KIC 009152994

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 ($S_\oplus$)
009152994-01	OBS	No	1.047513	132.177556	65.9	4.502	10.7	8.7	1.85	7292	1.74	16732.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009152994-01	OBS	FP	0.00	1	0	1	0	LPP_DV—MOD_NONUNIQ_DV—CENT_UNRESOLVED_OFFSET

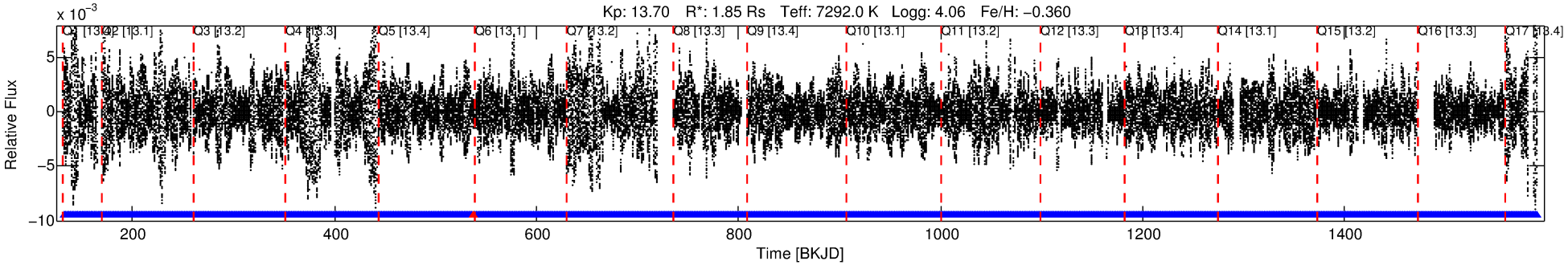
Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.
See `http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col` for comment definitions.

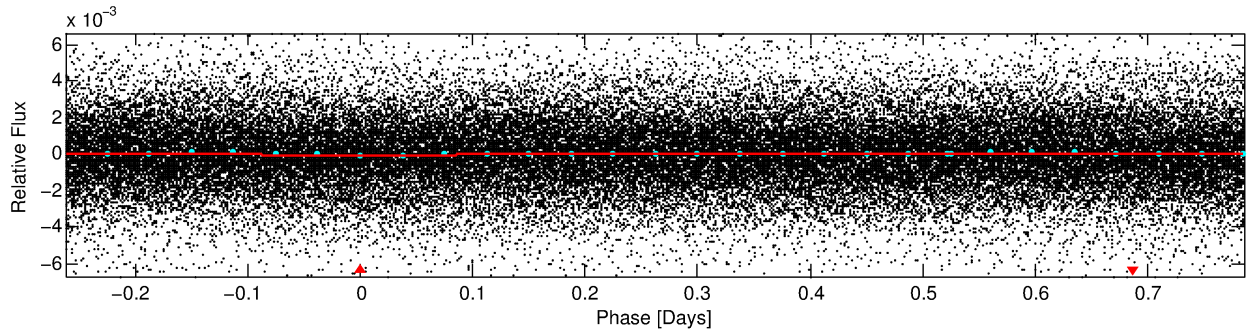
Ephemeris Match Information For 009152994-01

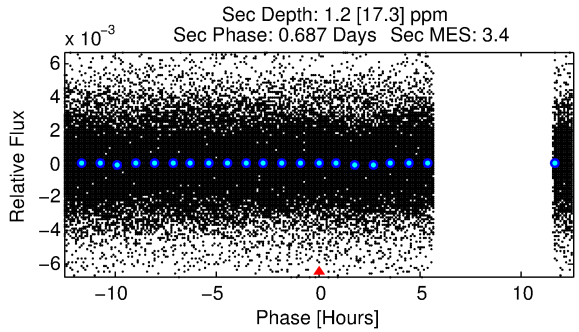
No Significant Match Found

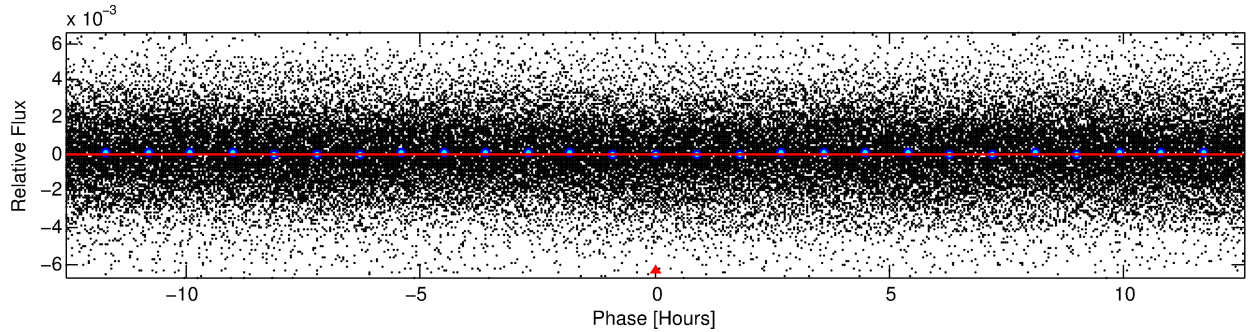
DV One-Page Summary

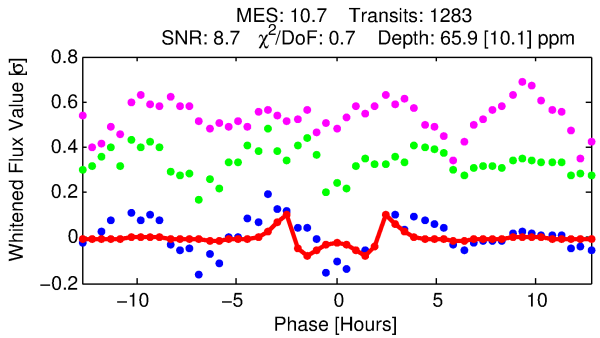
KIC: 9152994 Candidate: 1 of 1 Period: 1.048 d

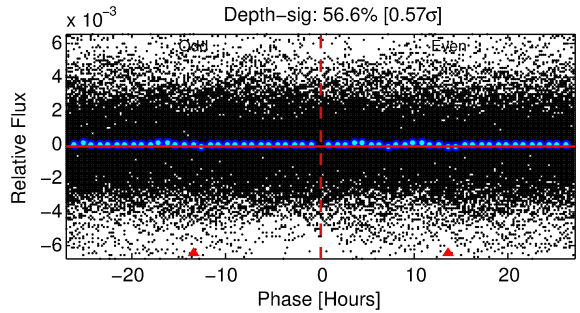


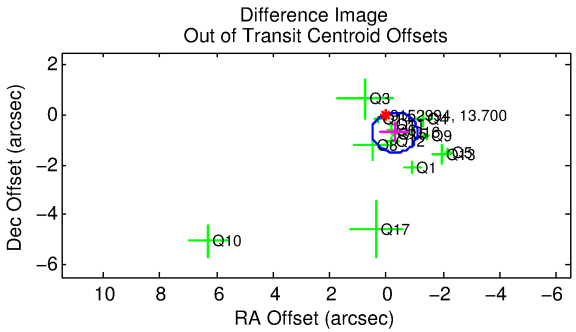












DV Fit Results:

Period = 1.04751 [0.00001] d
Epoch = 132.1776 [0.0018] BKJD
Rp/R* = 0.0086 [0.0015]
a/R* = 1.23 [0.37]
b = 0.90 [0.18]

Seff = 16732.33 [7174.02]
Teq = 2900 [311] K
Rp = 1.74 [0.56] Re
a = 0.0227 [0.0058] AU

Ag = 0.11 [1.63] [−0.55σ]
Teffp = 2596 [9400] K [−0.03σ]

DV Diagnostic Results:

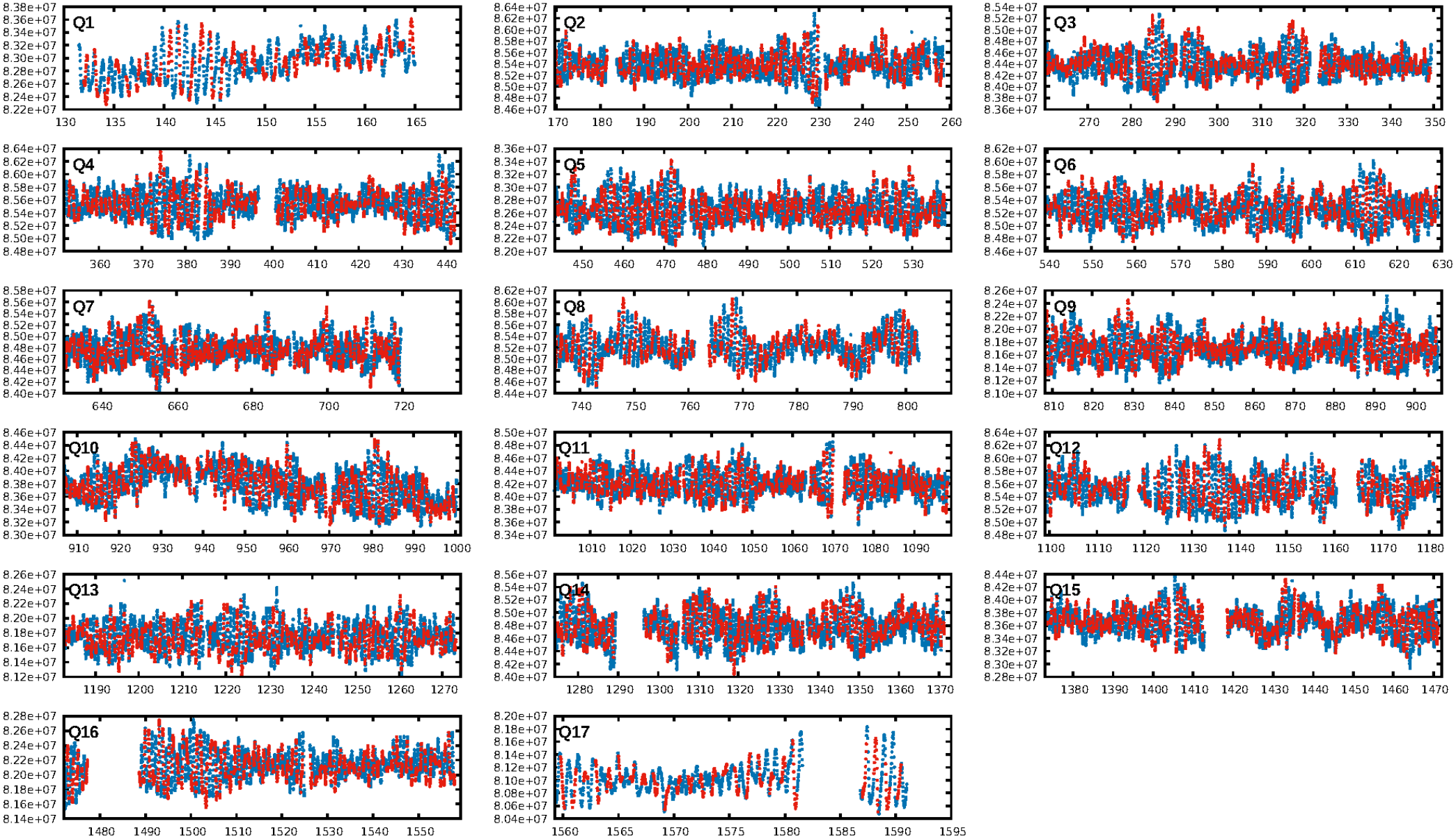
ShortPeriod−sig: N/A
LongPeriod−sig: N/A
ModelChiSquare2−sig: N/A
ModelChiSquareGof−sig: N/A
Bootstrap−pfa: 3.13e−30
RollingBand−fgt: 1.00 [1225/1226]
GhostDiagnostic−chr: 1.751

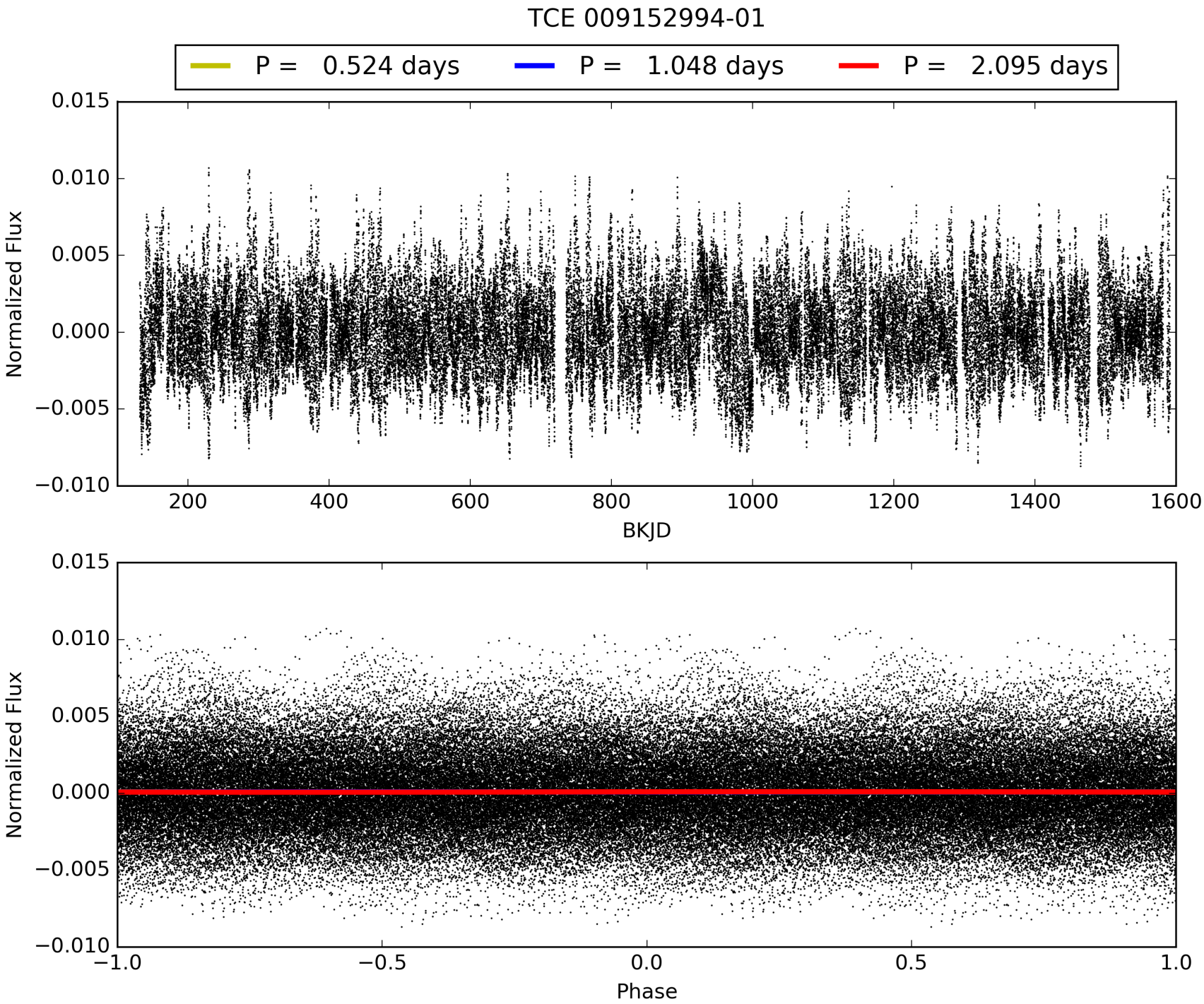
Centroid−sig: 0.0%
Centroid−so: 0.742 arcsec [1.18σ]
OotOffset−rm: 0.766 arcsec [2.87σ]
KicOffset−rm: 0.283 arcsec [0.83σ]
OotOffset−st: 3/3/4/5 [15]
KicOffset−st: 3/3/4/5 [15]
DiffImageQuality−fgm: 0.47 [7/15]
DiffImageOverlap−fno: 0.00 [17/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 −− Date Generated: 30−Jan−2016 20:24:01 Z

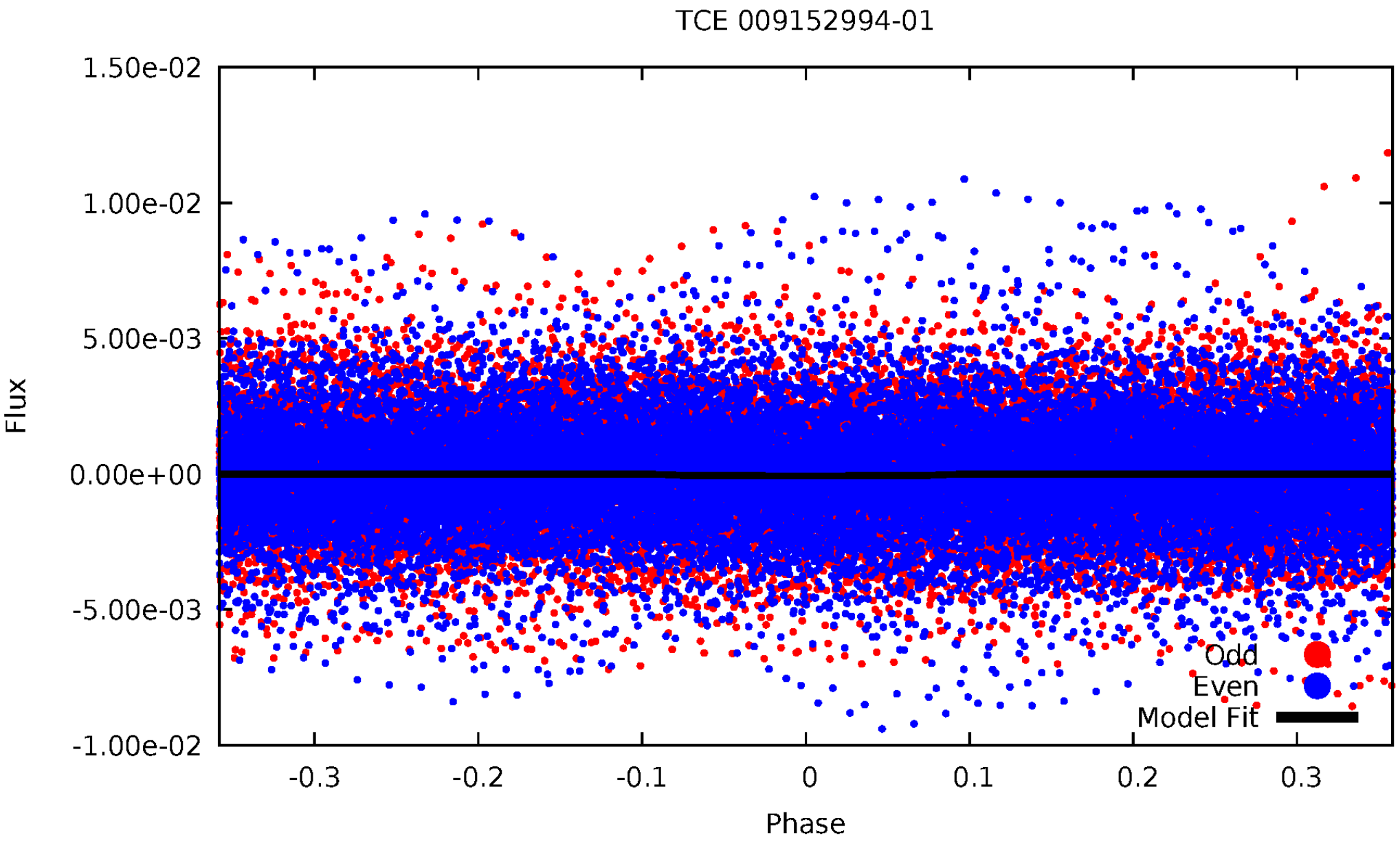
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 009152994-01, PDC Light Curves

