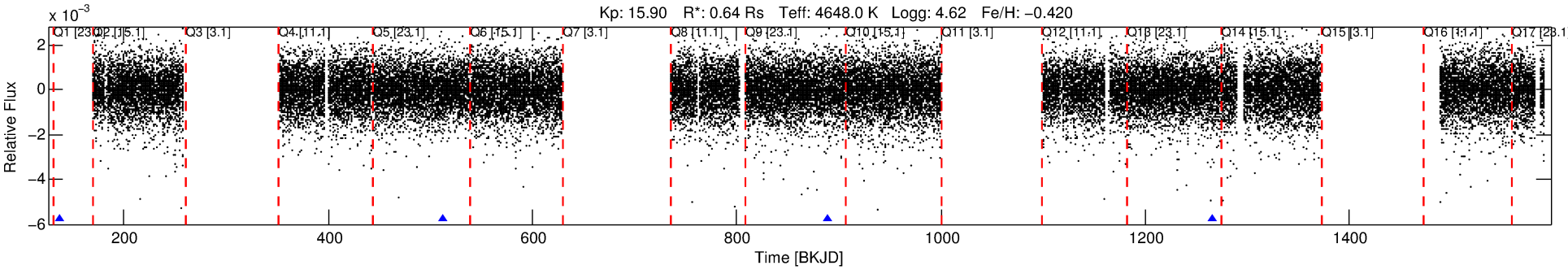
WARNING: THIS DATA IS SIMULATED, NOT OBSERVED

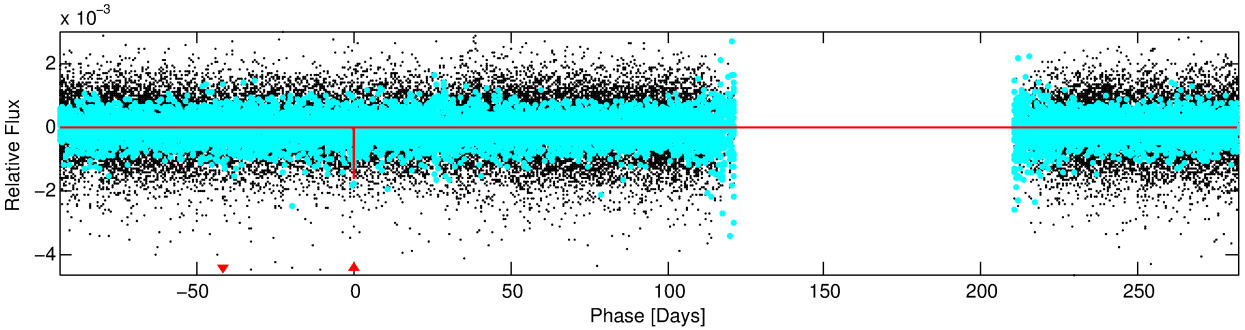
DV One-Page Summary

KIC: 9480140 Candidate: 1 of 1 Period: 375.975 d

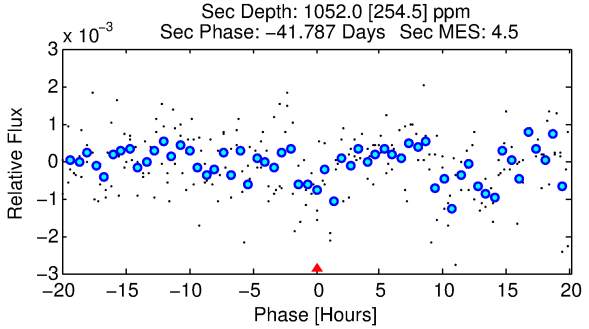
WARNING: THIS DATA IS SIMULATED, NOT OBSERVED

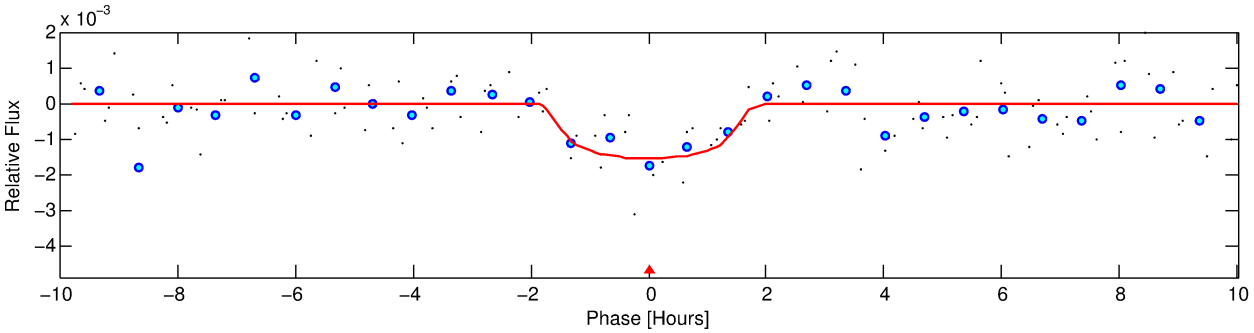
Kp: 15.90 R*: 0.64 Rs Teff: 4648.0 K Logg: 4.62 Fe/H: −0.420



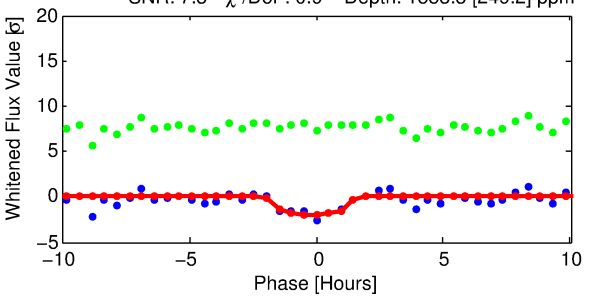


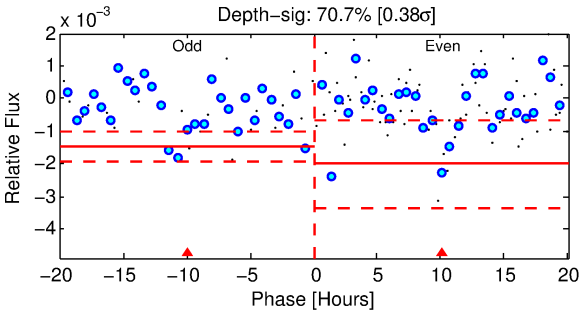
Sec Depth: 1052.0 [254.5] ppm
Sec Phase: −41.787 Days Sec MES: 4.5

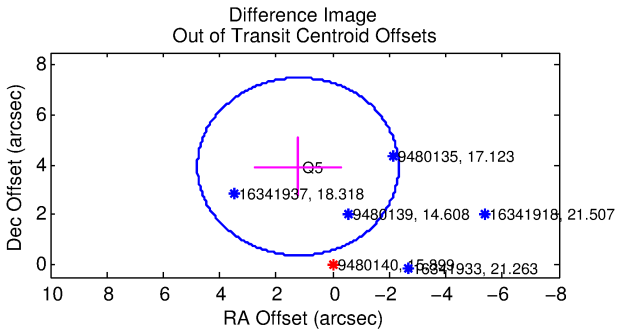




MES: 7.5 Transits: 3
SNR: 7.3 χ^2/DoF: 0.9 Depth: 1553.3 [249.2] ppm







DV Fit Results:

Period = 375.97512 [0.00717] d
Epoch = 137.0697 [0.0136] BKJD
Rp/R* = 0.0373 [0.0778]
a/R* = 728.67 [5008.58]
b = 0.60 [7.51]

Seff = 0.22 [0.04]
Teq = 176 [7] K
Rp = 2.60 [5.43] Re
a = 0.8712 [0.0632] AU

Ag = 65051.33 [272264.88] [0.24σ]
Teffp = 4336 [4538] K [0.92σ]

DV Diagnostic Results:

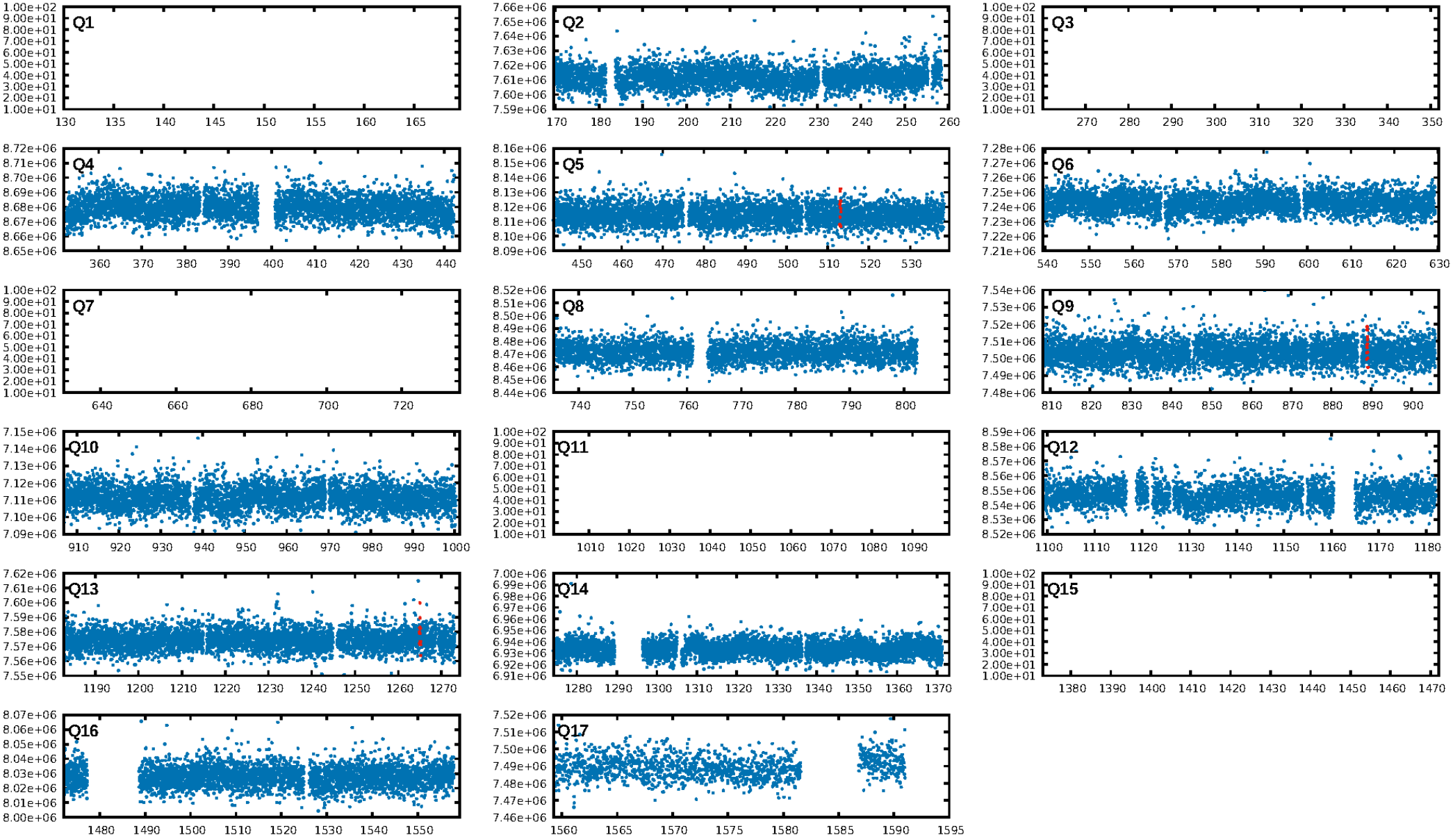
ShortPeriod−sig: N/A
LongPeriod−sig: N/A
ModelChiSquare2−sig: 100.0%
ModelChiSquareGof−sig: 98.5%
Bootstrap−pfa: 3.47e−11
RollingBand−fgt: 1.00 [3/3]
GhostDiagnostic−chr: −9.787

