KIC 008956206

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 ($S_\oplus$)
008956206-01	OBS	2048.01	6.179986	132.721724	714.9	2.229	25.8	29.2	0.79	5149	2.50	104.21

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008956206-01	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS

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.

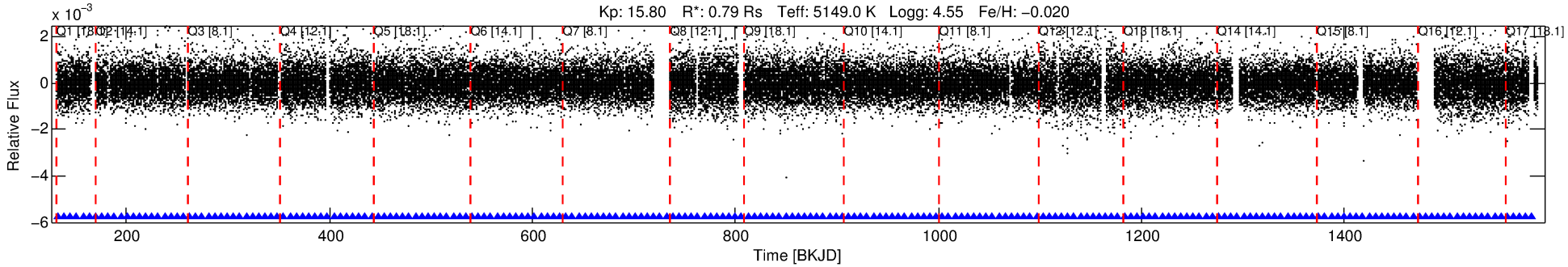
Ephemeris Match Information For 008956206-01

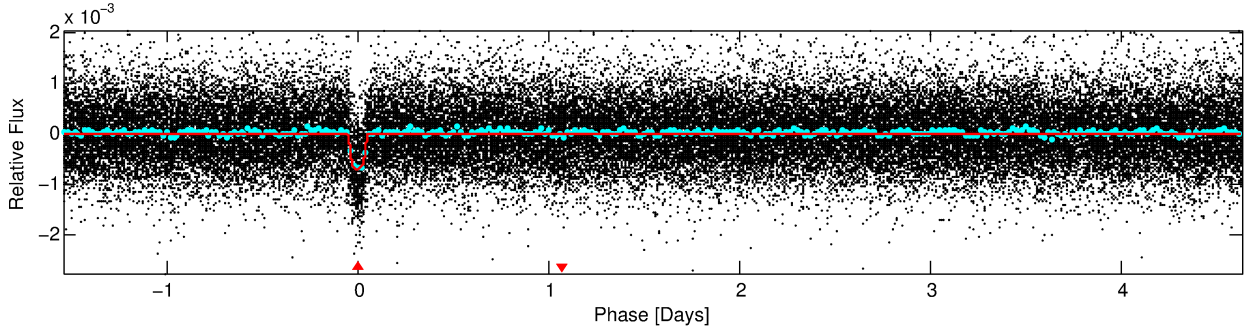
No Significant Match Found

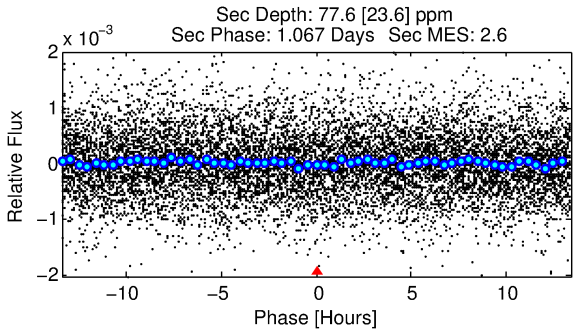
DV One-Page Summary

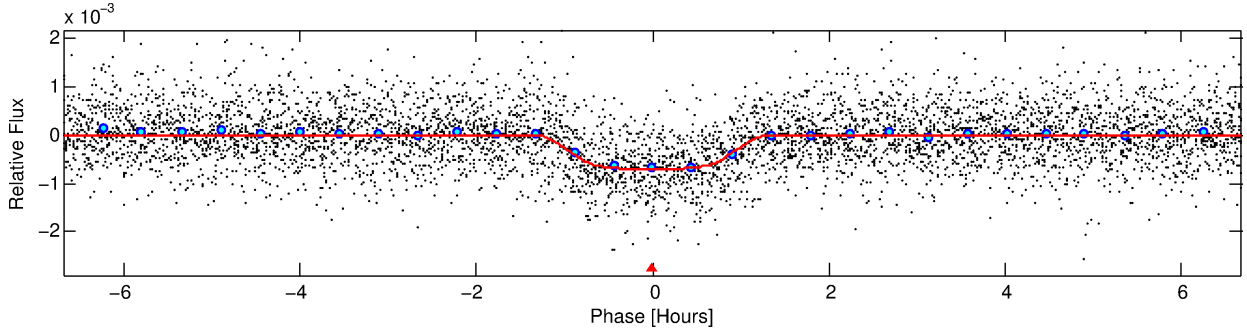
KIC: 8956206 Candidate: 1 of 1 Period: 6.180 d
KOI: K02048.01 Corr: 0.972

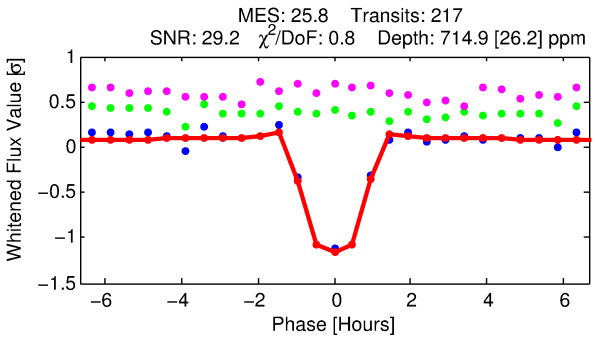
Kp: 15.80 R*: 0.79 Rs Teff: 5149.0 K Logg: 4.55 Fe/H: −0.020

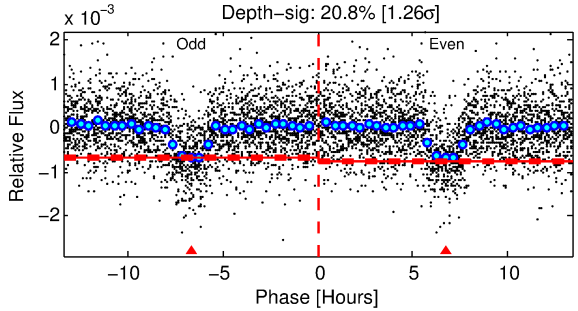


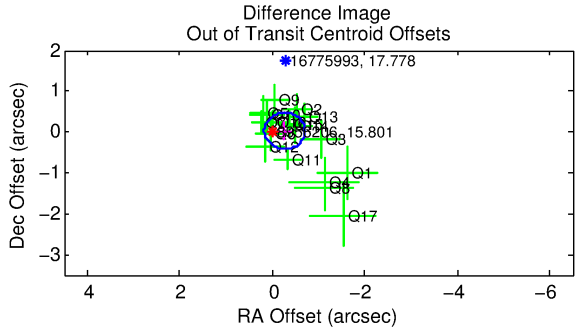












DV Fit Results:

Period = 6.17999 [0.00001] d
Epoch = 132.7217 [0.0015] BKJD
Rp/R* = 0.0290 [0.0058]
a/R* = 11.56 [8.90]
b = 0.87 [0.22]

Seff = 104.21 [11.89]
Teq = 815 [23] K
Rp = 2.50 [0.53] Re
a = 0.0615 [0.0034] AU

Ag = 25.84 [13.21] [1.88σ]
Teffp = 2840 [363] K [5.57σ]

DV Diagnostic Results:

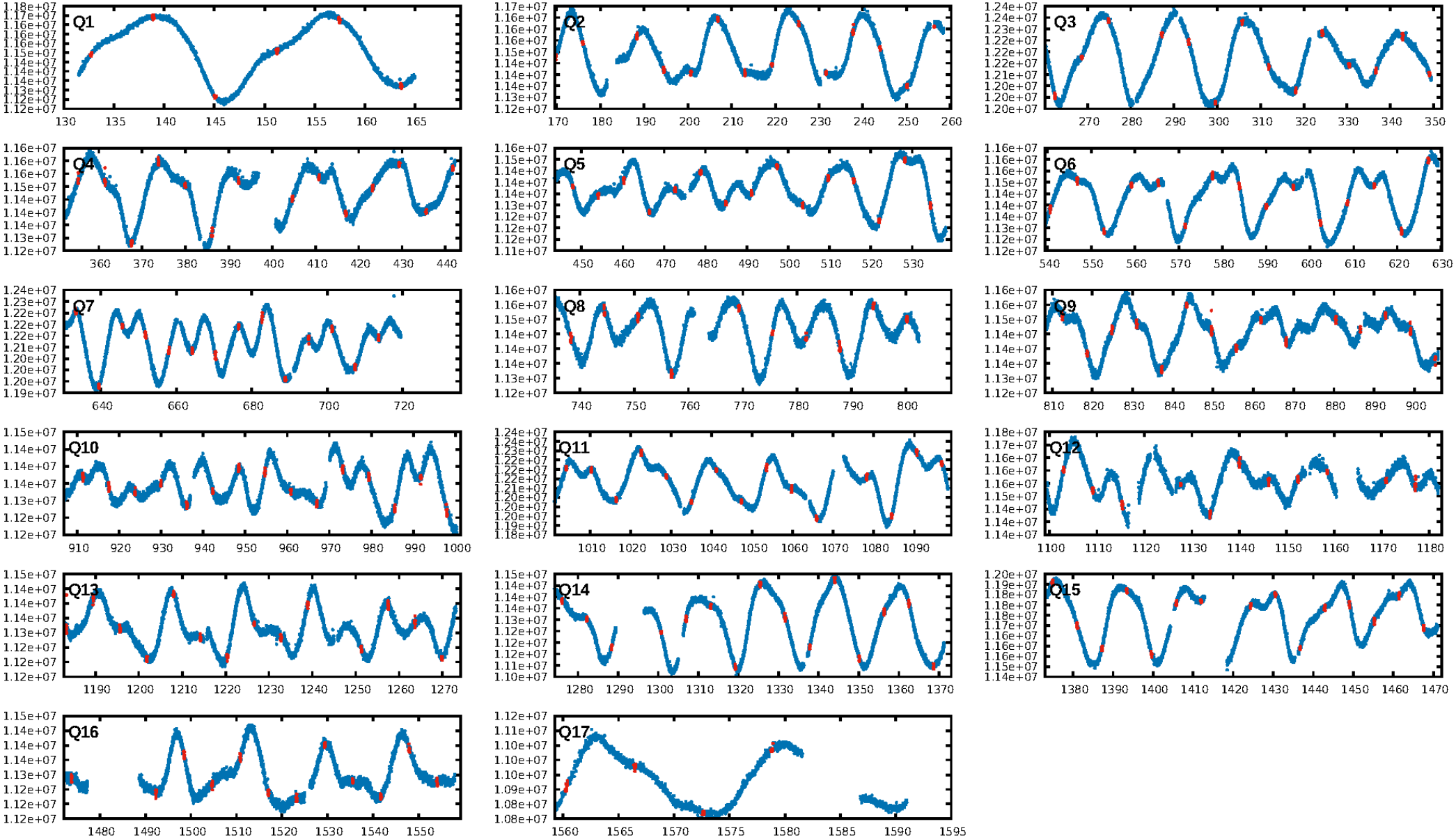
ShortPeriod−sig: N/A
LongPeriod−sig: N/A
ModelChiSquare2−sig: N/A
ModelChiSquareGof−sig: N/A
Bootstrap−pfa: 3.06e−141
RollingBand−fgt: 1.00 [207/207]
GhostDiagnostic−chr: 1.887

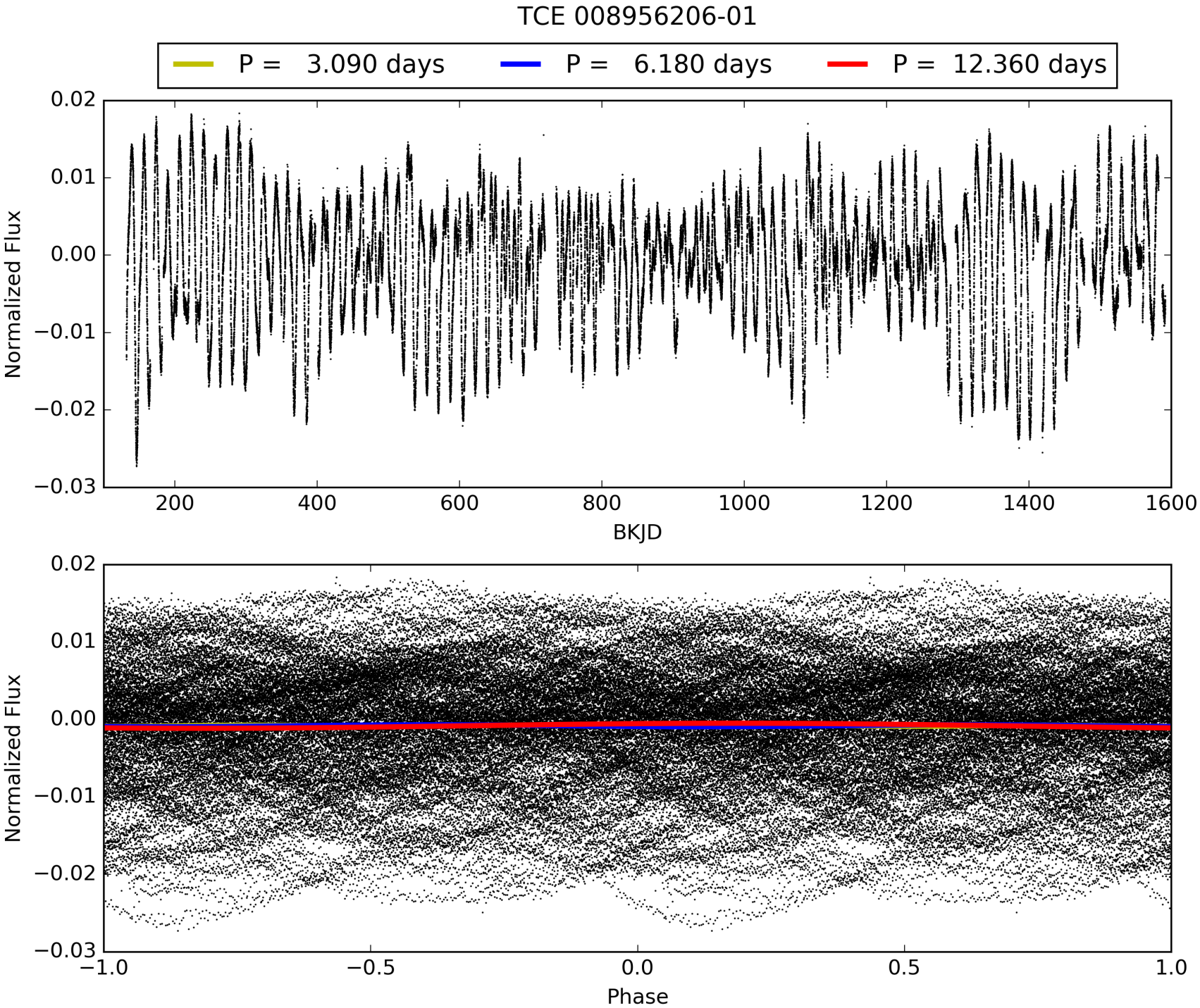
Centroid−sig: 0.2%
Centroid−so: 0.819 arcsec [2.23σ]
OotOffset−rm: 0.266 arcsec [1.80σ]
KicOffset−rm: 0.286 arcsec [1.53σ]
OotOffset−st: 4/4/4/5 [17]
KicOffset−st: 4/4/4/5 [17]
DiffImageQuality−fgm: 1.00 [17/17]
DiffImageOverlap−fno: 1.00 [17/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31−Jan−2016 15:43:01 Z

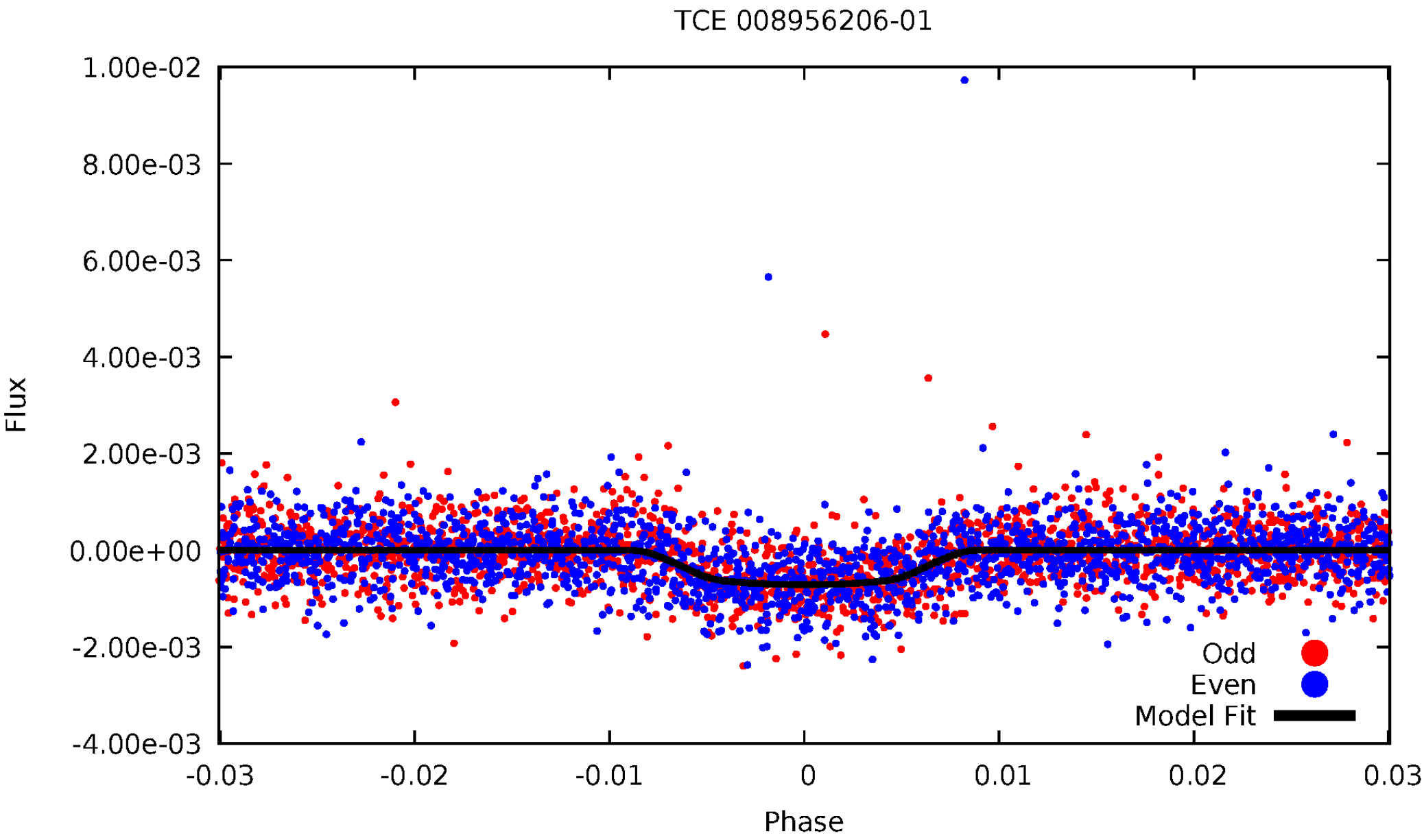
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 008956206-01, PDC Light Curves

