KIC 008144955

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	$R_\star$ ($R_\odot$)	$T_\star$ (K)	R_p ($R_\oplus$)	S_p ($S_\oplus$)
008144955-01	OBS	No	401.678735	209.315985	486.0	8.328	7.2	7.8	0.86	5762	2.04	0.66

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008144955-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.
See `http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col` for comment definitions.

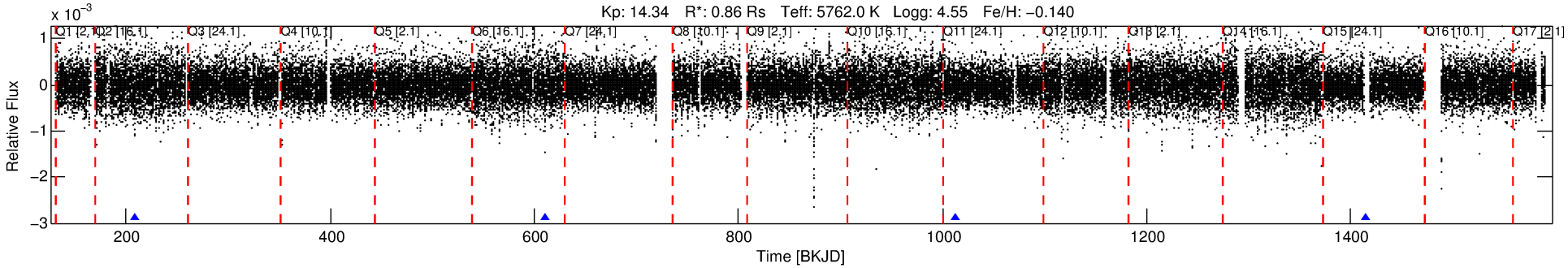
Ephemeris Match Information For 008144955-01

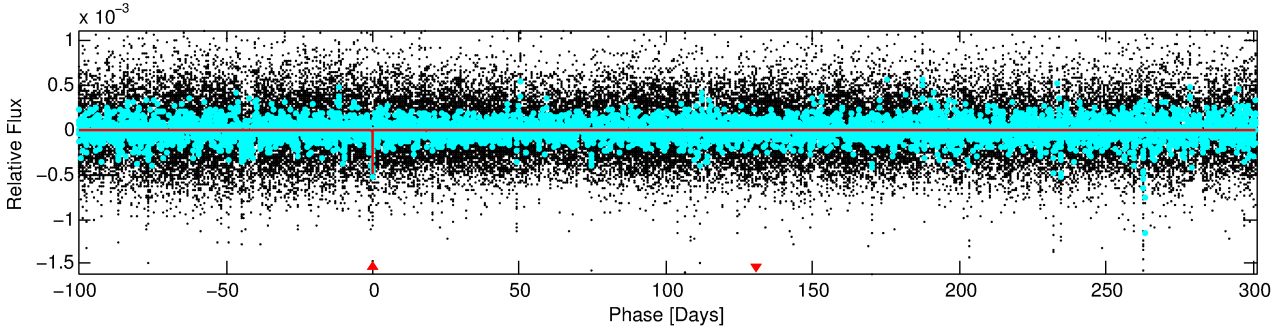
No Significant Match Found

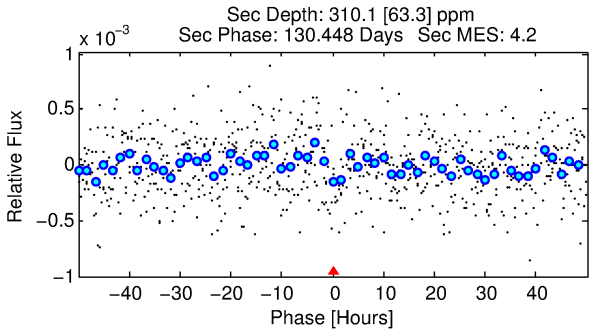
DV One-Page Summary

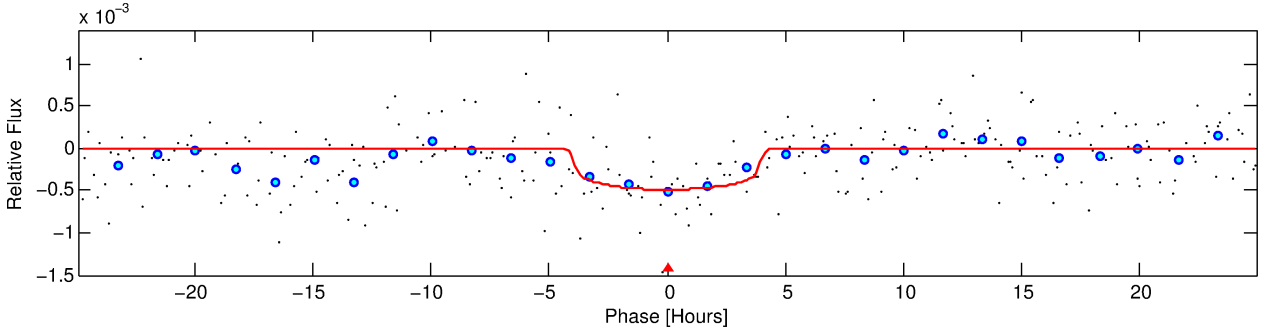
KIC: 8144955 Candidate: 1 of 1 Period: 401.679 d

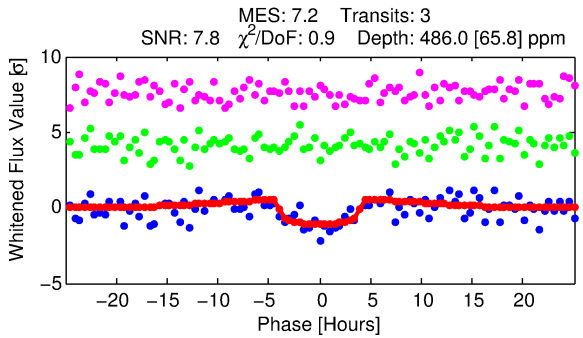
Kp: 14.34 R*: 0.86 Rs Teff: 5762.0 K Logg: 4.55 Fe/H: −0.140

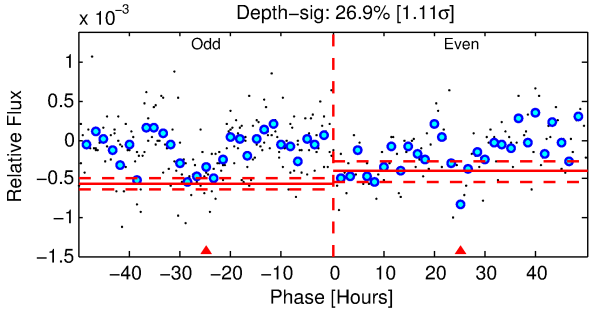


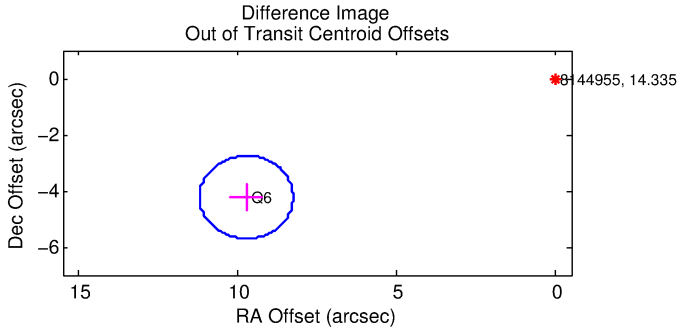












DV Fit Results:

Period = 401.67873 [0.01096] d
Epoch = 209.3160 [0.0177] BKJD
Rp/R* = 0.0217 [0.0128]
a/R* = 265.36 [695.41]
b = 0.72 [1.73]

Seff = 0.66 [0.25]
Teq = 230 [21] K
Rp = 2.04 [1.33] Re
a = 1.0478 [0.2534] AU

Ag = 45094.01 [56245.37] [0.80σ]
Teffp = 5186 [1556] K [3.18σ]

DV Diagnostic Results:

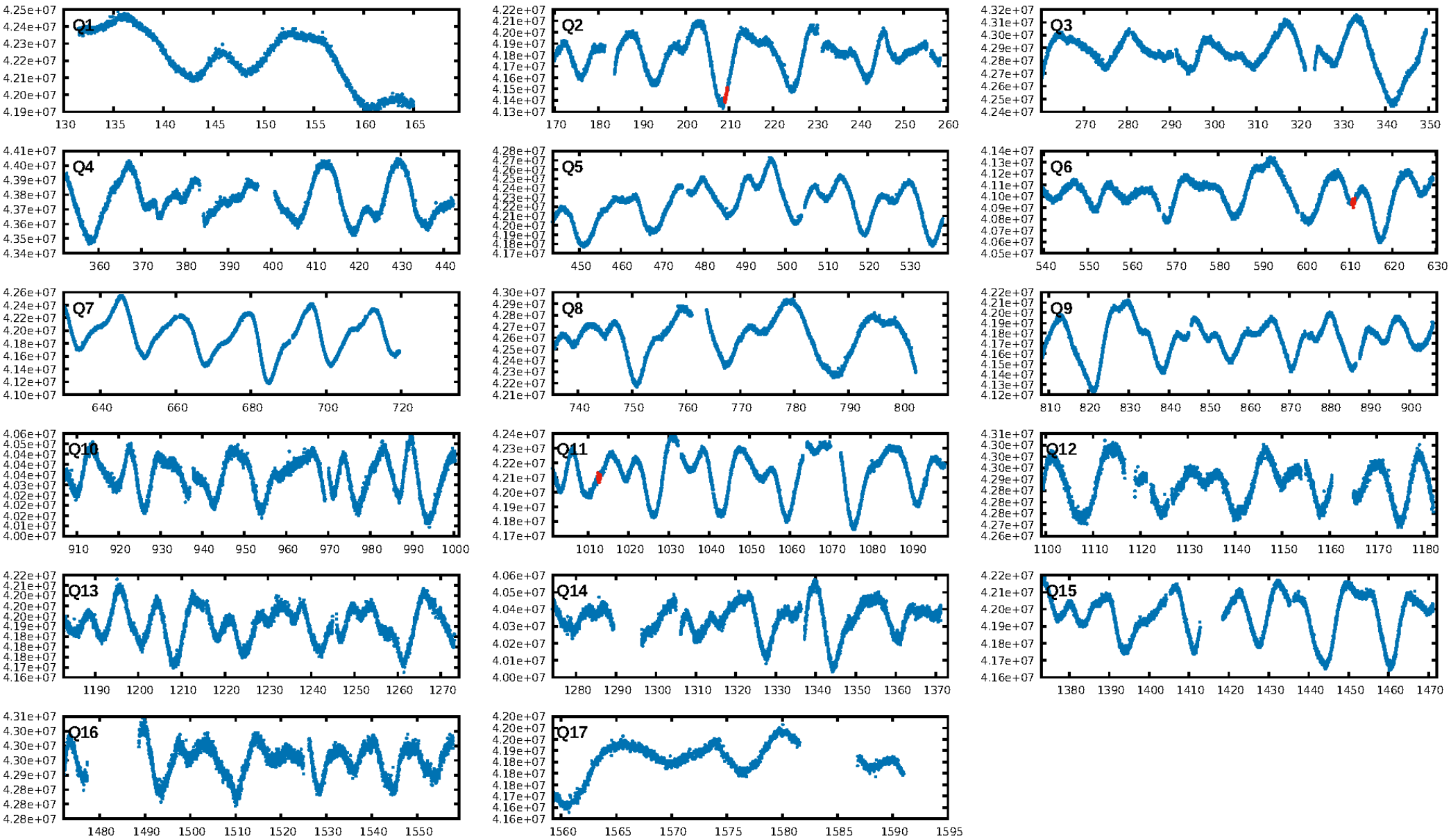
ShortPeriod−sig: N/A
LongPeriod−sig: N/A
ModelChiSquare2−sig: 64.4%
ModelChiSquareGof−sig: 100.0%
Bootstrap−pfa: 1.81e−09
RollingBand−fgt: 1.00 [3/3]
GhostDiagnostic−chr: 0.598

