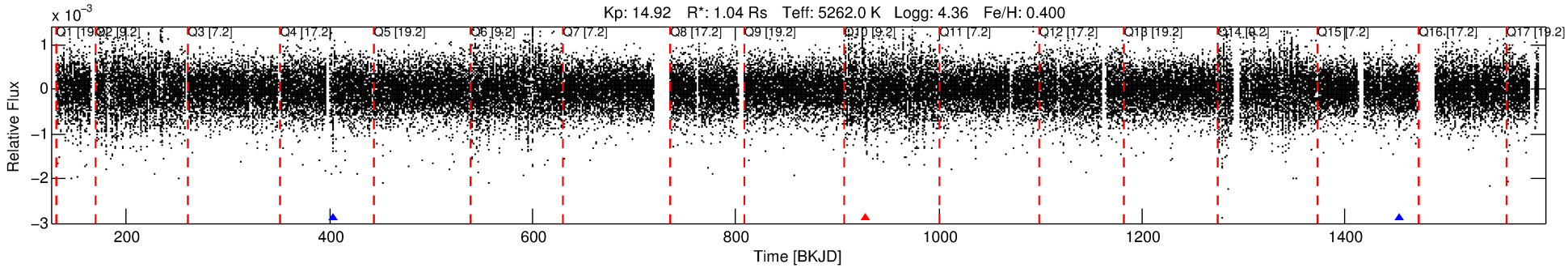
WARNING: THIS DATA IS SIMULATED, NOT OBSERVED

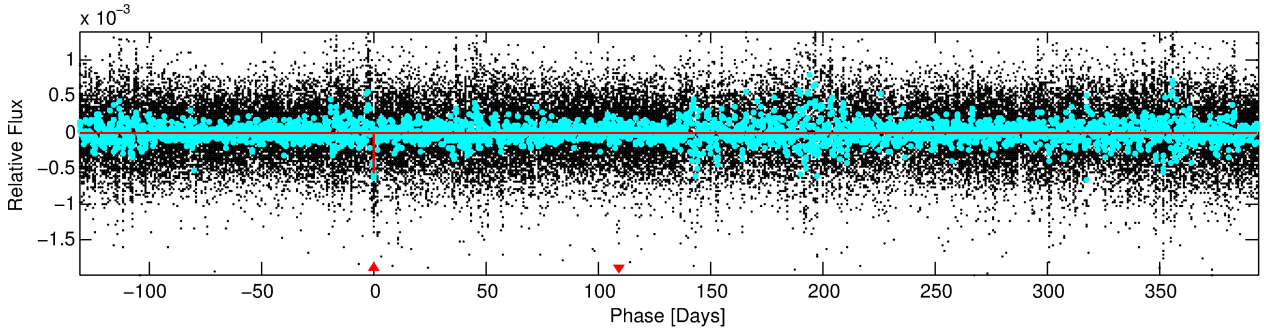
DV One-Page Summary

KIC: 8308722 Candidate: 1 of 1 Period: 524.596 d

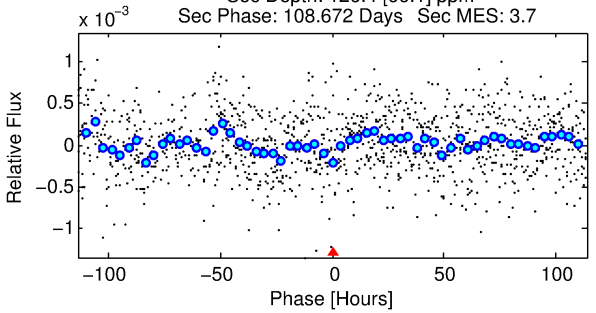
WARNING: THIS DATA IS SIMULATED, NOT OBSERVED

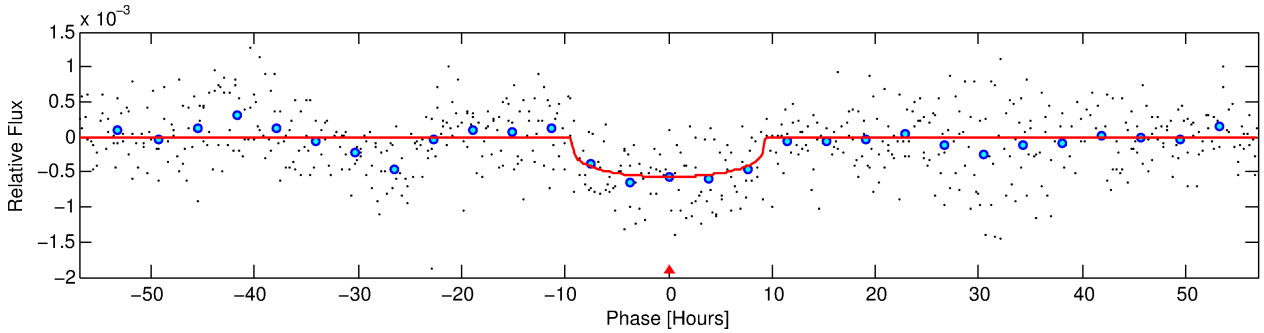
Kp: 14.92 R*: 1.04 Rs Teff: 5262.0 K Logg: 4.36 Fe/H: 0.400



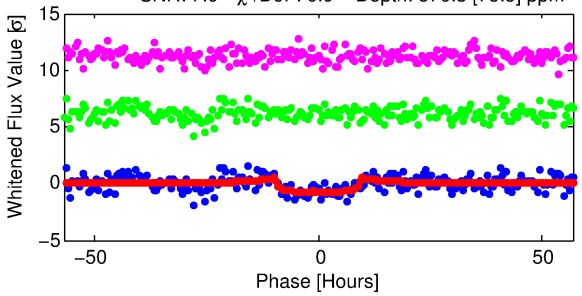


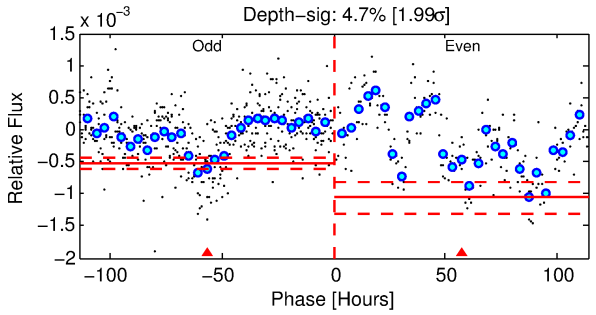
Sec Depth: 126.4 [66.1] ppm
Sec Phase: 108.672 Days Sec MES: 3.7

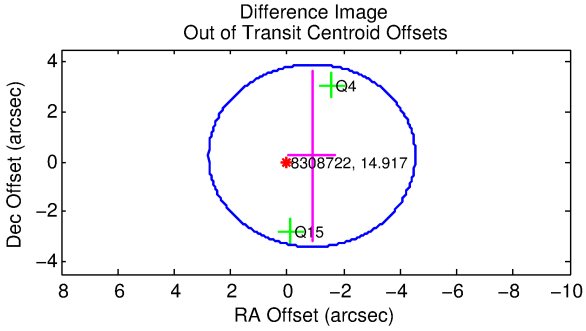




MES: 7.3 Transits: 3
SNR: 7.9 χ^2/DoF: 0.9 Depth: 570.3 [75.5] ppm







DV Fit Results:

Period = 524.59551 [0.01367] d
Epoch = 403.6140 [0.0195] BKJD
Rp/R* = 0.0221 [0.0104]
a/R* = 188.94 [312.68]
b = 0.49 [2.56]

Seff = 0.49 [0.20]
Teq = 213 [22] K
Rp = 2.50 [1.39] Re
a = 1.2304 [0.3194] AU

Ag = 16841.40 [19311.33] [0.87σ]
Teffp = 3755 [1019] K [3.48σ]

DV Diagnostic Results:

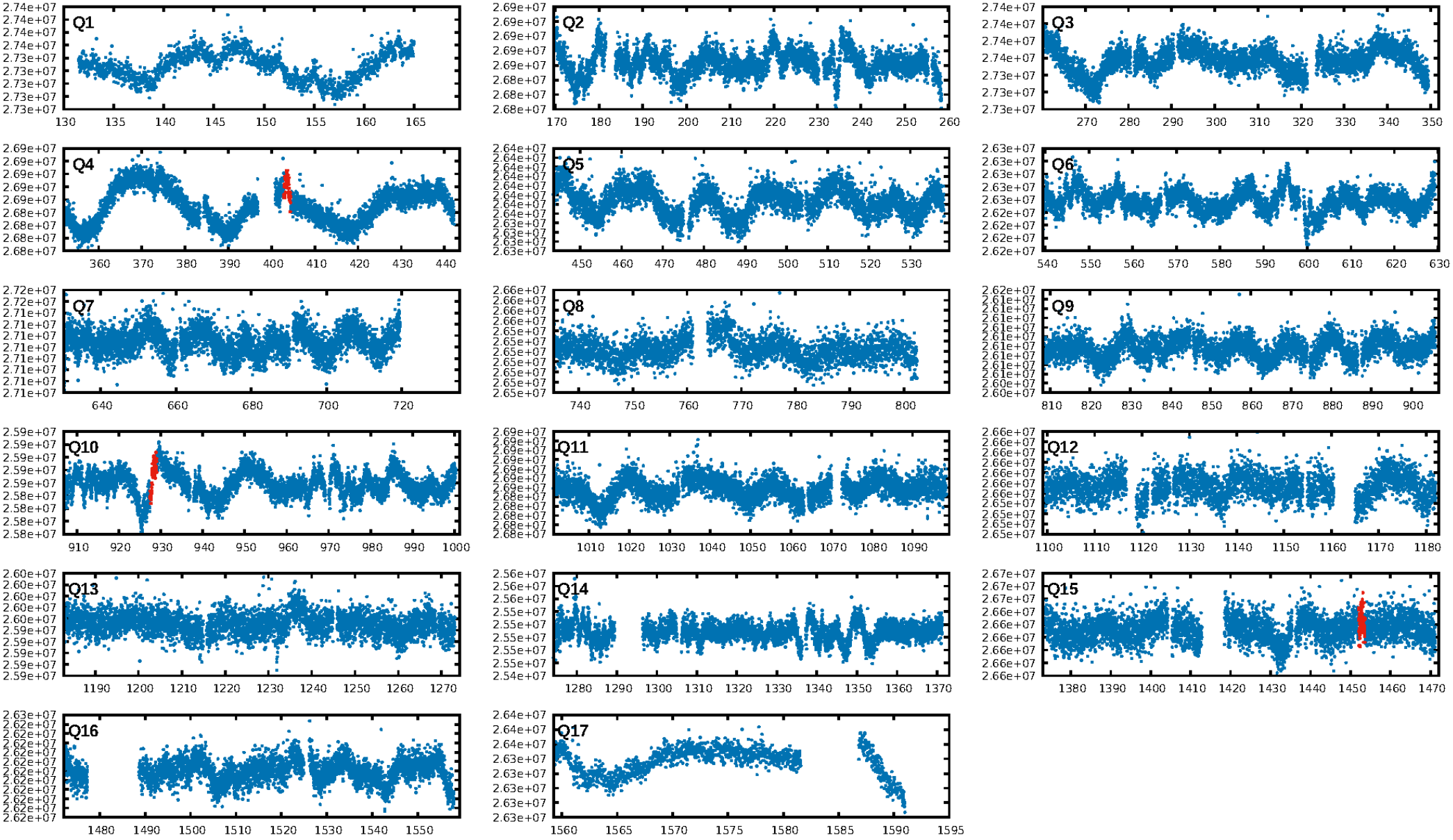
ShortPeriod−sig: N/A
LongPeriod−sig: N/A
ModelChiSquare2−sig: 1.4%
ModelChiSquareGof−sig: 99.6%
Bootstrap−pfa: 2.32e−08
RollingBand−fgt: 0.67 [2/3]
GhostDiagnostic−chr: −4.807

