

KIC 003838239

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})
003838239-01	OBS	No	0.926692	132.355803	40.6	2.251	7.7	4.6	0.88	5879	0.66	2512.92

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003838239-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV

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

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

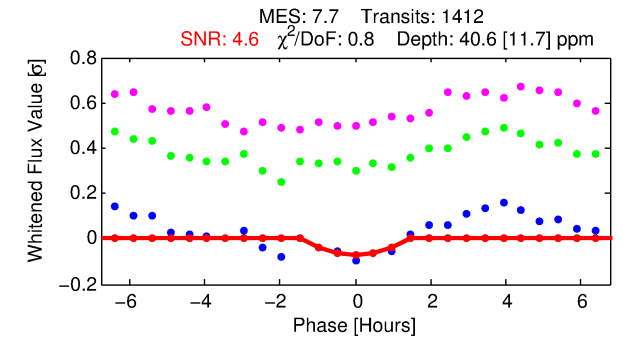
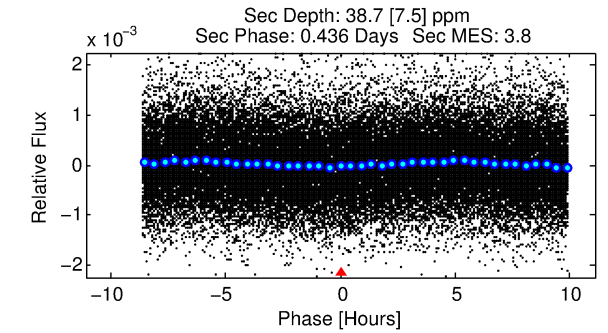
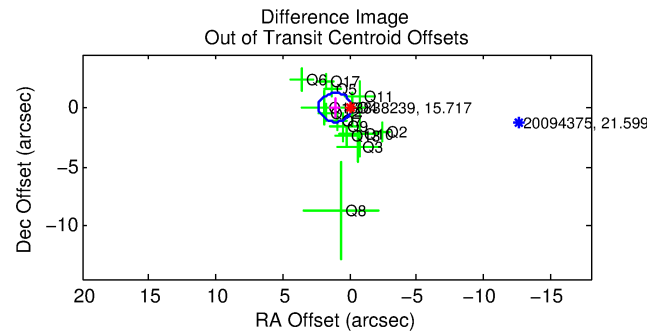
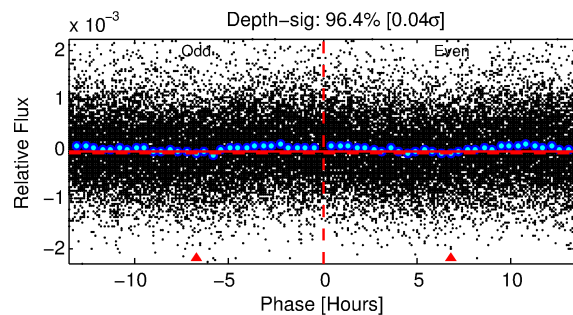
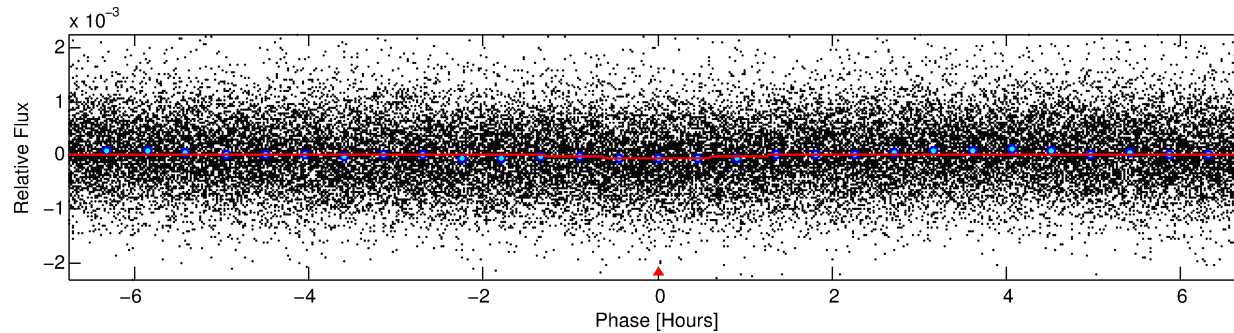
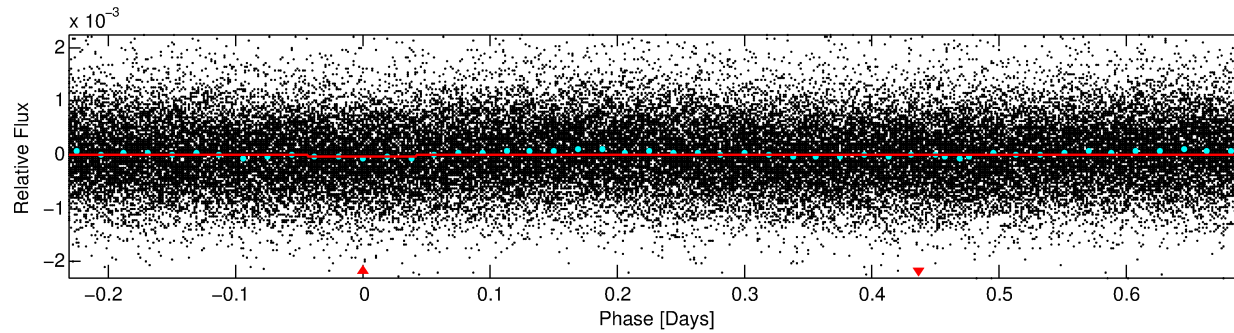
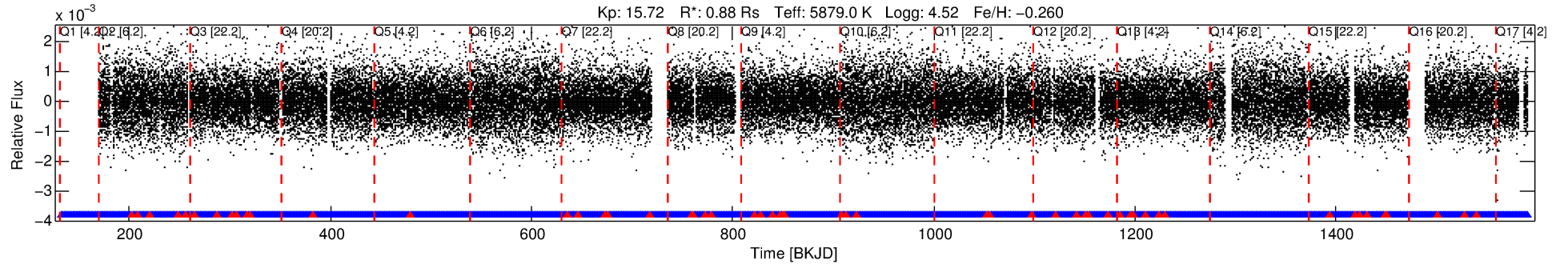
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003838239-01

No Significant Match Found

DV One-Page Summary

KIC: 3838239 Candidate: 1 of 1 Period: 0.927 d



DV Fit Results:

Period = 0.92669 [0.00002] d
Epoch = 132.3558 [0.0070] BKJD
Rp/R* = 0.0069 [0.0082]
a/R* = 1.71 [6.80]
b = 0.90 [1.33]
Seff = 2512.92 [966.34]
Teq = 1805 [174] K
Rp = 0.66 [0.81] Re
a = 0.0182 [0.0046] AU
Ag = 16.00 [38.45] [0.39 σ]
Teffp = 5583 [3319] K [1.14 σ]

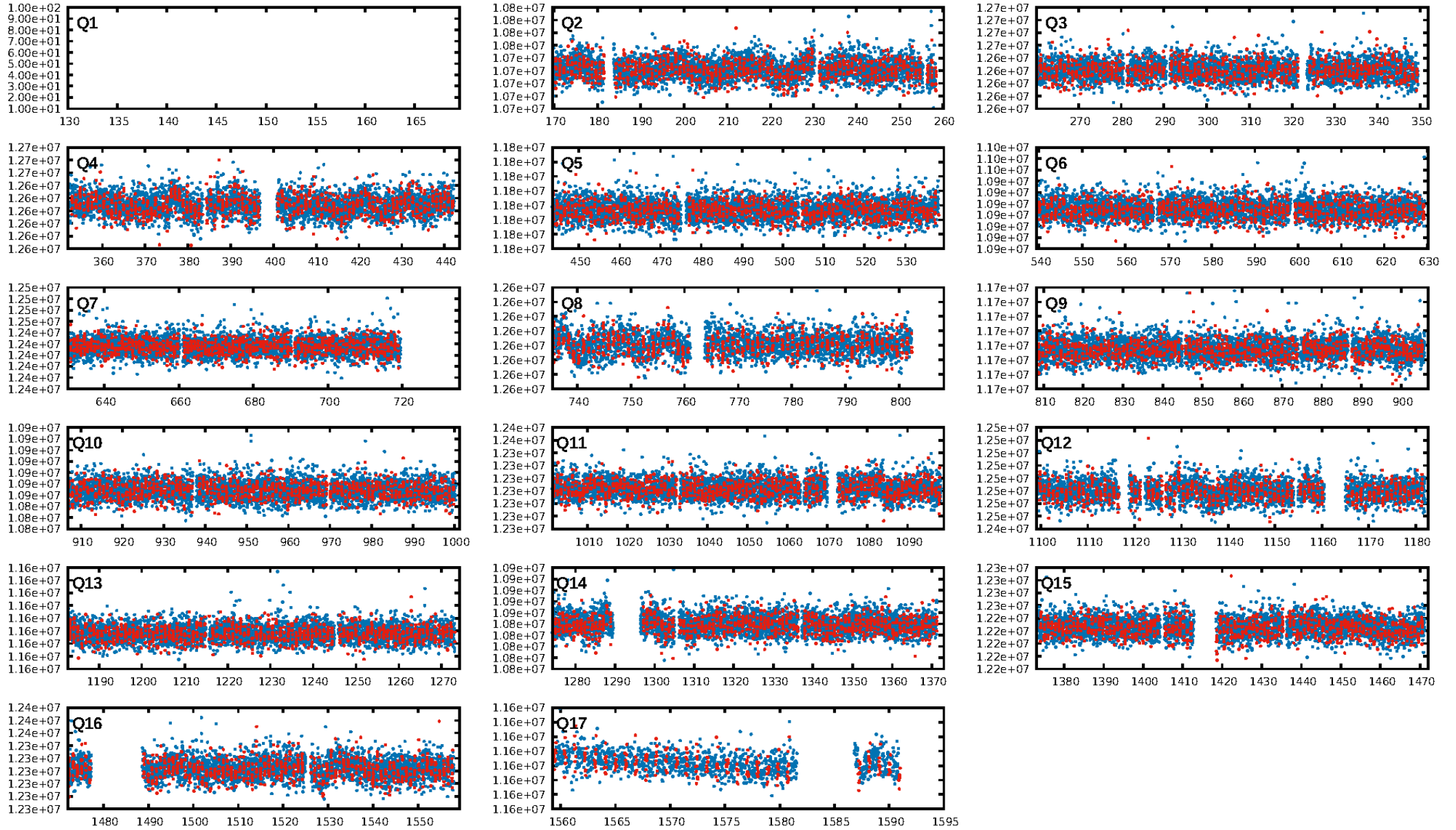
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.54e-16
RollingBand-fgt: 0.96 [1326/1383]
GhostDiagnostic-chr: 2.239
Centroid-sig: 10.2%
Centroid-so: 4.956 arcsec [1.41 σ]
OotOffset-rm: 1.134 arcsec [2.78 σ]
KicOffset-rm: 1.111 arcsec [2.83 σ]
OotOffset-st: 3/4/3/4 [14]
KicOffset-st: 3/4/3/4 [14]
DiffImageQuality-fgm: 0.29 [4/14]
DiffImageOverlap-fno: 1.00 [16/16]

