

KIC 011853255

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})
011853255-01	OBS	0778.01	2.243378	132.542843	813.3	1.135	30.6	39.9	0.56	4149	2.00	108.06

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011853255-01	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS

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 011853255-01

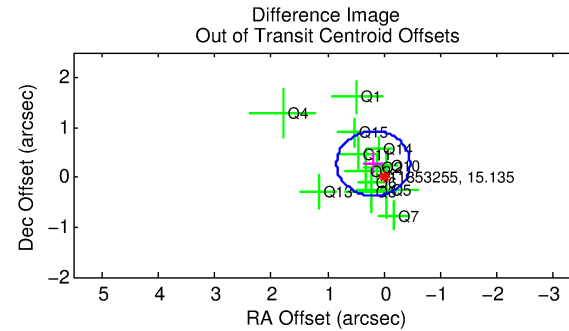
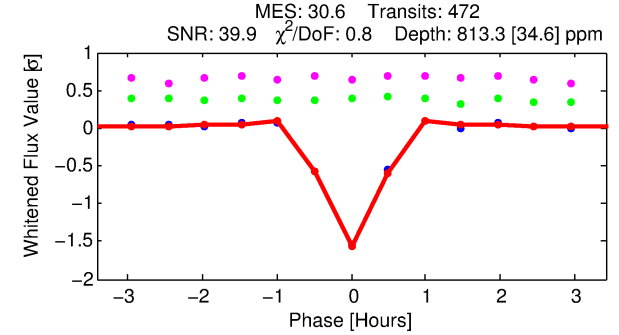
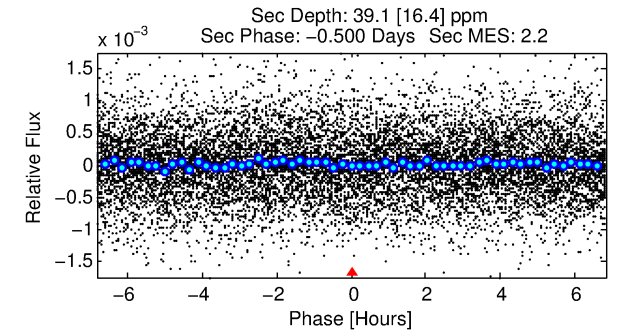
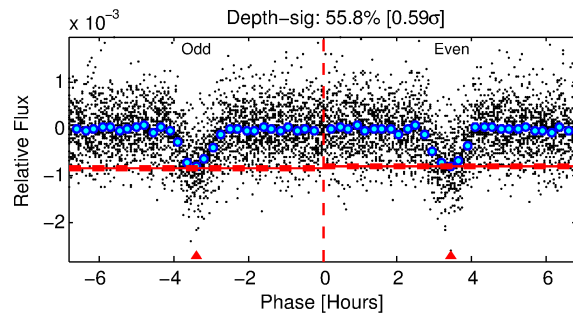
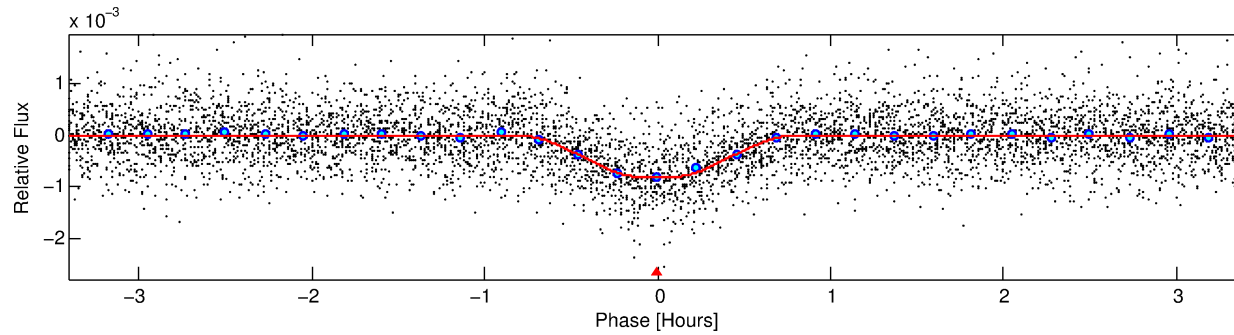
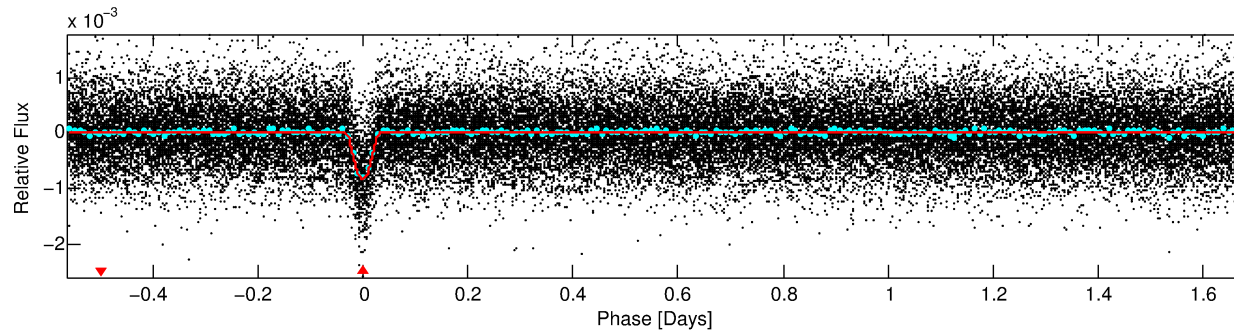
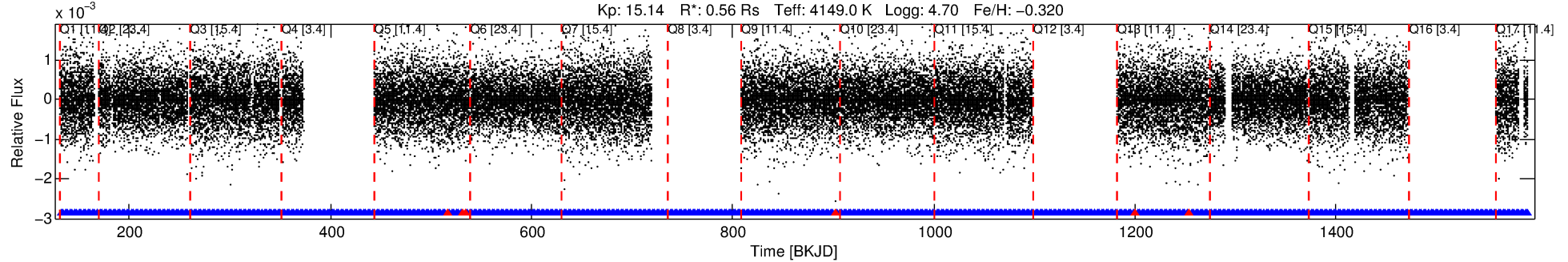
No Significant Match Found

DV One-Page Summary

KIC: 11853255 Candidate: 1 of 1 Period: 2.243 d

KOI: K00778.01 Corr: 0.948

Kp: 15.14 R*: 0.56 Rs Teff: 4149.0 K Logg: 4.70 Fe/H: -0.320



DV Fit Results:

Period = 2.24338 [0.00000] d
Epoch = 132.5428 [0.0004] BKJD
Rp/R* = 0.0326 [0.0037]
a/R* = 7.09 [3.14]
b = 0.92 [0.08]
Seff = 108.06 [11.30]
Teq = 822 [21] K
Rp = 2.00 [0.26] Re
a = 0.0280 [0.0012] AU
Ag = 4.19 [2.01] [1.58σ]
Teffp = 1818 [221] K [4.49σ]

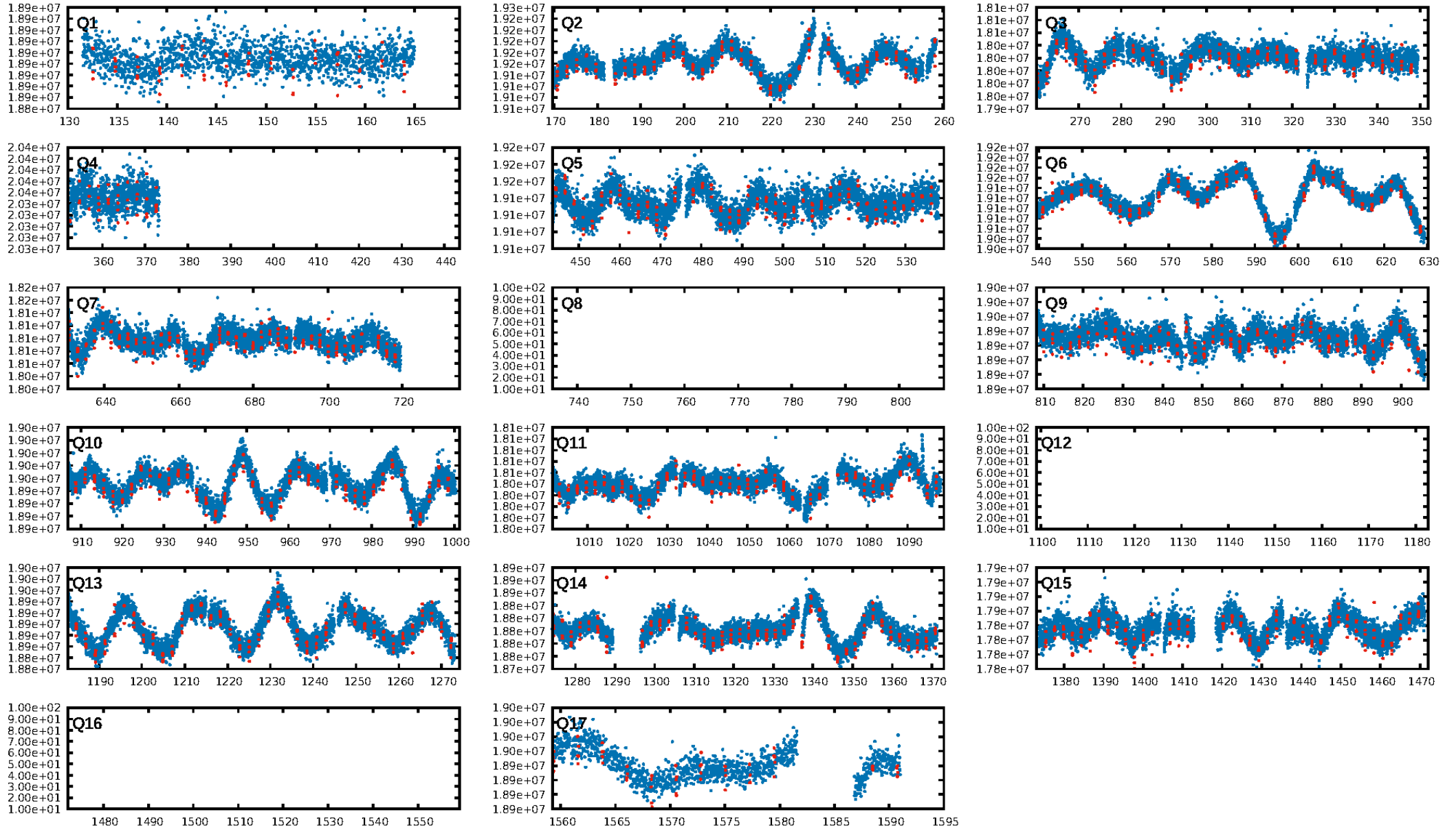
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.45e-198
RollingBand-fgt: 0.99 [429/435]
GhostDiagnostic-chr: 3.436
Centroid-sig: 0.0%
Centroid-so: 0.466 arcsec [1.28σ]
OotOffset-rm: 0.332 arcsec [1.54σ]
KicOffset-rm: 0.077 arcsec [0.47σ]
OotOffset-st: 4/4/1/4 [13]
KicOffset-st: 4/4/1/4 [13]
DiffImageQuality-fgm: 0.92 [12/13]
DiffImageOverlap-fno: 1.00 [14/14]