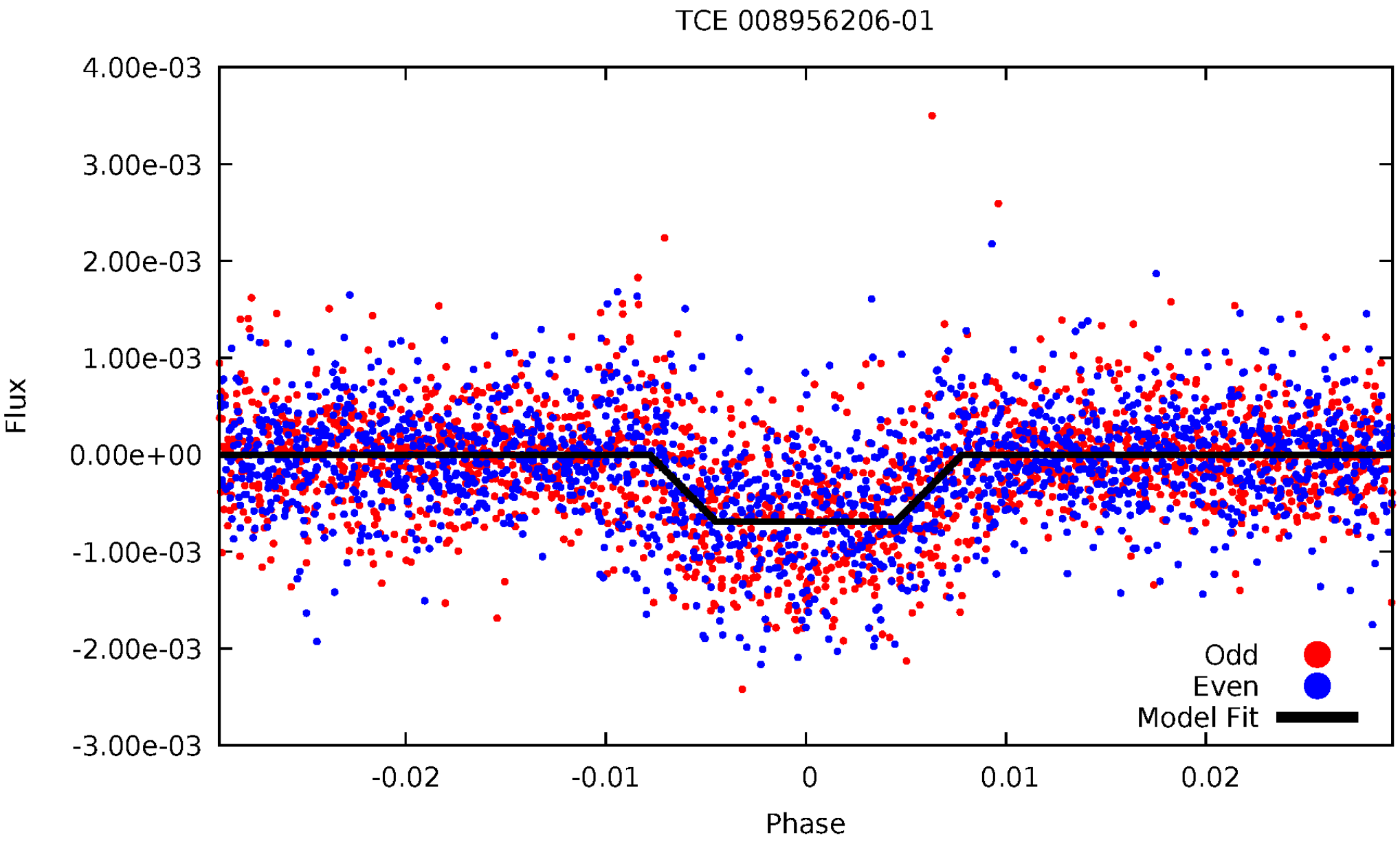



TCE 008956206-01
P = 3.090 days
P = 6.180 days
P = 12.360 days
Normalized Flux
BKJD
Normalized Flux
Phase

DV Odd/Even


TCE 008956206-01
1.00e-02
8.00e-03
6.00e-03
4.00e-03
2.00e-03
0.00e+00
-2.00e-03
-4.00e-03
Flux
-0.03
-0.02
-0.01
0
0.01
0.02
0.03
Phase
Odd
Even
Model Fit

ALT Odd/Even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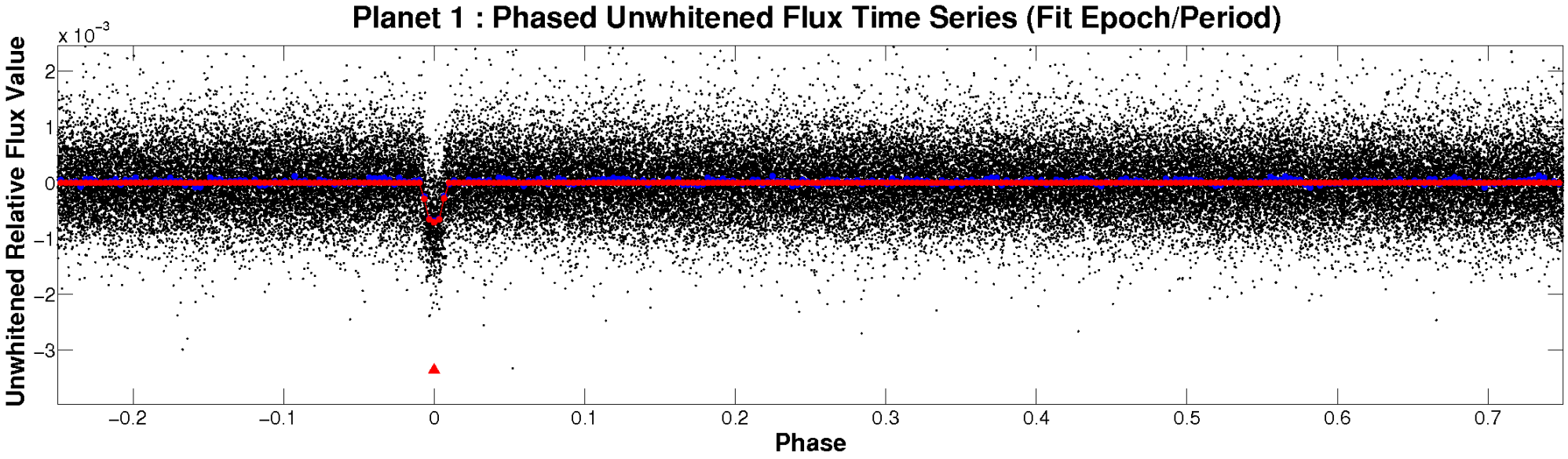
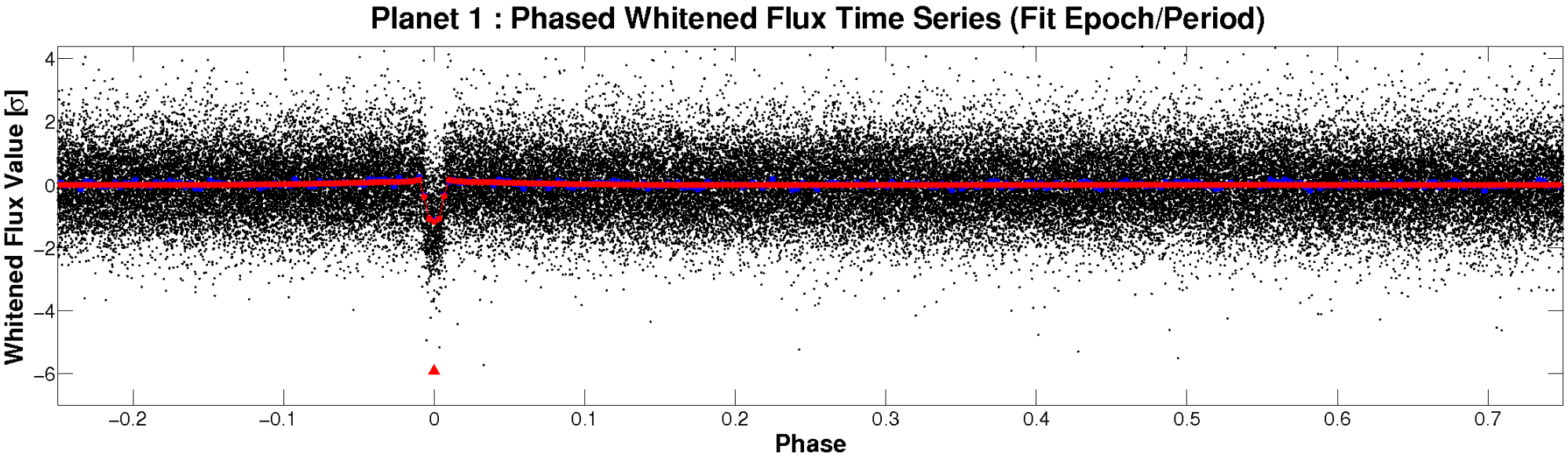
3.00e-03
2.00e-03
1.00e-03
0.00e+00
-1.00e-03
-2.00e-03
-3.00e-03
Flux
-0.02
-0.01
0
0.01
0.02
Phase
Odd
Even
Model Fit

