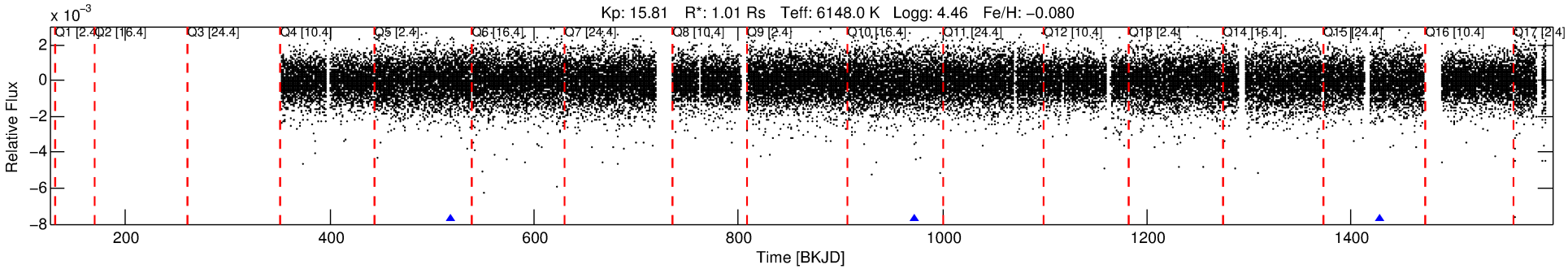
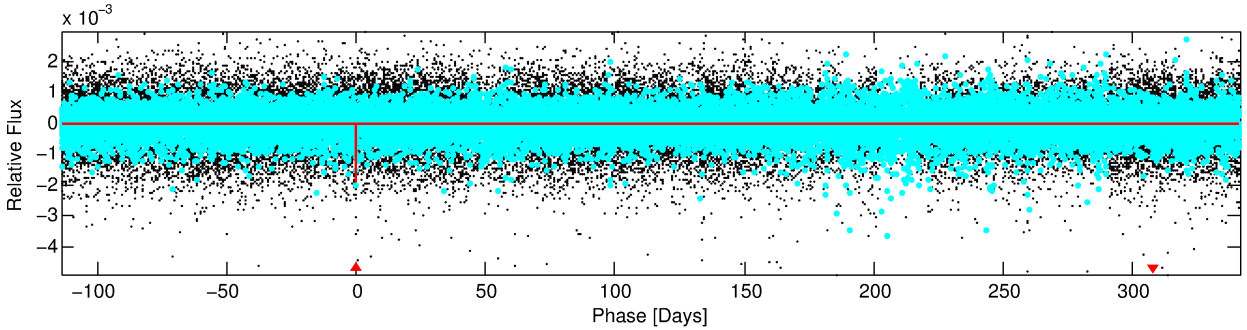
WARNING: THIS DATA IS SIMULATED, NOT OBSERVED

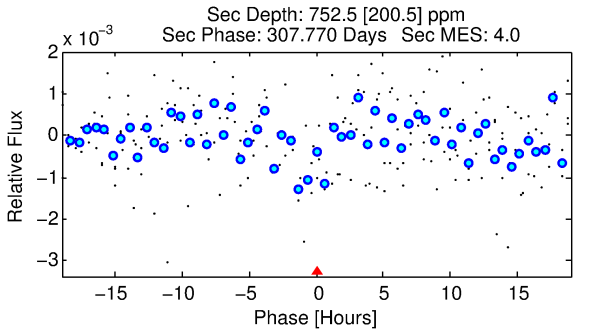
DV One-Page Summary

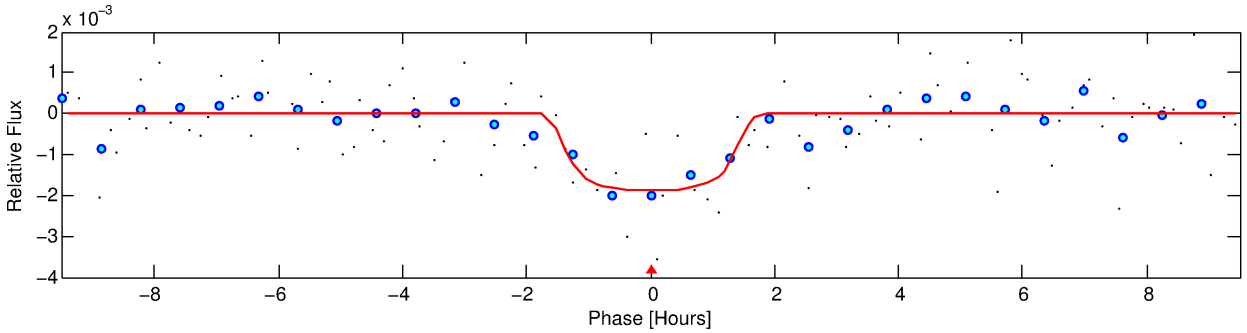
KIC: 8142723 Candidate: 1 of 1 Period: 455.040 d

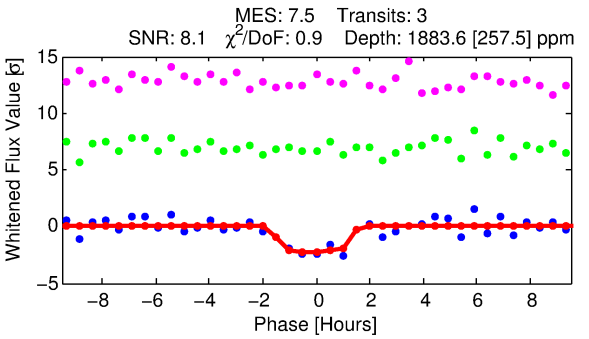
WARNING: THIS DATA IS SIMULATED, NOT OBSERVED

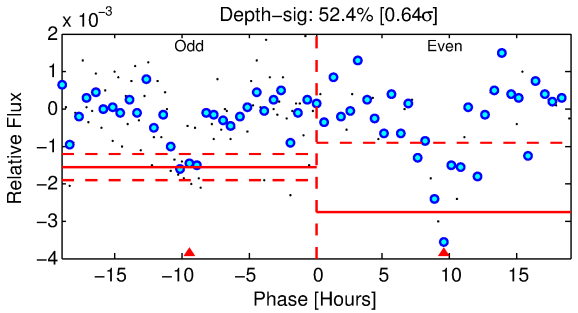


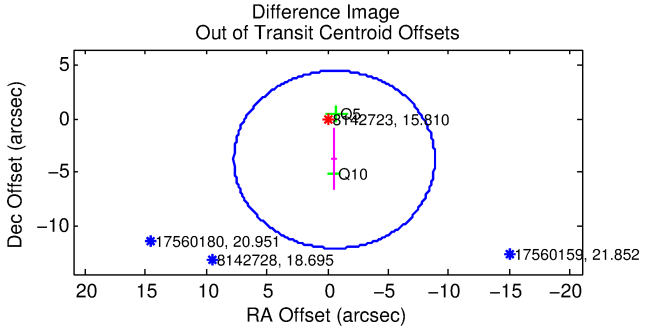












DV Fit Results:

Period = 455.04028 [0.00842] d
Epoch = 517.6997 [0.0122] BKJD
Rp/R* = 0.0433 [0.0412]
a/R* = 789.58 [3645.20]
b = 0.76 [2.68]

Seff = 0.93 [0.37]
Teq = 250 [25] K
Rp = 4.80 [4.78] Re
a = 1.1904 [0.2958] AU

Ag = 25499.35 [49823.51] [0.51σ]
Teffp = 4893 [2358] K [1.97σ]

DV Diagnostic Results:

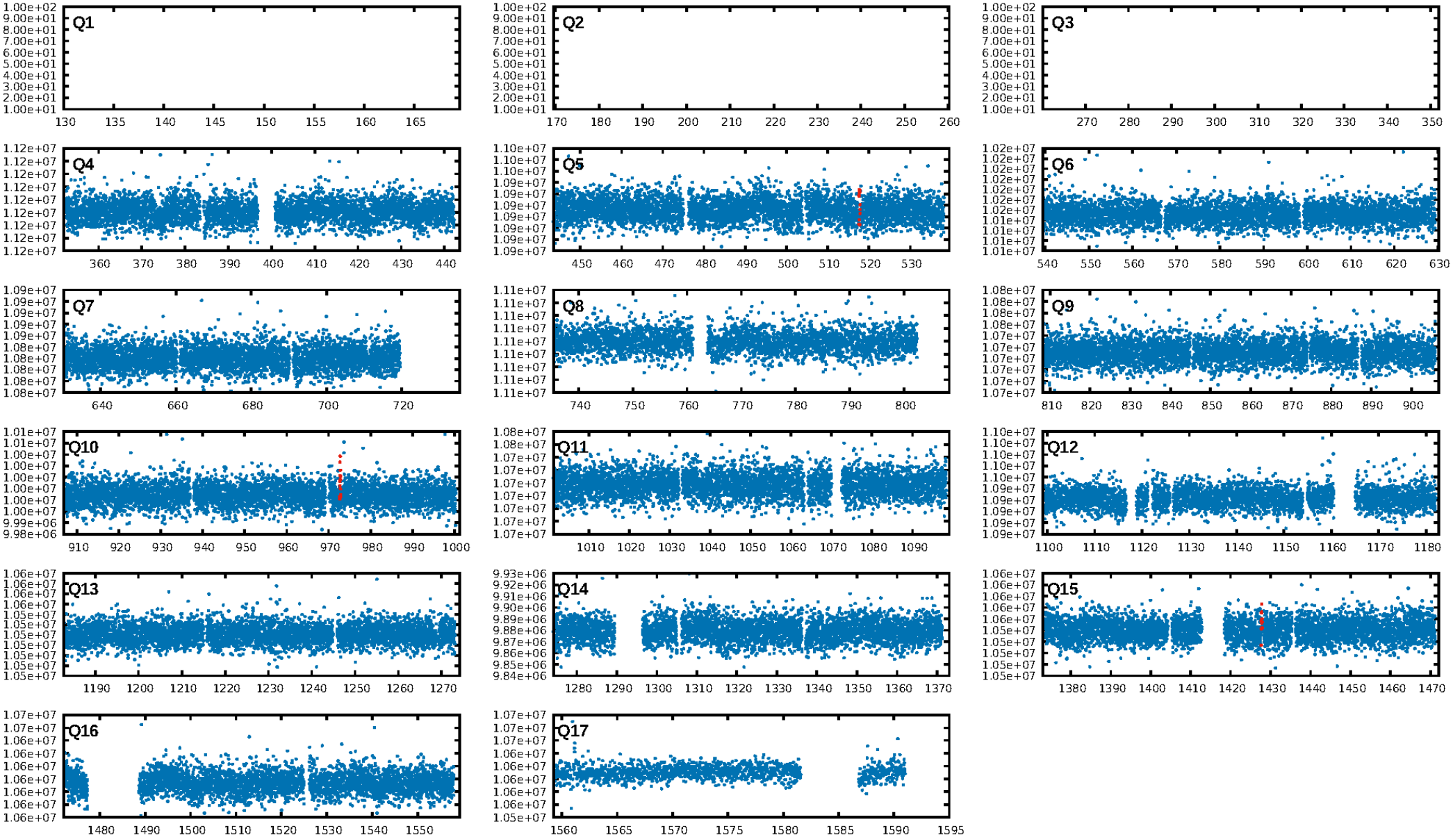
ShortPeriod−sig: N/A
LongPeriod−sig: N/A
ModelChiSquare2−sig: 29.6%
ModelChiSquareGof−sig: 99.4%
Bootstrap−pfa: 2.23e−08
RollingBand−fgt: 1.00 [3/3]
GhostDiagnostic−chr: 6.945

