

KIC 008622819

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})
008622819-01	OBS	No	443.234799	472.691345	250.8	15.450	8.1	8.2	0.95	6060	1.68	0.83

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008622819-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—CENT_FEW_DIFFS

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

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

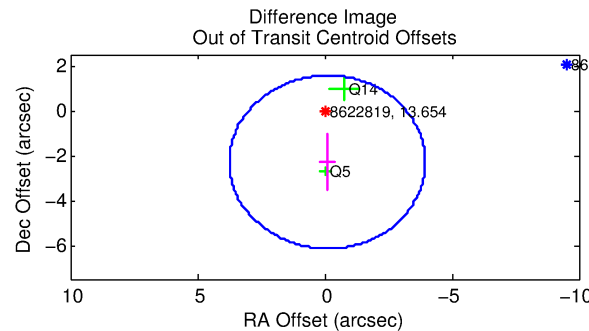
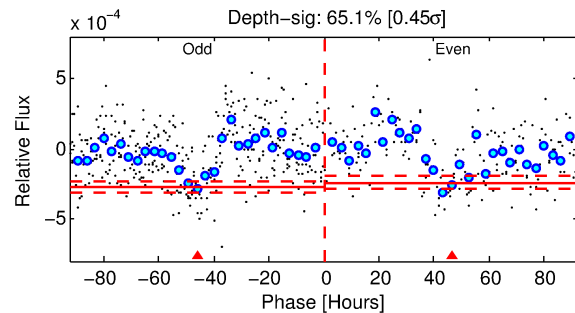
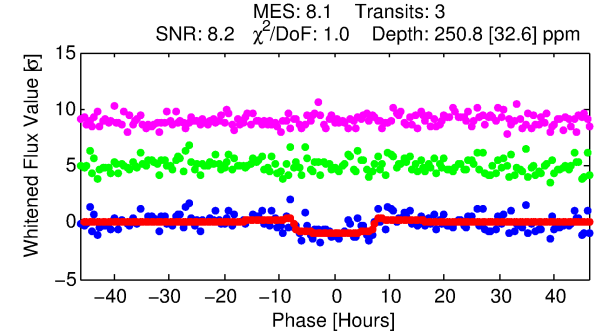
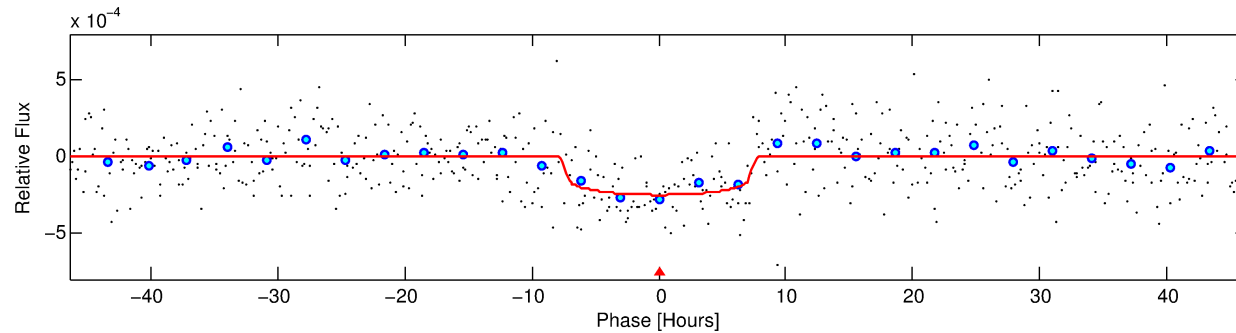
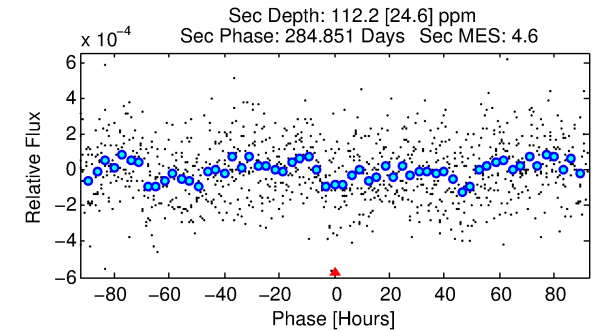
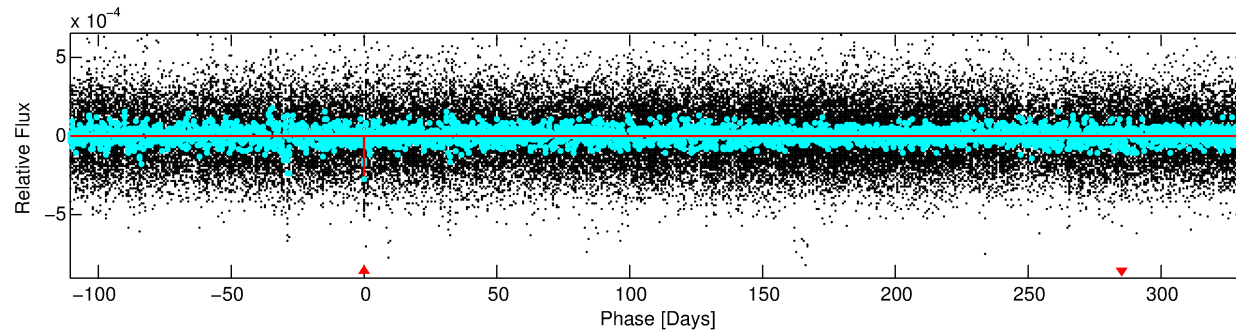
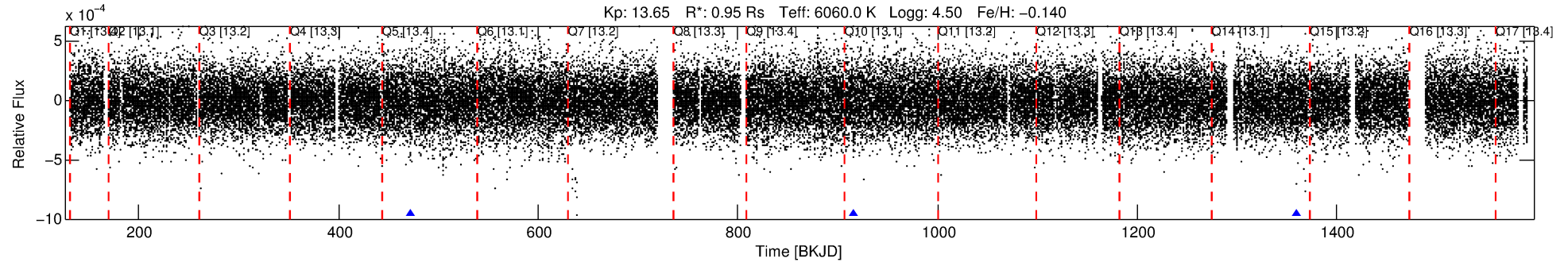
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008622819-01

No Significant Match Found

DV One-Page Summary

KIC: 8622819 Candidate: 1 of 1 Period: 443.235 d



DV Fit Results:

Period = 443.23480 [0.01381] d
Epoch = 472.6913 [0.0187] BKJD
Rp/R* = 0.0161 [0.0041]
a/R* = 135.32 [165.01]
b = 0.81 [0.53]
Seff = 0.83 [0.34]
Teq = 243 [25] K
Rp = 1.68 [0.68] Re
a = 1.1513 [0.3079] AU
Ag = 29141.72 [19742.49] [1.48σ]
Teffp = 4914 [697] K [6.70σ]

