

KIC 009911112

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})
009911112-01	OBS	5733.01	1.166836	131.910944	14745.4	2.051	480.0	439.4	2.12	8982	31.71	33807.01

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009911112-01	OBS	FP	0.00	0	1	0	0	MOD_ODDEVEN_DV

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

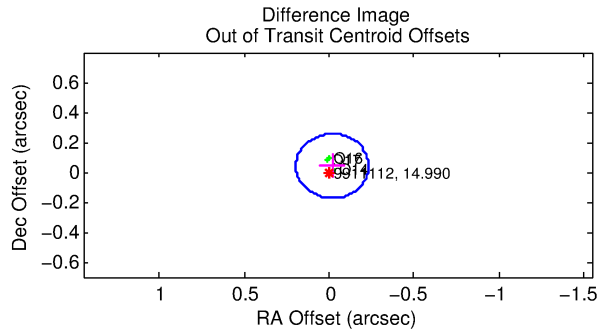
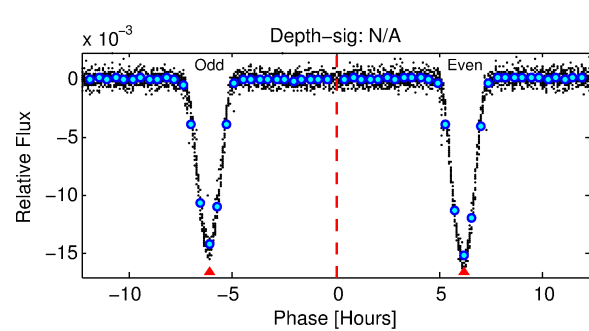
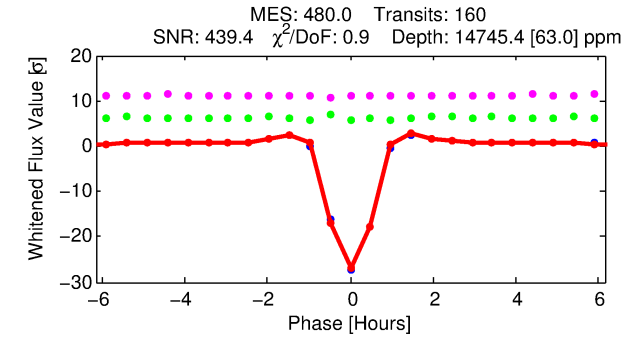
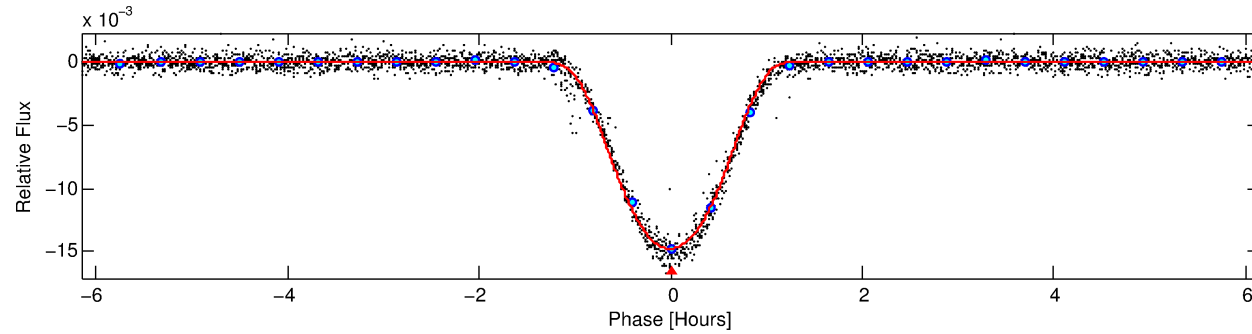
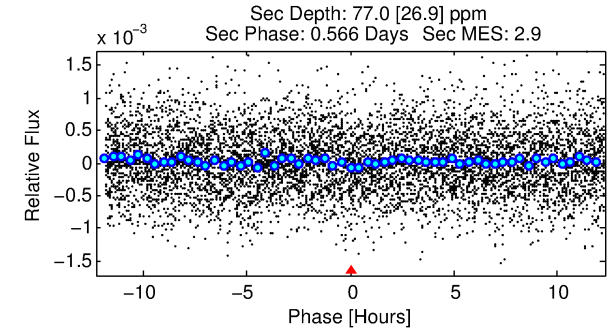
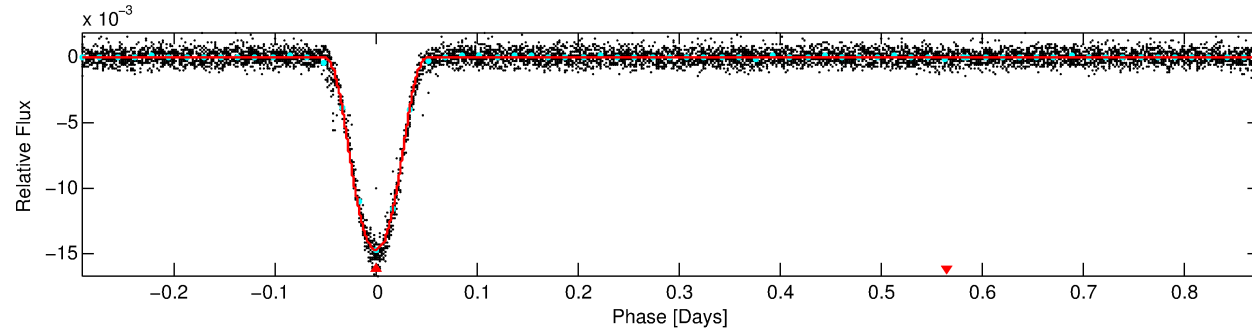
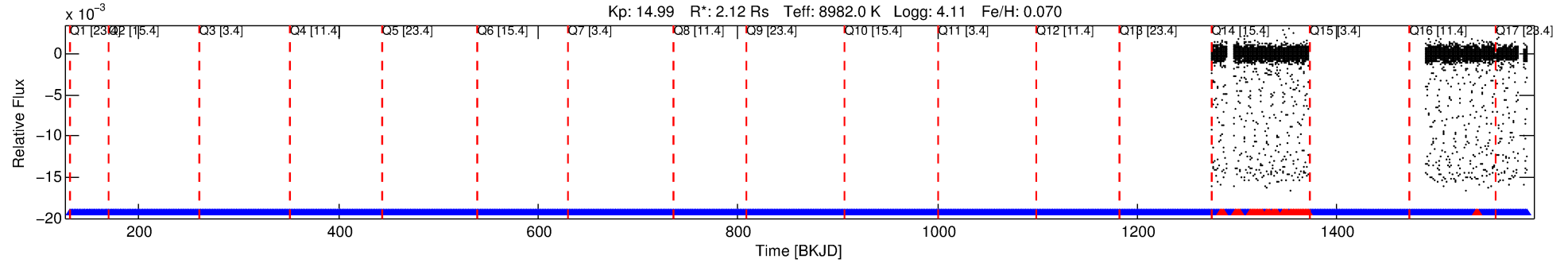
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009911112-01

No Significant Match Found

DV One-Page Summary

KIC: 9911112 Candidate: 1 of 1 Period: 1.167 d
KOI: K05733.01 Corr: 0.978



DV Fit Results:

Period = 1.16684 [0.00000] d
Epoch = 131.9109 [0.0001] BKJD
Rp/R* = 0.1369 [0.0027]
a/R* = 3.18 [0.03]
b = 0.90 [0.01]
Seff = 33807.01 [12619.67]
Teq = 3458 [323] K
Rp = 31.71 [9.36] Re
a = 0.0279 [0.0065] AU
Ag = 0.03 [0.02] [-62.14]
Teffp = 2274 [227] K [-3.00]

