

KIC 006863308

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})
006863308-01	OBS	No	0.997395	132.489438	21.3	6.501	7.6	7.0	0.96	6029	0.44	2760.73

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006863308-01	OBS	FP	0.00	1	0	1	0	LPP_DV—HALO_GHOST

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

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

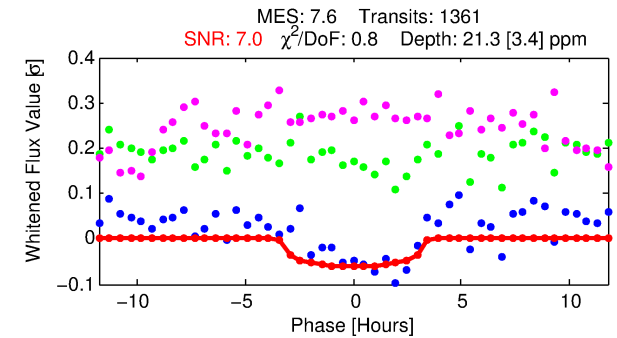
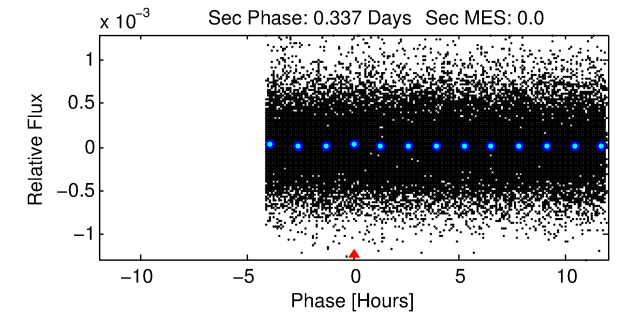
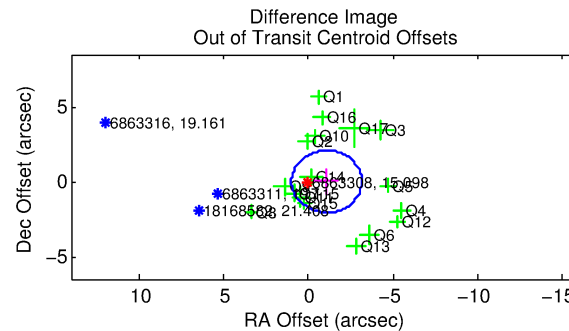
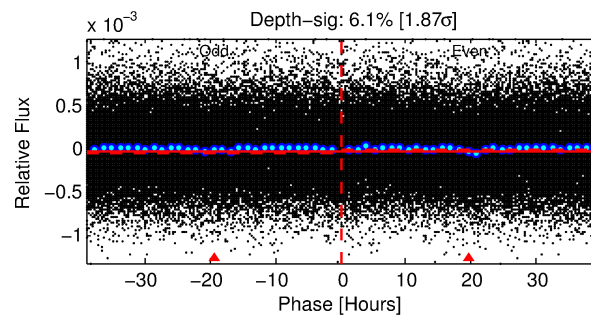
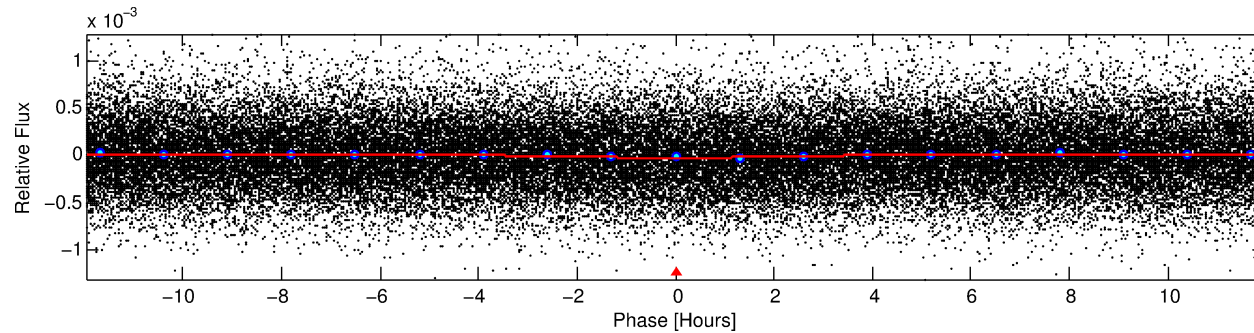
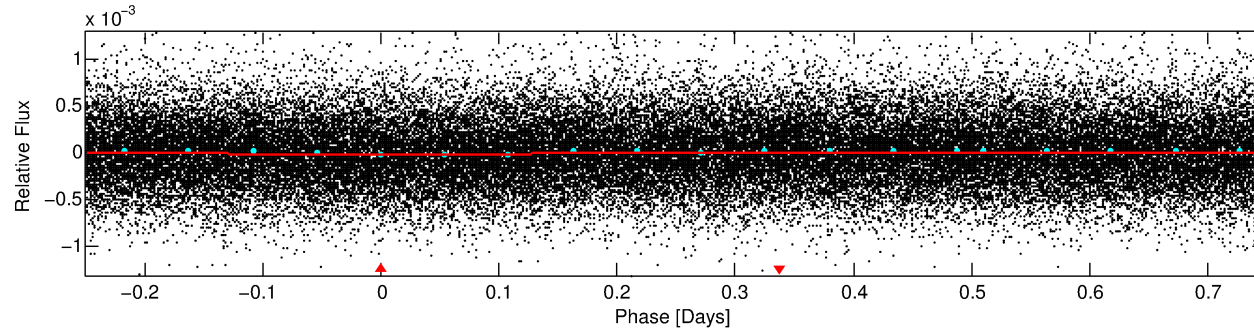
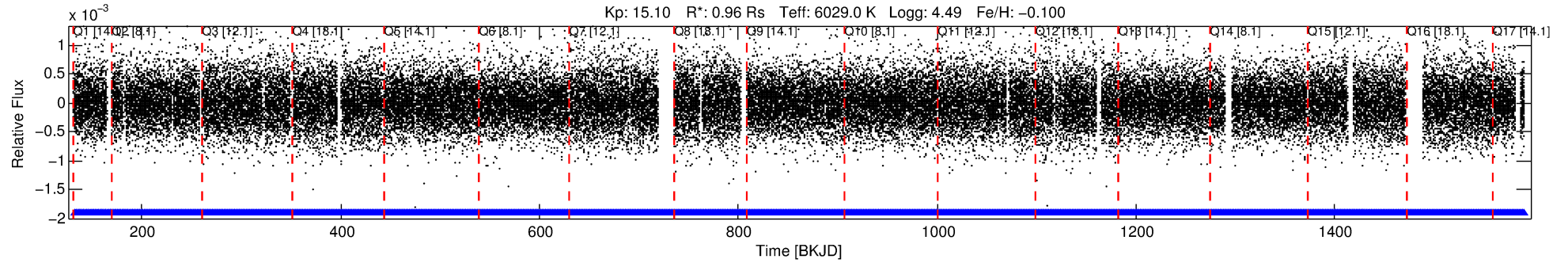
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006863308-01

No Significant Match Found

DV One-Page Summary

KIC: 6863308 Candidate: 1 of 1 Period: 0.997 d



DV Fit Results:

Period = 0.99740 [0.00002] d
Epoch = 132.4894 [0.0104] BKJD
Rp/R* = 0.0042 [0.0101]
a/R* = 1.33 [6.68]
b = 0.04 [297.70]
Seff = 2760.73 [910.17]
Teff = 1848 [152] K
Rp = 0.44 [1.06] Re
a = 0.0198 [0.0041] AU
Ag = N/A
Teffp = N/A

