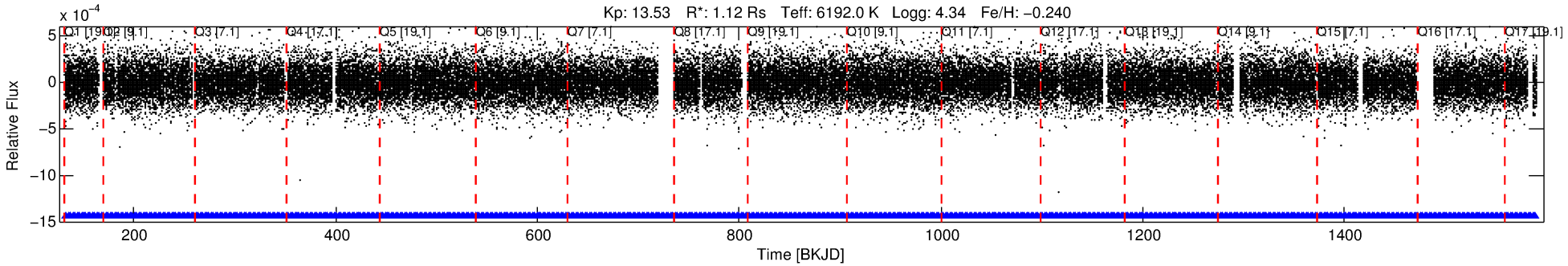
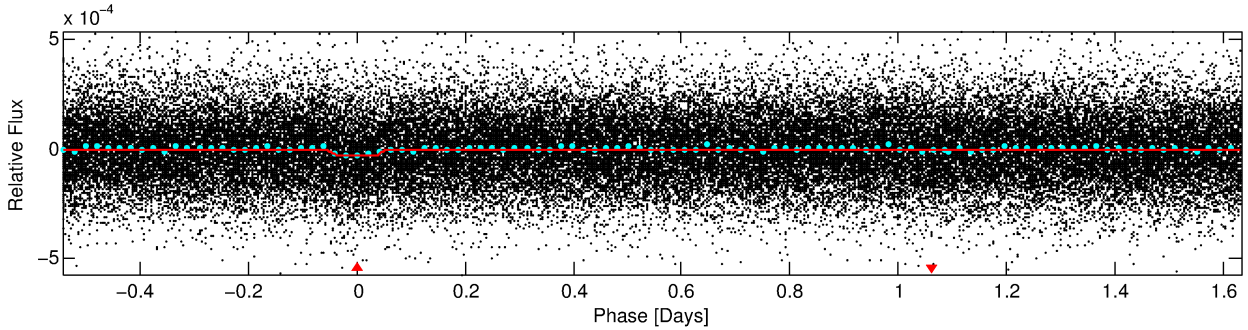
WARNING: THIS DATA IS SIMULATED, NOT OBSERVED

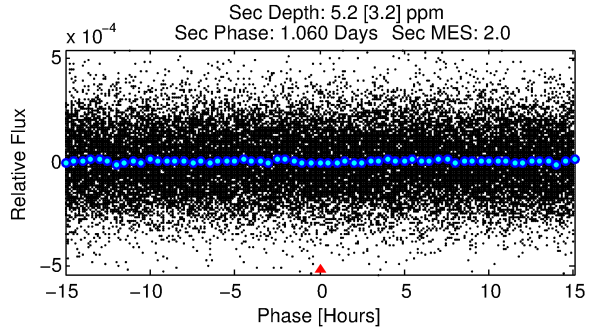
DV One-Page Summary

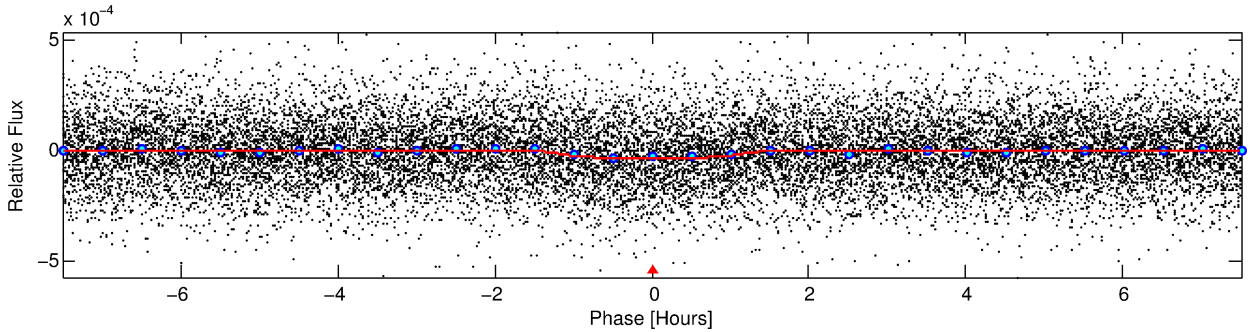
KIC: 6878176 Candidate: 1 of 1 Period: 2.179 d

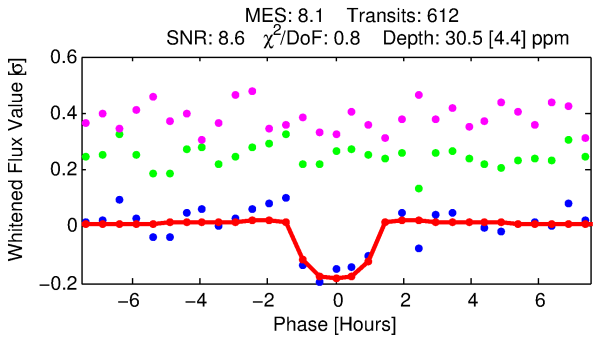
WARNING: THIS DATA IS SIMULATED, NOT OBSERVED

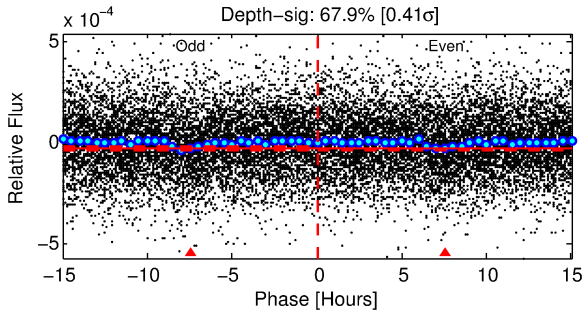


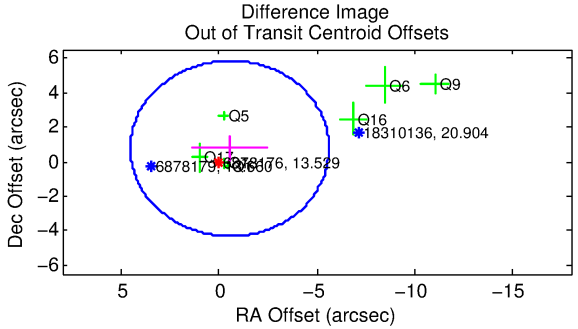












DV Fit Results:

Period = 2.17919 [0.00002] d
Epoch = 133.1473 [0.0040] BKJD
Rp/R* = 0.0063 [0.0028]
a/R* = 2.35 [5.01]
b = 0.95 [0.25]

Seff = 1527.46 [593.64]
Teq = 1594 [155] K
Rp = 0.77 [0.42] Re
a = 0.0329 [0.0083] AU

Ag = 5.19 [5.96] [0.70σ]
Teffp = 3720 [1019] K [2.06σ]

DV Diagnostic Results:

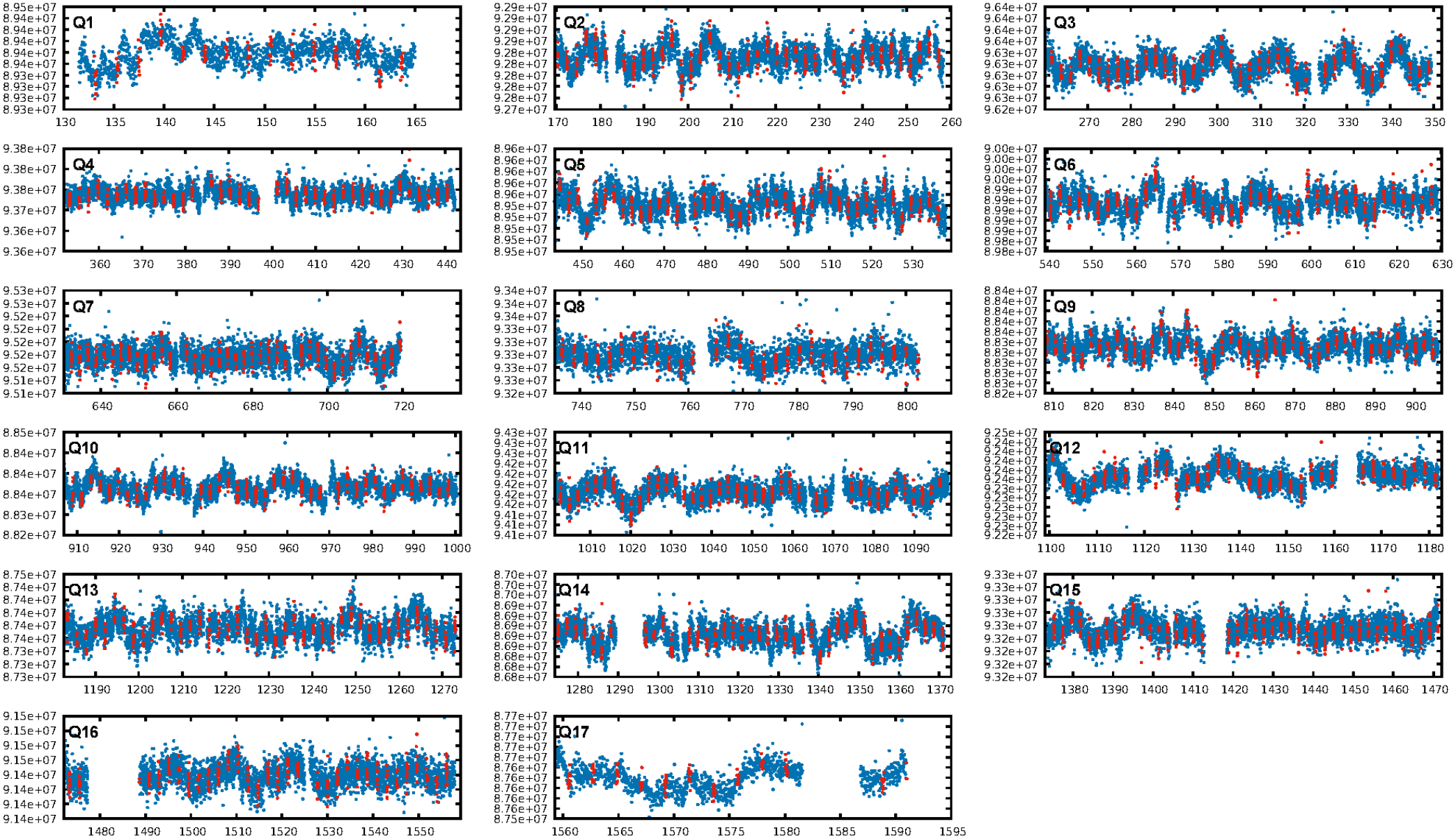
ShortPeriod−sig: N/A
LongPeriod−sig: N/A
ModelChiSquare2−sig: N/A
ModelChiSquareGof−sig: N/A
Bootstrap−pfa: 6.32e−16
RollingBand−fgt: 1.00 [585/585]
GhostDiagnostic−chr: 1.15