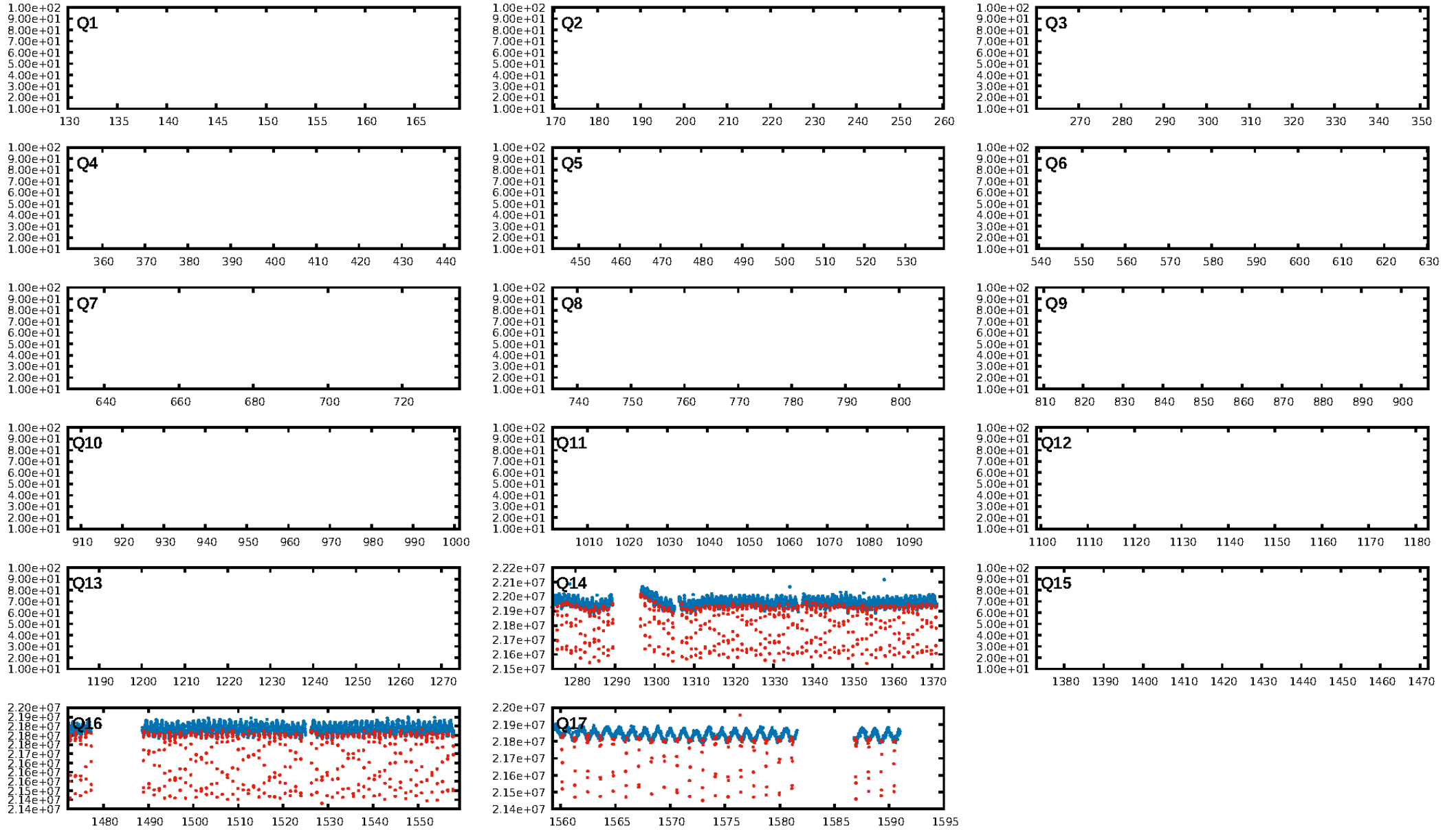
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 0.64 [88/137]
GhostDiagnostic-chr: 4.14
Centroid-sig: 0.0%
Centroid-so: 0.478 arcsec [17.97]
OotOffset-rm: 0.045 arcsec [0.62]
OotOffset-st: 1/0/1/1 [3]
KicOffset-rm: 0.064 arcsec [0.94]
KicOffset-st: 1/0/1/1 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

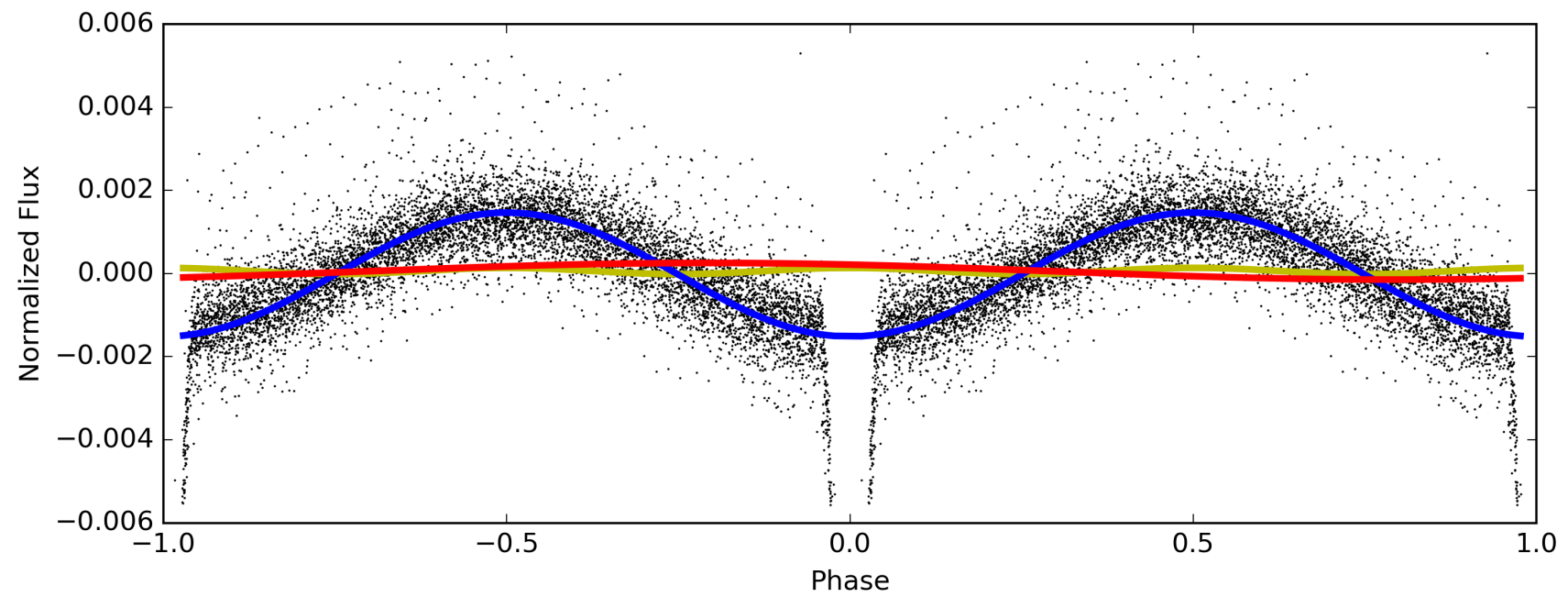
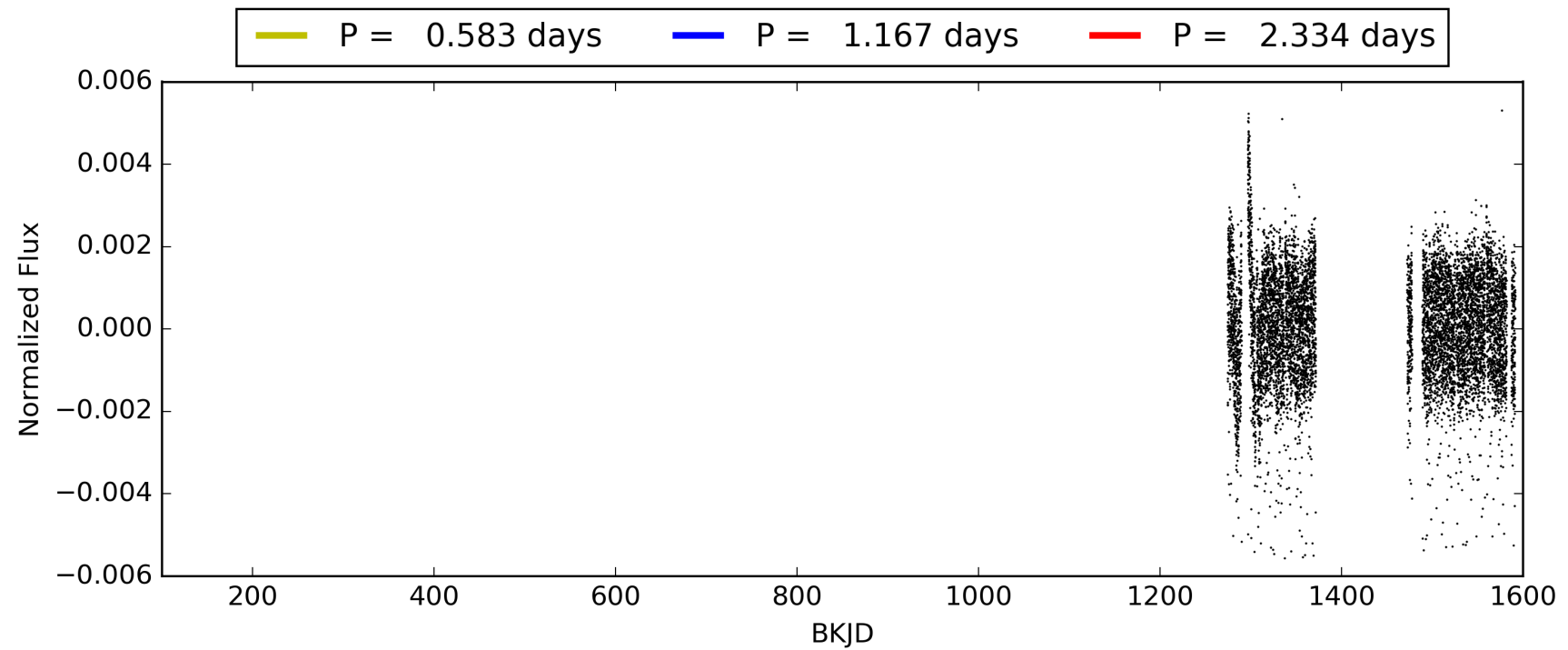
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 16:54:41 Z

