

KIC 004919814

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})
004919814-01	OBS	No	20.497810	150.921614	157.3	35.114	8.6	11.0	1.88	7141	4.58	299.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004919814-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV

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

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

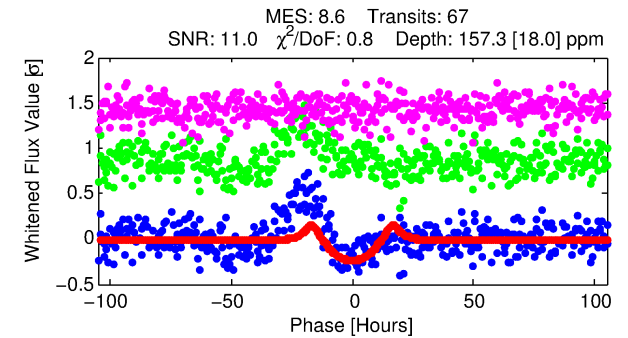
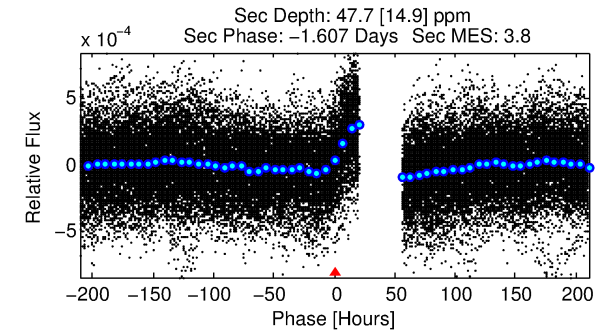
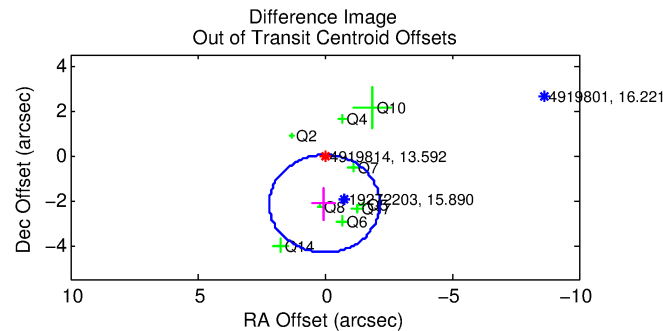
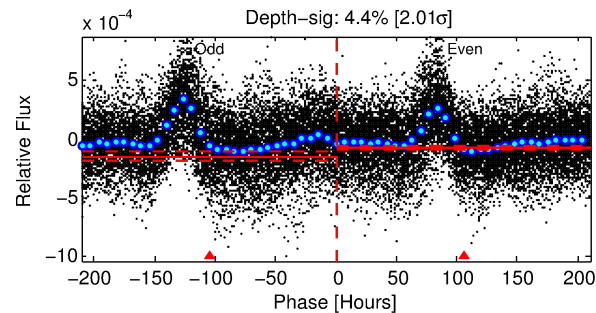
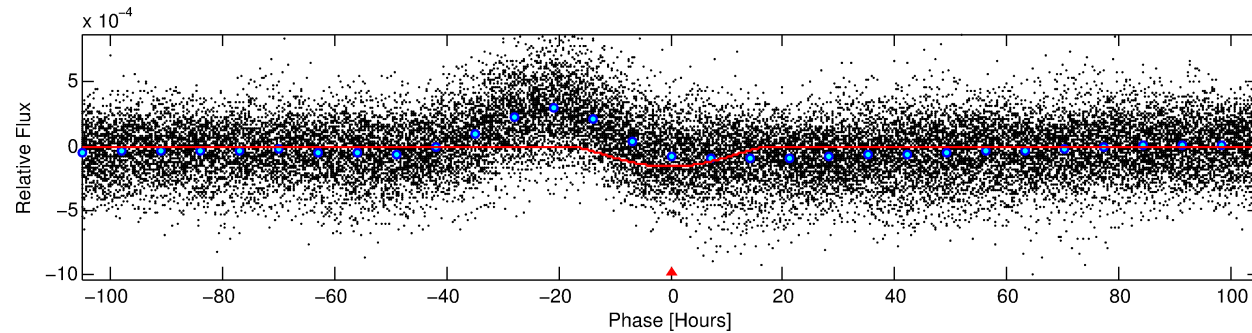
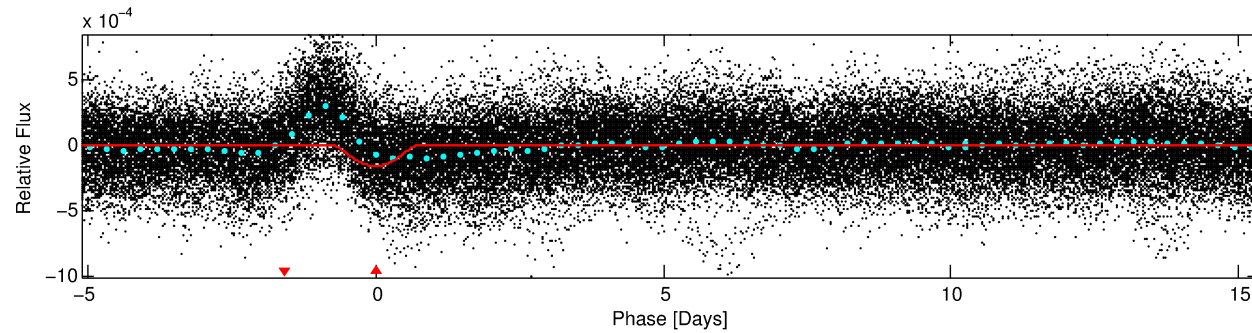
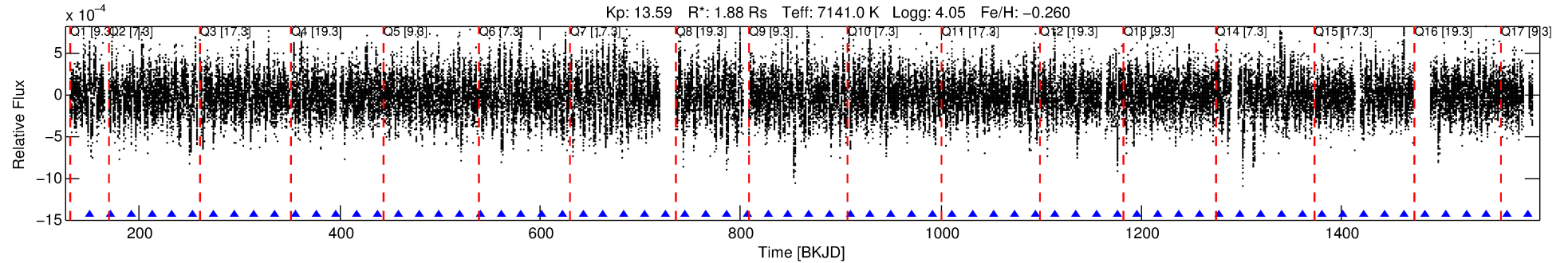
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004919814-01

No Significant Match Found

DV One-Page Summary

KIC: 4919814 Candidate: 1 of 1 Period: 20.498 d



DV Fit Results:

Period = 20.49781 [0.00106] d
Epoch = 150.9216 [0.0433] BKJD
Rp/R* = 0.0223 [0.0196]
a/R* = 1.39 [0.14]
b = 1.00 [0.03]
Seff = 299.31 [137.18]
Teq = 1061 [122] K
Rp = 4.58 [4.23] Re
a = 0.1657 [0.0439] AU
Ag = 34.35 [62.78] [0.53 σ]
Teffp = 3970 [1780] K [1.63 σ]

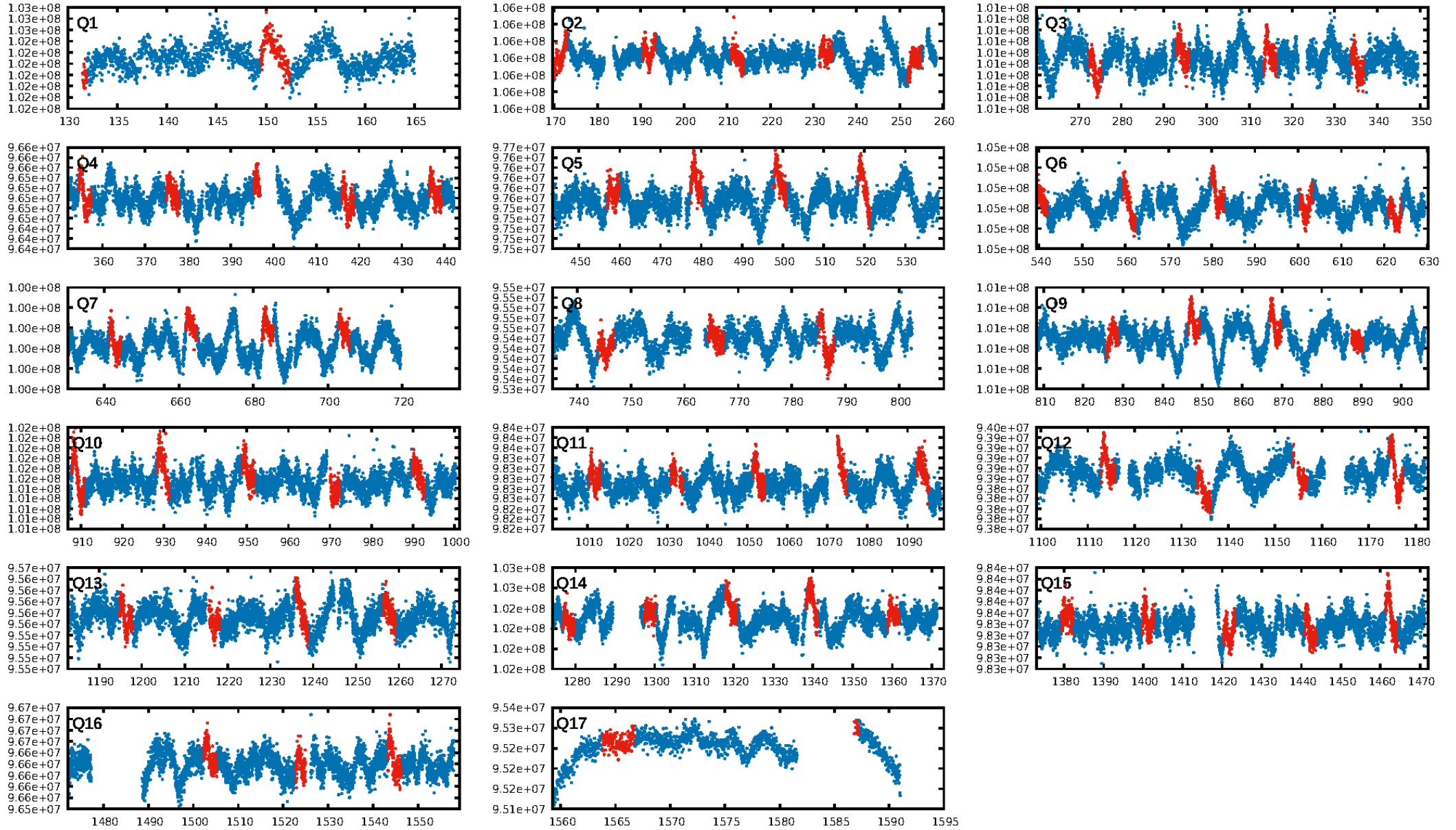
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 92.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.49e-17
RollingBand-fgt: 1.00 [65/65]
GhostDiagnostic-chr: 1.116
Centroid-sig: 0.0%
Centroid-so: 0.511 arcsec [1.50 σ]
OotOffset-rm: 2.152 arcsec [2.97 σ]
KicOffset-rm: 2.319 arcsec [3.77 σ]
OotOffset-st: 4/1/2/2 [9]
KicOffset-st: 4/1/2/2 [9]
DiffImageQuality-fgm: 0.44 [4/9]
DiffImageOverlap-fno: 1.00 [15/15]

