

KIC 002852810

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})
002852810-01	OBS	No	4.754512	135.510343	27.7	33.119	12.8	10.3	4.45	7105	2.35	9520.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002852810-01	OBS	FP	0.00	1	0	0	0	LPP_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 002852810-01

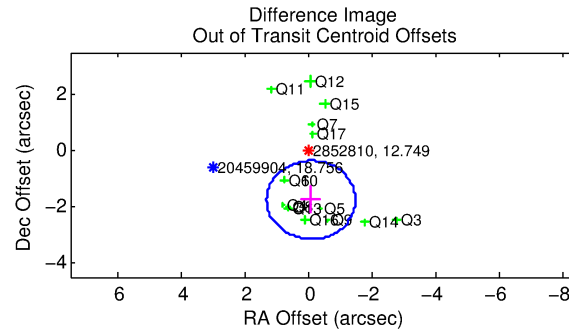
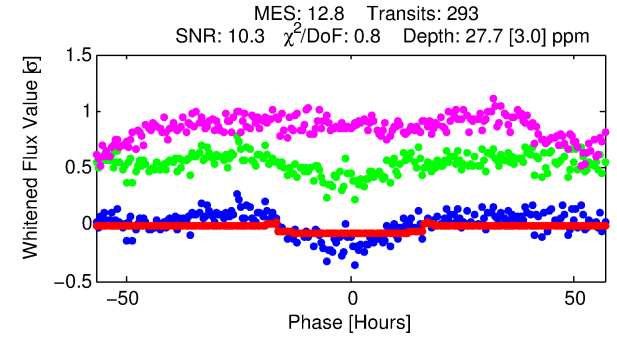
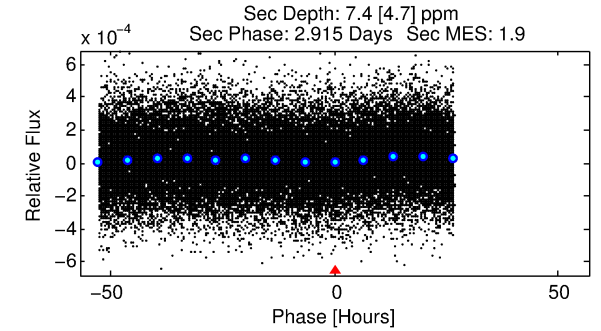
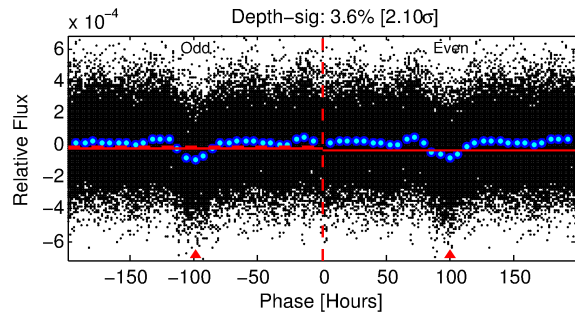
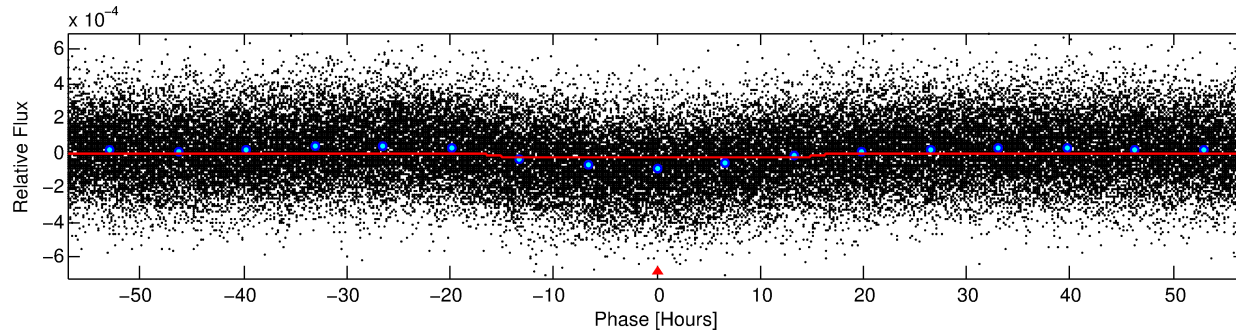
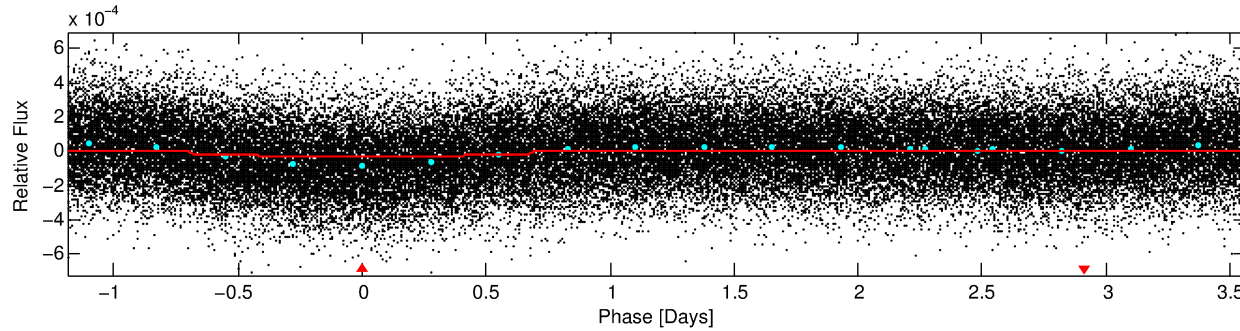
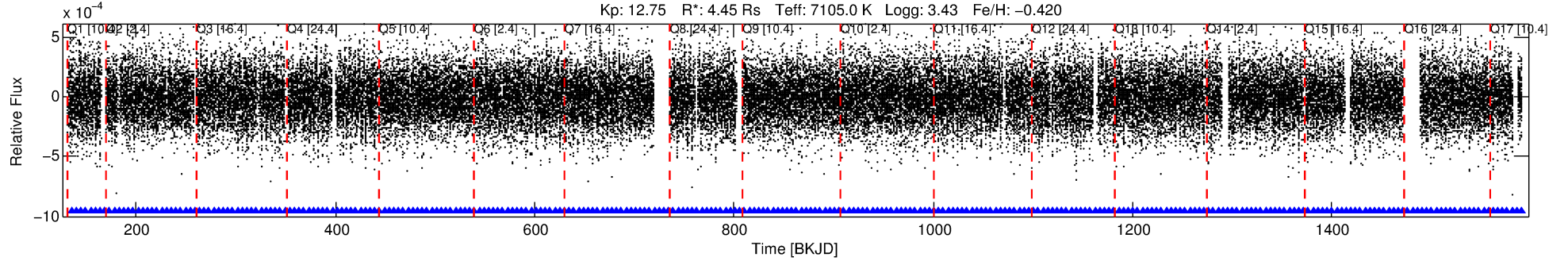
No Significant Match Found

DV One-Page Summary

KIC: 2852810 Candidate: 1 of 1 Period: 4.755 d

KOI: K06097 Corr: No Ephemeris Match

Kp: 12.75 R*: 4.45 Rs Teff: 7105.0 K Logg: 3.43 Fe/H: -0.420



DV Fit Results:

Period = 4.75451 [0.00009] d
Epoch = 135.5103 [0.0129] BKJD
Rp/R* = 0.0048 [0.0037]
a/R* = 1.27 [1.97]
b = 0.08 [53.18]
Seff = 9520.24 [6978.70]
Teq = 2519 [462] K
Rp = 2.35 [2.08] Re
a = 0.0689 [0.0309] AU
Ag = 3.50 [6.25] [0.40σ]
Teffp = 5328 [2185] K [1.26σ]

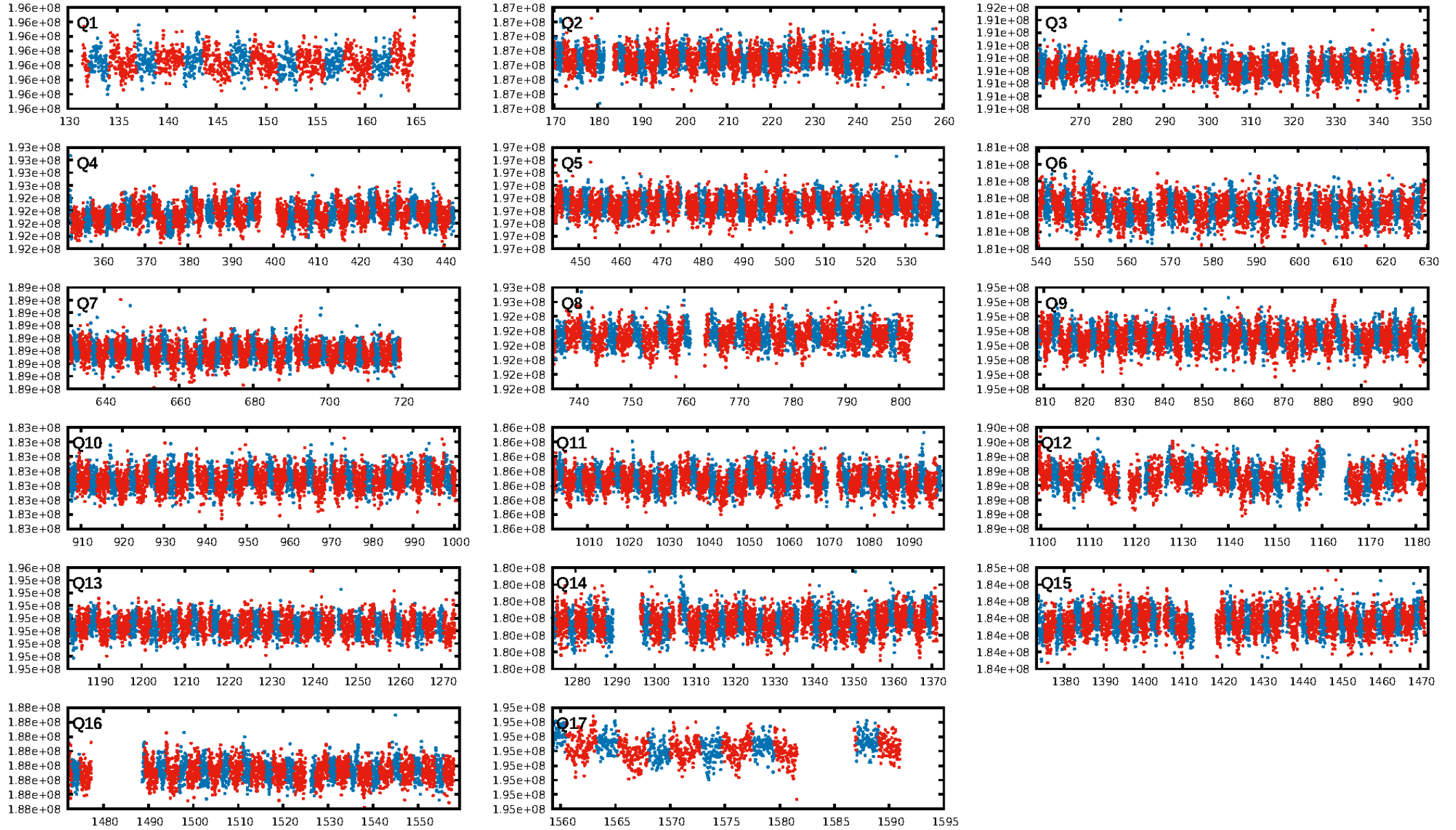
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.37e-42
RollingBand-fgt: 1.00 [280/280]
GhostDiagnostic-chr: 5.132
Centroid-sig: 0.2%
Centroid-so: 1.038 arcsec [1.47σ]
OotOffset-rm: 1.759 arcsec [3.78σ]
KicOffset-rm: 1.756 arcsec [4.01σ]
OotOffset-st: 3/4/4/4 [15]
KicOffset-st: 3/4/4/4 [15]
DiffImageQuality-fgm: 0.80 [12/15]
DiffImageOverlap-fno: 1.00 [17/17]

