

KIC 008838626

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})
008838626-01	OBS	No	0.721107	132.064222	28.5	0.906	7.1	5.0	1.00	6218	0.56	5585.11

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008838626-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—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.

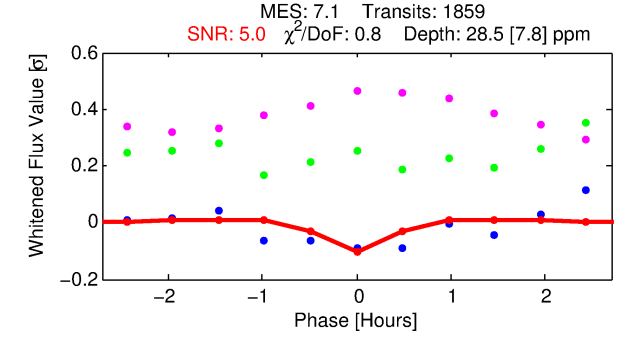
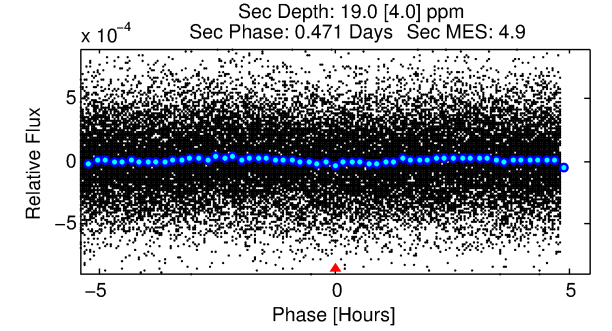
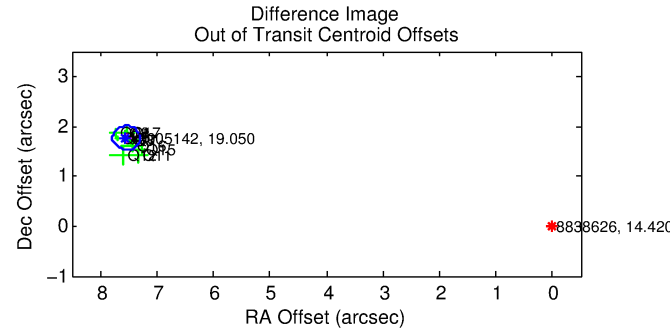
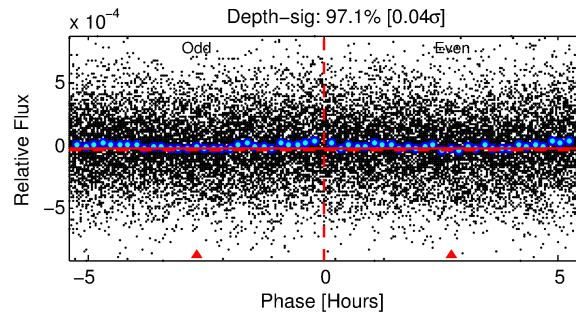
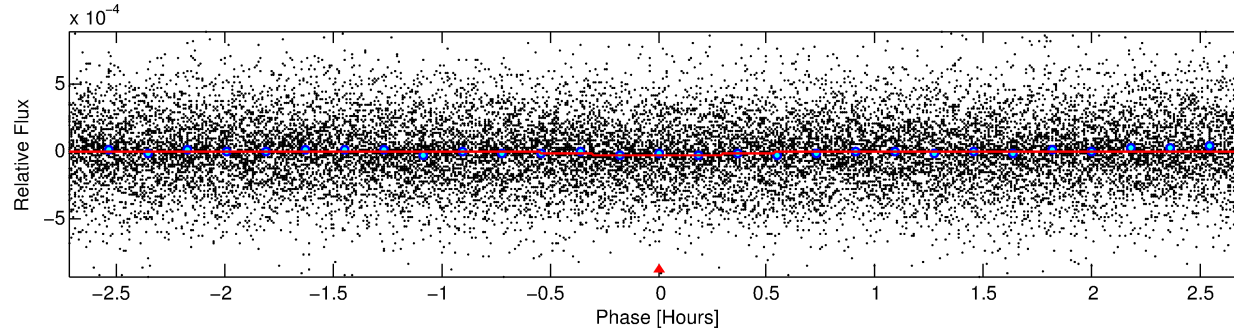
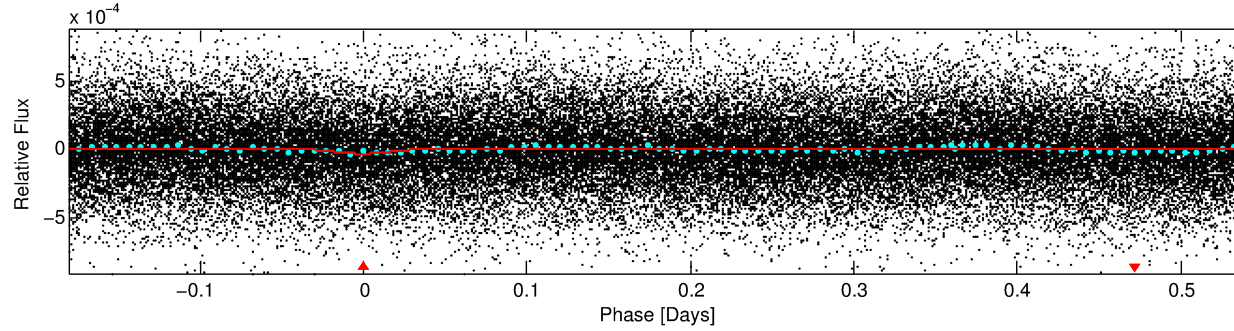
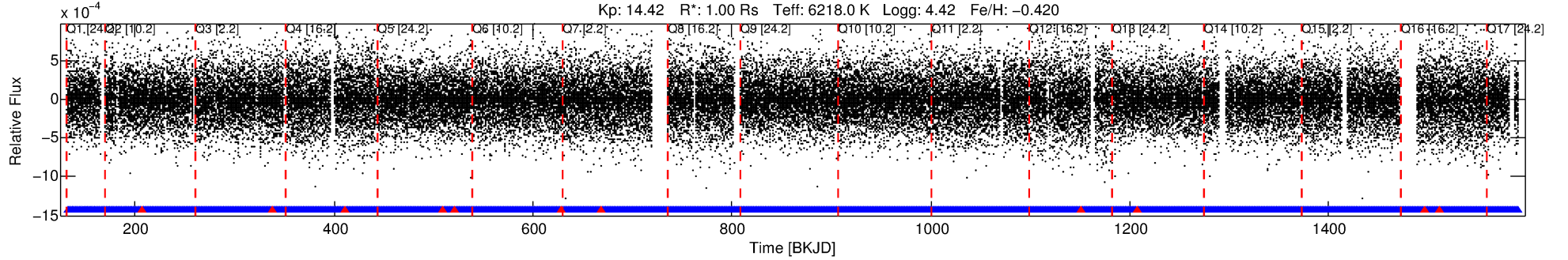
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008838626-01

No Significant Match Found

DV One-Page Summary

KIC: 8838626 Candidate: 1 of 1 Period: 0.721 d



DV Fit Results:

Period = 0.72111 [0.00002] d
Epoch = 132.0642 [0.0031] BKJD
Rp/R* = 0.0051 [0.0033]
a/R* = 5.49 [17.76]
b = 0.46 [5.81]
Seff = 5585.11 [2192.25]
Teff = 2204 [216] K
Rp = 0.55 [0.40] Re
a = 0.0155 [0.0039] AU
Ag = 8.20 [11.28] [0.64σ]
Teffp = 5768 [1920] K [1.84σ]

