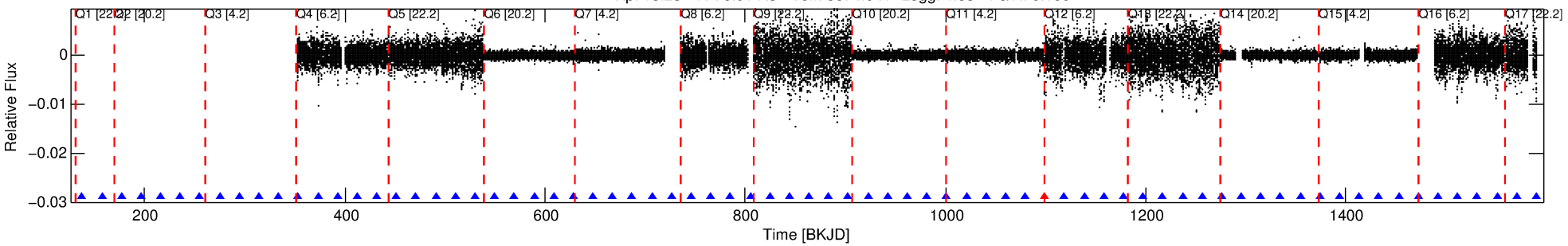
WARNING: THIS DATA IS SIMULATED, NOT OBSERVED

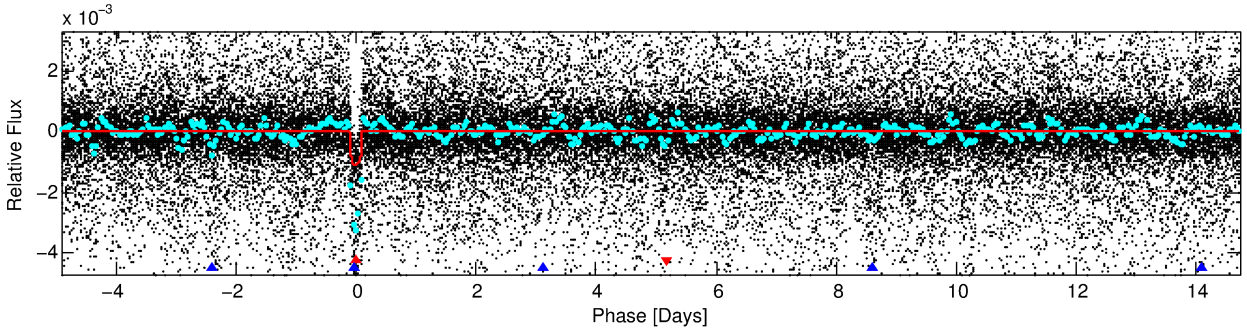
DV One-Page Summary

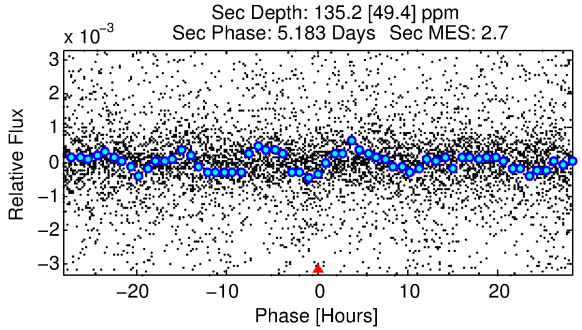
KIC: 11512103 Candidate: 1 of 2 Period: 19.627 d

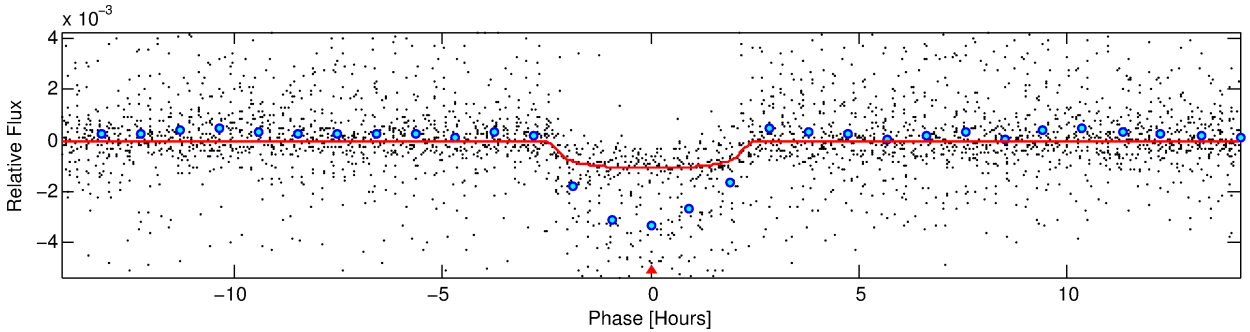
WARNING: THIS DATA IS SIMULATED, NOT OBSERVED

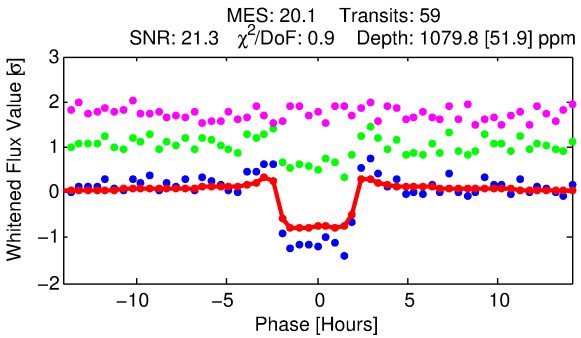
Kp: 15.23 R*: 0.91 Rs Teff: 5674.0 K Logg: 4.53 Fe/H: 0.100

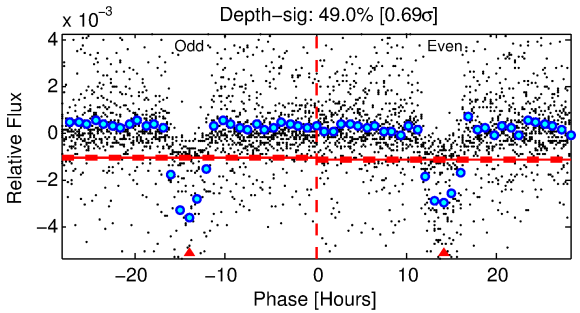


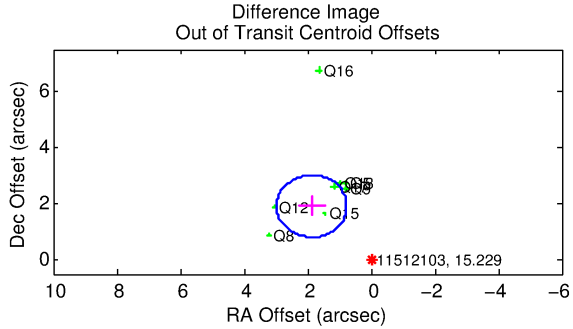












DV Fit Results:

Period = 19.62707 [0.00010] d
Epoch = 137.7021 [0.0047] BKJD
Rp/R* = 0.0313 [0.0101]
a/R* = 26.58 [35.15]
b = 0.60 [1.41]

Seff = 37.50 [14.31]
Teq = 631 [60] K
Rp = 3.10 [1.34] Re
a = 0.1426 [0.0348] AU

Ag = 157.71 [129.38] [1.21σ]
Teffp = 3457 [652] K [4.31σ]

DV Diagnostic Results:

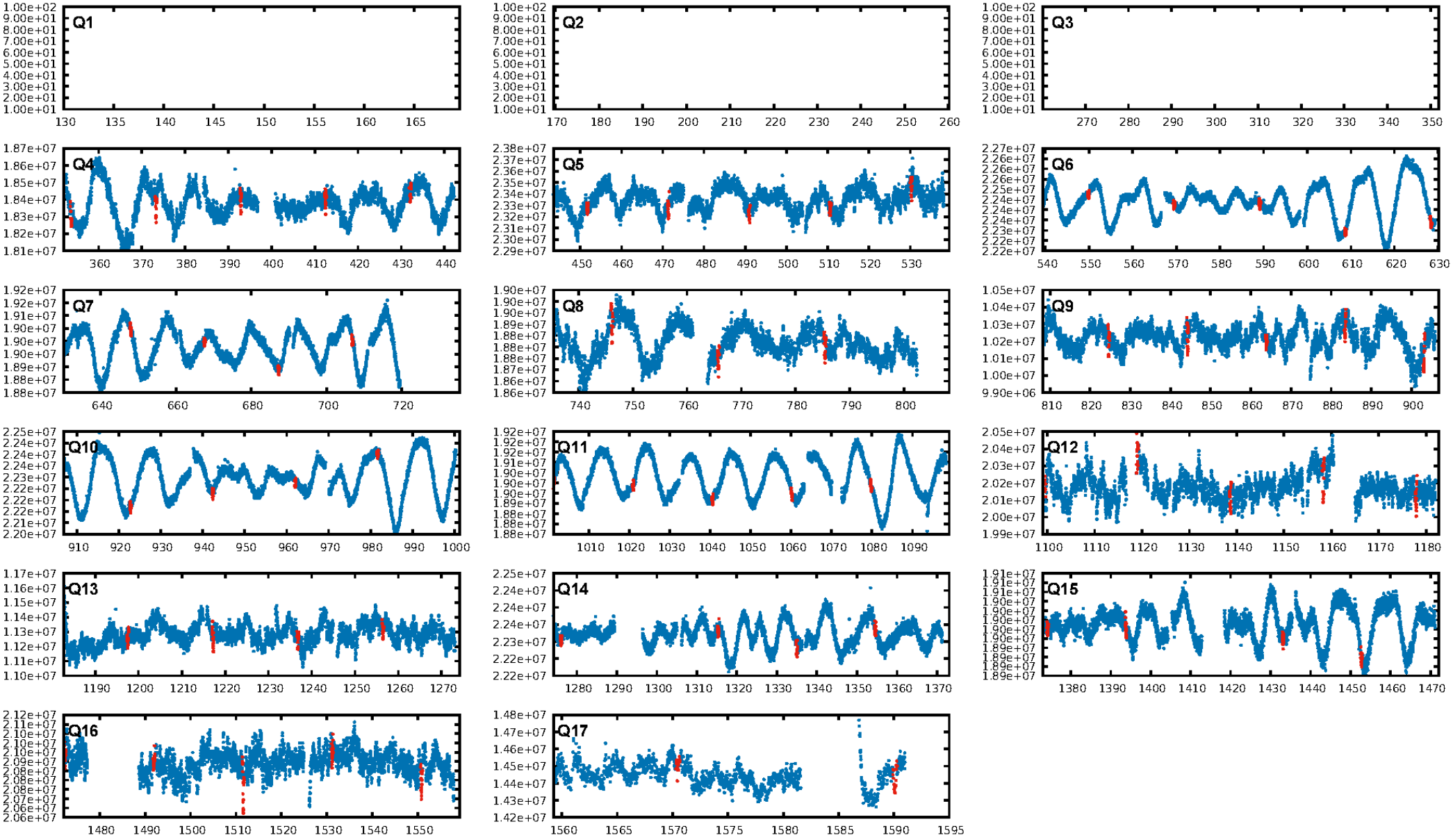
ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [961.27σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.57e-88
RollingBand-fgt: 0.98 [56/57]
GhostDiagnostic-chr: 10.59

