KIC 009175104

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 ($S_\oplus$)
009175104-01	OBS	No	0.828343	132.102648	17.6	5.200	7.9	9.5	3.37	6582	1.75	44680.85

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009175104-01	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.

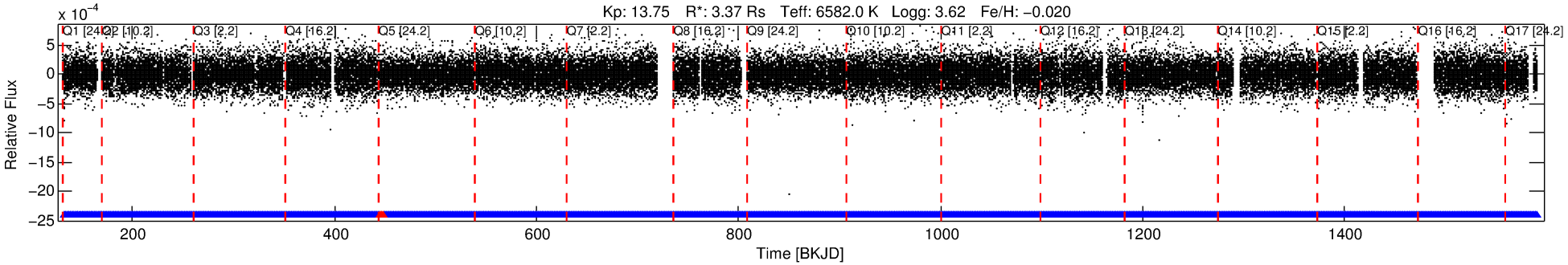
Ephemeris Match Information For 009175104-01

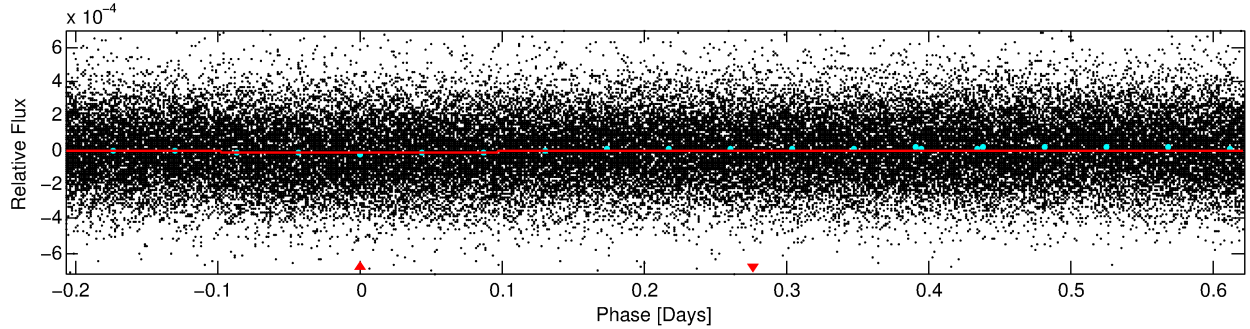
No Significant Match Found

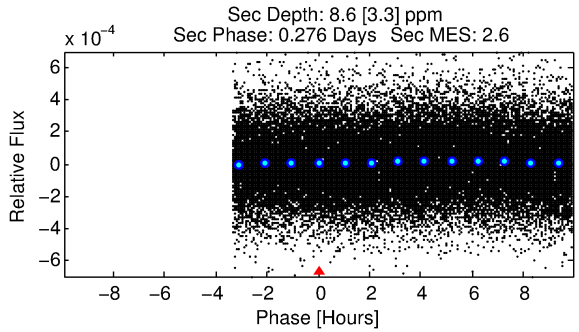
DV One-Page Summary

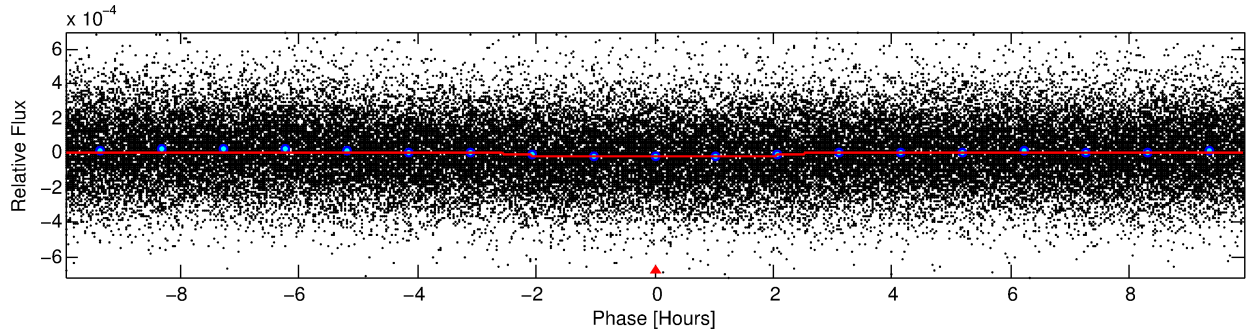
KIC: 9175104 Candidate: 1 of 1 Period: 0.828 d

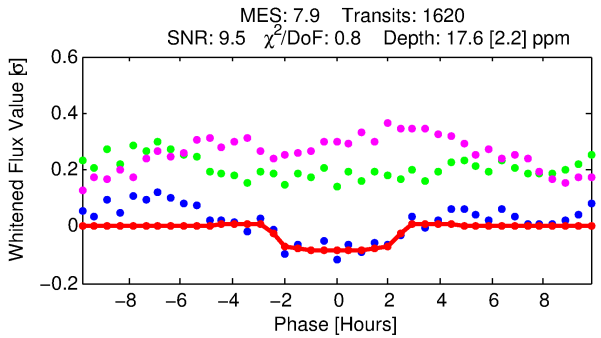
Kp: 13.75 R*: 3.37 Rs Teff: 6582.0 K Logg: 3.62 Fe/H: −0.020

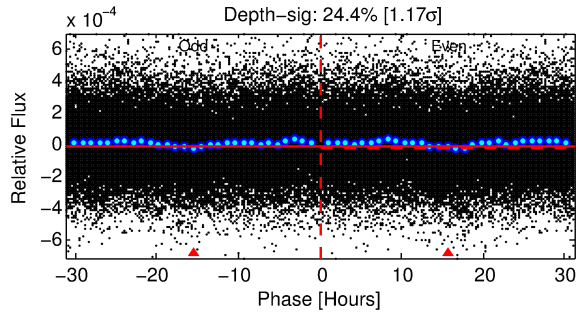


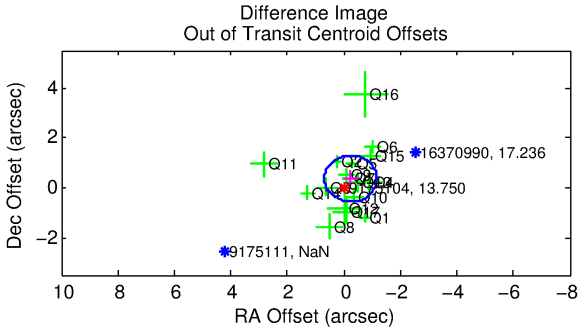












DV Fit Results:

Period = 0.82834 [0.00001] d
Epoch = 132.1026 [0.0055] BKJD
Rp/R* = 0.0048 [0.0015]
a/R* = 1.05 [0.18]
b = 0.95 [0.19]

Seff = 44680.85 [43561.96]
Teq = 3707 [904] K
Rp = 1.75 [1.14] Re
a = 0.0206 [0.0121] AU

Ag = 0.66 [0.80] [−0.43σ]
Teffp = 5166 [970] K [1.10σ]

DV Diagnostic Results:

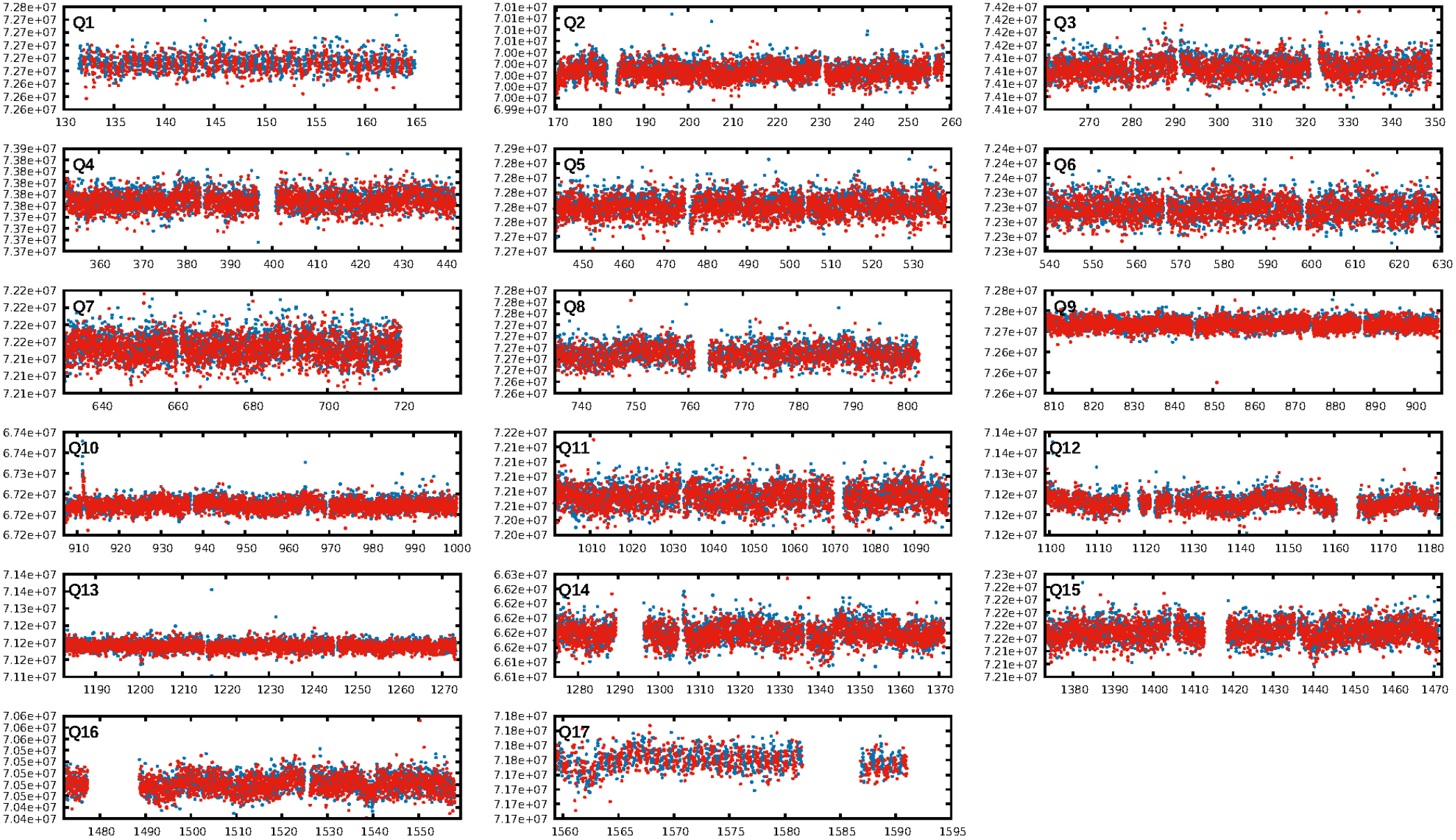
ShortPeriod−sig: N/A
LongPeriod−sig: N/A
ModelChiSquare2−sig: N/A
ModelChiSquareGof−sig: N/A
Bootstrap−pfa: 8.23e−13
RollingBand−fgt: 1.00 [1545/1548]
GhostDiagnostic−chr: 1.811