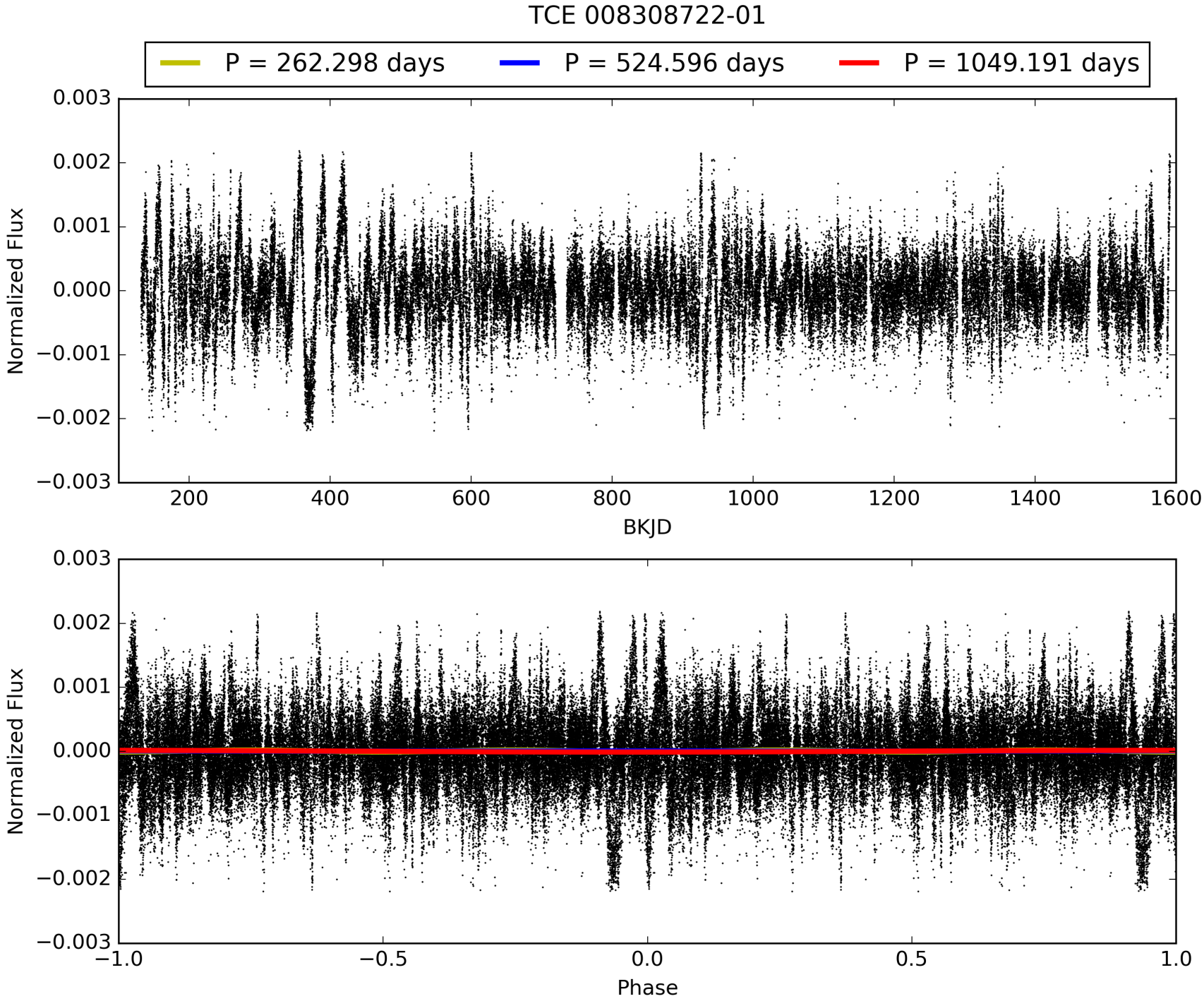
Centroid−sig: 0.5%
Centroid−so: 1.893 arcsec [1.50σ]
OotOffset−rm: 0.909 arcsec [0.75σ]
KicOffset−rm: 1.011 arcsec [0.53σ]
OotOffset−st: 0/1/1/0 [2]
KicOffset−st: 0/1/1/0 [2]
DiffImageQuality−fgm: 0.50 [1/2]
DiffImageOverlap−fno: 1.00 [3/3]

Software Revision: svn+ssh://murzim/repo/soc/branches/integ/ksop−2320@61025 −− Date Generated: 04−Mar−2016 02:49:13 Z

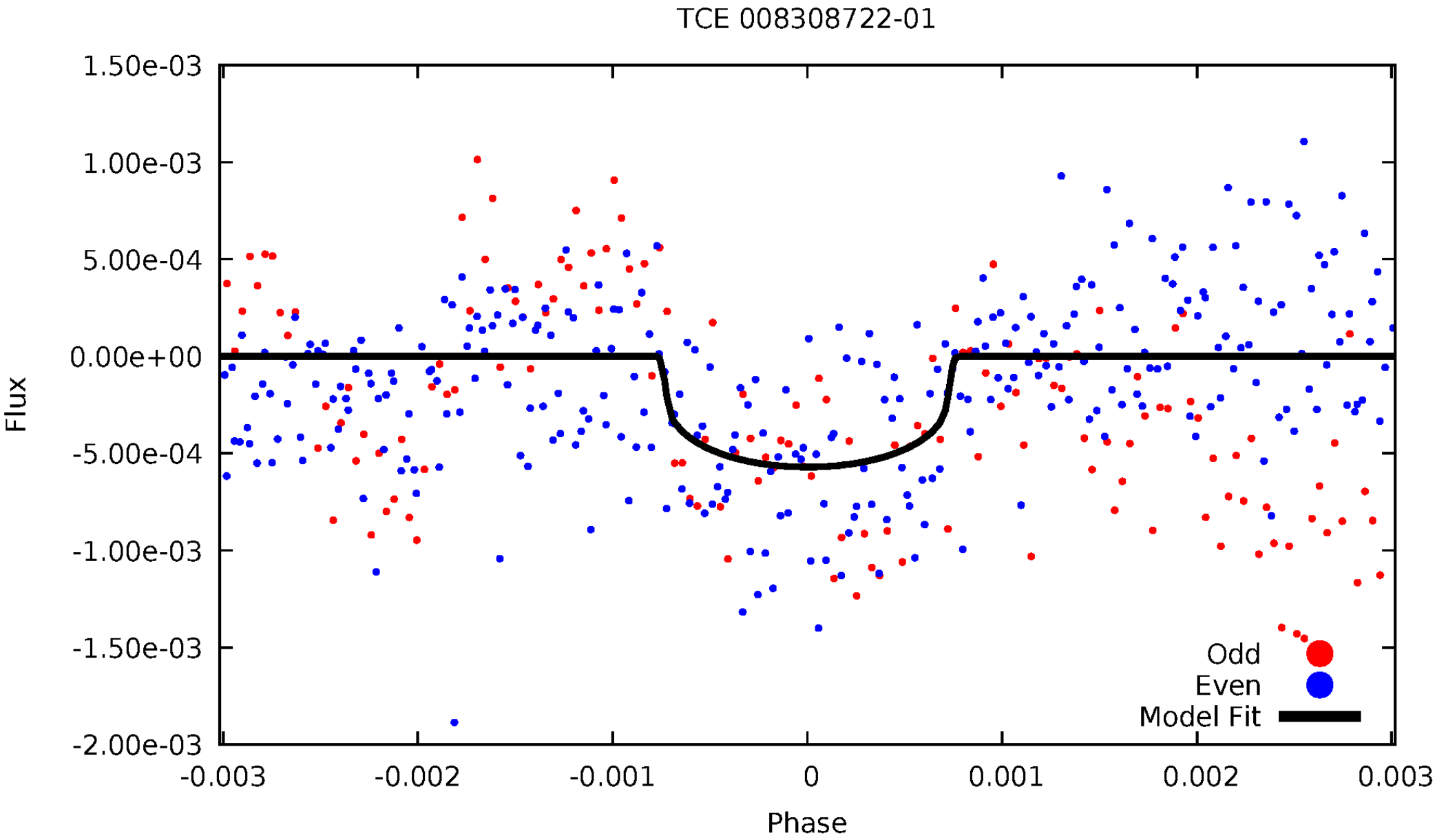
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