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

TCE 009911112-01, PDC Light Curves

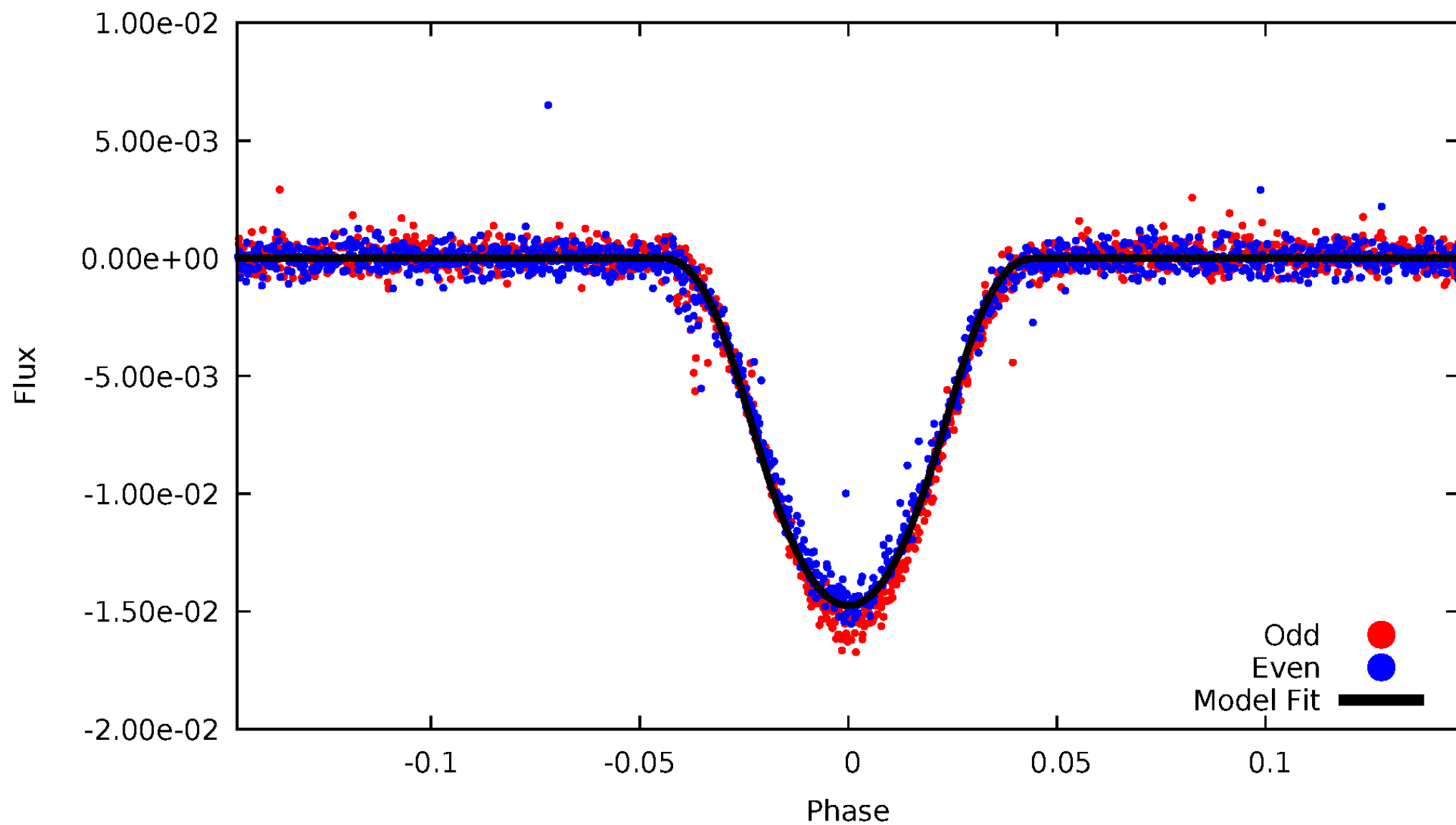


TCE 00991112-01



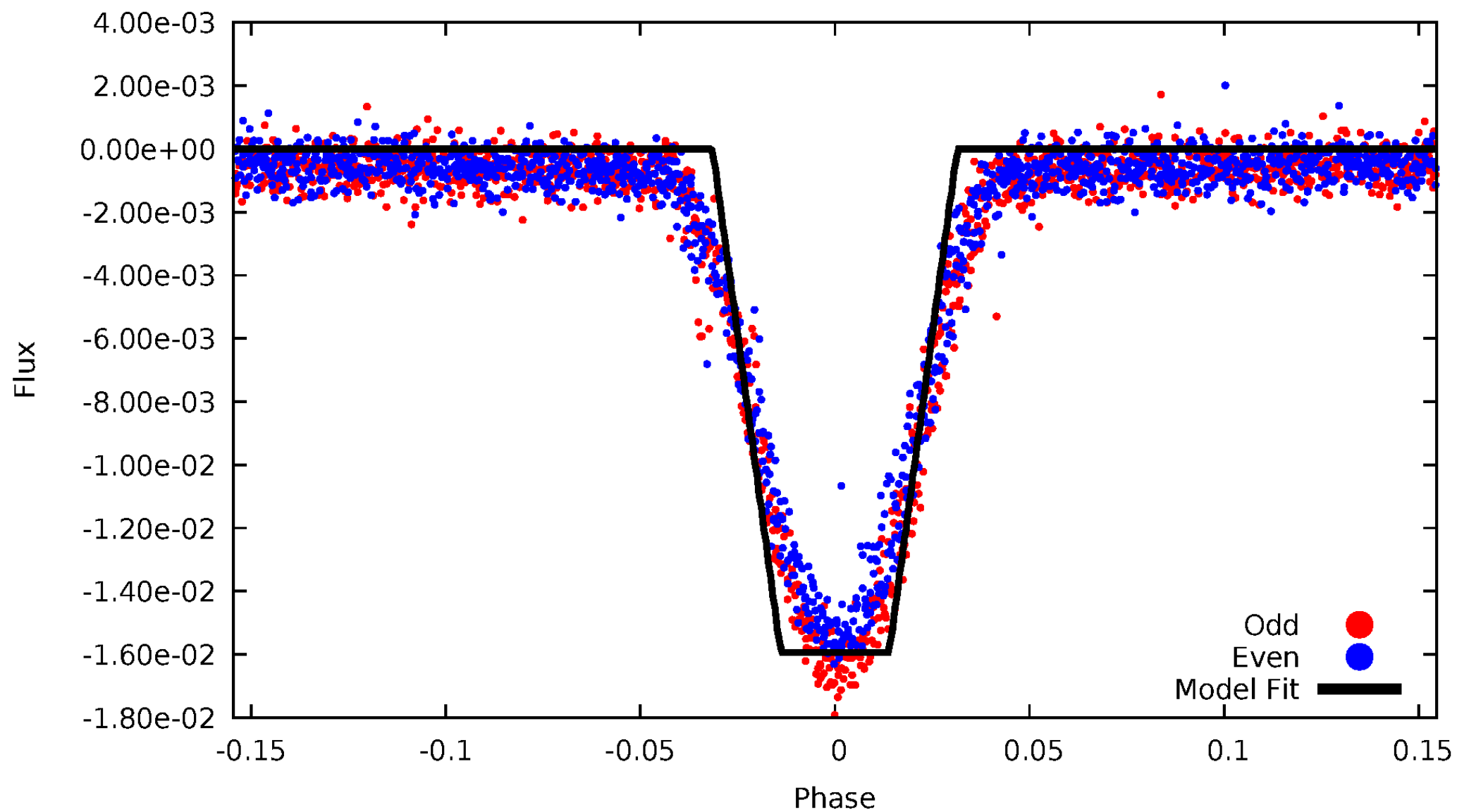
DV Odd/Even

TCE 009911112-01



