

KIC 008091757

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})
008091757-01	OBS	No	413.084012	266.792772	233.9	4.085	10.1	5.5	1.97	5855	3.19	3.08
008091757-02	OBS	No	480.804732	482.173450	245.3	4.865	7.6	6.1	1.97	5855	3.10	2.52
008091757-03	OBS	No	510.518515	492.827395	121.9	7.356	10.5	2.7	1.97	5855	2.42	2.32

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008091757-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
008091757-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_MEAS
008091757-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—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.

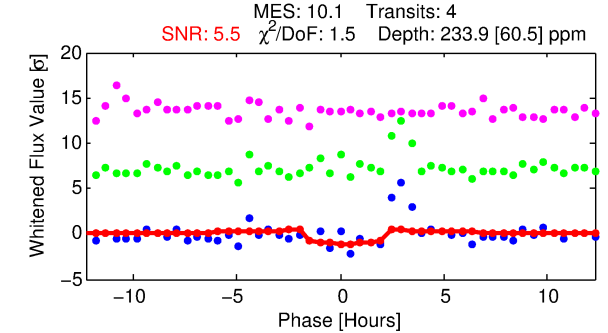
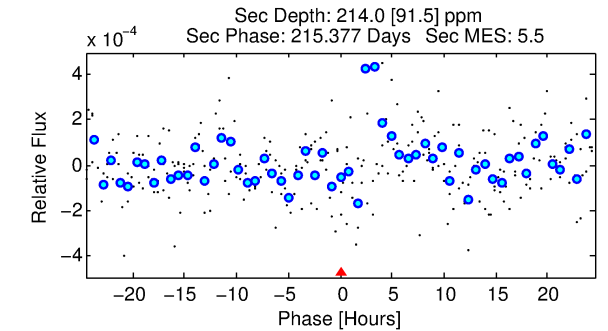
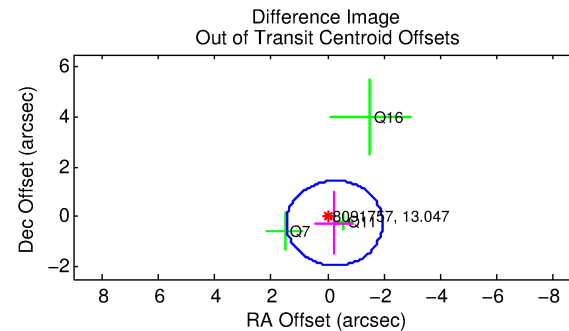
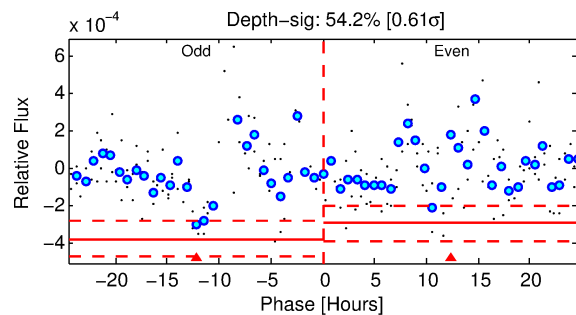
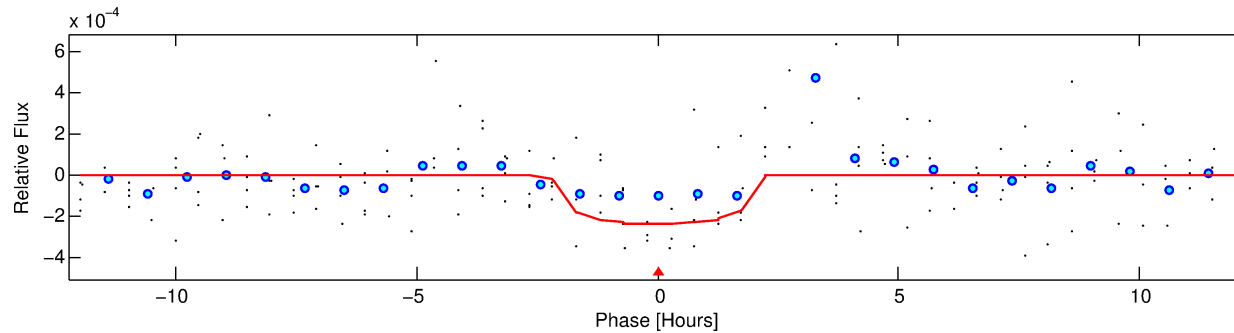
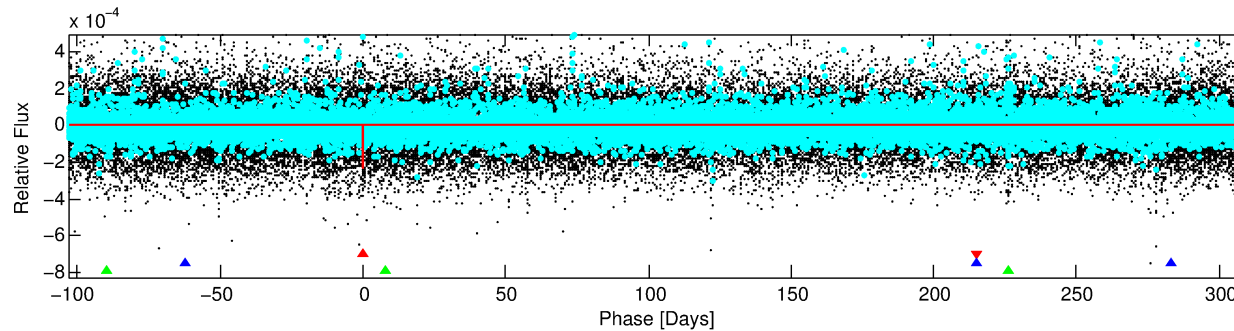
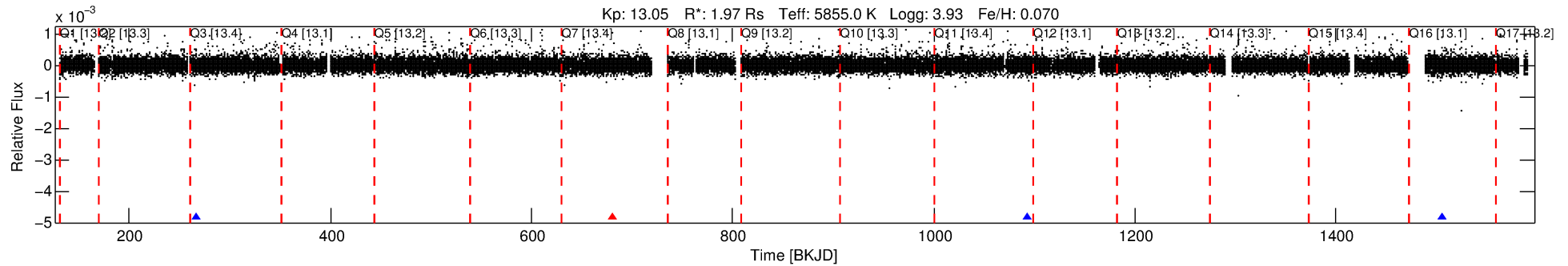
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008091757-01

No Significant Match Found

DV One-Page Summary

KIC: 8091757 Candidate: 1 of 3 Period: 413.084 d



DV Fit Results:

Period = 413.08401 [0.00634] d
Epoch = 266.7928 [0.0134] BKJD
Rp/R* = 0.0148 [0.0255]
a/R* = 595.17 [4655.01]
b = 0.66 [6.70]
Seff = 3.08 [1.11]
Teq = 338 [30] K
Rp = 3.19 [5.54] Re
a = 1.1518 [0.2669] AU
Ag = 15377.56 [53535.92] [0.29 σ]
Teffp = 5816 [5036] K [1.09 σ]

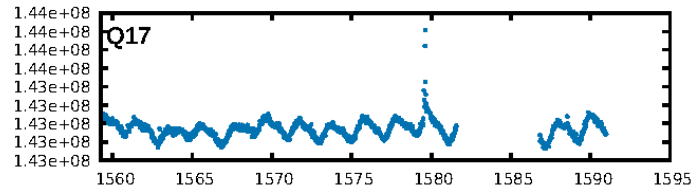
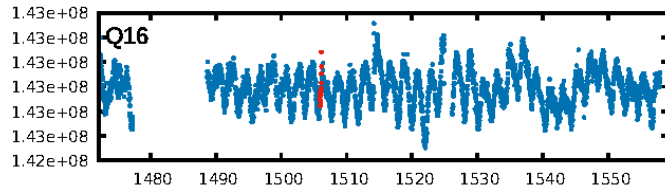
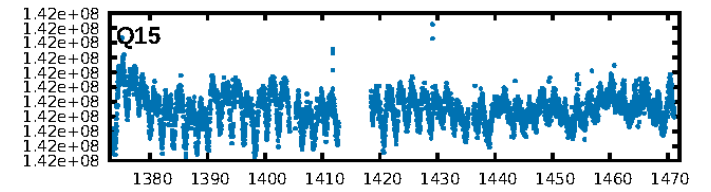
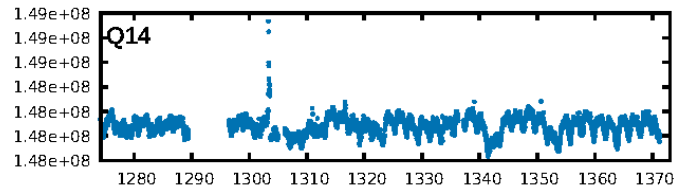
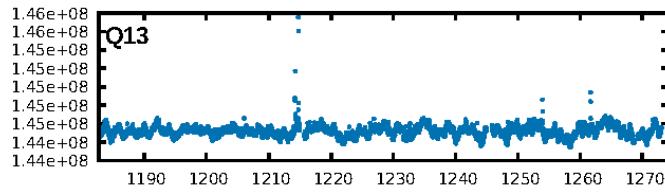
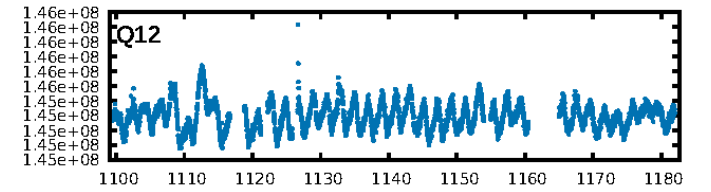
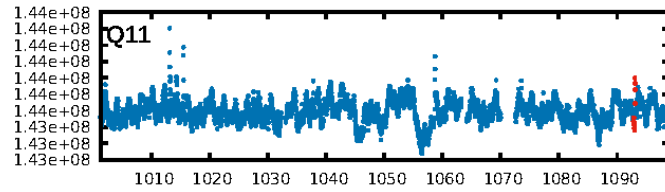
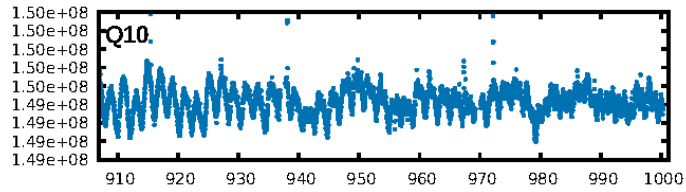
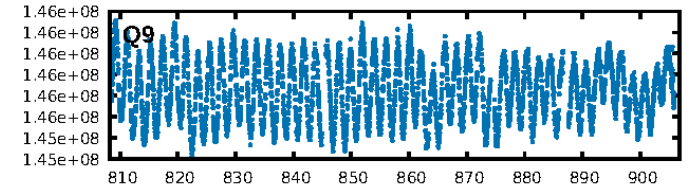
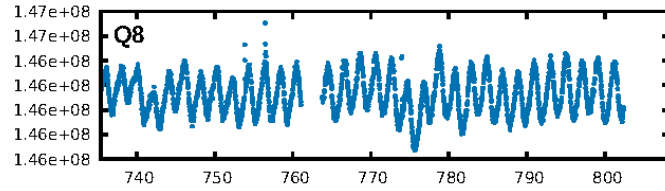
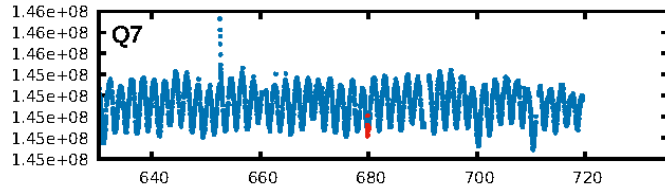
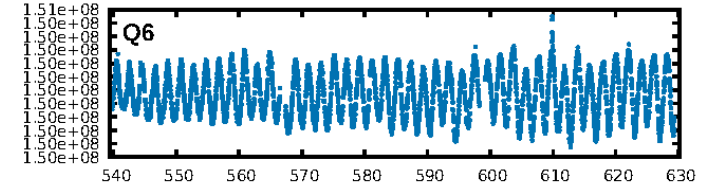
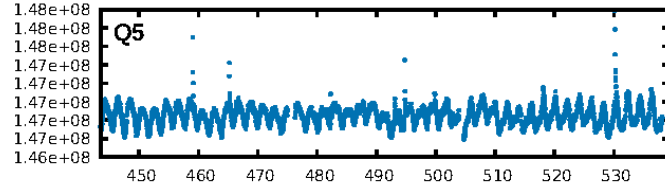
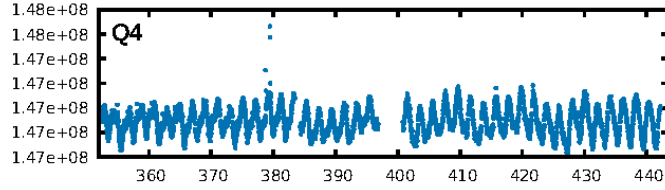
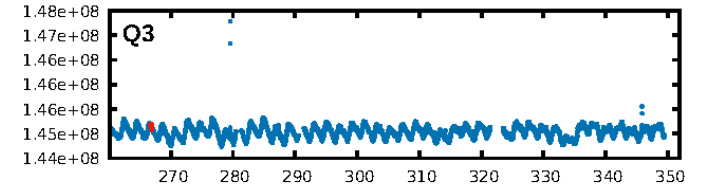
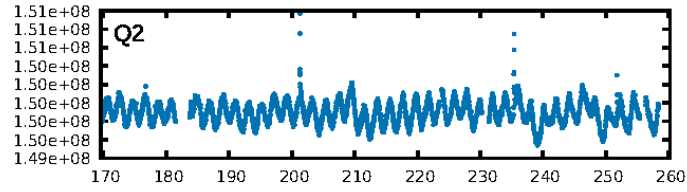
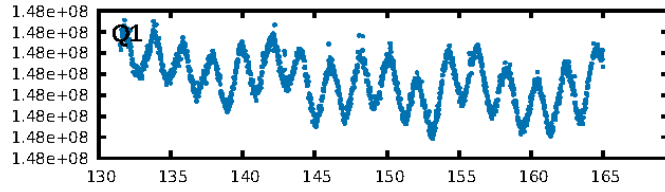
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [255.85 σ]
ModelChiSquare2-sig: 4.5%
ModelChiSquareGof-sig: 28.8%
Bootstrap-pfa: 2.04e-12
RollingBand-fgt: 0.75 [3/4]
GhostDiagnostic-chr: 15.21
Centroid-sig: 24.2%
Centroid-so: 2.148 arcsec [1.20 σ]
OotOffset-rm: 0.362 arcsec [0.64 σ]
OotOffset-st: 0/2/1/0 [3]
KicOffset-rm: 0.506 arcsec [0.65 σ]
KicOffset-st: 0/2/1/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [4/4]

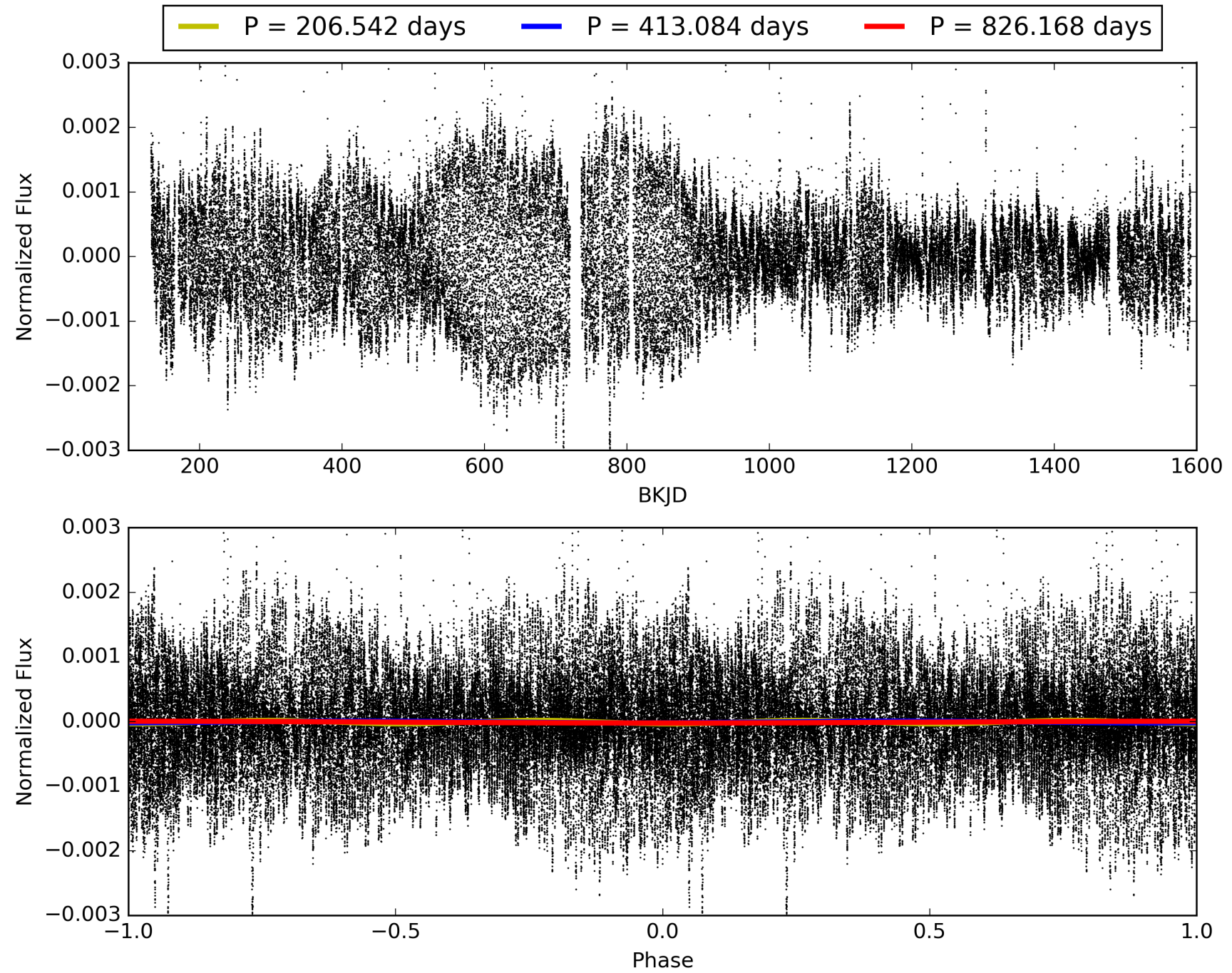
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:20:45 Z

