

KIC 008411947

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})
008411947-01	OBS	7034.01	0.898843	132.129303	317334.3	3.608	11471.7	5470.7	0.81	5284	51.44	1610.95

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008411947-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—DEEP_V_SHAPED

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.

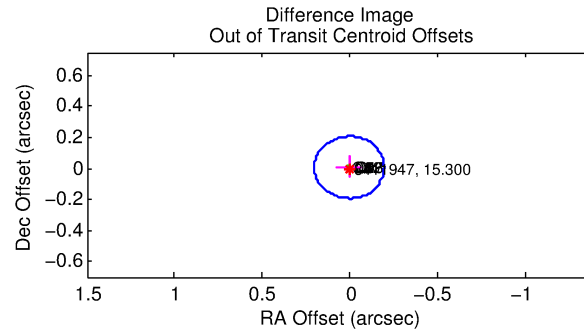
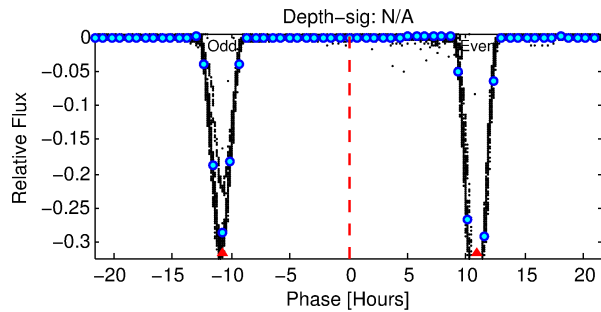
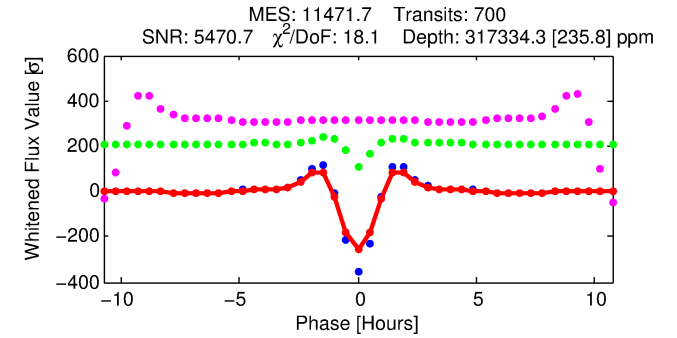
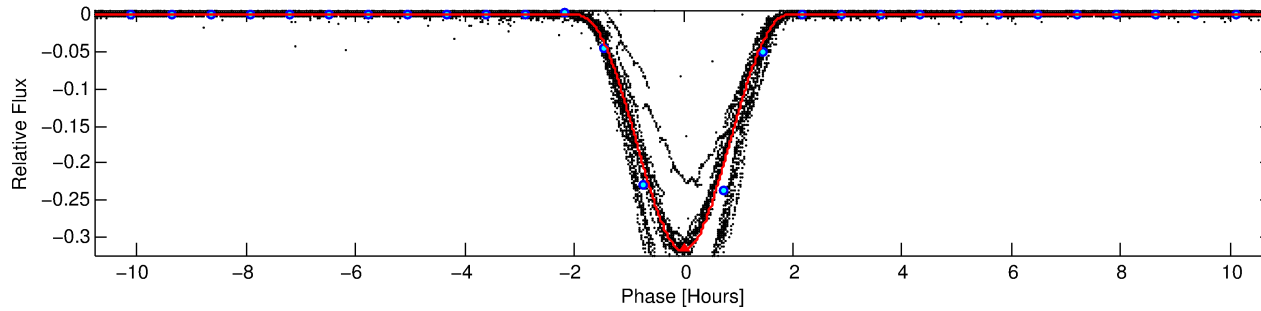
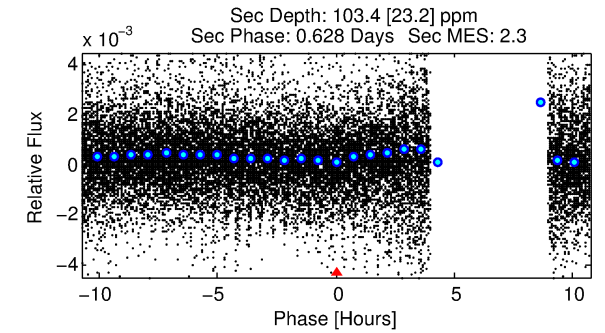
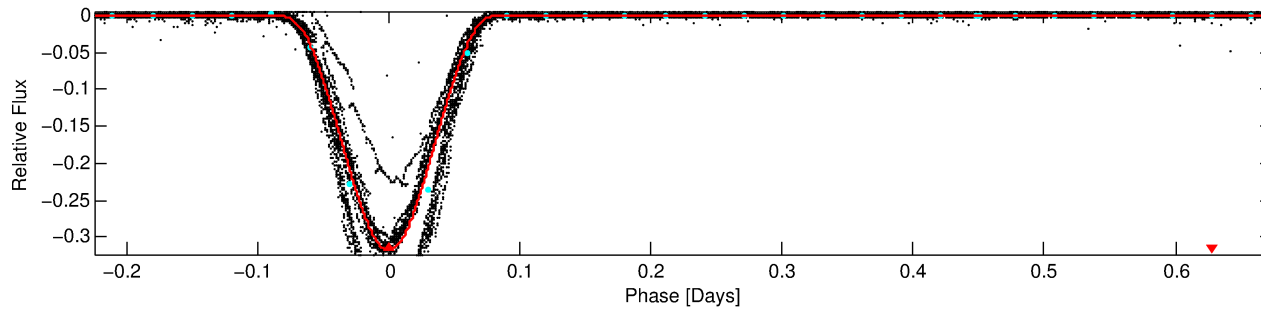
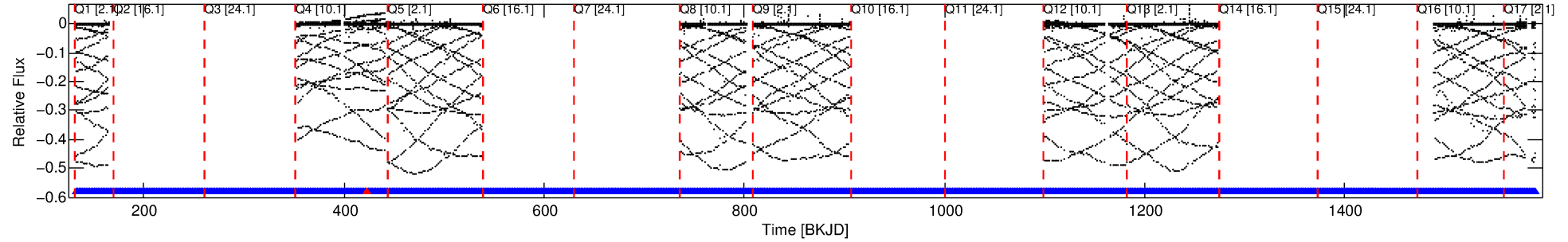
Ephemeris Match Information For 008411947-01

No Significant Match Found

DV One-Page Summary

KIC: 8411947 Candidate: 1 of 1 Period: 0.899 d
KOI: K07034.01 Corr: 0.984

Kp: 15.30 R*: 0.81 Rs Teff: 5284.0 K Logg: 4.52 Fe/H: -0.180



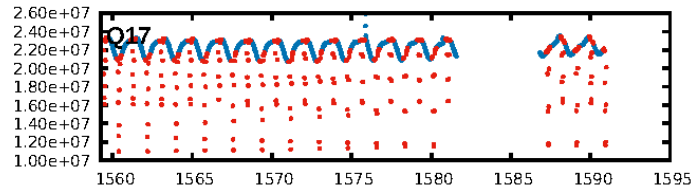
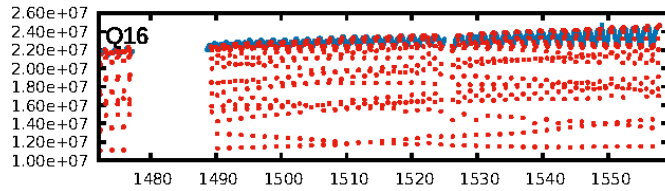
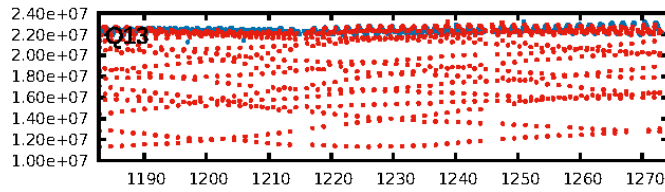
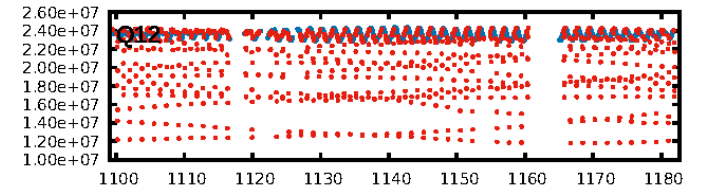
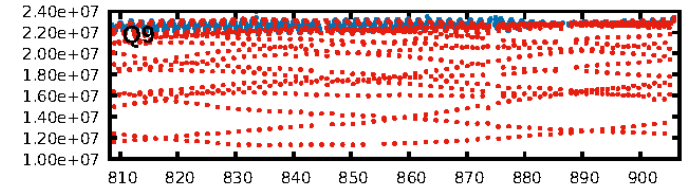
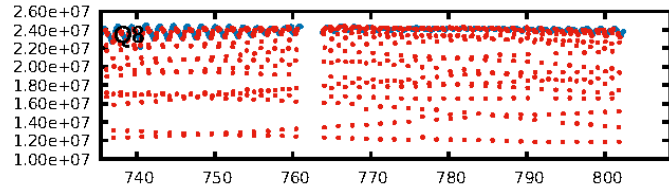
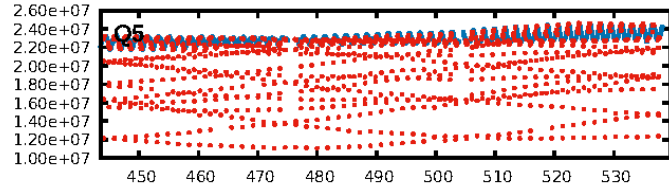
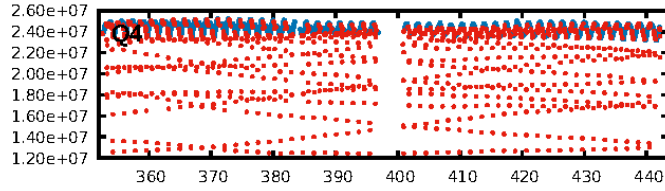
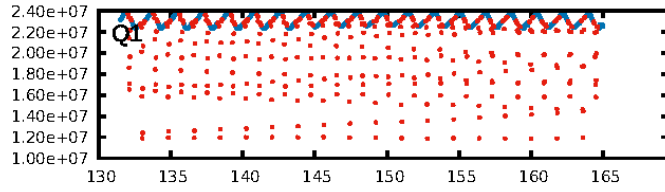
DV Fit Results:

Period = 0.89884 [0.00000] d
Epoch = 132.1293 [0.0000] BKJD
Rp/R* = 0.5842 [0.0073]
a/R* = 3.01 [0.01]
b = 0.56 [0.01]
Seff = 1610.95 [369.82]
Teq = 1615 [93] K
Rp = 51.44 [7.74] Re
a = 0.0168 [0.0021] AU
Ag = 0.01 [0.00] [-564.68σ]
Teffp = 697 [46] K [-8.86σ]

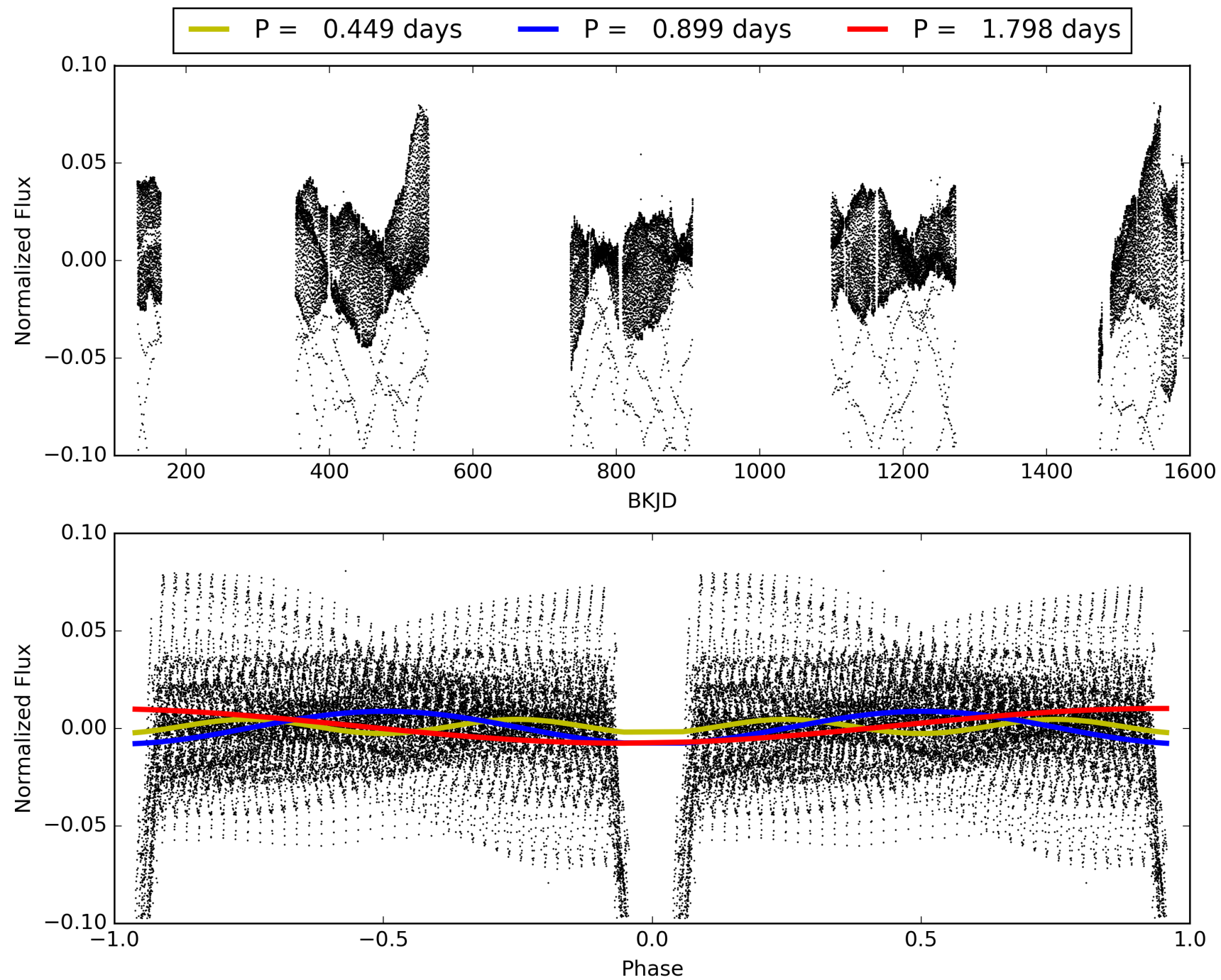
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [632/633]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: 0.314 arcsec [339.72σ]
OotOffset-rm: 0.009 arcsec [0.13σ]
KicOffset-rm: 0.117 arcsec [1.74σ]
OotOffset-st: 0/0/4/5 [9]
KicOffset-st: 0/0/4/5 [9]
DiffImageQuality-fgm: 1.00 [9/9]
DiffImageOverlap-fno: 1.00 [9/9]

