

KIC 010865206

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})
010865206-01	OBS	No	394.808357	270.767189	1297.4	1.397	17.5	8.1	0.71	4689	2.97	0.25
010865206-02	OBS	No	410.874070	372.498909	1764.6	7.260	12.4	7.4	0.71	4689	3.72	0.24
010865206-03	OBS	No	328.715069	443.524721	184.4	1.056	13.8	1.3	0.71	4689	1.00	0.32
010865206-04	OBS	No	519.362115	533.792988	1977.6	6.629	12.2	7.7	0.71	4689	3.17	0.17
010865206-05	OBS	No	551.999001	451.405187	1240.8	3.500	15.1	-1.0	0.71	4689	2.40	0.16

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010865206-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—LPP_ALT—MOD_POS_DV—INCONSISTENT_TRANS
010865206-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
010865206-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
010865206-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010865206-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

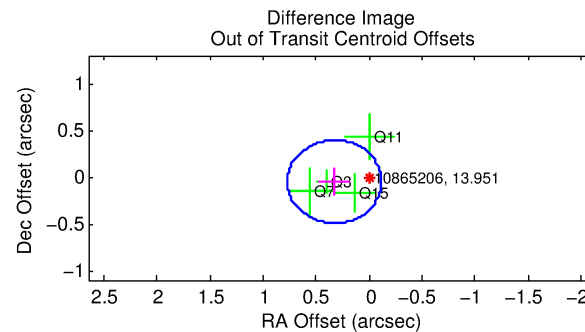
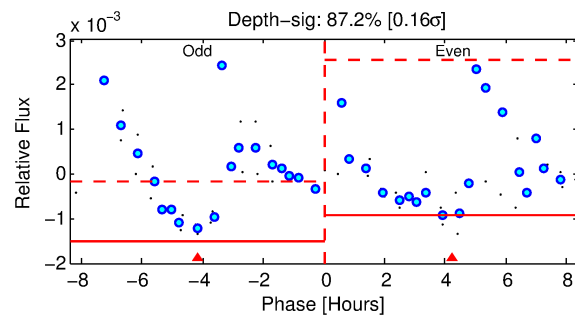
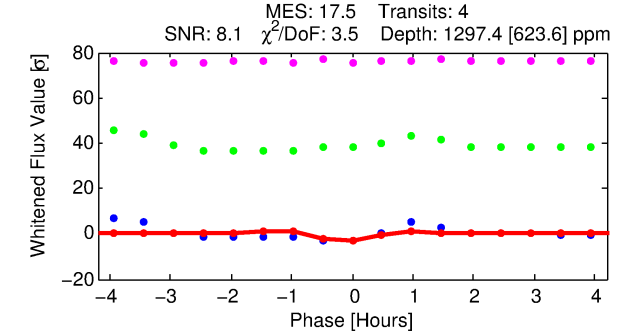
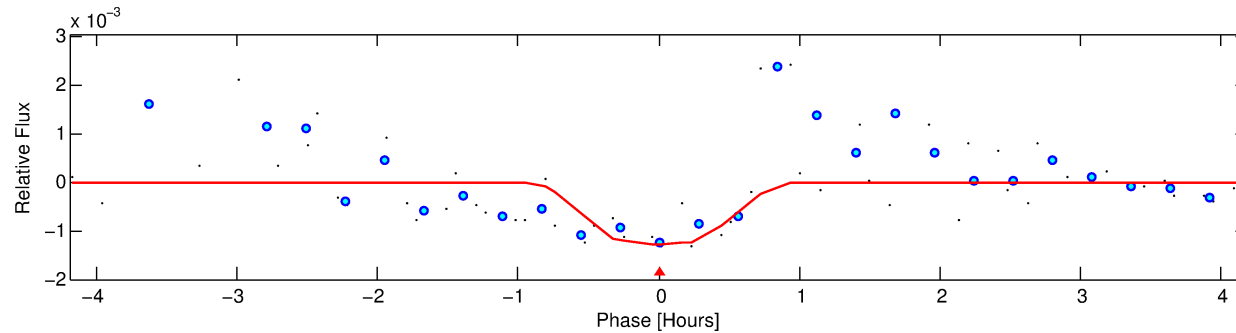
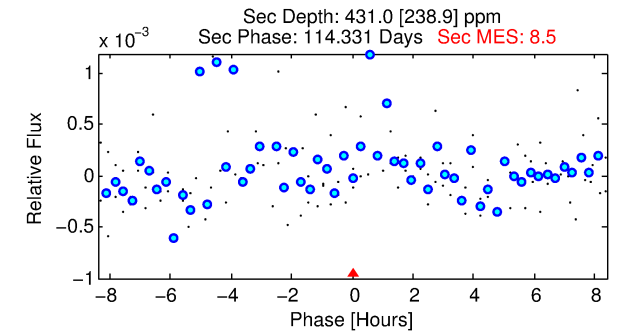
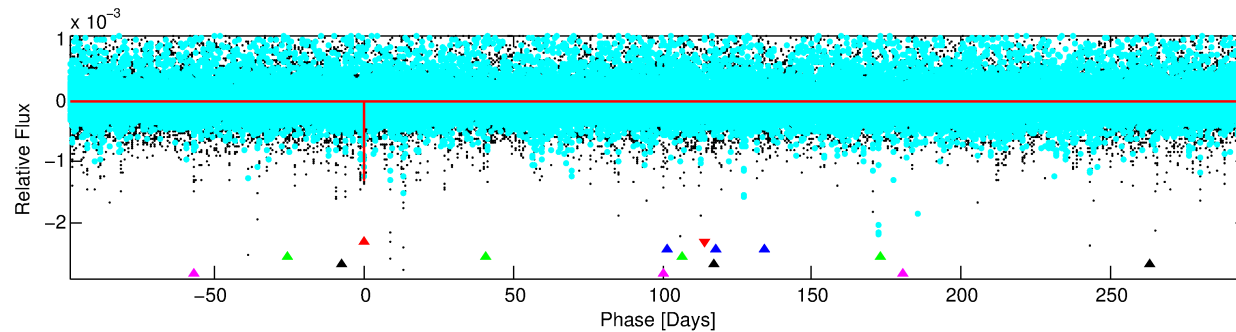
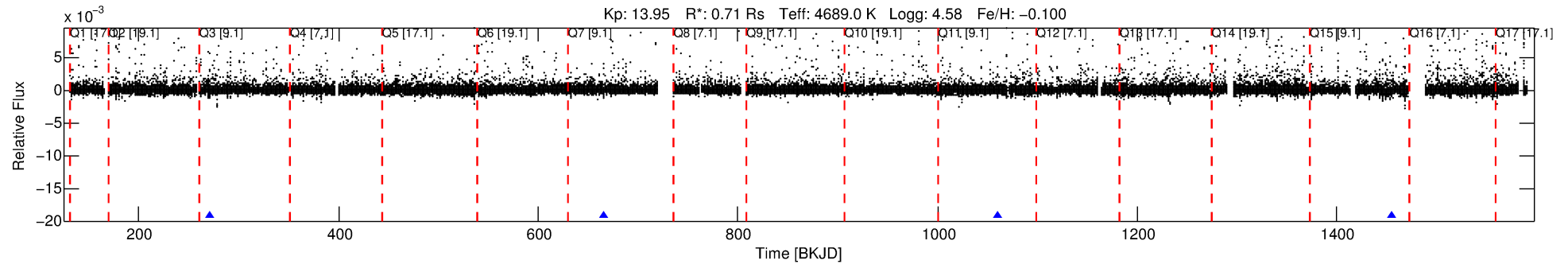
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010865206-01

No Significant Match Found

DV One-Page Summary

KIC: 10865206 Candidate: 1 of 5 Period: 394.808 d



DV Fit Results:

Period = 394.80836 [0.00753] d
Epoch = 270.7672 [0.0116] BKJD
Rp/R* = 0.0385 [0.2746]
a/R* = 1315.65 [31922.42]
b = 0.84 [8.85]
Seff = 0.25 [0.03]
Teq = 180 [5] K
Rp = 2.97 [21.19] Re
a = 0.9316 [0.0470] AU
Ag = 23317.71 [332846.43] [0.07 σ]
Teffp = 3443 [12287] K [0.27 σ]

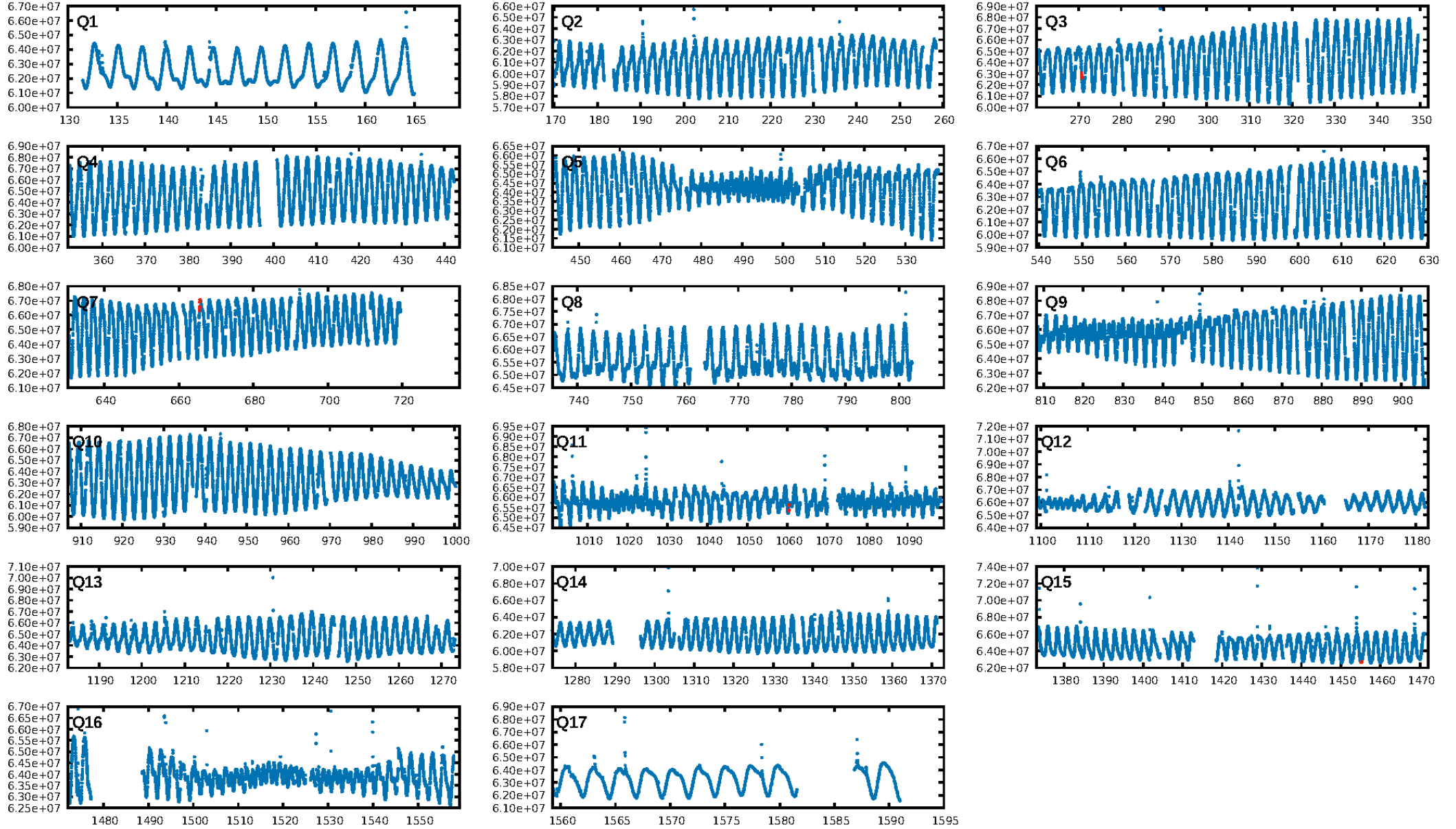
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [906.06 σ]
LongPeriod-sig: 100.0% [52.15 σ]
ModelChiSquare2-sig: 14.6%
ModelChiSquareGof-sig: 35.1%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -1.96
Centroid-sig: 60.9%
Centroid-so: 0.478 arcsec [0.66 σ]
OotOffset-rm: 0.332 arcsec [2.24 σ]
OotOffset-st: 0/4/0/0 [4]
KicOffset-rm: 0.362 arcsec [2.59 σ]
KicOffset-st: 0/4/0/0 [4]
DiffImageQuality-fgm: 0.75 [3/4]
DiffImageOverlap-fno: 1.00 [4/4]

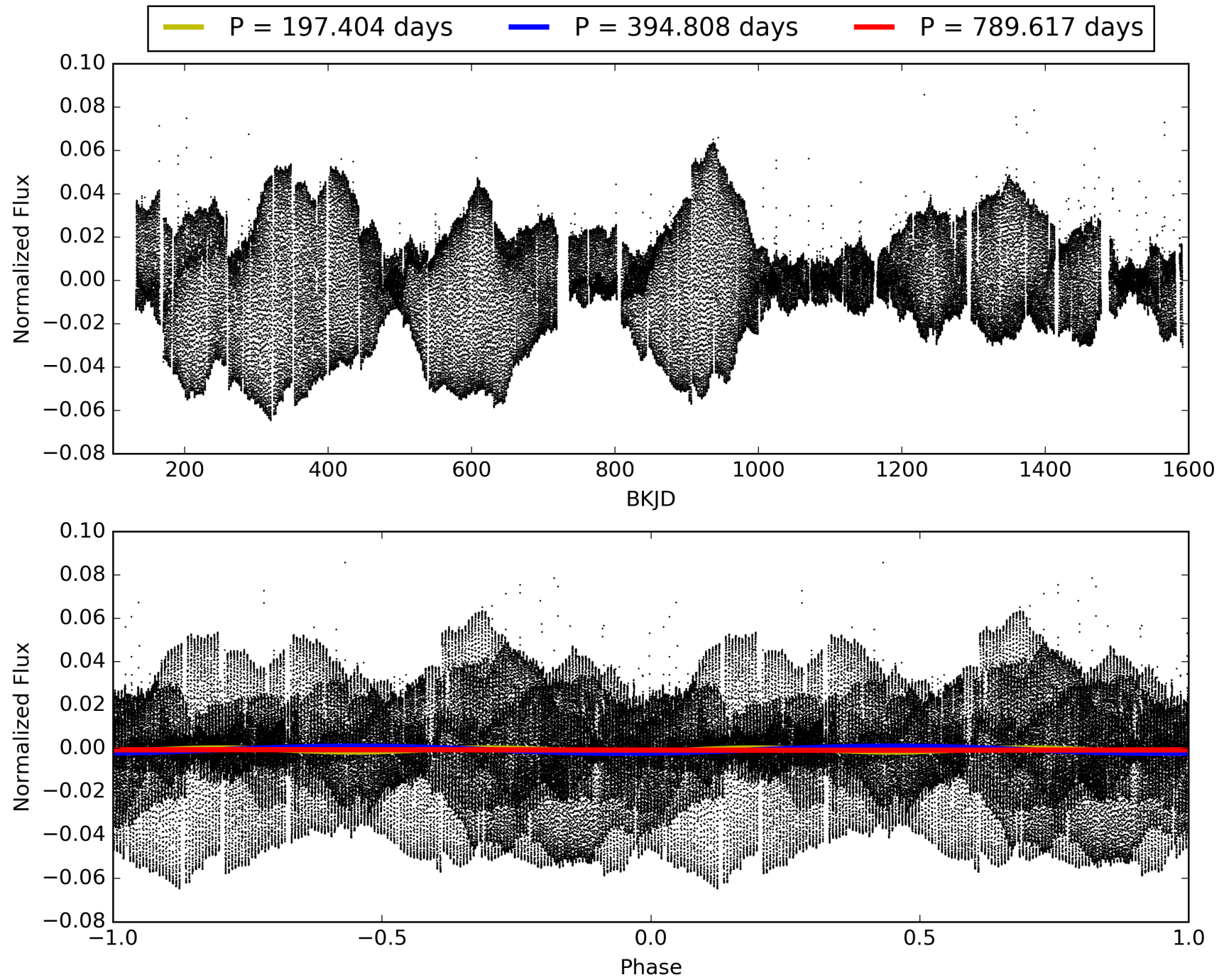
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:47:29 Z

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

TCE 010865206-01, PDC Light Curves

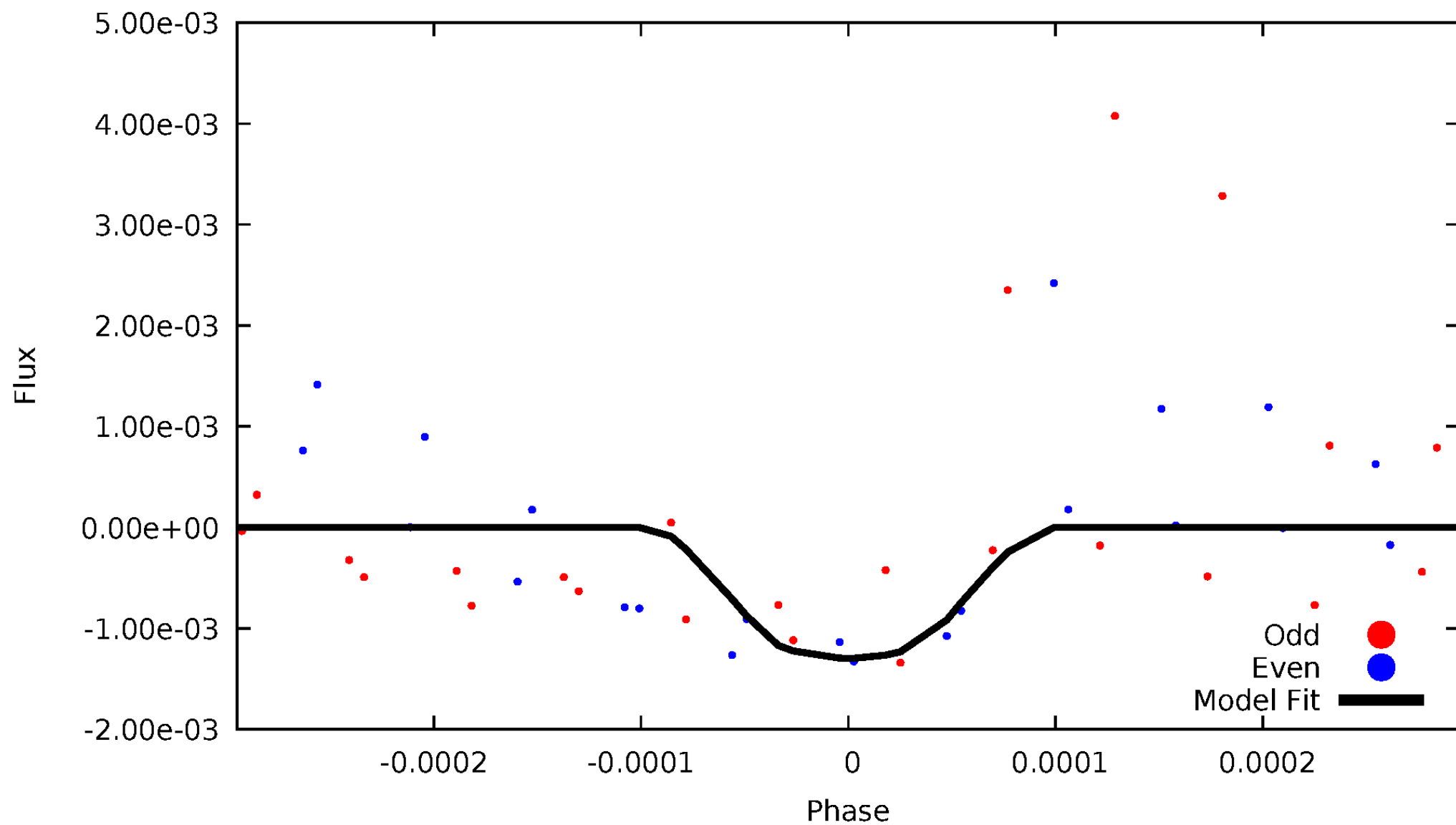


TCE 010865206-01



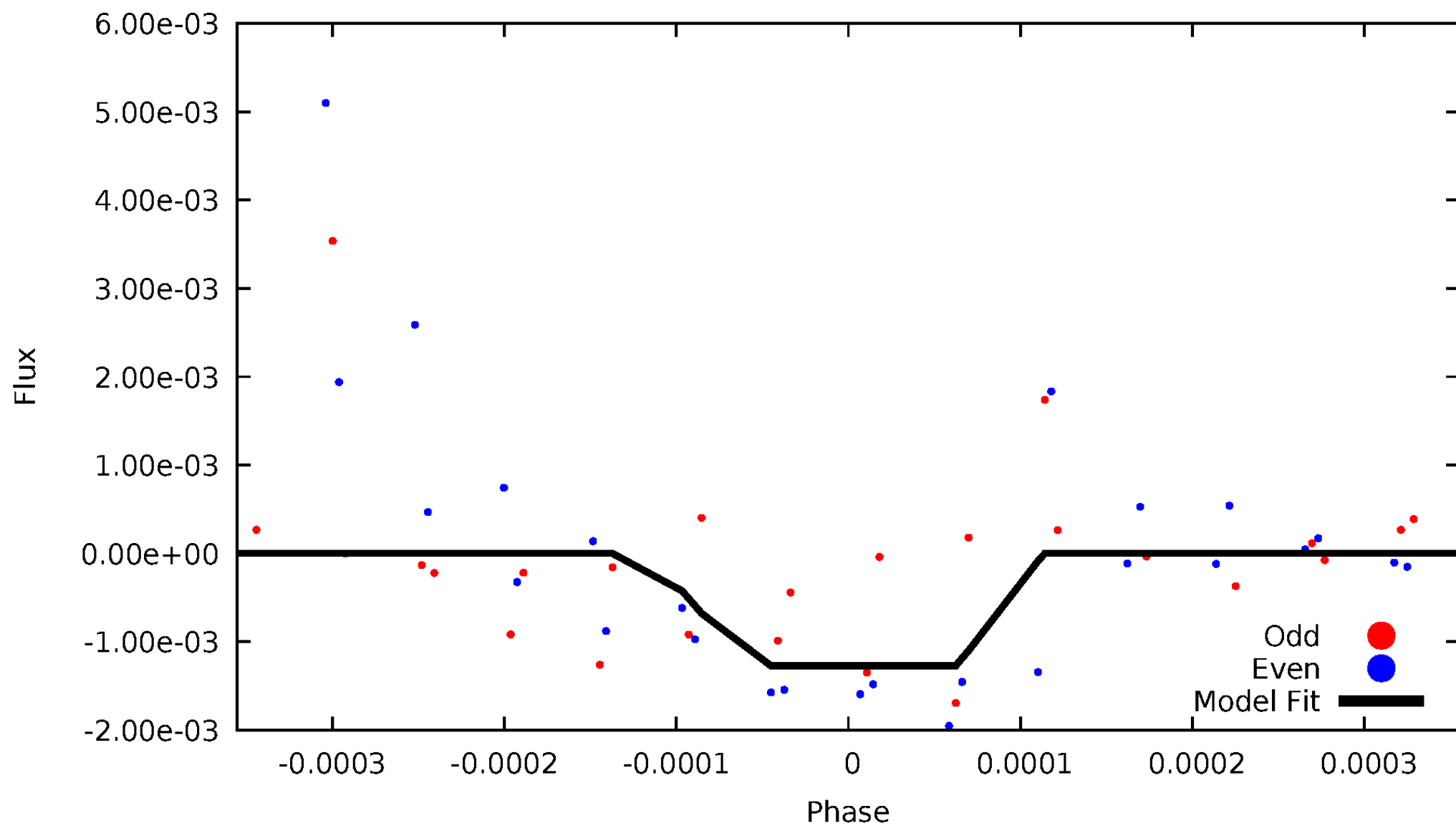
DV Odd/Even

TCE 010865206-01



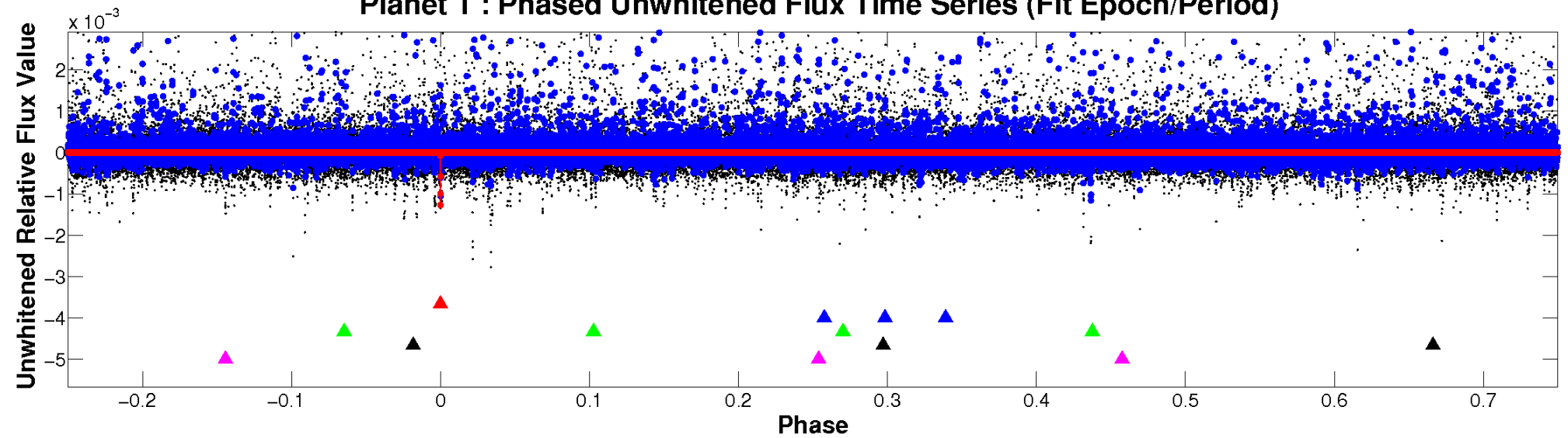
ALT Odd/Even

TCE 010865206-01

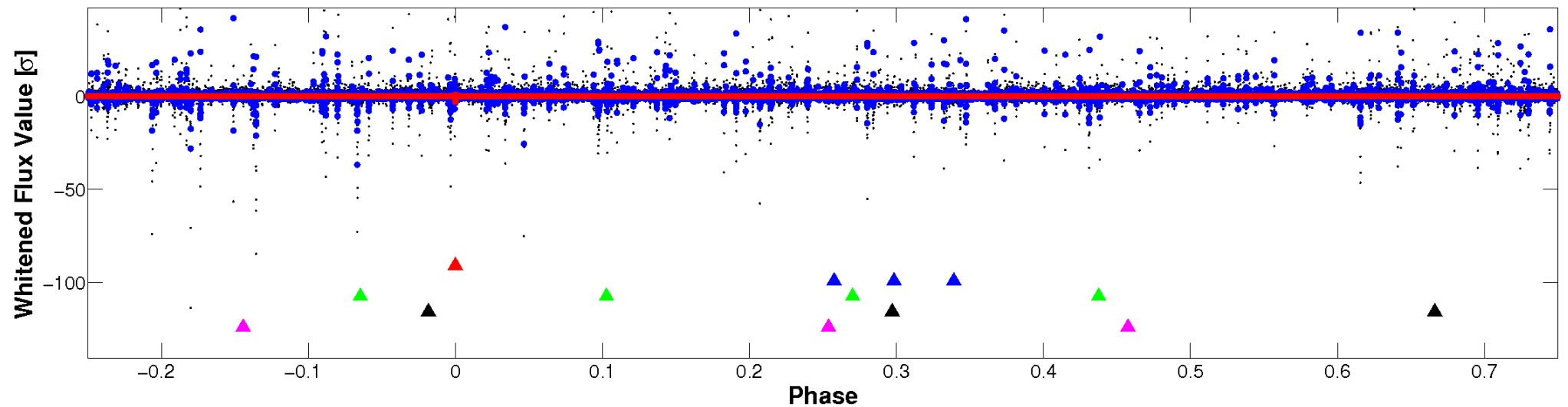


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

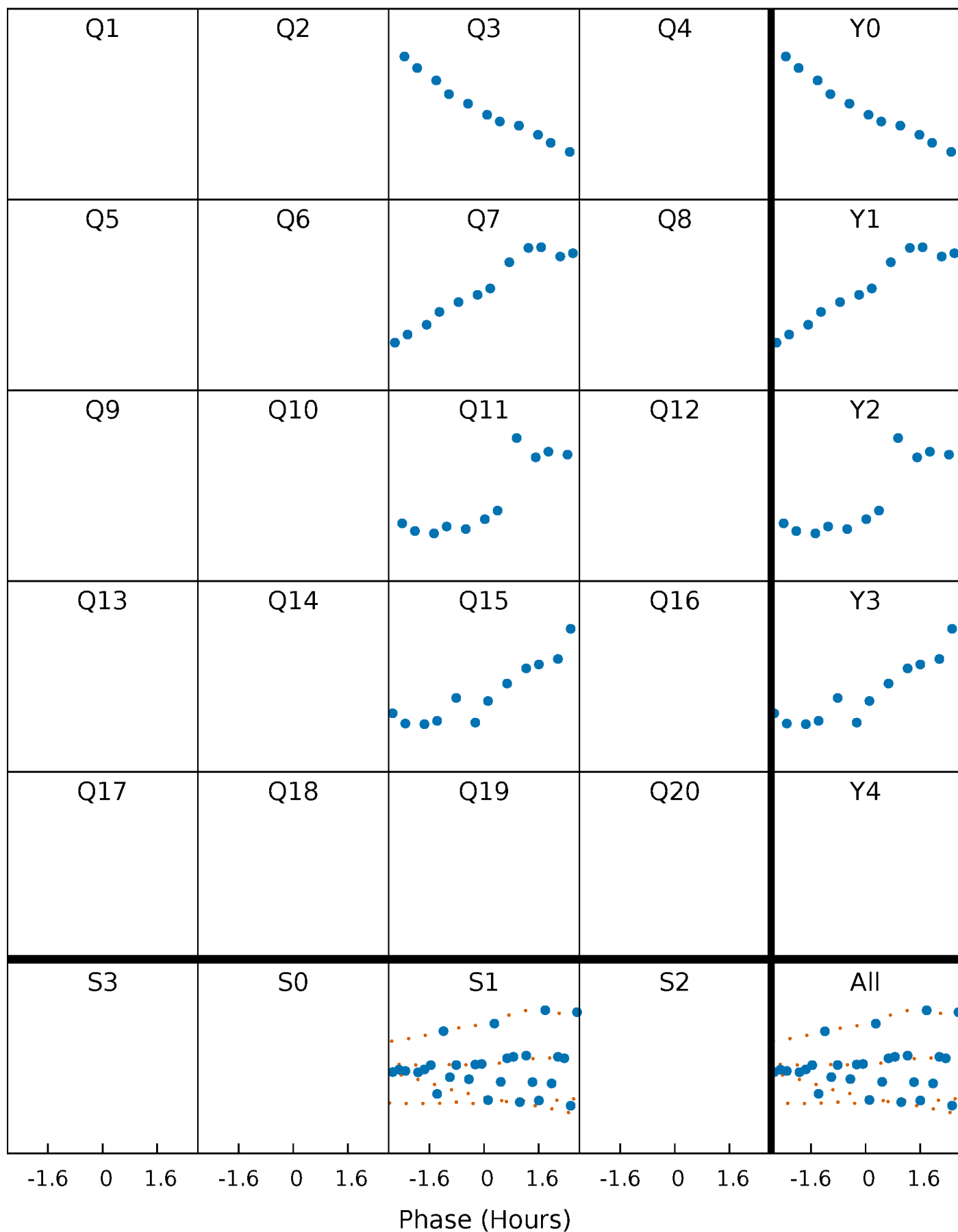


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



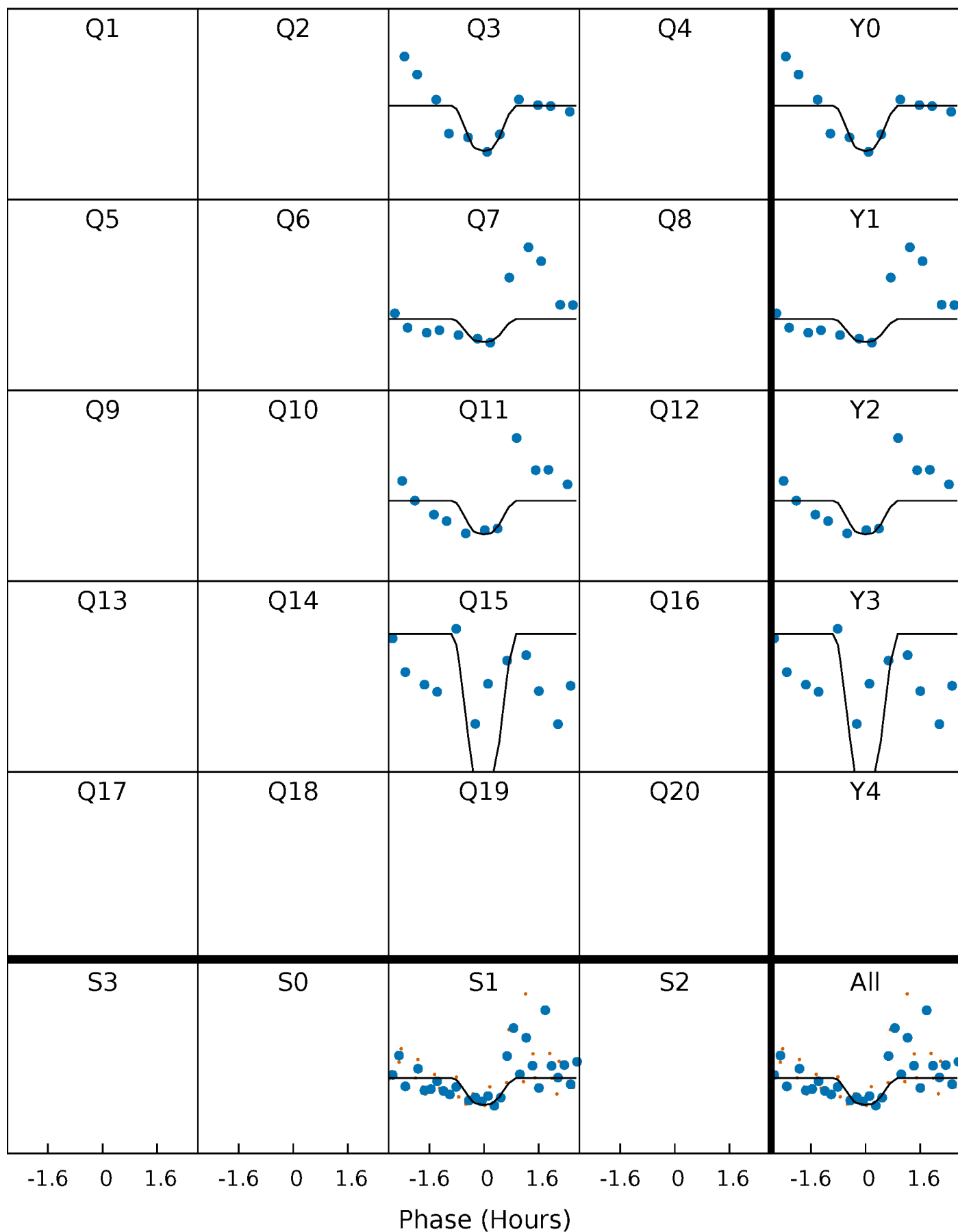
PDC Quarter-Phased Transit Curves

TCE 010865206-01 P=394.808357 Days $T_0=270.767189$ (BKJD)



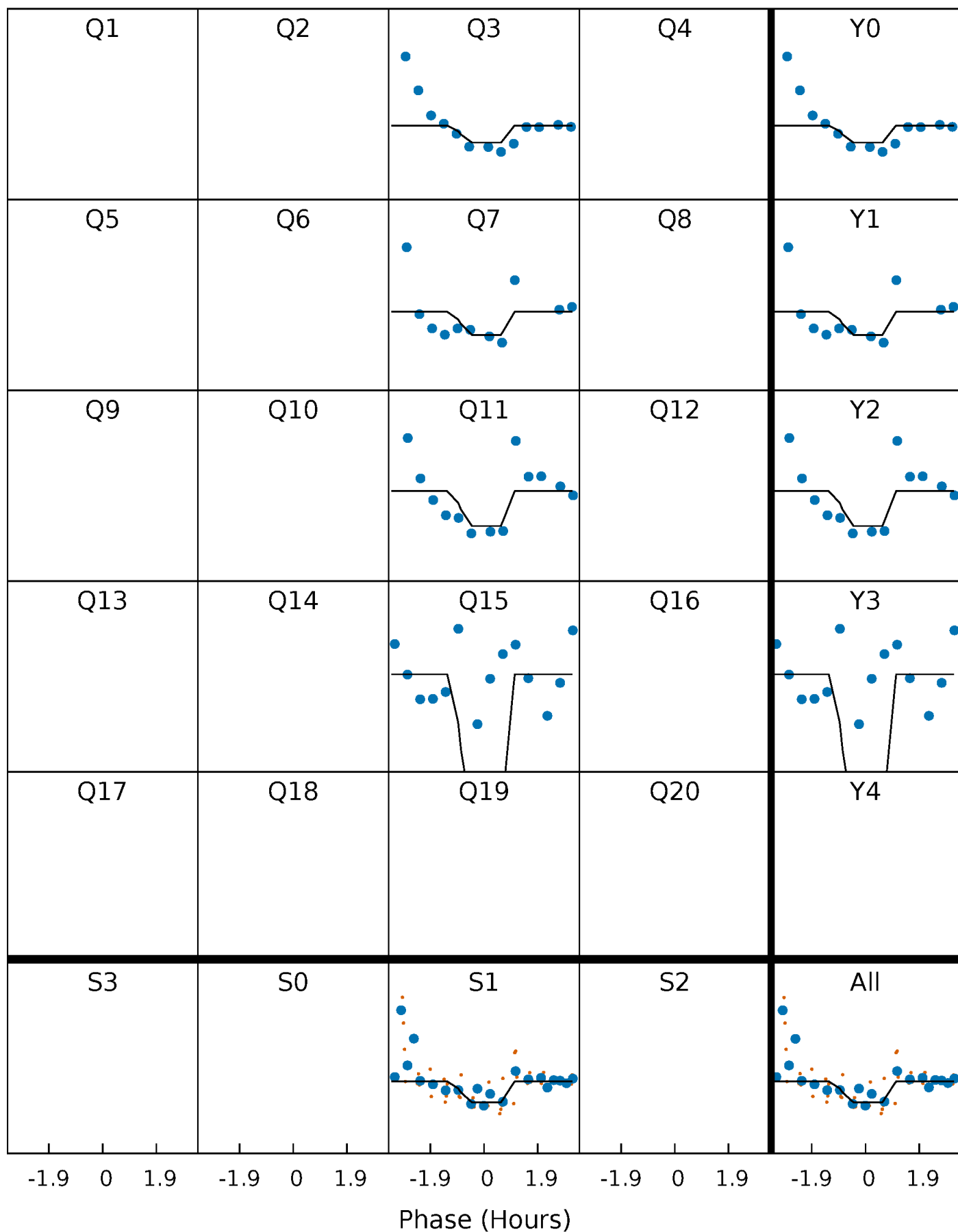
DV Quarter-Phased Transit Curves

TCE 010865206-01 P=394.808357 Days $T_0=270.767189$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

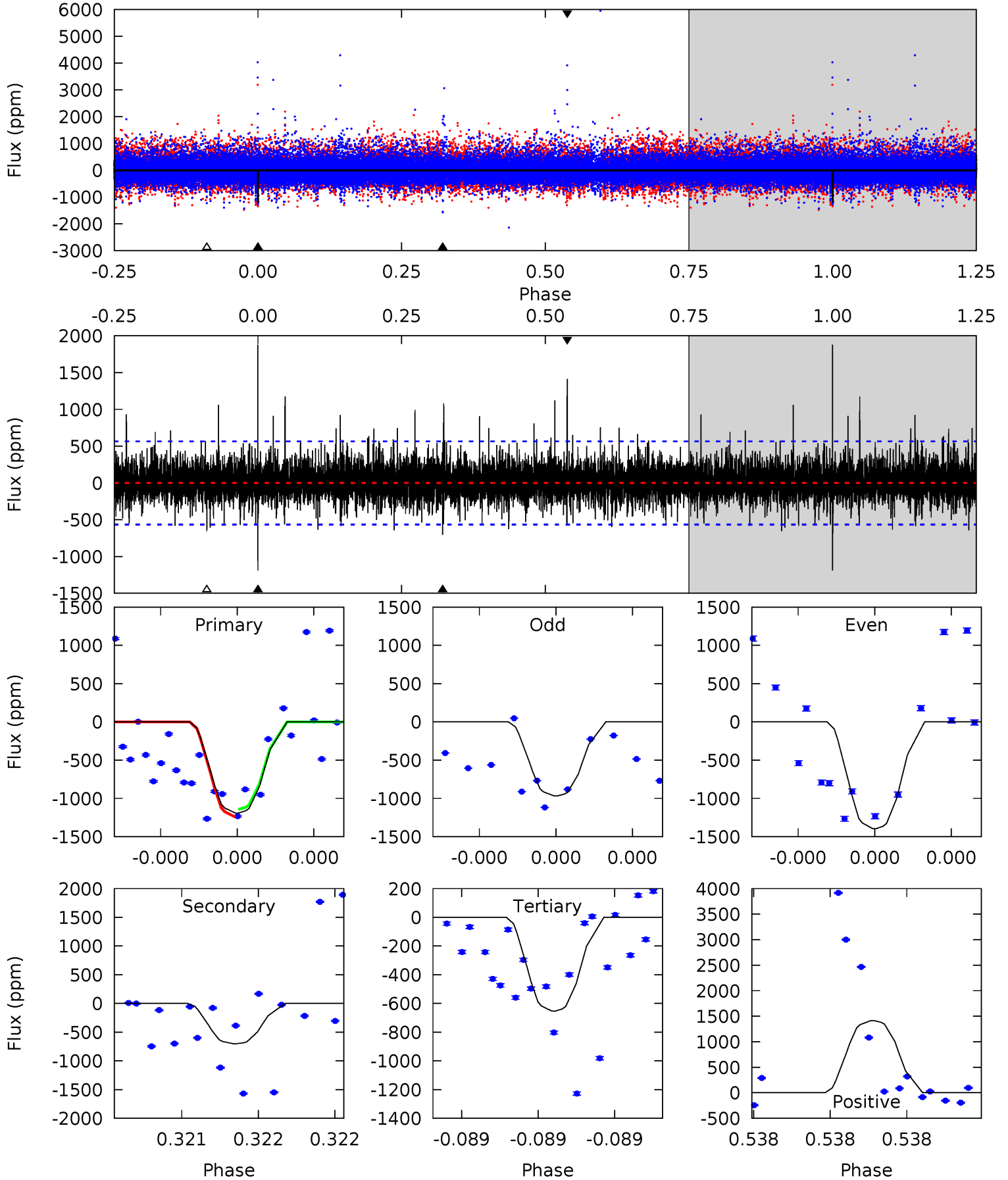
TCE 010865206-01 P=394.815694 Days $T_0=270.745118$ (BKJD)



