

KIC 003733638

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})
003733638-01	OBS	6353.01	10.071125	140.079840	46.4	7.306	7.3	9.0	2.81	5768	2.25	815.38

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003733638-01	OBS	PC	0.97	0	0	0	0	NO_COMMENT

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

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

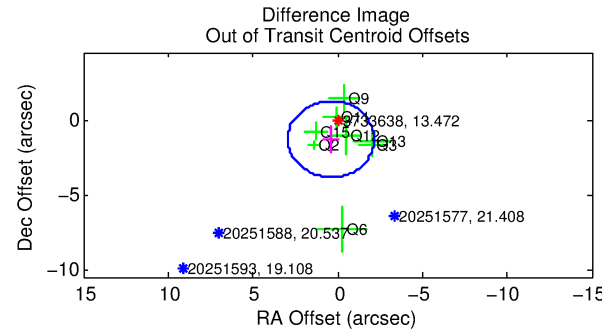
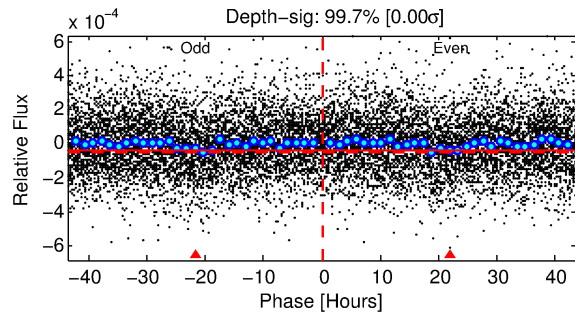
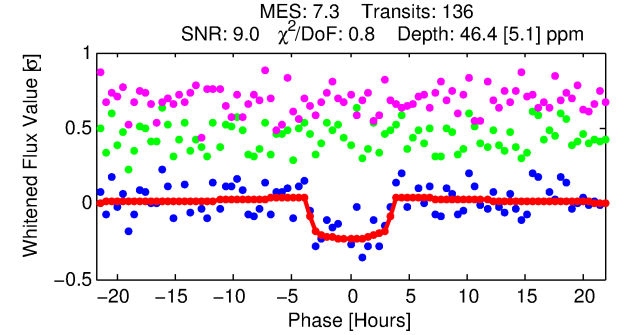
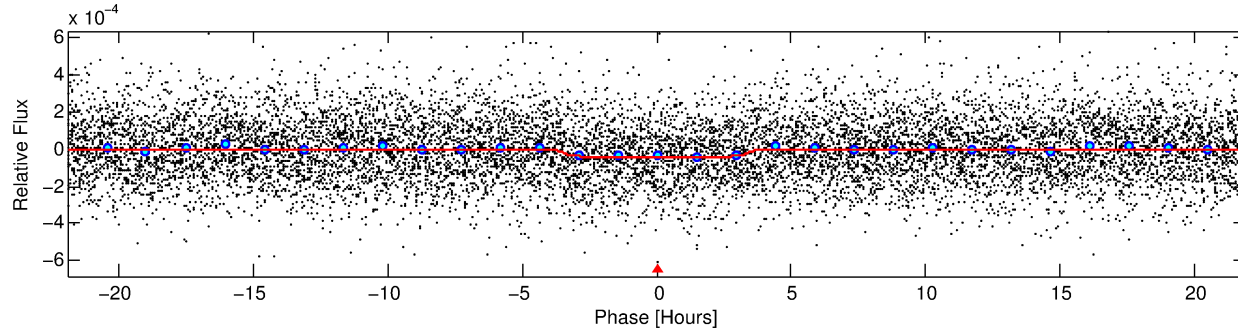
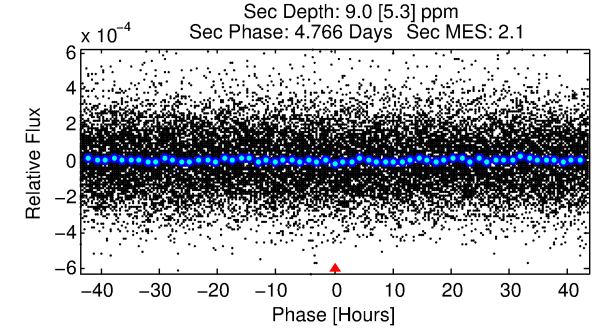
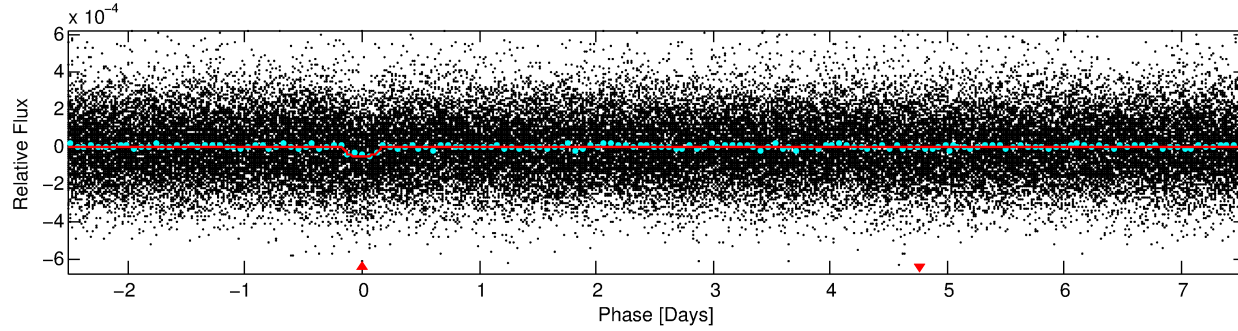
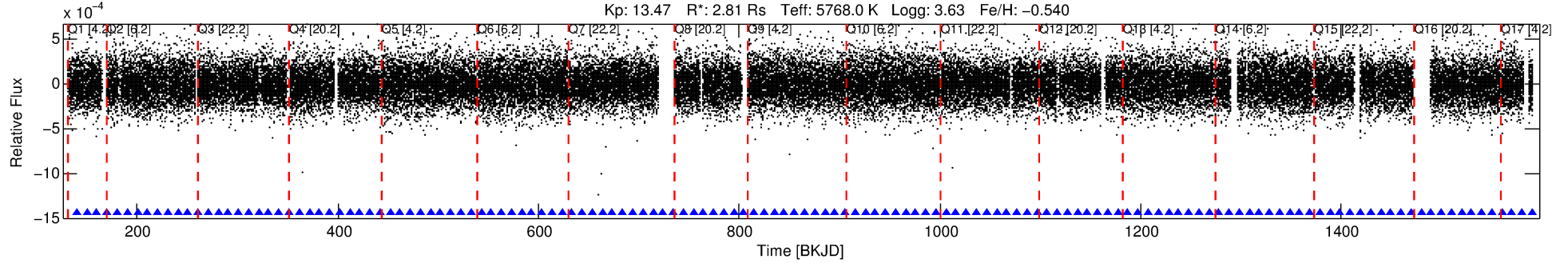
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003733638-01

No Significant Match Found

DV One-Page Summary

KIC: 3733638 Candidate: 1 of 1 Period: 10.071 d
KOI: K06353.01 Corr: 0.937



DV Fit Results:

Period = 10.07112 [0.00015] d
Epoch = 140.0798 [0.0121] BKJD
Rp/R* = 0.0074 [0.0025]
a/R* = 4.87 [8.12]
b = 0.90 [0.37]
Seff = 815.38 [1088.31]
Teq = 1363 [455] K
Rp = 2.26 [1.67] Re
a = 0.0980 [0.0751] AU
Ag = 9.35 [14.97] [0.56σ]
Teffp = 3684 [832] K [2.45σ]

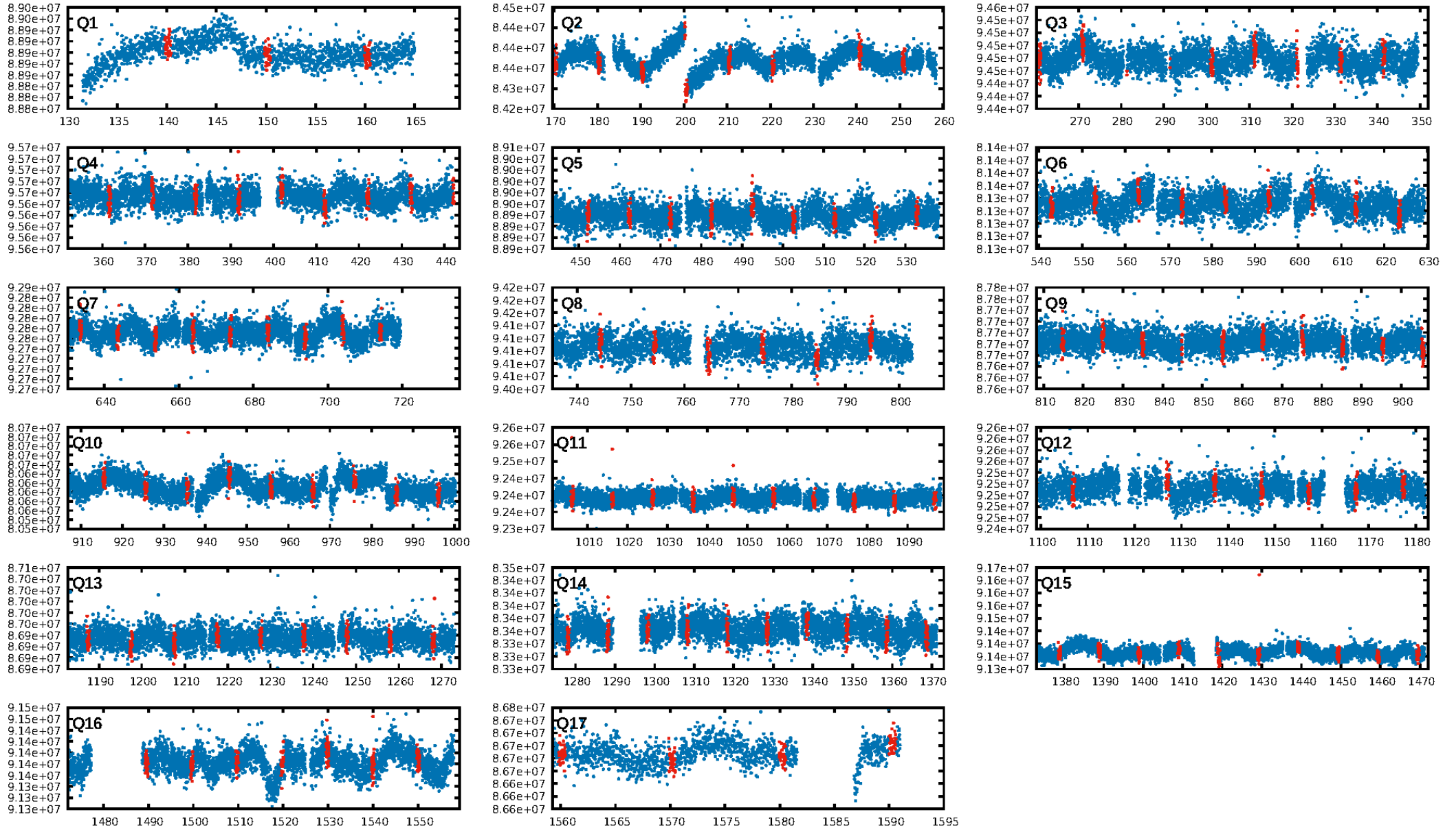
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 97.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.31e-13
RollingBand-fgt: 1.00 [129/129]
GhostDiagnostic-chr: 0.6397
Centroid-sig: 1.5%
Centroid-so: 2.505 arcsec [1.85σ]
OotOffset-rm: 1.359 arcsec [1.60σ]
OotOffset-st: 2/3/1/2 [8]
KicOffset-rm: 1.344 arcsec [1.66σ]
KicOffset-st: 2/3/1/2 [8]
DiffImageQuality-fgm: 0.75 [6/8]
DiffImageOverlap-fno: 1.00 [17/17]