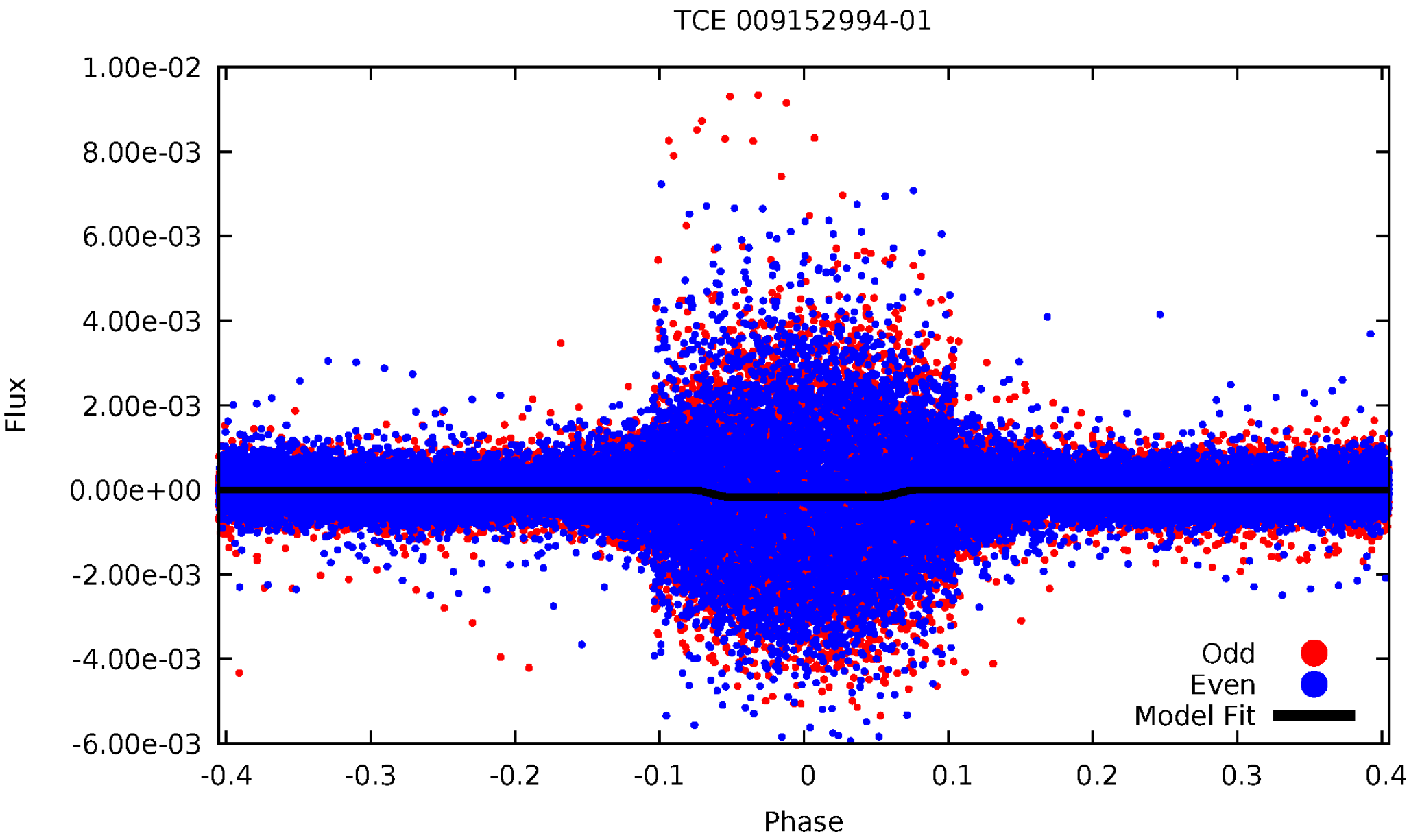



TCE 009152994-01
P = 0.524 days
P = 1.048 days
P = 2.095 days
Normalized Flux
BKJD
Normalized Flux
Phase

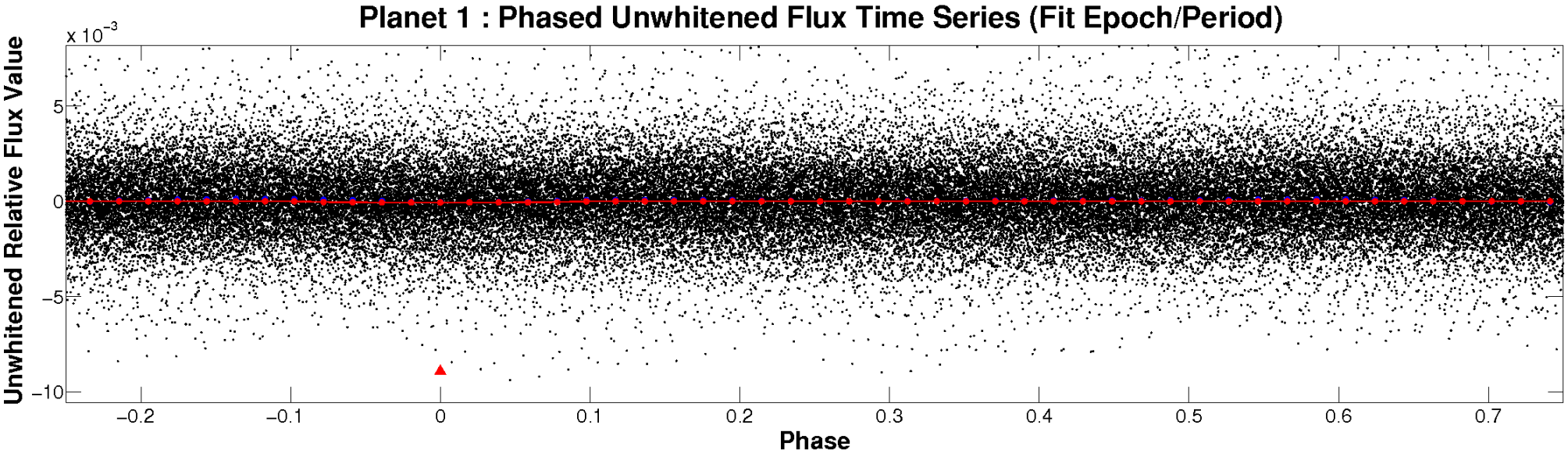
DV Odd/Even

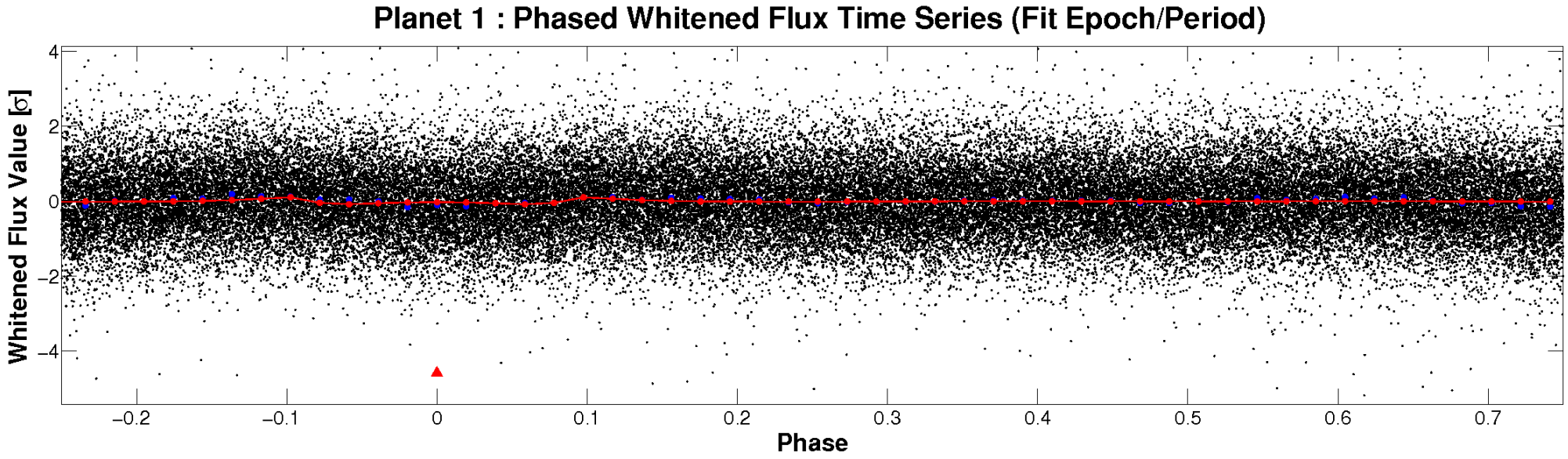

TCE 009152994-01
1.50e-02
1.00e-02
5.00e-03
0.00e+00
-5.00e-03
-1.00e-02
Flux
-0.3
-0.2
-0.1
0
0.1
0.2
0.3
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 009152994-01
1.00e-02
8.00e-03
6.00e-03
4.00e-03
2.00e-03
0.00e+00
-2.00e-03
-4.00e-03
-6.00e-03
Flux
-0.4
-0.3
-0.2
-0.1
0
0.1
0.2
0.3
0.4
Phase
Odd
Even
Model Fit