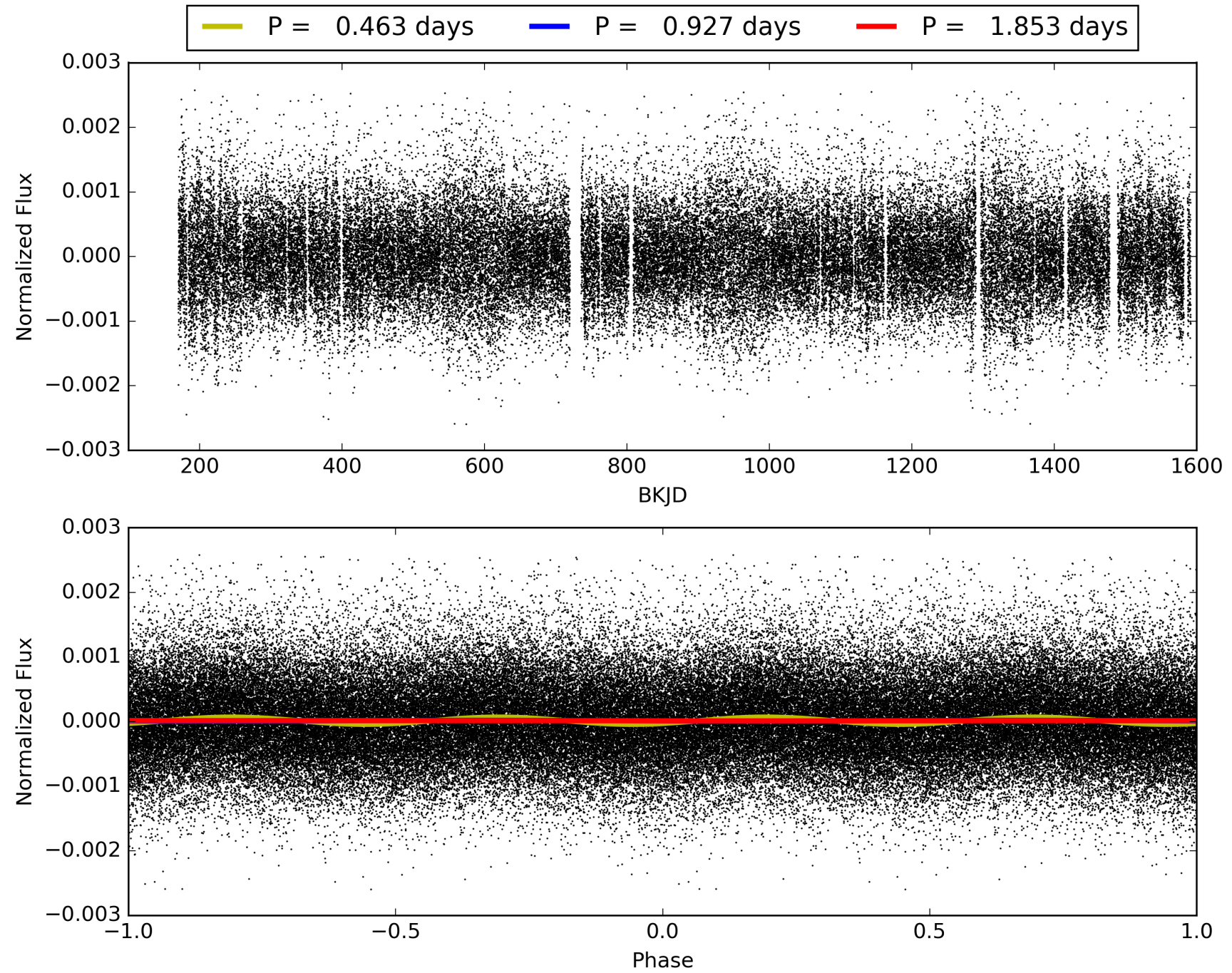
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 19:33:18 Z

