KIC 009204103

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 ($S_\oplus$)
009204103-01	OBS	No	0.551410	131.857379	58.5	4.447	10.2	11.4	0.62	4410	0.47	1051.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009204103-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_FEW_DIFFS

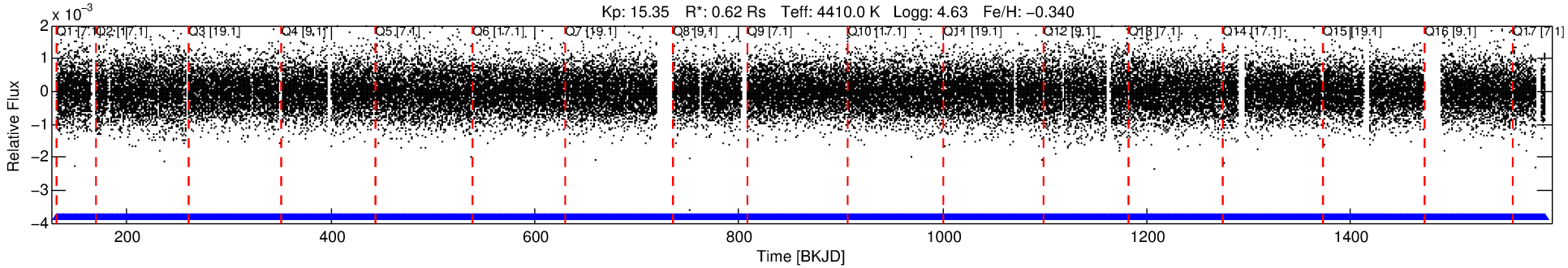
Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.
See `http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col` for comment definitions.

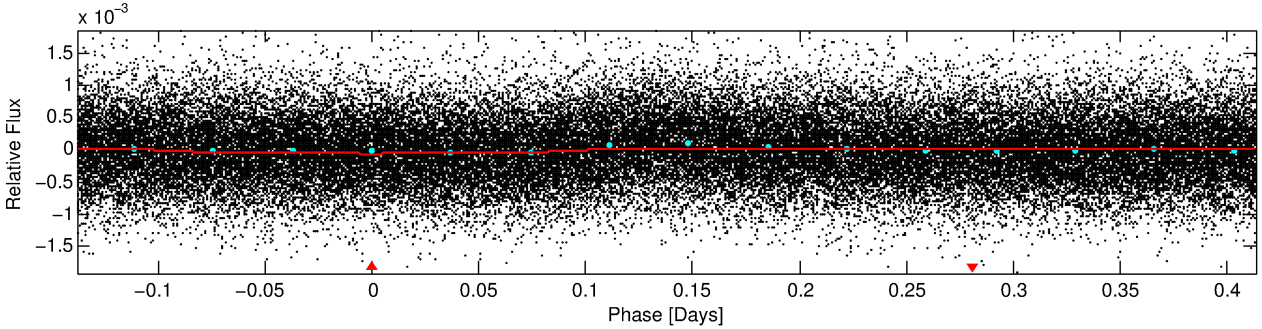
Ephemeris Match Information For 009204103-01

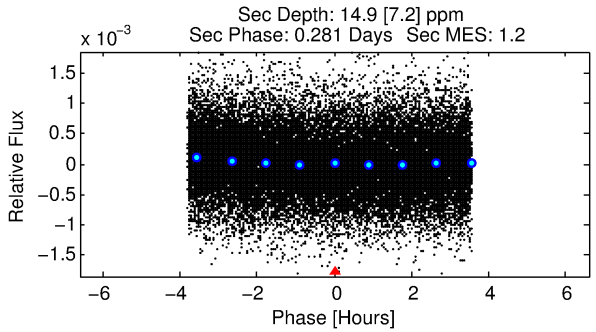
No Significant Match Found

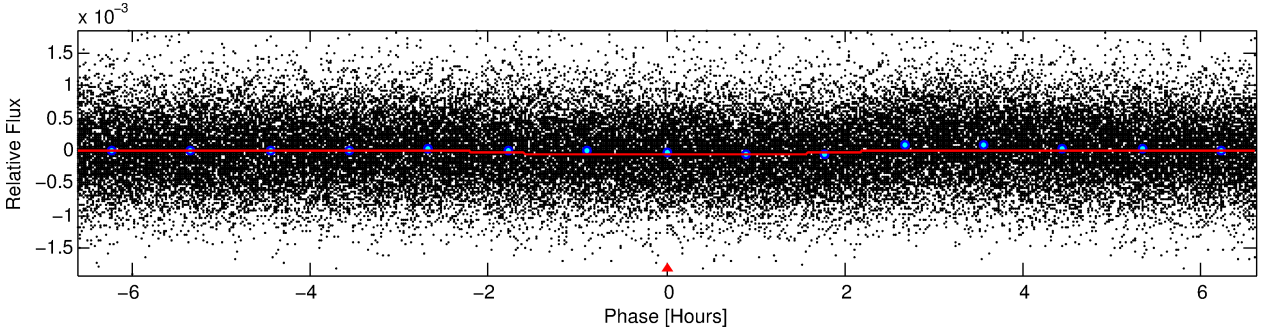
DV One-Page Summary

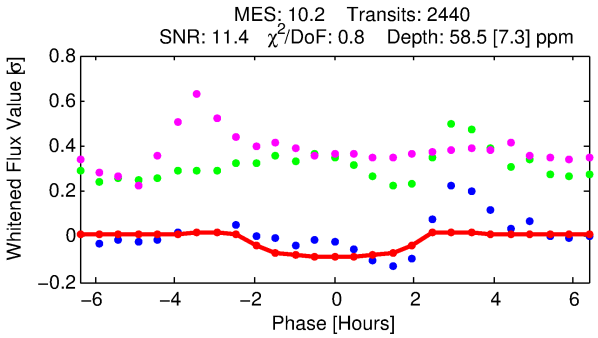
KIC: 9204103 Candidate: 1 of 1 Period: 0.551 d

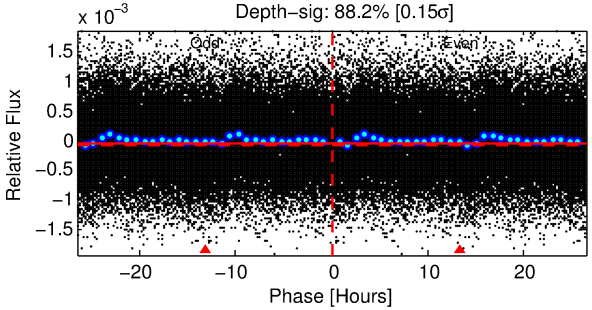


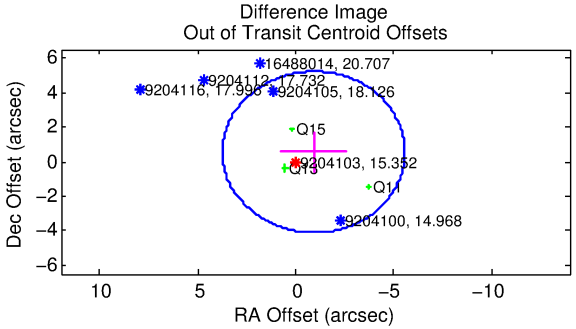












DV Fit Results:

Period = 0.55141 [0.00001] d
Epoch = 131.8574 [0.0040] BKJD
Rp/R* = 0.0069 [0.0046]
a/R* = 1.14 [0.54]
b = 0.38 [5.08]

Seff = 1051.02 [163.22]
Teq = 1452 [56] K
Rp = 0.47 [0.32] Re
a = 0.0111 [0.0008] AU

Ag = 4.65 [6.64] [0.55σ]
Teffp = 3296 [1178] K [1.56σ]

DV Diagnostic Results:

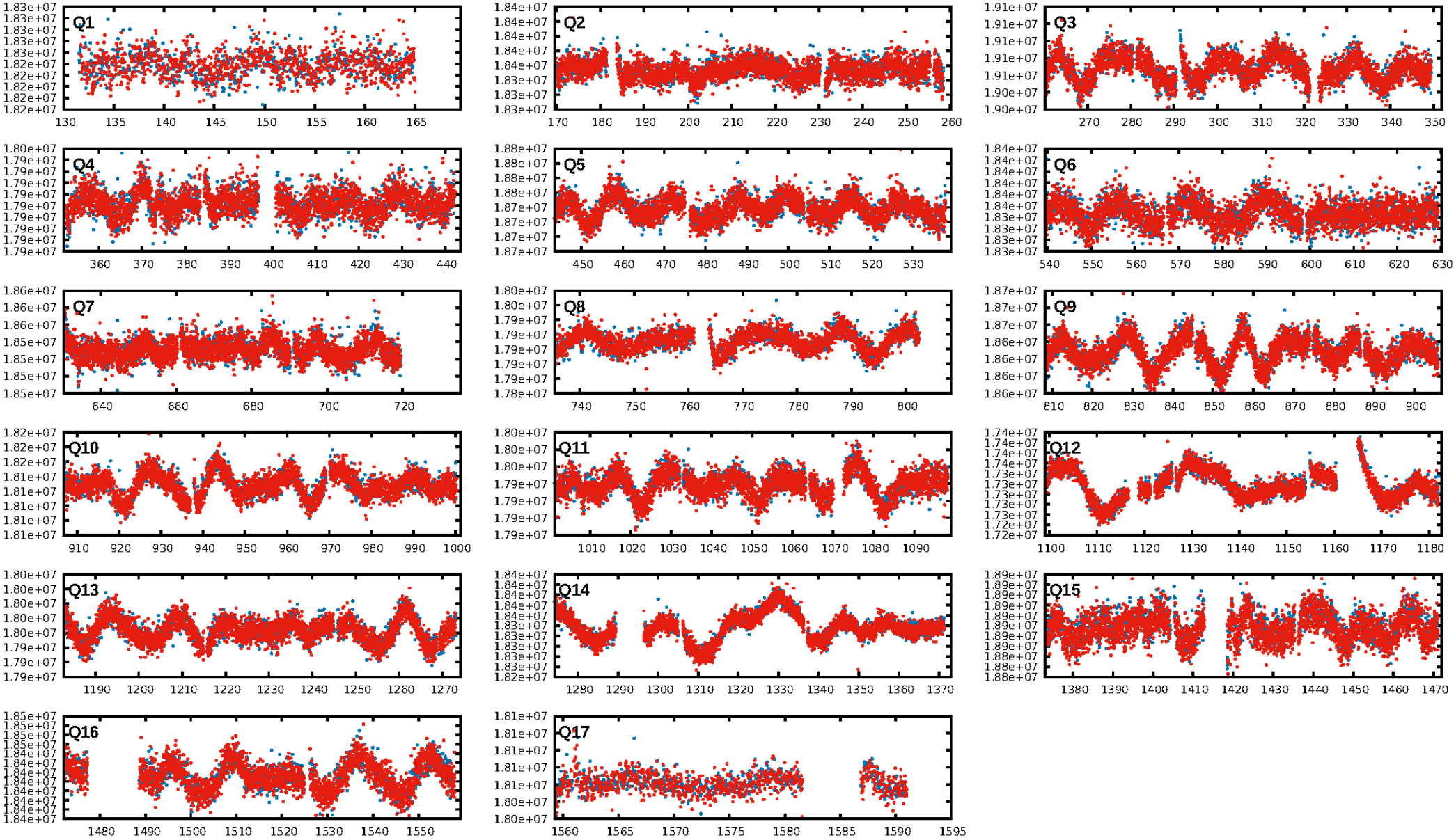
ShortPeriod−sig: N/A
LongPeriod−sig: N/A
ModelChiSquare2−sig: N/A
ModelChiSquareGof−sig: N/A
Bootstrap−pfa: N/A
RollingBand−fgt: 1.00 [2330/2330]
GhostDiagnostic−chr: 7.264

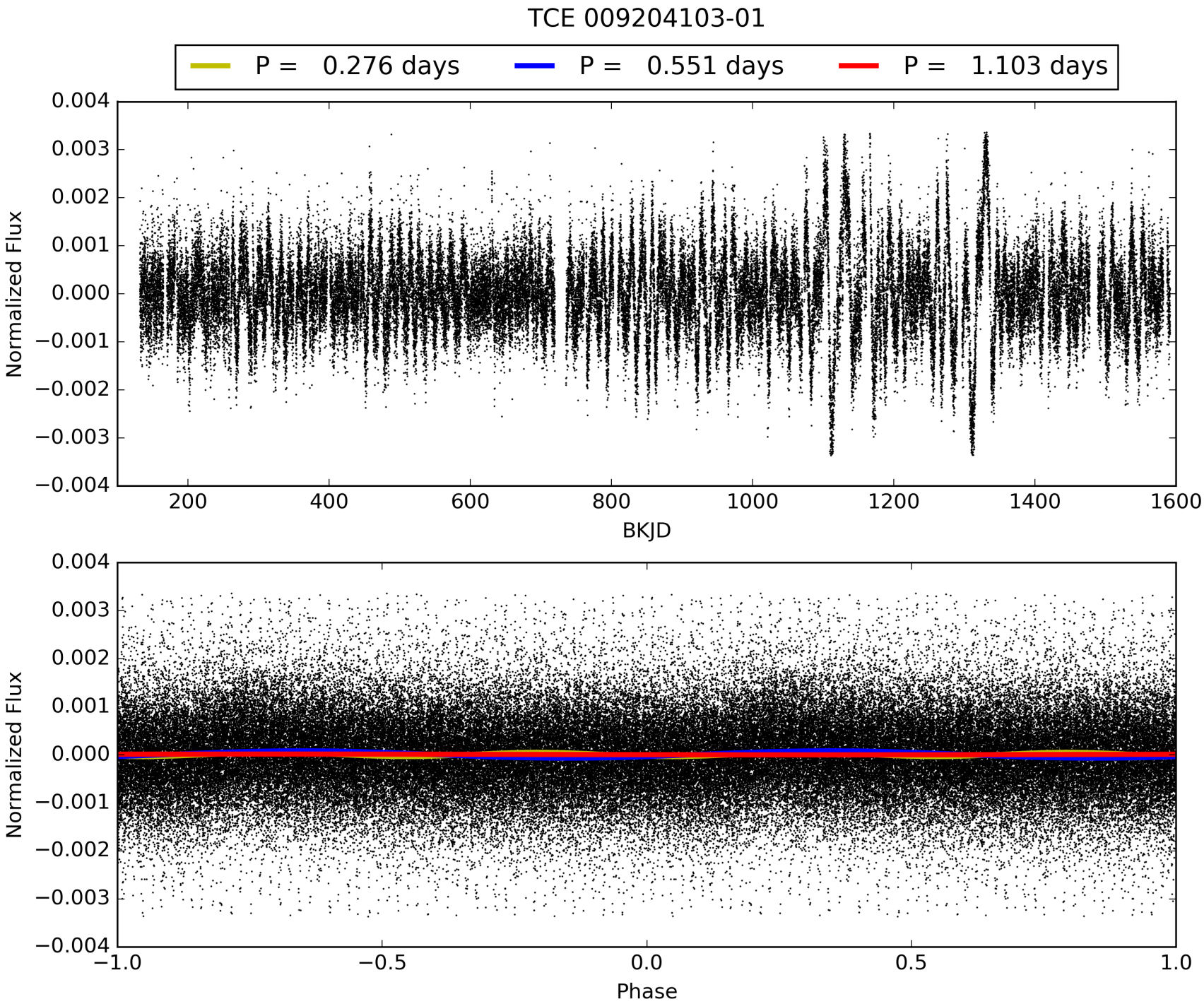
Centroid−sig: 0.0%
Centroid−so: 0.535 arcsec [1.15σ]
OotOffset−rm: 1.064 arcsec [0.68σ]
KicOffset−rm: 1.443 arcsec [0.95σ]
OotOffset−st: 0/2/0/1 [3]
KicOffset−st: 0/2/0/1 [3]
DiffImageQuality−fgm: 0.67 [2/3]
DiffImageOverlap−fno: 1.00 [17/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29−Jan−2016 00:27:36 Z

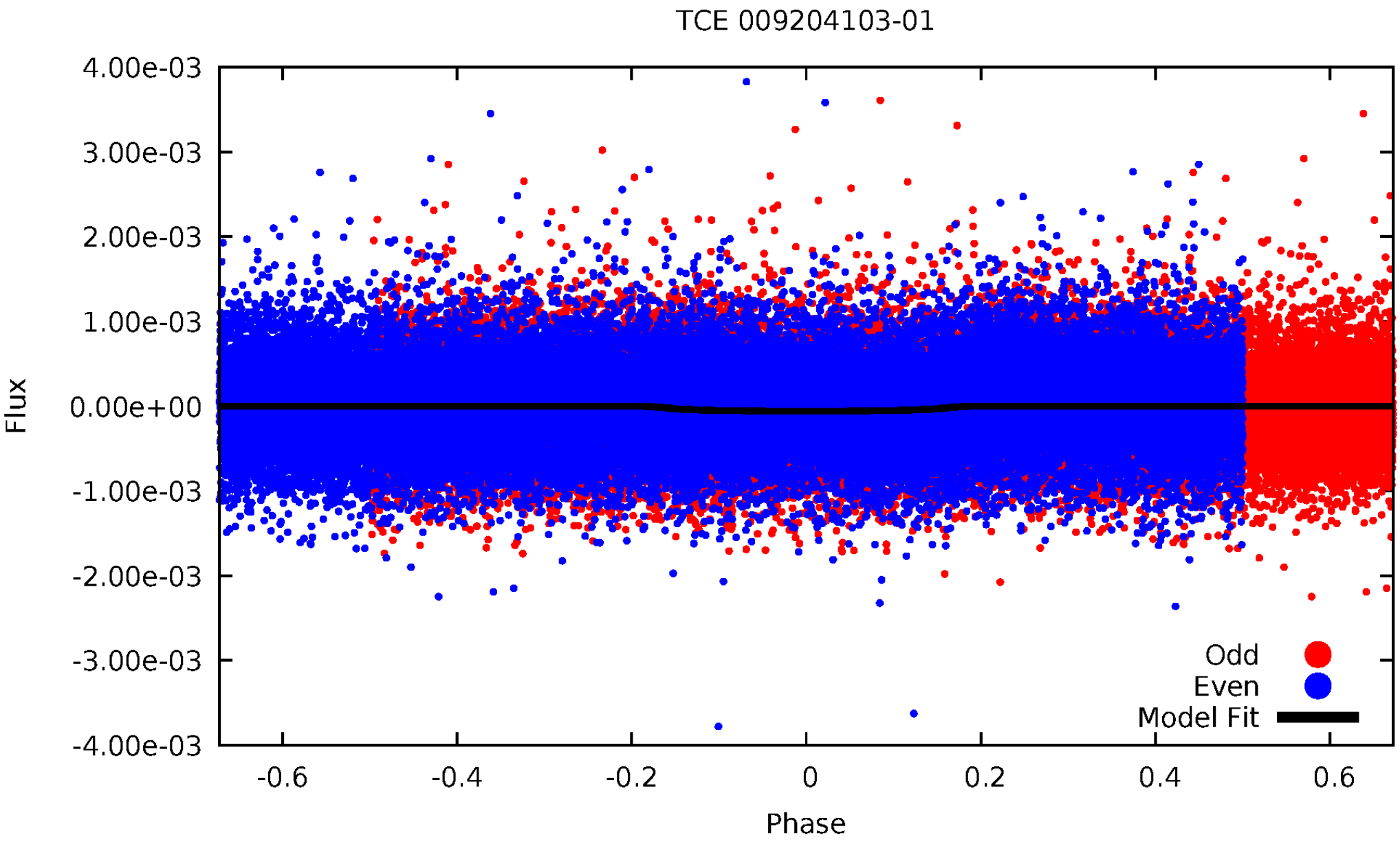
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 009204103-01, PDC Light Curves