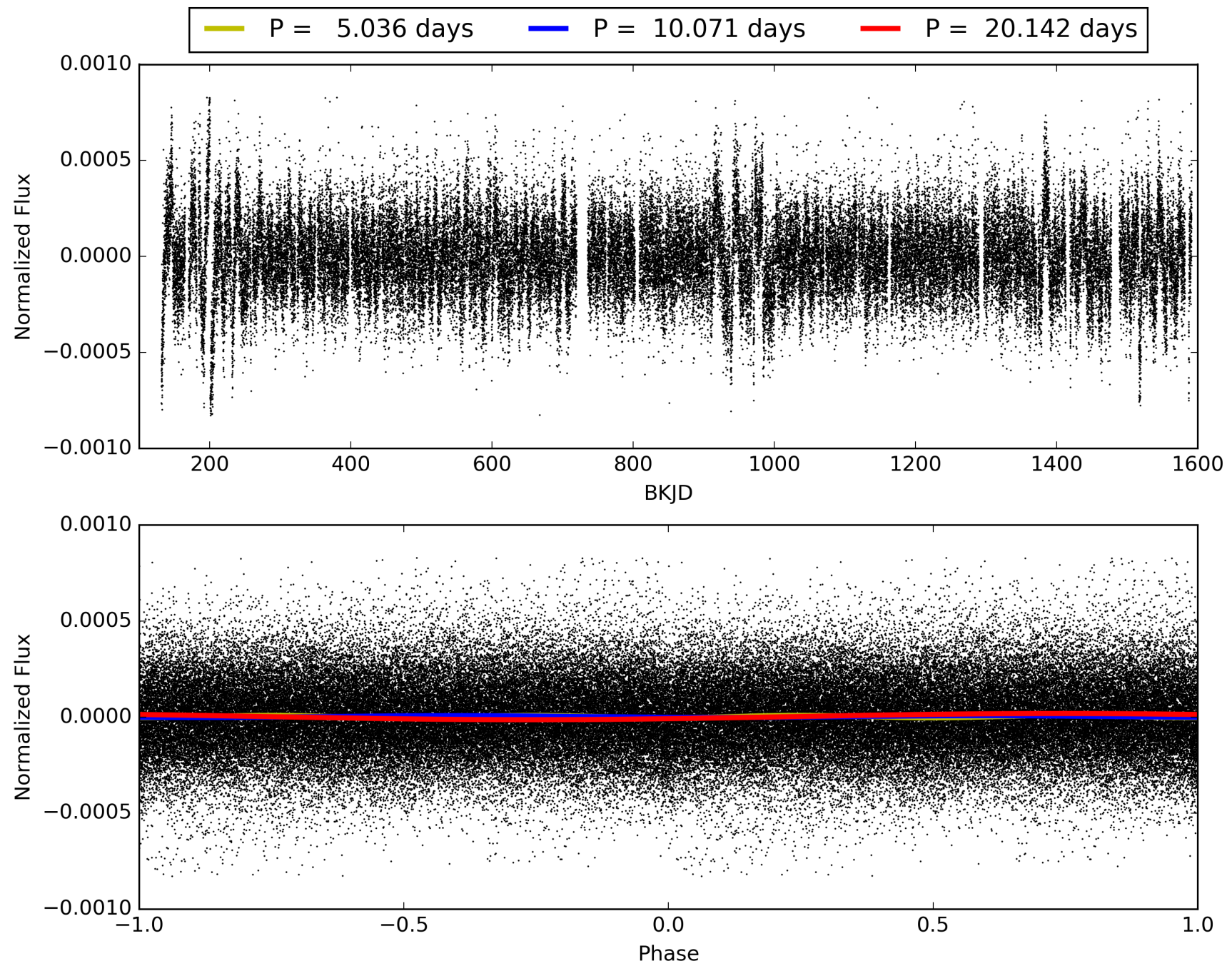
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 15:15:17 Z