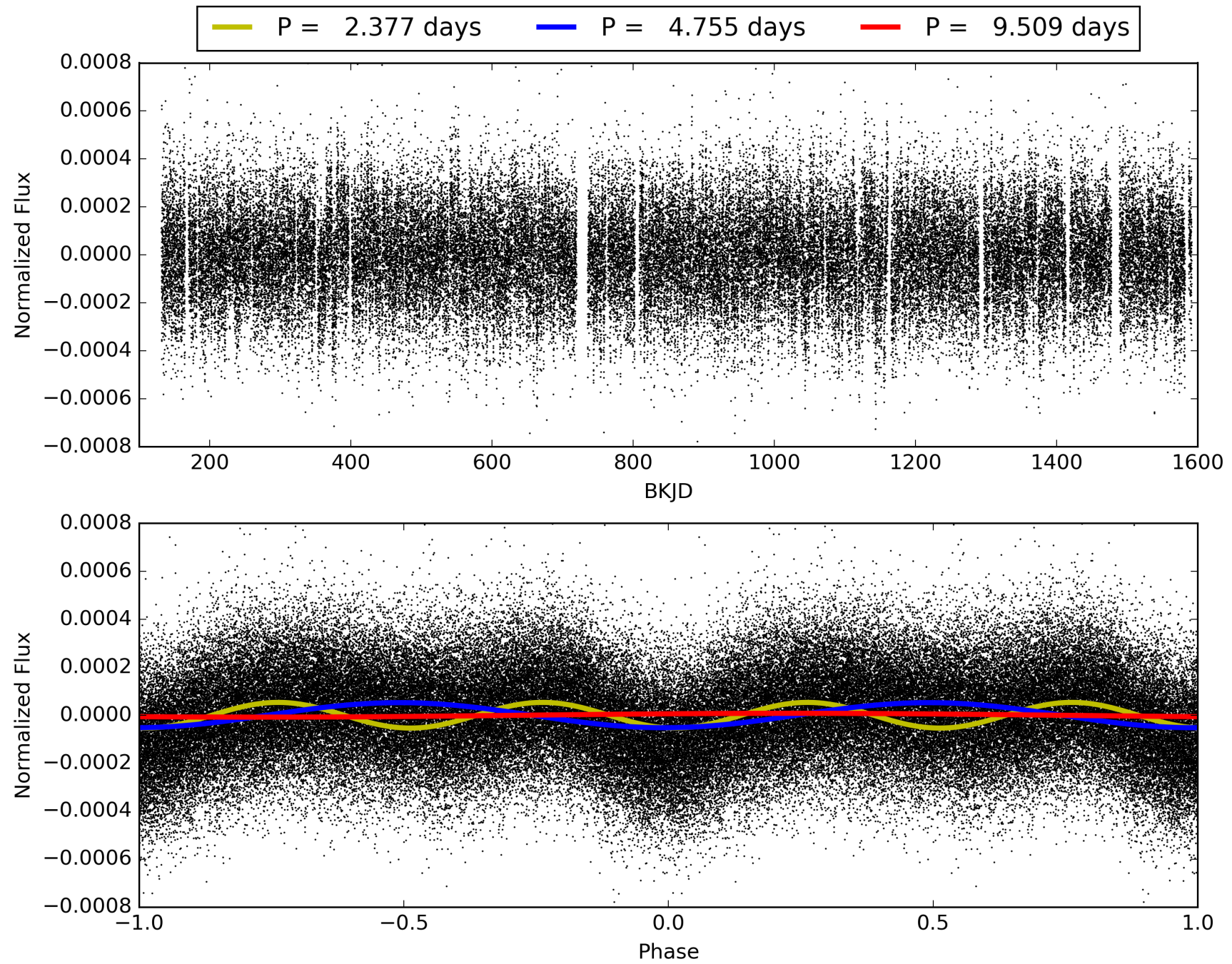
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 15:12:27 Z

