

KIC 005780855

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})
005780855-01	OBS	4443.01	5.675749	134.912558	50.8	3.592	9.9	10.1	1.44	6681	1.22	803.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005780855-01	OBS	PC	0.99	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.

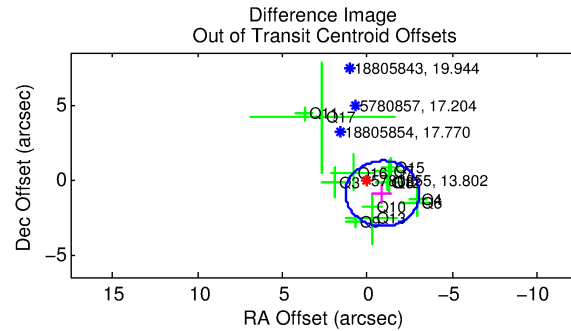
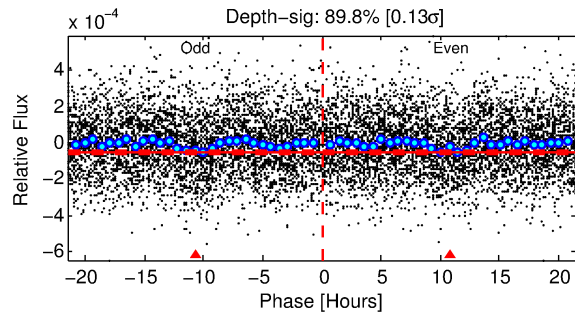
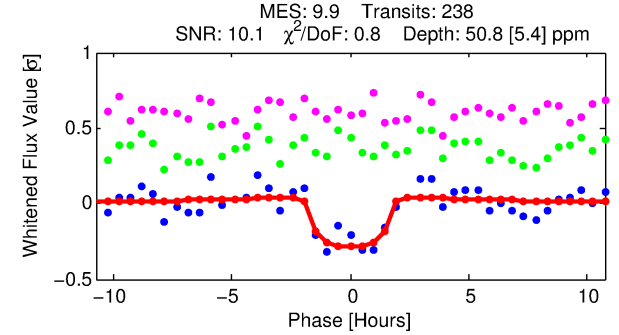
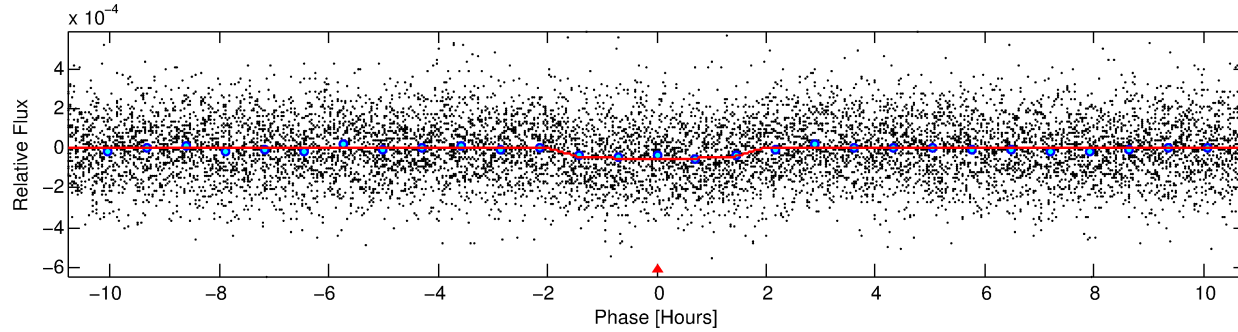
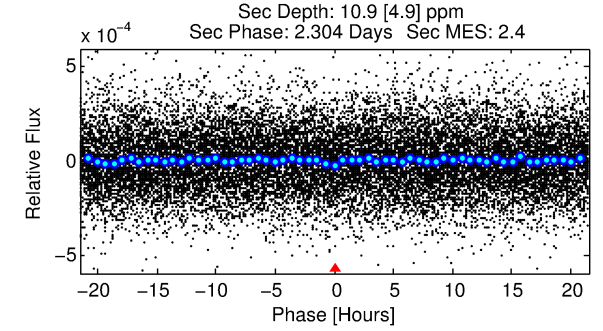
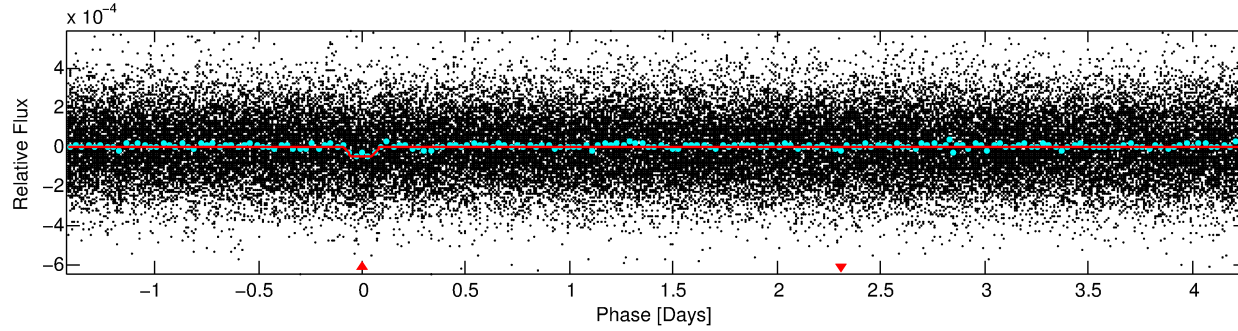
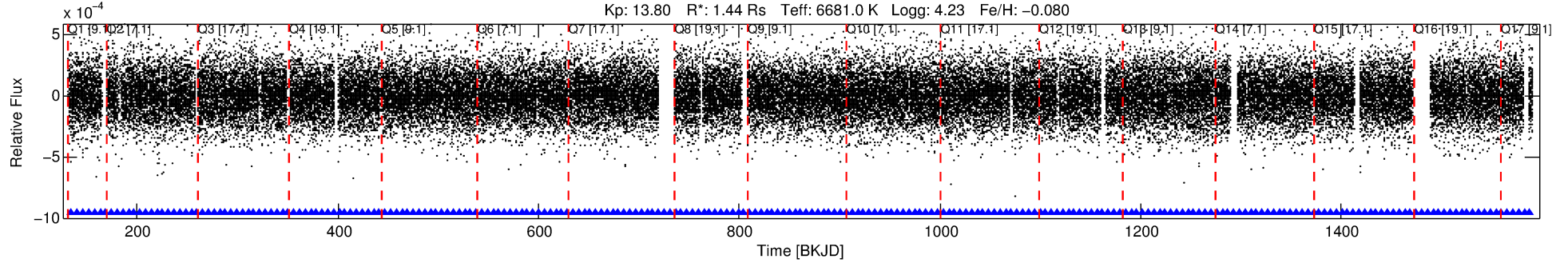
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005780855-01

No Significant Match Found

DV One-Page Summary

KIC: 5780855 Candidate: 1 of 1 Period: 5.676 d
KOI: K04443.01 Corr: 0.972



DV Fit Results:

Period = 5.67575 [0.00004] d
Epoch = 134.9126 [0.0055] BKJD
Rp/R* = 0.0078 [0.0030]
a/R* = 4.90 [10.98]
b = 0.93 [0.37]
Seff = 803.04 [308.54]
Teq = 1357 [130] K
Rp = 1.22 [0.62] Re
a = 0.0678 [0.0174] AU
Ag = 18.46 [17.89] [0.98σ]
Teffp = 4350 [993] K [2.99σ]

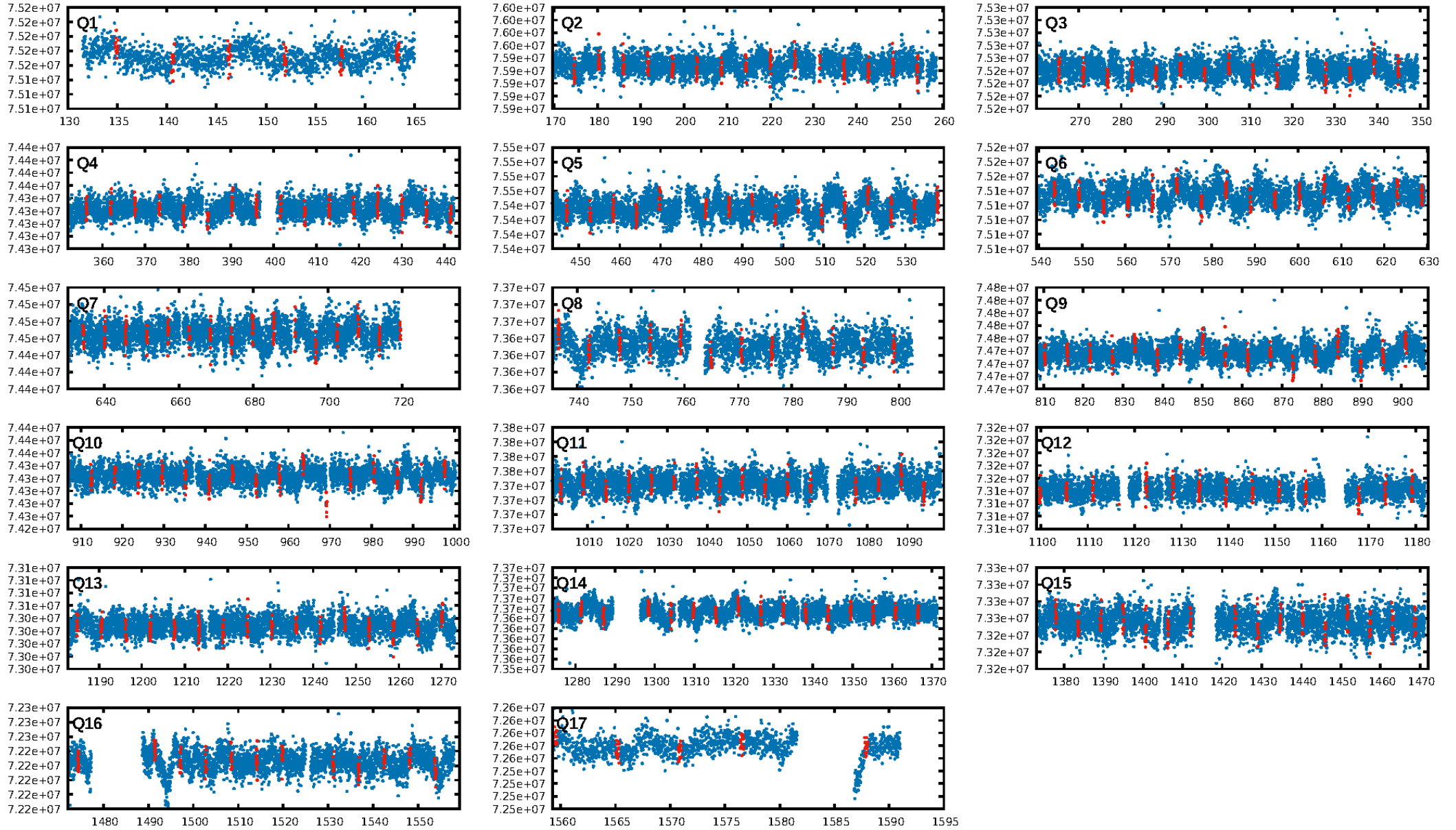
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 9.22e-23
RollingBand-fgt: 1.00 [227/227]
GhostDiagnostic-chr: 4.487
Centroid-sig: 7.5%
Centroid-so: 1.359 arcsec [1.22σ]
OotOffset-rm: 1.295 arcsec [1.78σ]
KicOffset-rm: 1.197 arcsec [1.72σ]
OotOffset-st: 2/4/4/3 [13]
KicOffset-st: 2/4/4/3 [13]
DiffImageQuality-fgm: 0.62 [8/13]
DiffImageOverlap-fno: 1.00 [17/17]