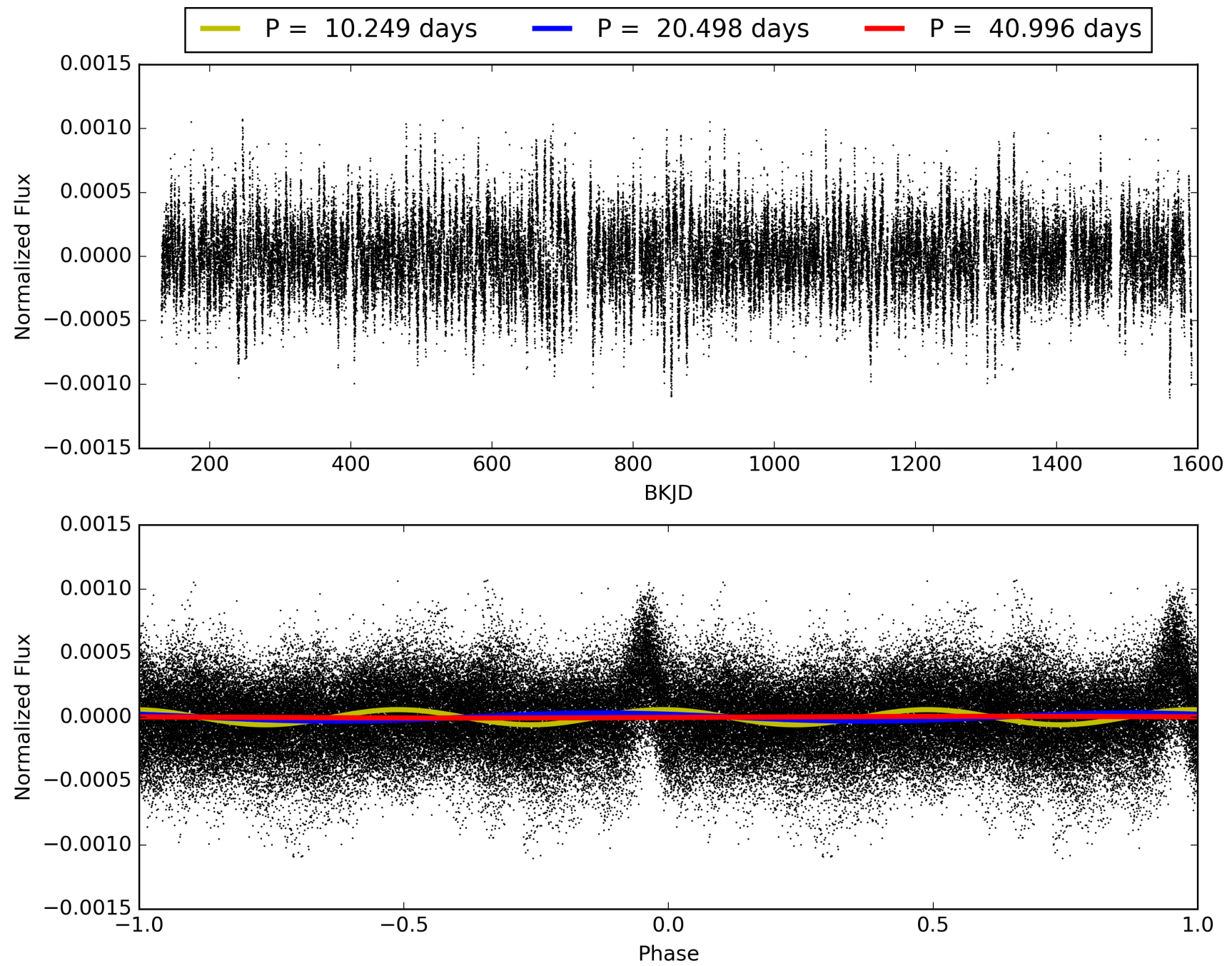
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 04:33:23 Z

