

KIC 011716643

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})
011716643-01	OBS	5929.01	466.003364	434.999147	2457.9	9.012	42.0	39.3	0.88	5830	4.43	0.58

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011716643-01	OBS	PC	0.94	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.

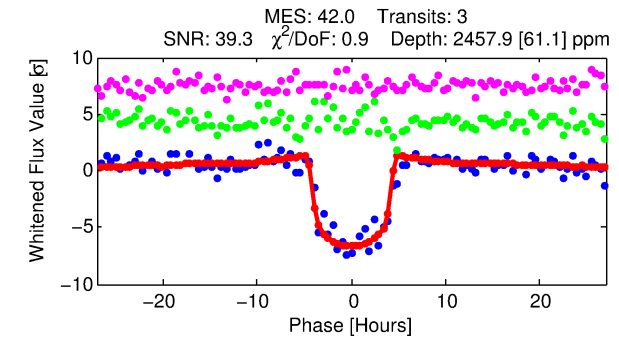
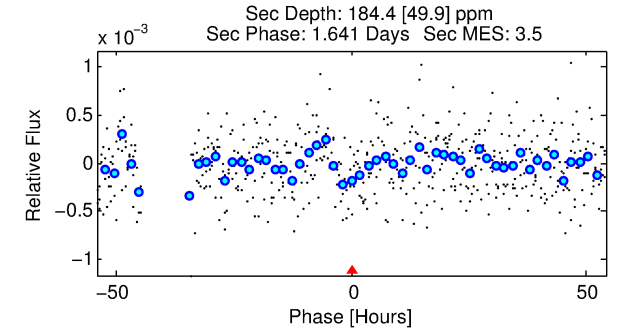
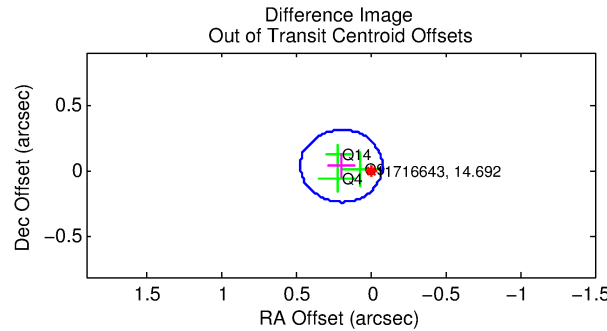
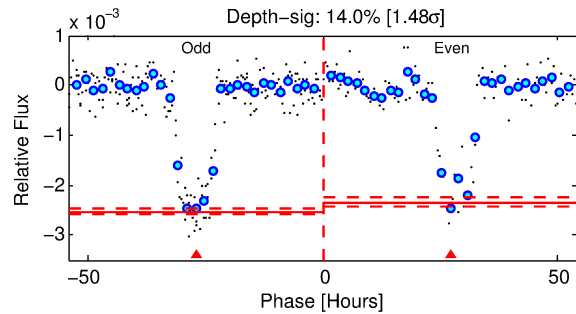
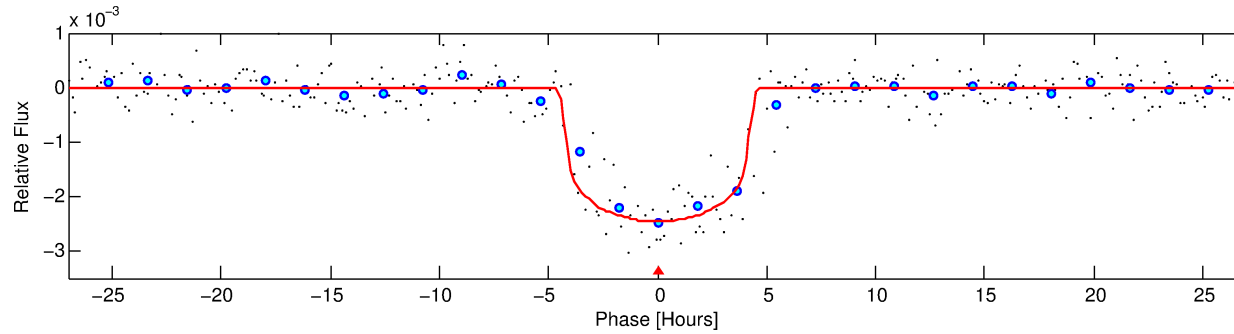
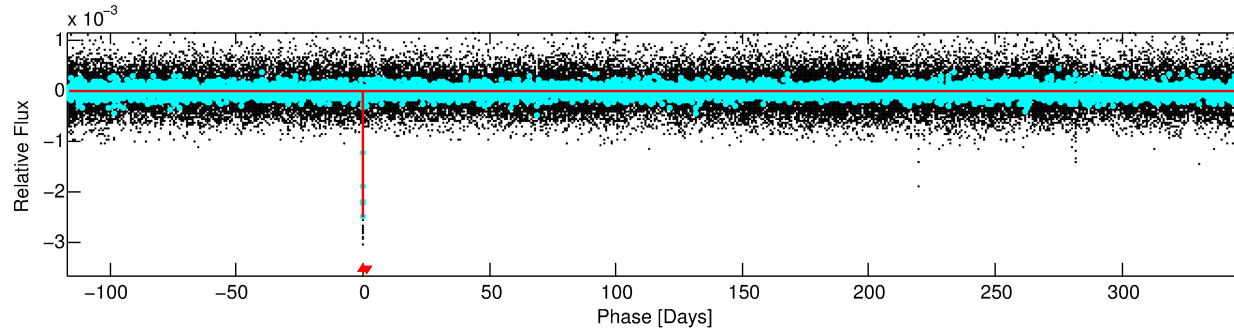
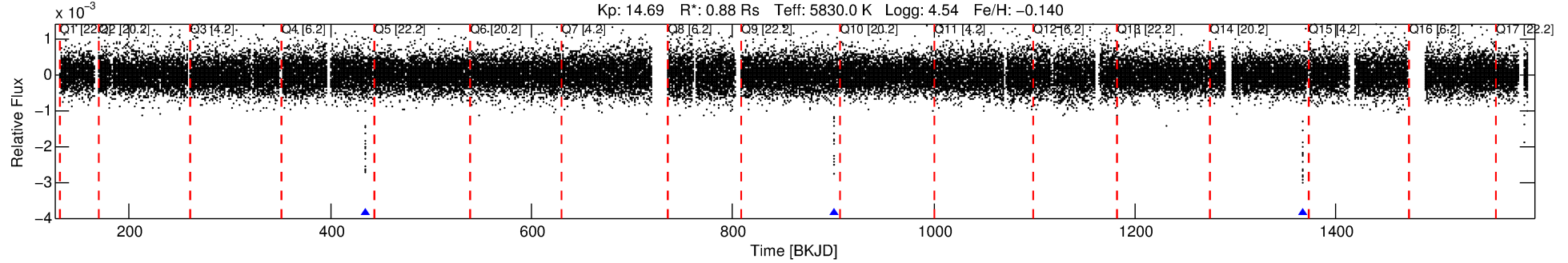
Ephemeris Match Information For 011716643-01

No Significant Match Found

DV One-Page Summary

KIC: 11716643 Candidate: 1 of 1 Period: 466.003 d
KOI: K05929.01 Corr: 0.917

Kp: 14.69 R*: 0.88 Rs Teff: 5830.0 K Logg: 4.54 Fe/H: -0.140



DV Fit Results:

Period = 466.00336 [0.00223] d
Epoch = 434.9991 [0.0030] BKJD
Rp/R* = 0.0463 [0.0046]
a/R* = 368.75 [161.62]
b = 0.47 [0.73]
Seff = 0.59 [0.21]
Teq = 223 [20] K
Rp = 4.43 [1.26] Re
a = 1.1649 [0.2648] AU
Ag = 7016.28 [3321.25] [2.11σ]
Teffp = 3156 [281] K [10.41σ]

