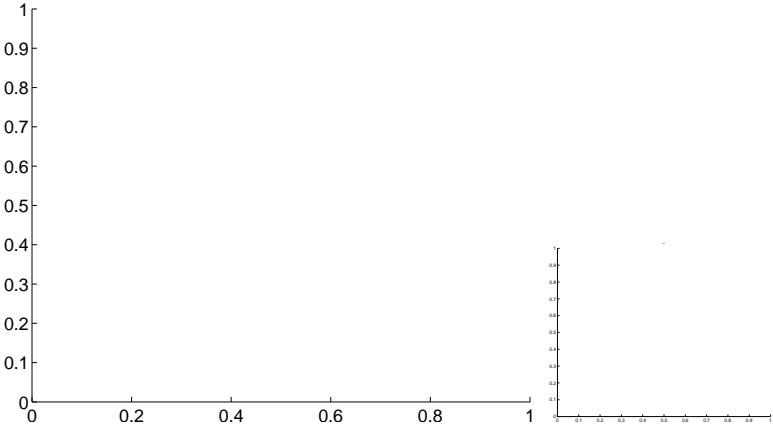
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

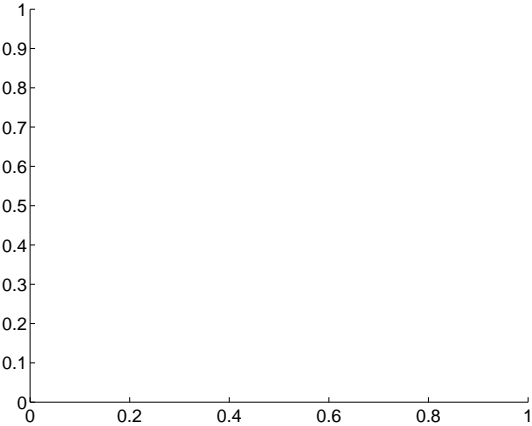
Q1 no difference image



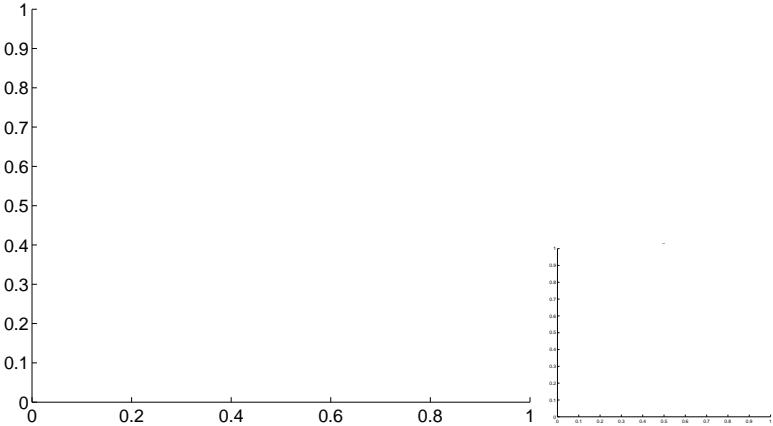