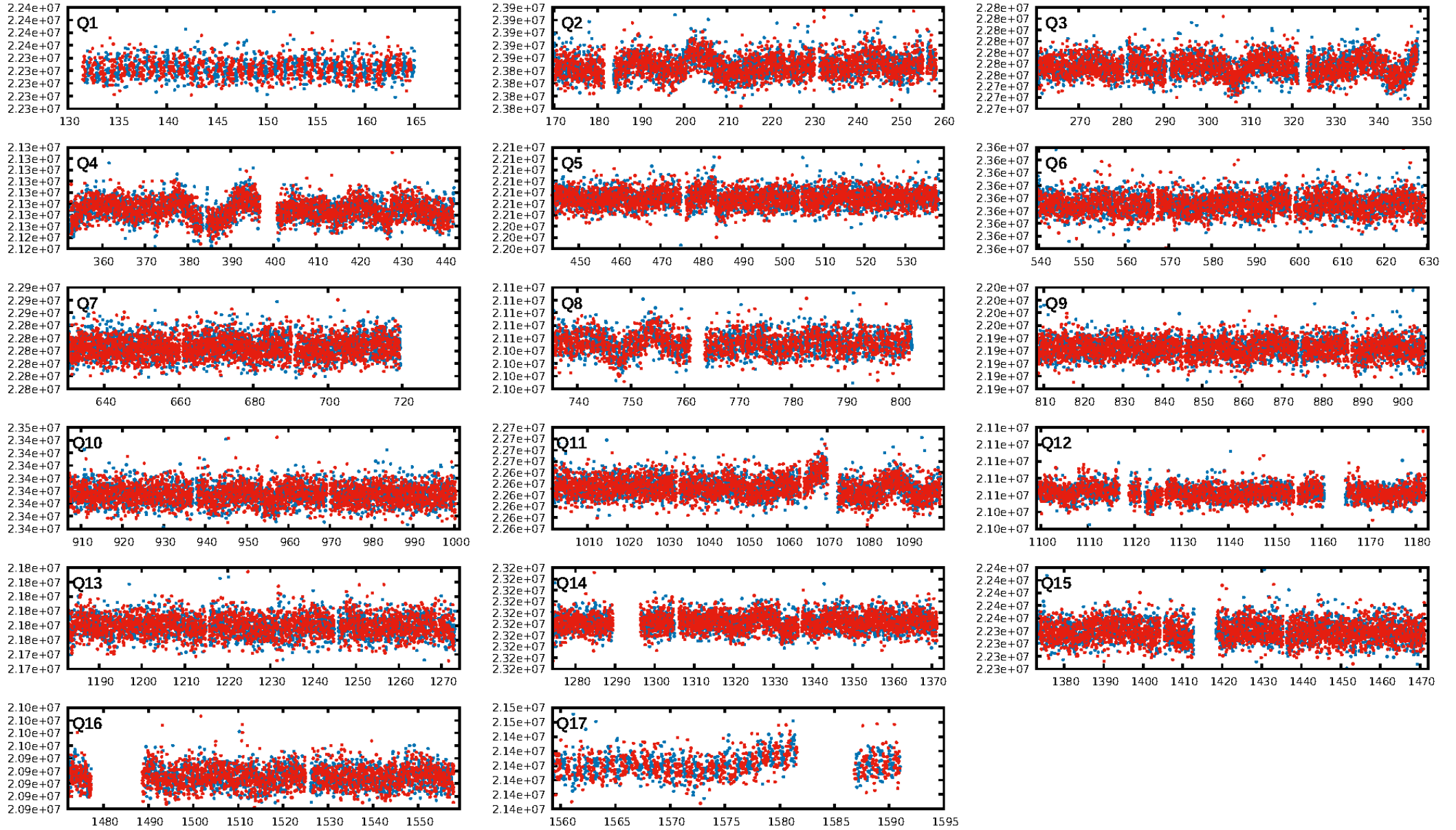
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.32e-12
RollingBand-fgt: 1.00 [1299/1299]
GhostDiagnostic-chr: 0.008679
Centroid-sig: 0.0%
Centroid-so: 7.057 arcsec [3.60 σ]
OotOffset-rm: 1.063 arcsec [1.54 σ]
KicOffset-rm: 1.072 arcsec [1.56 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.35 [6/17]
DiffImageOverlap-fno: 1.00 [17/17]

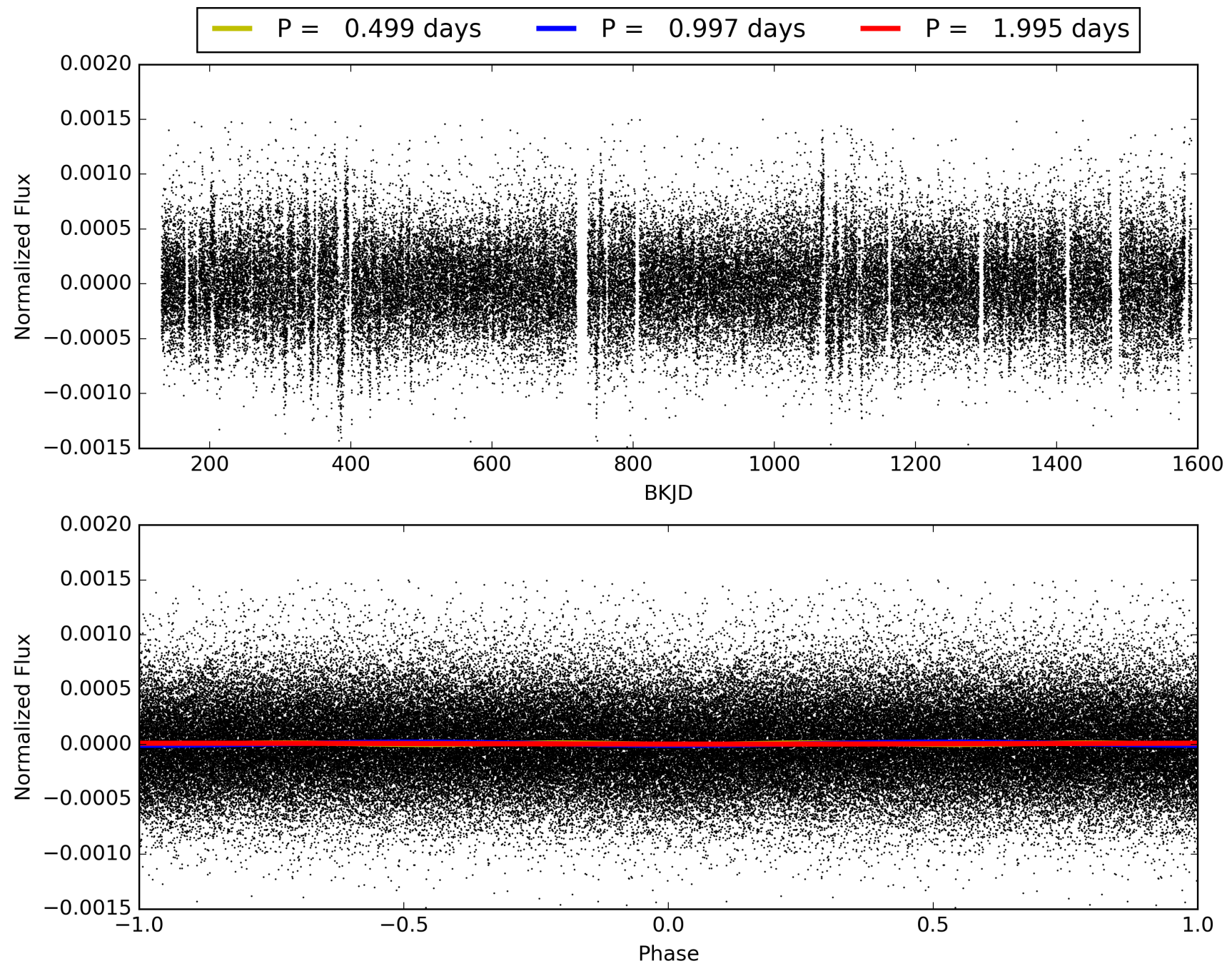
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 09:36:52 Z

