

KIC 000893507

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})
000893507-02	OBS	No	302.045706	286.987124	902.0	3.983	14.2	10.0	1.68	5382	5.80	3.05
000893507-04	OBS	No	285.253570	251.517656	506.6	7.502	13.7	6.5	1.68	5382	4.49	3.29
000893507-05	OBS	No	308.893358	271.389711	757.1	7.801	11.3	8.4	1.68	5382	5.94	2.96
000893507-06	OBS	No	279.221260	368.703012	404.1	4.684	11.6	6.7	1.68	5382	3.74	3.39
000893507-07	OBS	No	318.782248	427.805507	493.1	4.667	10.6	8.0	1.68	5382	4.08	2.84

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
000893507-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—CENT_FEW_DIFFS
000893507-04	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
000893507-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL_SKYE_ZUMA—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
000893507-06	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—INCONSISTENT_TRANS—CENT_FEW_DIFFS
000893507-07	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST

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

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

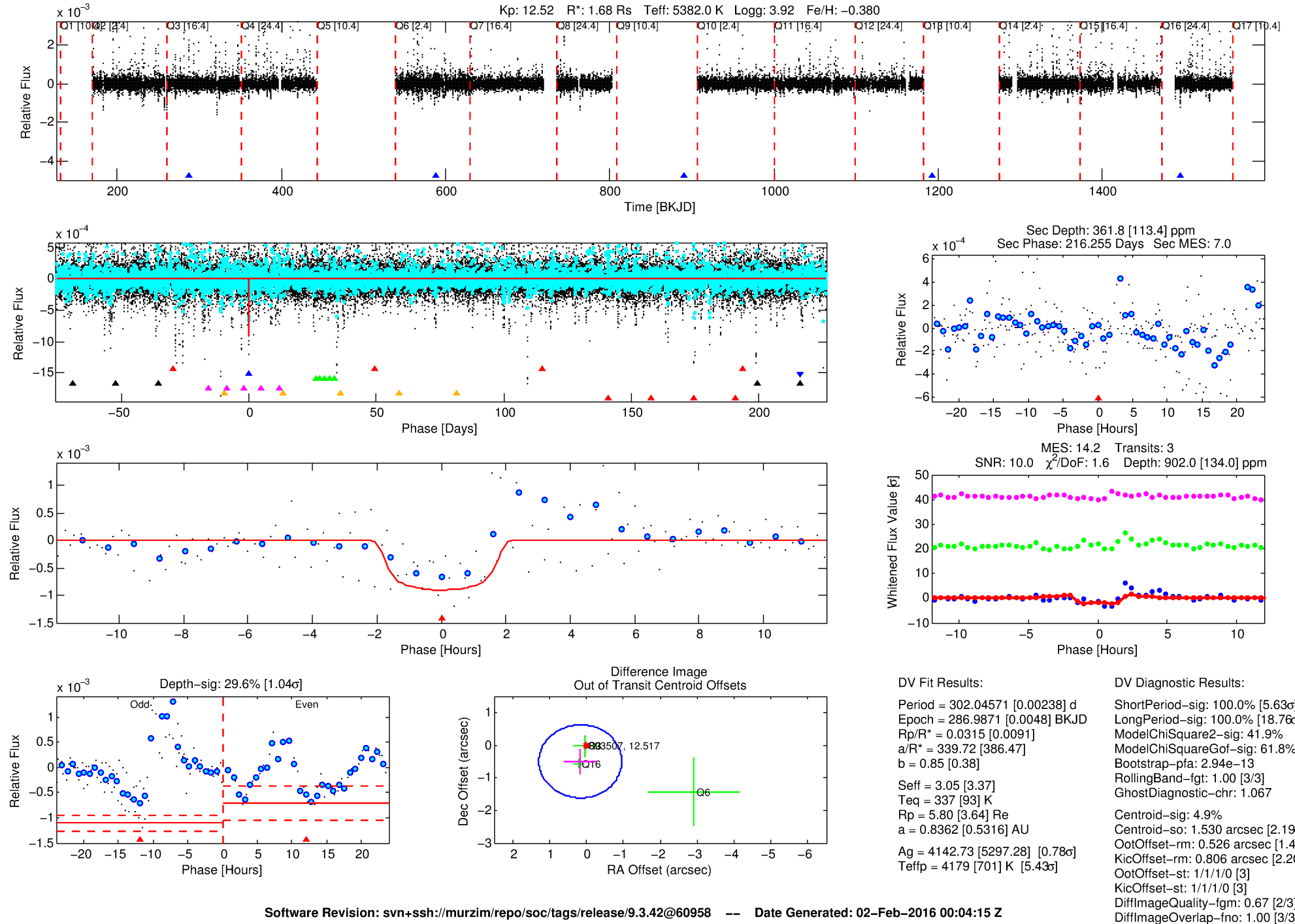
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 000893507-02

No Significant Match Found

DV One-Page Summary

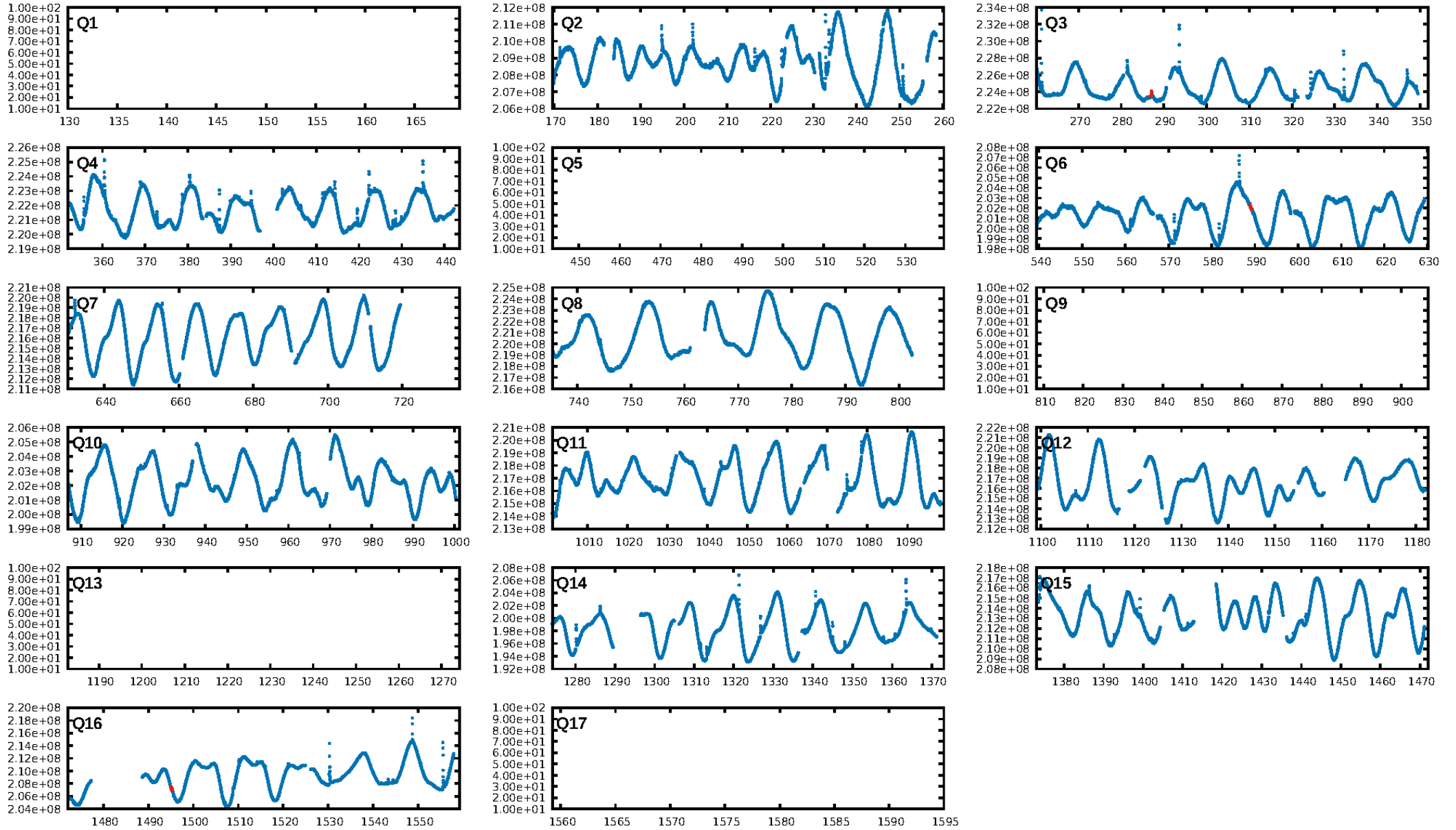
KIC: 893507 Candidate: 2 of 7 Period: 302.046 d



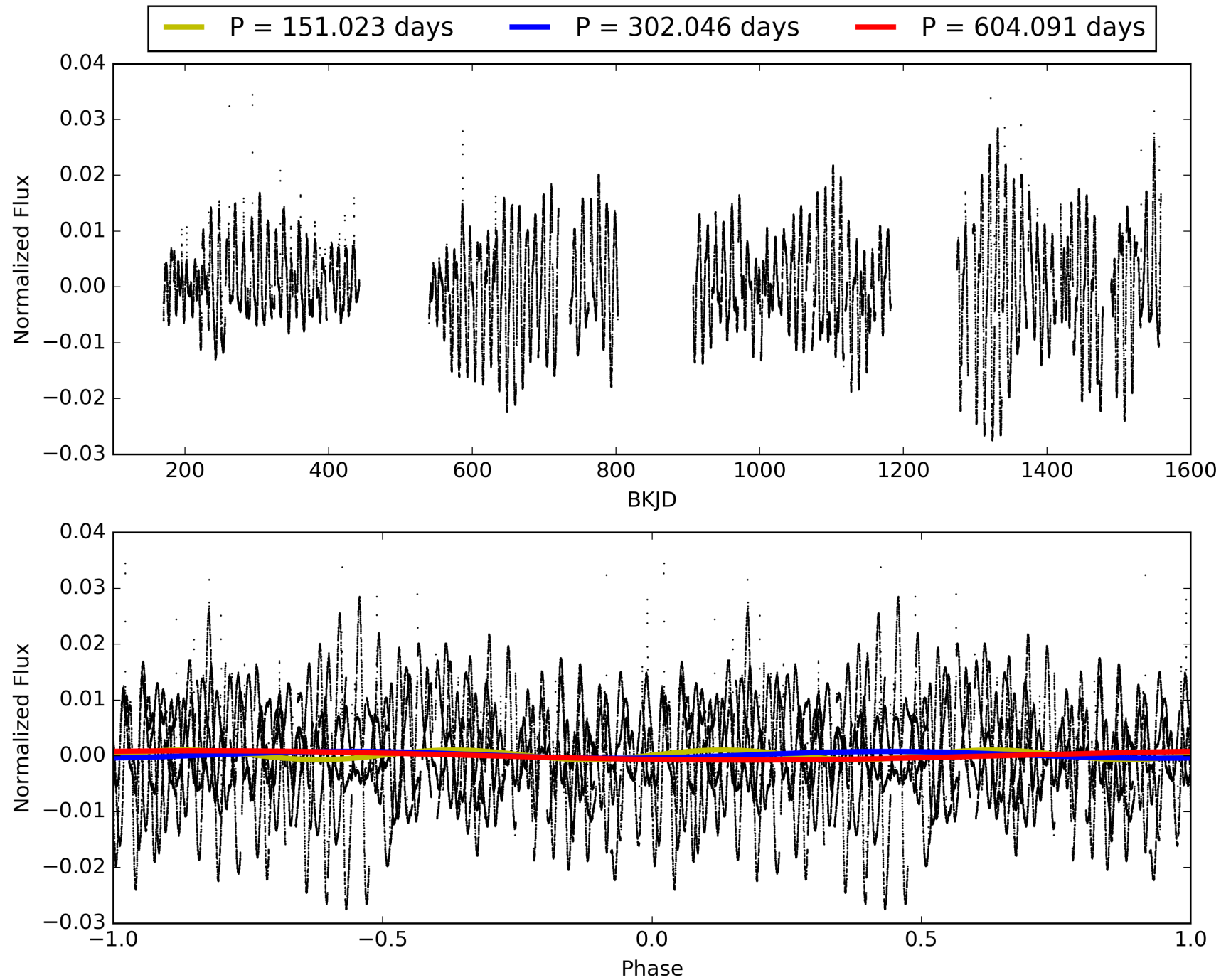
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:04:15 Z

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

TCE 000893507-02, PDC Light Curves

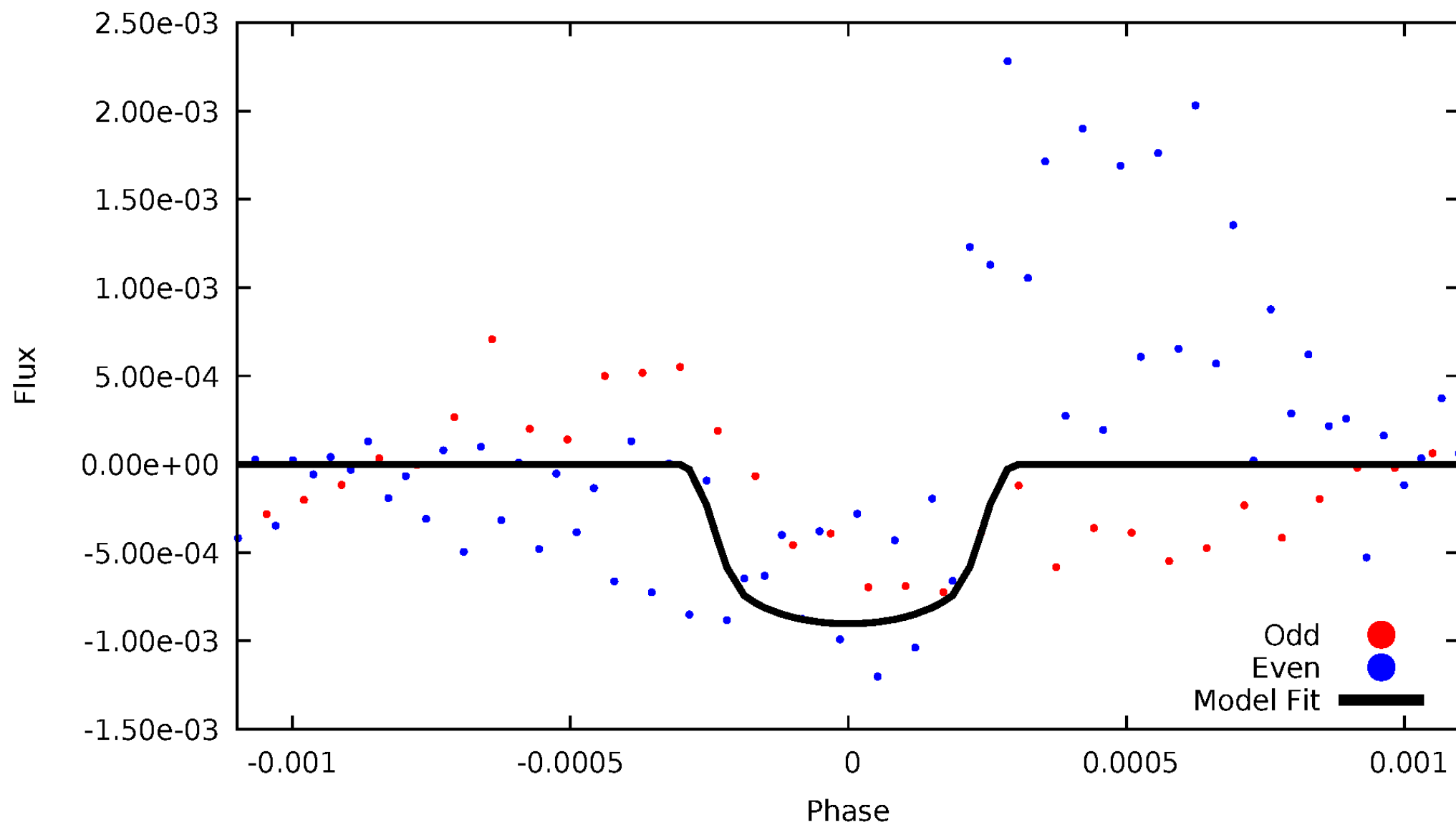


TCE 000893507-02



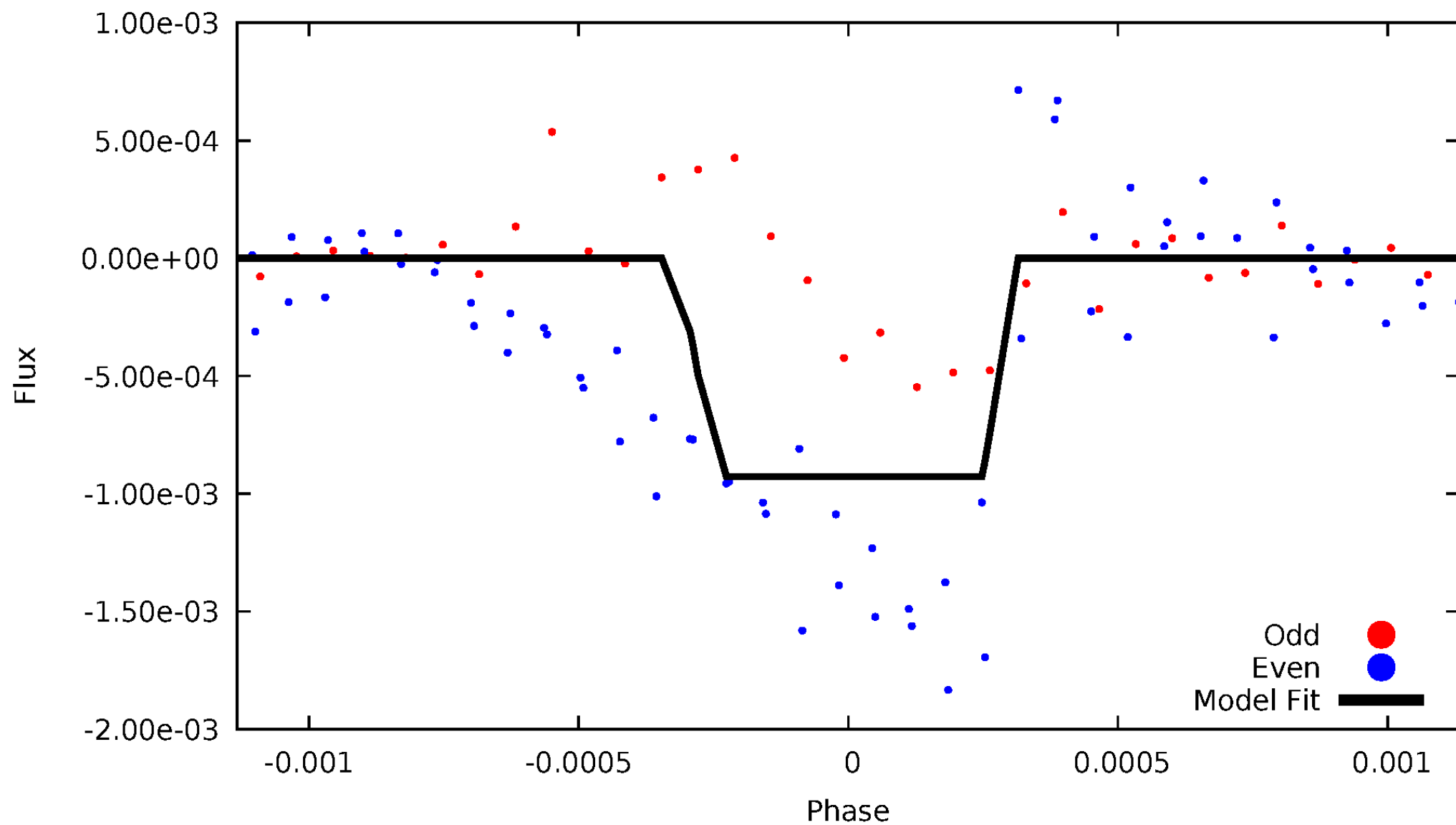
DV Odd/Even

TCE 000893507-02



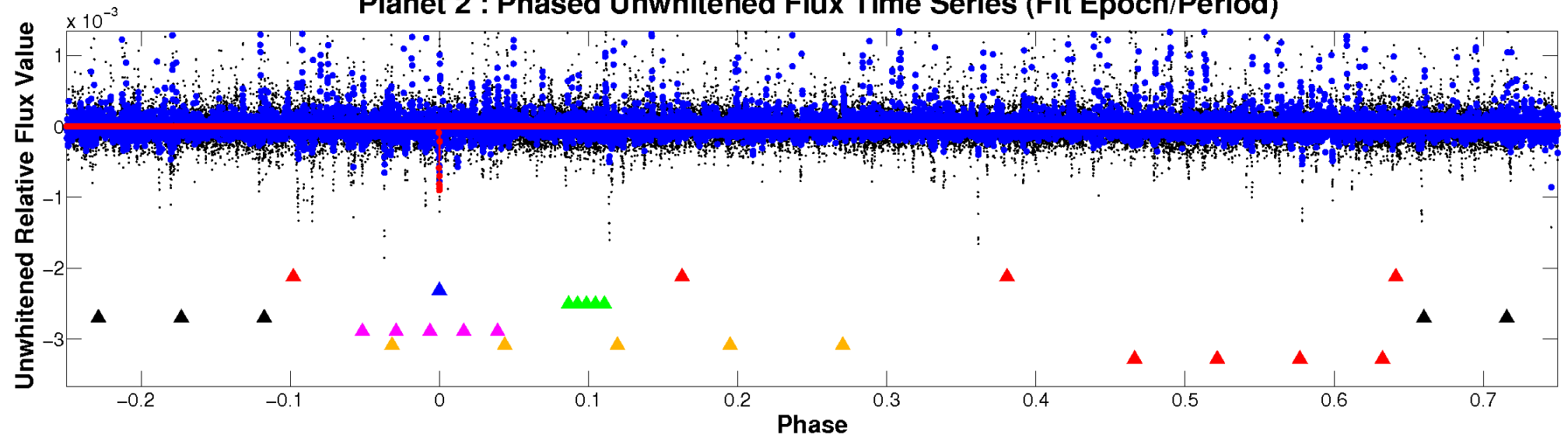
ALT Odd/Even

TCE 000893507-02

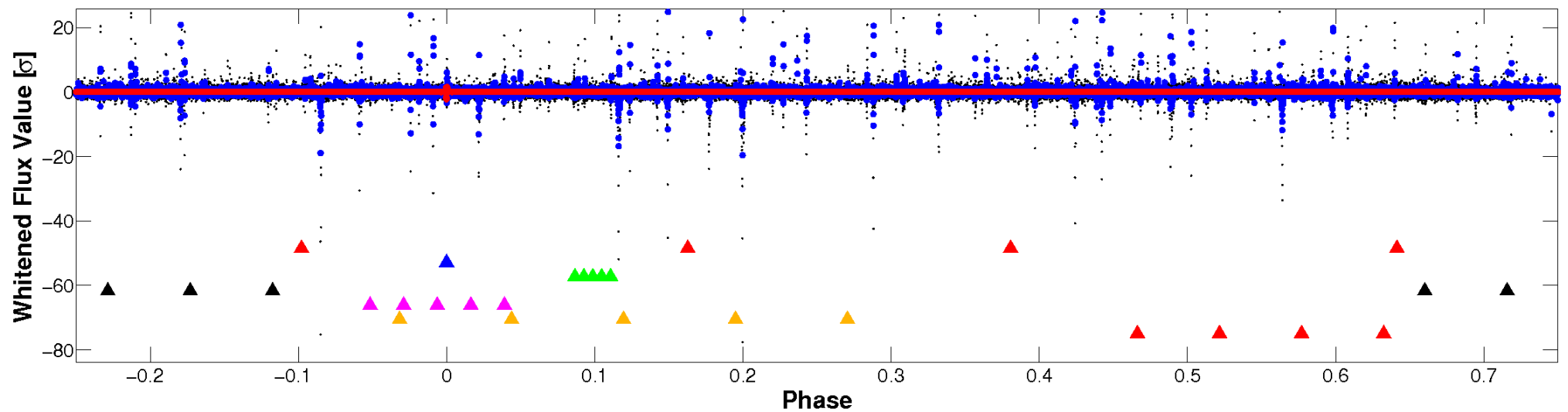


Non-Whitened Vs. Whitened Light Curve

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

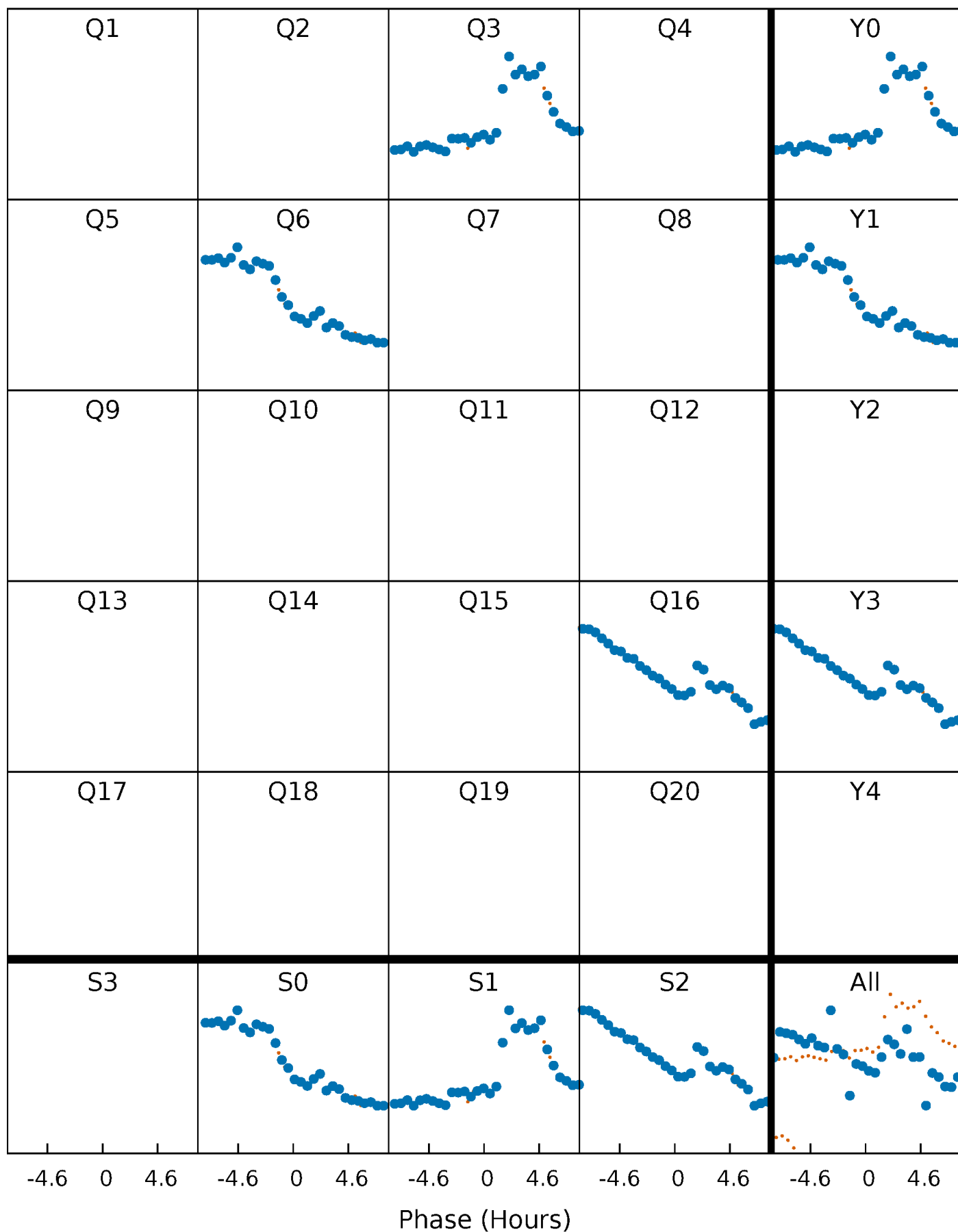


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



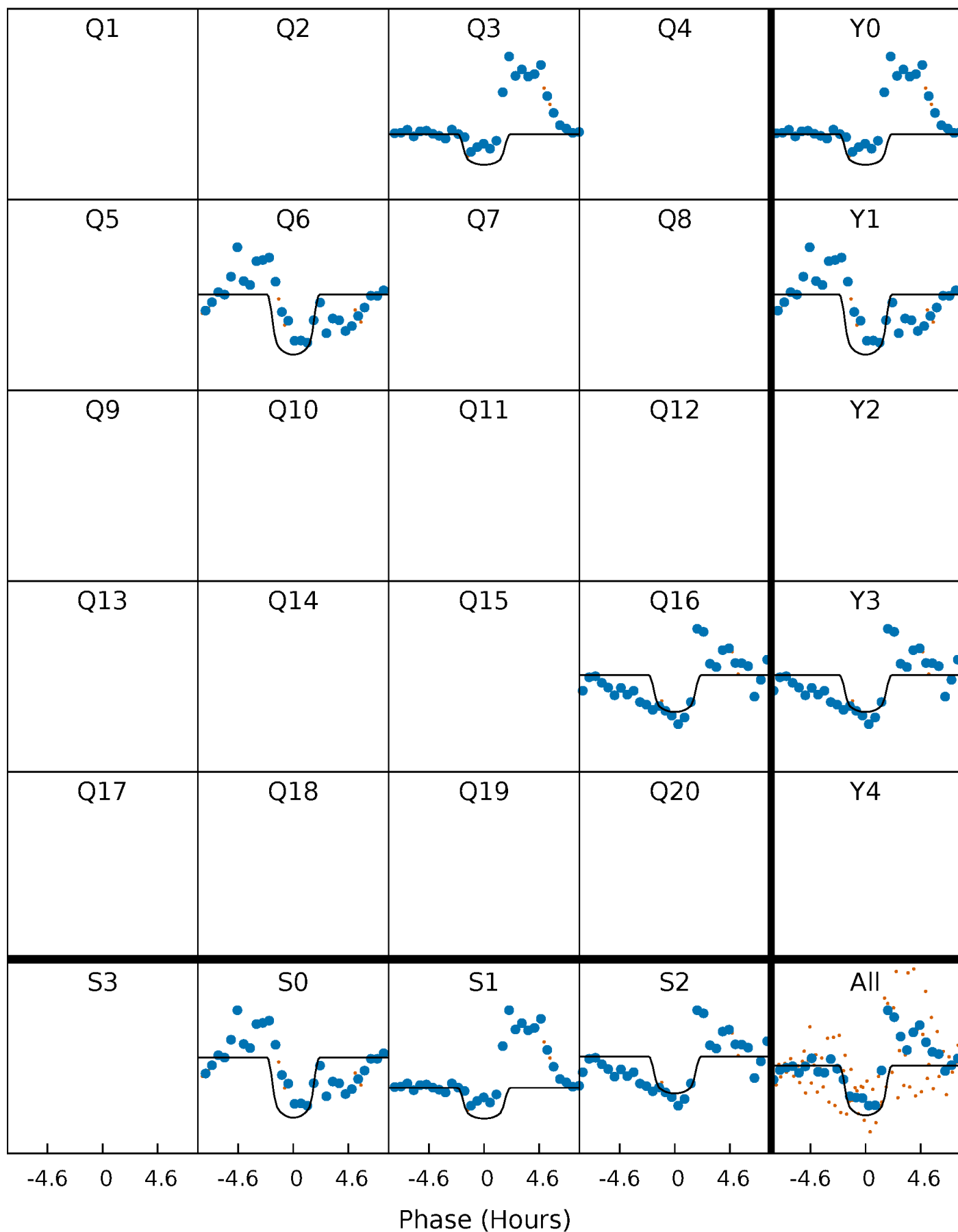
PDC Quarter-Phased Transit Curves

TCE 000893507-02 $P=302.045706$ Days $T_0=286.987124$ (BKJD)



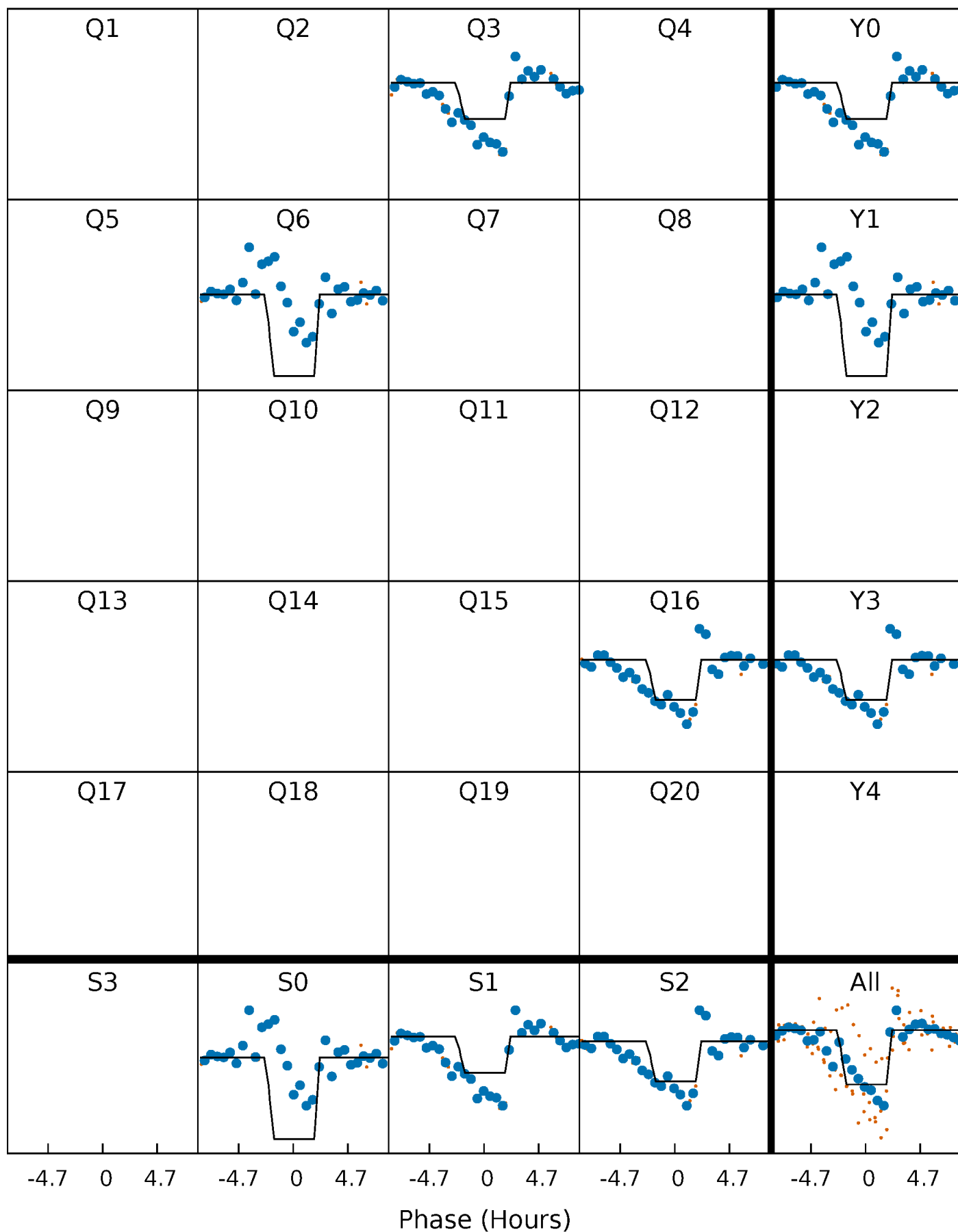
DV Quarter-Phased Transit Curves

TCE 000893507-02 $P=302.045706$ Days $T_0=286.987124$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

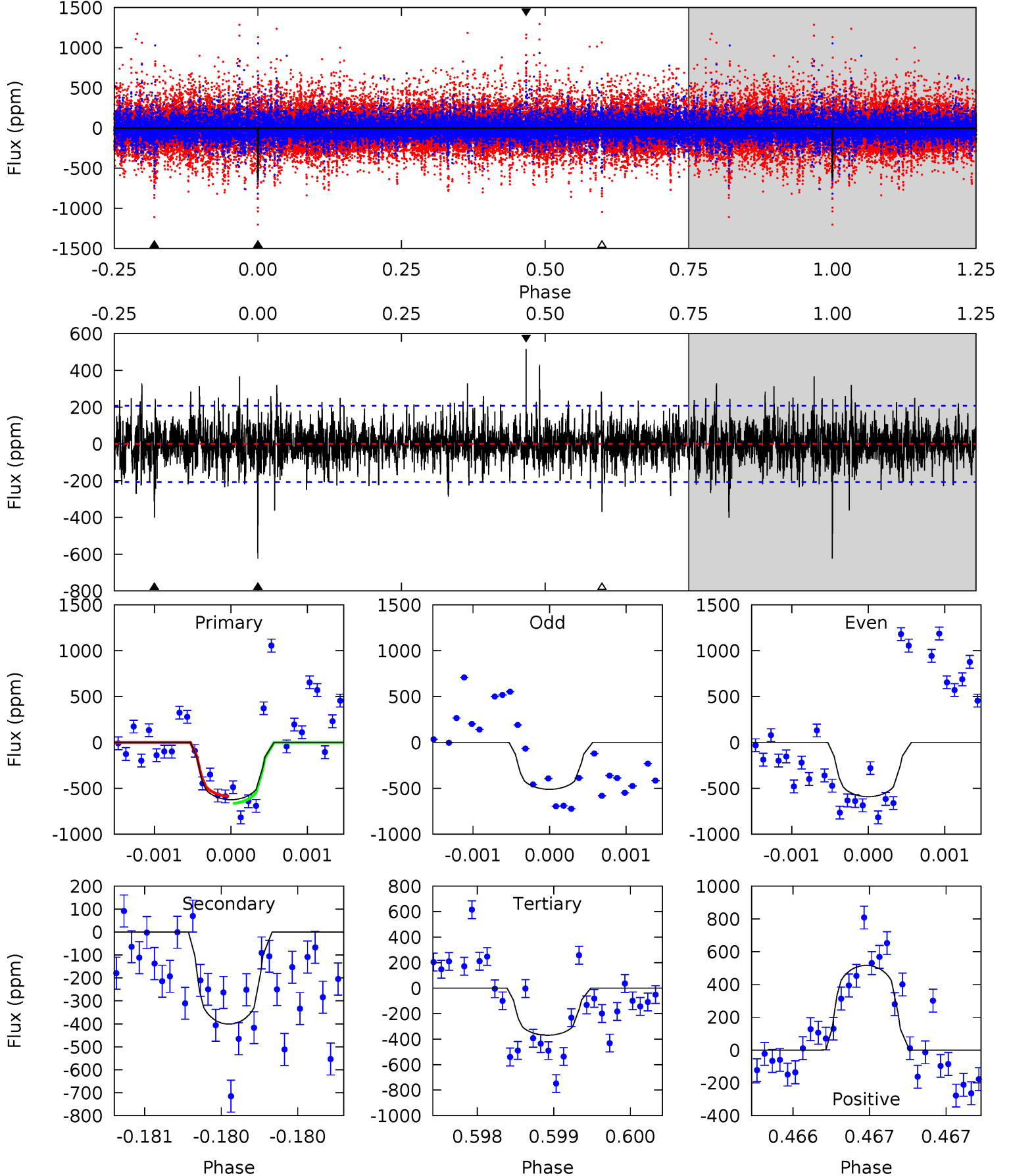
TCE 000893507-02 P=302.048884 Days $T_0=286.956359$ (BKJD)



DV Model-Shift Uniqueness Test

000893507-02, P = 302.045706 Days, E = 286.987124 Days

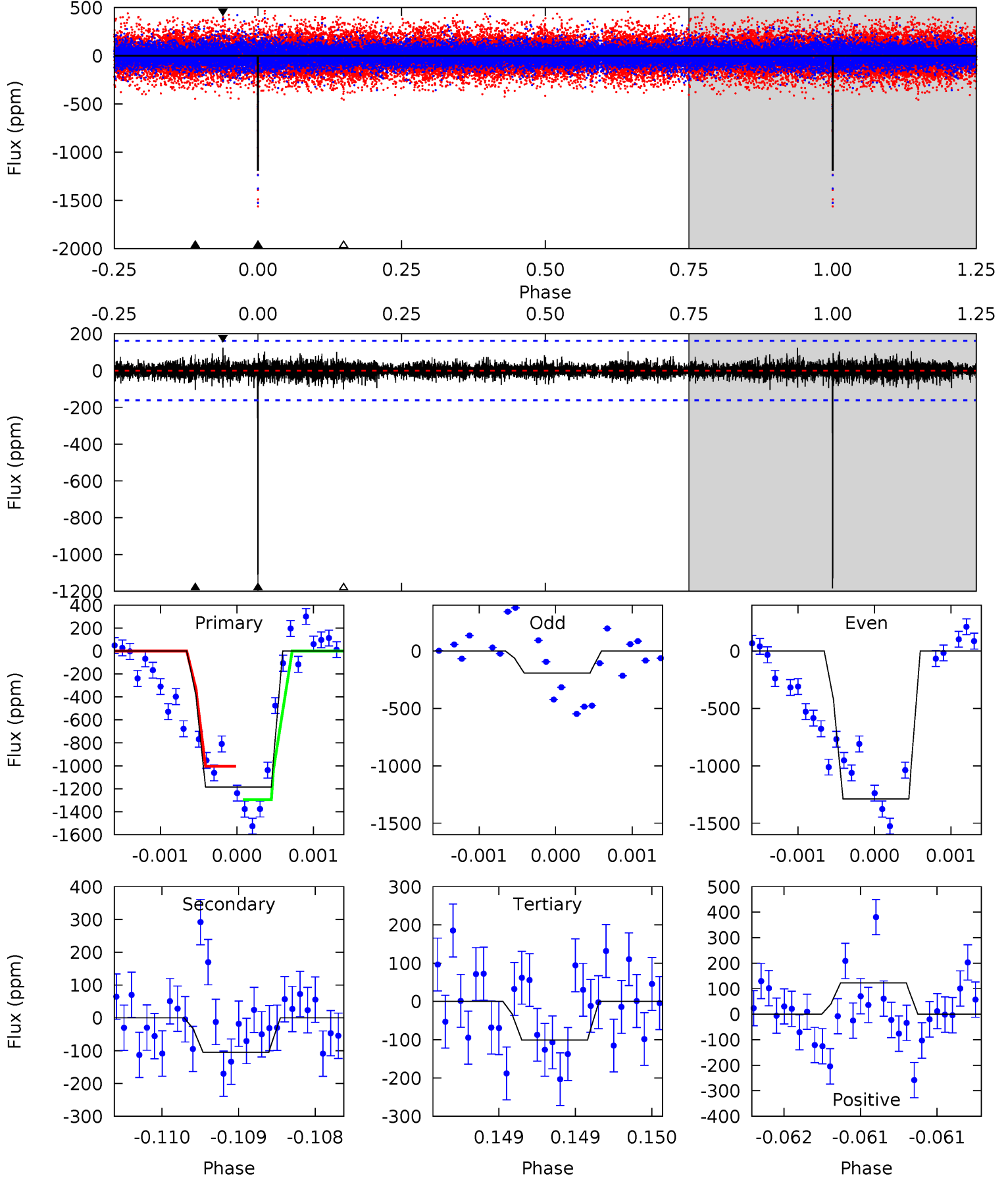
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.7	10.7	9.89	13.8	5.55	3.44	2.00	6.82	2.88	0.85	-3.09	0.70	1.09	0.45	1.05



Alt Model-Shift Uniqueness Test

000893507-02, P = 302.048884 Days, E = 286.956359 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
40.8	3.62	3.47	4.24	5.56	3.45	0.75	37.4	36.6	0.15	-0.62	24.1	0.82	0.09	5.18



Stellar Parameters For KIC 000893507

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5382^{+177}_{-144}	$3.917^{+0.672}_{-0.288}$	$-0.380^{+0.350}_{-0.250}$	$1.684^{+0.939}_{-0.939}$	$0.854^{+0.122}_{-0.110}$	$0.252^{+2.161}_{-0.180}$
	+3%/-3%	+17%/-7%	+92%/-66%	+56%/-56%	+14%/-13%	+858%/-71%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 000893507-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-401 ± 37	$5.40^{+2.57}_{-2.06}$	463^{+60}_{-75}	4454^{+621}_{-428}	5317^{+8586}_{-2871}
Alt.	-105 ± 29	$5.26^{+2.35}_{-2.09}$	462^{+61}_{-77}	3536^{+479}_{-333}	1422^{+2653}_{-807}

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 $A_{obs} \gg 1.0$

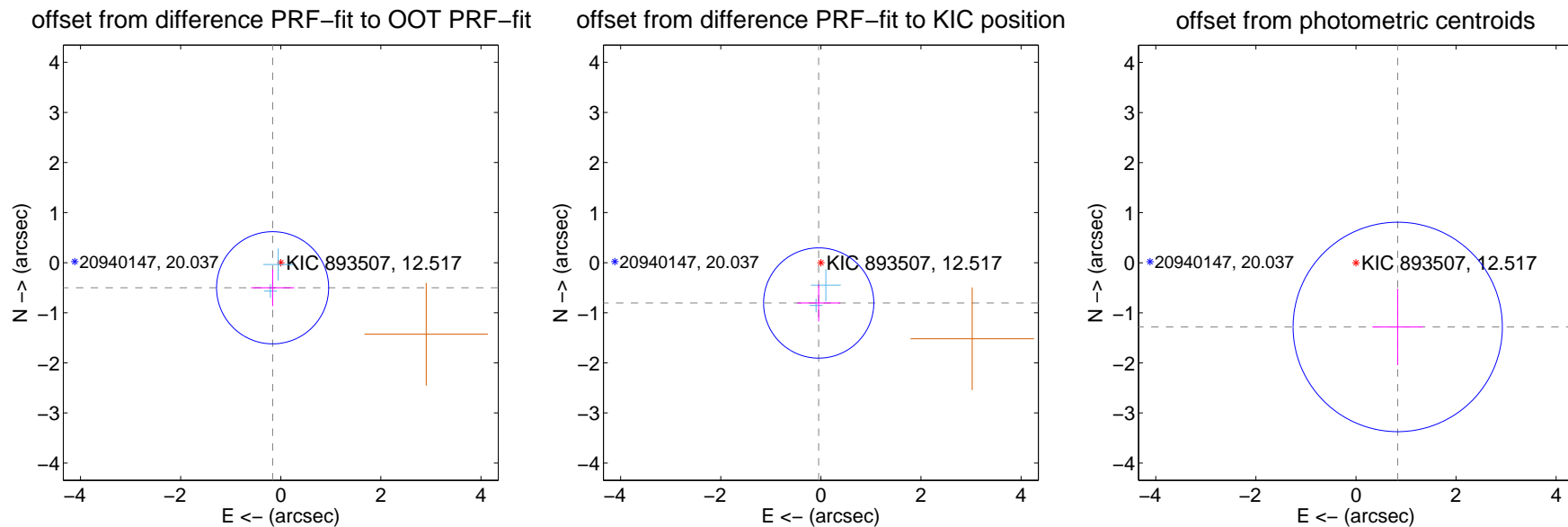
DV Centroid Data

Supplemental centroid analysis for 000893507-02. Kepler magnitude: 12.52. Transit SNR 9.99

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.31 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.526 ± 0.373	1.41	0.162 ± 0.430	-0.501 ± 0.367
PRF-fit source offset from KIC position	0.806 ± 0.367	2.20	0.043 ± 0.430	-0.805 ± 0.367
photometric centroid source offset	1.53 ± 0.70	2.19	-0.83 ± 0.51	-1.28 ± 0.76



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



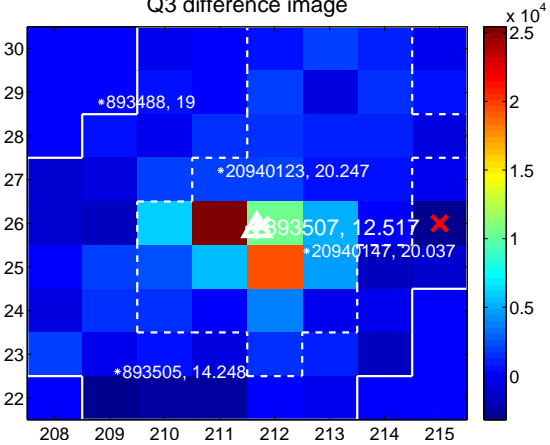
Q2 no difference image



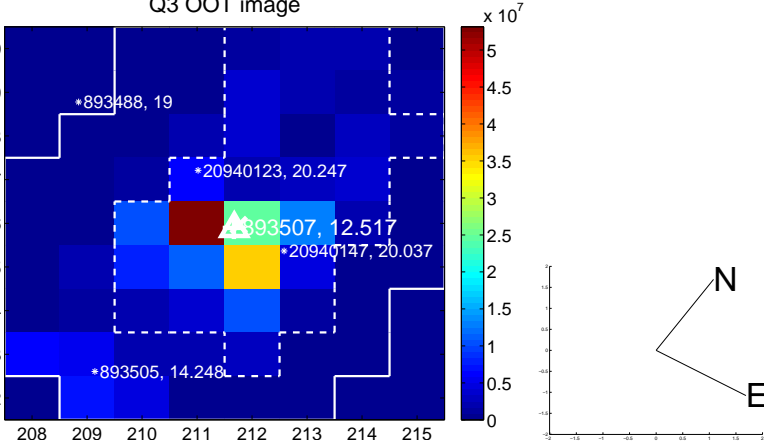
Q2 no OOT image



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.