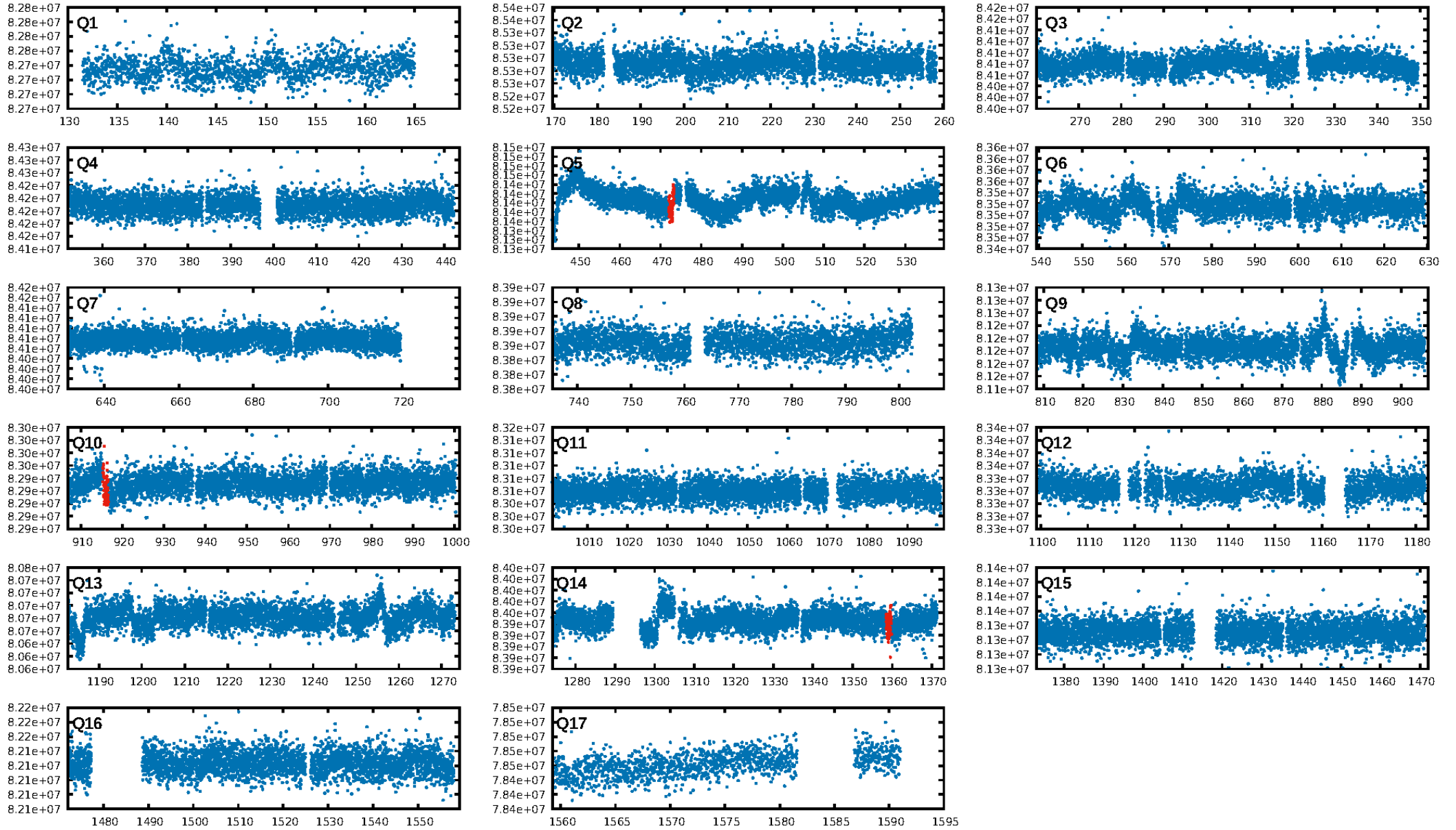
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 26.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.73e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -4.743
Centroid-sig: 8.9%
Centroid-so: 1.919 arcsec [1.50σ]
OotOffset-rm: 2.299 arcsec [1.79σ]
KicOffset-rm: 2.265 arcsec [1.23σ]
OotOffset-st: 1/0/0/1 [2]
KicOffset-st: 1/0/0/1 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

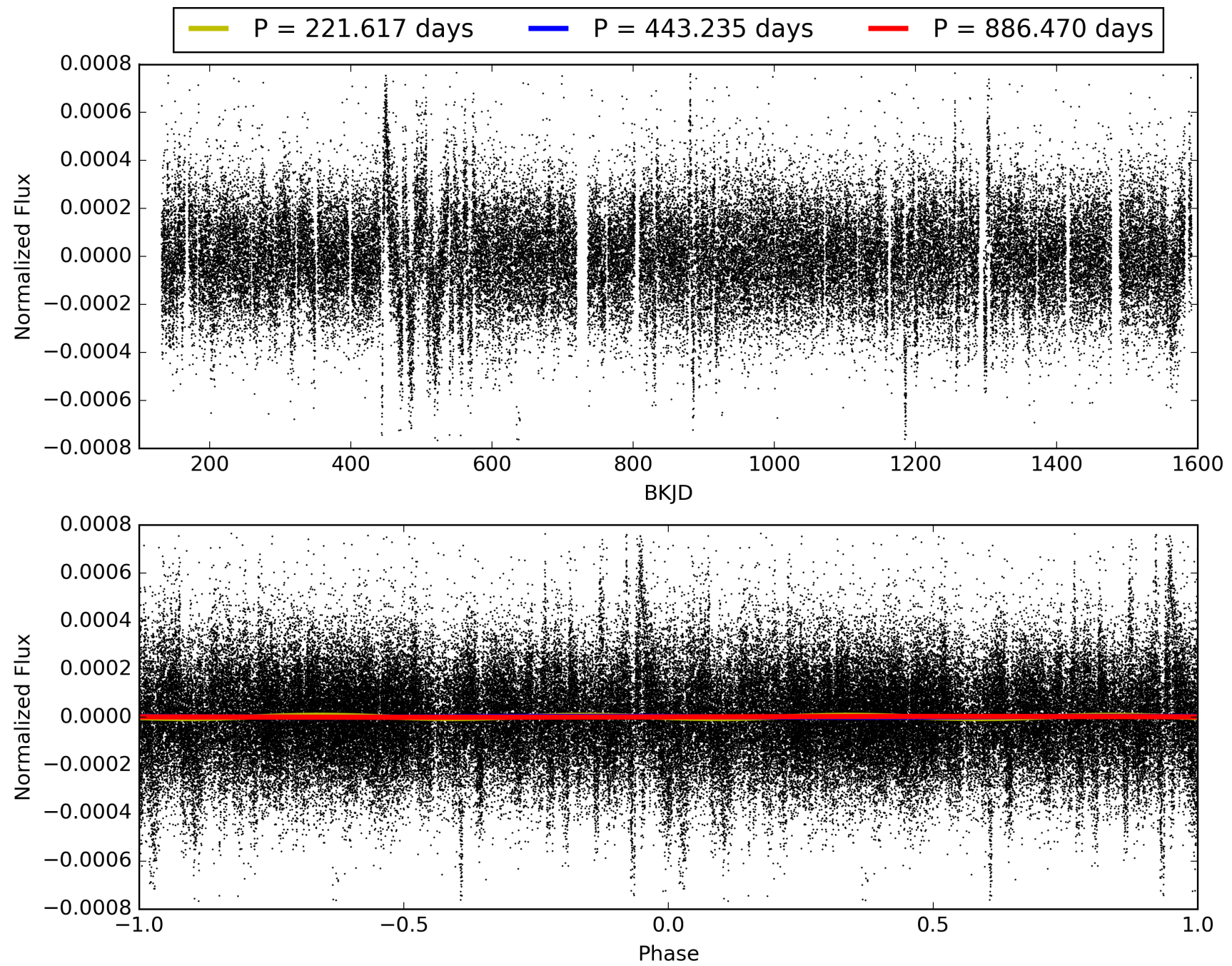
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:32:46 Z