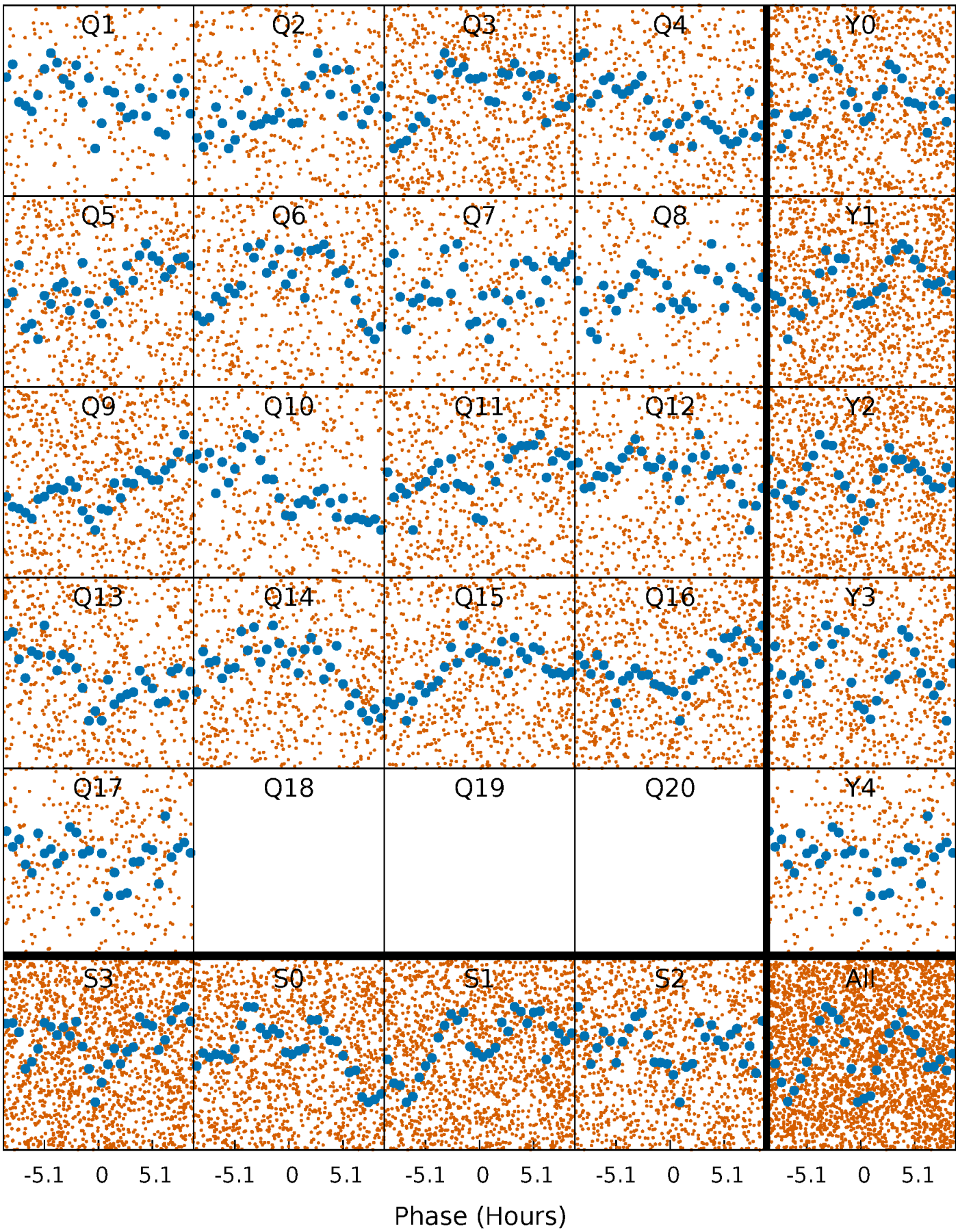
Non-Whitened Vs. Whitened Light Curve





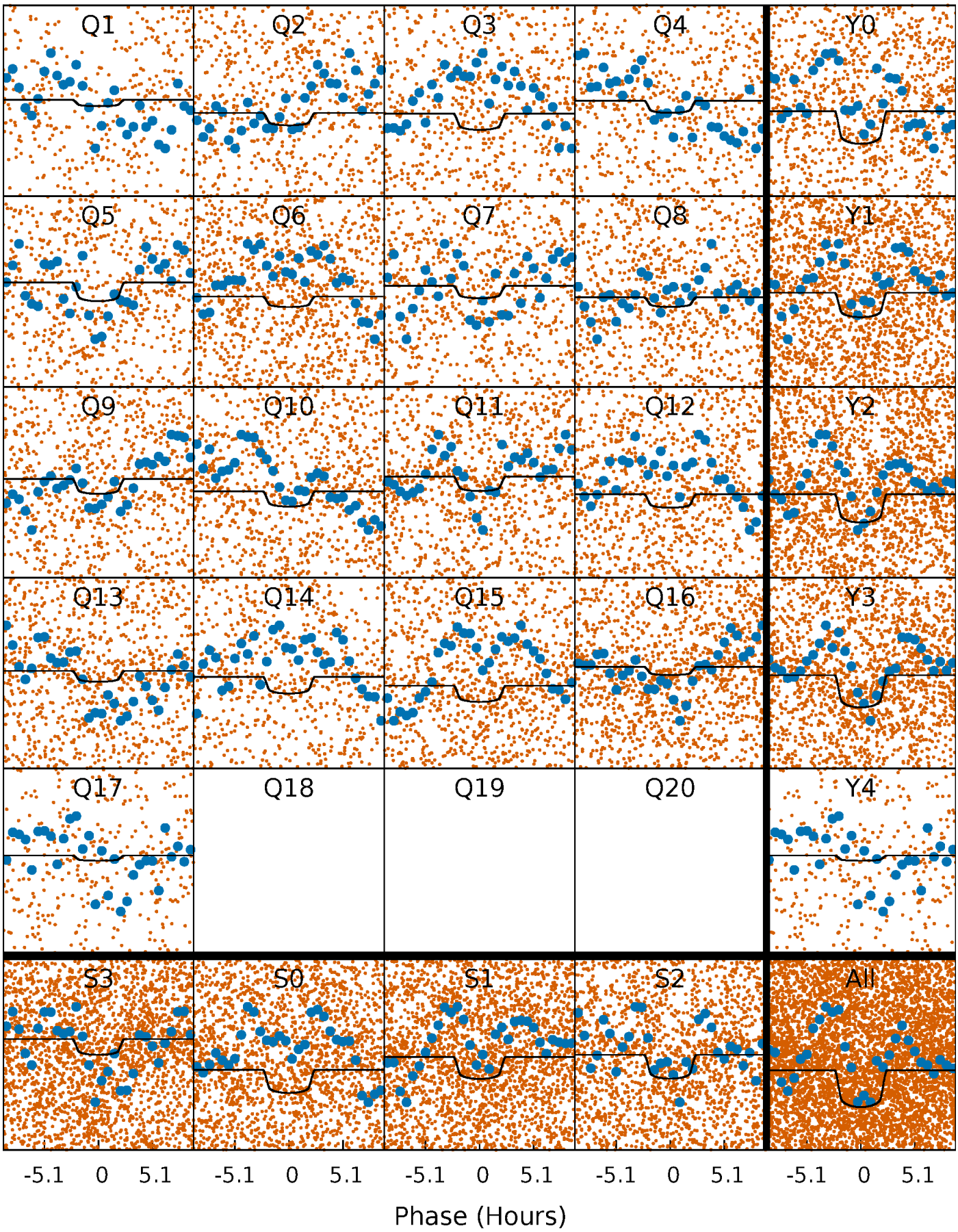
PDC Quarter-Phased Transit Curves

TCE 009152994-01 P= 1.047513 Days T_0=132.177556 (BKJD)



