

KIC 003851194

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})
003851194-01	OBS	7671.01	0.918469	131.858127	24.9	3.077	8.7	10.0	2.34	5837	1.39	14458.73

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003851194-01	OBS	FP	0.00	0	0	0	1	EPHEM_MATCH

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.

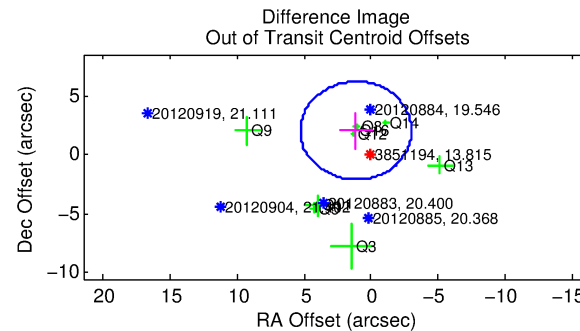
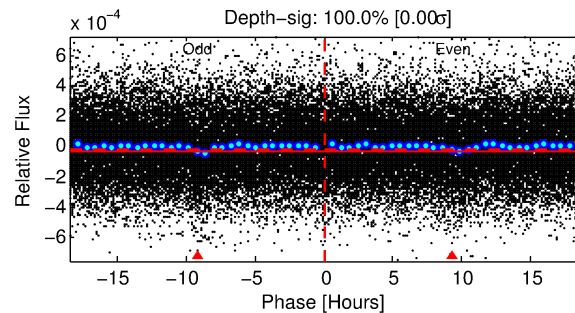
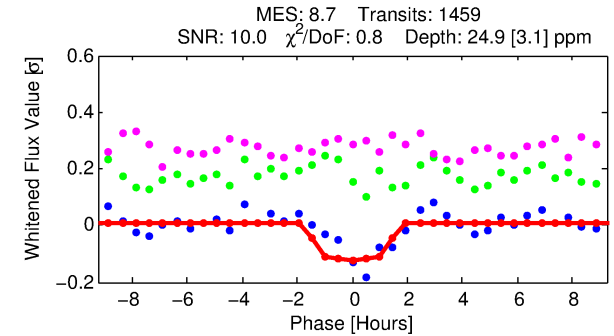
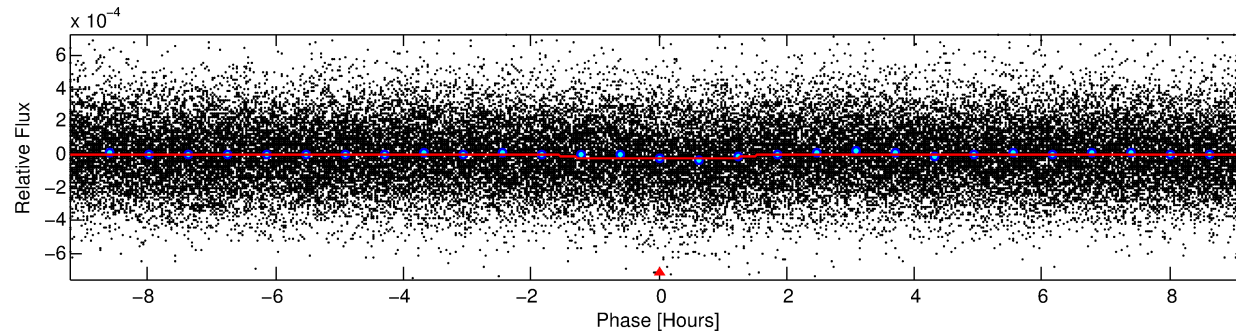
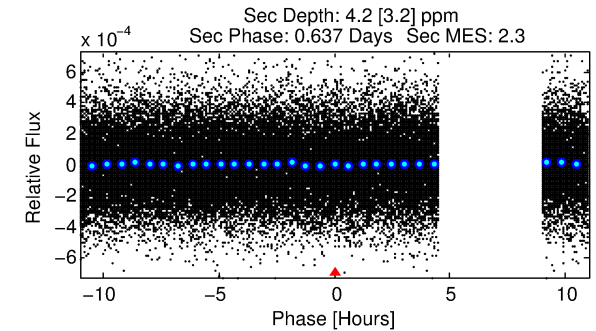
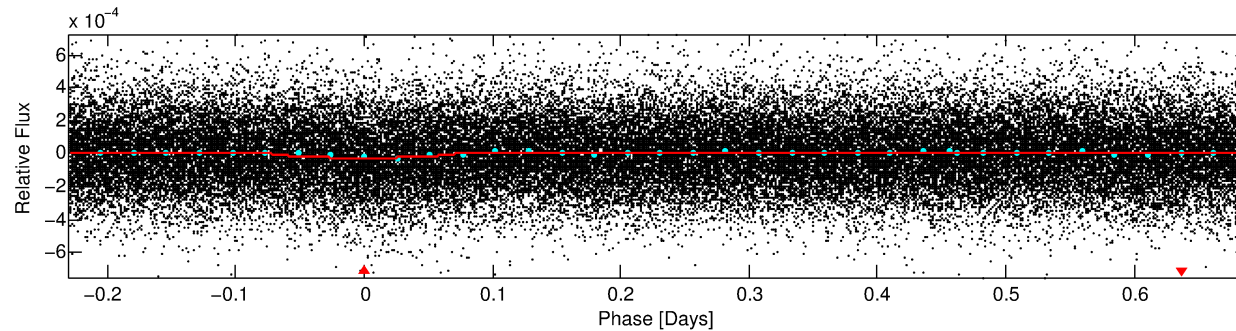
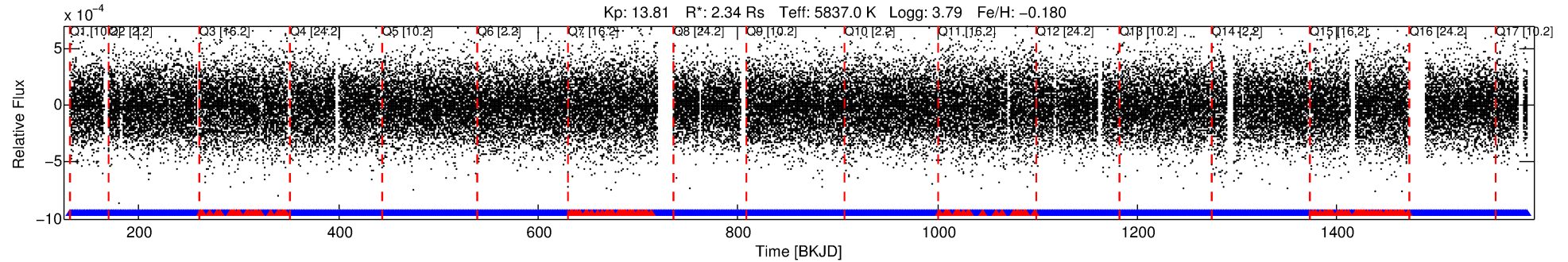
Ephemeris Match Information For 003851194-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
003851194-01	3851194	003954798-pri	3954798	1:1	317.7	80	1	13.61	13.82	29788.00	Col-Anomaly	0	1.14	0.39

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 3851194 Candidate: 1 of 1 Period: 0.918 d



DV Fit Results:

Period = 0.91847 [0.00001] d
Epoch = 131.8581 [0.0038] BKJD
Rp/R* = 0.0054 [0.0030]
a/R* = 1.37 [1.84]
b = 0.91 [0.58]
Seff = 14458.73 [6156.07]
Teff = 2796 [298] K
Rp = 1.39 [0.88] Re
a = 0.0198 [0.0055] AU
Ag = 0.47 [0.66] [-0.80σ]
Teffp = 3580 [1207] K [0.63σ]