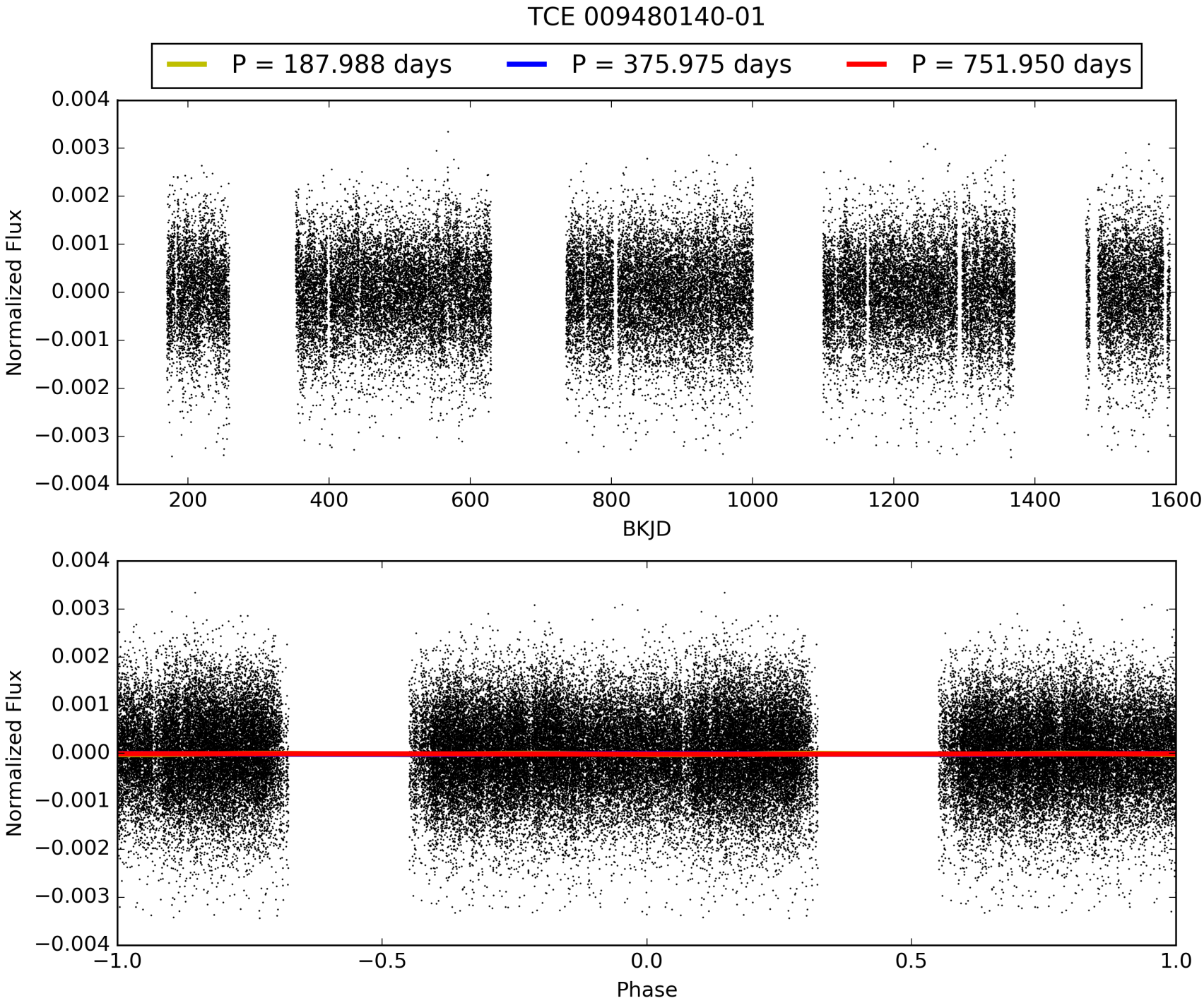
Centroid−sig: 0.0%
Centroid−so: 4.156 arcsec [2.82σ]
OotOffset−rm: 4.111 arcsec [3.47σ]
KicOffset−rm: 4.958 arcsec [4.21σ]
OotOffset−st: 0/0/0/1 [1]
KicOffset−st: 0/0/0/1 [1]
DiffImageQuality−fgm: 0.00 [0/1]
DiffImageOverlap−fno: 1.00 [3/3]

Software Revision: svn+ssh://murzim/repo/soc/branches/integ/ksop−2320@61025 −− Date Generated: 04−Mar−2016 00:40:12 Z

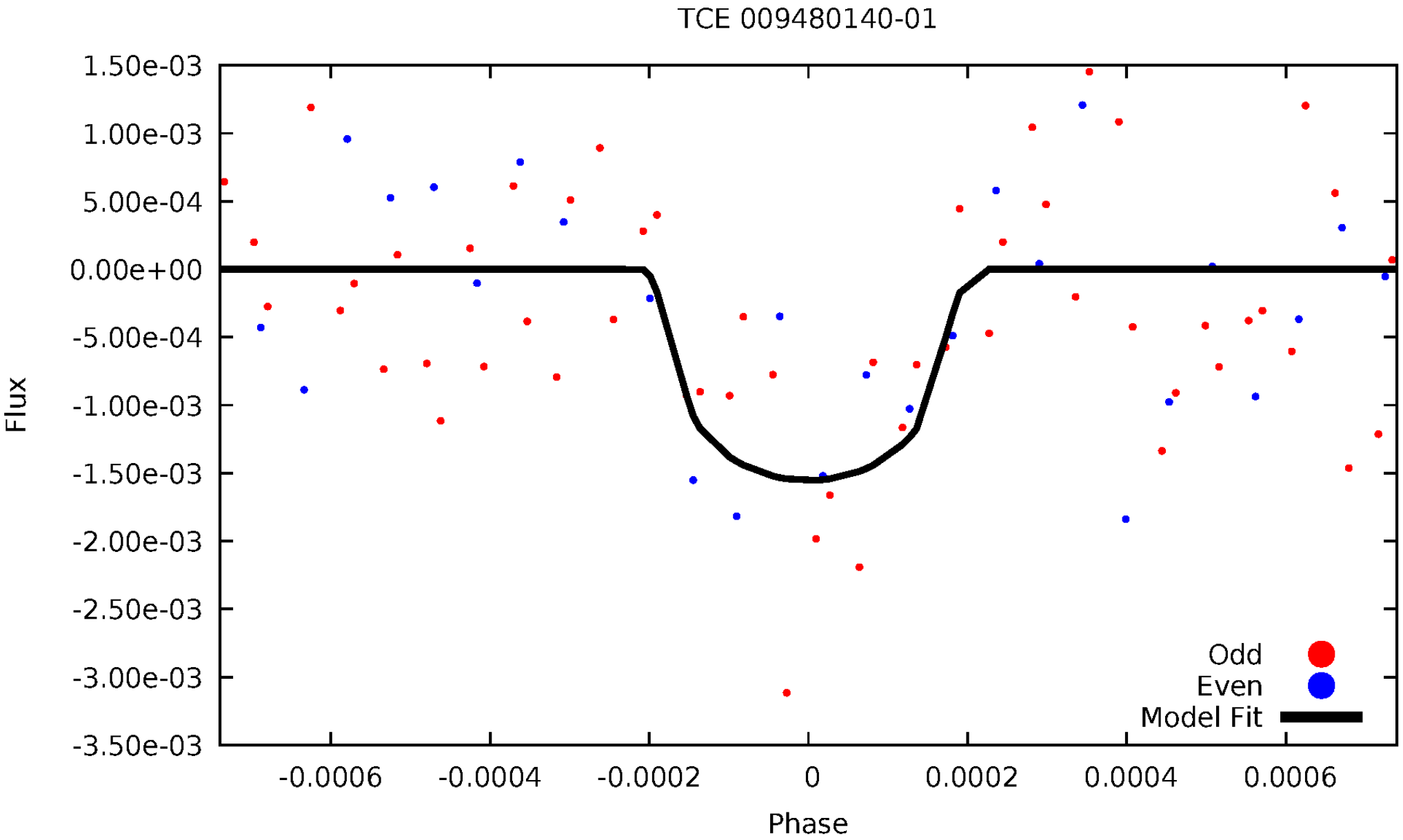
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

