

KIC 002297739

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})
002297739-01	OBS	No	1.611074	132.689436	69.2	15.678	9.2	8.7	0.51	4272	0.41	162.98

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002297739-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET

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

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

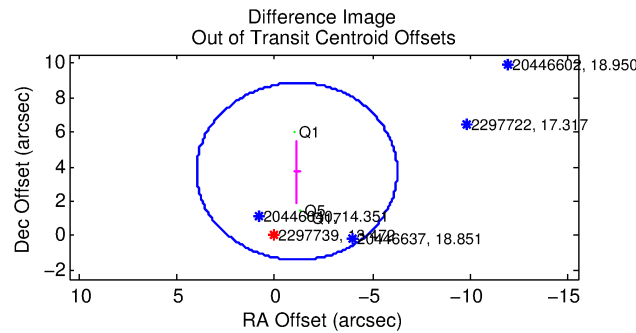
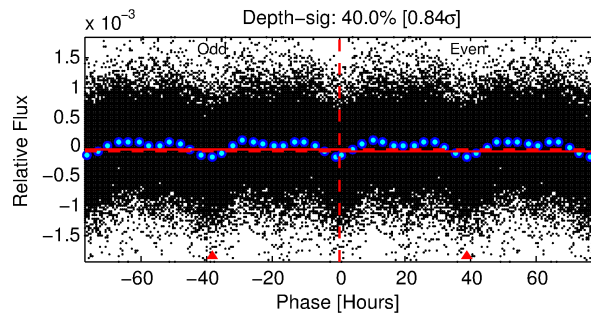
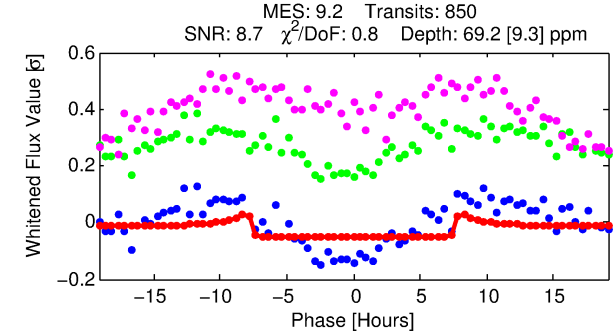
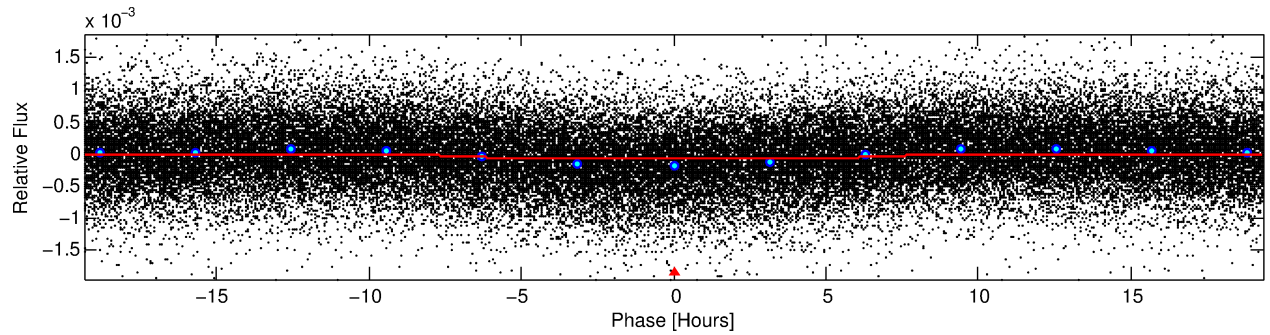
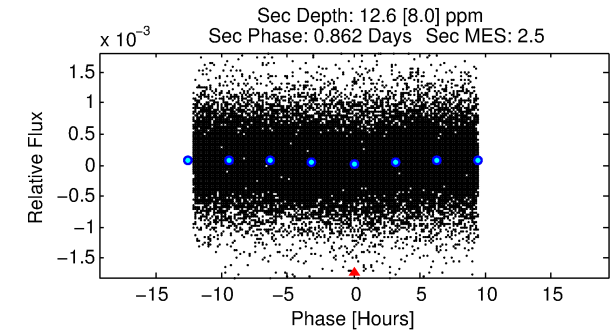
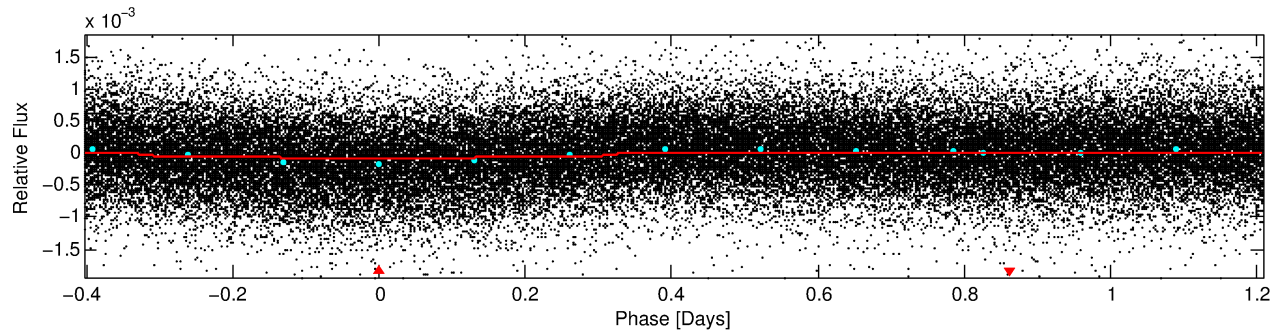
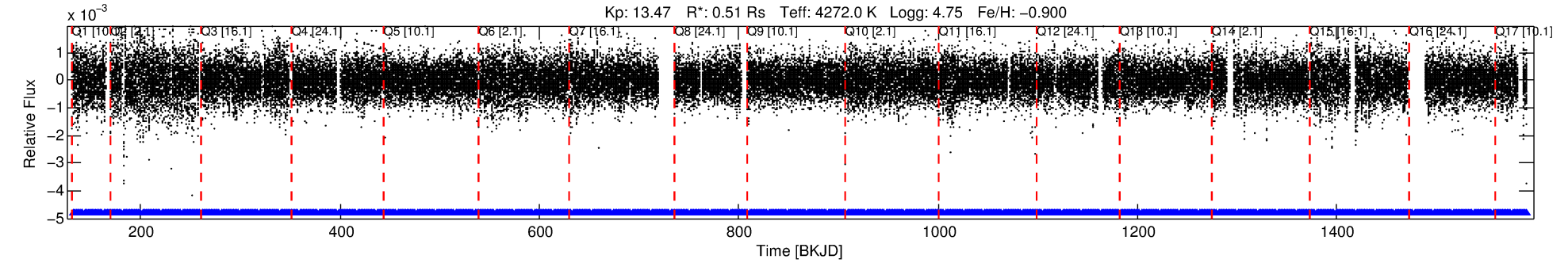
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002297739-01

No Significant Match Found

DV One-Page Summary

KIC: 2297739 Candidate: 1 of 1 Period: 1.611 d



DV Fit Results:

Period = 1.61107 [0.00003] d
Epoch = 132.6894 [0.0067] BKJD
Rp/R* = 0.0075 [0.0034]
a/R* = 1.05 [0.20]
b = 0.00 [2701.82]
Seff = 162.98 [34.35]
Teq = 911 [48] K
Rp = 0.41 [0.20] Re
a = 0.0216 [0.0020] AU
Ag = 18.84 [21.14] [0.84σ]
Teffp = 2935 [827] K [2.44σ]