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

TCE 008622819-01, PDC Light Curves

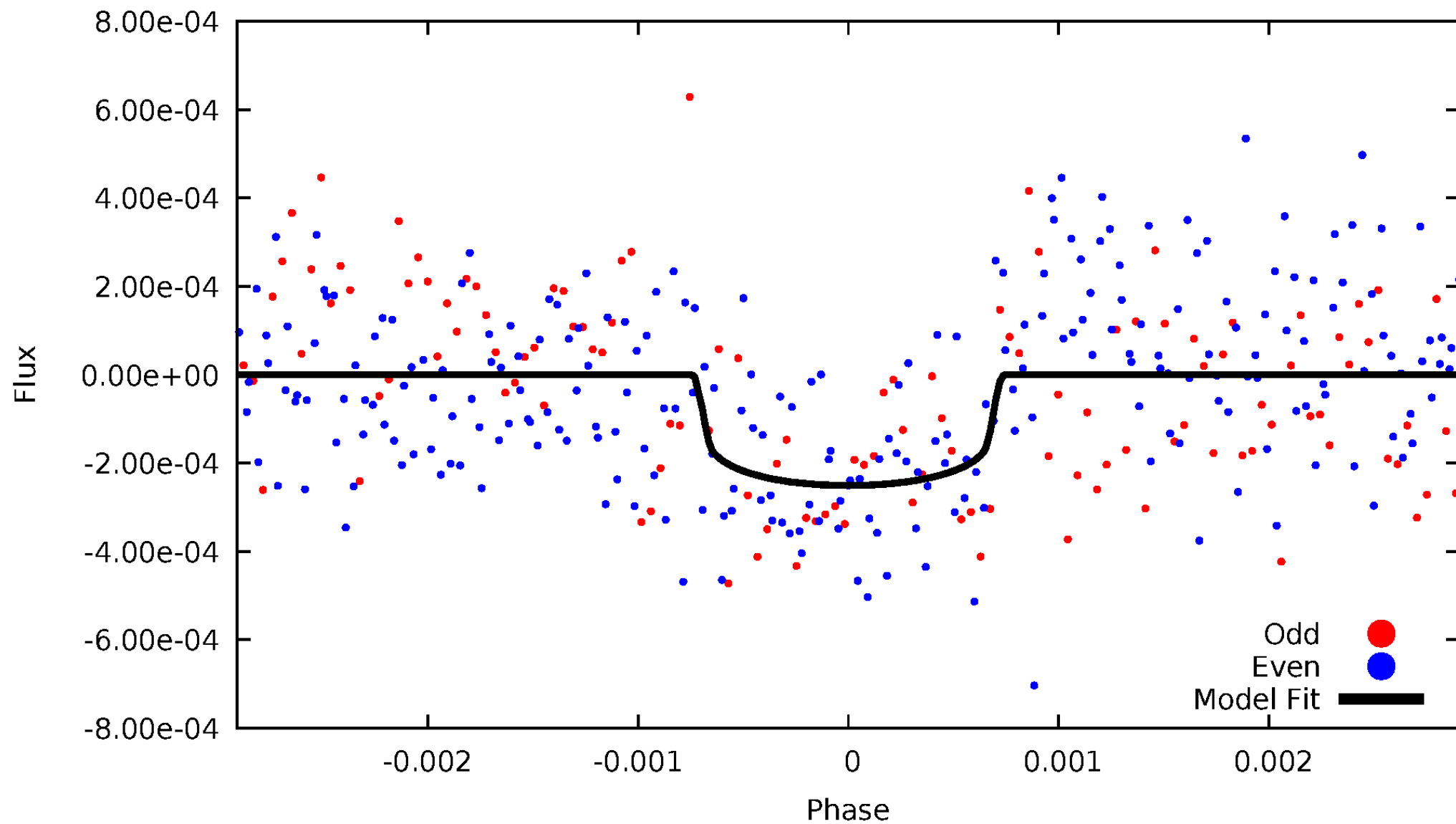


TCE 008622819-01