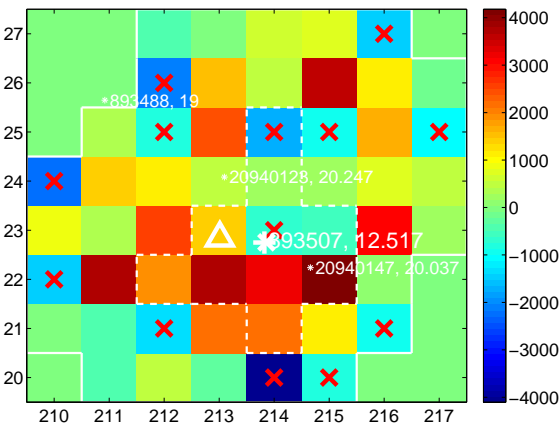
Q5 no difference image



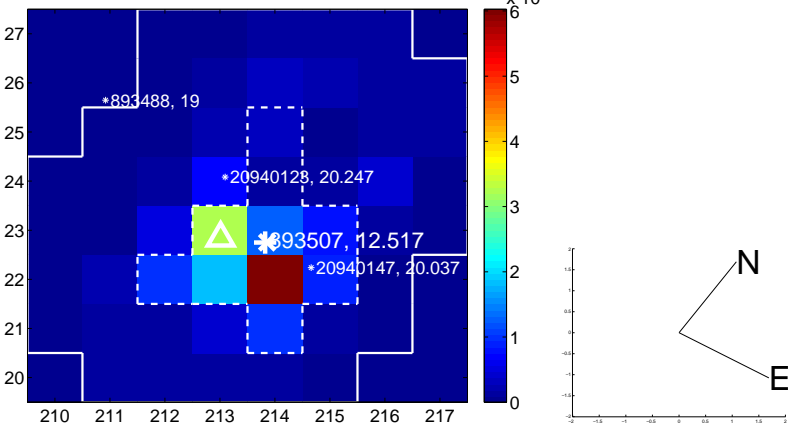
Q5 no OOT image



Q6 difference image. Poor Quality



Q6 OOT image



Q7 no difference image



Q7 no OOT image



Q8 no difference image



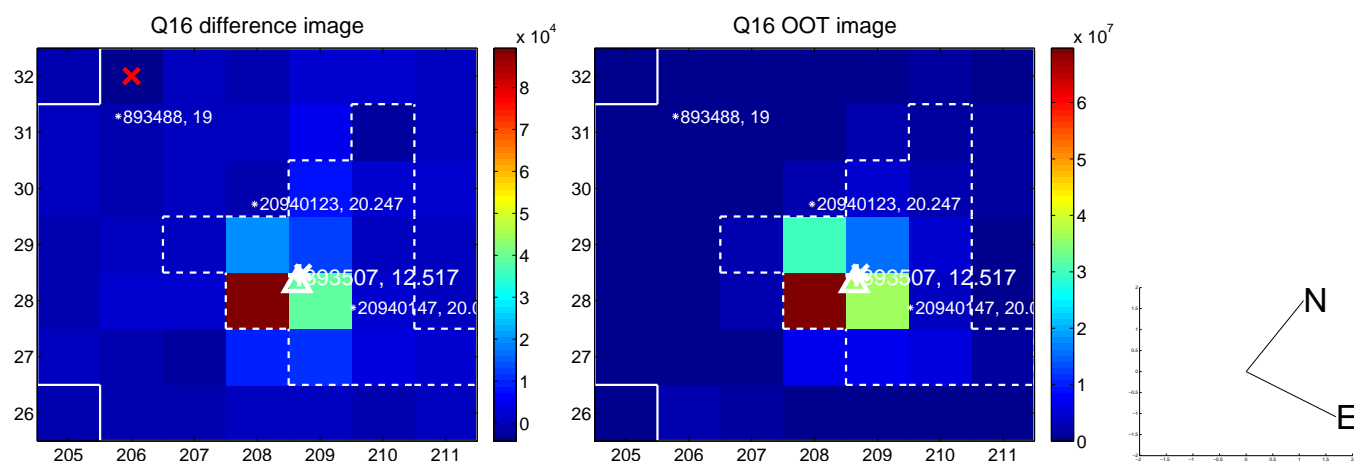
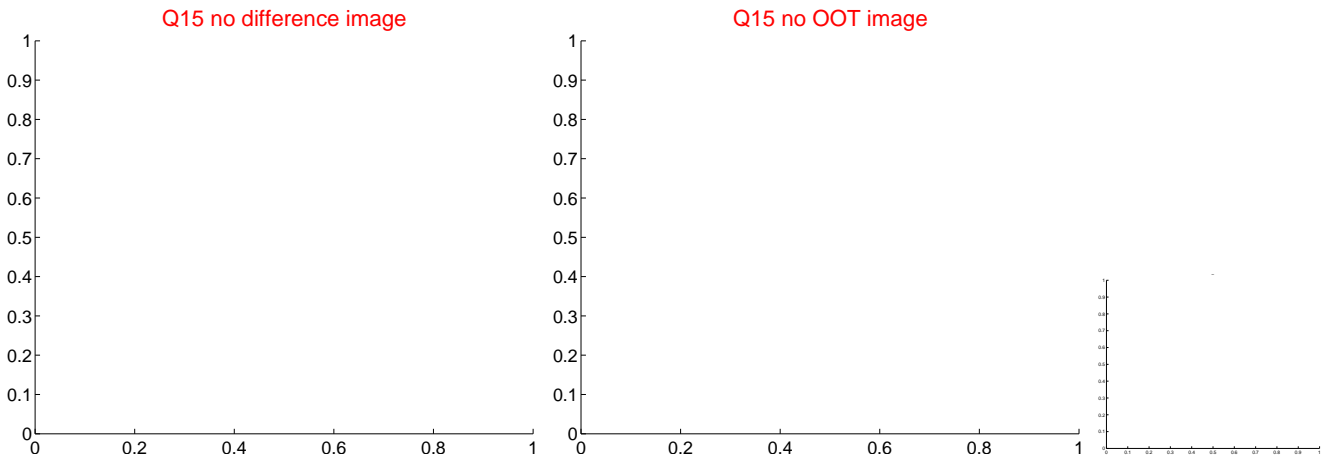
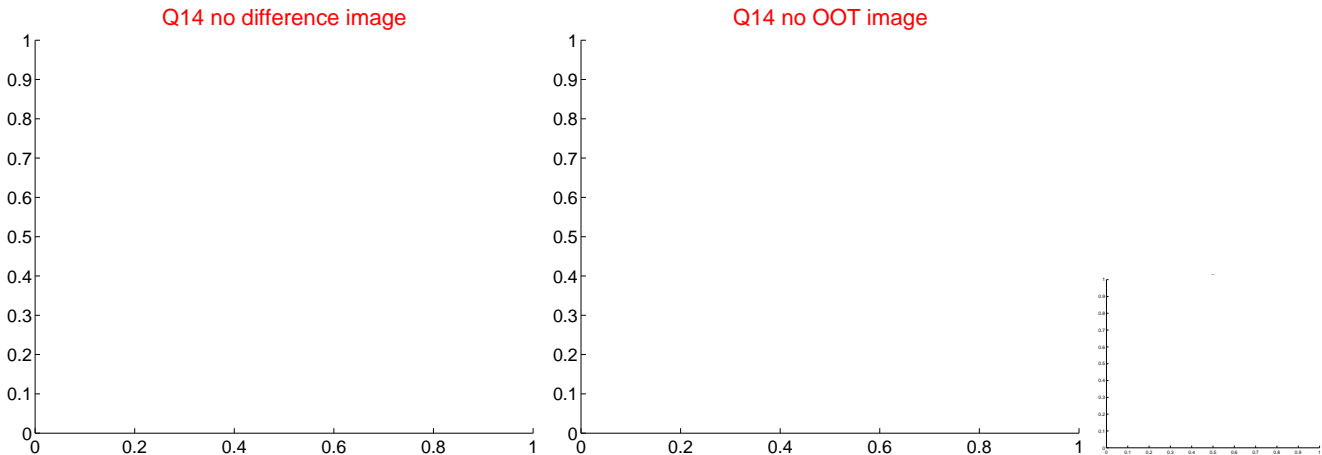
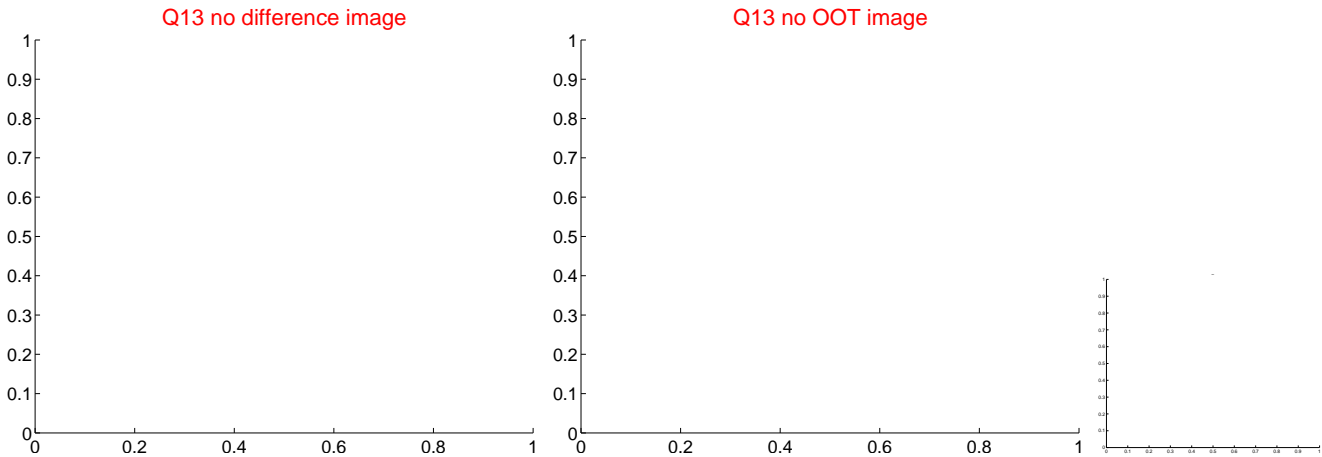
Q8 no OOT image



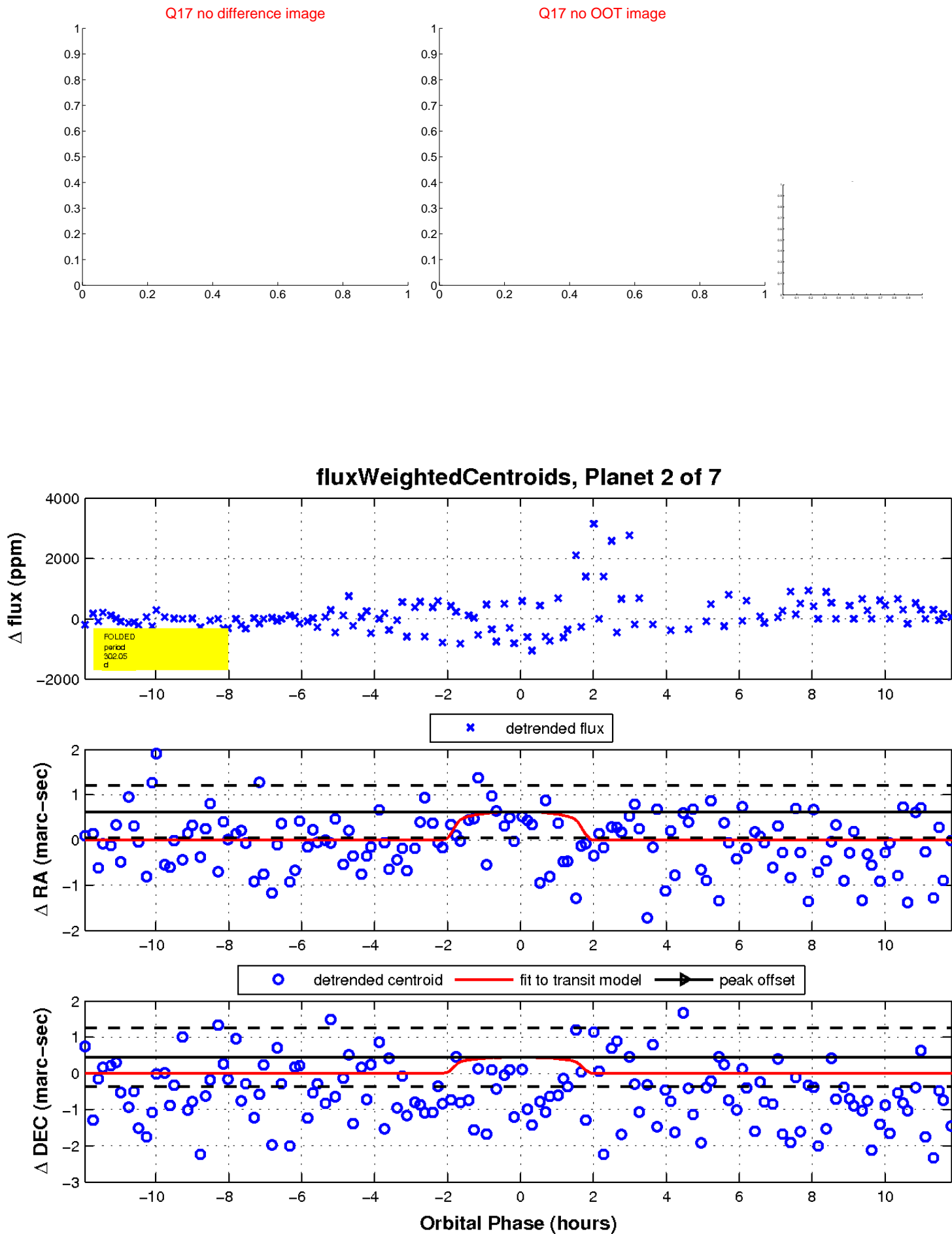
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

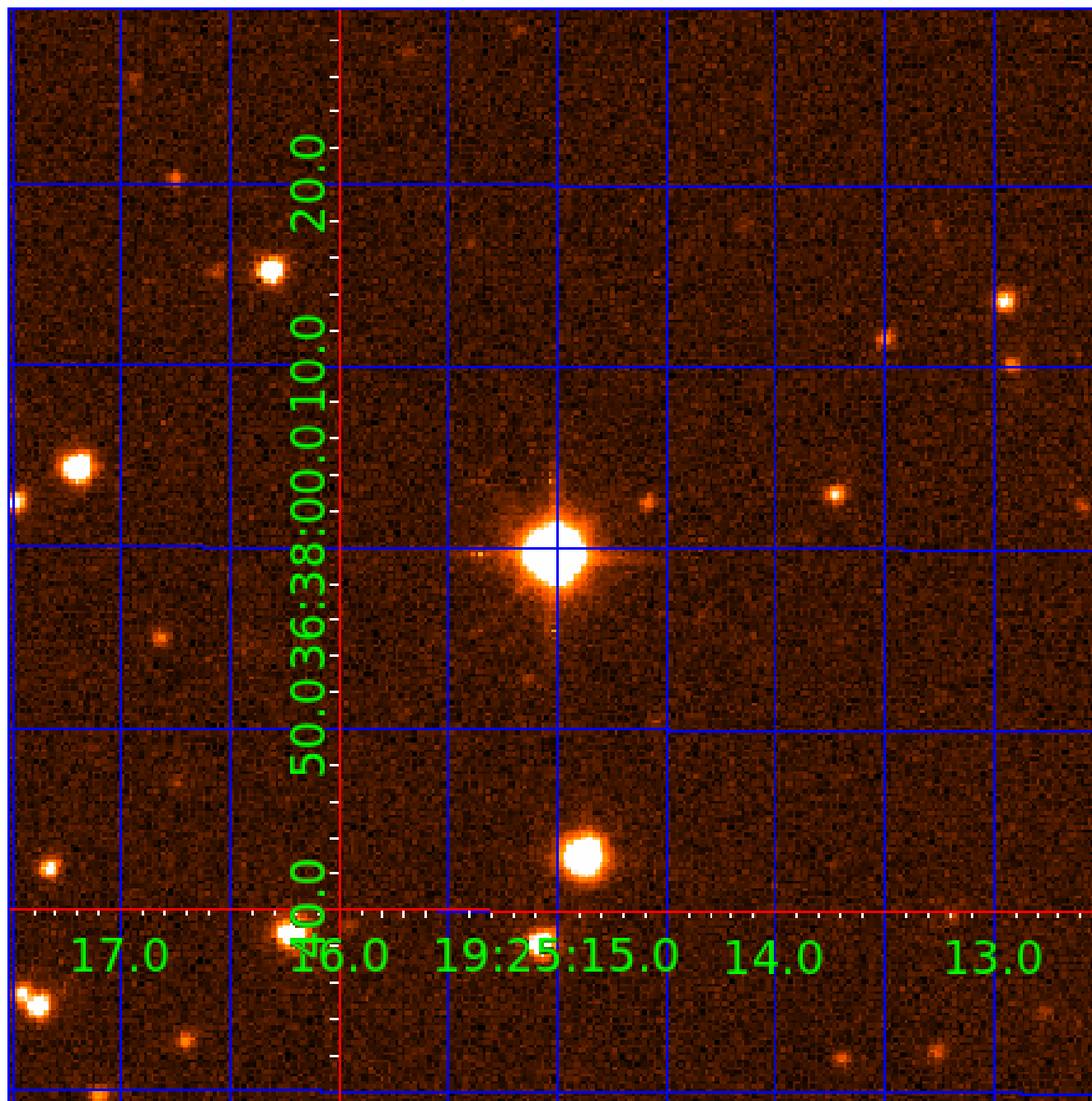


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 000893507

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})
000893507-02	OBS	No	302.045706	286.987124	902.0	3.983	14.2	10.0	1.68	5382	5.80	3.05
000893507-04	OBS	No	285.253570	251.517656	506.6	7.502	13.7	6.5	1.68	5382	4.49	3.29
000893507-05	OBS	No	308.893358	271.389711	757.1	7.801	11.3	8.4	1.68	5382	5.94	2.96
000893507-06	OBS	No	279.221260	368.703012	404.1	4.684	11.6	6.7	1.68	5382	3.74	3.39
000893507-07	OBS	No	318.782248	427.805507	493.1	4.667	10.6	8.0	1.68	5382	4.08	2.84

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
000893507-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—CENT_FEW_DIFFS
000893507-04	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
000893507-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL_SKYE_ZUMA—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
000893507-06	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—INCONSISTENT_TRANS—CENT_FEW_DIFFS
000893507-07	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST

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

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

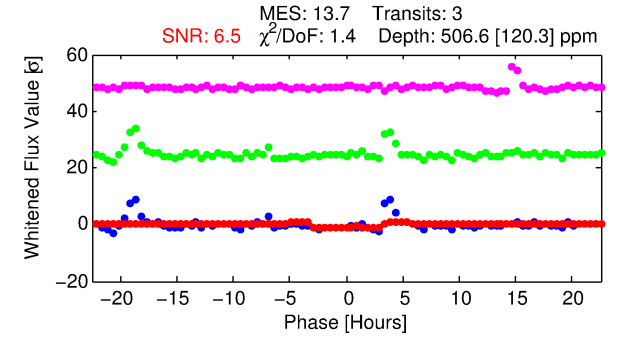
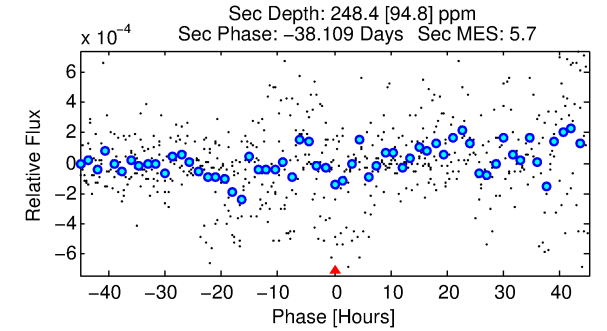
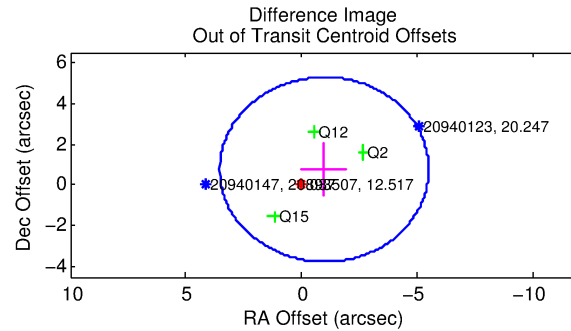
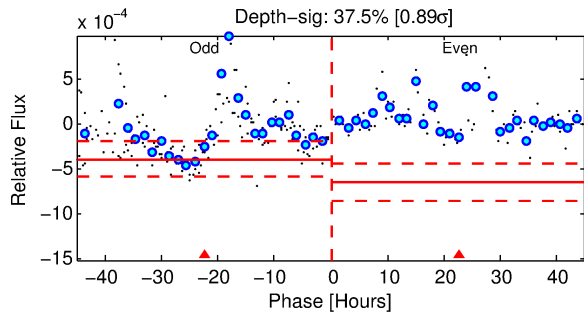
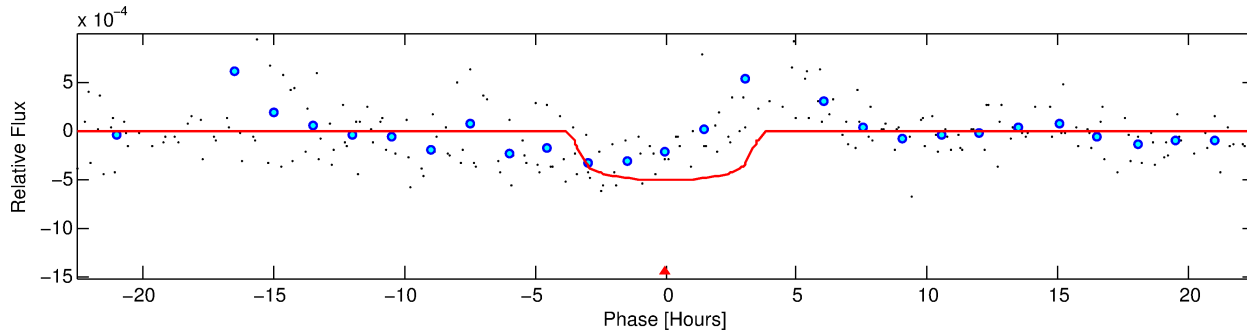
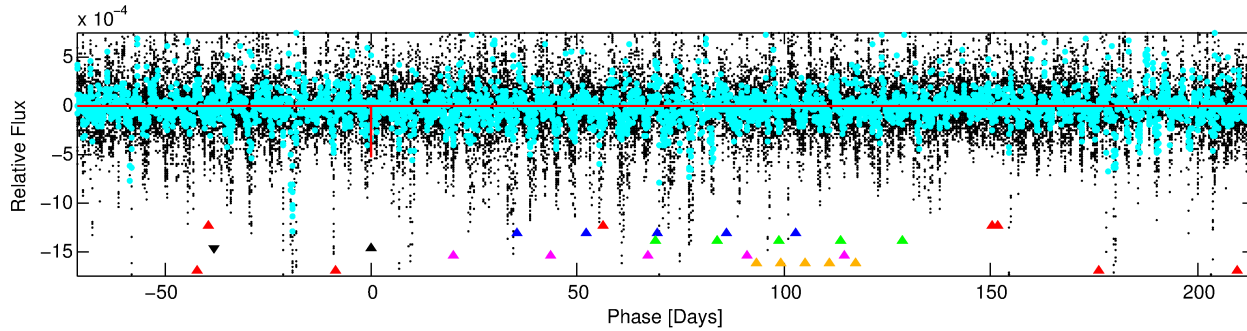
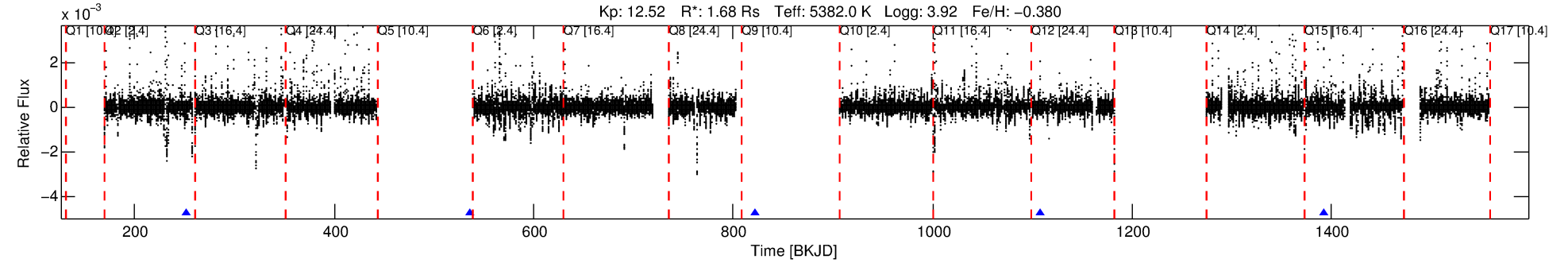
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 000893507-04

No Significant Match Found

DV One-Page Summary

KIC: 893507 Candidate: 4 of 7 Period: 285.254 d



DV Fit Results:

Period = 285.25357 [0.00485] d
Epoch = 251.5177 [0.0147] BKJD
Rp/R* = 0.0244 [0.0050]
a/R* = 147.20 [93.72]
b = 0.89 [0.15]
Seff = 3.29 [3.63]
Teq = 343 [95] K
Rp = 4.49 [2.67] Re
a = 0.8049 [0.5117] AU
Ag = 4396.55 [5417.75] [0.81σ]
Teffp = 4324 [624] K [6.30σ]

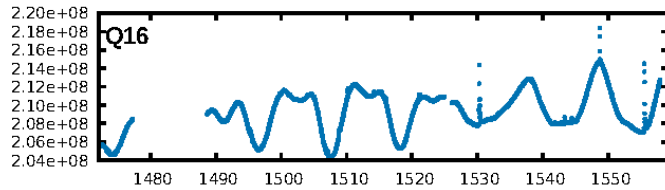
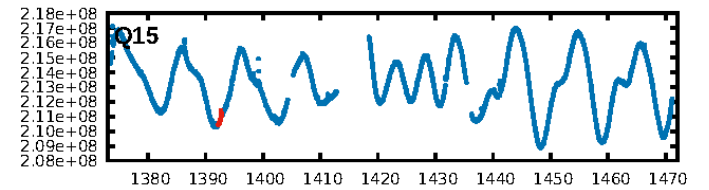
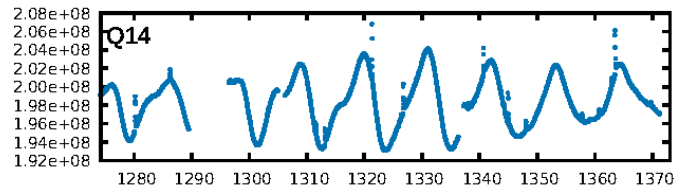
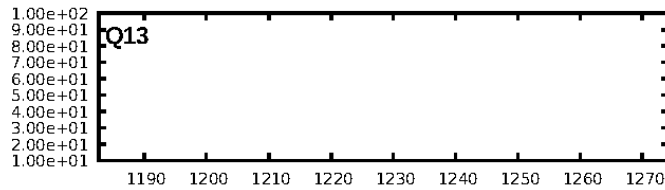
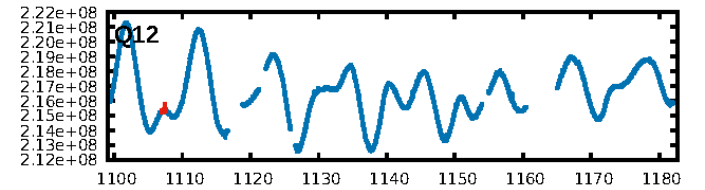
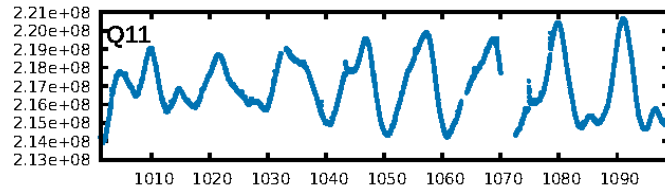
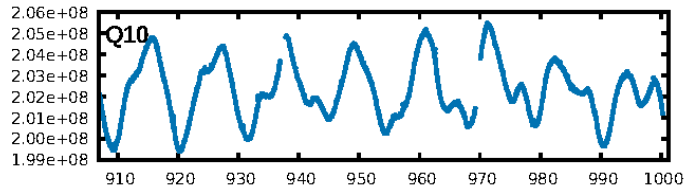
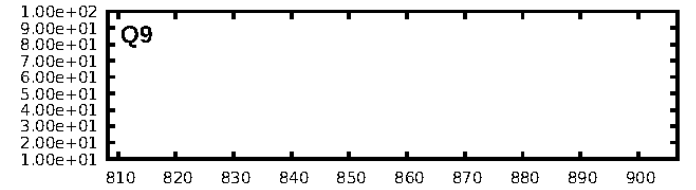
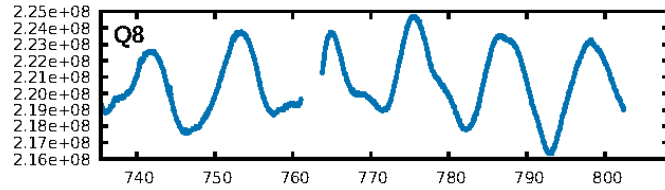
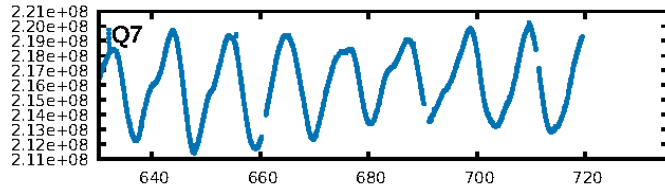
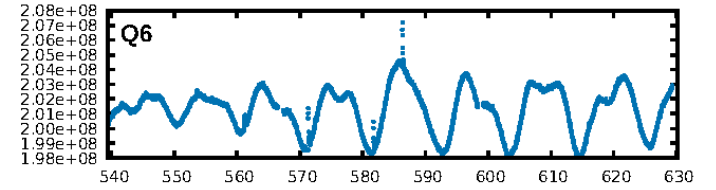
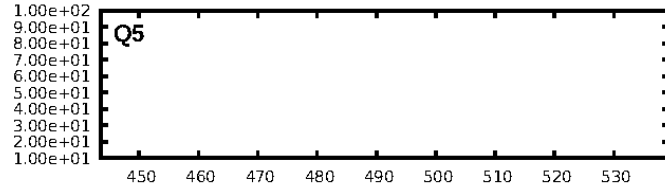
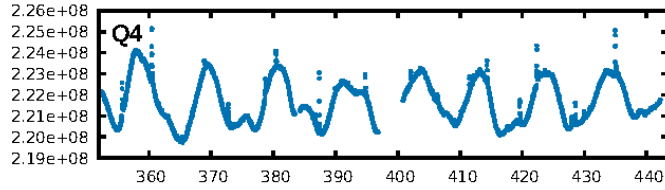
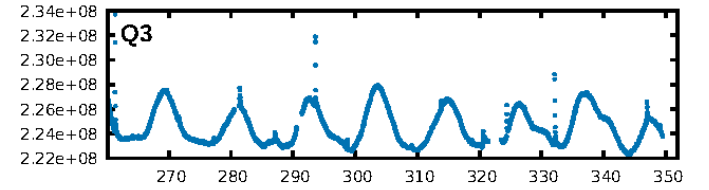
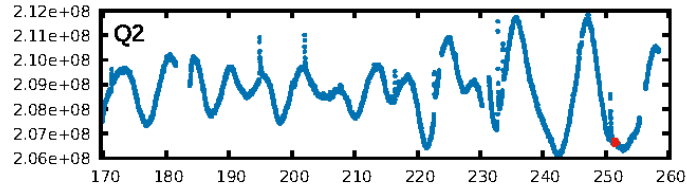
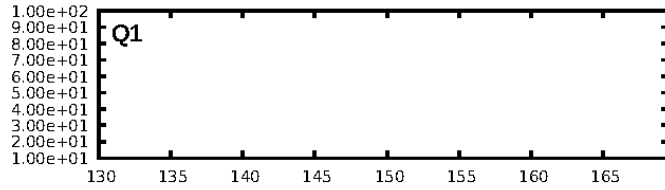
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [16.37σ]
LongPeriod-sig: 100.0% [35.85σ]
ModelChiSquare2-sig: 6.4%
ModelChiSquareGof-sig: 94.5%
Bootstrap-pfa: 4.02e-13
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.5131
Centroid-sig: 0.9%
Centroid-so: 2.066 arcsec [1.61σ]
OotOffset-rm: 1.241 arcsec [0.82σ]
KicOffset-rm: 1.290 arcsec [0.96σ]
OotOffset-st: 1/1/1/0 [3]
KicOffset-st: 1/1/1/0 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

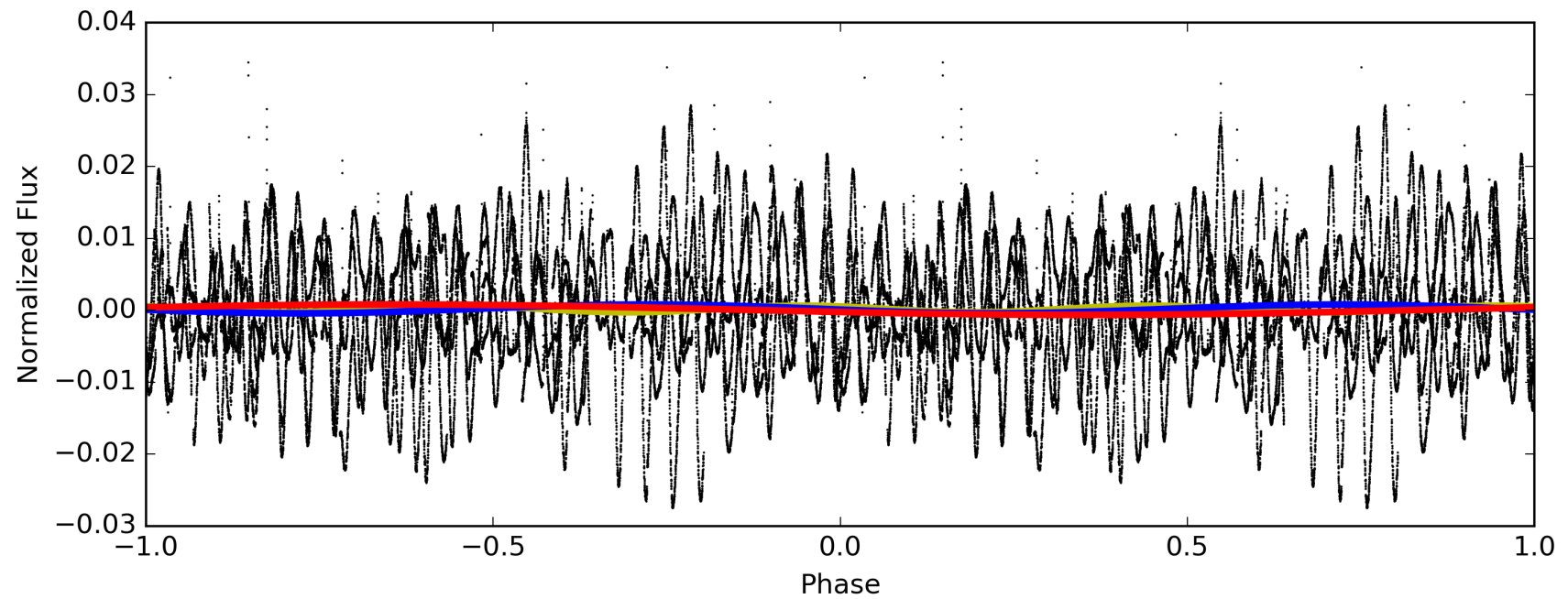
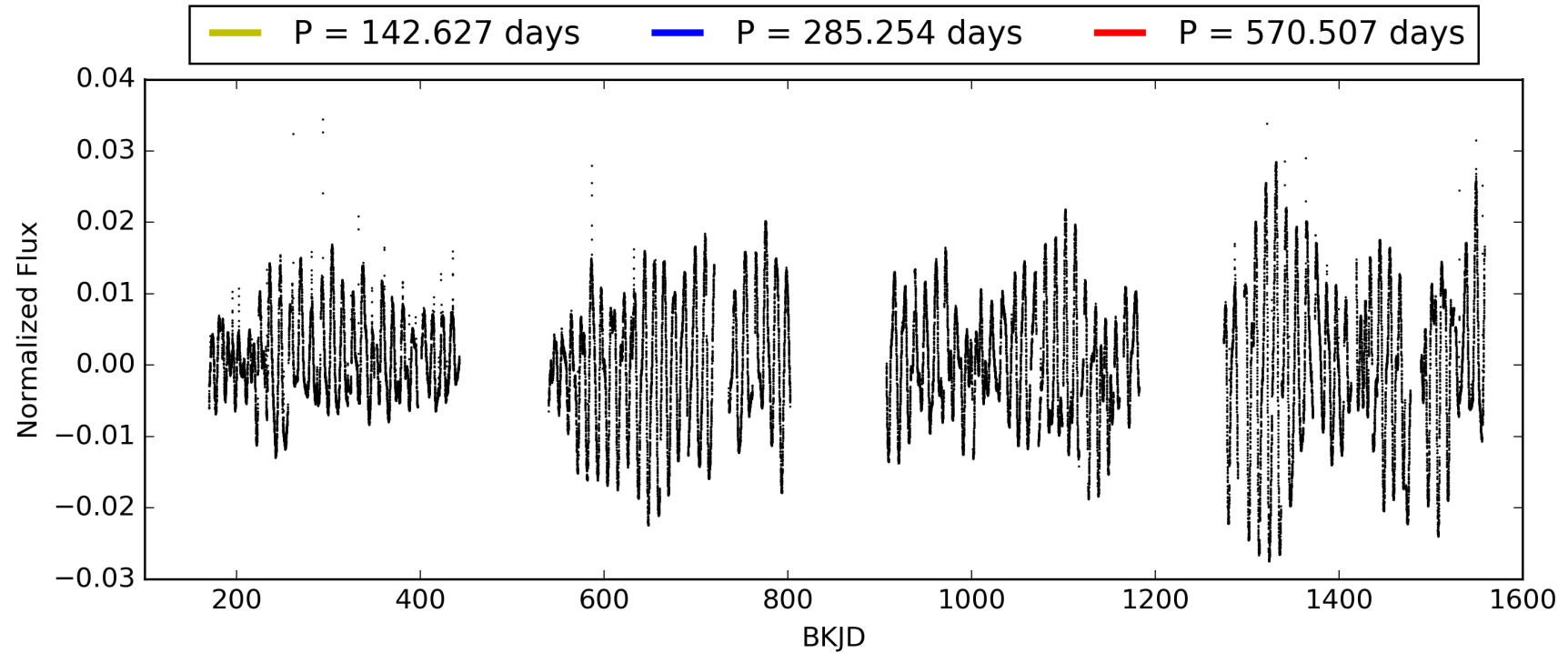
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:04:32 Z