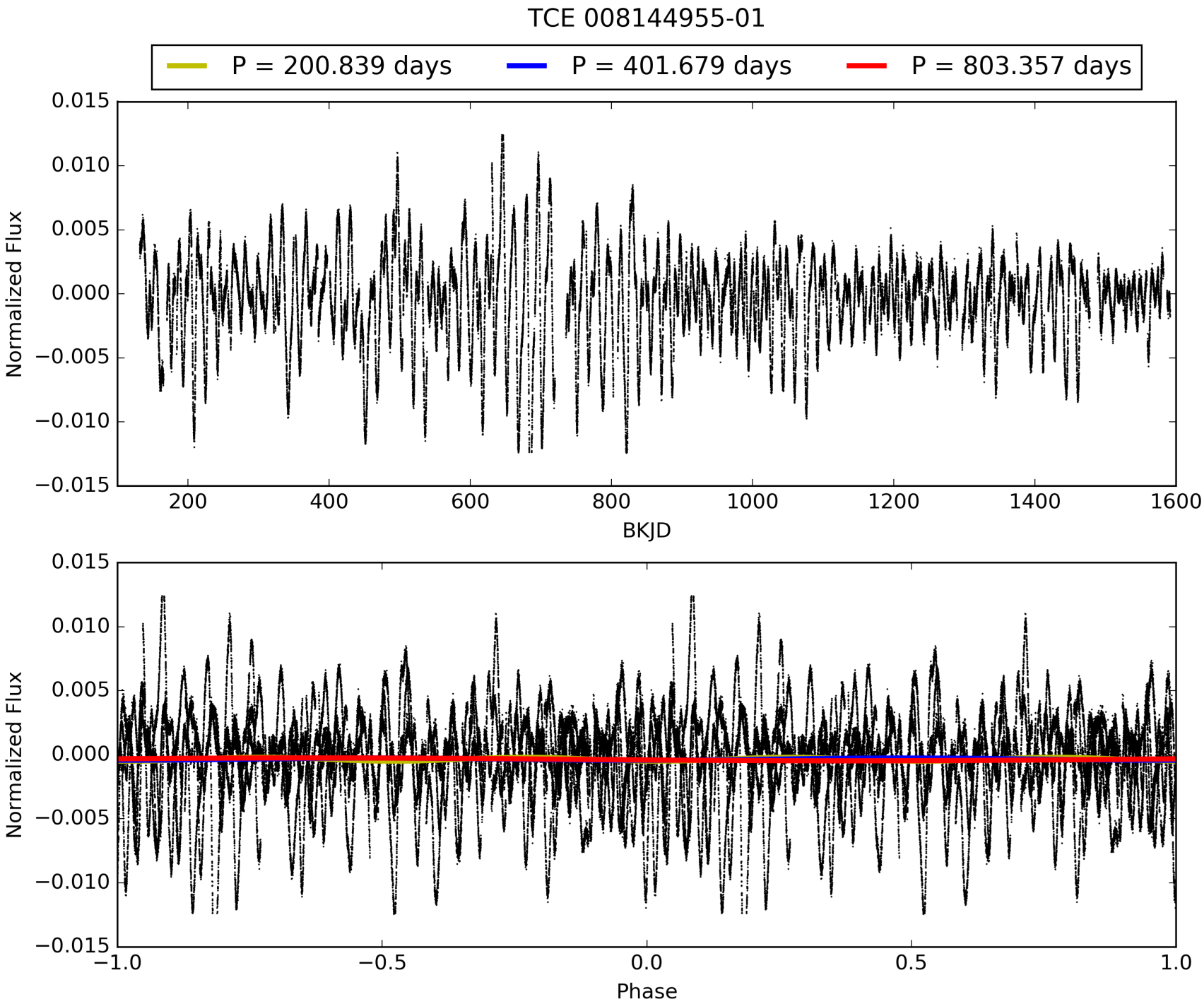
Centroid−sig: 96.0%
Centroid−so: 2.786 arcsec [1.52σ]
OotOffset−rm: 10.605 arcsec [21.62σ]
KicOffset−rm: 0.634 arcsec [1.29σ]
OotOffset−st: 1/0/0/0 [1]
KicOffset−st: 1/0/0/0 [1]
DiffImageQuality−fgm: 1.00 [1/1]
DiffImageOverlap−fno: 1.00 [3/3]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31−Jan−2016 22:23:13 Z

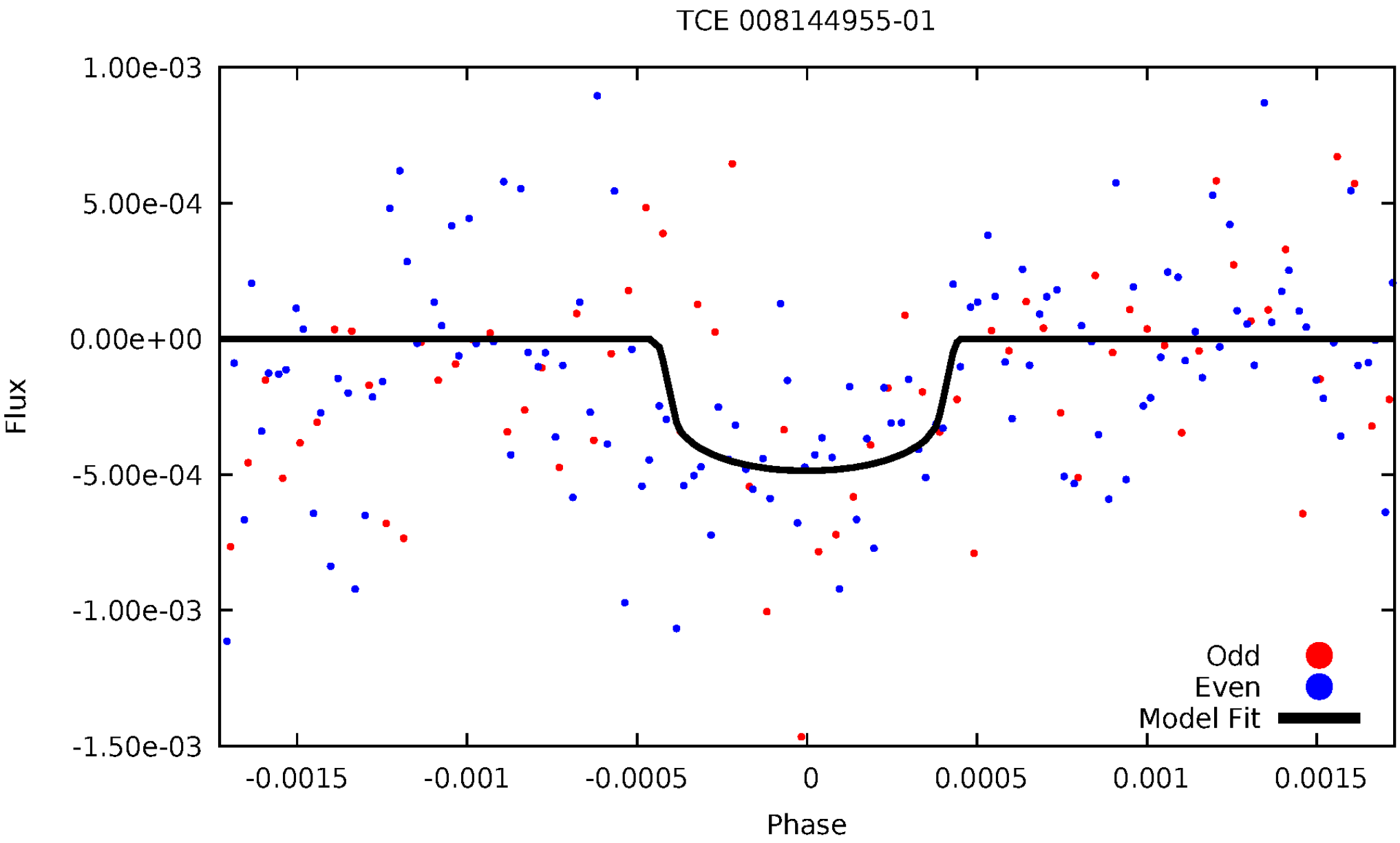
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 008144955-01, PDC Light Curves