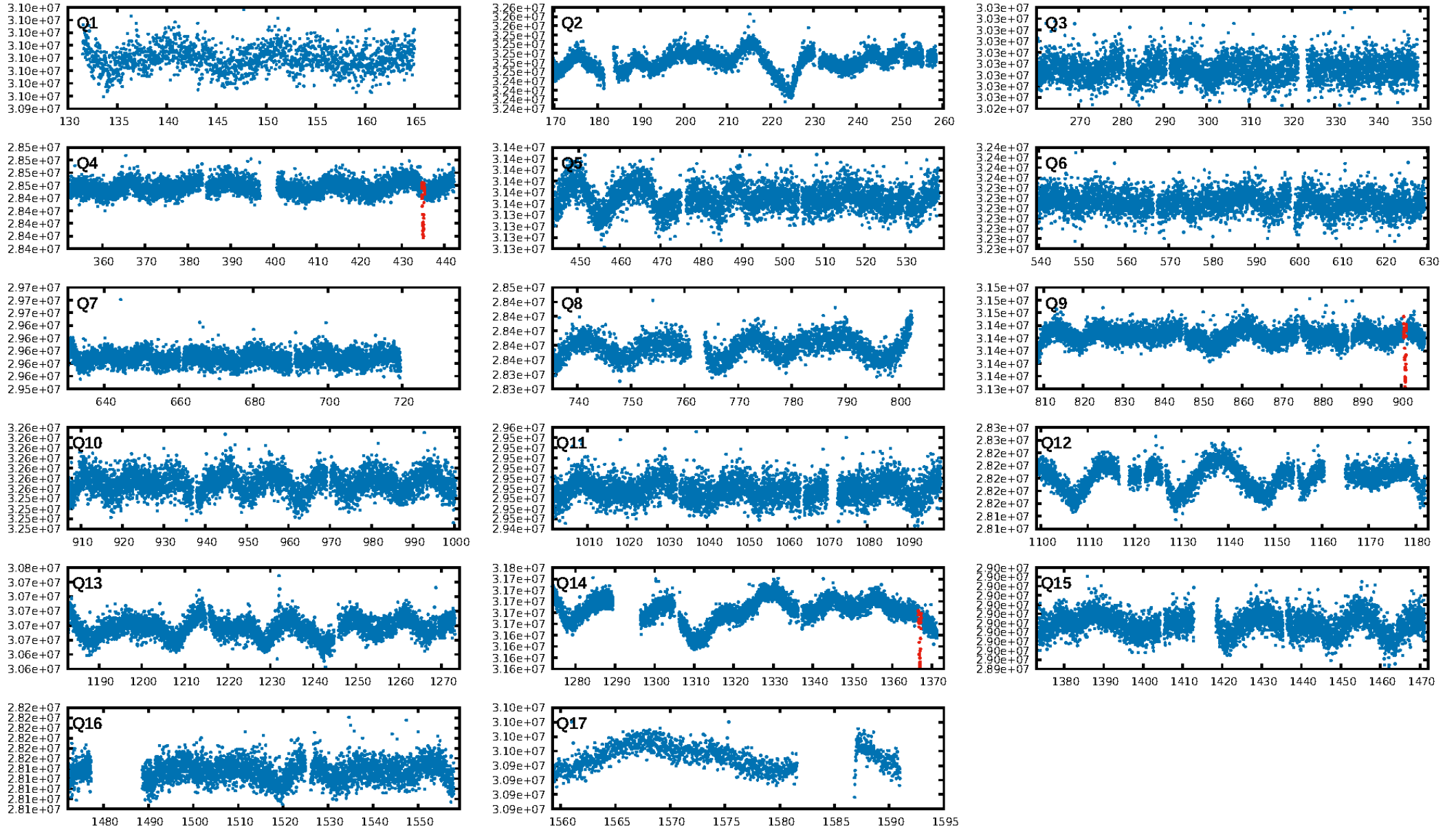
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 36.6%
ModelChiSquareGof-sig: 96.2%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 6.065
Centroid-sig: 28.7%
Centroid-so: 0.520 arcsec [1.69σ]
OotOffset-rm: 0.198 arcsec [2.17σ]
KicOffset-rm: 0.171 arcsec [1.69σ]
OotOffset-st: 1/0/1/1 [3]
KicOffset-st: 1/0/1/1 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

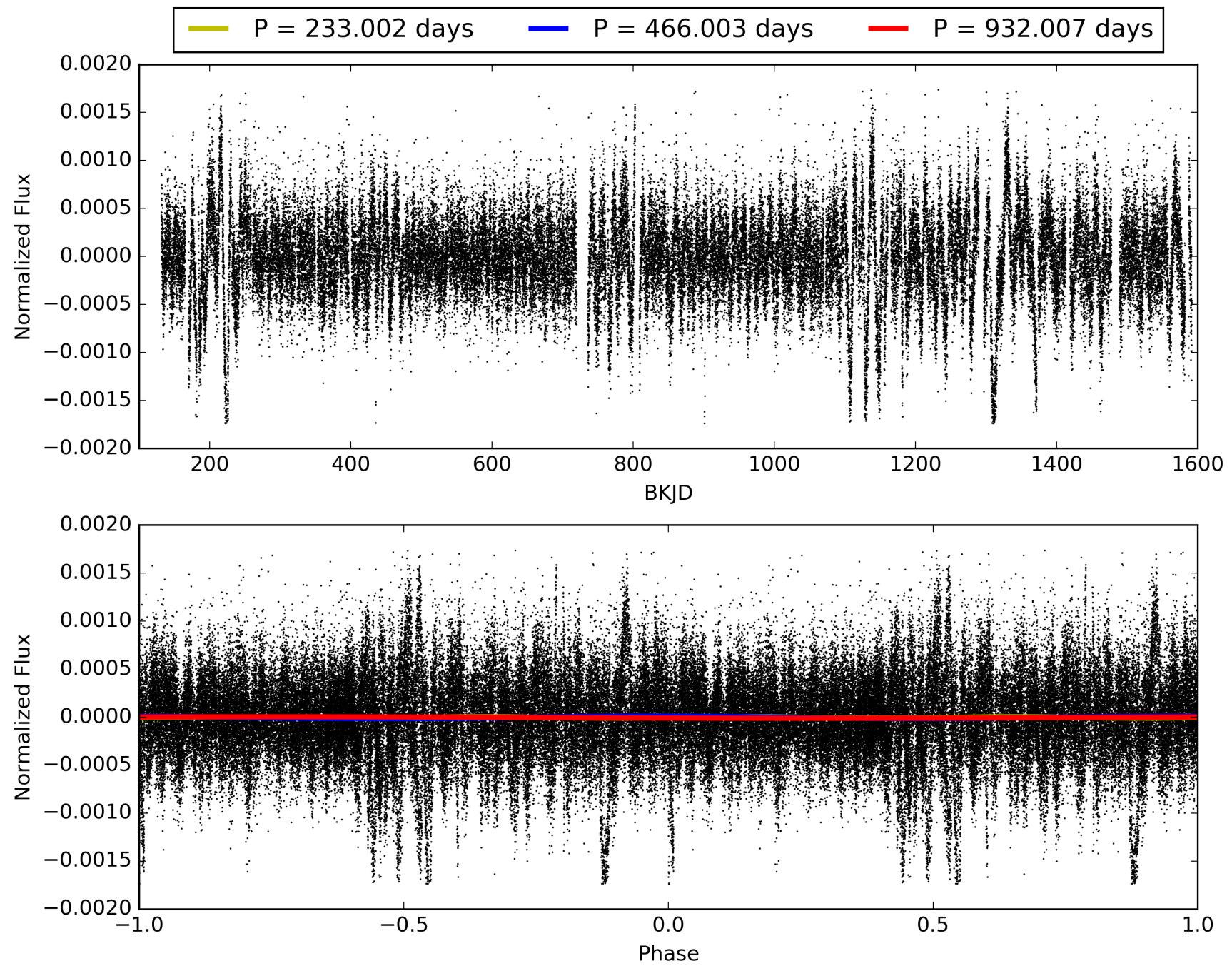
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:45:33 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 011716643-01, PDC Light Curves

