KIC 009163679

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 ($S_\oplus$)
009163679-01	OBS	No	1.123697	131.885202	22.8	10.532	7.6	8.0	0.77	5987	0.37	1684.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009163679-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_FEW_DIFFS

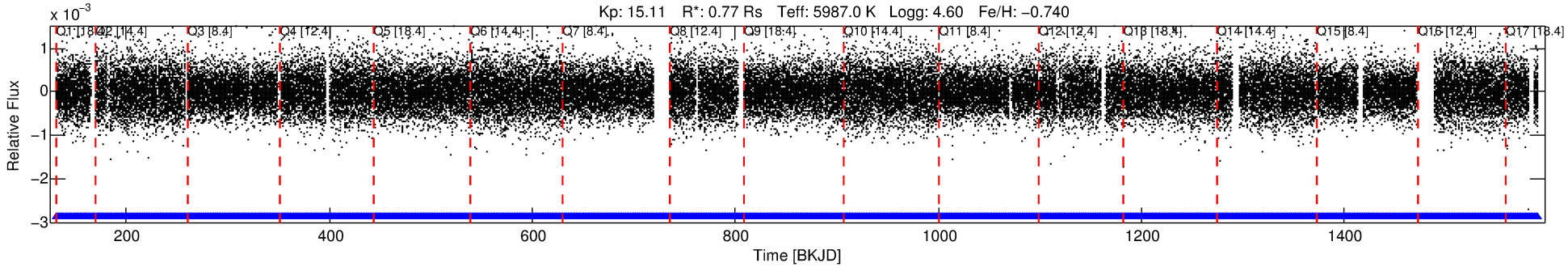
Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.
See `http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col` for comment definitions.

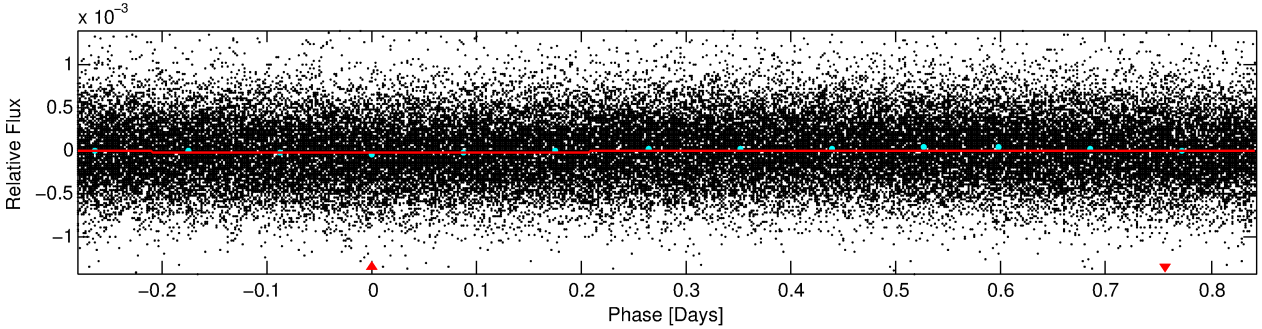
Ephemeris Match Information For 009163679-01

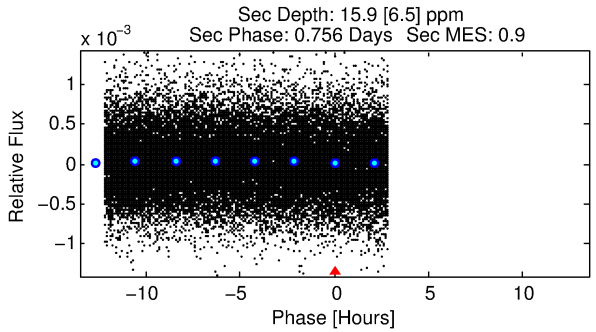
No Significant Match Found

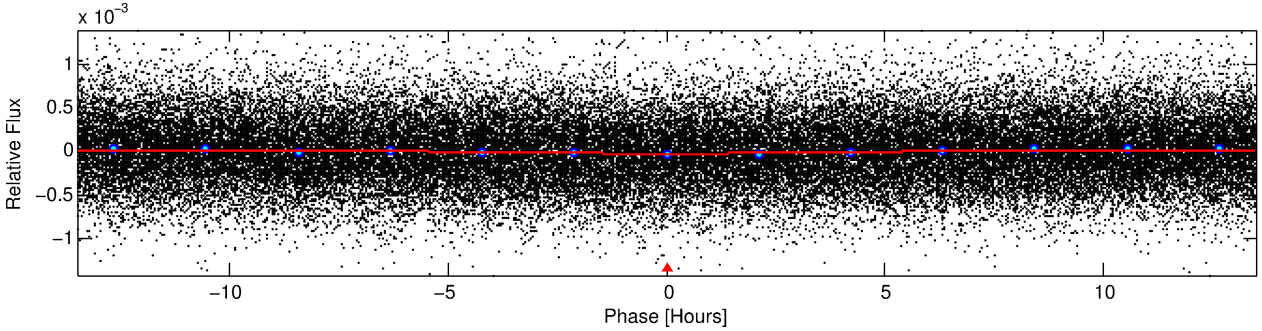
DV One-Page Summary

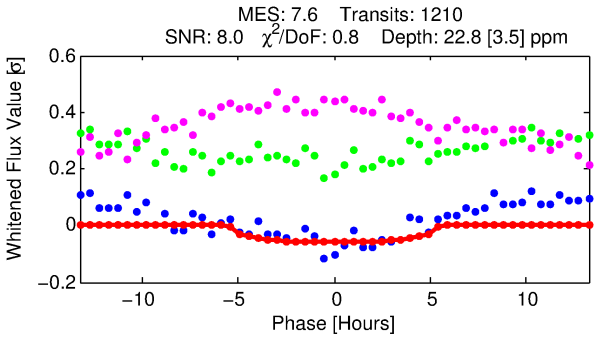
KIC: 9163679 Candidate: 1 of 1 Period: 1.124 d

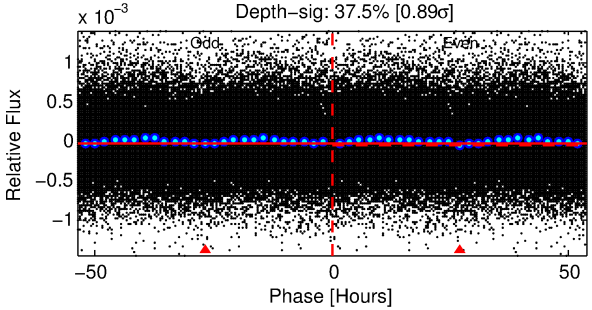


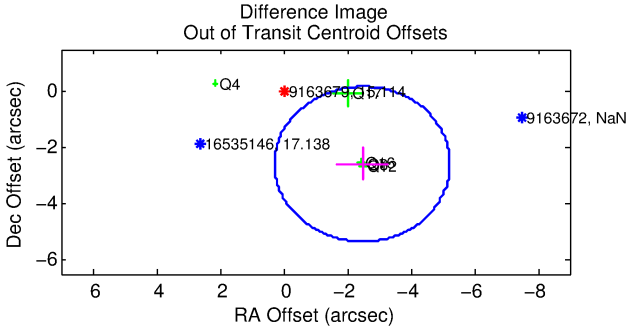












DV Fit Results:

Period = 1.12370 [0.00003] d
Epoch = 131.8852 [0.0129] BKJD
Rp/R* = 0.0044 [0.0066]
a/R* = 1.07 [0.97]
b = 0.06 [118.43]

Seff = 1684.04 [523.18]
Teq = 1633 [127] K
Rp = 0.37 [0.55] Re
a = 0.0200 [0.0039] AU

Ag = 26.08 [79.11] [0.32σ]
Teffp = 5707 [4312] K [0.94σ]

DV Diagnostic Results:

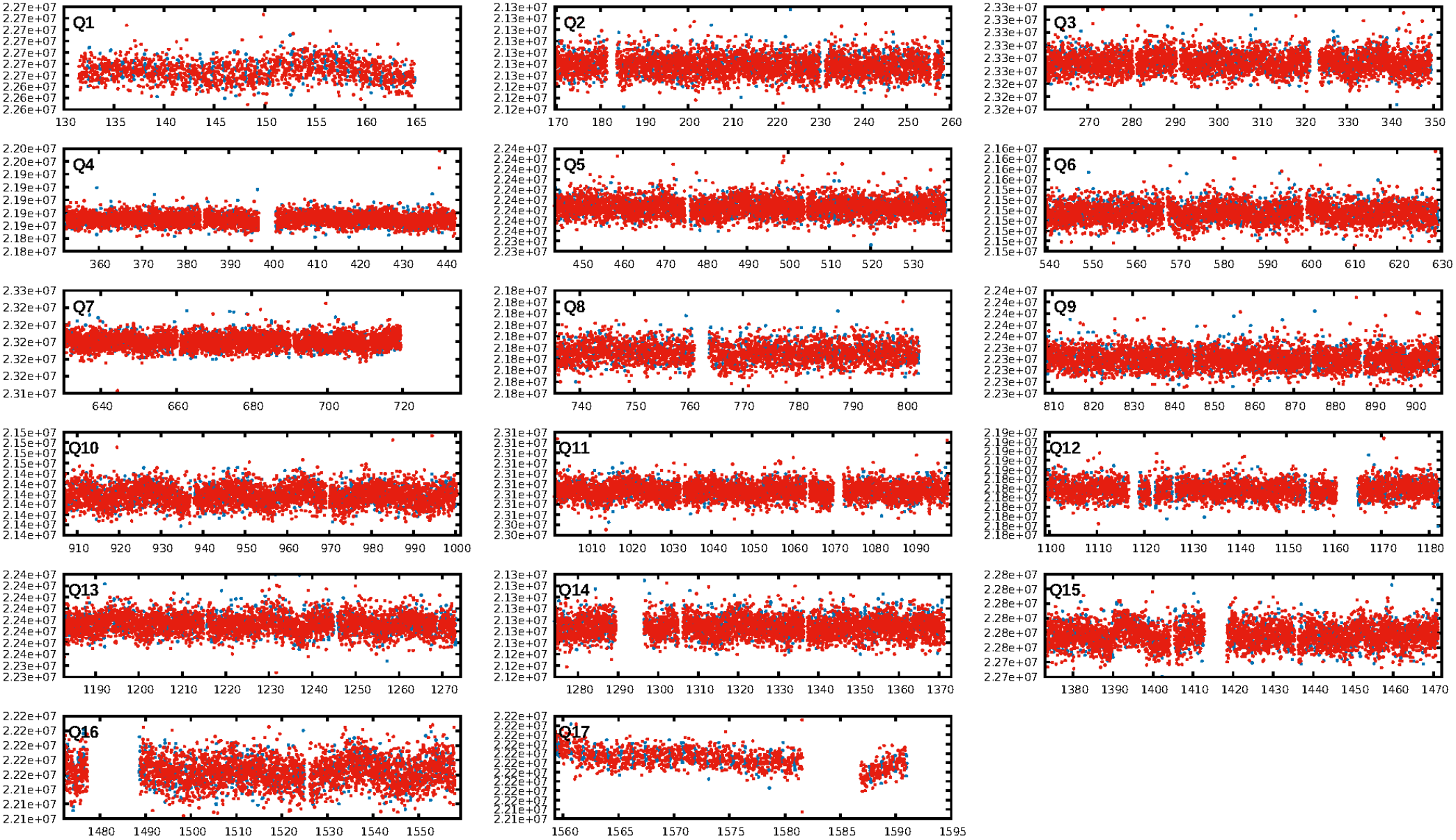
ShortPeriod−sig: N/A
LongPeriod−sig: N/A
ModelChiSquare2−sig: N/A
ModelChiSquareGof−sig: N/A
Bootstrap−pfa: N/A
RollingBand−fgt: 1.00 [1156/1156]
GhostDiagnostic−chr: −1.221

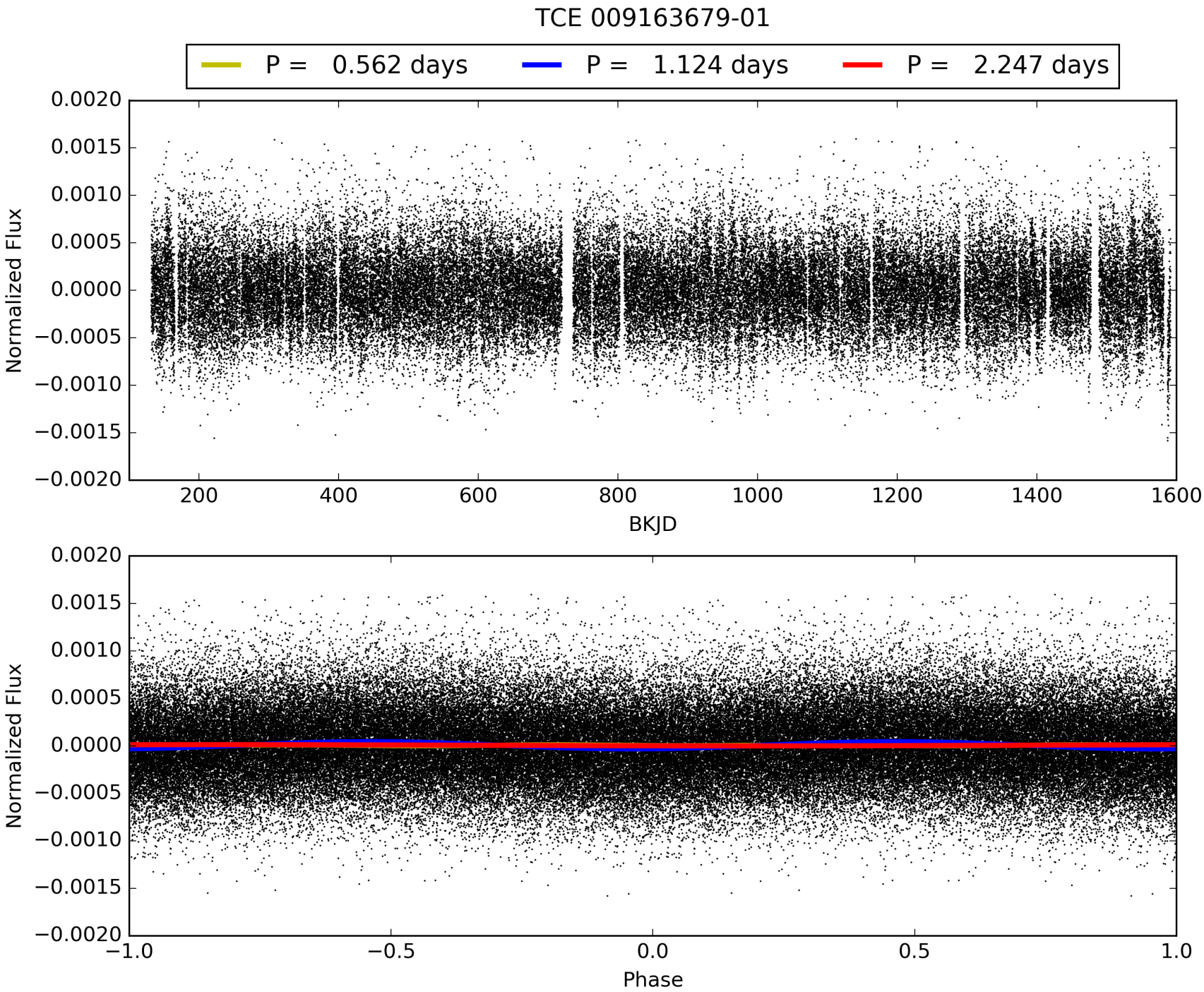
Centroid−sig: 0.0%
Centroid−so: 15.949 arcsec [8.91σ]
OotOffset−rm: 3.577 arcsec [3.89σ]
KicOffset−rm: 3.688 arcsec [3.30σ]
OotOffset−st: 0/0/4/1 [5]
KicOffset−st: 0/0/4/1 [5]
DiffImageQuality−fgm: 0.00 [0/5]
DiffImageOverlap−fno: 1.00 [17/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31−Jan−2016 03:21:06 Z

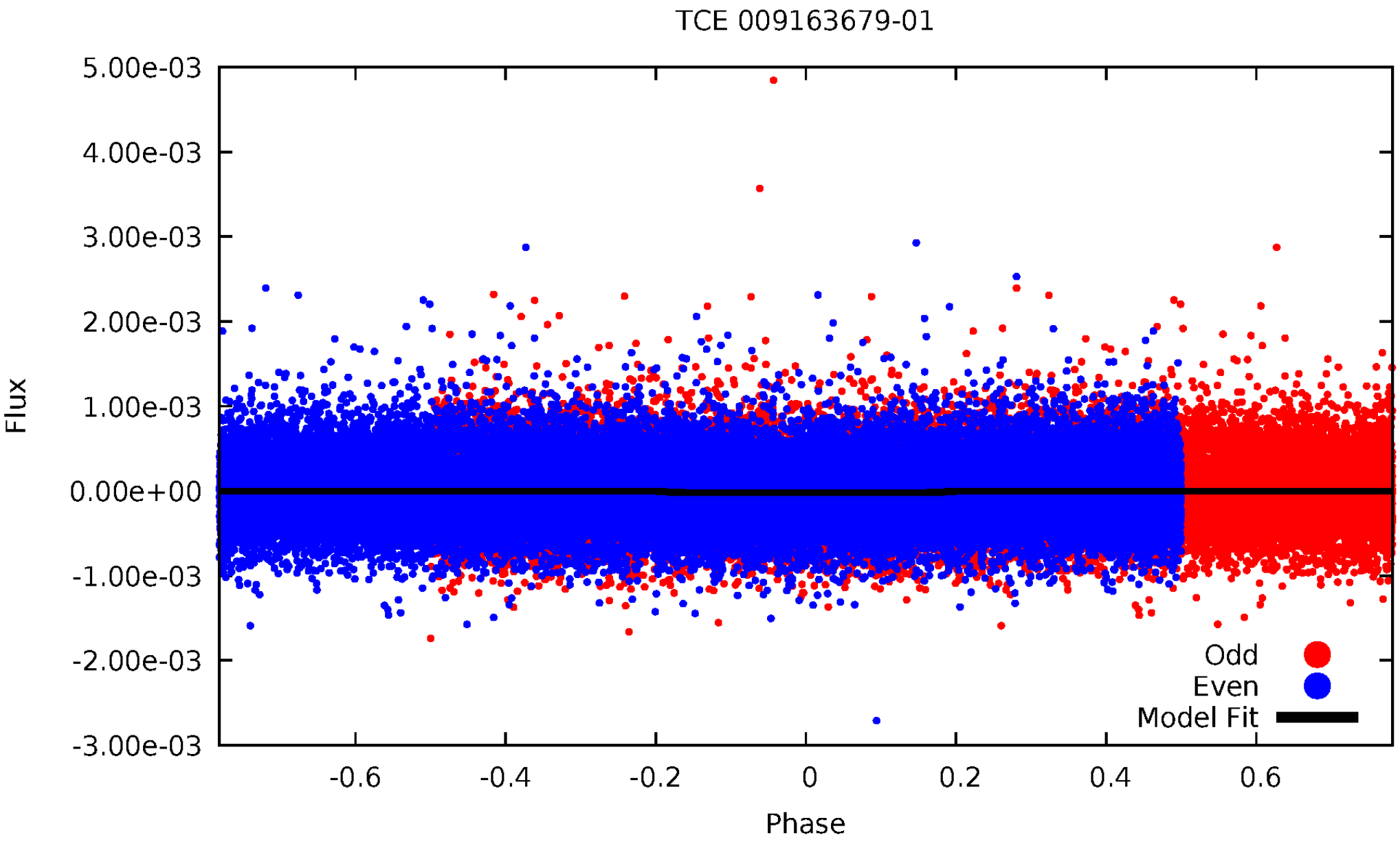
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 009163679-01, PDC Light Curves