DV Model-Shift Uniqueness Test

010865206-01, P = 394.808357 Days, E = 270.767189 Days

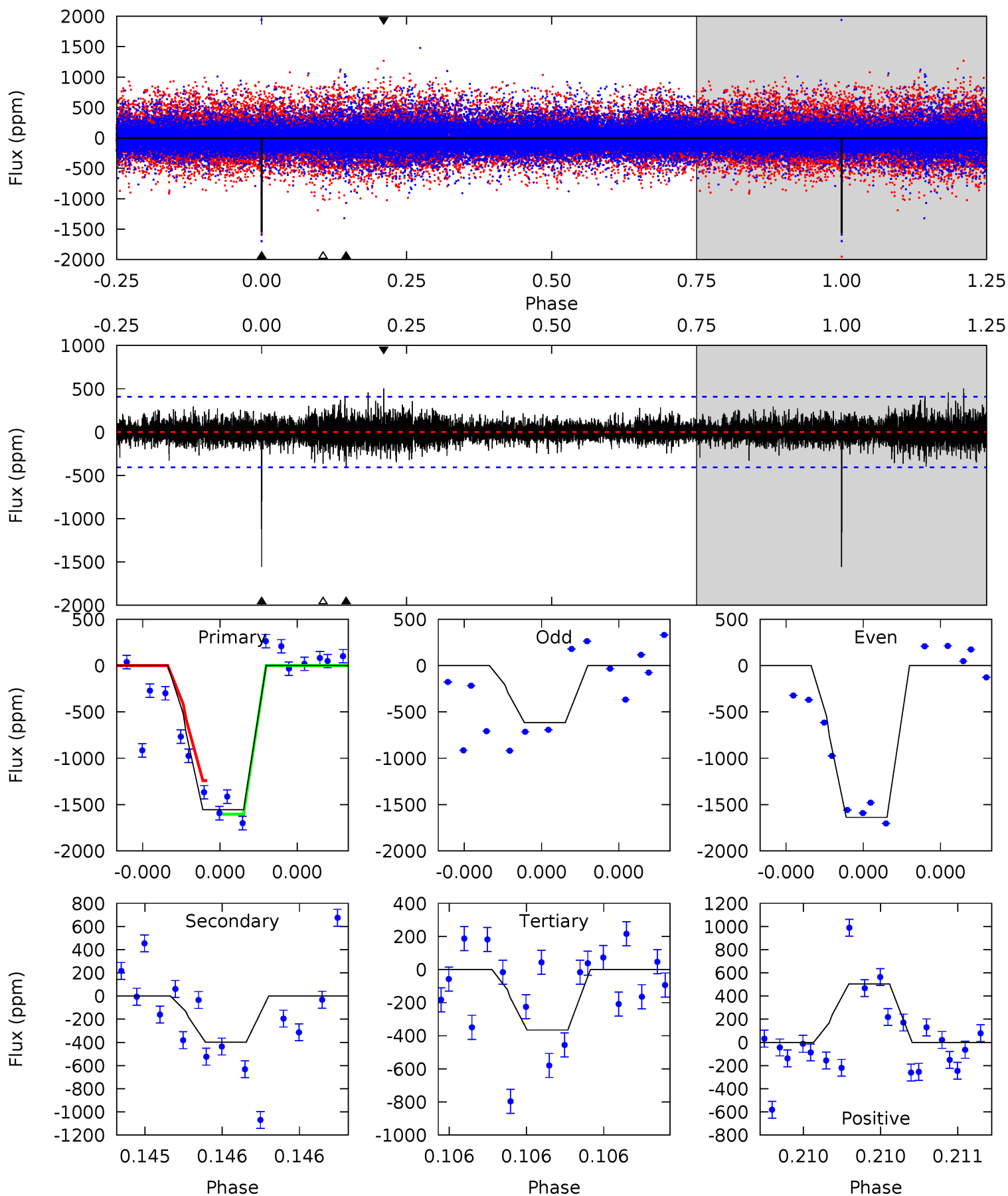
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.2	7.17	6.68	14.4	5.77	3.77	1.70	5.49	-2.28	0.49	-7.28	1.62	0.92	0.61	0.51



Alt Model-Shift Uniqueness Test

010865206-01, P = 394.815694 Days, E = 270.745118 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.9	5.60	5.14	7.08	5.73	3.72	1.03	16.7	14.8	0.46	-1.48	7.27	0.80	0.24	2.70



Stellar Parameters For KIC 010865206

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4689^{+84}_{-84}	$4.579^{+0.045}_{-0.017}$	$-0.100^{+0.150}_{-0.150}$	$0.707^{+0.028}_{-0.039}$	$0.691^{+0.046}_{-0.025}$	$2.760^{+0.482}_{-0.184}$
	+2%/-2%	+1%/-0%	+150%/-150%	+4%/-6%	+7%/-4%	+17%/-7%
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 010865206-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-702 ± 98	$15.83^{+16.15}_{-10.83}$	250^{+5}_{-5}	2475^{+969}_{-362}	1295^{+12844}_{-975}
Alt.	-398 ± 71	$15.14^{+15.32}_{-10.50}$	251^{+5}_{-6}	2349^{+844}_{-329}	848^{+7853}_{-644}

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

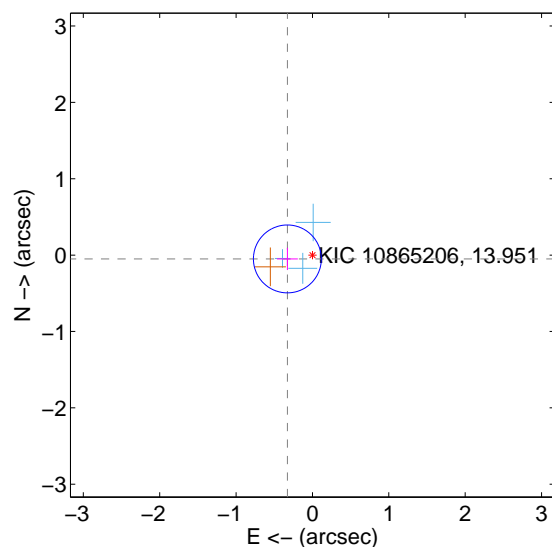
Supplemental centroid analysis for 010865206-01. Kepler magnitude: 13.95. Transit SNR 8.12

There are 3 quarters with good PRF difference image offsets

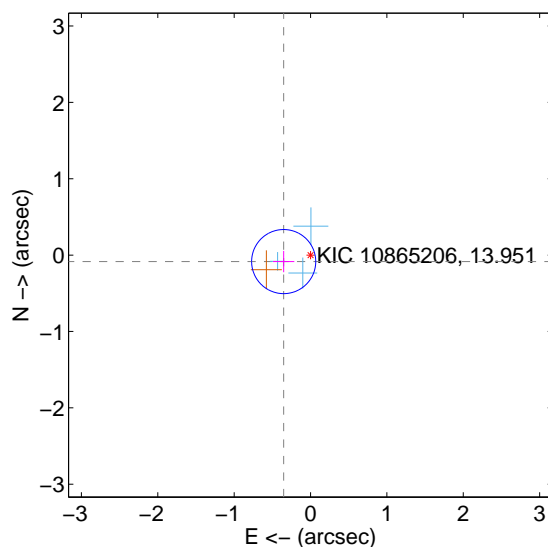
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.332 ± 0.148	2.24	0.328 ± 0.138	-0.050 ± 0.145
PRF-fit source offset from KIC position	0.362 ± 0.140	2.59	0.351 ± 0.140	-0.085 ± 0.140
photometric centroid source offset	0.48 ± 0.72	0.66	-0.16 ± 0.72	-0.45 ± 0.72

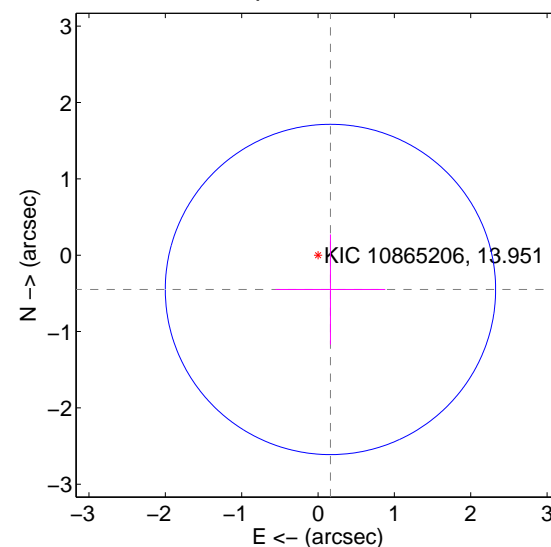
offset from difference PRF-fit to OOT PRF-fit



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.

Q1 no difference image



Q1 no OOT image



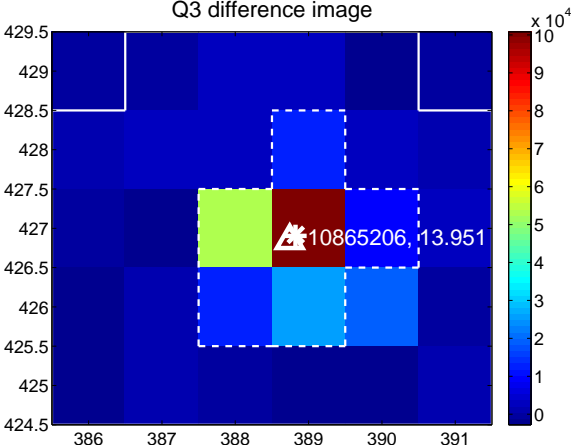
Q2 no difference image



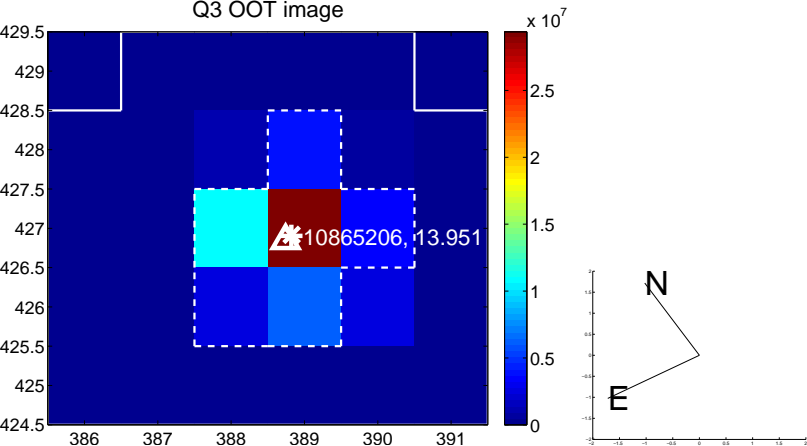
Q2 no OOT image



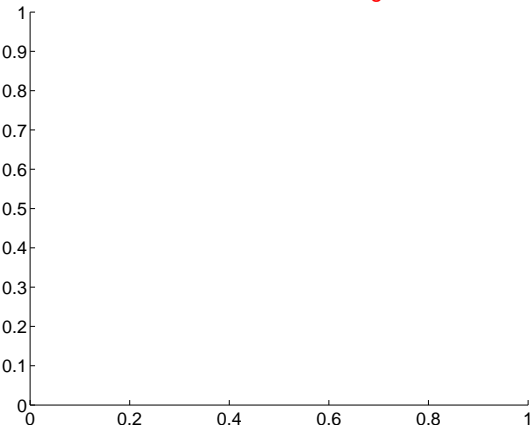
Q3 difference image



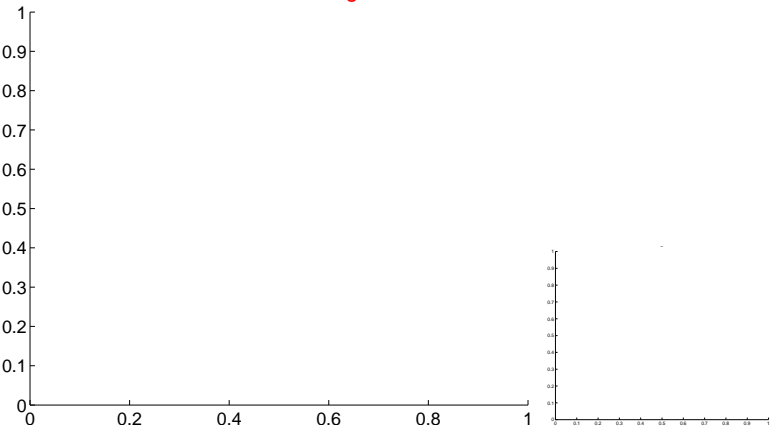
Q3 OOT image



Q4 no difference image



Q4 no OOT image

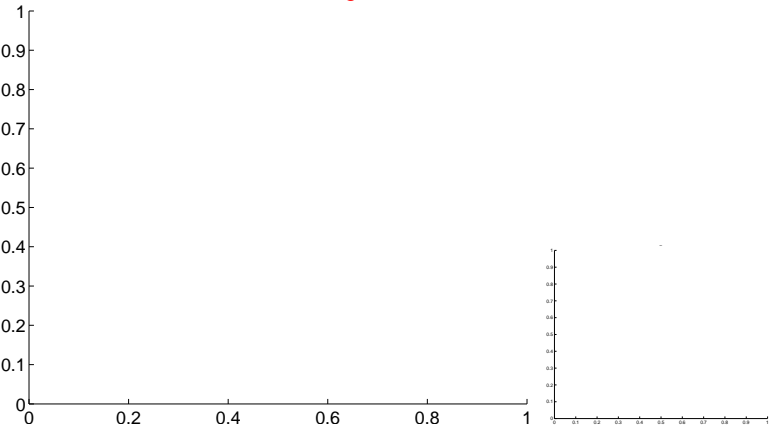


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

Q5 no difference image



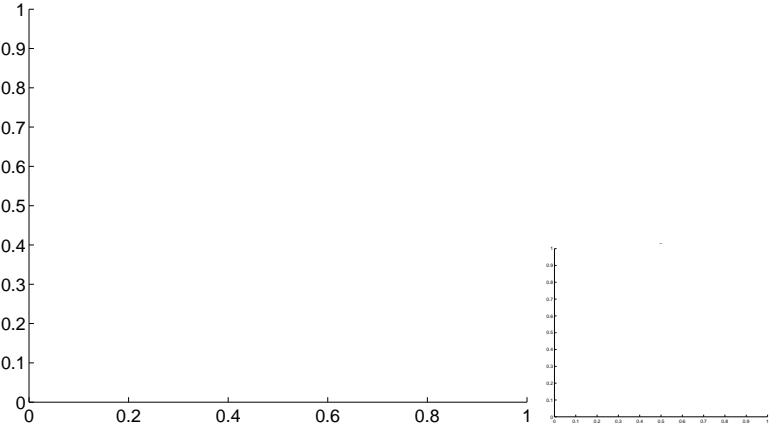
Q5 no OOT image



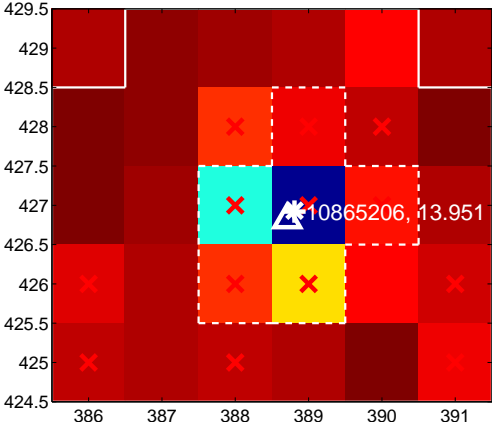
Q6 no difference image



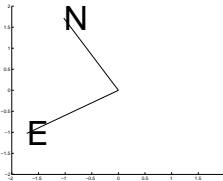
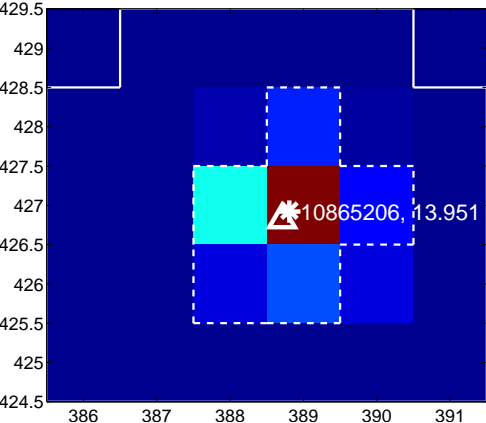
Q6 no OOT image



Q7 difference image. Poor Quality



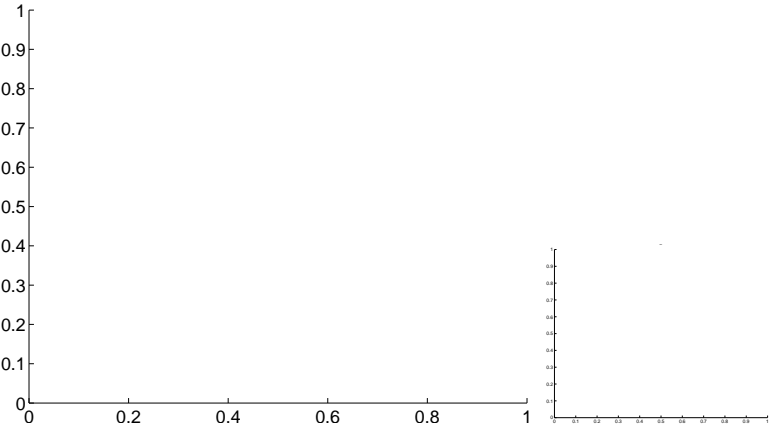
Q7 OOT image



Q8 no difference image



Q8 no OOT image



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

Q9 no difference image



Q9 no OOT image



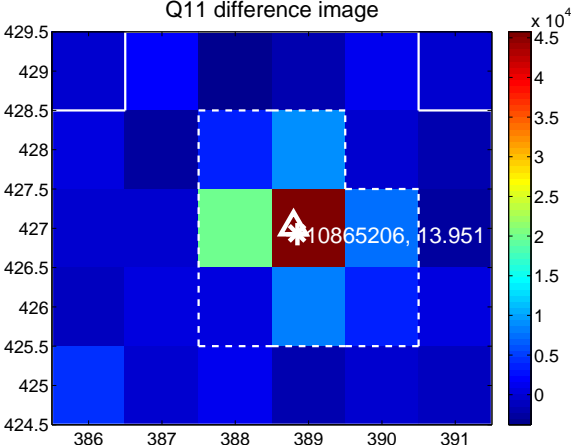
Q10 no difference image



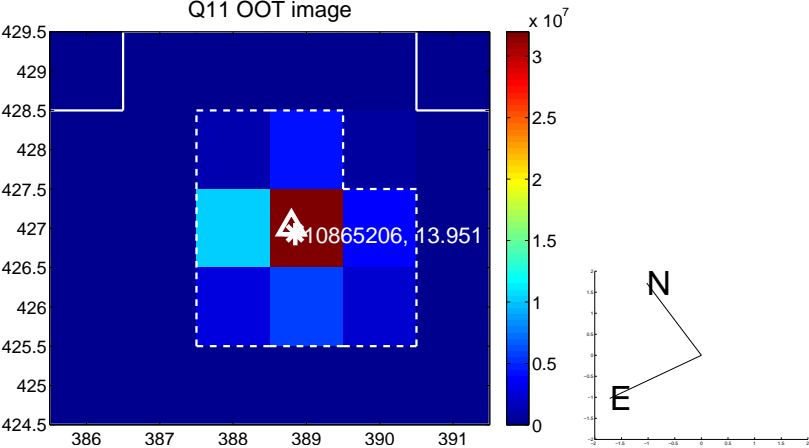
Q10 no OOT image



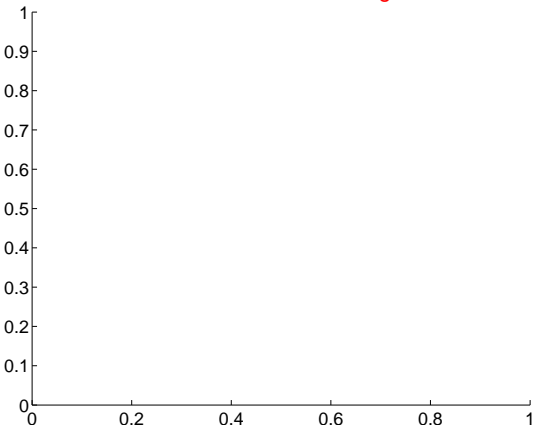
Q11 difference image



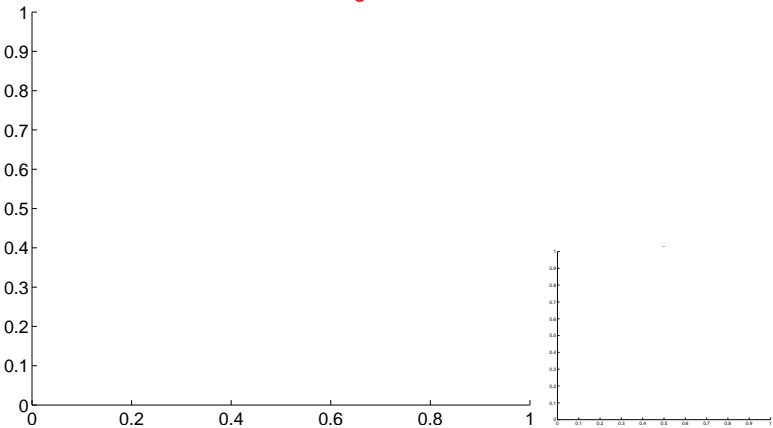
Q11 OOT image



Q12 no difference image



Q12 no OOT image



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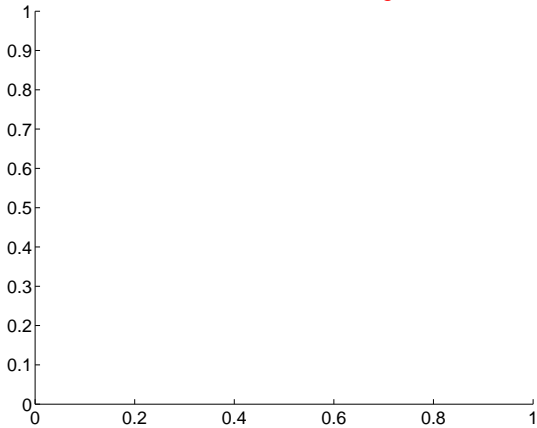
Q13 no difference image



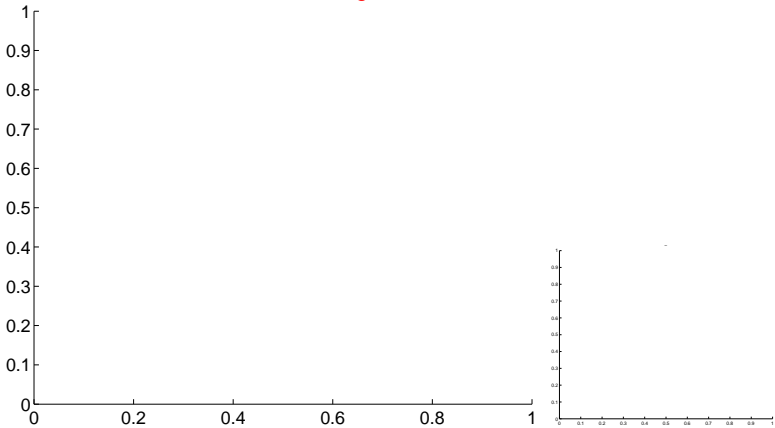
Q13 no OOT image



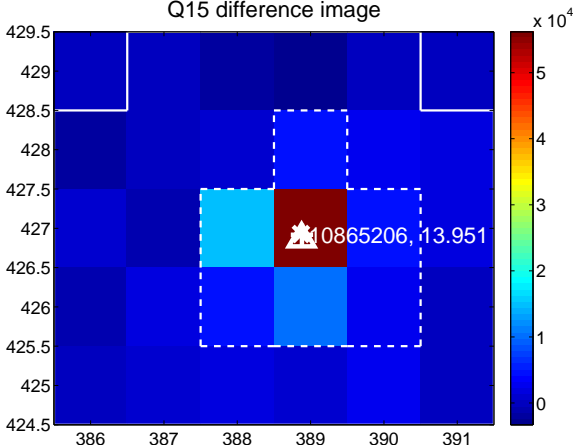
Q14 no difference image



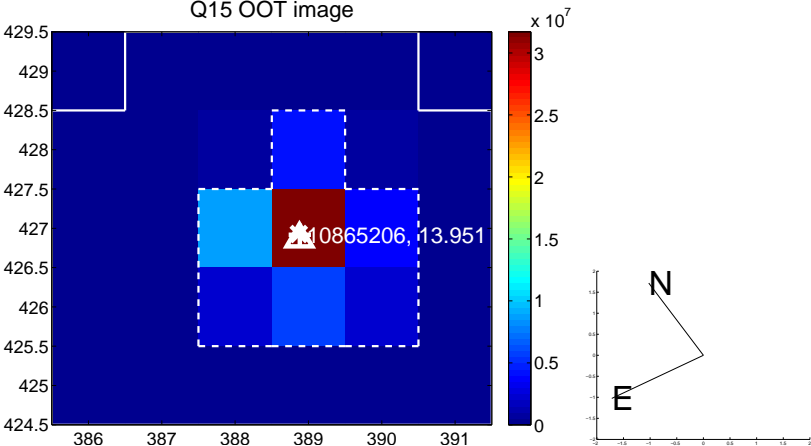
Q14 no OOT image



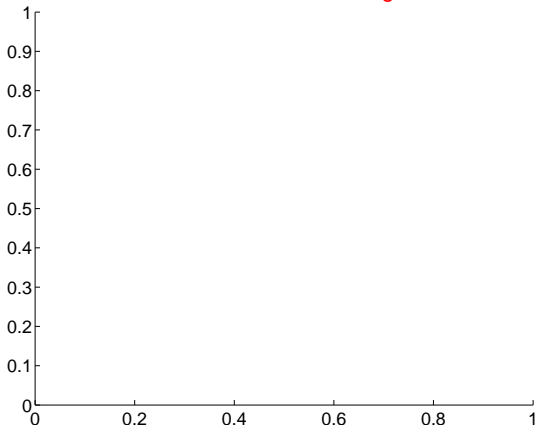
Q15 difference image



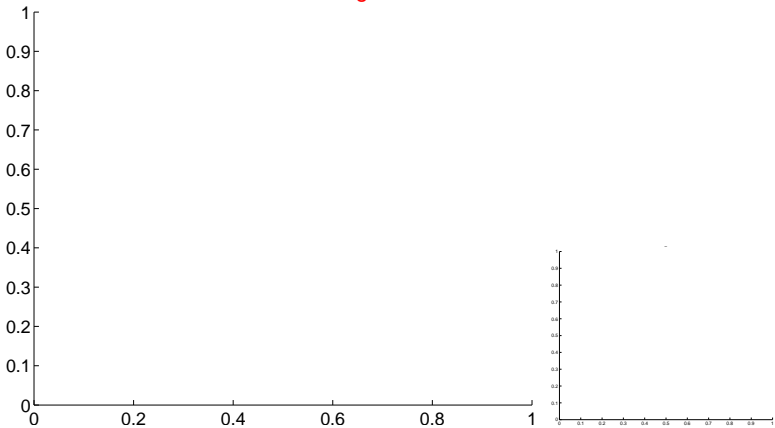
Q15 OOT image



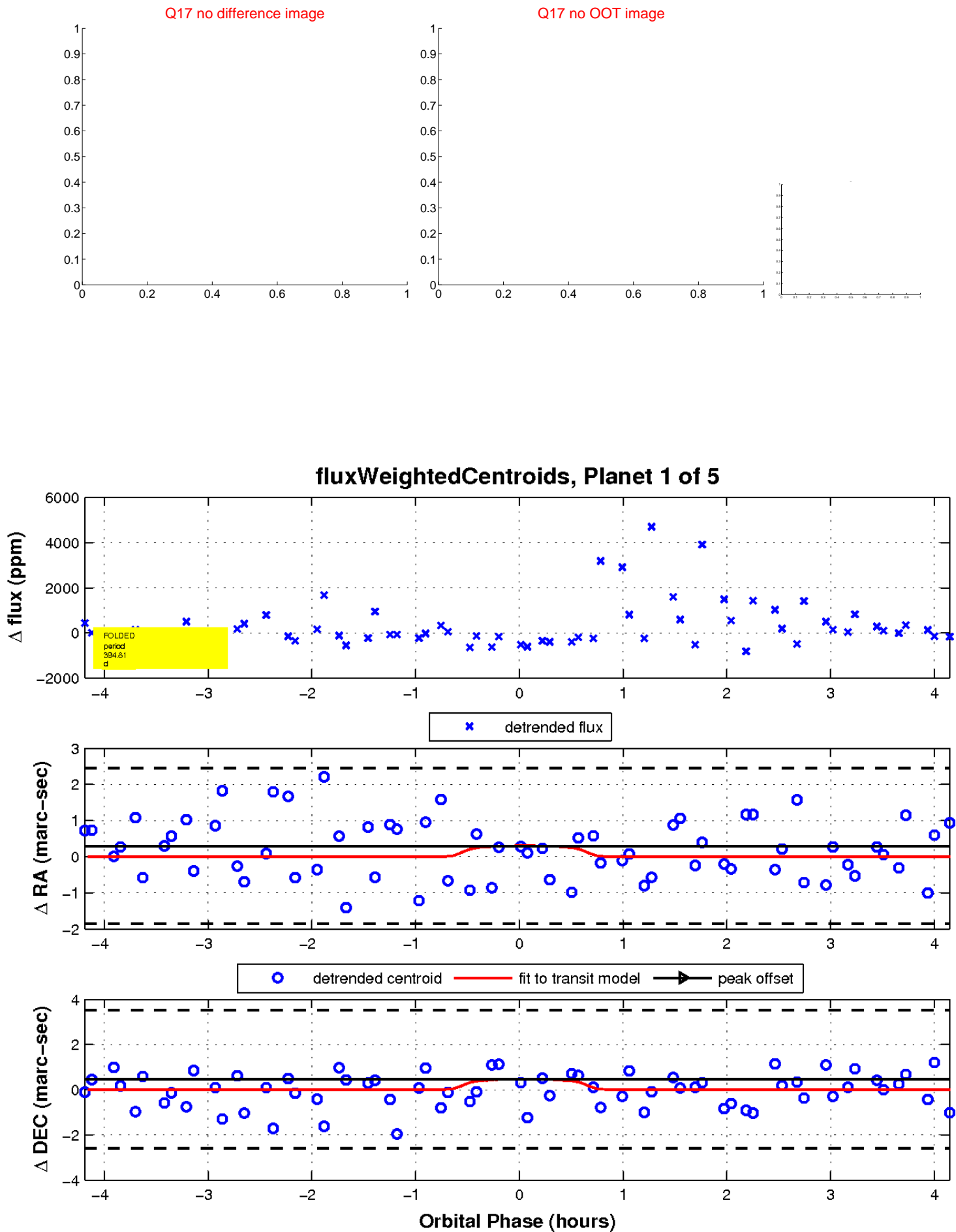
Q16 no difference image



Q16 no OOT image

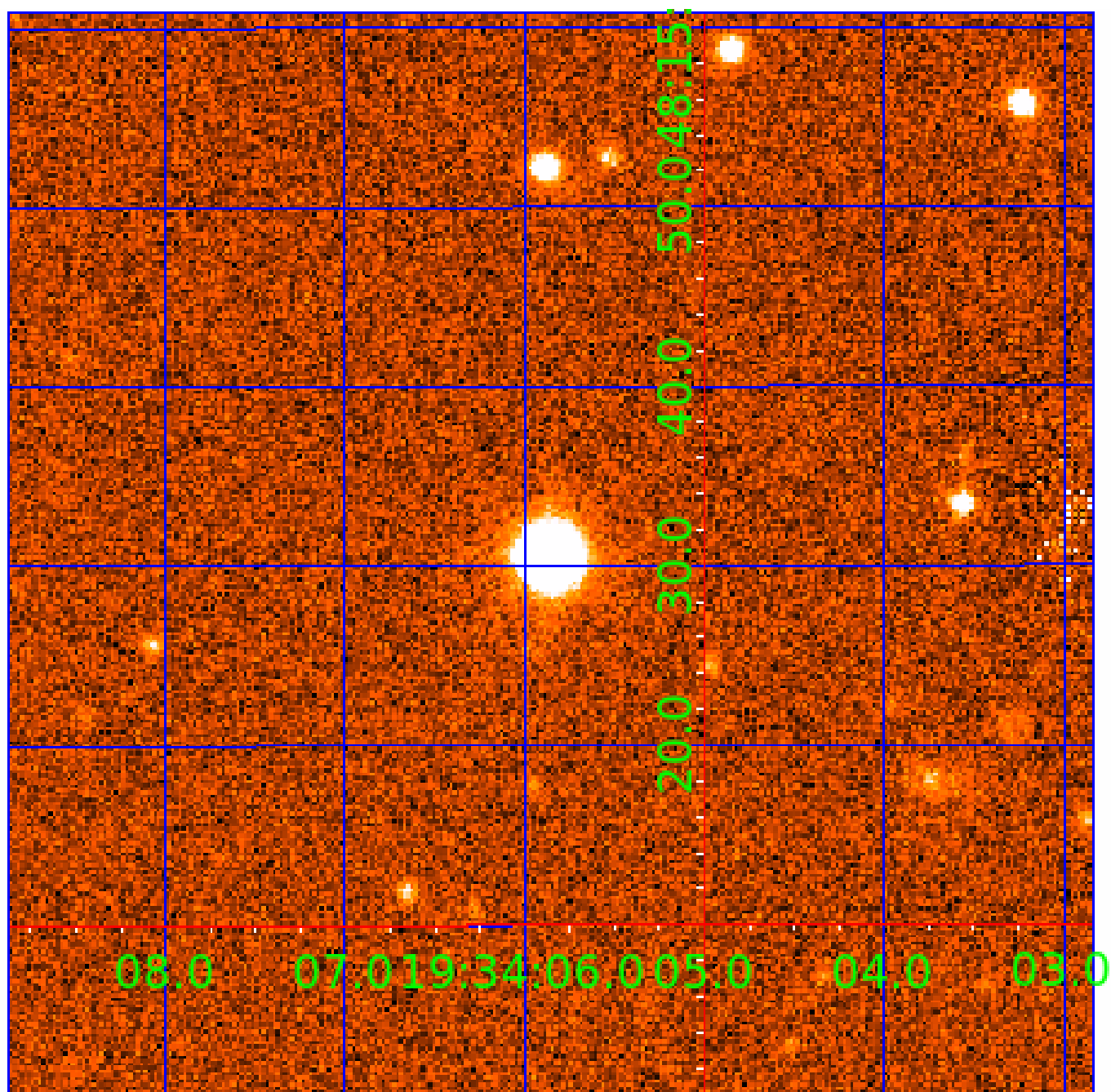


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UKIRT Image

Declination



KIC 010865206

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010865206-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
010865206-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010865206-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS

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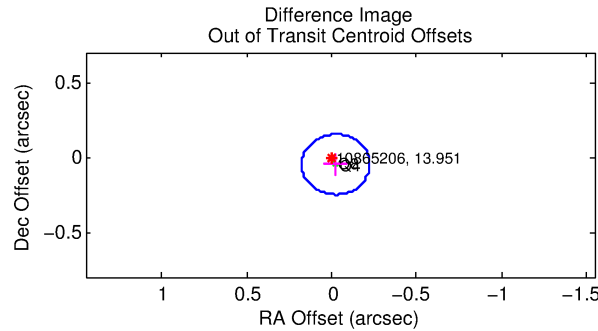
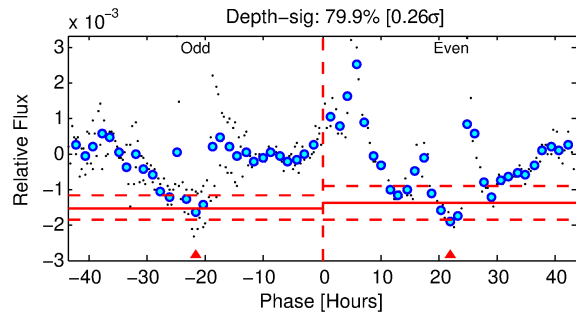
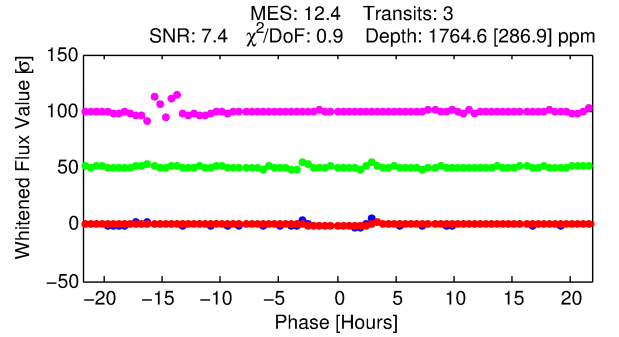
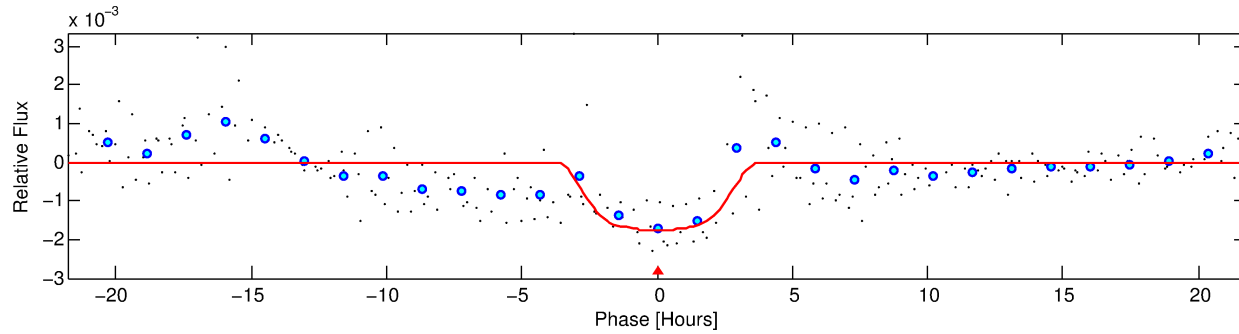
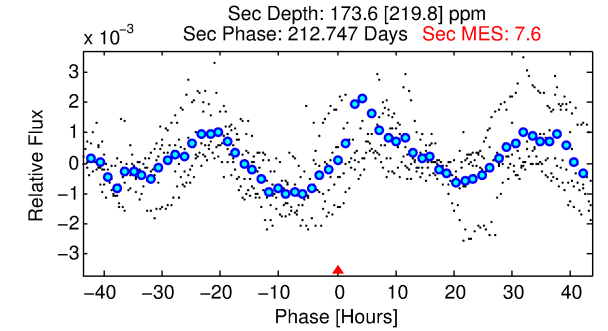
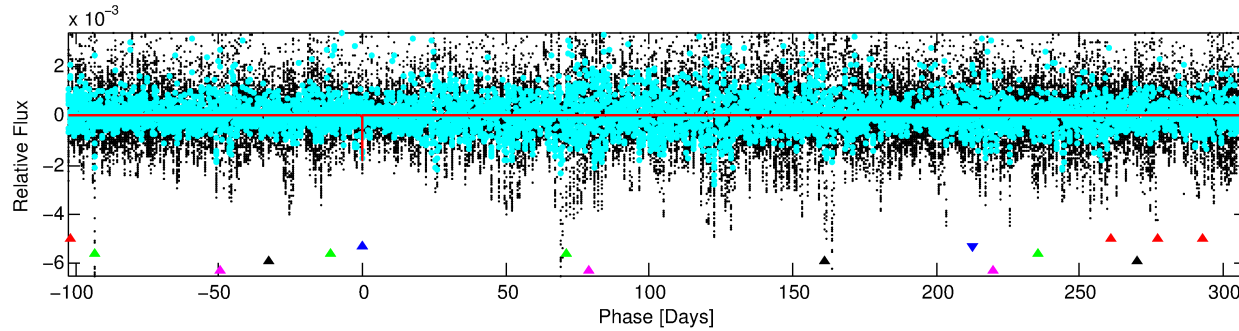
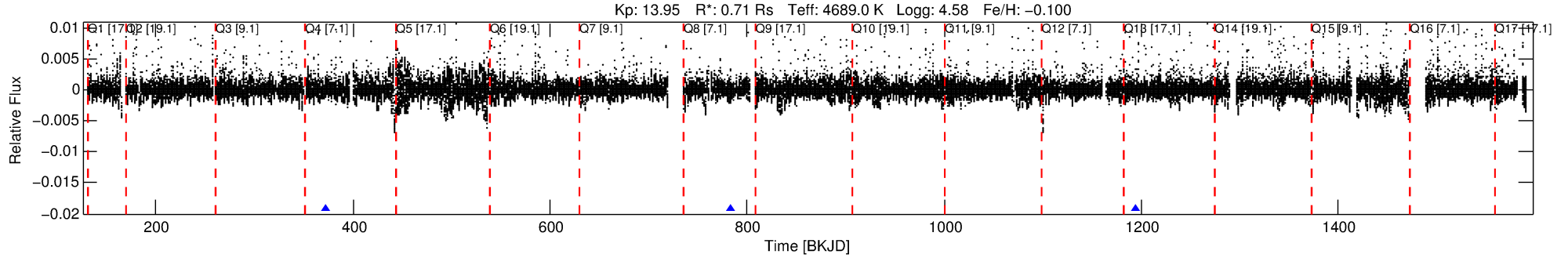
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010865206-02