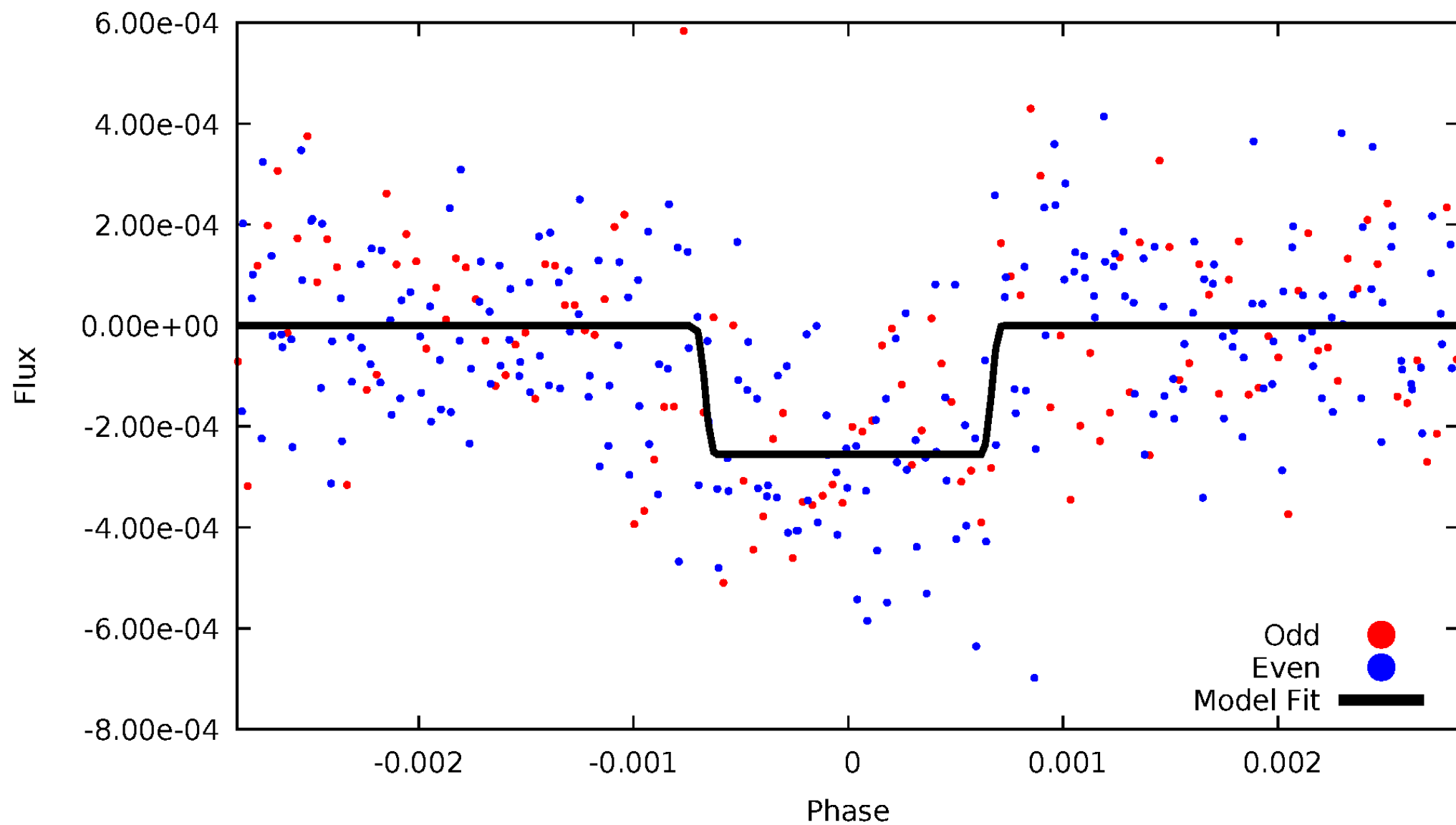
DV Odd/Even

TCE 008622819-01

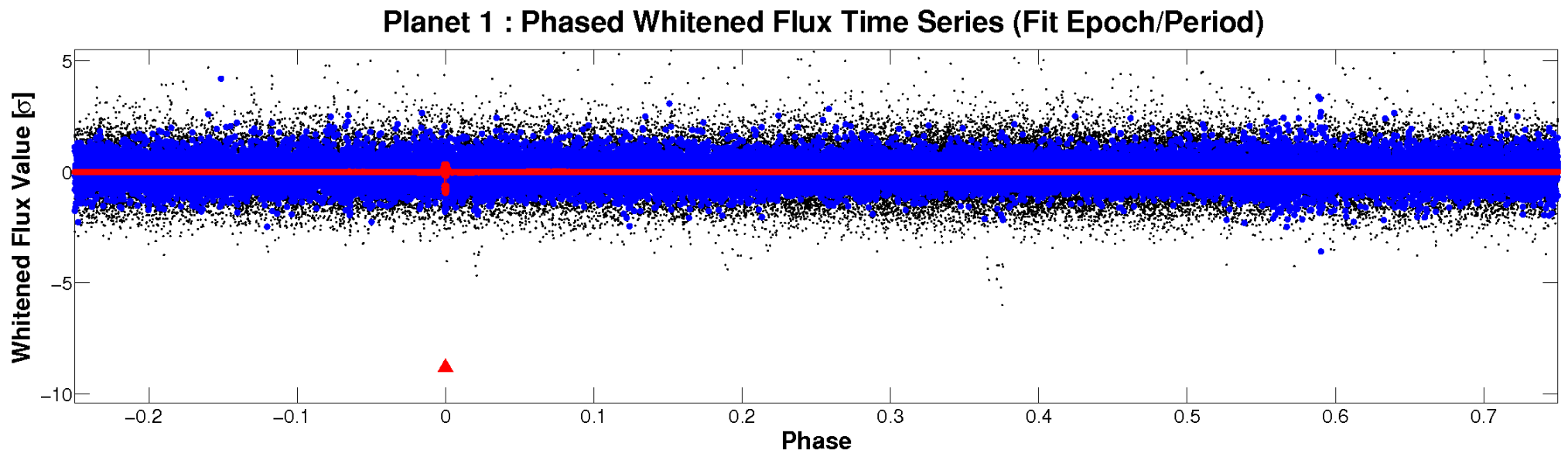
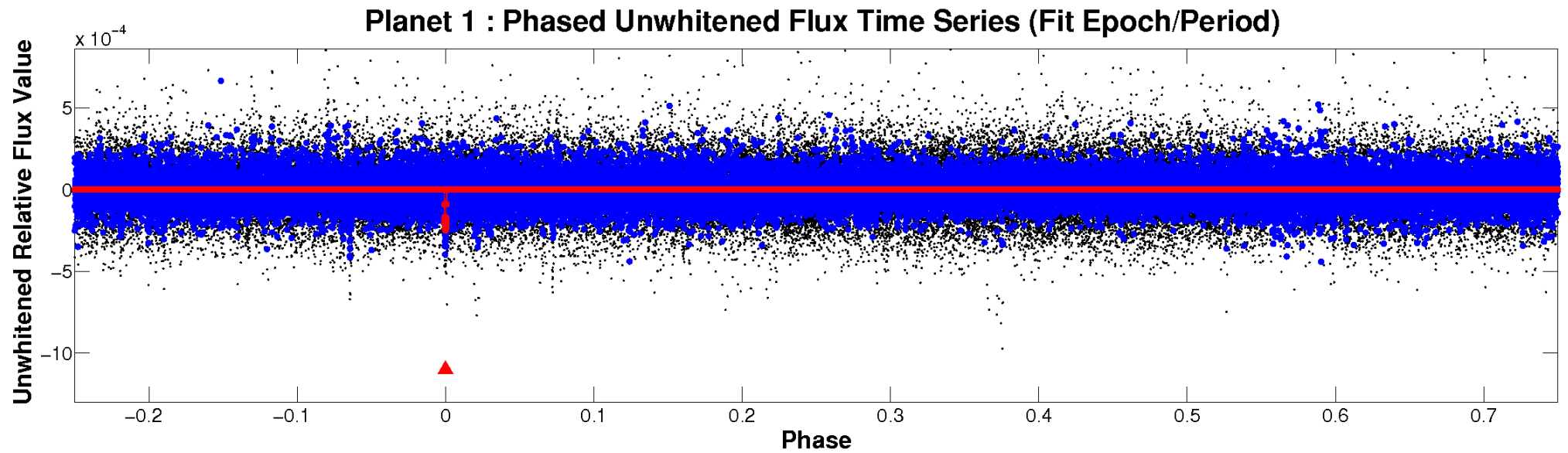