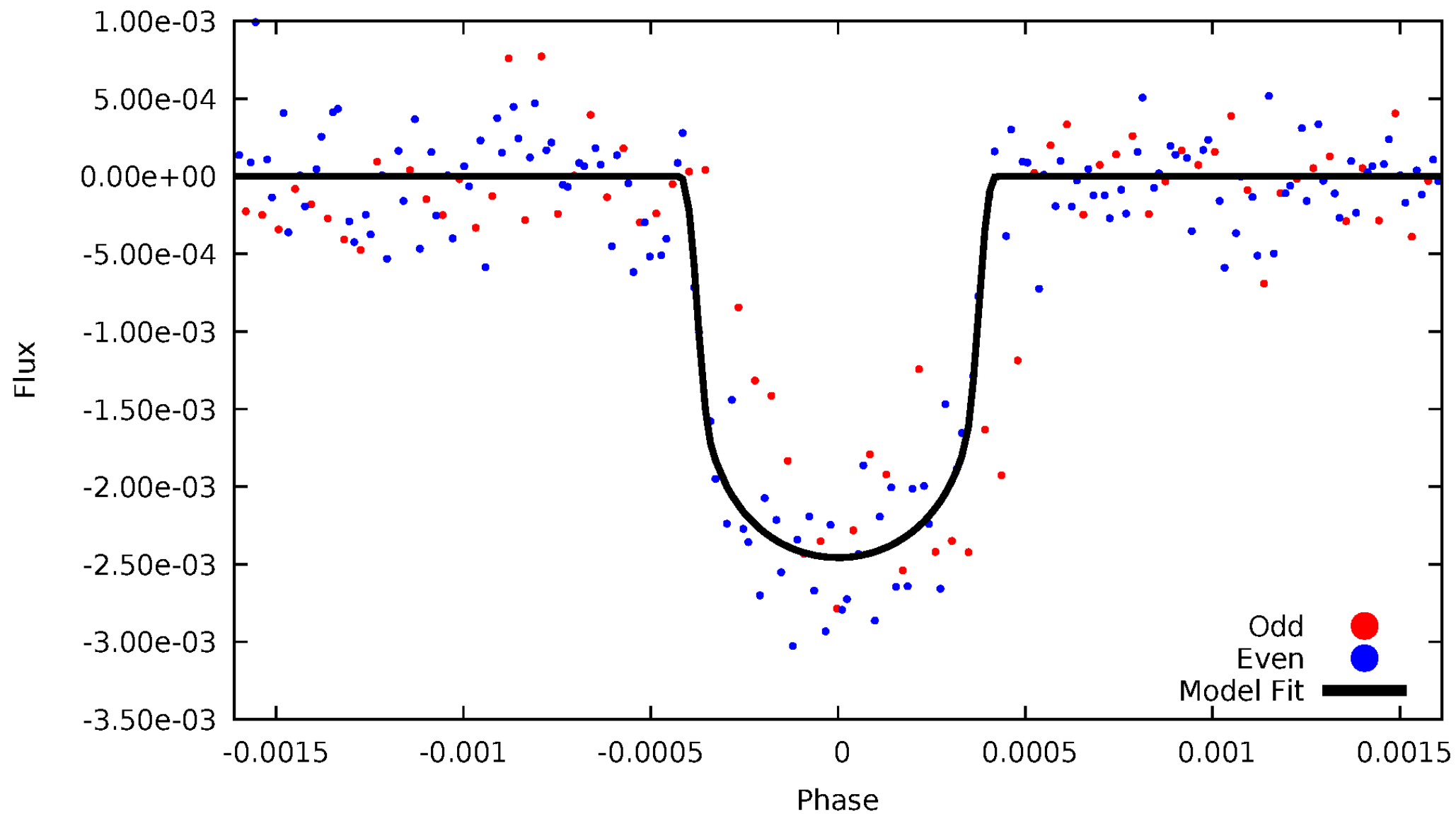


TCE 011716643-01



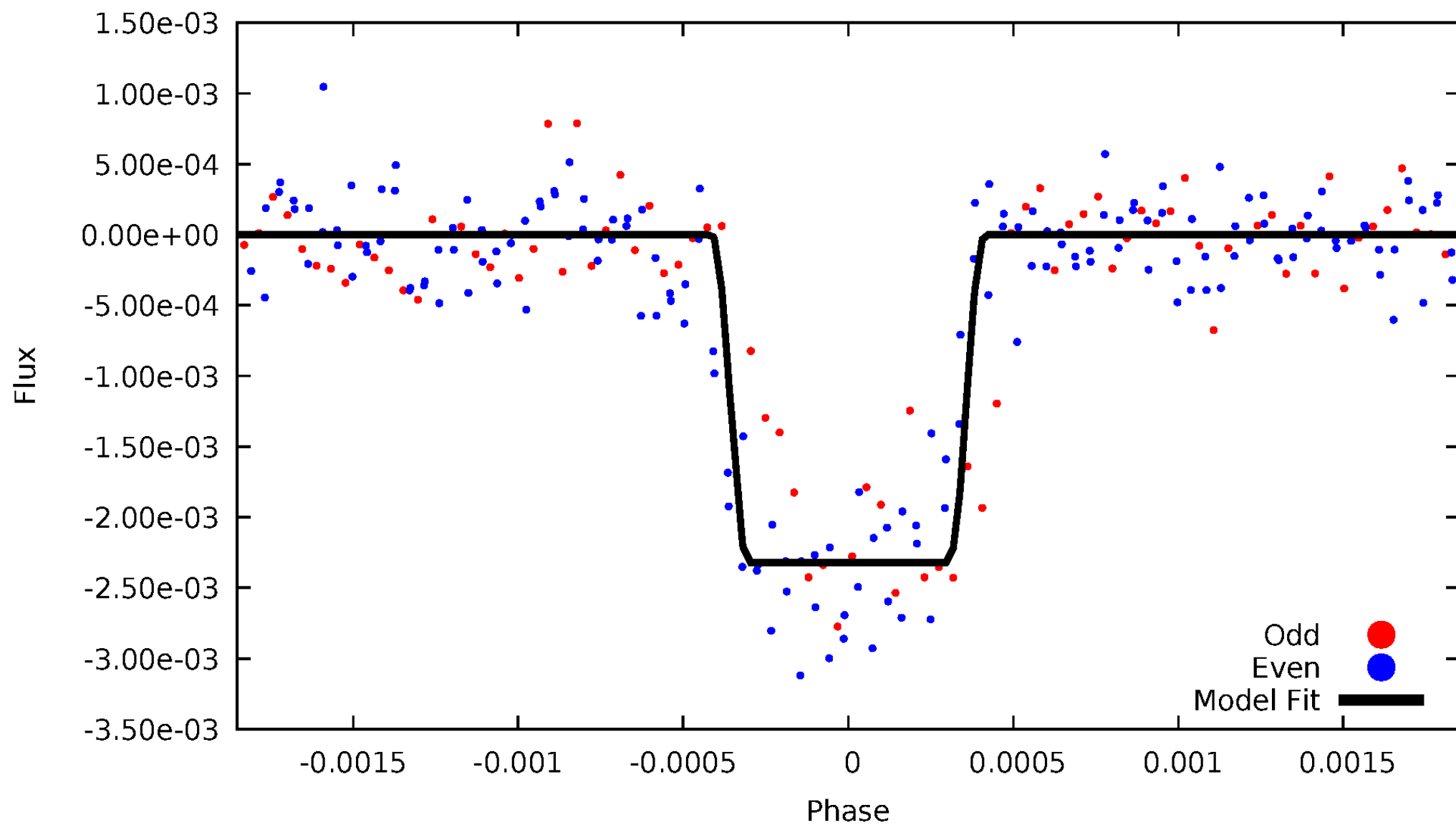
DV Odd/Even

TCE 011716643-01



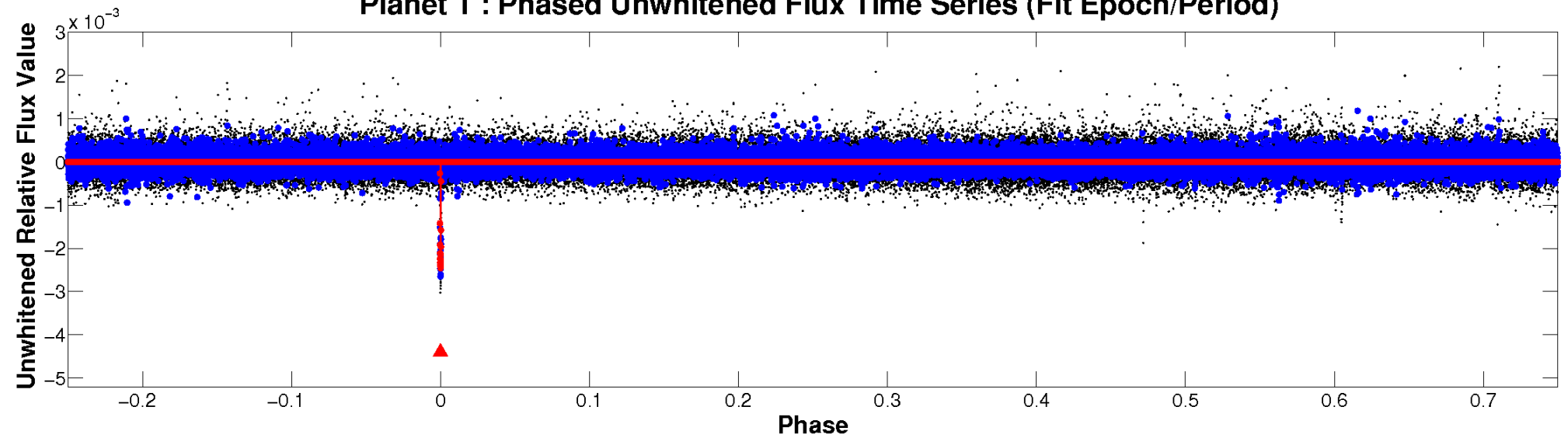
ALT Odd/Even

TCE 011716643-01

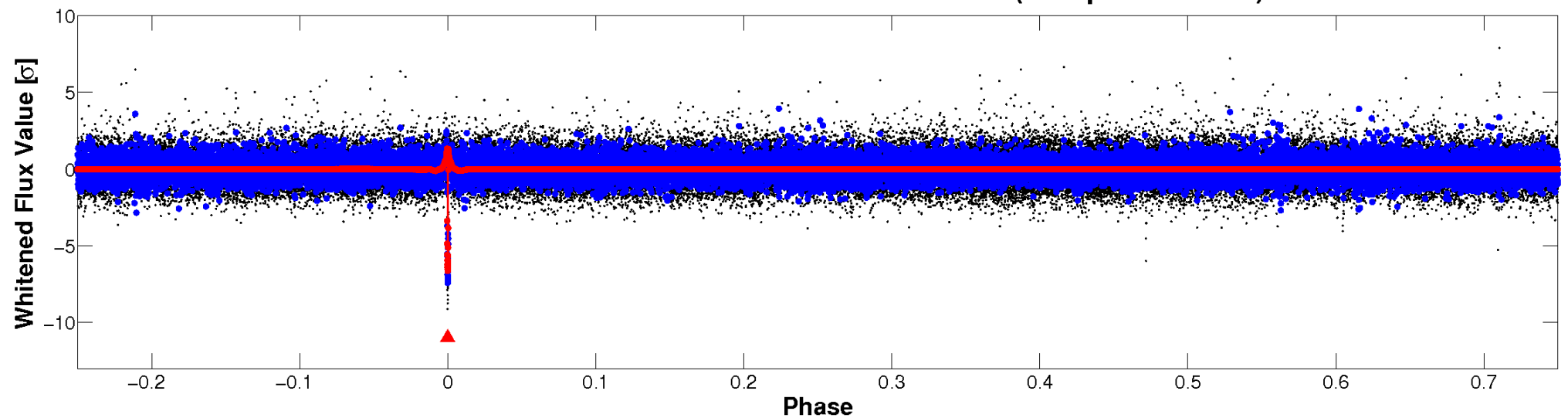


Non-Whitened Vs. Whitened Light Curve