No Significant Match Found

DV One-Page Summary

KIC: 10865206 Candidate: 2 of 5 Period: 410.874 d



DV Fit Results:

Period = 410.87407 [0.00729] d
Epoch = 372.4989 [0.0093] BKJD
Rp/R* = 0.0482 [0.0046]
a/R* = 221.97 [29.57]
b = 0.91 [0.03]
Seff = 0.24 [0.03]
Teq = 178 [5] K
Rp = 3.72 [0.41] Re
a = 0.9567 [0.0483] AU
Ag = 6310.30 [8092.40] [0.78σ]
Teffp = 2450 [785] K [2.89σ]

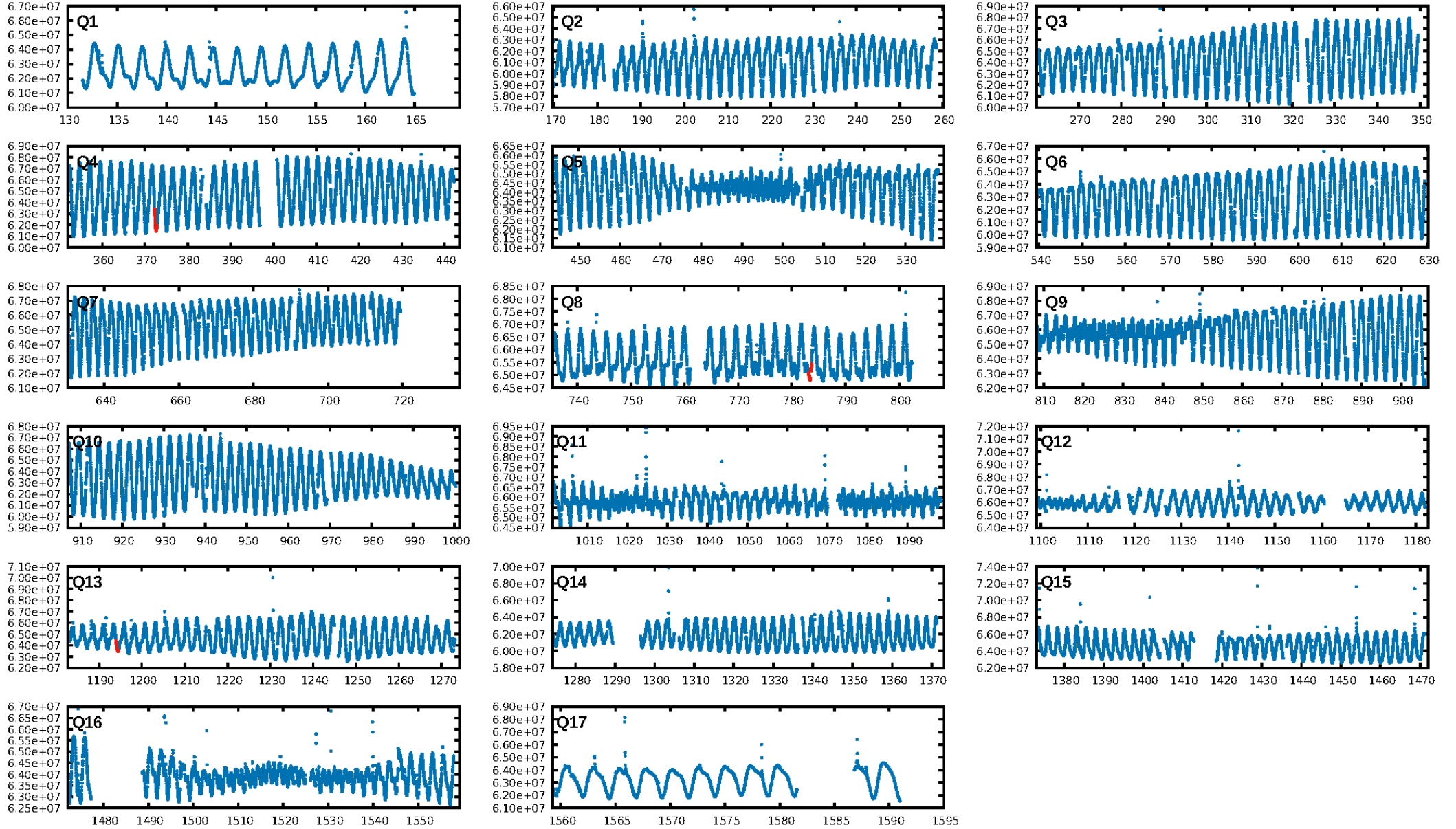
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [52.15σ]
LongPeriod-sig: 100.0% [264.84σ]
ModelChiSquare2-sig: 51.6%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 30.14
Centroid-sig: 6.7%
Centroid-so: 0.477 arcsec [1.50σ]
OotOffset-rm: 0.054 arcsec [0.81σ]
KicOffset-rm: 0.036 arcsec [0.53σ]
OotOffset-st: 0/0/2/0 [2]
KicOffset-st: 0/0/2/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

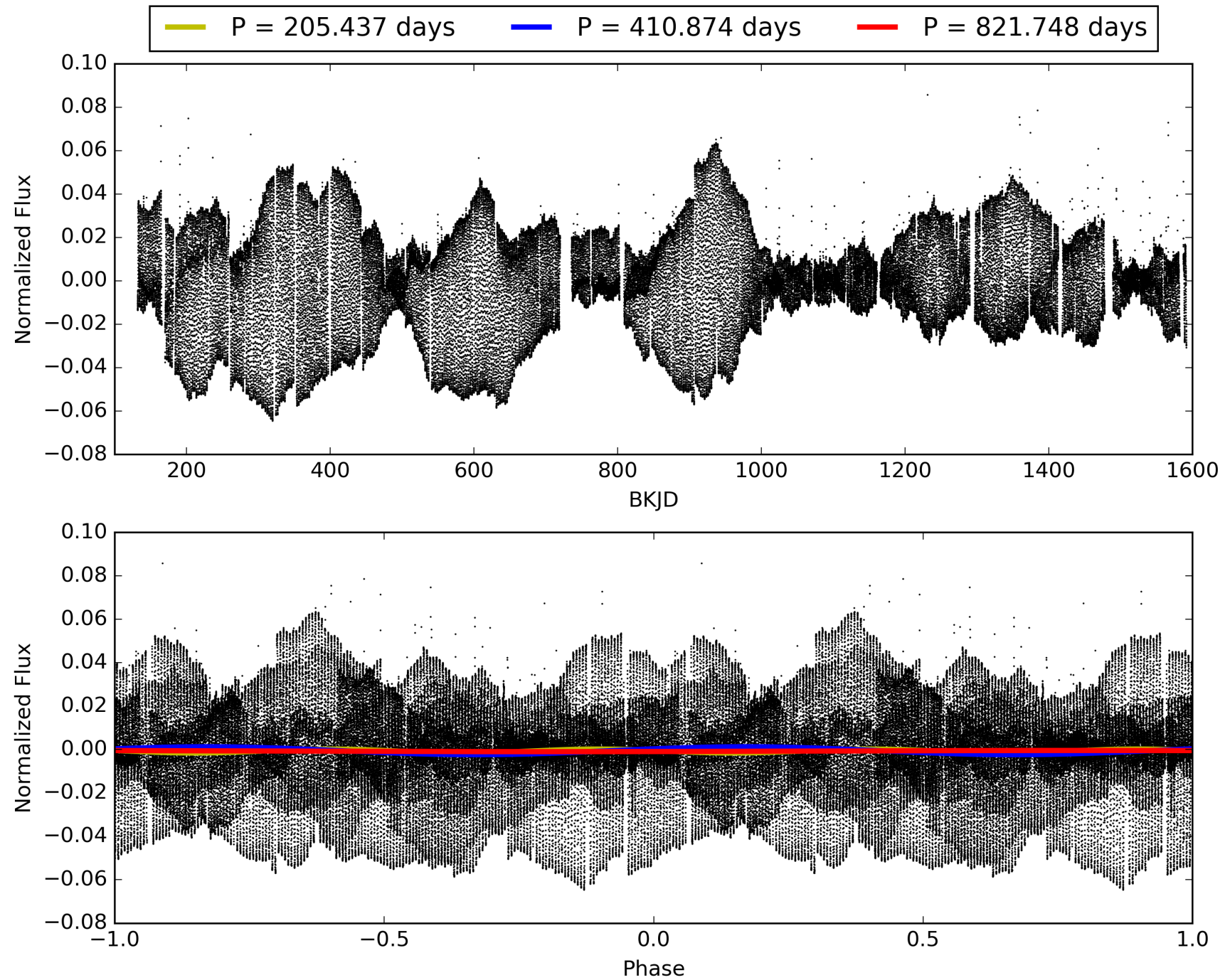
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:47:41 Z

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

TCE 010865206-02, PDC Light Curves

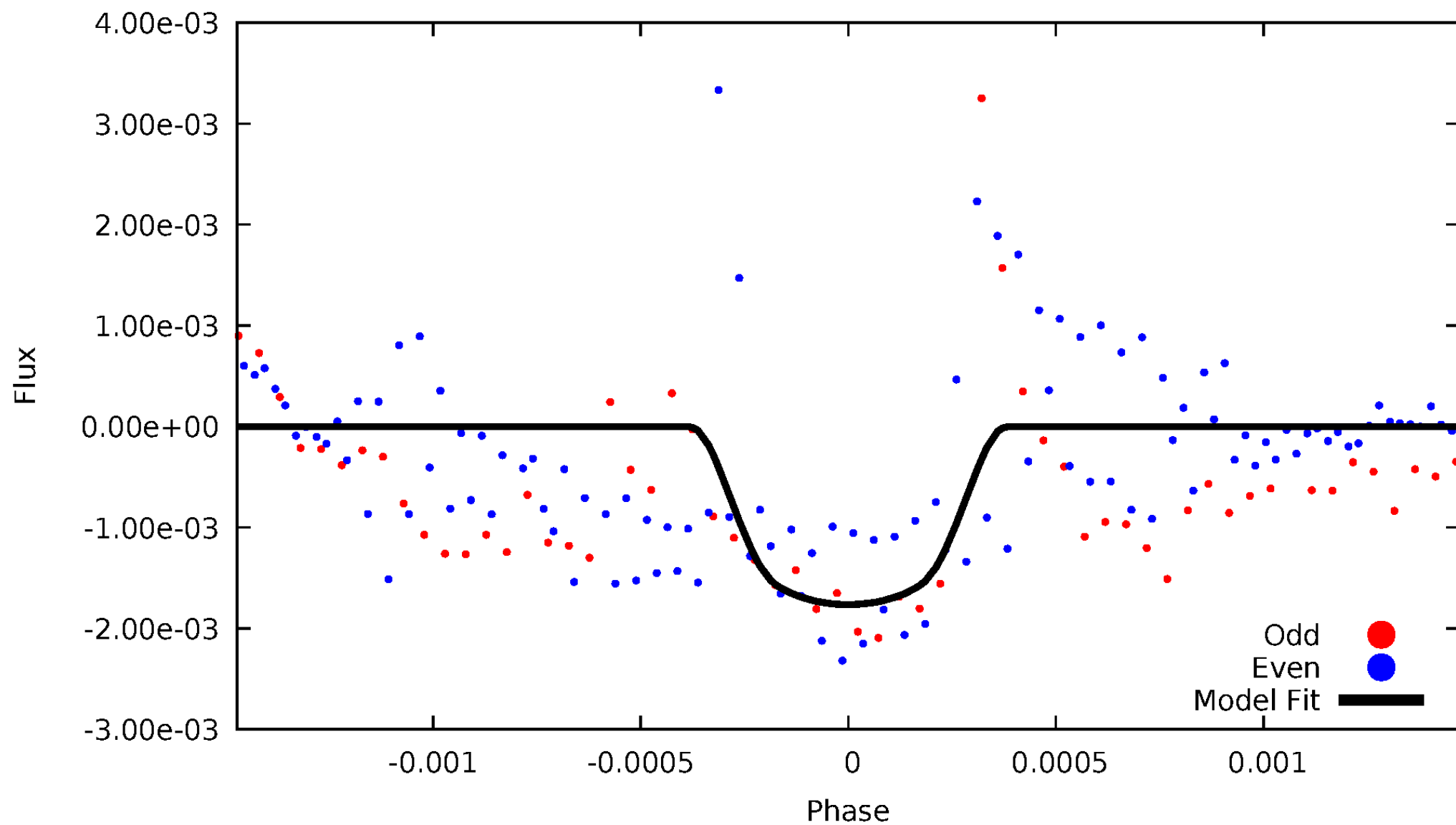


TCE 010865206-02



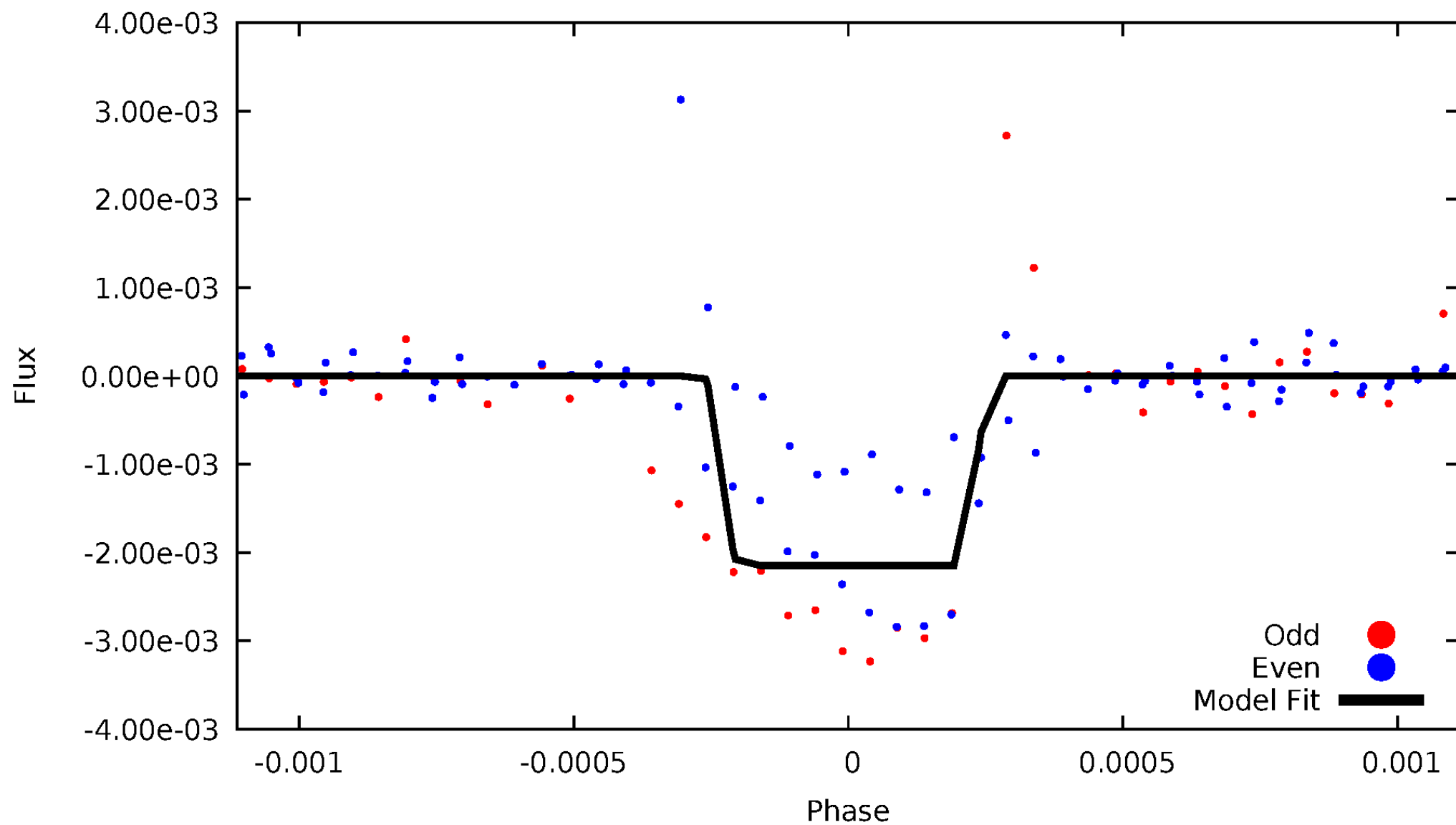
DV Odd/Even

TCE 010865206-02



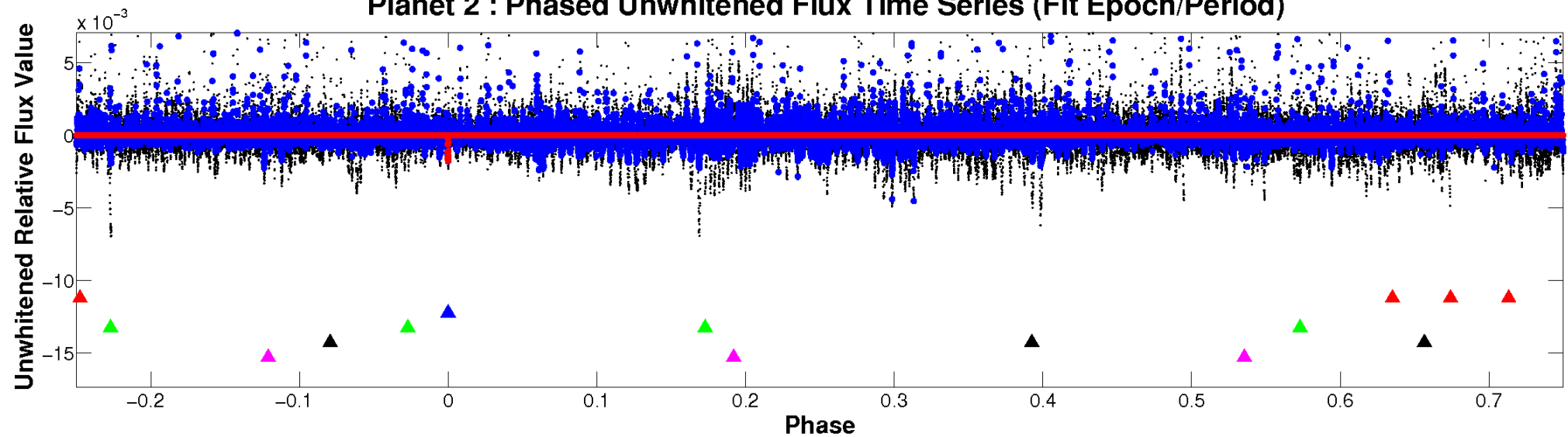
ALT Odd/Even

TCE 010865206-02

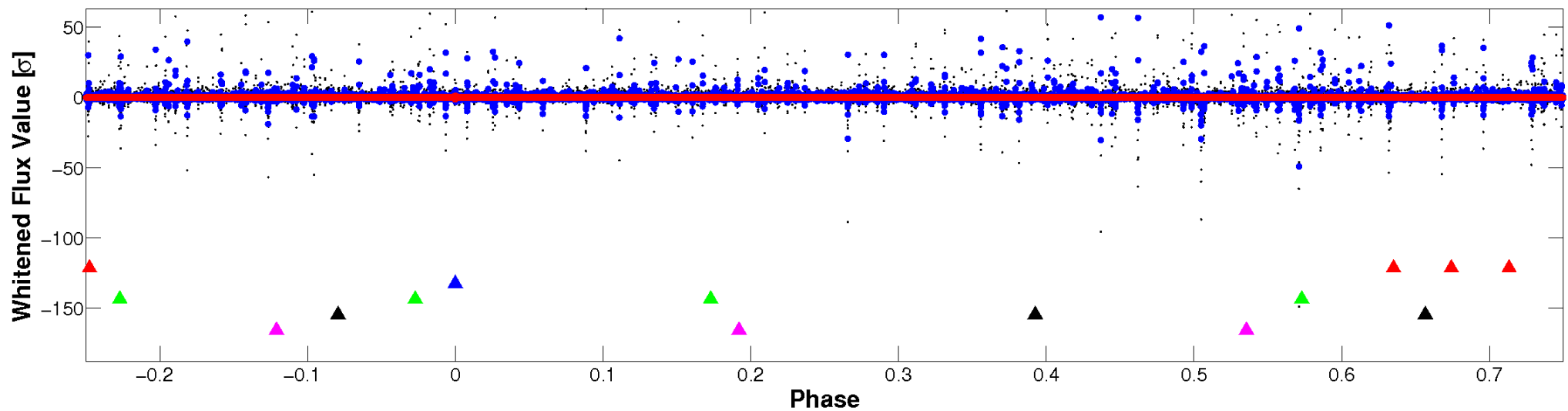


Non-Whitened Vs. Whitened Light Curve

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

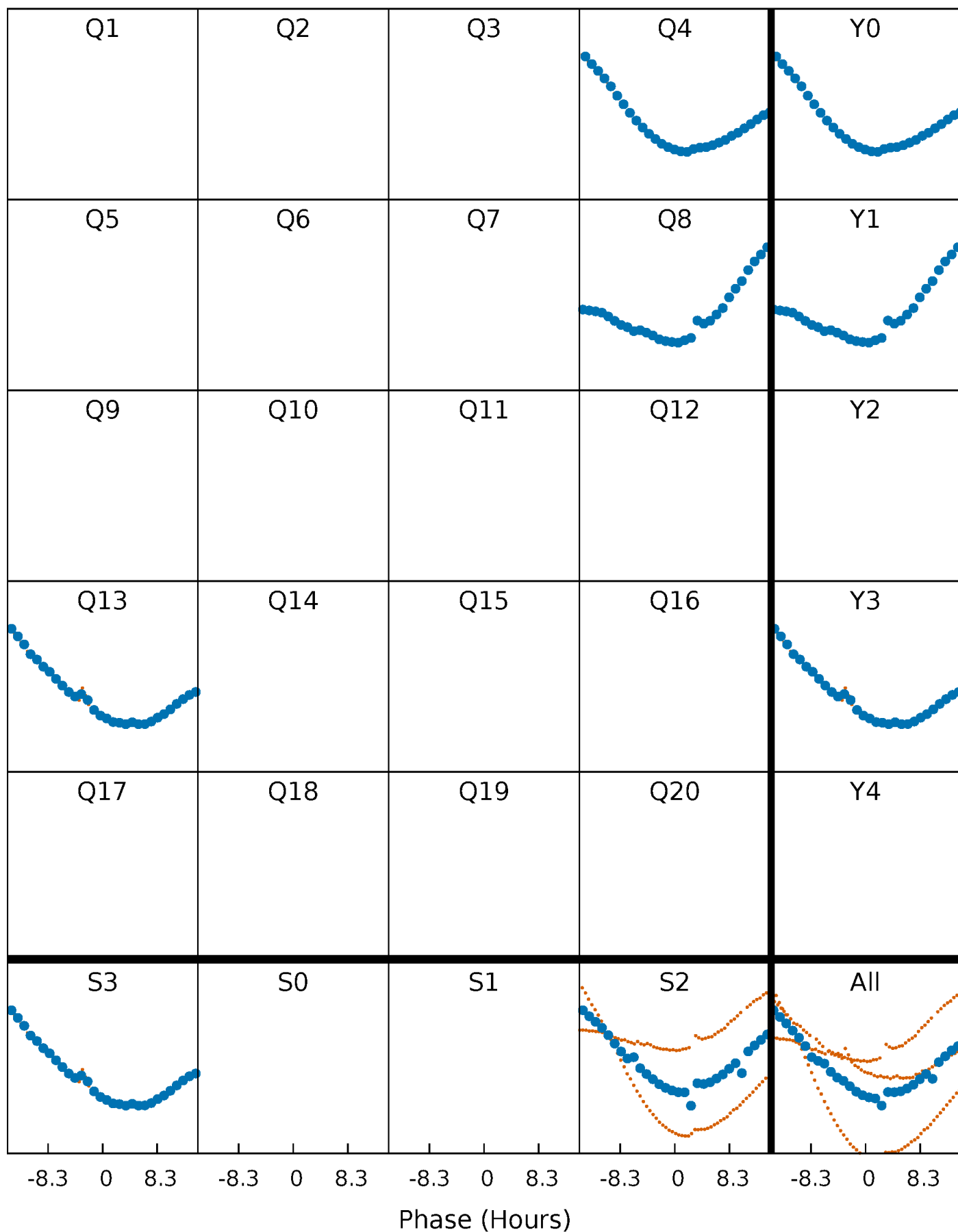


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



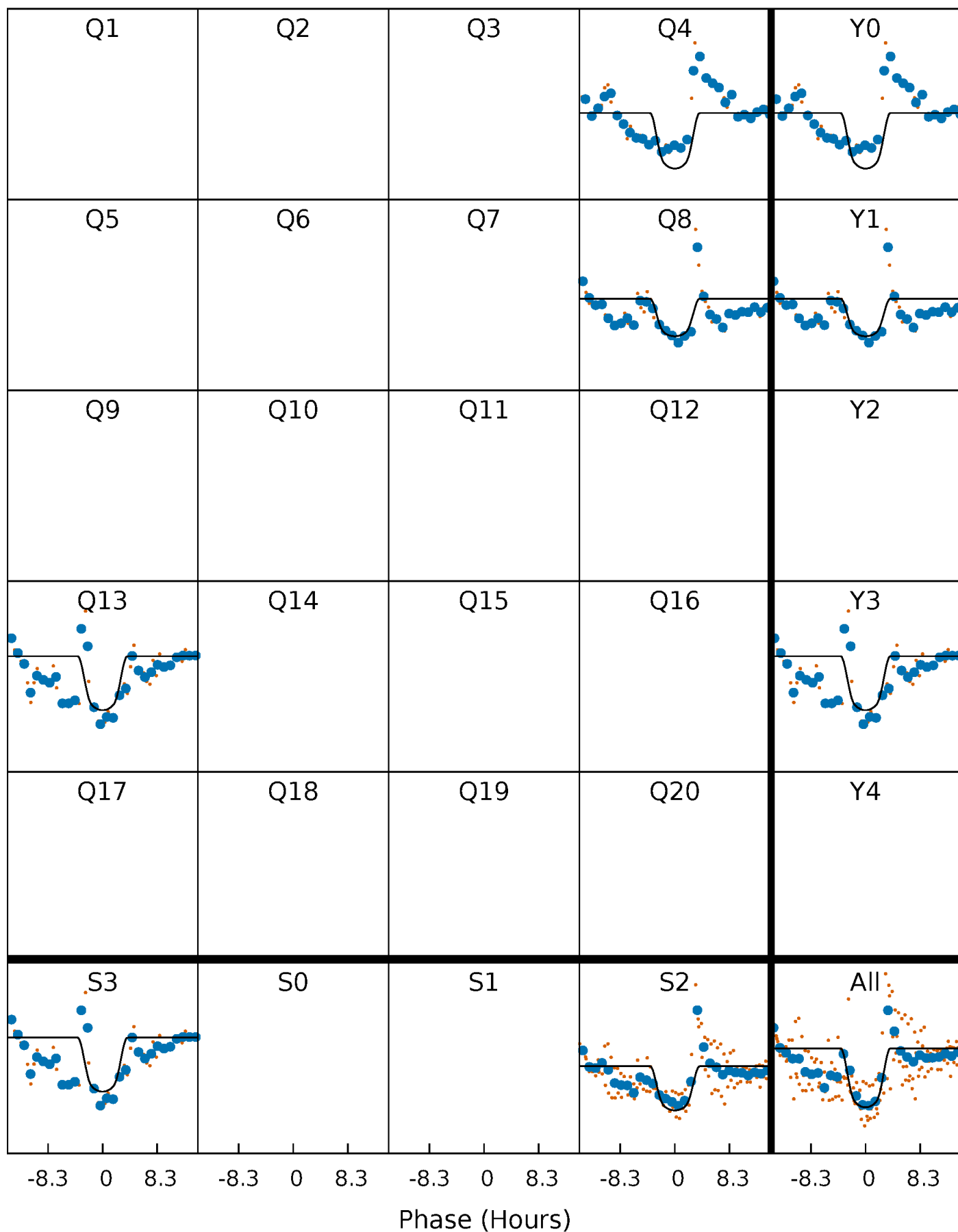
PDC Quarter-Phased Transit Curves

TCE 010865206-02 $P=410.874070$ Days $T_0=372.498909$ (BKJD)



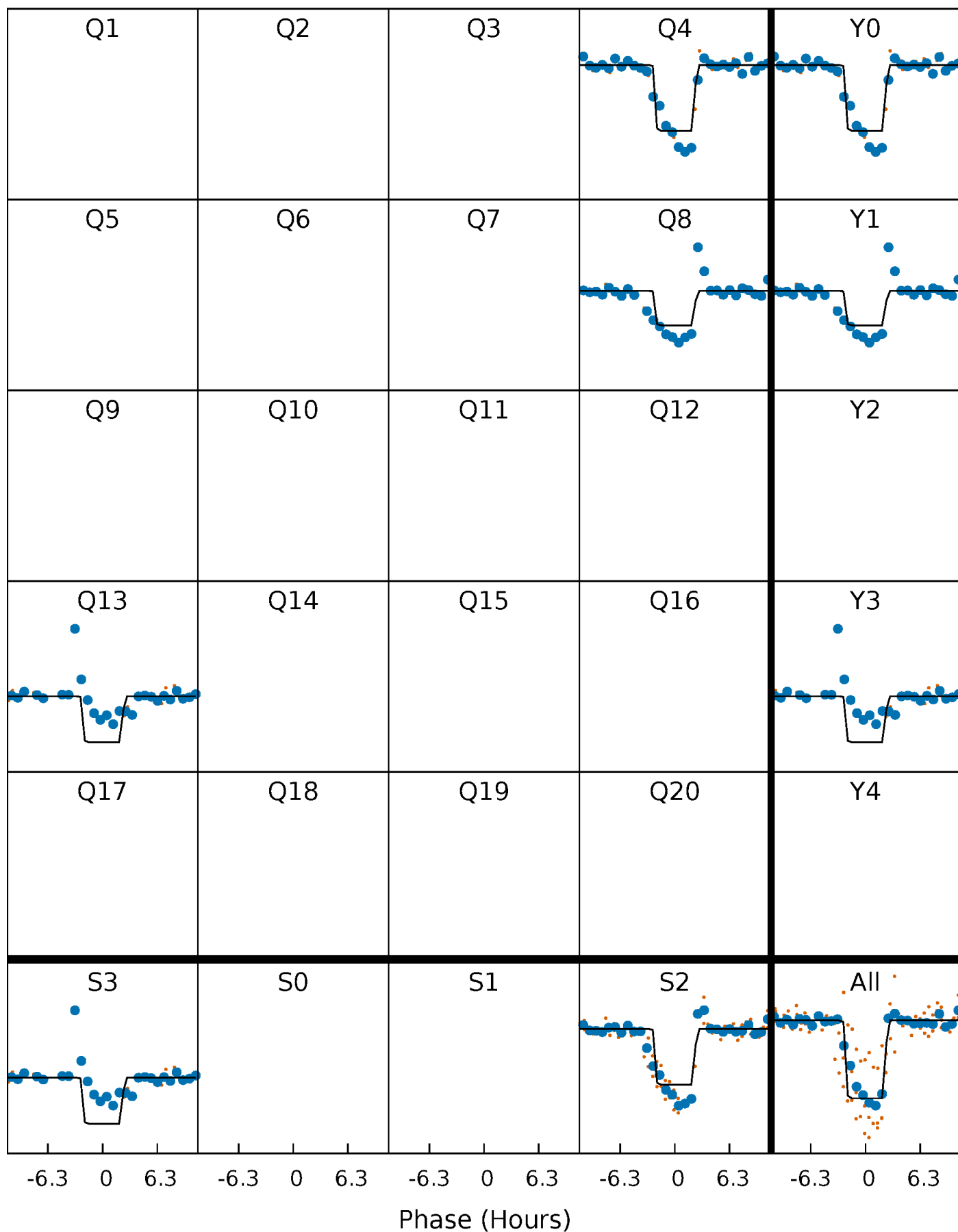
DV Quarter-Phased Transit Curves

TCE 010865206-02 $P=410.874070$ Days $T_0=372.498909$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

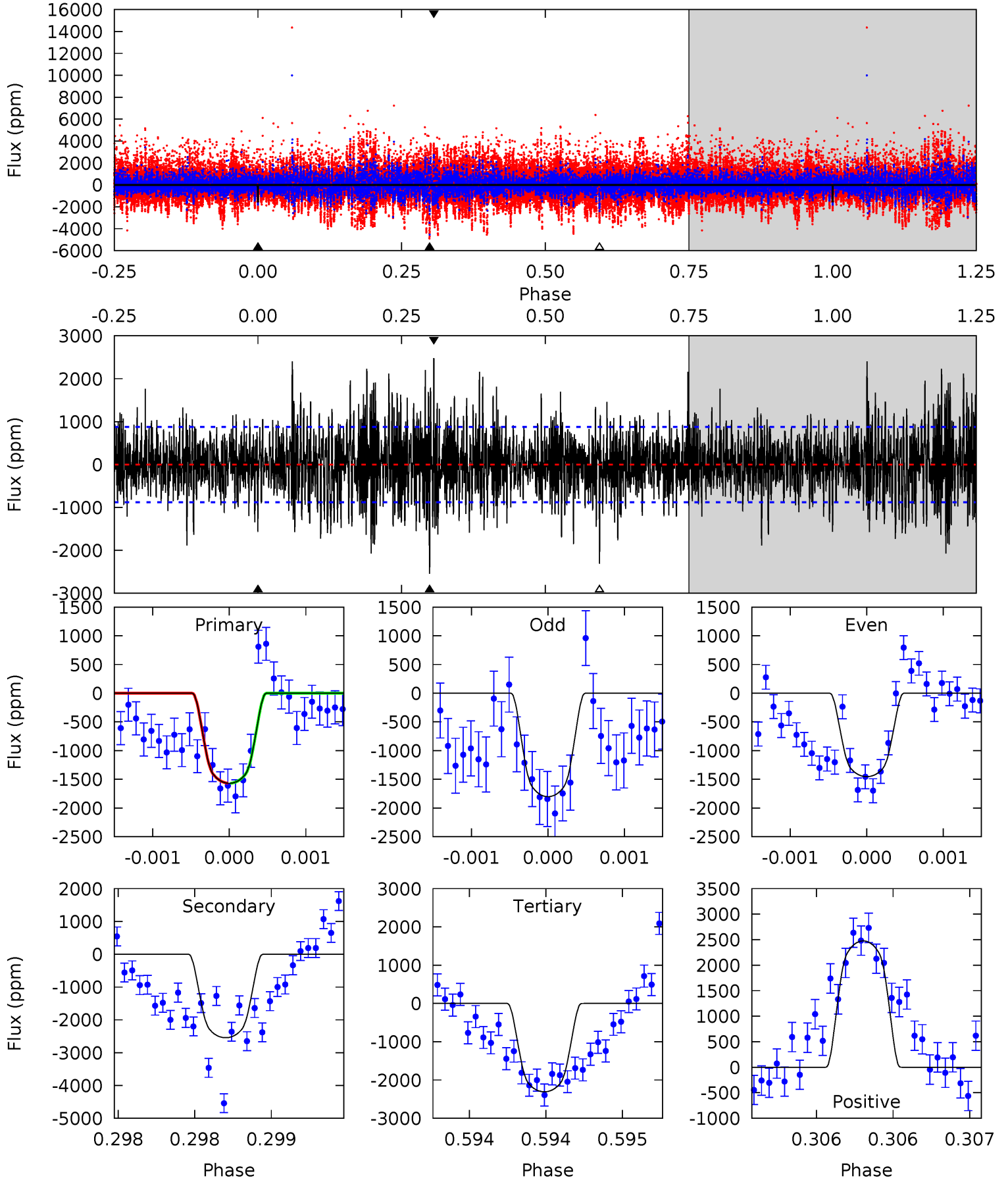
TCE 010865206-02 $P=410.878024$ Days $T_0=372.508440$ (BKJD)



DV Model-Shift Uniqueness Test

010865206-02, P = 410.874070 Days, E = 372.498909 Days

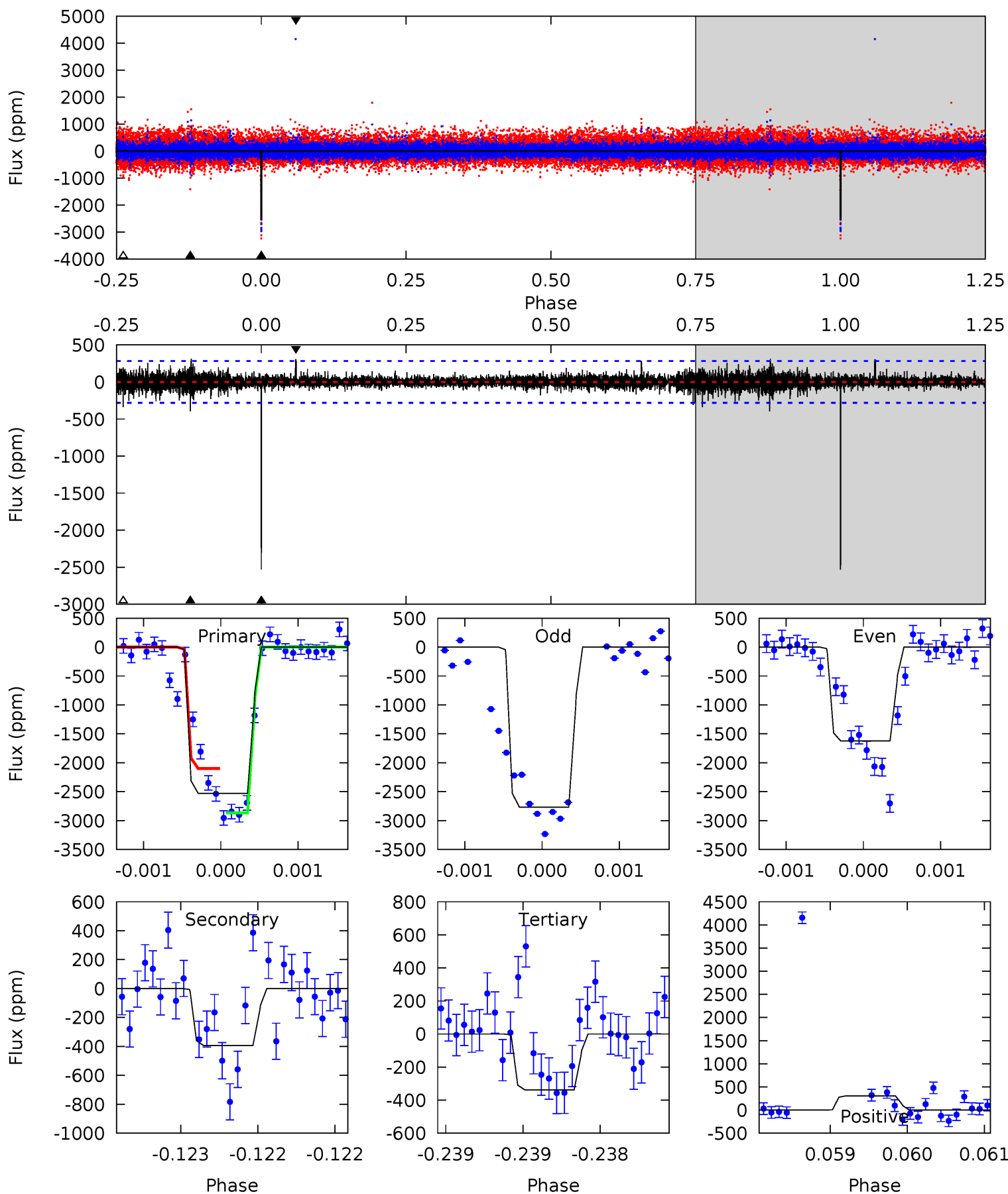
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.82	15.9	14.4	15.5	5.49	3.35	3.71	-4.63	-5.67	1.47	0.43	0.91	0.87	0.49	0.01



Alt Model-Shift Uniqueness Test

010865206-02, P = 410.878024 Days, E = 372.508440 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
49.9	7.77	6.67	6.03	5.56	3.46	0.97	43.3	43.9	1.10	1.75	11.4	0.86	0.11	7.84



Stellar Parameters For KIC 010865206

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4689^{+84}_{-84}	$4.579^{+0.045}_{-0.017}$	$-0.100^{+0.150}_{-0.150}$	$0.707^{+0.028}_{-0.039}$	$0.691^{+0.046}_{-0.025}$	$2.760^{+0.482}_{-0.184}$
	+2%/-2%	+1%/-0%	+150%/-150%	+4%/-6%	+7%/-4%	+17%/-7%
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 010865206-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-2544 ± 160	$3.68^{+0.37}_{-0.37}$	247^{+5}_{-5}	4781^{+226}_{-211}	95493^{+23259}_{-17538}
Alt.	-394 ± 51	$3.57^{+0.34}_{-0.39}$	247^{+5}_{-5}	3460^{+152}_{-124}	15669^{+4442}_{-3221}

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 $A_{obs} \gg 1.0$

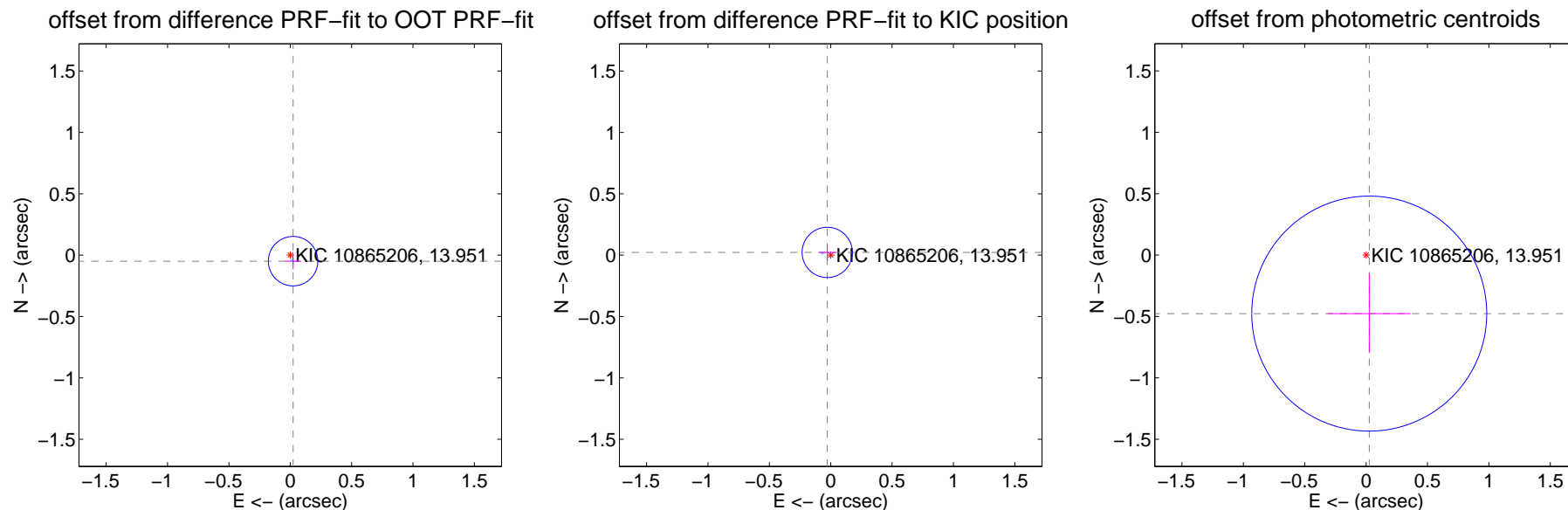
DV Centroid Data

Supplemental centroid analysis for 010865206-02. Kepler magnitude: 13.95. Transit SNR 7.35