TCE 008411947-01, PDC Light Curves

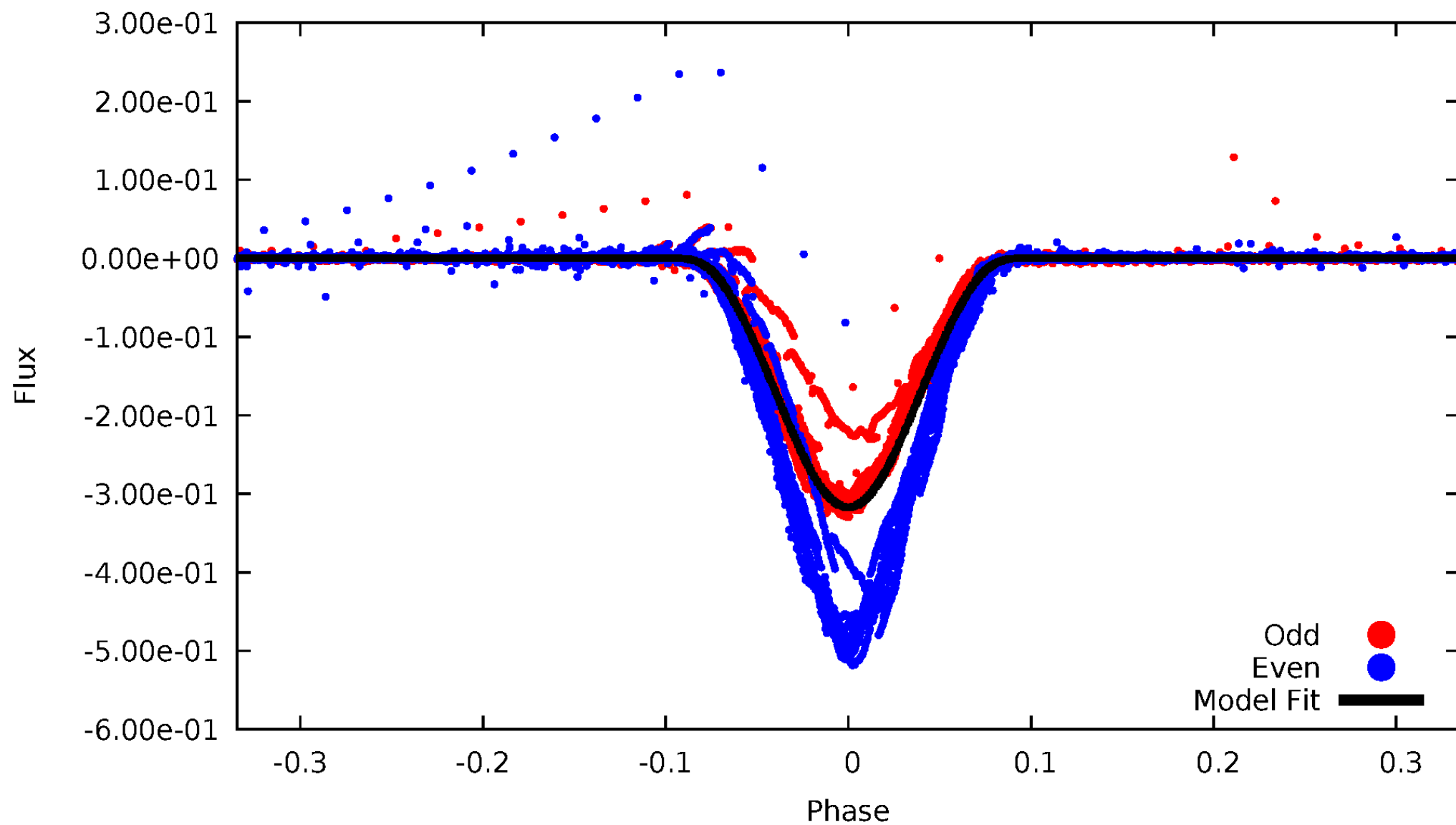


TCE 008411947-01



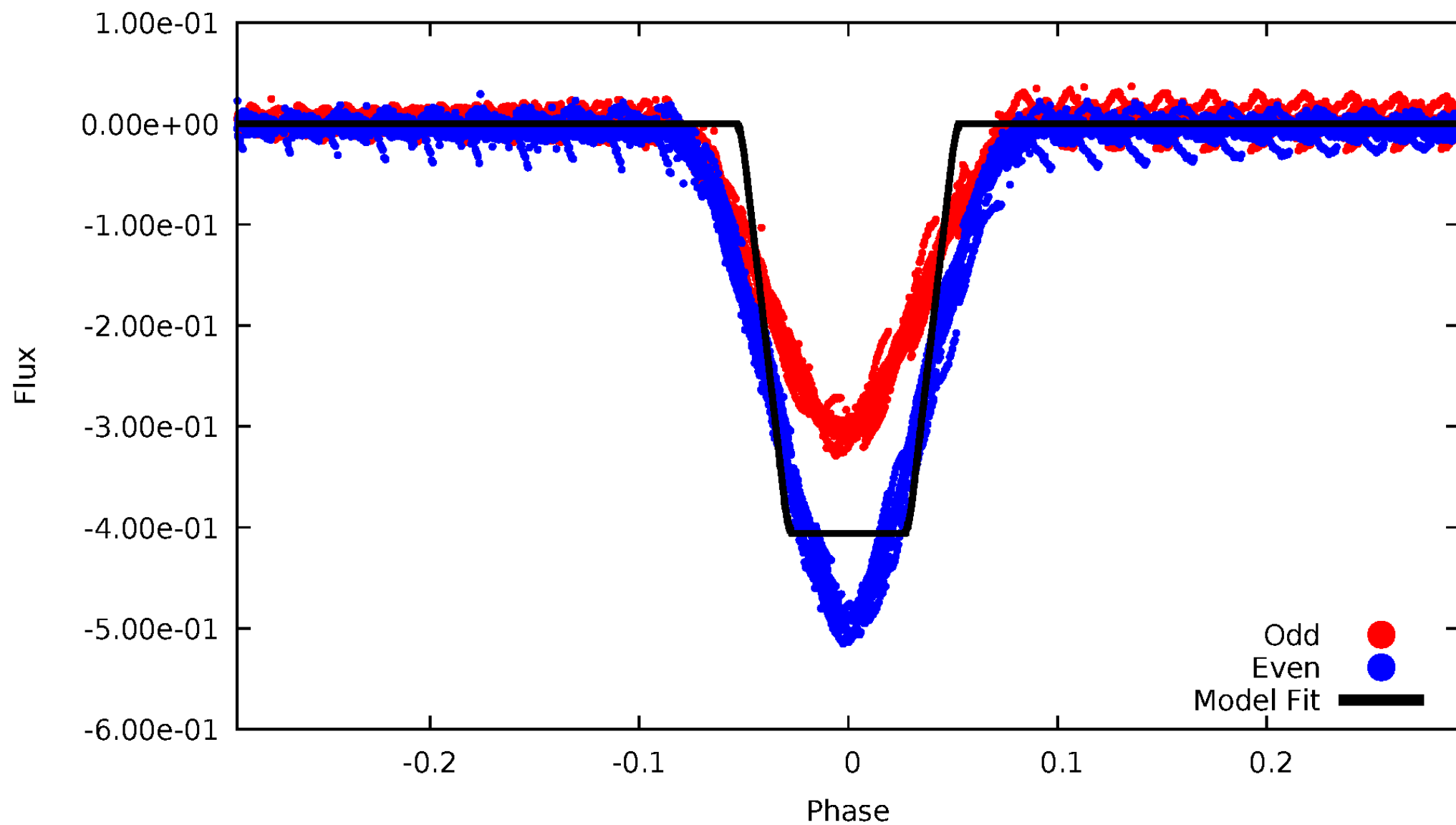
DV Odd/Even

TCE 008411947-01



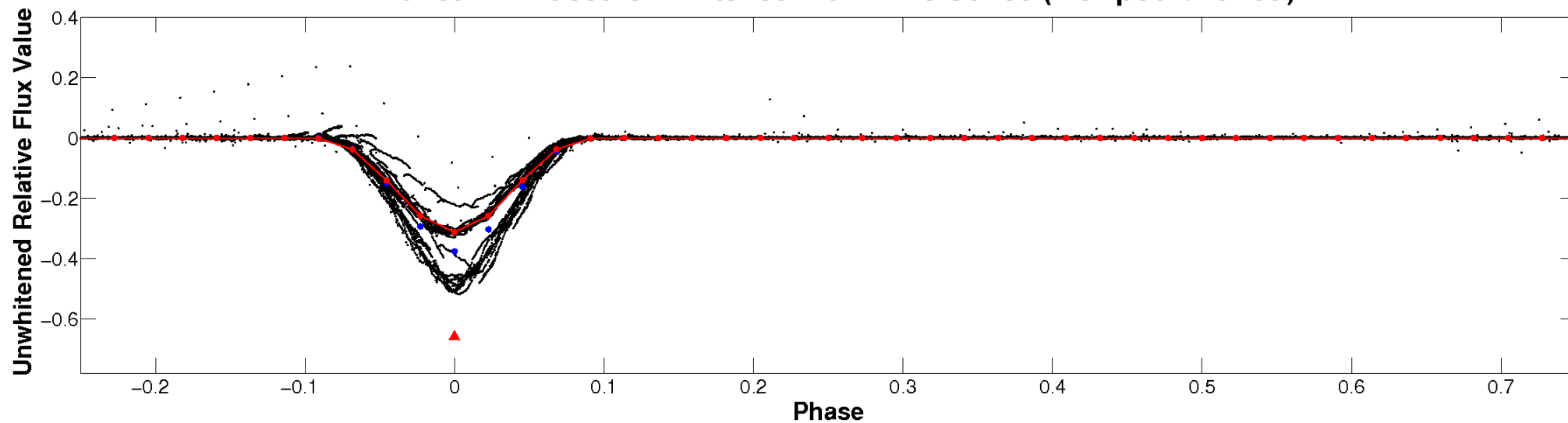
ALT Odd/Even

TCE 008411947-01

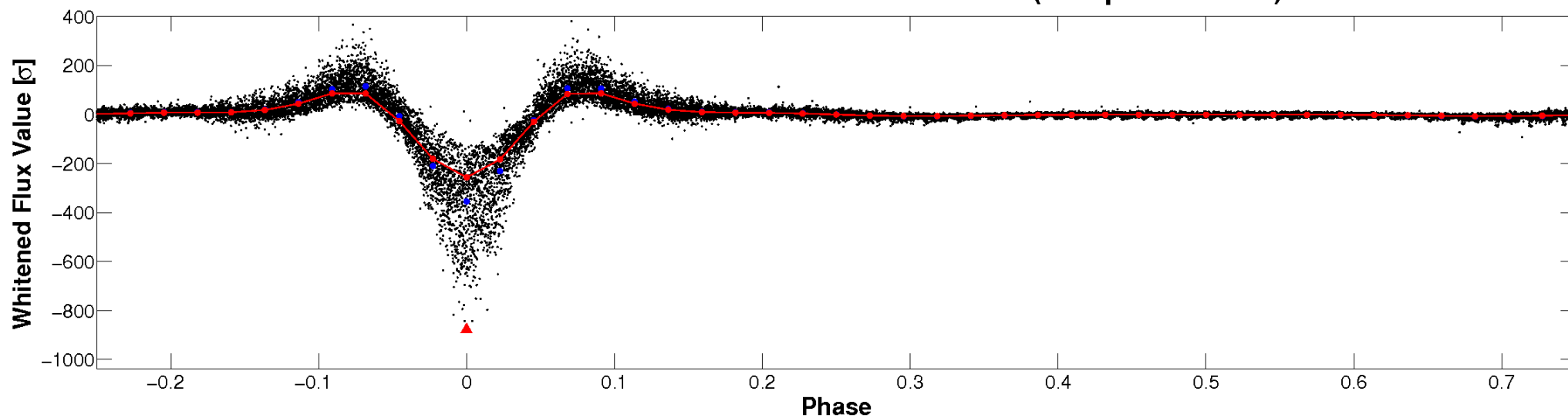


Non-Whitened Vs. Whitened Light Curve

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