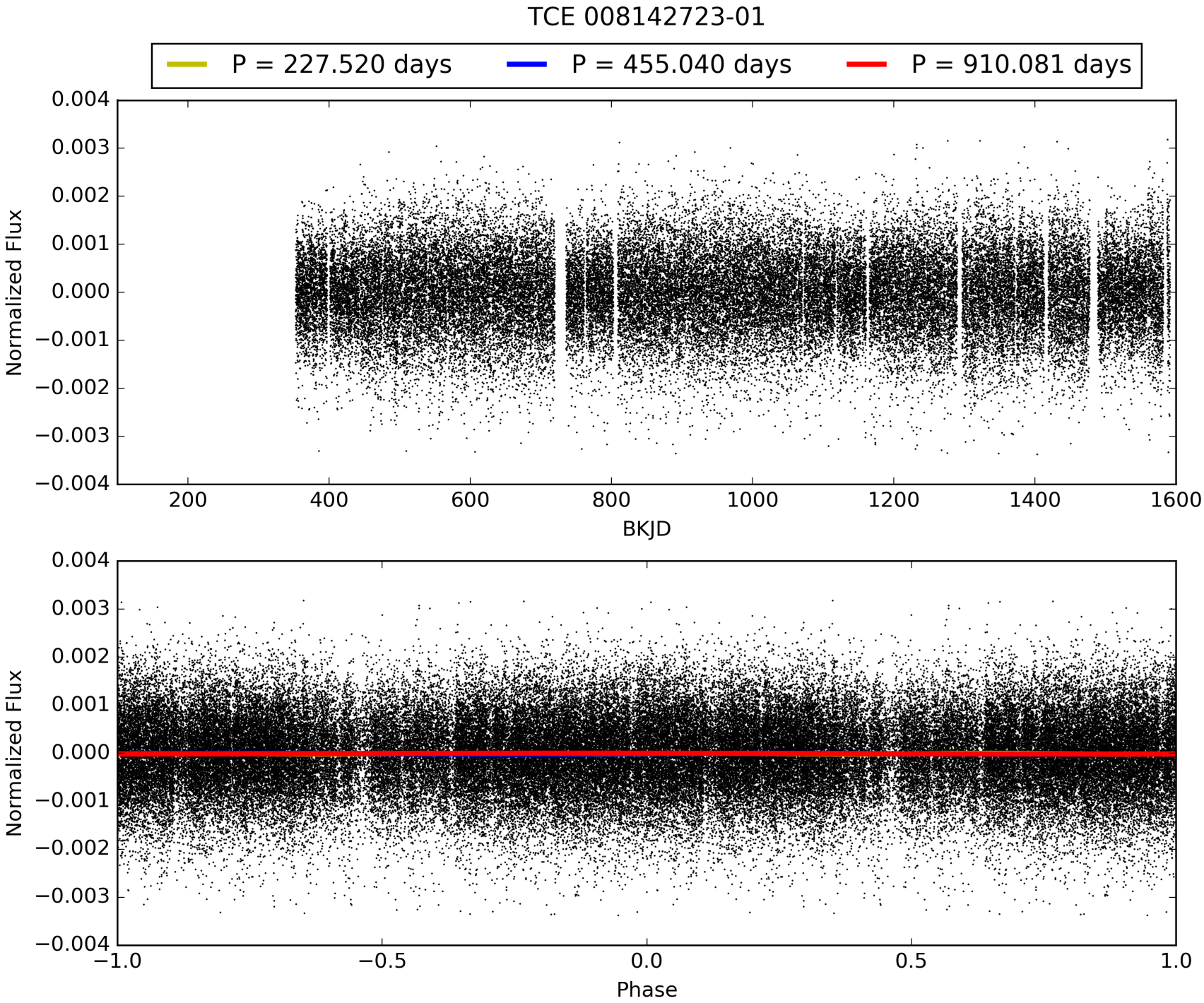
Centroid−sig: 11.2%
Centroid−so: 3.710 arcsec [1.92σ]
OotOffset−rm: 3.851 arcsec [1.39σ]
KicOffset−rm: 3.819 arcsec [1.38σ]
OotOffset−st: 1/0/0/1 [2]
KicOffset−st: 1/0/0/1 [2]
DiffImageQuality−fgm: 0.50 [1/2]
DiffImageOverlap−fno: 1.00 [3/3]

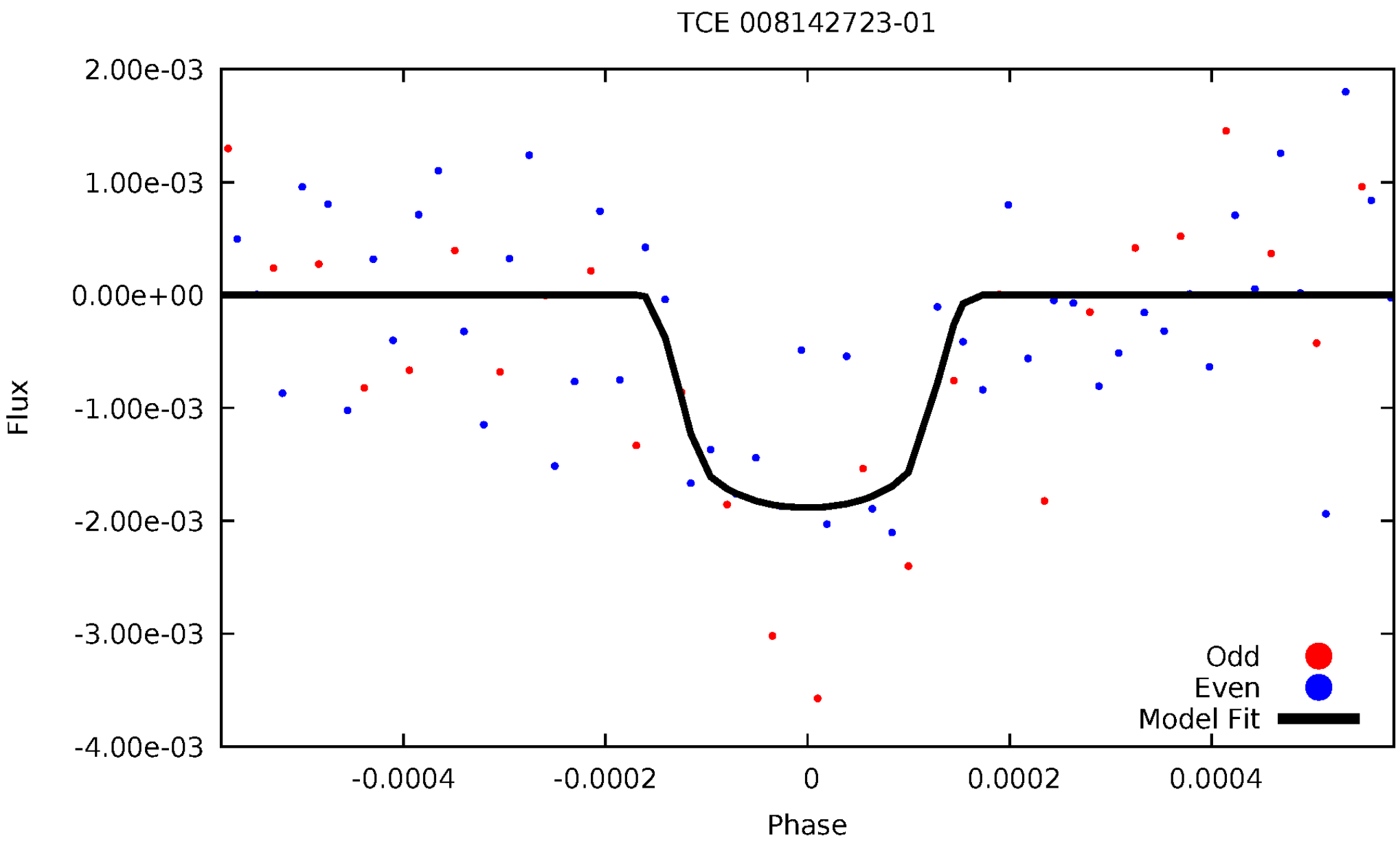
Software Revision: svn+ssh://murzim/repo/soc/branches/integ/ksop−2320@61025 −− Date Generated: 04−Mar−2016 00:17:51 Z

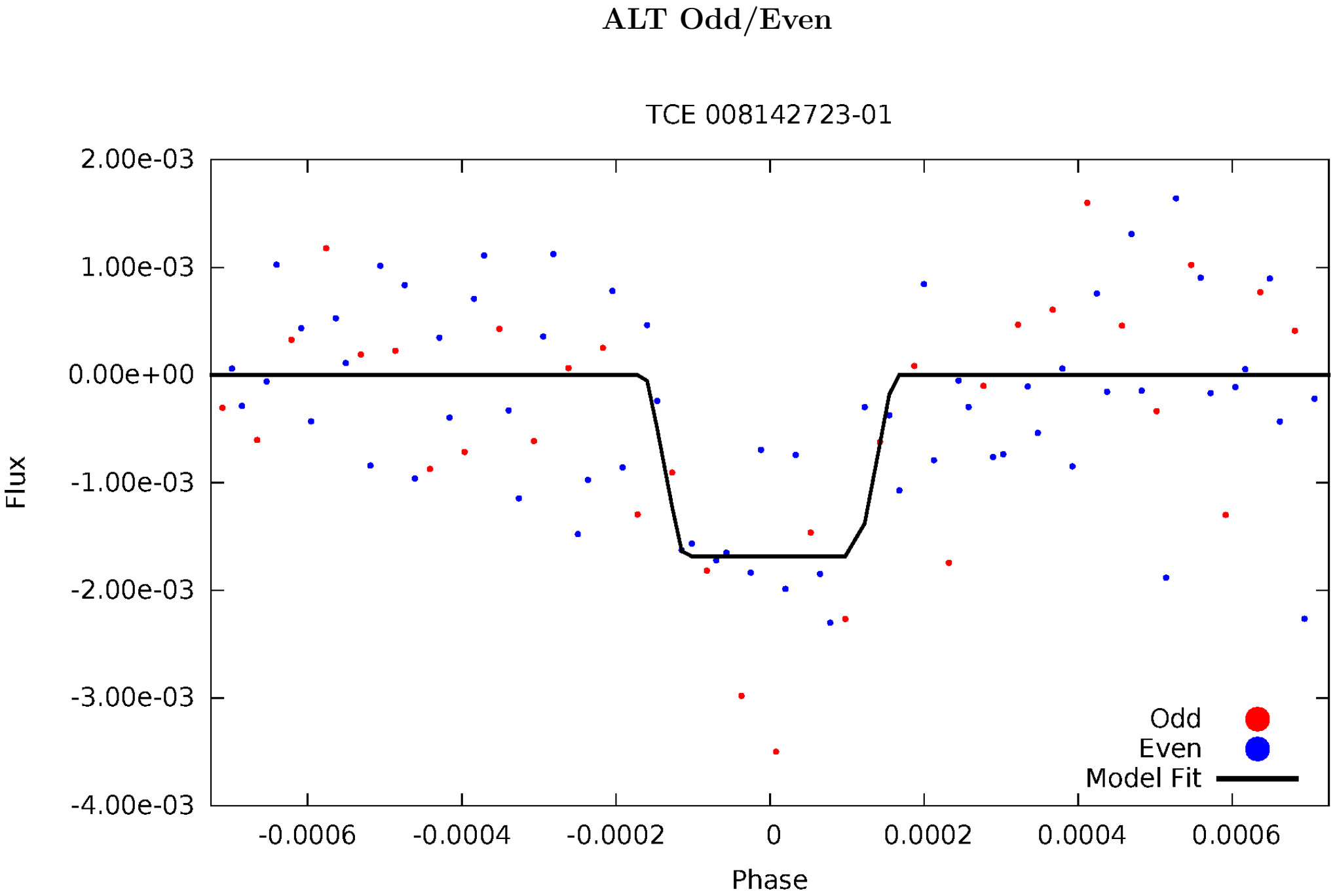
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 008142723-01, PDC Light Curves

