

KIC 010815083

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})
010815083-01	OBS	No	0.569433	131.603464	11.8	2.575	8.9	7.1	1.80	6802	0.63	26990.80

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010815083-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_CROWDED

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

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

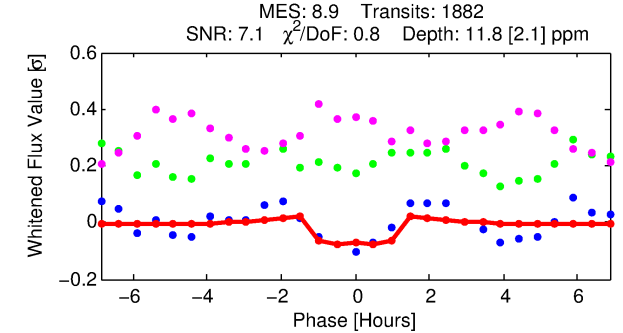
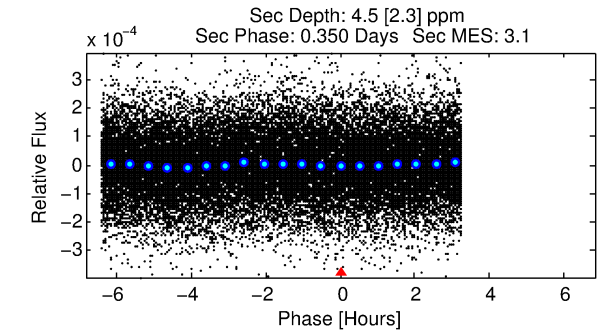
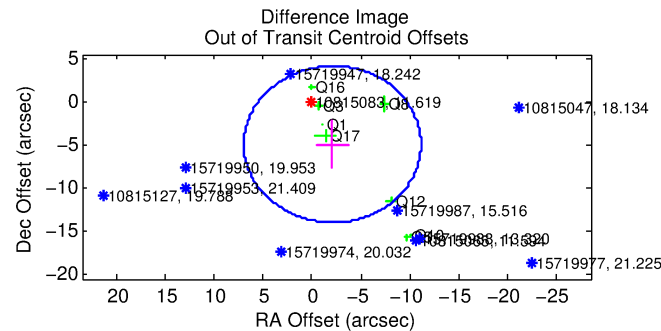
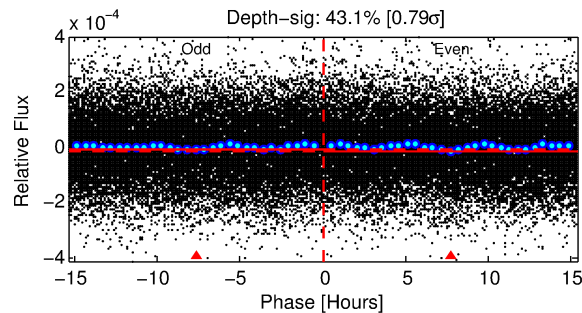
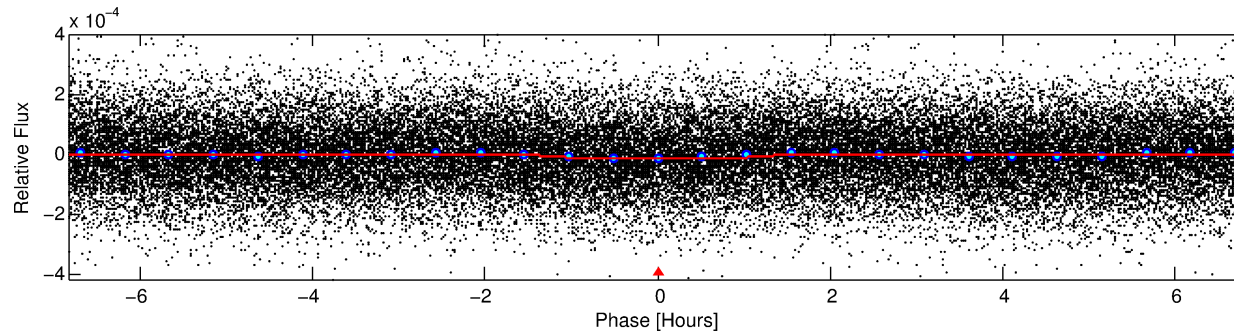
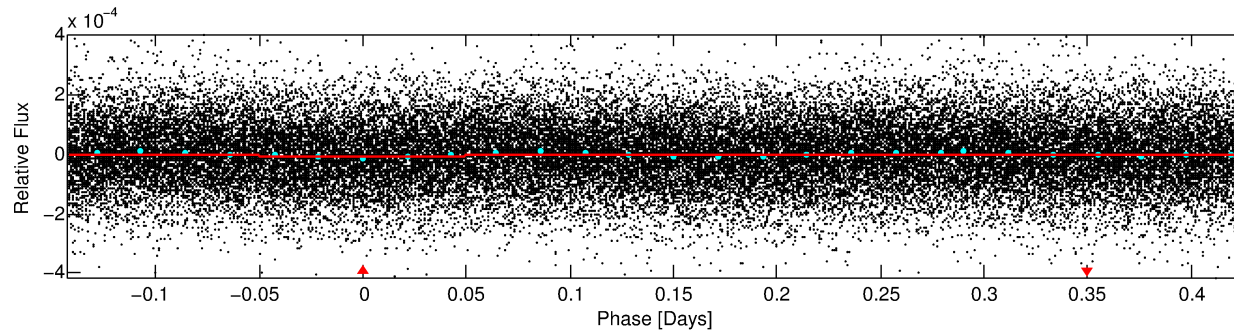
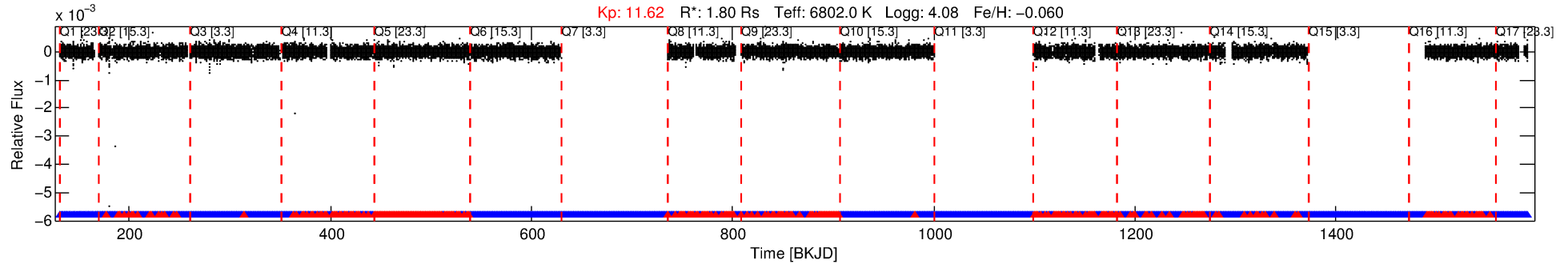
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010815083-01

No Significant Match Found

DV One-Page Summary

KIC: 10815083 Candidate: 1 of 1 Period: 0.569 d



DV Fit Results:

Period = 0.56943 [0.00001] d
Epoch = 131.6035 [0.0030] BKJD
Rp/R* = 0.0032 [0.0013]
a/R* = 1.72 [2.61]
b = 0.35 [5.73]
Seff = 26990.80 [11456.63]
Teq = 3268 [347] K
Rp = 0.63 [0.33] Re
a = 0.0151 [0.0041] AU
Ag = 1.44 [1.52] [0.29 σ]
Teffp = 5536 [1372] K [1.60 σ]