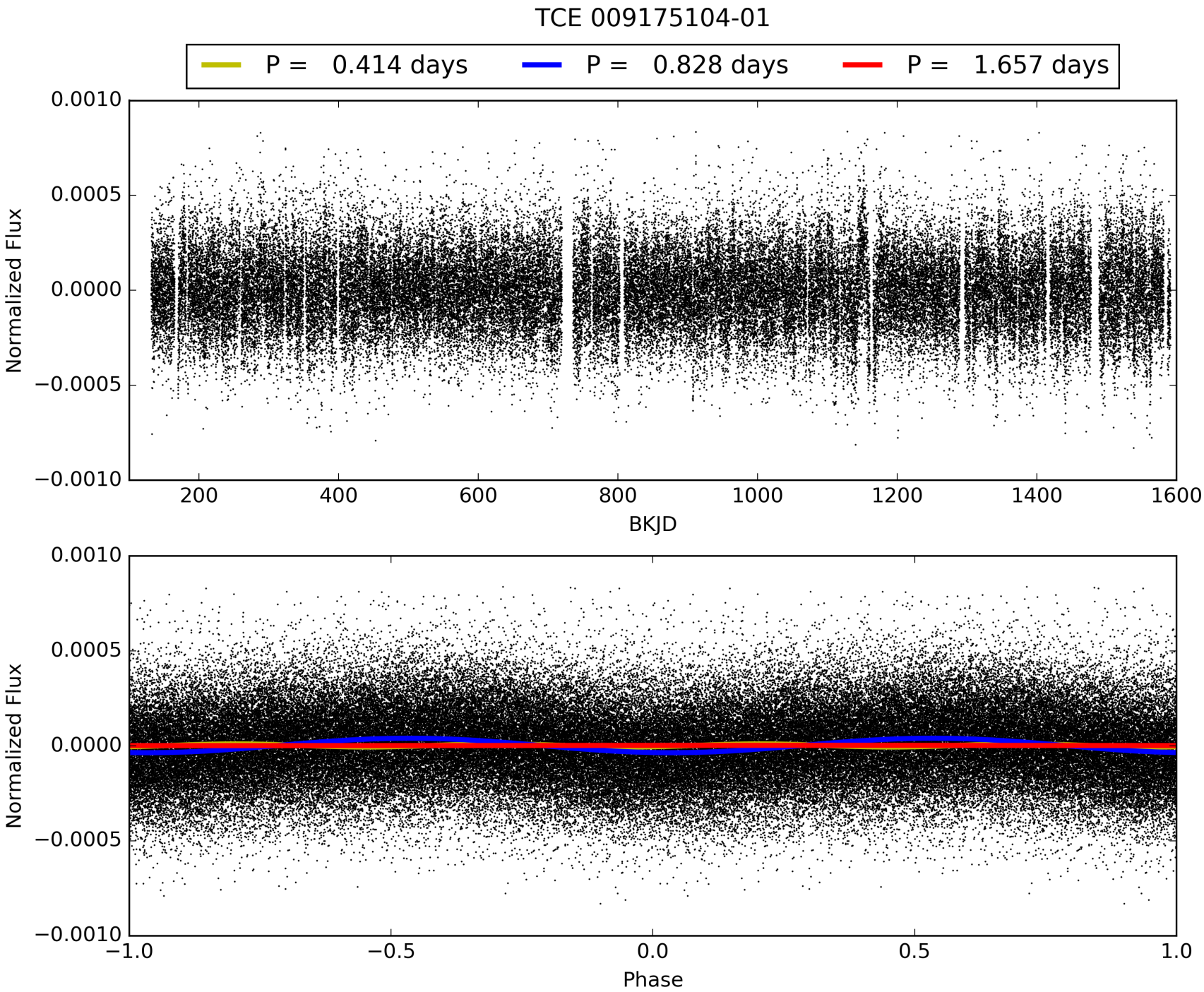
Centroid−sig: 3.4%
Centroid−so: 1.958 arcsec [1.44σ]
OotOffset−rm: 0.429 arcsec [1.39σ]
KicOffset−rm: 0.441 arcsec [1.52σ]
OotOffset−st: 4/4/4/5 [17]
KicOffset−st: 4/4/4/5 [17]
DiffImageQuality−fgm: 0.94 [16/17]
DiffImageOverlap−fno: 1.00 [17/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 −− Date Generated: 31−Jan−2016 19:03:13 Z

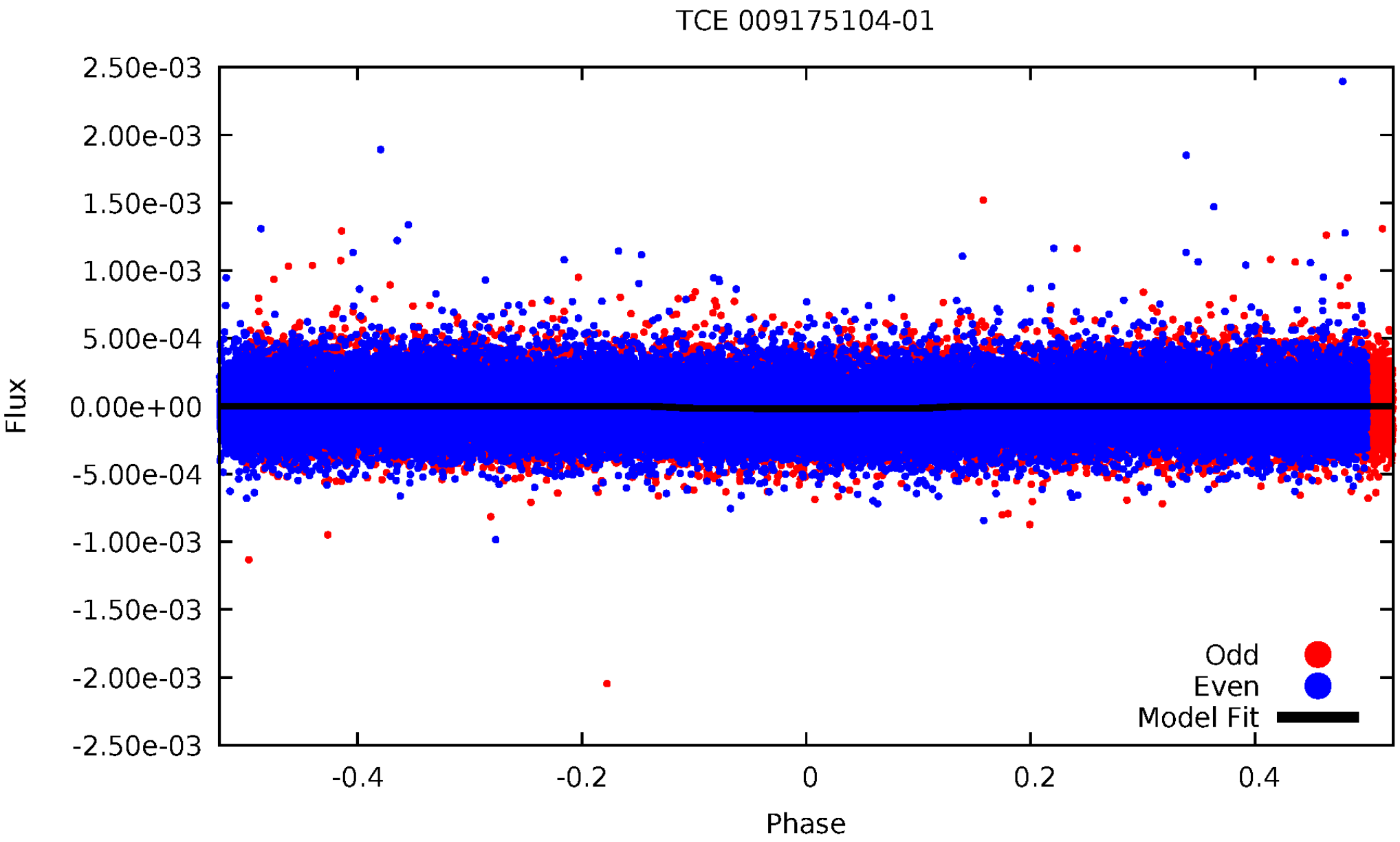
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 009175104-01, PDC Light Curves

