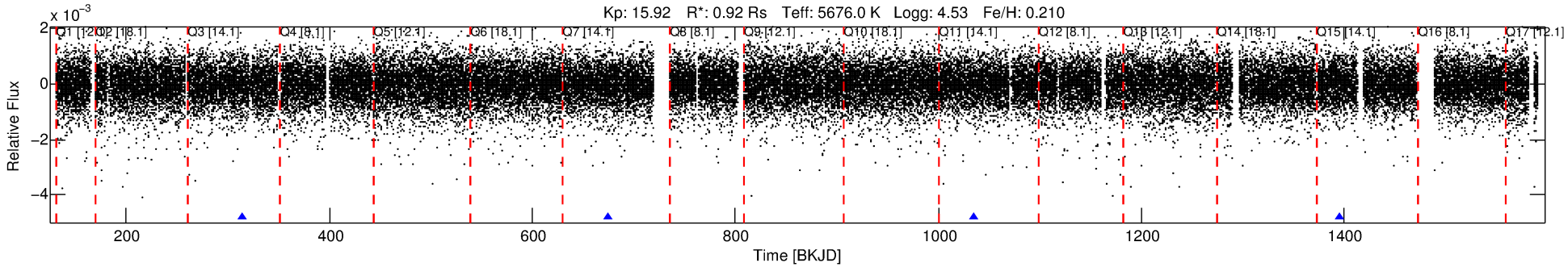
WARNING: THIS DATA IS SIMULATED, NOT OBSERVED

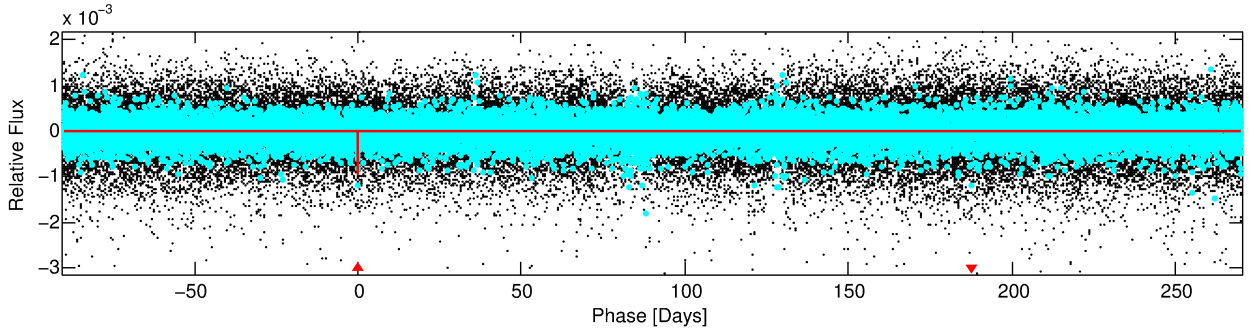
DV One-Page Summary

KIC: 9583738 Candidate: 1 of 1 Period: 360.318 d

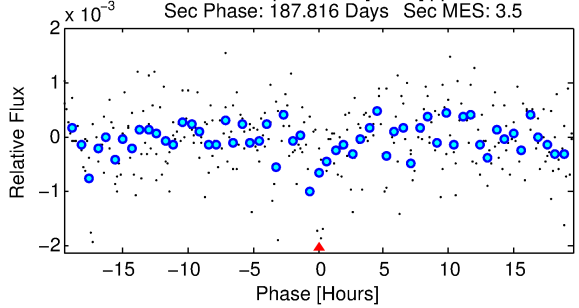
WARNING: THIS DATA IS SIMULATED, NOT OBSERVED

Kp: 15.92 R*: 0.92 Rs Teff: 5676.0 K Logg: 4.53 Fe/H: 0.210

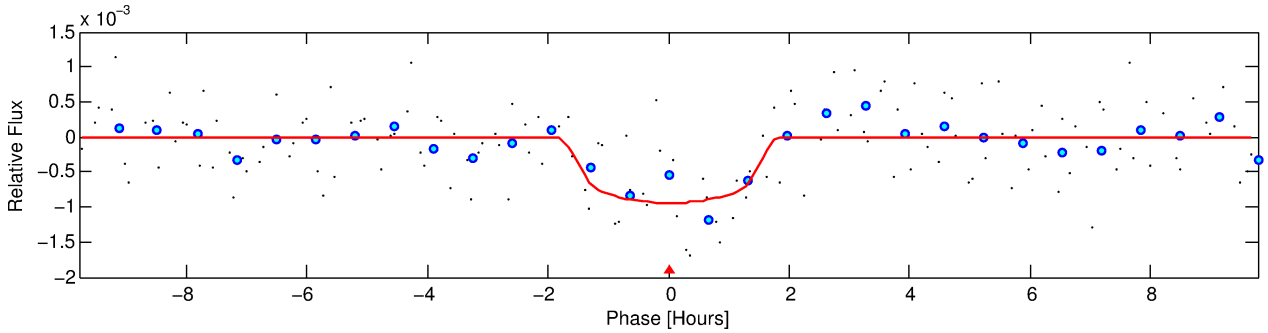


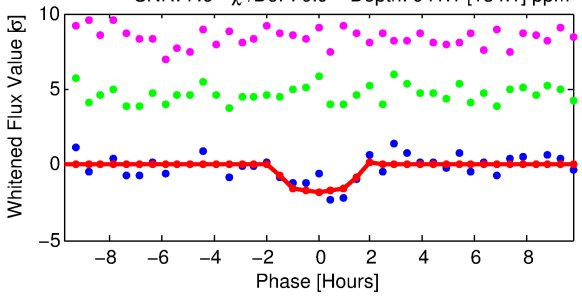


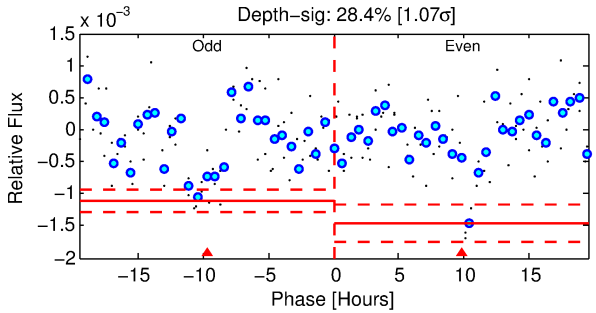
Sec Depth: 286.9 [140.0] ppm
Sec Phase: 187.816 Days Sec MES: 3.5

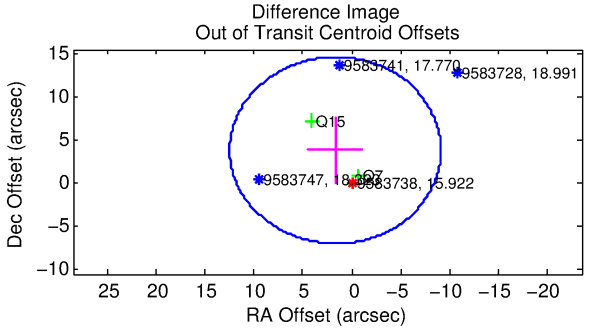


MES: 7.3 Transits: 4
SNR: 7.6 χ^2/DoF: 0.9 Depth: 941.1 [134.1] ppm









DV Fit Results:

Period = 360.31768 [0.00553] d
Epoch = 314.7334 [0.0097] BKJD
Rp/R* = 0.0297 [0.0578]
a/R* = 663.75 [5297.77]
b = 0.67 [6.77]

Seff = 0.78 [0.28]
Teq = 239 [21] K
Rp = 2.98 [5.83] Re
a = 1.0040 [0.2222] AU

Ag = 17951.97 [70585.16] [0.25σ]
Teffp = 4285 [4200] K [0.96σ]

DV Diagnostic Results:

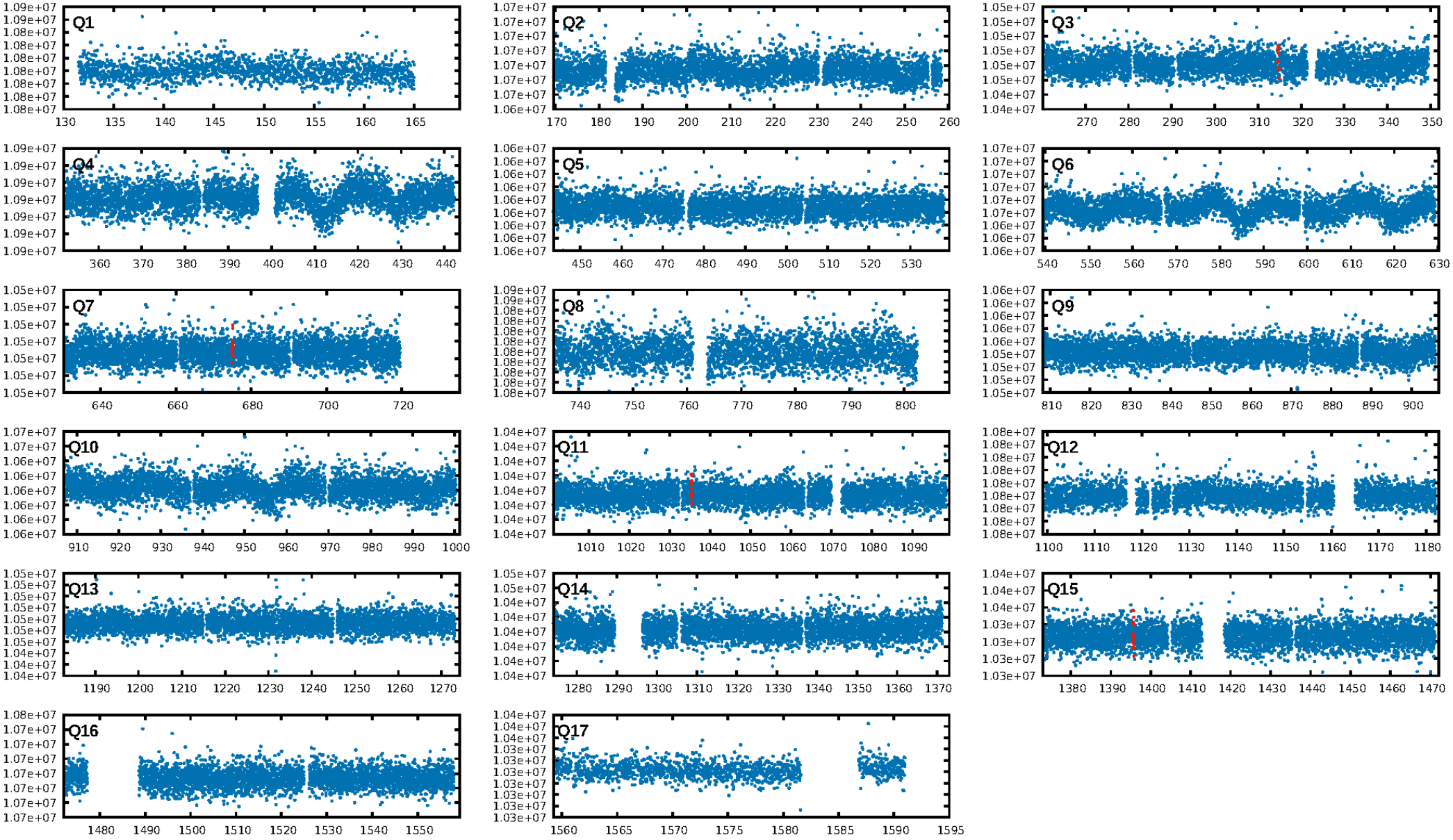
ShortPeriod−sig: N/A
LongPeriod−sig: N/A
ModelChiSquare2−sig: 44.5%
ModelChiSquareGof−sig: 90.1%
Bootstrap−pfa: 2.42e−10
RollingBand−fgt: 1.00 [4/4]
GhostDiagnostic−chr: 67.85