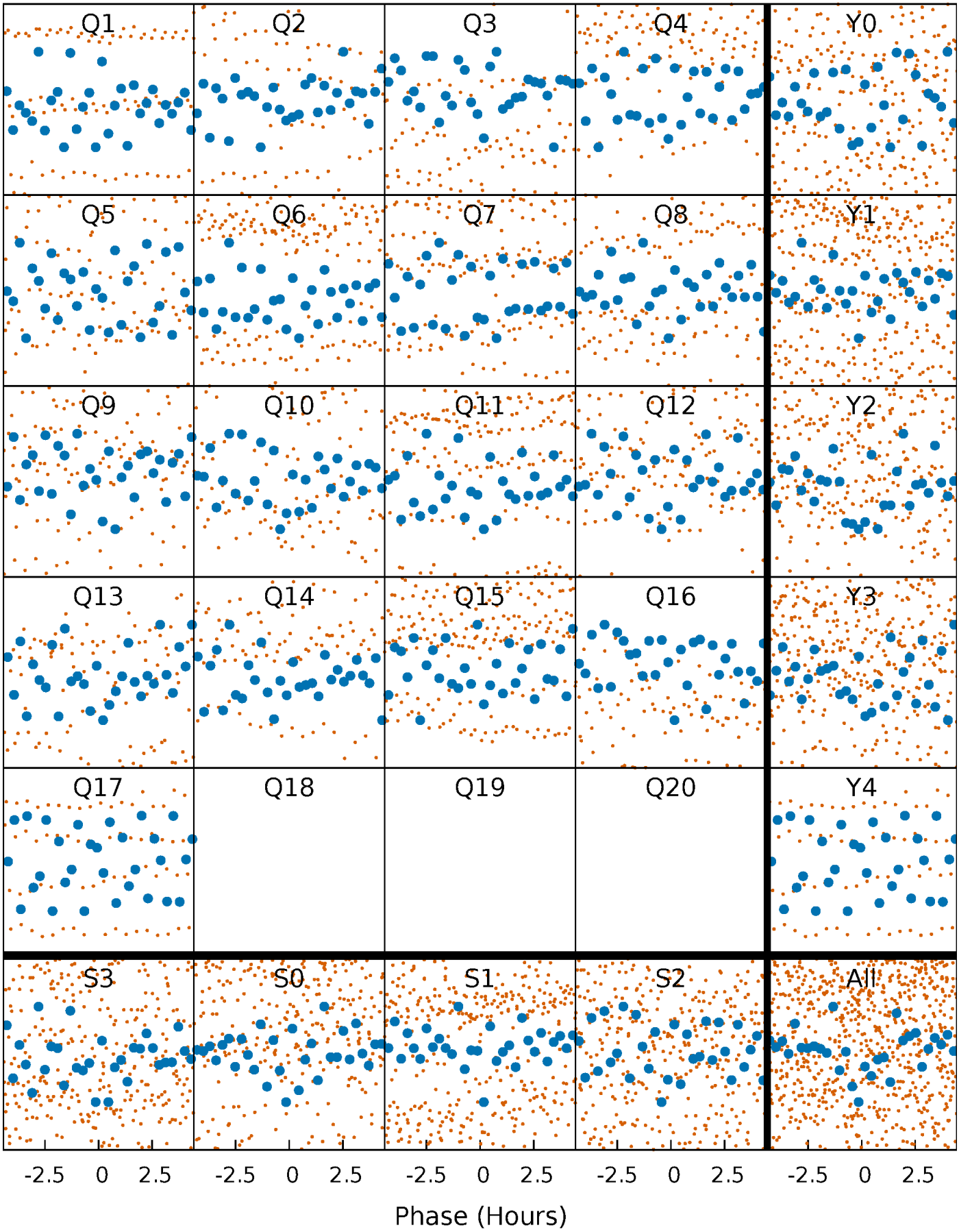
Non-Whitened Vs. Whitened Light Curve





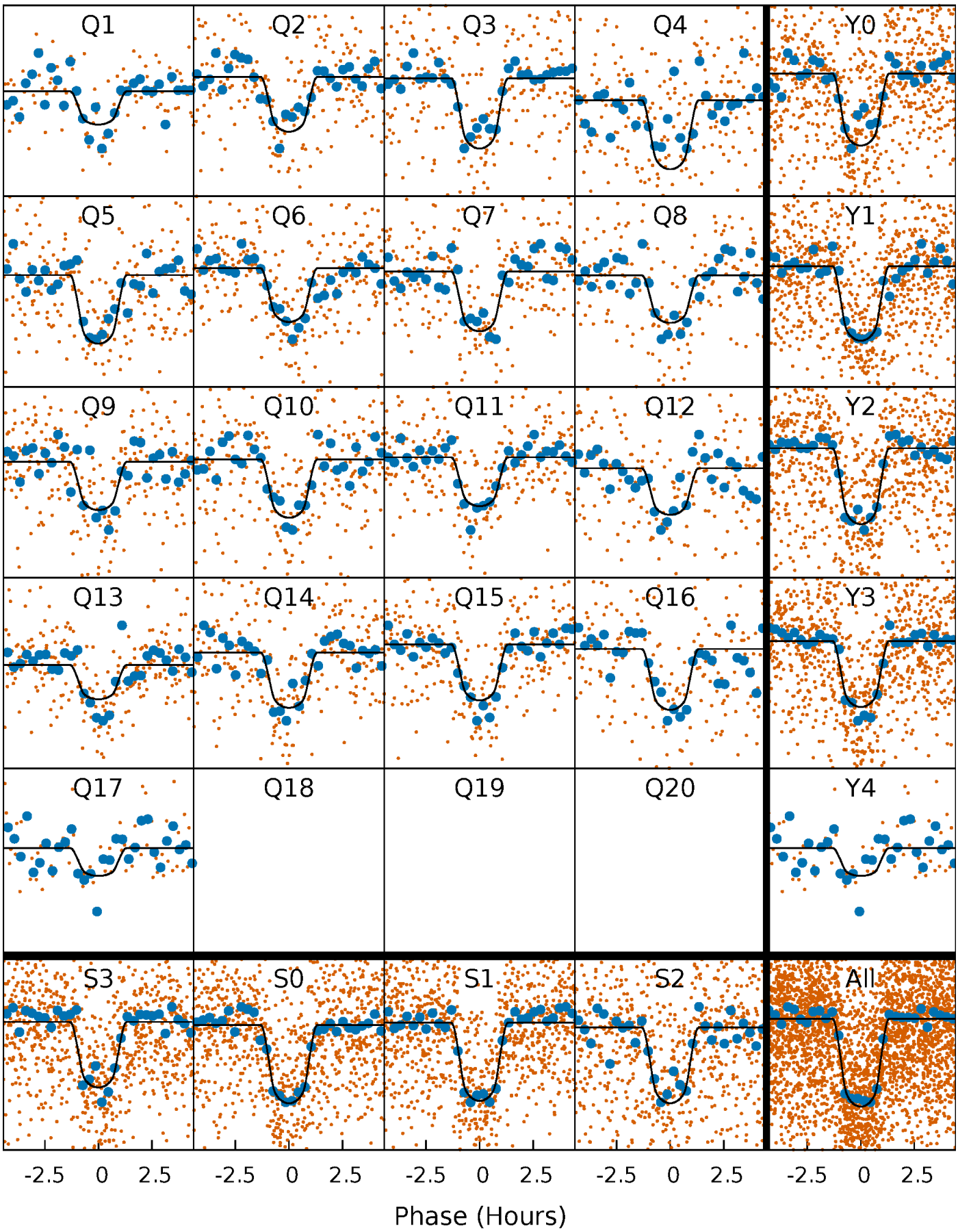
PDC Quarter-Phased Transit Curves

TCE 008956206-01 P= 6.179986 Days T_0=132.721724 (BKJD)