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

TCE 008091757-01, PDC Light Curves

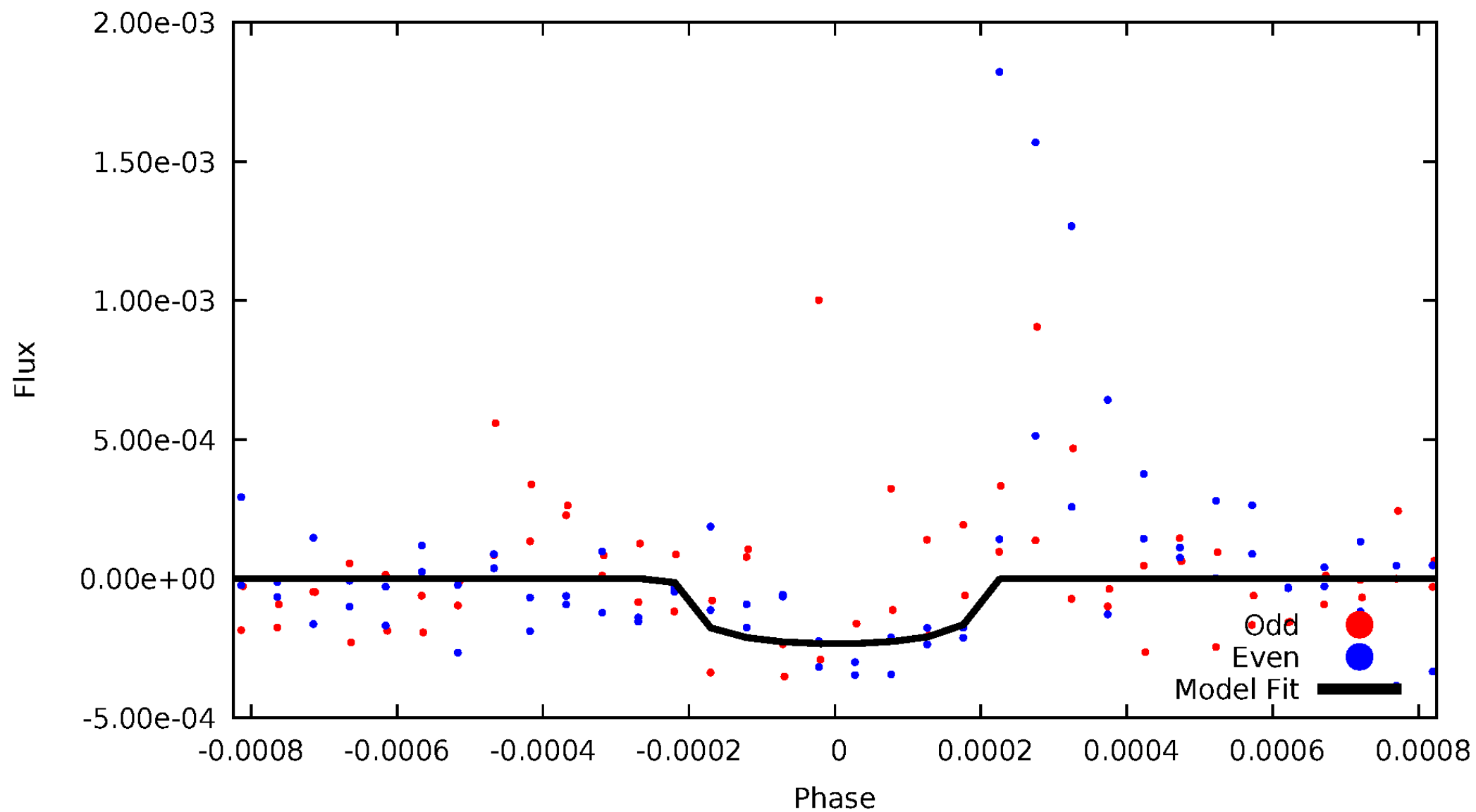


TCE 008091757-01



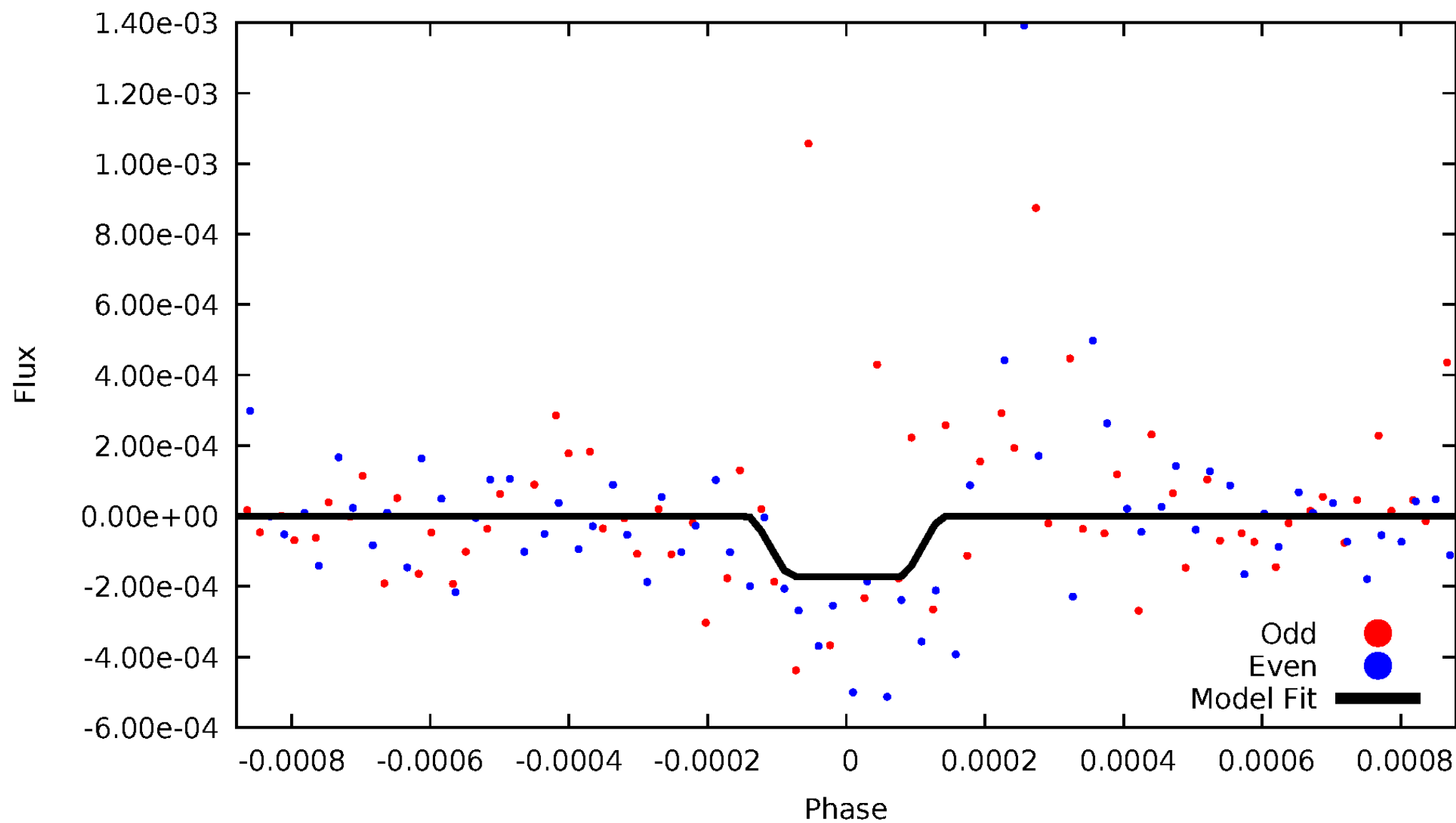
DV Odd/Even

TCE 008091757-01

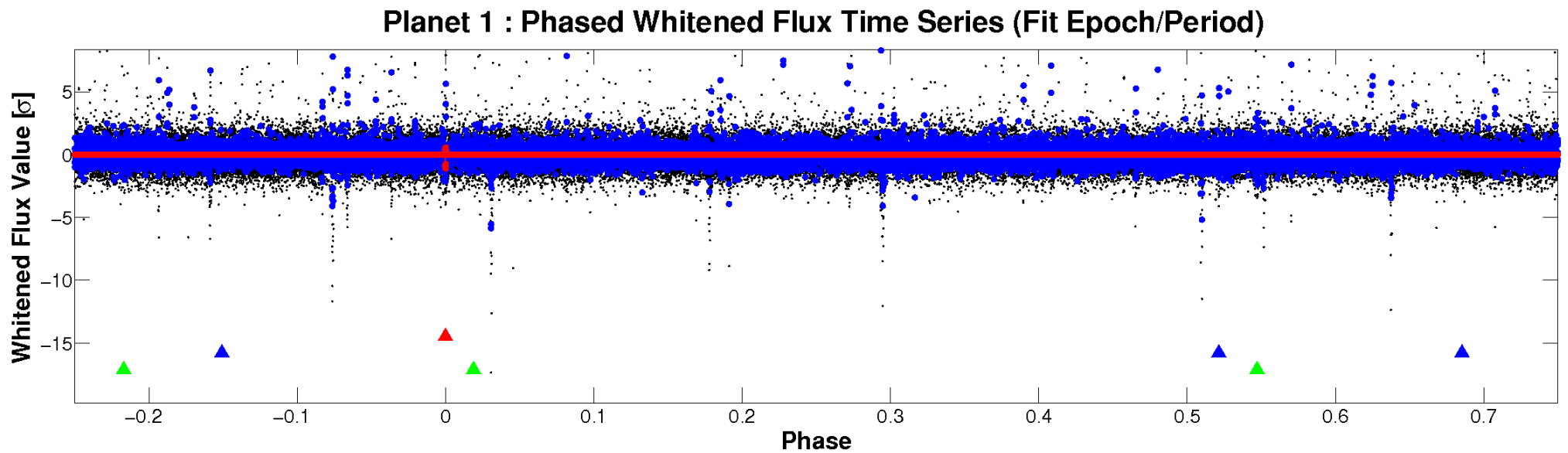
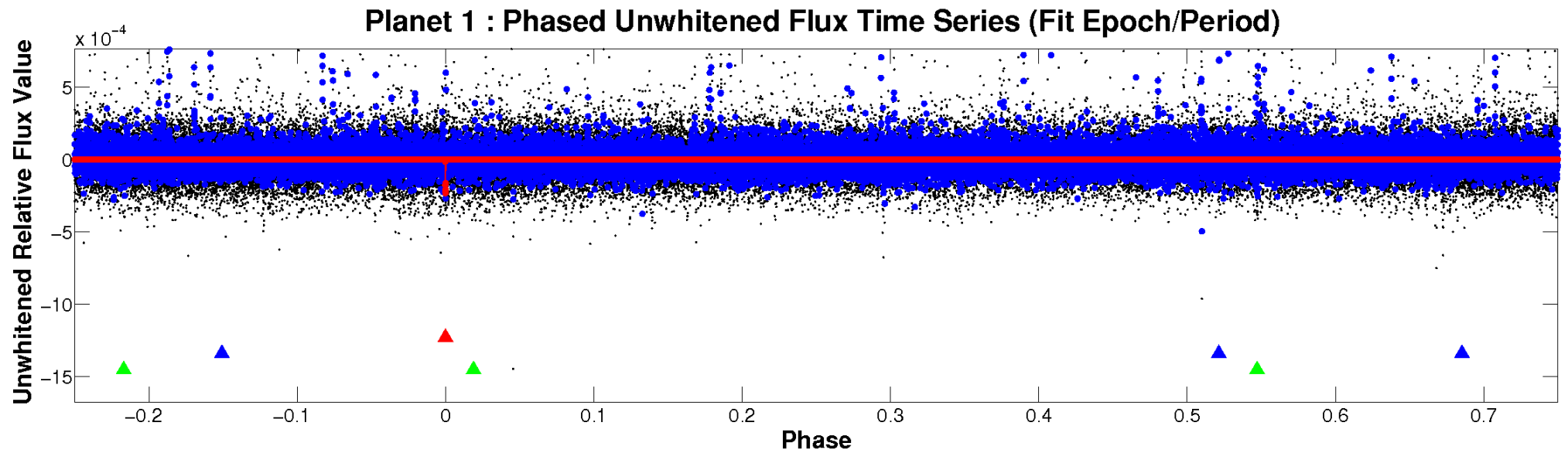


ALT Odd/Even

TCE 008091757-01

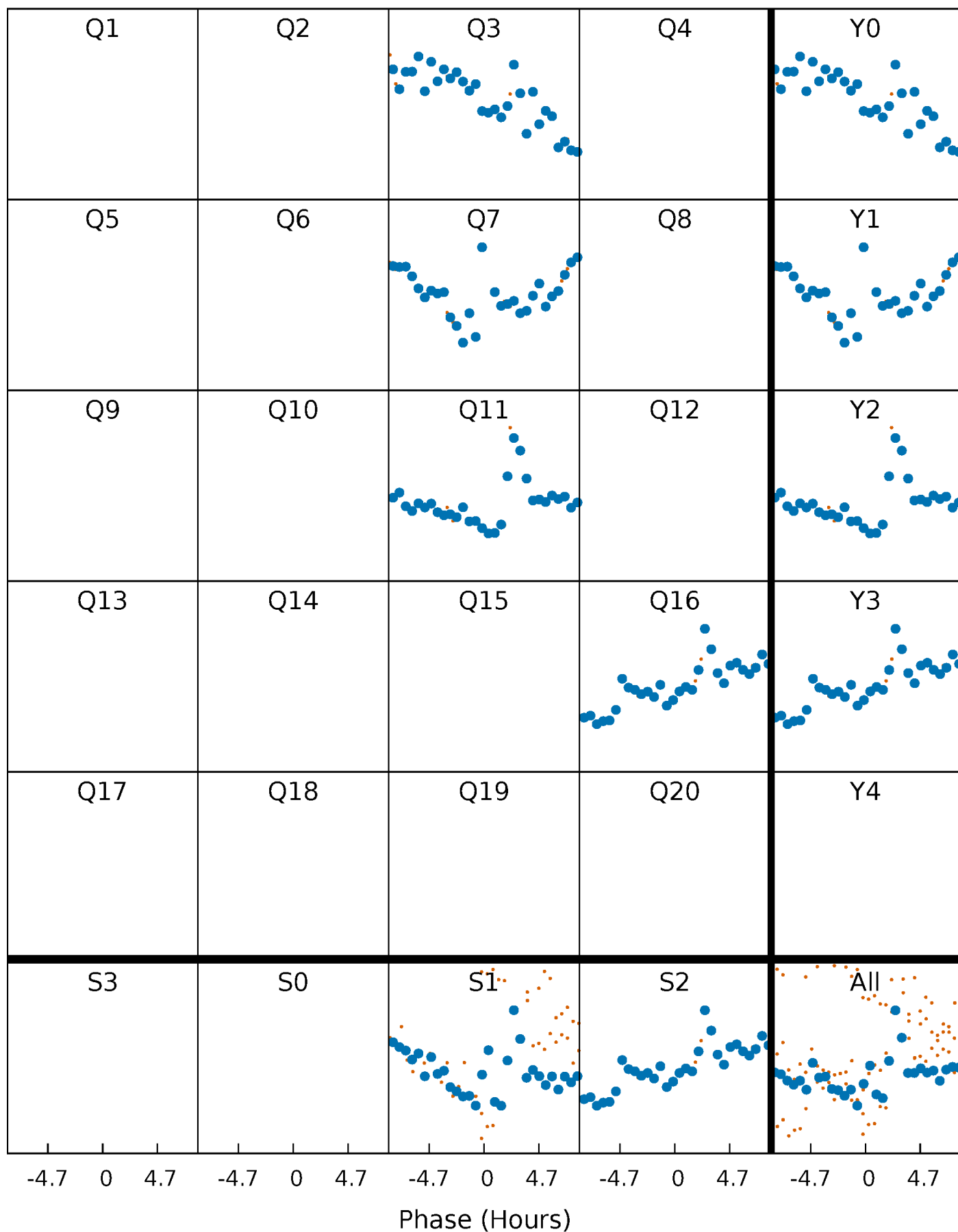


Non-Whitened Vs. Whitened Light Curve



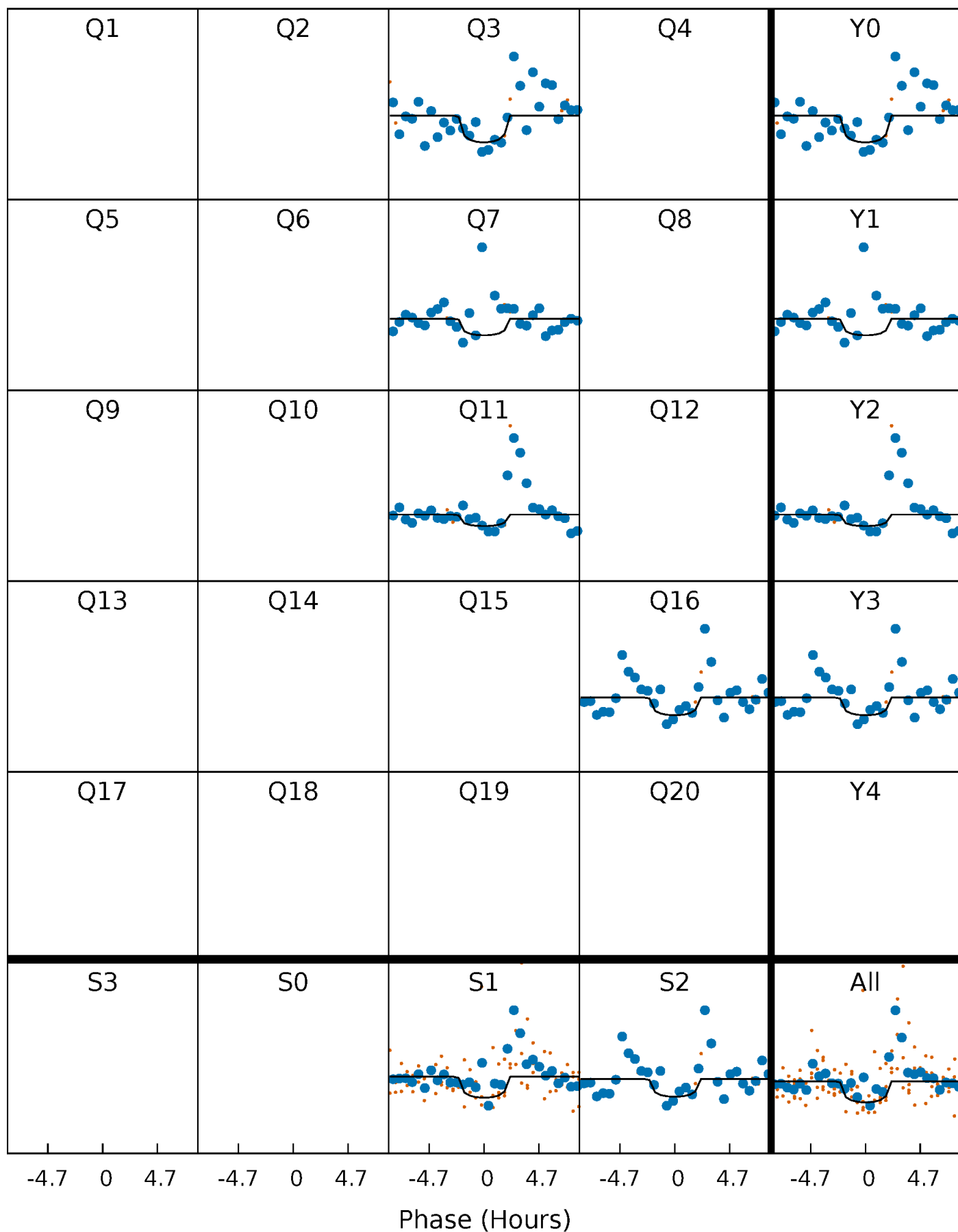
PDC Quarter-Phased Transit Curves

TCE 008091757-01 P=413.084012 Days $T_0=266.792772$ (BKJD)



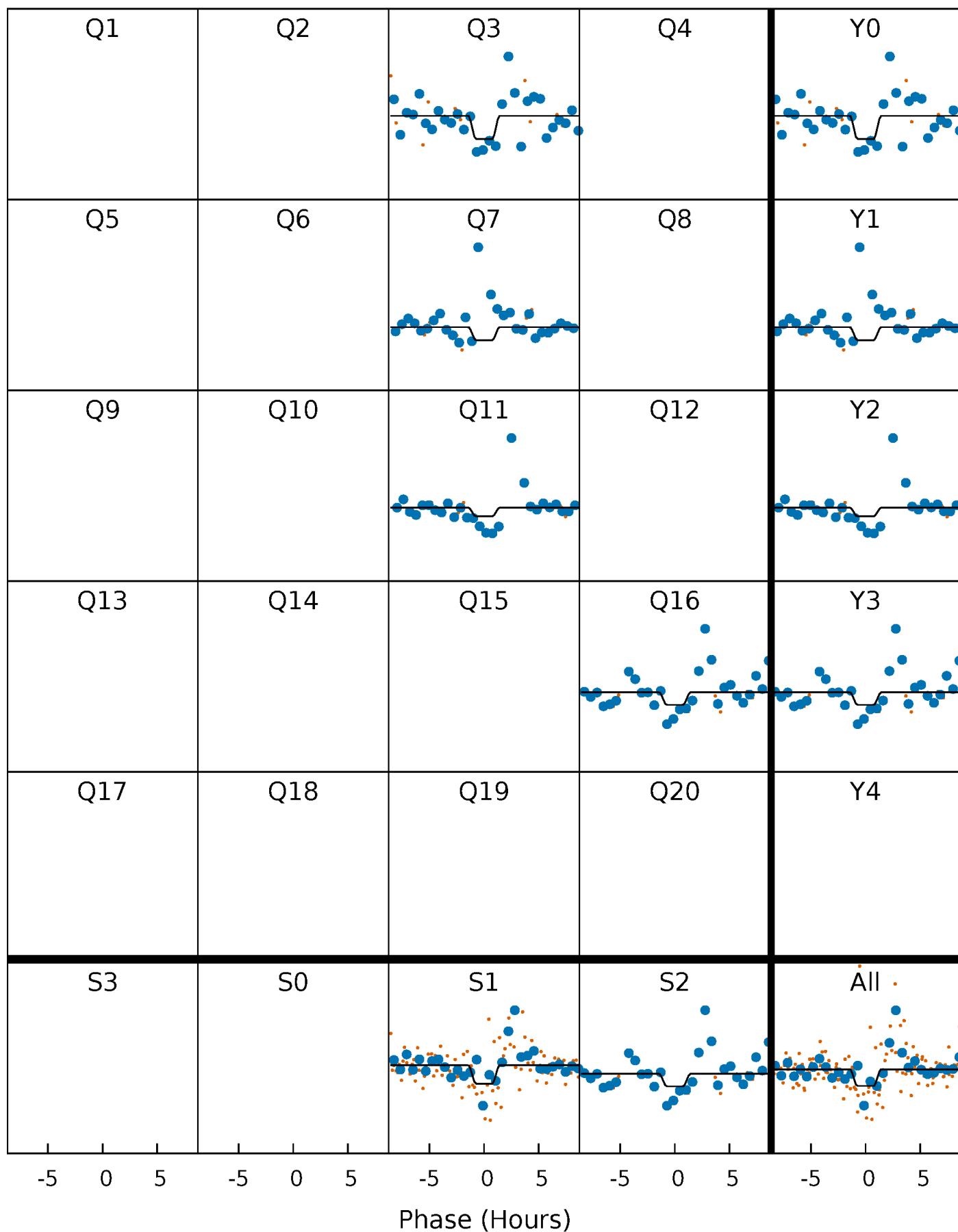
DV Quarter-Phased Transit Curves

TCE 008091757-01 P=413.084012 Days $T_0=266.792772$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

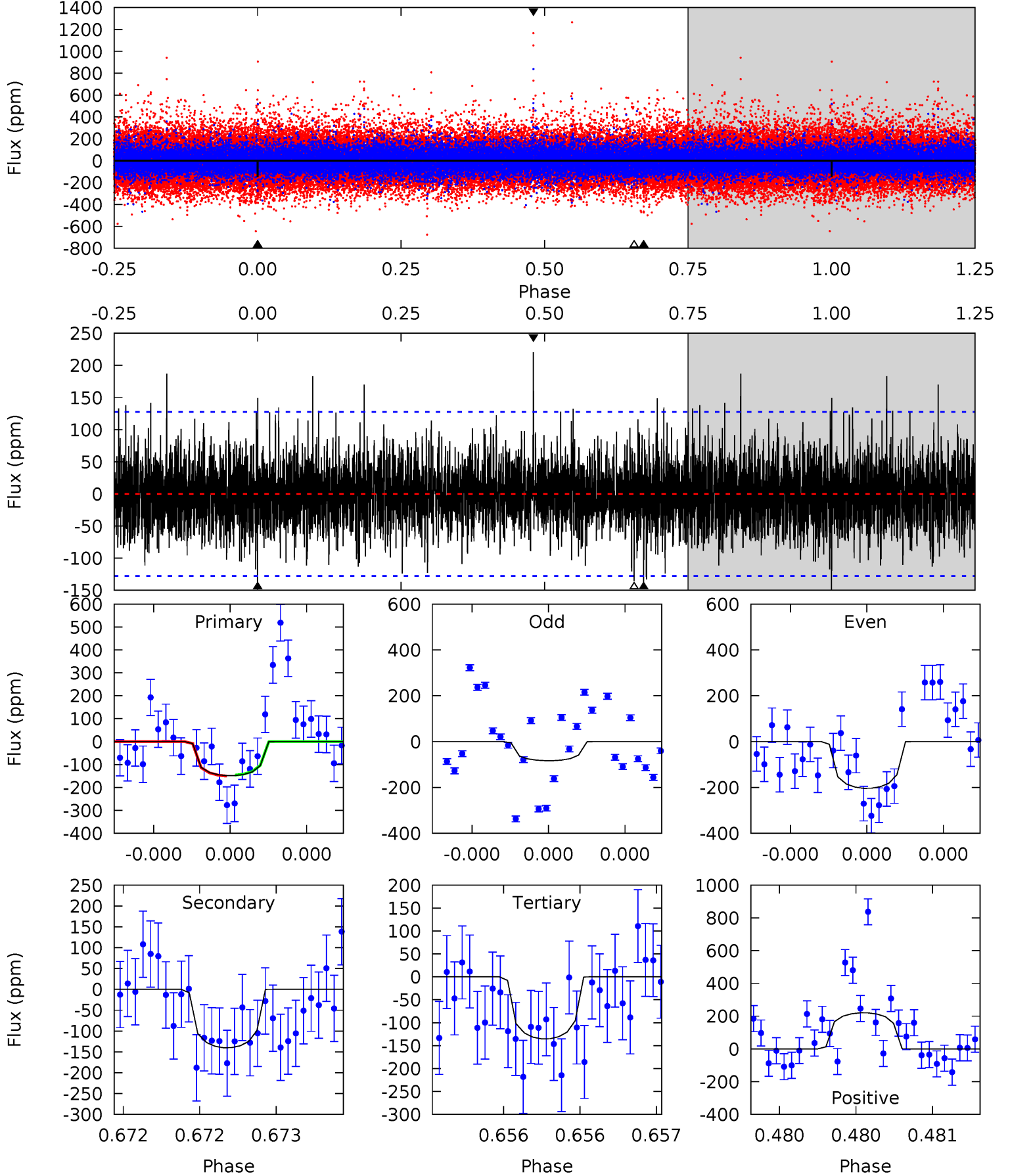
TCE 008091757-01 P=413.078038 Days $T_0=266.812094$ (BKJD)



DV Model-Shift Uniqueness Test

008091757-01, P = 413.084012 Days, E = 266.792772 Days

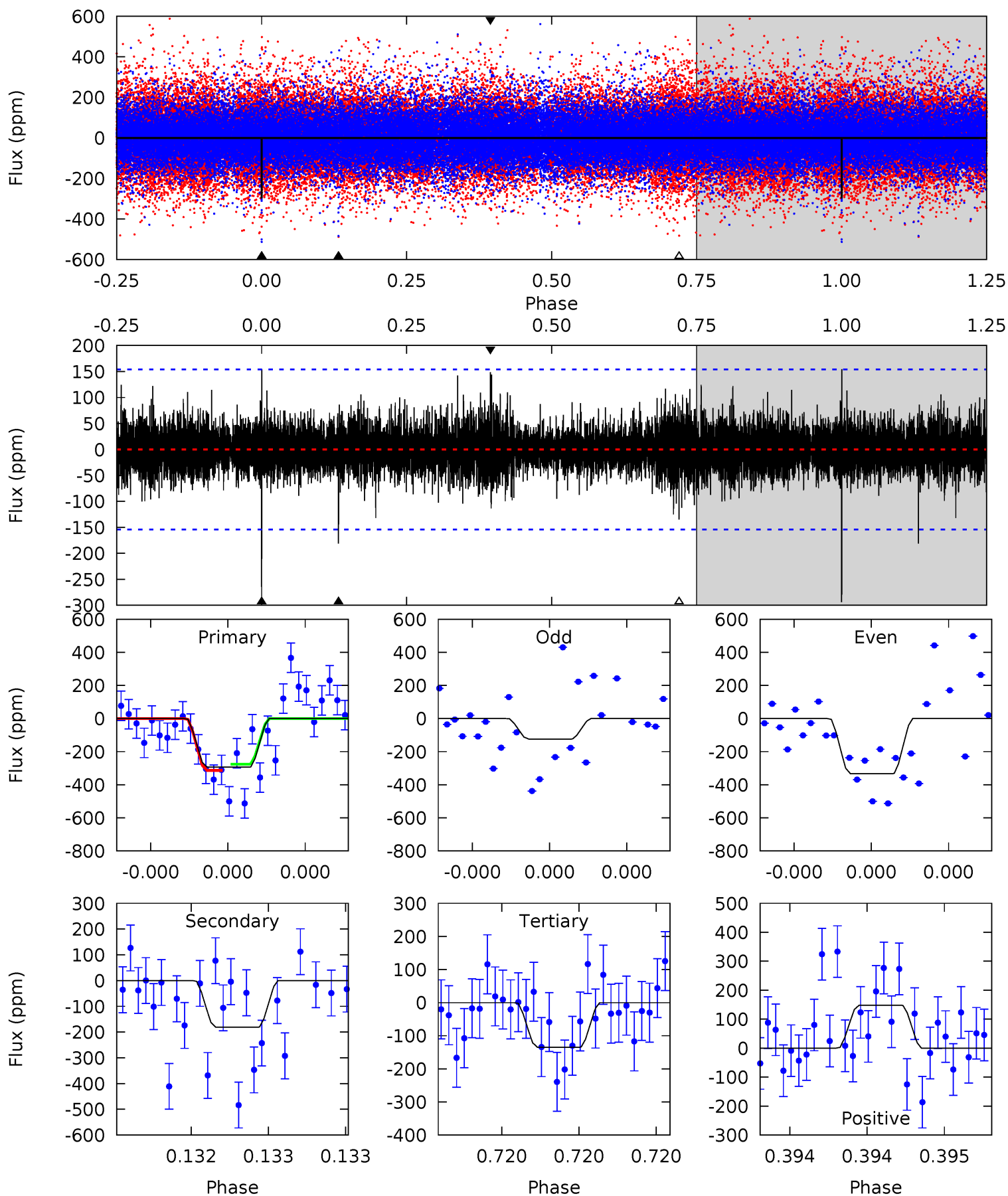
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.51	6.14	5.93	9.65	5.59	3.51	1.64	0.58	-3.14	0.21	-3.51	2.44	0.52	0.60	0.09



Alt Model-Shift Uniqueness Test

008091757-01, P = 413.078038 Days, E = 266.812094 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.8	6.68	4.96	5.46	5.68	3.64	1.10	5.87	5.37	1.72	1.22	4.03	0.43	0.34	0.70



Stellar Parameters For KIC 008091757

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5855^{+78}_{-78}	$3.926^{+0.203}_{-0.073}$	$0.070^{+0.150}_{-0.150}$	$1.970^{+0.273}_{-0.507}$	$1.194^{+0.122}_{-0.150}$	$0.220^{+0.267}_{-0.060}$
	+1%/-1%	+5%/-2%	+214%/-214%	+14%/-26%	+10%/-13%	+121%/-27%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 008091757-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-140 ± 23	$4.90^{+3.95}_{-3.32}$	467^{+18}_{-29}	4310^{+2954}_{-785}	4285^{+35709}_{-3038}
Alt.	-181 ± 27	$4.88^{+4.20}_{-3.36}$	466^{+20}_{-29}	4579^{+3567}_{-927}	5472^{+49713}_{-3945}

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 $A_{obs} \gg 1.0$

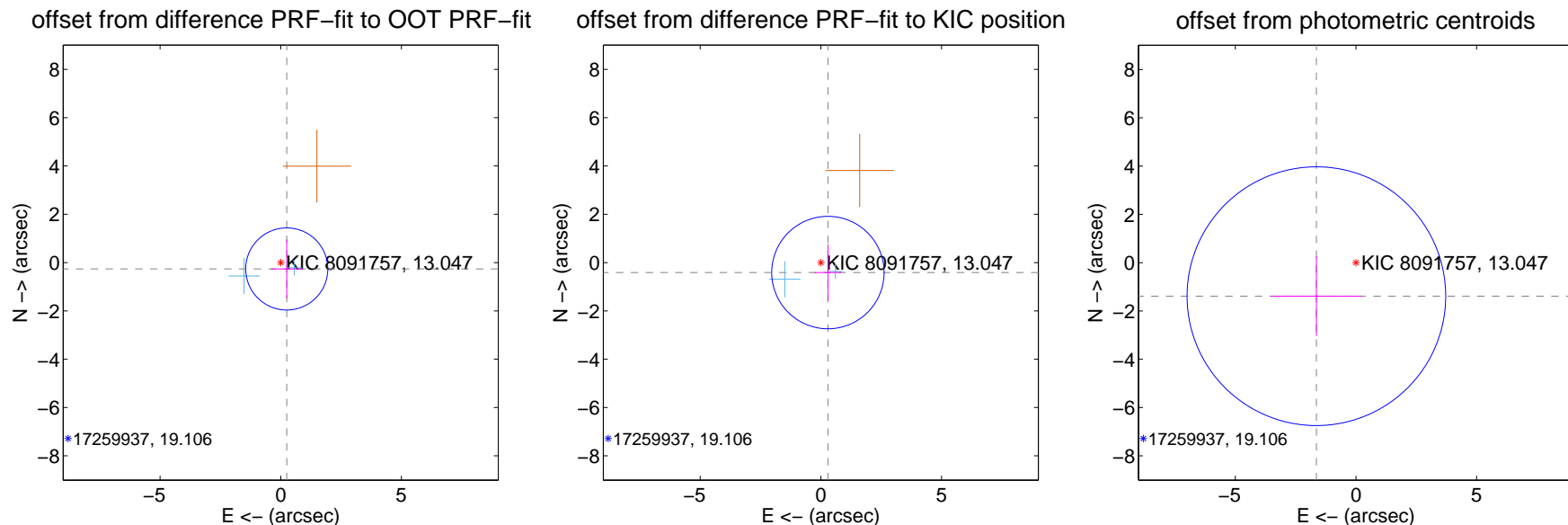
DV Centroid Data

Supplemental centroid analysis for 008091757-01. Kepler magnitude: 13.05. Transit SNR 5.51

