

KIC 010053138

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})
010053138-01	OBS	7279.01	11.772819	138.780933	70.1	4.099	7.9	8.6	1.06	5410	1.08	91.12

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010053138-01	OBS	PC	0.77	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.

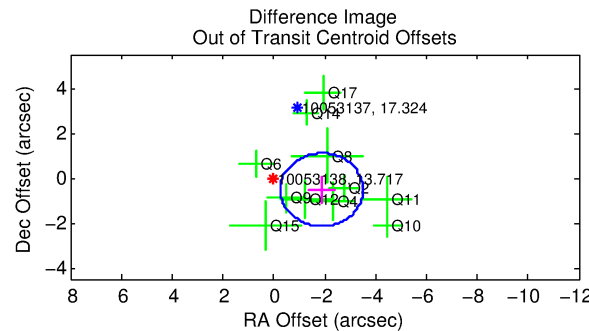
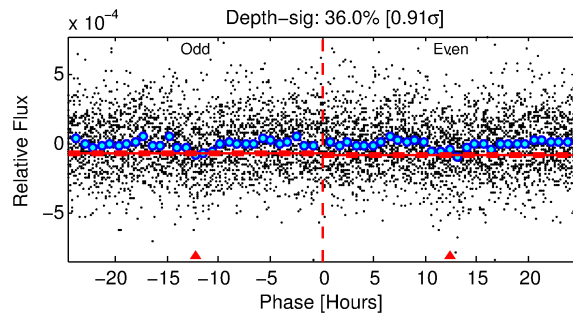
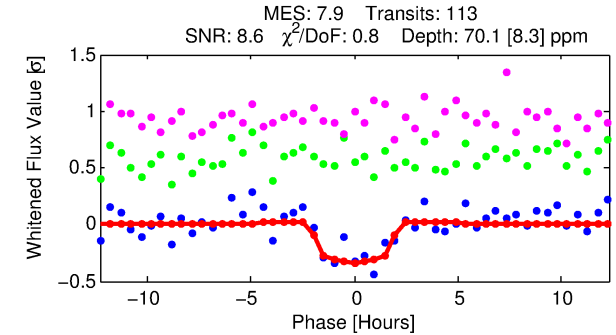
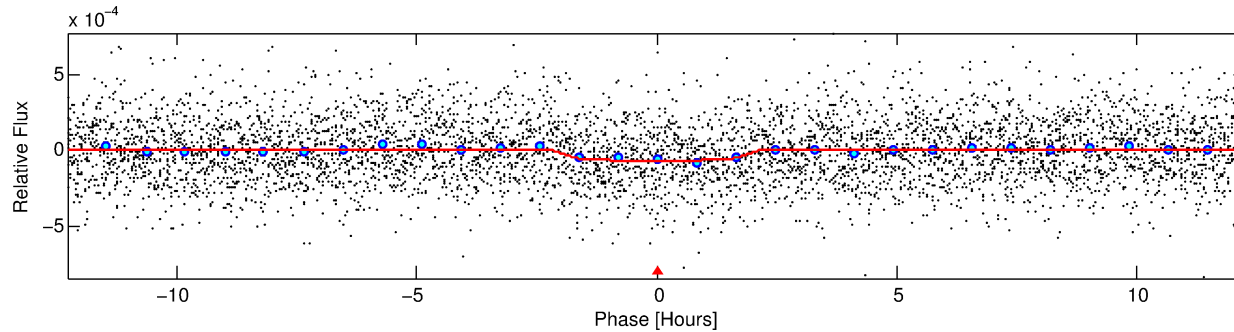
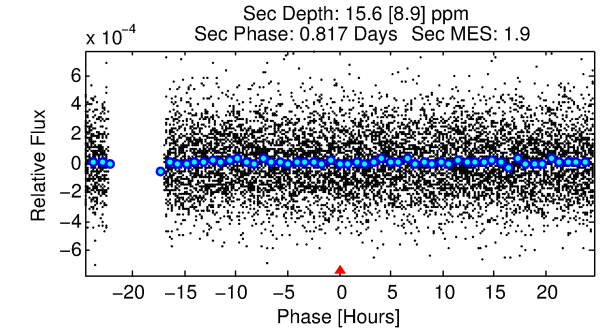
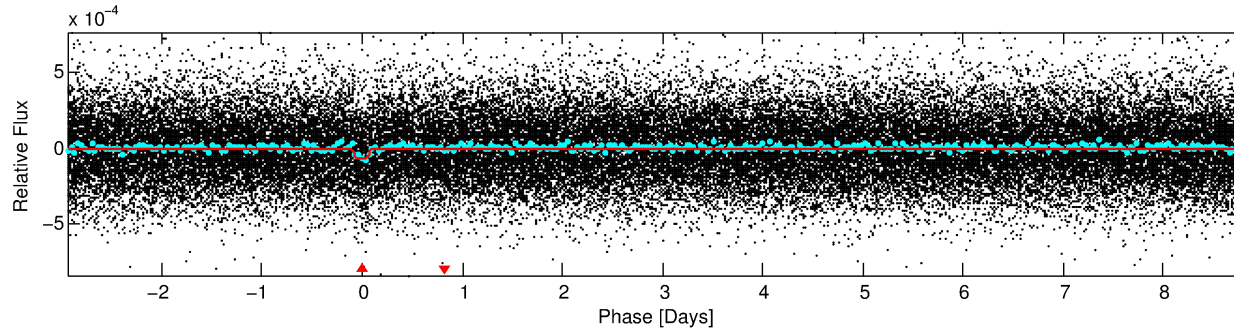
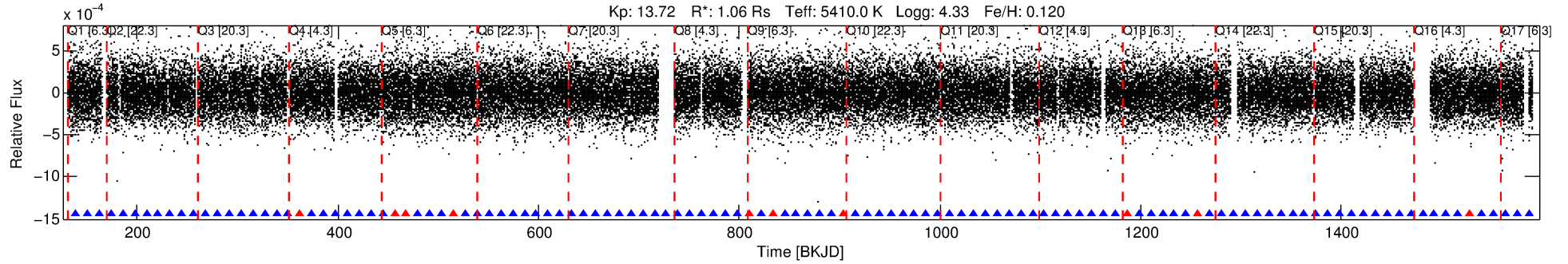
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010053138-01

No Significant Match Found

DV One-Page Summary

KIC: 10053138 Candidate: 1 of 1 Period: 11.773 d
KOI: K07279.01 Corr: 0.946



DV Fit Results:

Period = 11.77282 [0.00014] d
Epoch = 138.7809 [0.0098] BKJD
Rp/R* = 0.0094 [0.0059]
a/R* = 9.31 [25.93]
b = 0.92 [0.50]
Seff = 91.12 [24.79]
Teff = 788 [54] K
Rp = 1.09 [0.71] Re
a = 0.0969 [0.0164] AU
Ag = 68.48 [95.68] [0.71σ]
Teffp = 3504 [1203] K [2.26σ]

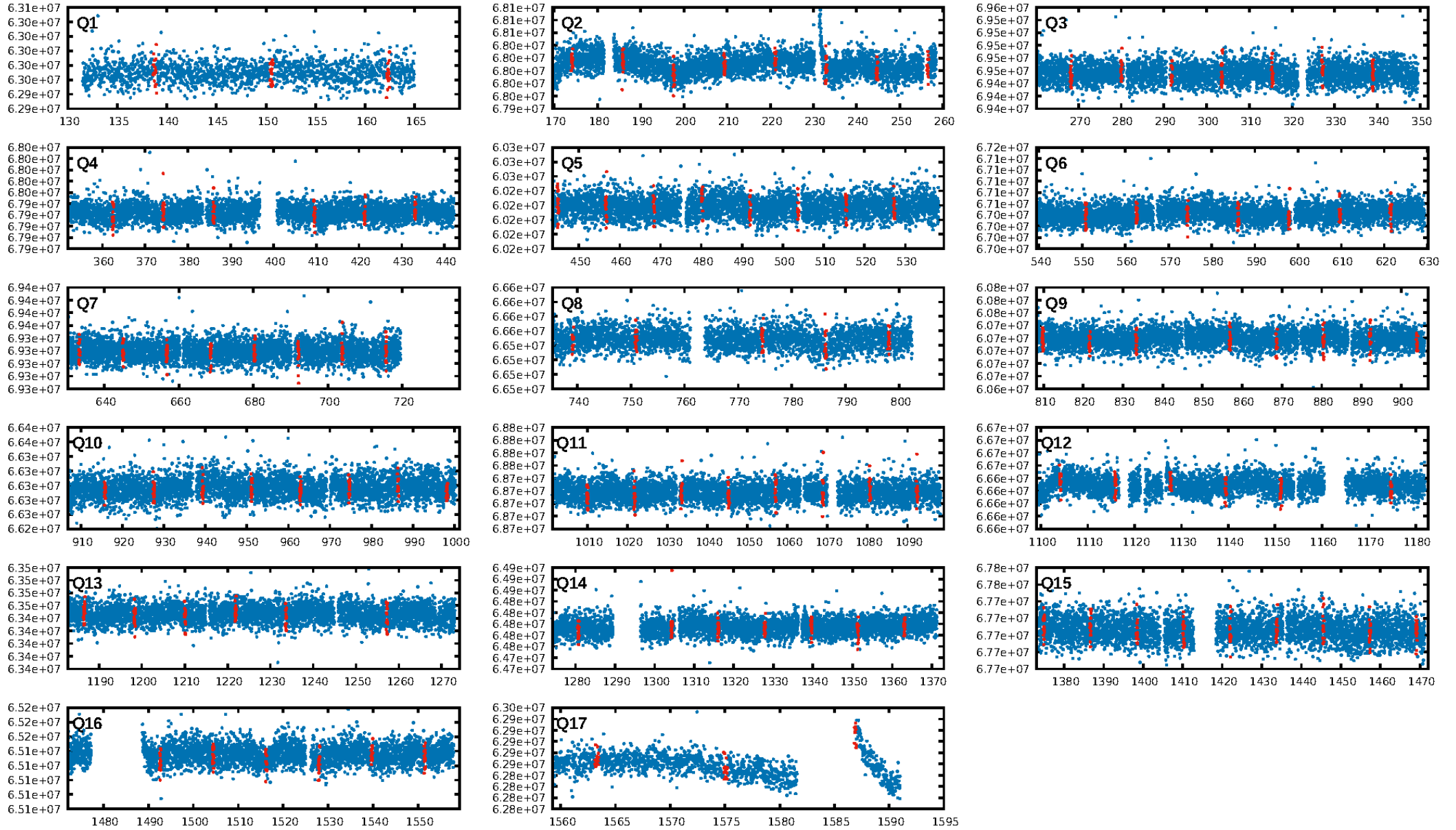
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.66e-15
RollingBand-fgt: 0.91 [97/107]
GhostDiagnostic-chr: 8.878
Centroid-sig: 0.5%
Centroid-so: 4.410 arcsec [2.78σ]
OotOffset-rm: 1.949 arcsec [3.60σ]
KicOffset-rm: 1.816 arcsec [3.45σ]
OotOffset-st: 4/2/3/2 [11]
KicOffset-st: 4/2/3/2 [11]
DiffImageQuality-fgm: 0.45 [5/11]
DiffImageOverlap-fno: 1.00 [17/17]