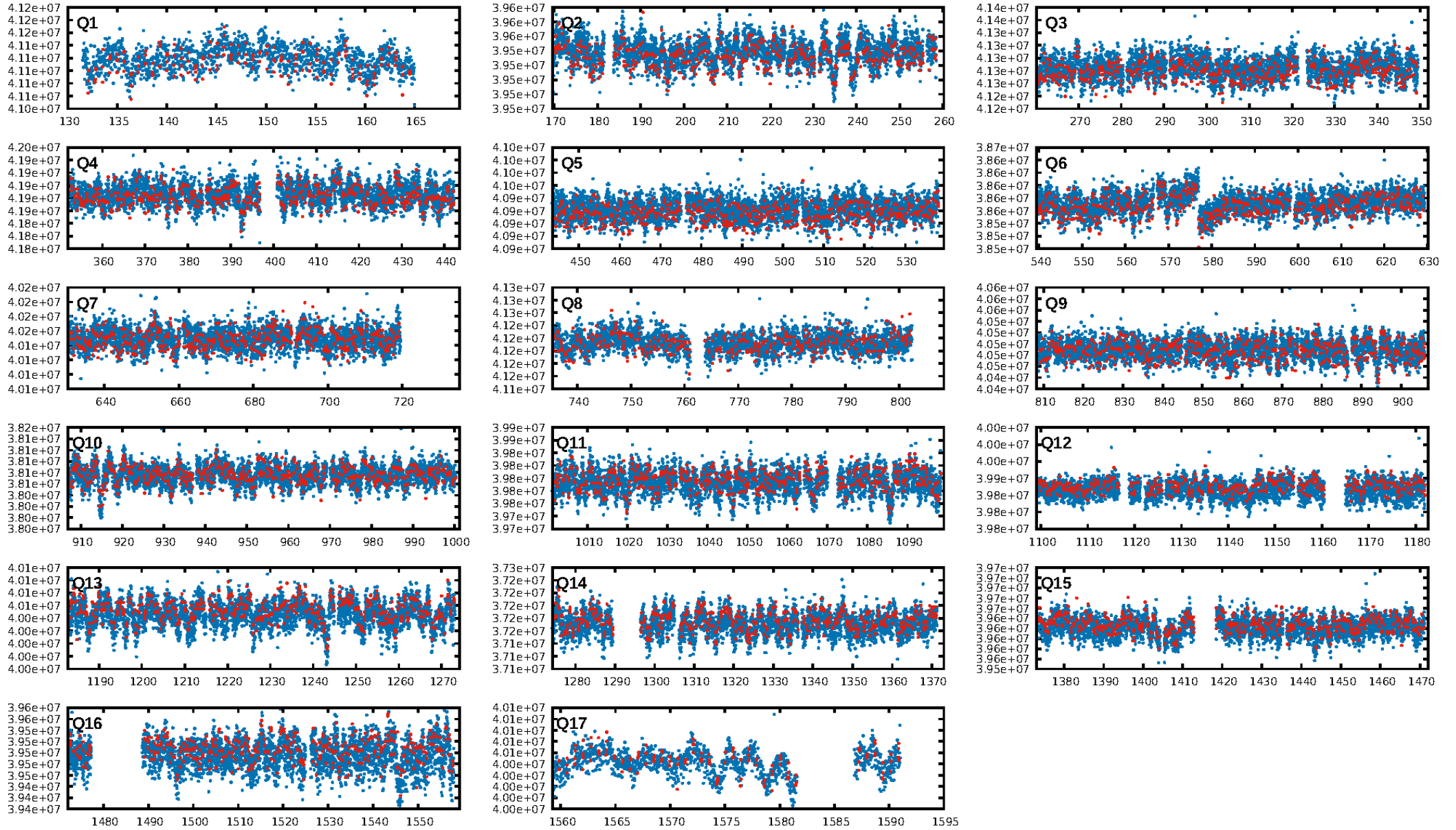
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.36e-12
RollingBand-fgt: 0.99 [1764/1776]
GhostDiagnostic-chr: -0.6653
Centroid-sig: 29.5%
Centroid-so: 3.341 arcsec [1.20σ]
OotOffset-rm: 7.740 arcsec [96.69σ]
KicOffset-rm: 7.813 arcsec [99.12σ]
OotOffset-st: 0/4/3/4 [11]
KicOffset-st: 0/4/3/4 [11]
DiffImageQuality-fgm: 0.45 [5/11]
DiffImageOverlap-fno: 1.00 [17/17]

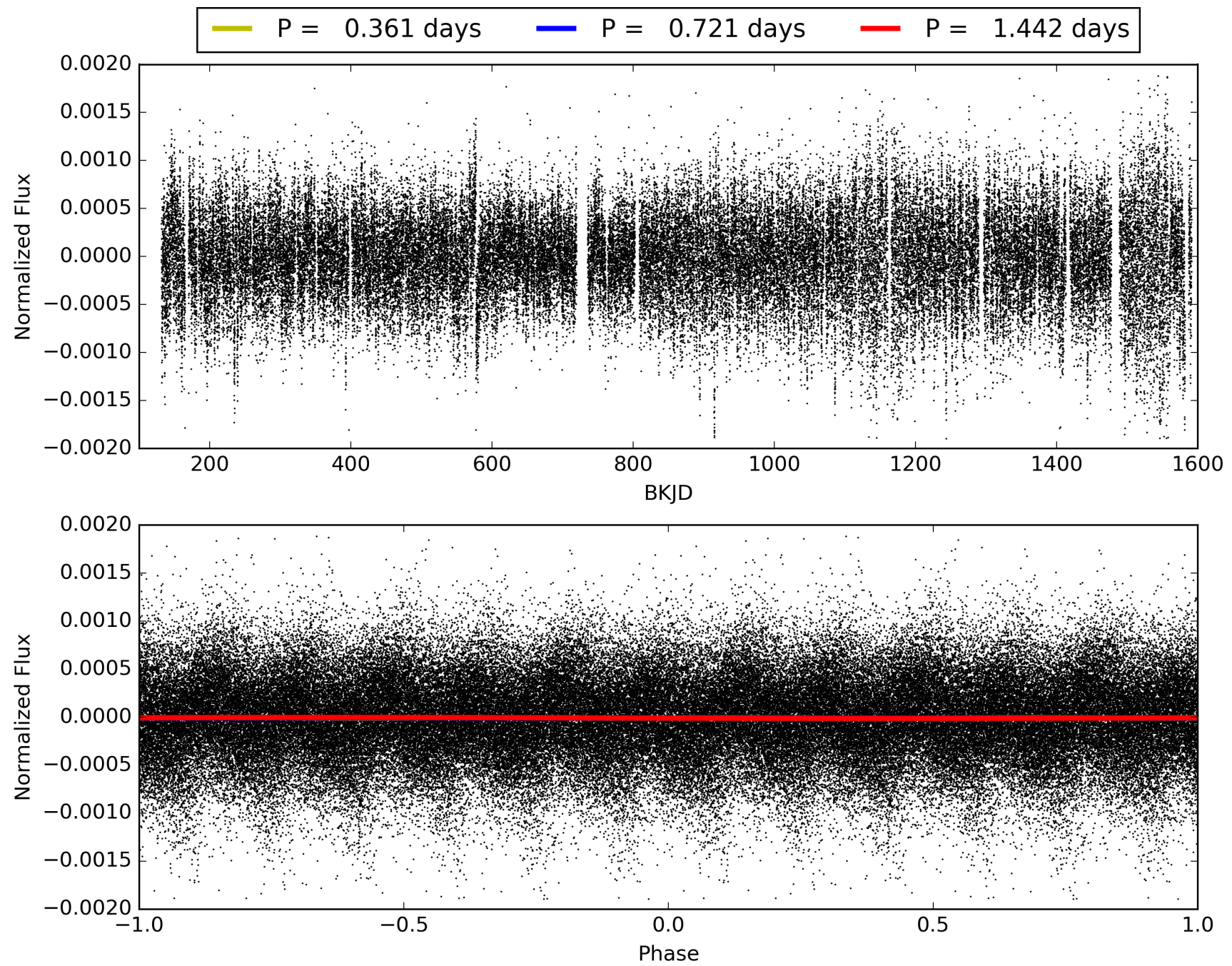
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:23:38 Z

