KIC 009288237

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 ($S_\oplus$)
009288237-01	OBS	3114.01	7.491294	135.314097	37.1	6.422	11.4	11.7	1.71	6177	1.21	657.55

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009288237-01	OBS	PC	0.99	0	0	0	0	NO_COMMENT

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.

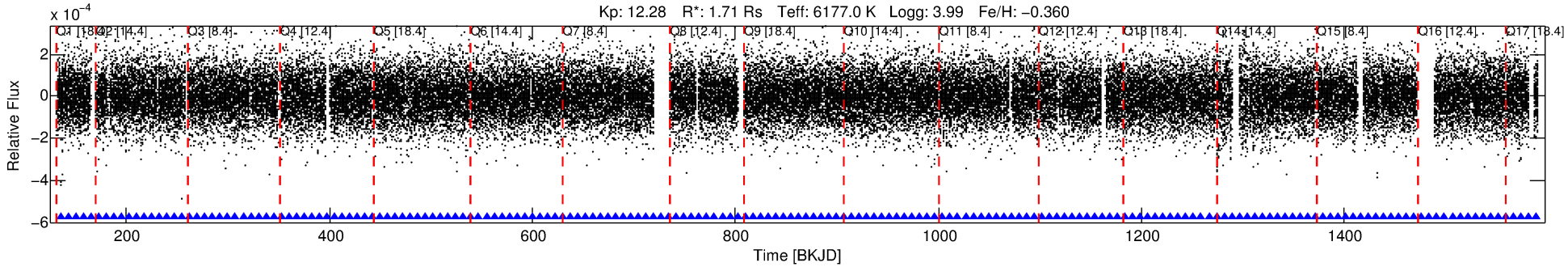
Ephemeris Match Information For 009288237-01

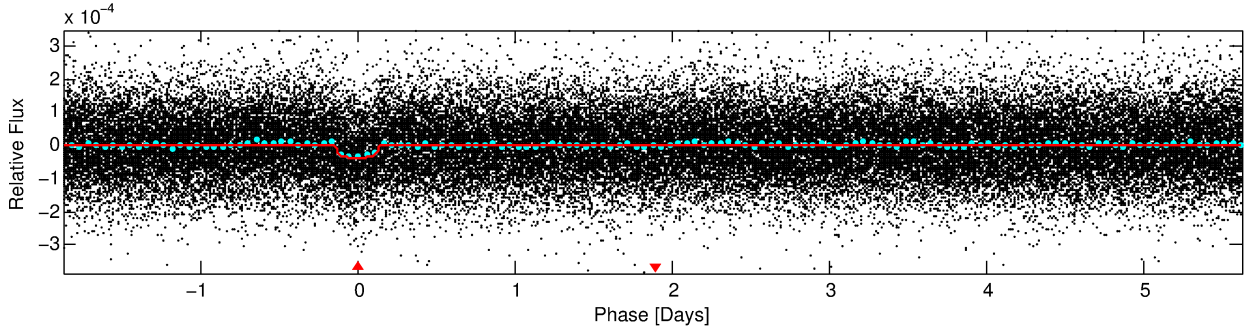
No Significant Match Found

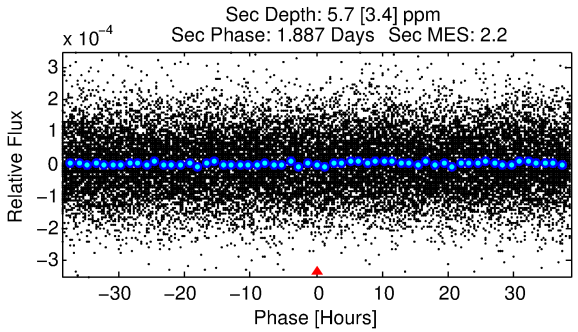
DV One-Page Summary

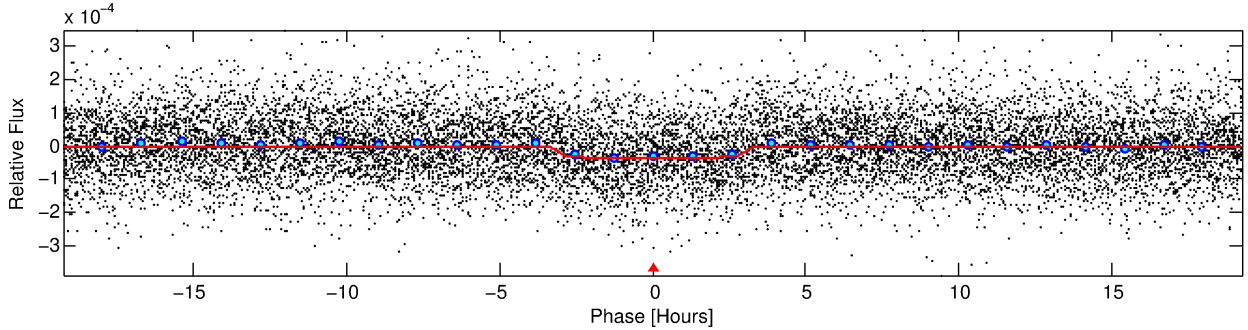
KIC: 9288237 Candidate: 1 of 1 Period: 7.491 d
KOI: K03114.01 Corr: 0.989

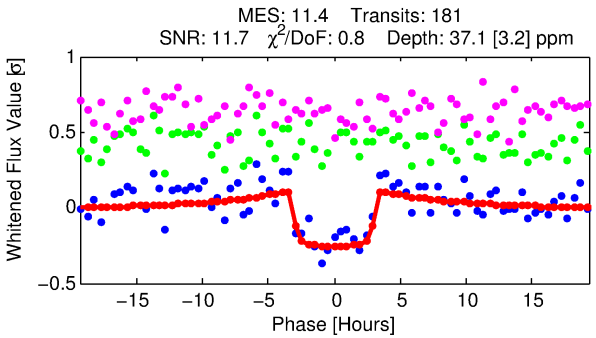
Kp: 12.28 R*: 1.71 Rs Teff: 6177.0 K Logg: 3.99 Fe/H: −0.360

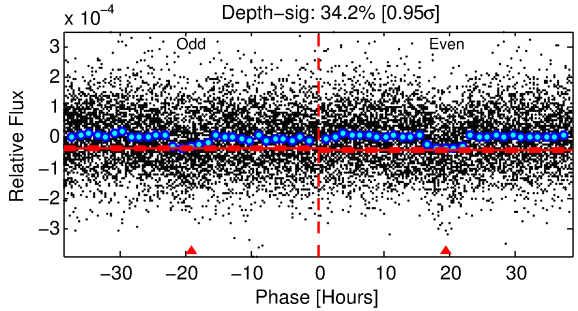


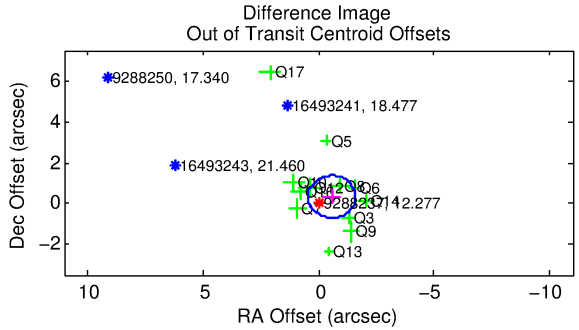












DV Fit Results:

Period = 7.49129 [0.00006] d
Epoch = 135.3141 [0.0061] BKJD
Rp/R* = 0.0065 [0.0014]
a/R* = 4.25 [4.68]
b = 0.89 [0.27]

Seff = 657.55 [308.18]
Teq = 1291 [151] K
Rp = 1.21 [0.45] Re
a = 0.0762 [0.0219] AU

Ag = 12.47 [10.70] [1.07σ]
Teffp = 3752 [689] K [3.49σ]

DV Diagnostic Results:

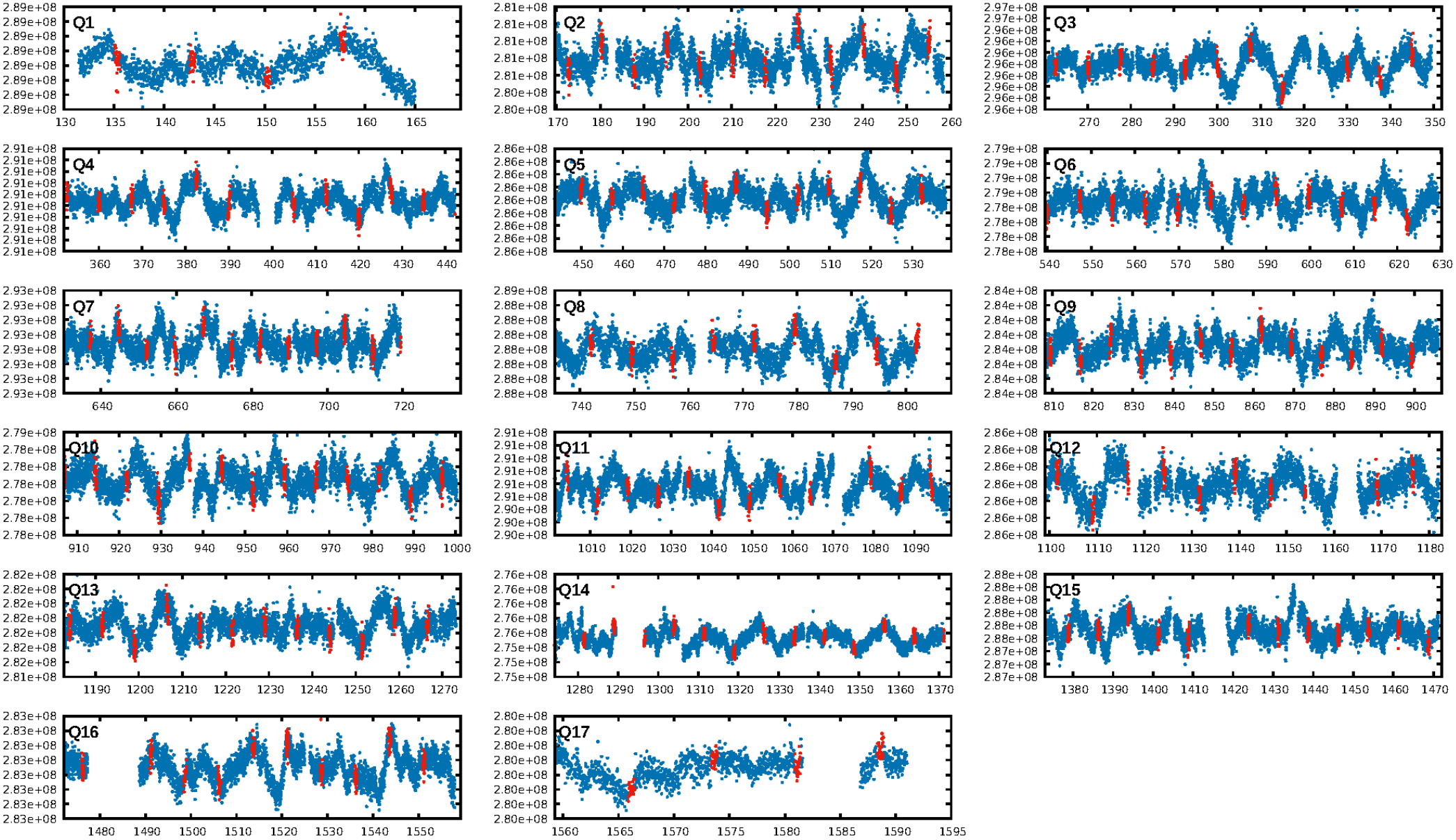
ShortPeriod−sig: N/A
LongPeriod−sig: N/A
ModelChiSquare2−sig: 100.0%
ModelChiSquareGof−sig: 100.0%
Bootstrap−pfa: 2.53e−28
RollingBand−fgt: 1.00 [173/173]
GhostDiagnostic−chr: −14.72

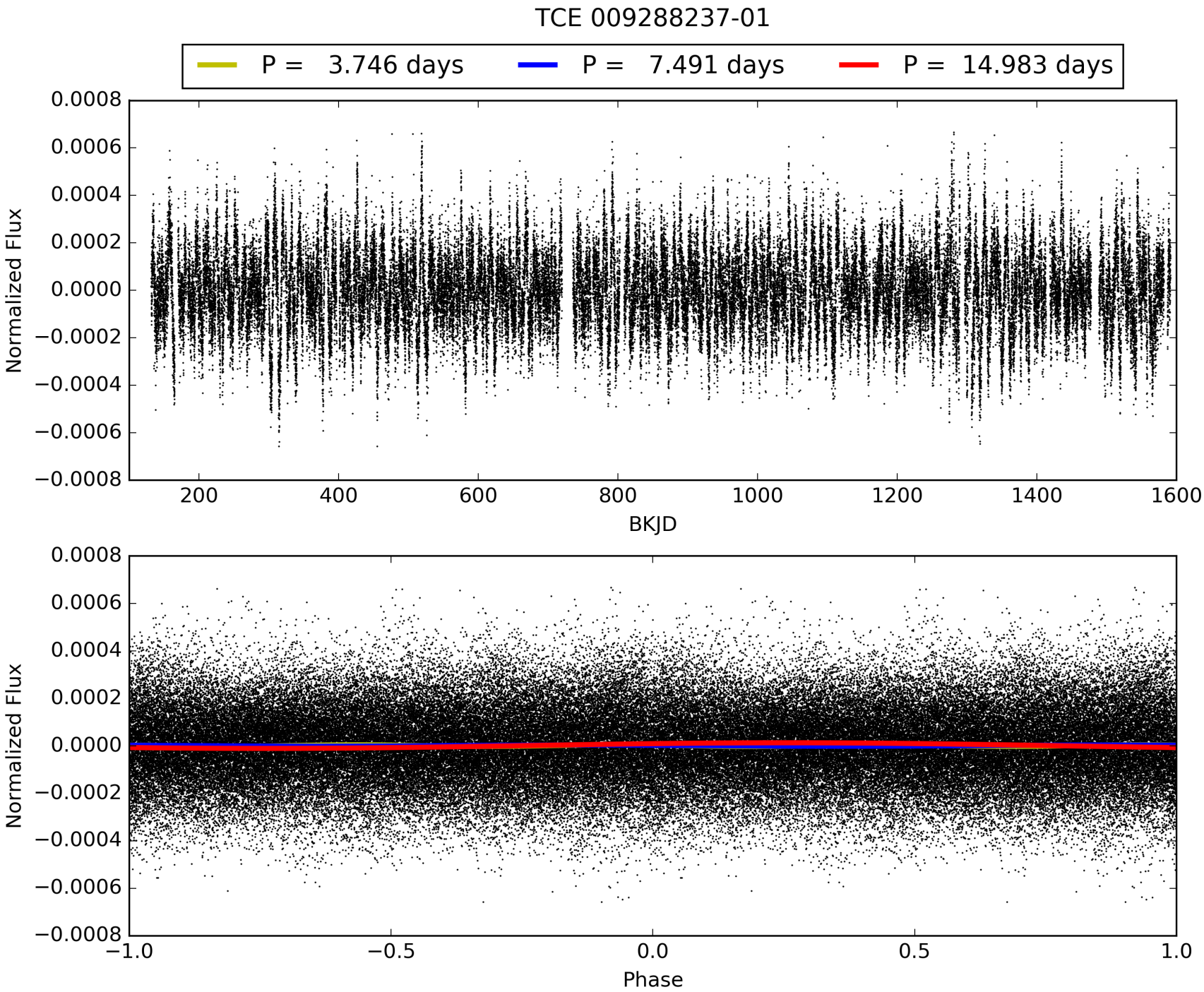
Centroid−sig: 98.1%
Centroid−so: 0.092 arcsec [0.14σ]
OotOffset−rm: 0.658 arcsec [1.91σ]
KicOffset−rm: 0.657 arcsec [1.91σ]
OotOffset−st: 3/2/3/4 [12]
KicOffset−st: 3/2/3/4 [12]
DiffImageQuality−fgm: 0.67 [8/12]
DiffImageOverlap−fno: 1.00 [17/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31−Jan−2016 02:00:52 Z

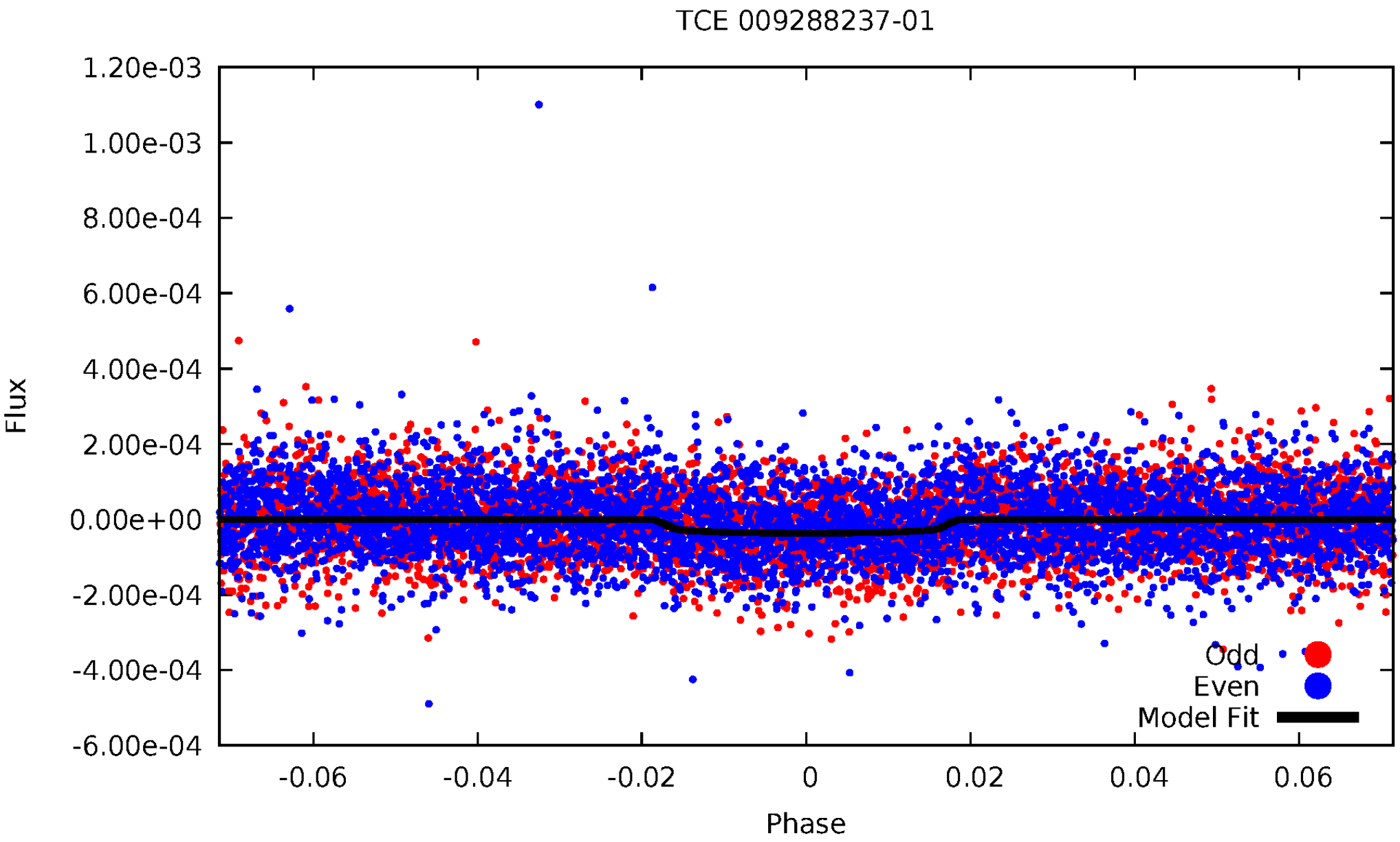
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 009288237-01, PDC Light Curves