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

TCE 000893507-04, PDC Light Curves

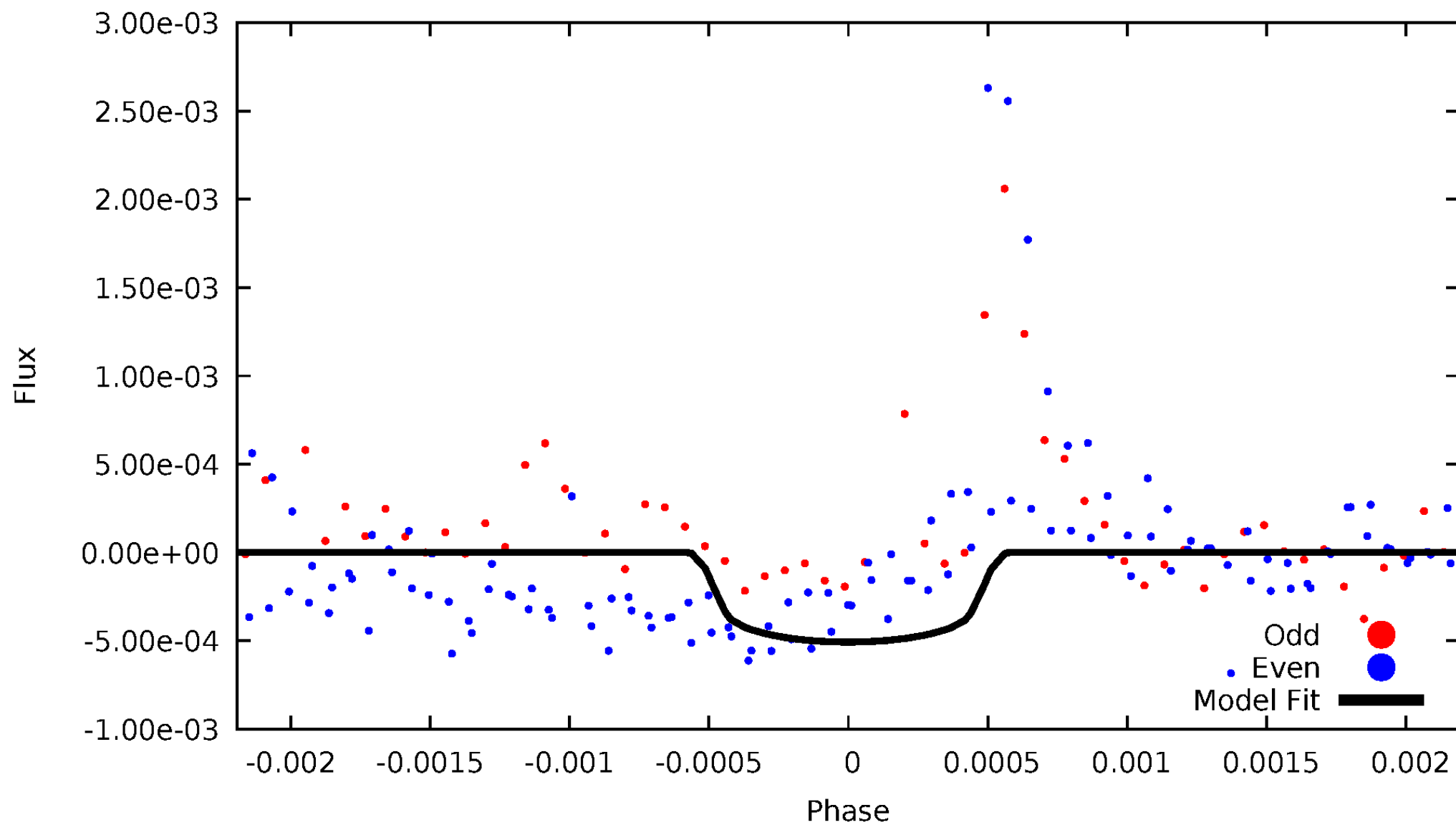


TCE 000893507-04



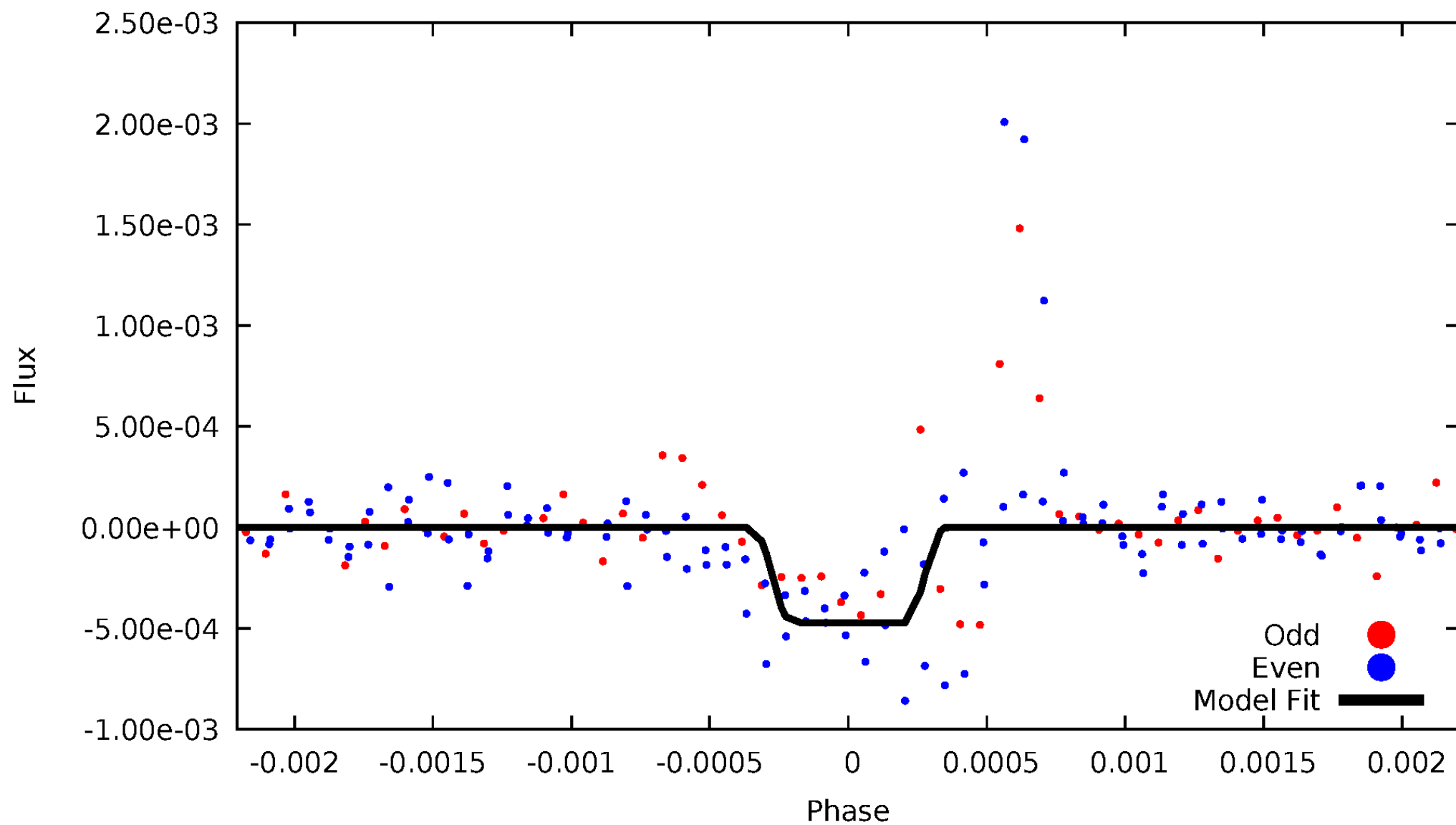
DV Odd/Even

TCE 000893507-04



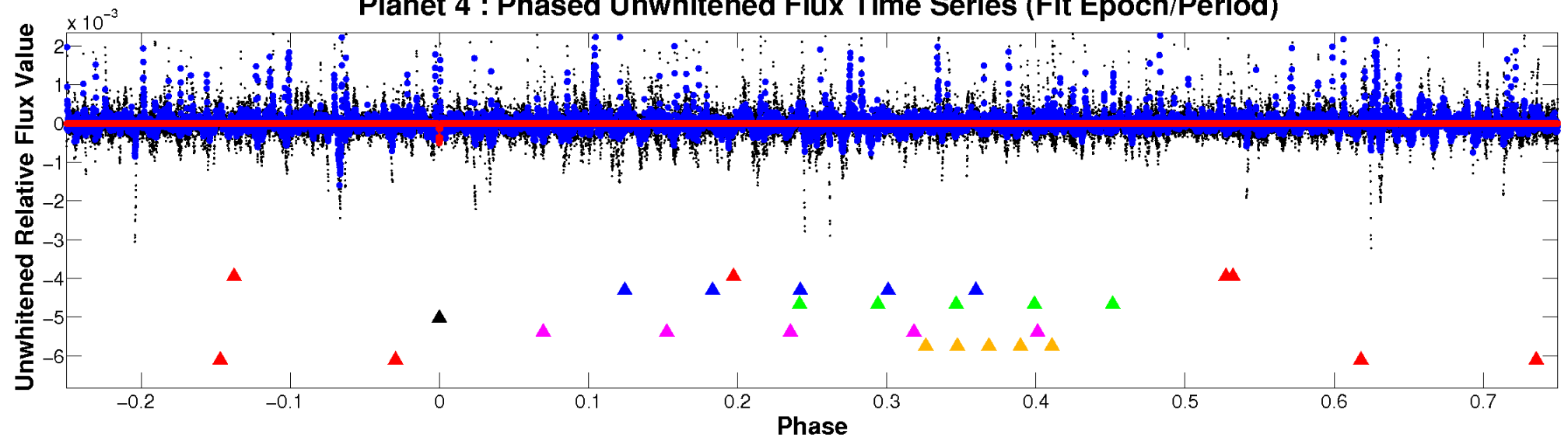
ALT Odd/Even

TCE 000893507-04

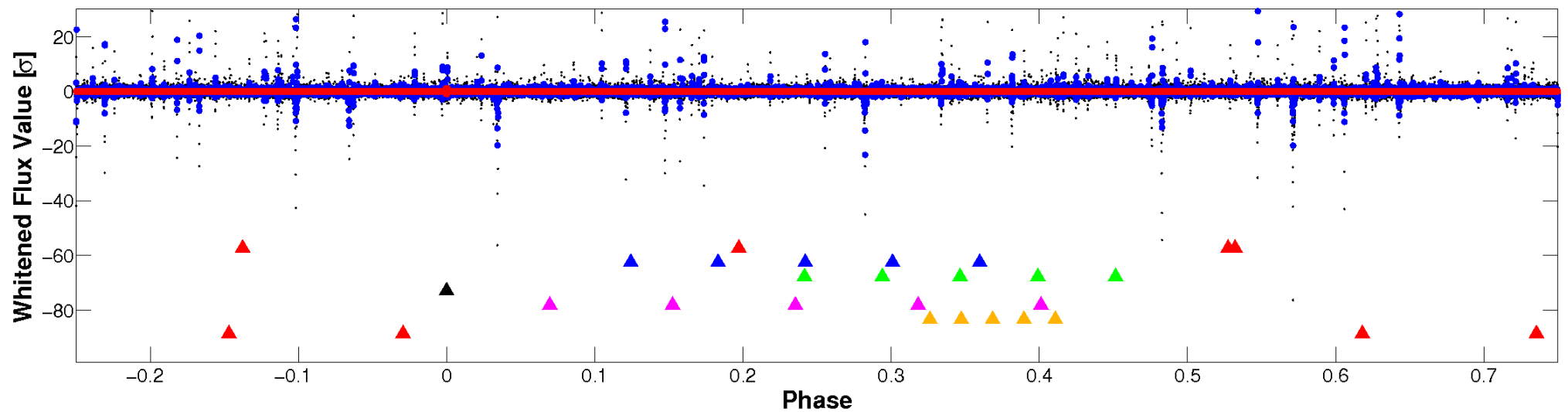


Non-Whitened Vs. Whitened Light Curve

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

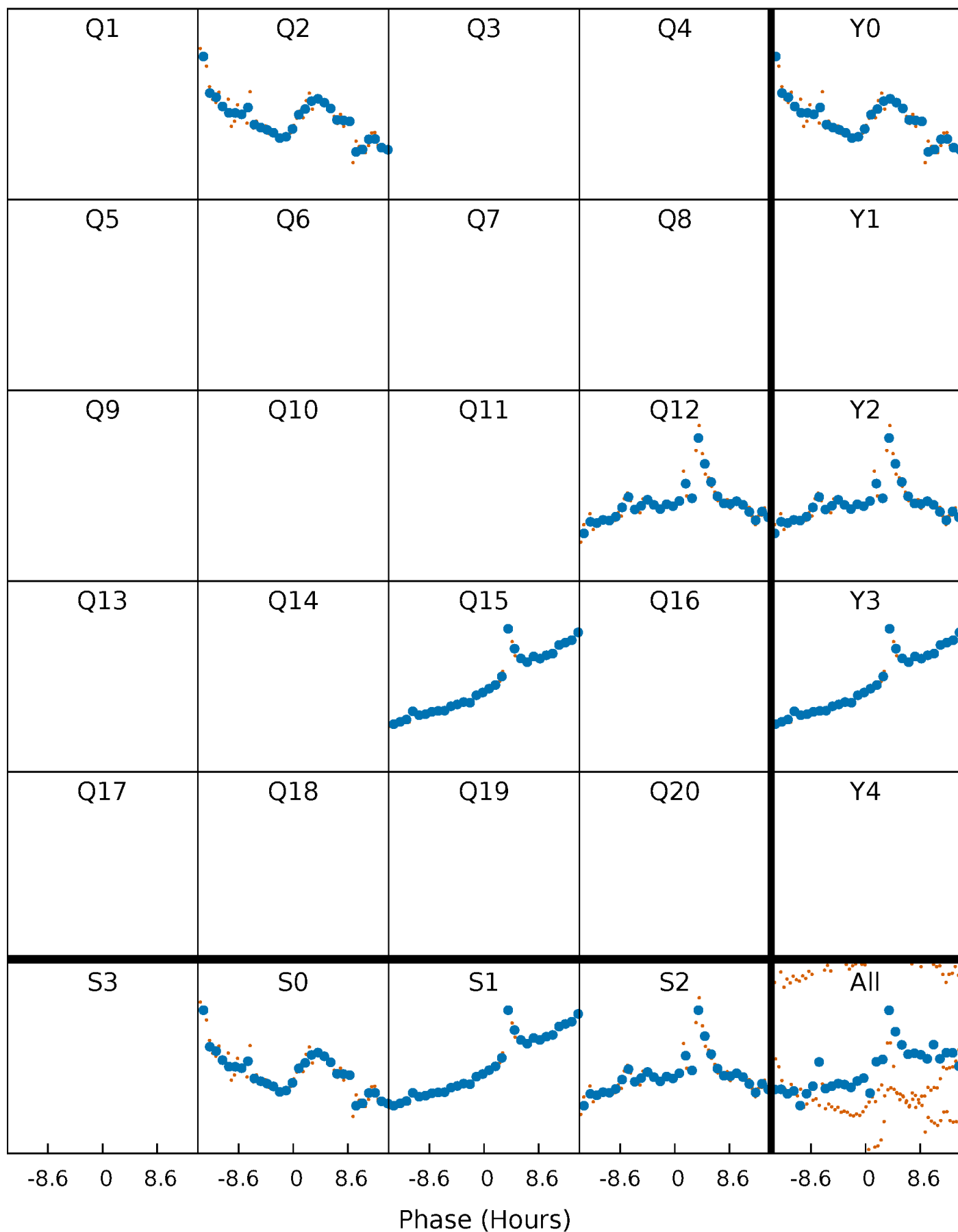


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



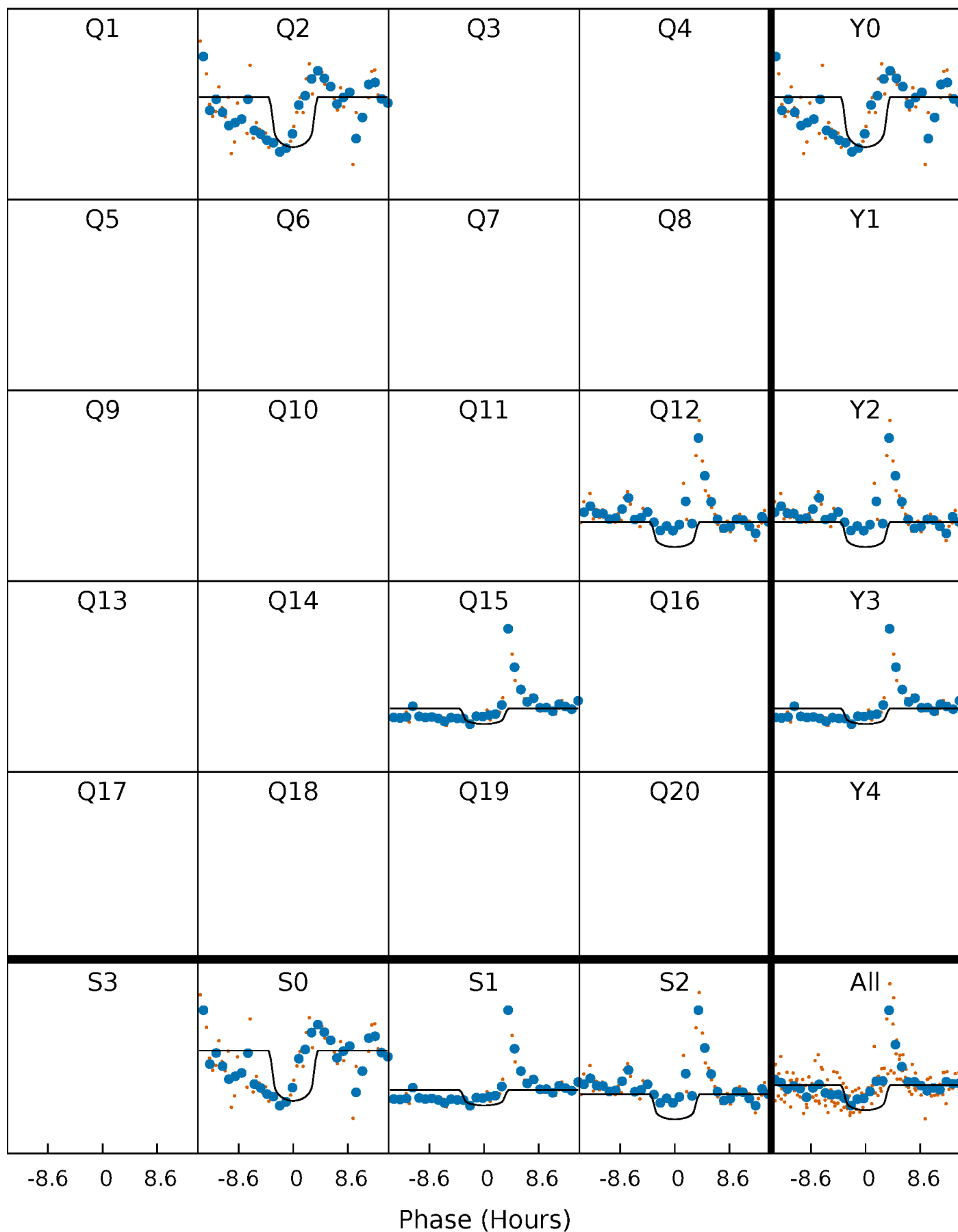
PDC Quarter-Phased Transit Curves

TCE 000893507-04 $P=285.253570$ Days $T_0=251.517656$ (BKJD)



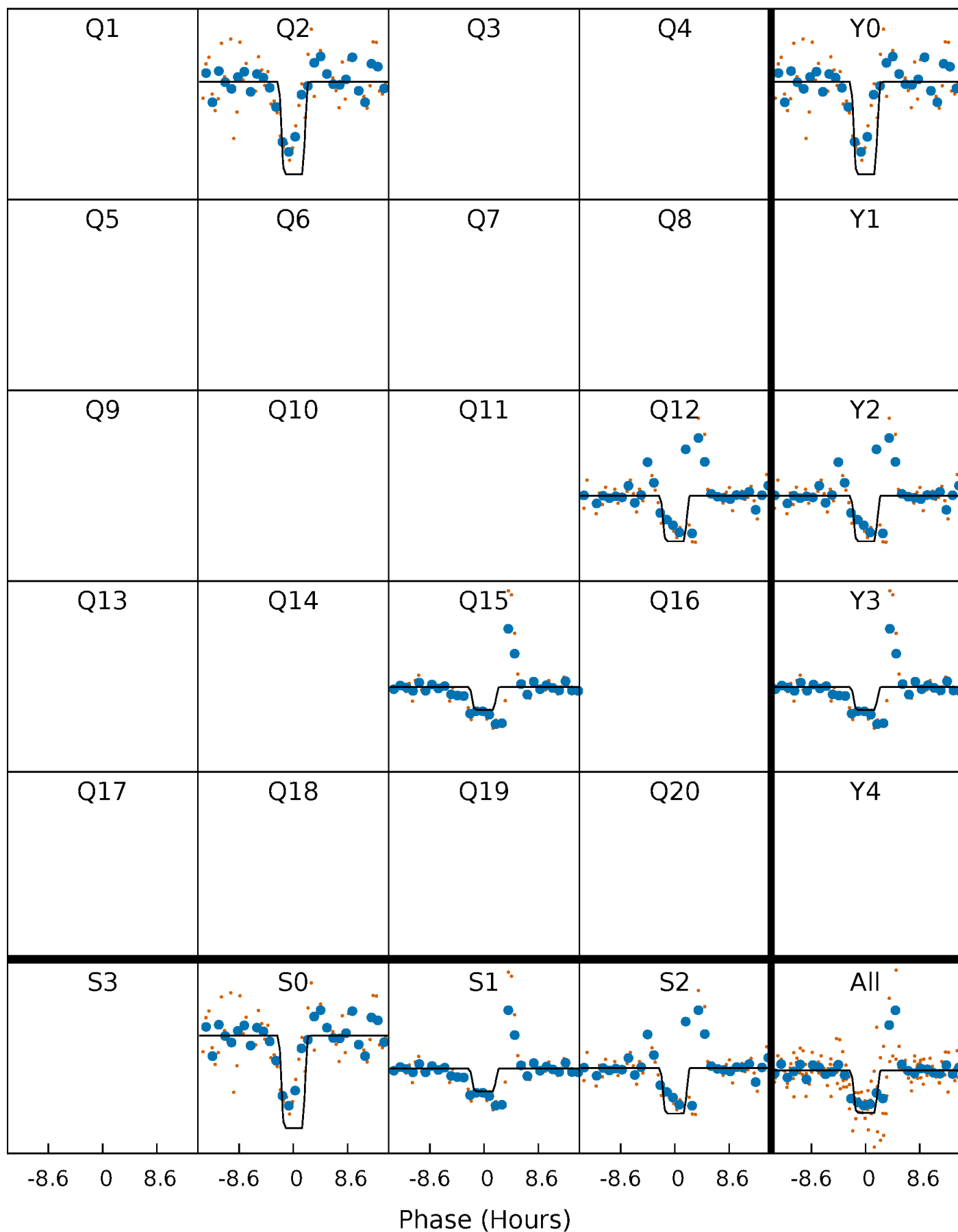
DV Quarter-Phased Transit Curves

TCE 000893507-04 P=285.253570 Days $T_0=251.517656$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

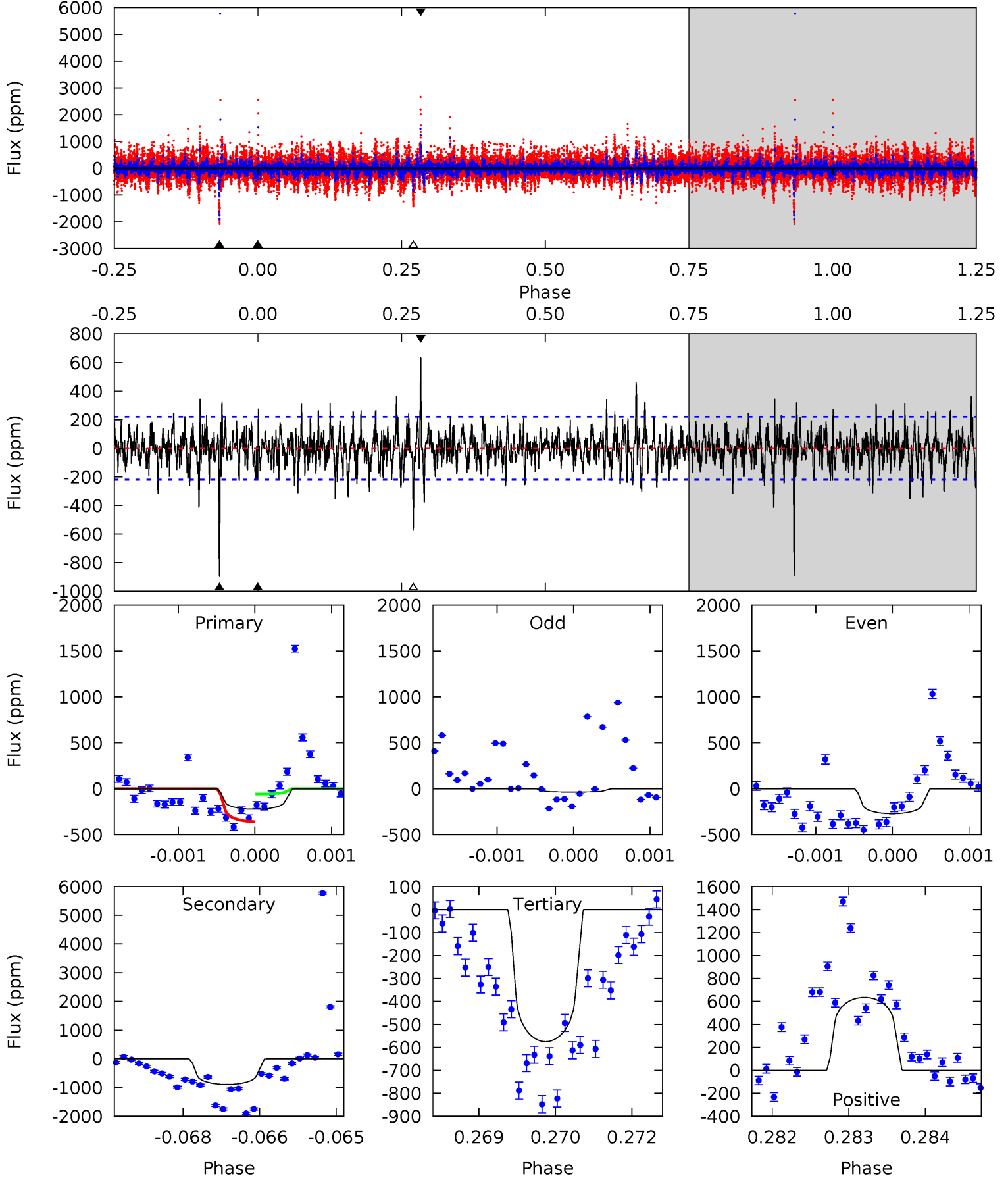
TCE 000893507-04 P=285.252498 Days $T_0=251.504231$ (BKJD)



DV Model-Shift Uniqueness Test

000893507-04, $P = 285.253570$ Days, $E = 251.517656$ Days

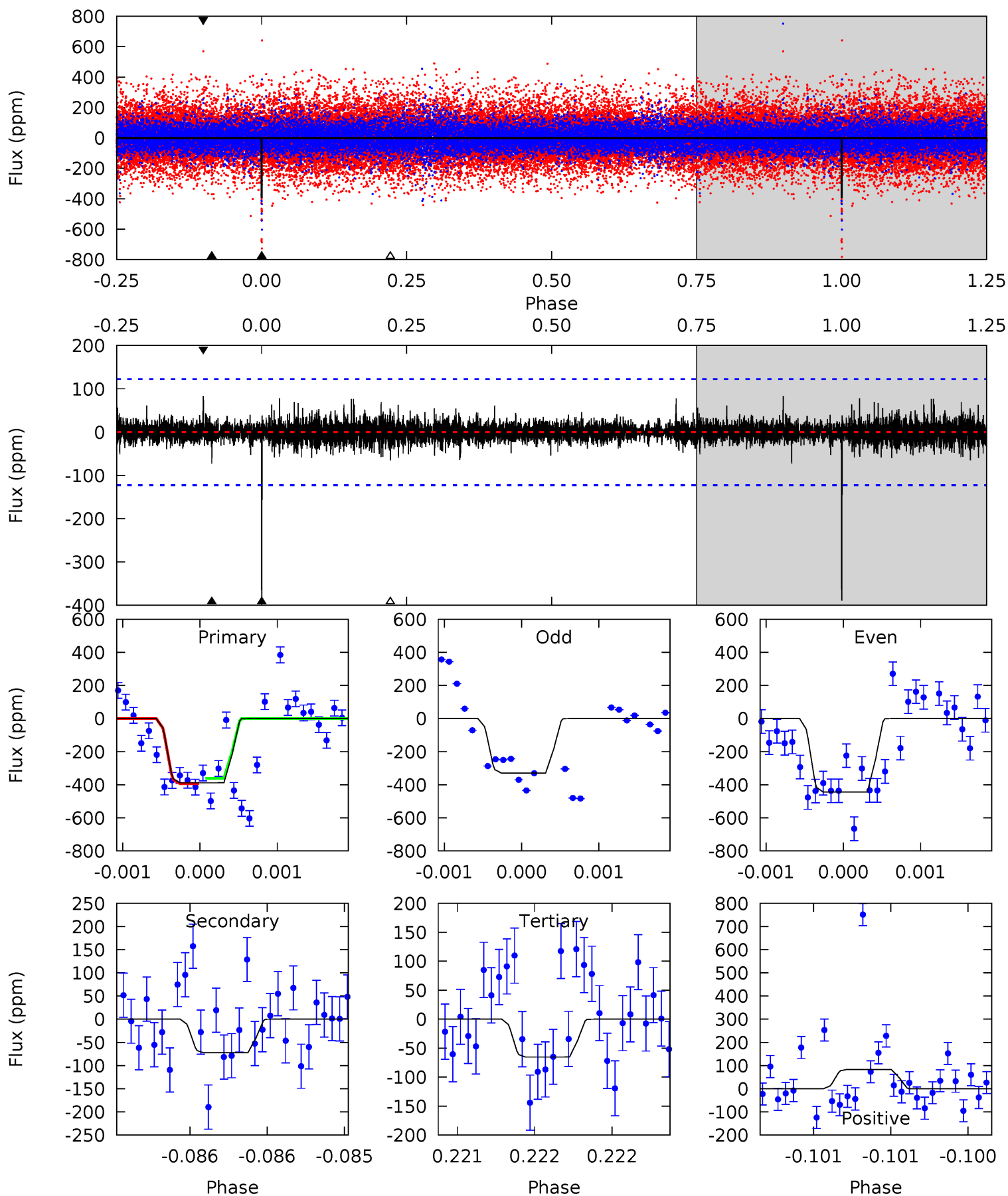
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.51	22.0	14.2	15.7	5.43	3.25	2.40	-8.70	-10.2	7.79	6.30	2.18	0.73	0.42	3.74



Alt Model-Shift Uniqueness Test

000893507-04, P = 285.252498 Days, E = 251.504231 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.5	3.27	2.95	3.76	5.53	3.41	0.65	14.6	13.8	0.32	-0.49	2.44	1.45	0.18	0.70



Stellar Parameters For KIC 000893507

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5382^{+177}_{-144}	$3.917^{+0.672}_{-0.288}$	$-0.380^{+0.350}_{-0.250}$	$1.684^{+0.939}_{-0.939}$	$0.854^{+0.122}_{-0.110}$	$0.252^{+2.161}_{-0.180}$
	+3%/-3%	+17%/-7%	+92%/-66%	+56%/-56%	+14%/-13%	+858%/-71%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 000893507-04 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-890 ± 40	$4.21^{+1.80}_{-1.41}$	471^{+65}_{-75}	5920^{+728}_{-544}	18194^{+22436}_{-9094}
Alt.	-73 ± 22	$3.71^{+1.67}_{-1.28}$	470^{+66}_{-73}	3738^{+447}_{-343}	1805^{+2723}_{-1007}

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

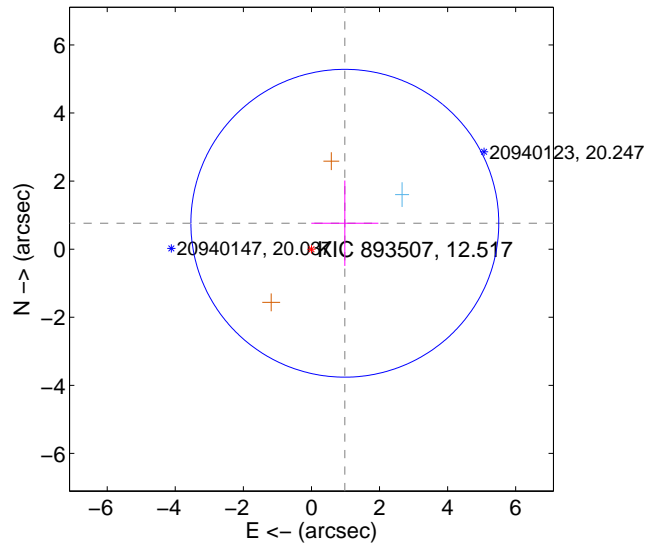
Supplemental centroid analysis for 000893507-04. Kepler magnitude: 12.52. Transit SNR 6.53

There are 1 quarters with good PRF difference image offsets

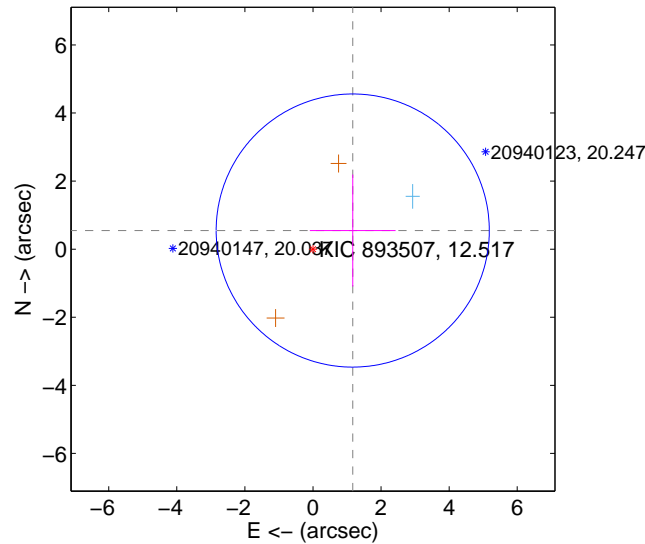
The direct PRF centroid is offset from the target star catalog position by about 0.47 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.241 ± 1.507	0.82	-0.980 ± 0.985	0.761 ± 1.256
PRF-fit source offset from KIC position	1.290 ± 1.337	0.96	-1.168 ± 1.260	0.547 ± 1.644
photometric centroid source offset	2.07 ± 1.29	1.61	1.51 ± 0.78	-1.41 ± 1.68

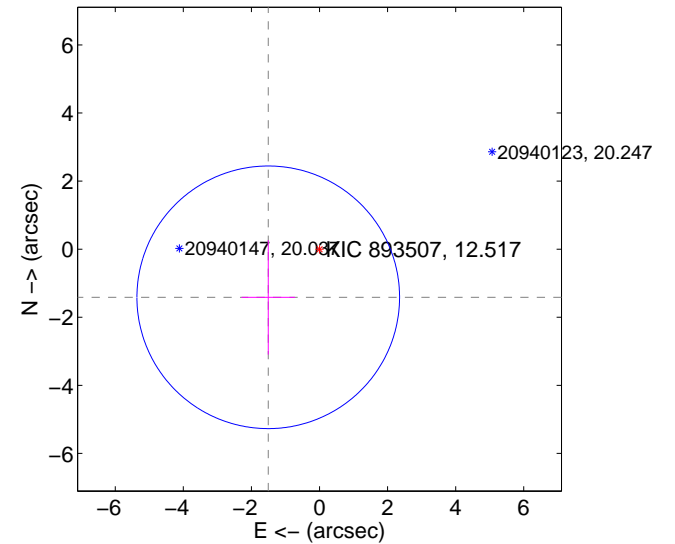
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

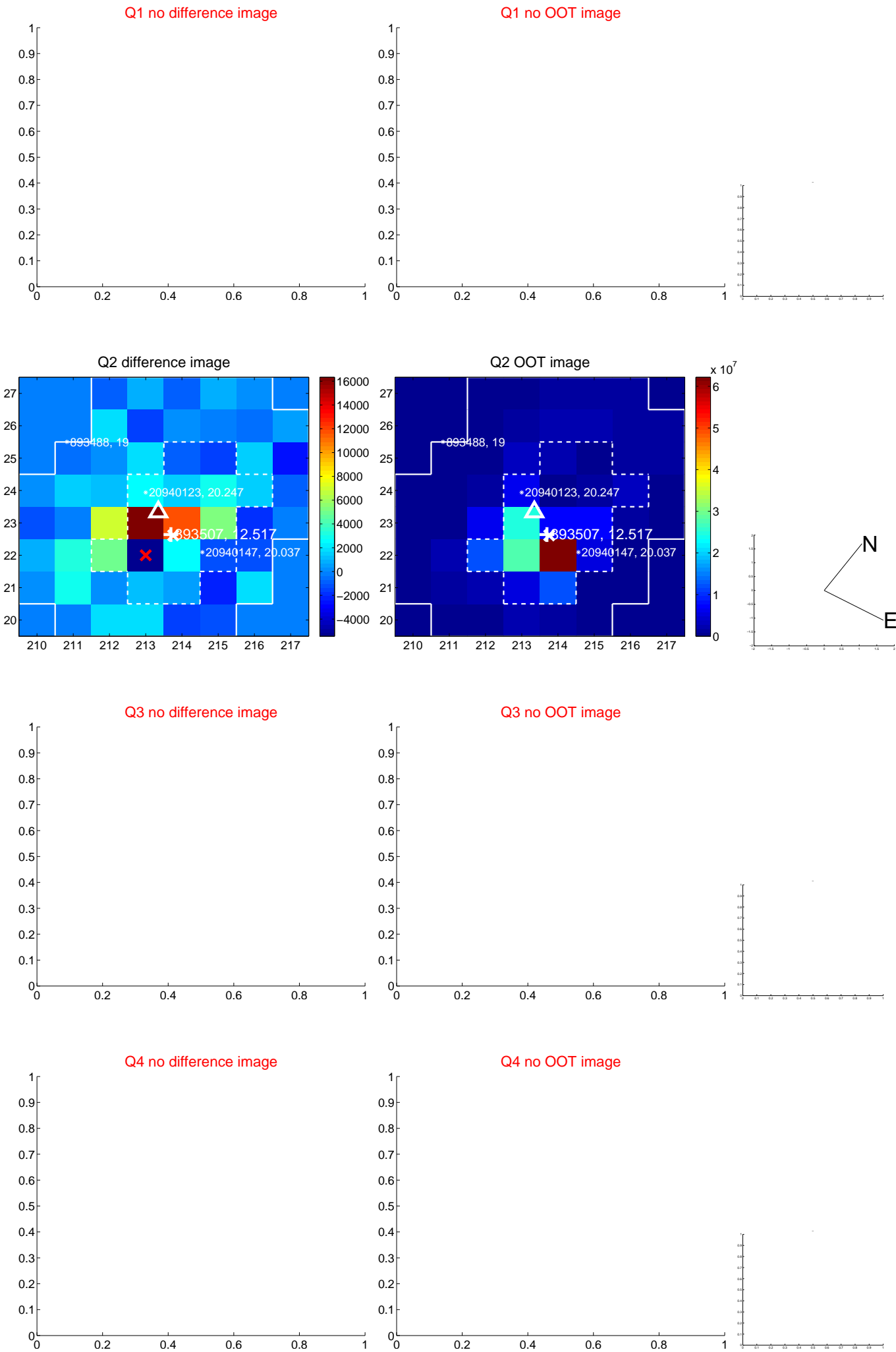


offset from photometric centroids



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.