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

TCE 003838239-01, PDC Light Curves

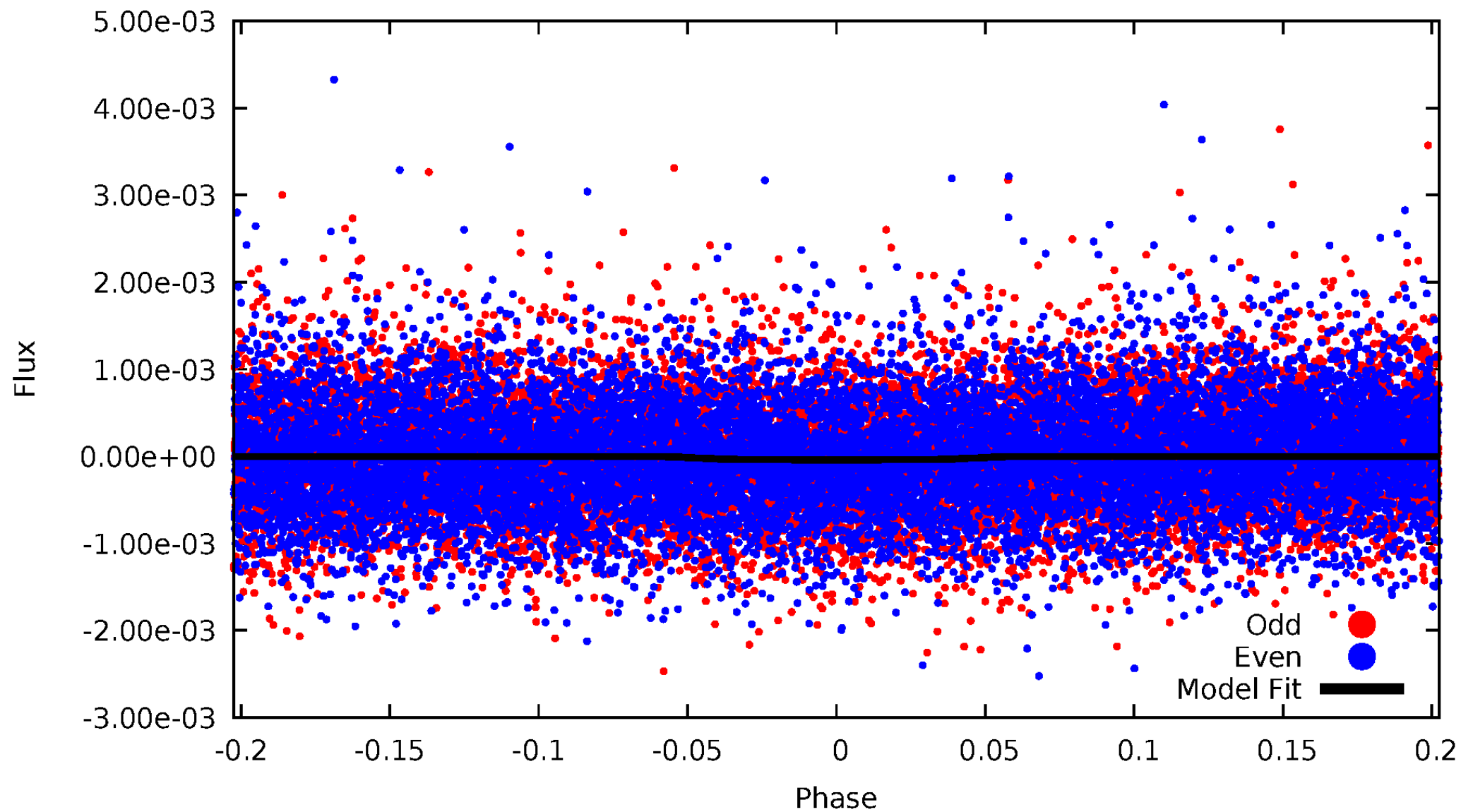


TCE 003838239-01



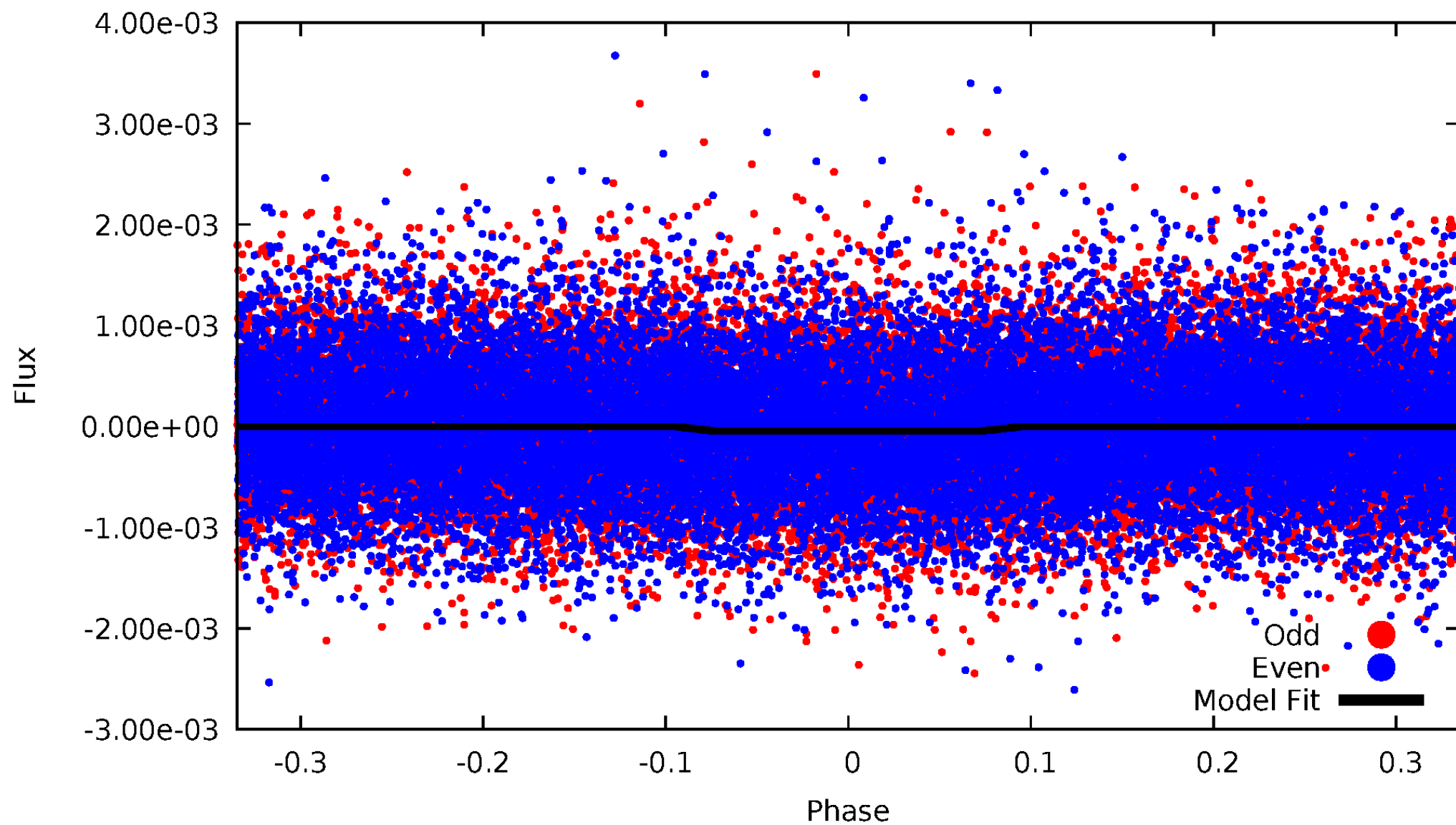
DV Odd/Even

TCE 003838239-01



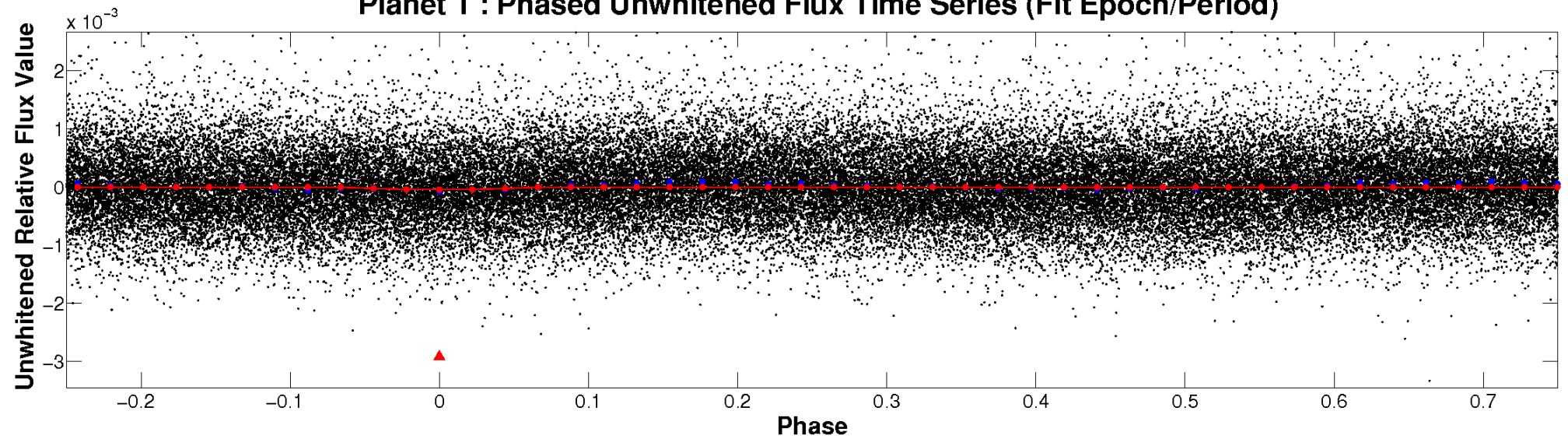
ALT Odd/Even

TCE 003838239-01

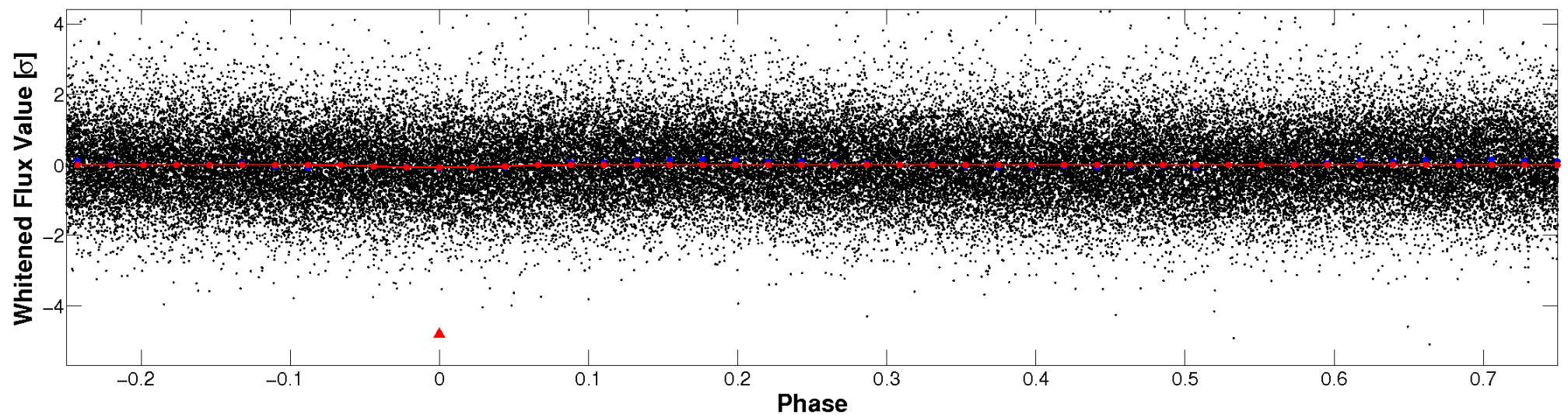


Non-Whitened Vs. Whitened Light Curve

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

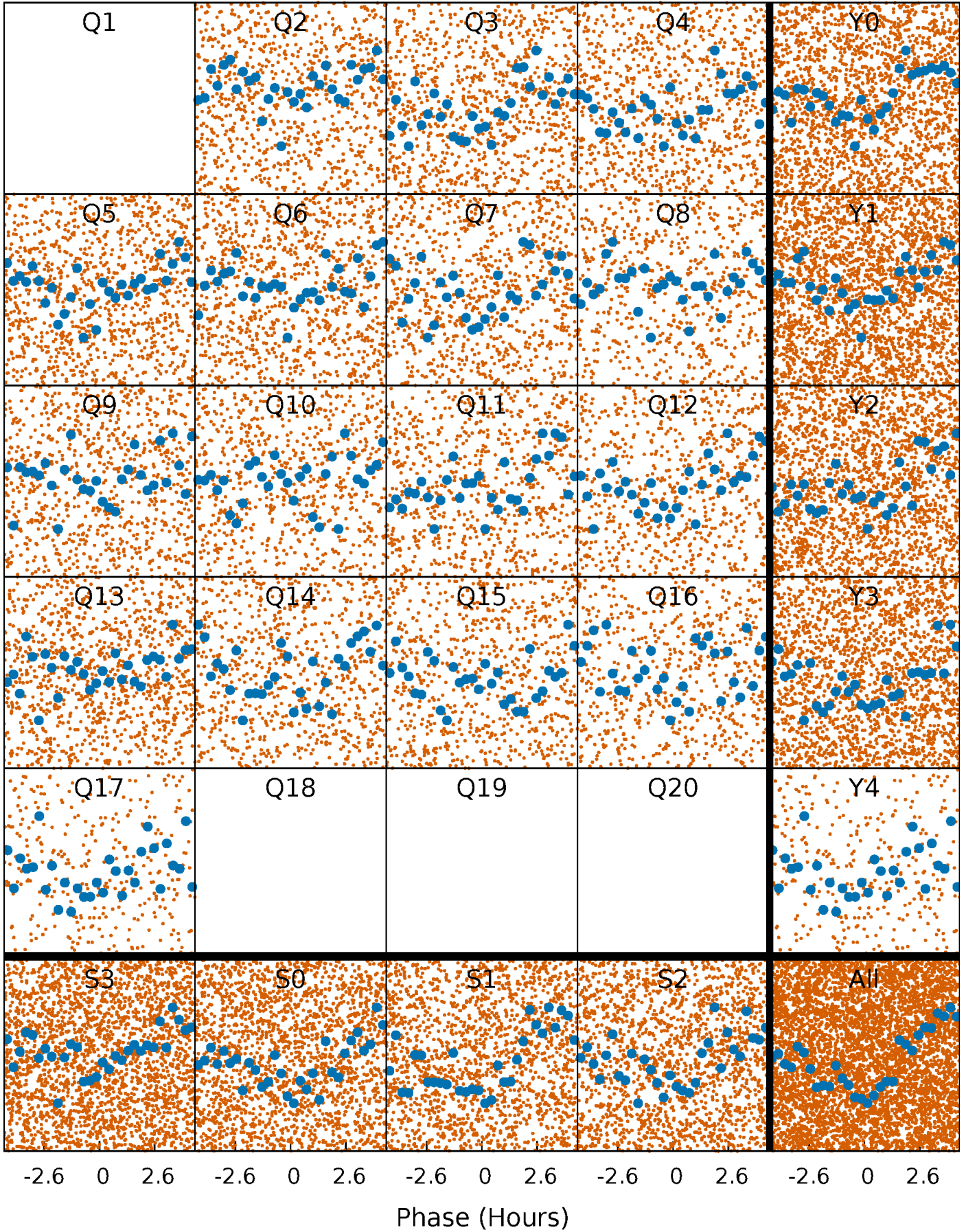