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

TCE 003733638-01, PDC Light Curves

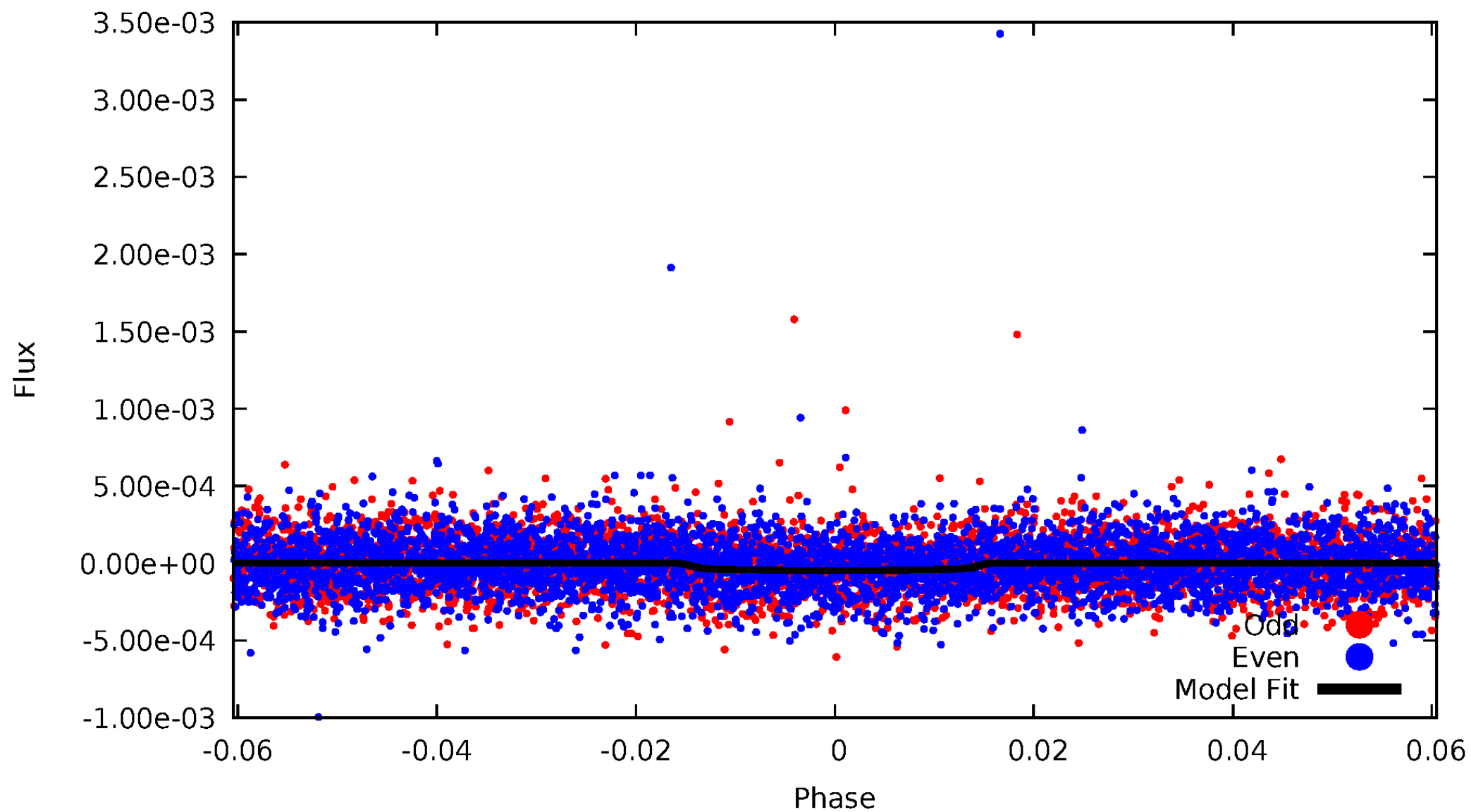


TCE 003733638-01



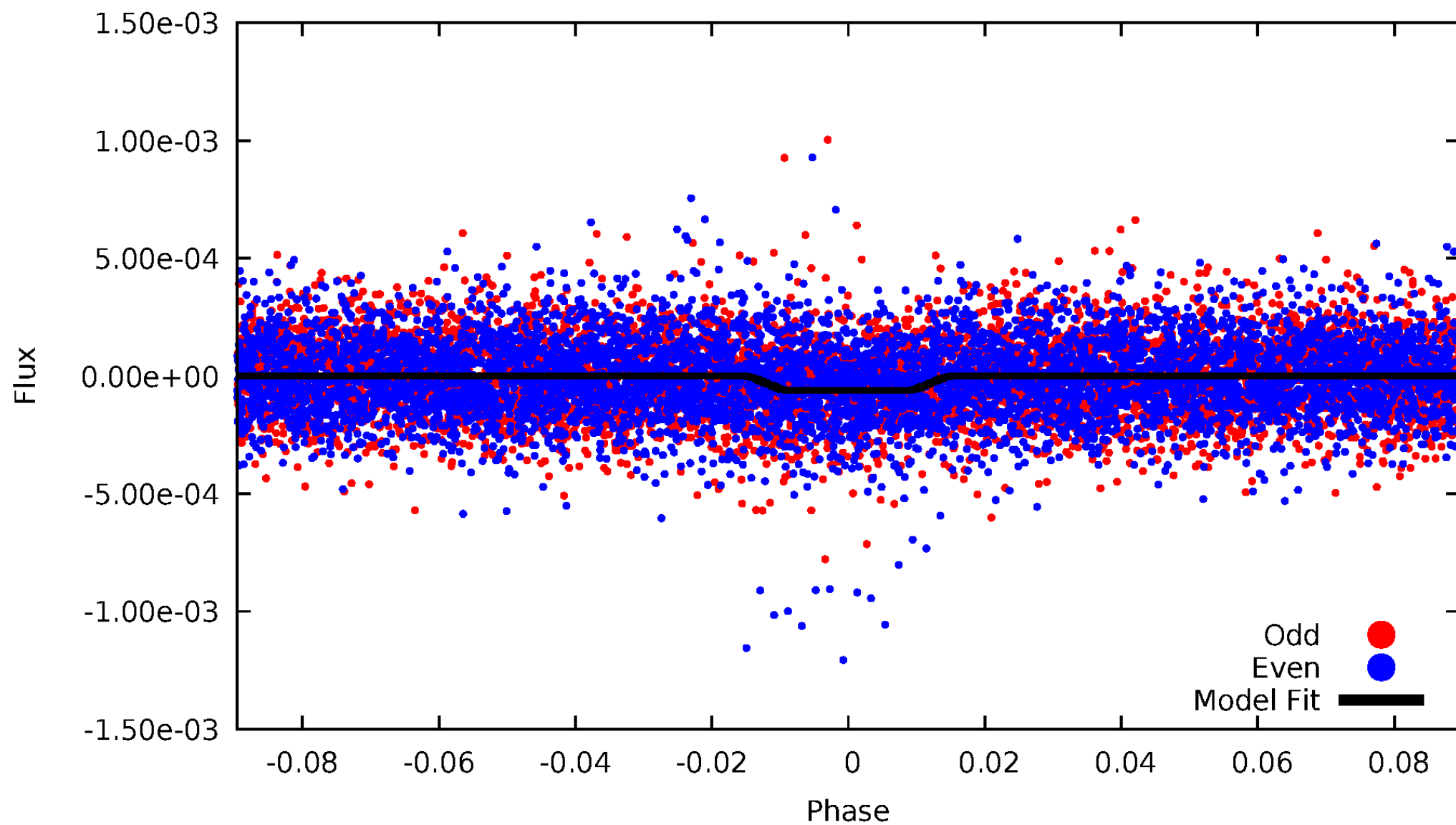
DV Odd/Even

TCE 003733638-01



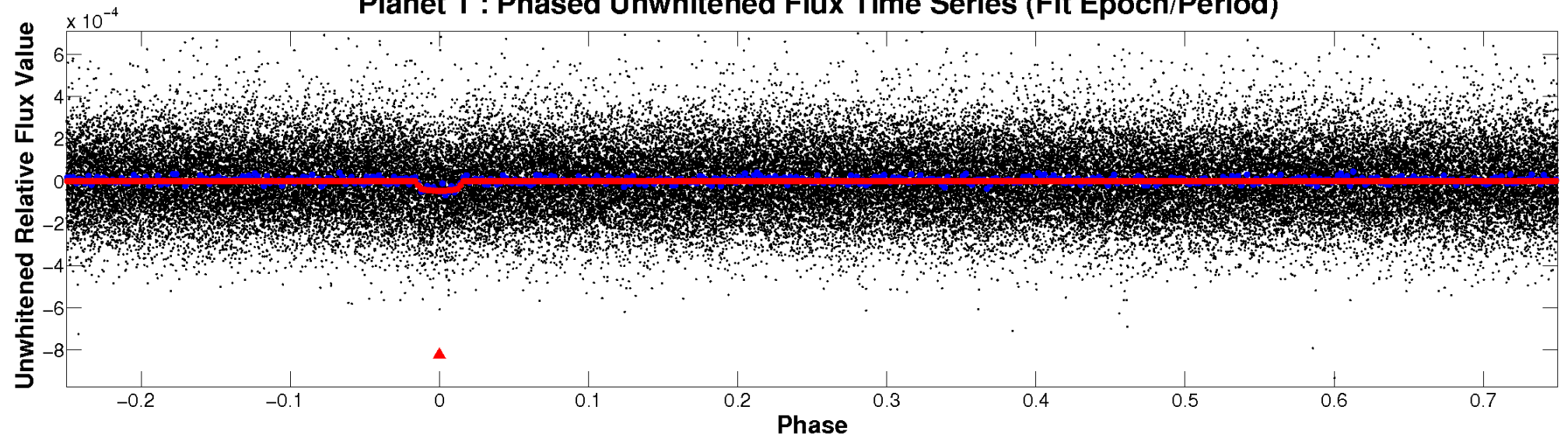
ALT Odd/Even

TCE 003733638-01

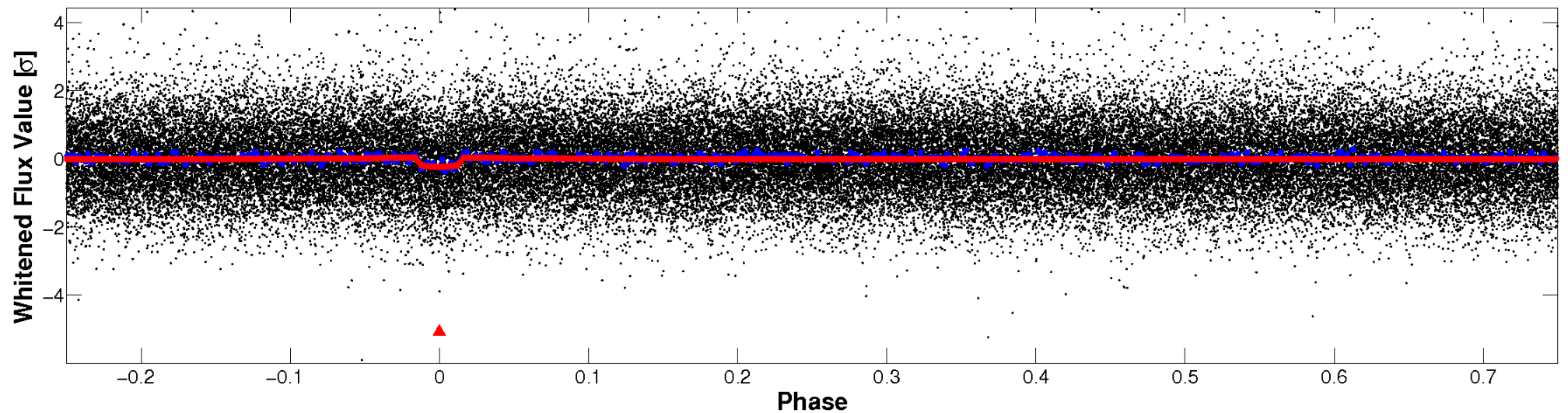


Non-Whitened Vs. Whitened Light Curve

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

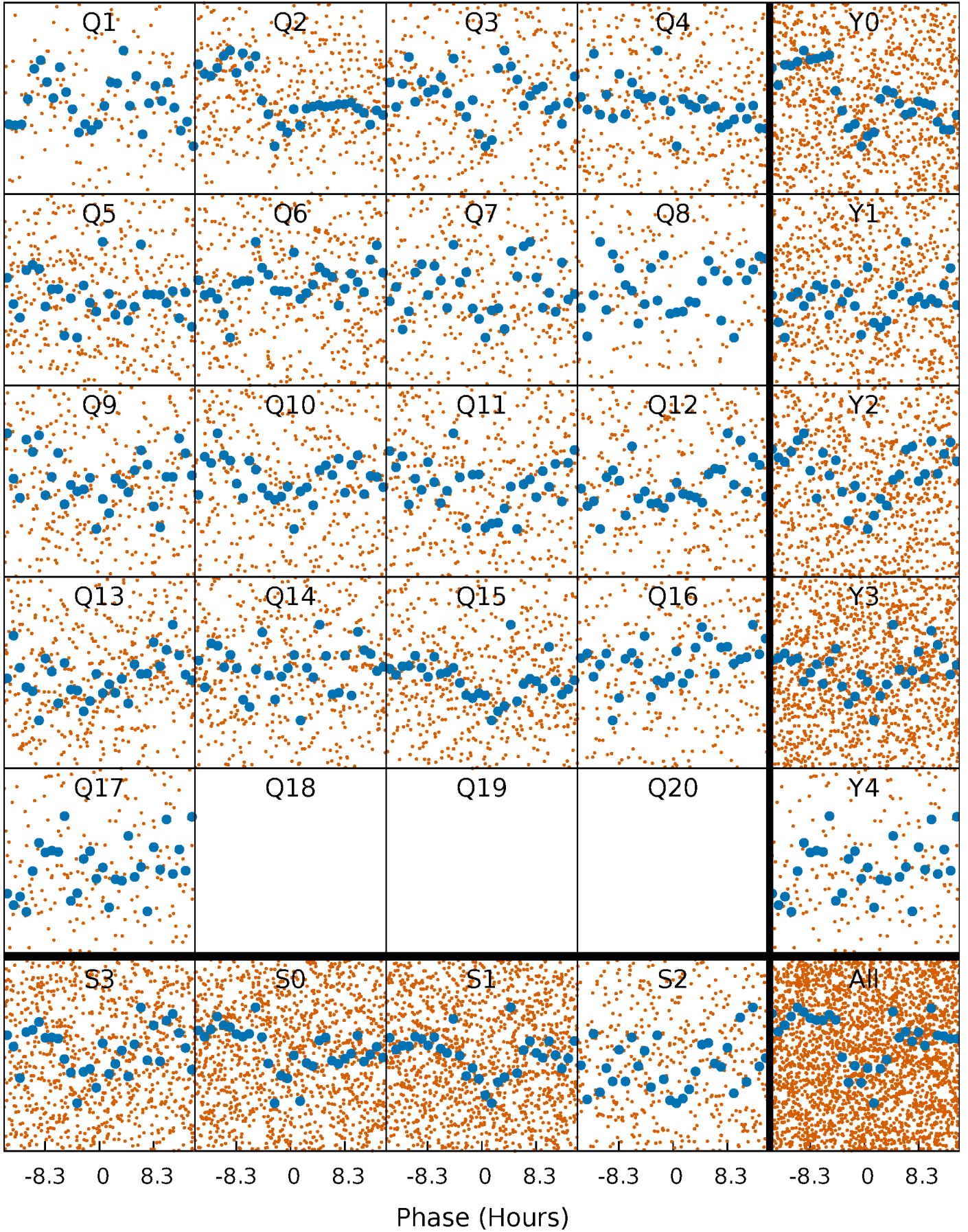


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



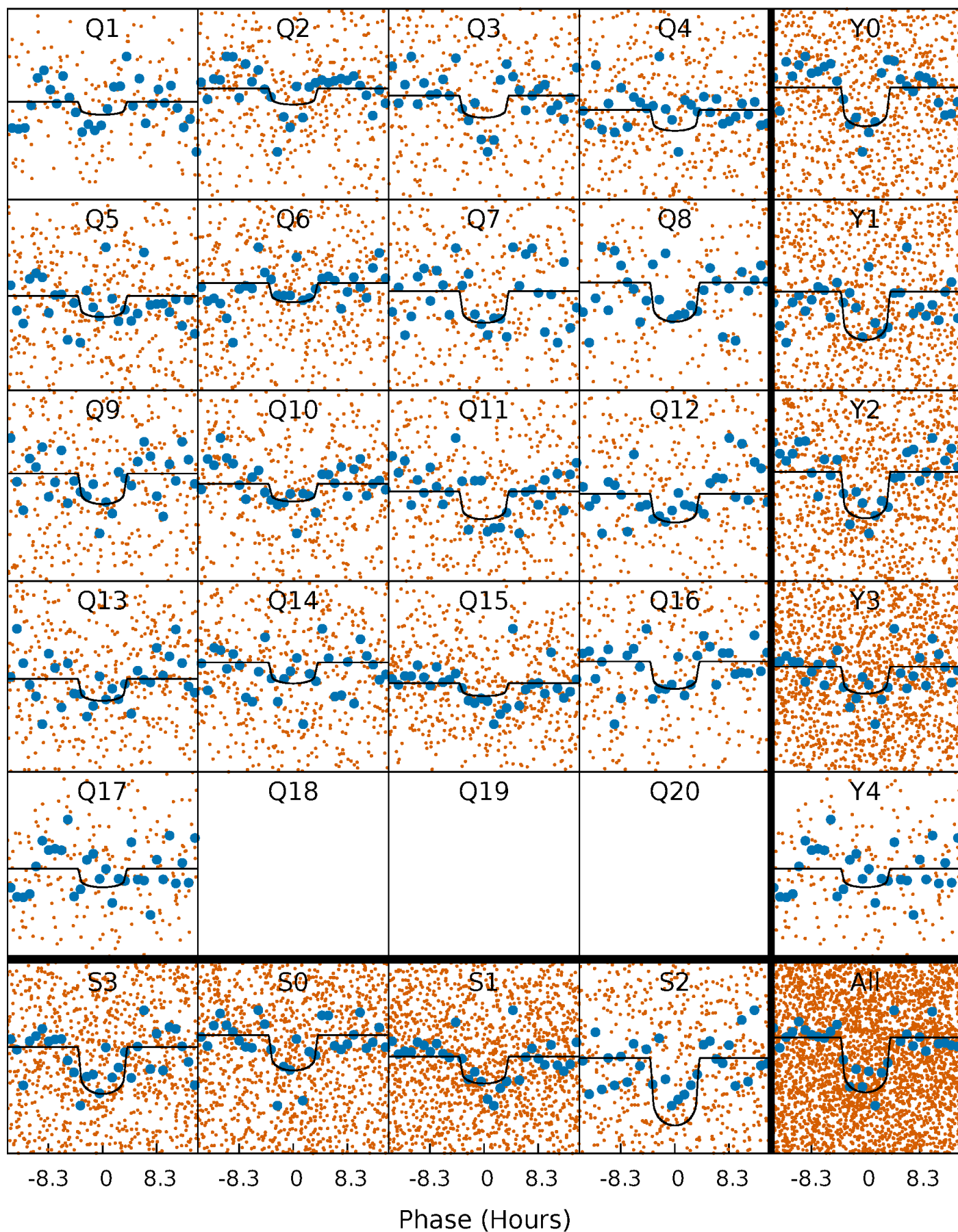
PDC Quarter-Phased Transit Curves

TCE 003733638-01 P= 10.071125 Days $T_0=140.079840$ (BKJD)