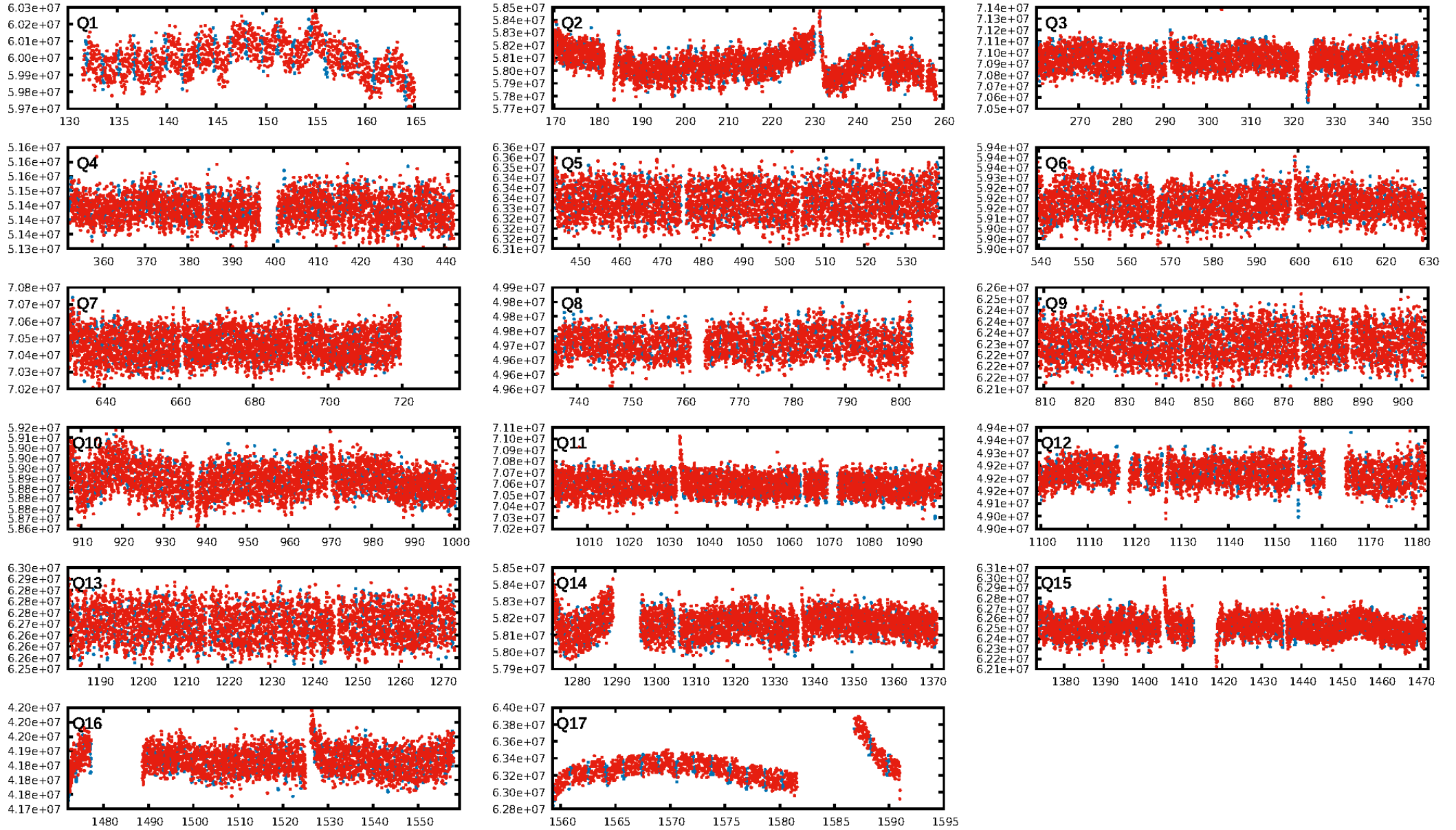
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [812/812]
GhostDiagnostic-chr: -0.6809
Centroid-sig: 0.0%
Centroid-so: 3.765 arcsec [16.25σ]
OotOffset-rm: 3.891 arcsec [2.28σ]
KicOffset-rm: 9.986 arcsec [31.79σ]
OotOffset-st: 0/0/0/3 [3]
KicOffset-st: 0/0/4/3 [7]
DiffImageQuality-fgm: 0.29 [2/7]
DiffImageOverlap-fno: 1.00 [17/17]

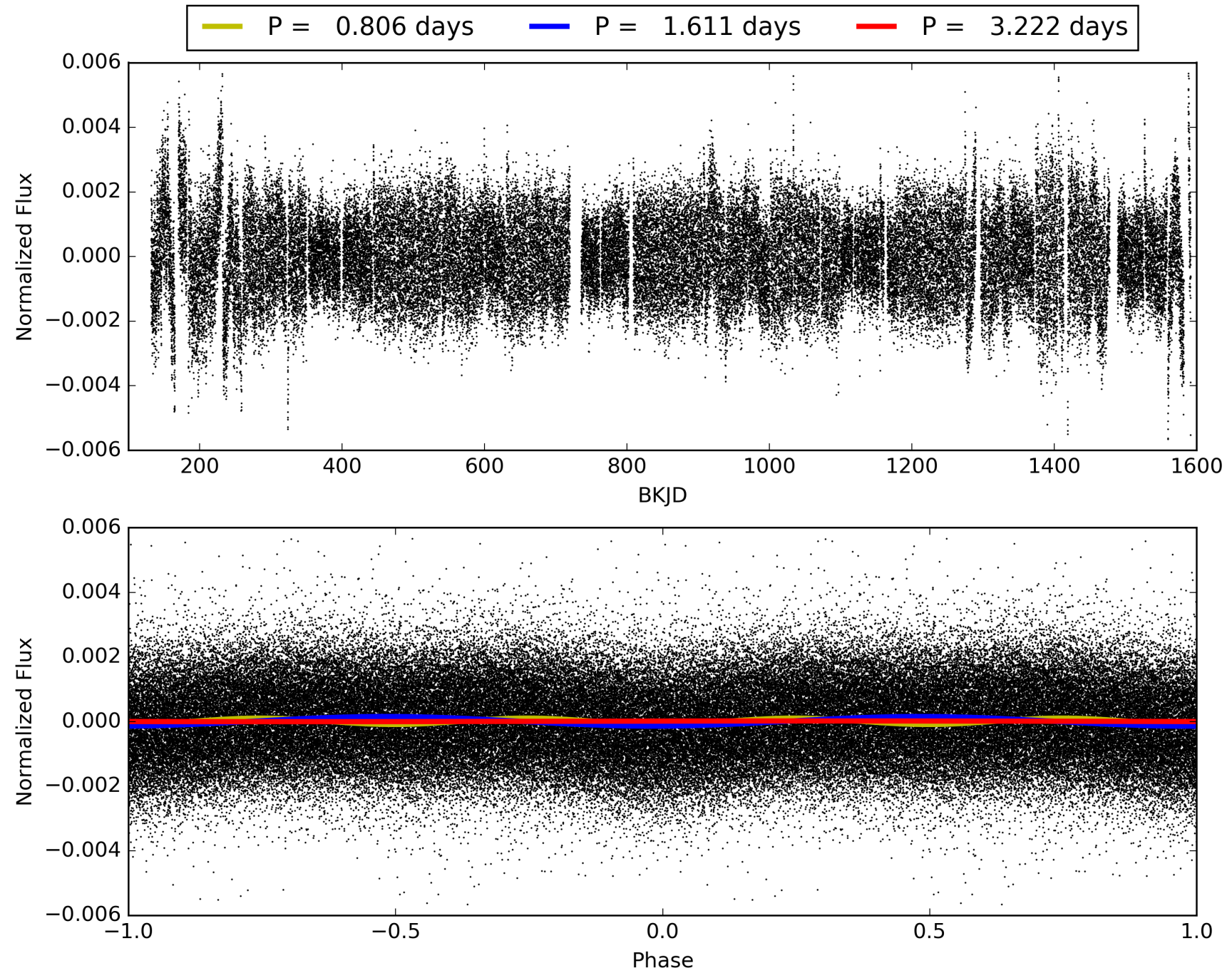
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:53:33 Z