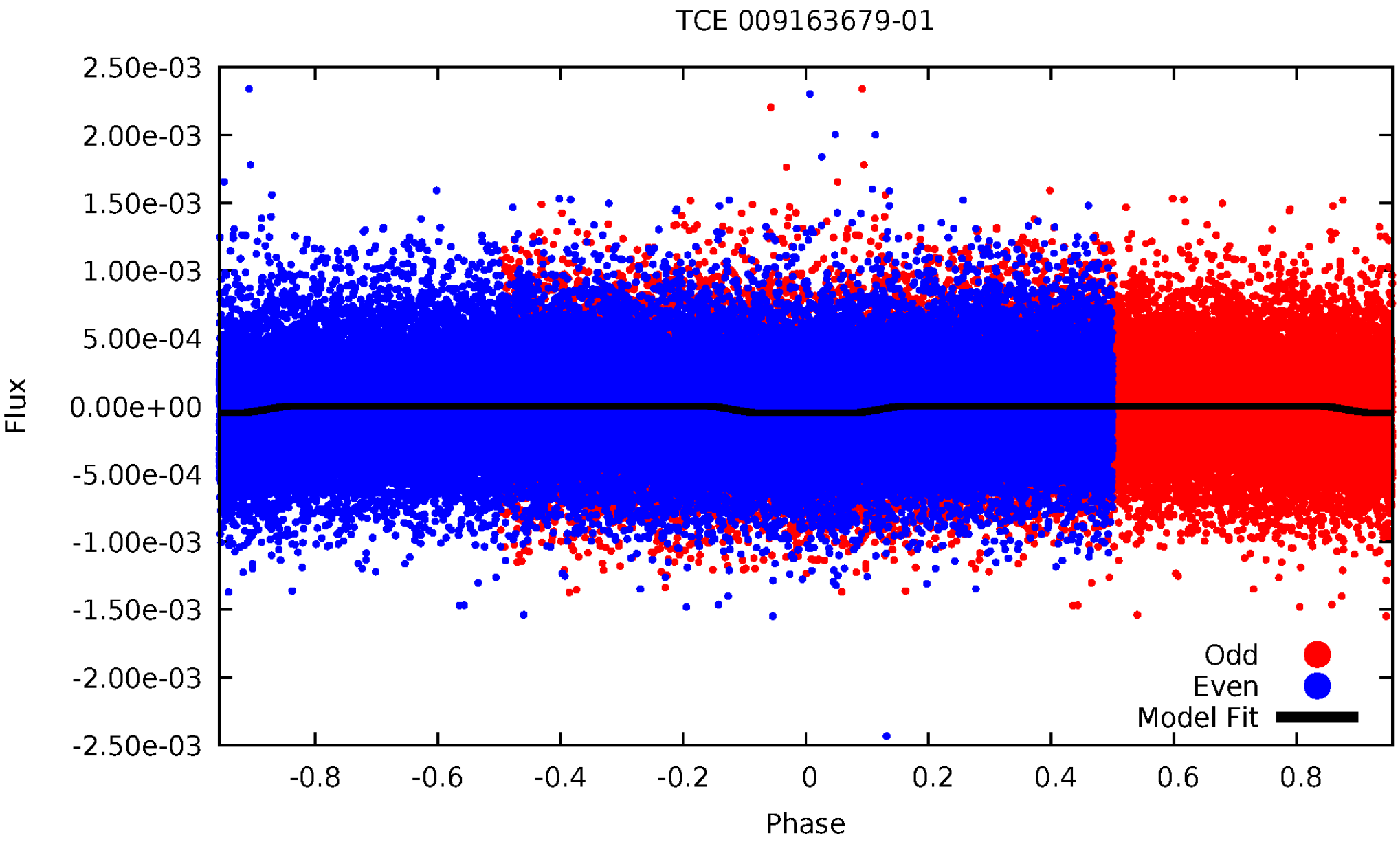



TCE 009163679-01
P = 0.562 days
P = 1.124 days
P = 2.247 days
Normalized Flux
BKJD
Normalized Flux
Phase

DV Odd/Even


TCE 009163679-01
5.00e-03
4.00e-03
3.00e-03
2.00e-03
1.00e-03
0.00e+00
-1.00e-03
-2.00e-03
-3.00e-03
Flux
-0.6
-0.4
-0.2
0
0.2
0.4
0.6
Phase
Odd
Even
Model Fit

ALT Odd/Even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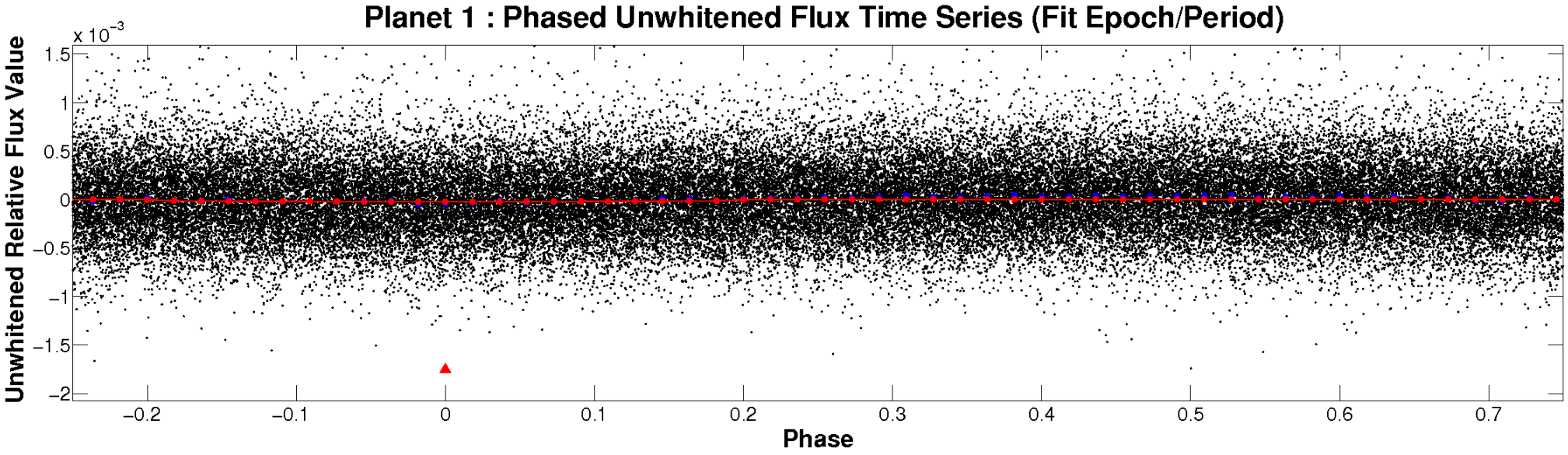
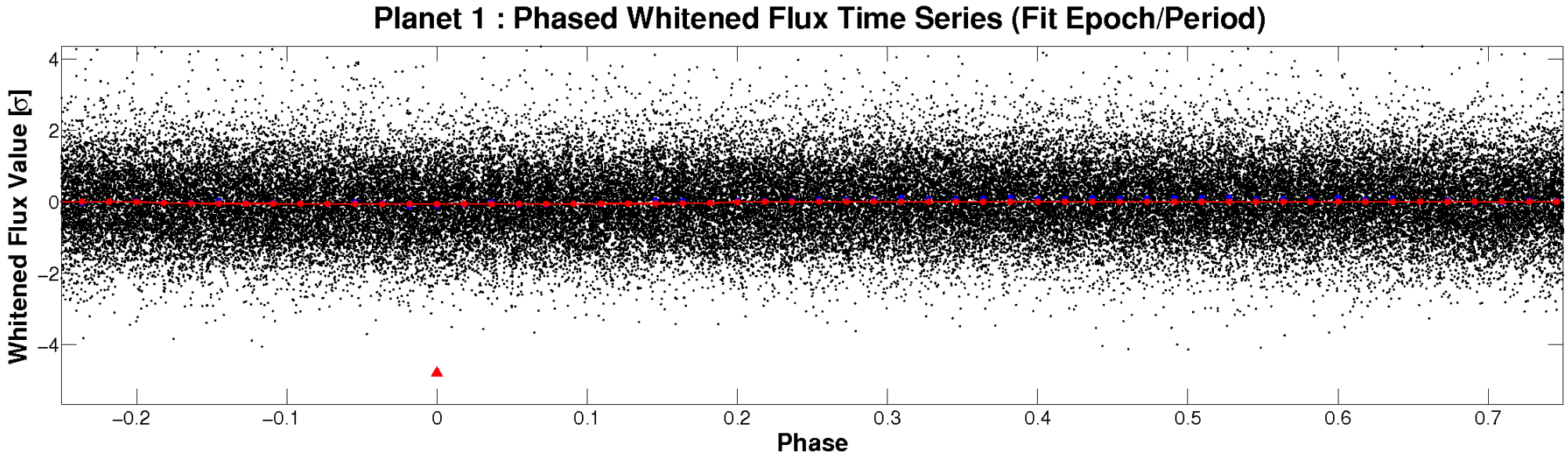
2.50e-03
2.00e-03
1.50e-03
1.00e-03
5.00e-04
0.00e+00
-5.00e-04
-1.00e-03
-1.50e-03
-2.00e-03
-2.50e-03
Flux
-0.8
-0.6
-0.4
-0.2
0
0.2
0.4
0.6
0.8
Phase
Odd
Even
Model Fit