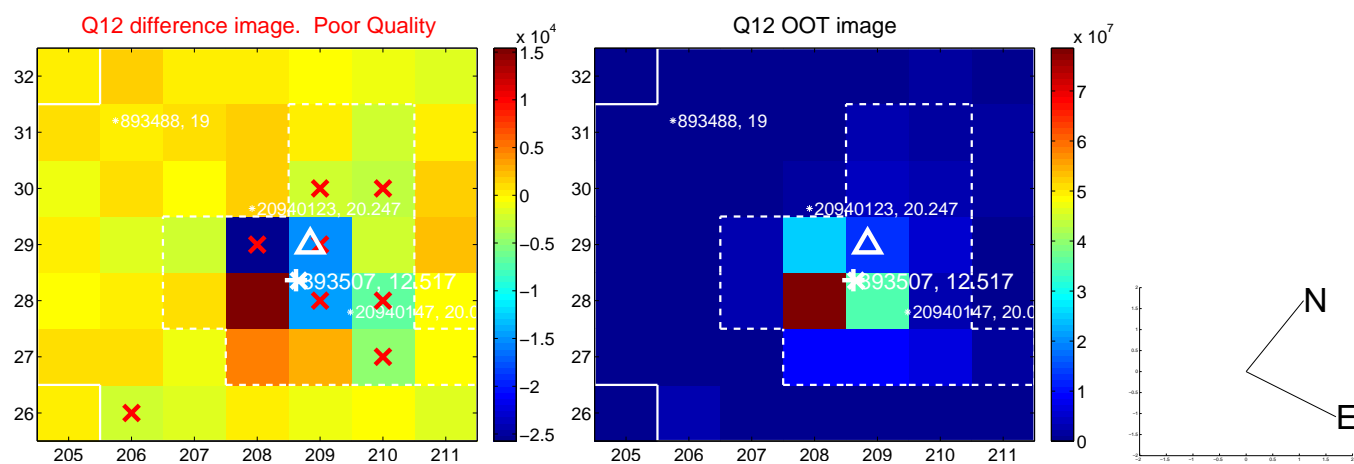
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



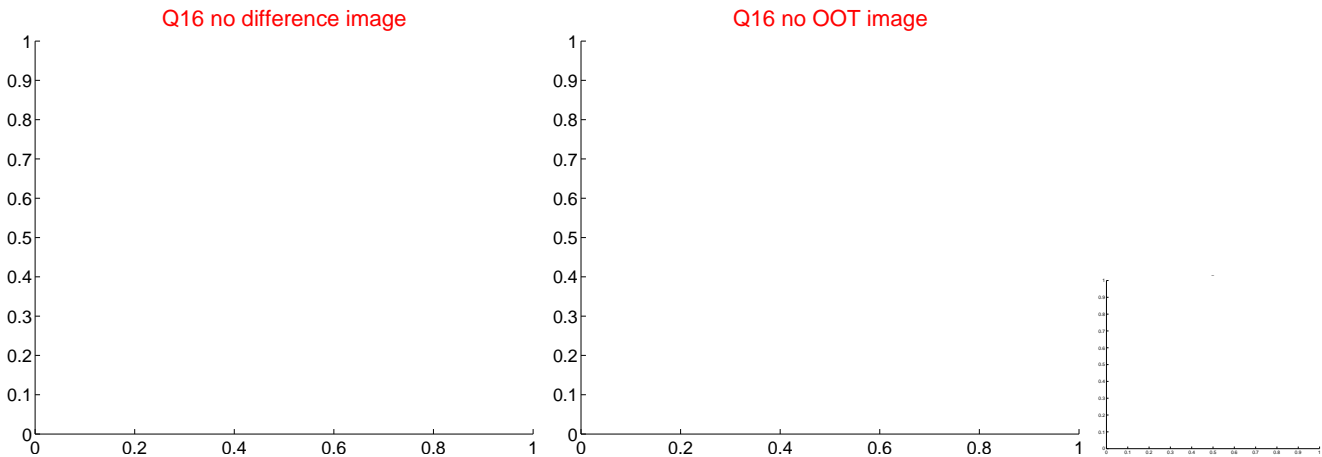
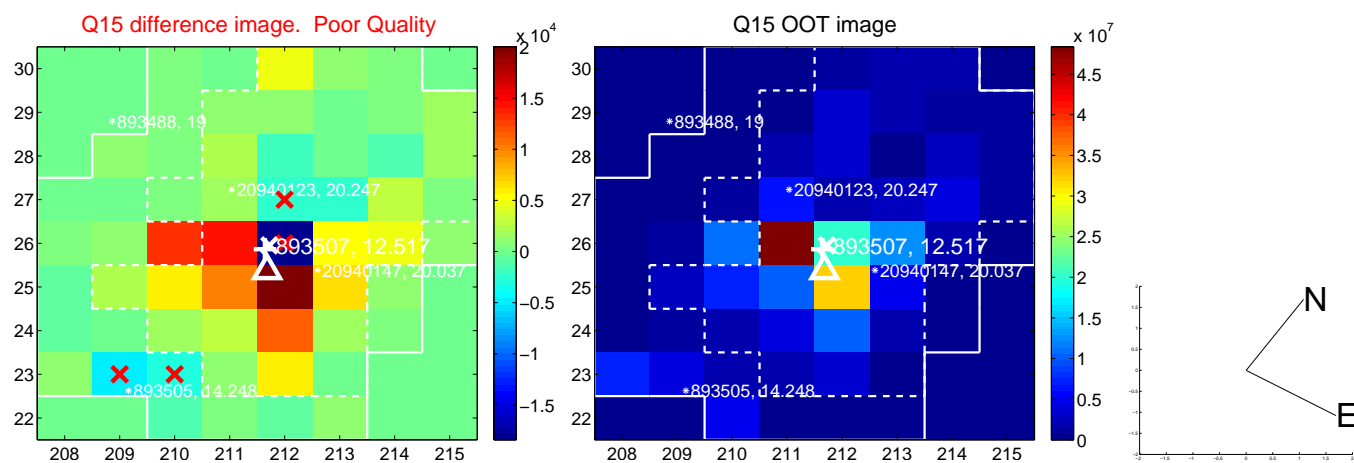
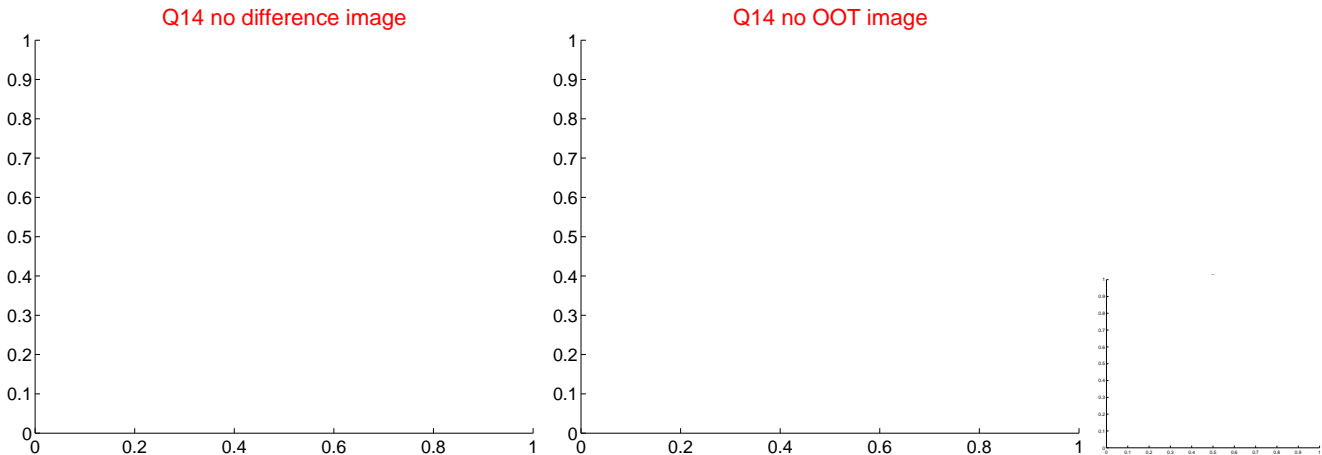
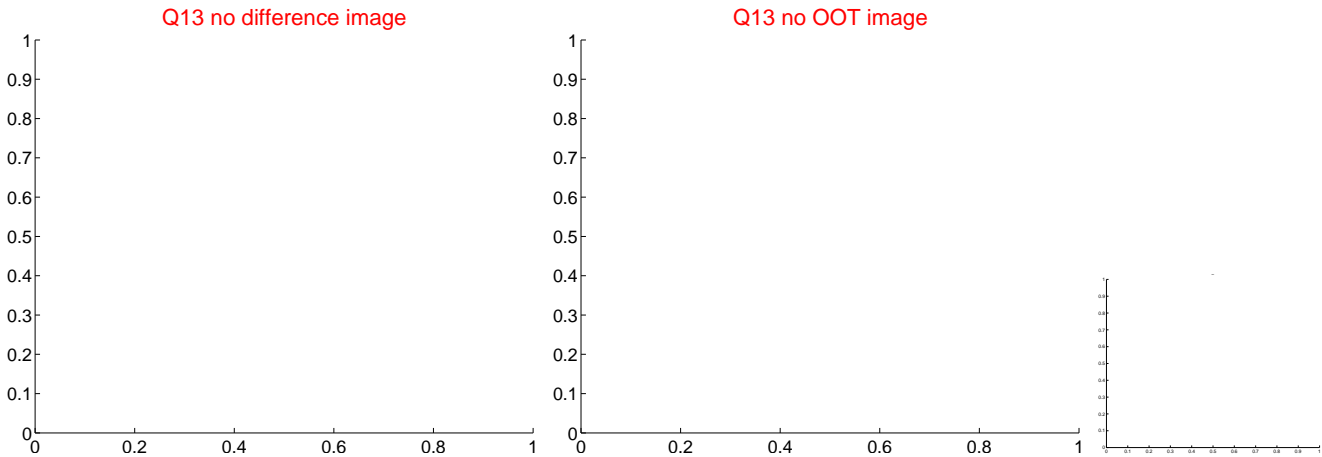
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



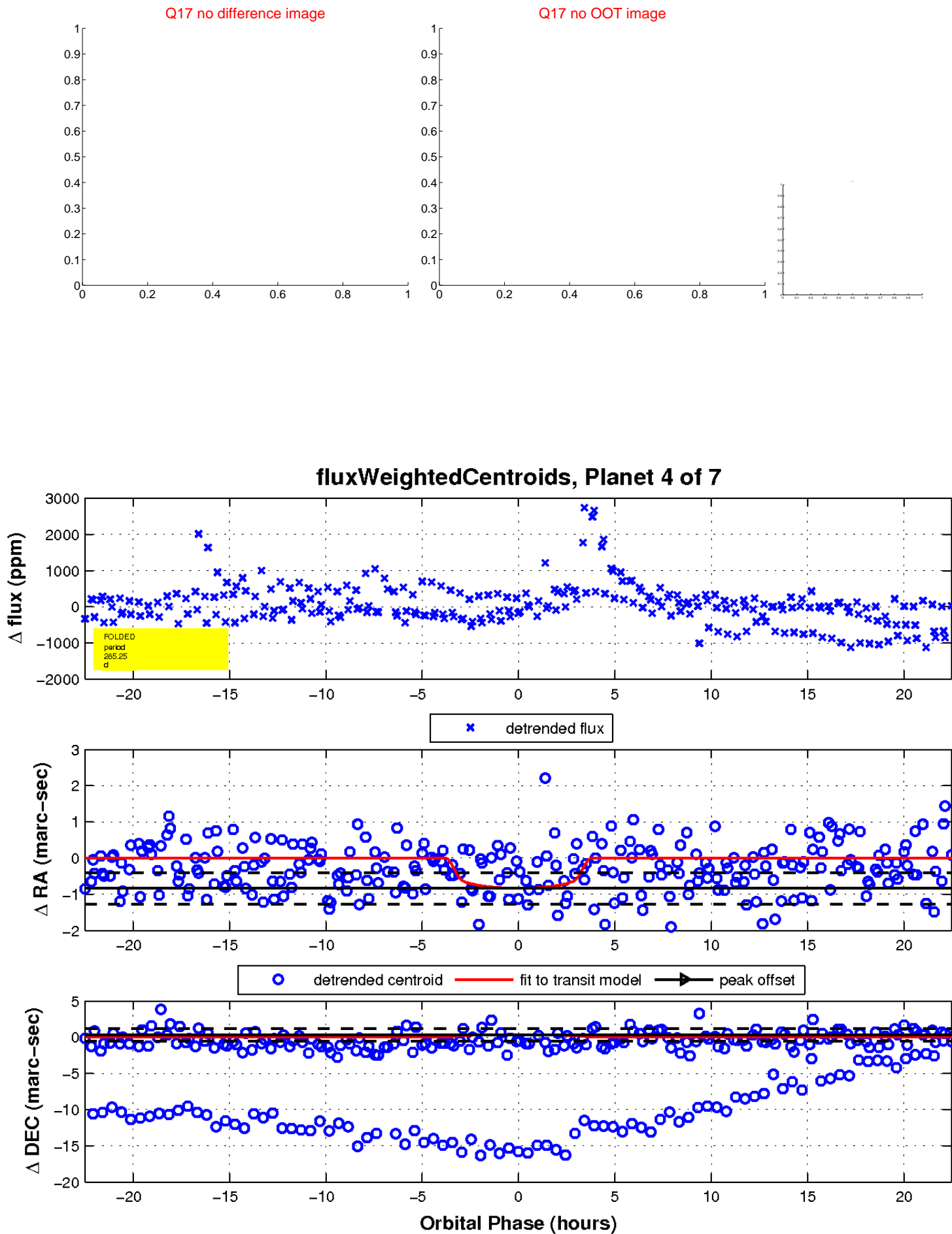
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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

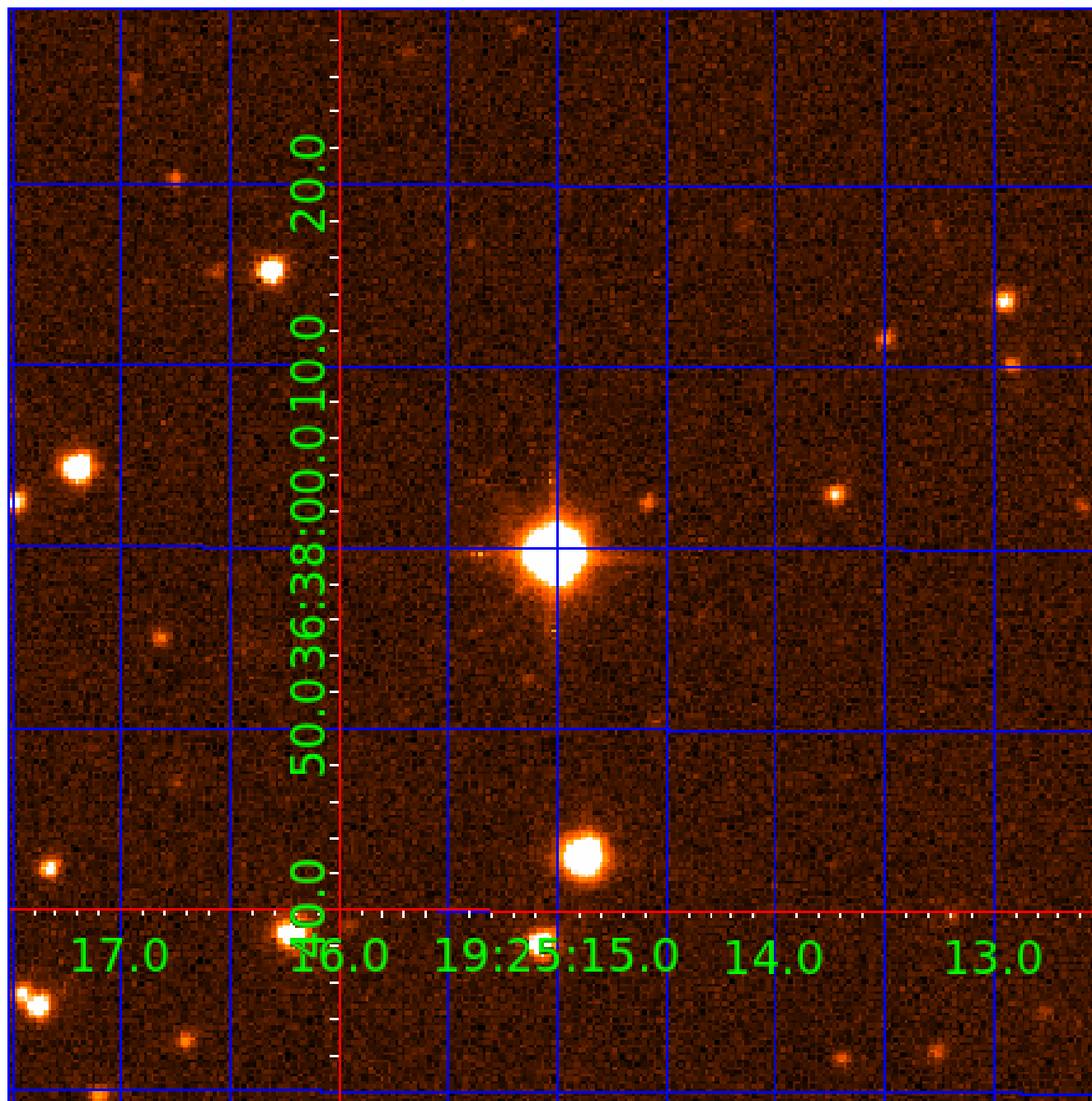


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 000893507

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})
000893507-02	OBS	No	302.045706	286.987124	902.0	3.983	14.2	10.0	1.68	5382	5.80	3.05
000893507-04	OBS	No	285.253570	251.517656	506.6	7.502	13.7	6.5	1.68	5382	4.49	3.29
000893507-05	OBS	No	308.893358	271.389711	757.1	7.801	11.3	8.4	1.68	5382	5.94	2.96
000893507-06	OBS	No	279.221260	368.703012	404.1	4.684	11.6	6.7	1.68	5382	3.74	3.39
000893507-07	OBS	No	318.782248	427.805507	493.1	4.667	10.6	8.0	1.68	5382	4.08	2.84

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
000893507-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—CENT_FEW_DIFFS
000893507-04	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
000893507-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL_SKYE_ZUMA—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
000893507-06	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—INCONSISTENT_TRANS—CENT_FEW_DIFFS
000893507-07	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST

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

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

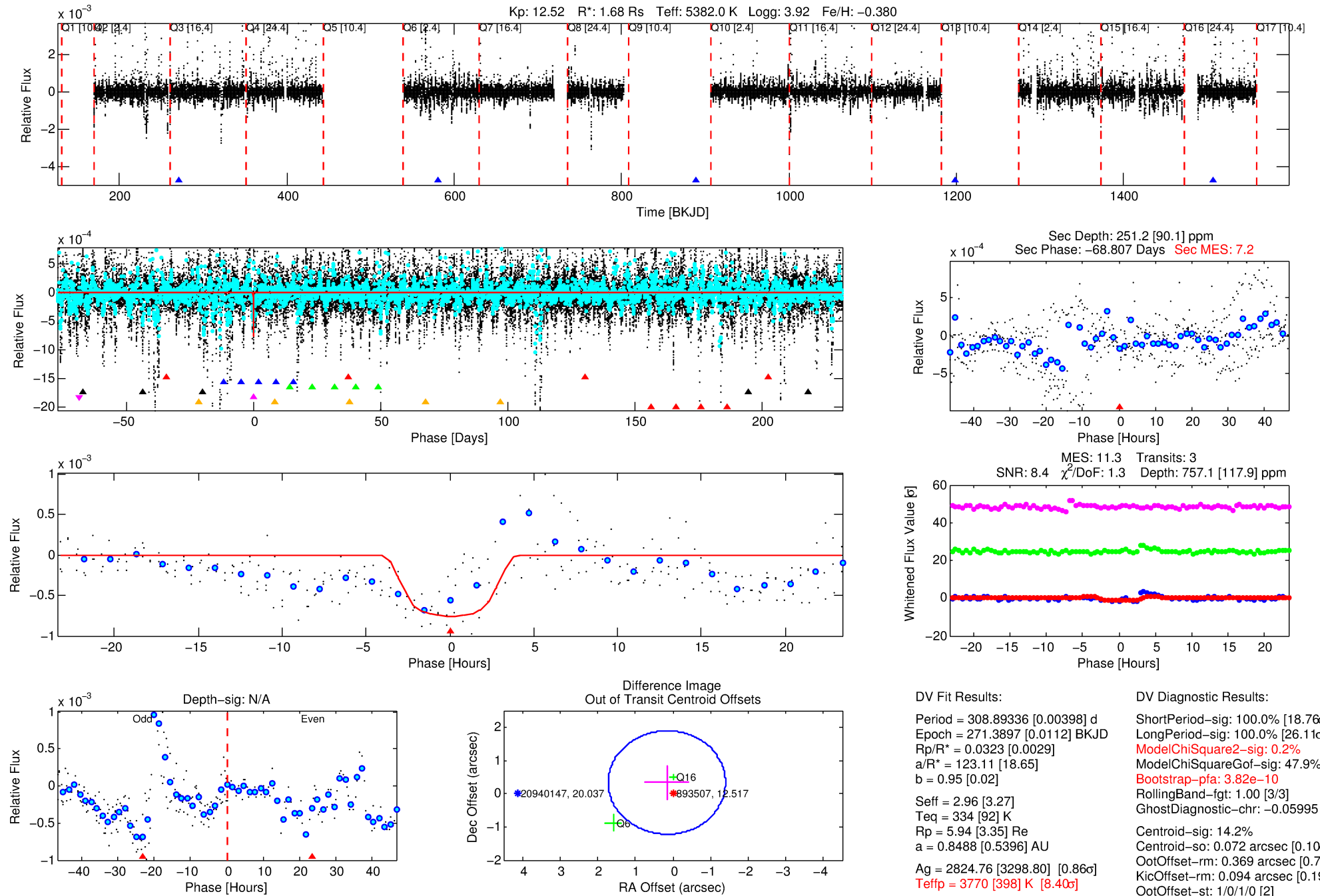
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 000893507-05

No Significant Match Found

DV One-Page Summary

KIC: 893507 Candidate: 5 of 7 Period: 308.893 d



DV Fit Results:

Period = 308.89336 [0.00398] d
Epoch = 271.3897 [0.0112] BKJD
Rp/R* = 0.0323 [0.0029]
a/R* = 123.11 [18.65]
b = 0.95 [0.02]
Seff = 2.96 [3.27]
Teq = 334 [92] K
Rp = 5.94 [3.35] Re
a = 0.8488 [0.5396] AU
Ag = 2824.76 [3298.80] [0.86σ]
Teffp = 3770 [398] K [8.40σ]

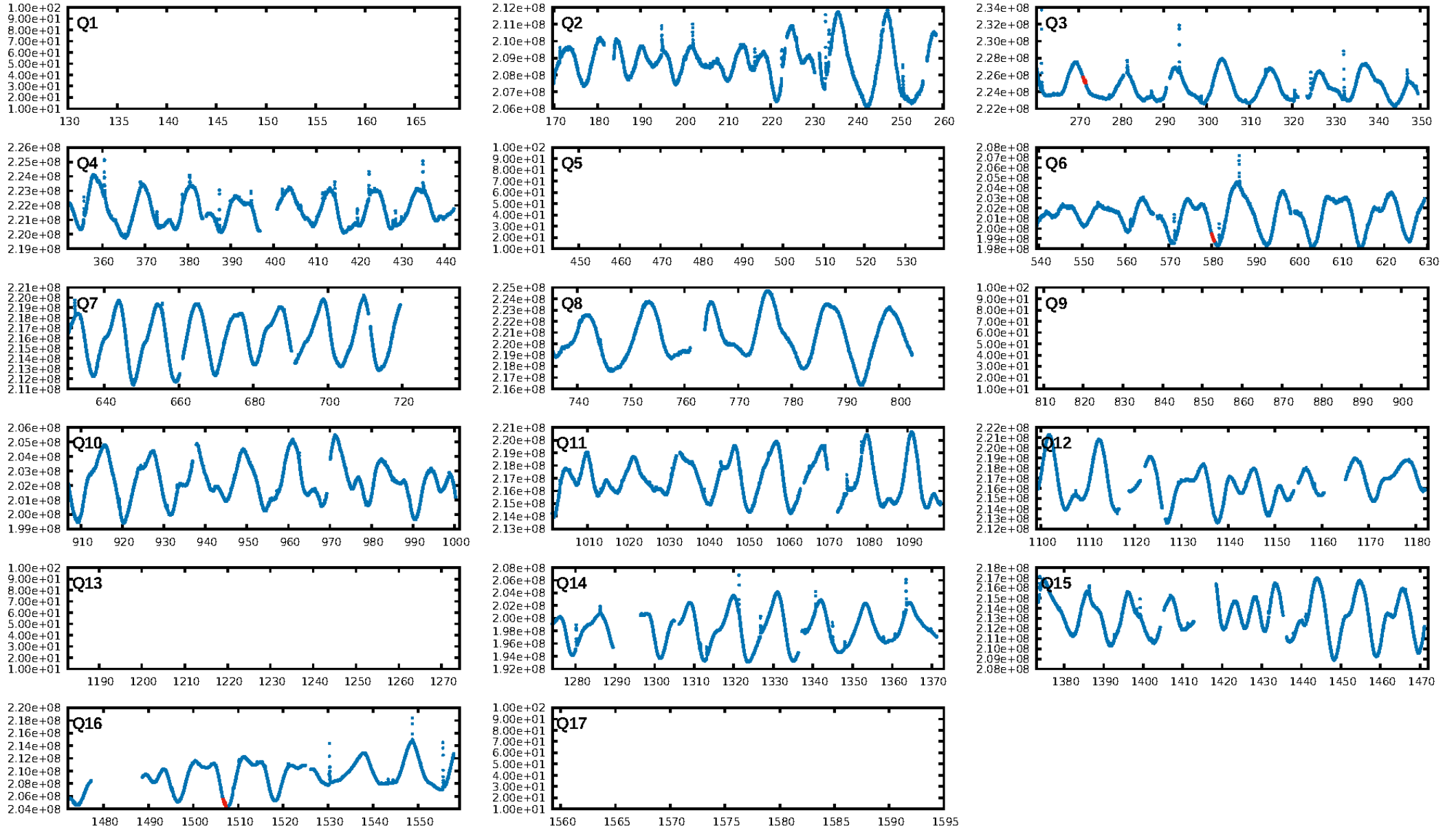
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [18.76σ]
LongPeriod-sig: 100.0% [26.11σ]
ModelChiSquare2-sig: 0.2%
ModelChiSquareGof-sig: 47.9%
Bootstrap-pfa: 3.82e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.05995
Centroid-sig: 14.2%
Centroid-so: 0.072 arcsec [0.10σ]
OotOffset-rm: 0.369 arcsec [0.71σ]
KicOffset-rm: 0.094 arcsec [0.19σ]
OotOffset-st: 1/0/1/0 [2]
KicOffset-st: 1/0/1/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

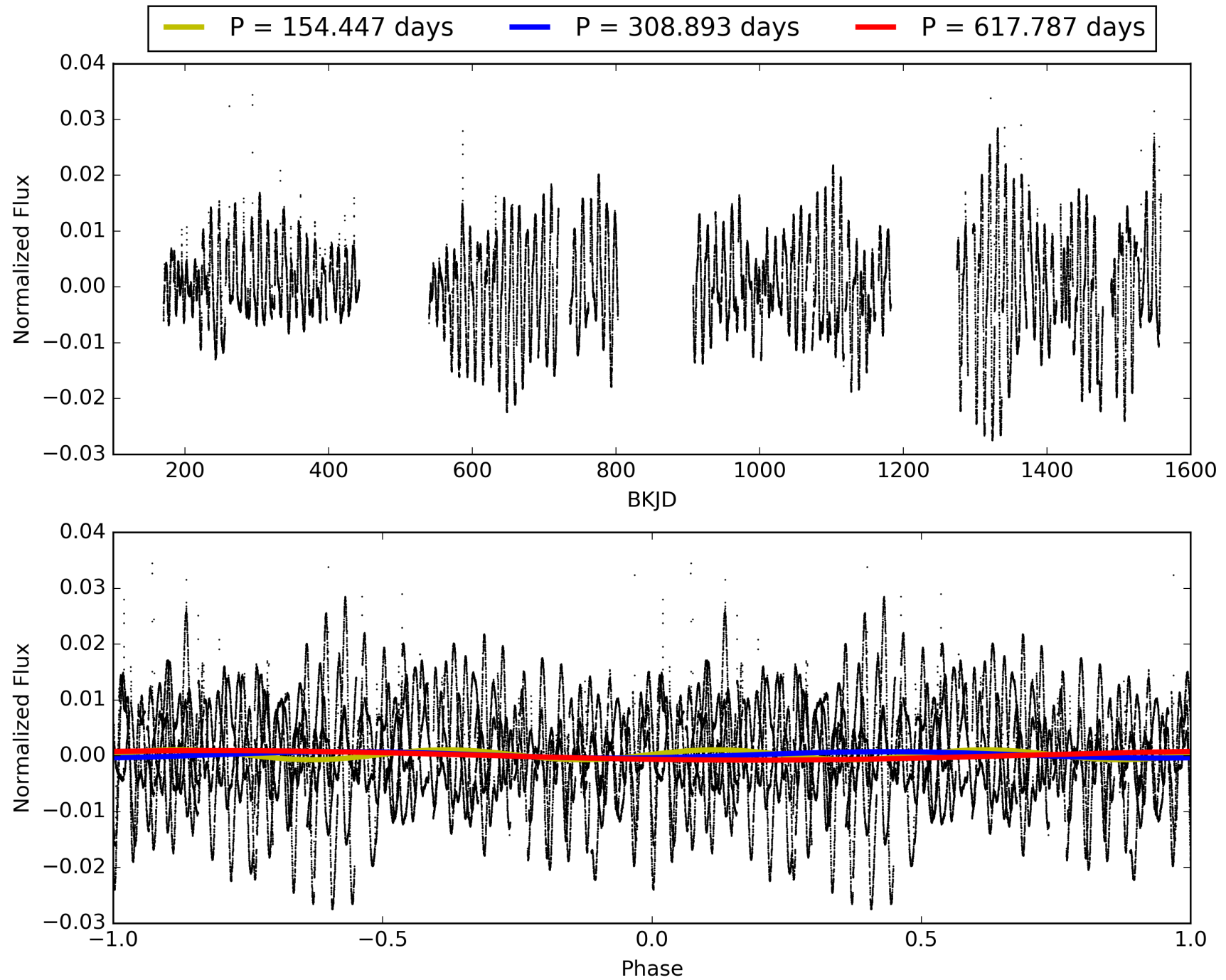
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:04:40 Z

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

TCE 000893507-05, PDC Light Curves

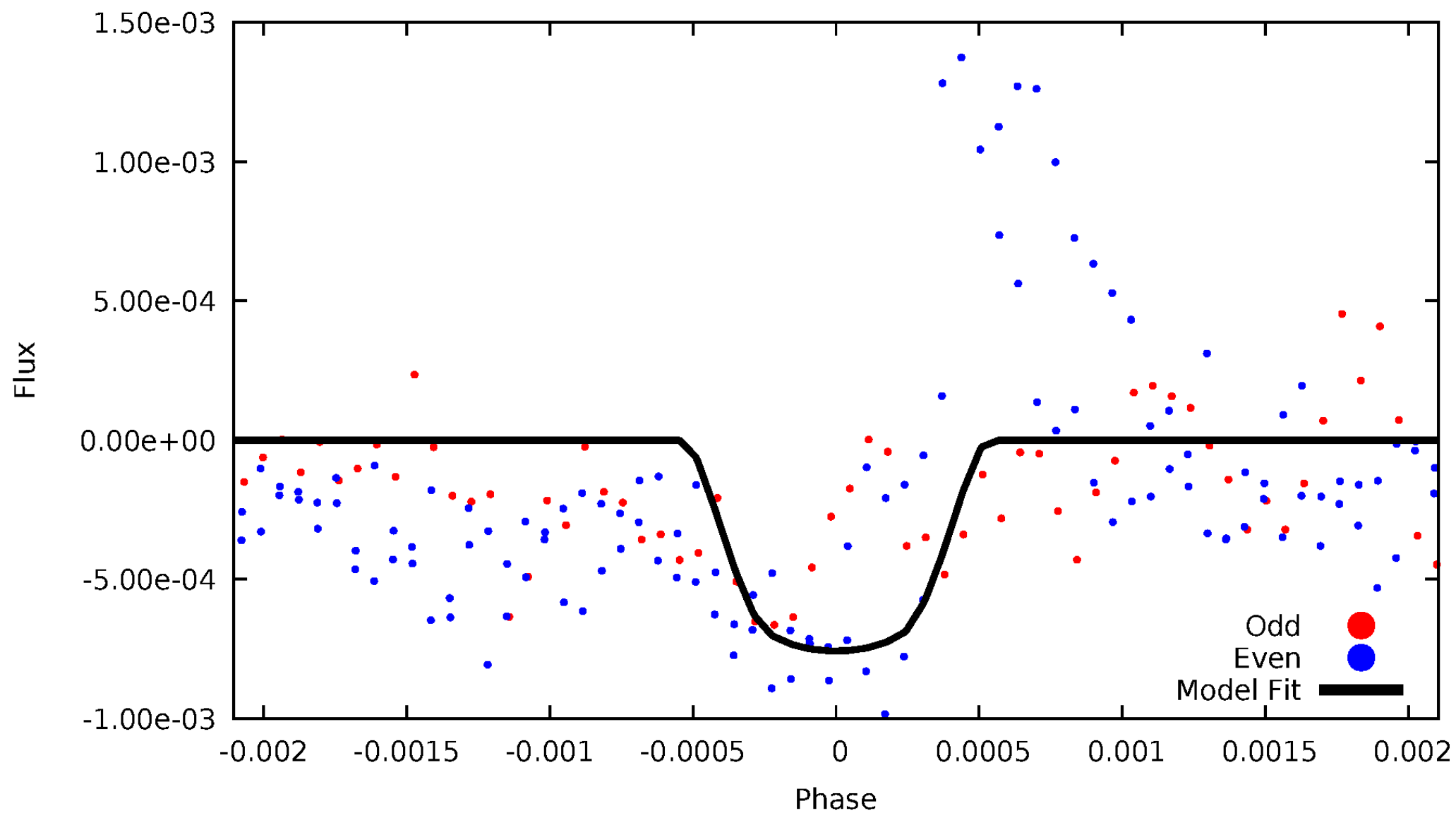


TCE 000893507-05



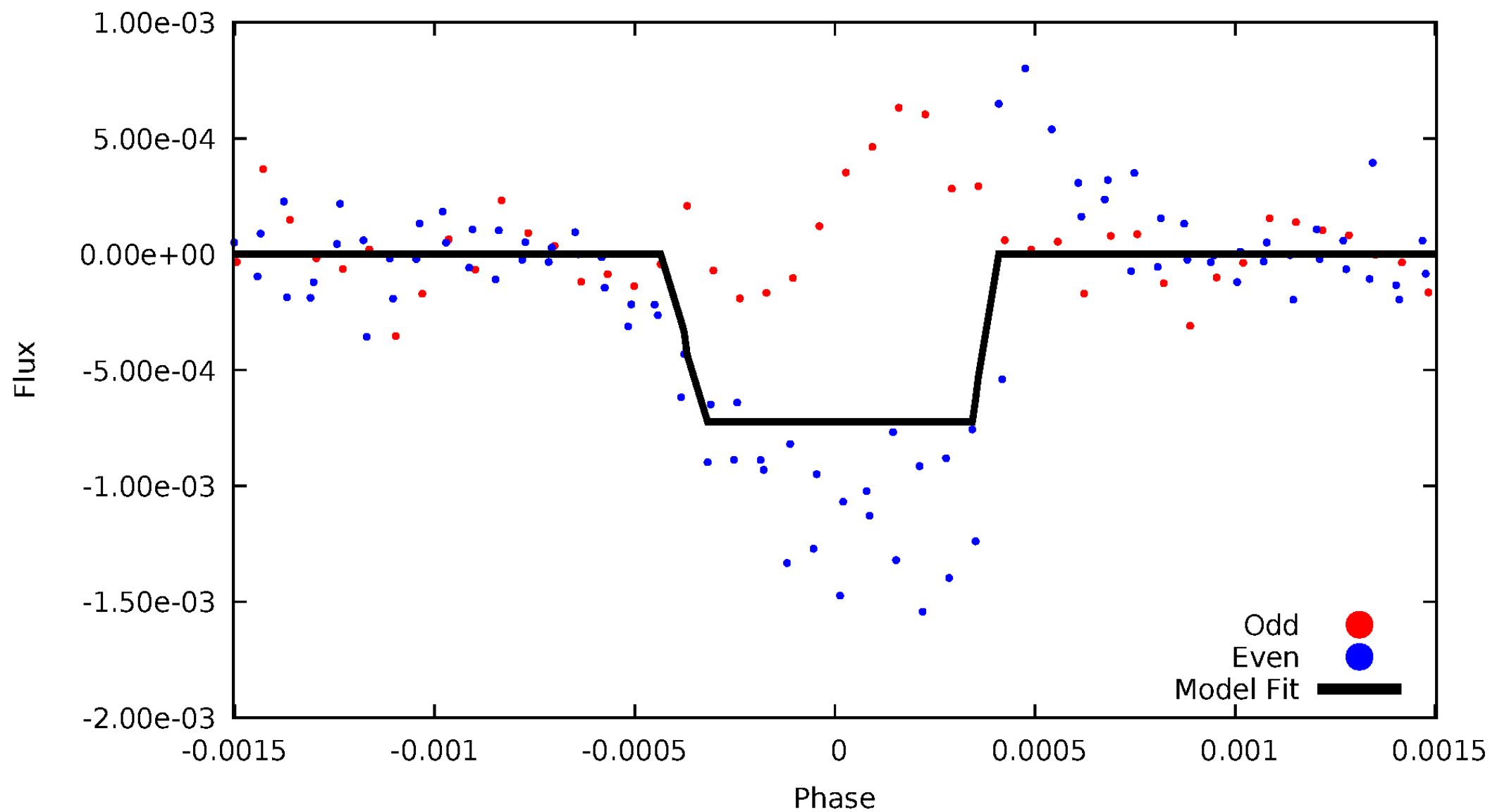
DV Odd/Even

TCE 000893507-05



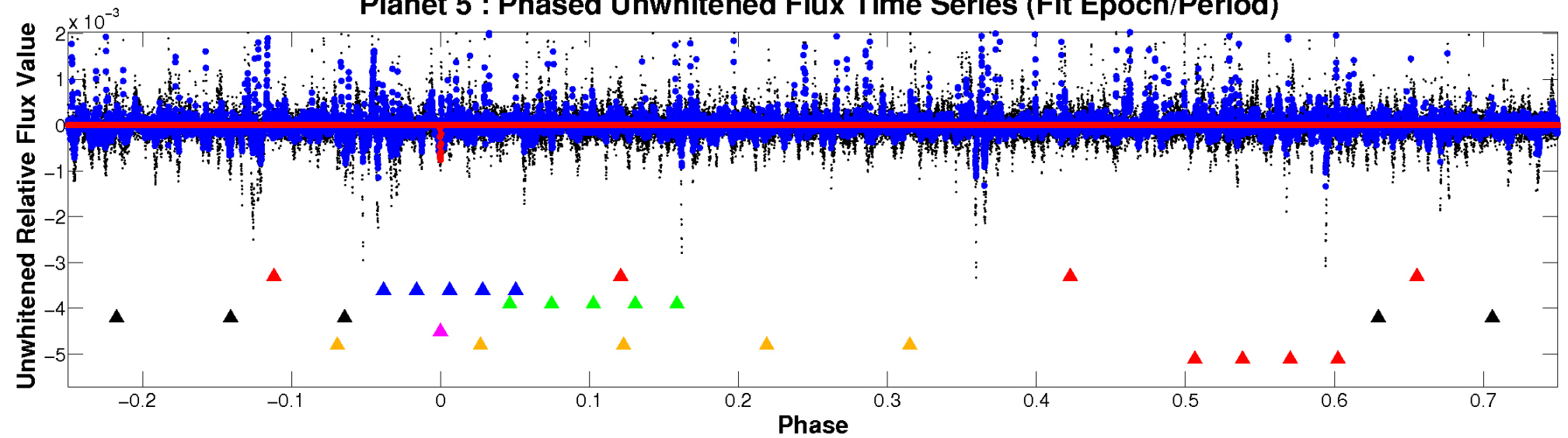
ALT Odd/Even

TCE 000893507-05

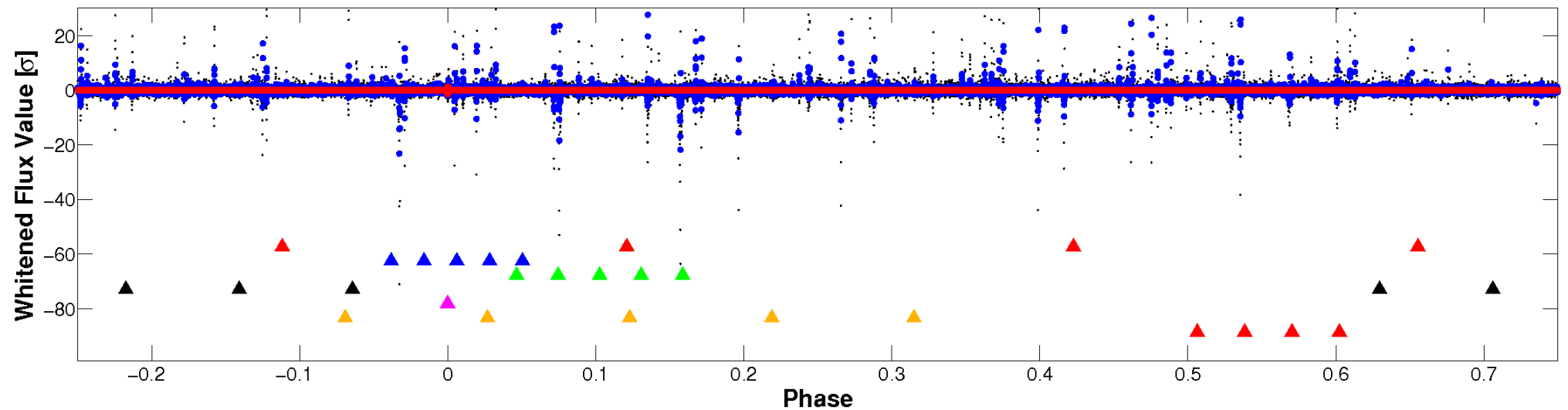


Non-Whitened Vs. Whitened Light Curve

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

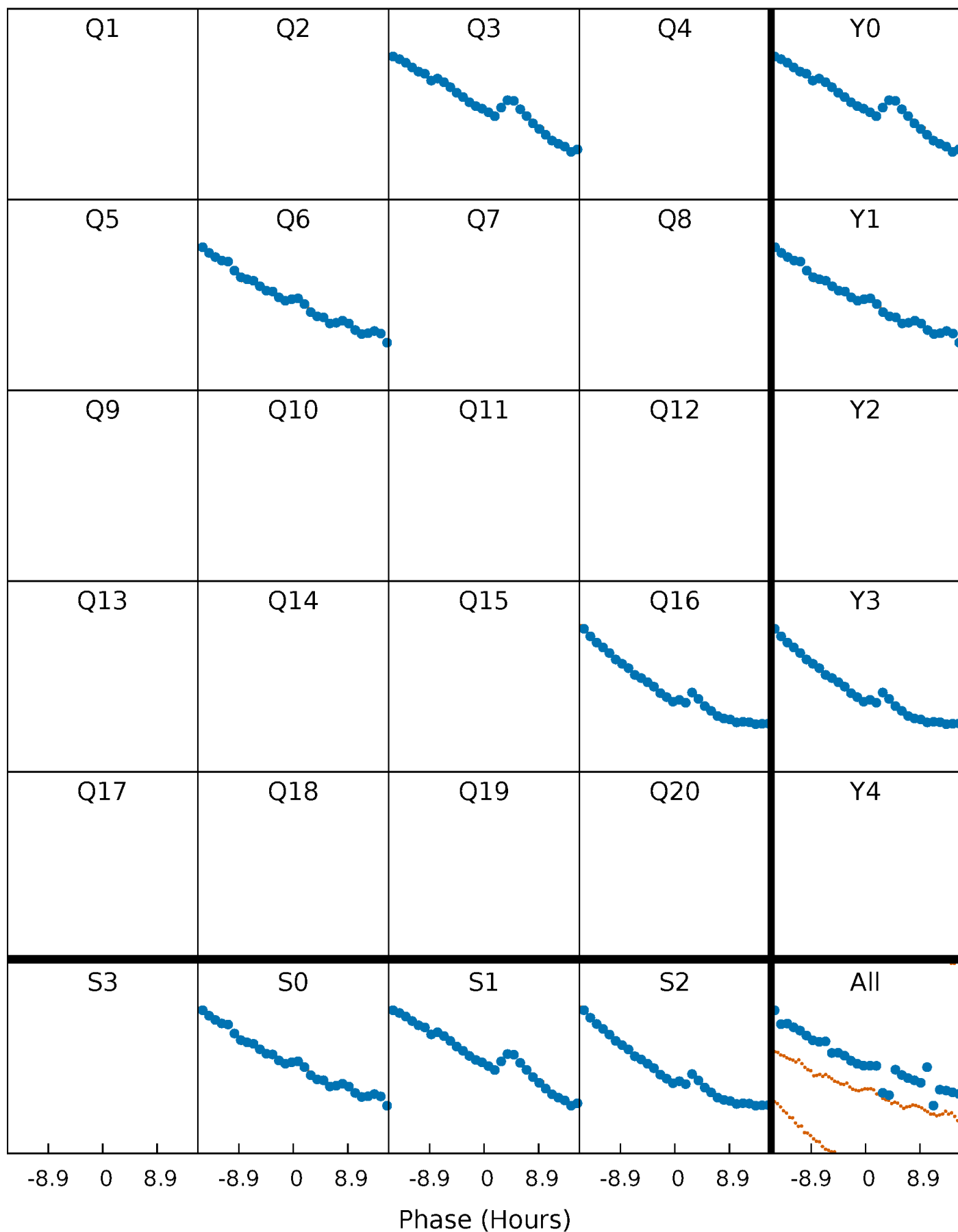


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



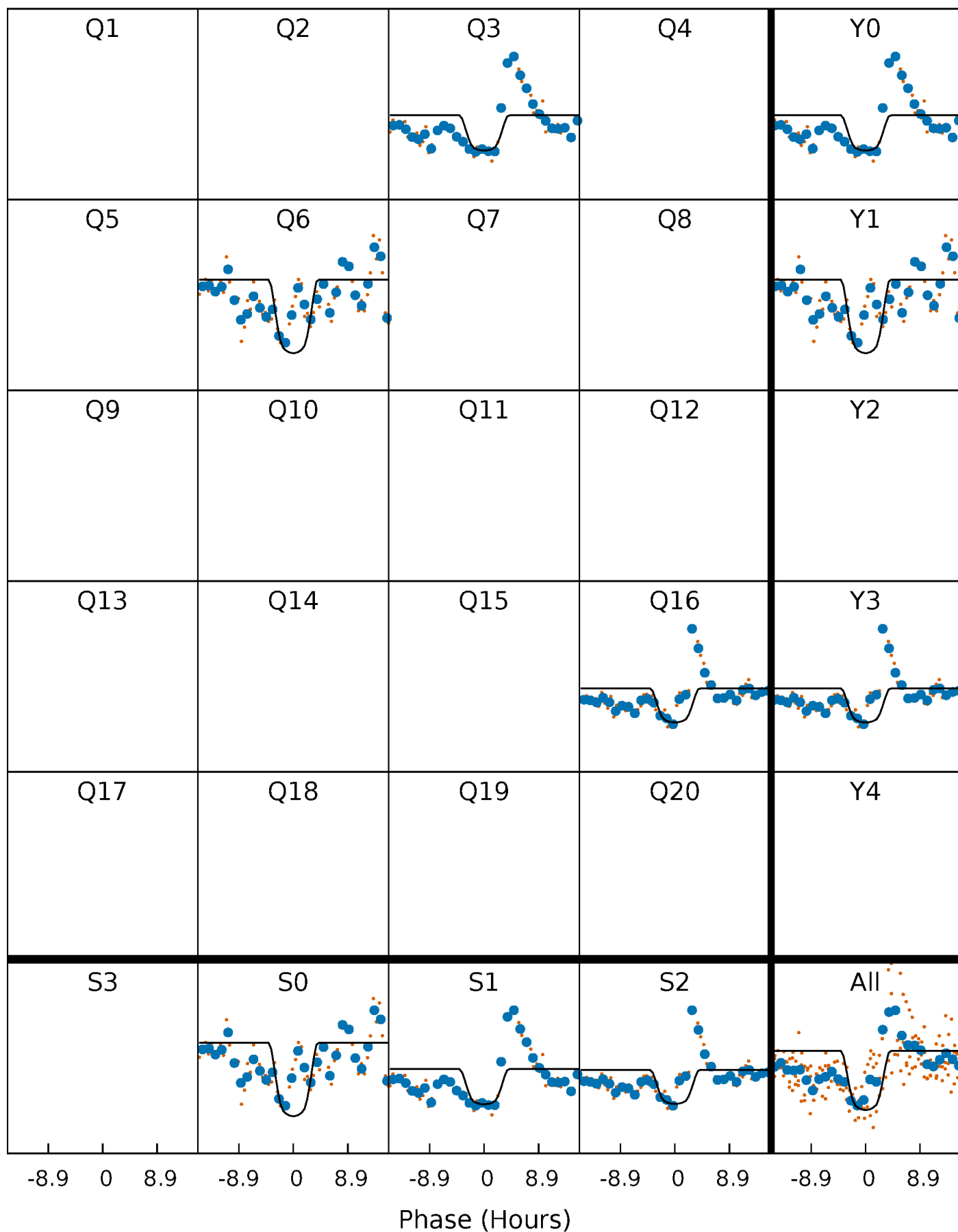
PDC Quarter-Phased Transit Curves

TCE 000893507-05 $P=308.893358$ Days $T_0=271.389711$ (BKJD)