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

TCE 002297739-01, PDC Light Curves

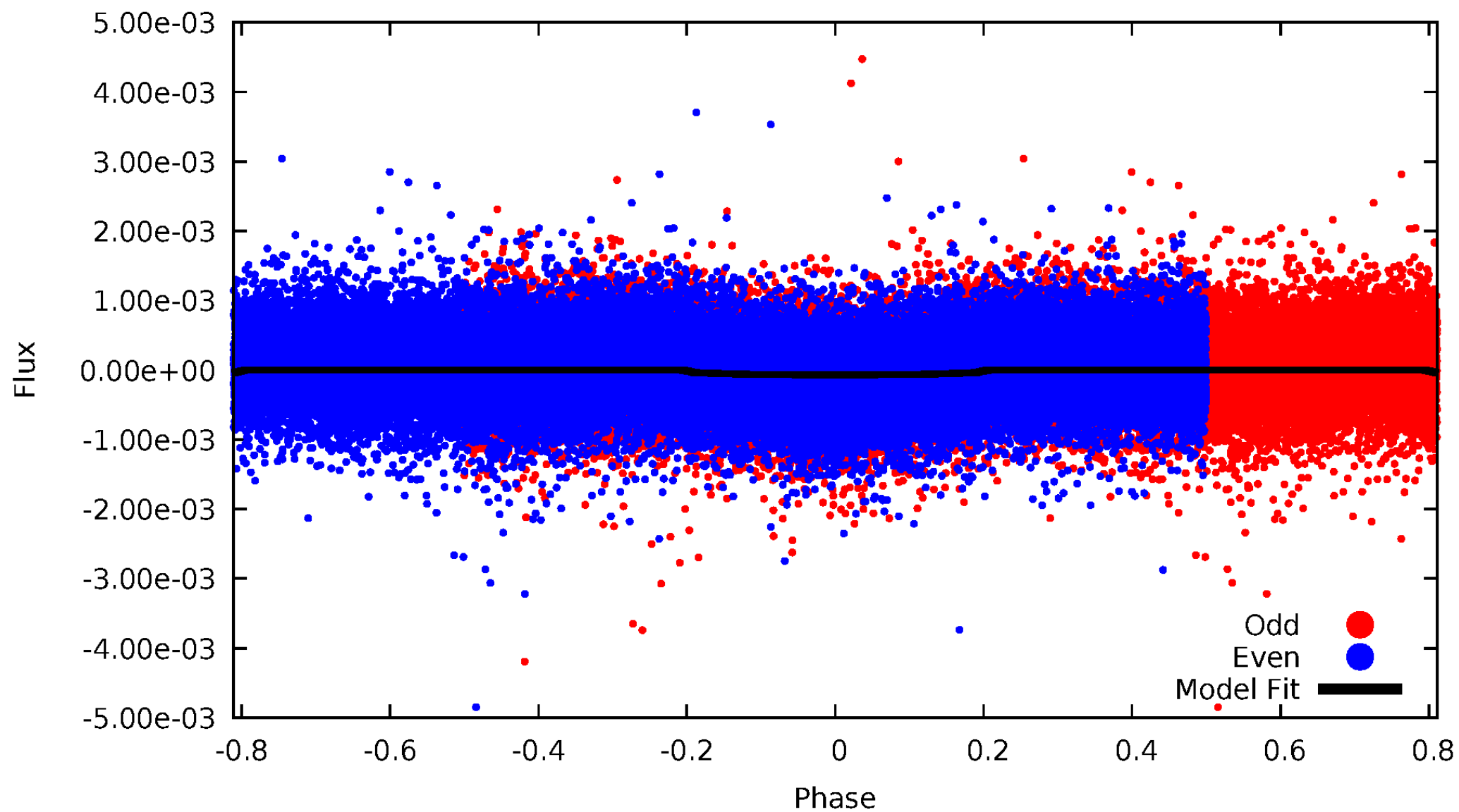


TCE 002297739-01



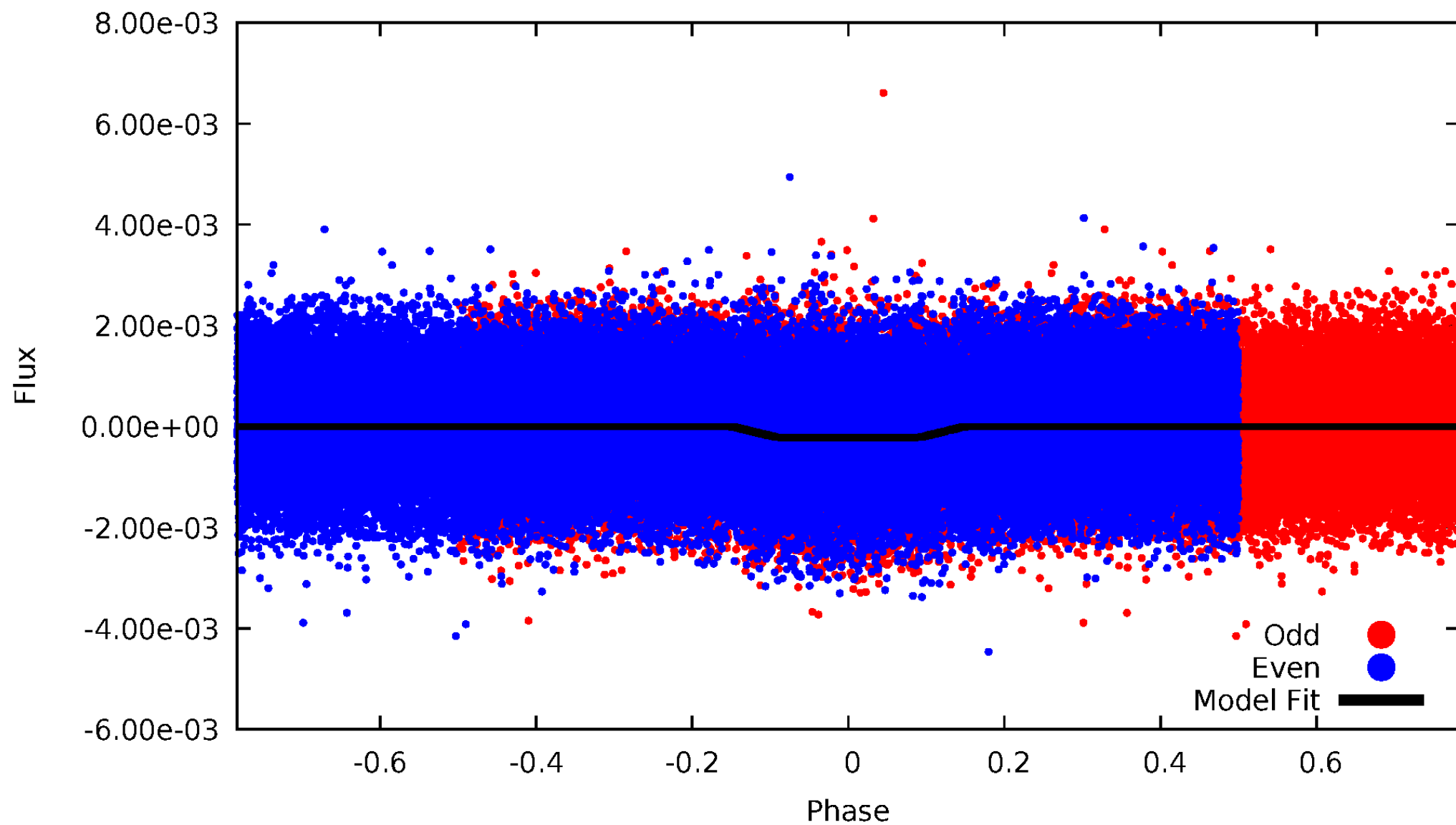
DV Odd/Even

TCE 002297739-01



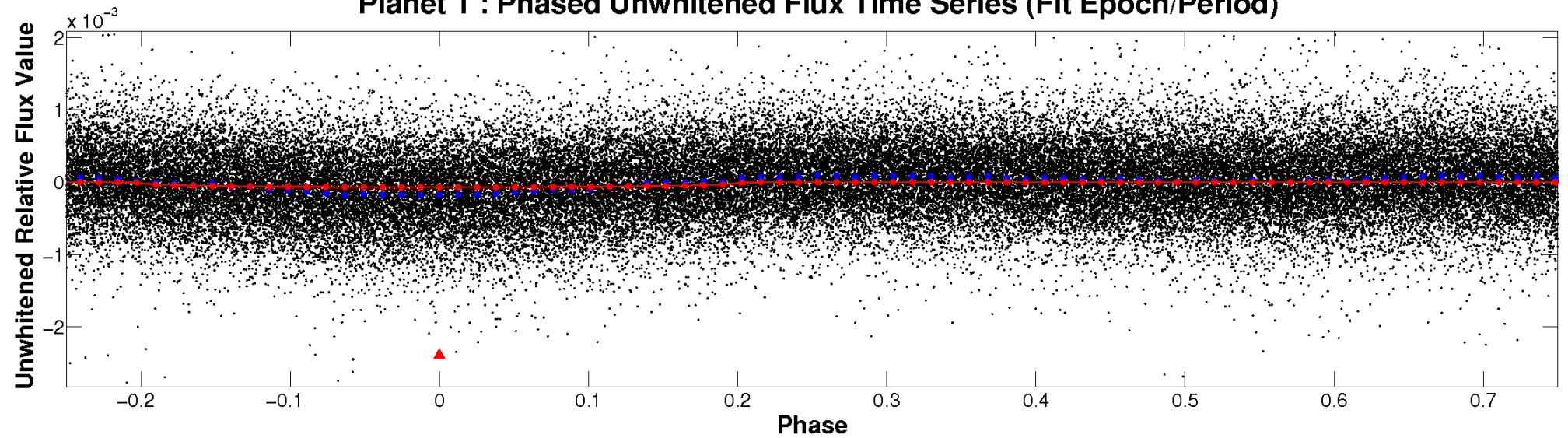
ALT Odd/Even

TCE 002297739-01

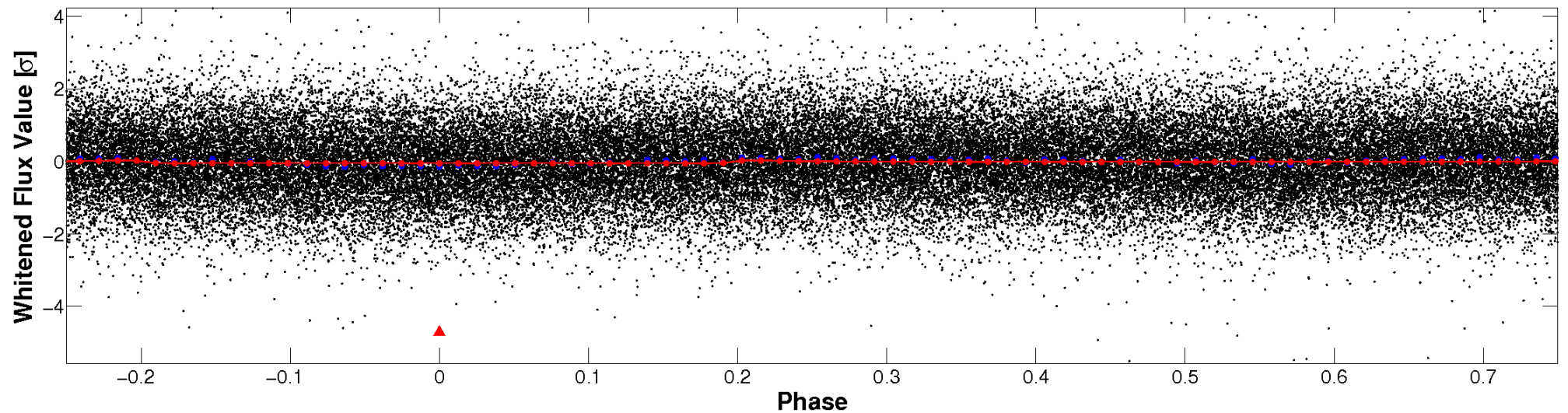