There are 2 quarters with good PRF difference image offsets

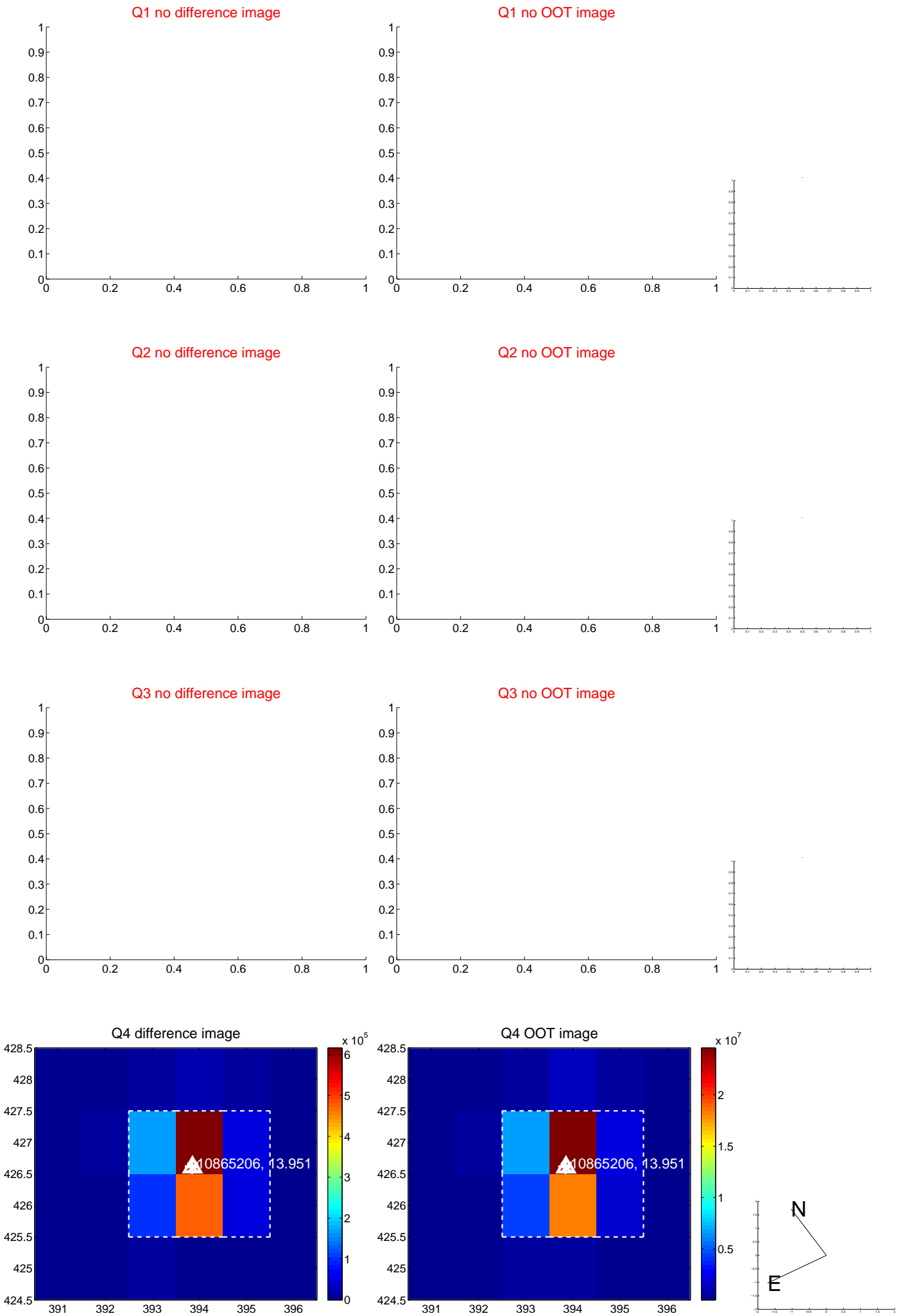
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.054 ± 0.067	0.81	-0.023 ± 0.067	-0.049 ± 0.067
PRF-fit source offset from KIC position	0.036 ± 0.068	0.53	0.028 ± 0.069	0.022 ± 0.067
photometric centroid source offset	0.48 ± 0.32	1.50	-0.03 ± 0.34	-0.48 ± 0.32

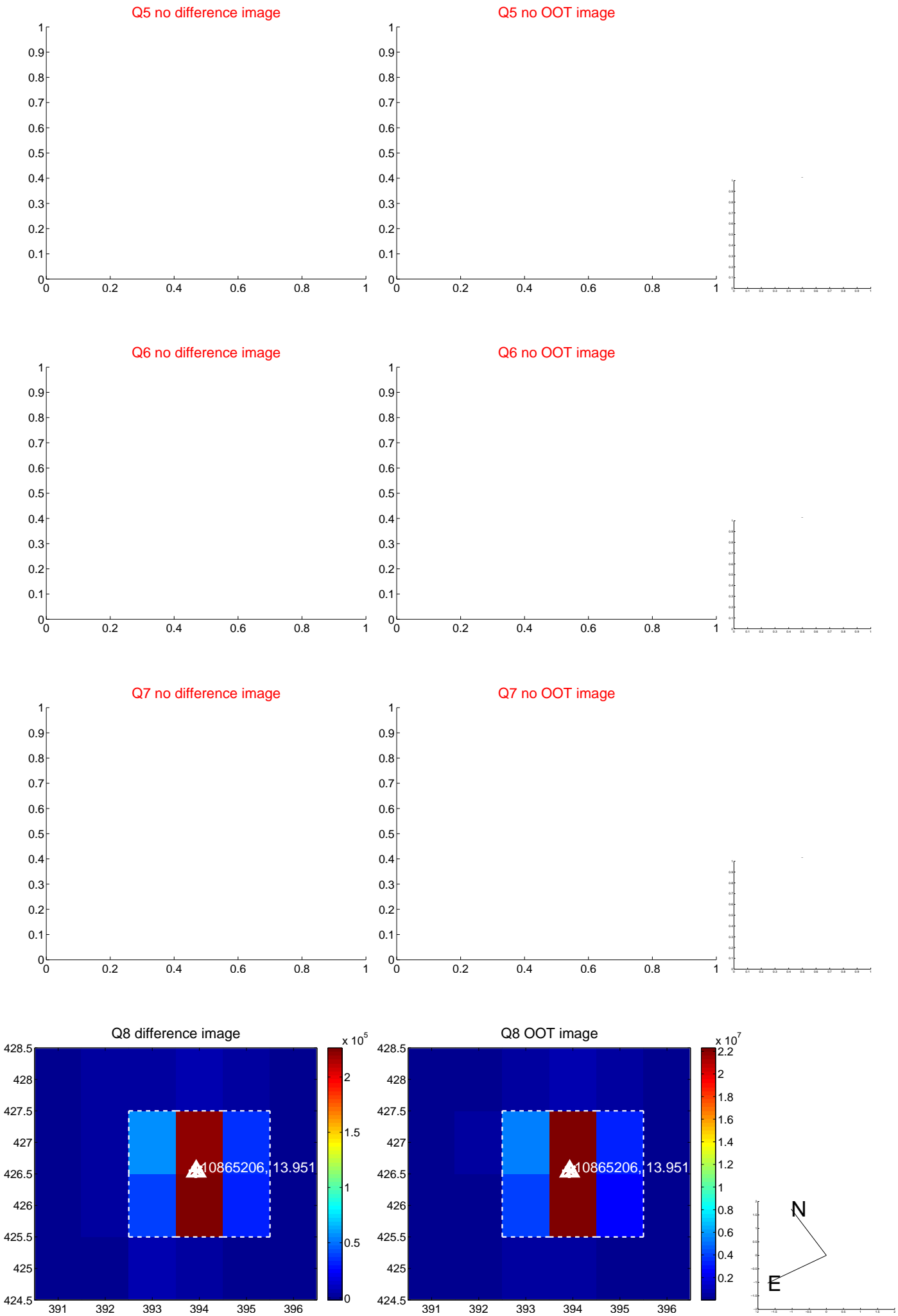


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



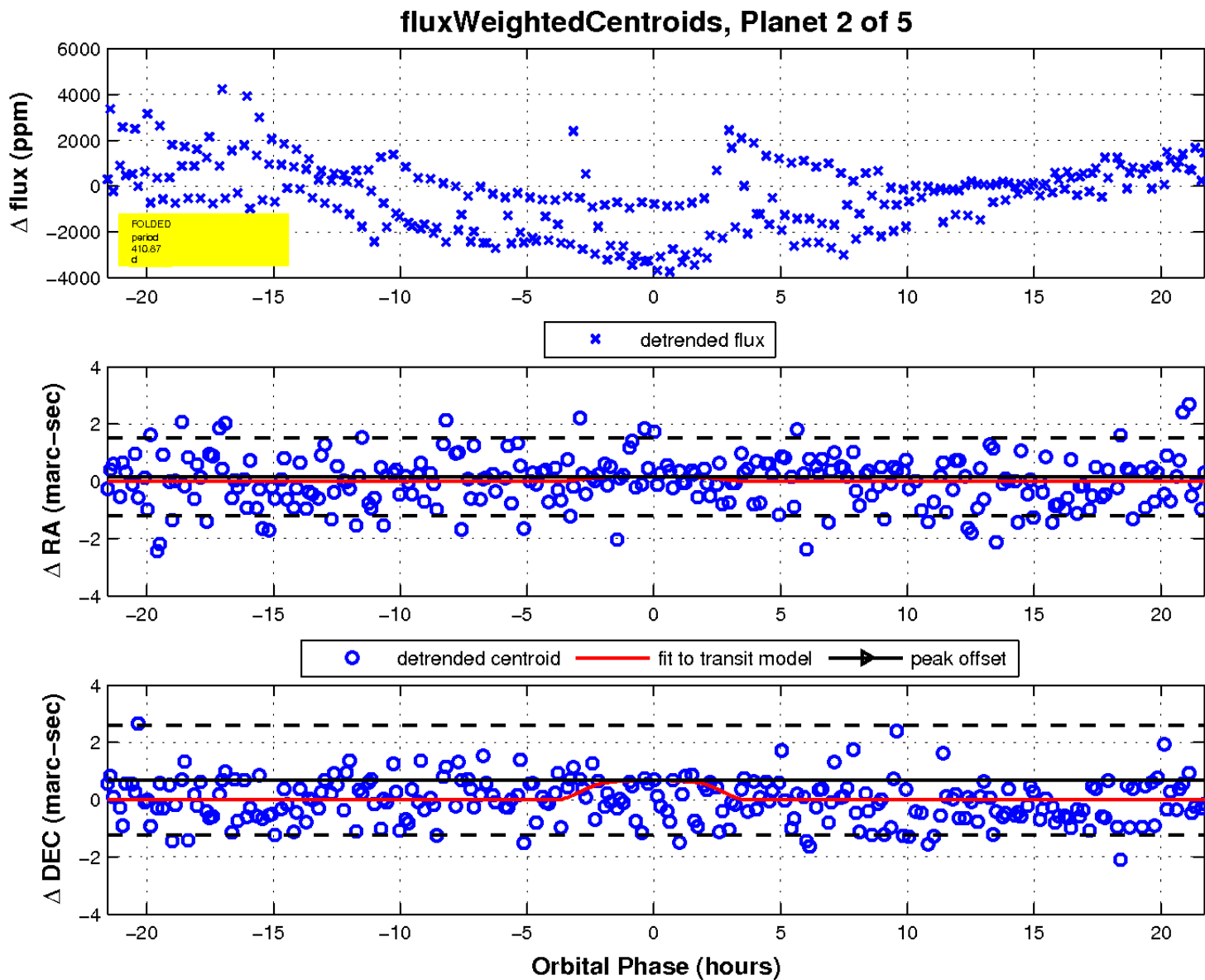
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

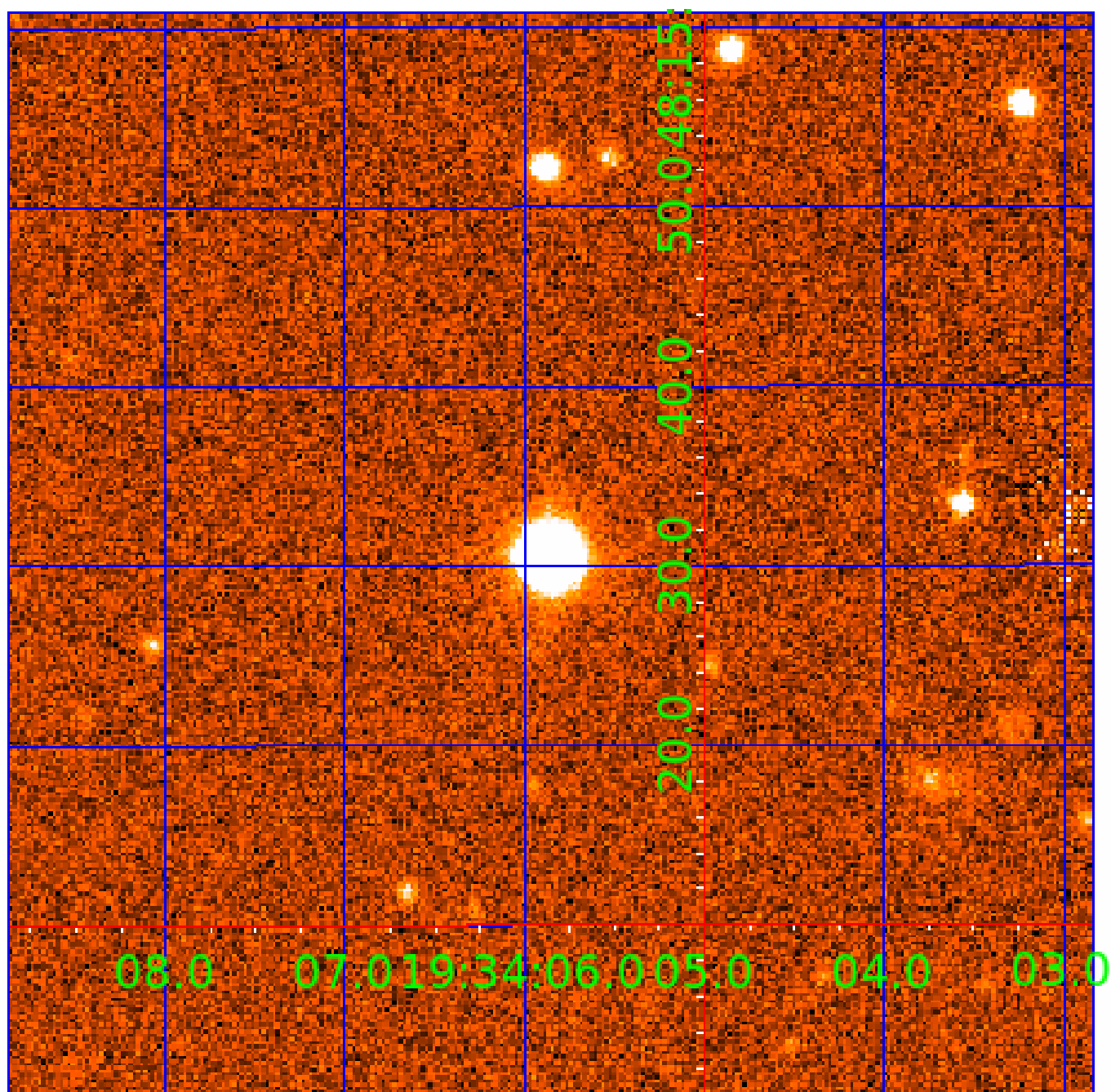


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010865206

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})
010865206-01	OBS	No	394.808357	270.767189	1297.4	1.397	17.5	8.1	0.71	4689	2.97	0.25
010865206-02	OBS	No	410.874070	372.498909	1764.6	7.260	12.4	7.4	0.71	4689	3.72	0.24
010865206-03	OBS	No	328.715069	443.524721	184.4	1.056	13.8	1.3	0.71	4689	1.00	0.32
010865206-04	OBS	No	519.362115	533.792988	1977.6	6.629	12.2	7.7	0.71	4689	3.17	0.17
010865206-05	OBS	No	551.999001	451.405187	1240.8	3.500	15.1	-1.0	0.71	4689	2.40	0.16

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010865206-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—LPP_ALT—MOD_POS_DV—INCONSISTENT_TRANS
010865206-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
010865206-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
010865206-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010865206-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

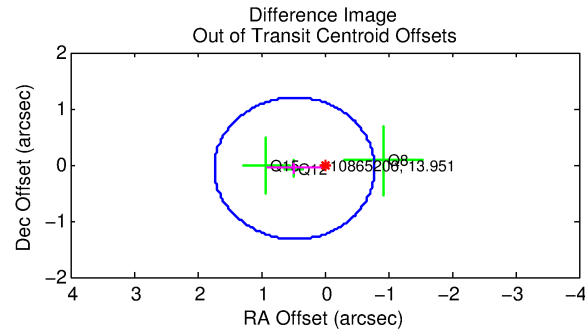
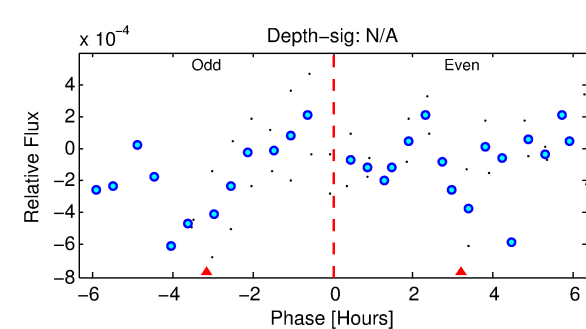
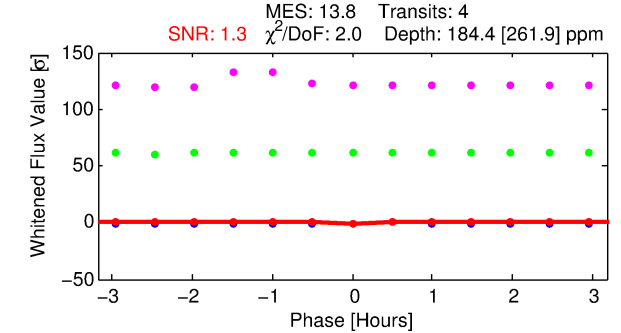
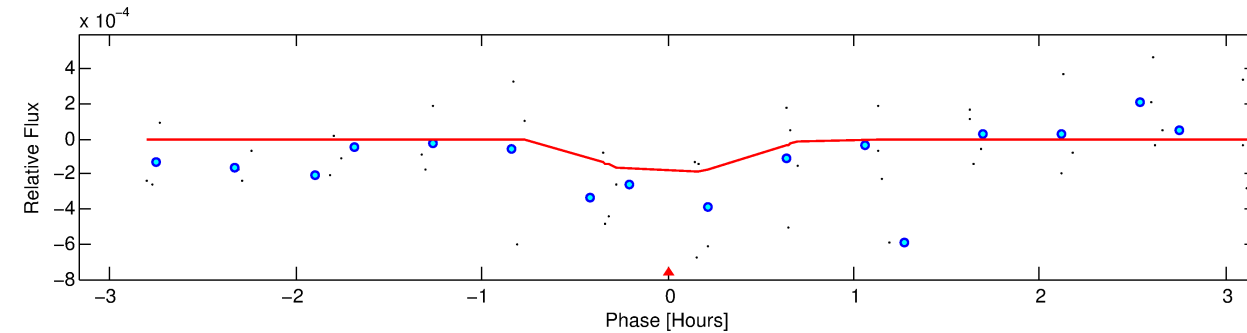
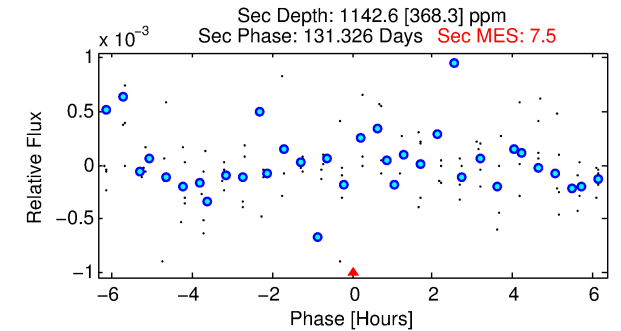
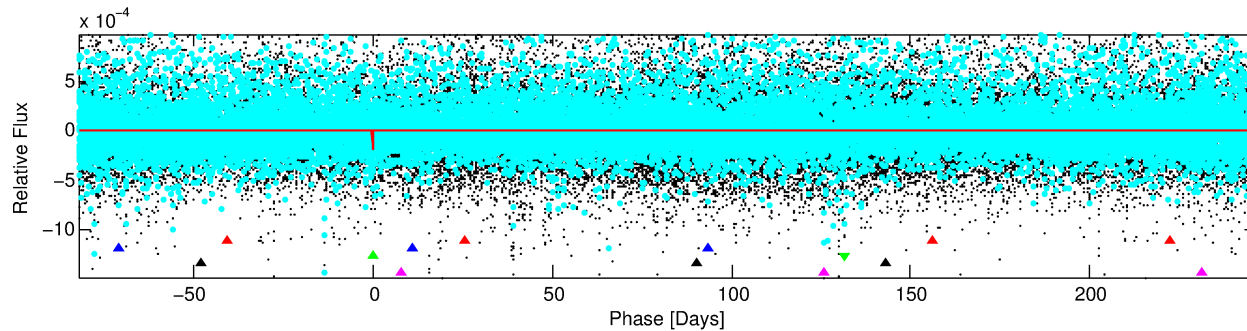
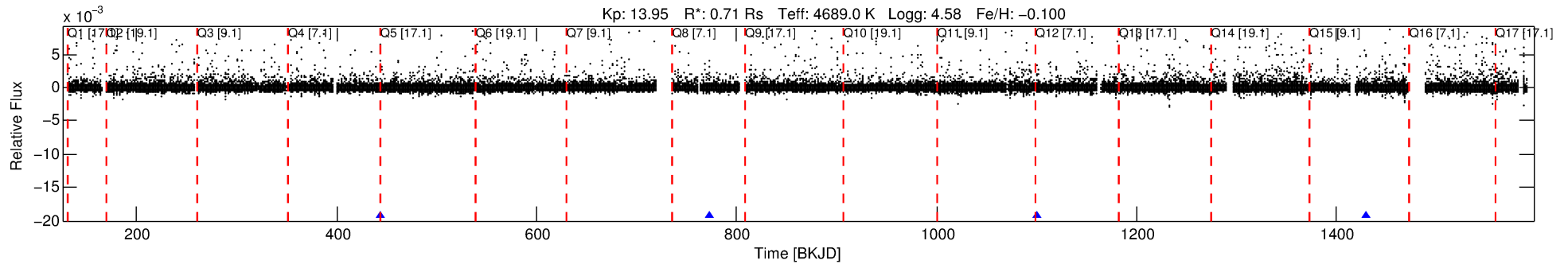
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010865206-03

No Significant Match Found

DV One-Page Summary

KIC: 10865206 Candidate: 3 of 5 Period: 328.715 d



DV Fit Results:

Period = 328.71507 [0.01622] d
Epoch = 443.5247 [0.0370] BKJD
Rp/R* = 0.0129 [0.1881]
a/R* = 2067.14 [93866.27]
b = 0.52 [65.37]
Seff = 0.32 [0.03]
Teq = 192 [5] K
Rp = 1.00 [14.51] Re
a = 0.8245 [0.0416] AU
Ag = 430526.34 [12542356.74] [0.03]
Teffp = 7586 [55253] K [0.13]

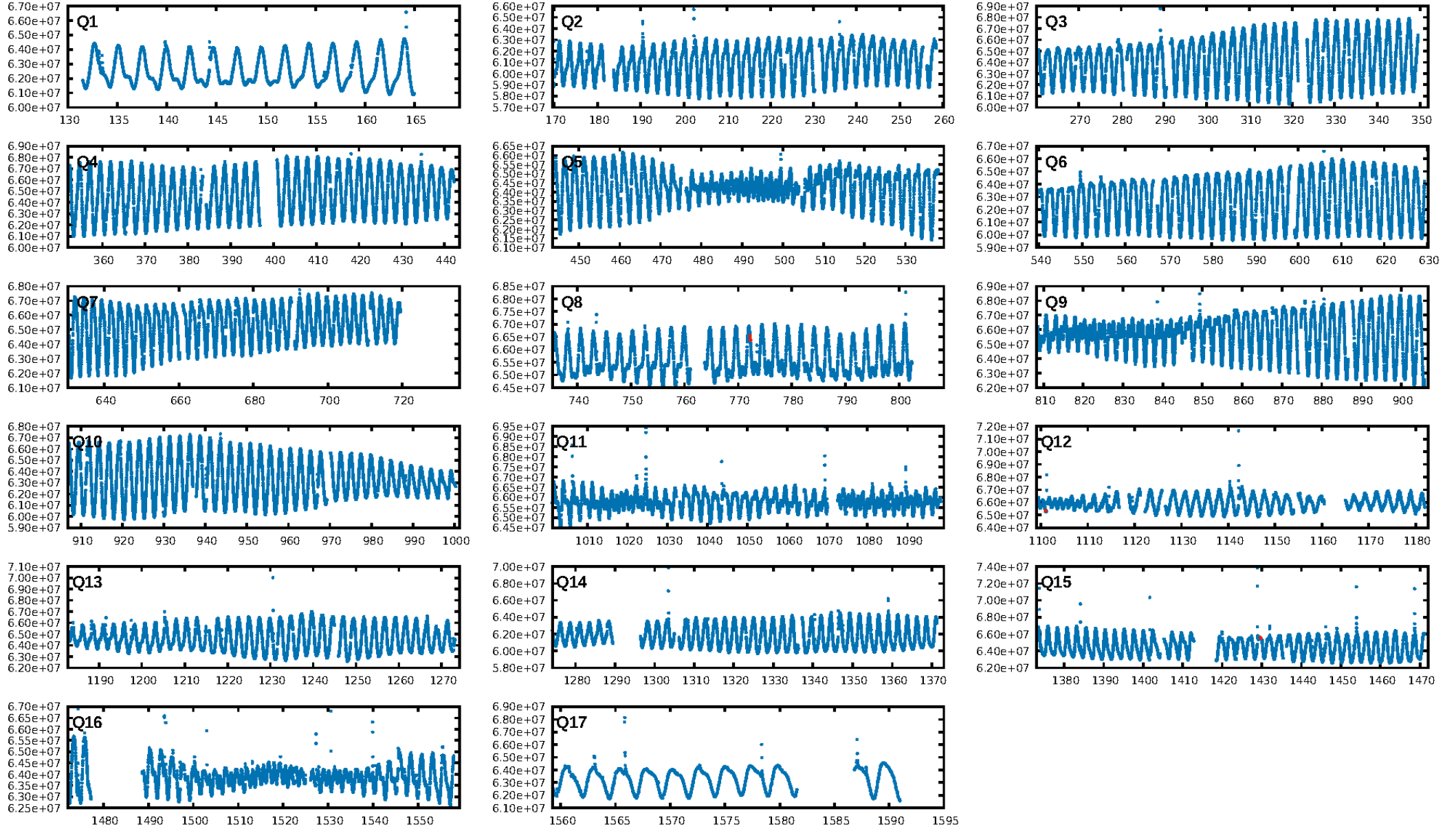
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [906.06]
ModelChiSquare2-sig: 43.8%
ModelChiSquareGof-sig: 60.4%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -0.05176
Centroid-sig: 44.4%
Centroid-so: 4.548 arcsec [0.82]
OotOffset-rm: 0.478 arcsec [1.14]
OotOffset-st: 0/1/2/0 [3]
KicOffset-rm: 0.602 arcsec [1.32]
KicOffset-st: 0/1/2/0 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

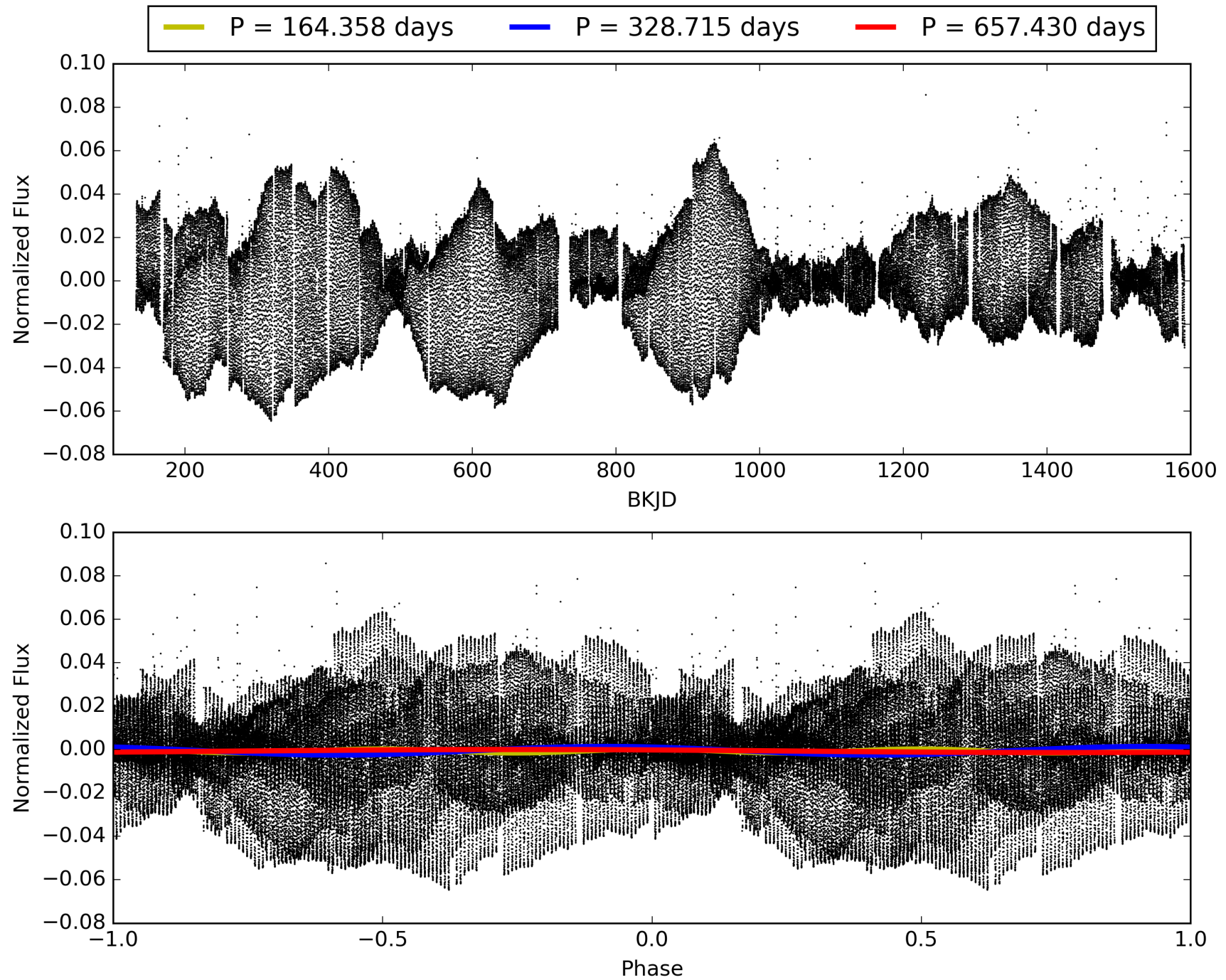
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:48:17 Z