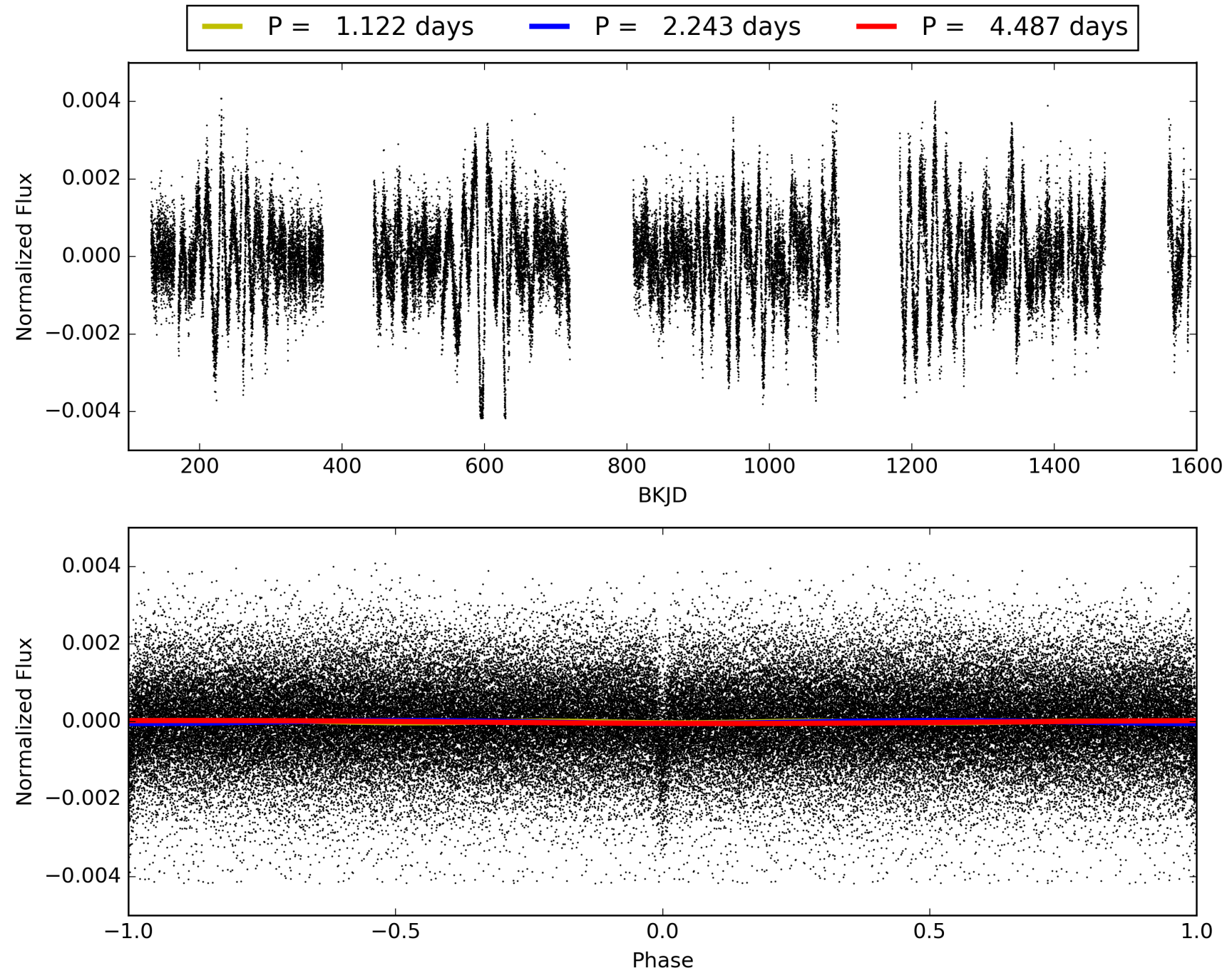
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 03:54:36 Z