Non-Whitened Vs. Whitened Light Curve

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

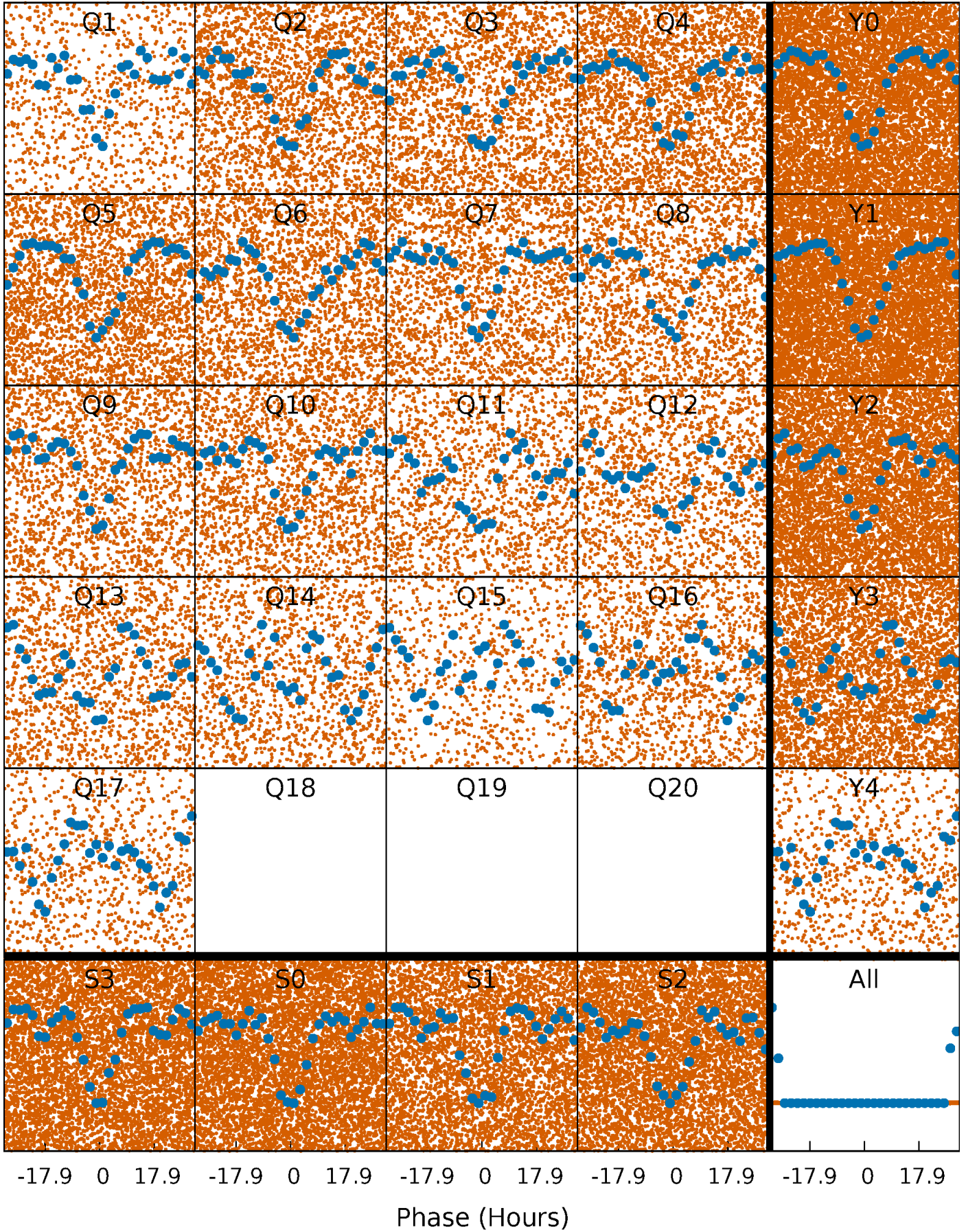


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



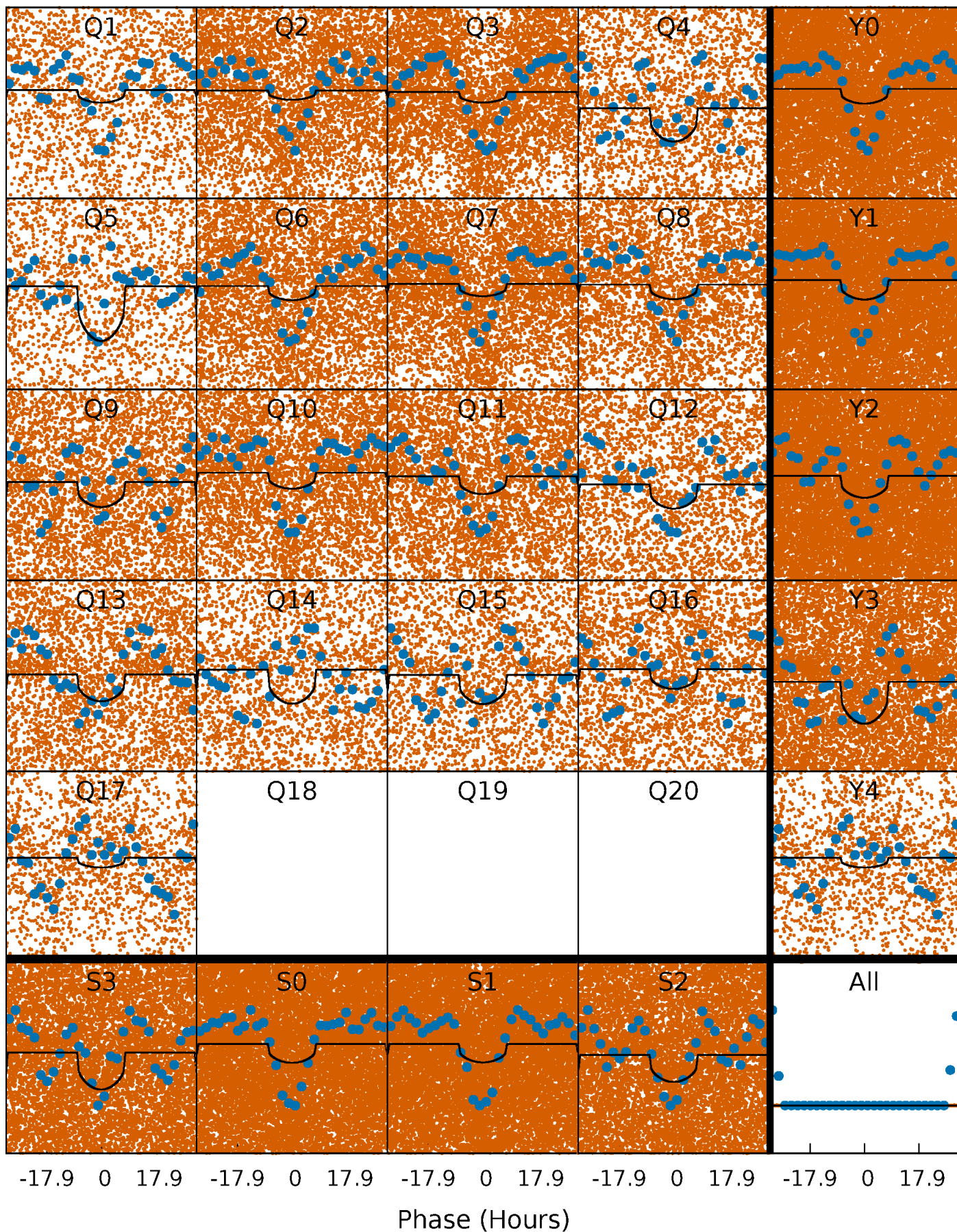
PDC Quarter-Phased Transit Curves

TCE 002297739-01 P= 1.611074 Days $T_0=132.689436$ (BKJD)