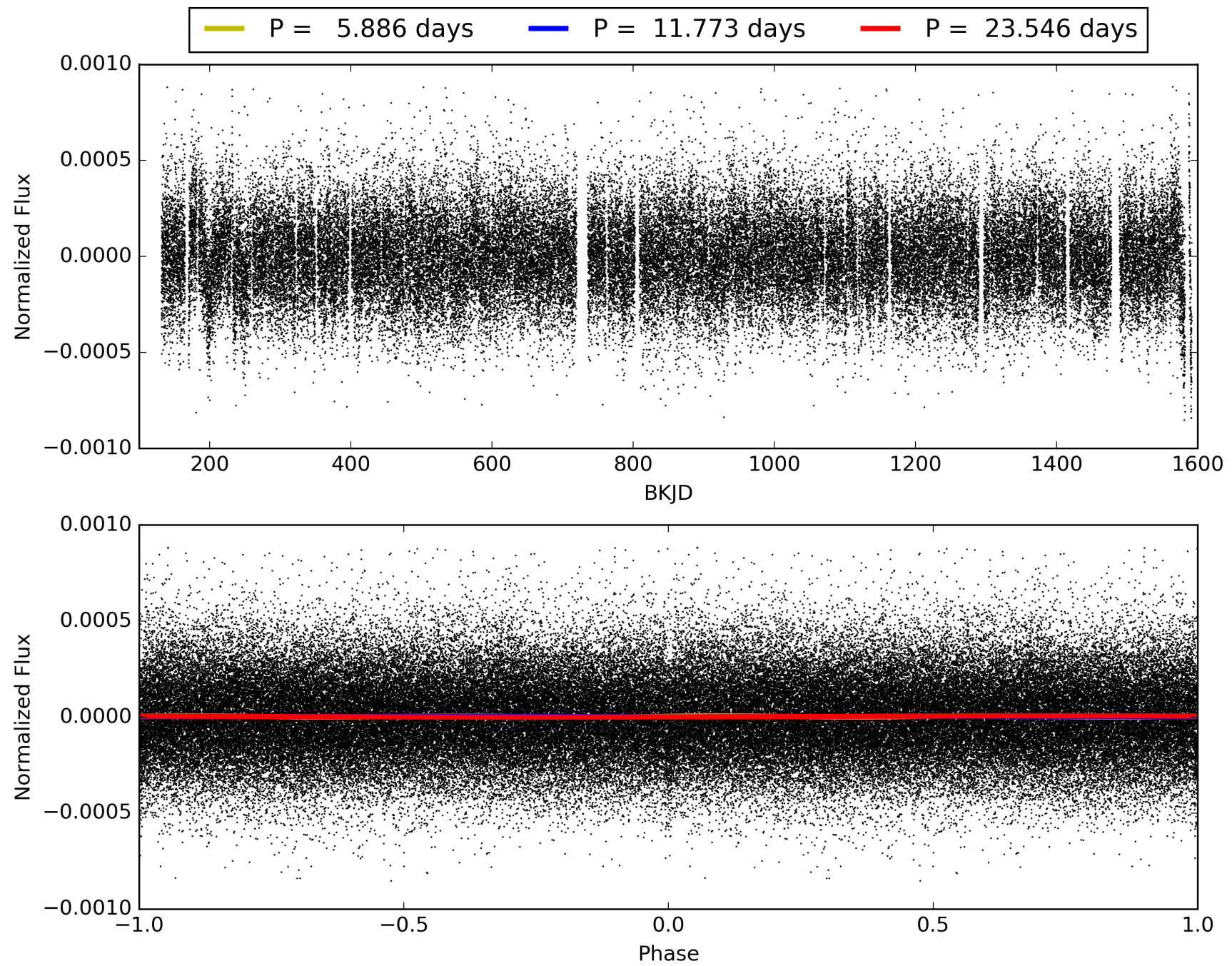
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:28:21 Z