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

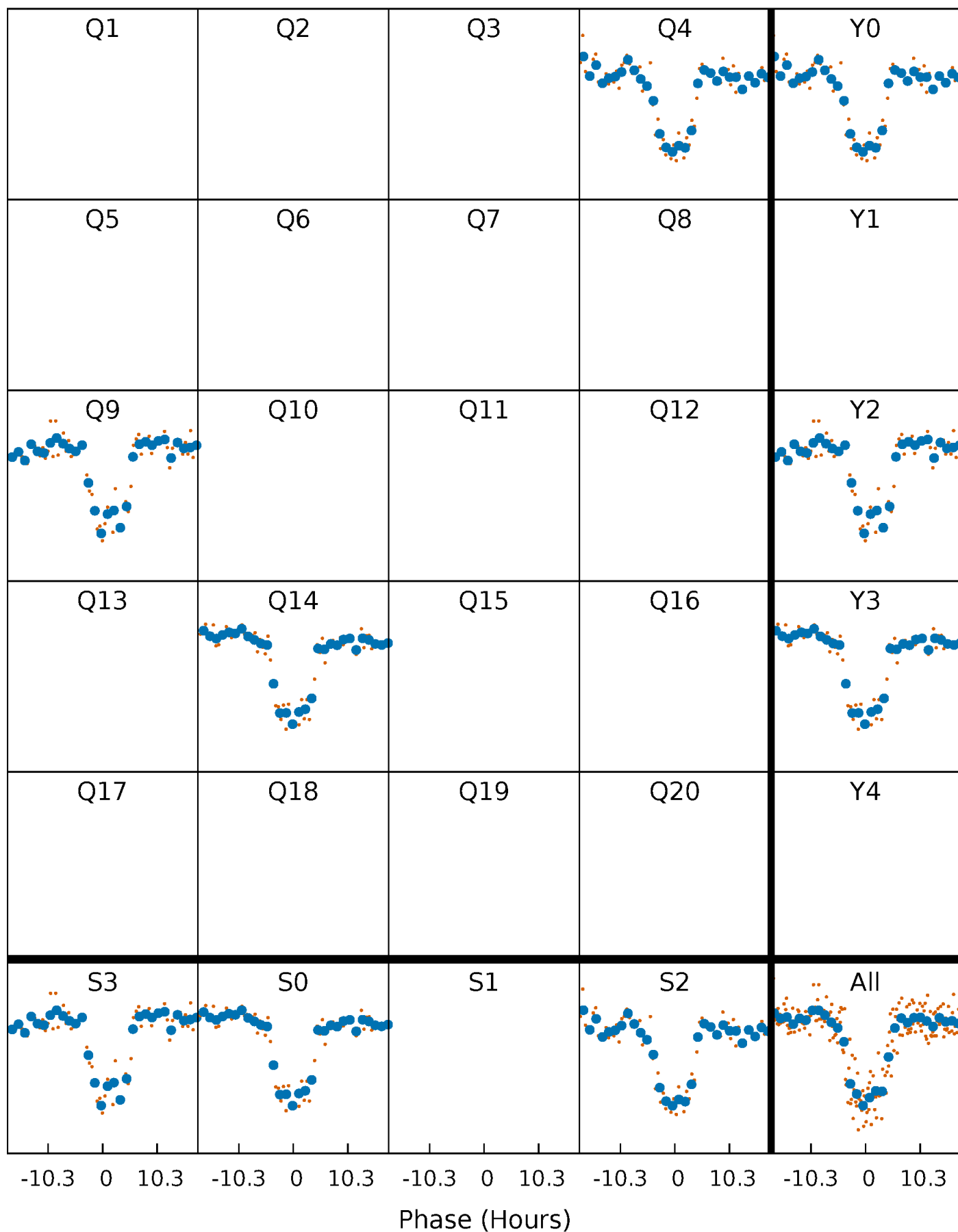


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



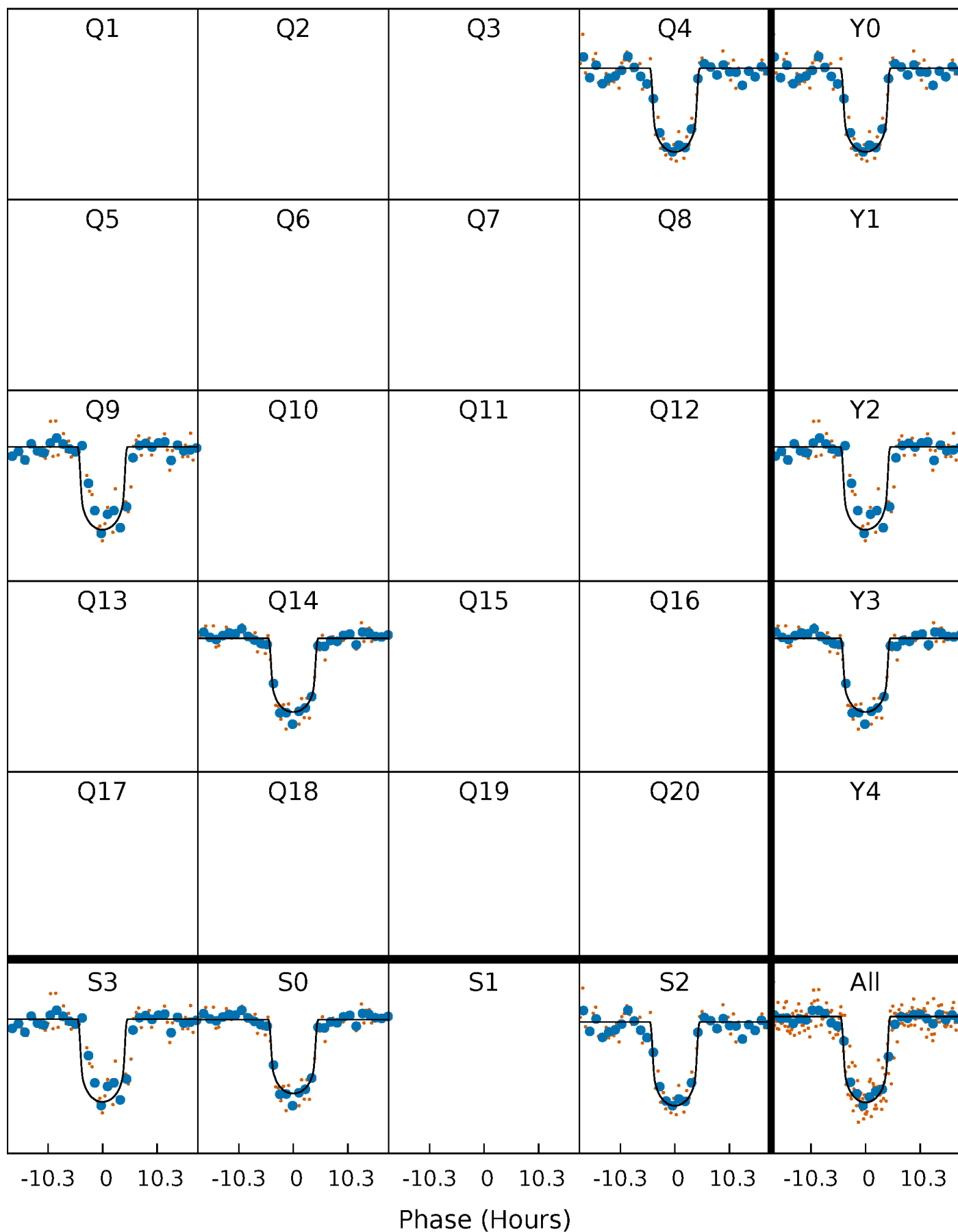
PDC Quarter-Phased Transit Curves

TCE 011716643-01 P=466.003363 Days $T_0=434.999147$ (BKJD)