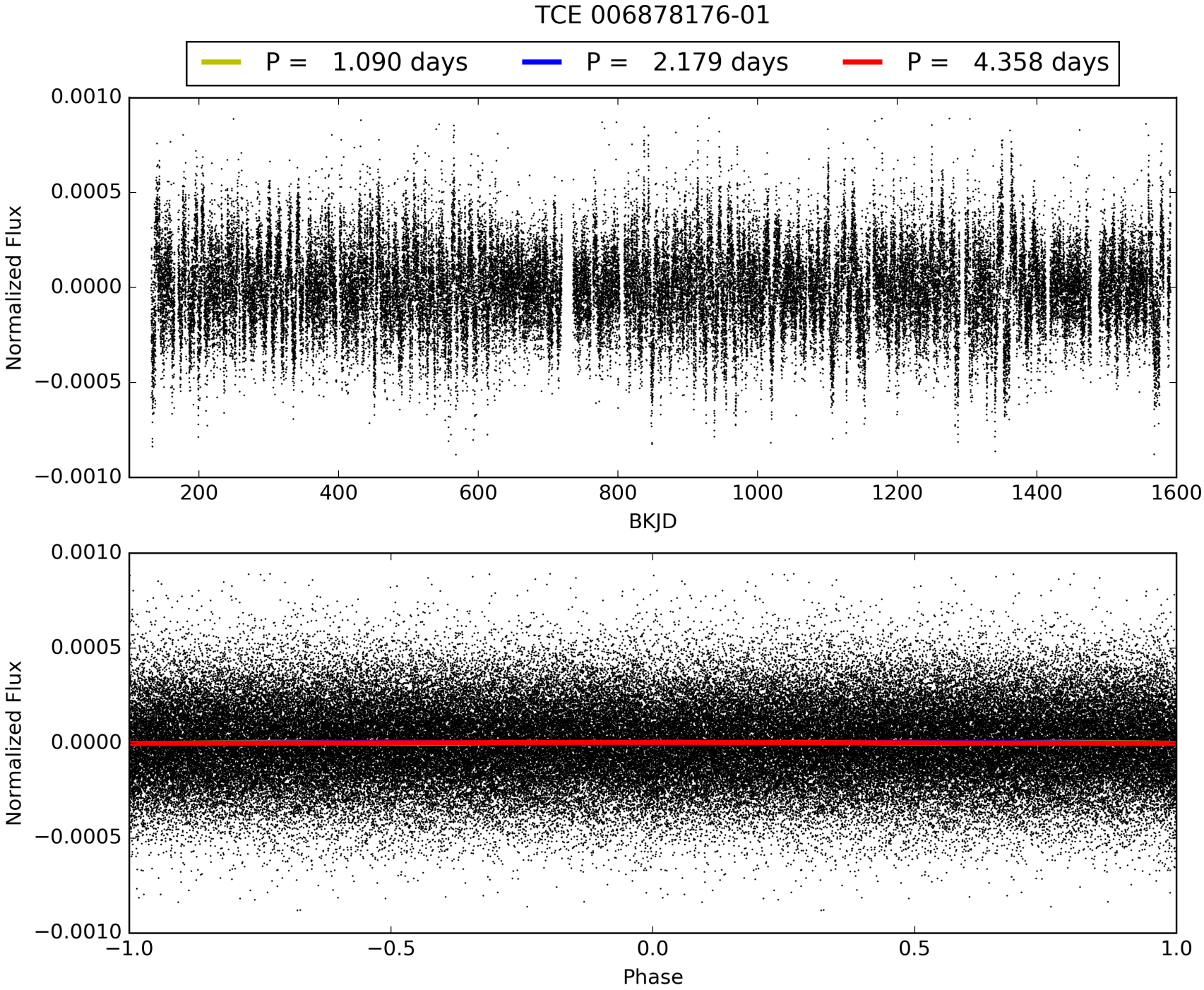
Centroid−sig: 3.8%
Centroid−so: 3.716 arcsec [2.15σ]
OotOffset−rm: 0.942 arcsec [0.56σ]
KicOffset−rm: 10.525 arcsec [7.06σ]
OotOffset−st: 1/0/1/5 [7]
KicOffset−st: 1/1/1/5 [8]
DiffImageQuality−fgm: 0.50 [4/8]
DiffImageOverlap−fno: 1.00 [17/17]

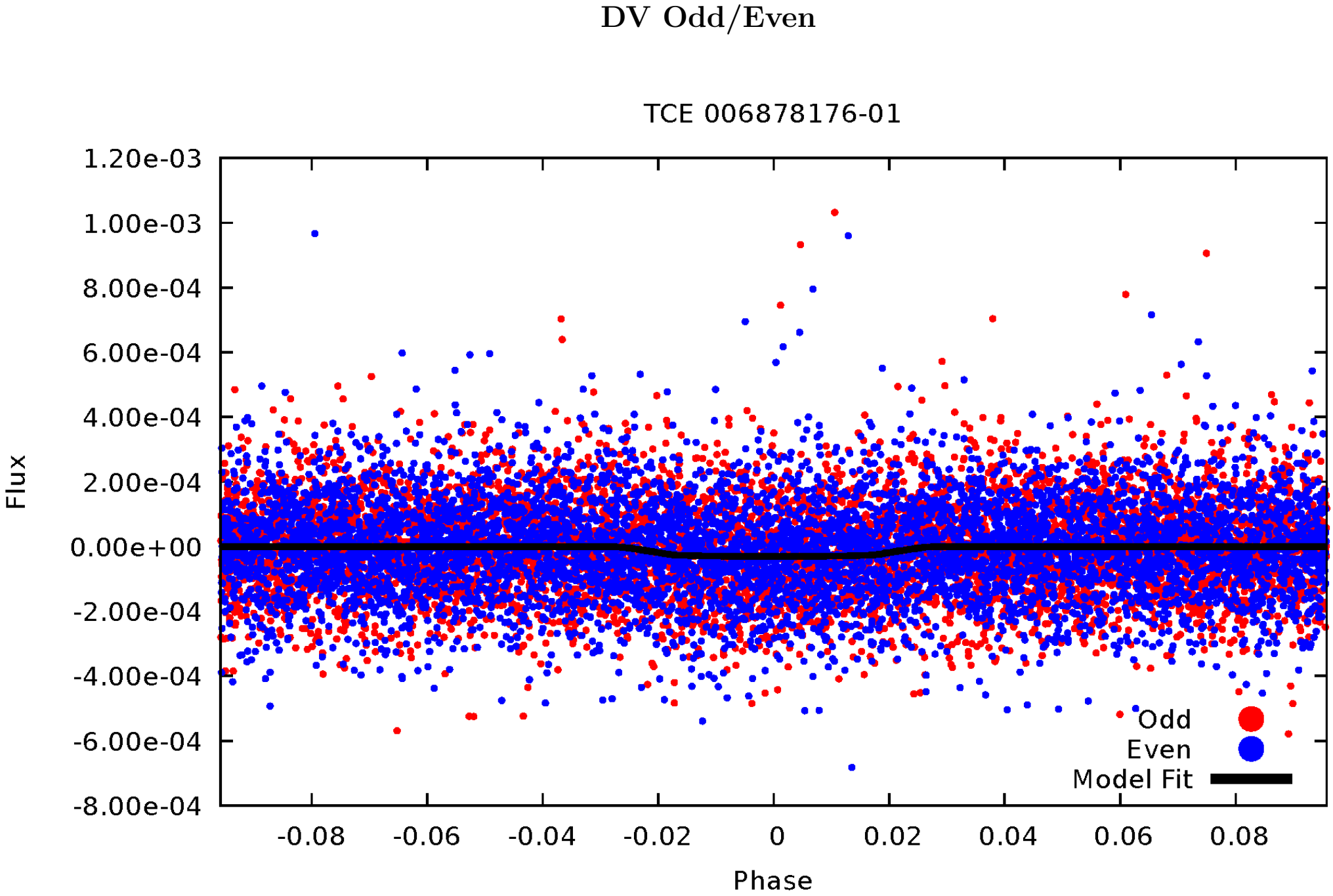
Software Revision: svn+ssh://murzim/repo/soc/branches/integ/ksop−2174@60968 −− Date Generated: 26−Feb−2016 21:18:43 Z

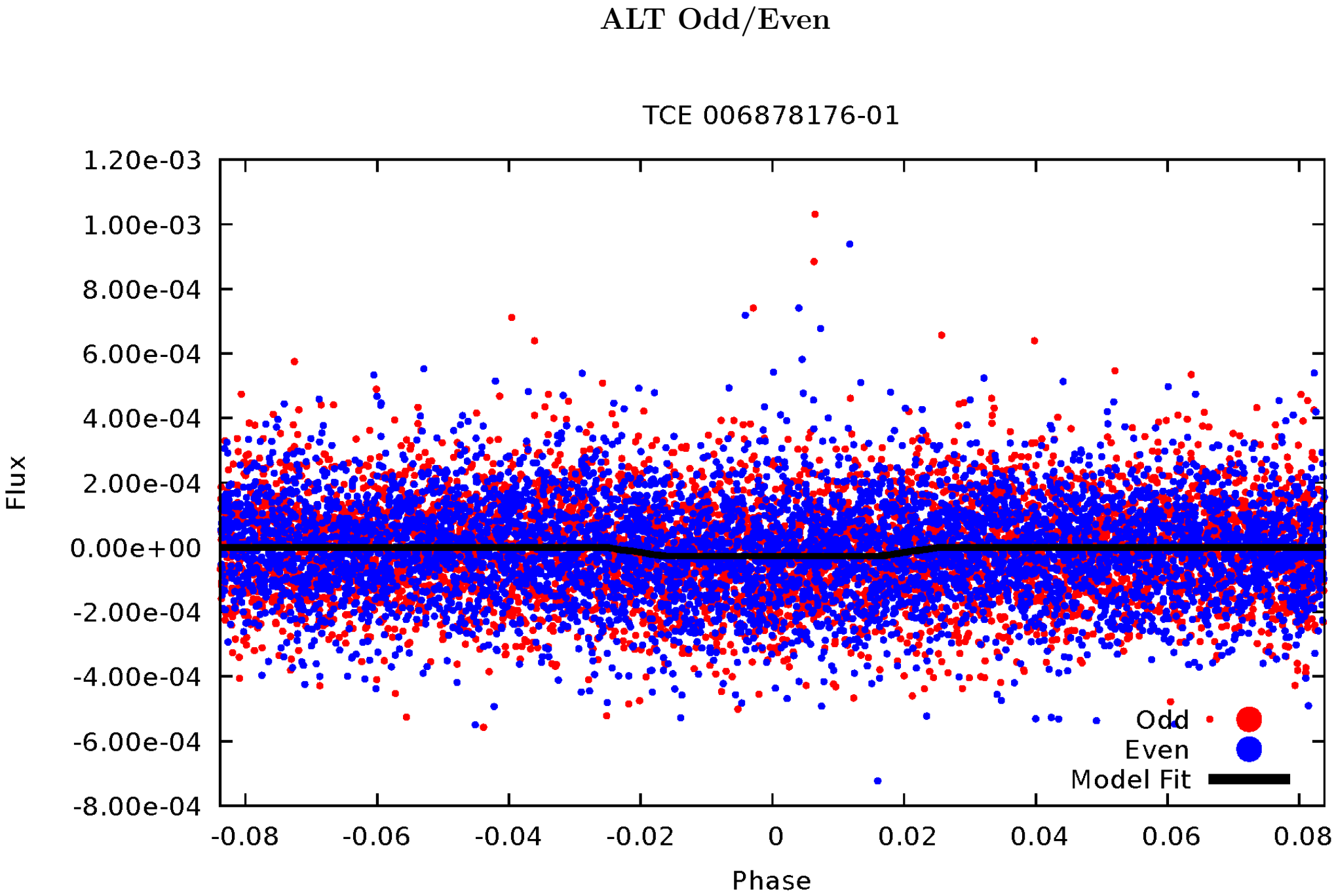
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 006878176-01, PDC Light Curves