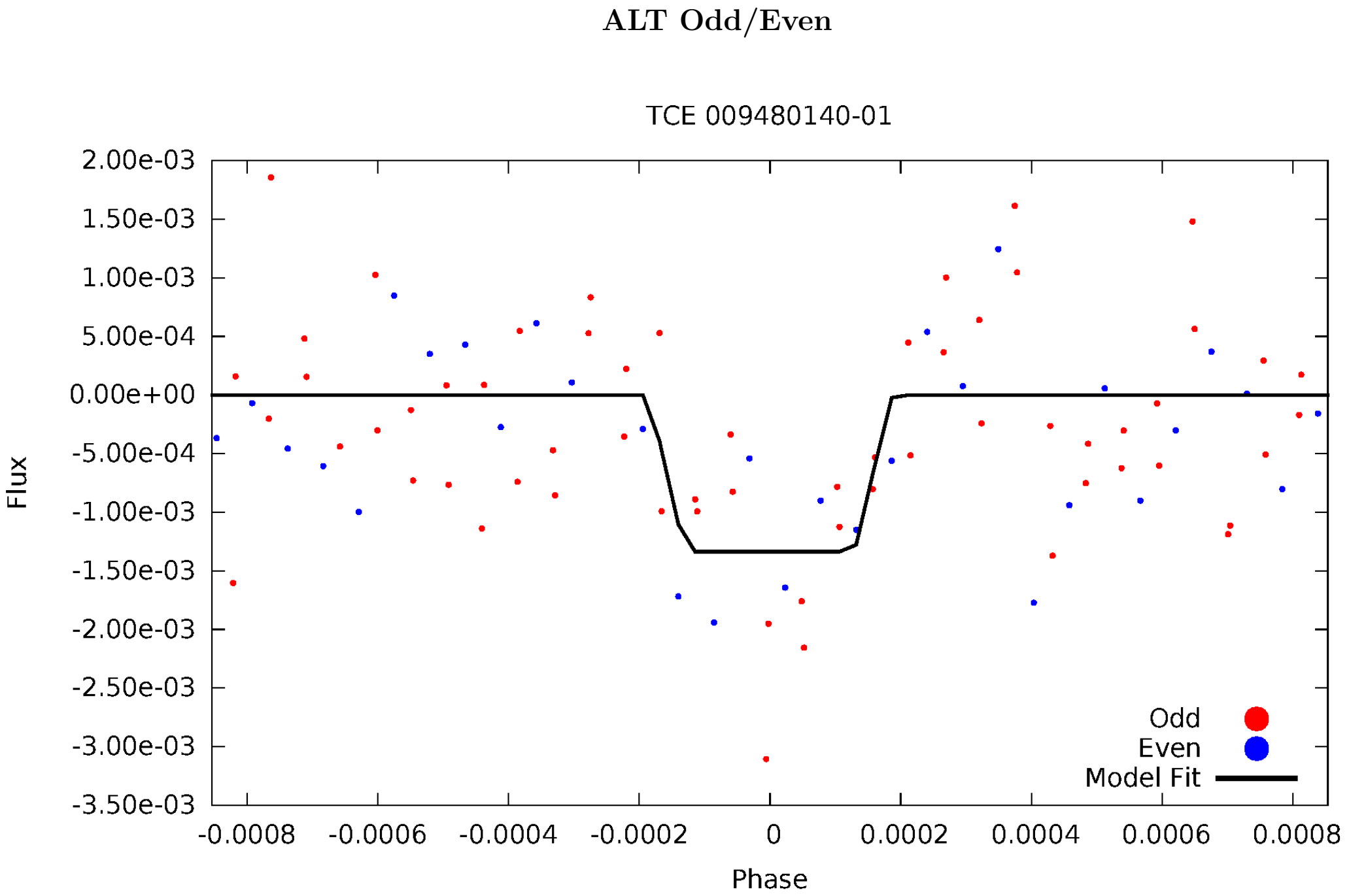
TCE 009480140-01, PDC Light Curves



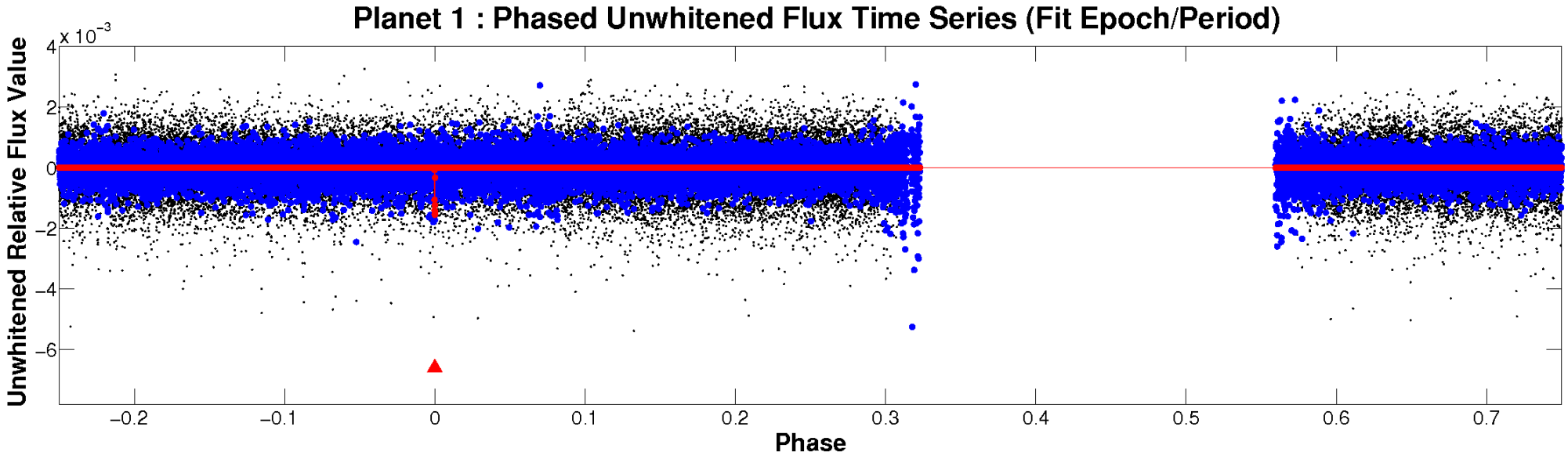

TCE 009480140-01
P = 187.988 days
P = 375.975 days
P = 751.950 days
Normalized Flux
0.004
0.003
0.002
0.001
0.000
−0.001
−0.002
−0.003
−0.004
200
400
600
800
1000
1200
1400
1600
BKJD
Normalized Flux
−1.0
−0.5
0.0
0.5
1.0
Phase

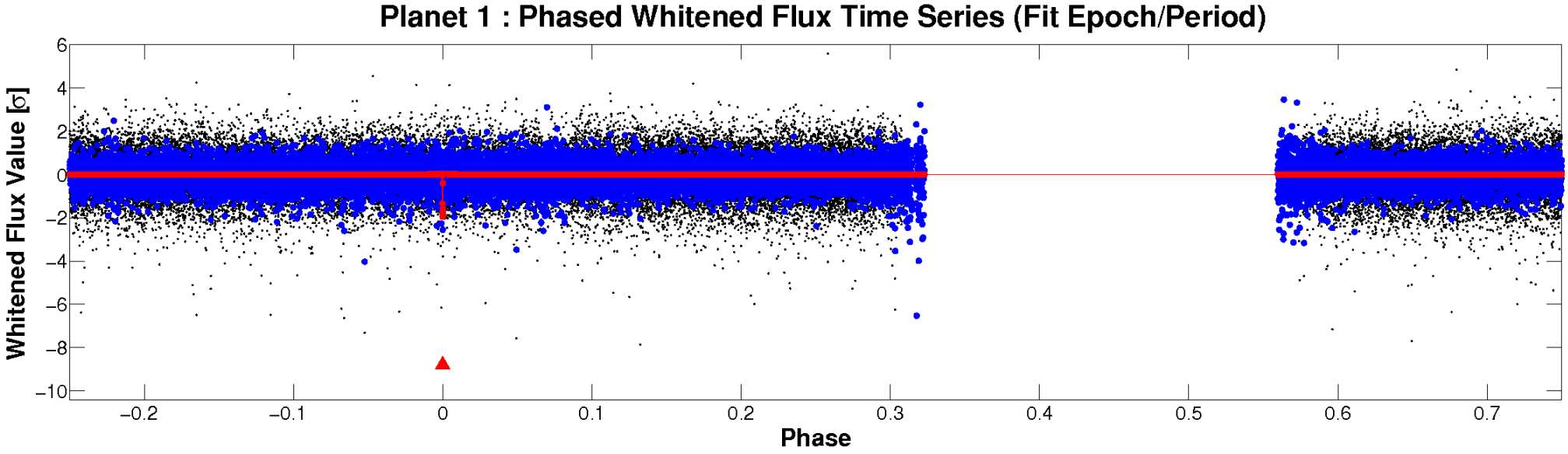
DV Odd/Even


TCE 009480140-01
1.50e-03
1.00e-03
5.00e-04
0.00e+00
-5.00e-04
-1.00e-03
-1.50e-03
-2.00e-03
-2.50e-03
-3.00e-03
-3.50e-03
Flux
-0.0006
-0.0004
-0.0002
0
0.0002
0.0004
0.0006
Phase
Odd
Even
Model Fit


ALT Odd/Even
TCE 009480140-01
2.00e-03
1.50e-03
1.00e-03
5.00e-04
0.00e+00
-5.00e-04
-1.00e-03
-1.50e-03
-2.00e-03
-2.50e-03
-3.00e-03
-3.50e-03
Flux
-0.0008
-0.0006
-0.0004
-0.0002
0
0.0002
0.0004
0.0006
0.0008
Phase
Odd
Even
Model Fit

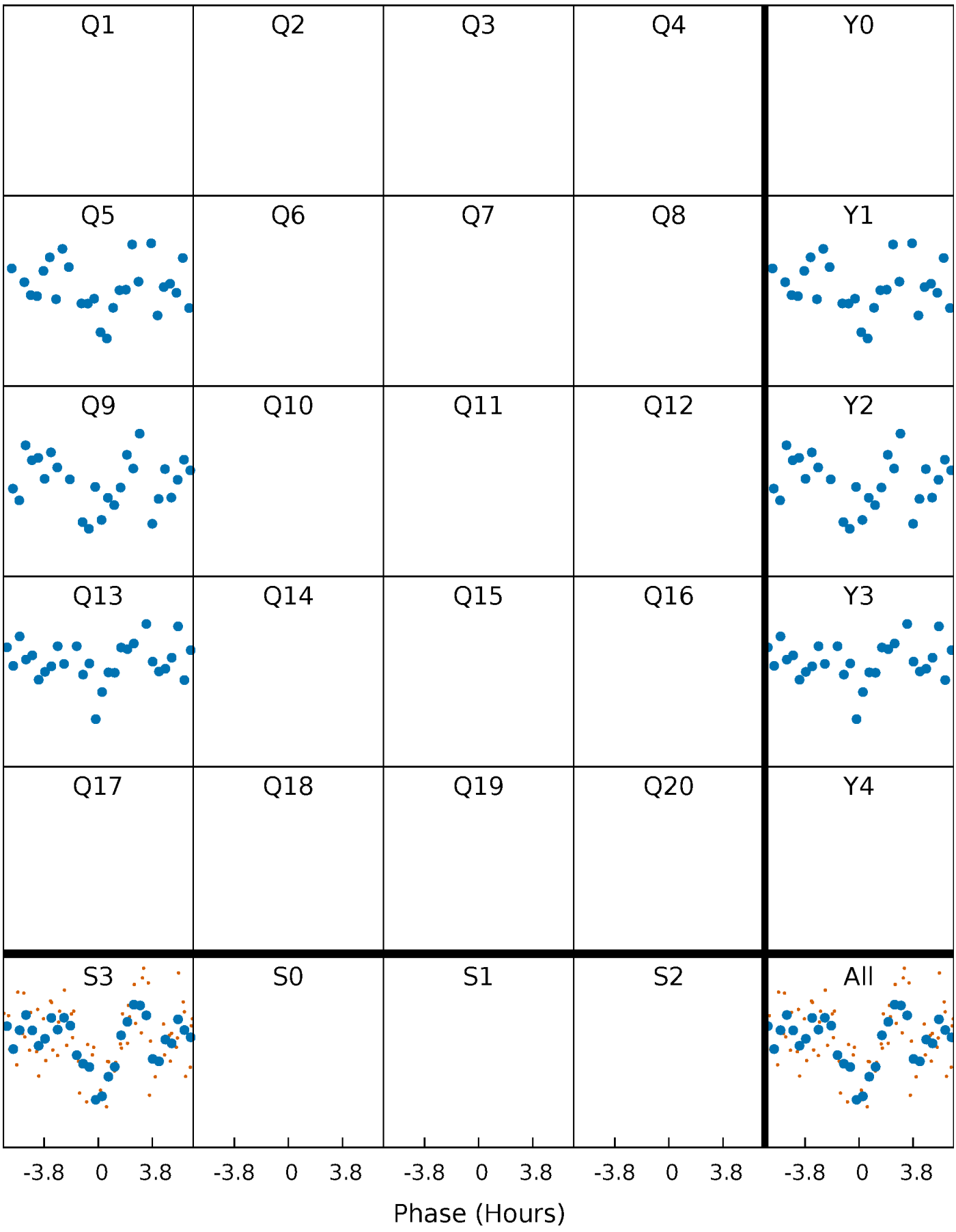
Non-Whitened Vs. Whitened Light Curve





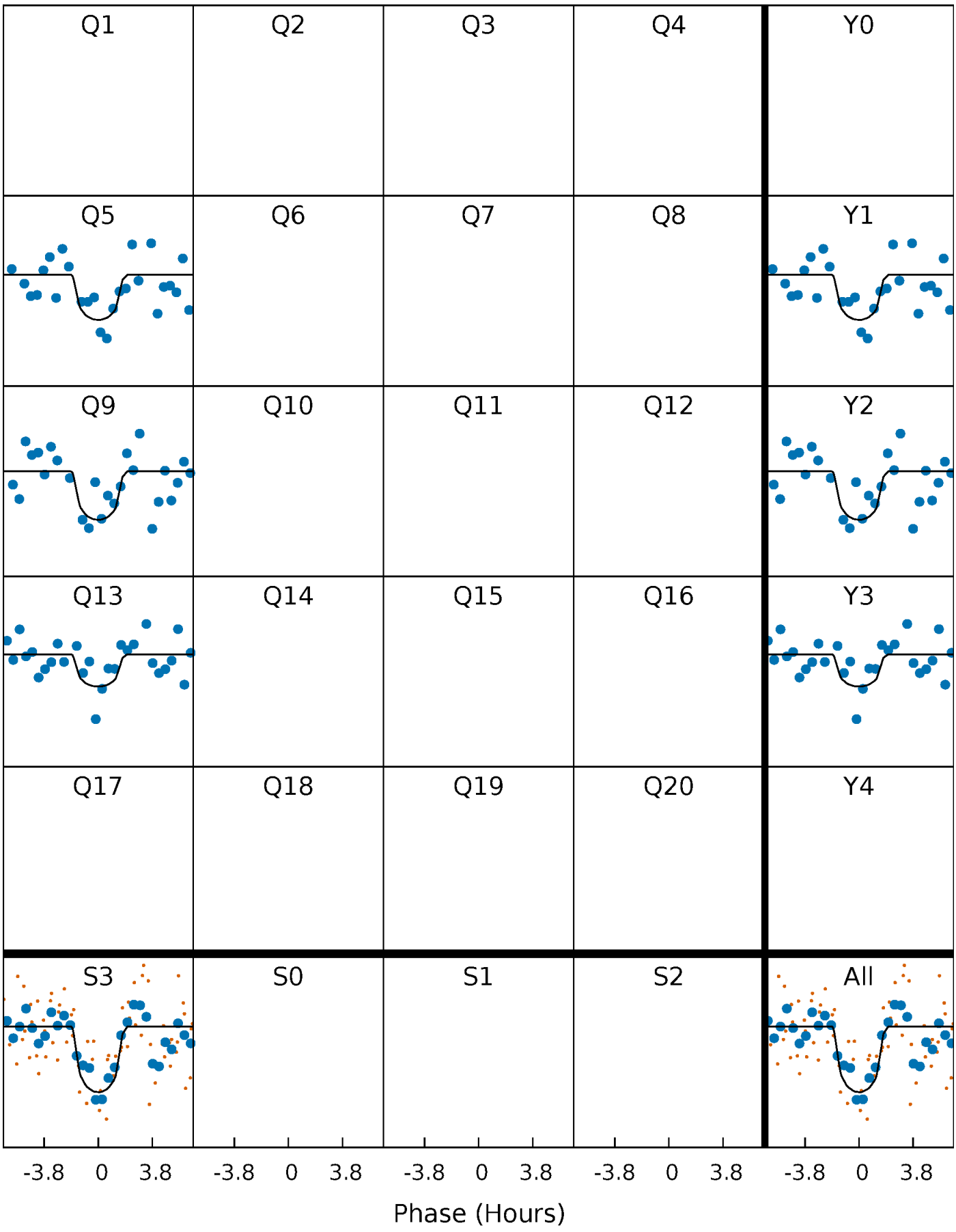
PDC Quarter-Phased Transit Curves

TCE 009480140-01 P=375.975123 Days T_0=137.069677 (BKJD)