ALT Odd/Even

TCE 008622819-01

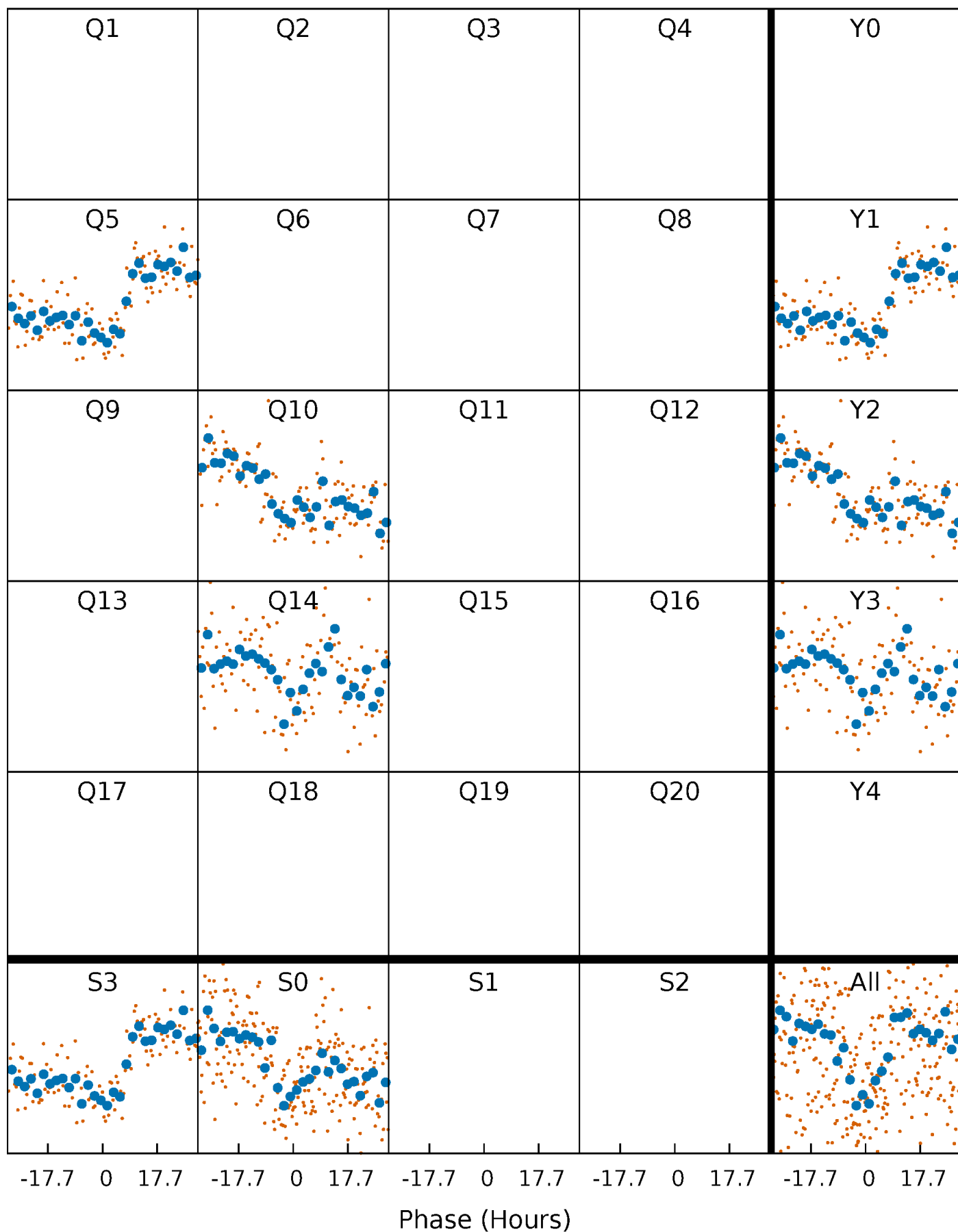


Non-Whitened Vs. Whitened Light Curve



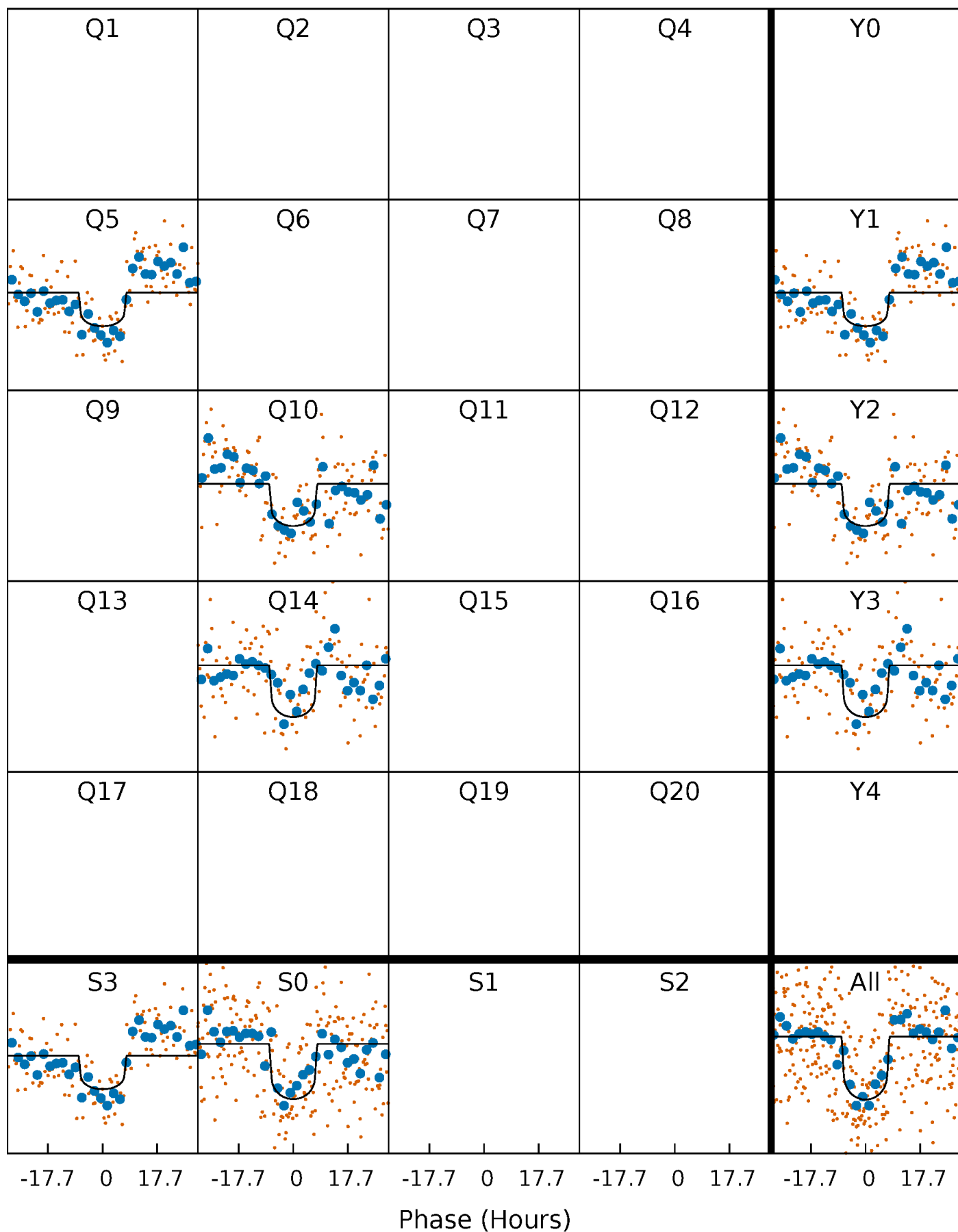
PDC Quarter-Phased Transit Curves

TCE 008622819-01 $P=443.234799$ Days $T_0=472.691345$ (BKJD)



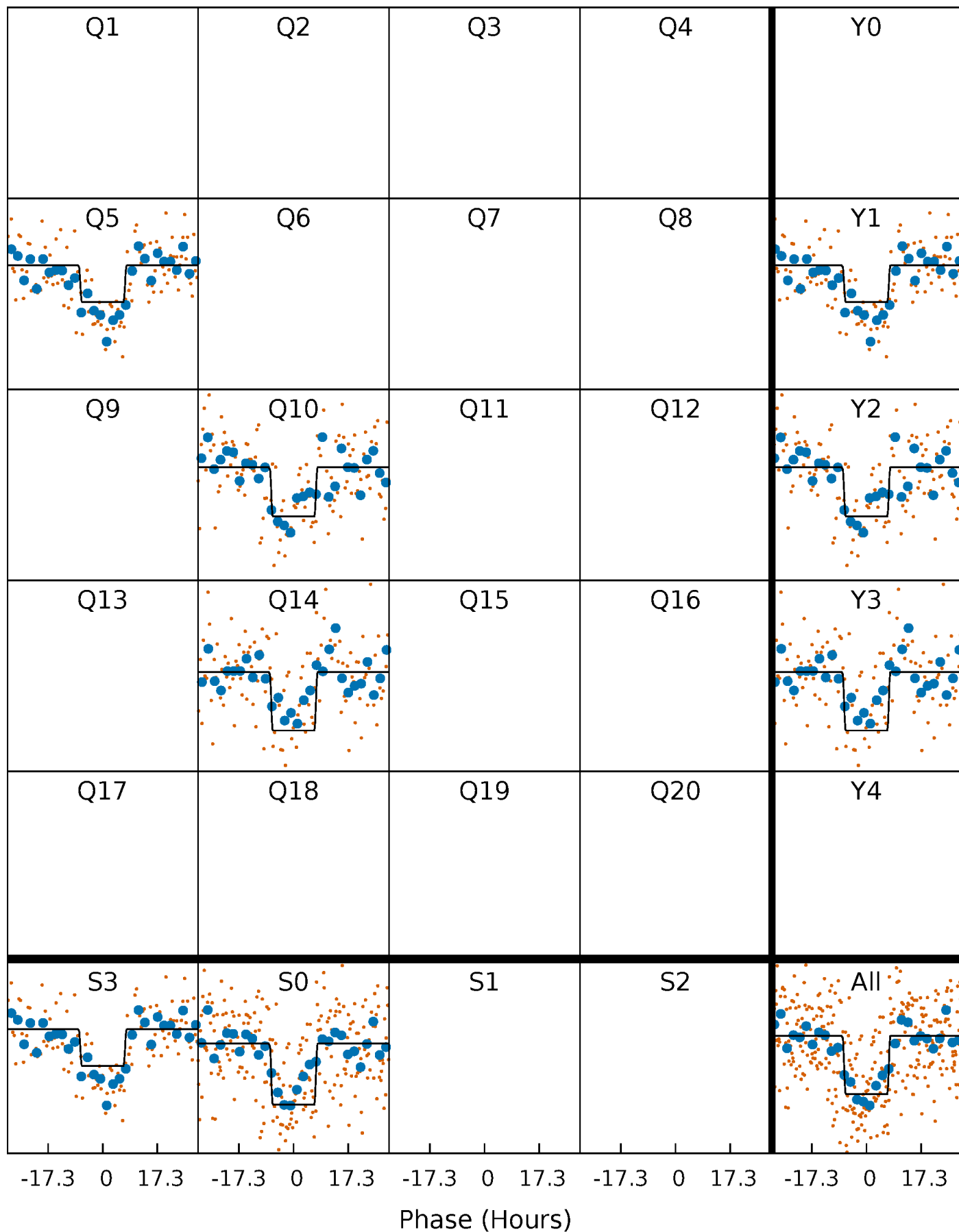
DV Quarter-Phased Transit Curves

TCE 008622819-01 P=443.234799 Days $T_0=472.691345$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