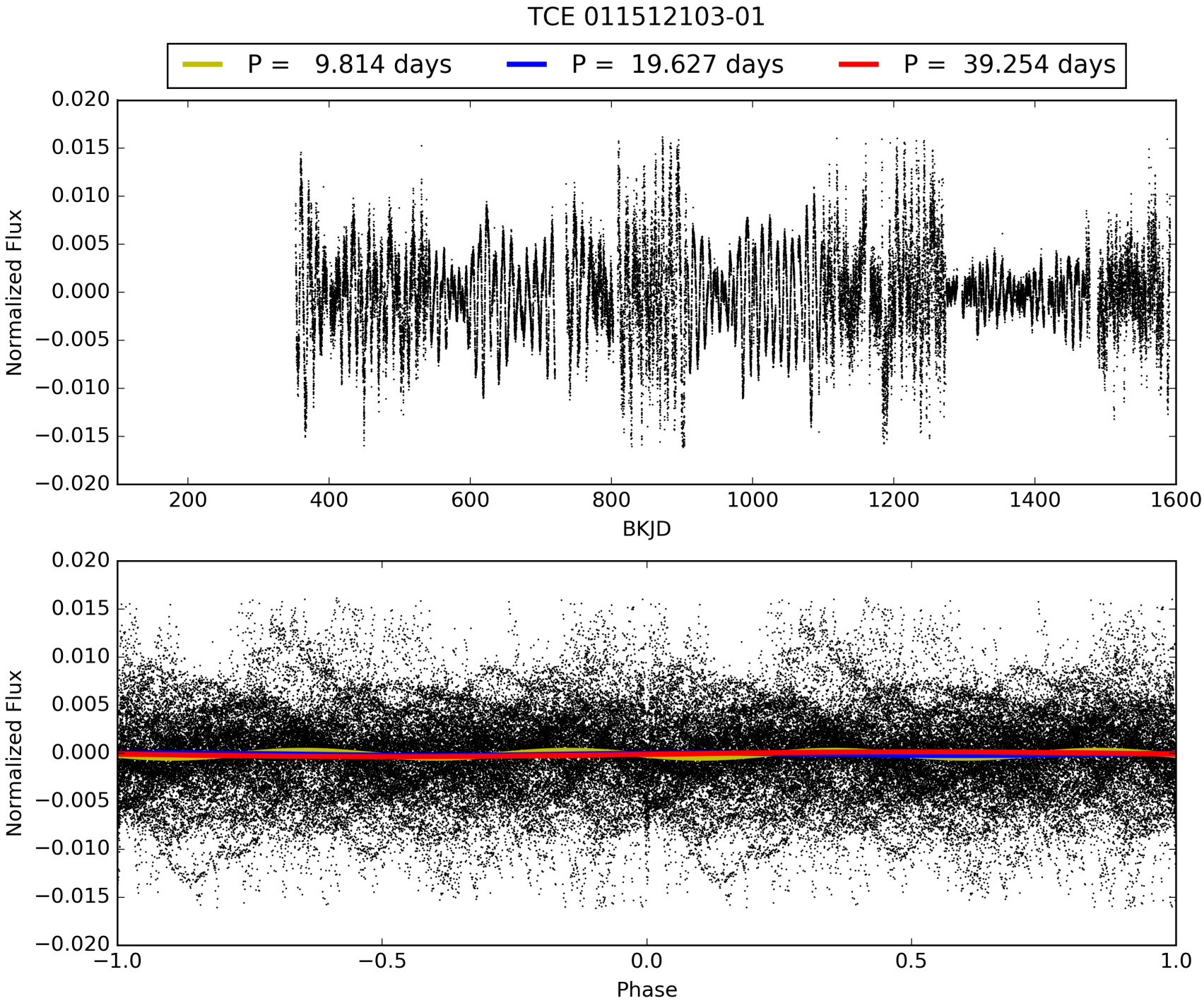
Centroid-sig: 0.0%
Centroid-so: 3.244 arcsec [20.47σ]
OotOffset-rm: 2.677 arcsec [7.27σ]
KicOffset-rm: 6.225 arcsec [7.00σ]
OotOffset-st: 0/1/3/4 [8]
KicOffset-st: 1/2/3/4 [10]
DiffImageQuality-fgm: 0.80 [8/10]
DiffImageOverlap-fno: 1.00 [14/14]

Software Revision: svn+ssh://murzim/repo/soc/branches/integ/ksop-2174@60968 -- Date Generated: 08-Feb-2016 14:09:10 Z

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

TCE 011512103-01, PDC Light Curves

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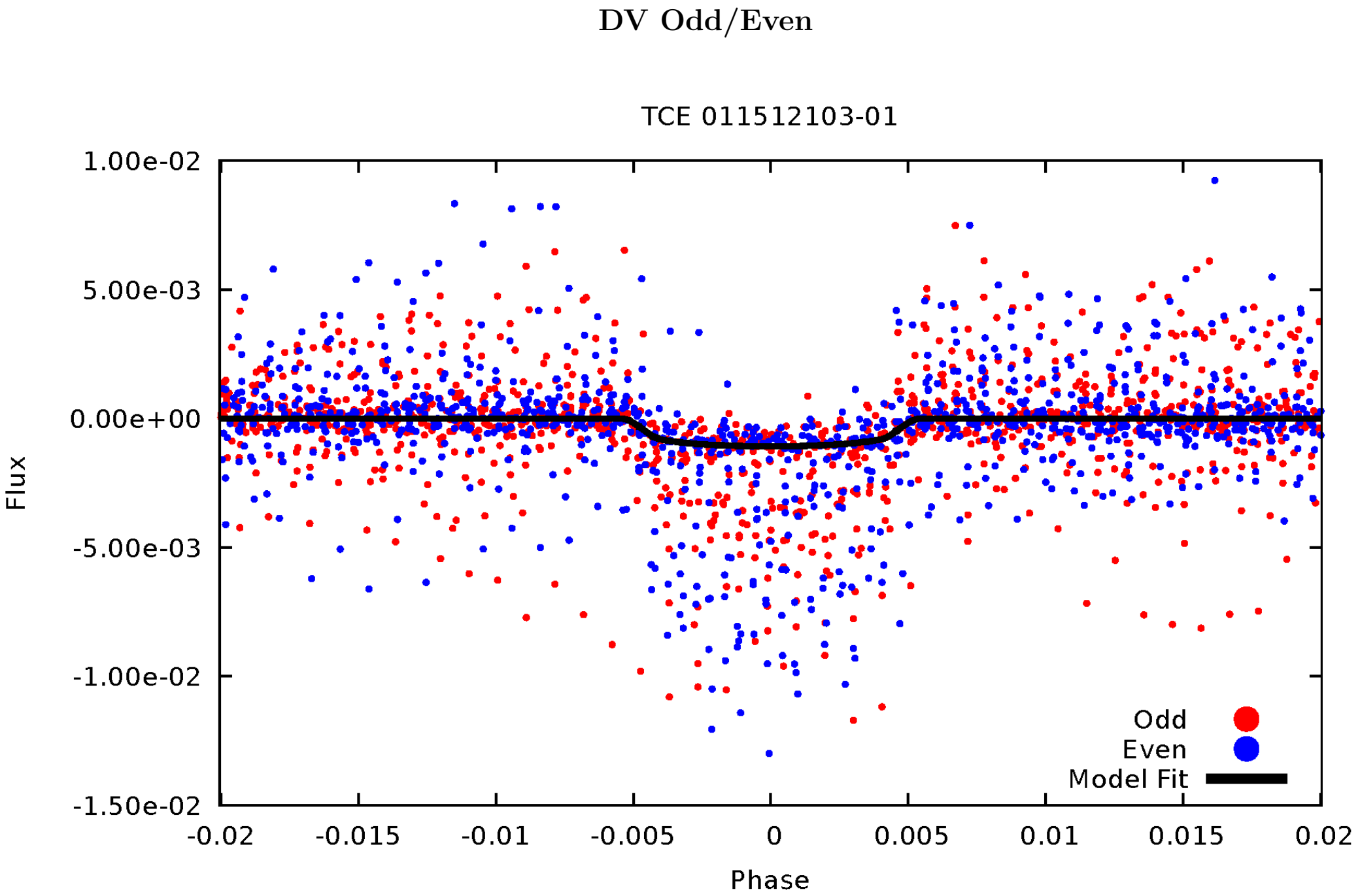
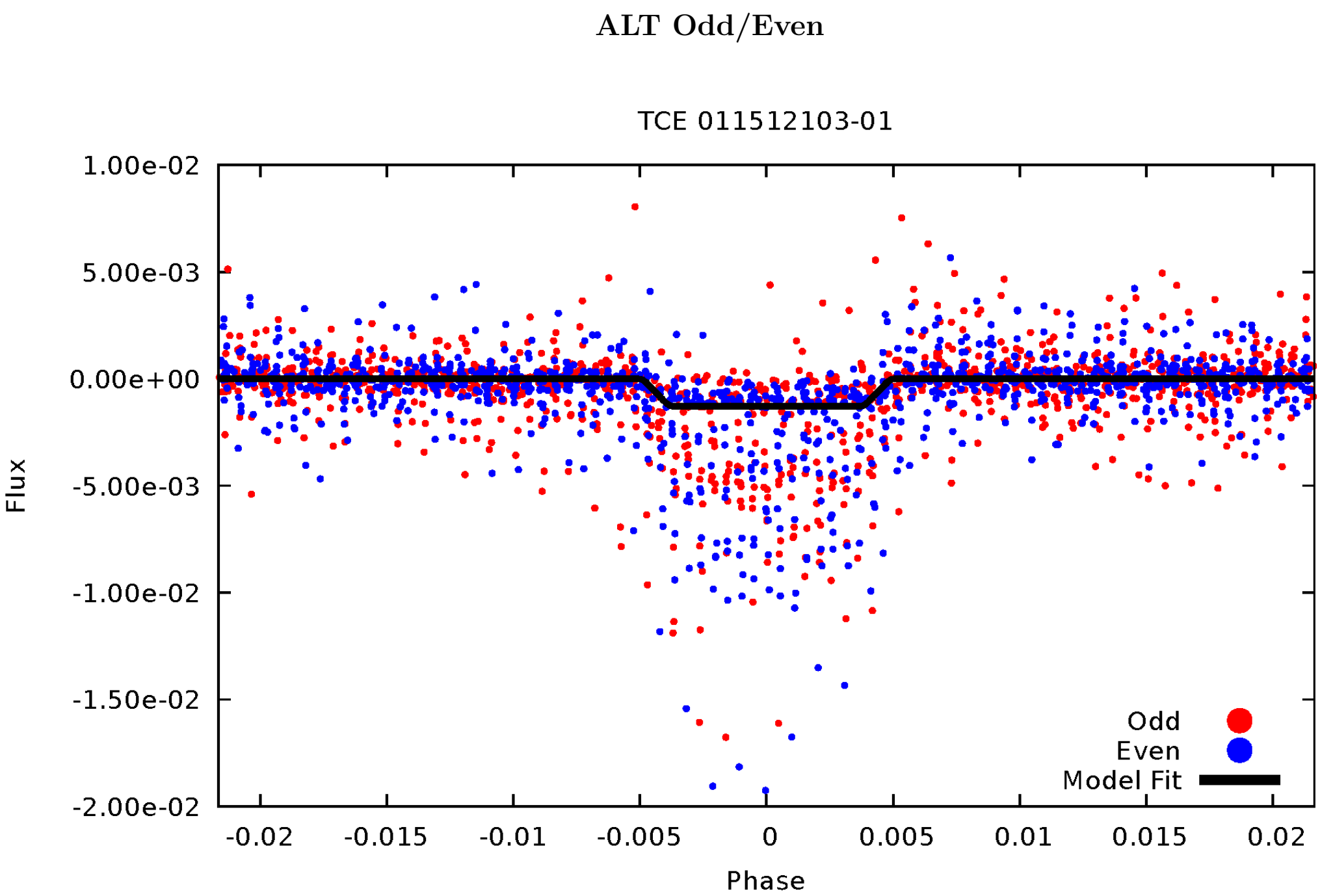
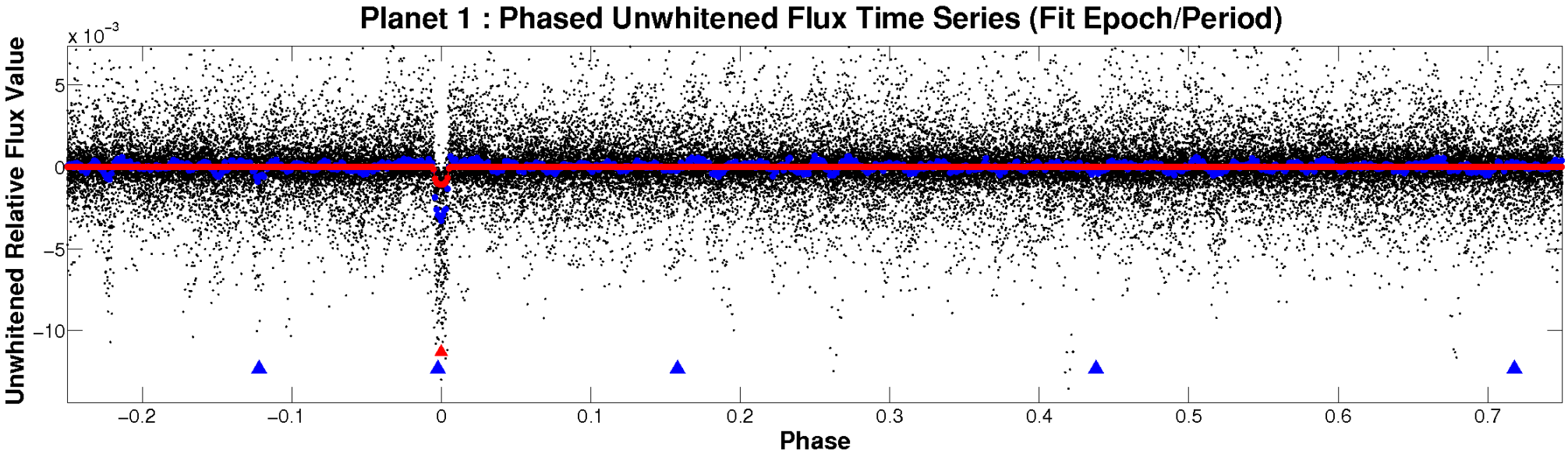
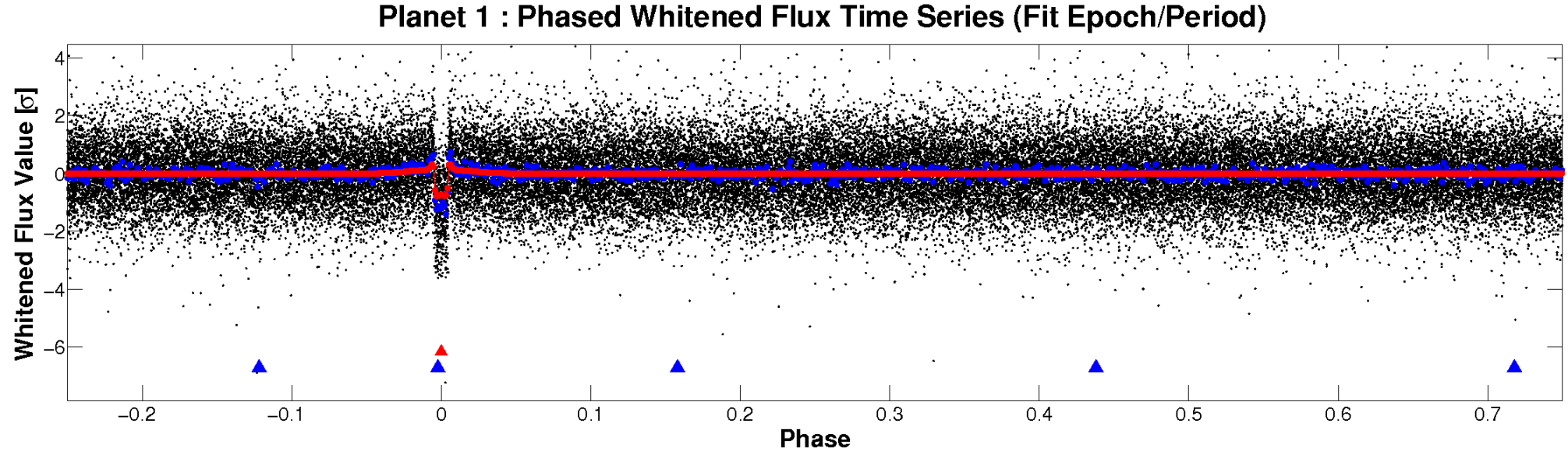
P = 9.814 days
P = 19.627 days
P = 39.254 days
Normalized Flux
BKJD
Normalized Flux
Phase