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

TCE 004919814-01, PDC Light Curves

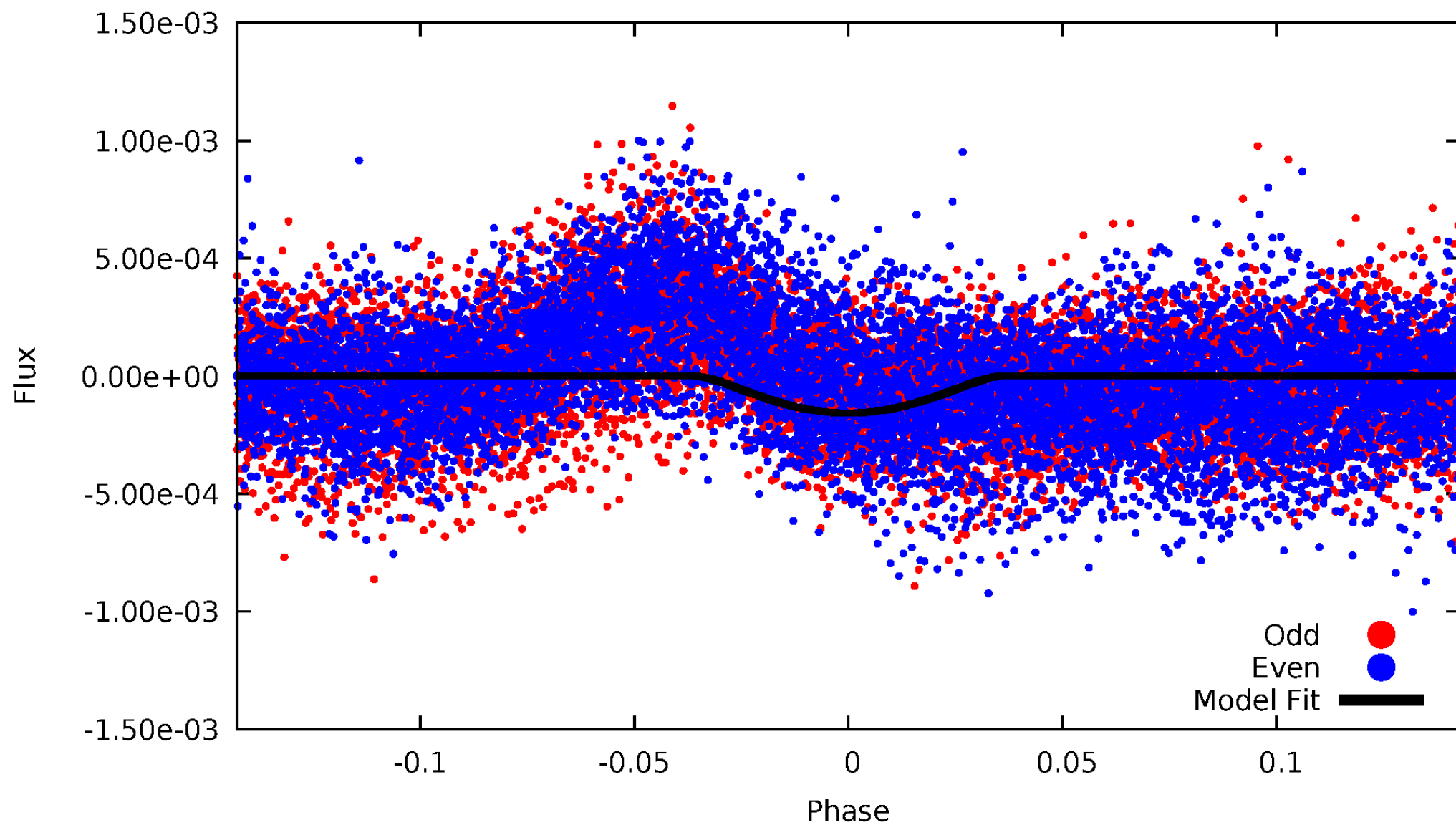


TCE 004919814-01



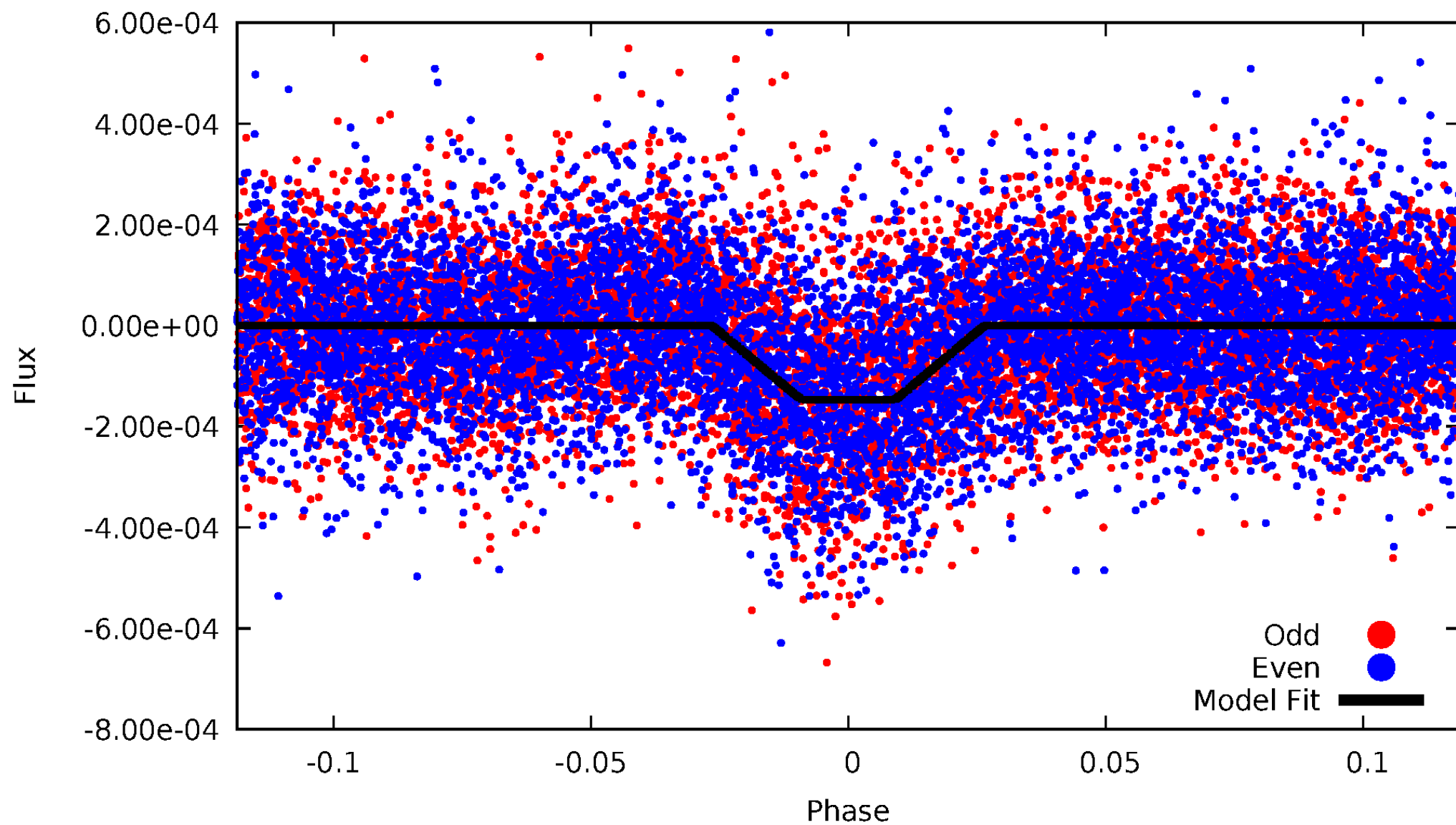
DV Odd/Even

TCE 004919814-01



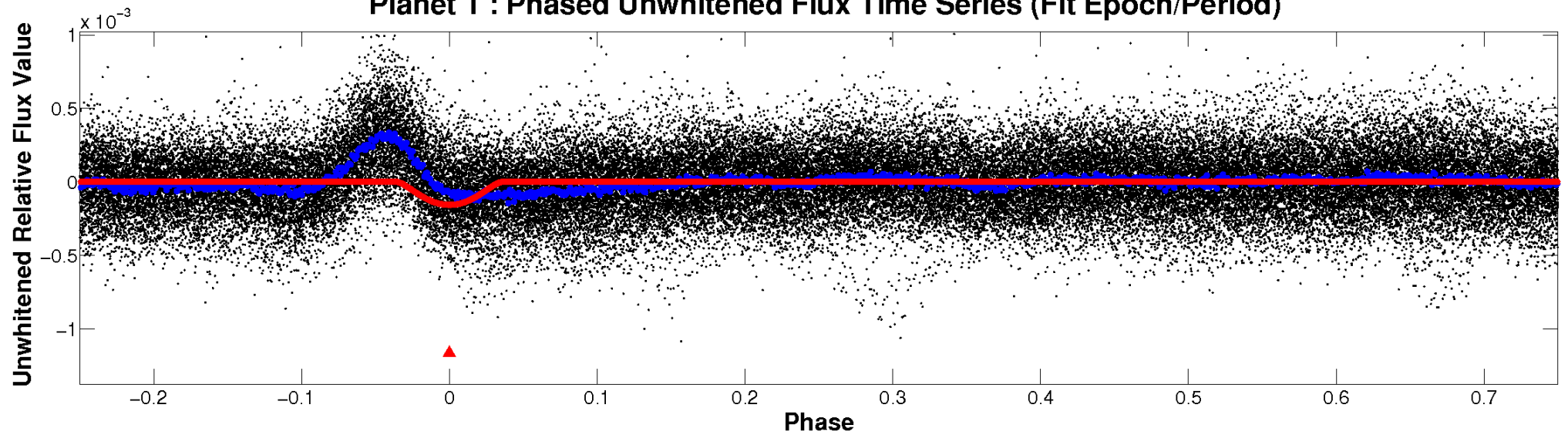
ALT Odd/Even

TCE 004919814-01

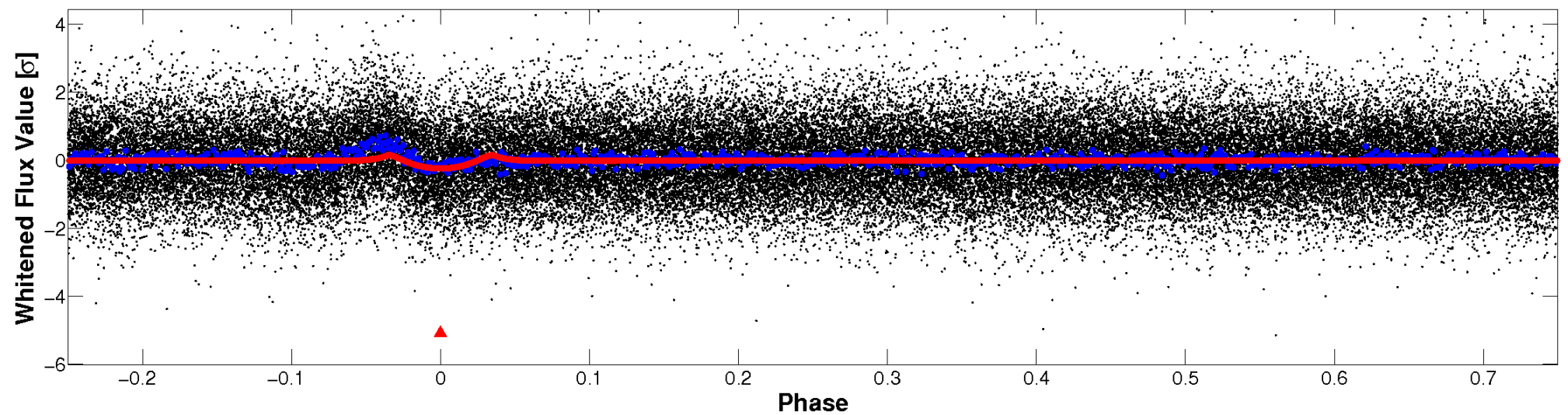


Non-Whitened Vs. Whitened Light Curve

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

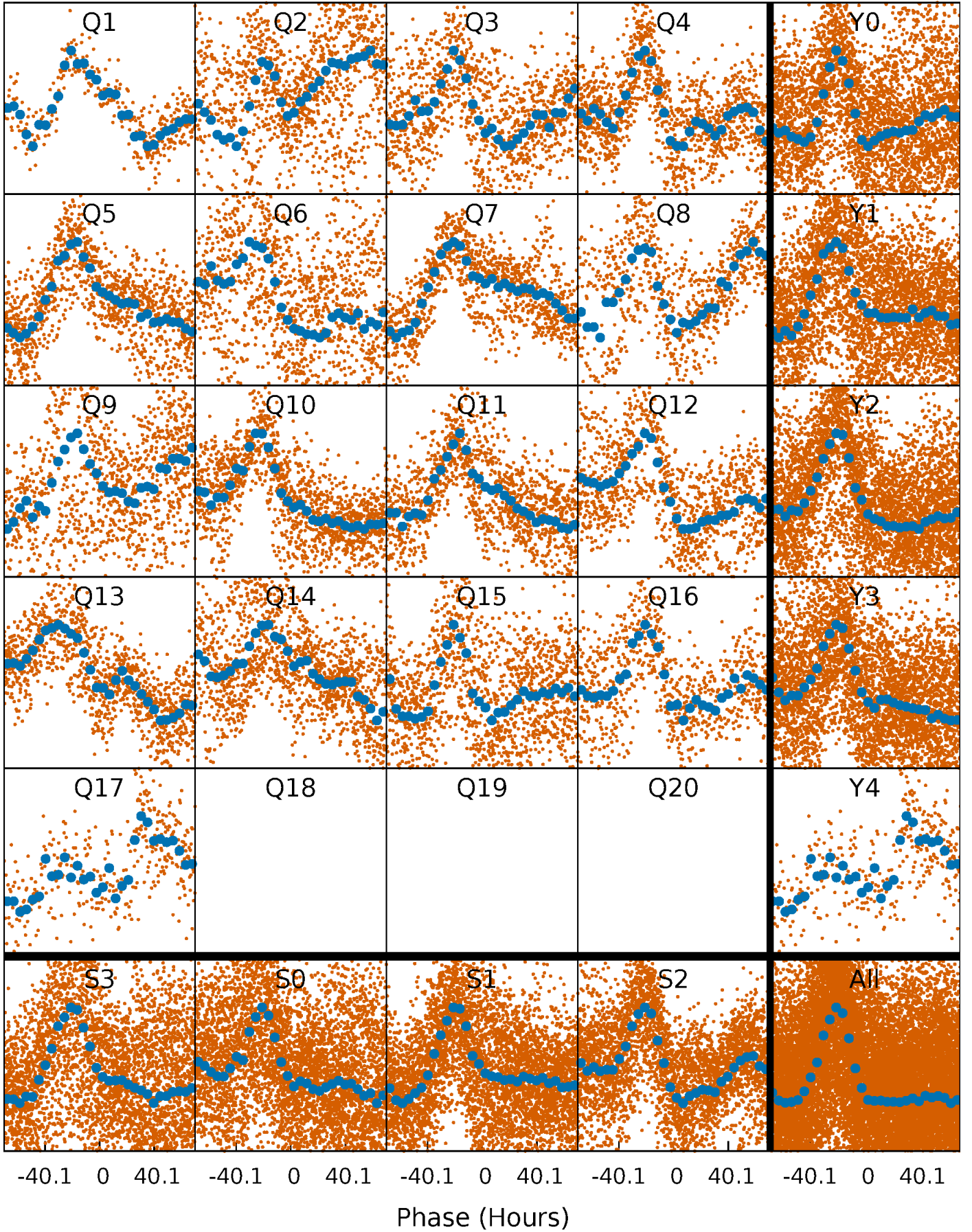