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

TCE 002852810-01, PDC Light Curves

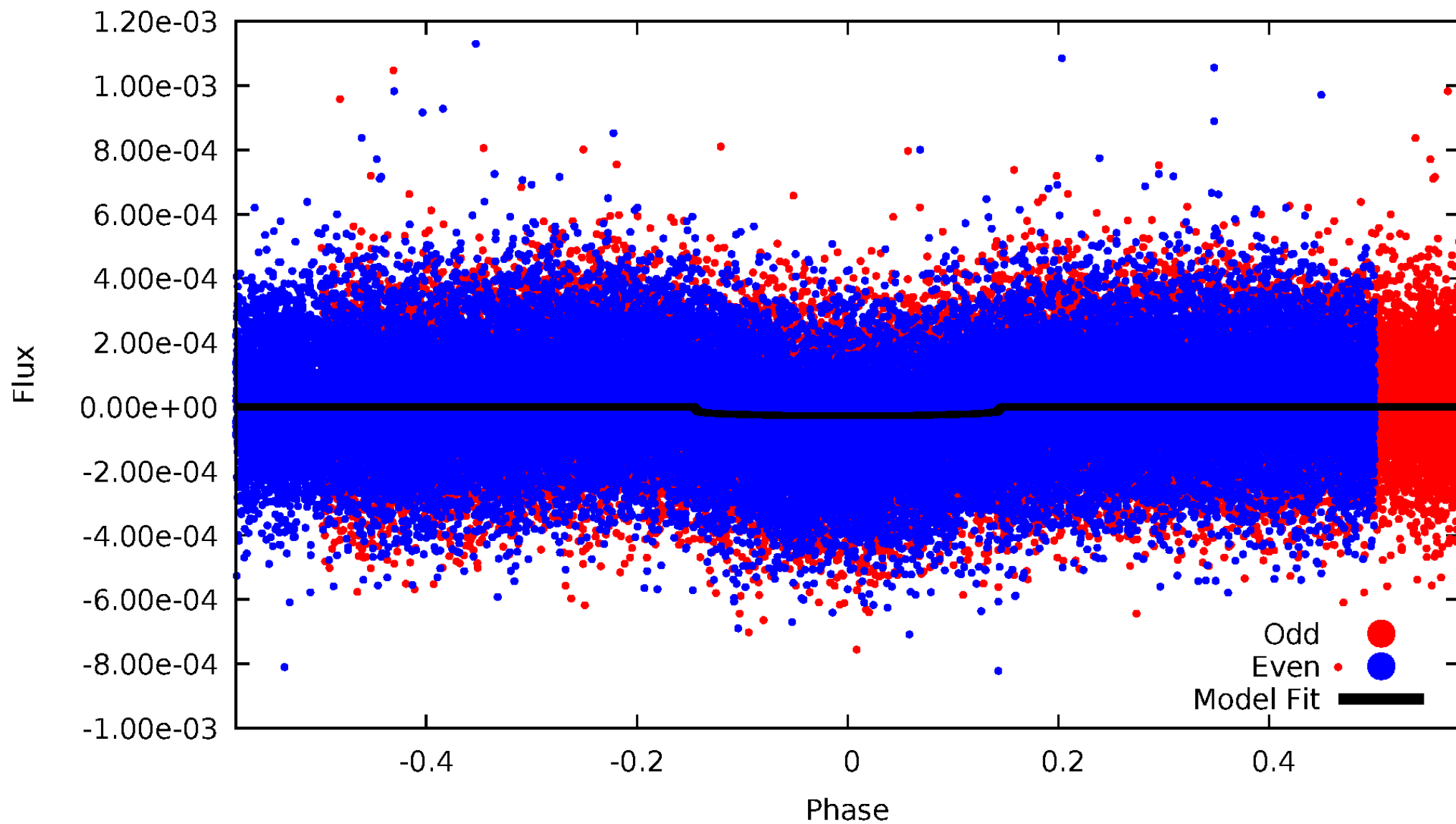


TCE 002852810-01



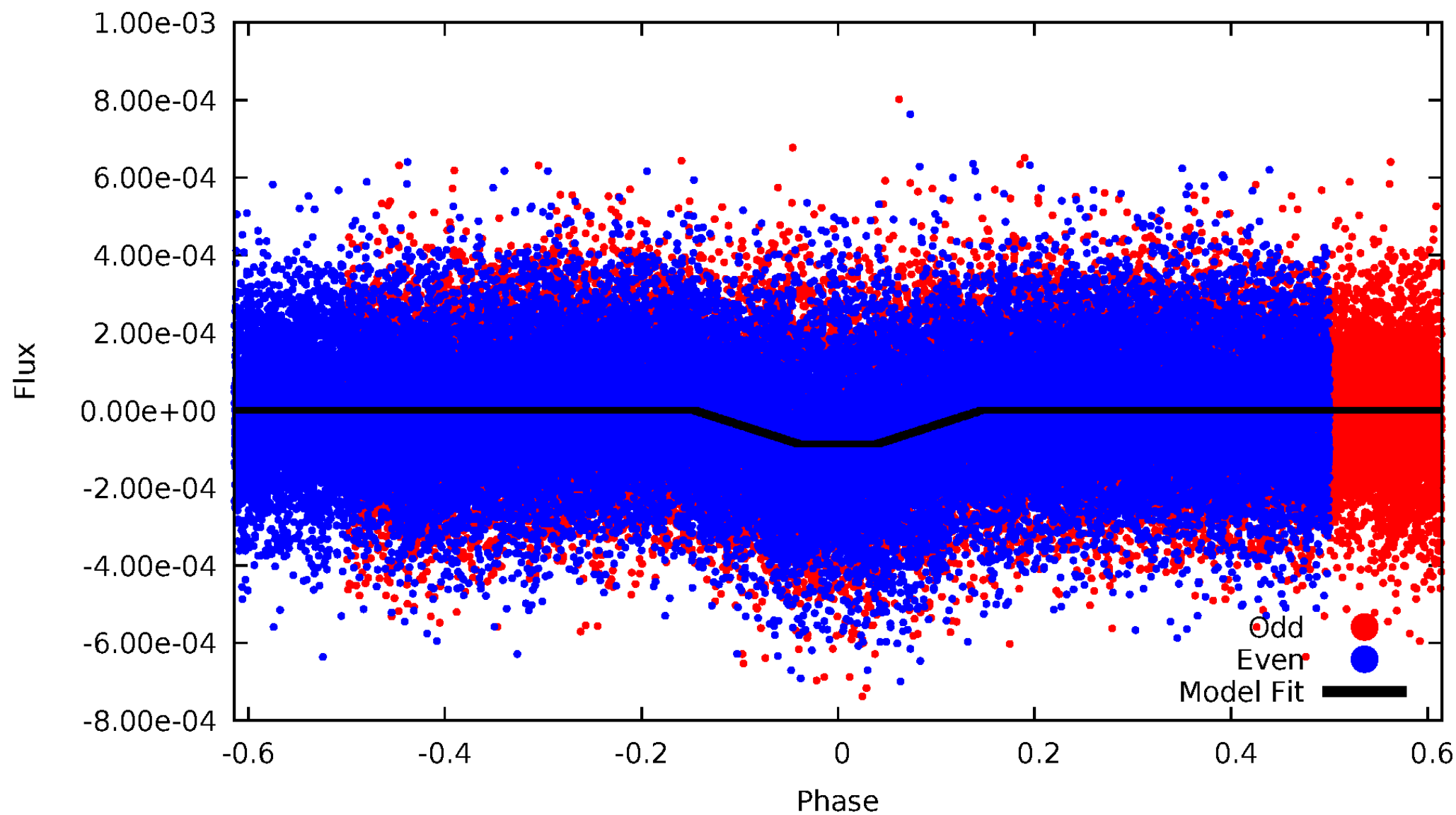
DV Odd/Even

TCE 002852810-01



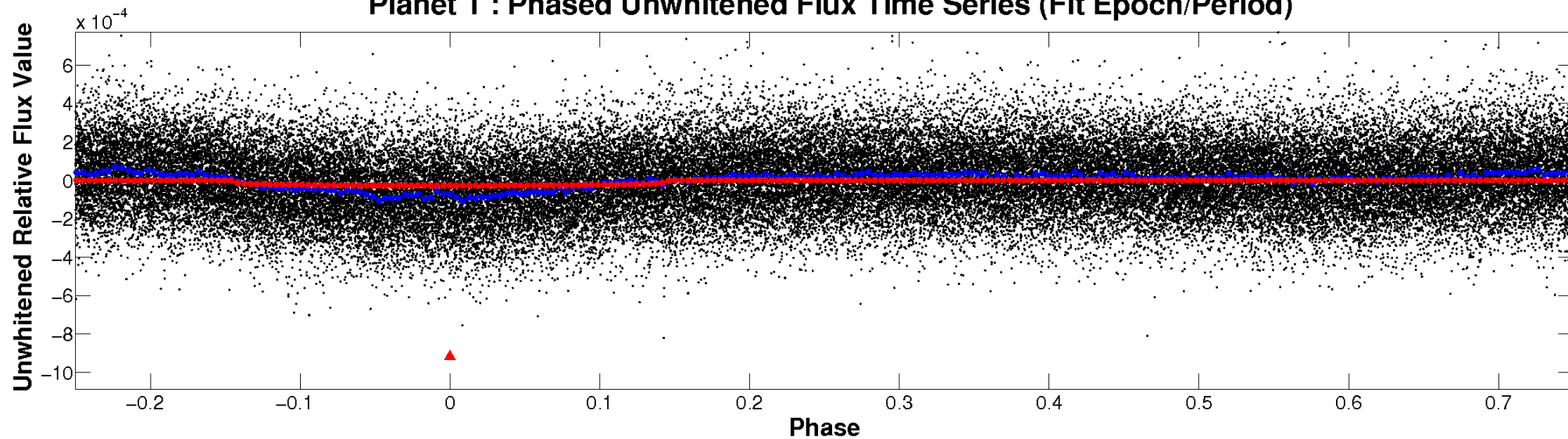
ALT Odd/Even

TCE 002852810-01

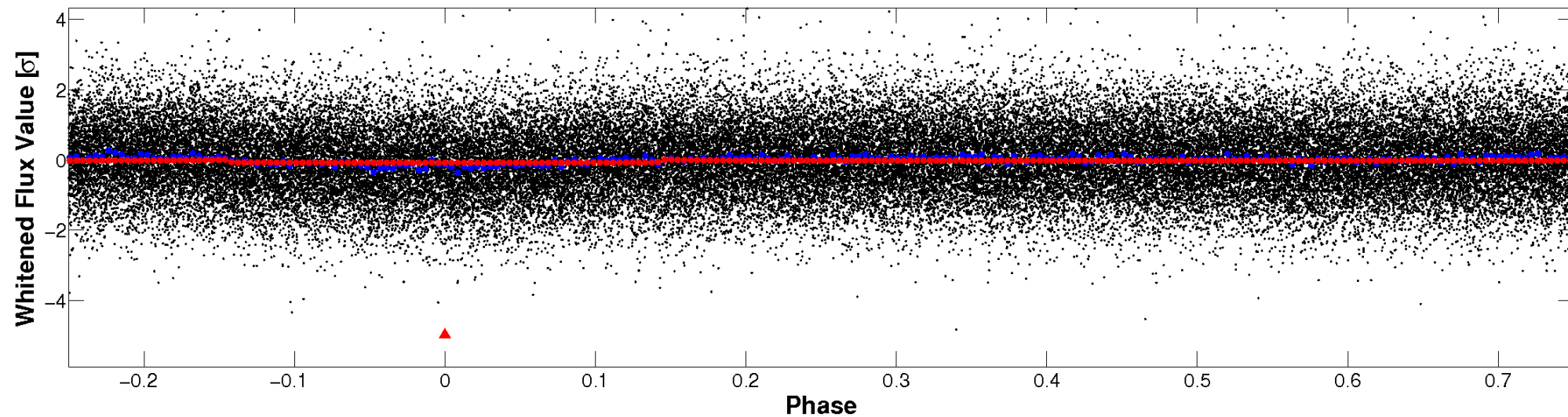


Non-Whitened Vs. Whitened Light Curve

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

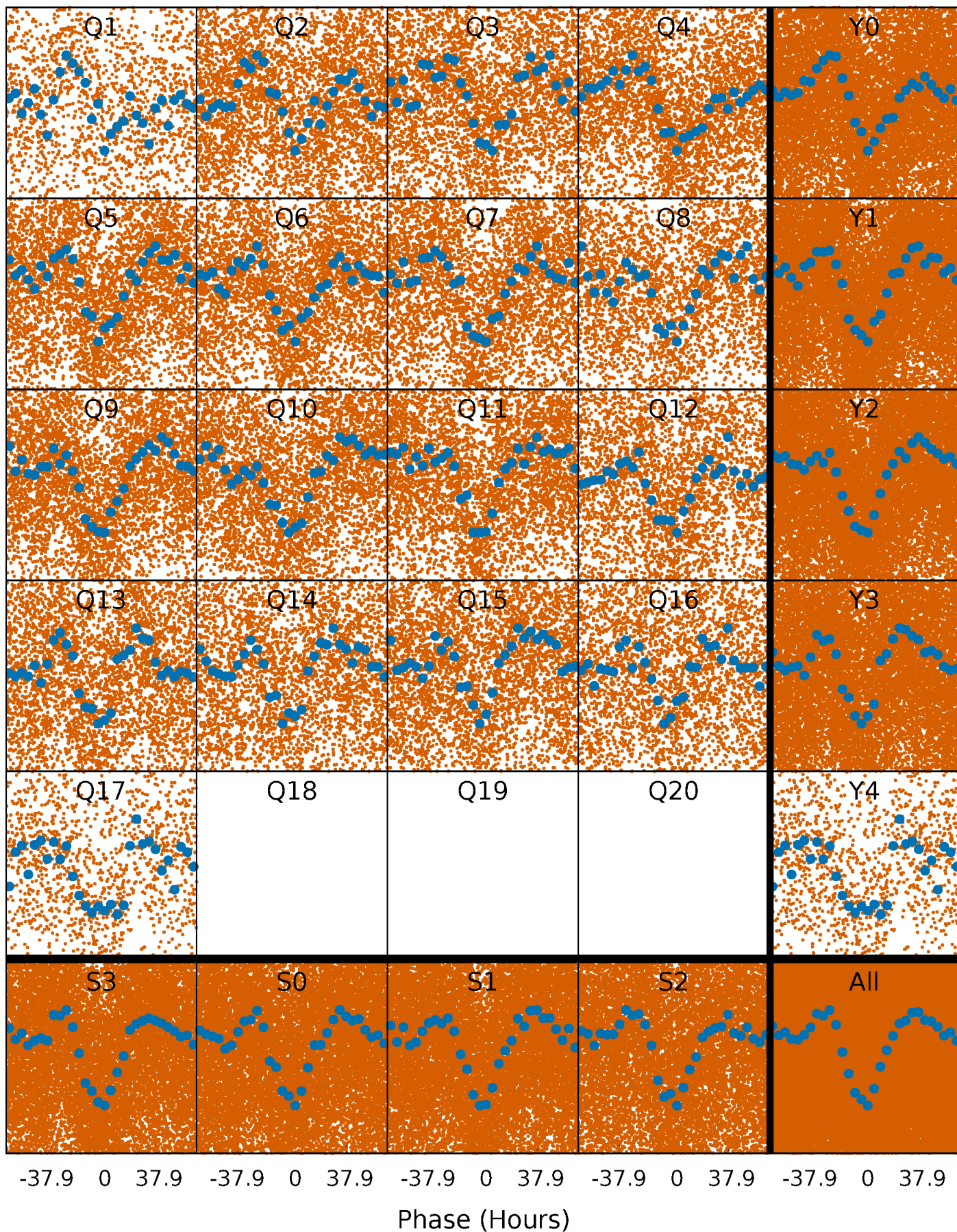