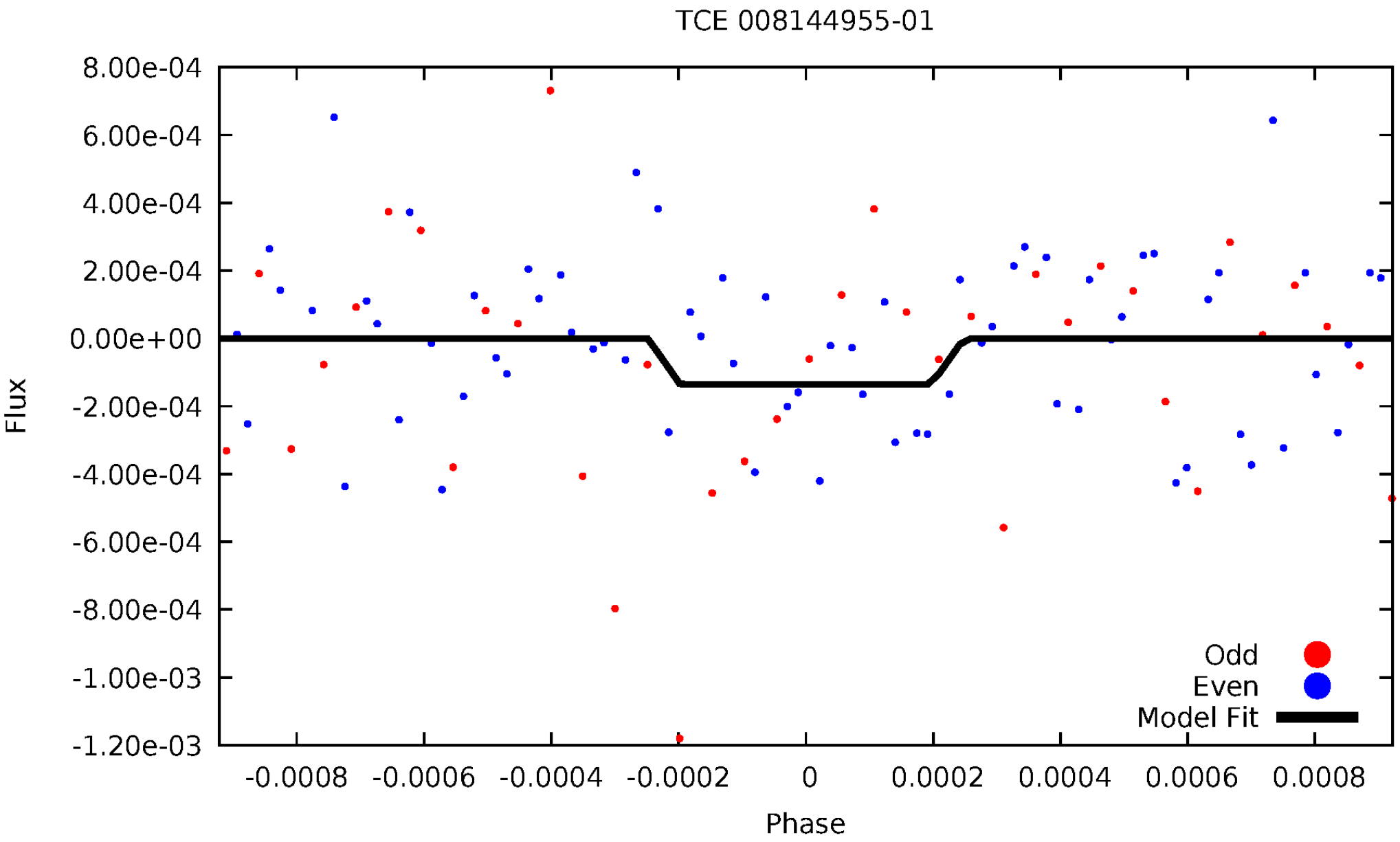



TCE 008144955-01
P = 200.839 days
P = 401.679 days
P = 803.357 days
Normalized Flux
BKJD
Normalized Flux
Phase

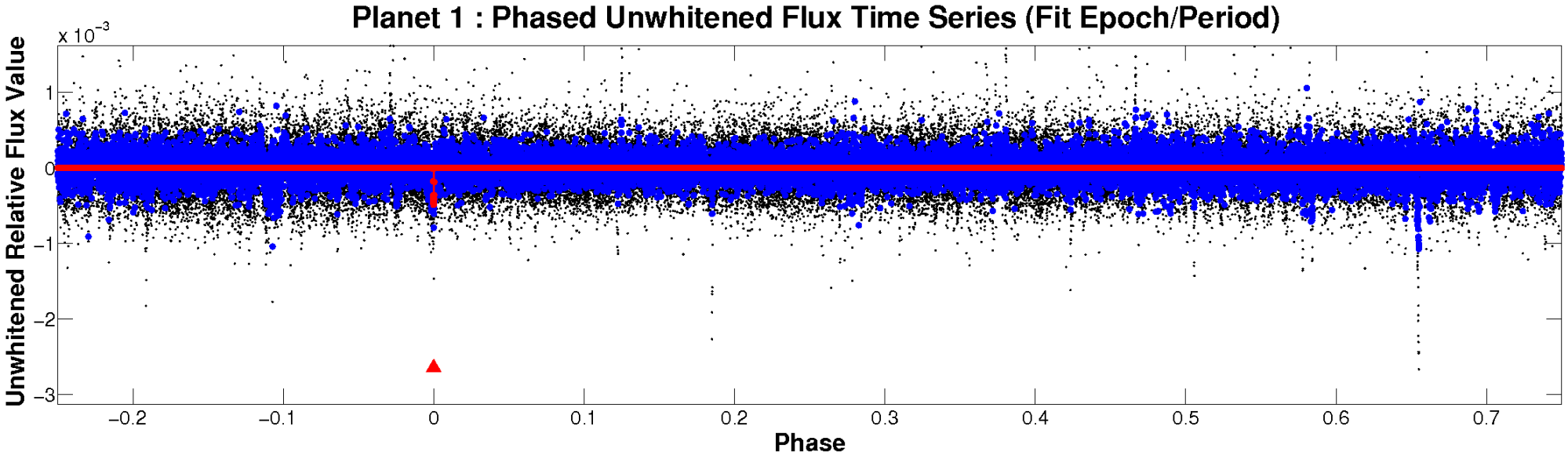
DV Odd/Even

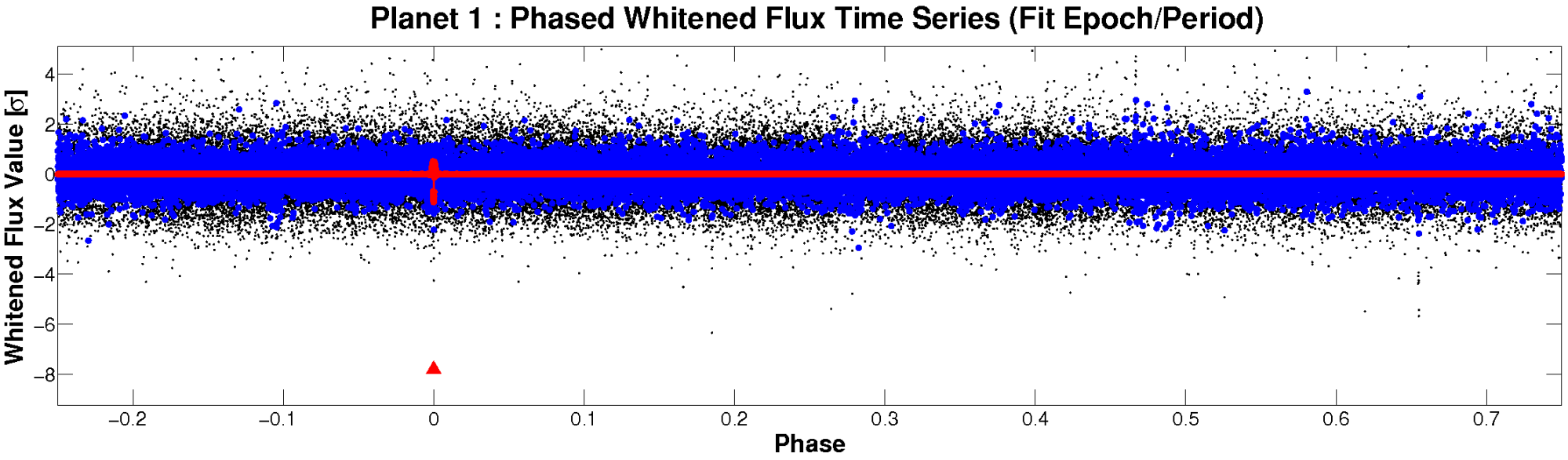

TCE 008144955-01
1.00e-03
5.00e-04
0.00e+00
-5.00e-04
-1.00e-03
-1.50e-03
Flux
-0.0015
-0.001
-0.0005
0
0.0005
0.001
0.0015
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 008144955-01
8.00e-04
6.00e-04
4.00e-04
2.00e-04
0.00e+00
-2.00e-04
-4.00e-04
-6.00e-04
-8.00e-04
-1.00e-03
-1.20e-03
Flux
-0.0008
-0.0006
-0.0004
-0.0002
0
0.0002
0.0004
0.0006
0.0008
Phase
Odd
Even
Model Fit