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

TCE 006863308-01, PDC Light Curves

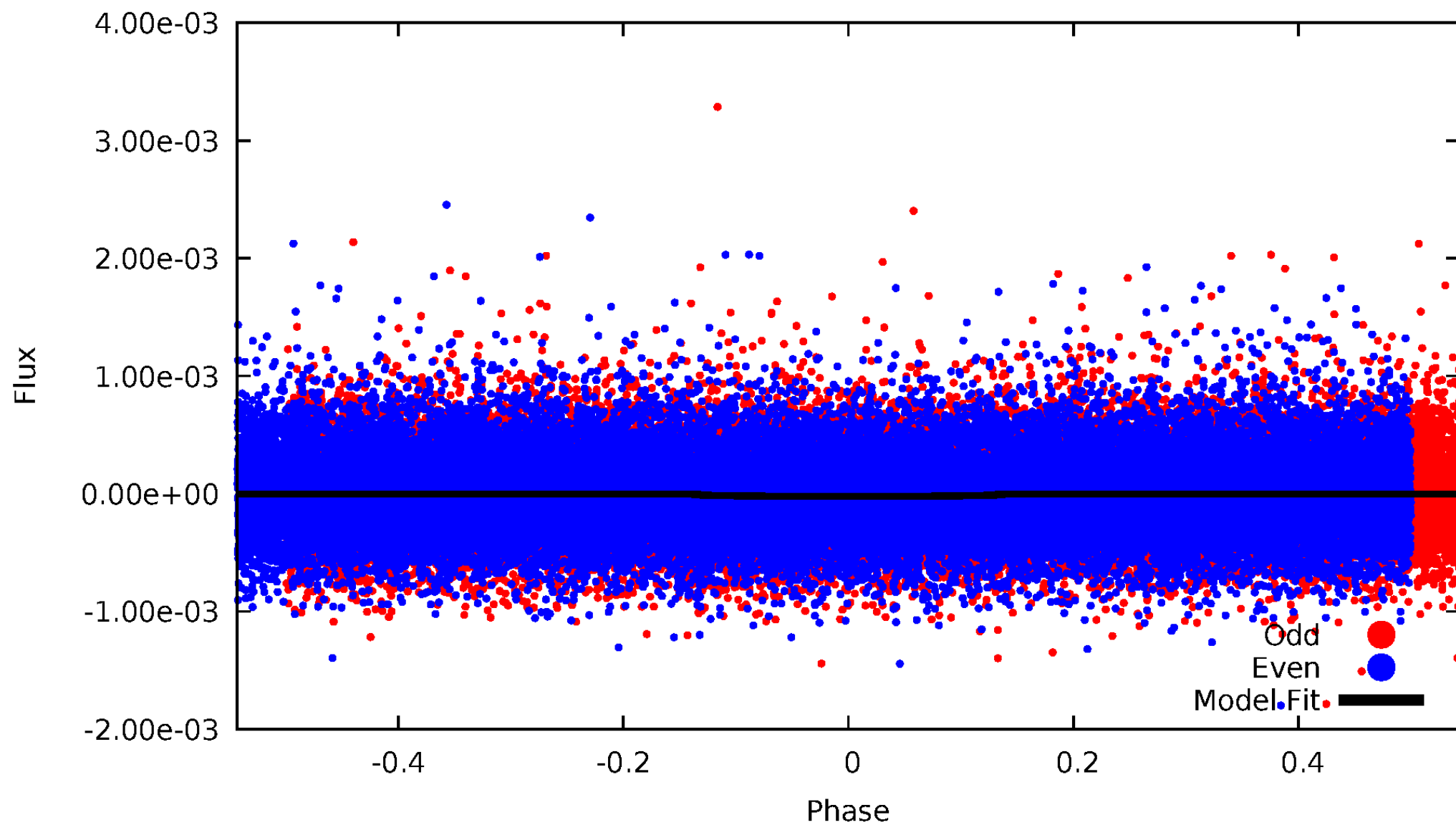


TCE 006863308-01



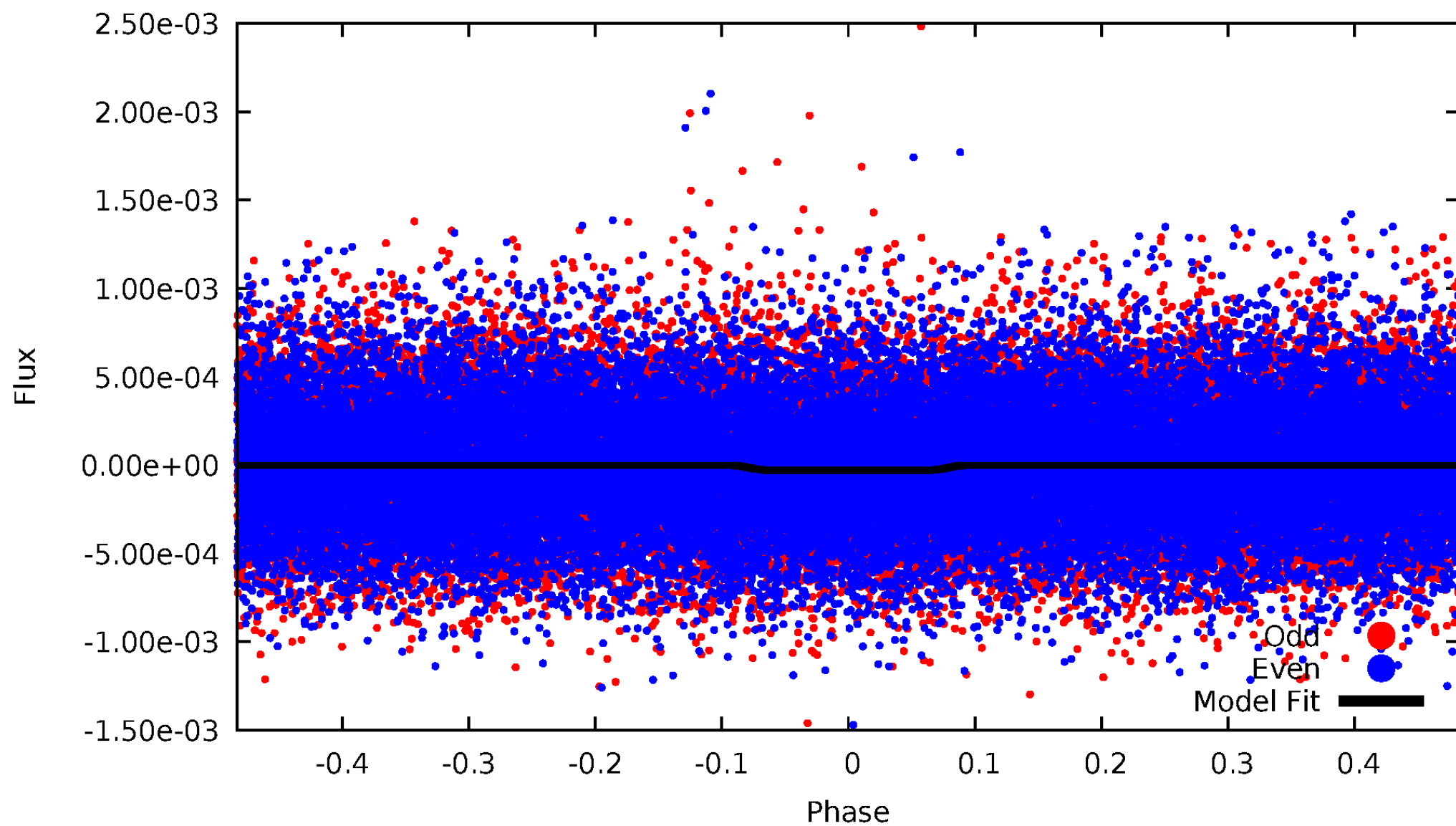
DV Odd/Even

TCE 006863308-01



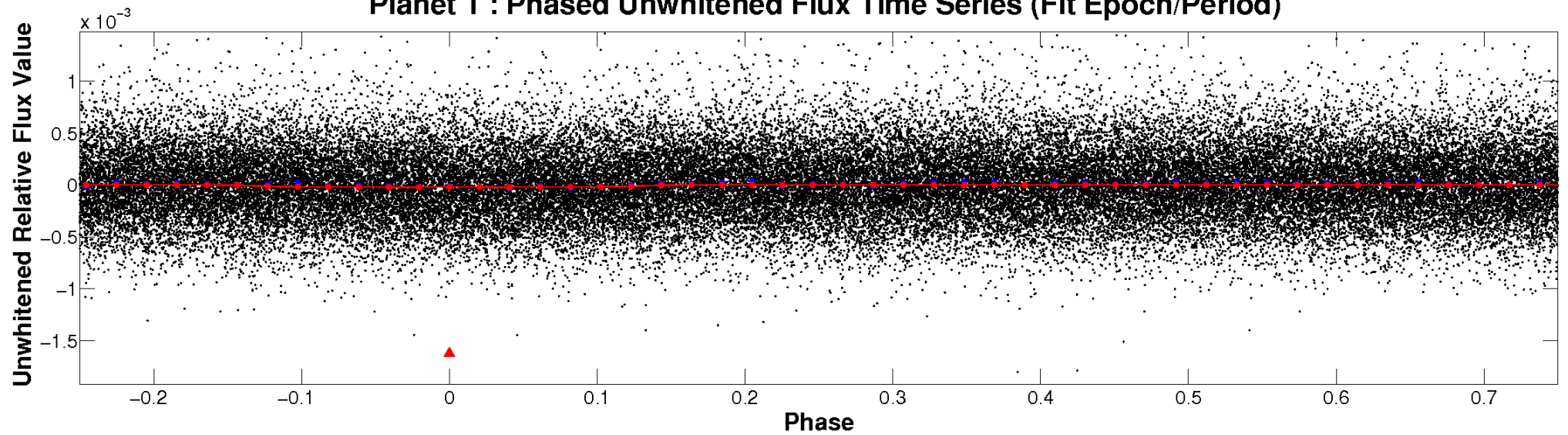
ALT Odd/Even

TCE 006863308-01

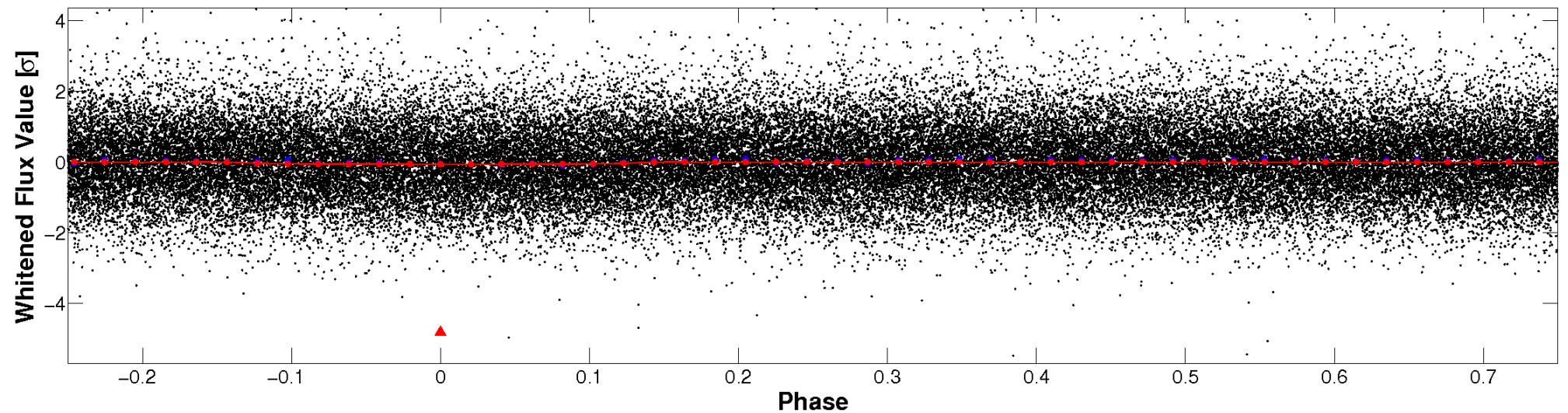