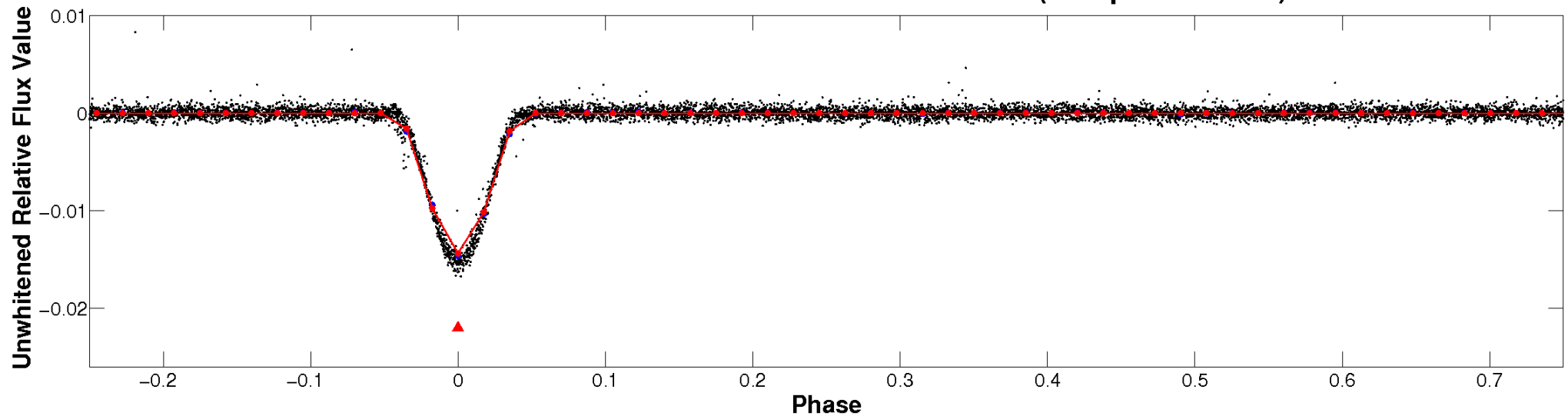
ALT Odd/Even

TCE 009911112-01

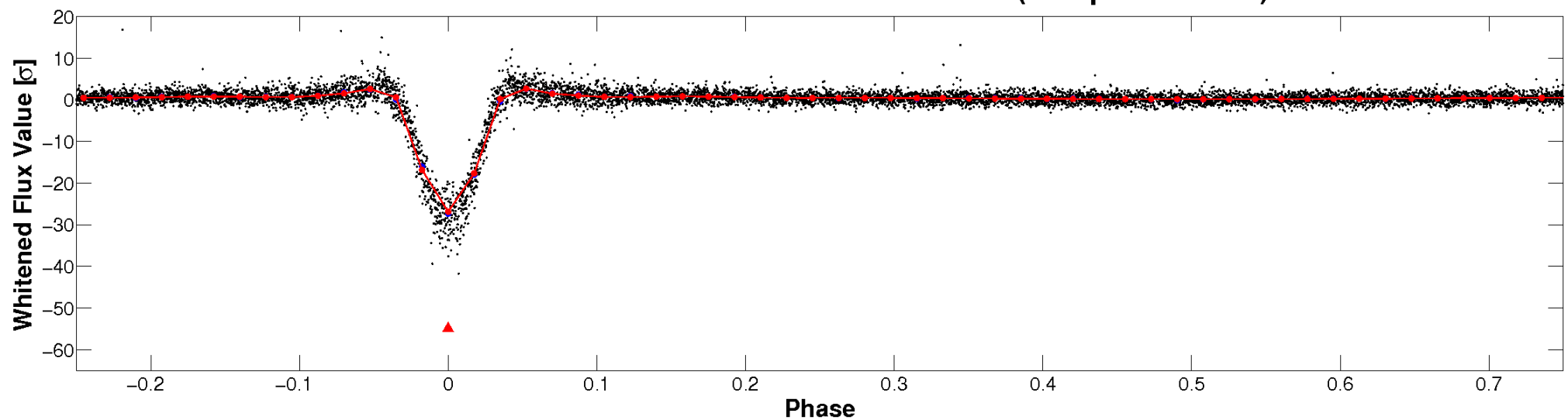


Non-Whitened Vs. Whitened Light Curve

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

