

KIC 006386823

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})
006386823-01	OBS	No	379.574605	206.568455	196.5	13.717	14.0	11.2	3.60	7217	5.50	19.80
006386823-02	OBS	No	1.076850	131.861510	12.0	3.810	9.4	9.0	3.60	7217	1.30	49306.27
006386823-03	OBS	No	383.388007	407.702888	146.3	26.054	10.9	7.8	3.60	7217	4.64	19.54

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006386823-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006386823-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT
006386823-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

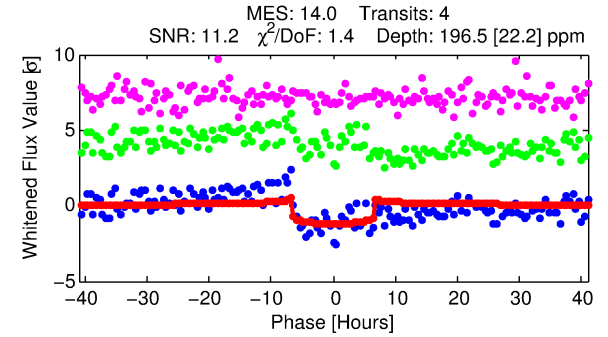
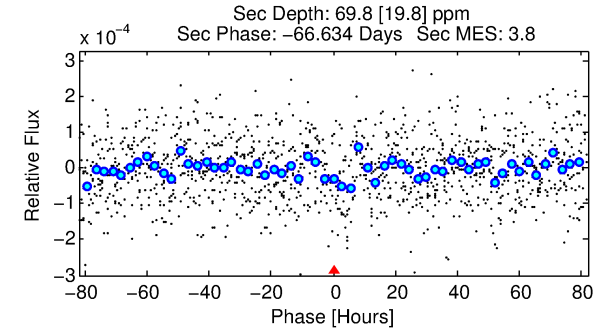
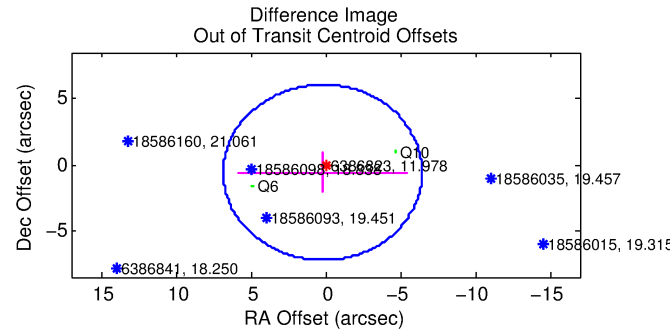
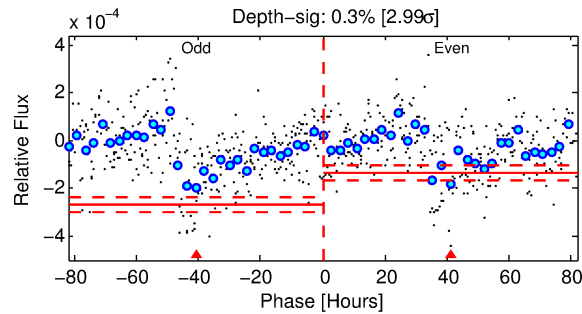
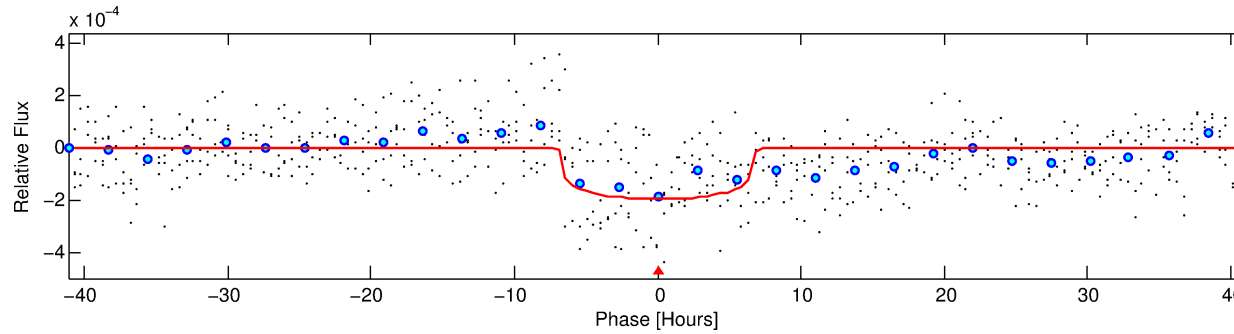
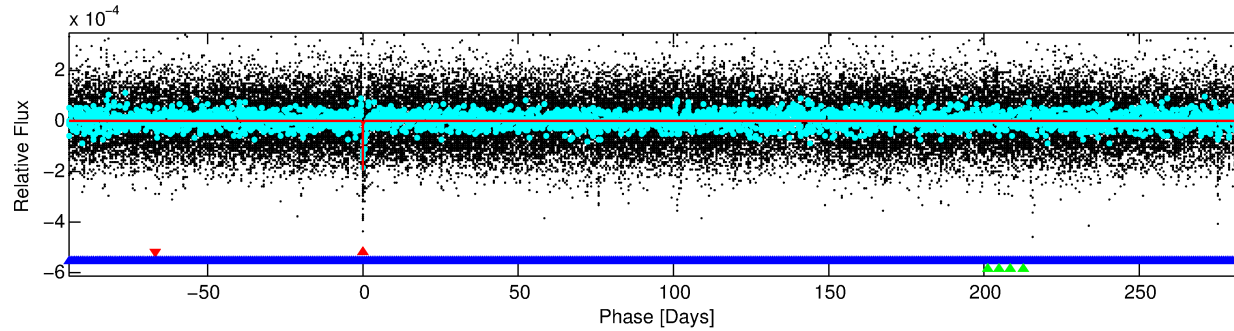
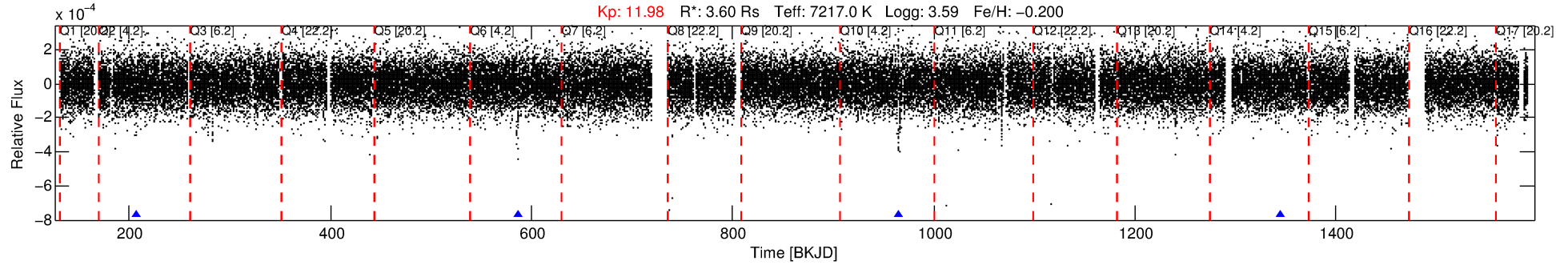
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006386823-01

No Significant Match Found

DV One-Page Summary

KIC: 6386823 Candidate: 1 of 3 Period: 379.575 d



DV Fit Results:

Period = 379.57460 [0.00778] d
Epoch = 206.5685 [0.0151] BKJD
Rp/R* = 0.0140 [0.0022]
a/R* = 140.99 [101.28]
b = 0.76 [0.39]
Seff = 19.80 [18.36]
Teq = 538 [125] K
Rp = 5.51 [3.00] Re
a = 1.2609 [0.6896] AU
Ag = 2015.63 [2025.03] [0.99 σ]
Teffp = 5572 [632] K [7.8 σ]

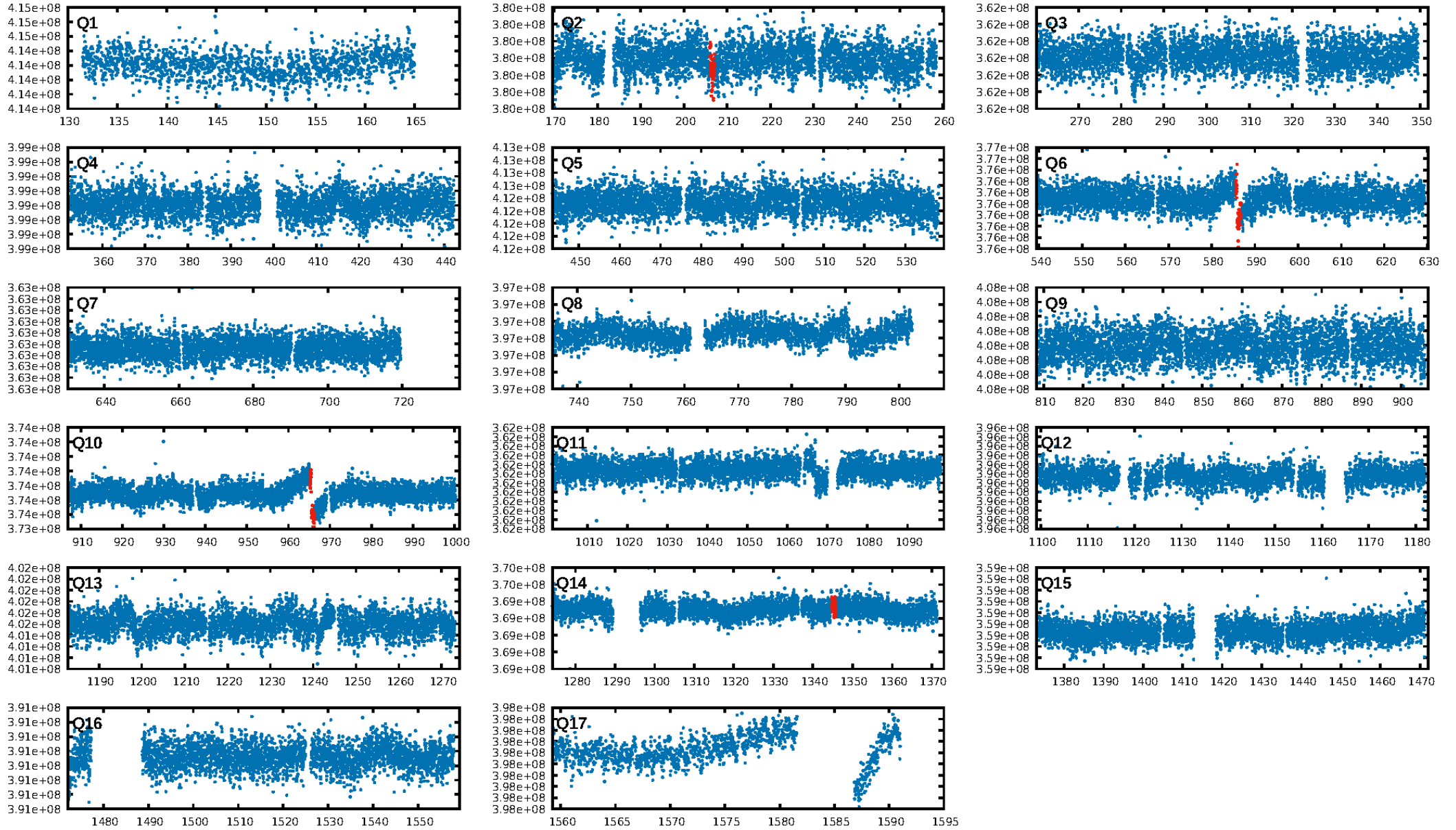
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [638.10 σ]
LongPeriod-sig: 99.8% [3.11 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 12.7%
Bootstrap-pfa: 4.29e-27
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 1.754
Centroid-sig: 0.1%
Centroid-so: 2.025 arcsec [1.95 σ]
OotOffset-rm: 0.615 arcsec [0.28 σ]
KicOffset-rm: 0.635 arcsec [0.16 σ]
OotOffset-st: 2/0/0/0 [2]
KicOffset-st: 2/0/0/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 0.00 [0/4]

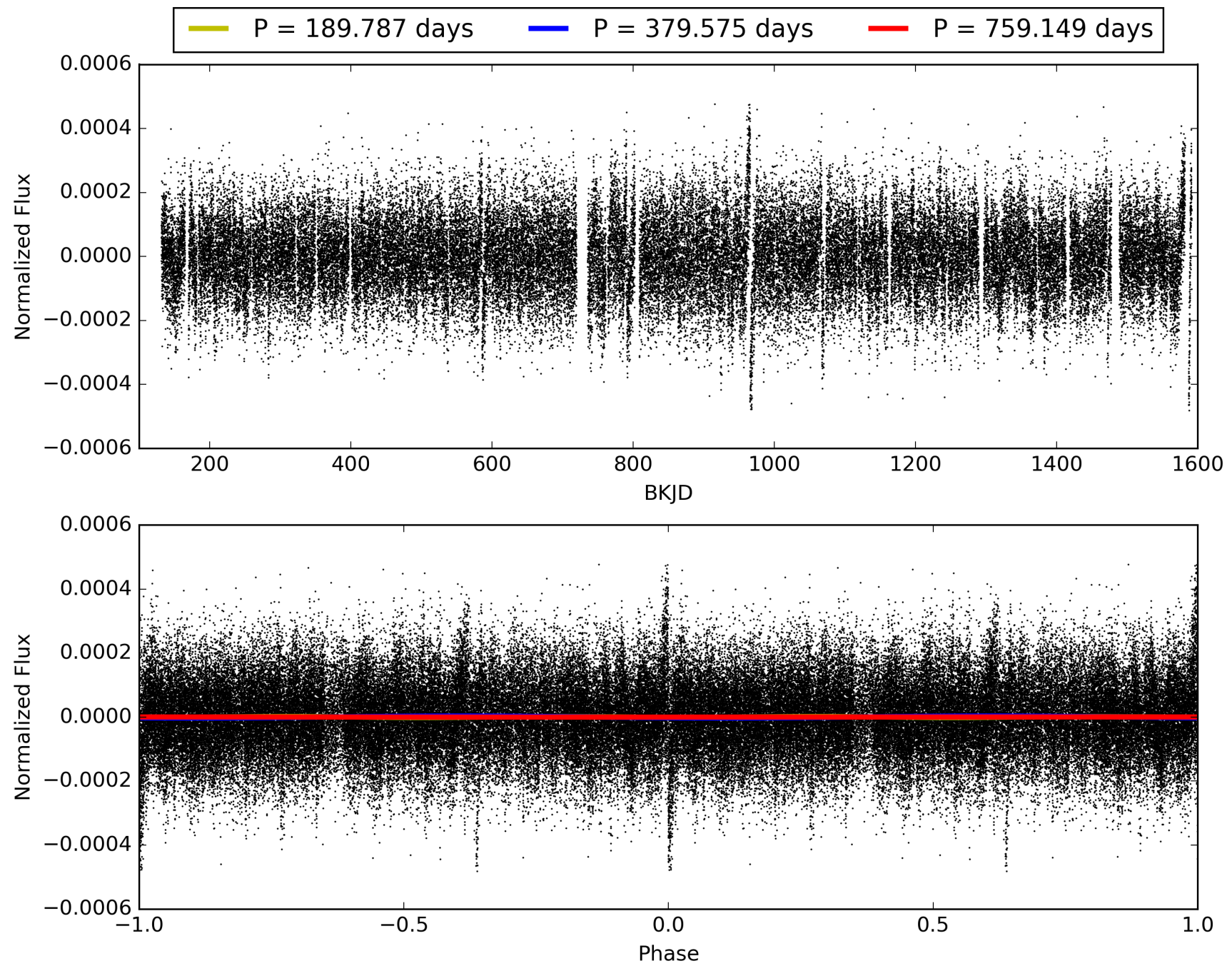
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:00:52 Z