Non-Whitened Vs. Whitened Light Curve

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

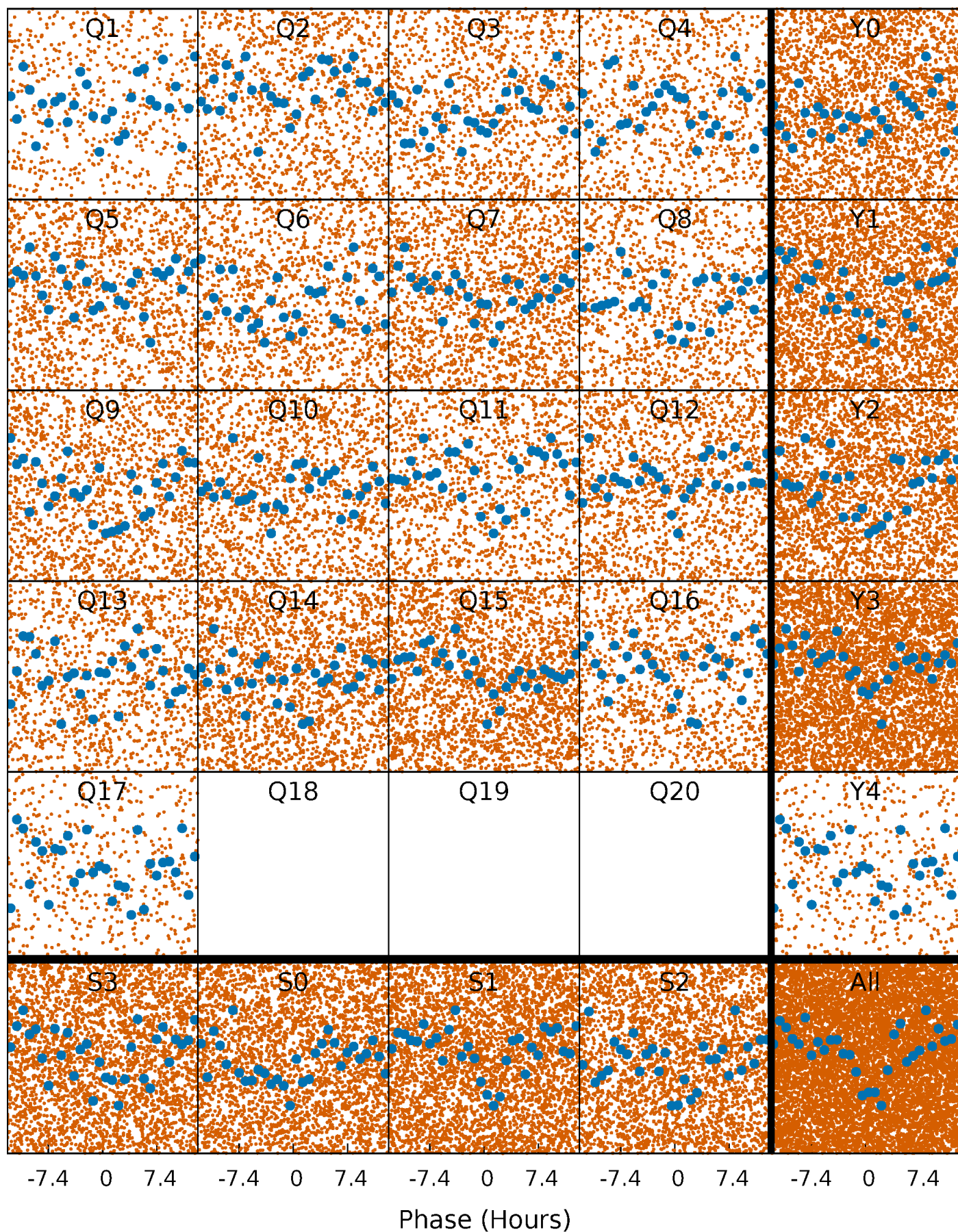


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



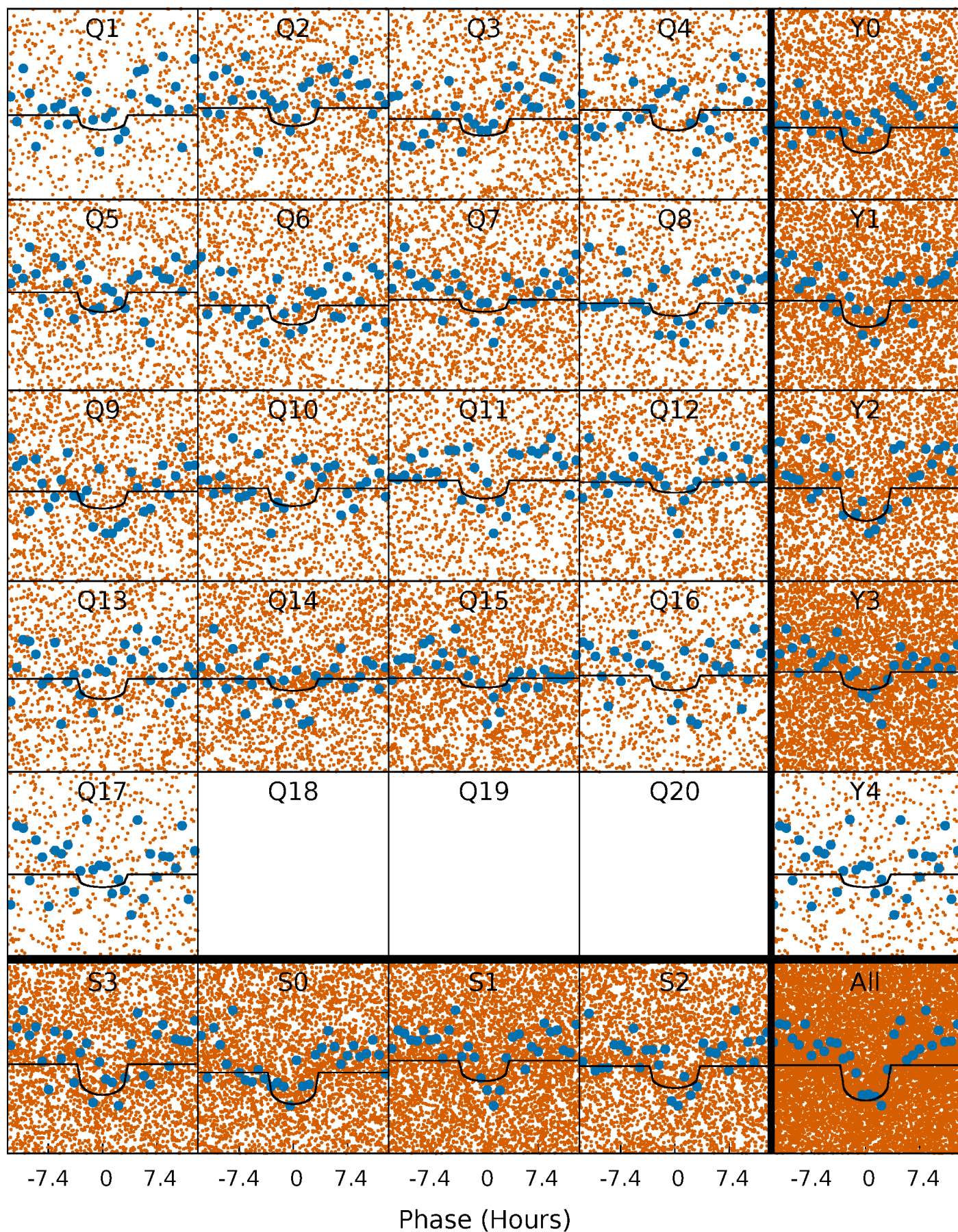
PDC Quarter-Phased Transit Curves

TCE 006863308-01 P= 0.997395 Days $T_0=132.489438$ (BKJD)