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

TCE 010053138-01, PDC Light Curves

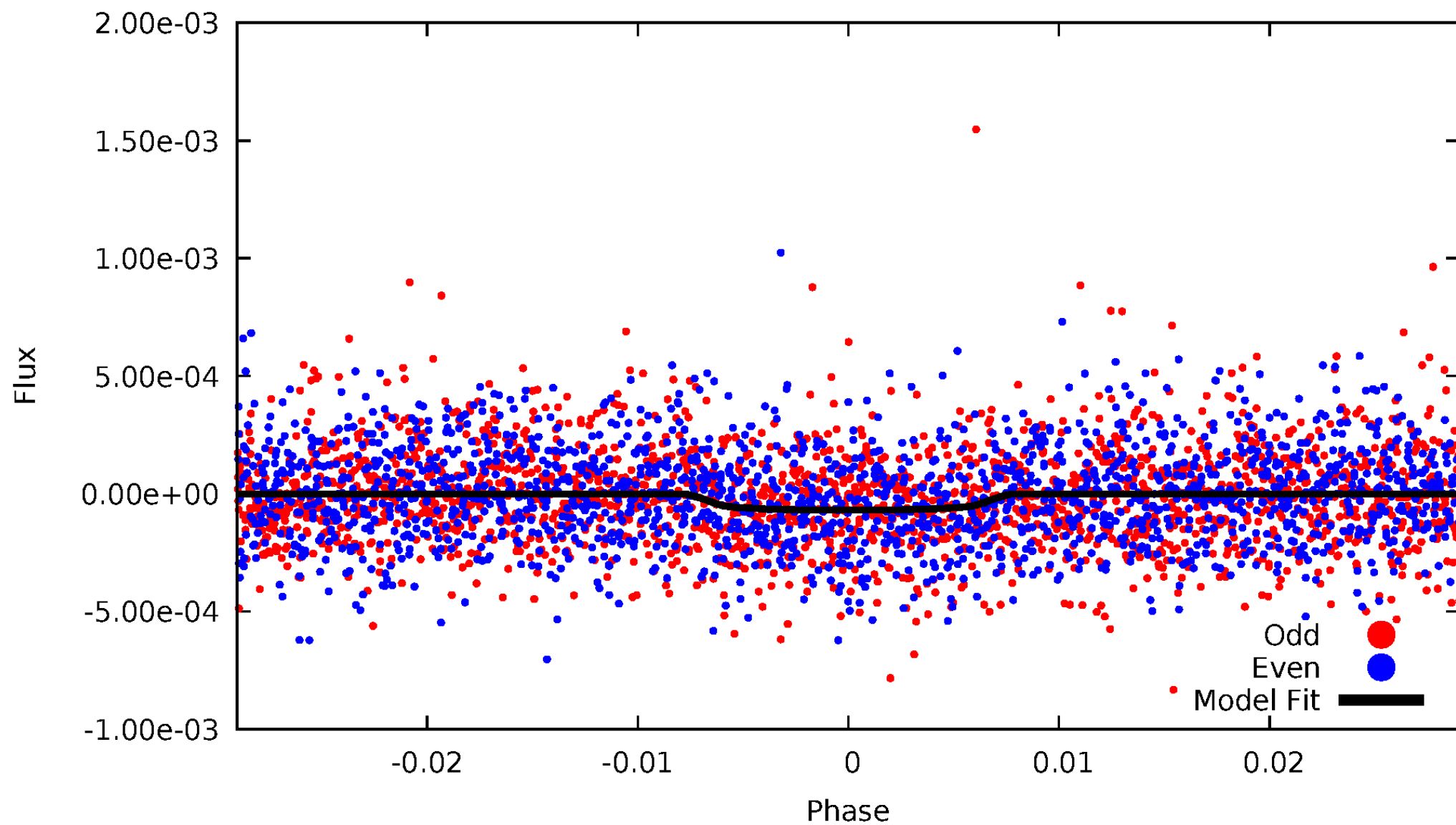


TCE 010053138-01



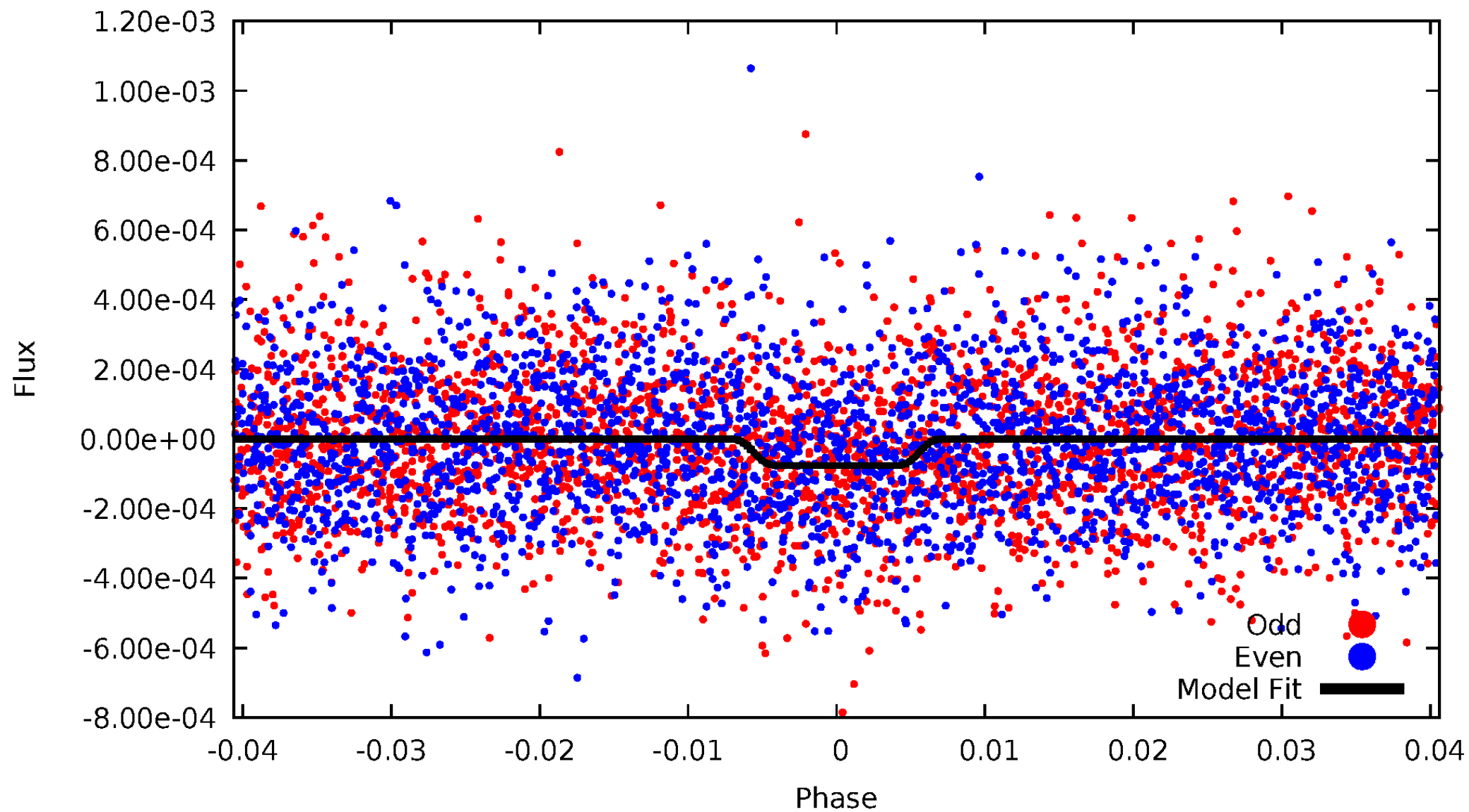
DV Odd/Even

TCE 010053138-01

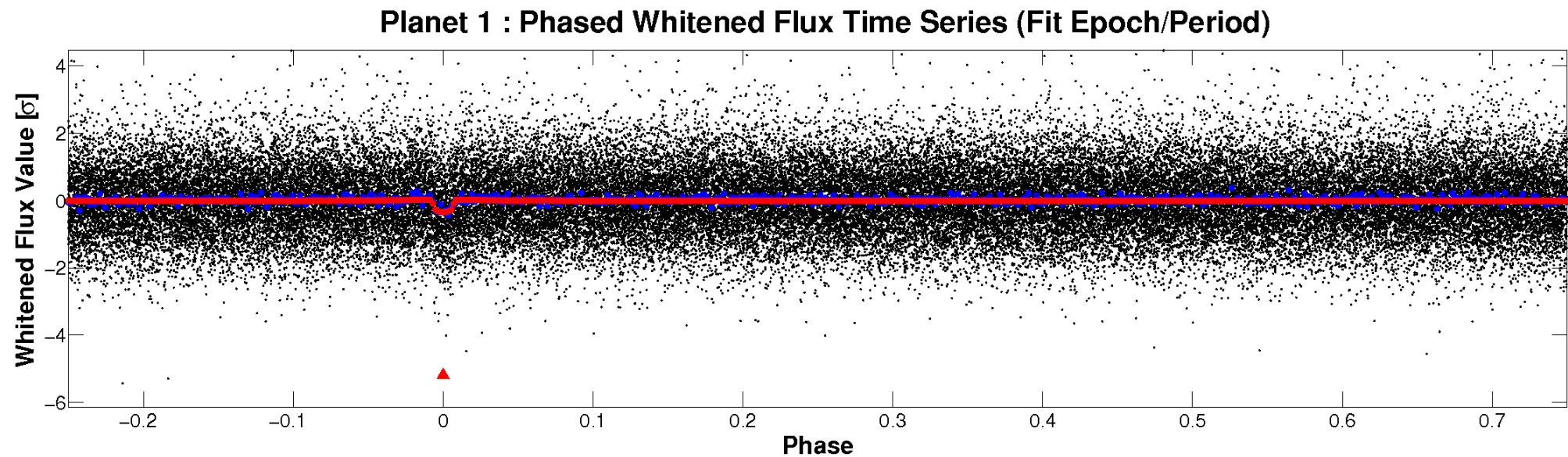
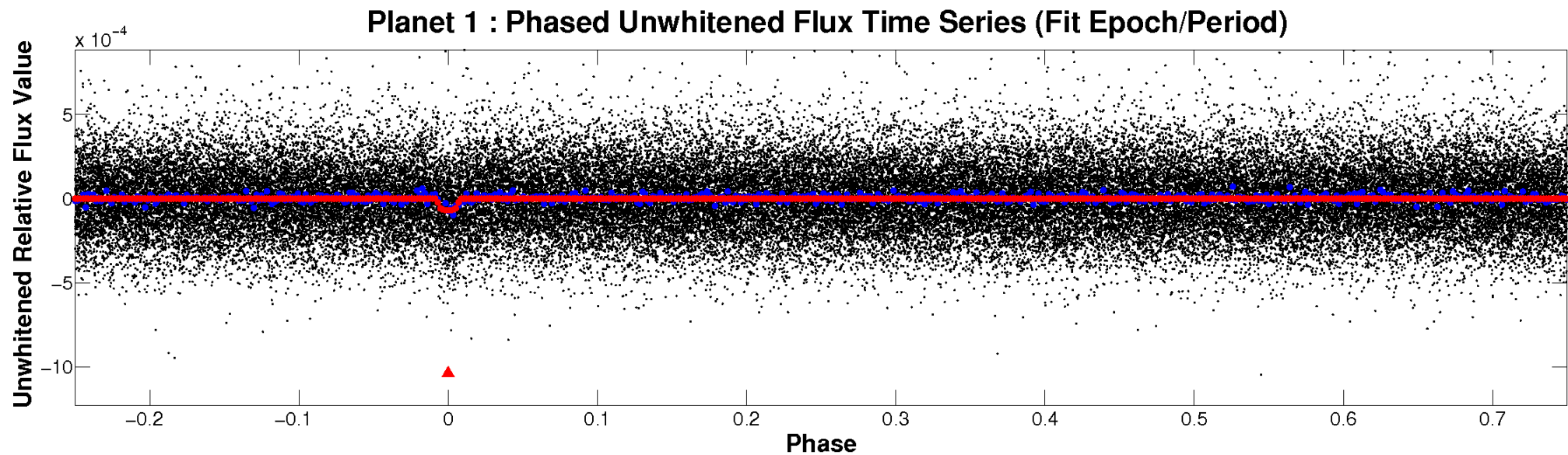