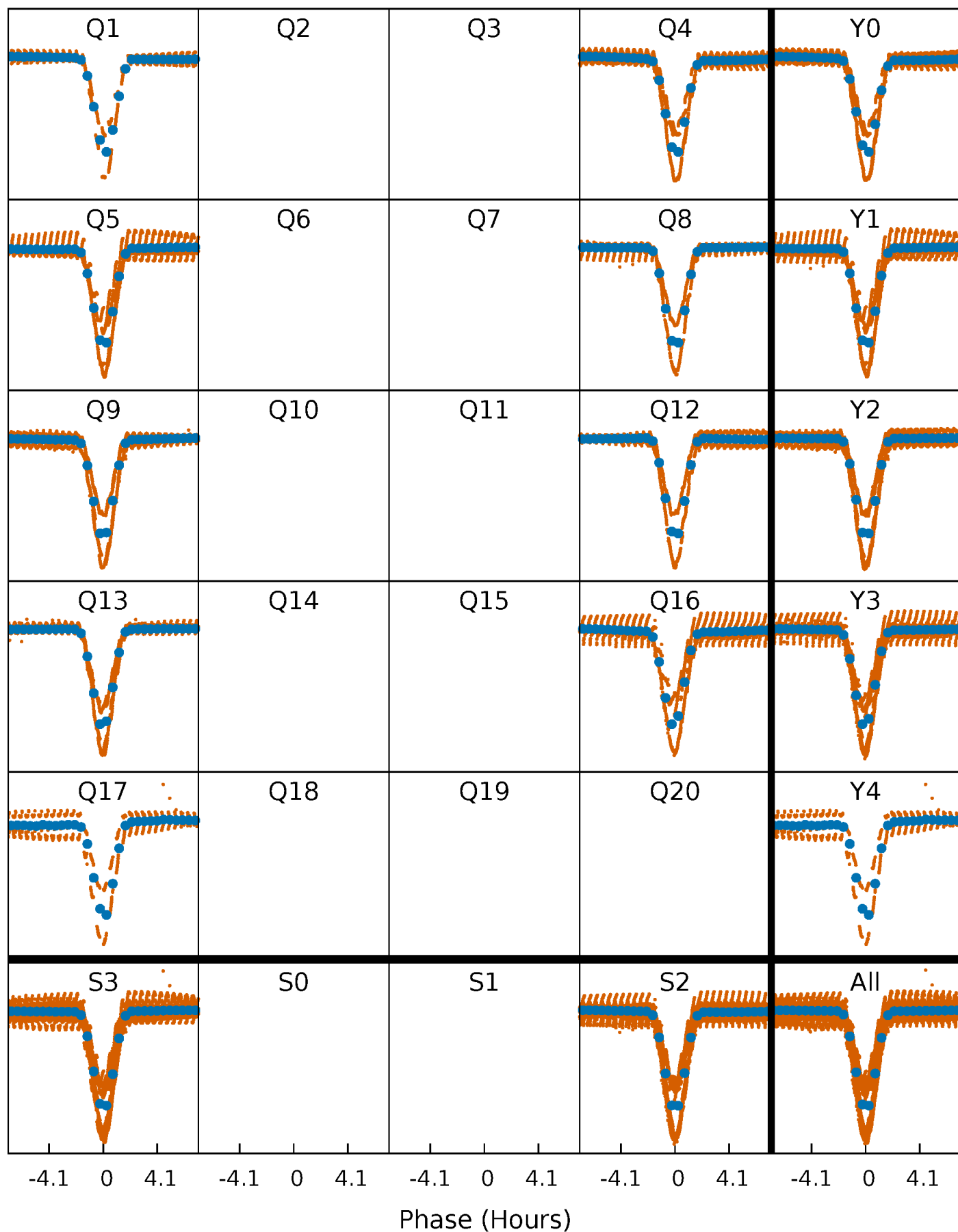


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



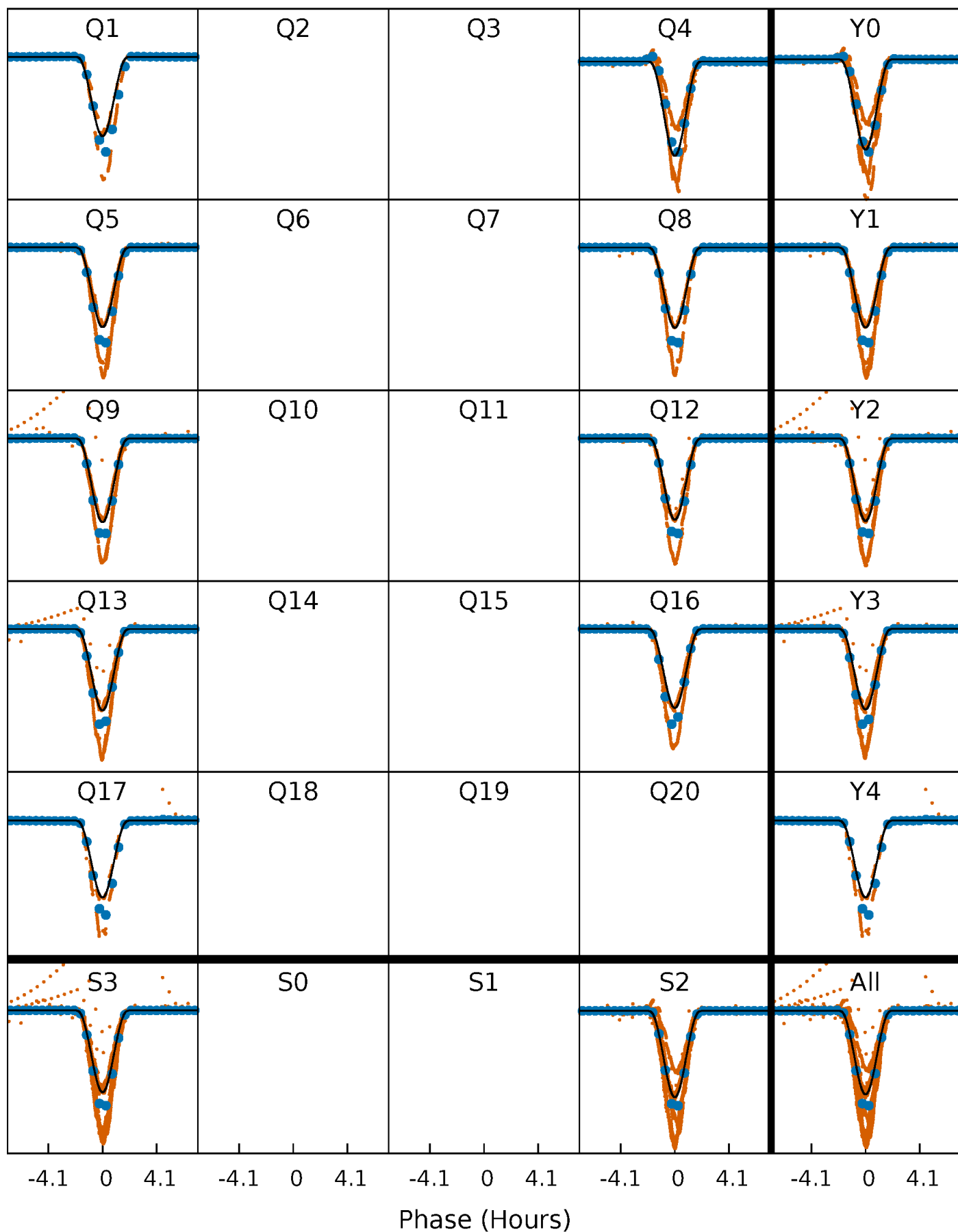
PDC Quarter-Phased Transit Curves

TCE 008411947-01 P= 0.898843 Days $T_0=132.129303$ (BKJD)



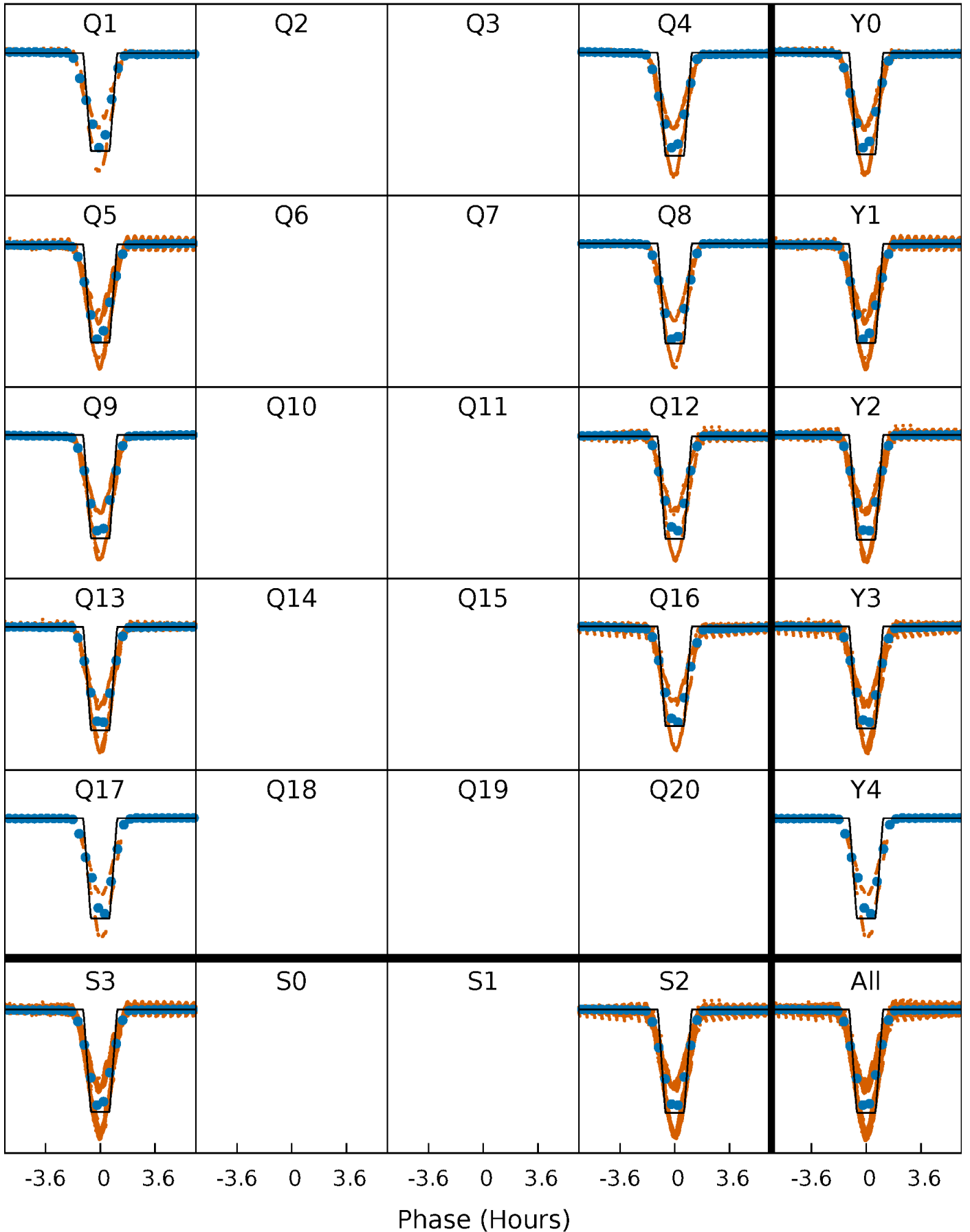
DV Quarter-Phased Transit Curves

TCE 008411947-01 P= 0.898843 Days $T_0=132.129303$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

