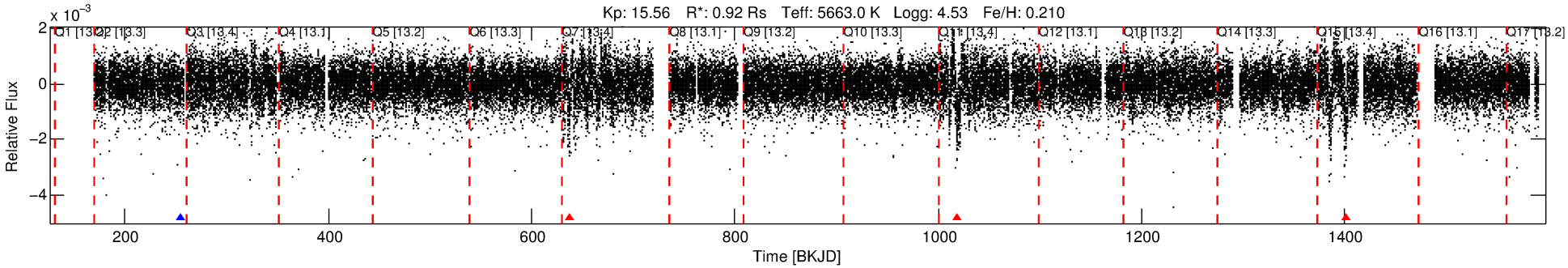
WARNING: THIS DATA IS SIMULATED, NOT OBSERVED

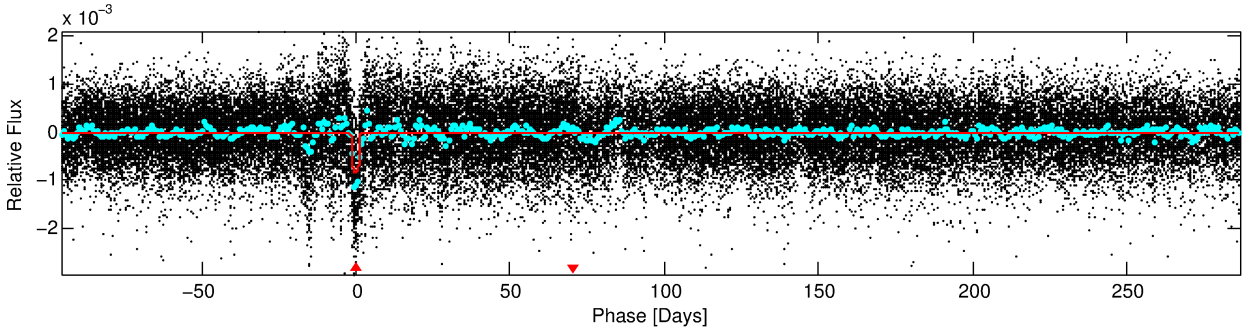
DV One-Page Summary

KIC: 8161349 Candidate: 1 of 1 Period: 381.920 d

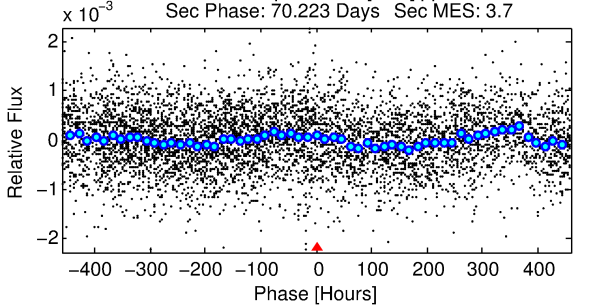
WARNING: THIS DATA IS SIMULATED, NOT OBSERVED

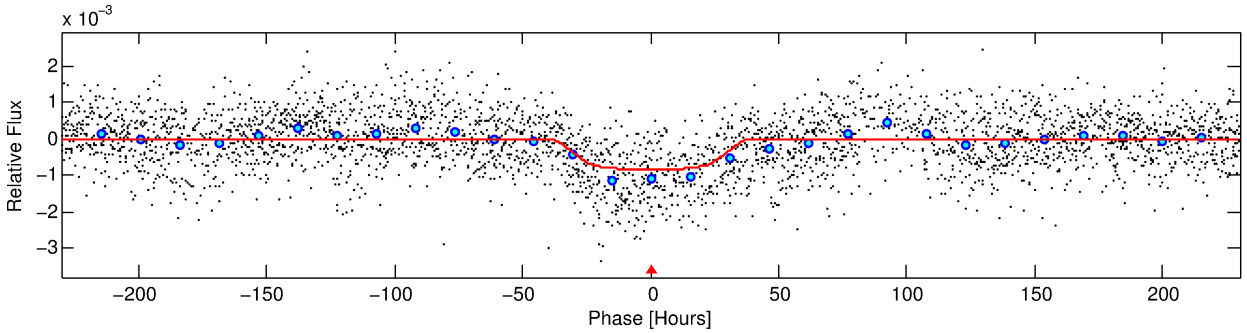
Kp: 15.56 R*: 0.92 Rs Teff: 5663.0 K Logg: 4.53 Fe/H: 0.210



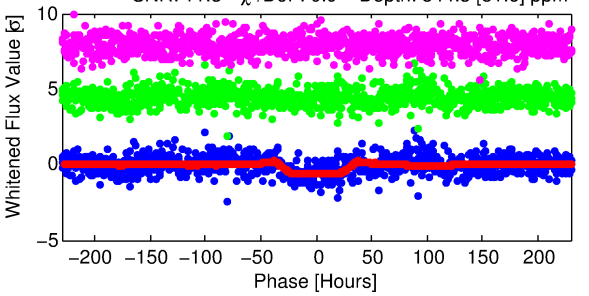


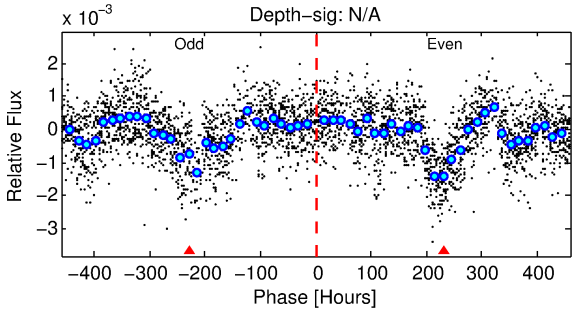
Sec Depth: 234.4 [81.3] ppm
Sec Phase: 70.223 Days Sec MES: 3.7





MES: 8.6 Transits: 4
SNR: 11.3 χ^2/DoF: 0.9 Depth: 844.3 [81.6] ppm





DV Fit Results:

Period = 381.92043 [0.04712] d
Epoch = 255.1352 [0.0821] BKJD
Rp/R* = 0.0332 [0.0022]
a/R* = 16.88 [2.65]
b = 0.93 [0.02]

Seff = 0.71 [0.27]
Teq = 234 [22] K
Rp = 3.32 [0.98] Re
a = 1.0422 [0.2551] AU

Ag = 12721.07 [6546.87] [1.94σ]
Teffp = 3844 [378] K [9.53σ]

DV Diagnostic Results:

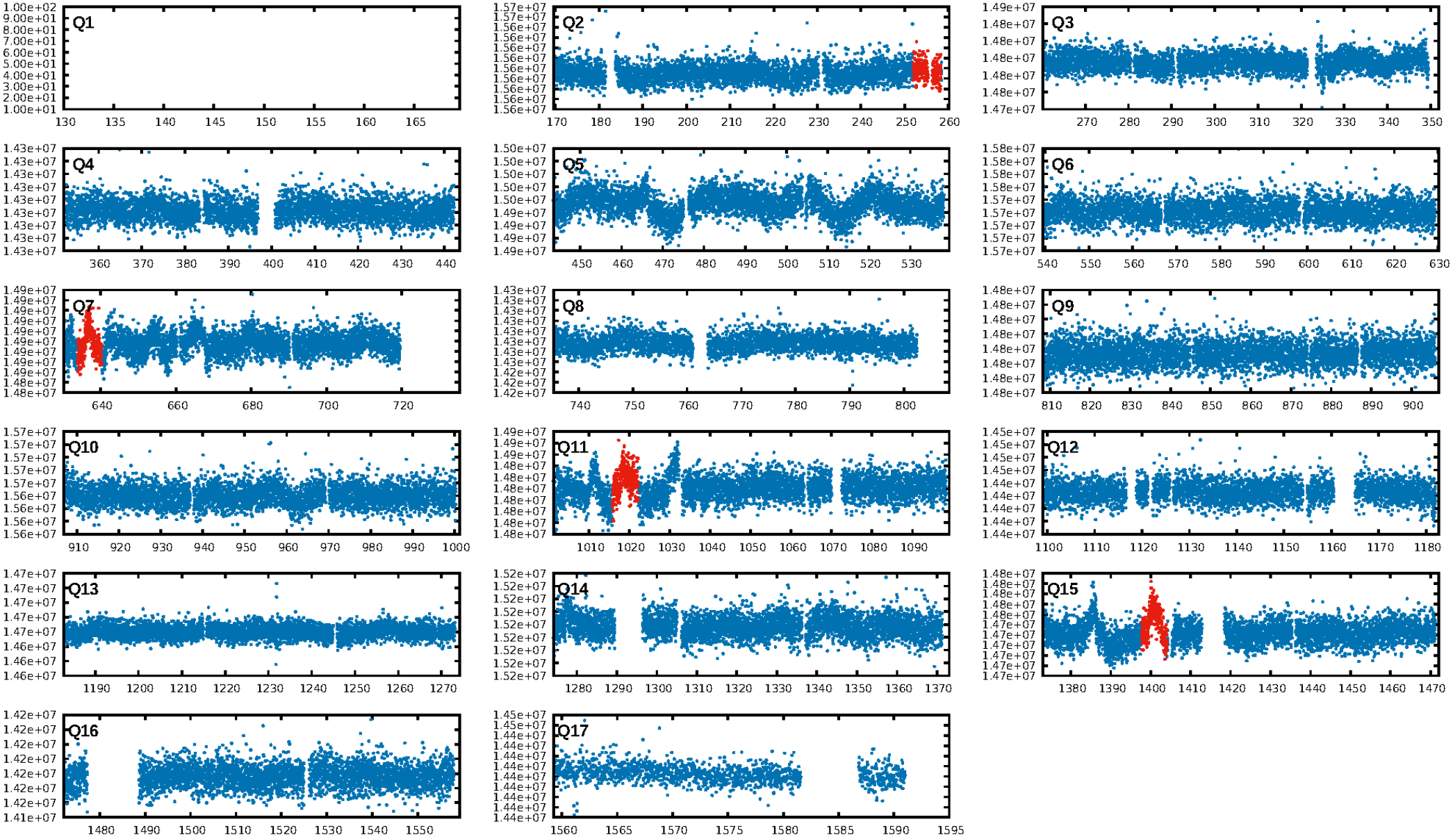
ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.90e-12
RollingBand-fgt: 0.25 [1/4]
GhostDiagnostic-chr: 0.7871