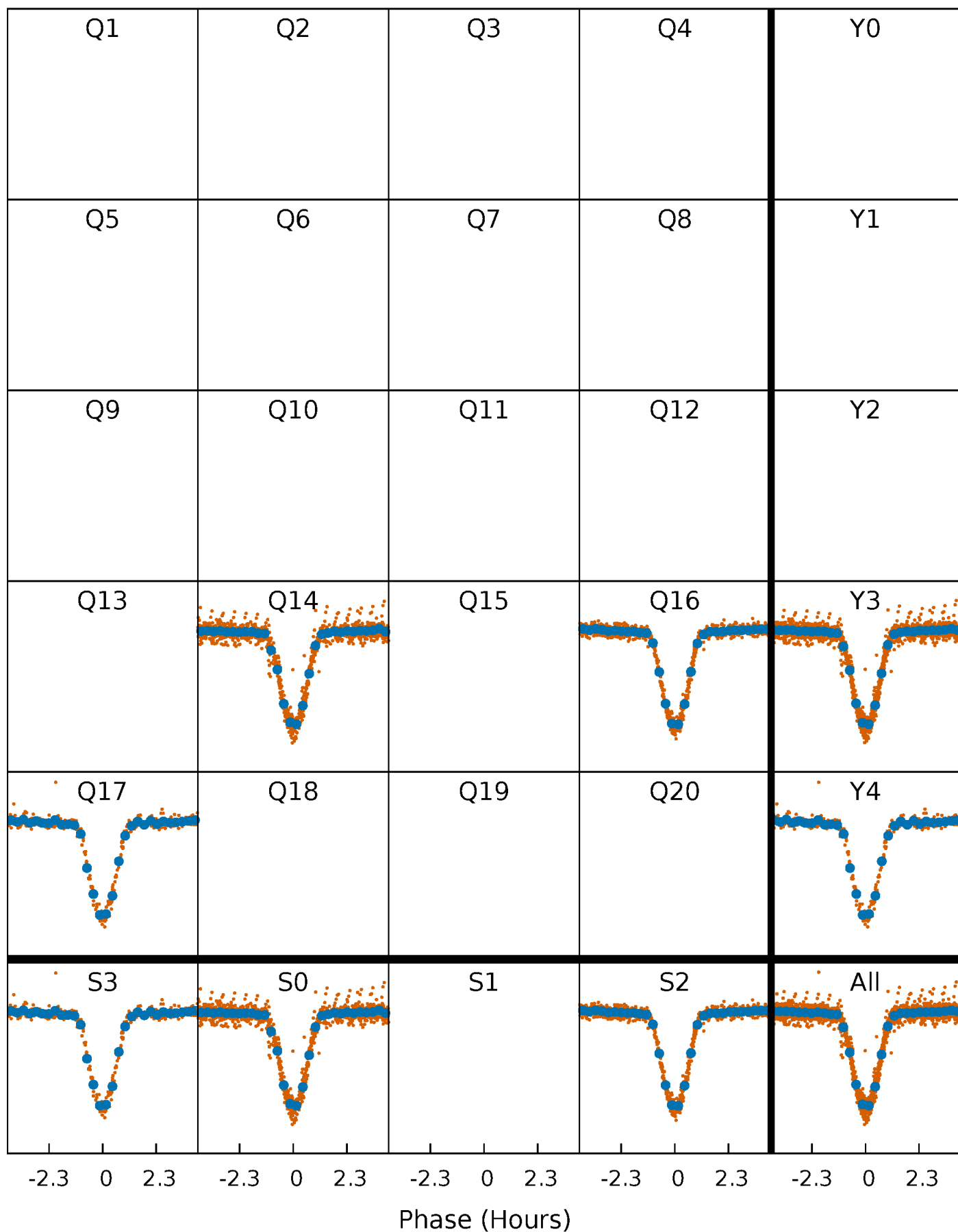


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



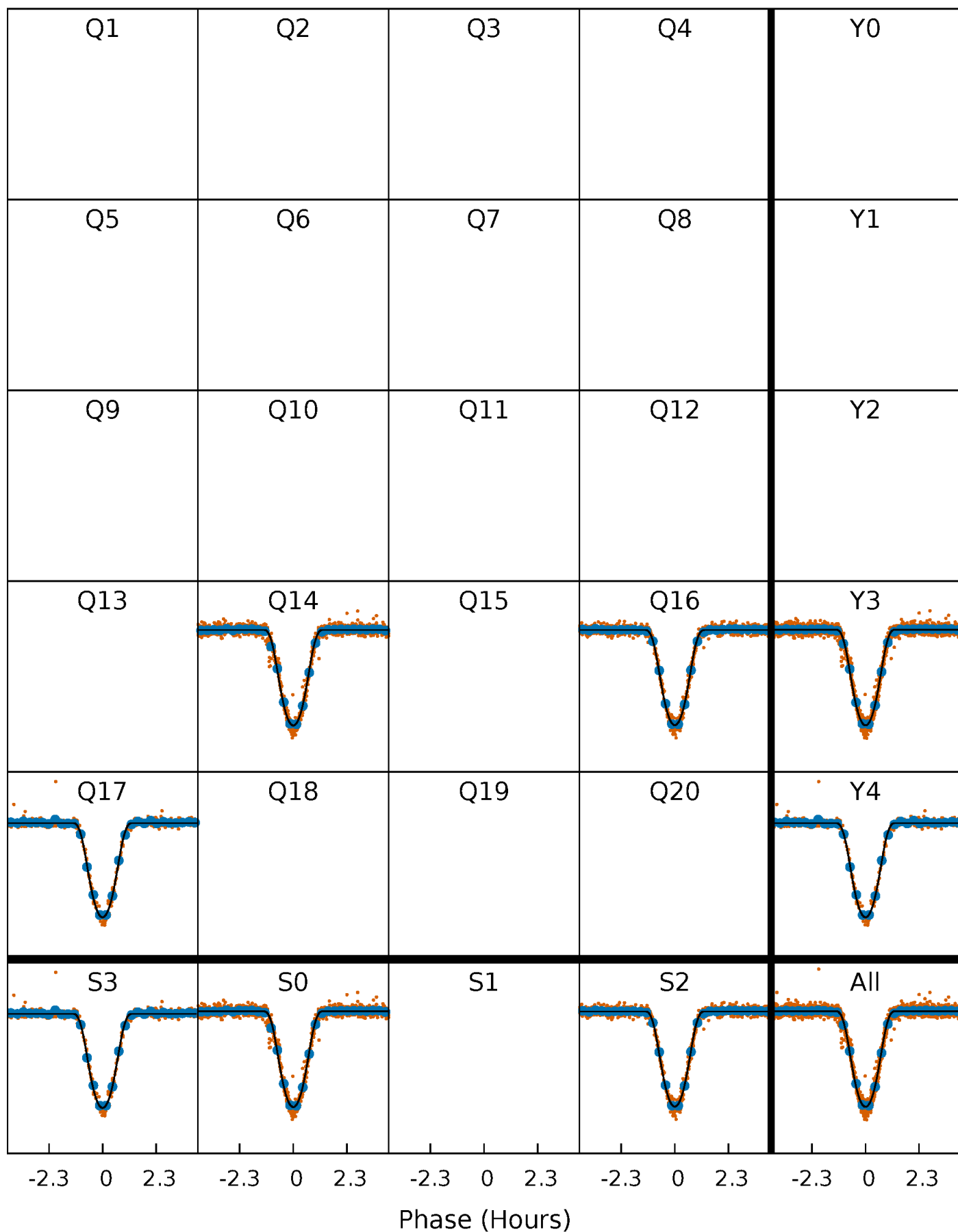
PDC Quarter-Phased Transit Curves

TCE 009911112-01 P= 1.166836 Days $T_0=131.910944$ (BKJD)