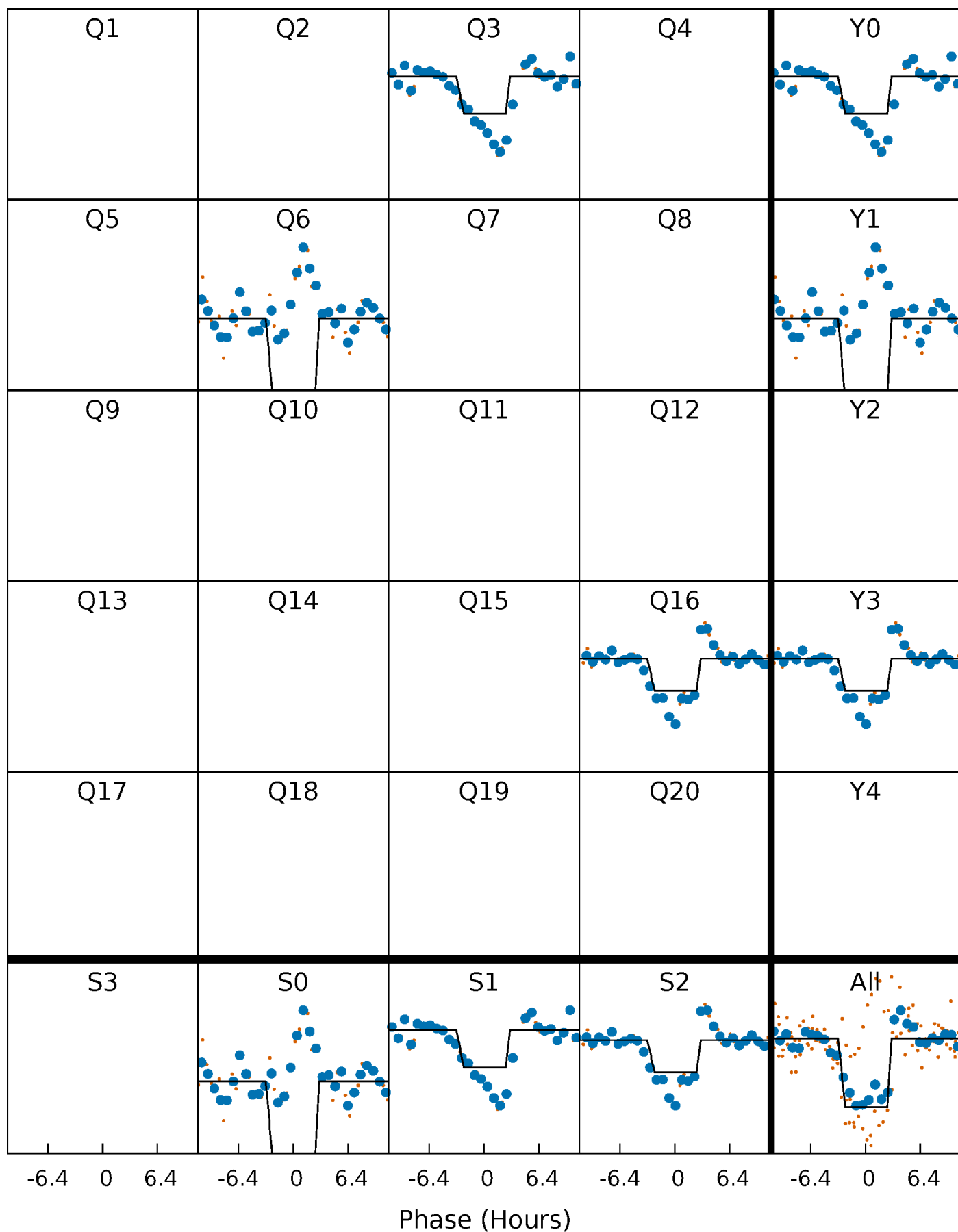
DV Quarter-Phased Transit Curves

TCE 000893507-05 $P=308.893358$ Days $T_0=271.389711$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

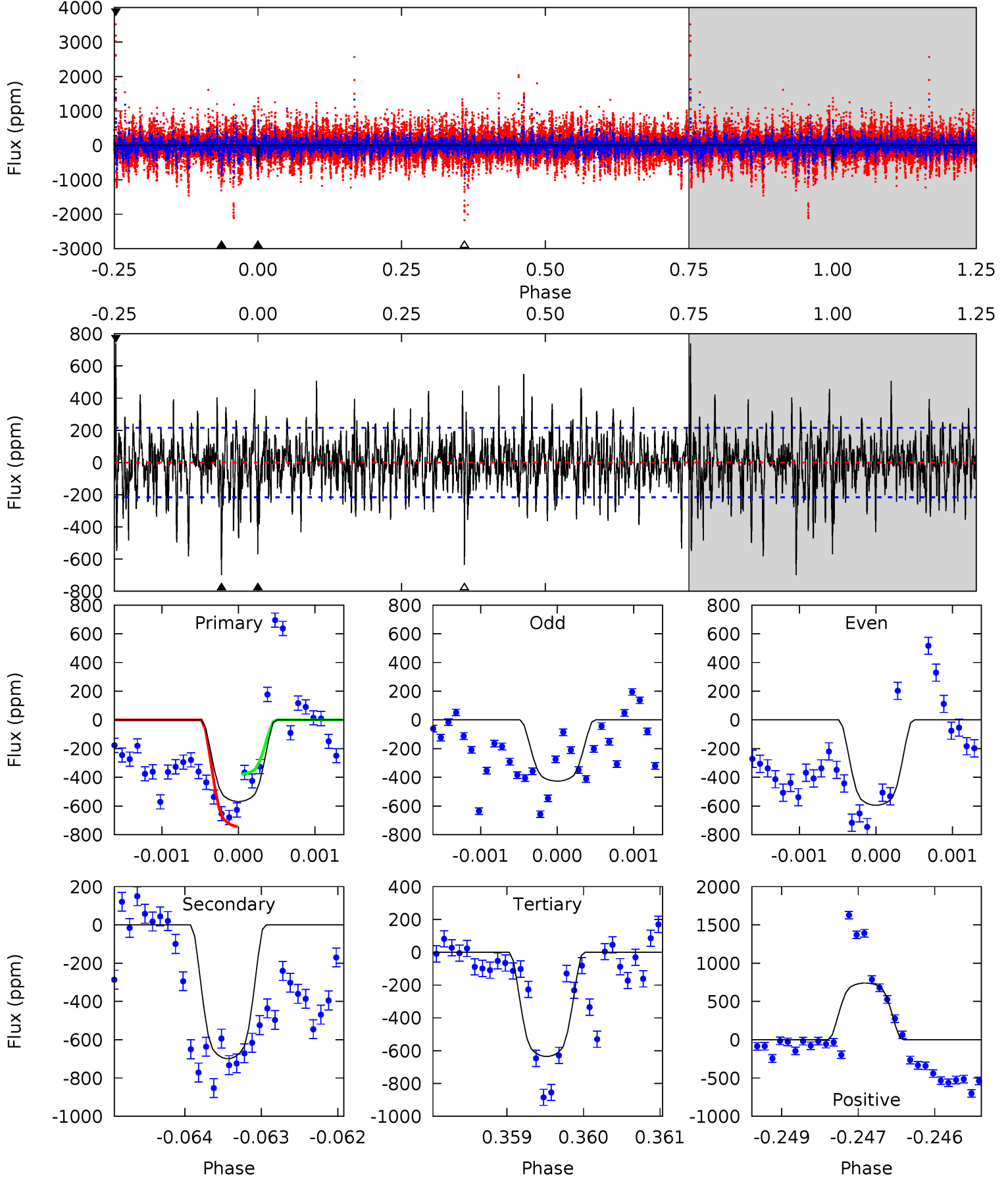
TCE 000893507-05 $P=308.894127$ Days $T_0=271.375021$ (BKJD)



DV Model-Shift Uniqueness Test

000893507-05, P = 308.893358 Days, E = 271.389711 Days

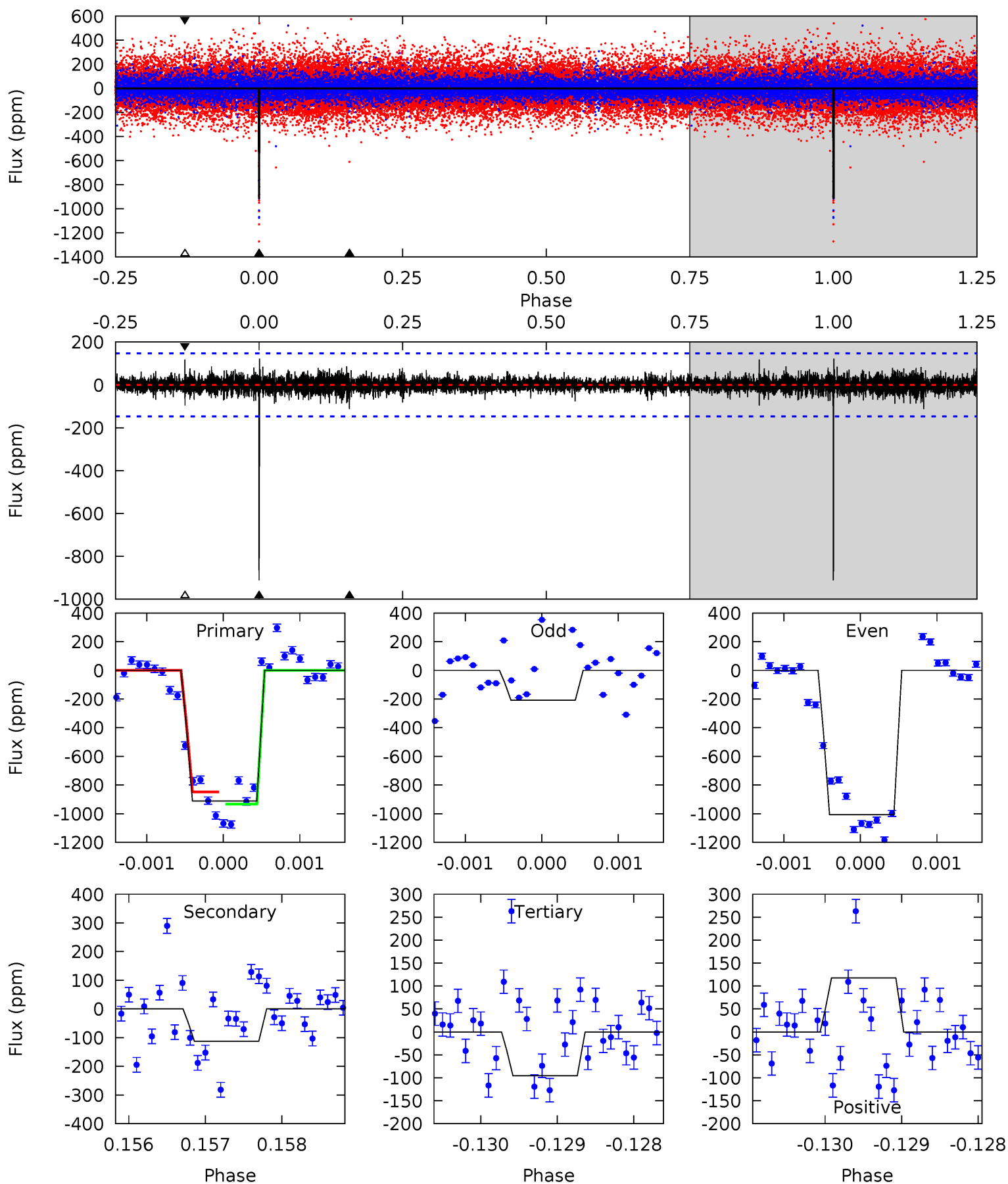
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.3	17.6	16.0	18.7	5.43	3.26	3.35	-1.68	-4.34	1.59	-1.06	1.41	1.27	0.51	4.62



Alt Model-Shift Uniqueness Test

000893507-05, P = 308.894127 Days, E = 271.375021 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
34.0	4.22	3.57	4.40	5.49	3.36	0.71	30.5	29.6	0.66	-0.18	20.2	0.62	0.12	0



Stellar Parameters For KIC 000893507

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5382^{+177}_{-144}	$3.917^{+0.672}_{-0.288}$	$-0.380^{+0.350}_{-0.250}$	$1.684^{+0.939}_{-0.939}$	$0.854^{+0.122}_{-0.110}$	$0.252^{+2.161}_{-0.180}$
	+3%/-3%	+17%/-7%	+92%/-66%	+56%/-56%	+14%/-13%	+858%/-71%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 000893507-05 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-699 ± 40	$5.76^{+1.99}_{-1.81}$	460^{+72}_{-78}	4949^{+267}_{-225}	8445^{+9814}_{-3811}
Alt.	-113 ± 27	$4.81^{+1.65}_{-1.55}$	460^{+70}_{-77}	3756^{+240}_{-207}	1919^{+2532}_{-921}

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

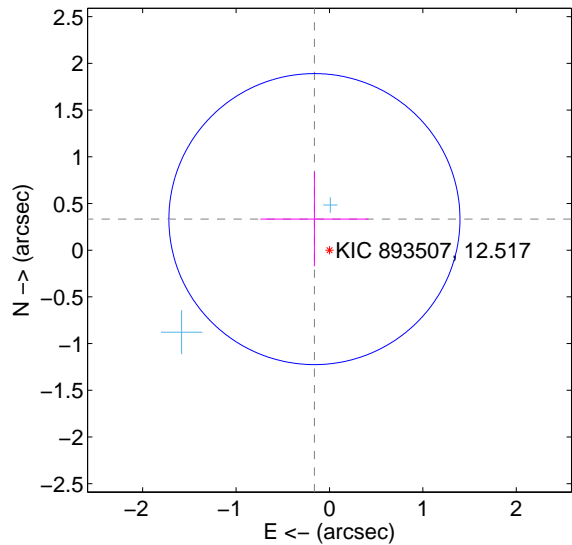
Supplemental centroid analysis for 000893507-05. Kepler magnitude: 12.52. Transit SNR 8.40

There are 2 quarters with good PRF difference image offsets

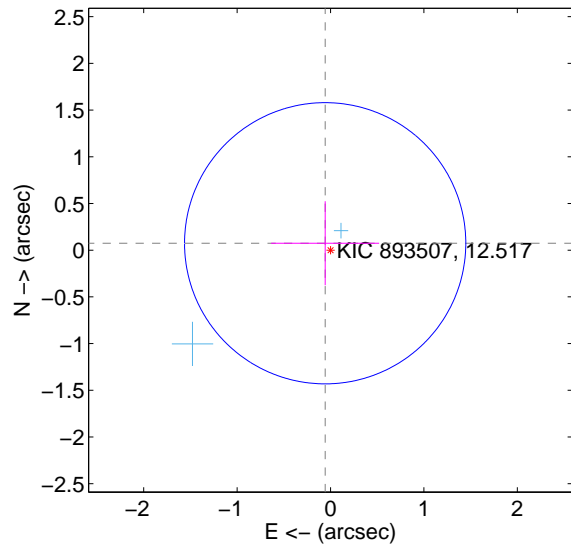
The direct PRF centroid is offset from the target star catalog position by about 0.29 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.369 ± 0.519	0.71	0.161 ± 0.578	0.332 ± 0.504
PRF-fit source offset from KIC position	0.094 ± 0.502	0.19	0.057 ± 0.578	0.074 ± 0.450
photometric centroid source offset	0.07 ± 0.70	0.10	-0.05 ± 0.51	0.05 ± 0.86

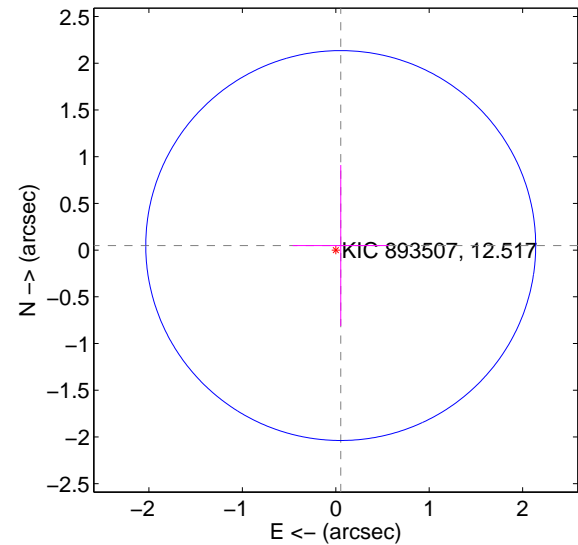
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

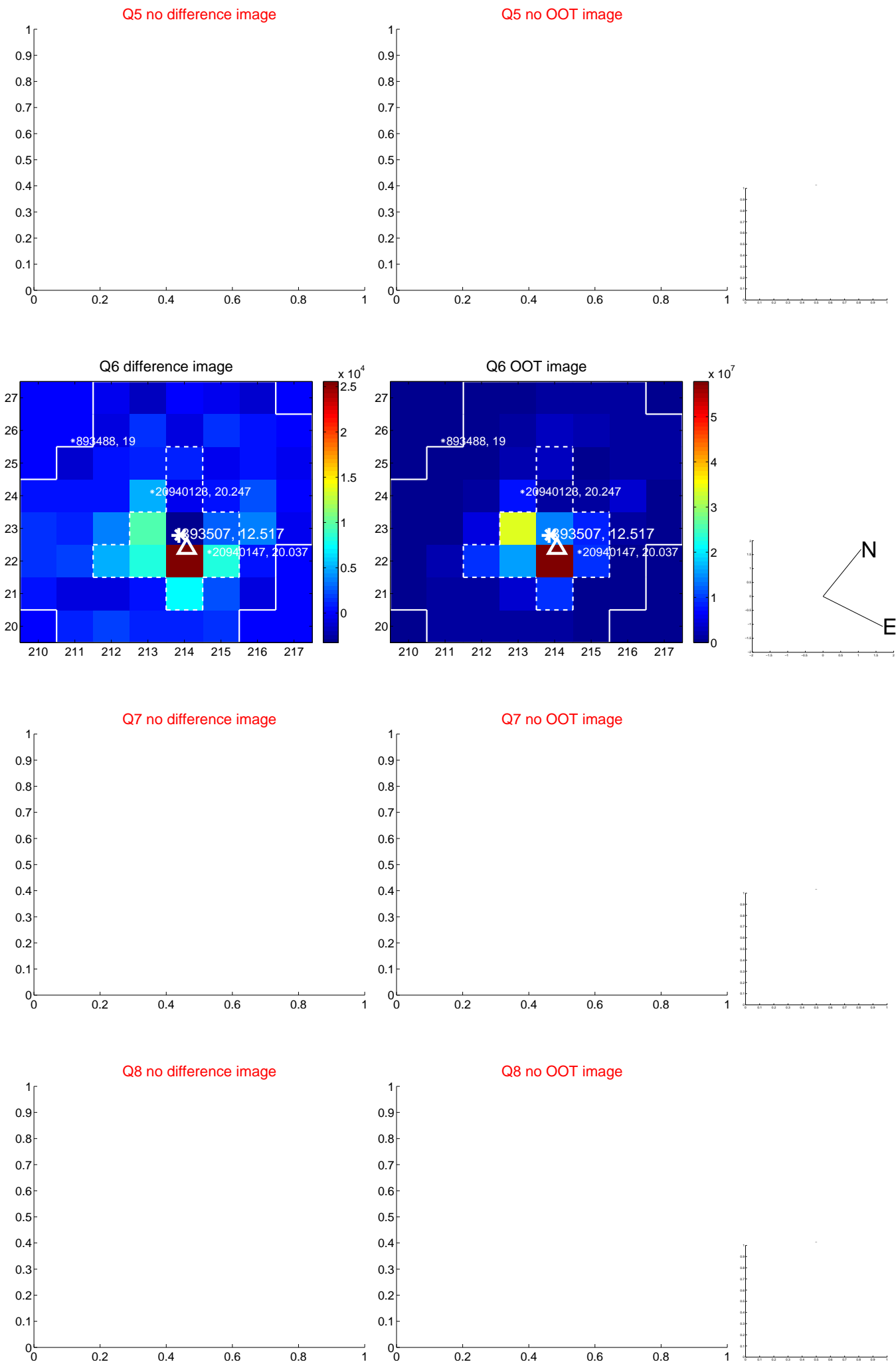


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



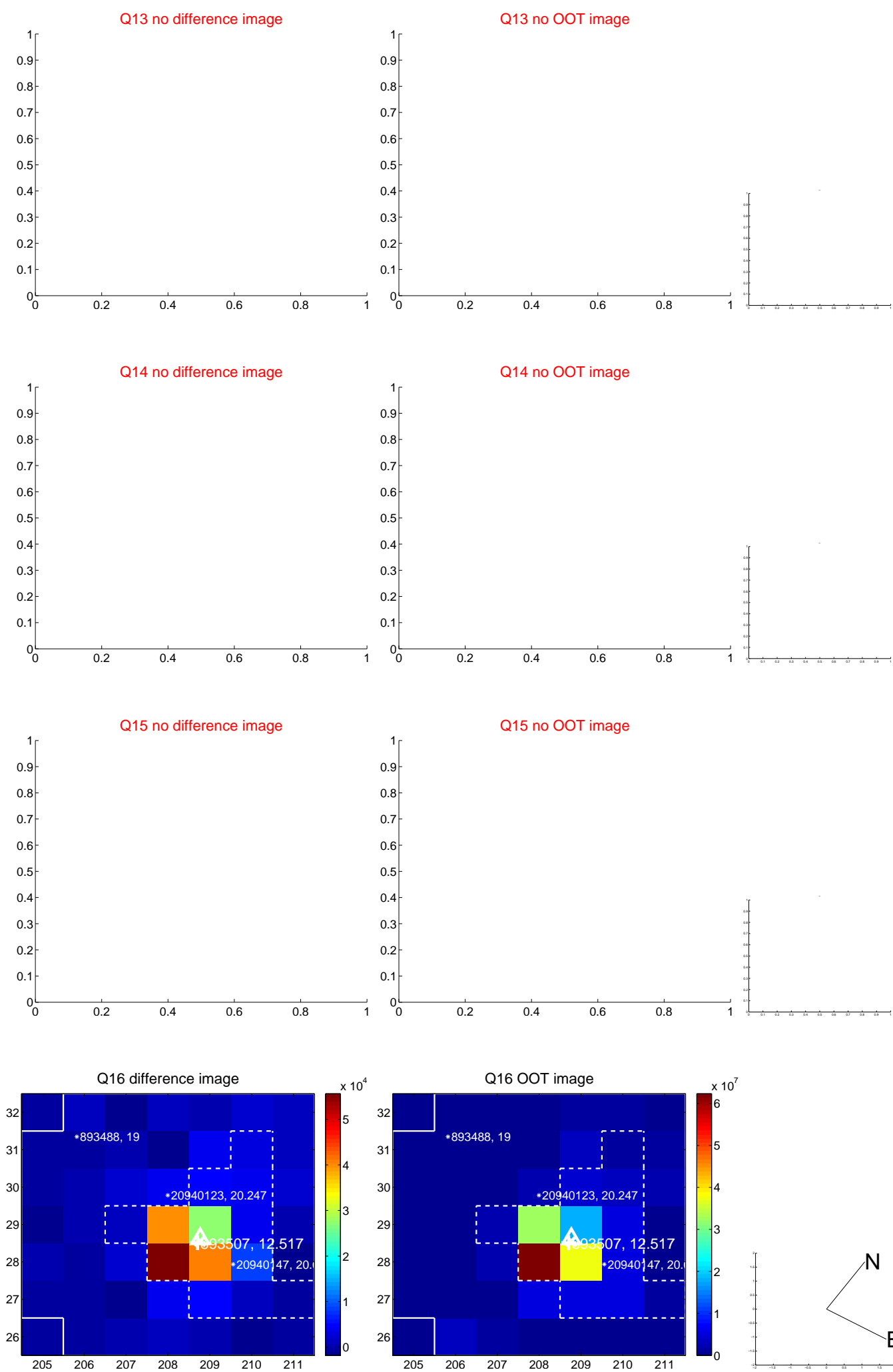
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



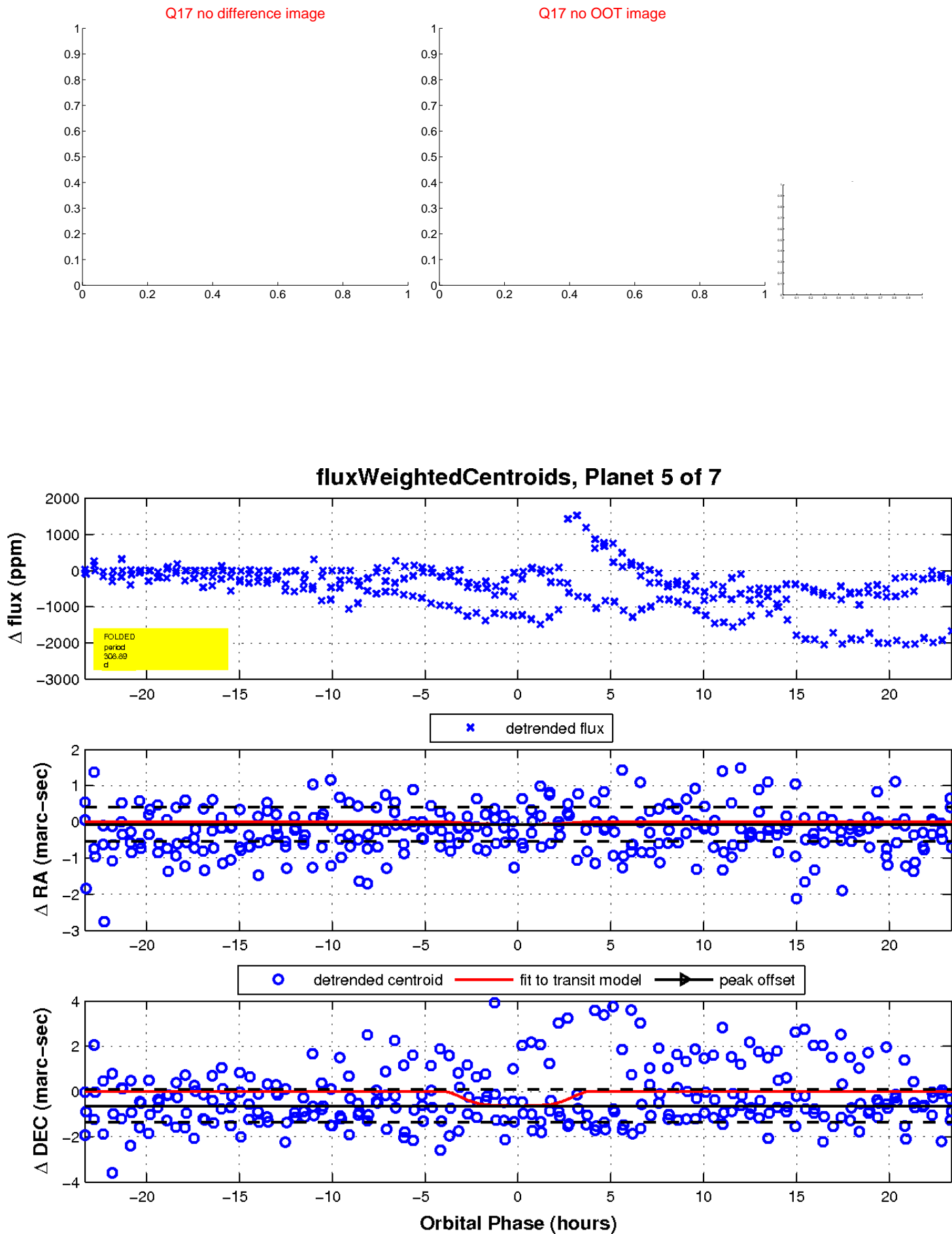
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

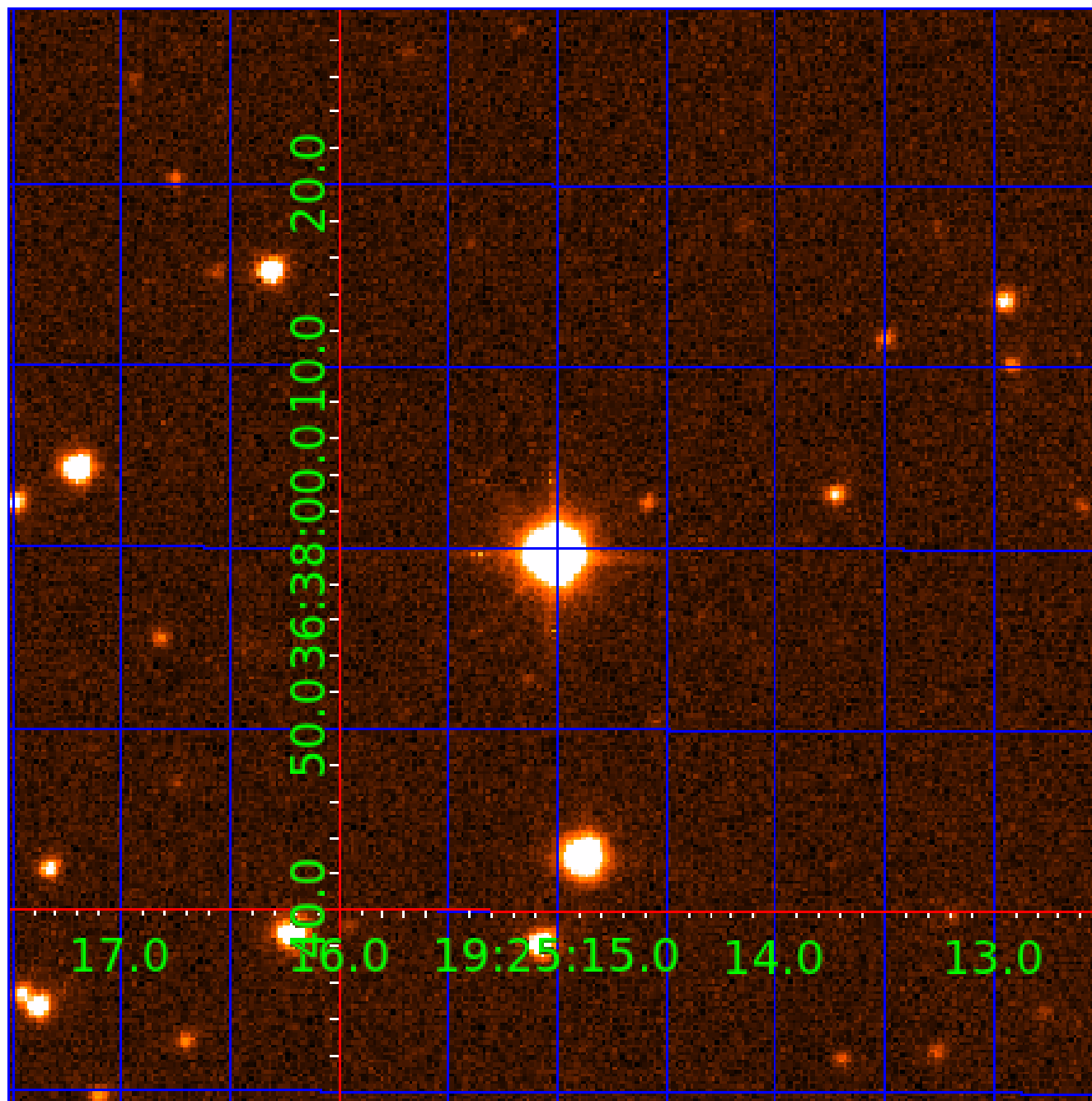


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 000893507

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})
000893507-02	OBS	No	302.045706	286.987124	902.0	3.983	14.2	10.0	1.68	5382	5.80	3.05
000893507-04	OBS	No	285.253570	251.517656	506.6	7.502	13.7	6.5	1.68	5382	4.49	3.29
000893507-05	OBS	No	308.893358	271.389711	757.1	7.801	11.3	8.4	1.68	5382	5.94	2.96
000893507-06	OBS	No	279.221260	368.703012	404.1	4.684	11.6	6.7	1.68	5382	3.74	3.39
000893507-07	OBS	No	318.782248	427.805507	493.1	4.667	10.6	8.0	1.68	5382	4.08	2.84

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
000893507-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—CENT_FEW_DIFFS
000893507-04	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
000893507-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL_SKYE_ZUMA—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS— HALO_GHOST
000893507-06	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—INCONSISTENT_TRANS— CENT_FEW_DIFFS
000893507-07	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST

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

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

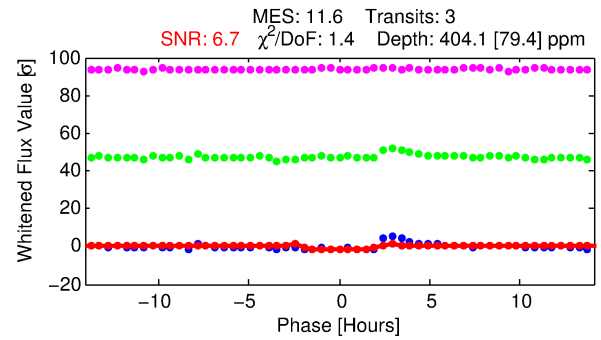
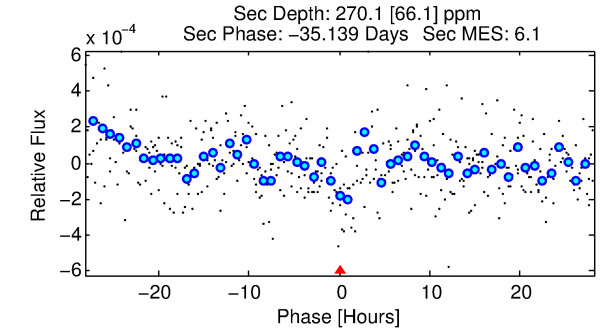
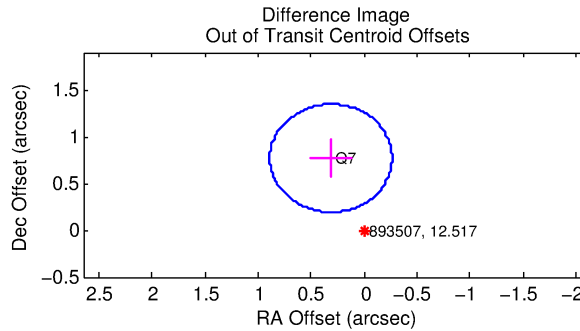
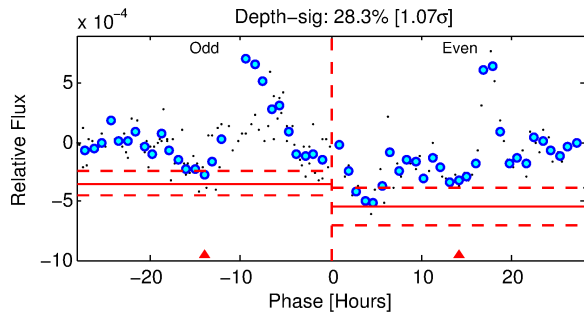
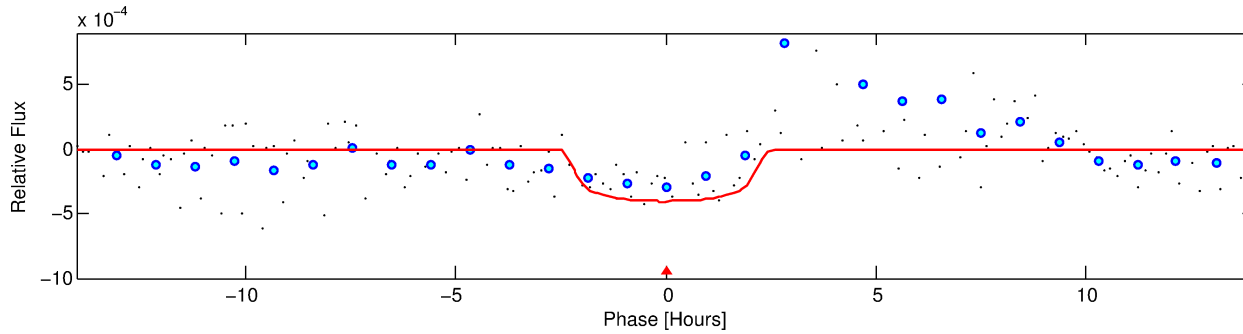
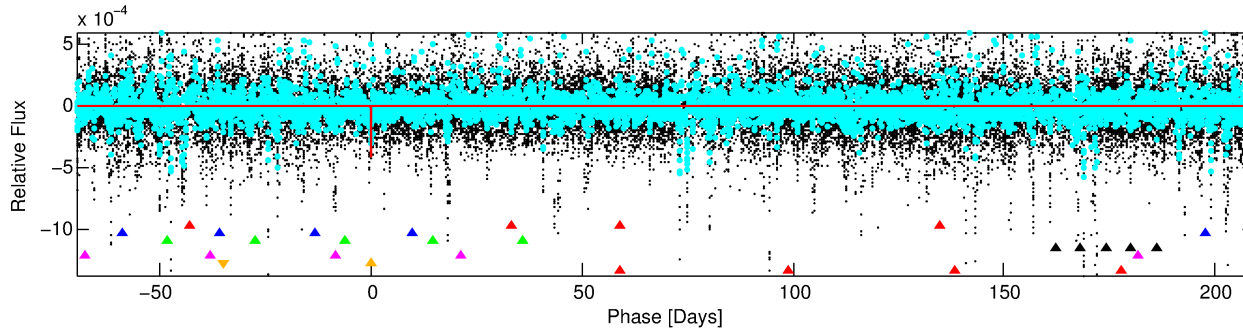
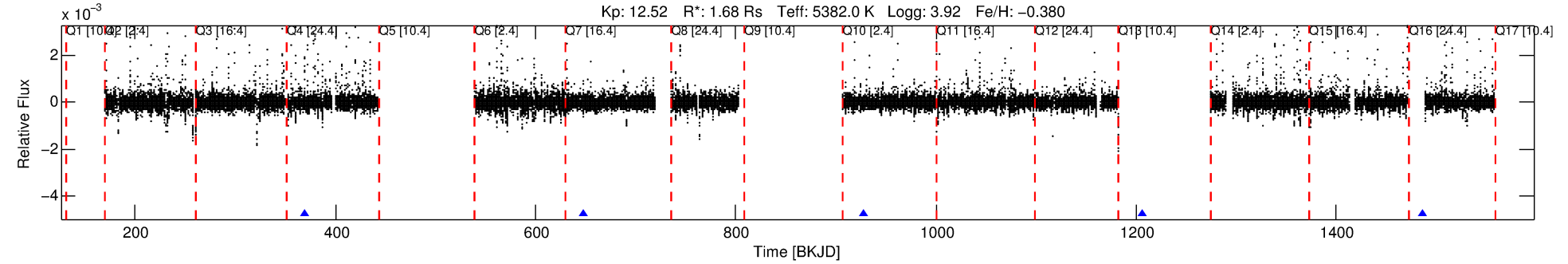
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 000893507-06

No Significant Match Found

DV One-Page Summary

KIC: 893507 Candidate: 6 of 7 Period: 279.221 d



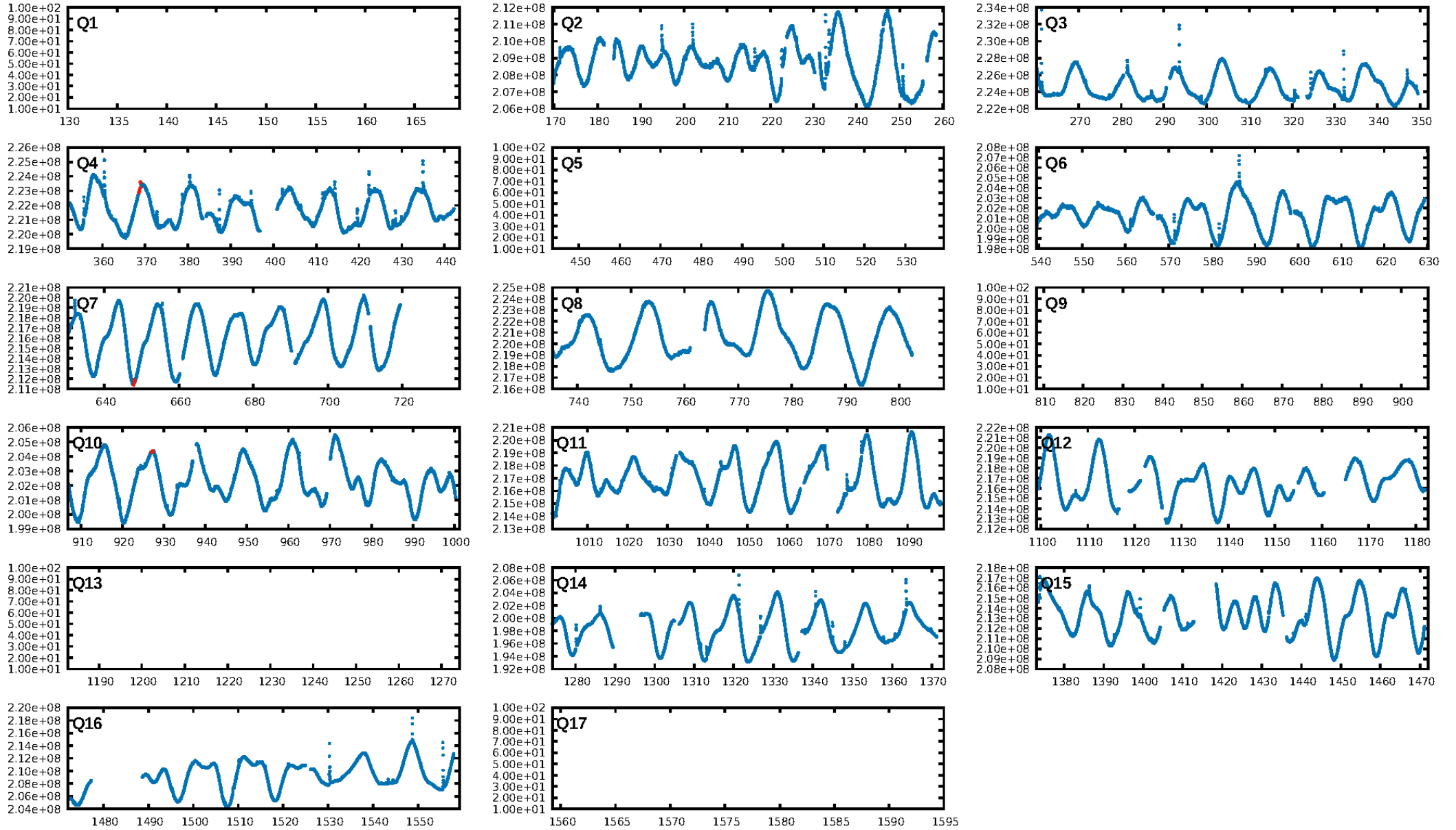
DV Fit Results:

Period = 279.22126 [0.00724] d
Epoch = 368.7030 [0.0114] BKJD
Rp/R* = 0.0204 [0.0141]
a/R* = 295.40 [850.31]
b = 0.79 [1.41]
Seff = 3.39 [3.74]
Teq = 346 [95] K
Rp = 3.74 [3.33] Re
a = 0.7935 [0.5045] AU
Ag = 6685.11 [11937.86] [0.56 σ]
Teffp = 4836 [1711] K [2.62 σ]