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



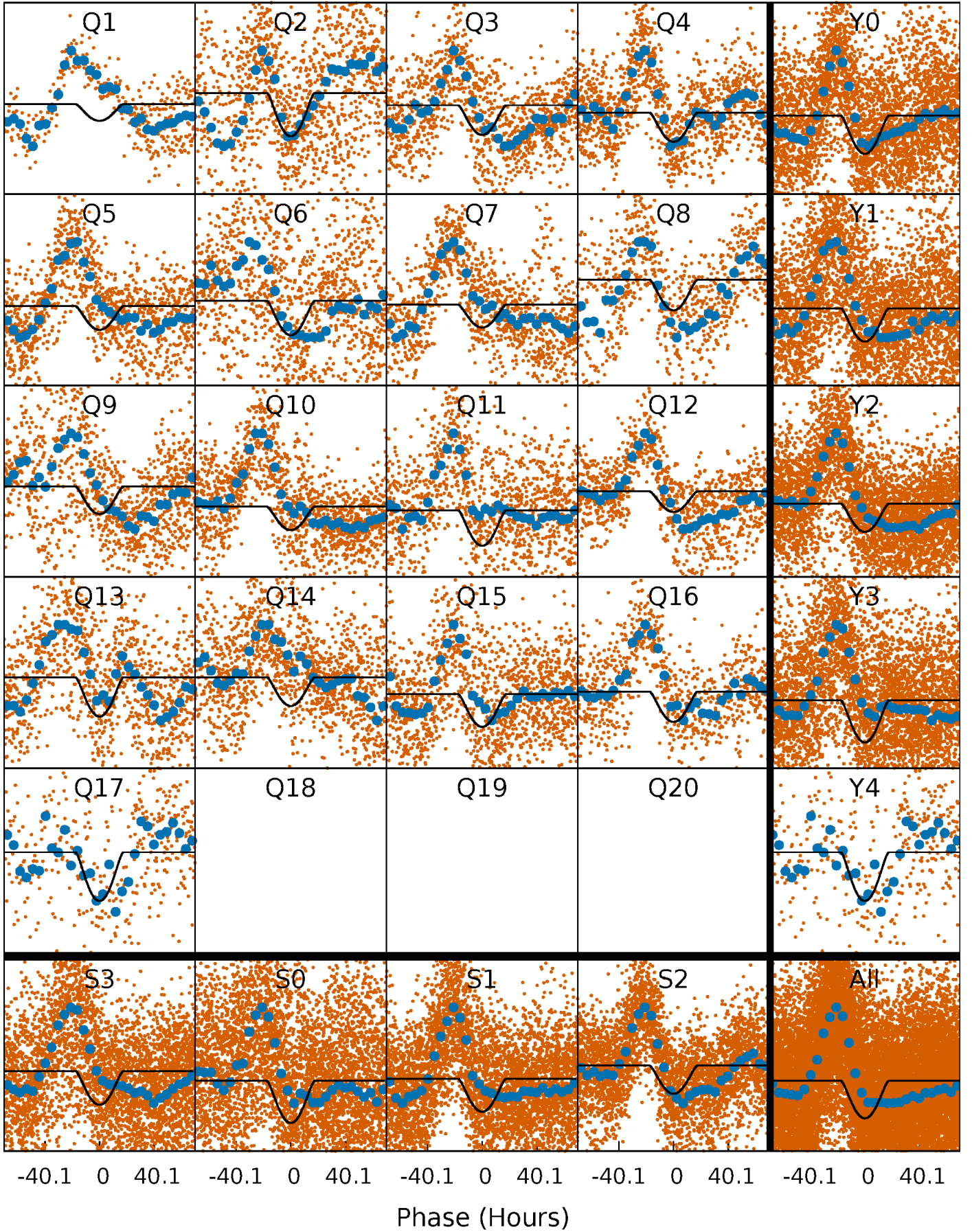
PDC Quarter-Phased Transit Curves

TCE 004919814-01 P= 20.497810 Days $T_0=150.921614$ (BKJD)



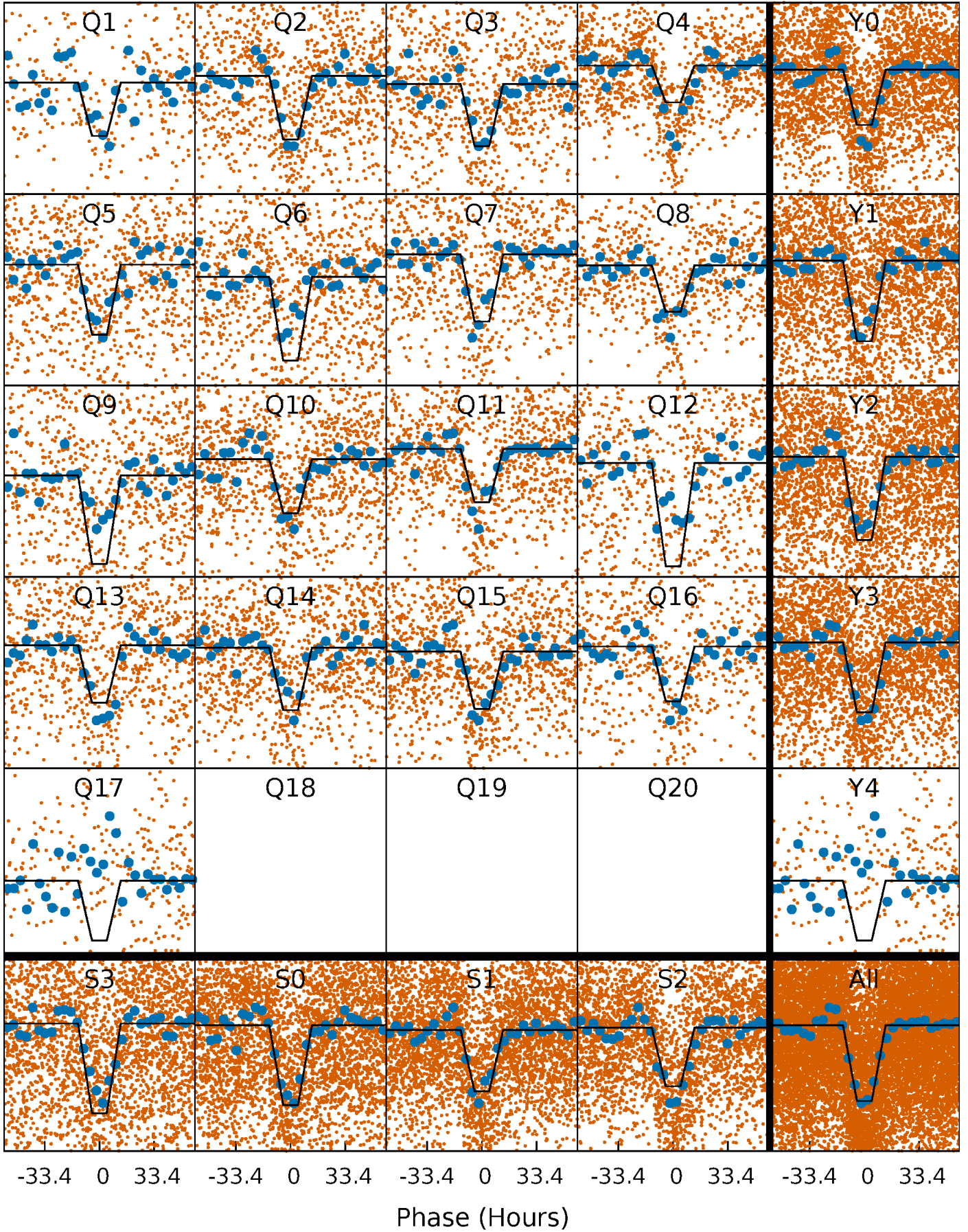
DV Quarter-Phased Transit Curves

TCE 004919814-01 P= 20.497810 Days $T_0=150.921614$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

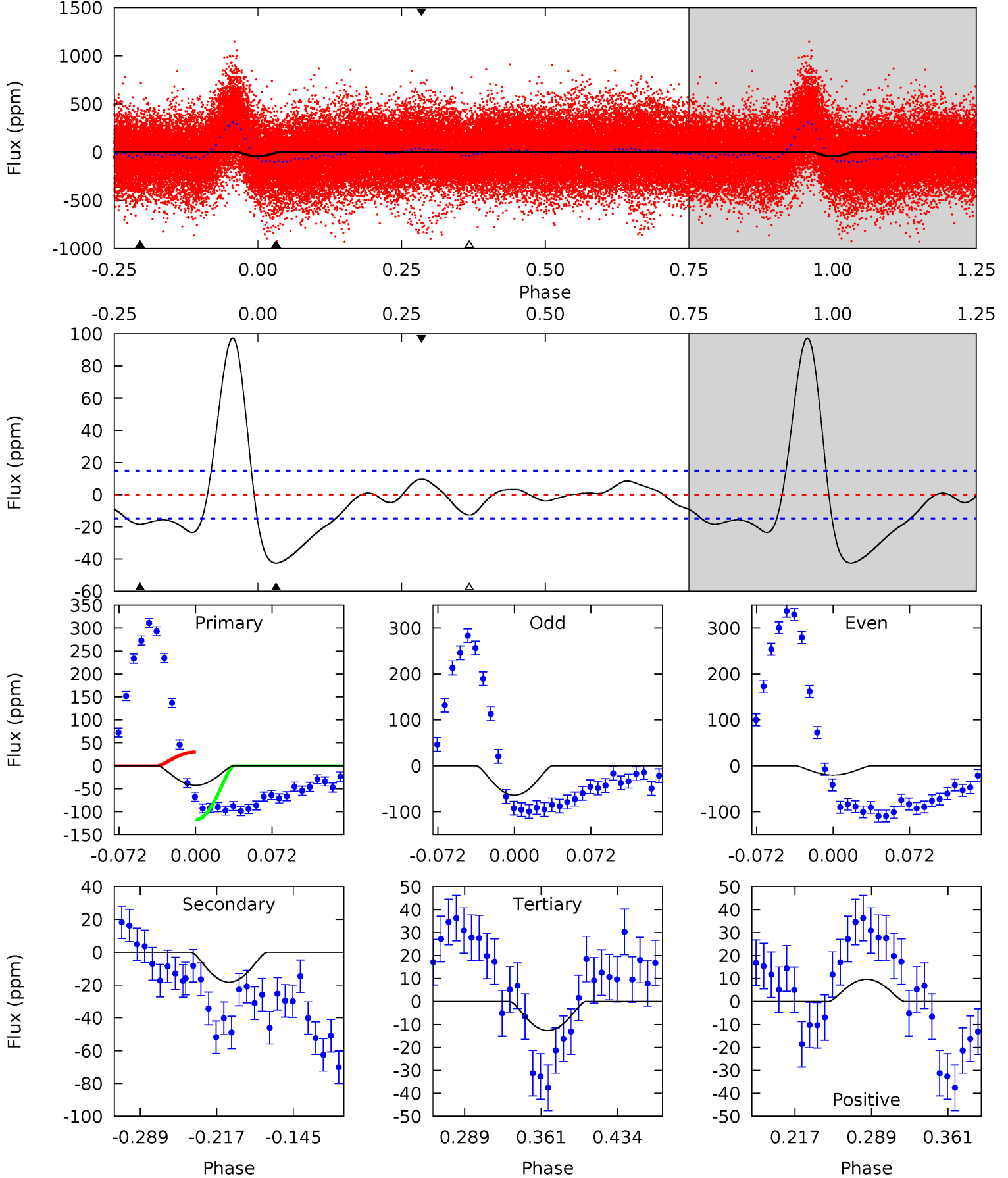
TCE 004919814-01 P= 20.499461 Days $T_0=150.775513$ (BKJD)