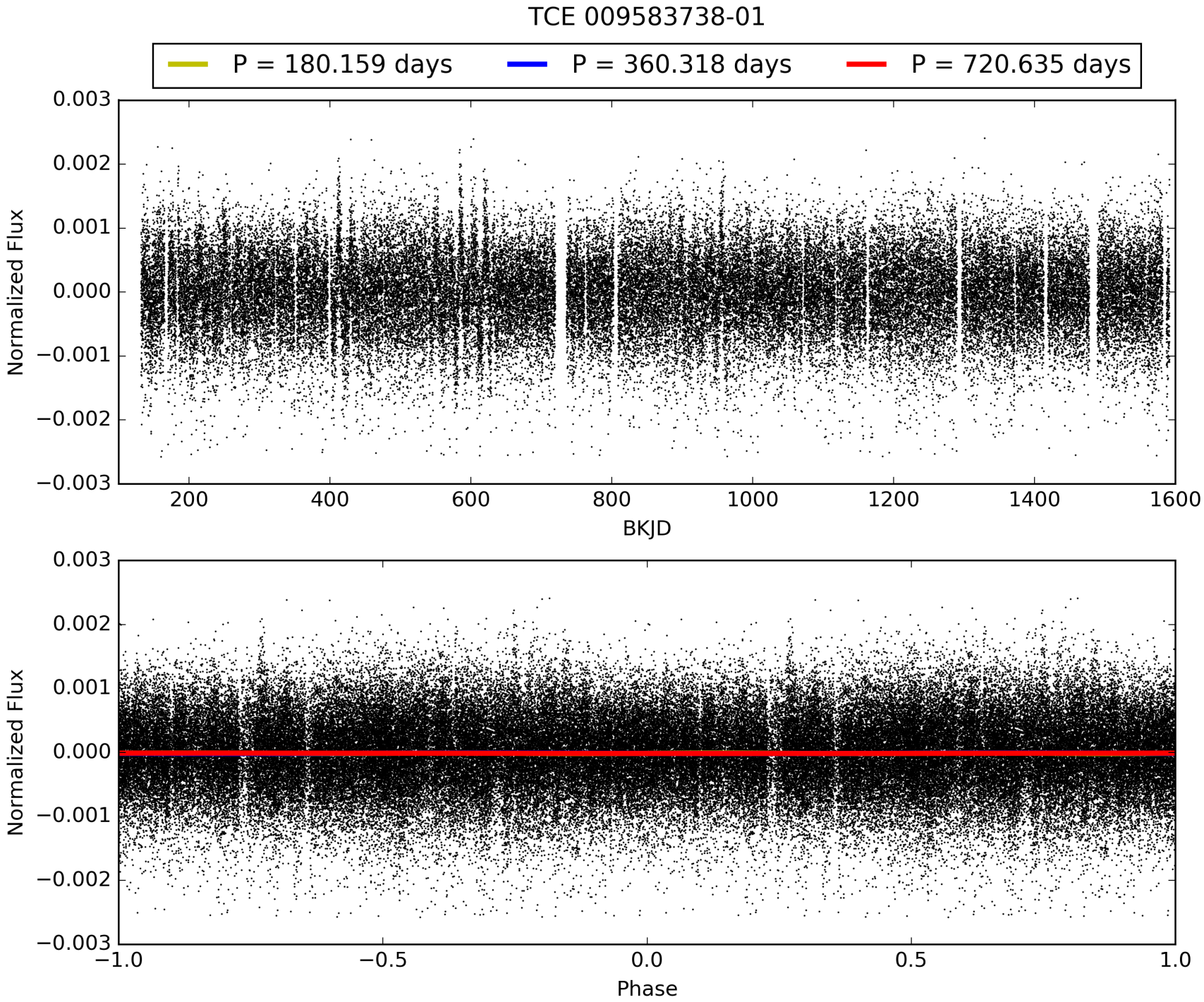
Centroid−sig: 0.6%
Centroid−so: 3.830 arcsec [1.82σ]
OotOffset−rm: 4.168 arcsec [1.16σ]
KicOffset−rm: 4.394 arcsec [1.19σ]
OotOffset−st: 0/2/0/0 [2]
KicOffset−st: 0/2/0/0 [2]
DiffImageQuality−fgm: 0.50 [1/2]
DiffImageOverlap−fno: 1.00 [4/4]

Software Revision: svn+ssh://murzim/repo/soc/branches/integ/ksop−2320@61025 −− Date Generated: 03−Mar−2016 23:34:37 Z

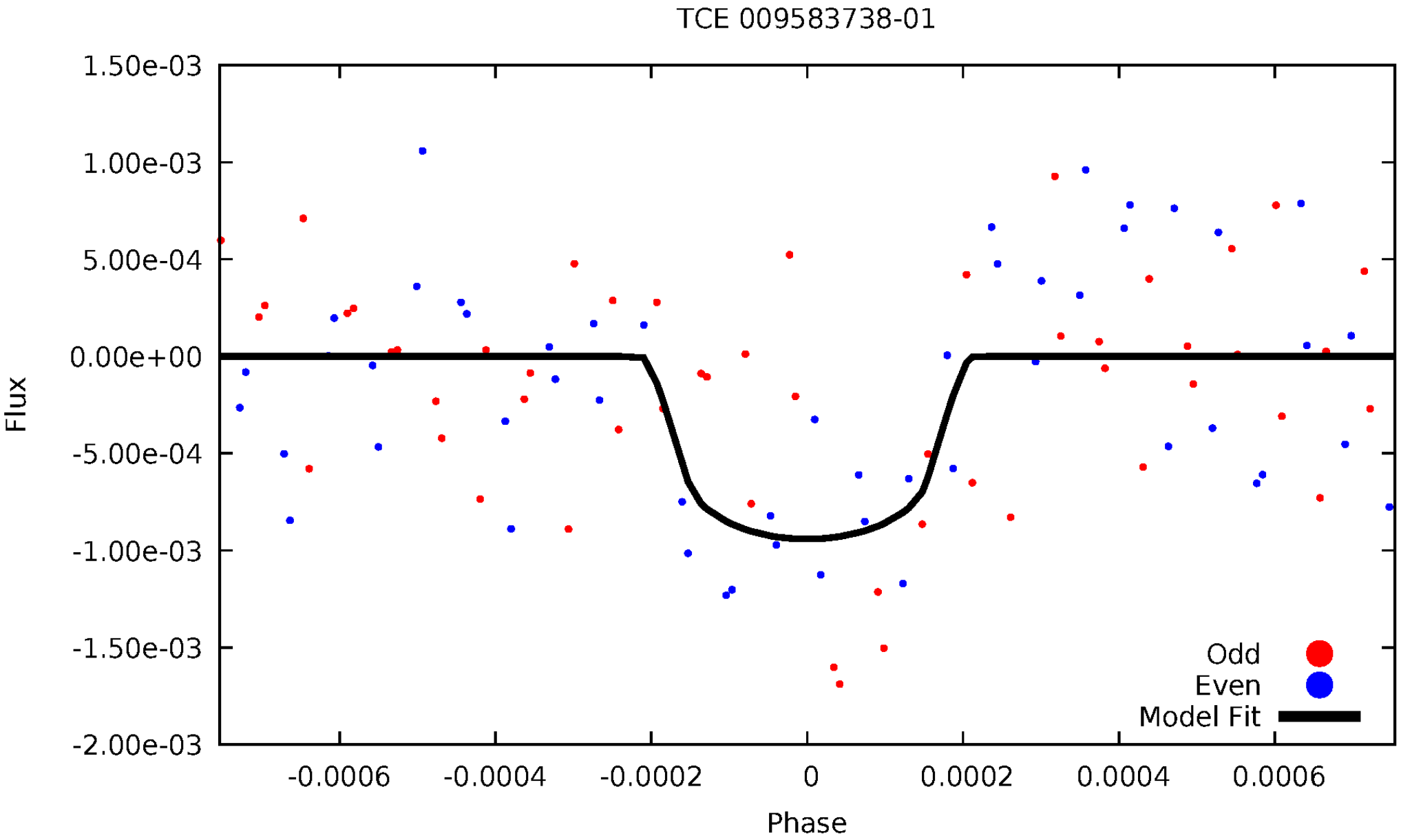
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

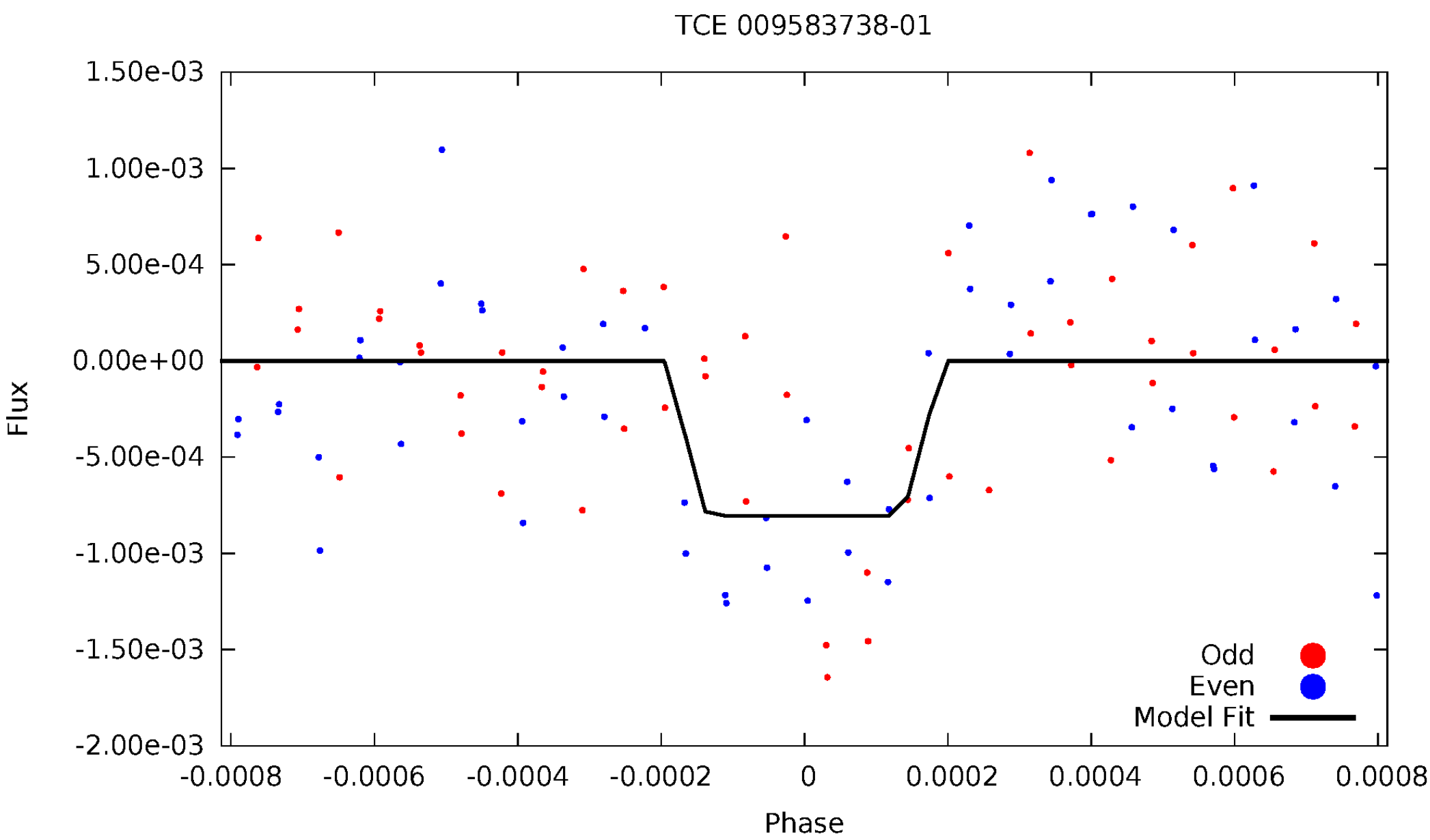
TCE 009583738-01, PDC Light Curves



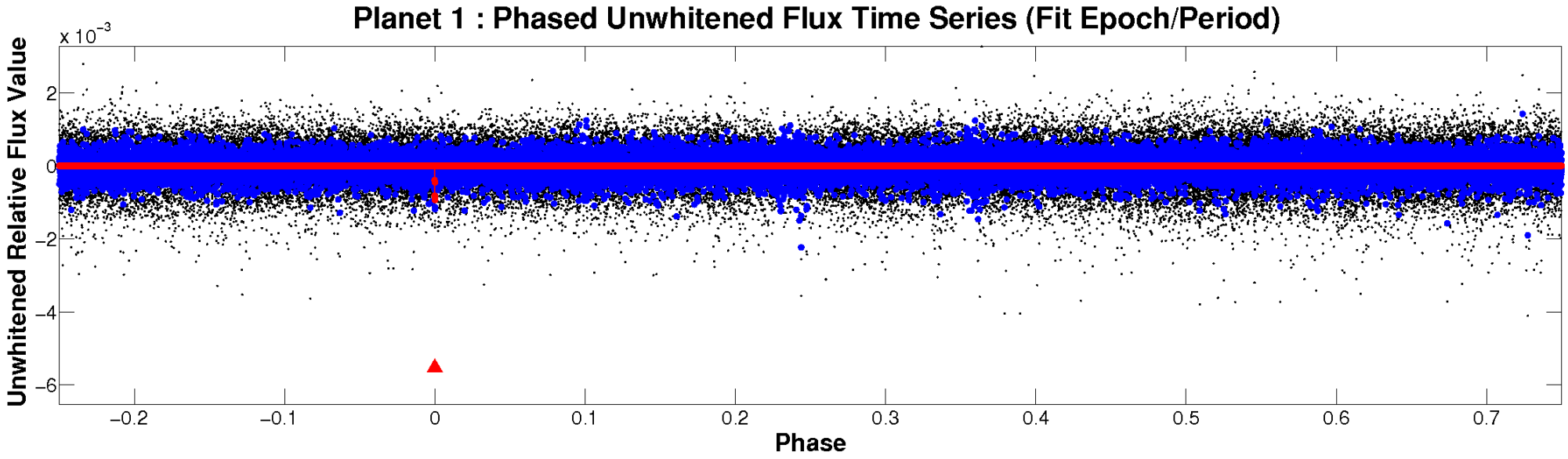

TCE 009583738-01
P = 180.159 days
P = 360.318 days
P = 720.635 days
Normalized Flux
0.003
0.002
0.001
0.000
−0.001
−0.002
−0.003
200
400
600
800
1000
1200
1400
1600
BKJD
Normalized Flux
0.003
0.002
0.001
0.000
−0.001
−0.002
−0.003
−1.0
−0.5
0.0
0.5
1.0
Phase