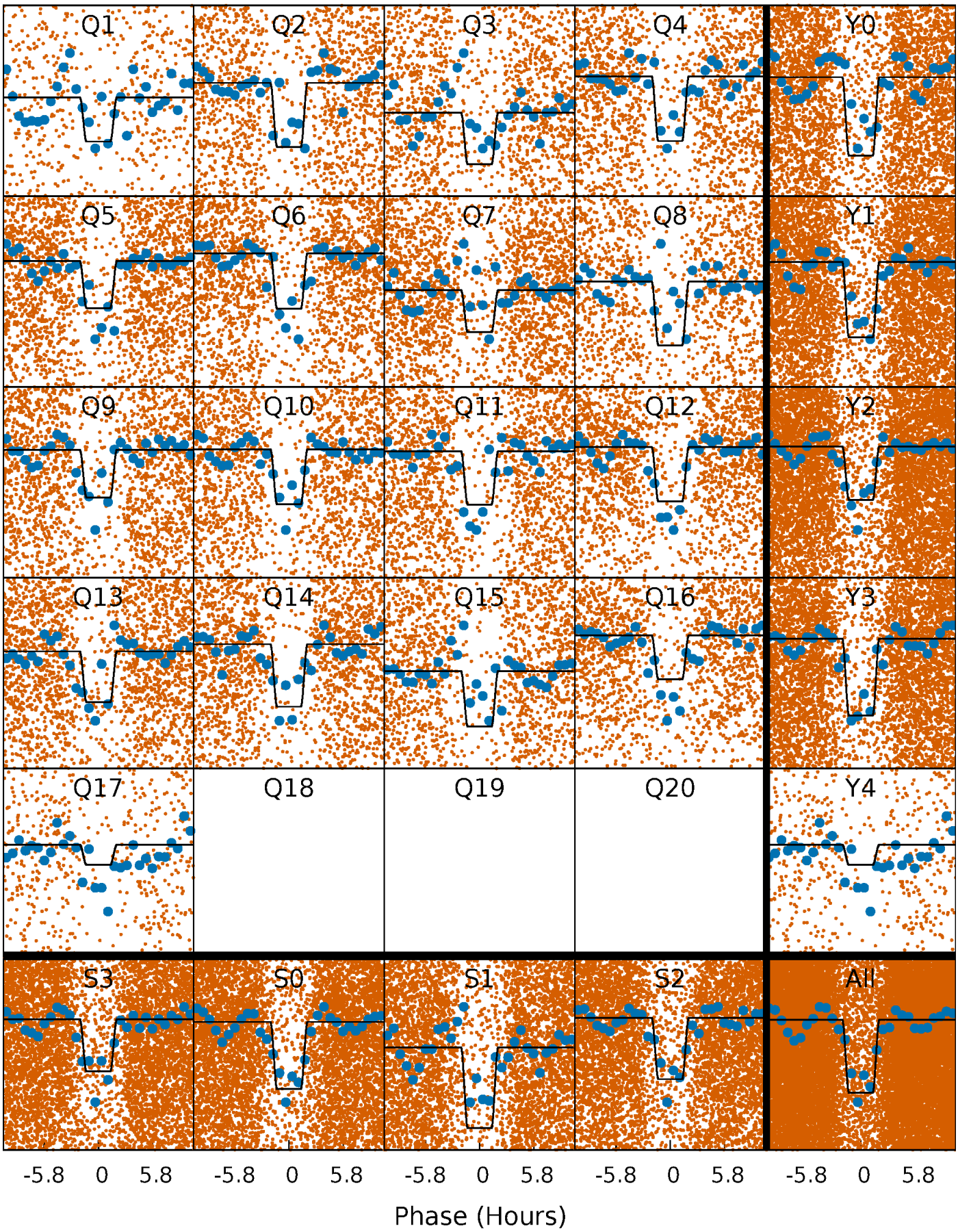
DV Quarter-Phased Transit Curves

TCE 009152994-01 P= 1.047513 Days T_0=132.177556 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

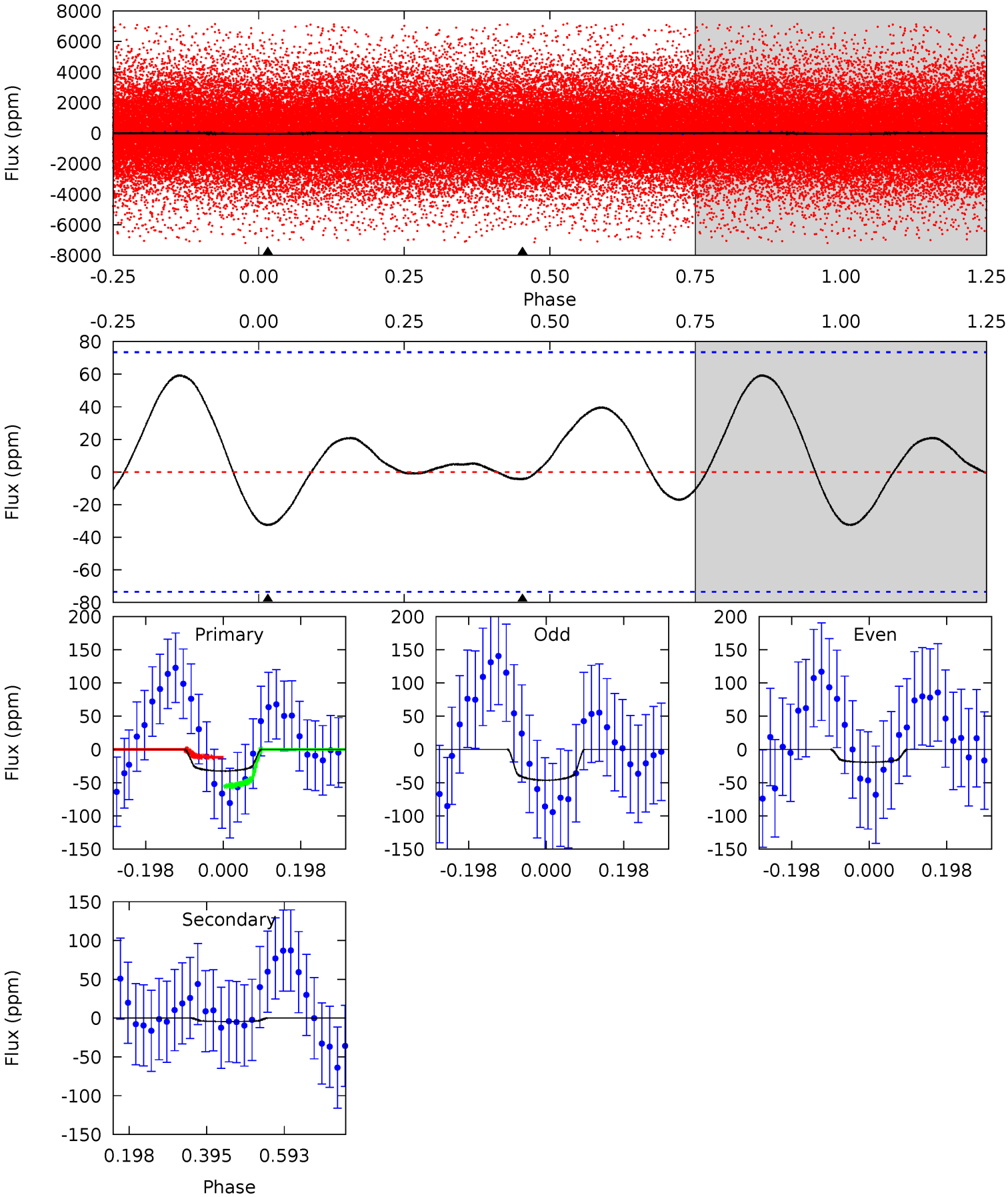
TCE 009152994-01 P= 1.047546 Days T_0=132.166257 (BKJD)



DV Model-Shift Uniqueness Test

009152994-01, P = 1.047513 Days, E = 131.130043 Days

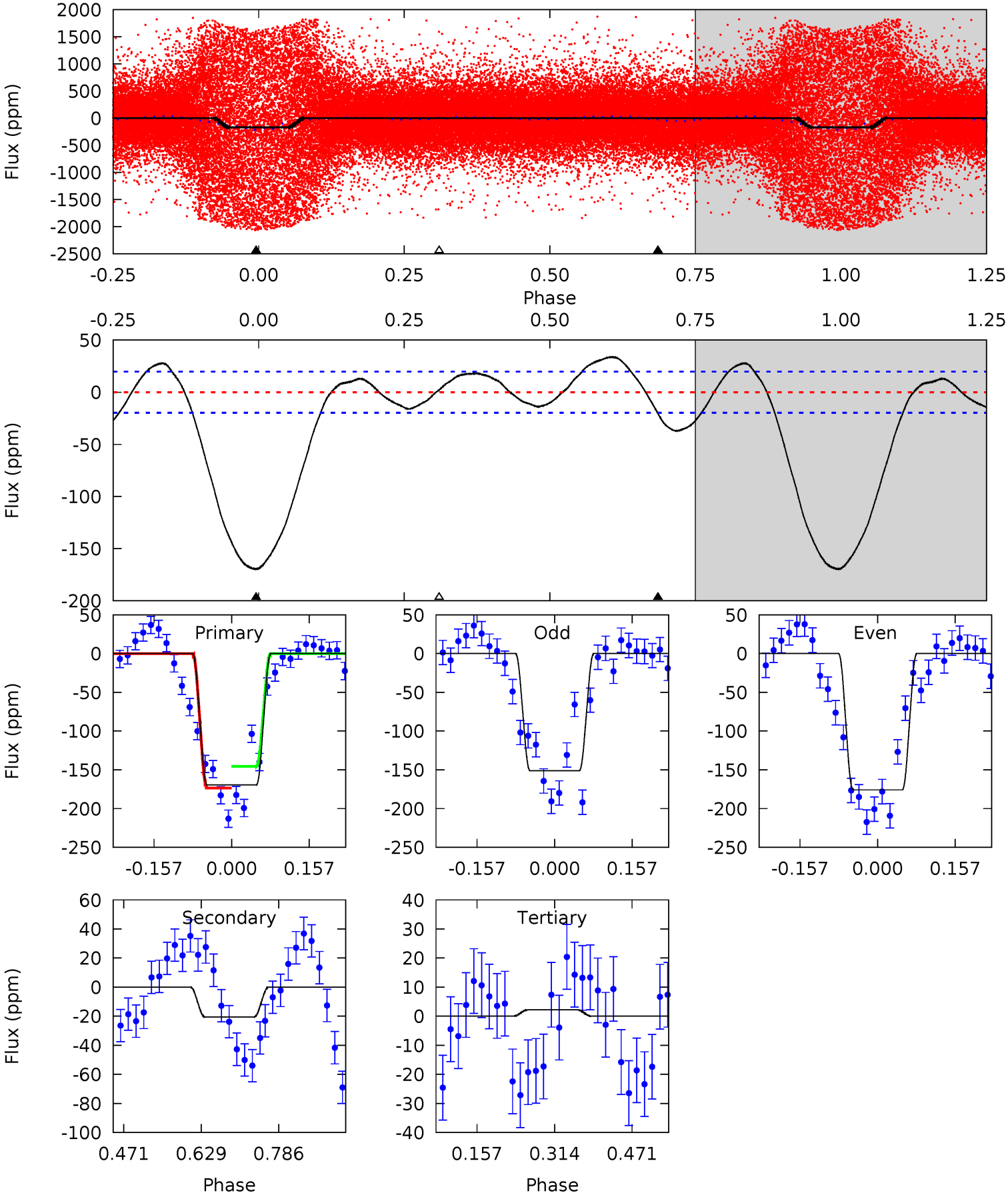
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.96	0.27	0	0	4.42	1.29	0.83	1.96	1.96	0.27	0.27	0.82	0.46	0.65	1.30