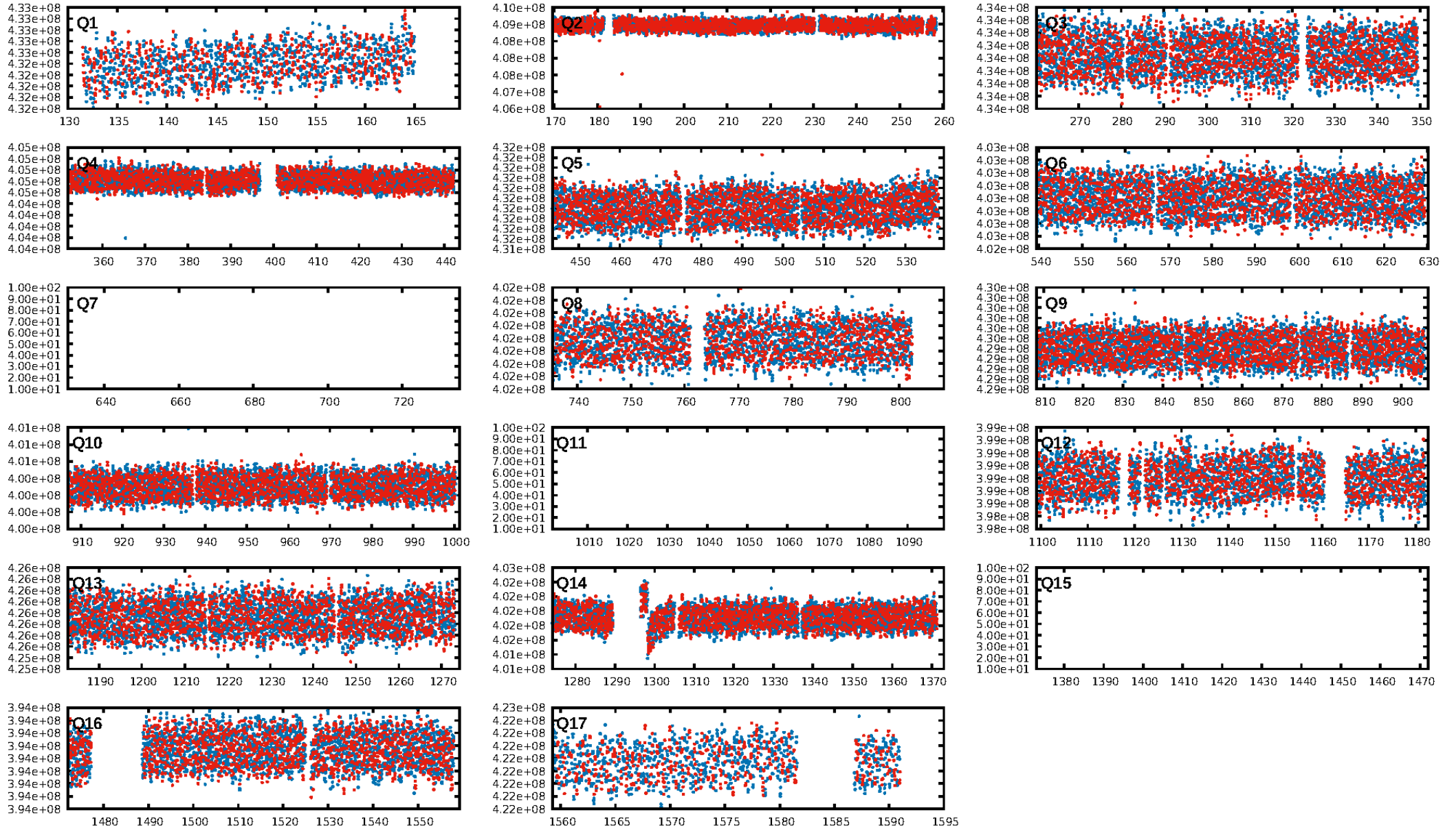
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.97e-14
RollingBand-fgt: 0.79 [1400/1776]
GhostDiagnostic-chr: 0.6828
Centroid-sig: N/A
Centroid-so: 1.795 arcsec [1.41 σ]
OotOffset-rm: 5.339 arcsec [1.77 σ]
KicOffset-rm: 5.388 arcsec [1.99 σ]
OotOffset-st: 2/1/3/2 [8]
KicOffset-st: 2/1/3/2 [8]
DiffImageQuality-fgm: 0.50 [4/8]
DiffImageOverlap-fno: 1.00 [14/14]

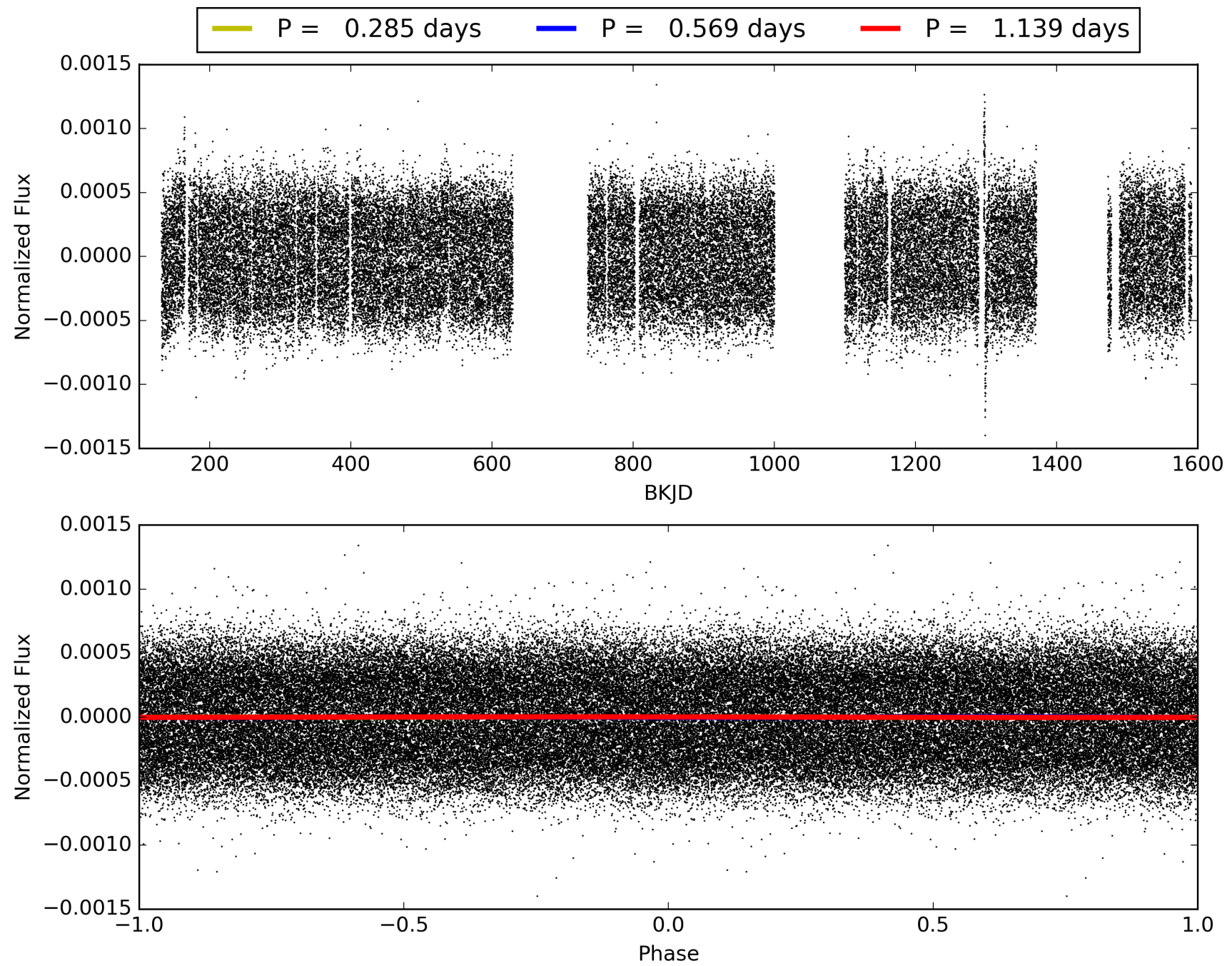
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 15:05:59 Z