ALT Odd/Even

TCE 010053138-01

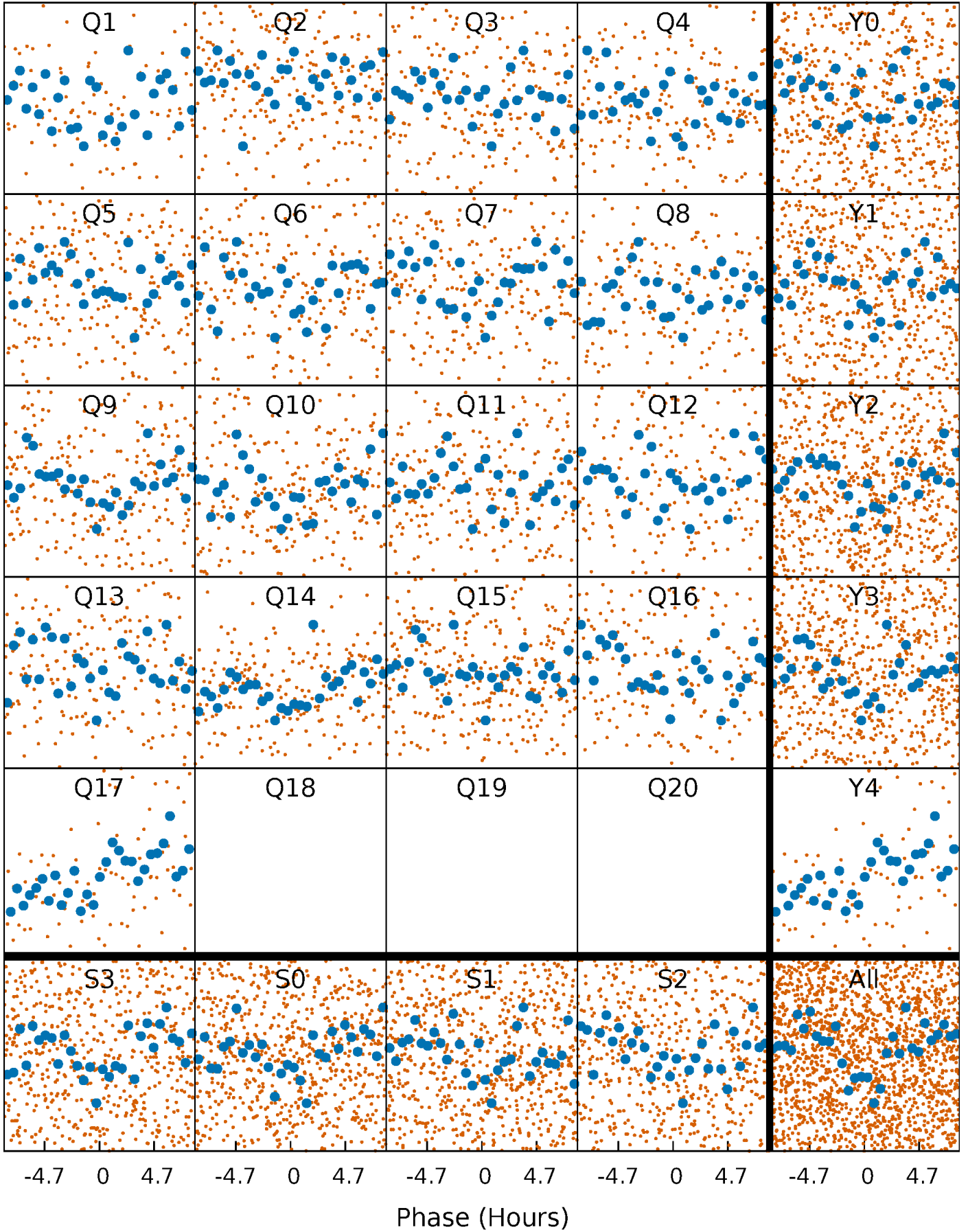


Non-Whitened Vs. Whitened Light Curve



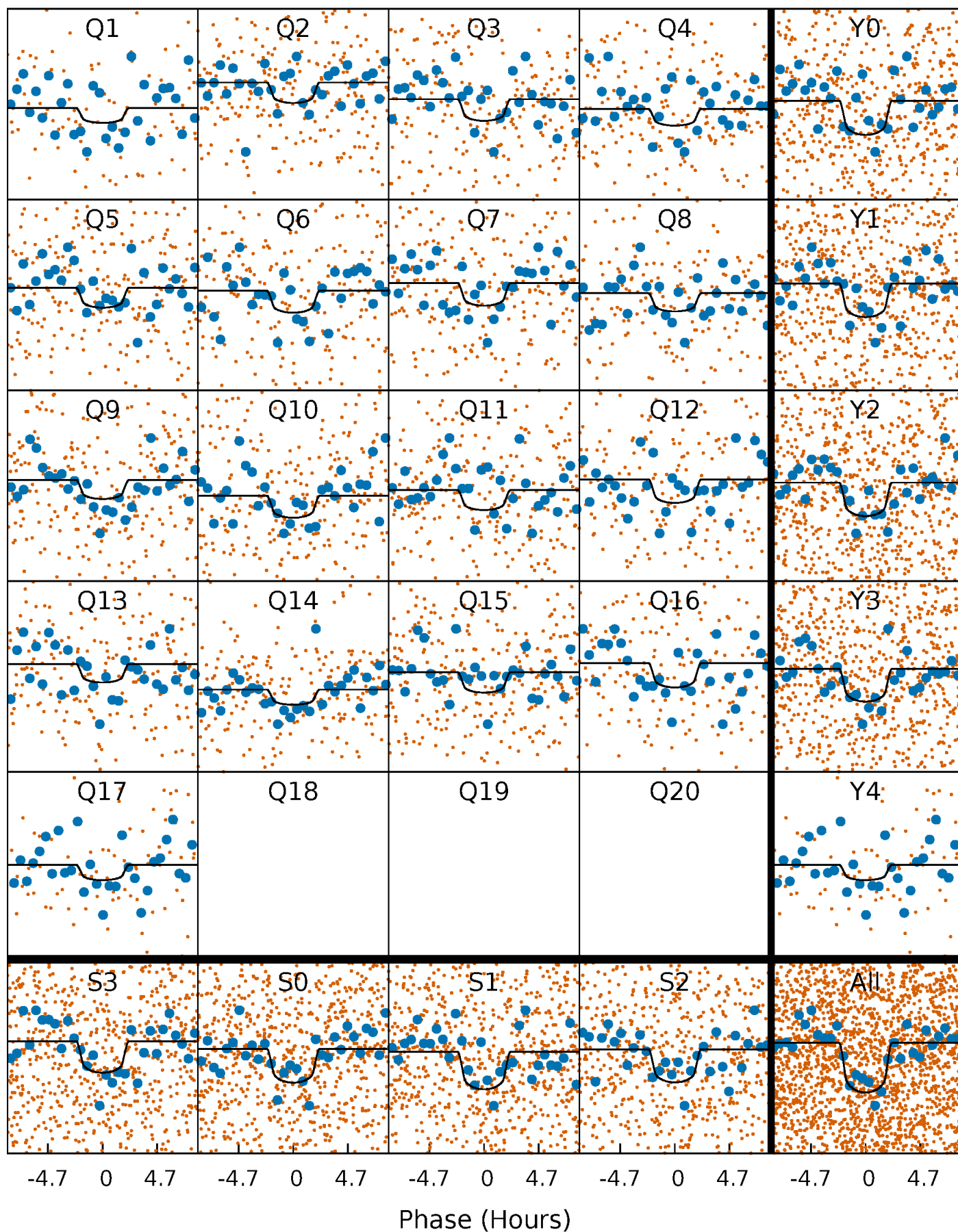
PDC Quarter-Phased Transit Curves

TCE 010053138-01 P= 11.772819 Days $T_0=138.780933$ (BKJD)



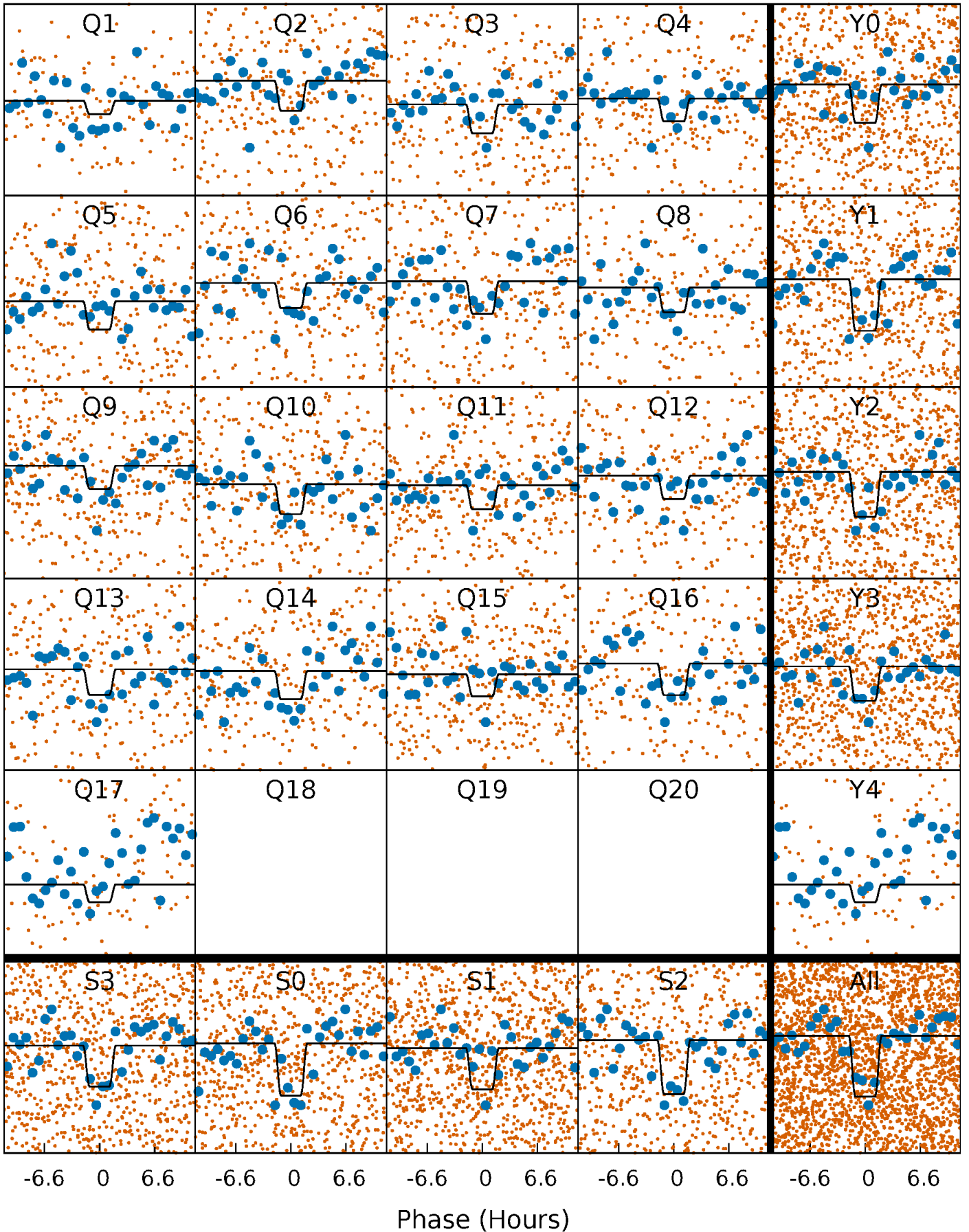
DV Quarter-Phased Transit Curves

TCE 010053138-01 P= 11.772819 Days $T_0=138.780933$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