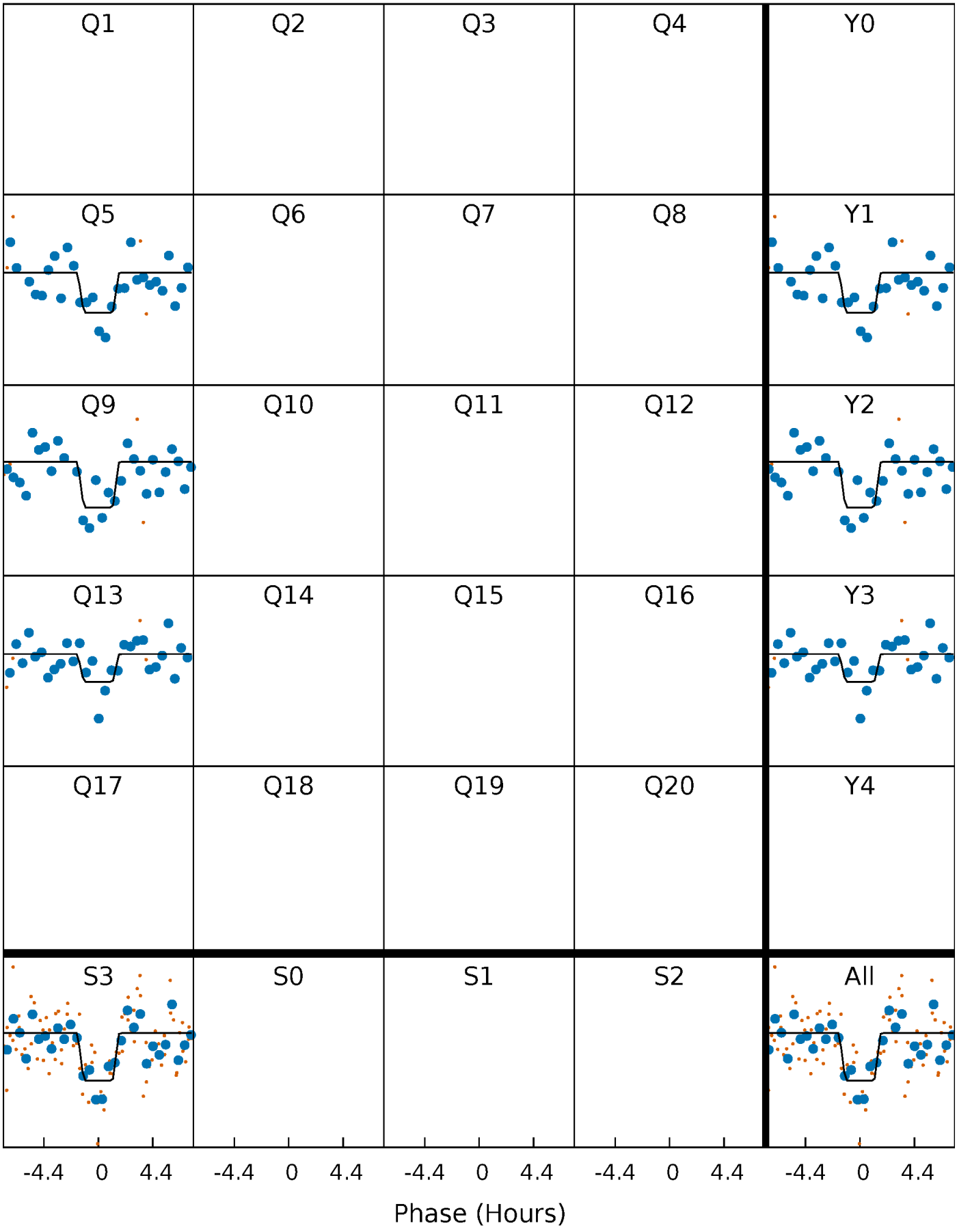
DV Quarter-Phased Transit Curves

TCE 009480140-01 P=375.975123 Days T_0=137.069677 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

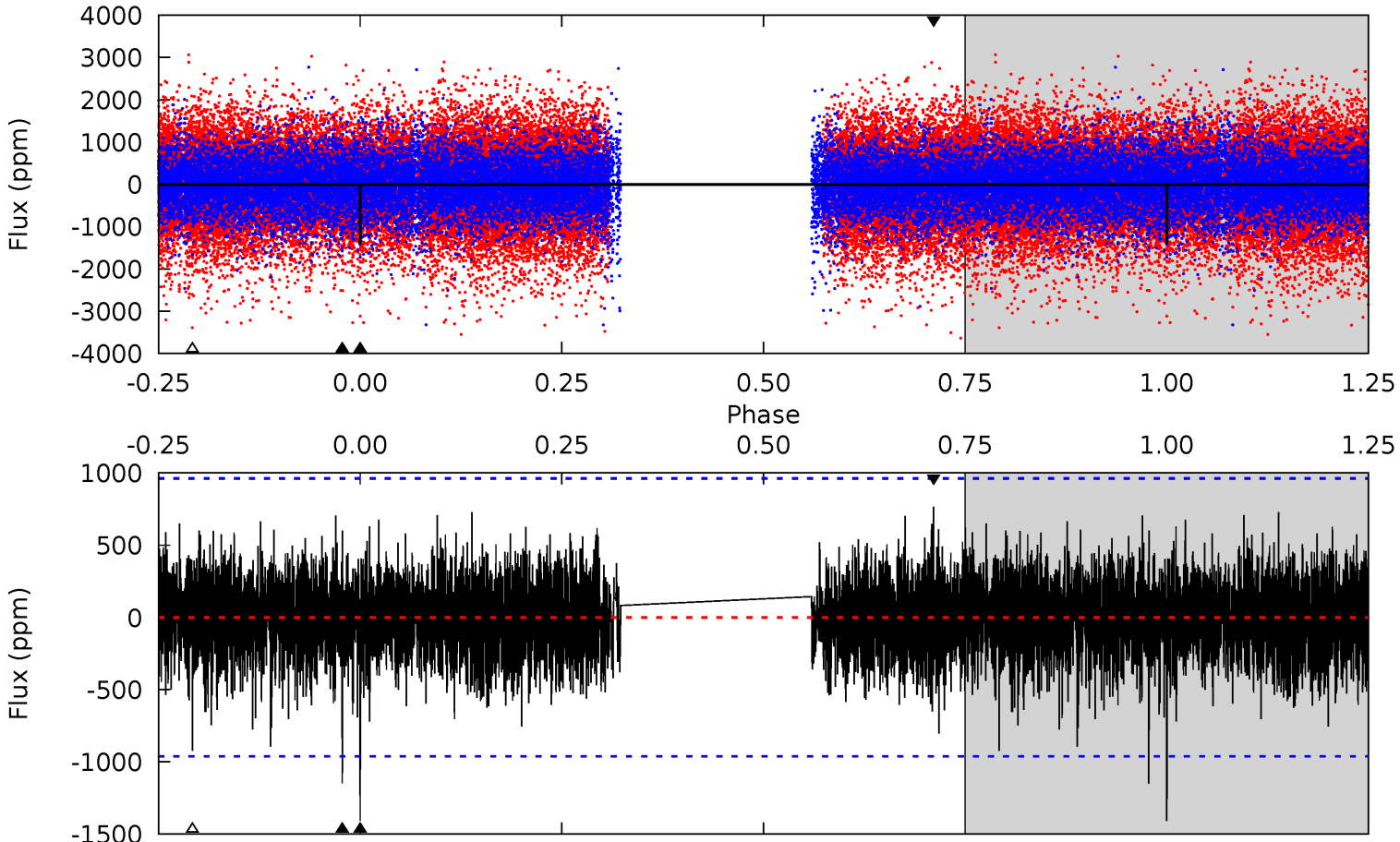
TCE 009480140-01 P=375.968789 Days T_0=137.080601 (BKJD)

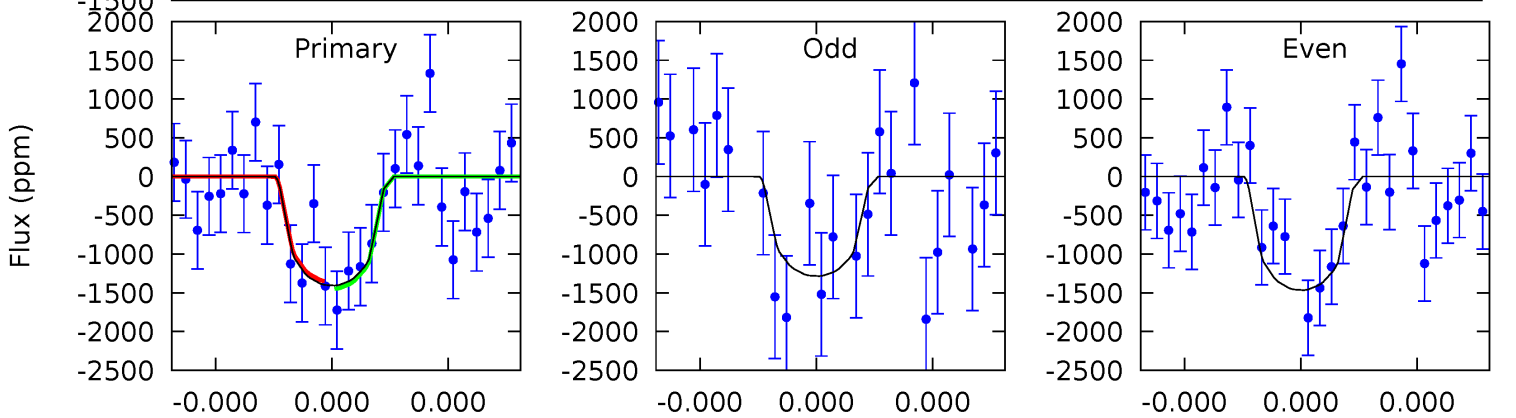


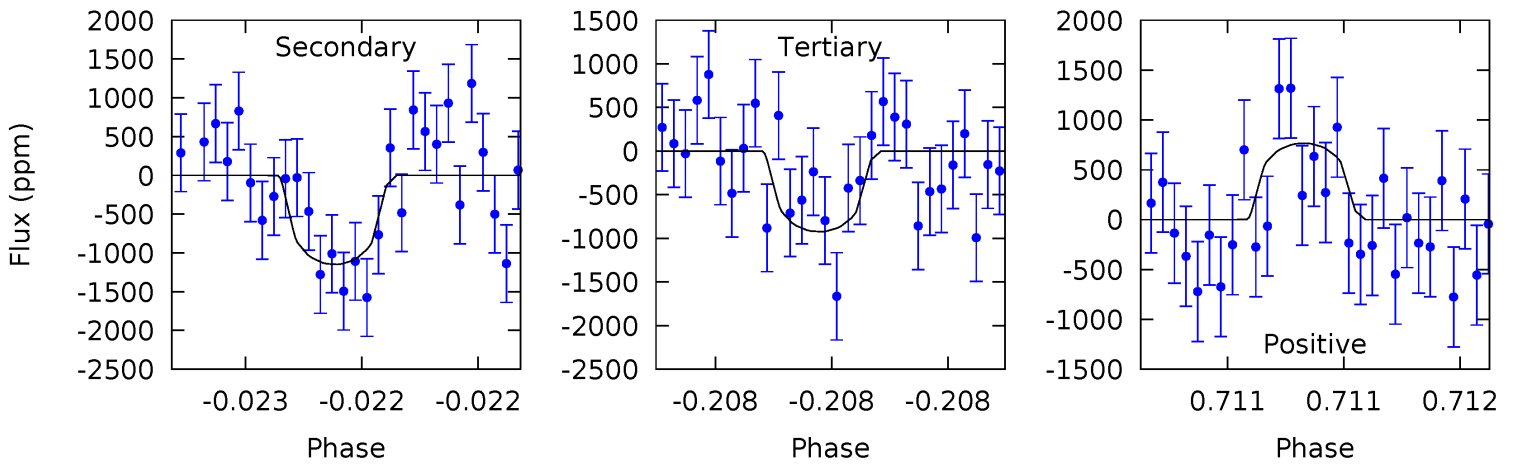
DV Model-Shift Uniqueness Test

009480140-01, P = 375.975123 Days, E = 137.069677 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.19	6.69	5.38	4.46	5.60	3.52	1.23	2.81	3.73	1.31	2.23	0.49	1.00	0.35	0.29