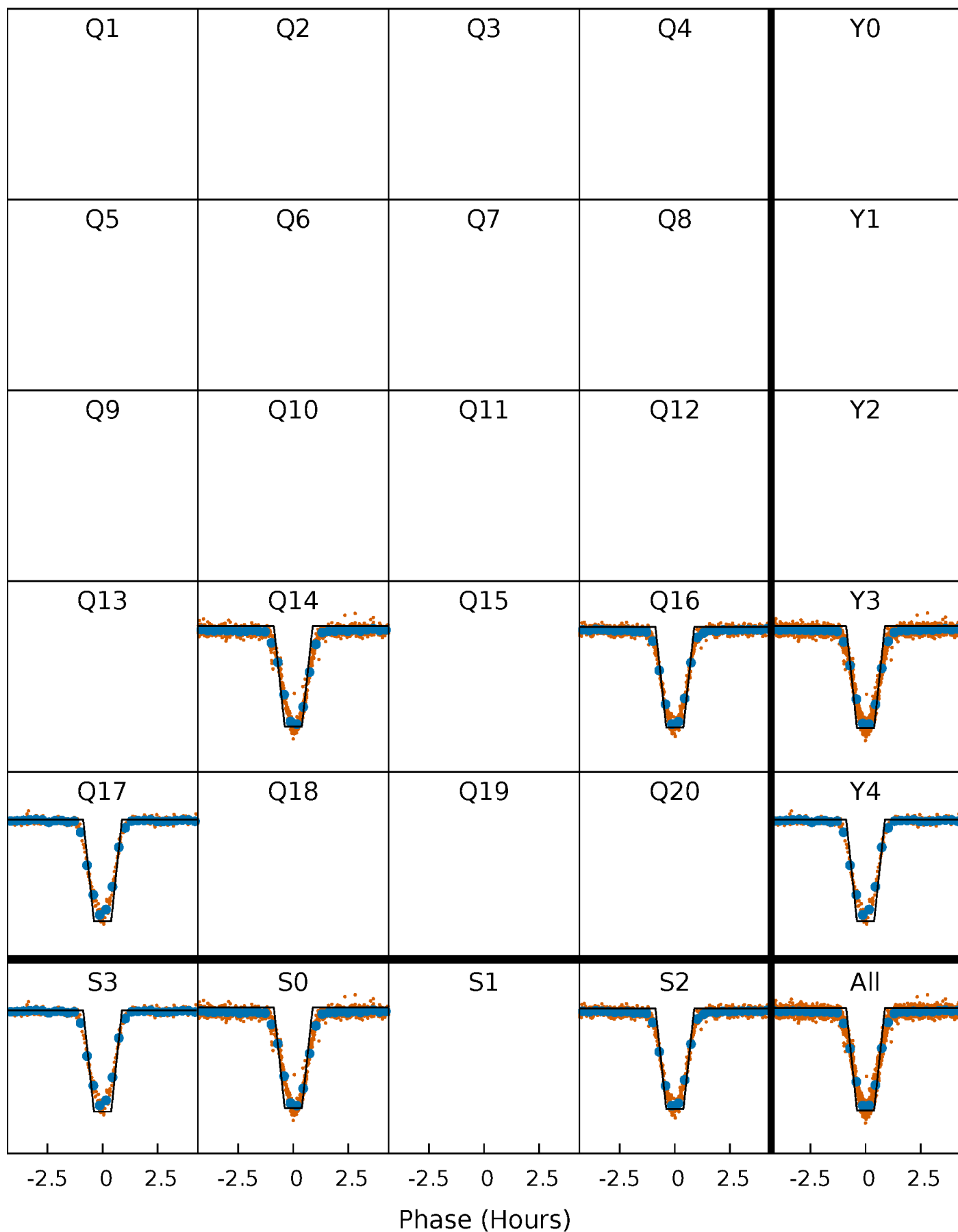
DV Quarter-Phased Transit Curves

TCE 009911112-01 P= 1.166836 Days $T_0=131.910944$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

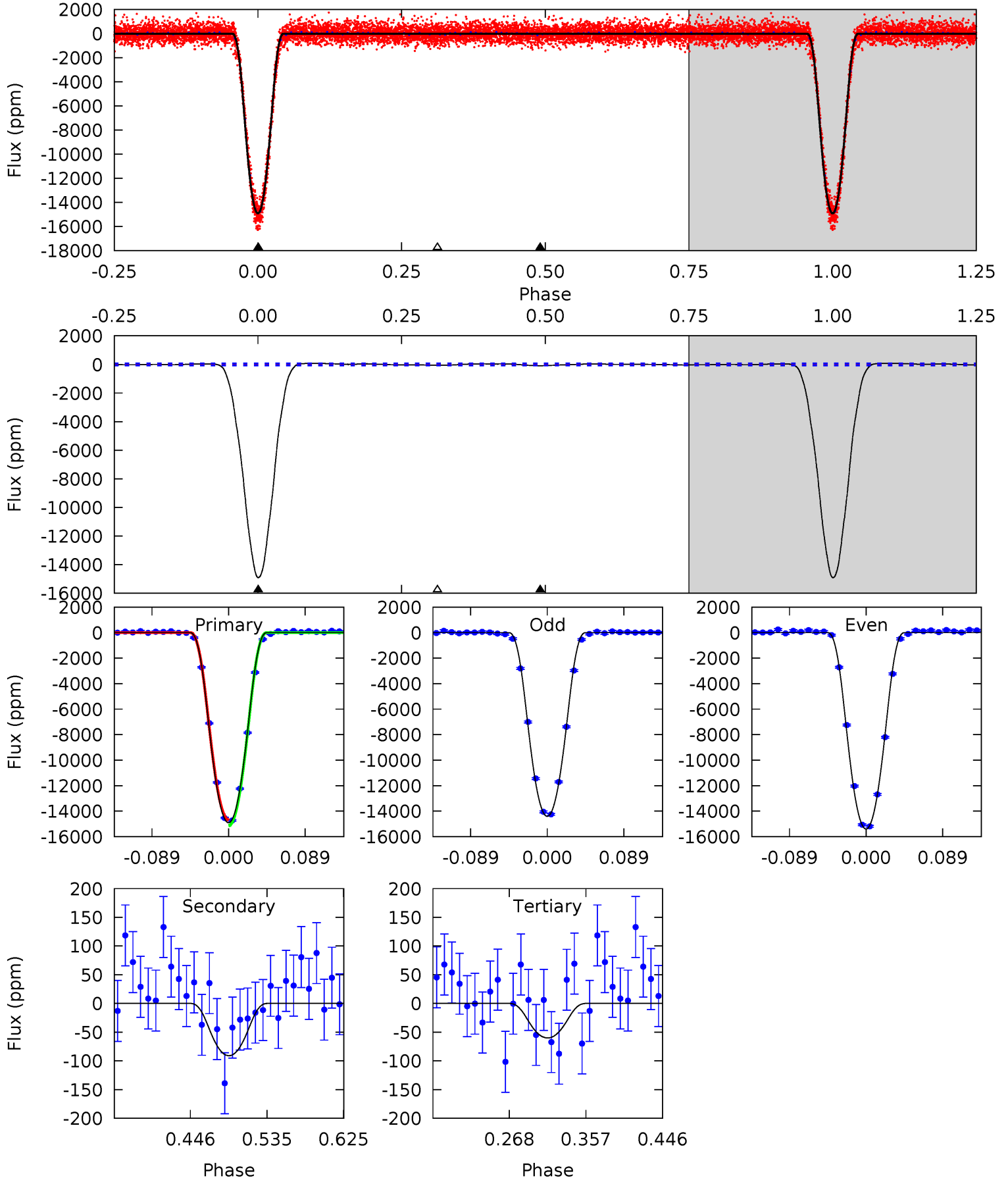
TCE 009911112-01 P= 1.166855 Days $T_0=131.888893$ (BKJD)