DV Model-Shift Uniqueness Test

004919814-01, P = 20.497810 Days, E = 130.423804 Days

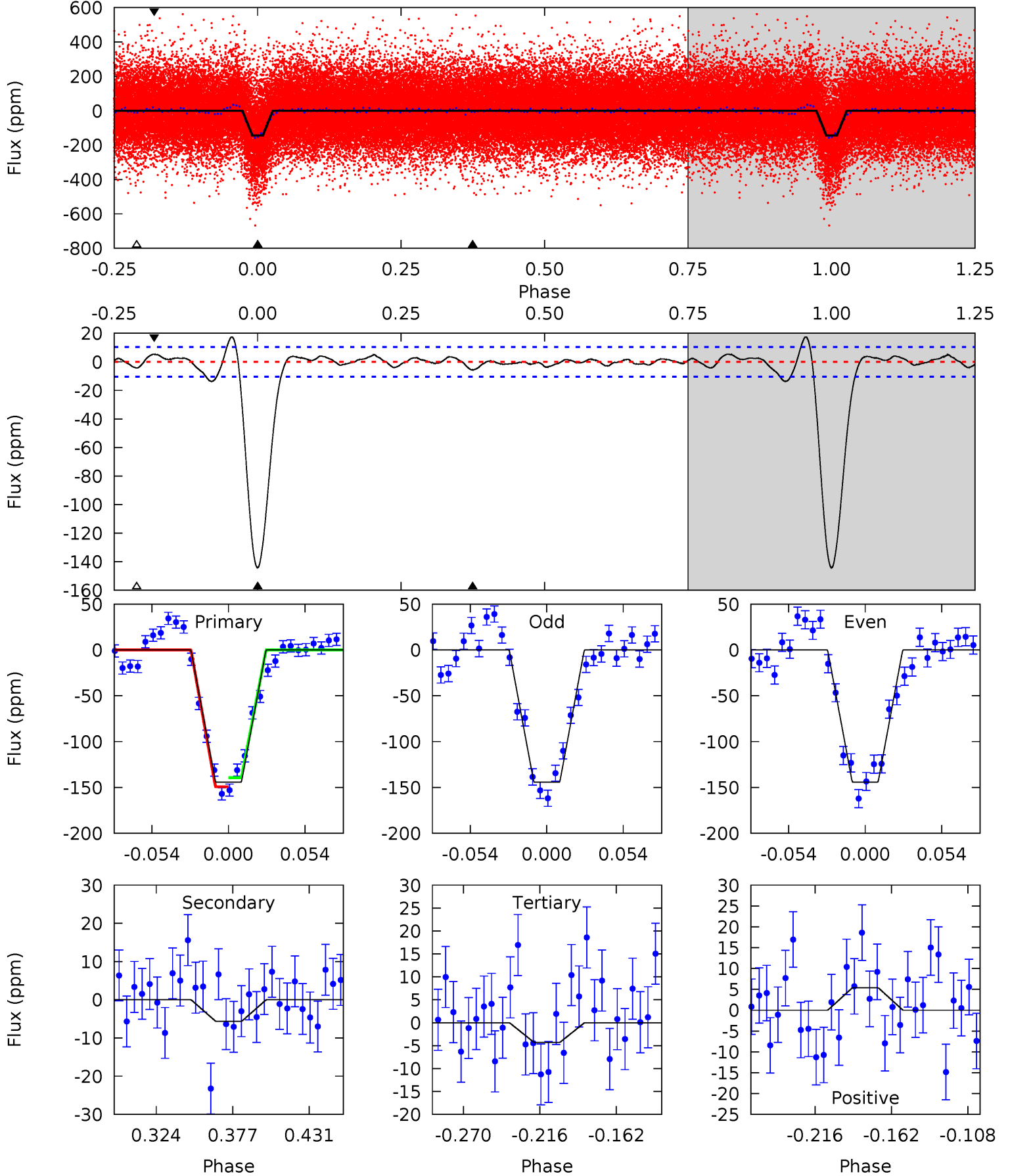
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.2	5.68	3.95	3.01	4.63	1.80	5.69	9.29	10.2	1.73	2.67	6.83	0.63	0.70	14.2



Alt Model-Shift Uniqueness Test

004919814-01, $P = 20.499461$ Days, $E = 130.276052$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
64.9	2.54	1.93	2.42	4.69	1.93	1.39	63.0	62.5	0.61	0.13	0.03	0.99	0.11	2.23



Stellar Parameters For KIC 004919814

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7141^{+256}_{-371}	$4.050^{+0.234}_{-0.175}$	$-0.260^{+0.250}_{-0.350}$	$1.878^{+0.548}_{-0.548}$	$1.441^{+0.194}_{-0.291}$	$0.307^{+0.453}_{-0.139}$
	+4%/-5%	+6%/-4%	+96%/-135%	+29%/-29%	+13%/-20%	+148%/-45%
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 004919814-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-18 ± 3	$5.34^{+3.74}_{-3.23}$	1461^{+130}_{-125}	3306^{+1188}_{-467}	$9.080^{+48.857}_{-5.800}$
Alt.	-6 ± 2	$3.86^{+3.58}_{-2.58}$	1468^{+123}_{-126}	3031^{+1380}_{-537}	$5.322^{+40.713}_{-4.031}$

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 $A_{obs} \gg 1.0$

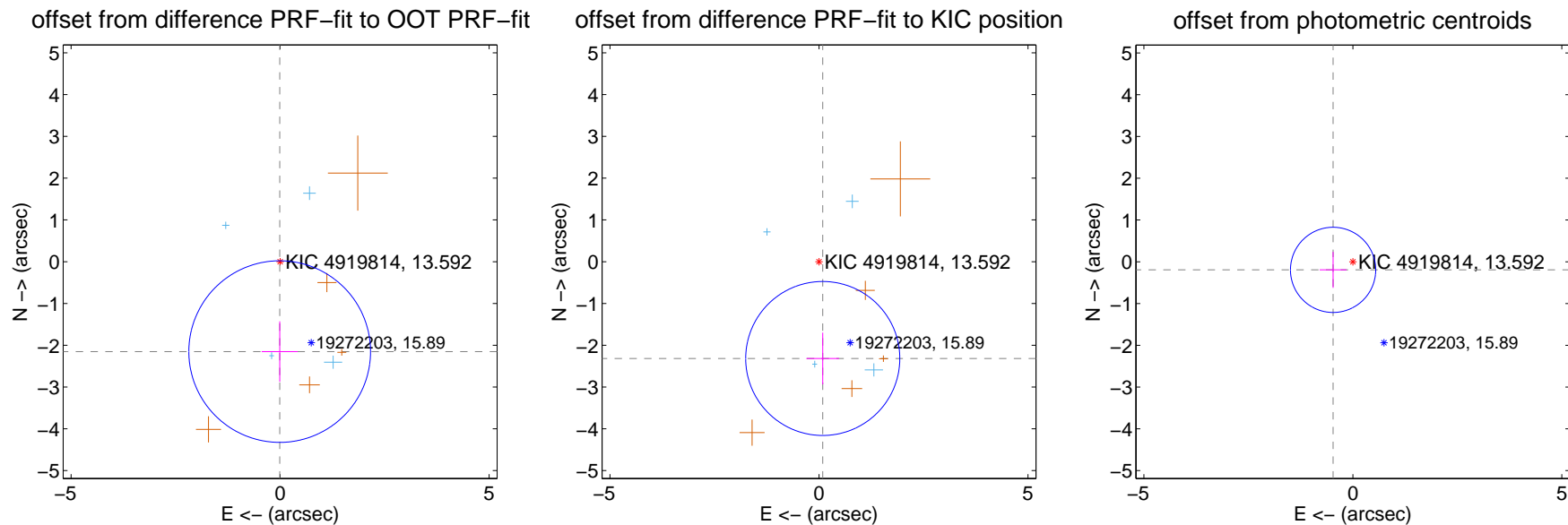
DV Centroid Data

Supplemental centroid analysis for 004919814-01. Kepler magnitude: 13.59. Transit SNR 11.04

There are 4 quarters with good PRF difference image offsets

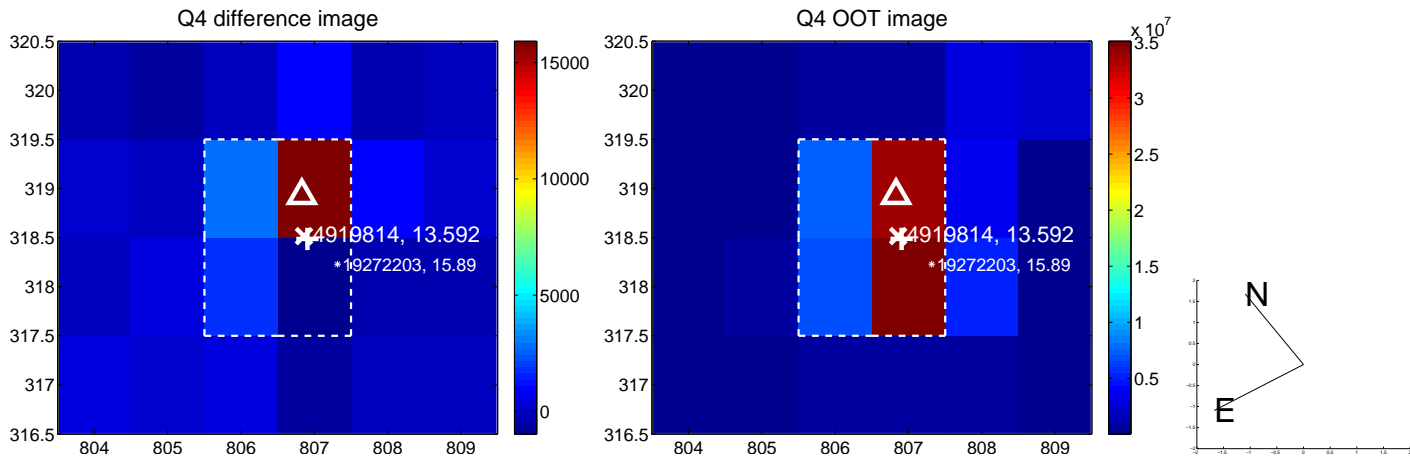
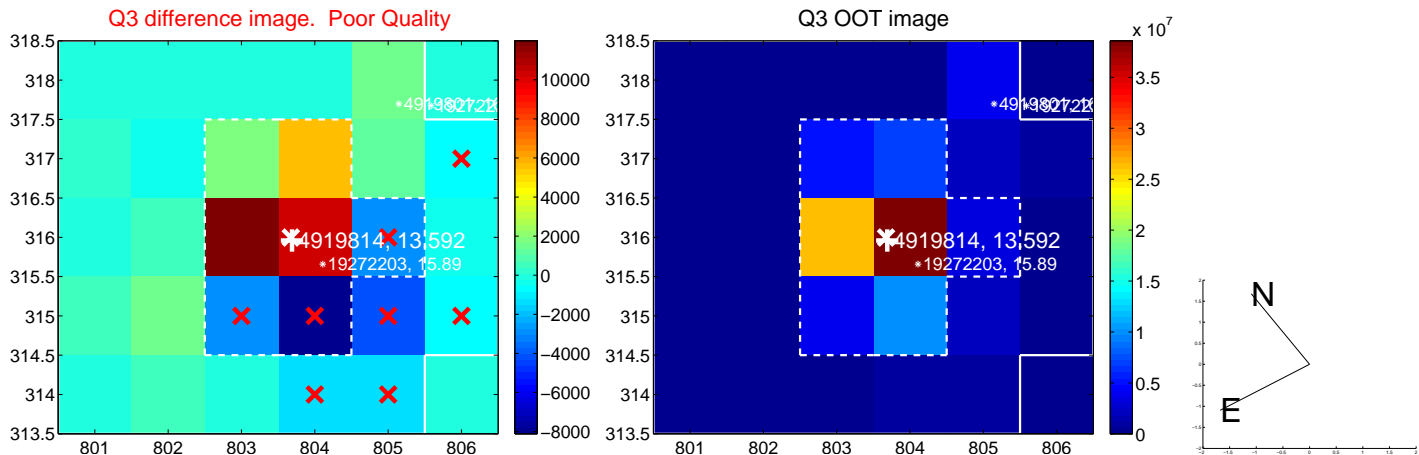
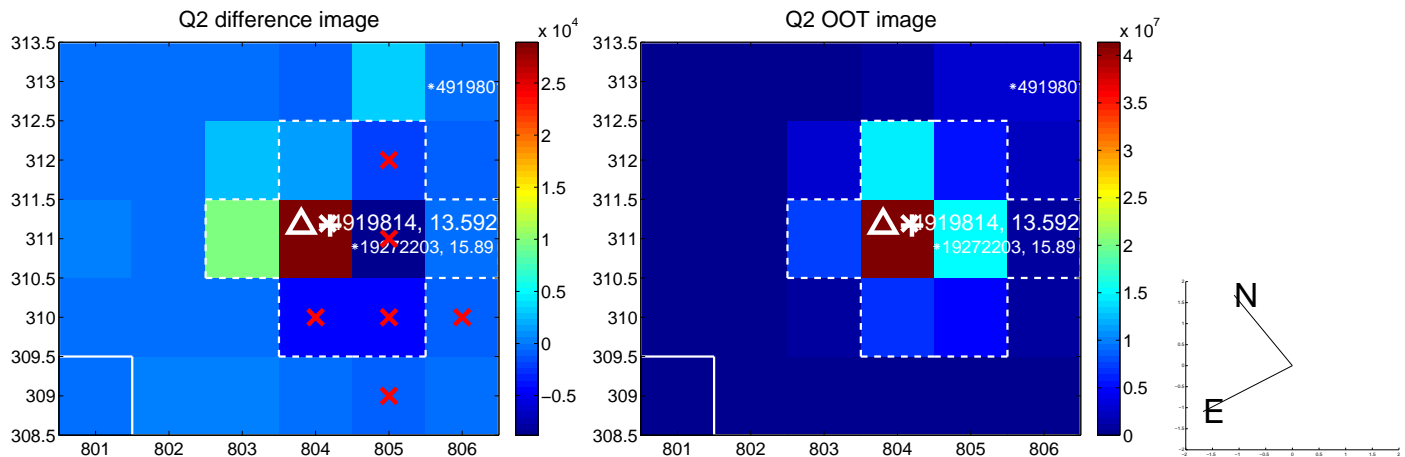
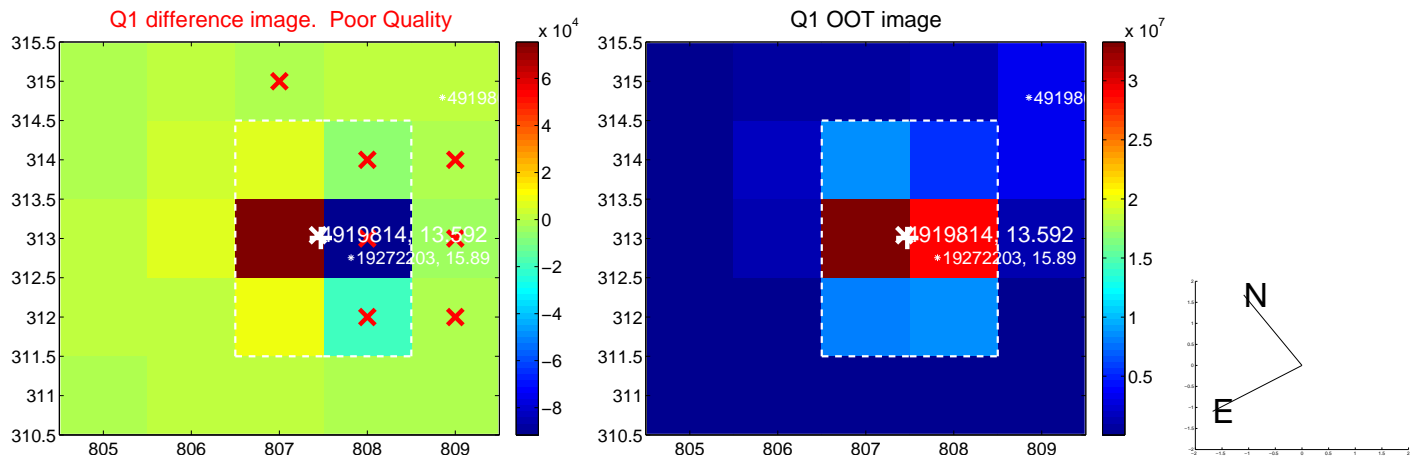
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.152 ± 0.725	2.97	0.010 ± 0.432	-2.152 ± 0.724
PRF-fit source offset from KIC position	2.319 ± 0.614	3.77	-0.090 ± 0.391	-2.317 ± 0.619
photometric centroid source offset	0.51 ± 0.34	1.50	0.47 ± 0.32	-0.19 ± 0.43