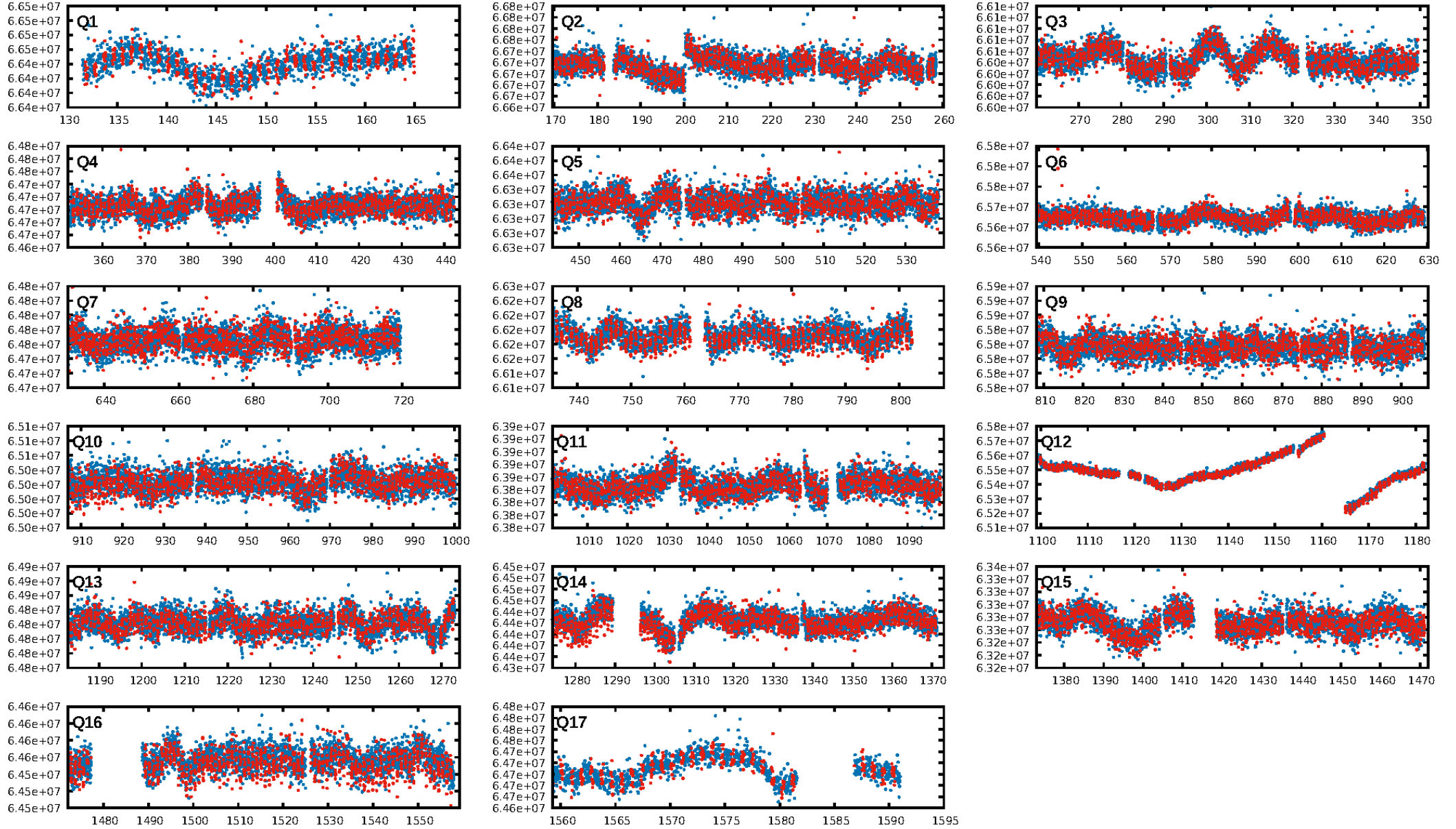
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.66e-18
RollingBand-fgt: 0.91 [1274/1394]
GhostDiagnostic-chr: 4.227
Centroid-sig: 0.0%
Centroid-so: 3.405 arcsec [2.36σ]
OotOffset-rm: 2.348 arcsec [1.70σ]
KicOffset-rm: 2.427 arcsec [2.10σ]
OotOffset-st: 1/2/3/3 [9]
KicOffset-st: 1/2/3/3 [9]
DiffImageQuality-fgm: 0.44 [4/9]
DiffImageOverlap-fno: 1.00 [17/17]

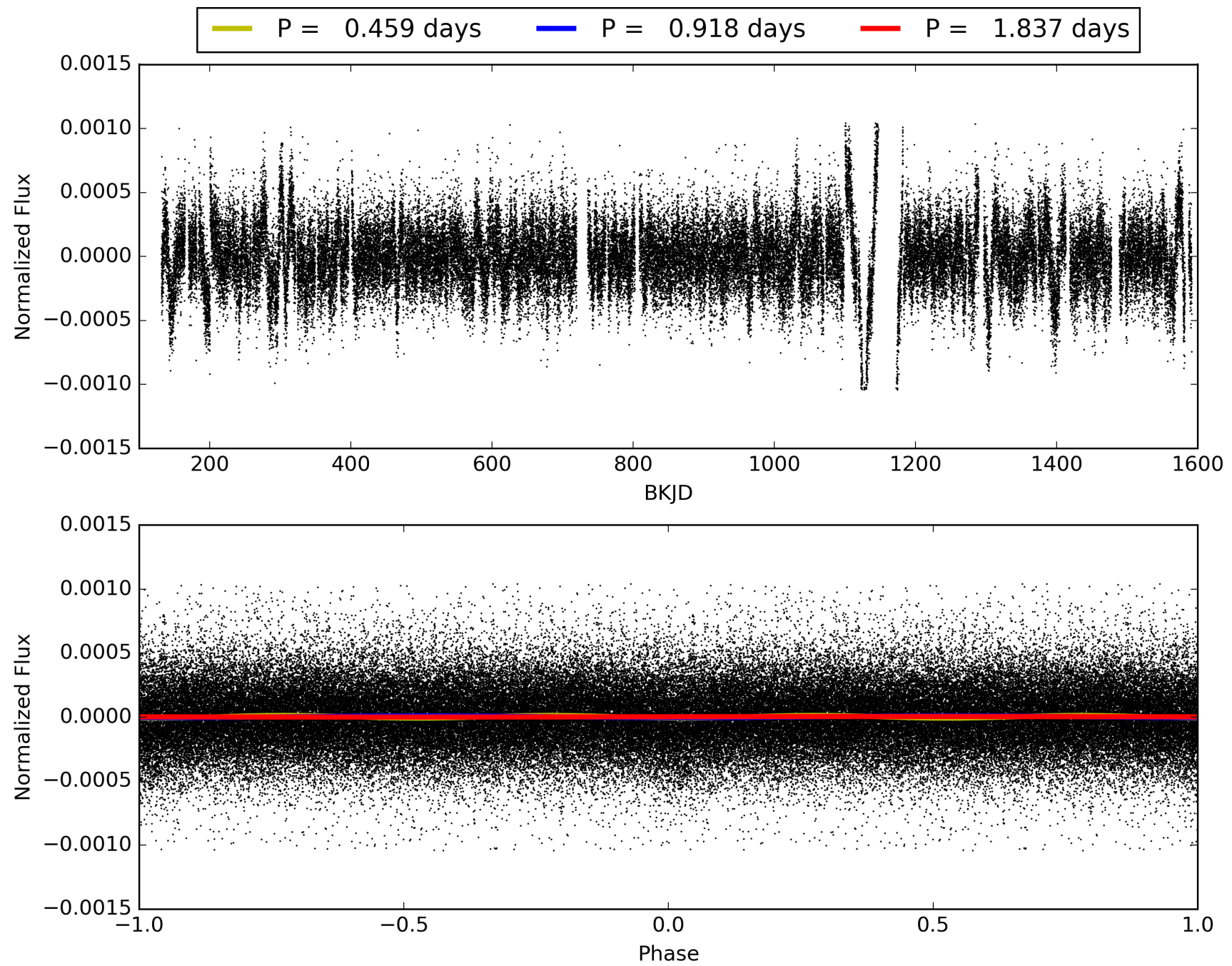
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:02:15 Z