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

TCE 008838626-01, PDC Light Curves

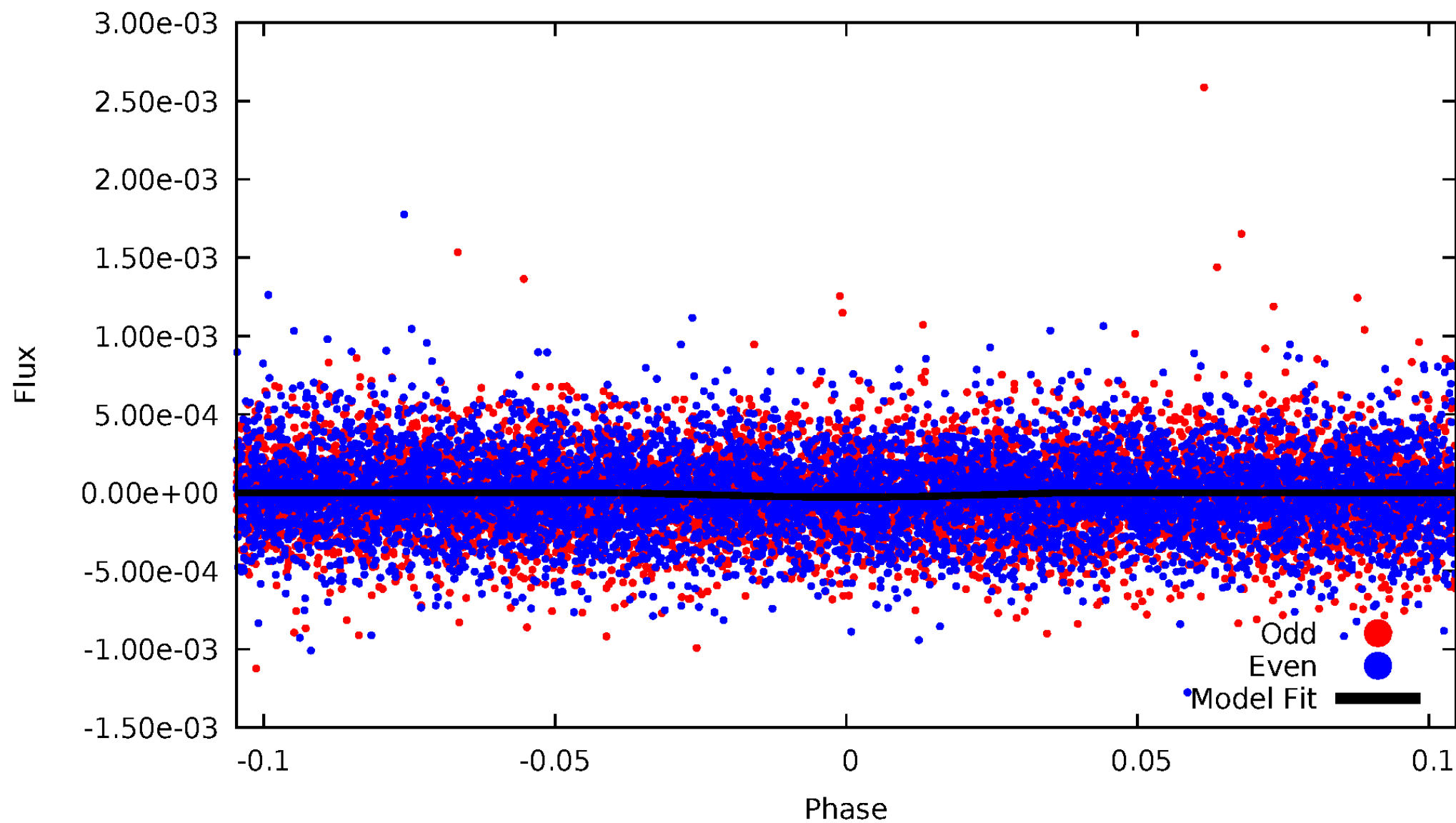


TCE 008838626-01



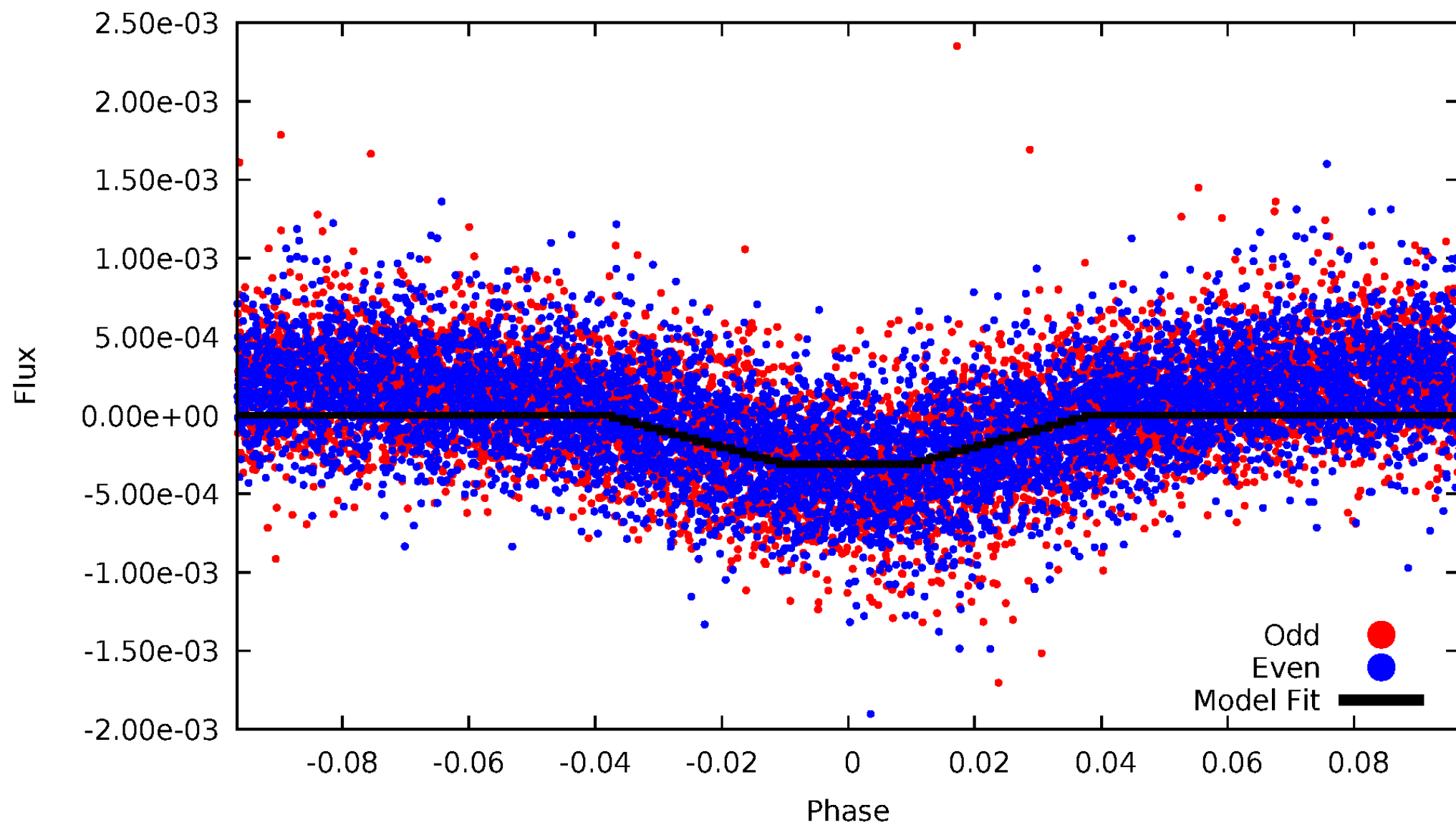
DV Odd/Even

TCE 008838626-01



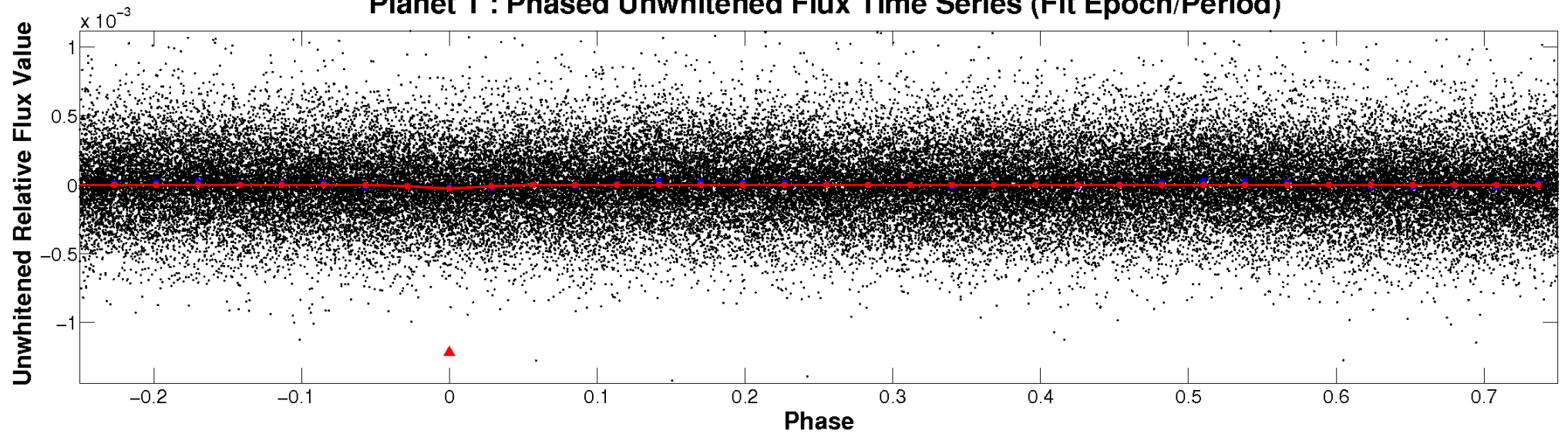
ALT Odd/Even

TCE 008838626-01

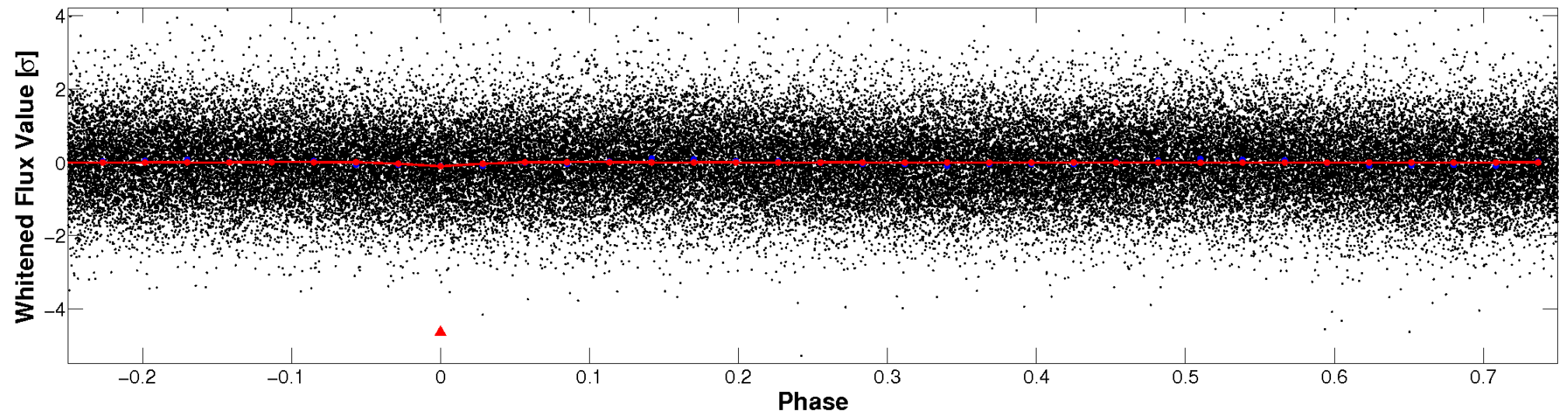