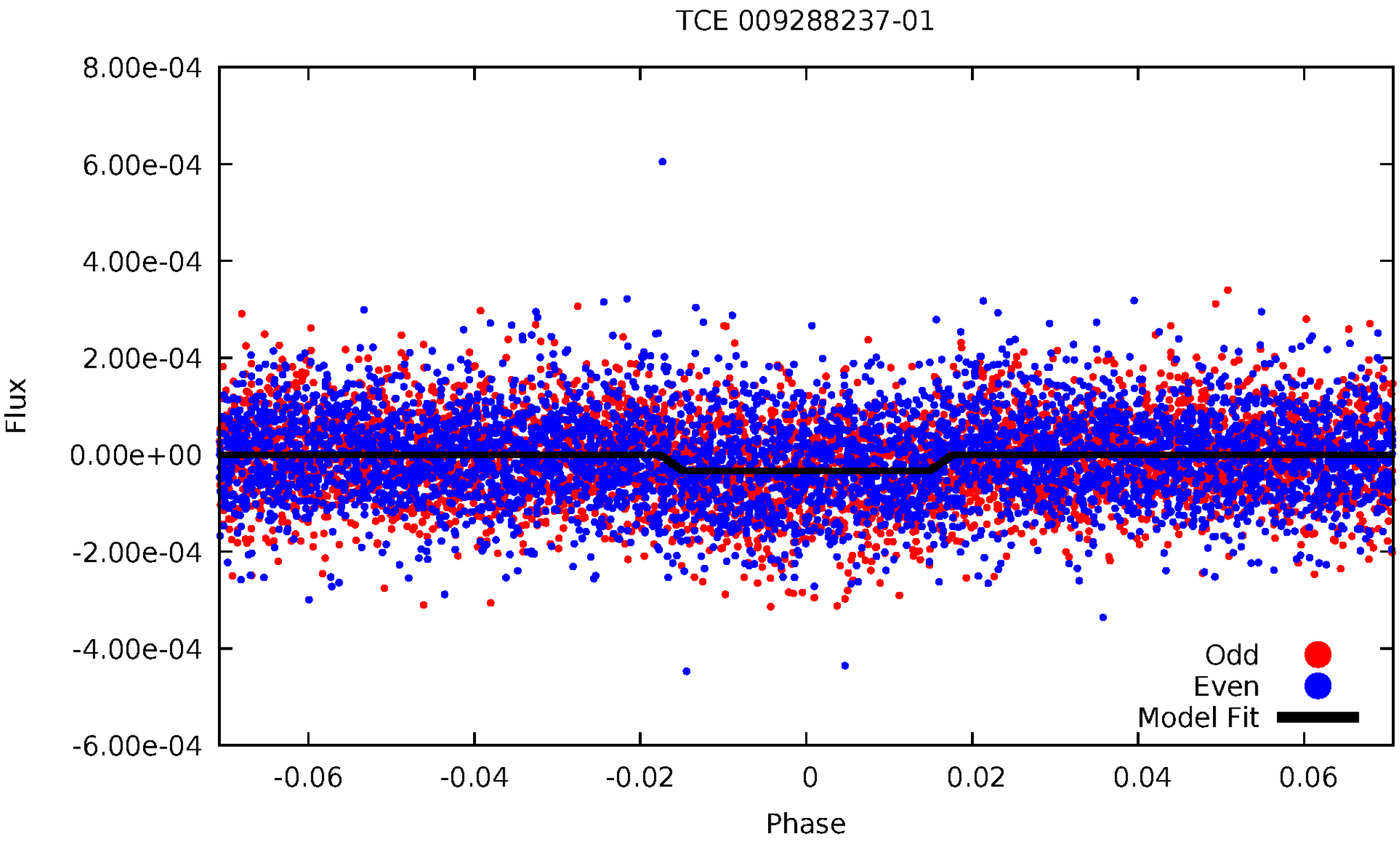



TCE 009288237-01
P = 3.746 days
P = 7.491 days
P = 14.983 days
Normalized Flux
BKJD
Normalized Flux
Phase

DV Odd/Even


TCE 009288237-01
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
Flux
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 009288237-01
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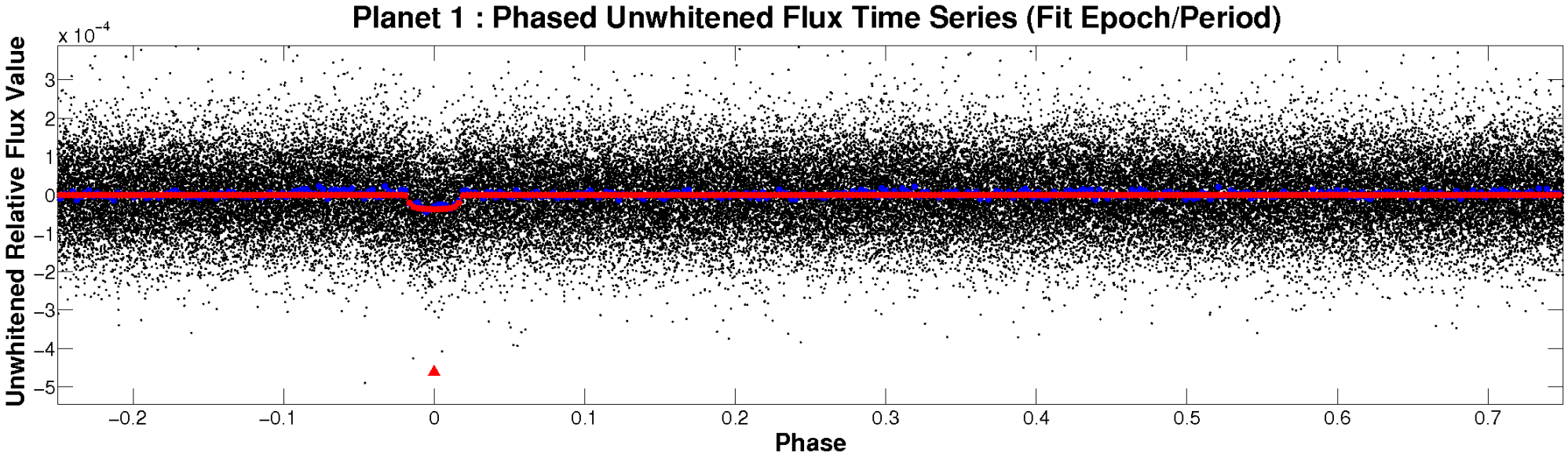
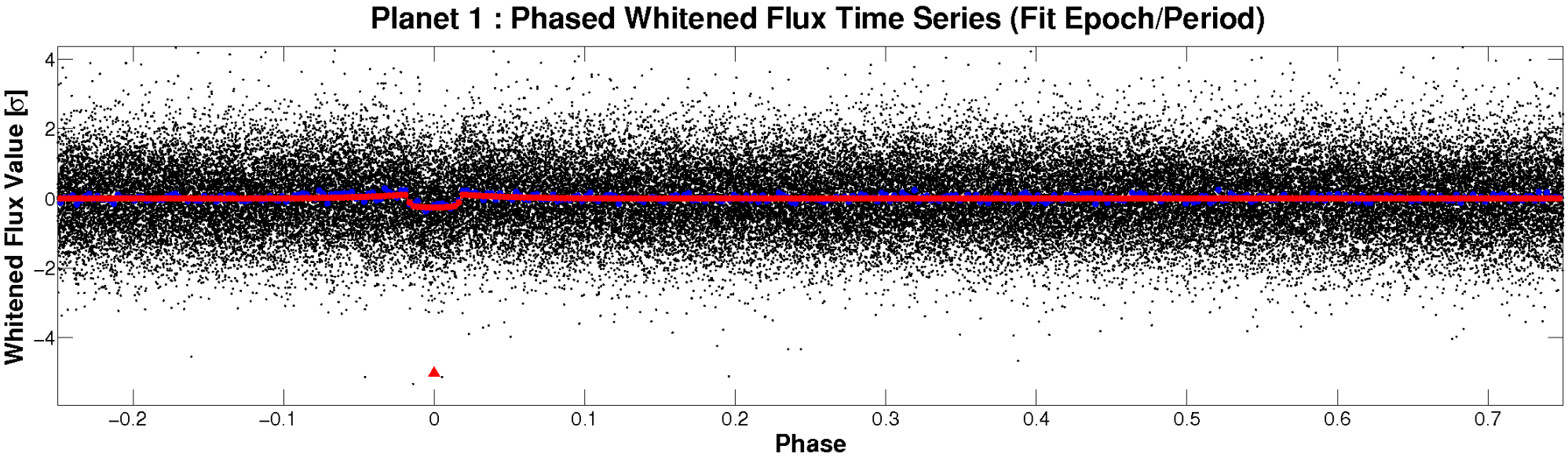
6.00e-04
4.00e-04
2.00e-04
0.00e+00
-2.00e-04
-4.00e-04
-6.00e-04
Flux
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
Phase
Odd
Even
Model Fit