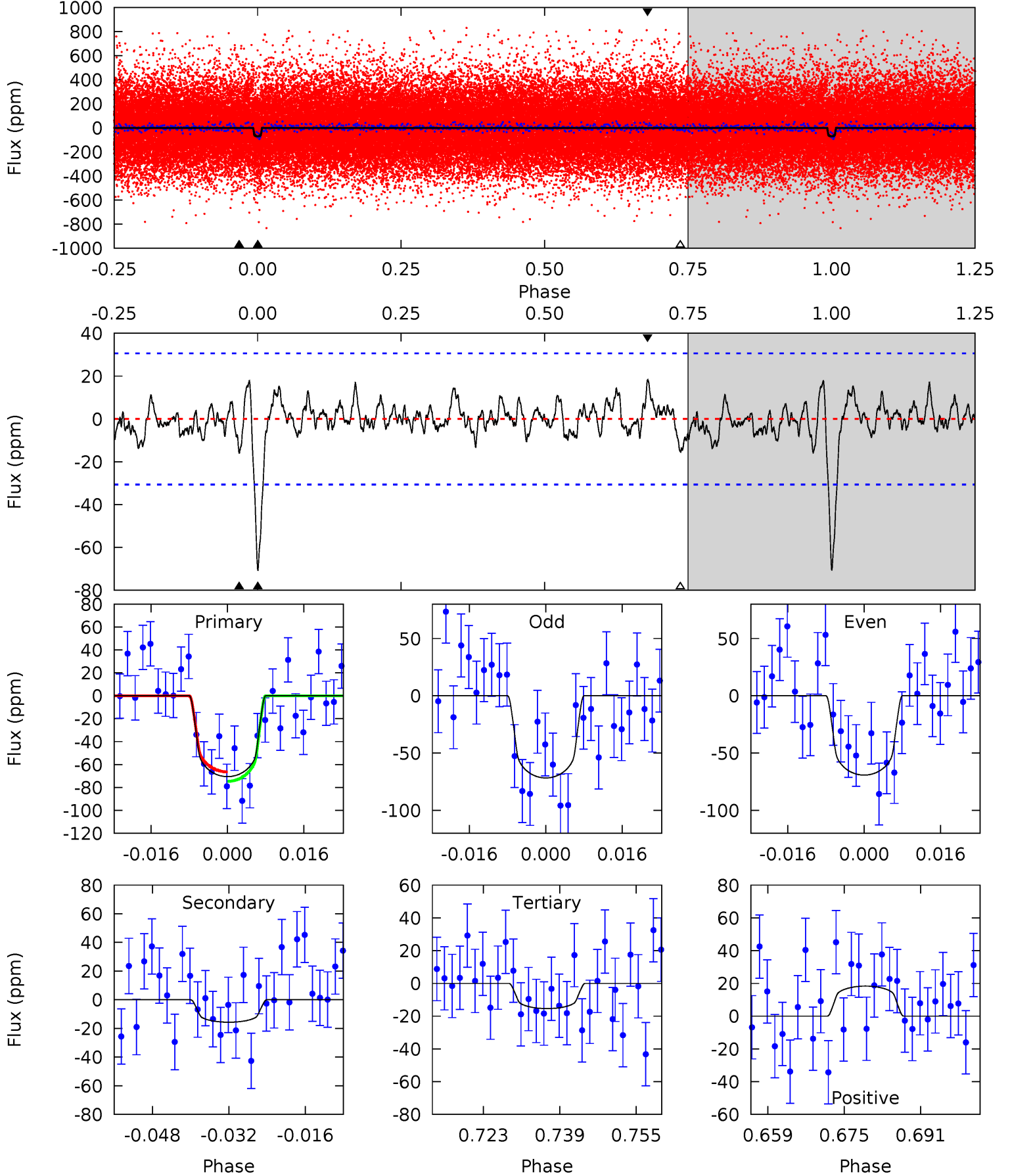
TCE 010053138-01 P= 11.772395 Days $T_0=138.819640$ (BKJD)



DV Model-Shift Uniqueness Test

010053138-01, P = 11.772819 Days, E = 127.008114 Days

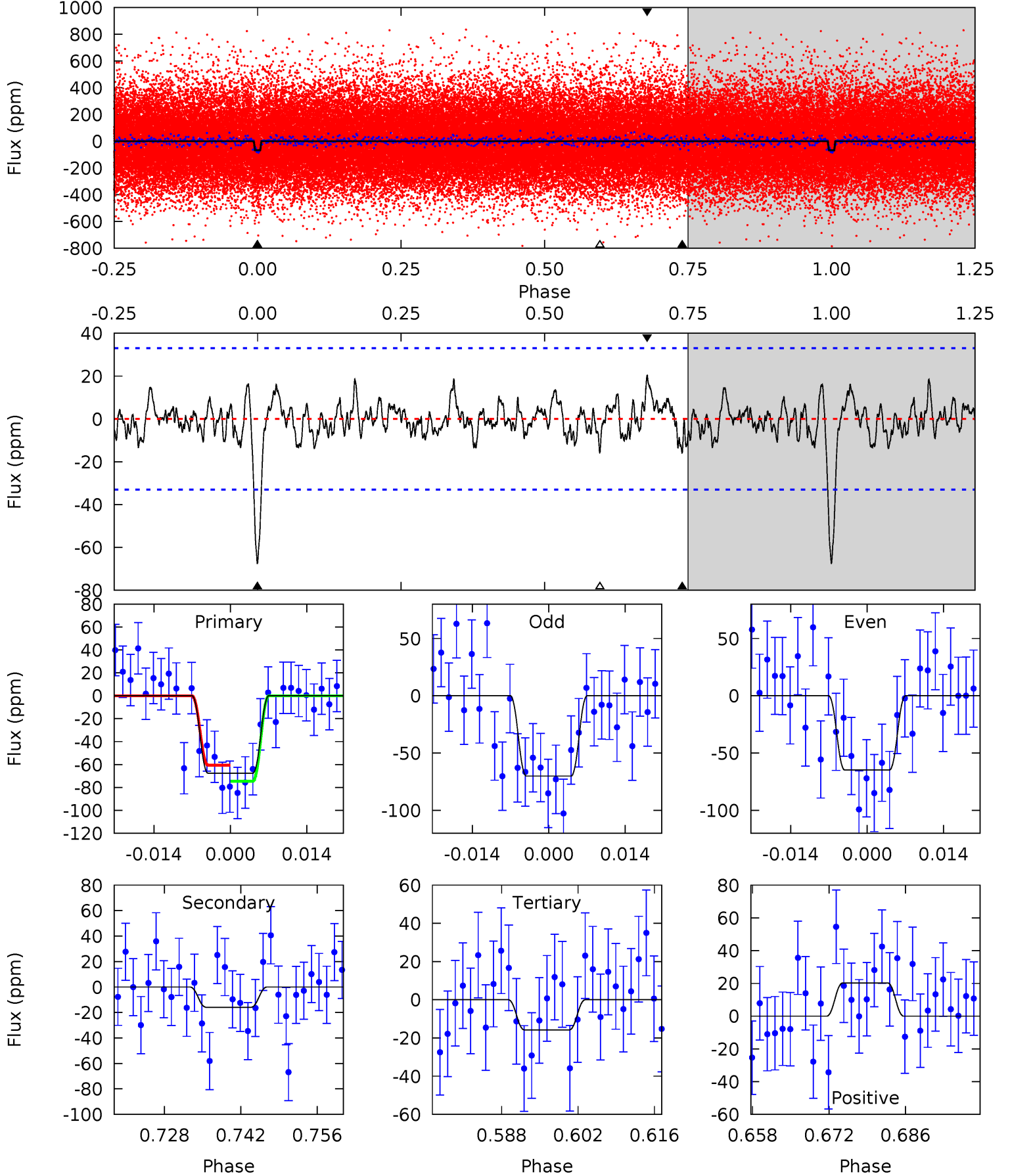
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.4	2.52	2.48	2.95	4.93	2.41	0.93	8.88	8.41	0.04	-0.43	0.20	0.89	0.21	0.67



Alt Model-Shift Uniqueness Test

010053138-01, P = 11.772395 Days, E = 127.047245 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.2	2.39	2.37	3.05	4.96	2.46	0.95	7.78	7.10	0.02	-0.66	0.40	0.95	0.23	1.05



Stellar Parameters For KIC 010053138

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5410^{+81}_{-72}	$4.333^{+0.154}_{-0.126}$	$0.120^{+0.150}_{-0.100}$	$1.056^{+0.191}_{-0.173}$	$0.875^{+0.063}_{-0.036}$	$1.046^{+0.741}_{-0.368}$
	+1%/-1%	+4%/-3%	+125%/-83%	+18%/-16%	+7%/-4%	+71%/-35%
Source	SPE90	SPE90	SPE90	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 010053138-01 / KOI 7279.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-16 ± 6	$1.15^{+0.70}_{-0.61}$	1097^{+54}_{-53}	3702^{+1287}_{-522}	57^{+216}_{-36}
Alt.	-16 ± 7	$0.99^{+0.73}_{-0.57}$	1102^{+54}_{-52}	3921^{+1623}_{-683}	78^{+356}_{-54}