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



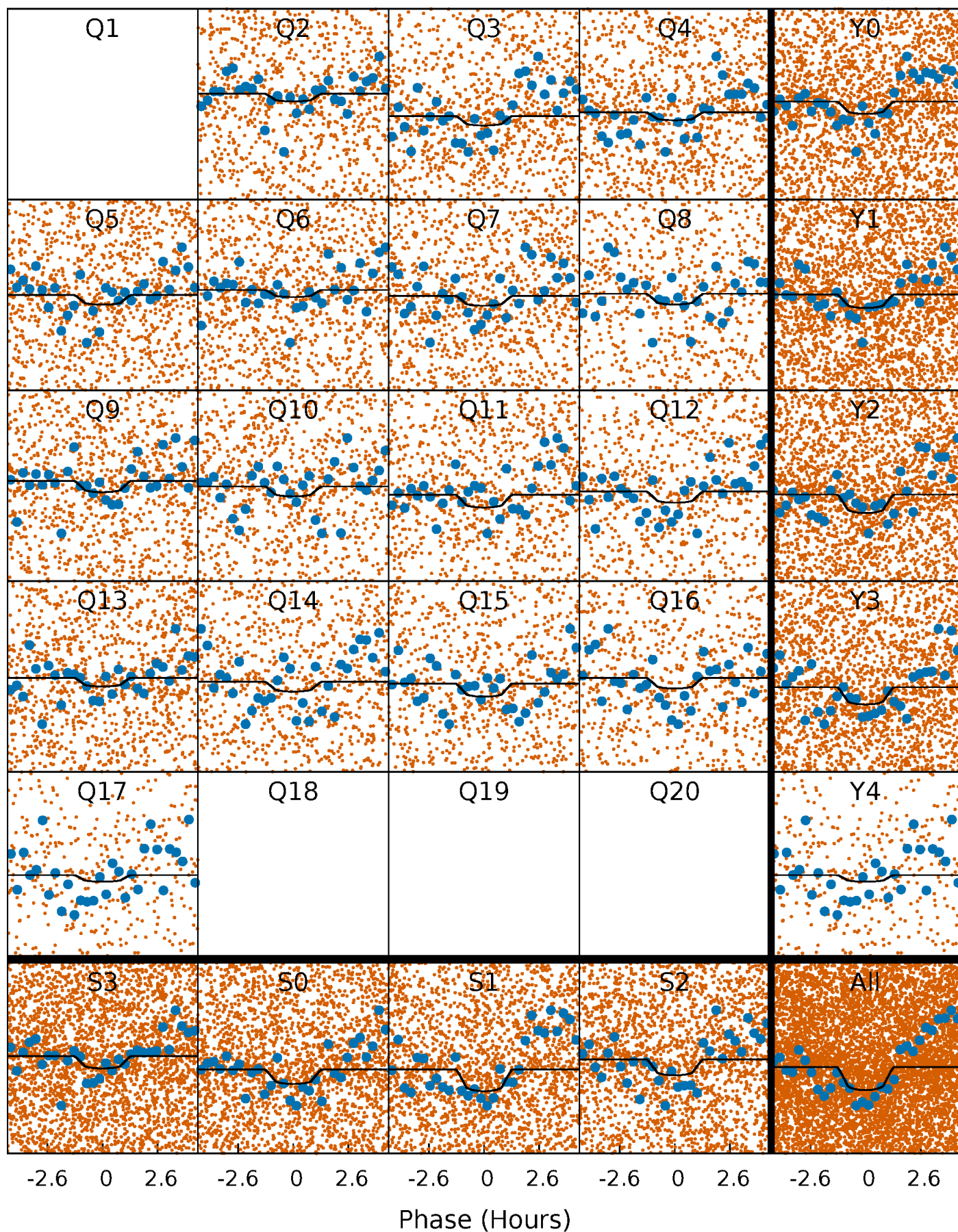
PDC Quarter-Phased Transit Curves

TCE 003838239-01 P= 0.926692 Days $T_0=132.355803$ (BKJD)



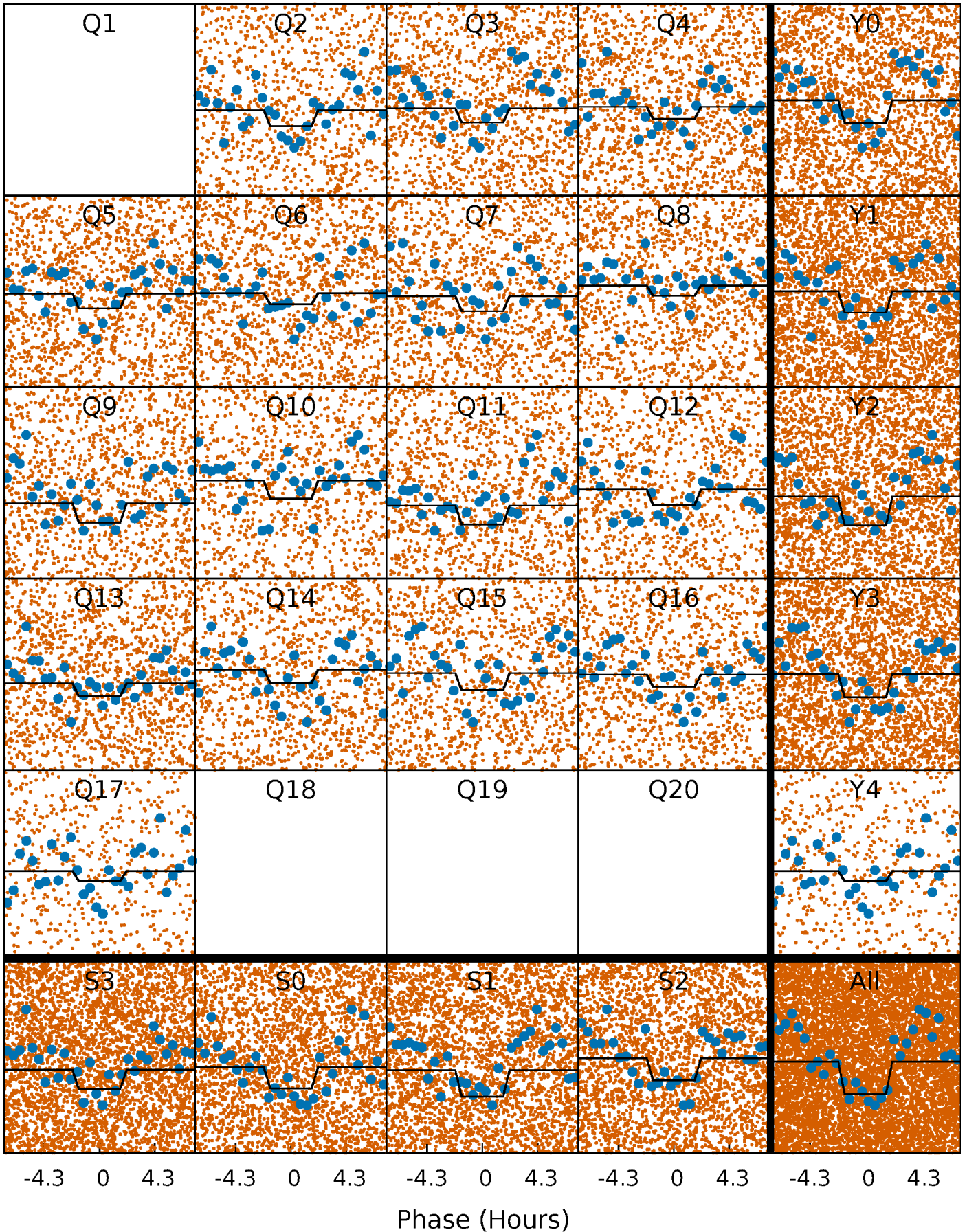
DV Quarter-Phased Transit Curves

TCE 003838239-01 P= 0.926692 Days $T_0=132.355803$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

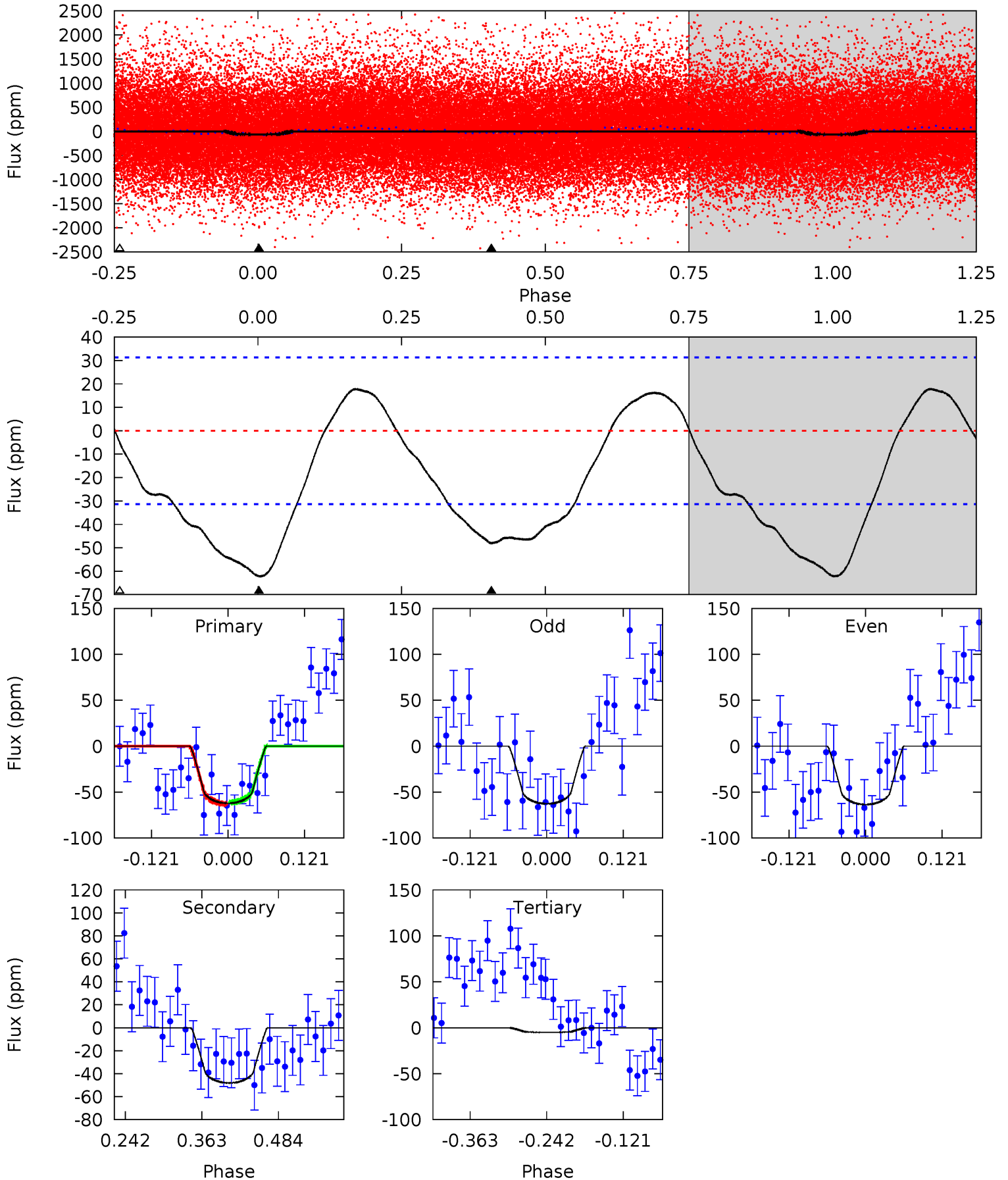
TCE 003838239-01 P= 0.926679 Days $T_0=132.340041$ (BKJD)