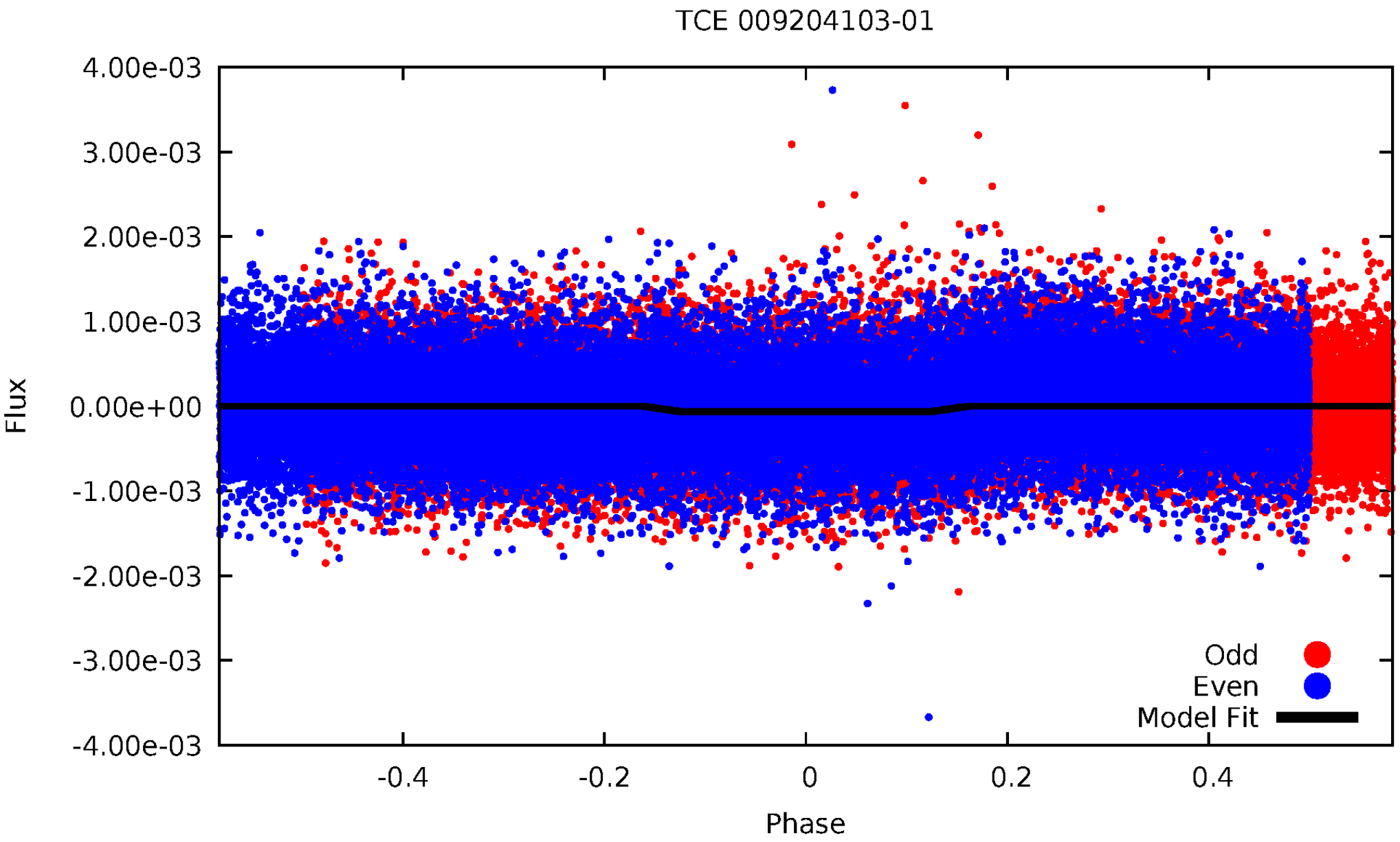



TCE 009204103-01
P = 0.276 days
P = 0.551 days
P = 1.103 days
Normalized Flux
BKJD
Normalized Flux
Phase

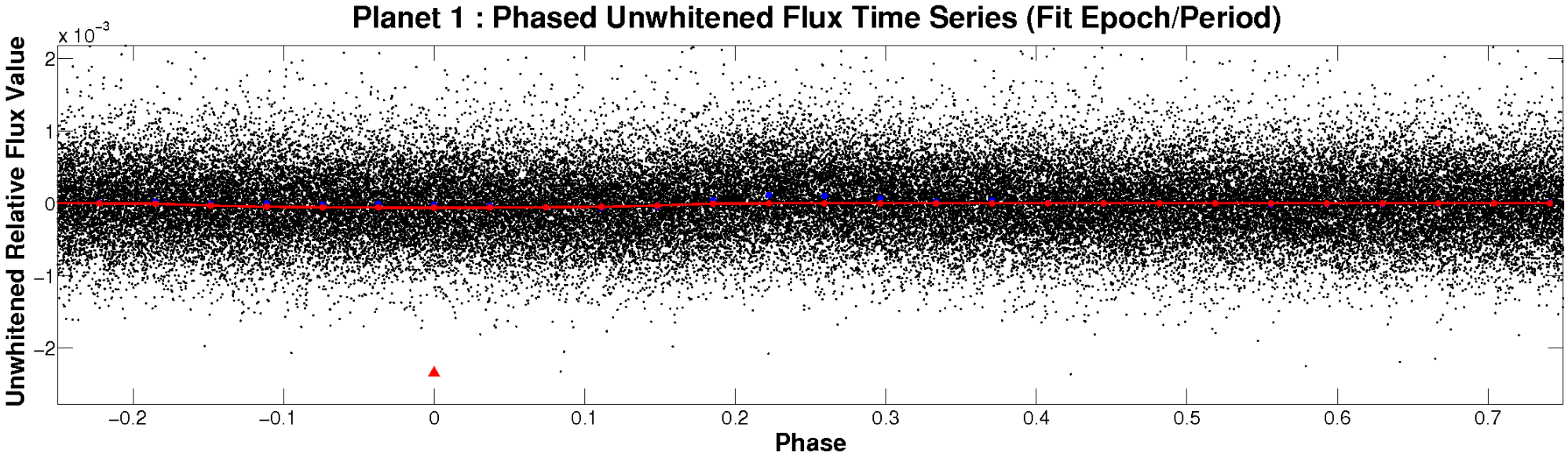
DV Odd/Even

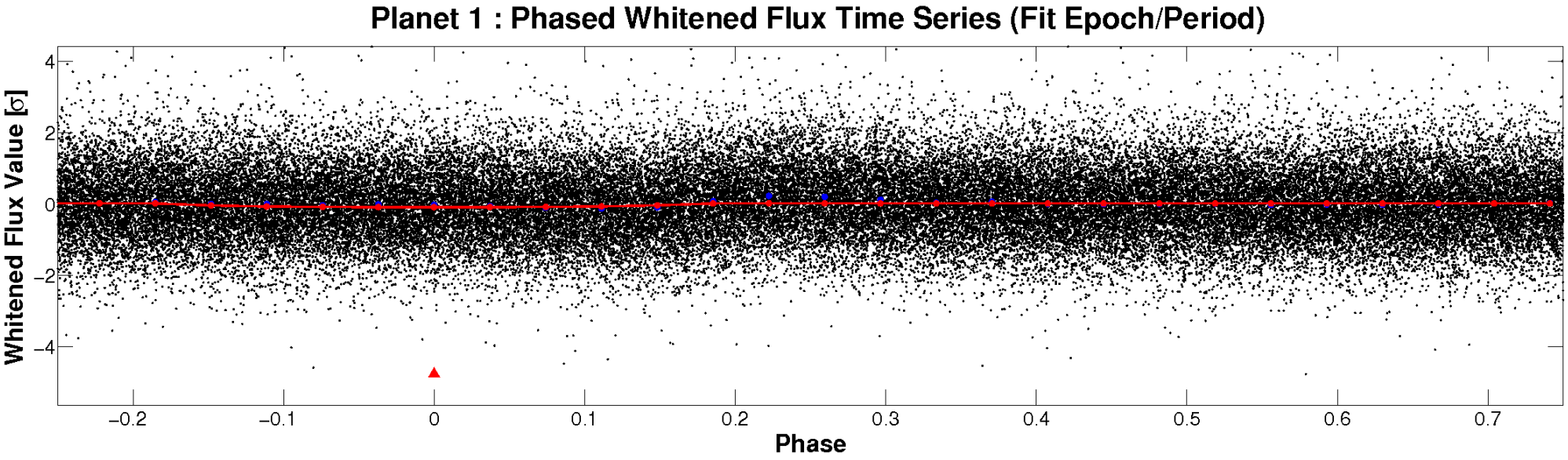

TCE 009204103-01
4.00e-03
3.00e-03
2.00e-03
1.00e-03
0.00e+00
-1.00e-03
-2.00e-03
-3.00e-03
-4.00e-03
Flux
-0.6
-0.4
-0.2
0
0.2
0.4
0.6
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 009204103-01
4.00e-03
3.00e-03
2.00e-03
1.00e-03
0.00e+00
-1.00e-03
-2.00e-03
-3.00e-03
-4.00e-03
Flux
-0.4
-0.2
0
0.2
0.4
Phase
Odd
Even
Model Fit