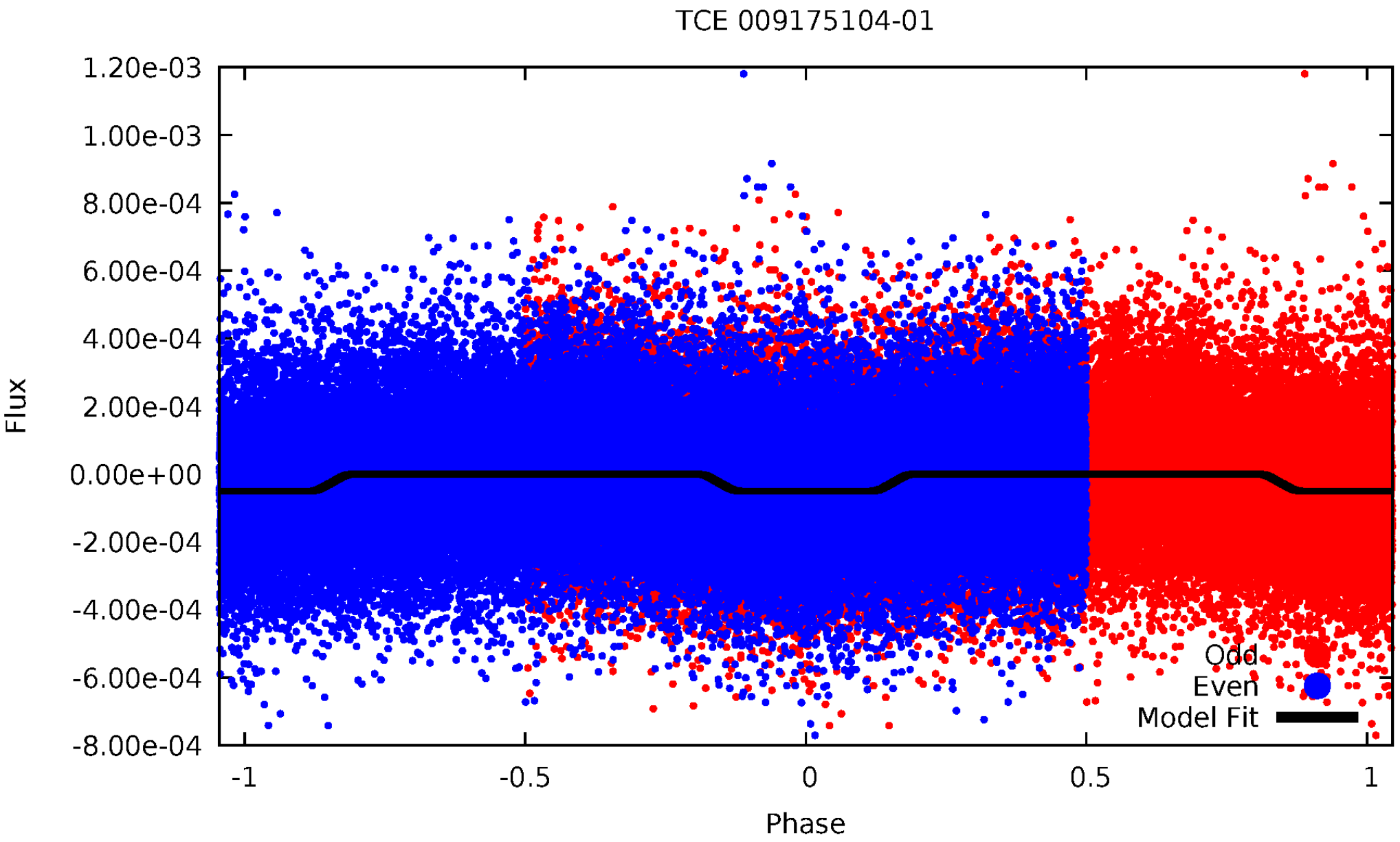



TCE 009175104-01
P = 0.414 days
P = 0.828 days
P = 1.657 days
Normalized Flux
0.0010
0.0005
0.0000
−0.0005
−0.0010
200
400
600
800
1000
1200
1400
1600
BKJD
Normalized Flux
0.0010
0.0005
0.0000
−0.0005
−0.0010
−1.0
−0.5
0.0
0.5
1.0
Phase

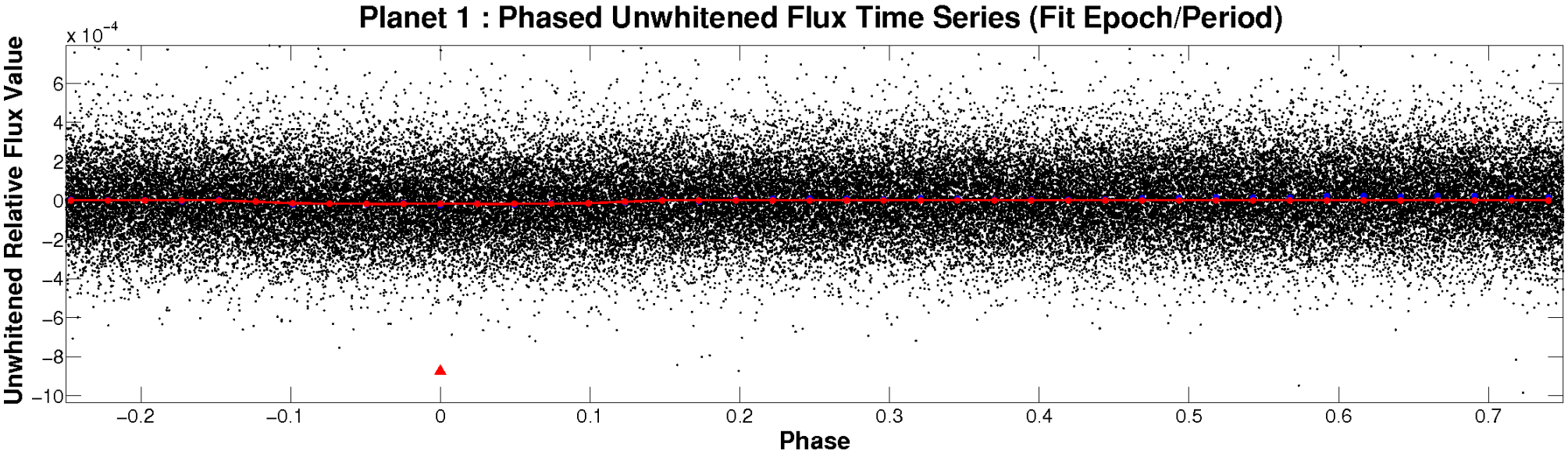
DV Odd/Even

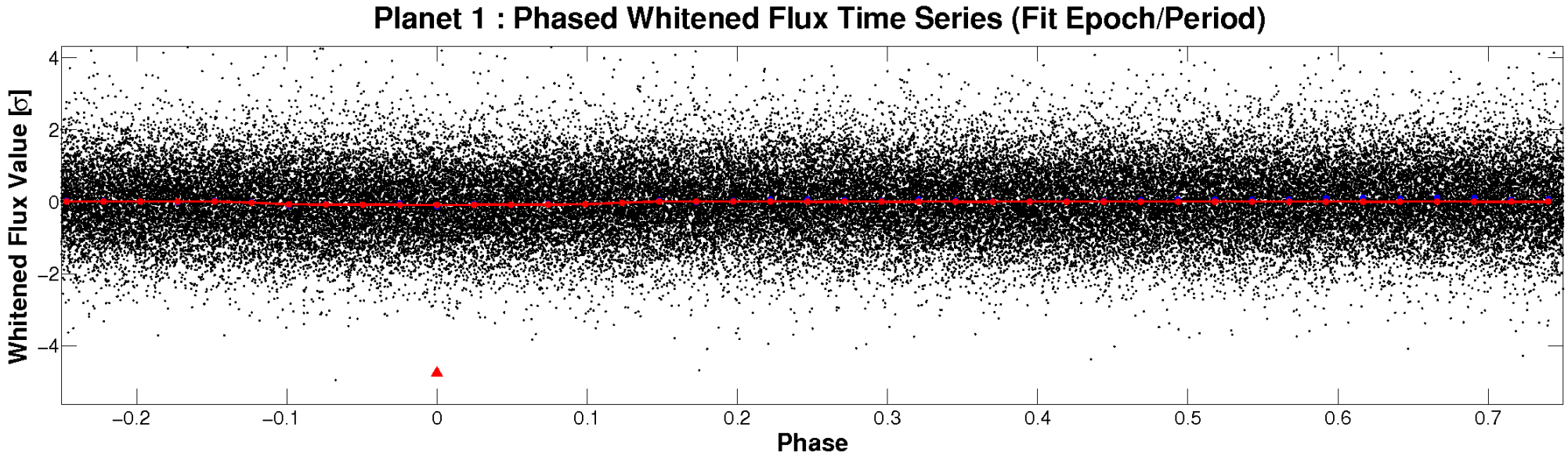

TCE 009175104-01
2.50e-03
2.00e-03
1.50e-03
1.00e-03
5.00e-04
0.00e+00
-5.00e-04
-1.00e-03
-1.50e-03
-2.00e-03
-2.50e-03
Flux
-0.4
-0.2
0
0.2
0.4
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 009175104-01
1.20e-03
1.00e-03
8.00e-04
6.00e-04
4.00e-04
2.00e-04
0.00e+00
-2.00e-04
-4.00e-04
-6.00e-04
-8.00e-04
Flux
-1
-0.5
0
0.5
1
Phase
Odd
Even
Model Fit