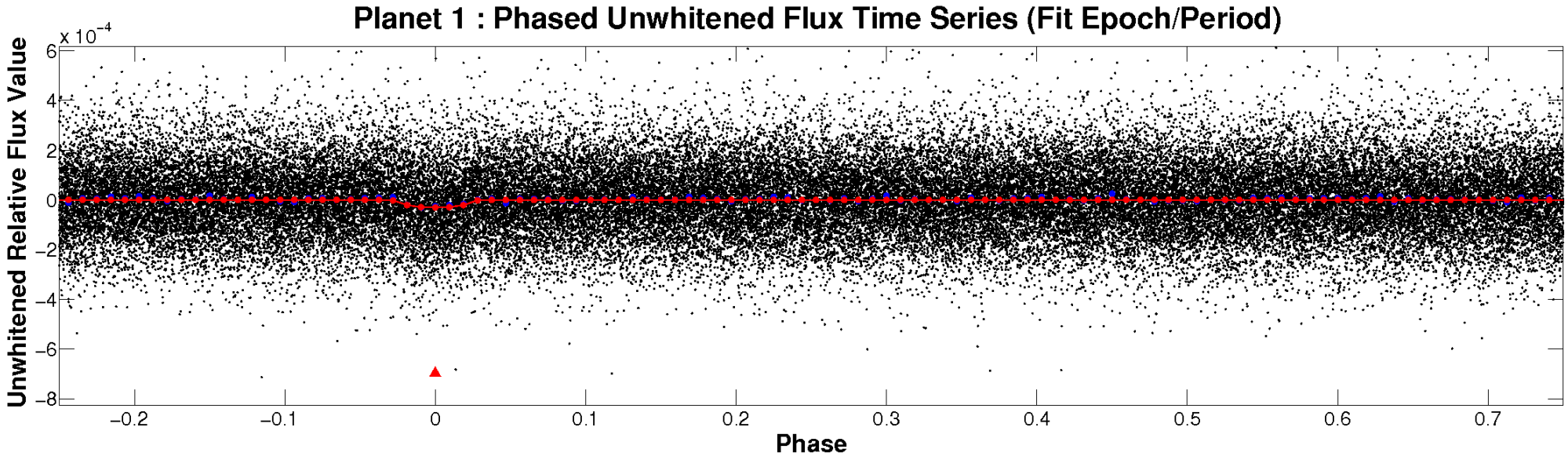


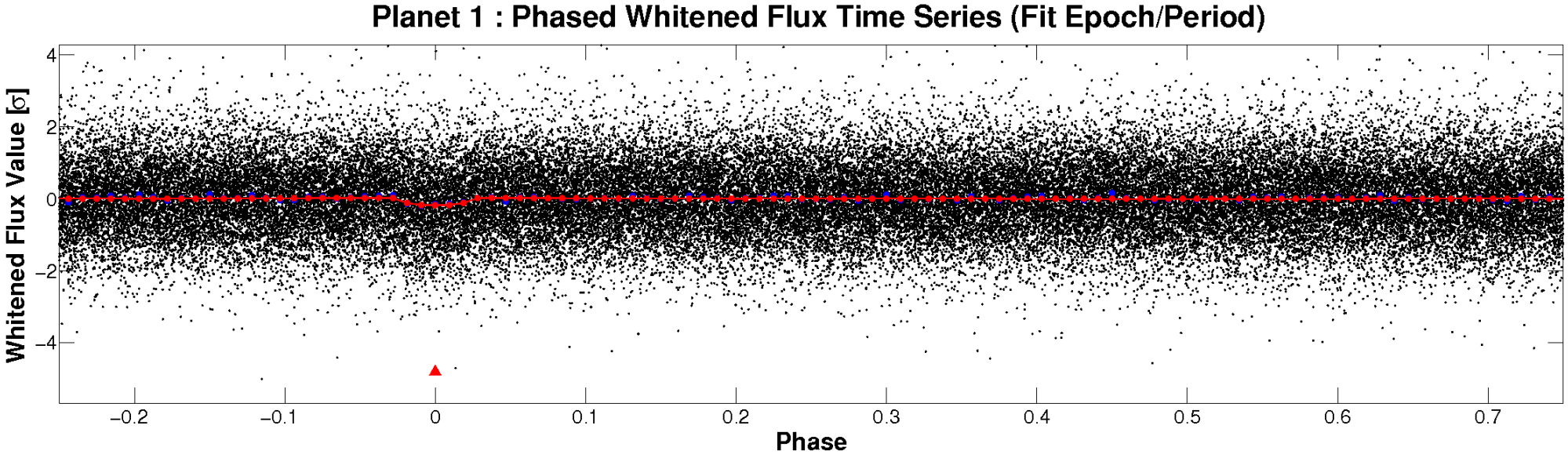

TCE 006878176-01
P = 1.090 days
P = 2.179 days
P = 4.358 days
Normalized Flux
0.0010
0.0005
0.0000
−0.0005
−0.0010
200
400
600
800
1000
1200
1400
1600
BKJD
Normalized Flux
0.0010
0.0005
0.0000
−0.0005
−0.0010
−1.0
−0.5
0.0
0.5
1.0
Phase


DV Odd/Even
TCE 006878176-01
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
-8.00e-04
Flux
-0.08
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
0.08
Phase
Odd
Even
Model Fit


ALT Odd/Even
TCE 006878176-01
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
-8.00e-04
Flux
-0.08
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
0.08
Phase
Odd
Even
Model Fit

