

KIC 008848115

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})
008848115-01	OBS	7101.01	0.824844	131.639604	197.5	1.405	39.2	26.0	41.42	4148	74.24	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008848115-01	OBS	FP	0.00	0	1	1	1	PLANET_IN_STAR—MOD_SEC_ALT—SEASONAL_DEPTH_DV—SEASONAL_DEPTH_ALT—CENT_RESOLVED_OFFSET—HALO_GHOST—EPHEM_MATCH

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 008848115-01

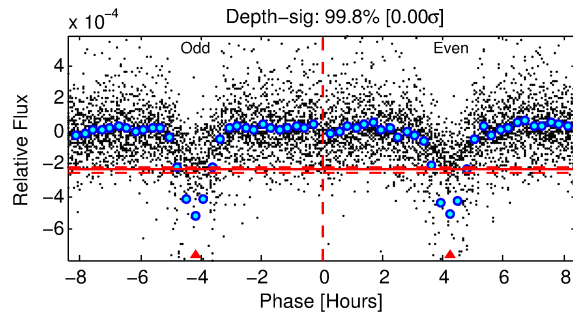
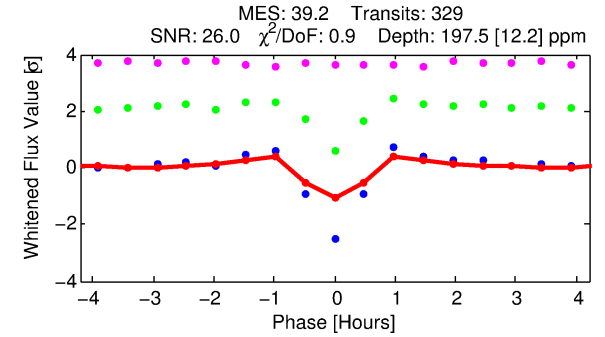
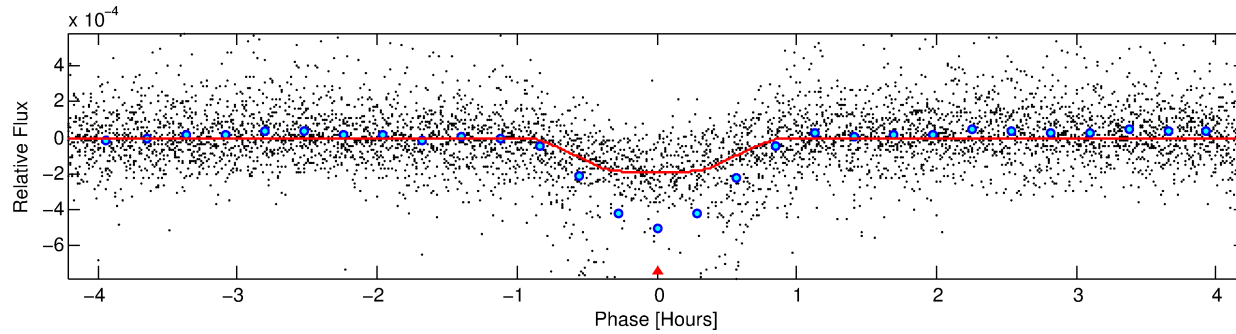
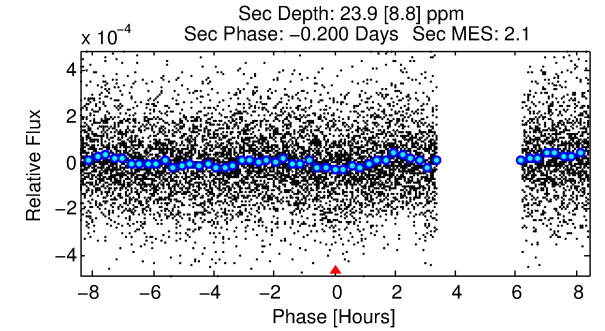
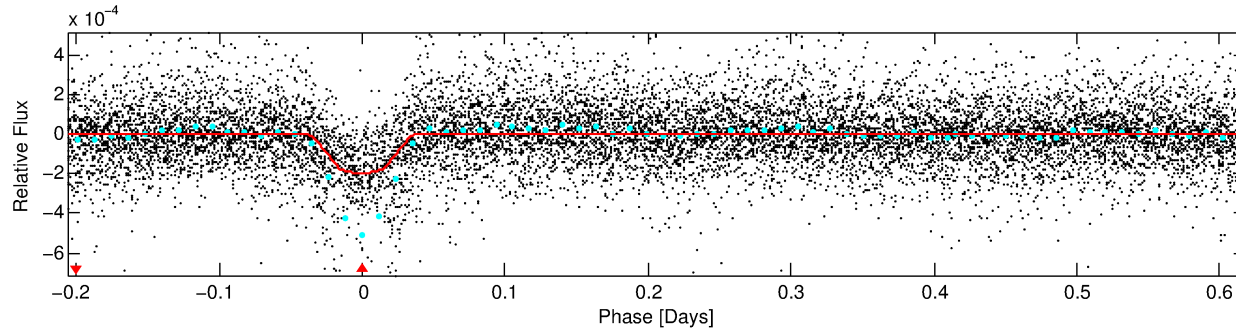
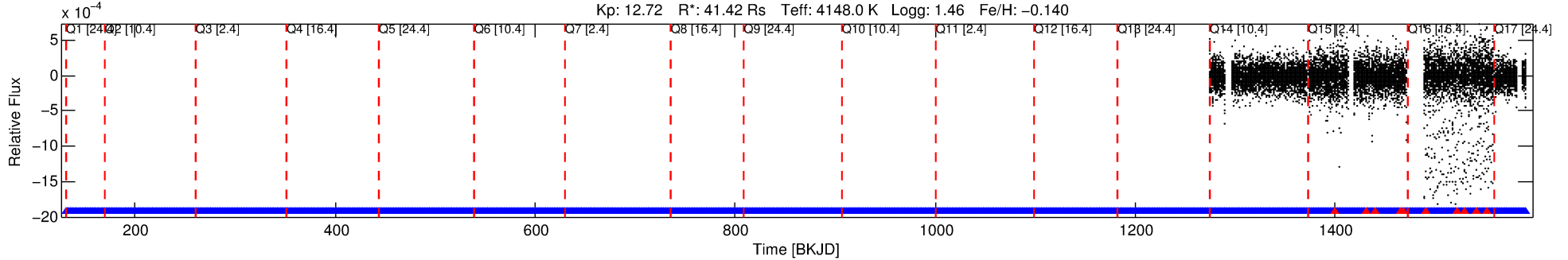
TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
008848115-01	8848115	7100.01	8848104	1:1	14.4	-1	-3	12.37	12.72	152.97	Direct-PRF	0	0.91	0.97

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 8848115 Candidate: 1 of 1 Period: 0.825 d
KOI: K07101.01 Corr: 0.937