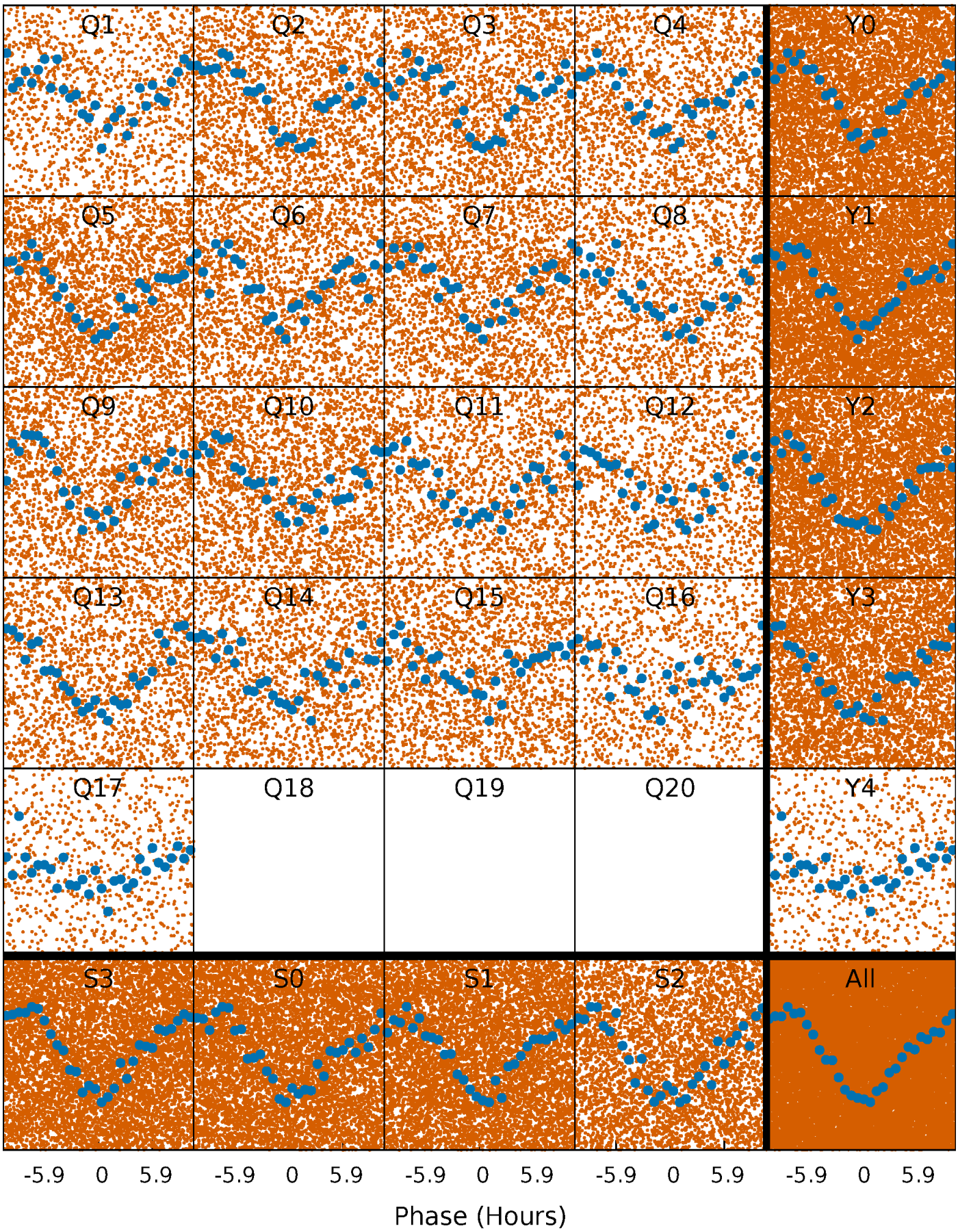
Non-Whitened Vs. Whitened Light Curve





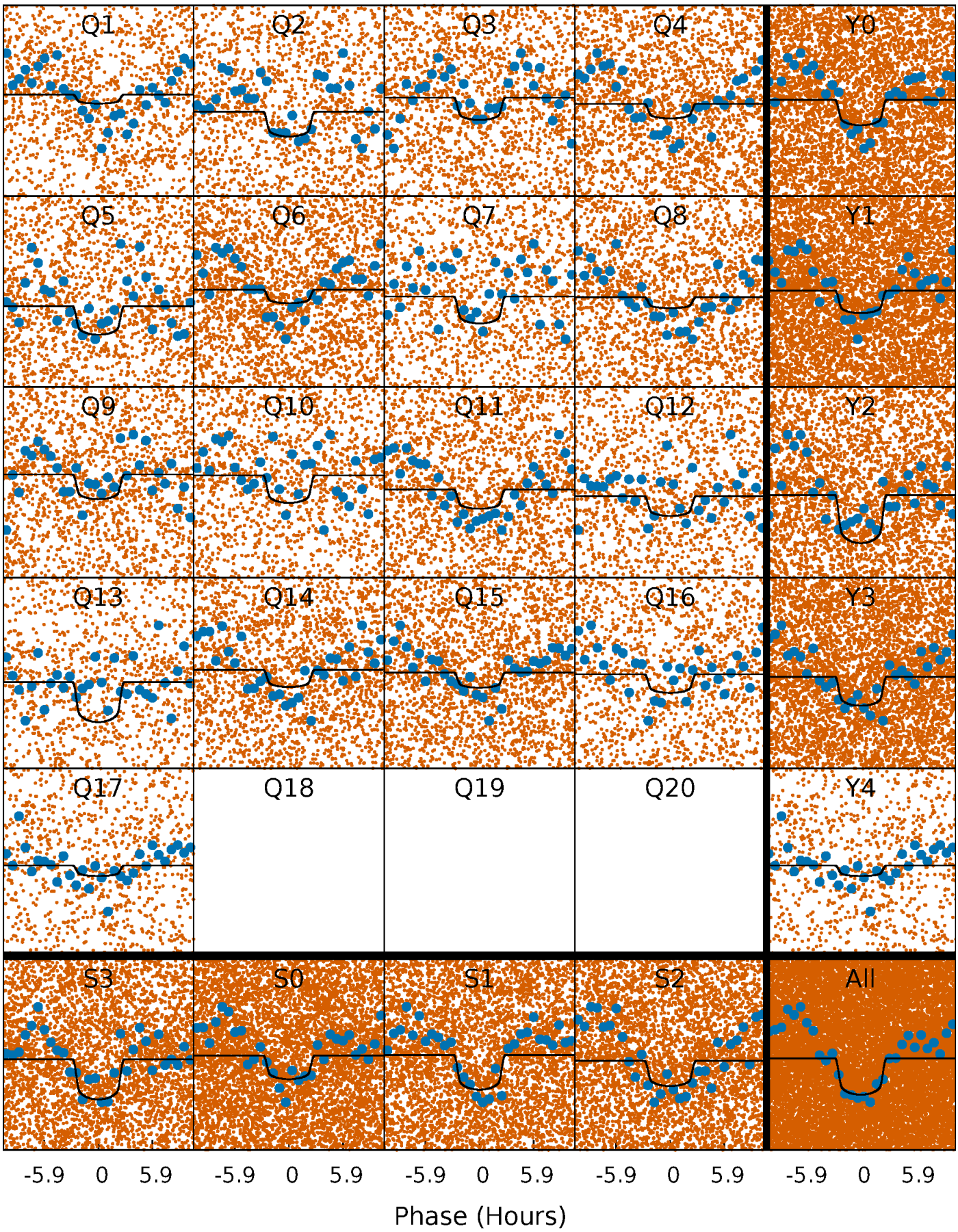
PDC Quarter-Phased Transit Curves

TCE 009175104-01 P= 0.828343 Days T_0=132.102648 (BKJD)