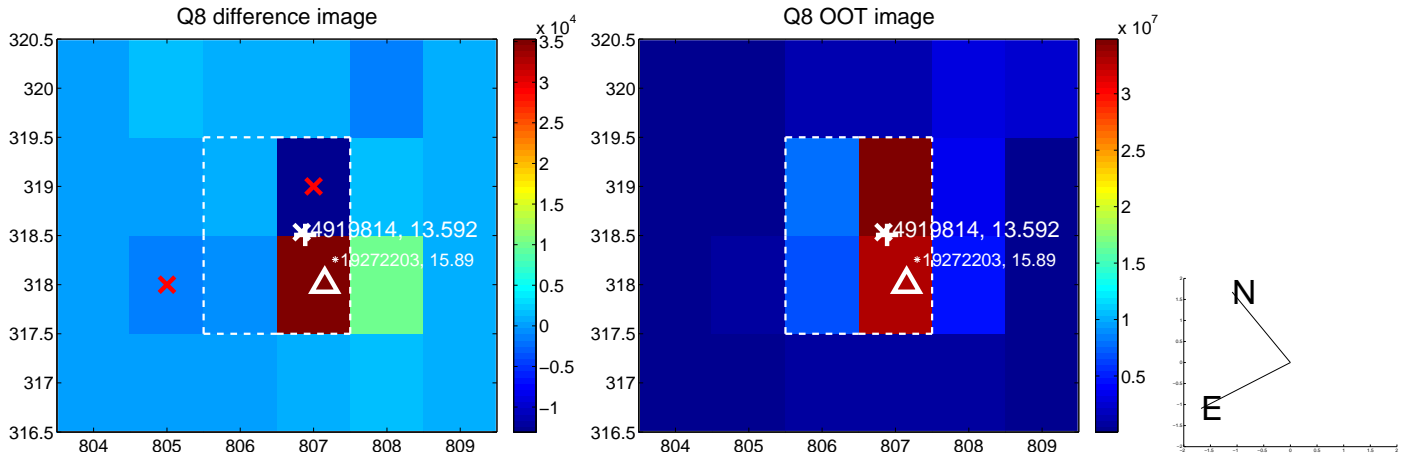
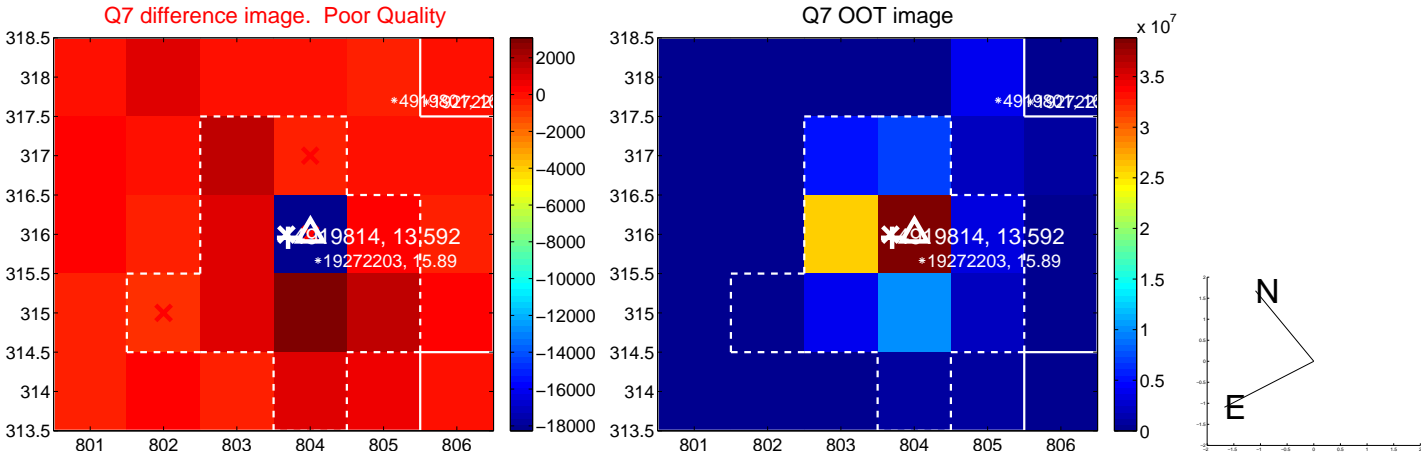
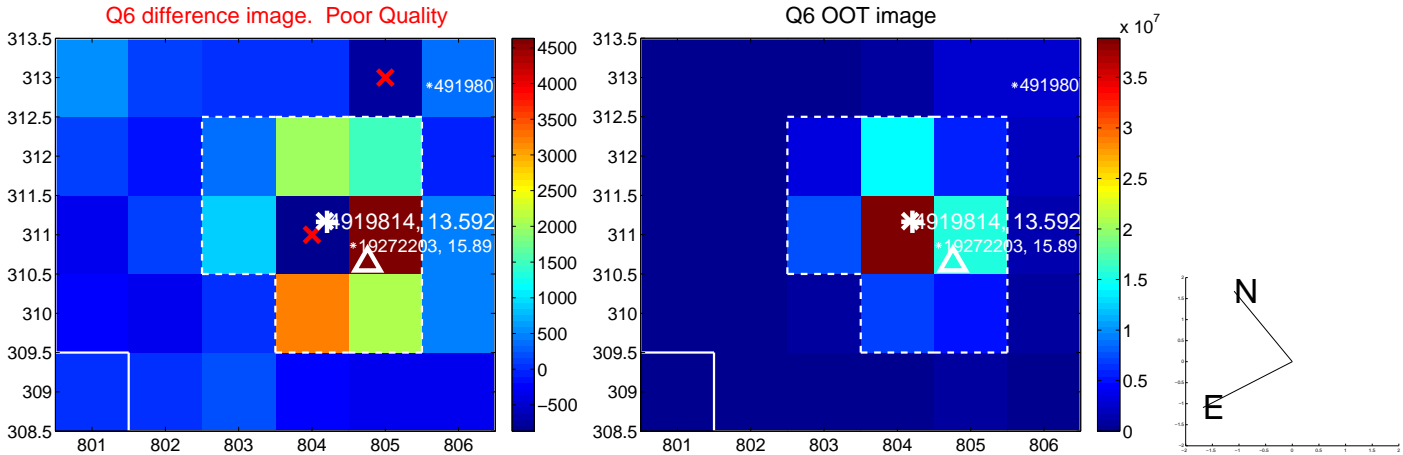
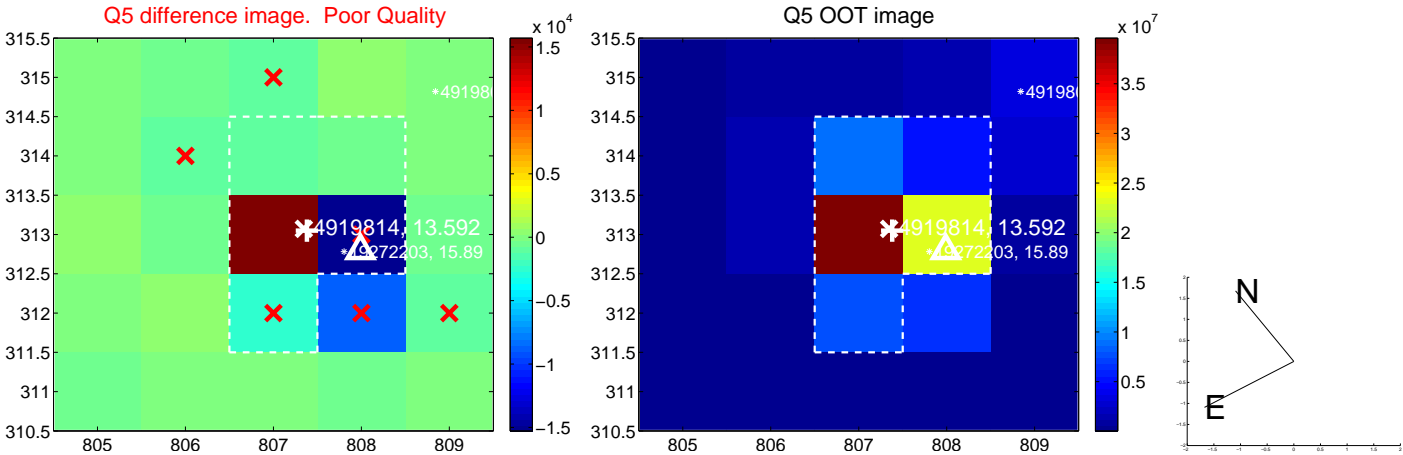