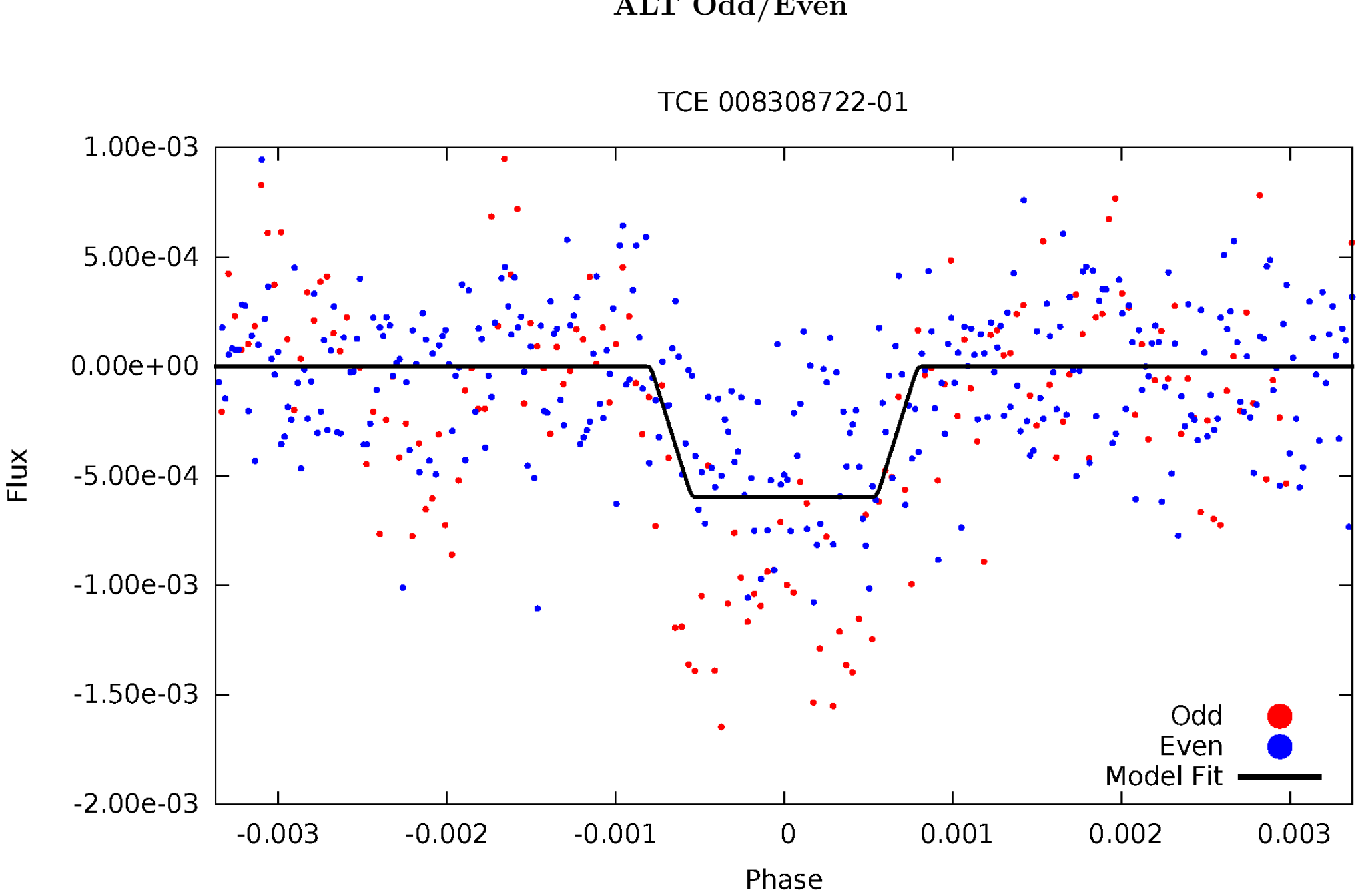
TCE 008308722-01, PDC Light Curves



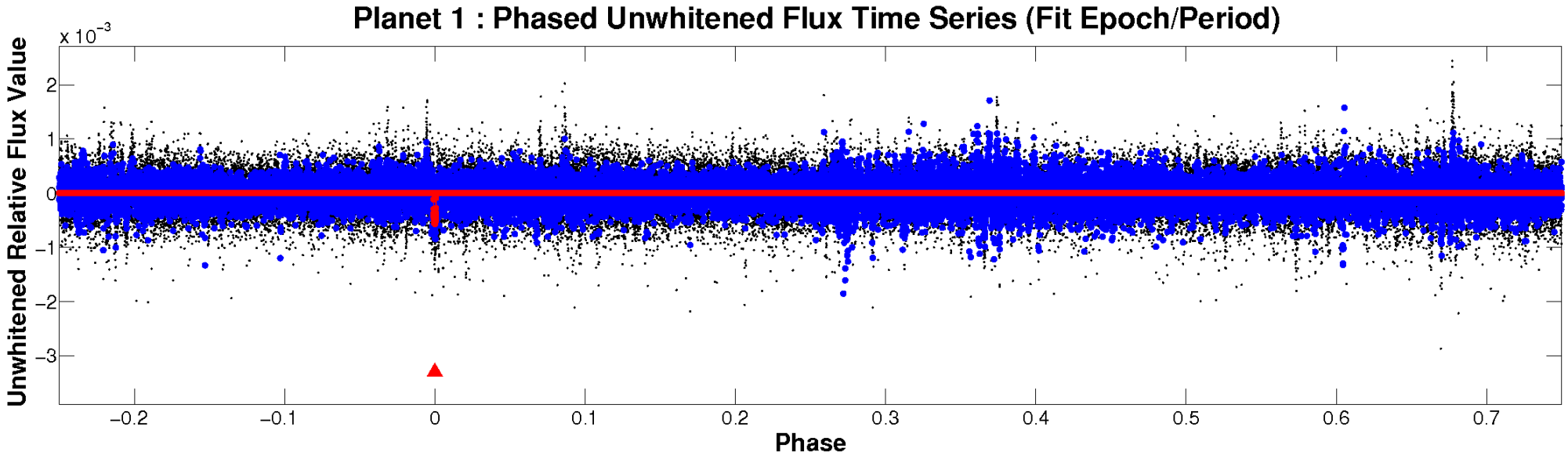

TCE 008308722-01
P = 262.298 days
P = 524.596 days
P = 1049.191 days
Normalized Flux
BKJD
Phase
0.003
0.002
0.001
0.000
−0.001
−0.002
−0.003
200
400
600
800
1000
1200
1400
1600
−1.0
−0.5
0.0
0.5
1.0

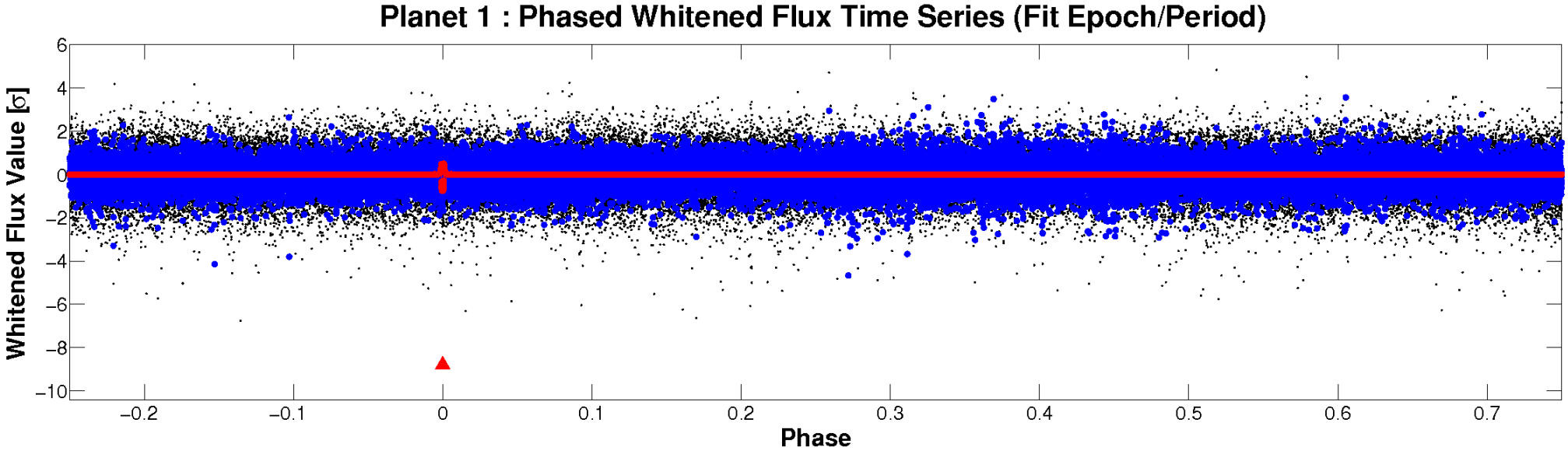
DV Odd/Even


TCE 008308722-01
1.50e-03
1.00e-03
5.00e-04
0.00e+00
-5.00e-04
-1.00e-03
-1.50e-03
-2.00e-03
Flux
-0.003
-0.002
-0.001
0
0.001
0.002
0.003
Phase
Odd
Even
Model Fit


ALT Odd/Even
TCE 008308722-01
1.00e-03
5.00e-04
0.00e+00
-5.00e-04
-1.00e-03
-1.50e-03
-2.00e-03
Flux
-0.003
-0.002
-0.001
0
0.001
0.002
0.003
Phase
Odd
Even
Model Fit

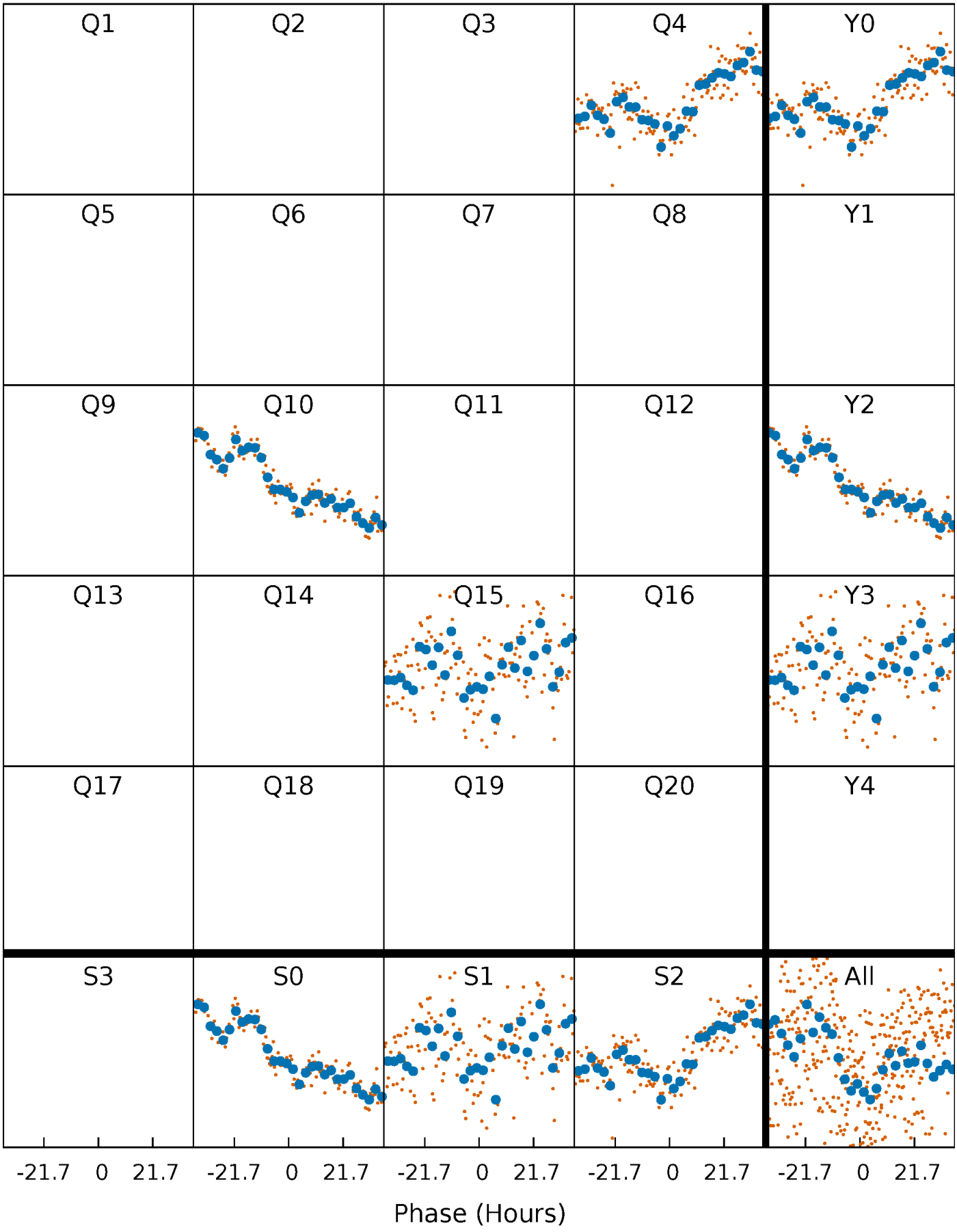
Non-Whitened Vs. Whitened Light Curve





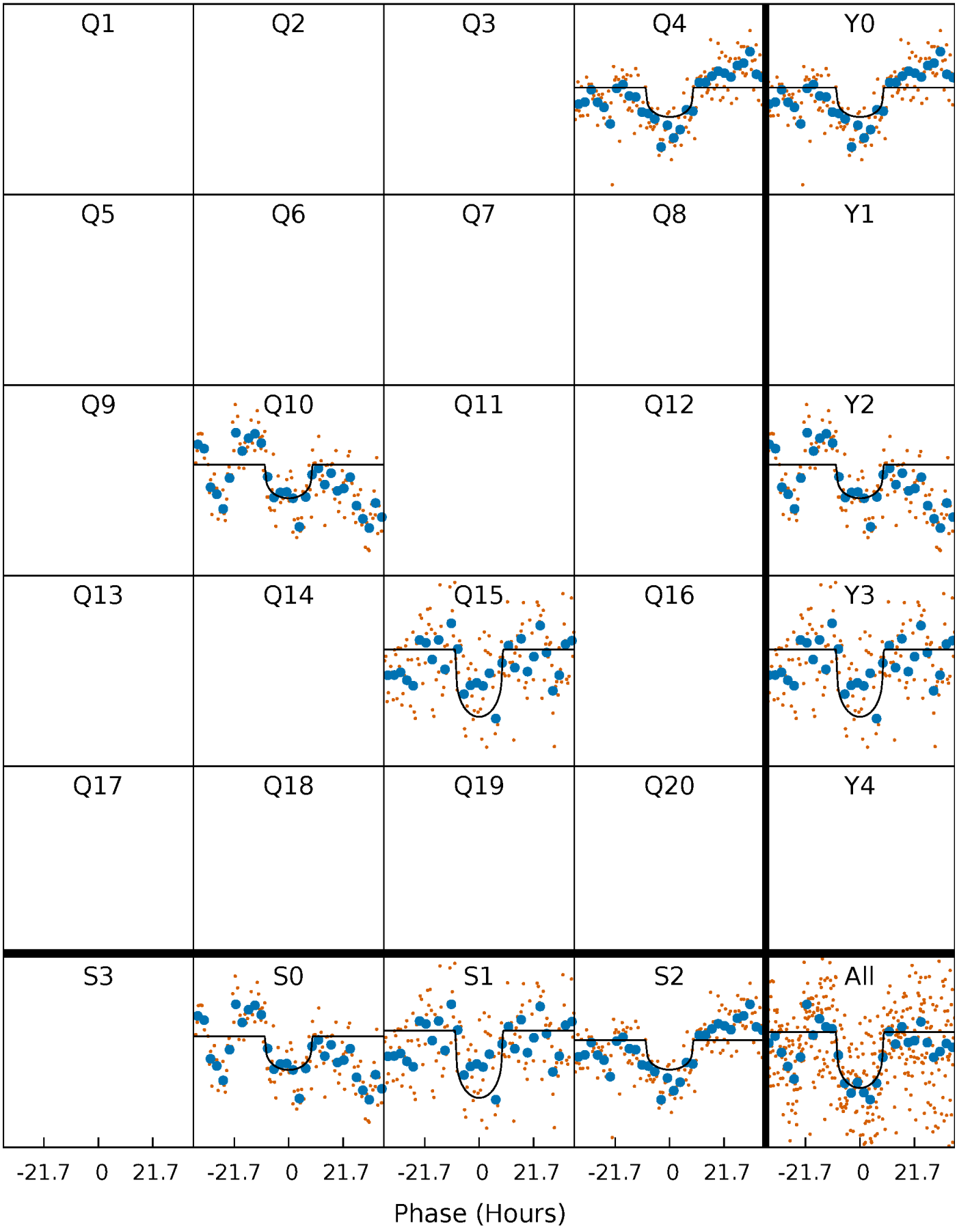
PDC Quarter-Phased Transit Curves

TCE 008308722-01 P=524.595512 Days T_0=403.613951 (BKJD)