Non-Whitened Vs. Whitened Light Curve

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

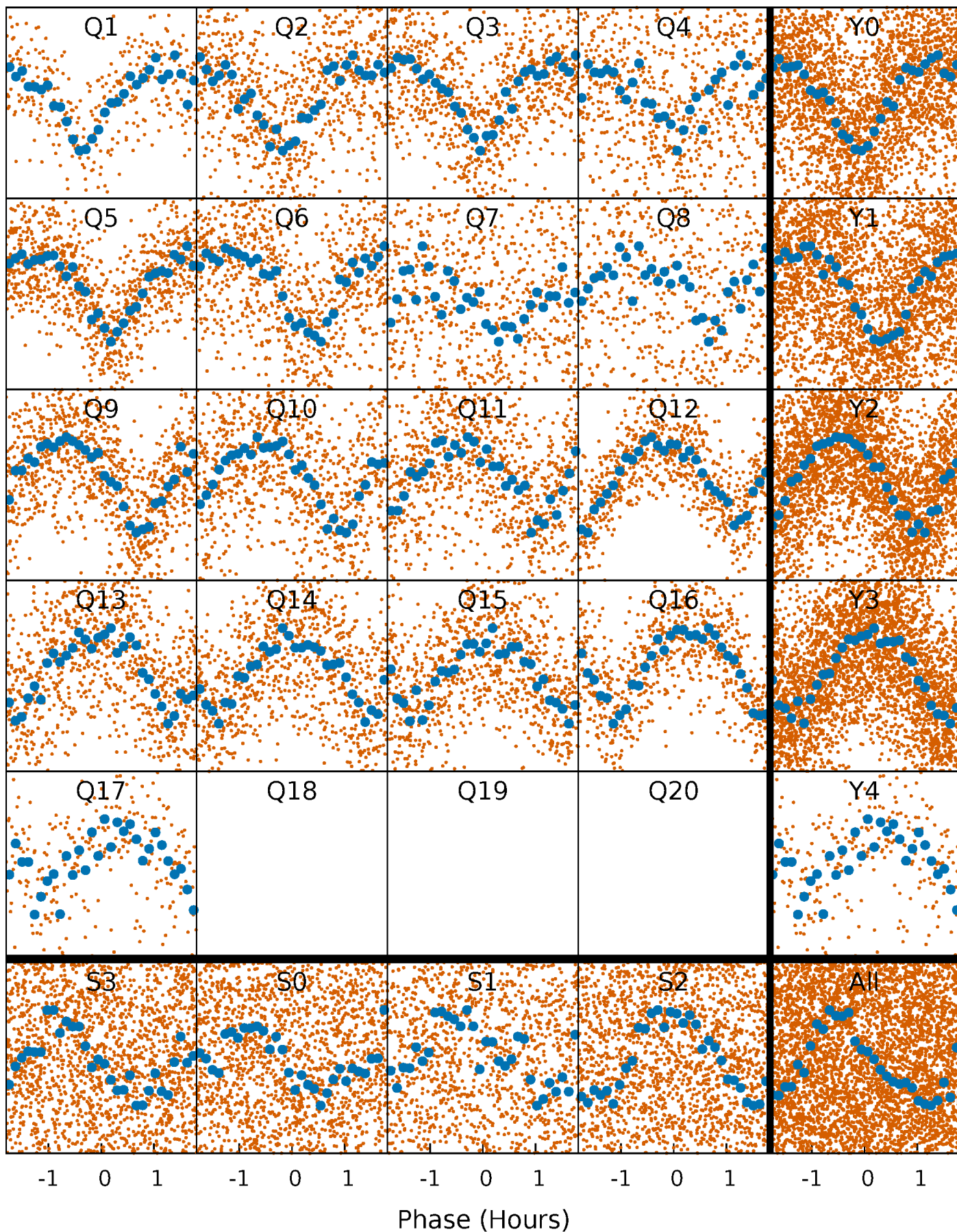


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



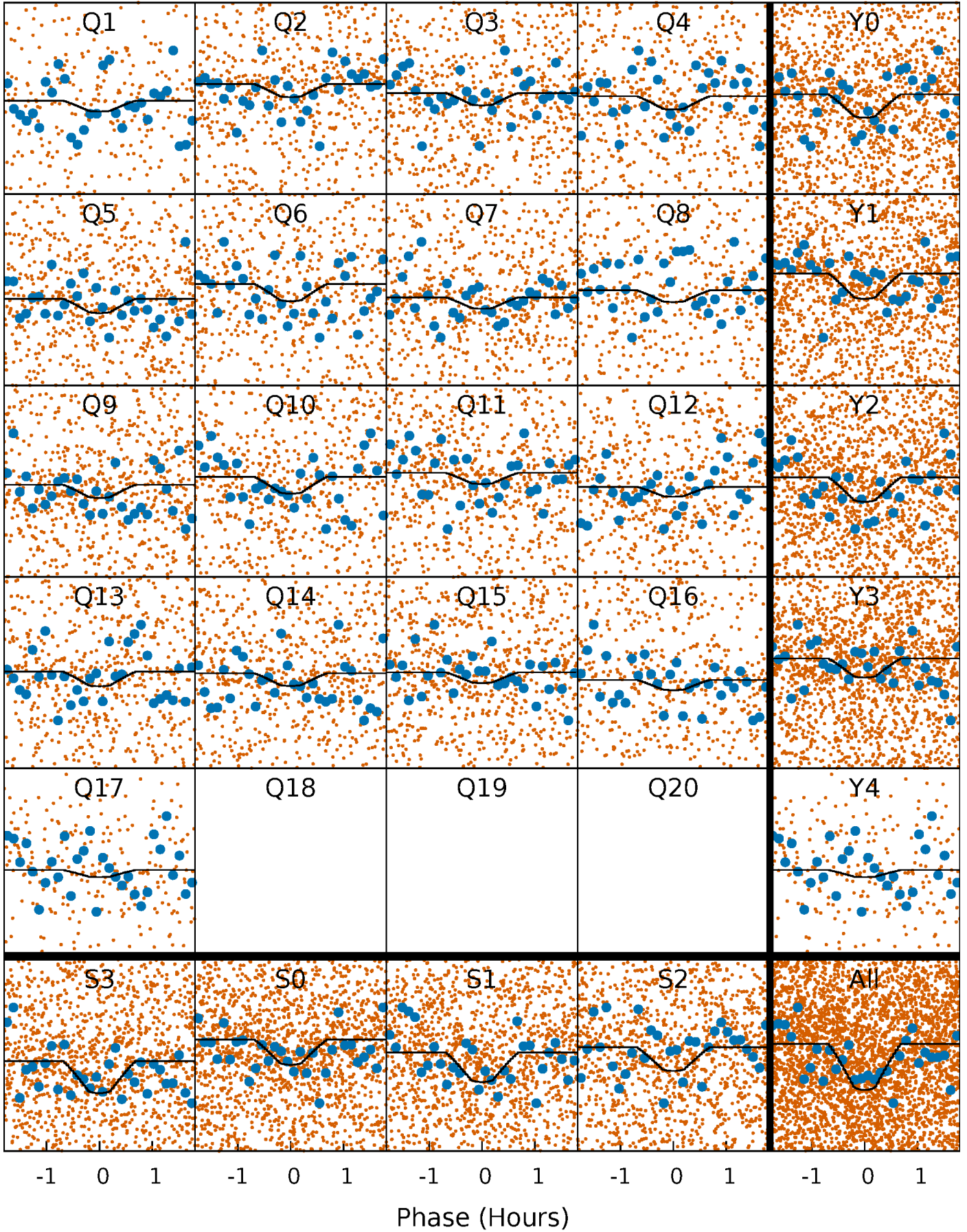
PDC Quarter-Phased Transit Curves

TCE 008838626-01 P= 0.721107 Days $T_0=132.064222$ (BKJD)