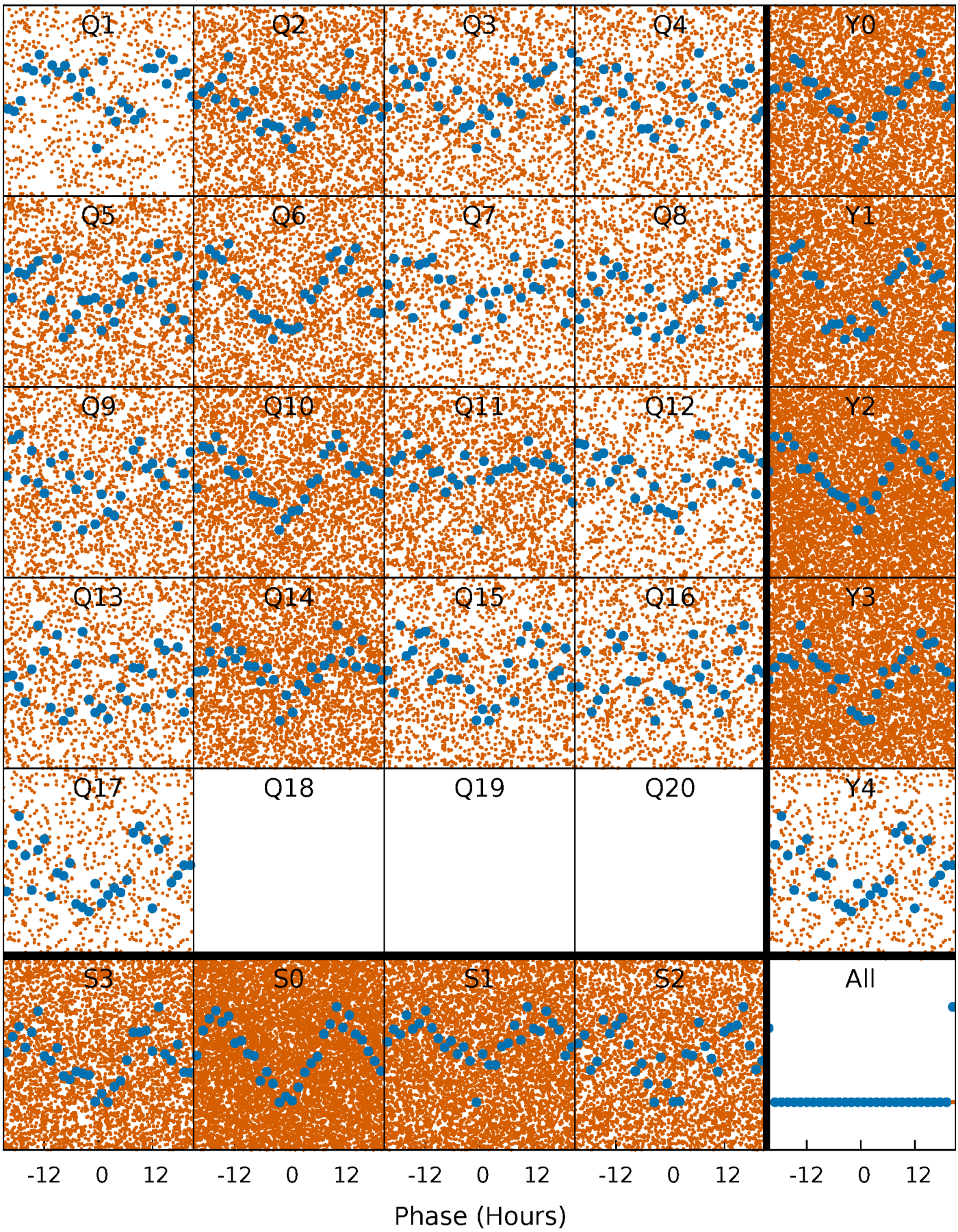
Non-Whitened Vs. Whitened Light Curve





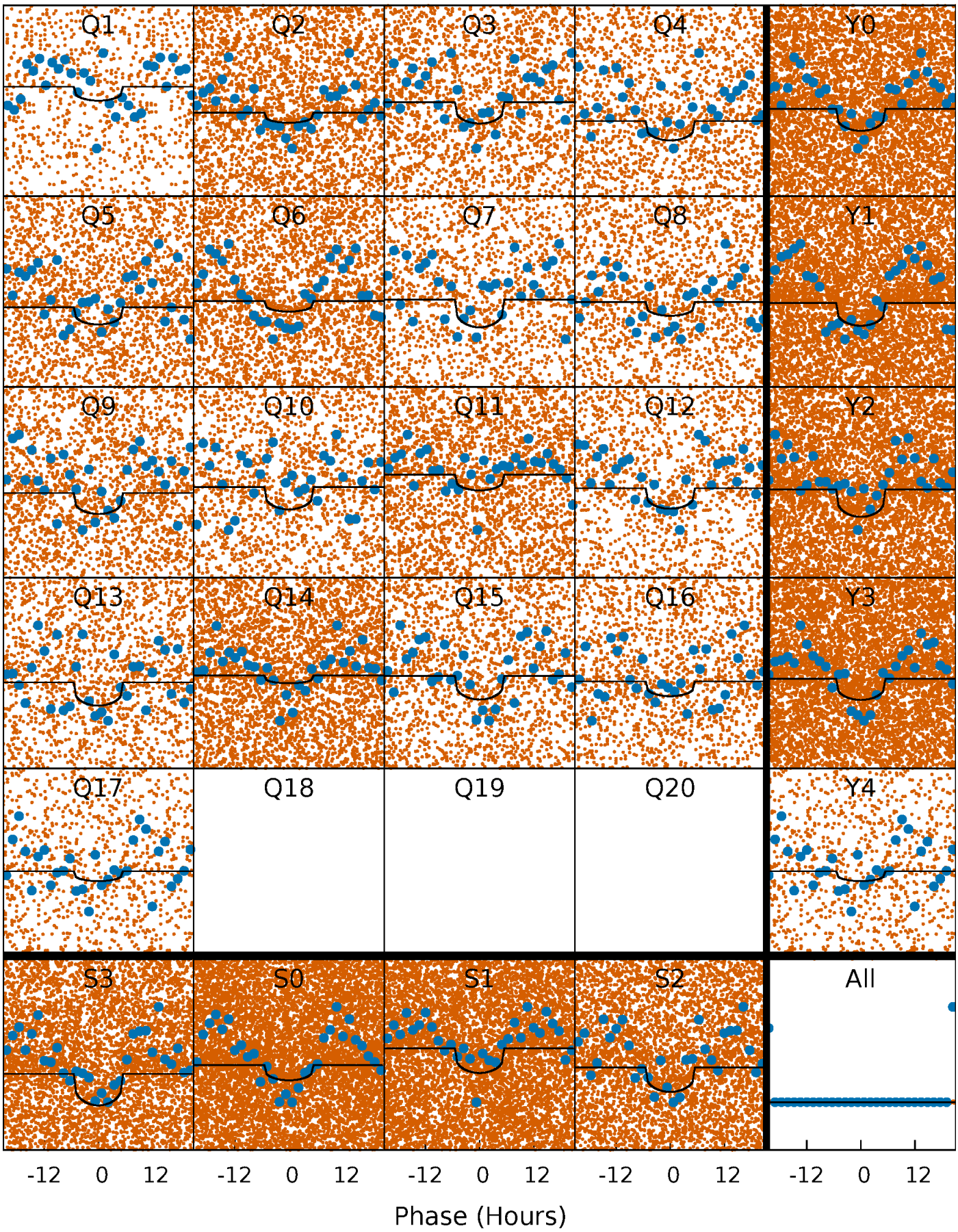
PDC Quarter-Phased Transit Curves

TCE 009163679-01 P= 1.123697 Days T_0=131.885202 (BKJD)