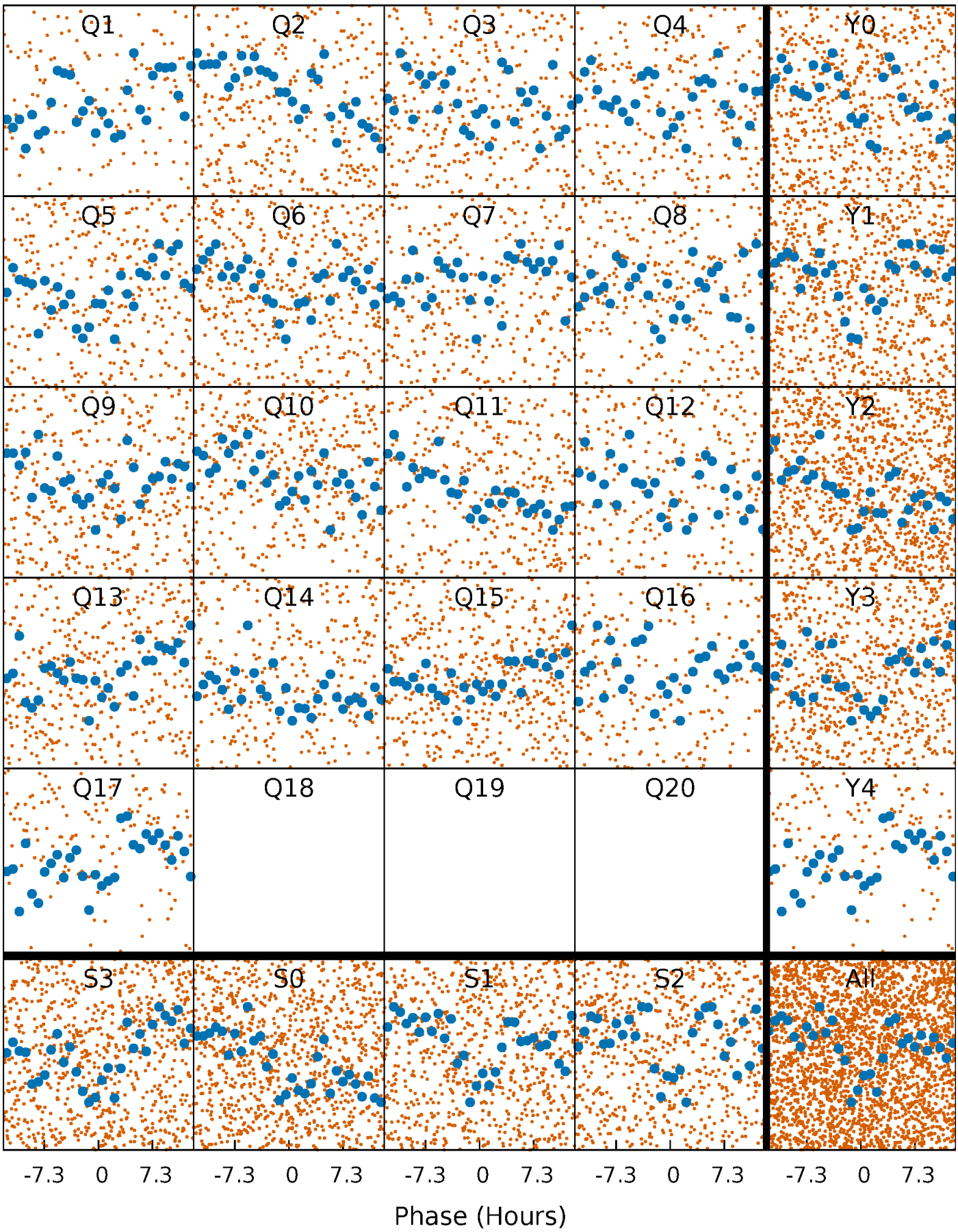
Non-Whitened Vs. Whitened Light Curve





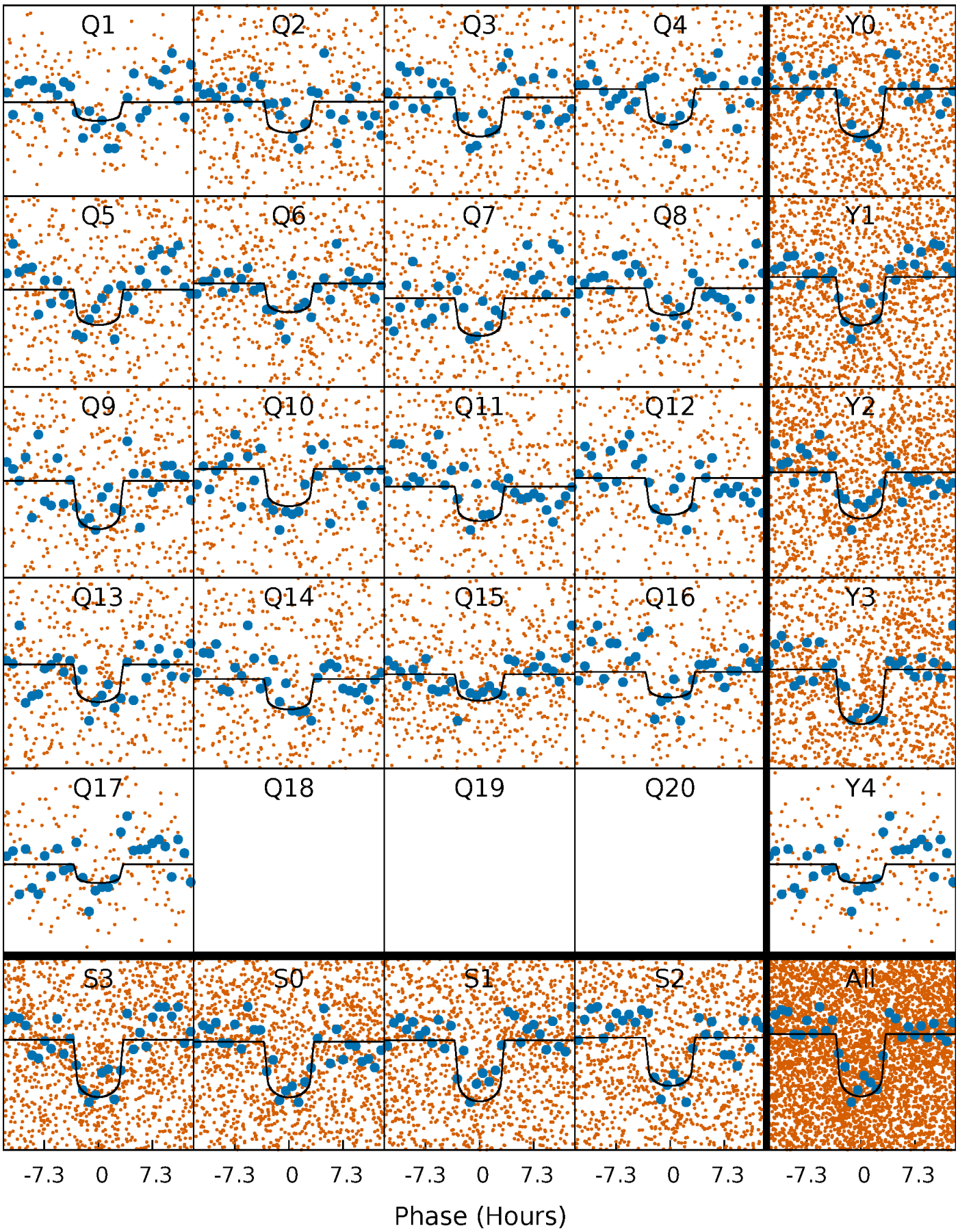
PDC Quarter-Phased Transit Curves

TCE 009288237-01 P= 7.491294 Days T_0=135.314097 (BKJD)