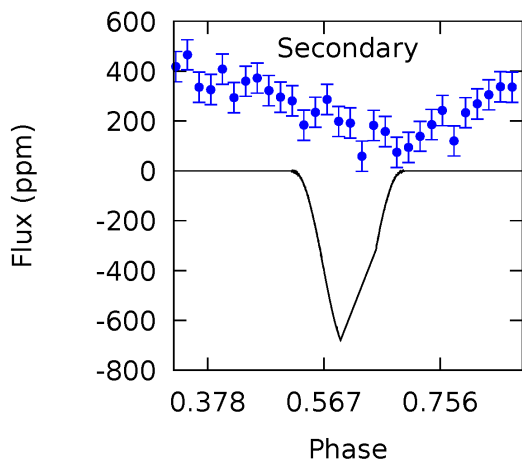
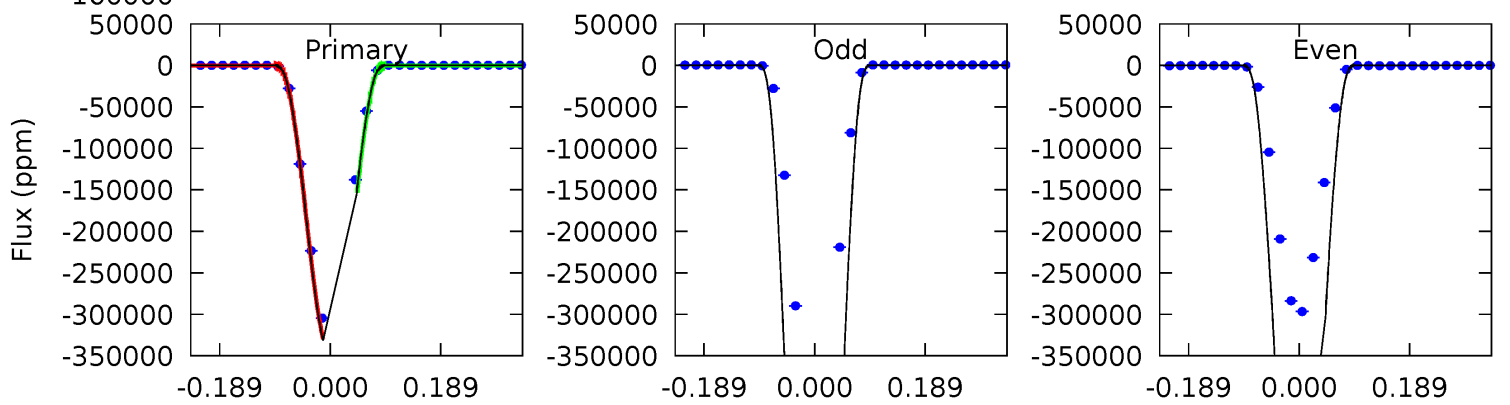
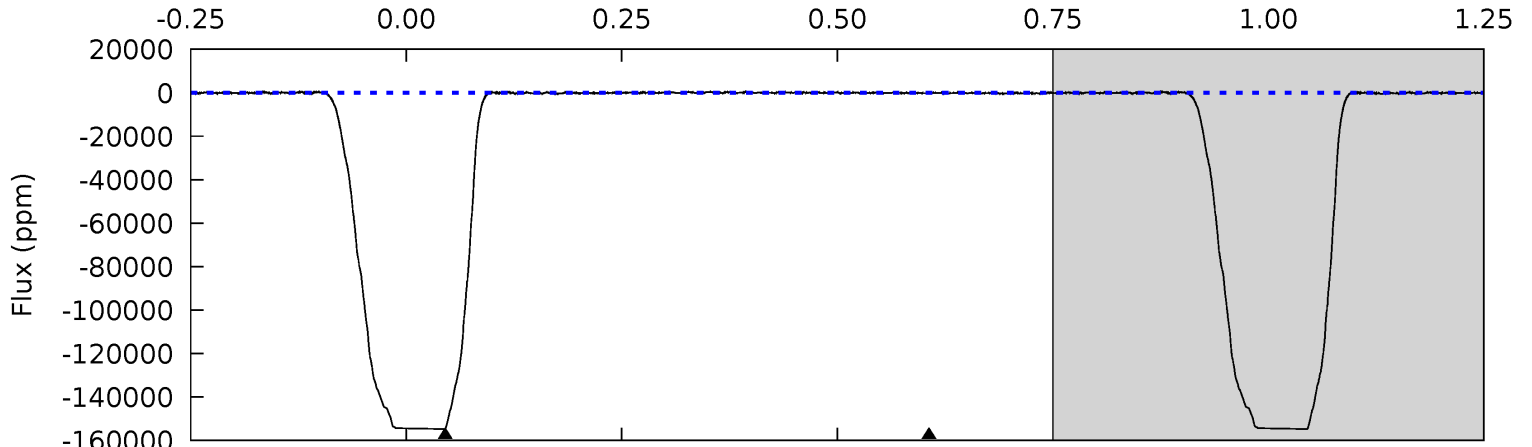
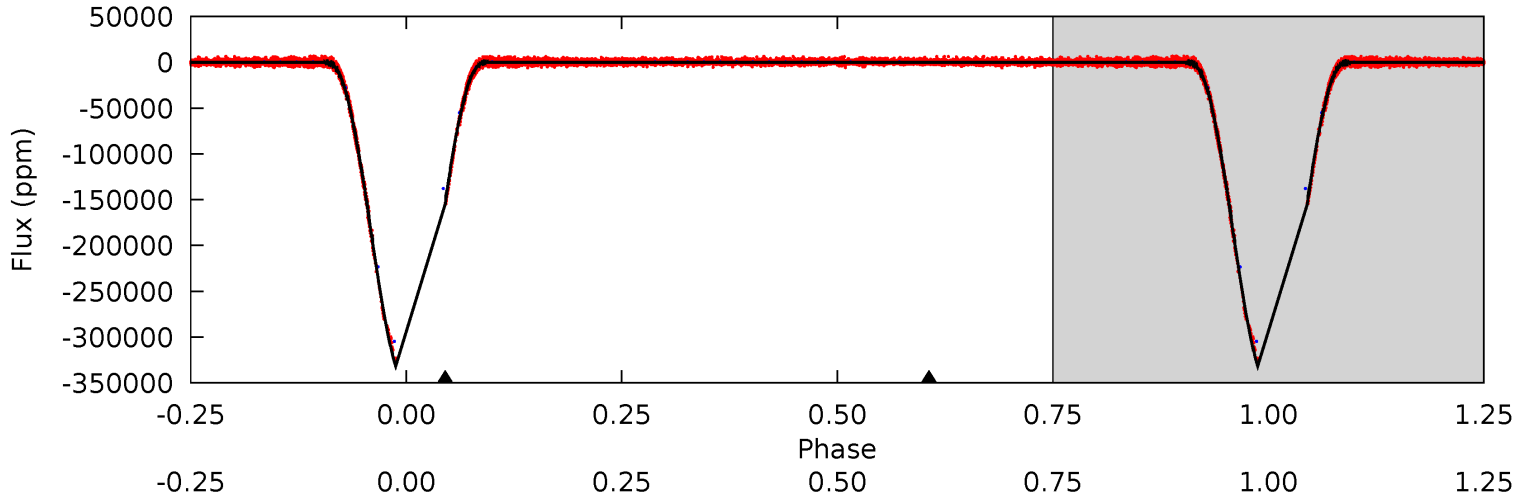
TCE 008411947-01 P= 0.898834 Days $T_0=132.137952$ (BKJD)