Kp: 12.72 R*: 41.42 Rs Teff: 4148.0 K Logg: 1.46 Fe/H: -0.140



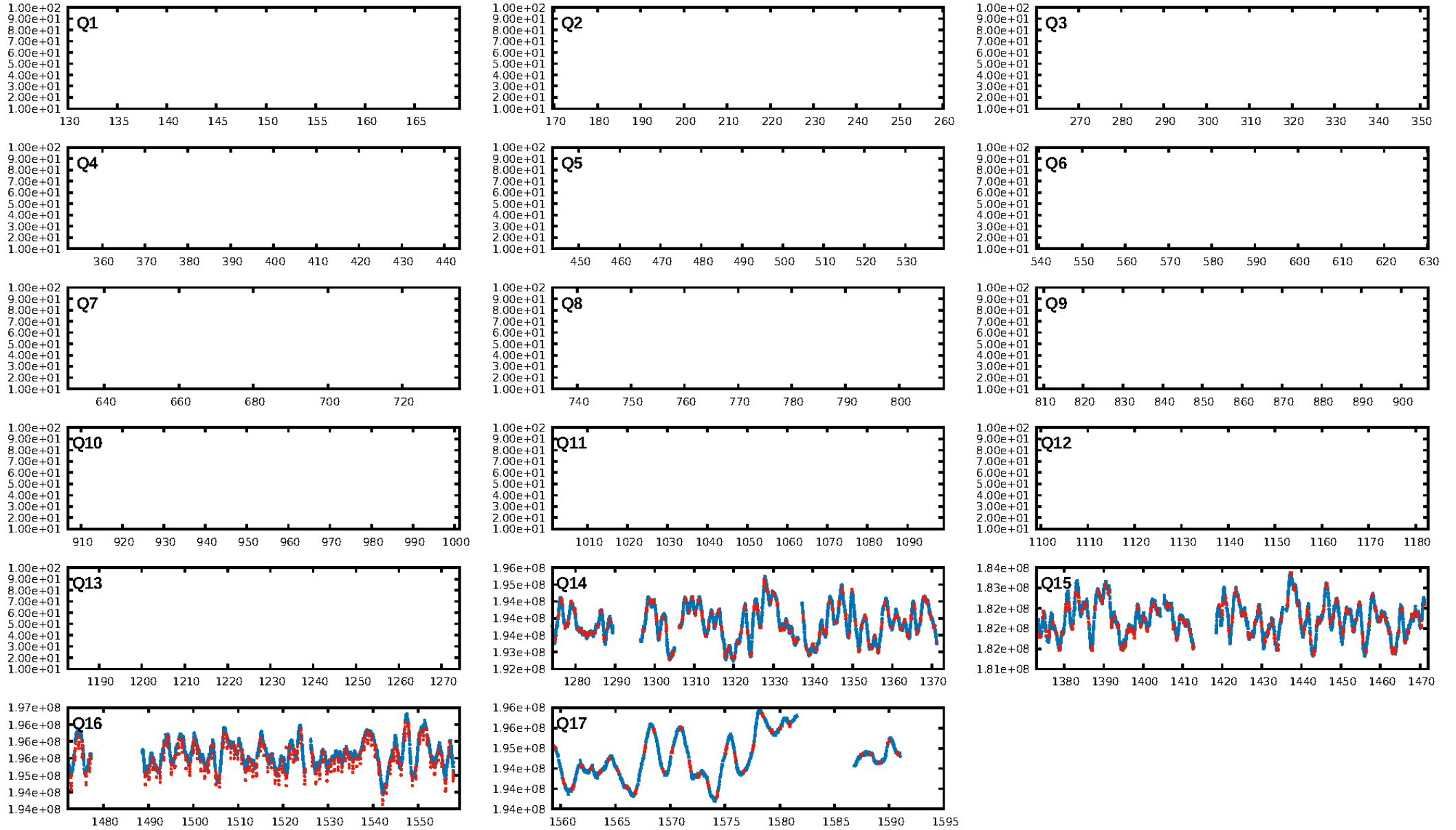
DV Fit Results:

Period = 0.82484 [0.00000] d
Epoch = 131.6396 [0.0006] BKJD
Rp/R* = 0.0164 [0.0059]
a/R* = 2.25 [2.22]
b = 0.91 [0.25]
Seff = N/A
Teq = N/A
Rp = 74.24 [34.56] Re
a = N/A
Ag = N/A
Teffp = N/A

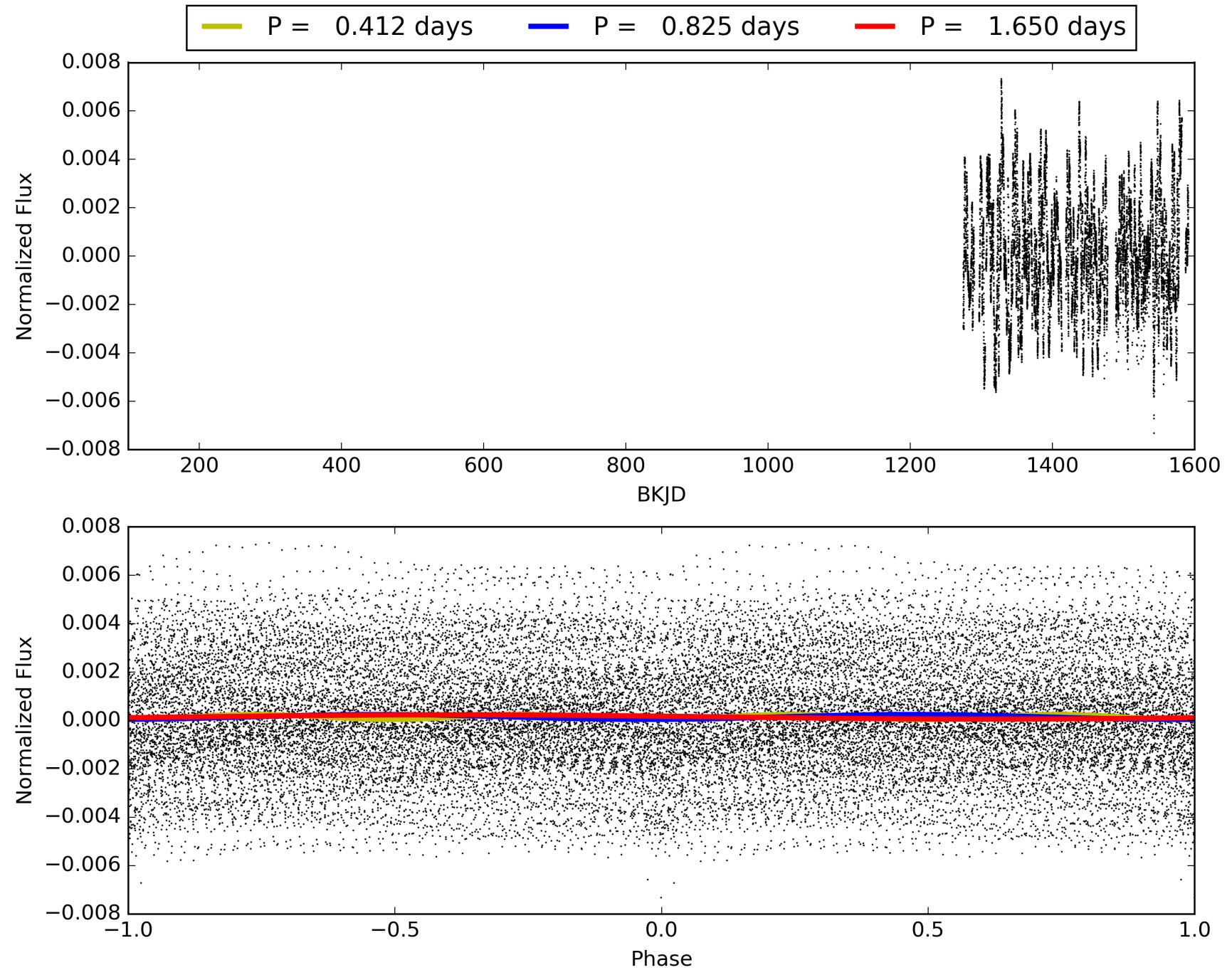
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.97 [287/297]
GhostDiagnostic-chr: -0.2353
Centroid-sig: 0.0%
Centroid-so: 65.348 arcsec [124.29σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0 [0]
KicOffset-st: 0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [4/4]