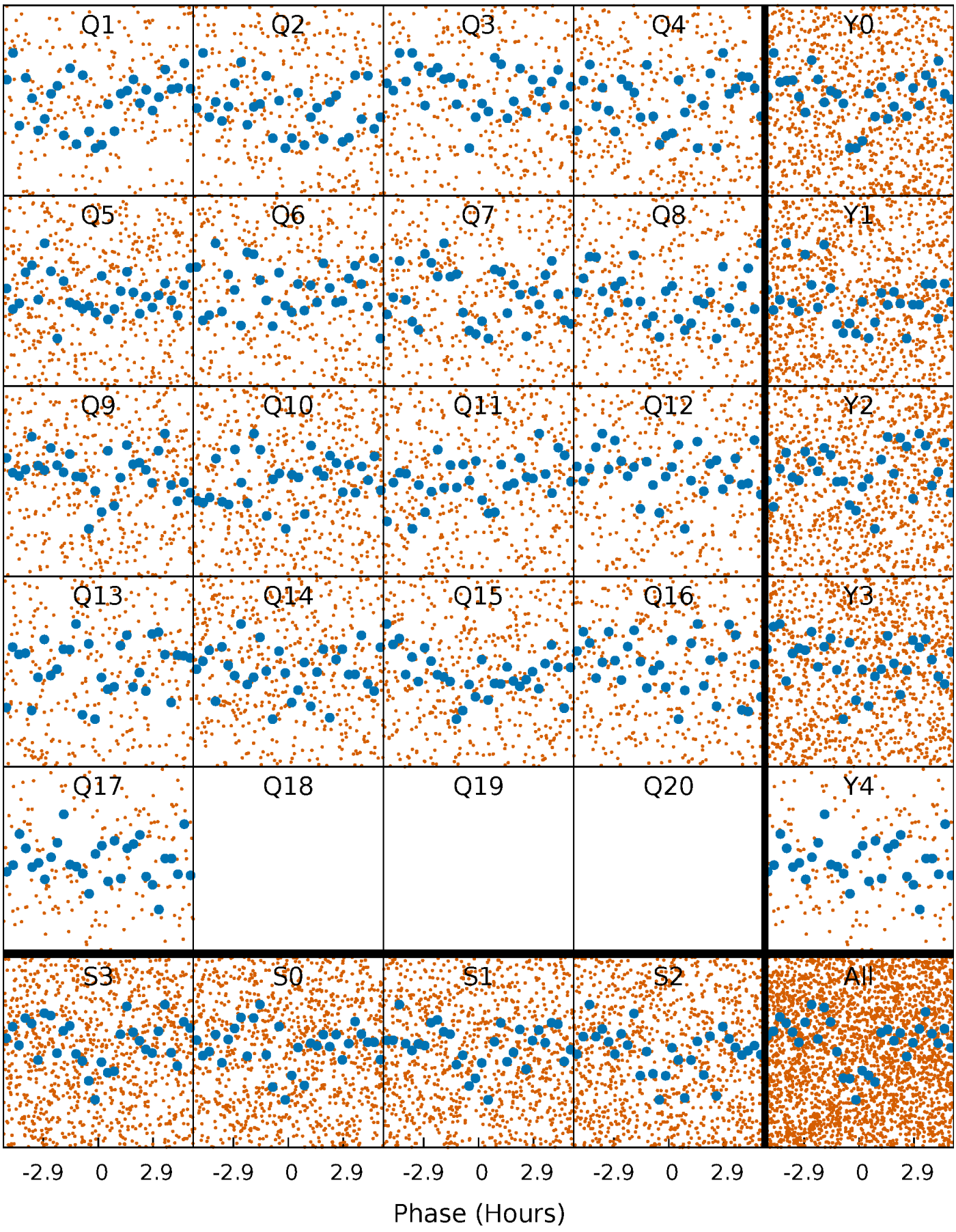
Non-Whitened Vs. Whitened Light Curve





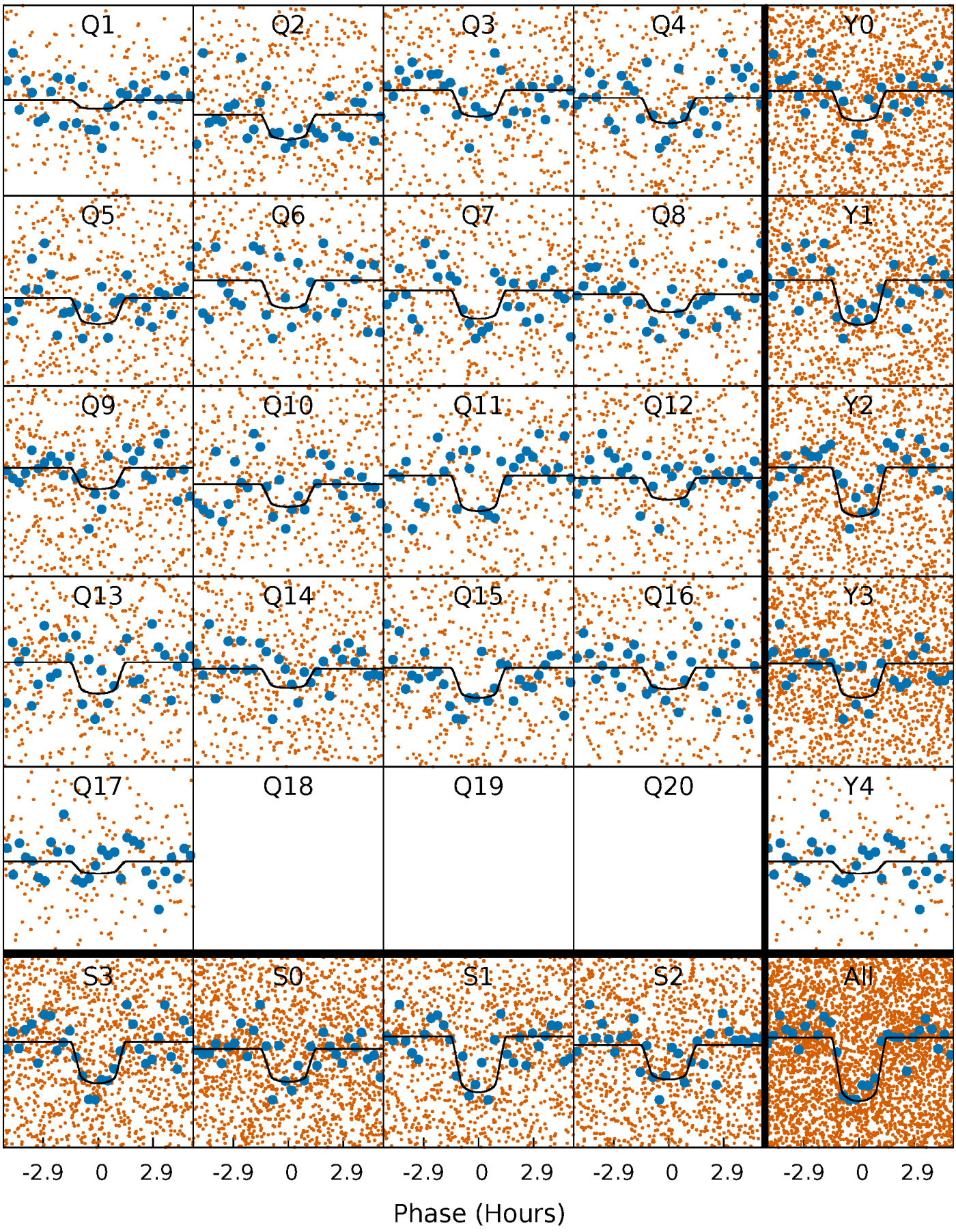
PDC Quarter-Phased Transit Curves

TCE 006878176-01 P= 2.179194 Days T_0=133.147252 (BKJD)



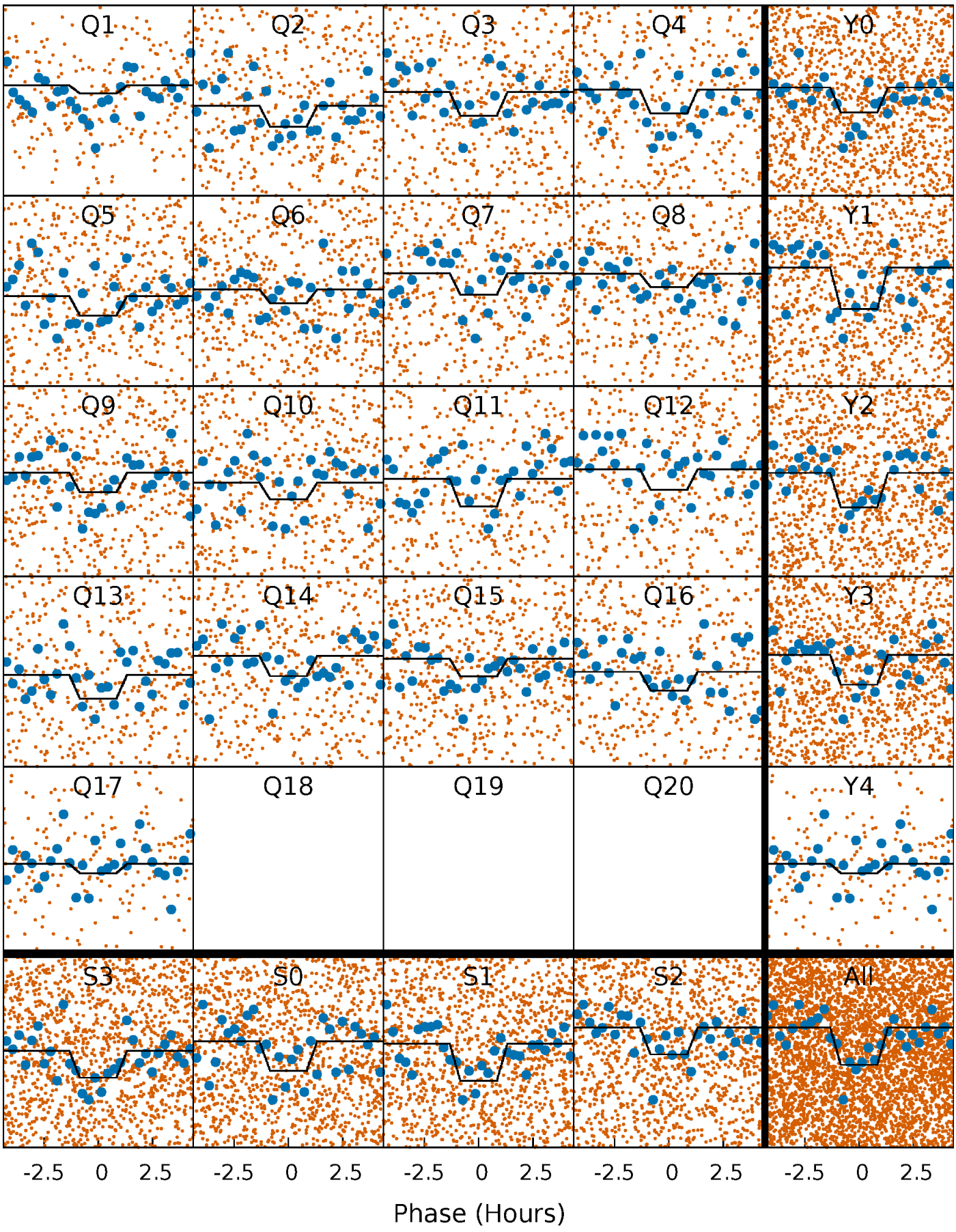
DV Quarter-Phased Transit Curves

TCE 006878176-01 P= 2.179194 Days T_0=133.147252 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

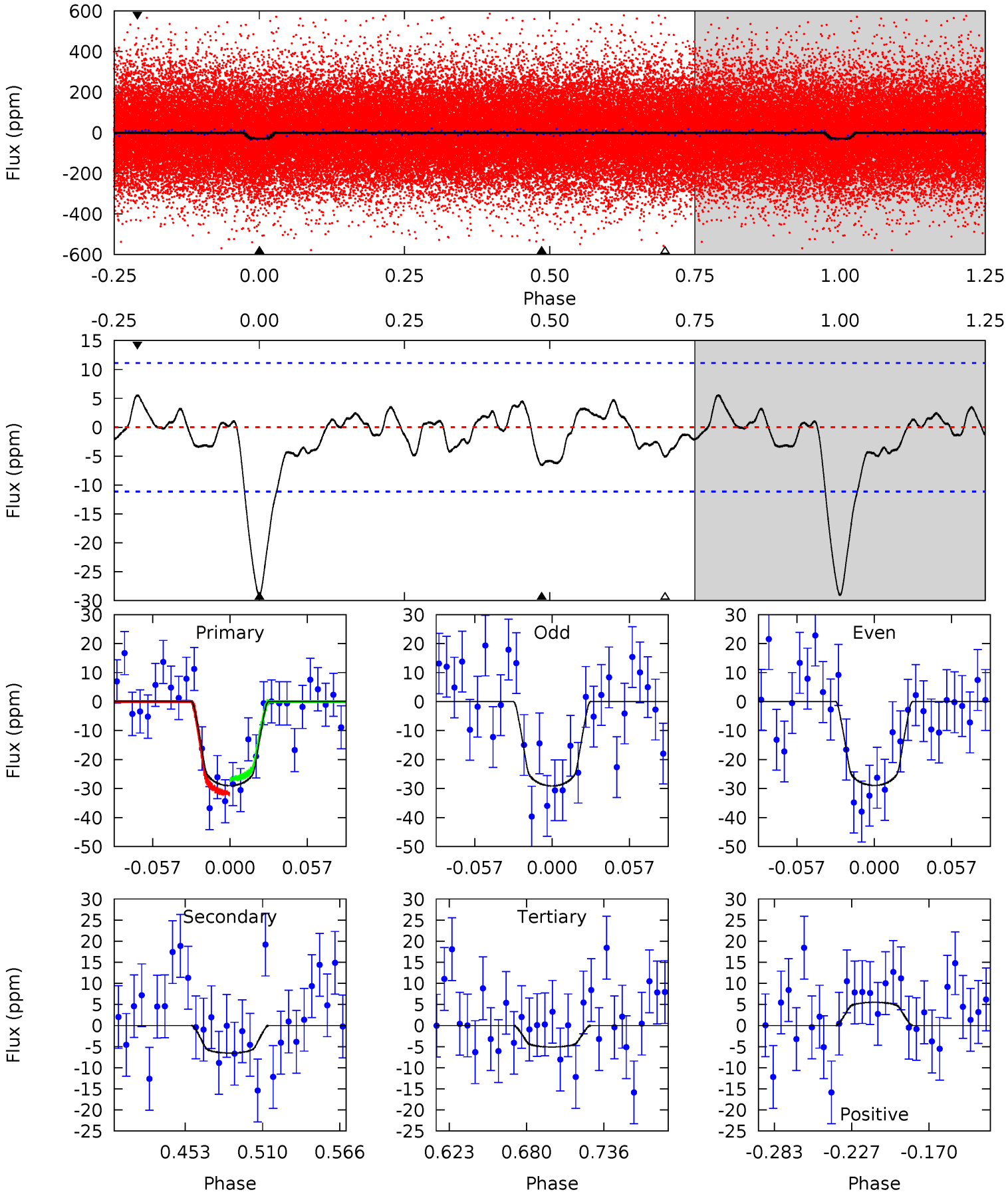
TCE 006878176-01 P= 2.179161 Days T_0=133.160559 (BKJD)