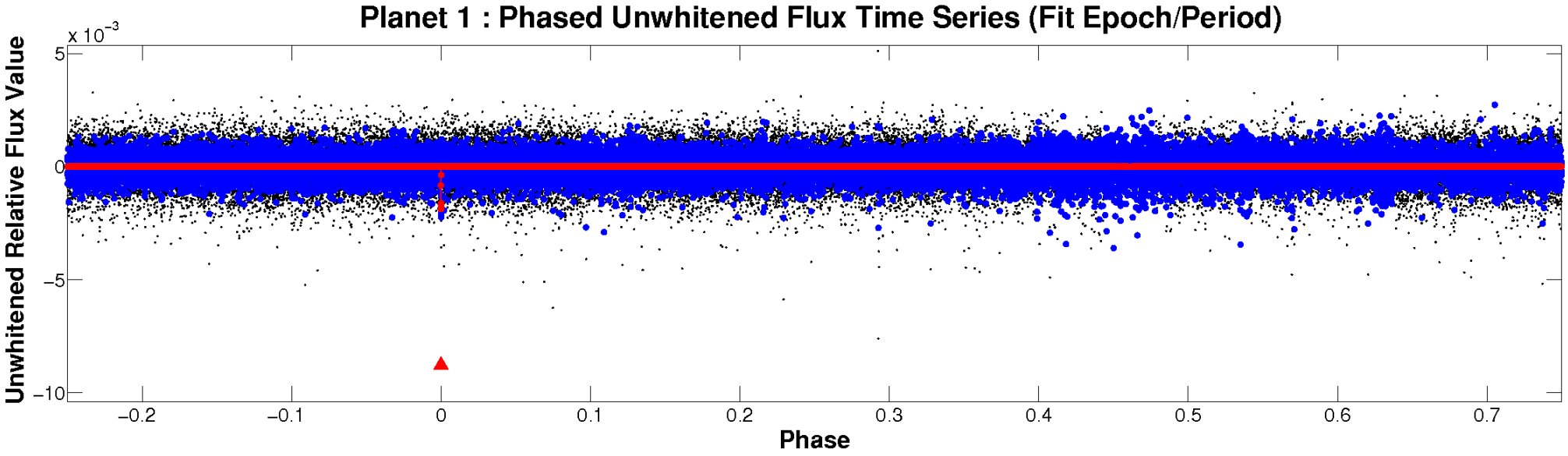


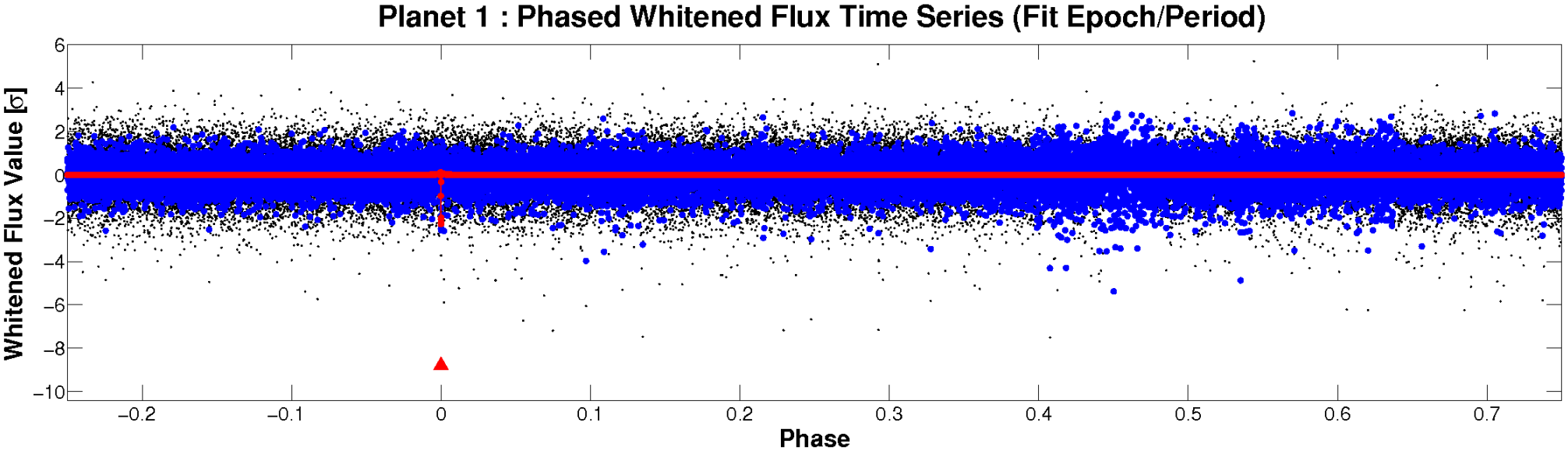

TCE 008142723-01
P = 227.520 days
P = 455.040 days
P = 910.081 days
Normalized Flux
0.004
0.003
0.002
0.001
0.000
−0.001
−0.002
−0.003
−0.004
200
400
600
800
1000
1200
1400
1600
BKJD
Normalized Flux
0.004
0.003
0.002
0.001
0.000
−0.001
−0.002
−0.003
−0.004
−1.0
−0.5
0.0
0.5
1.0
Phase


DV Odd/Even
TCE 008142723-01
2.00e-03
1.00e-03
0.00e+00
-1.00e-03
-2.00e-03
-3.00e-03
-4.00e-03
Flux
-0.0004
-0.0002
0
0.0002
0.0004
Phase
Odd
Even
Model Fit


ALT Odd/Even
TCE 008142723-01
2.00e-03
1.00e-03
0.00e+00
-1.00e-03
-2.00e-03
-3.00e-03
-4.00e-03
Flux
-0.0006
-0.0004
-0.0002
0
0.0002
0.0004
0.0006
Phase
Odd
Even
Model Fit