There are 2 quarters with good PRF difference image offsets

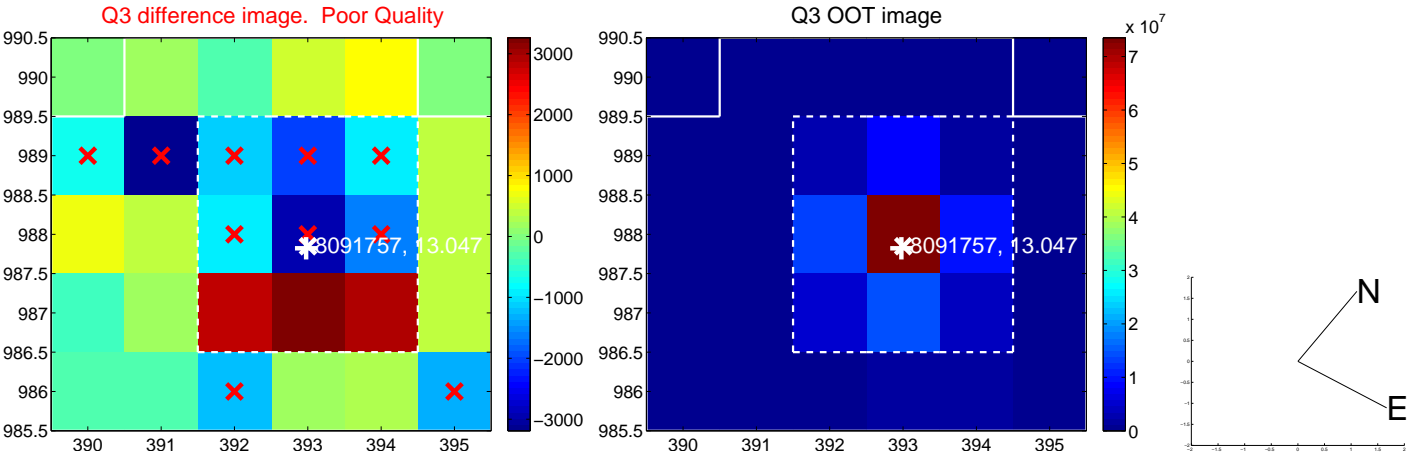
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.362 ± 0.567	0.64	-0.249 ± 0.652	-0.263 ± 1.215
PRF-fit source offset from KIC position	0.506 ± 0.776	0.65	-0.292 ± 0.552	-0.413 ± 1.178
photometric centroid source offset	2.15 ± 1.79	1.20	1.64 ± 1.88	-1.39 ± 1.65



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 \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

Q5 no difference image



Q5 no OOT image



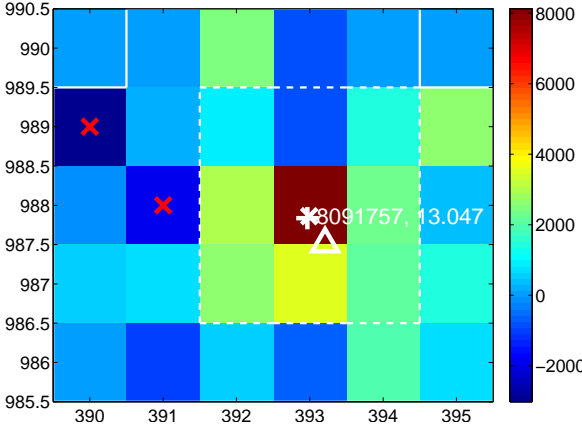
Q6 no difference image



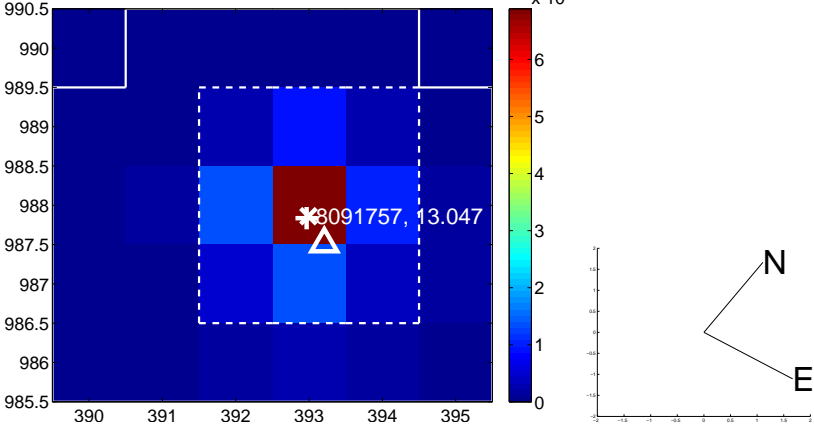
Q6 no OOT image



Q7 difference image



Q7 OOT image



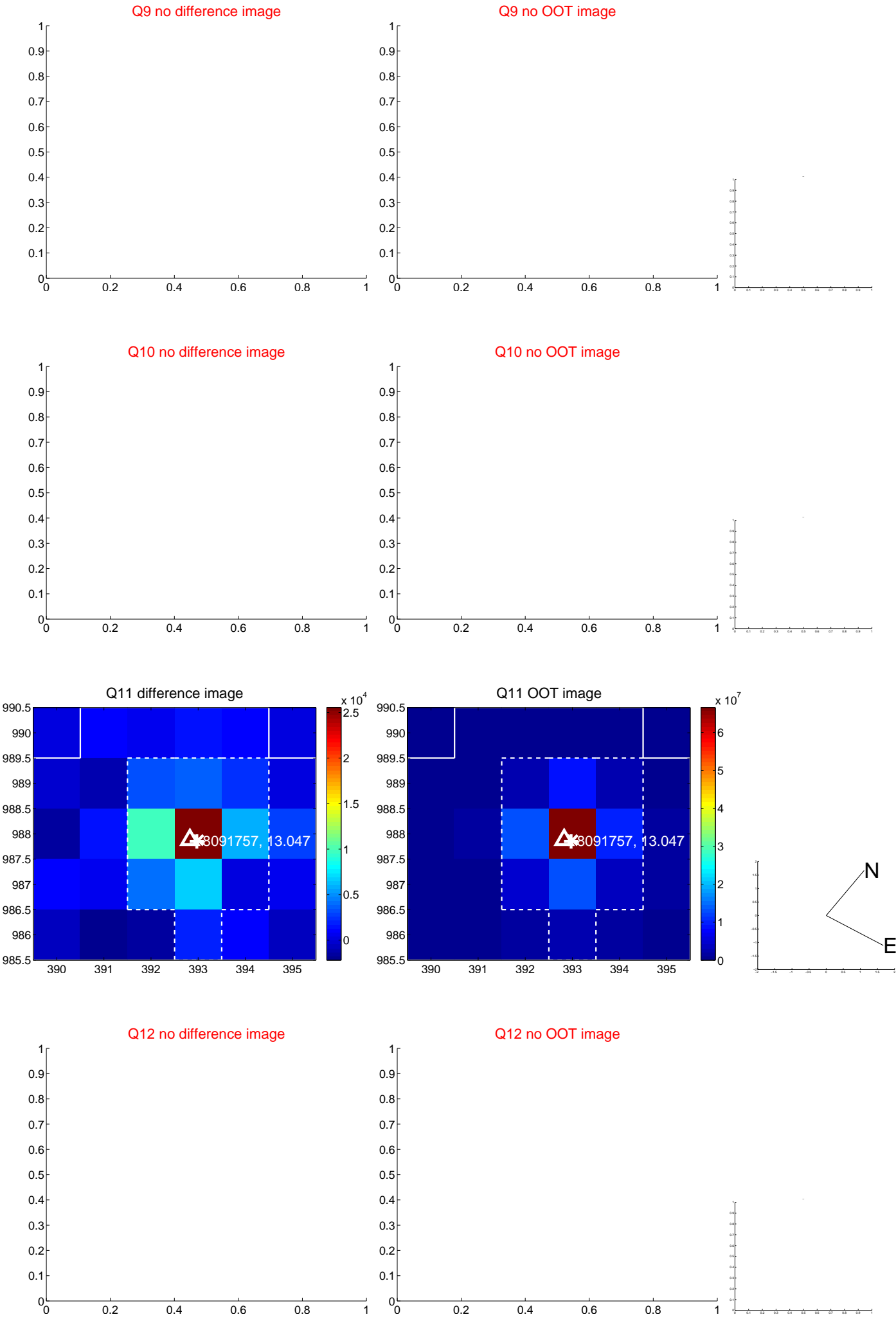
Q8 no difference image



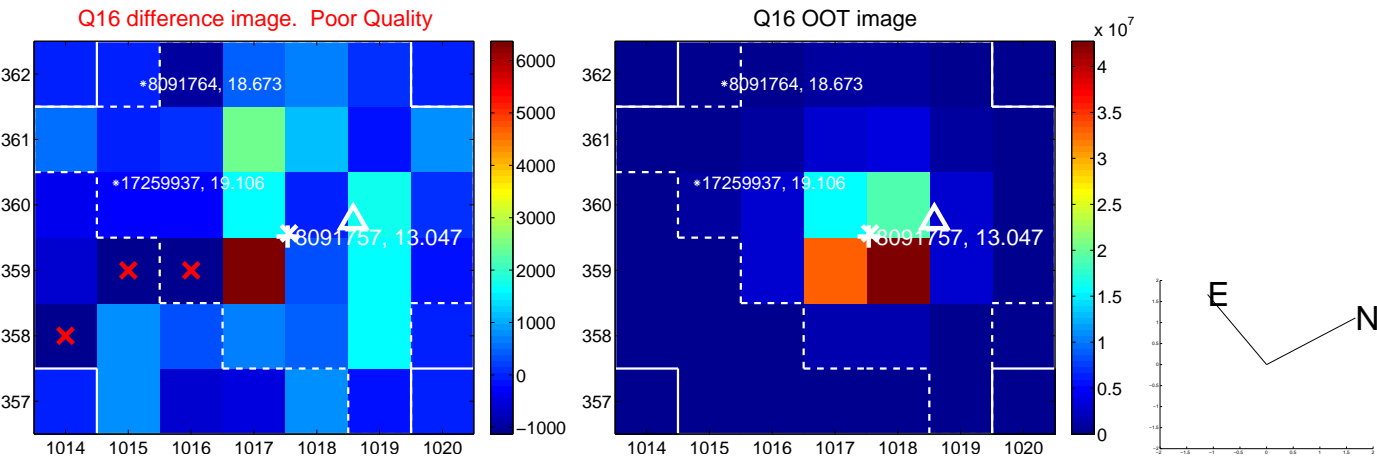
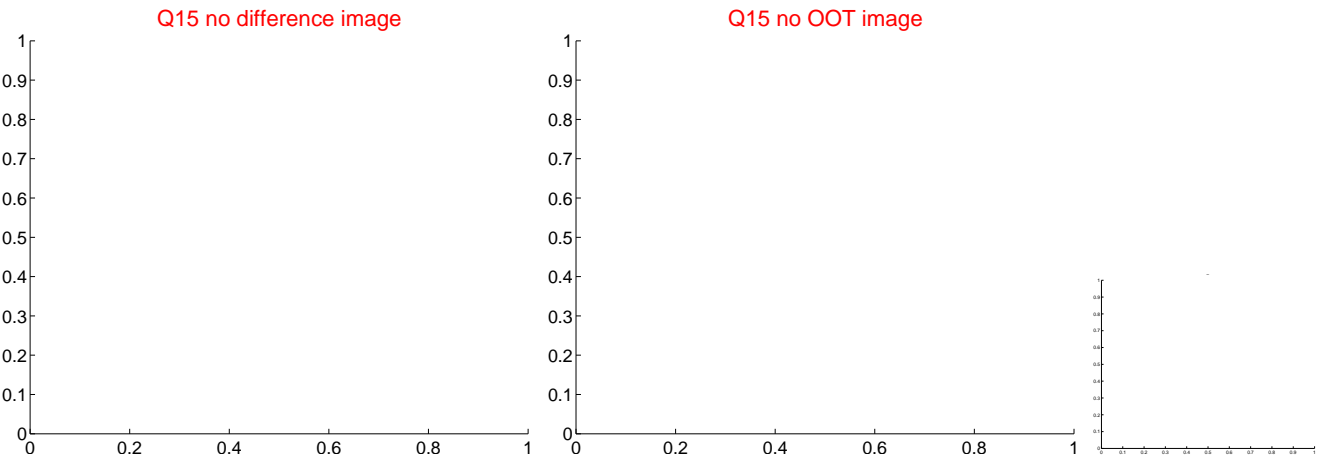
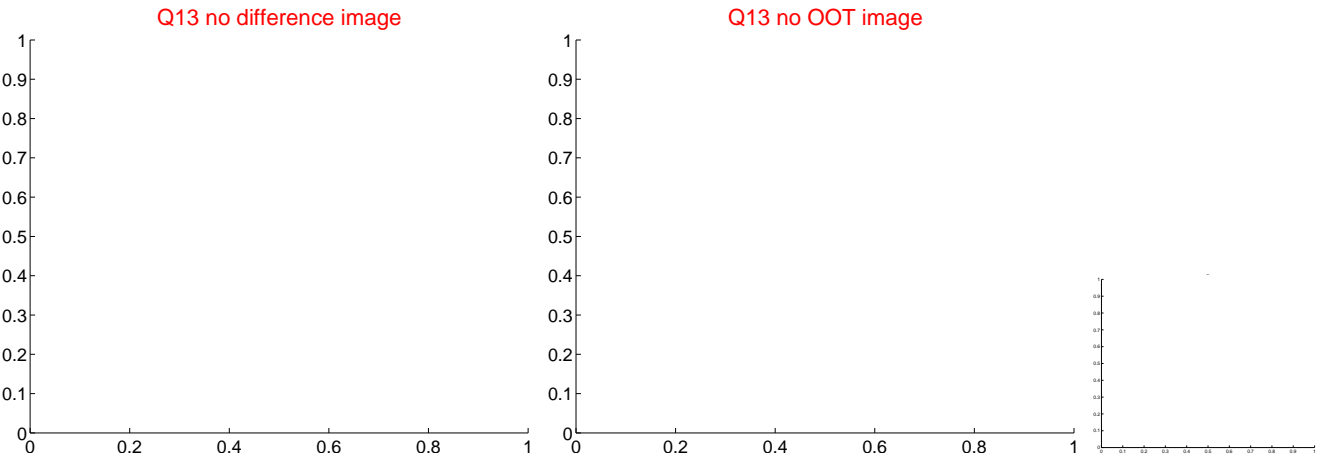
Q8 no OOT image



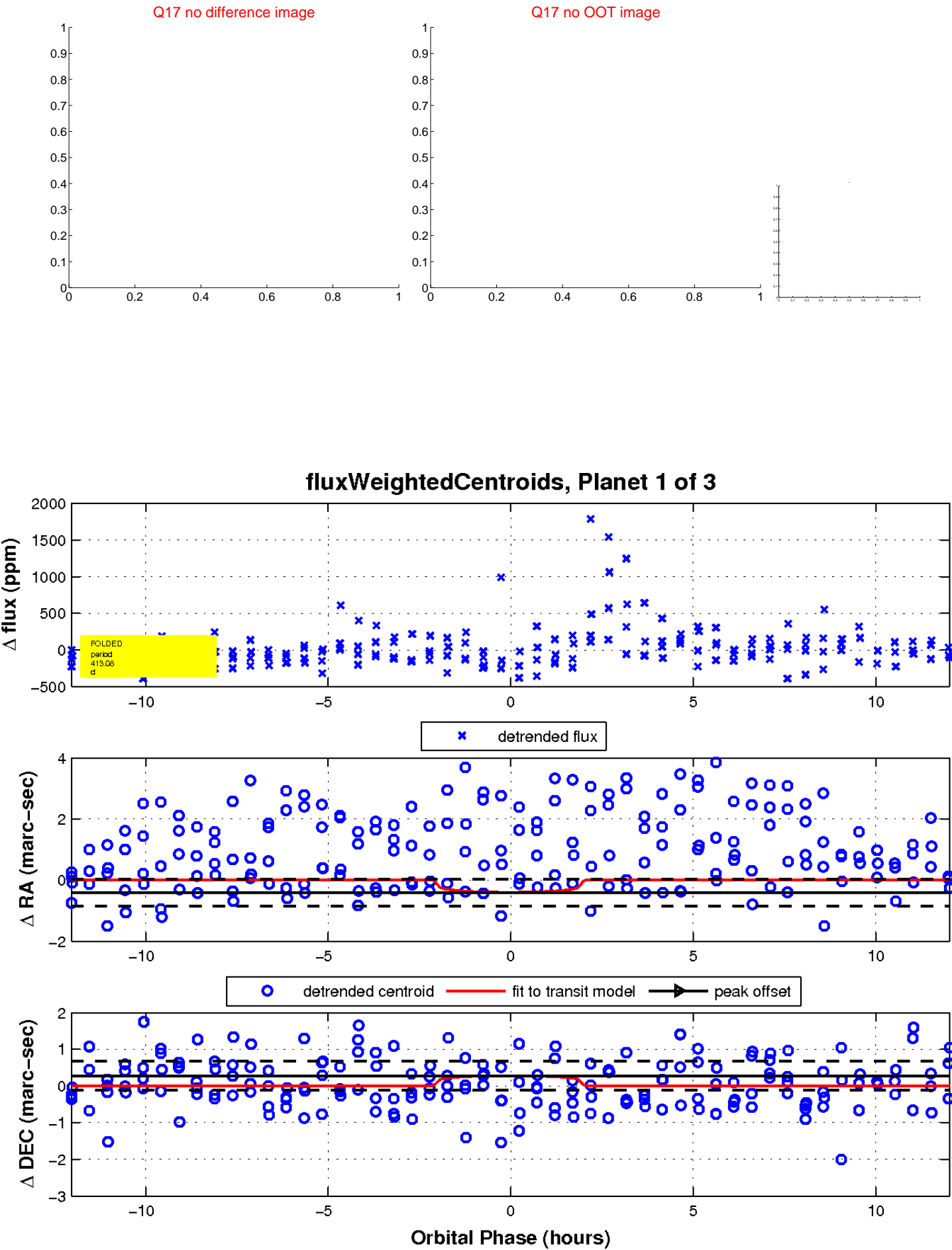
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



This is a false-color astronomical image, likely from a deep-sky survey. It shows a field of stars against a dark background. A prominent blue grid is overlaid on the image. The central star is the brightest and is surrounded by a blue nebula. Other stars are visible at various positions. Green text labels are present: '19.0', '18.0', '19:17.0', '16.0', '15.0', '14' along the bottom, and '30.0', '40.0', '50.0', '43:59' along the right side.

Declination

KIC 008091757

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})
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008091757-02	OBS	No	480.804732	482.173450	245.3	4.865	7.6	6.1	1.97	5855	3.10	2.52
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008091757-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
008091757-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_MEAS
008091757-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—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.

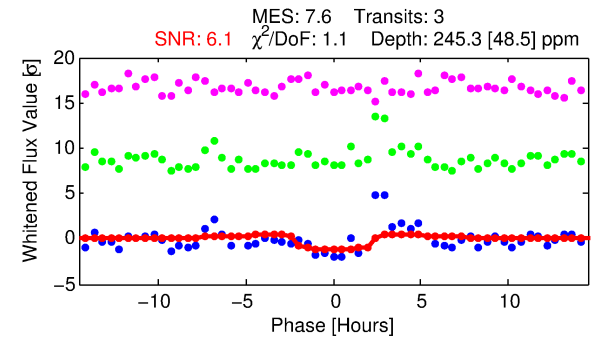
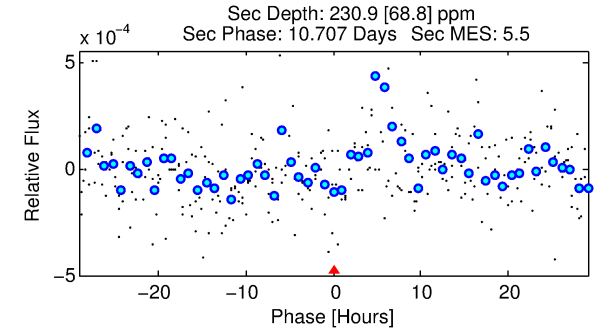
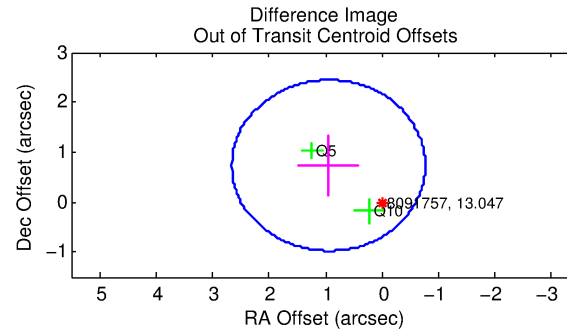
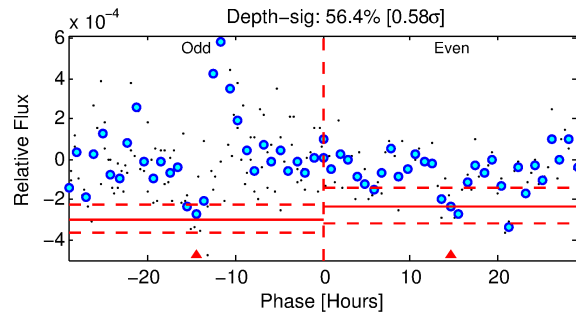
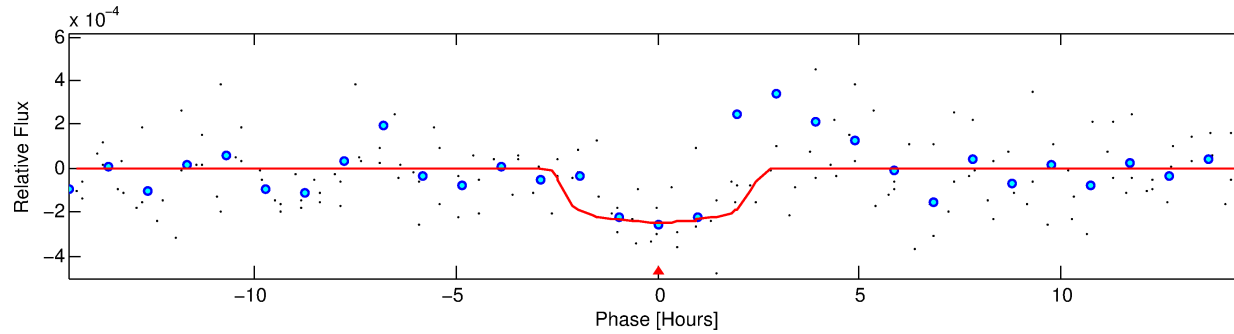
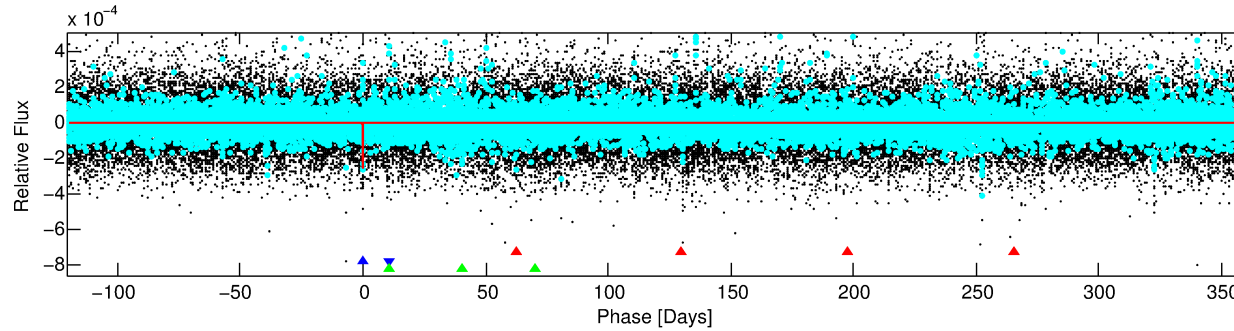
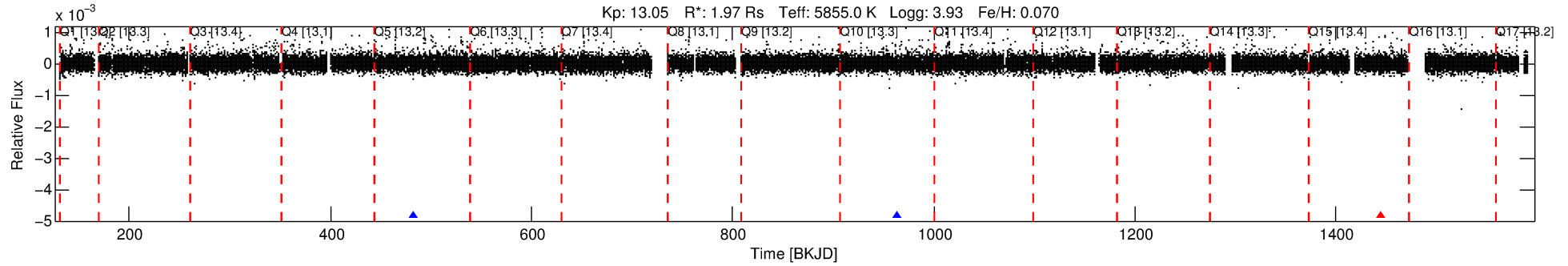
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008091757-02

No Significant Match Found

DV One-Page Summary

KIC: 8091757 Candidate: 2 of 3 Period: 480.805 d



DV Fit Results:

Period = 480.80473 [0.01024] d
Epoch = 482.1734 [0.0113] BKJD
Rp/R* = 0.0144 [0.0409]
a/R* = 719.06 [9128.06]
b = 0.35 [32.20]
Seff = 2.52 [0.90]
Teq = 321 [29] K
Rp = 3.10 [8.84] Re
a = 1.2744 [0.2954] AU
Ag = 21443.16 [122084.28] [0.18 σ]
Teffp = 6008 [8536] K [0.67 σ]