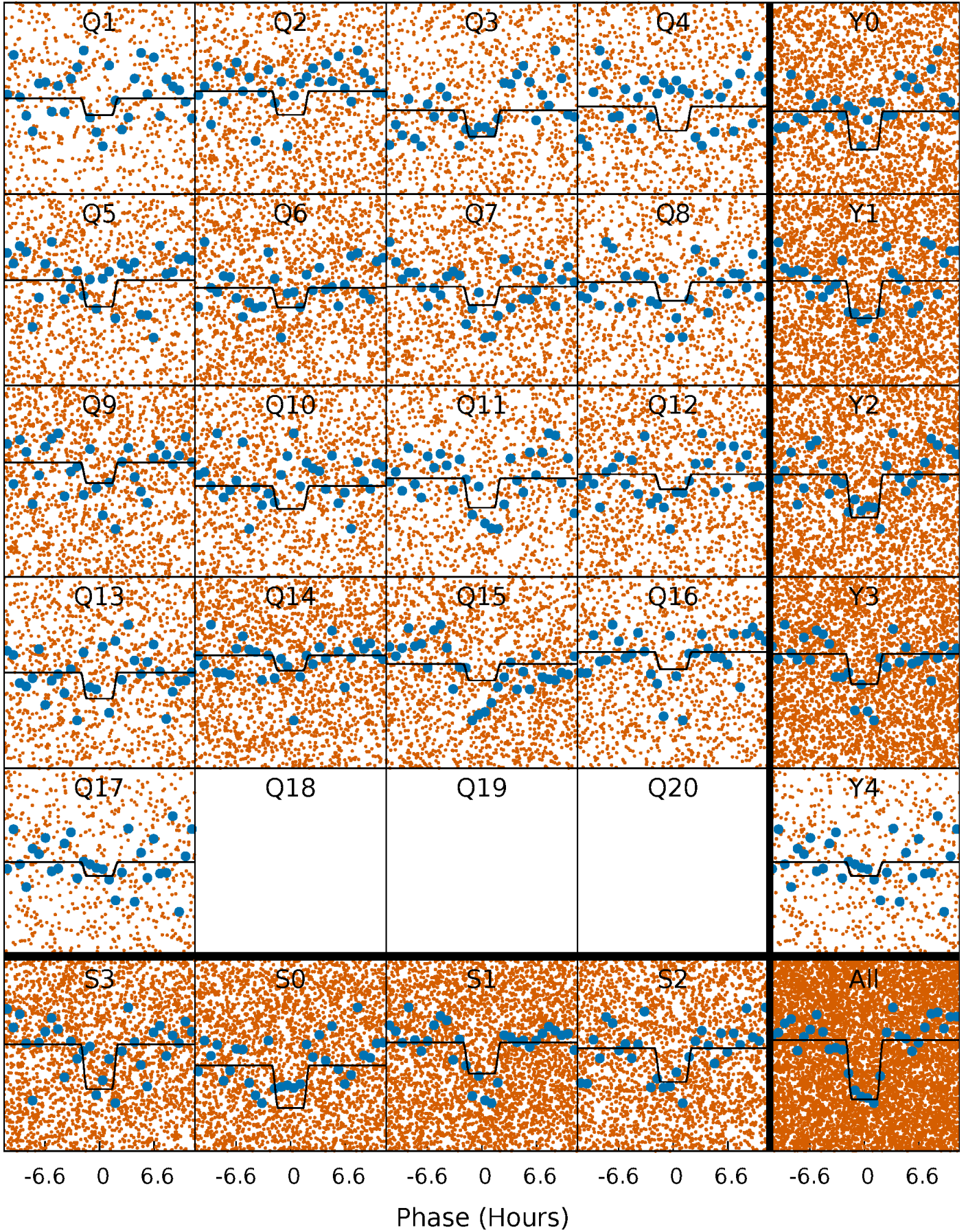
DV Quarter-Phased Transit Curves

TCE 006863308-01 P= 0.997395 Days $T_0=132.489438$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

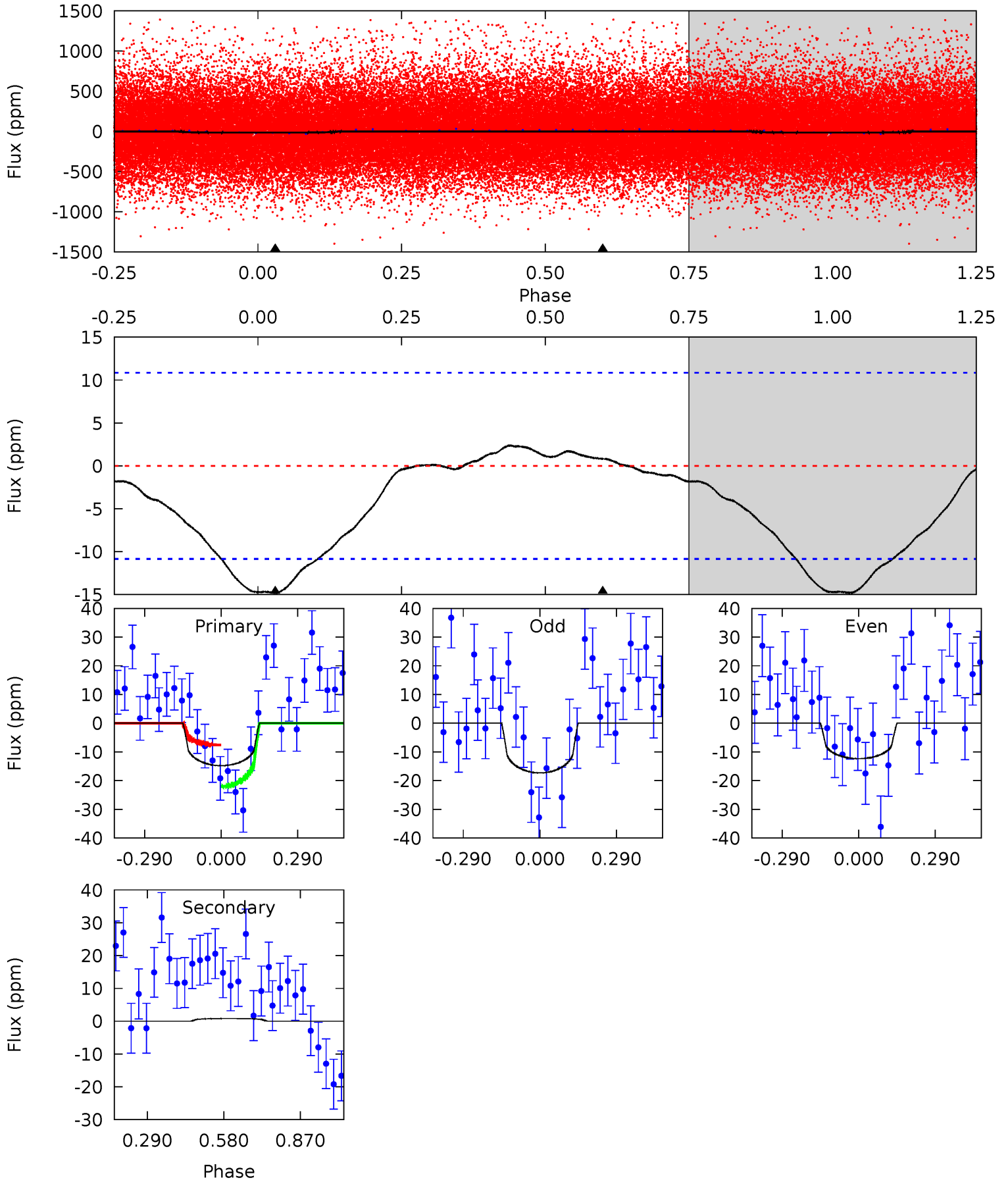
TCE 006863308-01 P= 0.997451 Days $T_0=132.473406$ (BKJD)



DV Model-Shift Uniqueness Test

006863308-01, P = 0.997395 Days, E = 131.492043 Days

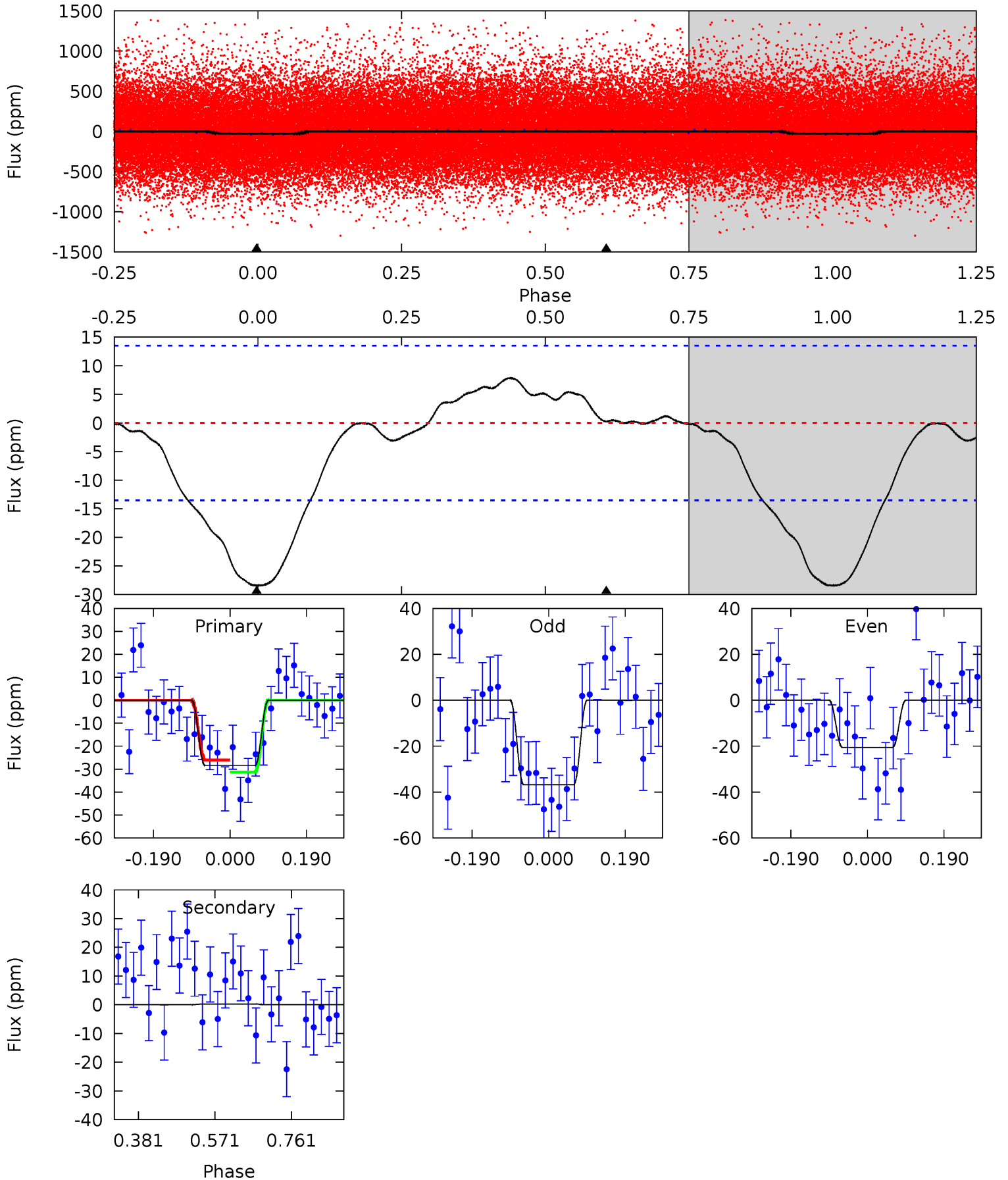
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.91	-0.33	0	0	4.34	1.06	0.07	5.91	5.91	-0.33	-0.33	1.00	0.87	0.14	2.93