DV Model-Shift Uniqueness Test

008411947-01, P = 0.898843 Days, E = 131.230460 Days

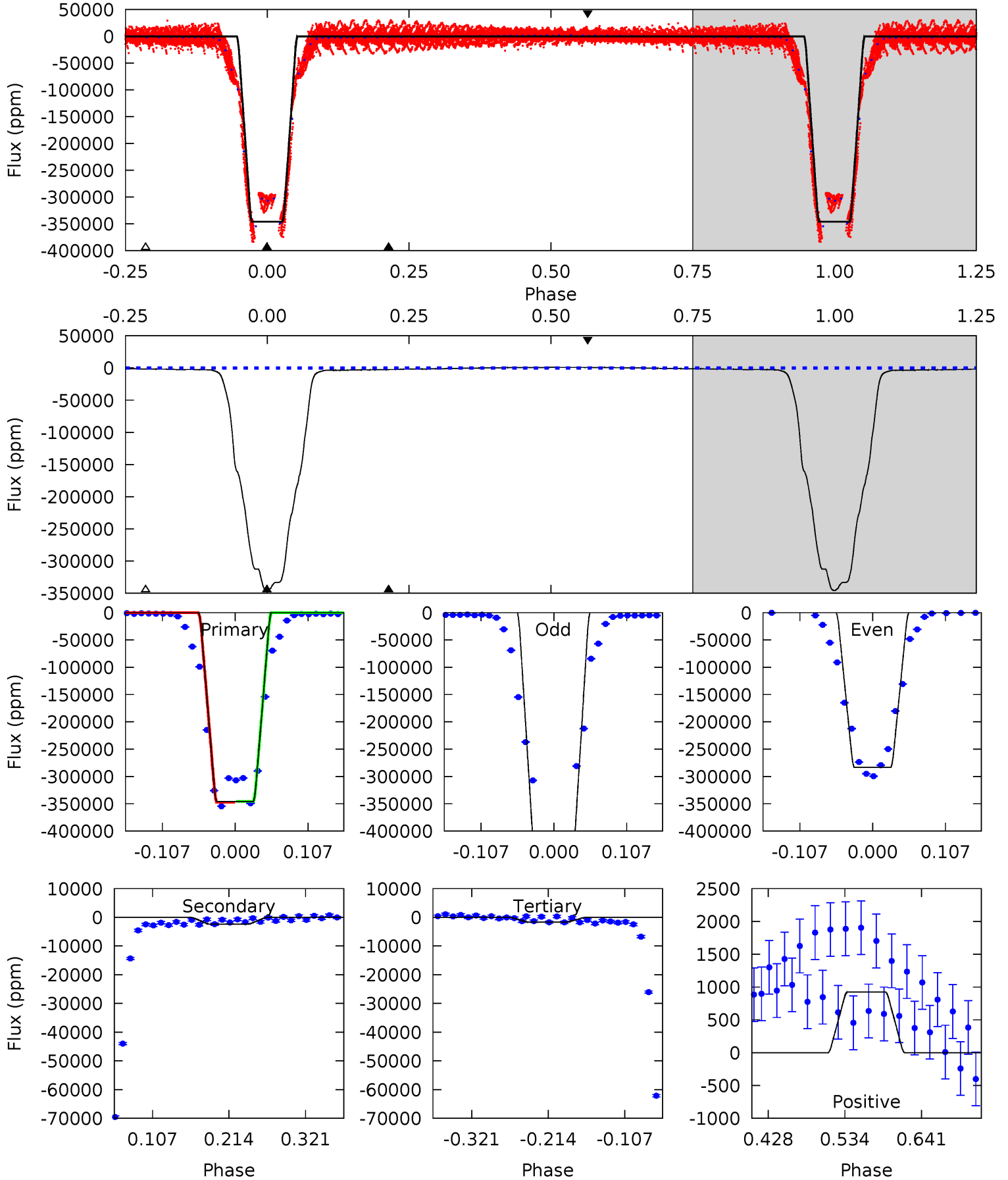
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4178	8.56	0	0	4.43	1.31	3.69	4178	4178	8.56	8.56	2851	1.13	0.00	0



Alt Model-Shift Uniqueness Test

008411947-01, P = 0.898834 Days, E = 131.239118 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1635	11.2	7.84	4.36	4.55	1.61	5.28	1627	1631	3.33	6.81	523.6	0.89	0.00	3.40



Stellar Parameters For KIC 008411947

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5284^{+185}_{-185}	$4.518^{+0.081}_{-0.099}$	$-0.180^{+0.300}_{-0.300}$	$0.807^{+0.121}_{-0.088}$	$0.783^{+0.104}_{-0.070}$	$2.098^{+0.716}_{-0.635}$
	+4%/-4%	+2%/-2%	+167%/-167%	+15%/-11%	+13%/-9%	+34%/-30%
Source	KIC0	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 008411947-01 / KOI 7034.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-317 ± 37	$51.94^{+4.36}_{-3.74}$	2264^{+117}_{-103}	-2623^{+68}_{-75}	$0.018^{+0.003}_{-0.003}$
Alt.	-2364 ± 212	$56.35^{+5.35}_{-3.52}$	2262^{+110}_{-103}	-2485^{+79}_{-84}	$0.115^{+0.020}_{-0.018}$

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 $A_{obs} \gg 1.0$

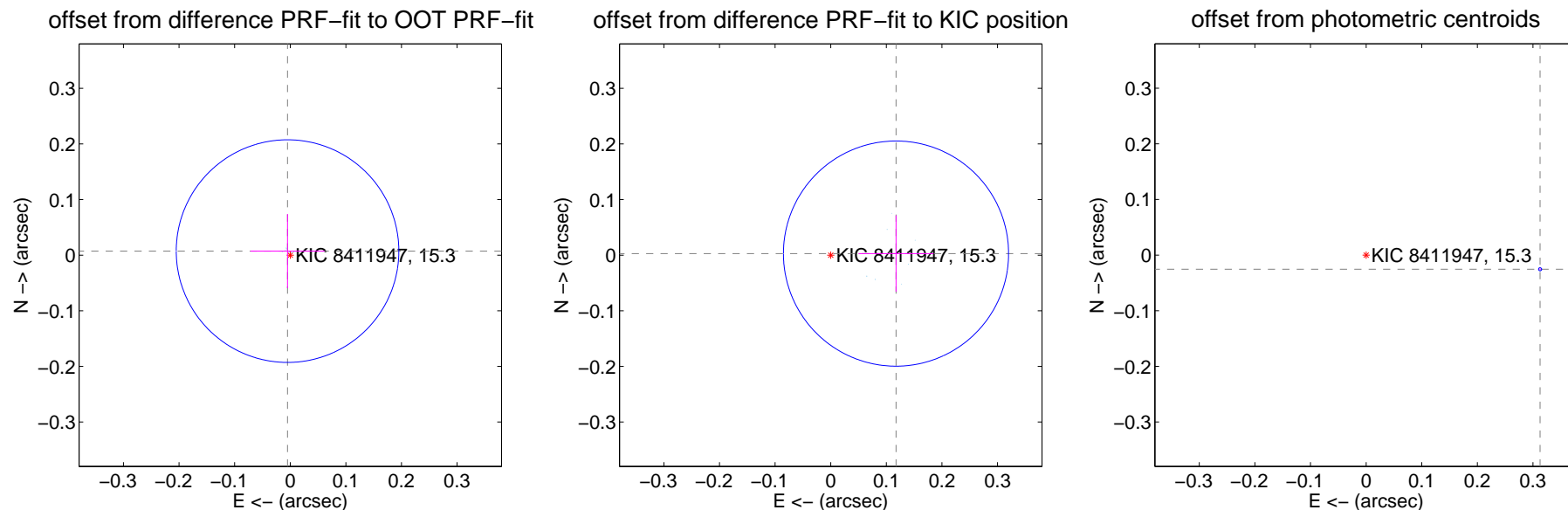
DV Centroid Data

Supplemental centroid analysis for 008411947-01. Kepler magnitude: 15.30. Transit SNR 5470.69

There are 9 quarters with good PRF difference image offsets

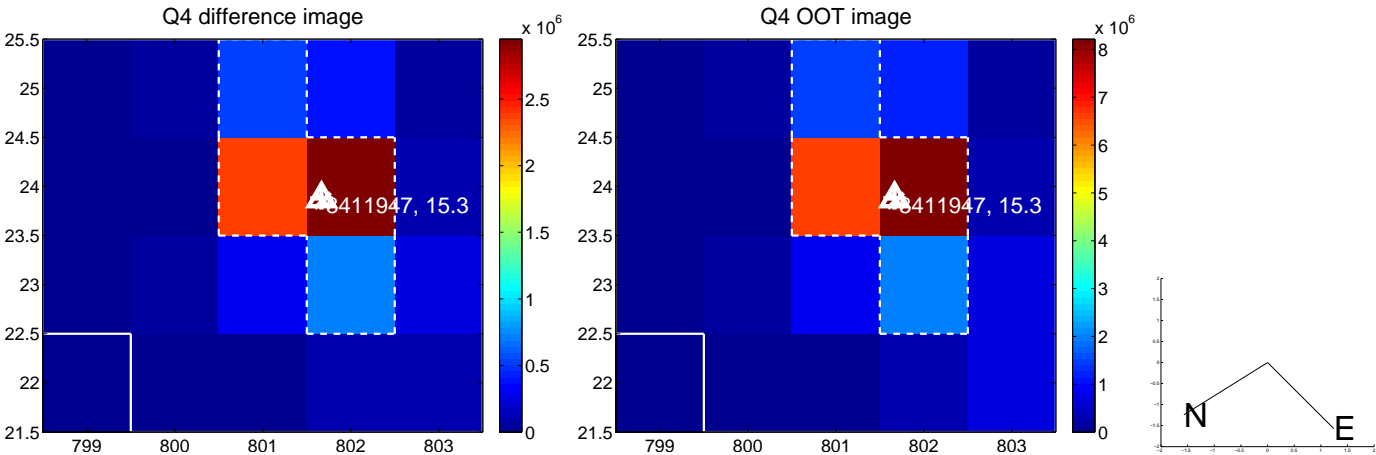
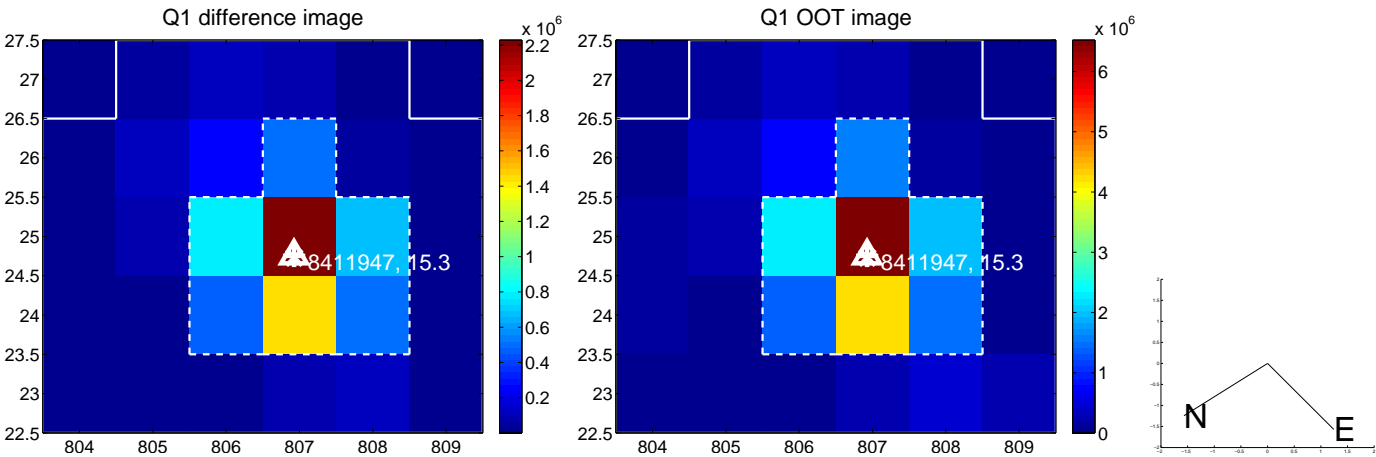
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.009 ± 0.067	0.13	0.005 ± 0.067	0.007 ± 0.067
PRF-fit source offset from KIC position	0.117 ± 0.067	1.74	-0.117 ± 0.067	0.003 ± 0.069
photometric centroid source offset	0.31 ± 0.00	339.72	-0.31 ± 0.00	-0.03 ± 0.00