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

TCE 010865206-03, PDC Light Curves

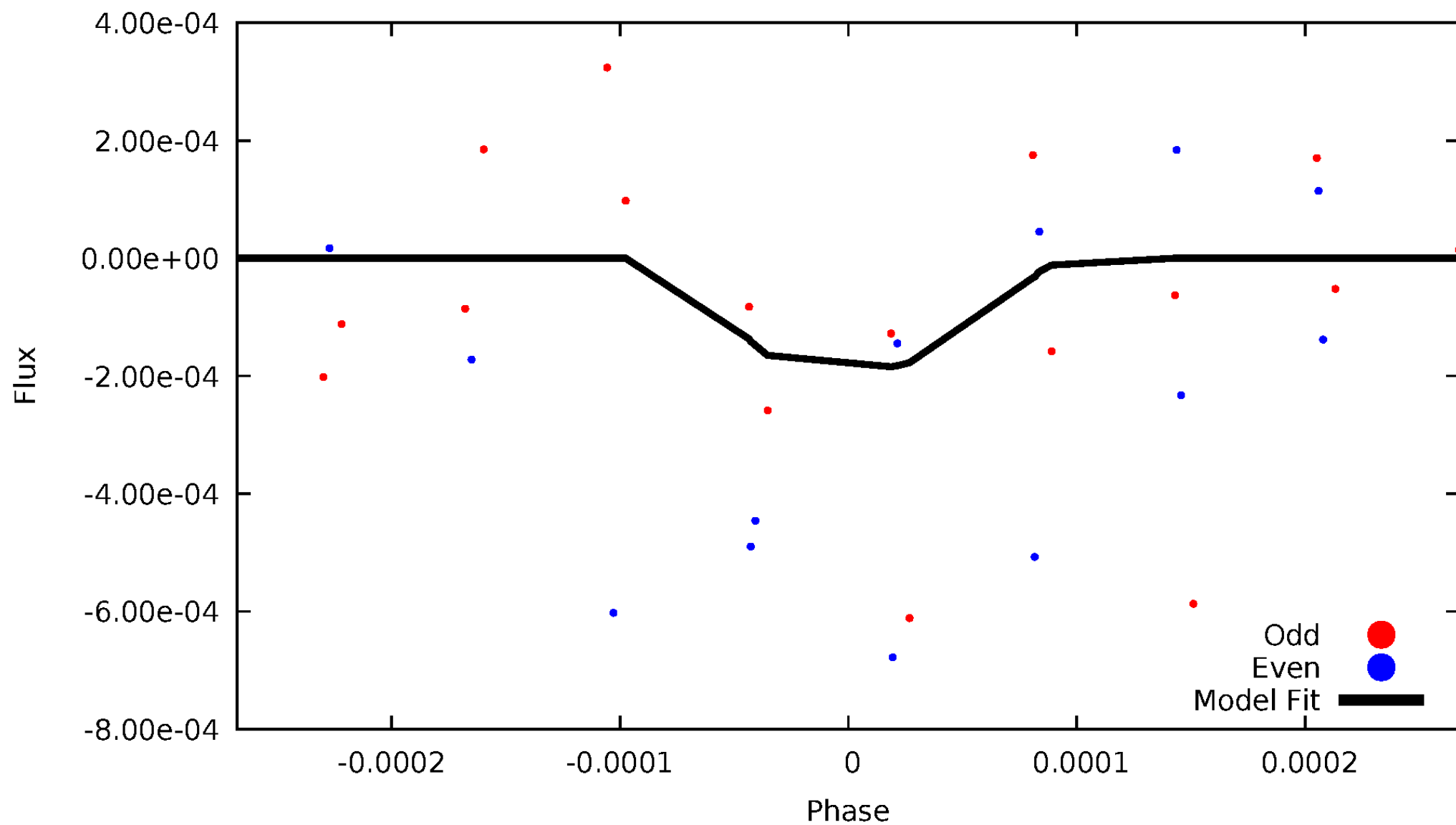


TCE 010865206-03



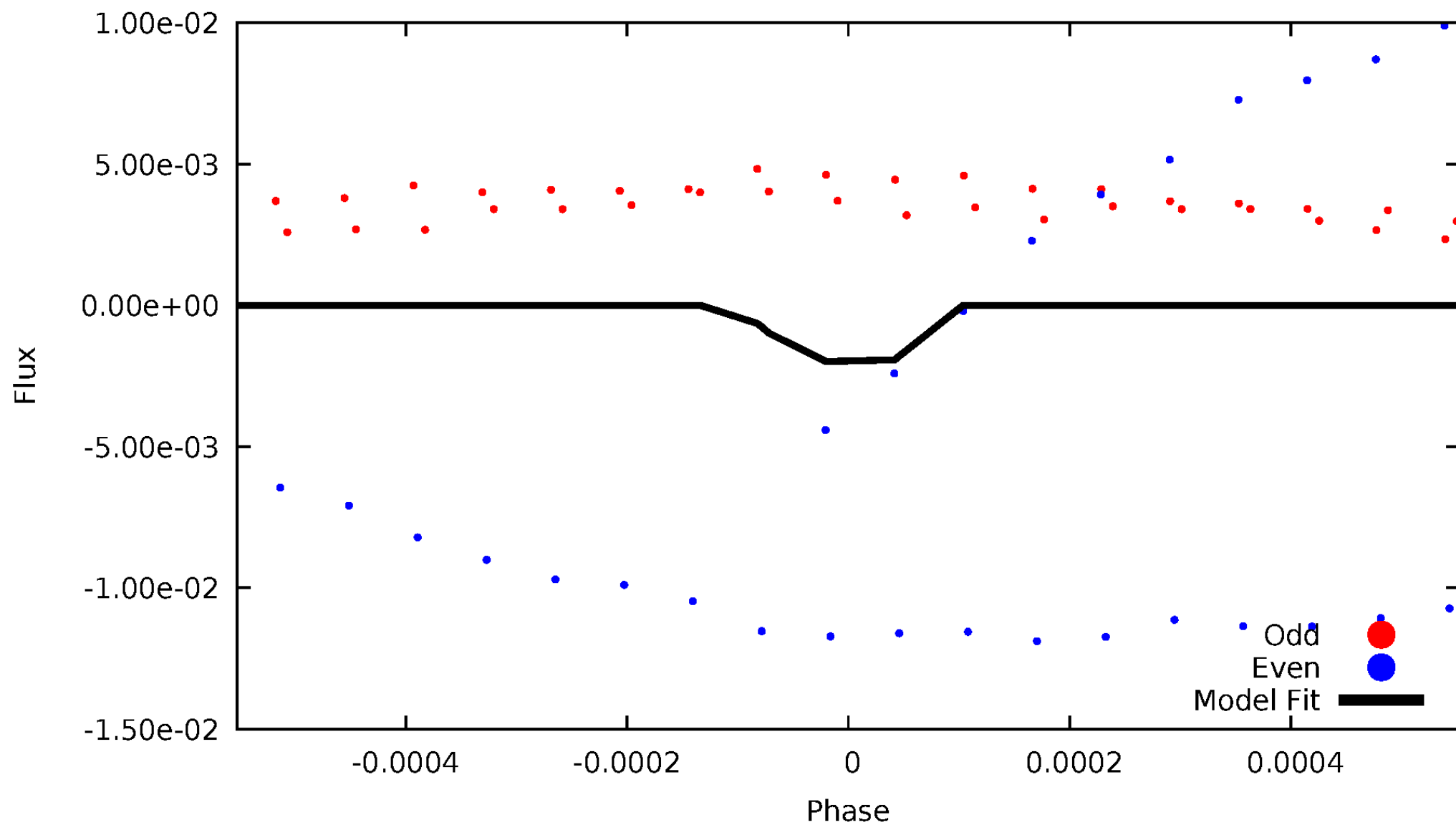
DV Odd/Even

TCE 010865206-03



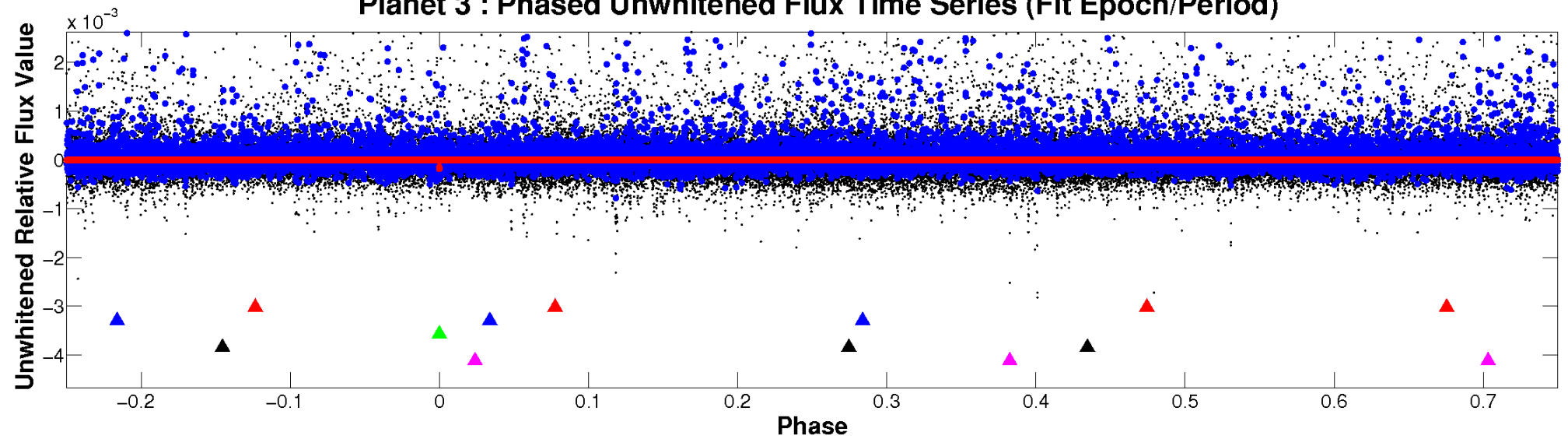
ALT Odd/Even

TCE 010865206-03

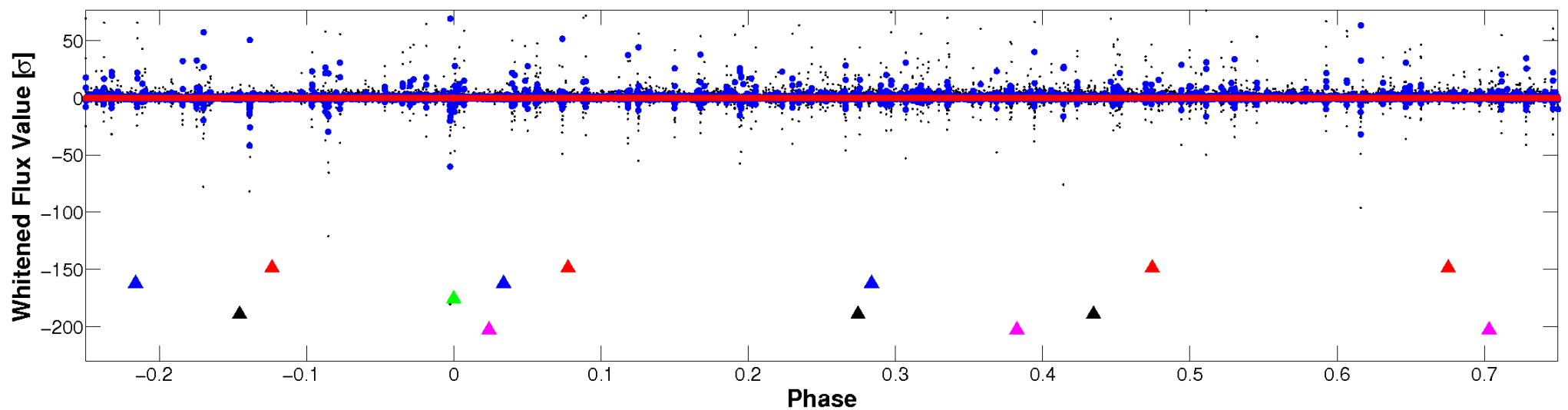


Non-Whitened Vs. Whitened Light Curve

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

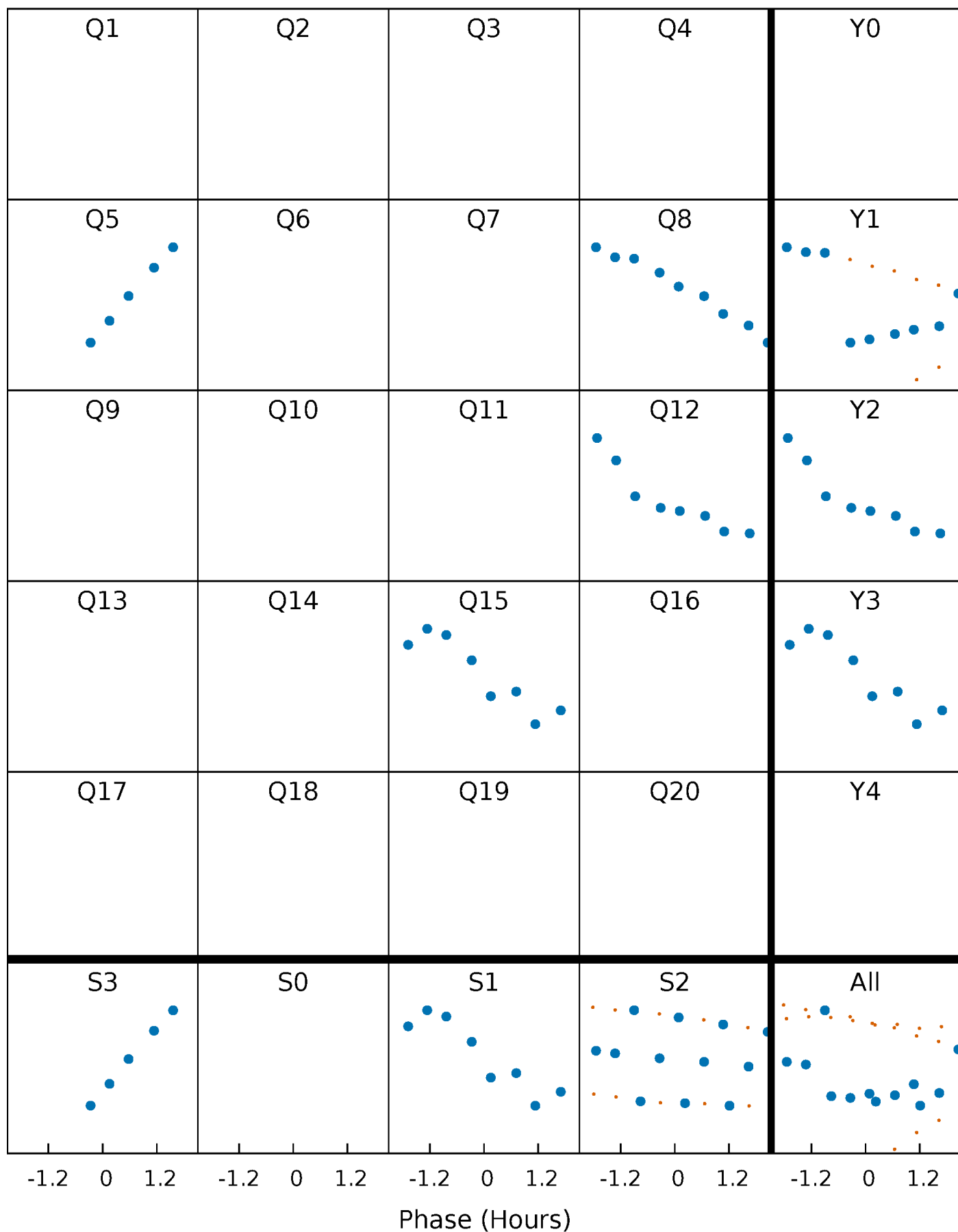


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



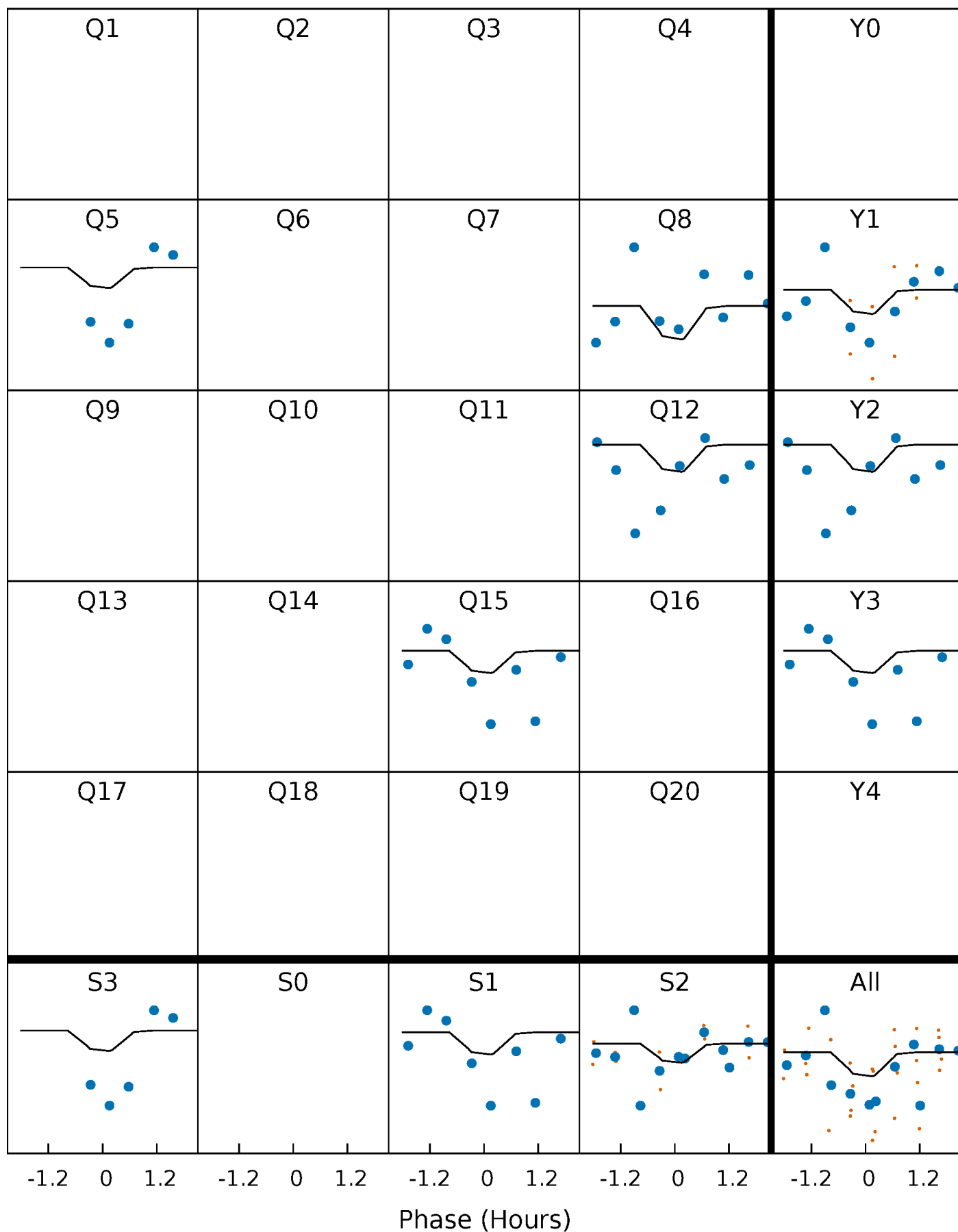
PDC Quarter-Phased Transit Curves

TCE 010865206-03 $P=328.715069$ Days $T_0=443.524721$ (BKJD)



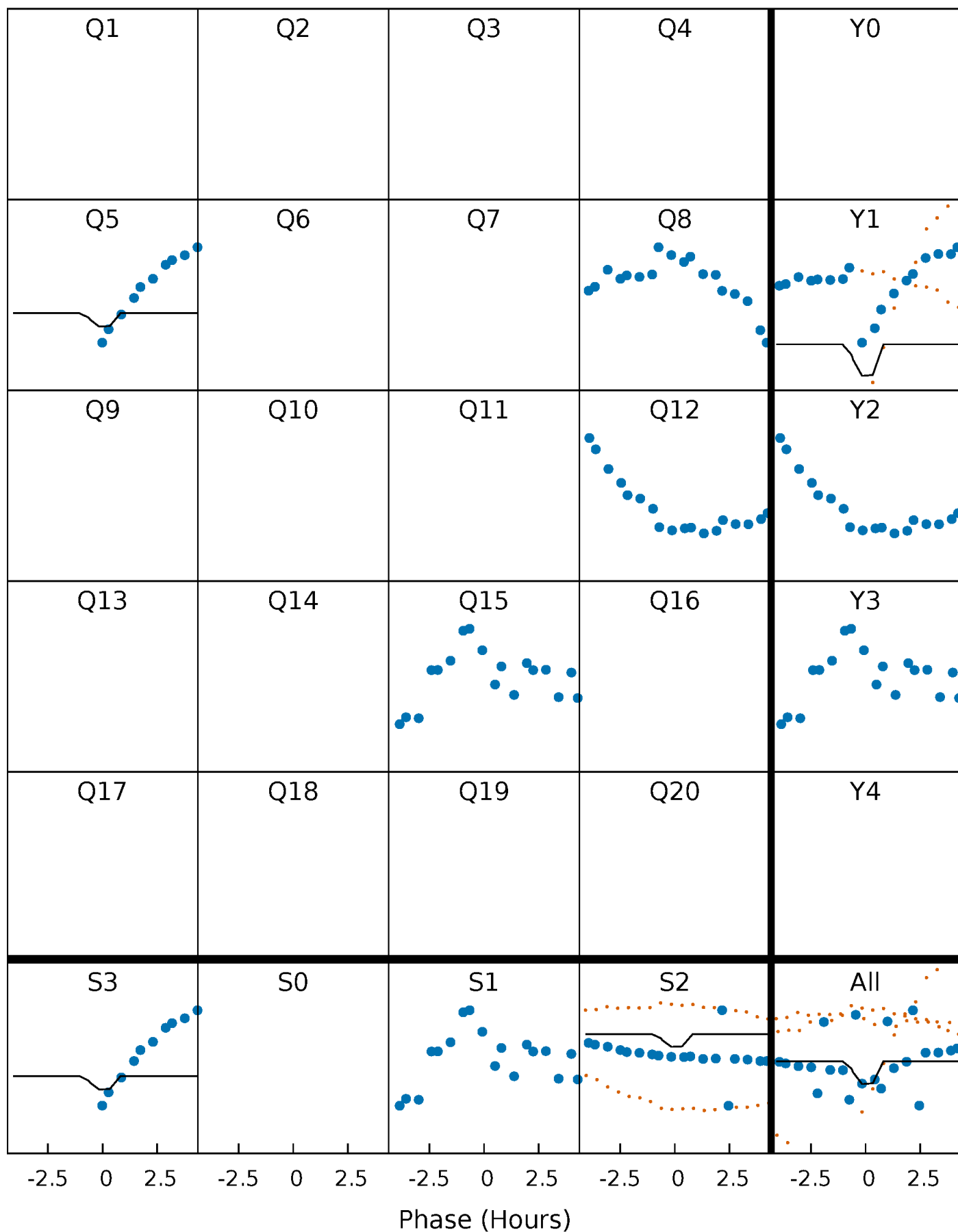
DV Quarter-Phased Transit Curves

TCE 010865206-03 P=328.715069 Days $T_0=443.524721$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

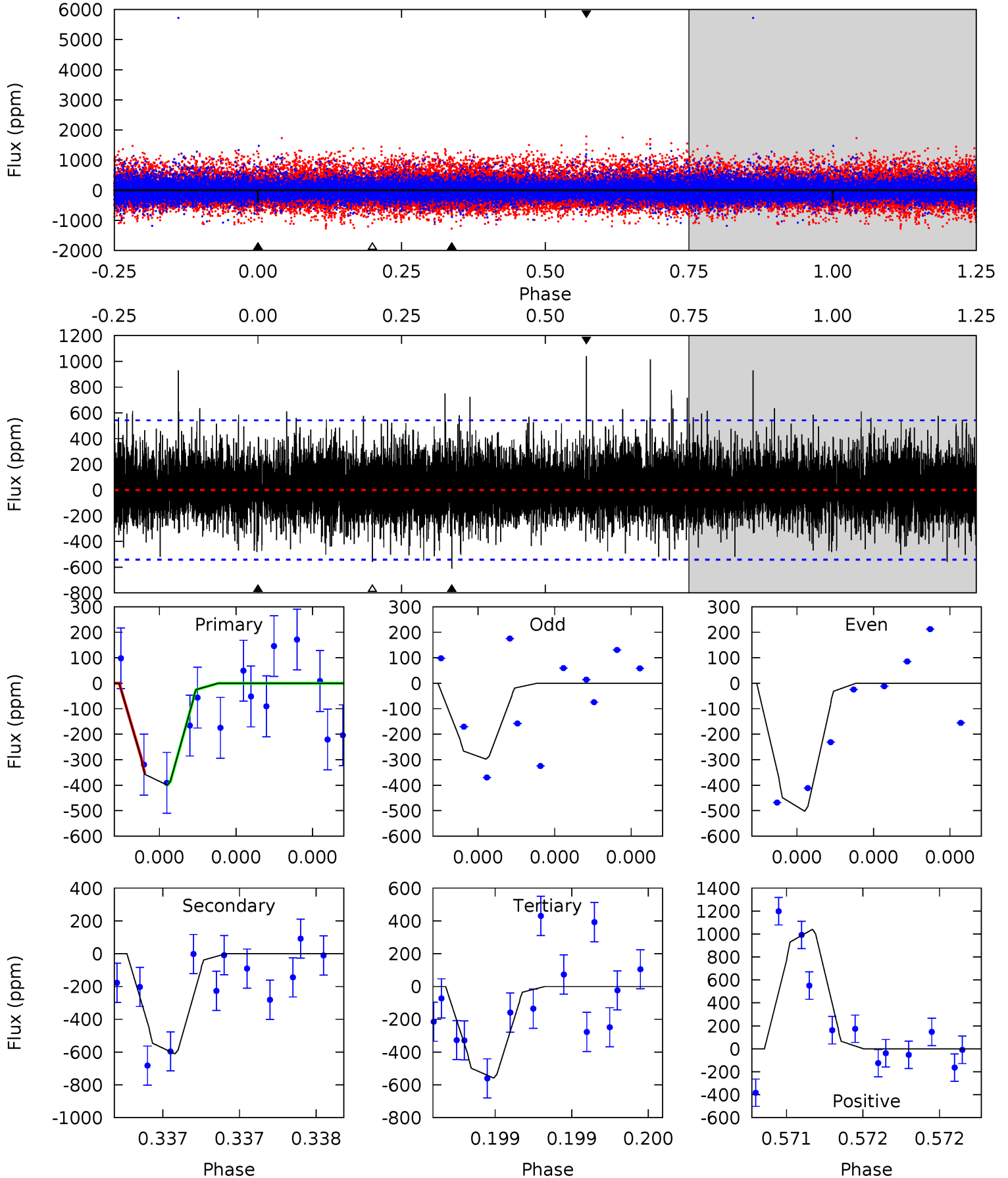
TCE 010865206-03 $P=328.714680$ Days $T_0=443.517420$ (BKJD)



DV Model-Shift Uniqueness Test

010865206-03, P = 328.715069 Days, E = 114.809652 Days

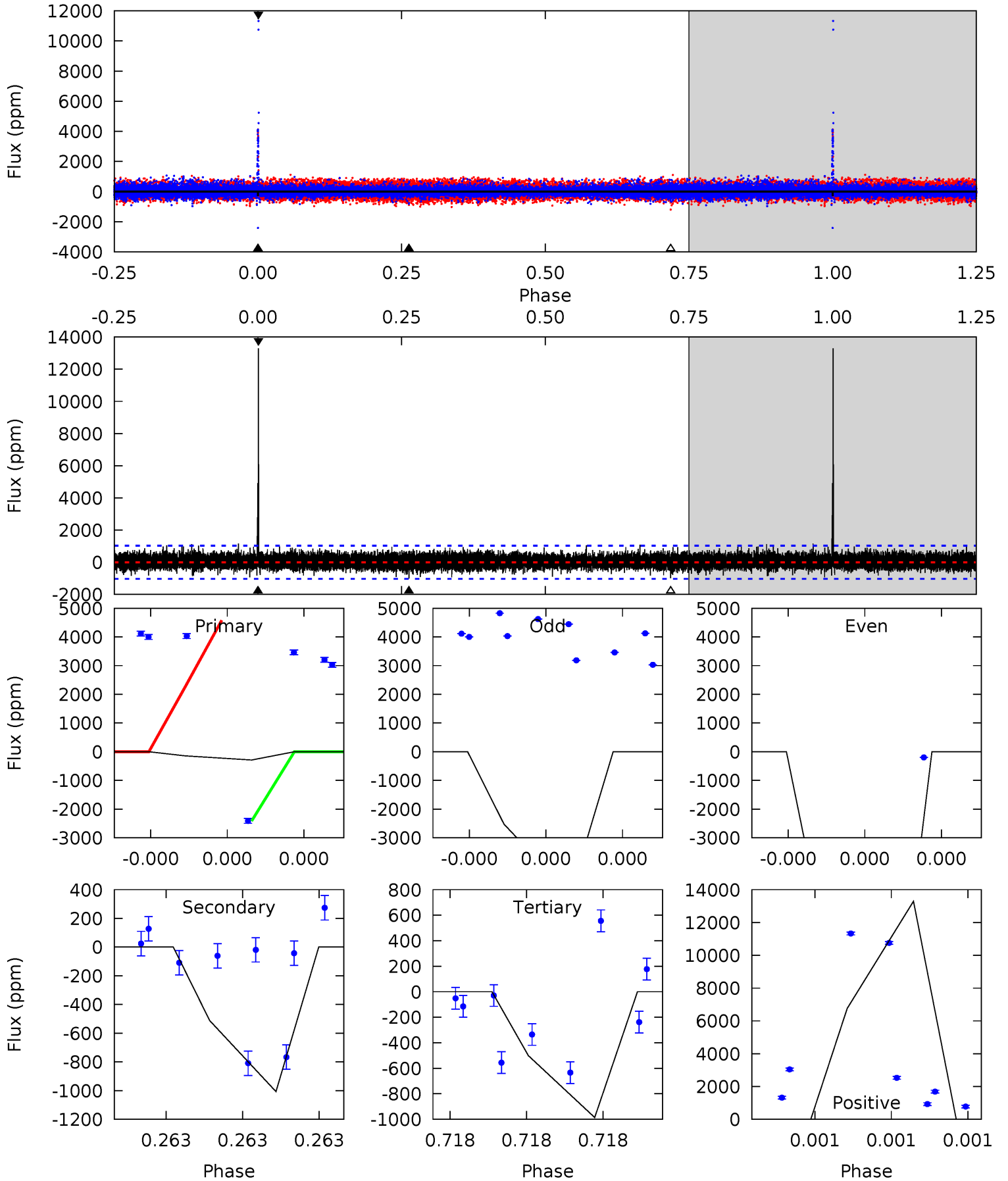
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.23	6.47	5.91	11.0	5.74	3.74	1.48	-1.68	-6.79	0.56	-4.55	0.84	1.02	0.63	0.20



Alt Model-Shift Uniqueness Test

010865206-03, P = 328.714680 Days, E = 114.802740 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.62	5.68	5.56	75.0	5.80	3.82	1.36	-3.93	-73.3	0.12	-69.3	24.4	-4.18	0.93	7.08



Stellar Parameters For KIC 010865206

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4689^{+84}_{-84}	$4.579^{+0.045}_{-0.017}$	$-0.100^{+0.150}_{-0.150}$	$0.707^{+0.028}_{-0.039}$	$0.691^{+0.046}_{-0.025}$	$2.760^{+0.482}_{-0.184}$
	+2%/-2%	+1%/-0%	+150%/-150%	+4%/-6%	+7%/-4%	+17%/-7%
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 010865206-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-611 ± 94	$10.30^{+10.78}_{-7.66}$	266^{+6}_{-6}	2722^{+1361}_{-441}	2213^{+30378}_{-1696}
Alt.	-1007 ± 177	$10.83^{+11.16}_{-7.28}$	266^{+5}_{-6}	2867^{+1174}_{-477}	3194^{+25566}_{-2439}

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 $A_{obs} \gg 1.0$

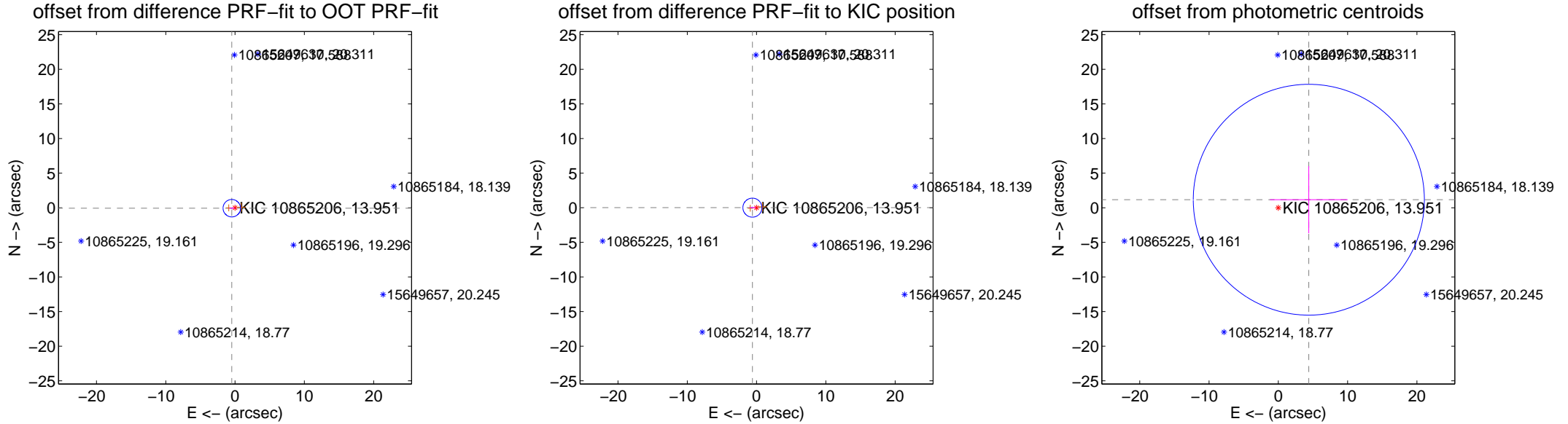
DV Centroid Data

Supplemental centroid analysis for 010865206-03. Kepler magnitude: 13.95. Transit SNR 1.29

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.478 ± 0.420	1.14	0.473 ± 0.421	-0.066 ± 0.072
PRF-fit source offset from KIC position	0.602 ± 0.457	1.32	0.602 ± 0.459	0.013 ± 0.086
photometric centroid source offset	4.55 ± 5.56	0.82	-4.40 ± 5.60	1.16 ± 4.85



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



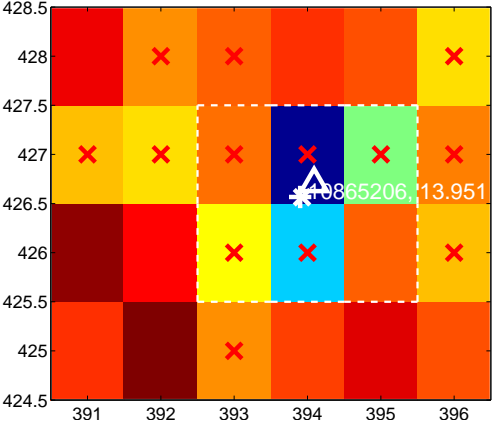
Q7 no difference image



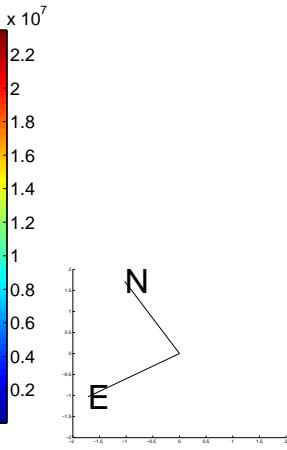
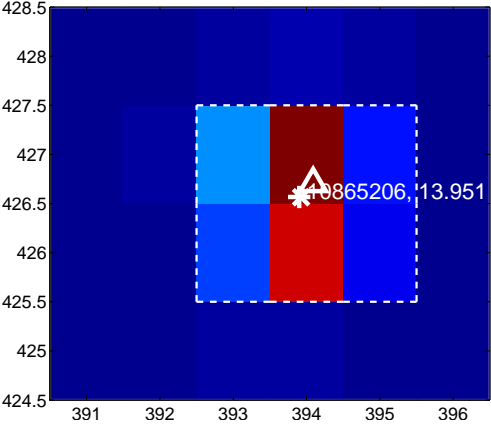
Q7 no OOT image



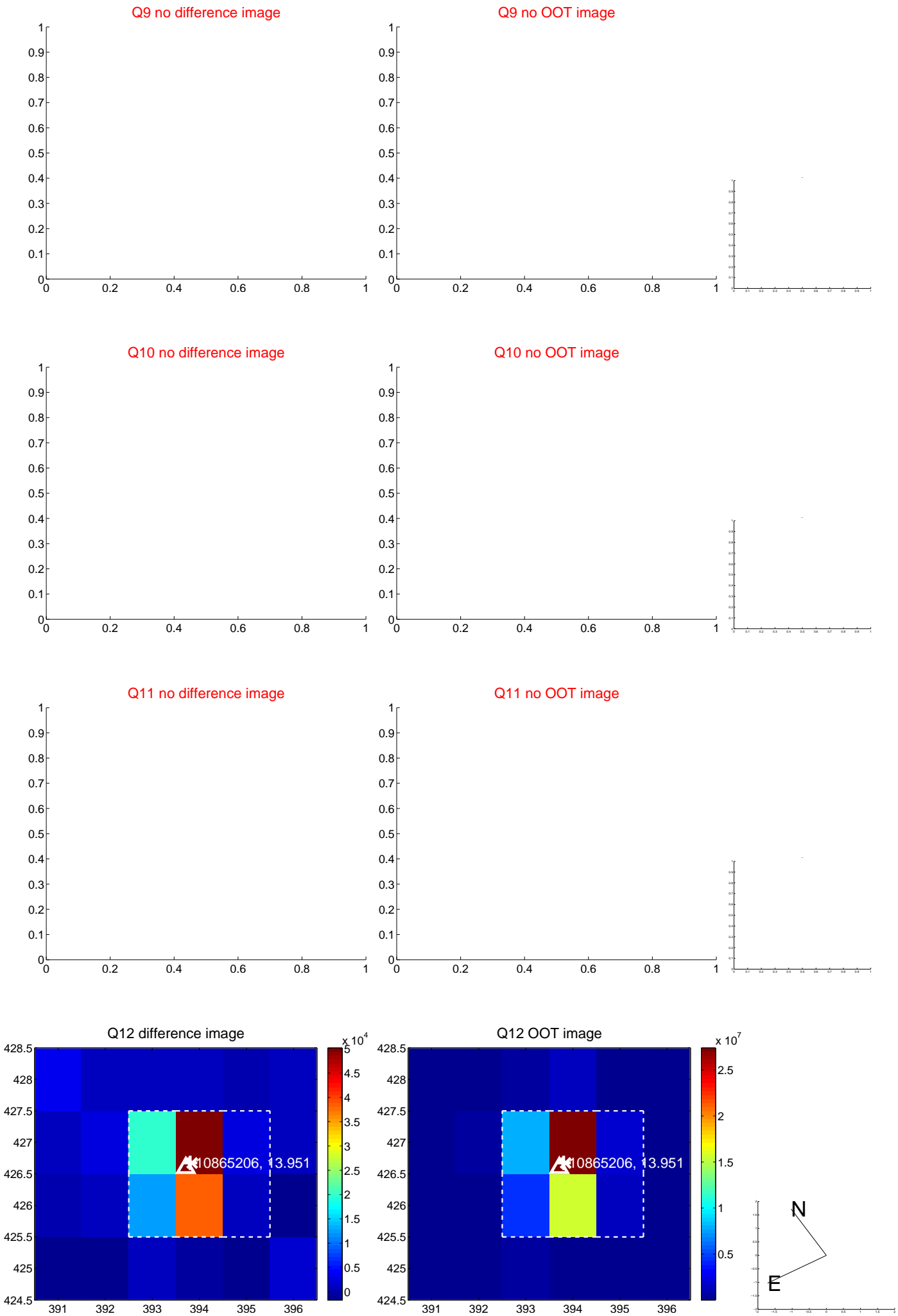
Q8 difference image. Poor Quality



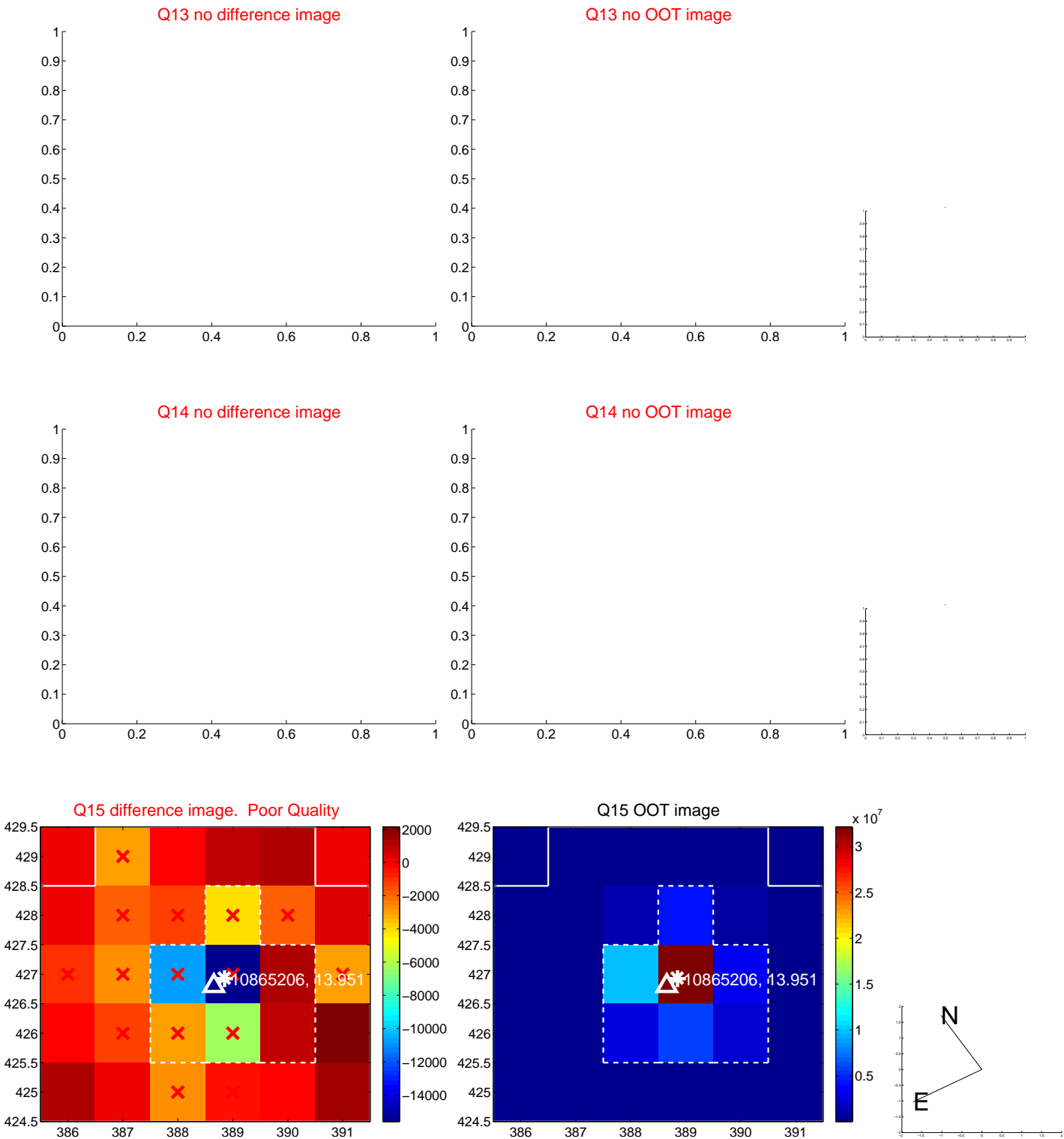
Q8 OOT image



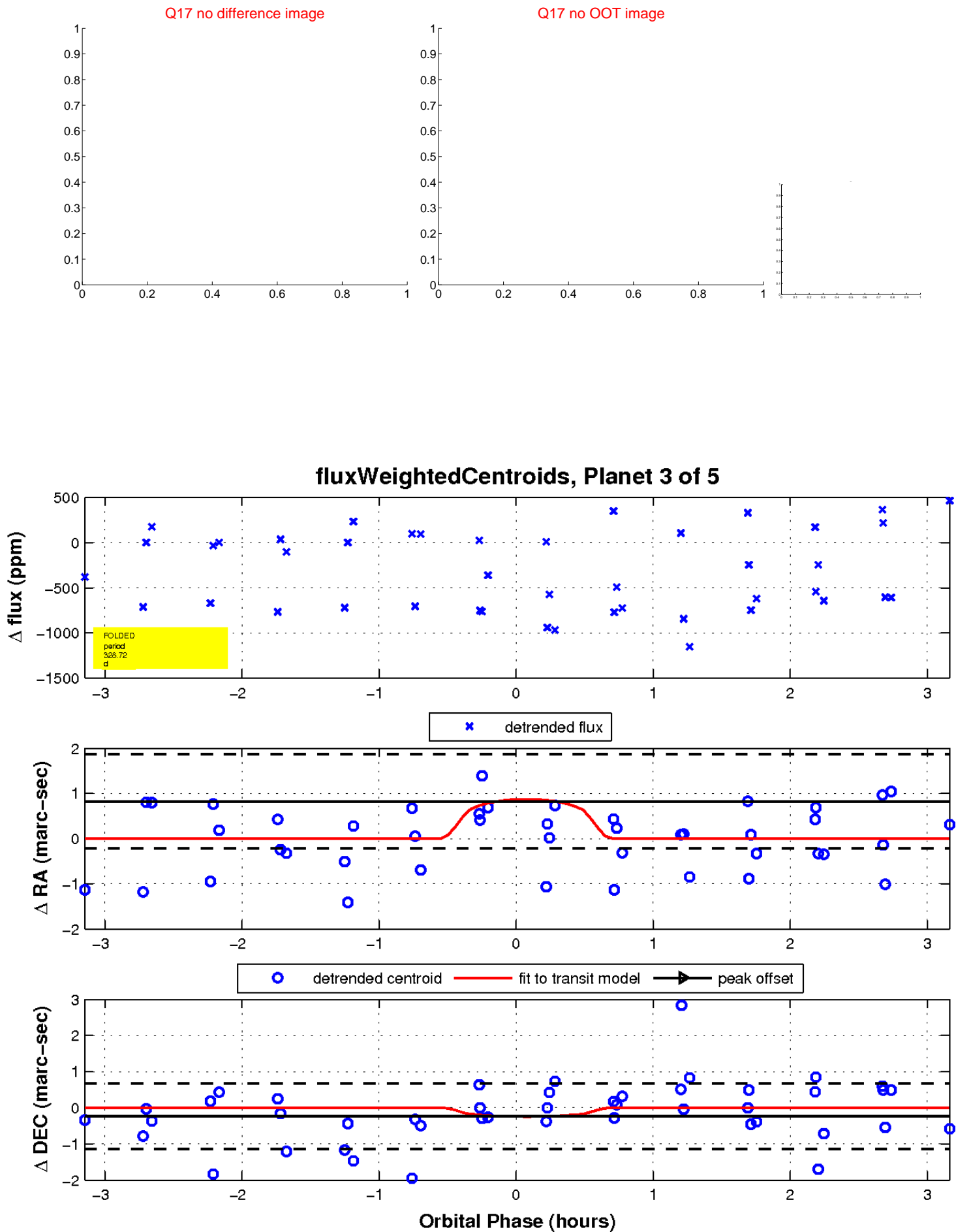
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

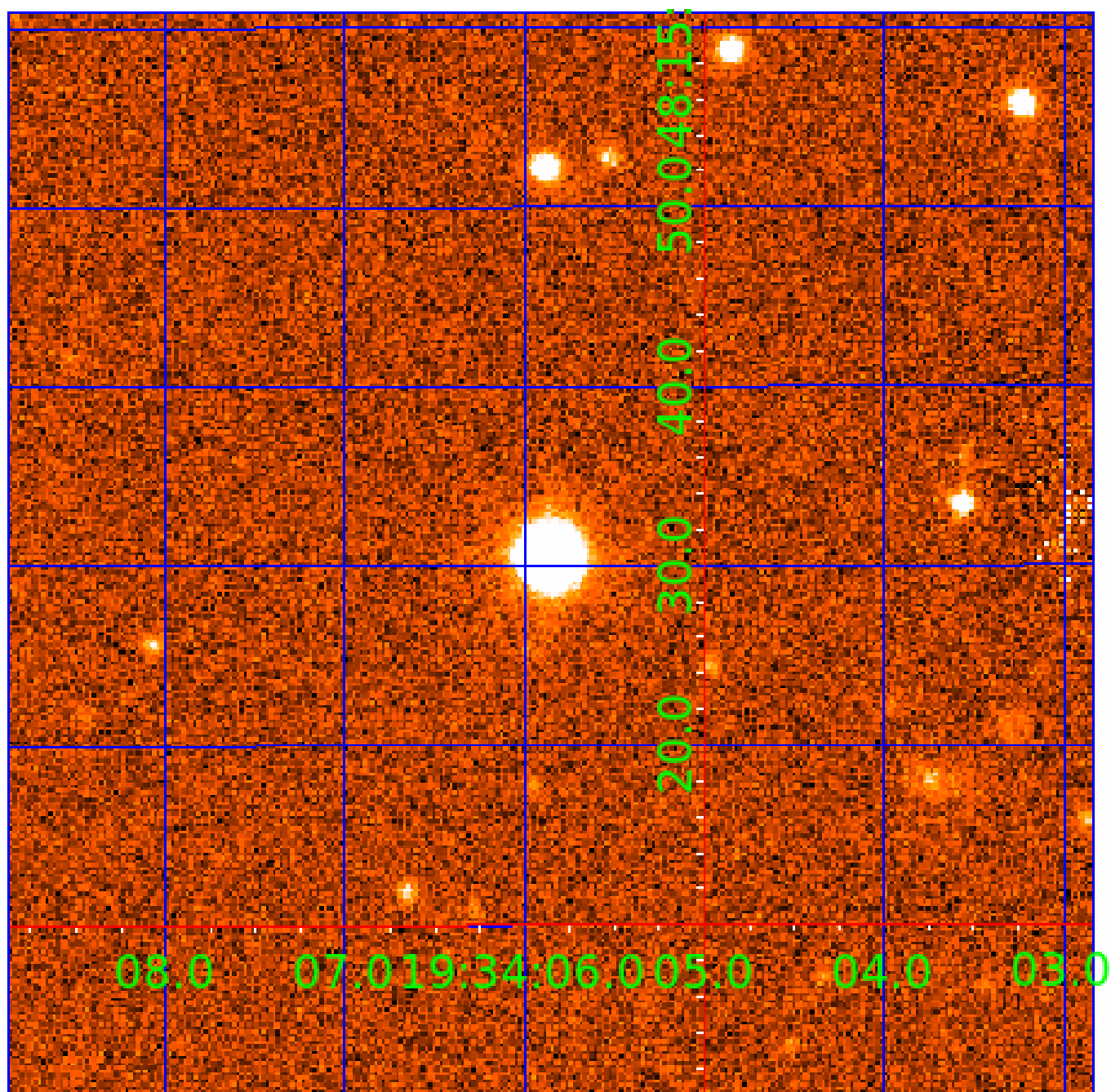


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010865206

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})
010865206-01	OBS	No	394.808357	270.767189	1297.4	1.397	17.5	8.1	0.71	4689	2.97	0.25
010865206-02	OBS	No	410.874070	372.498909	1764.6	7.260	12.4	7.4	0.71	4689	3.72	0.24
010865206-03	OBS	No	328.715069	443.524721	184.4	1.056	13.8	1.3	0.71	4689	1.00	0.32
010865206-04	OBS	No	519.362115	533.792988	1977.6	6.629	12.2	7.7	0.71	4689	3.17	0.17
010865206-05	OBS	No	551.999001	451.405187	1240.8	3.500	15.1	-1.0	0.71	4689	2.40	0.16