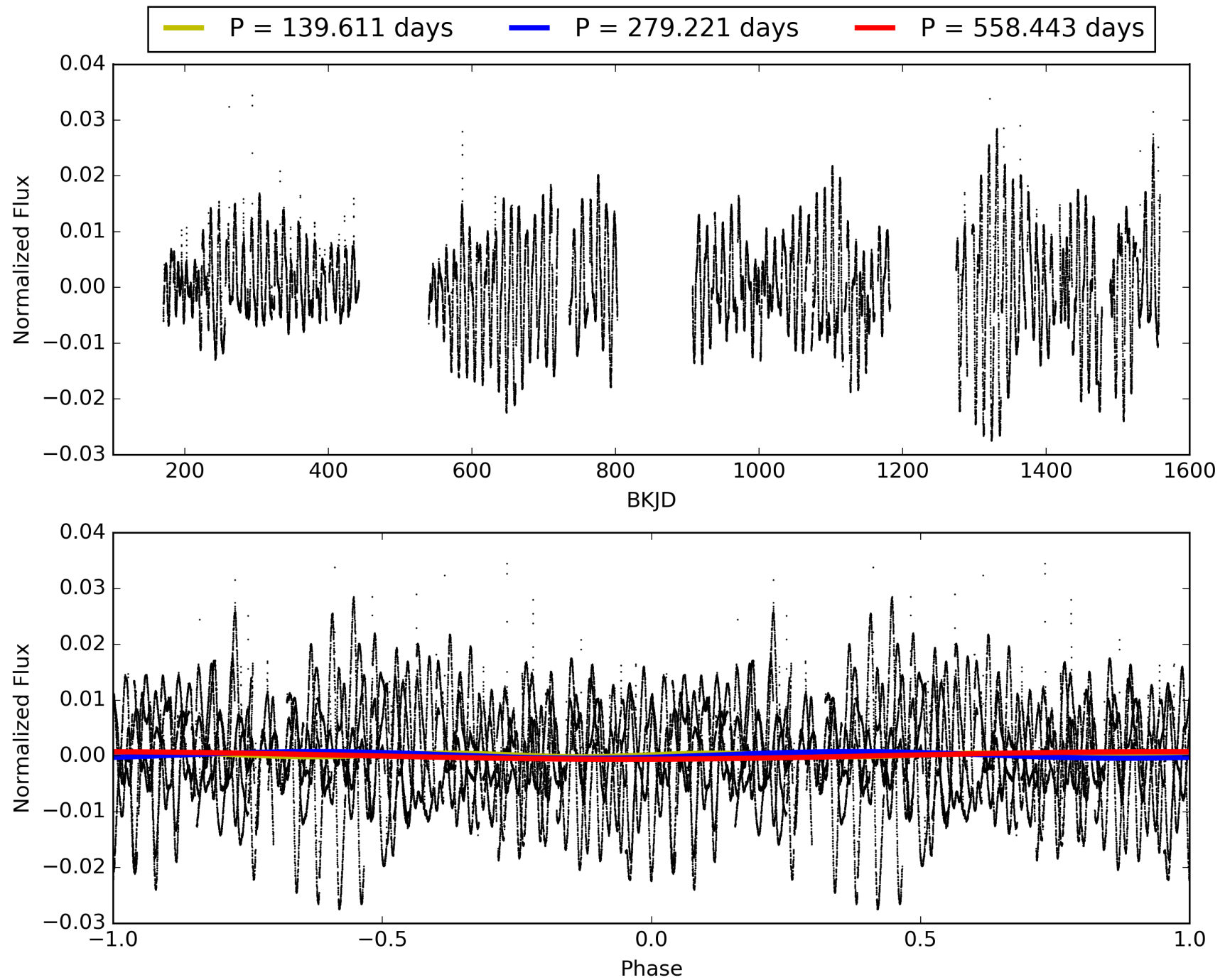
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [16.37 σ]
ModelChiSquare2-sig: 5.3%
ModelChiSquareGof-sig: 86.2%
Bootstrap-pfa: 2.12e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 44.67
Centroid-sig: 50.3%
Centroid-so: 0.790 arcsec [0.83 σ]
OotOffset-rm: 0.830 arcsec [4.32 σ]
OotOffset-st: 0/1/0/0 [1]
KicOffset-rm: 0.368 arcsec [1.92 σ]
KicOffset-st: 0/1/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 000893507-06, PDC Light Curves

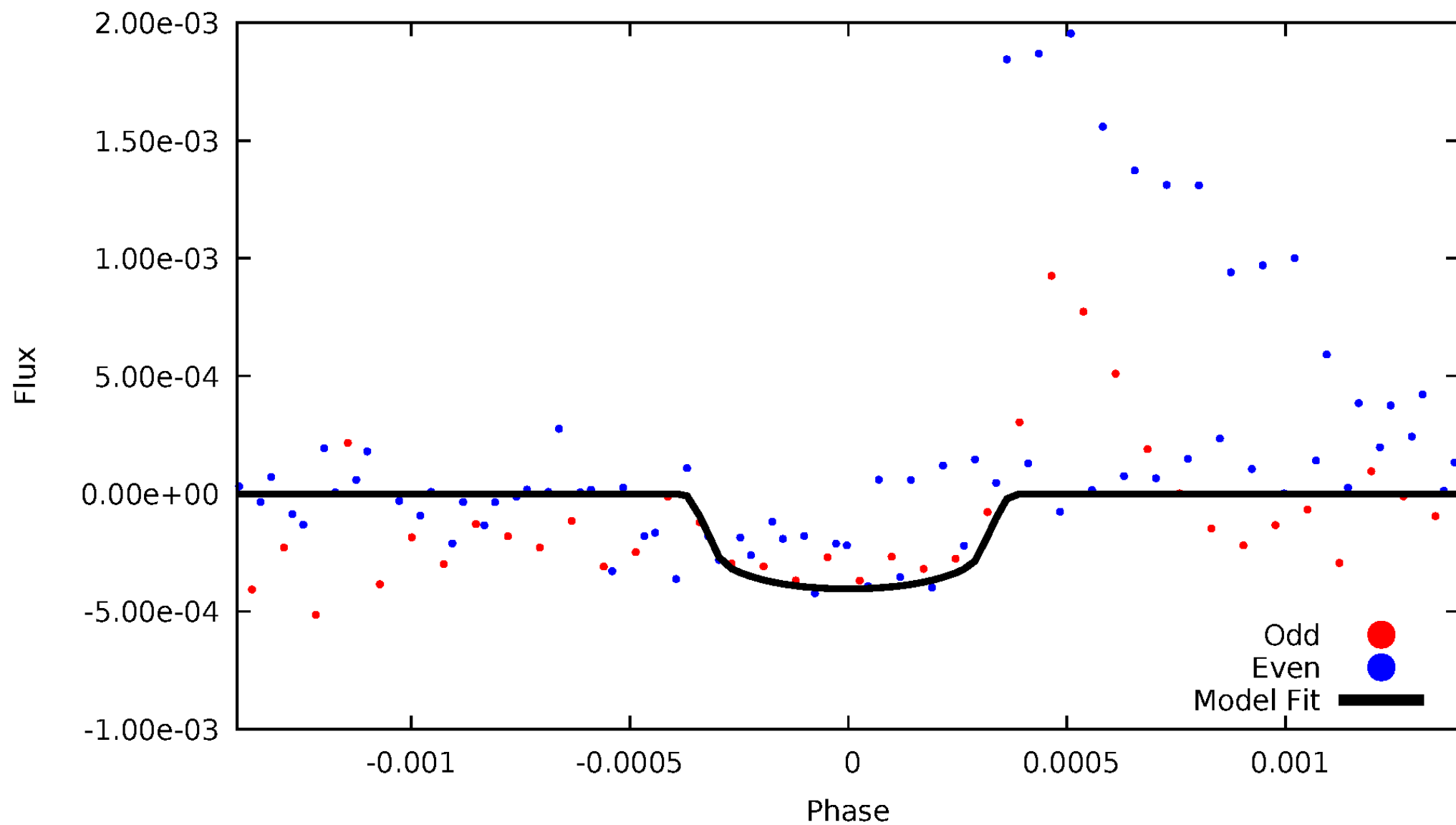


TCE 000893507-06



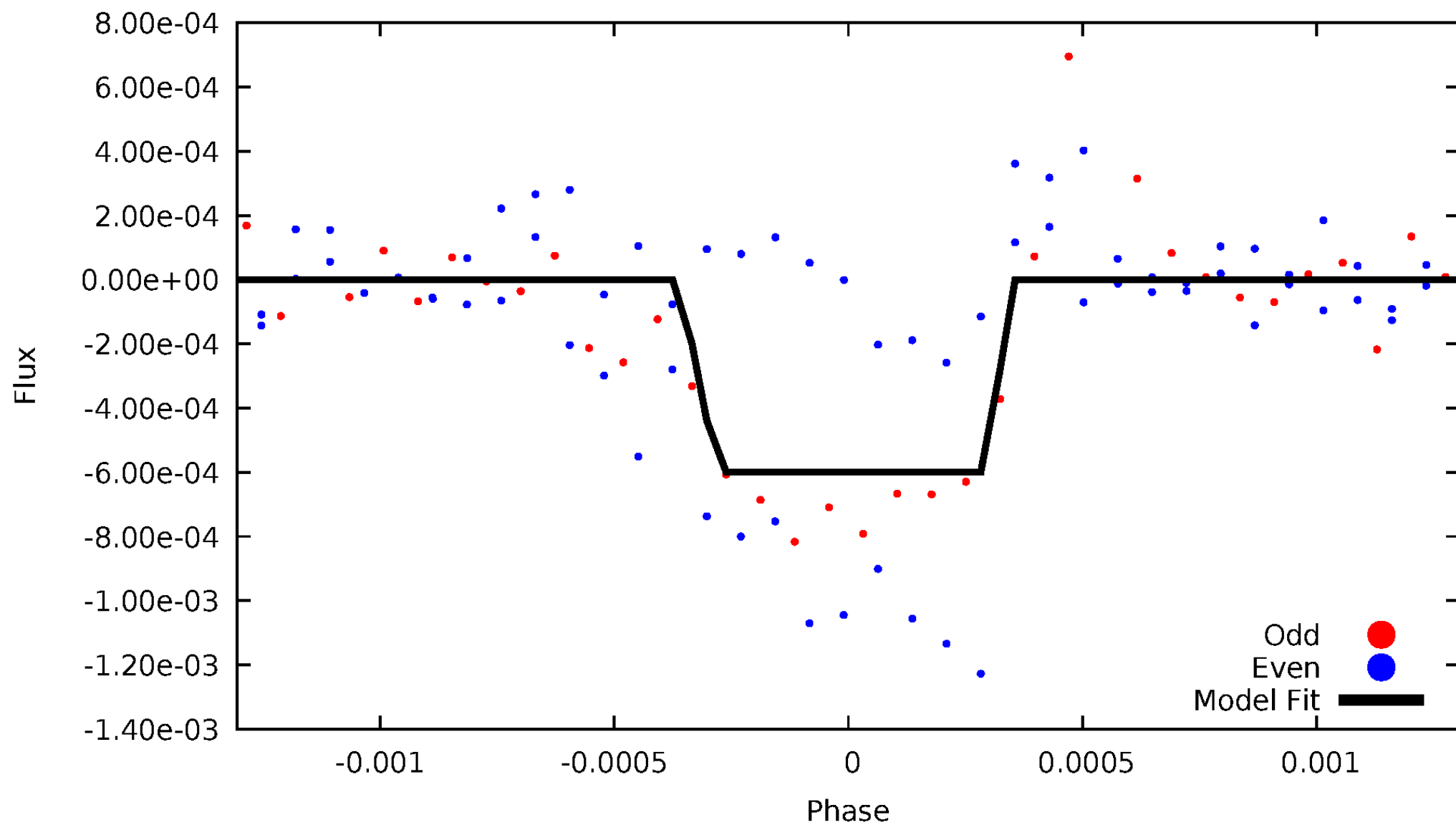
DV Odd/Even

TCE 000893507-06



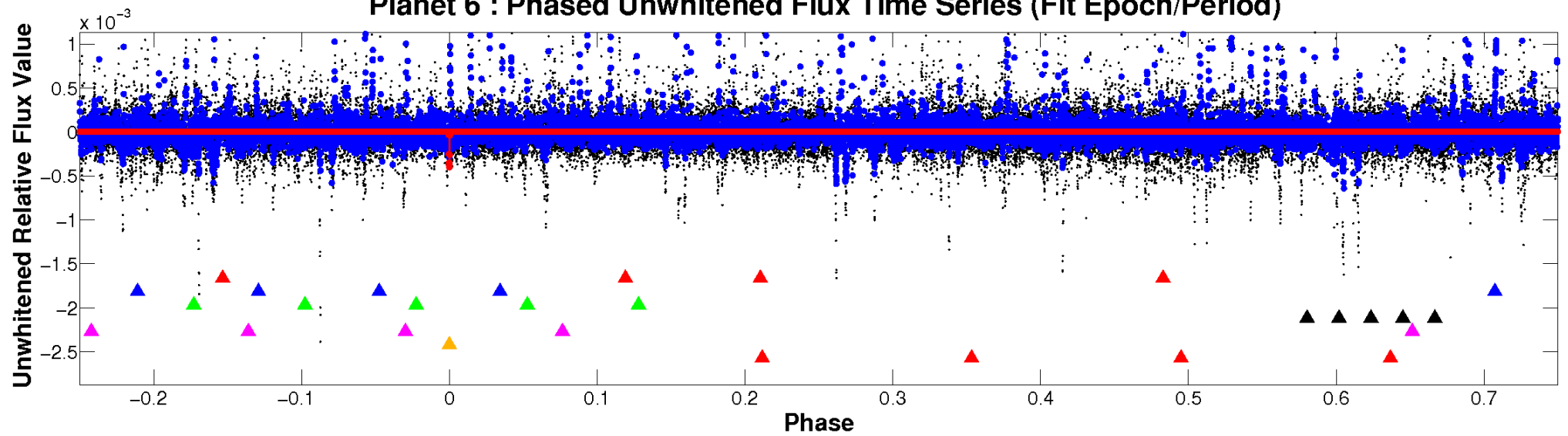
ALT Odd/Even

TCE 000893507-06

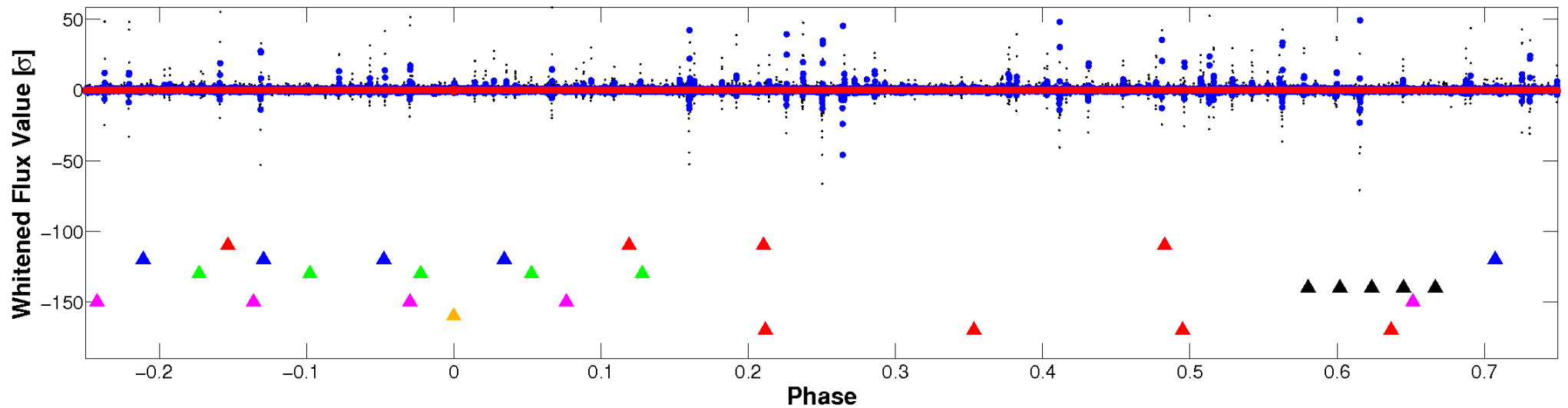


Non-Whitened Vs. Whitened Light Curve

Planet 6 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

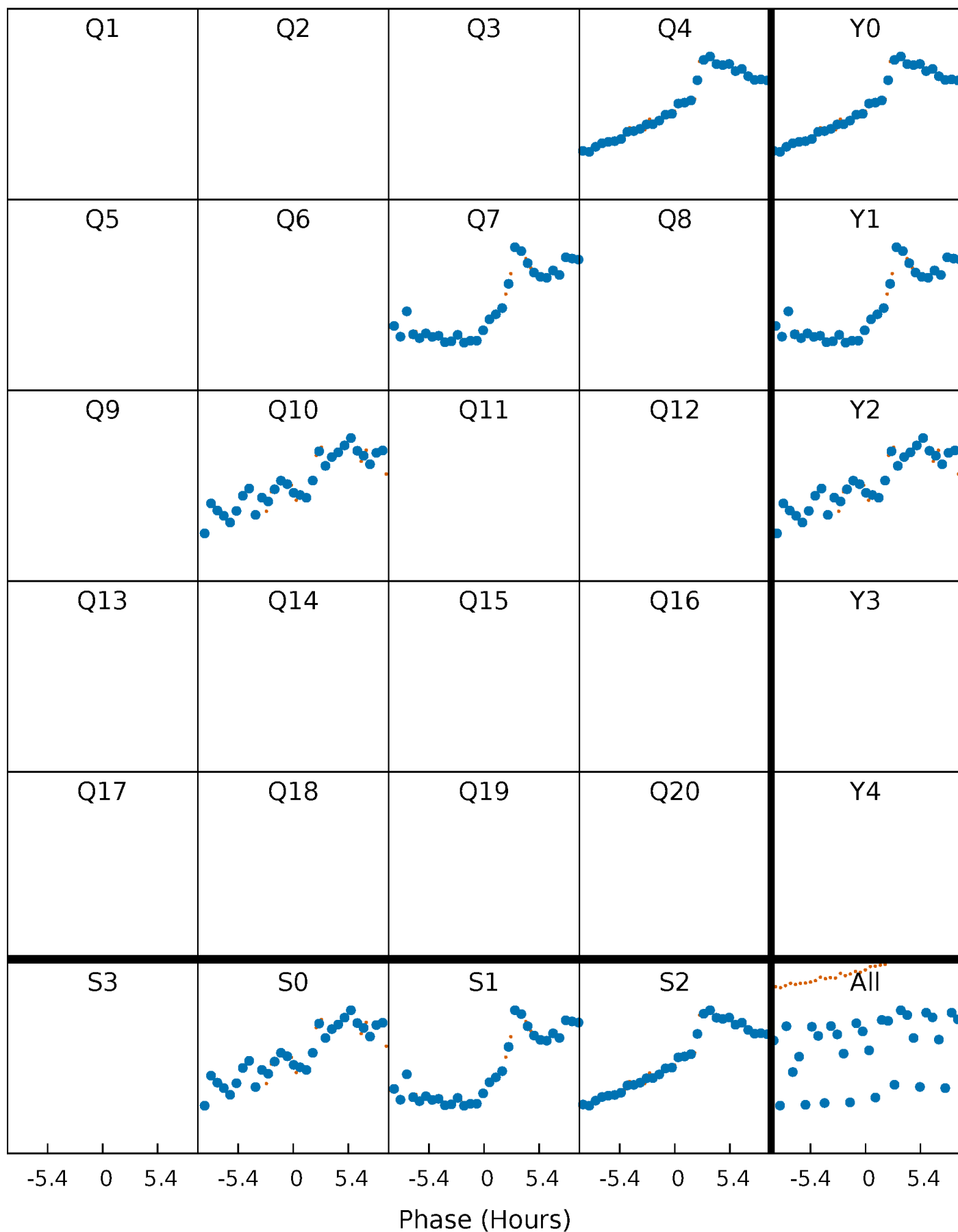


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



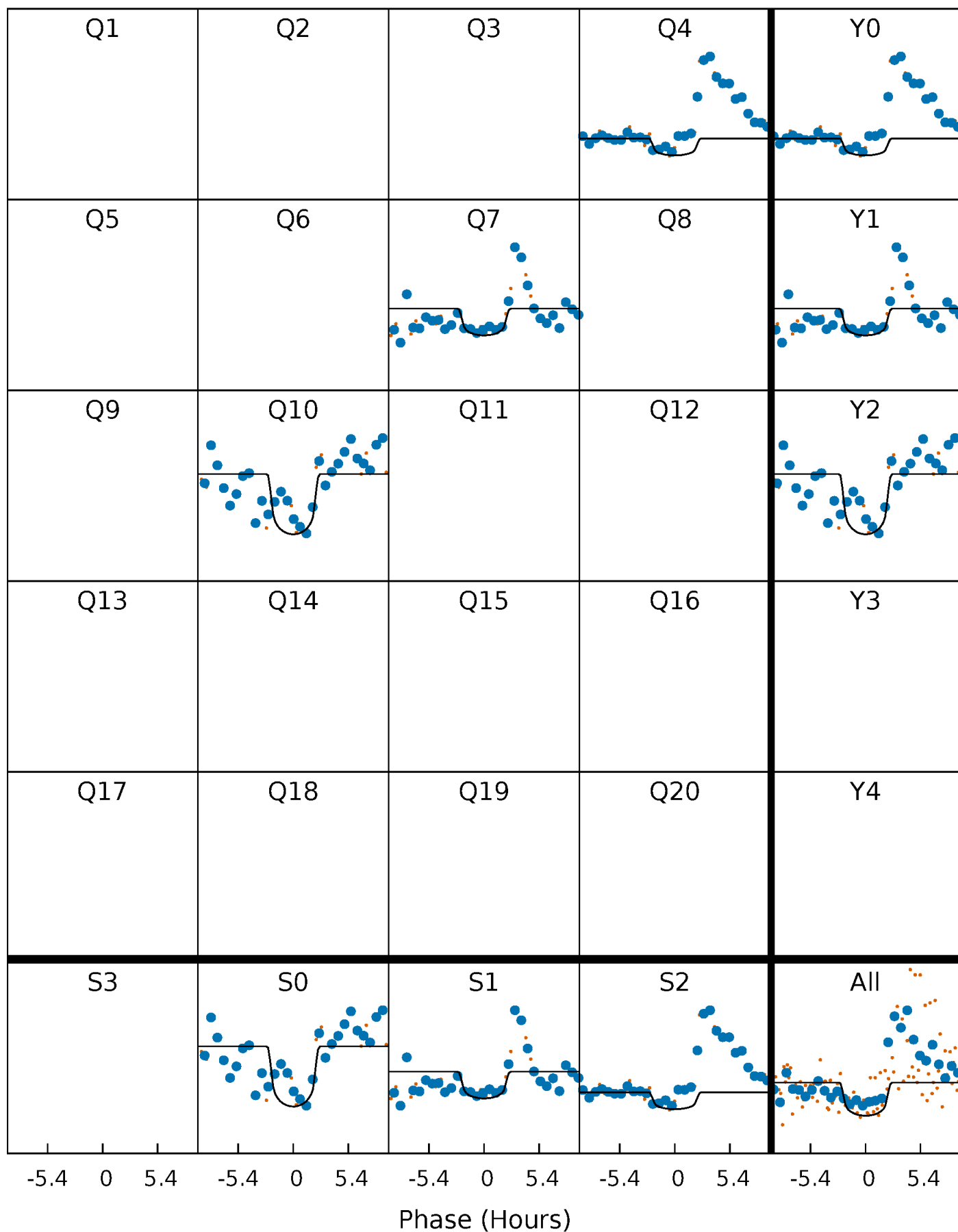
PDC Quarter-Phased Transit Curves

TCE 000893507-06 P=279.221260 Days $T_0=368.703012$ (BKJD)



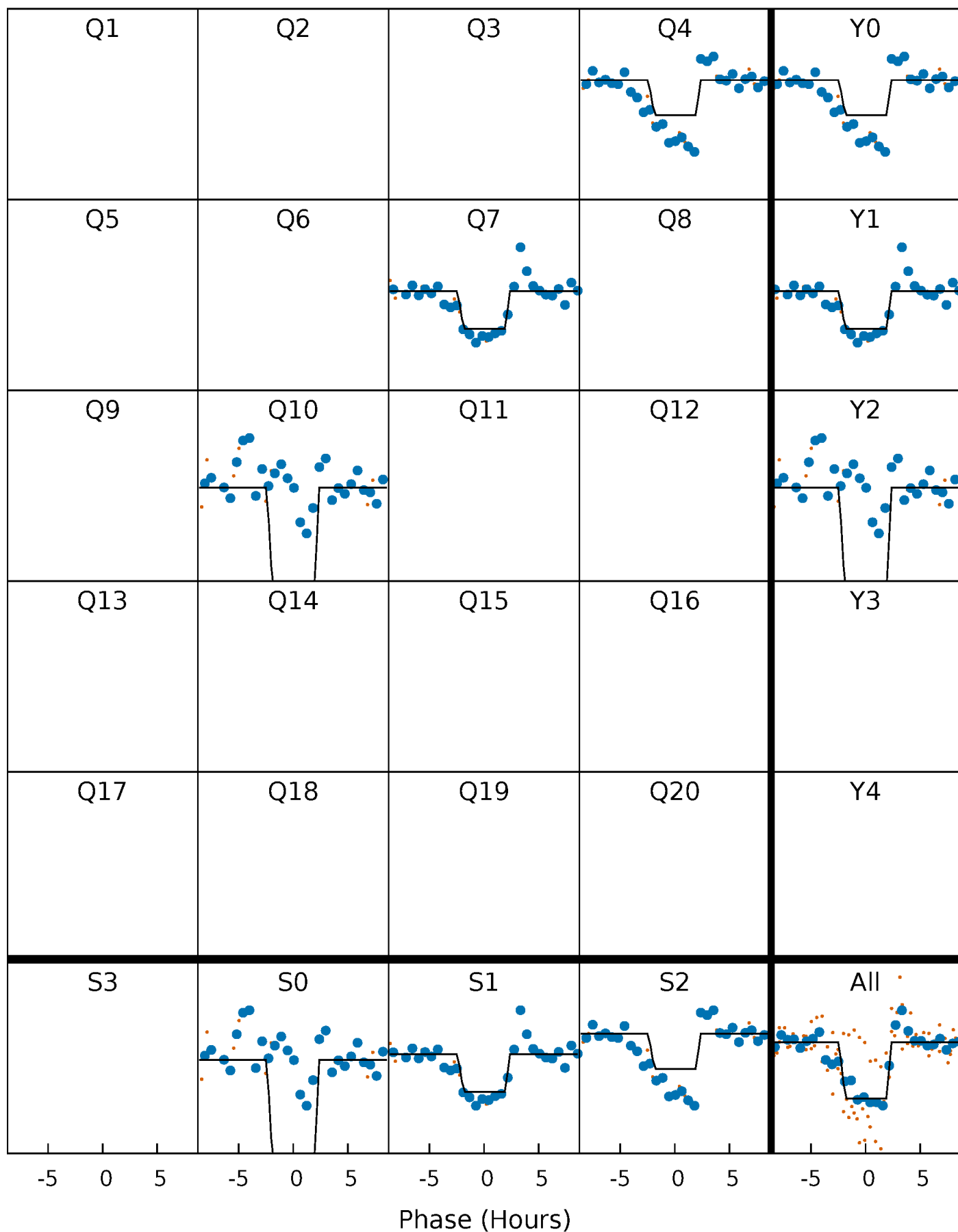
DV Quarter-Phased Transit Curves

TCE 000893507-06 $P=279.221260$ Days $T_0=368.703012$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

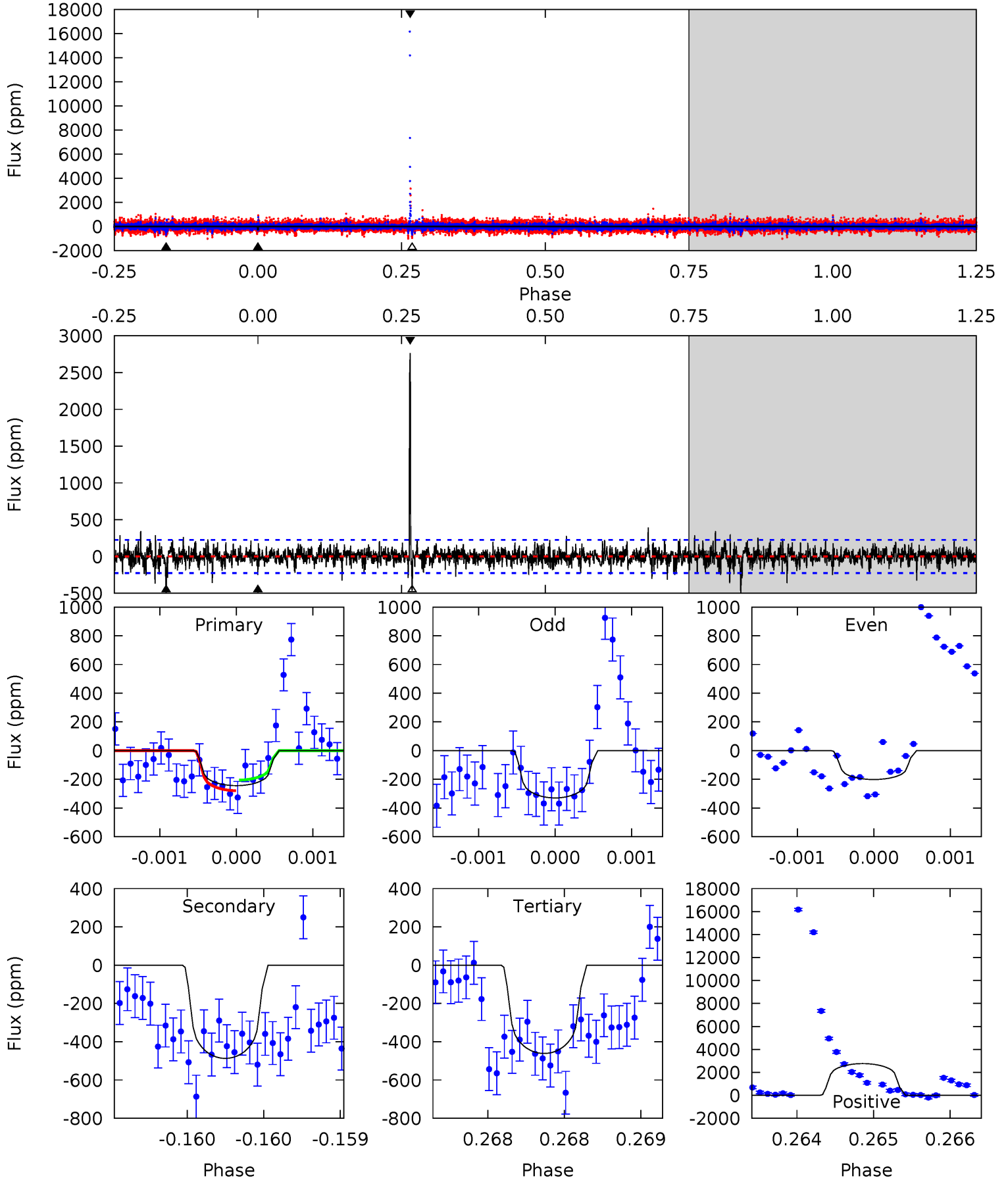
TCE 000893507-06 $P=279.217786$ Days $T_0=368.704855$ (BKJD)



DV Model-Shift Uniqueness Test

000893507-06, P = 279.221260 Days, E = 89.481752 Days

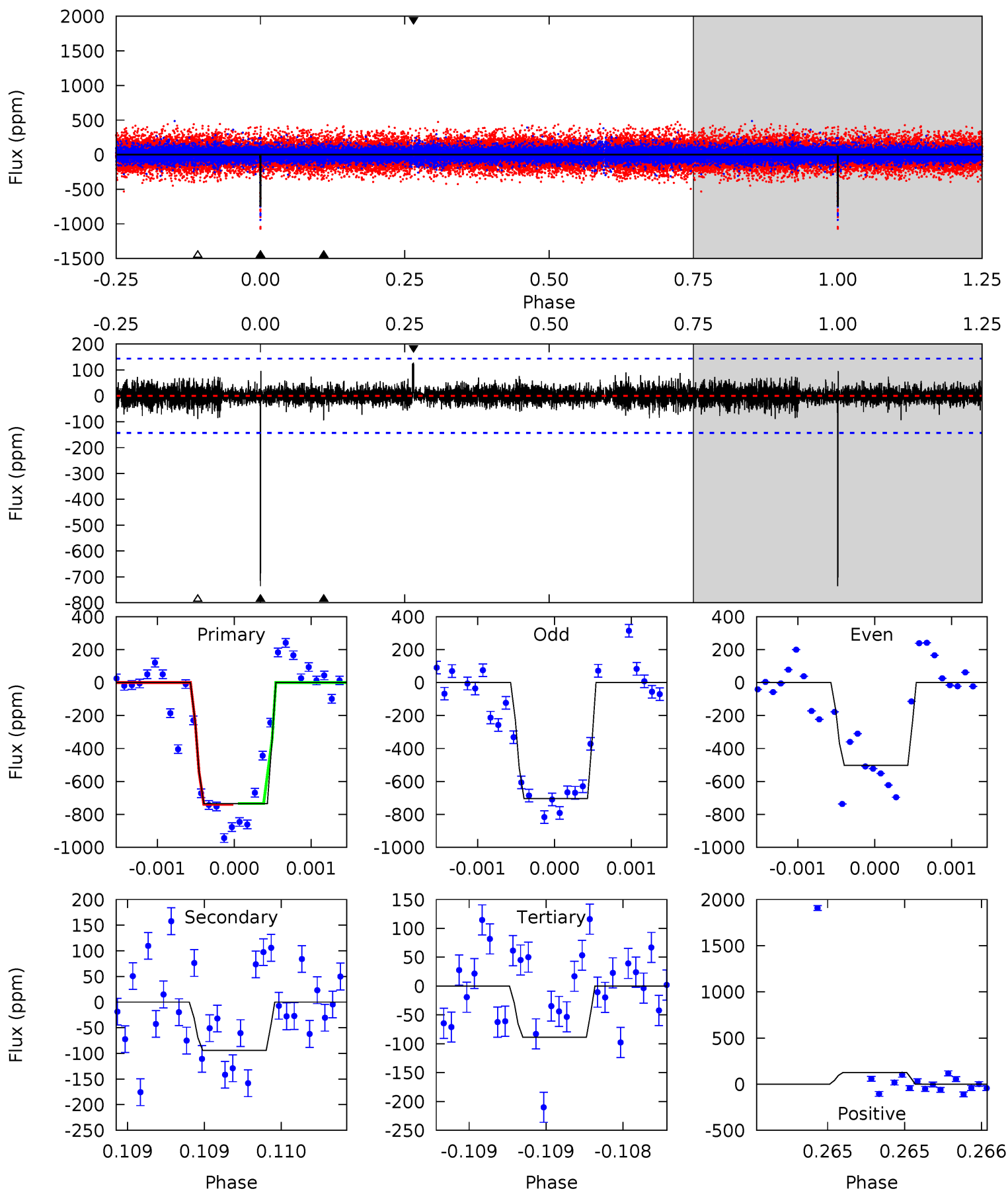
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.96	11.9	11.3	67.5	5.51	3.39	2.31	-5.30	-61.5	0.63	-55.6	1.14	0.86	0.85	0.91



Alt Model-Shift Uniqueness Test

000893507-06, P = 279.217786 Days, E = 89.487069 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.3	3.63	3.42	4.91	5.53	3.41	0.76	24.9	23.4	0.21	-1.28	4.34	0.83	0.15	0.10



Stellar Parameters For KIC 000893507

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5382^{+177}_{-144}	$3.917^{+0.672}_{-0.288}$	$-0.380^{+0.350}_{-0.250}$	$1.684^{+0.939}_{-0.939}$	$0.854^{+0.122}_{-0.110}$	$0.252^{+2.161}_{-0.180}$
	+3%/-3%	+17%/-7%	+92%/-66%	+56%/-56%	+14%/-13%	+858%/-71%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 000893507-06 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-487 ± 41	$3.47^{+2.94}_{-1.83}$	470^{+69}_{-72}	5460^{+2549}_{-1021}	13948^{+49417}_{-9940}
Alt.	-94 ± 26	$4.10^{+3.09}_{-2.25}$	473^{+67}_{-75}	3753^{+1043}_{-525}	1882^{+7438}_{-1288}

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

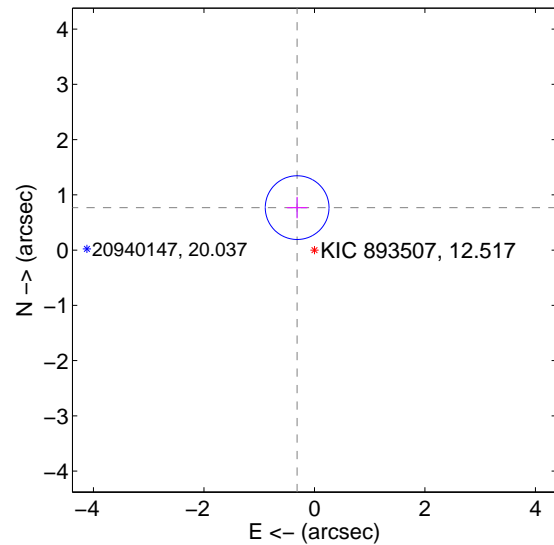
Supplemental centroid analysis for 000893507-06. Kepler magnitude: 12.52. Transit SNR 6.70

There are 1 quarters with good PRF difference image offsets

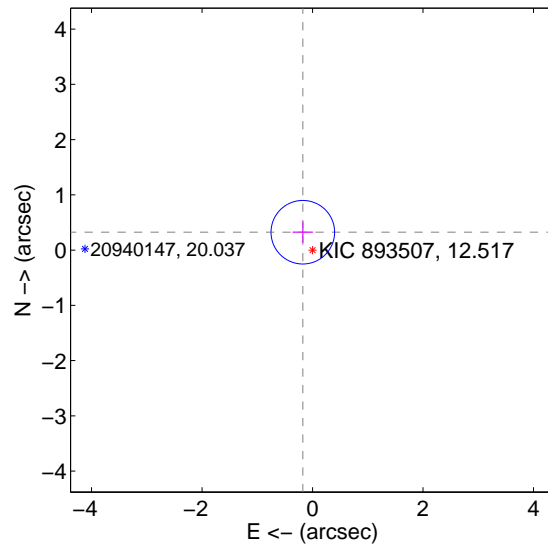
The direct PRF centroid is offset from the target star catalog position by about 0.47 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.830 ± 0.192	4.32	0.313 ± 0.187	0.769 ± 0.193
PRF-fit source offset from KIC position	0.368 ± 0.192	1.92	0.176 ± 0.187	0.324 ± 0.193
photometric centroid source offset	0.79 ± 0.95	0.83	-0.78 ± 0.93	-0.12 ± 1.63

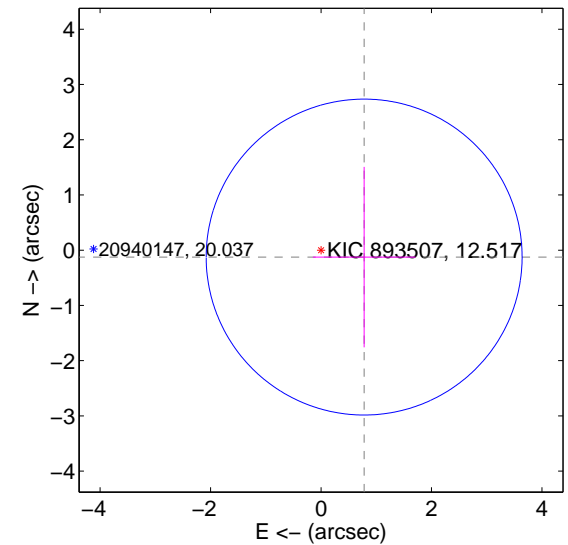
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

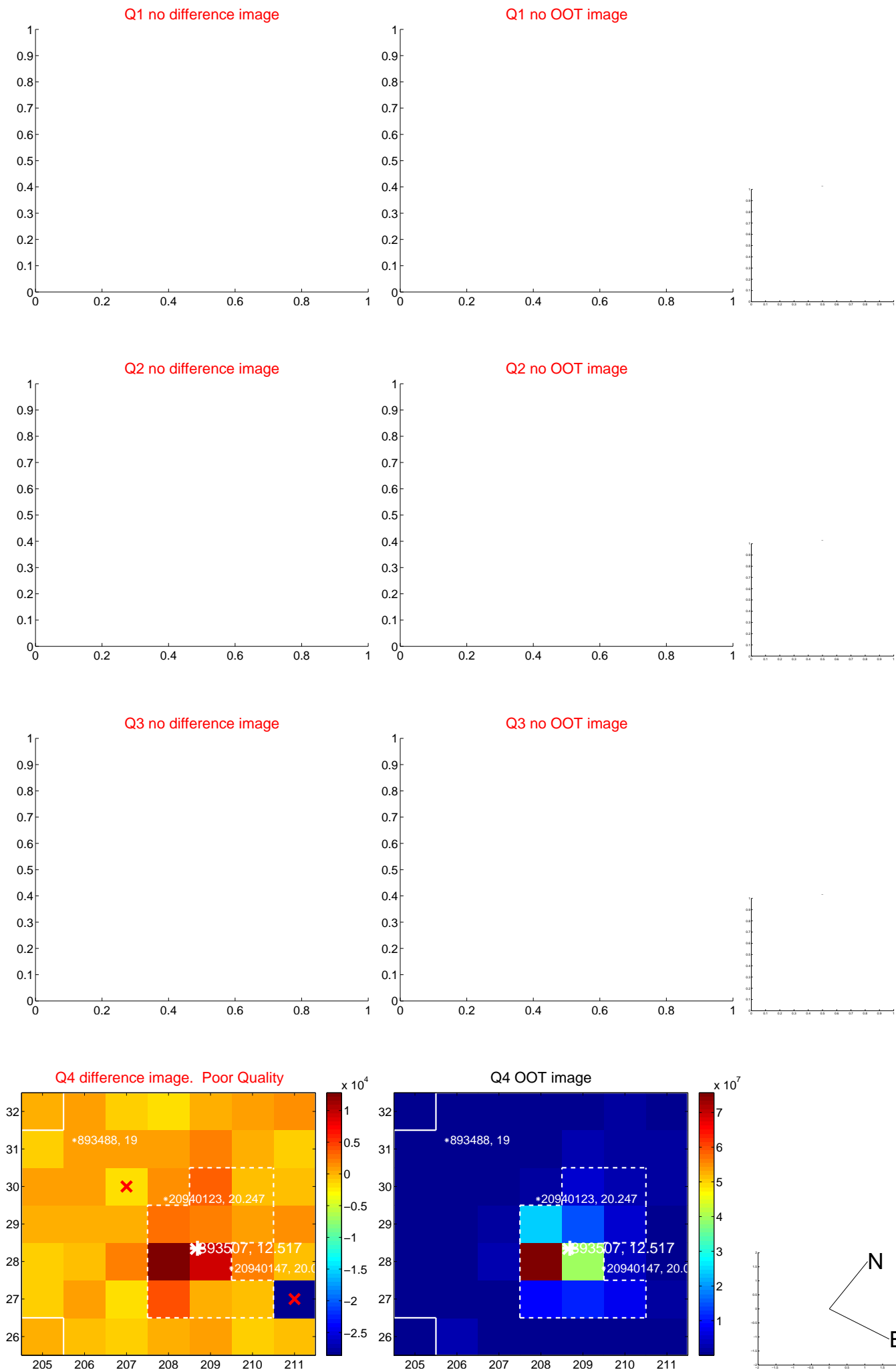


offset from photometric centroids



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.