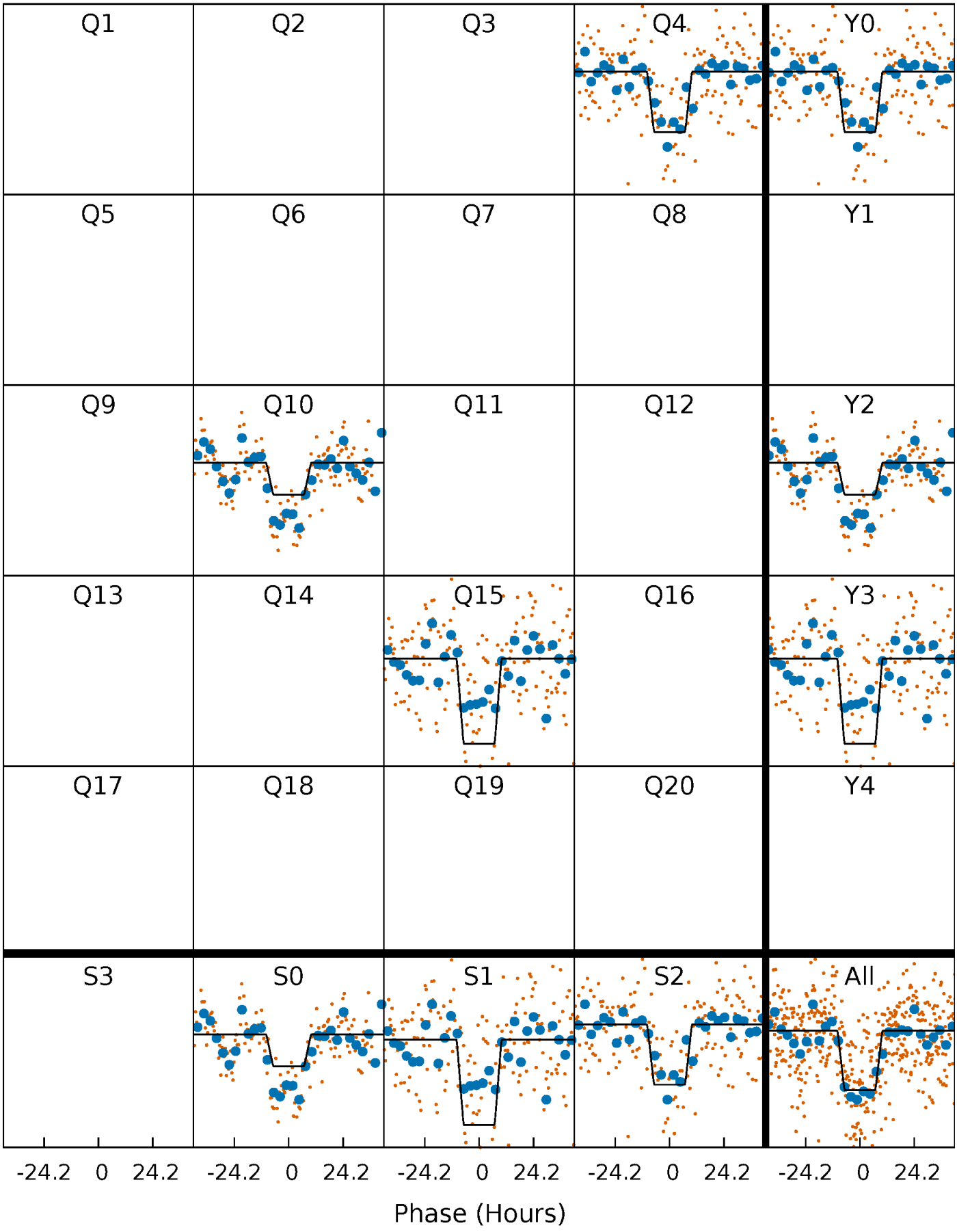
DV Quarter-Phased Transit Curves

TCE 008308722-01 P=524.595512 Days T_0=403.613951 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

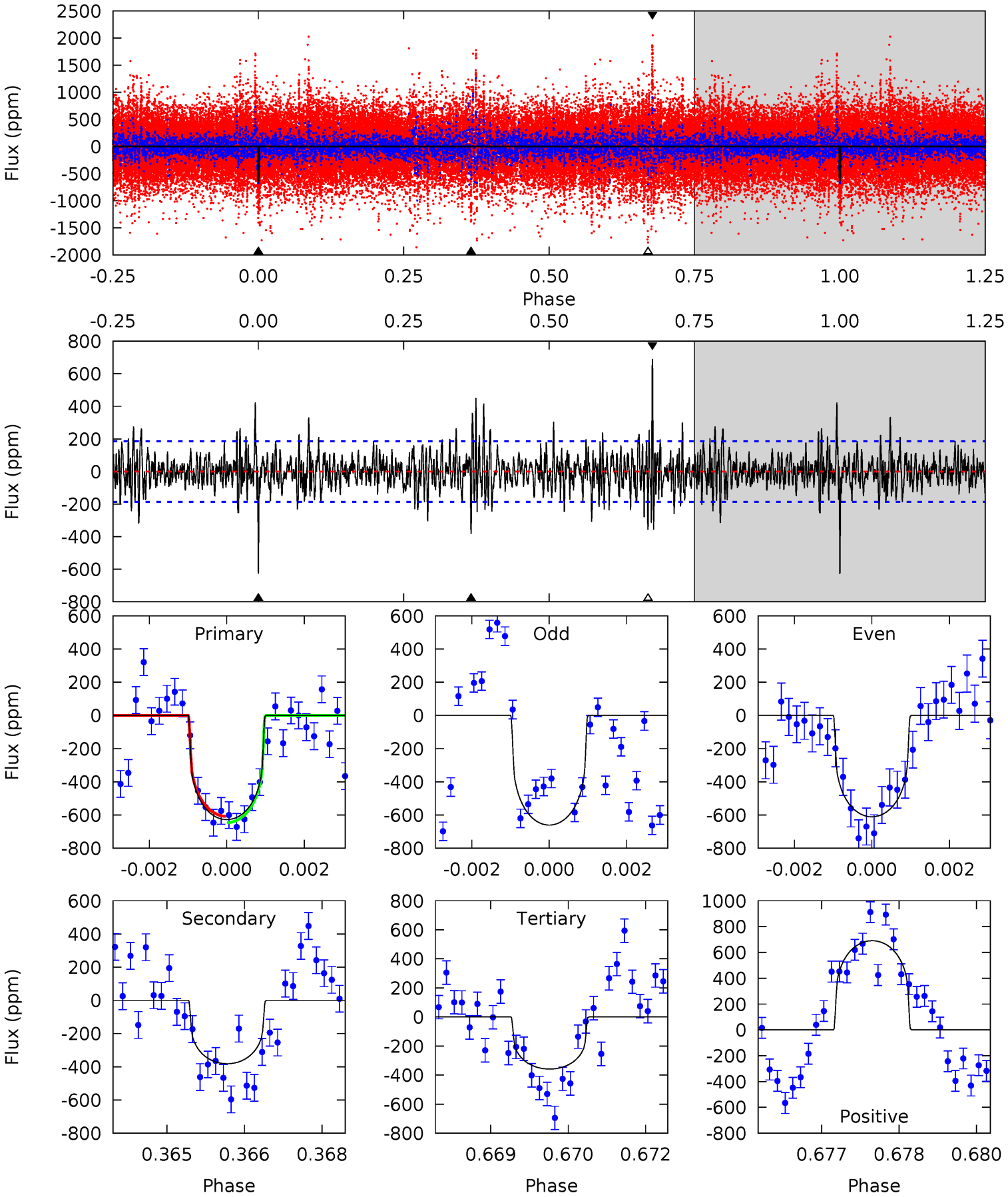
TCE 008308722-01 P=524.638464 Days T_0=403.552865 (BKJD)



DV Model-Shift Uniqueness Test

008308722-01, P = 524.595512 Days, E = 403.613951 Days

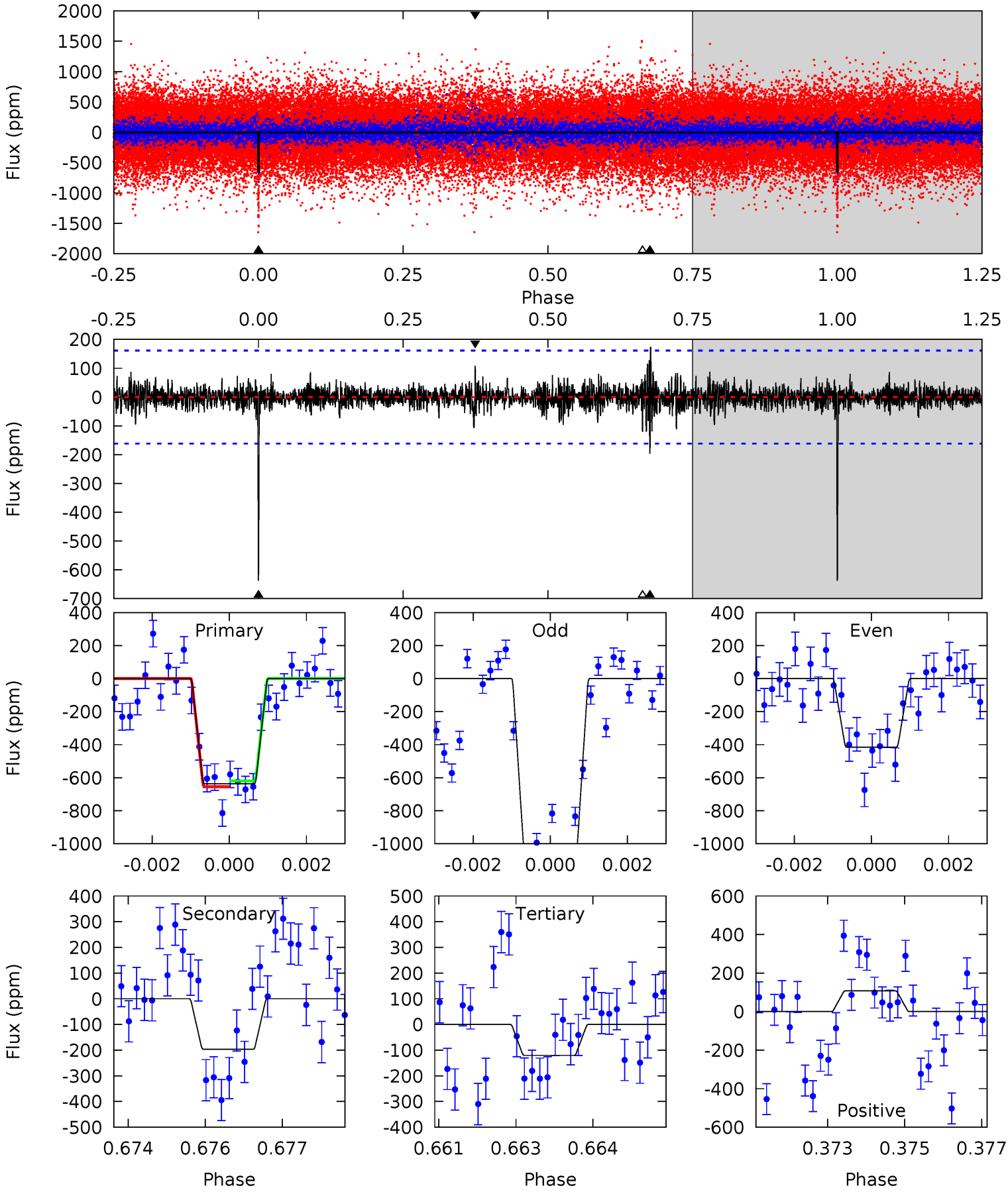
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.2	11.0	10.4	20.0	5.37	3.17	2.77	7.79	-1.81	0.67	-8.93	0.70	0.94	0.52	0.55