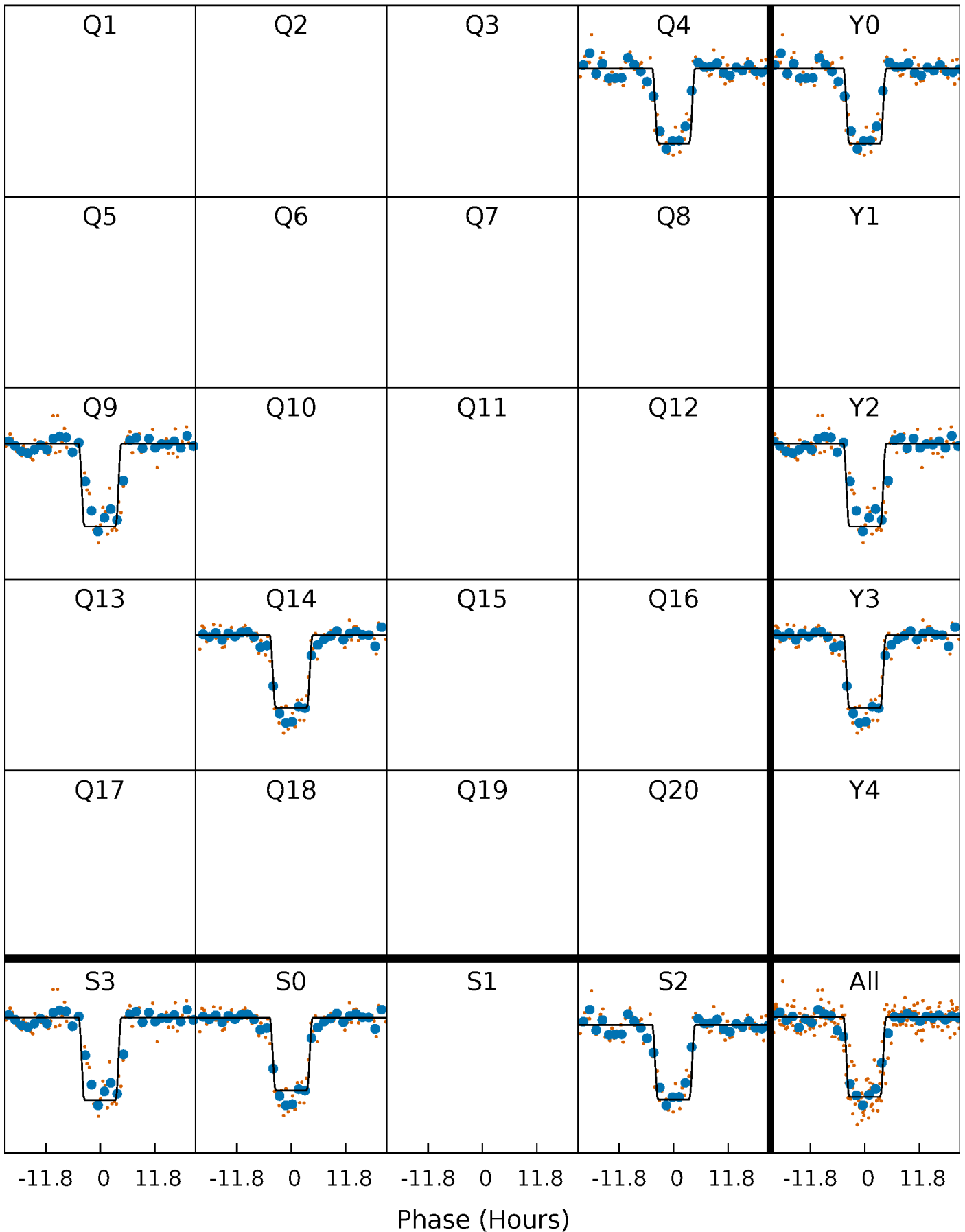
DV Quarter-Phased Transit Curves

TCE 011716643-01 P=466.003363 Days $T_0=434.999147$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

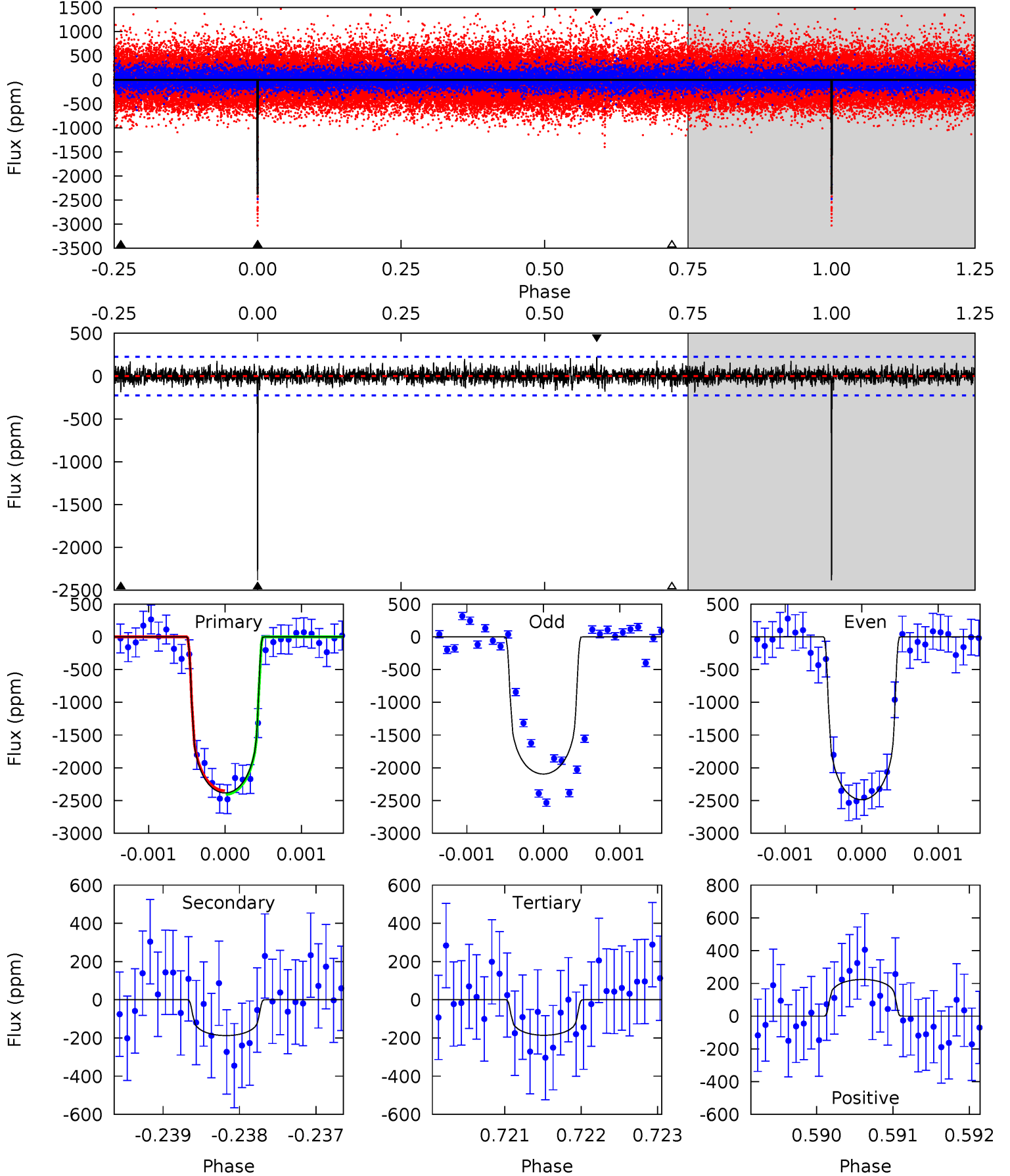
TCE 011716643-01 P=466.000958 Days $T_0=435.015489$ (BKJD)