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

TCE 010815083-01, PDC Light Curves

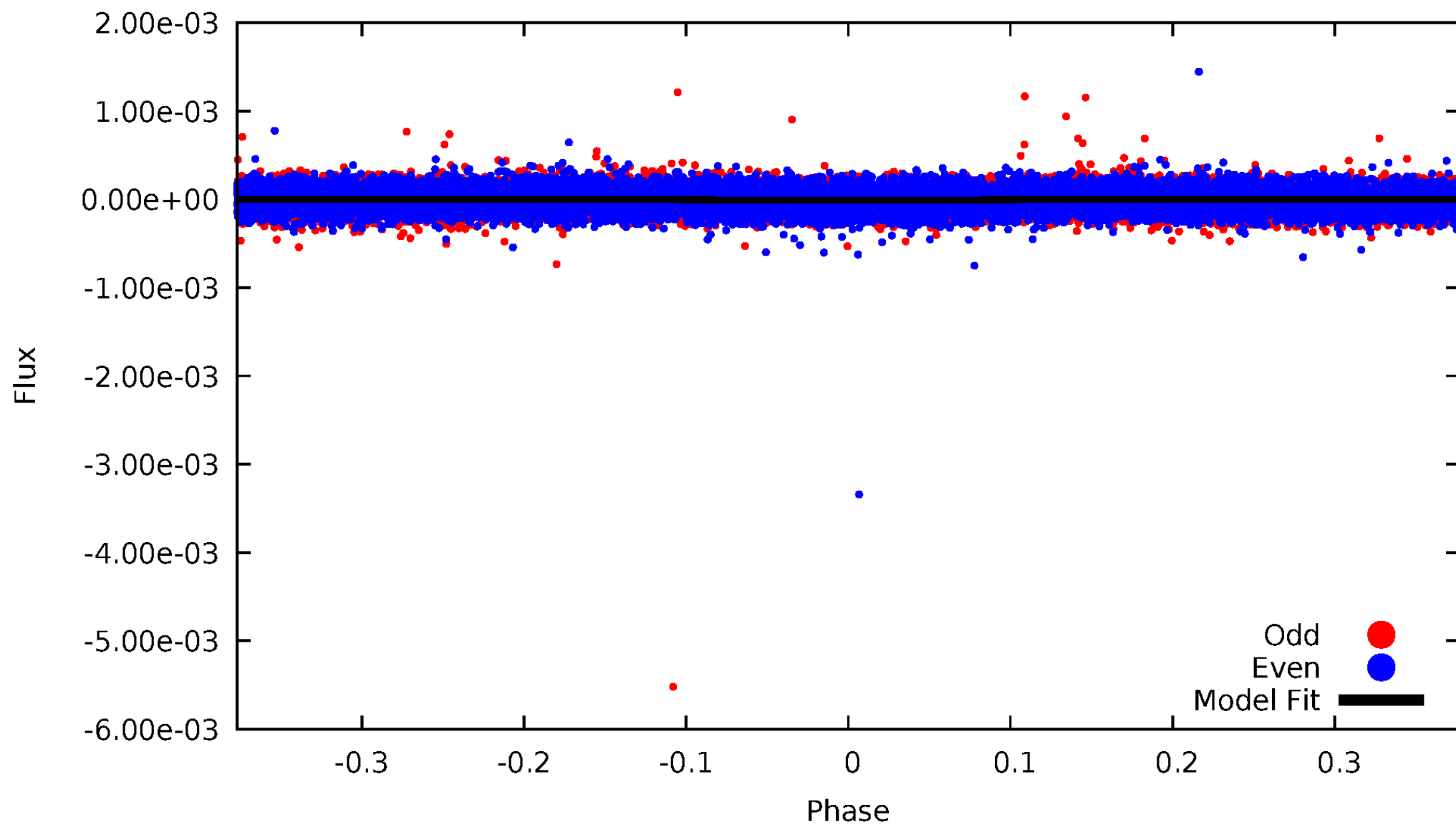


TCE 010815083-01



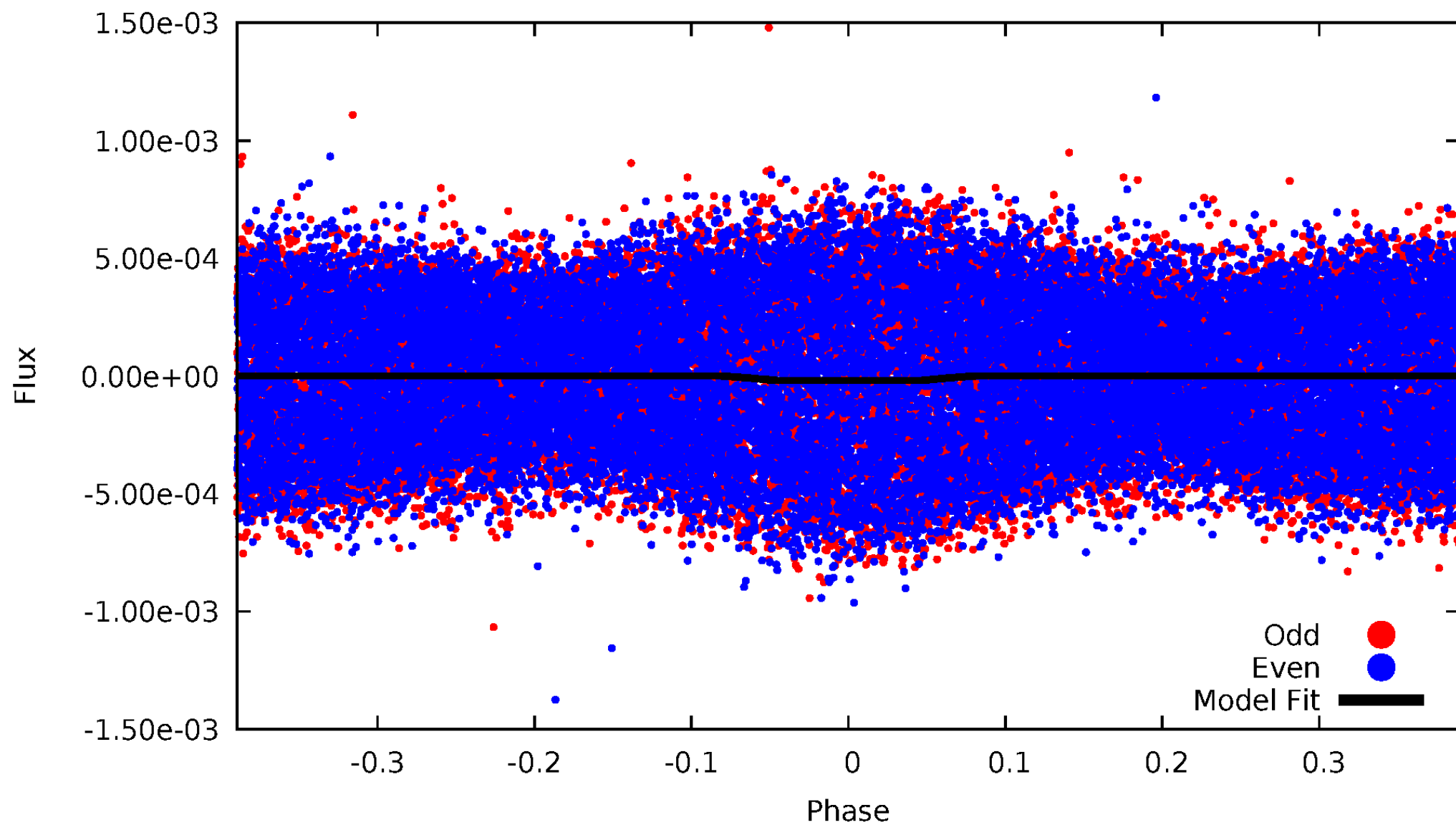
DV Odd/Even

TCE 010815083-01



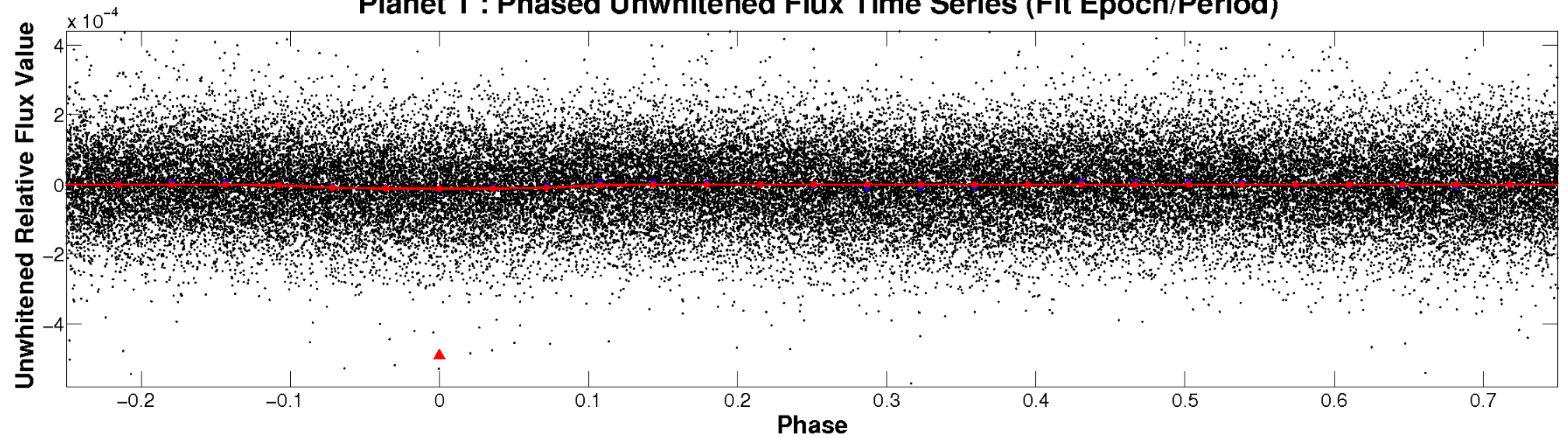
ALT Odd/Even

TCE 010815083-01

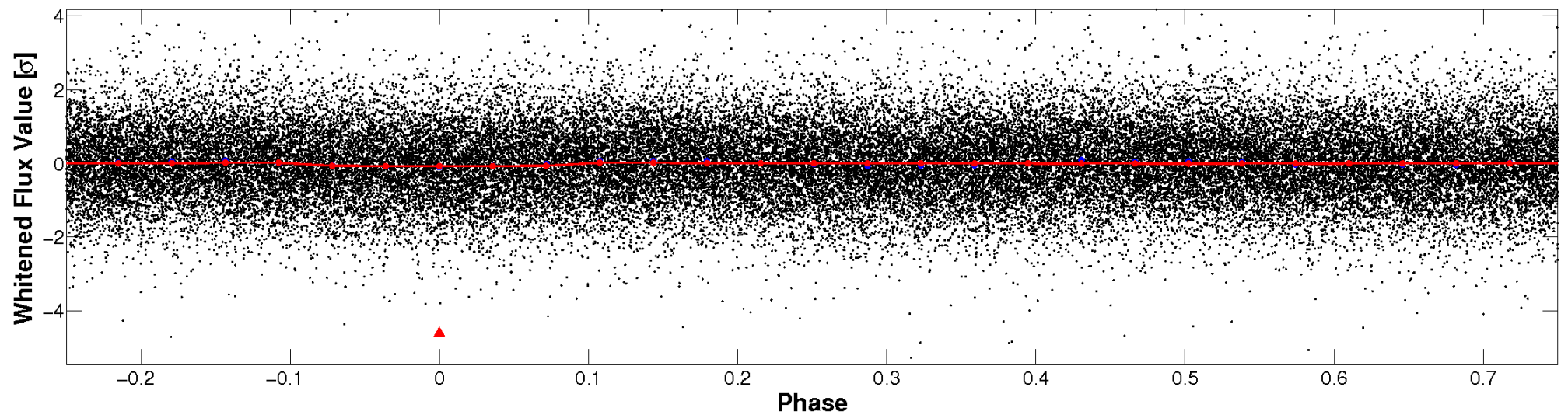


Non-Whitened Vs. Whitened Light Curve

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