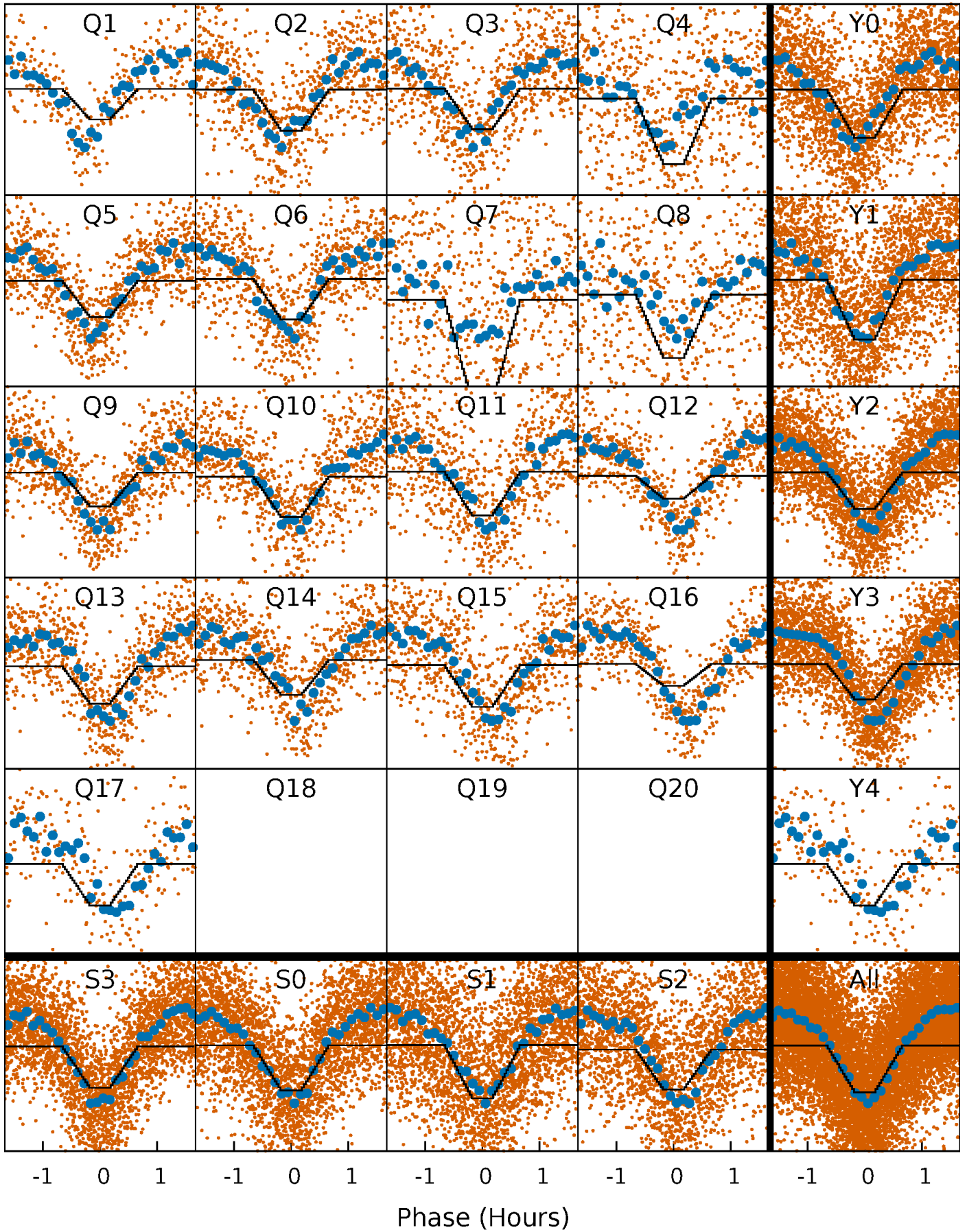
DV Quarter-Phased Transit Curves

TCE 008838626-01 P= 0.721107 Days $T_0=132.064222$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

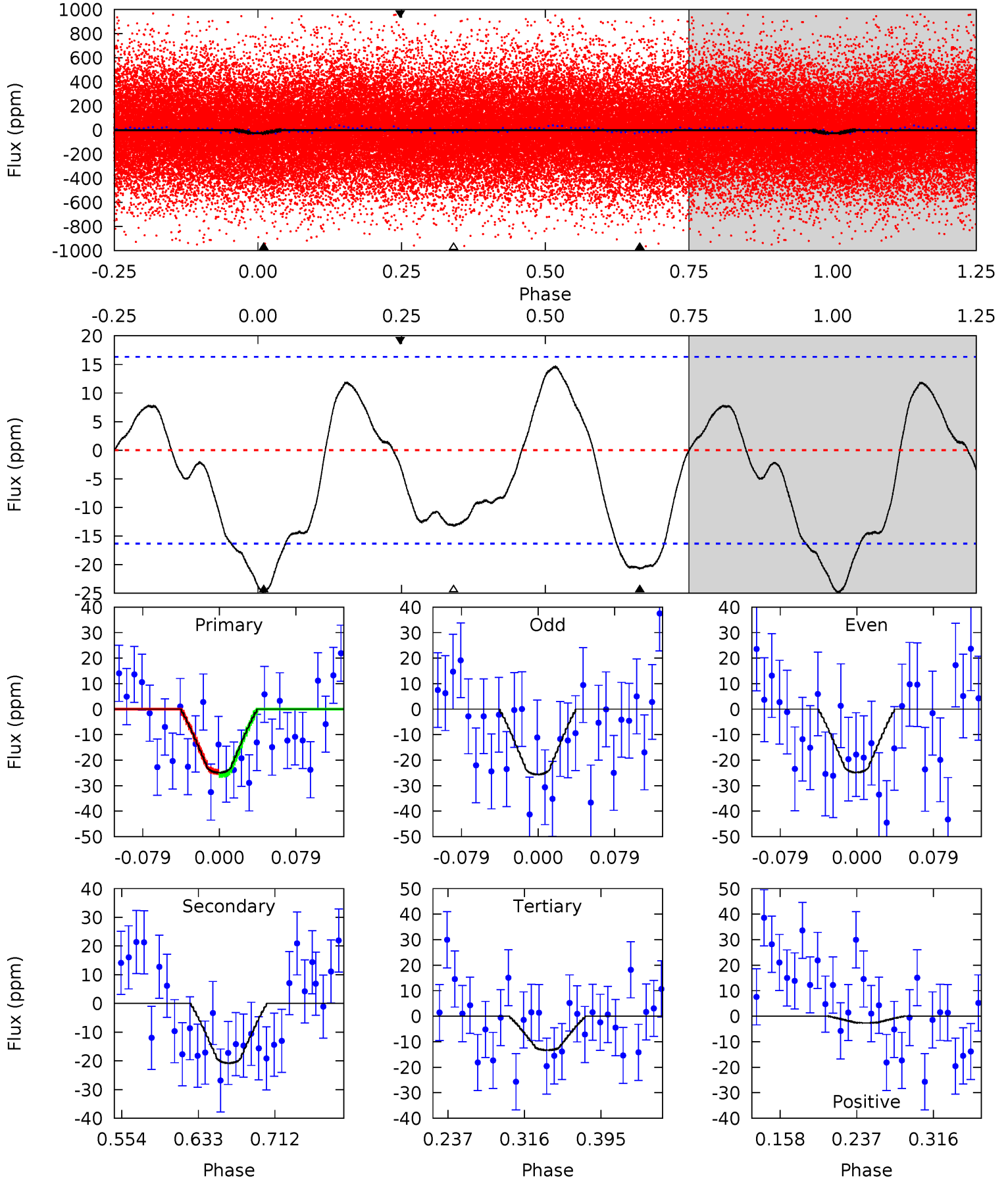
TCE 008838626-01 P= 0.721141 Days $T_0=132.060973$ (BKJD)



DV Model-Shift Uniqueness Test

008838626-01, P = 0.721107 Days, E = 131.343115 Days

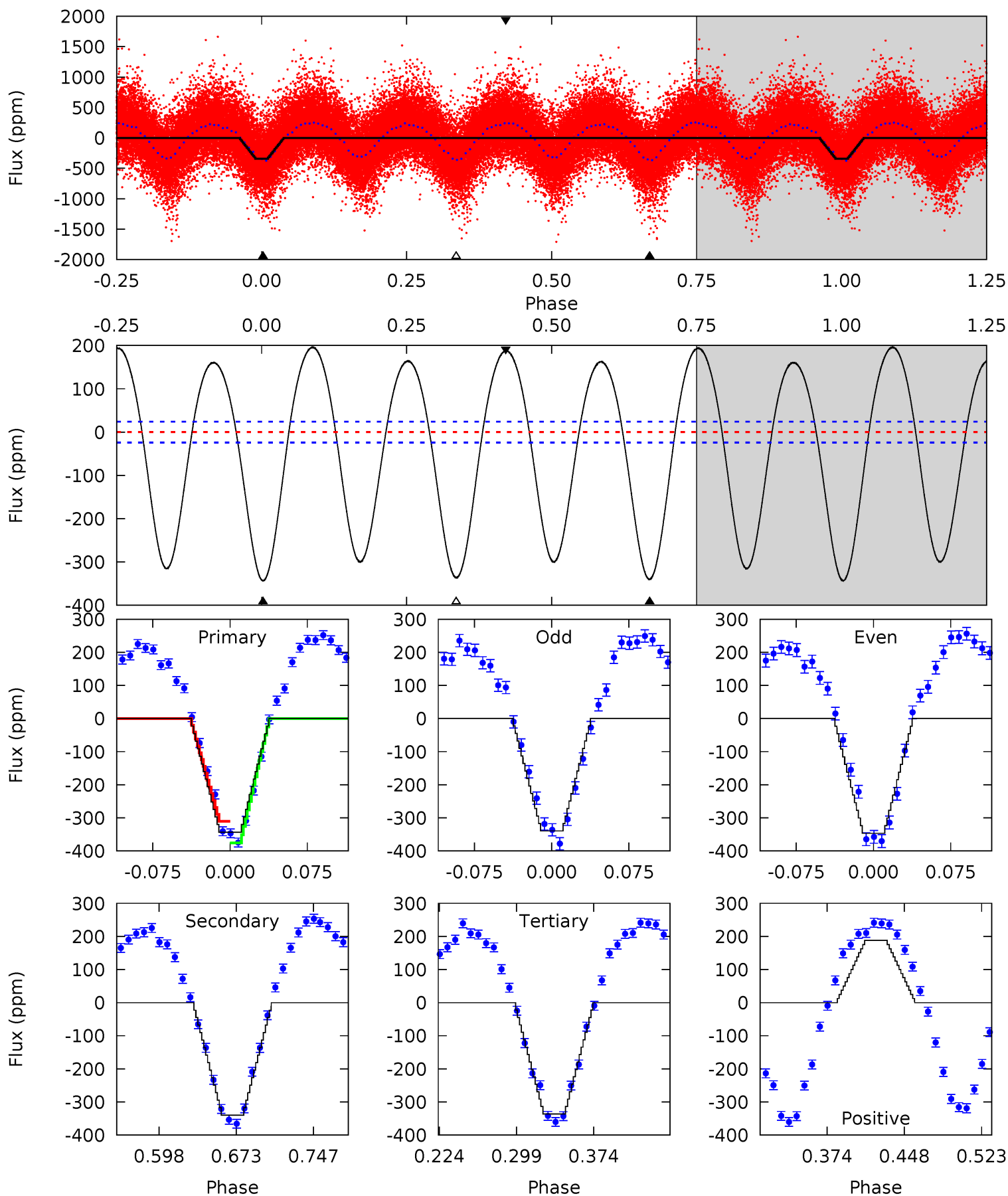
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.04	5.88	3.76	-0.74	4.61	1.76	2.31	3.28	7.78	2.12	6.62	0.11	0.87	0.37	0.17