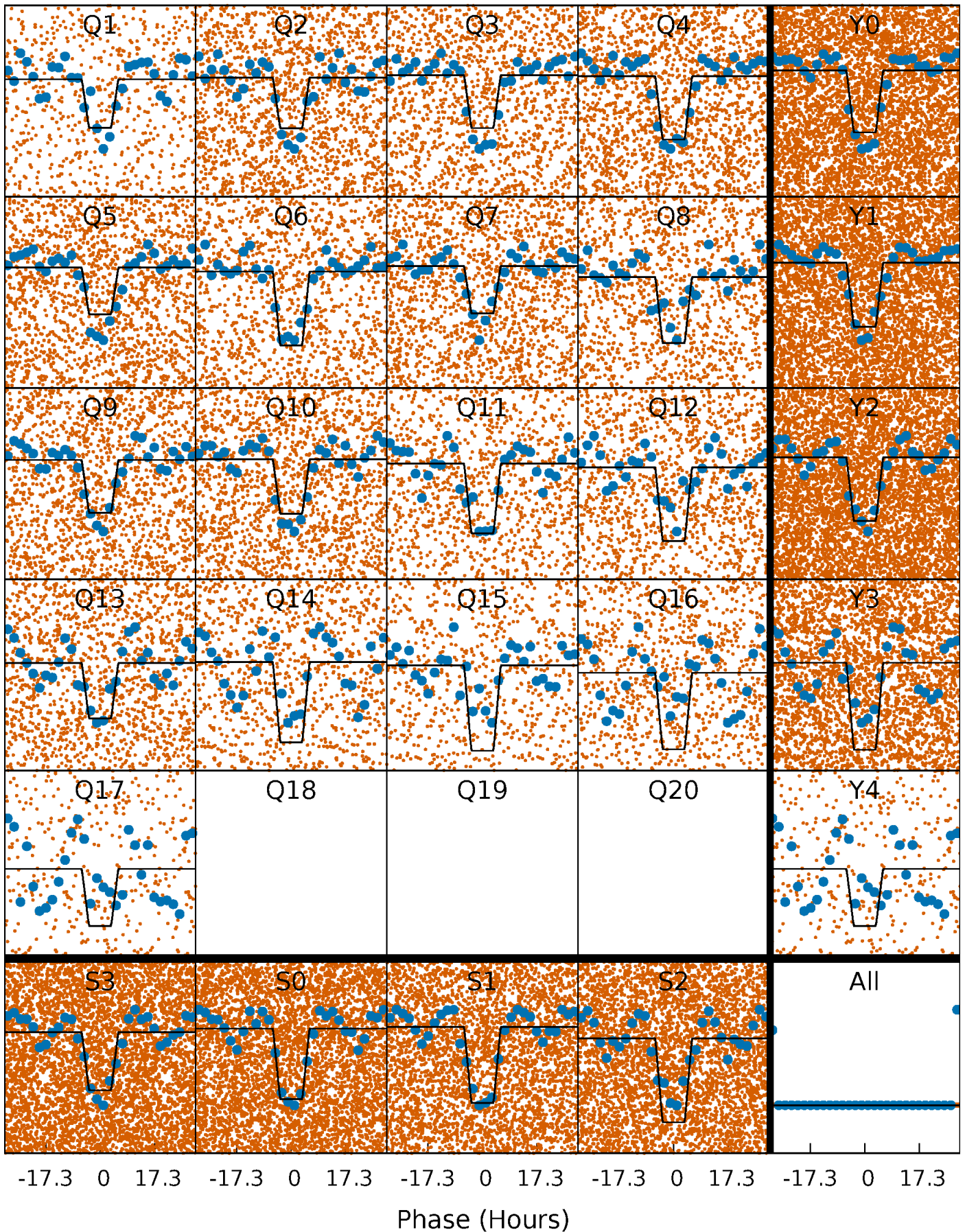
DV Quarter-Phased Transit Curves

TCE 002297739-01 P= 1.611074 Days $T_0=132.689436$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

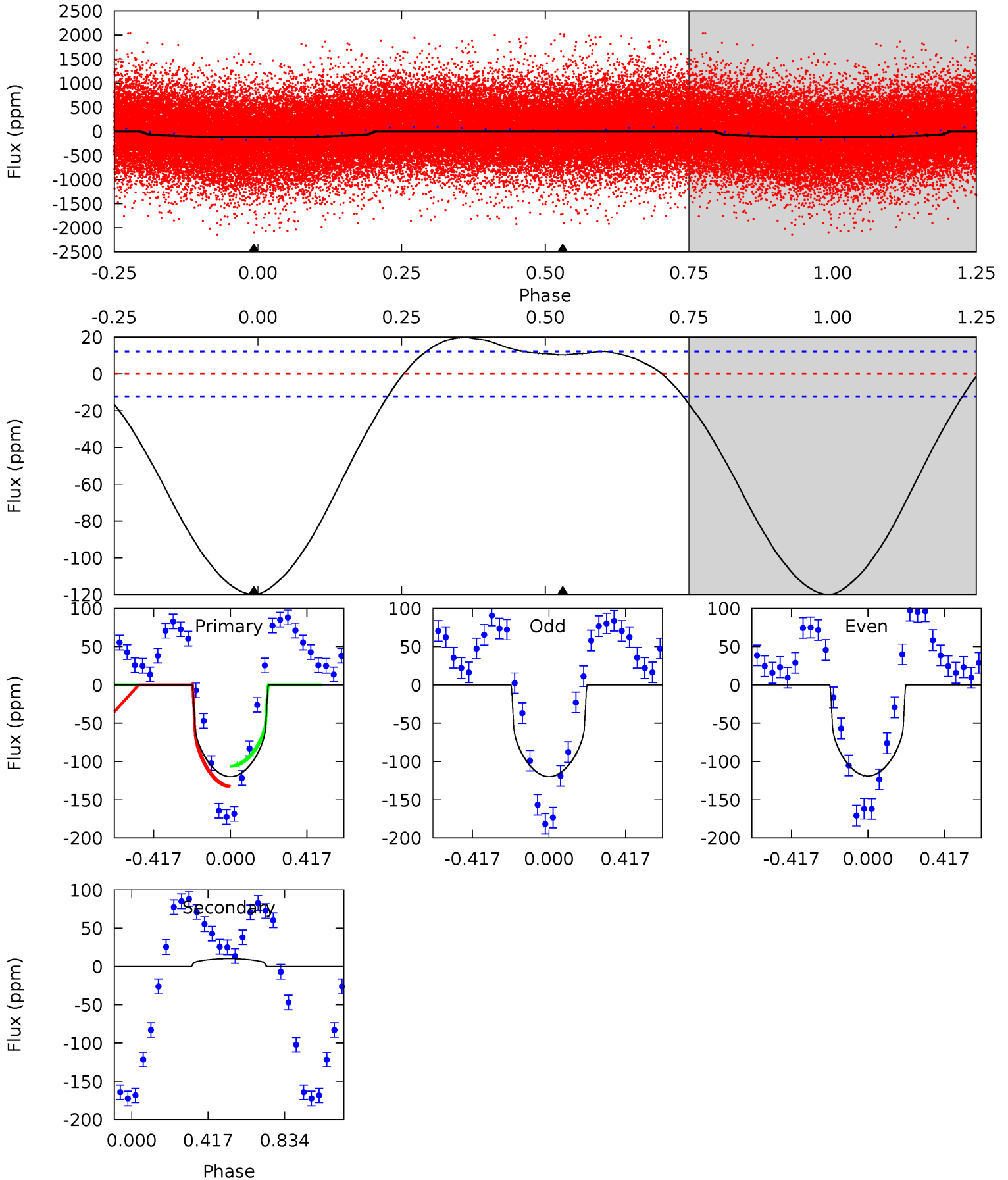
TCE 002297739-01 P= 1.611067 Days $T_0=132.675941$ (BKJD)



DV Model-Shift Uniqueness Test

002297739-01, P = 1.611074 Days, E = 131.078362 Days

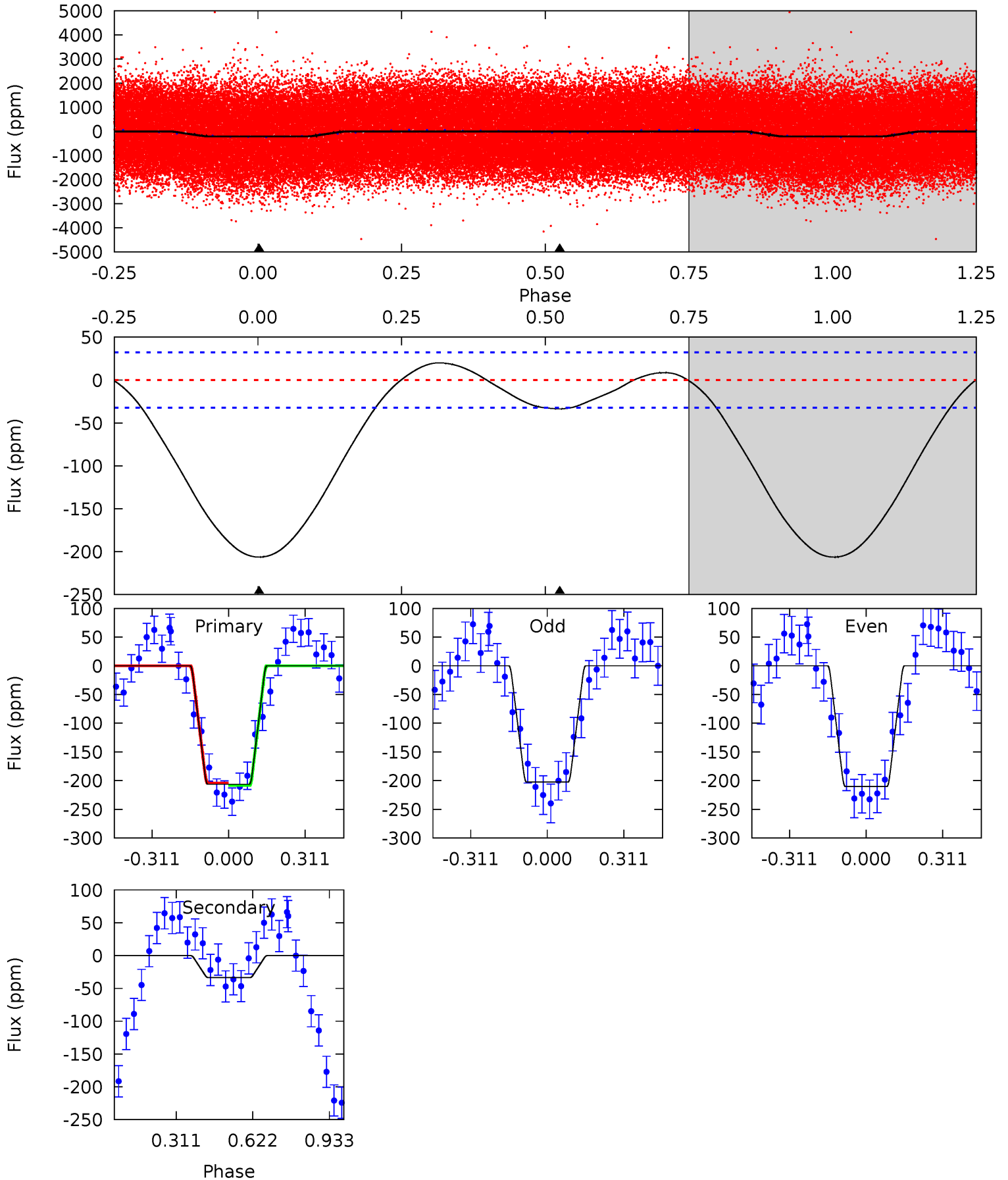
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
41.8	-3.61	0	0	4.26	0.81	4.20	41.8	41.8	-3.61	-3.61	0.15	1.28	0.14	4.48