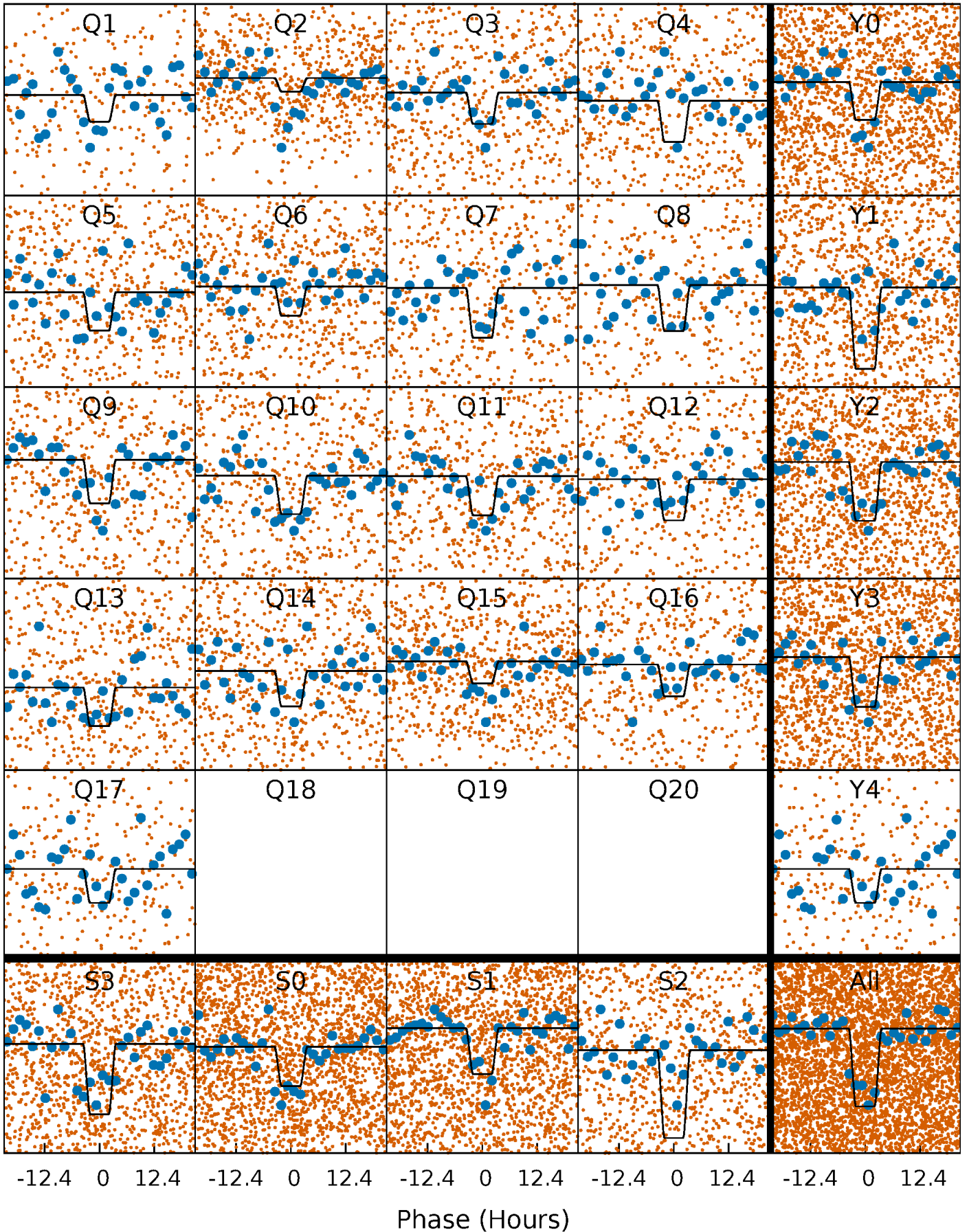
DV Quarter-Phased Transit Curves

TCE 003733638-01 P= 10.071125 Days $T_0=140.079840$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

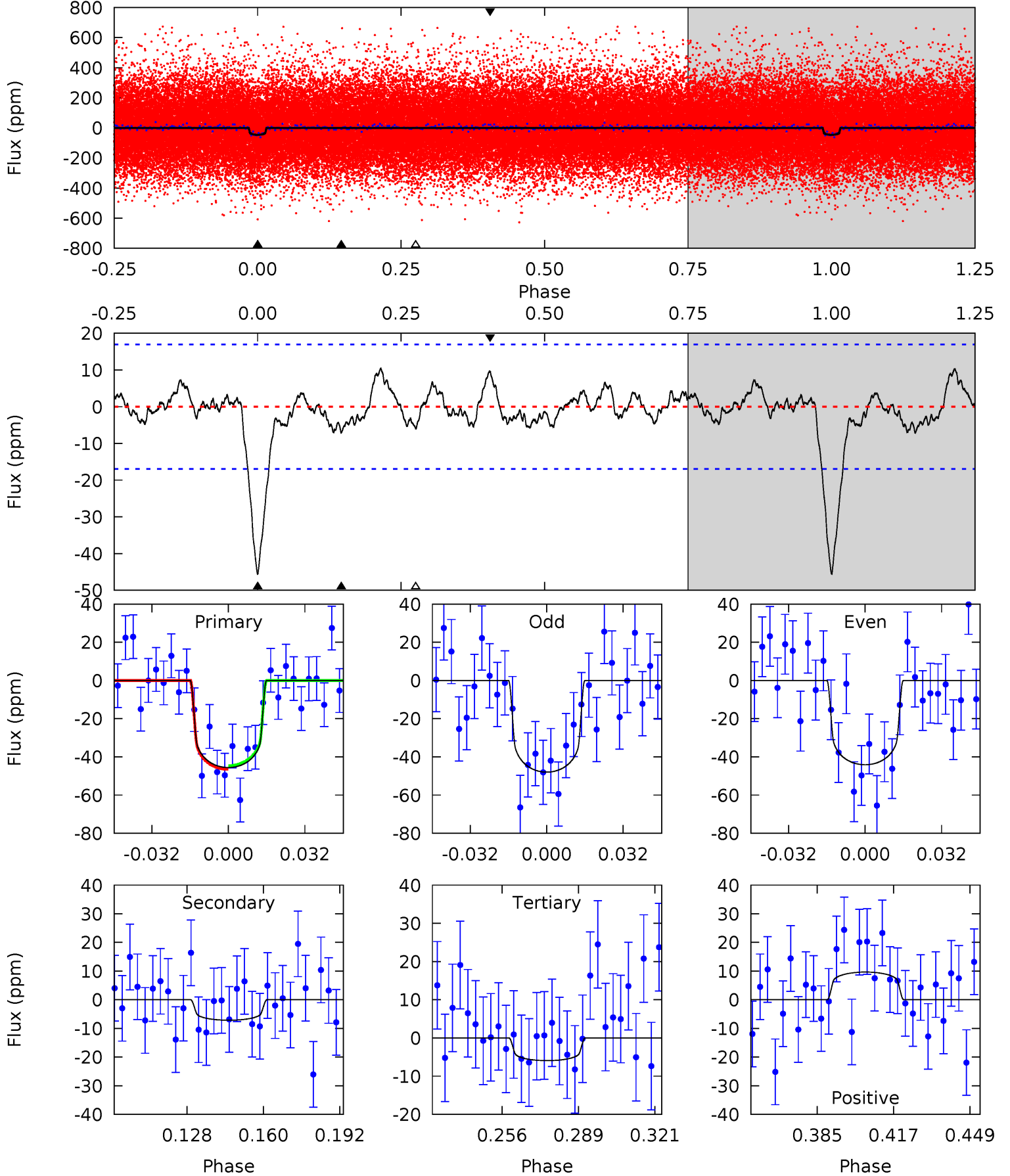
TCE 003733638-01 P= 10.071595 Days $T_0=140.055832$ (BKJD)



DV Model-Shift Uniqueness Test

003733638-01, P = 10.071125 Days, E = 130.008715 Days

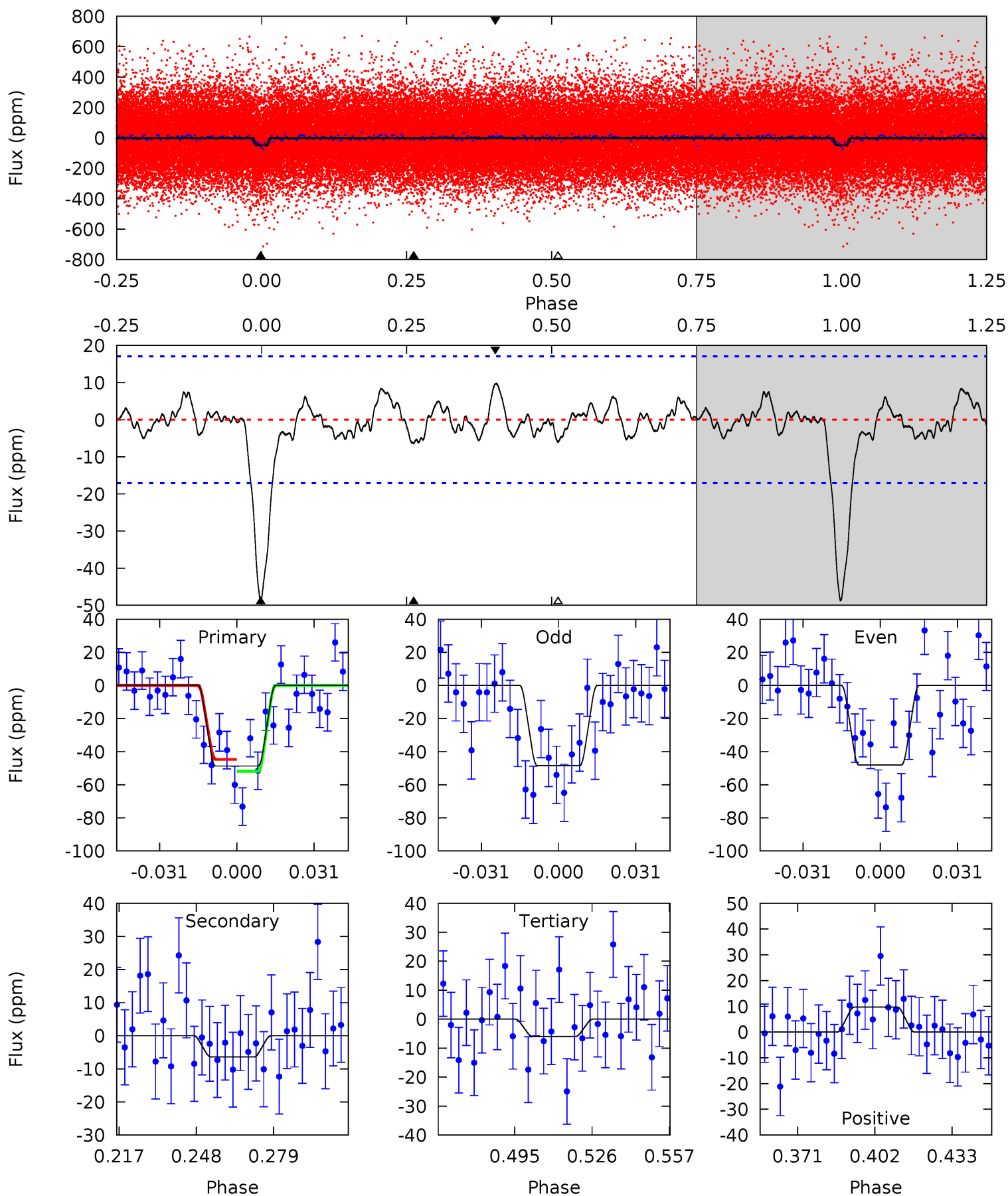
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.9	2.02	1.68	2.73	4.80	2.14	0.97	11.2	10.2	0.34	-0.71	0.55	1.11	0.19	0.26