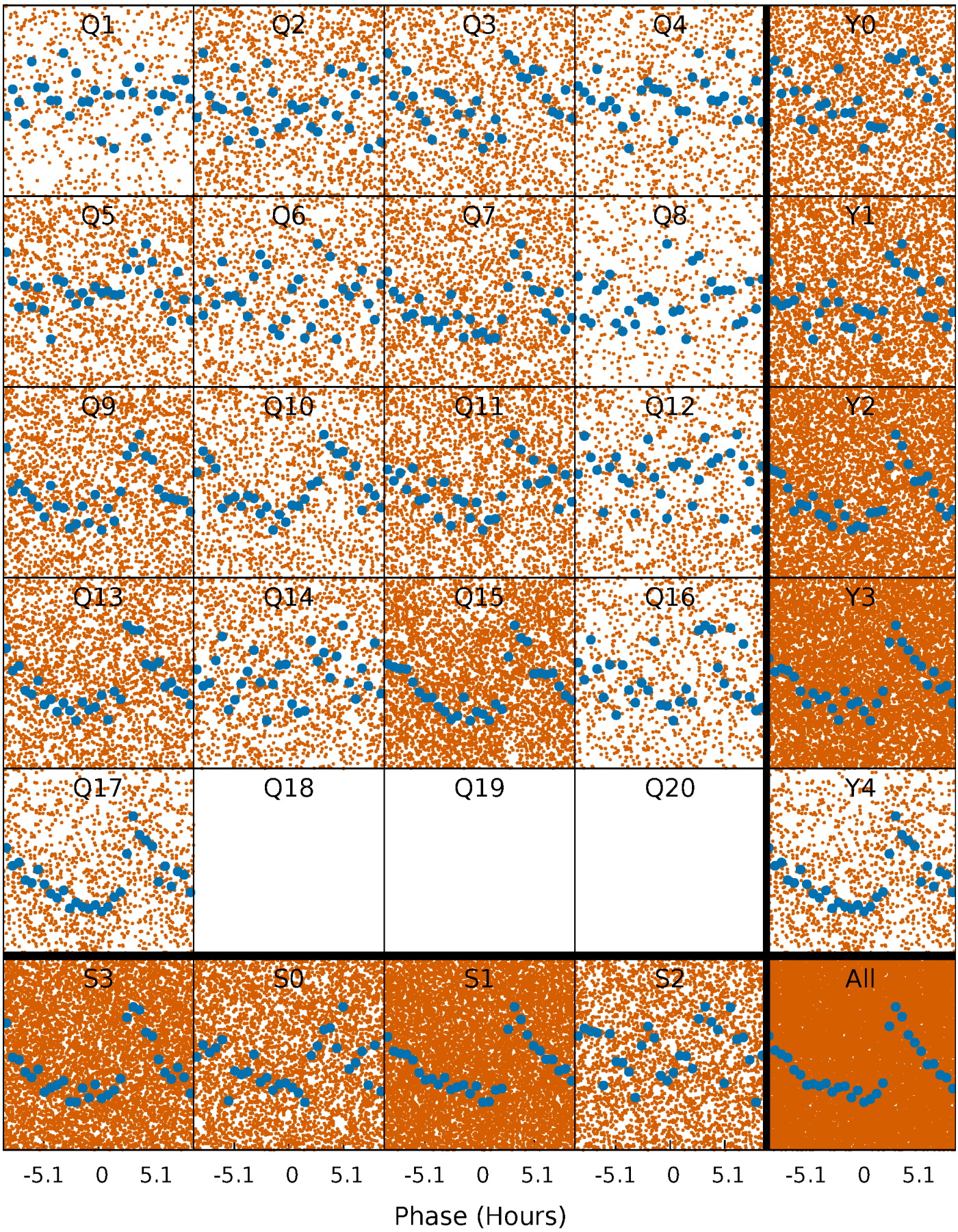
Non-Whitened Vs. Whitened Light Curve





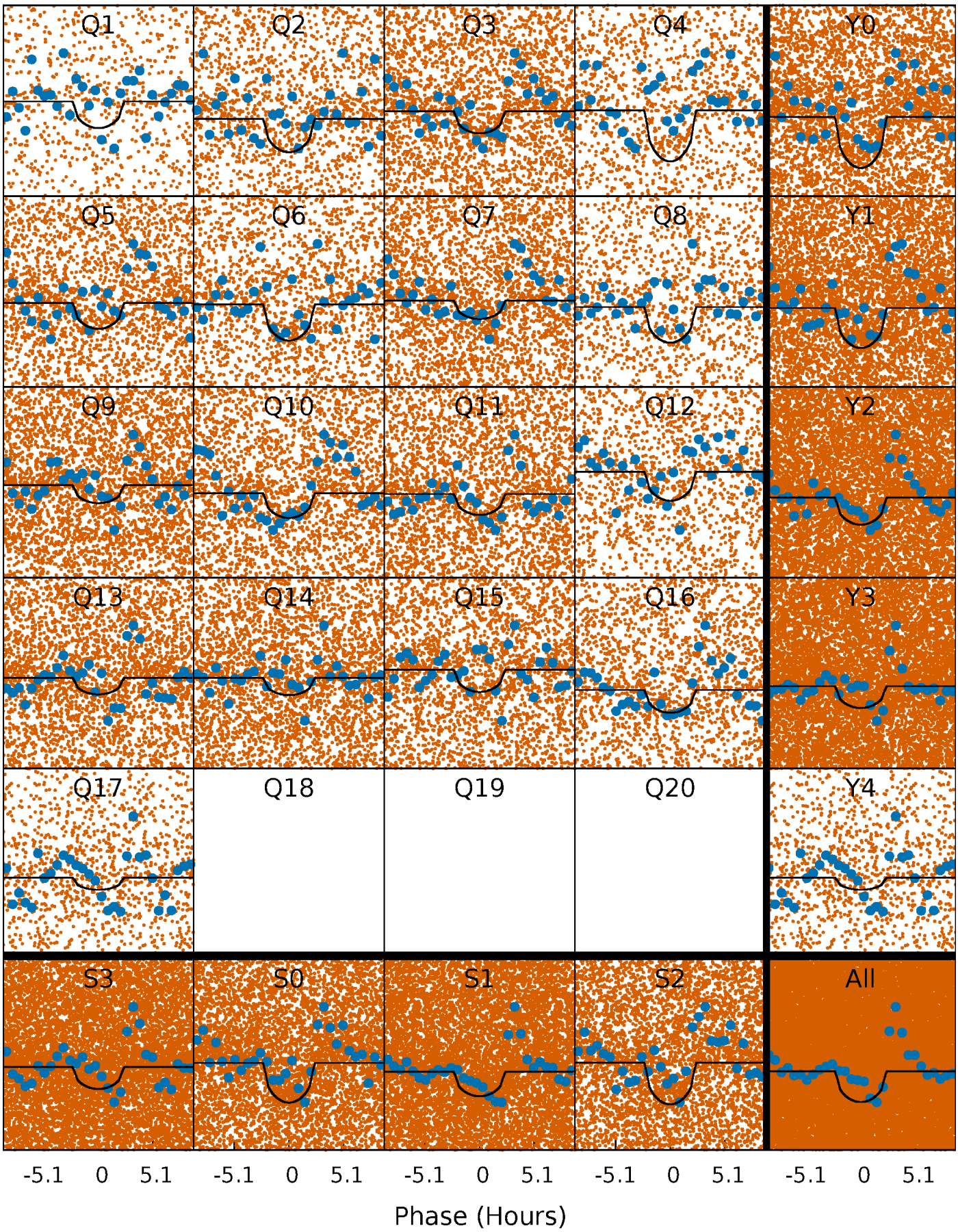
PDC Quarter-Phased Transit Curves

TCE 009204103-01 P= 0.551410 Days T_0=131.857379 (BKJD)