DV Model-Shift Uniqueness Test

003838239-01, P = 0.926692 Days, E = 132.355803 Days

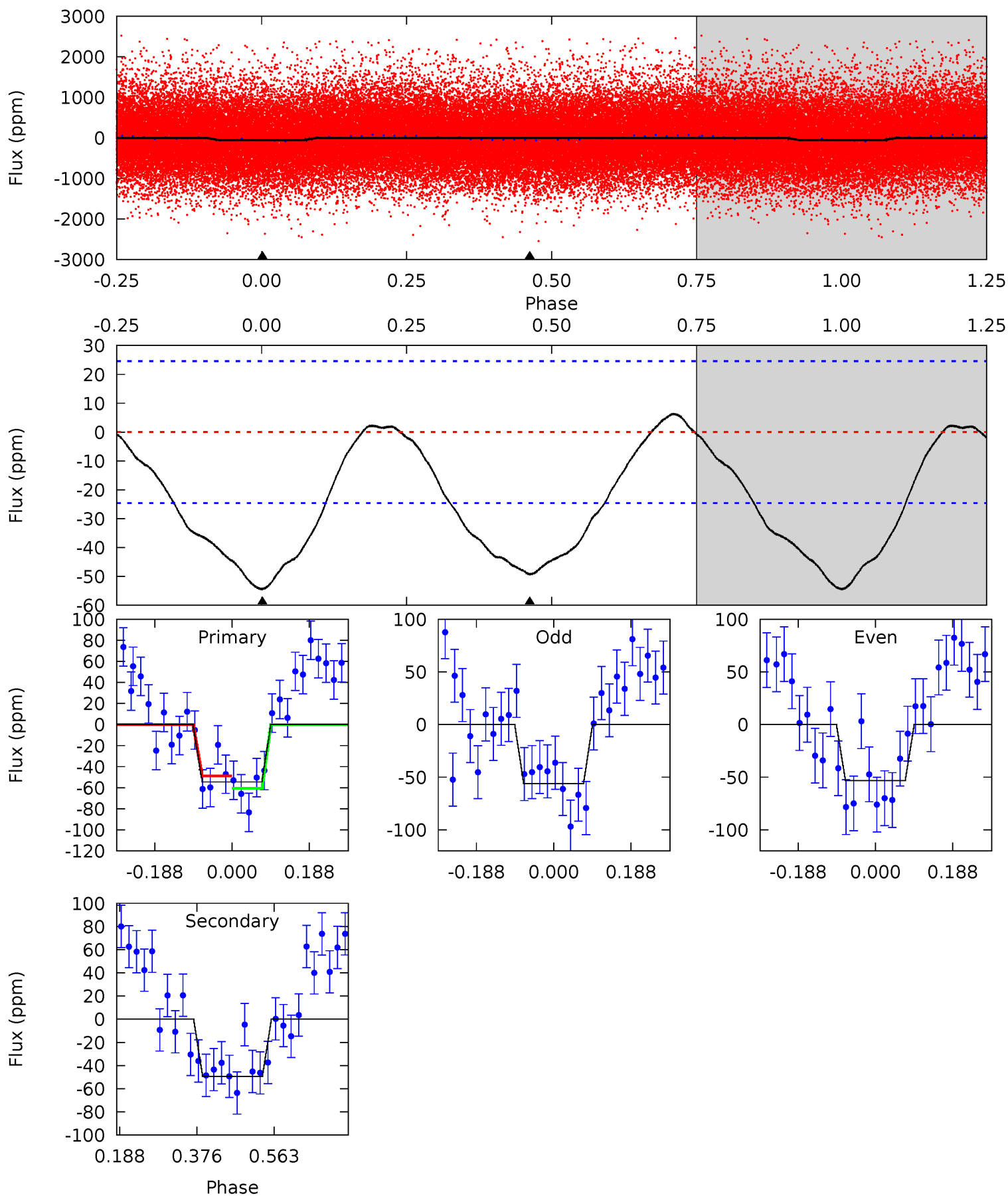
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.98	6.94	0.74	0	4.52	1.55	2.60	8.24	8.98	6.20	6.94	0.06	0.96	0.22	0.11



Alt Model-Shift Uniqueness Test

003838239-01, P = 0.926679 Days, E = 132.340041 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.82	8.89	0	0	4.43	1.32	0.91	9.82	9.82	8.89	8.89	0.27	0.86	0.10	1.06



Stellar Parameters For KIC 003838239

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5879^{+157}_{-174}	$4.518^{+0.050}_{-0.200}$	$-0.260^{+0.300}_{-0.300}$	$0.881^{+0.263}_{-0.088}$	$0.934^{+0.110}_{-0.110}$	$1.925^{+0.507}_{-0.967}$
	+3%/-3%	+1%/-4%	+115%/-115%	+30%/-10%	+12%/-12%	+26%/-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 003838239-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-48 ± 7	$0.92^{+0.76}_{-0.63}$	2570^{+167}_{-115}	5120^{+4392}_{-1121}	10^{+89}_{-7}
Alt.	-49 ± 6	$0.95^{+0.78}_{-0.63}$	2576^{+178}_{-122}	5107^{+4047}_{-1071}	$9.756^{+76.365}_{-6.818}$

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

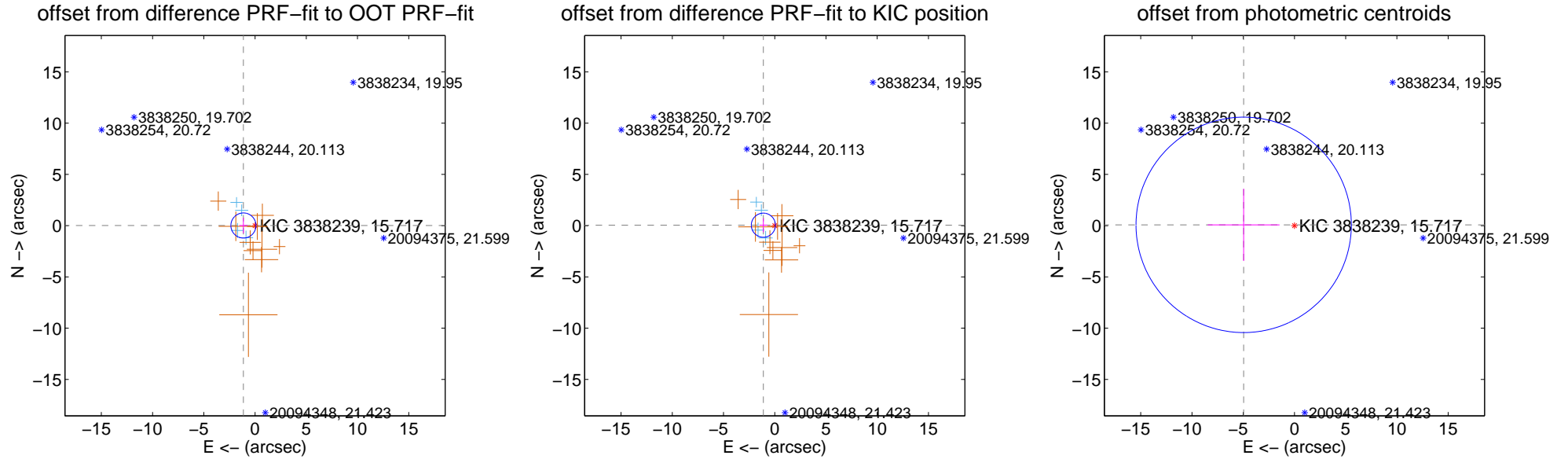
DV Centroid Data

Supplemental centroid analysis for 003838239-01. Kepler magnitude: 15.72. Transit SNR 4.60

There are 4 quarters with good PRF difference image offsets

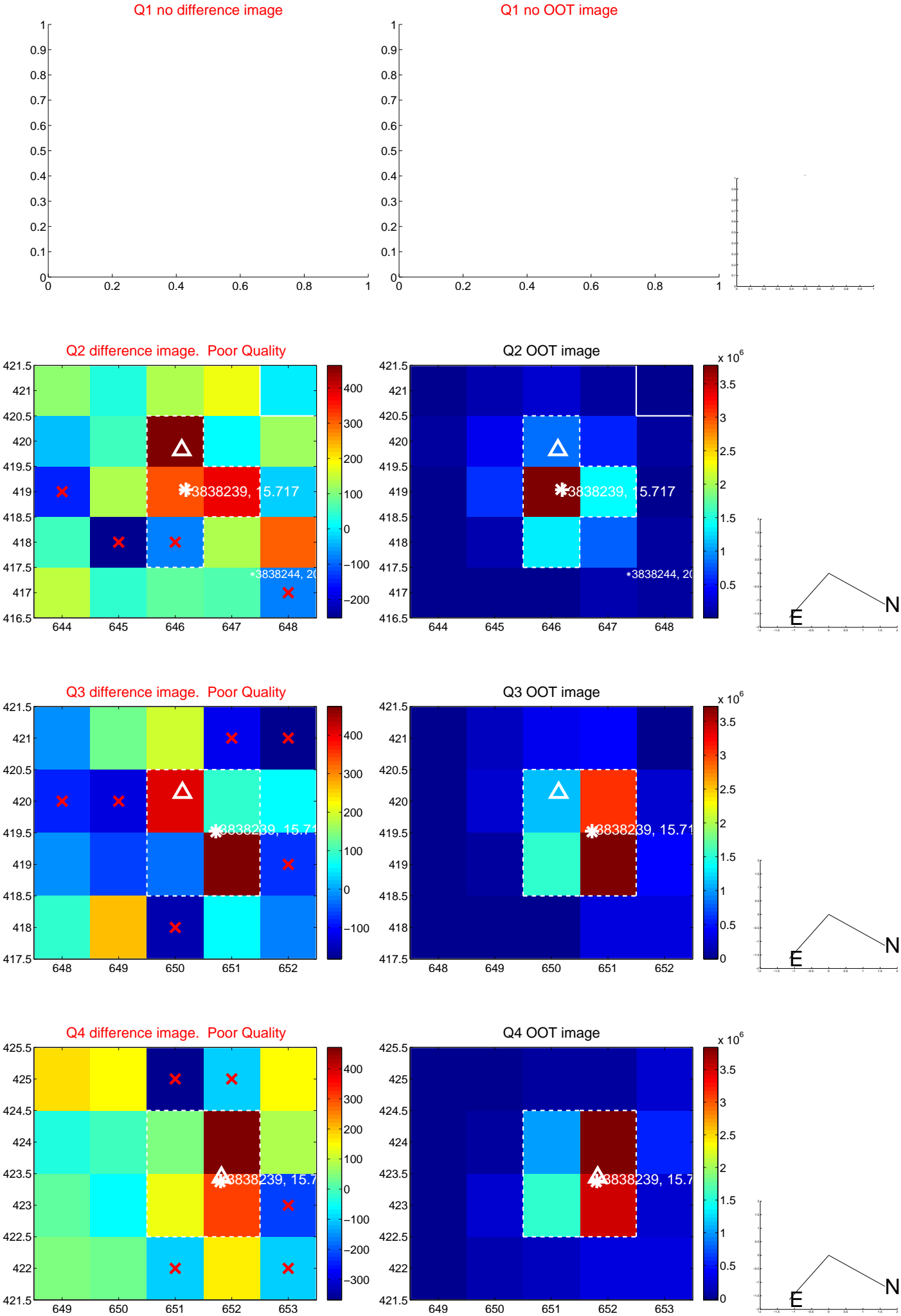
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.134 ± 0.408	2.78	1.134 ± 0.404	0.015 ± 0.761
PRF-fit source offset from KIC position	1.111 ± 0.392	2.83	1.111 ± 0.382	0.045 ± 0.692
photometric centroid source offset	4.96 ± 3.50	1.41	4.95 ± 3.50	0.08 ± 3.52