Q1 no OOT image



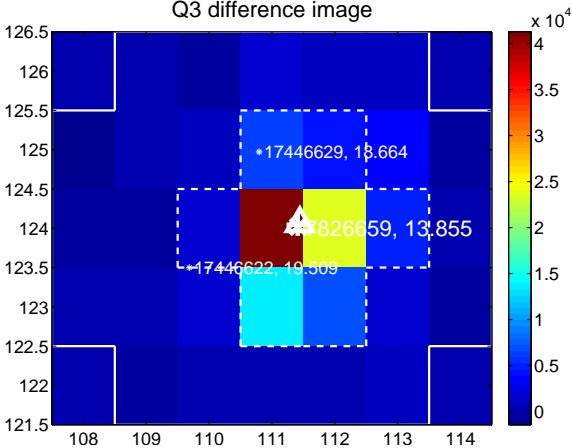
Q2 no difference image



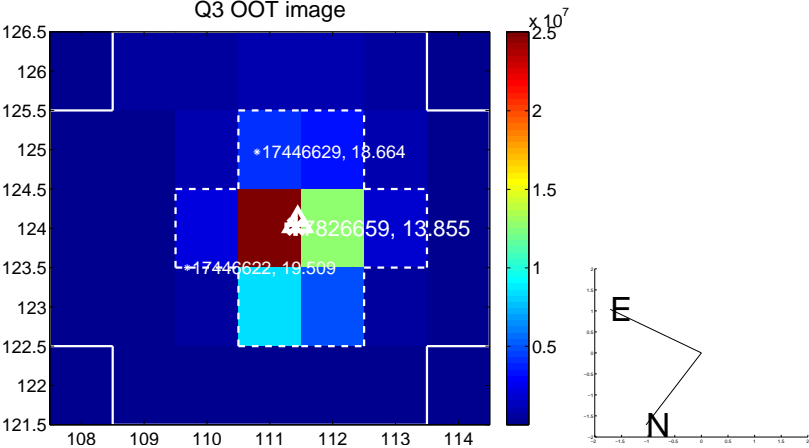
Q2 no OOT image



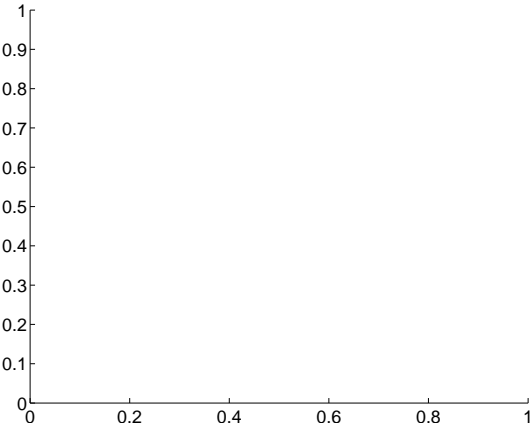
Q3 difference image