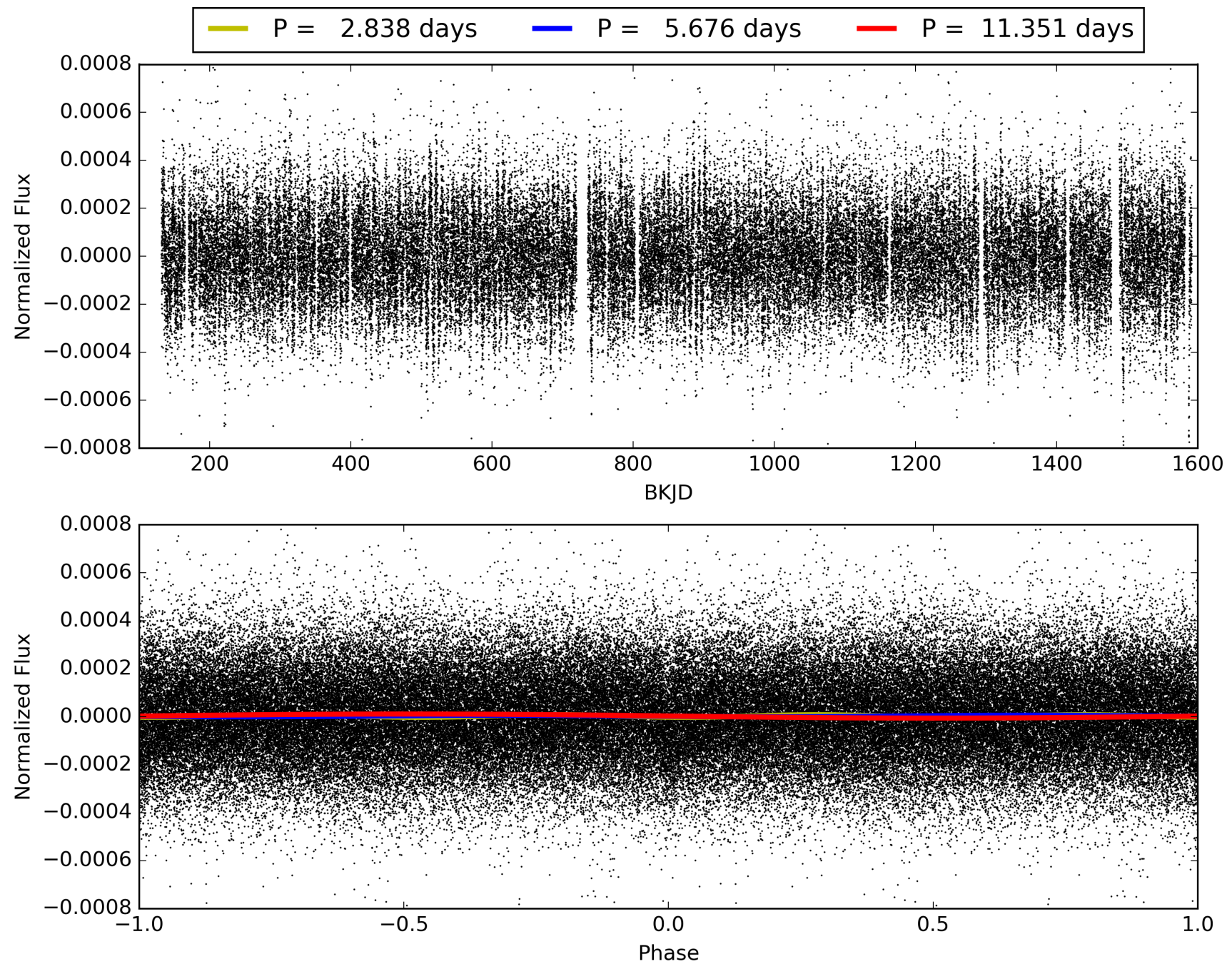
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 14:31:10 Z