DV Odd/Even
TCE 011512103-01
1.00e-02
5.00e-03
0.00e+00
-5.00e-03
-1.00e-02
-1.50e-02
Flux
-0.02
-0.015
-0.01
-0.005
0
0.005
0.01
0.015
0.02
Phase
Odd
Even
Model Fit


ALT Odd/Even
TCE 011512103-01
1.00e-02
5.00e-03
0.00e+00
-5.00e-03
-1.00e-02
-1.50e-02
-2.00e-02
Flux
-0.02
-0.015
-0.01
-0.005
0
0.005
0.01
0.015
0.02
Phase
Odd
Even
Model Fit

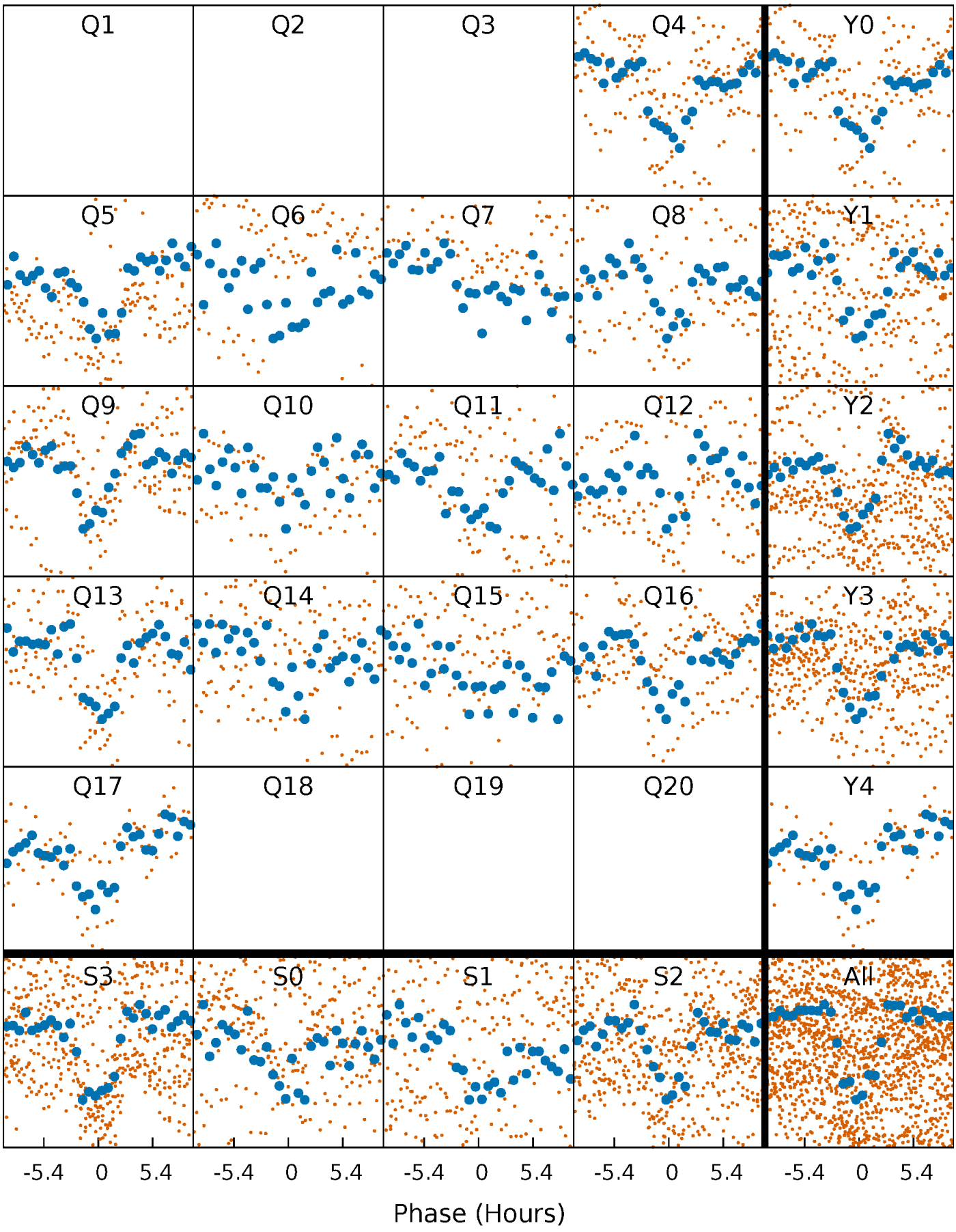
Non-Whitened Vs. Whitened Light Curve





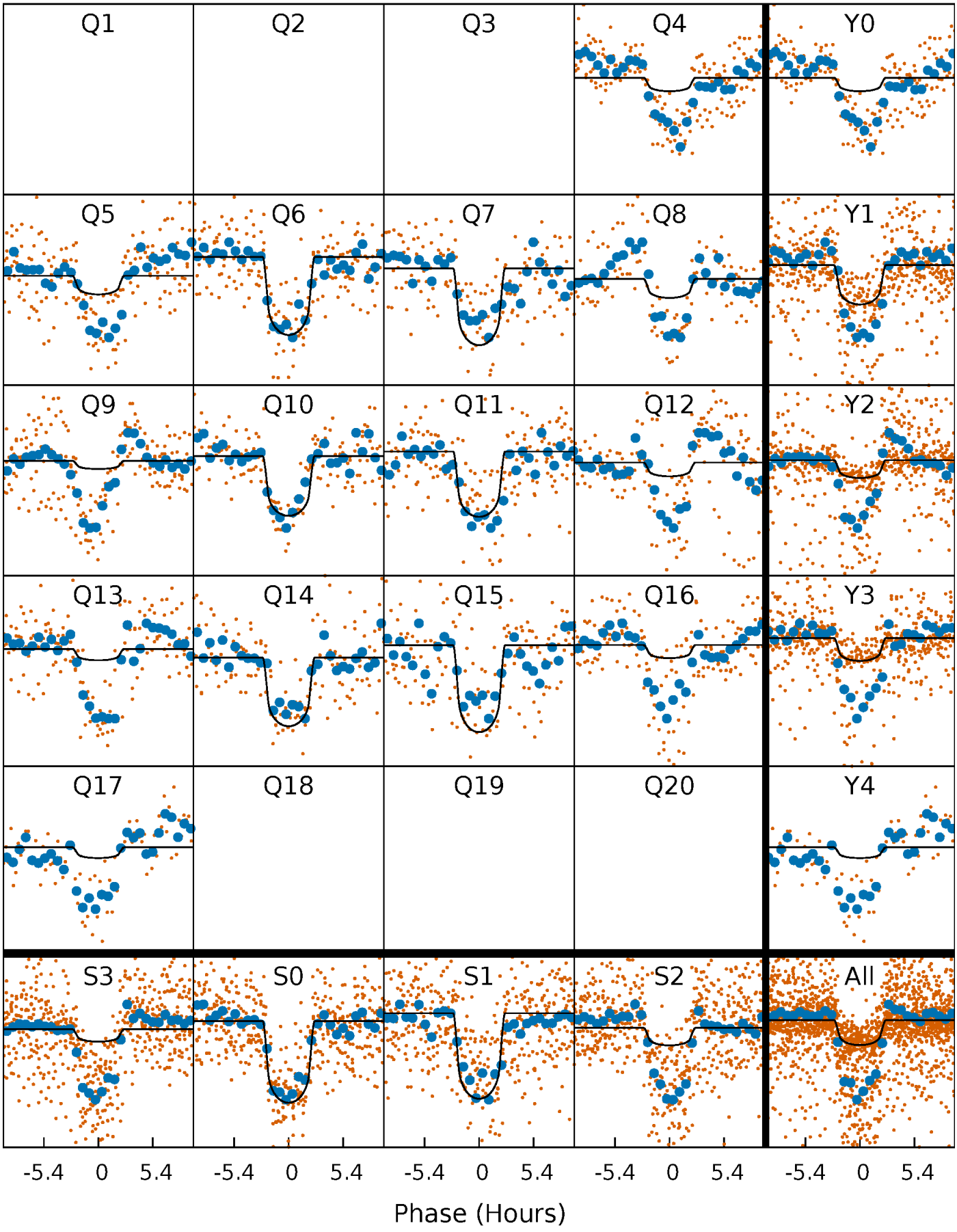
PDC Quarter-Phased Transit Curves

TCE 011512103-01 P= 19.627074 Days T_0=137.702121 (BKJD)