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

TCE 006386823-01, PDC Light Curves

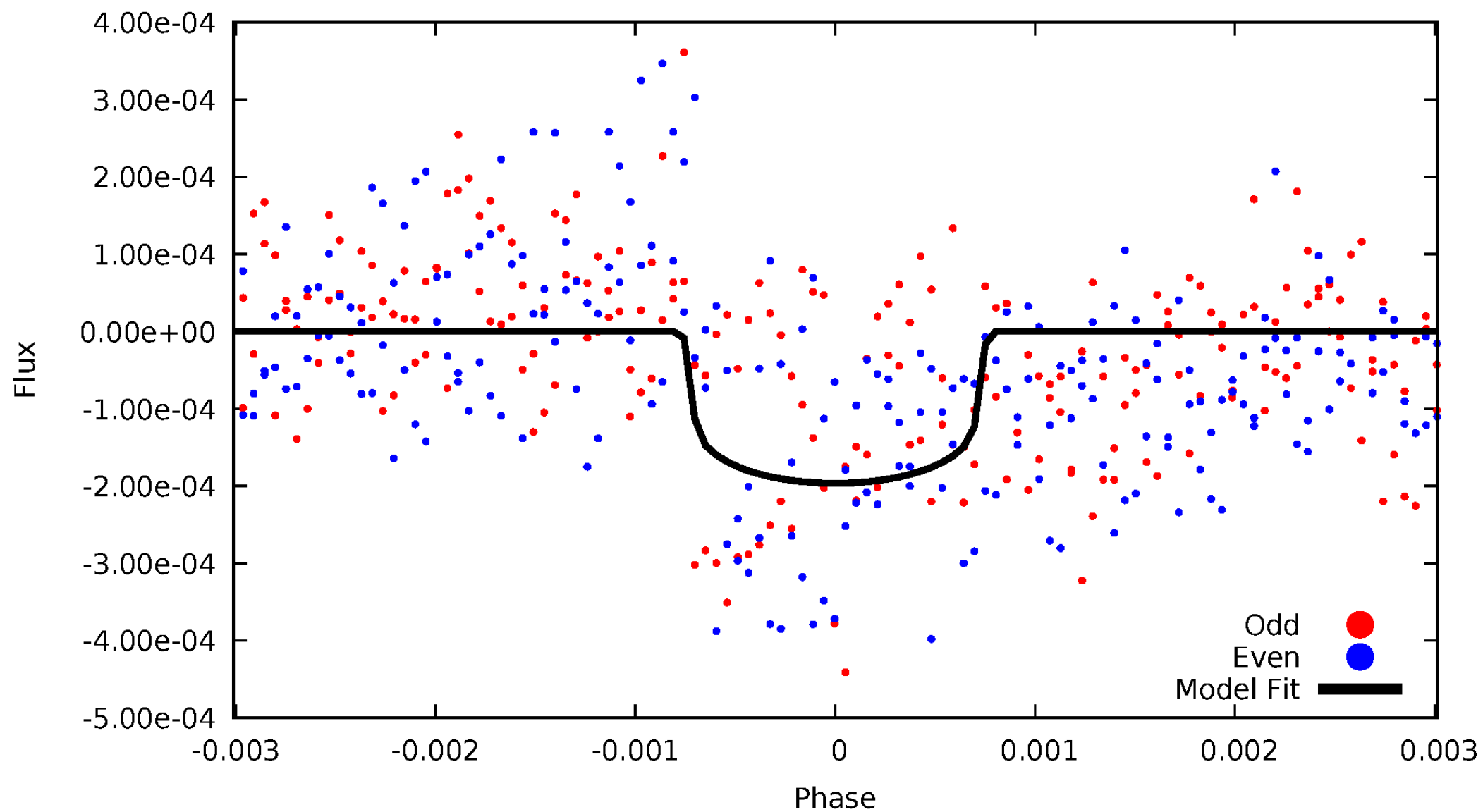


TCE 006386823-01



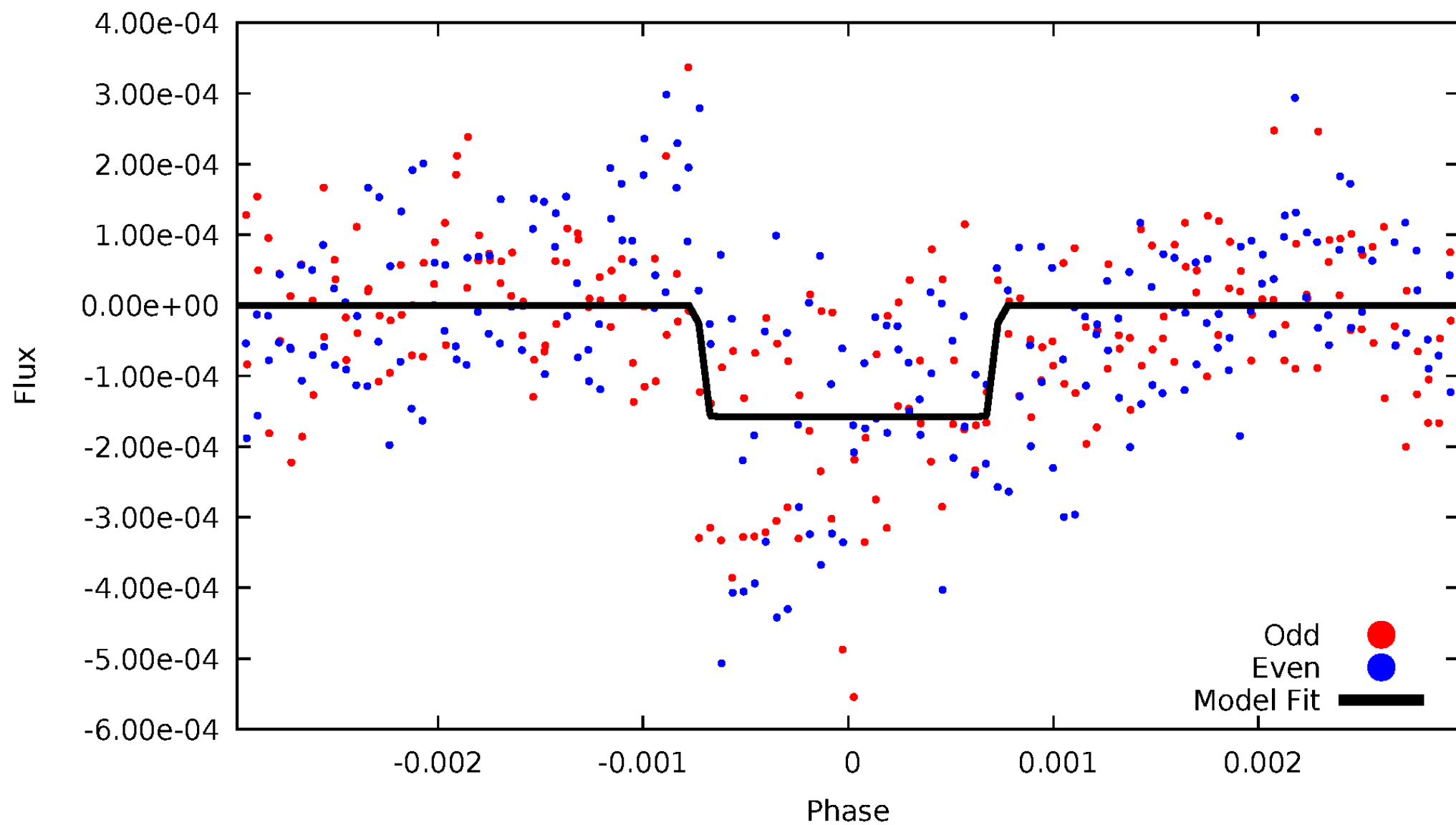
DV Odd/Even

TCE 006386823-01



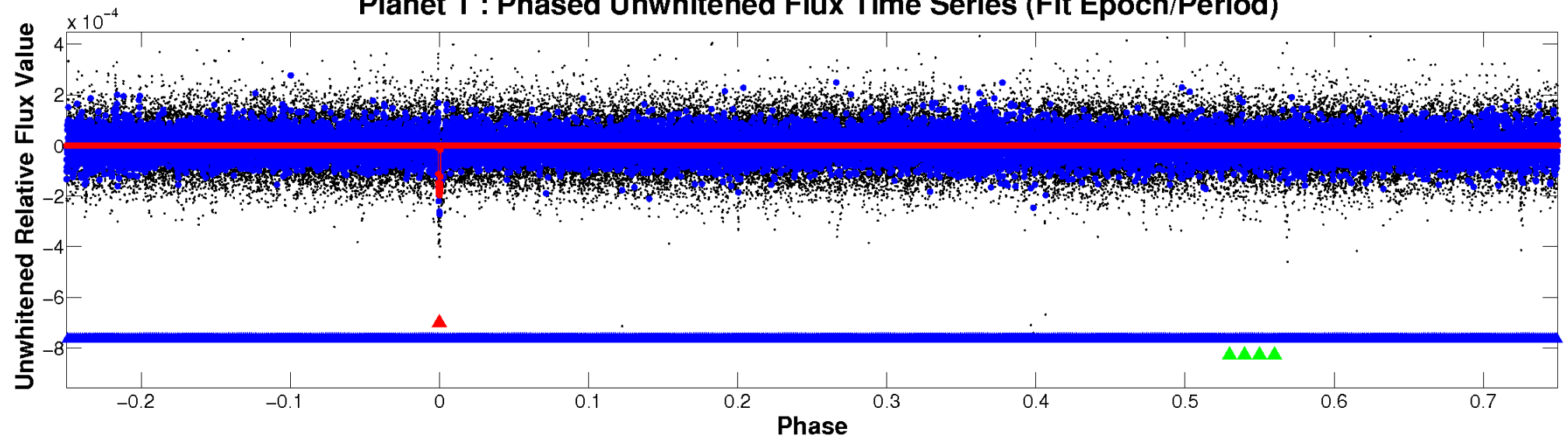
ALT Odd/Even

TCE 006386823-01

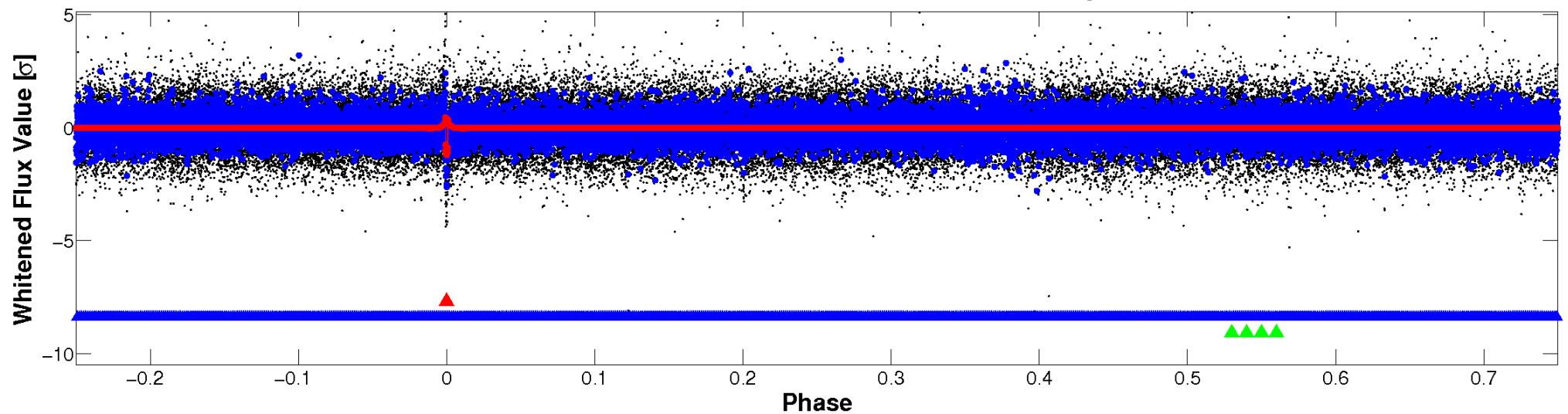


Non-Whitened Vs. Whitened Light Curve

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

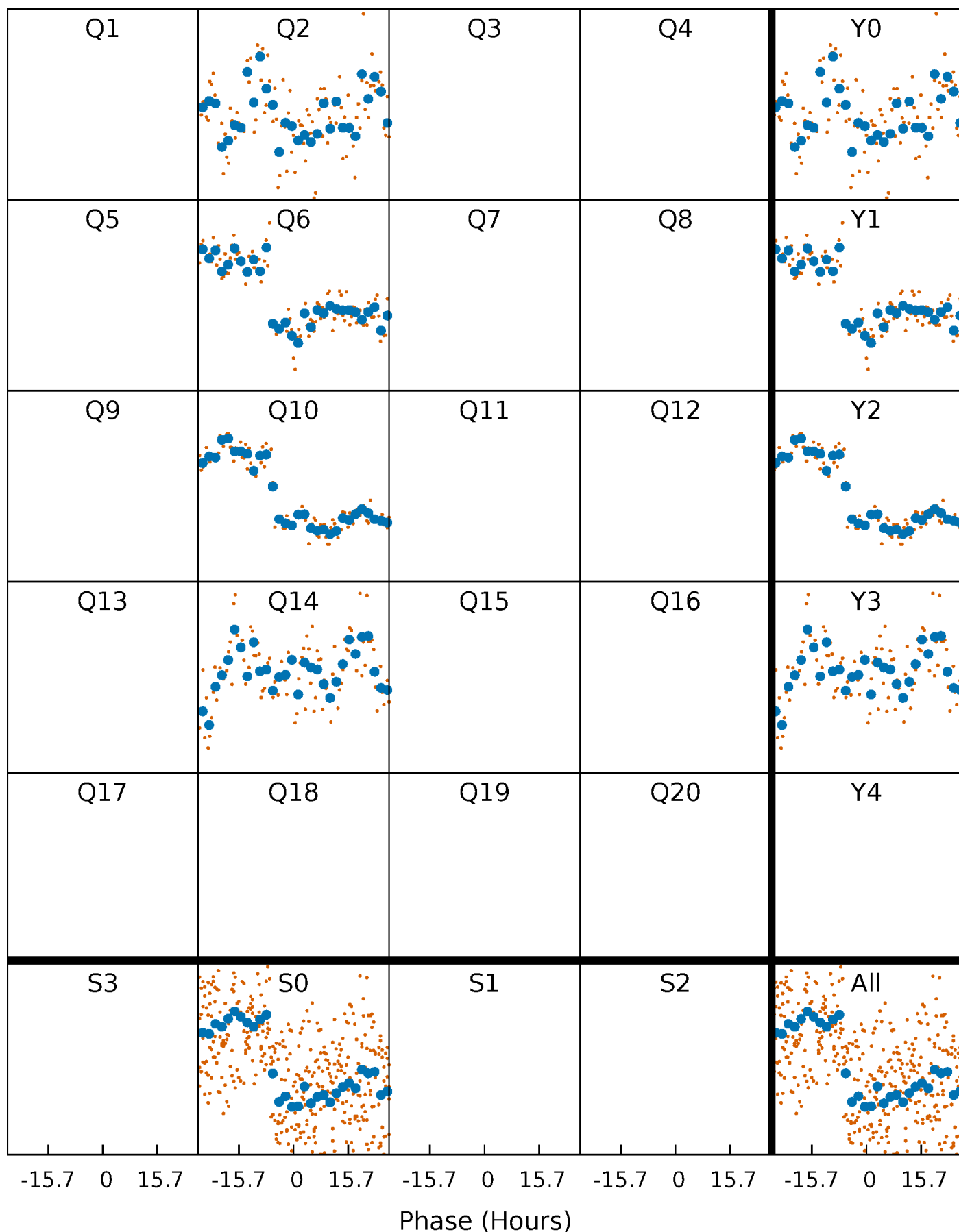