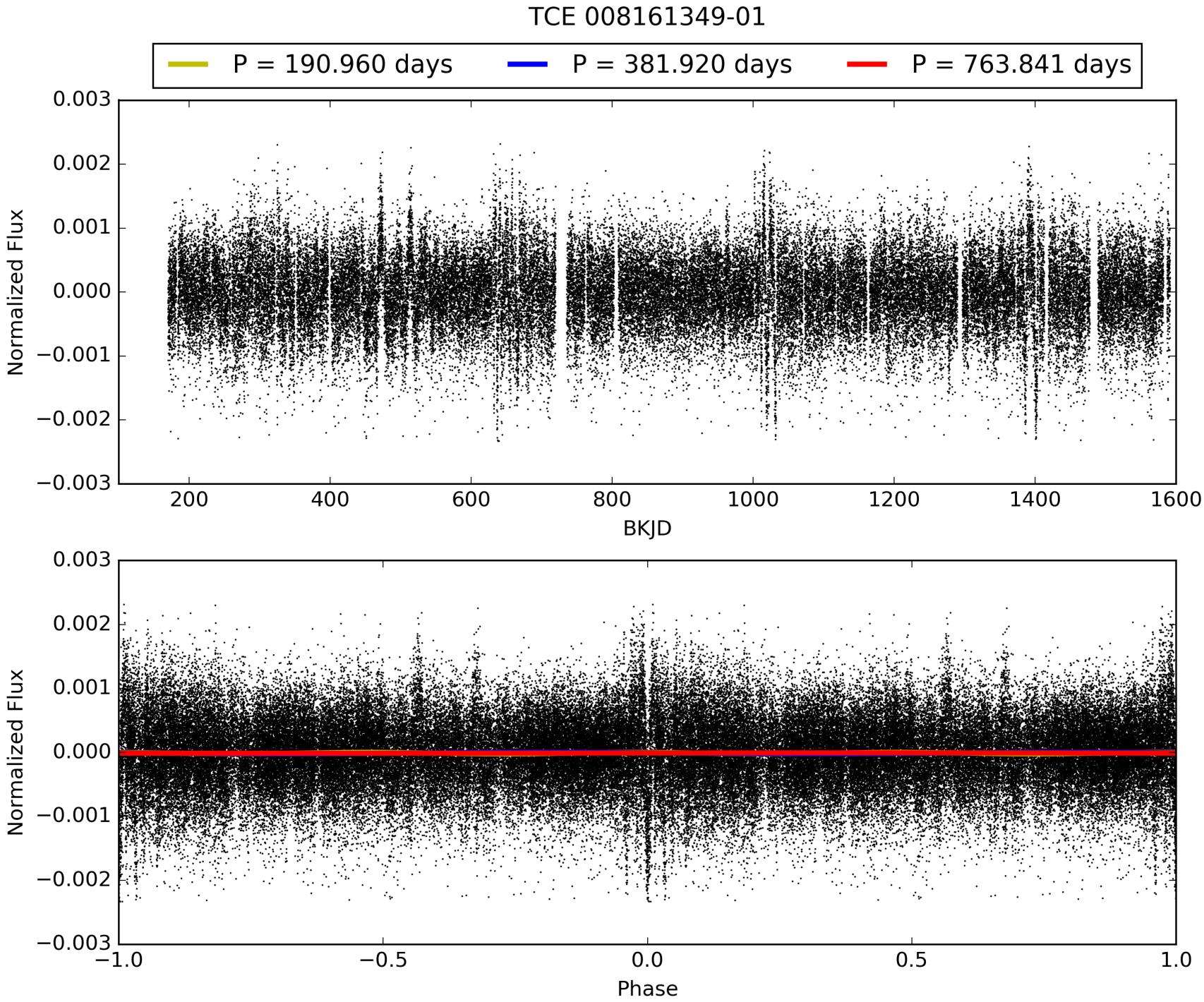
Centroid-sig: 43.0%
Centroid-so: 1.002 arcsec [1.10σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: N/A

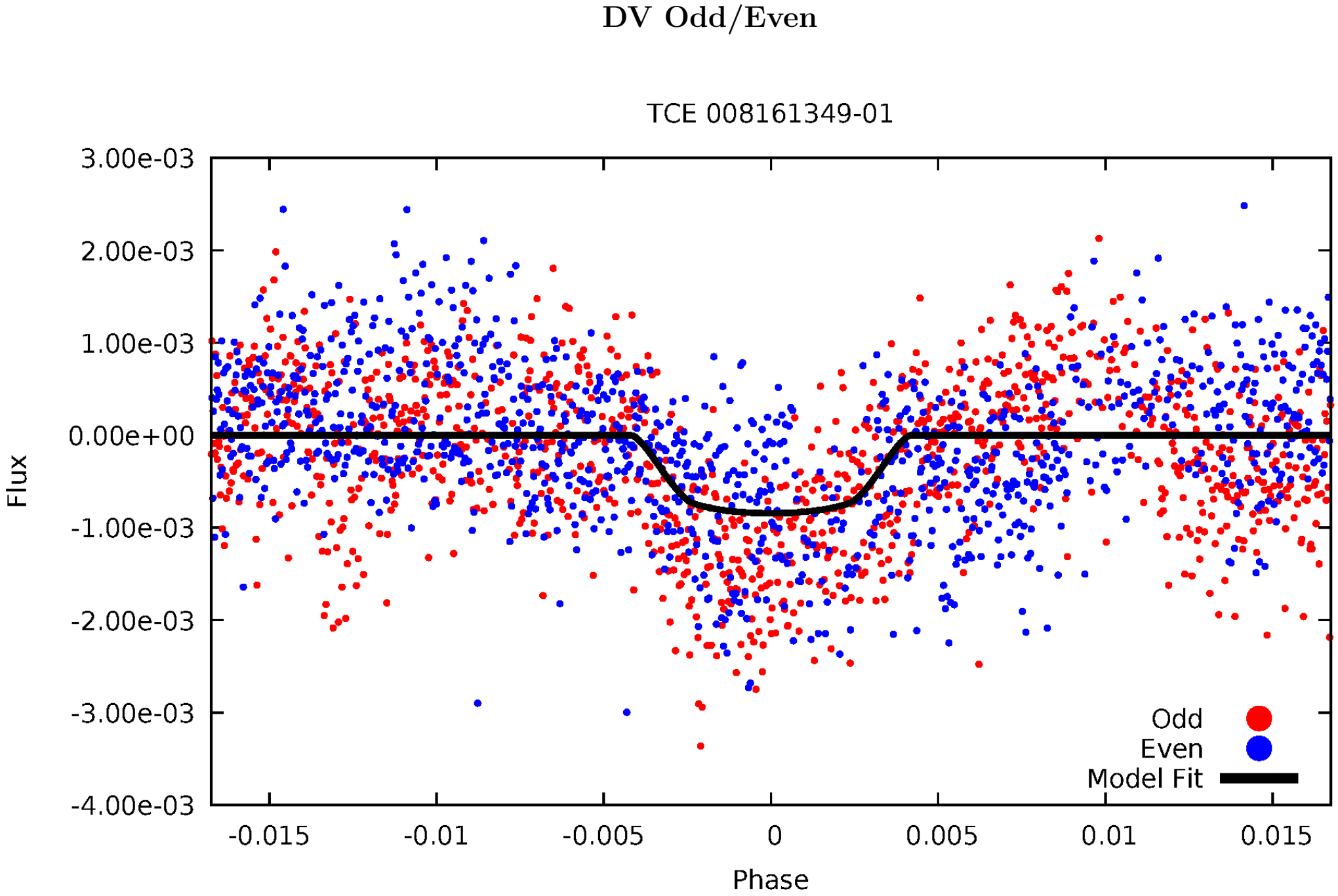
Software Revision: svn+ssh://murzim/repo/soc/branches/integ/ksop-2320@61025 -- Date Generated: 04-Mar-2016 03:01:36 Z

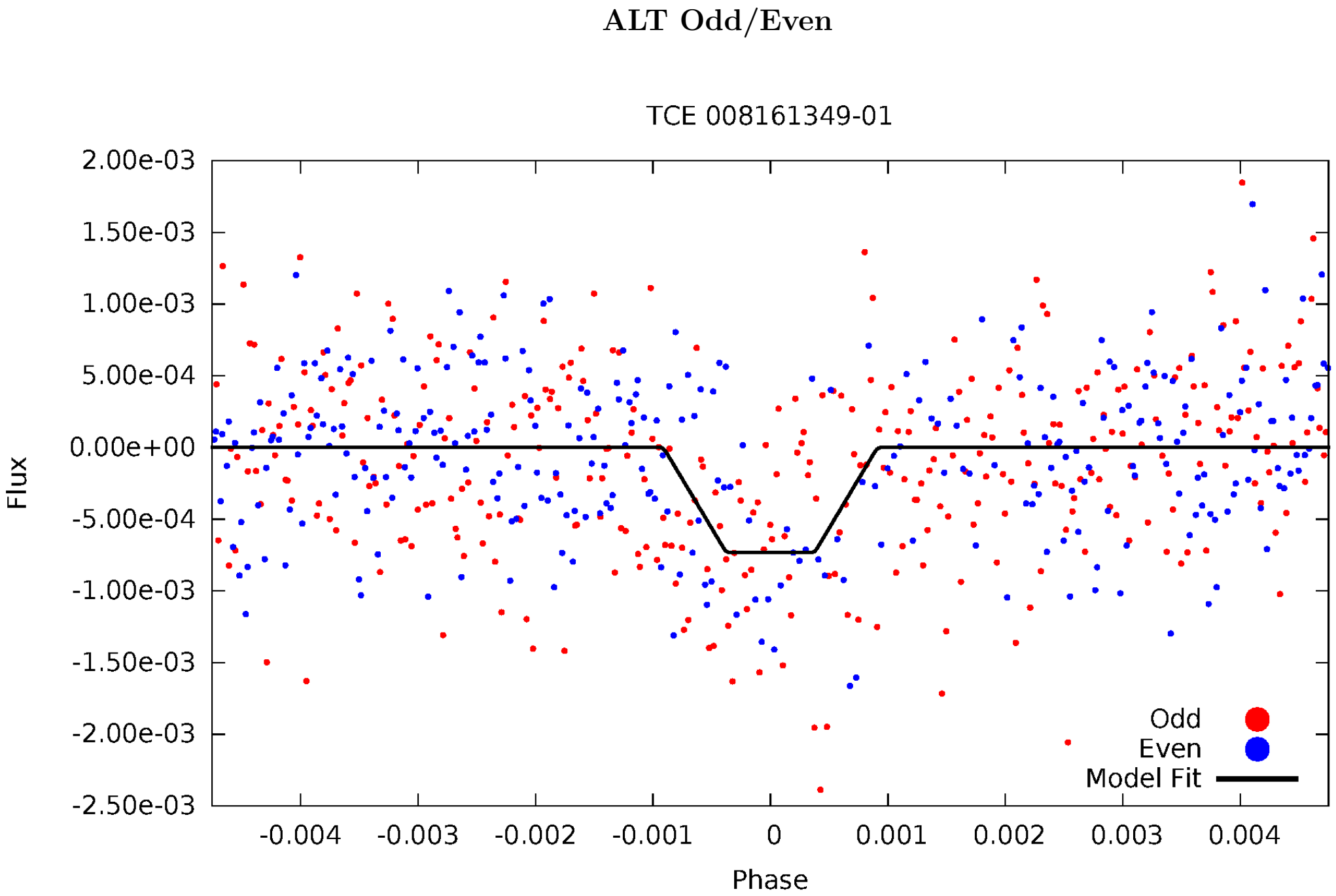
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 008161349-01, PDC Light Curves