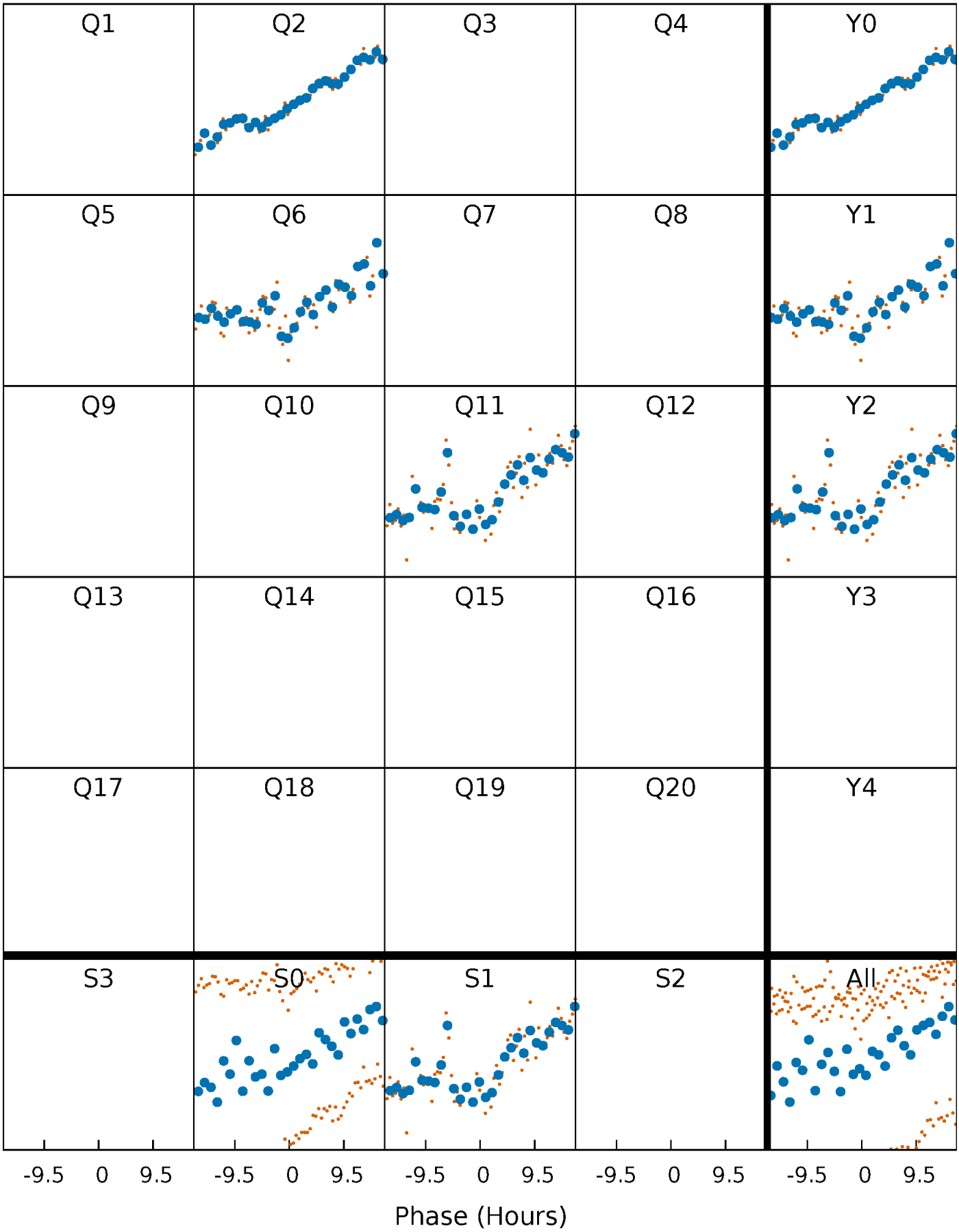
Non-Whitened Vs. Whitened Light Curve





PDC Quarter-Phased Transit Curves

TCE 008144955-01 P=401.678735 Days T_0=209.315985 (BKJD)



DV Quarter-Phased Transit Curves

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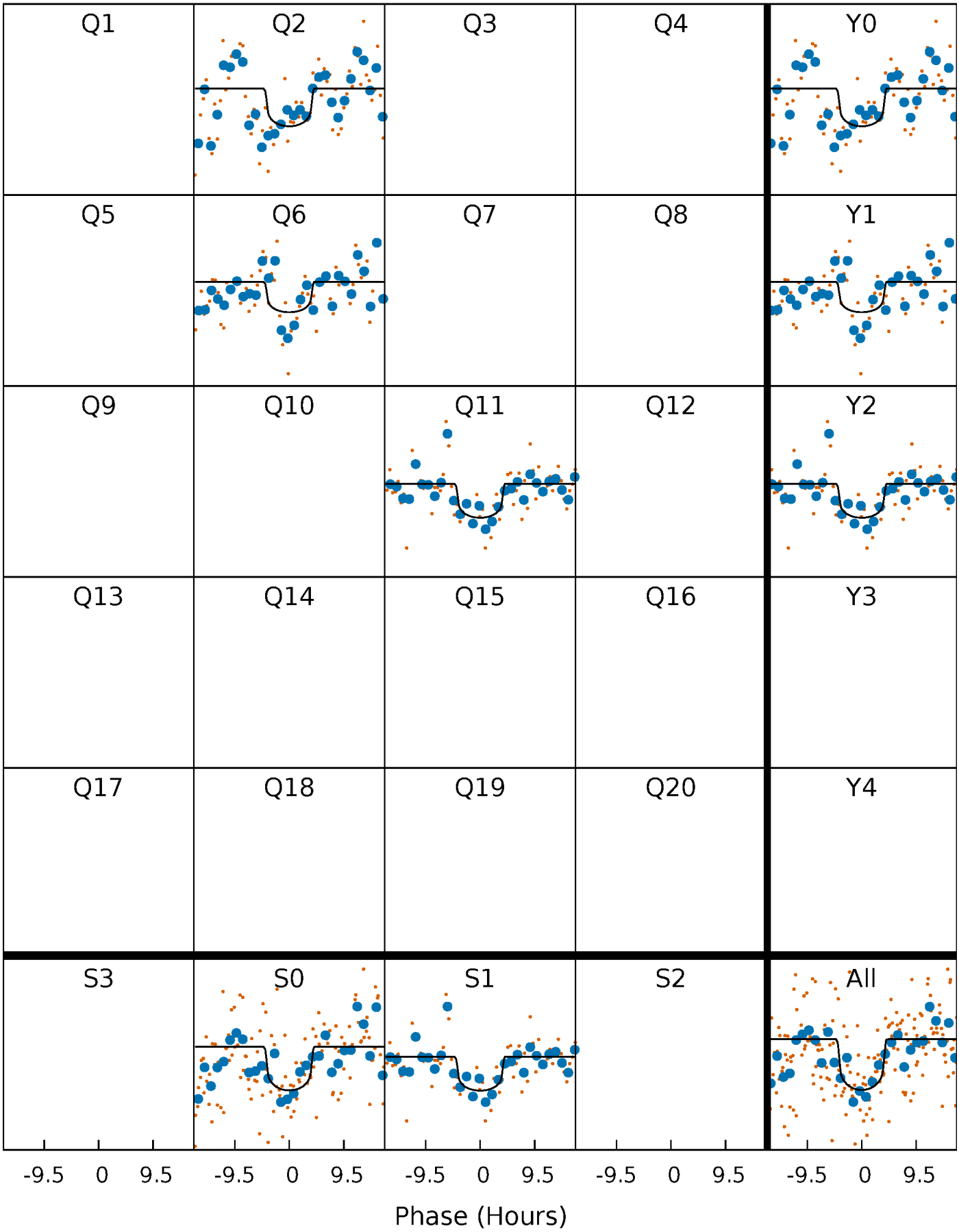
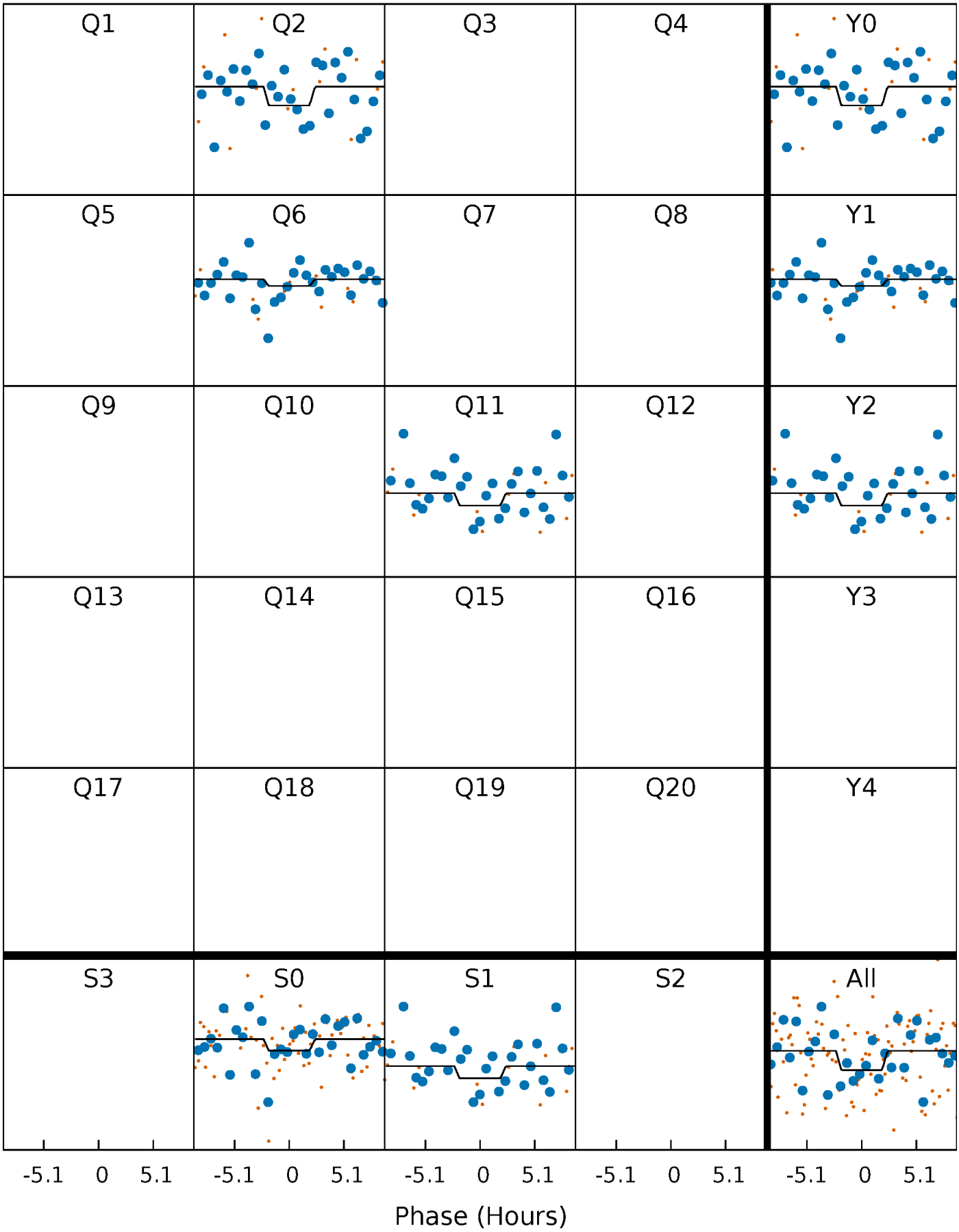