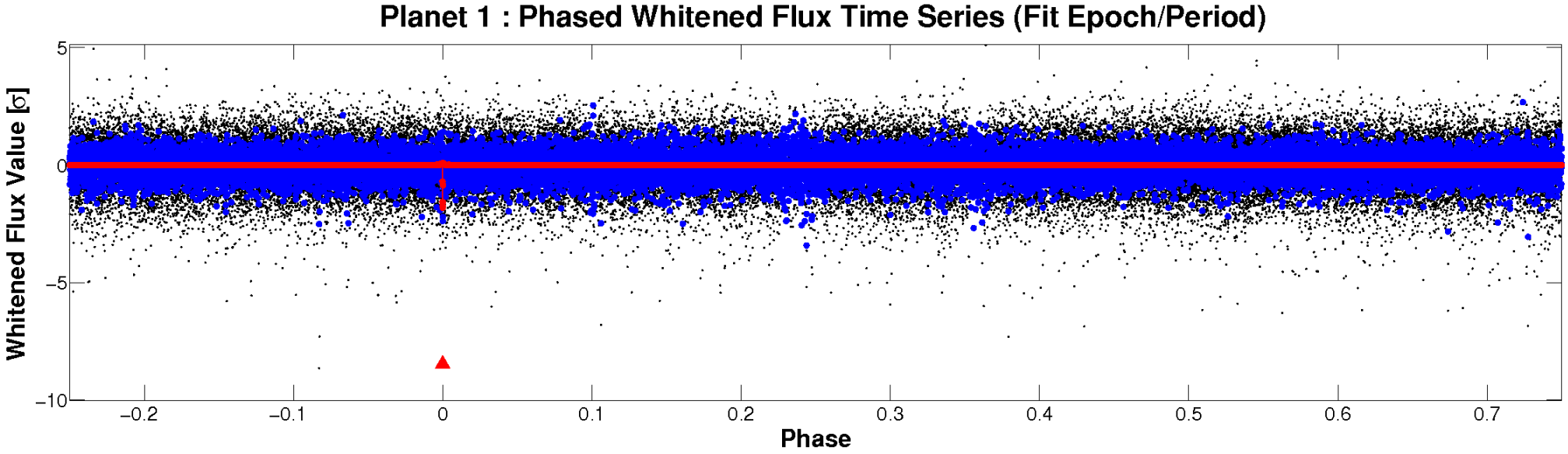
DV Odd/Even


TCE 009583738-01
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
-0.0006
-0.0004
-0.0002
0
0.0002
0.0004
0.0006
Phase
Odd
Even
Model Fit


ALT Odd/Even
TCE 009583738-01
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
-0.0008
-0.0006
-0.0004
-0.0002
0
0.0002
0.0004
0.0006
0.0008
Phase
Odd
Even
Model Fit

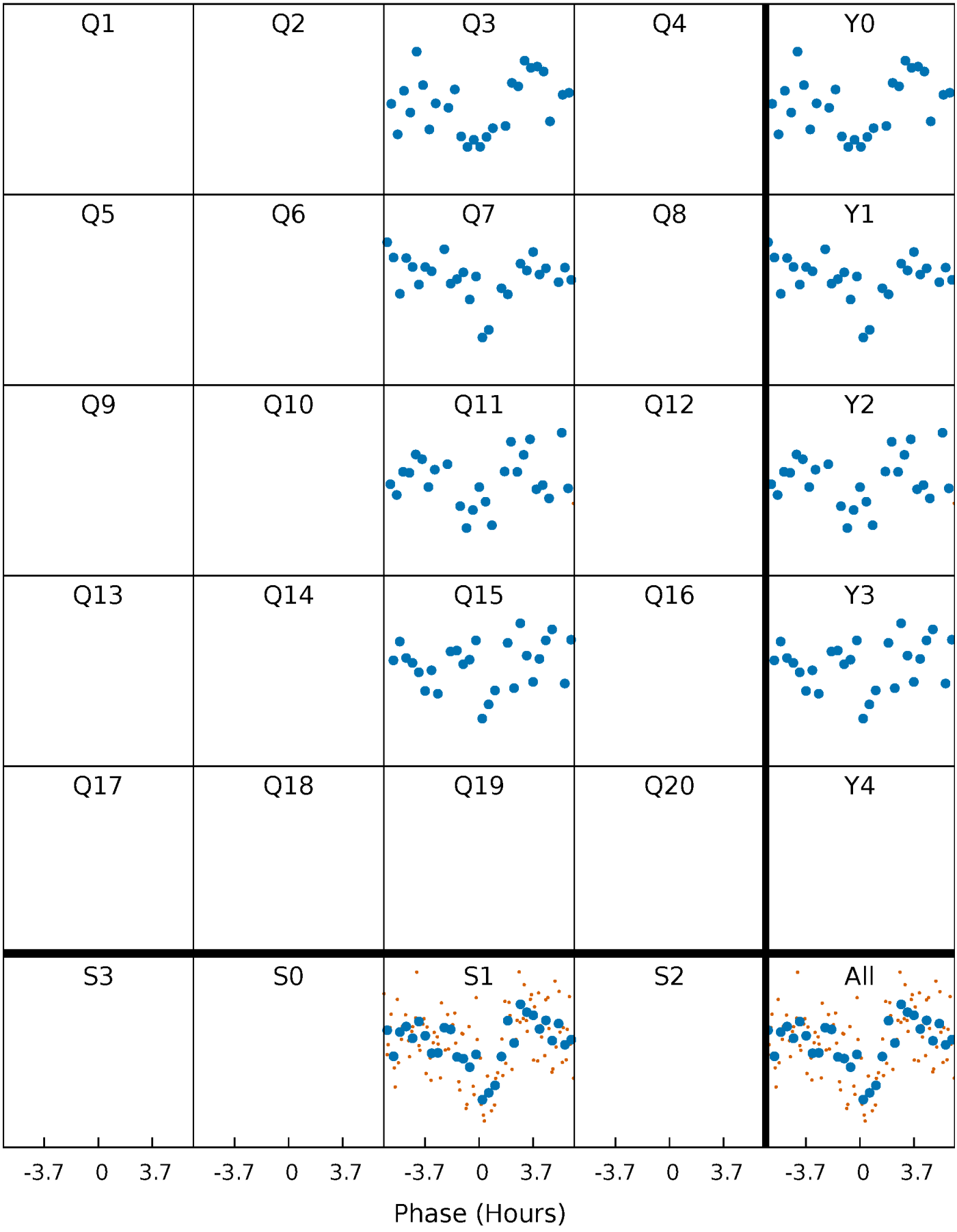
Non-Whitened Vs. Whitened Light Curve





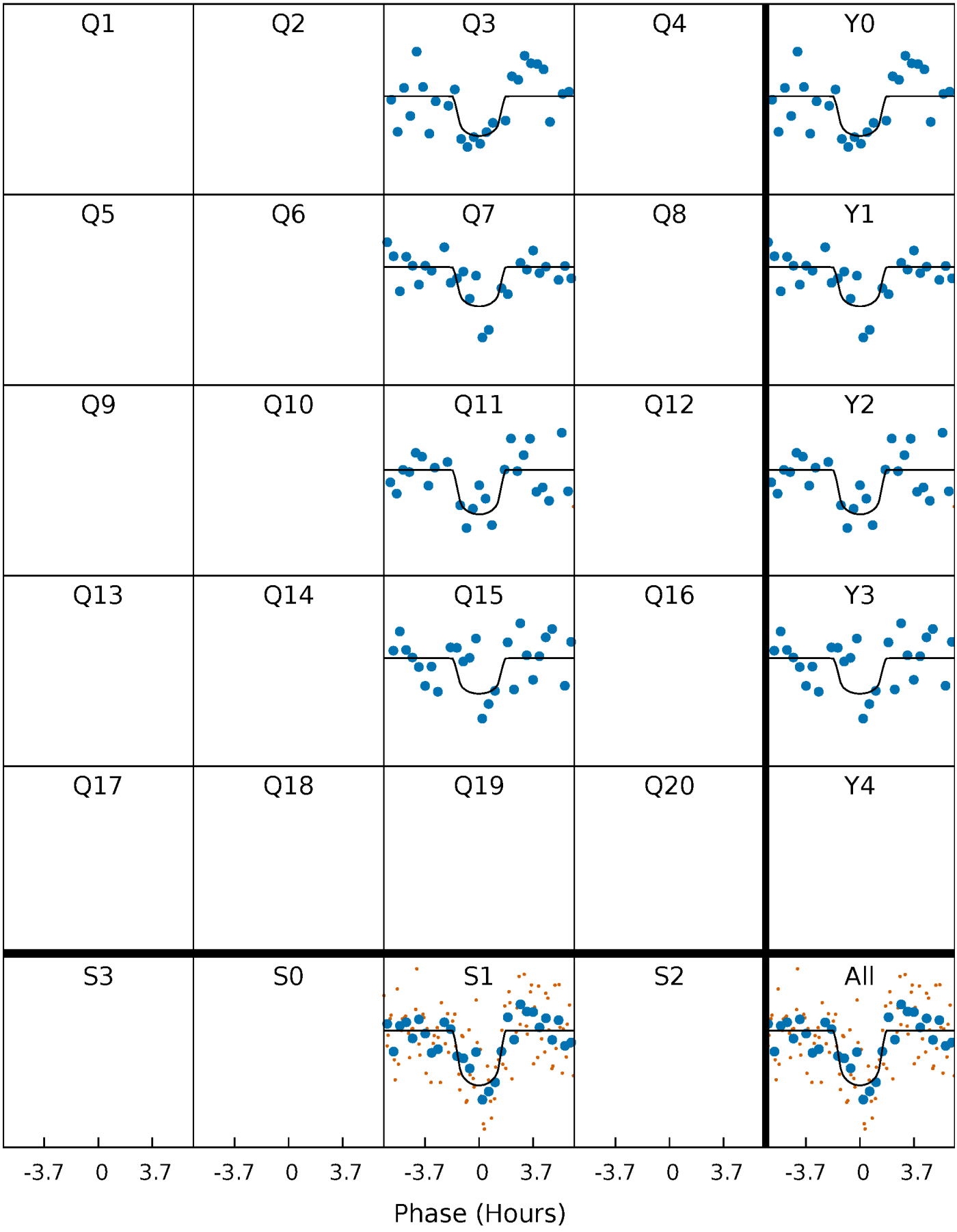
PDC Quarter-Phased Transit Curves

TCE 009583738-01 P=360.317676 Days T_0=314.733381 (BKJD)