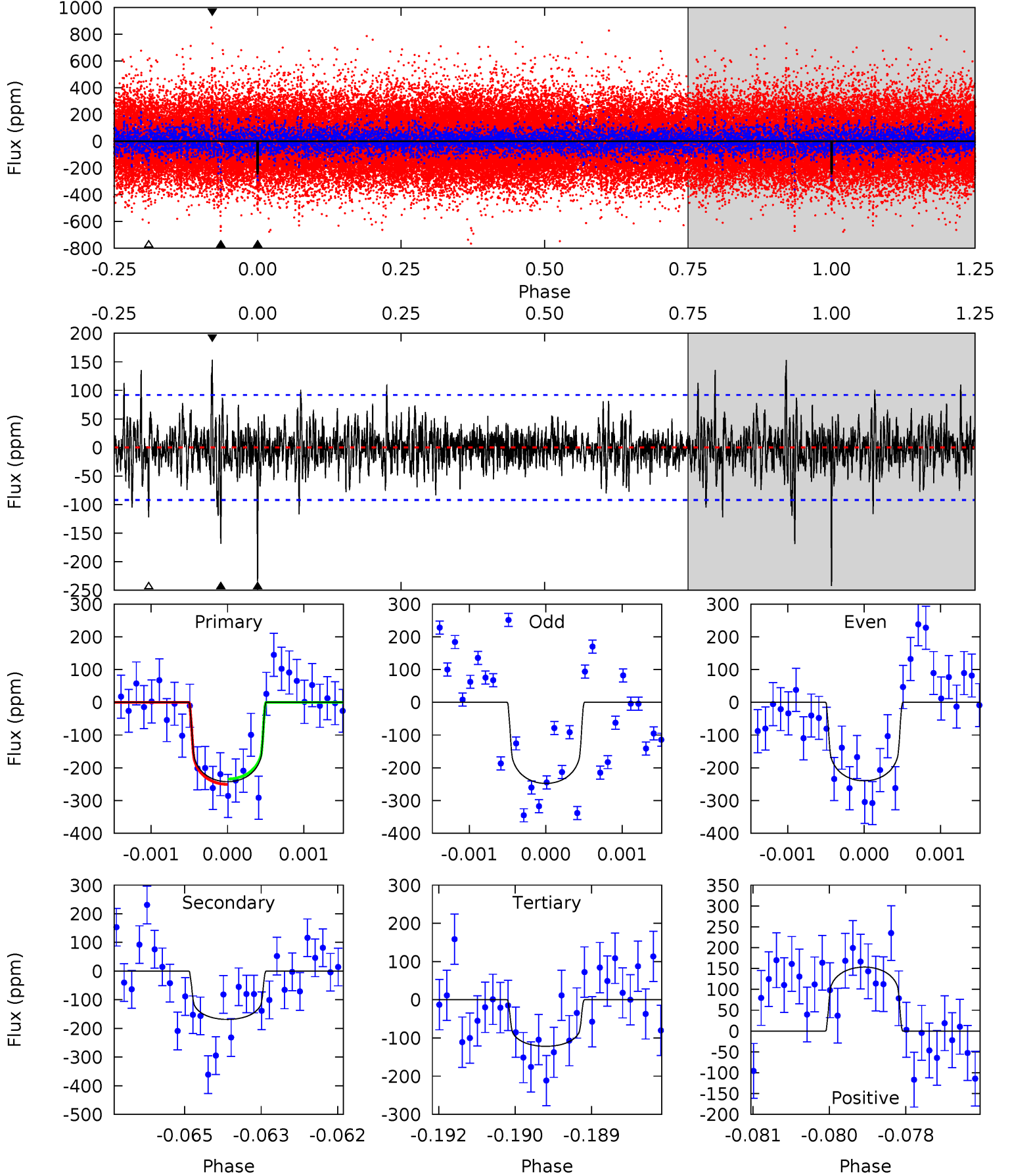
TCE 008622819-01 P=443.237972 Days $T_0=472.692942$ (BKJD)



DV Model-Shift Uniqueness Test

008622819-01, $P = 443.234799$ Days, $E = 29.456546$ Days

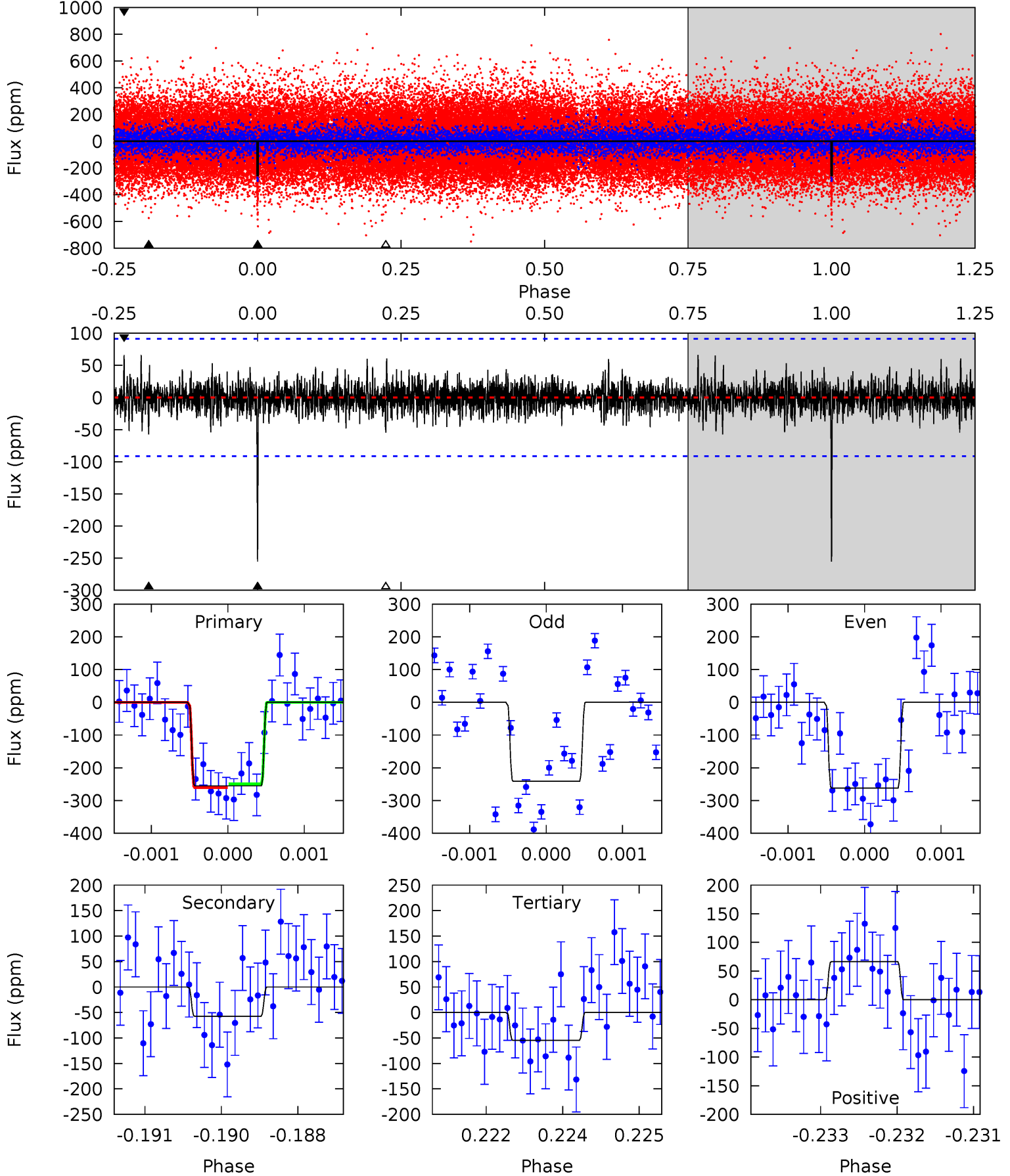
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.2	9.87	7.13	8.98	5.38	3.18	1.62	7.06	5.22	2.74	0.90	0.22	0.98	0.39	0.48



Alt Model-Shift Uniqueness Test

008622819-01, P = 443.237972 Days, E = 29.454970 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.0	3.37	3.21	3.91	5.39	3.19	0.88	11.8	11.1	0.16	-0.54	0.57	1.06	0.21	0.35



Stellar Parameters For KIC 008622819

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6060^{+162}_{-198}	$4.495^{+0.054}_{-0.216}$	$-0.140^{+0.250}_{-0.350}$	$0.953^{+0.300}_{-0.100}$	$1.036^{+0.129}_{-0.129}$	$1.684^{+0.456}_{-0.897}$
	+3%/-3%	+1%/-5%	+179%/-250%	+31%/-10%	+12%/-12%	+27%/-53%
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 008622819-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-169 ± 17	$1.78^{+0.47}_{-0.51}$	348^{+25}_{-17}	5471^{+929}_{-552}	38391^{+34542}_{-15226}
Alt.	-57 ± 17	$1.73^{+0.50}_{-0.46}$	346^{+27}_{-16}	4375^{+590}_{-464}	13357^{+12312}_{-6344}