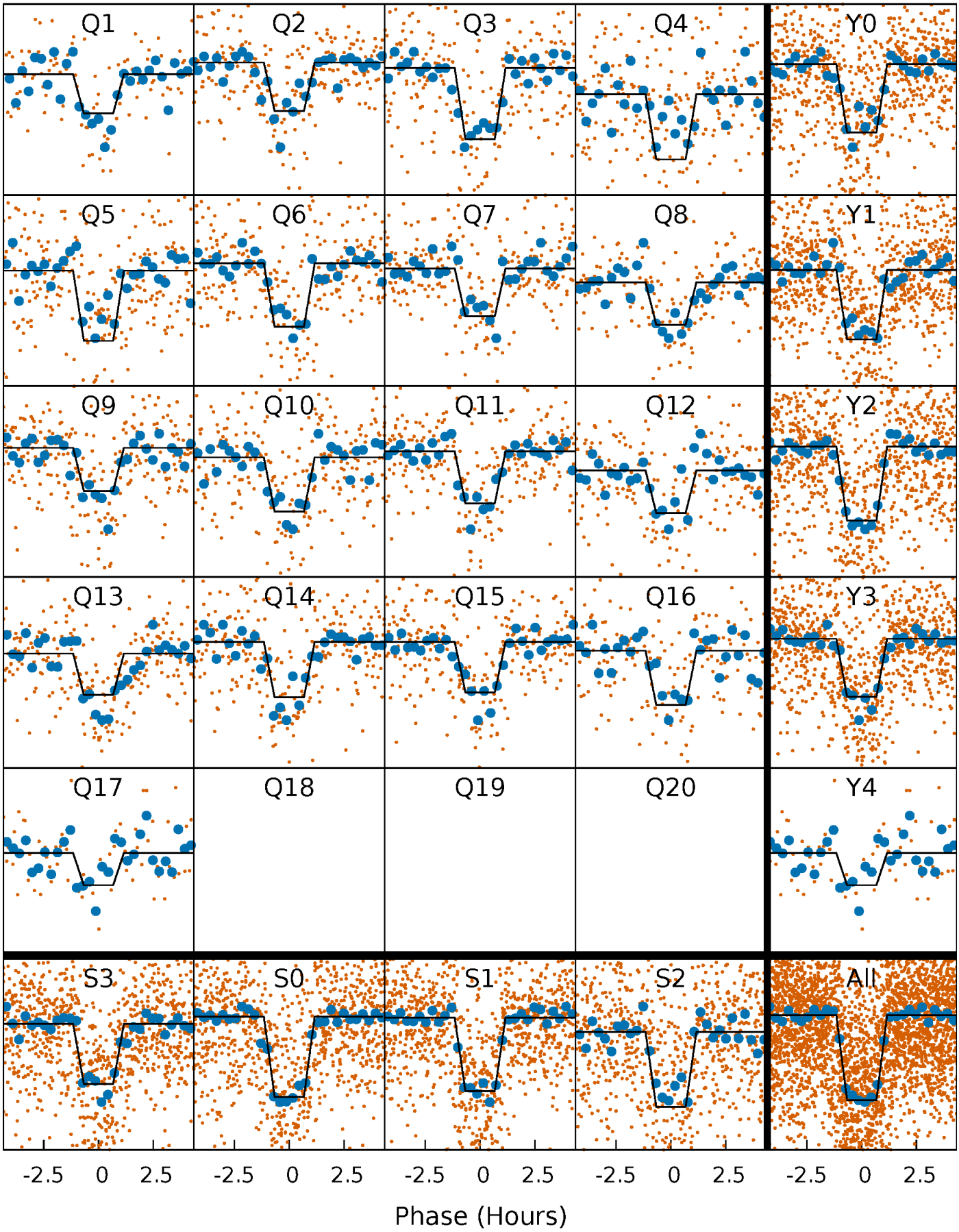
DV Quarter-Phased Transit Curves

TCE 008956206-01 P= 6.179986 Days T_0=132.721724 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

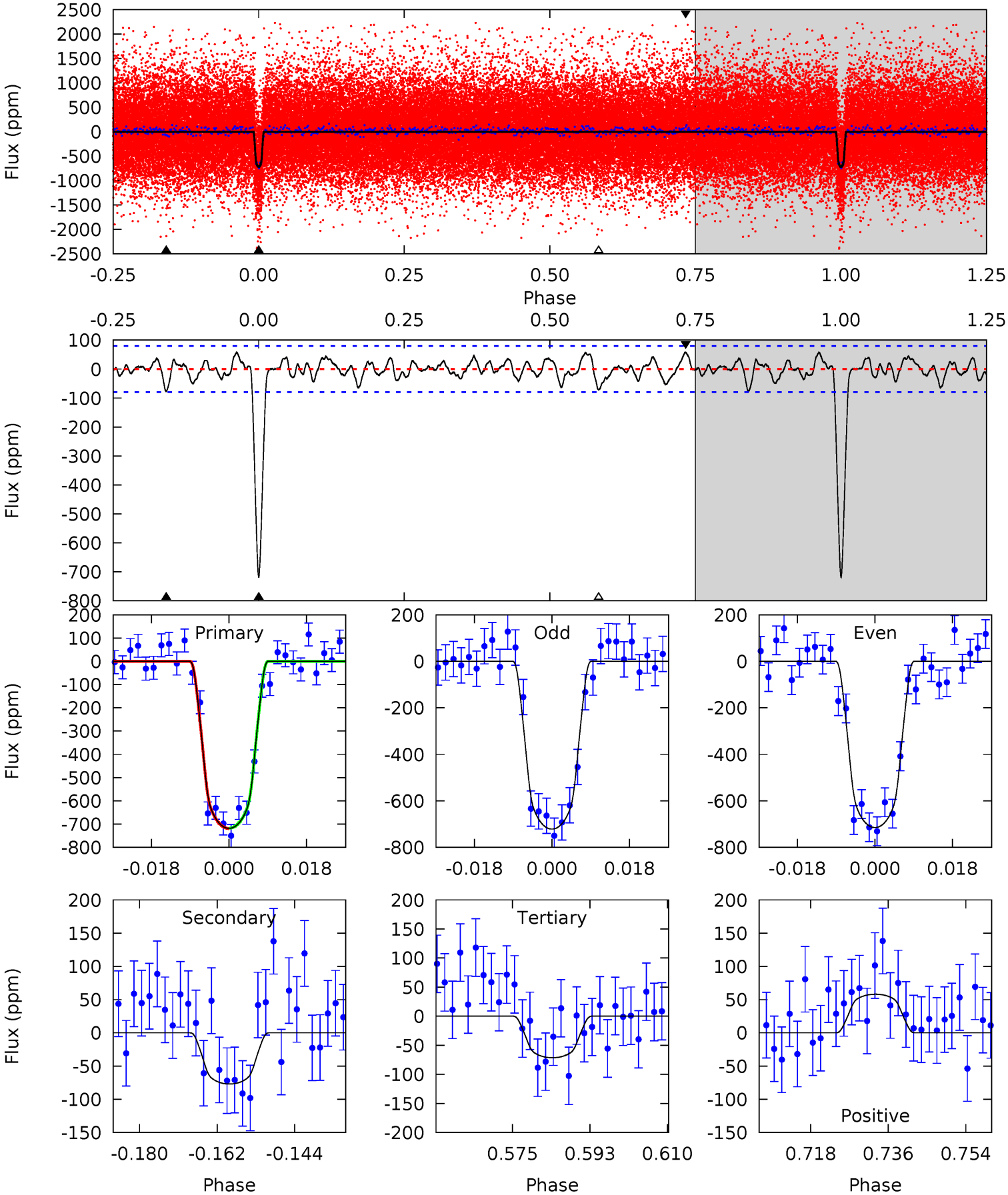
TCE 008956206-01 P= 6.179994 Days T_0=132.720691 (BKJD)



DV Model-Shift Uniqueness Test

008956206-01, P = 6.179986 Days, E = 126.541738 Days

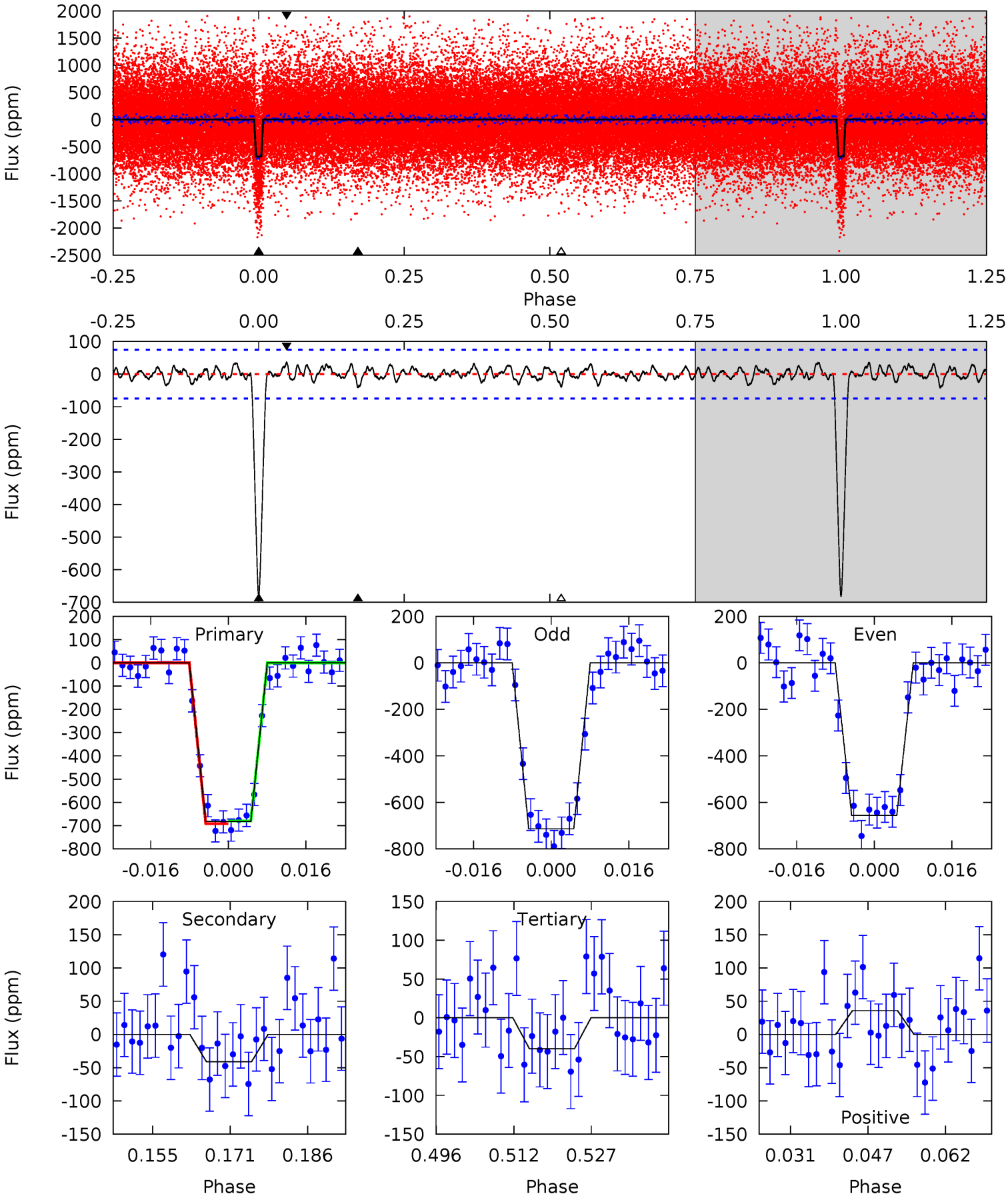
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
44.4	4.76	4.41	3.59	4.91	2.37	1.52	40.0	40.8	0.35	1.17	0.20	1.00	0.07	0.04