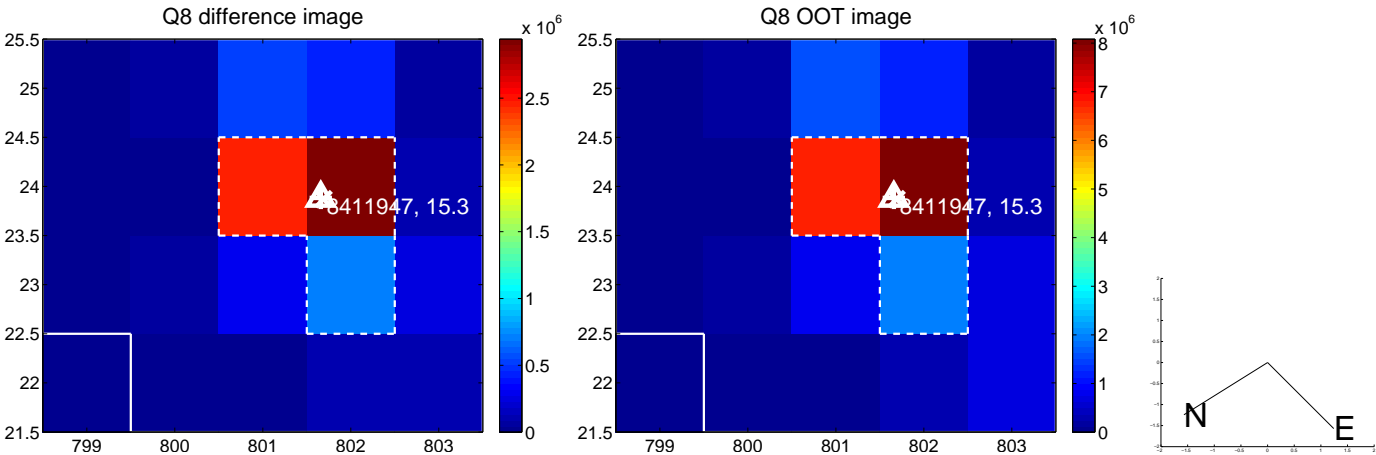
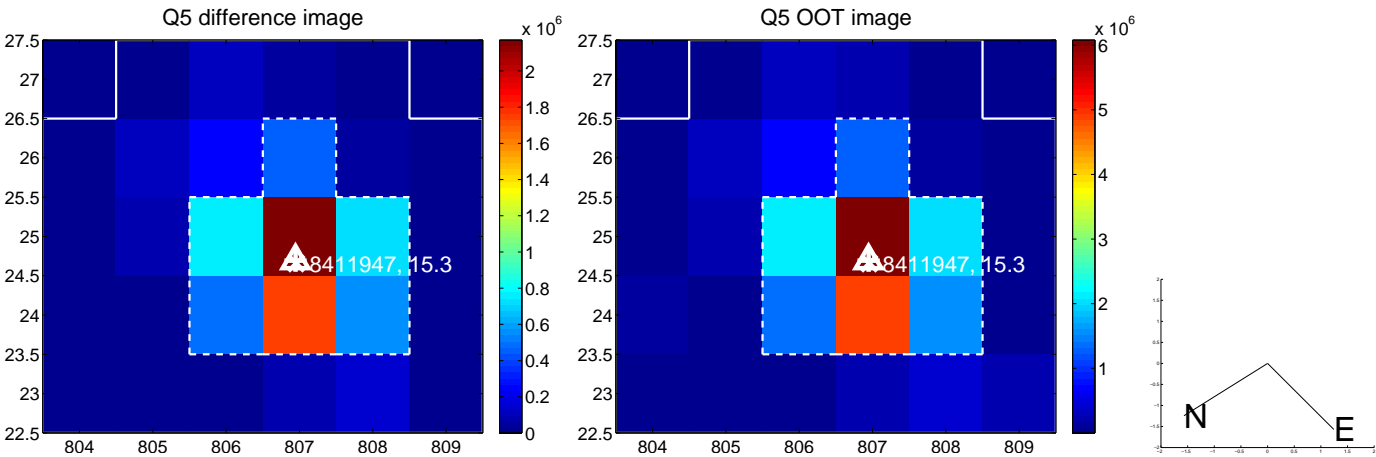


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

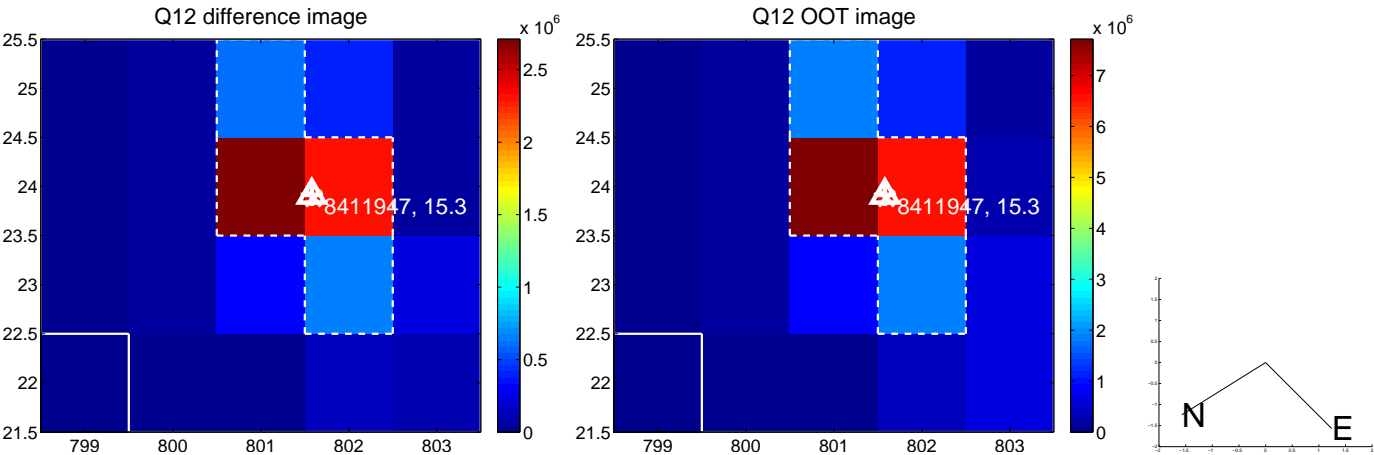
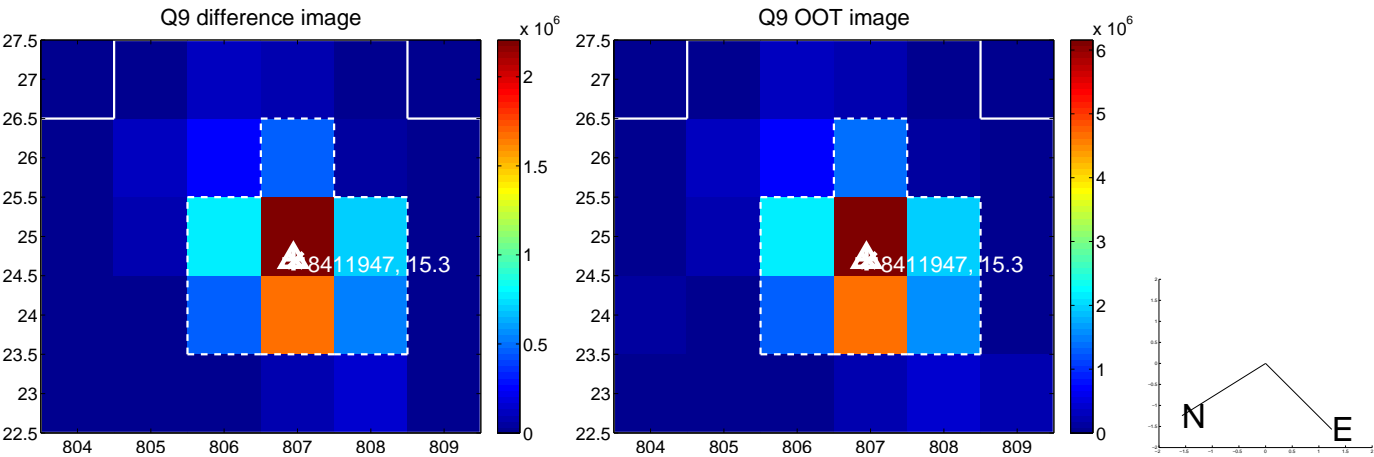
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