Alt Model-Shift Uniqueness Test

006863308-01, P = 0.997451 Days, E = 131.475955 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.31	-0.09	0	0	4.43	1.31	1.09	9.31	9.31	-0.09	-0.09	2.67	1.09	0.22	0.85



Stellar Parameters For KIC 006863308

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6029^{+167}_{-188}	$4.494^{+0.052}_{-0.168}$	$-0.100^{+0.250}_{-0.350}$	$0.956^{+0.234}_{-0.100}$	$1.040^{+0.118}_{-0.144}$	$1.675^{+0.389}_{-0.744}$
	+3%/-3%	+1%/-4%	+250%/-350%	+24%/-10%	+11%/-14%	+23%/-44%
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 006863308-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	1 ± 3	$0.94^{+0.86}_{-0.66}$	2619^{+165}_{-120}	-3024^{+5562}_{-867}	$-0.112^{+0.518}_{-1.520}$
Alt.	0 ± 3	$0.99^{+0.96}_{-0.68}$	2629^{+143}_{-126}	-2941^{+6108}_{-771}	$-0.043^{+0.920}_{-1.329}$

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

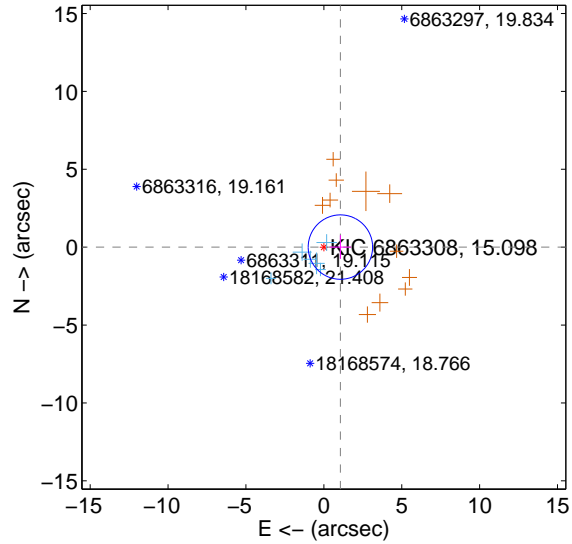
Supplemental centroid analysis for 006863308-01. Kepler magnitude: 15.10. Transit SNR 6.96

There are 6 quarters with good PRF difference image offsets

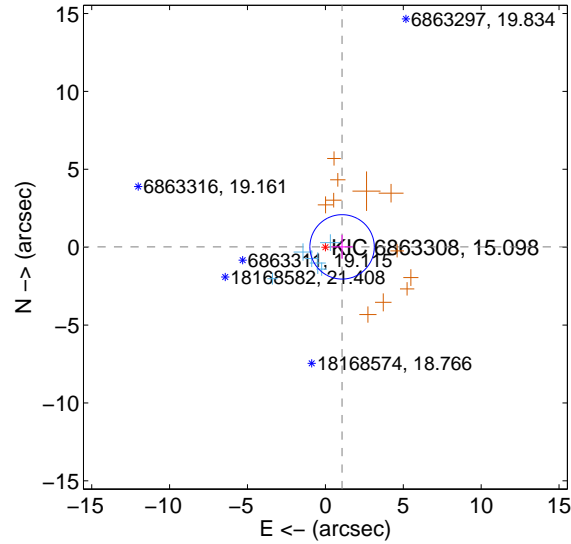
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.063 ± 0.689	1.54	-1.063 ± 0.689	0.006 ± 0.762
PRF-fit source offset from KIC position	1.072 ± 0.689	1.56	-1.072 ± 0.689	0.020 ± 0.763
photometric centroid source offset	7.06 ± 1.96	3.60	-6.64 ± 1.96	-2.38 ± 1.95

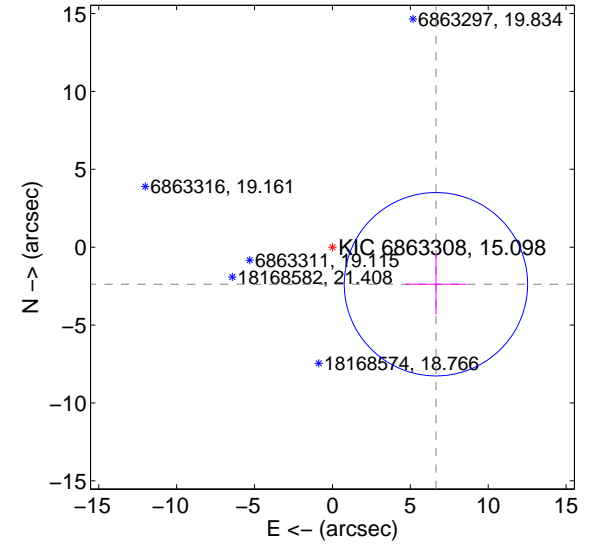
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