DV Model-Shift Uniqueness Test

009911112-01, P = 1.166836 Days, E = 131.910944 Days

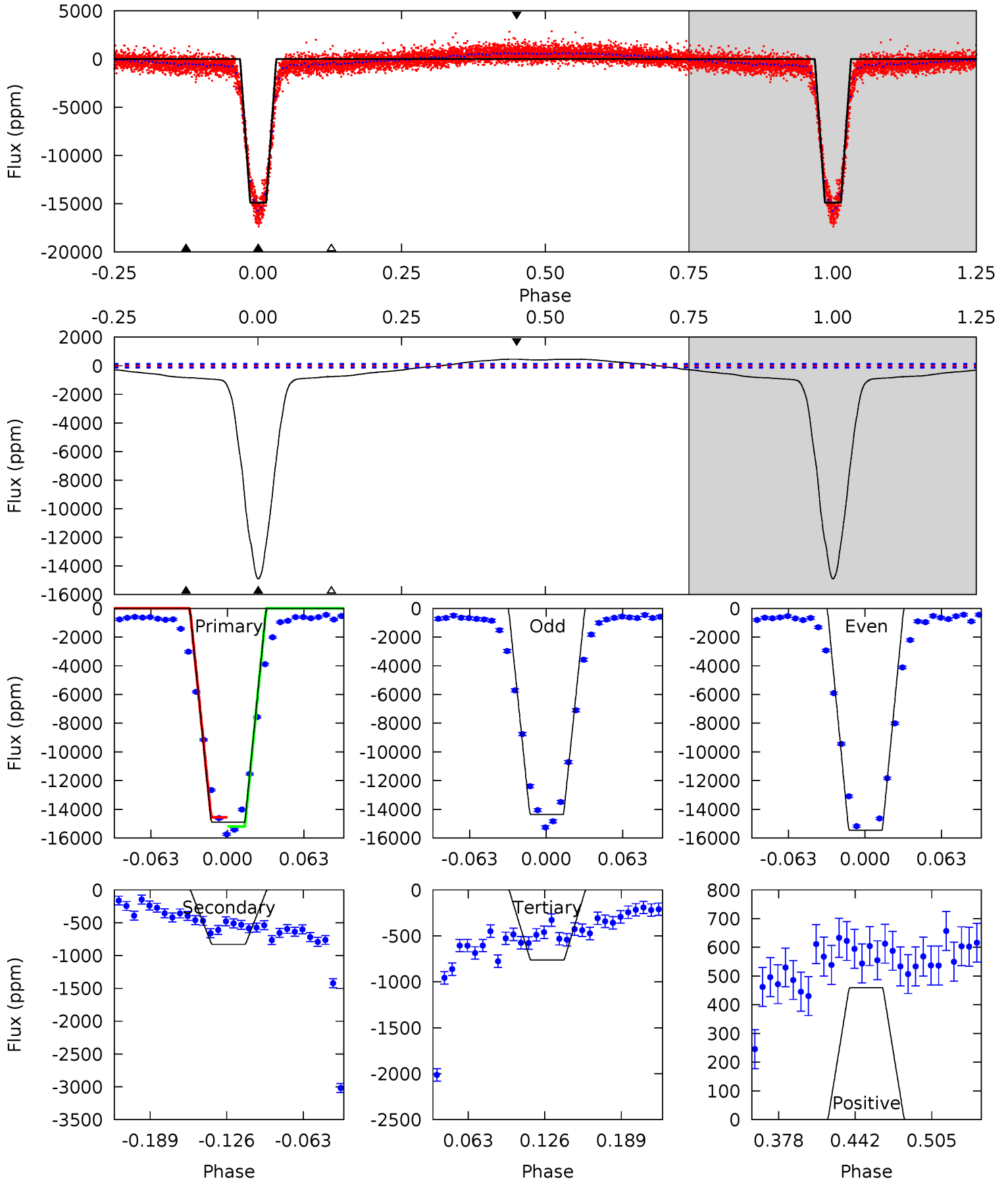
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
907.9	5.54	3.66	0	4.59	1.70	1.83	904.2	907.9	1.88	5.54	30.5	1.00	0.00	14.4



Alt Model-Shift Uniqueness Test

009911112-01, P = 1.166855 Days, E = 131.888893 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
534.4	29.8	27.4	16.5	4.66	1.86	15.7	507.1	517.9	2.42	13.3	19.4	0.99	0.03	11.5



Stellar Parameters For KIC 009911112

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8982^{+251}_{-430}	$4.111^{+0.135}_{-0.165}$	$0.070^{+0.200}_{-0.650}$	$2.123^{+0.625}_{-0.511}$	$2.122^{+0.359}_{-0.538}$	$0.312^{+0.260}_{-0.141}$
	+3%/-5%	+3%/-4%	+286%/-929%	+29%/-24%	+17%/-25%	+83%/-45%
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 009911112-01 / KOI 5733.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-91 ± 16	$32.13^{+5.22}_{-4.50}$	4842^{+363}_{-347}	-3971^{+195}_{-222}	$0.037^{+0.013}_{-0.010}$
Alt.	-830 ± 28	$29.28^{+4.96}_{-3.74}$	4821^{+354}_{-337}	3404^{+298}_{-807}	$0.407^{+0.113}_{-0.096}$

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

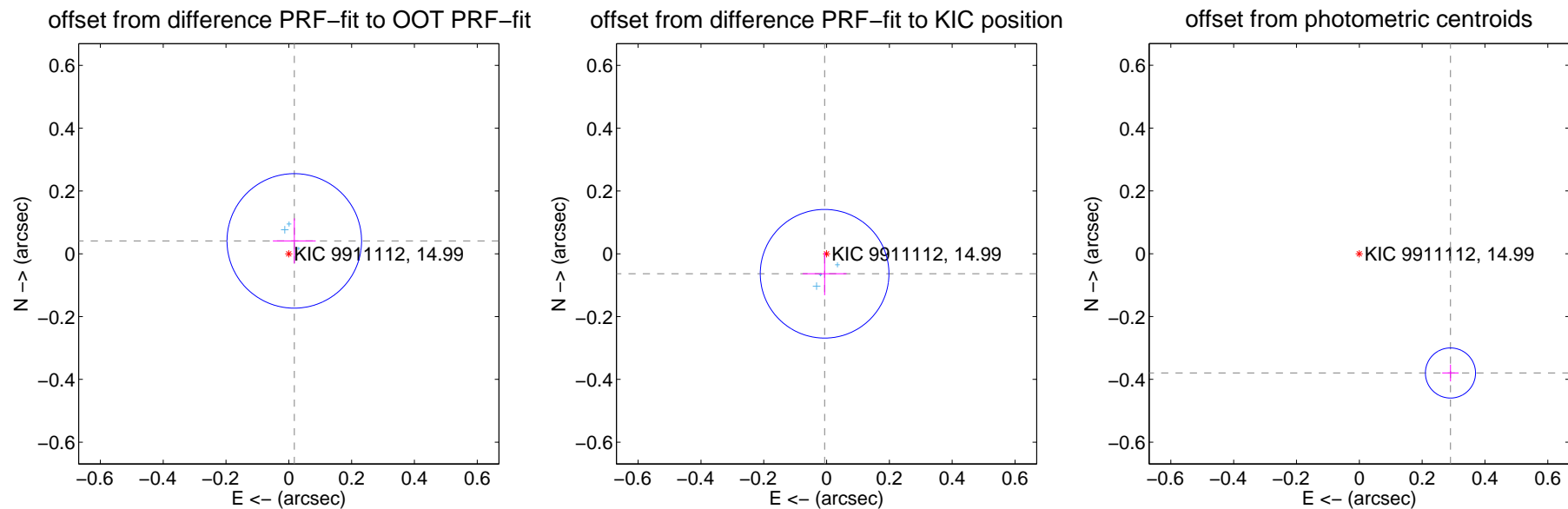
DV Centroid Data

Supplemental centroid analysis for 009911112-01. Kepler magnitude: 14.99. Transit SNR 439.43

There are 3 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.045 ± 0.071	0.62	-0.017 ± 0.068	0.041 ± 0.072
PRF-fit source offset from KIC position	0.064 ± 0.068	0.94	0.006 ± 0.070	-0.064 ± 0.068
photometric centroid source offset	0.48 ± 0.03	17.97	-0.29 ± 0.03	-0.38 ± 0.03



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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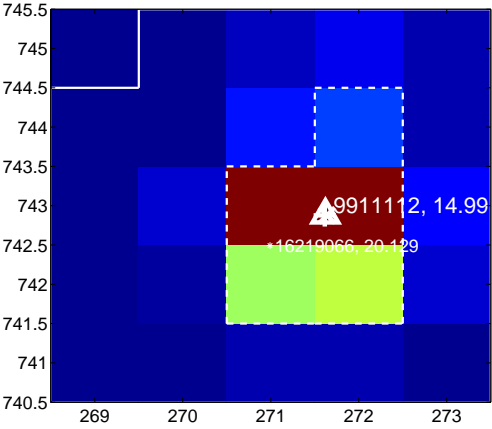
Q13 no difference image



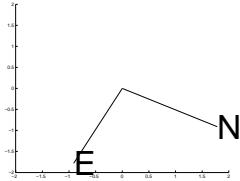
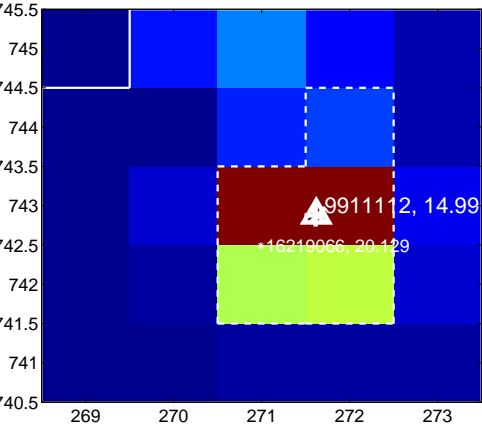
Q13 no OOT image