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

TCE 011853255-01, PDC Light Curves

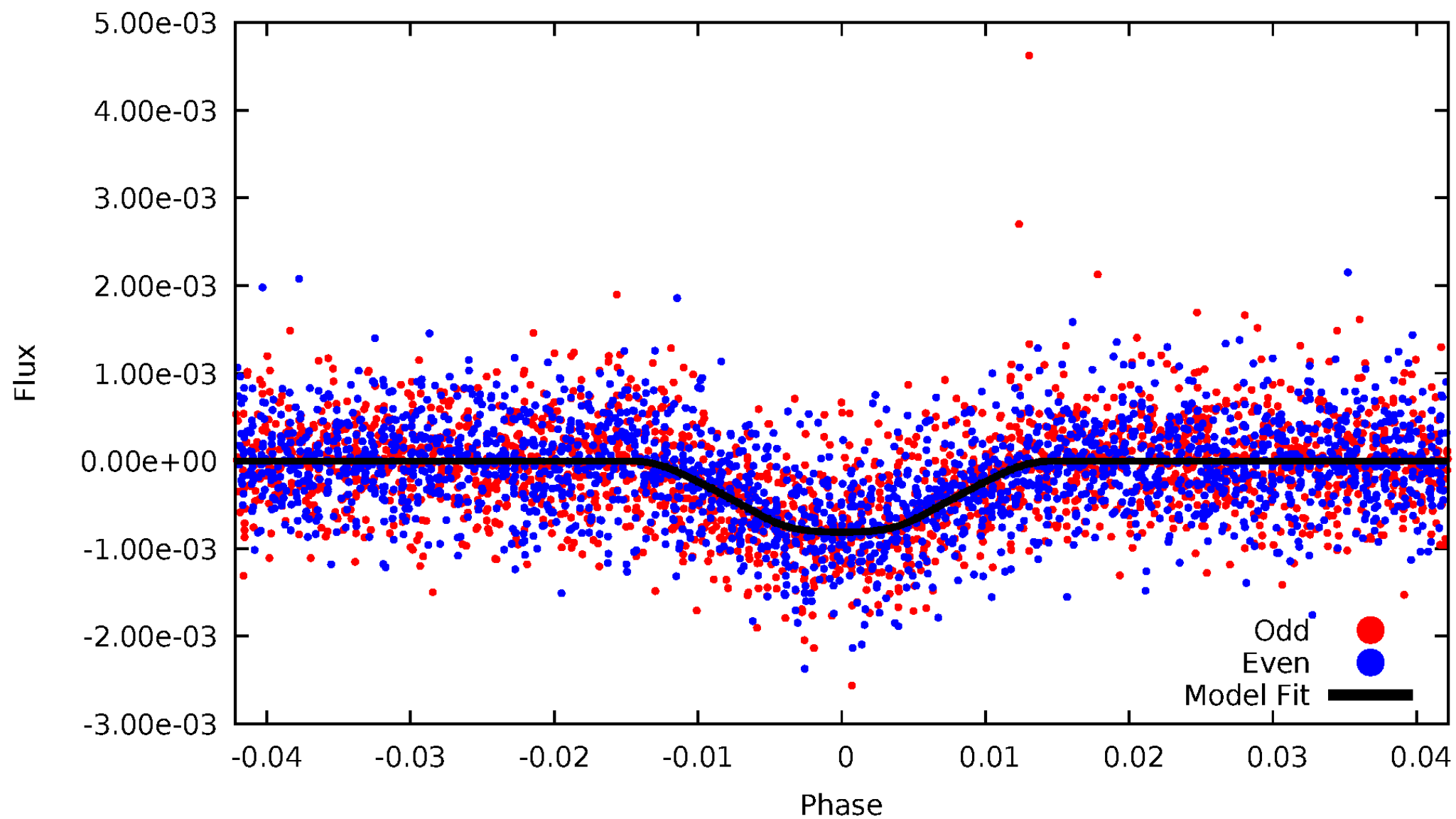


TCE 011853255-01



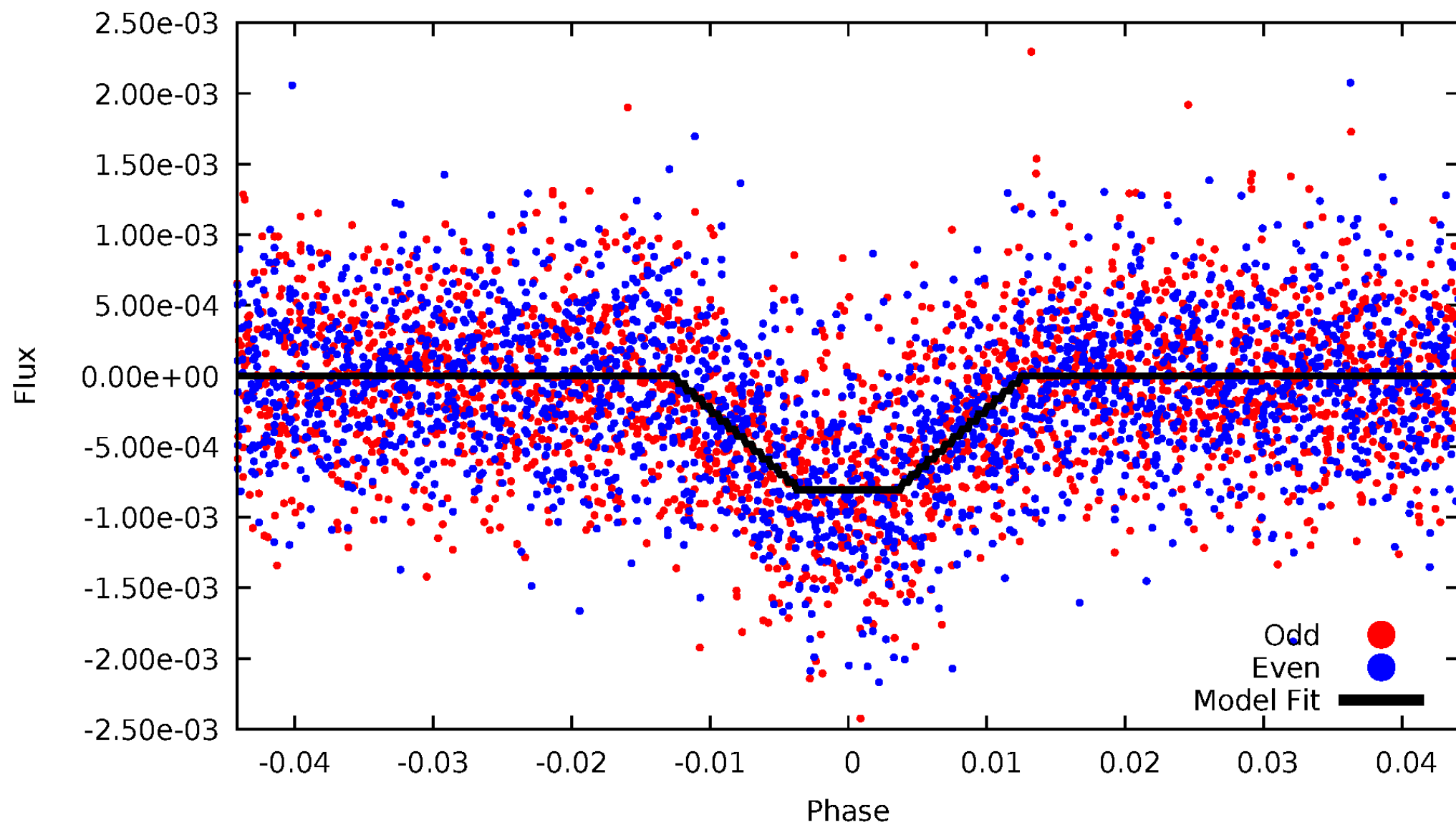
DV Odd/Even

TCE 011853255-01

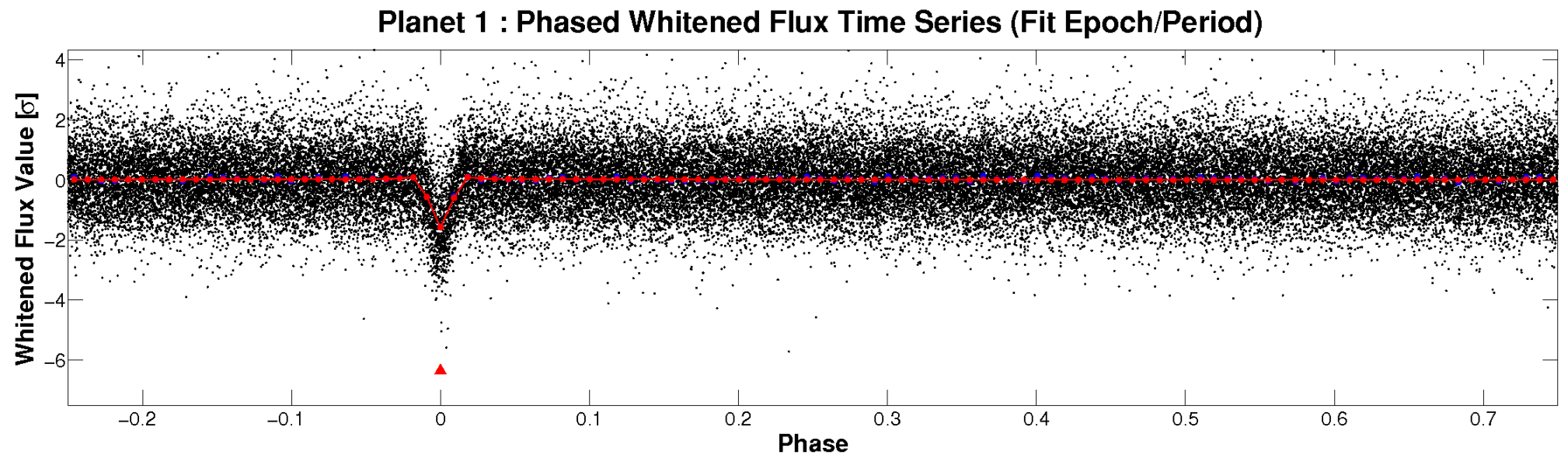
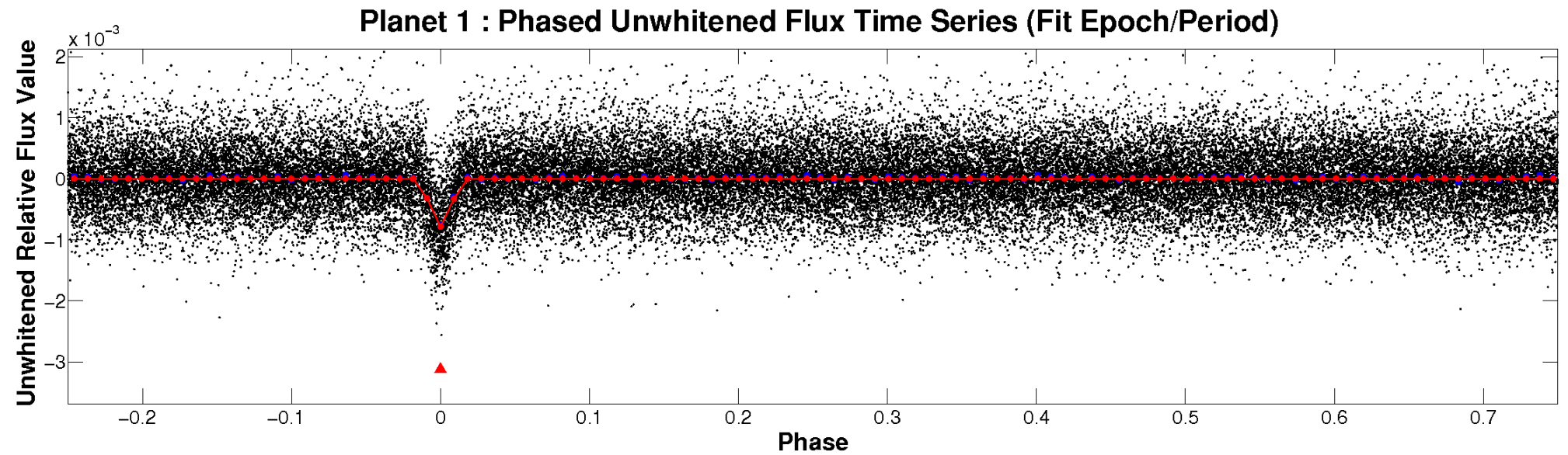