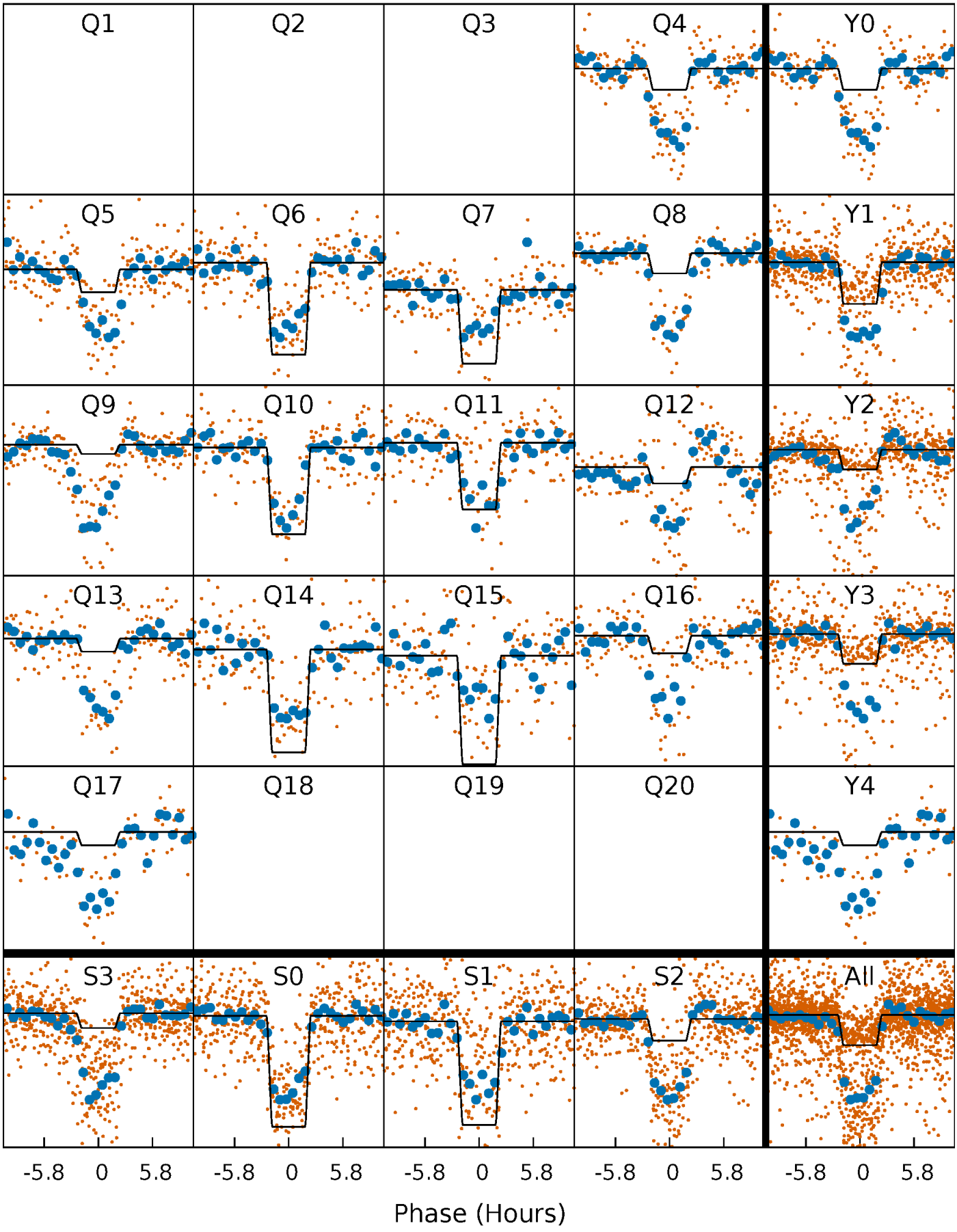
DV Quarter-Phased Transit Curves

TCE 011512103-01 P= 19.627074 Days T_0=137.702121 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

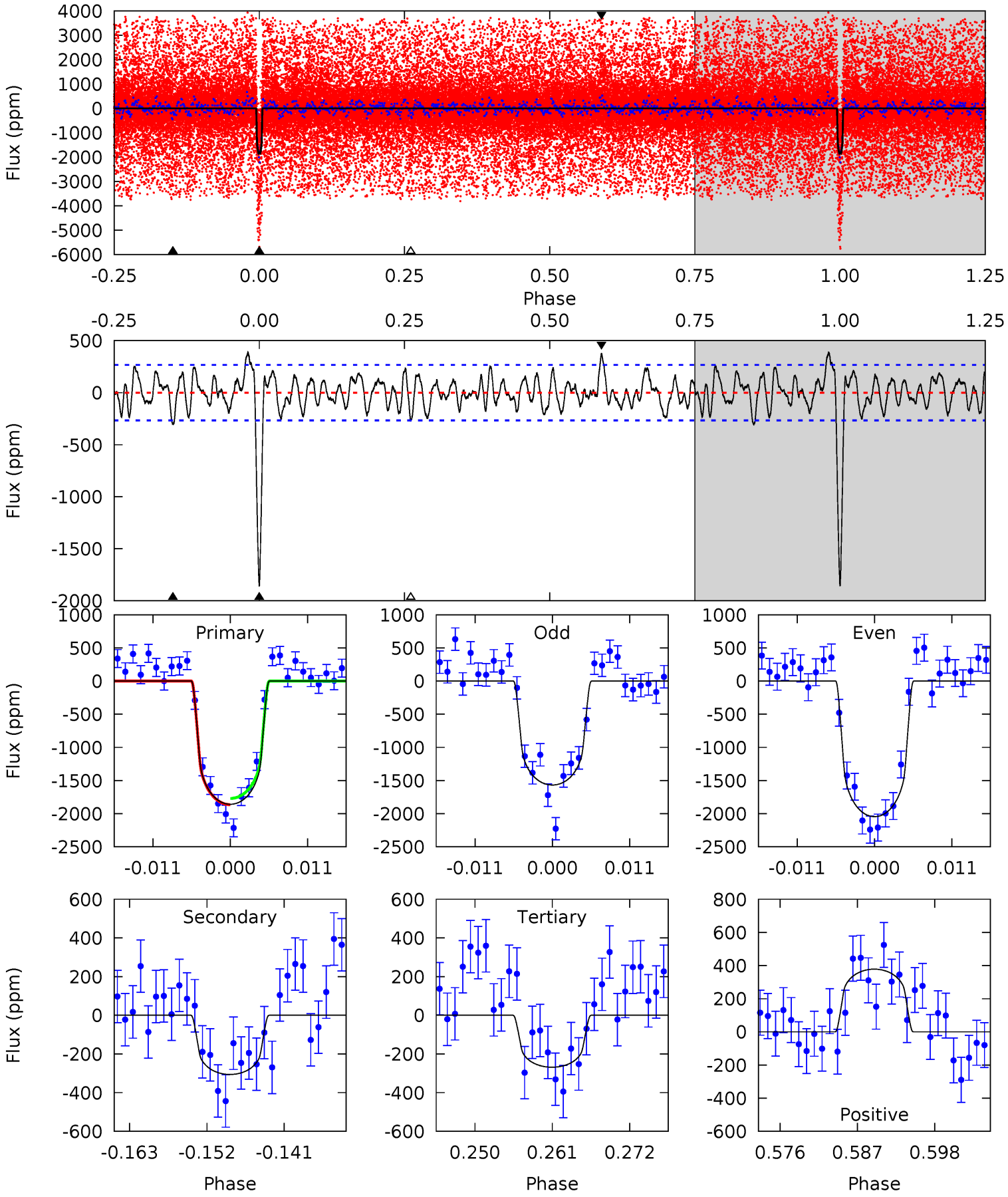
TCE 011512103-01 P= 19.626951 Days T_0=137.706290 (BKJD)



DV Model-Shift Uniqueness Test

011512103-01, P = 19.627074 Days, E = 137.702121 Days

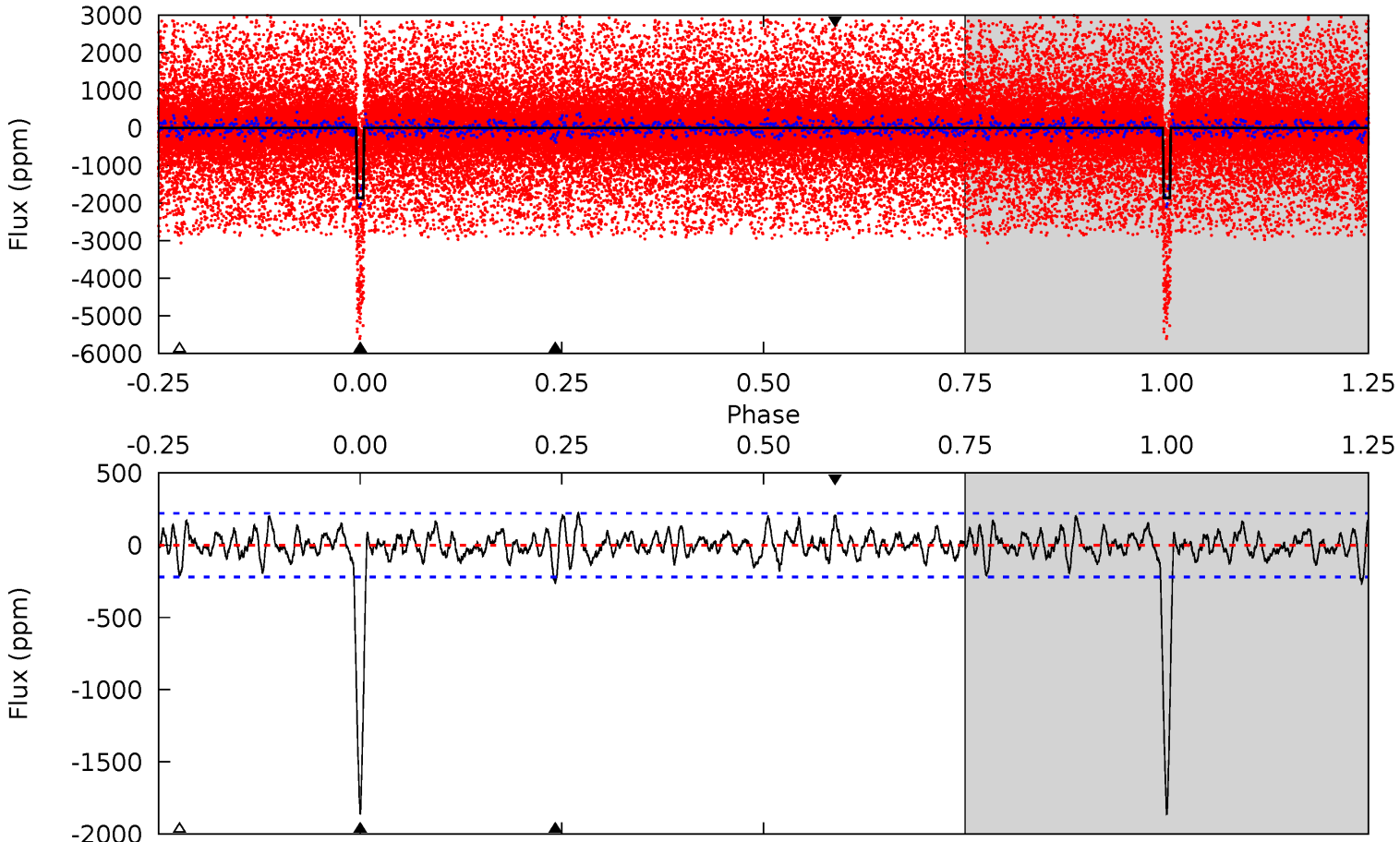
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
35.0	5.76	5.05	7.11	5.01	2.55	2.28	29.9	27.8	0.70	-1.36	4.56	1.36	0.17	0.91