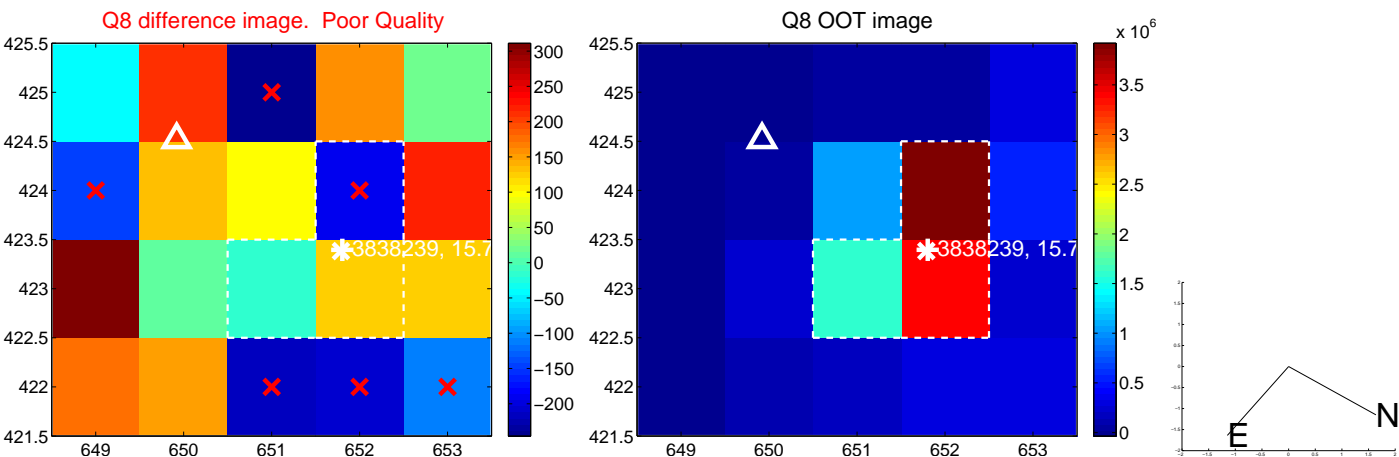
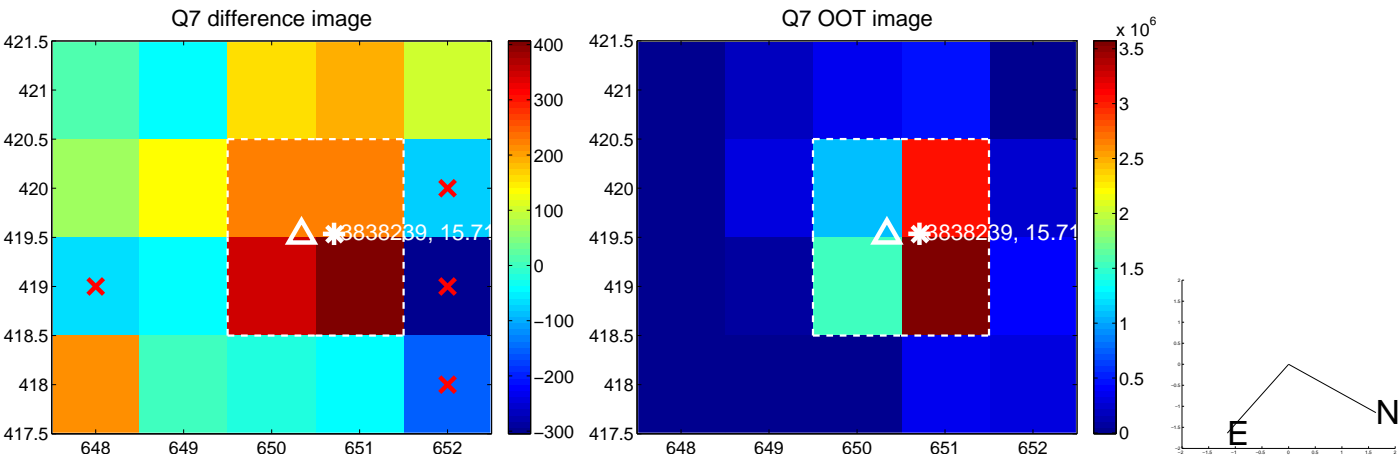
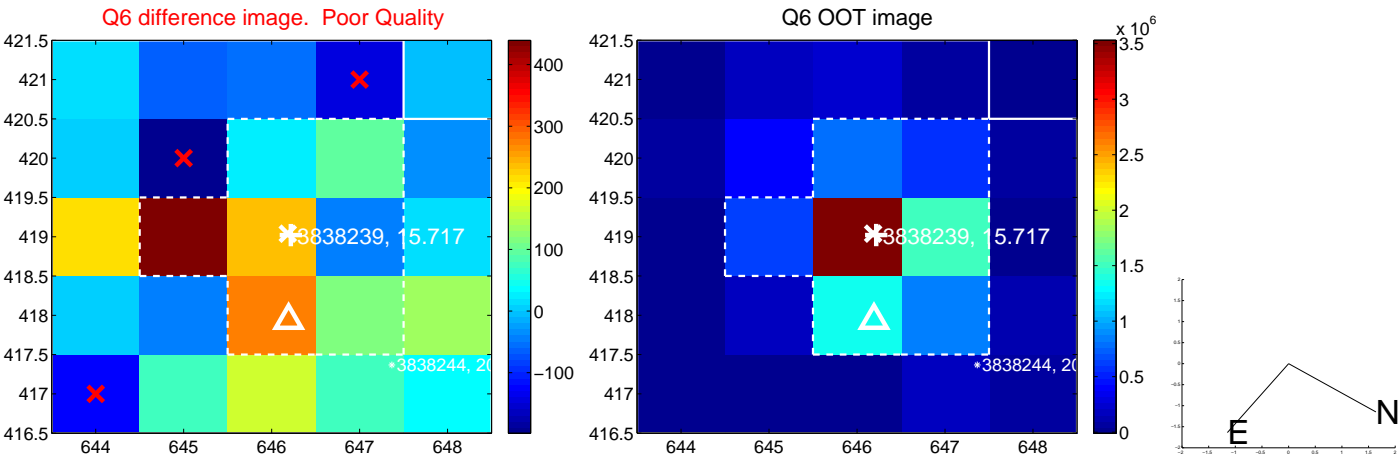
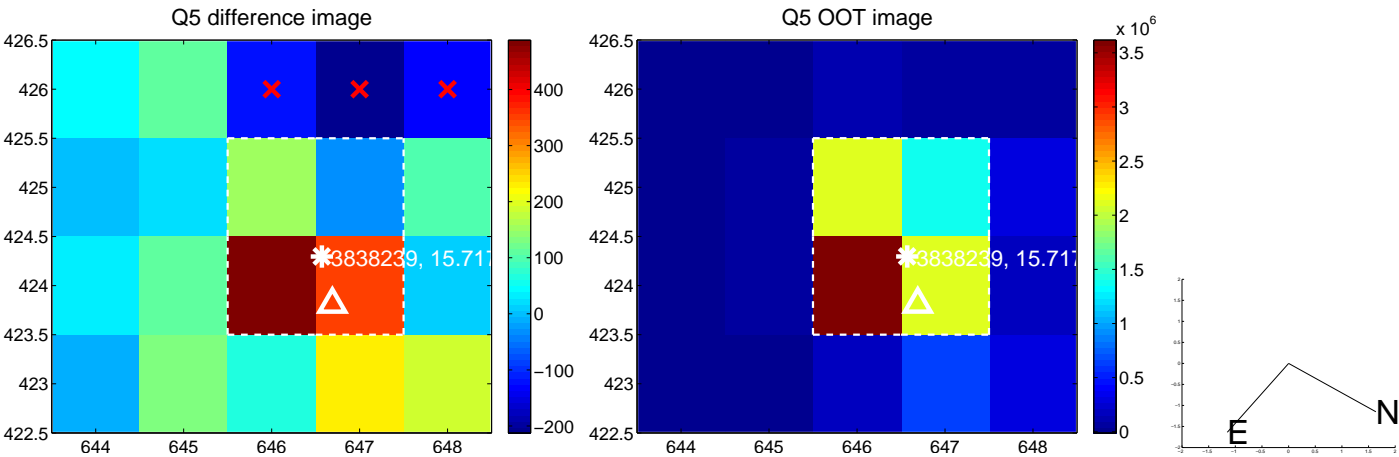