ALT Odd/Even

TCE 011853255-01

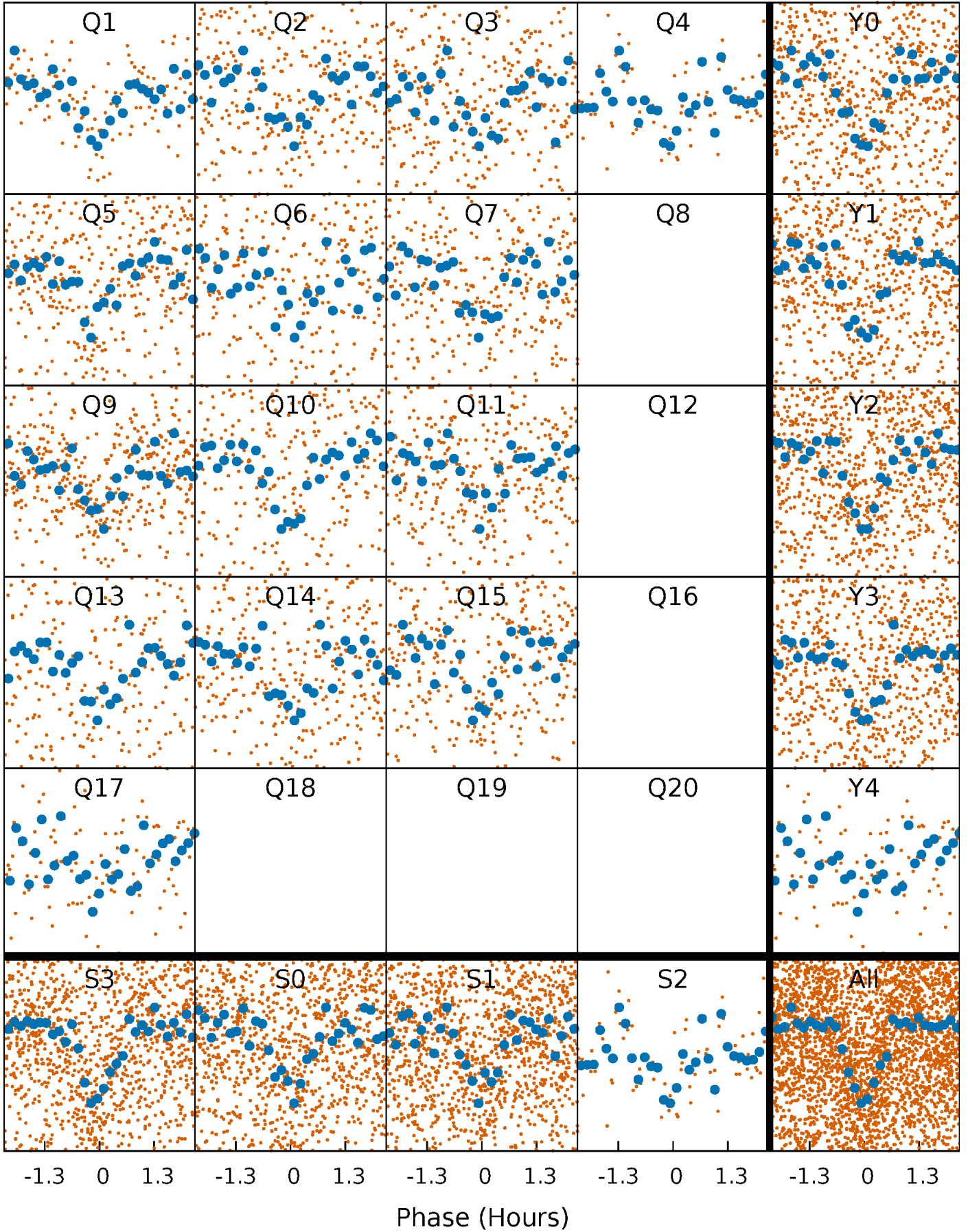


Non-Whitened Vs. Whitened Light Curve



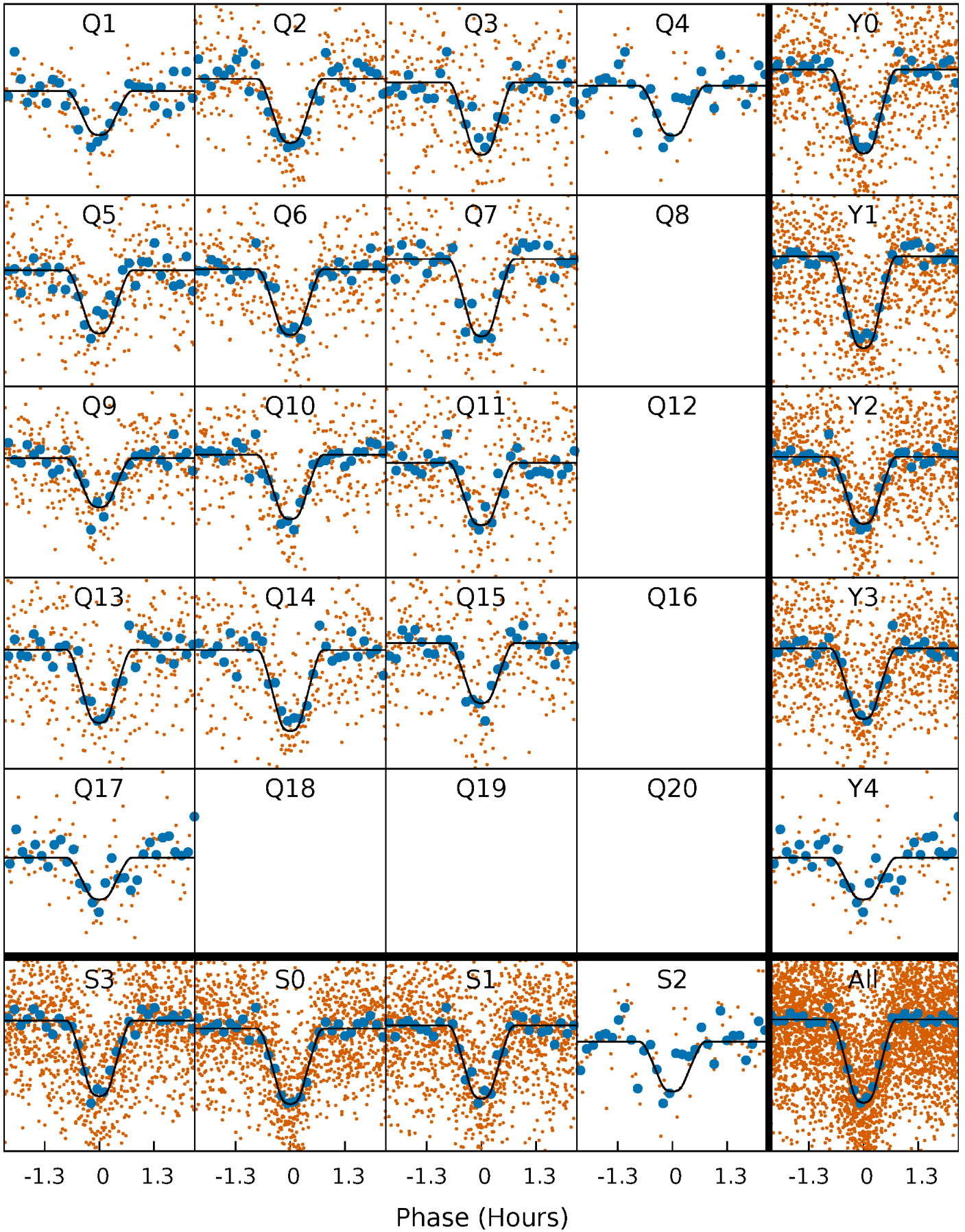
PDC Quarter-Phased Transit Curves

TCE 011853255-01 P= 2.243378 Days $T_0=132.542843$ (BKJD)



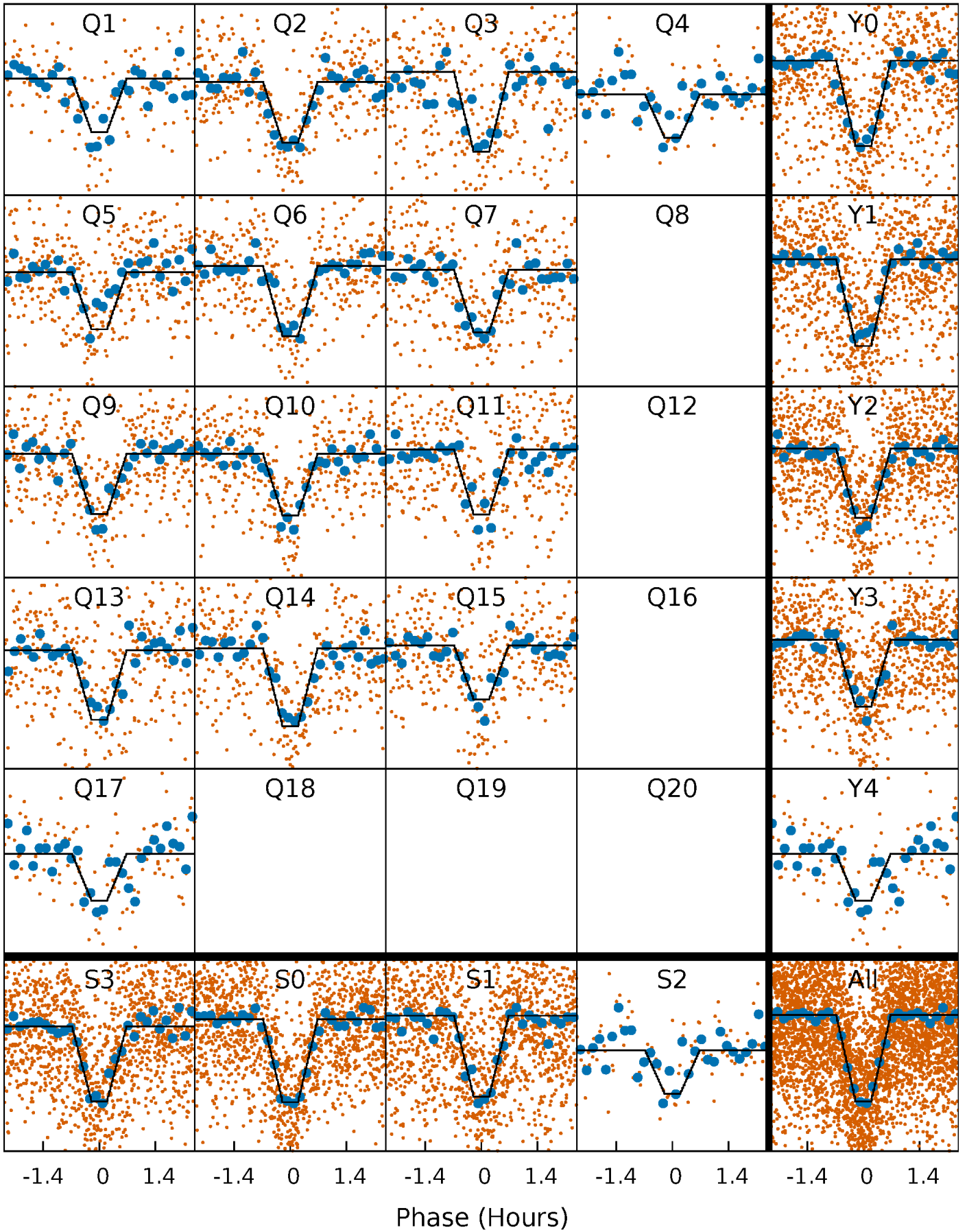
DV Quarter-Phased Transit Curves

TCE 011853255-01 P= 2.243378 Days $T_0=132.542843$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

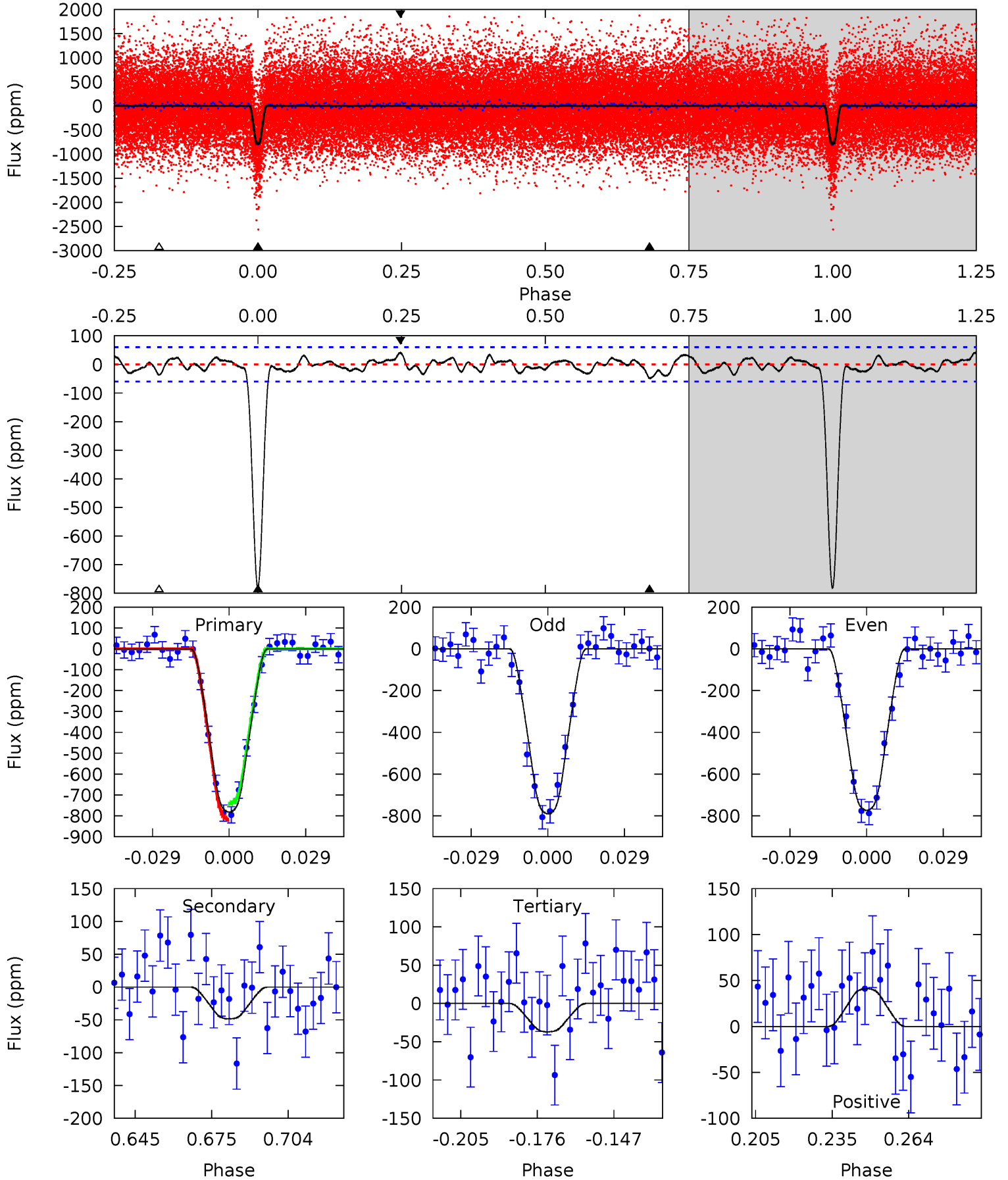
TCE 011853255-01 P= 2.243372 Days $T_0=132.544686$ (BKJD)