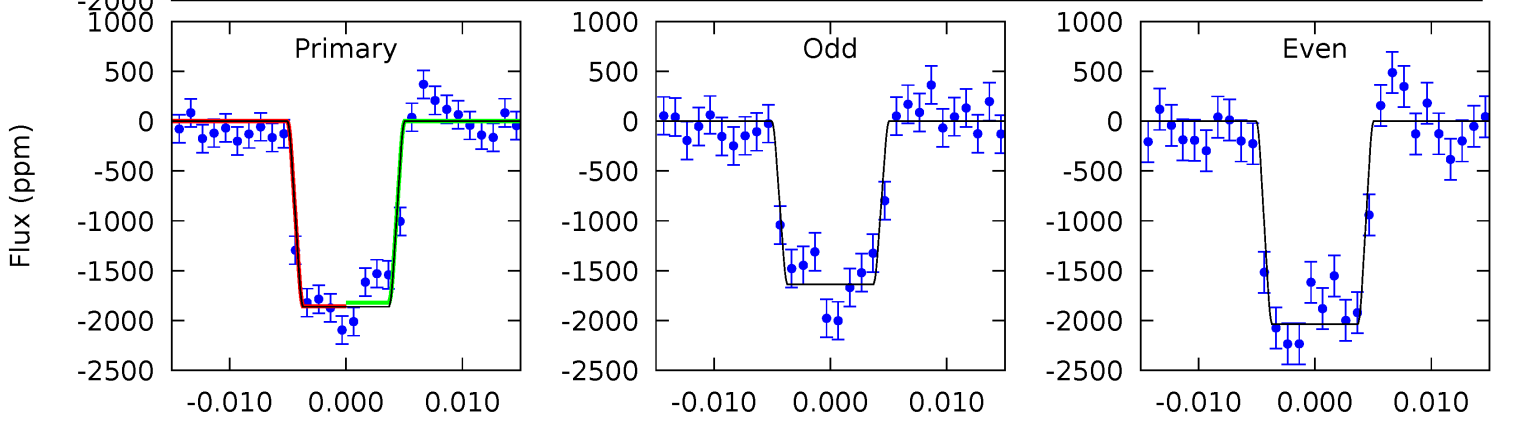


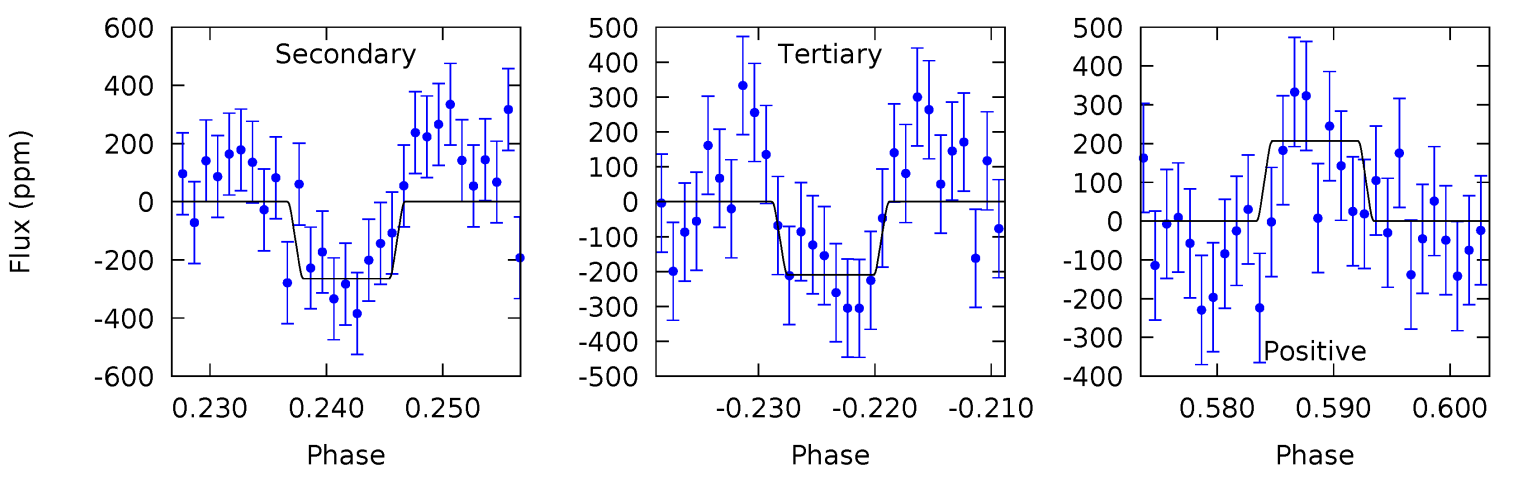
Alt Model-Shift Uniqueness Test

011512103-01, P = 19.626951 Days, E = 137.706290 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
42.5	6.03	4.79	4.71	5.03	2.58	1.59	37.7	37.7	1.24	1.32	4.59	1.42	0.11	0







Stellar Parameters For KIC 011512103

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	5674^{+171}_{-206}	$4.525^{+0.048}_{-0.192}$	$0.100^{+0.250}_{-0.300}$	$0.906^{+0.264}_{-0.088}$	$1.001^{+0.100}_{-0.120}$	$1.899^{+0.363}_{-0.956}$
	+3%/-4%	+1%/-4%	+250%/-300%	+29%/-10%	+10%/-12%	+19%/-50%
Source	KIC0	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 011512103-01 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-306±53	$3.23^{+1.11}_{-1.10}$	896^{+59}_{-41}	4423^{+836}_{-467}	317^{+449}_{-145}
Alt.	-264±44	$3.66^{+1.11}_{-1.08}$	896^{+58}_{-40}	4111^{+538}_{-377}	211^{+217}_{-89}

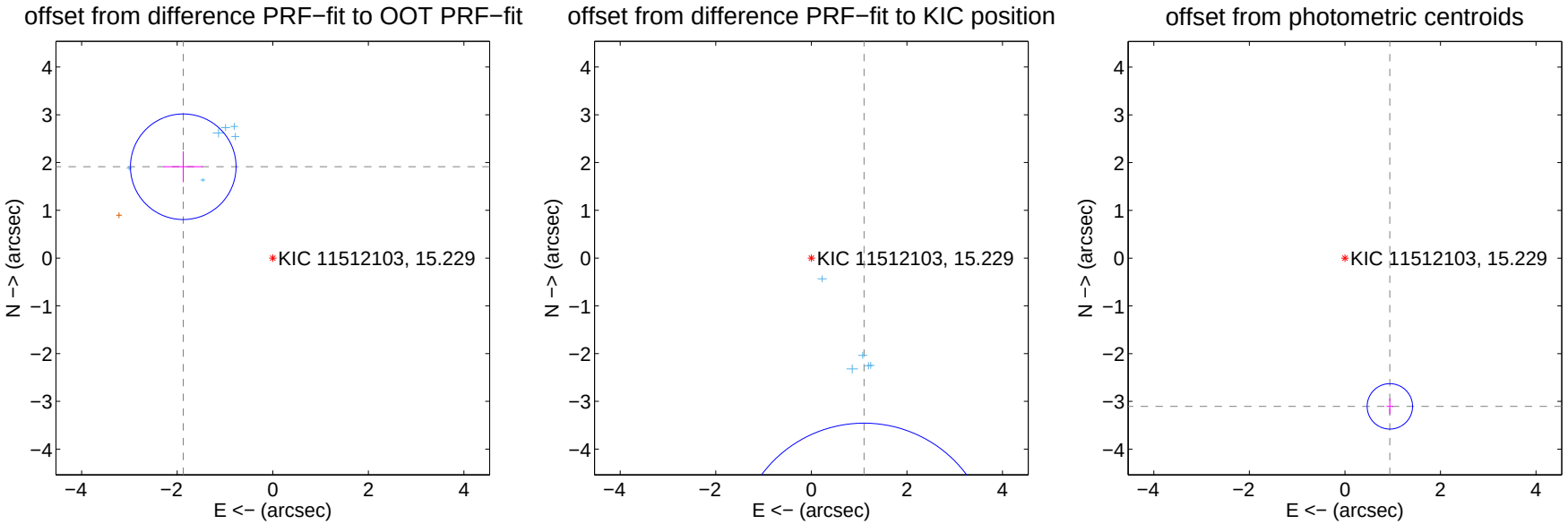
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

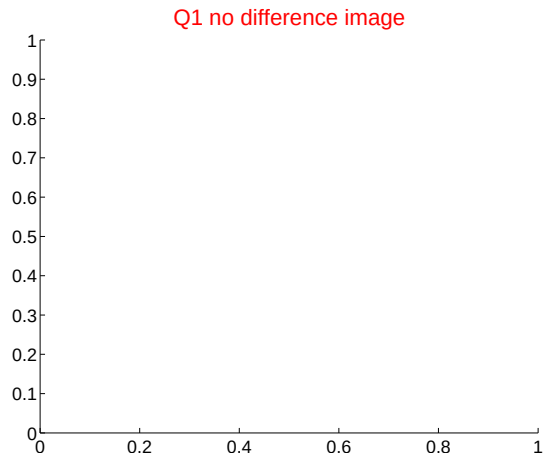
Supplemental centroid analysis for 011512103-01. Kepler magnitude: 15.23. Transit SNR 21.35
There are 8 quarters with good PRF difference image offsets
The OOT PRF centroid is offset from the target star catalog position by about 5.33 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

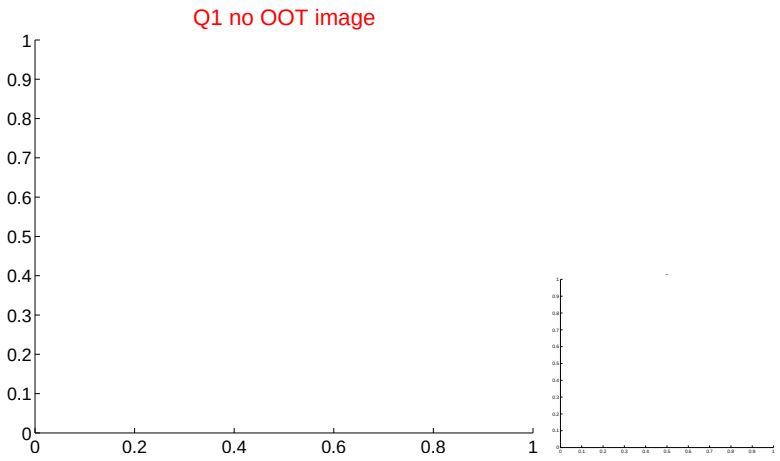
	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.677 $\pm$ 0.368	7.27	1.874 $\pm$ 0.410	1.912 $\pm$ 0.324
PRF-fit source offset from KIC position	6.225 $\pm$ 0.890	7.00	-1.104 $\pm$ 0.327	-6.127 $\pm$ 0.912
photometric centroid source offset	3.24 $\pm$ 0.16	20.47	-0.94 $\pm$ 0.07	-3.10 $\pm$ 0.16

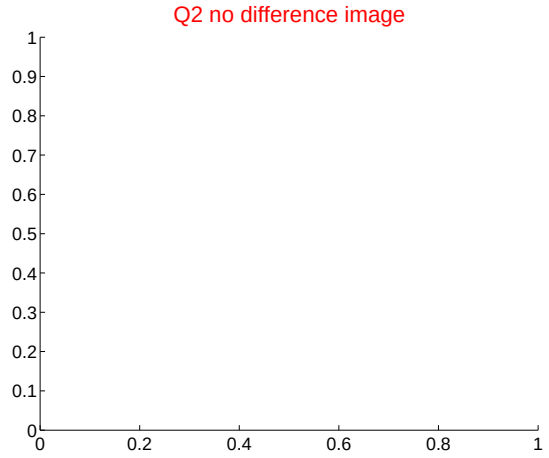


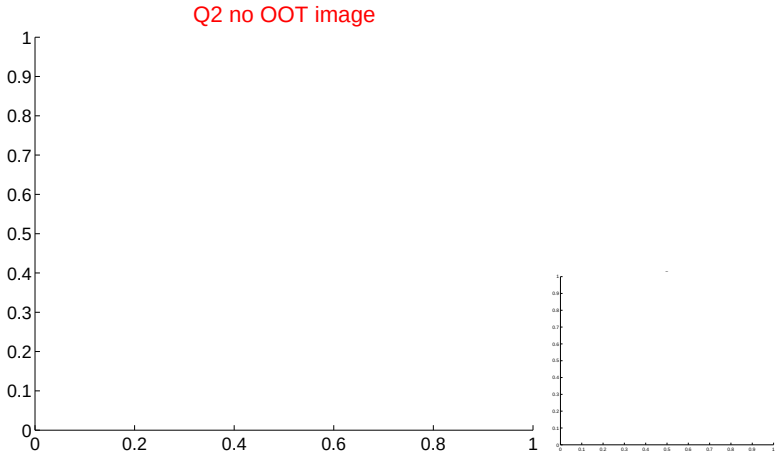
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

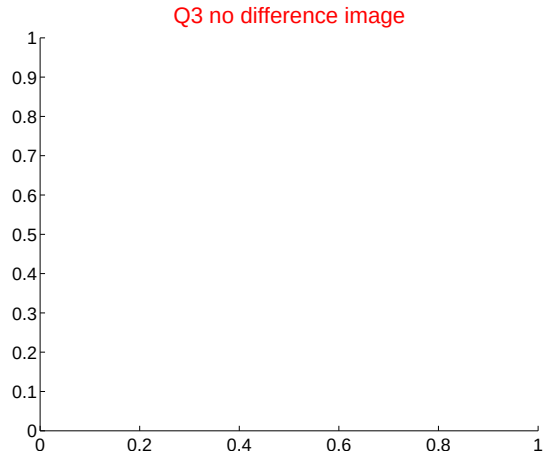
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