Alt Model-Shift Uniqueness Test

009152994-01, P = 1.047546 Days, E = 131.118711 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
38.5	4.64	-0.49	0	4.47	1.41	2.52	39.0	38.5	5.14	4.64	2.79	0.91	0.17	3.19



Stellar Parameters For KIC 009152994

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	7292^{+228}_{-304}	$4.059^{+0.228}_{-0.171}$	$-0.360^{+0.300}_{-0.300}$	$1.846^{+0.507}_{-0.507}$	$1.422^{+0.216}_{-0.241}$	$0.319^{+0.428}_{-0.136}$
	+3%/-4%	+6%/-4%	+83%/-83%	+27%/-27%	+15%/-17%	+134%/-43%
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 009152994-01 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-4±17	$1.74^{+0.41}_{-0.39}$	4021^{+297}_{-311}	3222^{+1968}_{-8132}	$0.416^{+1.754}_{-1.637}$
Alt.	-20±4	$2.63^{+0.51}_{-0.50}$	4031^{+317}_{-355}	4042^{+417}_{-396}	$0.851^{+0.449}_{-0.308}$

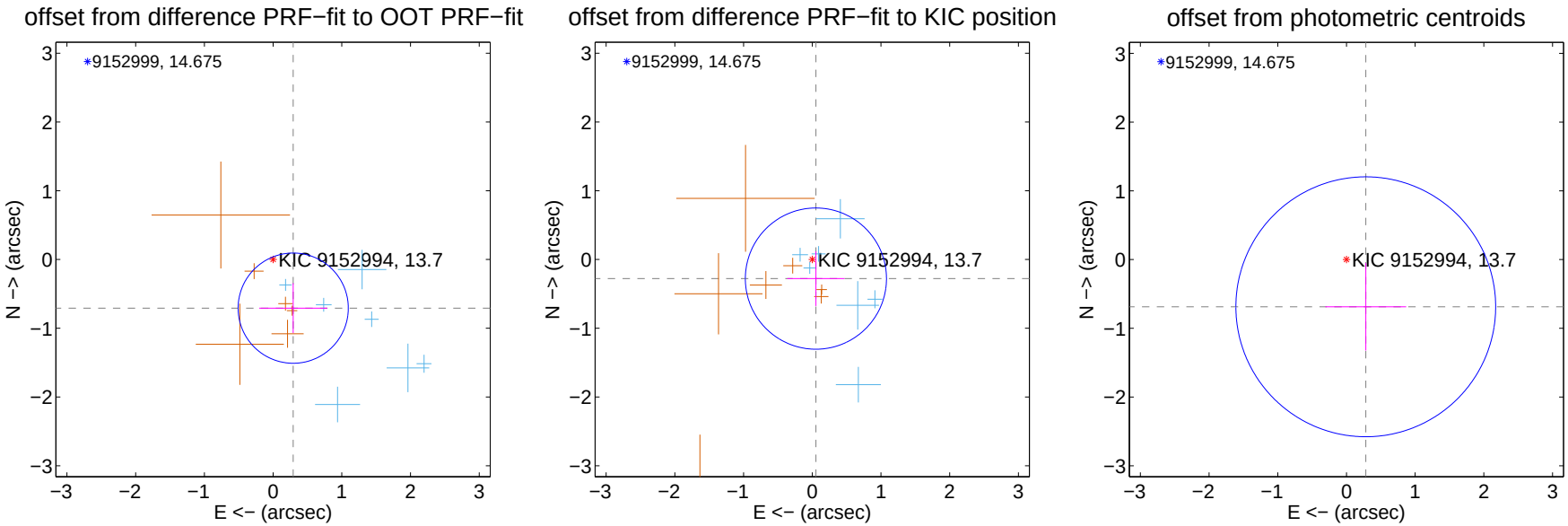
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

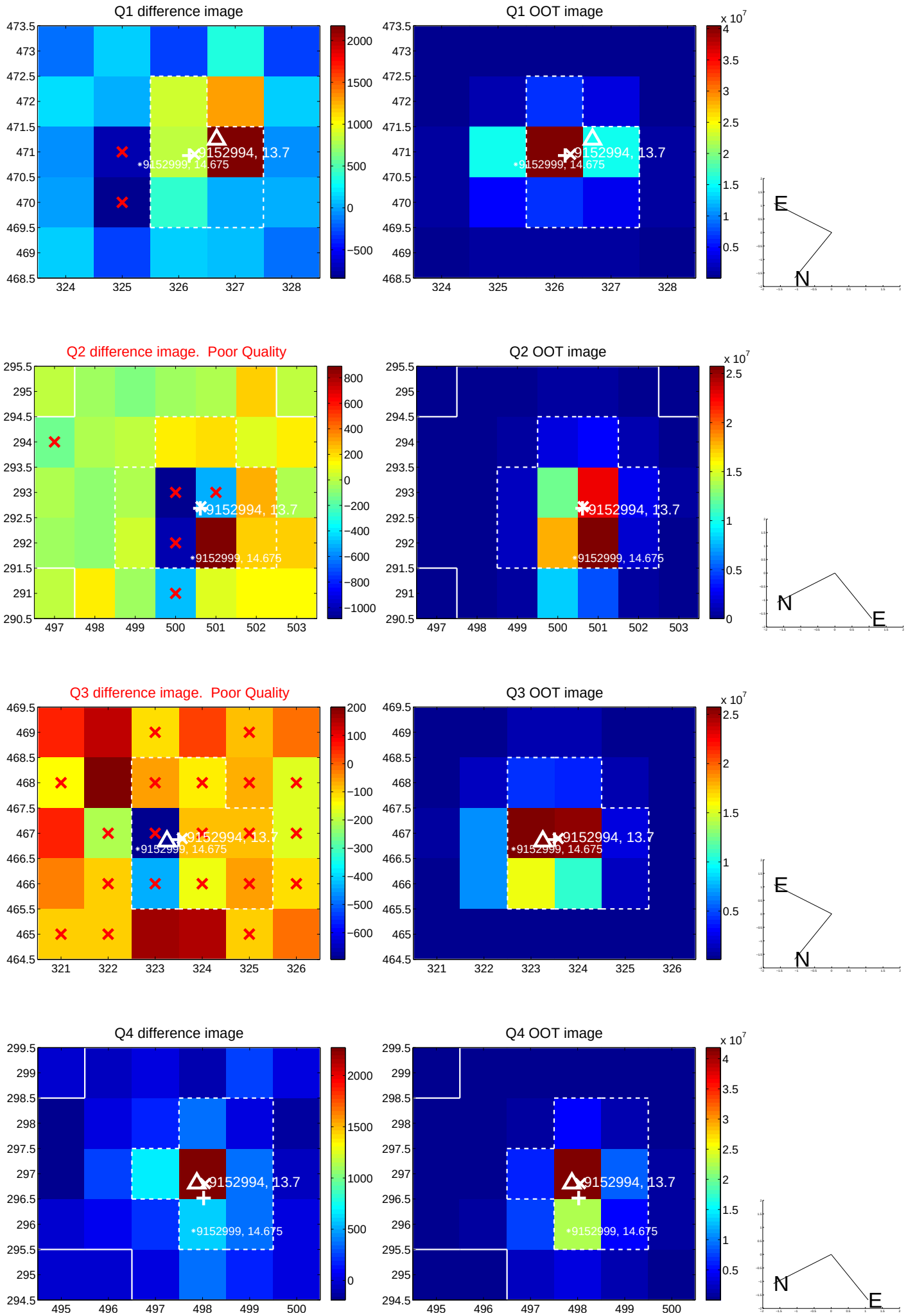
Supplemental centroid analysis for 009152994-01. Kepler magnitude: 13.70. Transit SNR 8.72
There are 7 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 1.60 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.766 ± 0.267	2.87	-0.293 ± 0.496	-0.708 ± 0.362
PRF-fit source offset from KIC position	0.283 ± 0.342	0.83	-0.053 ± 0.416	-0.278 ± 0.399
photometric centroid source offset	0.74 ± 0.63	1.18	-0.28 ± 0.59	-0.69 ± 0.64