DV Model-Shift Uniqueness Test

011853255-01, P = 2.243378 Days, E = 130.299465 Days

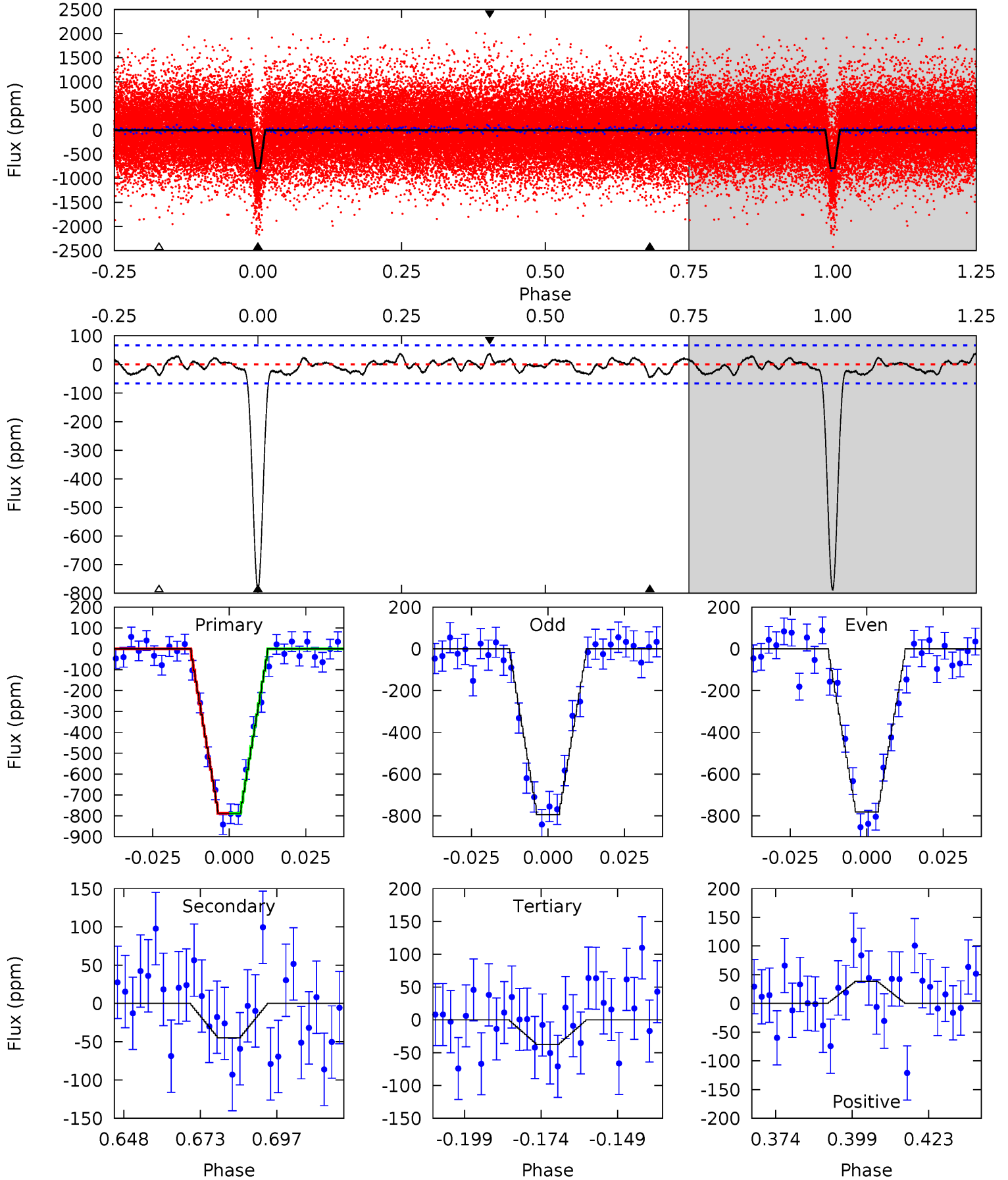
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
62.5	3.87	2.96	3.27	4.82	2.18	1.34	59.5	59.2	0.91	0.59	0.66	0.95	0.05	3.10



Alt Model-Shift Uniqueness Test

011853255-01, P = 2.243372 Days, E = 130.301314 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
57.2	3.26	2.72	2.80	4.85	2.24	1.22	54.5	54.4	0.54	0.47	0.47	0.94	0.05	0.03



Stellar Parameters For KIC 011853255

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	4149^{+82}_{-91}	$4.698^{+0.024}_{-0.027}$	$-0.320^{+0.150}_{-0.150}$	$0.564^{+0.030}_{-0.033}$	$0.578^{+0.027}_{-0.037}$	$4.549^{+0.556}_{-0.495}$
	+2%/-2%	+1%/-1%	+47%/-47%	+5%/-6%	+5%/-6%	+12%/-11%
Source	SPE60	SPE60	SPE60	DSEP		

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

Secondary Eclipse Parameters for KIC 011853255-01 / KOI 0778.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-48 ± 13	$2.00^{+0.24}_{-0.23}$	1149^{+25}_{-28}	2585^{+122}_{-134}	$5.097^{+2.078}_{-1.546}$
Alt.	-45 ± 14	$1.74^{+0.23}_{-0.25}$	1149^{+26}_{-28}	2661^{+141}_{-168}	$6.309^{+3.075}_{-2.332}$

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

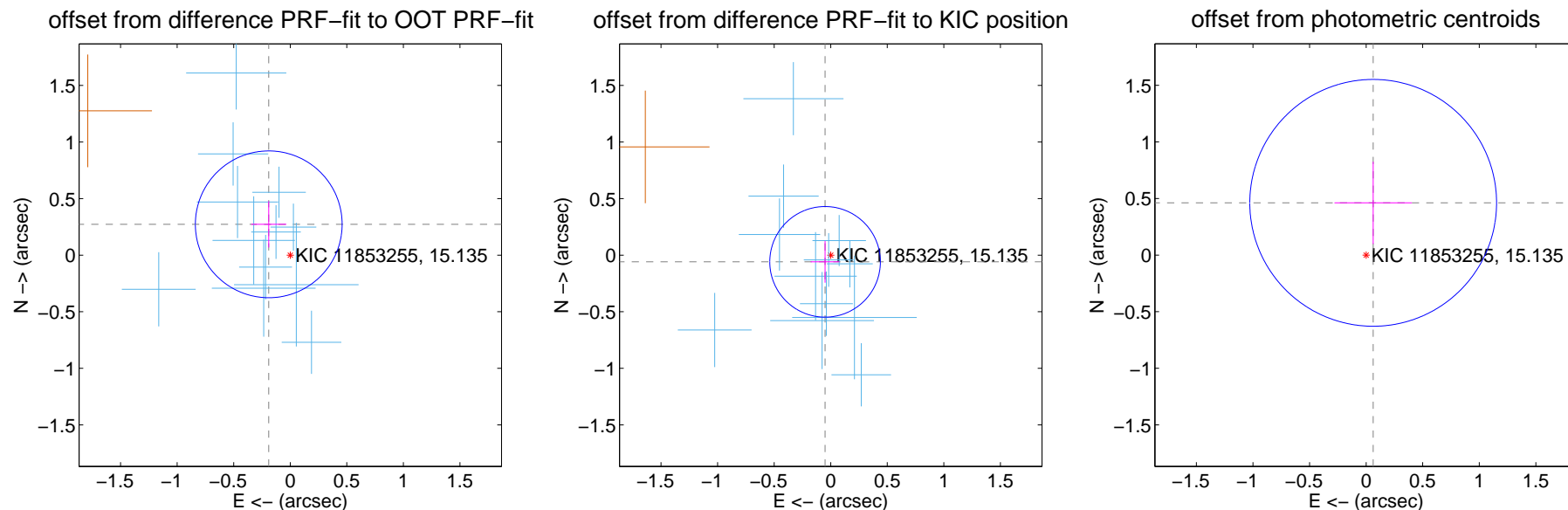
DV Centroid Data

Supplemental centroid analysis for 011853255-01. Kepler magnitude: 15.13. Transit SNR 39.86