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

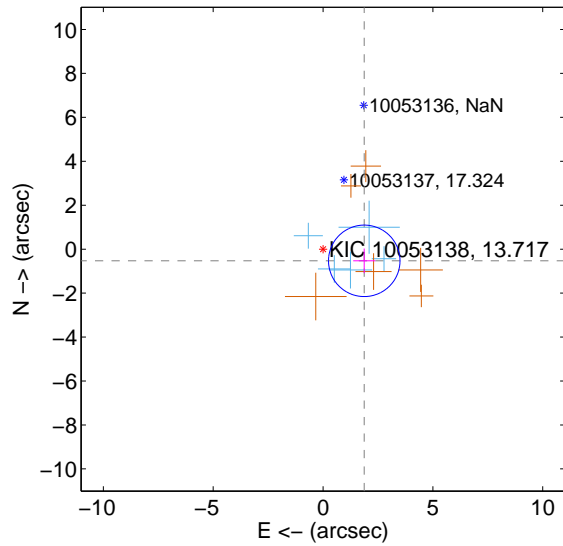
Supplemental centroid analysis for 010053138-01. Kepler magnitude: 13.72. Transit SNR 8.59

There are 5 quarters with good PRF difference image offsets

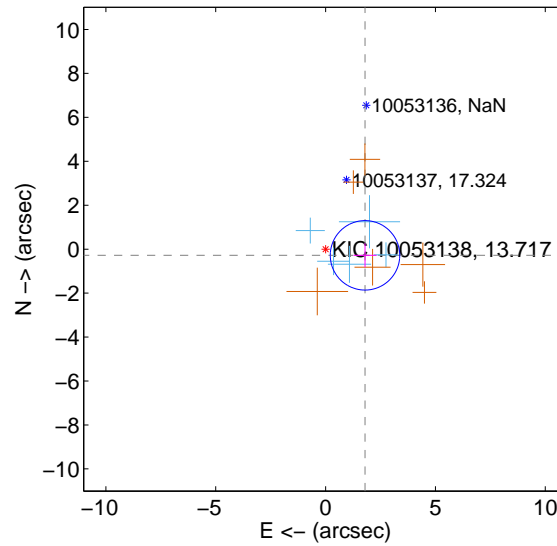
The direct PRF centroid is offset from the target star catalog position by about 0.34 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.949 ± 0.542	3.60	-1.876 ± 0.501	-0.530 ± 0.561
PRF-fit source offset from KIC position	1.816 ± 0.527	3.45	-1.794 ± 0.526	-0.280 ± 0.546
photometric centroid source offset	4.41 ± 1.59	2.78	-3.93 ± 1.61	1.99 ± 1.49

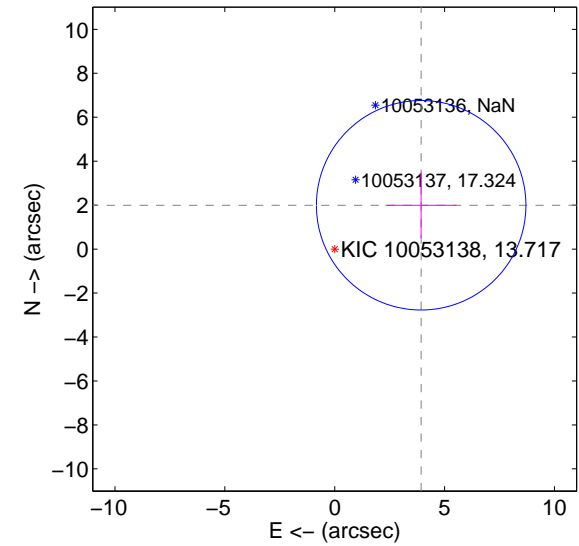
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