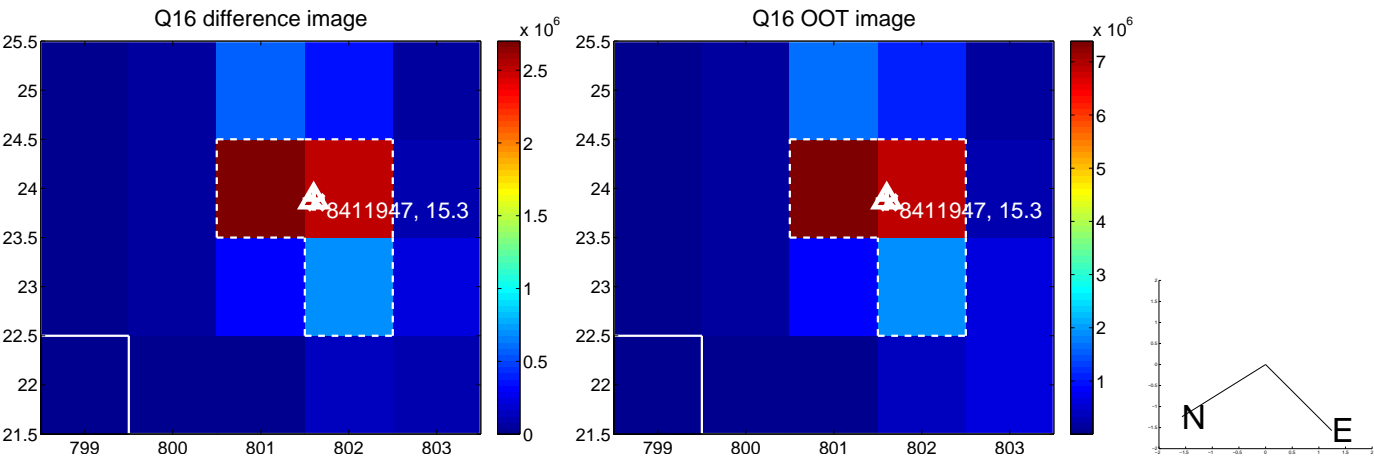
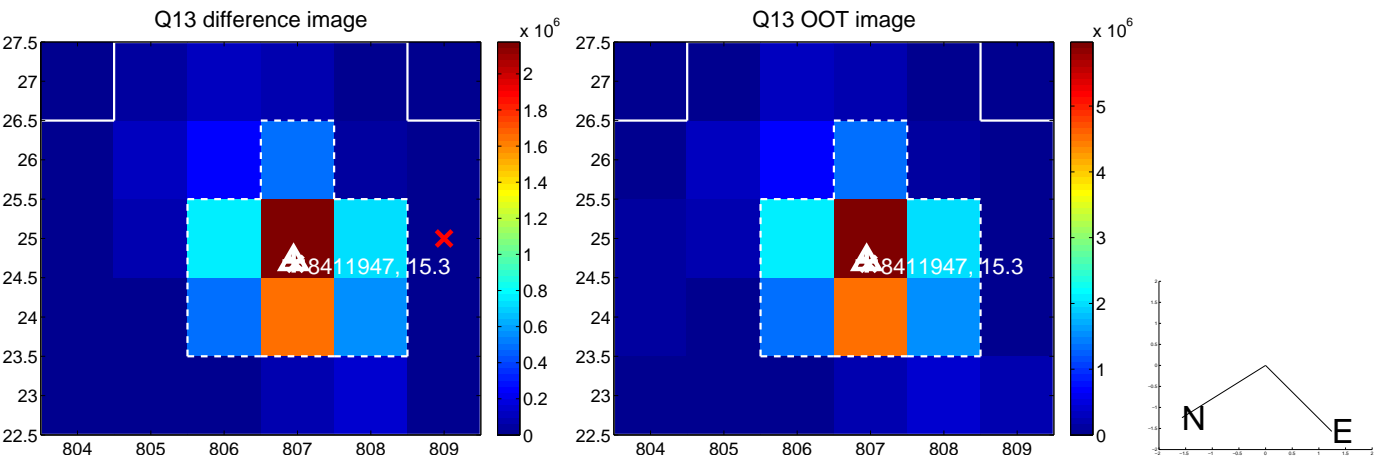
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



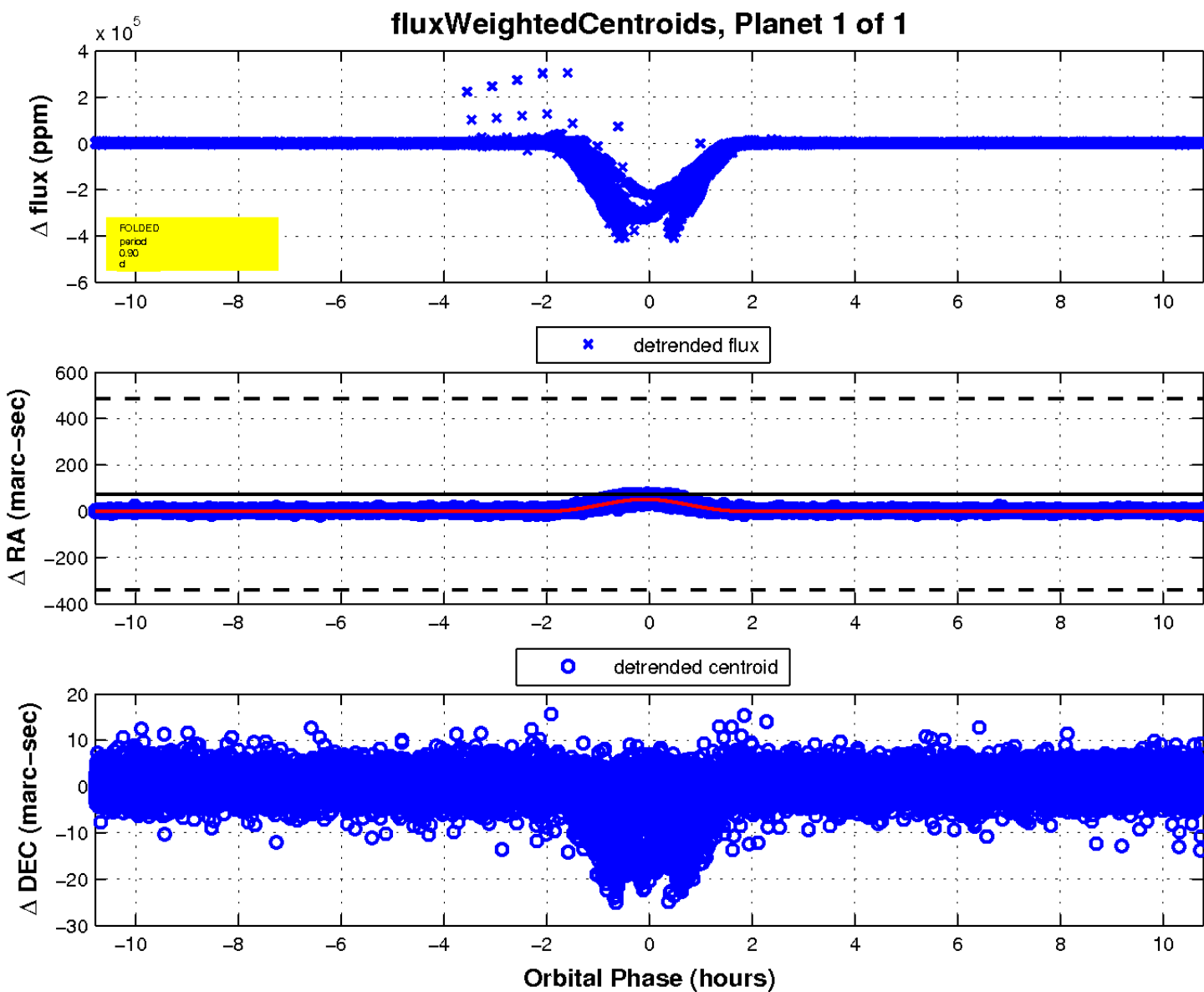
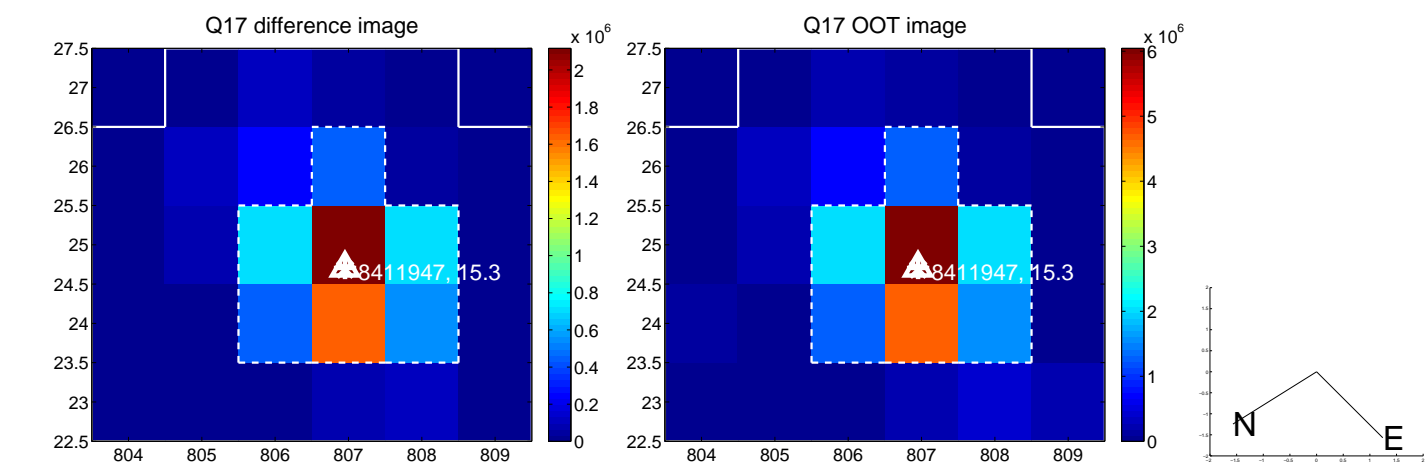
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