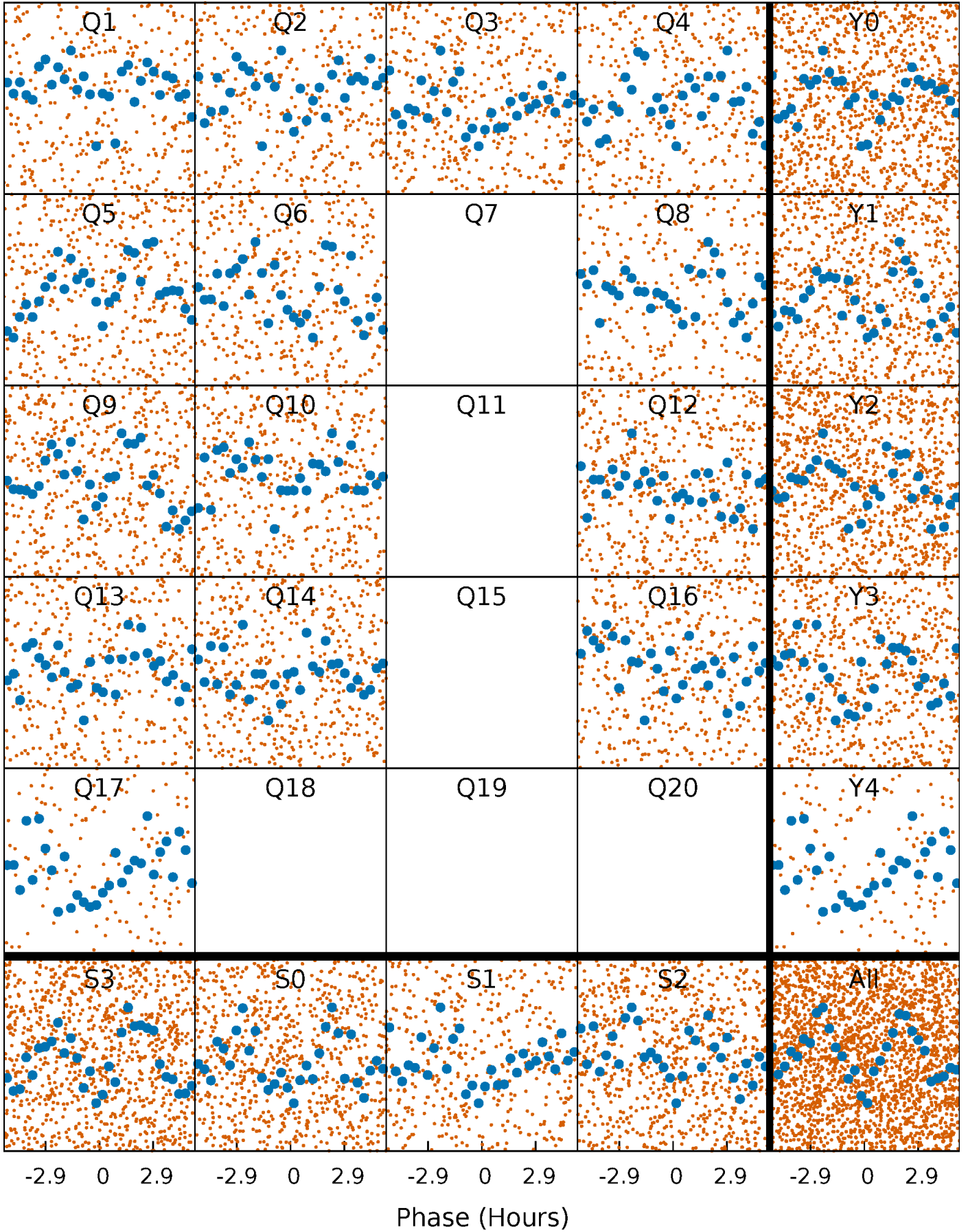


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



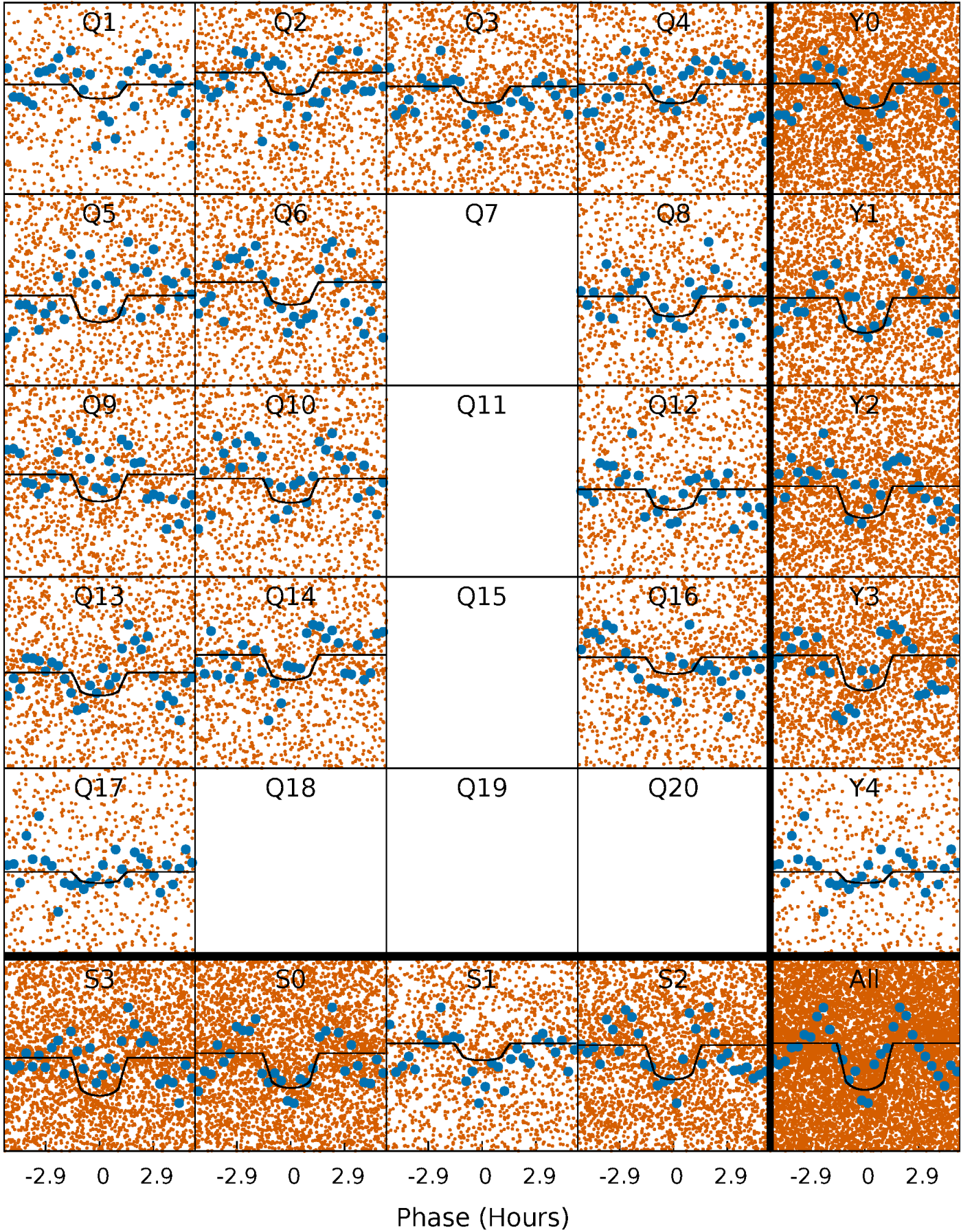
PDC Quarter-Phased Transit Curves

TCE 010815083-01 P= 0.569433 Days $T_0=131.603464$ (BKJD)



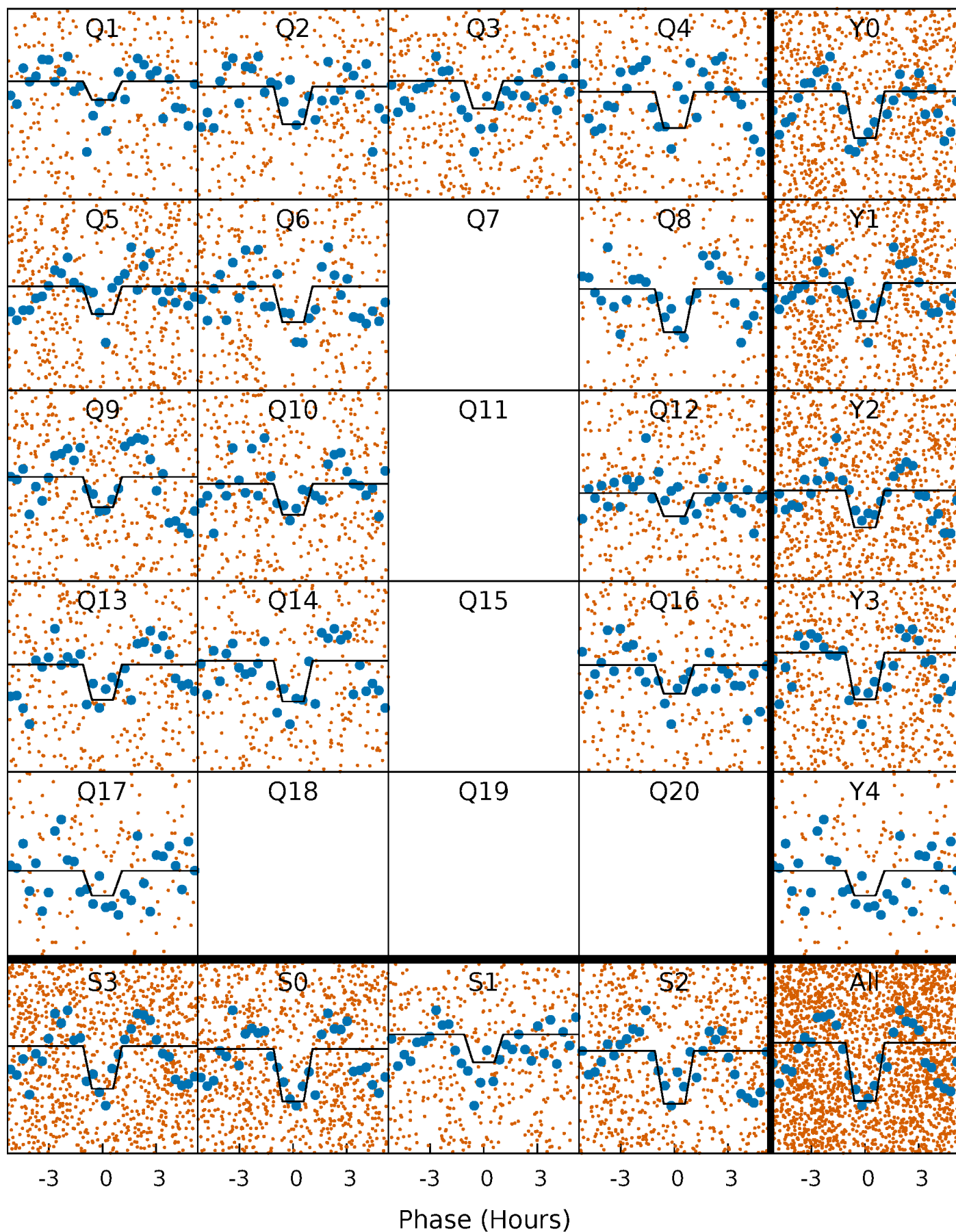
DV Quarter-Phased Transit Curves

TCE 010815083-01 P= 0.569433 Days $T_0=131.603464$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