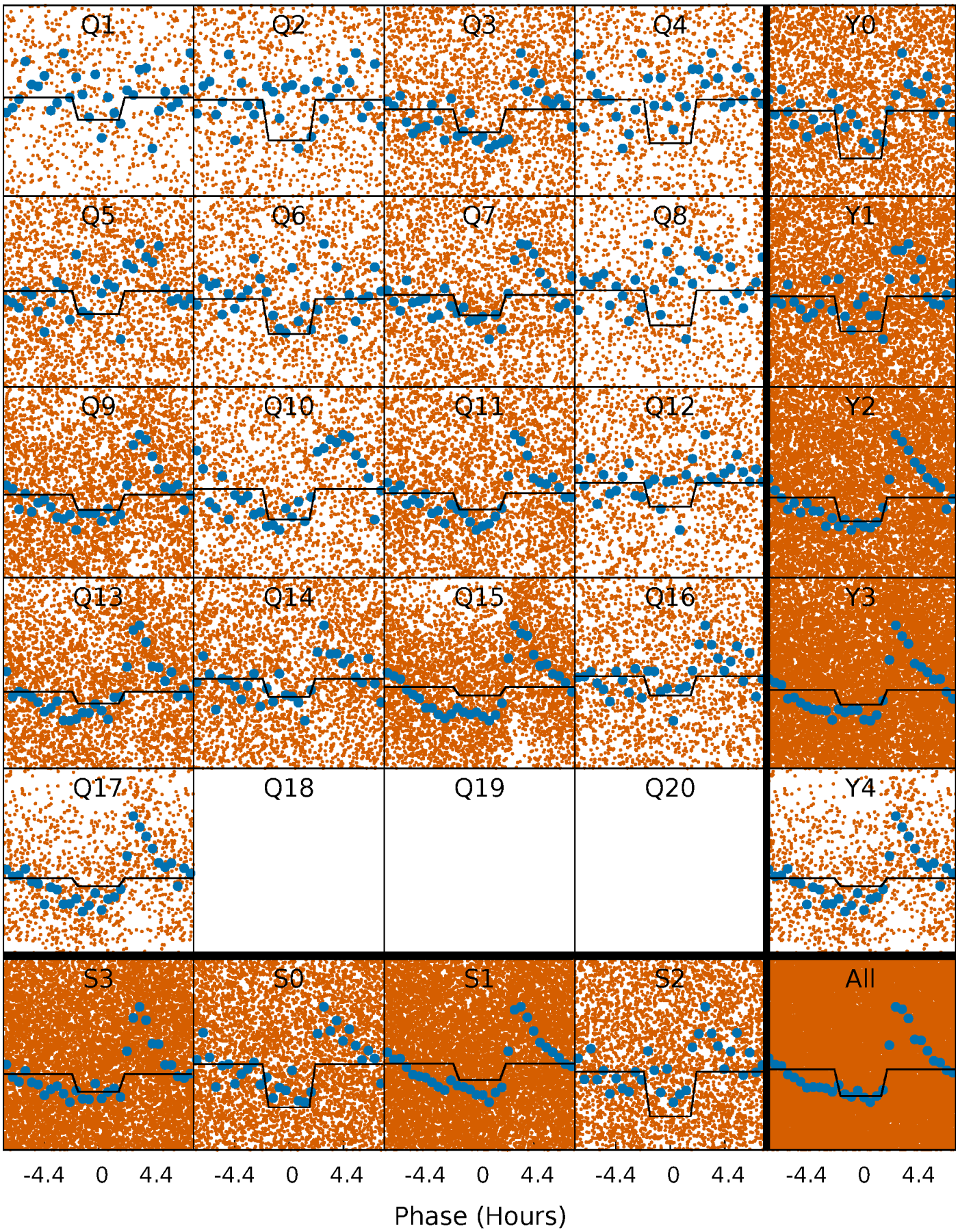
DV Quarter-Phased Transit Curves

TCE 009204103-01 P= 0.551410 Days T_0=131.857379 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

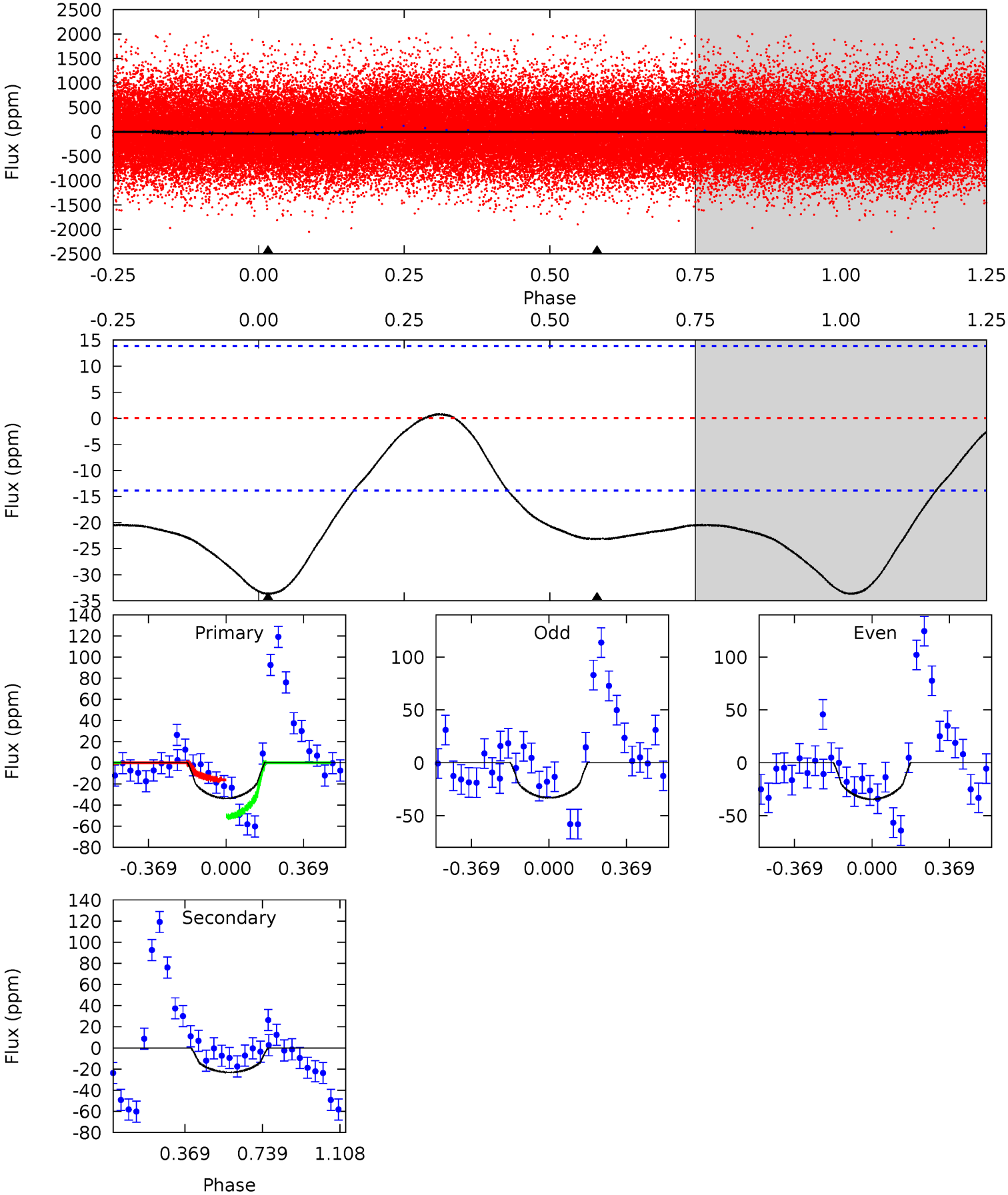
TCE 009204103-01 P= 0.551418 Days T_0=131.849143 (BKJD)



DV Model-Shift Uniqueness Test

009204103-01, P = 0.551410 Days, E = 131.305969 Days

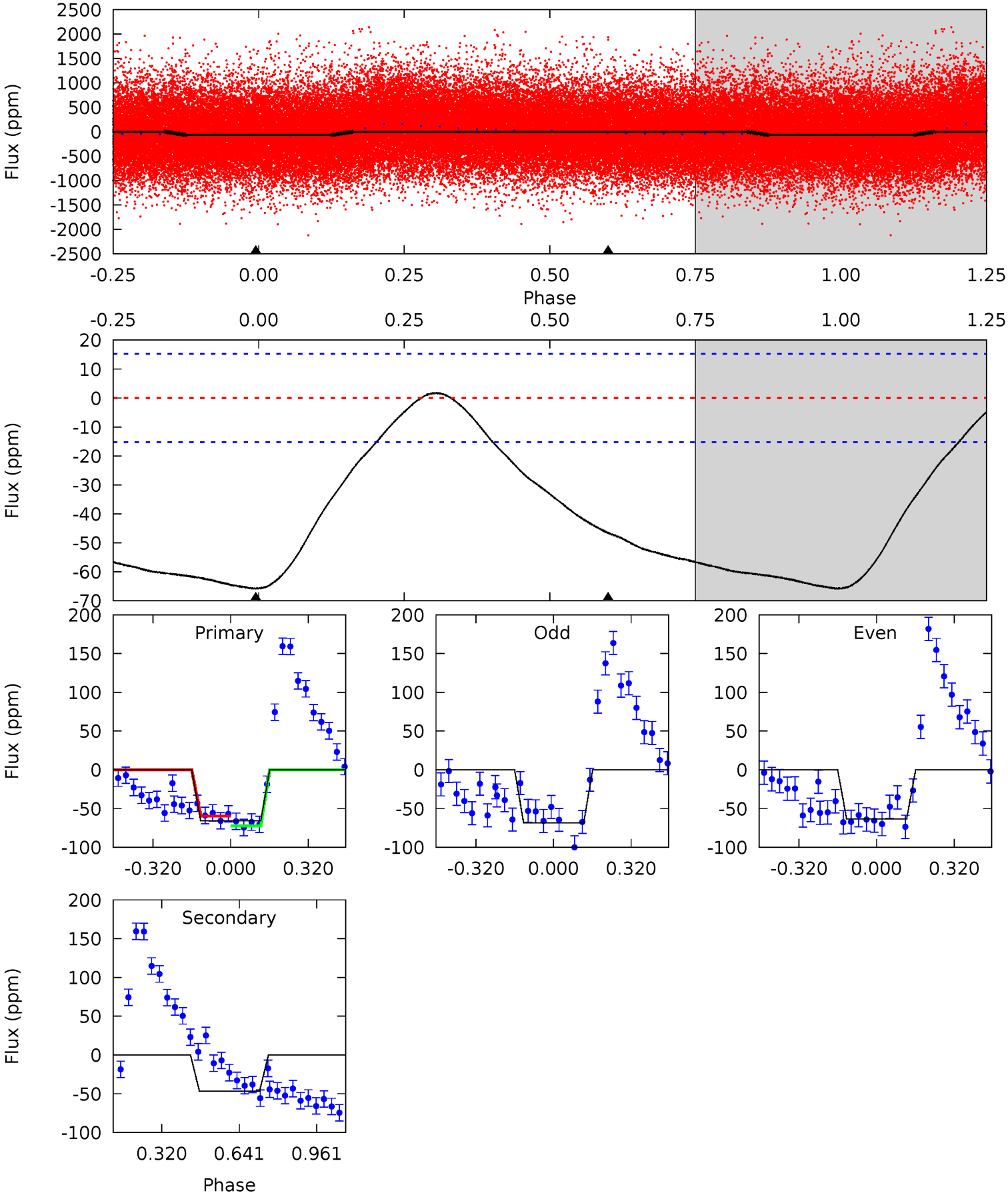
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.4	7.15	0	0	4.28	0.90	0.31	10.4	10.4	7.15	7.15	0.20	0.92	0.02	5.40