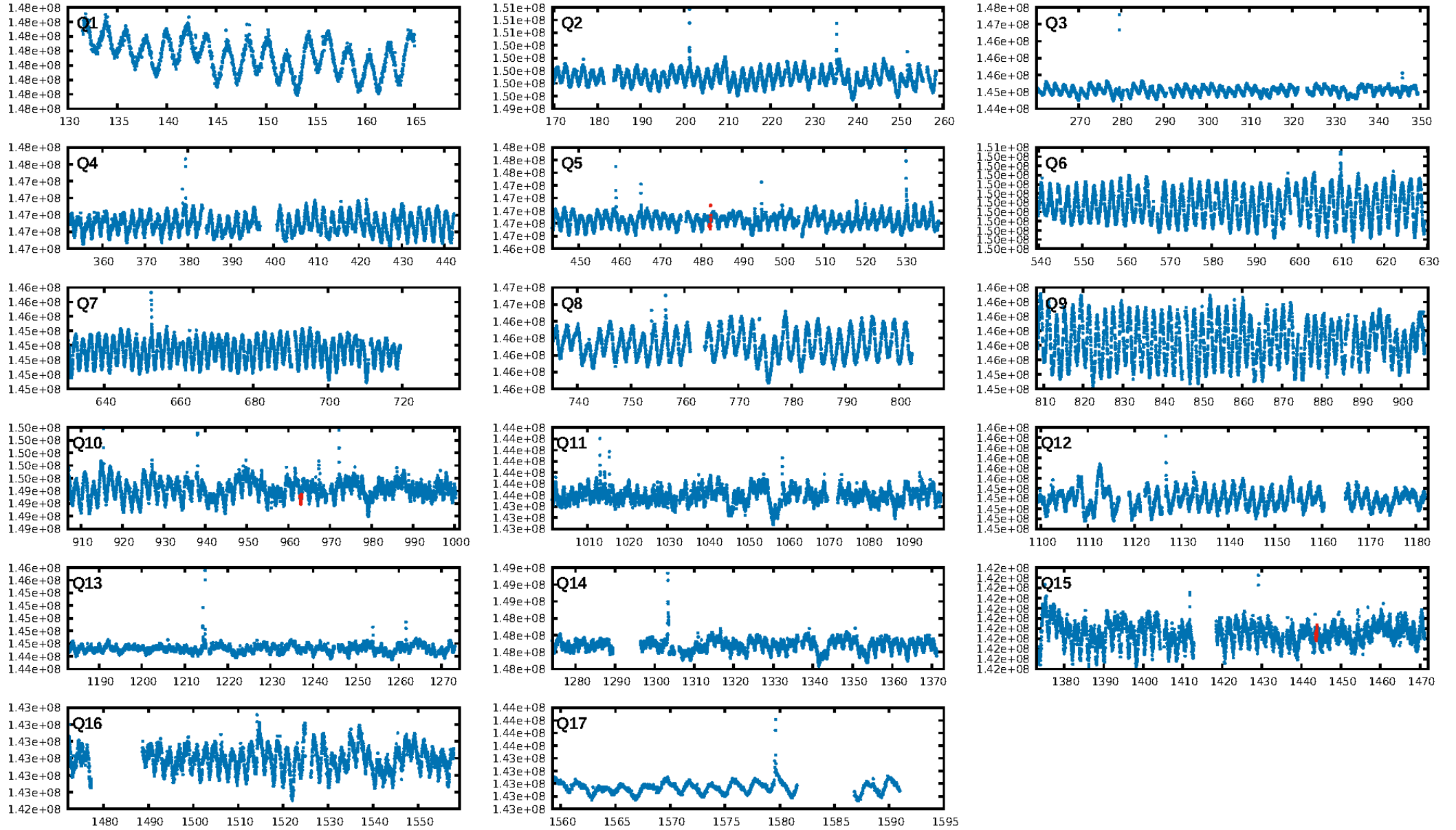
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [255.85 σ]
LongPeriod-sig: 100.0% [80.86 σ]
ModelChiSquare2-sig: 4.8%
ModelChiSquareGof-sig: 80.6%
Bootstrap-pfa: 2.61e-08
RollingBand-fgt: 0.67 [2/3]
GhostDiagnostic-chr: -39.31
Centroid-sig: 11.5%
Centroid-so: 1.920 arcsec [1.30 σ]
OotOffset-rm: 1.197 arcsec [2.10 σ]
KicOffset-rm: 0.982 arcsec [1.82 σ]
OotOffset-st: 1/0/0/1 [2]
KicOffset-st: 1/0/0/1 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

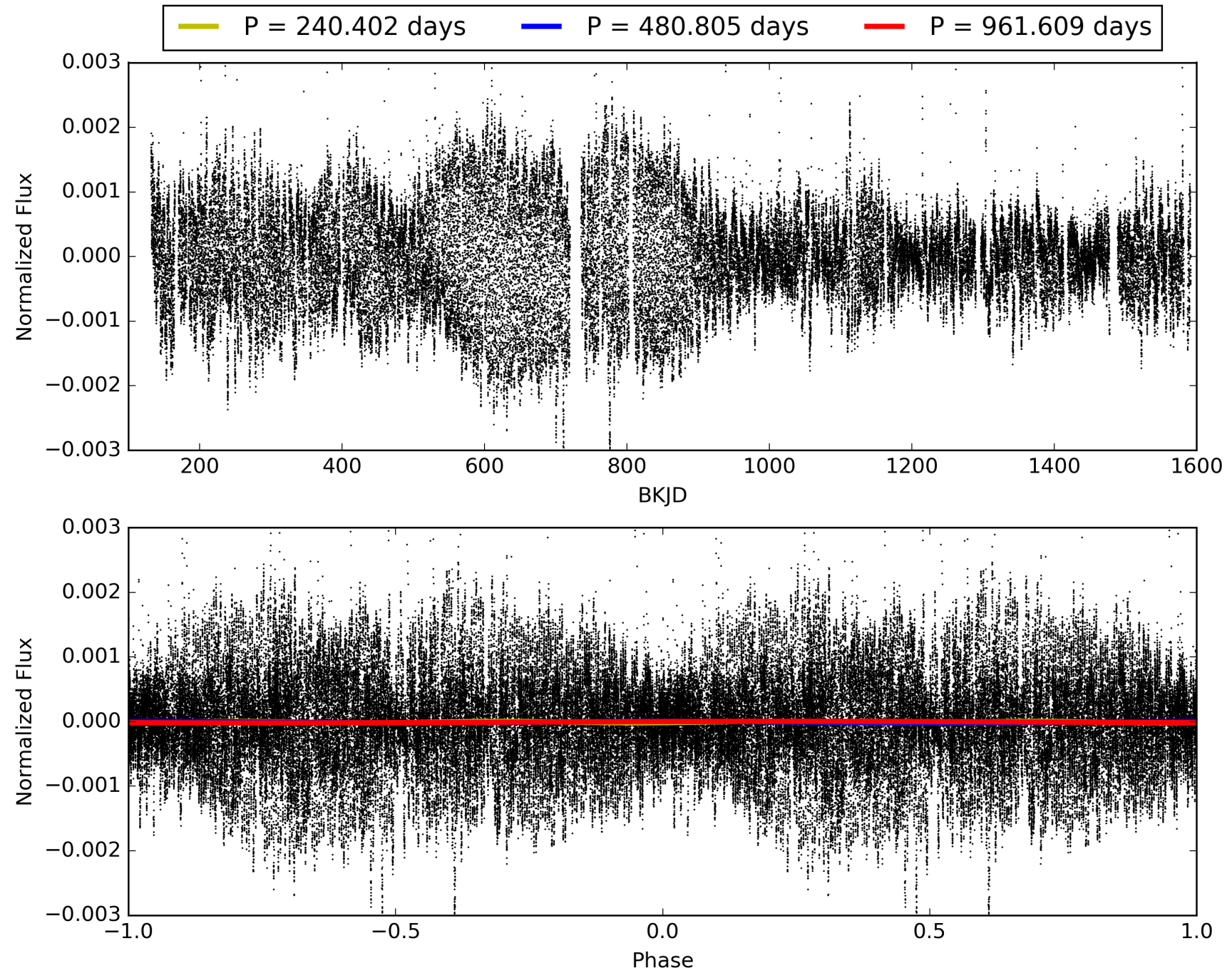
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:21:01 Z

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

TCE 008091757-02, PDC Light Curves

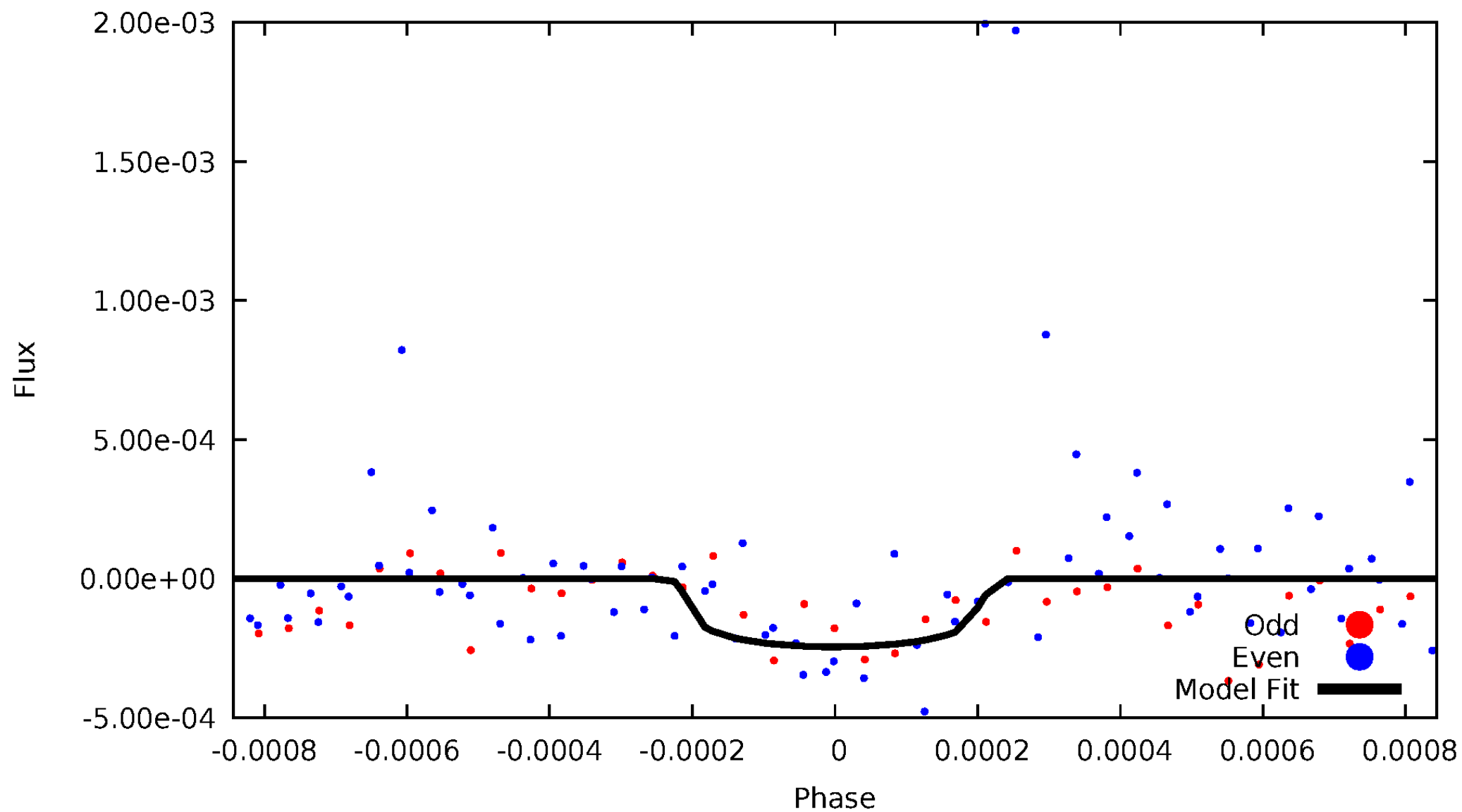


TCE 008091757-02



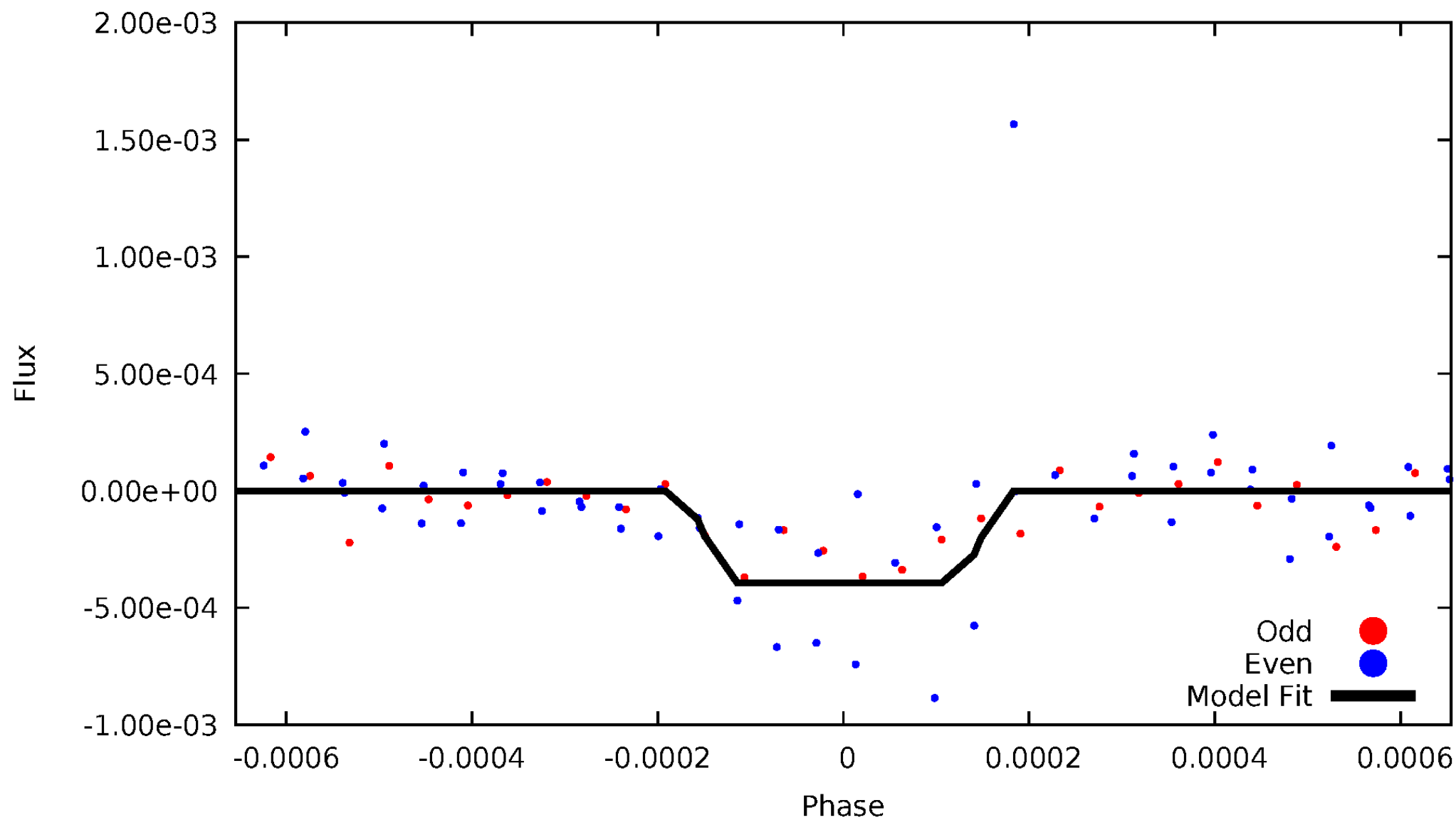
DV Odd/Even

TCE 008091757-02



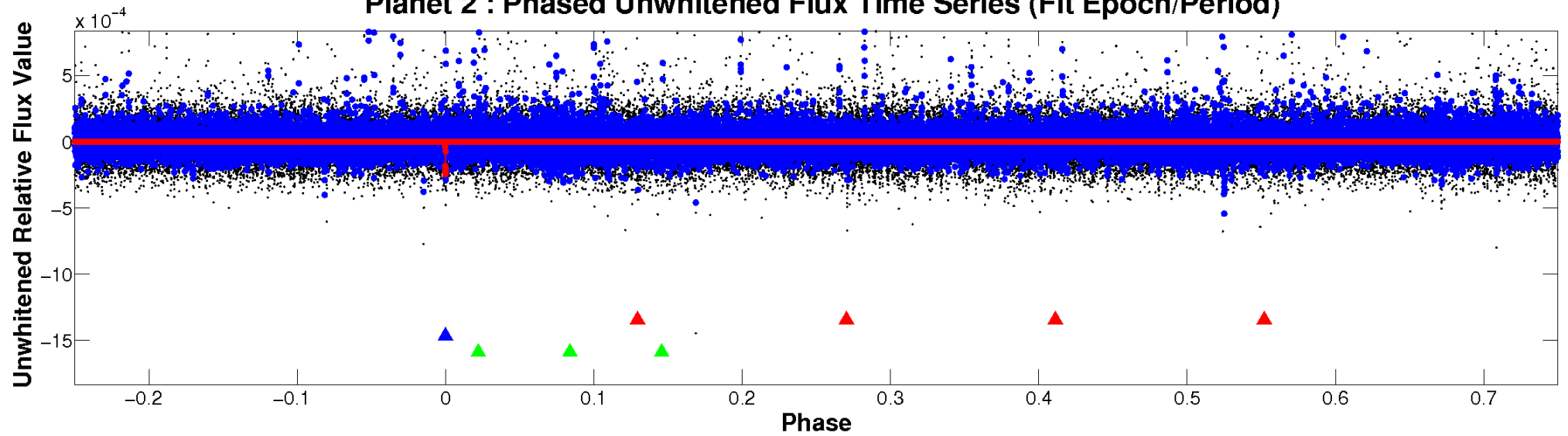
ALT Odd/Even

TCE 008091757-02

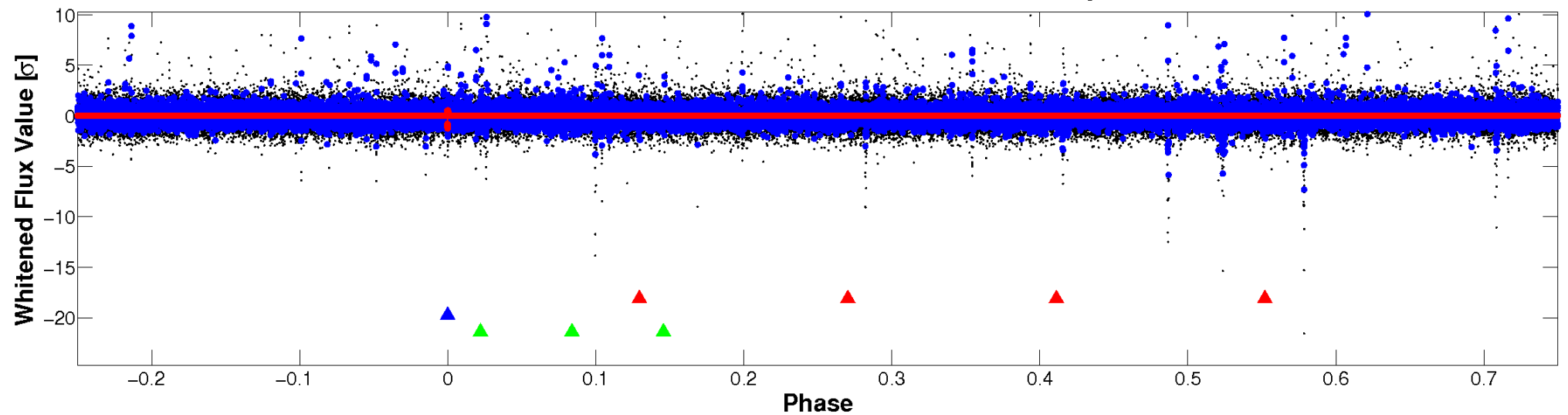


Non-Whitened Vs. Whitened Light Curve

Planet 2 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

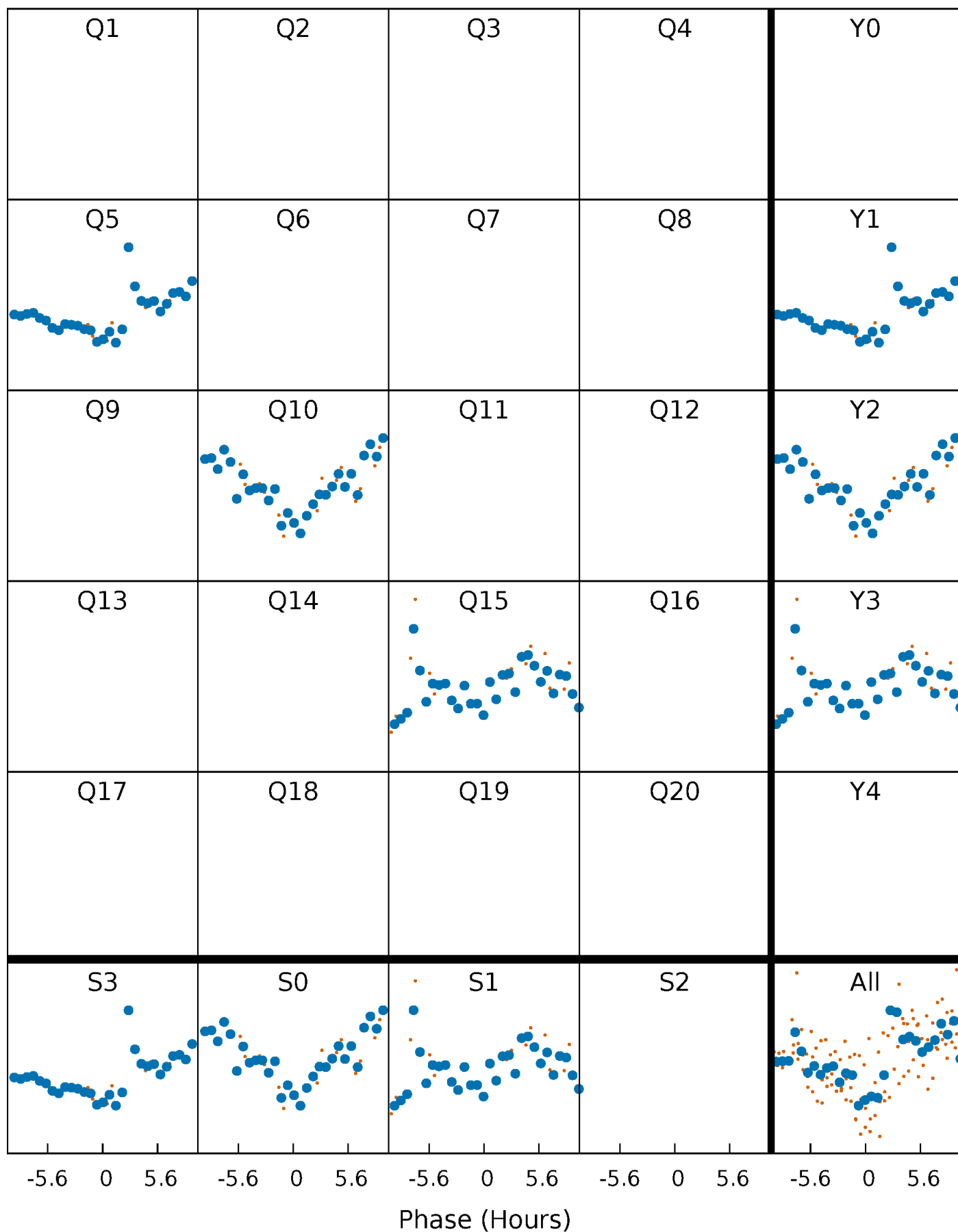


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



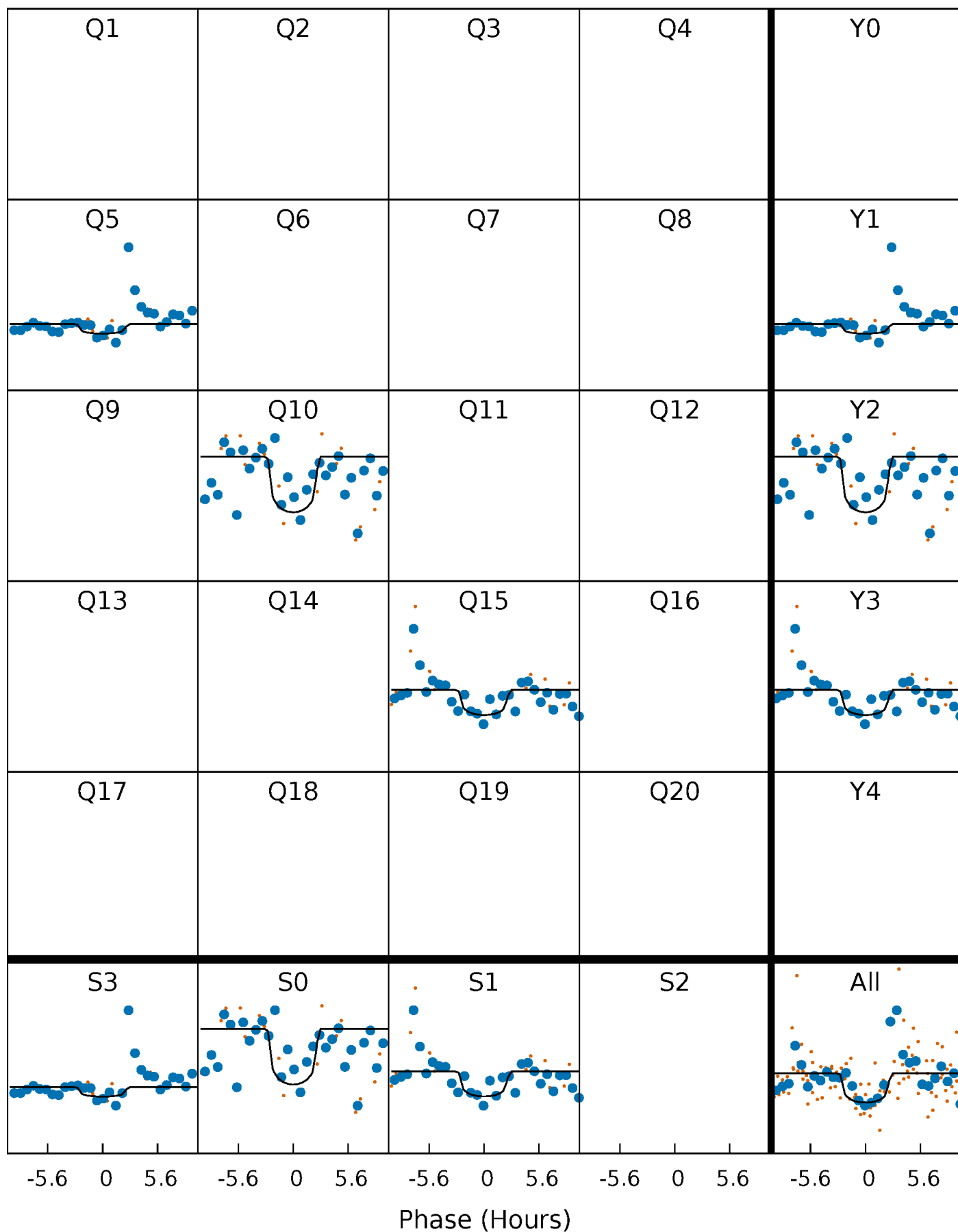
PDC Quarter-Phased Transit Curves

TCE 008091757-02 $P=480.804732$ Days $T_0=482.173450$ (BKJD)