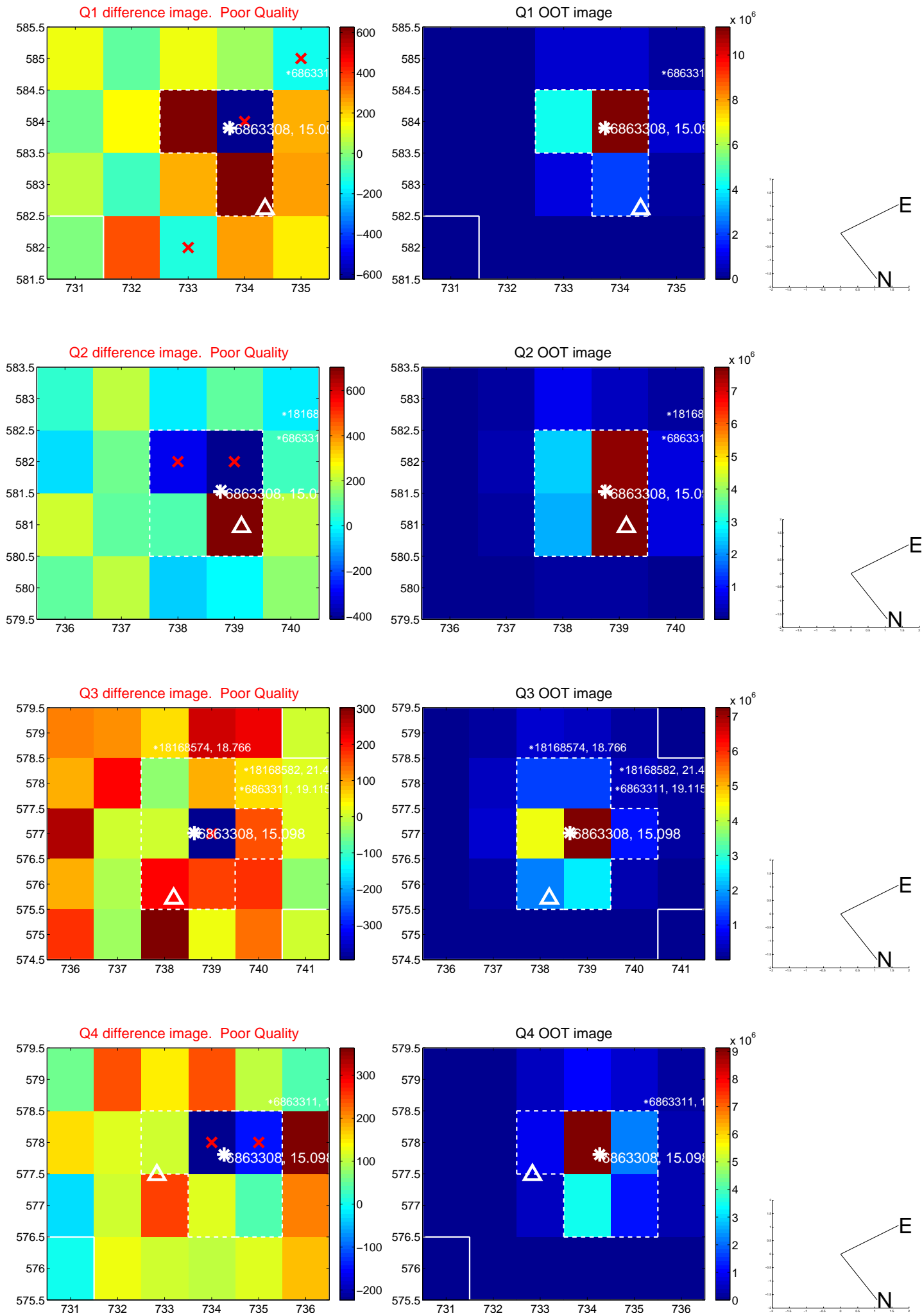


offset from photometric centroids

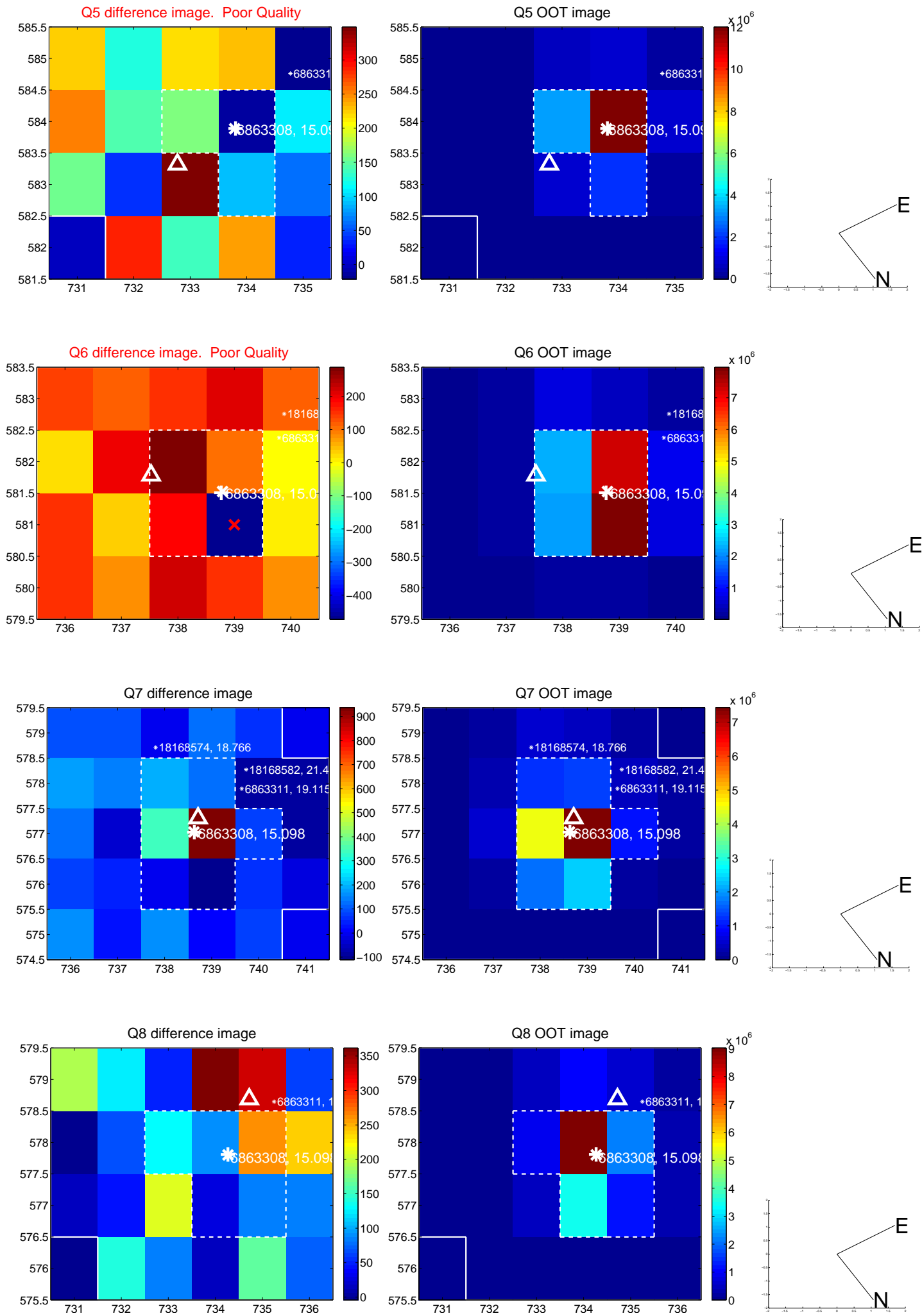


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

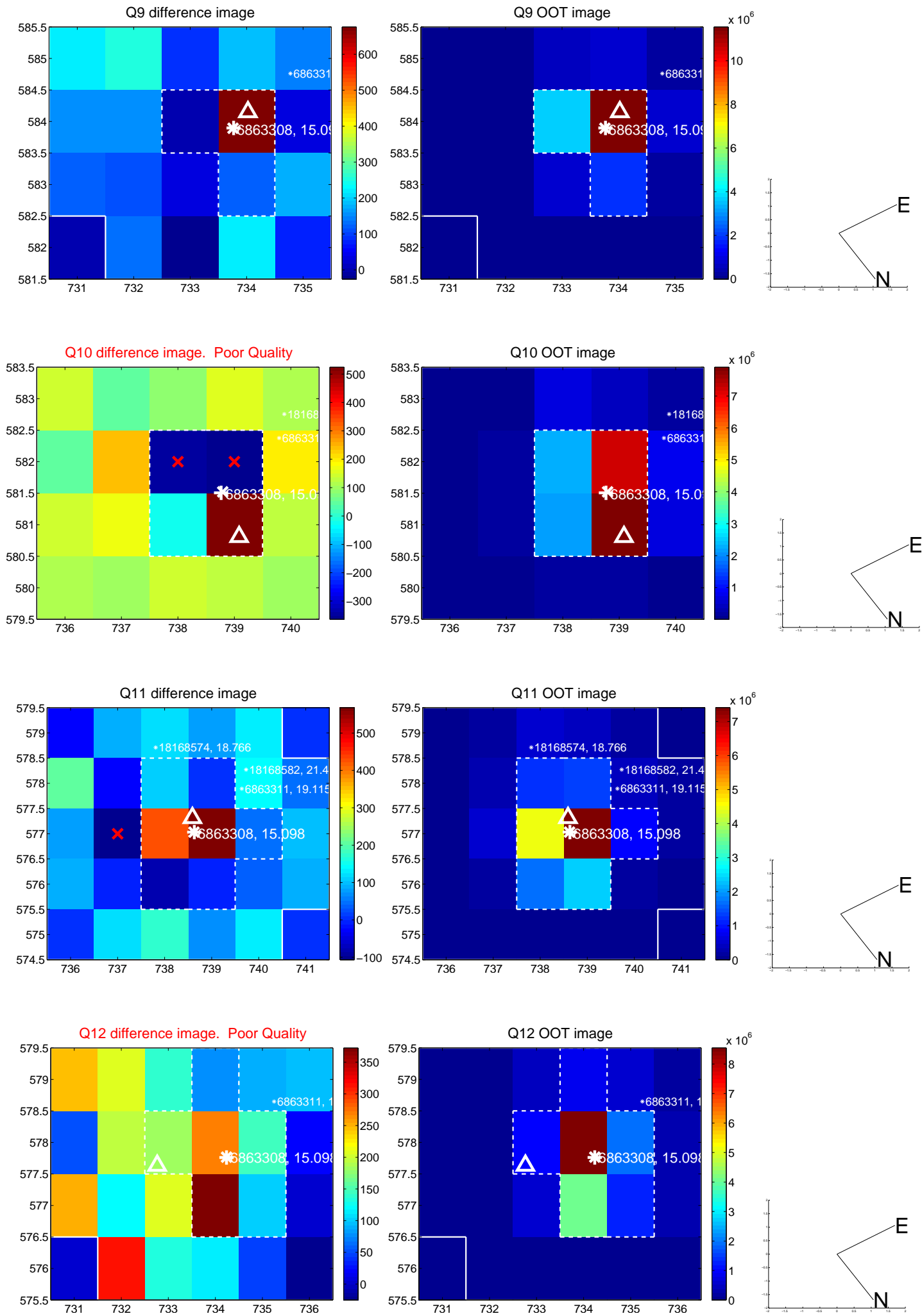
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