Alt. Detrend Quarter-Phased Transit Curves

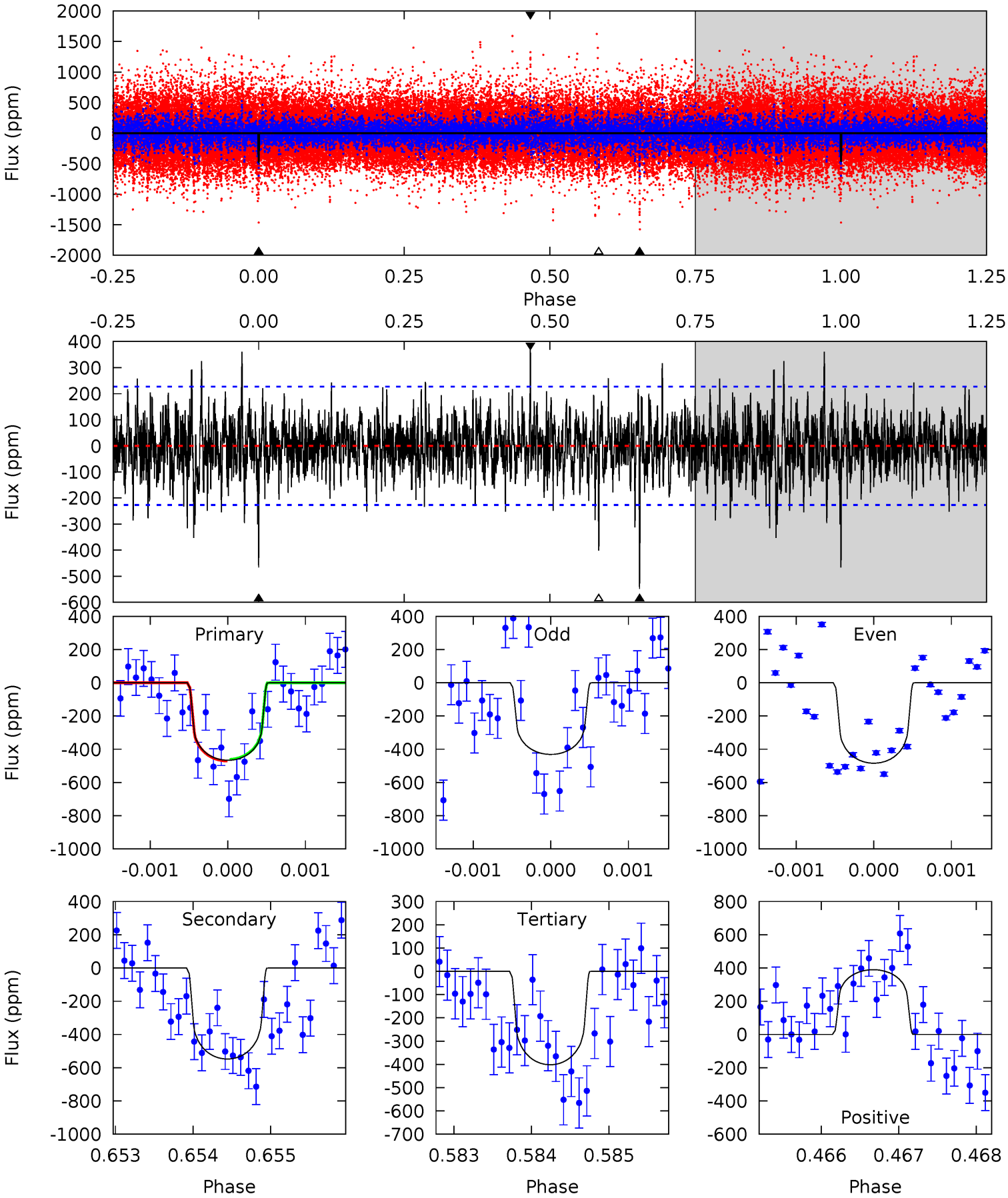
TCE 008144955-01 P=401.676111 Days T_0=209.391452 (BKJD)



DV Model-Shift Uniqueness Test

008144955-01, P = 401.678735 Days, E = 209.315985 Days

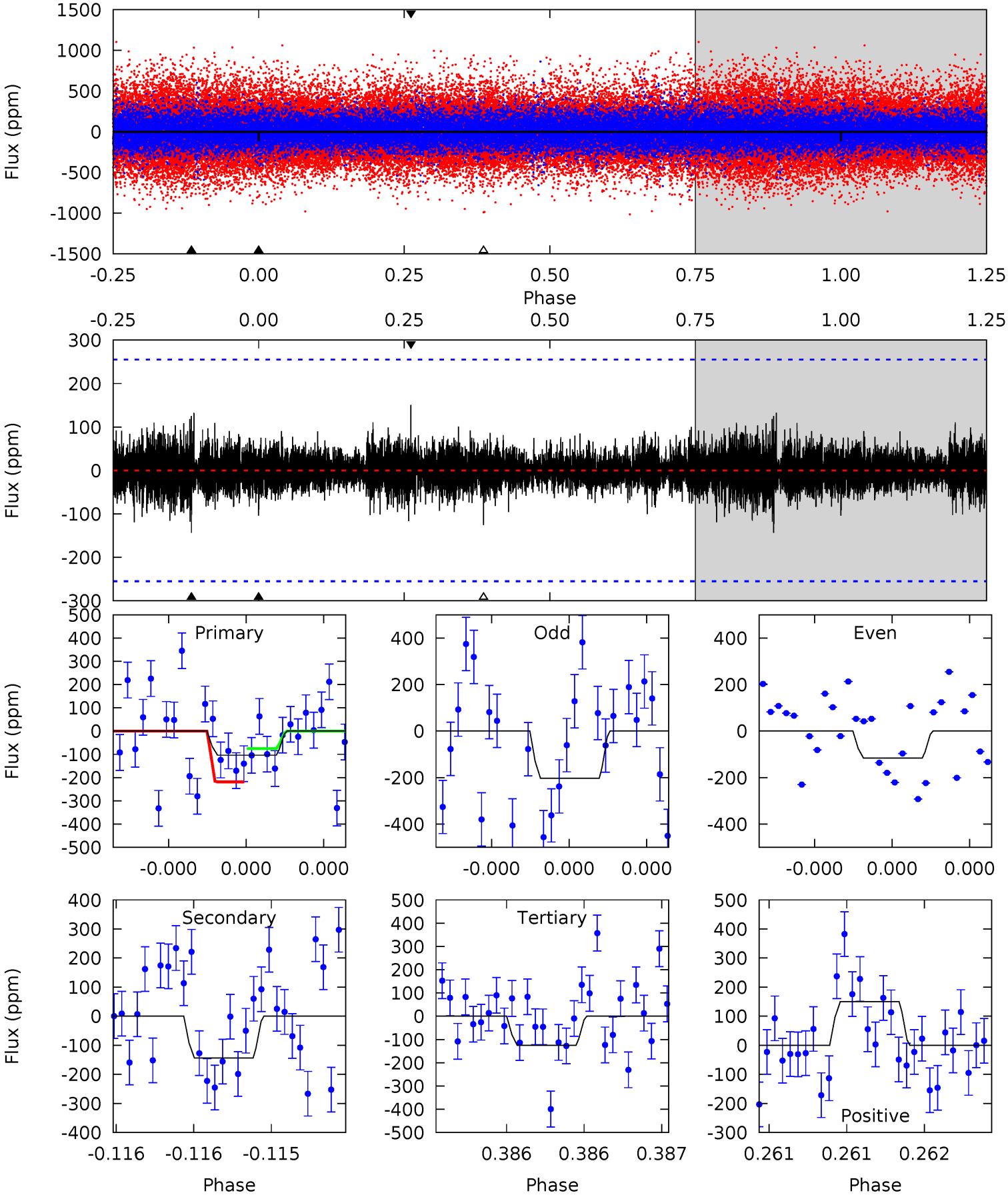
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.3	13.2	9.69	9.40	5.47	3.32	2.01	1.57	1.86	3.53	3.82	0.60	1.03	0.42	0.12



Alt Model-Shift Uniqueness Test

008144955-01, P = 401.676111 Days, E = 209.391452 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.27	3.14	2.74	3.29	5.58	3.48	0.60	-0.46	-1.02	0.40	-0.15	0.91	1.18	0.51	1.58



Stellar Parameters For KIC 008144955

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	5762^{+138}_{-155}	$4.548^{+0.035}_{-0.196}$	$-0.140^{+0.300}_{-0.300}$	$0.859^{+0.244}_{-0.076}$	$0.951^{+0.100}_{-0.111}$	$2.111^{+0.412}_{-1.085}$
	+2%/-3%	+1%/-4%	+214%/-214%	+28%/-9%	+11%/-12%	+20%/-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 008144955-01 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-548±41	$2.25^{+1.30}_{-1.19}$	330^{+21}_{-14}	5845^{+3021}_{-1030}	$63987^{+221466}_{-38107}$
Alt.	-144±46	$1.47^{+1.16}_{-0.91}$	328^{+23}_{-13}	5175^{+3529}_{-1094}	$39639^{+216548}_{-28330}$