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

TCE 003851194-01, PDC Light Curves

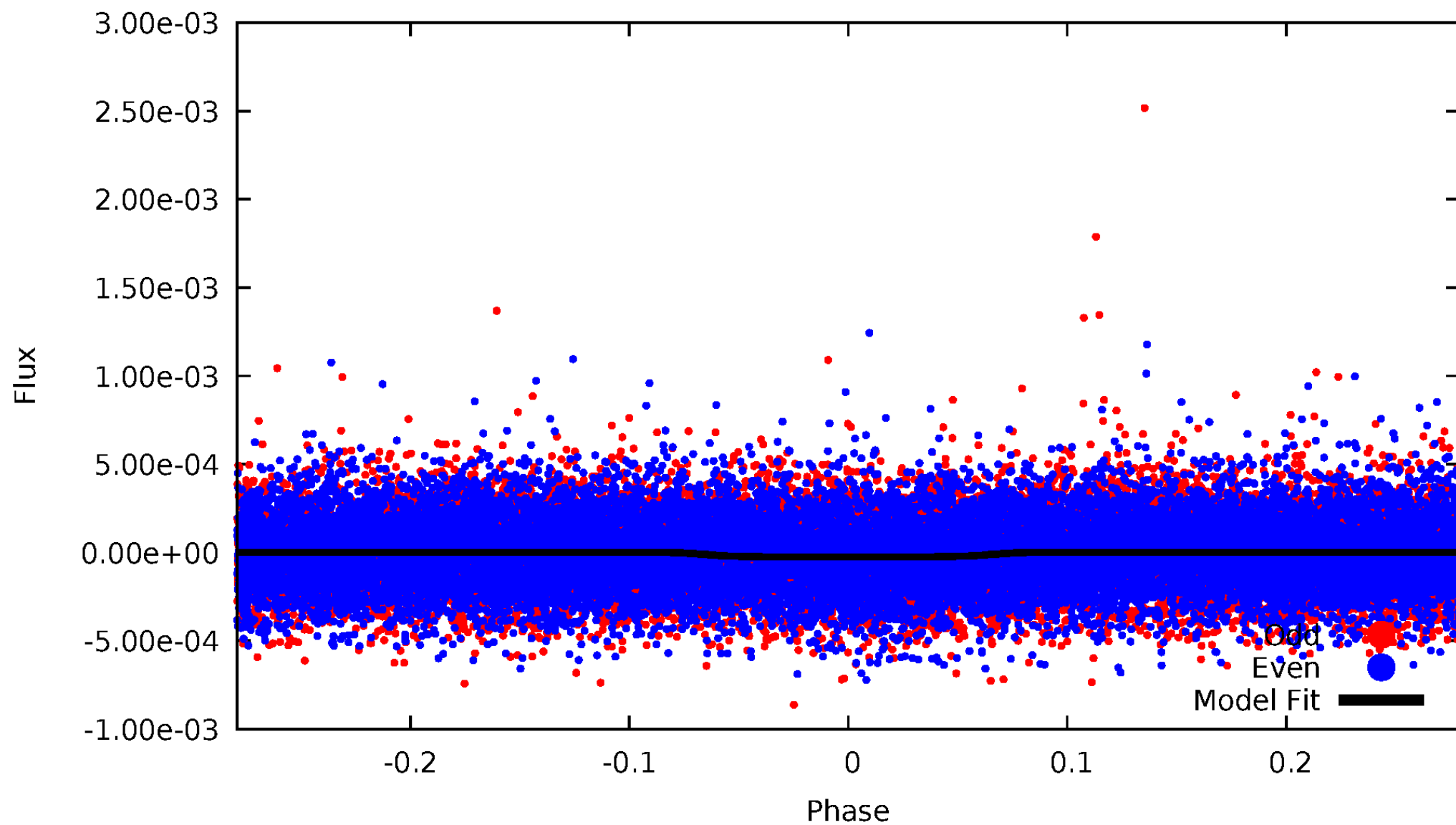


TCE 003851194-01



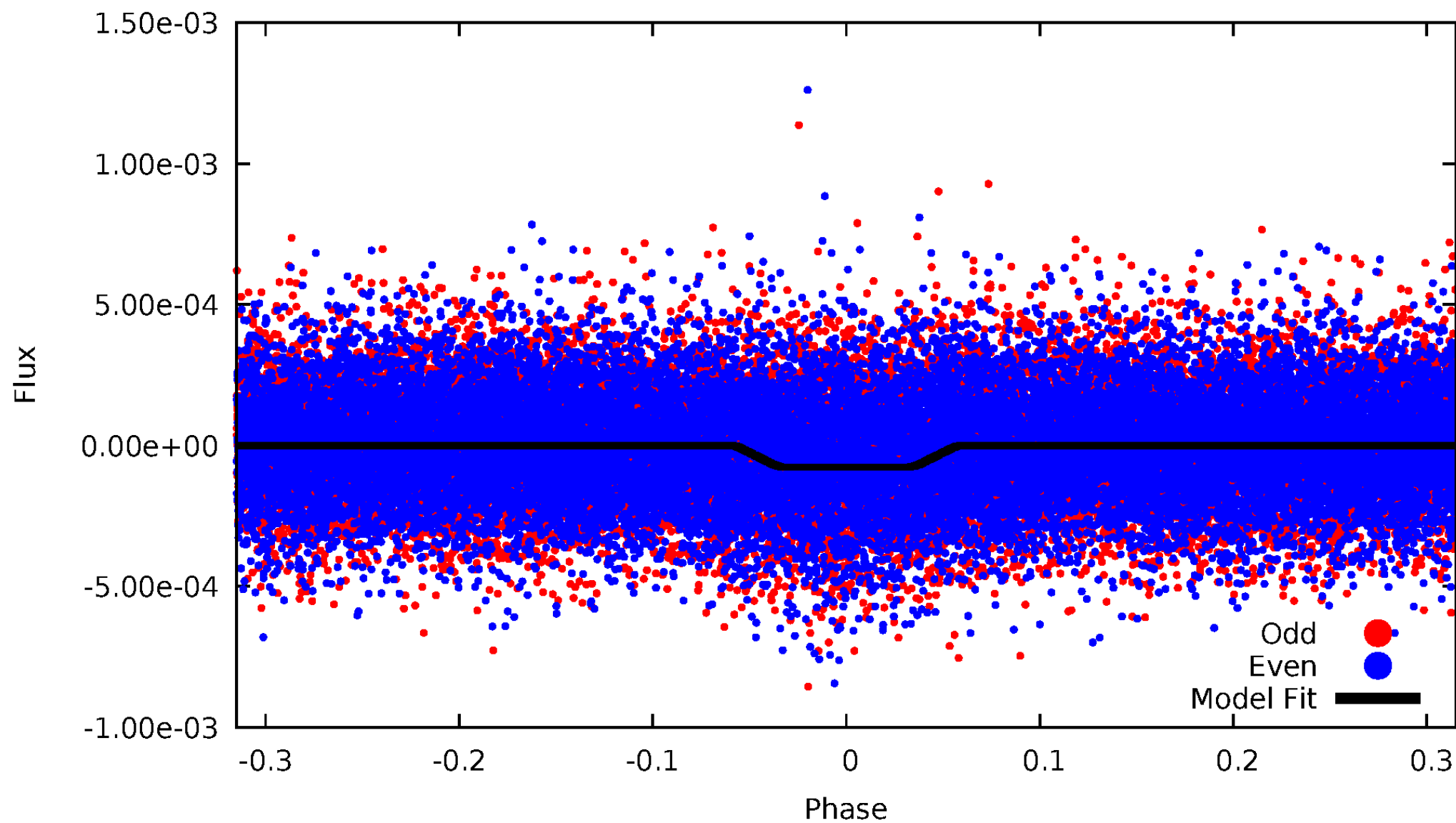
DV Odd/Even

TCE 003851194-01



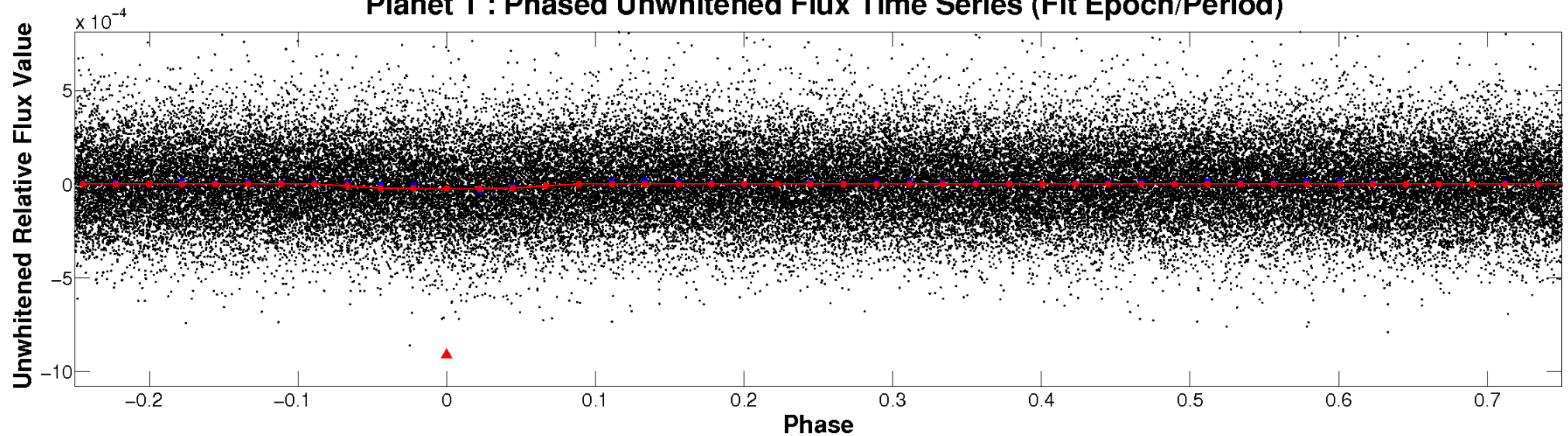
ALT Odd/Even

TCE 003851194-01

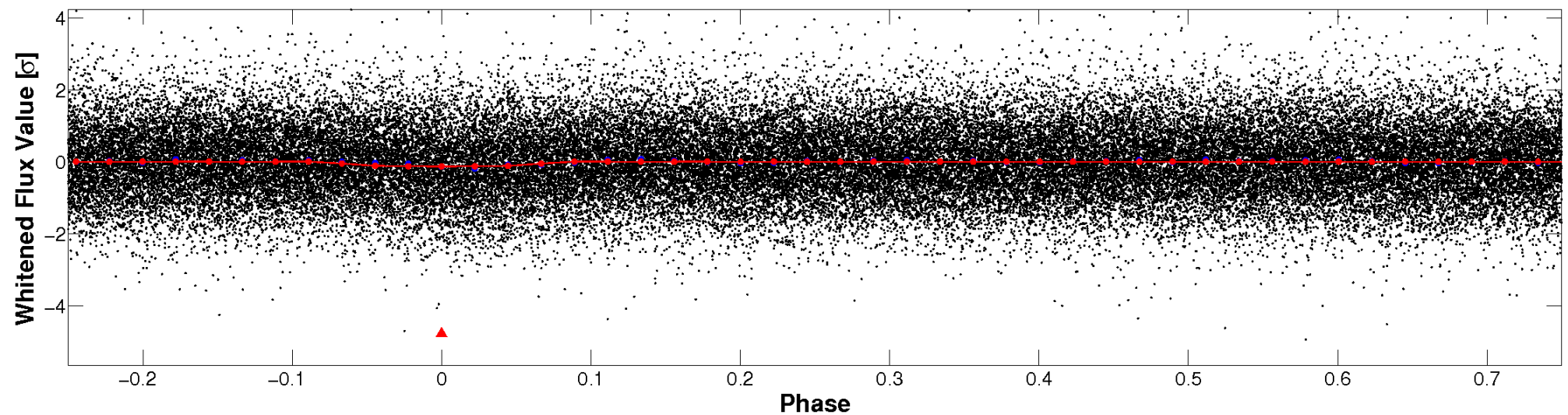