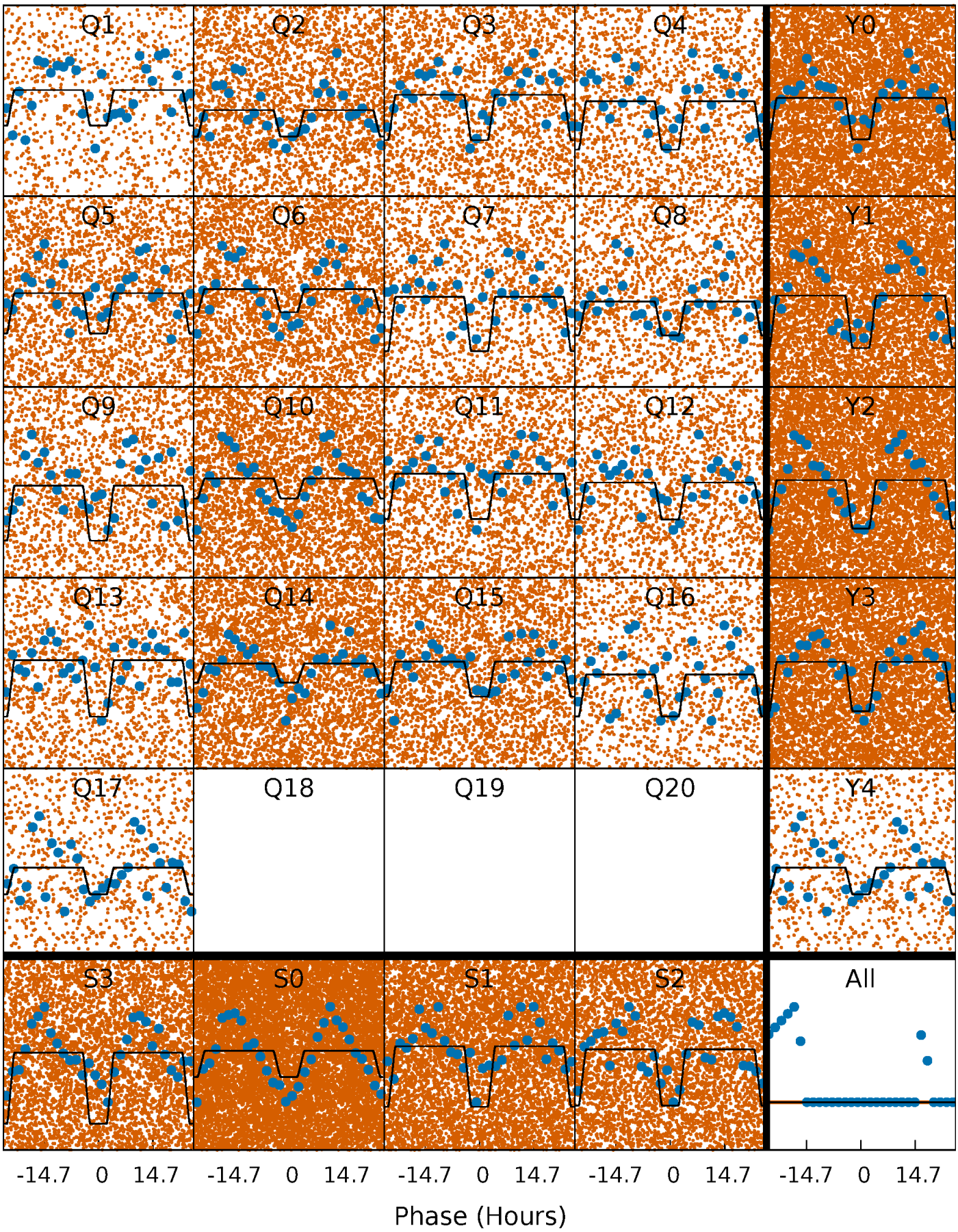
DV Quarter-Phased Transit Curves

TCE 009163679-01 P= 1.123697 Days T_0=131.885202 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

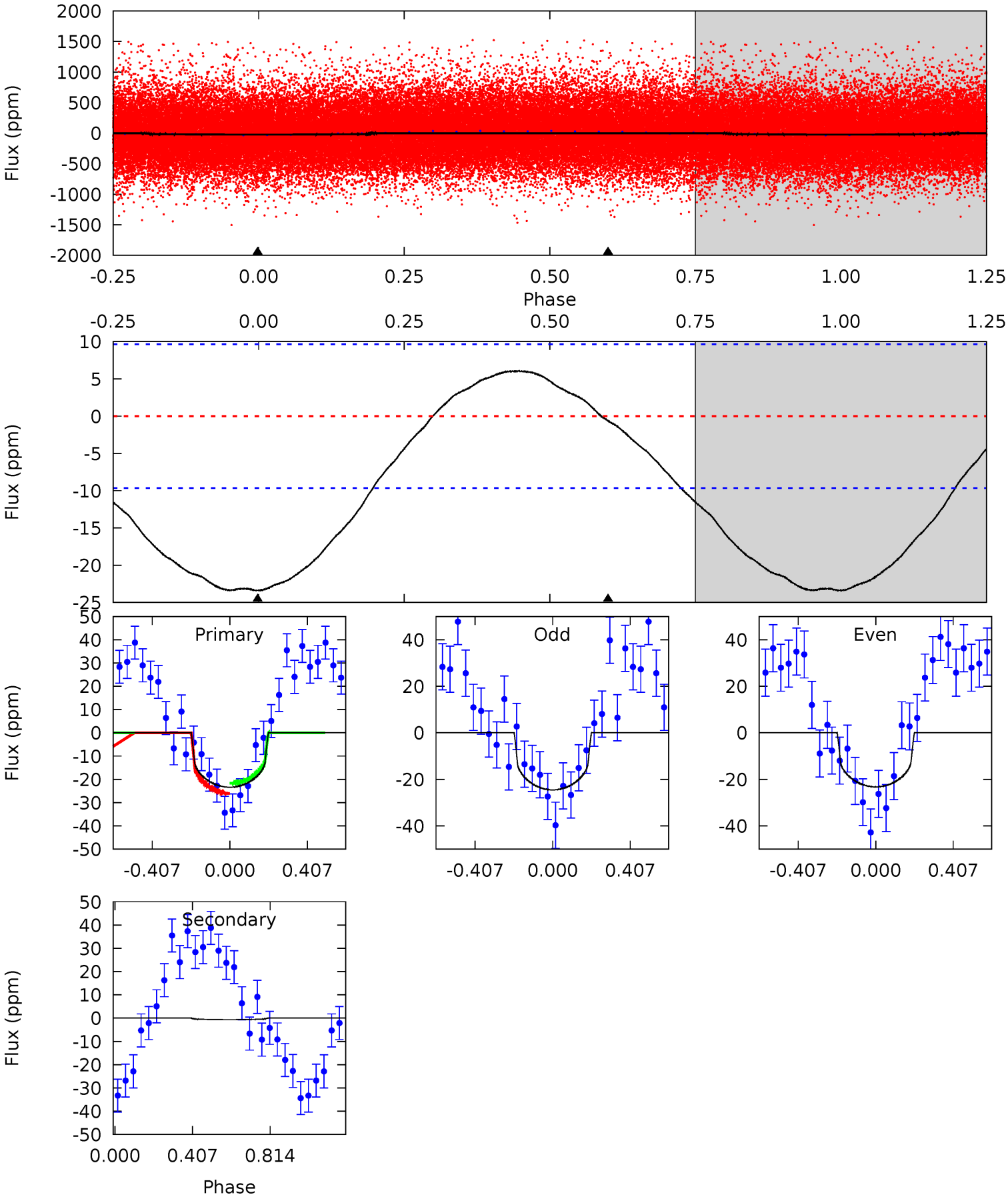
TCE 009163679-01 P= 1.123655 Days T_0=131.896808 (BKJD)



DV Model-Shift Uniqueness Test

009163679-01, P = 1.123697 Days, E = 130.761505 Days

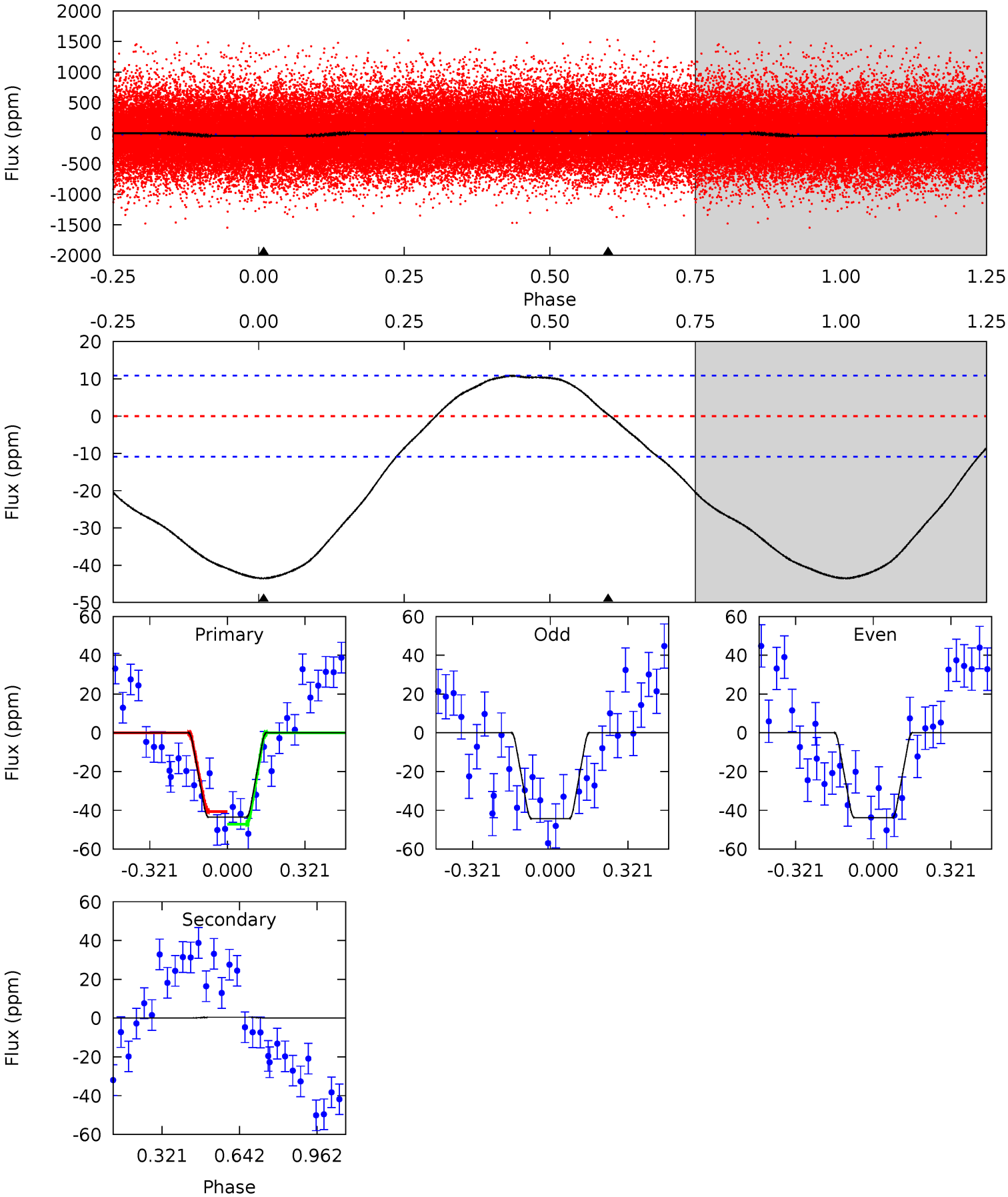
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	0.28	0	0	4.26	0.83	1.05	10.3	10.3	0.28	0.28	0.28	0.95	0.21	0.97