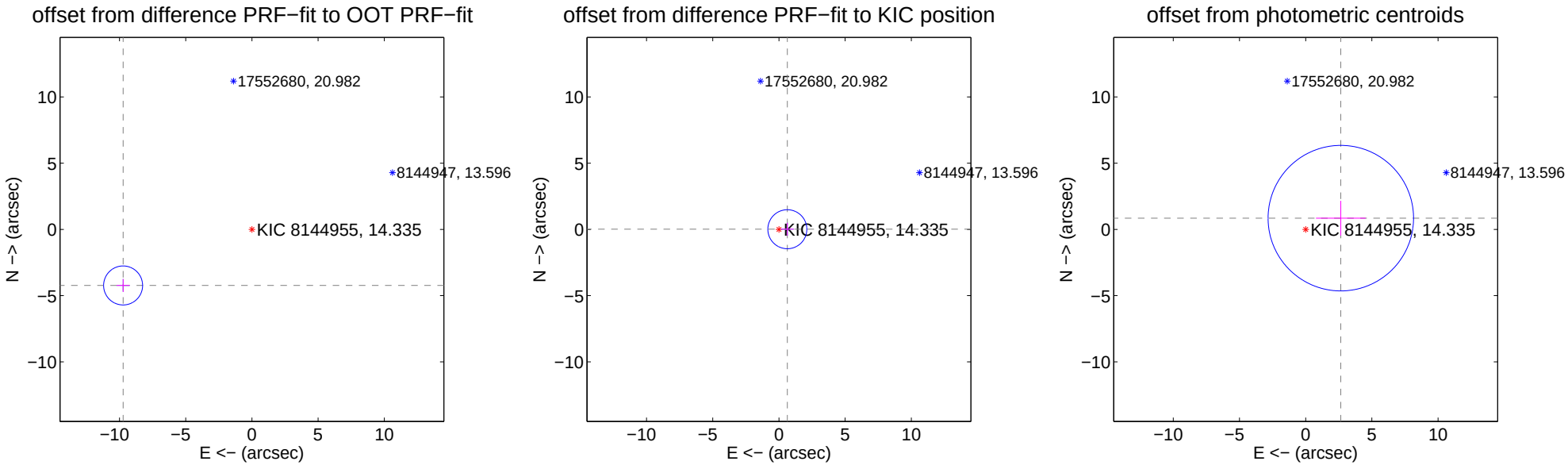
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

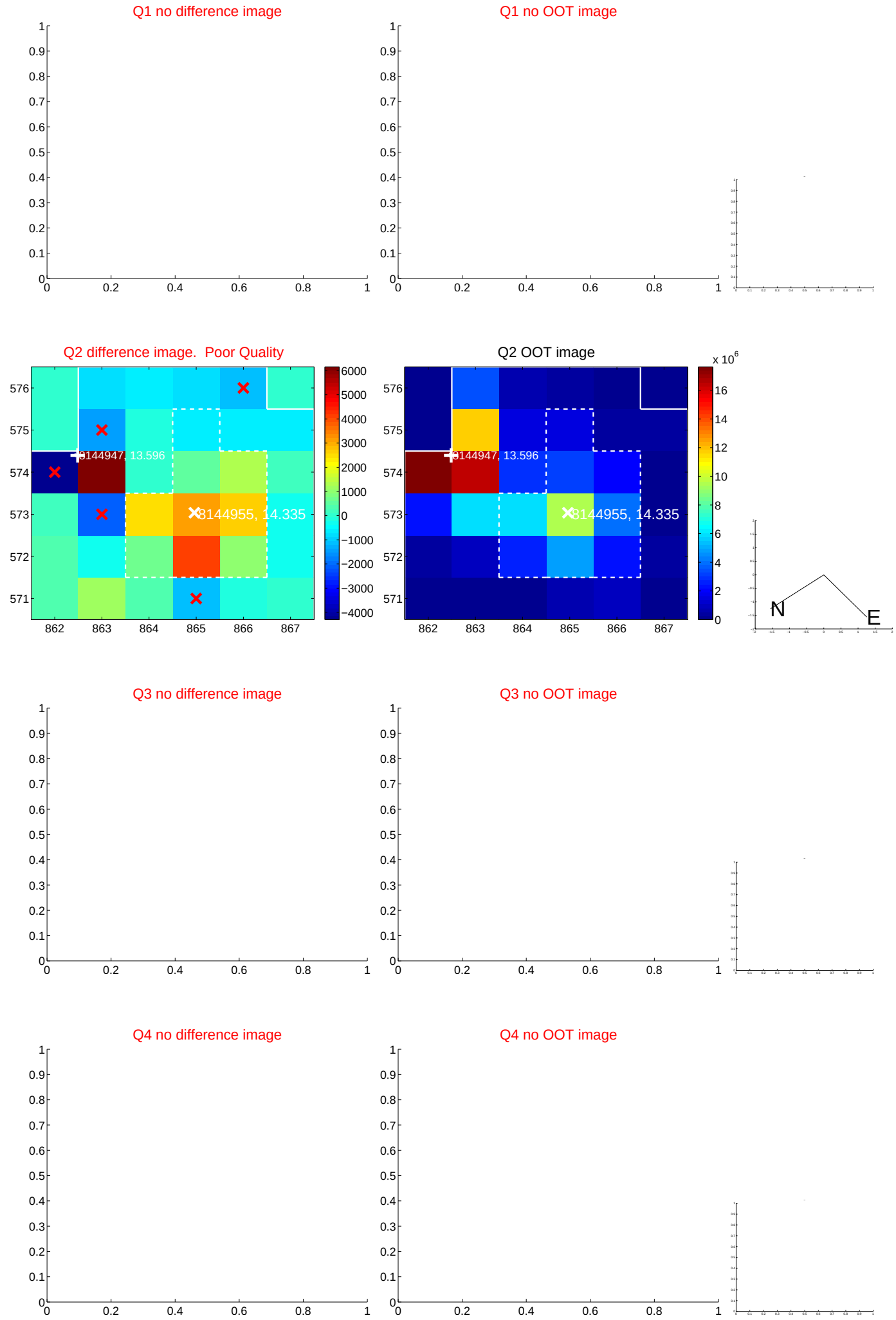
Supplemental centroid analysis for 008144955-01. Kepler magnitude: 14.34. Transit SNR 7.77
There are 1 quarters with good PRF difference image offsets
The OOT PRF centroid is offset from the target star catalog position by about 11.19 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	10.605 ± 0.491	21.62	9.725 ± 0.491	-4.230 ± 0.491
PRF-fit source offset from KIC position	0.634 ± 0.491	1.29	-0.634 ± 0.491	0.014 ± 0.491
photometric centroid source offset	2.79 ± 1.83	1.52	-2.65 ± 1.88	0.85 ± 1.31