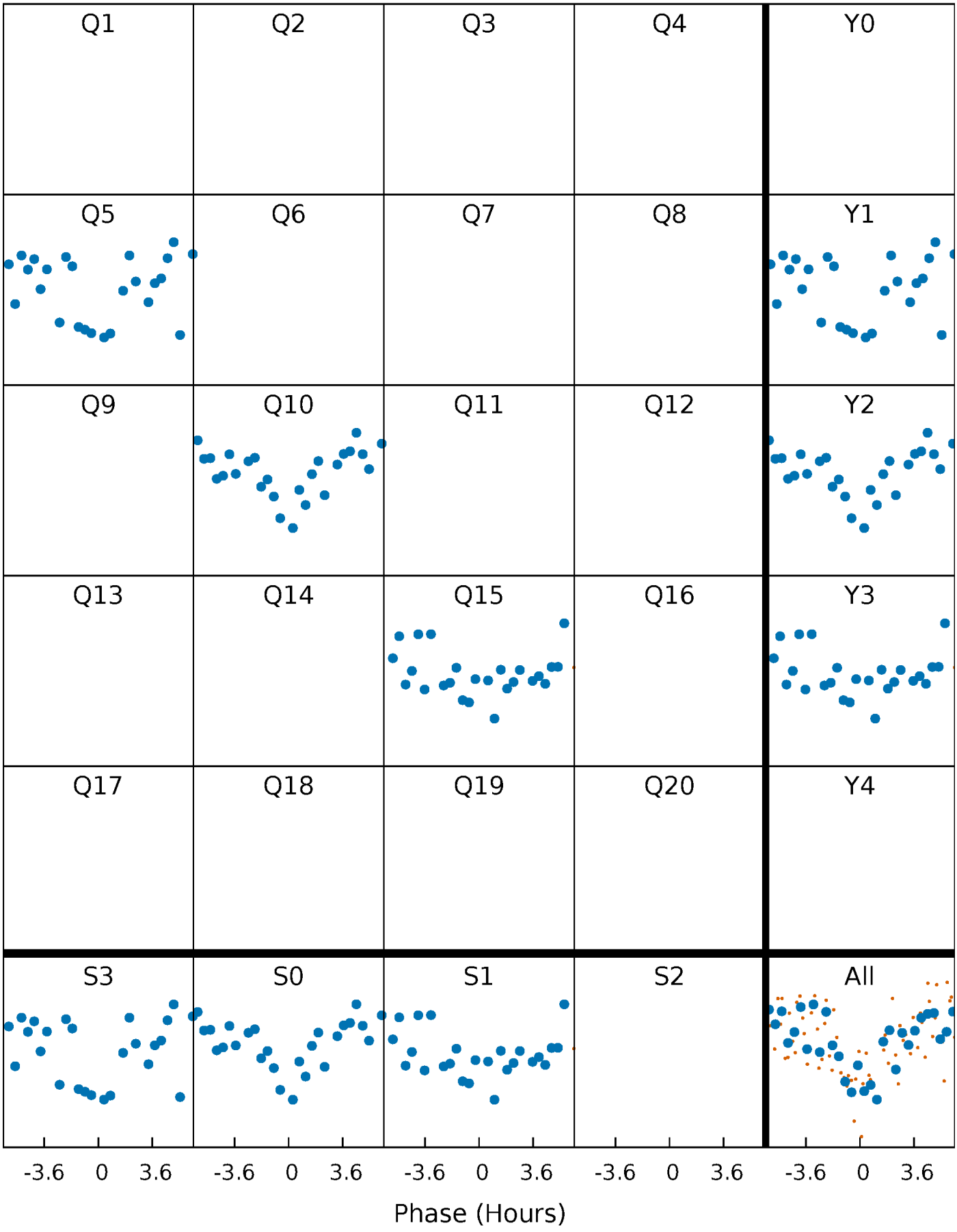
Non-Whitened Vs. Whitened Light Curve





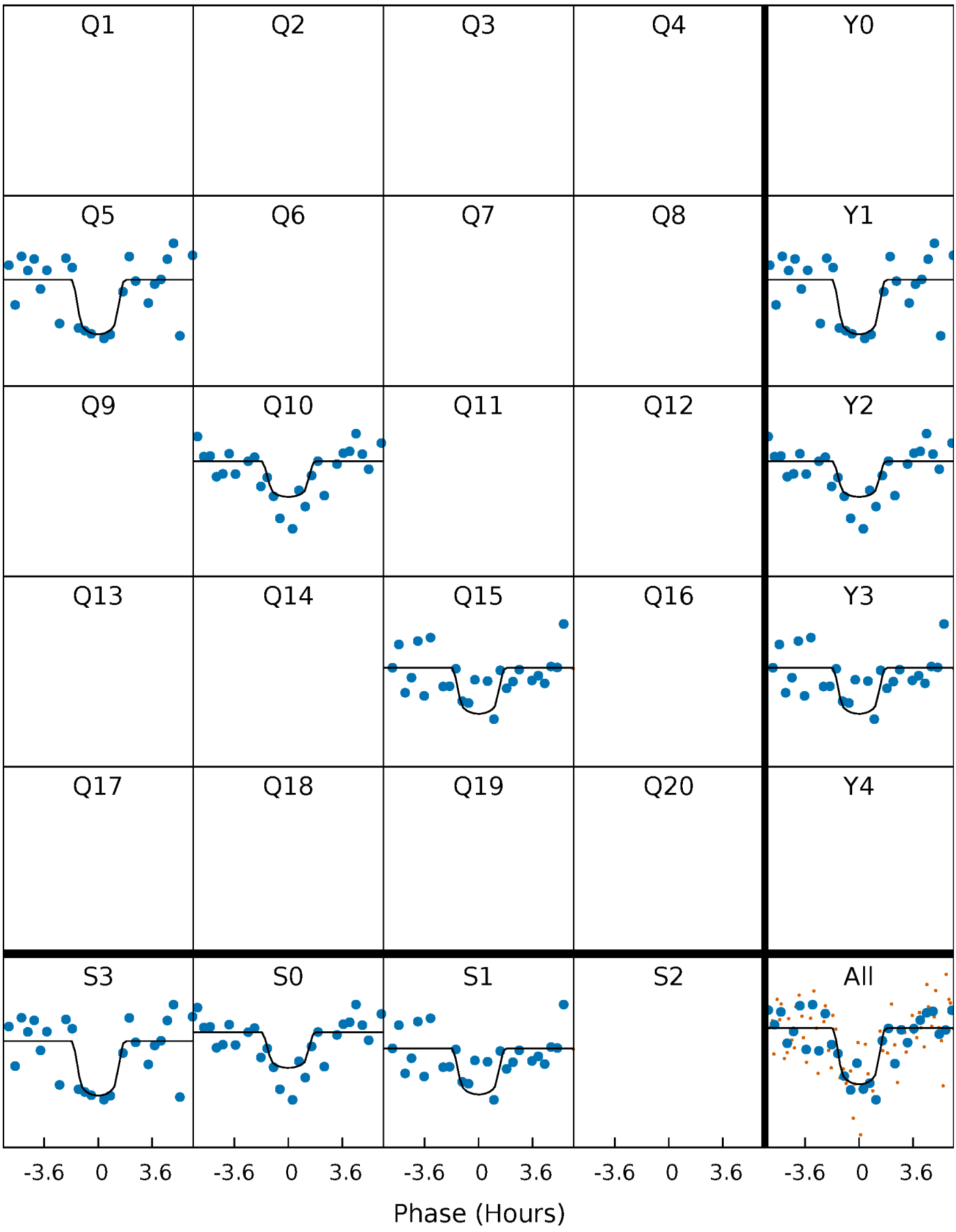
PDC Quarter-Phased Transit Curves

TCE 008142723-01 P=455.040280 Days T_0=517.699746 (BKJD)



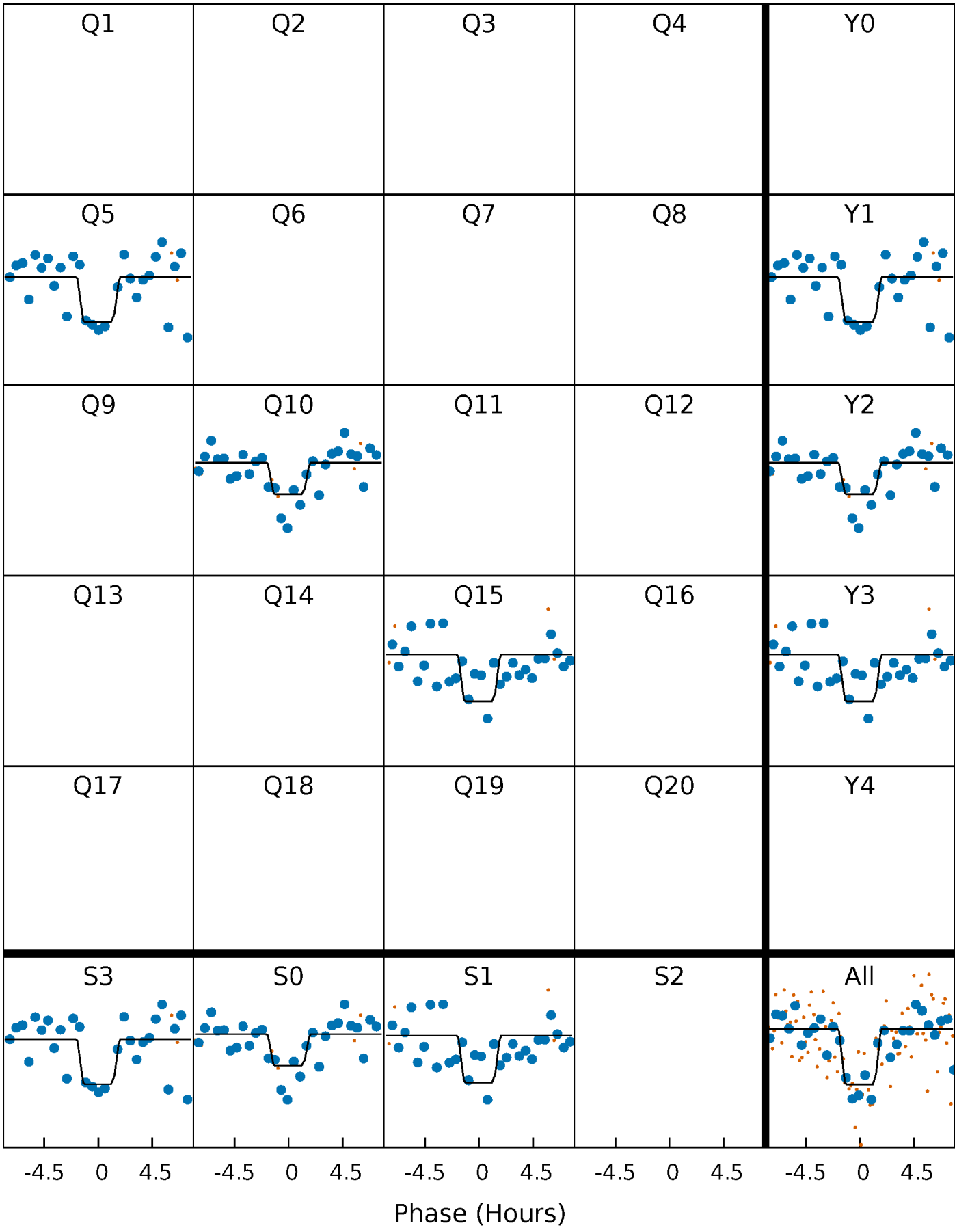
DV Quarter-Phased Transit Curves

TCE 008142723-01 P=455.040280 Days T_0=517.699746 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

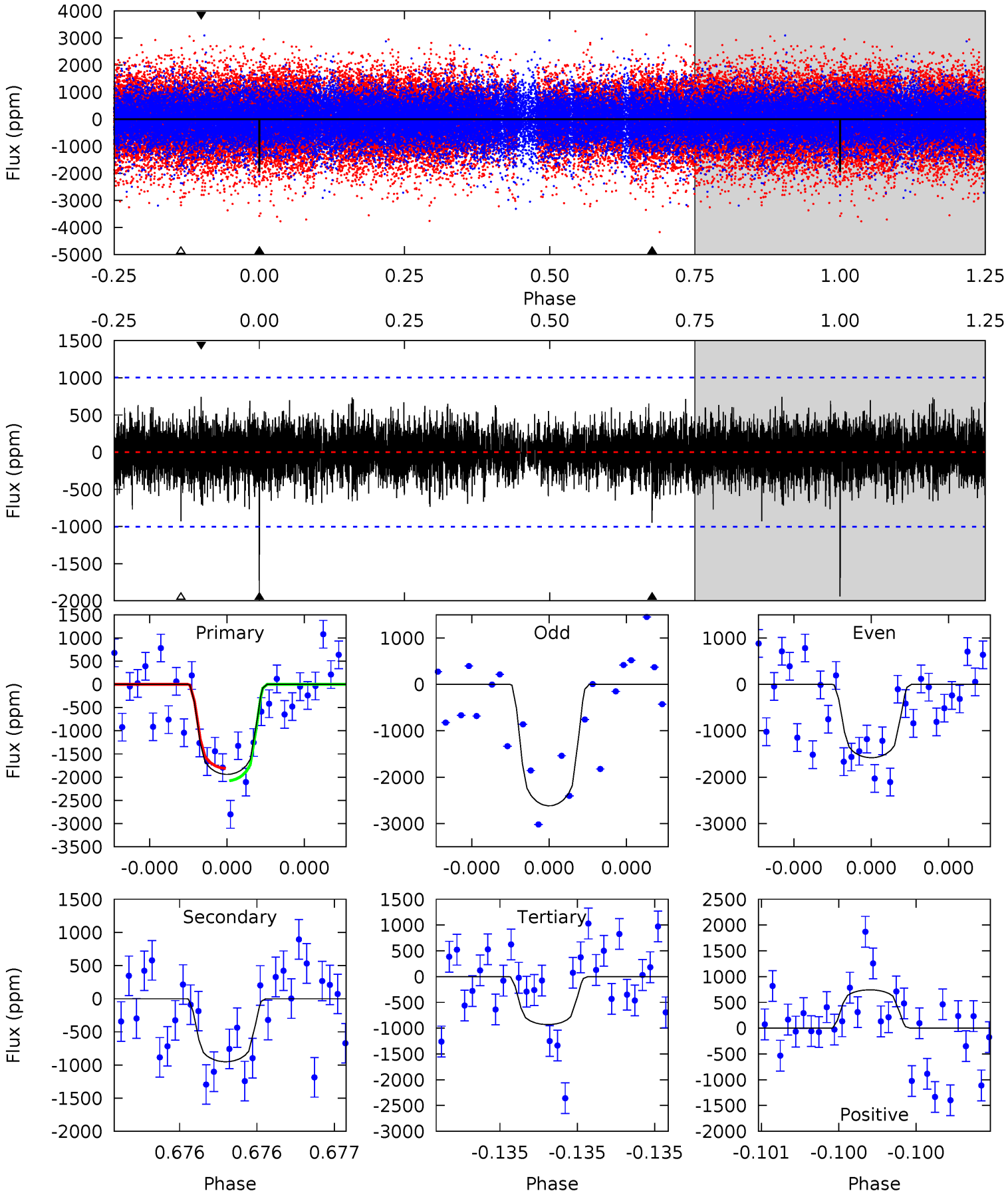
TCE 008142723-01 P=455.041759 Days T_0=517.699343 (BKJD)