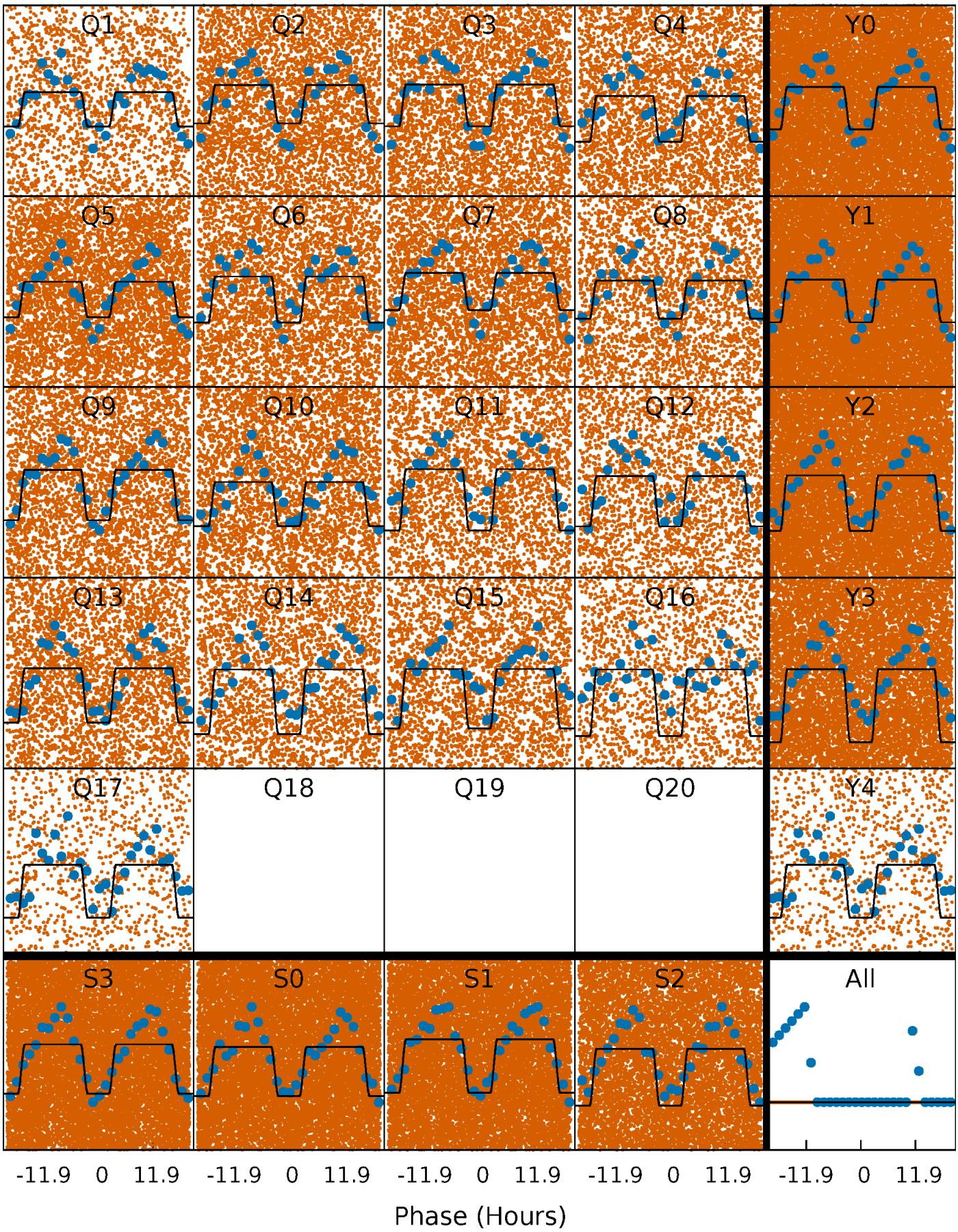
DV Quarter-Phased Transit Curves

TCE 009175104-01 P= 0.828343 Days T_0=132.102648 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

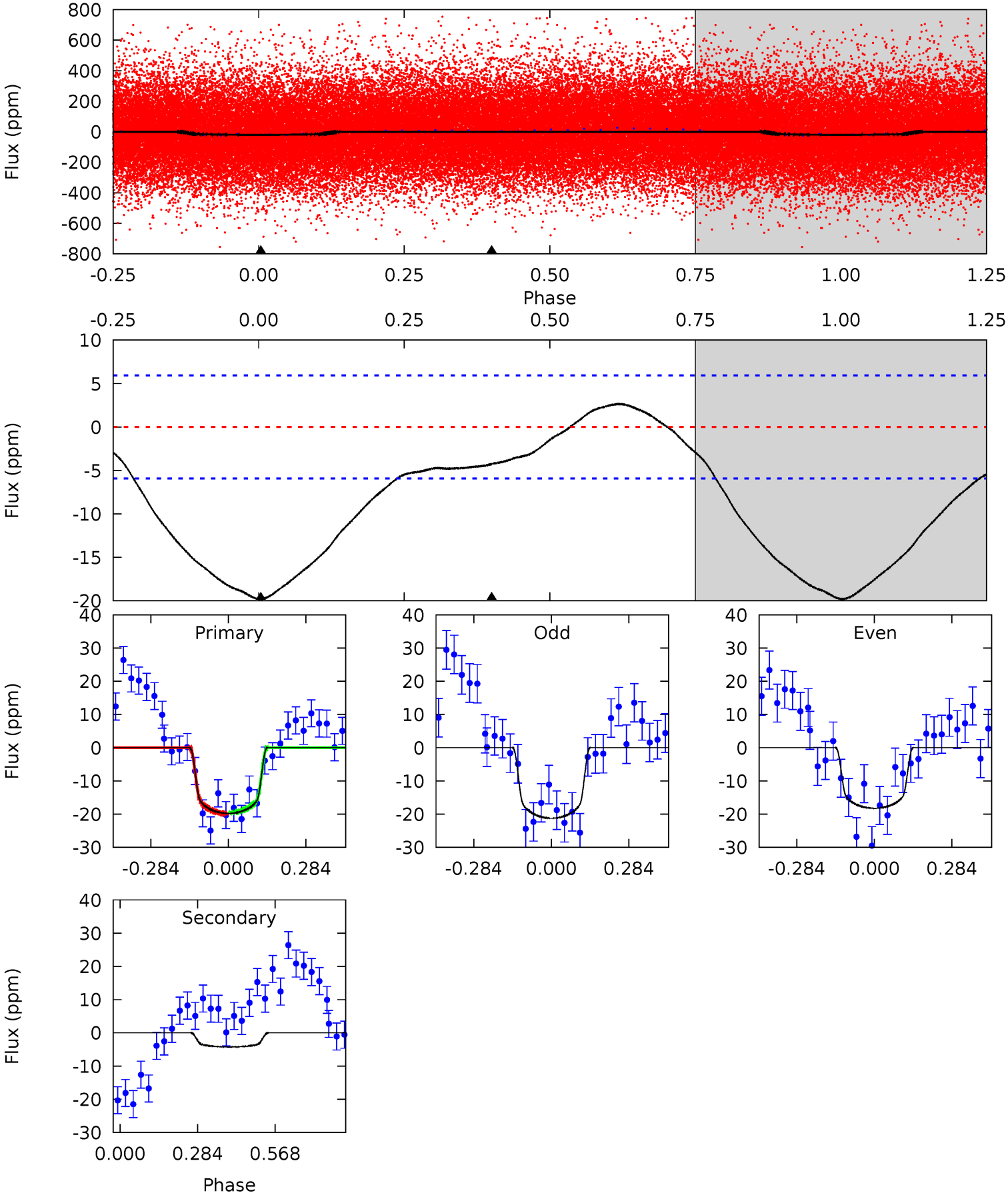
TCE 009175104-01 P= 0.828264 Days T_0=132.170960 (BKJD)



DV Model-Shift Uniqueness Test

009175104-01, P = 0.828343 Days, E = 131.274305 Days

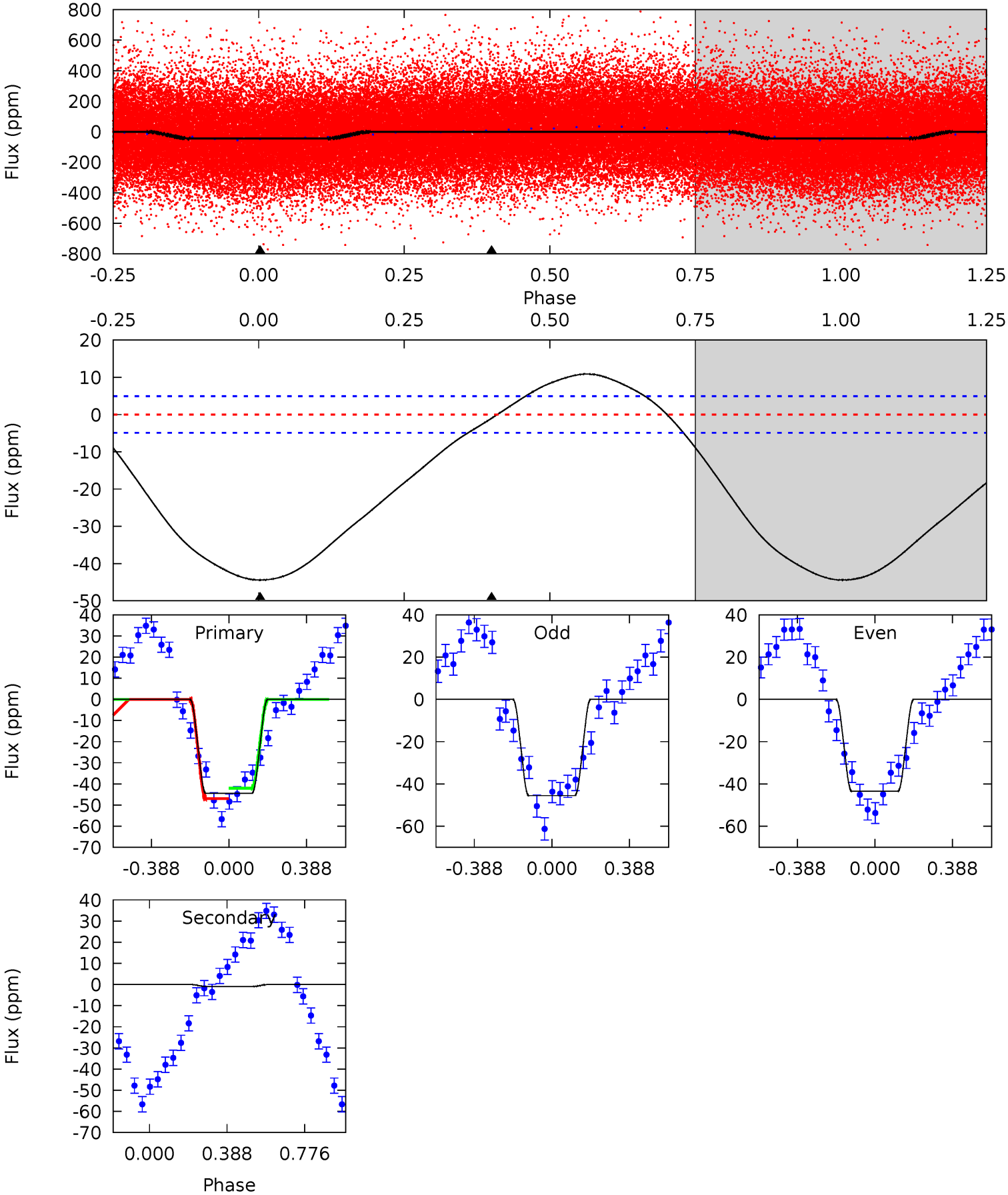
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.5	3.12	0	0	4.34	1.07	1.12	14.5	14.5	3.12	3.12	1.10	1.04	0.12	0.13