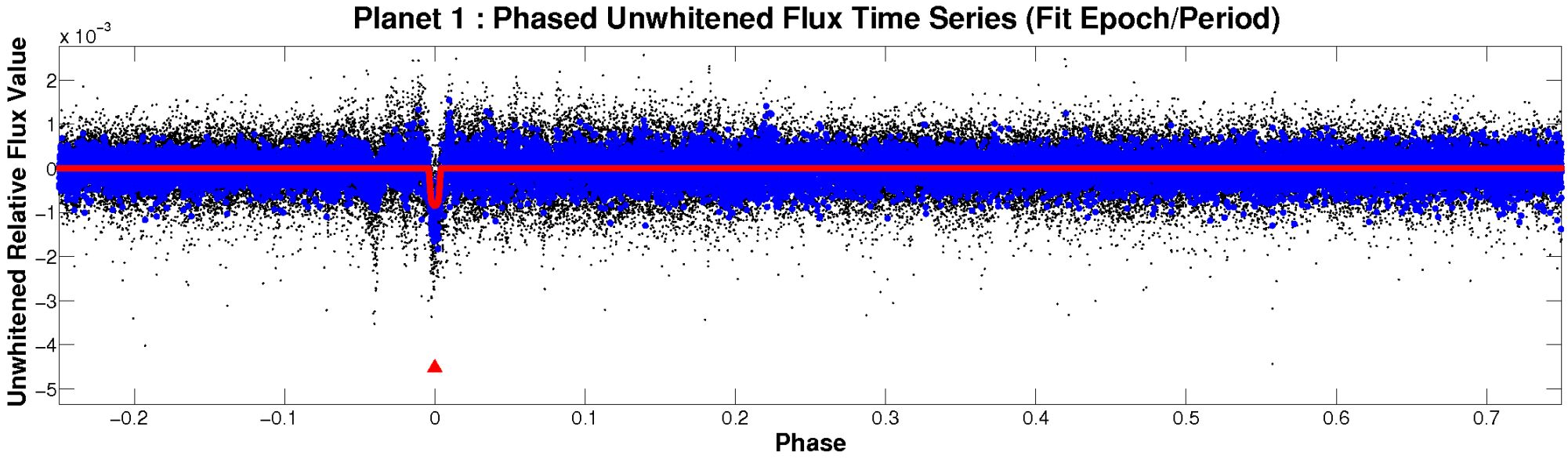


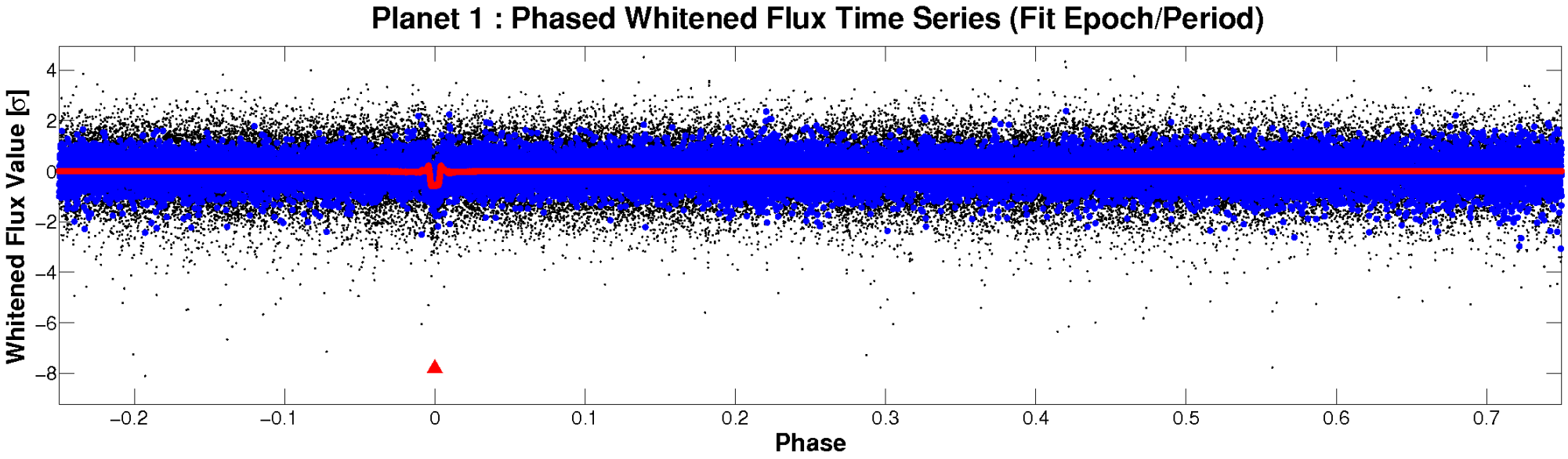

TCE 008161349-01
P = 190.960 days
P = 381.920 days
P = 763.841 days
Normalized Flux
0.003
0.002
0.001
0.000
−0.001
−0.002
−0.003
200
400
600
800
1000
1200
1400
1600
BKJD
Normalized Flux
0.003
0.002
0.001
0.000
−0.001
−0.002
−0.003
−1.0
−0.5
0.0
0.5
1.0
Phase


DV Odd/Even
TCE 008161349-01
3.00e-03
2.00e-03
1.00e-03
0.00e+00
-1.00e-03
-2.00e-03
-3.00e-03
-4.00e-03
Flux
-0.015
-0.01
-0.005
0
0.005
0.01
0.015
Phase
Odd
Even
Model Fit


ALT Odd/Even
TCE 008161349-01
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
Flux
-0.004
-0.003
-0.002
-0.001
0
0.001
0.002
0.003
0.004
Phase
Odd
Even
Model Fit