Alt Model-Shift Uniqueness Test

003733638-01, $P = 10.071595$ Days, $E = 129.984237$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.7	1.81	1.69	2.73	4.80	2.16	0.94	12.0	11.0	0.12	-0.92	0.05	1.12	0.17	1.01



Stellar Parameters For KIC 003733638

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5768^{+192}_{-157}	$3.633^{+0.816}_{-0.192}$	$-0.540^{+0.350}_{-0.250}$	$2.810^{+0.797}_{-1.860}$	$1.236^{+0.181}_{-0.392}$	$0.078^{+1.389}_{-0.043}$
	+3%/-3%	+22%/-5%	+65%/-46%	+28%/-66%	+15%/-32%	+1770%/-55%
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 003733638-01 / KOI 6353.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-7 ± 4	$2.01^{+0.98}_{-0.88}$	1873^{+180}_{-323}	3818^{+647}_{-596}	$8.623^{+18.286}_{-5.681}$
Alt.	-6 ± 4	$2.07^{+1.09}_{-0.86}$	1860^{+194}_{-356}	3652^{+627}_{-544}	$7.044^{+14.956}_{-4.644}$

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 $A_{obs} \gg 1.0$

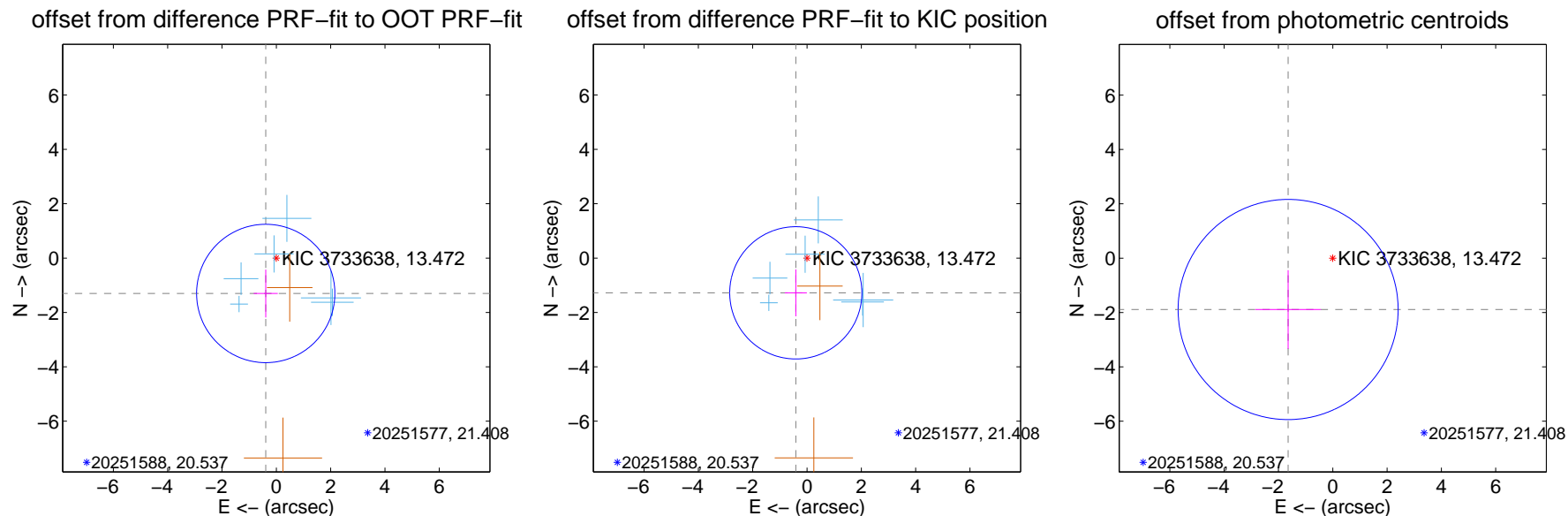
DV Centroid Data

Supplemental centroid analysis for 003733638-01. Kepler magnitude: 13.47. Transit SNR 8.97

There are 6 quarters with good PRF difference image offsets

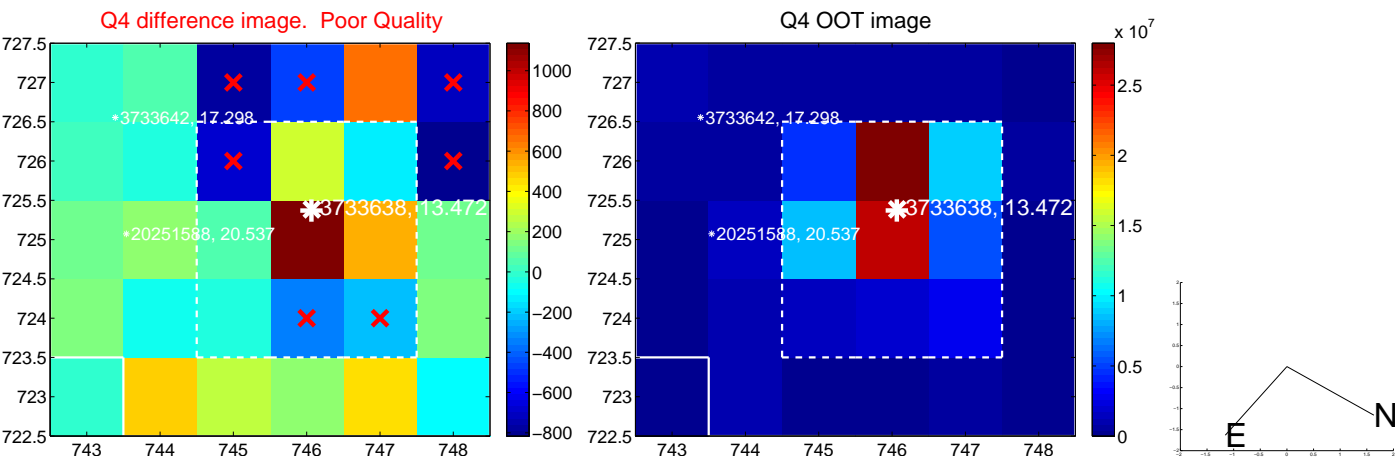
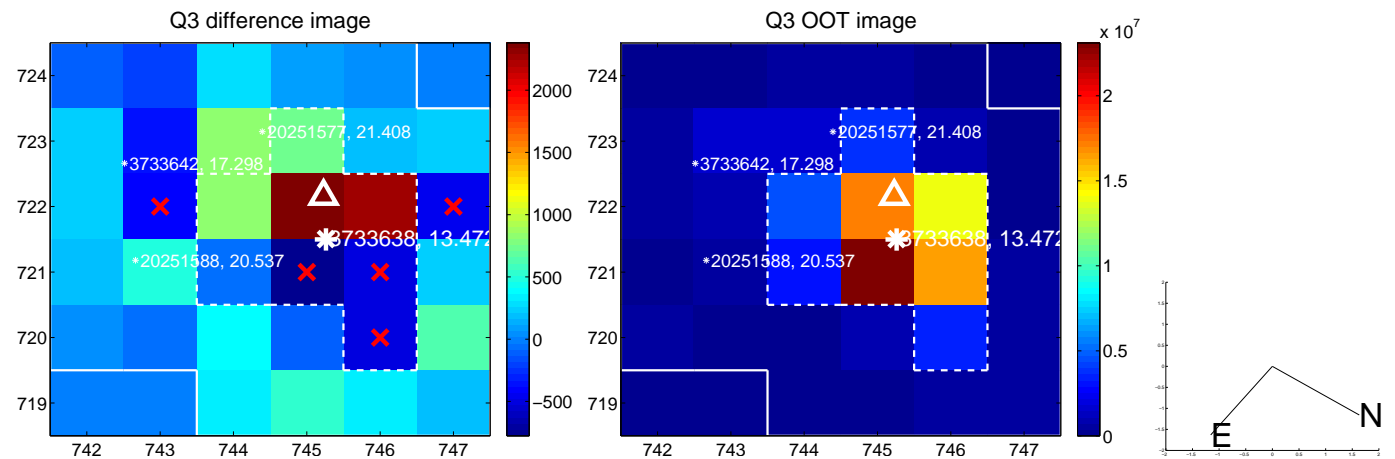
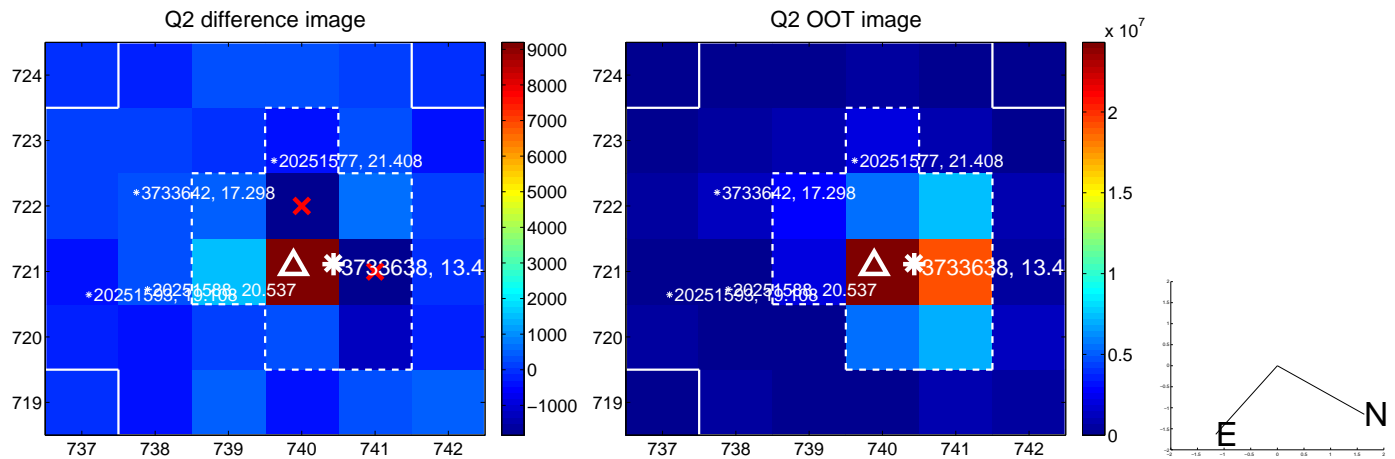
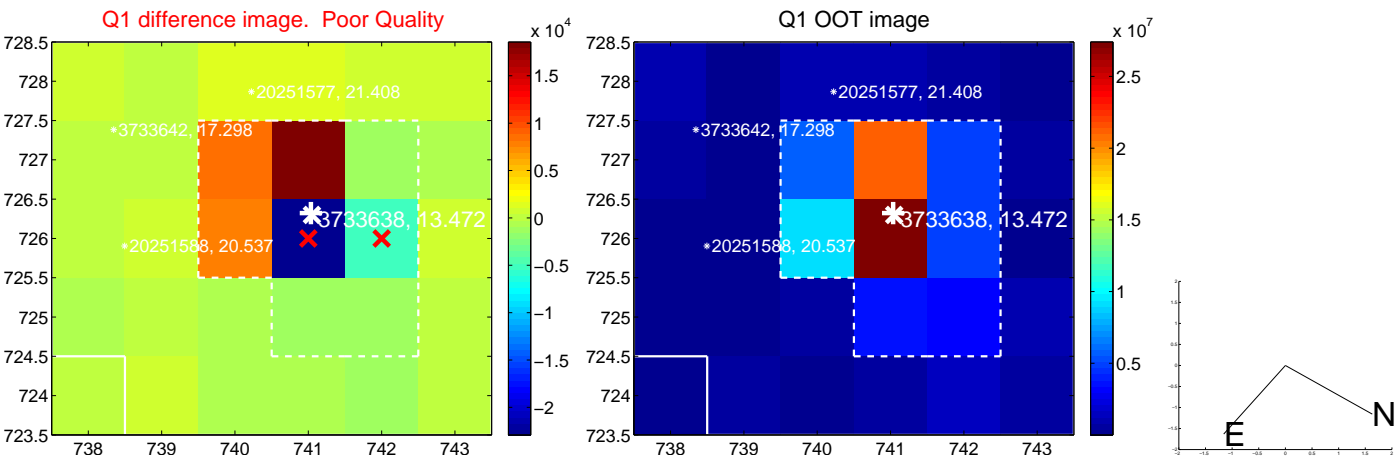
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.359 ± 0.849	1.60	0.390 ± 0.444	-1.302 ± 0.881
PRF-fit source offset from KIC position	1.344 ± 0.811	1.66	0.413 ± 0.406	-1.279 ± 0.864
photometric centroid source offset	2.51 ± 1.35	1.85	1.64 ± 1.21	-1.89 ± 1.45