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



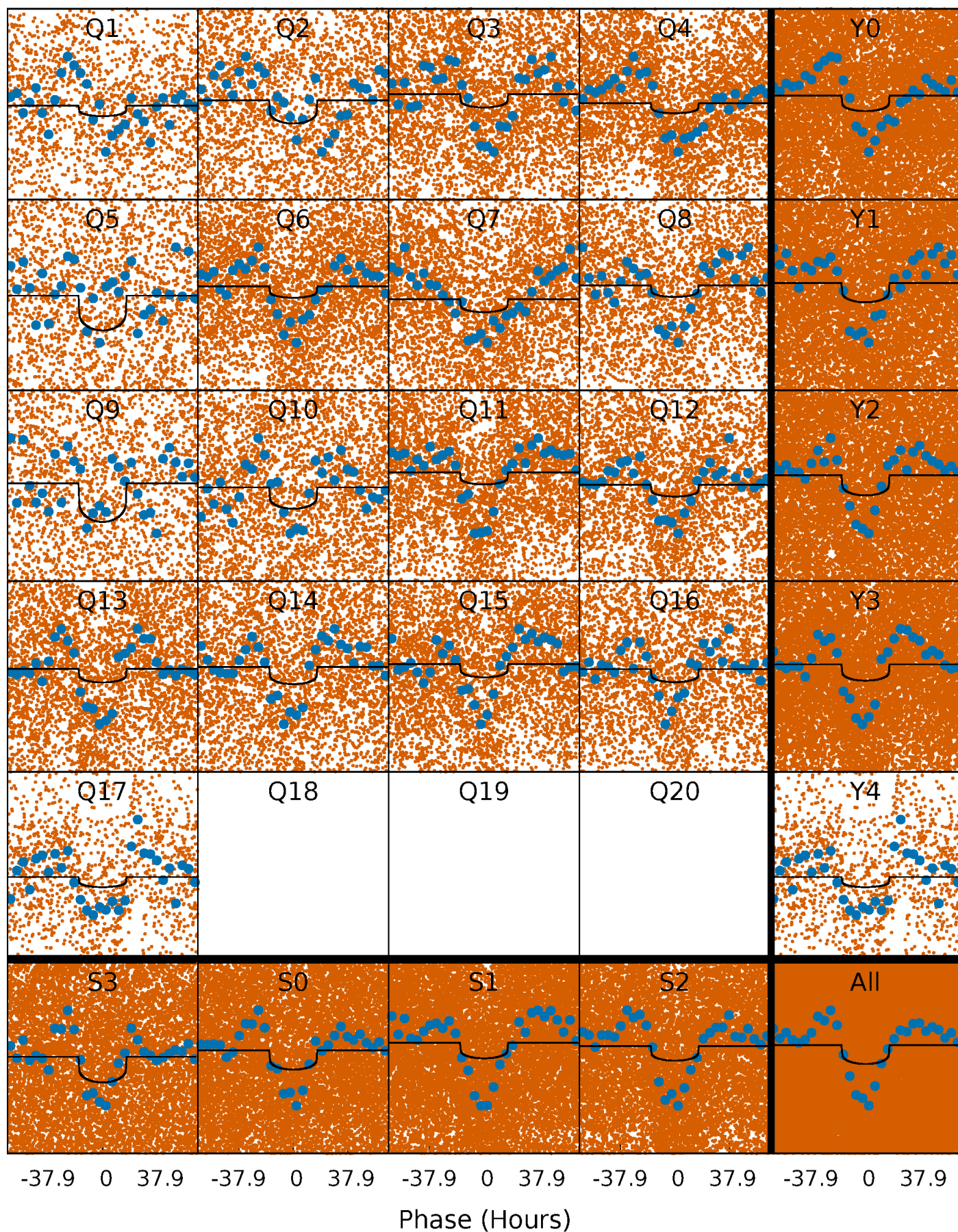
PDC Quarter-Phased Transit Curves

TCE 002852810-01 P= 4.754512 Days $T_0=135.510343$ (BKJD)



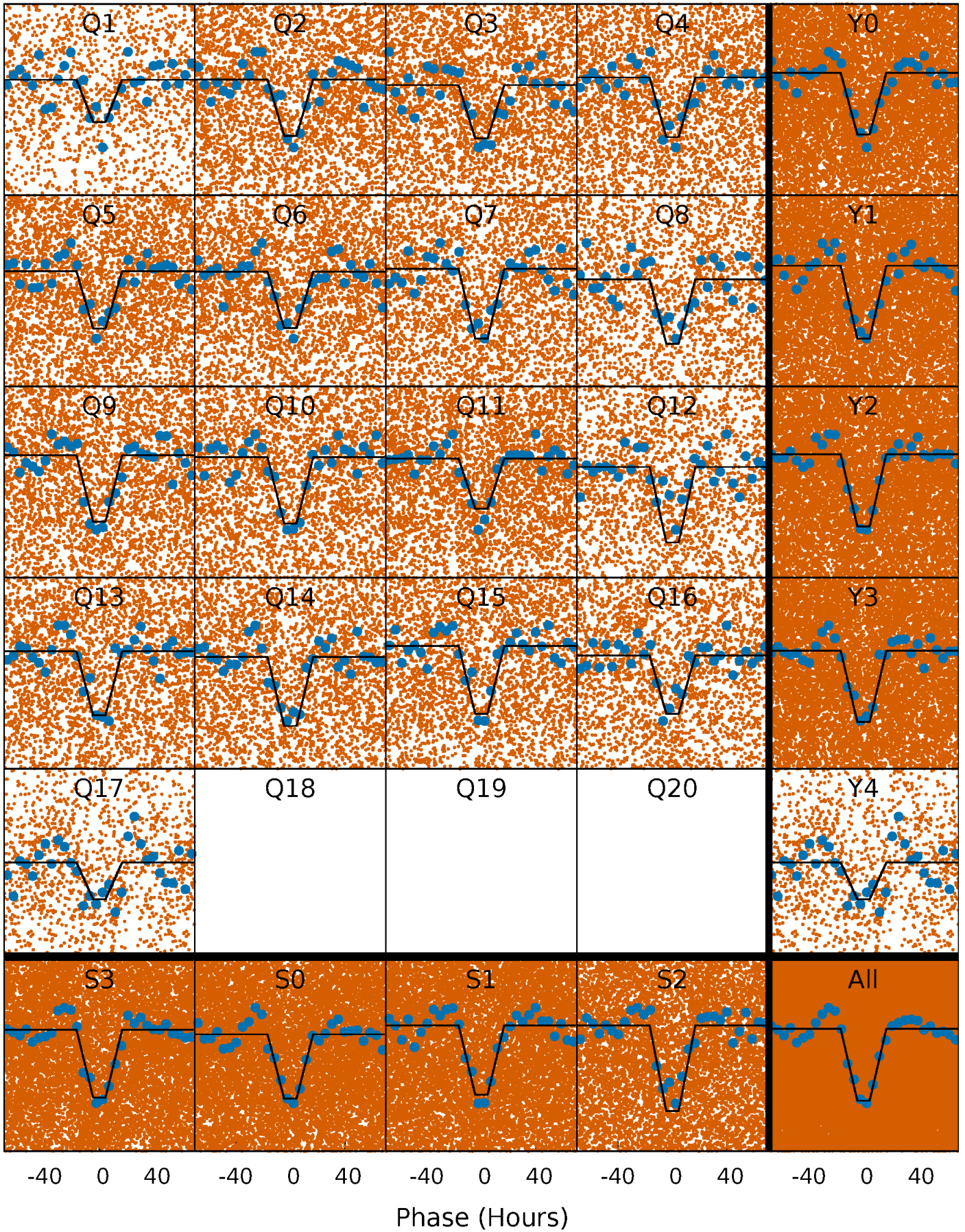
DV Quarter-Phased Transit Curves

TCE 002852810-01 P= 4.754512 Days $T_0=135.510343$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

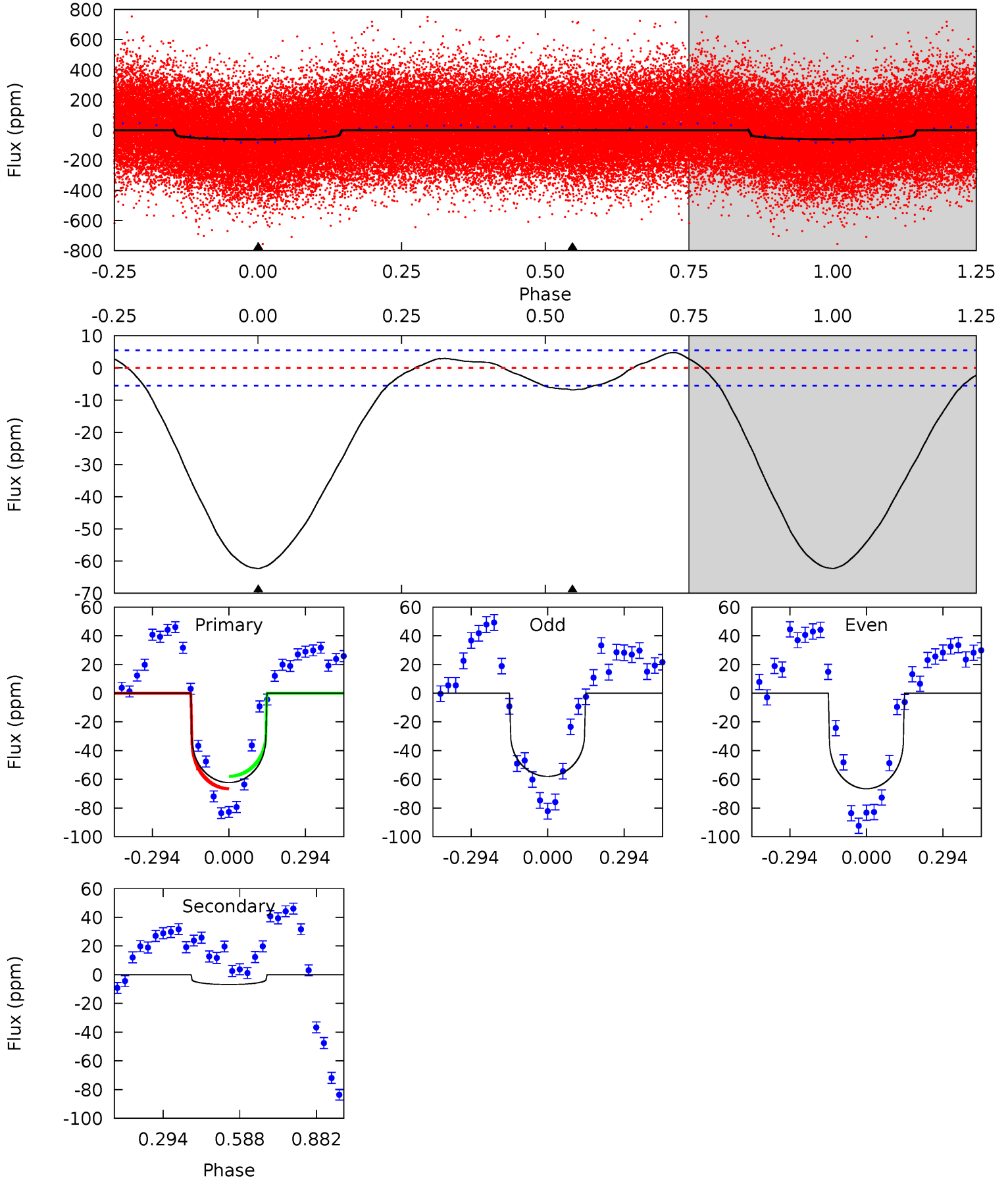
TCE 002852810-01 P= 4.754492 Days $T_0=135.487645$ (BKJD)