Alt Model-Shift Uniqueness Test

008308722-01, P = 524.638464 Days, E = 403.552865 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.2	6.54	4.00	3.58	5.37	3.15	0.86	17.2	17.6	2.54	2.95	10.4	1.27	0.21	0.58



Stellar Parameters For KIC 008308722

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	5262^{+174}_{-158}	$4.361^{+0.167}_{-0.222}$	$0.400^{+0.100}_{-0.250}$	$1.038^{+0.305}_{-0.178}$	$0.904^{+0.075}_{-0.061}$	$1.137^{+0.918}_{-0.614}$
	+3%/-3%	+4%/-5%	+25%/-62%	+29%/-17%	+8%/-7%	+81%/-54%
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 008308722-01 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-381±35	$2.55^{+1.22}_{-1.19}$	300^{+25}_{-19}	4999^{+1610}_{-695}	$49722^{+121469}_{-27566}$
Alt.	-197±30	$2.82^{+1.35}_{-1.20}$	300^{+24}_{-21}	4185^{+1052}_{-505}	19947^{+41721}_{-10572}

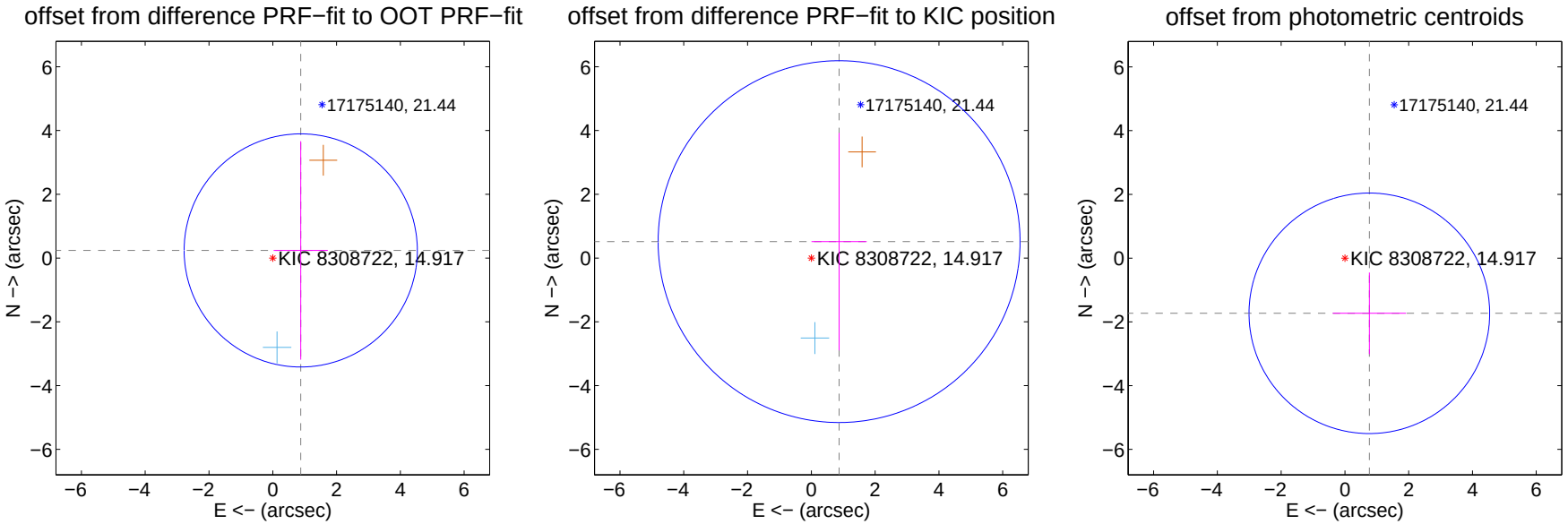
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

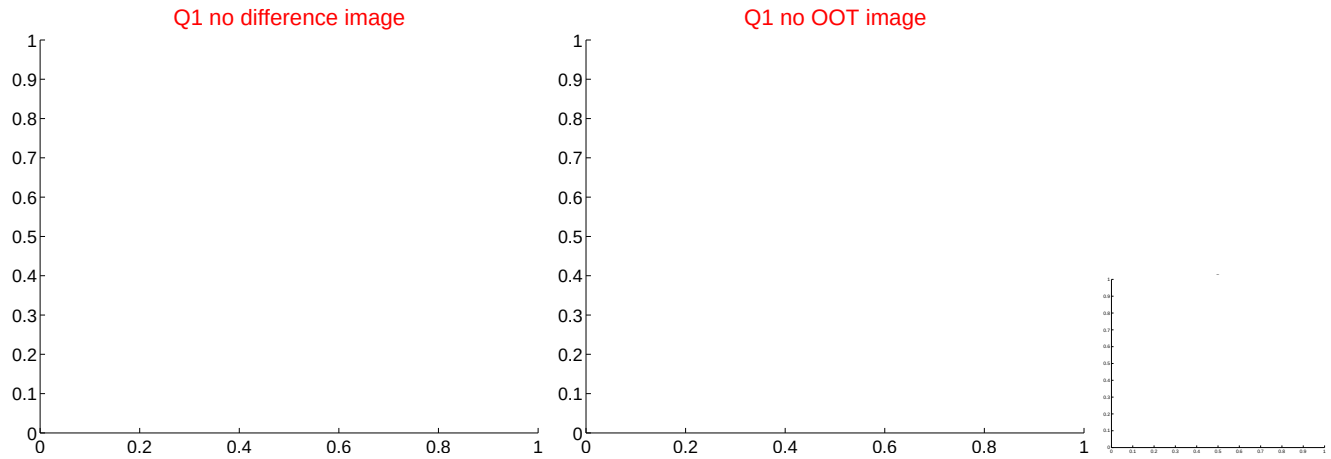
Supplemental centroid analysis for 008308722-01. Kepler magnitude: 14.92. Transit SNR 7.89
There are 1 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.29 arcsec

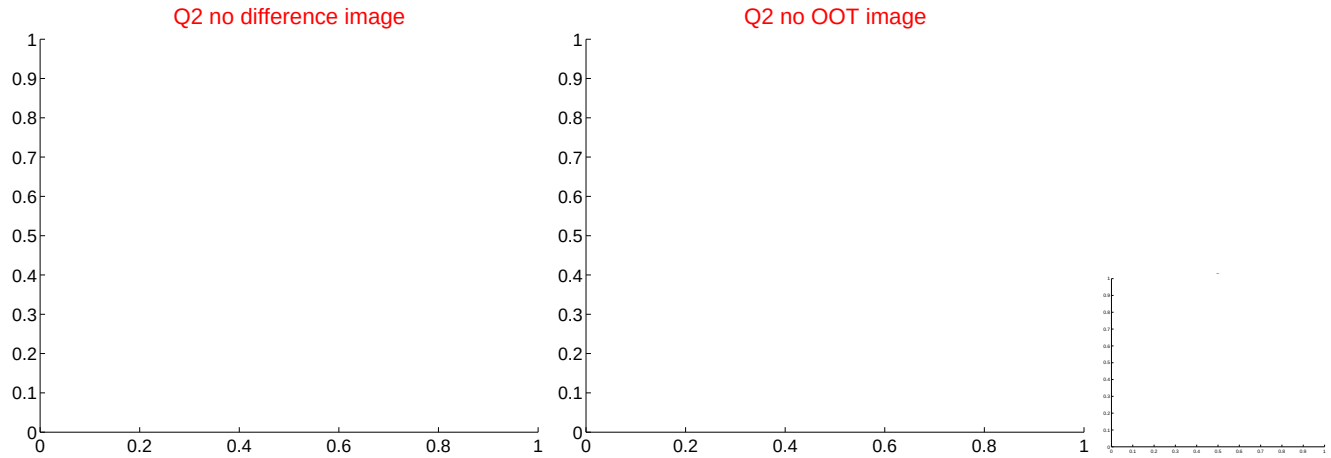
	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.909 ± 1.219	0.75	-0.877 ± 0.849	0.239 ± 3.427
PRF-fit source offset from KIC position	1.011 ± 1.891	0.53	-0.870 ± 0.867	0.516 ± 3.410
photometric centroid source offset	1.89 ± 1.26	1.50	-0.77 ± 1.15	-1.73 ± 1.28

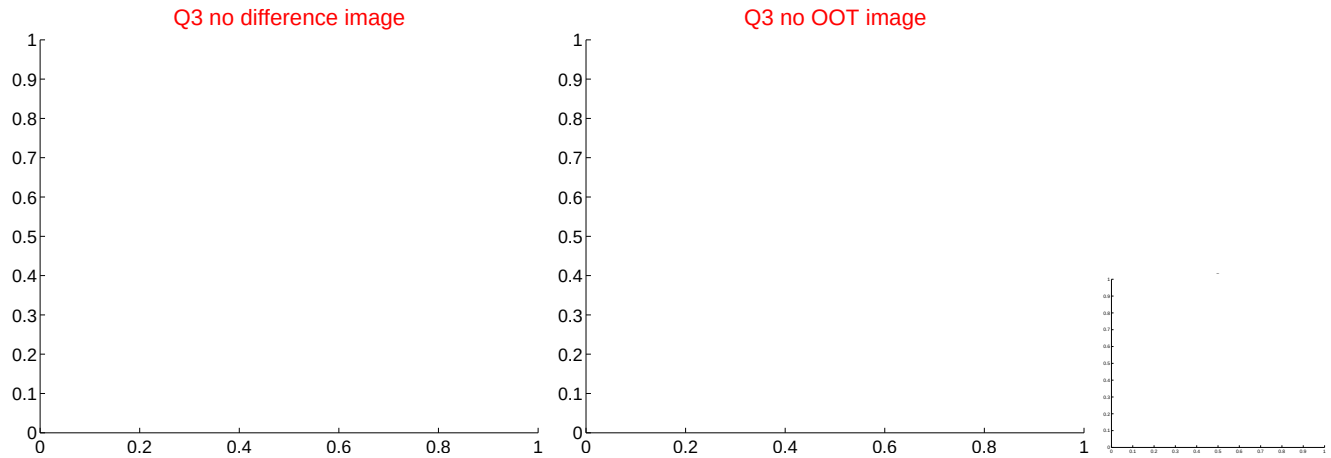


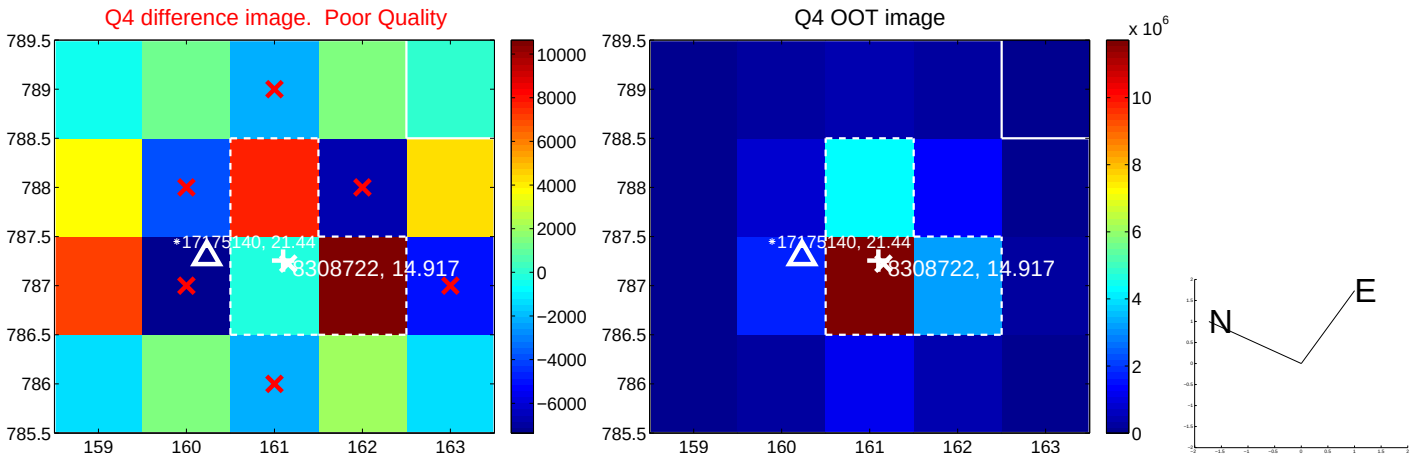
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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