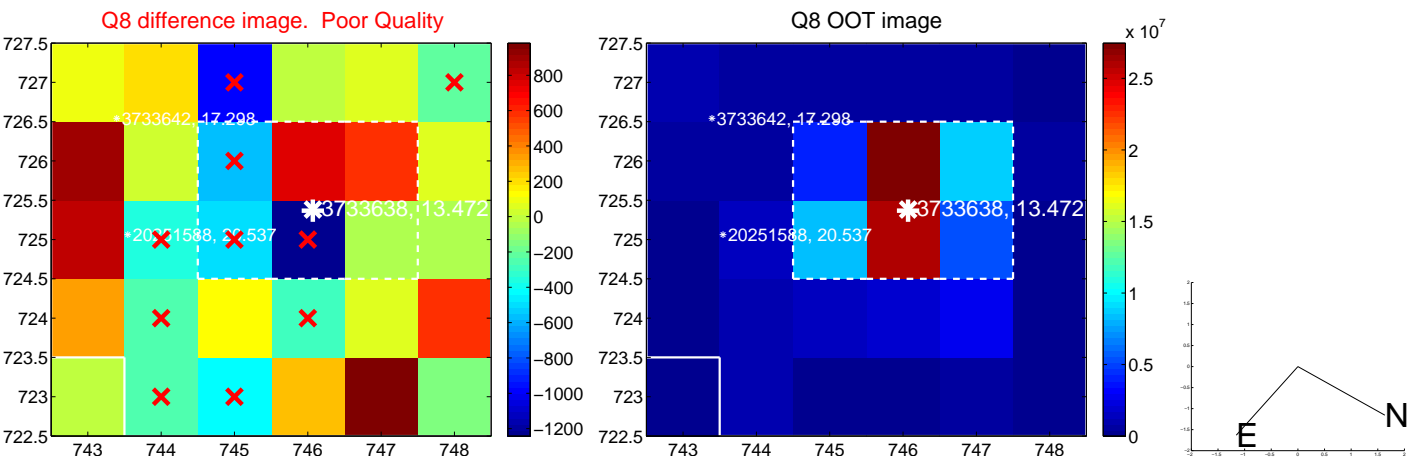
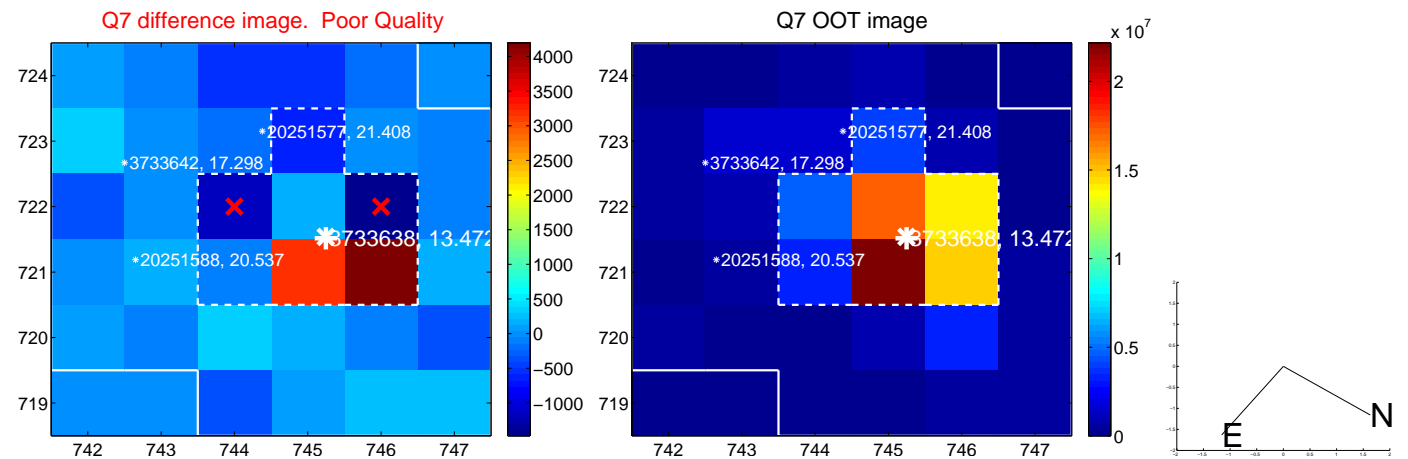
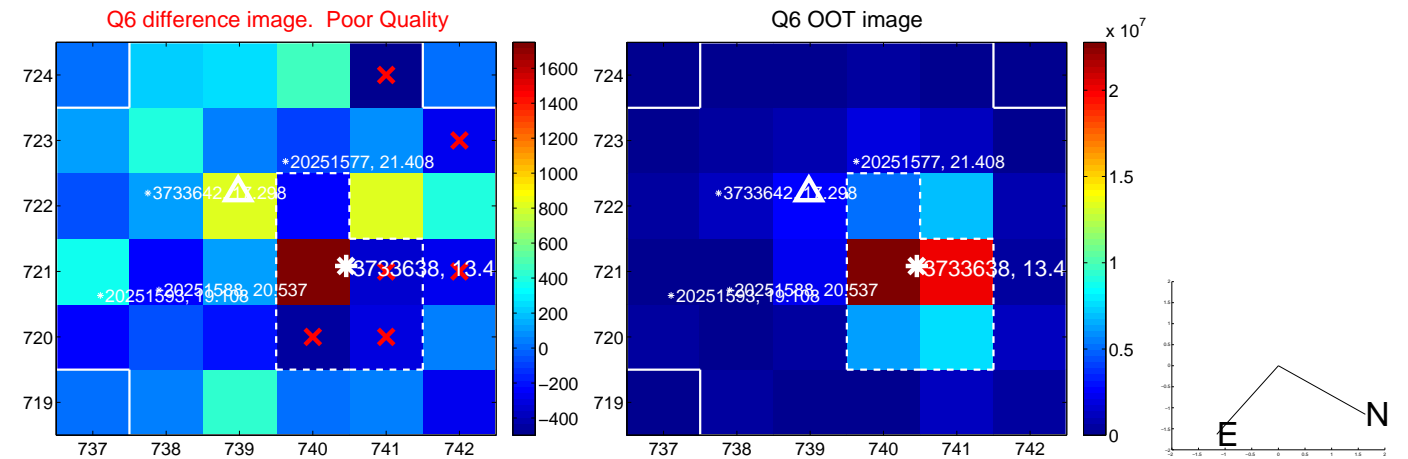
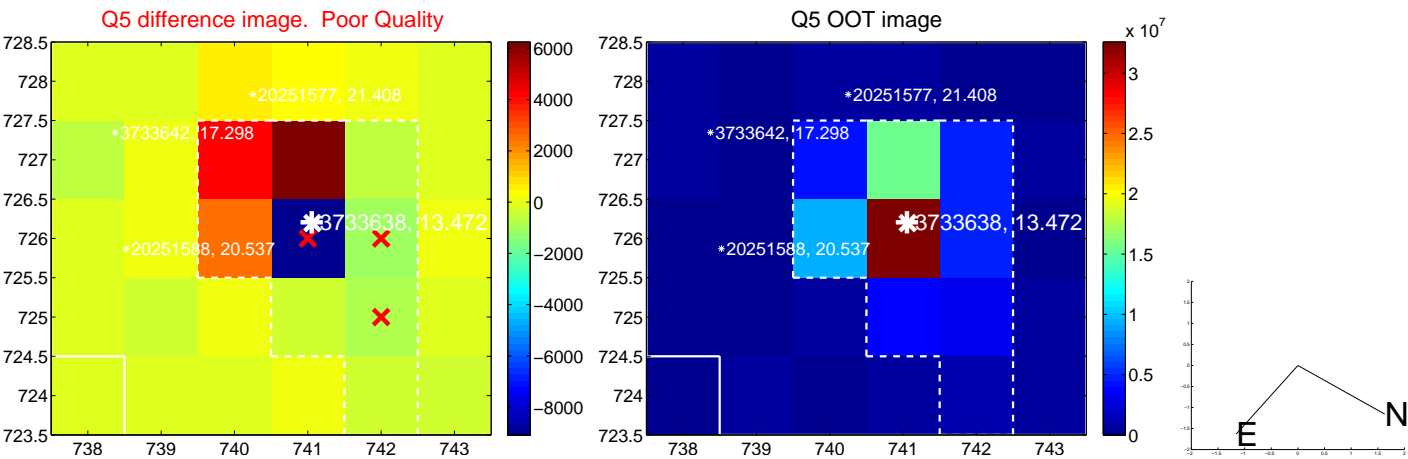