DV Model-Shift Uniqueness Test

008142723-01, P = 455.040280 Days, E = 62.659466 Days

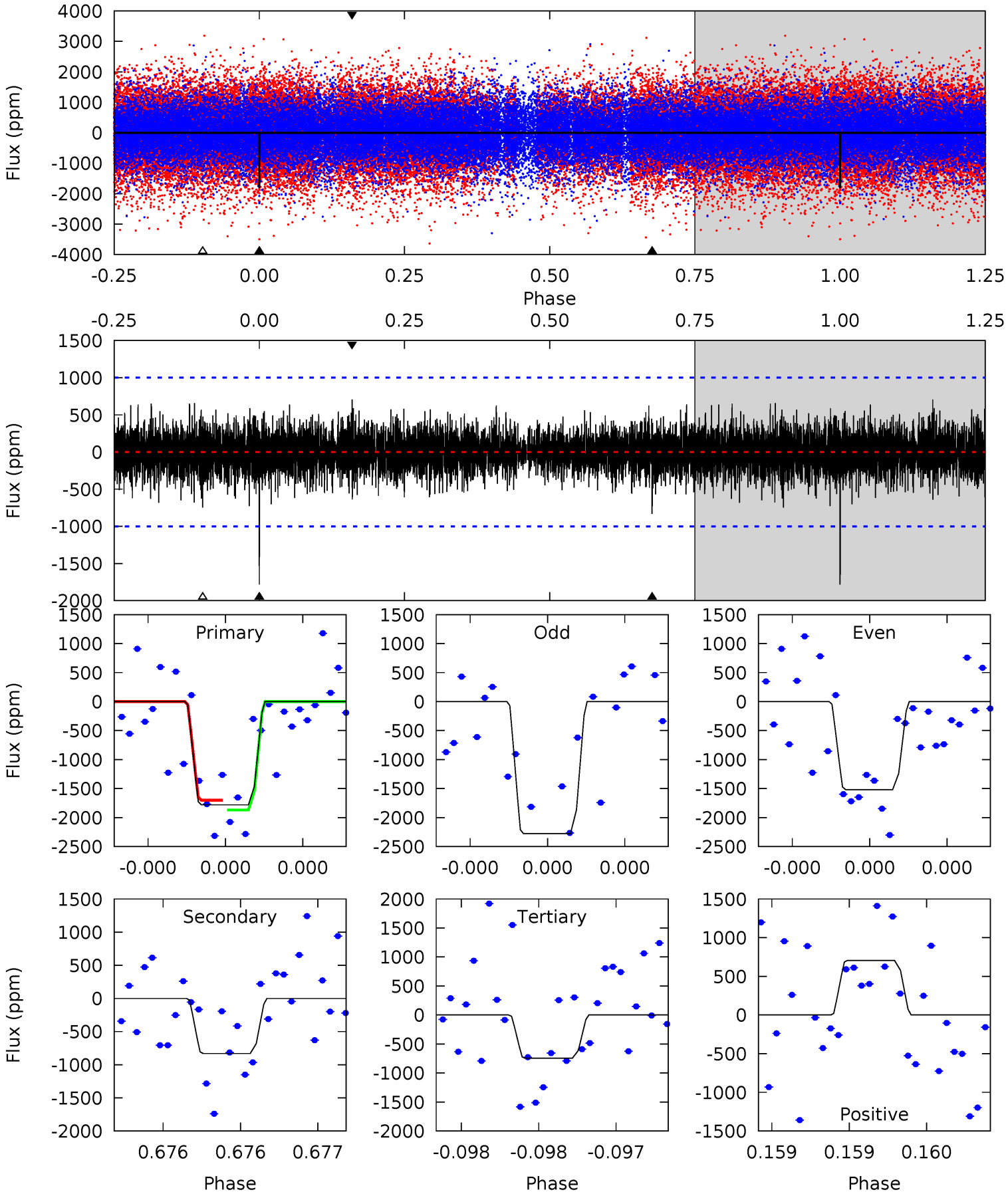
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.9	5.35	5.23	4.18	5.64	3.59	1.15	5.68	6.73	0.11	1.16	2.83	0.96	0.28	0.75



Alt Model-Shift Uniqueness Test

008142723-01, P = 455.041759 Days, E = 62.657584 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.1	4.69	4.21	3.98	5.65	3.59	1.05	5.84	6.07	0.48	0.71	2.08	0.98	0.28	0.47



Stellar Parameters For KIC 008142723

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	6148^{+193}_{-257}	$4.461^{+0.065}_{-0.195}$	$-0.080^{+0.250}_{-0.350}$	$1.015^{+0.302}_{-0.108}$	$1.083^{+0.139}_{-0.153}$	$1.457^{+0.399}_{-0.753}$
	+3%/-4%	+1%/-4%	+312%/-438%	+30%/-11%	+13%/-14%	+27%/-52%
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 008142723-01 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-950±178	$5.84^{+4.67}_{-3.66}$	356^{+27}_{-19}	4892^{+3112}_{-920}	$20636^{+126441}_{-13709}$
Alt.	-831±177	$5.40^{+4.33}_{-3.52}$	354^{+23}_{-19}	4823^{+3765}_{-938}	$20842^{+154648}_{-14317}$

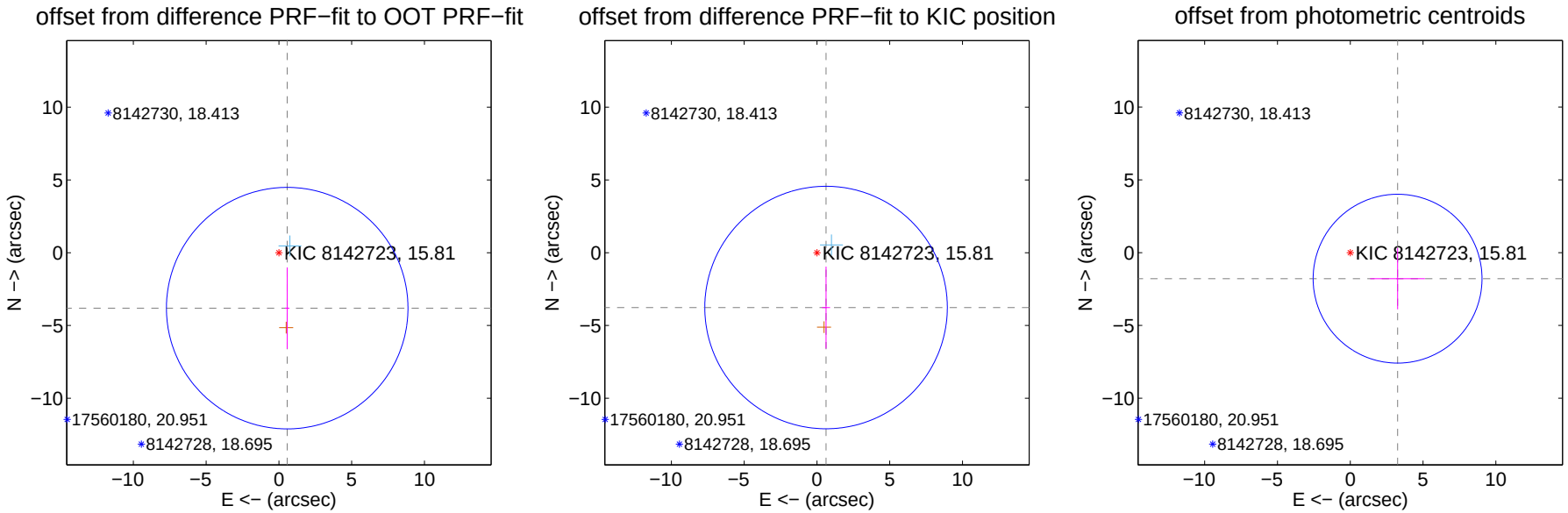
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

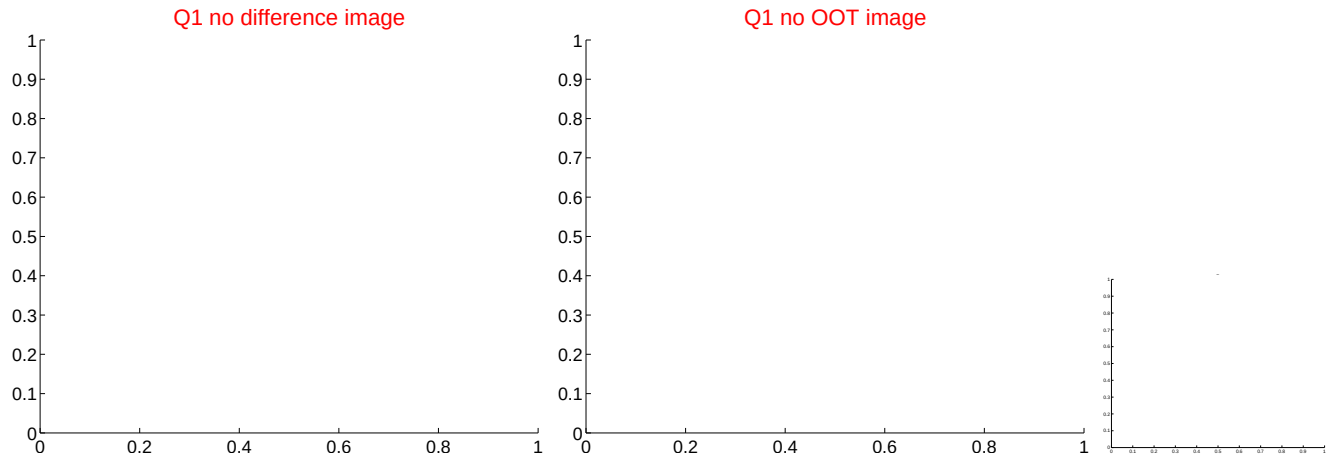
Supplemental centroid analysis for 008142723-01. Kepler magnitude: 15.81. Transit SNR 8.09
There are 1 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

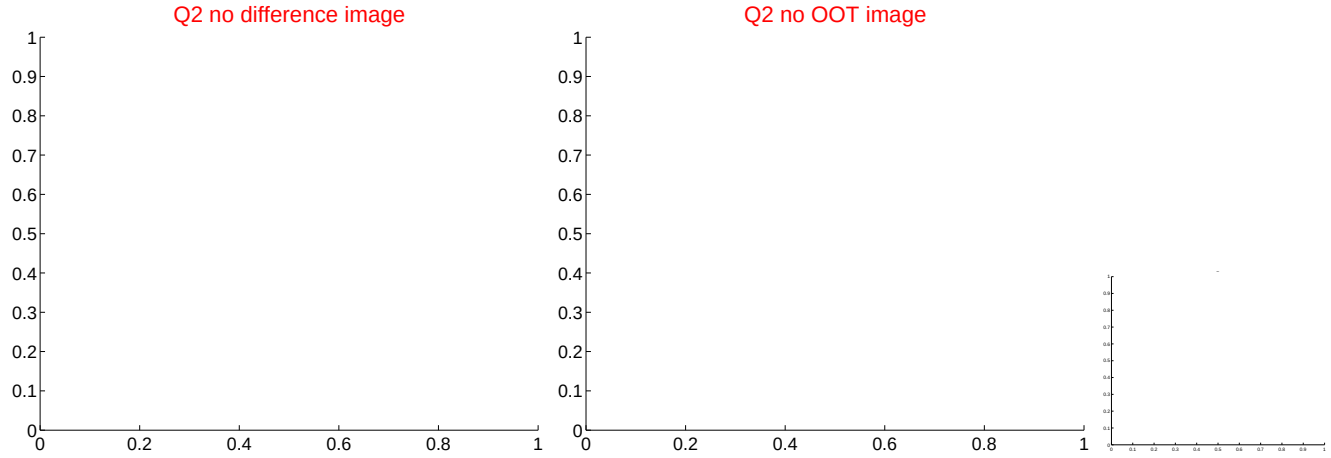
	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.851 $\pm$ 2.766	1.39	-0.570 $\pm$ 0.151	-3.809 $\pm$ 2.796
PRF-fit source offset from KIC position	3.819 $\pm$ 2.777	1.38	-0.625 $\pm$ 0.273	-3.767 $\pm$ 2.815
photometric centroid source offset	3.71 $\pm$ 1.93	1.92	-3.25 $\pm$ 1.88	-1.79 $\pm$ 2.11