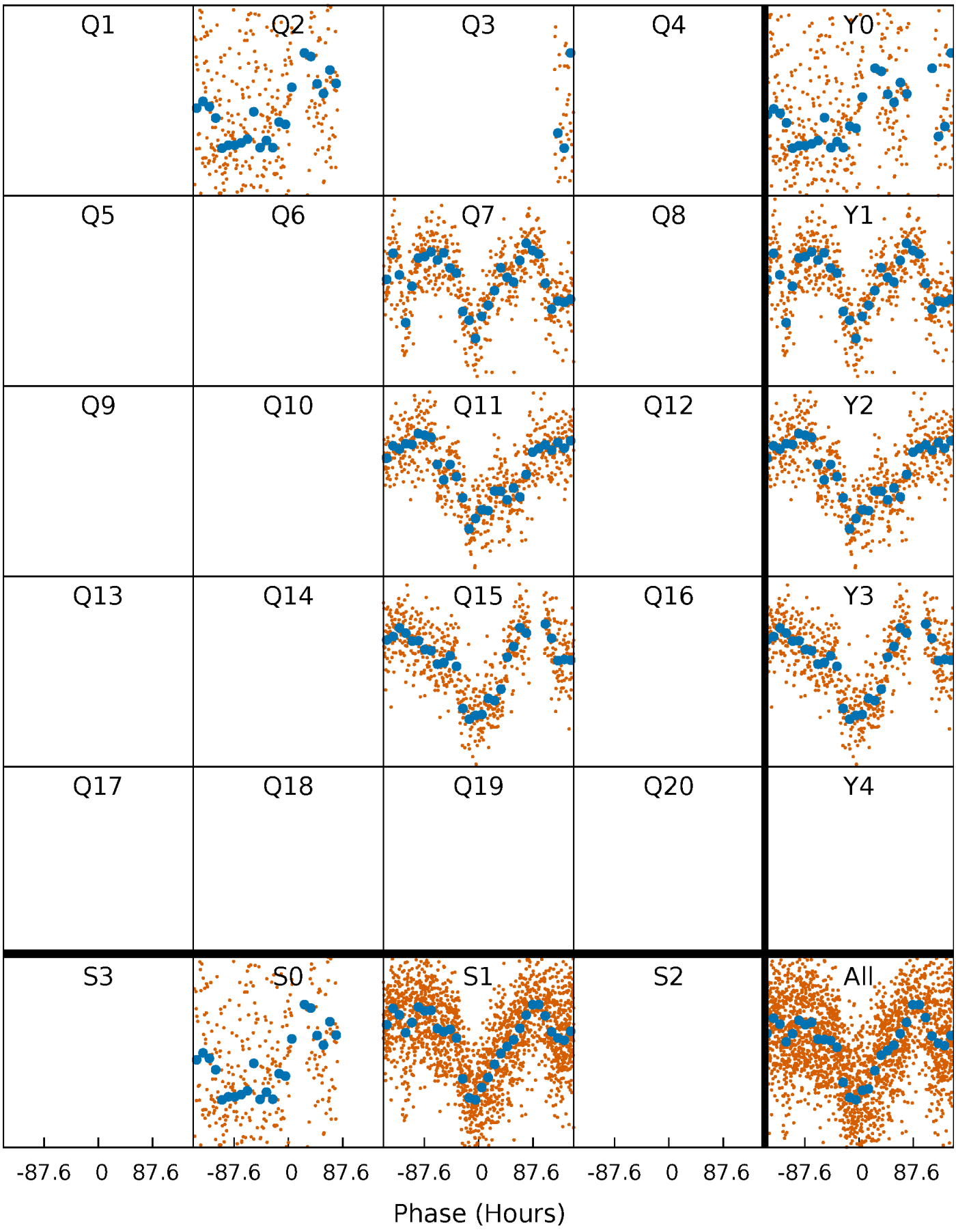
Non-Whitened Vs. Whitened Light Curve





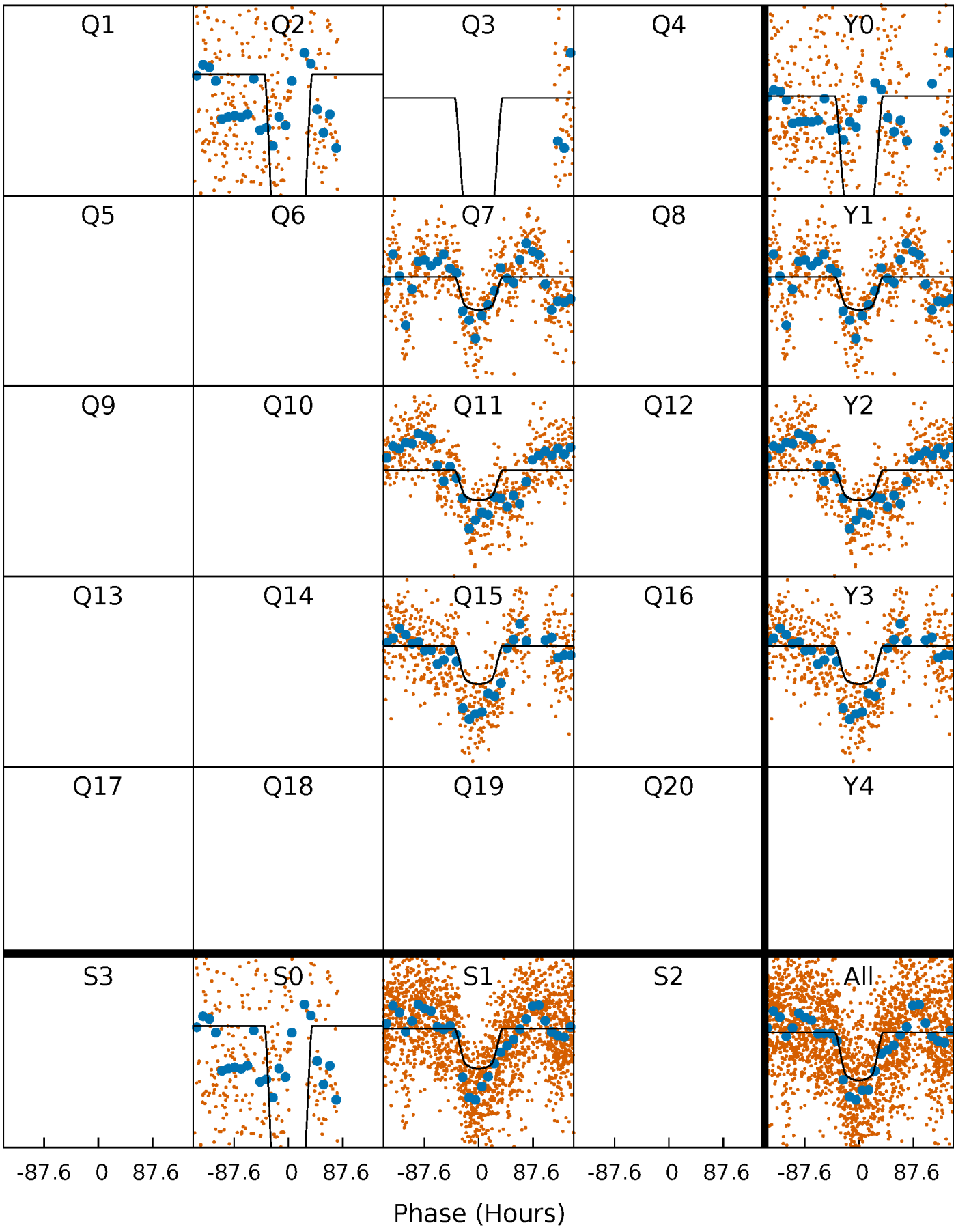
PDC Quarter-Phased Transit Curves

TCE 008161349-01 P=381.920431 Days T_0=255.135235 (BKJD)



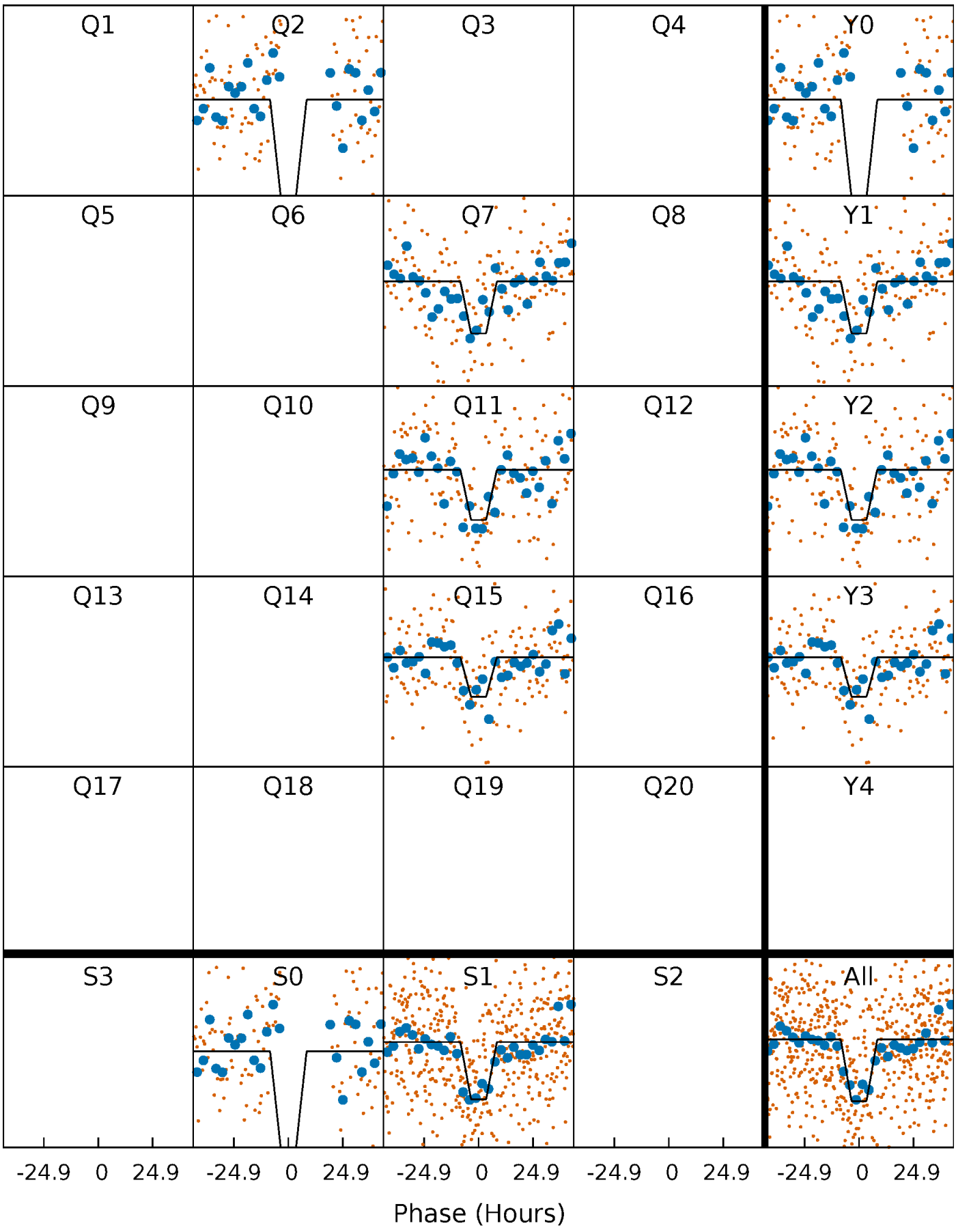
DV Quarter-Phased Transit Curves

TCE 008161349-01 P=381.920431 Days T_0=255.135235 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

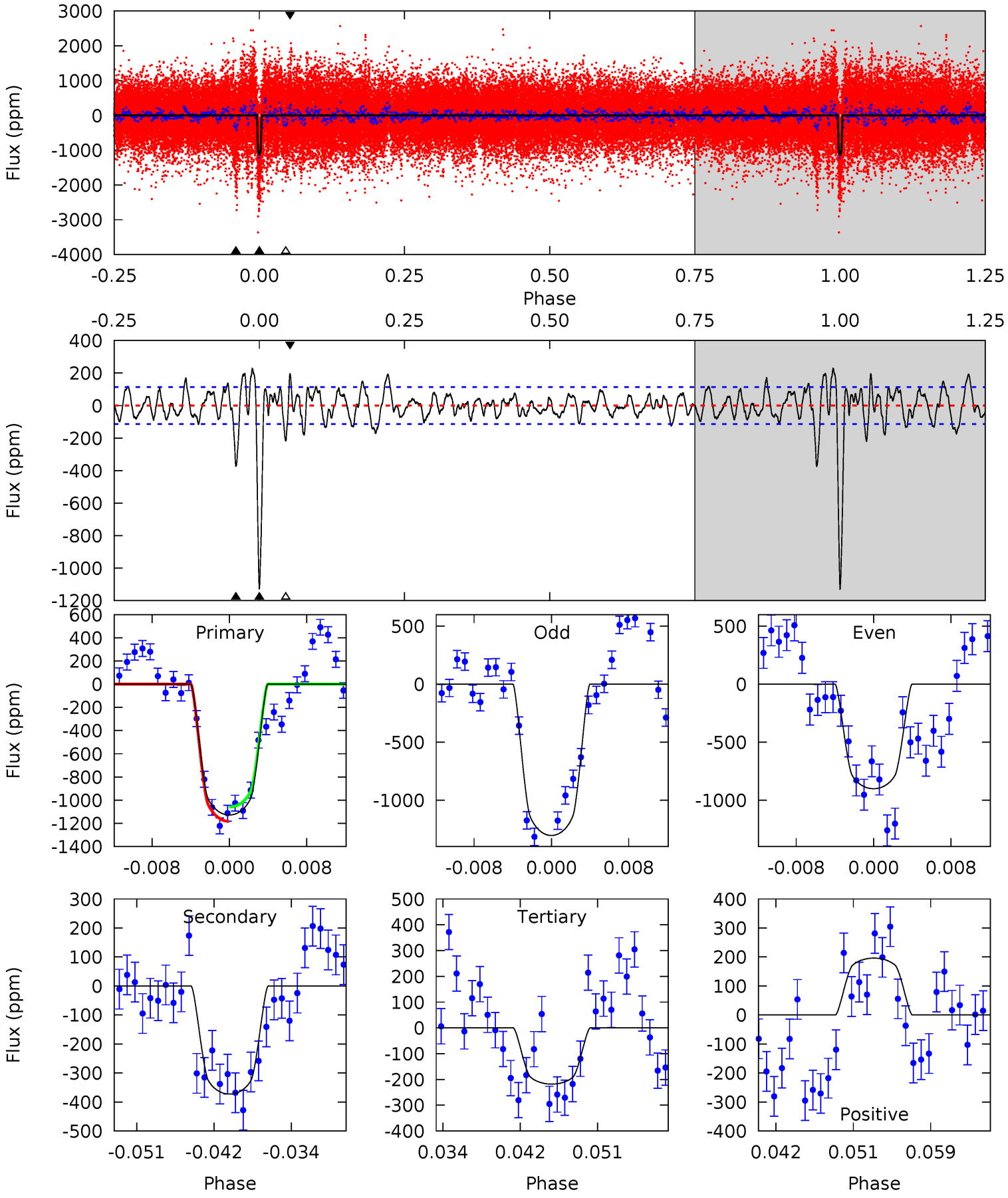
TCE 008161349-01 P=381.467320 Days T_0=255.526834 (BKJD)