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

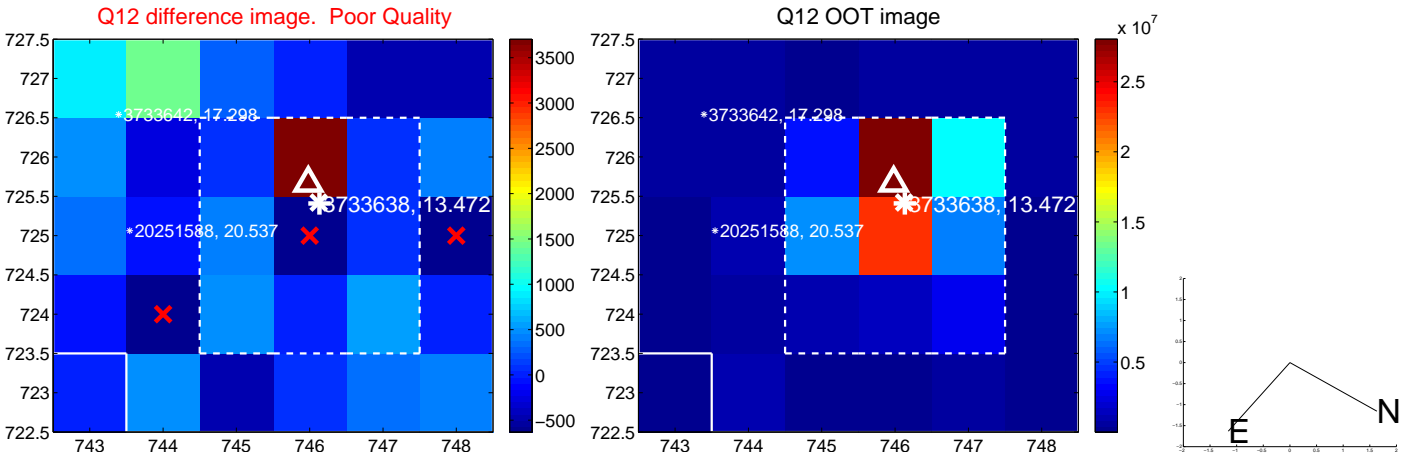
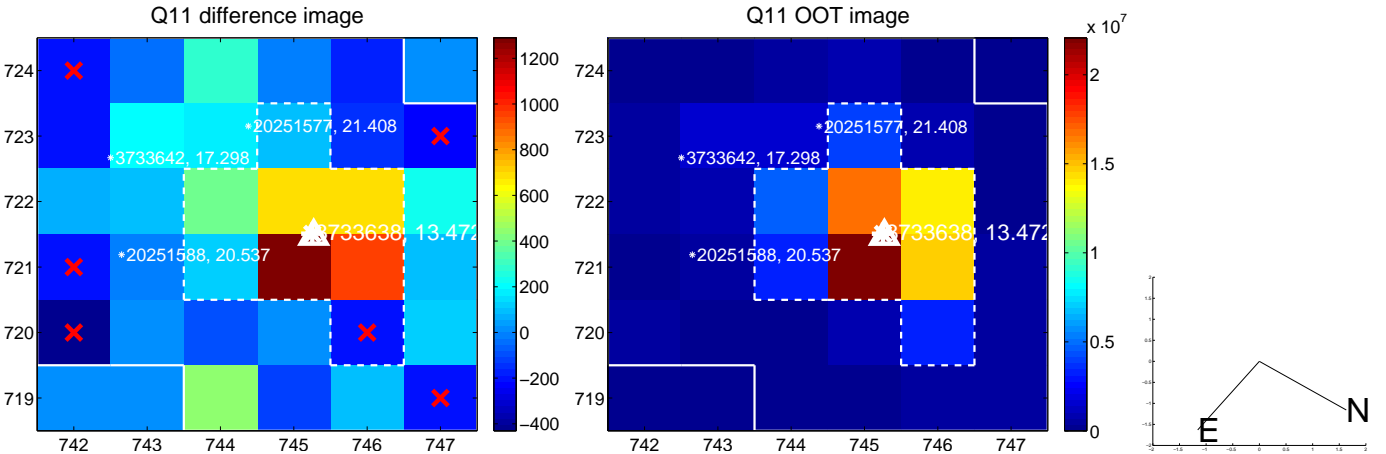
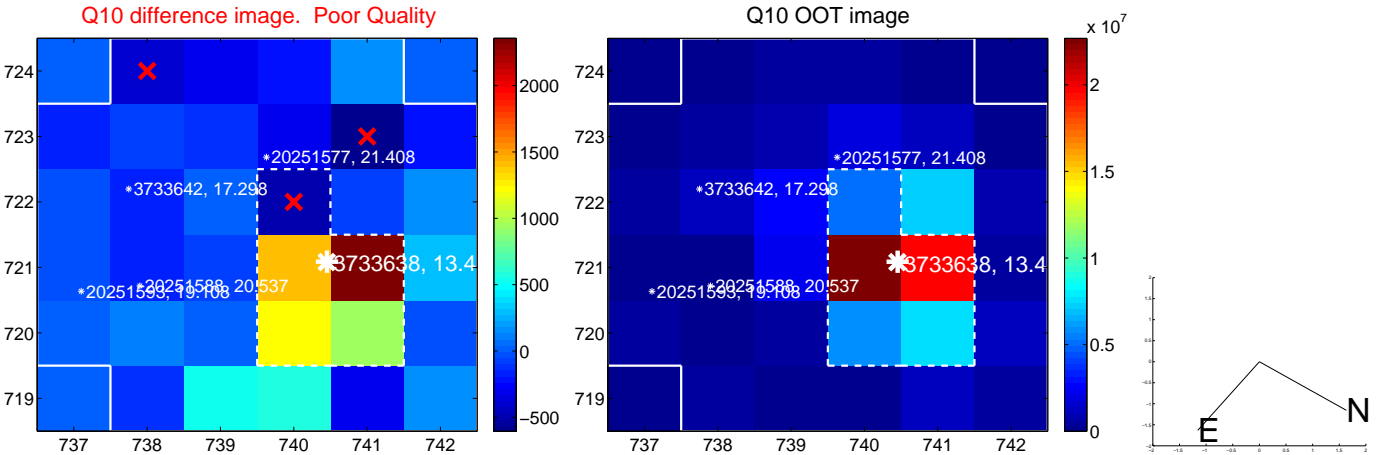
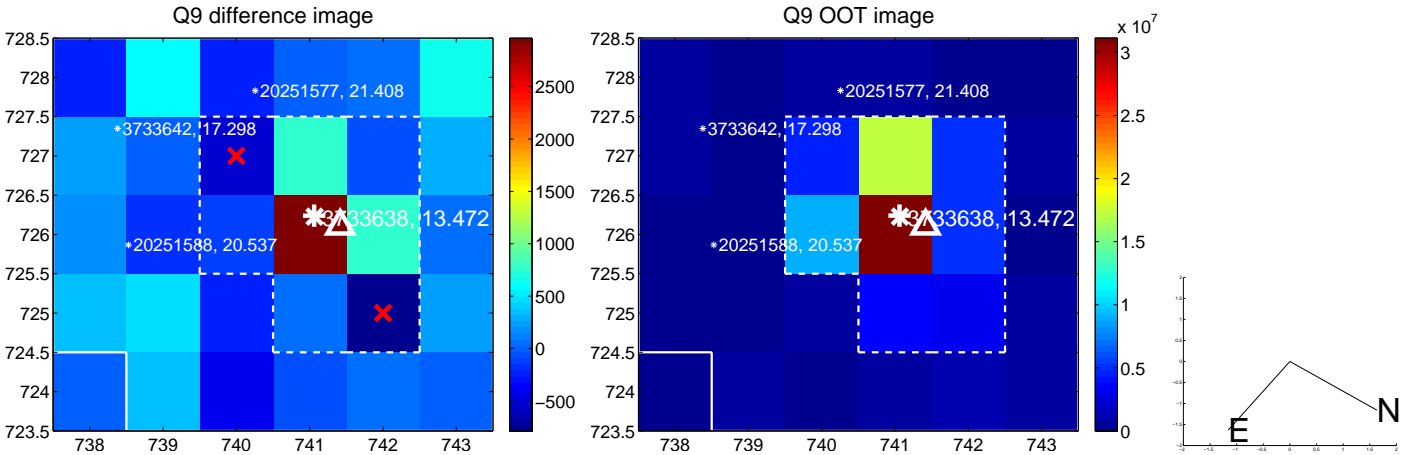
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