Alt Model-Shift Uniqueness Test

009204103-01, P = 0.551418 Days, E = 131.297725 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.6	13.2	0	0	4.31	0.99	0.56	18.6	18.6	13.2	13.2	0.70	0.94	0.03	1.81



Stellar Parameters For KIC 009204103

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	4410^{+131}_{-131}	$4.635^{+0.052}_{-0.024}$	$-0.340^{+0.300}_{-0.300}$	$0.620^{+0.050}_{-0.056}$	$0.605^{+0.070}_{-0.047}$	$3.583^{+0.831}_{-0.466}$
	+3%/-3%	+1%/-1%	+88%/-88%	+8%/-9%	+12%/-8%	+23%/-13%
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 009204103-01 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-23±3	$0.49^{+0.33}_{-0.28}$	2013^{+73}_{-67}	3756^{+1390}_{-621}	$6.535^{+27.139}_{-4.205}$
Alt.	-47±4	$0.55^{+0.31}_{-0.27}$	2010^{+71}_{-62}	4078^{+1321}_{-592}	10^{+30}_{-6}

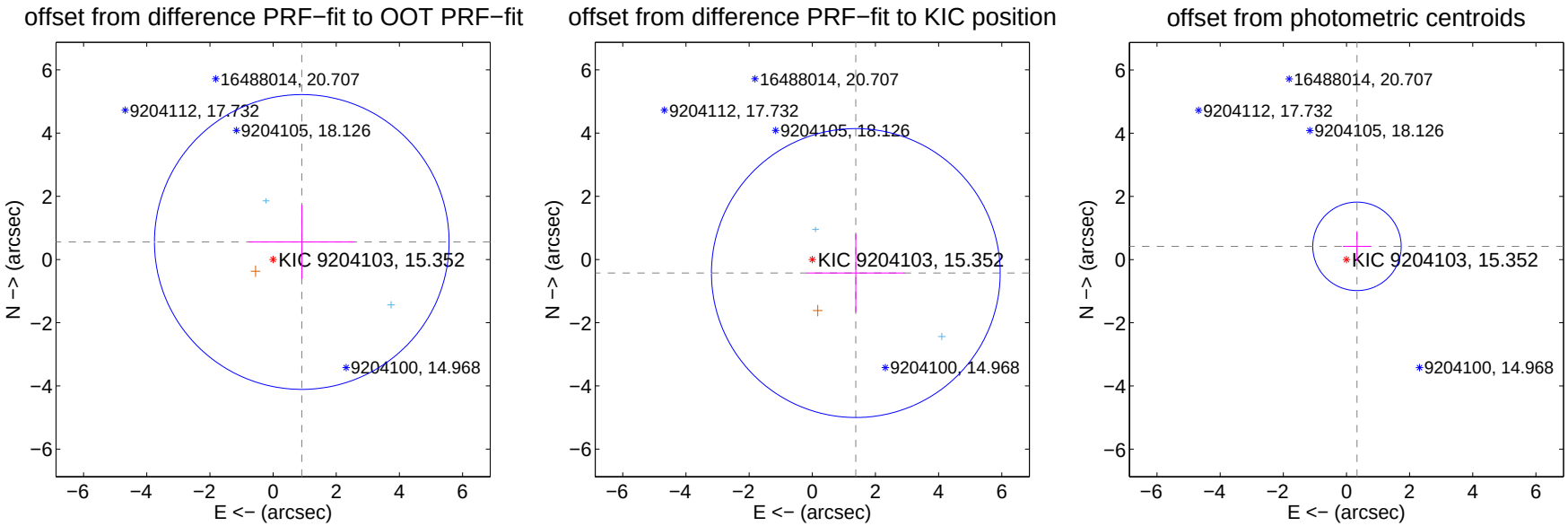
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

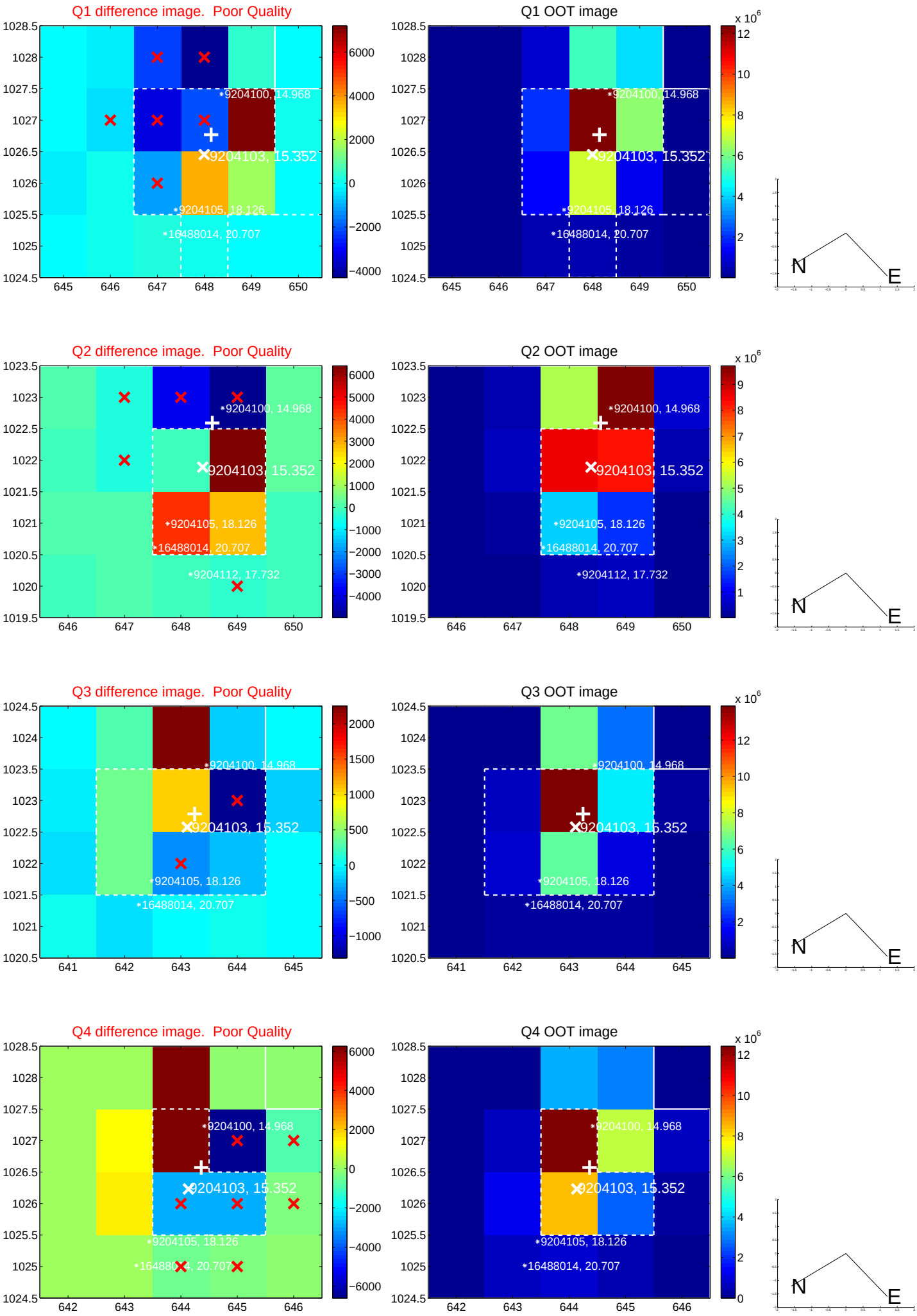
Supplemental centroid analysis for 009204103-01. Kepler magnitude: 15.35. Transit SNR 11.41
There are 2 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.96 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.064 ± 1.555	0.68	-0.908 ± 1.675	0.554 ± 1.171
PRF-fit source offset from KIC position	1.443 ± 1.523	0.95	-1.378 ± 1.548	-0.429 ± 1.235
photometric centroid source offset	0.53 ± 0.47	1.15	-0.33 ± 0.45	0.42 ± 0.48