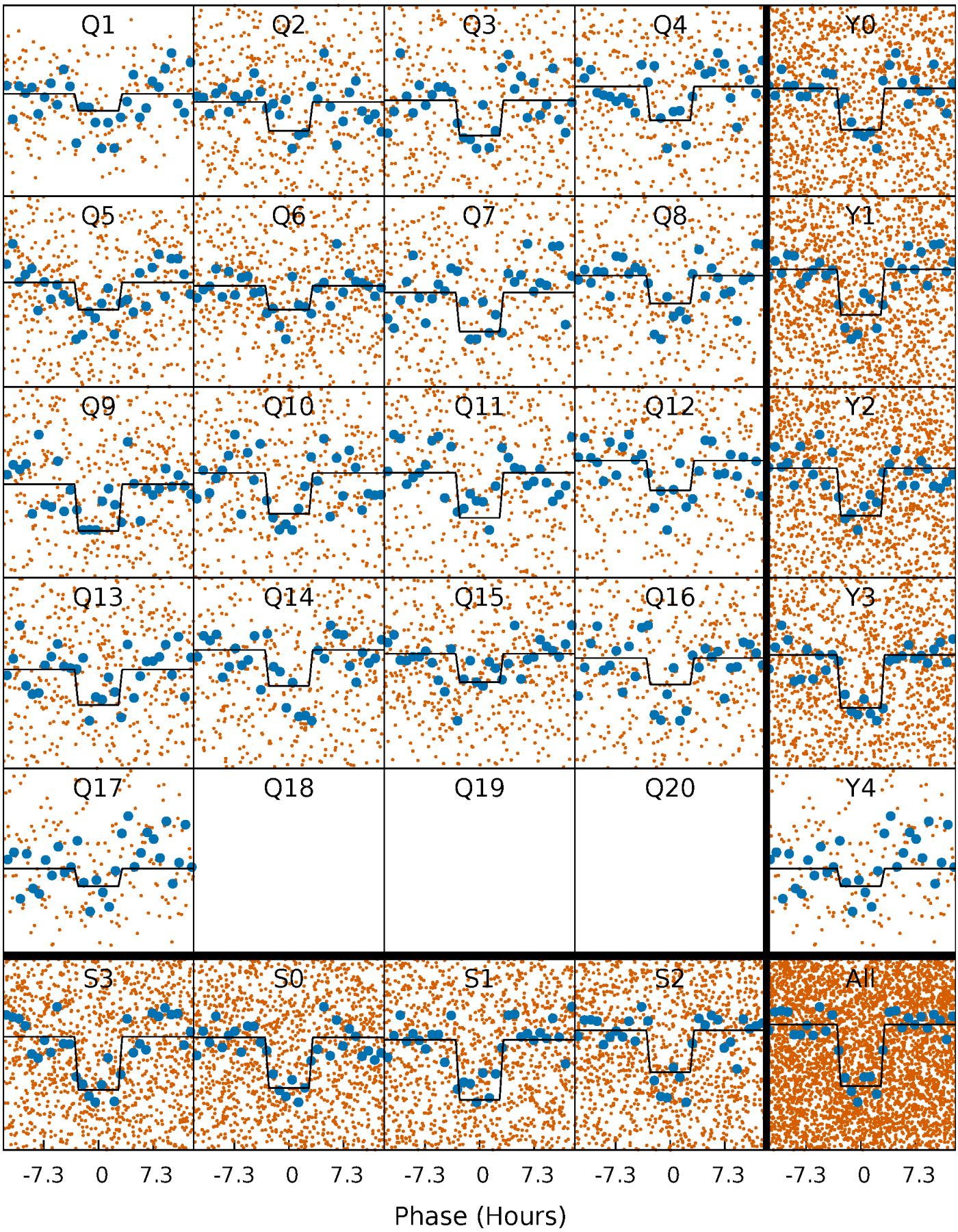
DV Quarter-Phased Transit Curves

TCE 009288237-01 P= 7.491294 Days T_0=135.314097 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

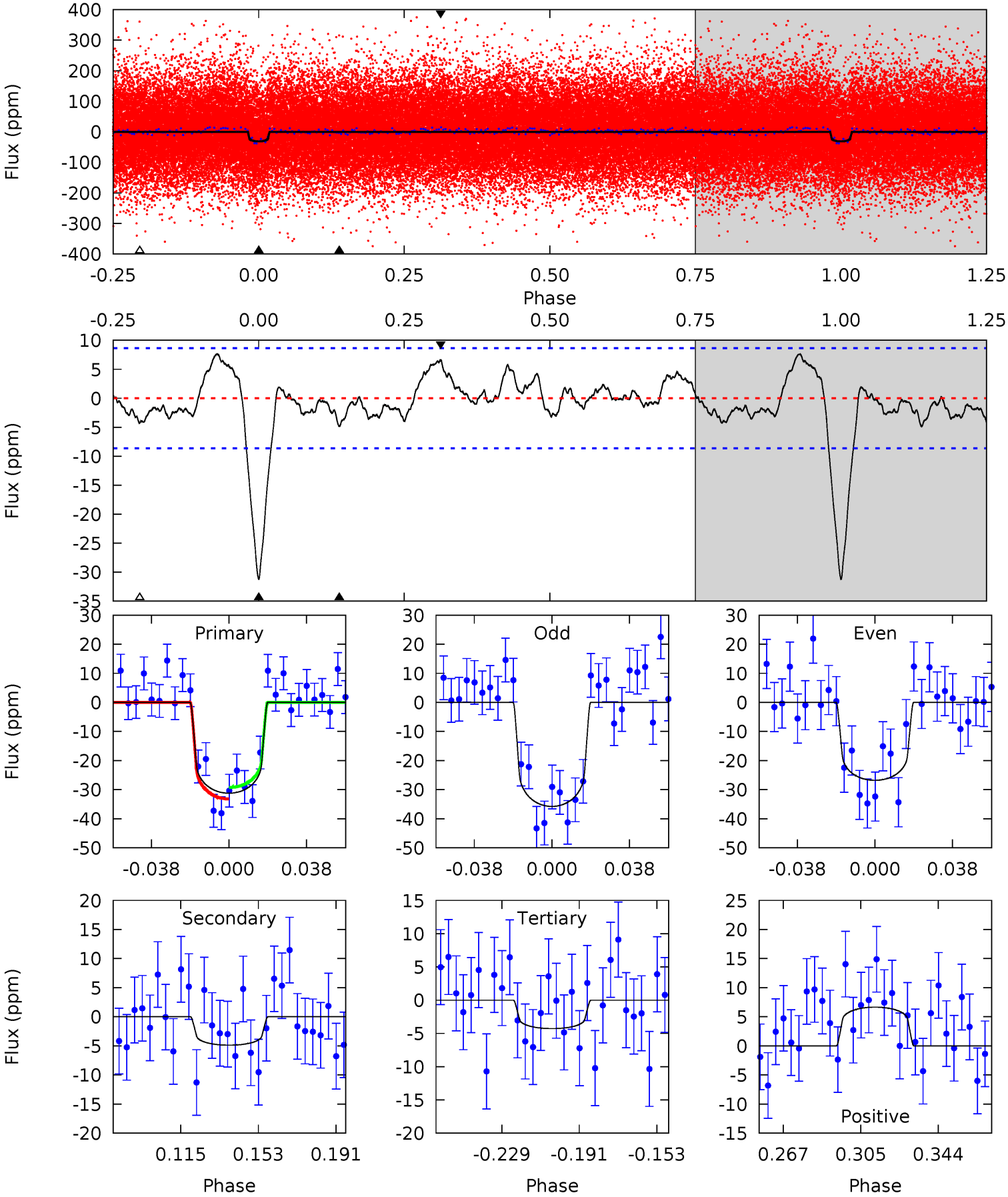
TCE 009288237-01 P= 7.491212 Days T_0=135.318739 (BKJD)



DV Model-Shift Uniqueness Test

009288237-01, P = 7.491294 Days, E = 127.822803 Days

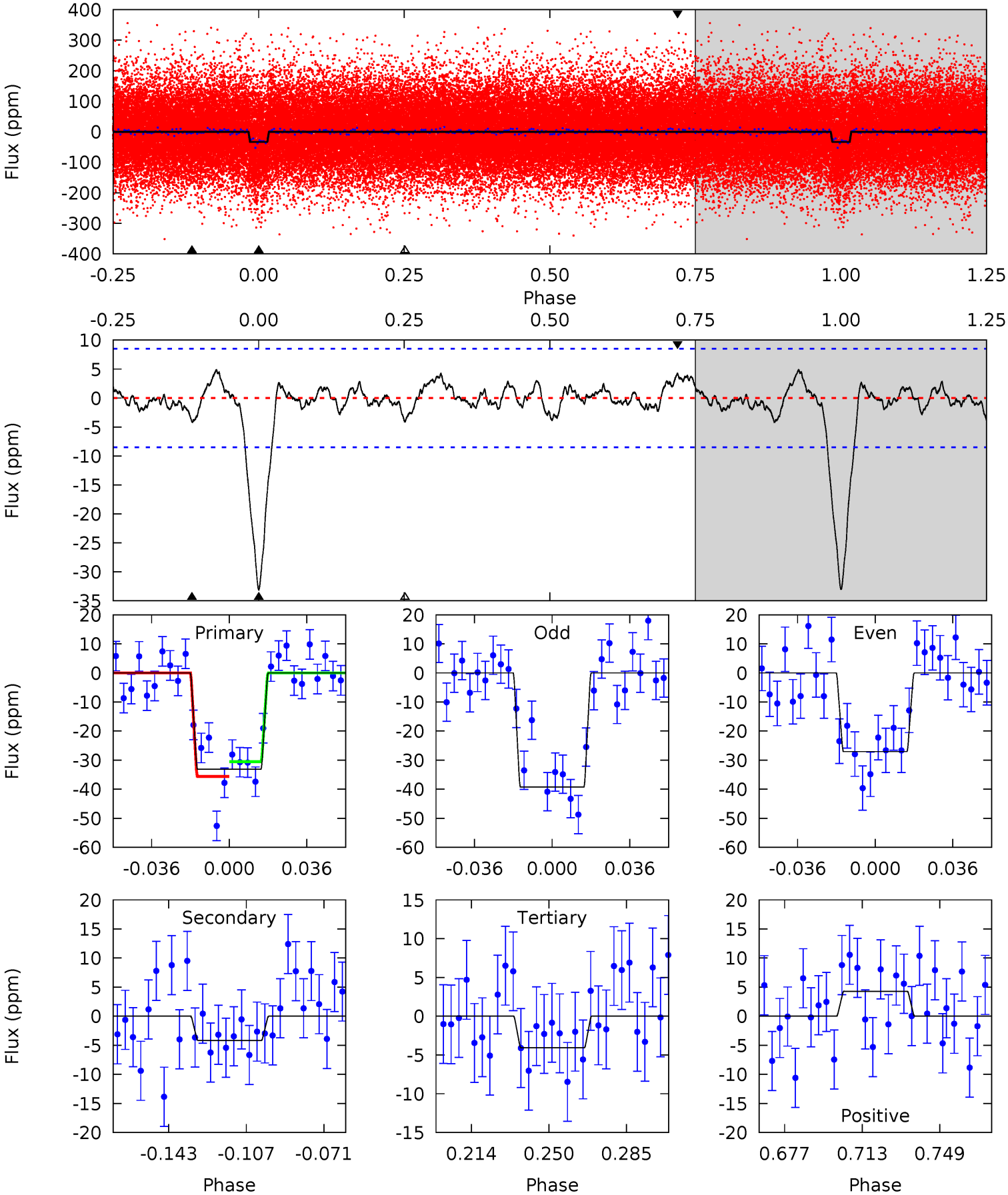
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.2	2.69	2.36	3.67	4.76	2.07	1.54	14.9	13.5	0.33	-0.98	2.48	0.98	0.20	1.09