There are 12 quarters with good PRF difference image offsets

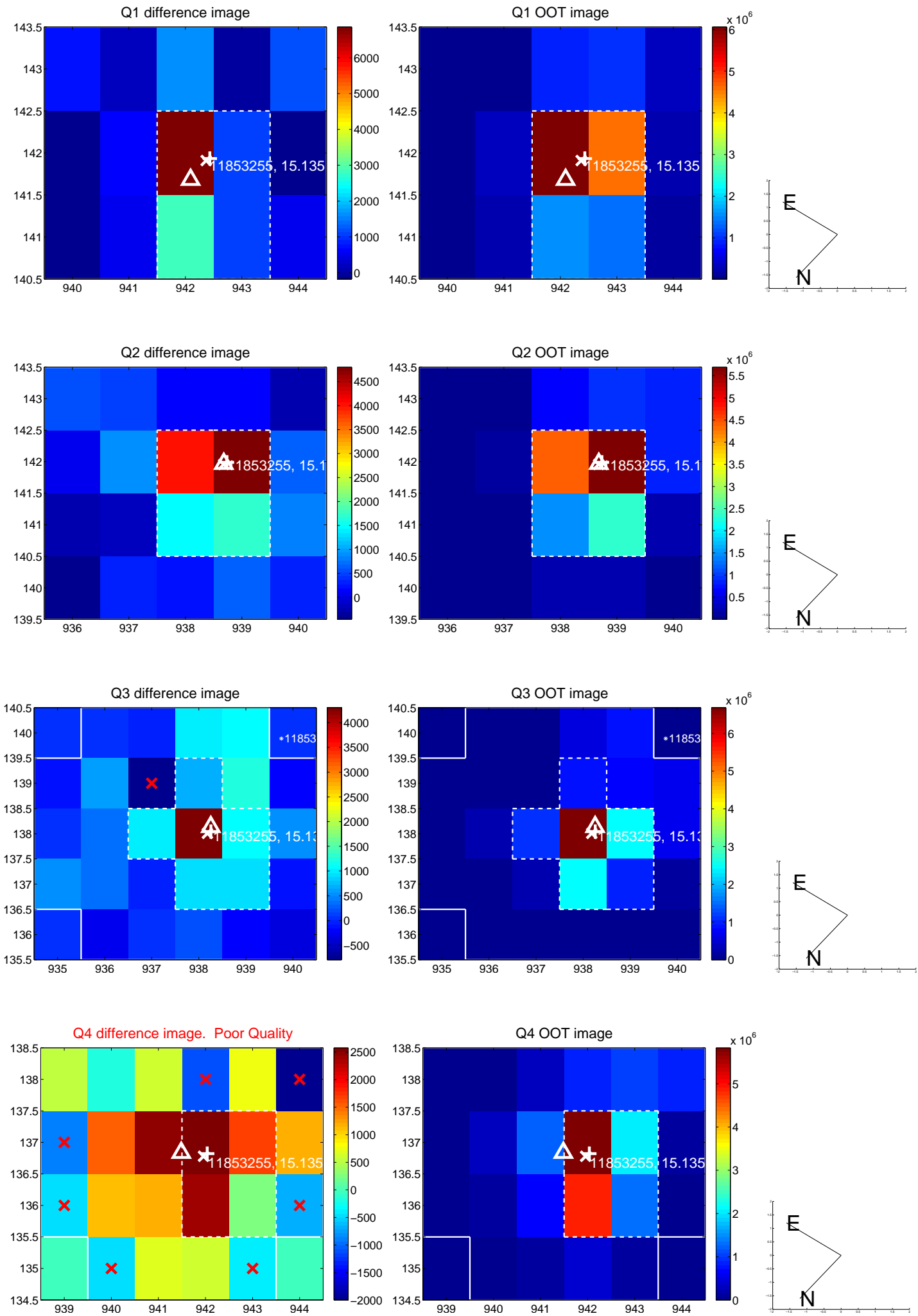
The direct PRF centroid is offset from the target star catalog position by about 0.38 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.332 ± 0.216	1.54	0.190 ± 0.155	0.272 ± 0.204
PRF-fit source offset from KIC position	0.077 ± 0.163	0.47	0.050 ± 0.127	-0.059 ± 0.184
photometric centroid source offset	0.47 ± 0.36	1.28	-0.06 ± 0.34	0.46 ± 0.36

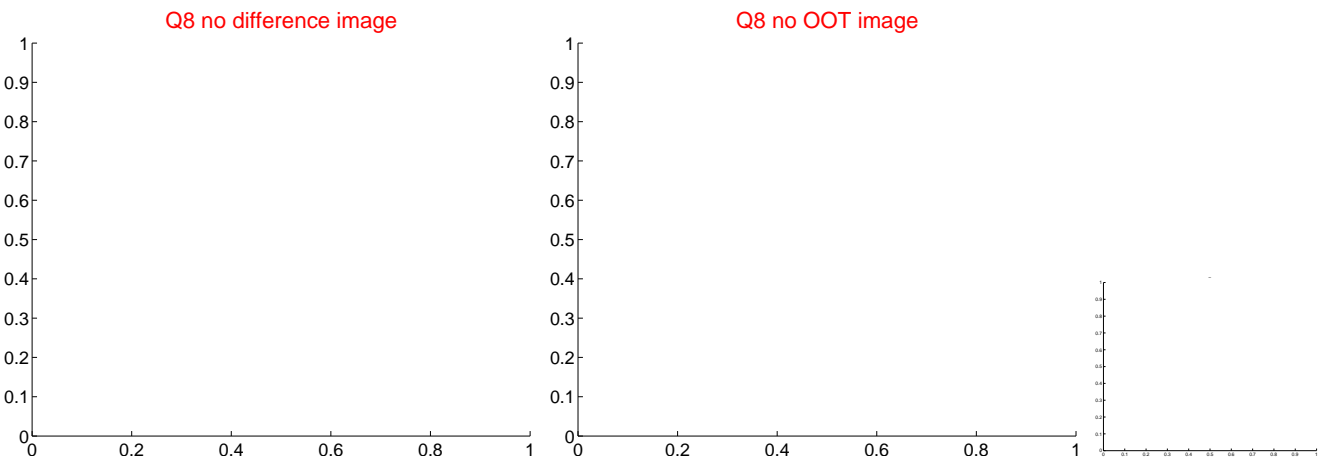
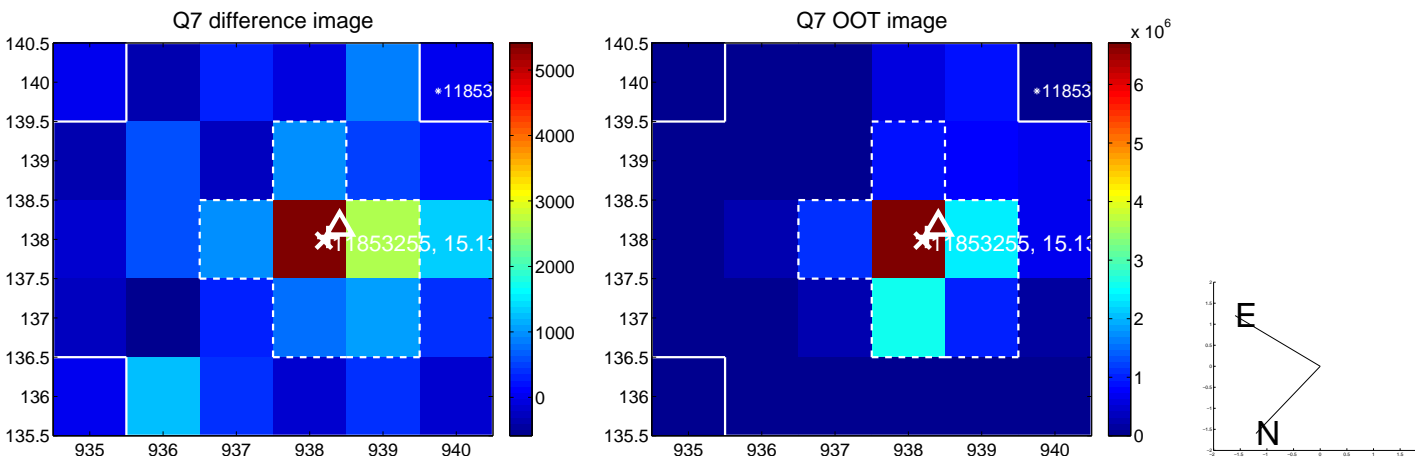
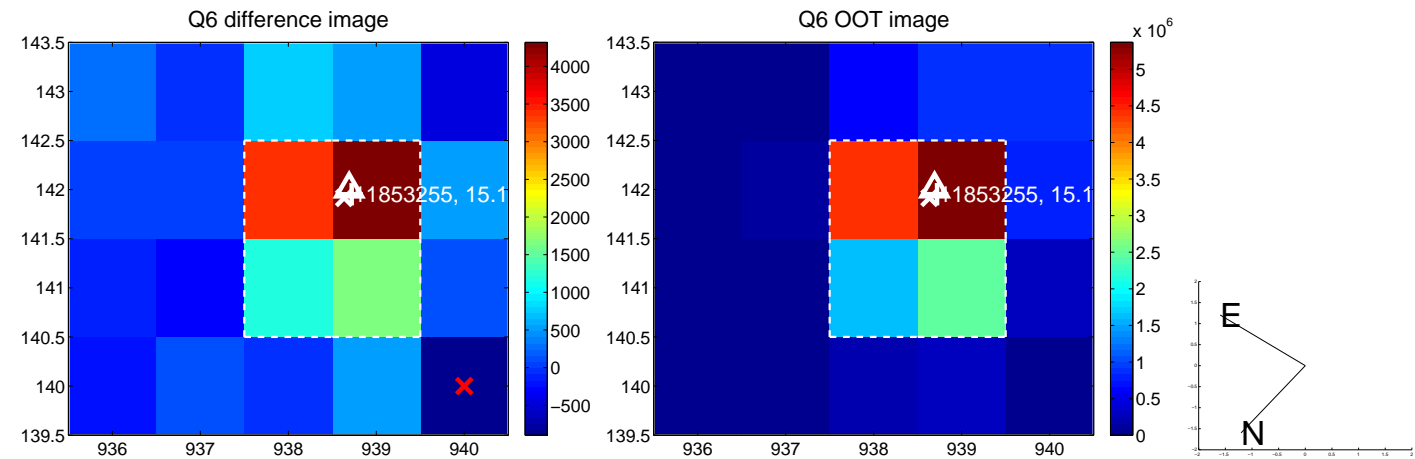
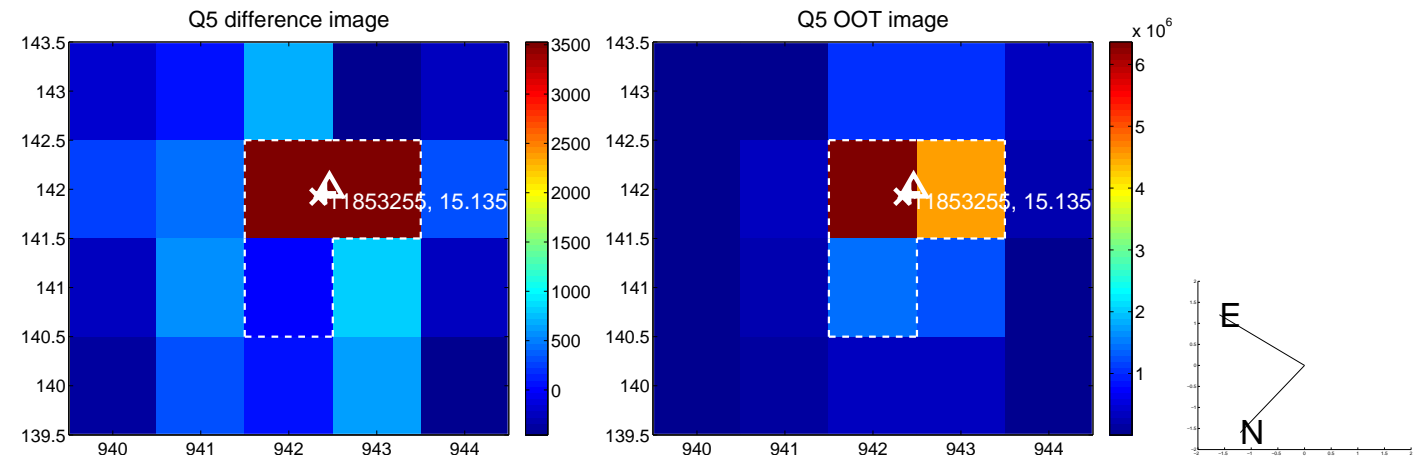