Alt Model-Shift Uniqueness Test

009175104-01, P = 0.828264 Days, E = 131.342696 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
38.6	0.85	0	0	4.27	0.86	3.95	38.6	38.6	0.85	0.85	0.87	1.01	0.20	2.10



Stellar Parameters For KIC 009175104

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	6582^{+182}_{-250}	$3.617^{+0.576}_{-0.064}$	$-0.020^{+0.250}_{-0.300}$	$3.366^{+0.453}_{-1.927}$	$1.711^{+0.172}_{-0.515}$	$0.063^{+0.516}_{-0.014}$
	+3%/-4%	+16%/-2%	+1250%/-1500%	+13%/-57%	+10%/-30%	+817%/-22%
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 009175104-01 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-4±1	$1.52^{+0.61}_{-0.59}$	4956^{+362}_{-716}	3584^{+1202}_{-7264}	$0.417^{+0.697}_{-0.229}$
Alt.	-1±1	$2.30^{+0.72}_{-0.71}$	4958^{+356}_{-679}	-4158^{+564}_{-297}	$0.039^{+0.077}_{-0.049}$

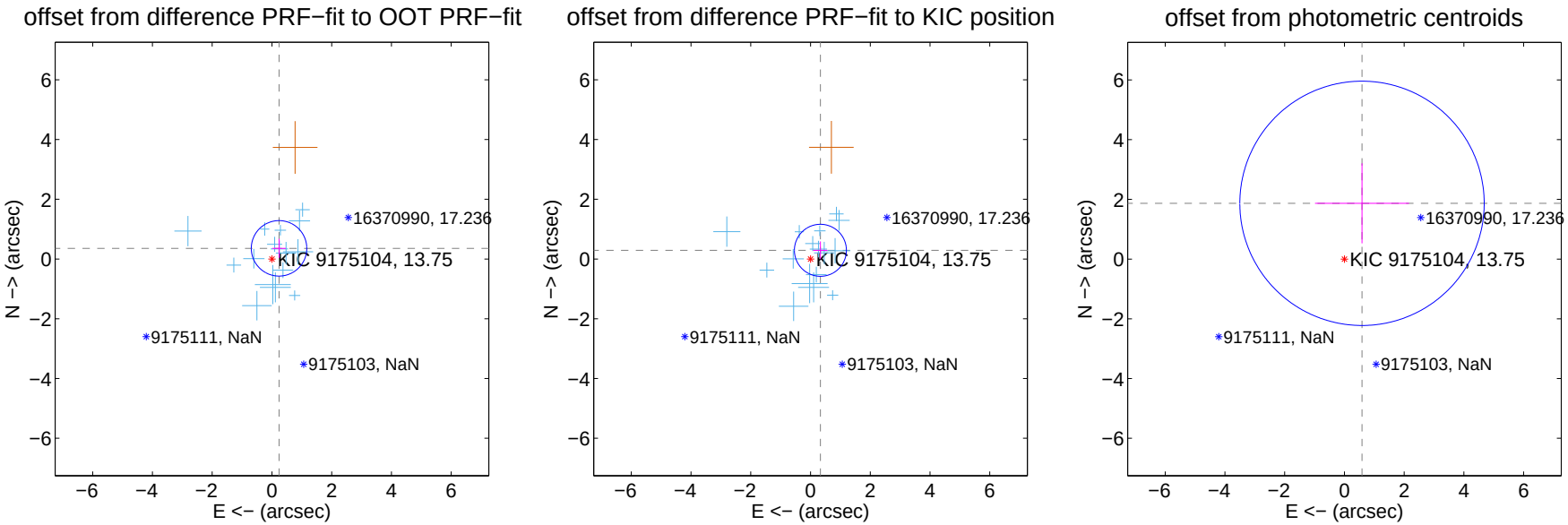
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

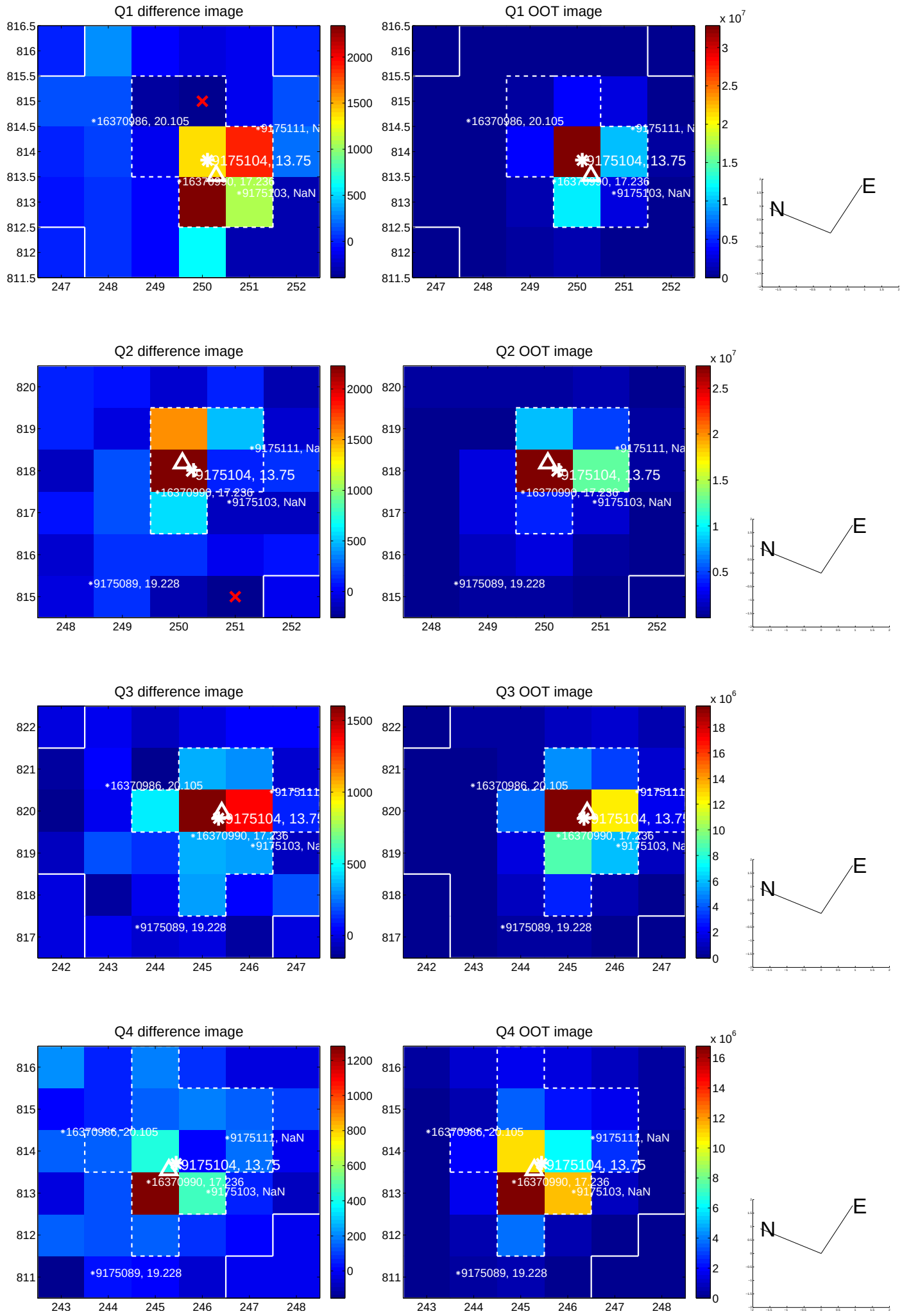
Supplemental centroid analysis for 009175104-01. Kepler magnitude: 13.75. Transit SNR 9.55
There are 16 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.01 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.429 ± 0.310	1.39	-0.237 ± 0.230	0.357 ± 0.316
PRF-fit source offset from KIC position	0.441 ± 0.290	1.52	-0.331 ± 0.237	0.292 ± 0.296
photometric centroid source offset	1.96 ± 1.36	1.44	-0.59 ± 1.57	1.87 ± 1.34