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



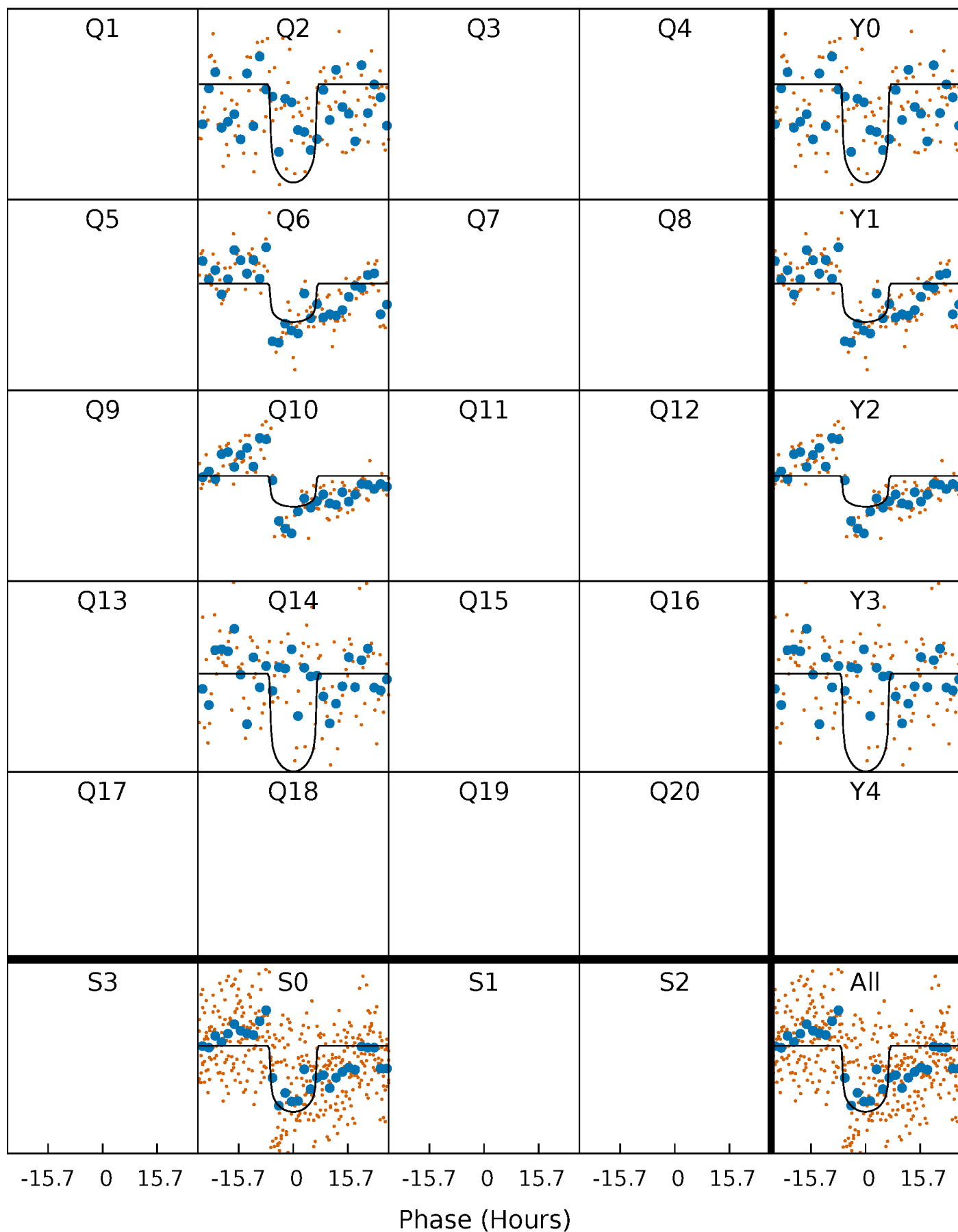
PDC Quarter-Phased Transit Curves

TCE 006386823-01 P=379.574605 Days $T_0=206.568455$ (BKJD)



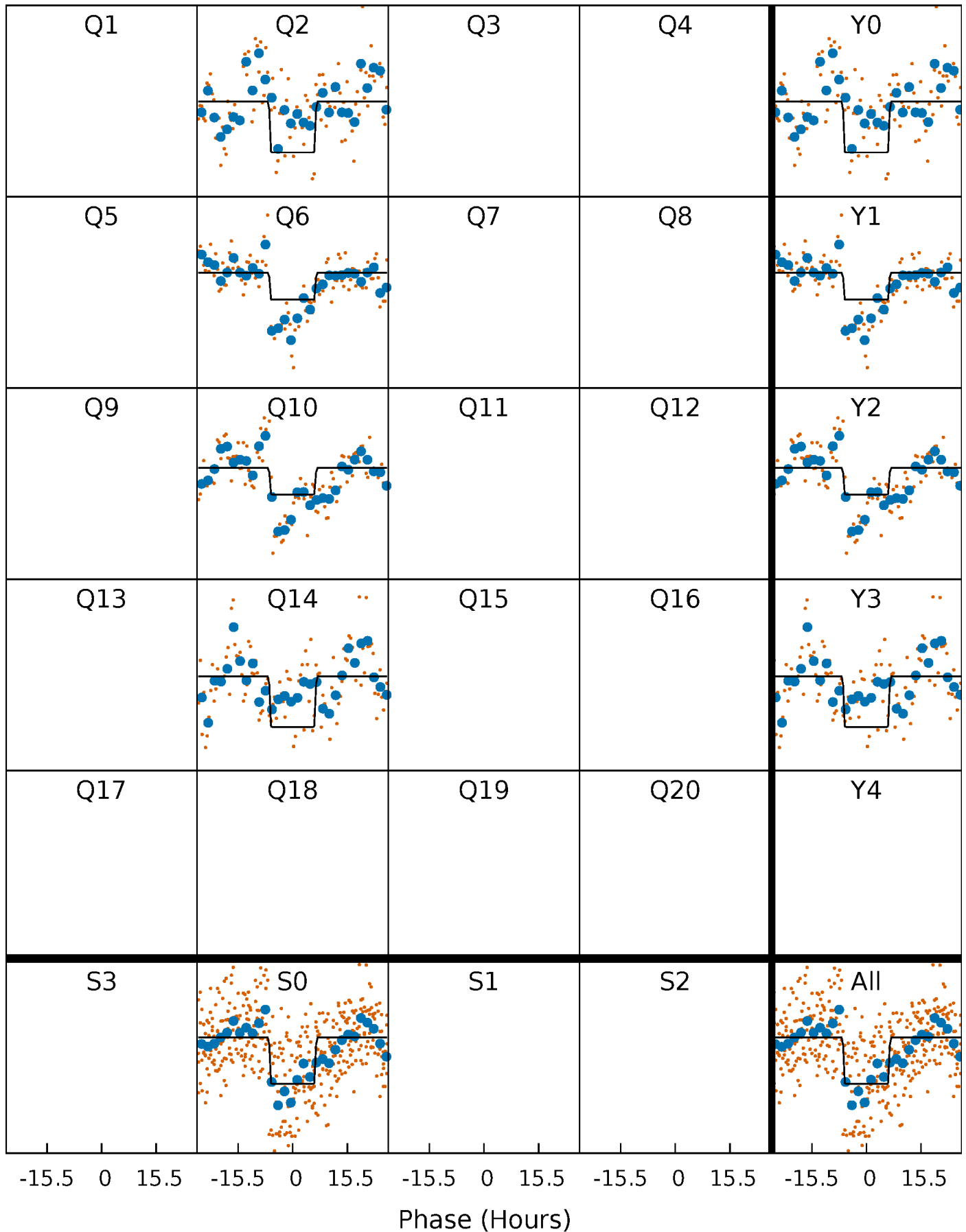
DV Quarter-Phased Transit Curves

TCE 006386823-01 P=379.574605 Days $T_0=206.568455$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

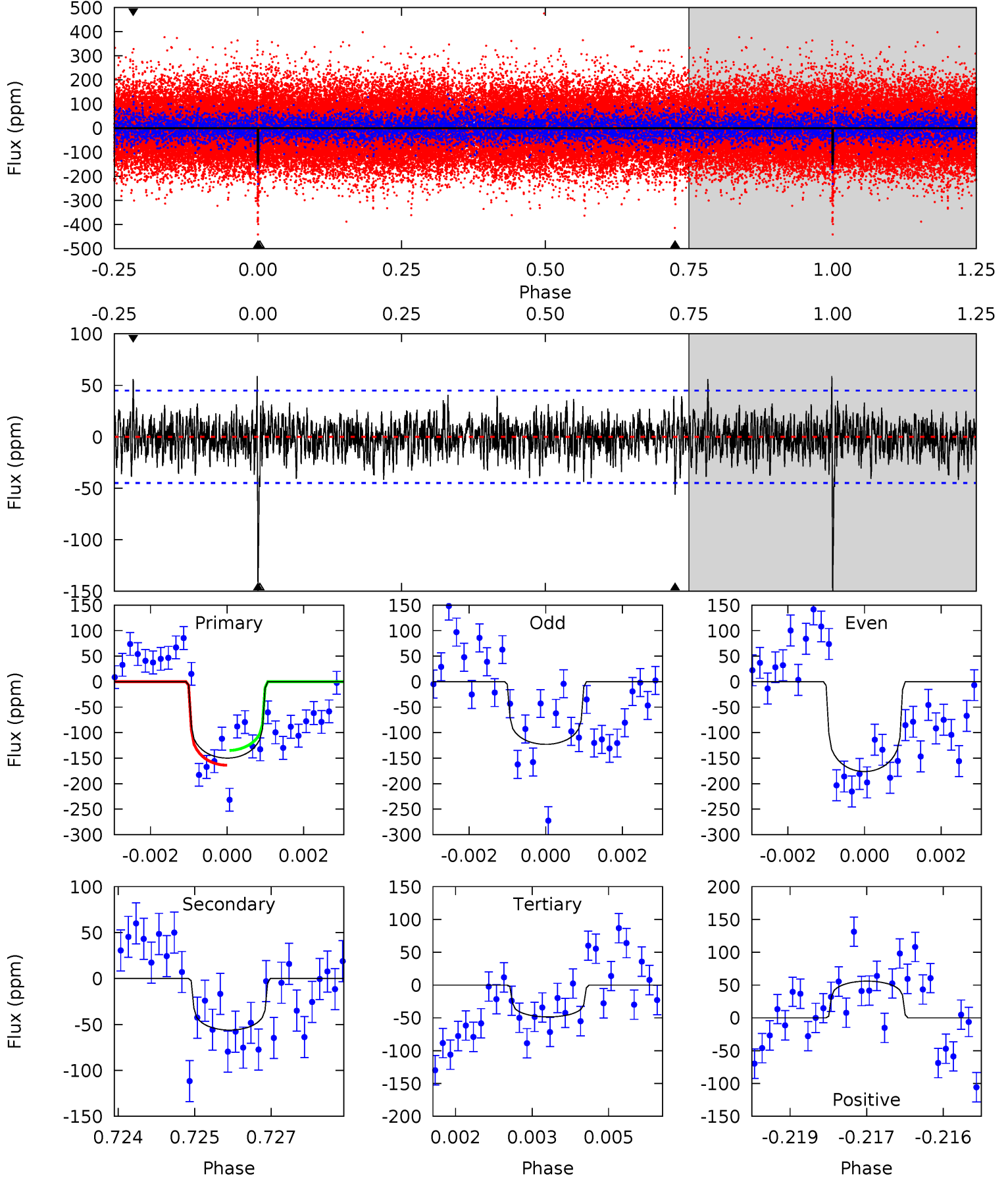
TCE 006386823-01 P=379.573810 Days $T_0=206.578450$ (BKJD)