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

TCE 005780855-01, PDC Light Curves

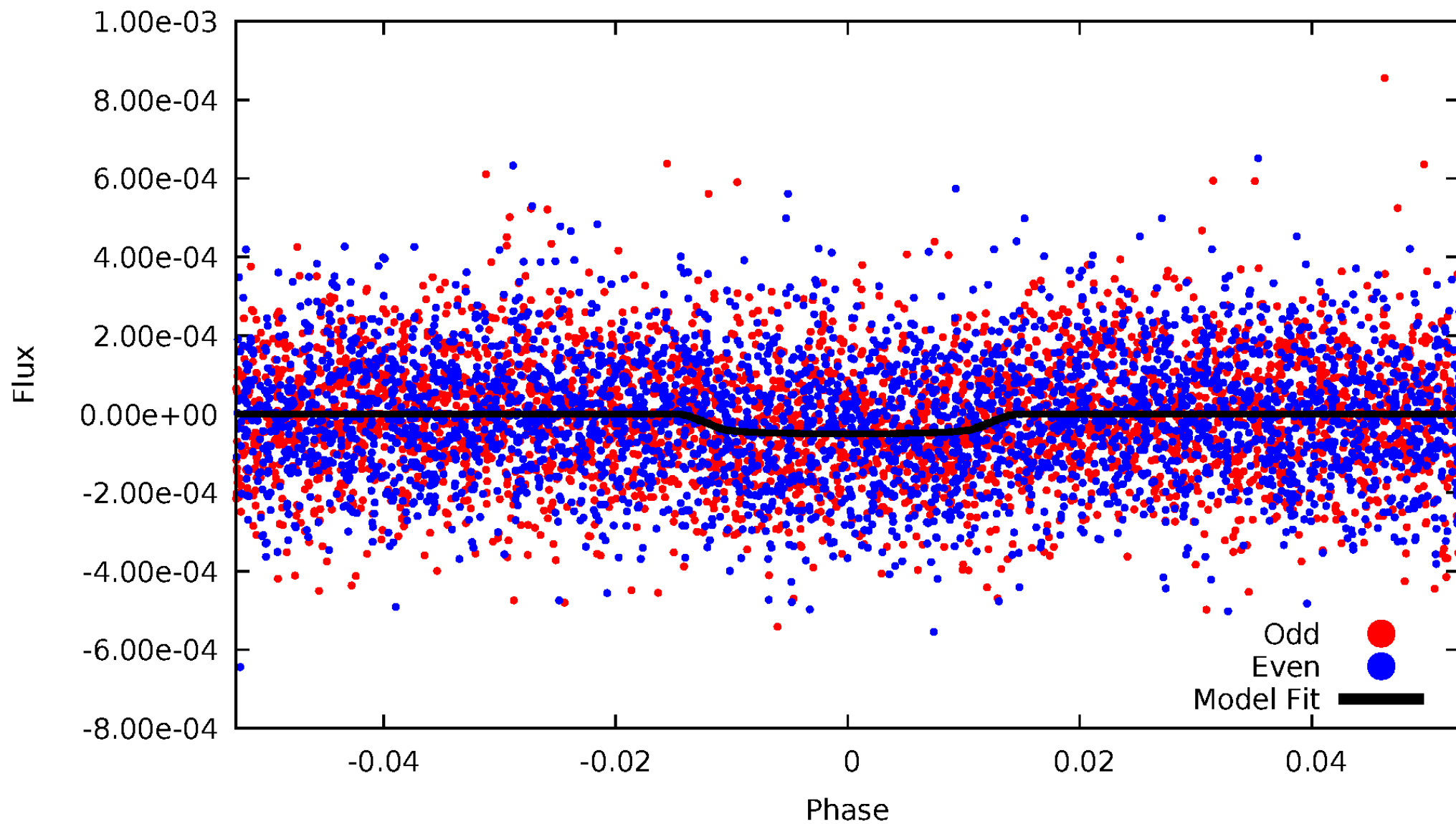


TCE 005780855-01



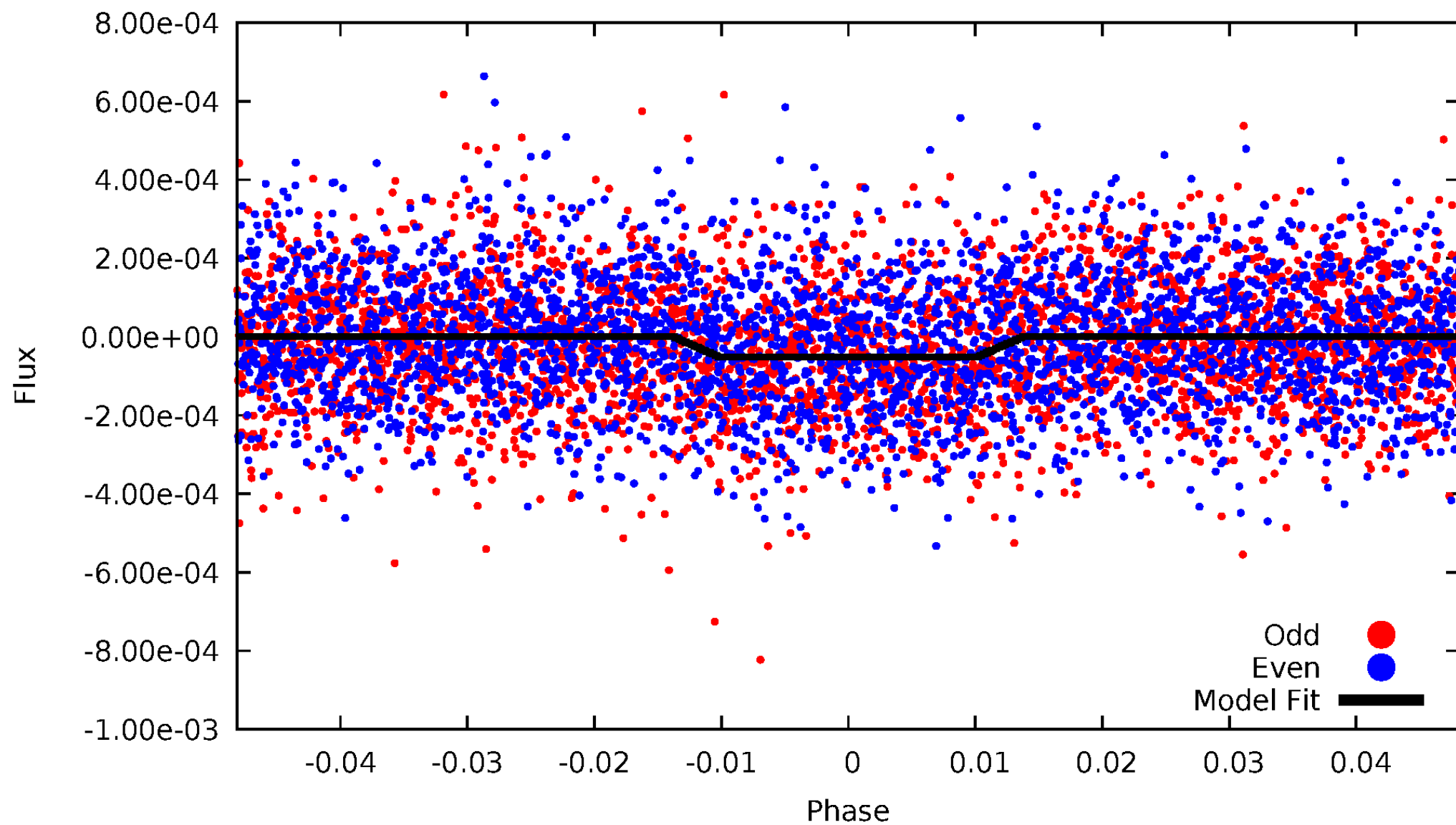
DV Odd/Even

TCE 005780855-01

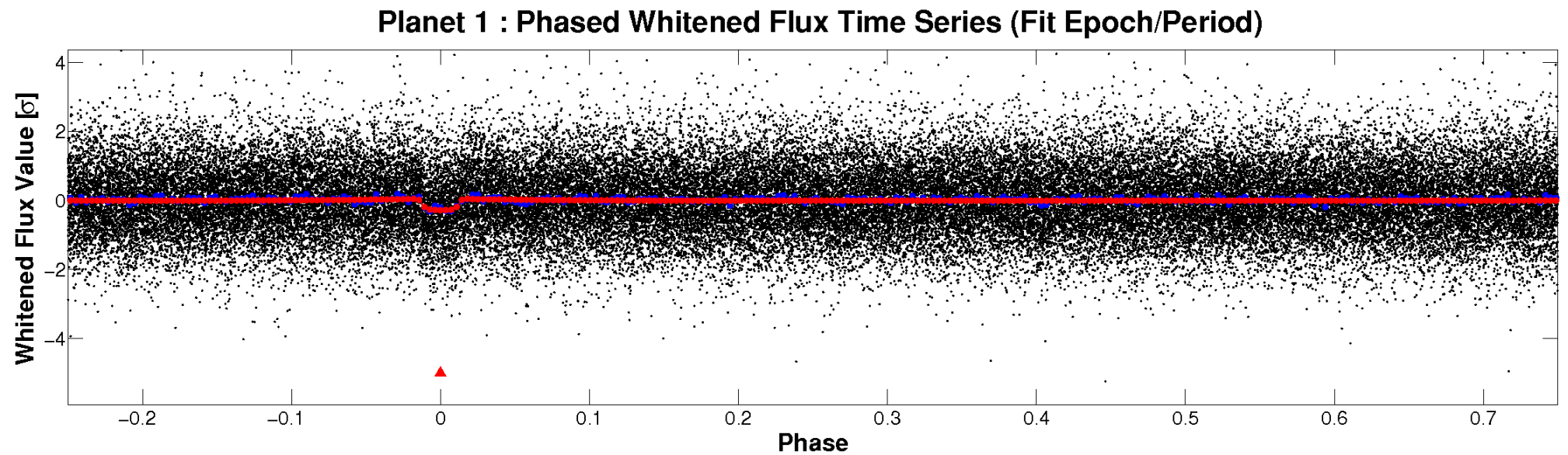
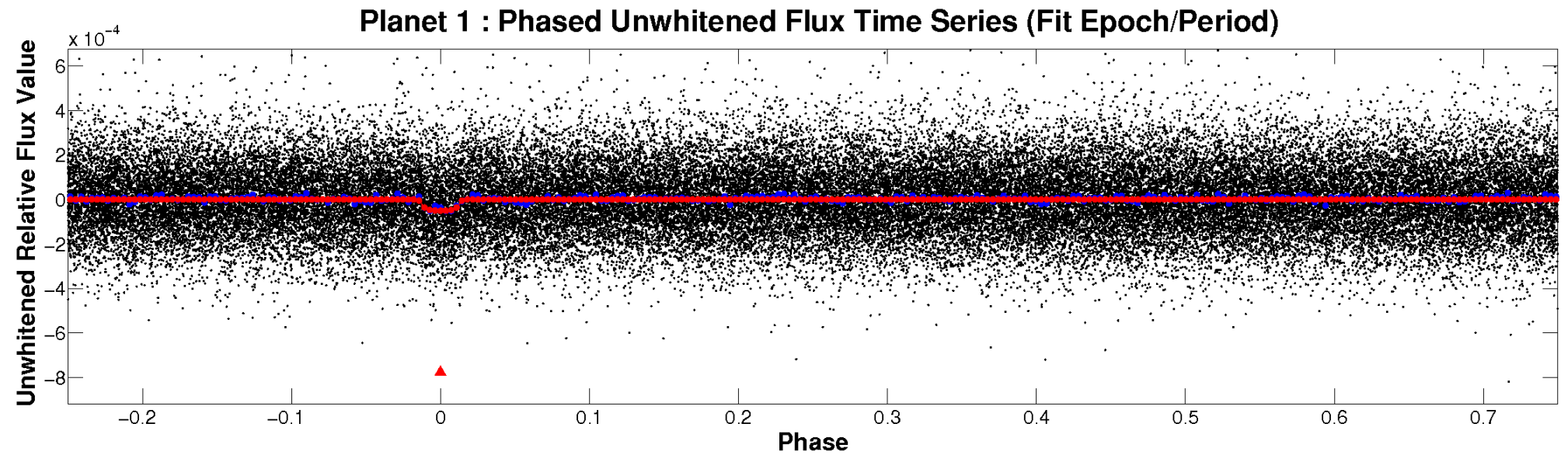


ALT Odd/Even

TCE 005780855-01

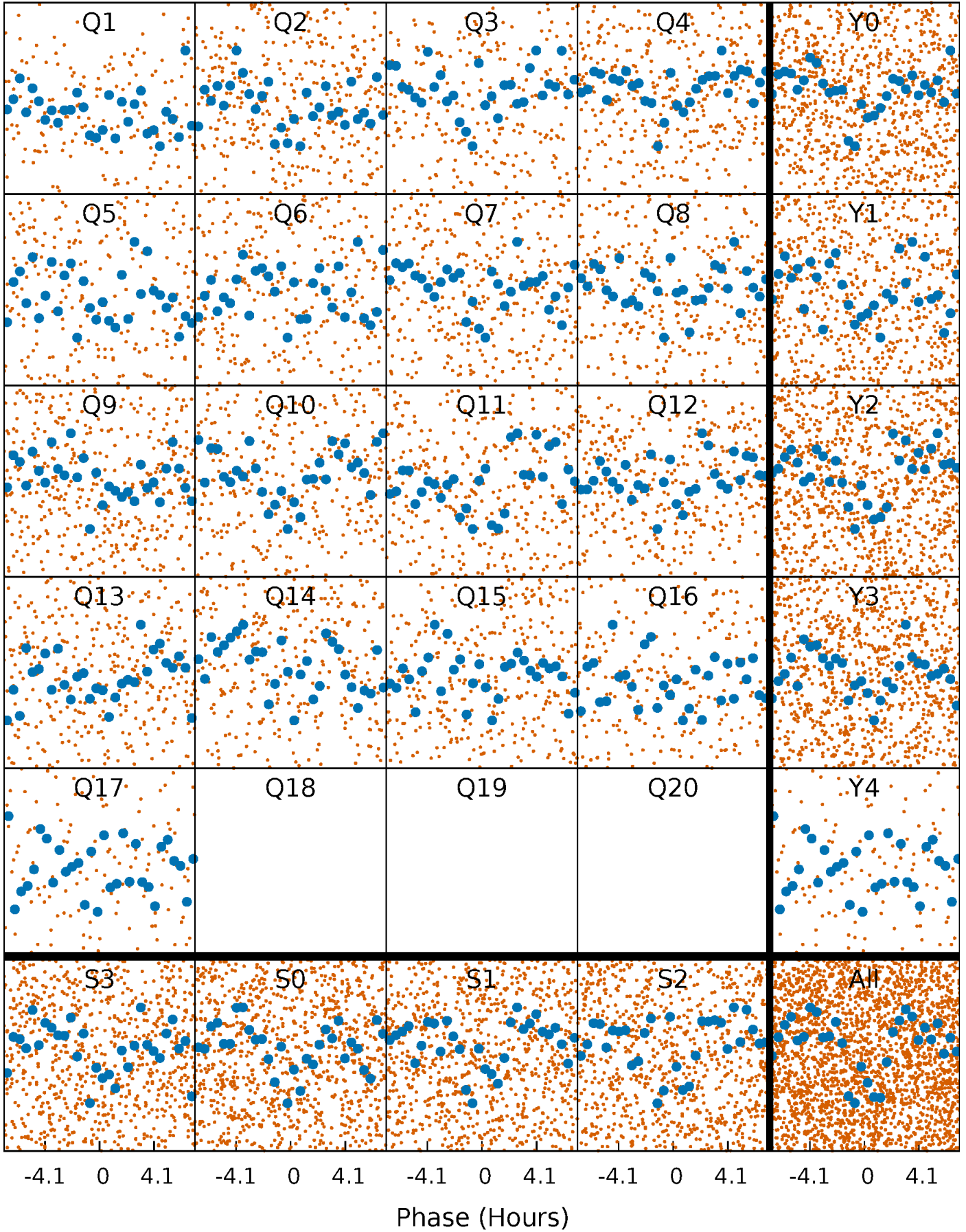


Non-Whitened Vs. Whitened Light Curve



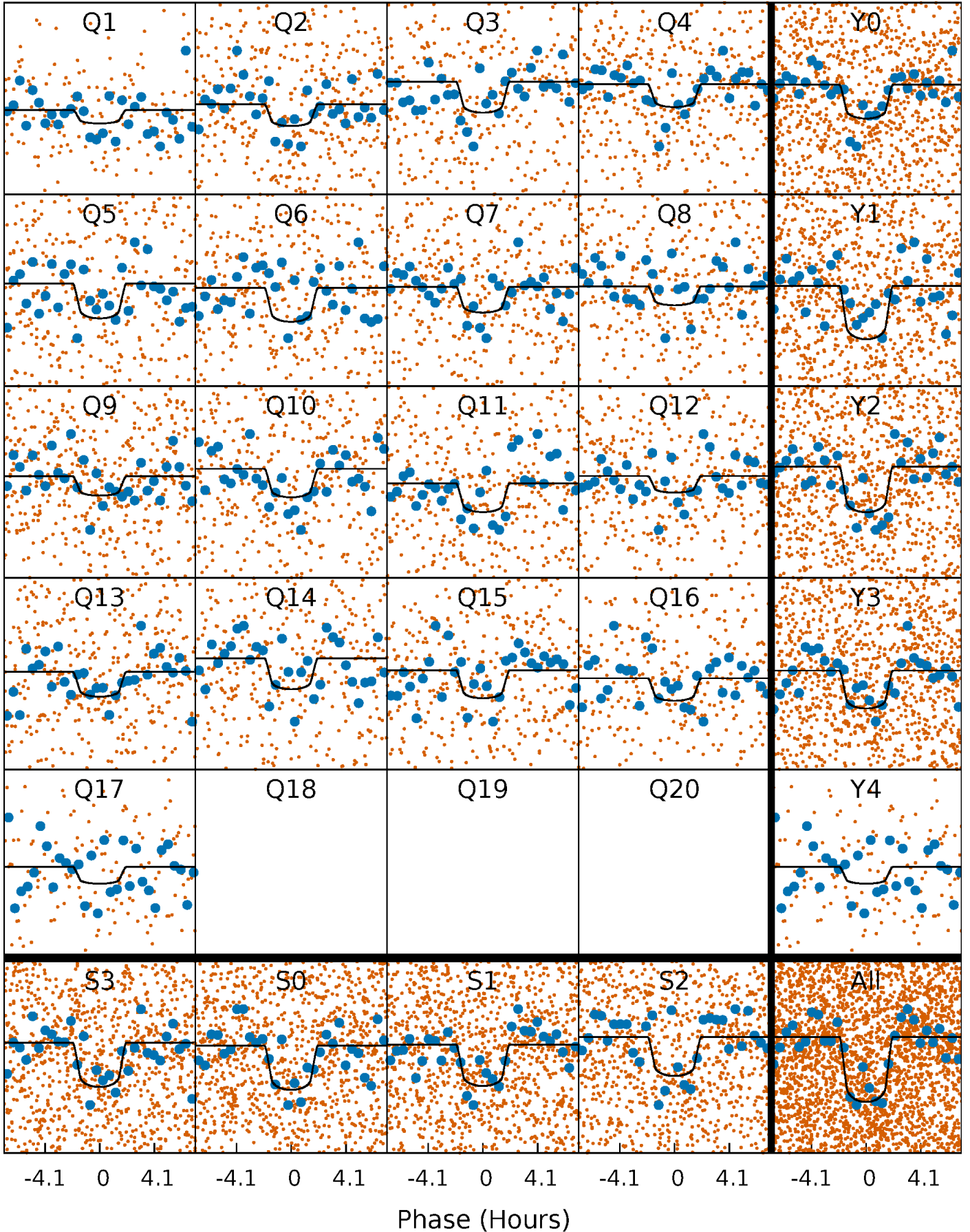
PDC Quarter-Phased Transit Curves

TCE 005780855-01 P= 5.675749 Days $T_0=134.912558$ (BKJD)