DV Model-Shift Uniqueness Test

002852810-01, P = 4.754512 Days, E = 130.755831 Days

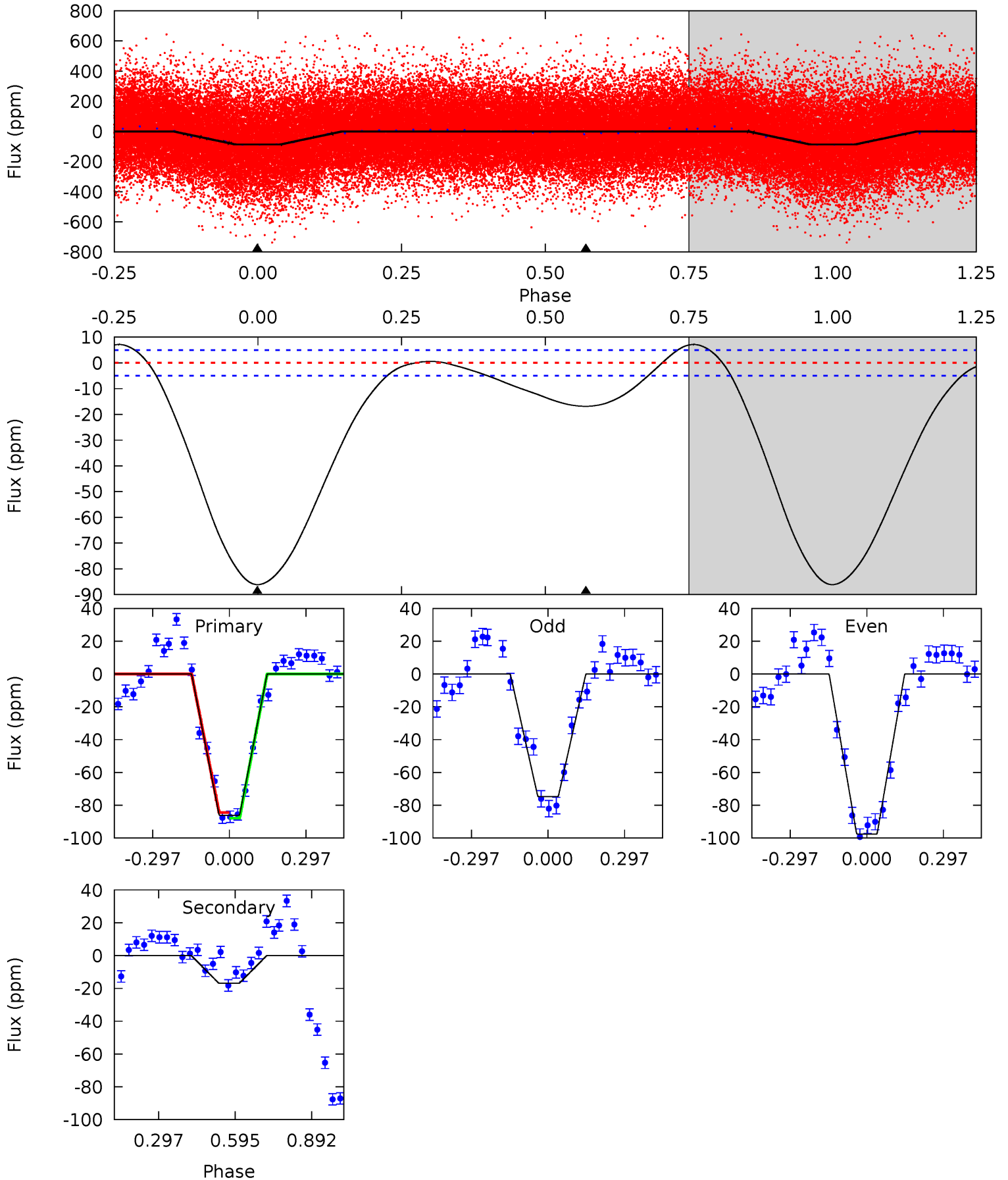
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
49.1	5.40	0	0	4.33	1.05	1.95	49.1	49.1	5.40	5.40	3.40	1.04	0.07	3.36



Alt Model-Shift Uniqueness Test

002852810-01, P = 4.754492 Days, E = 130.733153 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
75.0	14.7	0	0	4.33	1.04	0.89	75.0	75.0	14.7	14.7	9.94	1.02	0.08	1.43



Stellar Parameters For KIC 002852810

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7105^{+191}_{-255}	$3.427^{+0.423}_{-0.047}$	$-0.420^{+0.350}_{-0.250}$	$4.451^{+0.229}_{-2.059}$	$1.930^{+0.137}_{-0.467}$	$0.031^{+0.110}_{-0.005}$
	+3%/-4%	+12%/-1%	+83%/-60%	+5%/-46%	+7%/-24%	+358%/-15%
Source	PHO1	FLK73	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 002852810-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-7 ± 1	$2.31^{+1.55}_{-1.41}$	3424^{+171}_{-355}	4905^{+3244}_{-1004}	$3.350^{+18.225}_{-2.225}$
Alt.	-17 ± 1	$4.18^{+1.75}_{-1.80}$	3410^{+185}_{-299}	4619^{+1282}_{-609}	$2.465^{+4.974}_{-1.186}$

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 $A_{obs} \gg 1.0$

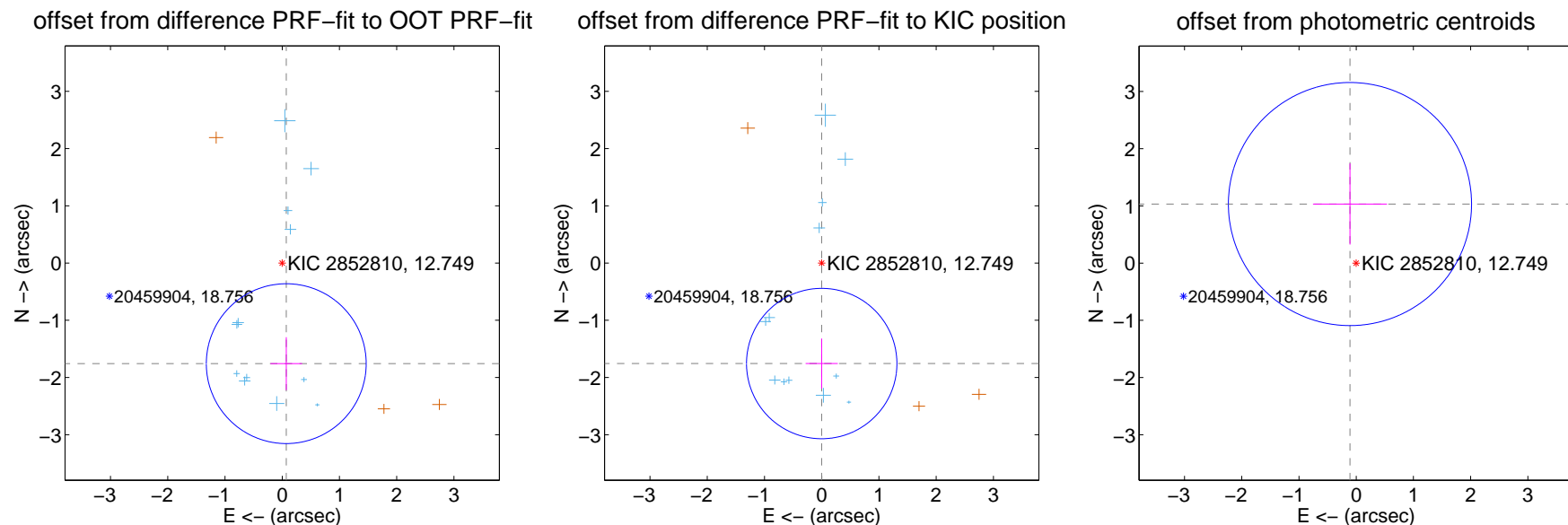
DV Centroid Data

Supplemental centroid analysis for 002852810-01. Kepler magnitude: 12.75. Transit SNR 10.29