DV Model-Shift Uniqueness Test

008161349-01, P = 381.920431 Days, E = 255.135235 Days

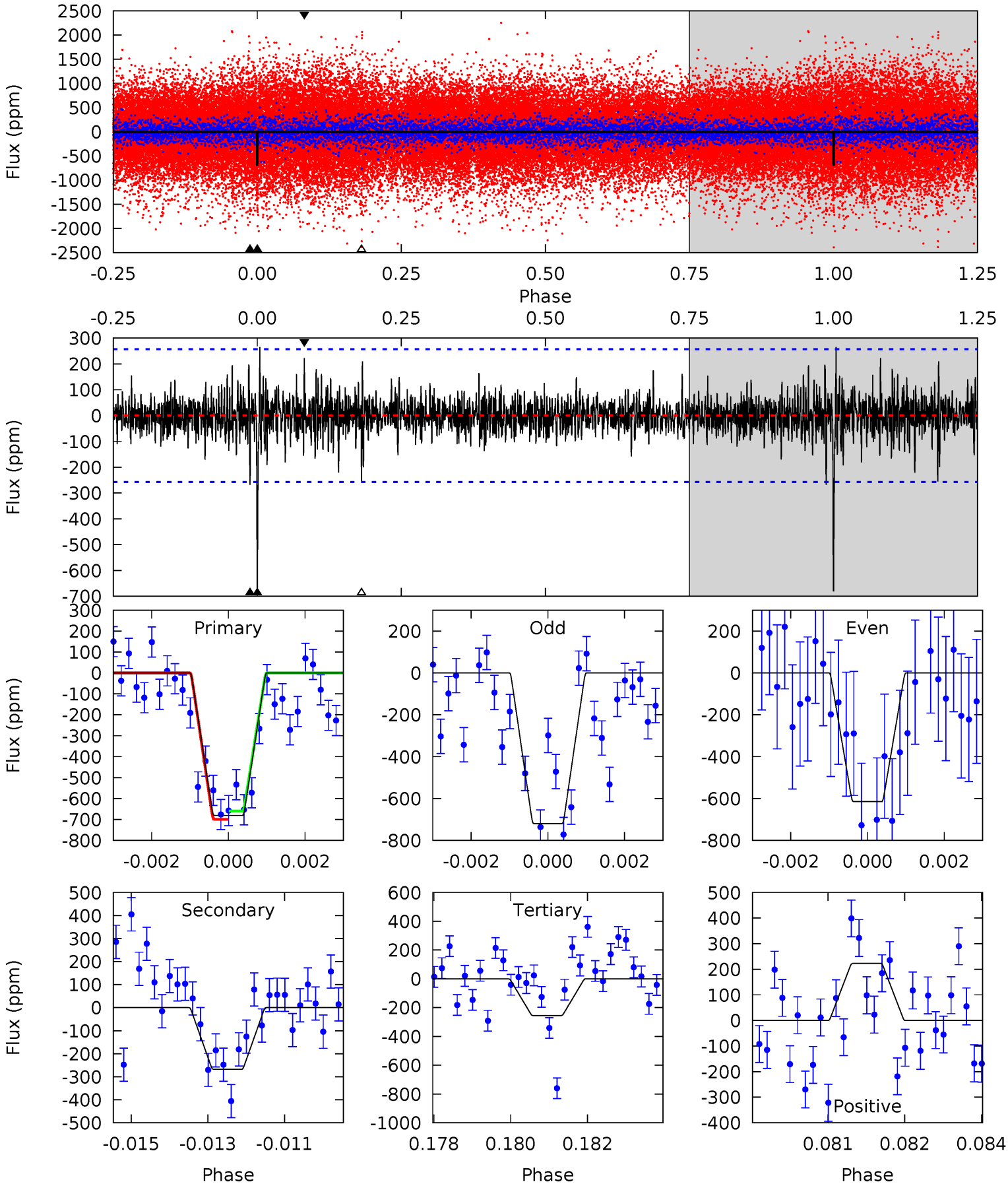
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
50.1	16.5	9.68	8.70	5.06	2.63	2.99	40.4	41.3	6.87	7.84	8.94	0.86	0.17	2.71



Alt Model-Shift Uniqueness Test

008161349-01, P = 381.467320 Days, E = 255.526834 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.1	5.55	5.28	4.62	5.34	3.11	1.12	8.84	9.50	0.27	0.93	1.06	0.67	0.28	0.41



Stellar Parameters For KIC 008161349

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	5663^{+154}_{-188}	$4.530^{+0.035}_{-0.196}$	$0.210^{+0.200}_{-0.300}$	$0.915^{+0.265}_{-0.066}$	$1.034^{+0.090}_{-0.120}$	$1.901^{+0.367}_{-0.965}$
	+3%/-3%	+1%/-4%	+95%/-143%	+29%/-7%	+9%/-12%	+19%/-51%
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 008161349-01 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-373±23	$3.43^{+0.58}_{-0.33}$	335^{+23}_{-15}	4490^{+170}_{-145}	18359^{+4044}_{-4682}
Alt.	-268±48	$2.78^{+0.45}_{-0.30}$	333^{+22}_{-14}	4545^{+246}_{-251}	19237^{+6830}_{-5199}

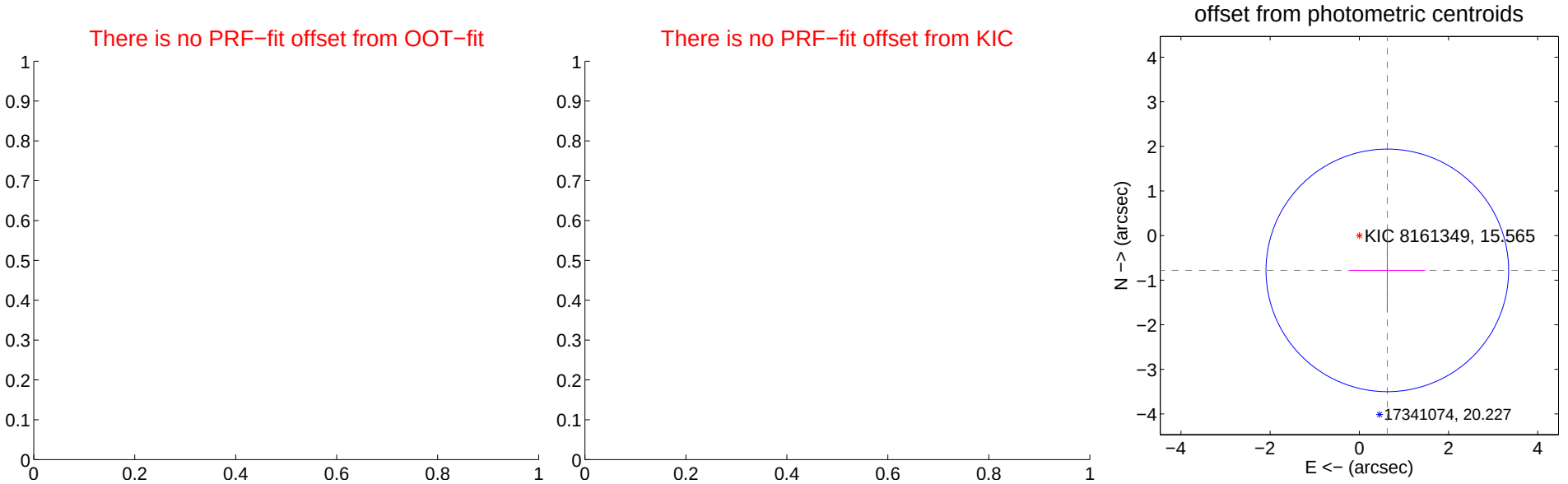
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

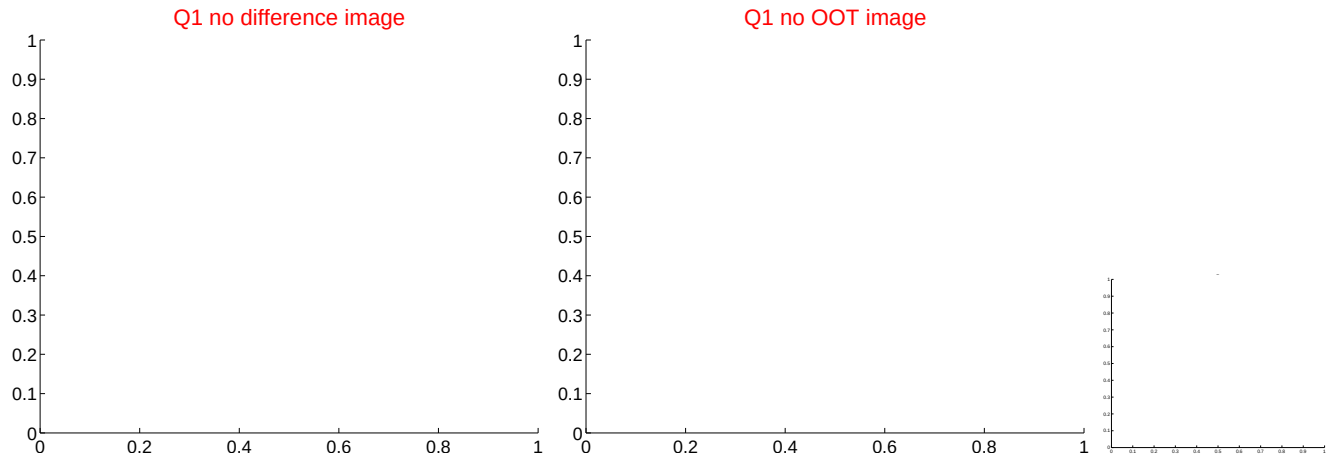
Supplemental centroid analysis for 008161349-01. Kepler magnitude: 15.56. Transit SNR 11.32
There are 0 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

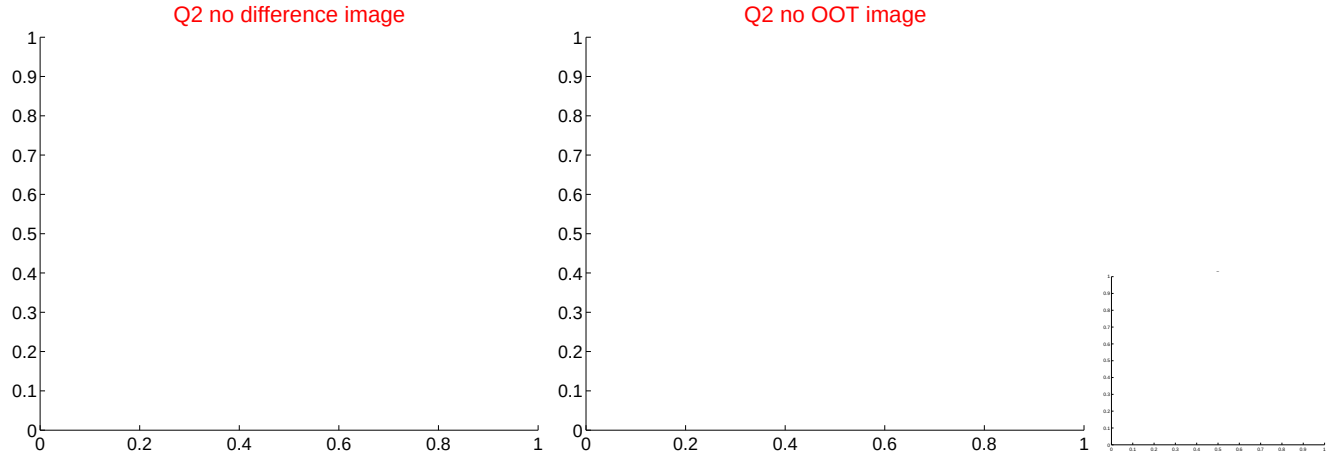
	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	1.00 ± 0.91	1.10	-0.63 ± 0.85	-0.78 ± 0.94