DV Model-Shift Uniqueness Test

011716643-01, P = 466.003363 Days, E = 434.999147 Days

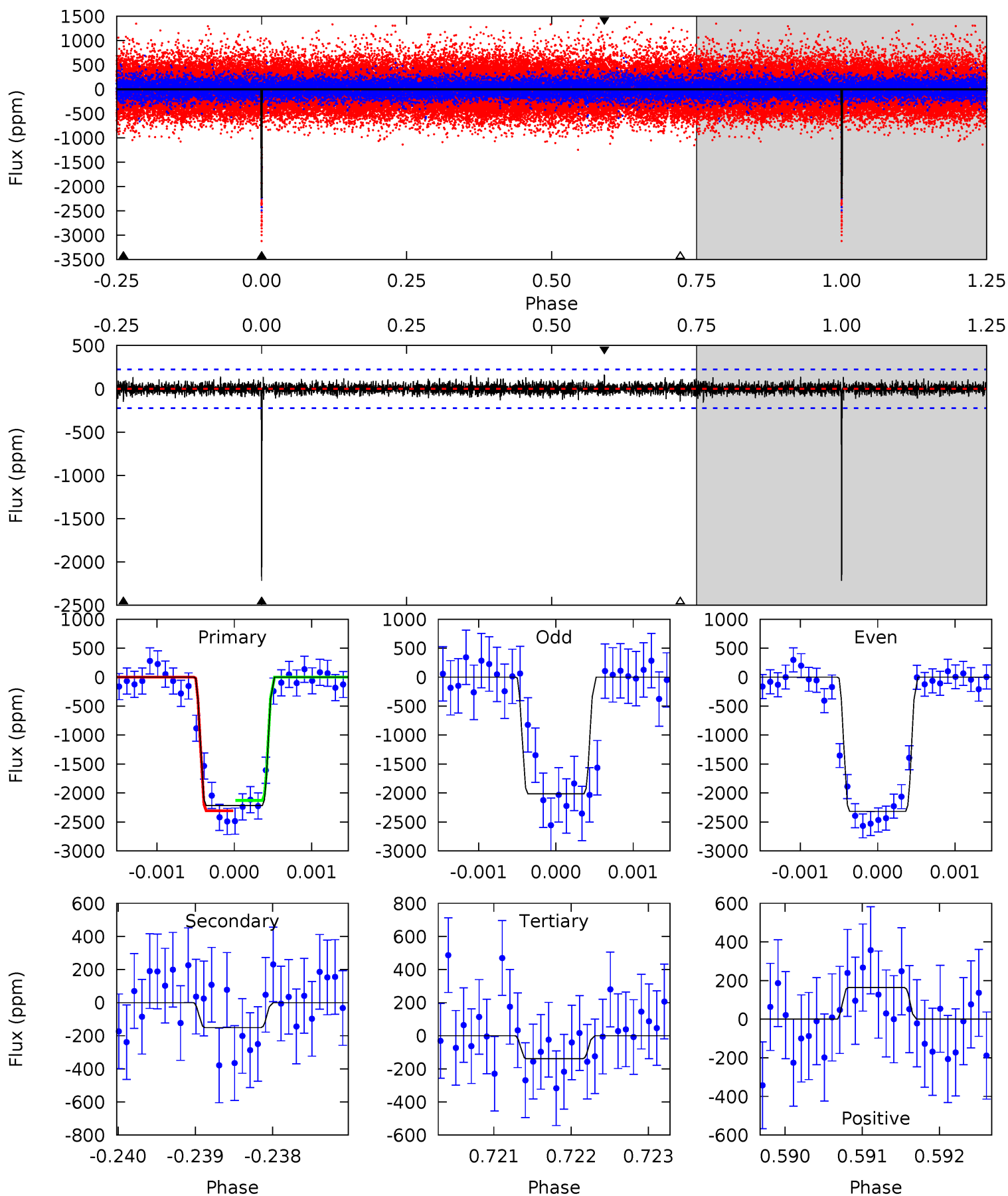
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
58.0	4.56	4.52	5.45	5.48	3.34	1.21	53.5	52.6	0.04	-0.89	4.47	1.00	0.09	0.69



Alt Model-Shift Uniqueness Test

011716643-01, P = 466.000958 Days, E = 435.015489 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
54.5	3.70	3.42	4.02	5.49	3.35	0.90	51.1	50.5	0.28	-0.32	3.45	1.05	0.07	2.21



Stellar Parameters For KIC 011716643

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5830^{+140}_{-175}	$4.540^{+0.035}_{-0.184}$	$-0.140^{+0.300}_{-0.300}$	$0.876^{+0.234}_{-0.078}$	$0.970^{+0.111}_{-0.122}$	$2.036^{+0.376}_{-0.999}$
	+2%/-3%	+1%/-4%	+214%/-214%	+27%/-9%	+11%/-13%	+18%/-49%
Source	PHO1	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 011716643-01 / KOI 5929.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-187 ± 41	$4.60^{+0.83}_{-0.58}$	318^{+20}_{-13}	3602^{+180}_{-178}	6346^{+2320}_{-2032}
Alt.	-151 ± 41	$4.82^{+0.76}_{-0.64}$	319^{+19}_{-13}	3449^{+197}_{-203}	4766^{+2068}_{-1703}

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 $A_{obs} \gg 1.0$

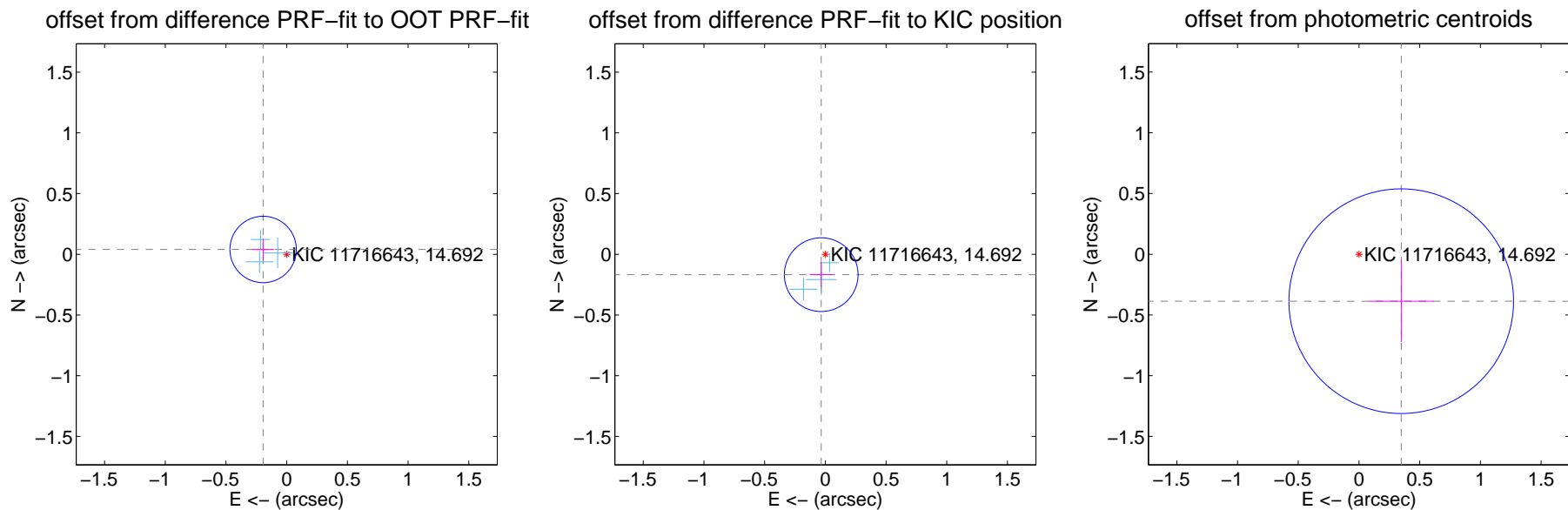
DV Centroid Data

Supplemental centroid analysis for 011716643-01. Kepler magnitude: 14.69. Transit SNR 39.34