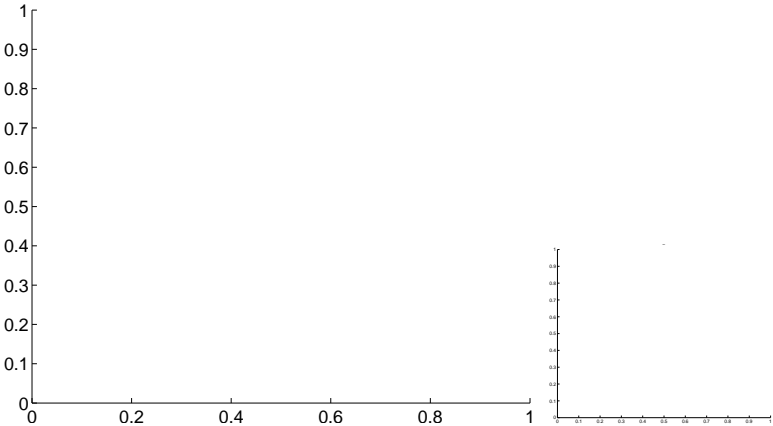
Q3 OOT image



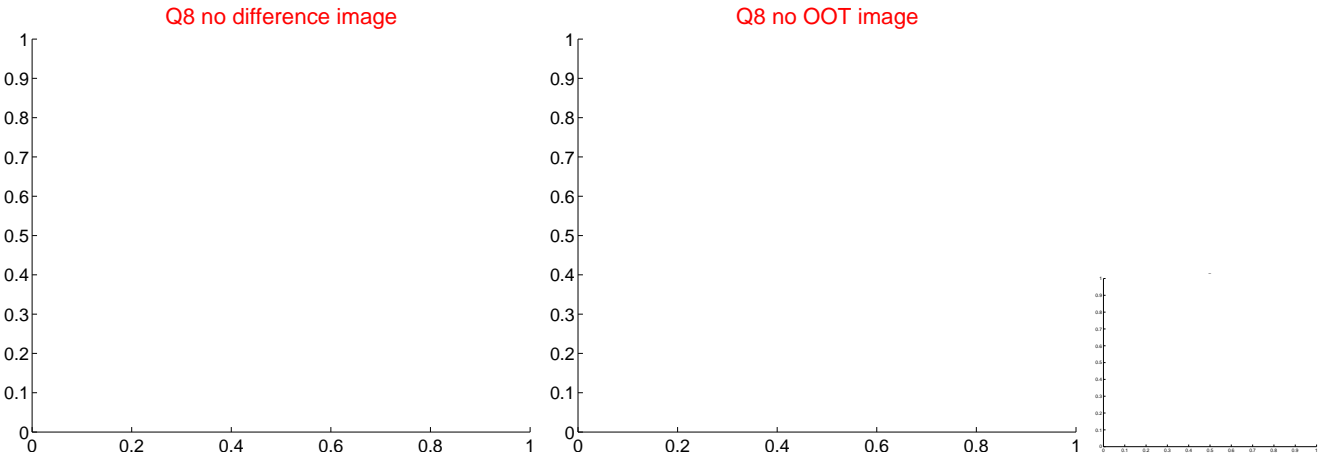
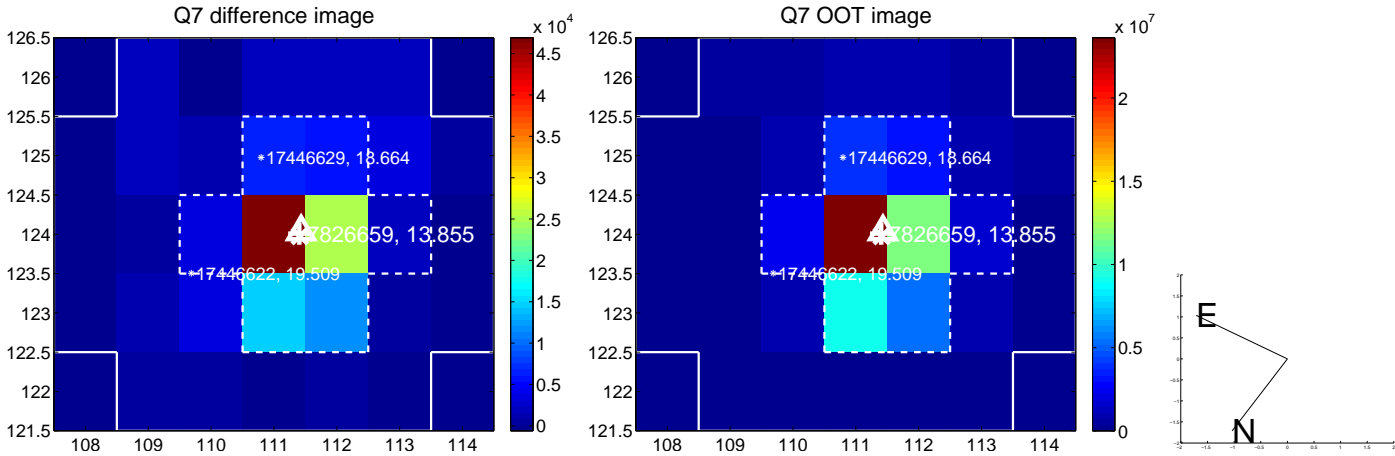
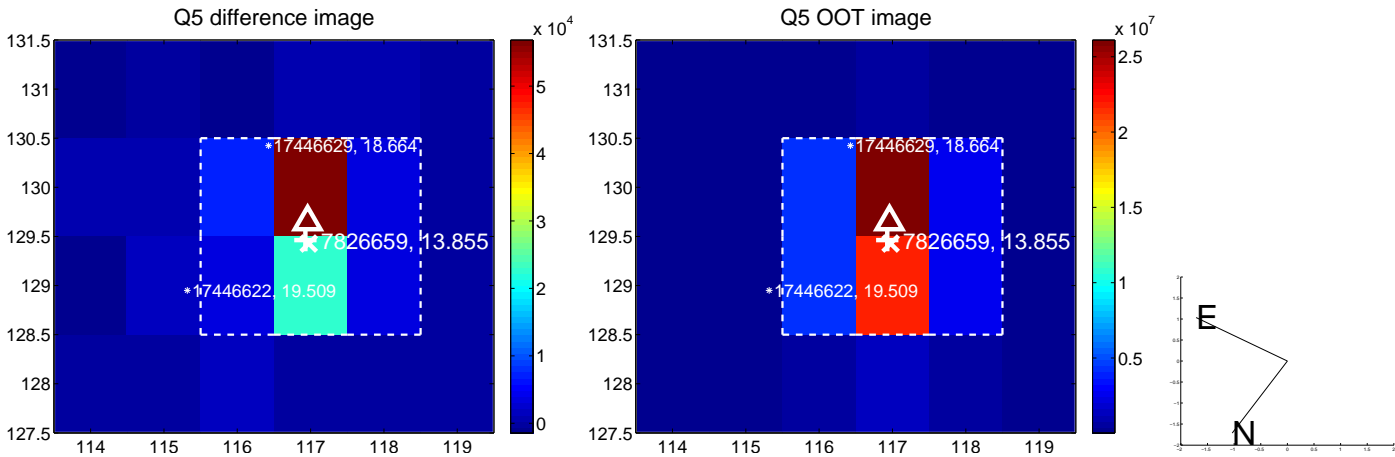
Q4 no difference image