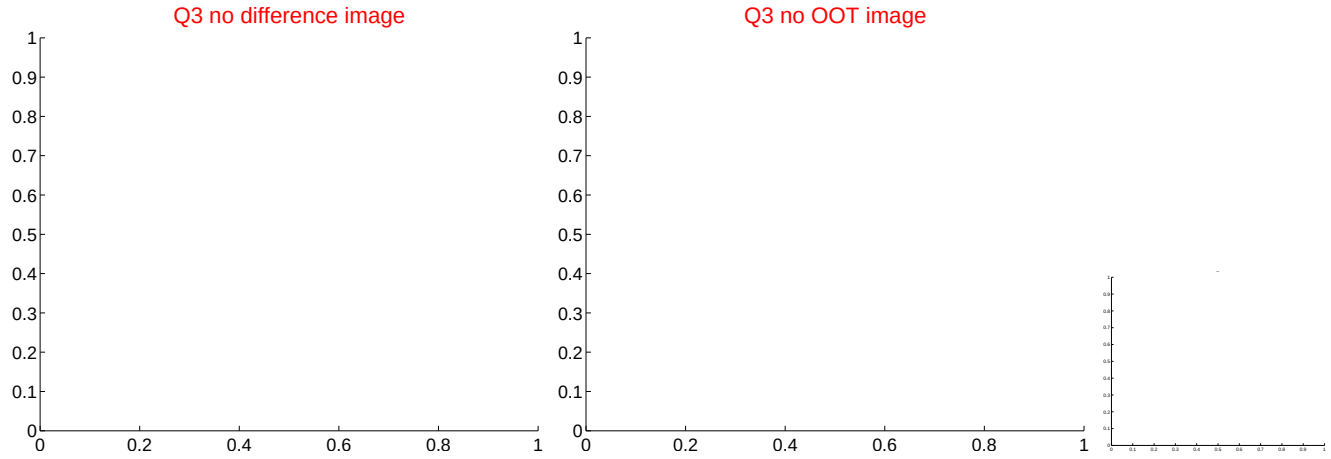


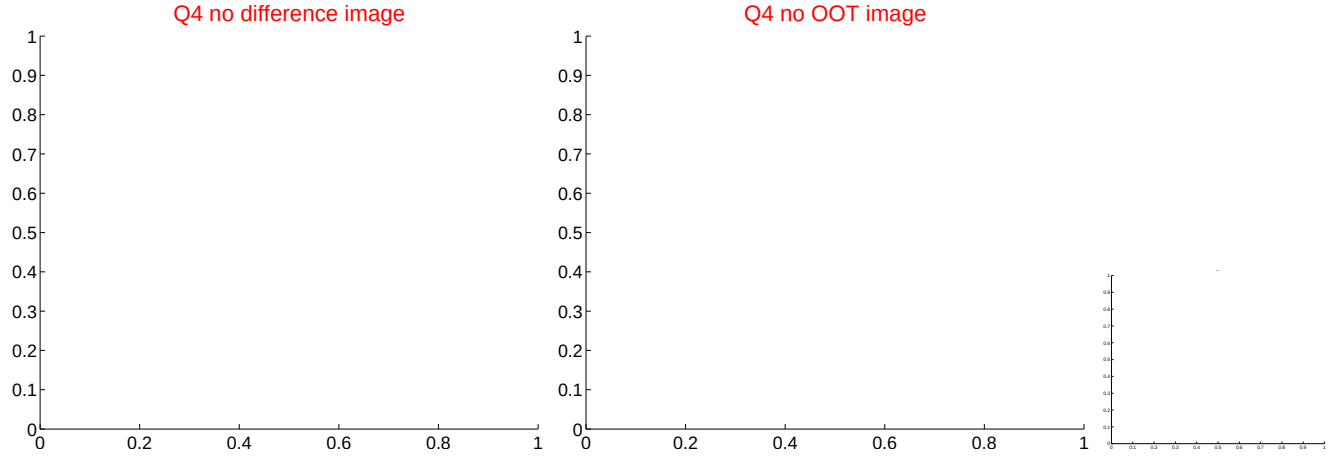
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

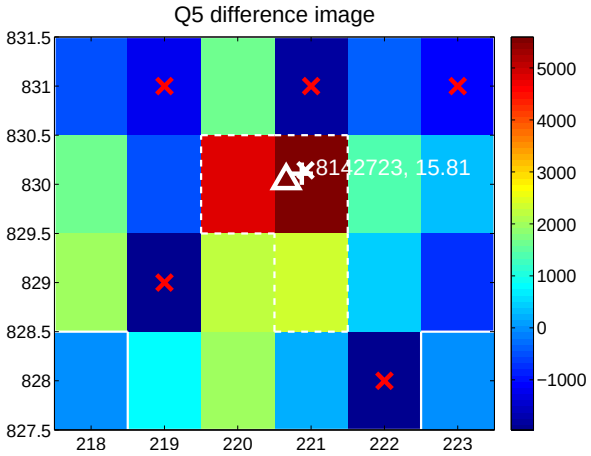


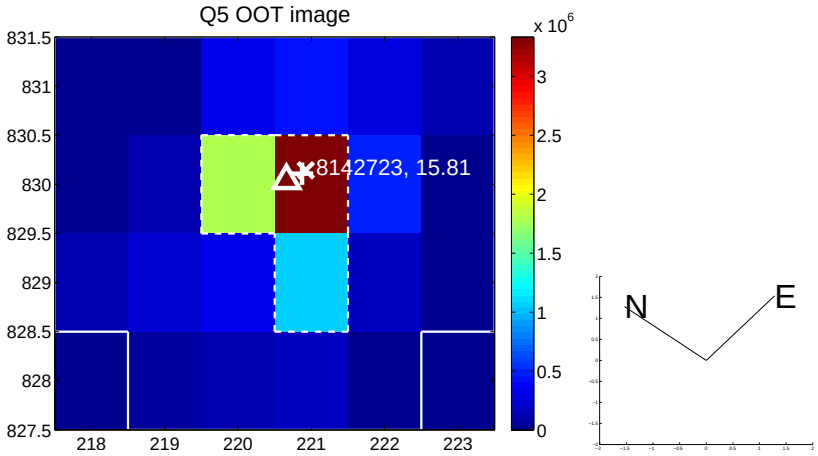


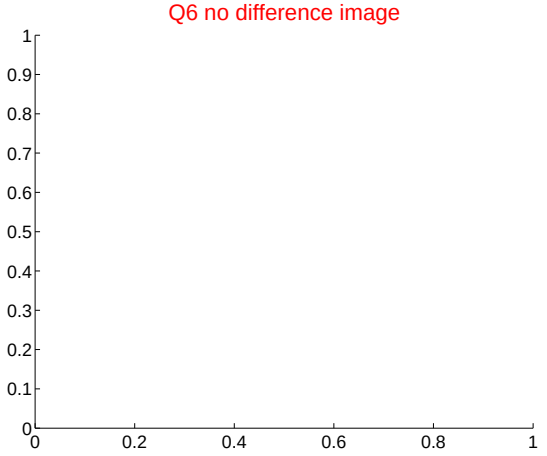


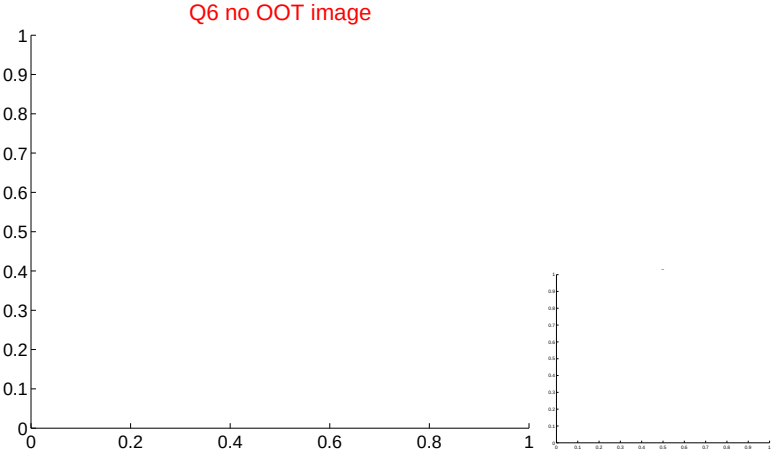


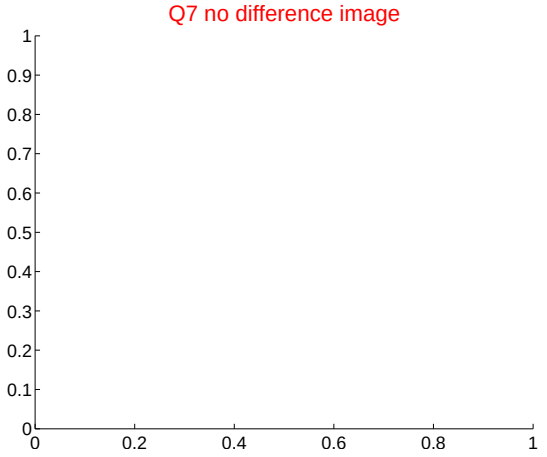
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