Alt Model-Shift Uniqueness Test

009288237-01, P = 7.491212 Days, E = 127.827527 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	2.34	2.29	2.41	4.78	2.10	0.96	16.3	16.2	0.05	-0.07	3.43	1.08	0.13	1.43



Stellar Parameters For KIC 009288237

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	6177^{+168}_{-168}	$3.993^{+0.266}_{-0.114}$	$-0.360^{+0.350}_{-0.300}$	$1.710^{+0.347}_{-0.520}$	$1.051^{+0.202}_{-0.151}$	$0.296^{+0.460}_{-0.105}$
	+3%/-3%	+7%/-3%	+97%/-83%	+20%/-30%	+19%/-14%	+156%/-35%
Source	PHO1	FLK73	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 009288237-01 / KOI 3114.01

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-5±2	$1.16^{+0.32}_{-0.28}$	1781^{+107}_{-143}	3921^{+442}_{-387}	12^{+10}_{-6}
Alt.	-4±2	$1.02^{+0.33}_{-0.27}$	1776^{+113}_{-140}	3982^{+515}_{-469}	13^{+13}_{-7}

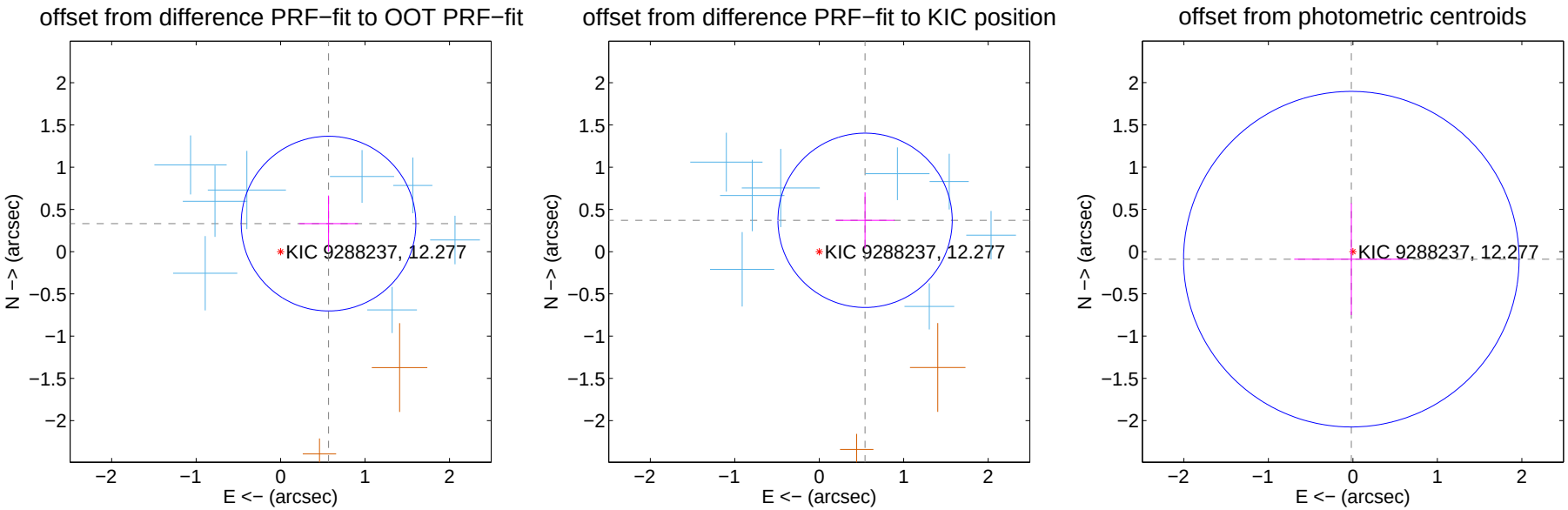
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

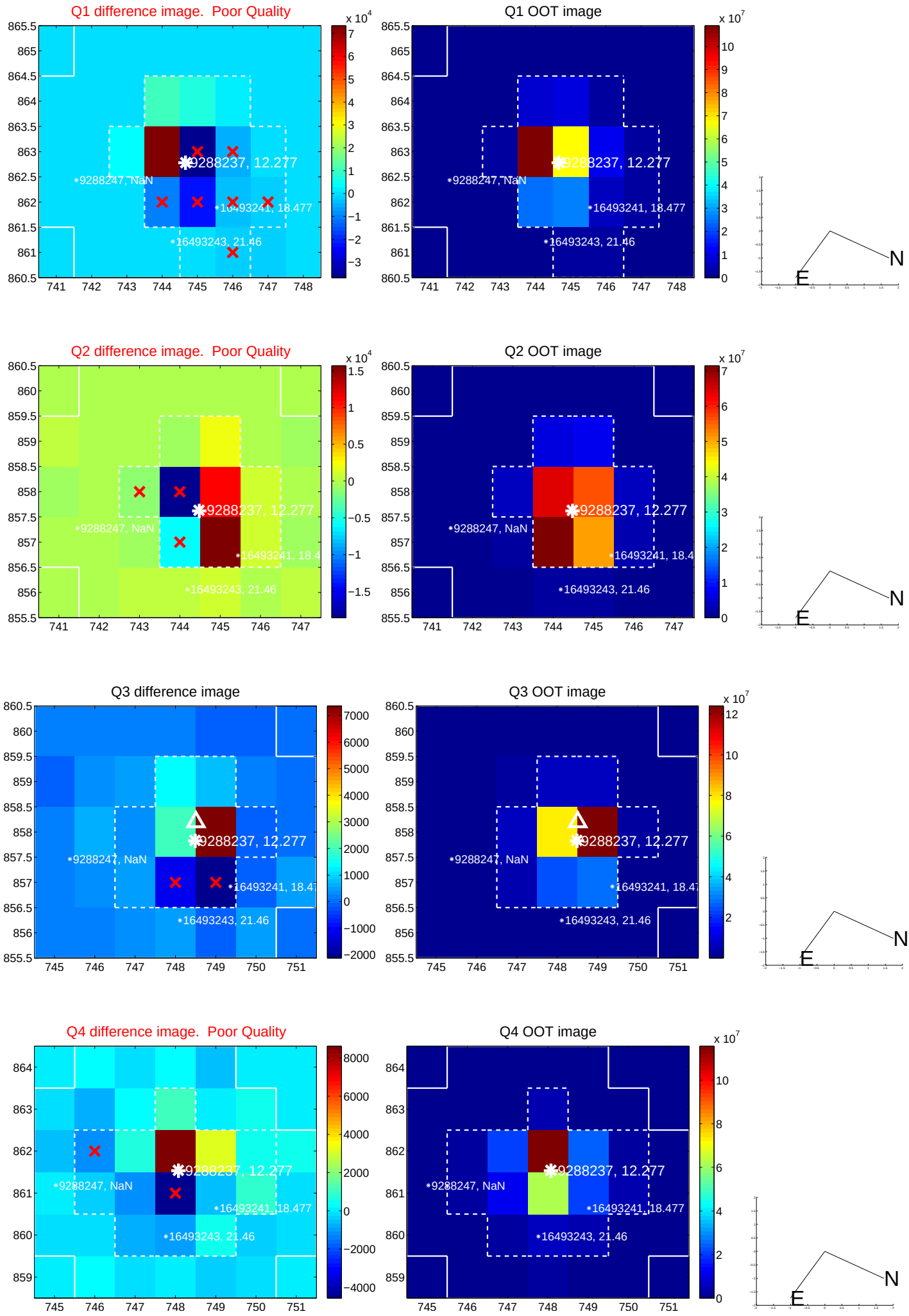
Supplemental centroid analysis for 009288237-01. Kepler magnitude: 12.28. Transit SNR 11.69
There are 8 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.658 ± 0.345	1.91	-0.568 ± 0.349	0.332 ± 0.332
PRF-fit source offset from KIC position	0.657 ± 0.344	1.91	-0.542 ± 0.349	0.371 ± 0.332
photometric centroid source offset	0.09 ± 0.66	0.14	0.02 ± 0.67	-0.09 ± 0.66