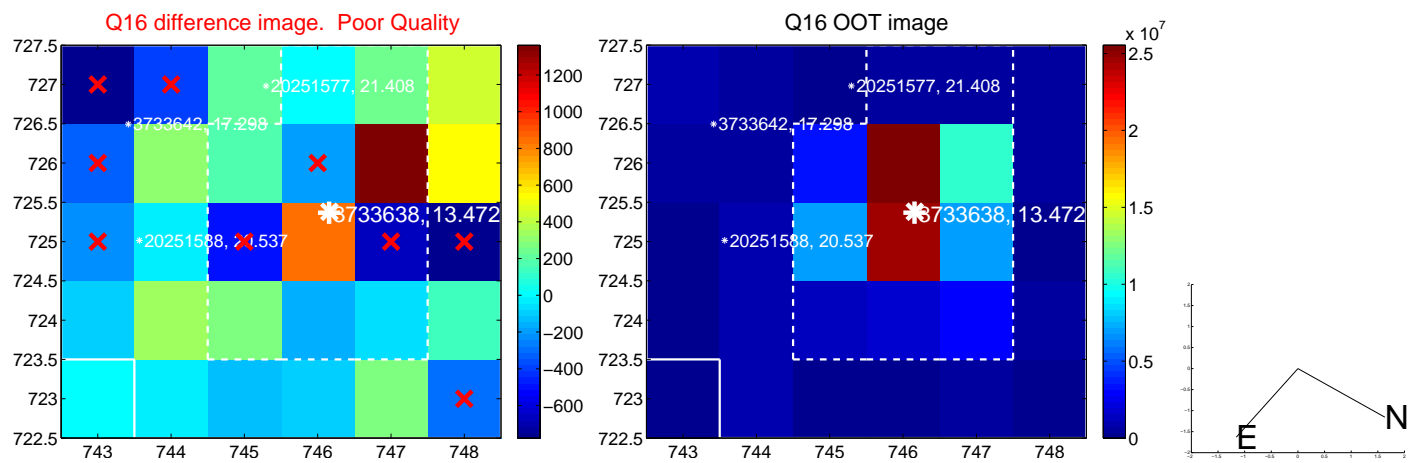
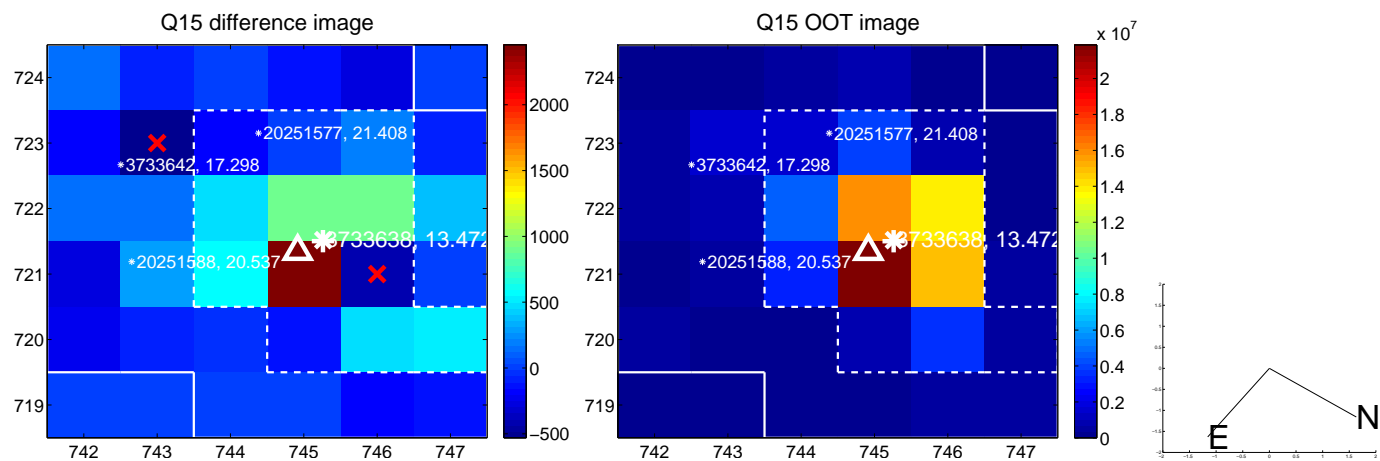
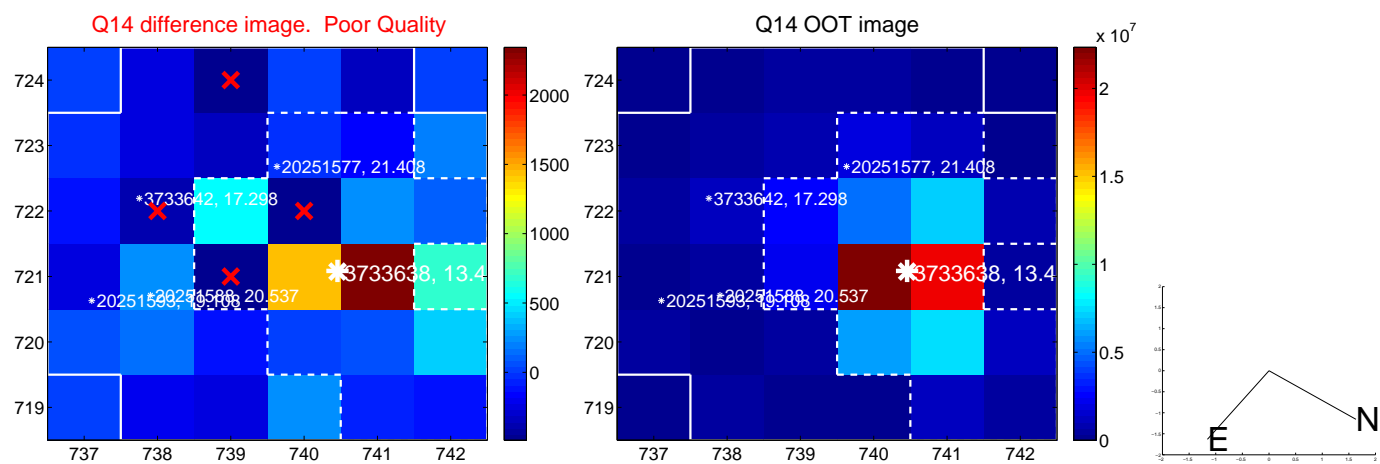
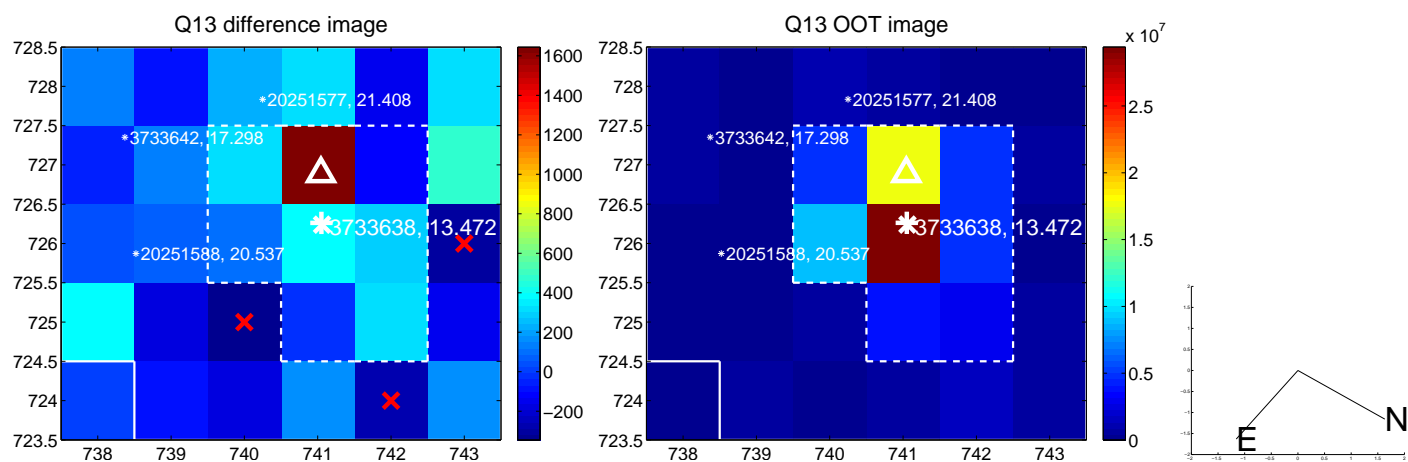
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



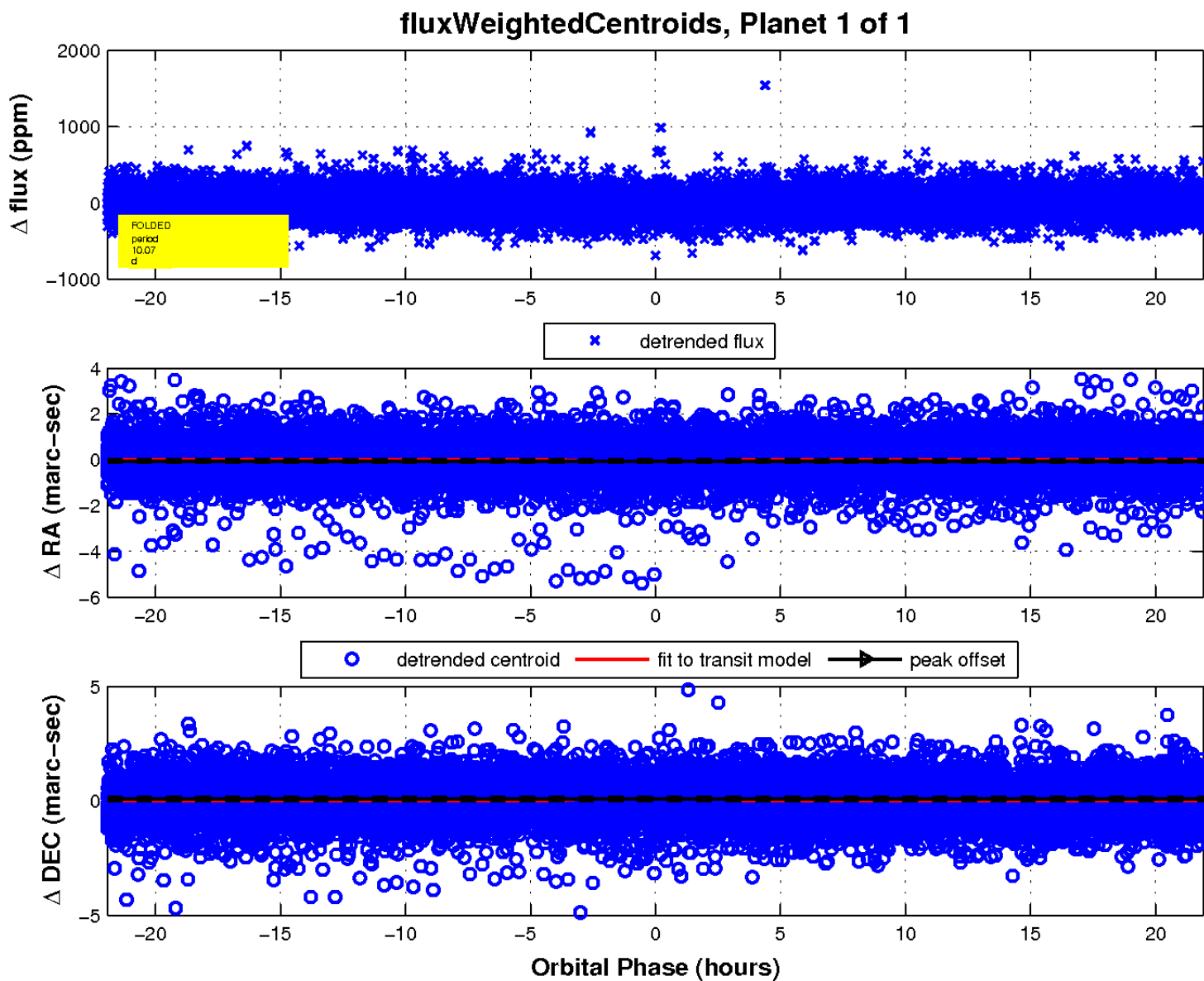
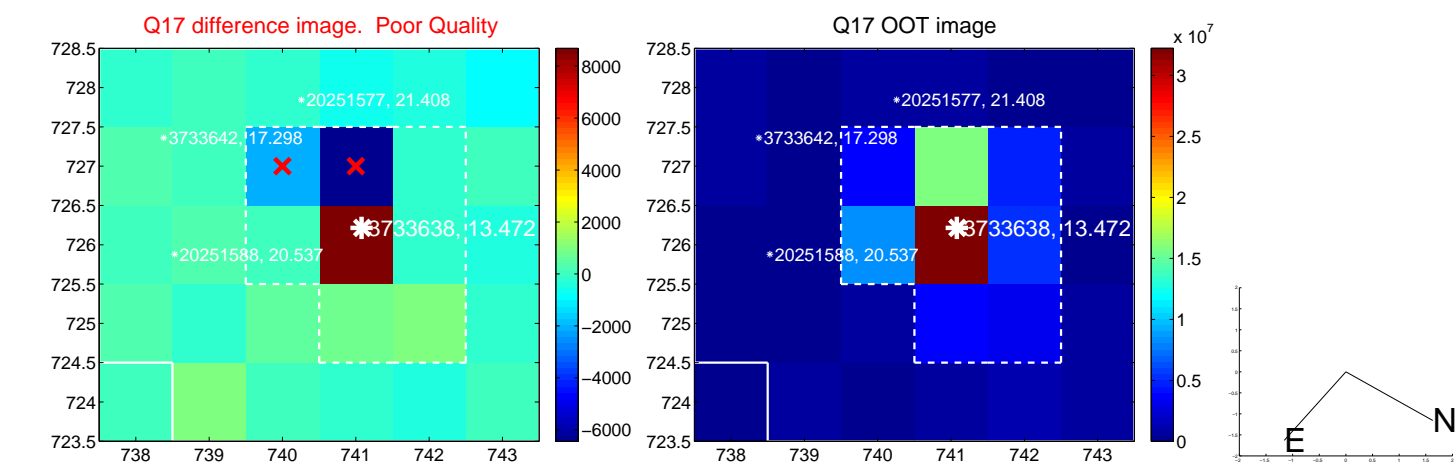
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