DV Model-Shift Uniqueness Test

006386823-01, P = 379.574605 Days, E = 206.568455 Days

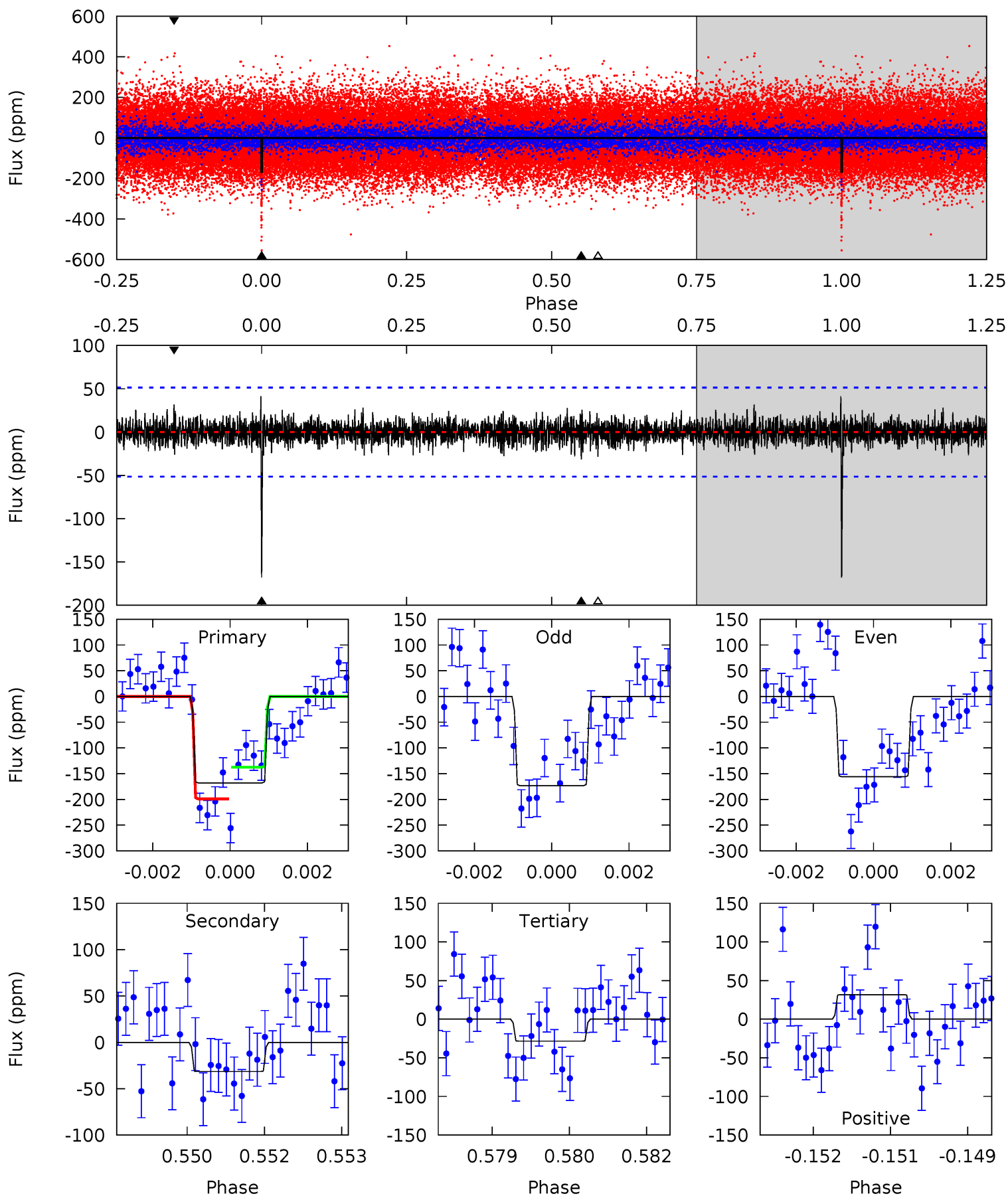
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.0	6.73	5.82	6.71	5.38	3.17	1.60	12.1	11.3	0.92	0.03	3.19	0.92	0.28	1.72



Alt Model-Shift Uniqueness Test

006386823-01, P = 379.573810 Days, E = 206.578450 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.6	3.28	2.97	3.31	5.38	3.17	0.86	14.6	14.2	0.31	-0.03	0.90	1.03	0.20	3.23



Stellar Parameters For KIC 006386823

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7217^{+226}_{-302}	$3.594^{+0.549}_{-0.061}$	$-0.200^{+0.250}_{-0.300}$	$3.599^{+0.332}_{-1.882}$	$1.857^{+0.164}_{-0.493}$	$0.056^{+0.378}_{-0.012}$
	+3%/-4%	+15%/-2%	+125%/-150%	+9%/-52%	+9%/-27%	+674%/-21%
Source	KIC0	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 006386823-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-56 ± 8	$4.90^{+1.27}_{-1.39}$	723^{+50}_{-102}	5254^{+527}_{-401}	2016^{+1636}_{-720}
Alt.	-31 ± 10	$4.39^{+1.23}_{-1.32}$	719^{+50}_{-104}	4855^{+507}_{-456}	1393^{+1498}_{-594}

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

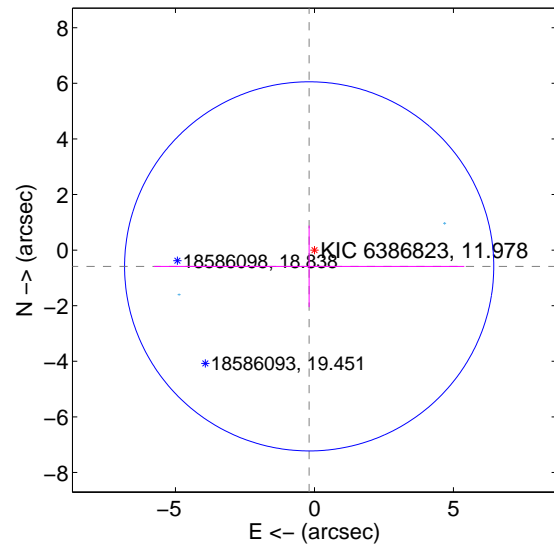
Supplemental centroid analysis for 006386823-01. **Kepler magnitude: 11.98.** Transit SNR 11.23

There are 2 quarters with good PRF difference image offsets

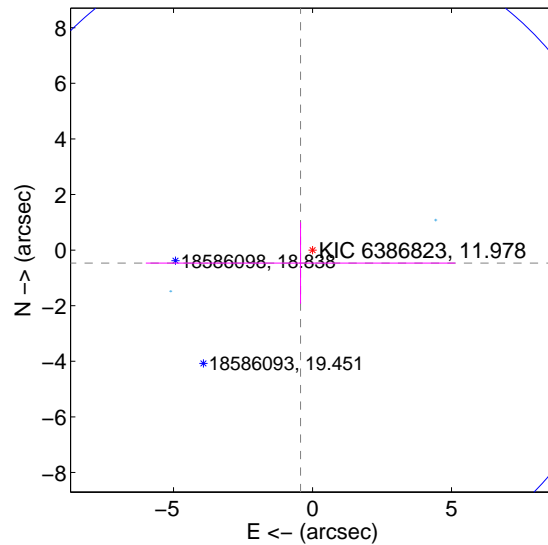
The direct PRF centroid is offset from the target star catalog position by about 0.28 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.615 ± 2.213	0.28	0.190 ± 5.580	-0.585 ± 1.465
PRF-fit source offset from KIC position	0.635 ± 3.921	0.16	0.430 ± 5.569	-0.467 ± 1.465
photometric centroid source offset	2.02 ± 1.04	1.95	1.45 ± 1.19	-1.41 ± 0.85

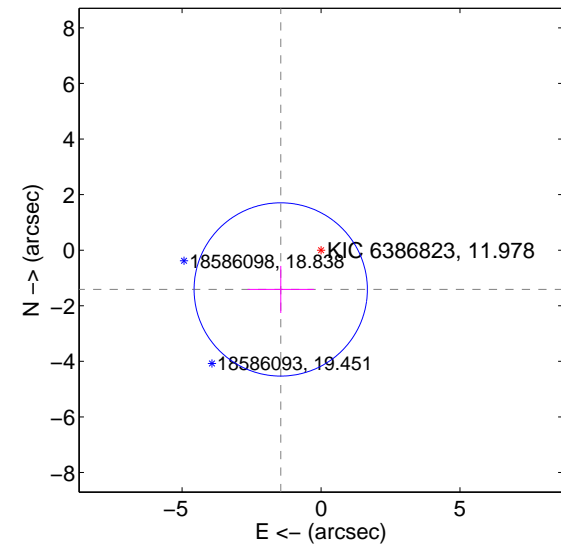
offset from difference PRF-fit to OOT PRF-fit



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.

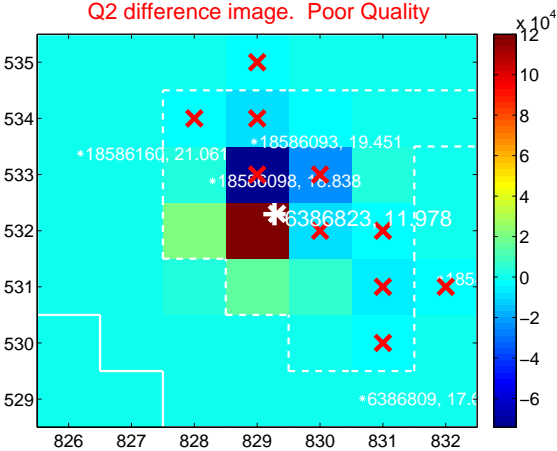
Q1 no difference image



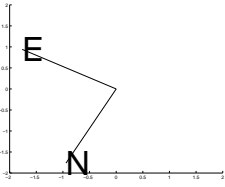
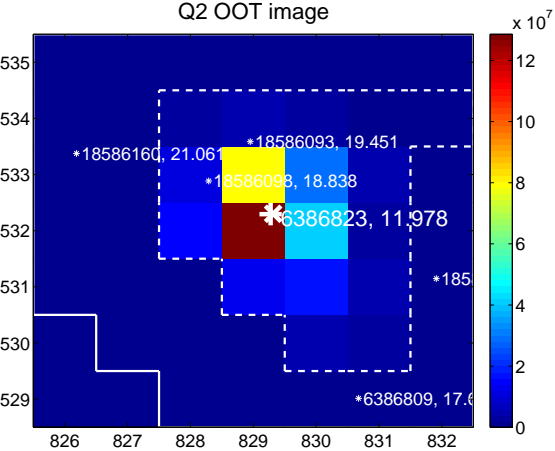
Q1 no OOT image



Q2 difference image. Poor Quality



Q2 OOT image



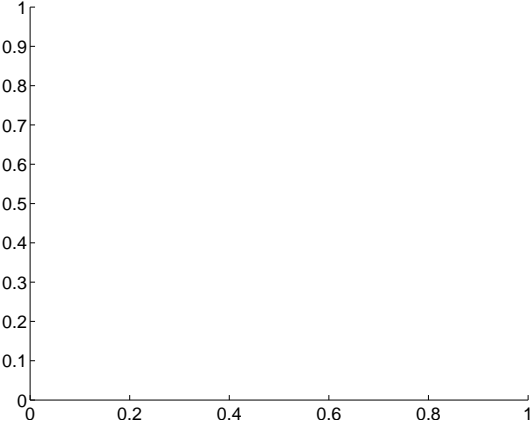
Q3 no difference image



Q3 no 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.

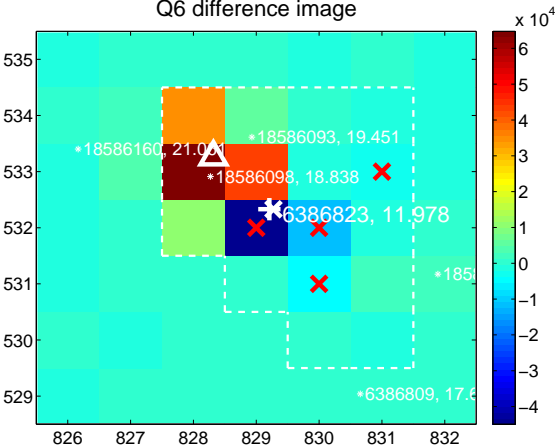
Q5 no difference image



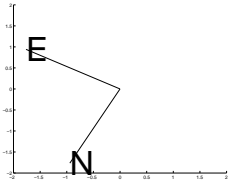
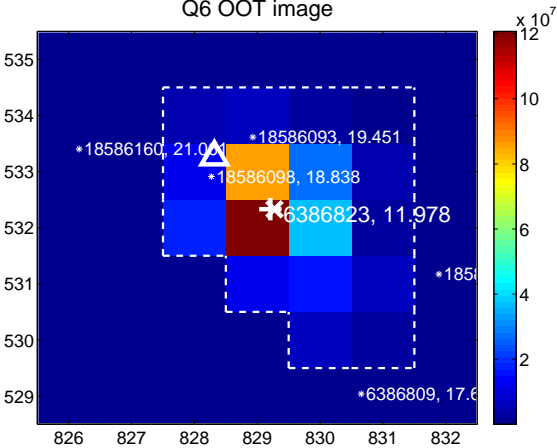
Q5 no OOT image