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

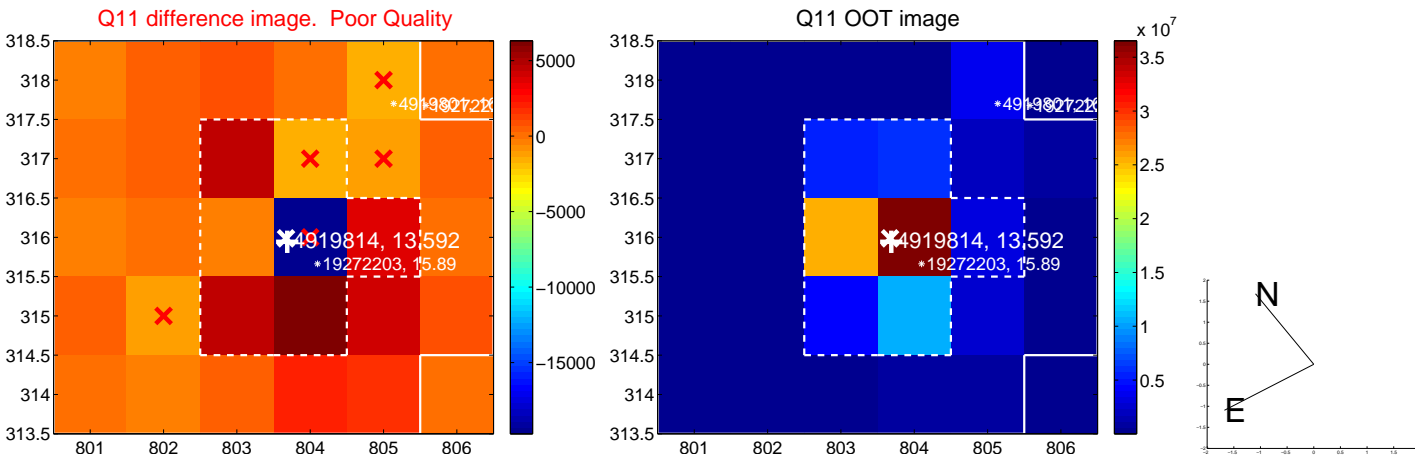
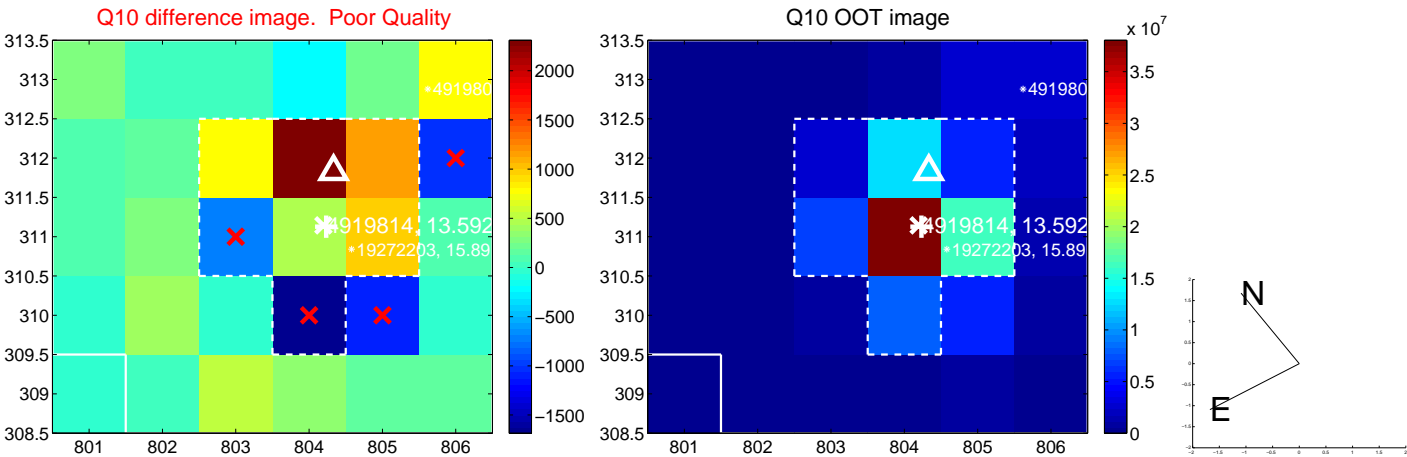
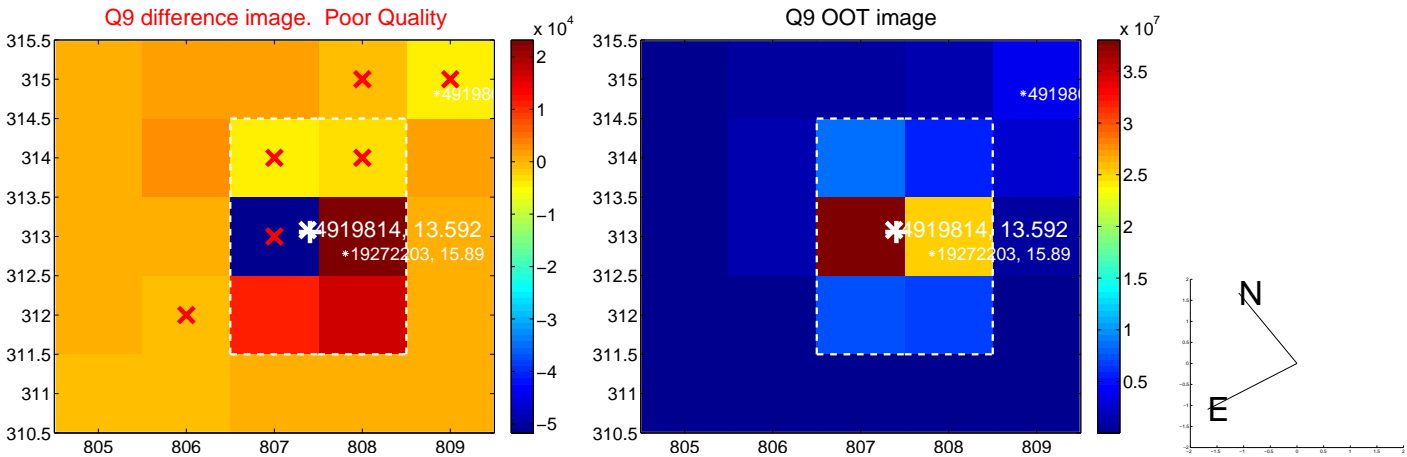
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