TCE 008848115-01, PDC Light Curves

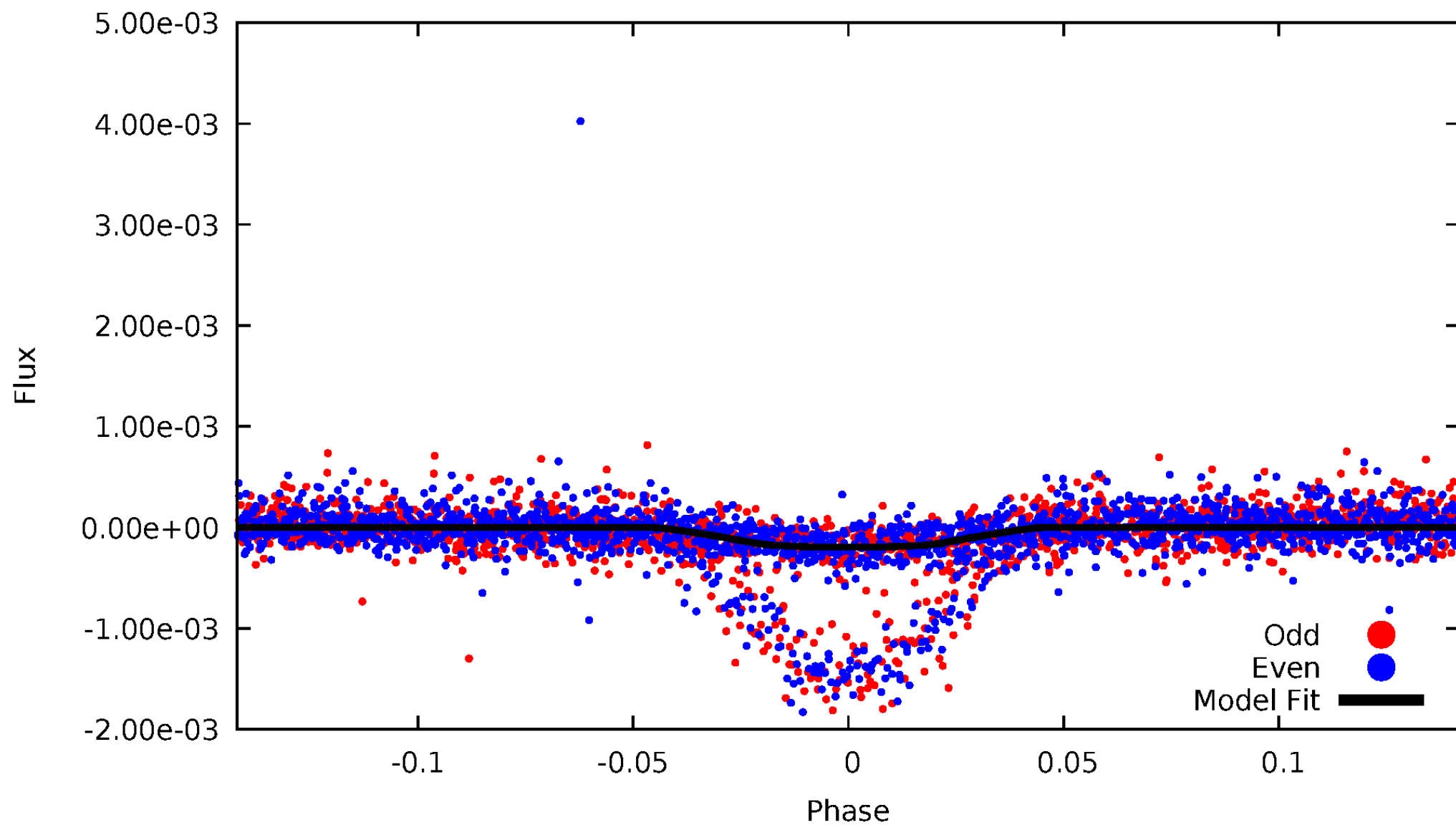


TCE 008848115-01



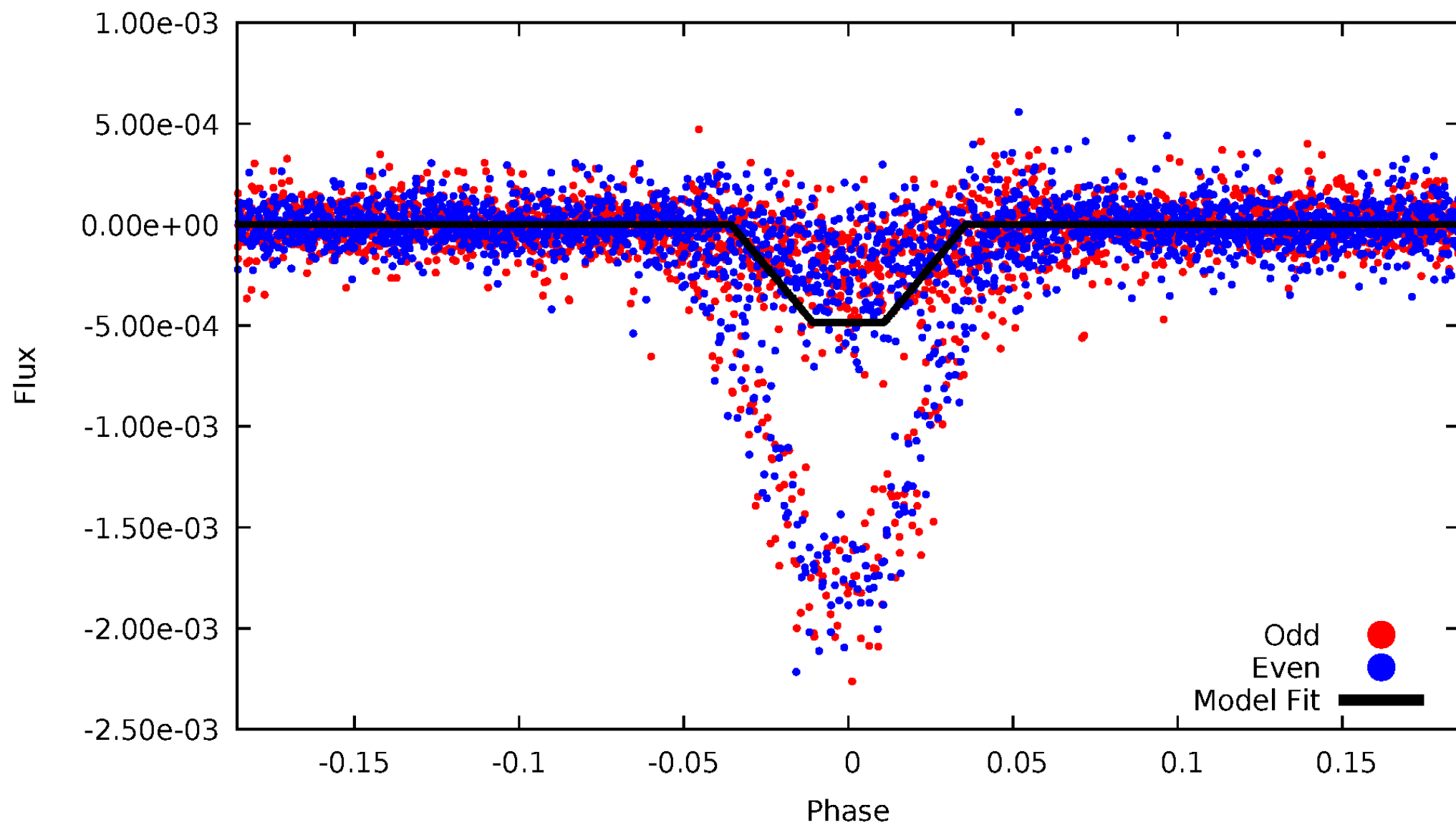