There are 12 quarters with good PRF difference image offsets

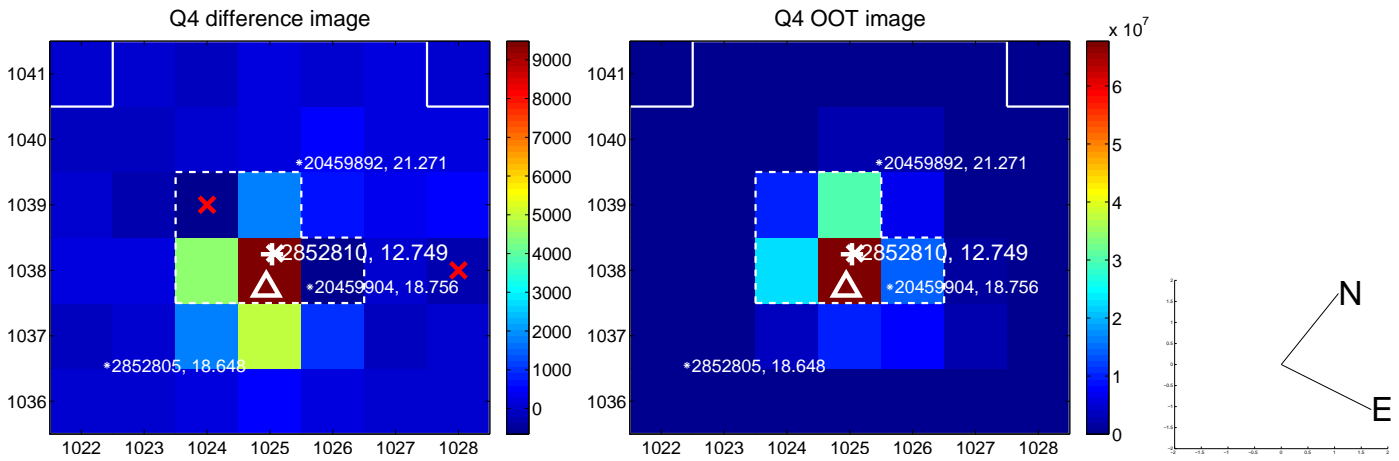
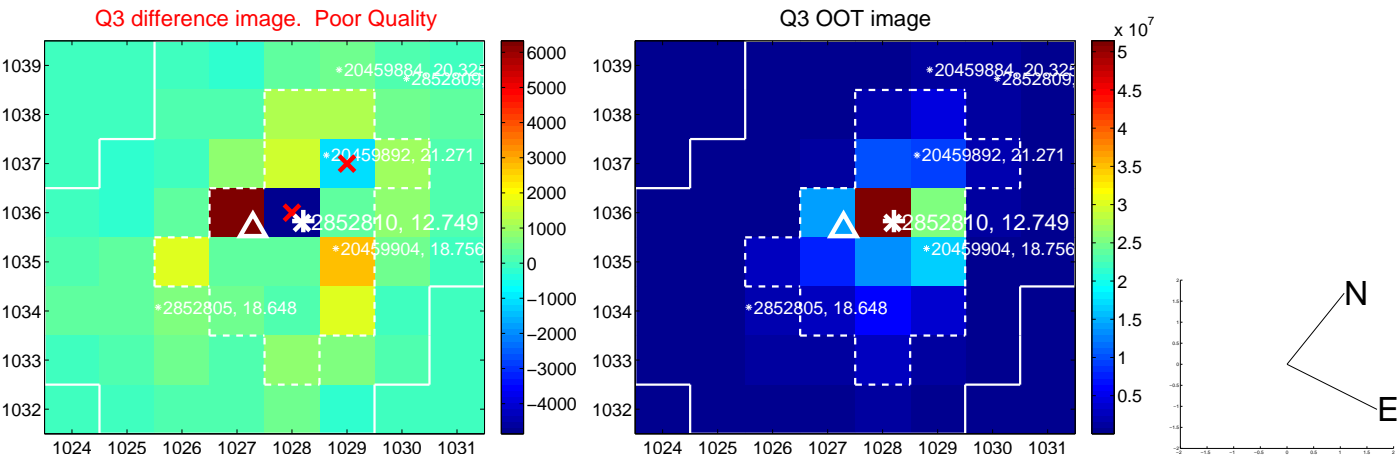
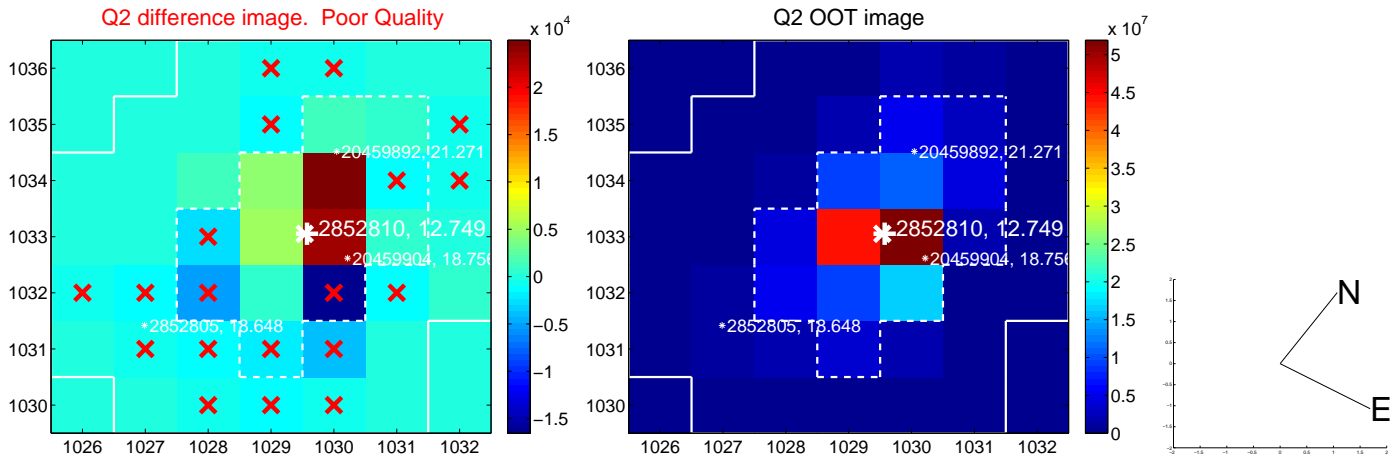
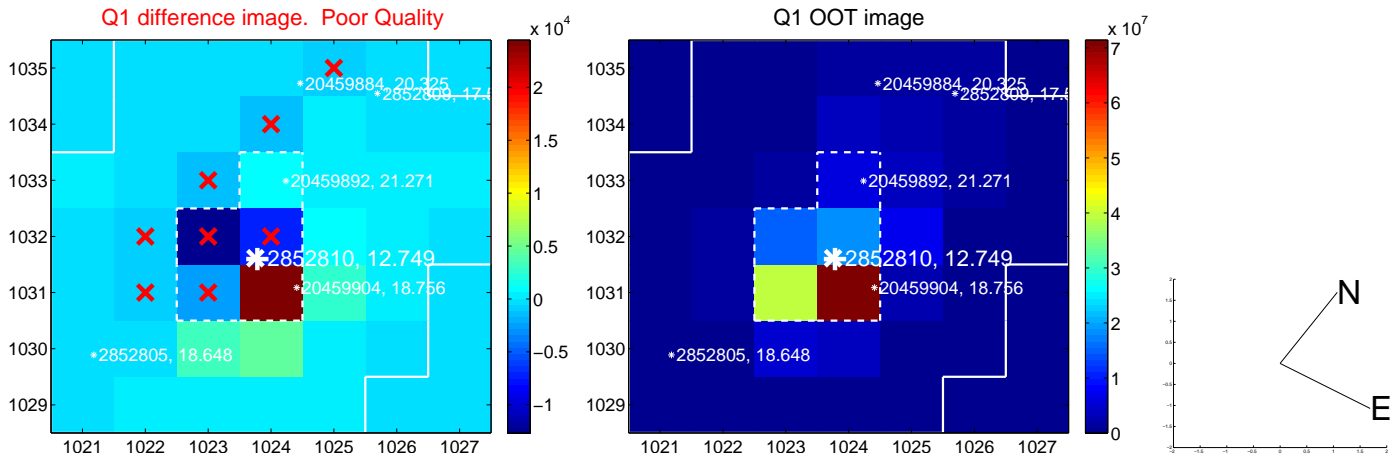
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.759 ± 0.465	3.78	-0.070 ± 0.277	-1.758 ± 0.462
PRF-fit source offset from KIC position	1.756 ± 0.438	4.01	0.000 ± 0.280	-1.756 ± 0.438
photometric centroid source offset	1.04 ± 0.71	1.47	0.11 ± 0.65	1.03 ± 0.71