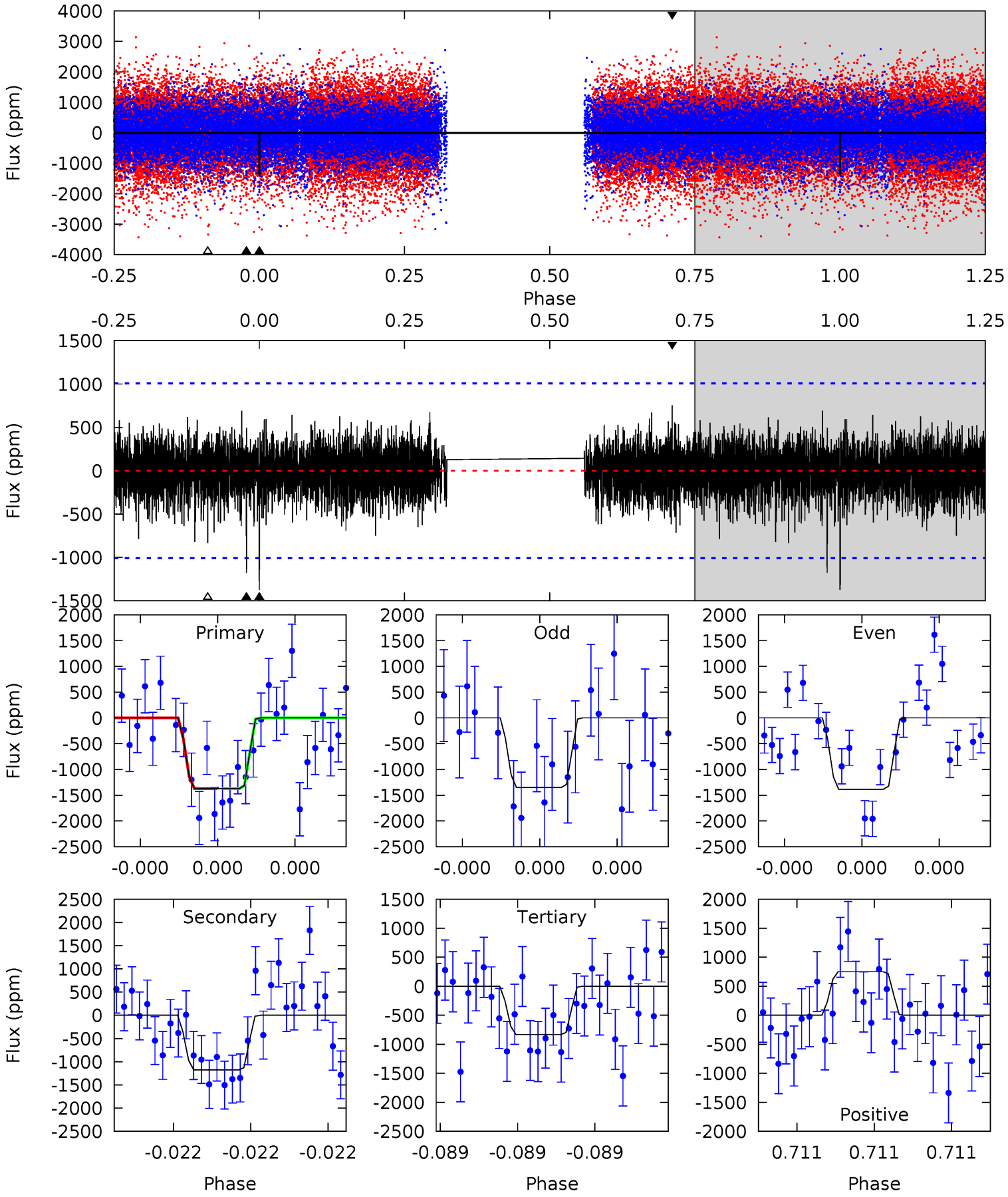




Alt Model-Shift Uniqueness Test

009480140-01, P = 375.968789 Days, E = 137.080601 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.65	6.57	4.65	4.19	5.62	3.55	1.10	3.00	3.45	1.93	2.38	0.09	1.02	0.35	0.01



Stellar Parameters For KIC 009480140

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	4648^{+139}_{-139}	$4.622^{+0.054}_{-0.032}$	$-0.420^{+0.350}_{-0.300}$	$0.639^{+0.057}_{-0.057}$	$0.624^{+0.080}_{-0.040}$	$3.366^{+0.769}_{-0.431}$
	+3%/-3%	+1%/-1%	+83%/-71%	+9%/-9%	+13%/-6%	+23%/-13%
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 009480140-01 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1149±172	$4.86^{+4.53}_{-3.21}$	245^{+8}_{-9}	3558^{+1852}_{-612}	$20204^{+163135}_{-14820}$
Alt.	-1179±179	$4.76^{+4.33}_{-3.22}$	244^{+9}_{-9}	3603^{+2029}_{-617}	$21408^{+186739}_{-15293}$

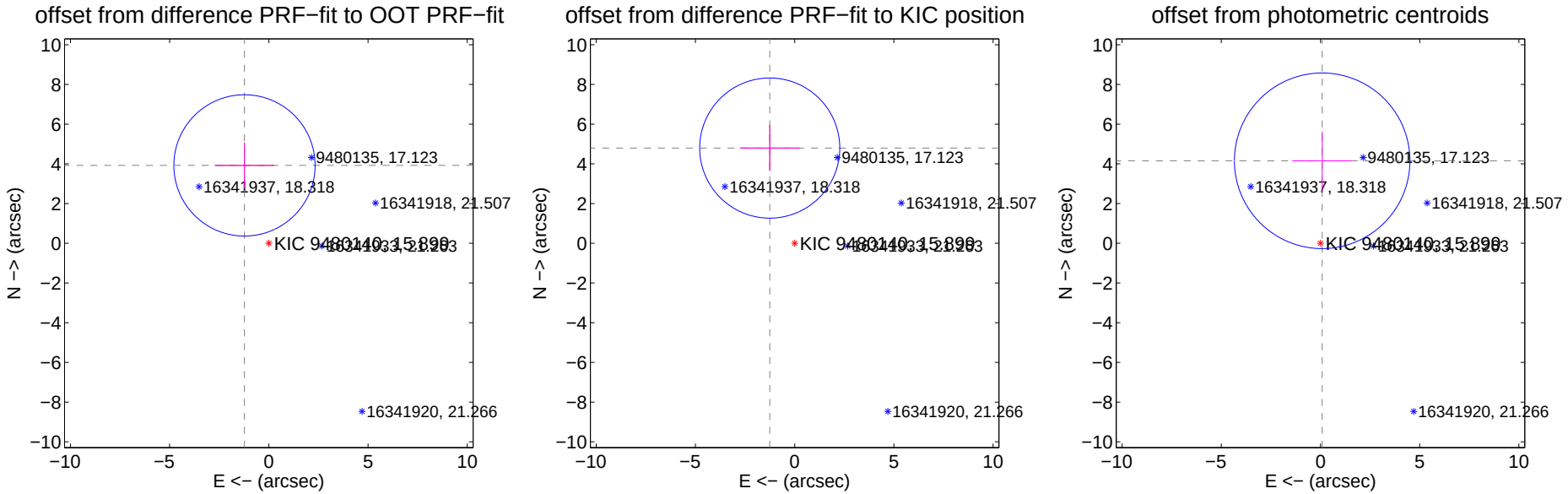
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

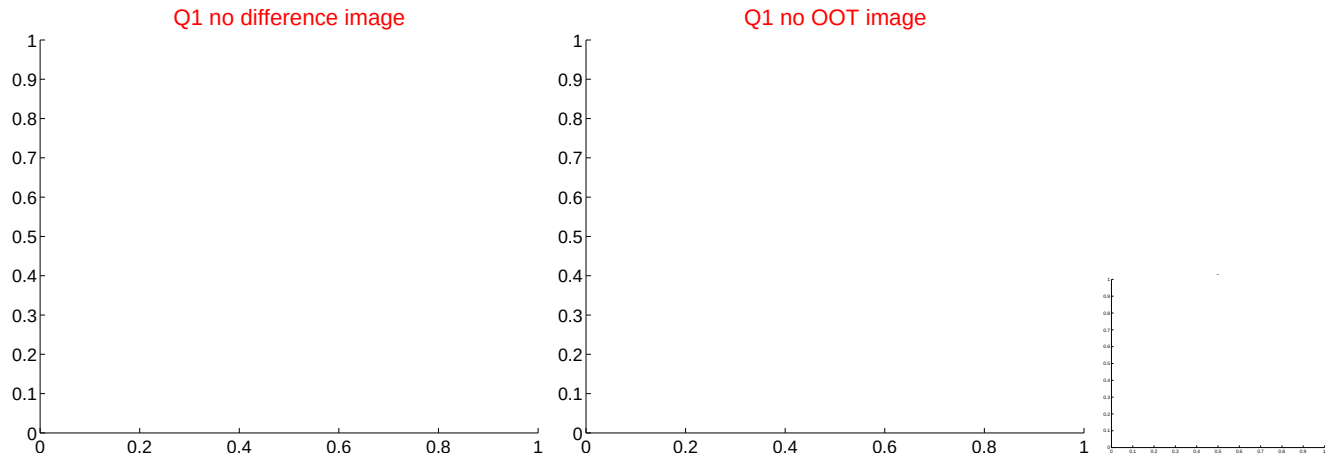
Supplemental centroid analysis for 009480140-01. Kepler magnitude: 15.90. Transit SNR 7.30
There are 0 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.87 arcsec

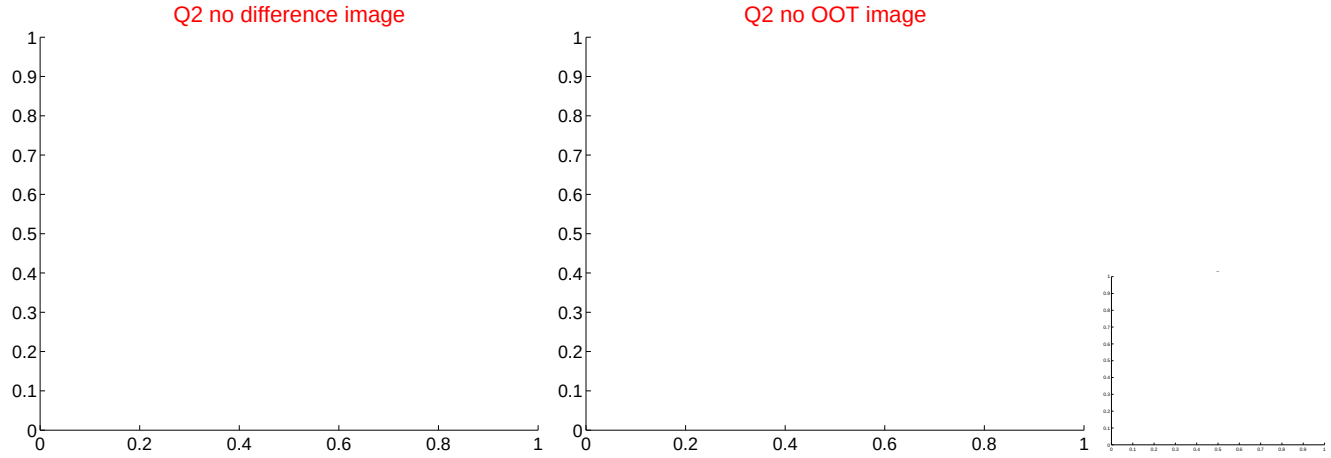
	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.111 ± 1.186	3.47	1.228 ± 1.496	3.923 ± 1.151
PRF-fit source offset from KIC position	4.958 ± 1.177	4.21	1.257 ± 1.496	4.796 ± 1.151
photometric centroid source offset	4.16 ± 1.47	2.82	-0.09 ± 1.51	4.15 ± 1.47