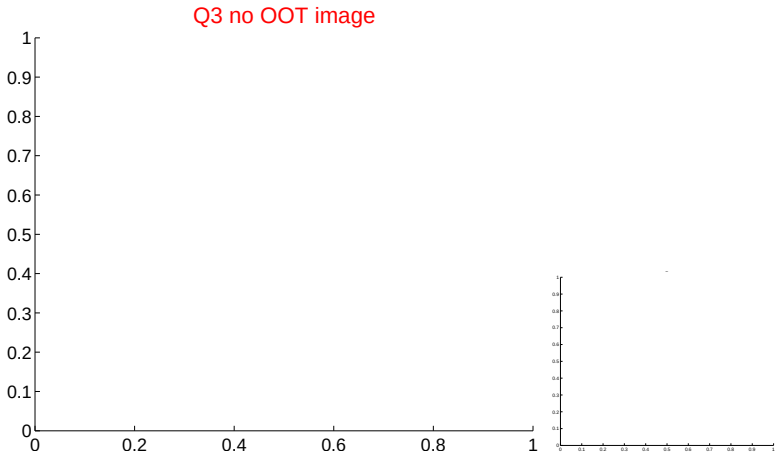


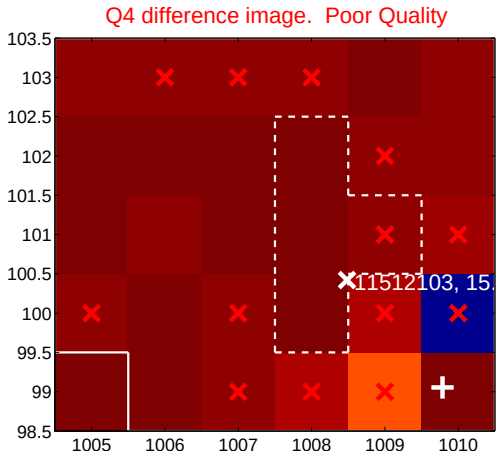


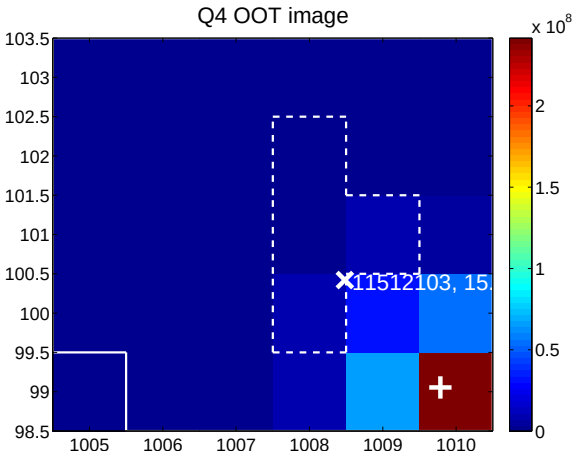


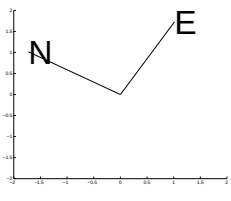




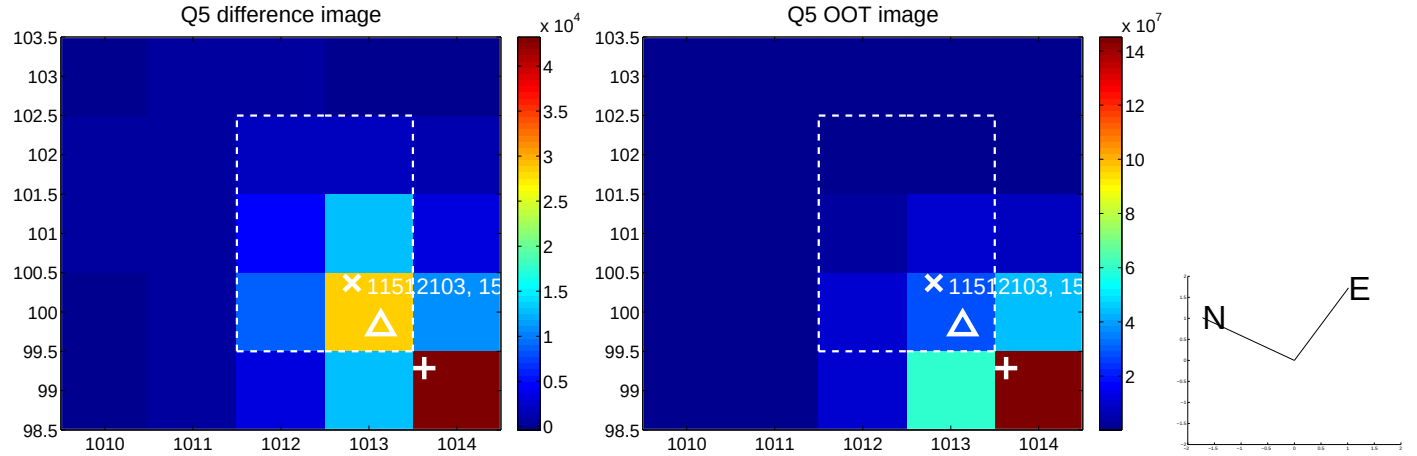


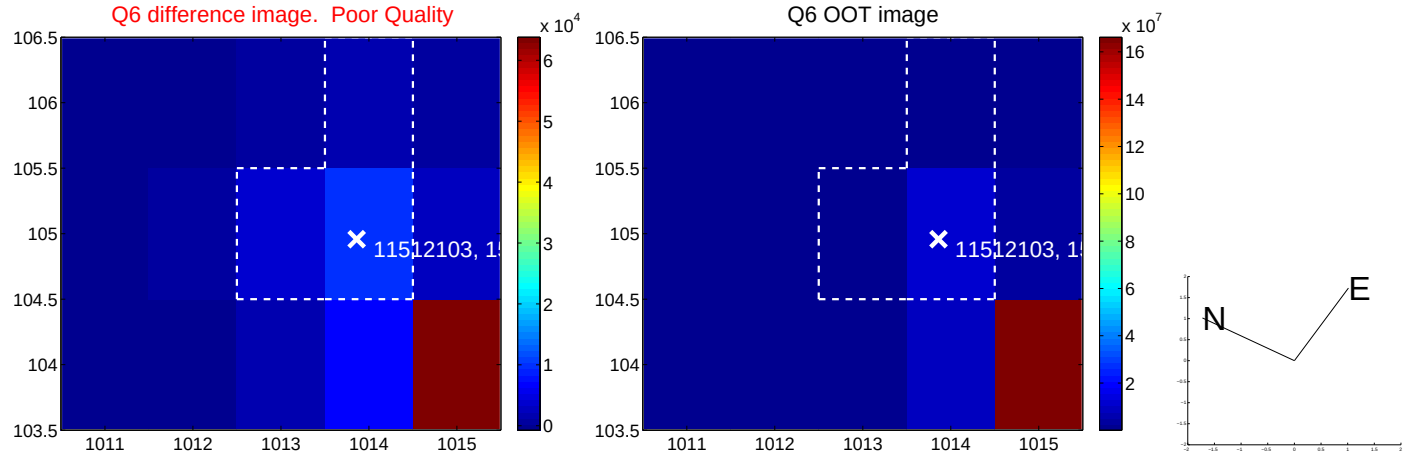


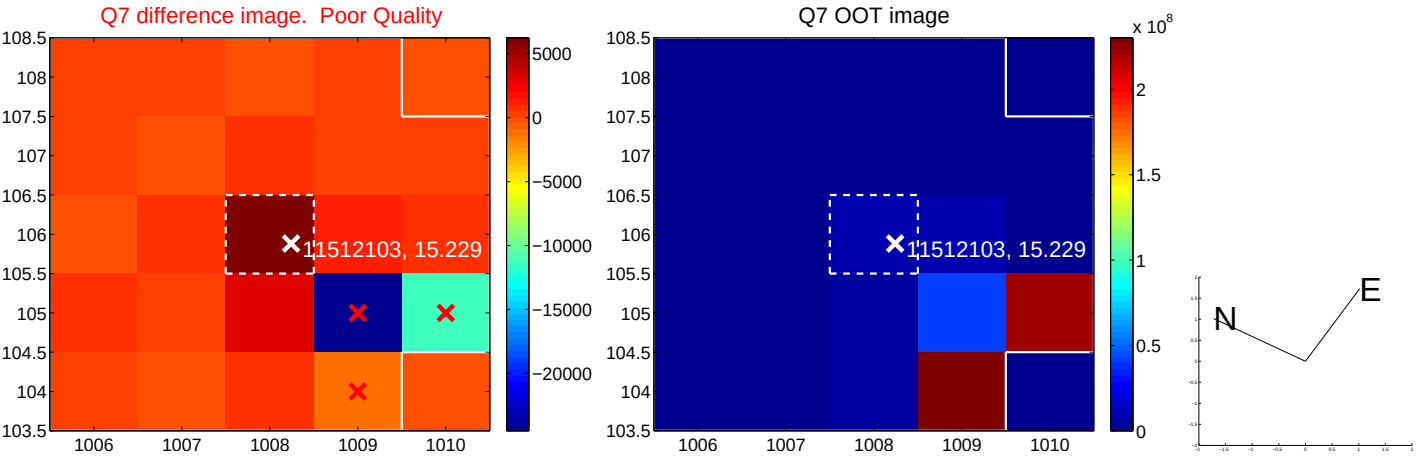


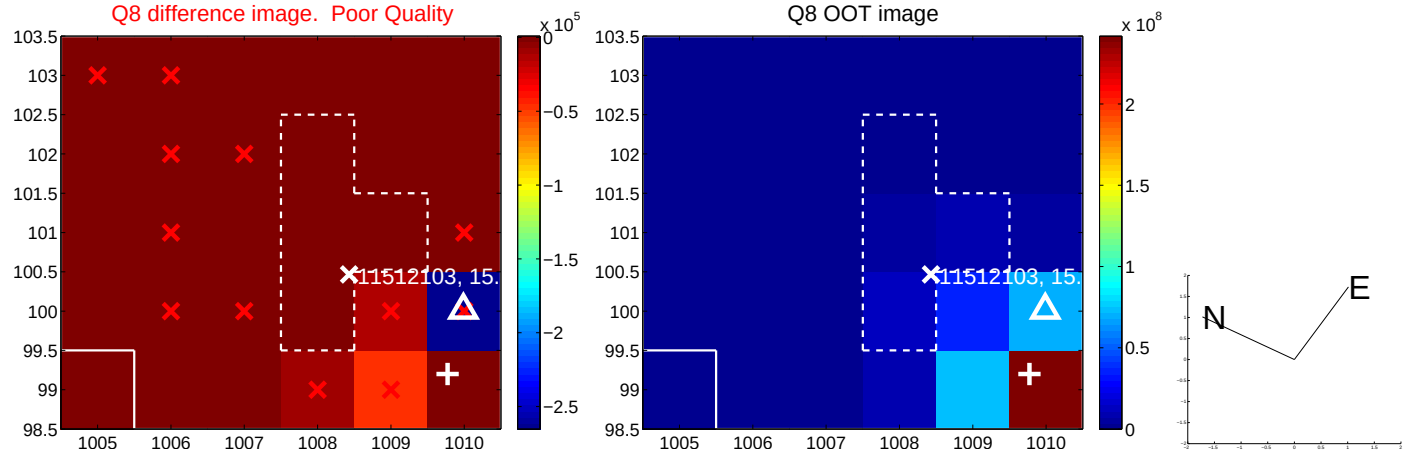