Non-Whitened Vs. Whitened Light Curve

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

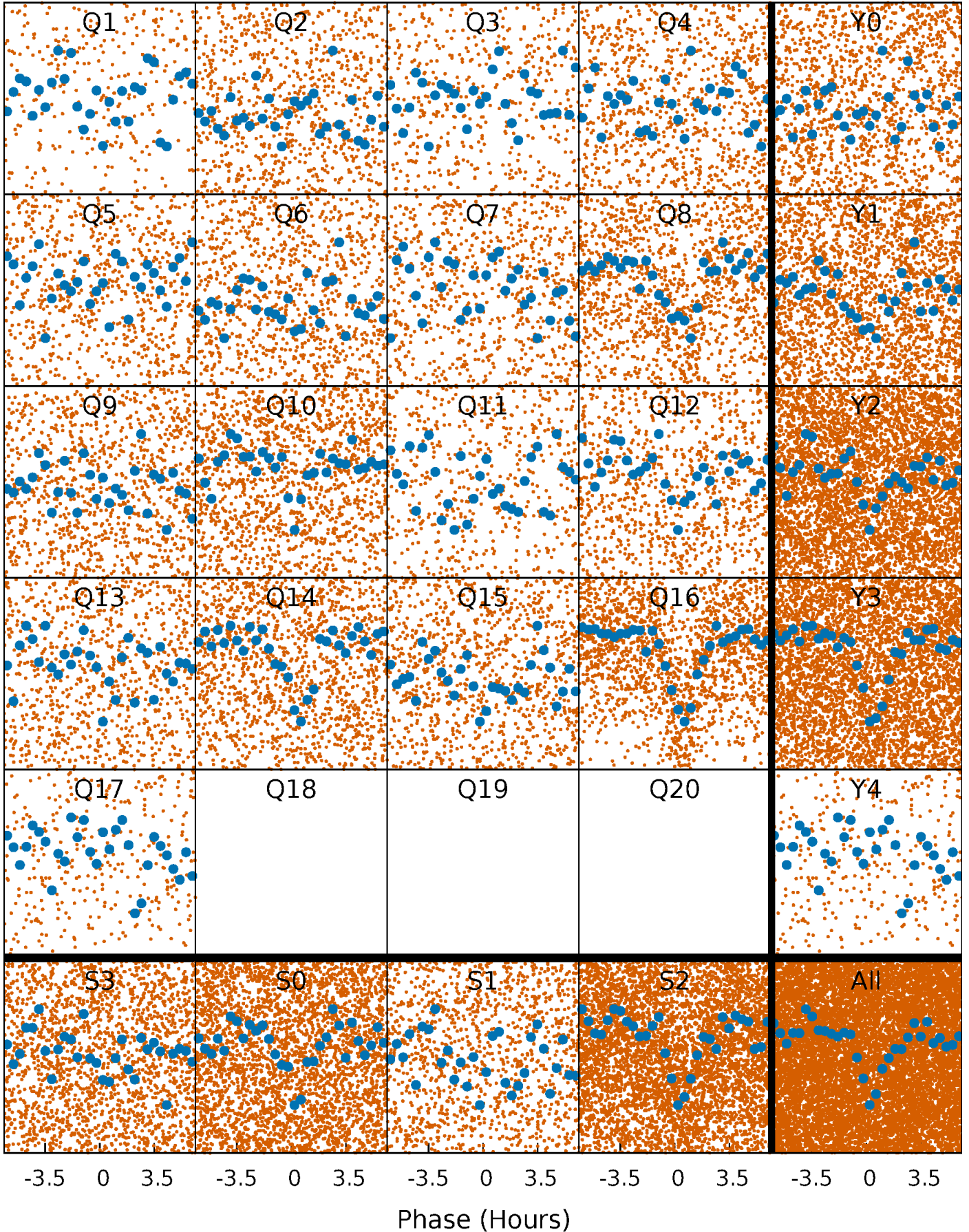


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



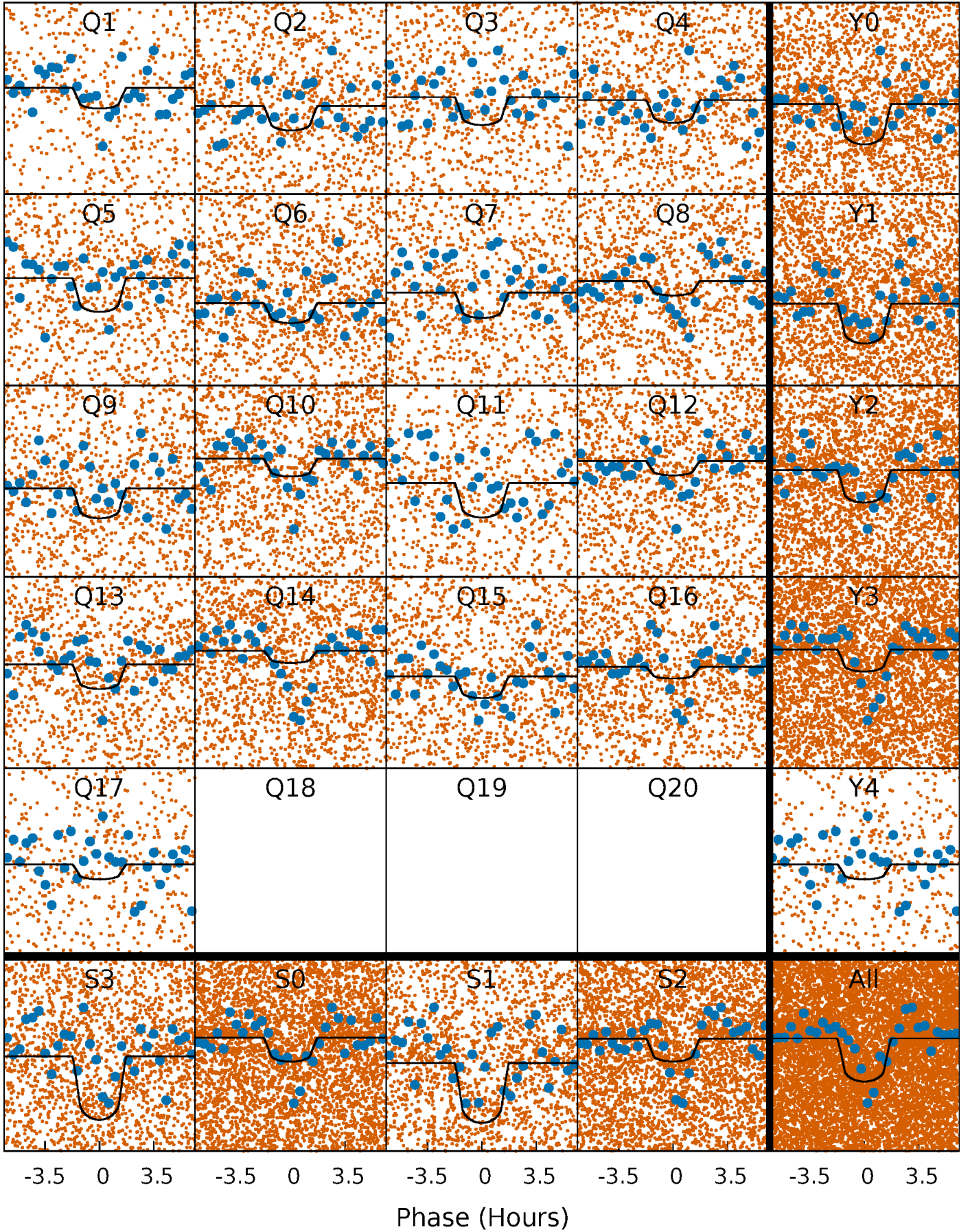
PDC Quarter-Phased Transit Curves

TCE 003851194-01 P= 0.918469 Days $T_0=131.858127$ (BKJD)