Q5 no difference image



Q5 no OOT image



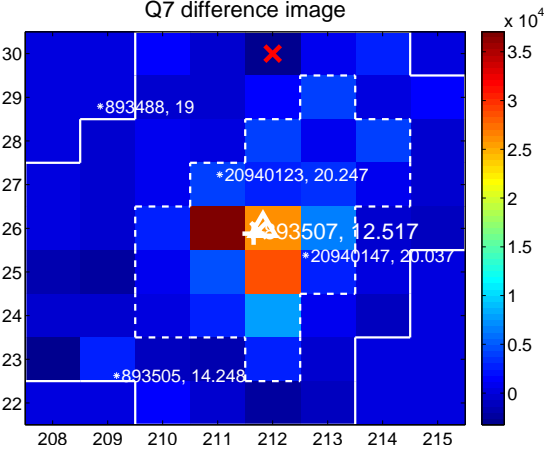
Q6 no difference image



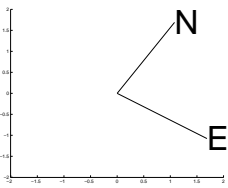
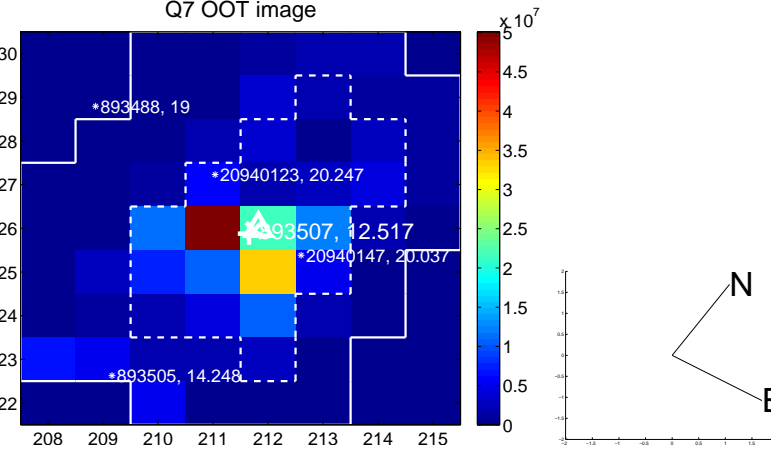
Q6 no OOT image



Q7 difference image



Q7 OOT image



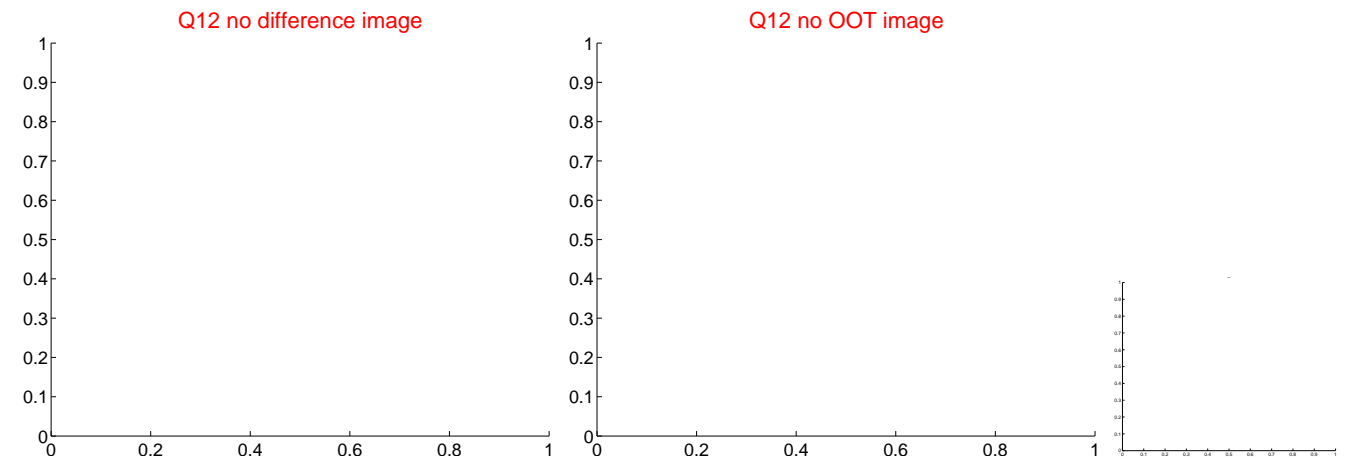
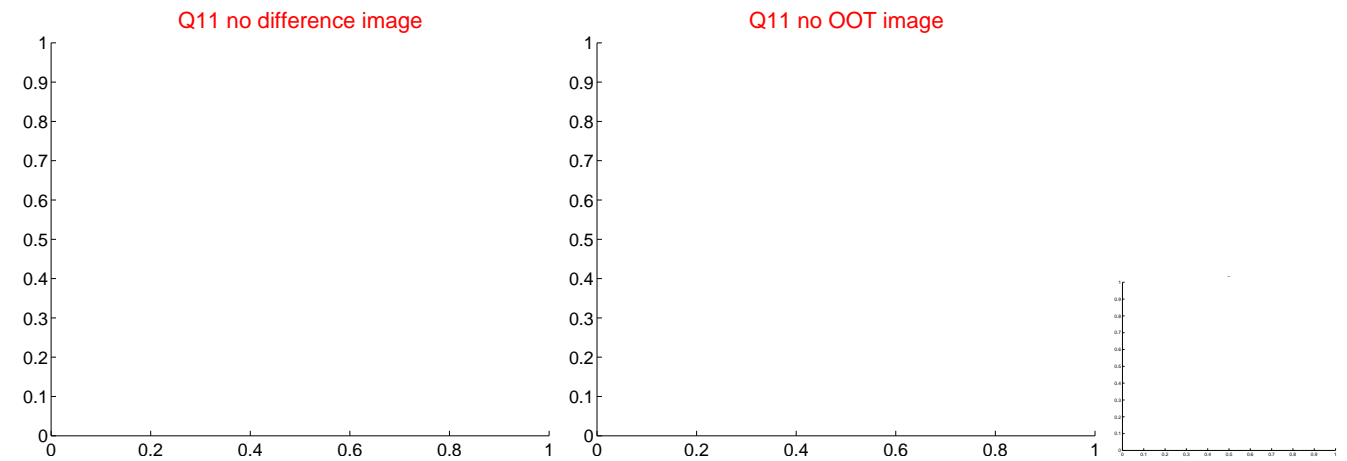
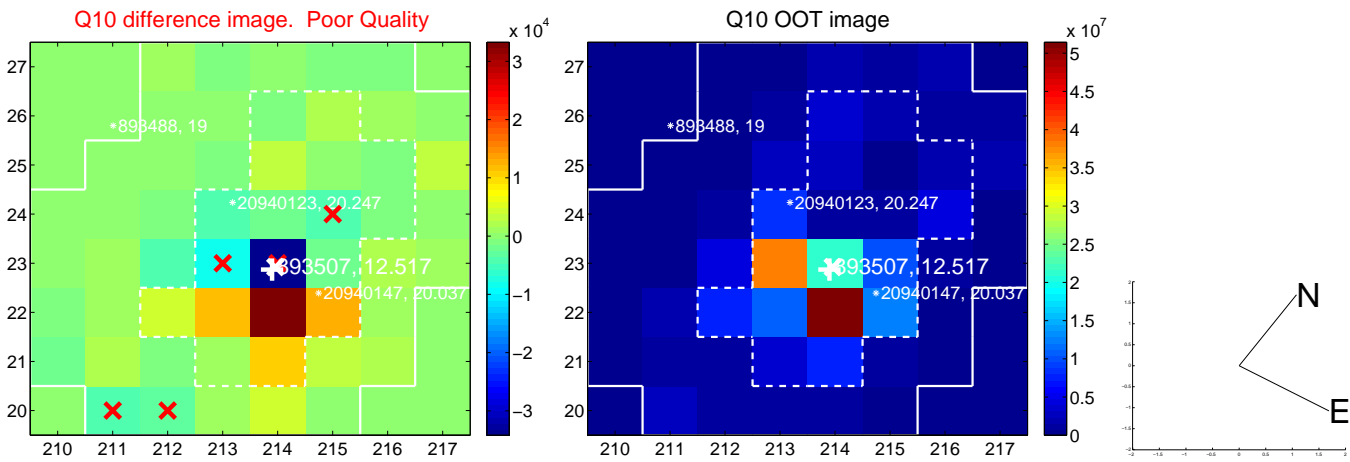
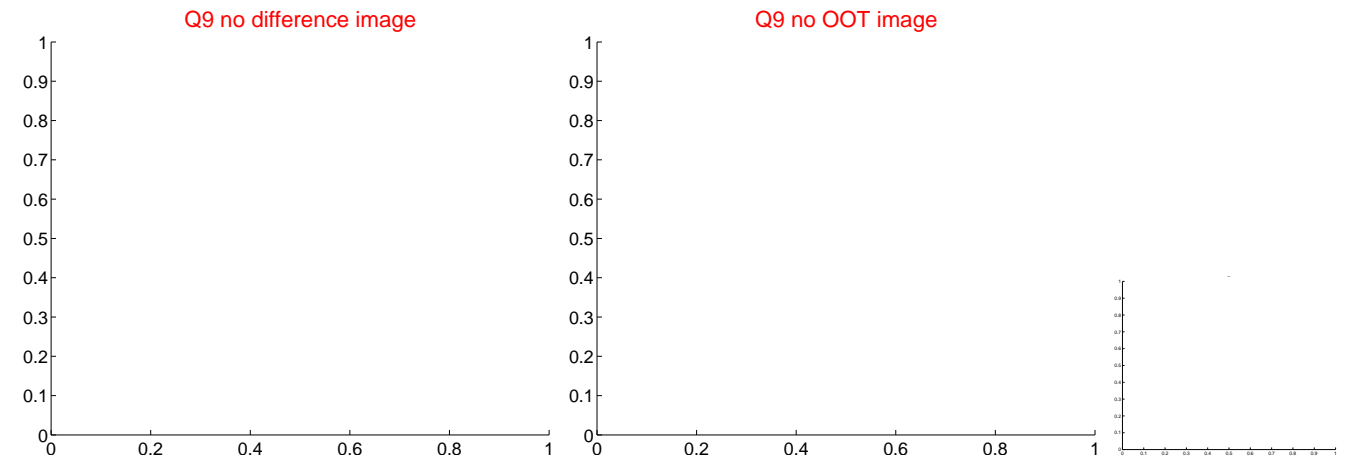
Q8 no difference image



Q8 no OOT image



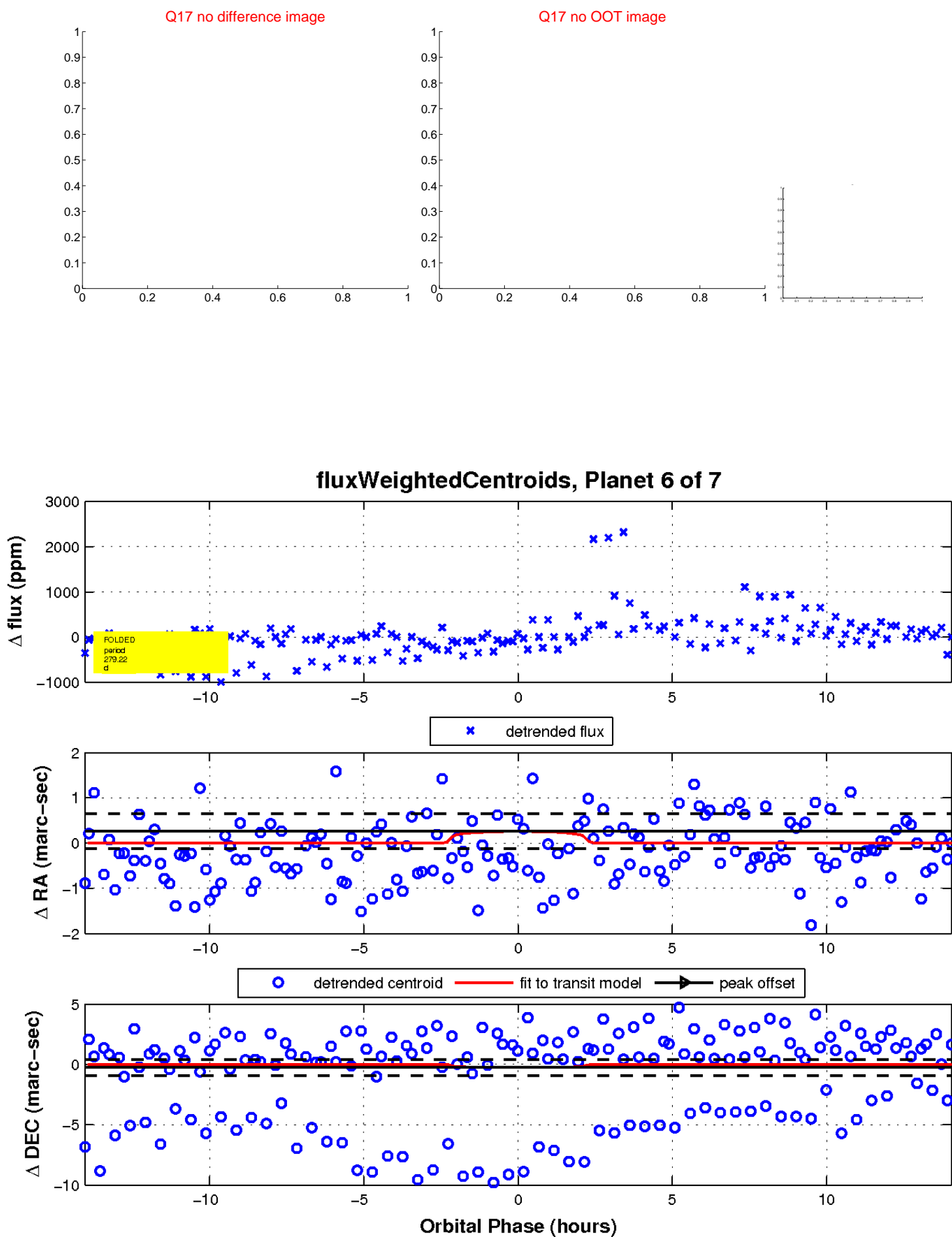
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

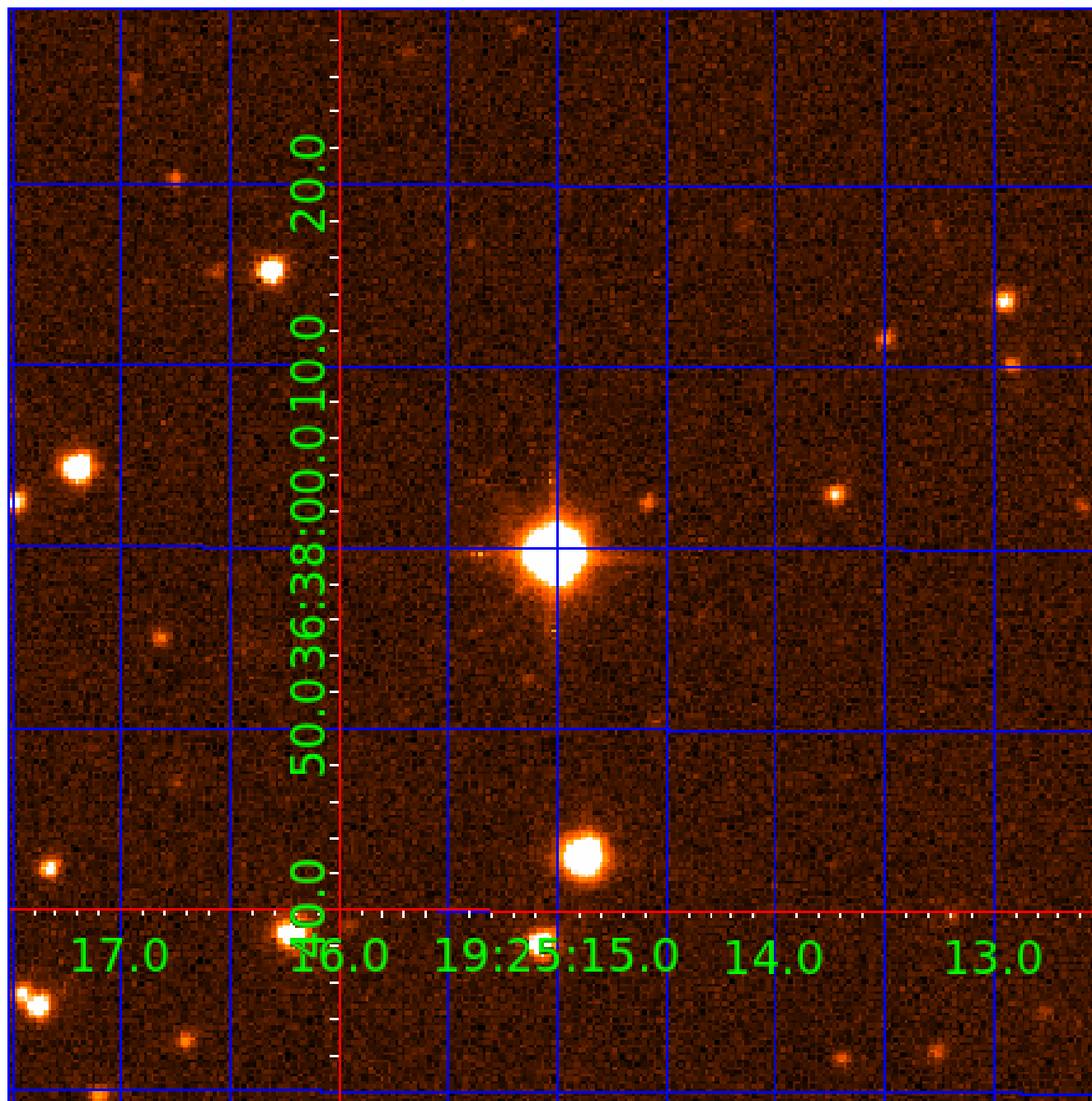


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 000893507

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})
000893507-02	OBS	No	302.045706	286.987124	902.0	3.983	14.2	10.0	1.68	5382	5.80	3.05
000893507-04	OBS	No	285.253570	251.517656	506.6	7.502	13.7	6.5	1.68	5382	4.49	3.29
000893507-05	OBS	No	308.893358	271.389711	757.1	7.801	11.3	8.4	1.68	5382	5.94	2.96
000893507-06	OBS	No	279.221260	368.703012	404.1	4.684	11.6	6.7	1.68	5382	3.74	3.39
000893507-07	OBS	No	318.782248	427.805507	493.1	4.667	10.6	8.0	1.68	5382	4.08	2.84

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
000893507-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—CENT_FEW_DIFFS
000893507-04	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
000893507-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL_SKYE_ZUMA—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
000893507-06	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—INCONSISTENT_TRANS—CENT_FEW_DIFFS
000893507-07	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST

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

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

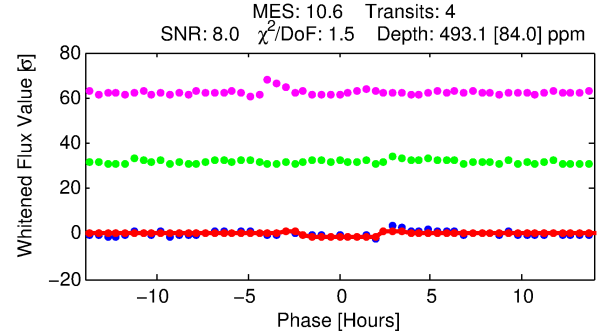
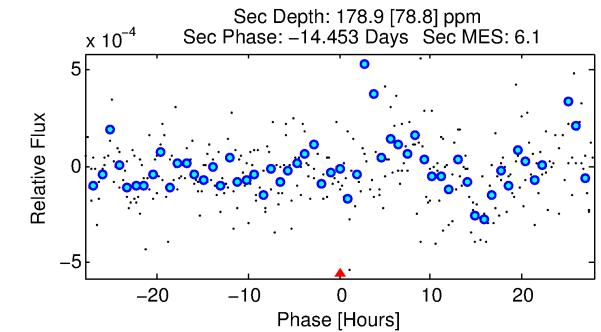
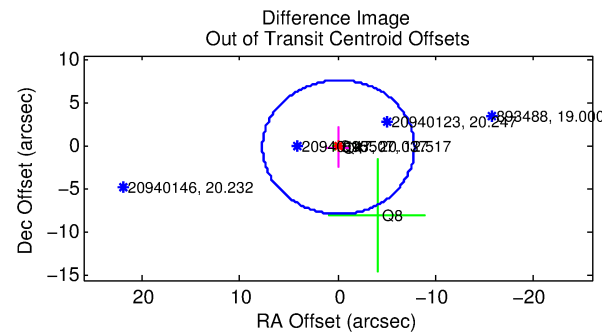
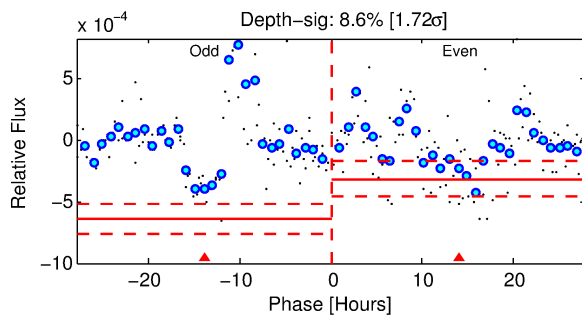
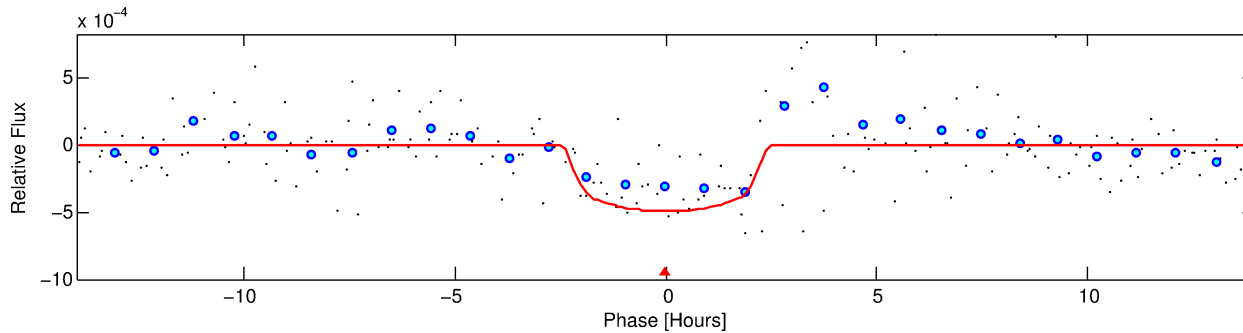
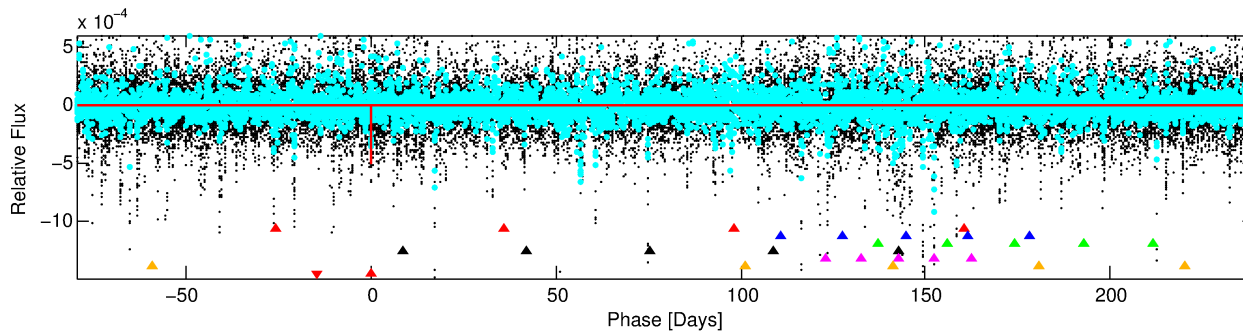
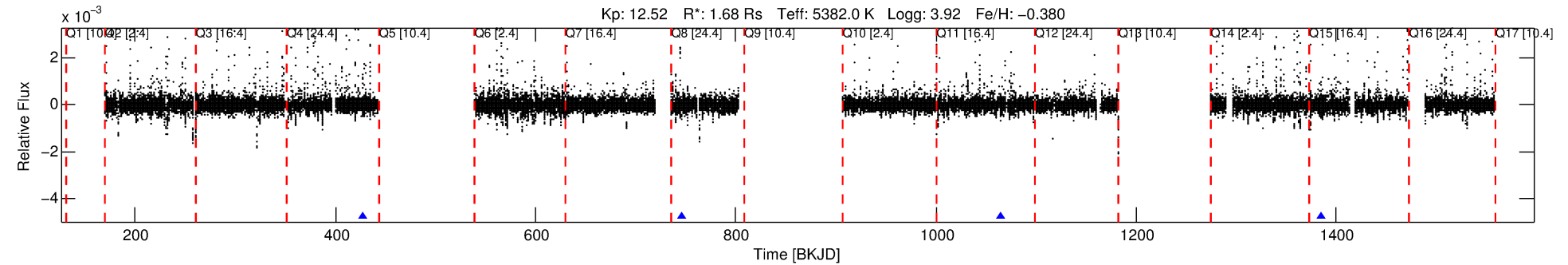
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 000893507-07

No Significant Match Found

DV One-Page Summary

KIC: 893507 Candidate: 7 of 7 Period: 318.782 d



DV Fit Results:

Period = 318.78225 [0.00424] d
Epoch = 427.8055 [0.0064] BKJD
Rp/R* = 0.0222 [0.0207]
a/R* = 356.94 [1384.94]
b = 0.76 [2.19]
Seff = 2.84 [3.13]
Teq = 331 [91] K
Rp = 4.08 [4.43] Re
a = 0.8668 [0.5511] AU
Ag = 4439.46 [9783.91] [0.45σ]
Teffp = 4177 [2001] K [1.92σ]

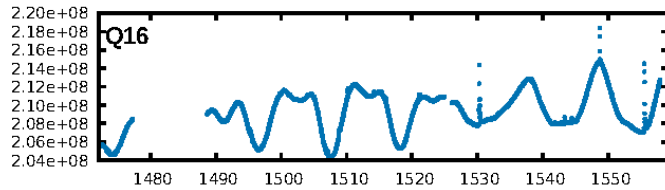
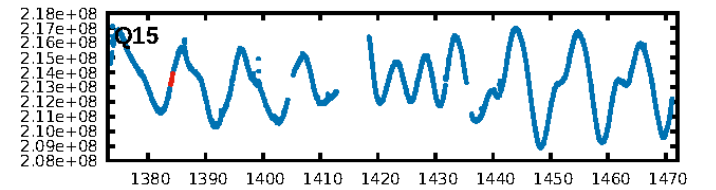
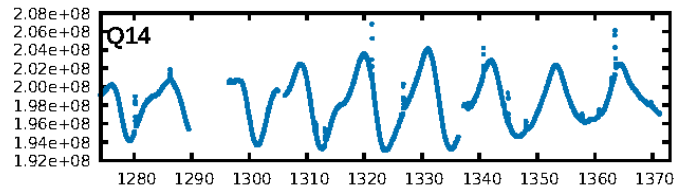
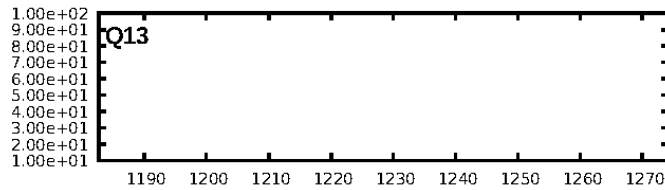
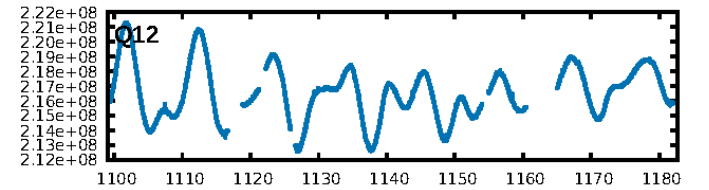
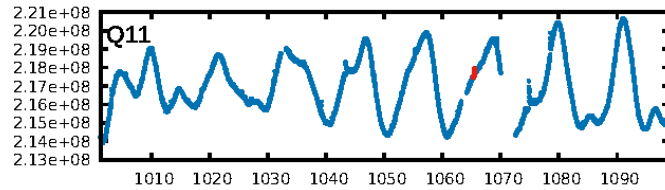
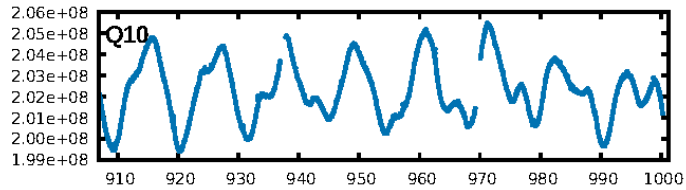
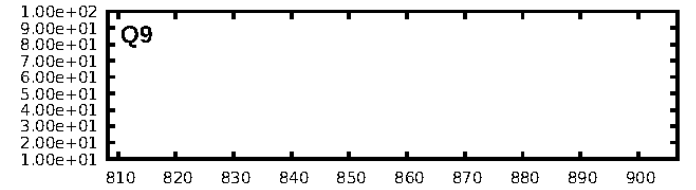
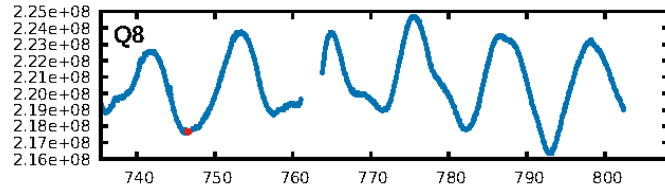
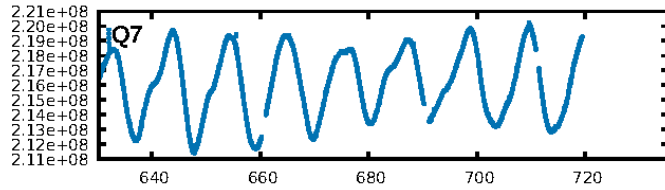
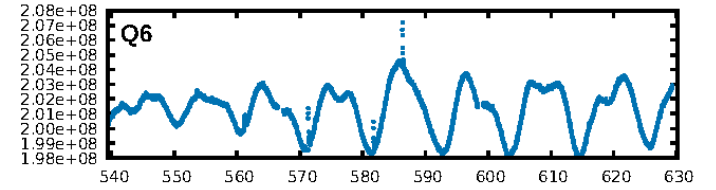
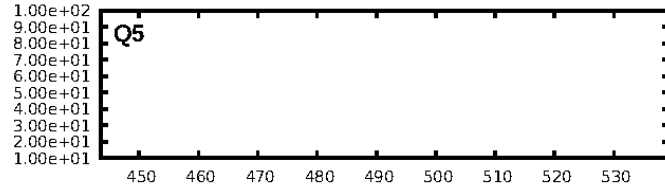
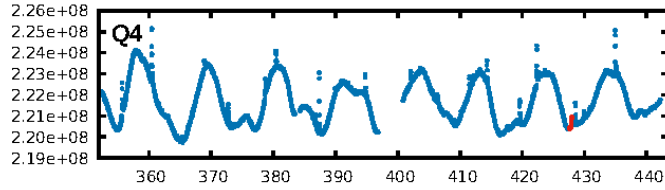
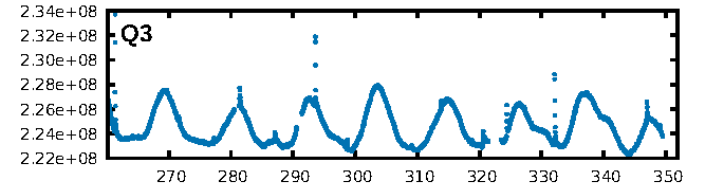
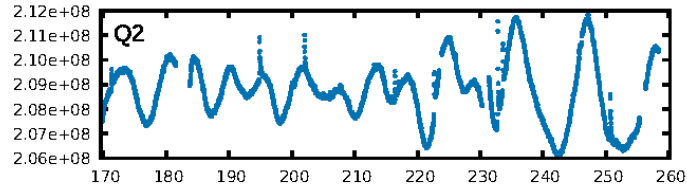
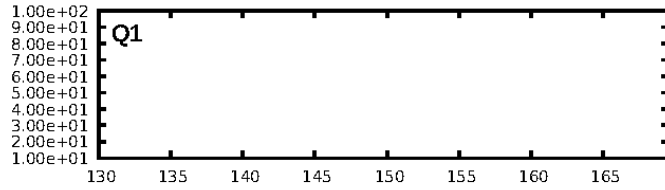
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [26.11σ]
LongPeriod-sig: 100.0% [282.40σ]
ModelChiSquare2-sig: 1.2%
ModelChiSquareGof-sig: 97.5%
Bootstrap-pfa: 3.33e-09
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -0.07974
Centroid-sig: 91.1%
Centroid-so: 0.697 arcsec [0.60σ]
OotOffset-rm: 0.170 arcsec [0.07σ]
OotOffset-st: 0/1/2/0 [3]
KicOffset-rm: 0.127 arcsec [0.06σ]
KicOffset-st: 0/1/2/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

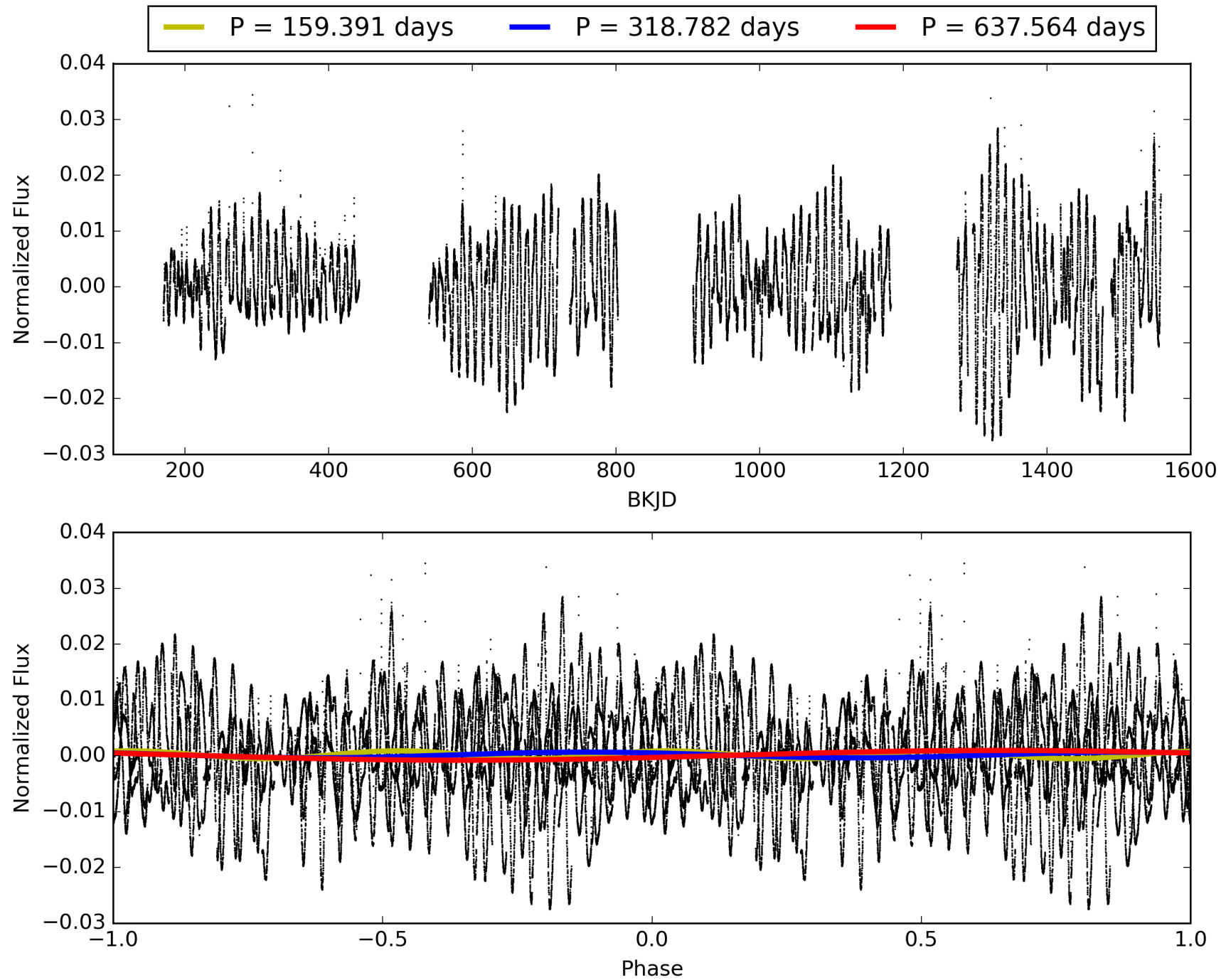
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:04:59 Z

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

TCE 000893507-07, PDC Light Curves

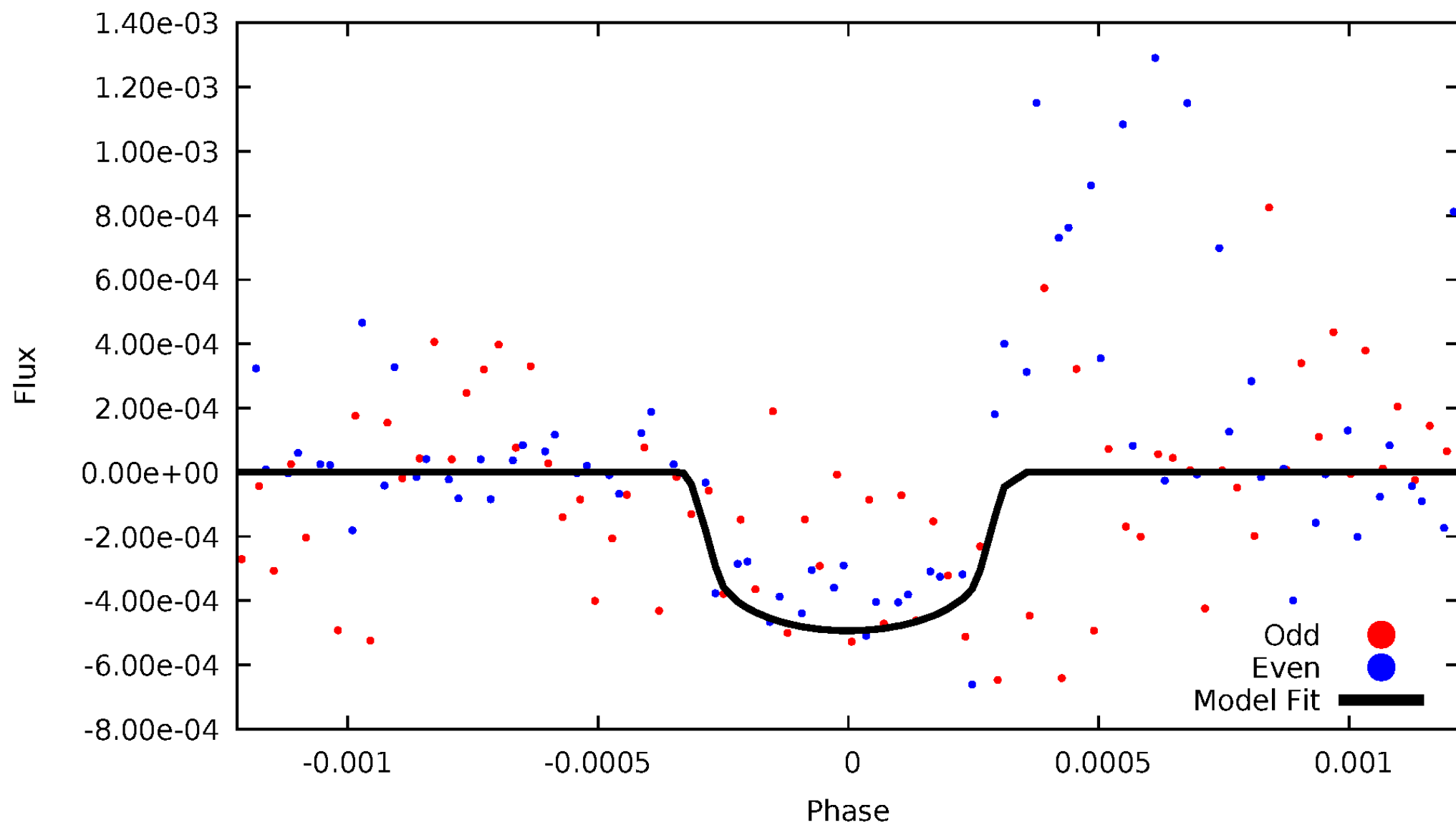


TCE 000893507-07



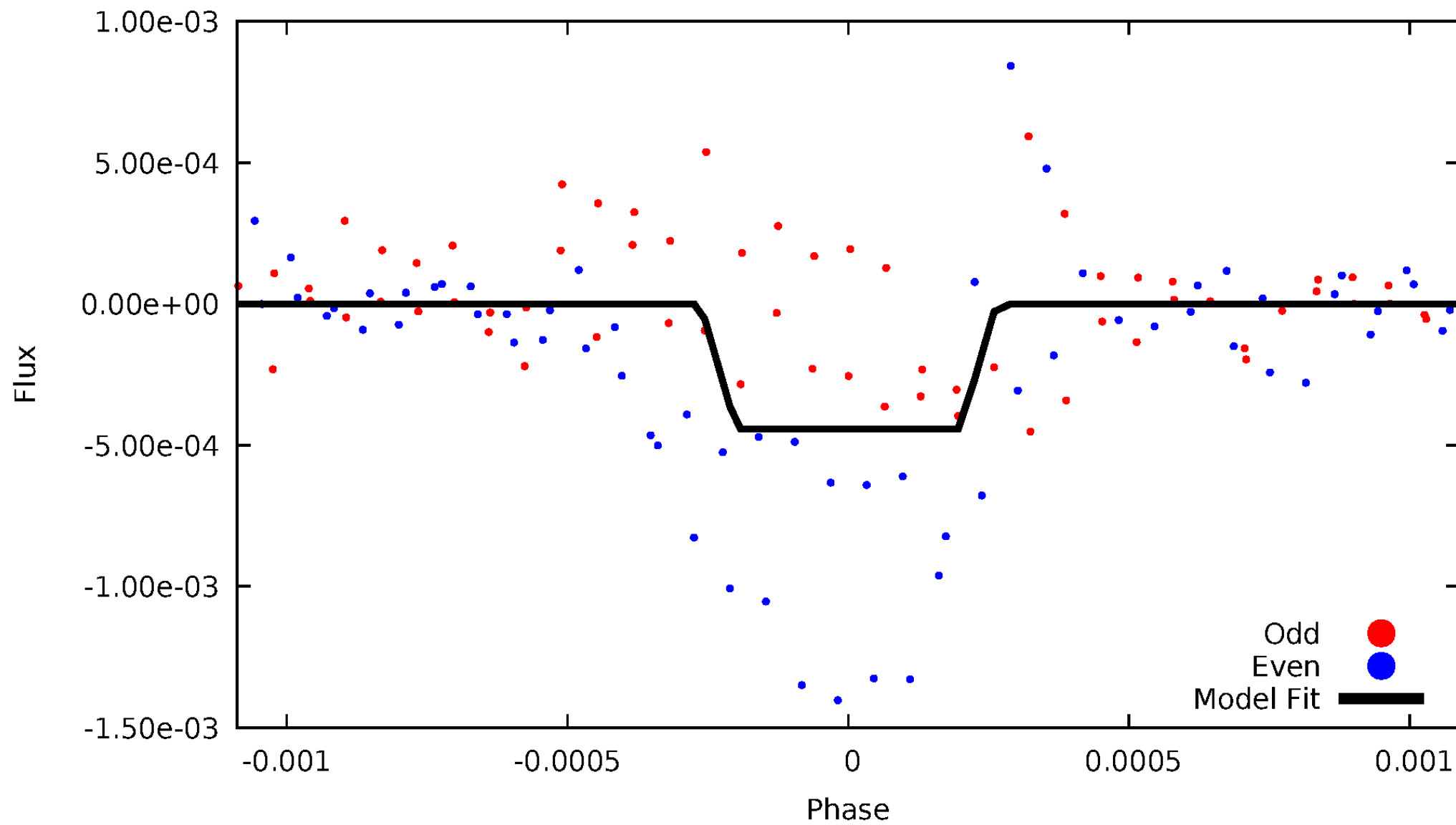
DV Odd/Even

TCE 000893507-07



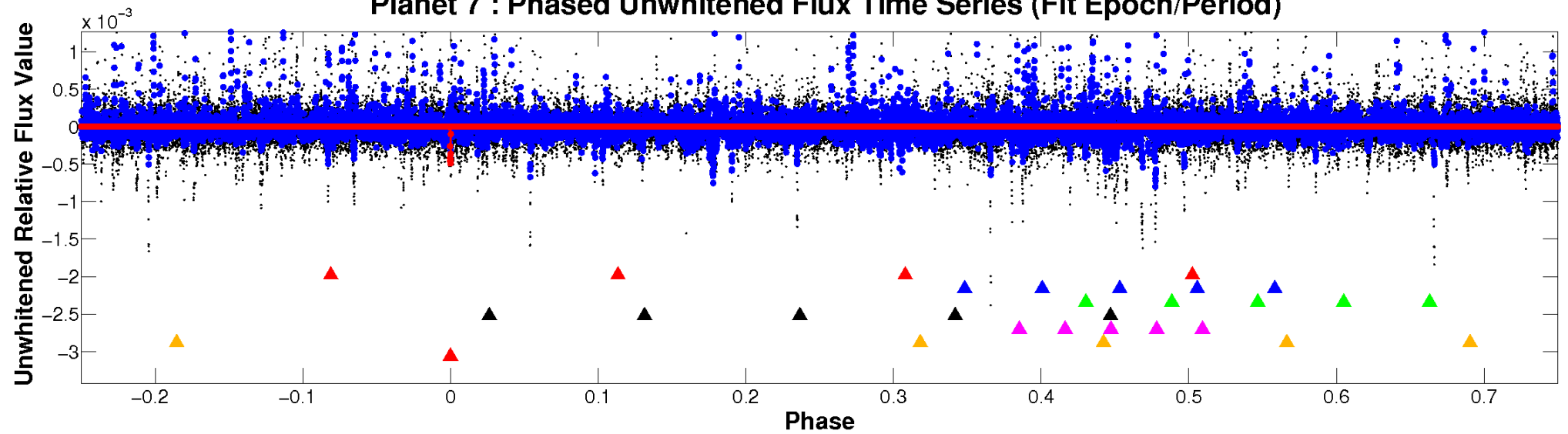
ALT Odd/Even

TCE 000893507-07

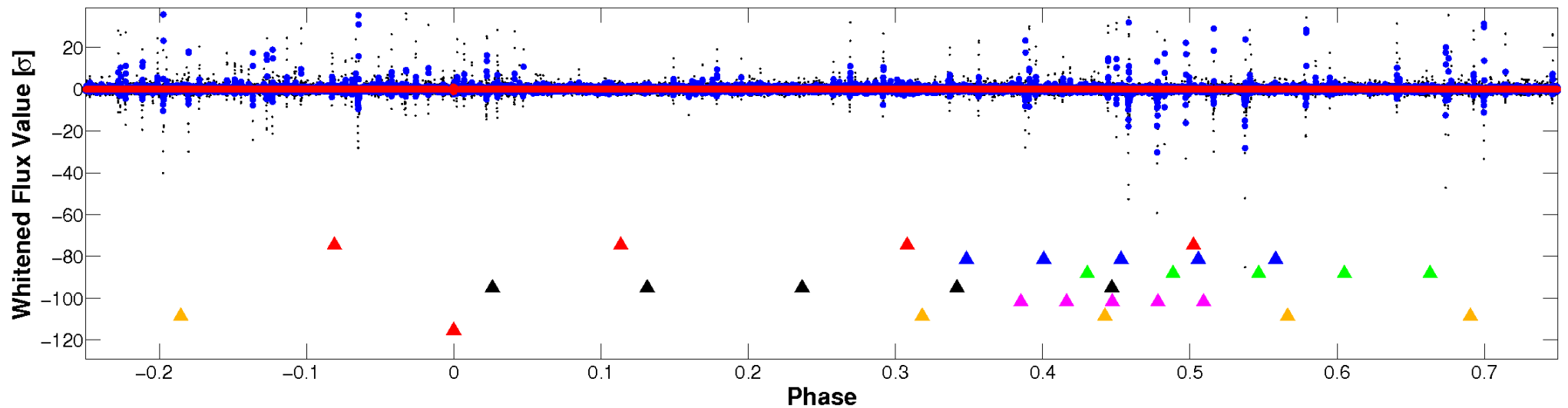


Non-Whitened Vs. Whitened Light Curve

Planet 7 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

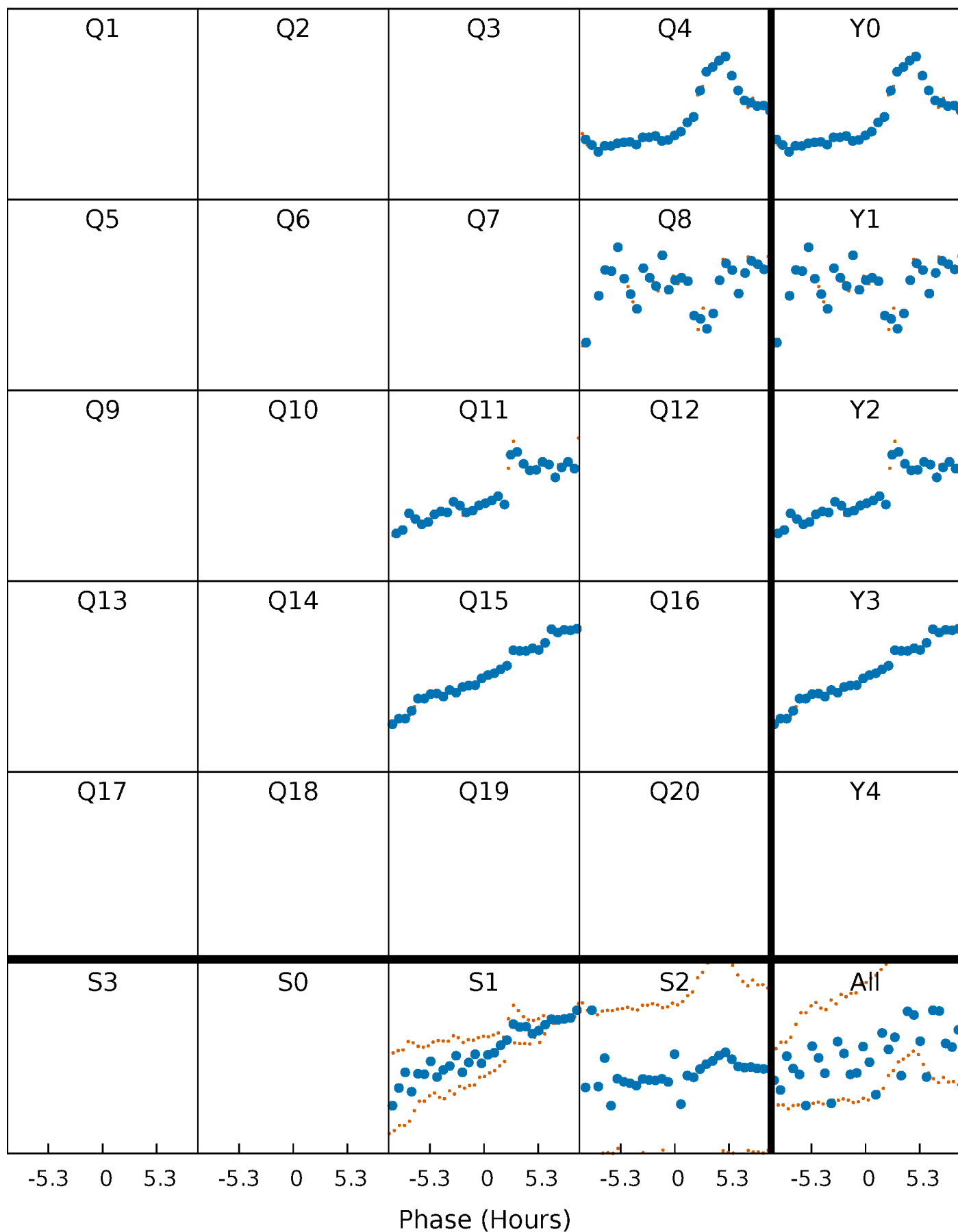


Planet 7 : Phased Whitened Flux Time Series (Fit Epoch/Period)