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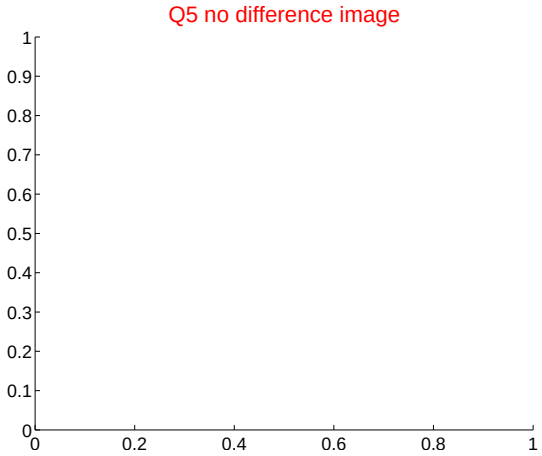
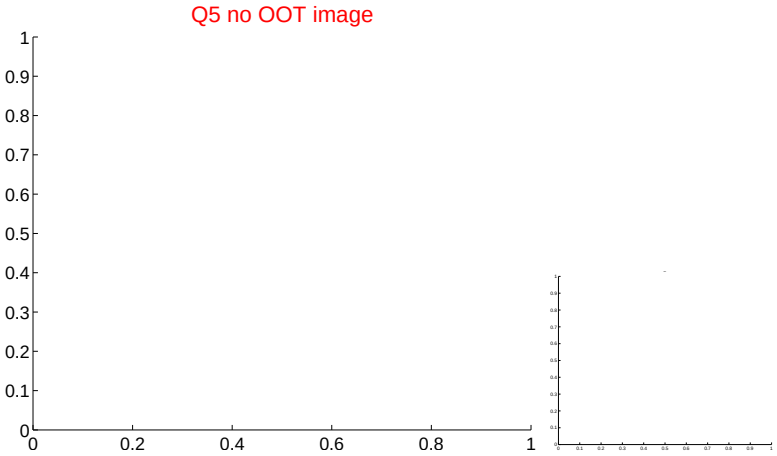
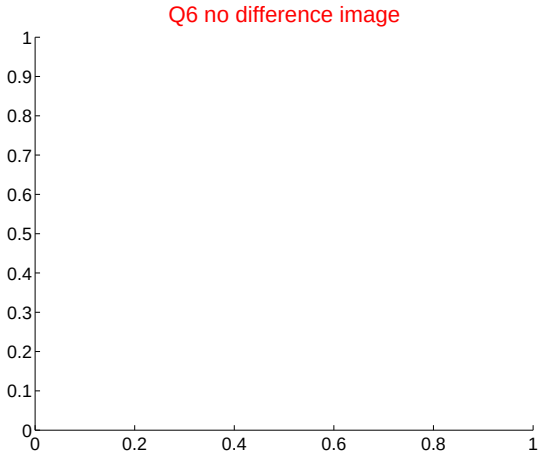
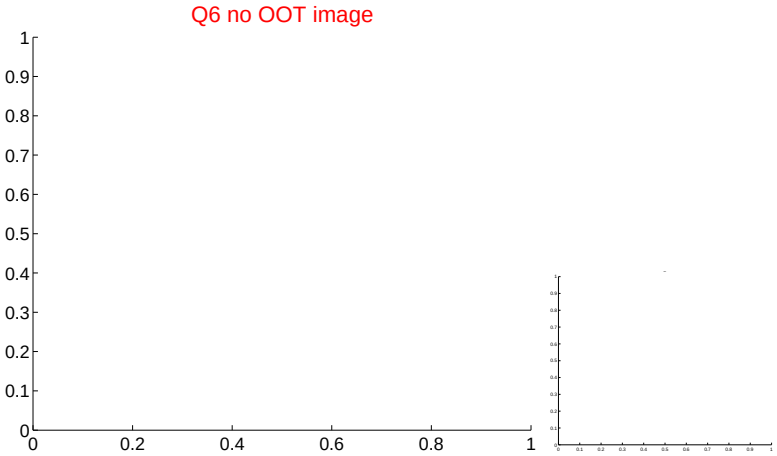
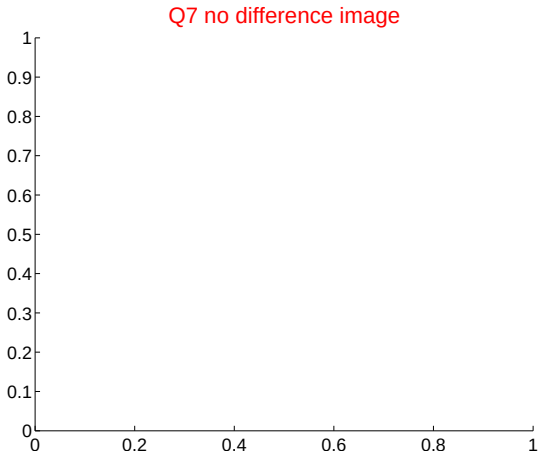
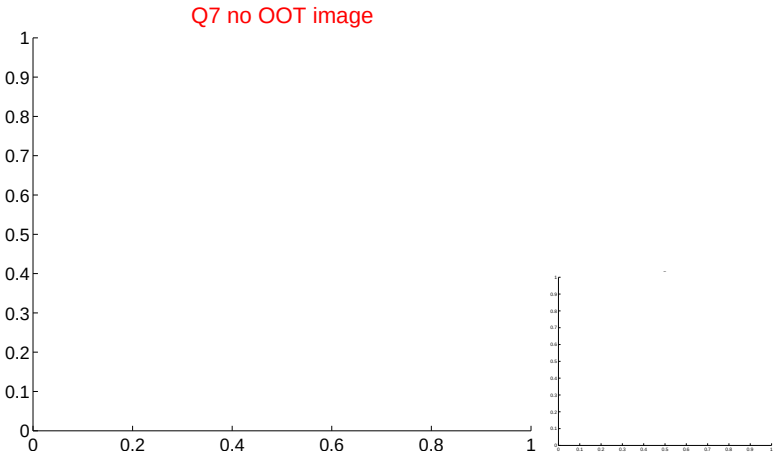