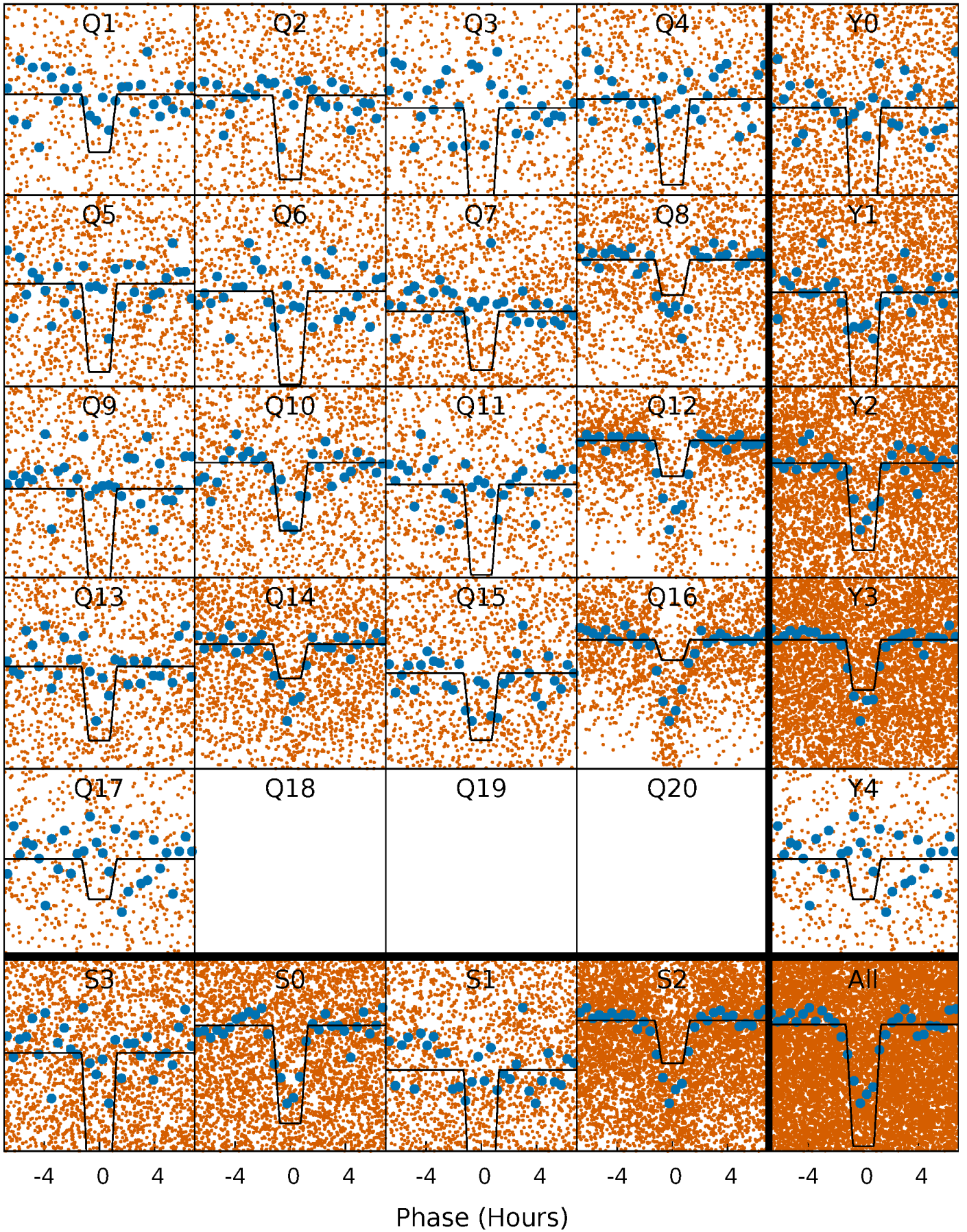
DV Quarter-Phased Transit Curves

TCE 003851194-01 P= 0.918469 Days $T_0=131.858127$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

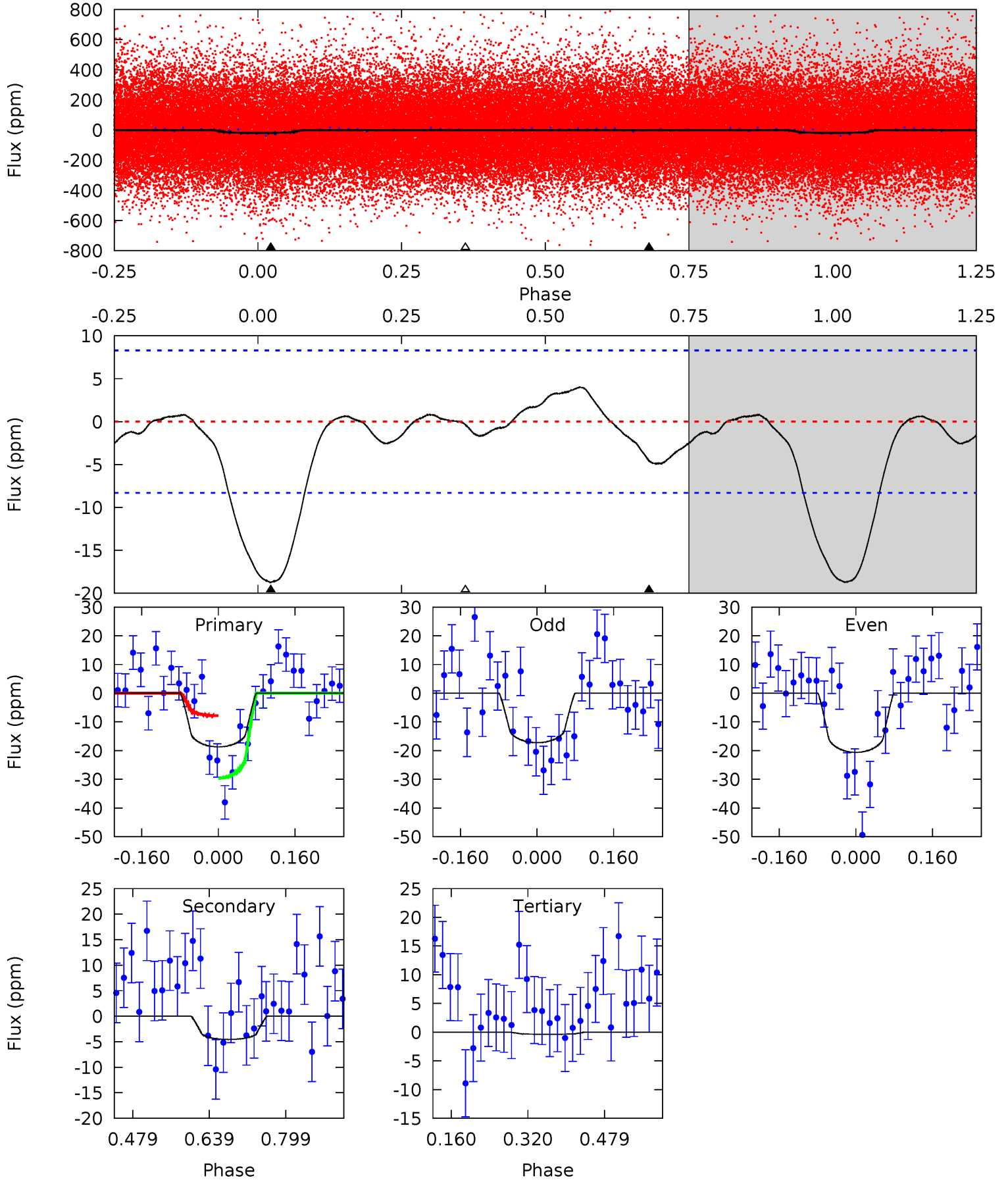
TCE 003851194-01 P= 0.918490 Days $T_0=131.852310$ (BKJD)



DV Model-Shift Uniqueness Test

003851194-01, P = 0.918469 Days, E = 130.939658 Days

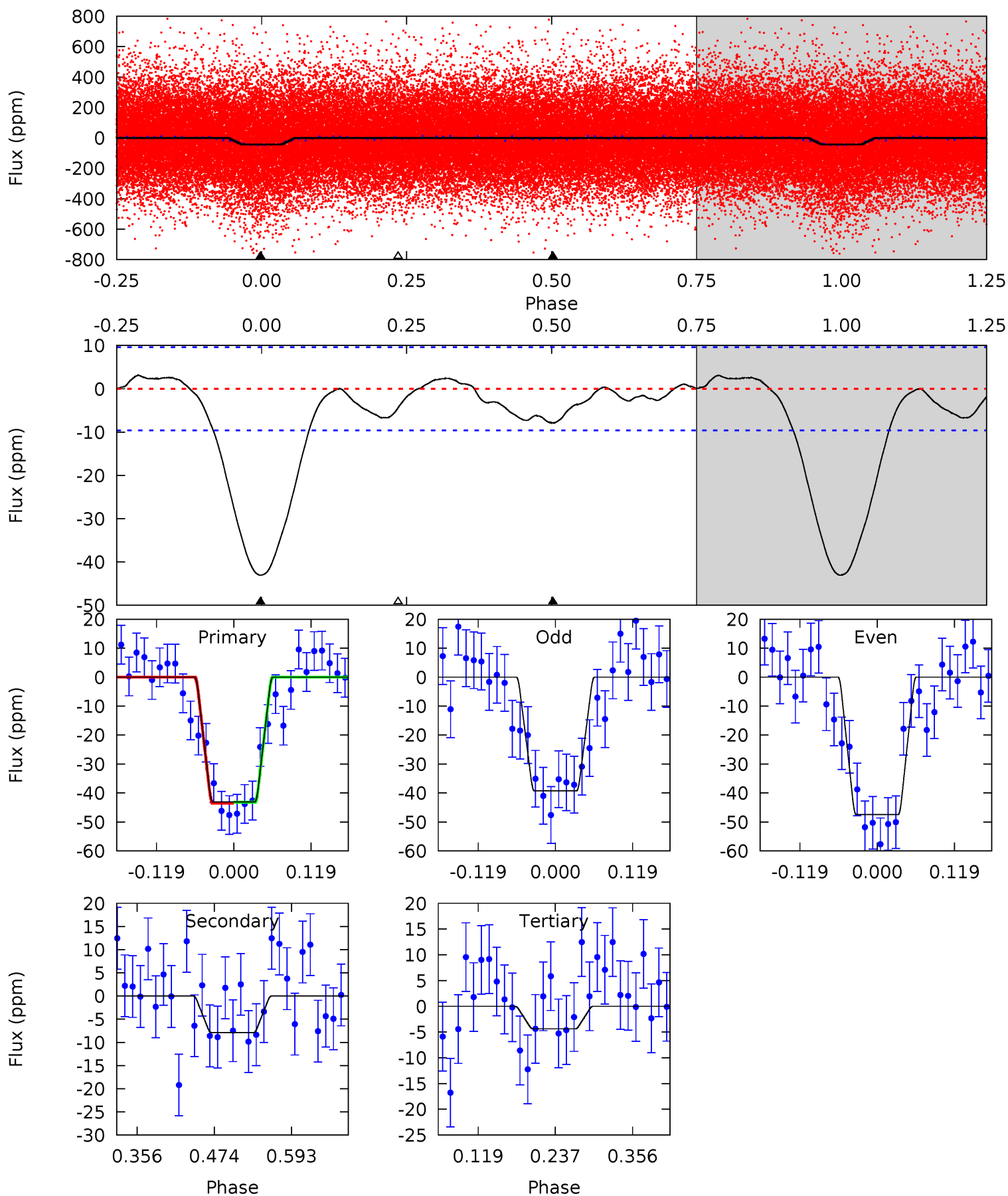
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.1	2.45	0.20	0	4.47	1.41	0.76	9.87	10.1	2.25	2.45	0.91	1.15	0.18	5.86