Alt Model-Shift Uniqueness Test

002297739-01, P = 1.611067 Days, E = 131.064874 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.6	4.50	0	0	4.32	1.01	1.42	27.6	27.6	4.50	4.50	0.52	1.06	0.09	0.27



Stellar Parameters For KIC 002297739

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4272^{+134}_{-179}	$4.746^{+0.066}_{-0.042}$	$-0.900^{+0.300}_{-0.350}$	$0.505^{+0.049}_{-0.059}$	$0.518^{+0.042}_{-0.051}$	$5.665^{+1.784}_{-0.943}$
	+3%/-4%	+1%/-1%	+33%/-39%	+10%/-12%	+8%/-10%	+31%/-17%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 002297739-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	10 ± 3	$0.41^{+0.19}_{-0.18}$	1260^{+53}_{-55}	-3186^{+322}_{-664}	$-15.192^{+8.458}_{-32.808}$
Alt.	-34 ± 7	$0.81^{+0.19}_{-0.19}$	1265^{+53}_{-59}	3104^{+324}_{-216}	13^{+10}_{-5}

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 $A_{\text{obs}} \gg 1.0$

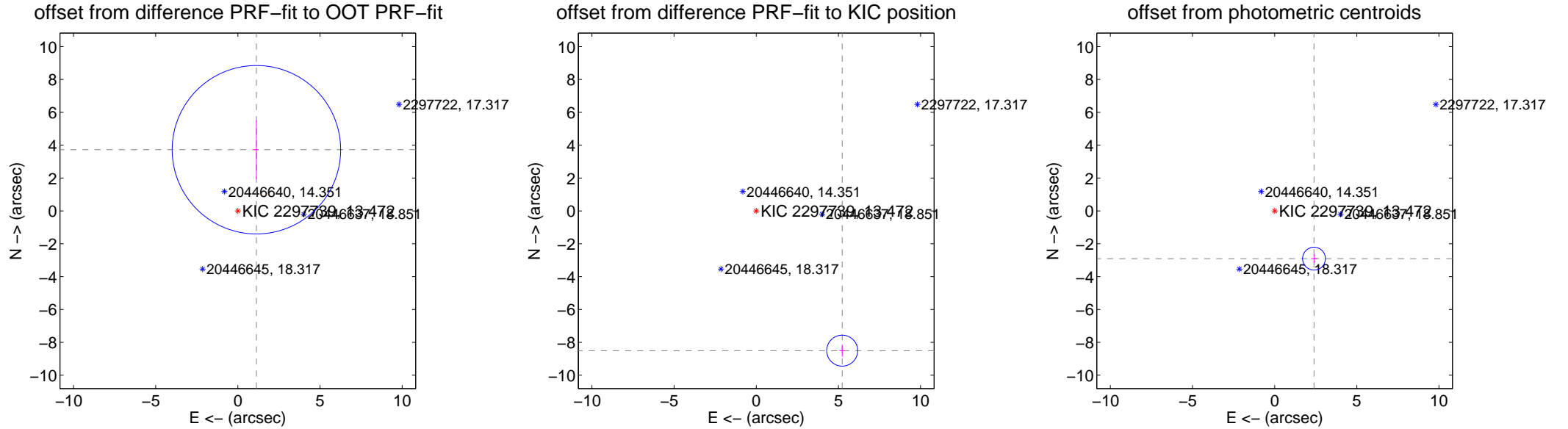
DV Centroid Data

Supplemental centroid analysis for 002297739-01. Kepler magnitude: 13.47. Transit SNR 8.72

There are 2 quarters with good PRF difference image offsets

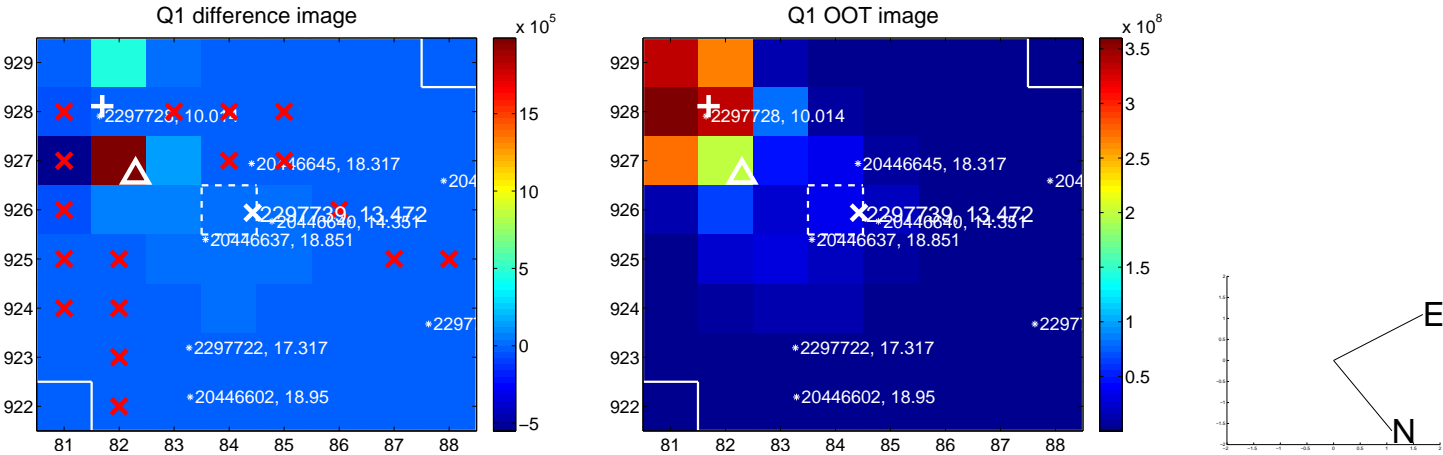
The OOT PRF centroid is offset from the target star catalog position by about 10.19 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.891 ± 1.709	2.28	-1.131 ± 0.133	3.723 ± 1.785
PRF-fit source offset from KIC position	9.986 ± 0.314	31.79	-5.231 ± 0.157	-8.507 ± 0.356
photometric centroid source offset	3.77 ± 0.23	16.25	-2.39 ± 0.18	-2.91 ± 0.26