Alt Model-Shift Uniqueness Test

009163679-01, P = 1.123655 Days, E = 130.773153 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.2	-0.18	0	0	4.31	0.99	1.71	17.2	17.2	-0.18	-0.18	0.08	1.08	0.20	1.30



Stellar Parameters For KIC 009163679

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	5987^{+161}_{-179}	$4.598^{+0.040}_{-0.160}$	$-0.740^{+0.300}_{-0.300}$	$0.766^{+0.170}_{-0.057}$	$0.854^{+0.071}_{-0.095}$	$2.674^{+0.415}_{-1.177}$
	+3%/-3%	+1%/-3%	+41%/-41%	+22%/-7%	+8%/-11%	+16%/-44%
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 009163679-01 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1±2	$0.56^{+0.45}_{-0.36}$	2325^{+121}_{-100}	1362^{+2640}_{-4811}	$0.300^{+3.886}_{-1.709}$
Alt.	0±3	$0.73^{+0.52}_{-0.47}$	2325^{+130}_{-99}	-2879^{+5976}_{-863}	$-0.188^{+1.282}_{-2.355}$

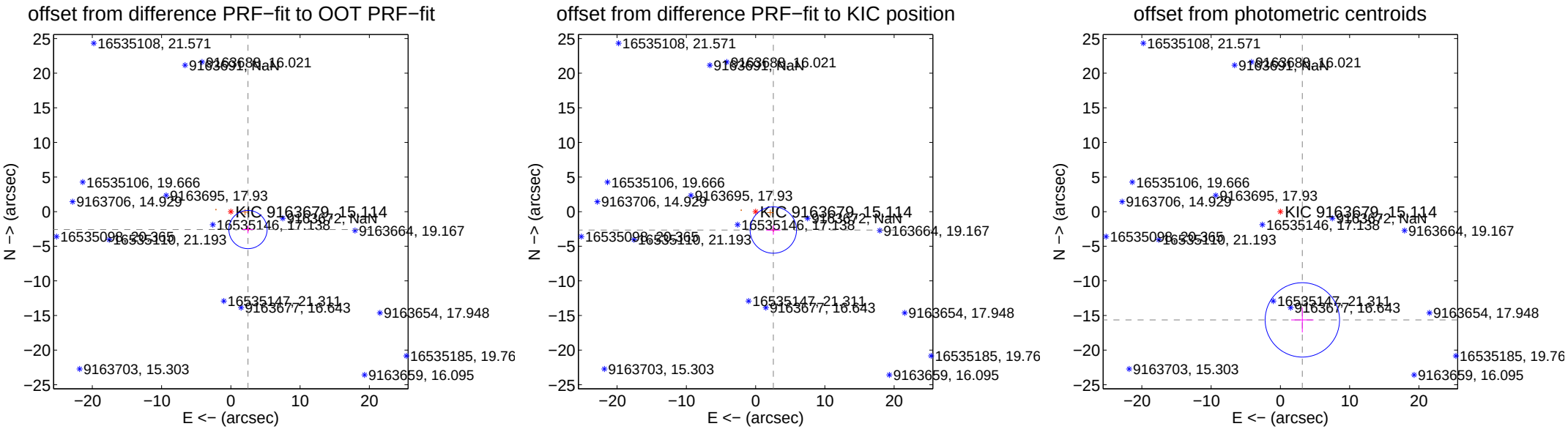
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

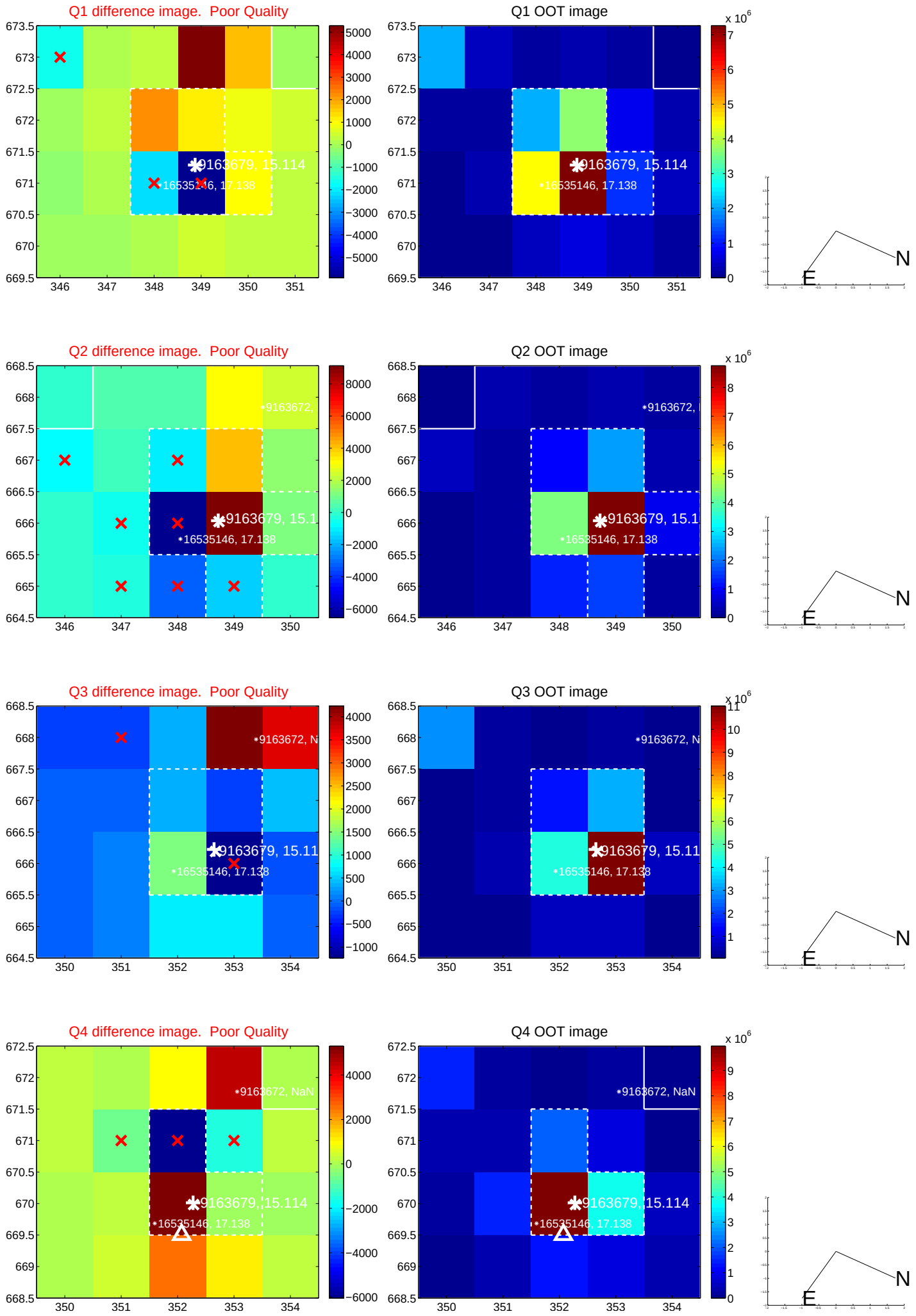
Supplemental centroid analysis for 009163679-01. Kepler magnitude: 15.11. Transit SNR 8.00
There are 0 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.577 ± 0.920	3.89	-2.475 ± 0.801	-2.583 ± 0.561
PRF-fit source offset from KIC position	3.688 ± 1.116	3.30	-2.557 ± 1.023	-2.657 ± 0.680
photometric centroid source offset	15.95 ± 1.79	8.91	-3.17 ± 1.61	-15.63 ± 1.80