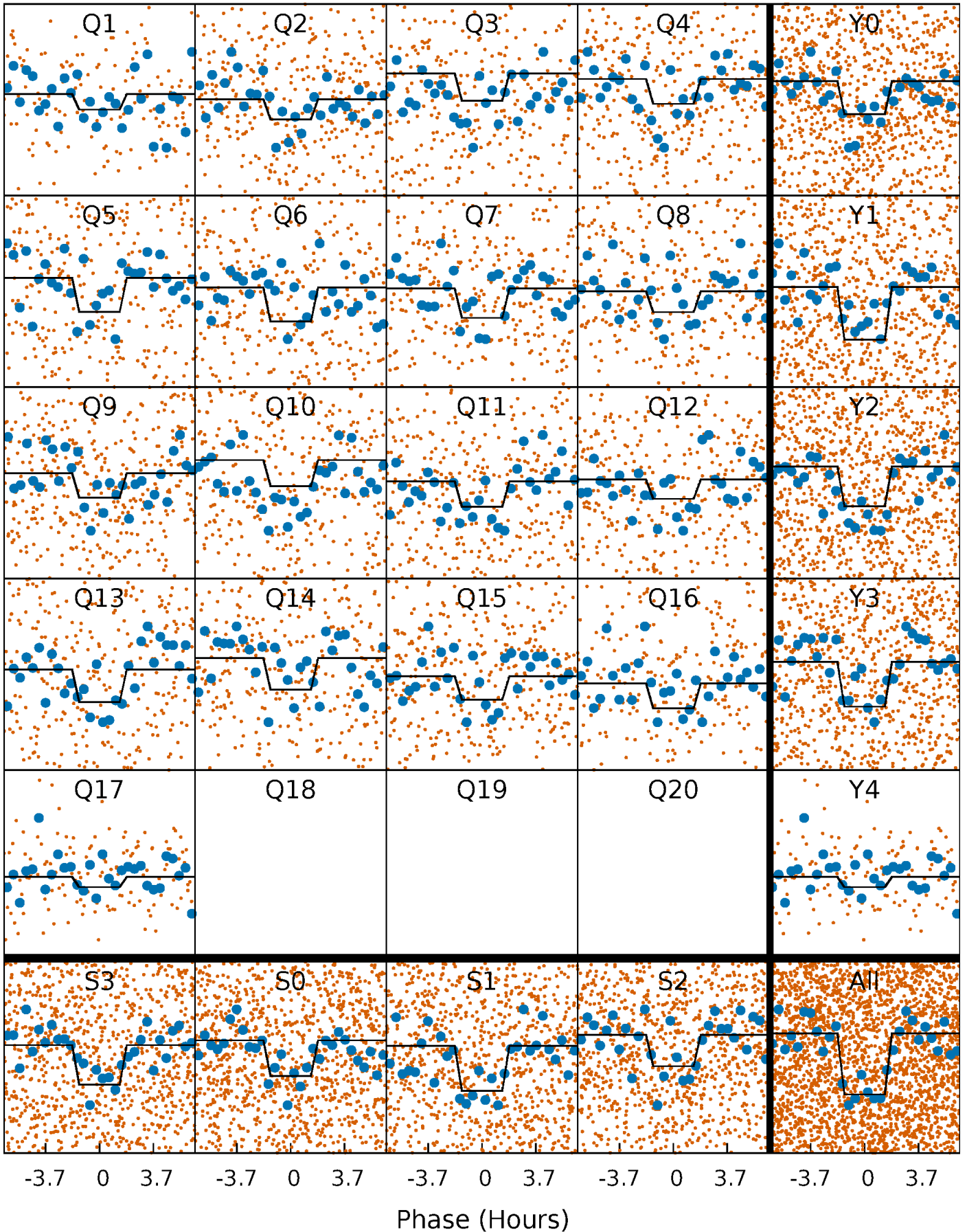
DV Quarter-Phased Transit Curves

TCE 005780855-01 P= 5.675749 Days $T_0=134.912558$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

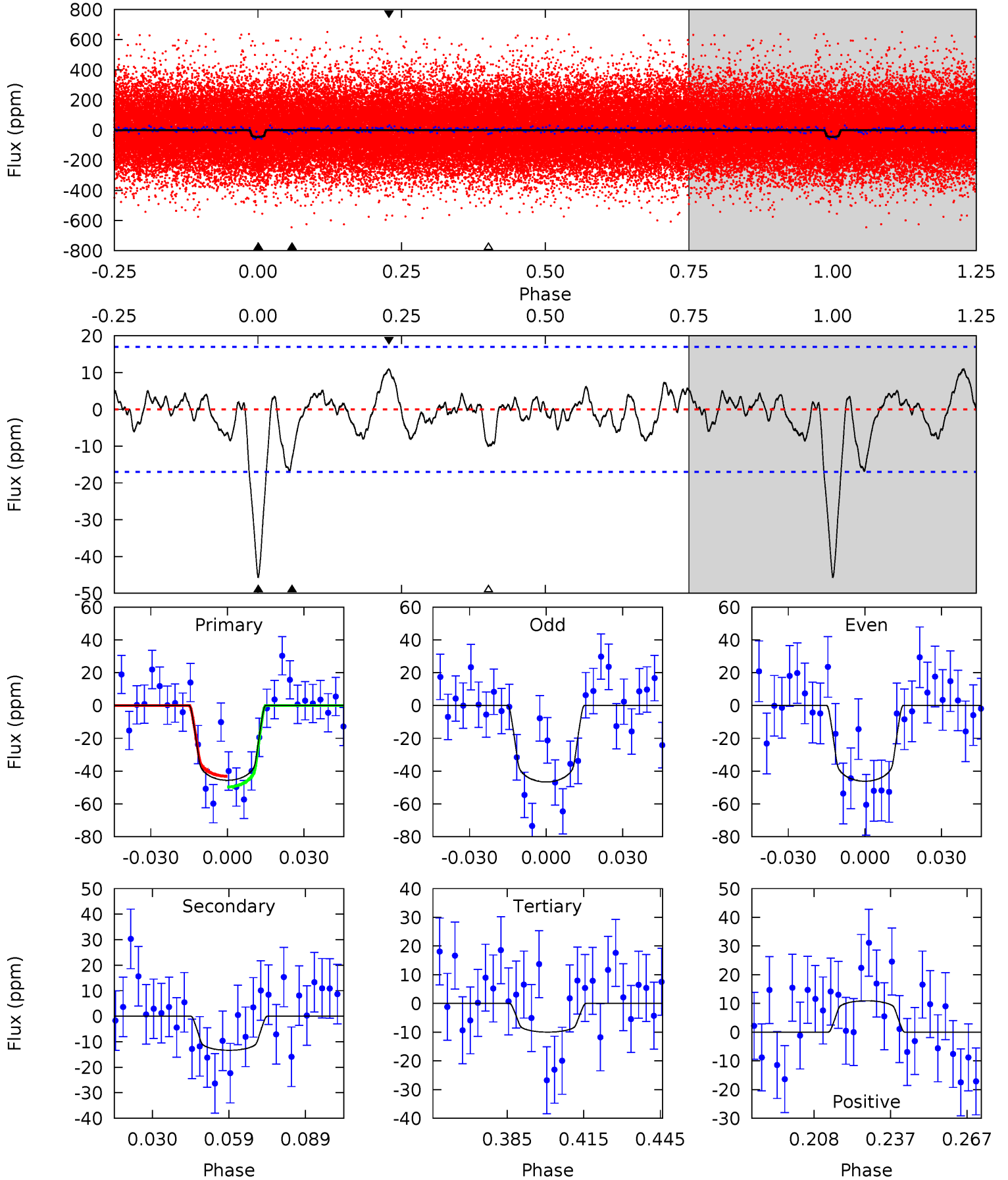
TCE 005780855-01 P= 5.675770 Days $T_0=134.911303$ (BKJD)



DV Model-Shift Uniqueness Test

005780855-01, P = 5.675749 Days, E = 129.236809 Days

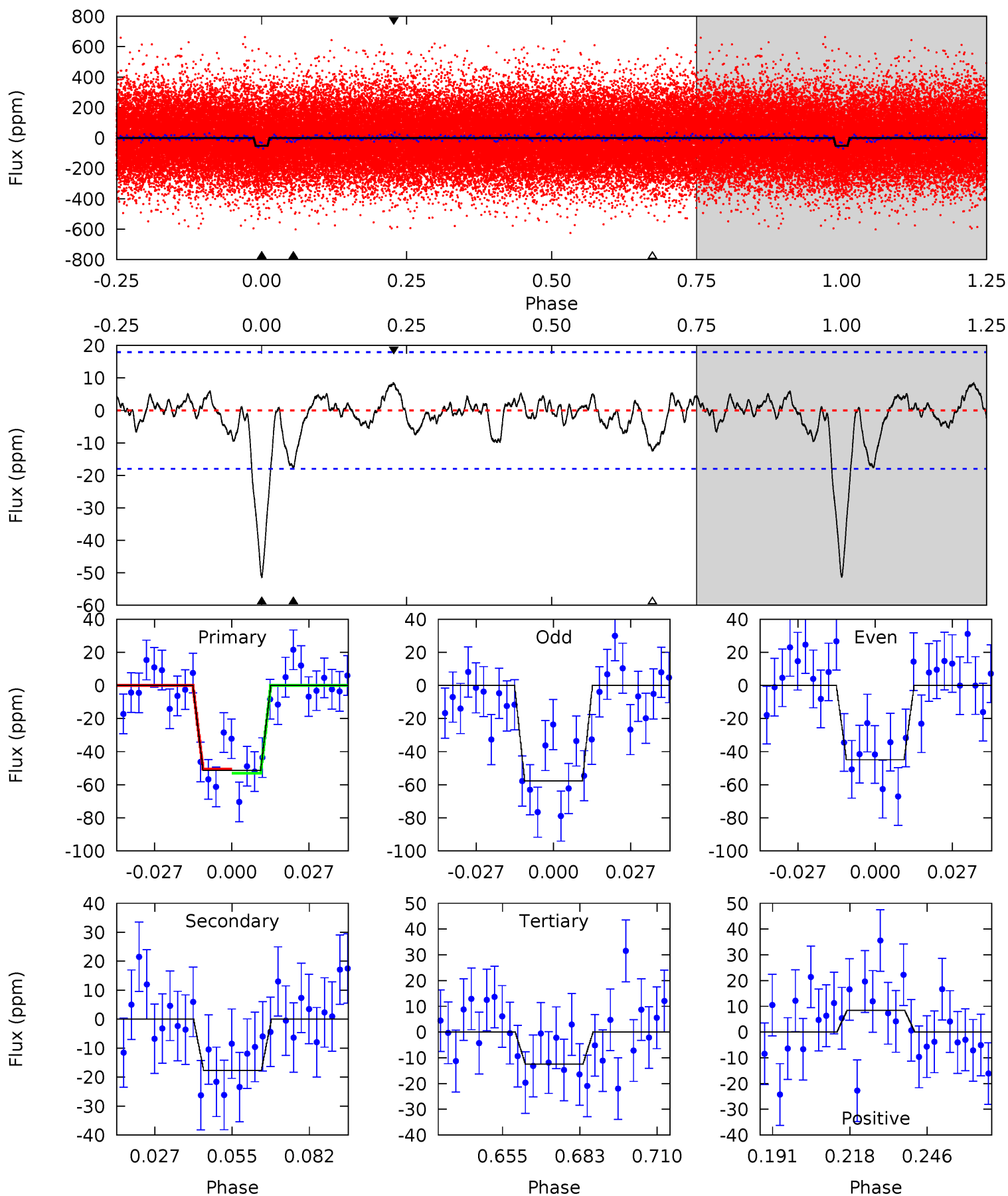
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.9	3.79	2.83	3.10	4.81	2.17	1.12	10.1	9.82	0.96	0.69	0.06	0.85	0.19	0.92