Q6 difference image



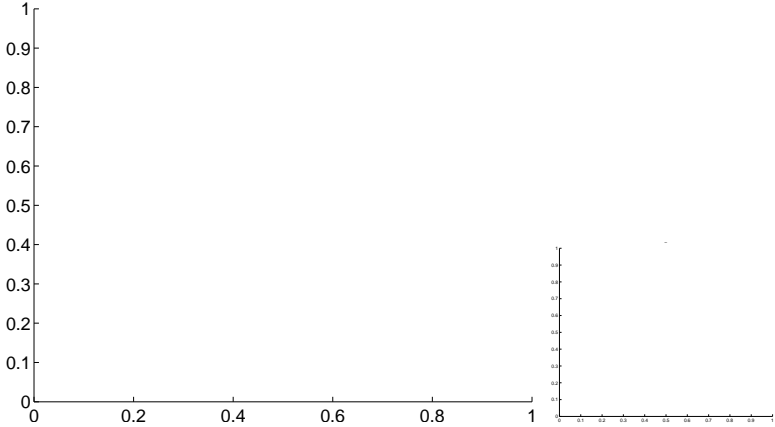
Q6 OOT image



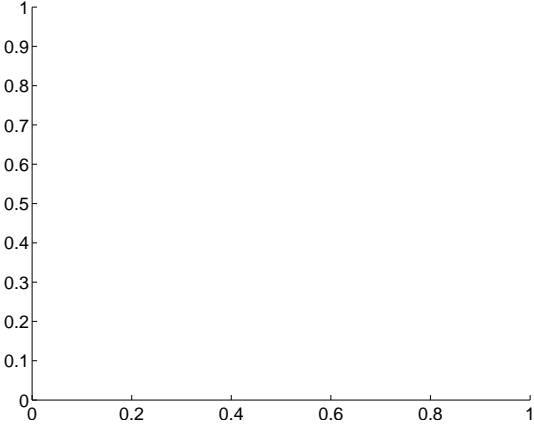
Q7 no difference image



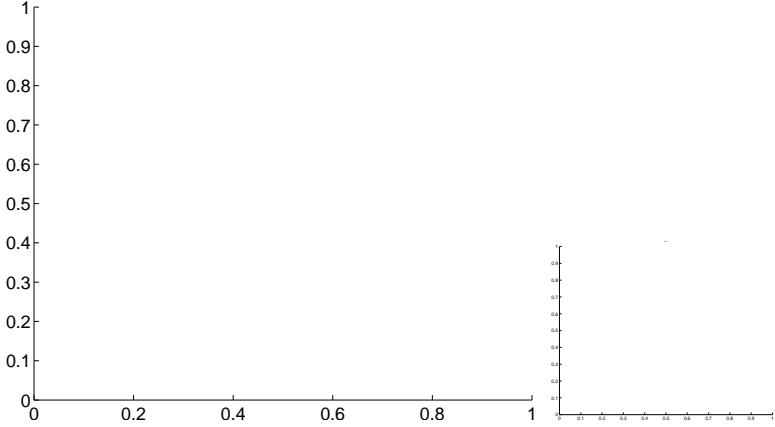
Q7 no OOT image



Q8 no difference image



Q8 no OOT image



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

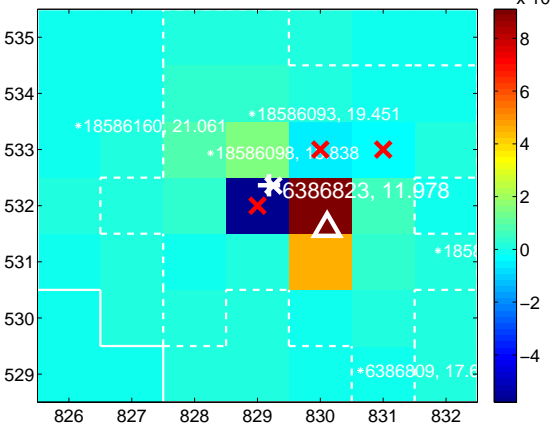
Q9 no difference image



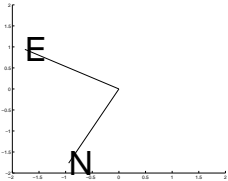
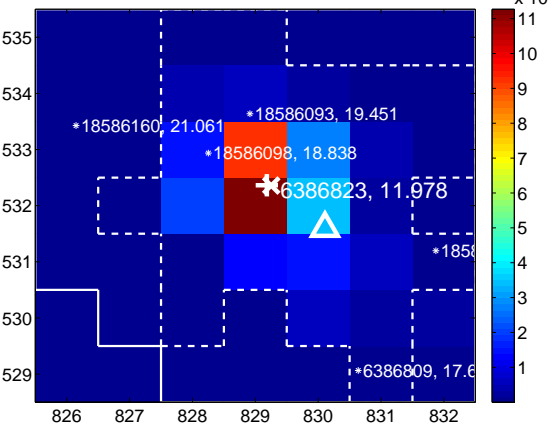
Q9 no OOT image