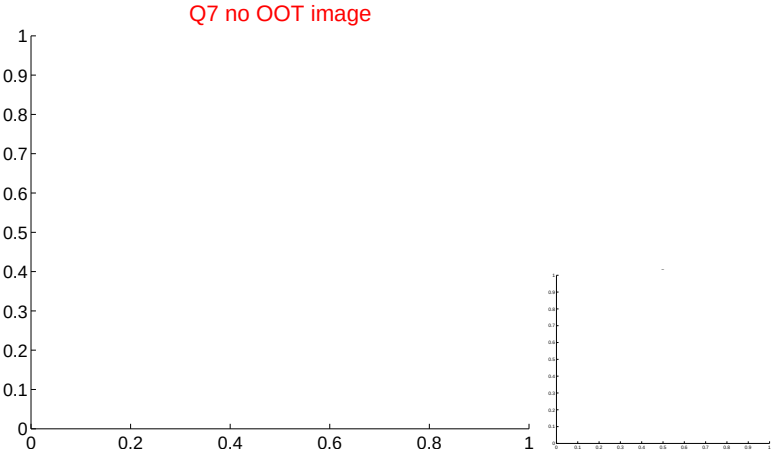


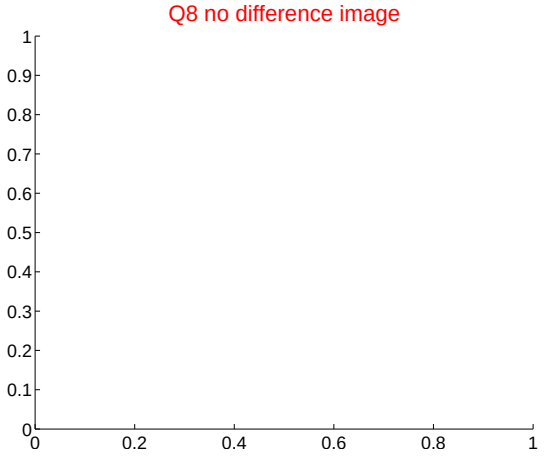


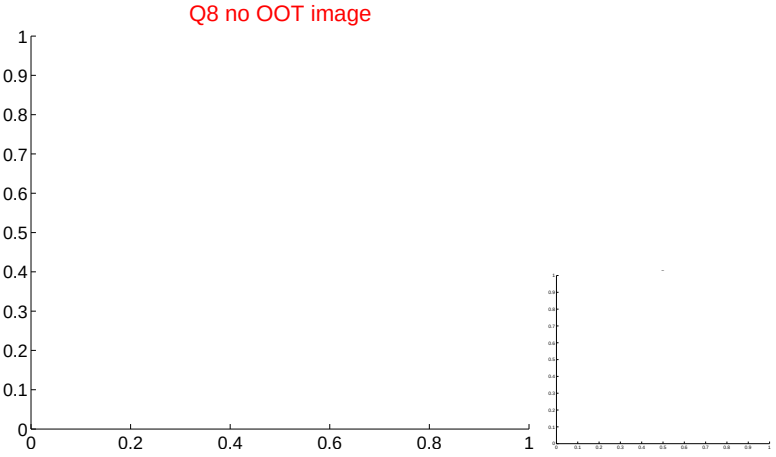




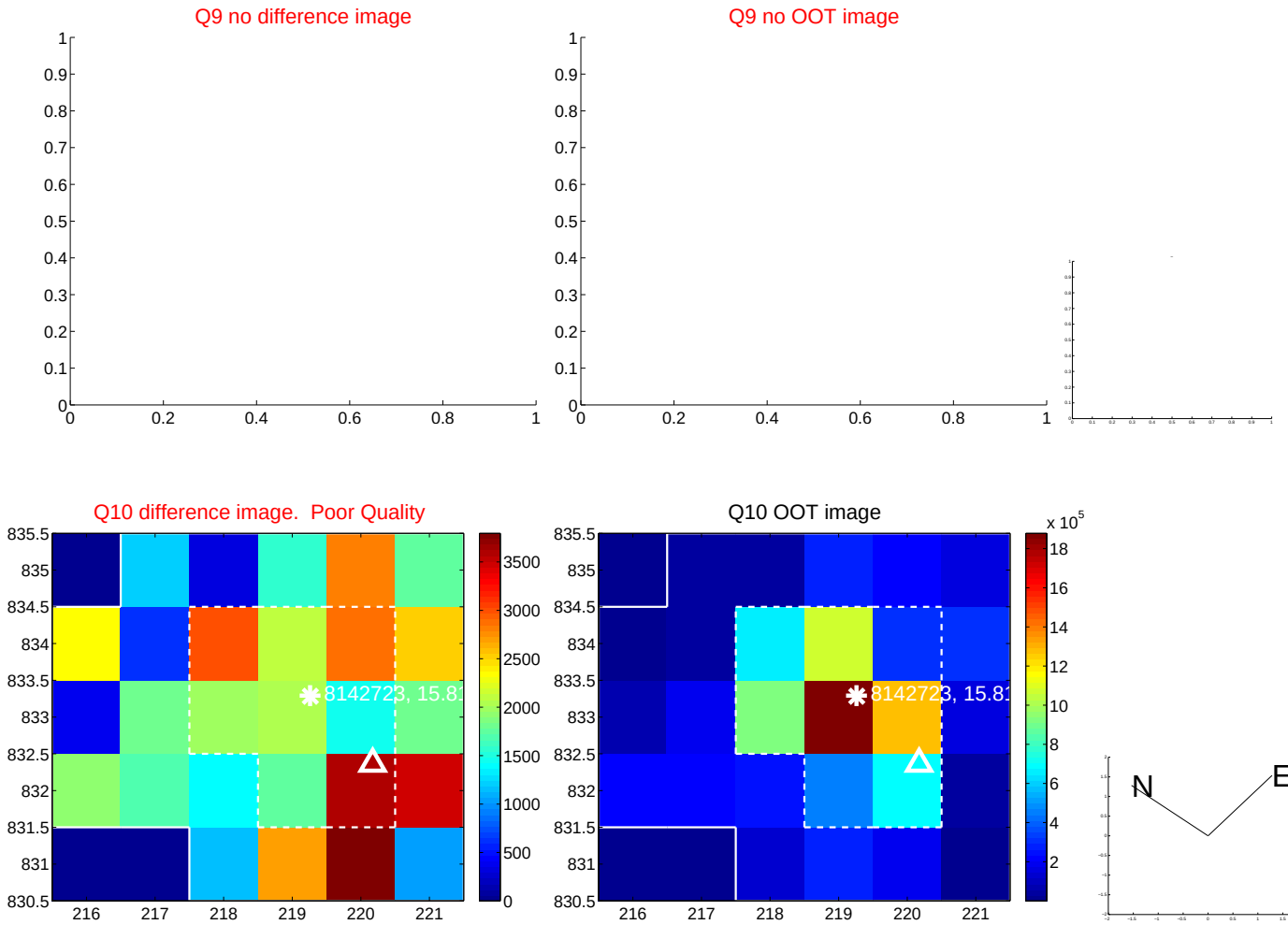




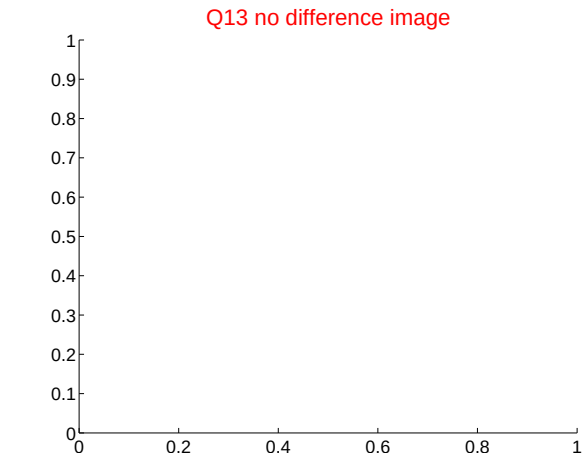


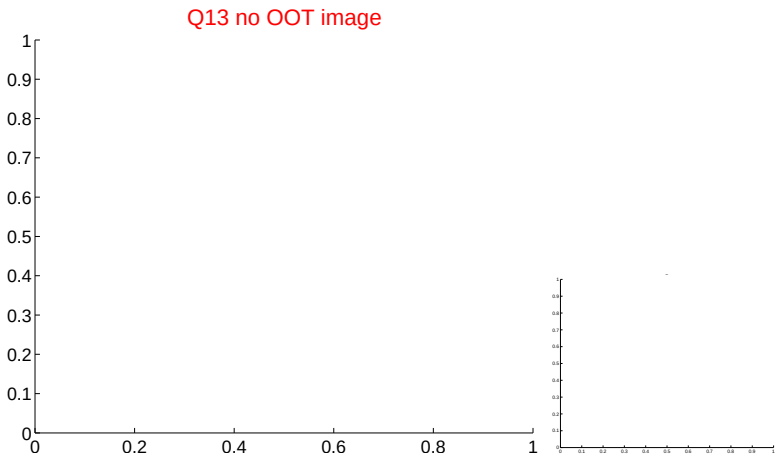


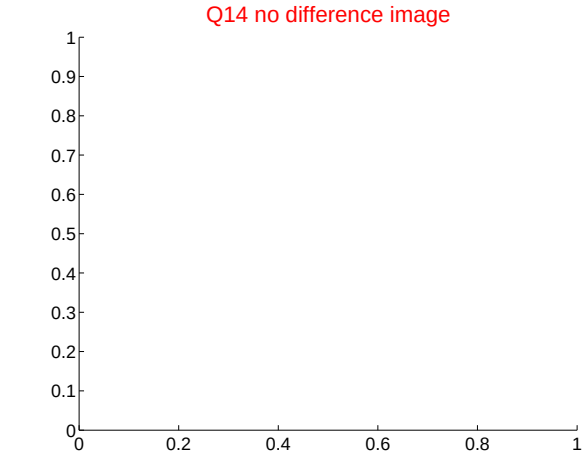
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

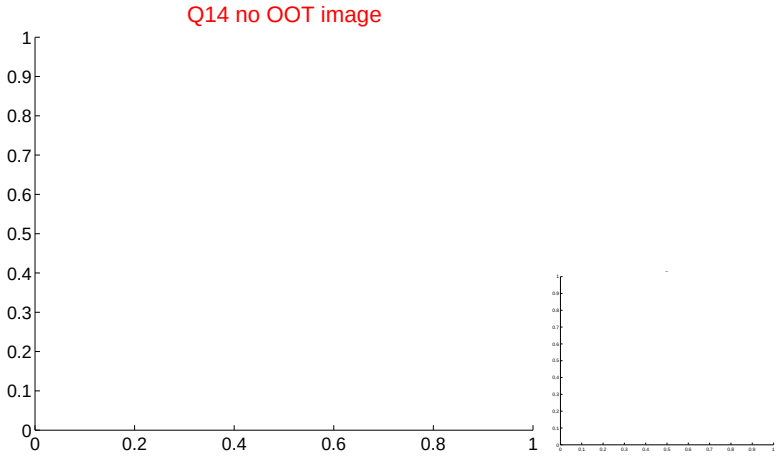


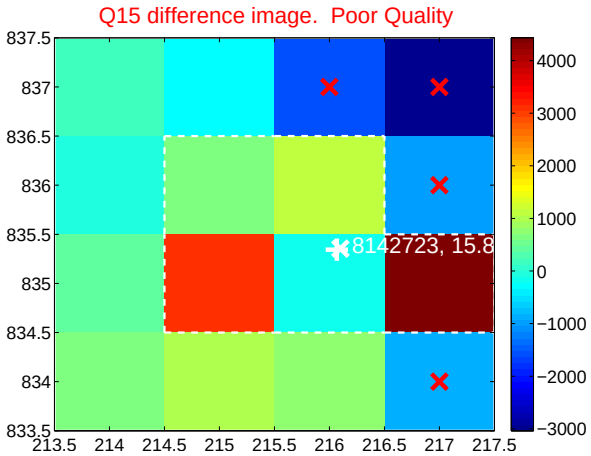
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