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 $A_{obs} \gg 1.0$

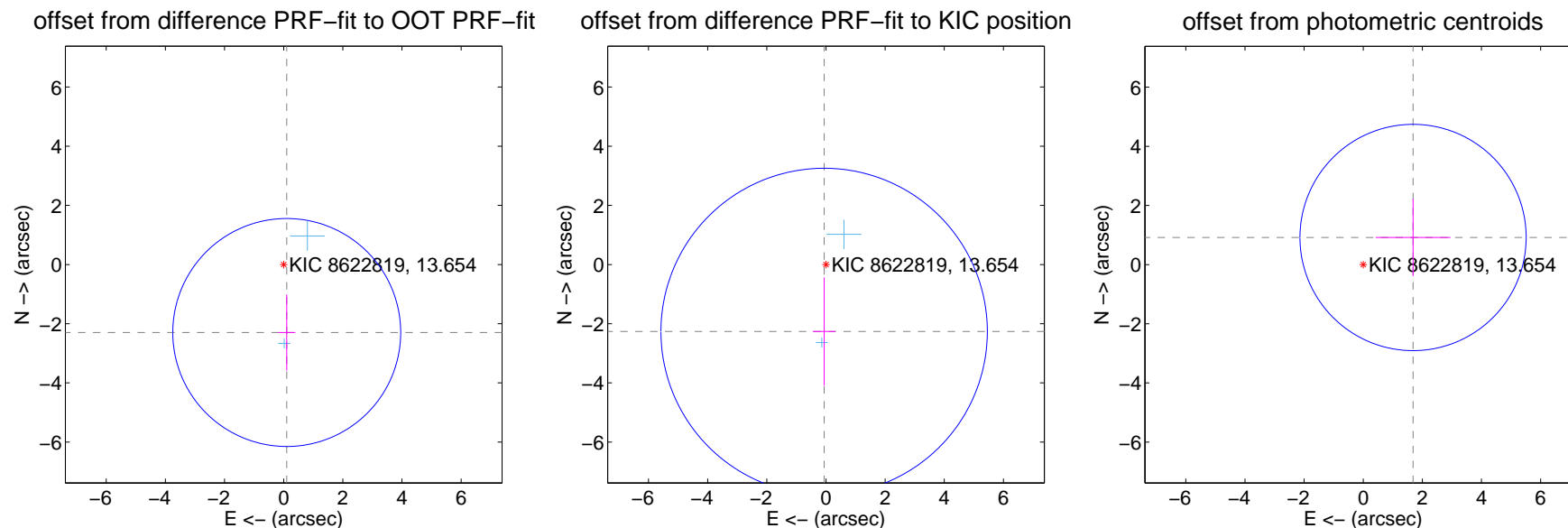
DV Centroid Data

Supplemental centroid analysis for 008622819-01. Kepler magnitude: 13.65. Transit SNR 8.25

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.299 ± 1.284	1.79	-0.104 ± 0.289	-2.297 ± 1.286
PRF-fit source offset from KIC position	2.265 ± 1.839	1.23	0.062 ± 0.382	-2.264 ± 1.830
photometric centroid source offset	1.92 ± 1.28	1.50	-1.69 ± 1.27	0.92 ± 1.30

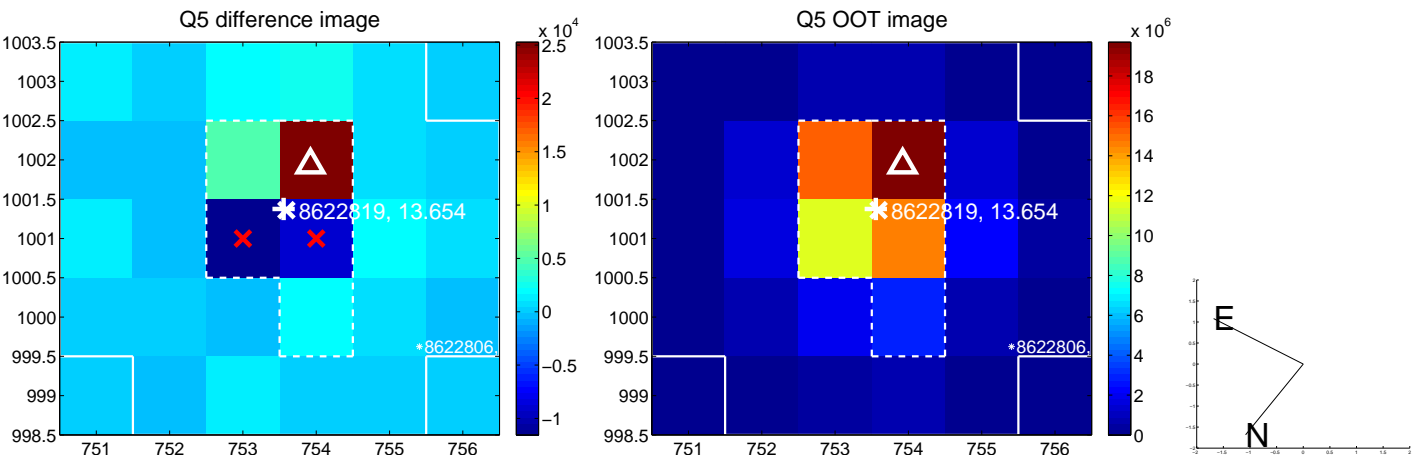


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

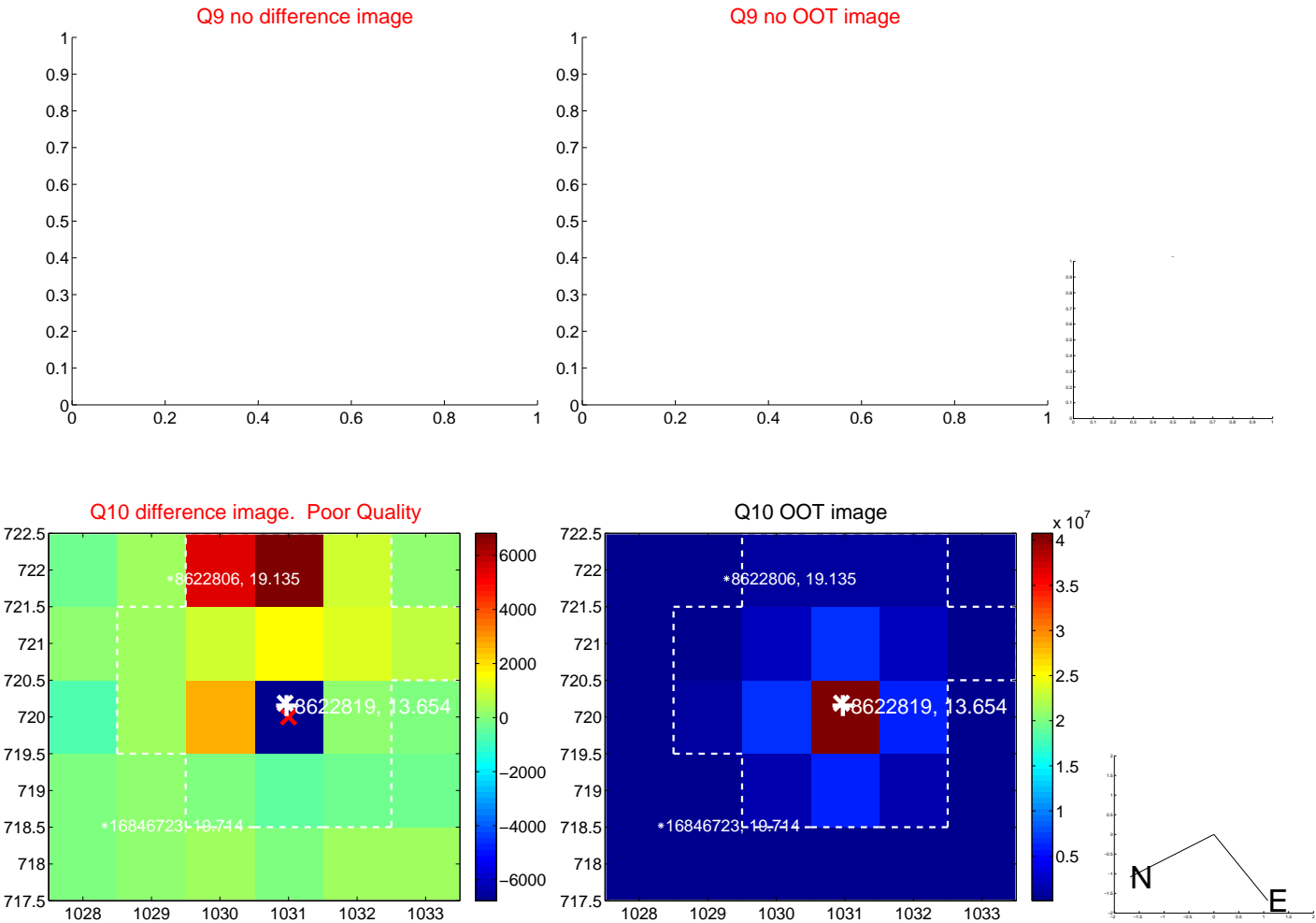
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