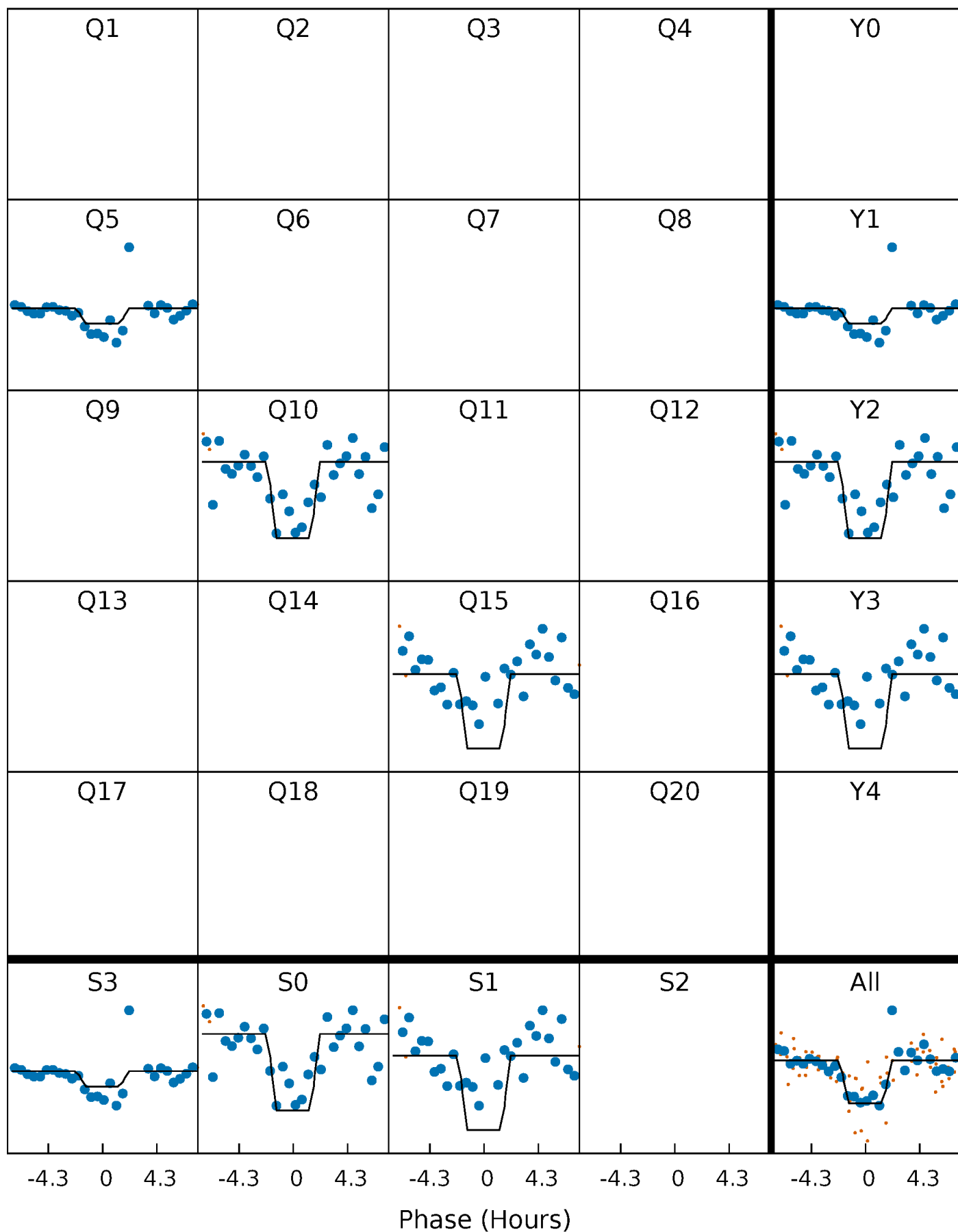
DV Quarter-Phased Transit Curves

TCE 008091757-02 $P=480.804732$ Days $T_0=482.173450$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

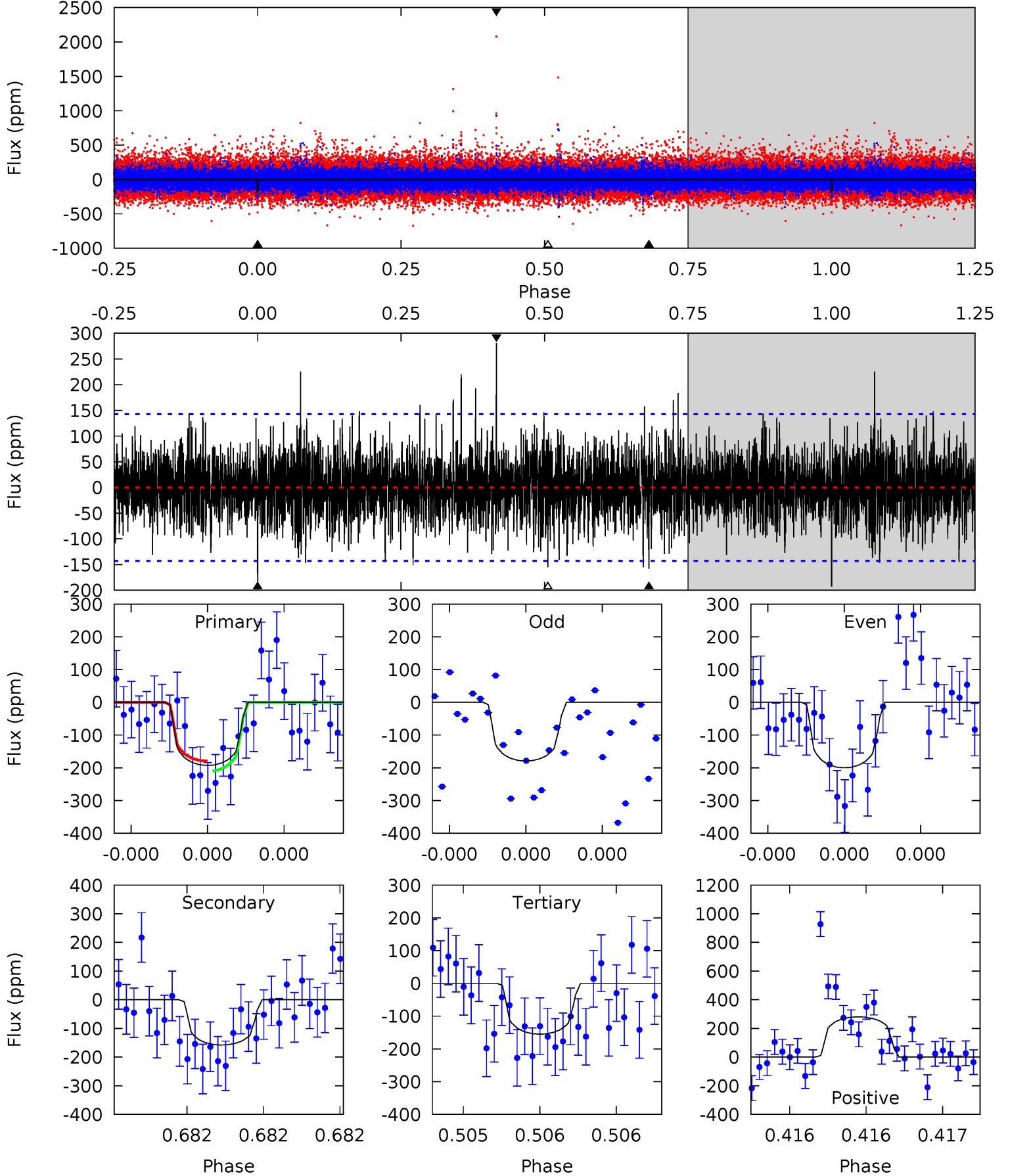
TCE 008091757-02 P=480.801667 Days $T_0=482.186599$ (BKJD)



DV Model-Shift Uniqueness Test

008091757-02, P = 480.804732 Days, E = 1.368718 Days

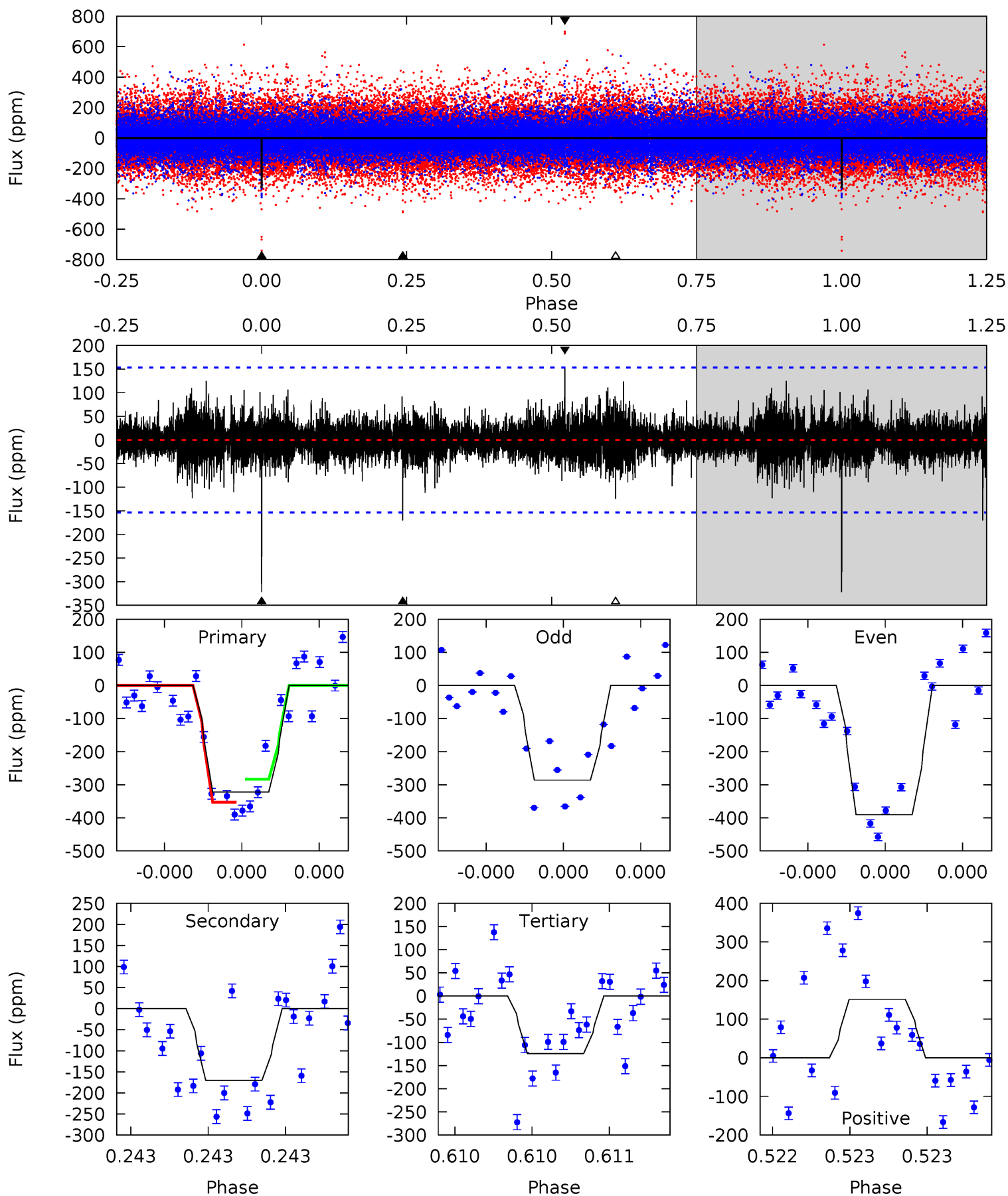
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.55	6.18	6.07	11.0	5.59	3.50	1.71	1.48	-3.44	0.11	-4.81	0.35	0.96	0.59	0.59



Alt Model-Shift Uniqueness Test

008091757-02, P = 480.801667 Days, E = 1.384932 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.9	6.28	4.59	5.57	5.66	3.61	0.94	7.28	6.30	1.69	0.71	1.93	1.24	0.32	1.27



Stellar Parameters For KIC 008091757

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5855^{+78}_{-78}	$3.926^{+0.203}_{-0.073}$	$0.070^{+0.150}_{-0.150}$	$1.970^{+0.273}_{-0.507}$	$1.194^{+0.122}_{-0.150}$	$0.220^{+0.267}_{-0.060}$
	+1%/-1%	+5%/-2%	+214%/-214%	+14%/-26%	+10%/-13%	+121%/-27%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 008091757-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-158 ± 26	$6.75^{+6.87}_{-4.74}$	443^{+20}_{-28}	3939^{+2718}_{-785}	3055^{+32814}_{-2319}
Alt.	-170 ± 27	$7.26^{+7.29}_{-4.93}$	444^{+17}_{-28}	3925^{+2438}_{-790}	2913^{+27072}_{-2184}

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

DV Centroid Data

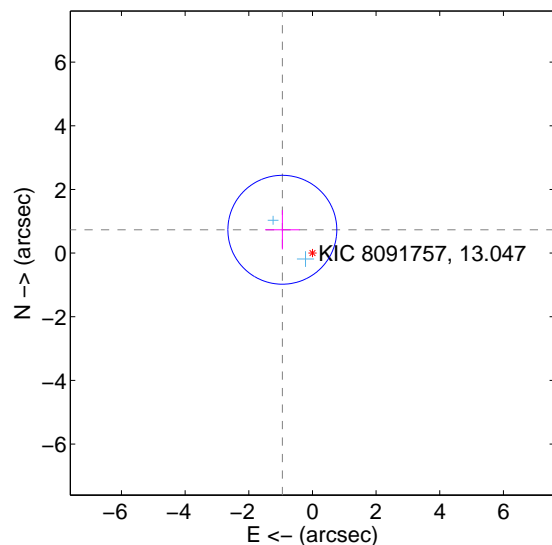
Supplemental centroid analysis for 008091757-02. Kepler magnitude: 13.05. Transit SNR 6.08

There are 2 quarters with good PRF difference image offsets

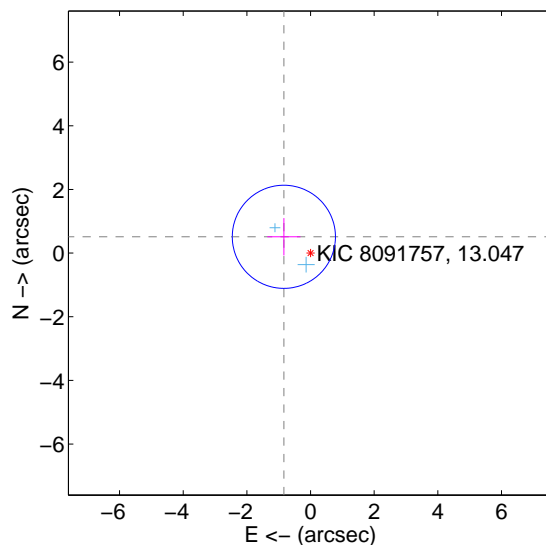
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.197 ± 0.570	2.10	0.946 ± 0.541	0.733 ± 0.616
PRF-fit source offset from KIC position	0.982 ± 0.540	1.82	0.838 ± 0.522	0.512 ± 0.587
photometric centroid source offset	1.92 ± 1.47	1.30	-0.91 ± 1.59	-1.69 ± 1.44

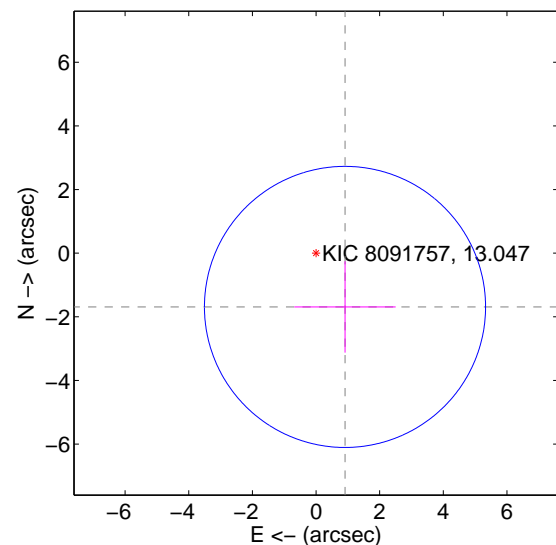
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

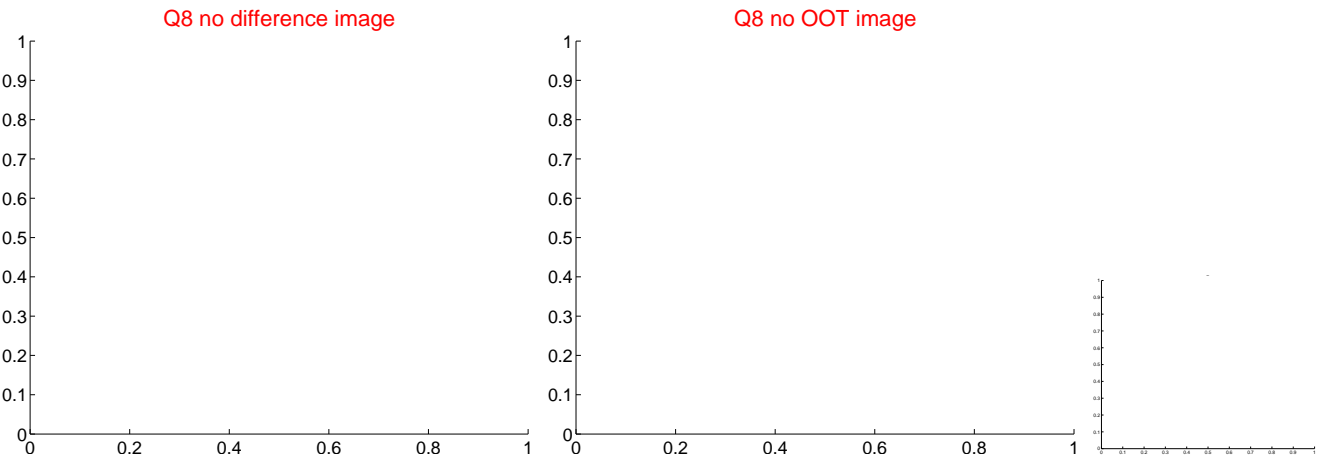
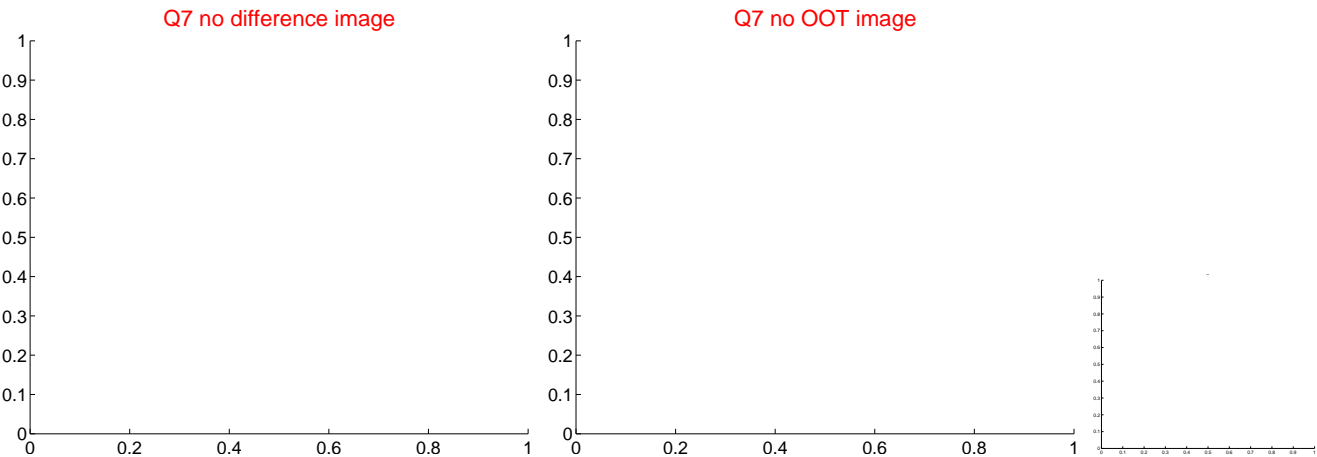
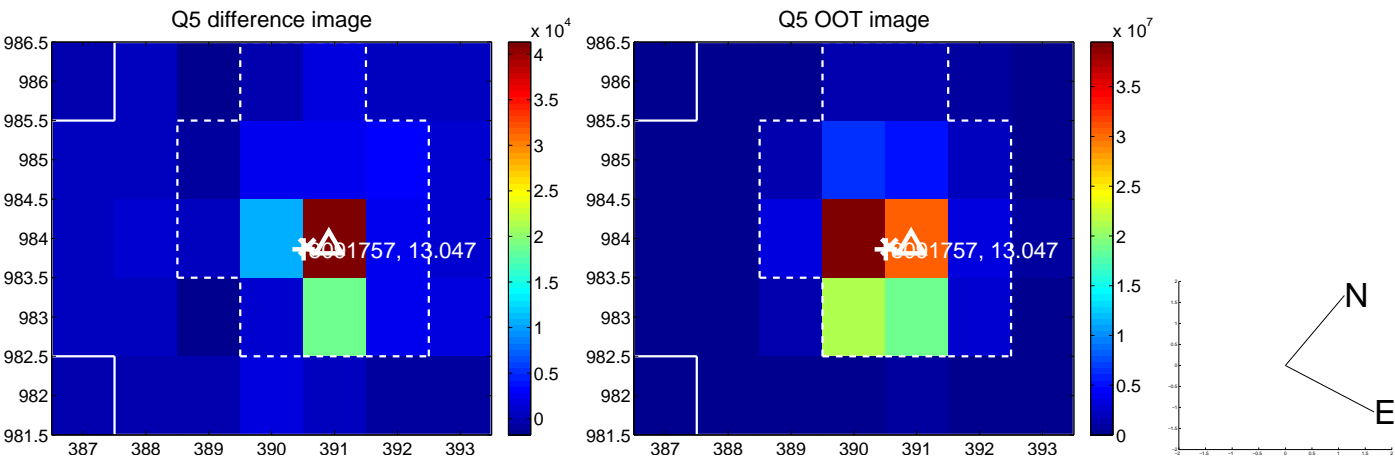


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

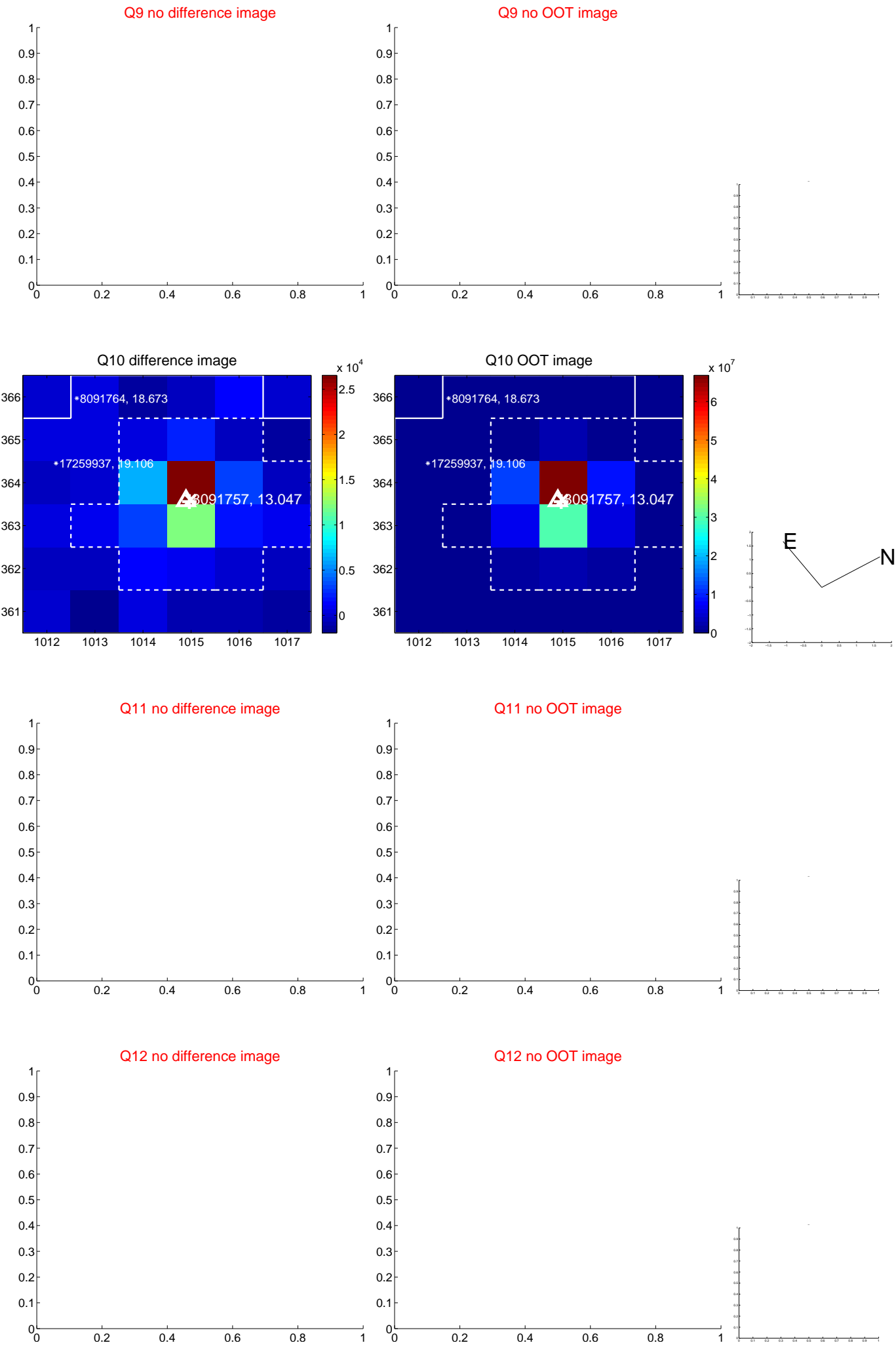
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