Alt Model-Shift Uniqueness Test

005780855-01, P = 5.675770 Days, E = 129.235533 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.8	4.76	3.35	2.26	4.83	2.21	1.03	10.5	11.5	1.41	2.49	1.73	0.98	0.14	0.34



Stellar Parameters For KIC 005780855

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6681^{+161}_{-241}	$4.233^{+0.124}_{-0.186}$	$-0.080^{+0.250}_{-0.300}$	$1.438^{+0.459}_{-0.282}$	$1.294^{+0.200}_{-0.200}$	$0.613^{+0.368}_{-0.307}$
	+2%/-4%	+3%/-4%	+312%/-375%	+32%/-20%	+15%/-15%	+60%/-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 005780855-01 / KOI 4443.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-13 ± 4	$1.27^{+0.55}_{-0.49}$	1903^{+131}_{-112}	4625^{+1084}_{-593}	21^{+34}_{-11}
Alt.	-18 ± 4	$1.17^{+0.54}_{-0.48}$	1912^{+136}_{-117}	5094^{+1387}_{-733}	33^{+60}_{-18}

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 $A_{obs} \gg 1.0$

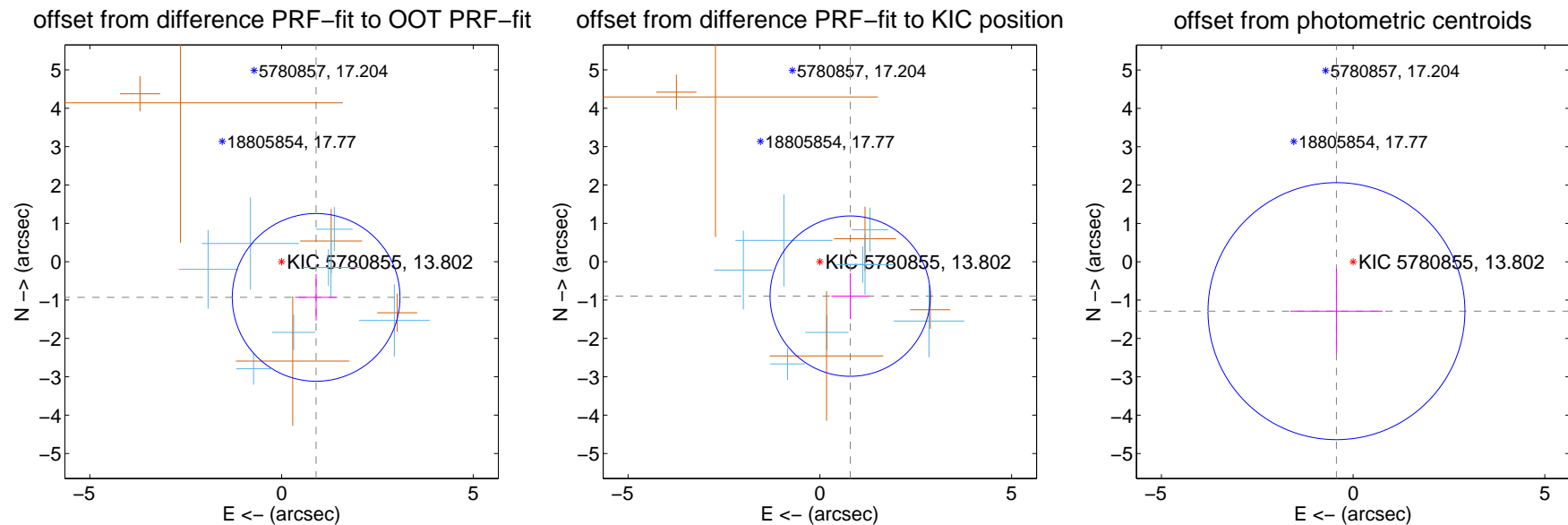
DV Centroid Data

Supplemental centroid analysis for 005780855-01. Kepler magnitude: 13.80. Transit SNR 10.09

There are 8 quarters with good PRF difference image offsets

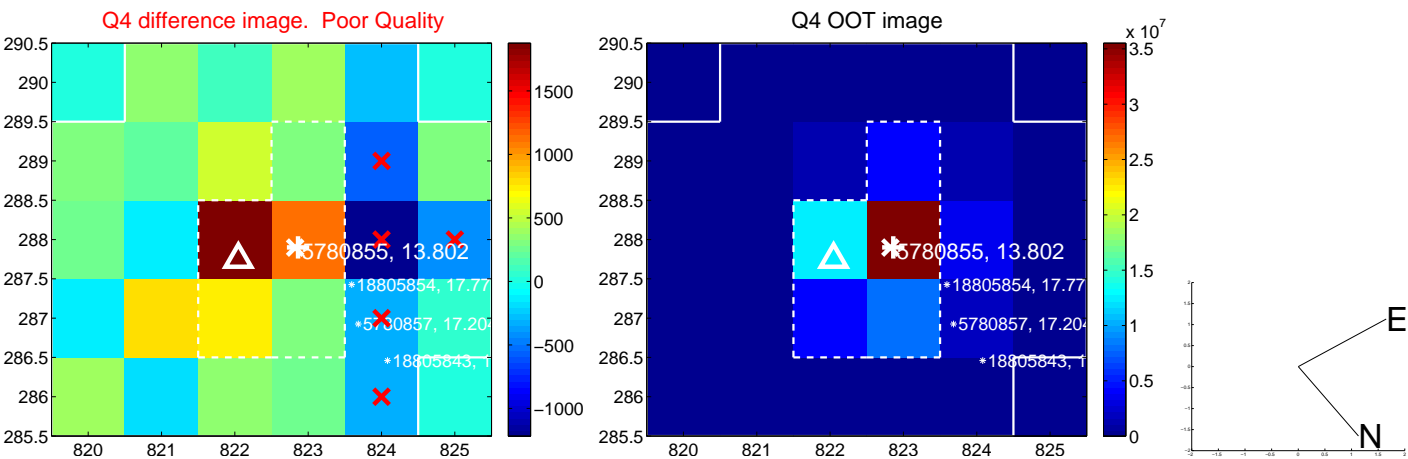
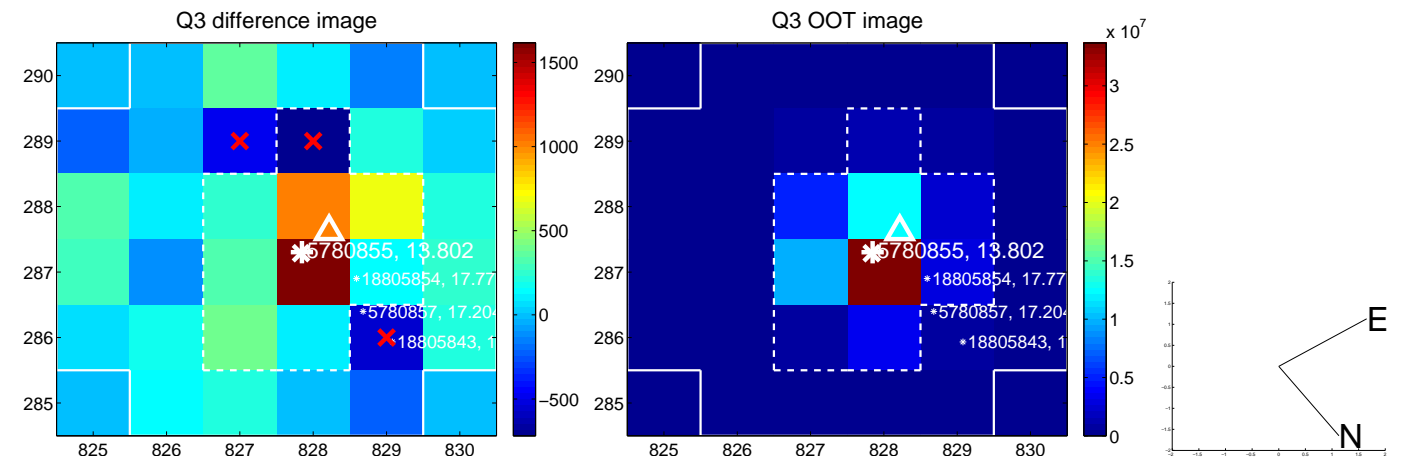
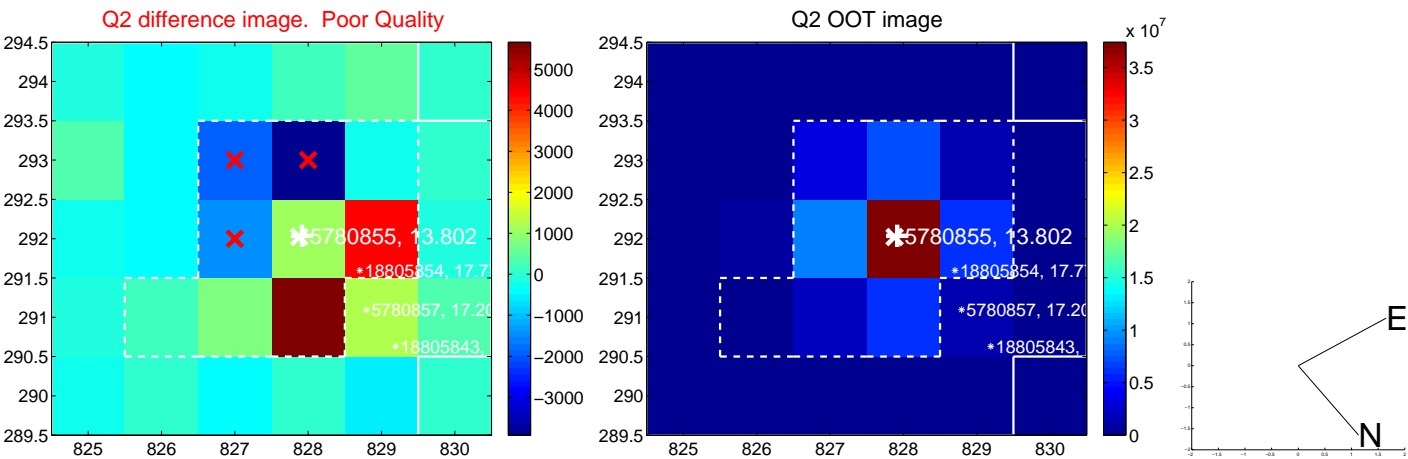
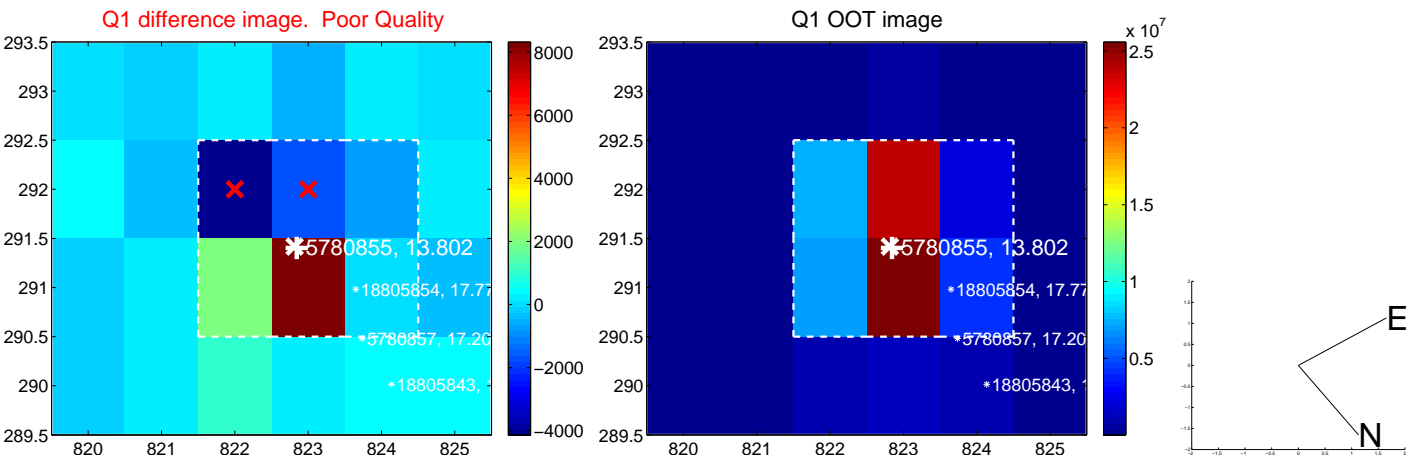
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.295 ± 0.728	1.78	-0.901 ± 0.550	-0.930 ± 0.607
PRF-fit source offset from KIC position	1.197 ± 0.696	1.72	-0.792 ± 0.491	-0.898 ± 0.597
photometric centroid source offset	1.36 ± 1.12	1.22	0.43 ± 1.20	-1.29 ± 1.11