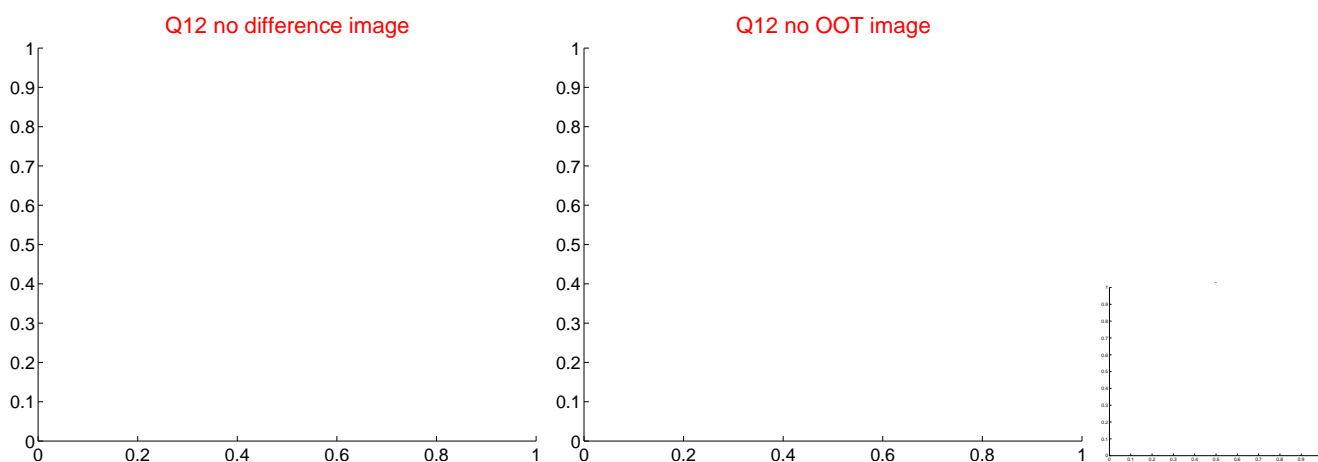
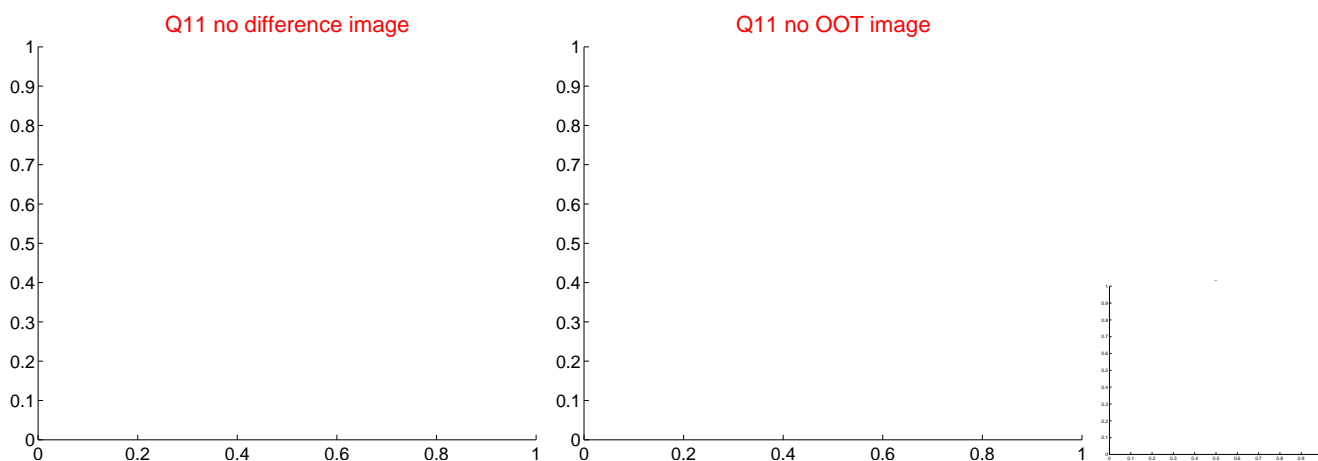