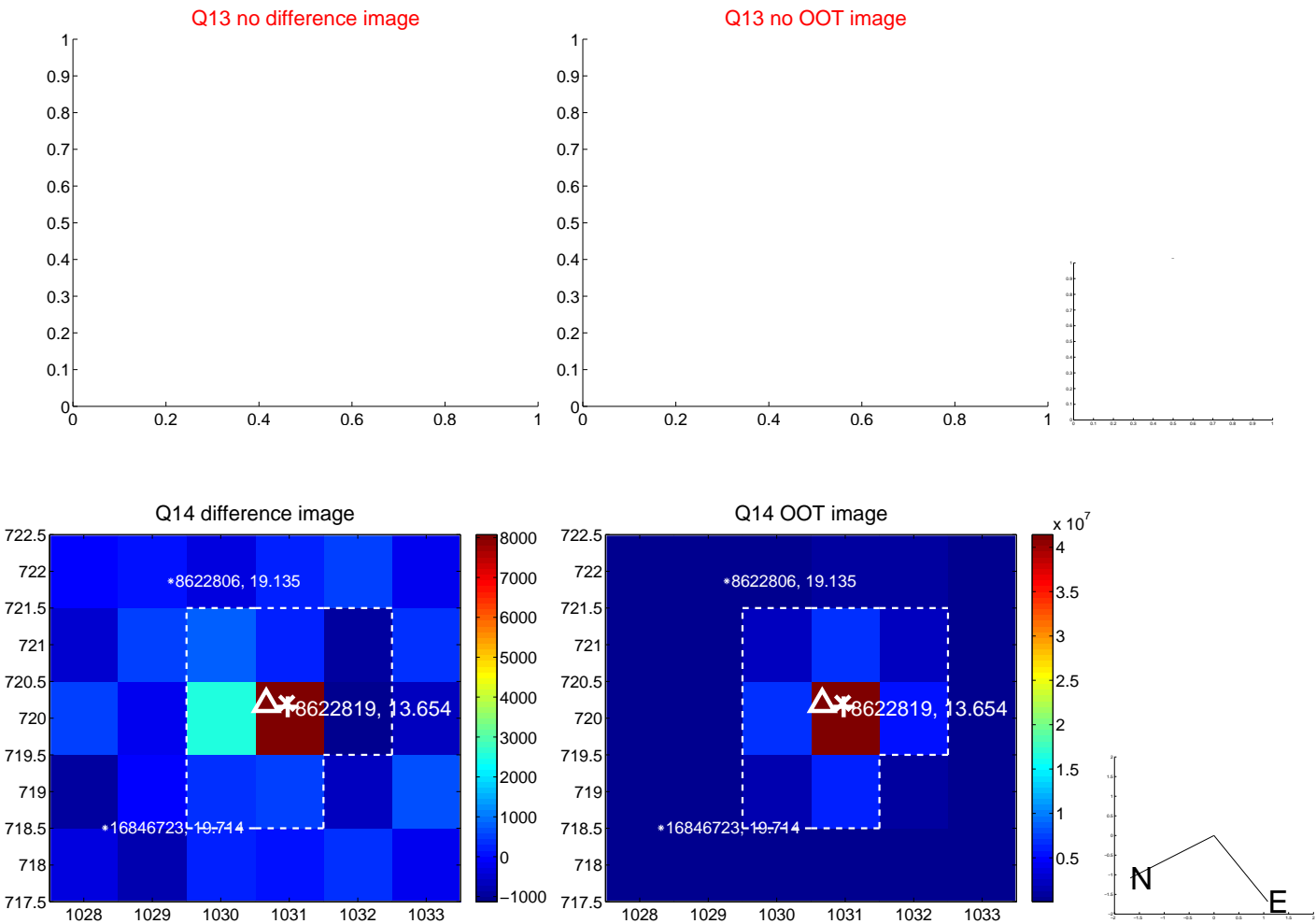
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



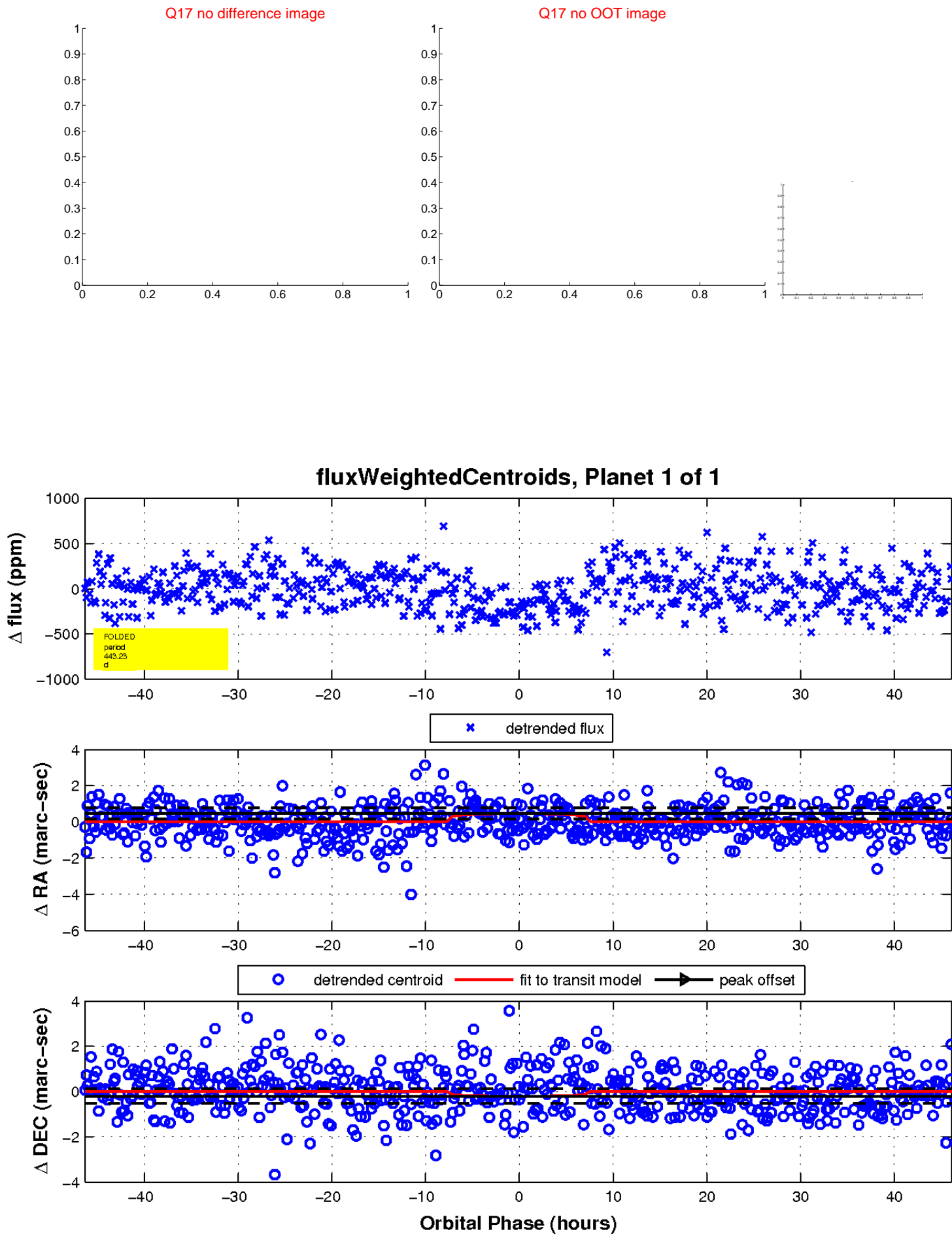
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



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



UKIRT Image

Declination