Alt Model-Shift Uniqueness Test

008956206-01, P = 6.179994 Days, E = 126.540697 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
45.0	2.72	2.63	2.37	4.94	2.42	0.93	42.3	42.6	0.08	0.35	1.89	1.06	0.05	0.39



Stellar Parameters For KIC 008956206

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	5149^{+103}_{-103}	$4.551^{+0.041}_{-0.045}$	$-0.020^{+0.150}_{-0.150}$	$0.791^{+0.051}_{-0.042}$	$0.811^{+0.046}_{-0.041}$	$2.308^{+0.372}_{-0.349}$
	+2%/-2%	+1%/-1%	+750%/-750%	+6%/-5%	+6%/-5%	+16%/-15%
Source	SPE58	SPE58	SPE58	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 008956206-01 / KOI 2048.01

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-77±16	$2.50^{+0.51}_{-0.48}$	1138^{+32}_{-30}	3342^{+253}_{-221}	26^{+15}_{-9}
Alt.	-41±15	$2.27^{+0.49}_{-0.51}$	1138^{+31}_{-26}	3115^{+318}_{-270}	16^{+14}_{-7}

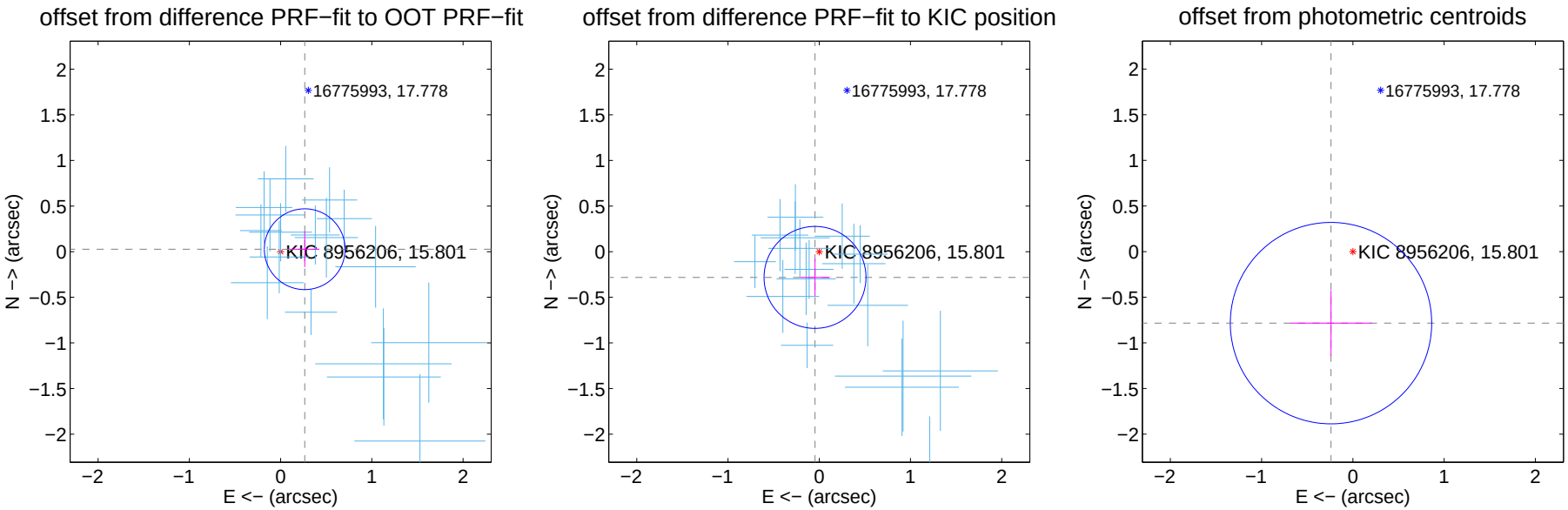
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

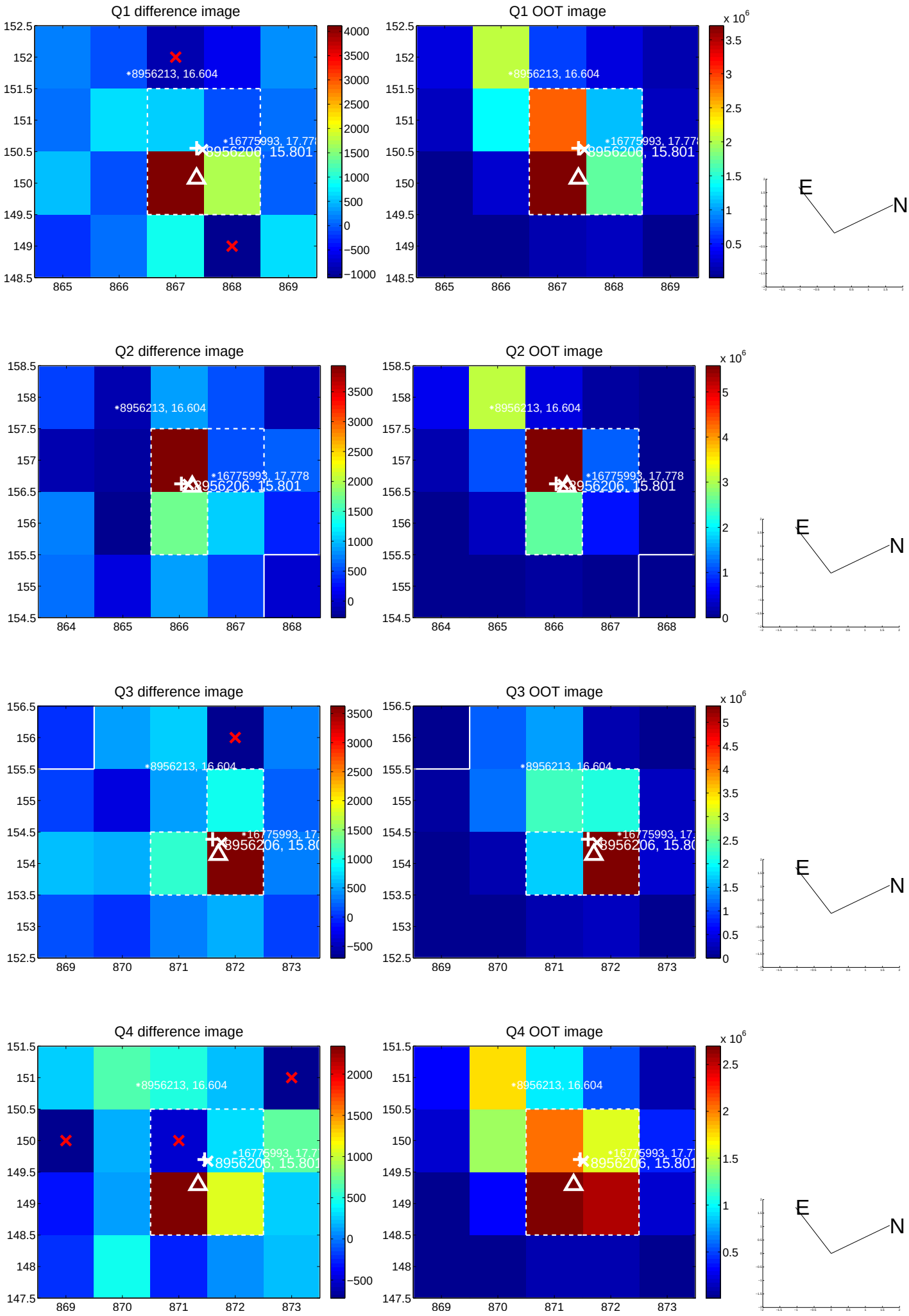
Supplemental centroid analysis for 008956206-01. Kepler magnitude: 15.80. Transit SNR 29.19
There are 17 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.56 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.266 ± 0.148	1.80	-0.264 ± 0.160	0.027 ± 0.195
PRF-fit source offset from KIC position	0.286 ± 0.186	1.53	0.047 ± 0.162	-0.282 ± 0.204
photometric centroid source offset	0.82 ± 0.37	2.23	0.24 ± 0.45	-0.78 ± 0.36