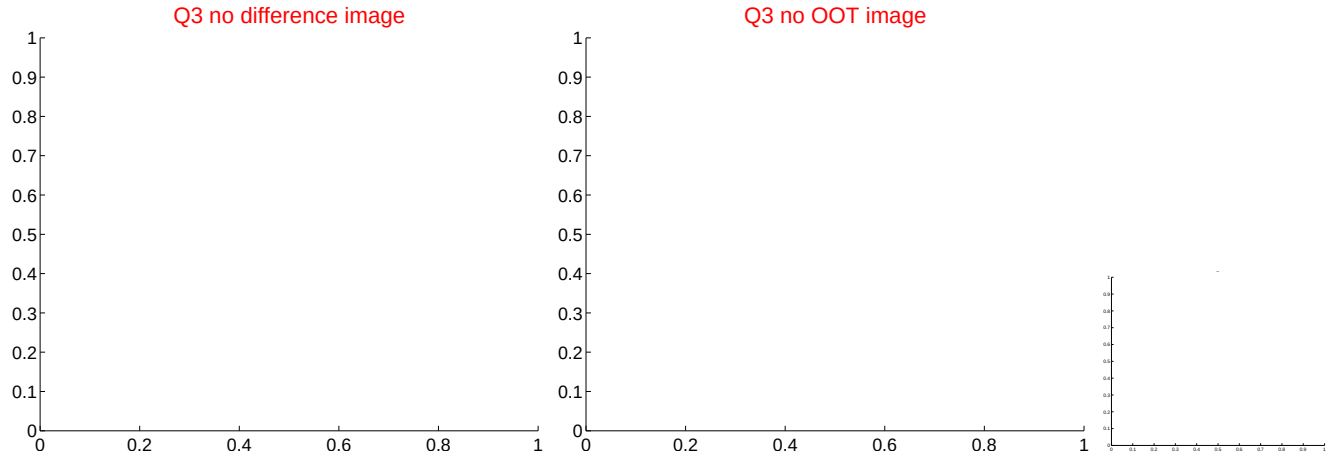


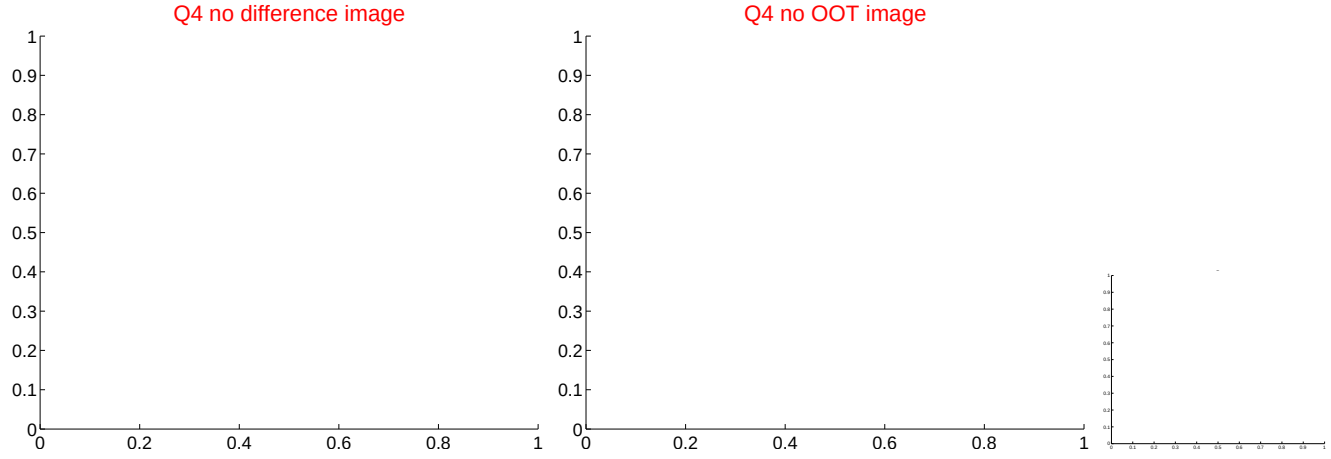
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