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

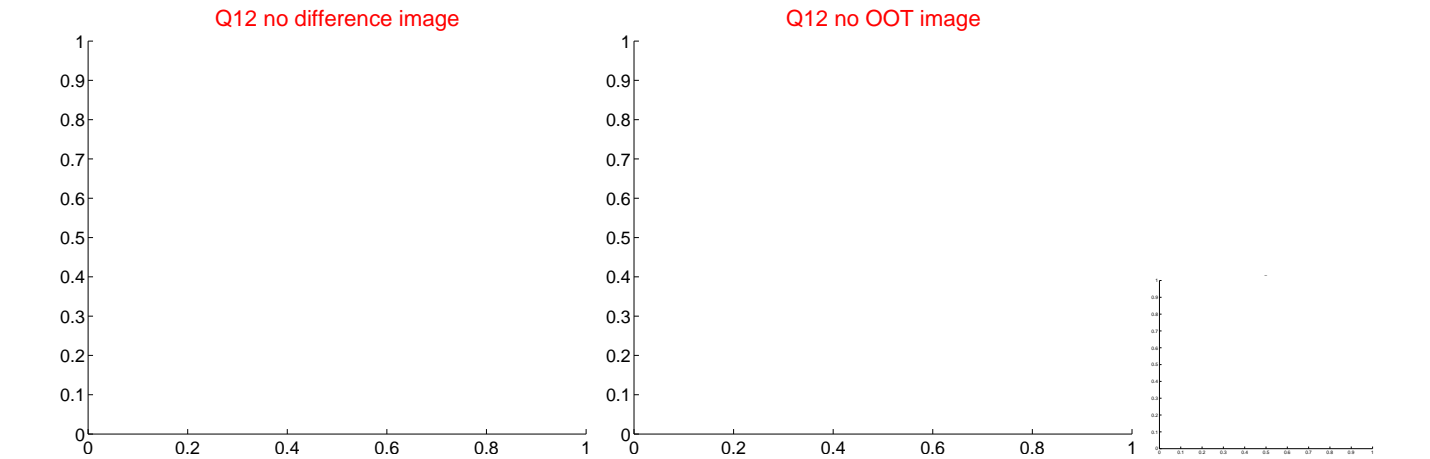
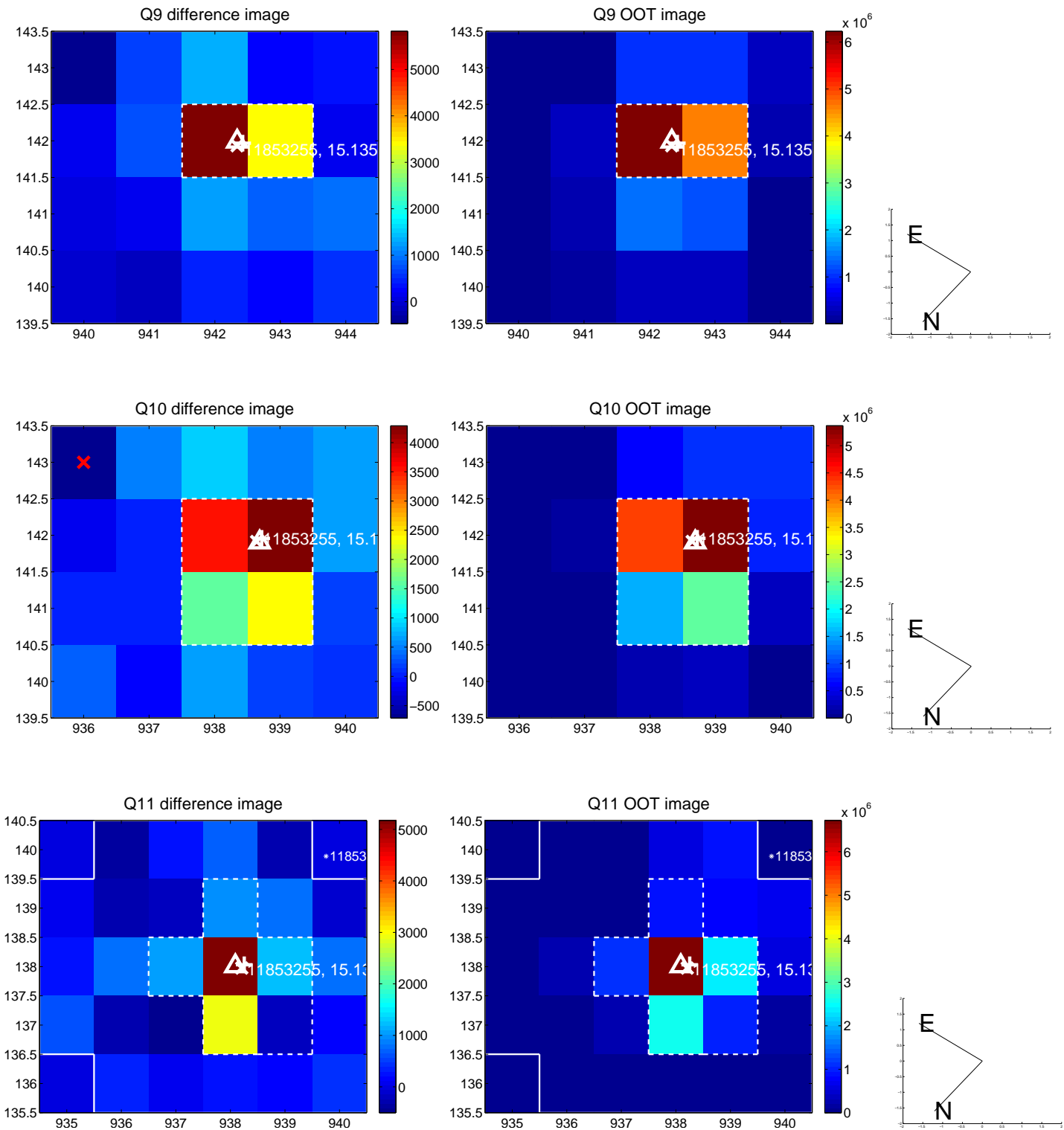
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