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

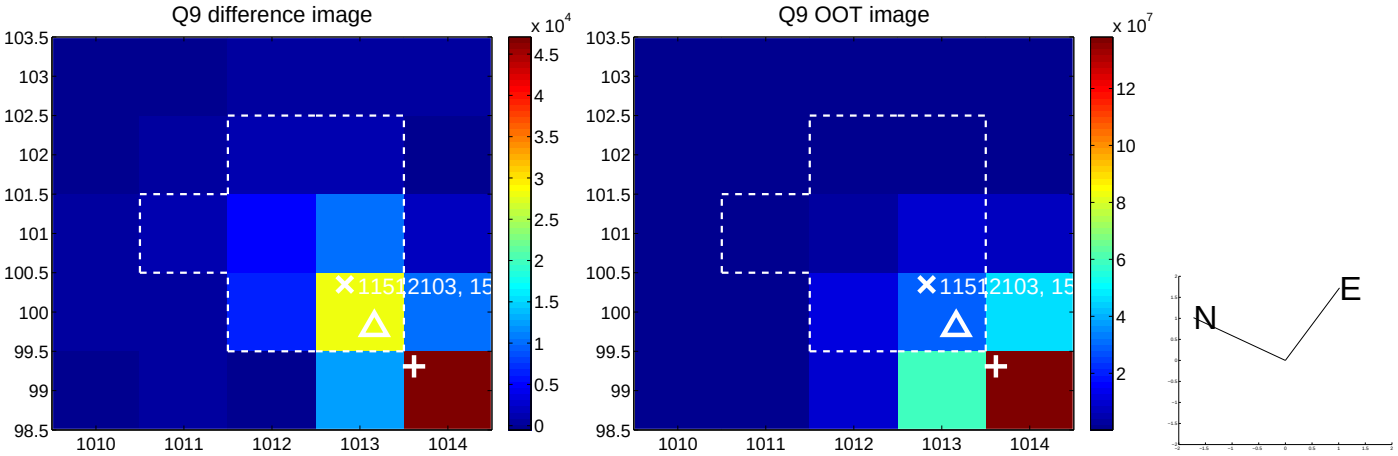


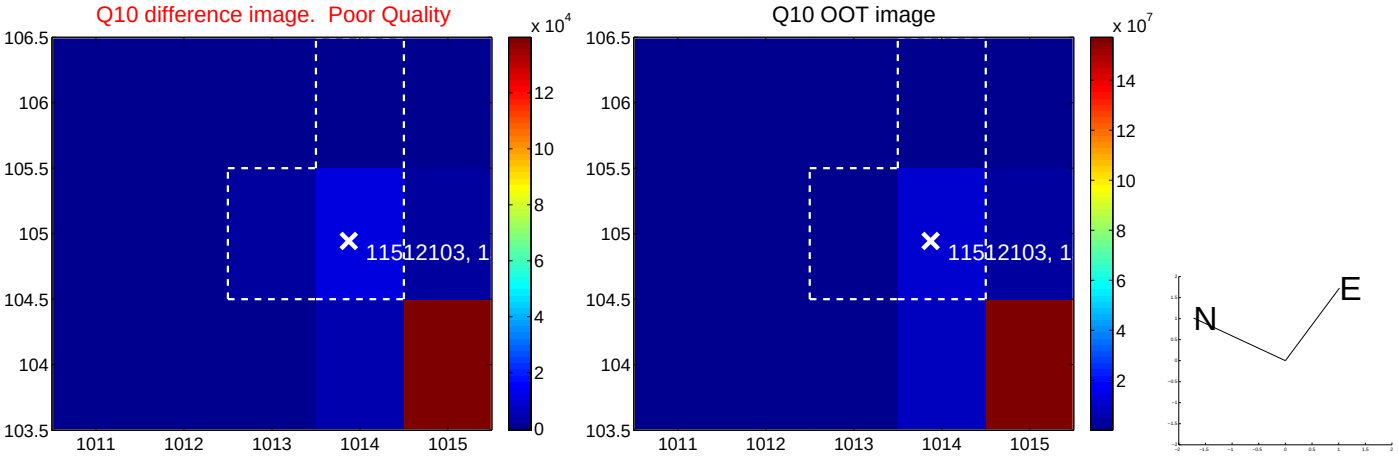


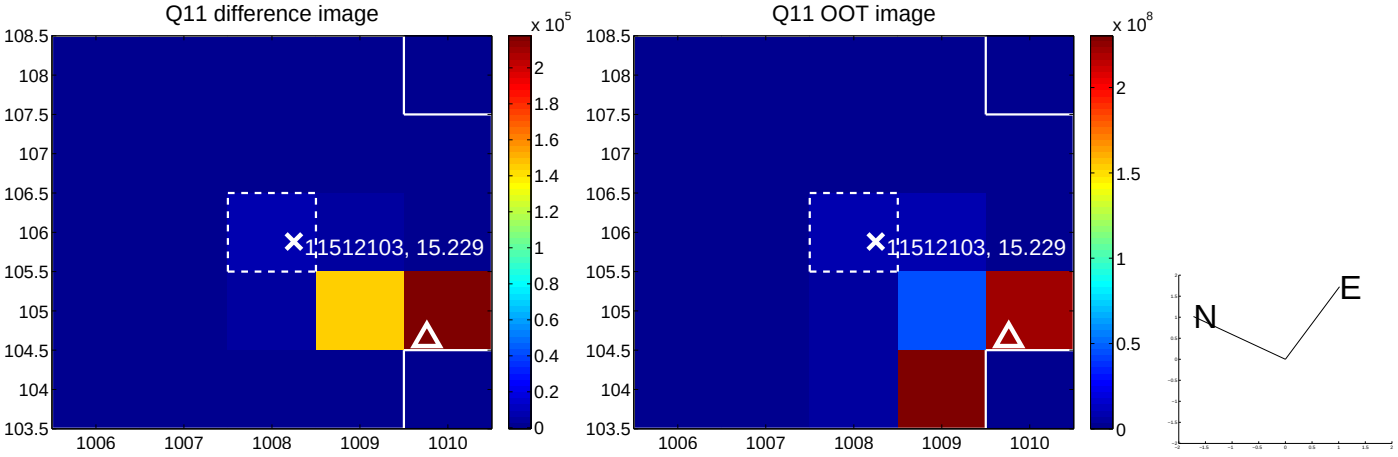


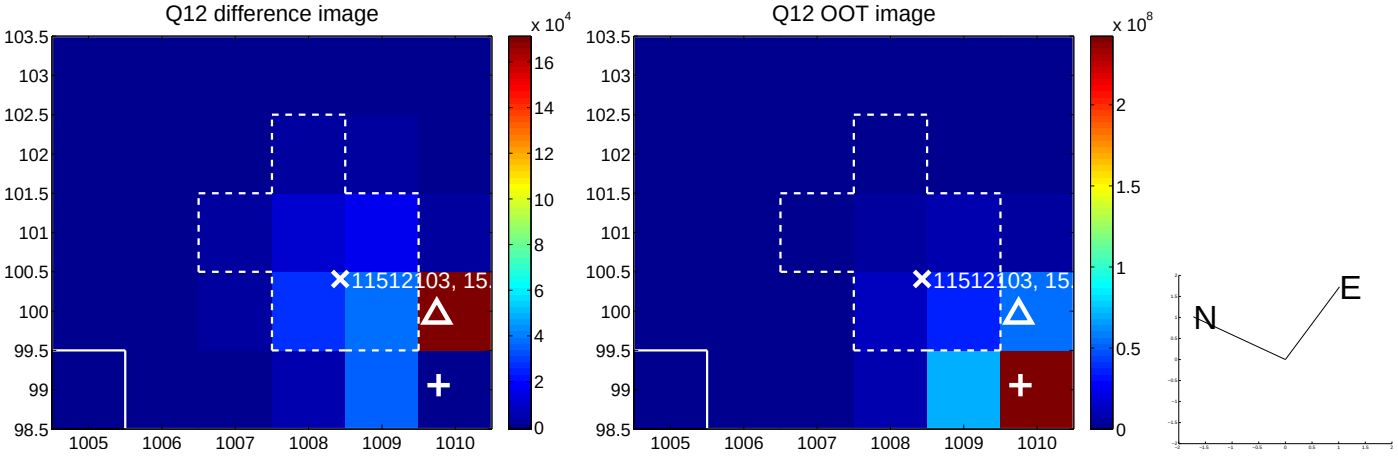


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

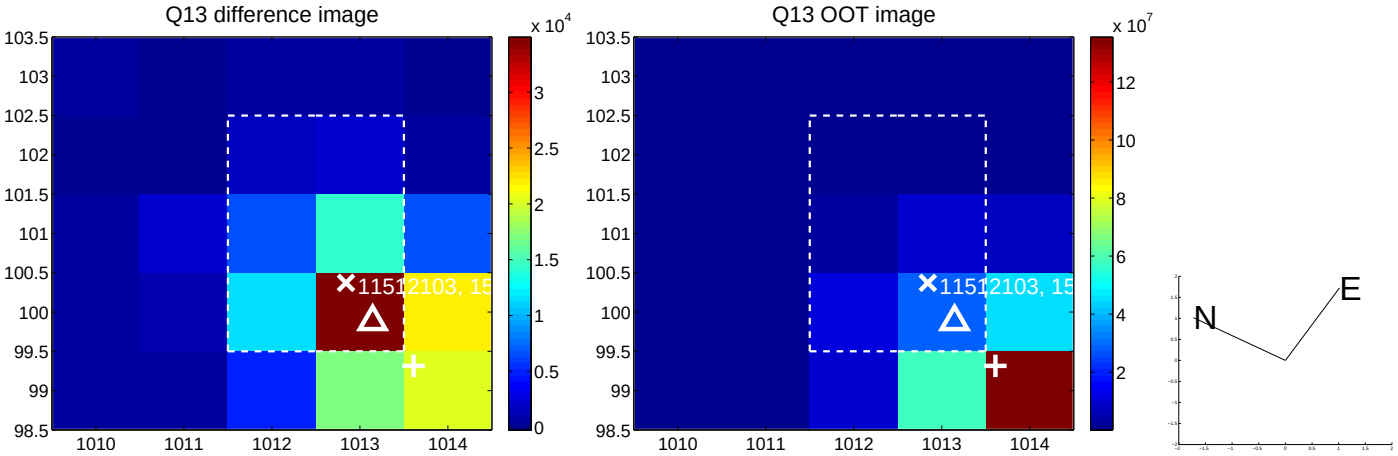


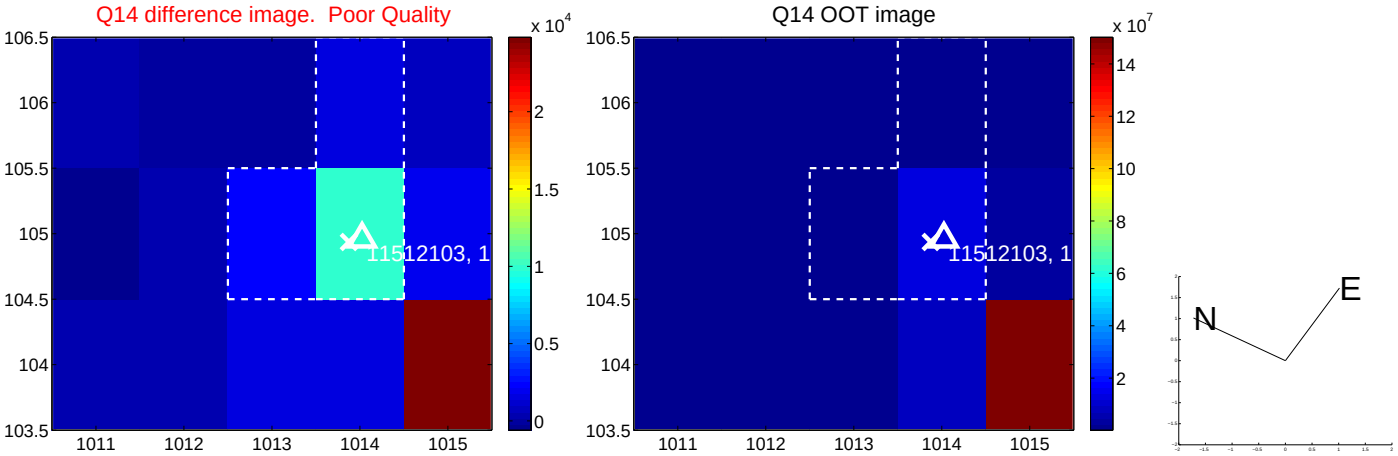


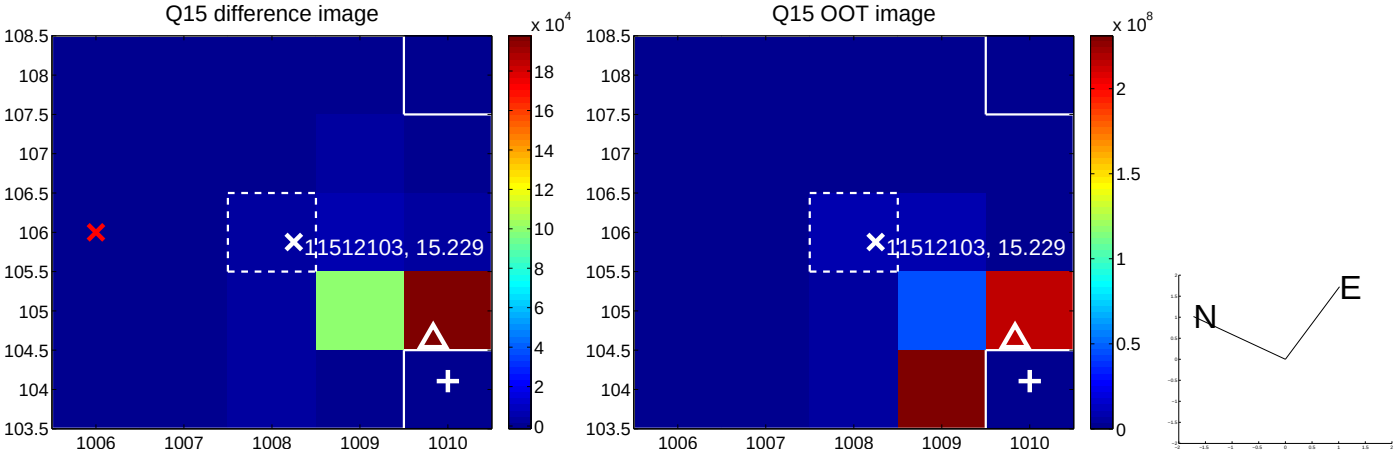