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010865206-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—LPP_ALT—MOD_POS_DV—INCONSISTENT_TRANS
010865206-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
010865206-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
010865206-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010865206-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

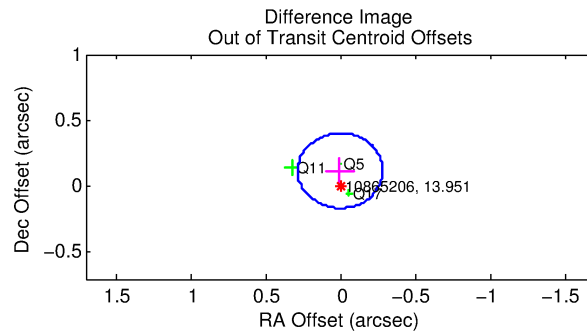
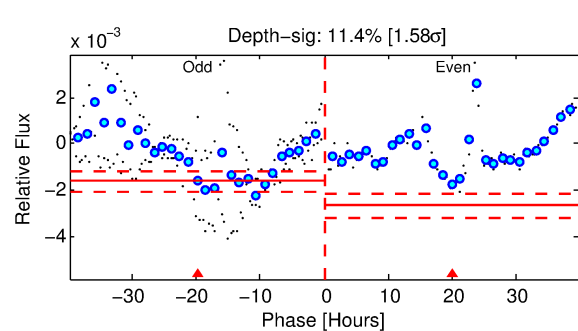
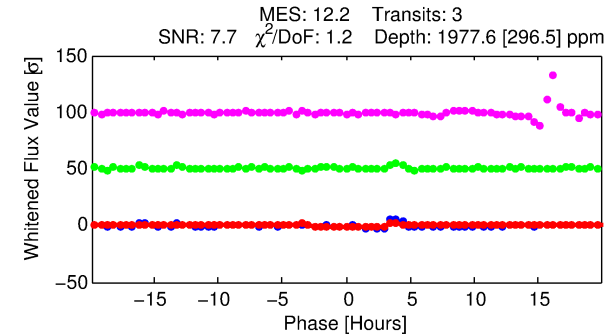
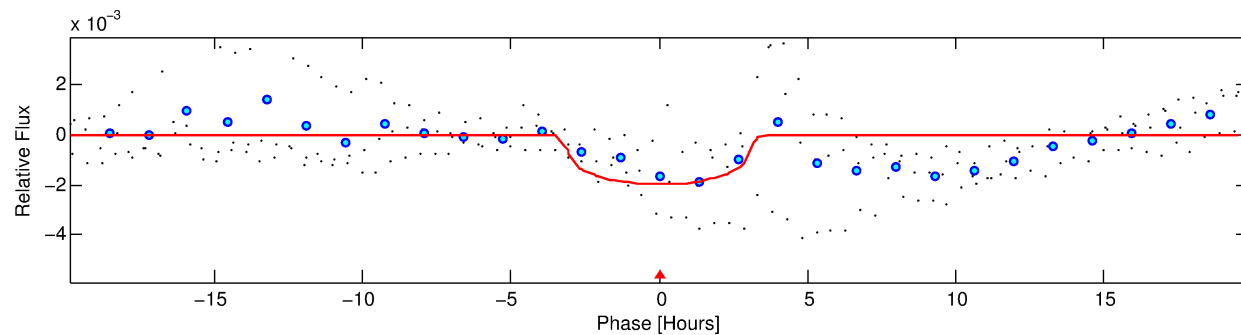
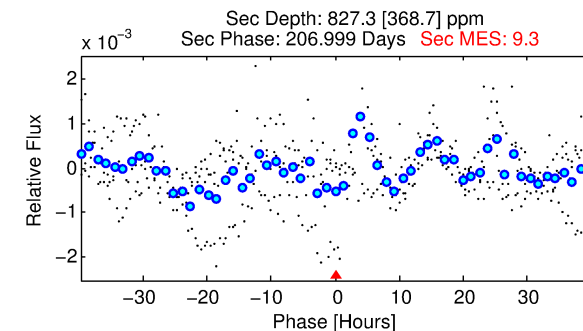
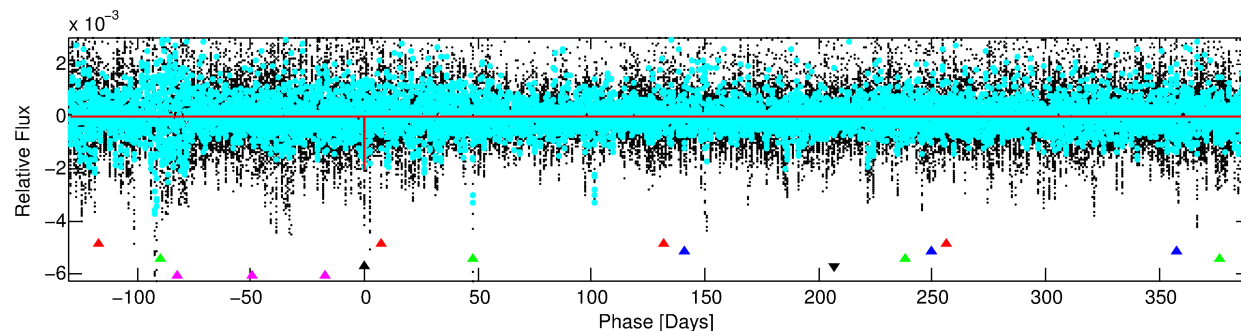
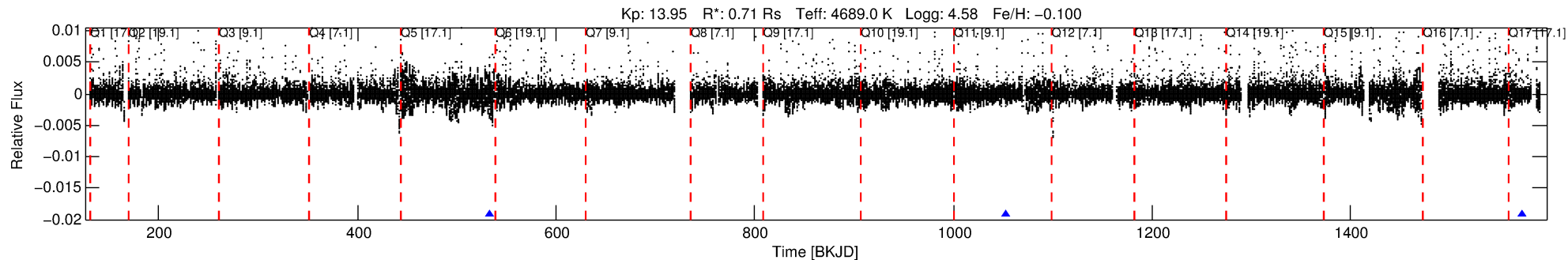
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010865206-04

No Significant Match Found

DV One-Page Summary

KIC: 10865206 Candidate: 4 of 5 Period: 519.362 d



DV Fit Results:

Period = 519.36211 [0.00490] d
Epoch = 533.7930 [0.0059] BKJD
Rp/R* = 0.0411 [0.0206]
a/R* = 541.96 [839.25]
b = 0.51 [2.27]
Seff = 0.17 [0.02]
Teq = 164 [4] K
Rp = 3.17 [1.60] Re
a = 1.1185 [0.0564] AU
Ag = 56738.98 [62569.37] [0.91σ]
Teffp = 3925 [1082] K [3.48σ]

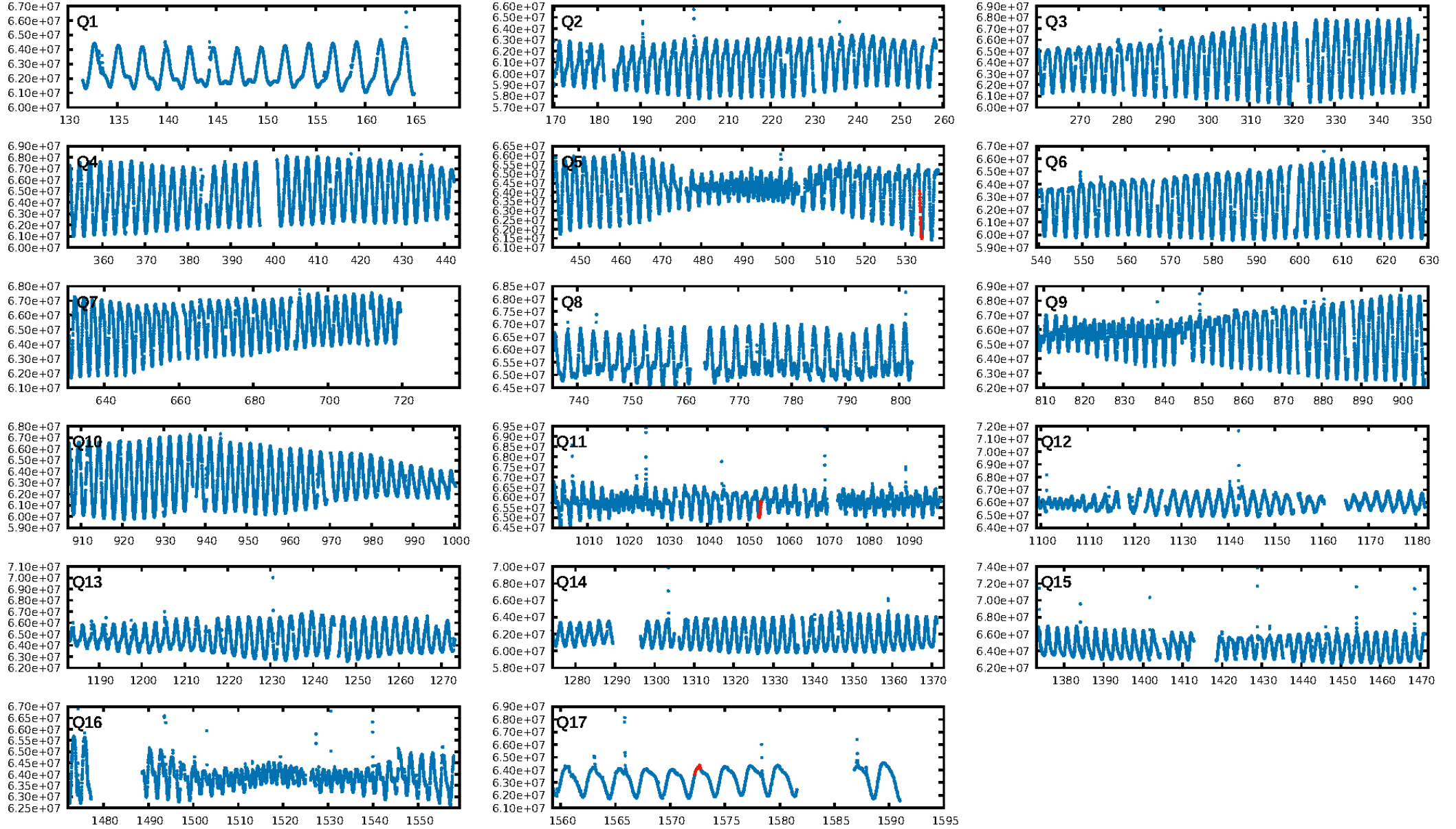
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [264.84σ]
LongPeriod-sig: 100.0% [104.49σ]
ModelChiSquare2-sig: 76.4%
ModelChiSquareGof-sig: 91.6%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 1.386
Centroid-sig: 65.7%
Centroid-so: 0.105 arcsec [0.36σ]
OotOffset-rm: 0.119 arcsec [1.26σ]
KicOffset-rm: 0.162 arcsec [1.41σ]
OotOffset-st: 0/1/0/2 [3]
KicOffset-st: 0/1/0/2 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

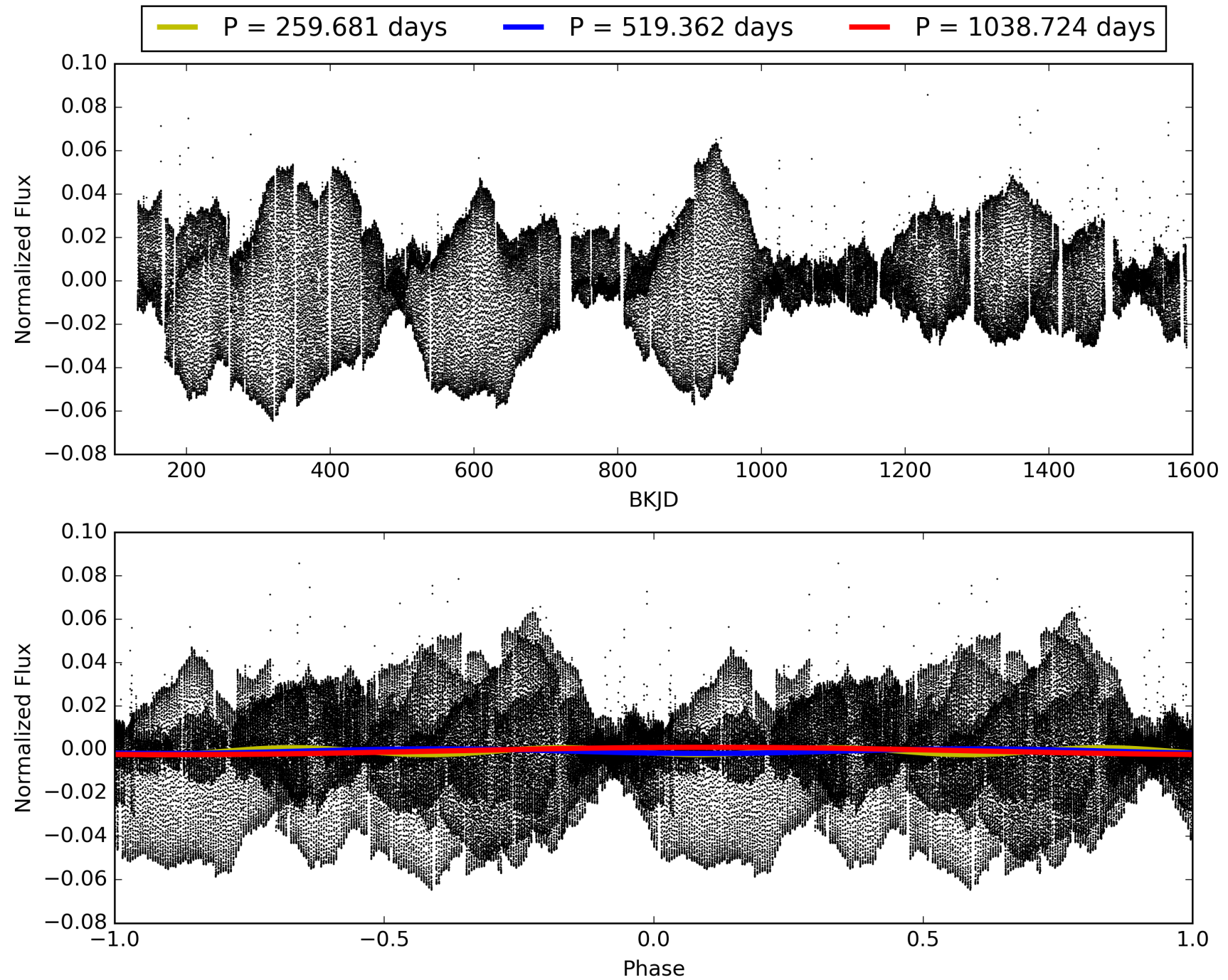
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:48:31 Z

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

TCE 010865206-04, PDC Light Curves

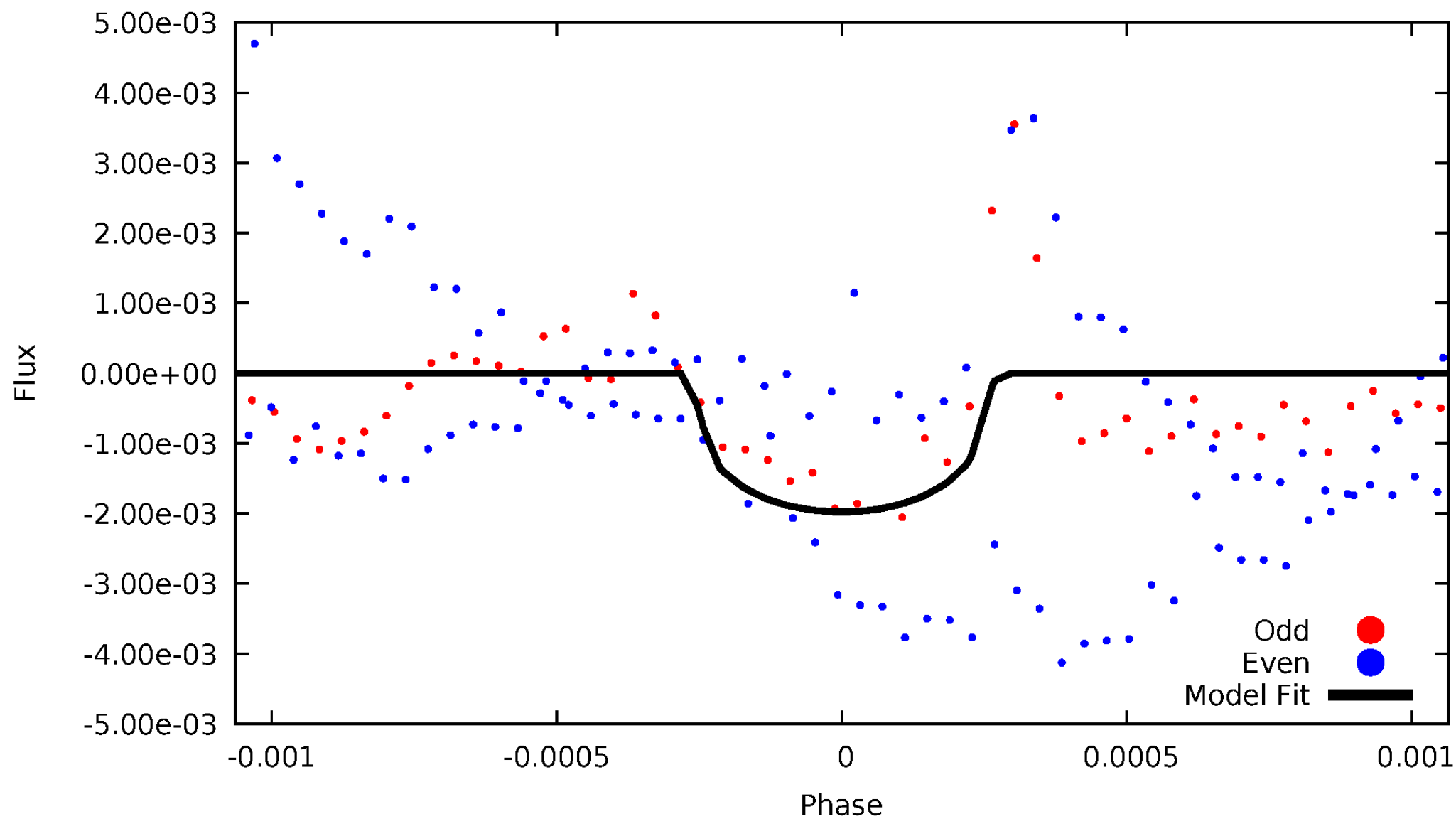


TCE 010865206-04



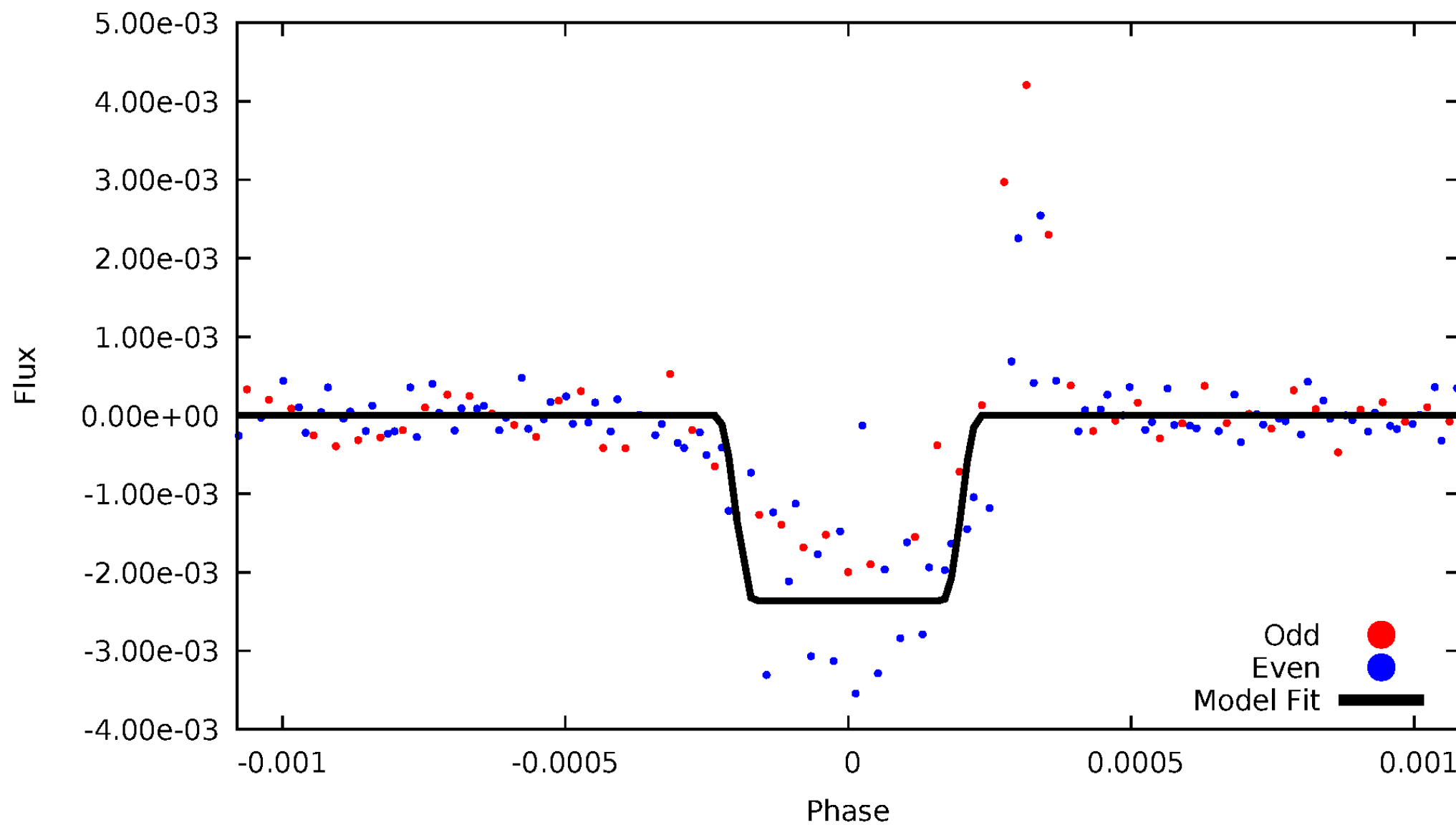
DV Odd/Even

TCE 010865206-04



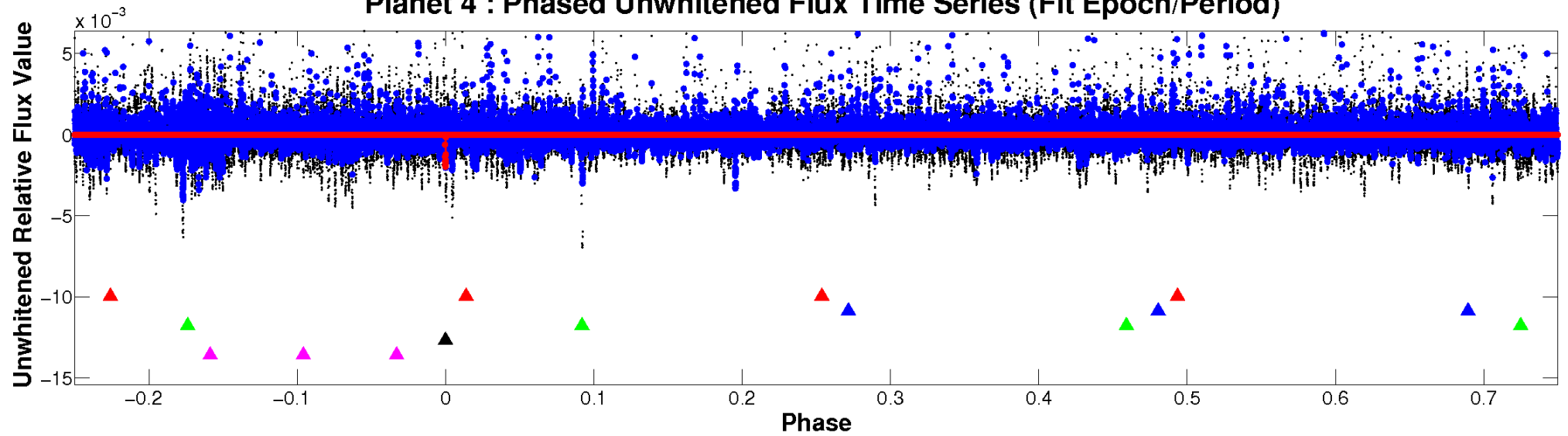
ALT Odd/Even

TCE 010865206-04

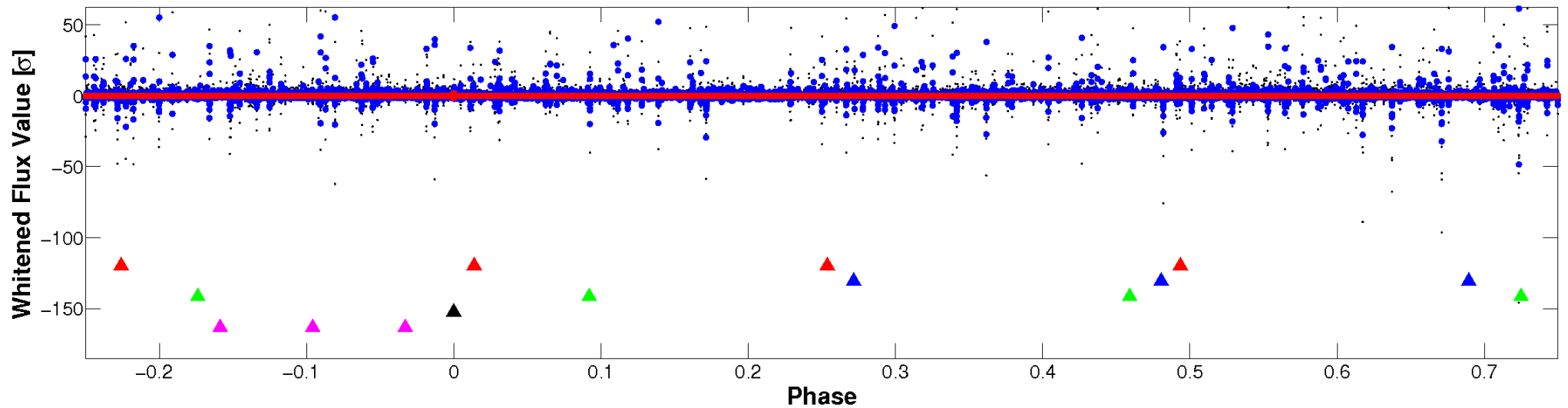


Non-Whitened Vs. Whitened Light Curve

Planet 4 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

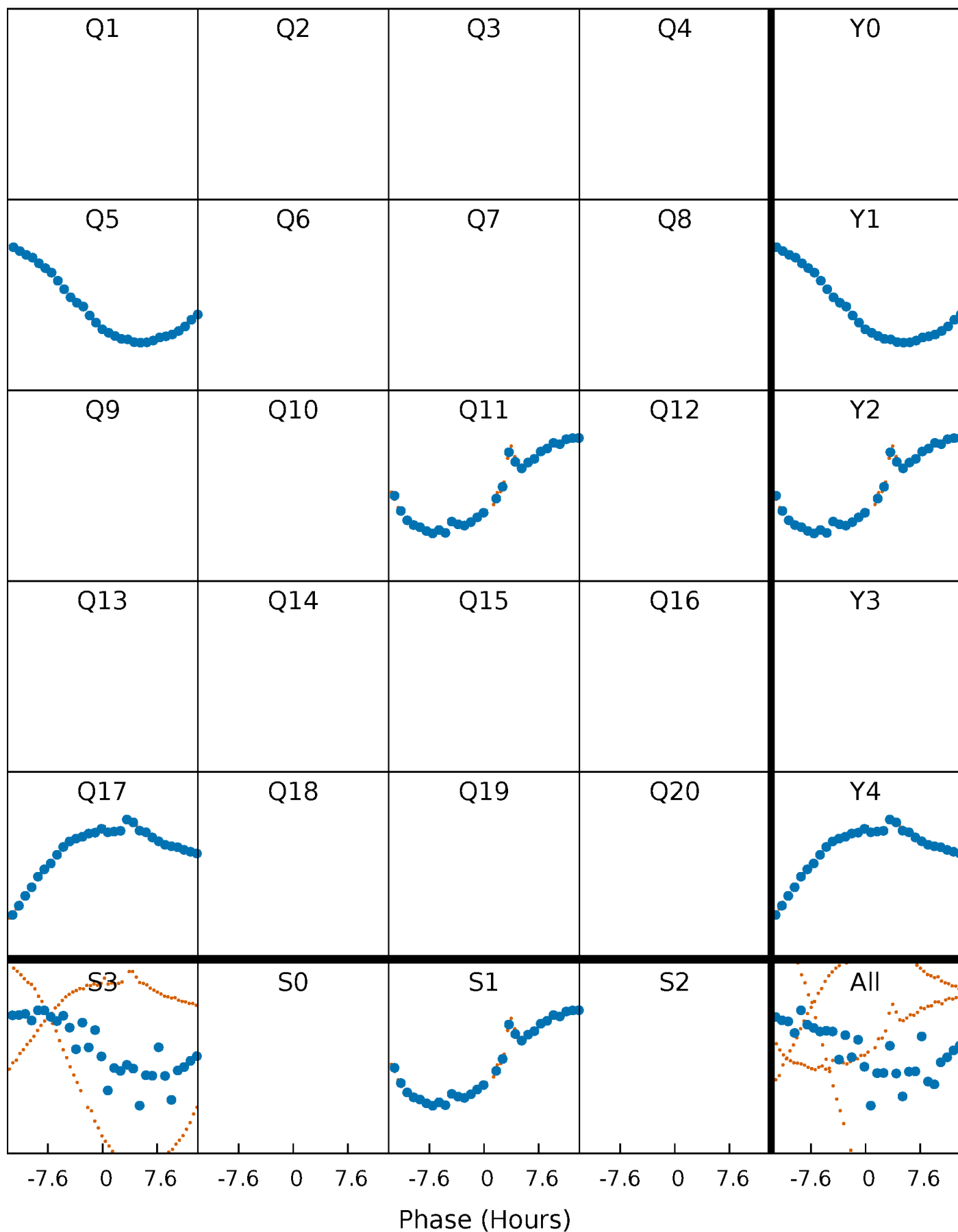


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



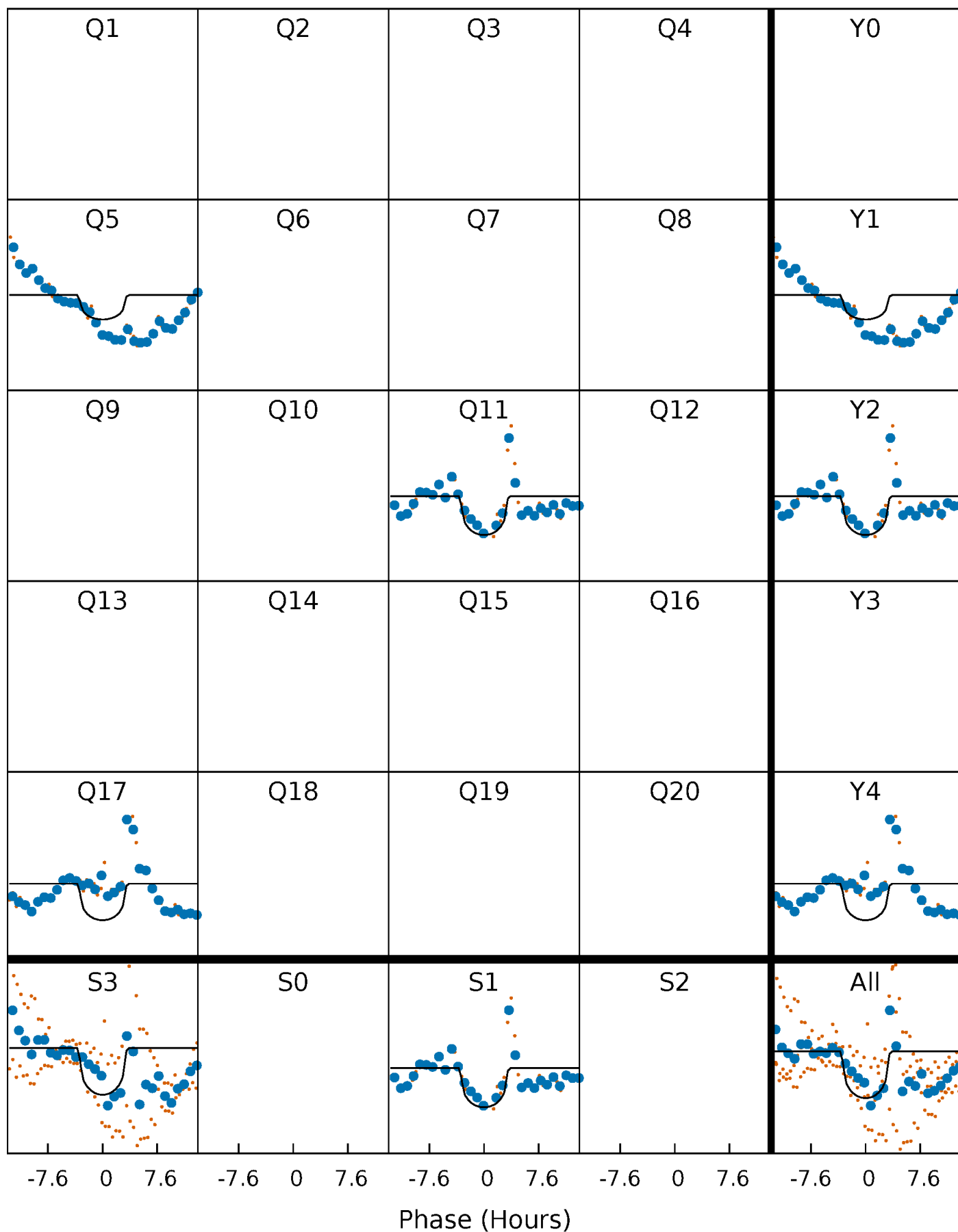
PDC Quarter-Phased Transit Curves

TCE 010865206-04 P=519.362115 Days $T_0=533.792988$ (BKJD)



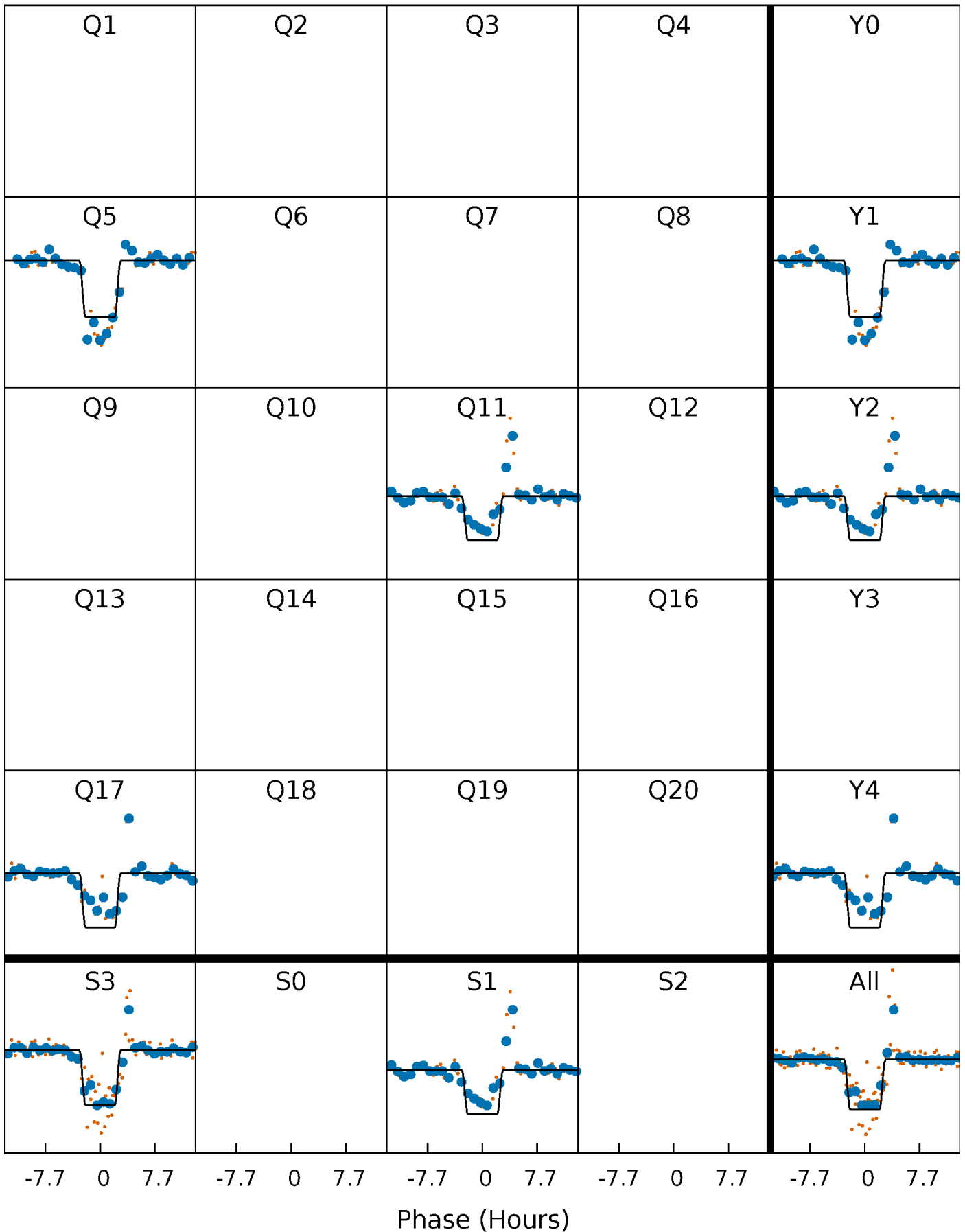
DV Quarter-Phased Transit Curves

TCE 010865206-04 $P=519.362115$ Days $T_0=533.792988$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

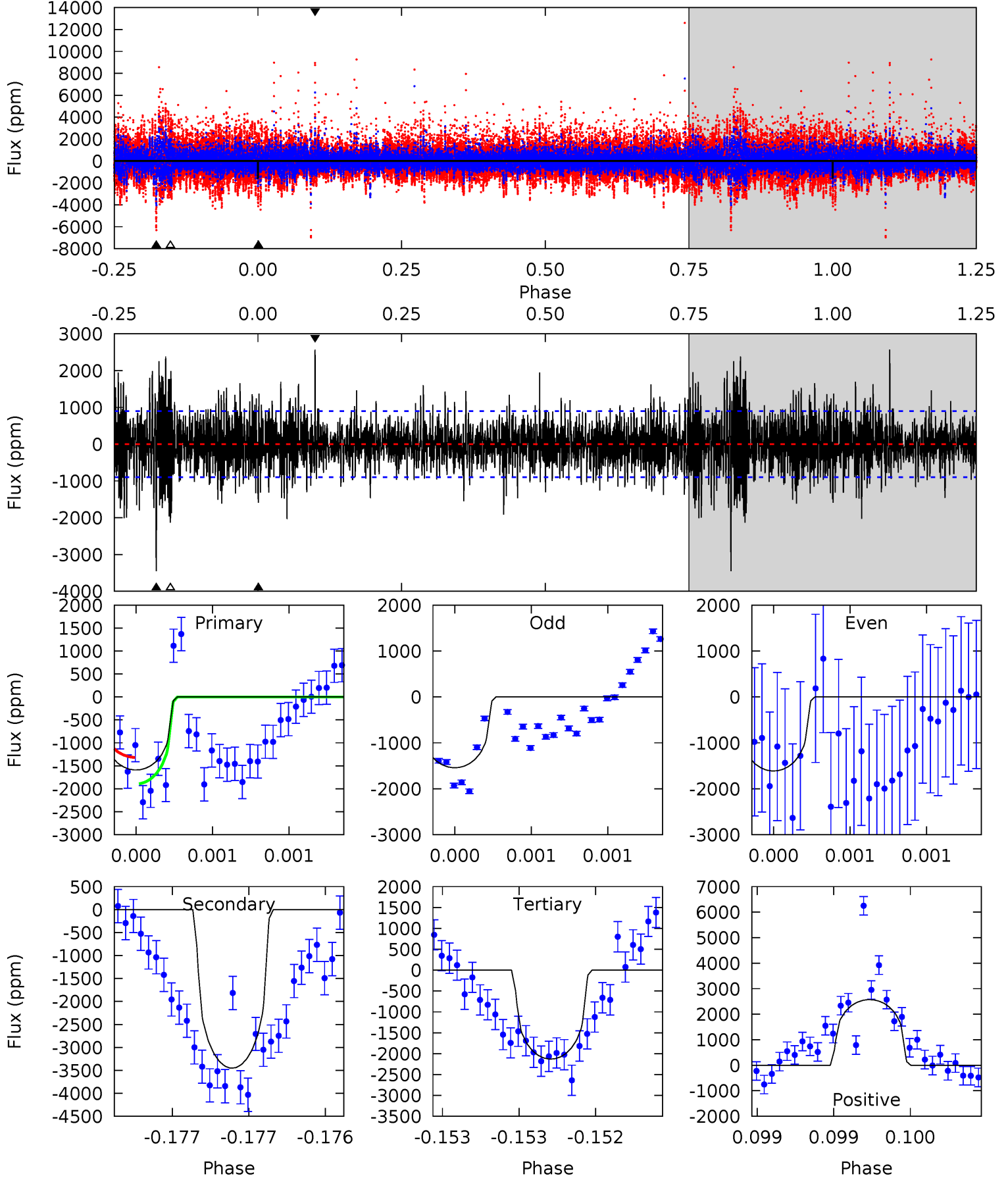
TCE 010865206-04 $P=519.366606$ Days $T_0=533.782530$ (BKJD)