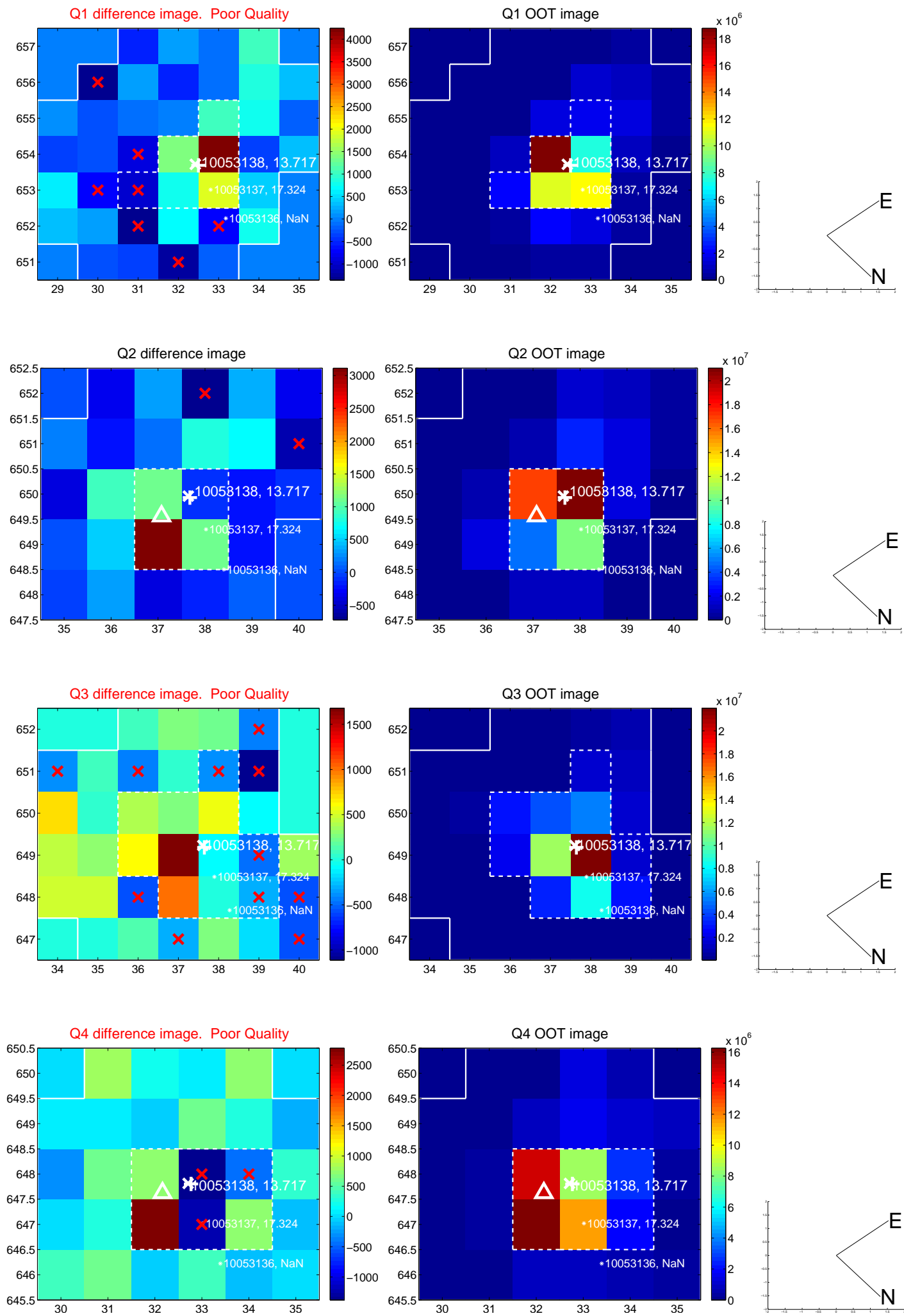


offset from photometric centroids

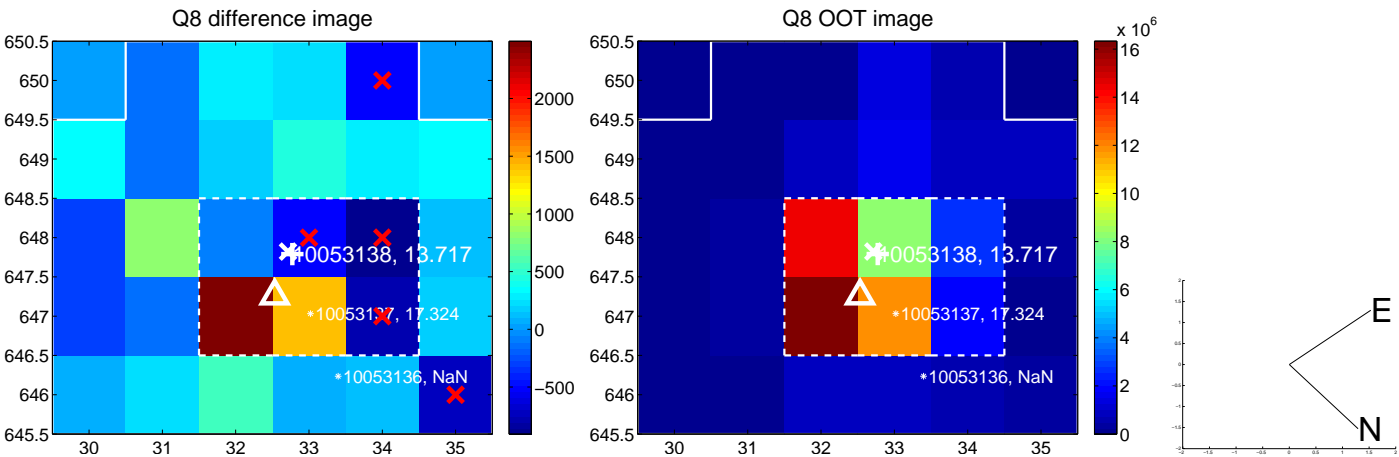
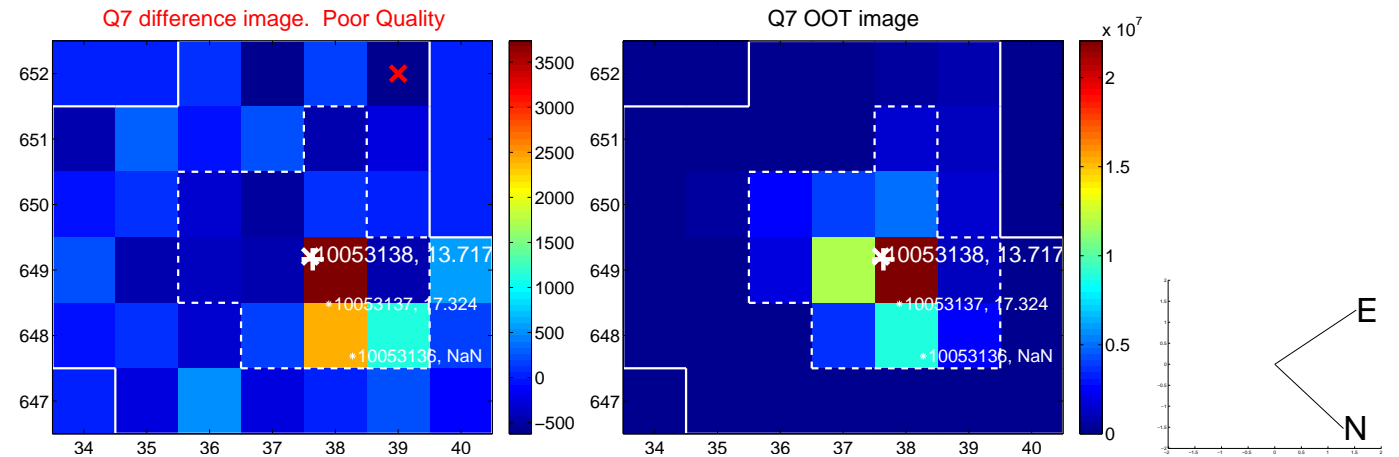
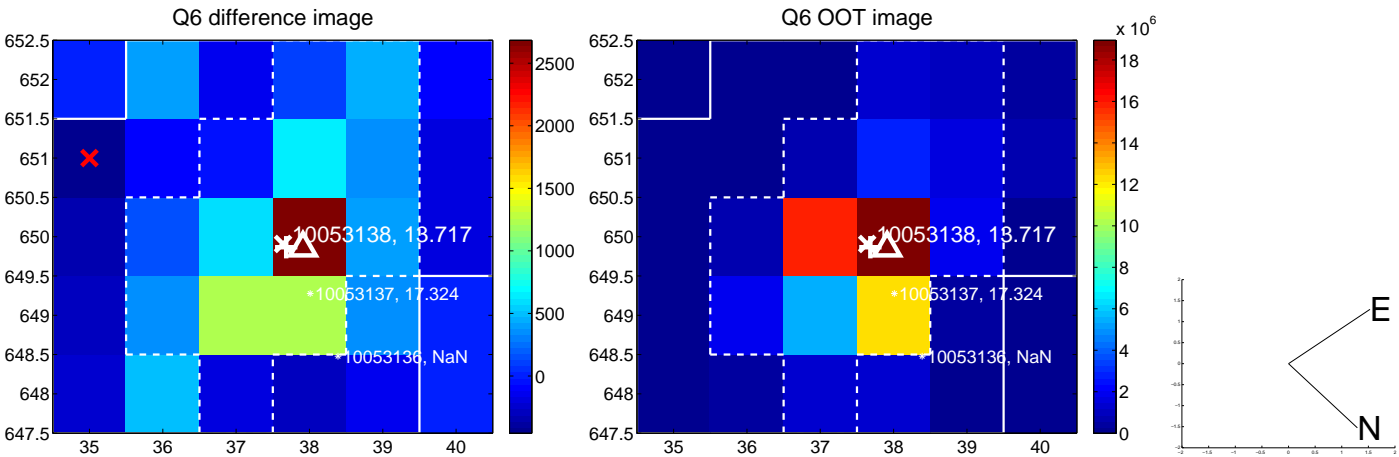
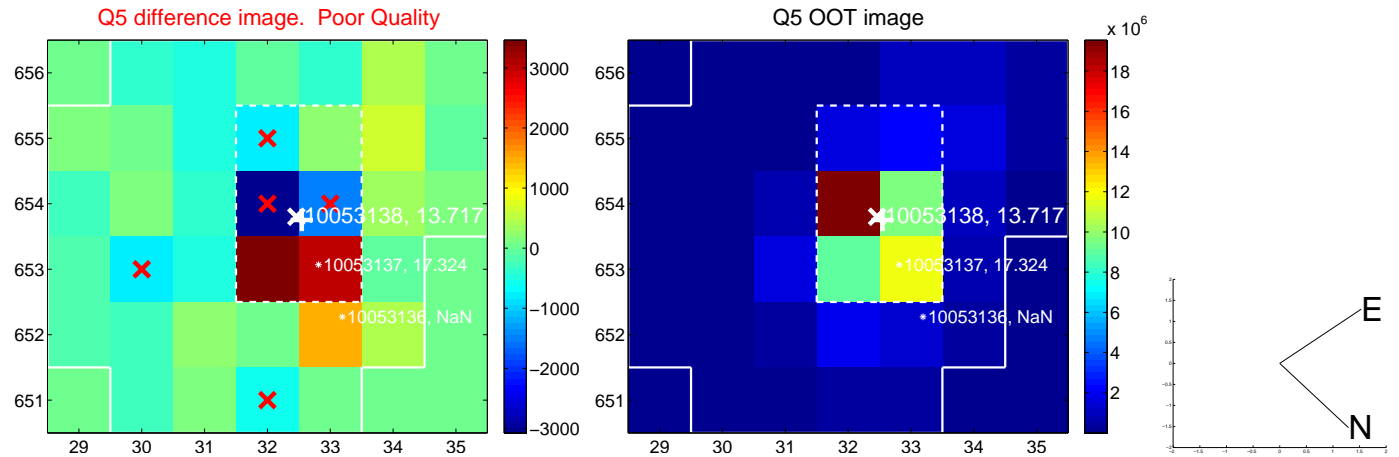


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

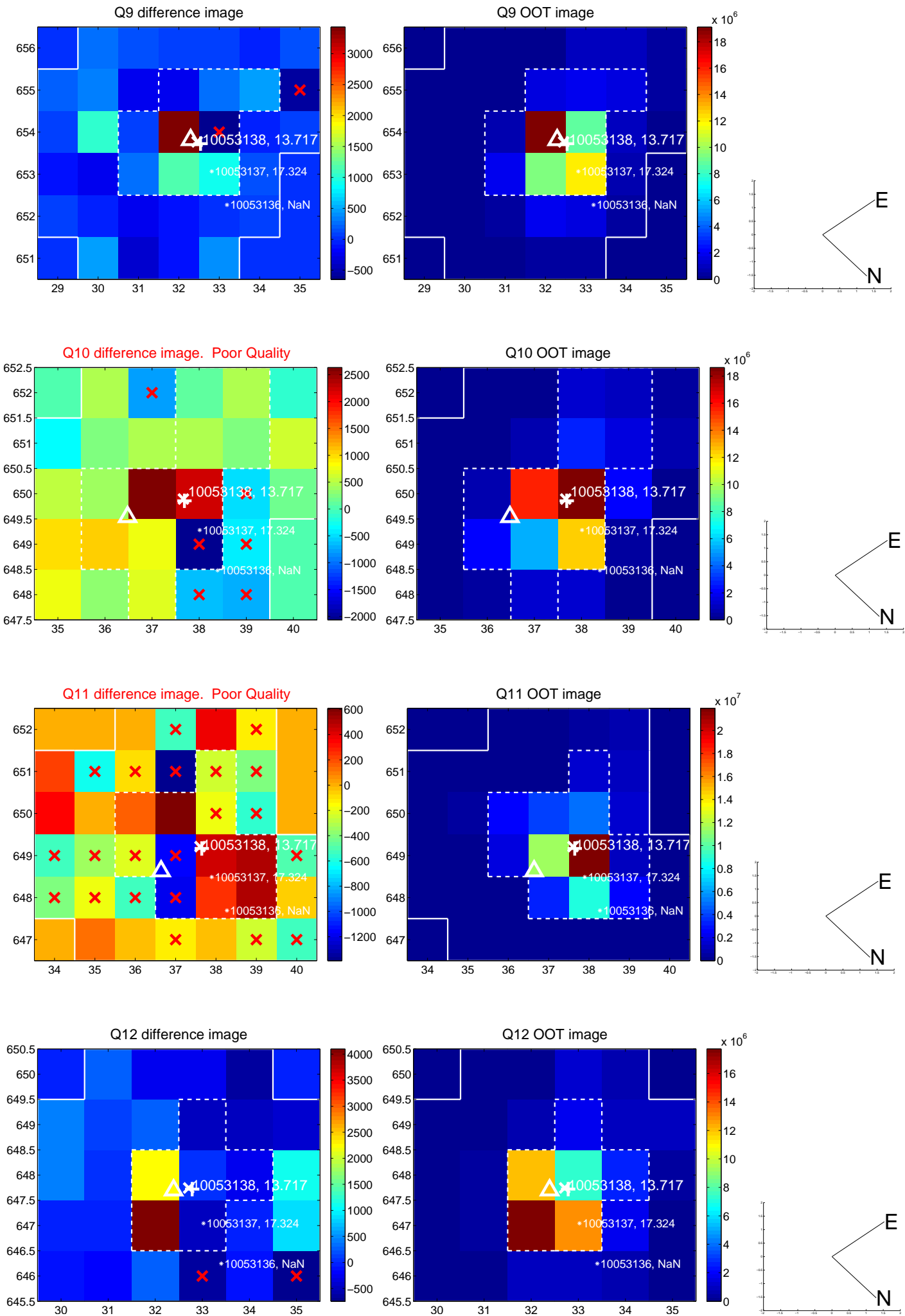
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