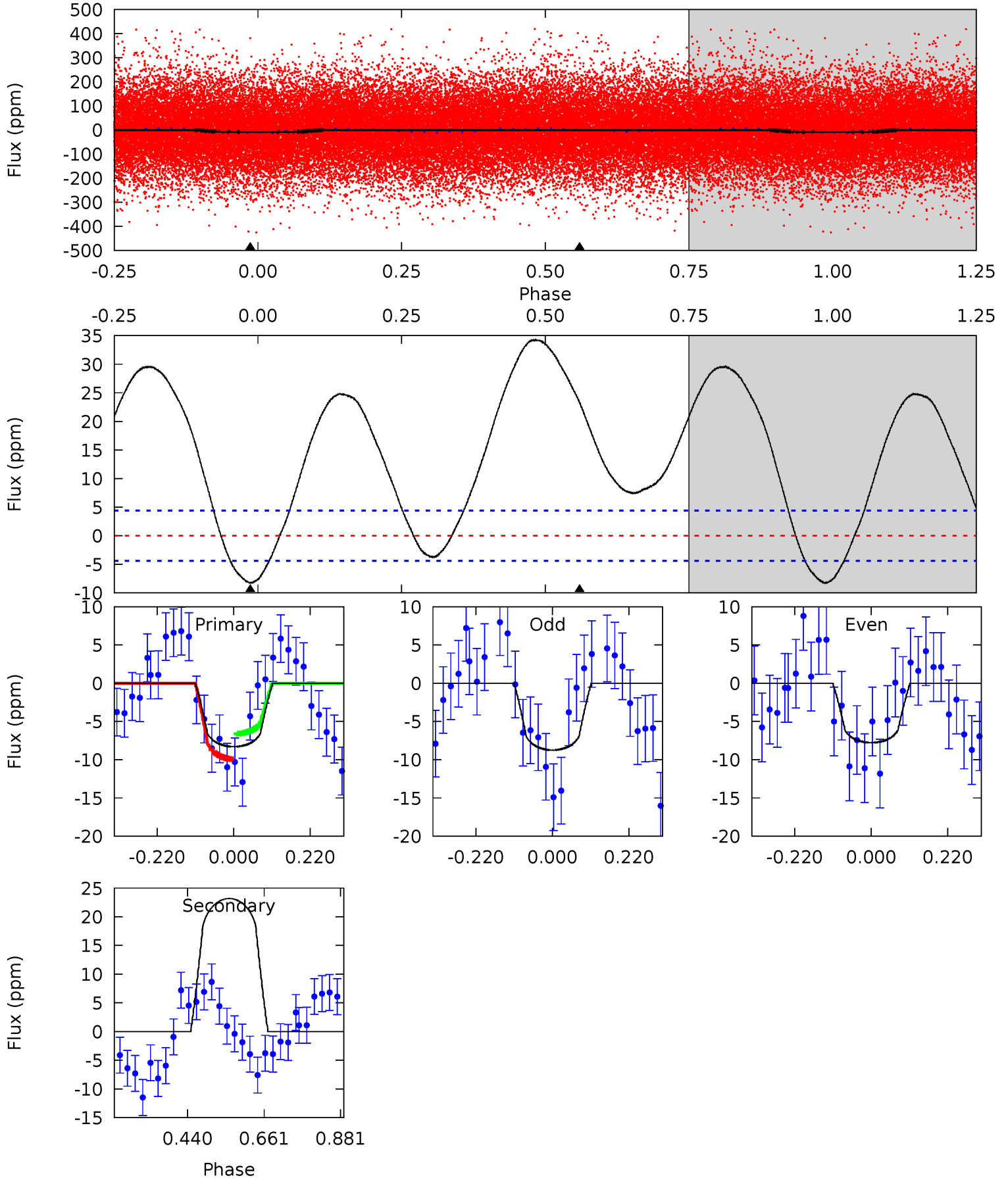
TCE 010815083-01 P= 0.569402 Days $T_0=131.632423$ (BKJD)



DV Model-Shift Uniqueness Test

010815083-01, P = 0.569433 Days, E = 131.034031 Days

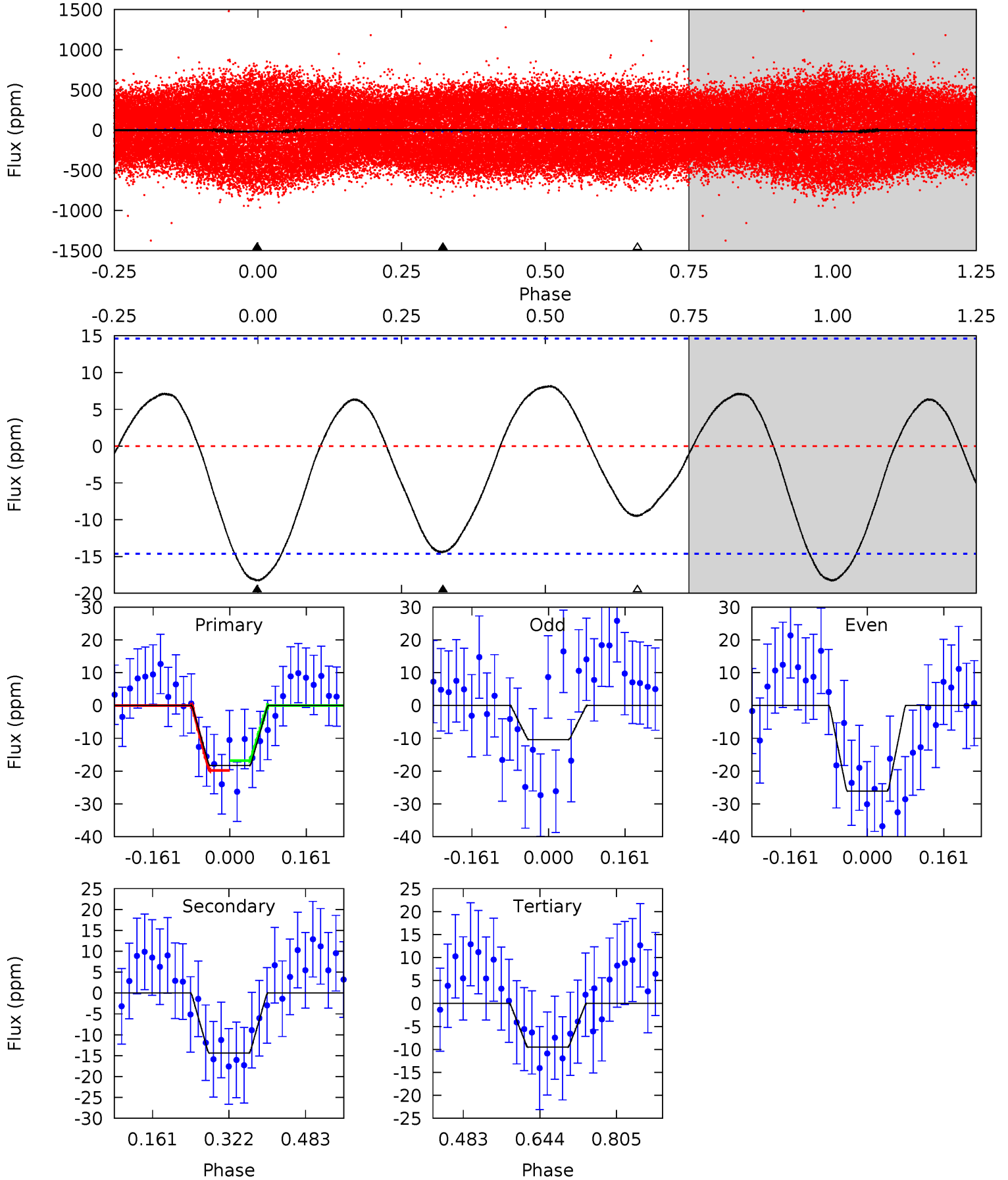
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.32	-23.2	0	0	4.40	1.23	6.18	8.32	8.32	-23.2	-23.2	0.49	1.10	0.81	1.69



Alt Model-Shift Uniqueness Test

010815083-01, P = 0.569402 Days, E = 131.063021 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.59	4.39	2.90	0	4.46	1.40	1.88	2.69	5.59	1.49	4.39	2.31	1.55	0.31	0.50



Stellar Parameters For KIC 010815083

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6802^{+189}_{-283}	$4.084^{+0.214}_{-0.175}$	$-0.060^{+0.250}_{-0.300}$	$1.797^{+0.569}_{-0.518}$	$1.433^{+0.208}_{-0.254}$	$0.348^{+0.432}_{-0.168}$
	+3%/-4%	+5%/-4%	+417%/-500%	+32%/-29%	+15%/-18%	+124%/-48%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 010815083-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	23 ± 1	$0.61^{+0.29}_{-0.26}$	4551^{+379}_{-375}	-8880^{+1765}_{-4266}	$-7.974^{+4.386}_{-15.470}$
Alt.	-14 ± 3	$0.88^{+0.31}_{-0.30}$	4531^{+371}_{-358}	6049^{+1449}_{-1011}	$2.439^{+2.872}_{-1.194}$