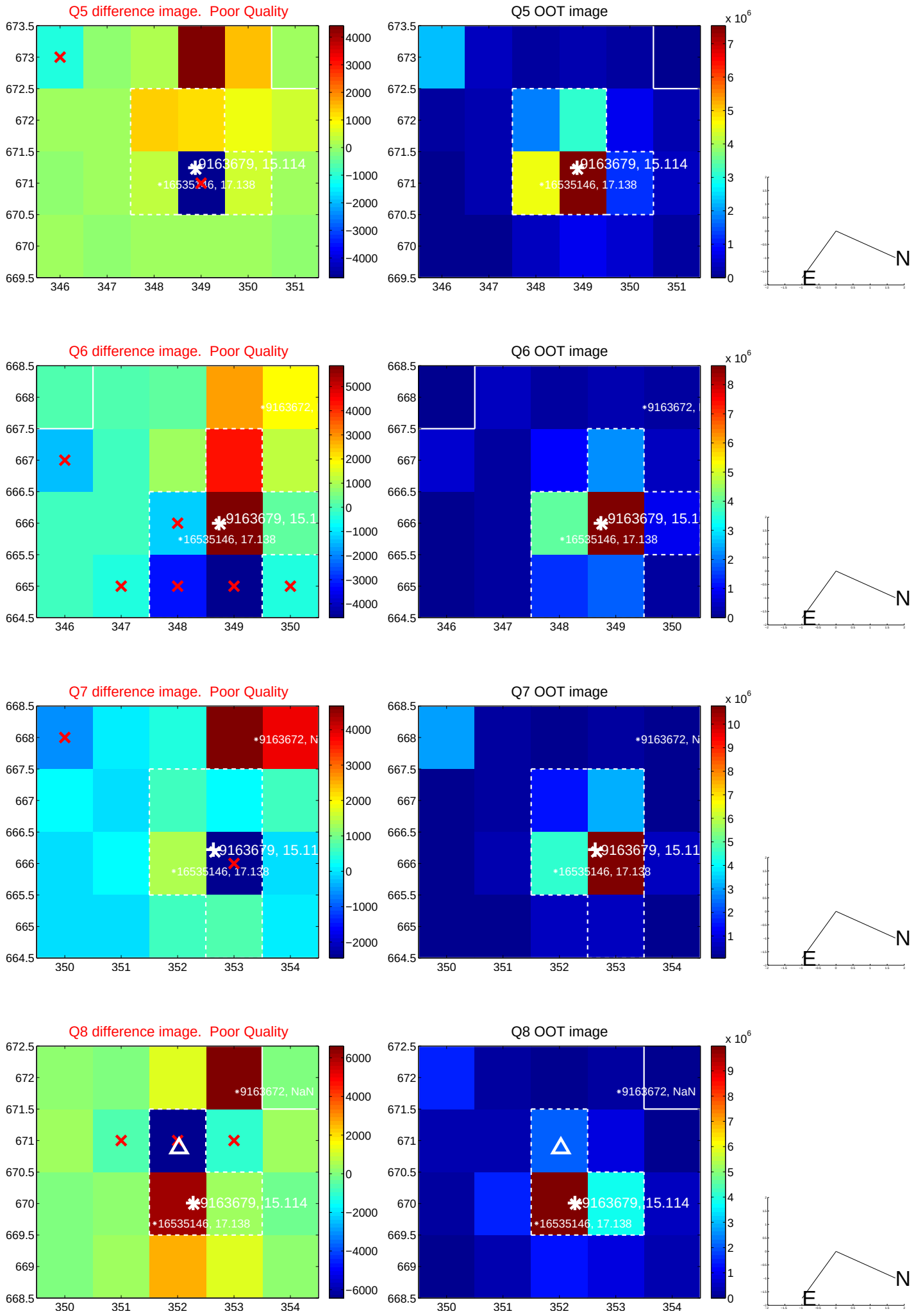


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

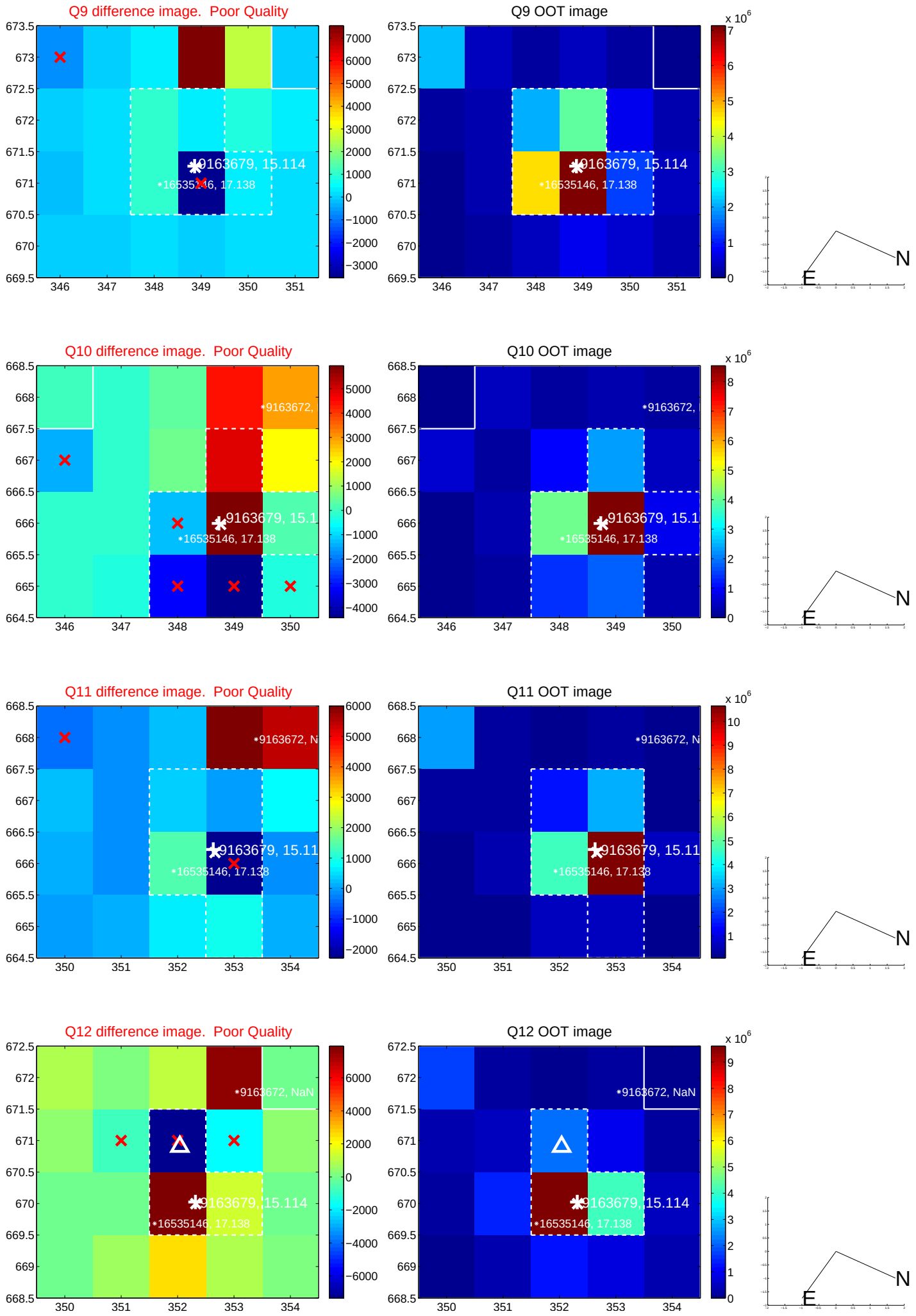
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



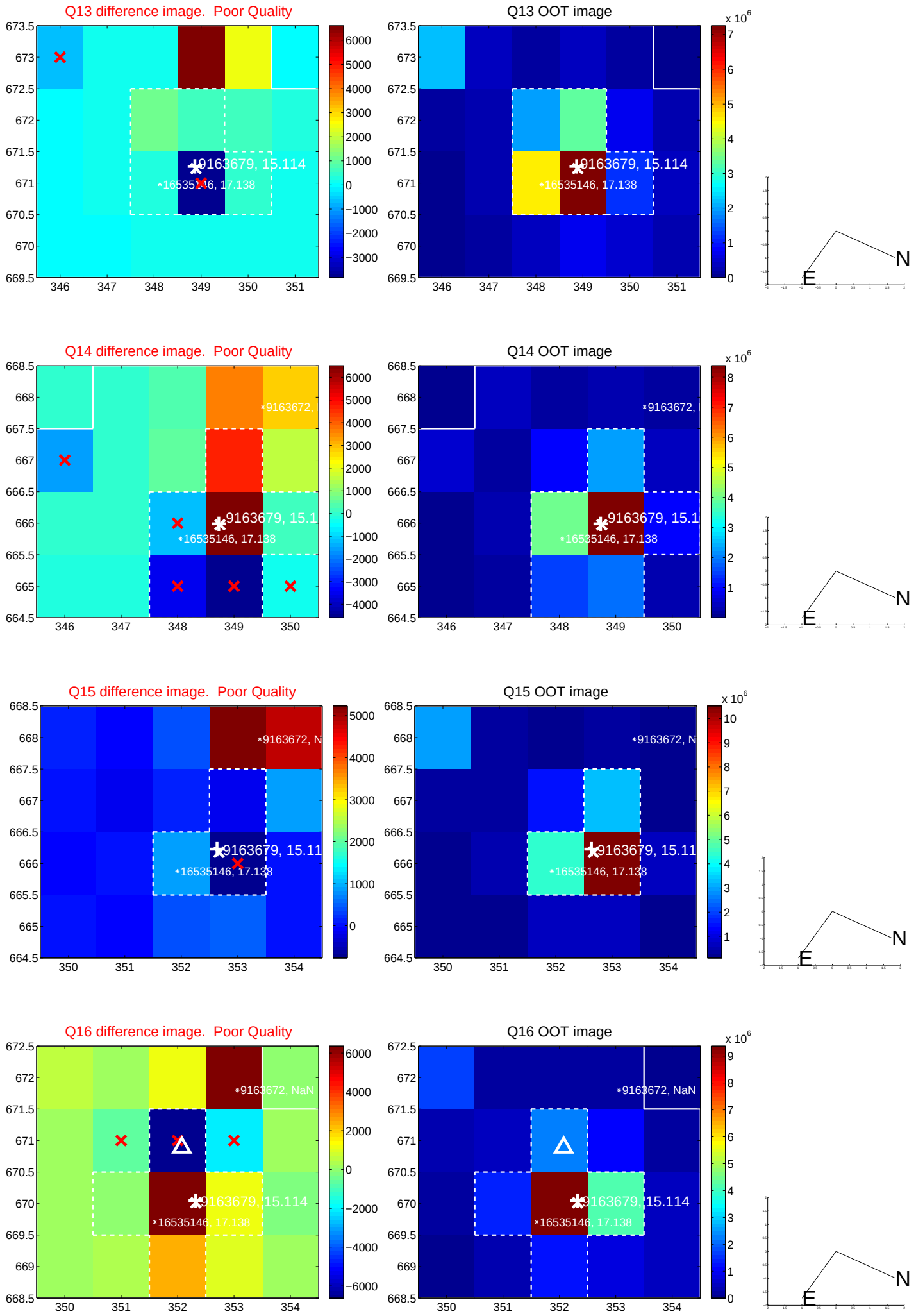
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