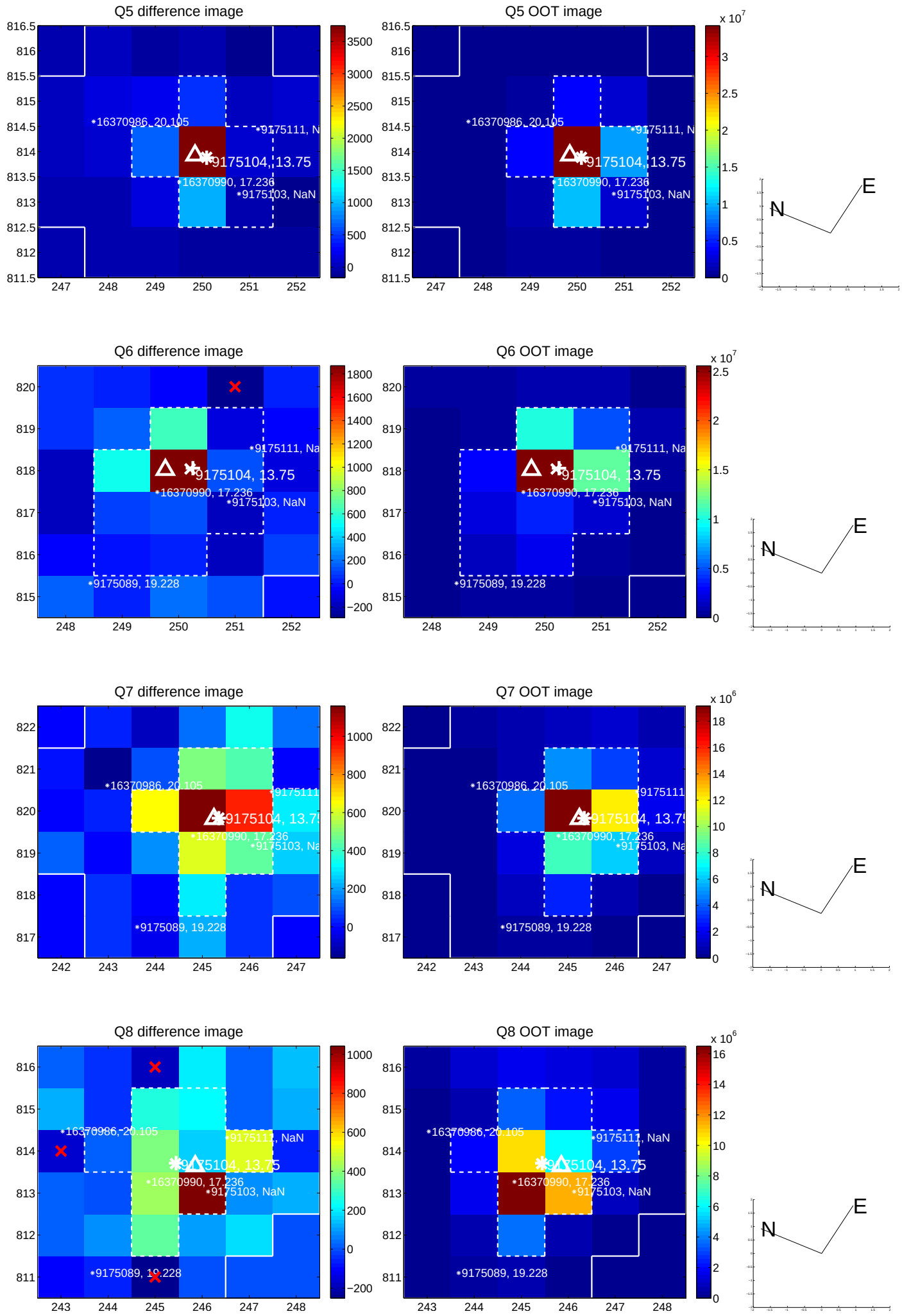


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

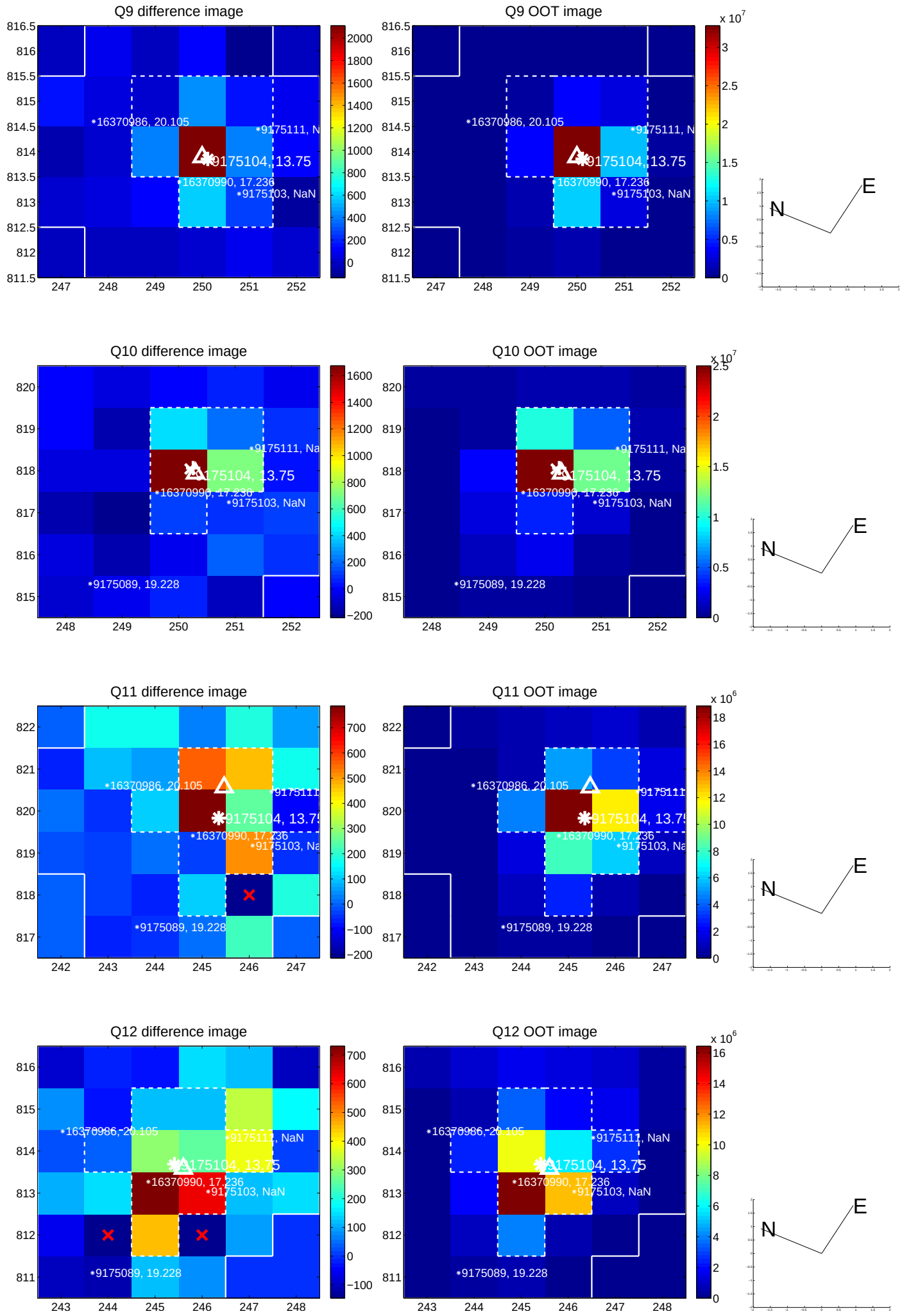
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



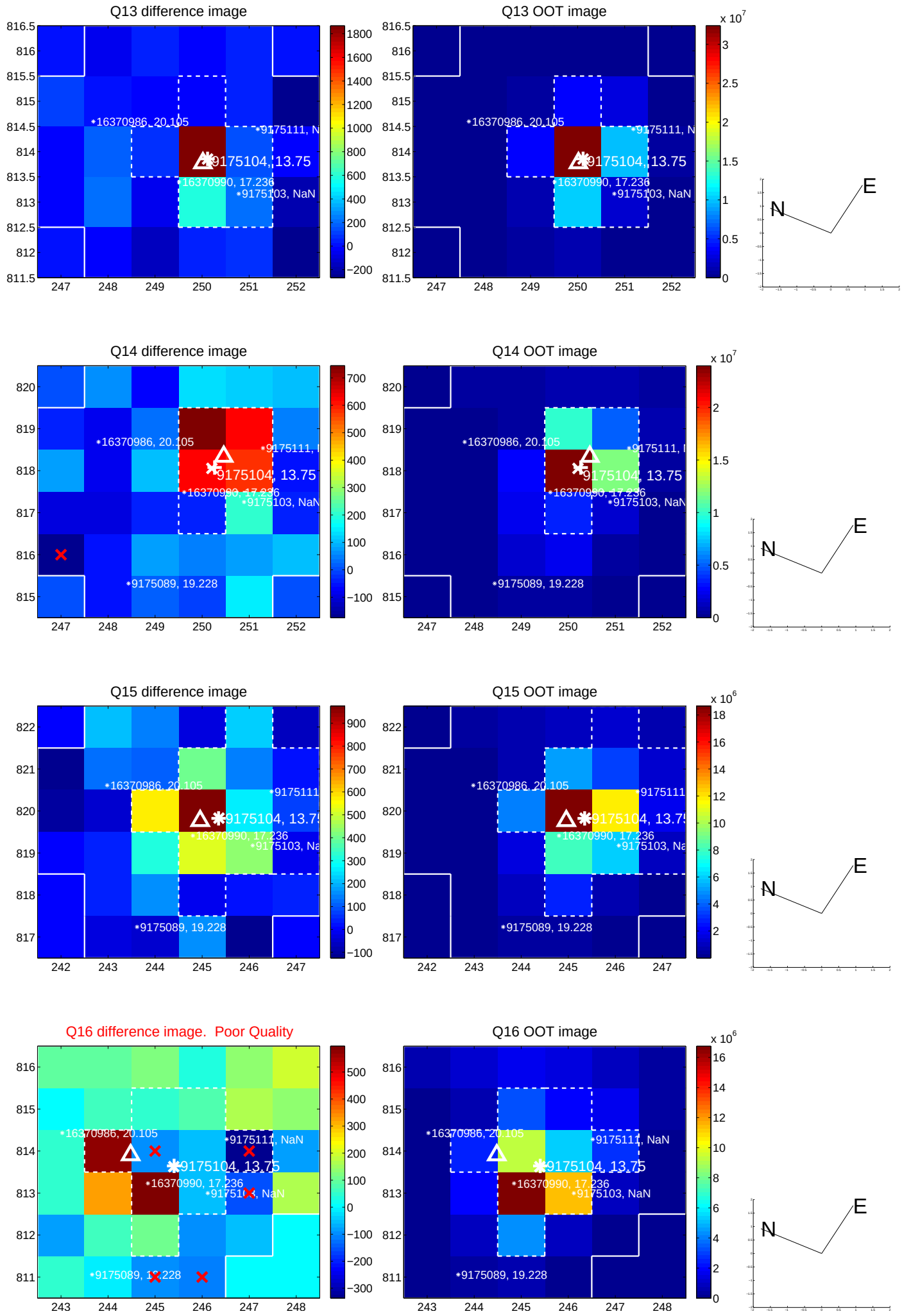
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