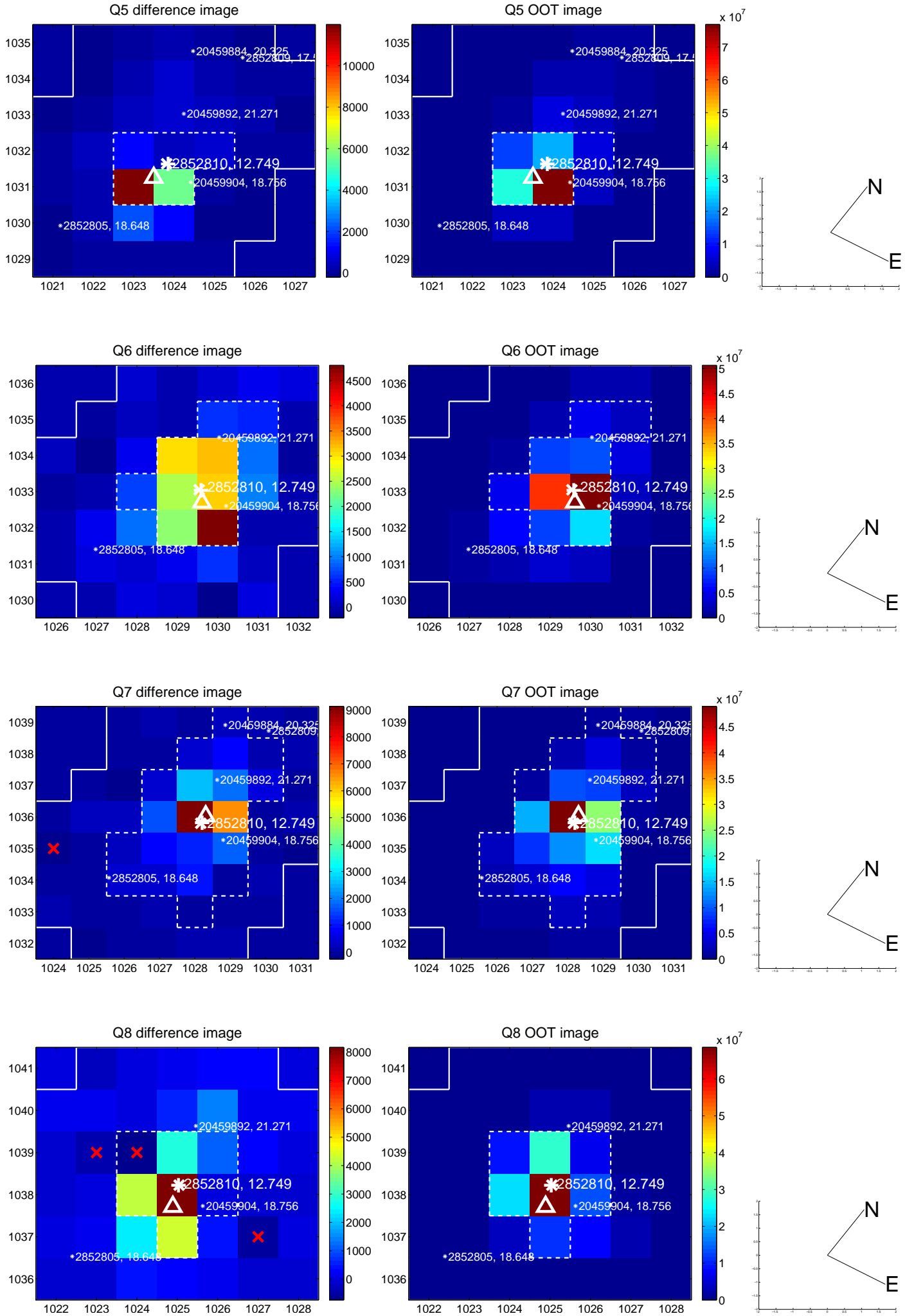


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

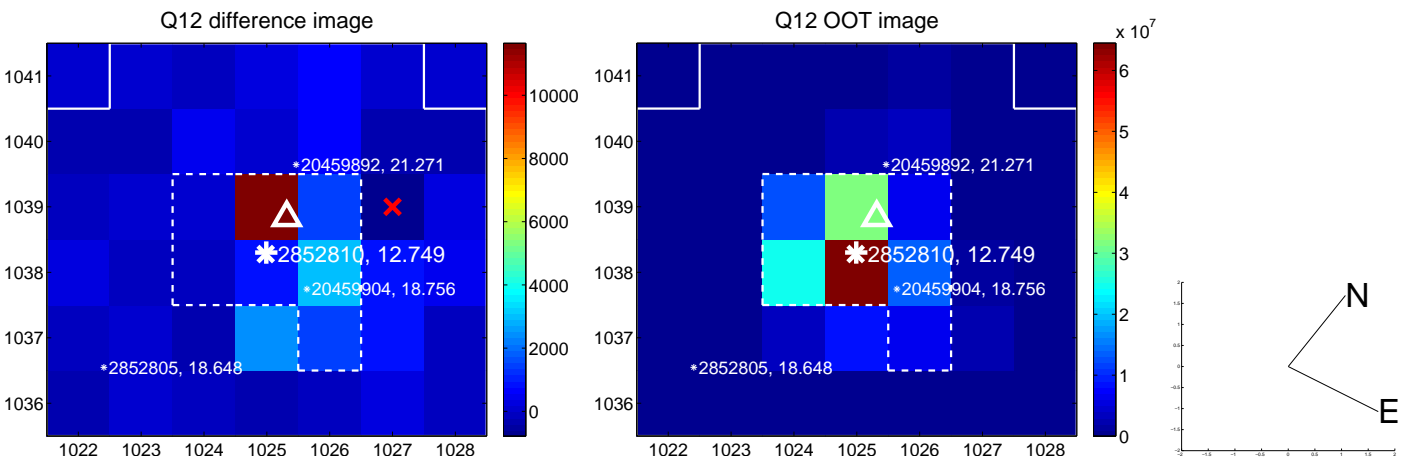
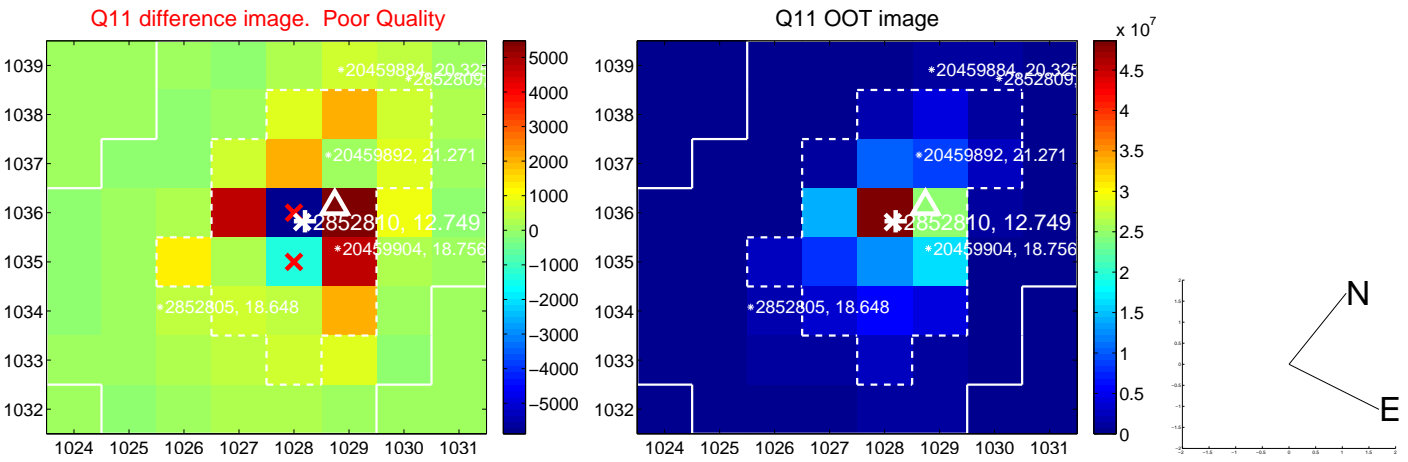
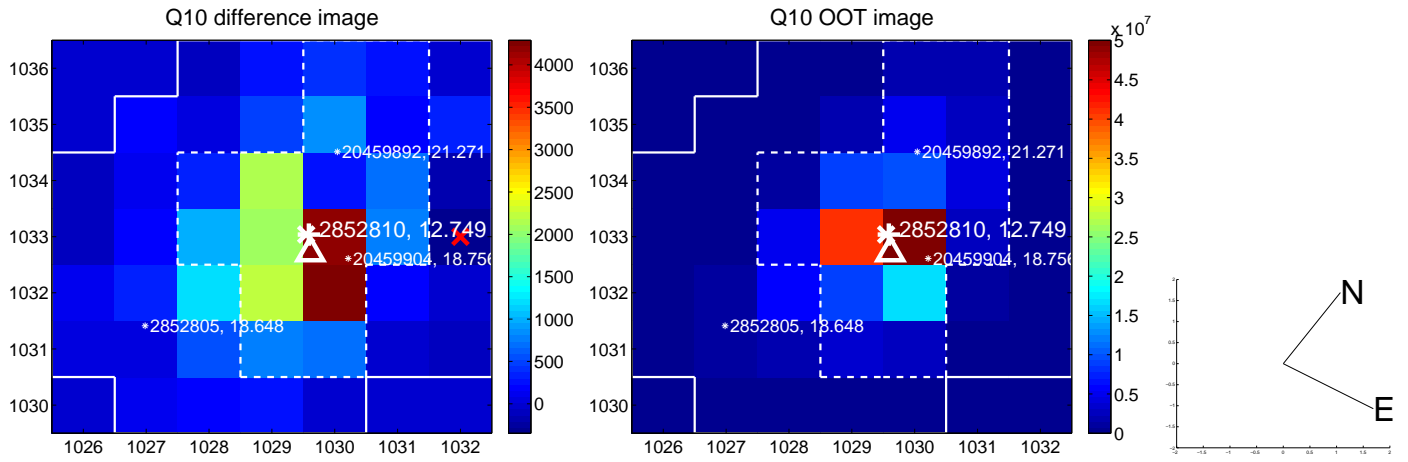
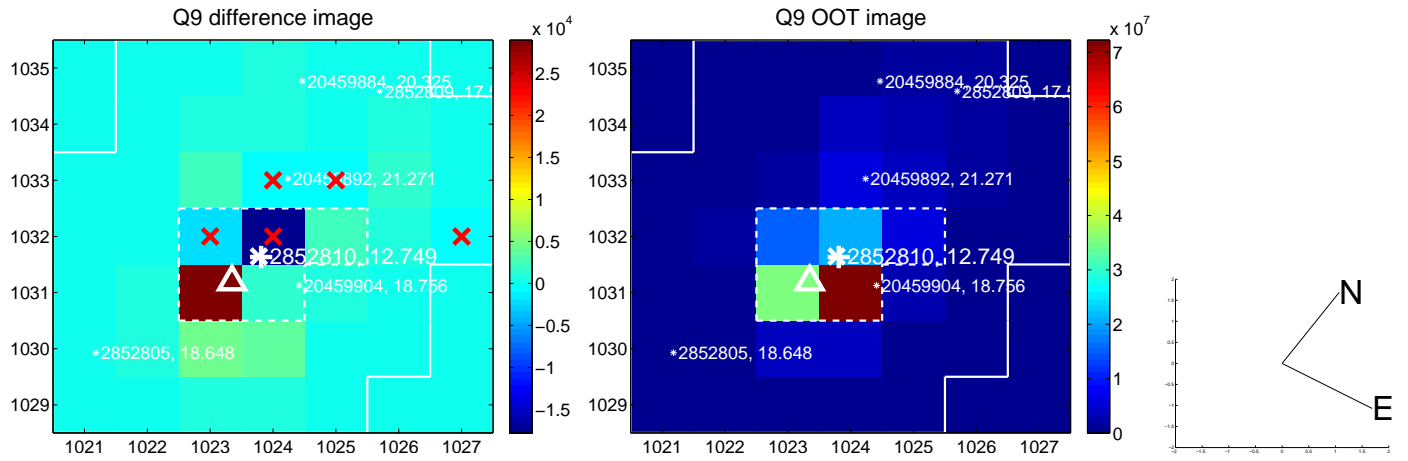
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