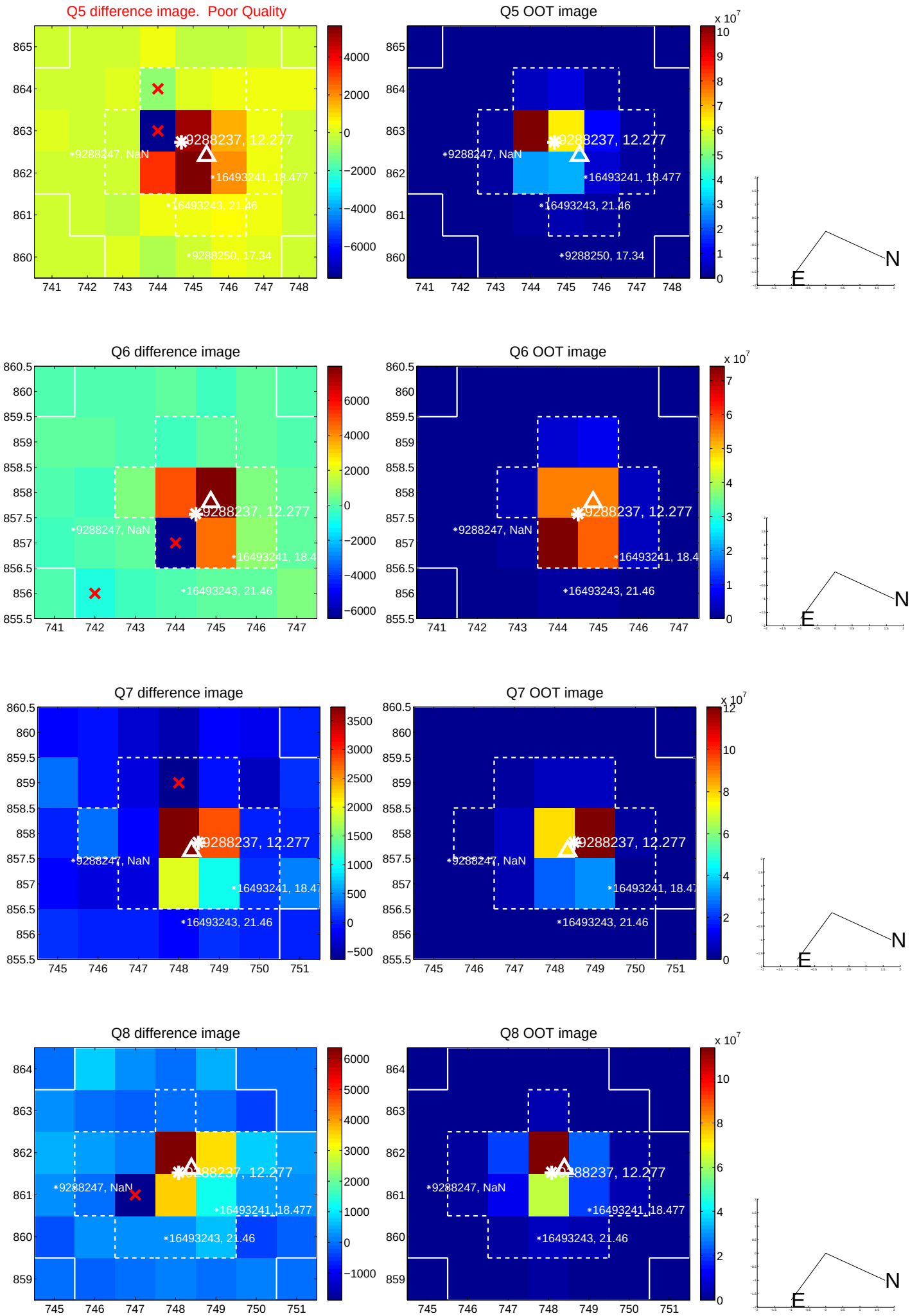


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

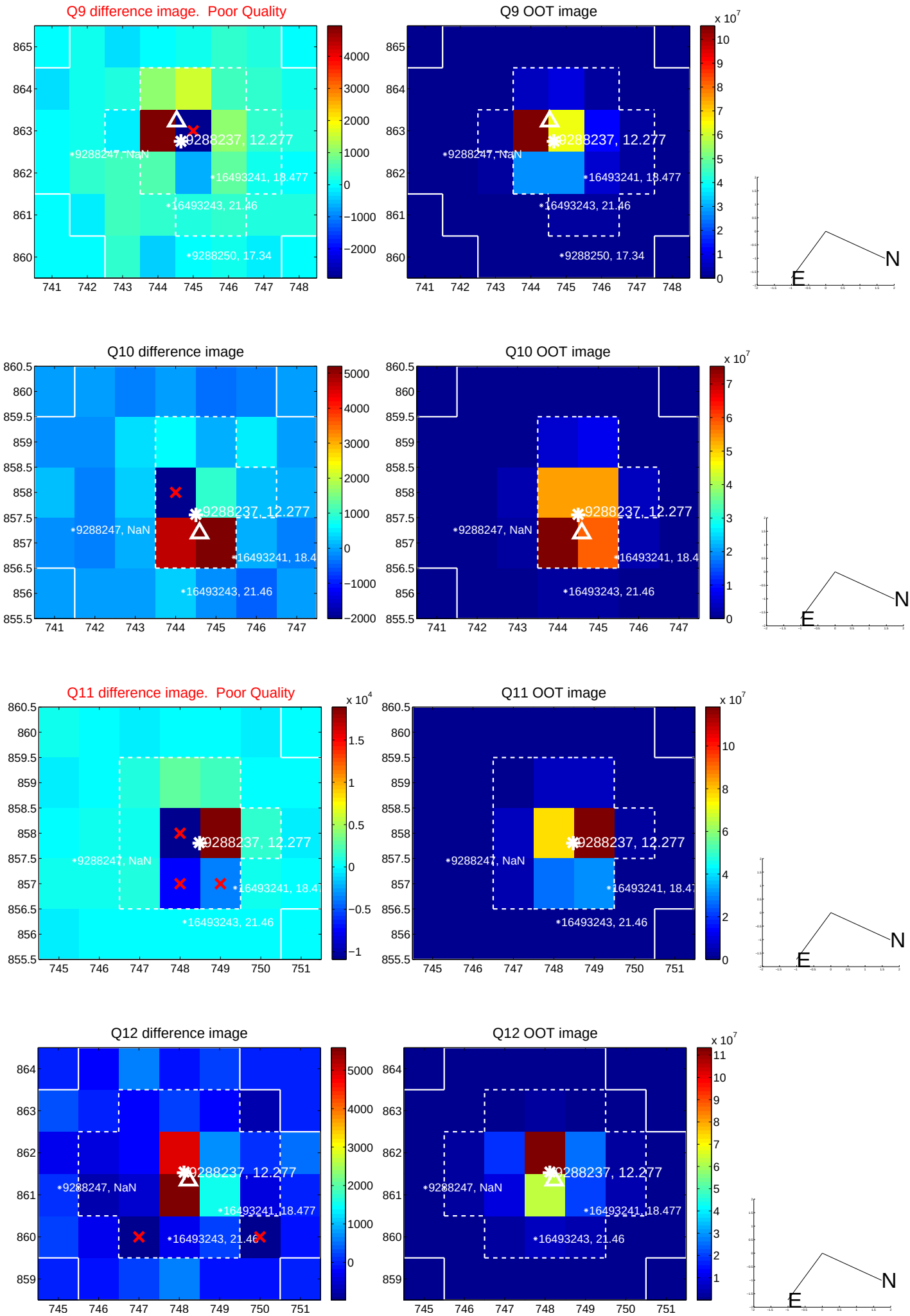
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



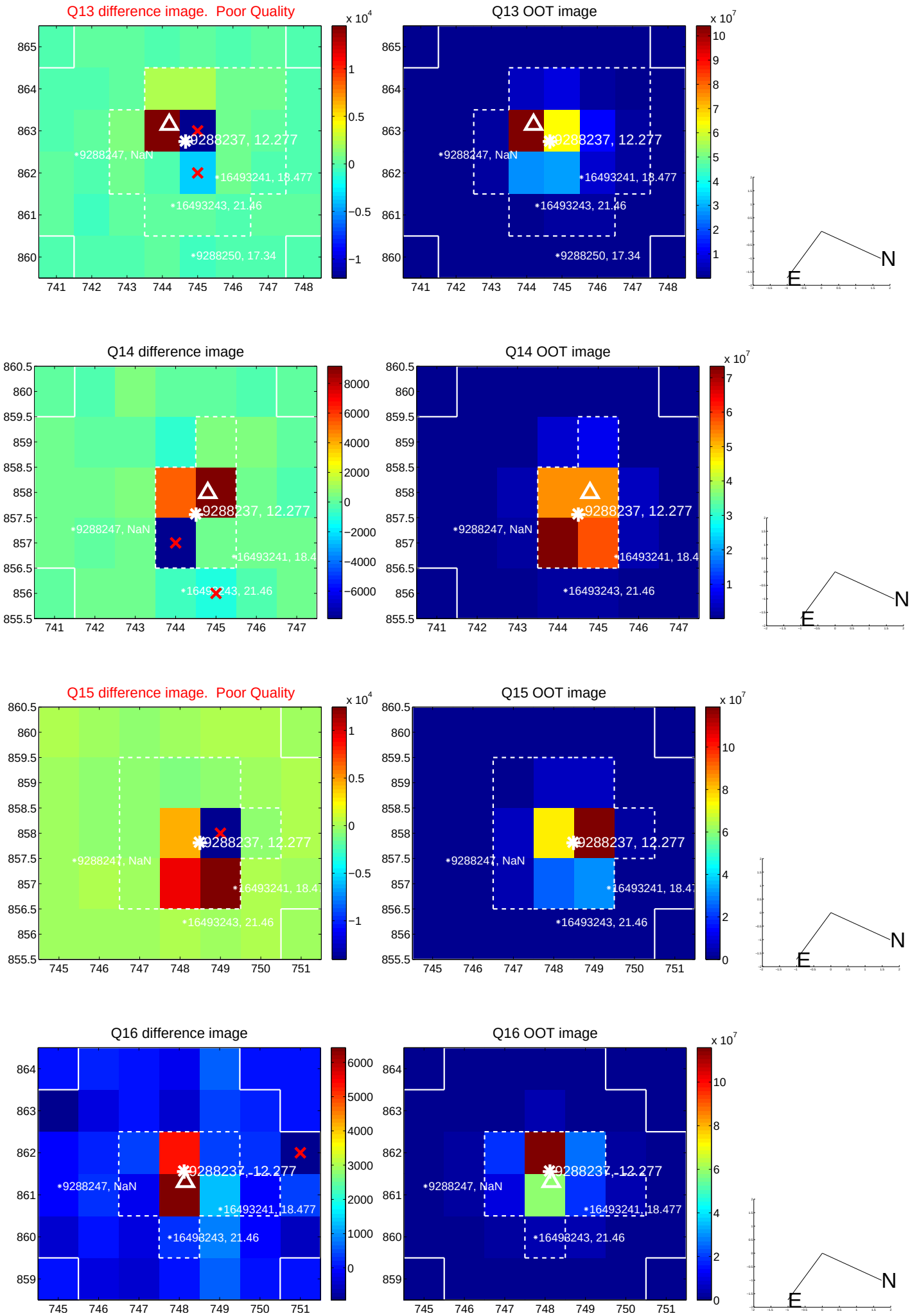
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