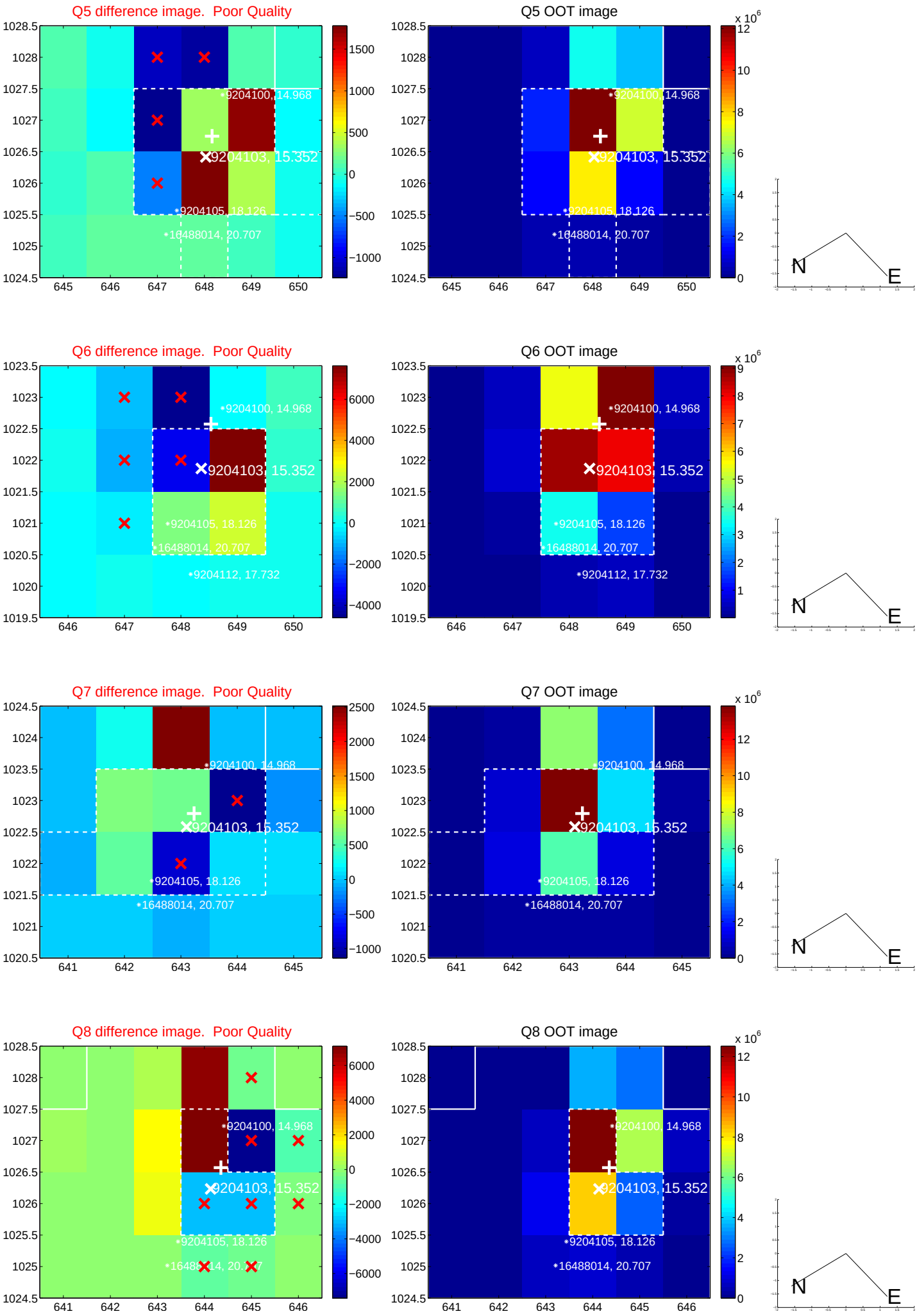


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

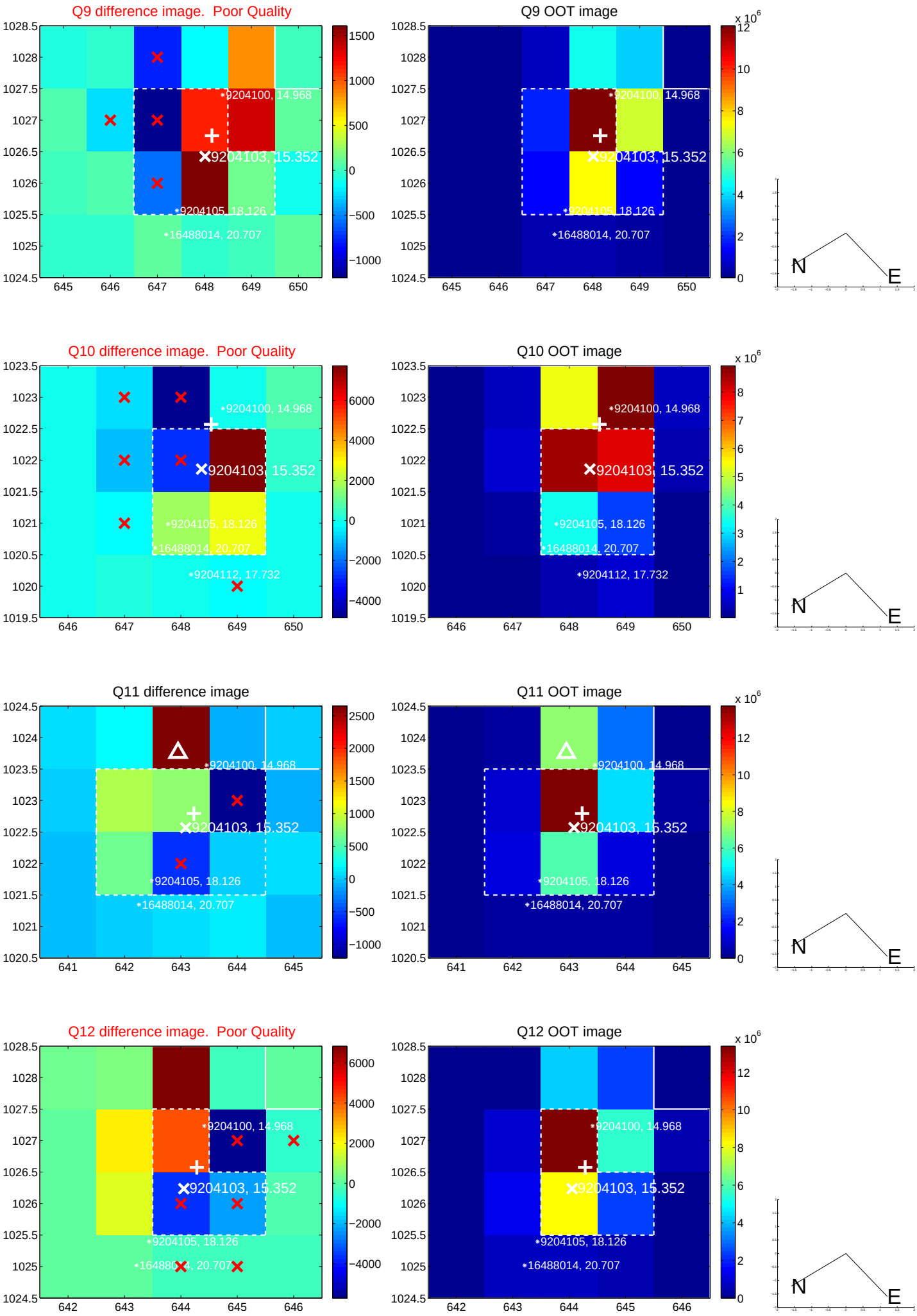
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



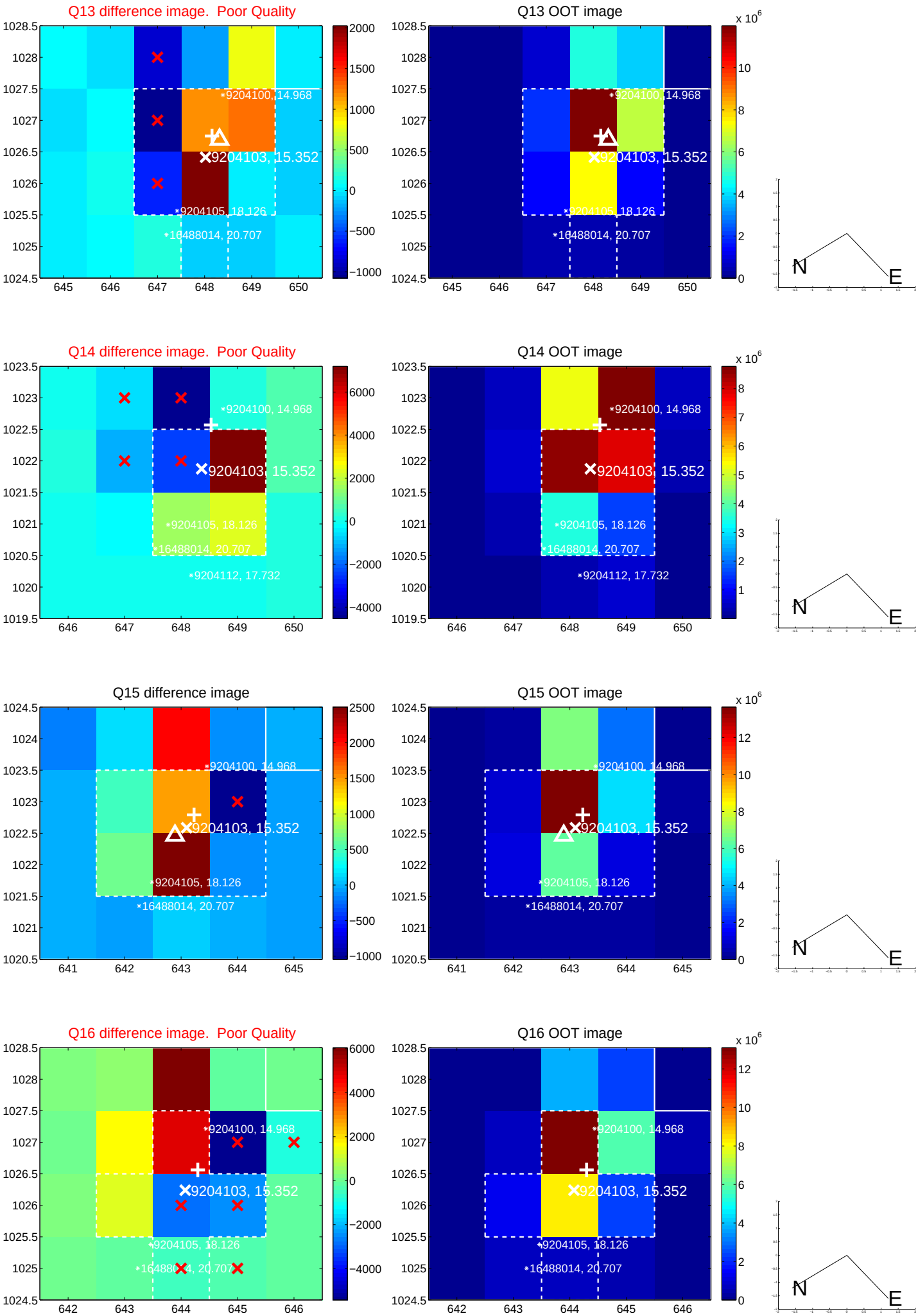
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