Alt Model-Shift Uniqueness Test

008838626-01, P = 0.721141 Days, E = 131.339832 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
65.8	65.2	64.5	36.0	4.63	1.78	33.8	1.35	29.8	0.70	29.1	0.68	0.97	0.36	6.48



Stellar Parameters For KIC 008838626

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6218^{+169}_{-207}	$4.418^{+0.087}_{-0.203}$	$-0.420^{+0.300}_{-0.300}$	$1.003^{+0.298}_{-0.128}$	$0.961^{+0.135}_{-0.111}$	$1.343^{+0.611}_{-0.677}$
	+3%/-3%	+2%/-5%	+71%/-71%	+30%/-13%	+14%/-12%	+45%/-50%
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 008838626-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-21 ± 4	$0.63^{+0.38}_{-0.36}$	3124^{+234}_{-166}	5565^{+3344}_{-1073}	$6.670^{+27.399}_{-4.067}$
Alt.	-340 ± 5	$1.97^{+0.47}_{-0.42}$	3114^{+235}_{-172}	6354^{+779}_{-598}	12^{+6}_{-4}

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 $A_{obs} \gg 1.0$

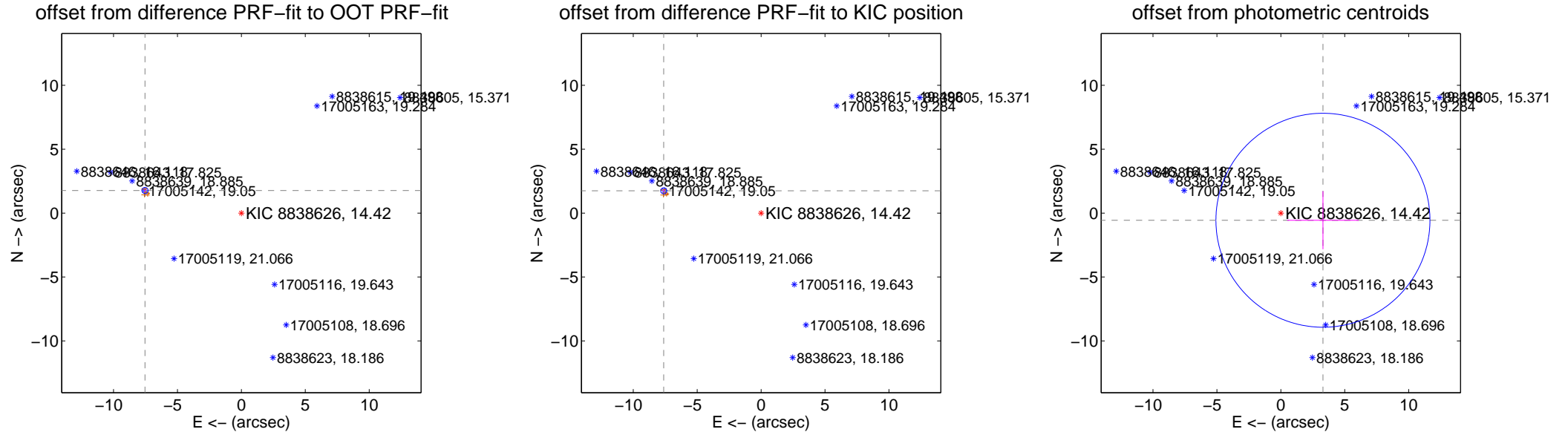
DV Centroid Data

Supplemental centroid analysis for 008838626-01. Kepler magnitude: 14.42. Transit SNR 5.04

There are 5 quarters with good PRF difference image offsets

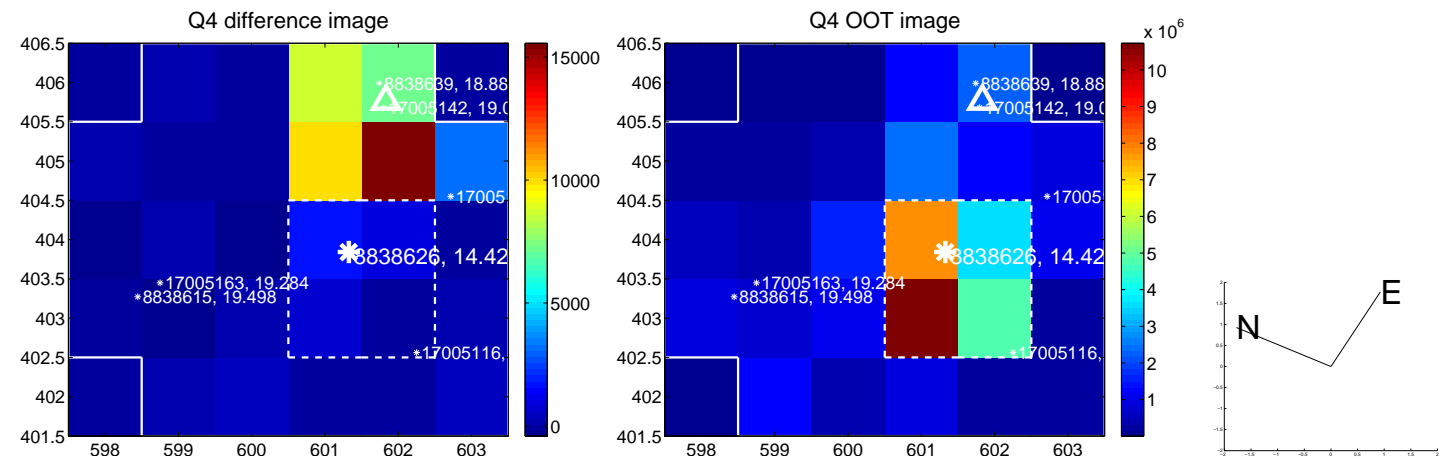
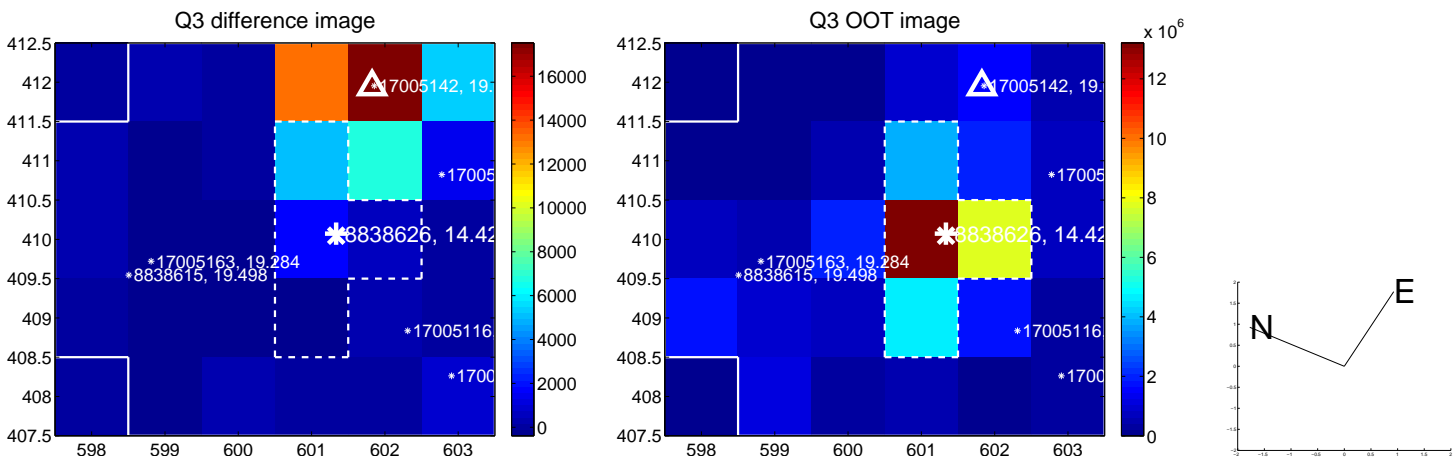
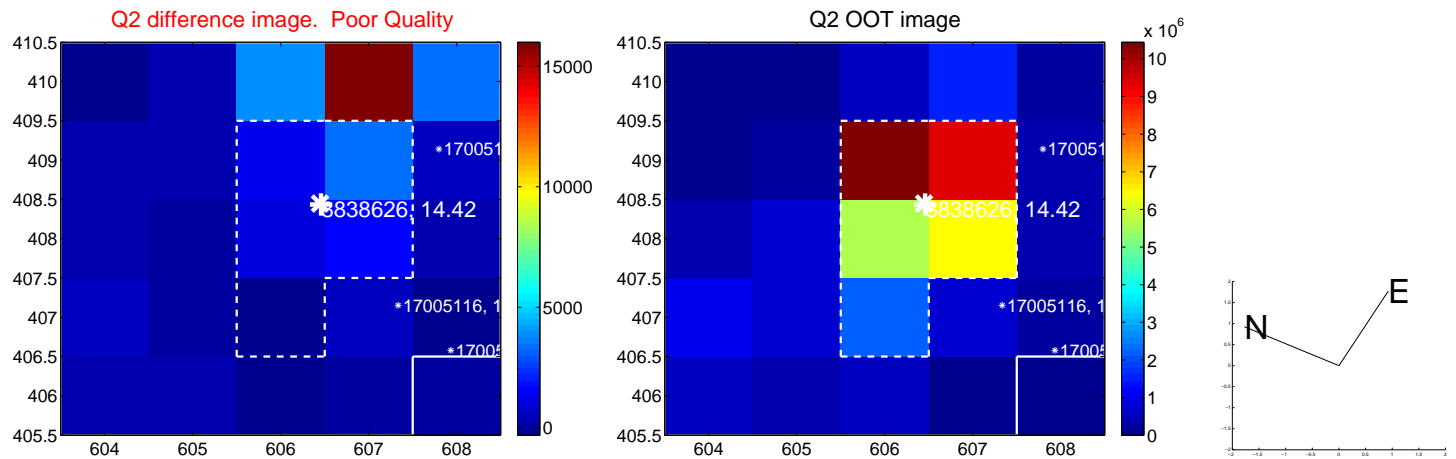
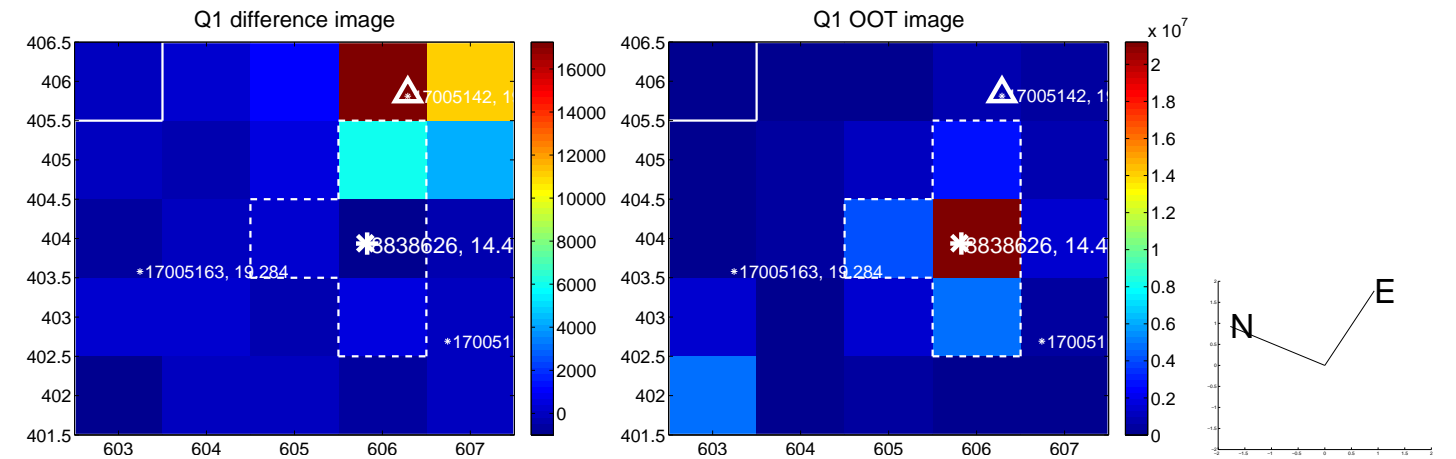
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.740 \pm 0.080	96.69	7.536 \pm 0.077	1.767 \pm 0.083
PRF-fit source offset from KIC position	7.813 \pm 0.079	99.12	7.616 \pm 0.076	1.743 \pm 0.080
photometric centroid source offset	3.34 \pm 2.79	1.20	-3.29 \pm 2.80	-0.56 \pm 2.27