DV Model-Shift Uniqueness Test

010865206-04, P = 519.362115 Days, E = 14.430873 Days

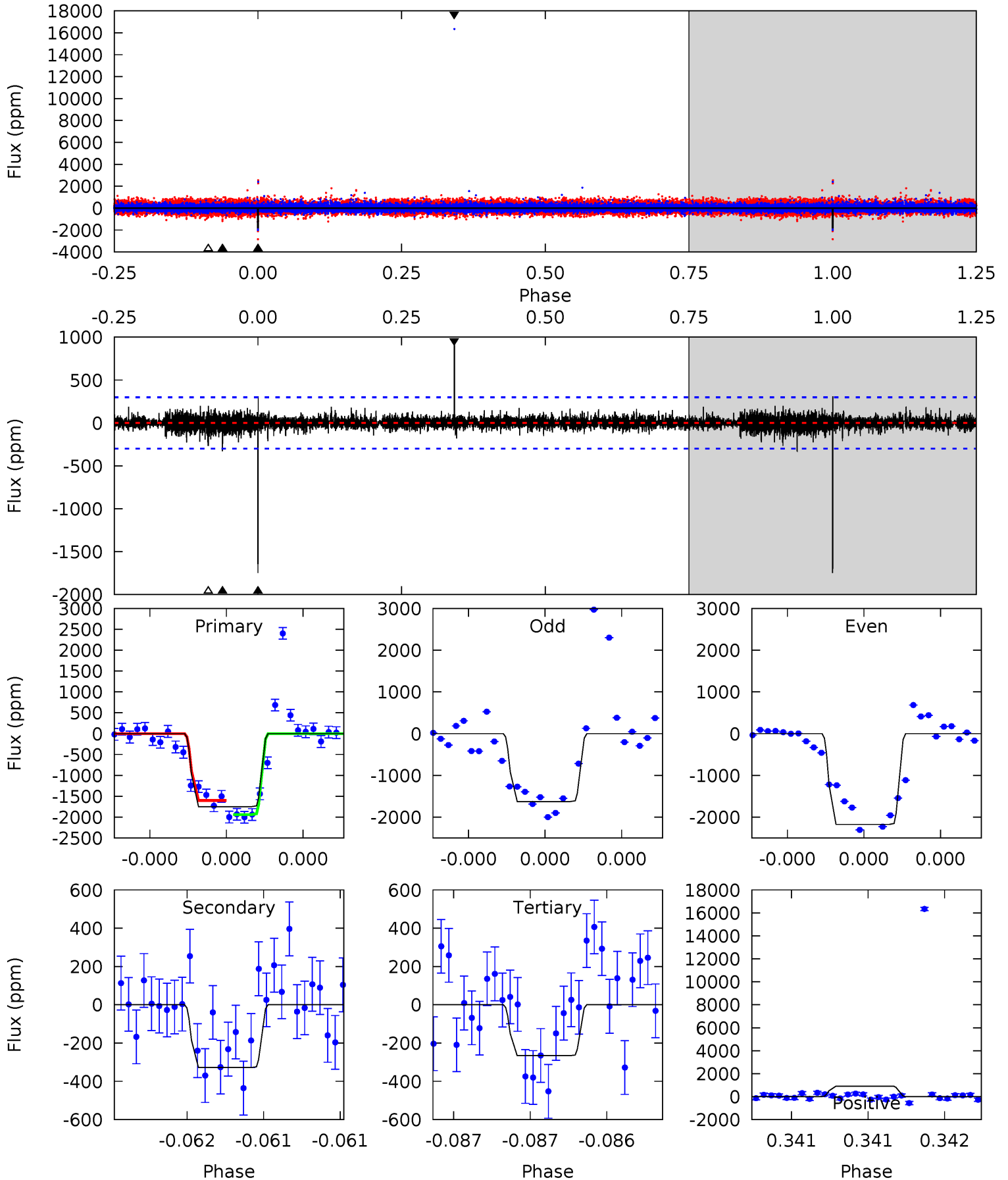
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.84	21.4	13.2	15.9	5.56	3.45	3.29	-3.34	-6.07	8.18	5.45	0.17	1.05	0.43	1.79



Alt Model-Shift Uniqueness Test

010865206-04, P = 519.366606 Days, E = 14.415924 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
32.8	6.15	4.99	17.1	5.60	3.52	0.86	27.8	15.8	1.16	-10.9	5.04	1.31	0.34	3.16



Stellar Parameters For KIC 010865206

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4689^{+84}_{-84}	$4.579^{+0.045}_{-0.017}$	$-0.100^{+0.150}_{-0.150}$	$0.707^{+0.028}_{-0.039}$	$0.691^{+0.046}_{-0.025}$	$2.760^{+0.482}_{-0.184}$
	+2%/-2%	+1%/-0%	+150%/-150%	+4%/-6%	+7%/-4%	+17%/-7%
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 010865206-04 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-3451 ± 162	$3.20^{+1.57}_{-1.52}$	228^{+5}_{-5}	5455^{+2103}_{-890}	$237070^{+625272}_{-130438}$
Alt.	-328 ± 53	$3.77^{+1.59}_{-1.57}$	229^{+5}_{-5}	3318^{+612}_{-344}	16549^{+28644}_{-8846}

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 $A_{\text{obs}} \gg 1.0$

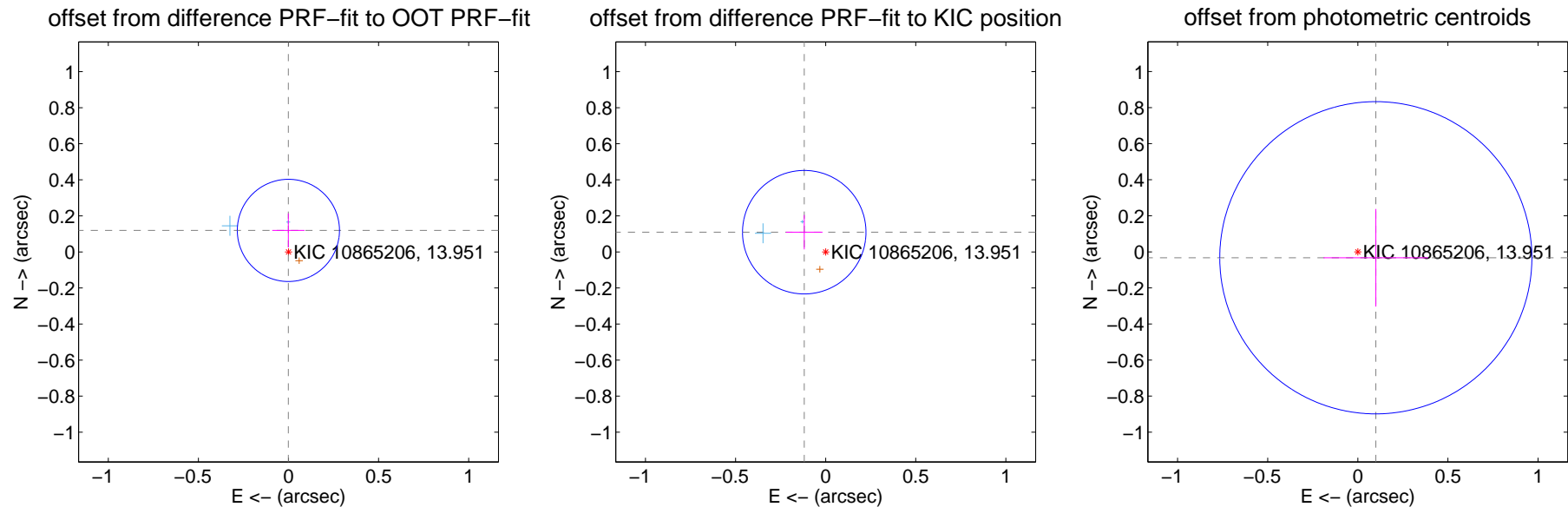
DV Centroid Data

Supplemental centroid analysis for 010865206-04. Kepler magnitude: 13.95. Transit SNR 7.65

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.119 ± 0.094	1.26	0.001 ± 0.090	0.119 ± 0.094
PRF-fit source offset from KIC position	0.162 ± 0.114	1.41	0.119 ± 0.101	0.109 ± 0.095
photometric centroid source offset	0.11 ± 0.29	0.36	-0.10 ± 0.29	-0.03 ± 0.27

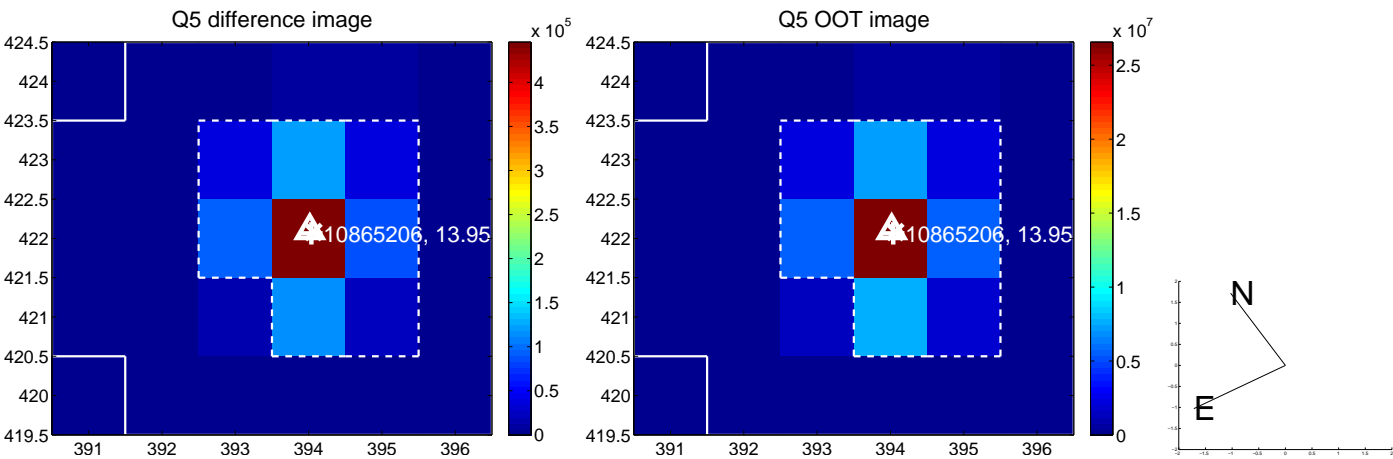


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



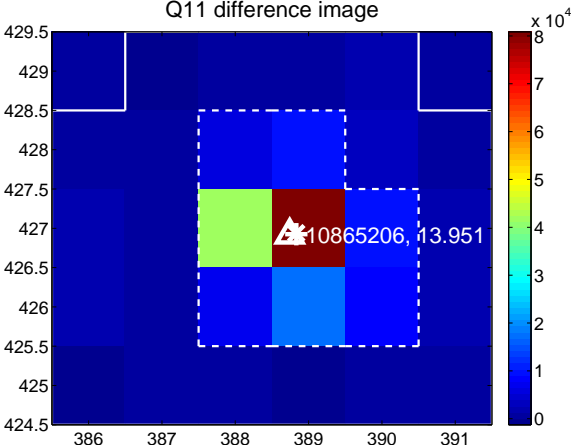
Q10 no difference image



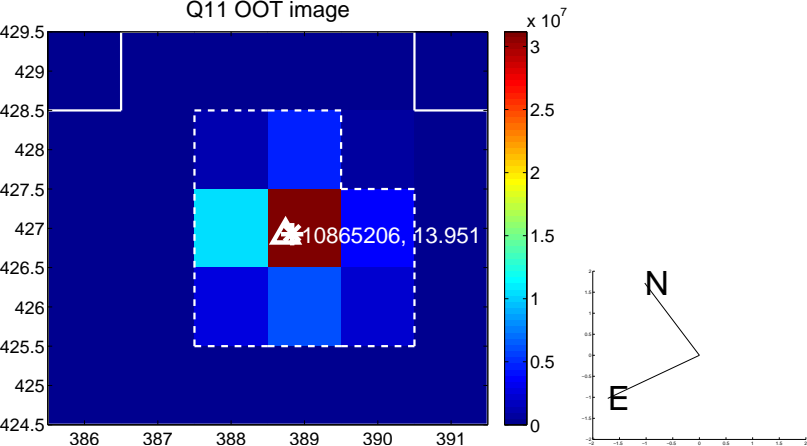
Q10 no OOT image



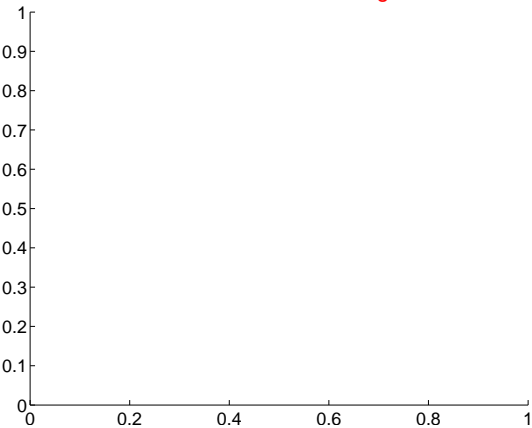
Q11 difference image



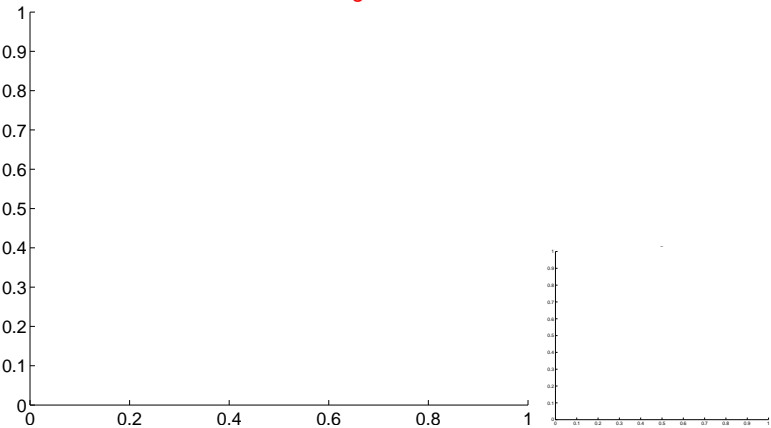
Q11 OOT image



Q12 no difference image



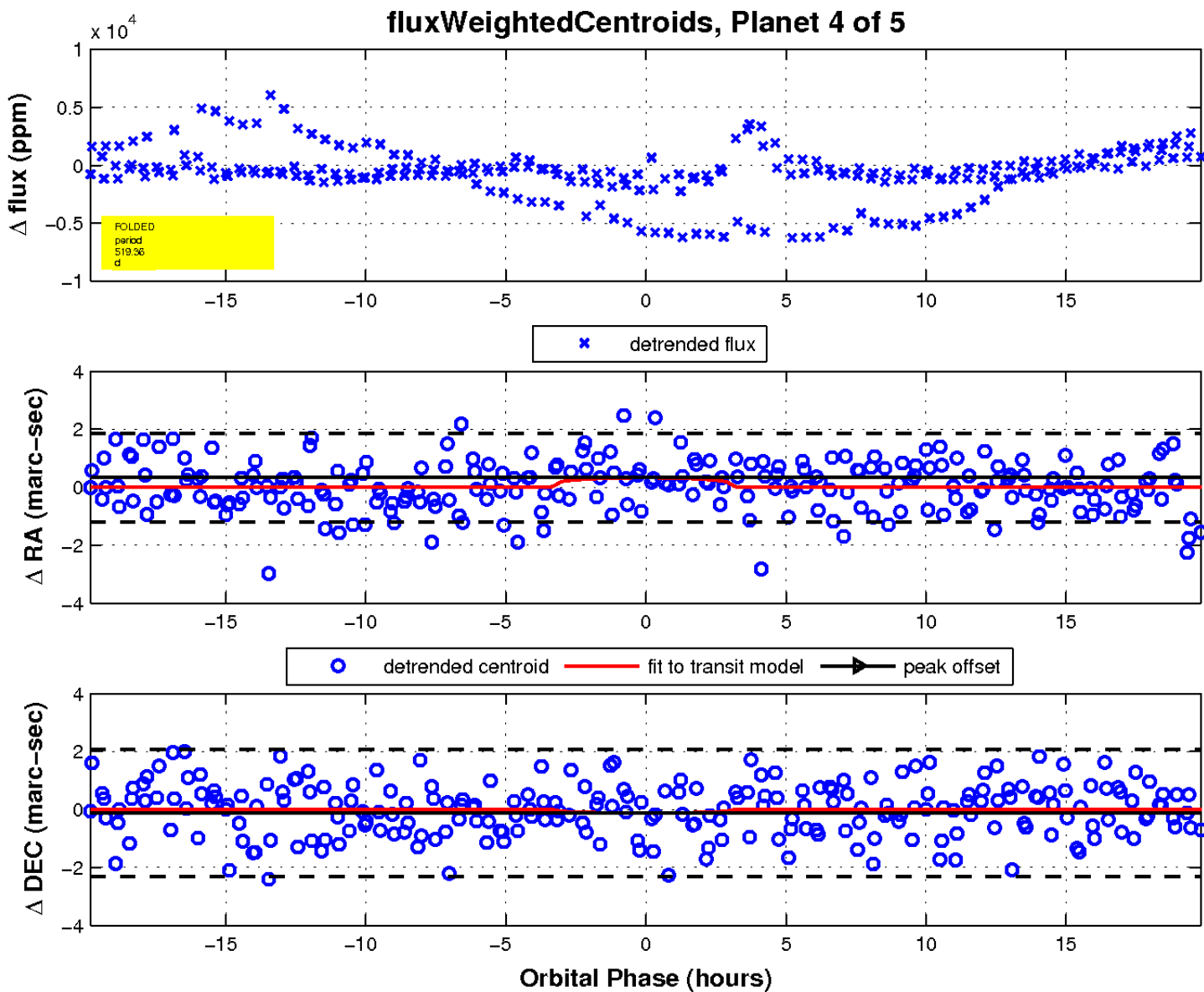
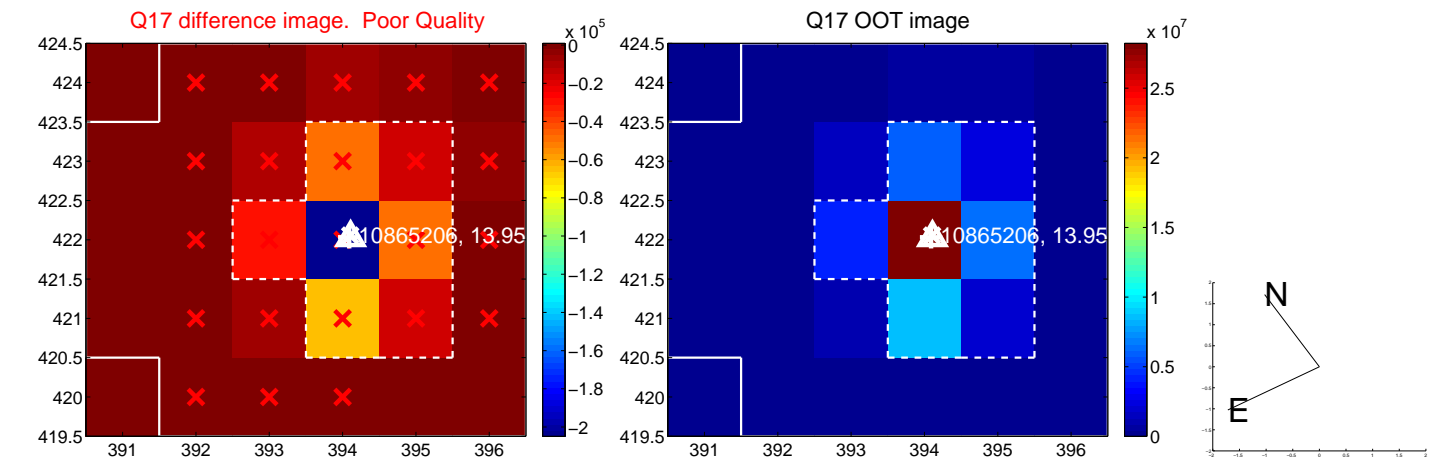
Q12 no OOT image



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

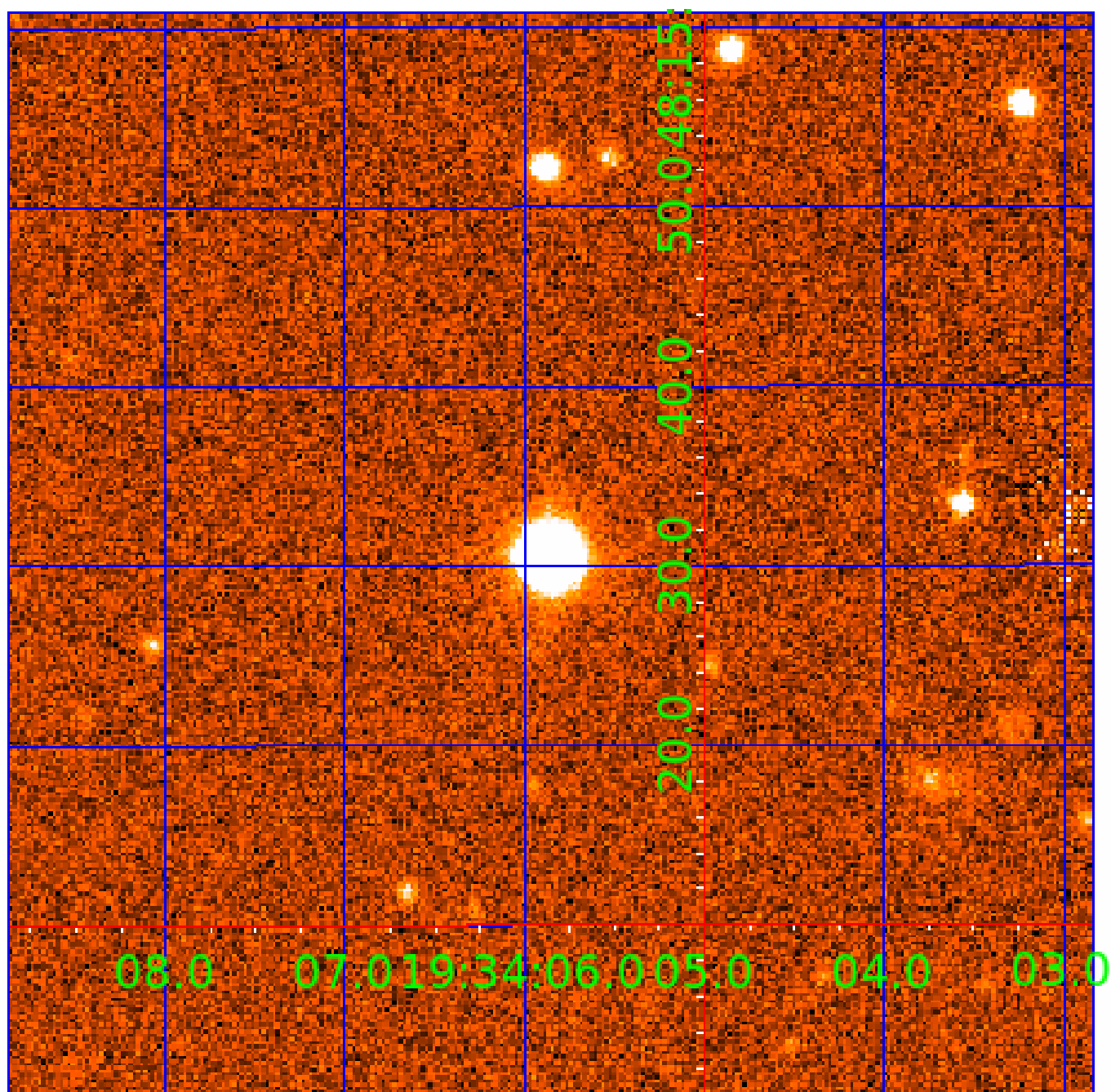


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010865206

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})
010865206-01	OBS	No	394.808357	270.767189	1297.4	1.397	17.5	8.1	0.71	4689	2.97	0.25
010865206-02	OBS	No	410.874070	372.498909	1764.6	7.260	12.4	7.4	0.71	4689	3.72	0.24
010865206-03	OBS	No	328.715069	443.524721	184.4	1.056	13.8	1.3	0.71	4689	1.00	0.32
010865206-04	OBS	No	519.362115	533.792988	1977.6	6.629	12.2	7.7	0.71	4689	3.17	0.17
010865206-05	OBS	No	551.999001	451.405187	1240.8	3.500	15.1	-1.0	0.71	4689	2.40	0.16

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010865206-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—LPP_ALT—MOD_POS_DV—INCONSISTENT_TRANS
010865206-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
010865206-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
010865206-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010865206-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

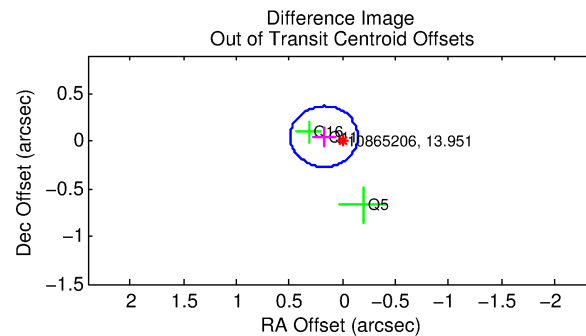
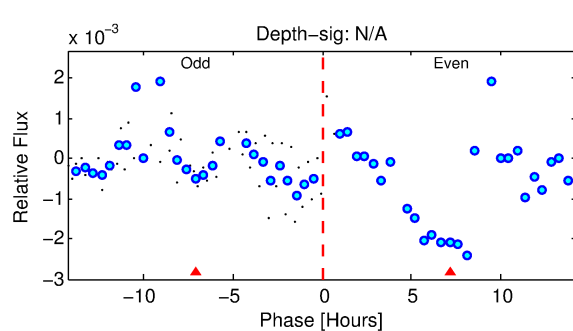
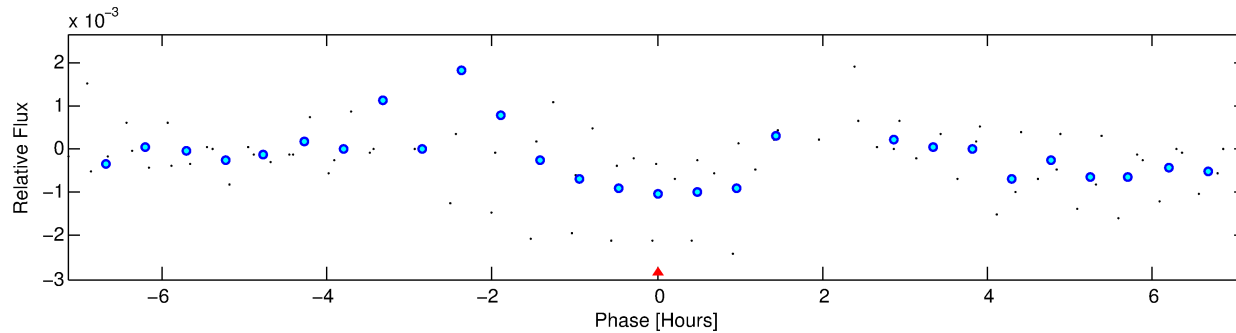
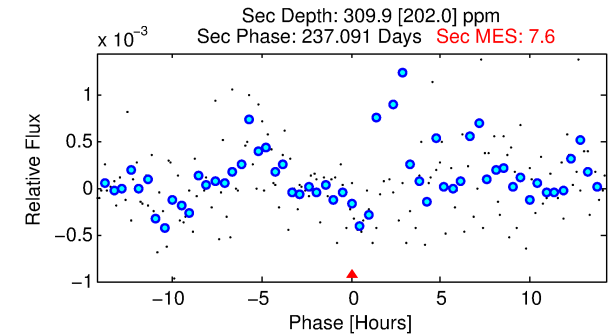
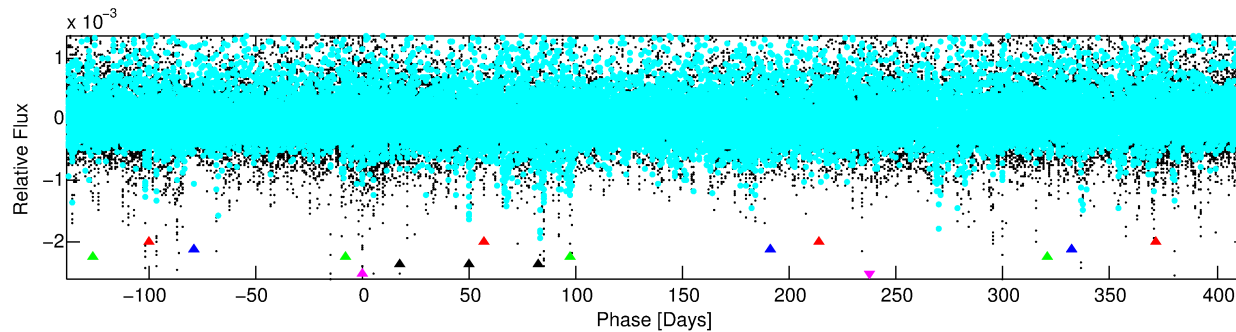
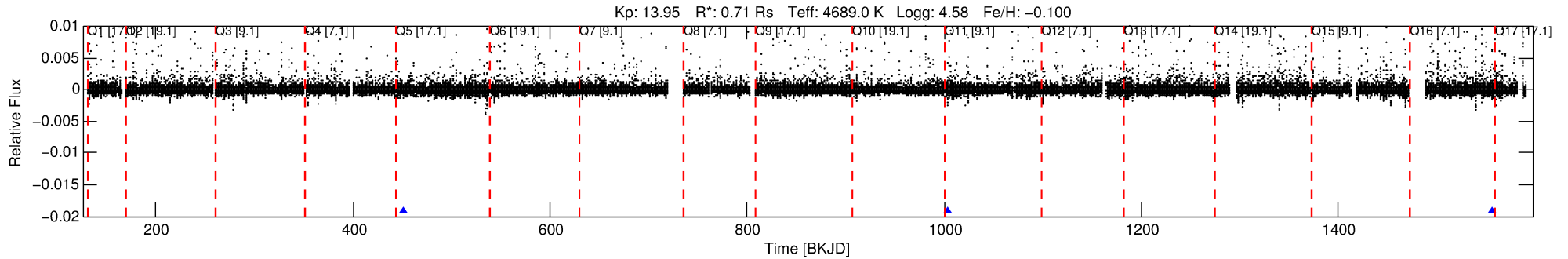
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010865206-05

No Significant Match Found

DV One-Page Summary

KIC: 10865206 Candidate: 5 of 5 Period: 551.999 d



TPS TCE Results:

Period = 551.99900 d
Epoch = 451.4052 BKJD

DV fit results are unavailable

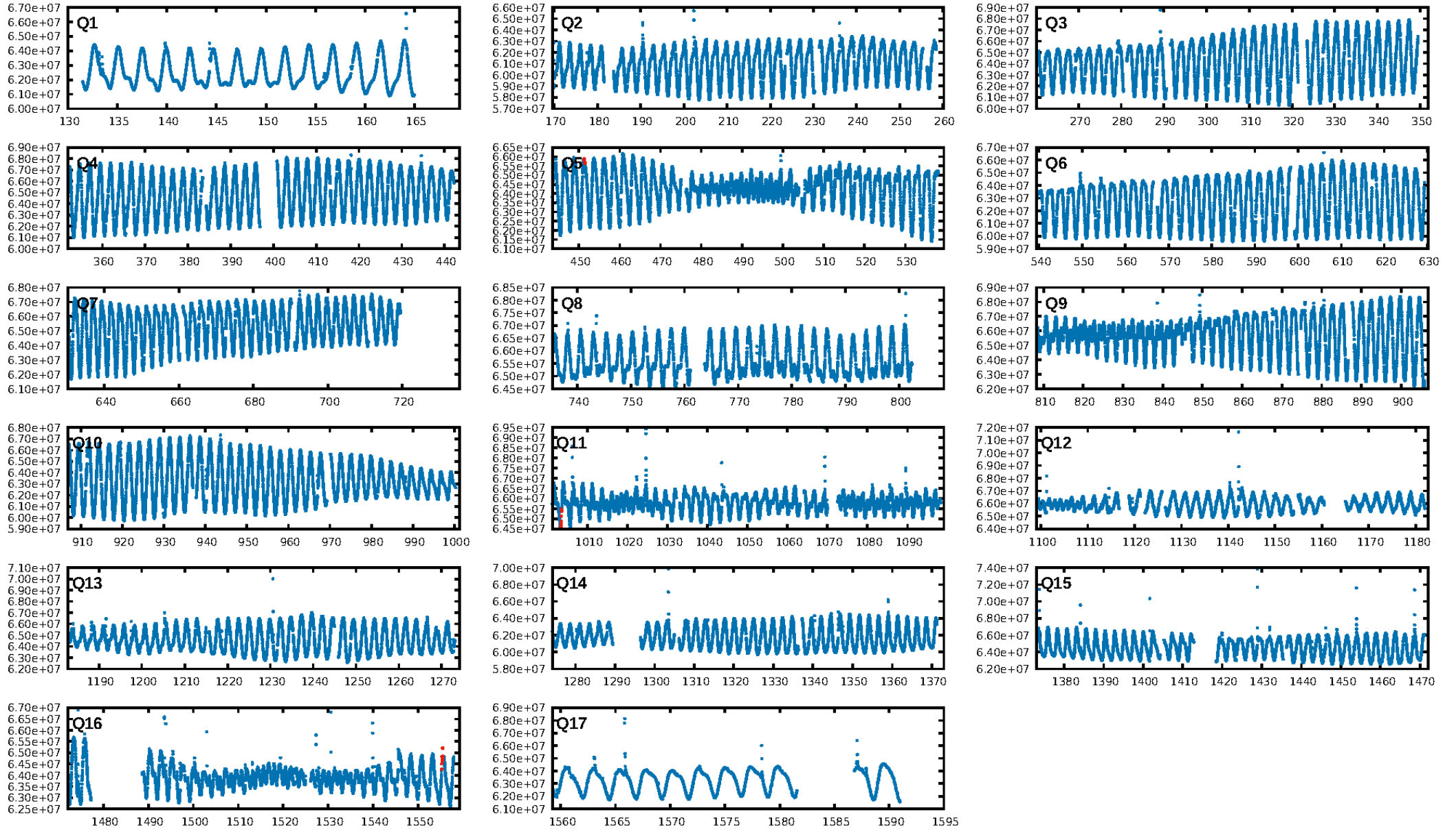
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [104.49σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 21.6
Centroid-sig: 95.7%
Centroid-so: 0.245 arcsec [0.23σ]
OotOffset-rm: 0.178 arcsec [1.67σ]
KicOffset-rm: 0.292 arcsec [2.17σ]
OotOffset-st: 0/1/1/1 [3]
KicOffset-st: 0/1/1/1 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

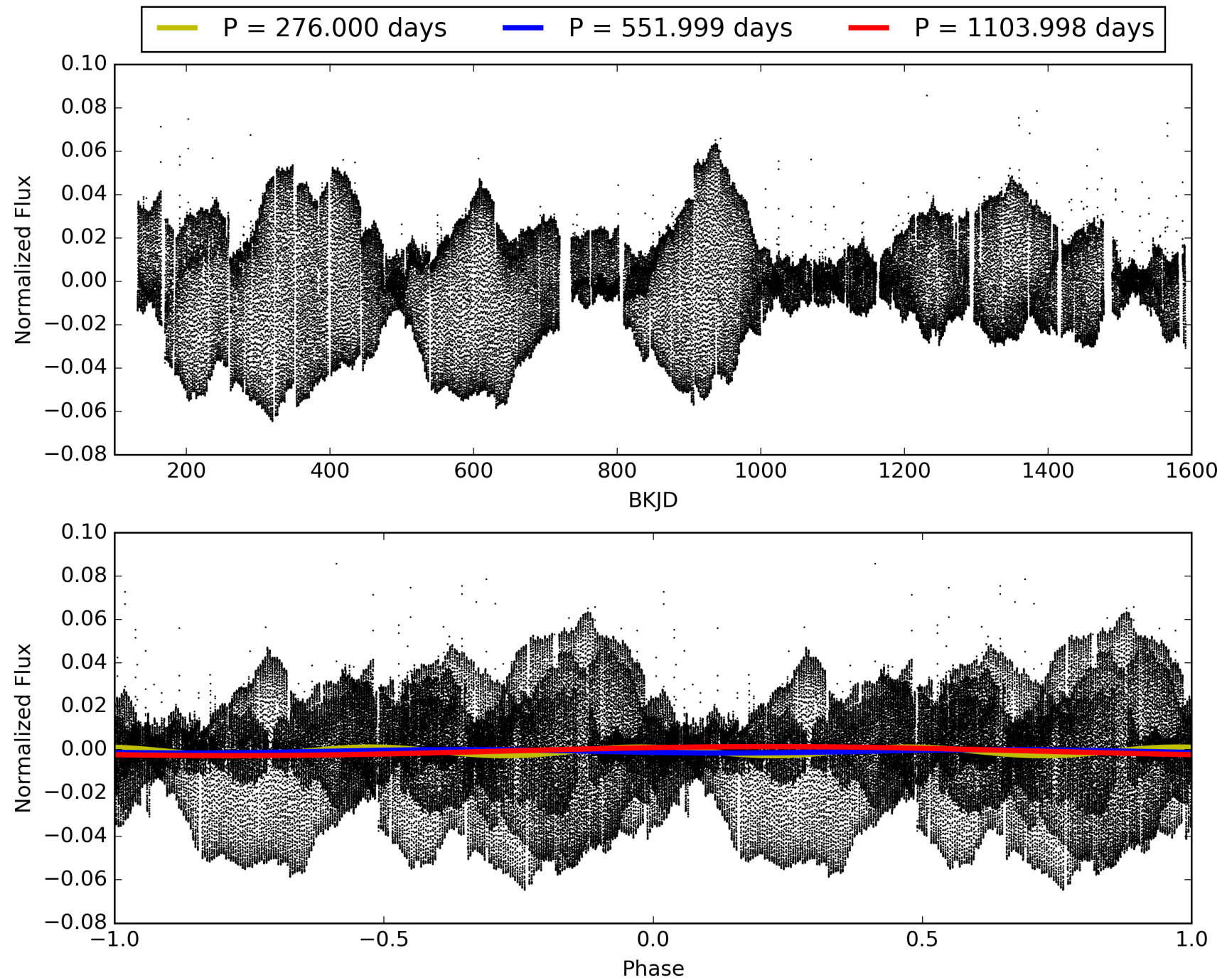
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:48:59 Z