DV Model-Shift Uniqueness Test

006878176-01, P = 2.179194 Days, E = 130.968058 Days

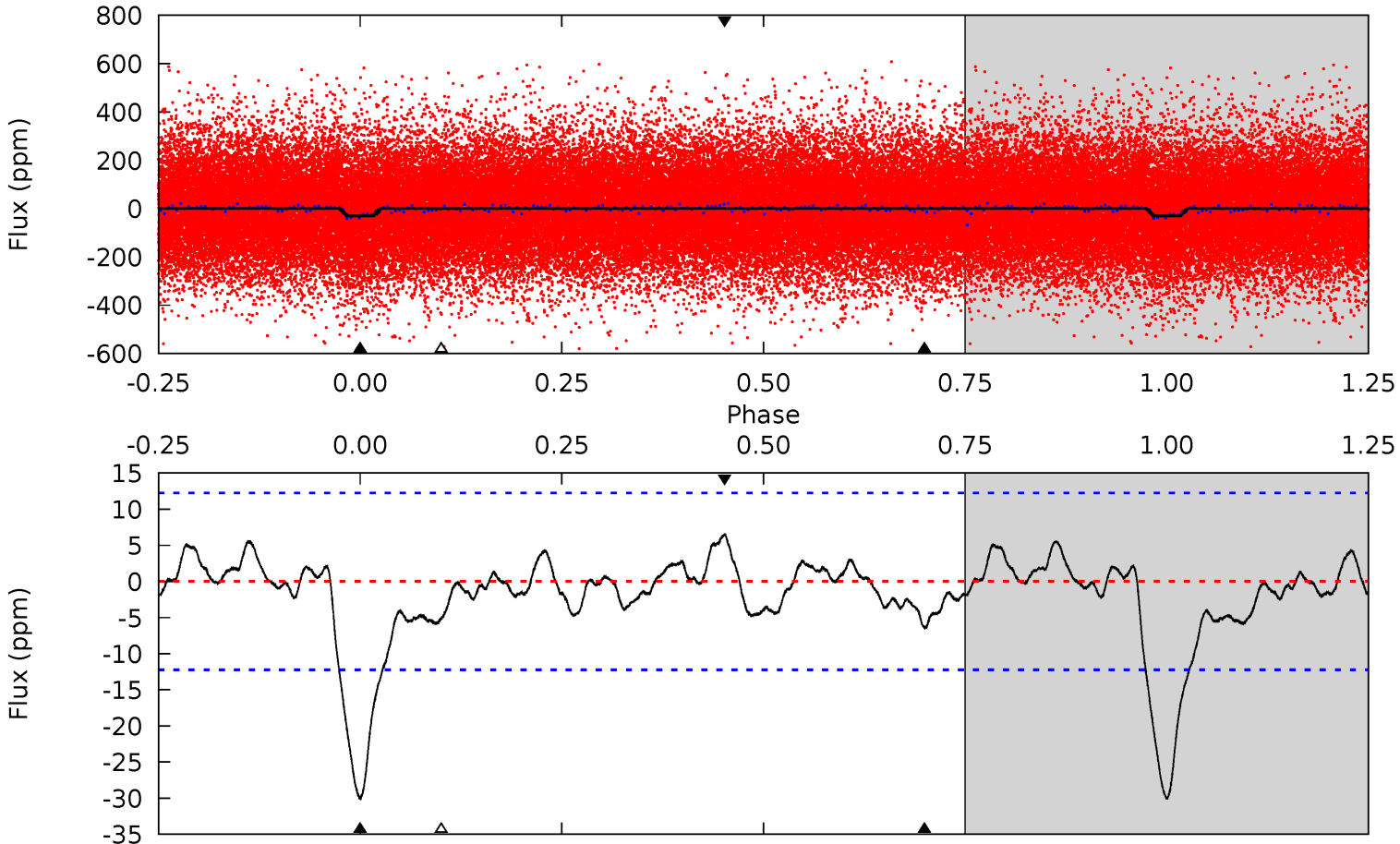
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.2	2.75	2.14	2.32	4.68	1.91	1.05	10.1	9.90	0.61	0.43	0.03	1.02	0.16	1.05

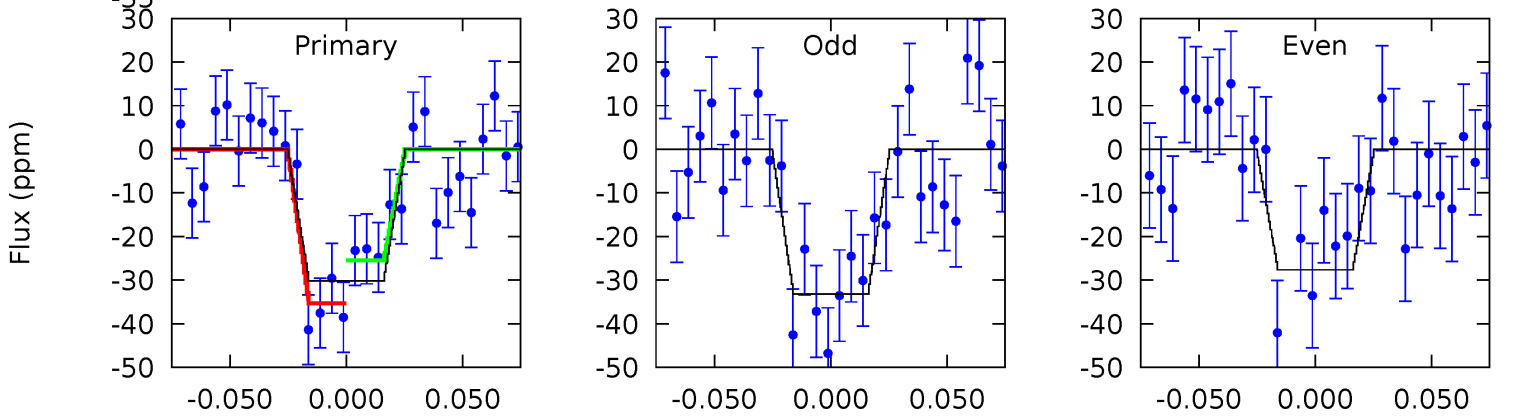


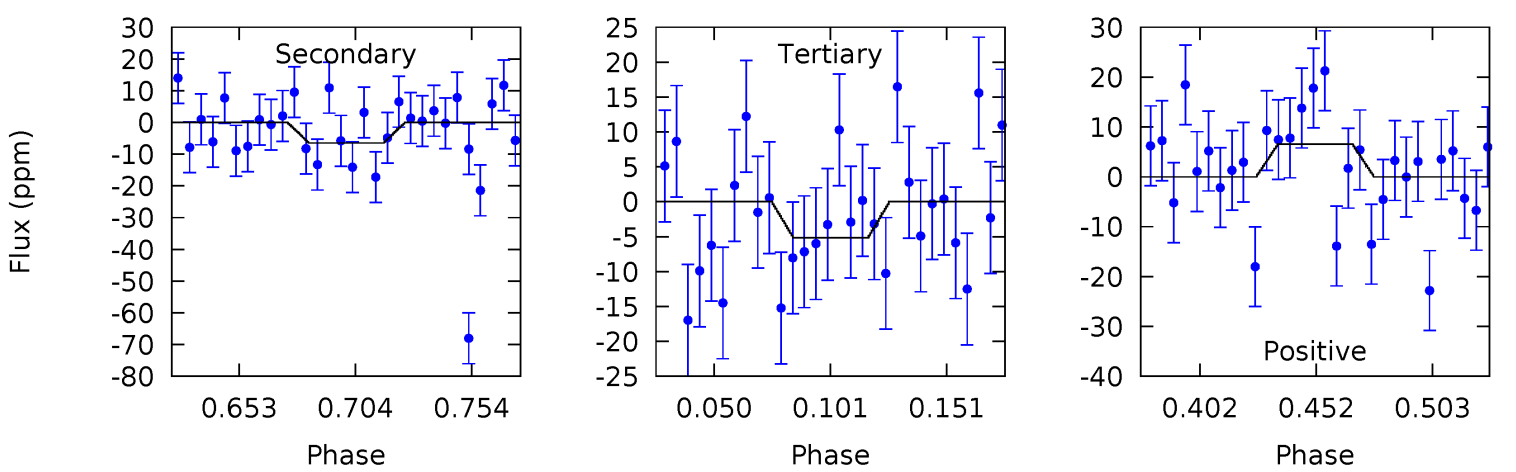
Alt Model-Shift Uniqueness Test

006878176-01, P = 2.179161 Days, E = 130.981398 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.6	2.50	1.99	2.52	4.71	1.96	1.05	9.61	9.08	0.51	-0.02	1.06	0.89	0.18	1.90







Stellar Parameters For KIC 006878176

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	6192^{+169}_{-206}	$4.339^{+0.132}_{-0.198}$	$-0.240^{+0.300}_{-0.300}$	$1.120^{+0.340}_{-0.183}$	$0.997^{+0.160}_{-0.107}$	$0.999^{+0.584}_{-0.492}$
	+3%/-3%	+3%/-5%	+125%/-125%	+30%/-16%	+16%/-11%	+58%/-49%
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 006878176-01 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-7±2	$0.80^{+0.36}_{-0.34}$	2234^{+186}_{-136}	4098^{+970}_{-554}	$5.845^{+10.875}_{-3.386}$
Alt.	-6±3	$0.65^{+0.38}_{-0.30}$	2244^{+153}_{-129}	4416^{+1593}_{-725}	$8.866^{+25.492}_{-5.685}$

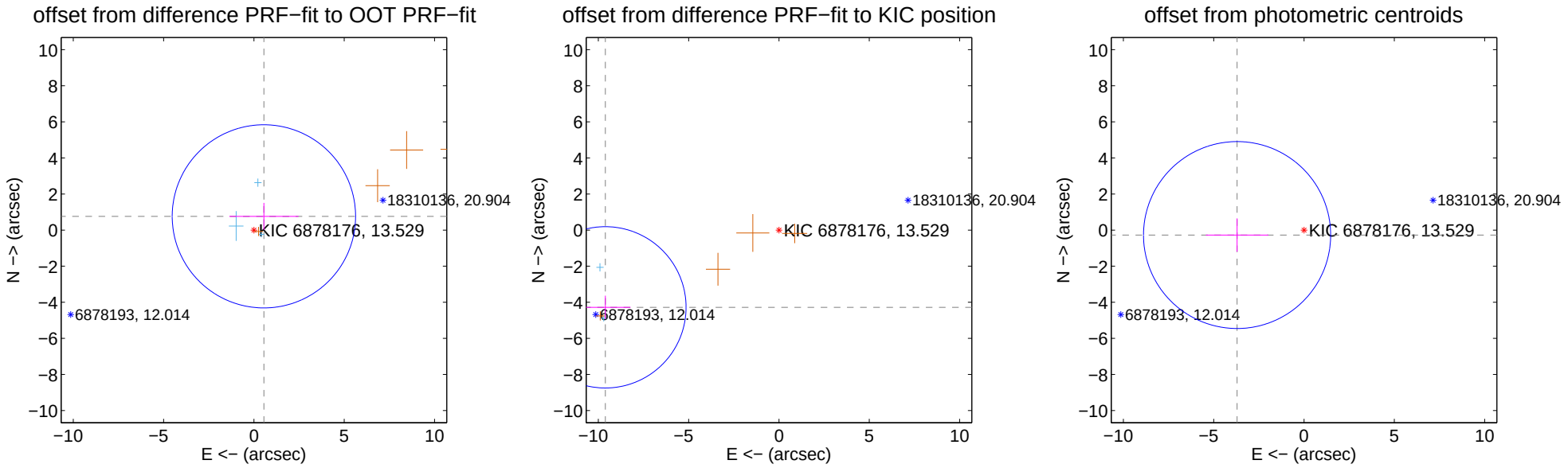
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

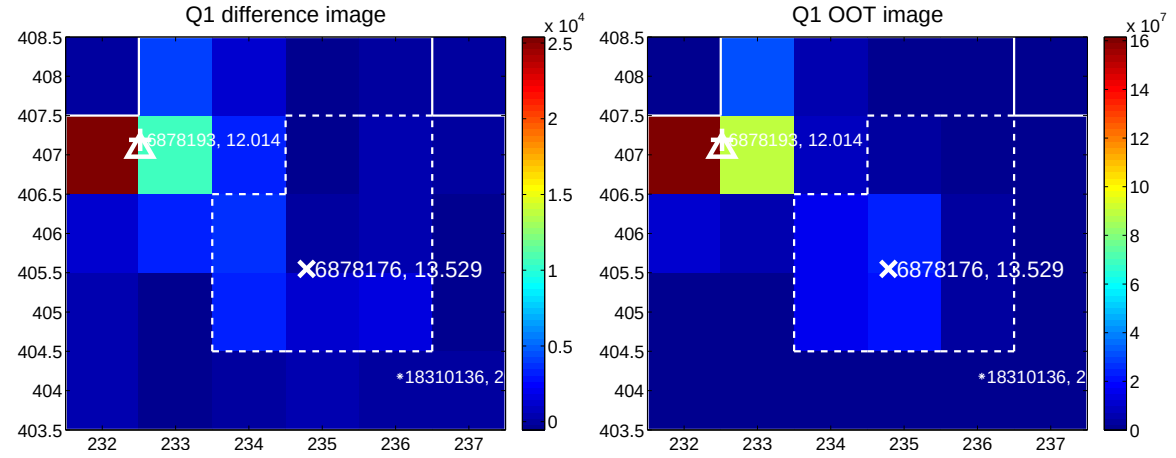
Supplemental centroid analysis for 006878176-01. Kepler magnitude: 13.53. Transit SNR 8.64
There are 4 quarters with good PRF difference image offsets
The OOT PRF centroid is offset from the target star catalog position by about 11.16 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