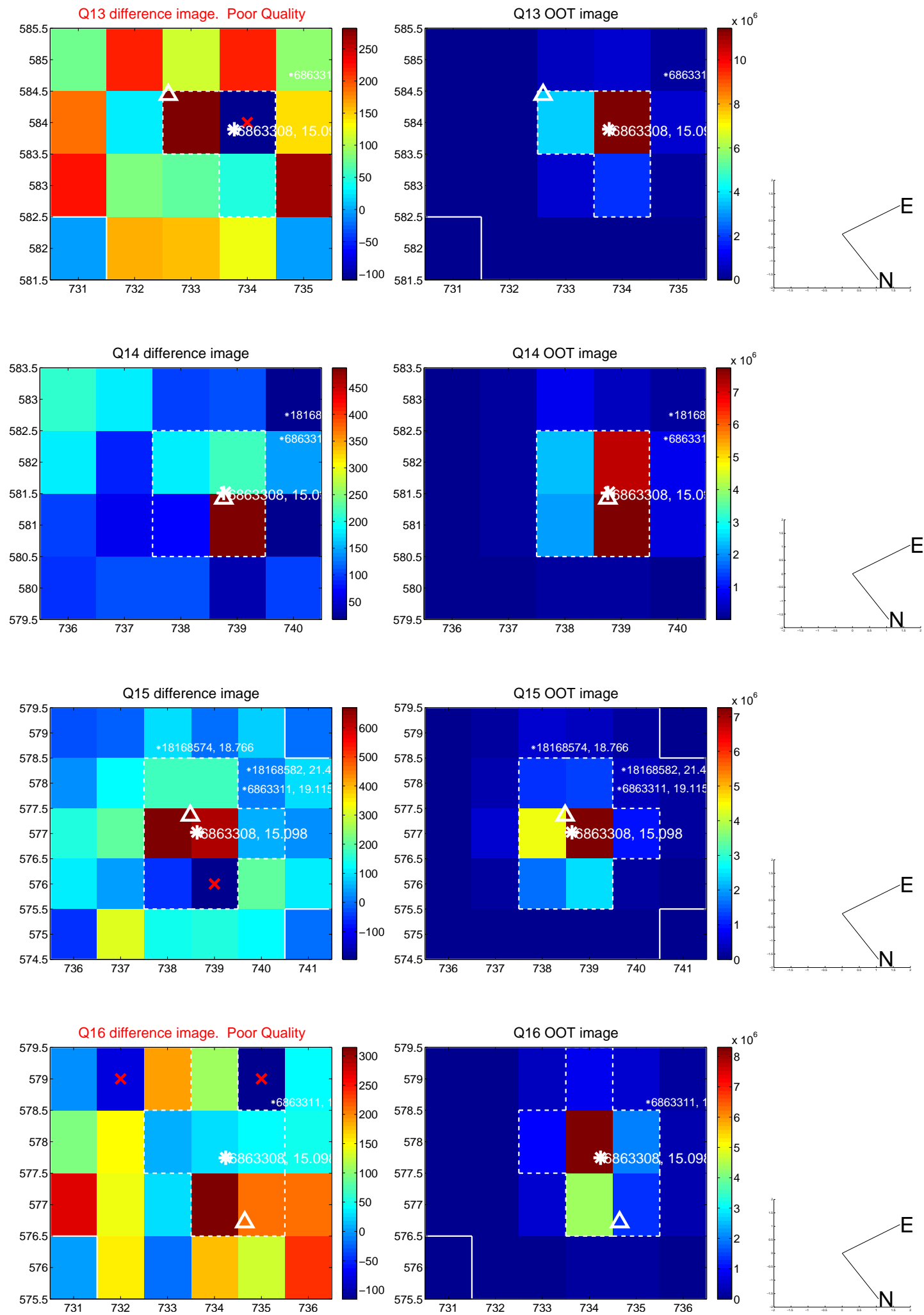
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



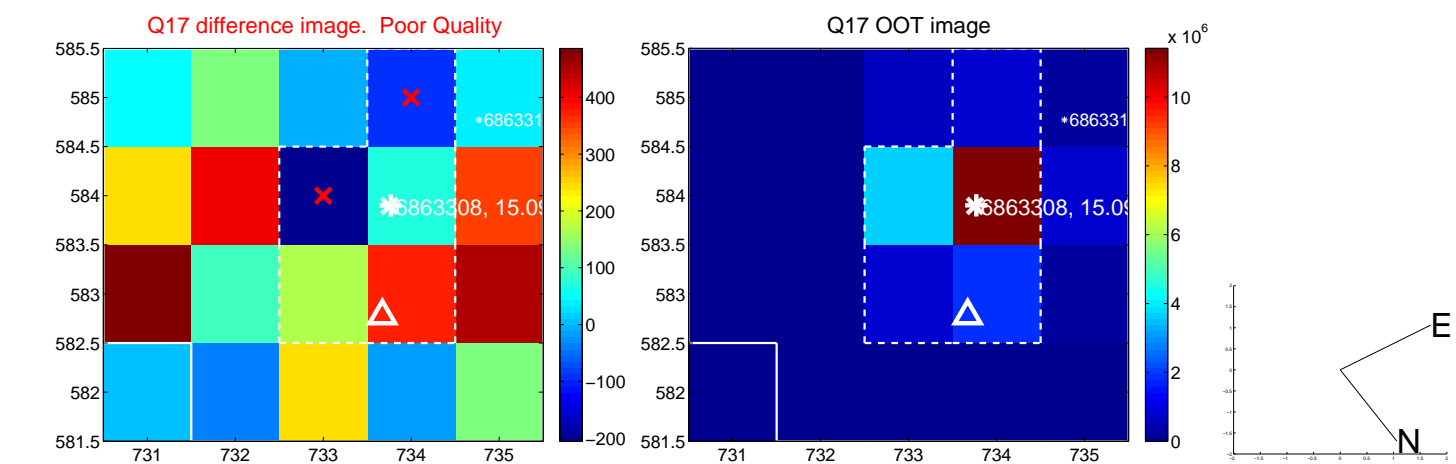
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



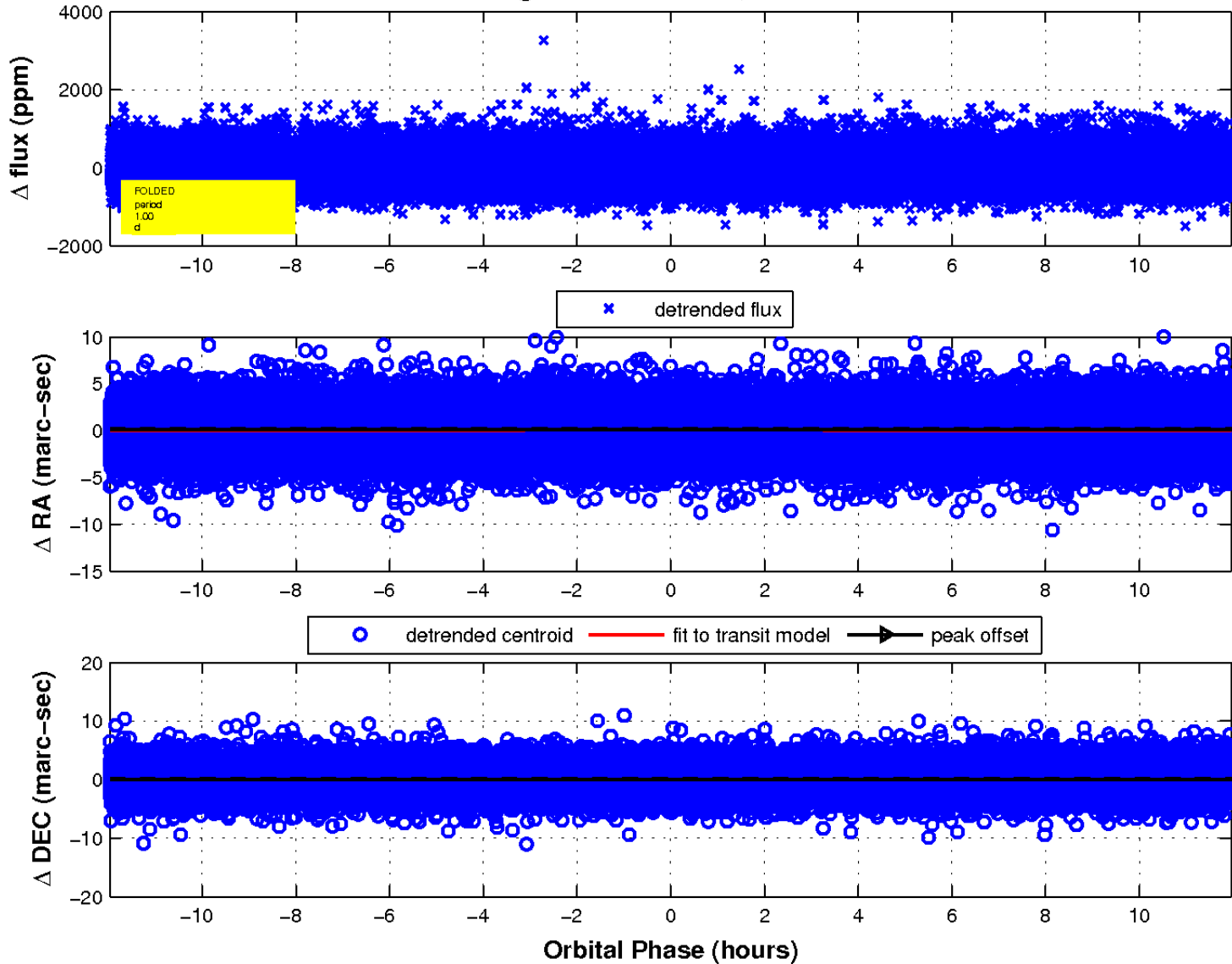
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