DV Odd/Even

TCE 008848115-01

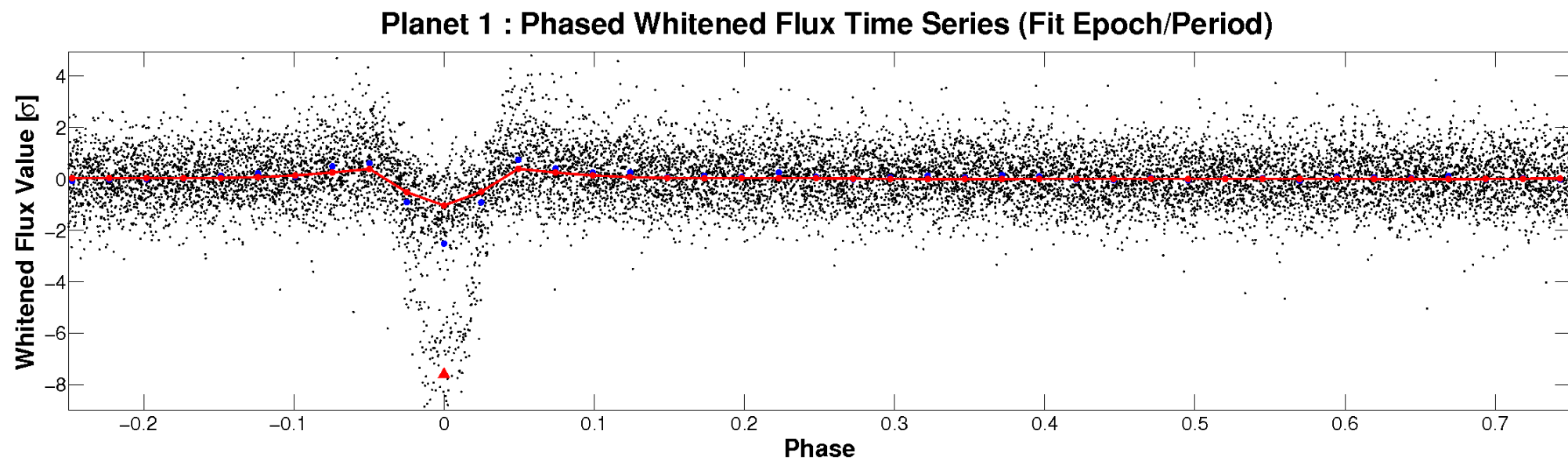
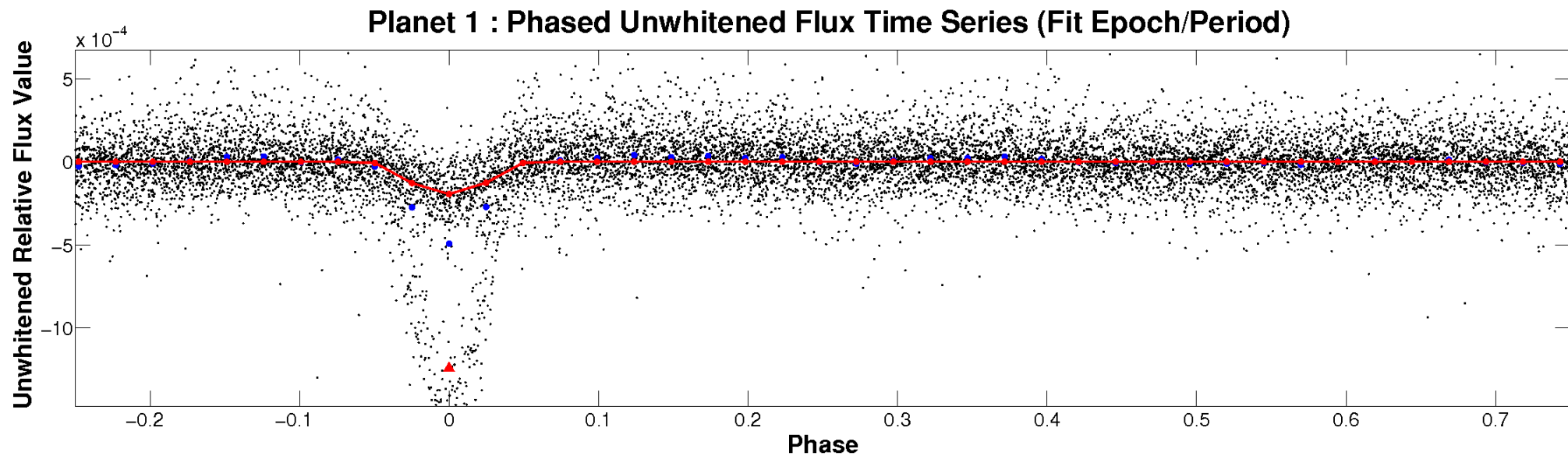