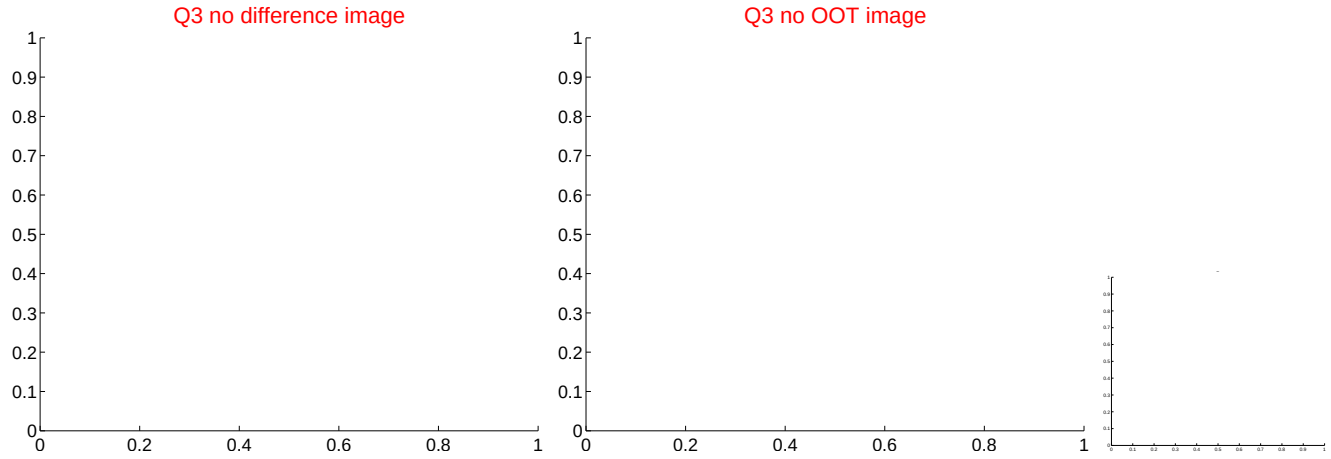


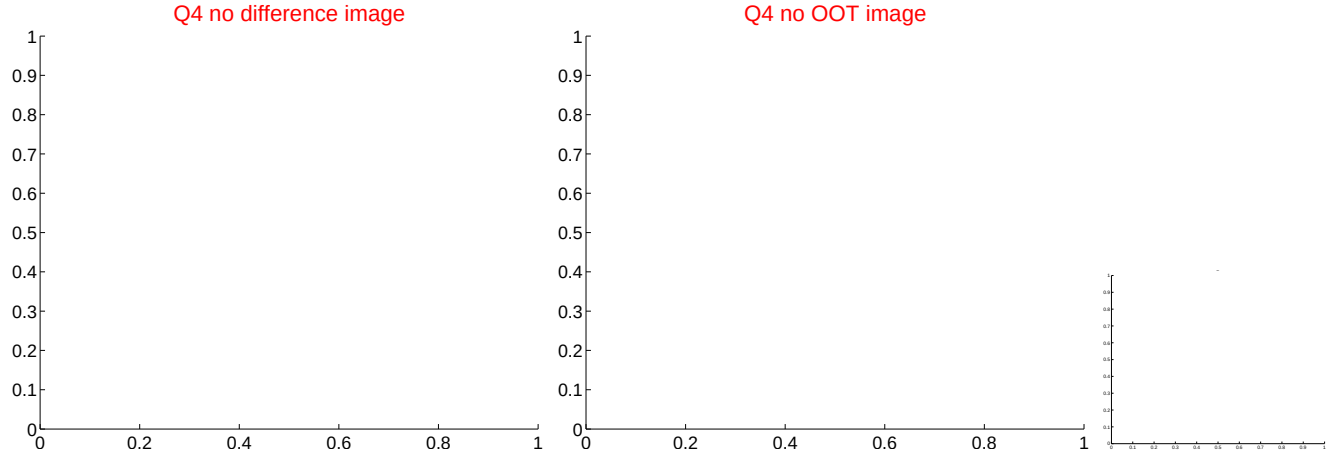
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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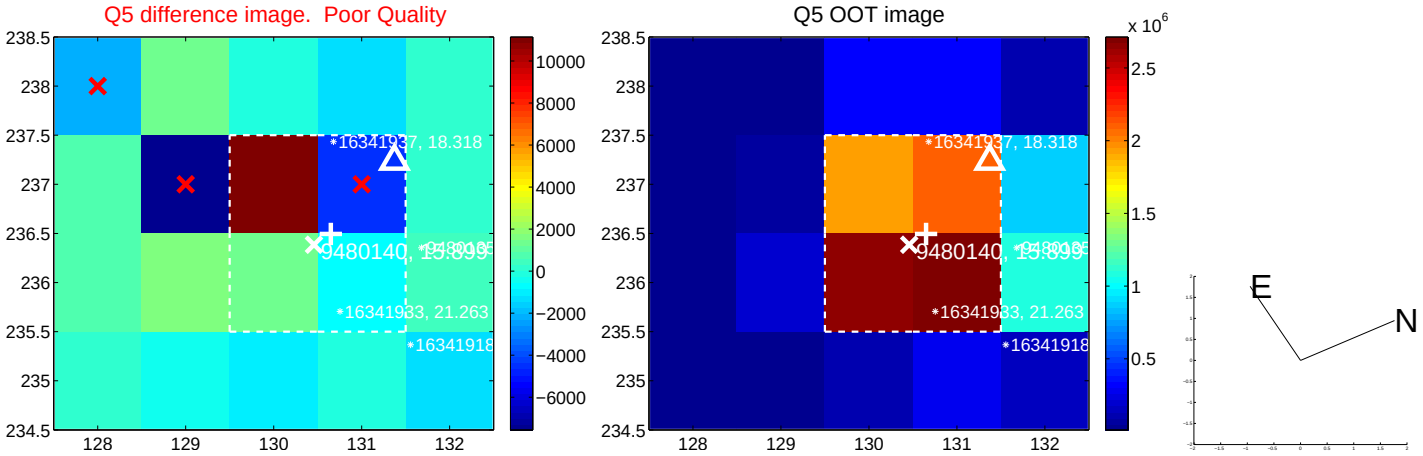
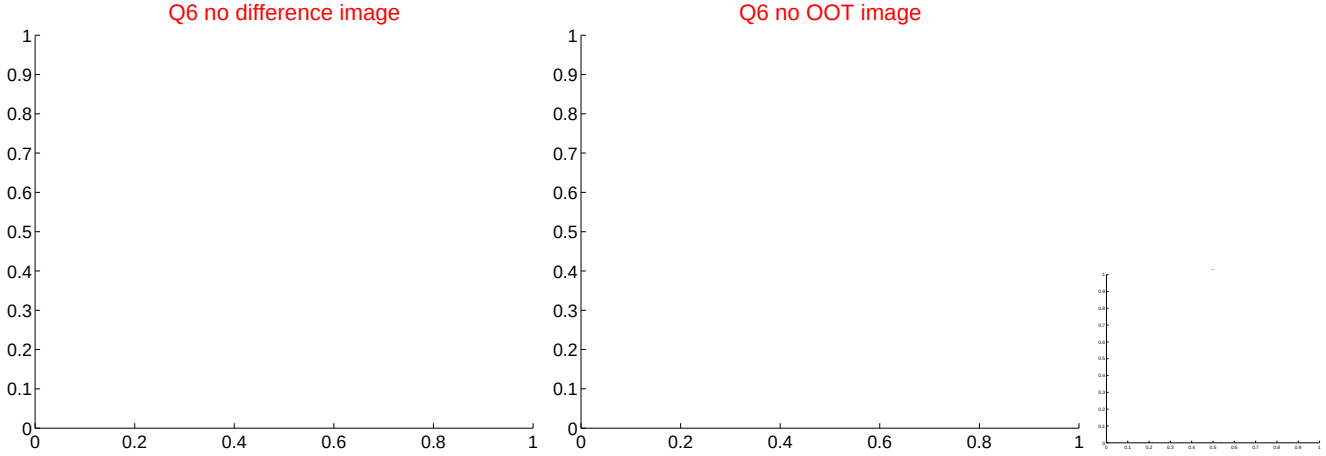
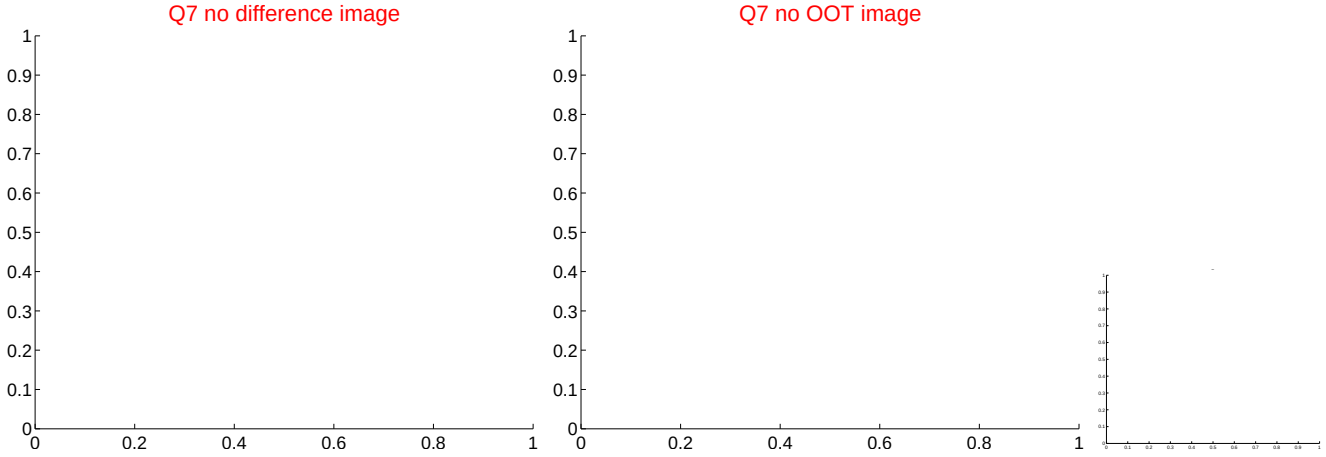
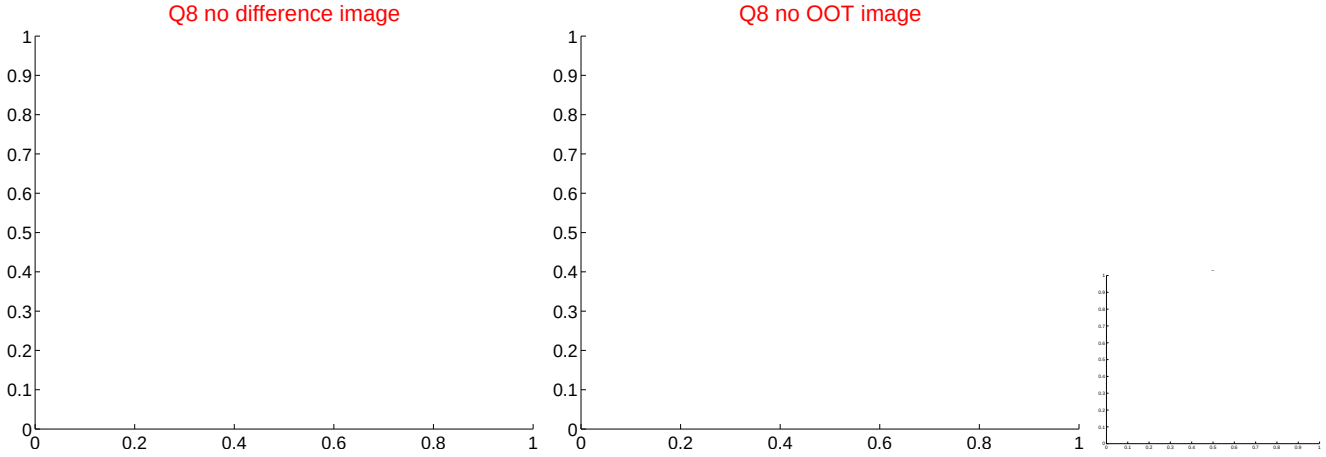
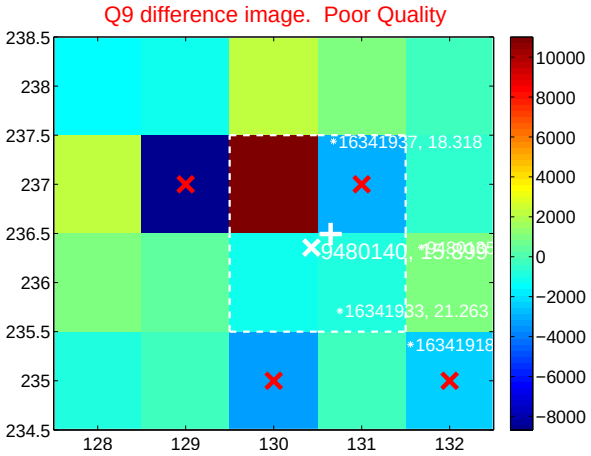