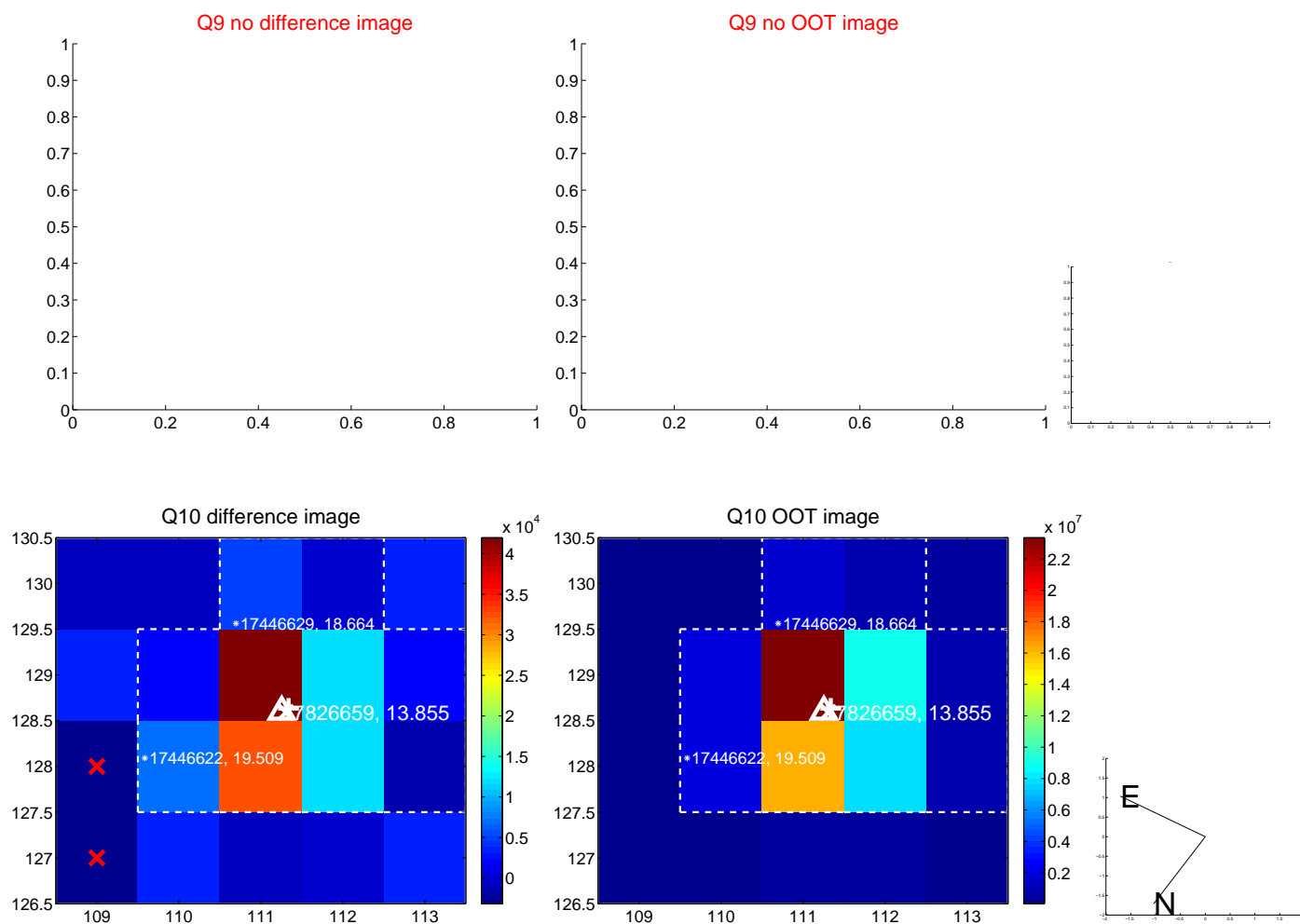
Q4 no OOT image