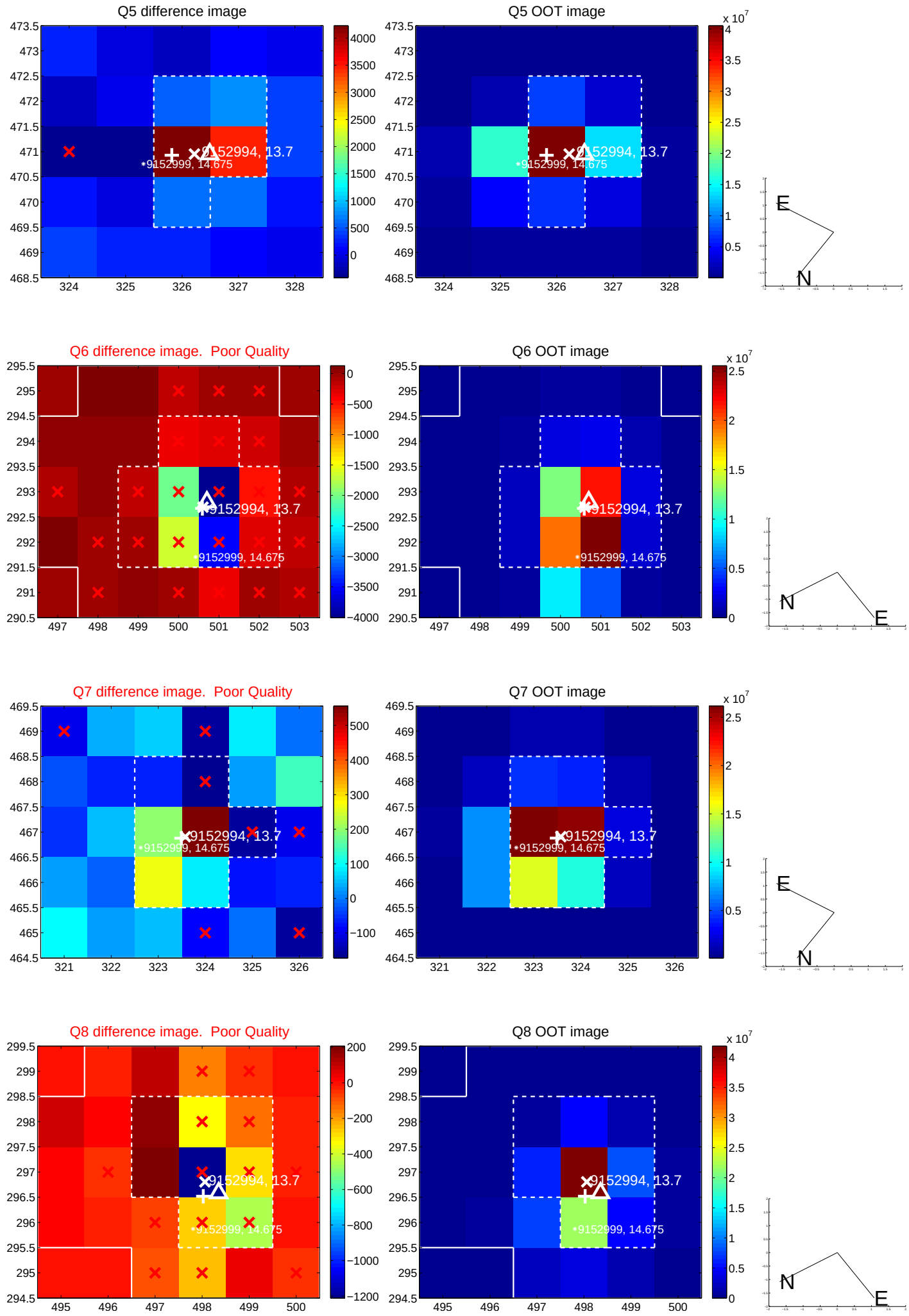


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

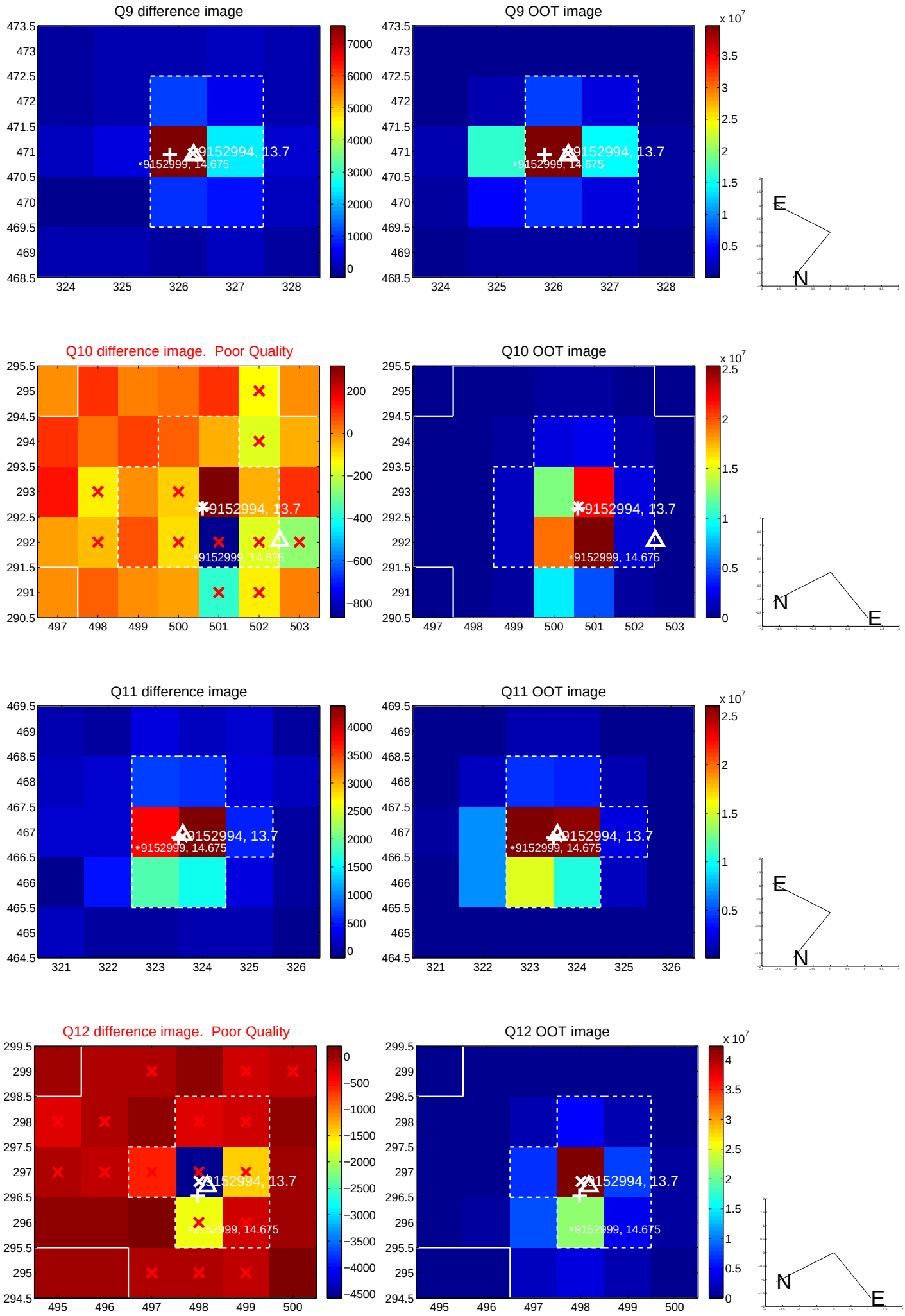
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



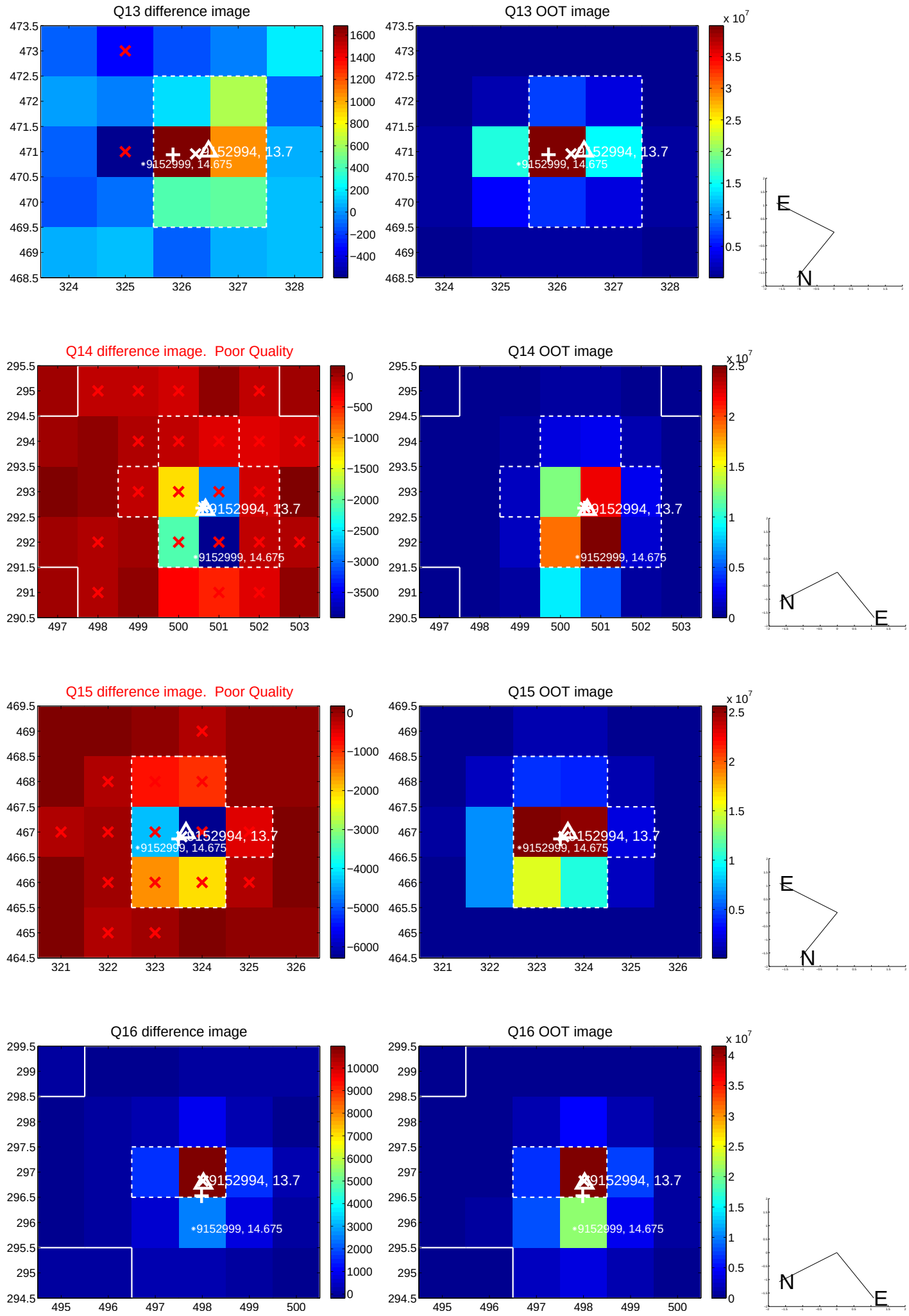
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