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

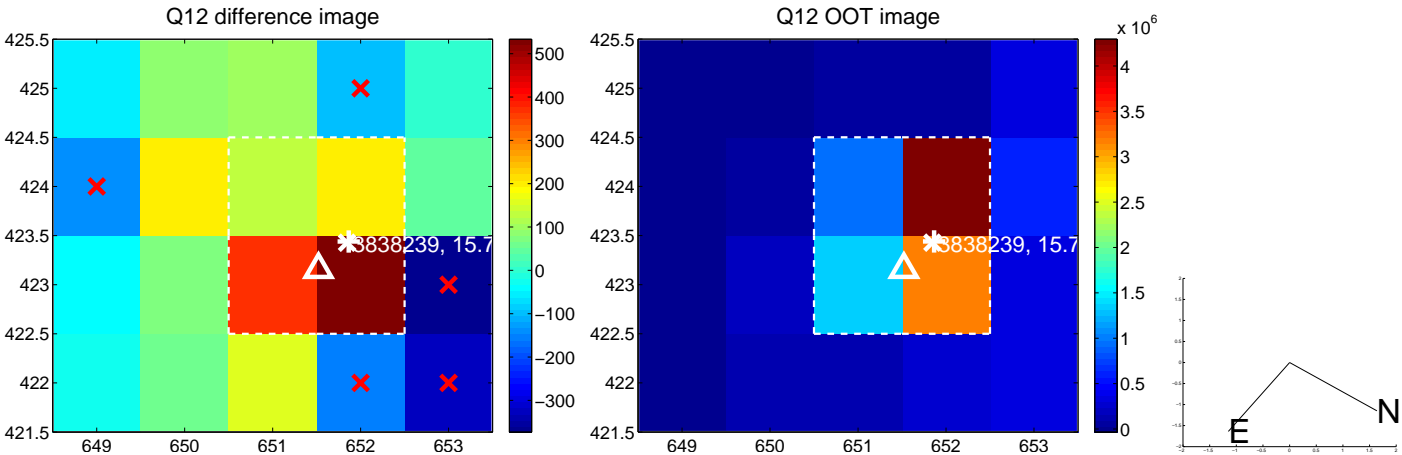
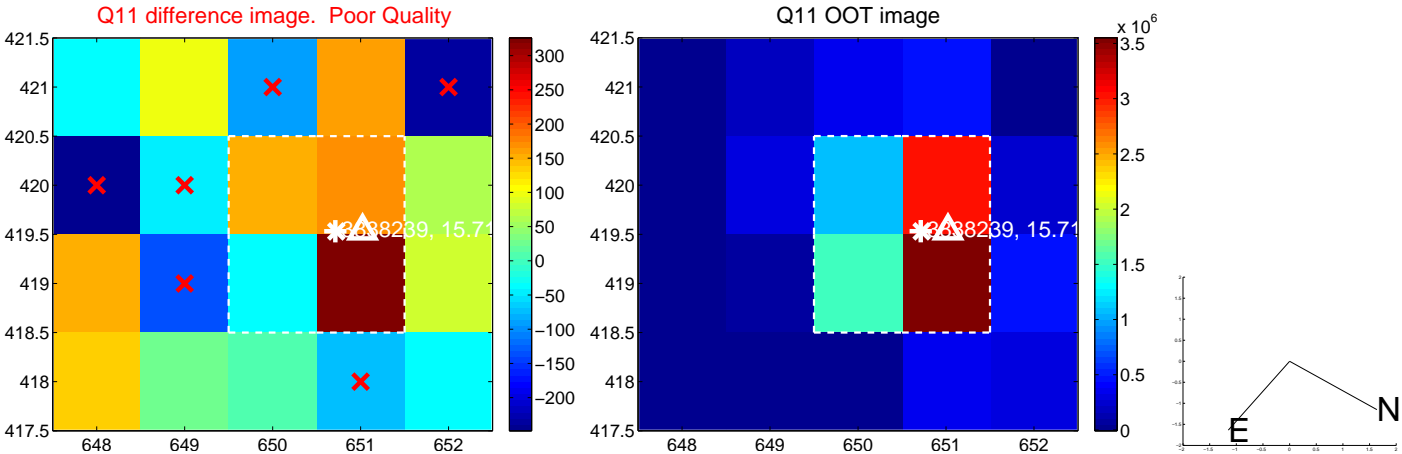
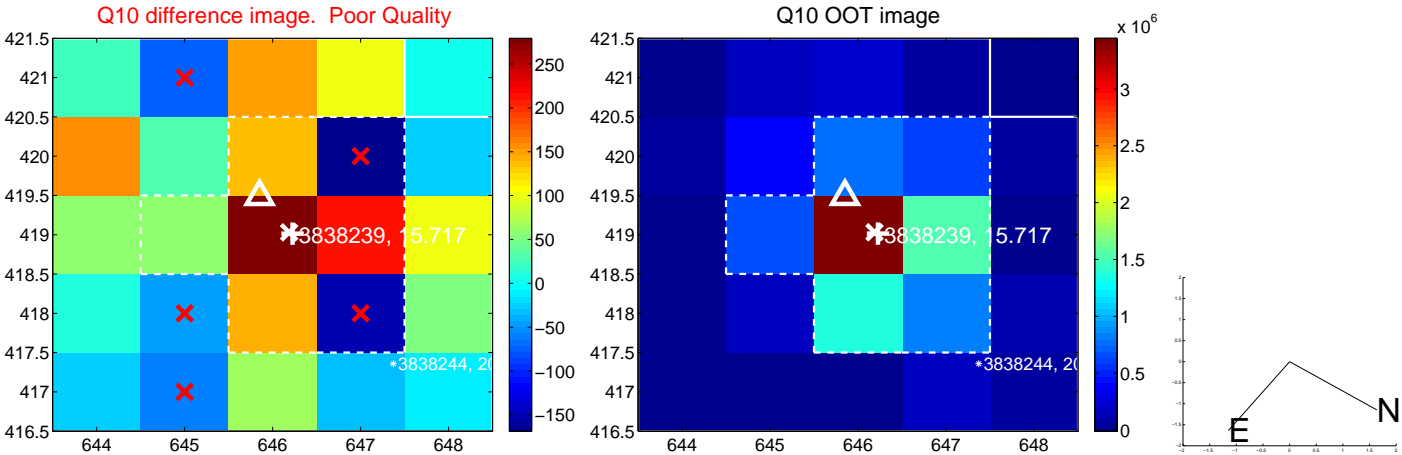
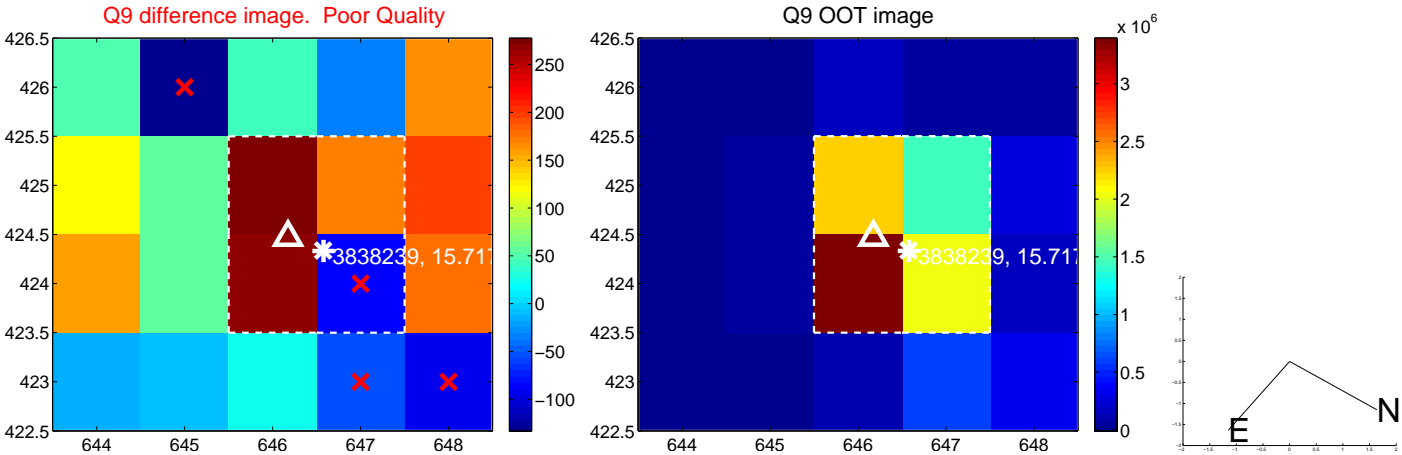
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