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

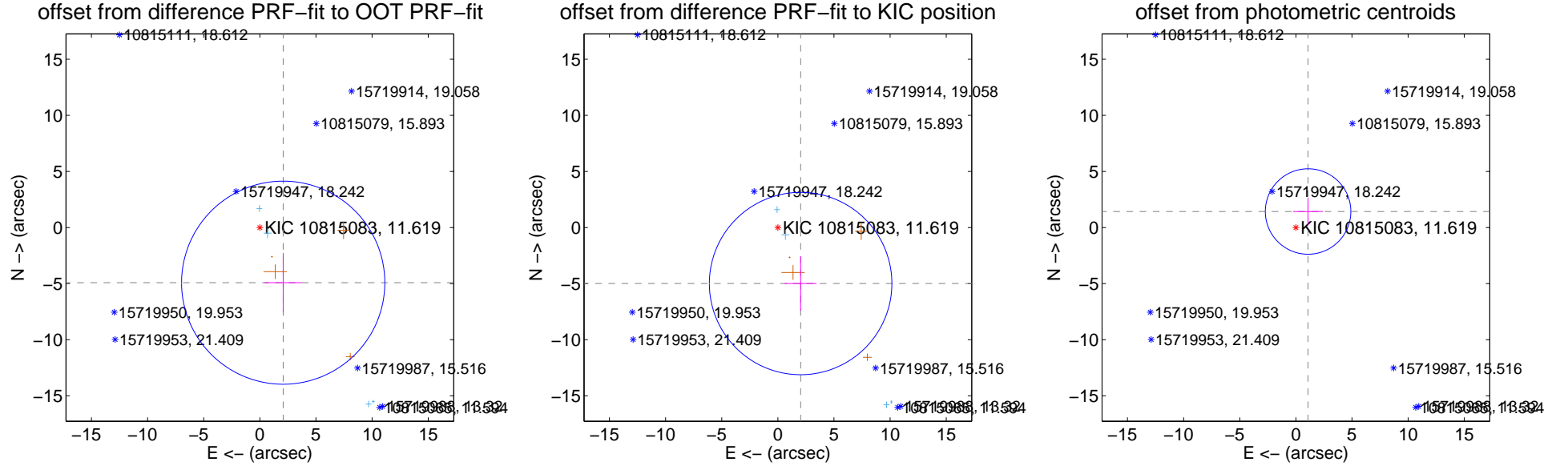
DV Centroid Data

Supplemental centroid analysis for 010815083-01. **Kepler magnitude: 11.62.** Transit SNR 7.10

There are 4 quarters with good PRF difference image offsets

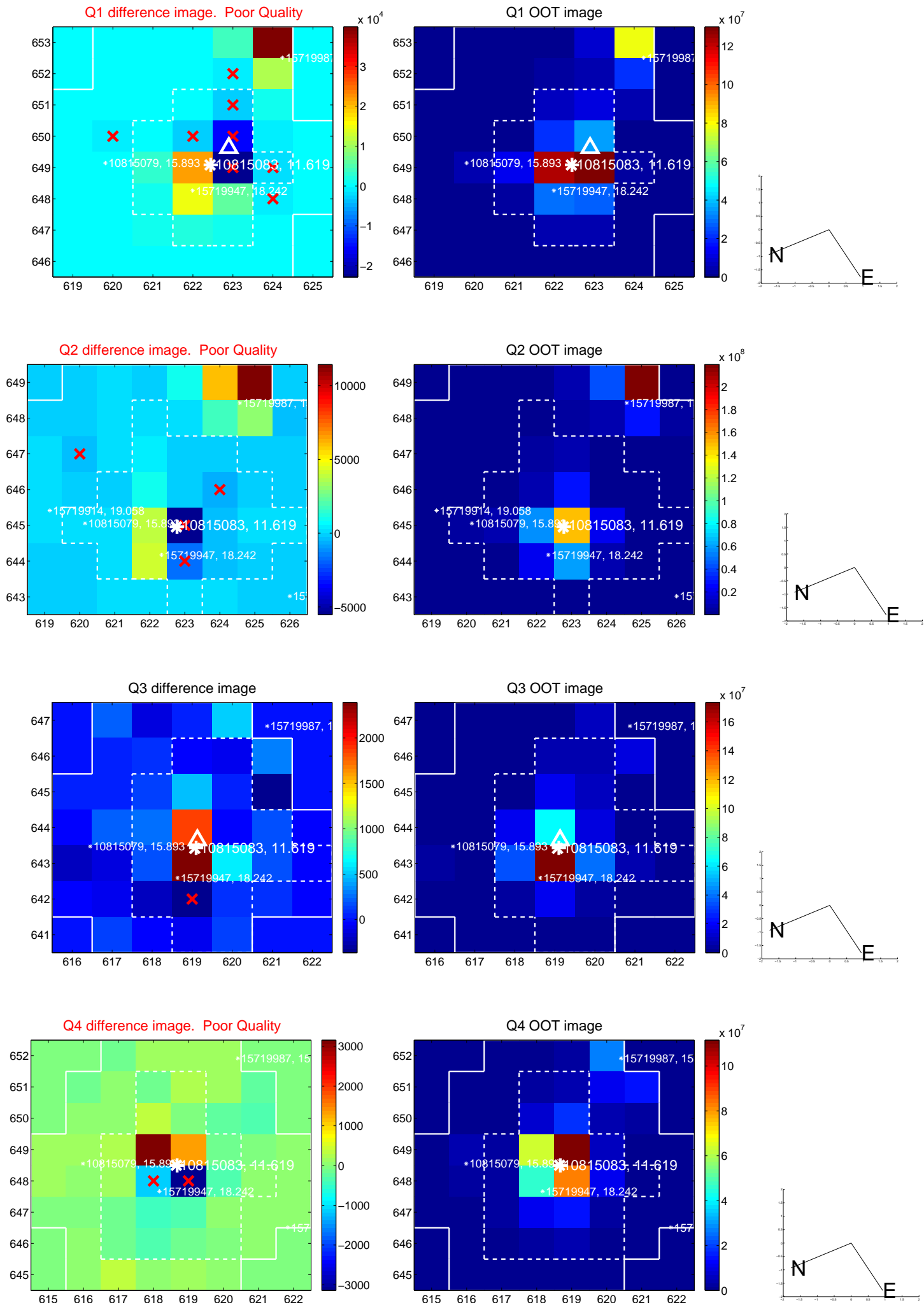
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.339 ± 3.017	1.77	-2.080 ± 1.664	-4.917 ± 2.632
PRF-fit source offset from KIC position	5.388 ± 2.709	1.99	-2.027 ± 1.419	-4.992 ± 2.422
photometric centroid source offset	1.79 ± 1.27	1.41	-1.09 ± 1.33	1.43 ± 1.23