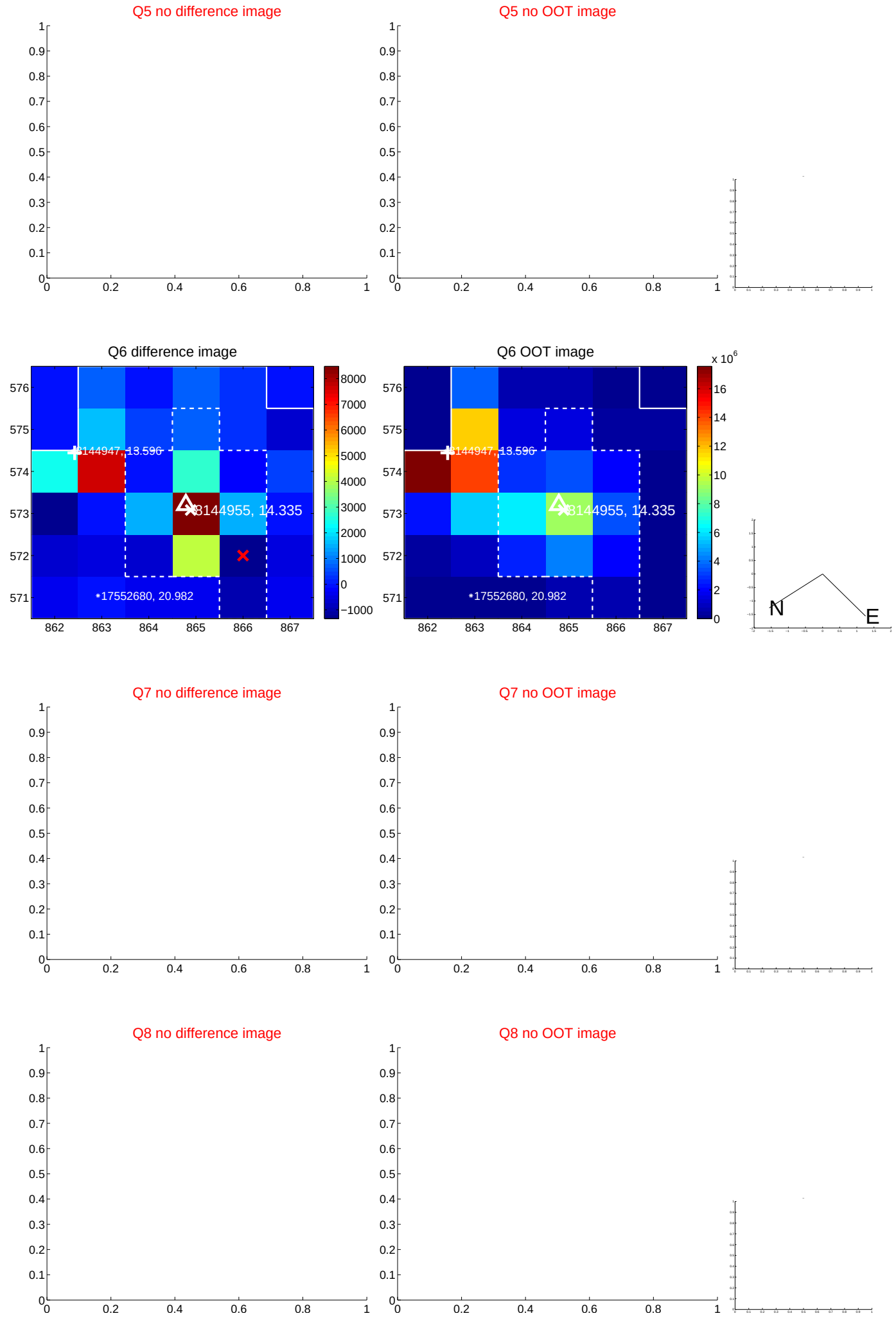


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

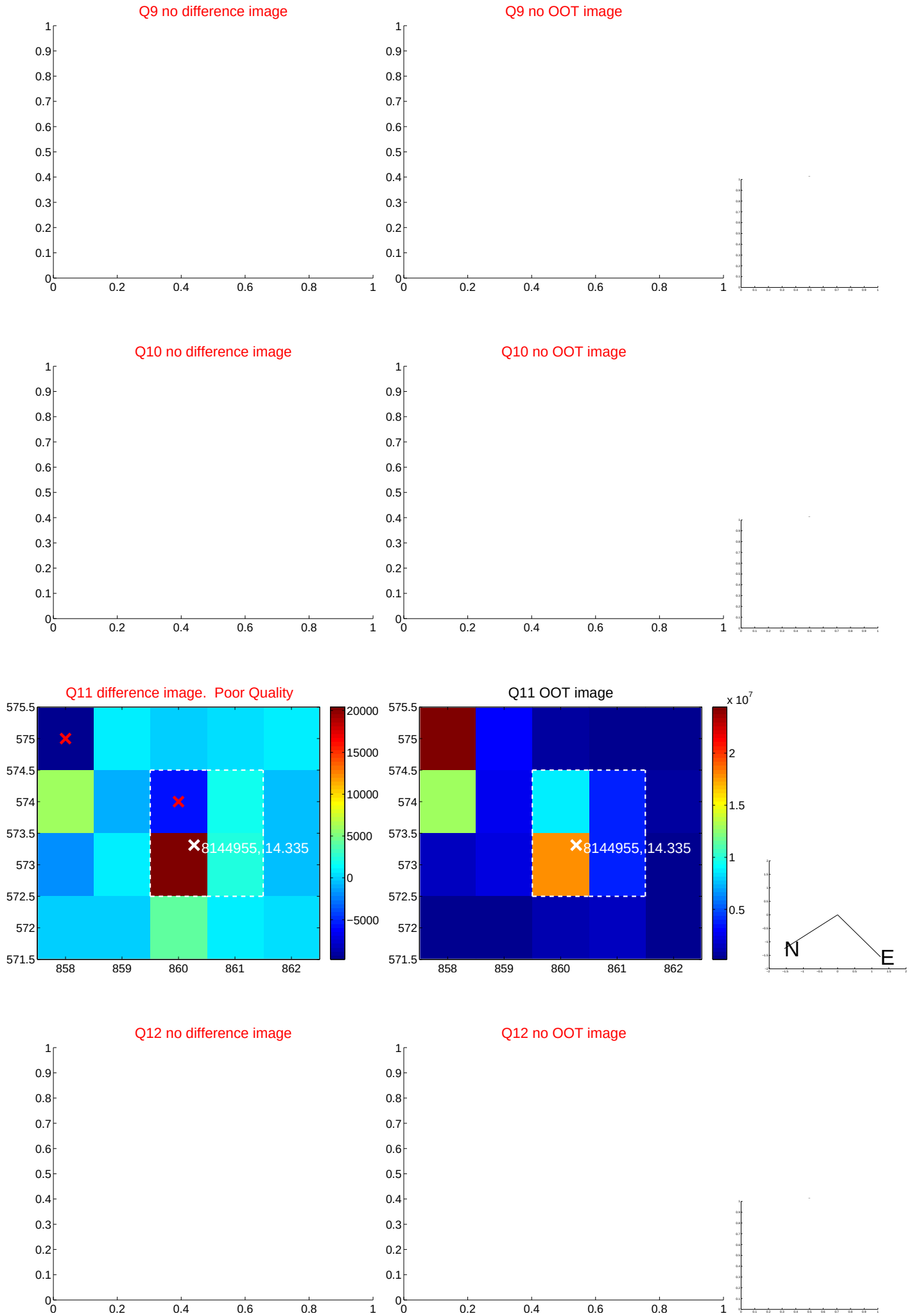
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



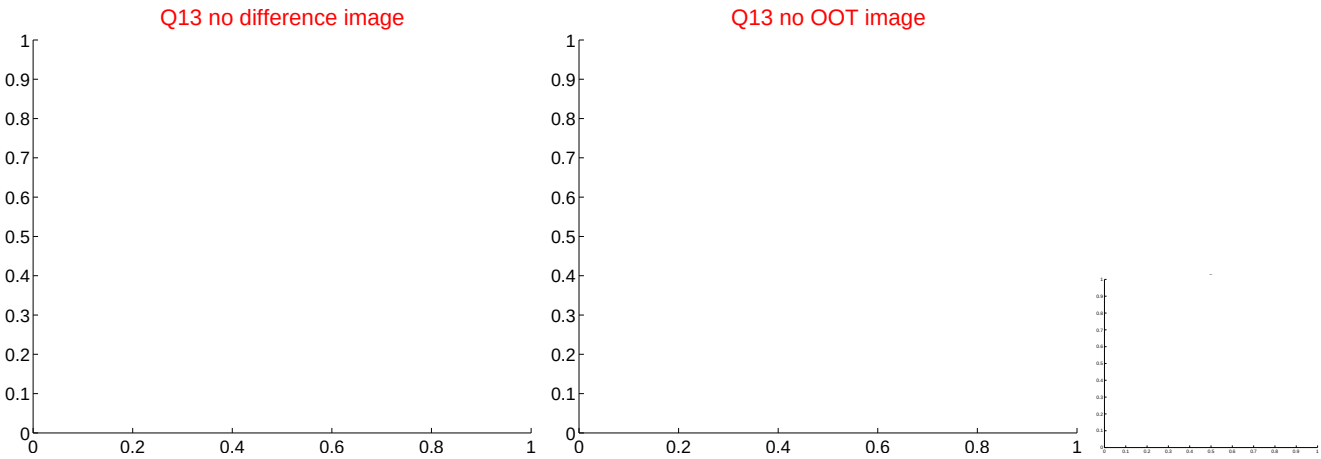
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

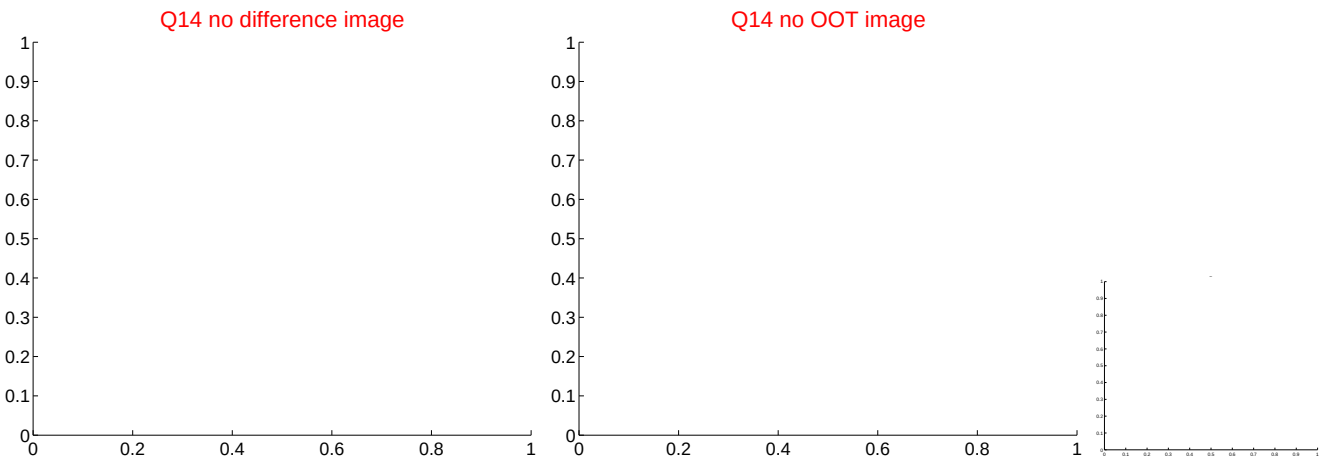


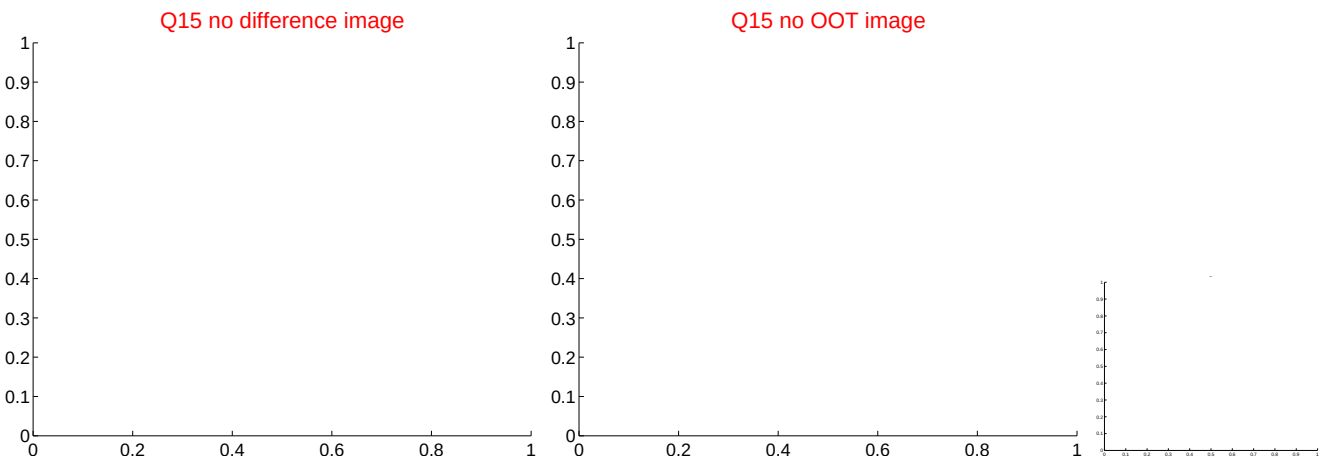
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