ALT Odd/Even

TCE 008848115-01

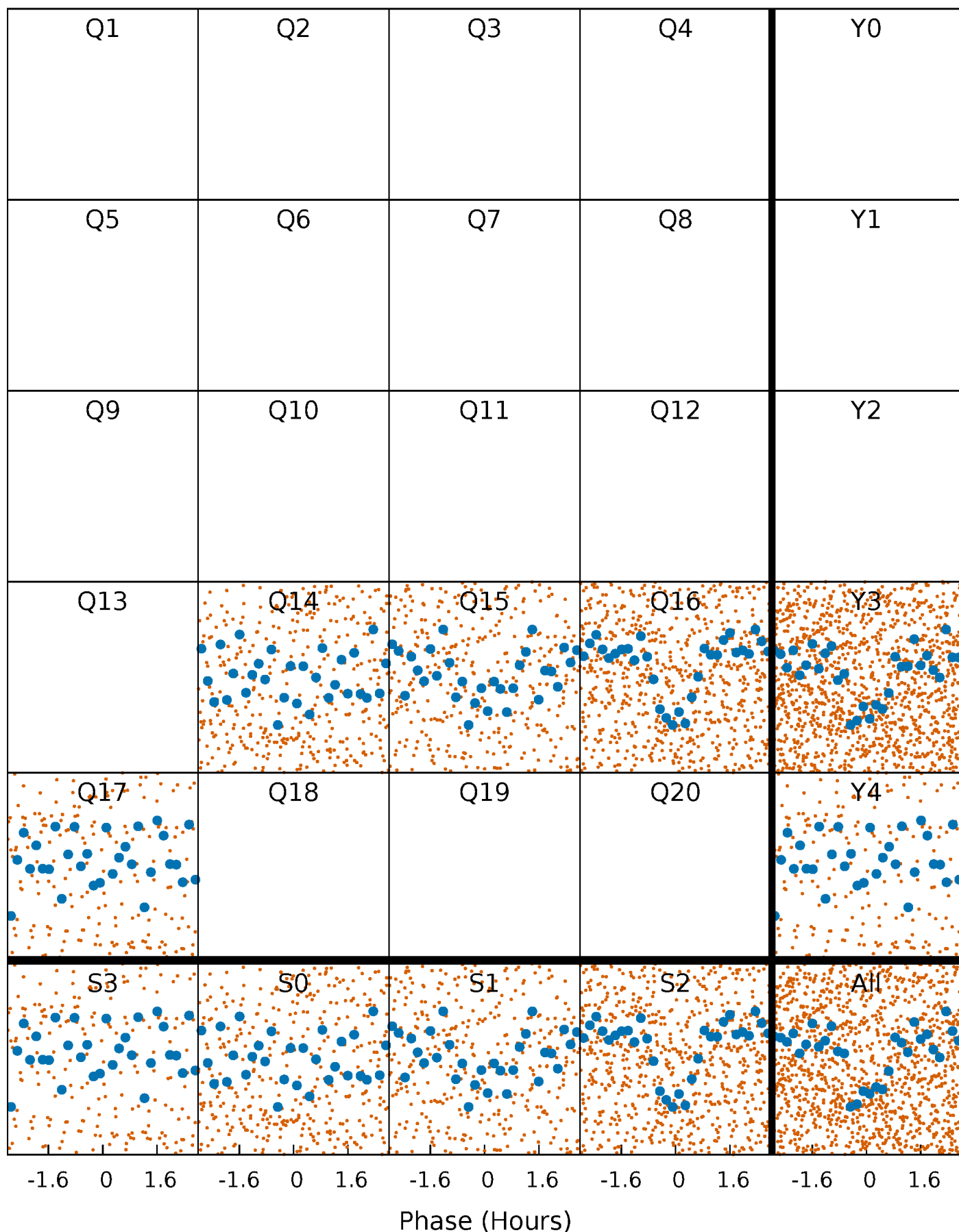


Non-Whitened Vs. Whitened Light Curve



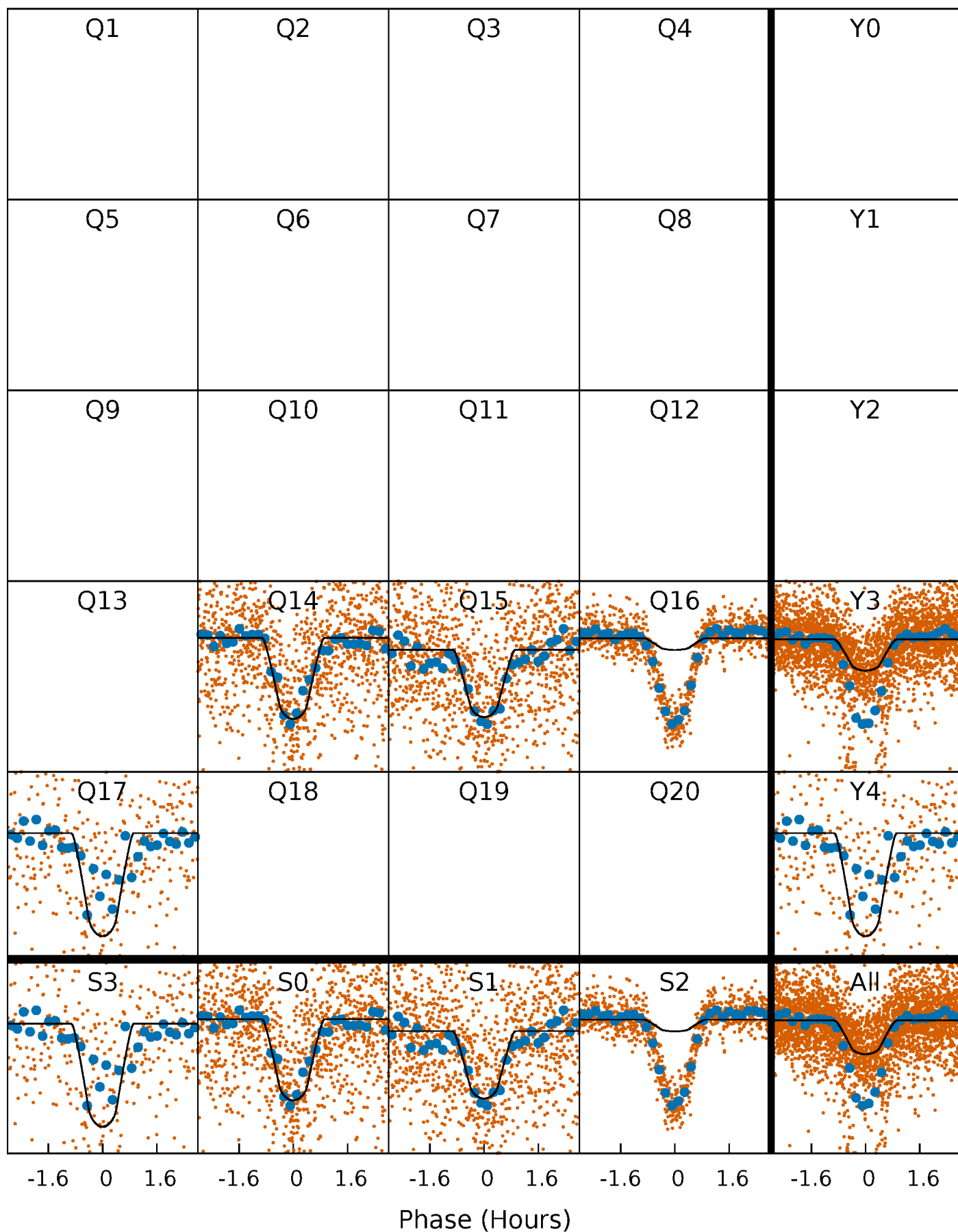
PDC Quarter-Phased Transit Curves

TCE 008848115-01 P= 0.824844 Days $T_0=131.639604$ (BKJD)



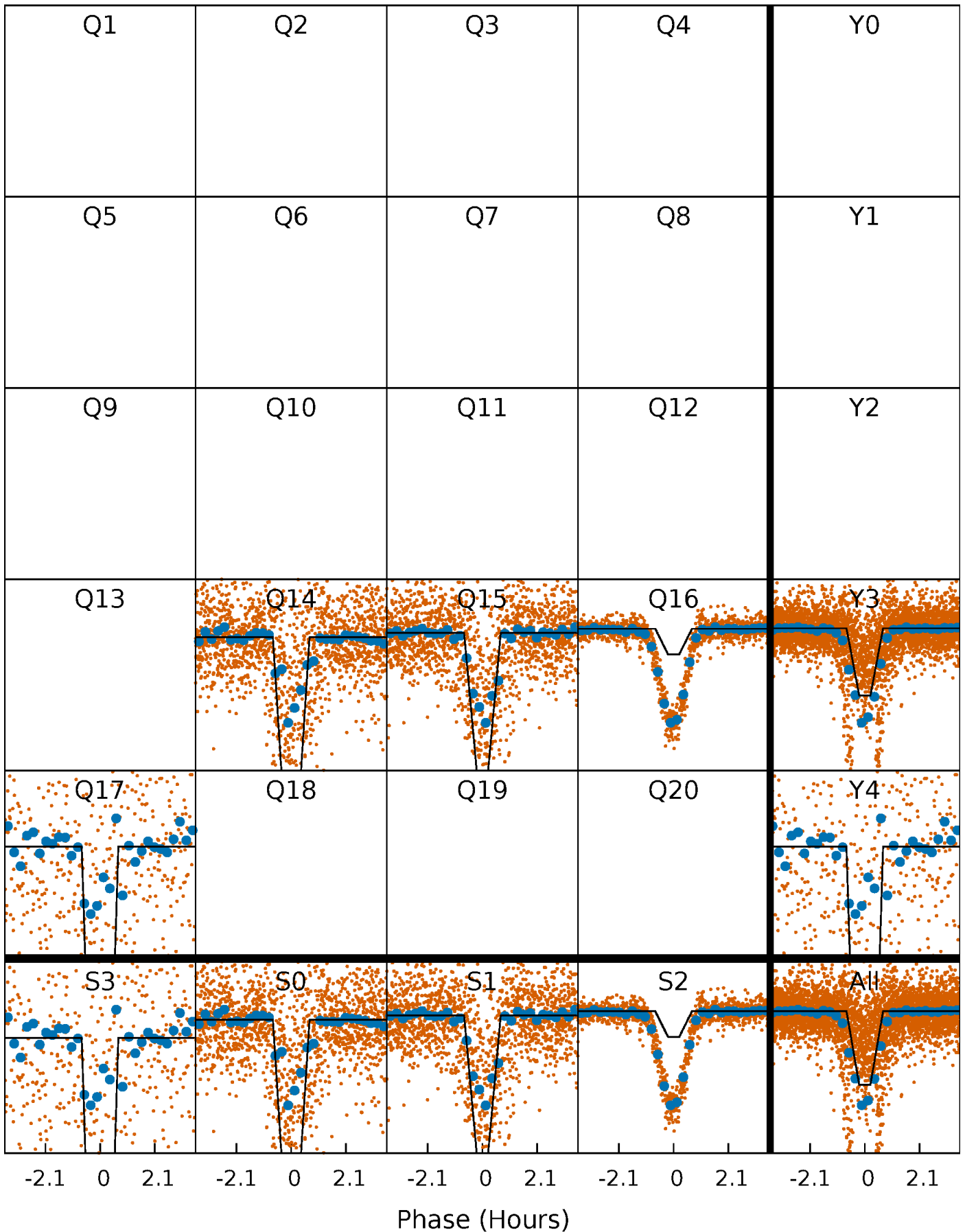
DV Quarter-Phased Transit Curves

TCE 008848115-01 P= 0.824844 Days $T_0=131.639604$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