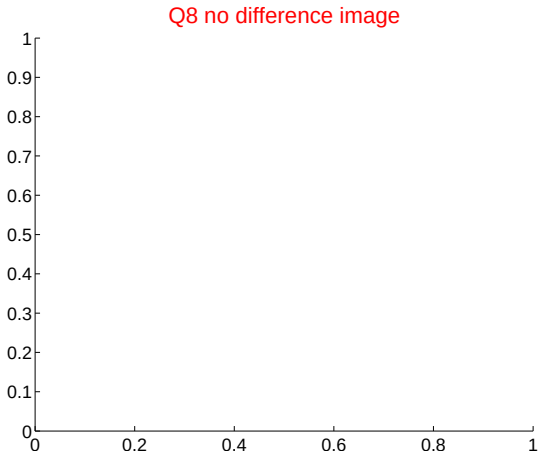


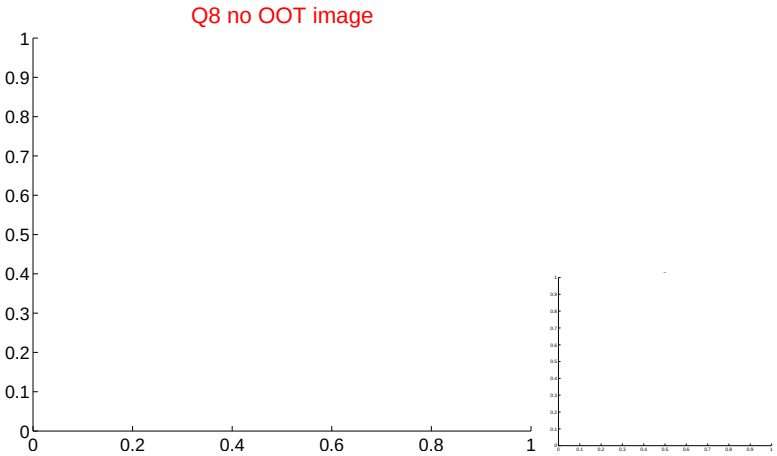




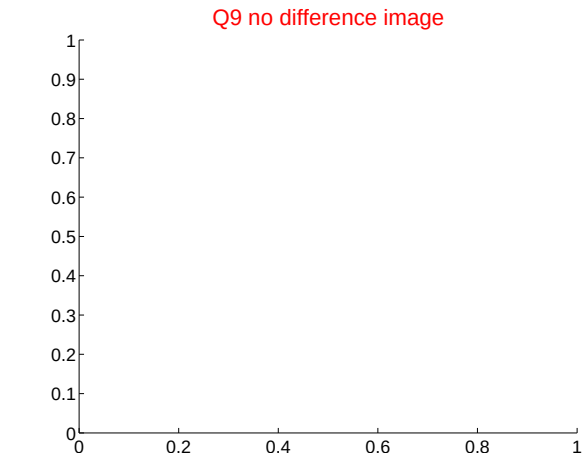


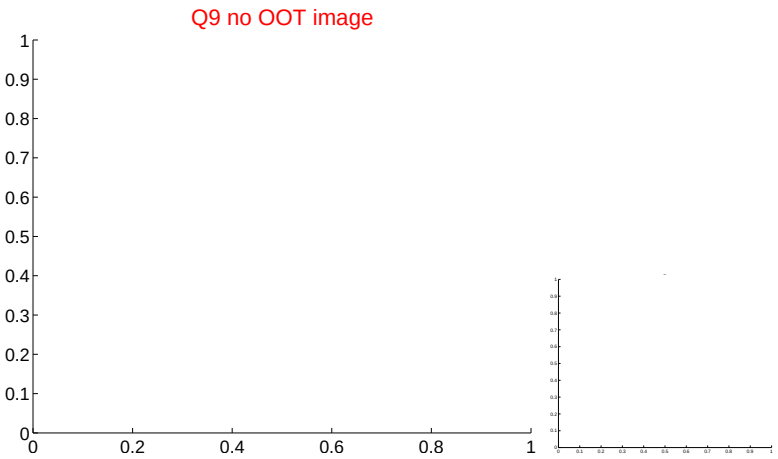


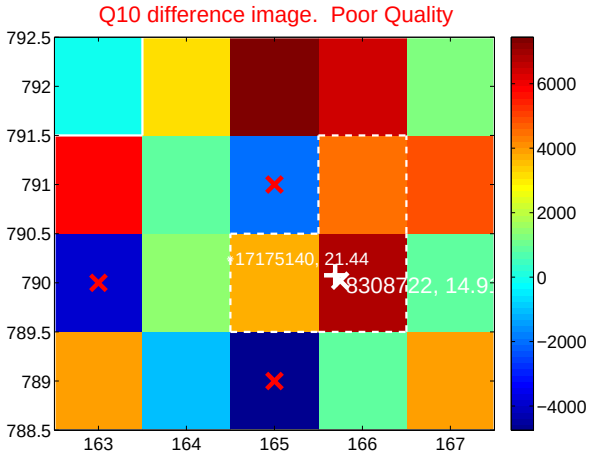


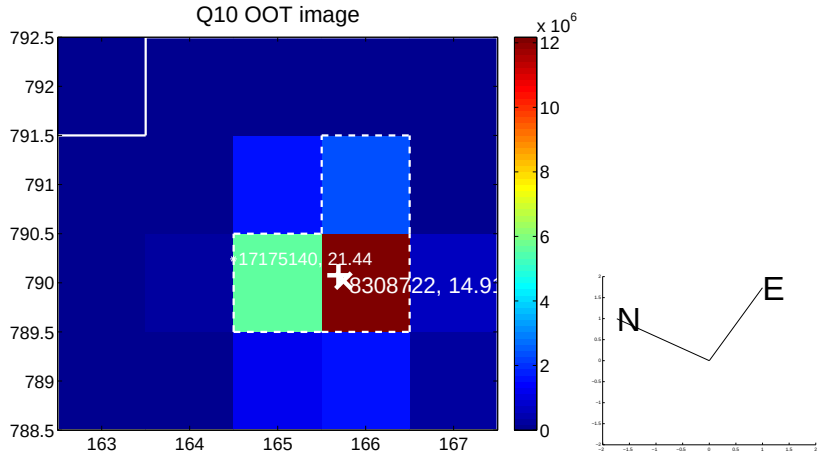


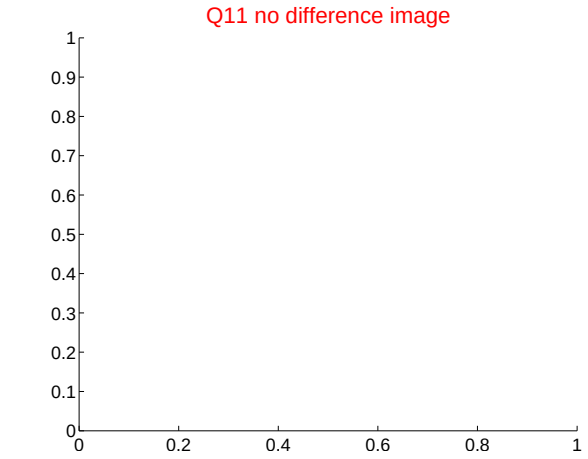
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