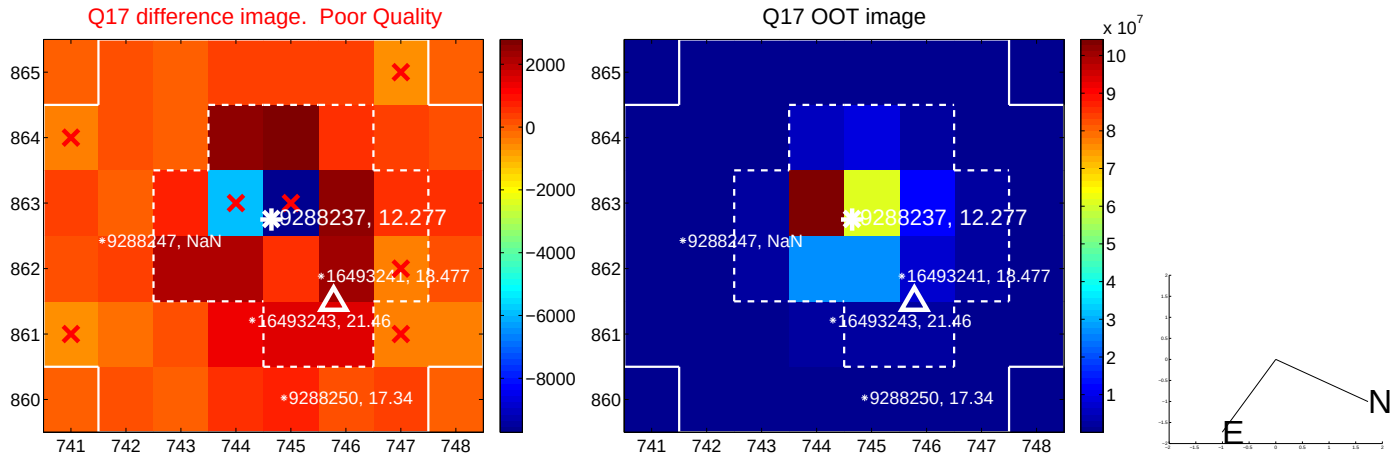
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

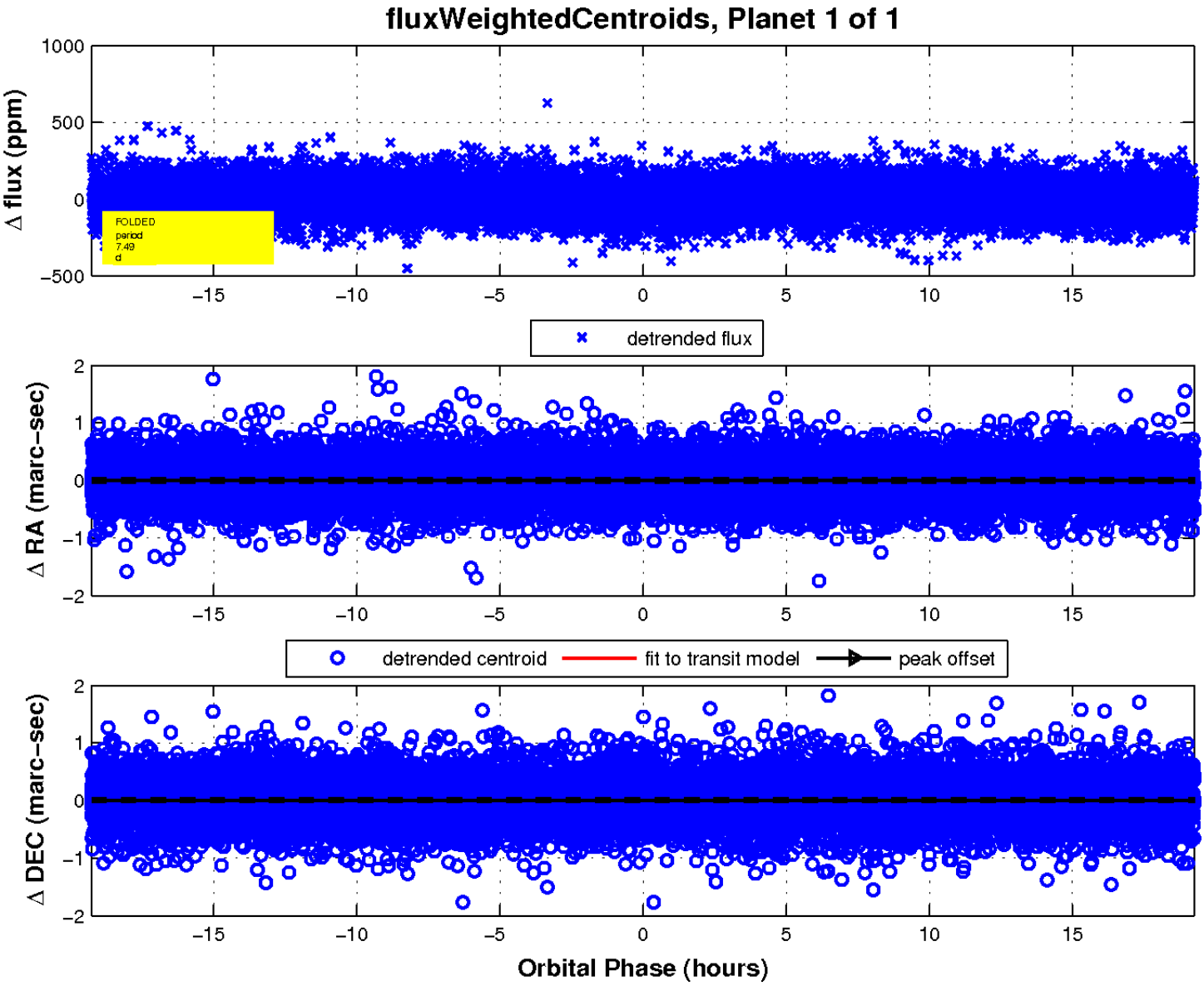
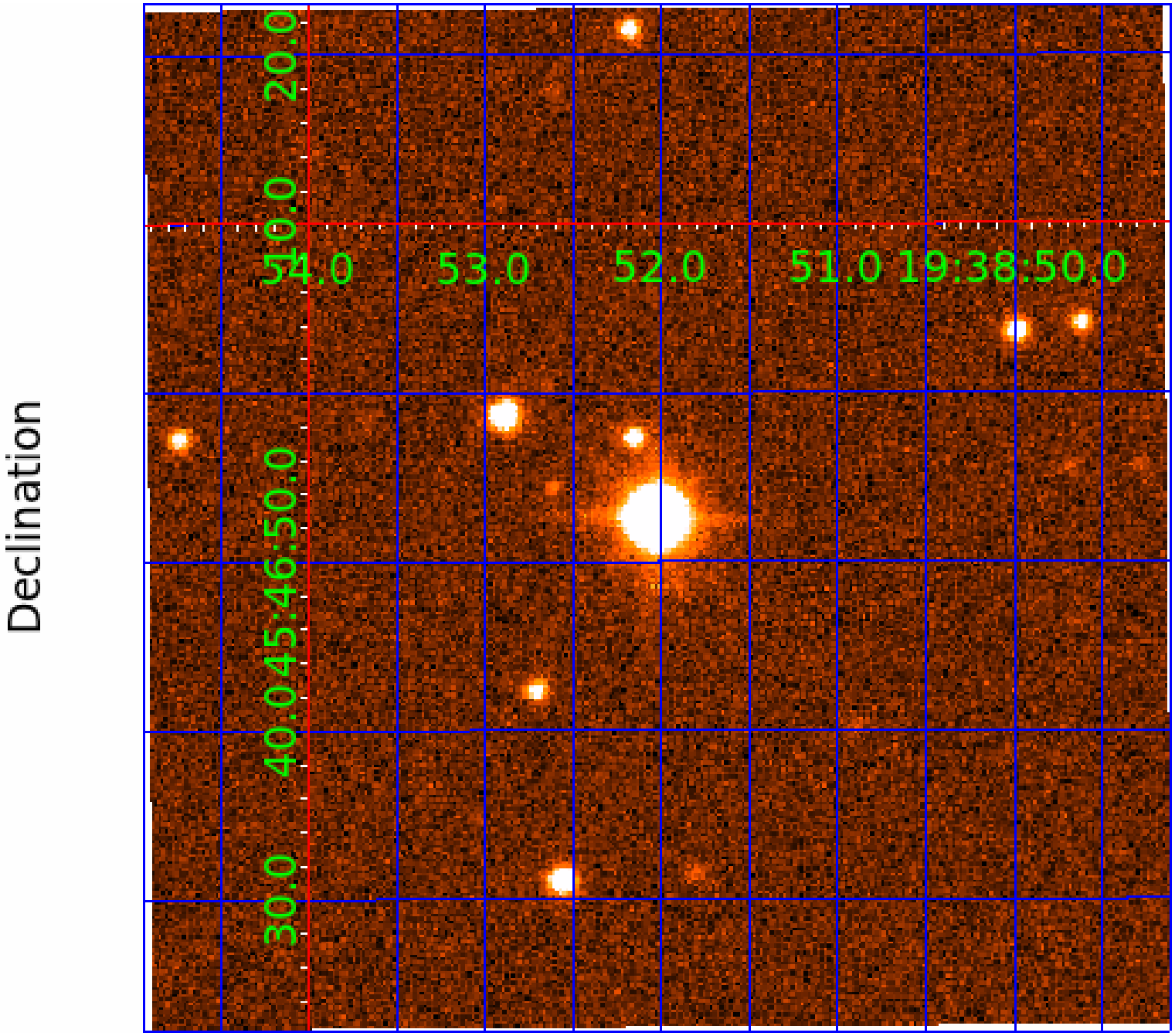


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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





UKIRT Image