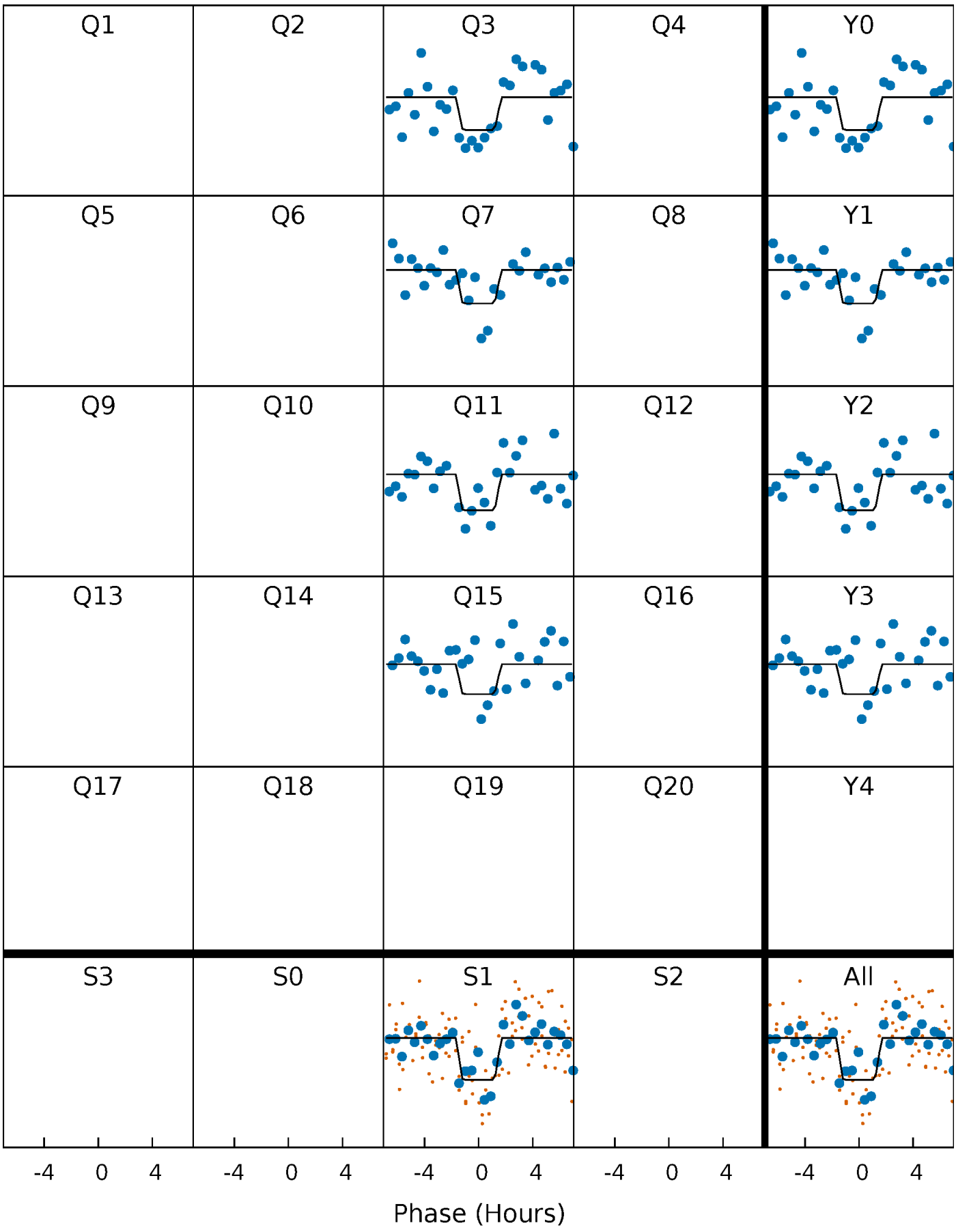
DV Quarter-Phased Transit Curves

TCE 009583738-01 P=360.317676 Days T_0=314.733381 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

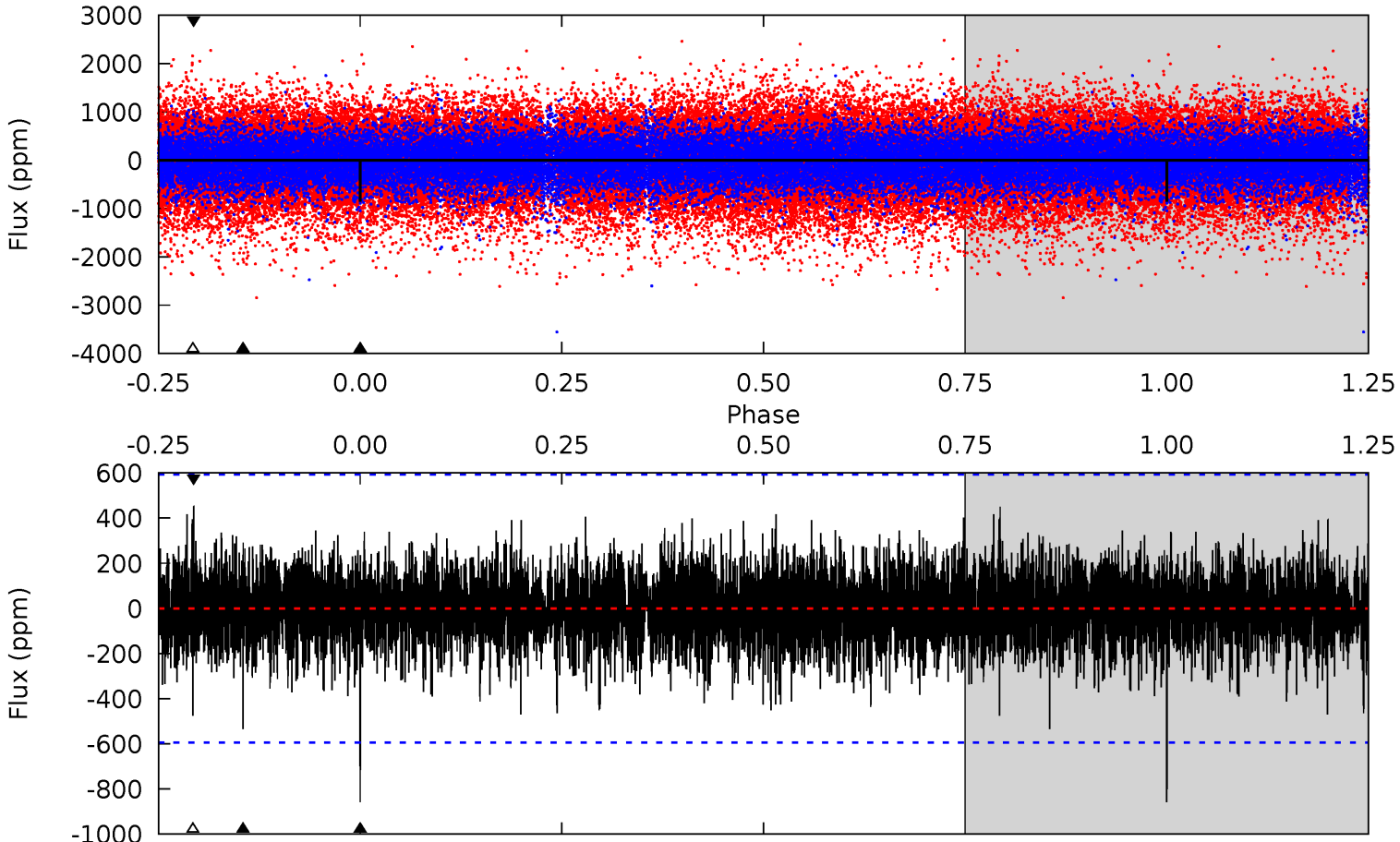
TCE 009583738-01 P=360.316579 Days T_0=314.737955 (BKJD)

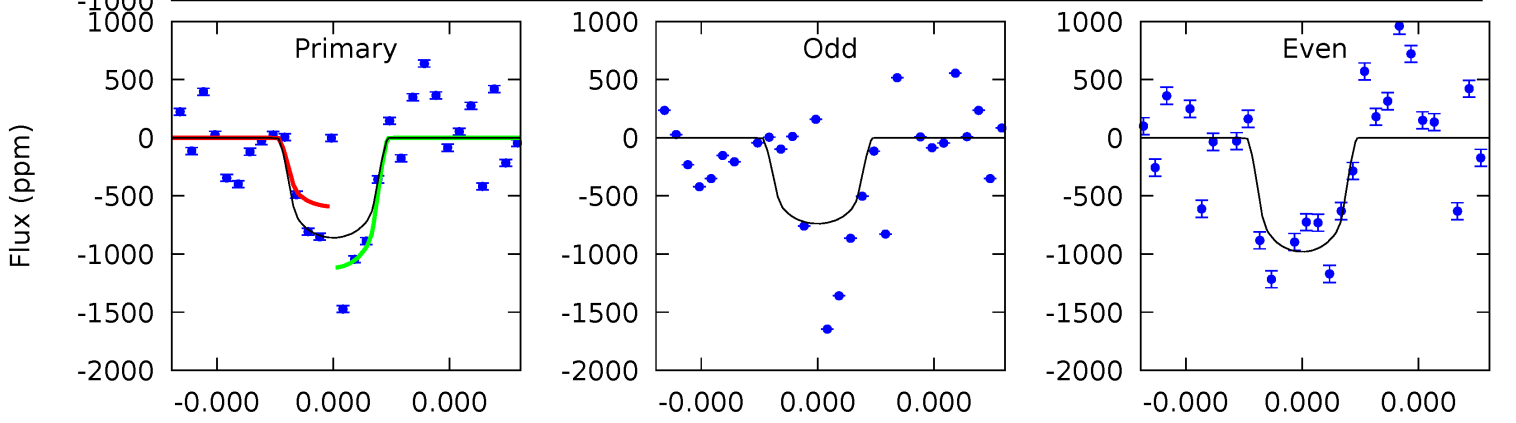


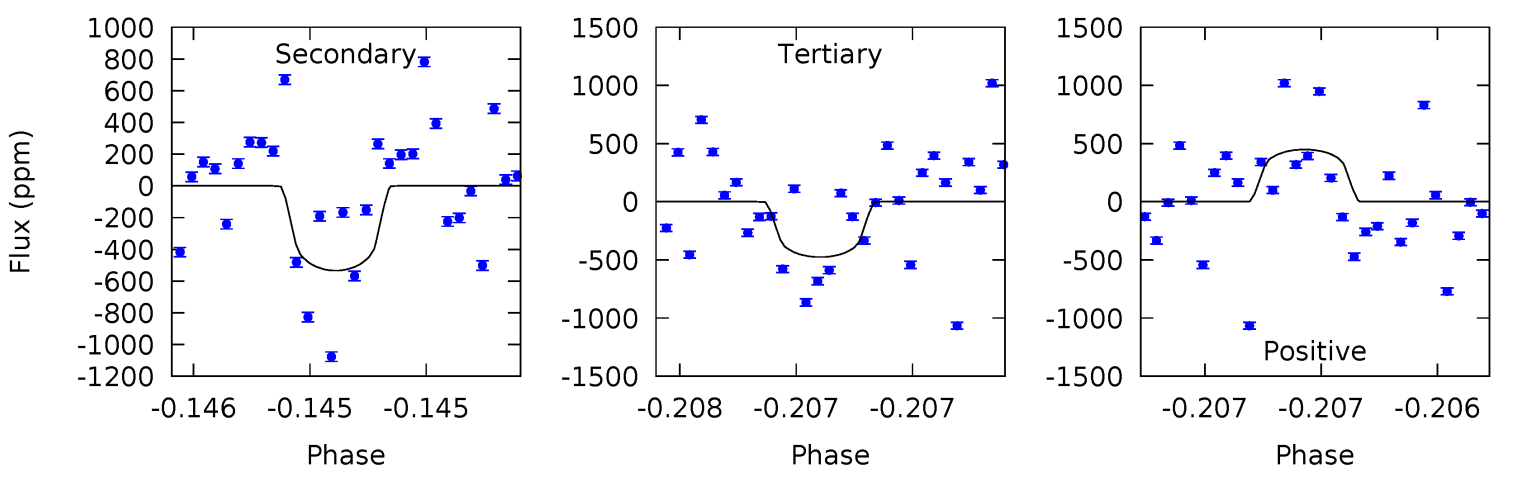
DV Model-Shift Uniqueness Test

009583738-01, P = 360.317676 Days, E = 314.733381 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.08	5.03	4.48	4.23	5.59	3.51	1.17	3.61	3.86	0.55	0.80	1.15	0.96	0.34	2.48