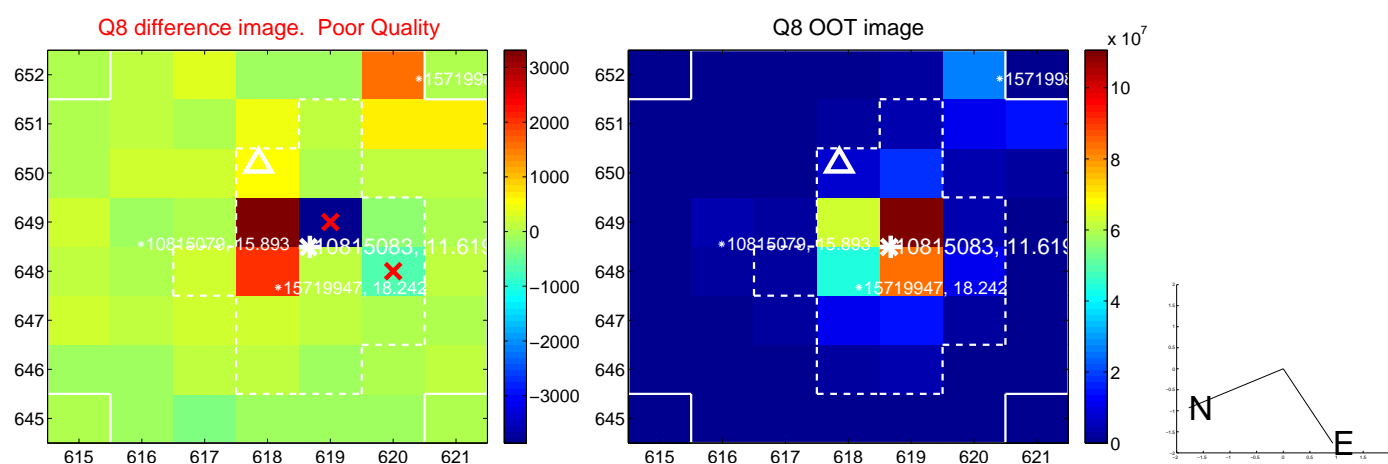
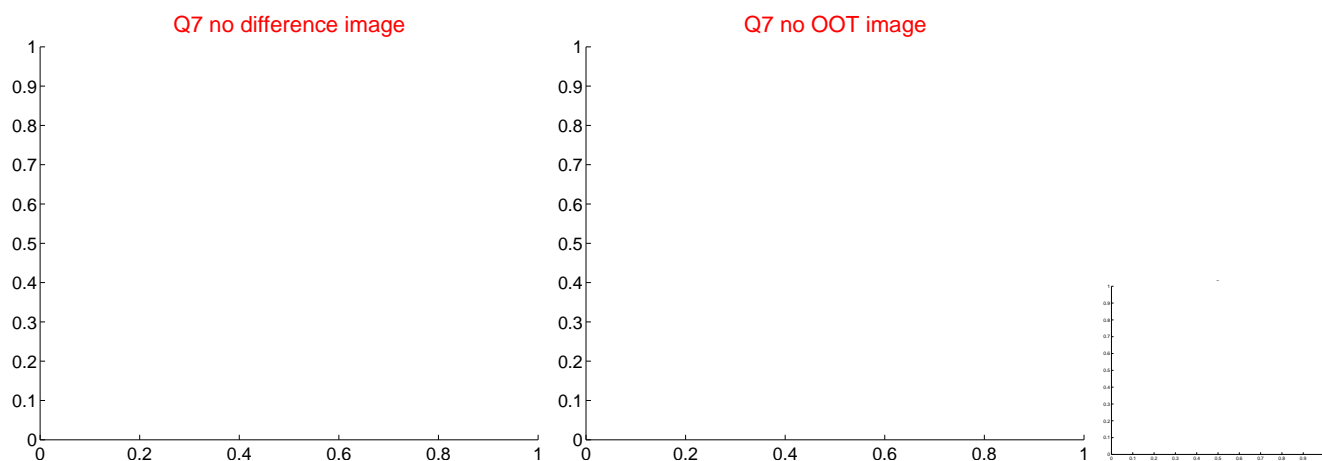
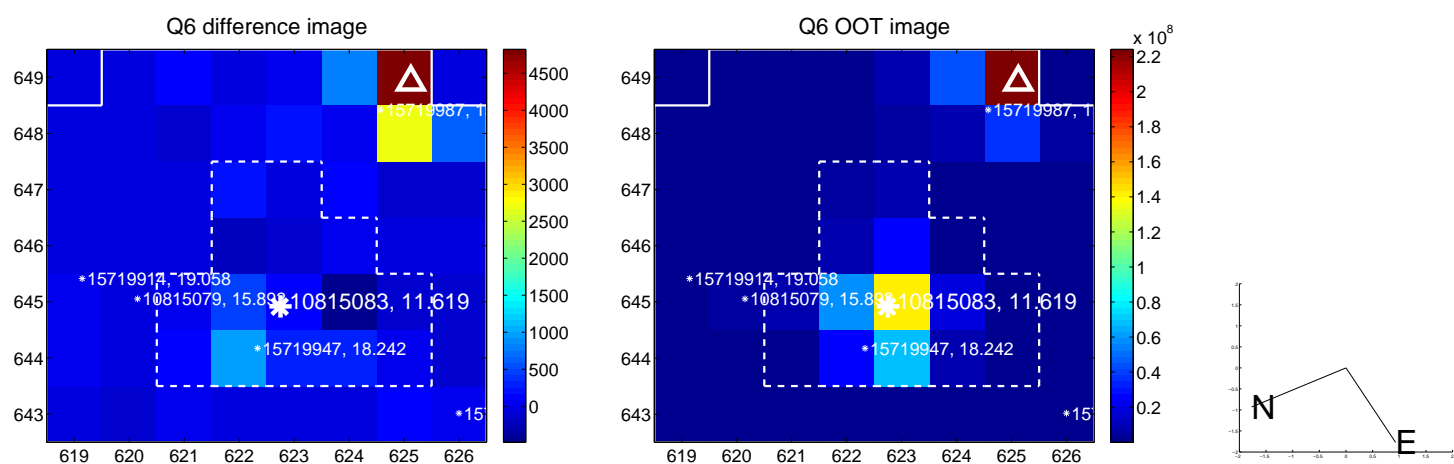
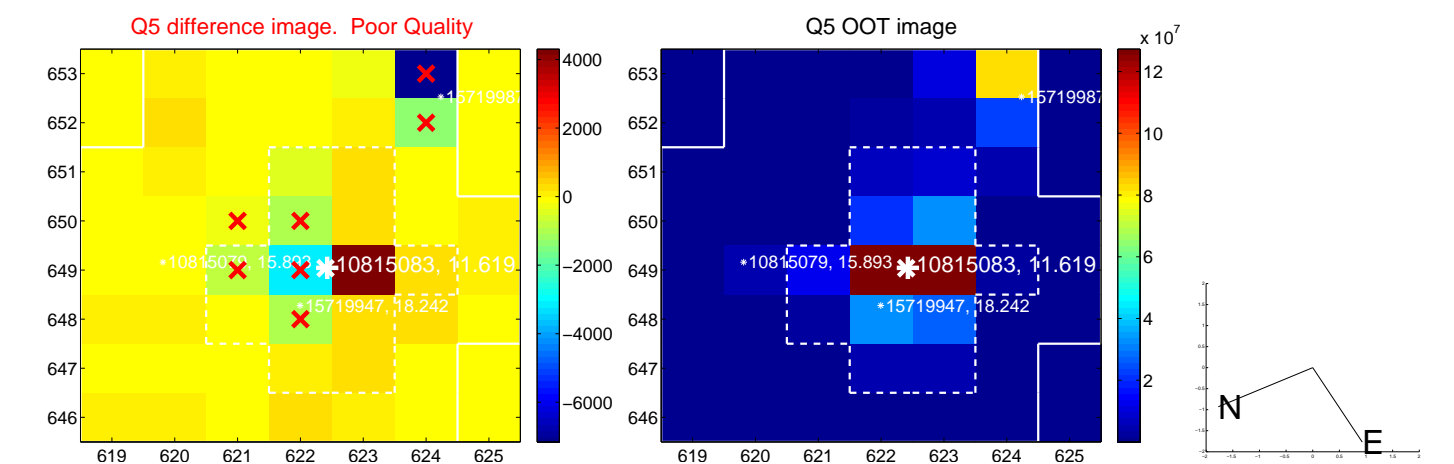


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

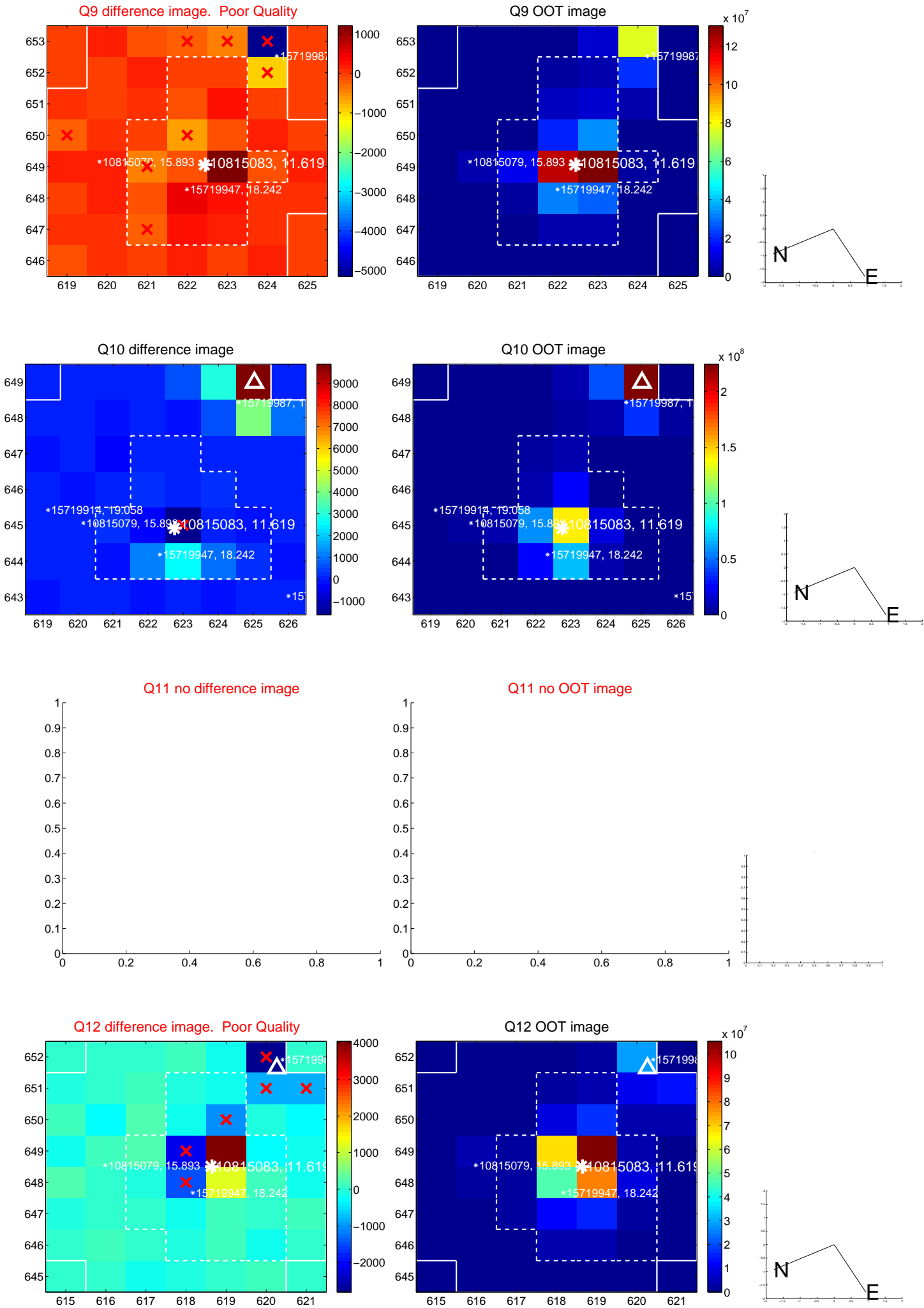
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