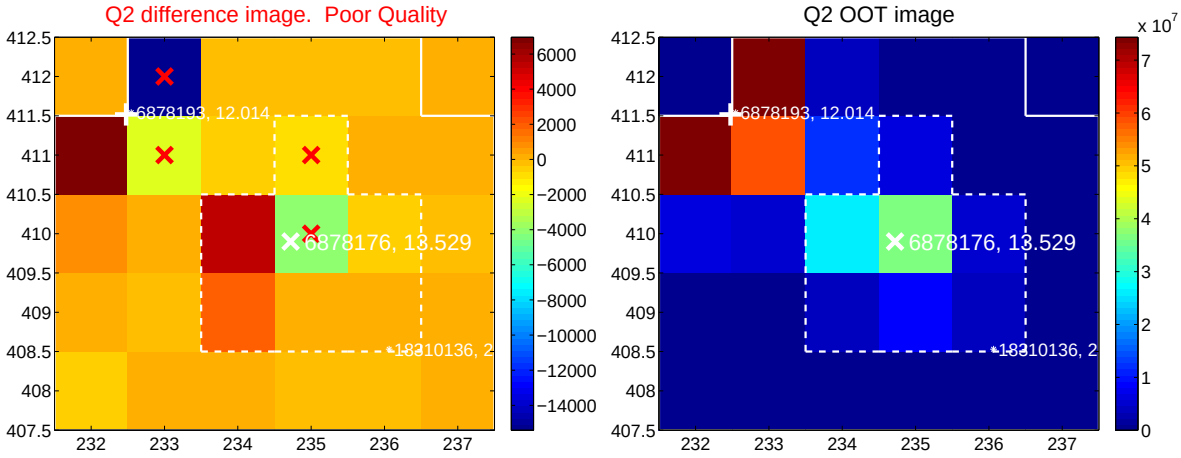
	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.942 ± 1.692	0.56	-0.553 ± 1.914	0.762 ± 0.748
PRF-fit source offset from KIC position	10.525 ± 1.490	7.06	9.615 ± 1.396	-4.281 ± 0.647
photometric centroid source offset	3.72 ± 1.73	2.15	3.71 ± 1.73	-0.27 ± 0.92

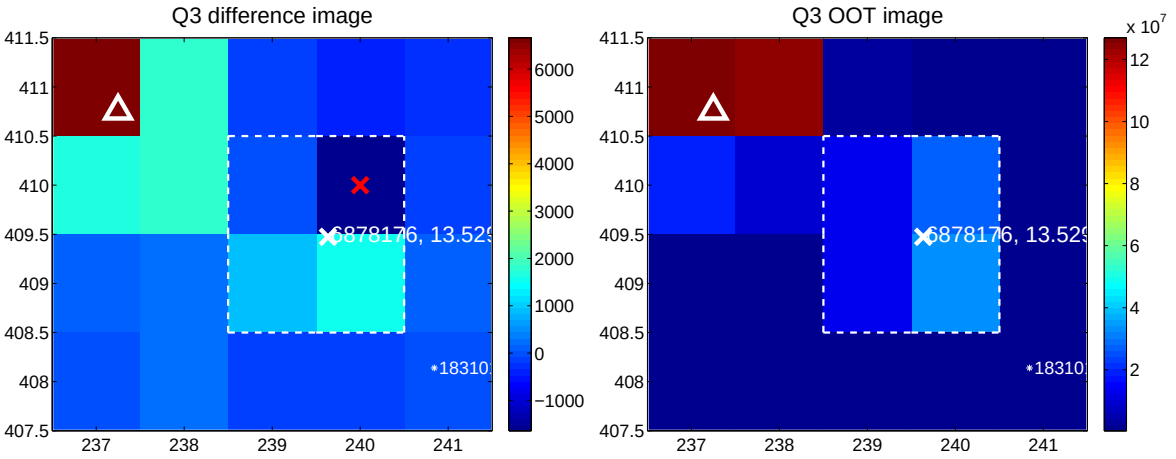


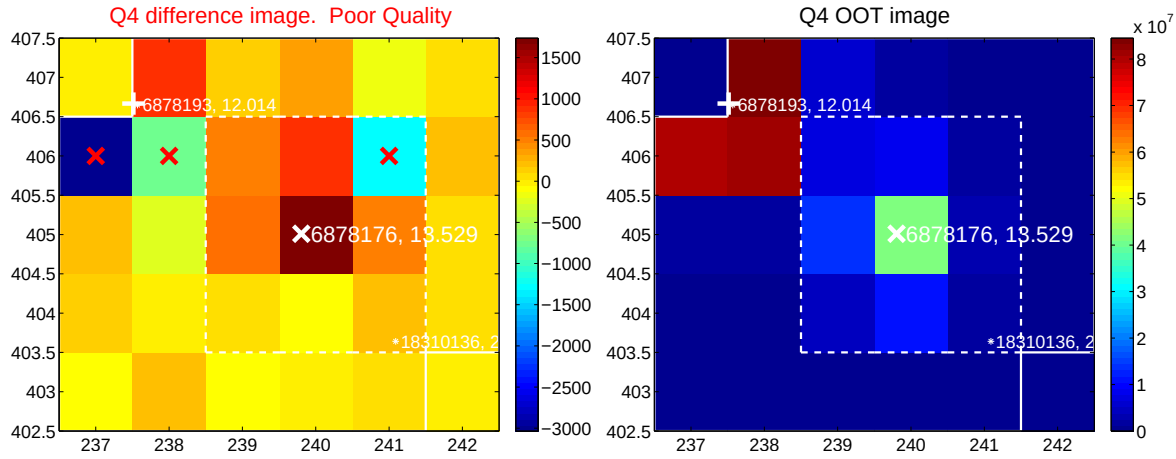
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