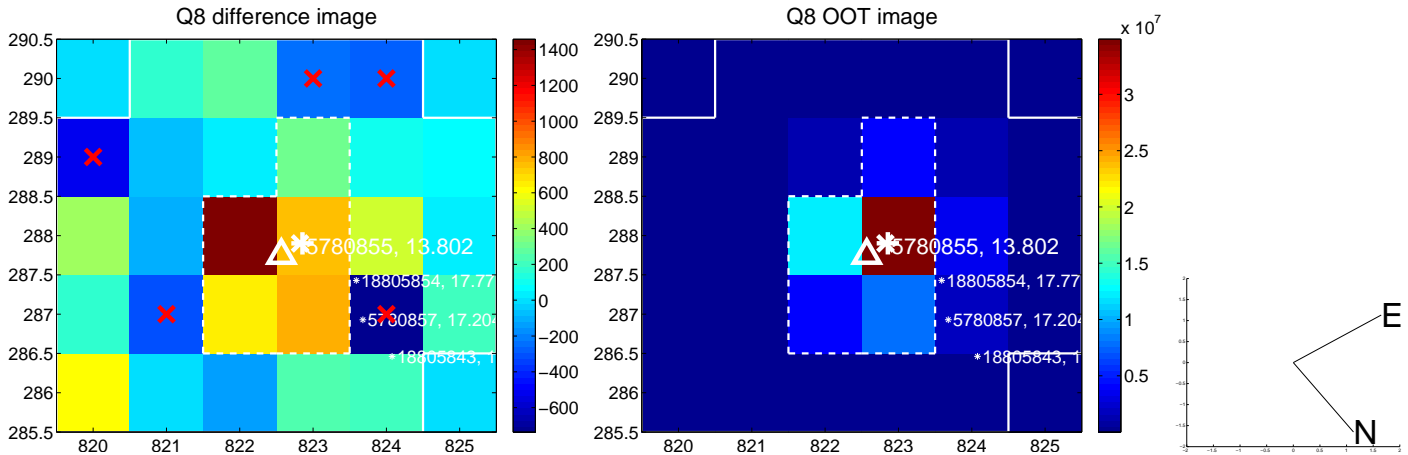
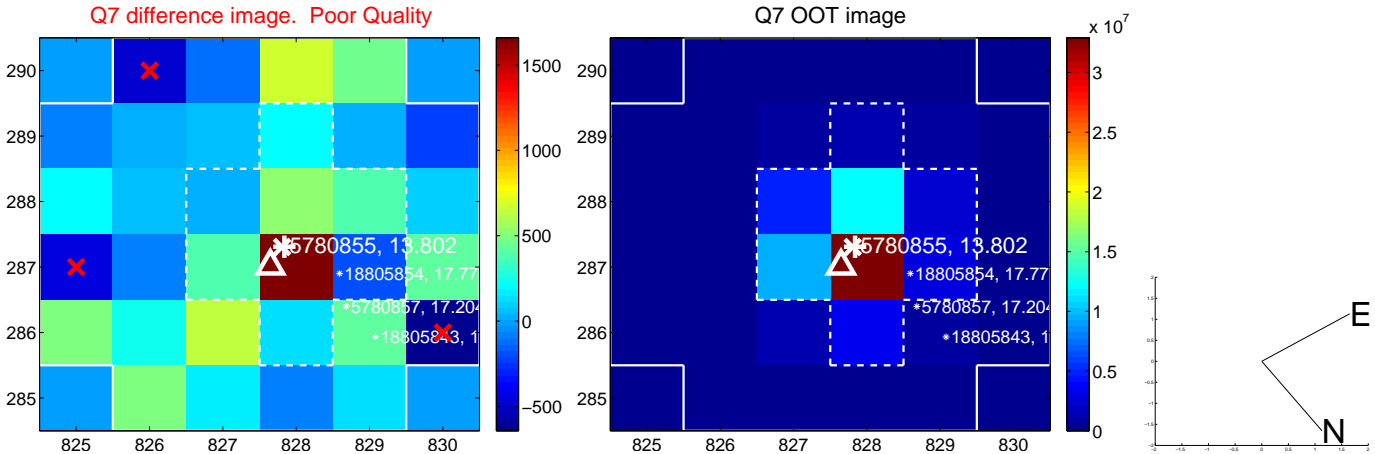
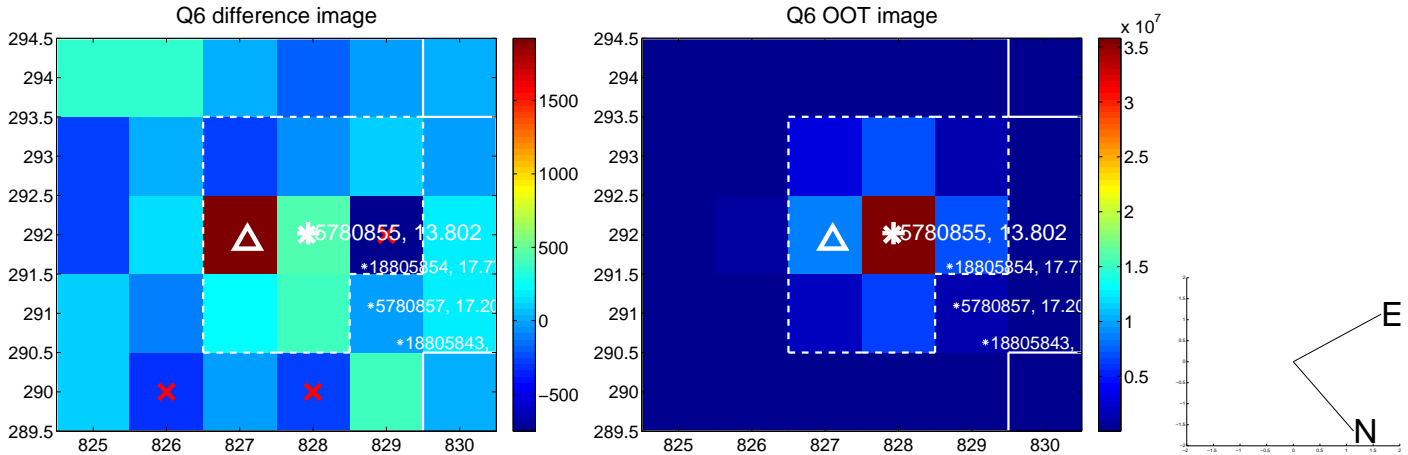
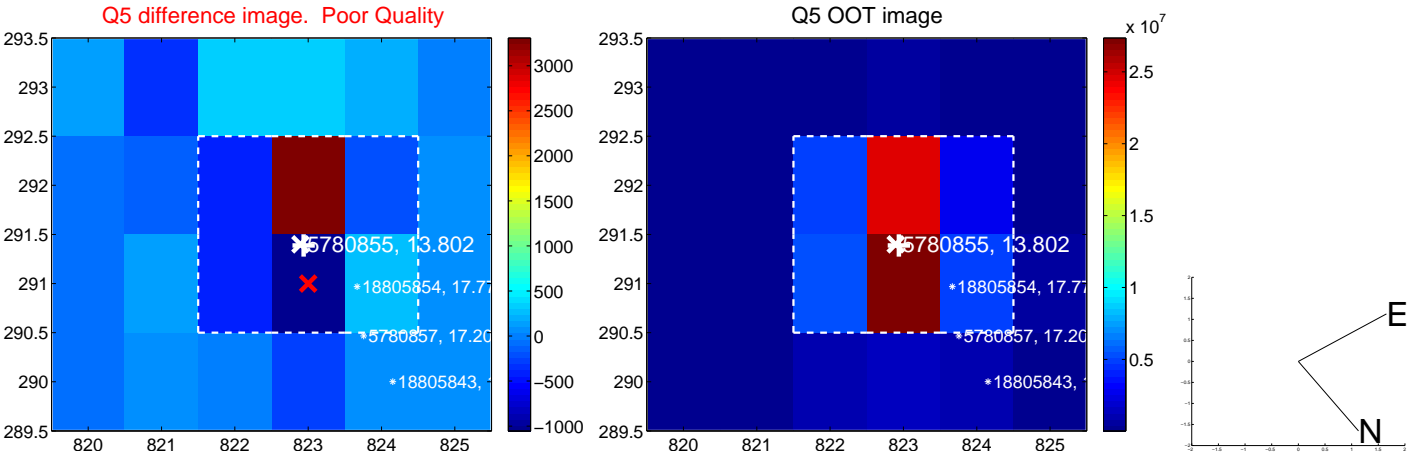