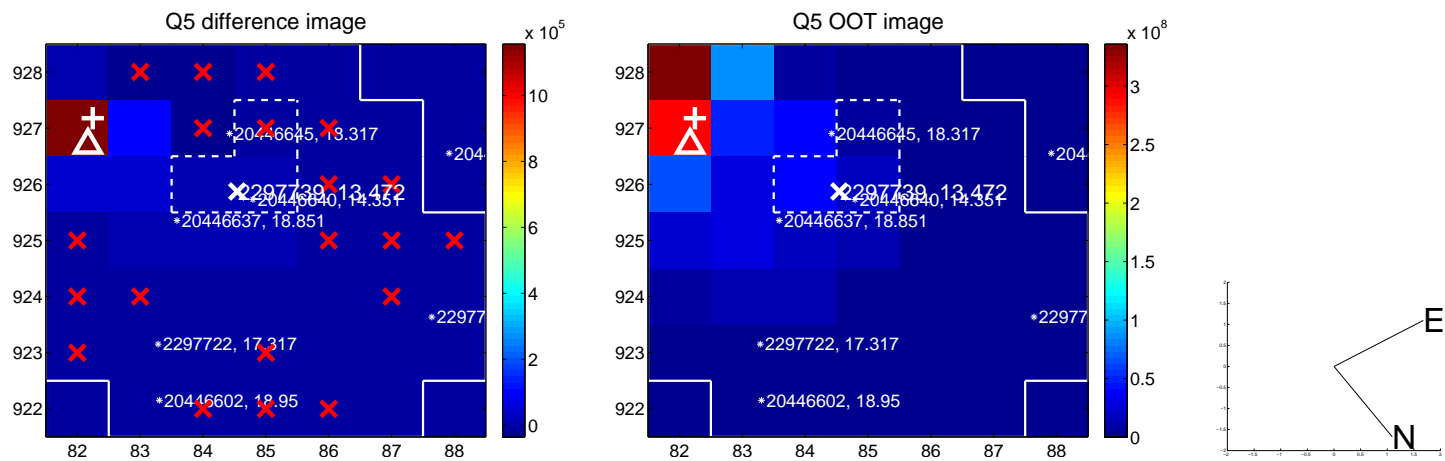


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

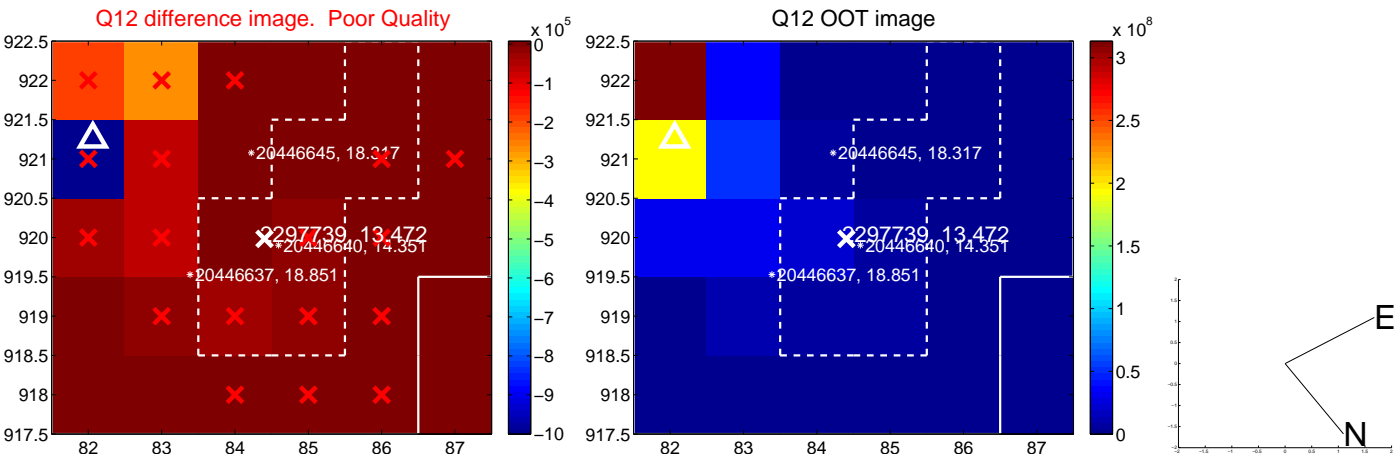
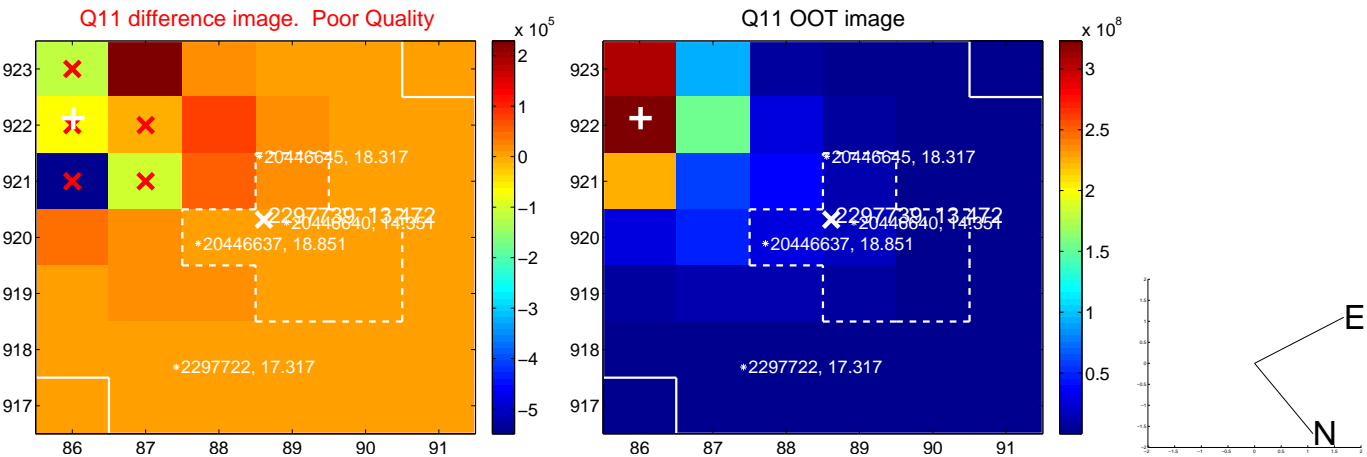
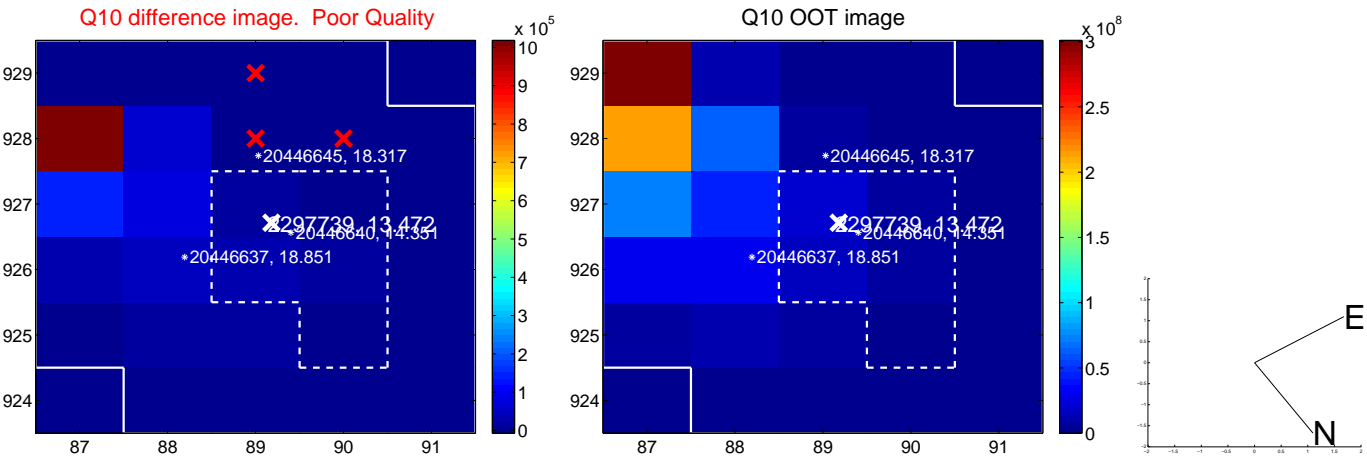
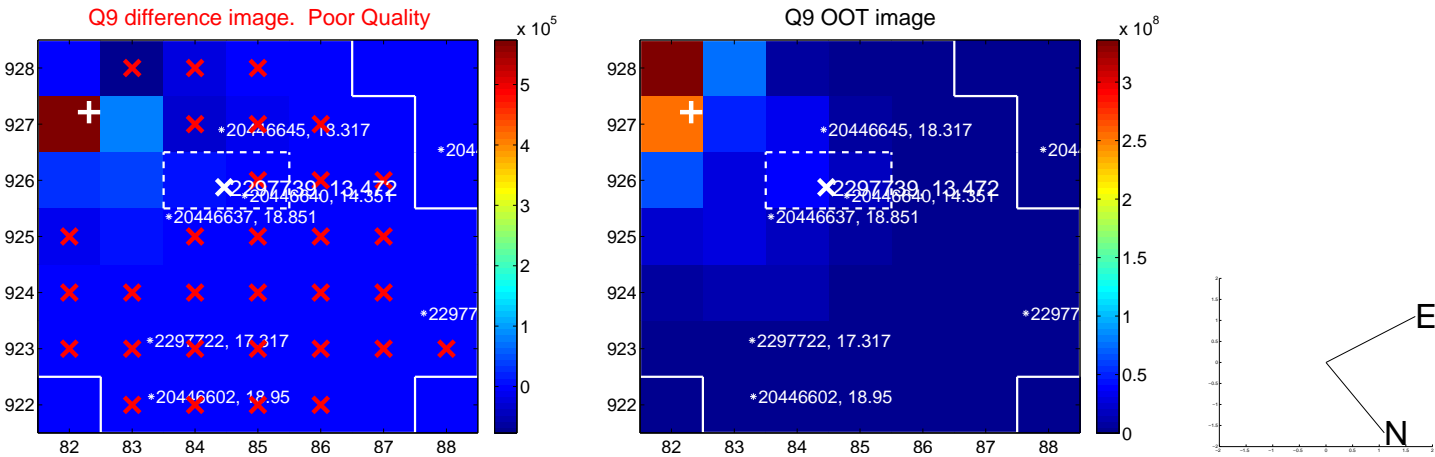
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