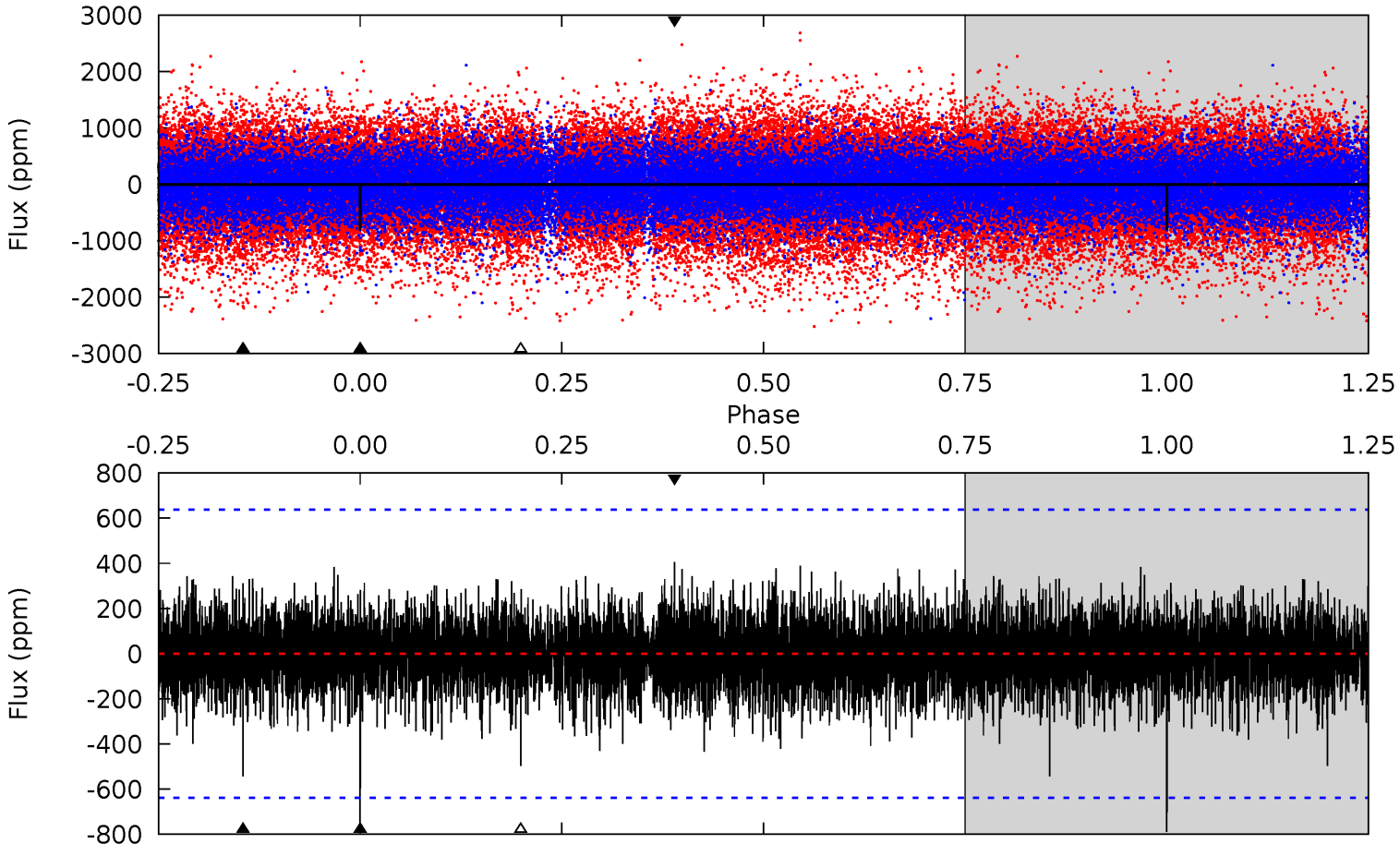


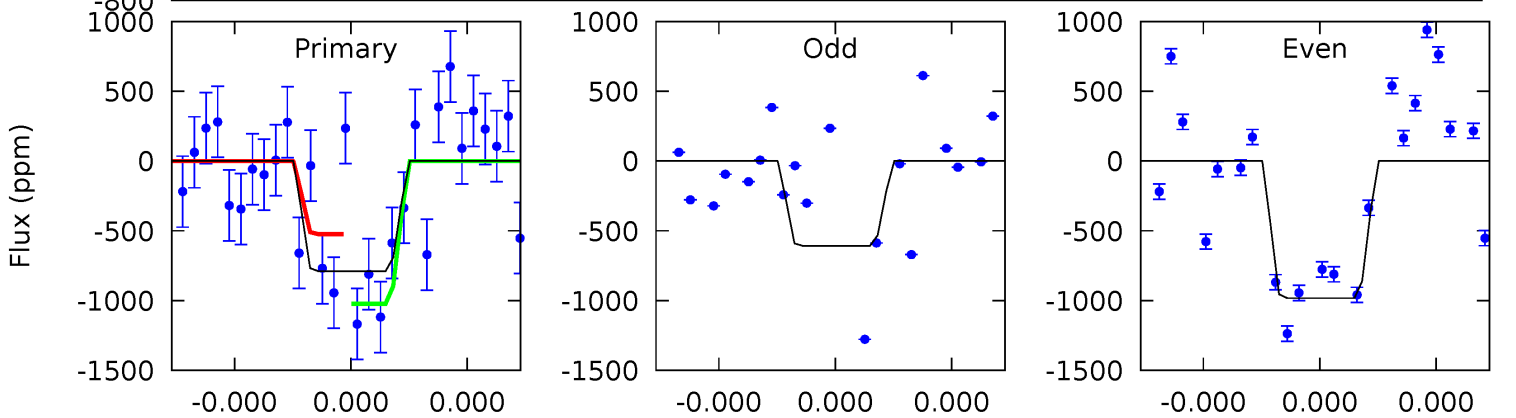


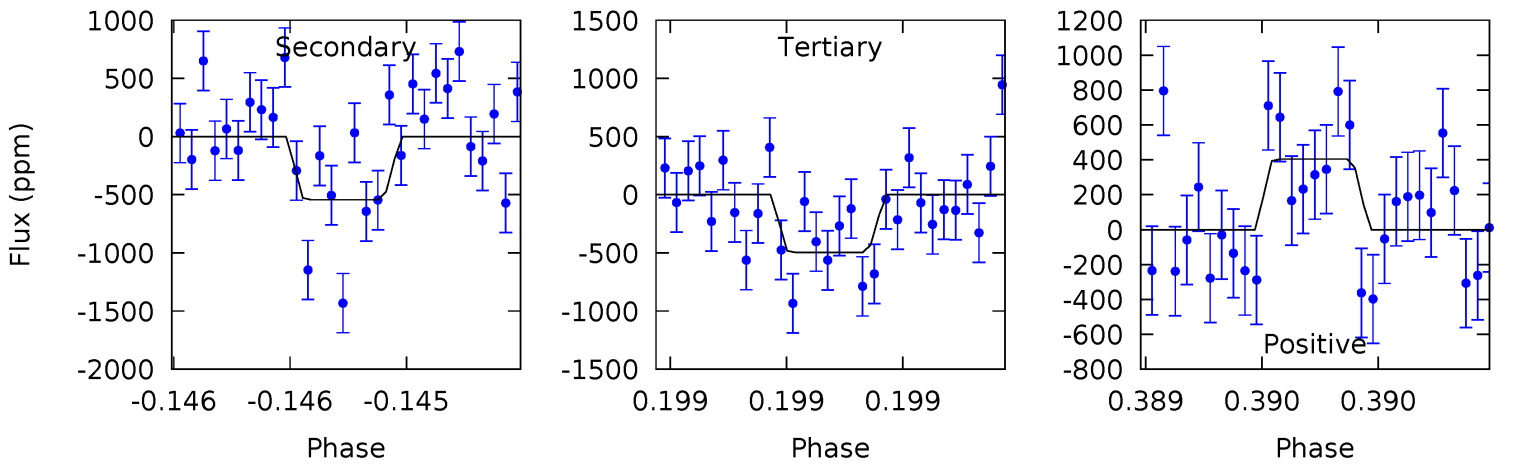
Alt Model-Shift Uniqueness Test

009583738-01, P = 360.316579 Days, E = 314.737955 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.95	4.78	4.37	3.56	5.61	3.54	1.02	2.58	3.39	0.41	1.22	1.65	0.98	0.34	2.19







Stellar Parameters For KIC 009583738

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	5676^{+154}_{-188}	$4.529^{+0.033}_{-0.187}$	$0.210^{+0.200}_{-0.300}$	$0.918^{+0.232}_{-0.083}$	$1.038^{+0.089}_{-0.133}$	$1.892^{+0.351}_{-0.893}$
	+3%/-3%	+1%/-4%	+95%/-143%	+25%/-9%	+9%/-13%	+19%/-47%
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 009583738-01 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-534±106	$5.70^{+4.82}_{-3.67}$	341^{+21}_{-15}	4035^{+2097}_{-741}	9024^{+59143}_{-6437}
Alt.	-543±114	$5.15^{+5.21}_{-3.35}$	343^{+20}_{-16}	4145^{+2448}_{-860}	10709^{+79916}_{-8154}

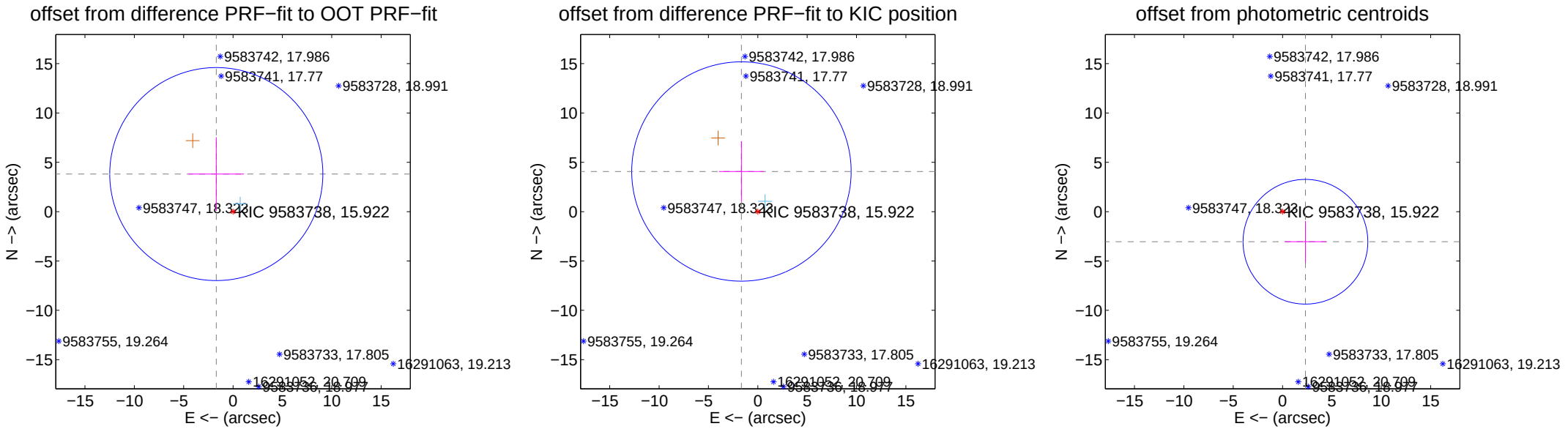
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

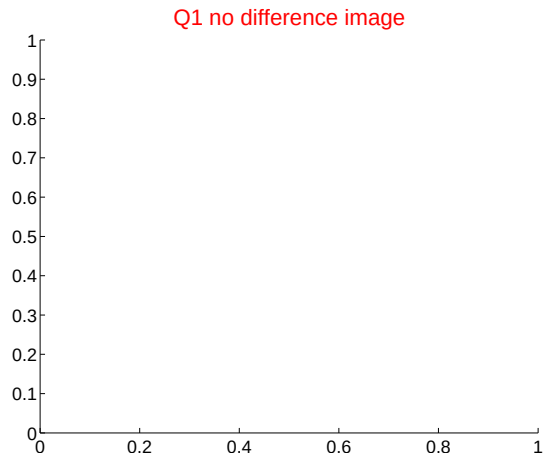
Supplemental centroid analysis for 009583738-01. Kepler magnitude: 15.92. Transit SNR 7.65
There are 1 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.28 arcsec