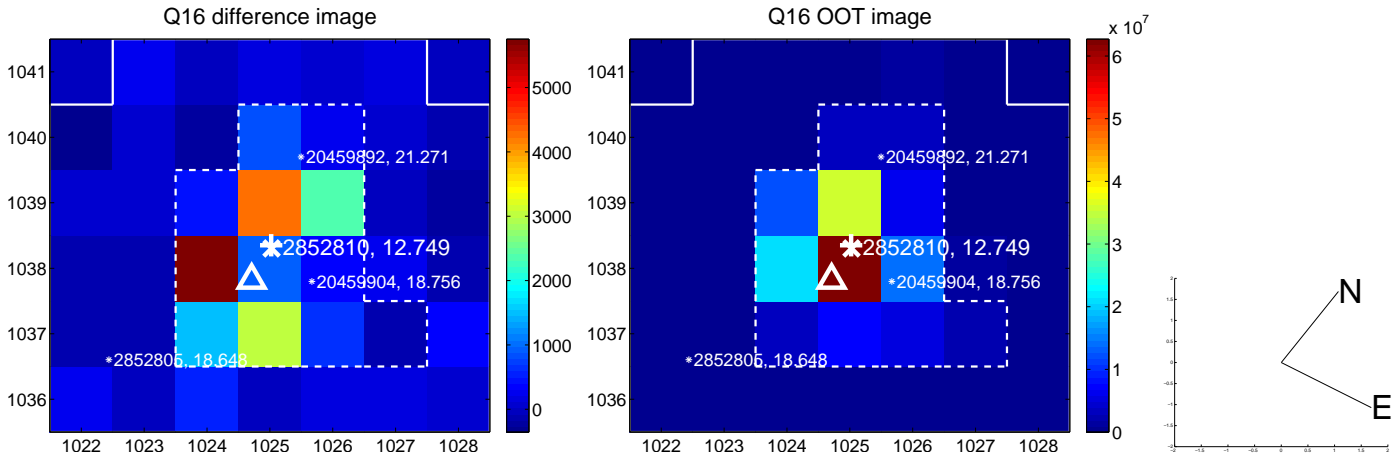
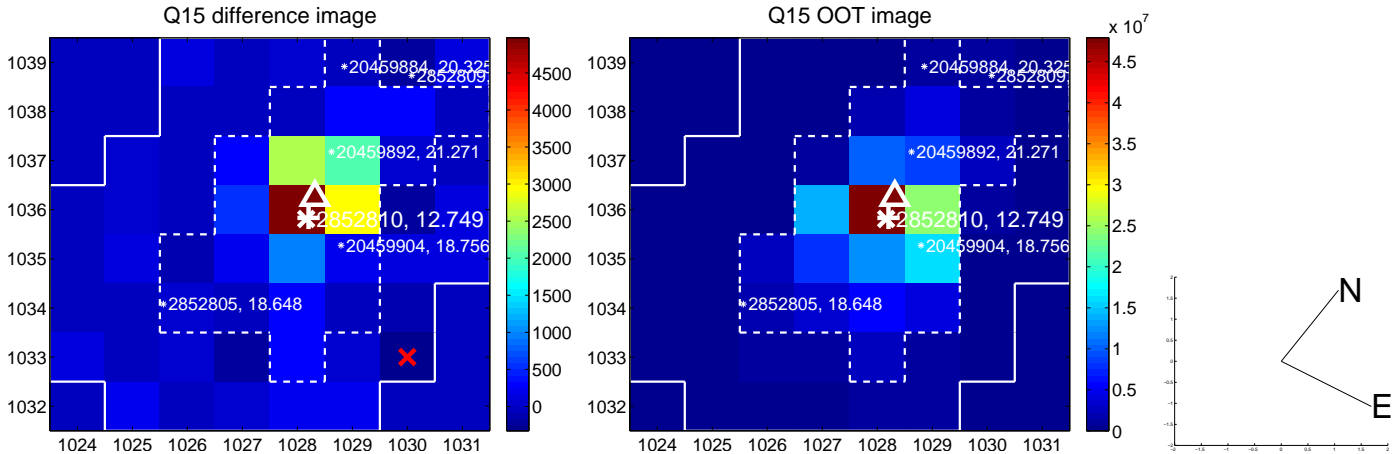
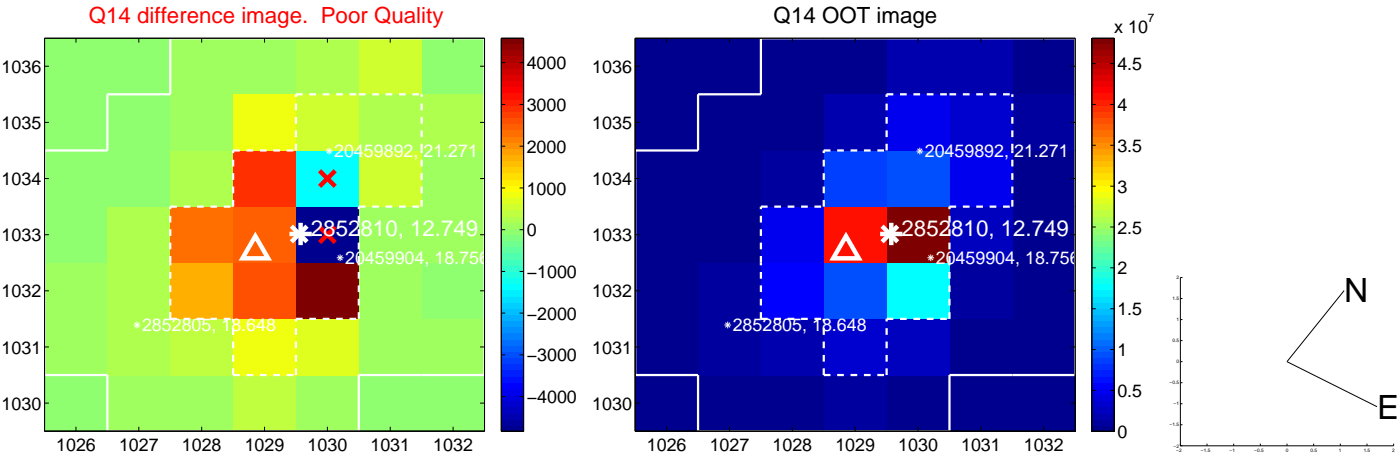
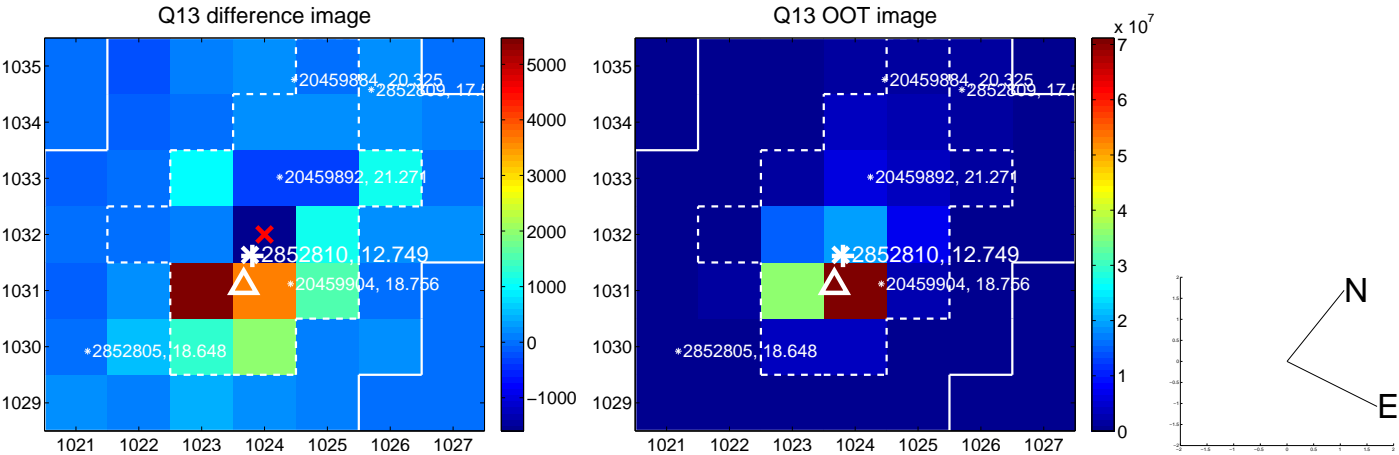
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



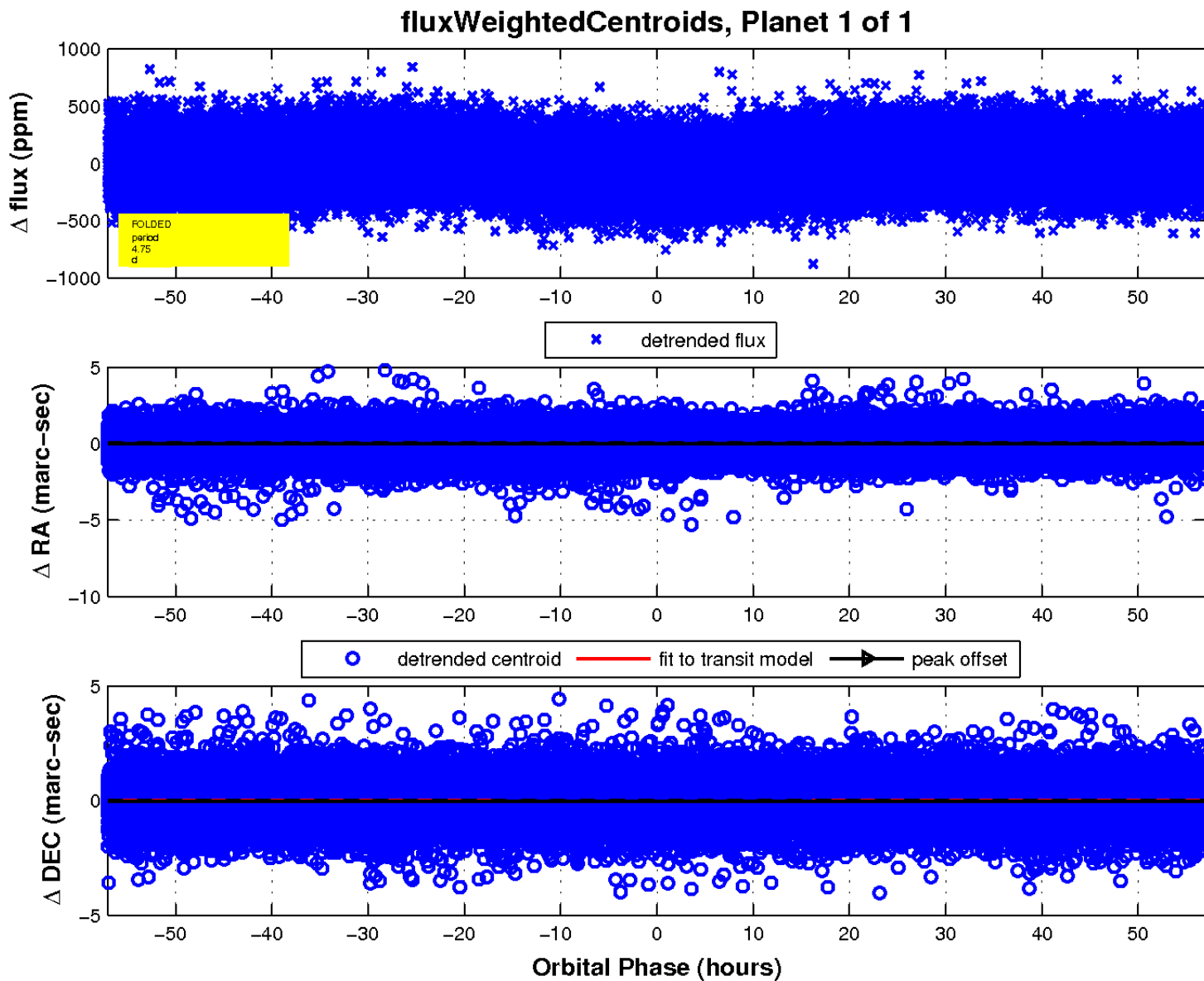
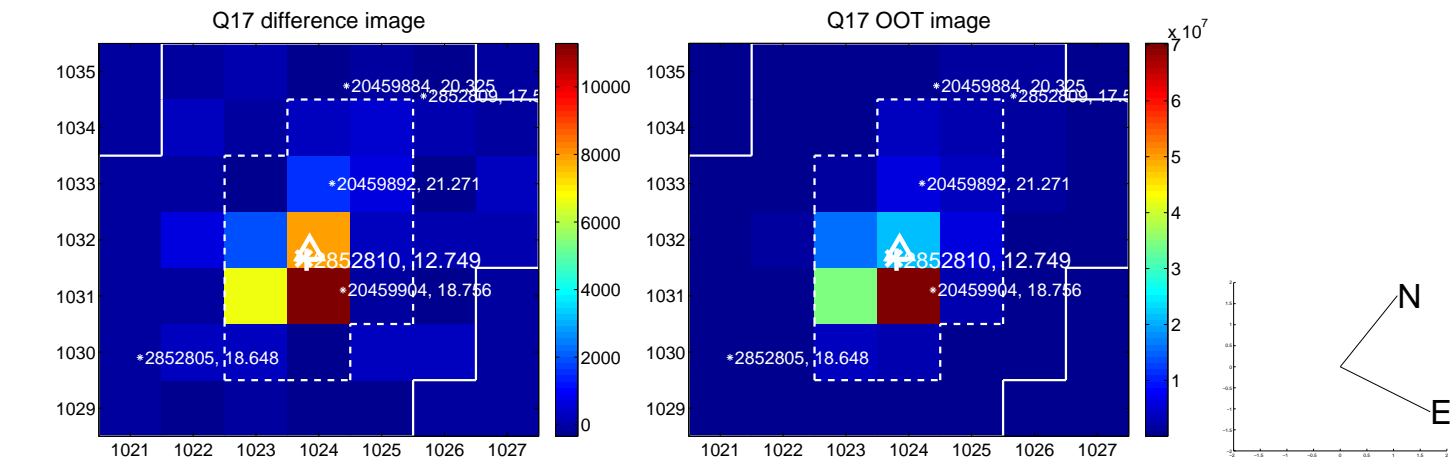
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