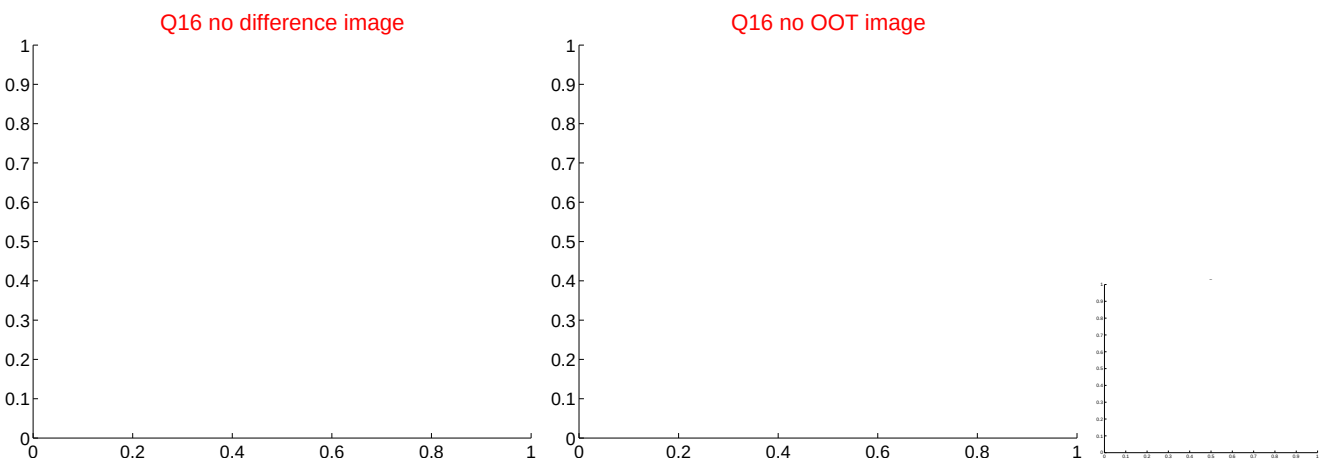


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

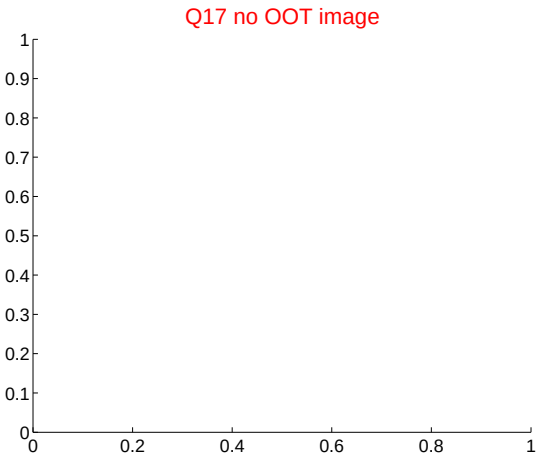


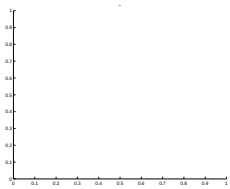


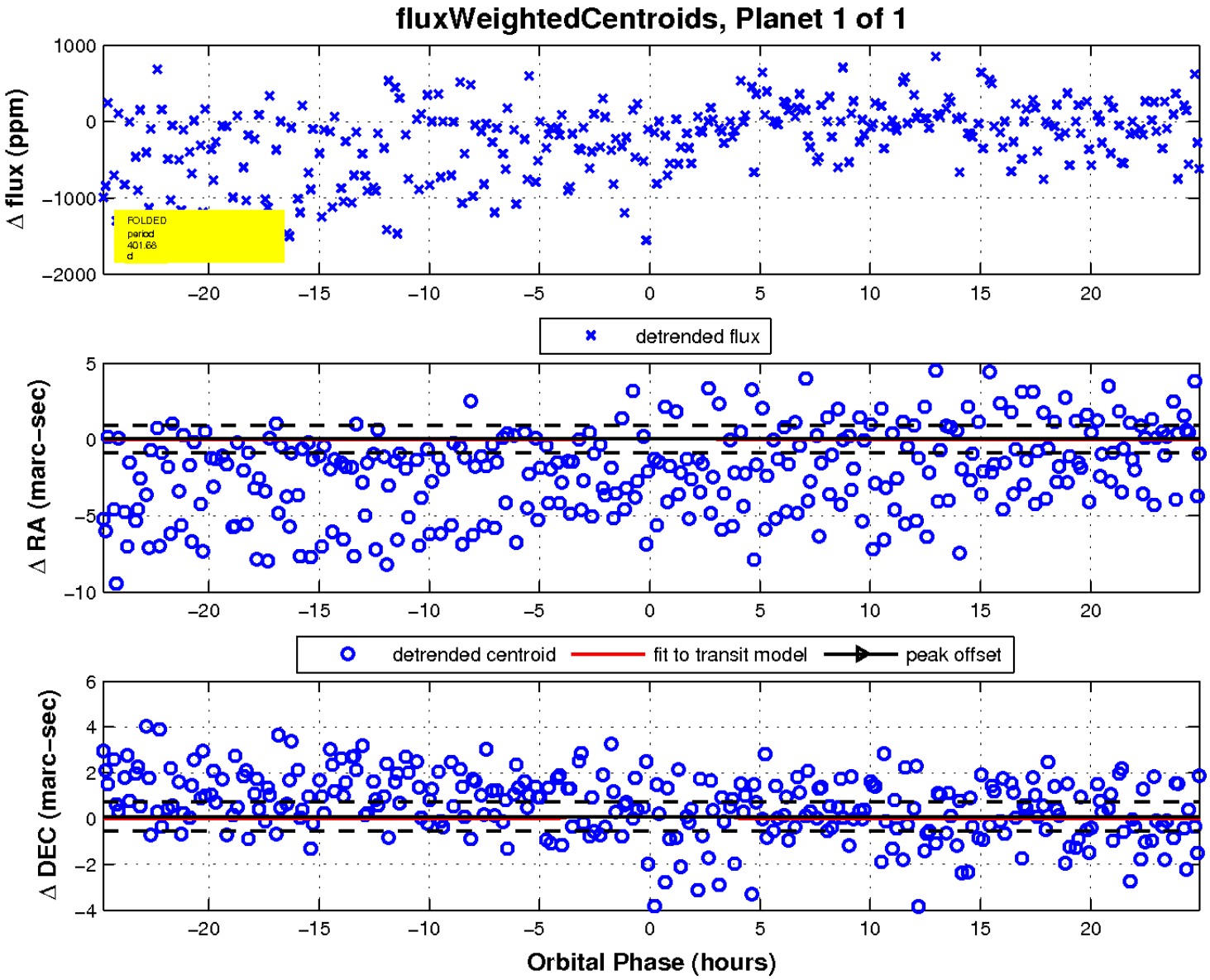




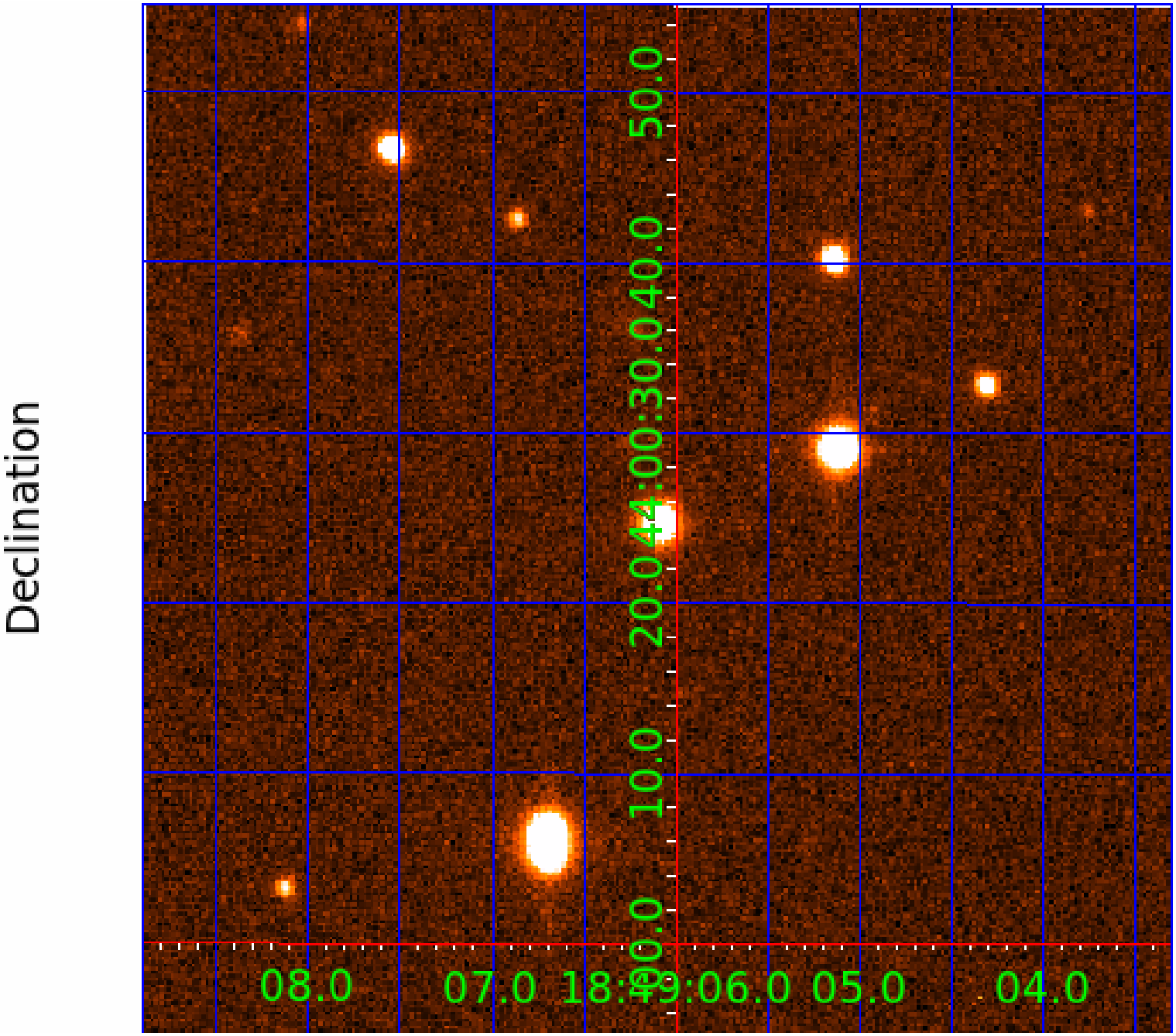
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.







UKIRT Image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