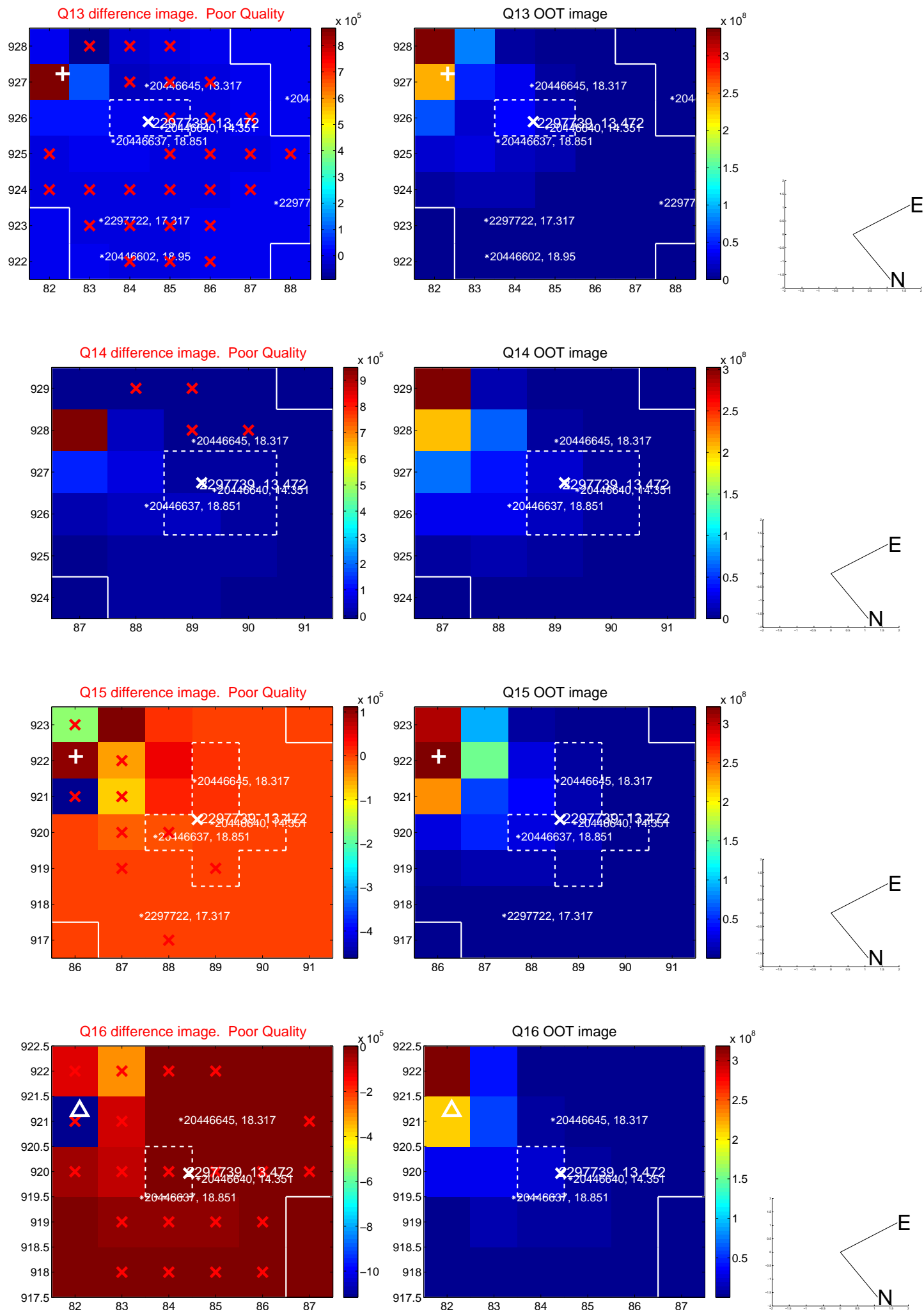
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



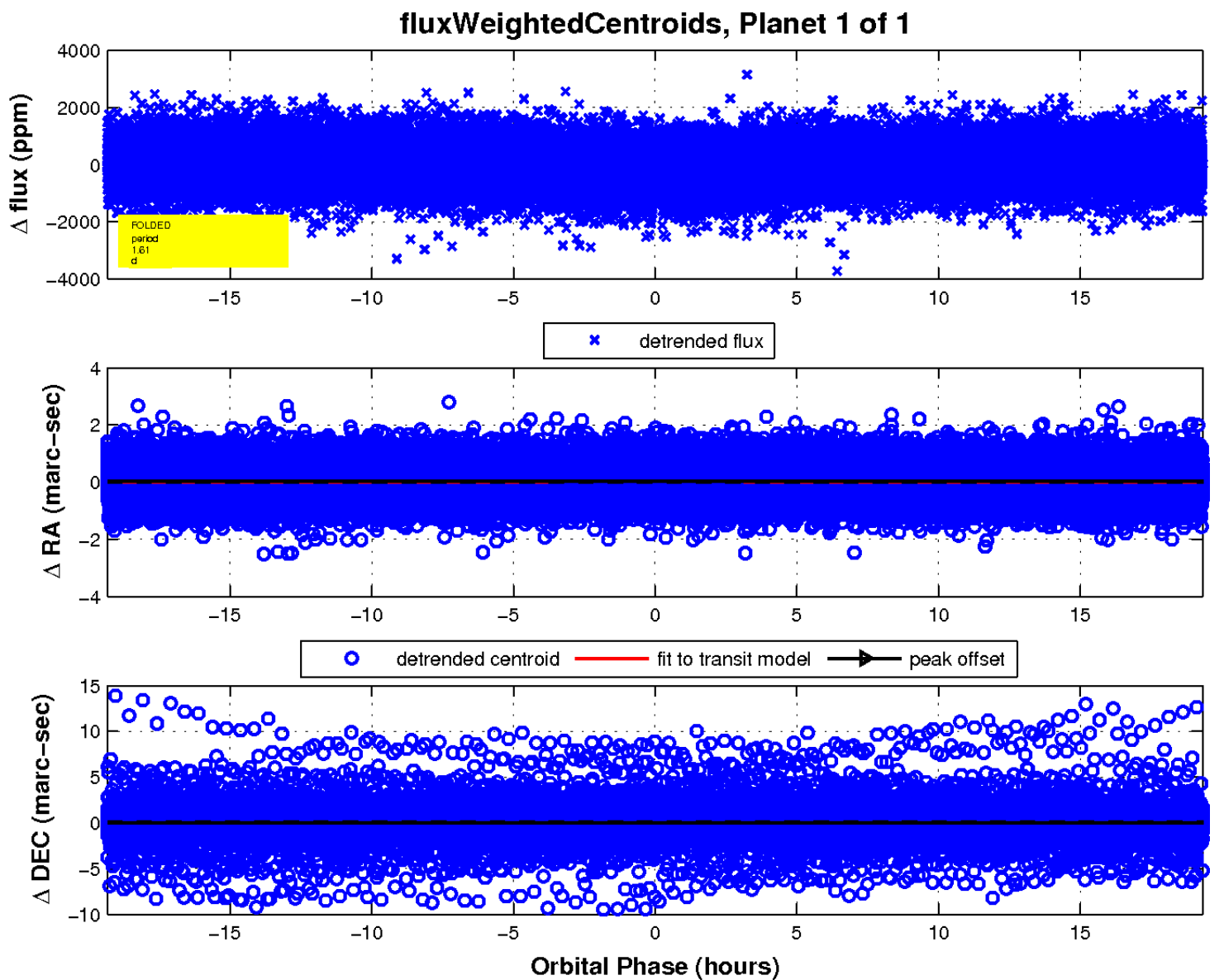
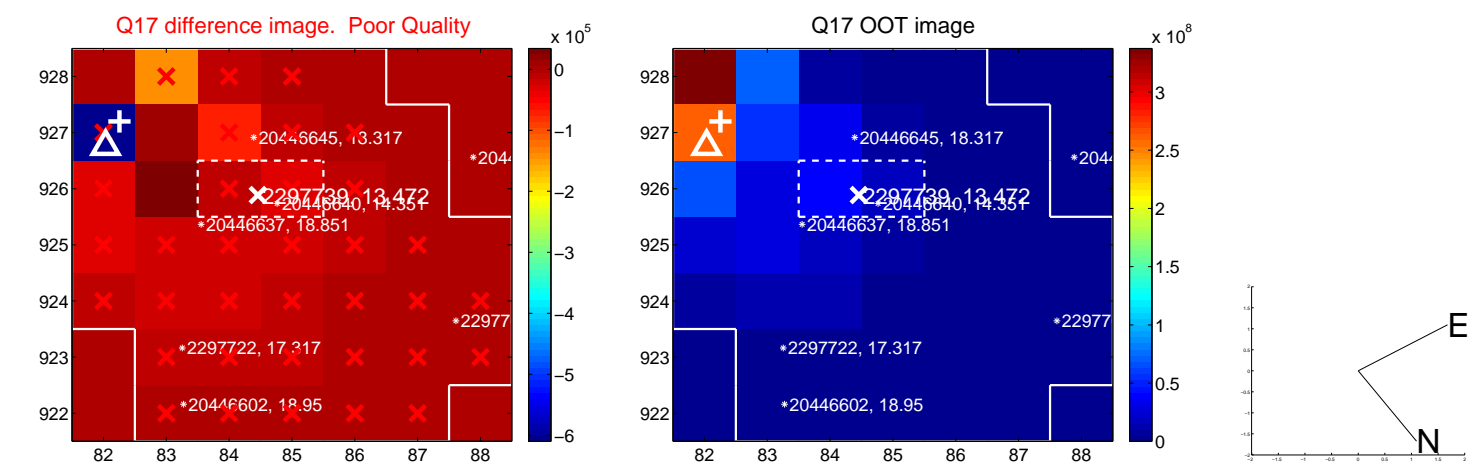
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