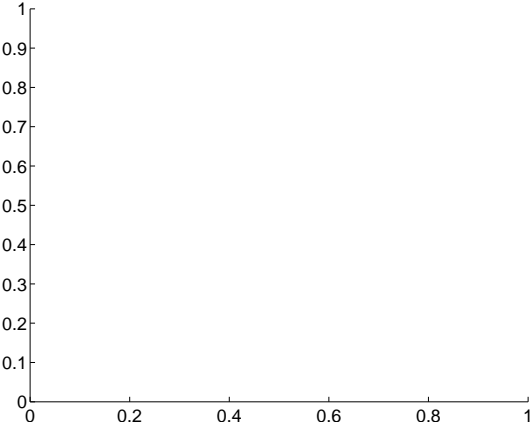
Q10 difference image



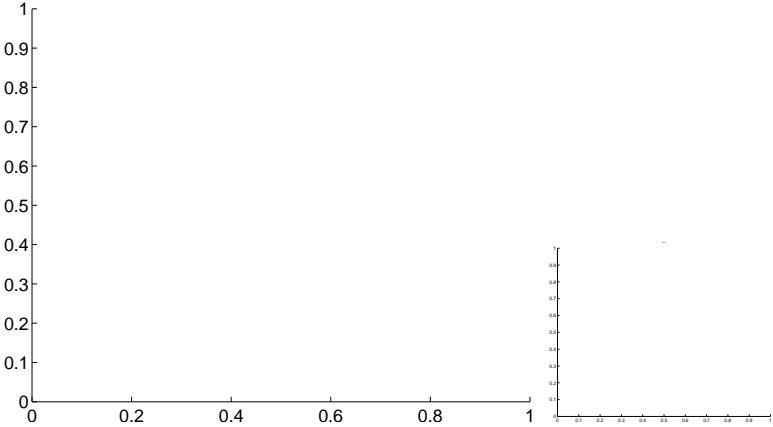
Q10 OOT image



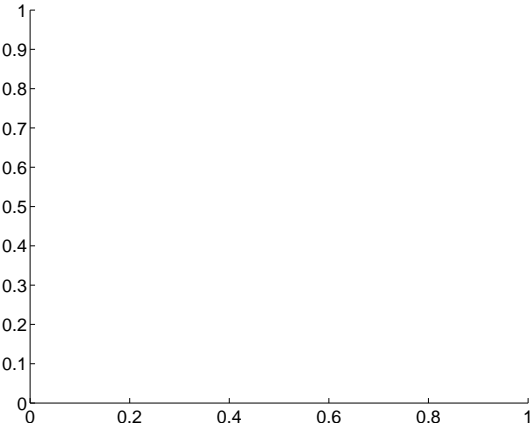
Q11 no difference image



Q11 no OOT image



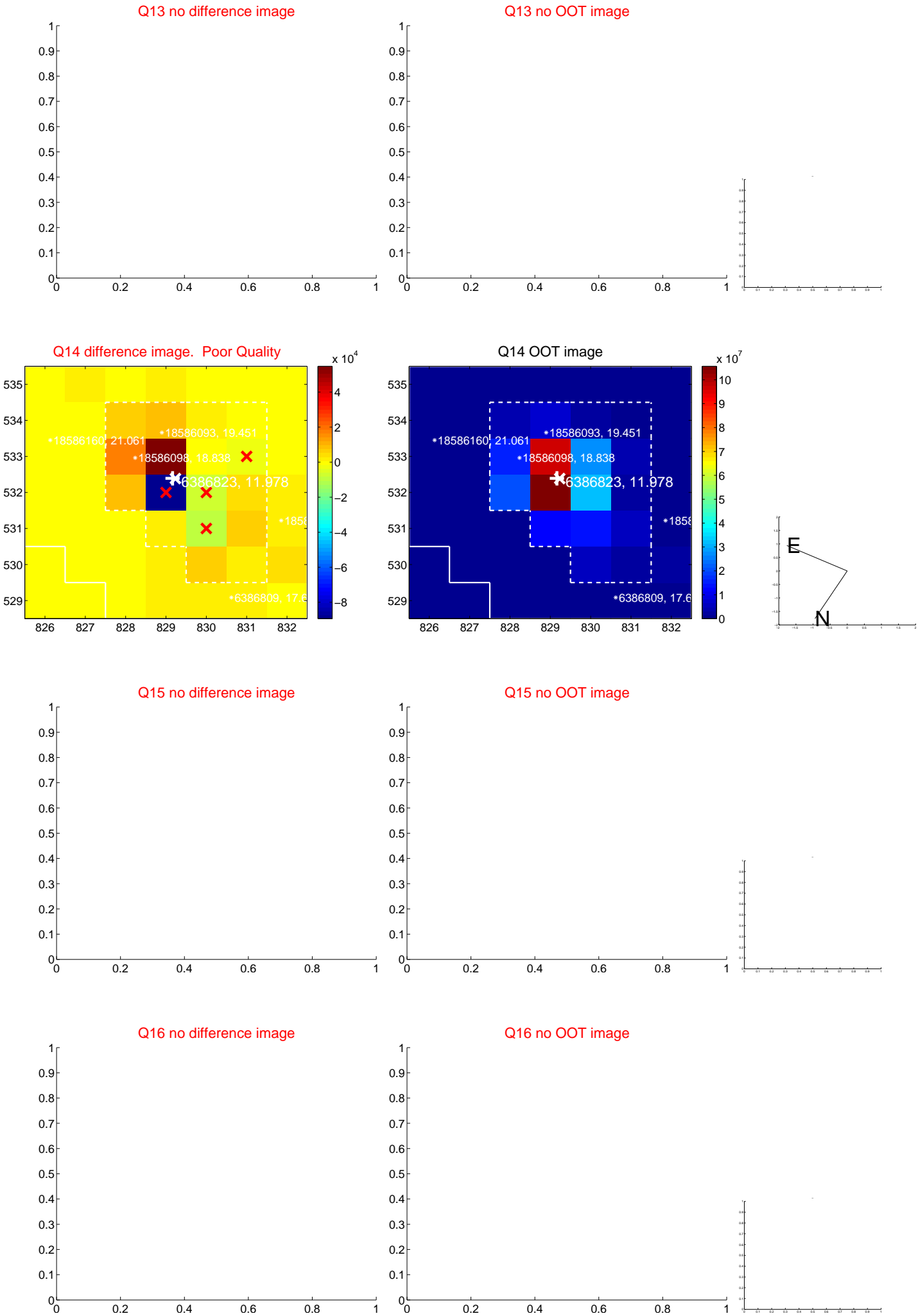
Q12 no difference image



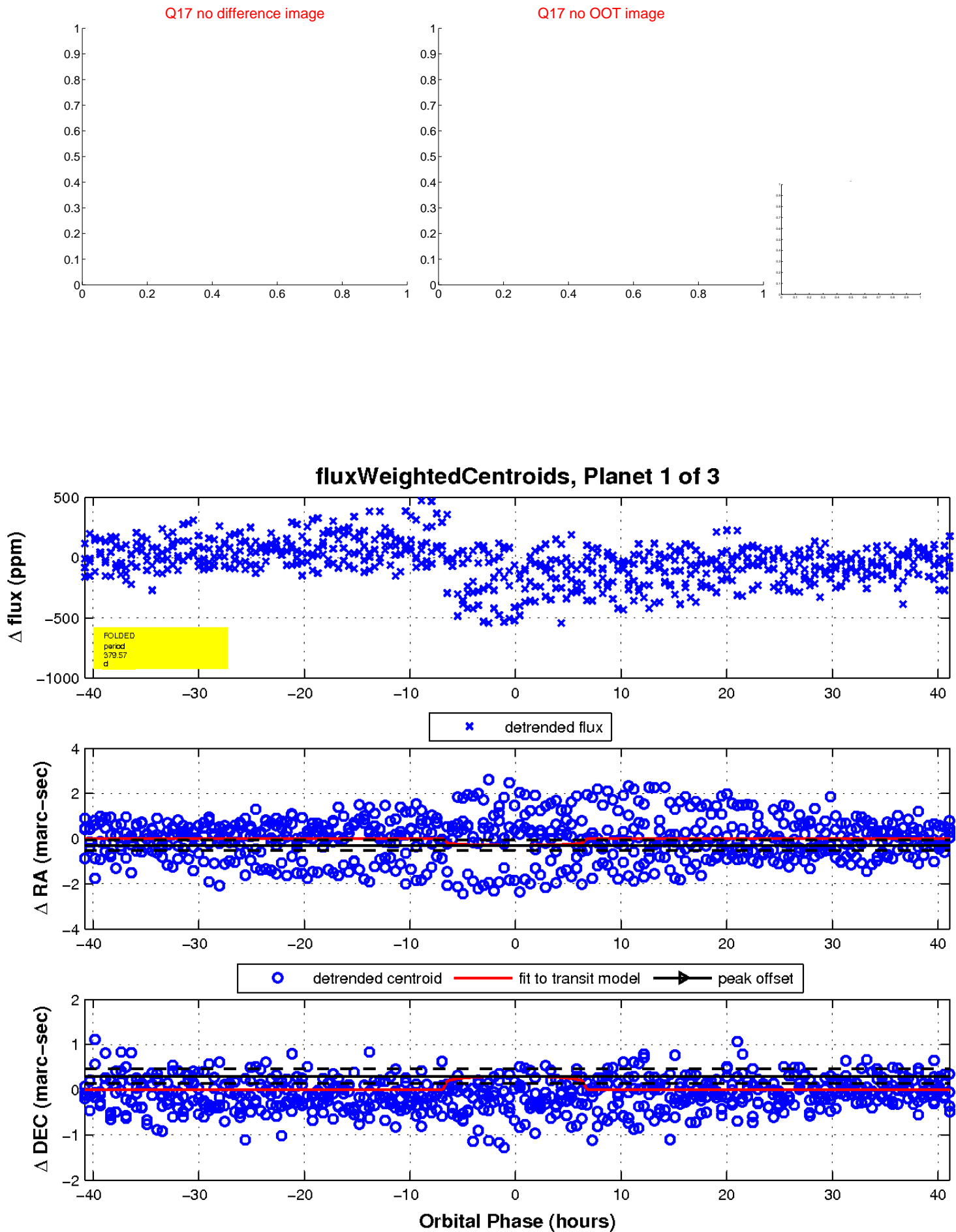
Q12 no OOT image



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

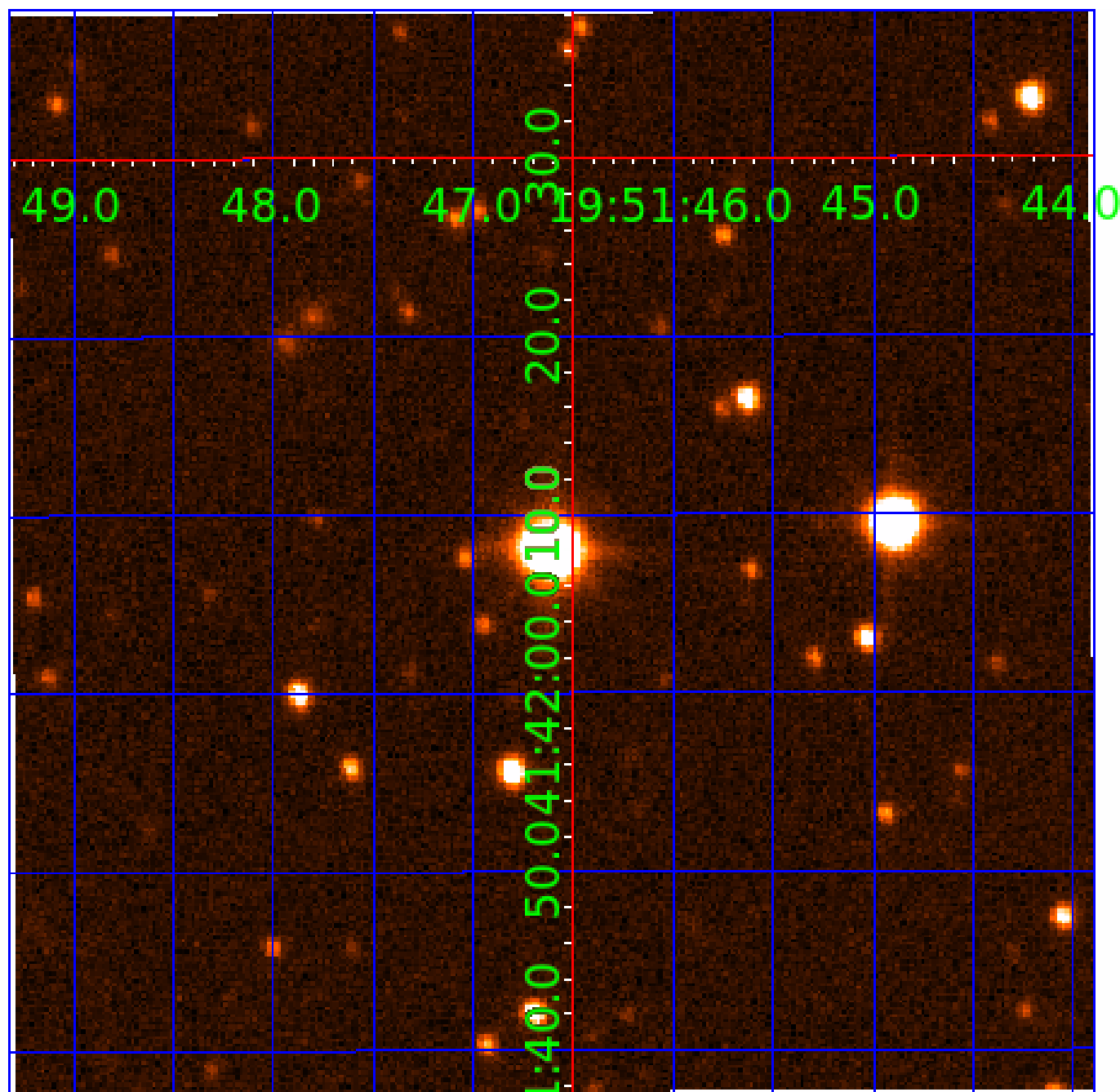


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006386823

Q1-17 DR25 TCE Parameters

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006386823-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT
006386823-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

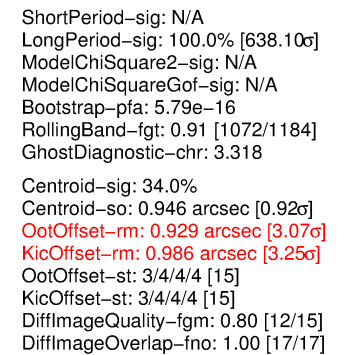
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

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

Ephemeris Match Information For 006386823-02

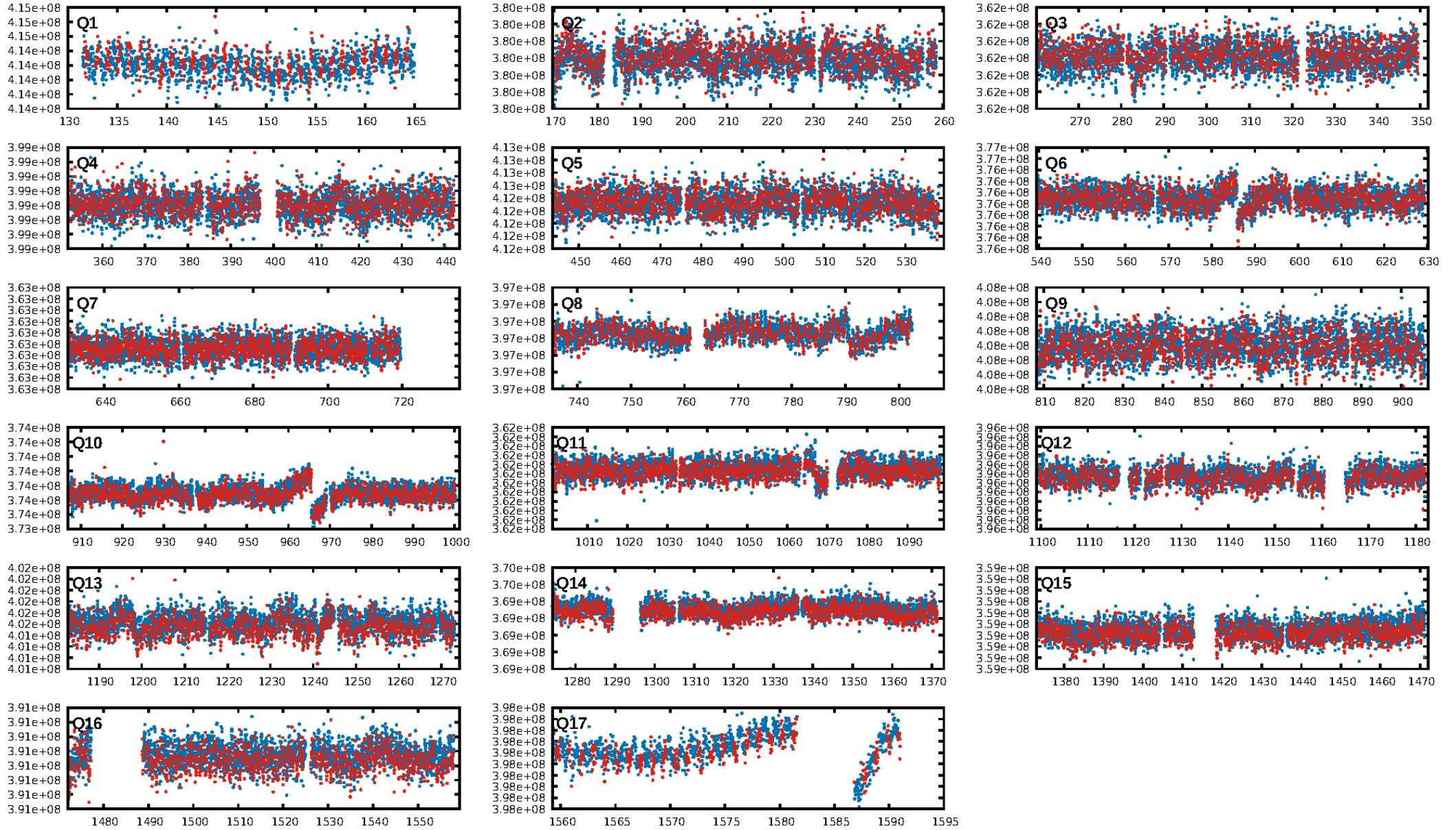
No Significant Match Found

KIC: 6386823 Candidate: 2 of 3 Period: 1.077 d

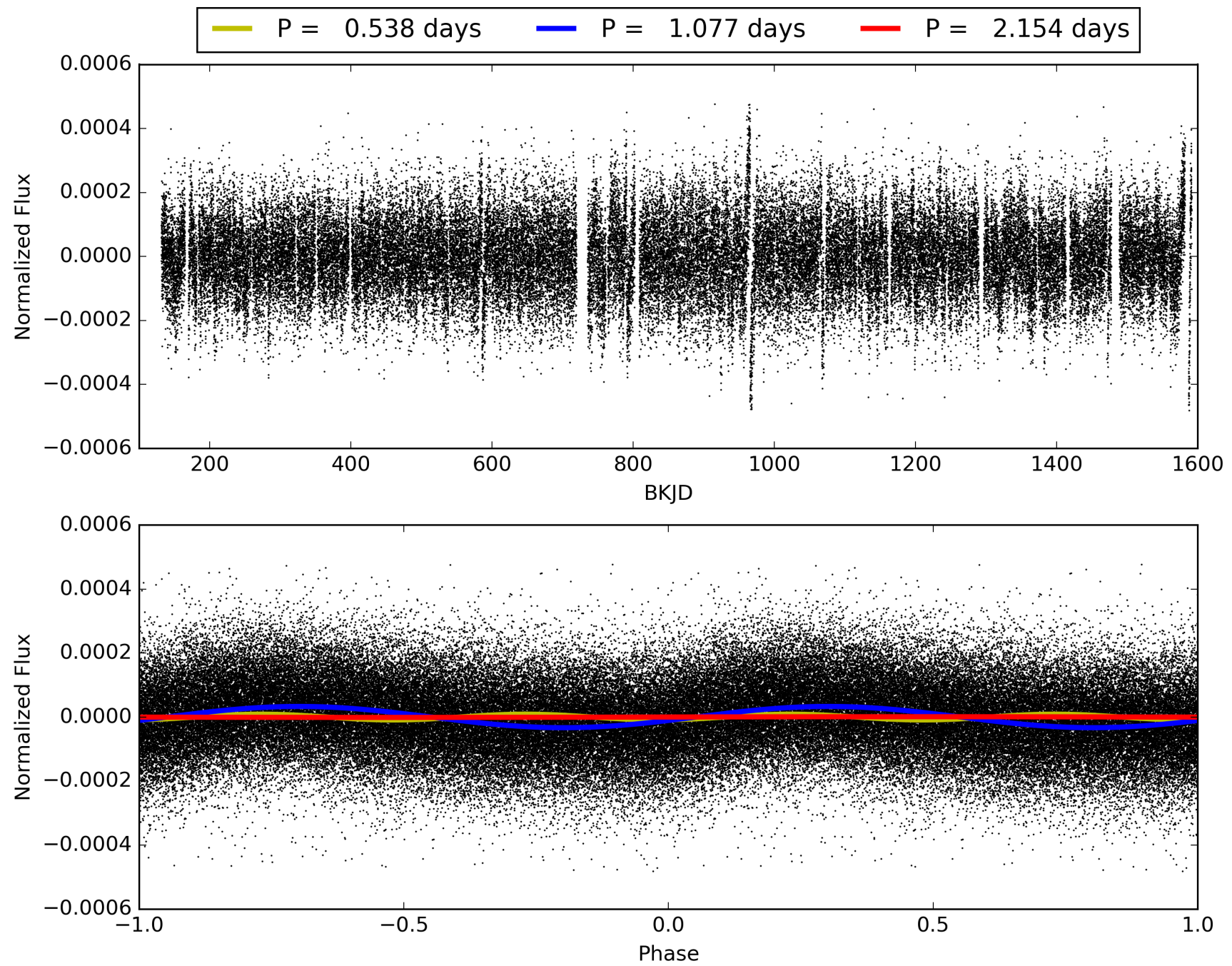


This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 006386823-02, PDC Light Curves