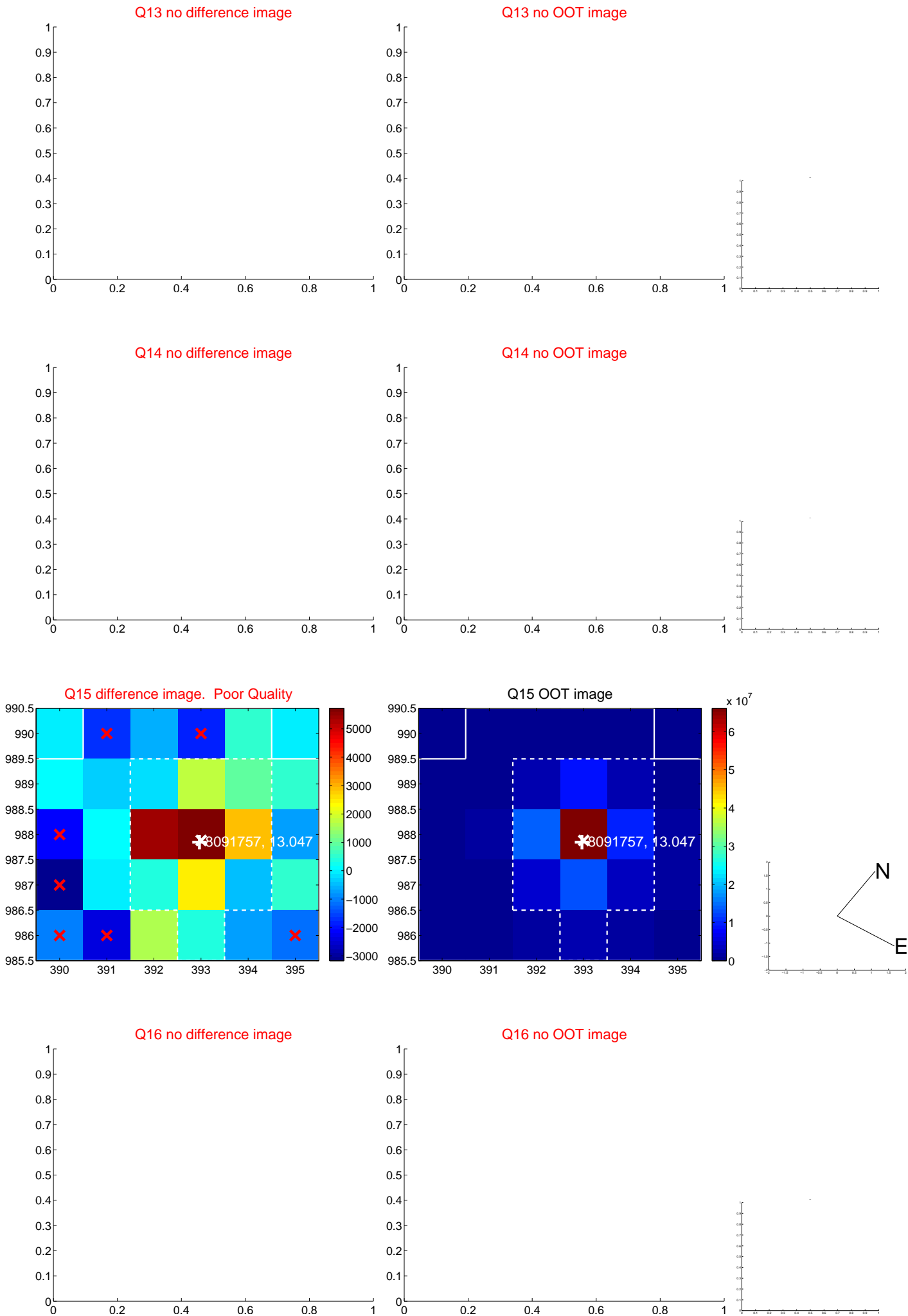
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



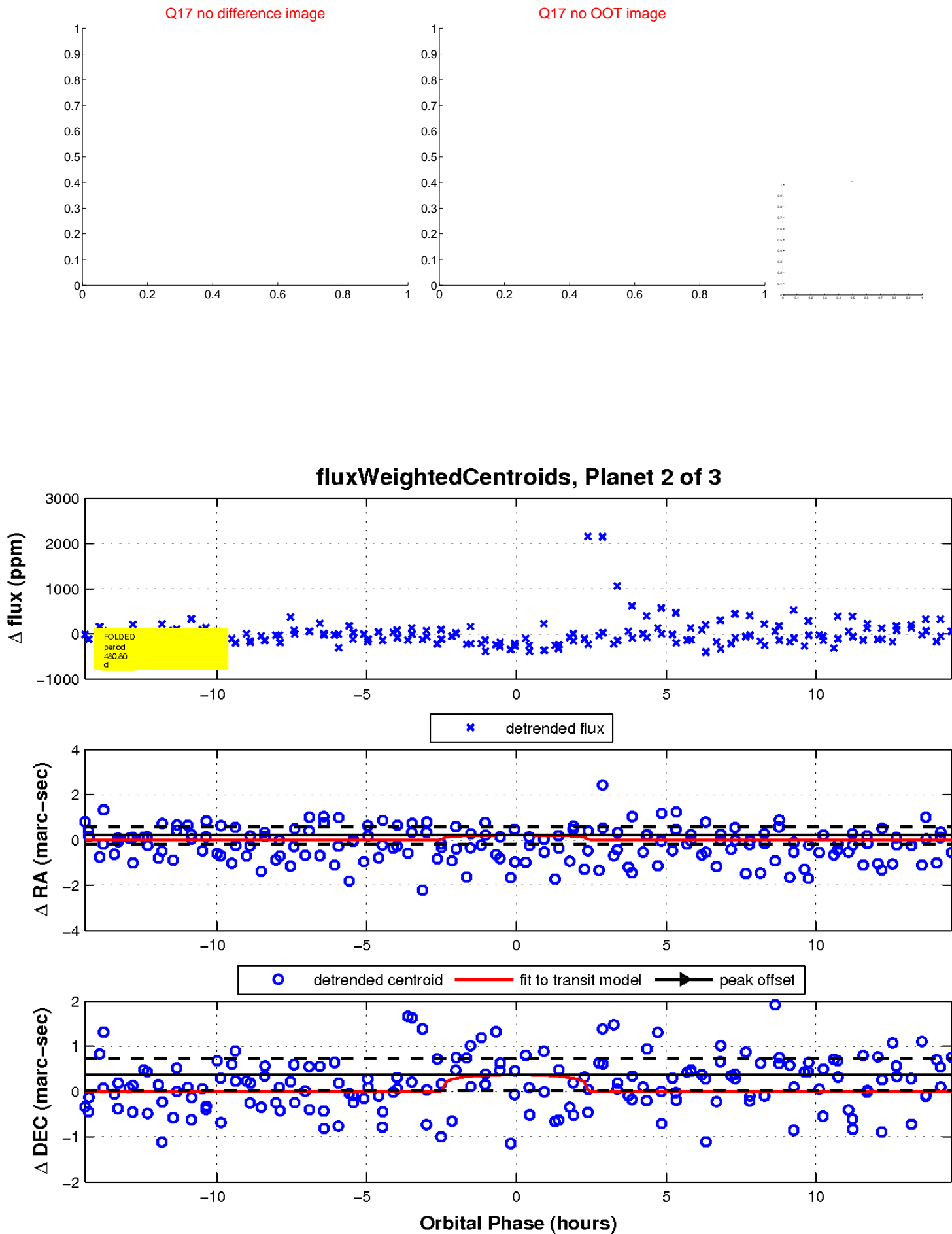
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

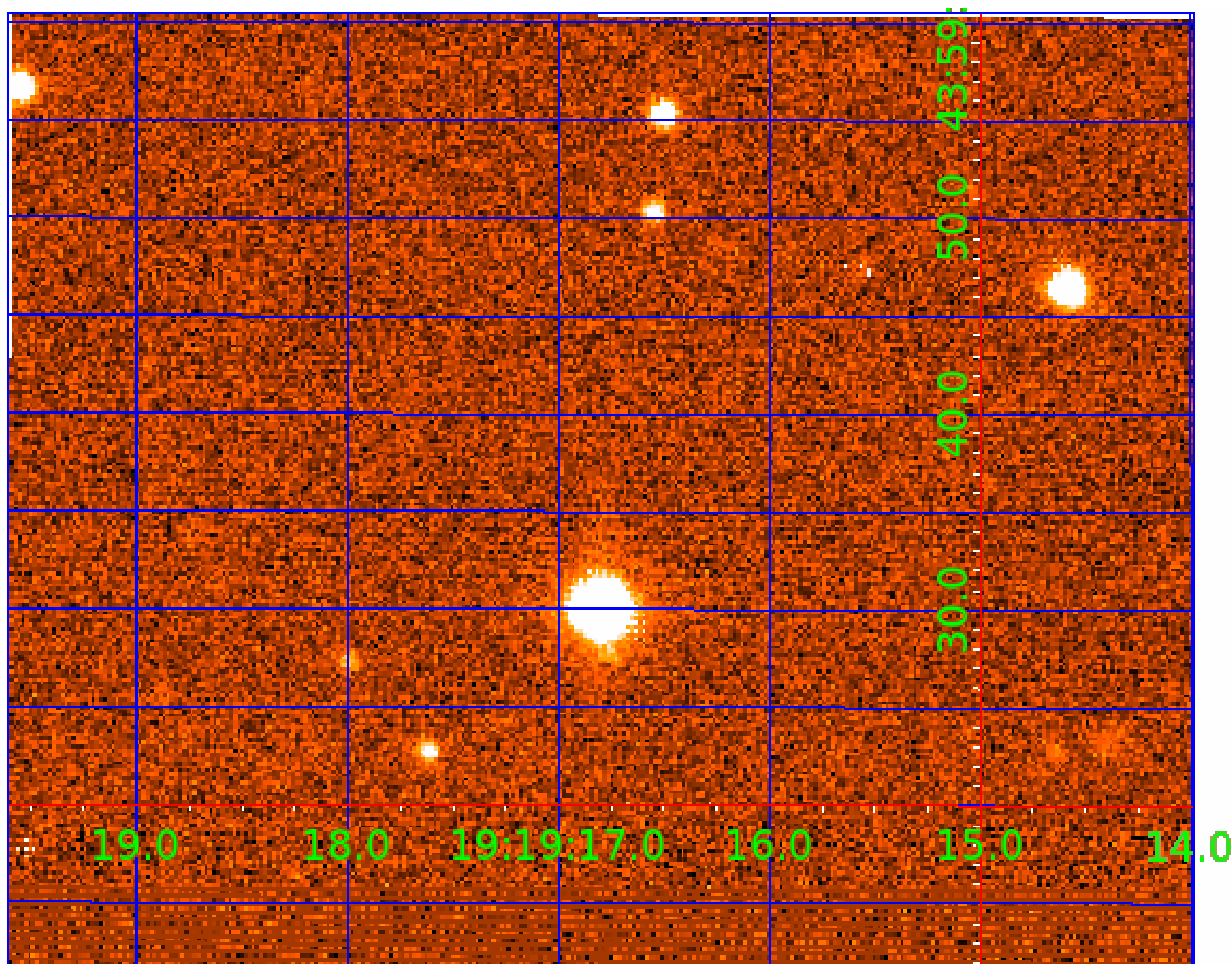


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008091757

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})
008091757-01	OBS	No	413.084012	266.792772	233.9	4.085	10.1	5.5	1.97	5855	3.19	3.08
008091757-02	OBS	No	480.804732	482.173450	245.3	4.865	7.6	6.1	1.97	5855	3.10	2.52
008091757-03	OBS	No	510.518515	492.827395	121.9	7.356	10.5	2.7	1.97	5855	2.42	2.32

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008091757-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
008091757-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_MEAS
008091757-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—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.

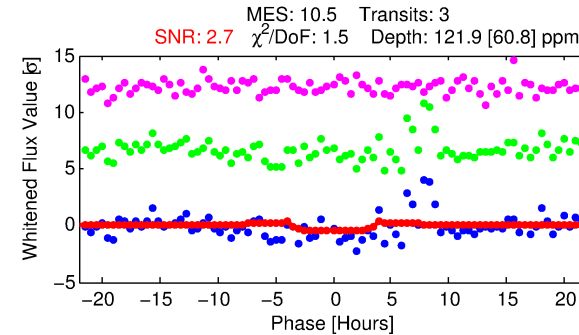
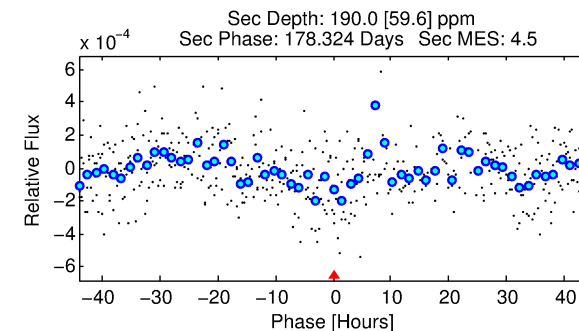
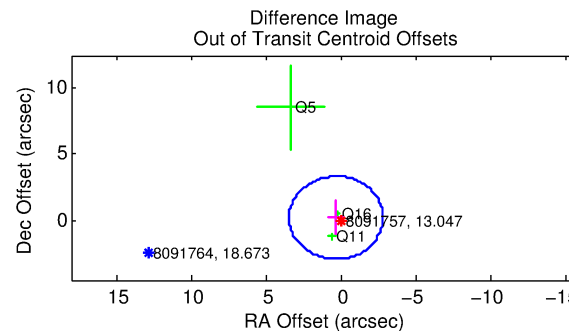
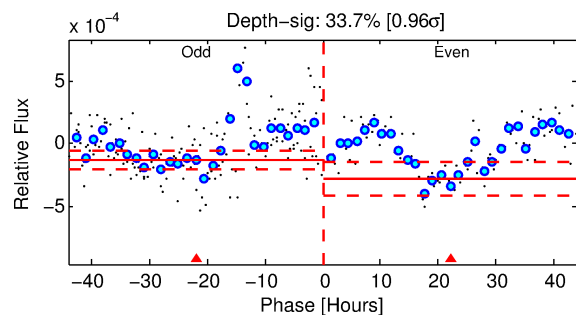
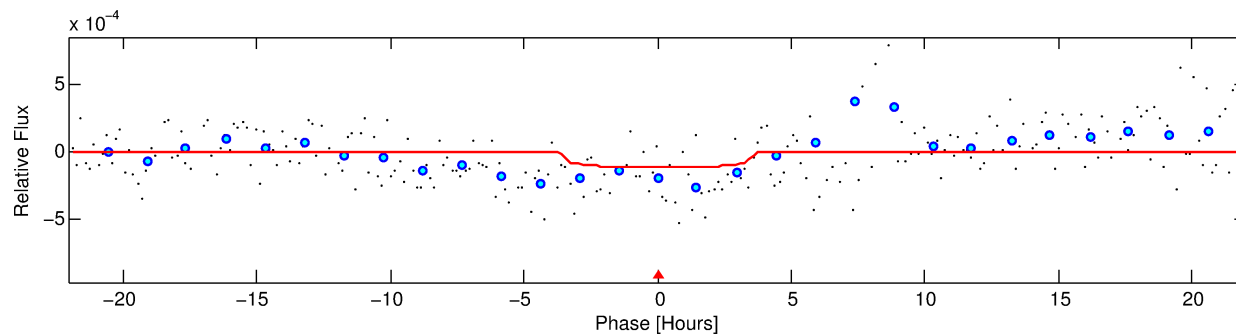
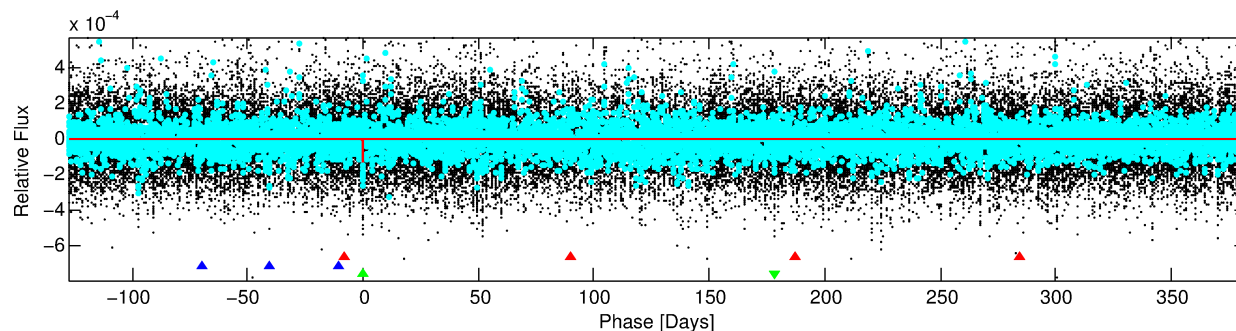
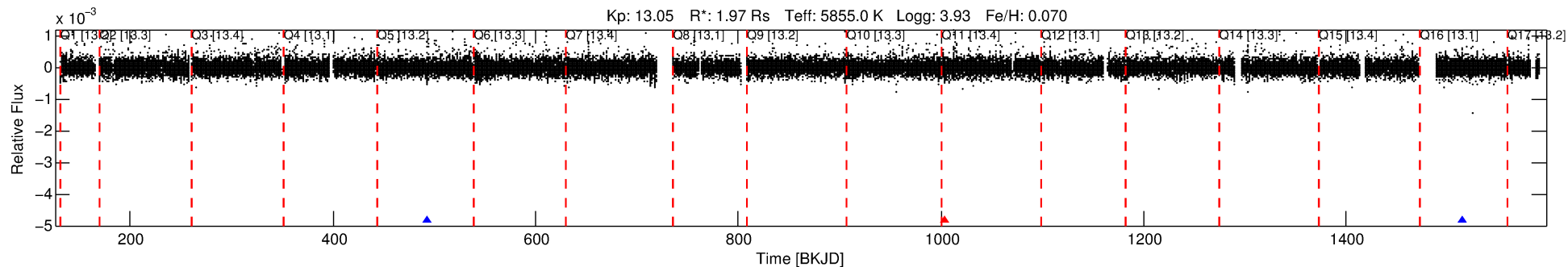
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008091757-03

No Significant Match Found

DV One-Page Summary

KIC: 8091757 Candidate: 3 of 3 Period: 510.519 d



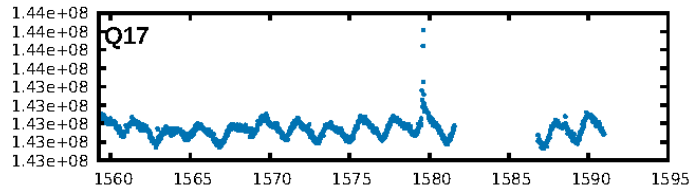
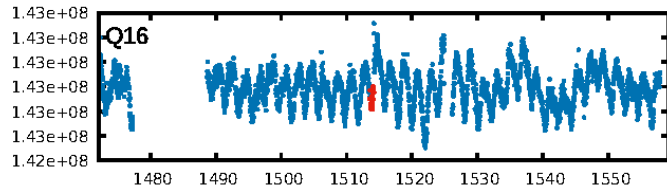
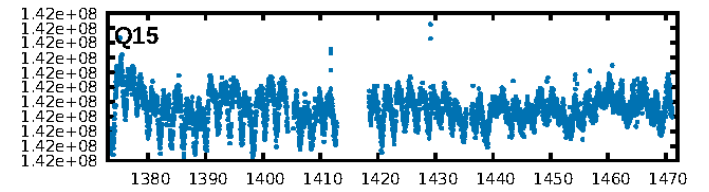
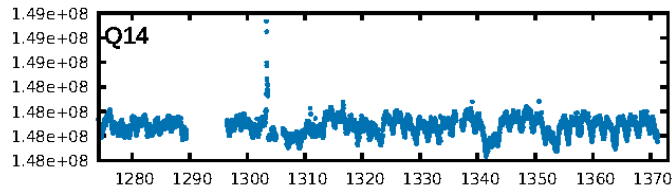
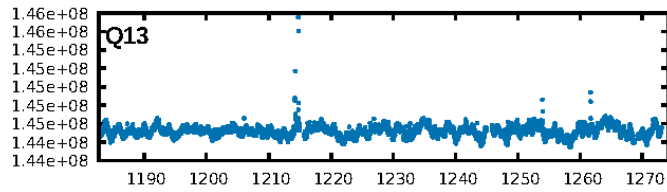
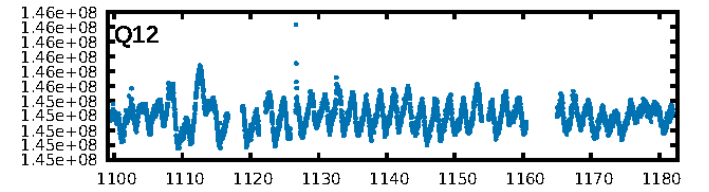
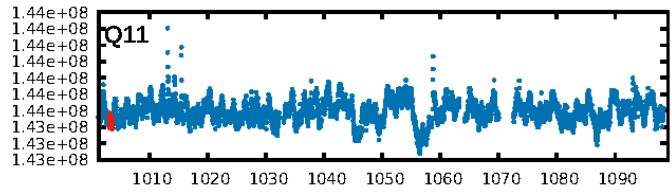
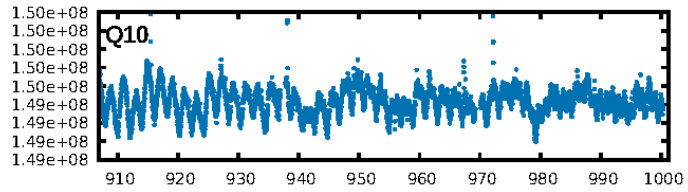
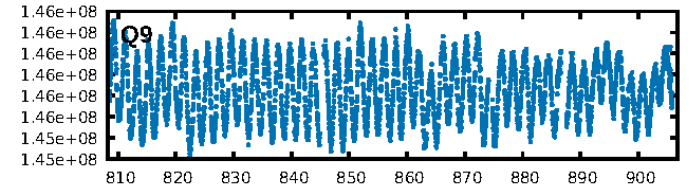
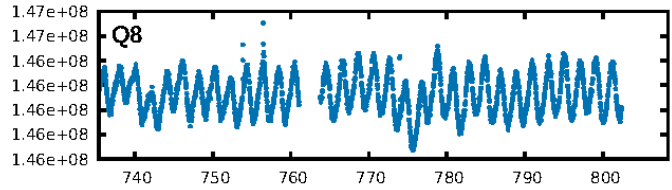
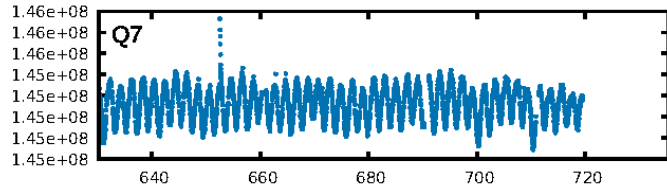
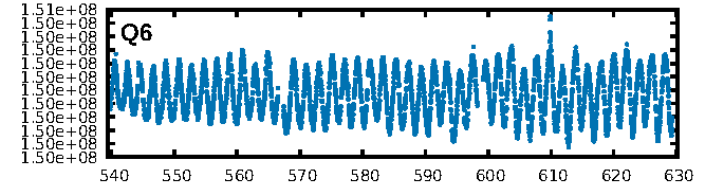
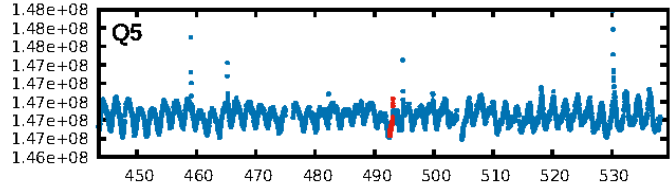
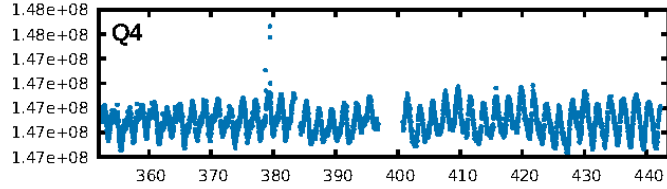
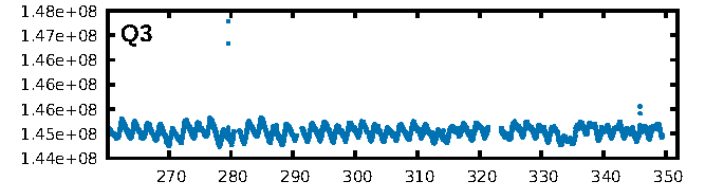
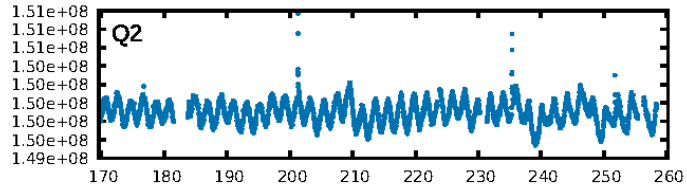
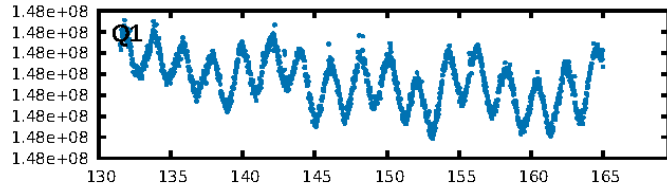
DV Fit Results:

Period = 510.51852 [0.02670] d
Epoch = 492.8274 [0.0396] BKJD
Rp/R* = 0.0113 [0.0274]
a/R* = 323.24 [3655.93]
b = 0.81 [4.96]
Seff = 2.32 [0.84]
Teq = 315 [28] K
Rp = 2.42 [5.93] Re
a = 1.3264 [0.3074] AU
Ag = 31385.14 [153575.63] [0.20 σ]
Teffp = 6478 [7904] K [0.78 σ]

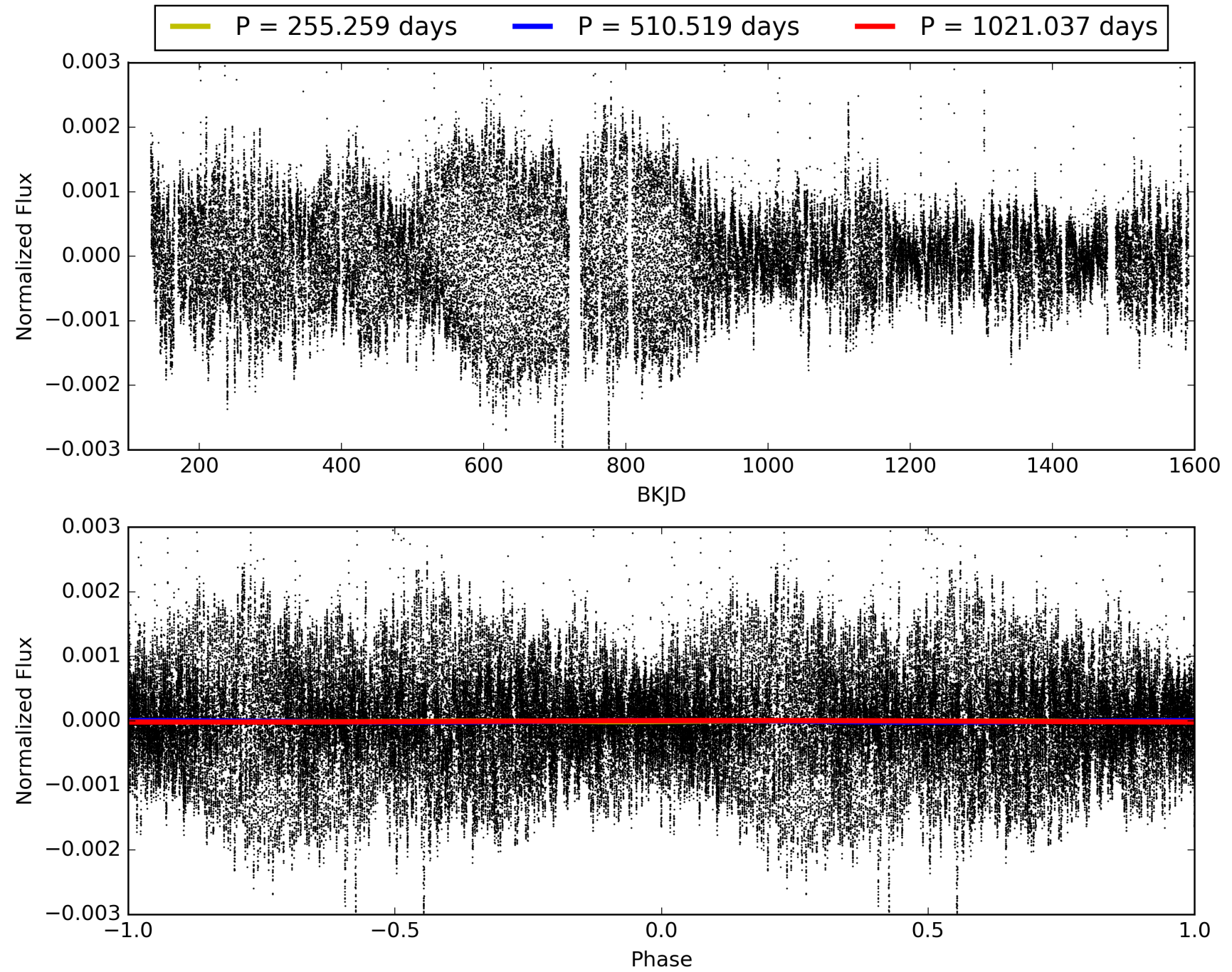
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [80.86 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 3.2%
ModelChiSquareGof-sig: 78.1%
Bootstrap-pfa: 4.23e-12
RollingBand-fgt: 0.67 [2/3]
GhostDiagnostic-chr: 0.9705
Centroid-sig: 55.1%
Centroid-so: 2.084 arcsec [0.75 σ]
OotOffset-rm: 0.369 arcsec [0.35 σ]
KicOffset-rm: 0.210 arcsec [0.16 σ]
OotOffset-st: 0/1/1/1 [3]
KicOffset-st: 0/1/1/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 008091757-03, PDC Light Curves