There are 3 quarters with good PRF difference image offsets

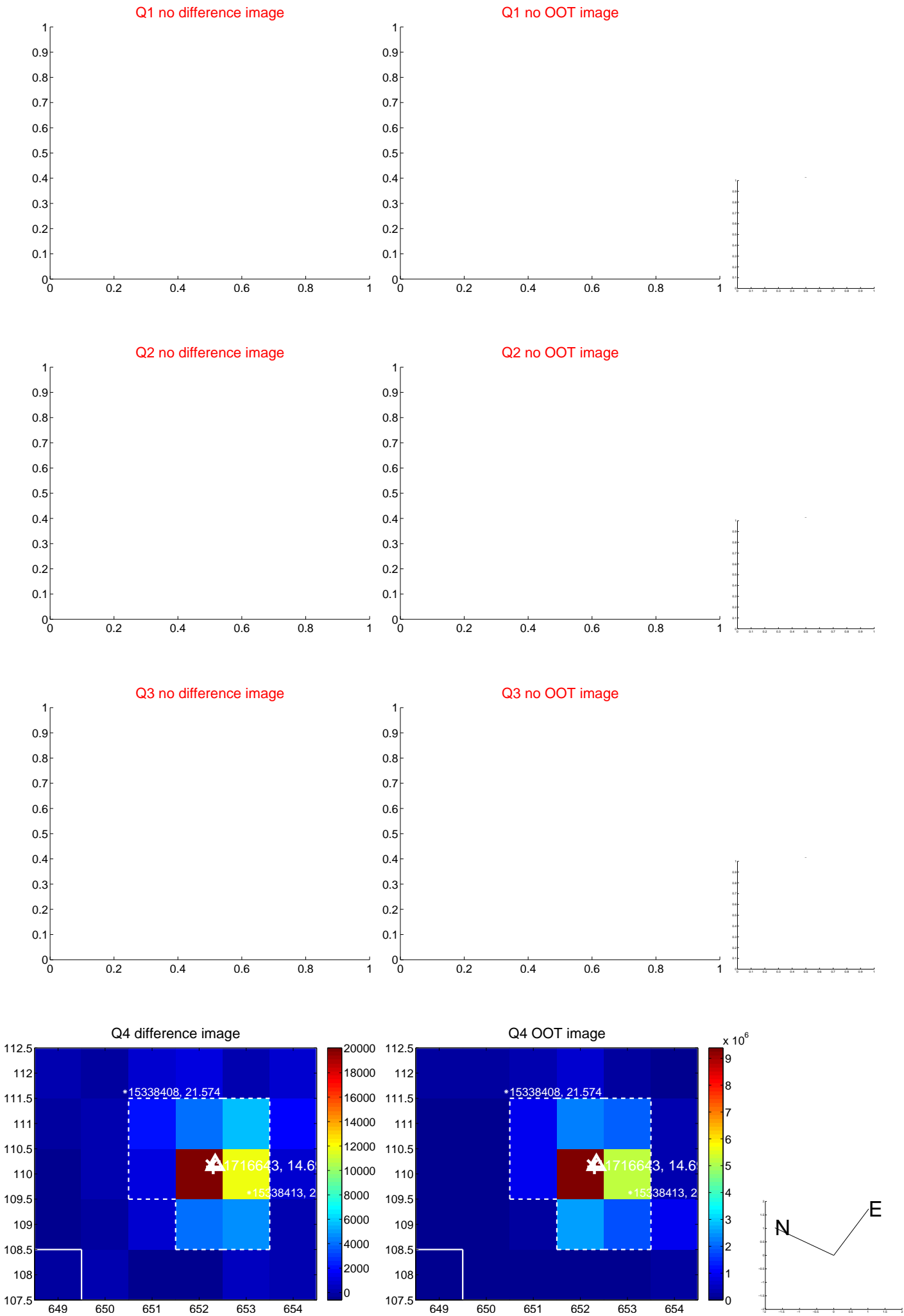
The direct PRF centroid is offset from the target star catalog position by about 0.31 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.198 ± 0.091	2.17	0.194 ± 0.091	0.040 ± 0.089
PRF-fit source offset from KIC position	0.171 ± 0.101	1.69	0.034 ± 0.096	-0.168 ± 0.101
photometric centroid source offset	0.52 ± 0.31	1.69	-0.35 ± 0.27	-0.39 ± 0.34



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.

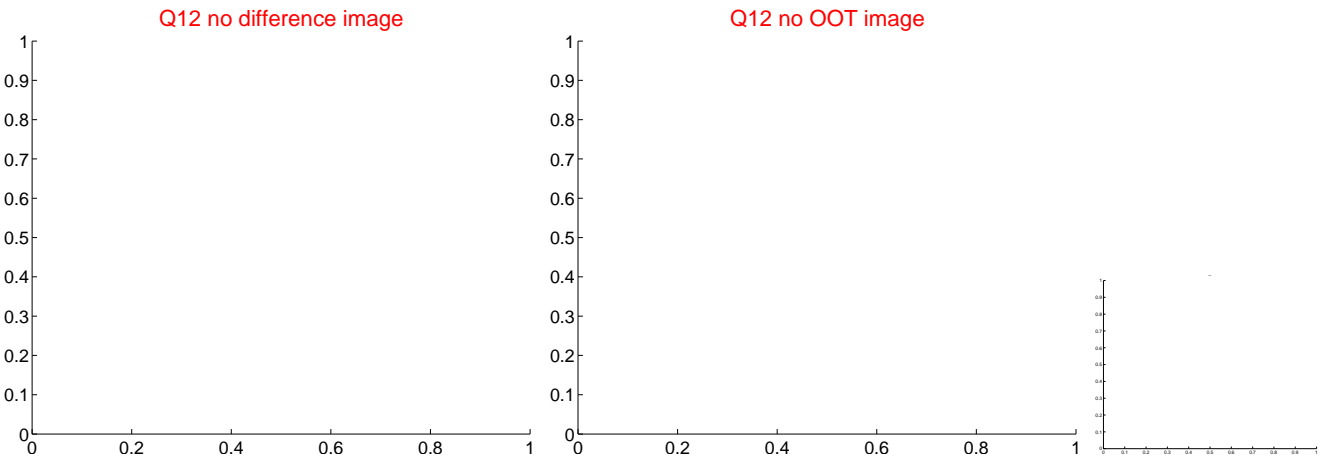
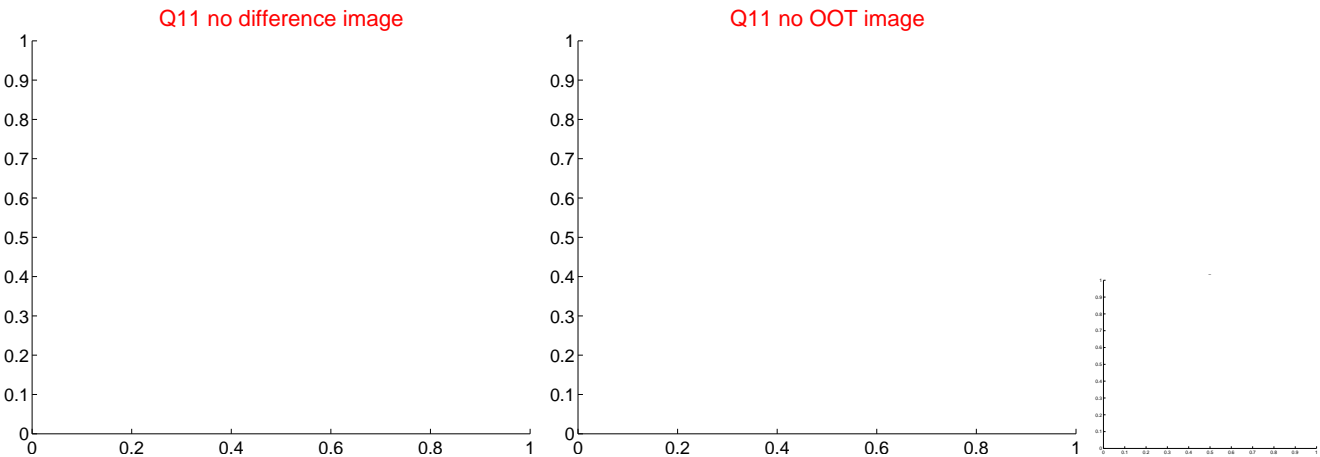
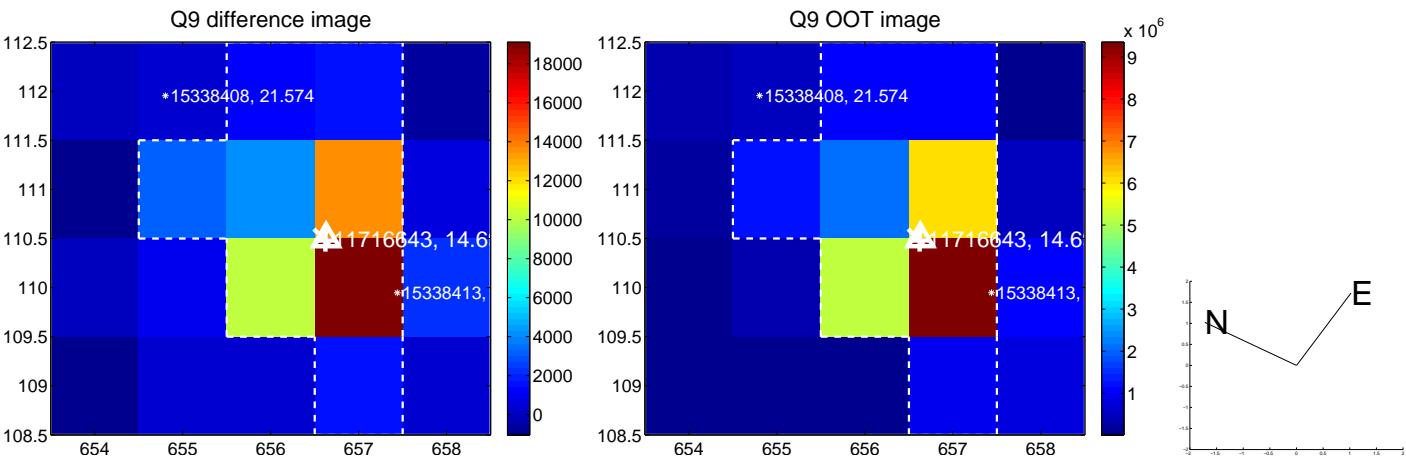
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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