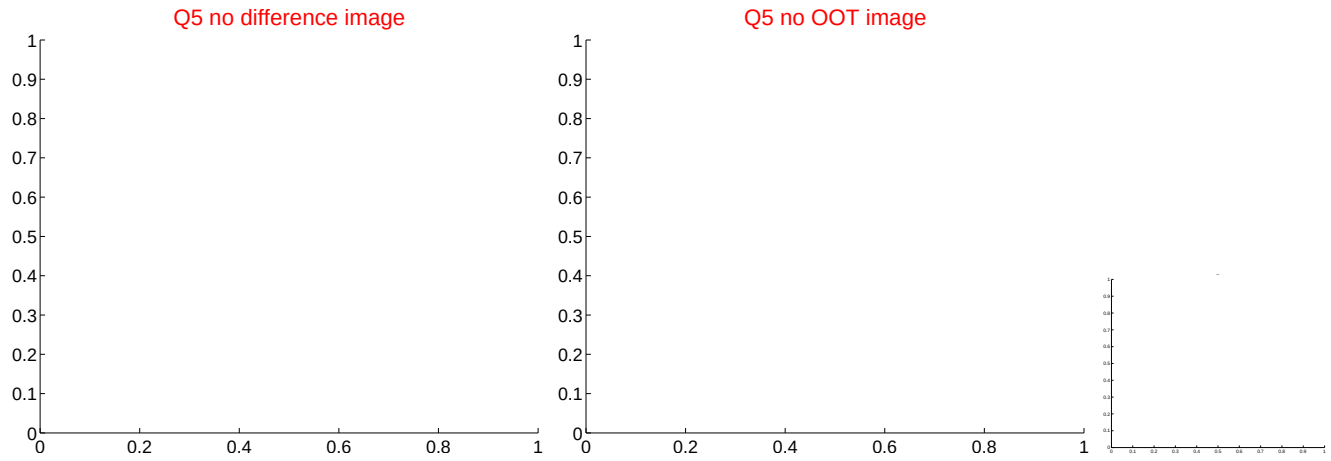


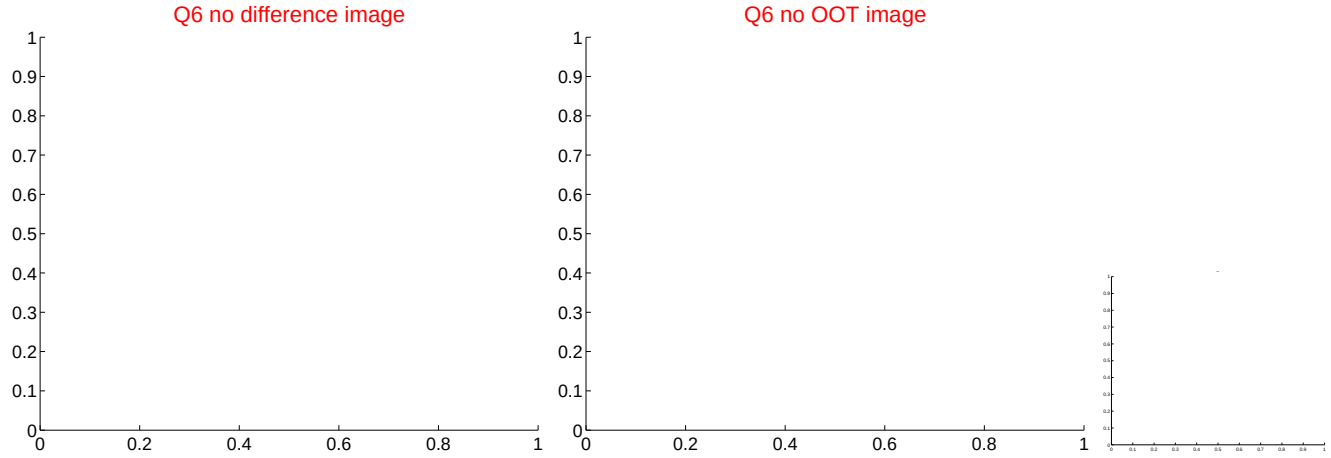


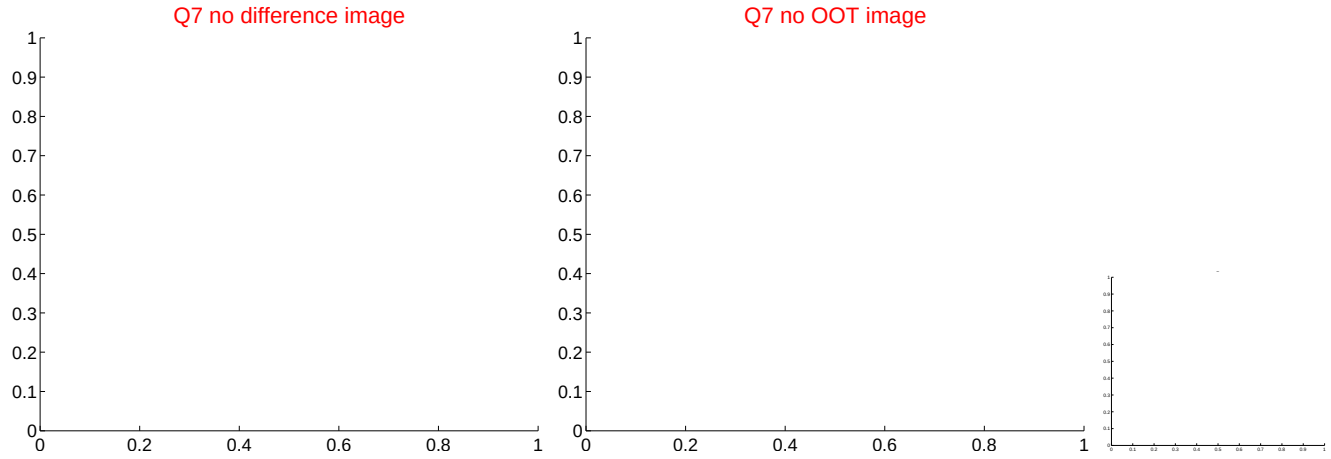


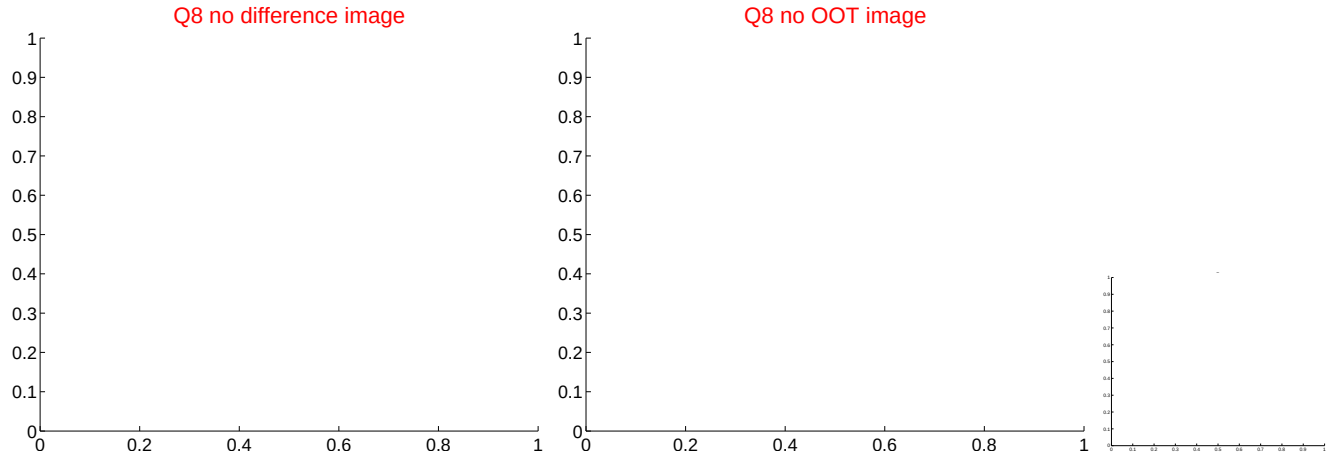


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

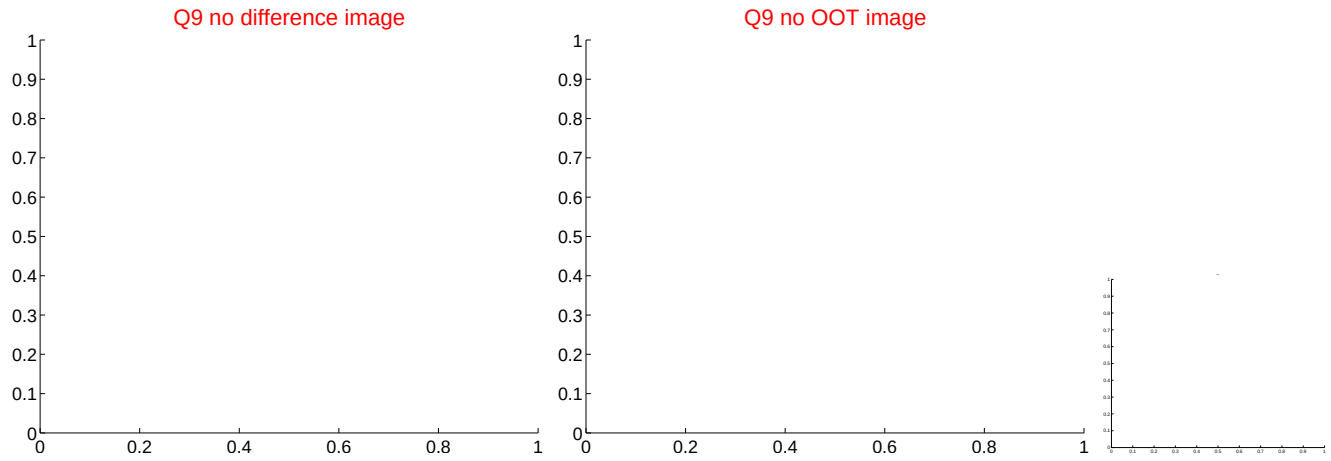


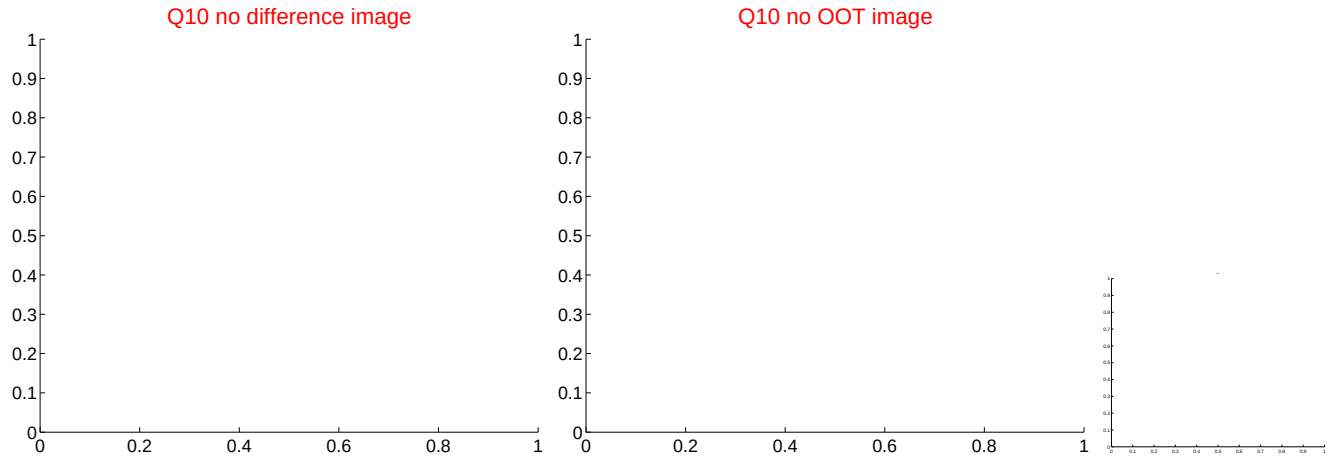


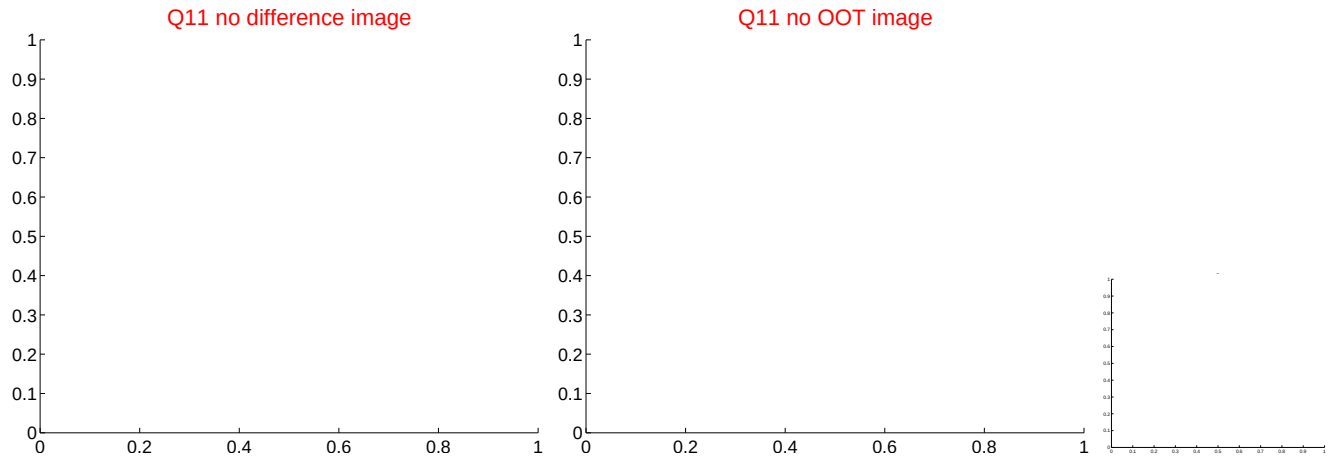


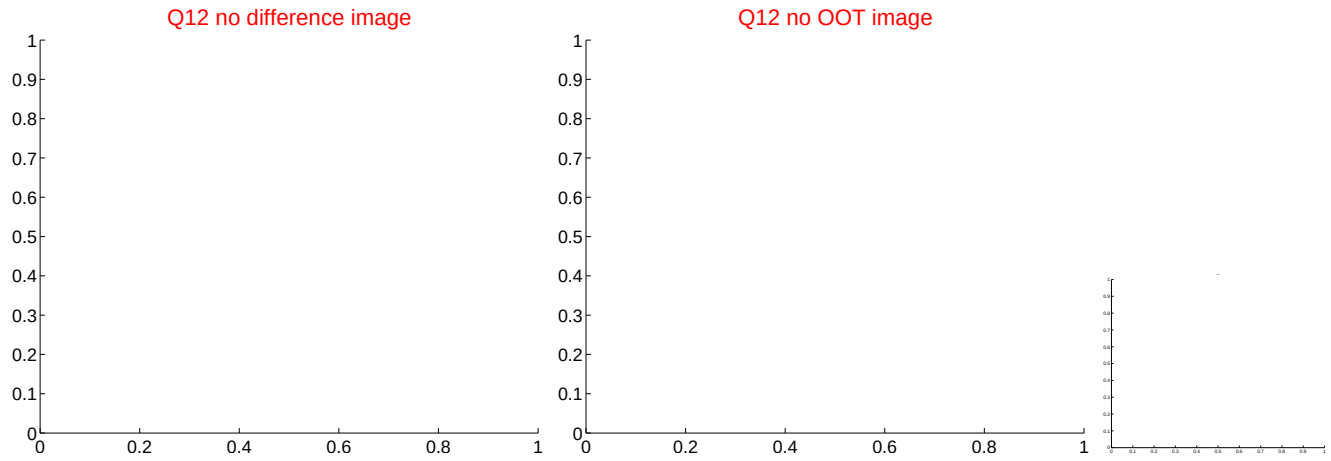