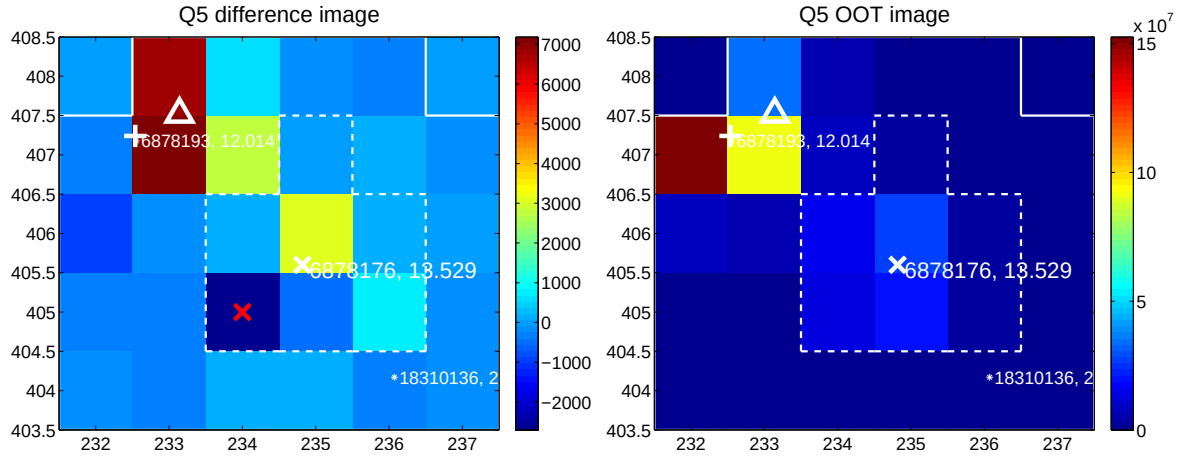


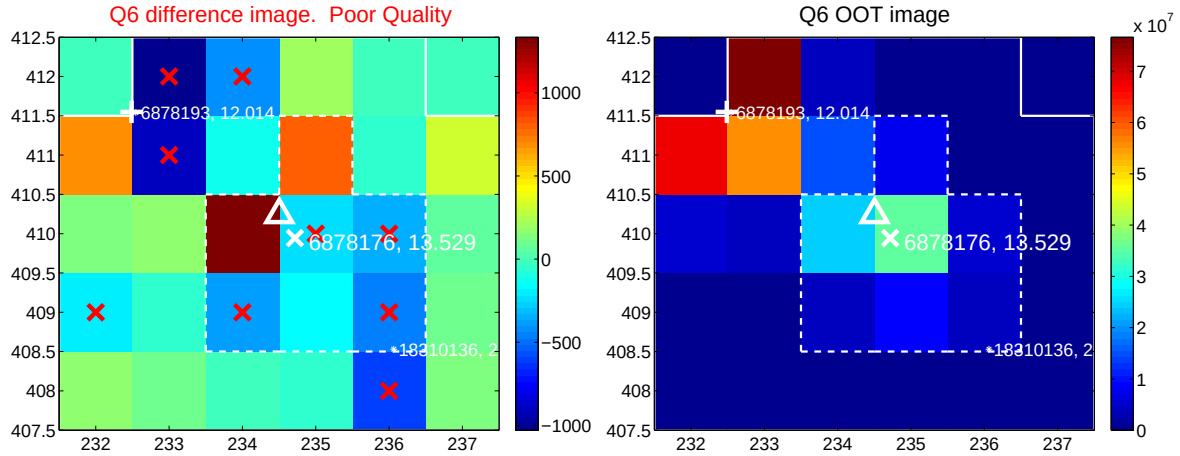


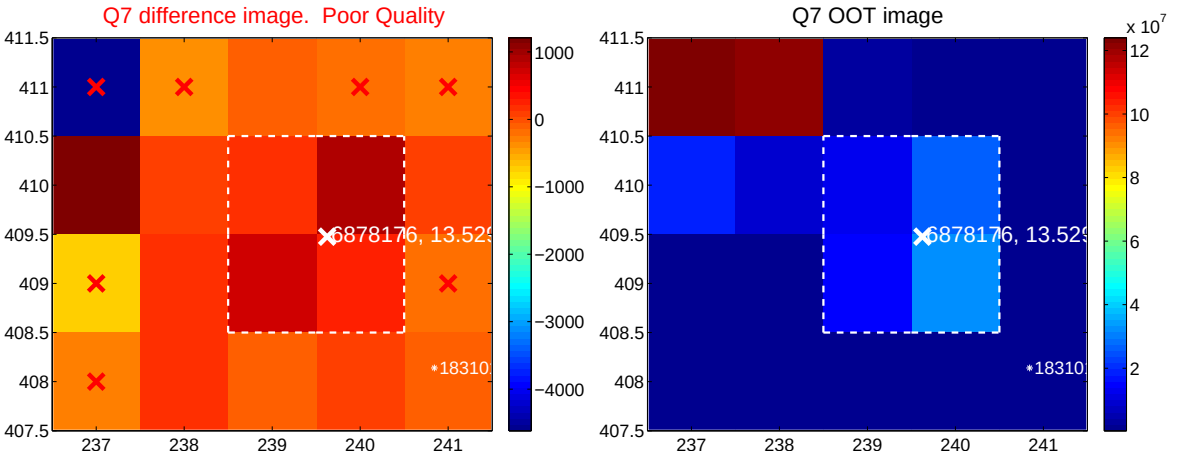


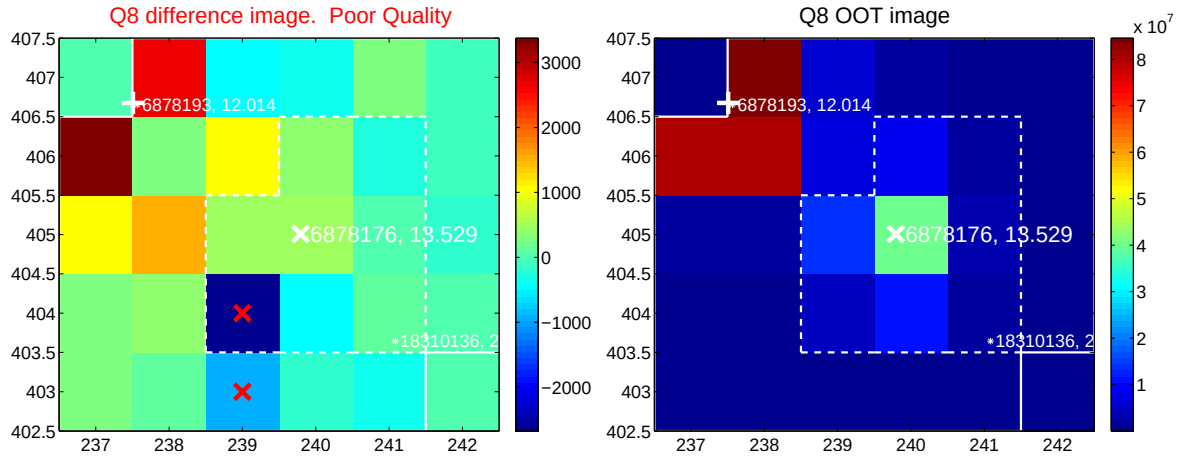


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

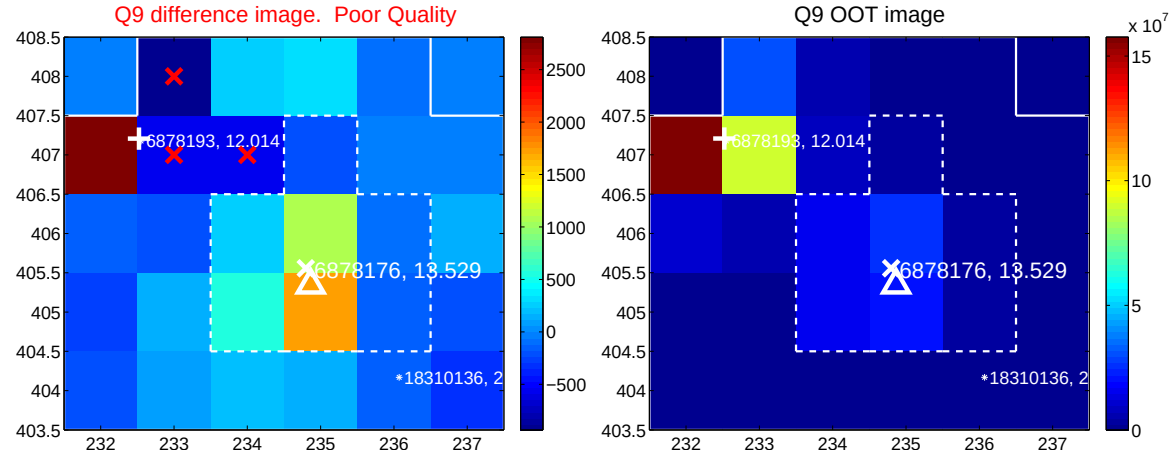


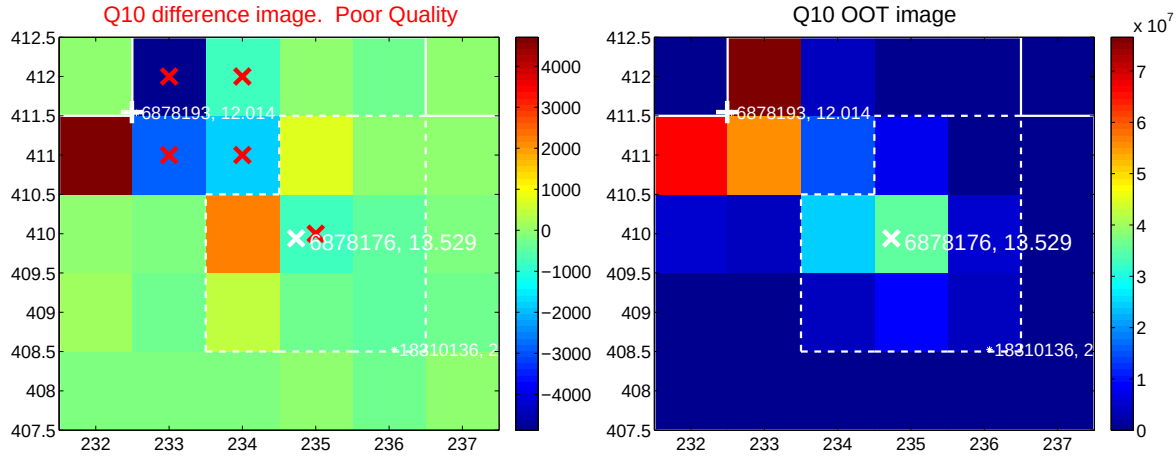


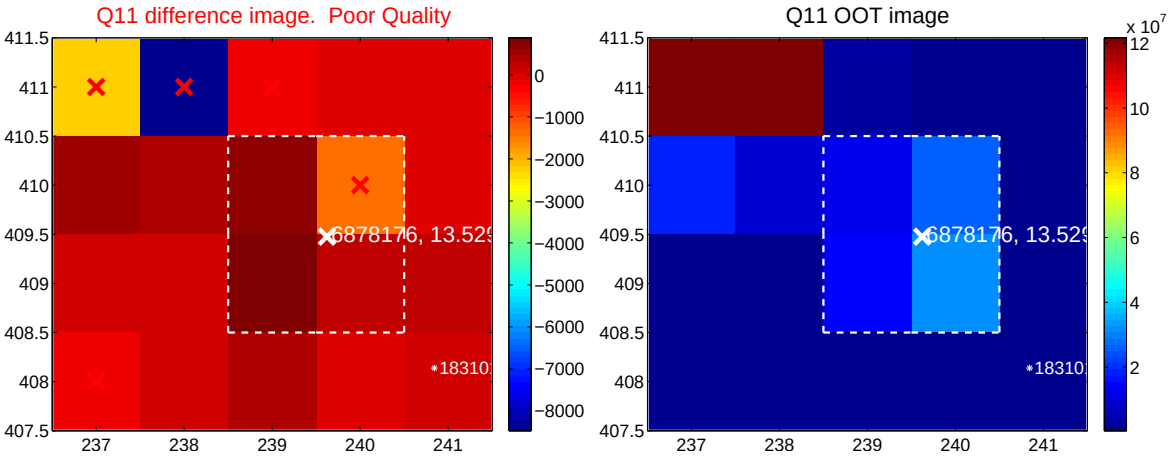


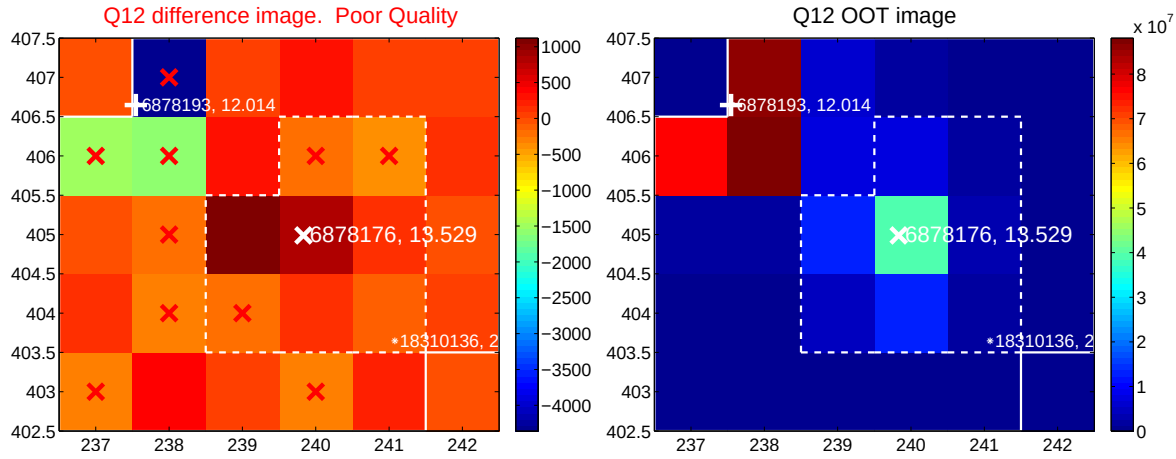