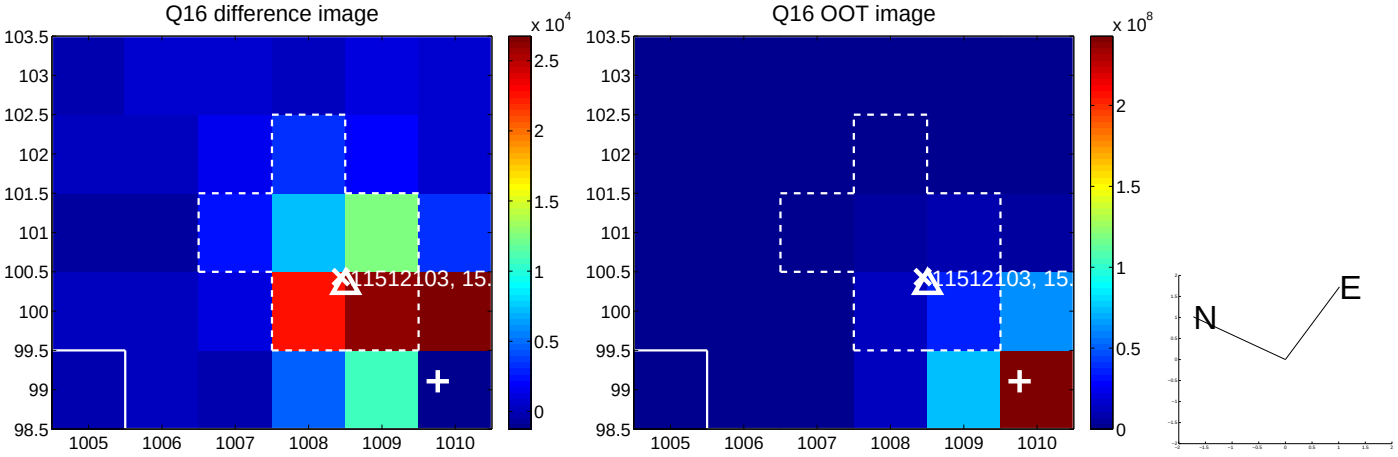


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

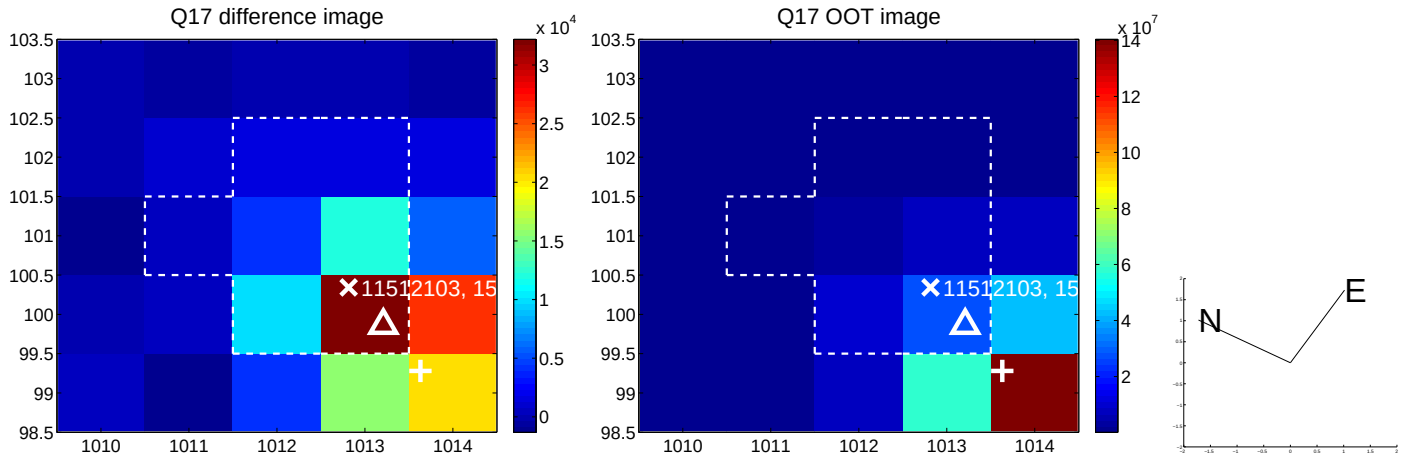


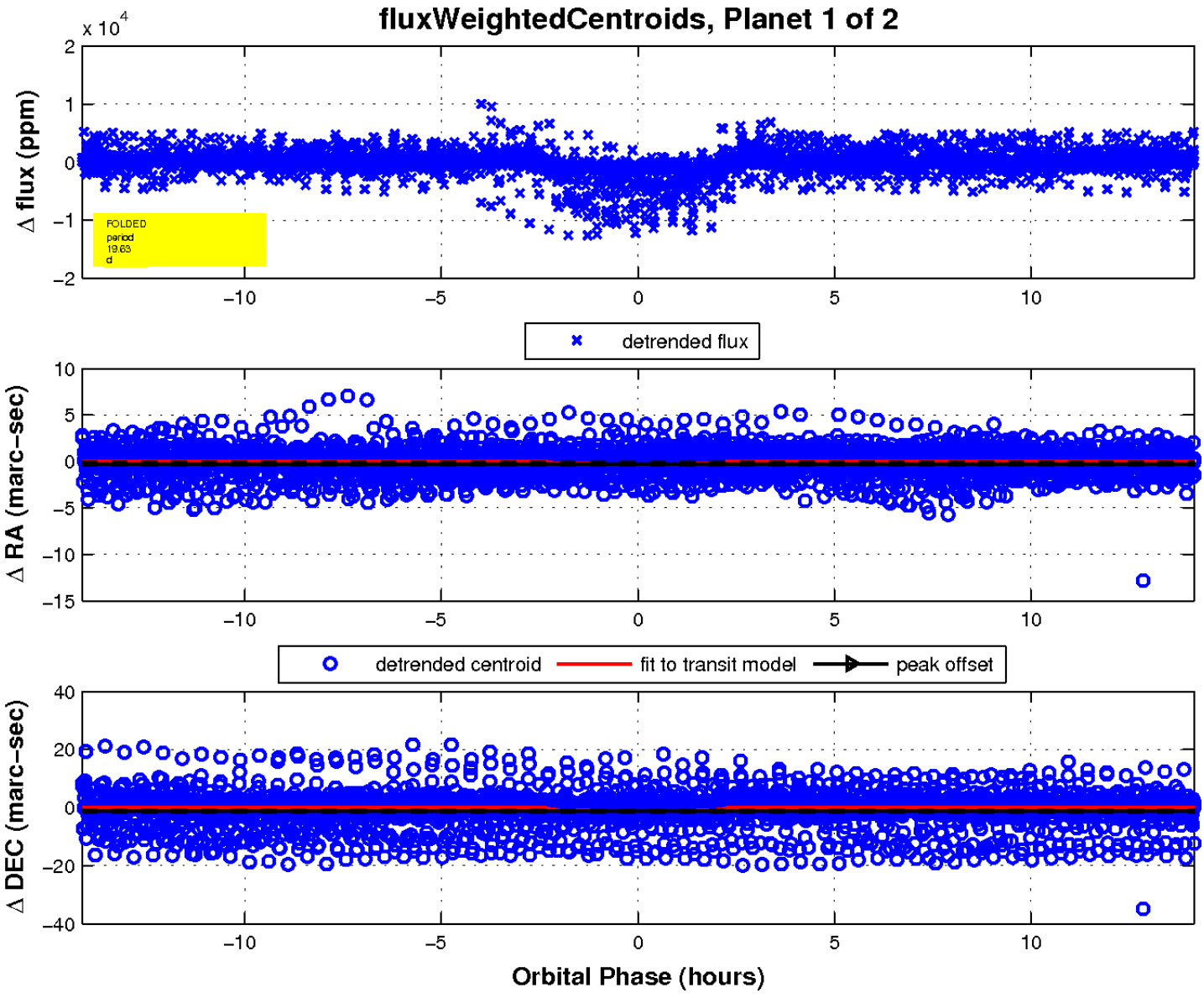




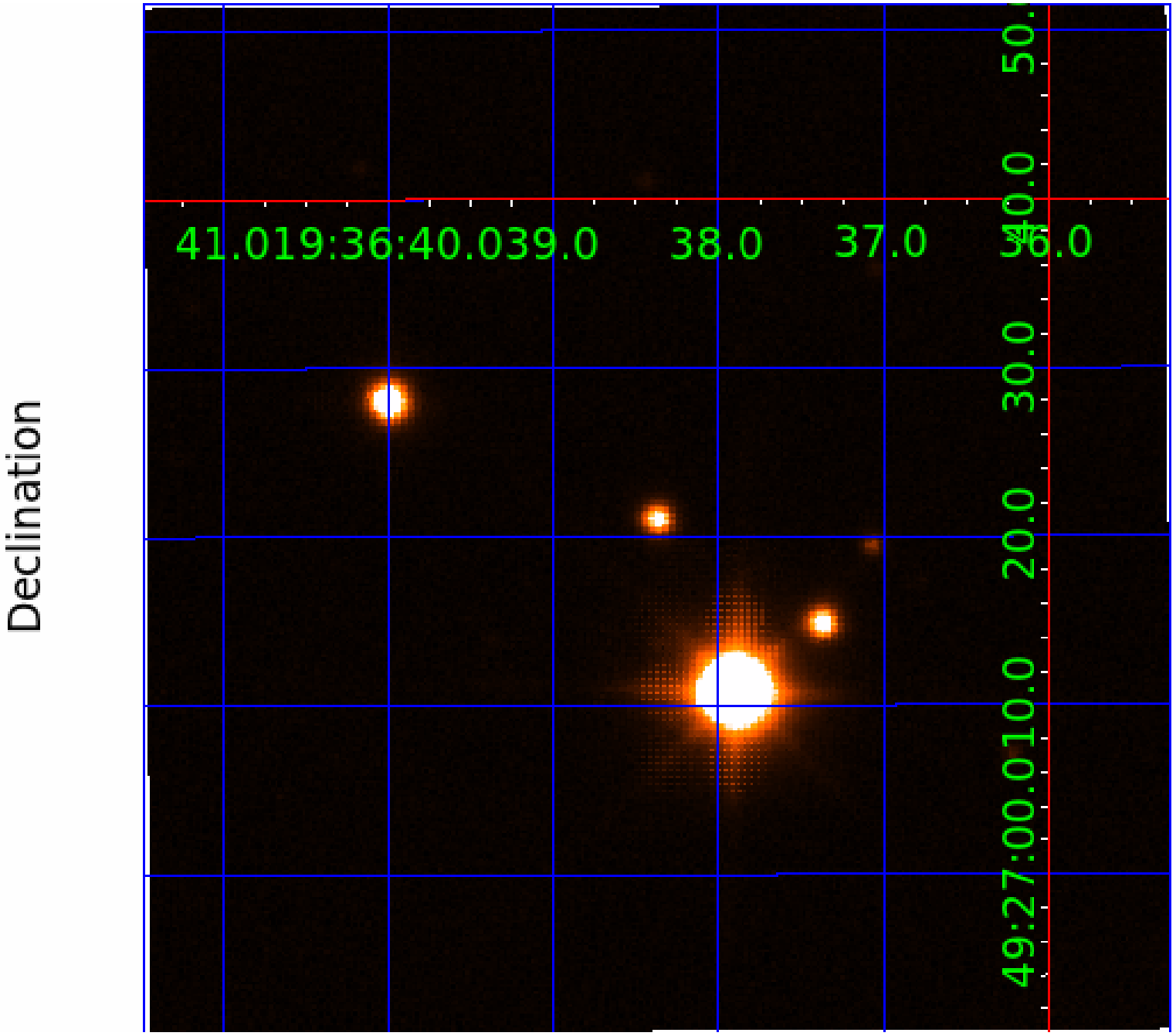


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.





UKIRT Image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