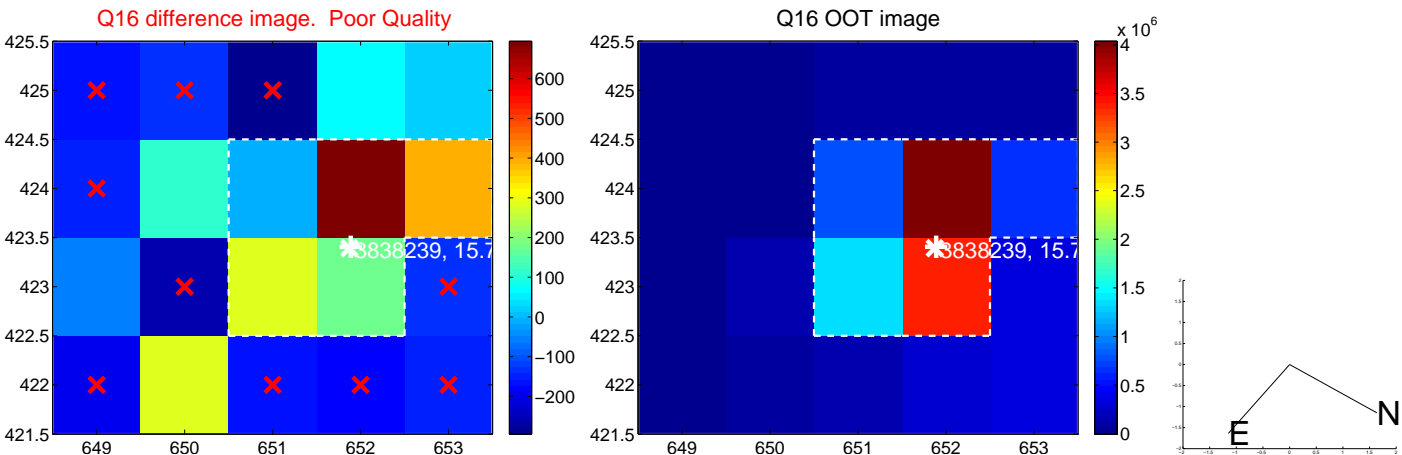
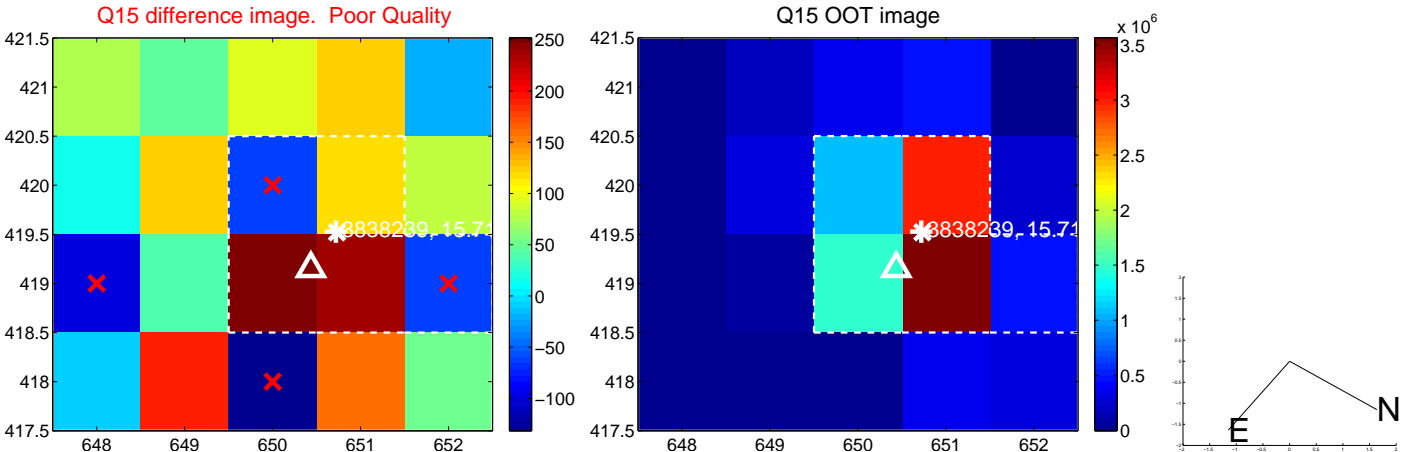
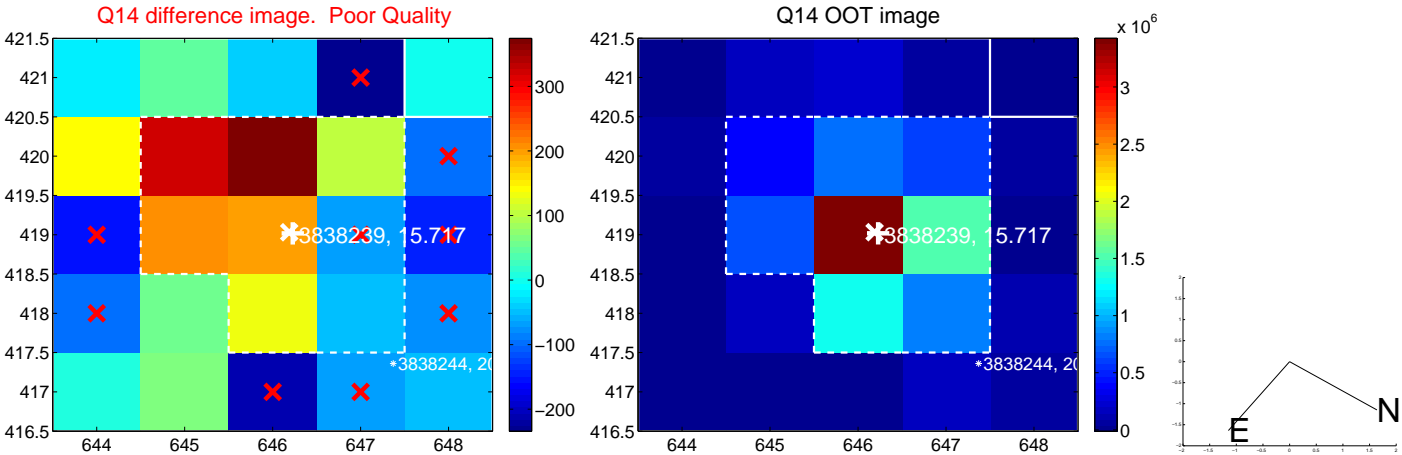
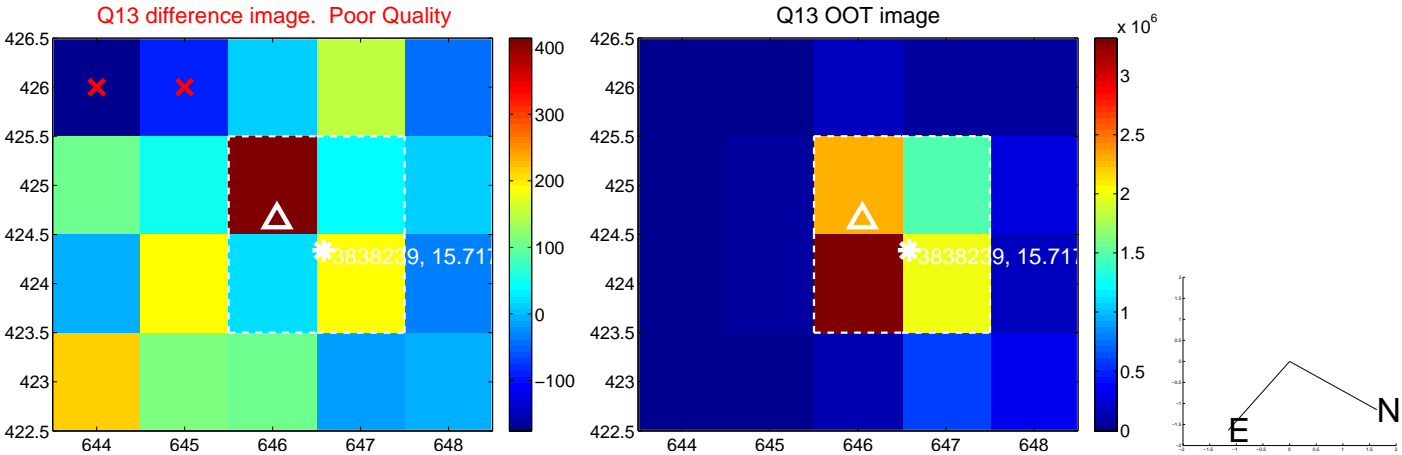
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



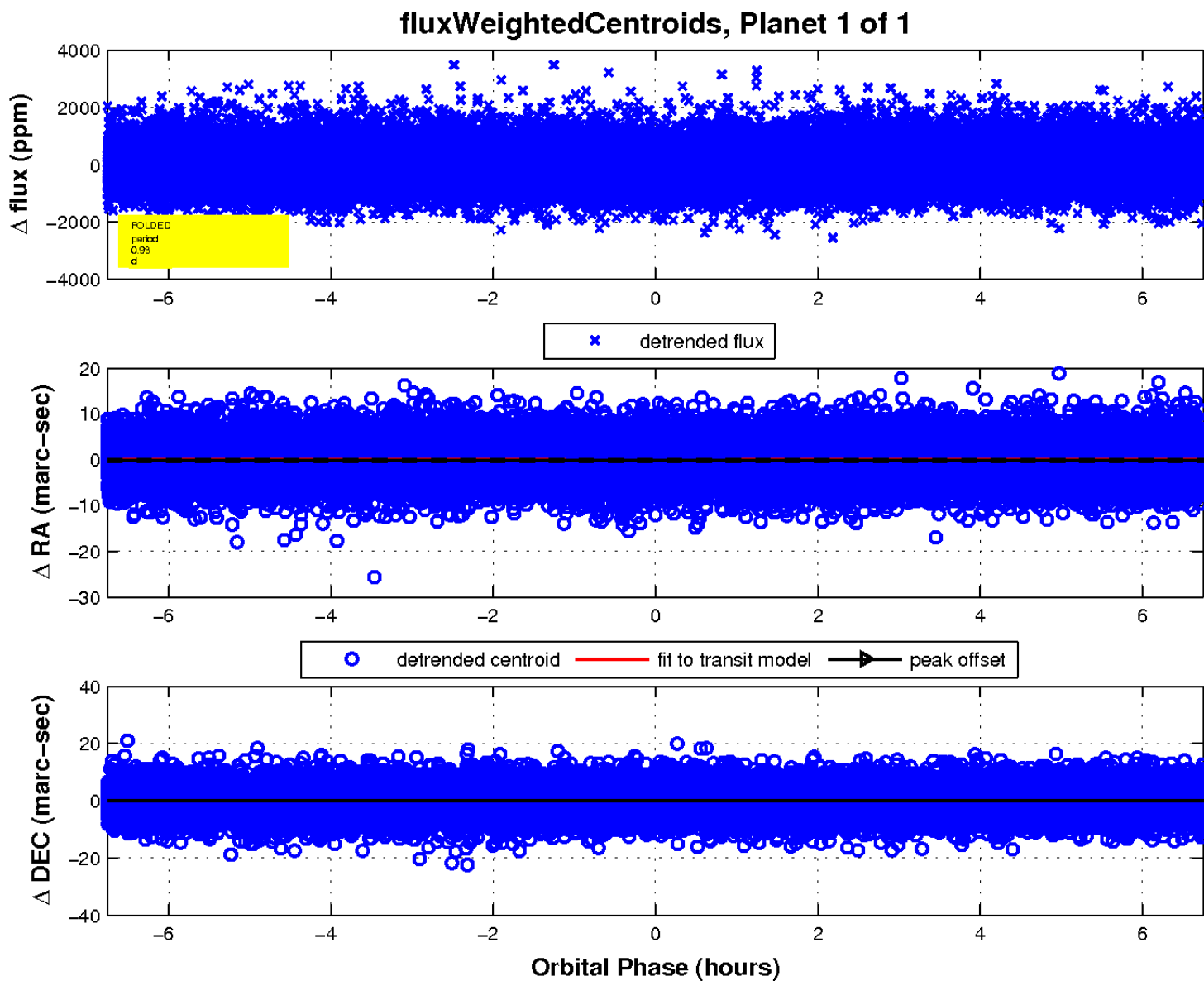
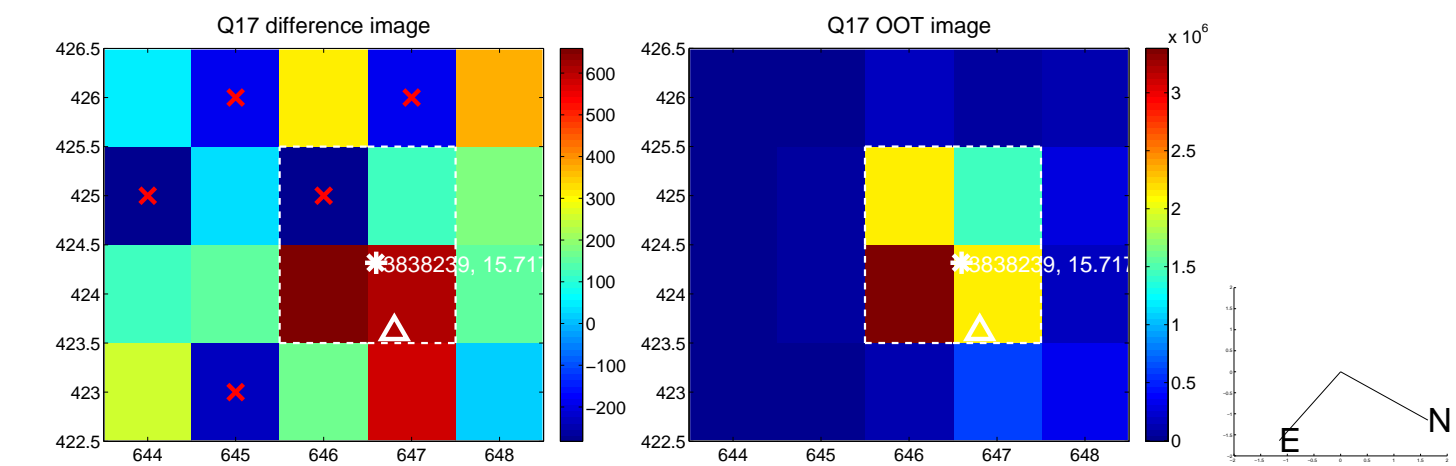
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