Alt Model-Shift Uniqueness Test

003851194-01, P = 0.918490 Days, E = 130.933820 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.3	3.73	2.07	0	4.53	1.56	1.25	18.2	20.3	1.66	3.73	1.92	1.44	0.07	0.07



Stellar Parameters For KIC 003851194

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5837^{+79}_{-79}	$3.791^{+0.240}_{-0.096}$	$-0.180^{+0.150}_{-0.150}$	$2.338^{+0.390}_{-0.724}$	$1.232^{+0.116}_{-0.249}$	$0.136^{+0.198}_{-0.043}$
	+1%/-1%	+6%/-3%	+83%/-83%	+17%/-31%	+9%/-20%	+146%/-32%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 003851194-01 / KOI 7671.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-5 ± 2	$1.36^{+0.75}_{-0.67}$	3873^{+171}_{-295}	3354^{+1647}_{-6524}	$0.502^{+1.594}_{-0.331}$
Alt.	-8 ± 2	$2.11^{+0.87}_{-0.80}$	3853^{+201}_{-274}	2891^{+1121}_{-6056}	$0.380^{+0.567}_{-0.202}$

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

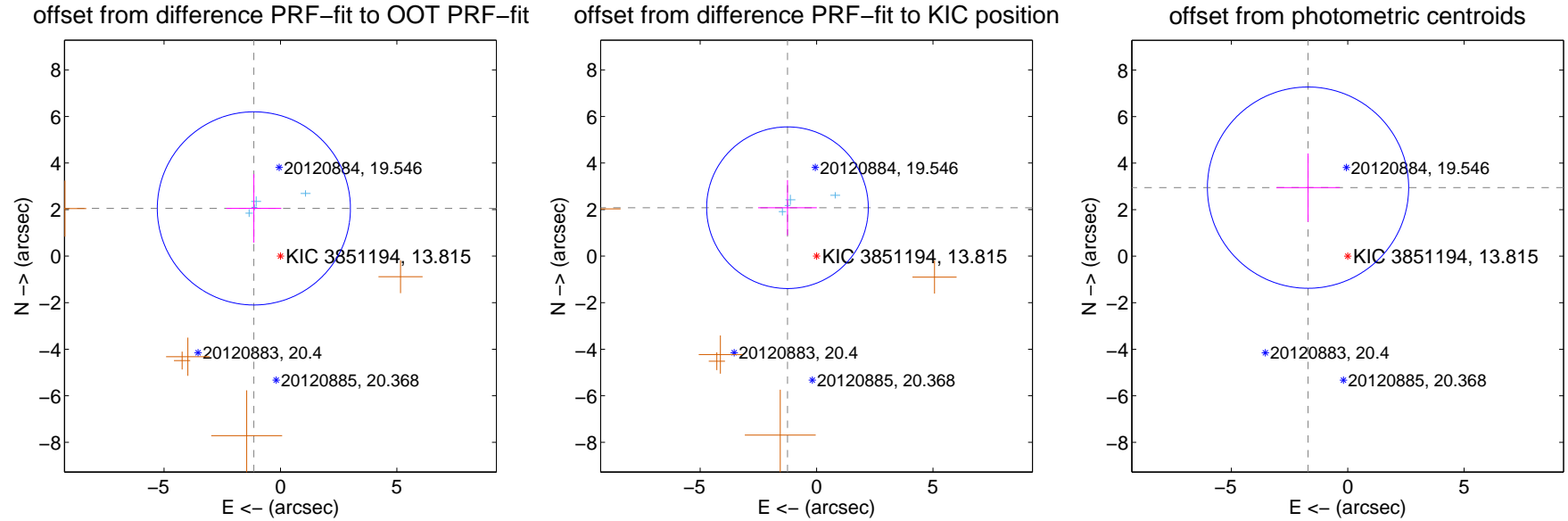
DV Centroid Data

Supplemental centroid analysis for 003851194-01. Kepler magnitude: 13.81. Transit SNR 9.99

There are 4 quarters with good PRF difference image offsets

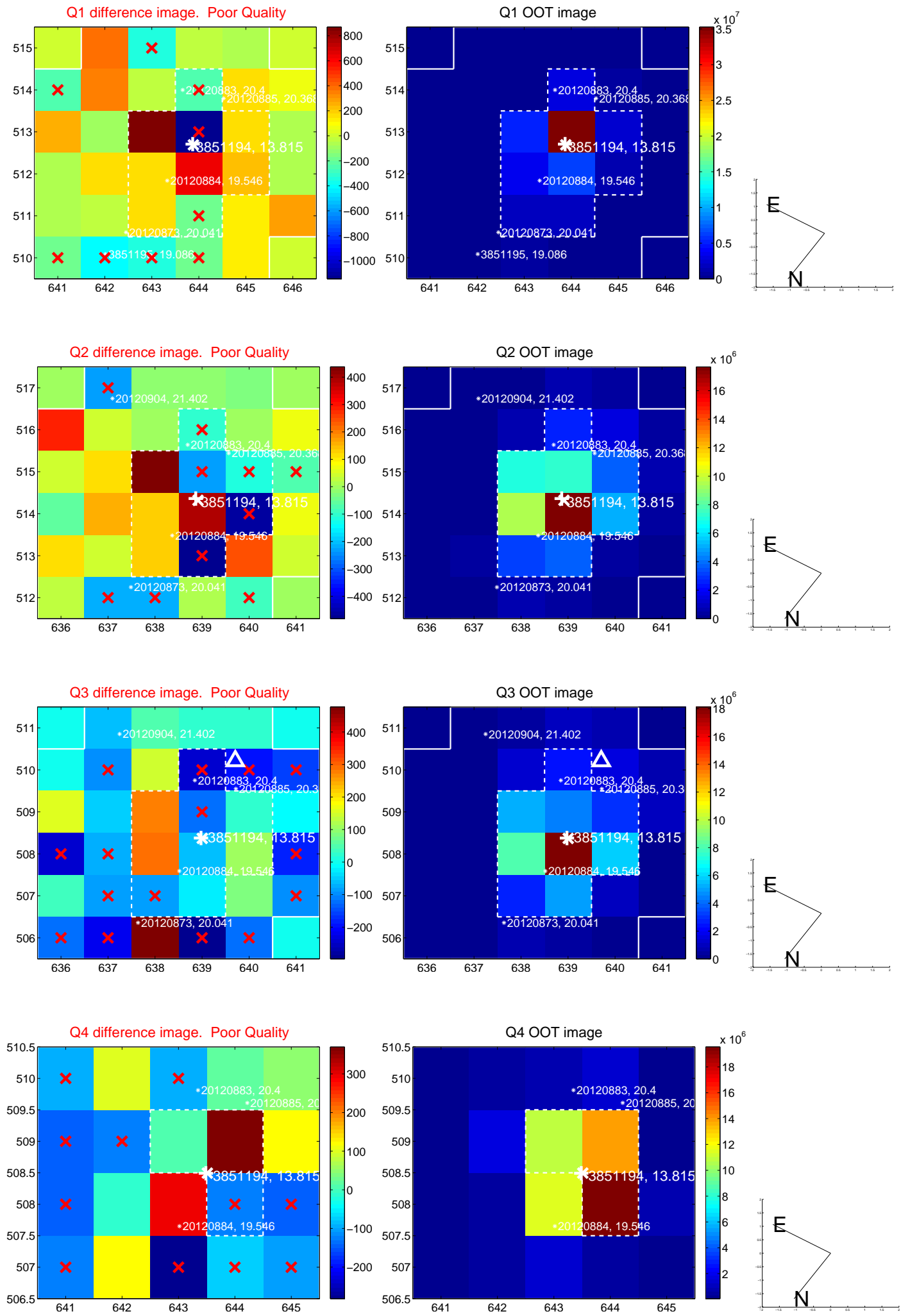
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.348 ± 1.383	1.70	1.143 ± 1.182	2.051 ± 1.473
PRF-fit source offset from KIC position	2.427 ± 1.158	2.10	1.251 ± 1.263	2.080 ± 1.187
photometric centroid source offset	3.40 ± 1.44	2.36	1.71 ± 1.36	2.95 ± 1.47