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



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

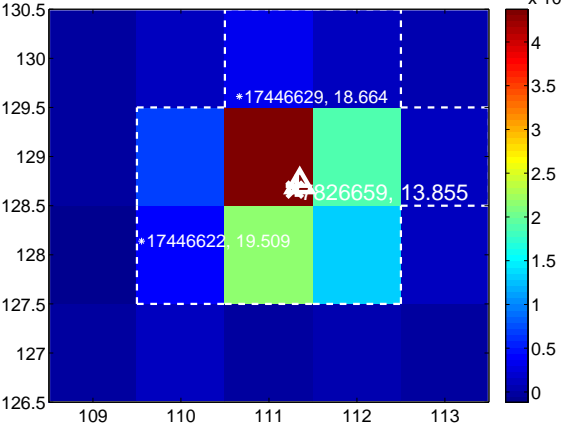
Q13 no difference image



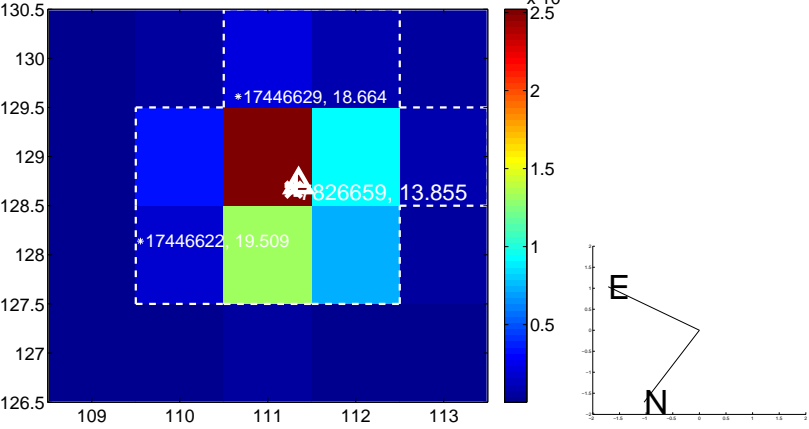
Q13 no OOT image



Q14 difference image



Q14 OOT image