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

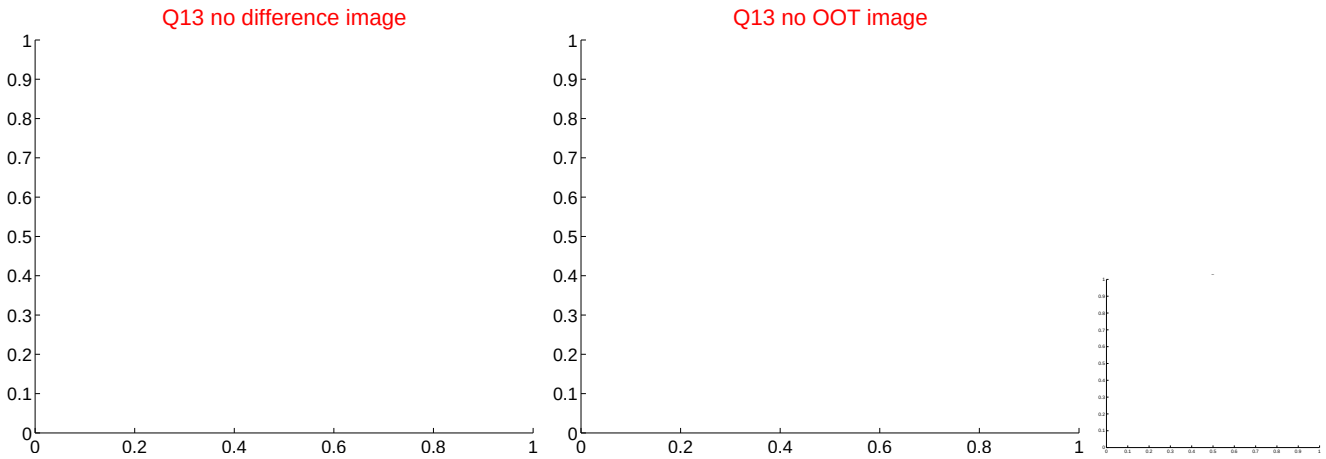


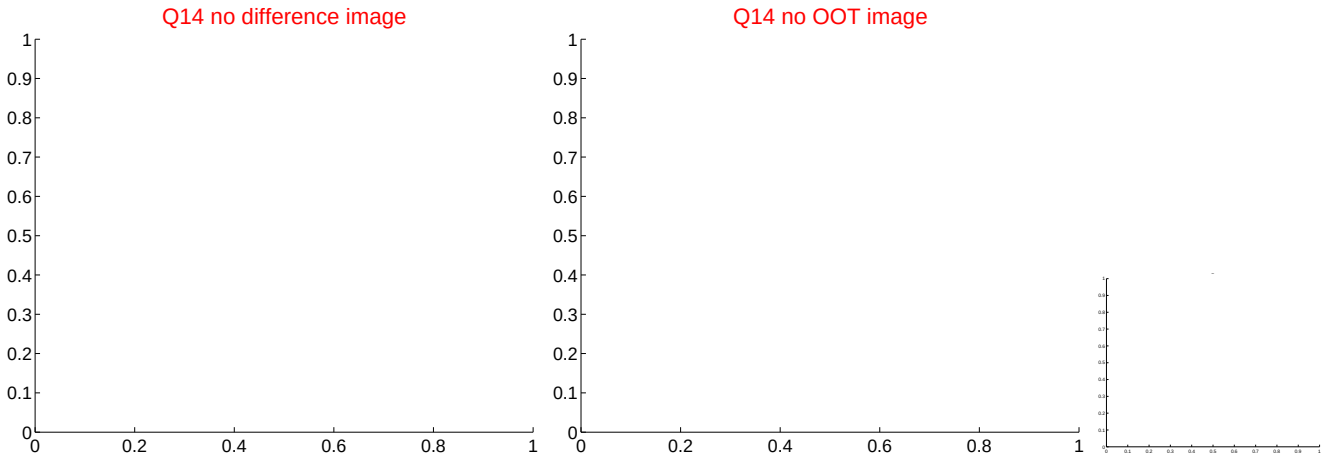


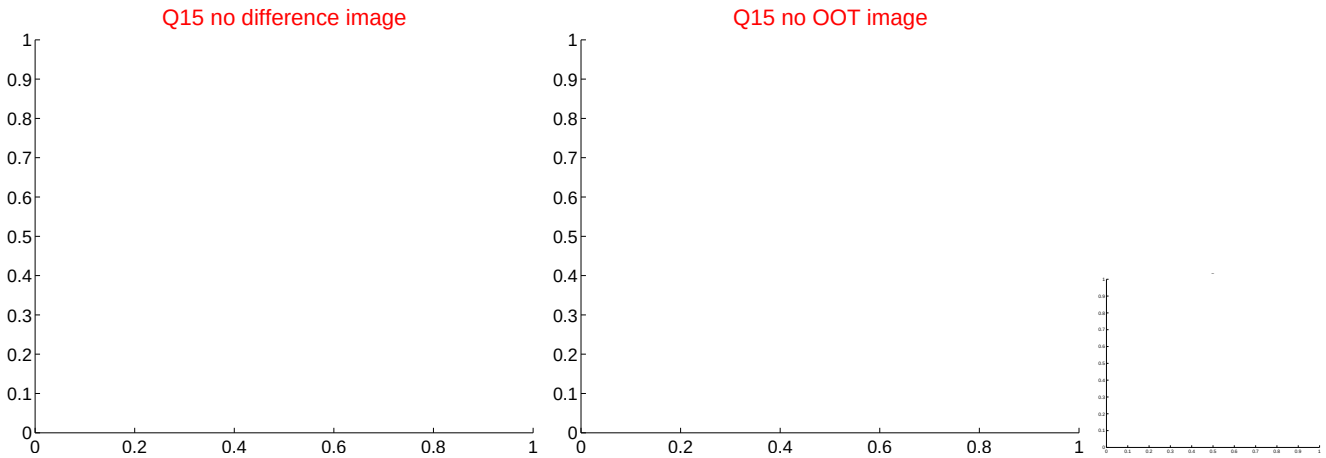


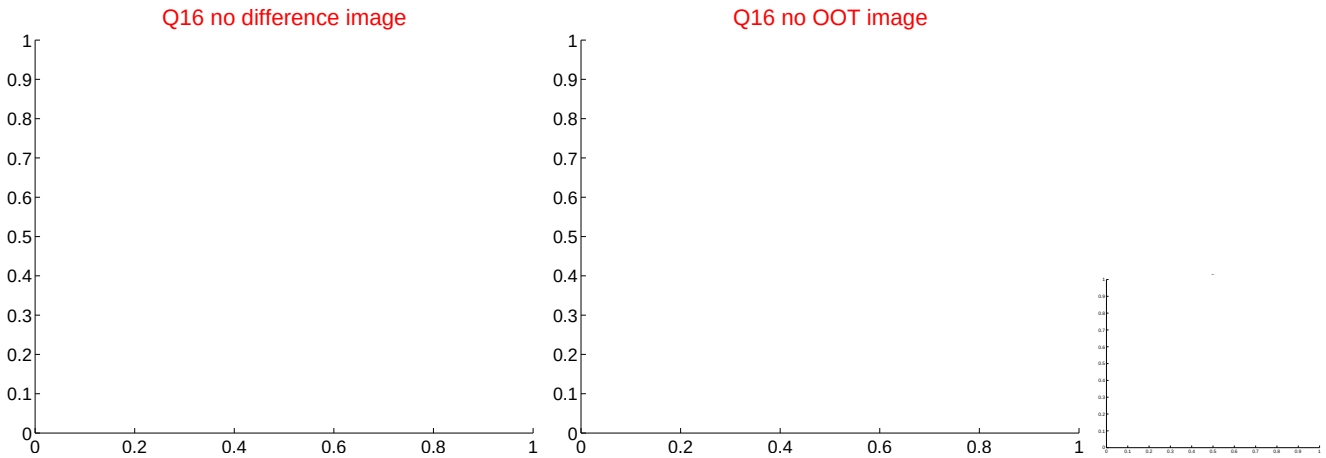


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

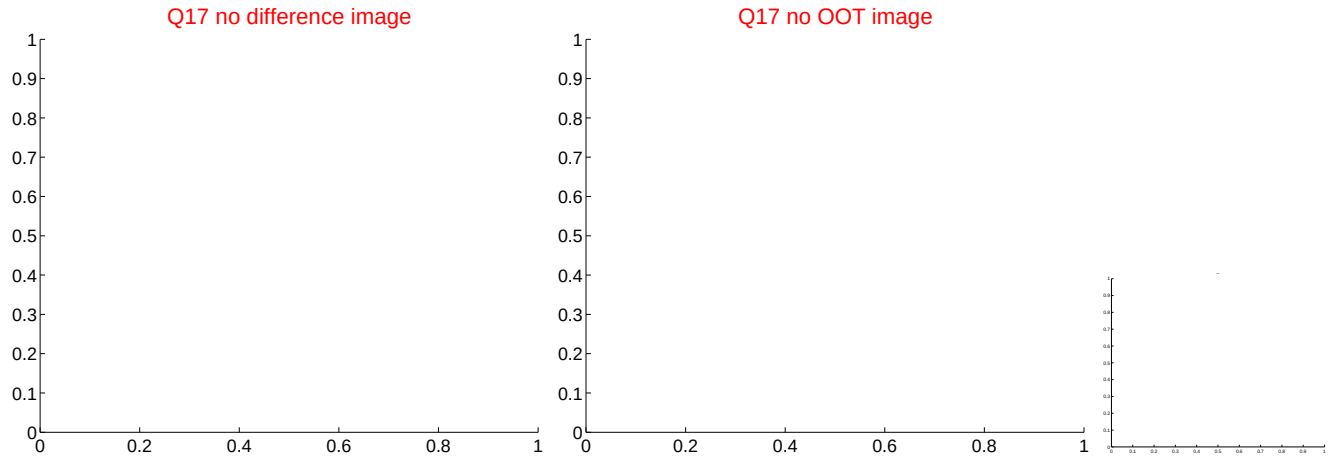


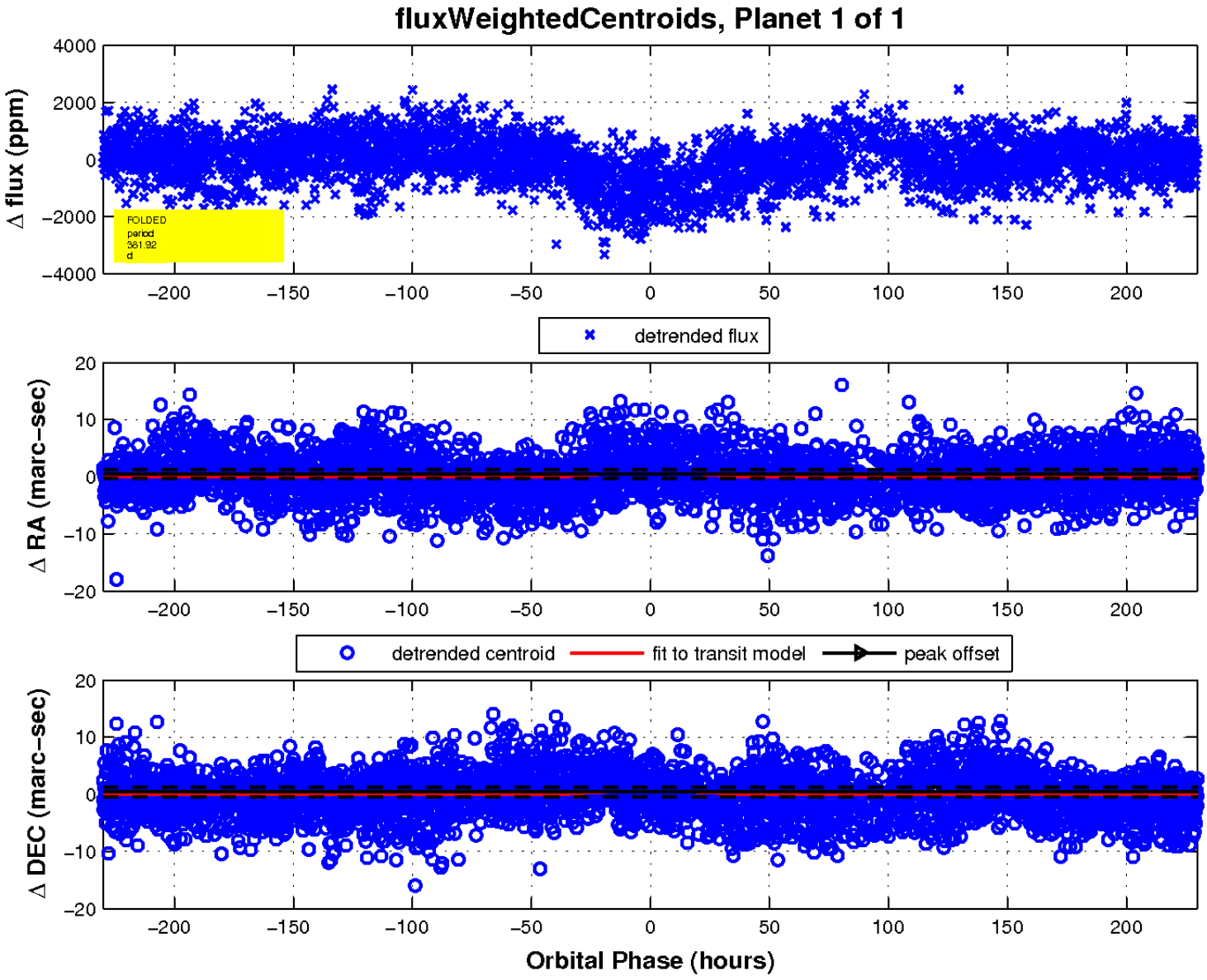






white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.





UKIRT Image