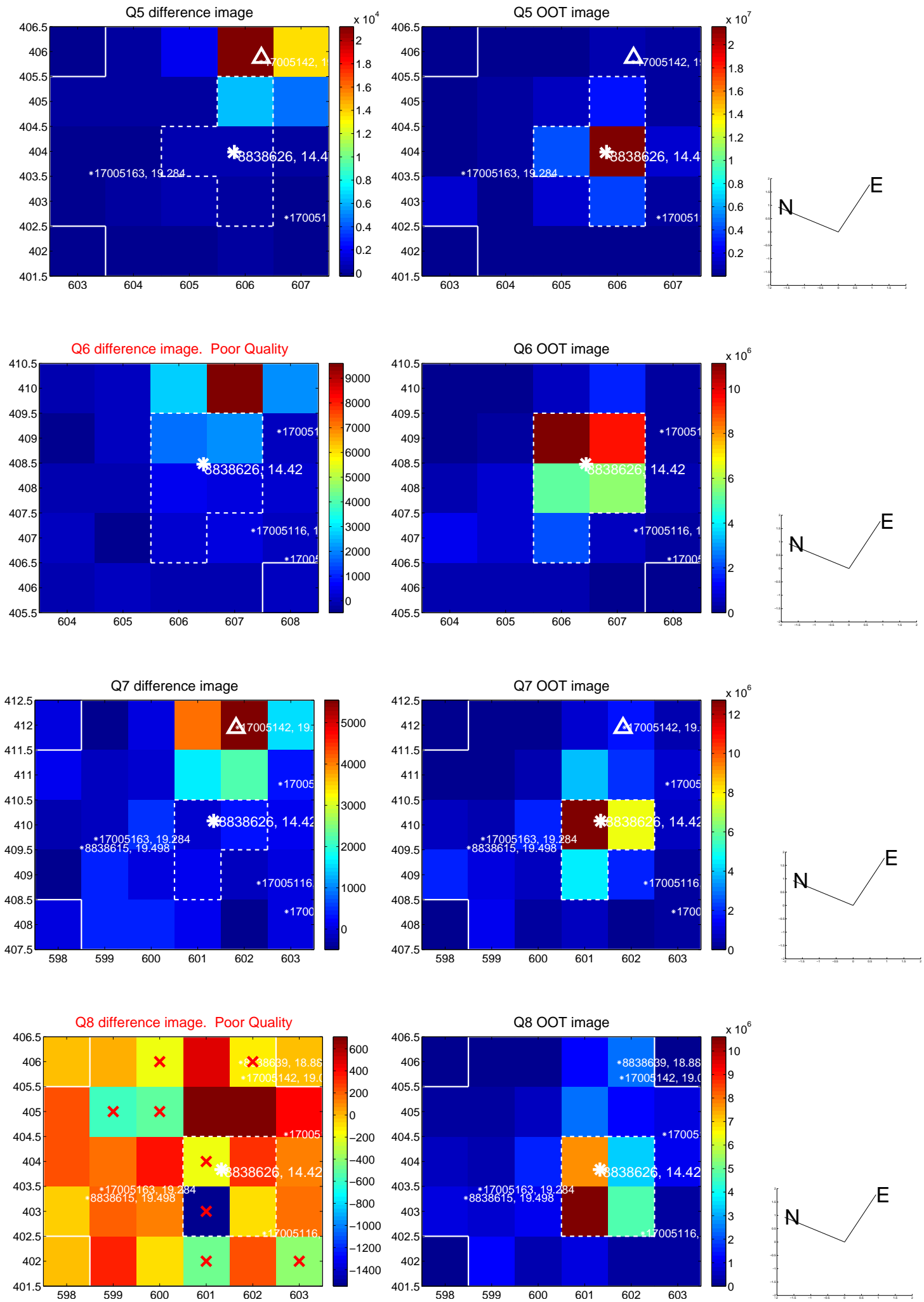


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

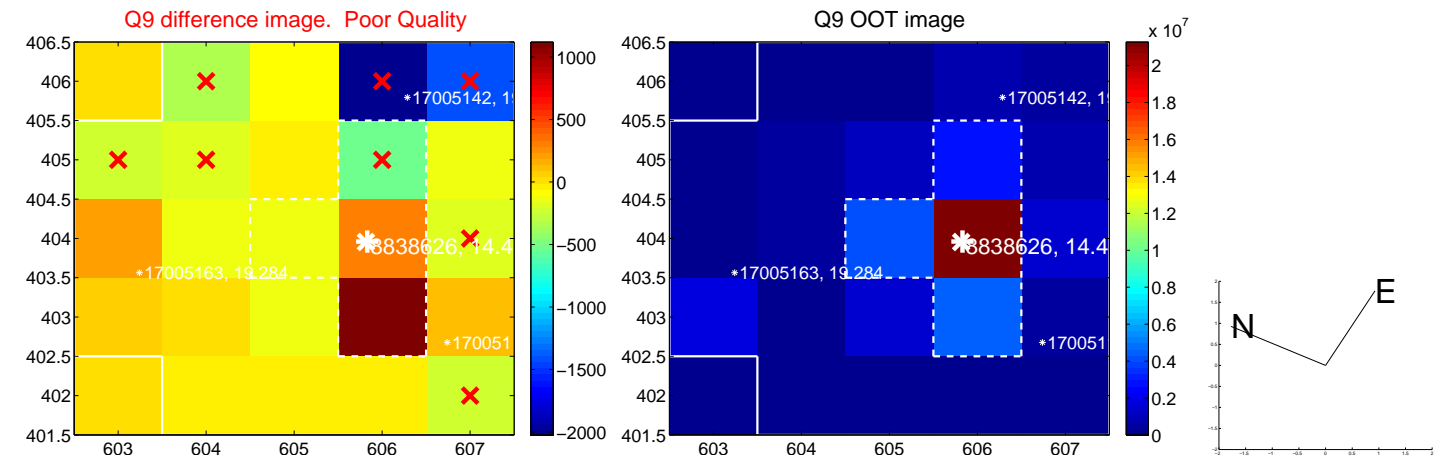
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