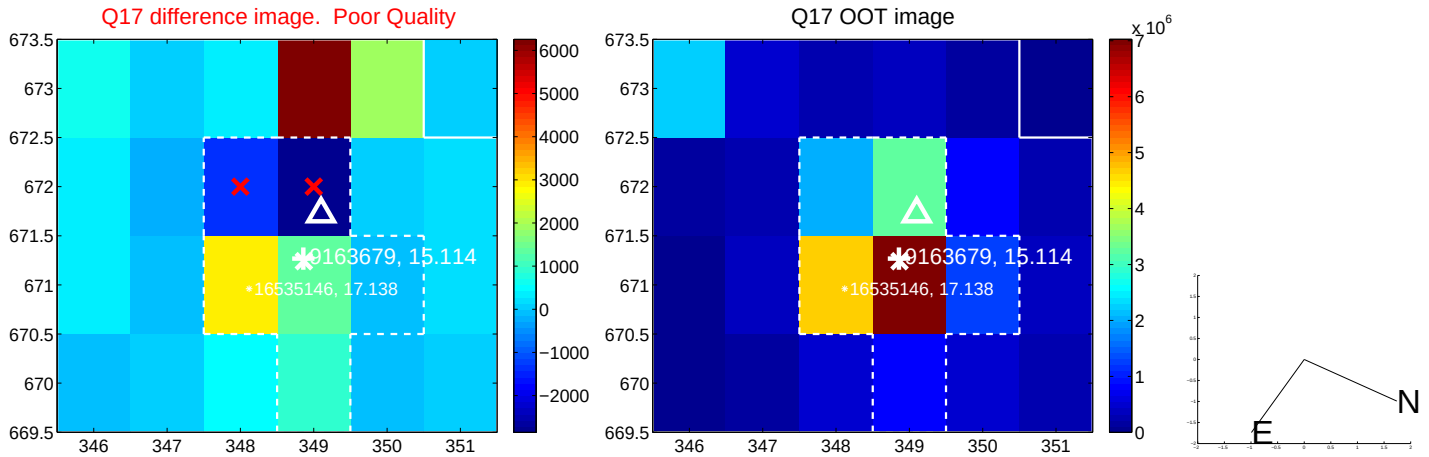
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

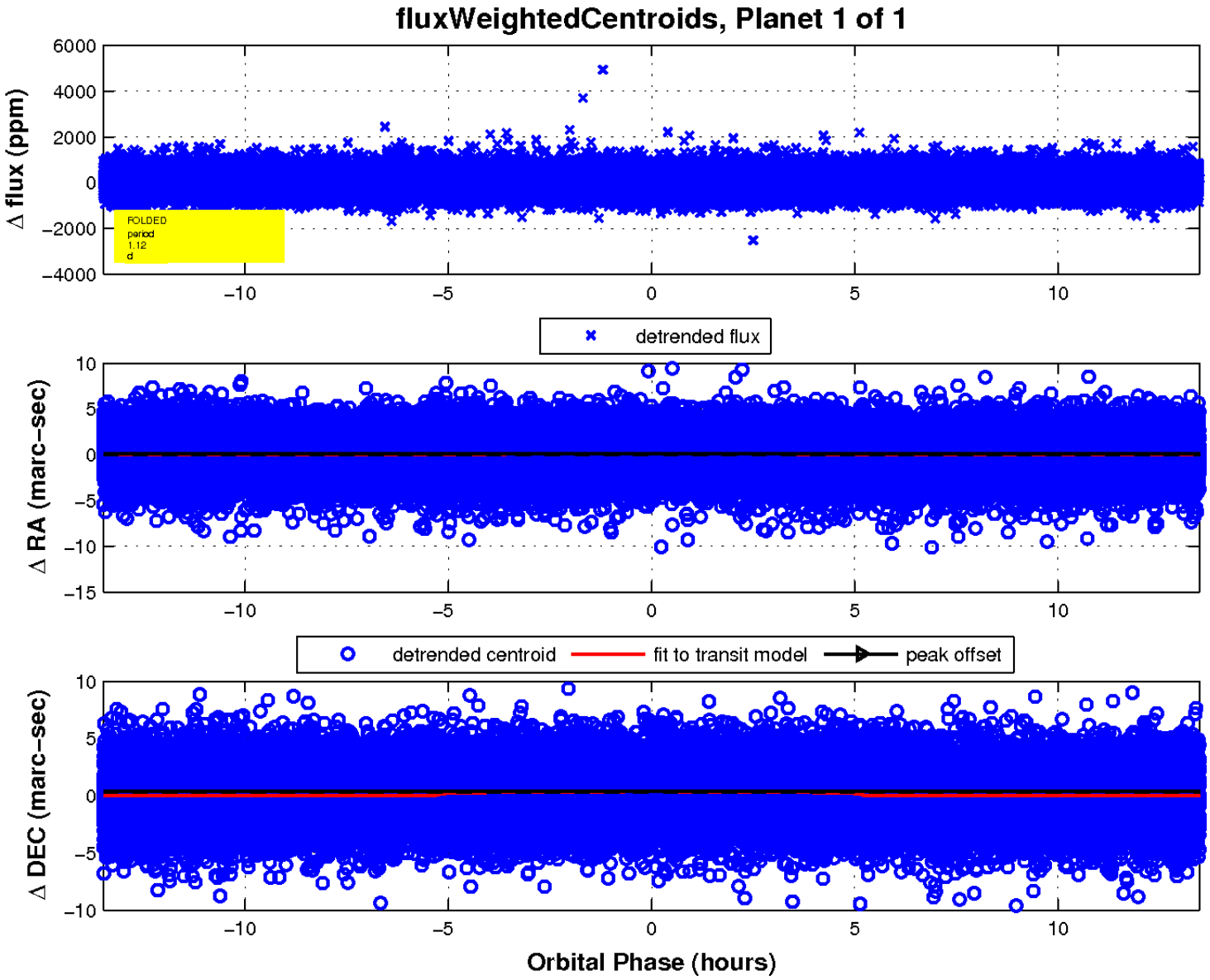


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

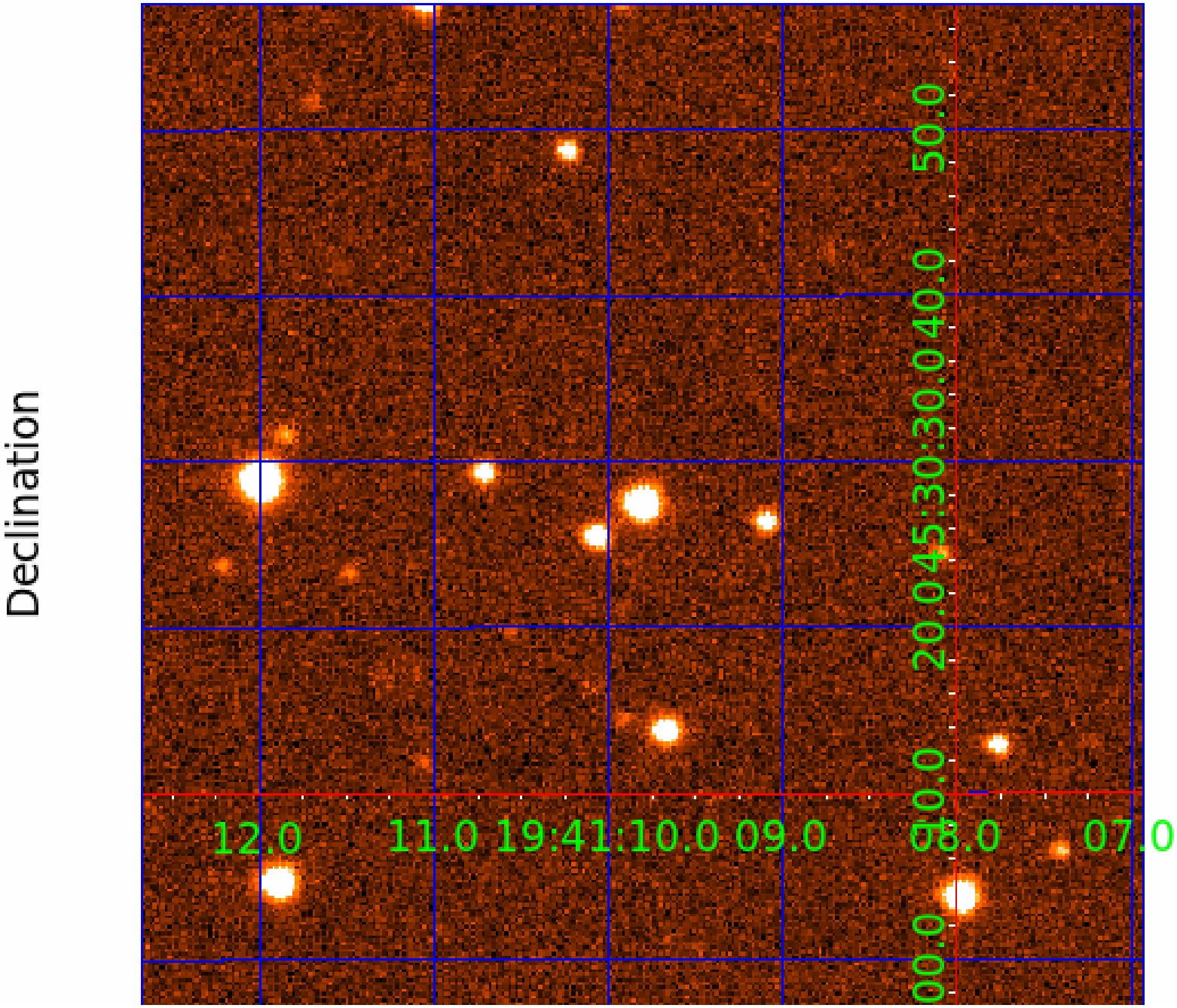


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.





UKIRT Image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