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

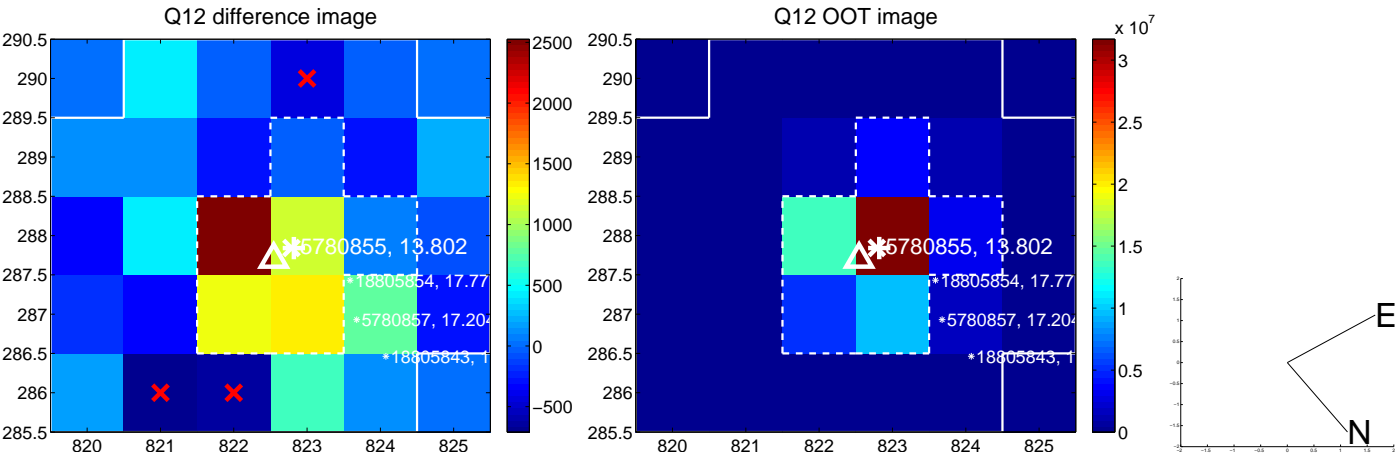
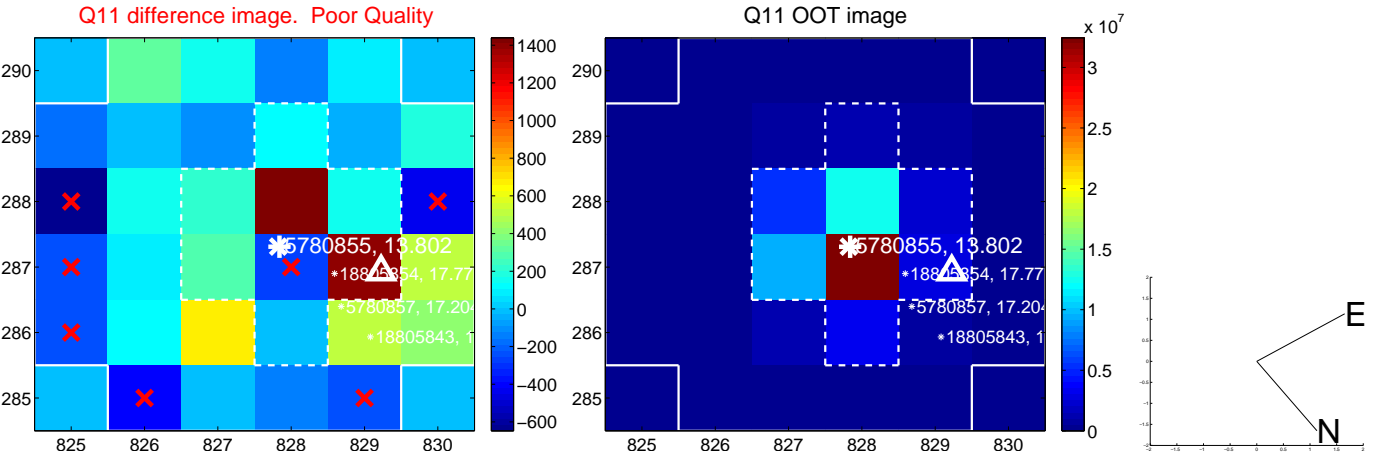
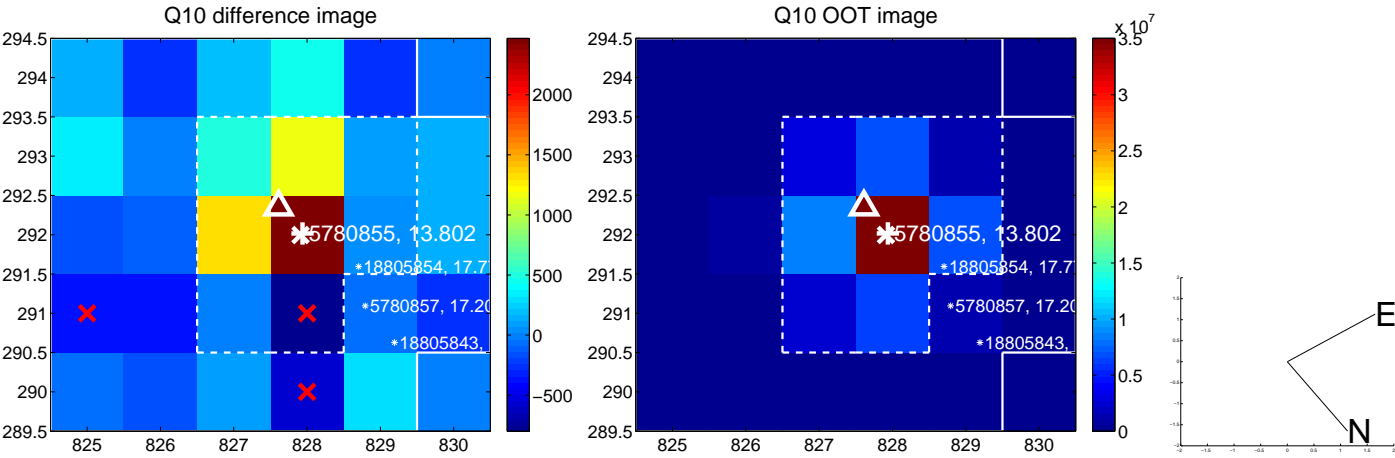
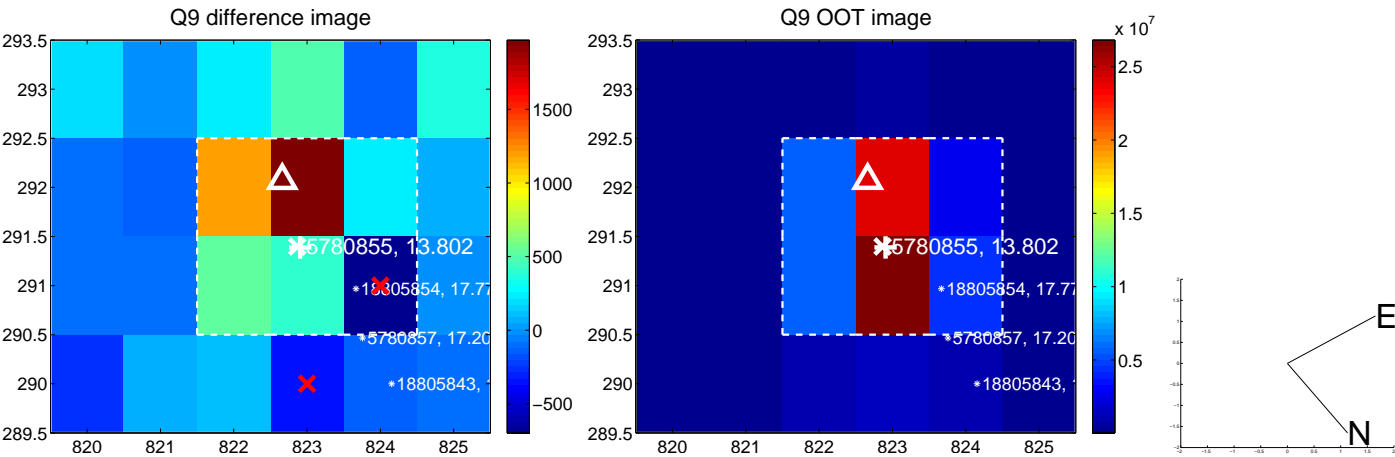
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