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

TCE 010865206-05, PDC Light Curves

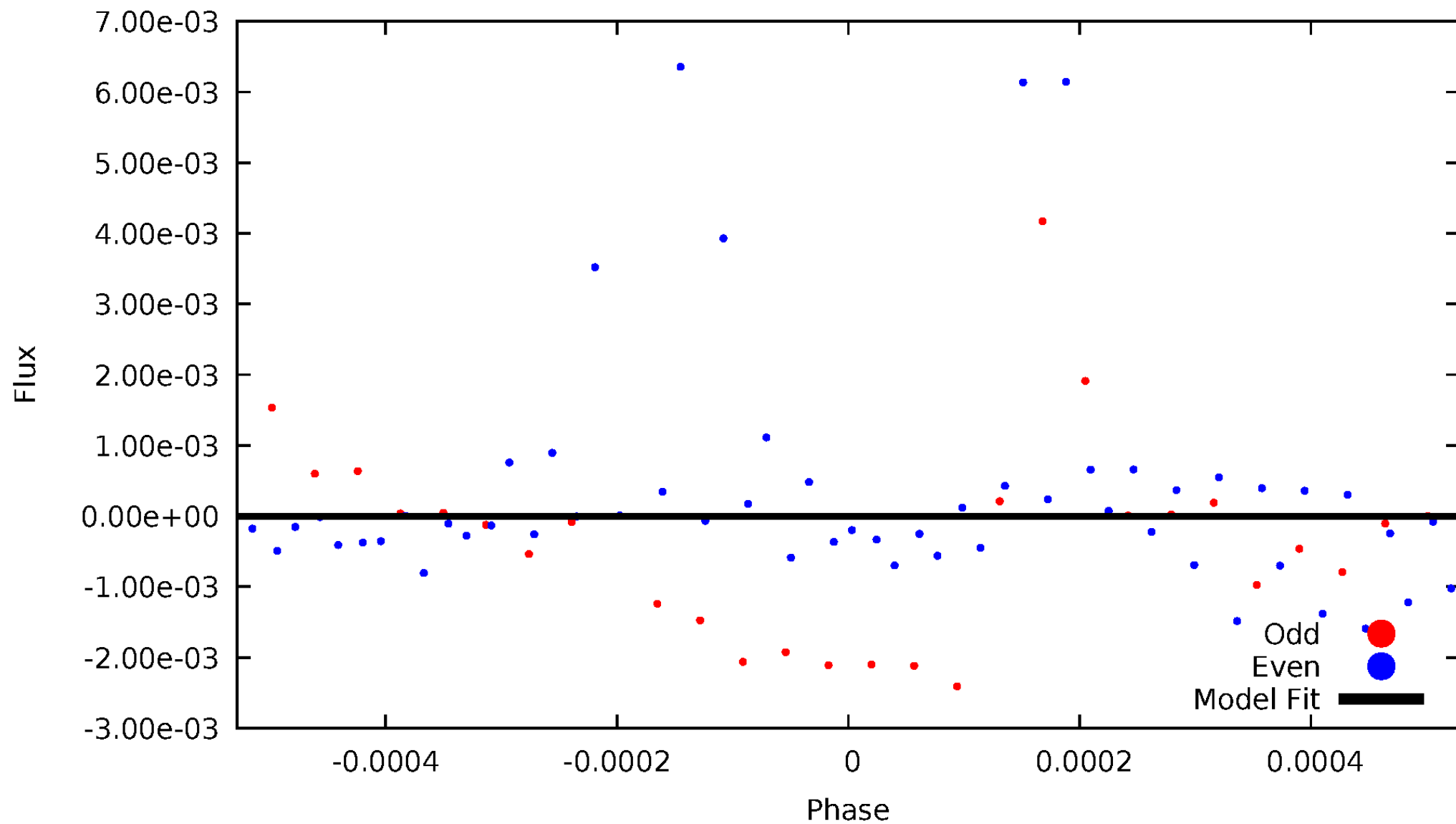


TCE 010865206-05



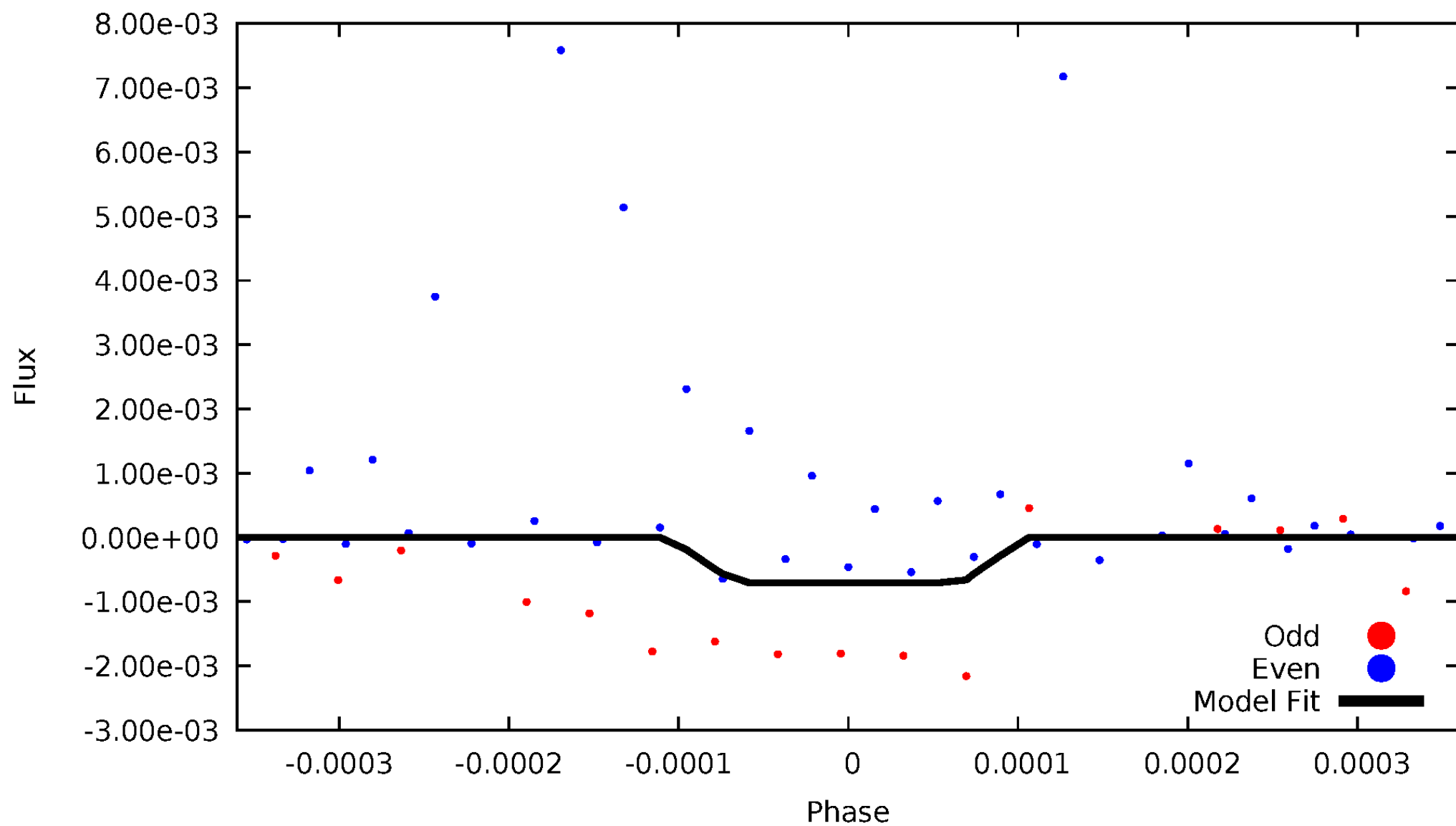
DV Odd/Even

TCE 010865206-05



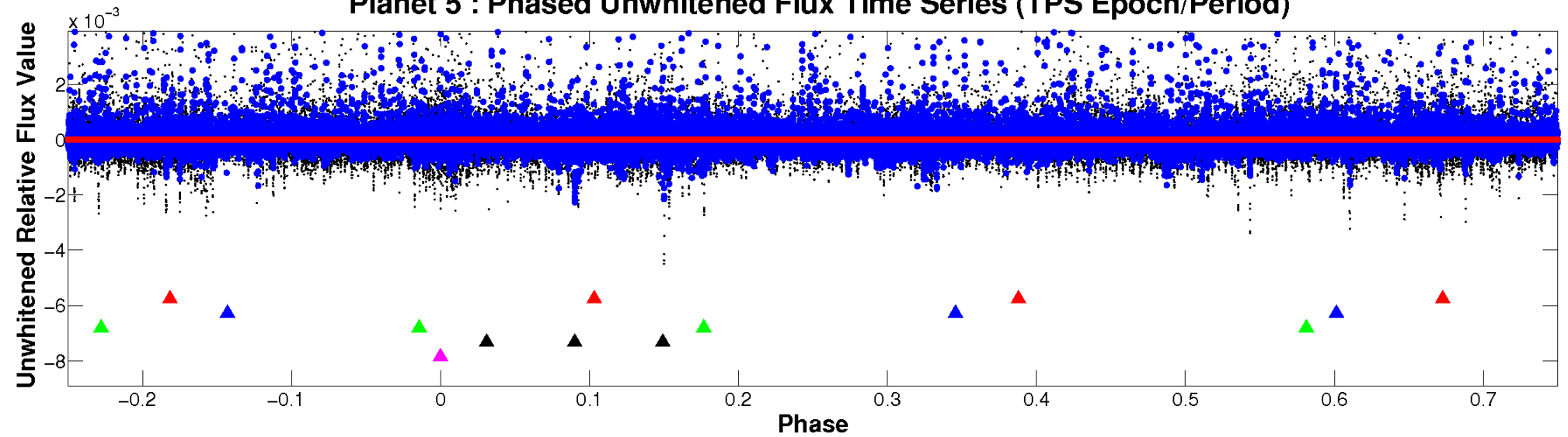
ALT Odd/Even

TCE 010865206-05



Non-Whitened Vs. Whitened Light Curve

Planet 5 : Phased Unwhitened Flux Time Series (TPS Epoch/Period)

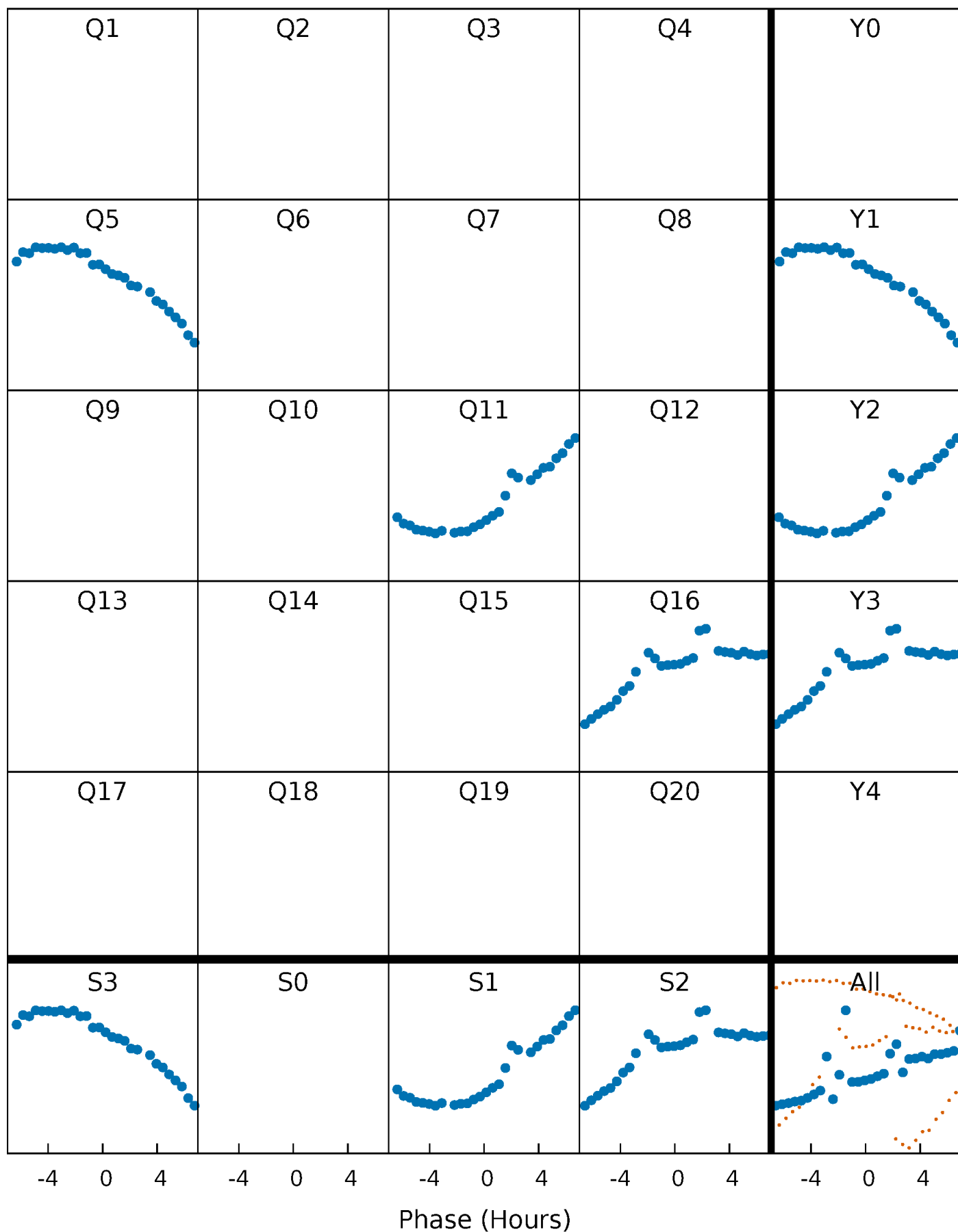


Planet 5 : Phased Whitened Flux Time Series (TPS Epoch/Period)



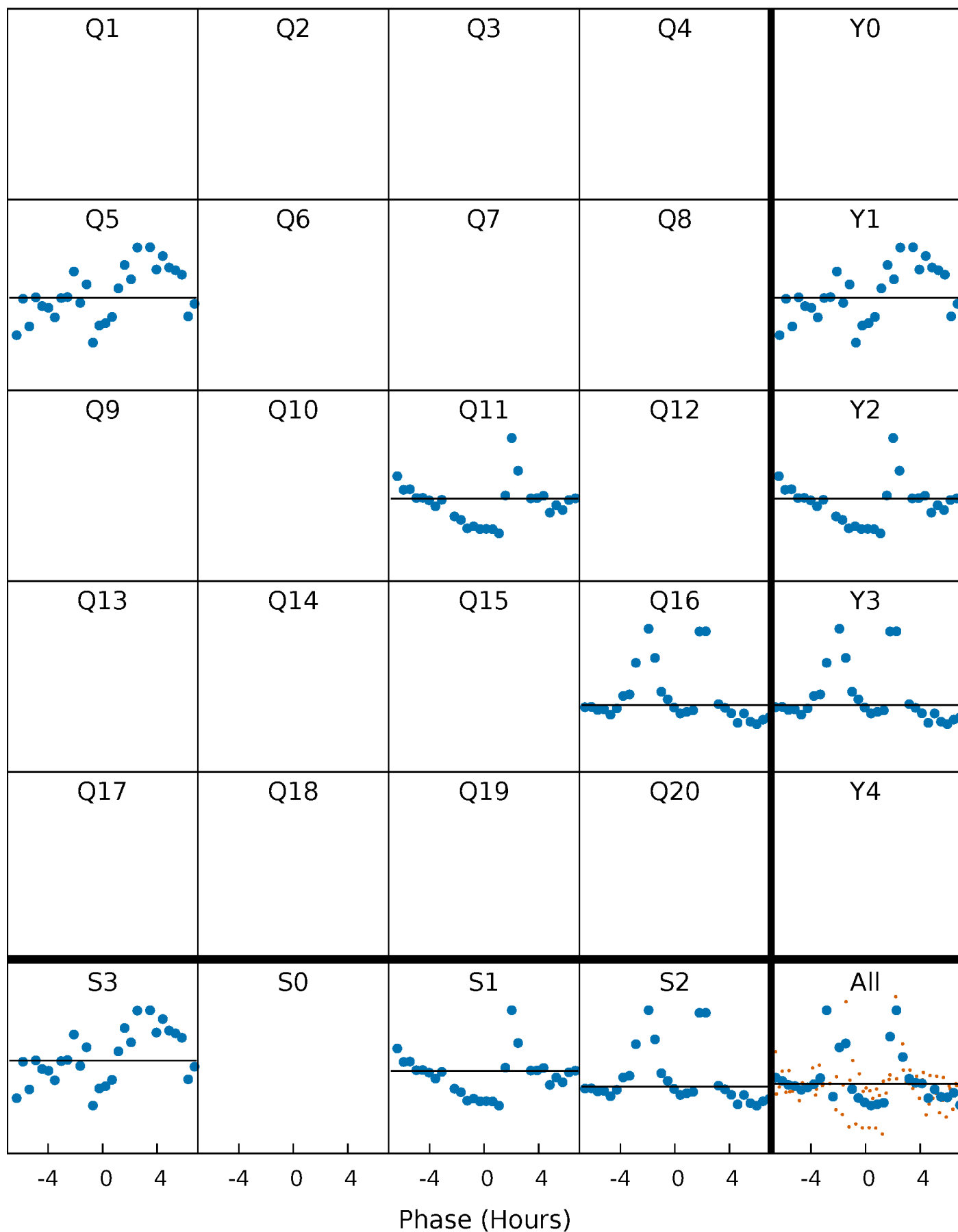
PDC Quarter-Phased Transit Curves

TCE 010865206-05 P=551.999001 Days $T_0=451.405187$ (BKJD)



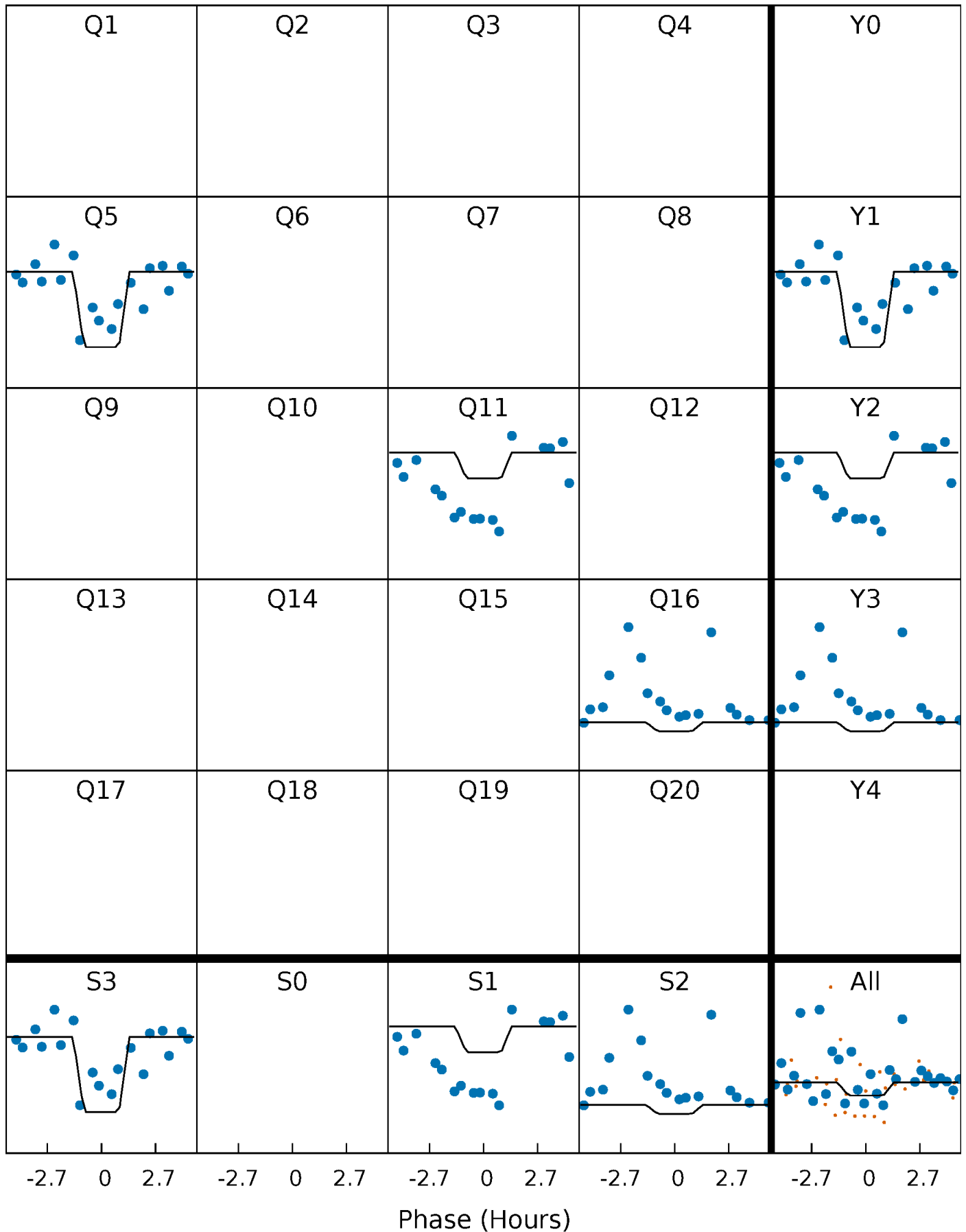
DV Quarter-Phased Transit Curves

TCE 010865206-05 P=551.999001 Days $T_0=451.405187$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

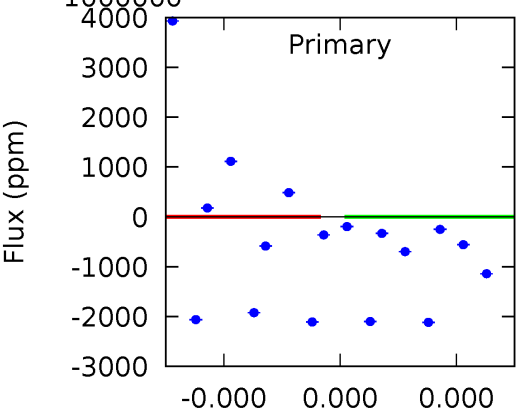
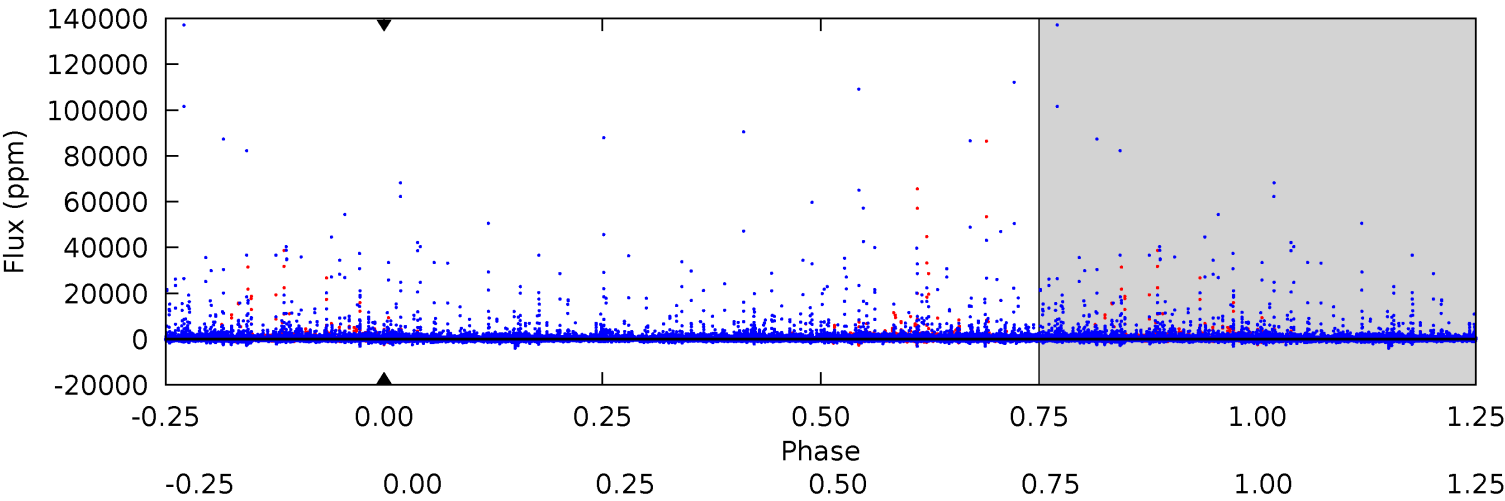
TCE 010865206-05 $P=551.999001$ Days $T_0=451.418677$ (BKJD)



DV Model-Shift Uniqueness Test

010865206-05, P = 551.999001 Days, E = 451.405187 Days

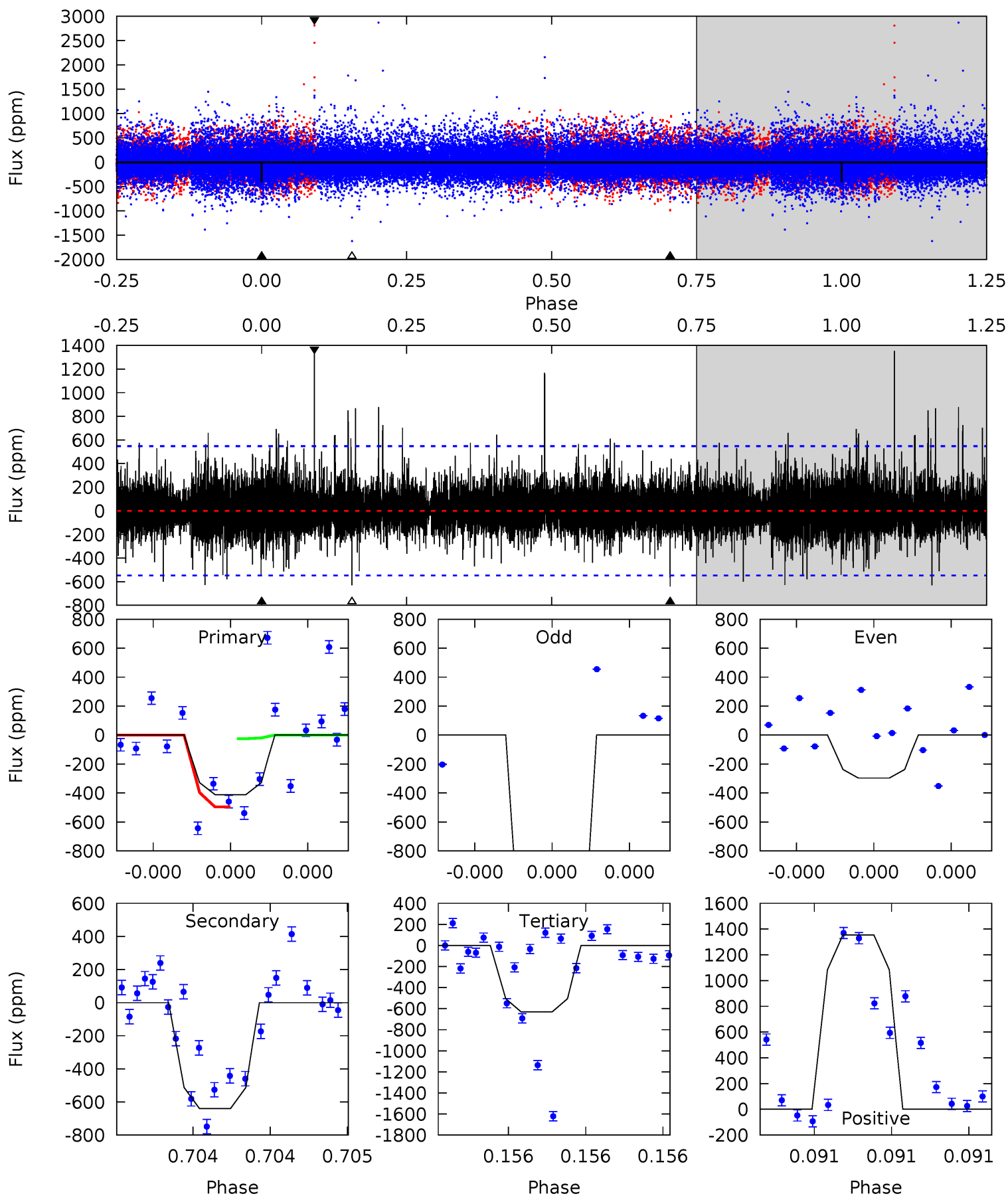
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

010865206-05, P = 551.999001 Days, E = 451.418677 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.31	6.72	6.62	14.2	5.74	3.74	1.17	-2.31	-9.90	0.10	-7.49	10.2	0.95	0.68	2.67



Stellar Parameters For KIC 010865206

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4689^{+84}_{-84}	$4.579^{+0.045}_{-0.017}$	$-0.100^{+0.150}_{-0.150}$	$0.707^{+0.028}_{-0.039}$	$0.691^{+0.046}_{-0.025}$	$2.760^{+0.482}_{-0.184}$
	+2%/-2%	+1%/-0%	+150%/-150%	+4%/-6%	+7%/-4%	+17%/-7%
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 010865206-05 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$6.05^{+6.02}_{-4.26}$	224^{+5}_{-5}	2855^{+10084}_{-14584}	$6033^{+4206023}_{-3408525}$
Alt.	-640 ± 95	$5.97^{+5.92}_{-4.08}$	224^{+5}_{-5}	3191^{+1533}_{-557}	$13472^{+118762}_{-10018}$

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

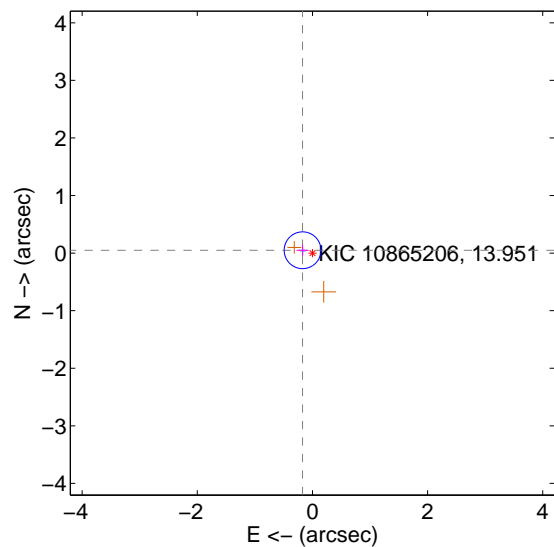
Supplemental centroid analysis for 010865206-05. Kepler magnitude: 13.95. Transit SNR -1.00

There are 1 quarters with good PRF difference image offsets

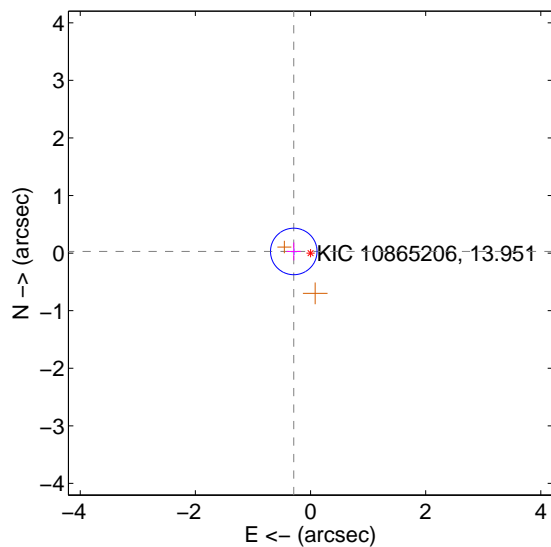
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.178 ± 0.106	1.67	0.171 ± 0.107	0.050 ± 0.100
PRF-fit source offset from KIC position	0.292 ± 0.135	2.17	0.291 ± 0.124	0.029 ± 0.155
photometric centroid source offset	0.24 ± 1.09	0.23	-0.04 ± 1.09	-0.24 ± 1.09

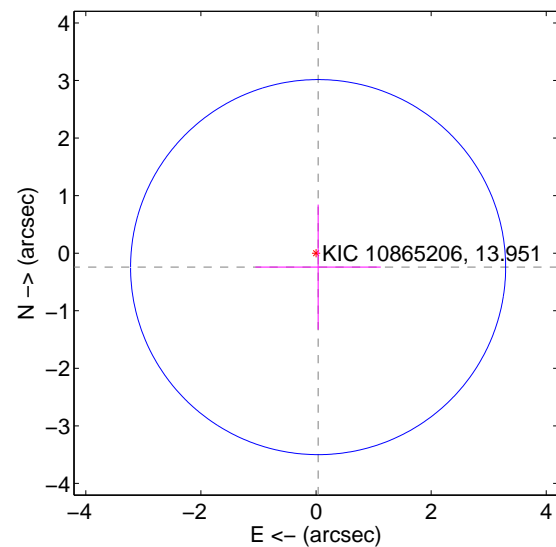
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

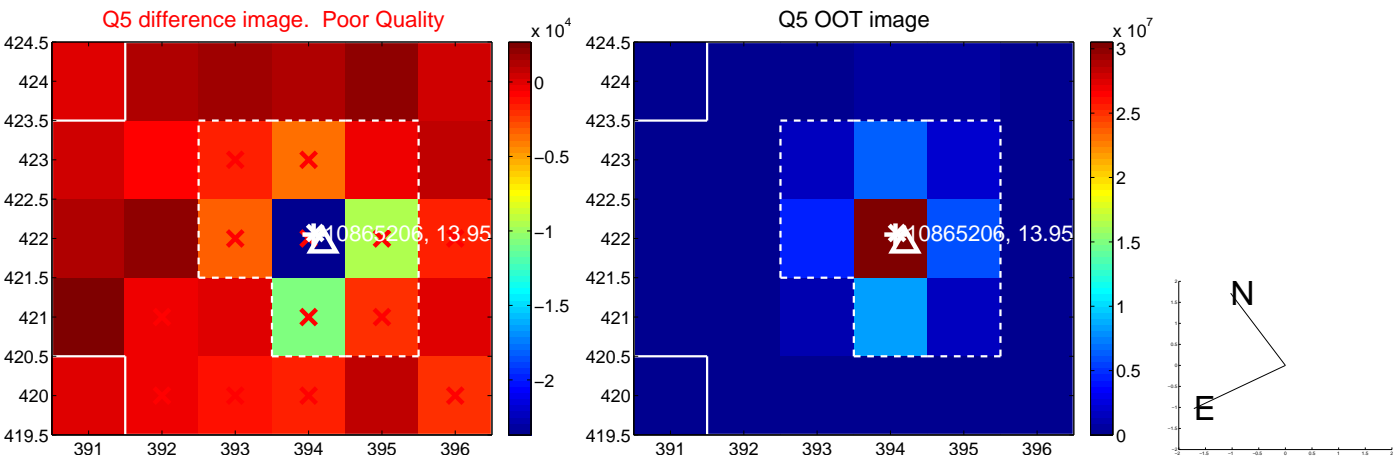


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



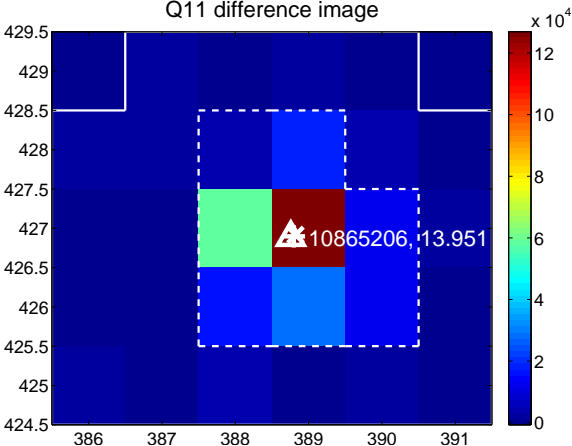
Q10 no difference image



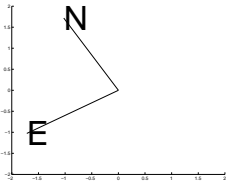
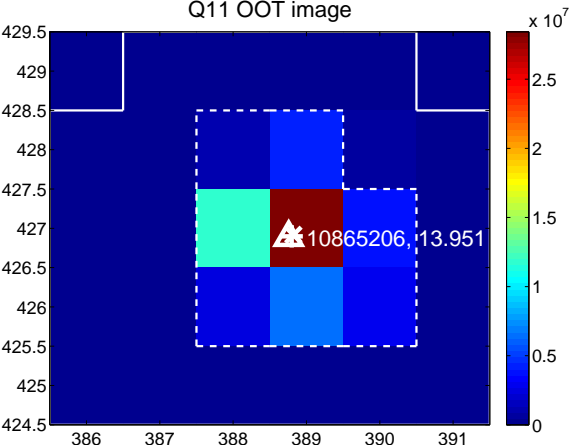
Q10 no OOT image



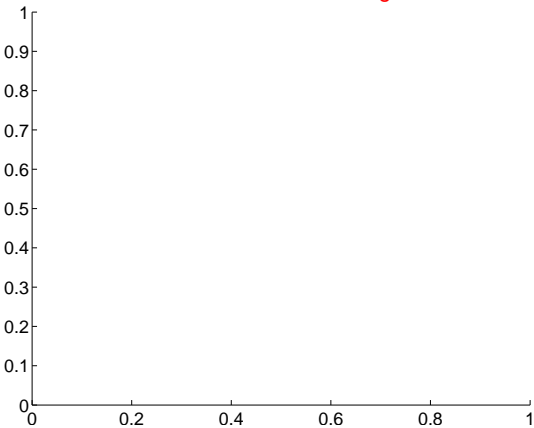
Q11 difference image



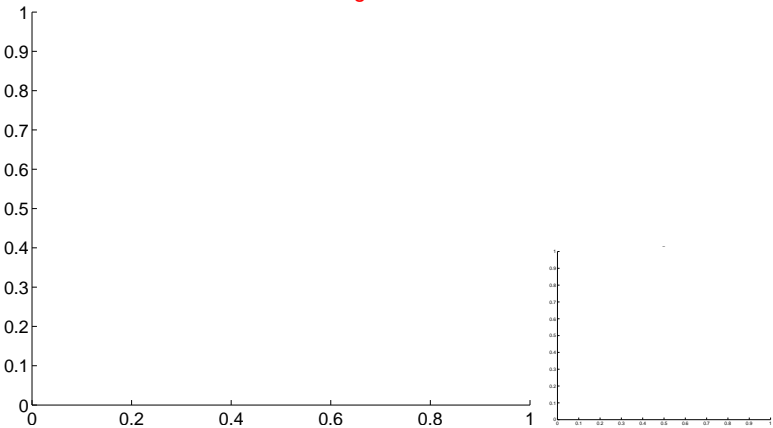
Q11 OOT image



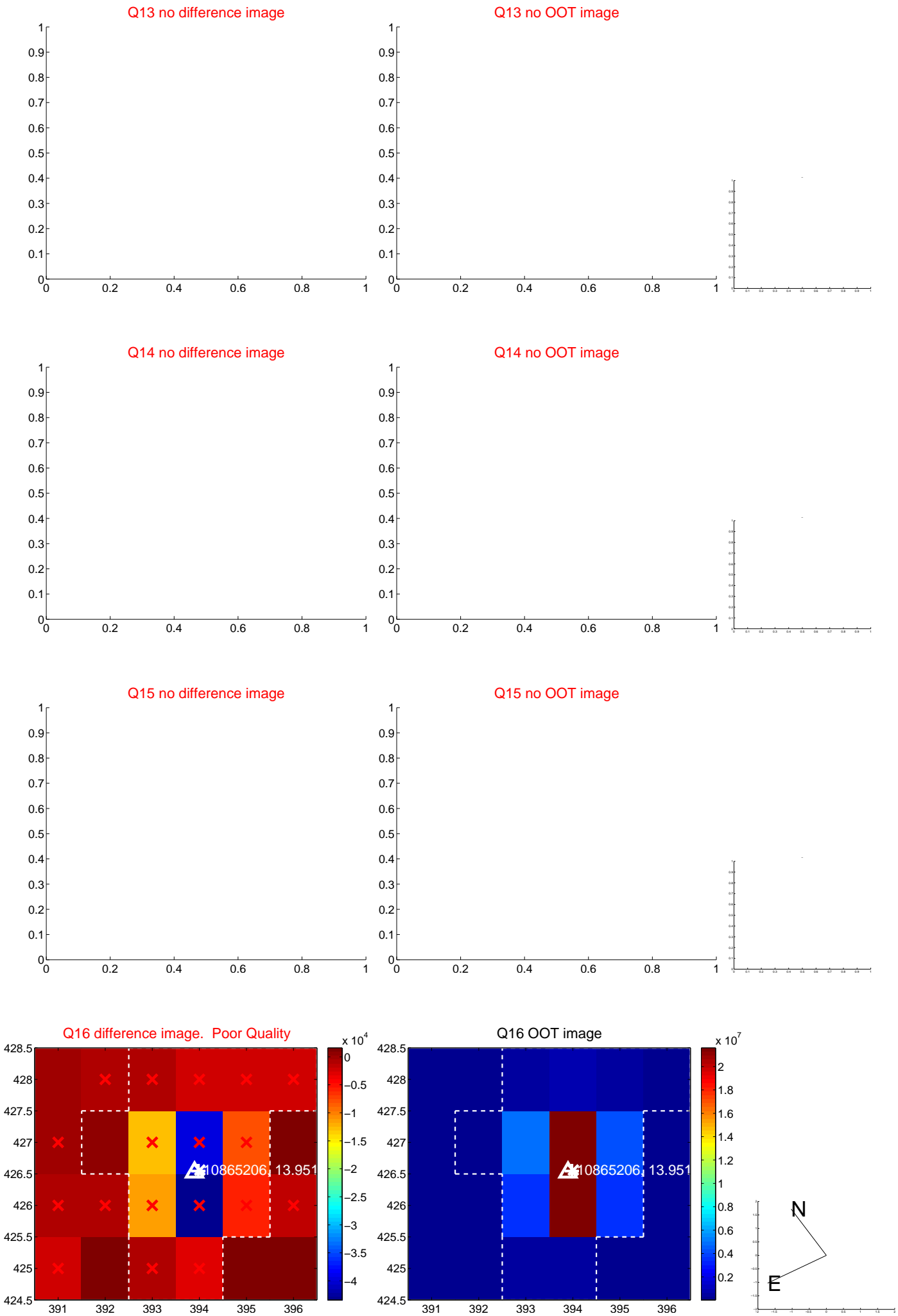
Q12 no difference image



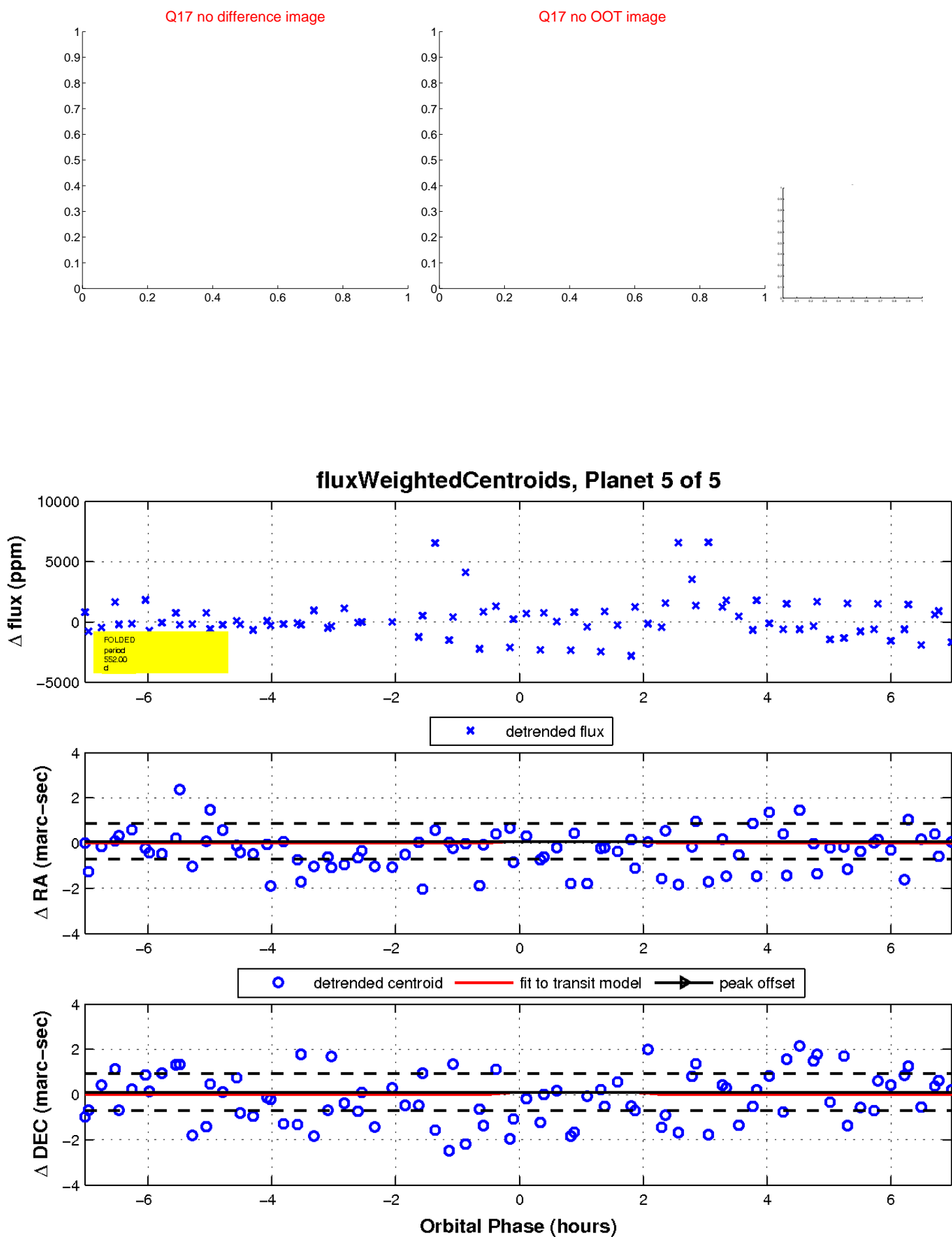
Q12 no OOT image



white \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.



UKIRT Image

Declination