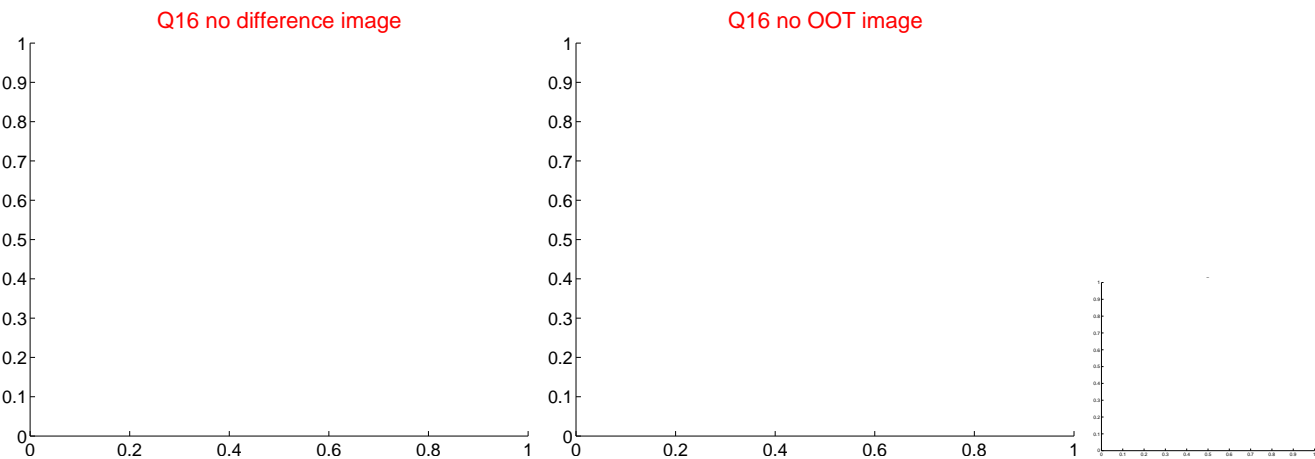
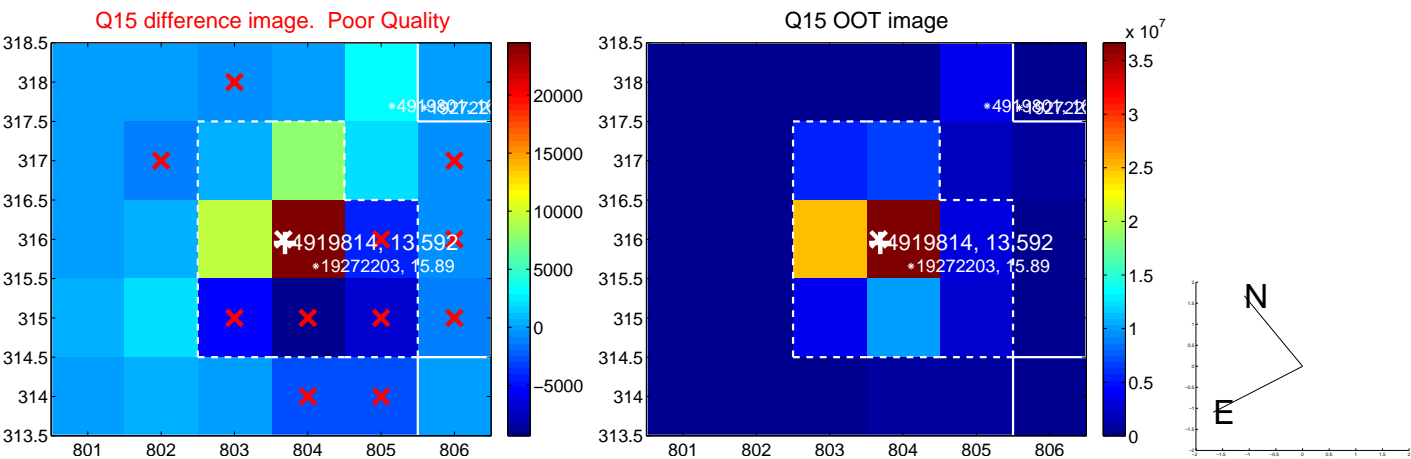
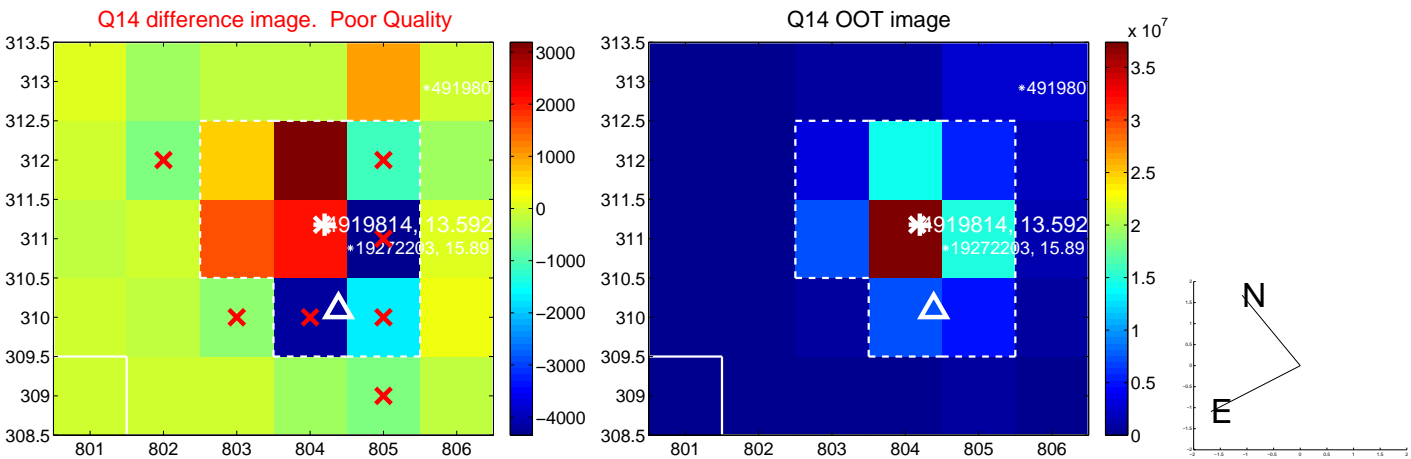
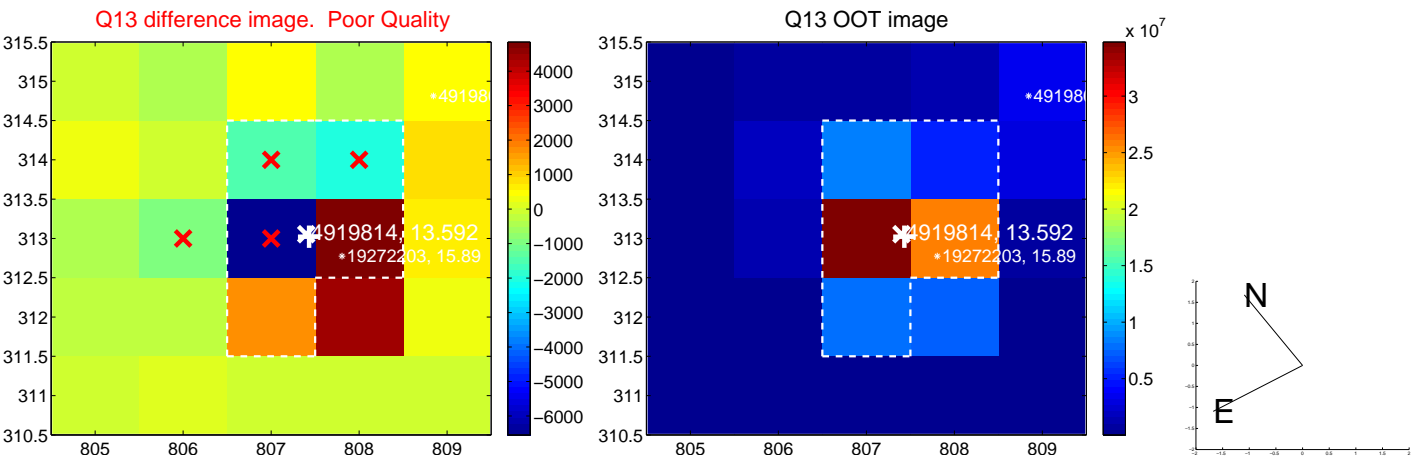
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



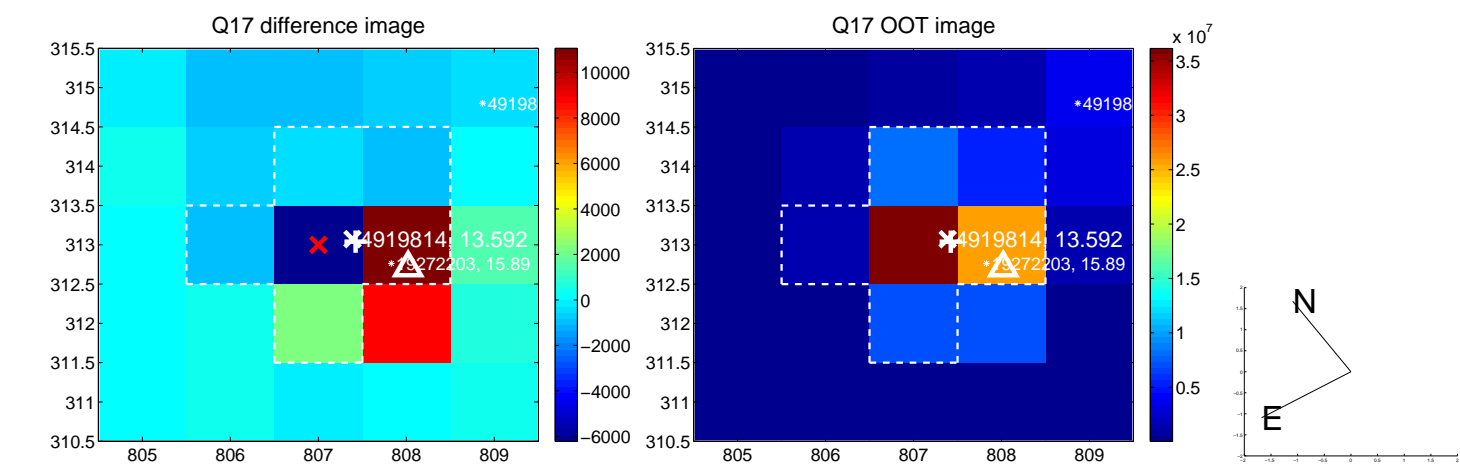
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



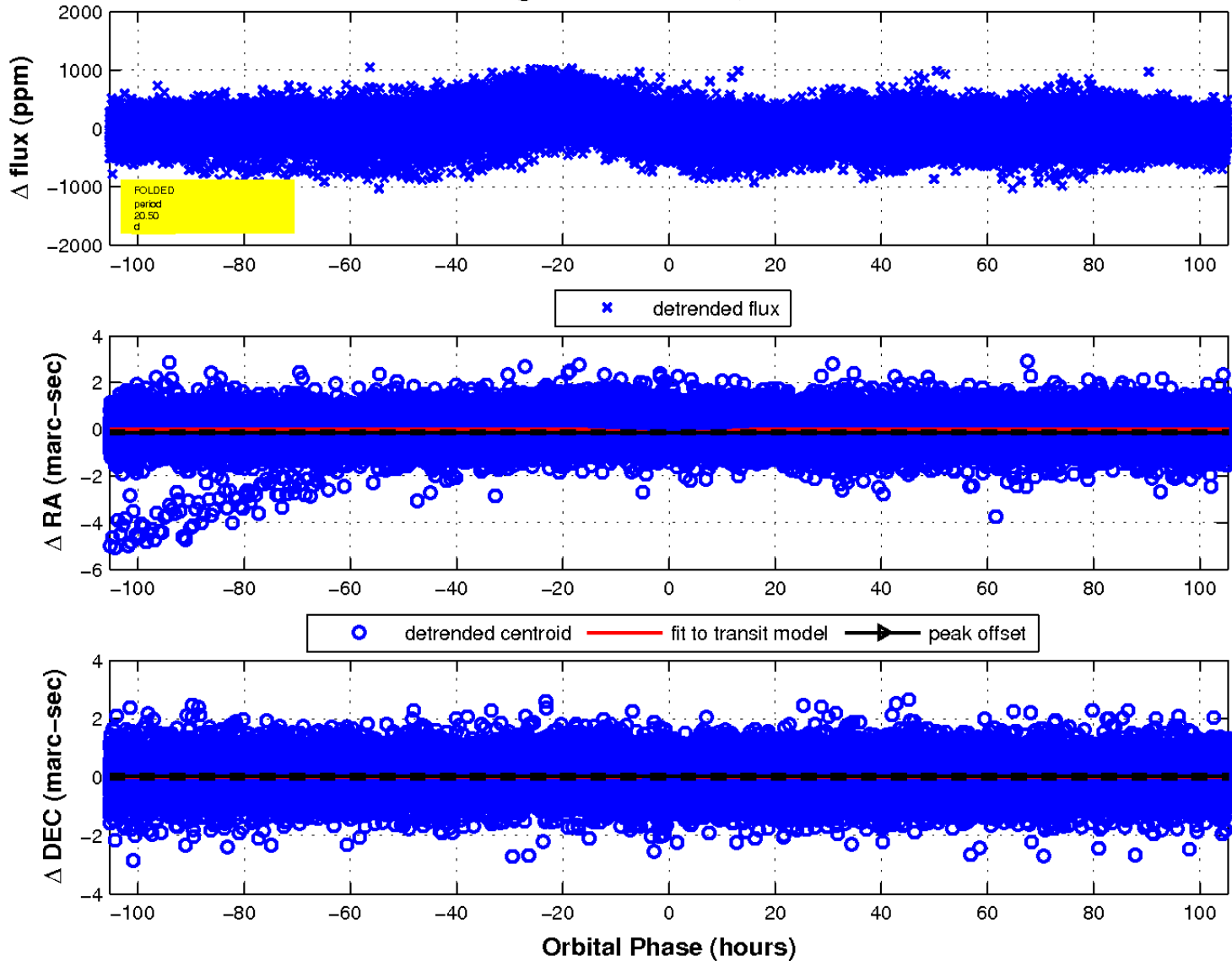
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