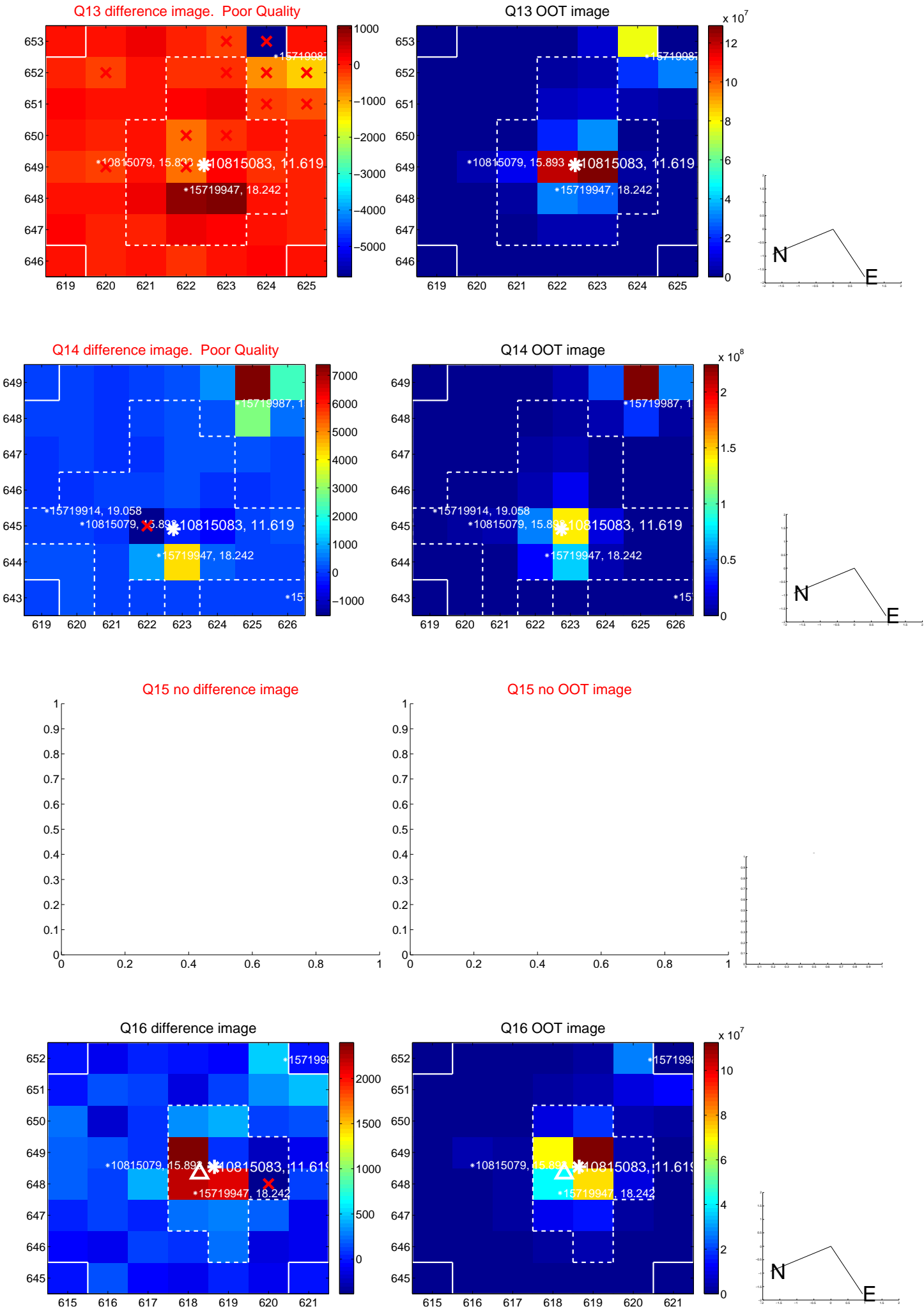
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



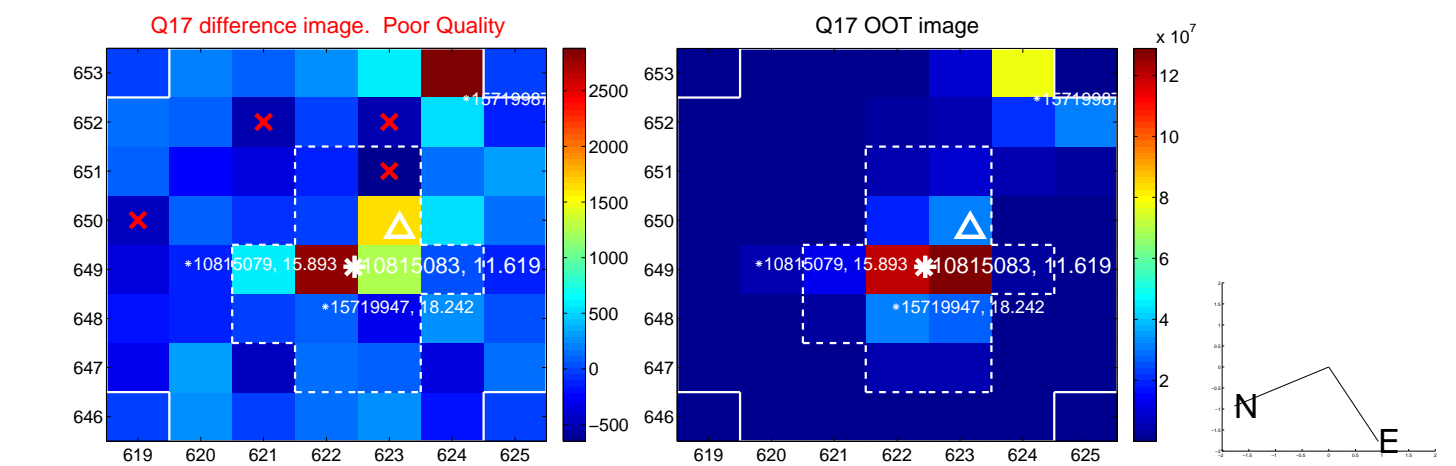
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



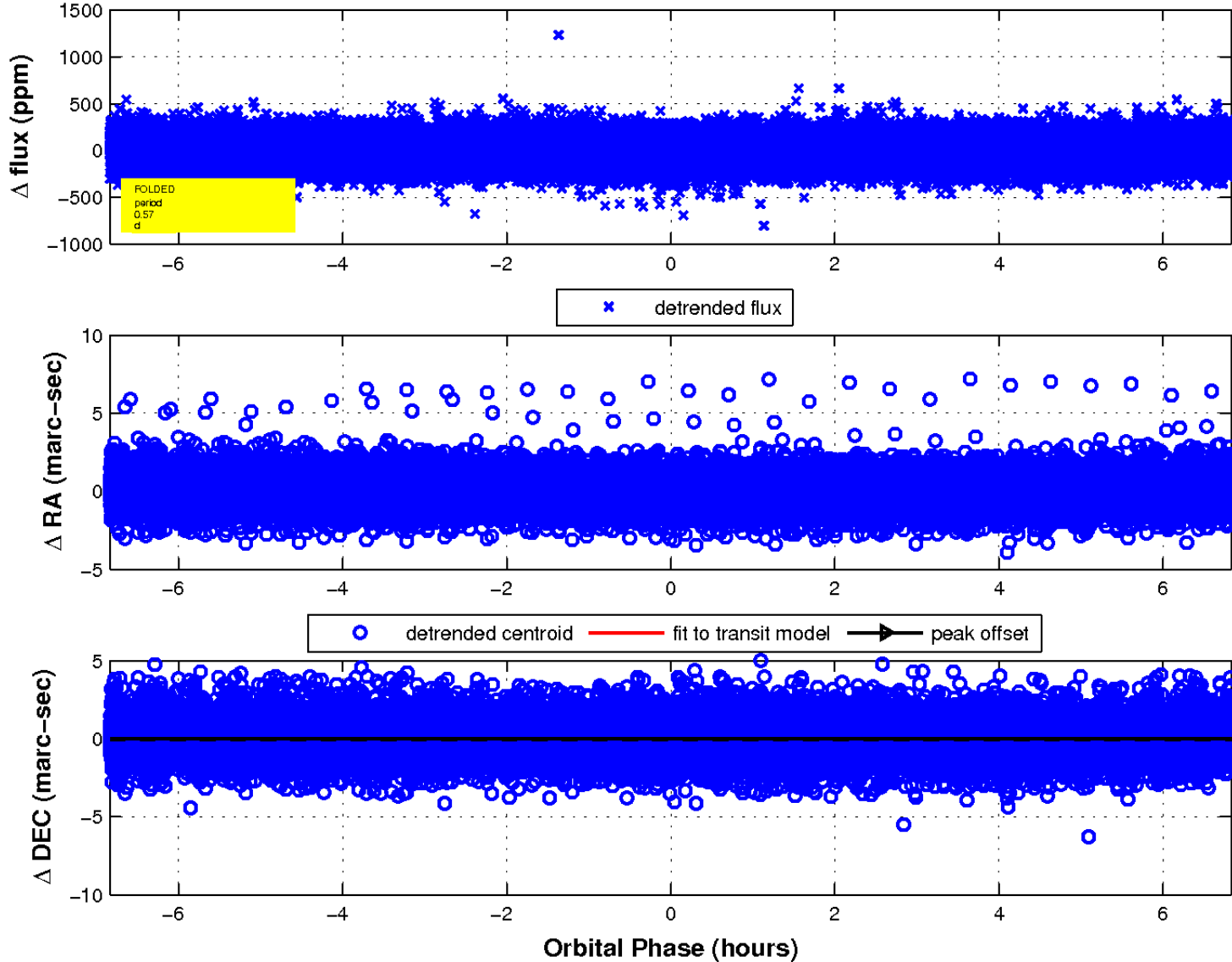
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