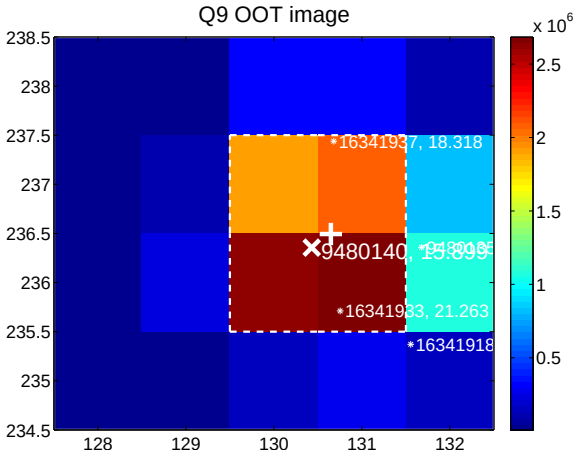


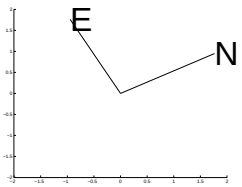


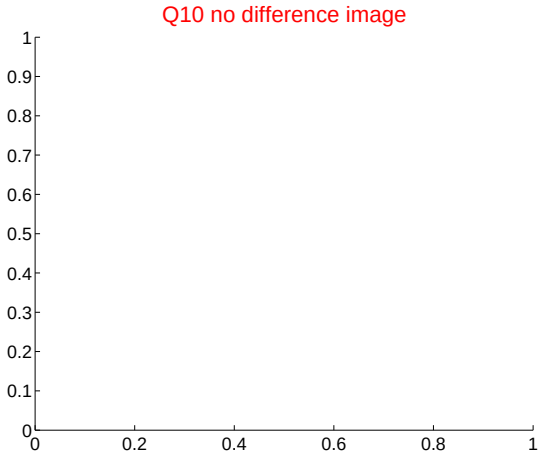


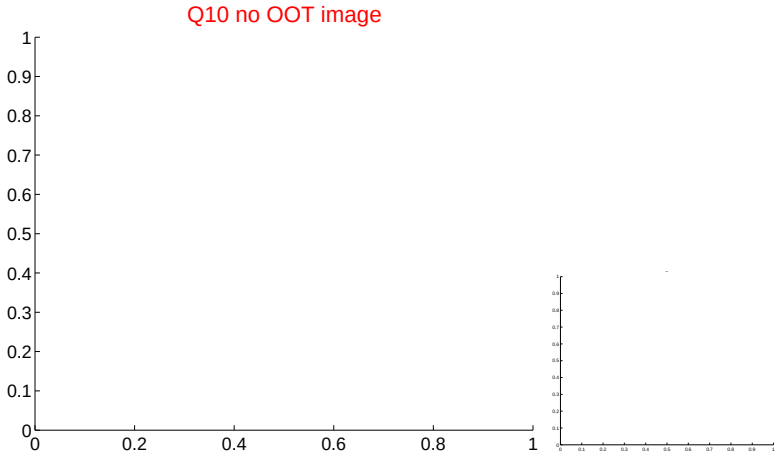
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

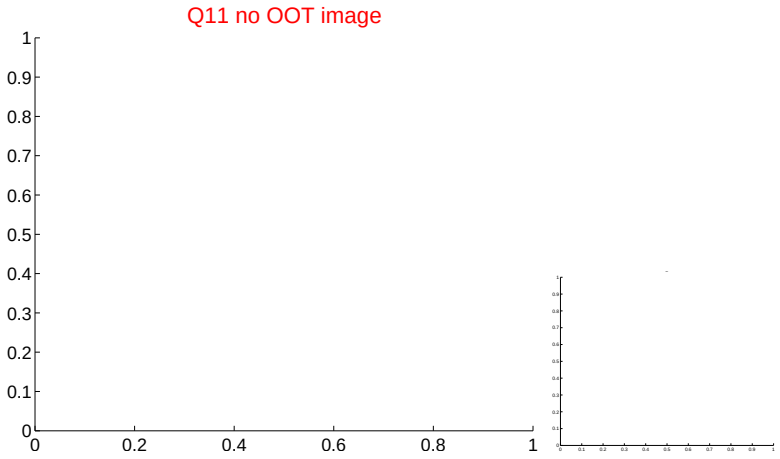


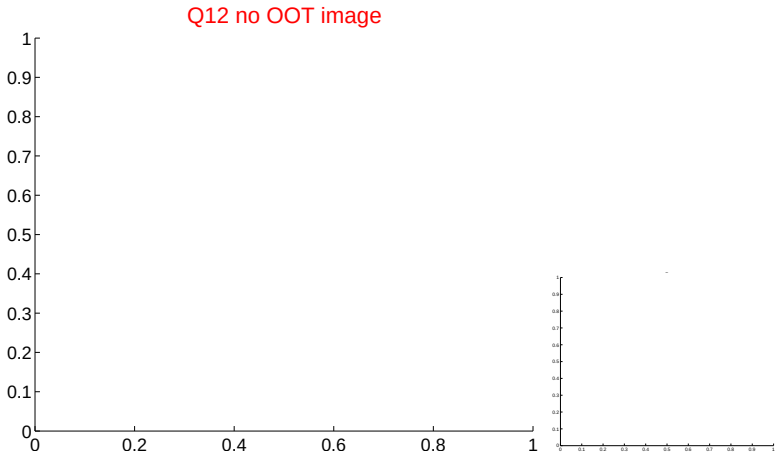




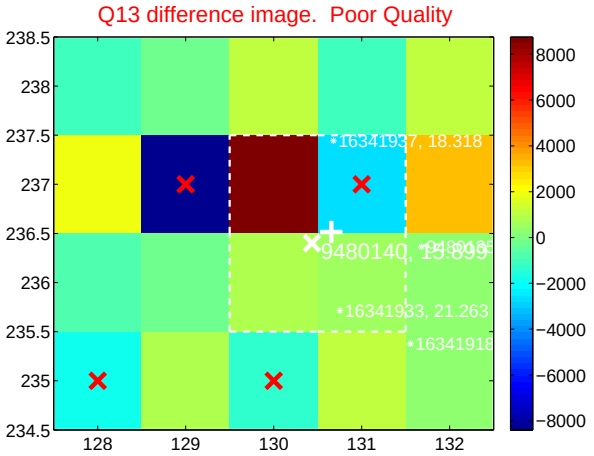


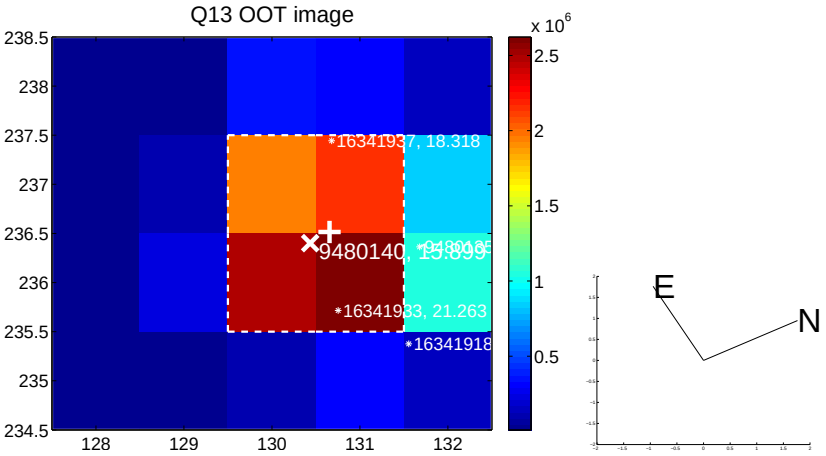


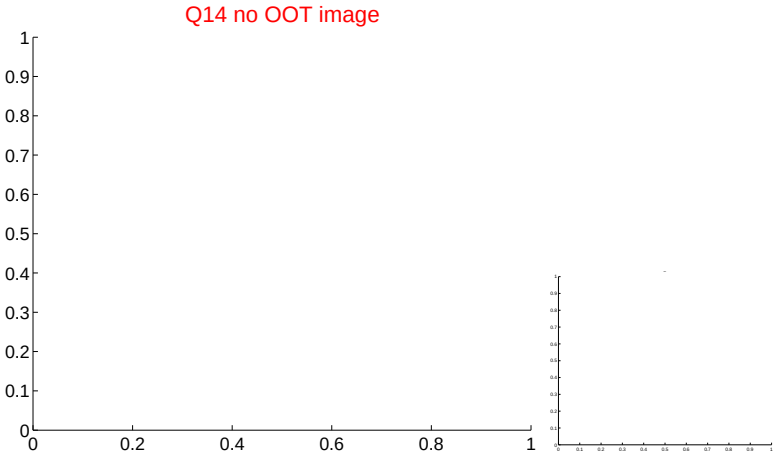


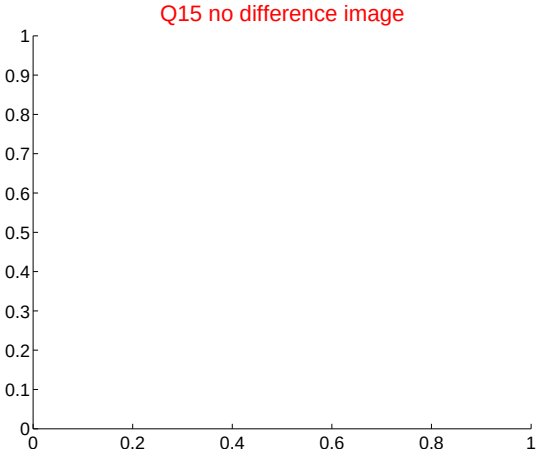


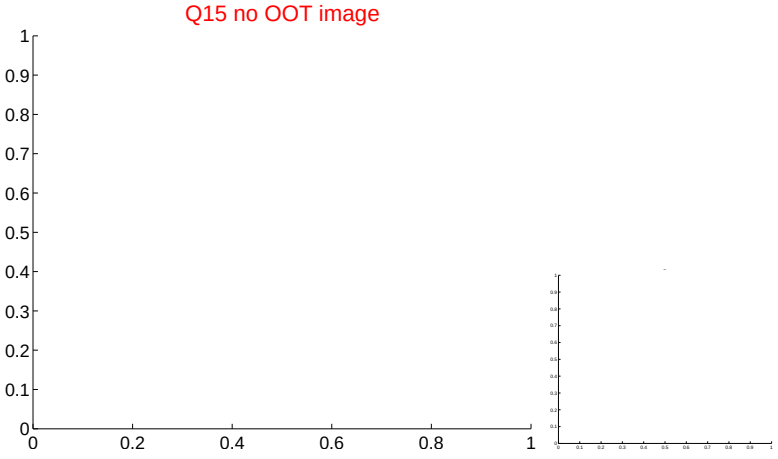
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