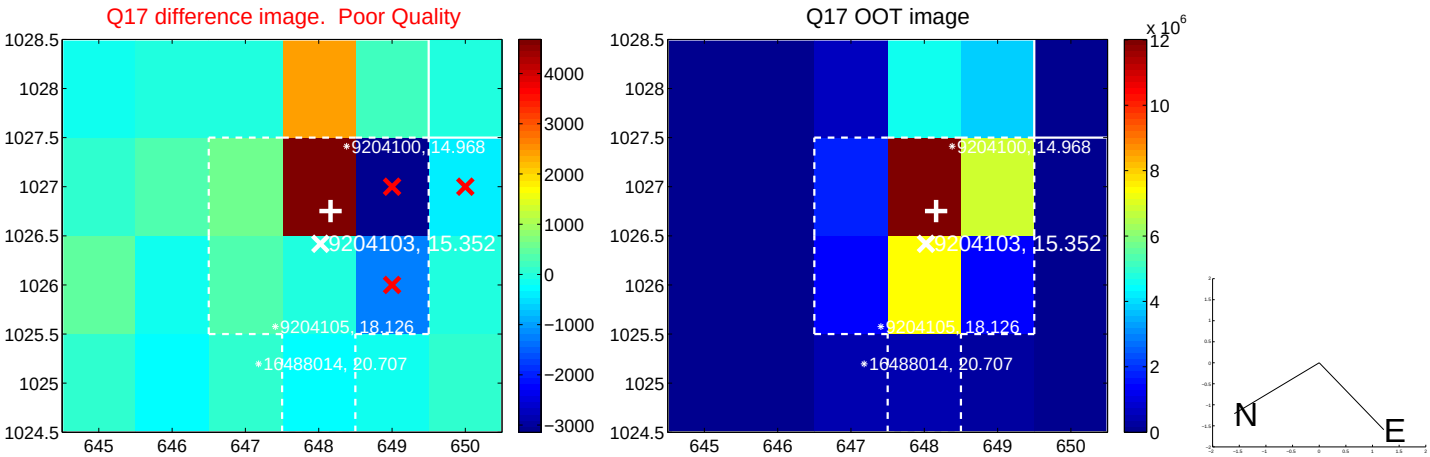
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

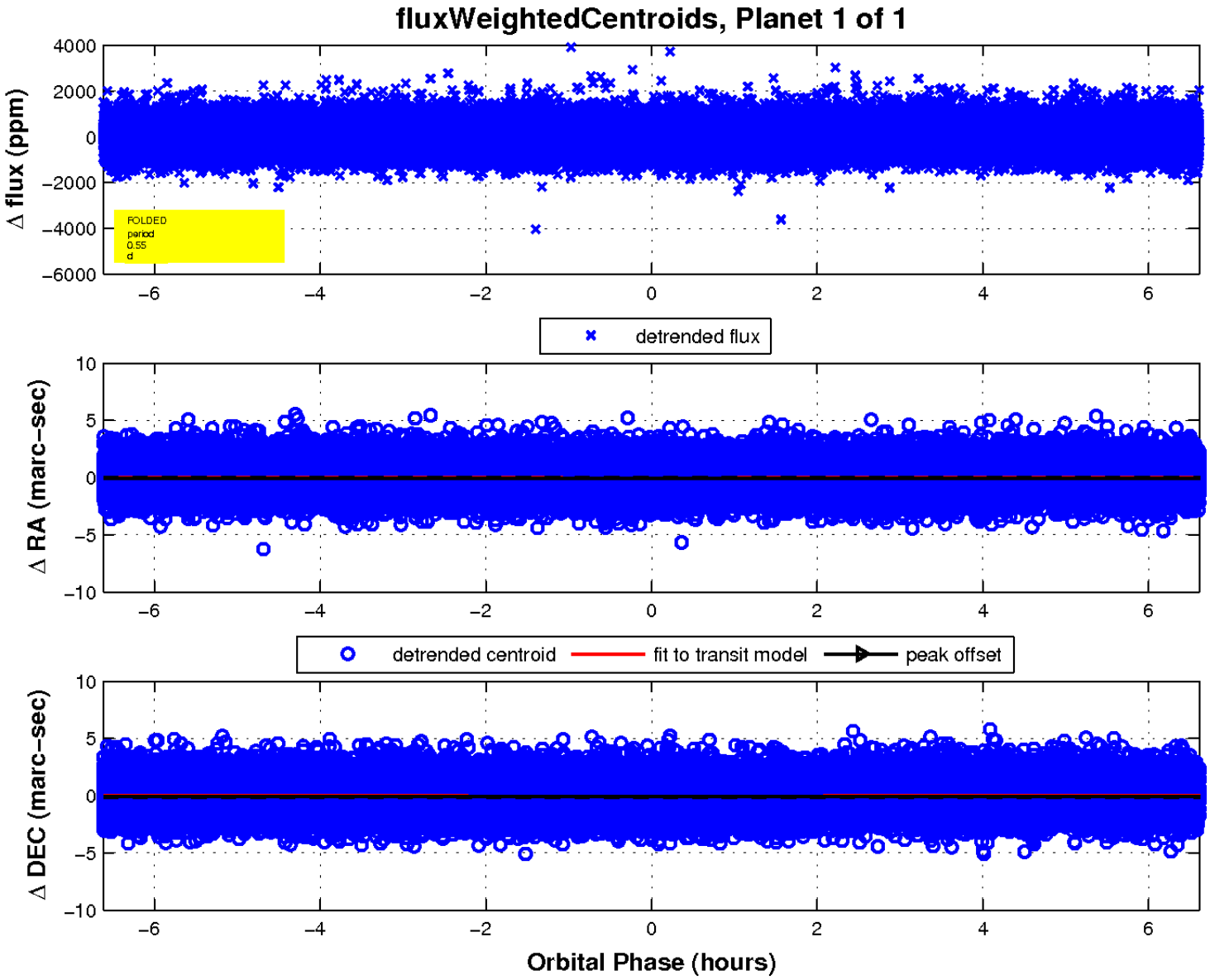
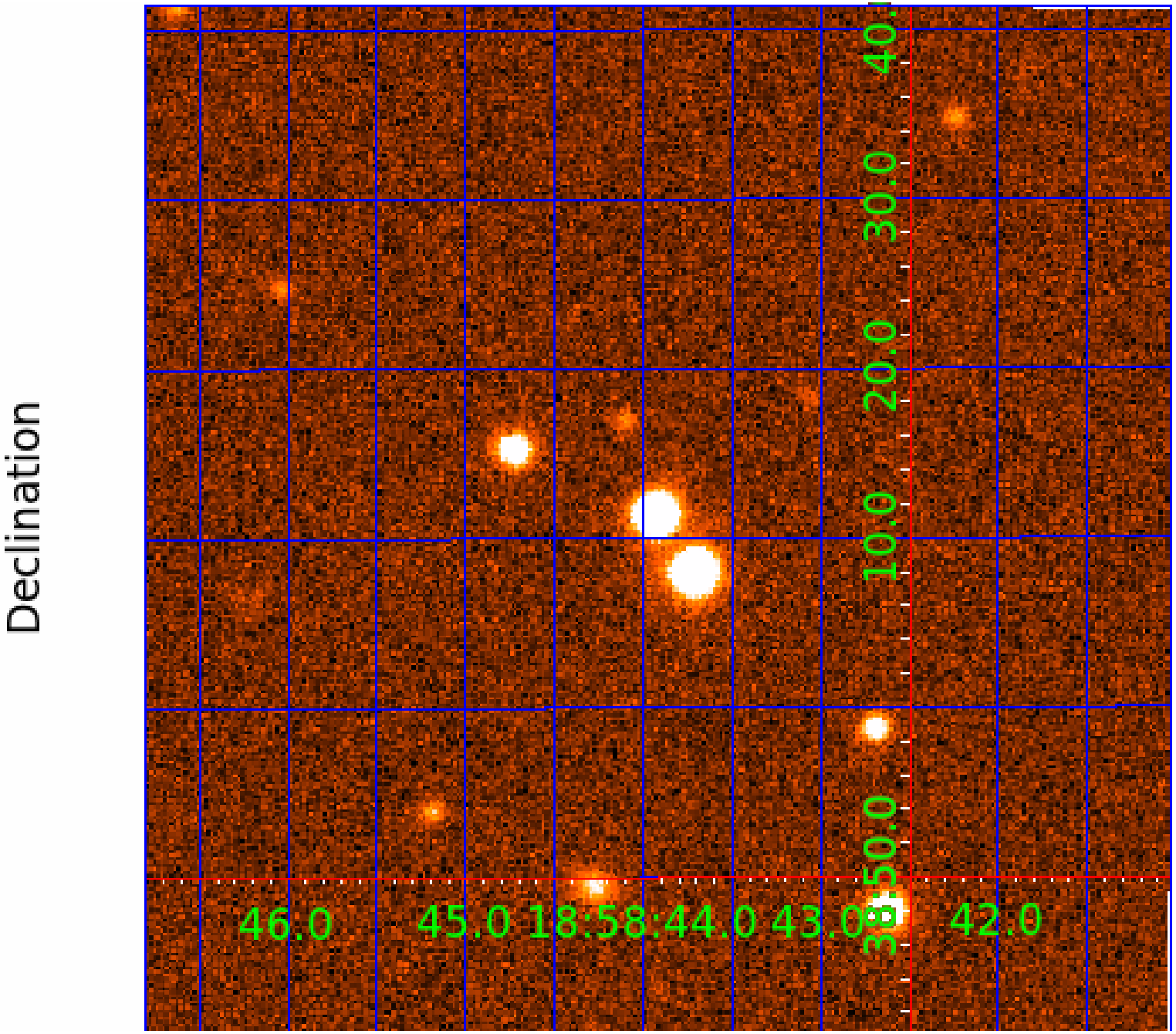


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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





UKIRT Image