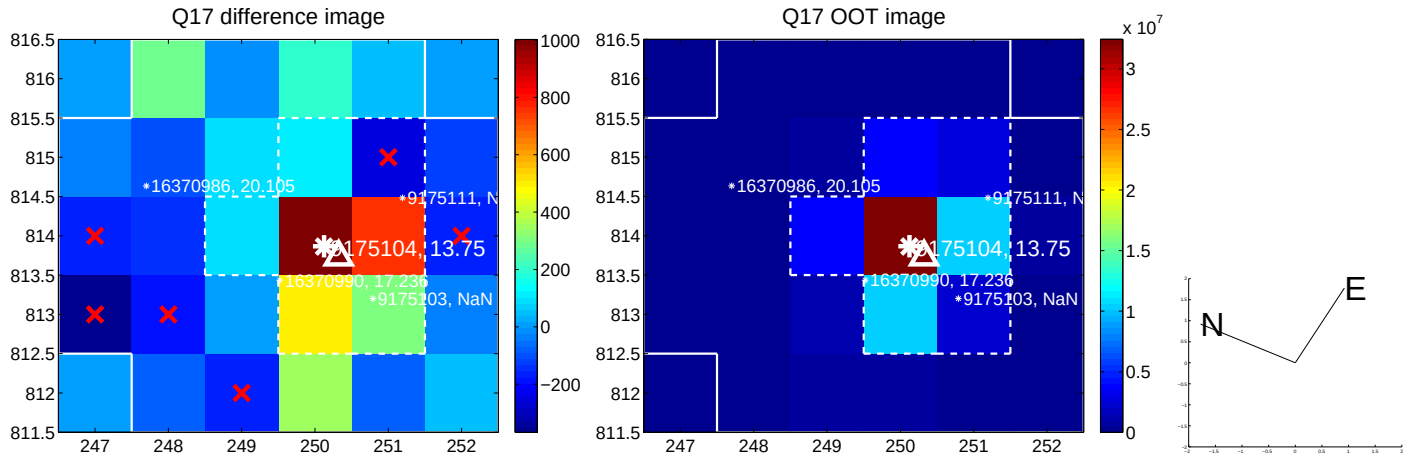
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

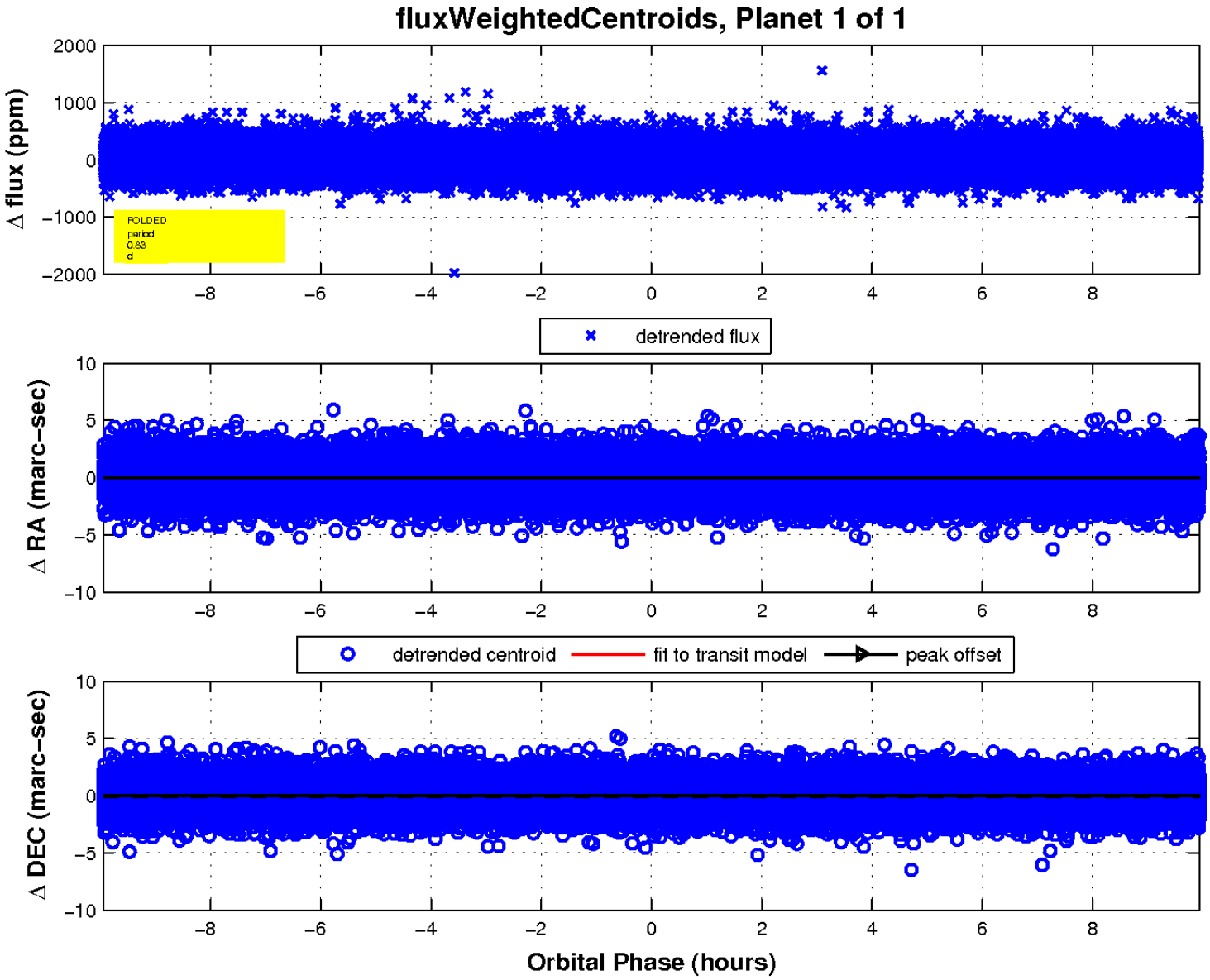
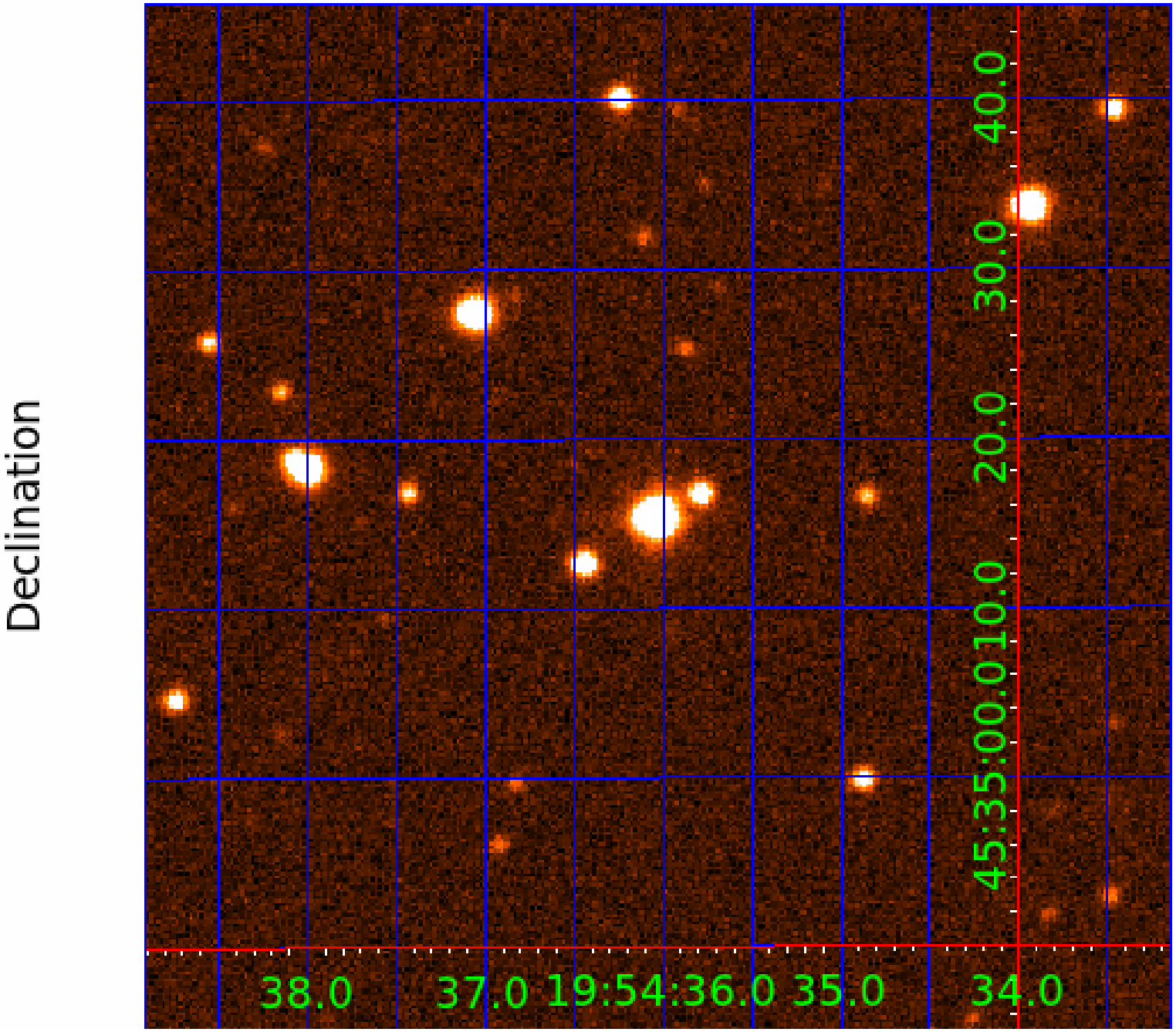


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.





UKIRT Image