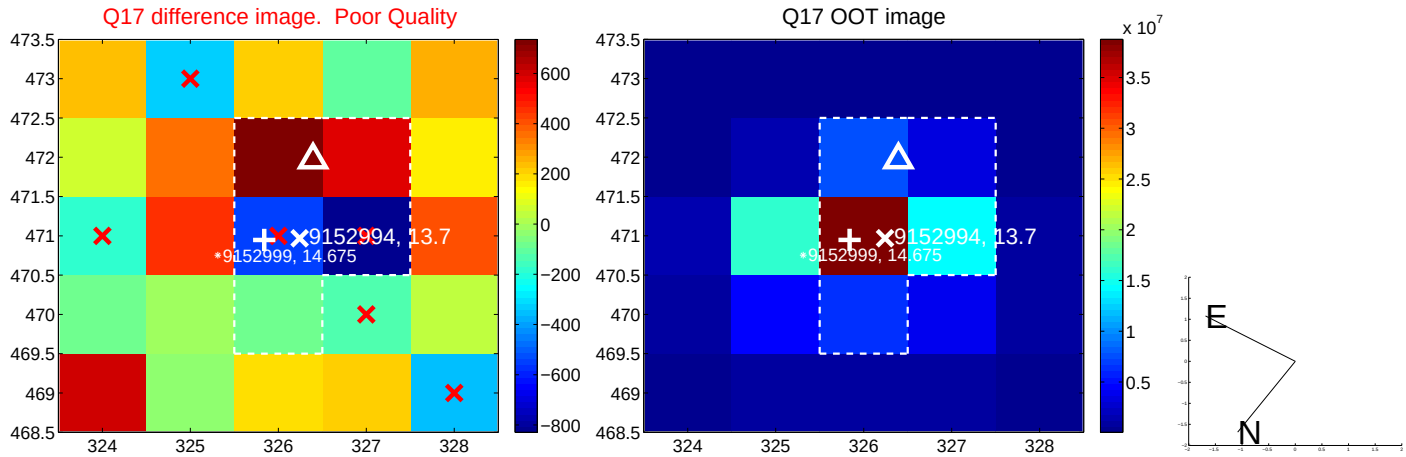
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

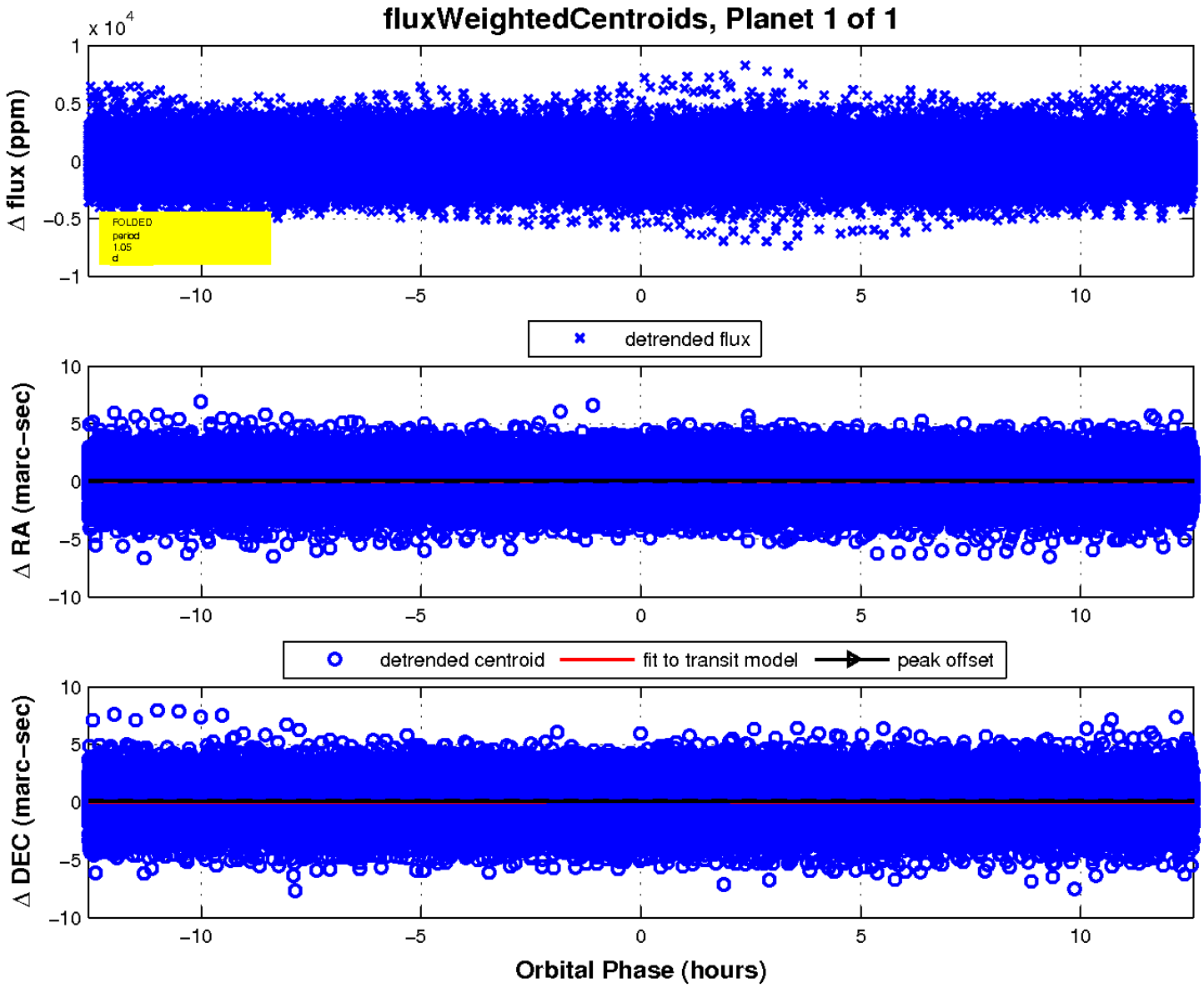


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

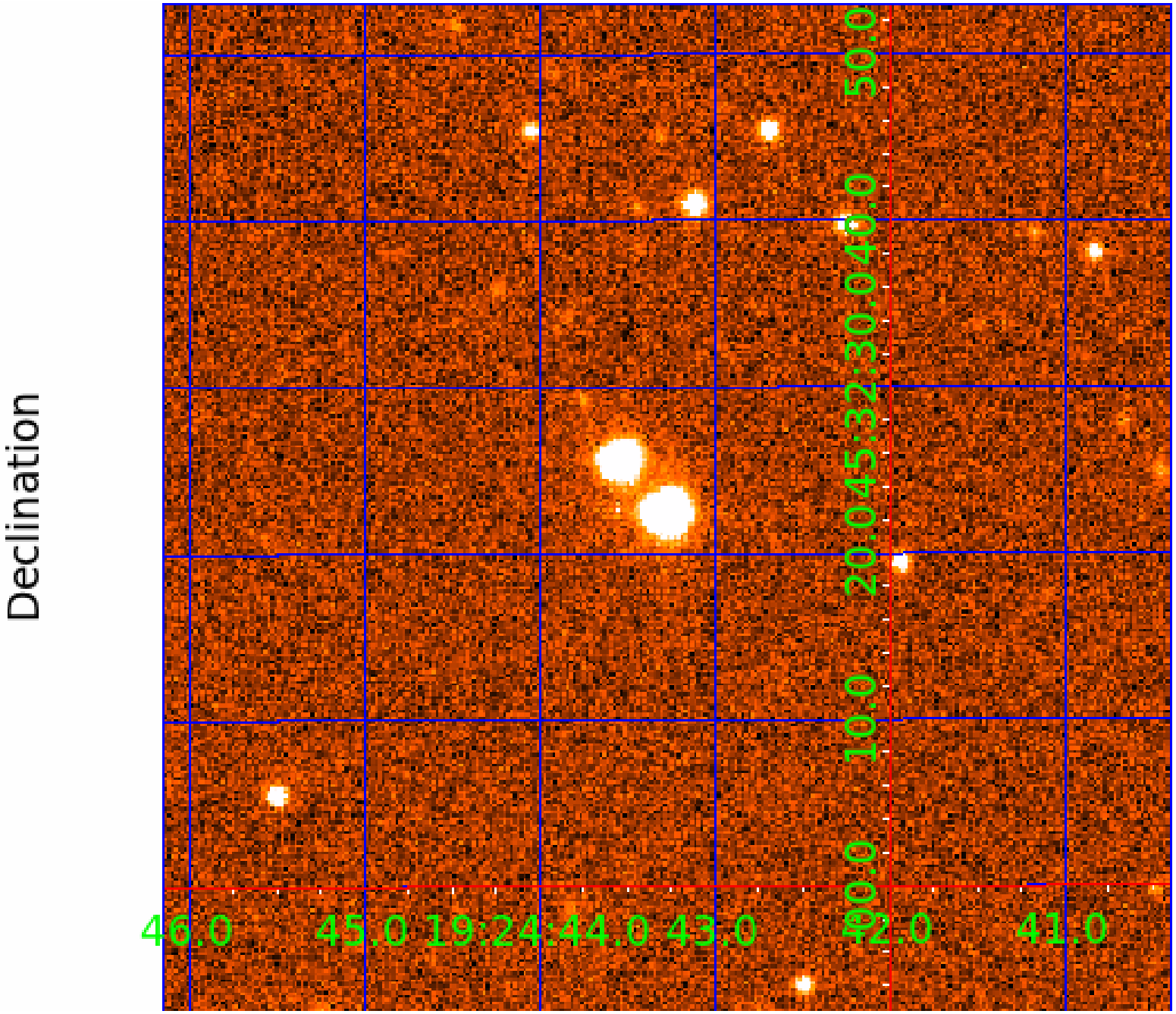


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.





UKIRT Image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