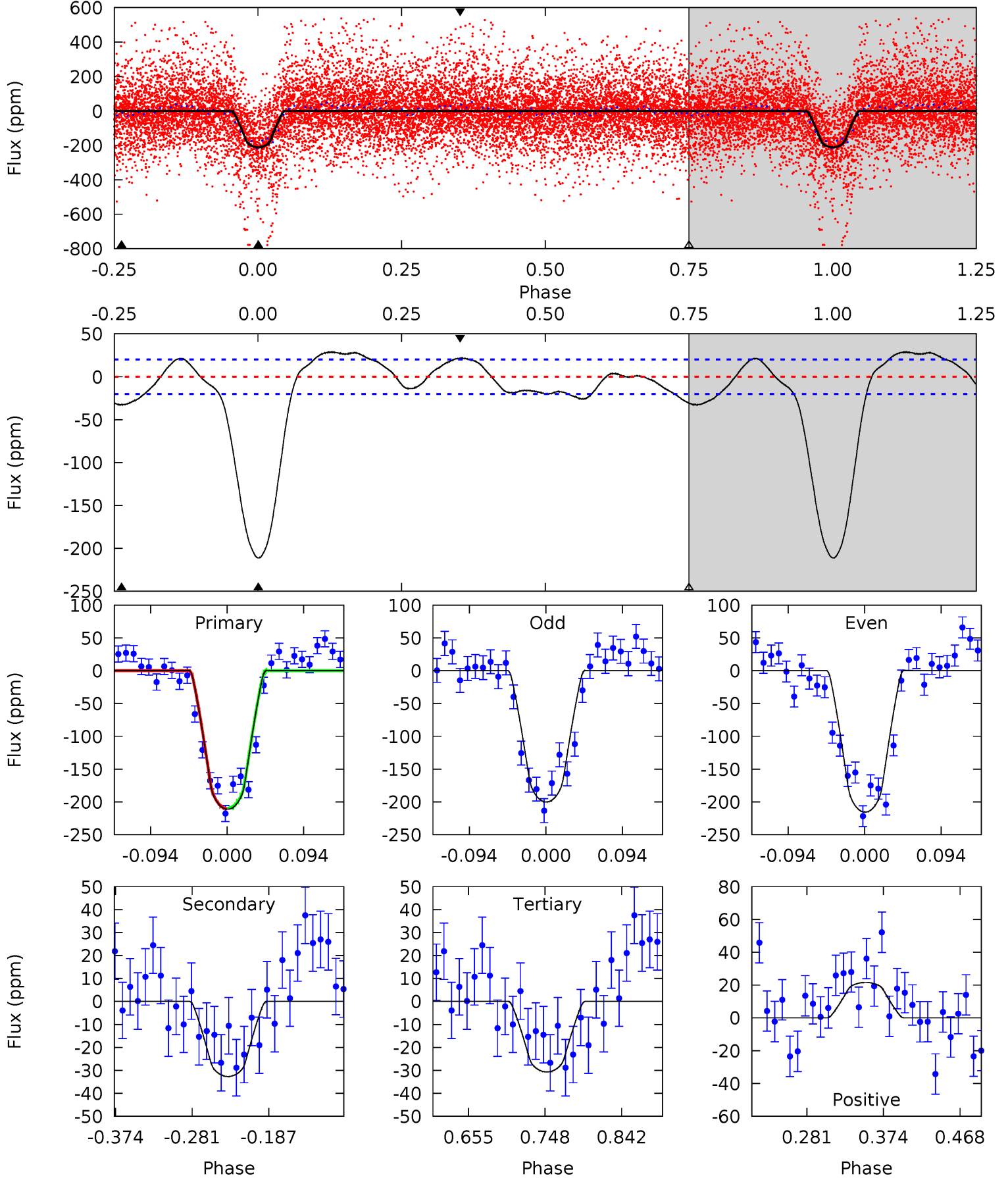
TCE 008848115-01 P= 0.824865 Days $T_0=131.605643$ (BKJD)



DV Model-Shift Uniqueness Test

008848115-01, P = 0.824844 Days, E = 131.639604 Days

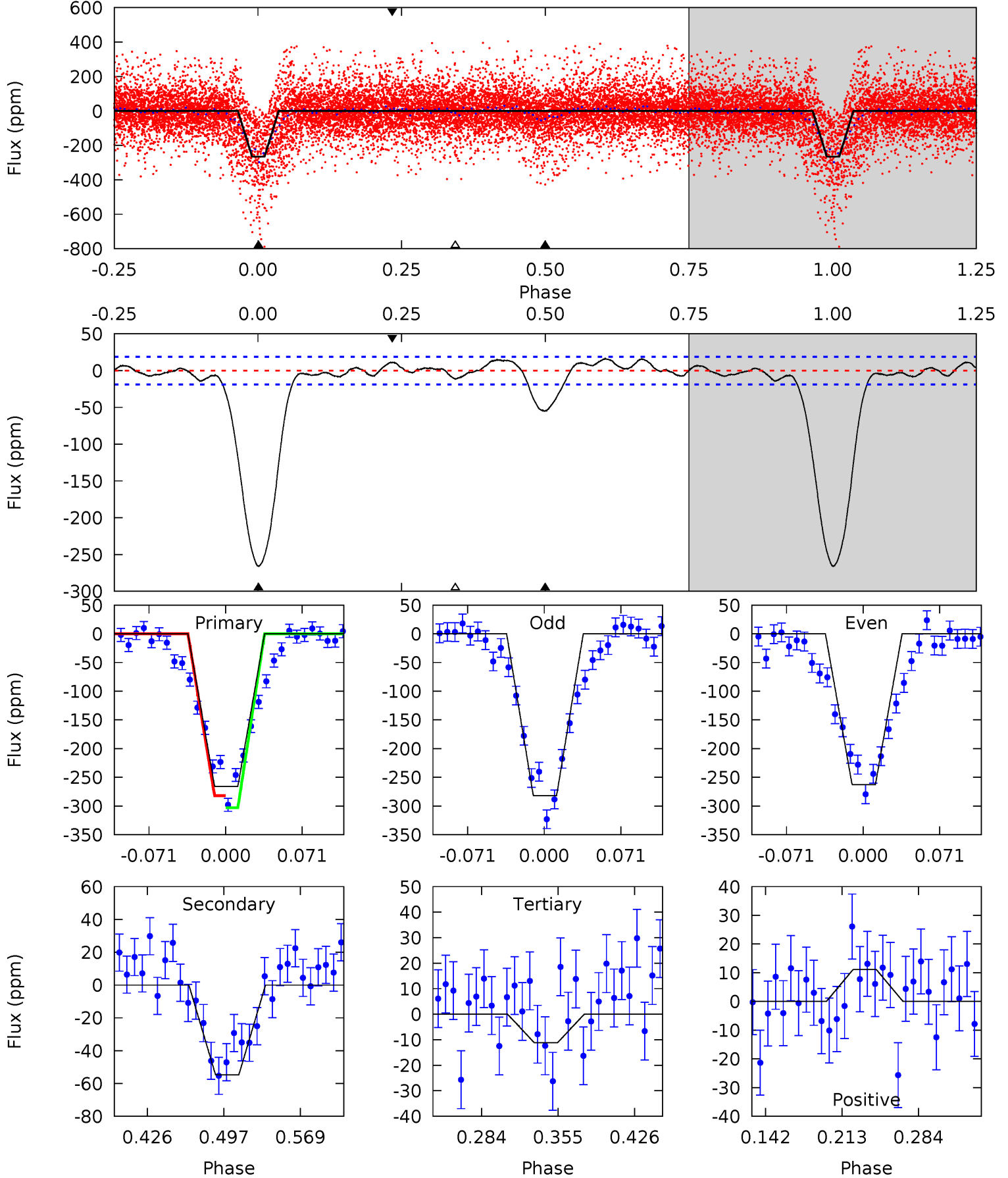
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
48.2	7.46	7.00	4.93	4.58	1.68	3.92	41.2	43.3	0.46	2.53	1.77	1.99	0.12	0.10