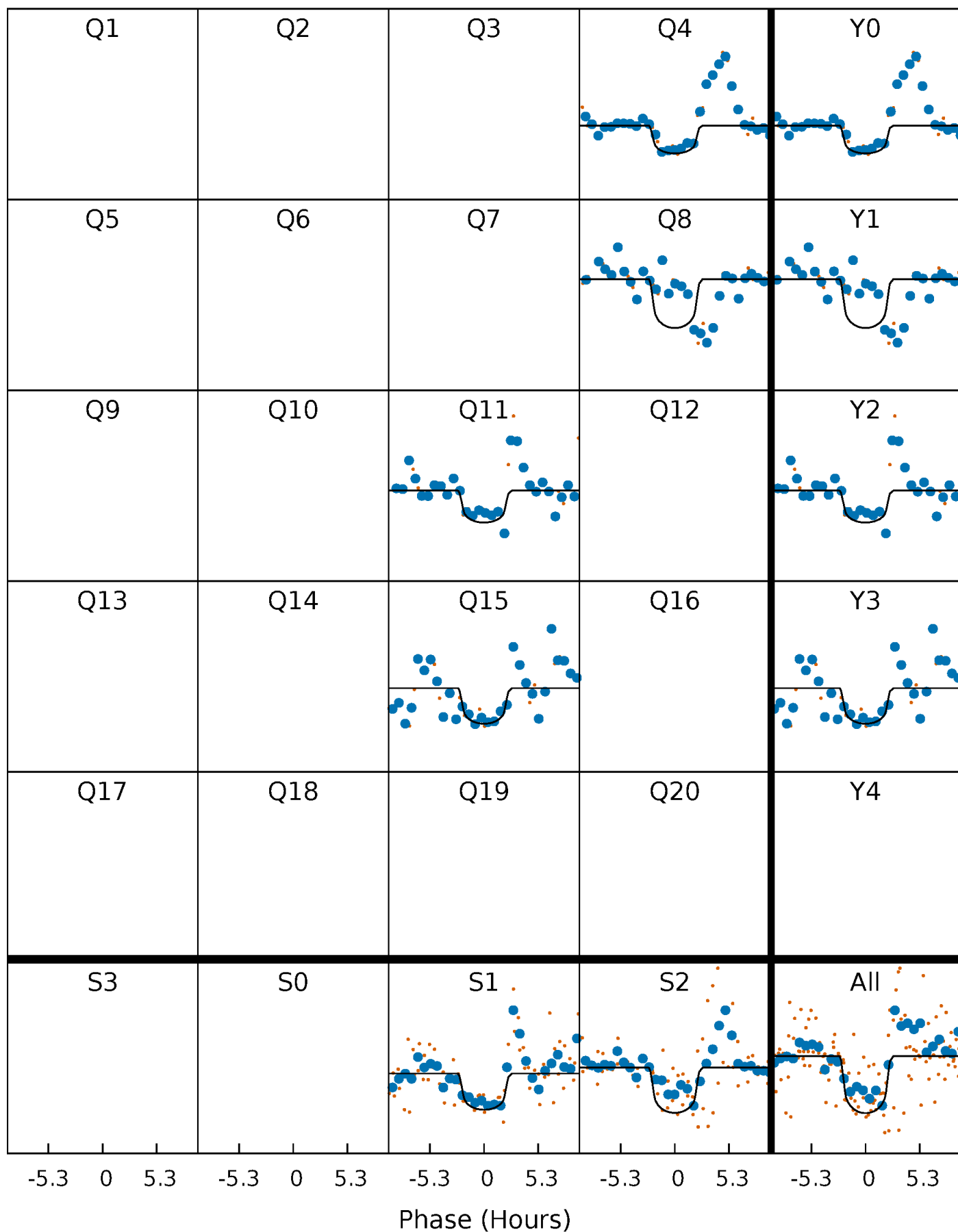
PDC Quarter-Phased Transit Curves

TCE 000893507-07 $P=318.782248$ Days $T_0=427.805507$ (BKJD)



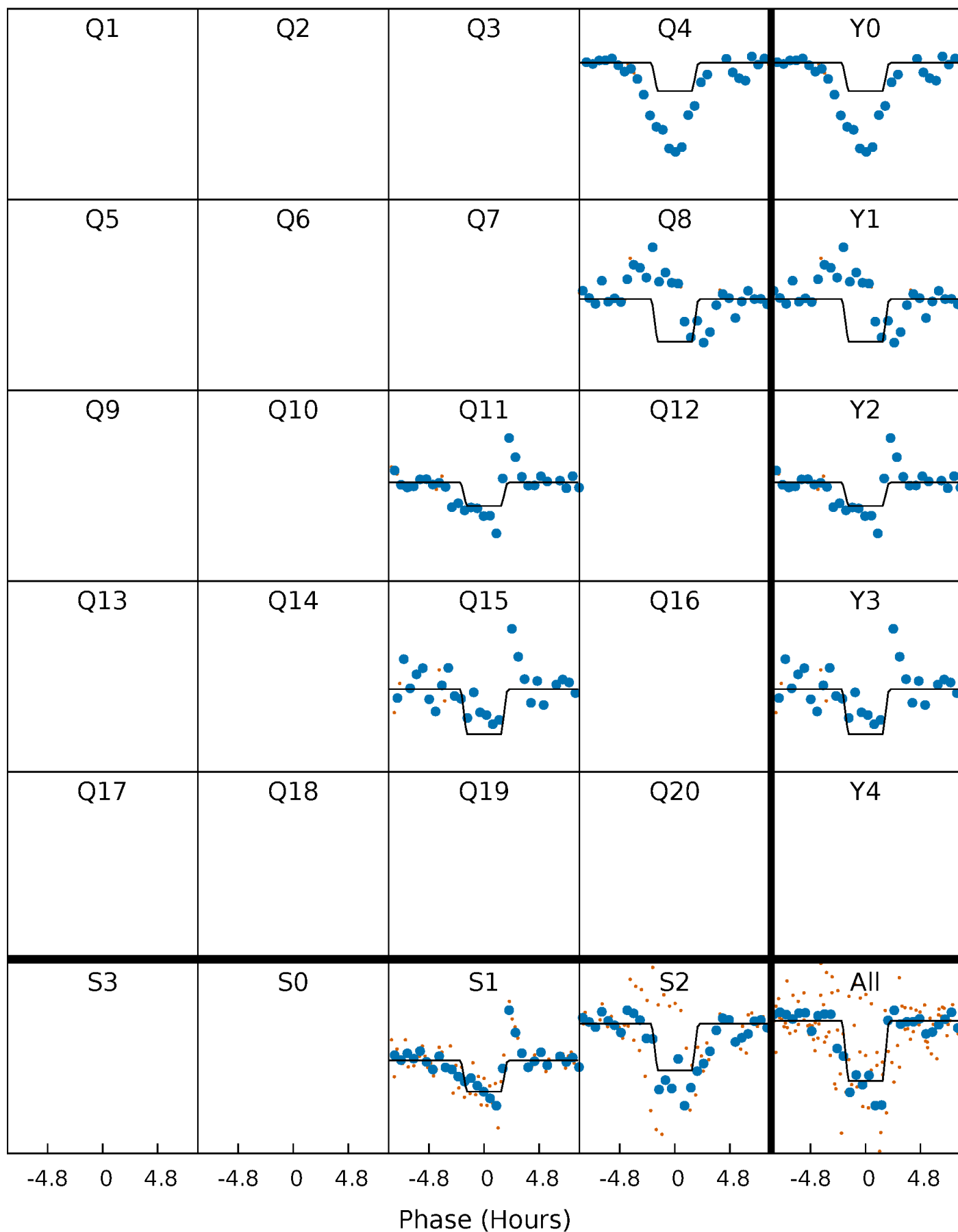
DV Quarter-Phased Transit Curves

TCE 000893507-07 $P=318.782248$ Days $T_0=427.805507$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

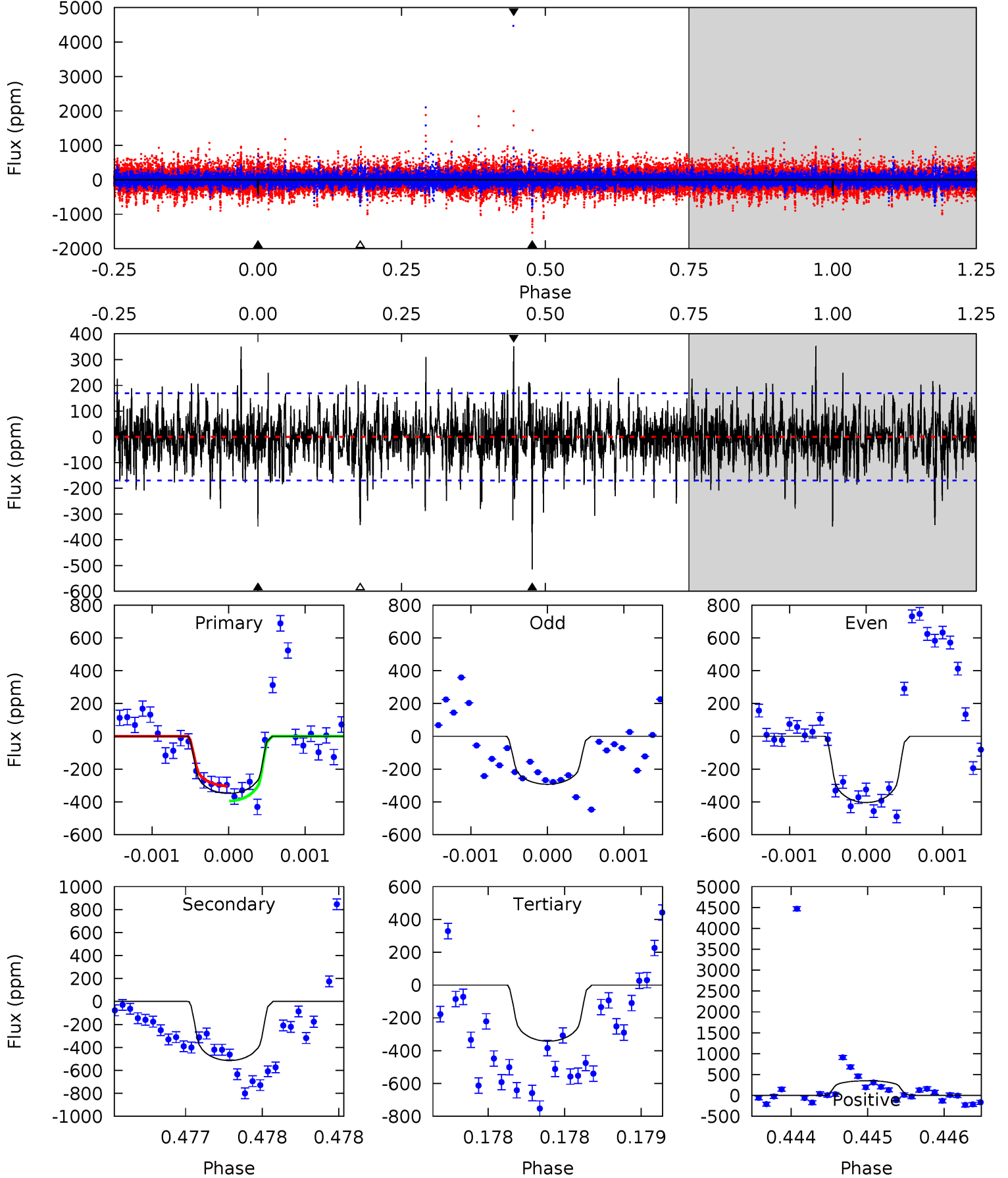
TCE 000893507-07 $P=318.777158$ Days $T_0=427.843219$ (BKJD)



DV Model-Shift Uniqueness Test

000893507-07, P = 318.782248 Days, E = 109.023259 Days

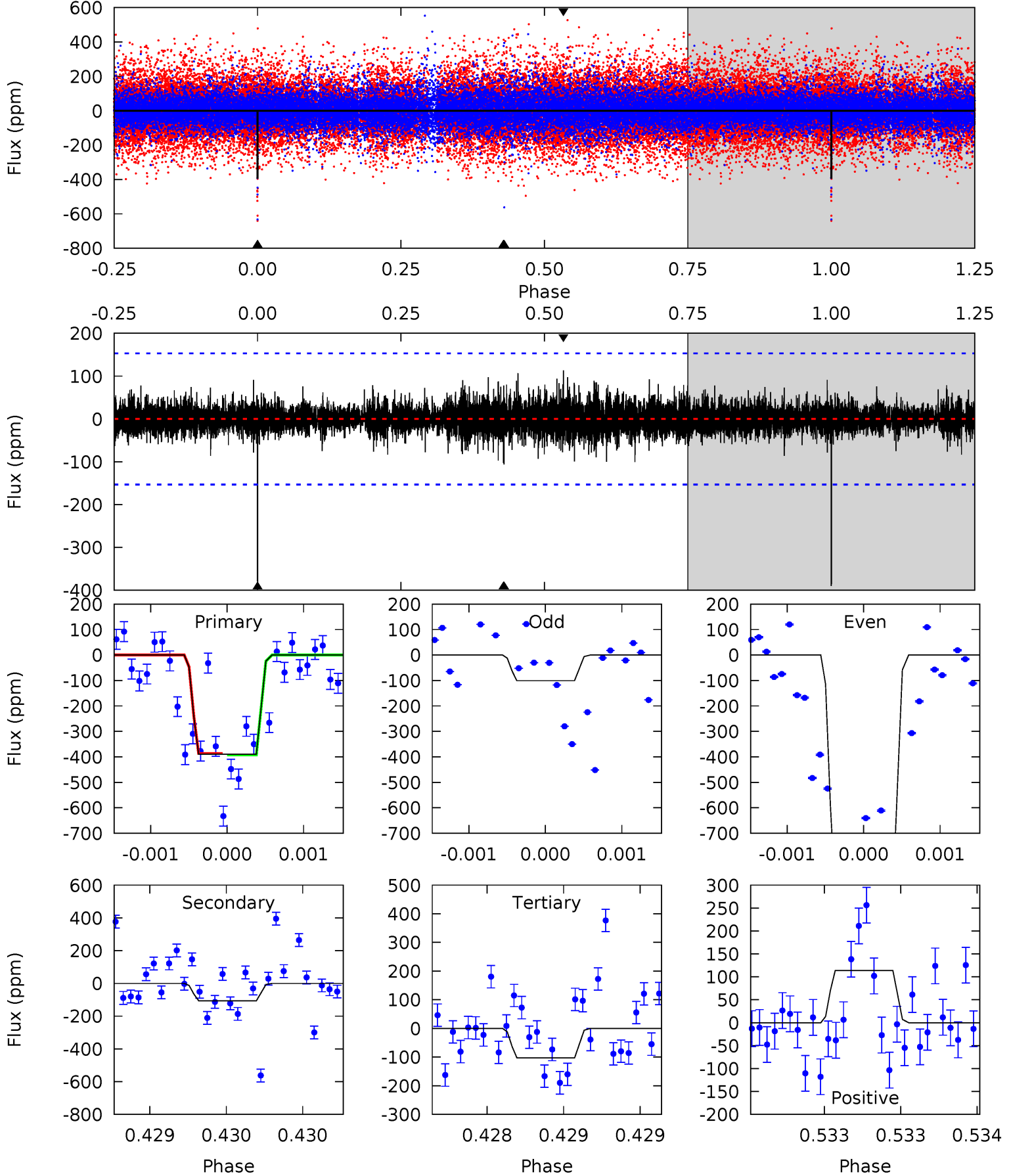
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.4	16.8	11.2	11.5	5.53	3.42	2.28	0.20	-0.11	5.63	5.32	1.02	0.86	0.41	1.51



Alt Model-Shift Uniqueness Test

000893507-07, P = 318.777158 Days, E = 109.066061 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.2	3.86	3.73	4.13	5.57	3.47	0.79	10.4	10.0	0.12	-0.27	19.6	1.18	0.23	0



Stellar Parameters For KIC 000893507

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5382^{+177}_{-144}	$3.917^{+0.672}_{-0.288}$	$-0.380^{+0.350}_{-0.250}$	$1.684^{+0.939}_{-0.939}$	$0.854^{+0.122}_{-0.110}$	$0.252^{+2.161}_{-0.180}$
	+3%/-3%	+17%/-7%	+92%/-66%	+56%/-56%	+14%/-13%	+858%/-71%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 000893507-07 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-515 ± 31	$4.34^{+4.07}_{-2.71}$	455^{+62}_{-76}	5051^{+3310}_{-986}	11501^{+70653}_{-8482}
Alt.	-106 ± 28	$4.17^{+4.21}_{-2.65}$	455^{+61}_{-77}	3793^{+1806}_{-689}	2497^{+17117}_{-1923}

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

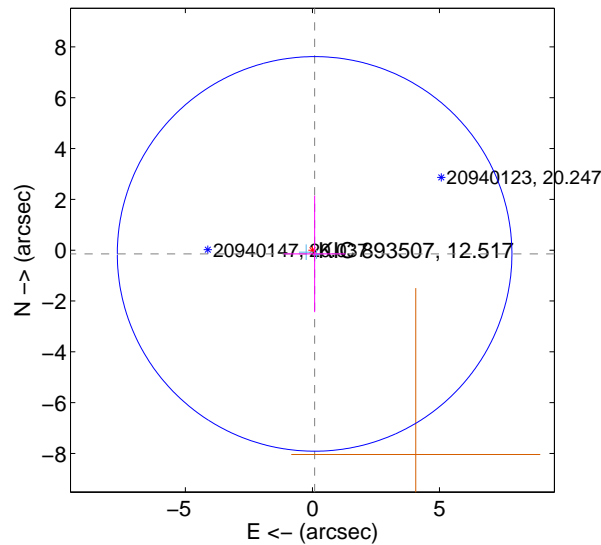
Supplemental centroid analysis for 000893507-07. Kepler magnitude: 12.52. Transit SNR 8.01

There are 2 quarters with good PRF difference image offsets

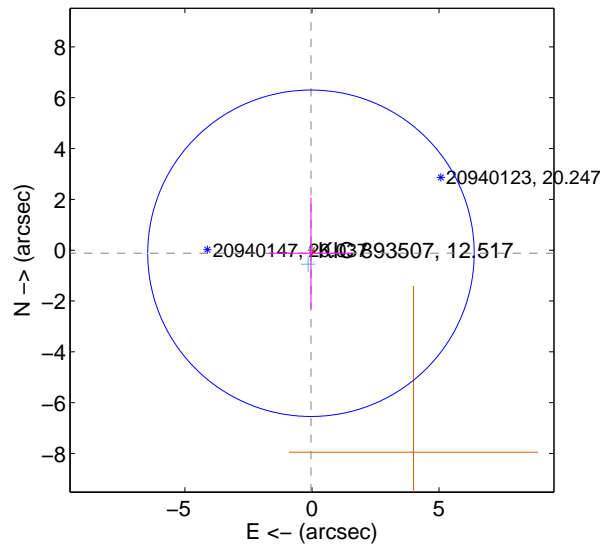
The direct PRF centroid is offset from the target star catalog position by about 0.48 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.170 ± 2.587	0.07	-0.086 ± 1.214	-0.147 ± 2.291
PRF-fit source offset from KIC position	0.127 ± 2.140	0.06	0.039 ± 1.637	-0.121 ± 2.186
photometric centroid source offset	0.70 ± 1.16	0.60	0.03 ± 0.64	-0.70 ± 1.16

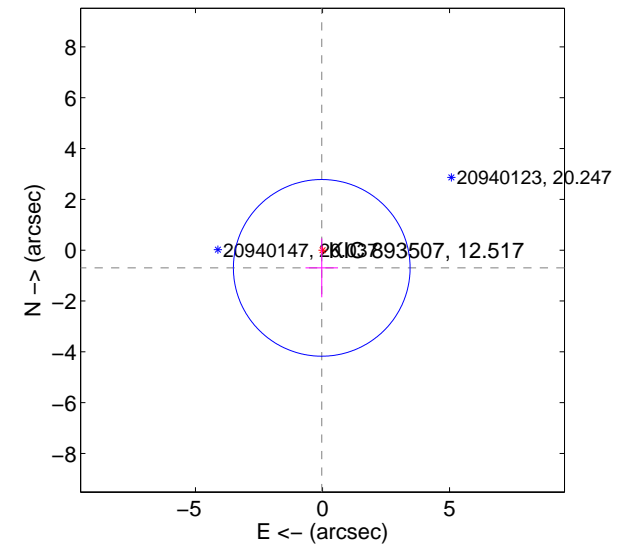
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

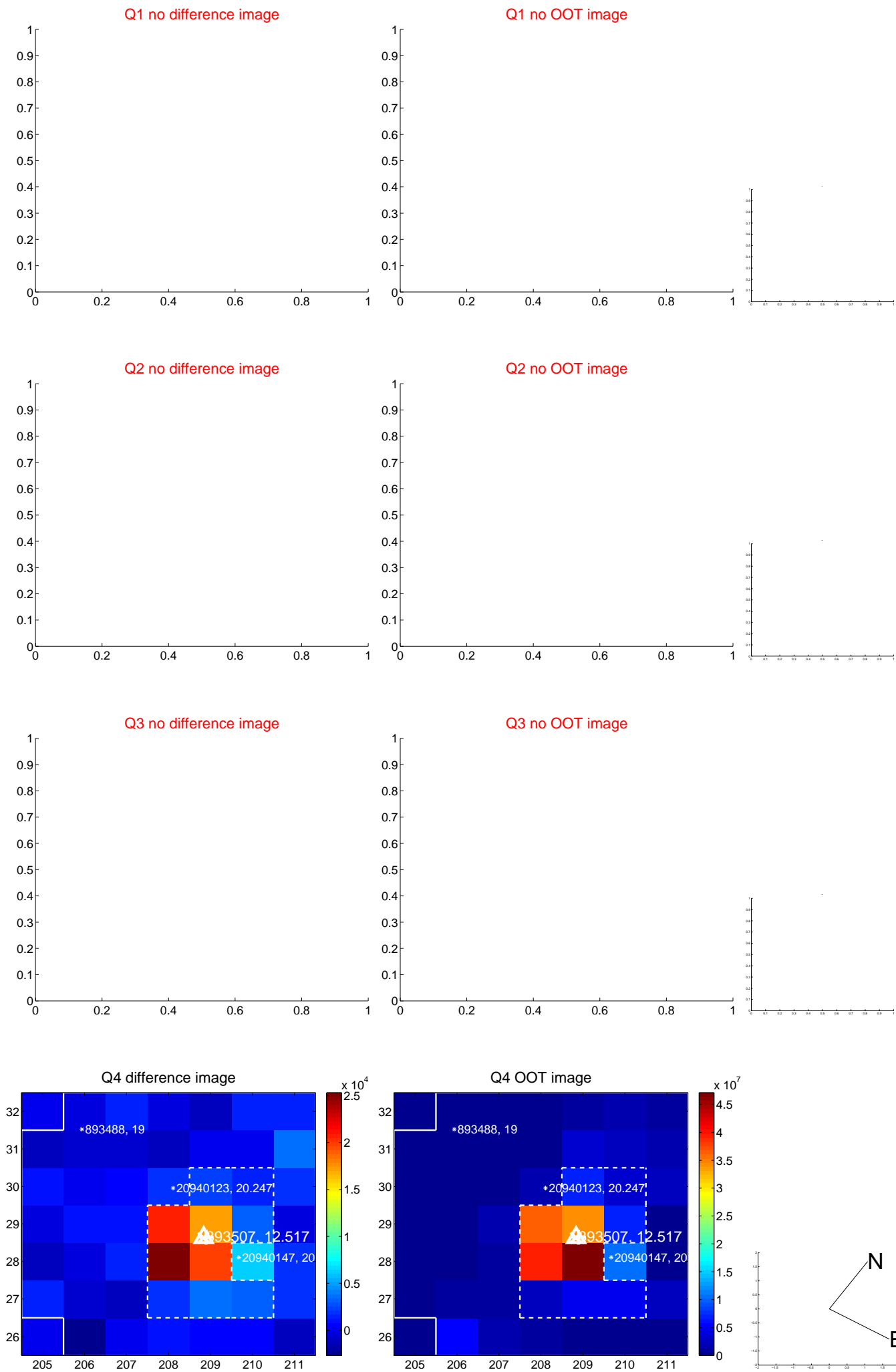


offset from photometric centroids

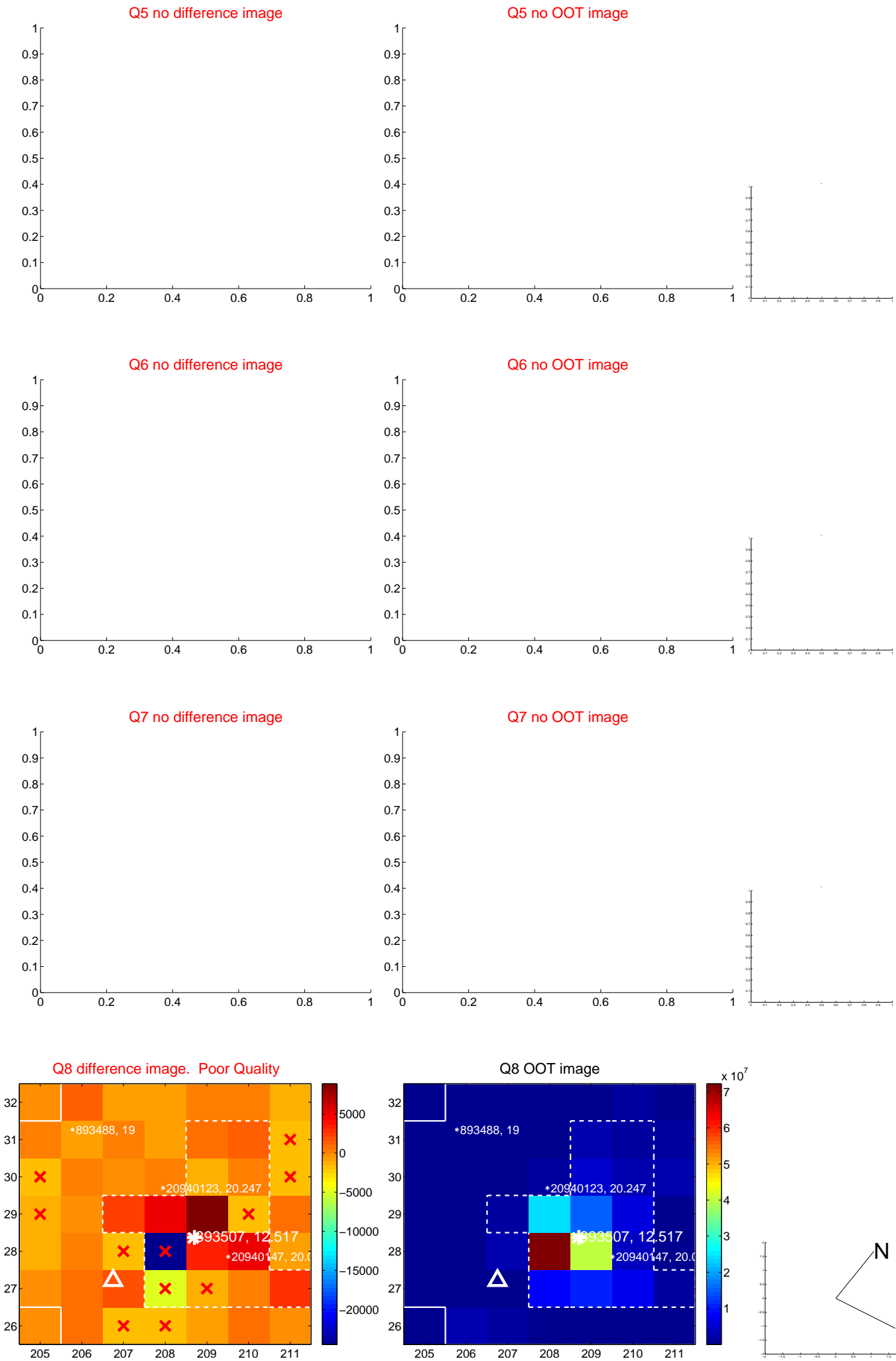


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



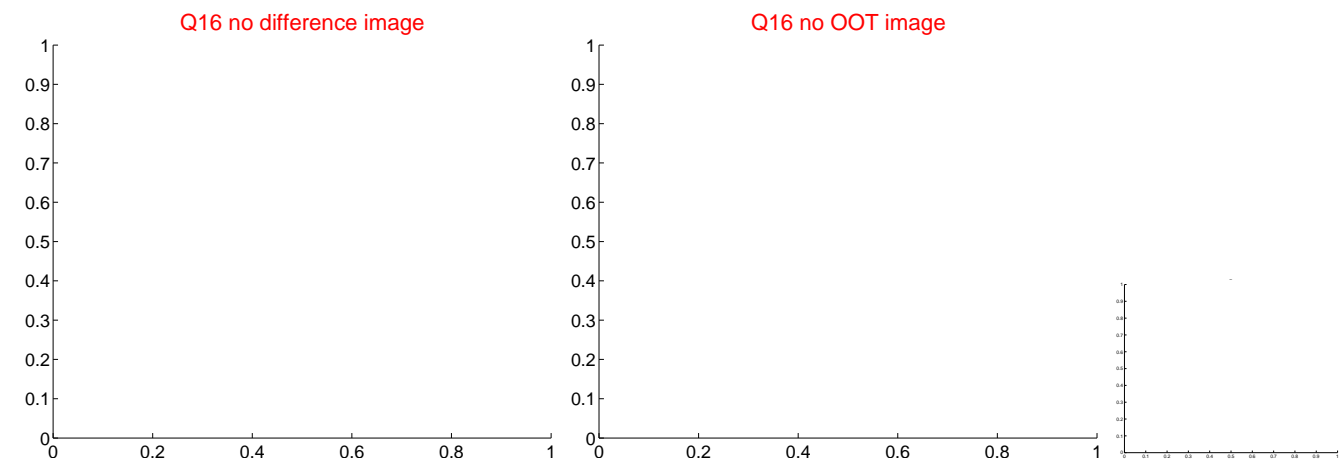
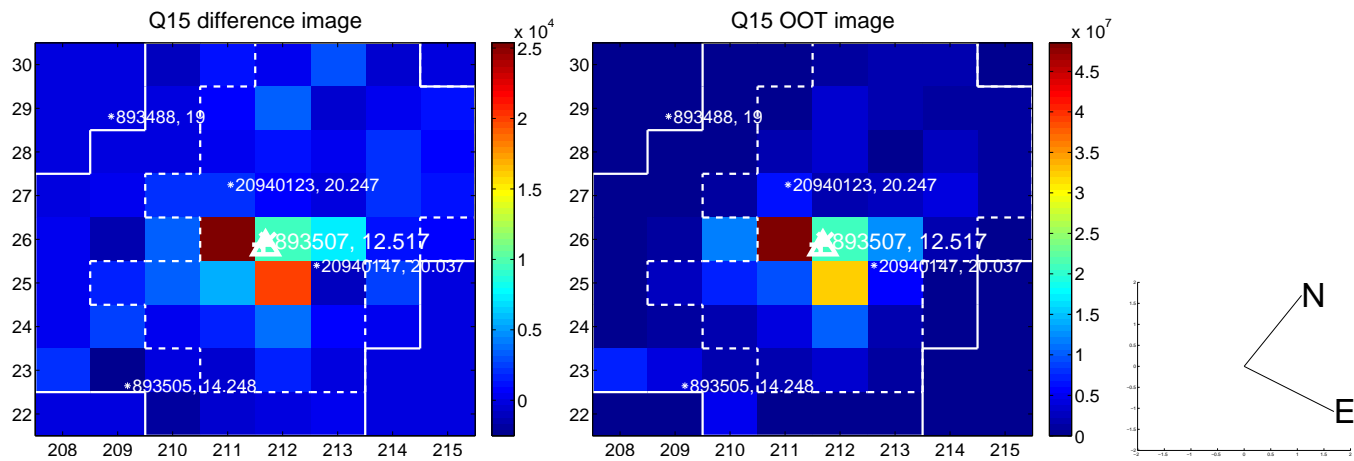
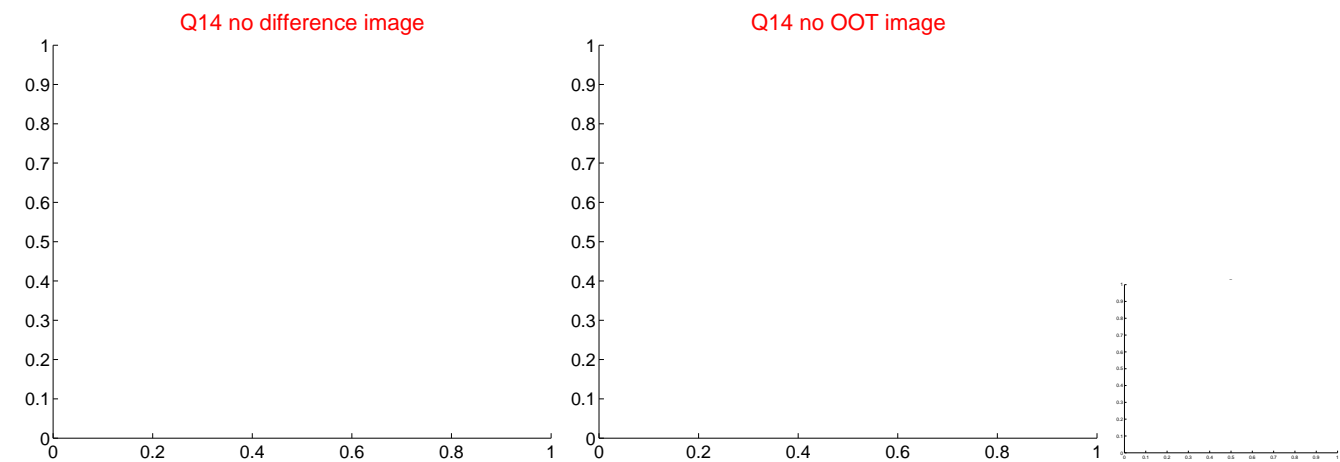
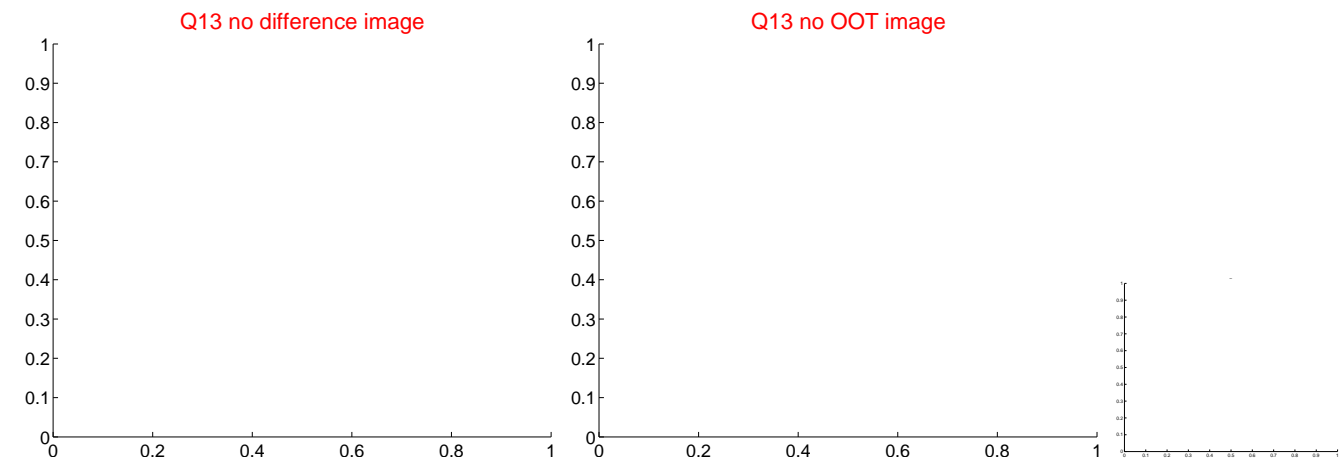
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



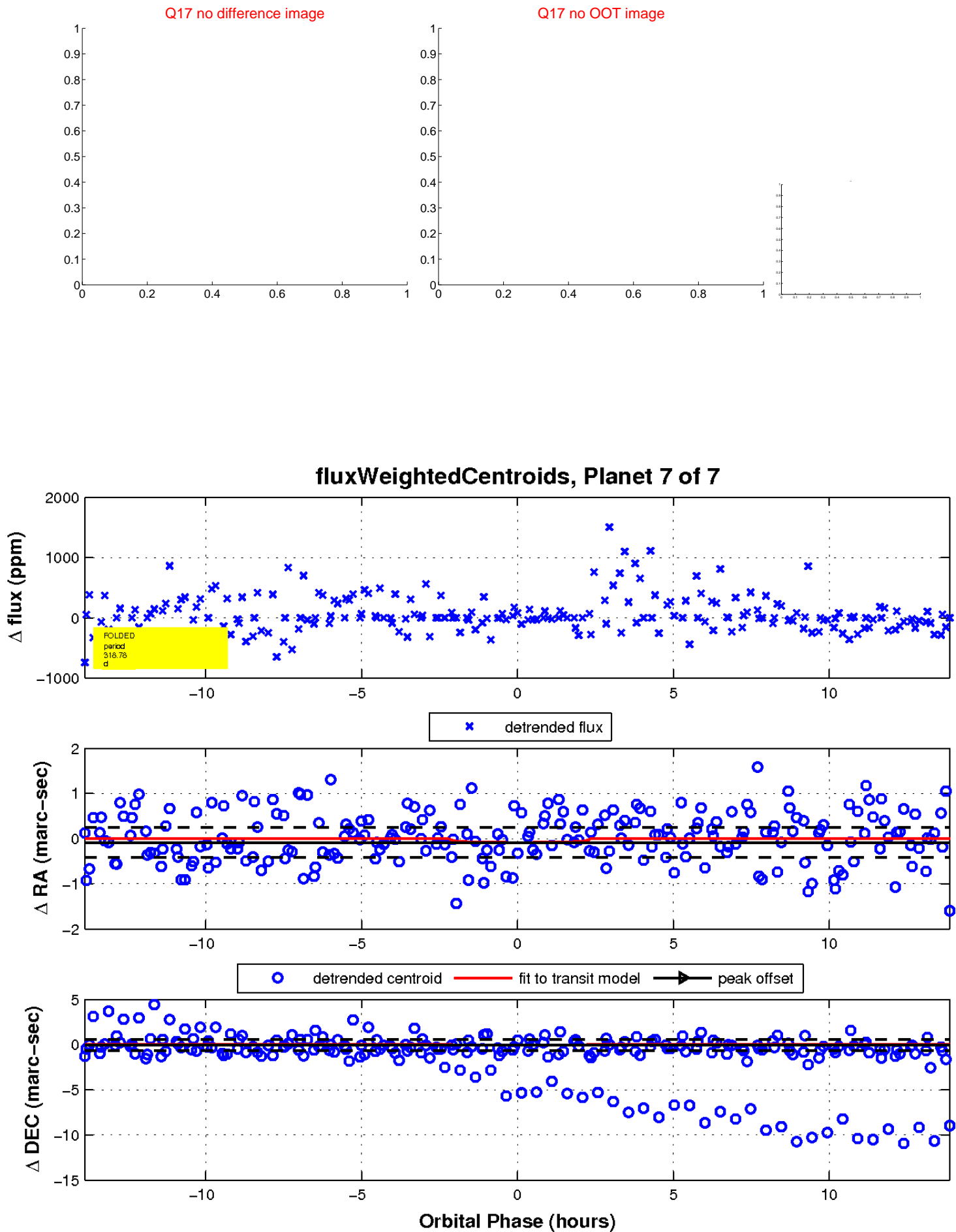
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \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