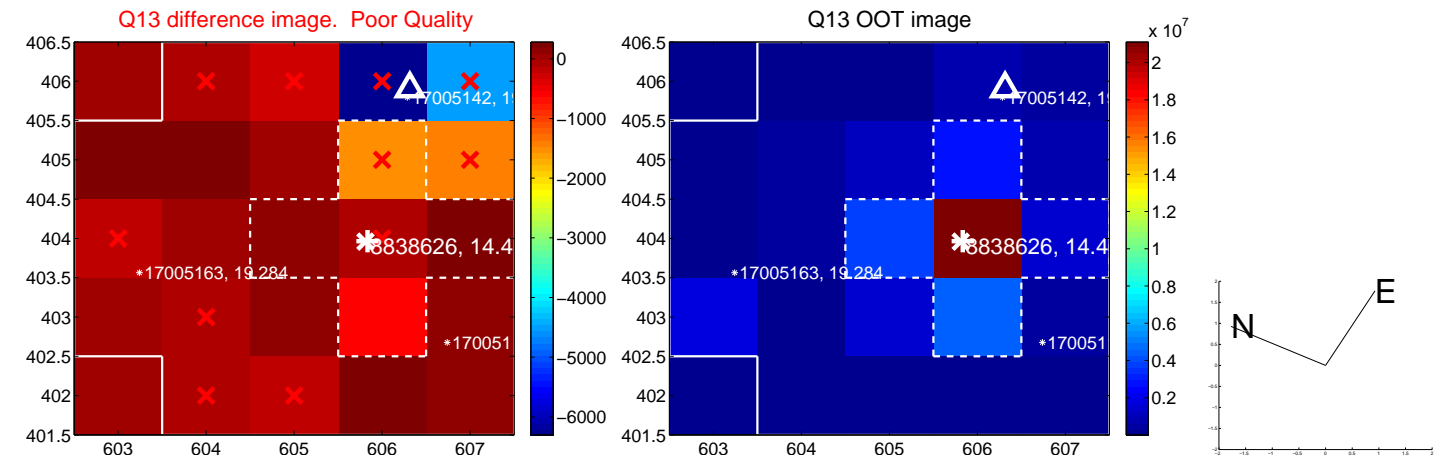
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



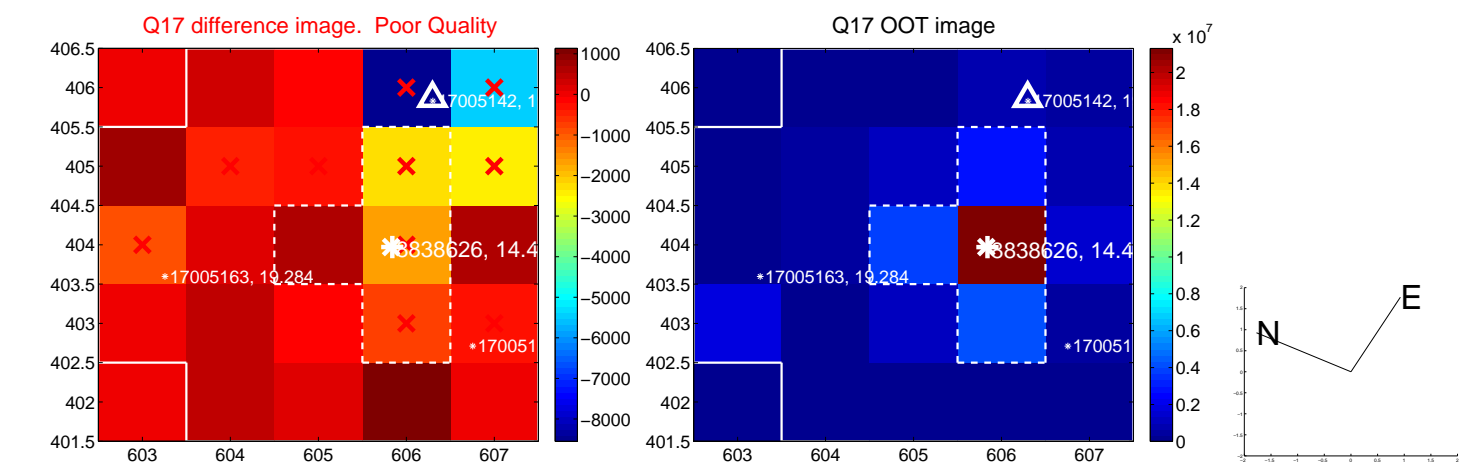
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



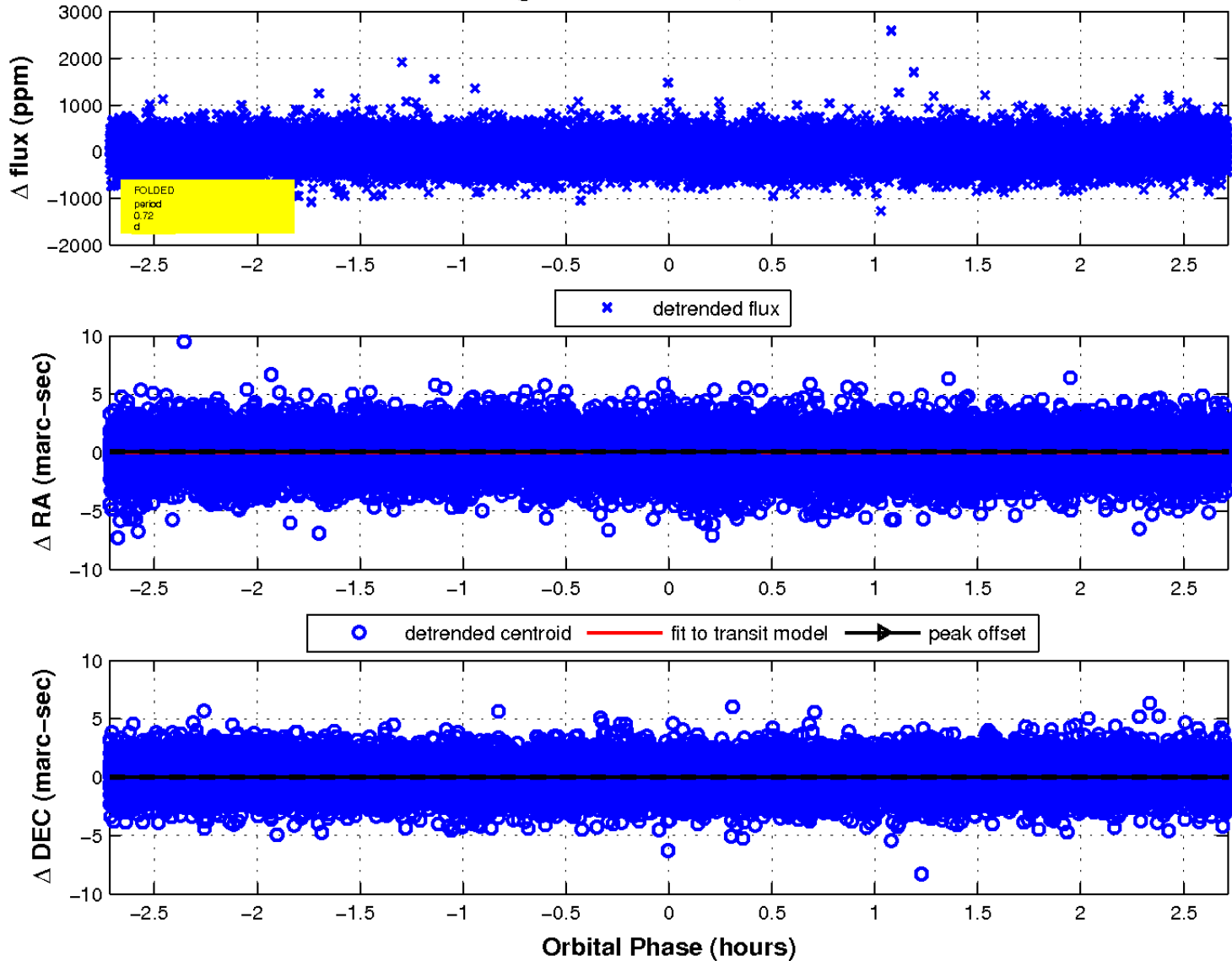
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