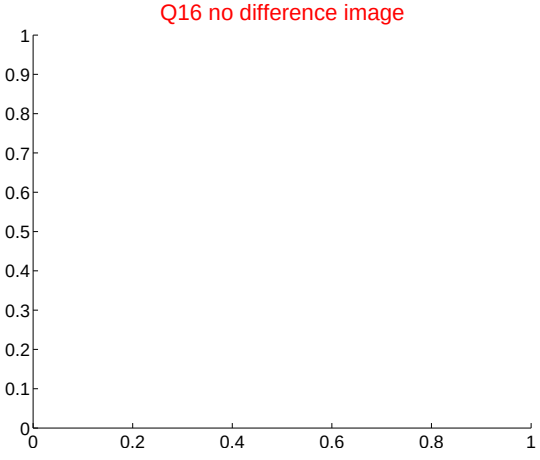


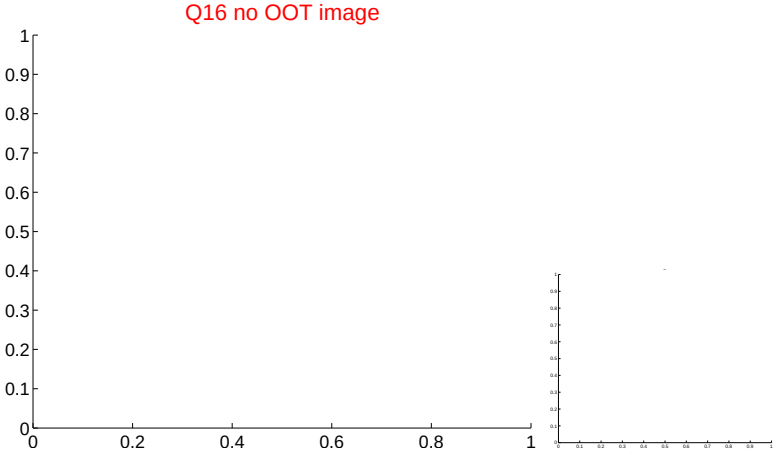




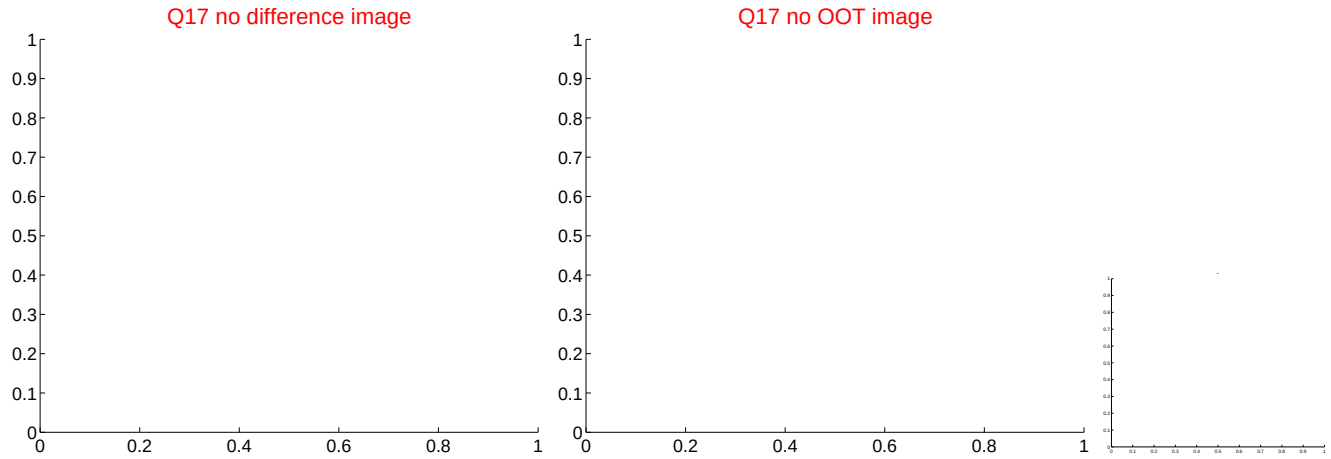


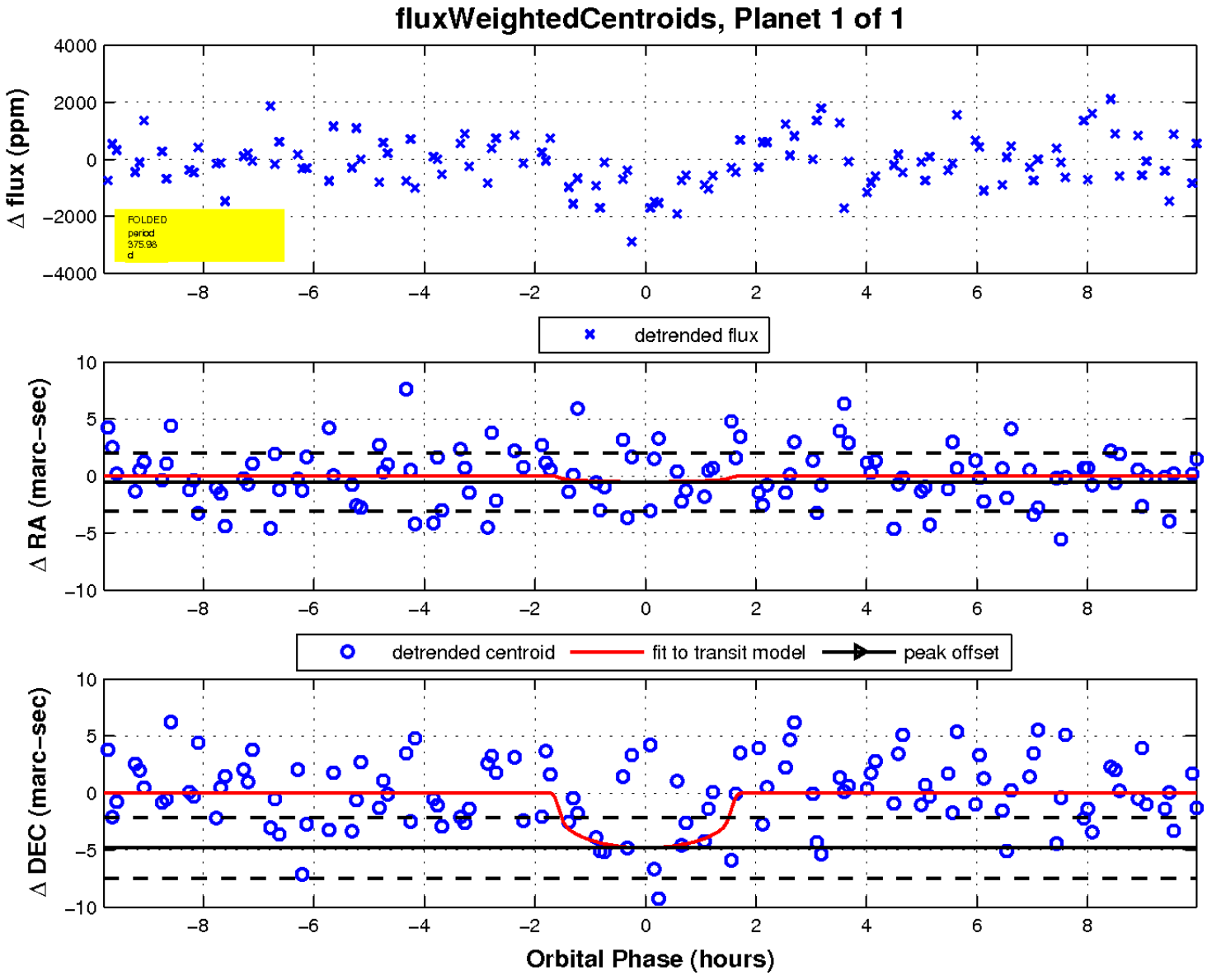




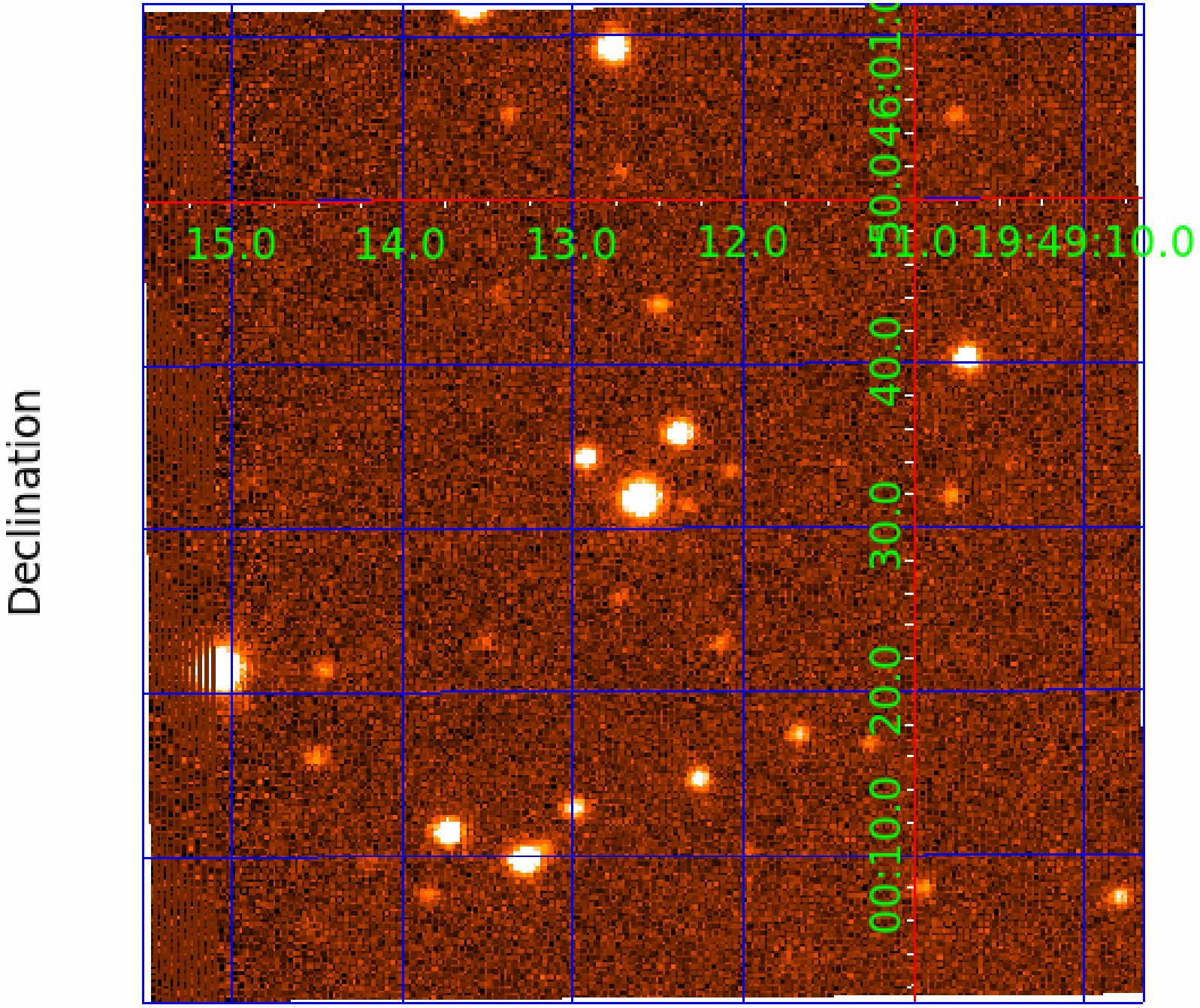


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.





UKIRT Image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