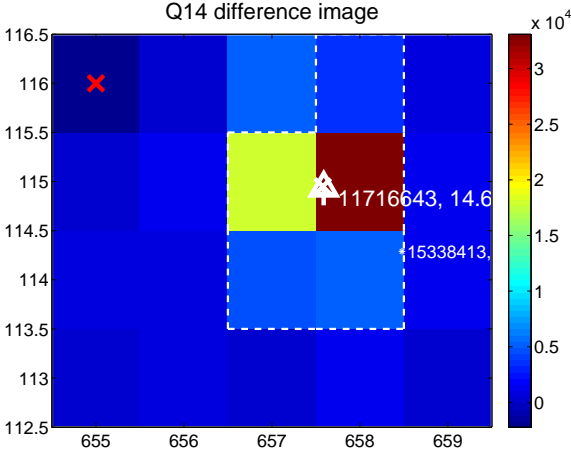
Q13 no difference image



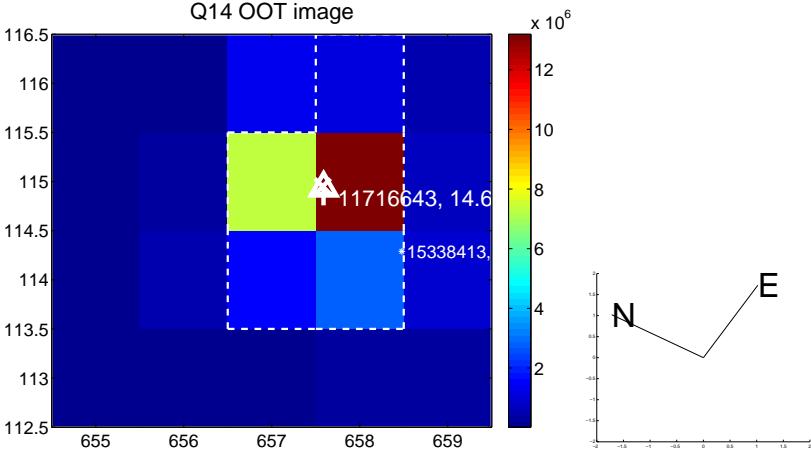
Q13 no OOT image



Q14 difference image



Q14 OOT image



Q15 no difference image



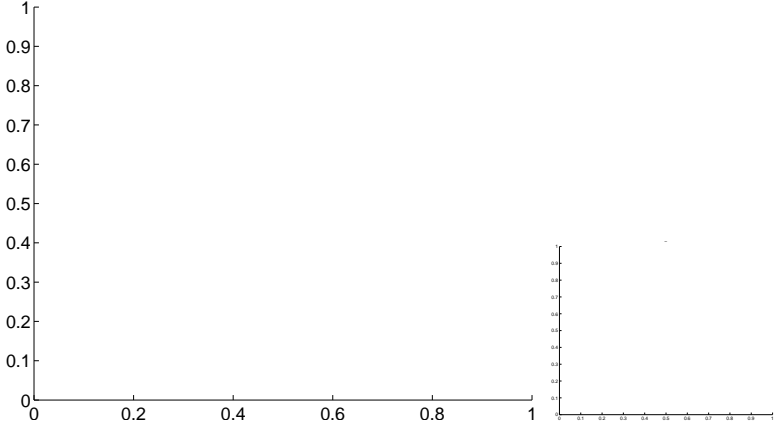
Q15 no OOT image



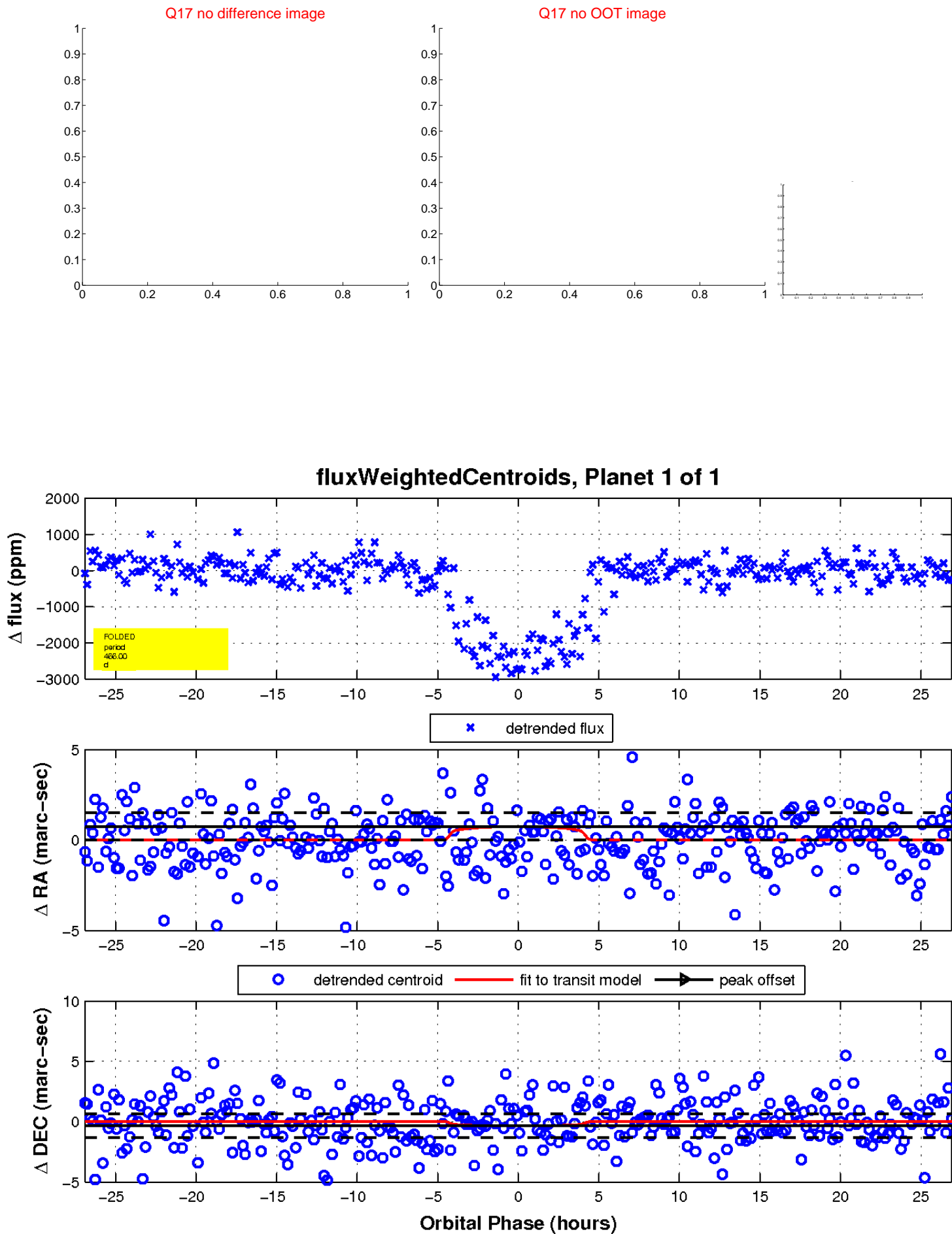
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