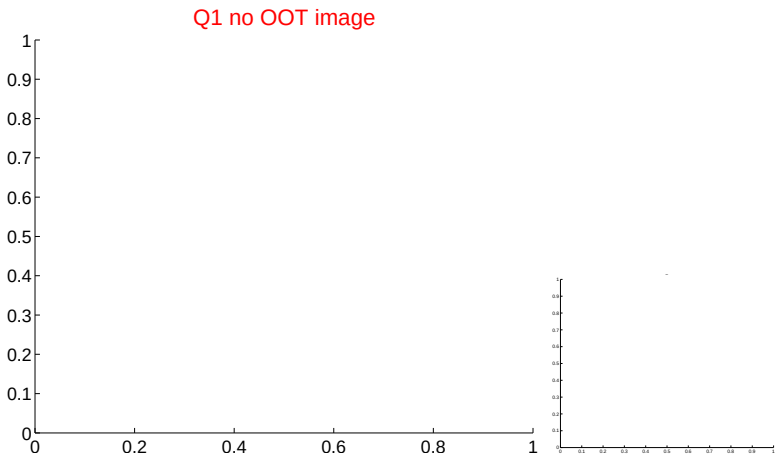
	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.168 ± 3.597	1.16	1.695 ± 2.809	3.808 ± 3.734
PRF-fit source offset from KIC position	4.394 ± 3.704	1.19	1.658 ± 2.279	4.069 ± 3.072
photometric centroid source offset	3.83 ± 2.11	1.82	-2.32 ± 2.10	-3.05 ± 2.11

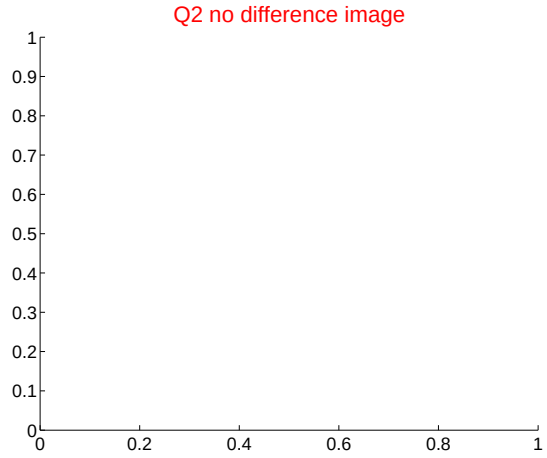


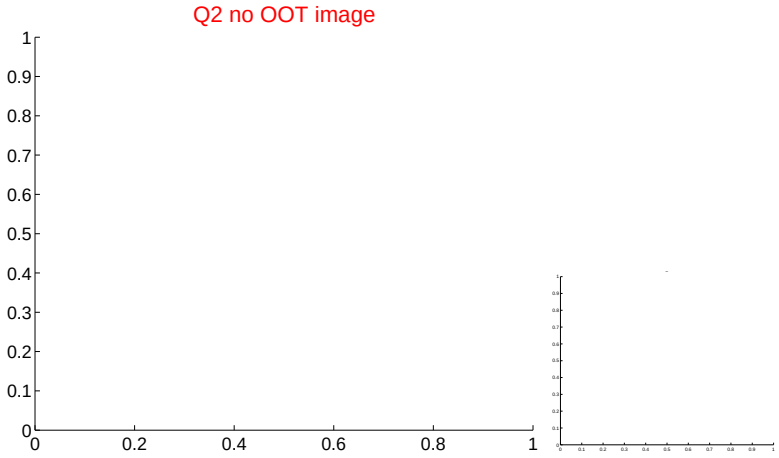
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

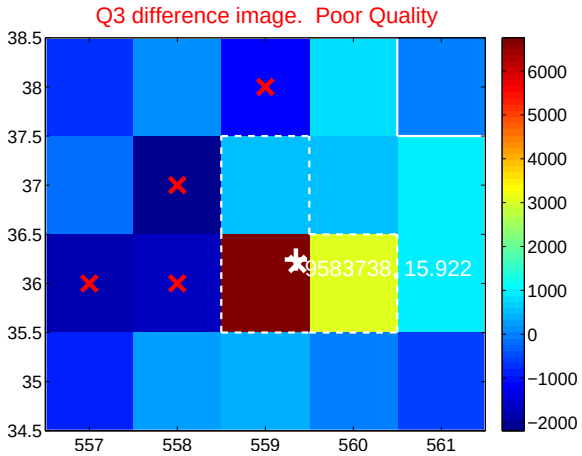
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