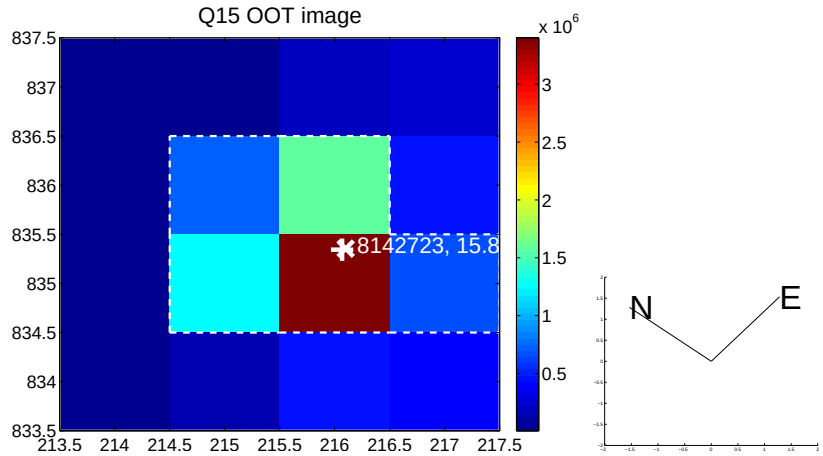


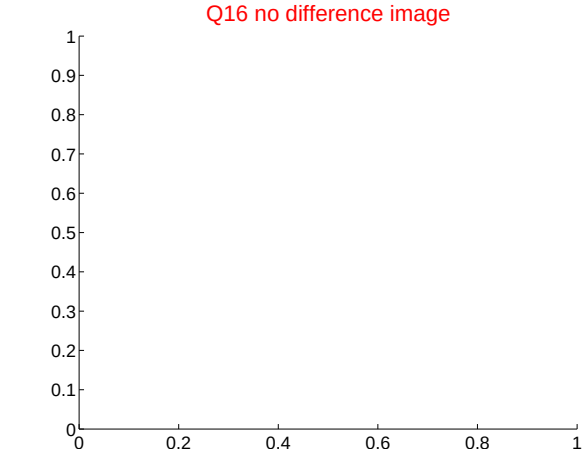


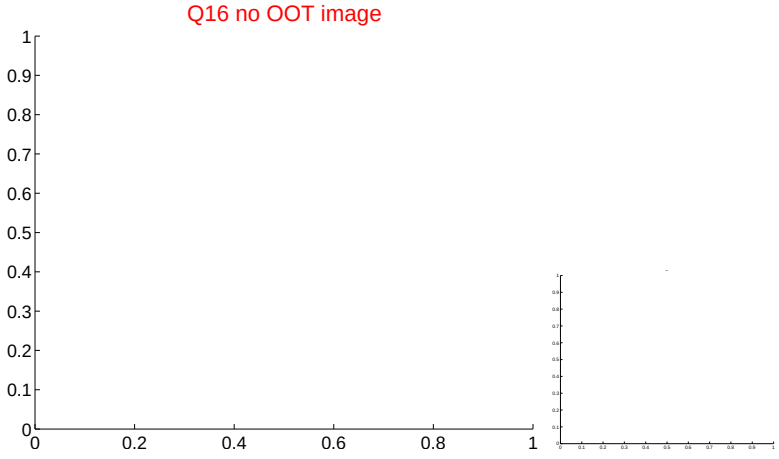




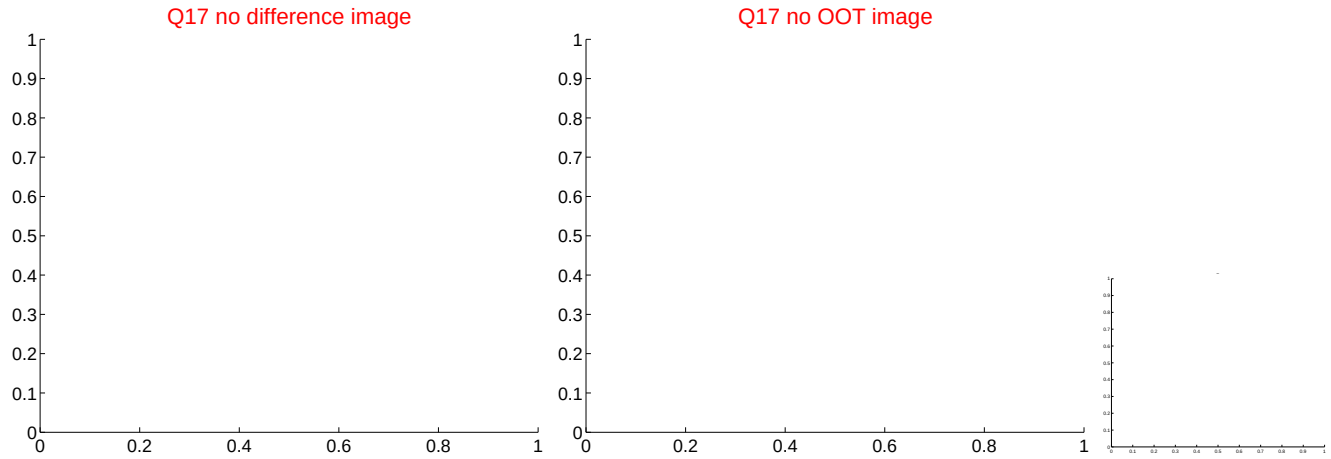


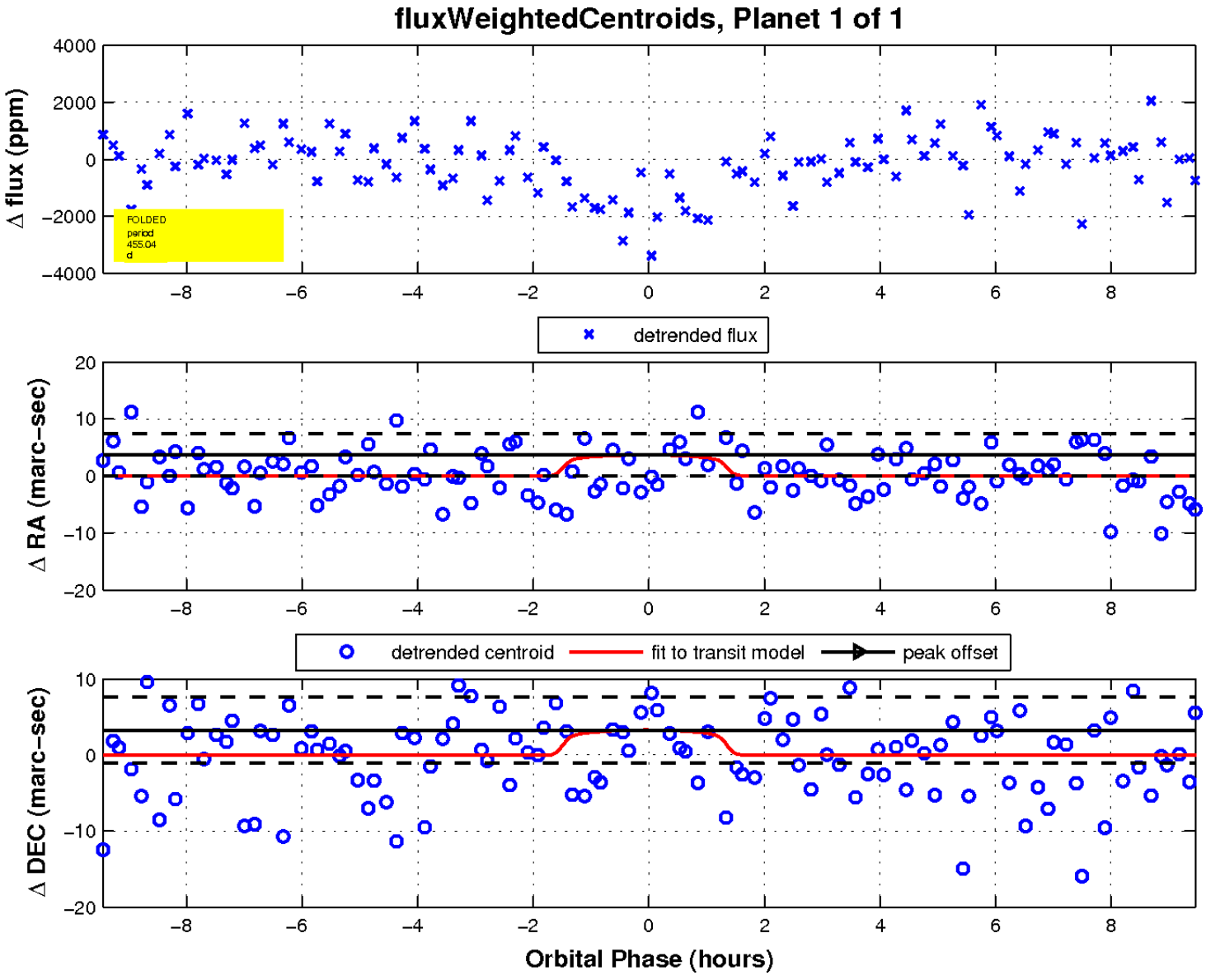




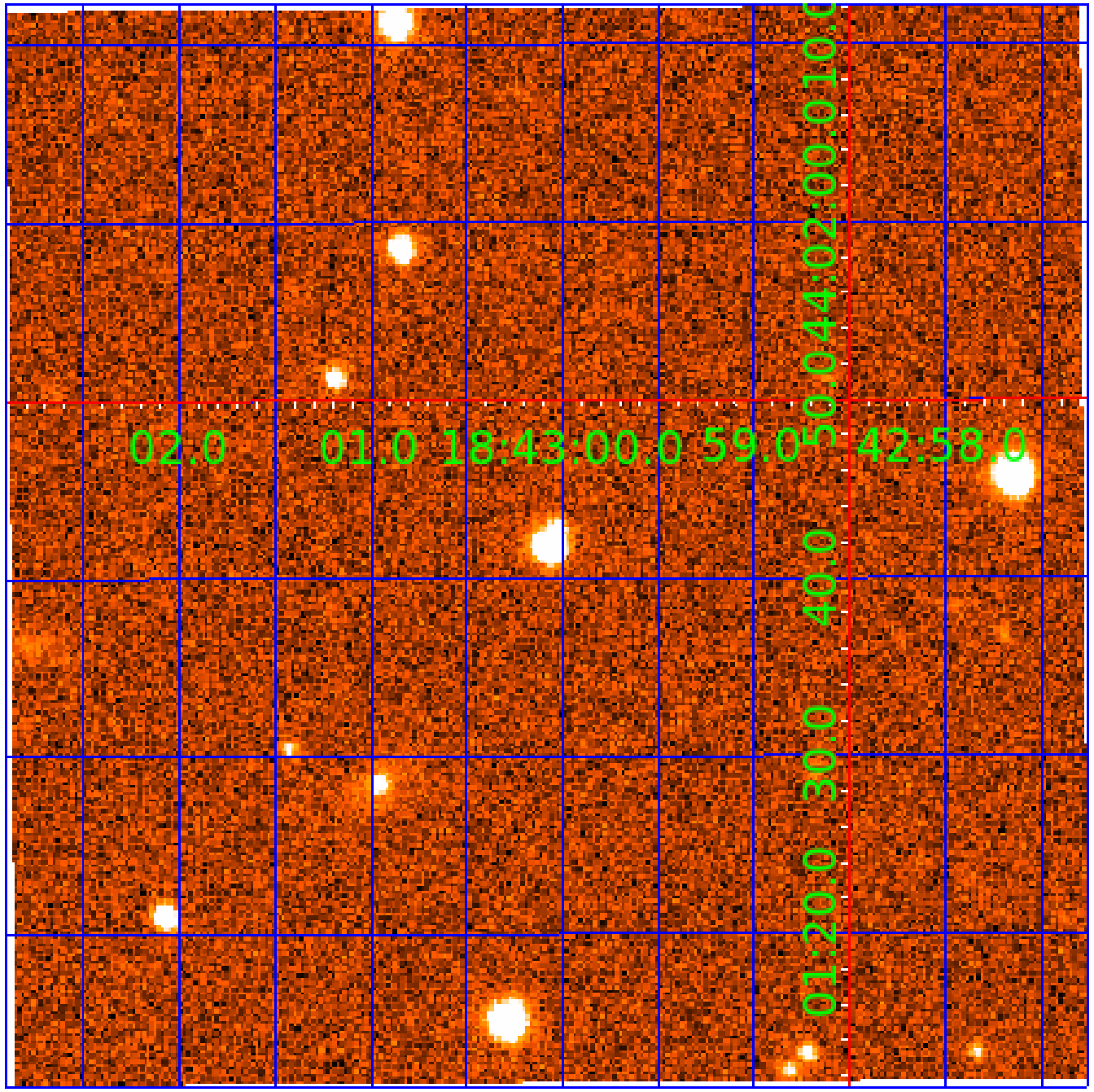


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.





UKIRT Image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