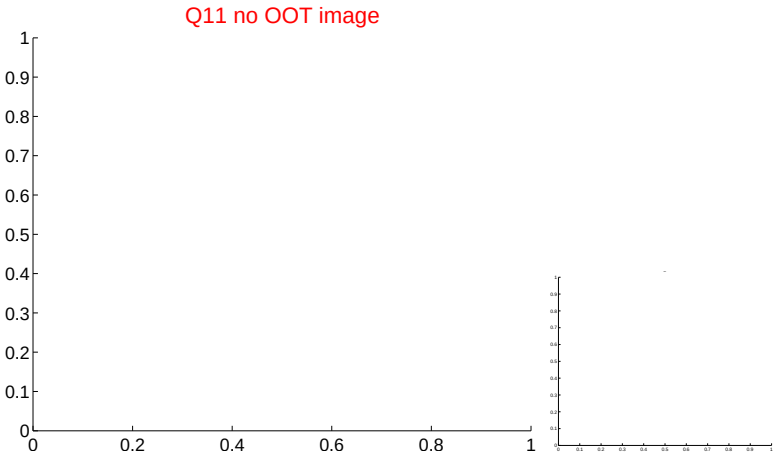


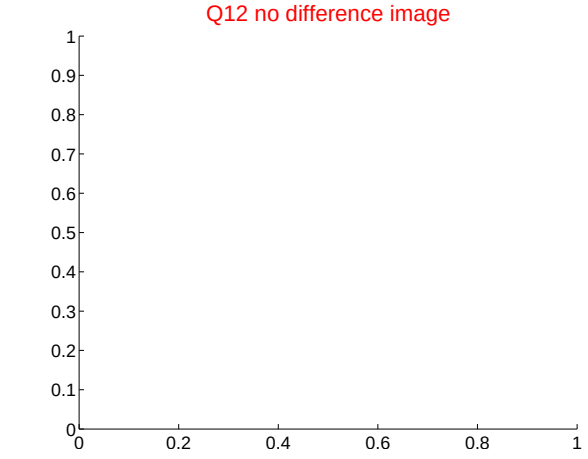


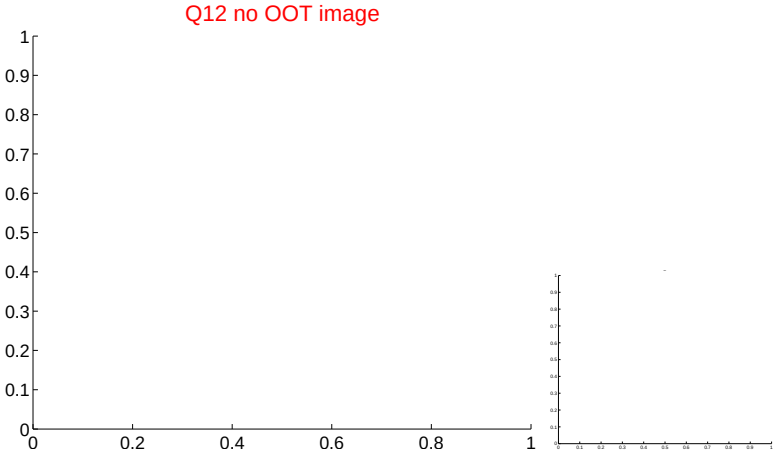




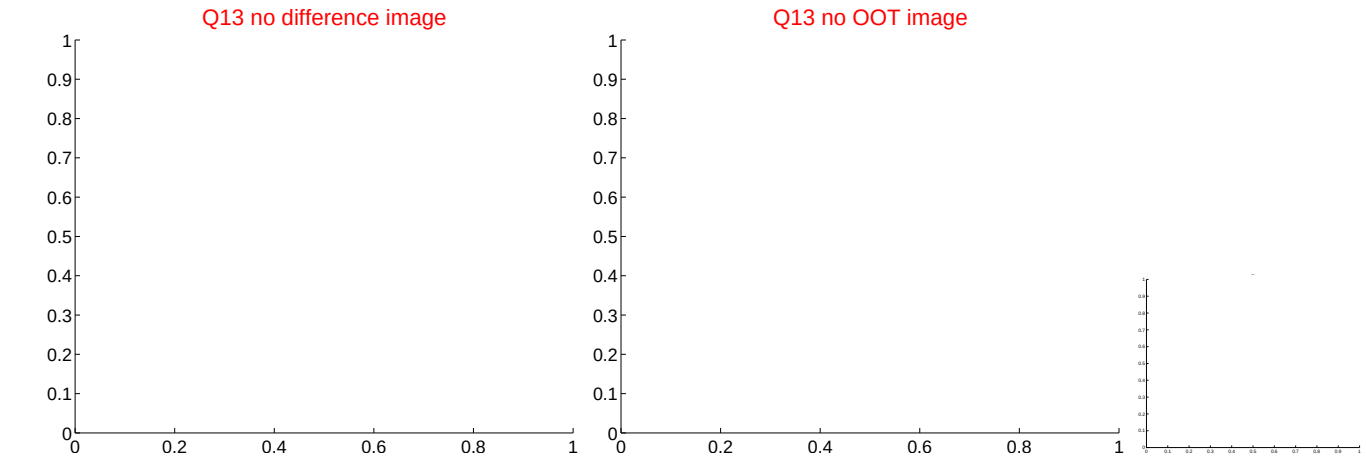


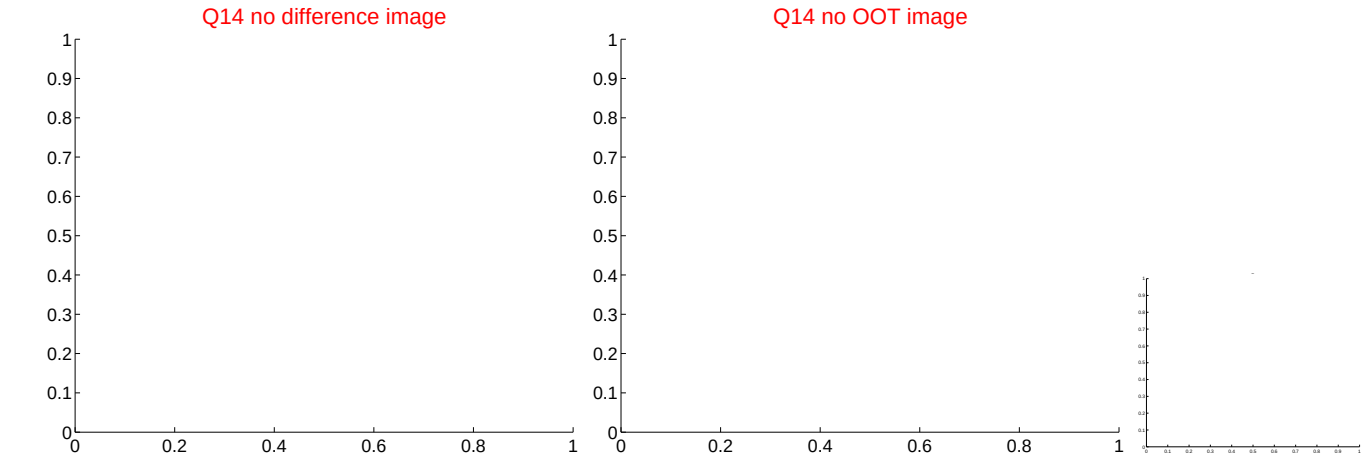


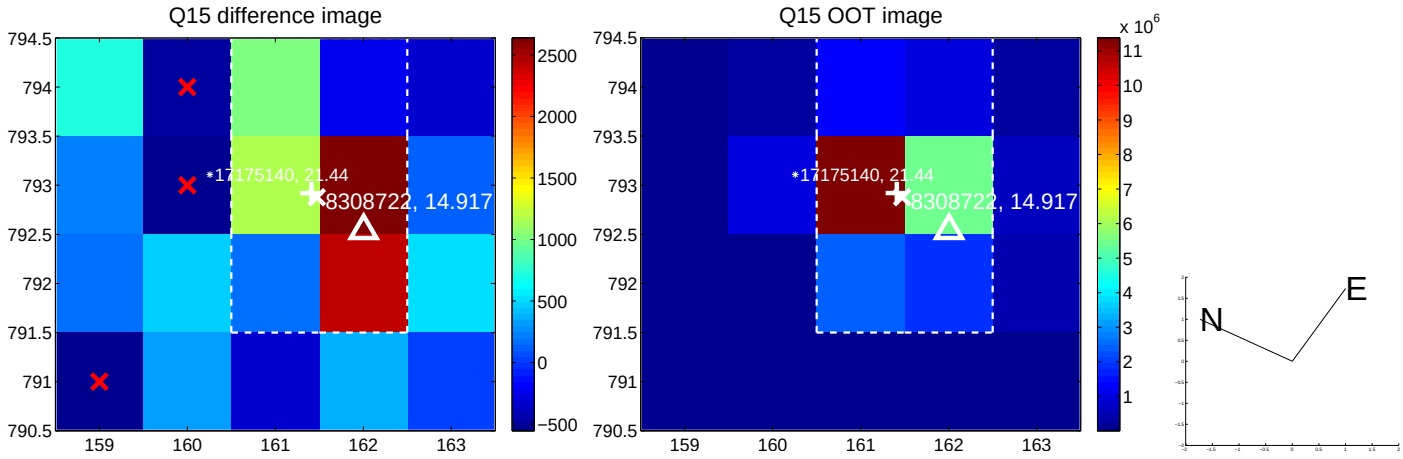


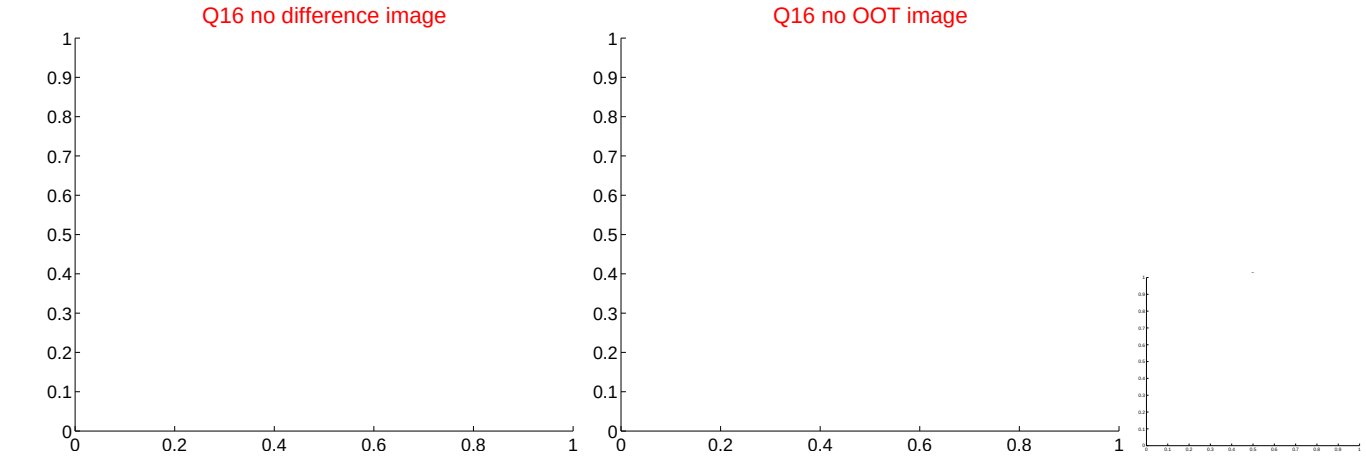


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

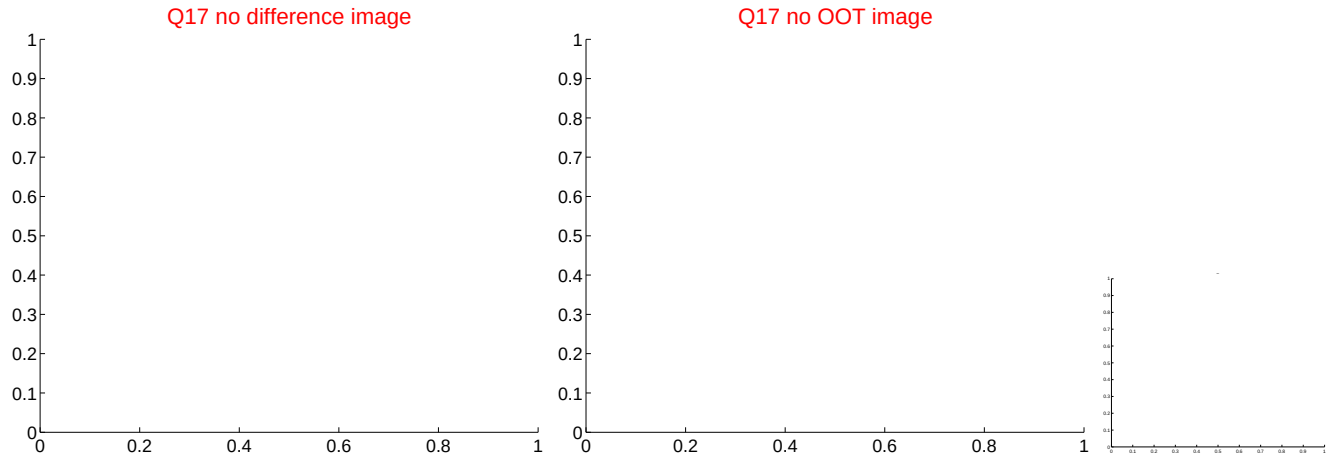


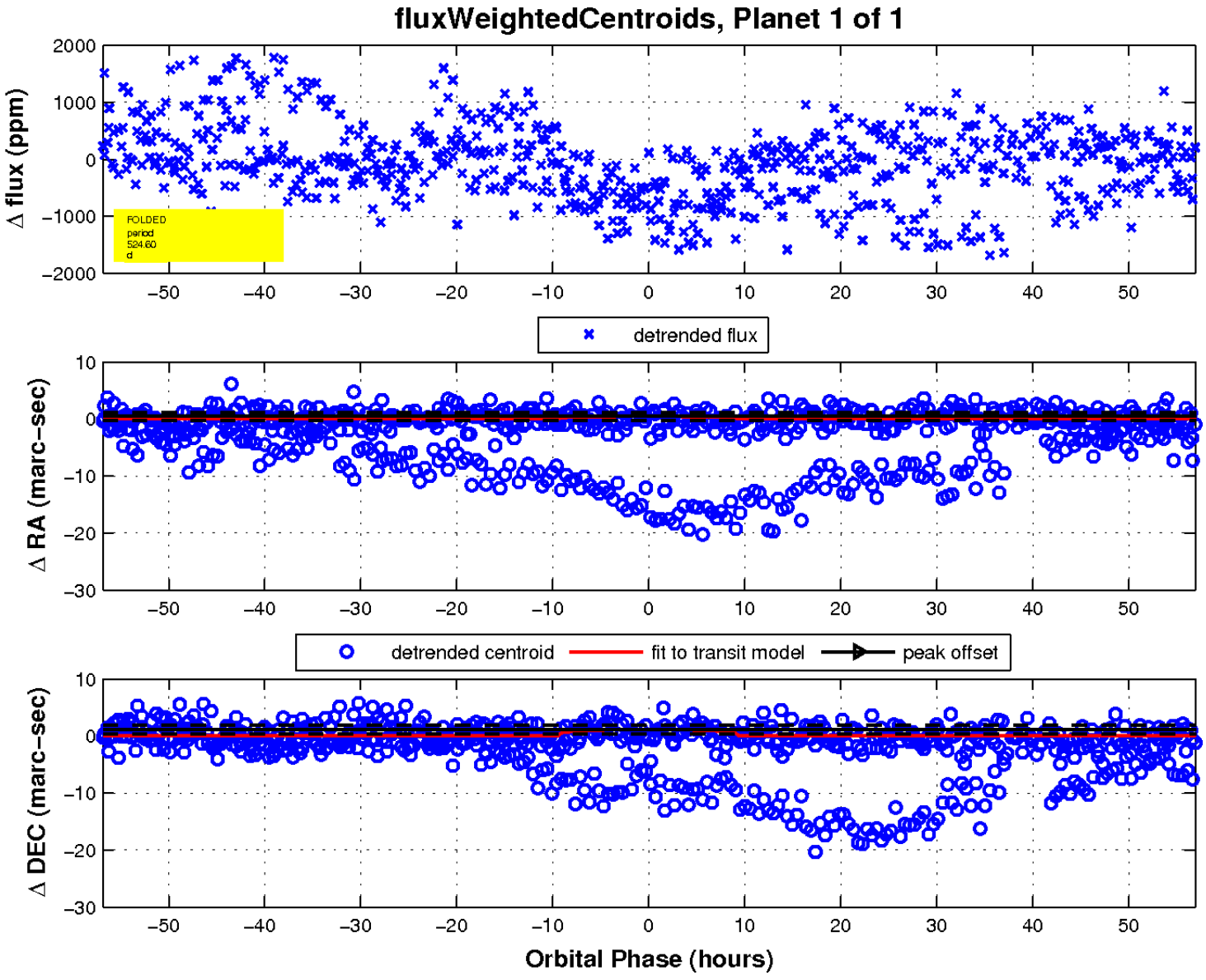




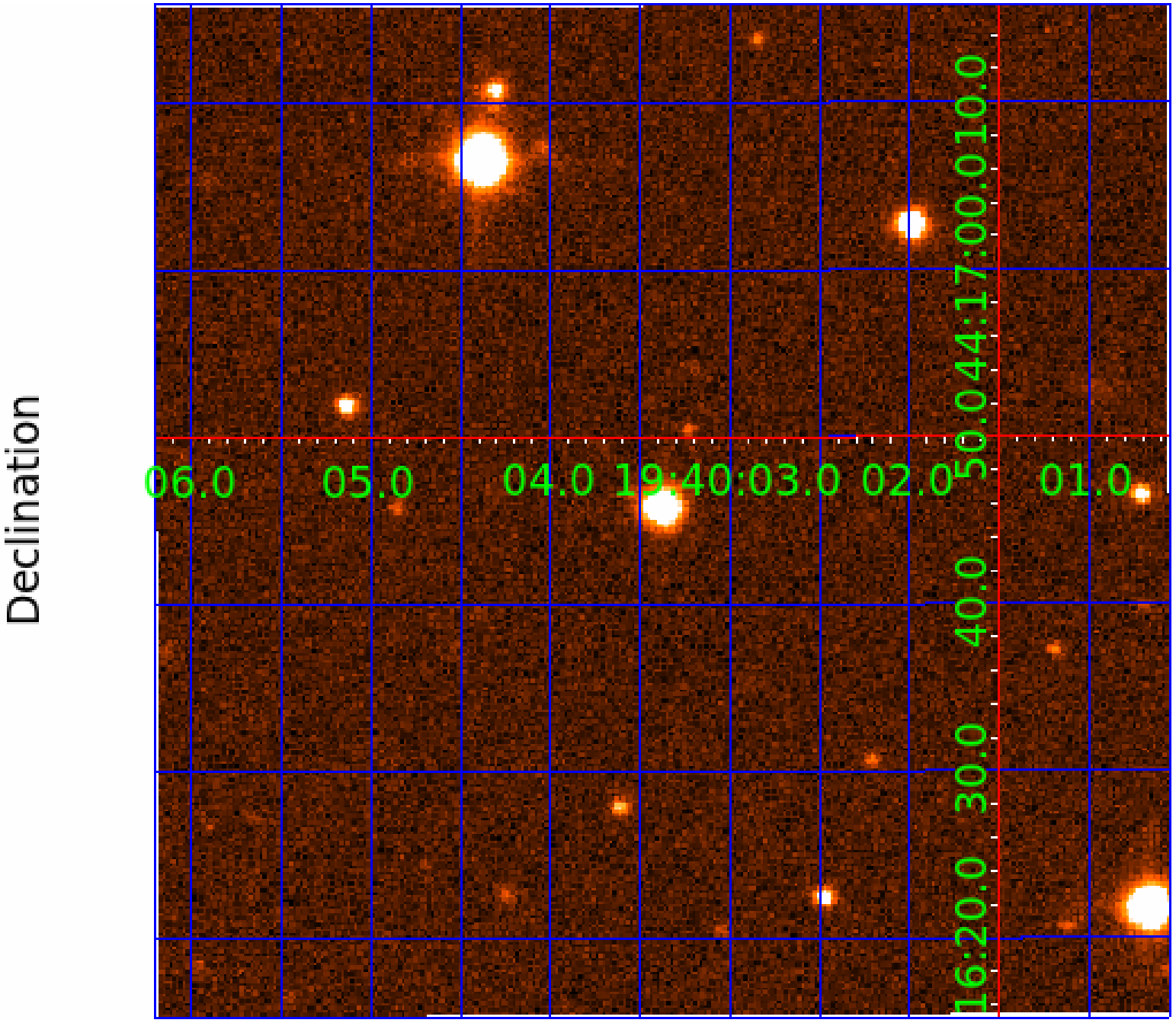


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.





UKIRT Image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