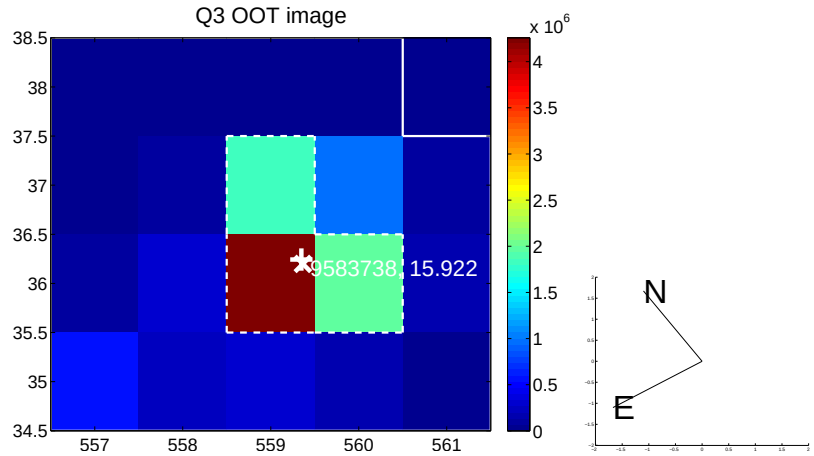


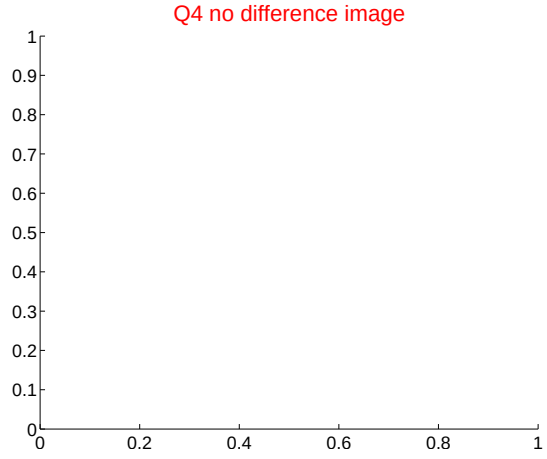


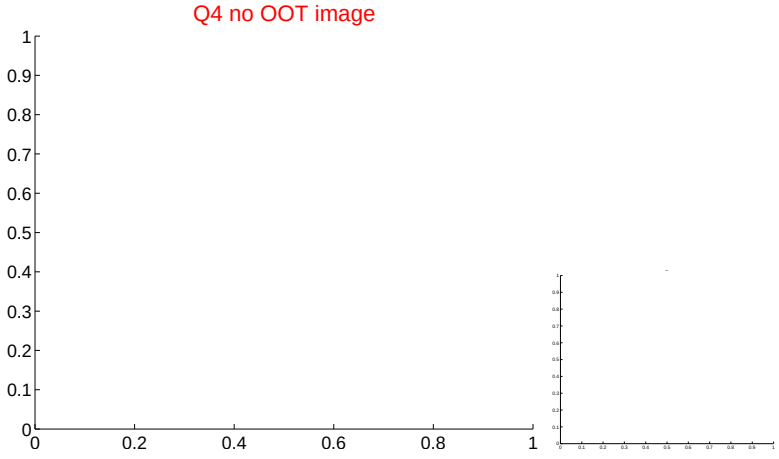




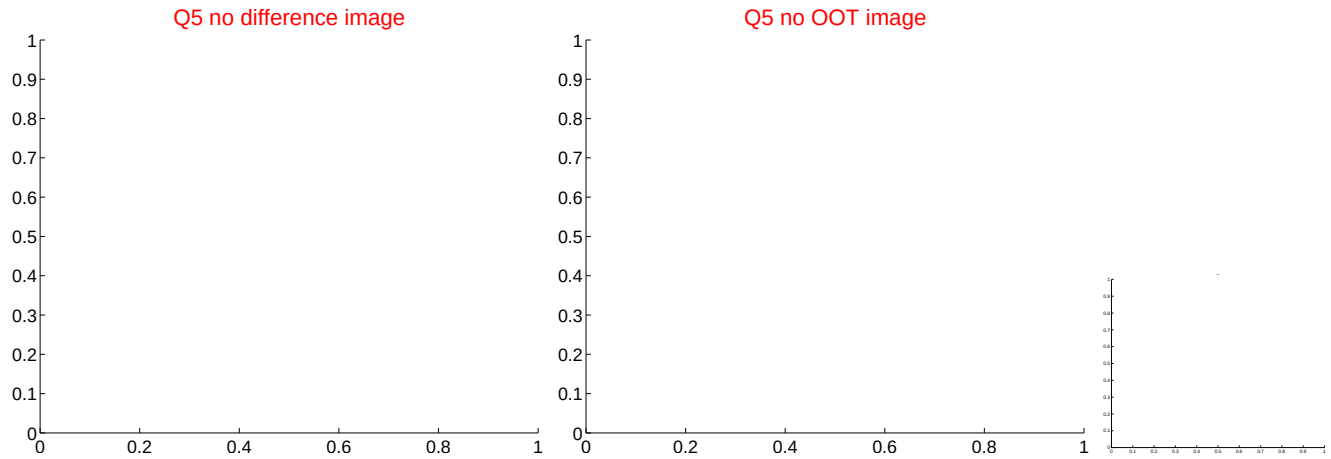


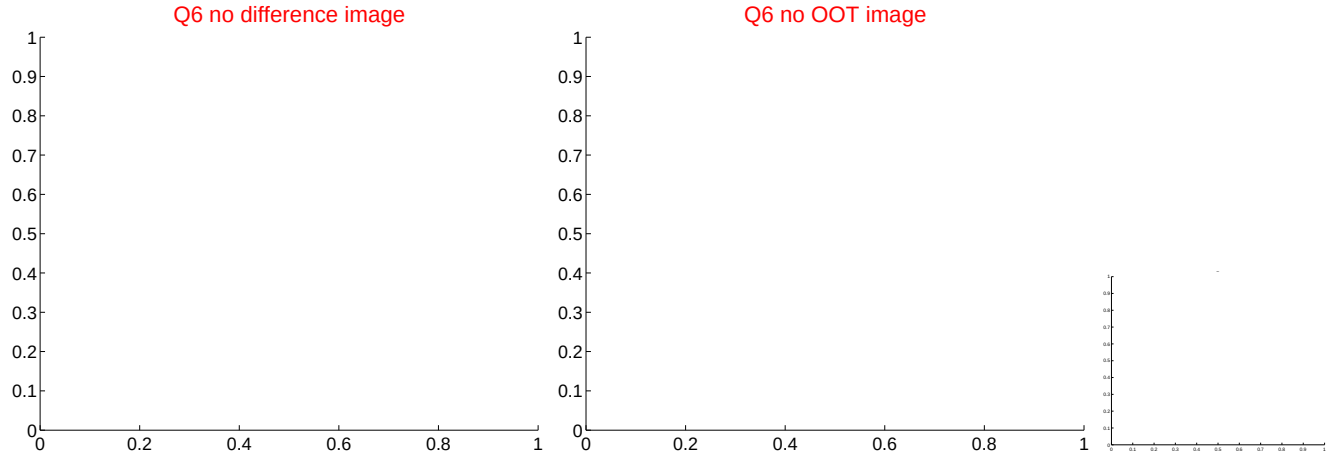


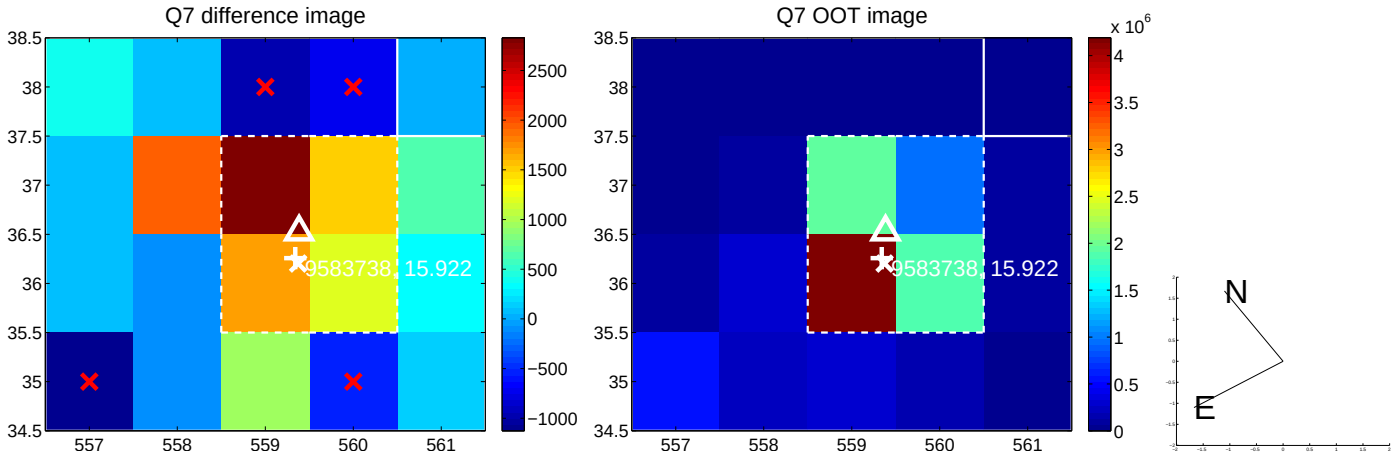


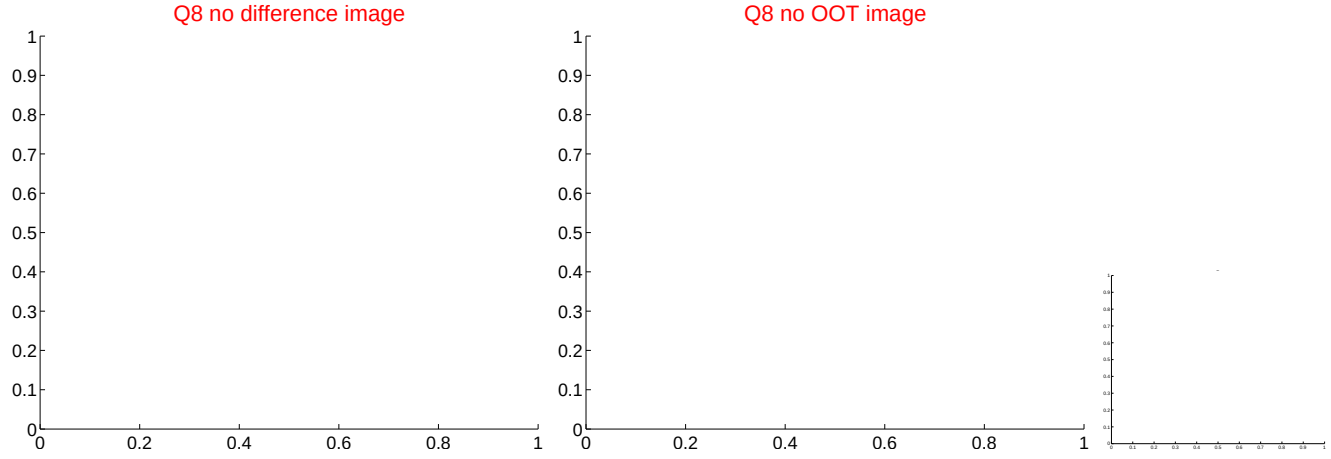


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

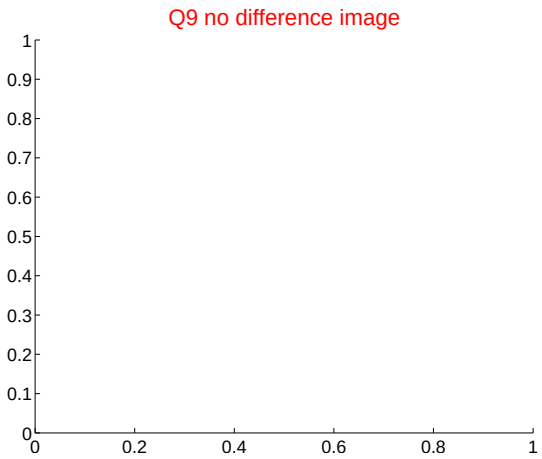


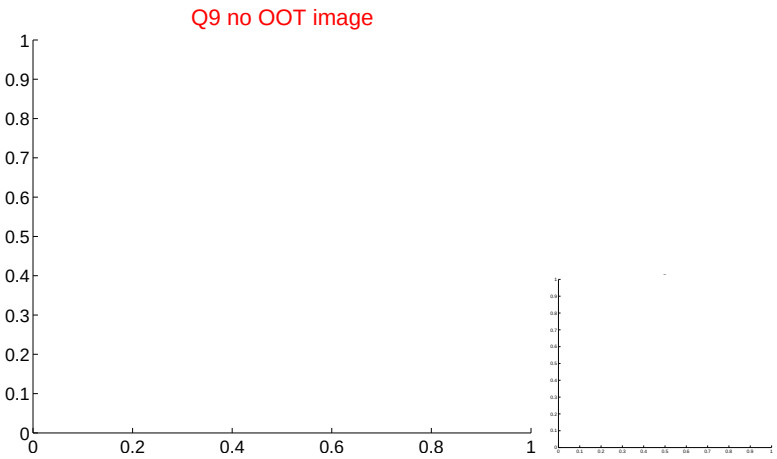


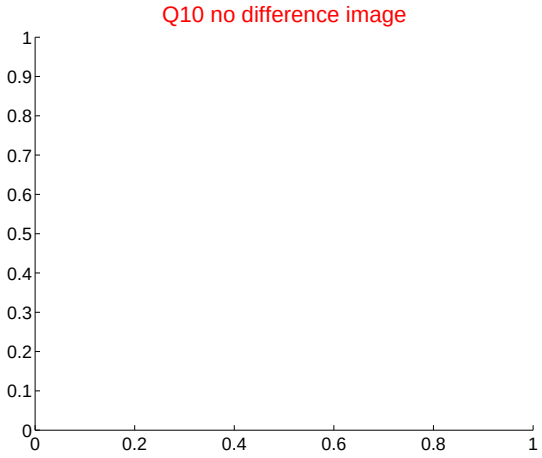


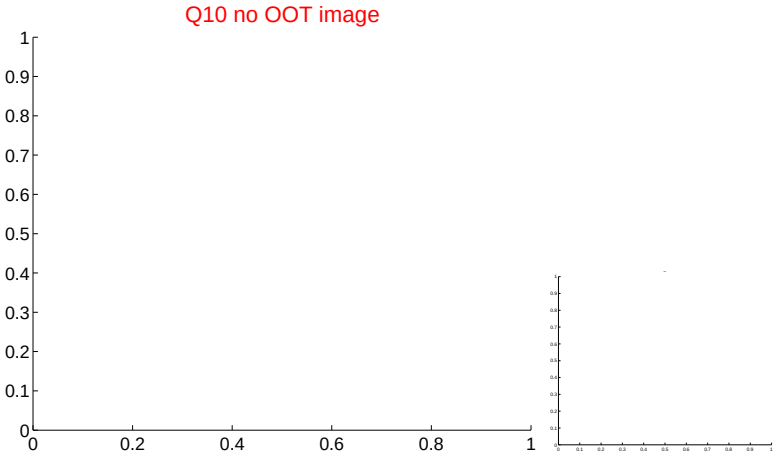


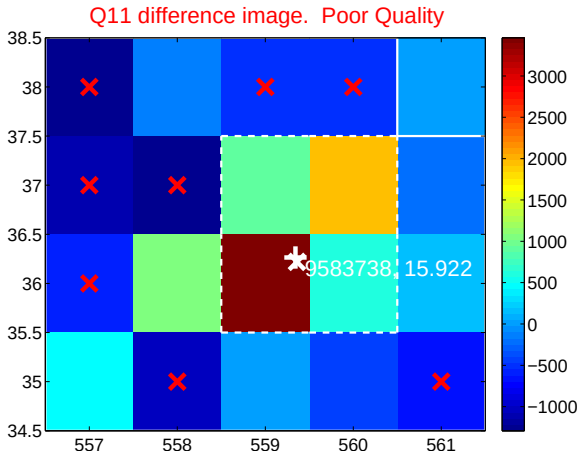
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

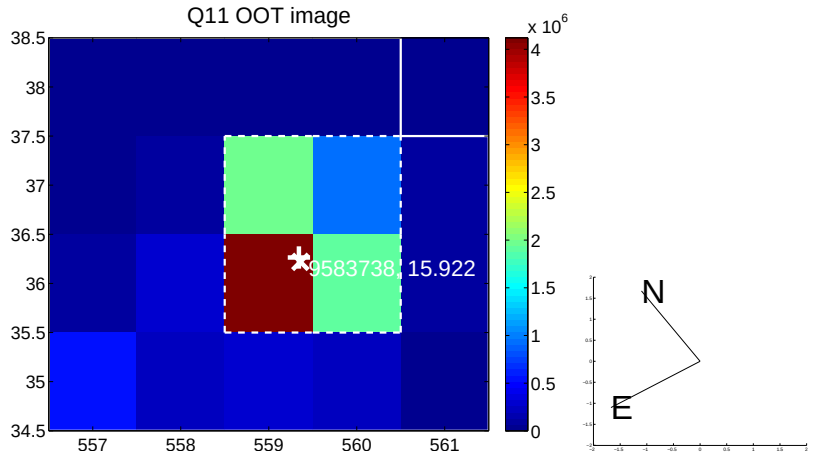


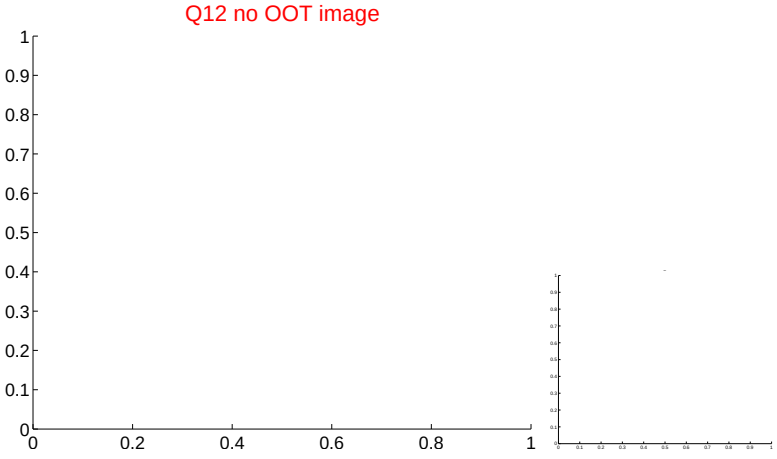












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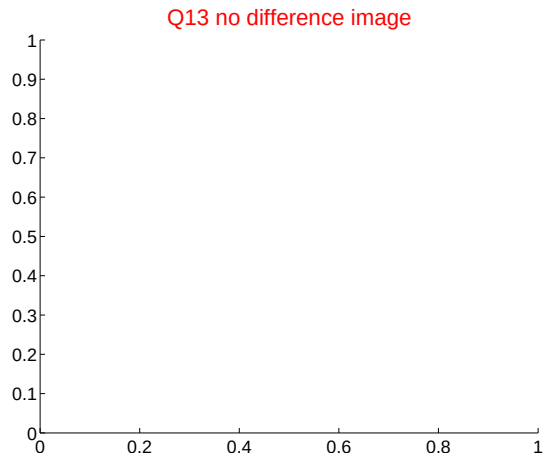