Q14 difference image



Q14 OOT image



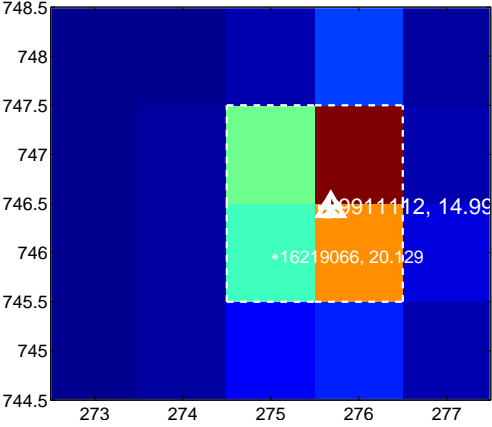
Q15 no difference image



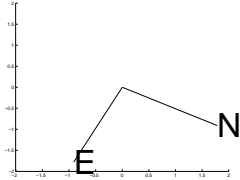
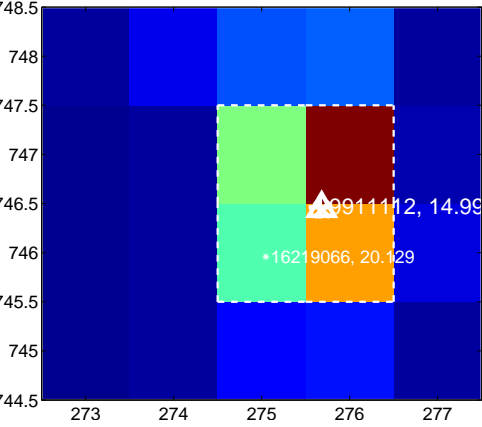
Q15 no OOT image



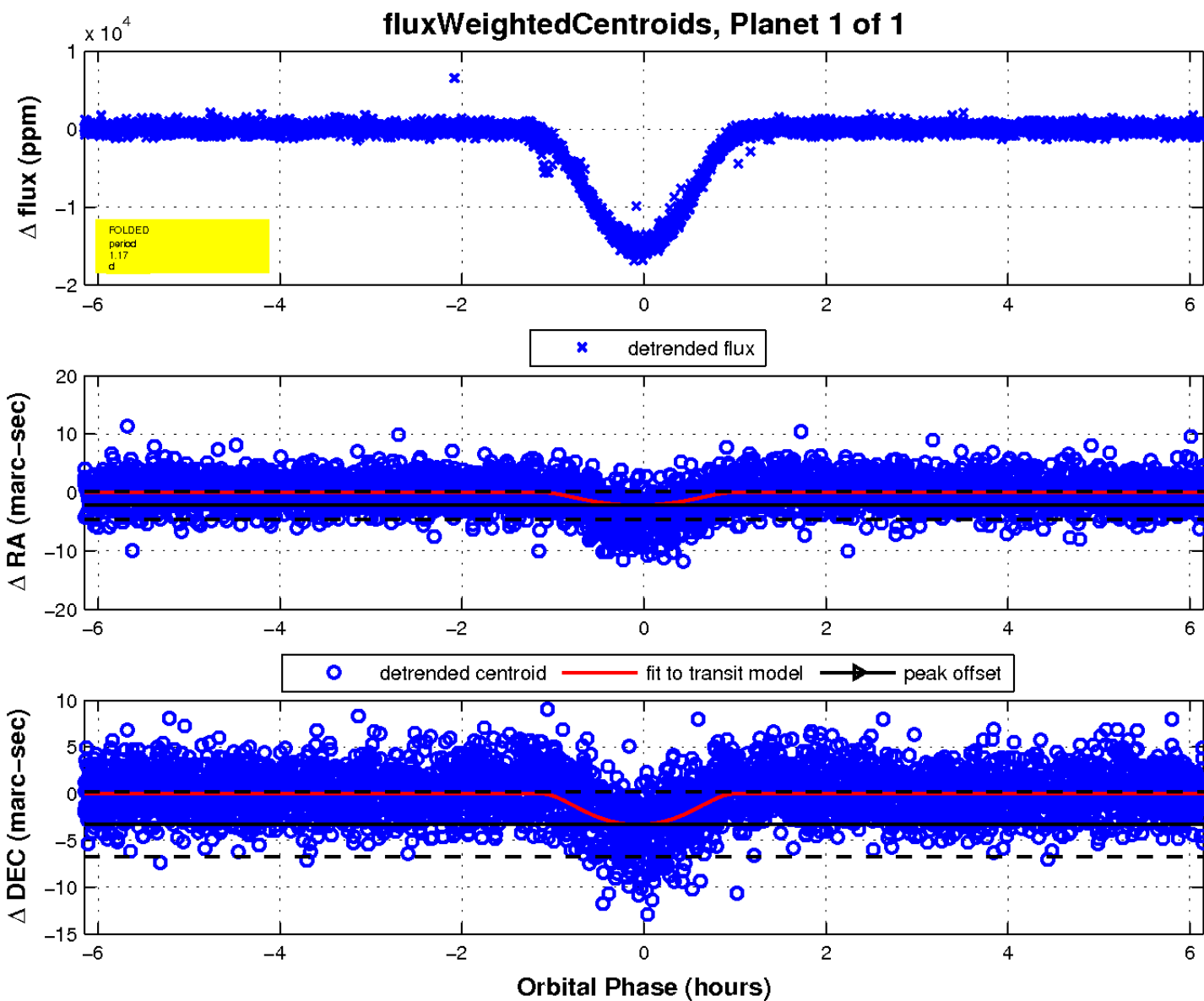
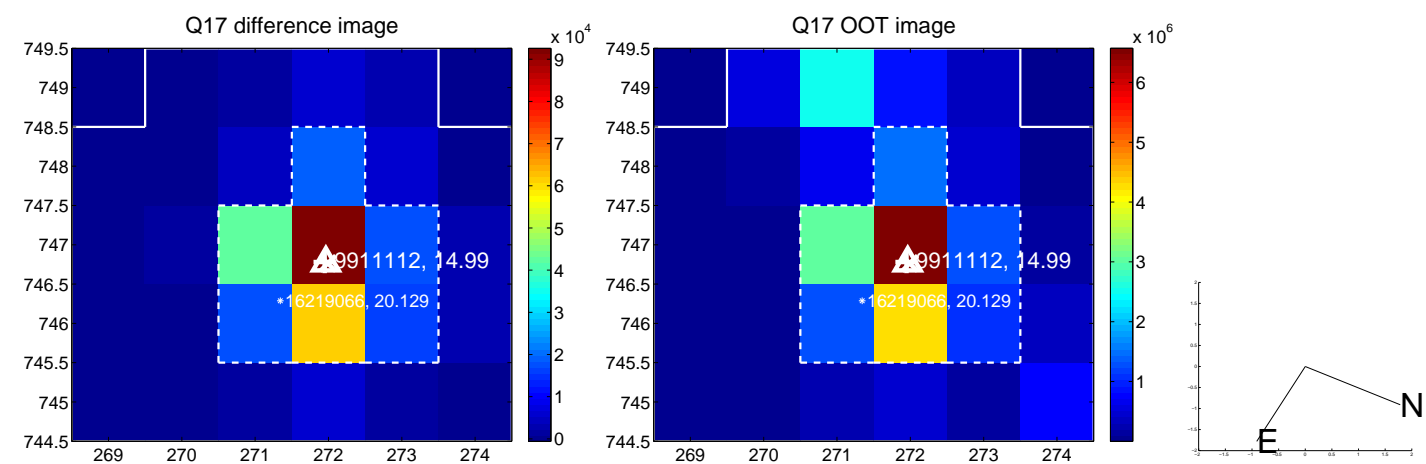
Q16 difference image



Q16 OOT image



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



UKIRT Image

Declination