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

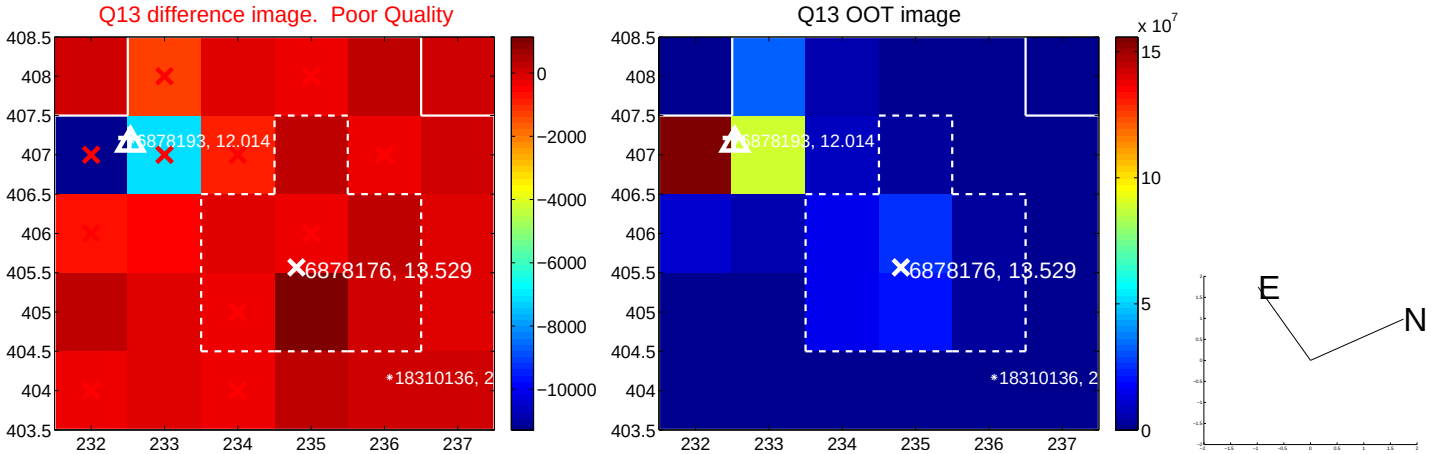


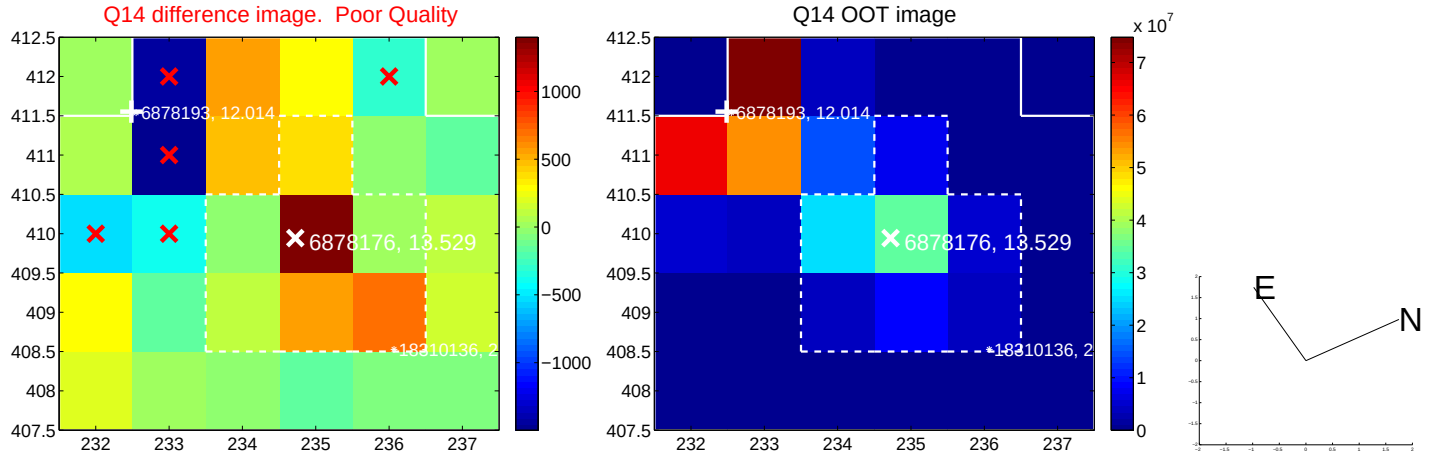


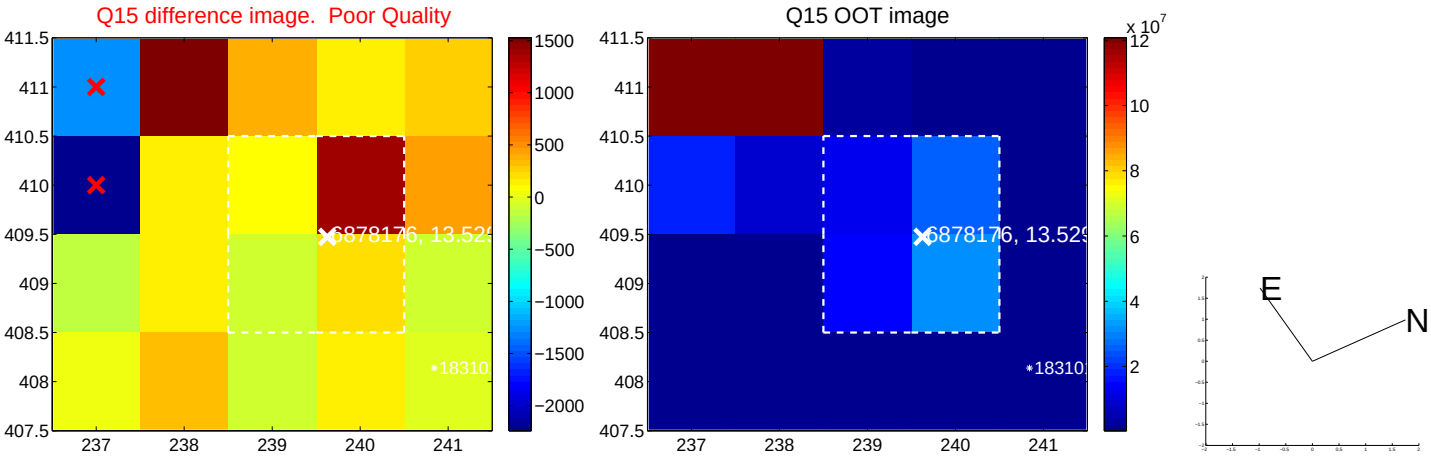


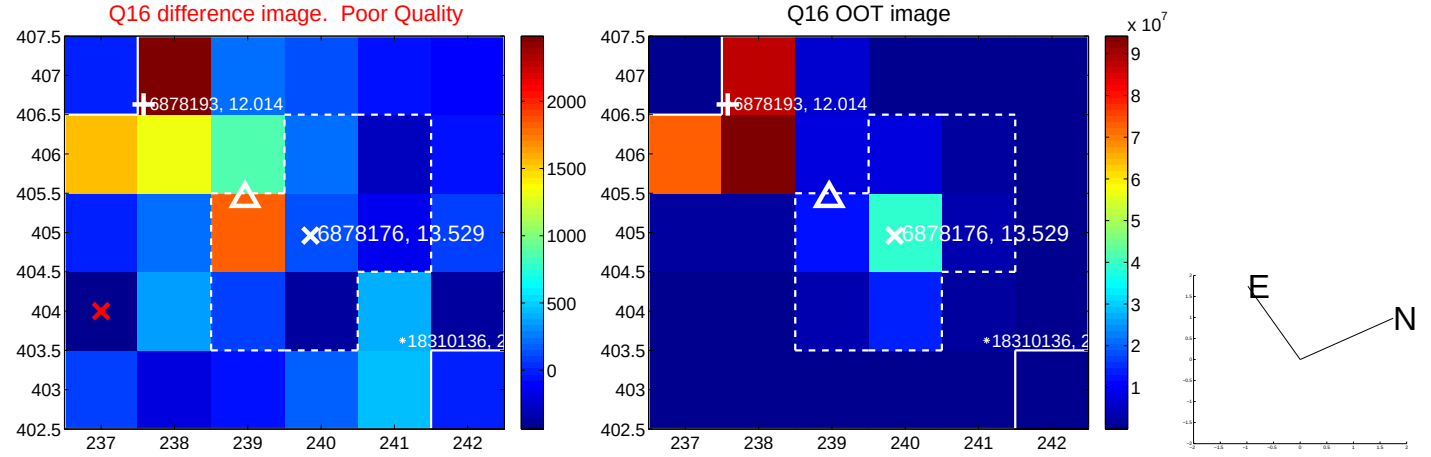


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

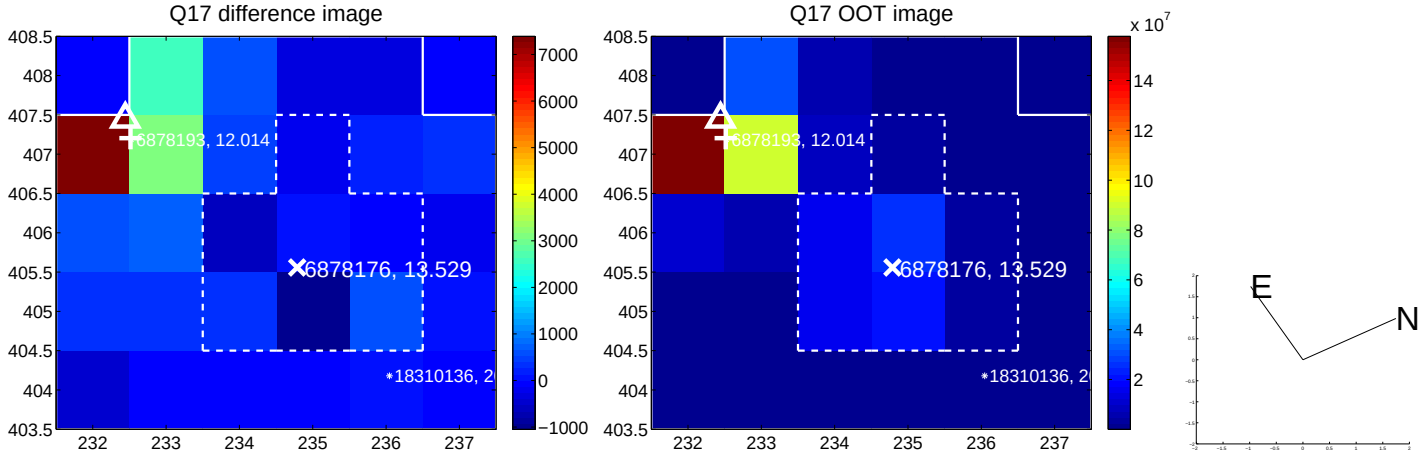


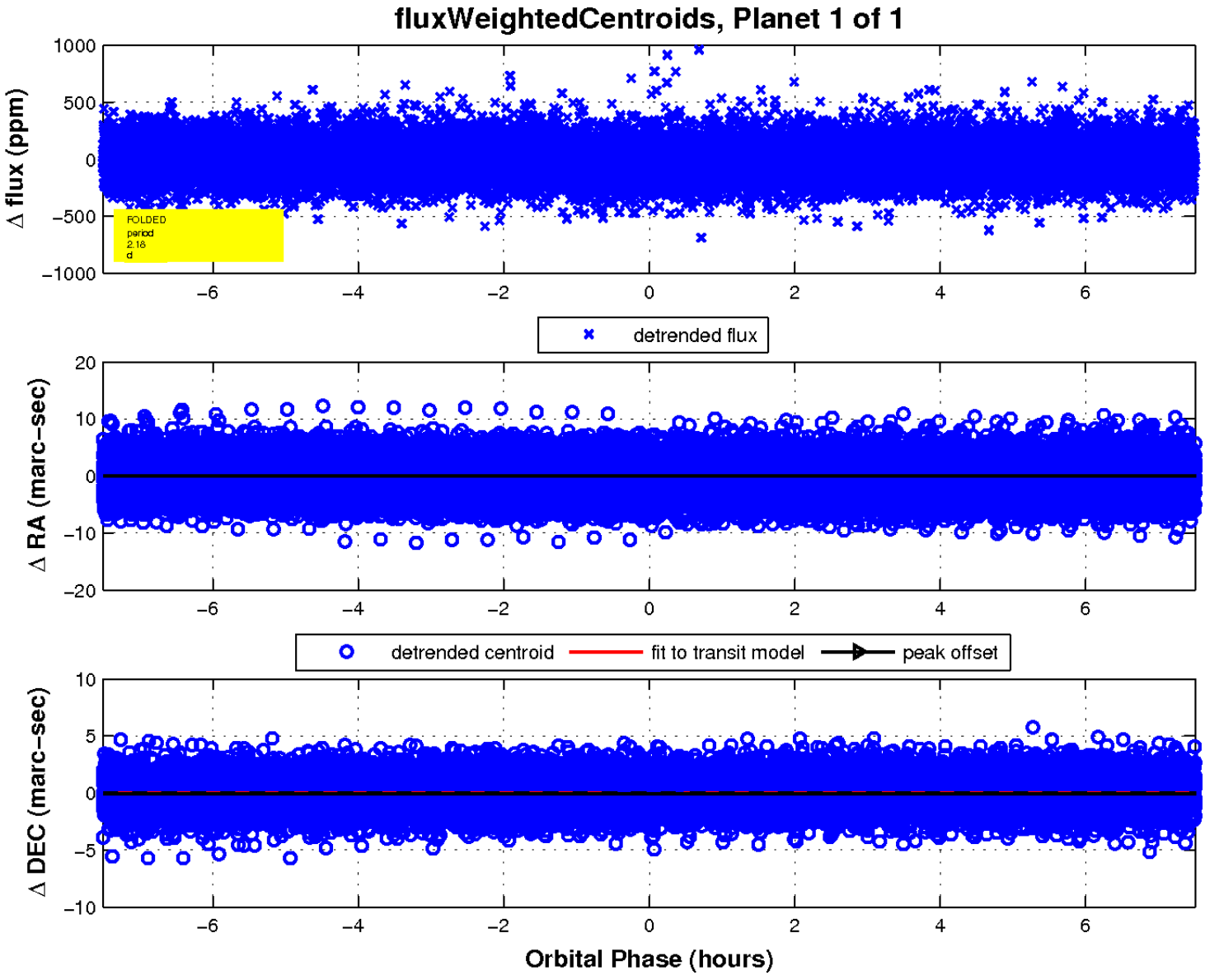






white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.





UKIRT Image