Alt Model-Shift Uniqueness Test

008848115-01, P = 0.824865 Days, E = 131.605643 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
65.3	13.4	2.75	2.73	4.64	1.81	1.72	62.5	62.6	10.7	10.7	2.33	2.13	0.06	2.50



Stellar Parameters For KIC 008848115

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4148^{+66}_{-66}	$1.458^{+0.150}_{-0.087}$	$-0.140^{+0.150}_{-0.150}$	$41.424^{+4.071}_{-12.214}$	$1.796^{+0.034}_{-0.651}$	$0.000^{+0.000}_{-0.000}$
	+2%/-2%	+10%/-6%	+107%/-107%	+10%/-29%	+2%/-36%	+94%/-25%
Source	SPE74	SPE74	SPE74	DSEP		

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

Secondary Eclipse Parameters for KIC 008848115-01 / KOI 7101.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-33 ± 4	$71.18^{+27.76}_{-26.78}$	11379^{+424}_{-643}	-9180^{+709}_{-538}	$0.002^{+0.002}_{-0.001}$
Alt.	-55 ± 4	$97.01^{+30.24}_{-26.71}$	11379^{+416}_{-576}	-9187^{+656}_{-520}	$0.001^{+0.001}_{-0.001}$

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 $A_{obs} \gg 1.0$

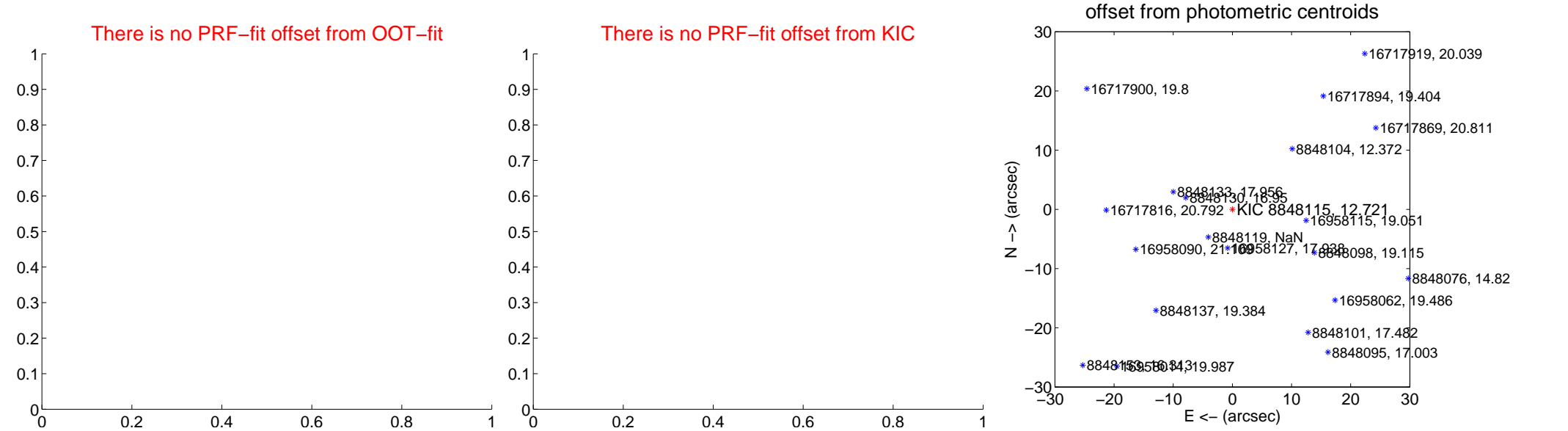
DV Centroid Data

Supplemental centroid analysis for 008848115-01. Kepler magnitude: 12.72. Transit SNR 26.02

There are 0 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	65.34 ± 0.53	124.29	-44.07 ± 0.57	48.24 ± 0.49

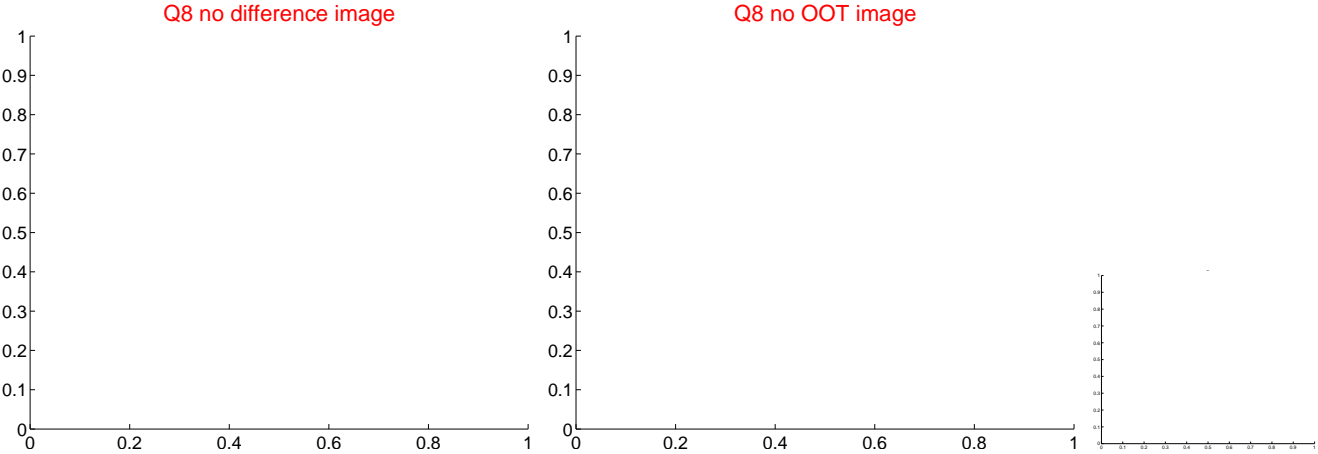


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

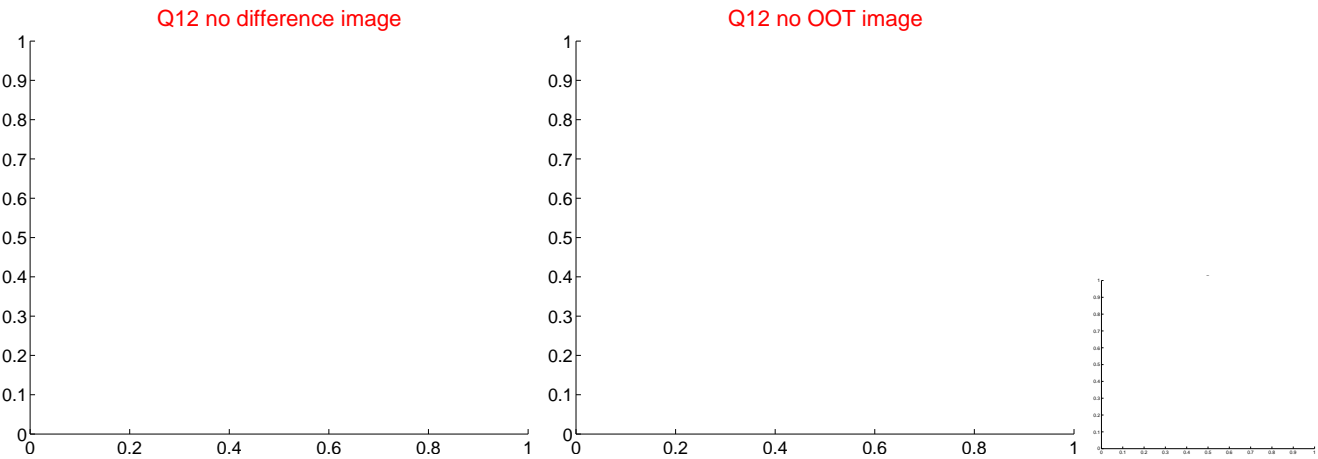
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