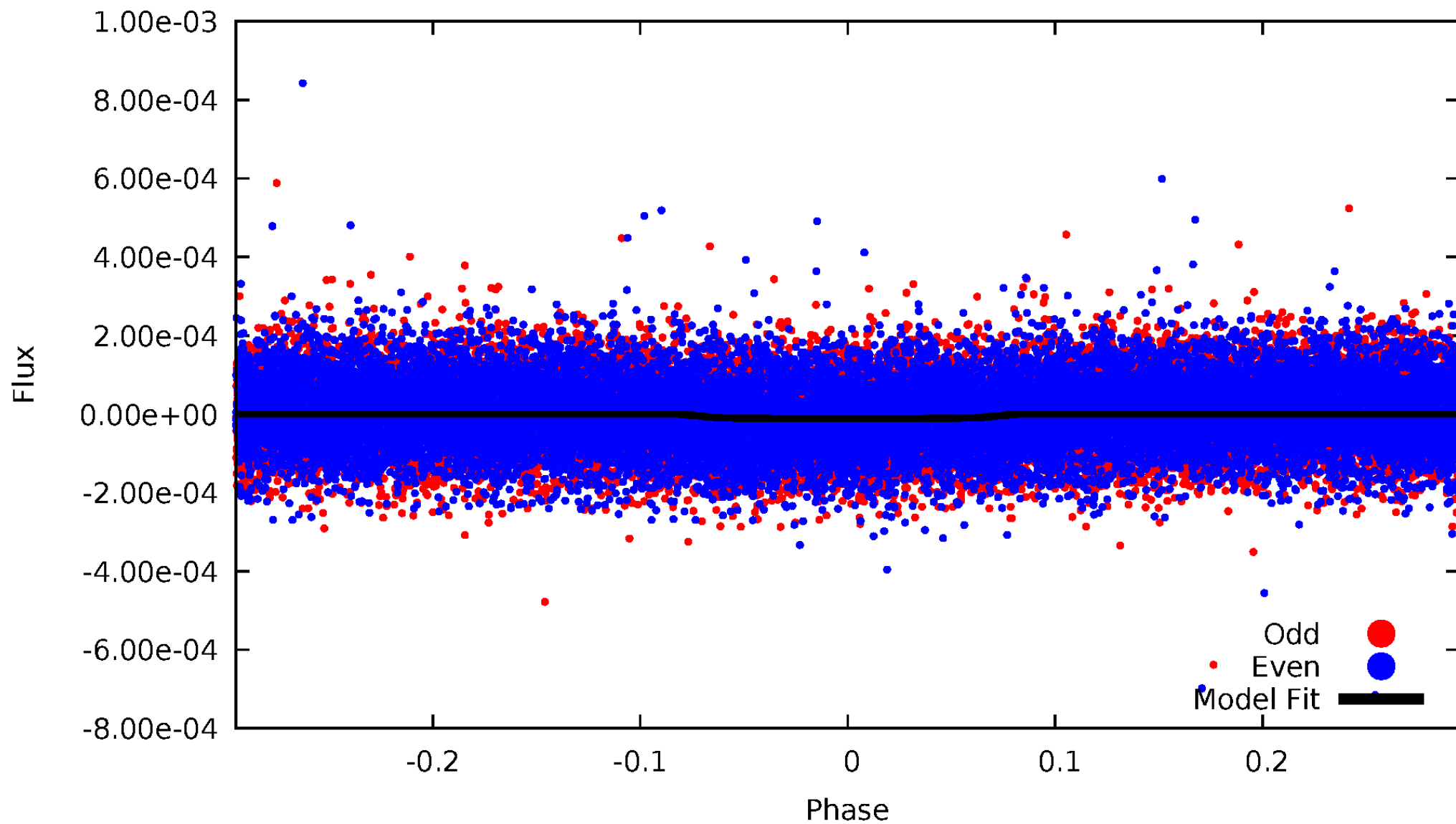


TCE 006386823-02



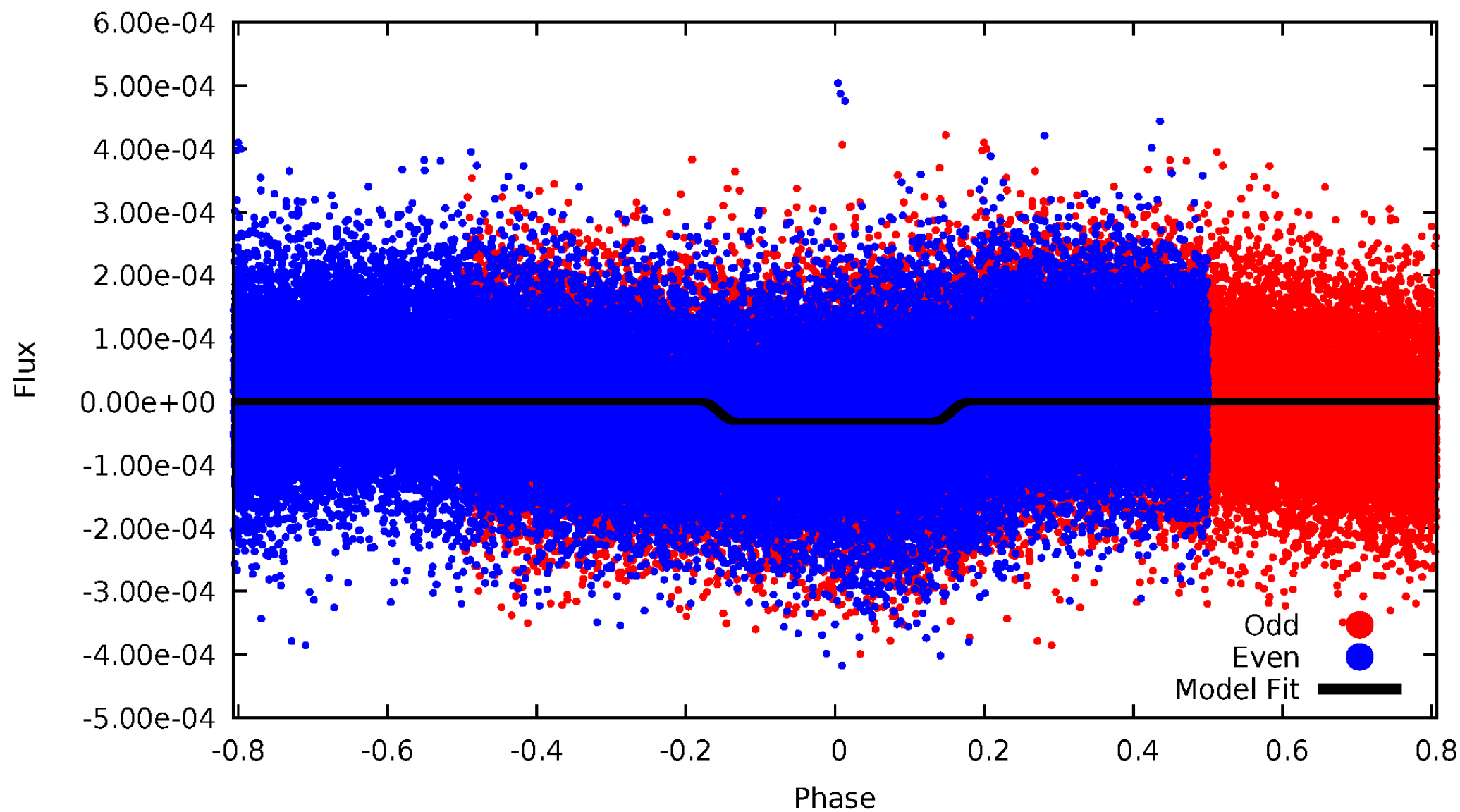
DV Odd/Even

TCE 006386823-02



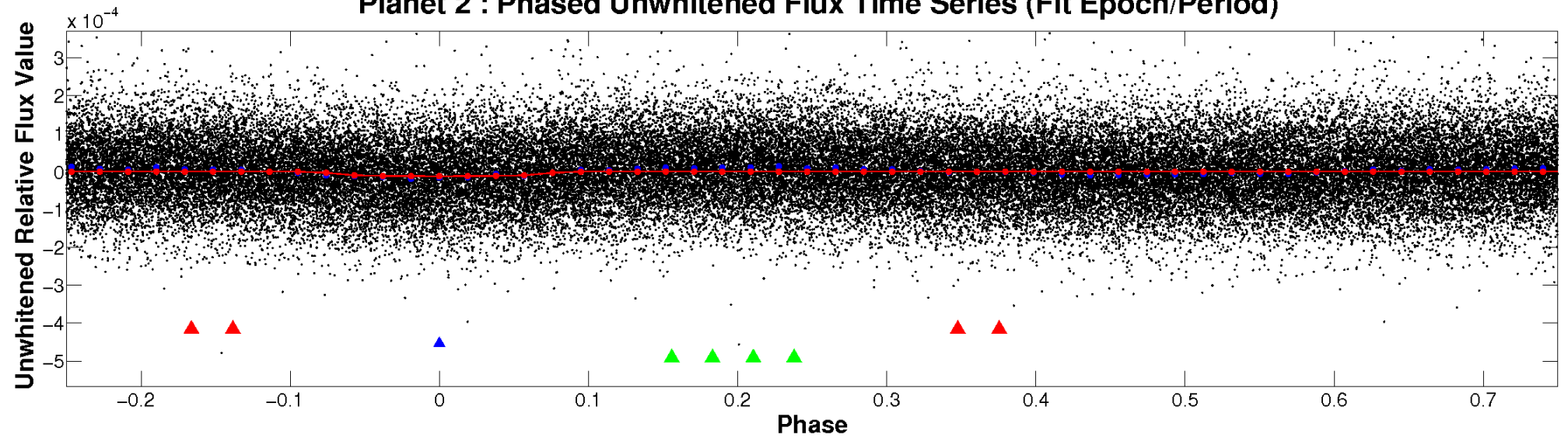
ALT Odd/Even

TCE 006386823-02

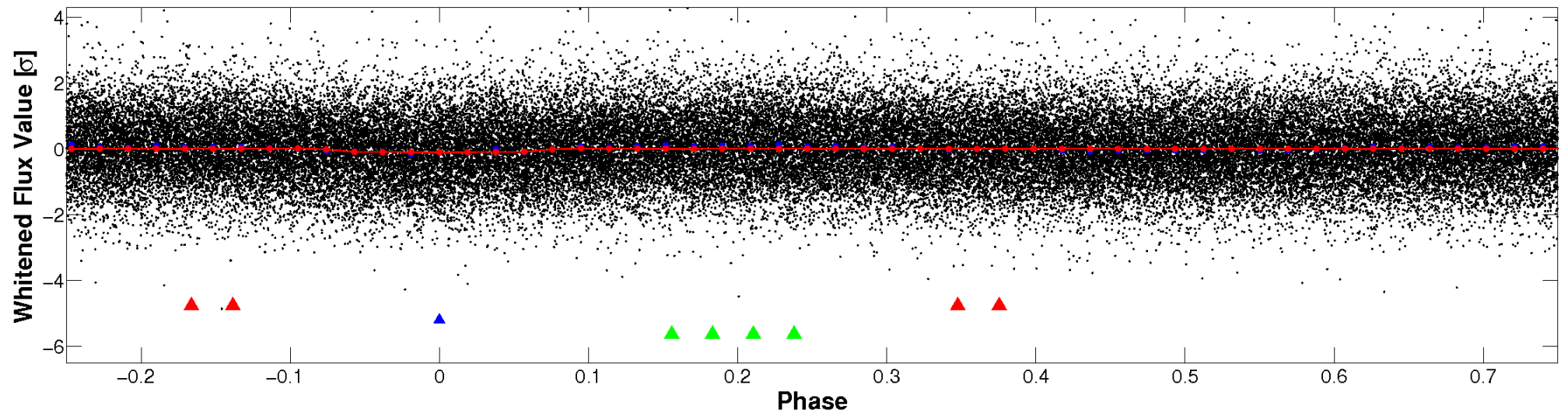


Non-Whitened Vs. Whitened Light Curve

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

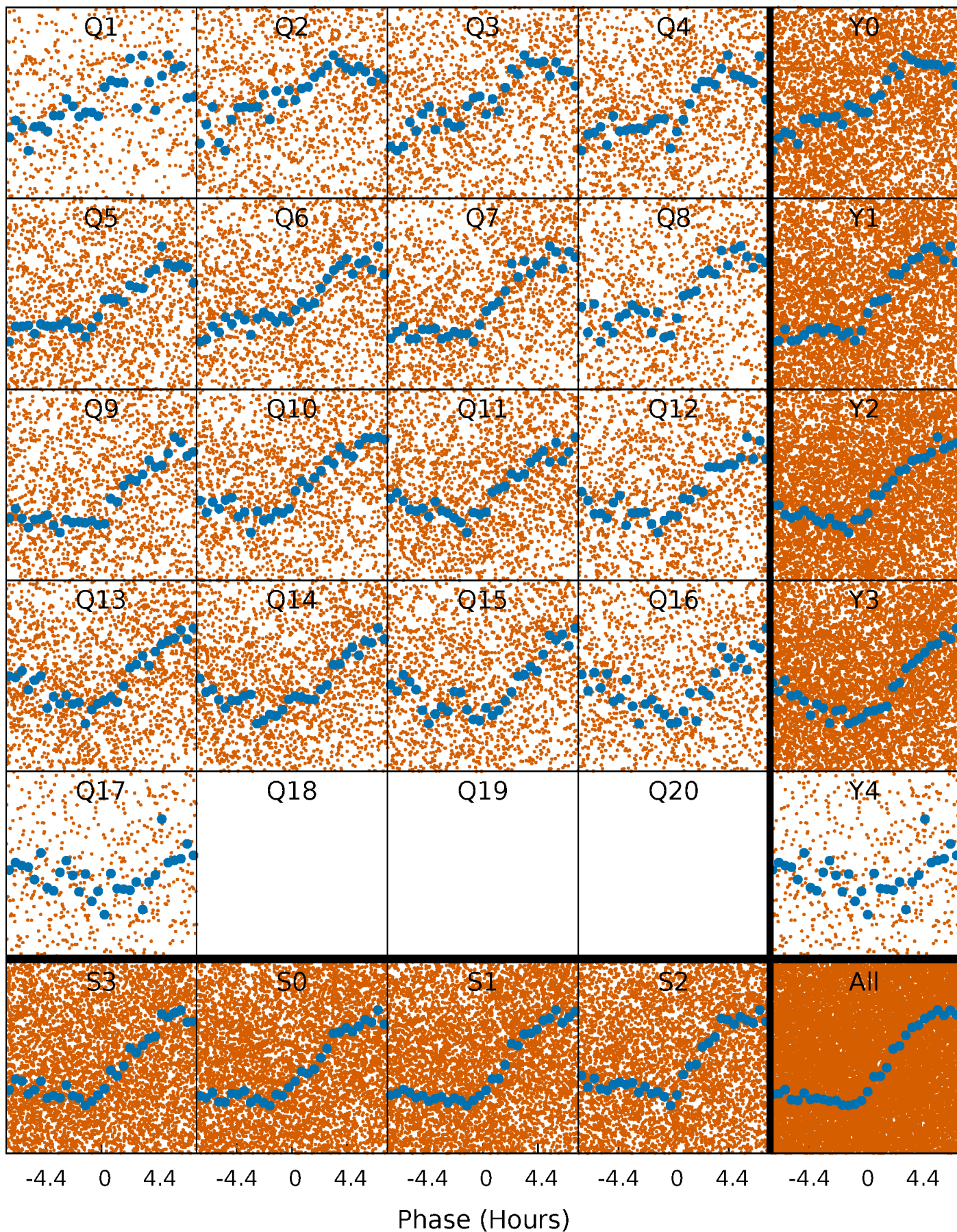


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



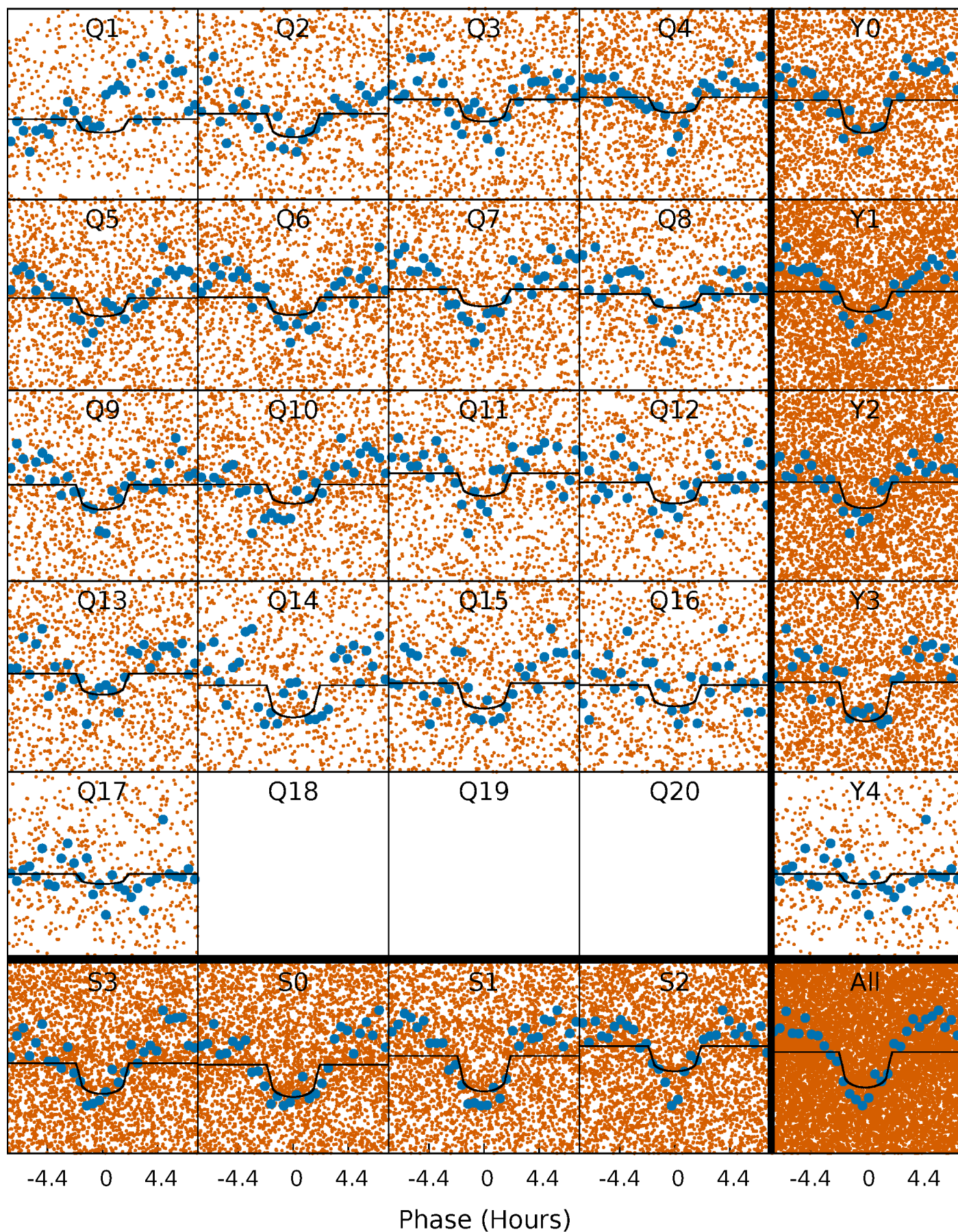
PDC Quarter-Phased Transit Curves

TCE 006386823-02 P= 1.076850 Days $T_0=131.861510$ (BKJD)