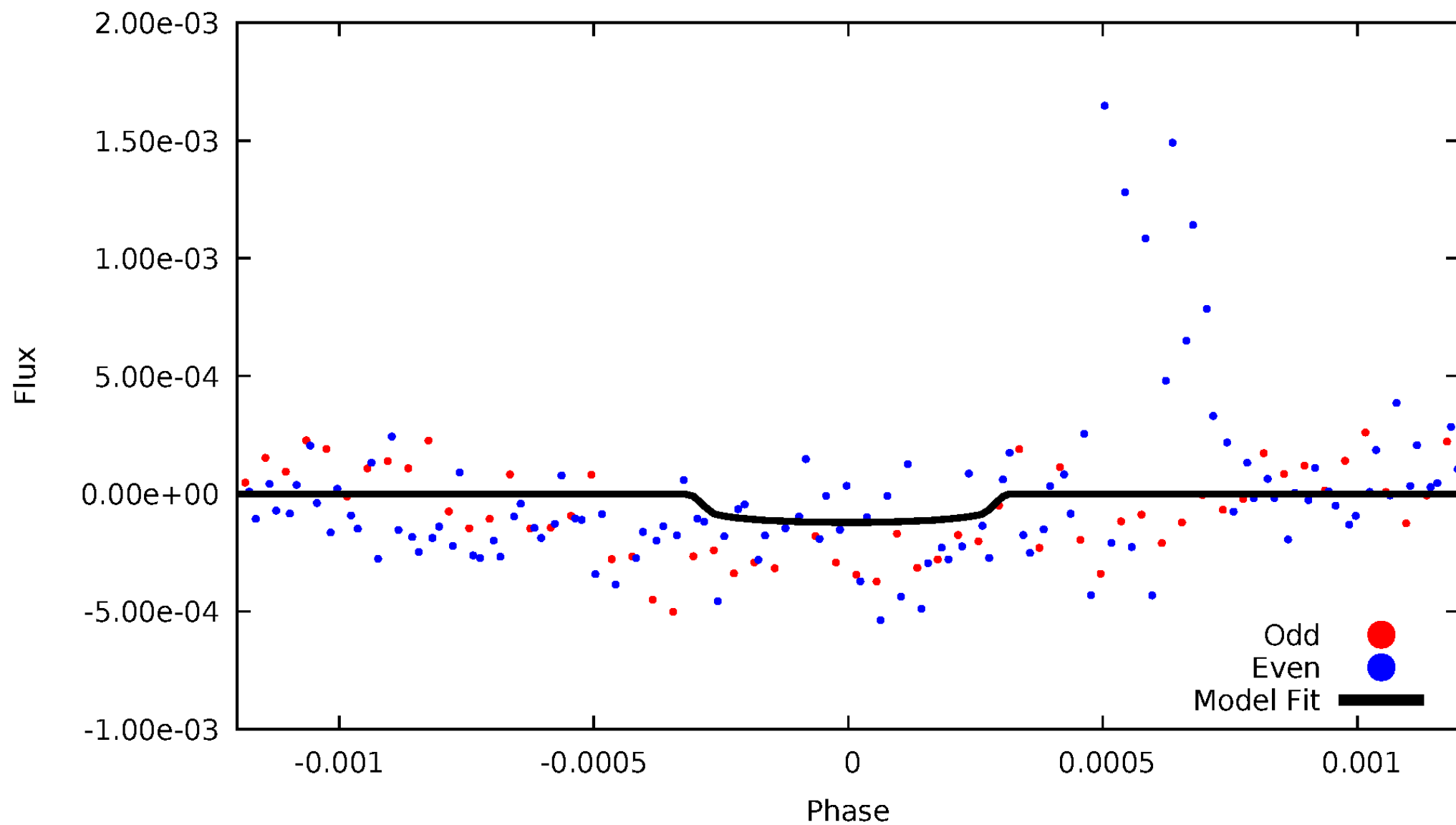


TCE 008091757-03



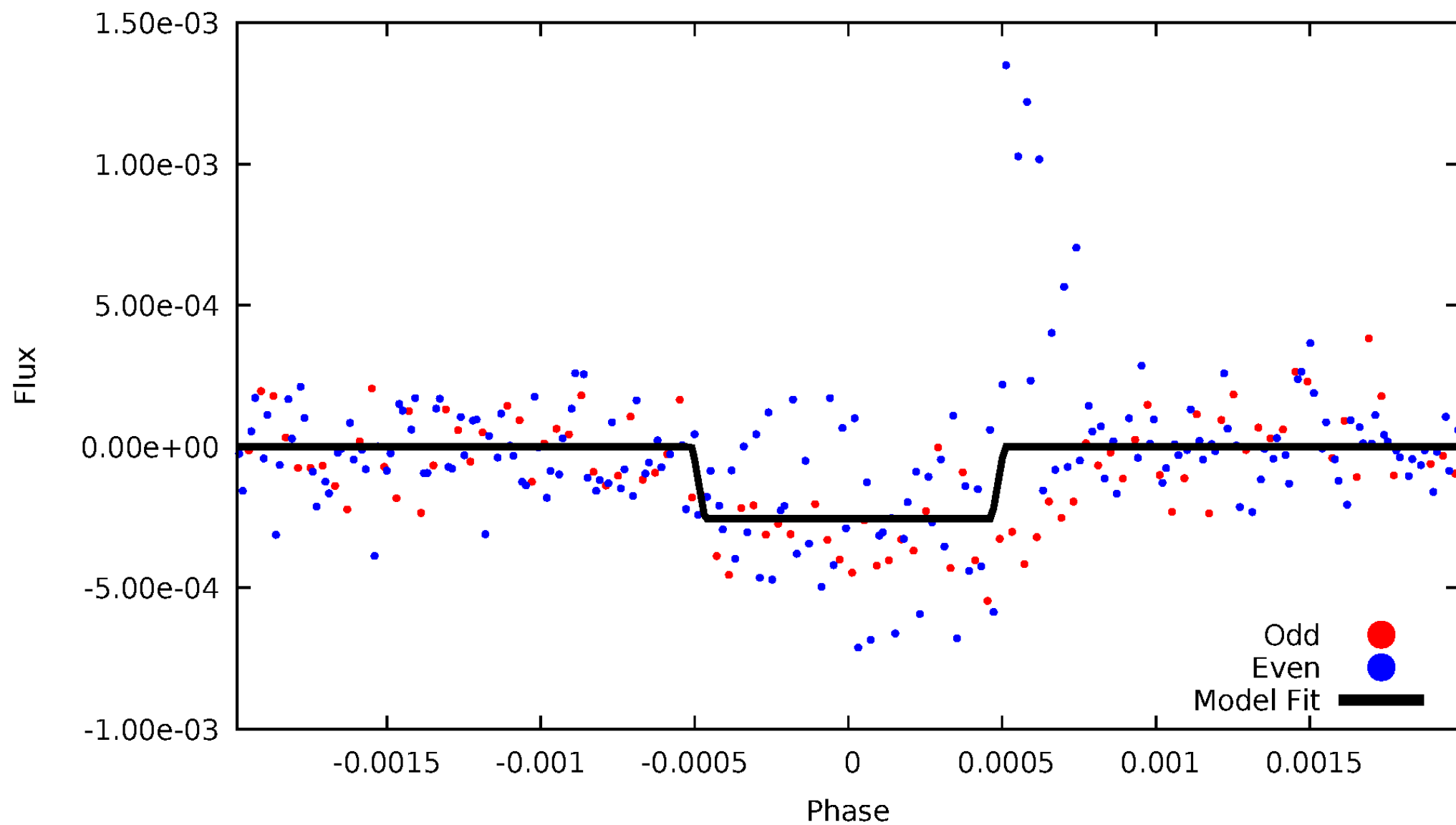
DV Odd/Even

TCE 008091757-03



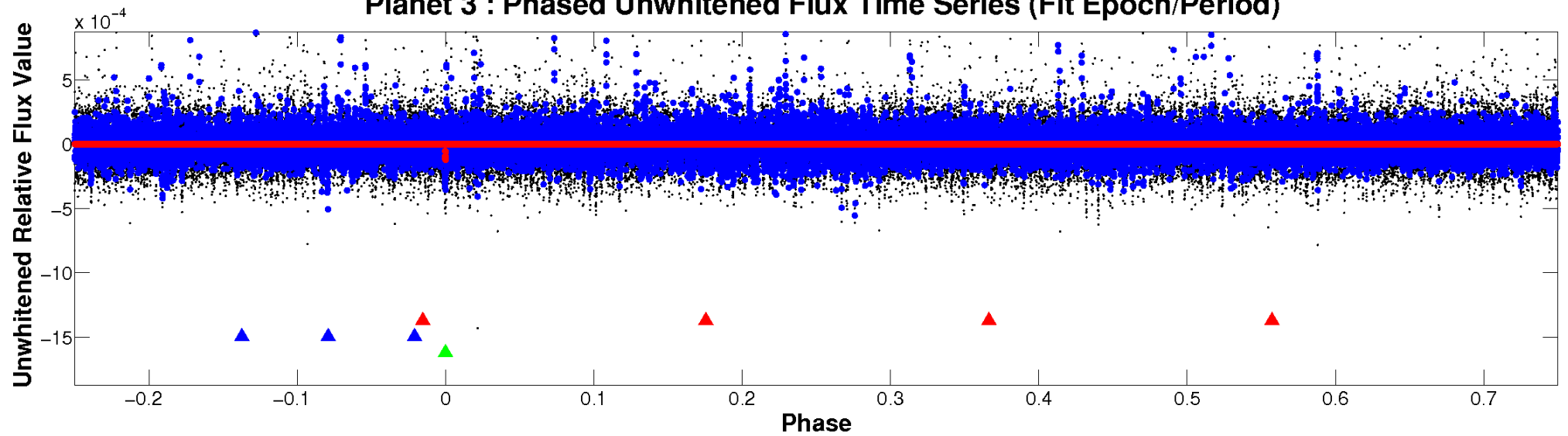
ALT Odd/Even

TCE 008091757-03

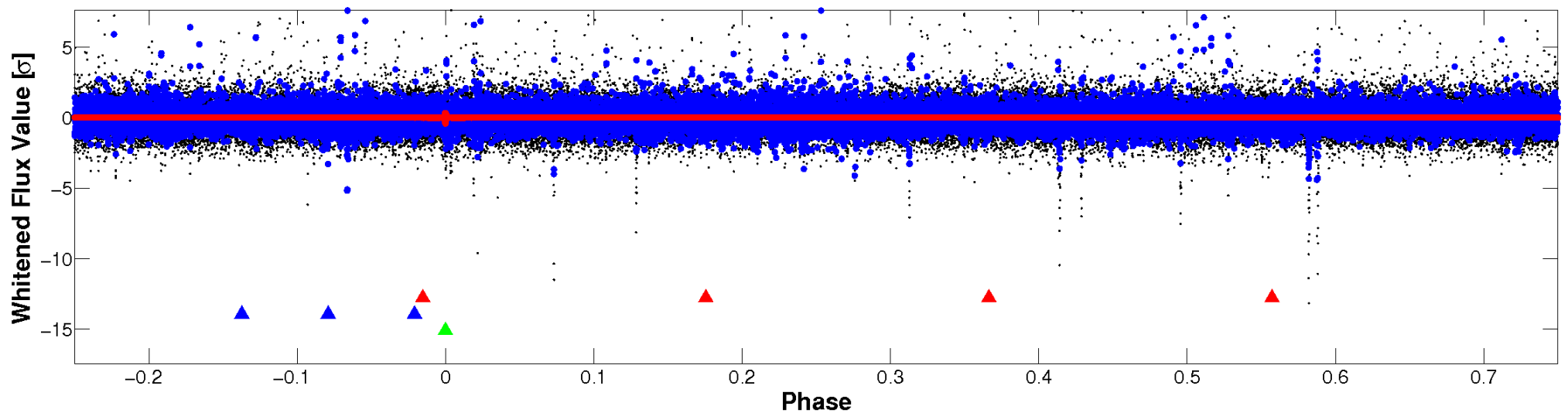


Non-Whitened Vs. Whitened Light Curve

Planet 3 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

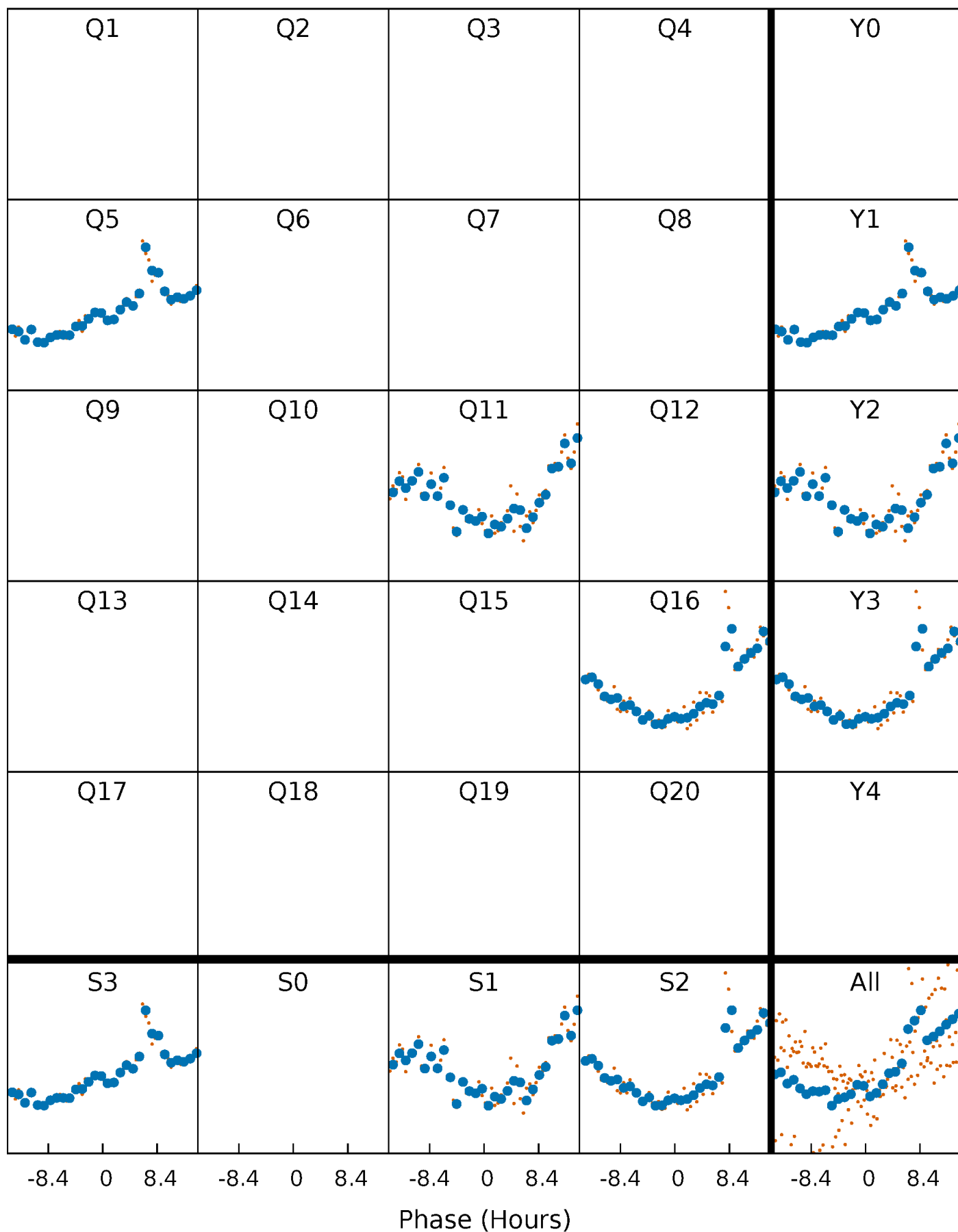


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



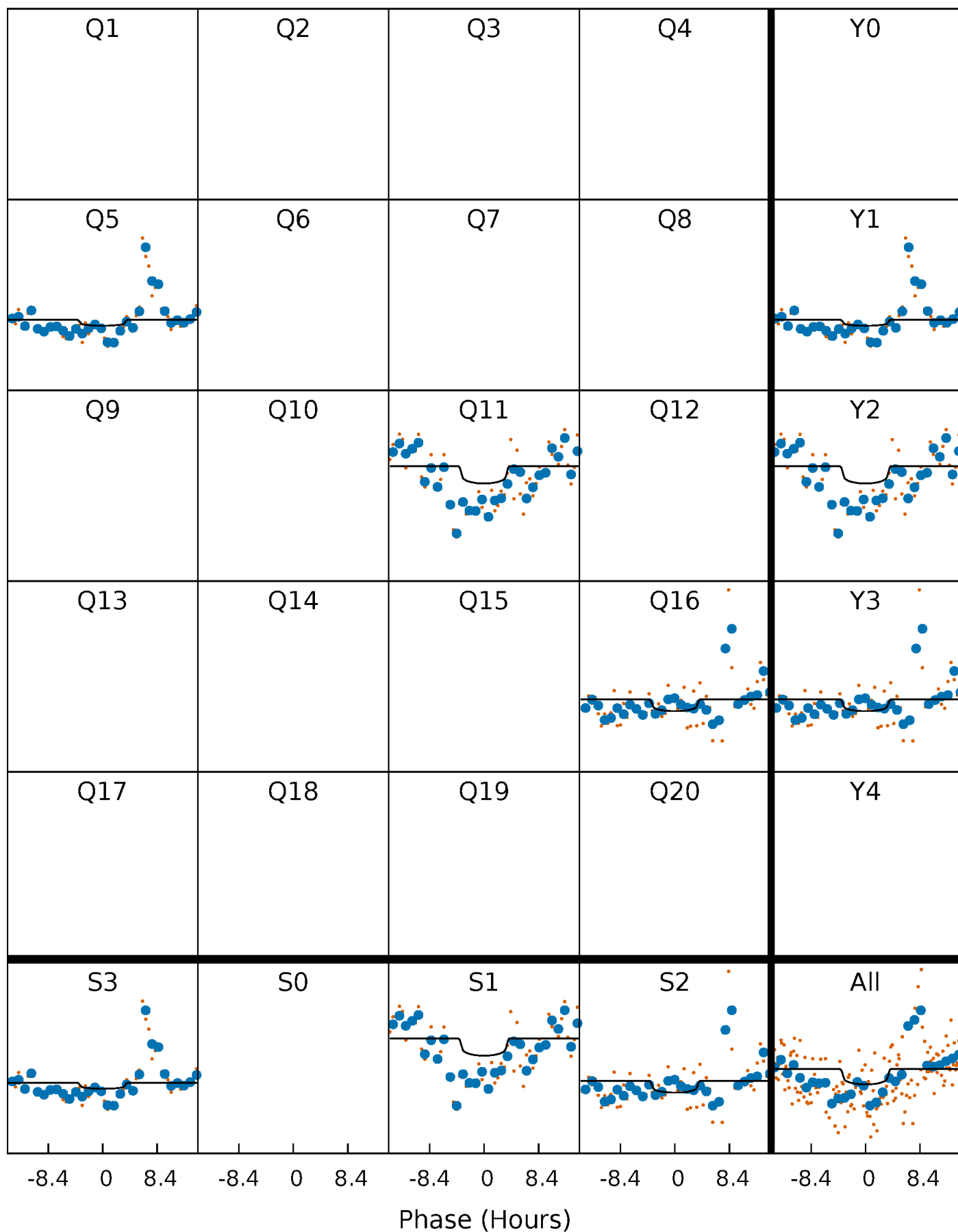
PDC Quarter-Phased Transit Curves

TCE 008091757-03 $P=510.518515$ Days $T_0=492.827396$ (BKJD)



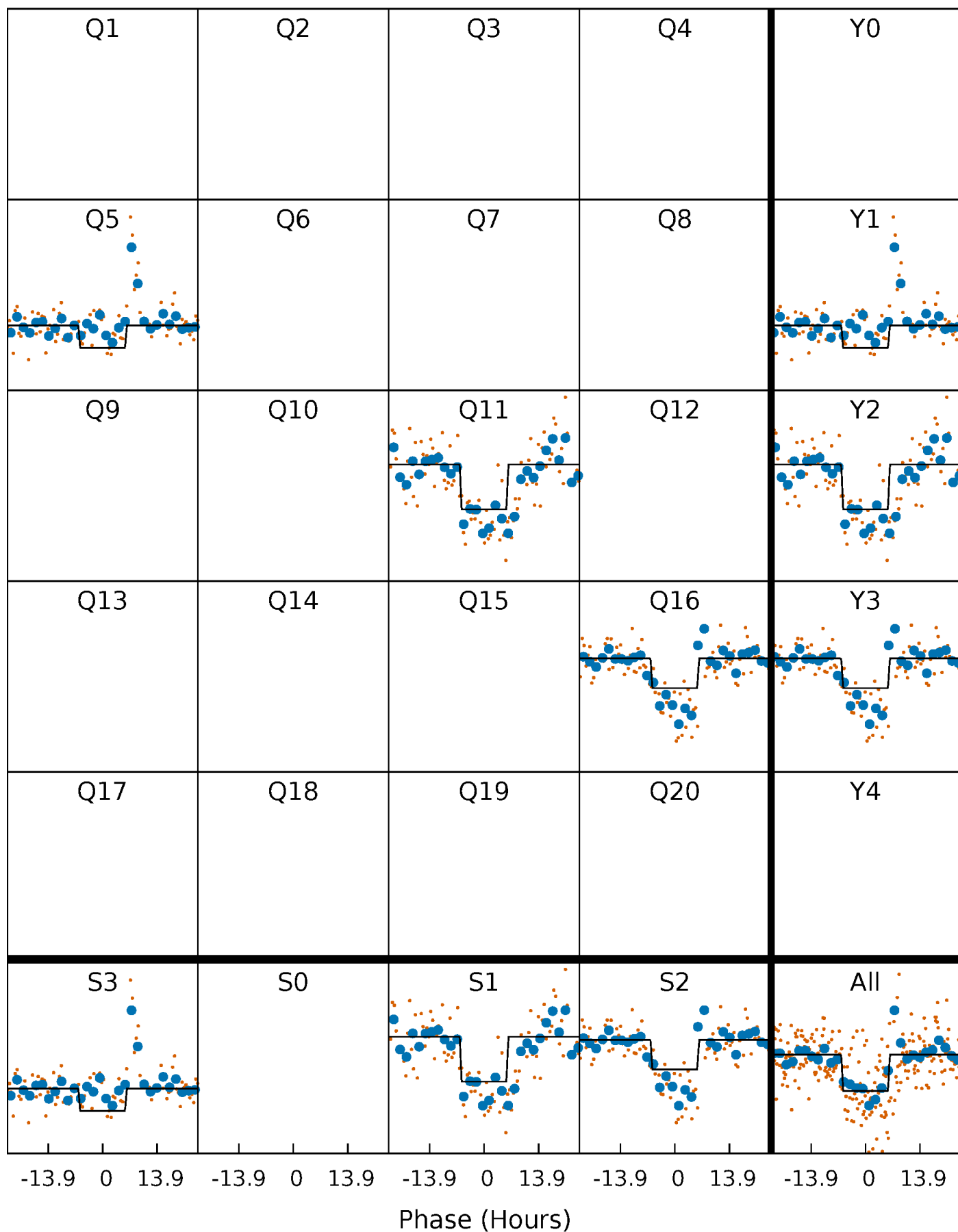
DV Quarter-Phased Transit Curves

TCE 008091757-03 $P=510.518515$ Days $T_0=492.827396$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

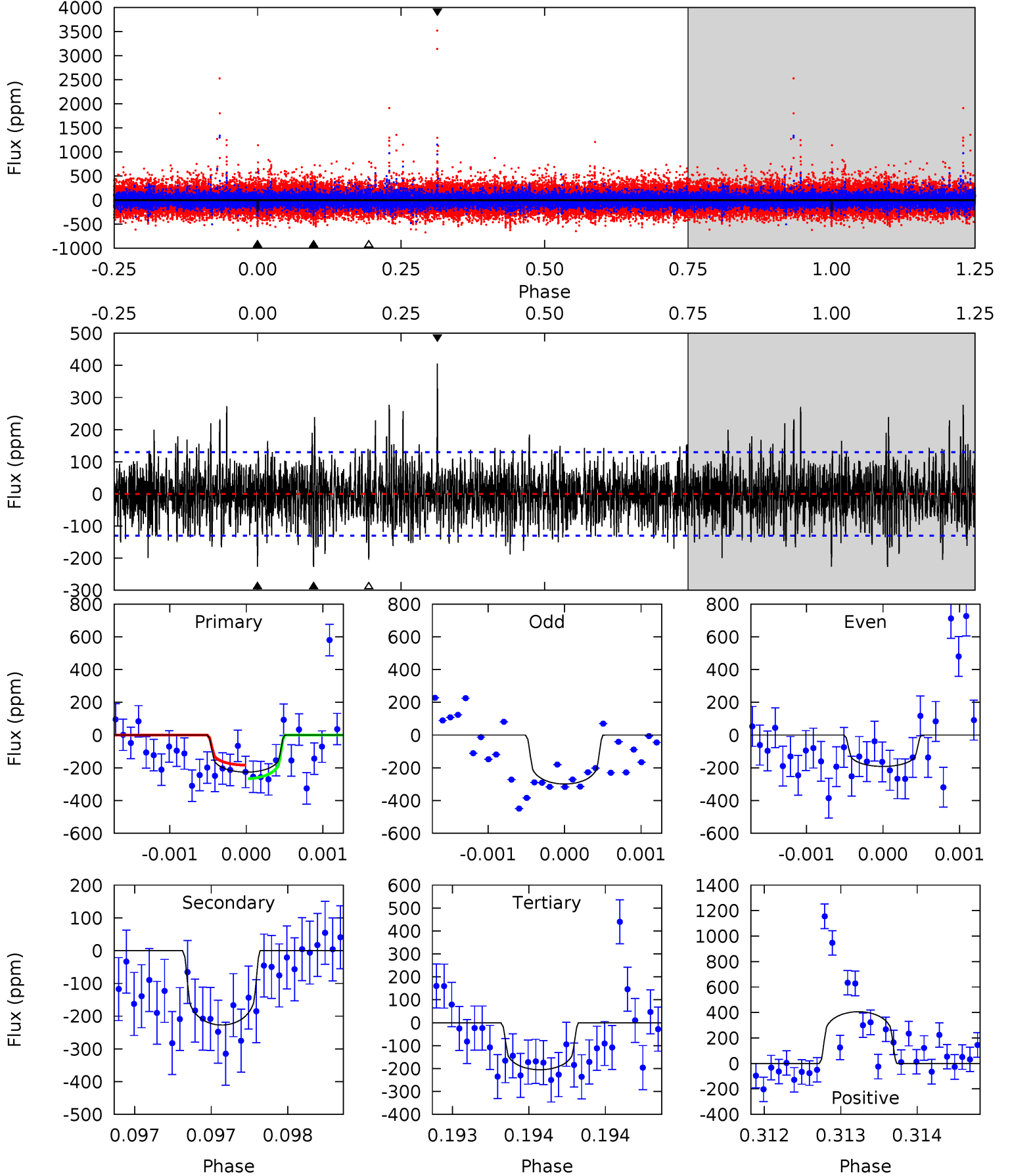
TCE 008091757-03 P=510.559741 Days $T_0=492.808403$ (BKJD)