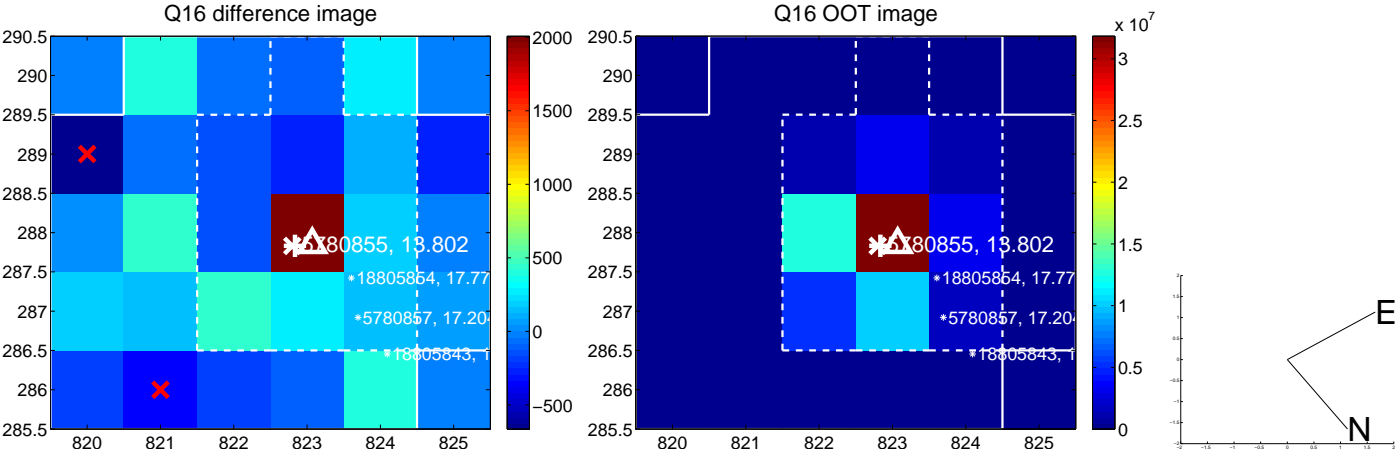
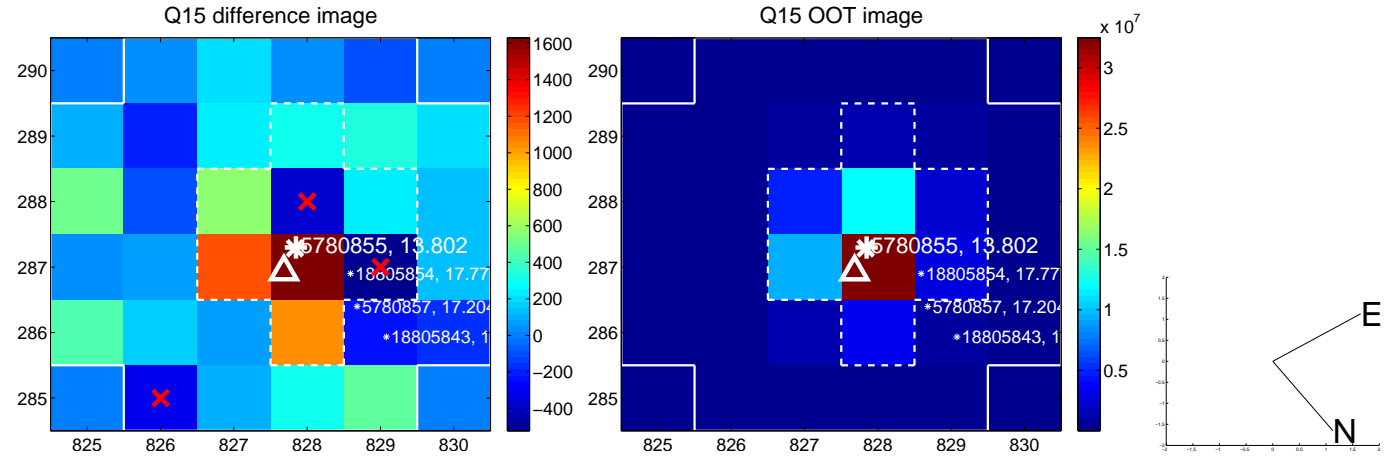
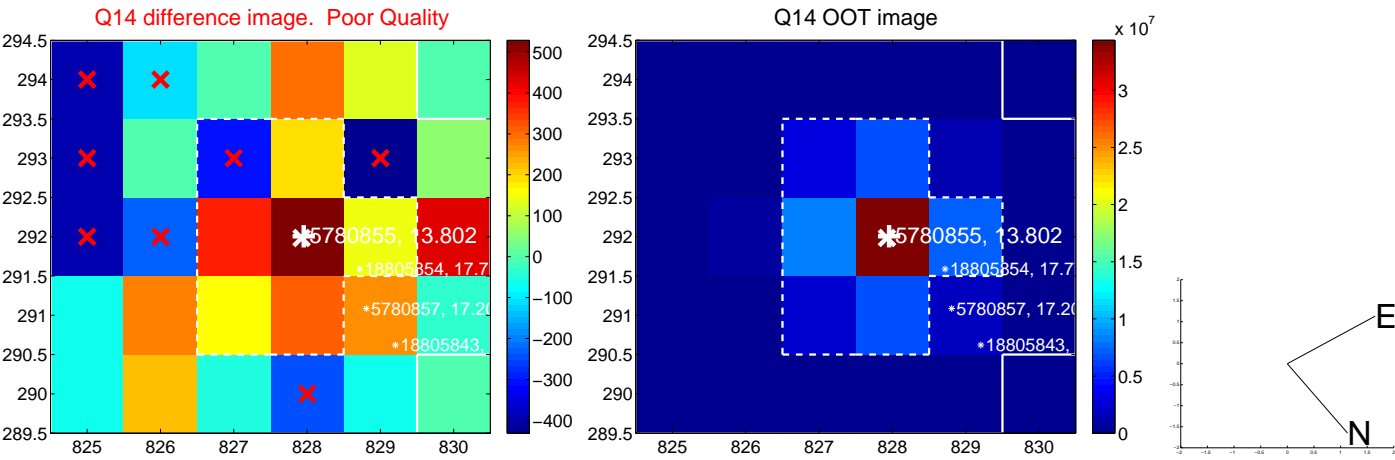
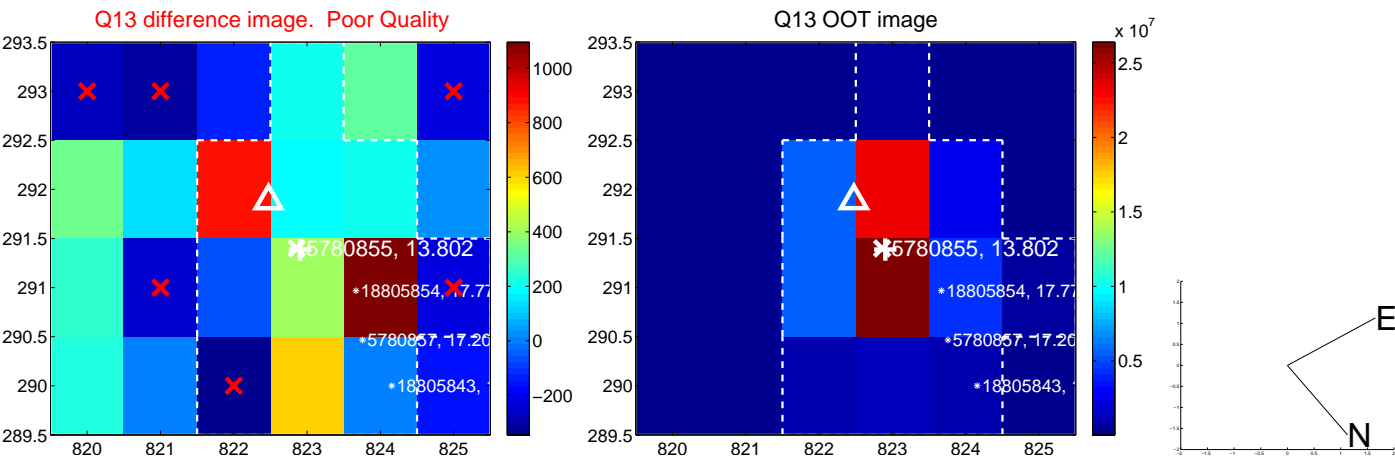
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



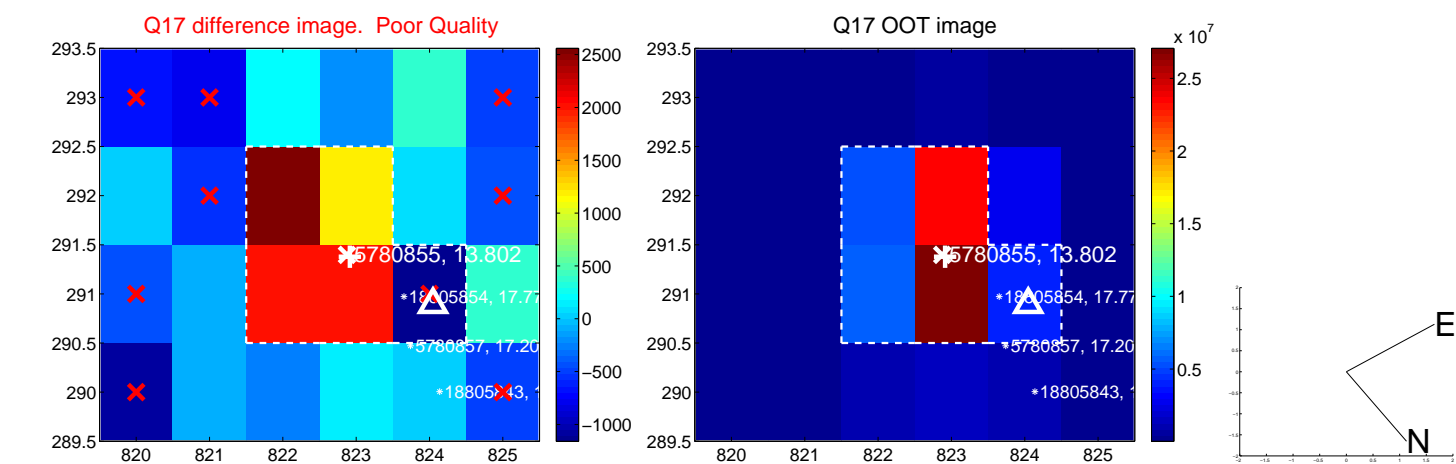
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



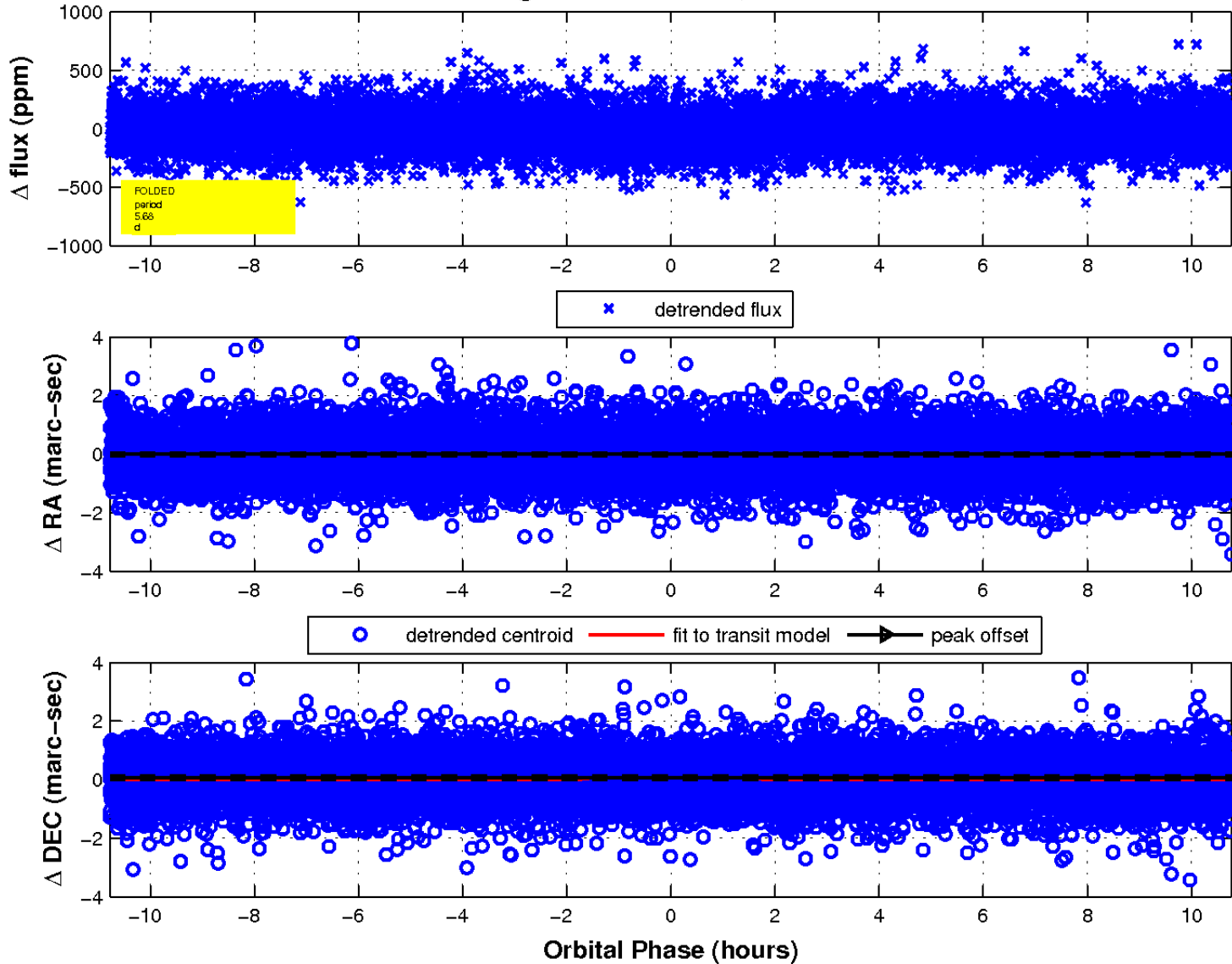
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