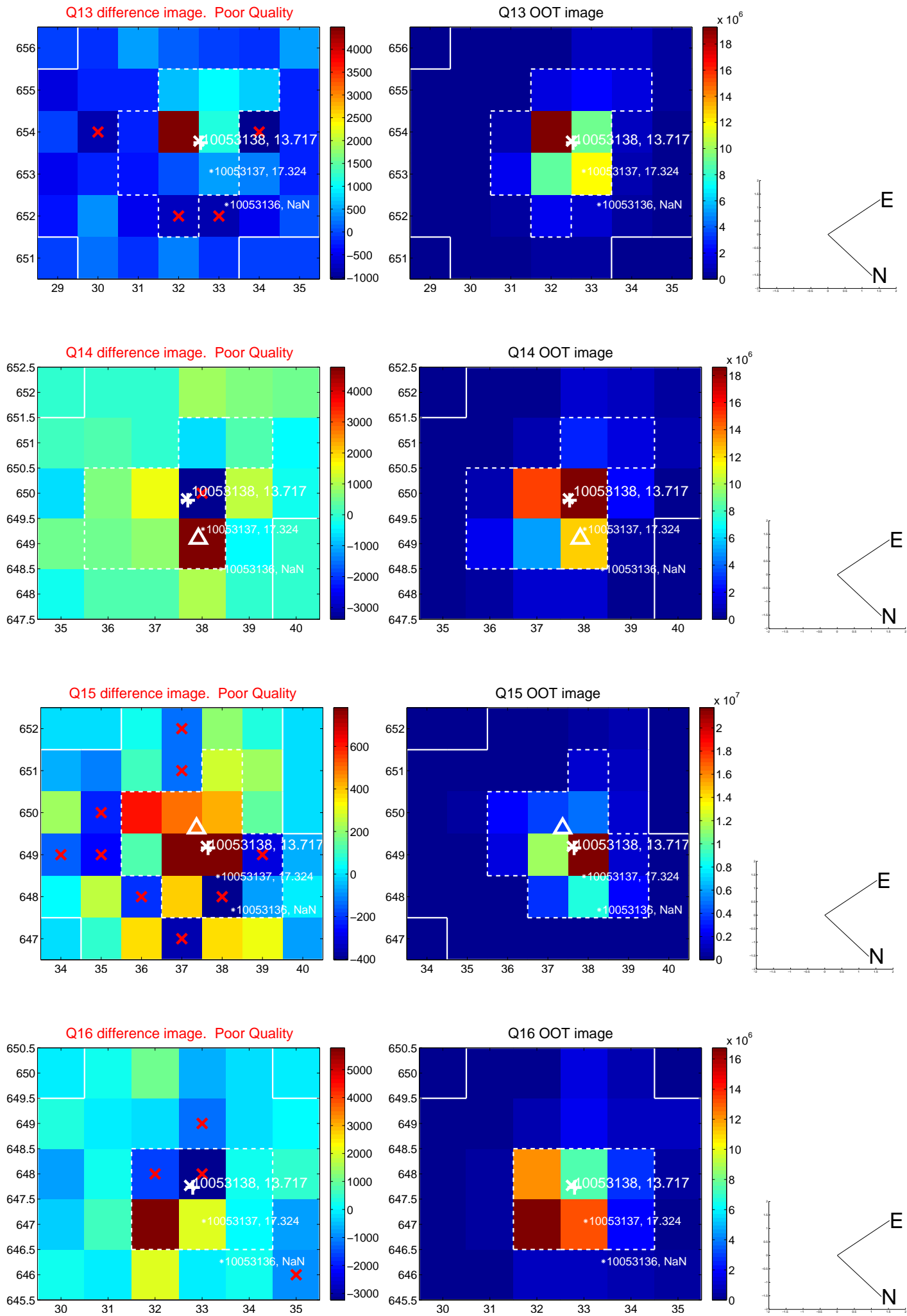
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



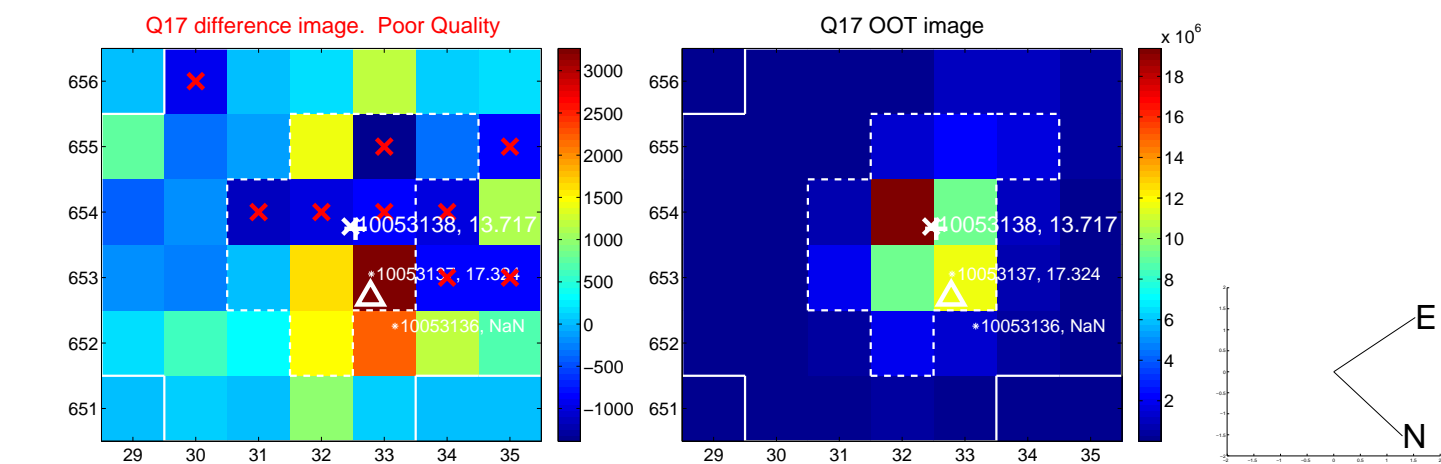
white \times : KIC target position; +: OOT centroid; Δ : difference centroid. red \times : large negative pixel value.



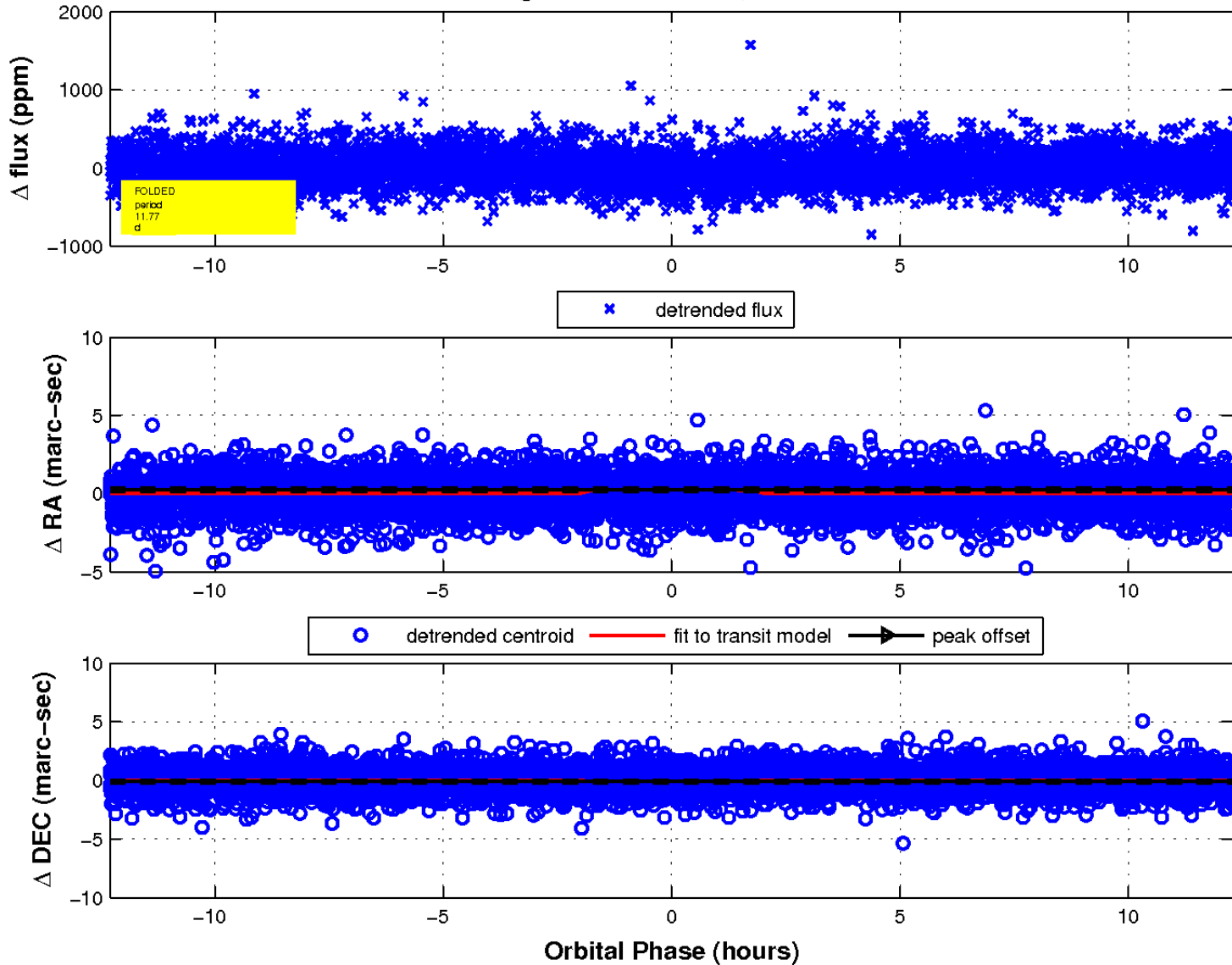
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