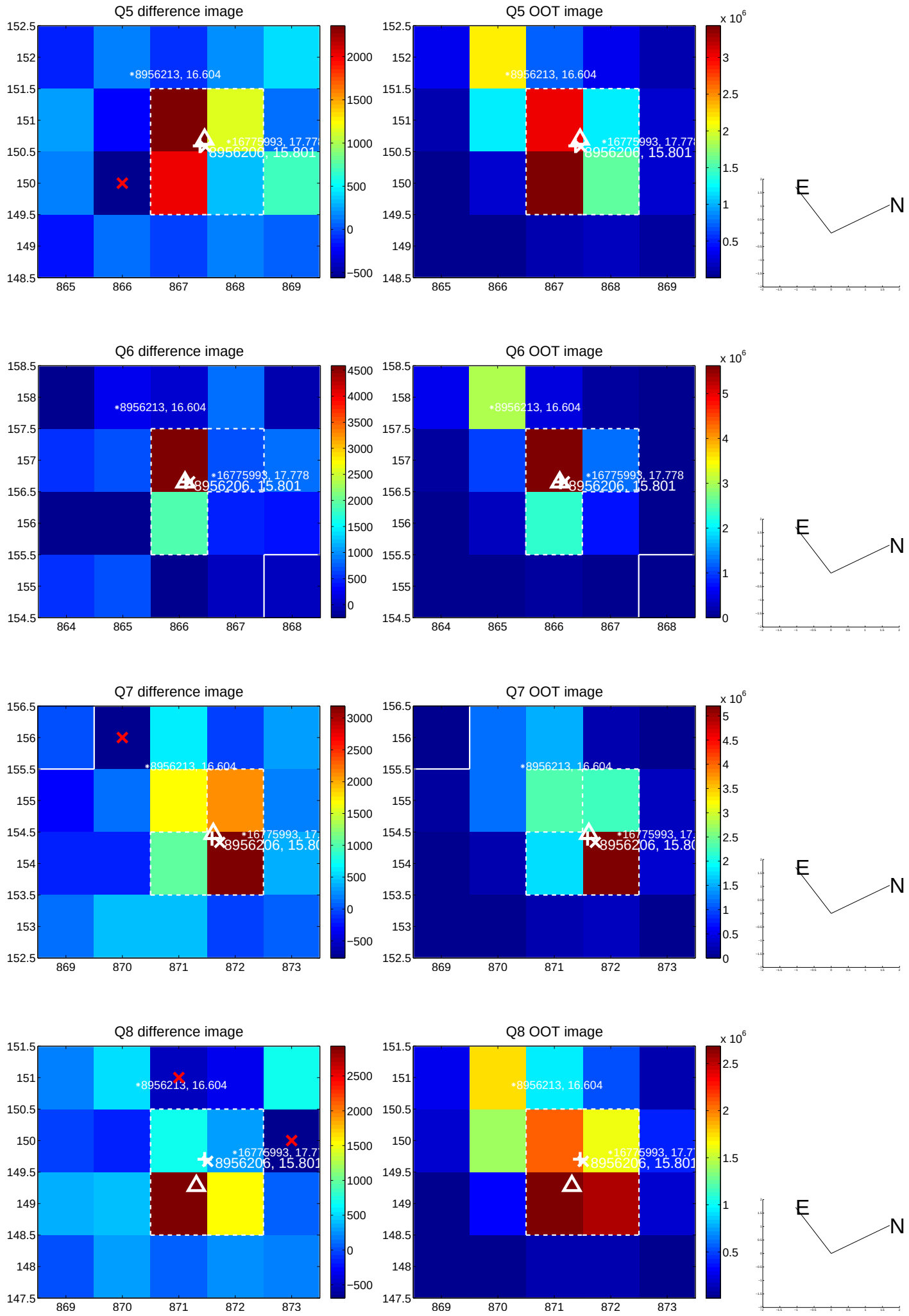


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

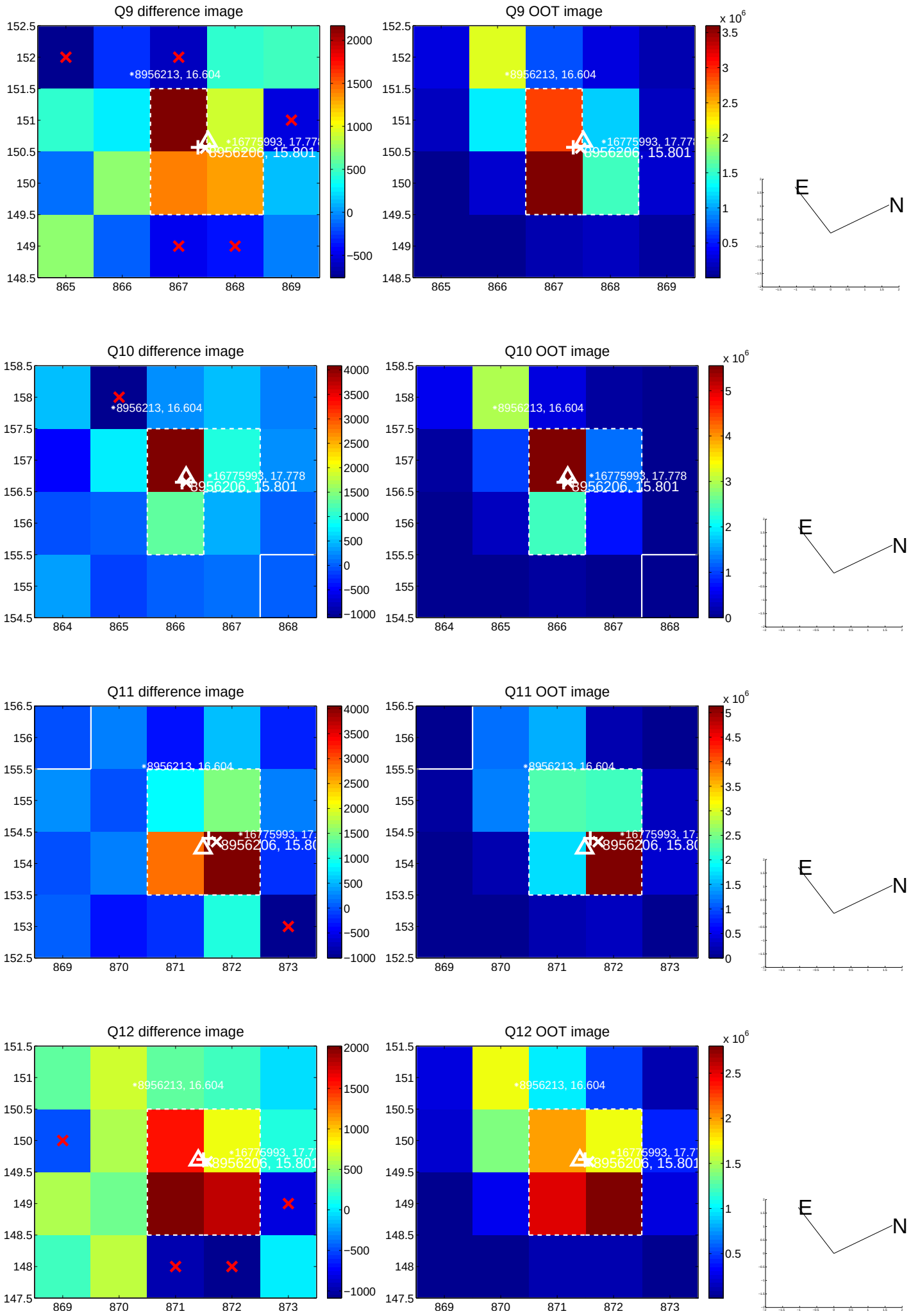
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



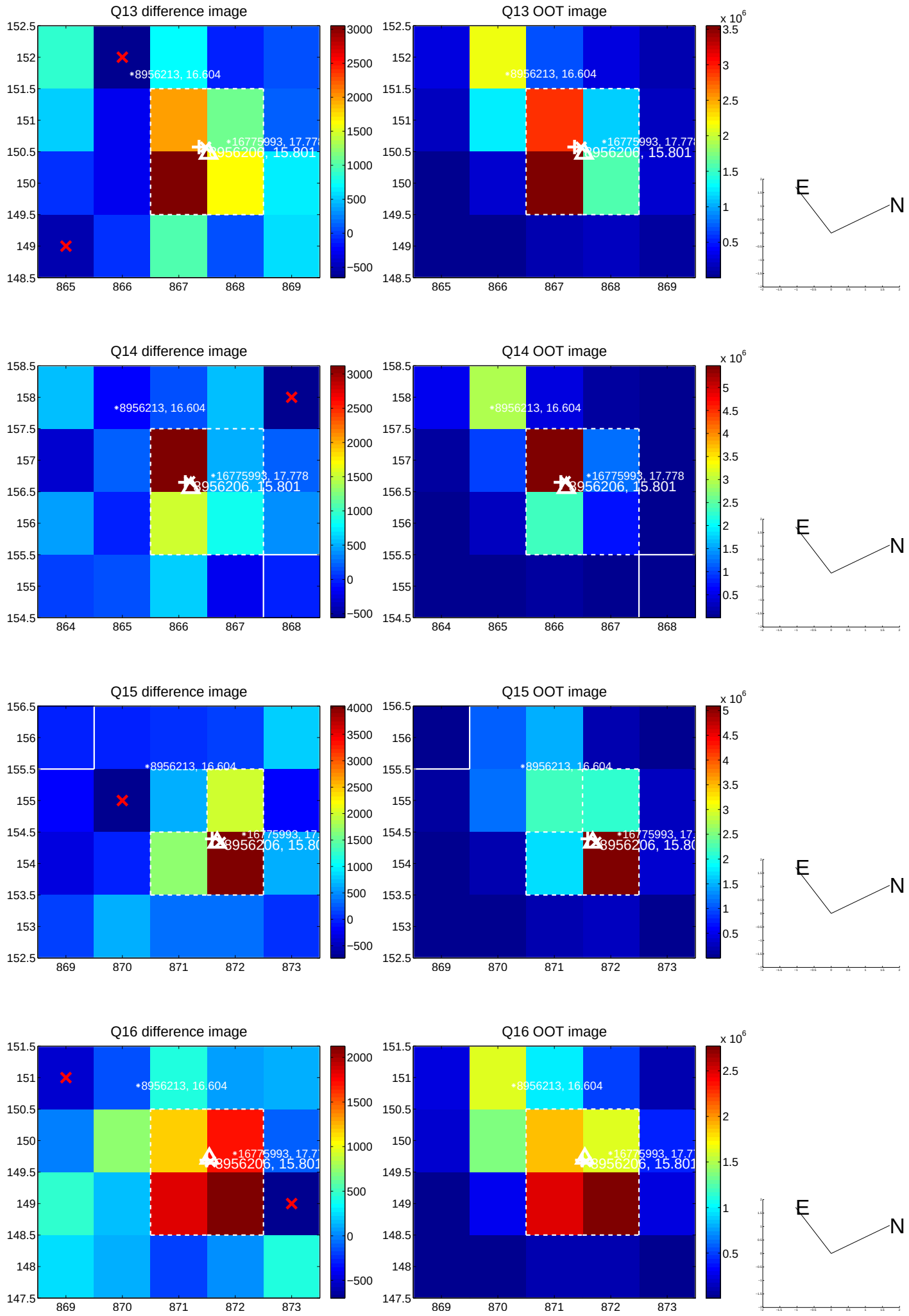
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