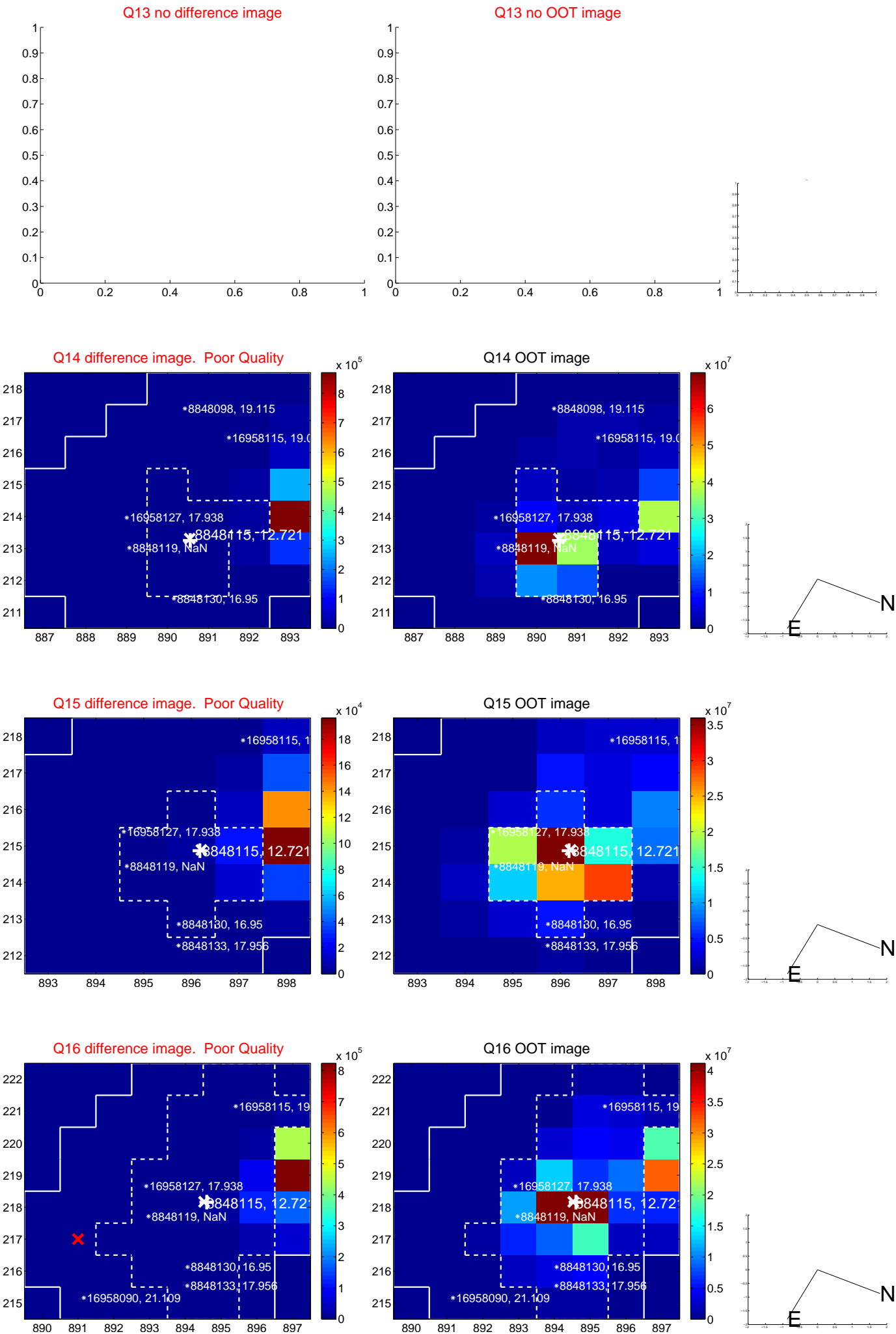
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



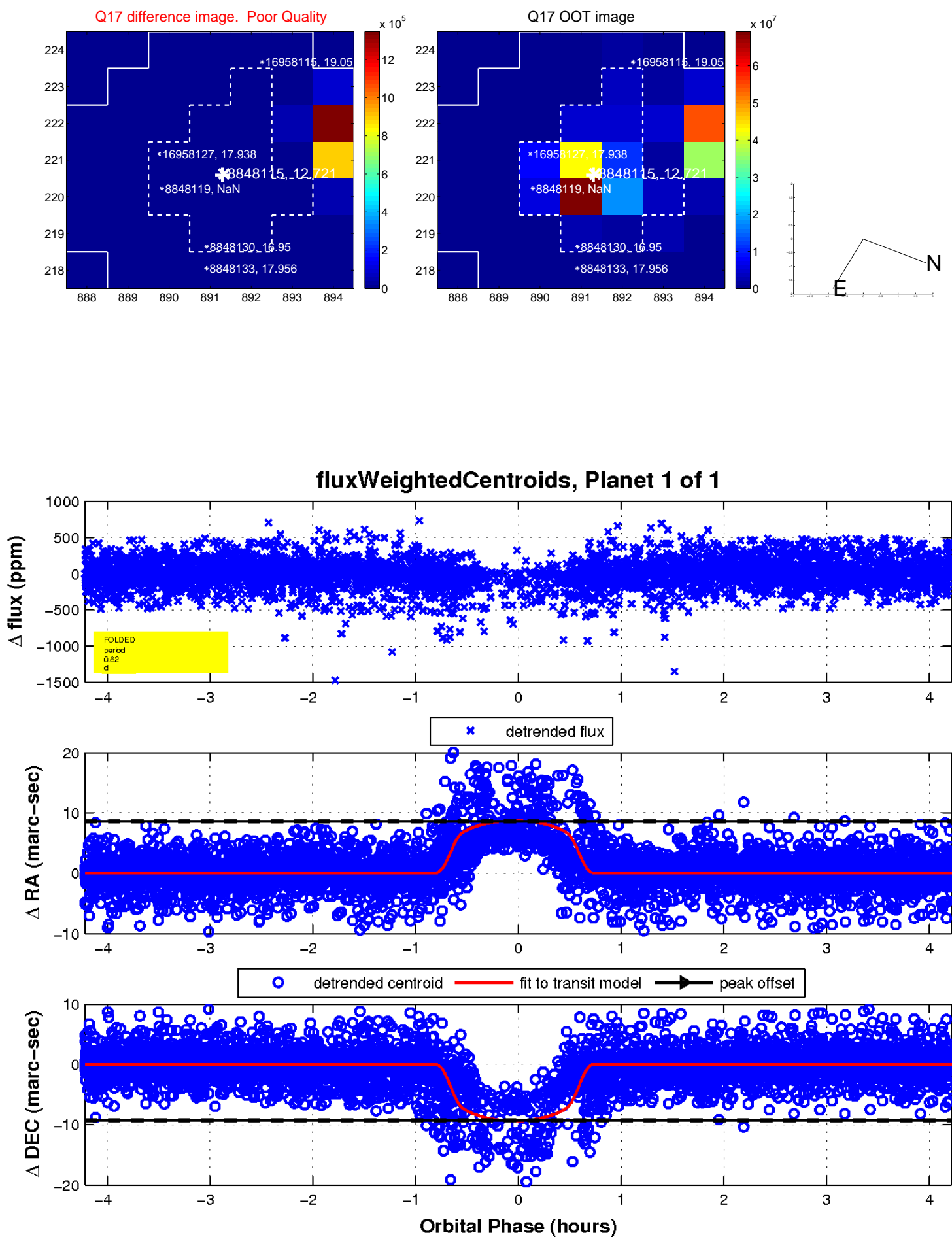
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UKIRT Image