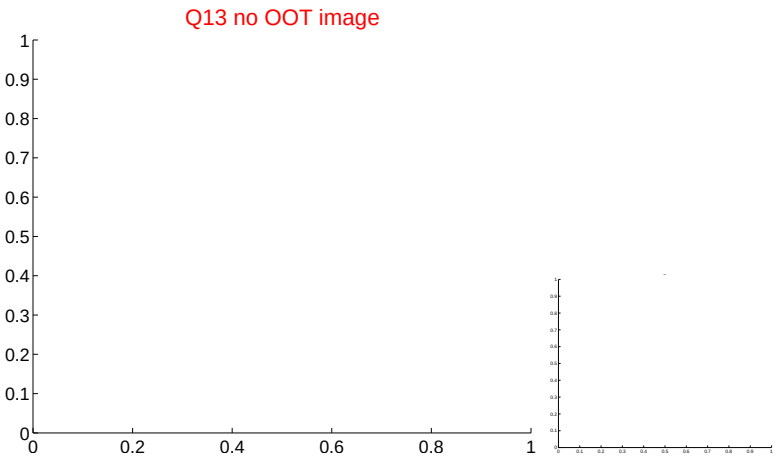

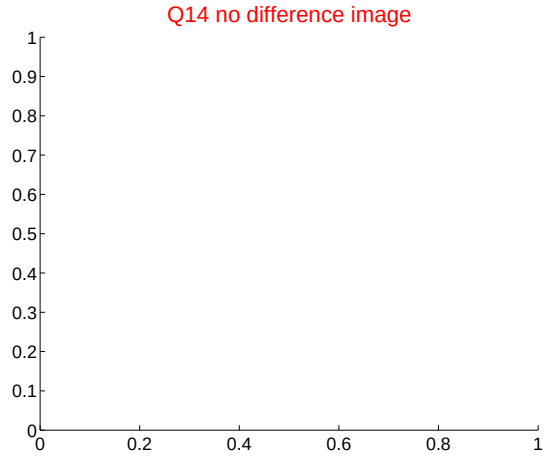

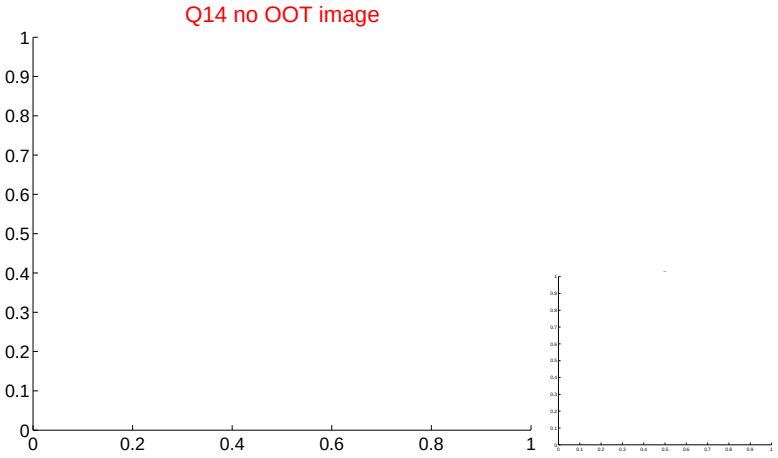

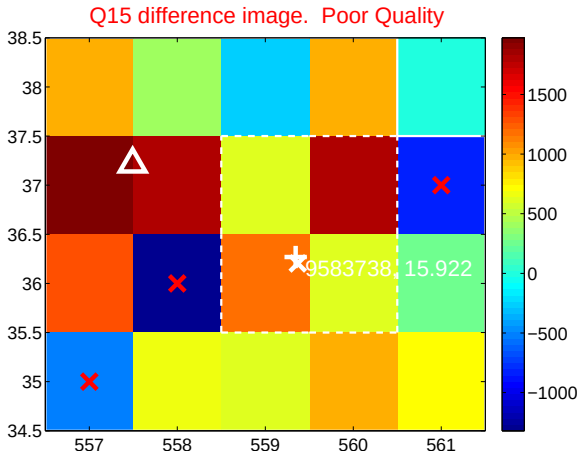

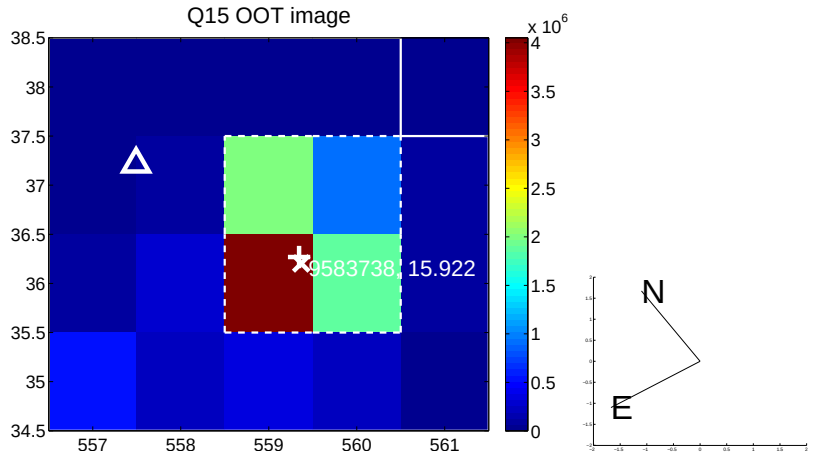

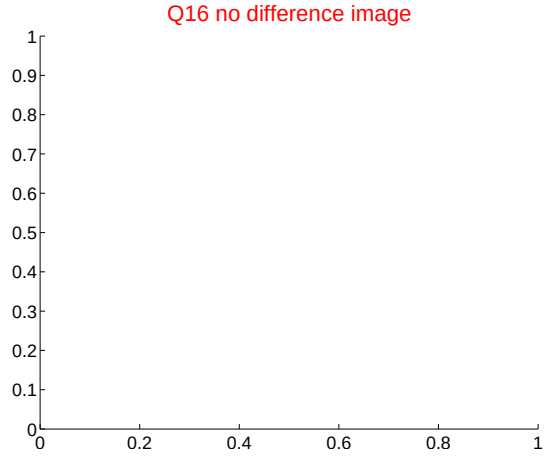

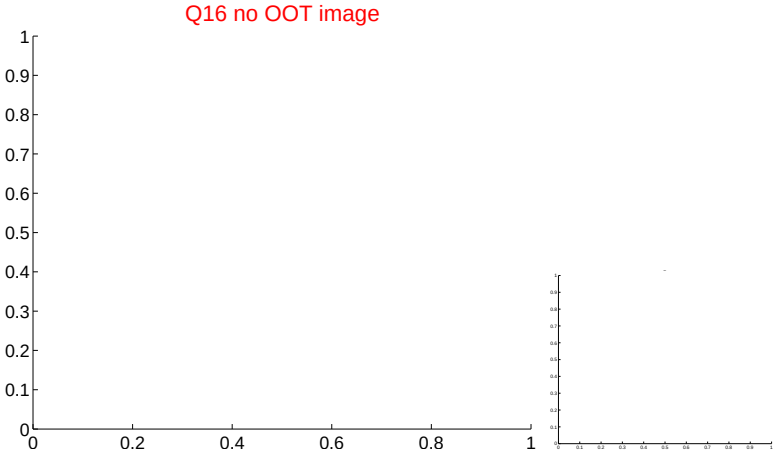

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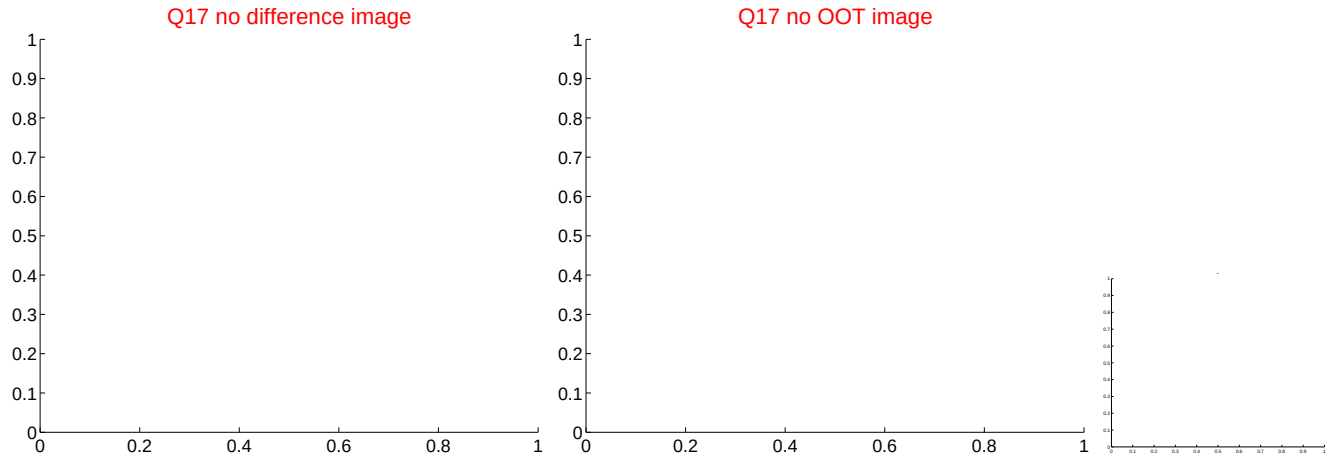

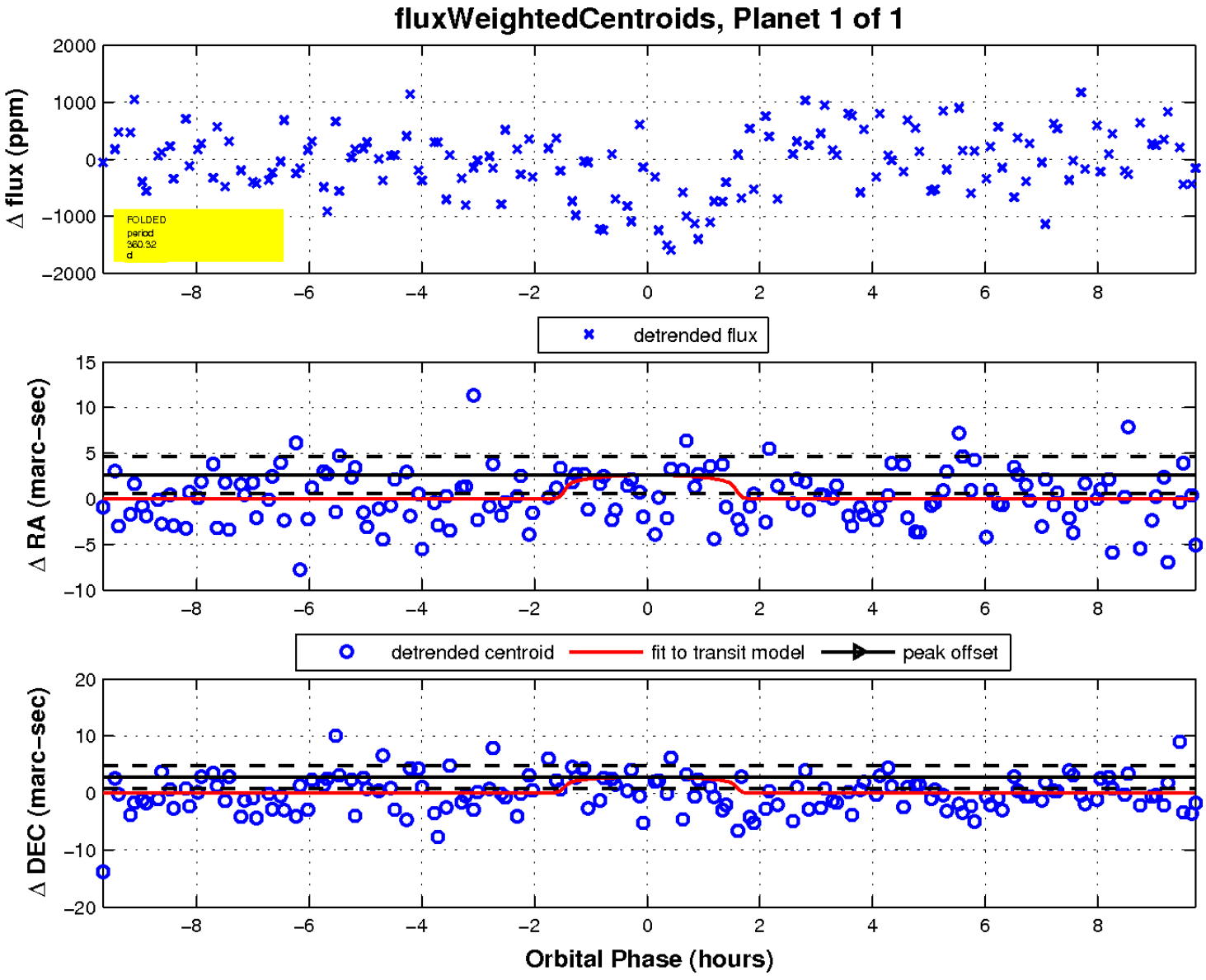

UKIRT Image

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