DV Model-Shift Uniqueness Test

008091757-03, P = 510.518515 Days, E = 492.827396 Days

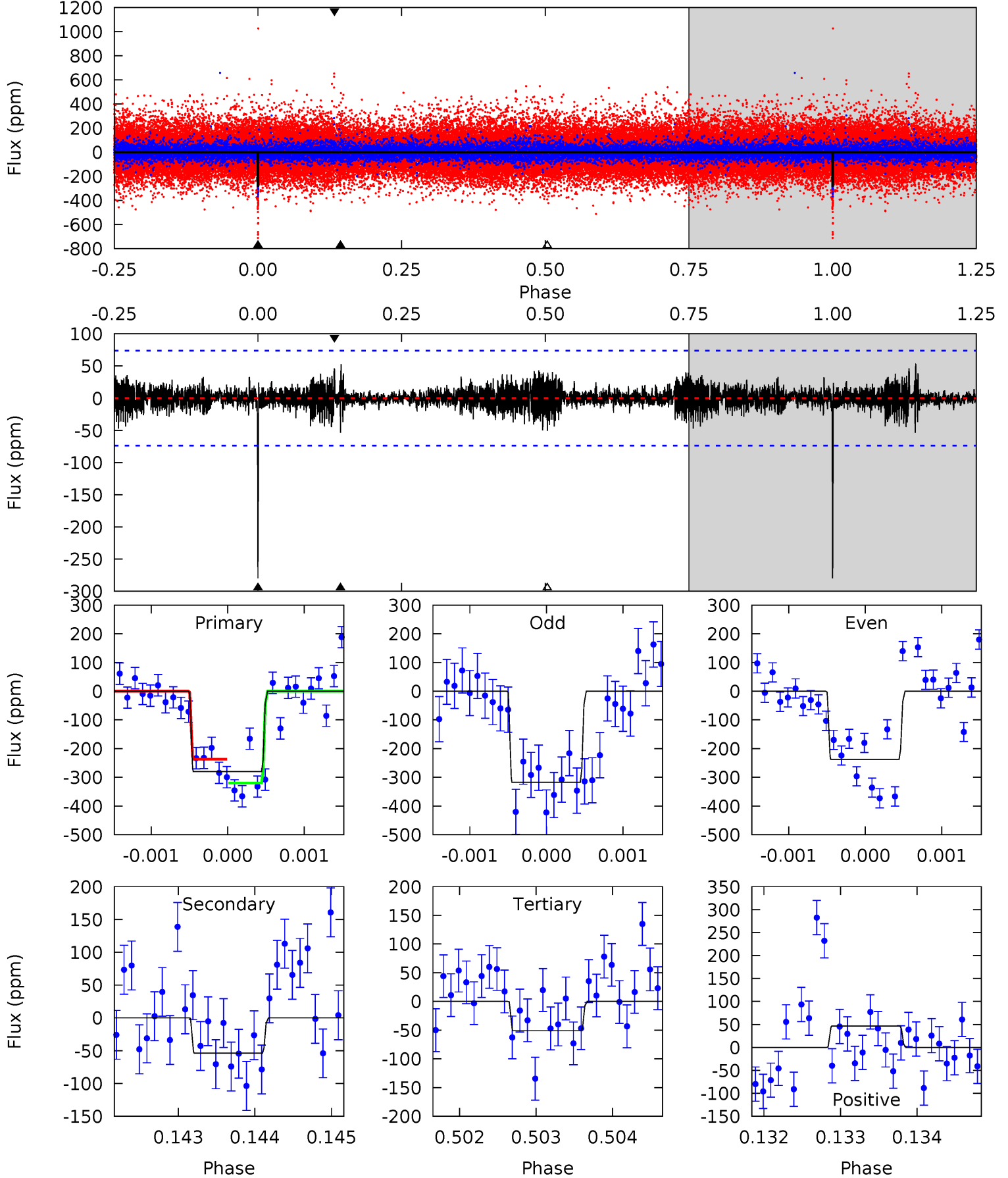
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.63	9.66	8.72	17.3	5.53	3.42	2.57	0.91	-7.63	0.94	-7.60	1.98	0.77	0.64	1.76



Alt Model-Shift Uniqueness Test

008091757-03, P = 510.559741 Days, E = 492.808403 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.7	3.96	3.75	3.42	5.45	3.28	0.84	16.9	17.2	0.21	0.54	2.78	0.84	0.16	3.06



Stellar Parameters For KIC 008091757

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5855^{+78}_{-78}	$3.926^{+0.203}_{-0.073}$	$0.070^{+0.150}_{-0.150}$	$1.970^{+0.273}_{-0.507}$	$1.194^{+0.122}_{-0.150}$	$0.220^{+0.267}_{-0.060}$
	+1%/-1%	+5%/-2%	+214%/-214%	+14%/-26%	+10%/-13%	+121%/-27%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 008091757-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-227 ± 24	$4.96^{+5.03}_{-3.51}$	435^{+18}_{-29}	4758^{+4144}_{-1106}	9026^{+96640}_{-6872}
Alt.	-54 ± 14	$5.19^{+4.85}_{-3.51}$	436^{+17}_{-27}	3597^{+1926}_{-637}	1958^{+16663}_{-1461}

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

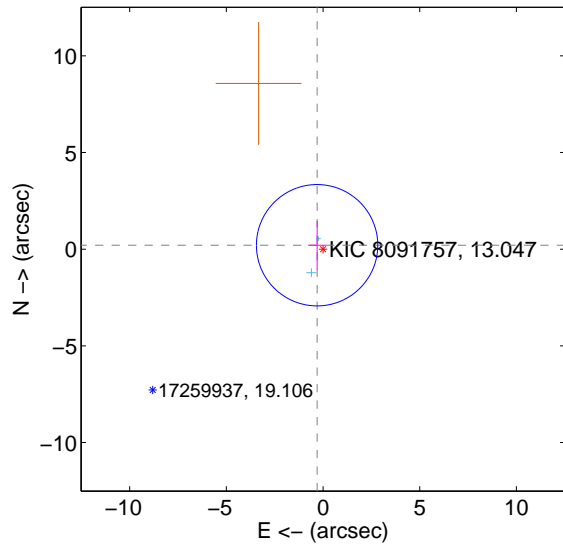
Supplemental centroid analysis for 008091757-03. Kepler magnitude: 13.05. Transit SNR 2.72

There are 2 quarters with good PRF difference image offsets

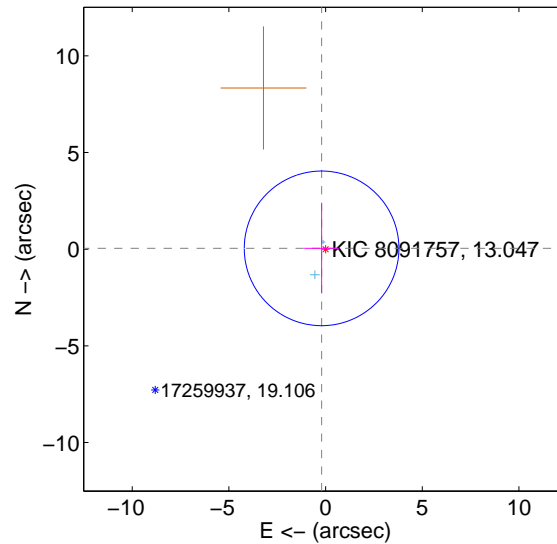
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.369 ± 1.046	0.35	0.307 ± 0.468	0.204 ± 1.253
PRF-fit source offset from KIC position	0.210 ± 1.333	0.16	0.206 ± 0.896	0.042 ± 2.320
photometric centroid source offset	2.08 ± 2.78	0.75	-1.22 ± 2.82	-1.69 ± 2.76

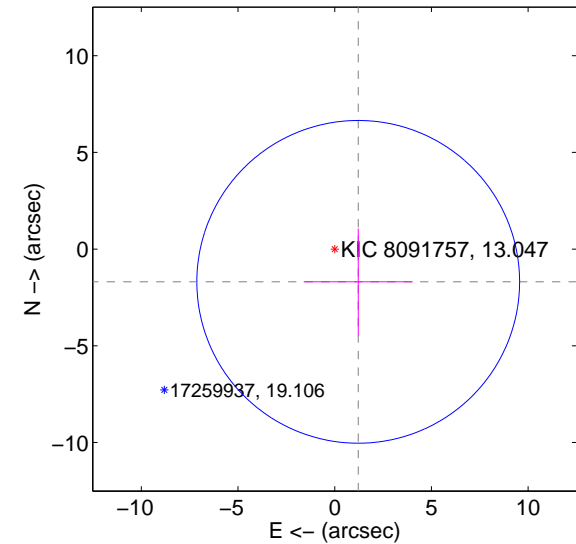
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

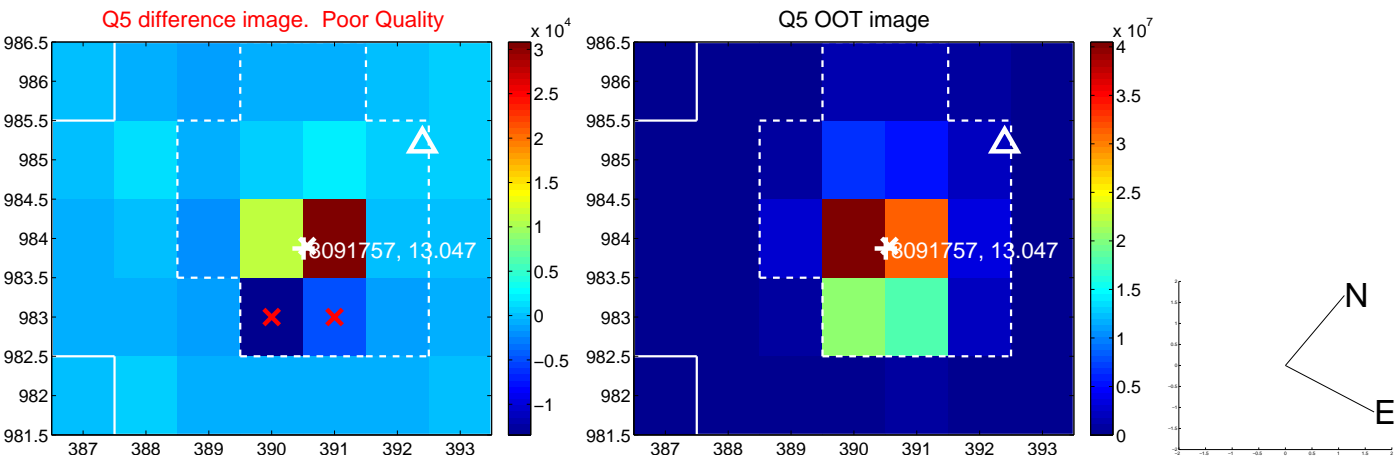


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . 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 \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

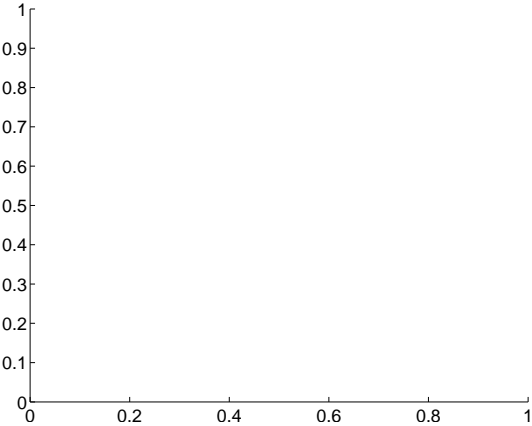


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

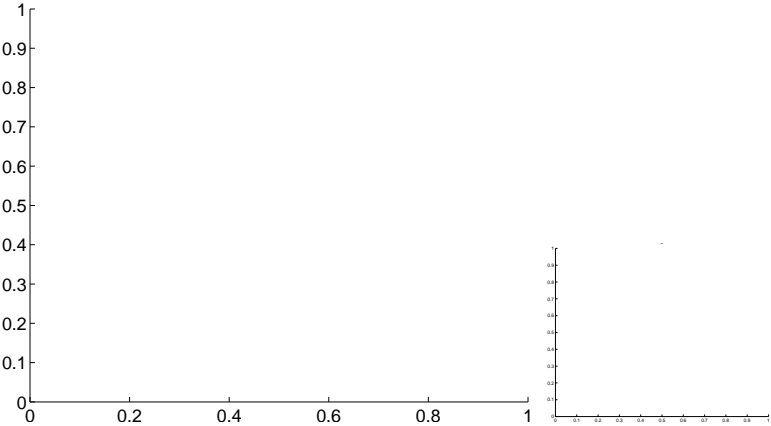


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

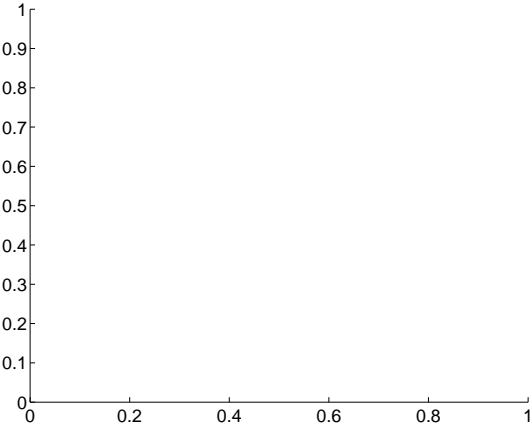
Q9 no difference image



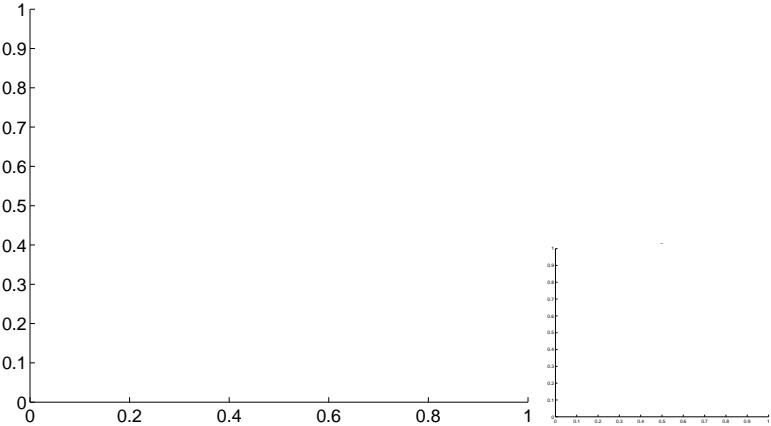
Q9 no OOT image



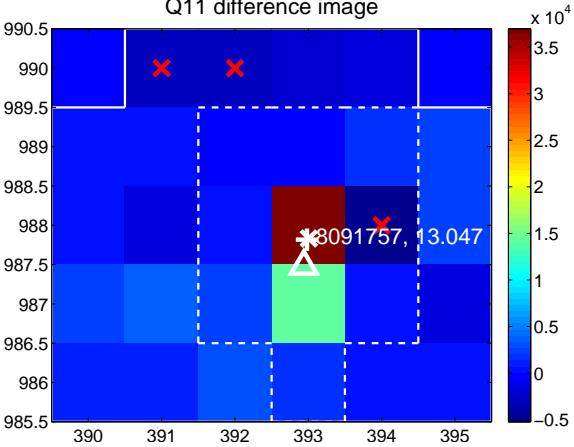
Q10 no difference image



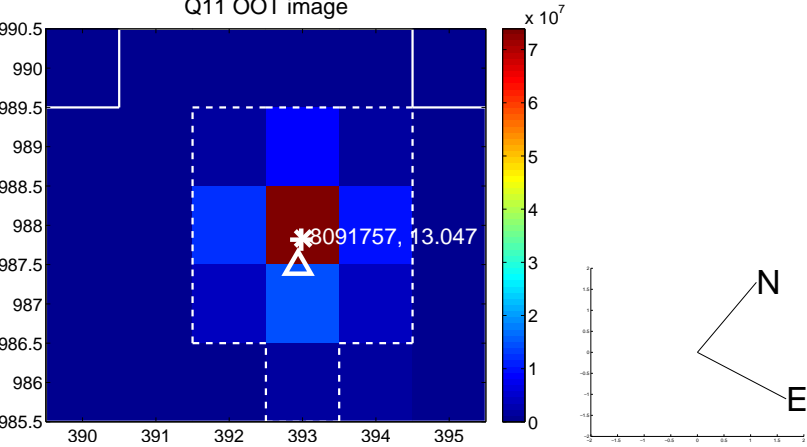
Q10 no OOT image



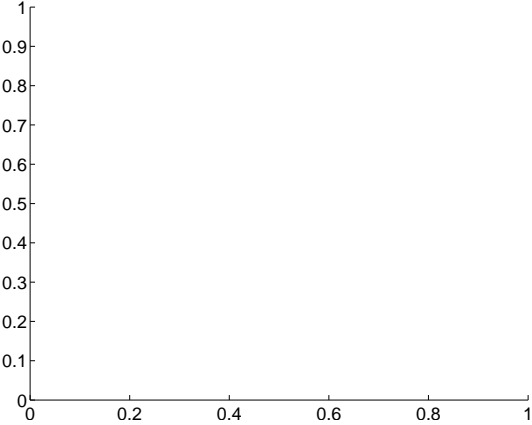
Q11 difference image



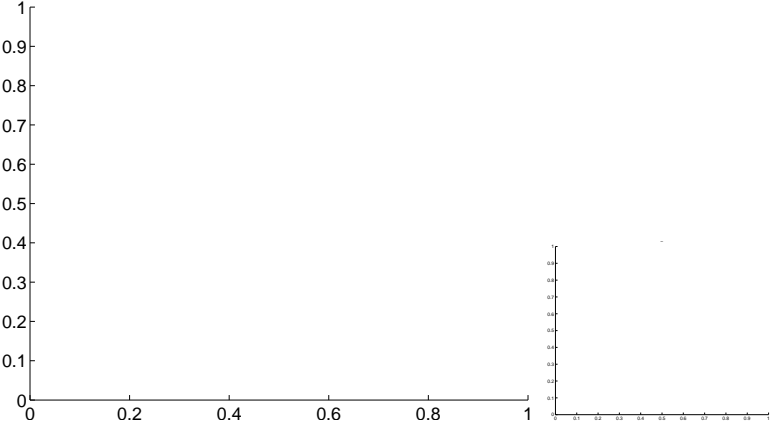
Q11 OOT image



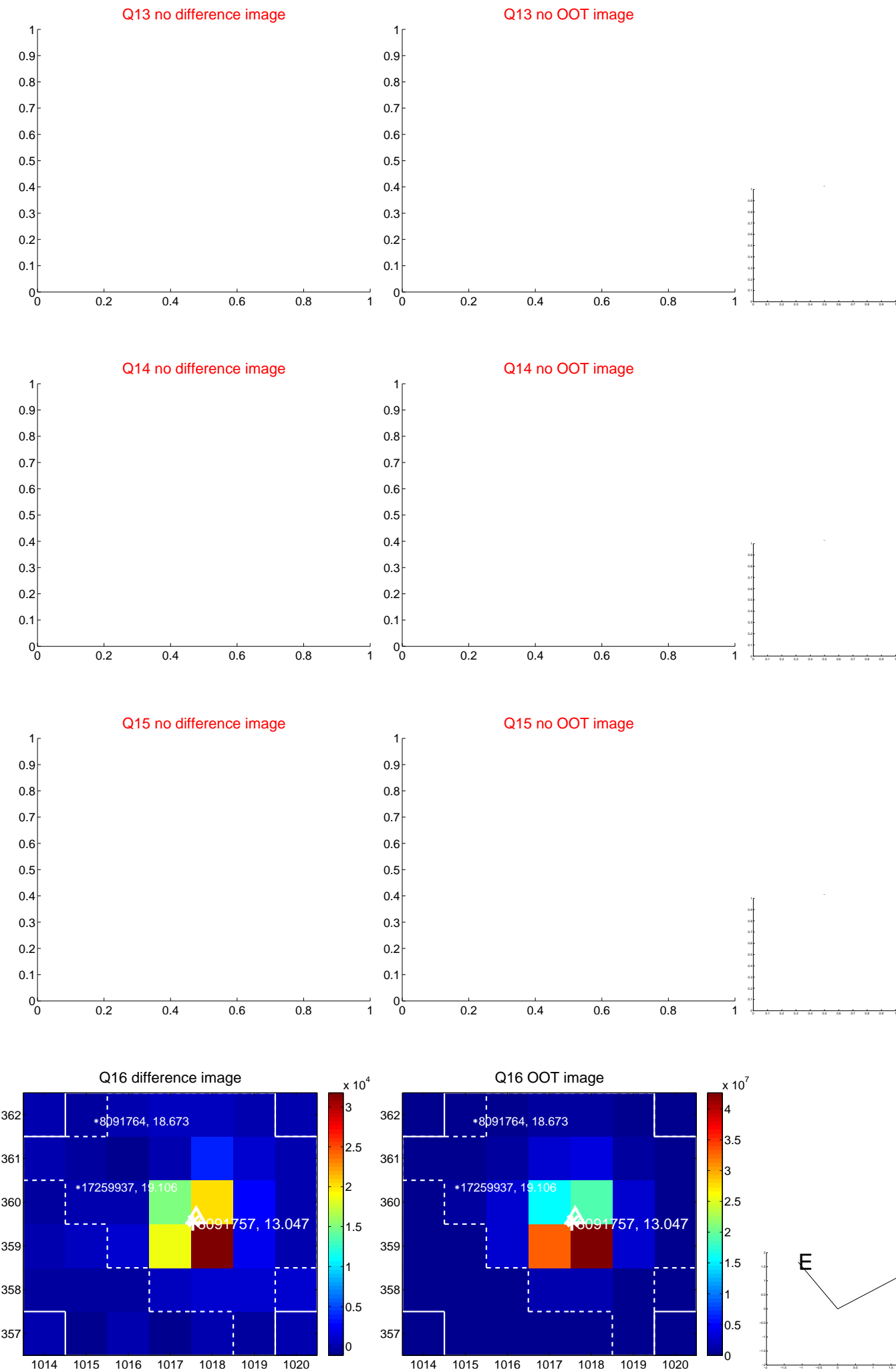
Q12 no difference image



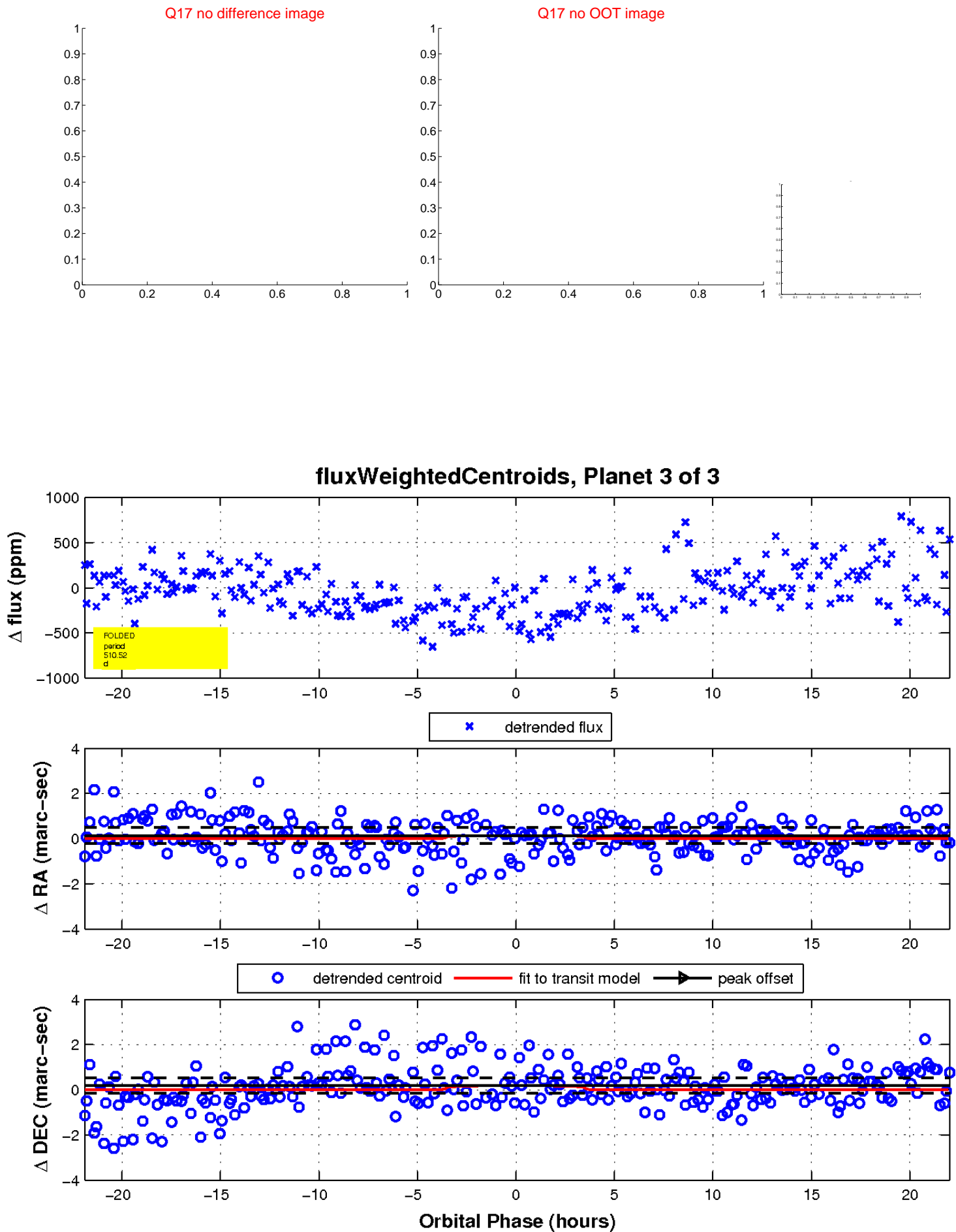
Q12 no OOT image



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



white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