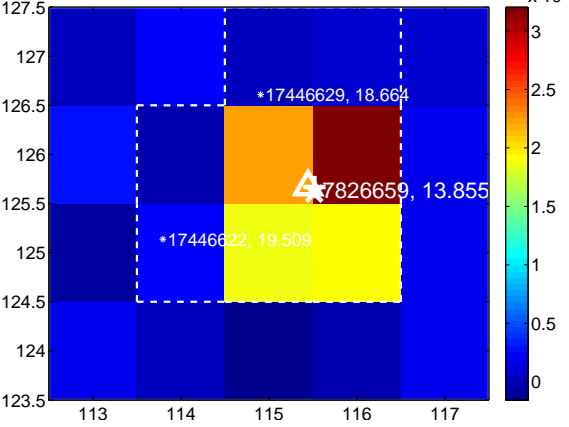
Q15 no difference image



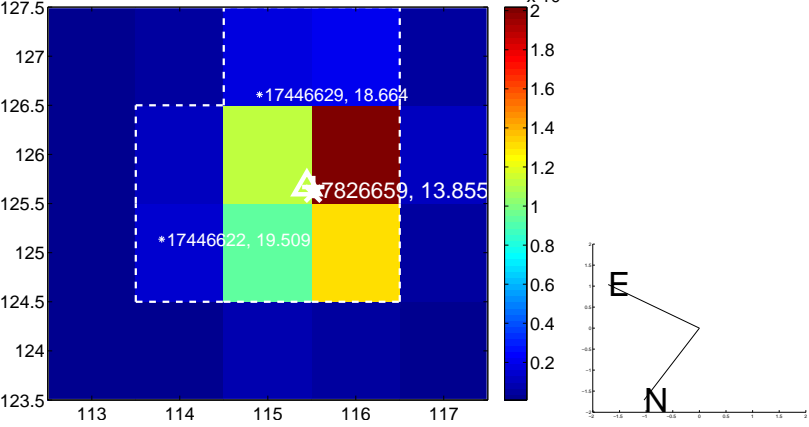
Q15 no OOT image



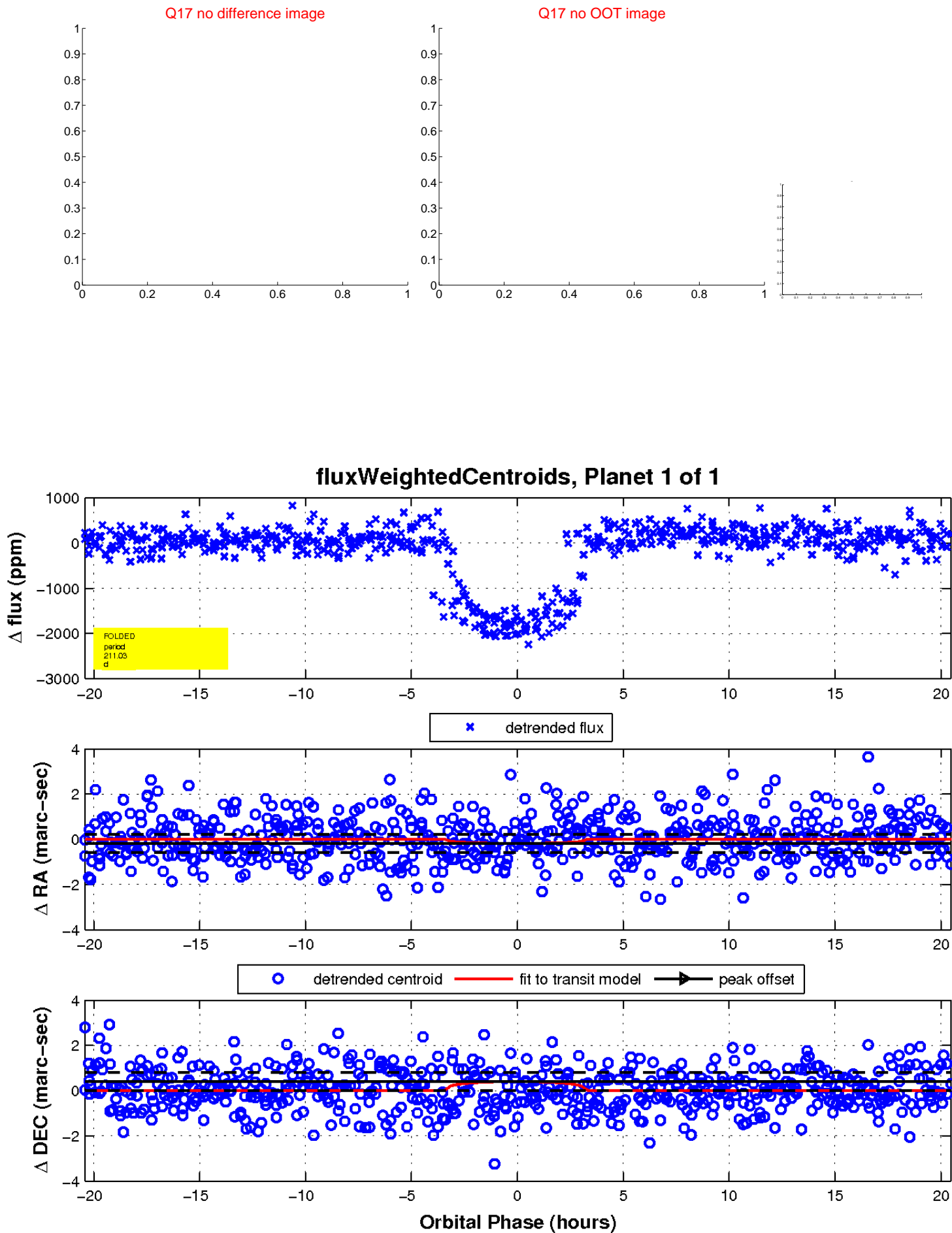
Q16 difference image



Q16 OOT image



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



UKIRT Image

Declination