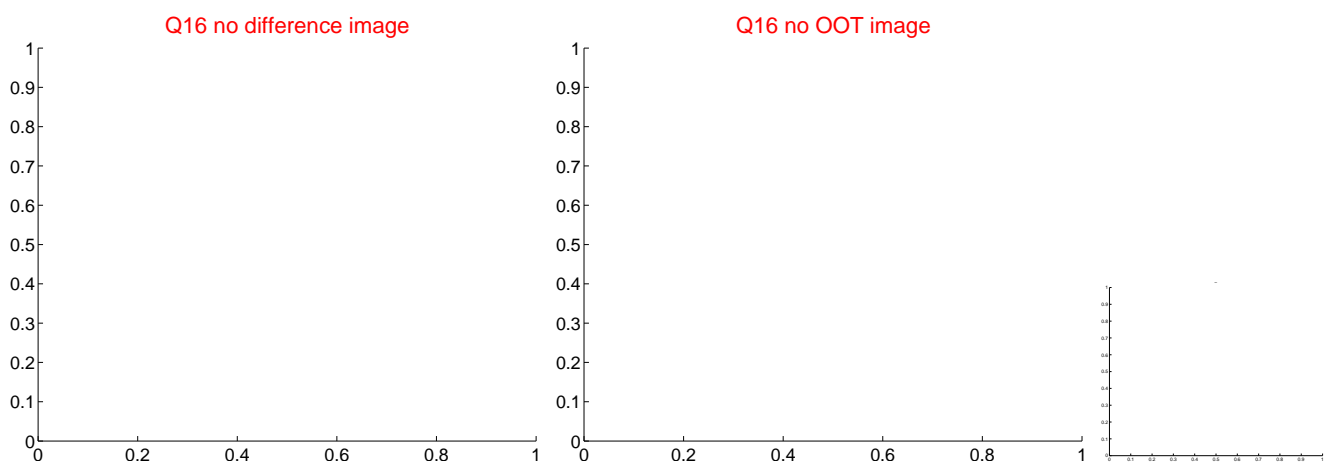
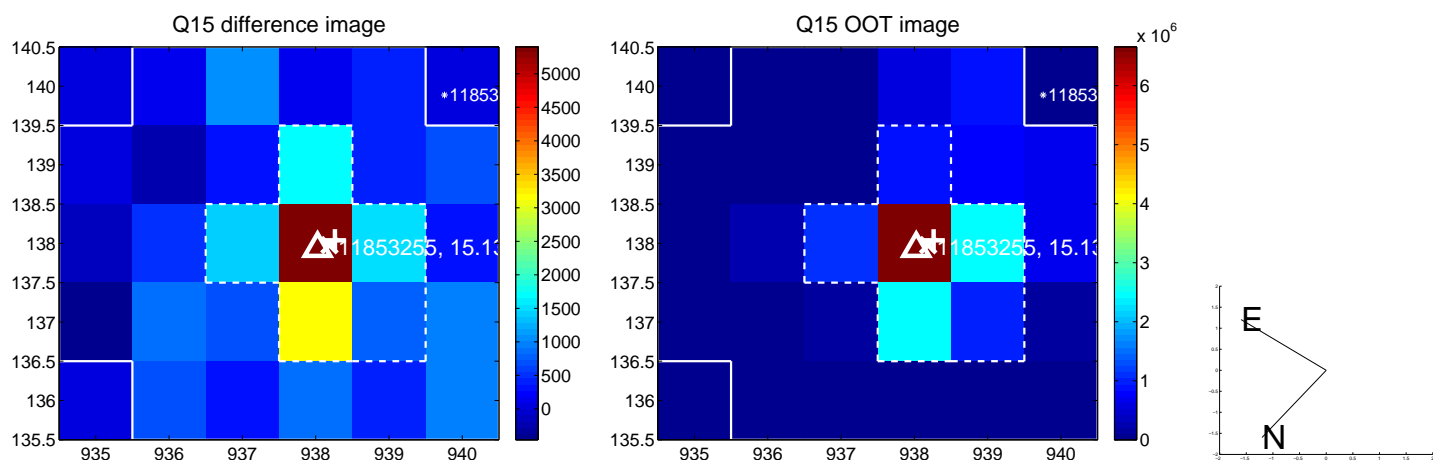
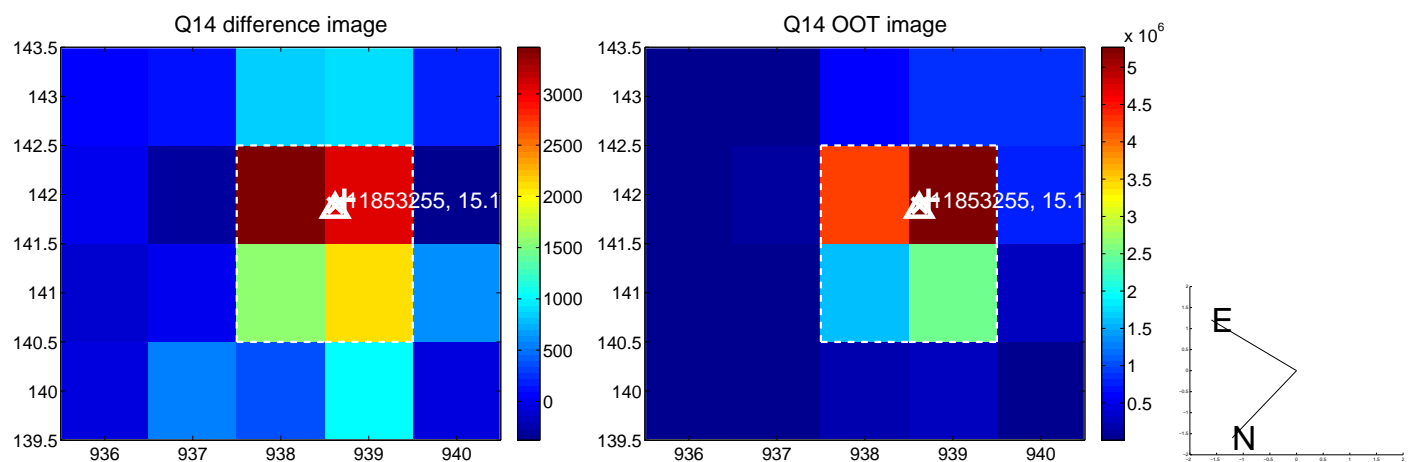
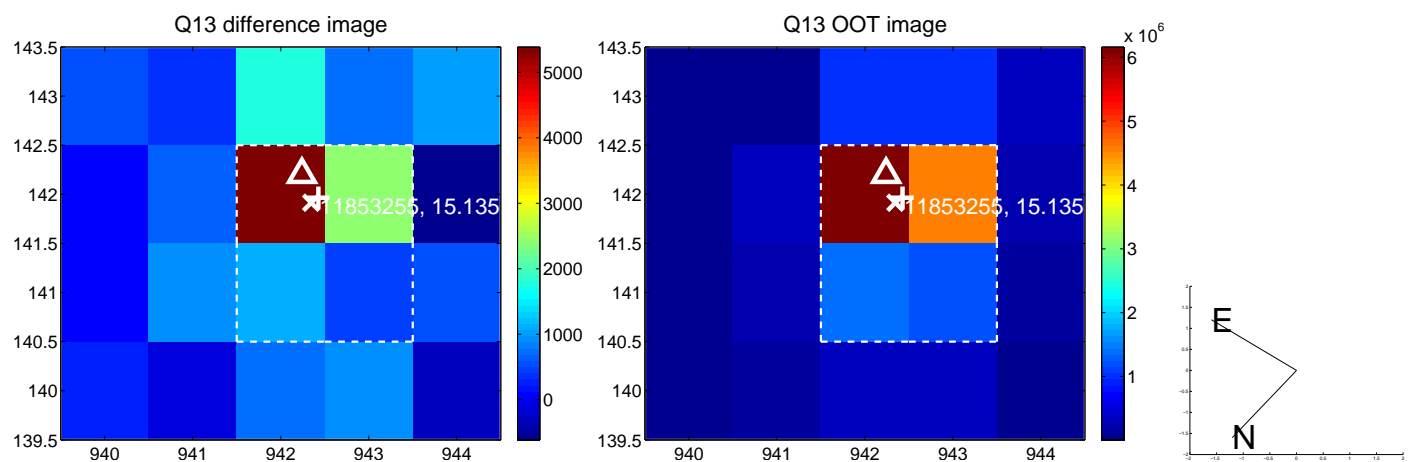
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



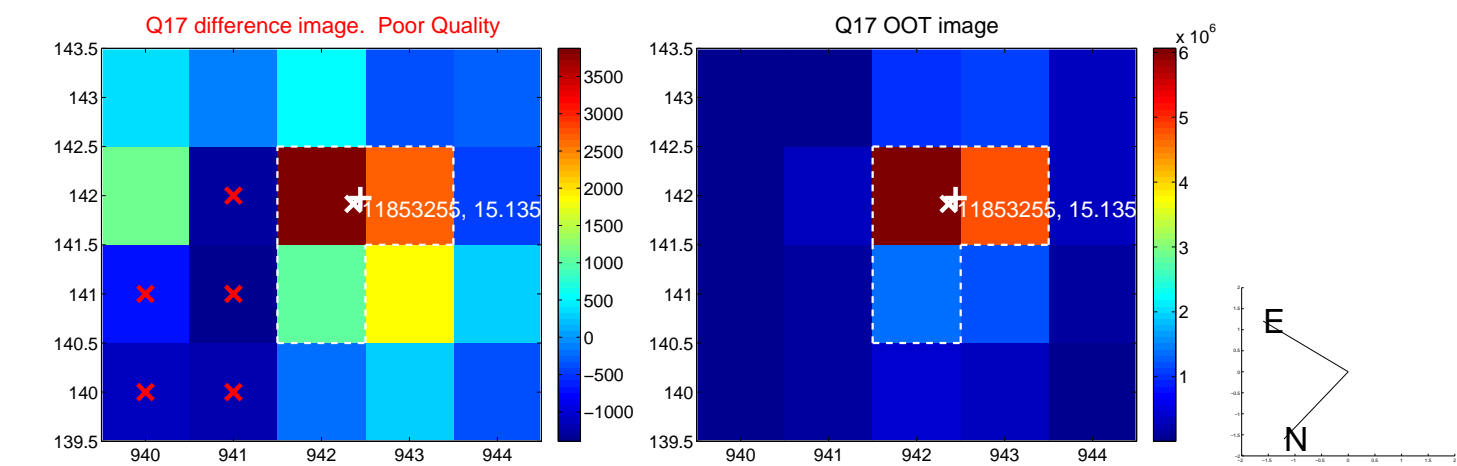
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



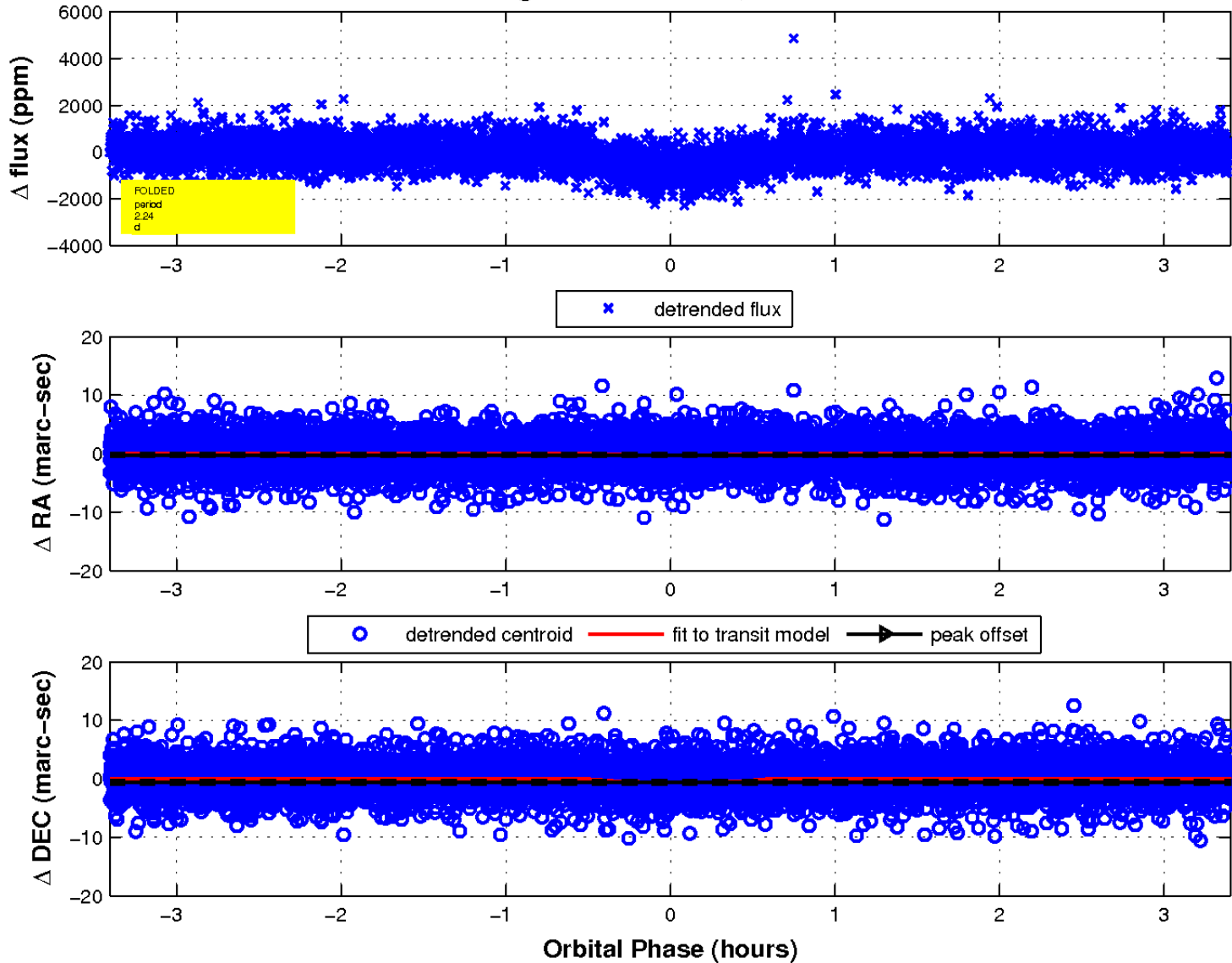
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