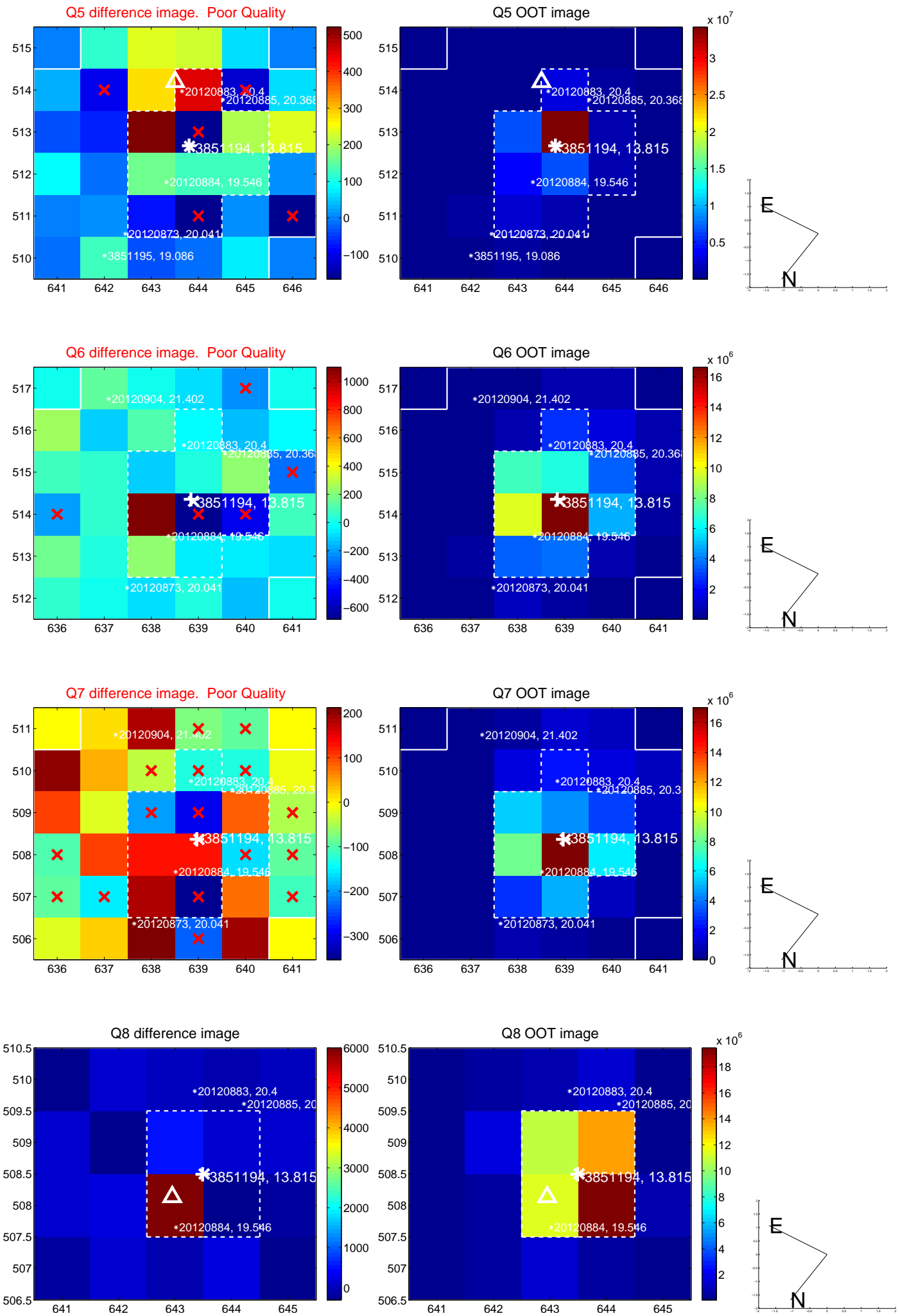


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

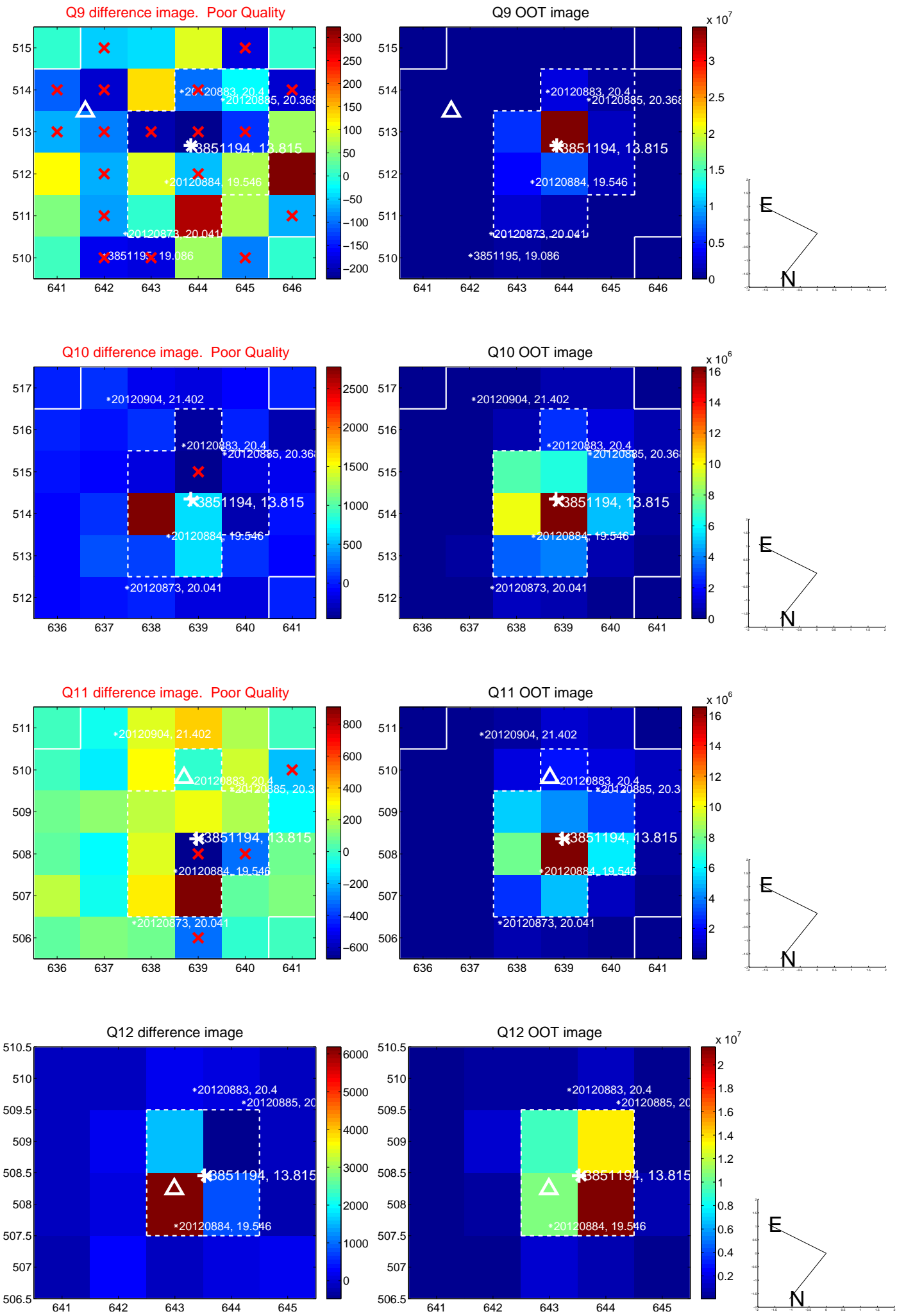
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