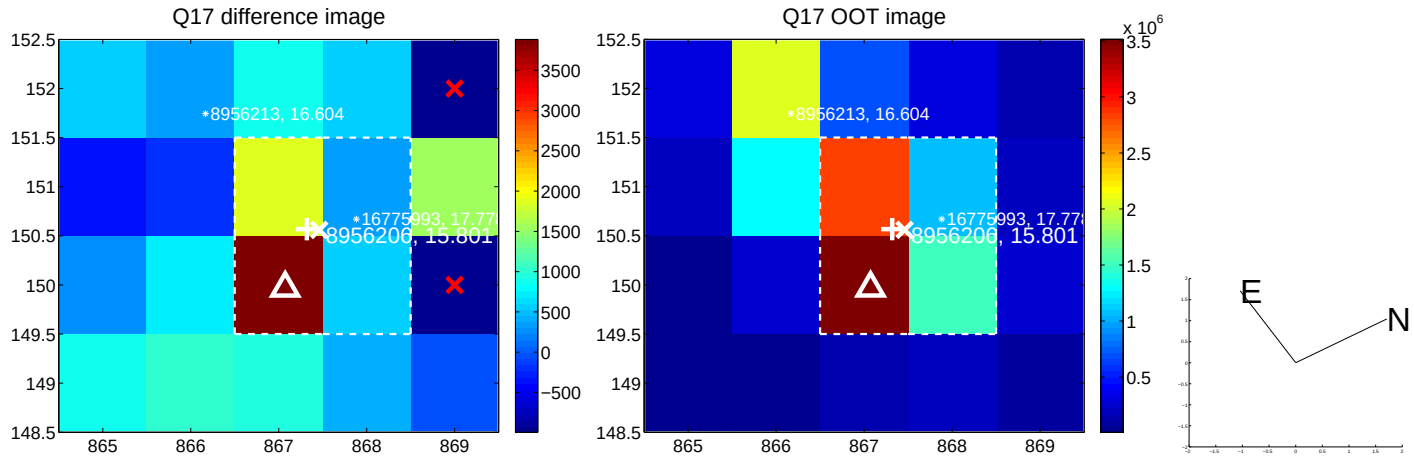
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

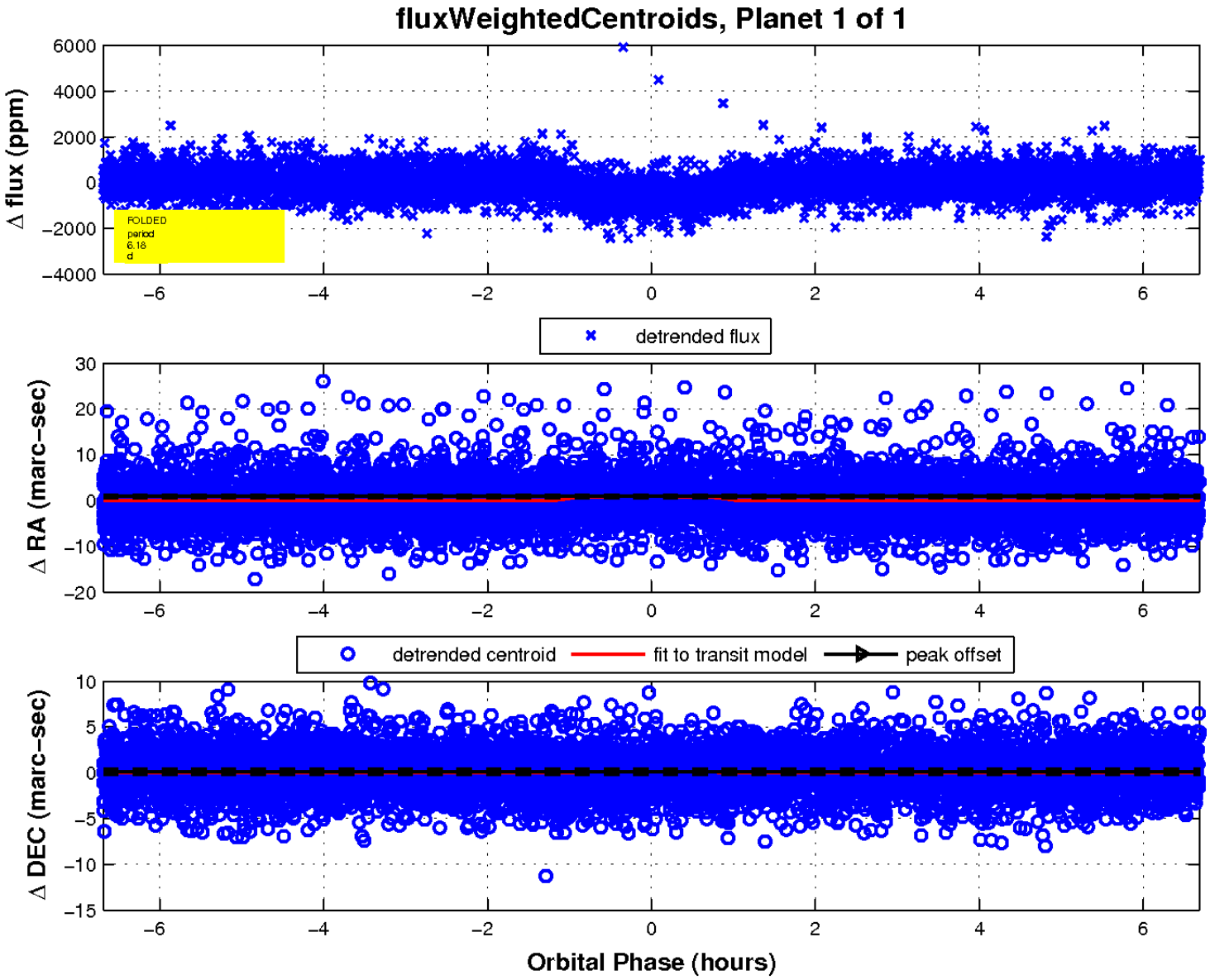


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

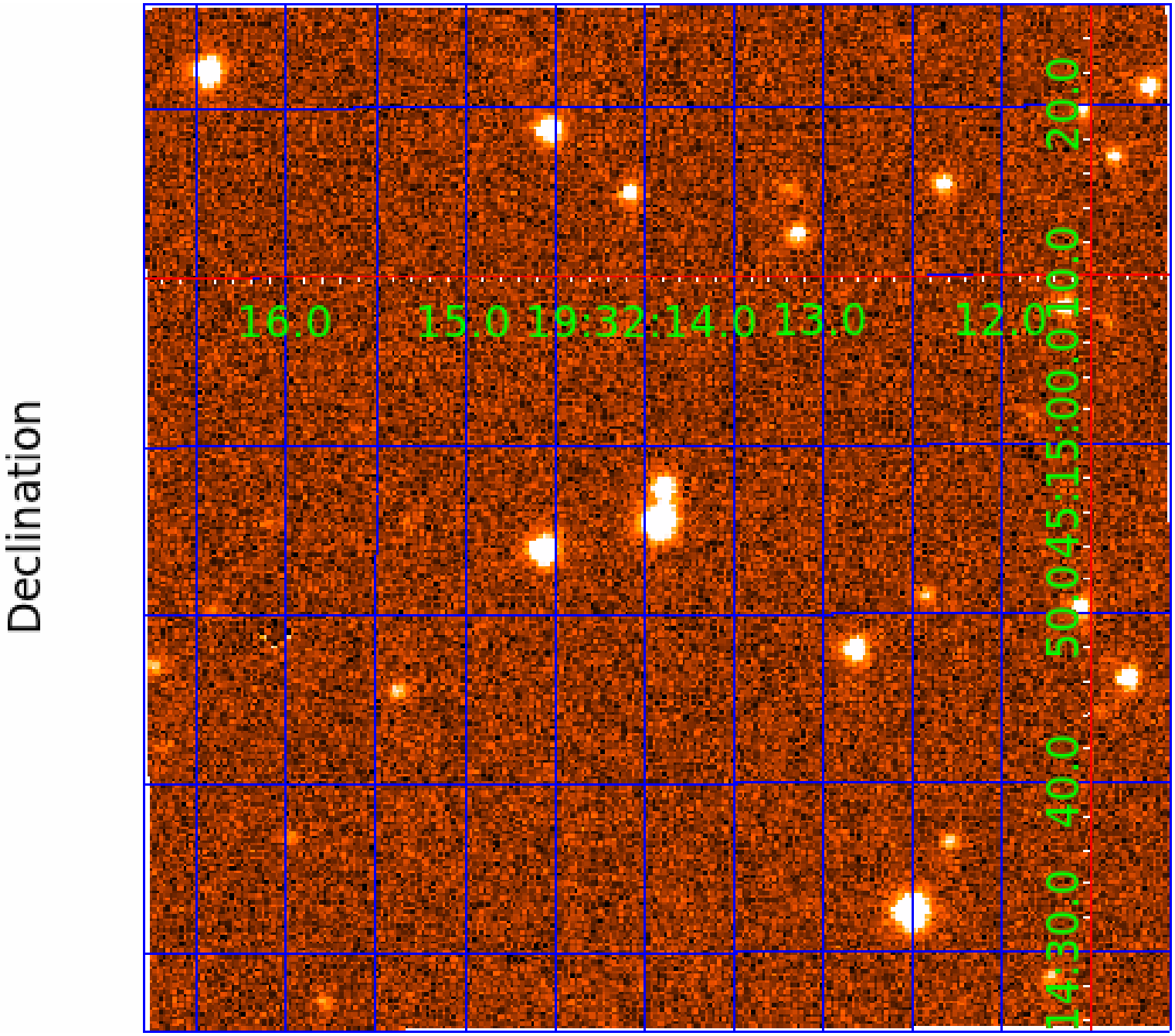


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.





UKIRT Image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