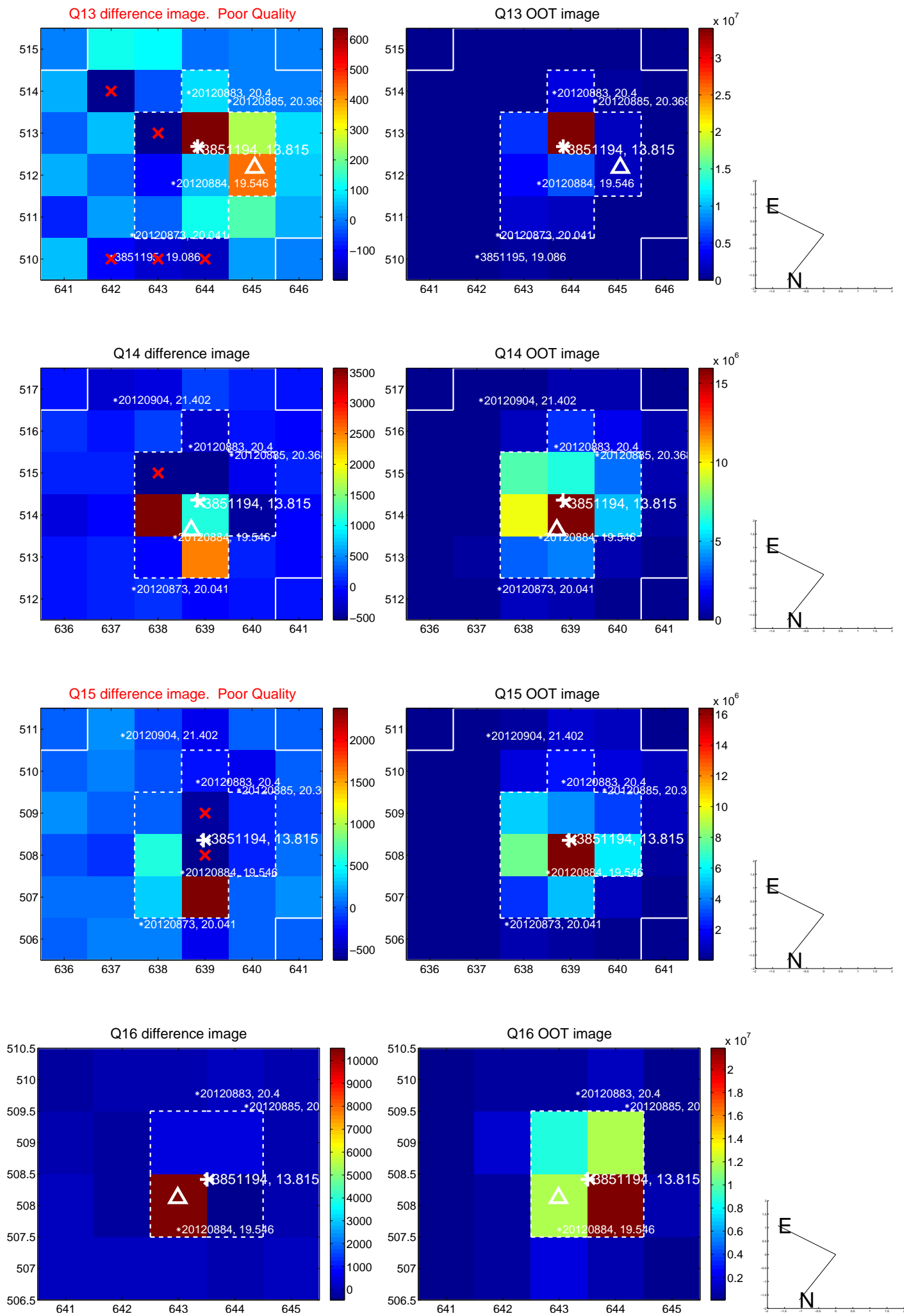
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



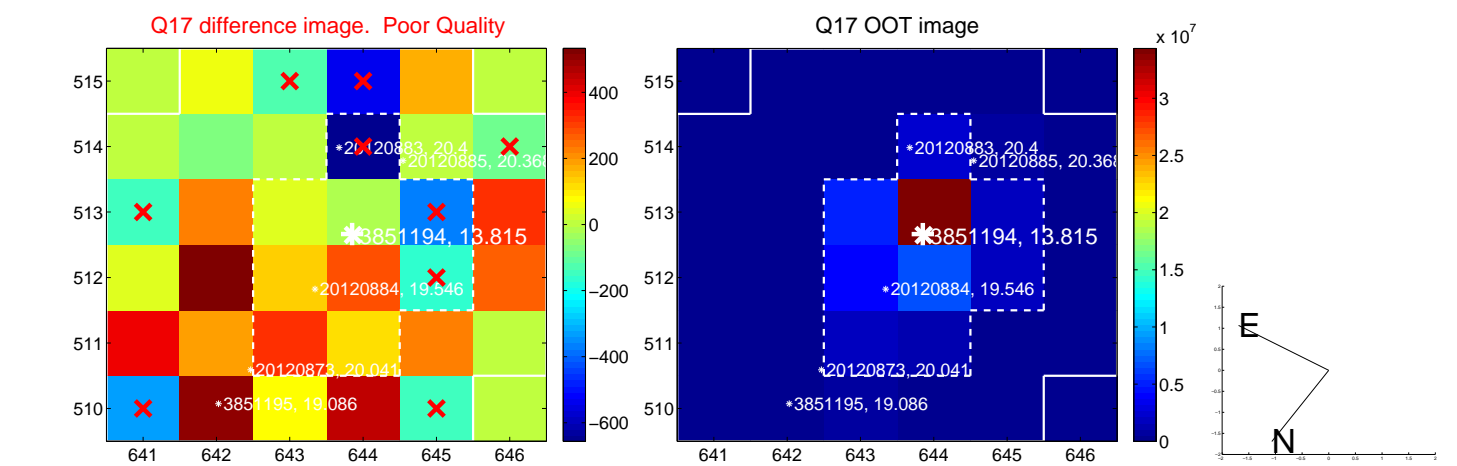
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



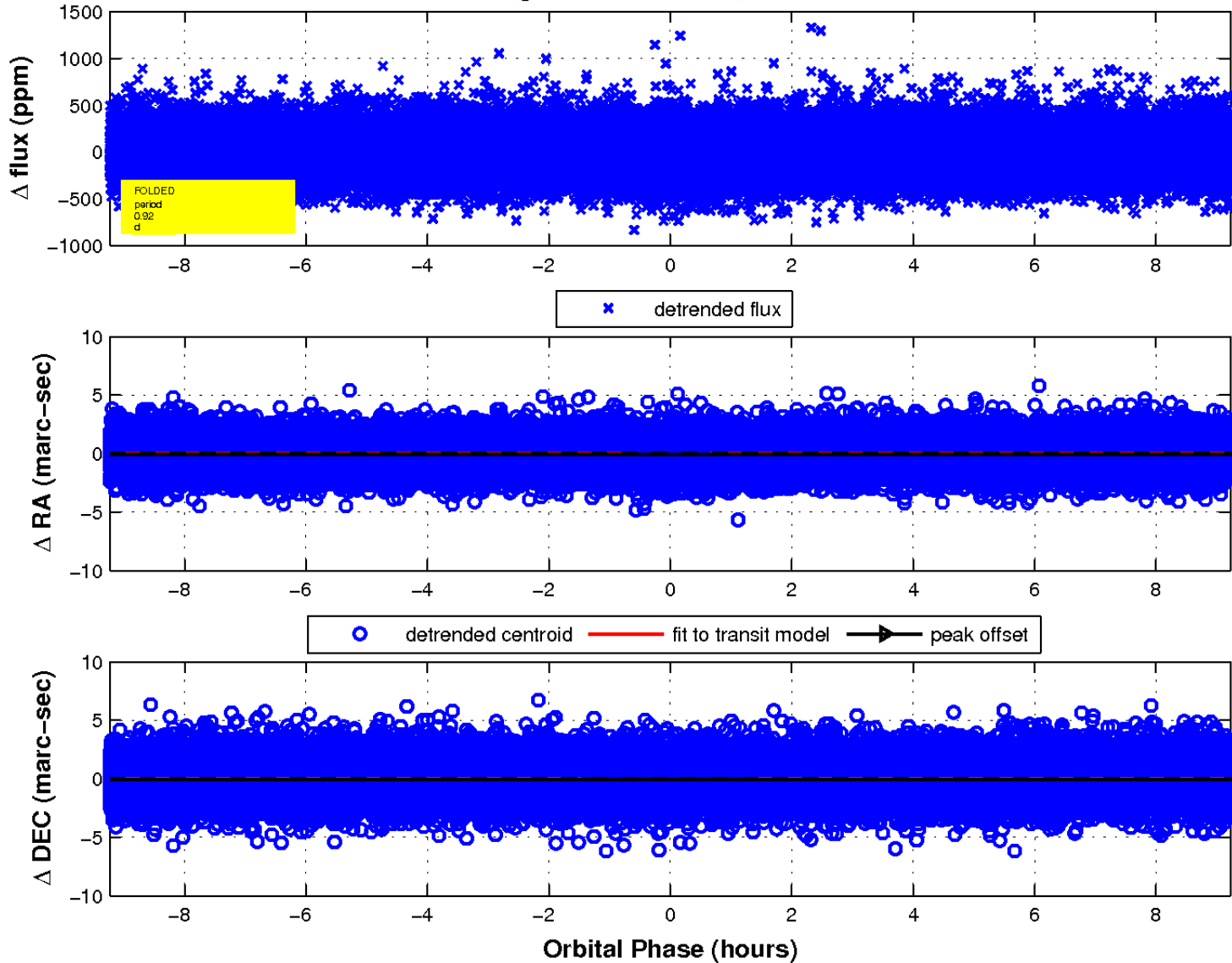
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