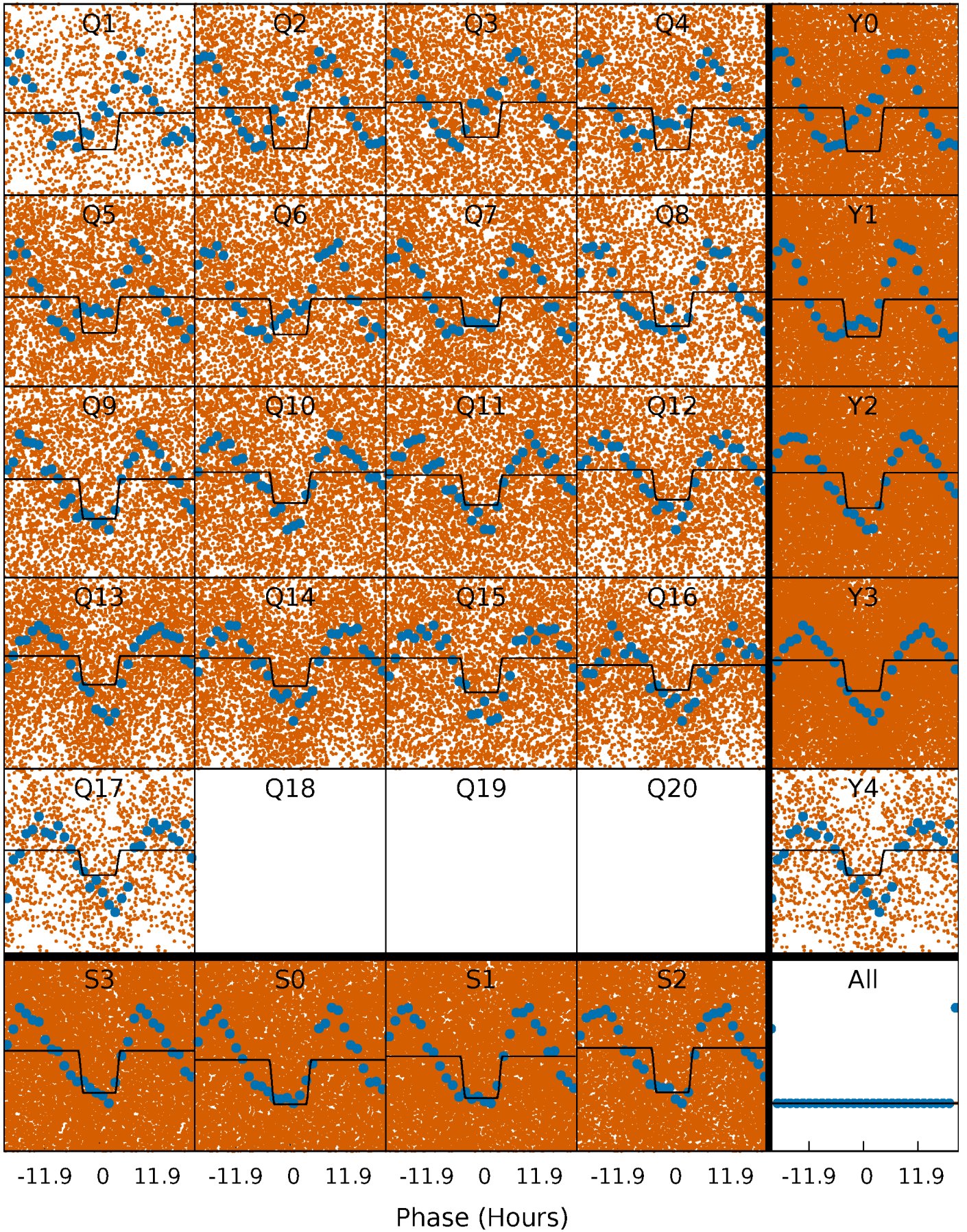
DV Quarter-Phased Transit Curves

TCE 006386823-02 P= 1.076850 Days $T_0=131.861510$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

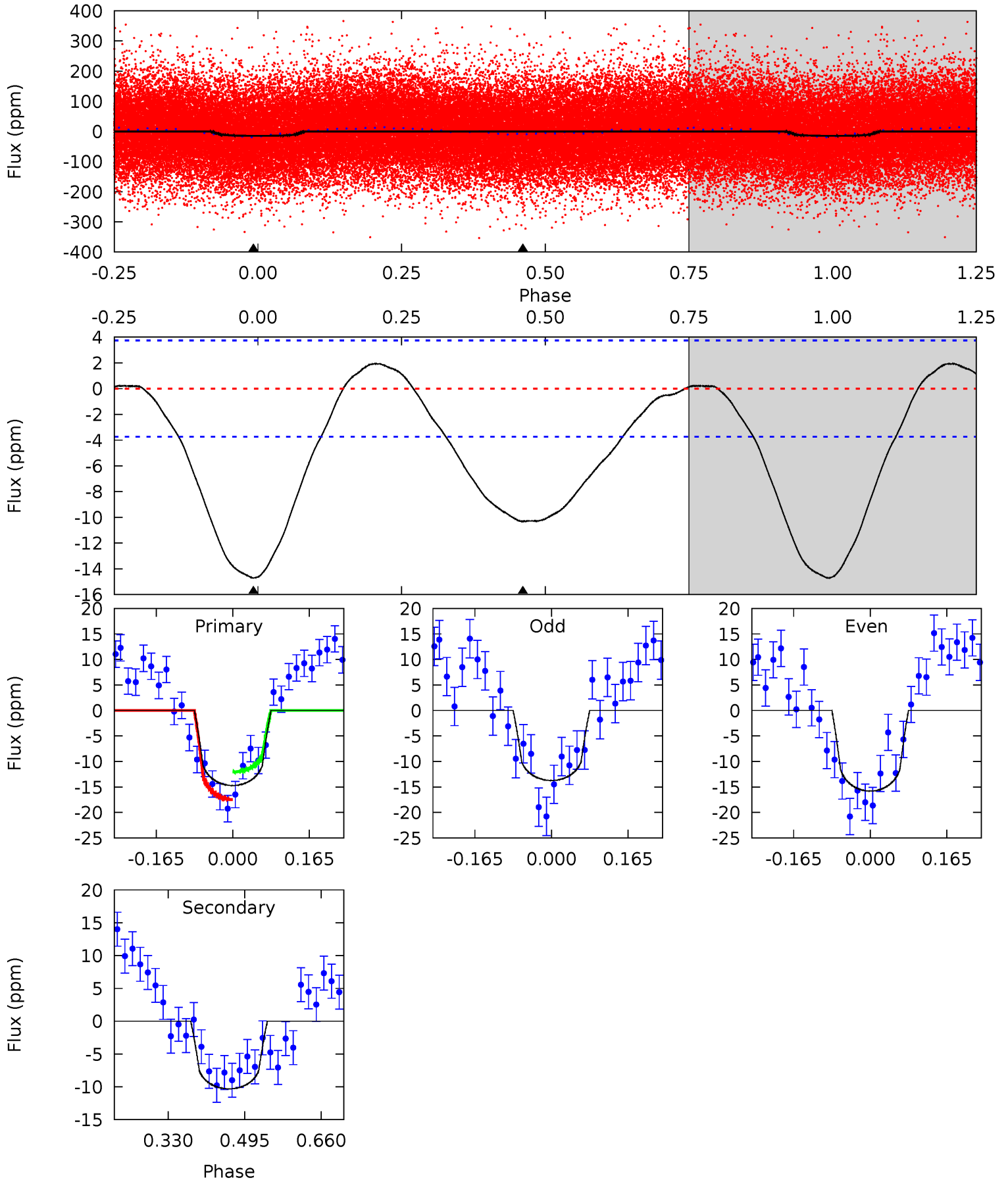
TCE 006386823-02 P= 1.076869 Days $T_0=131.728946$ (BKJD)



DV Model-Shift Uniqueness Test

006386823-02, P = 1.076850 Days, E = 130.784660 Days

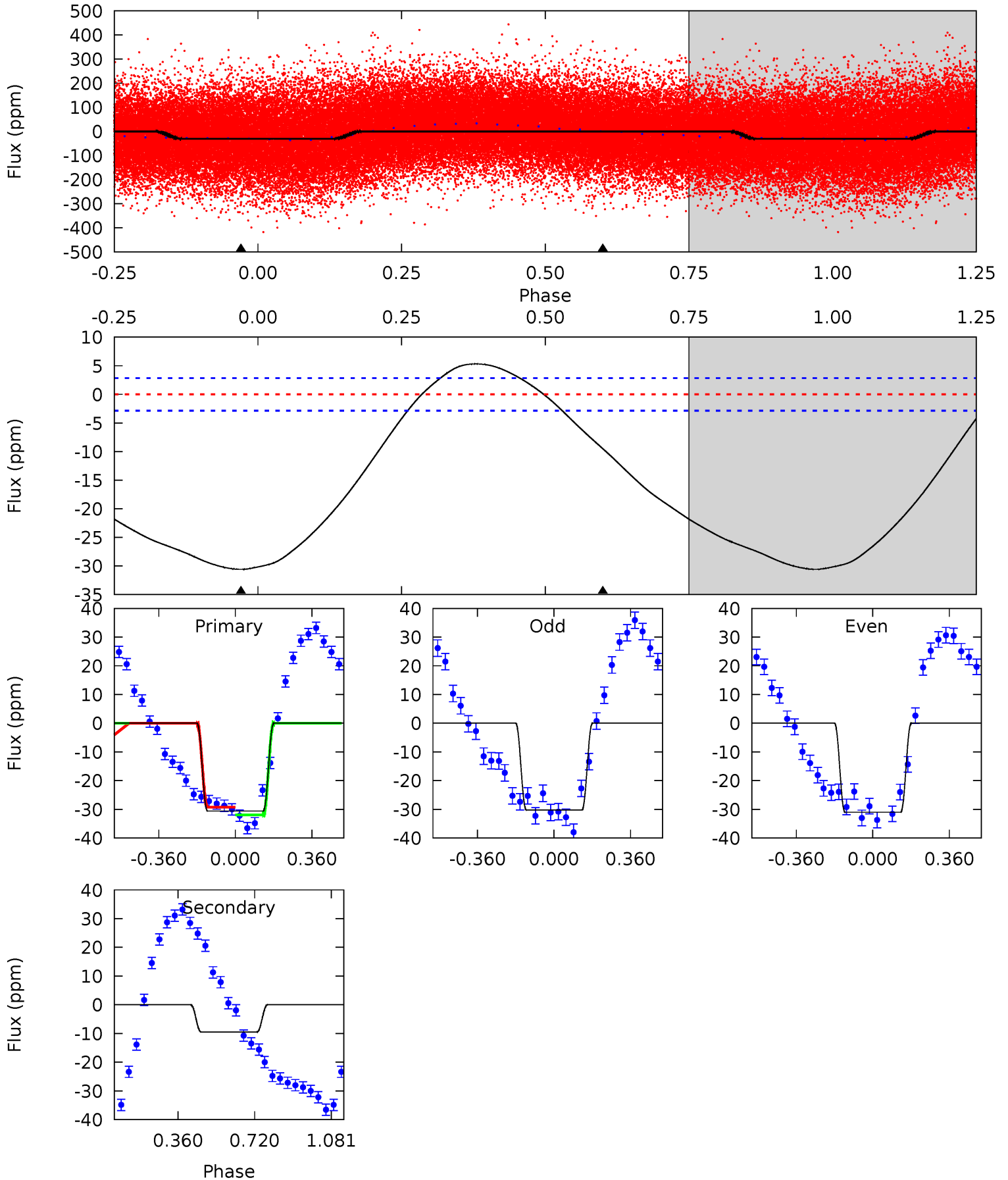
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.6	12.3	0	0	4.46	1.39	1.76	17.6	17.6	12.3	12.3	1.24	1.02	0.12	3.24



Alt Model-Shift Uniqueness Test

006386823-02, P = 1.076869 Days, E = 130.652077 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
46.1	14.3	0	0	4.29	0.91	4.71	46.1	46.1	14.3	14.3	0.61	0.97	0.15	2.00



Stellar Parameters For KIC 006386823

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7217^{+226}_{-302}	$3.594^{+0.549}_{-0.061}$	$-0.200^{+0.250}_{-0.300}$	$3.599^{+0.332}_{-1.882}$	$1.857^{+0.164}_{-0.493}$	$0.056^{+0.378}_{-0.012}$
	+3%/-4%	+15%/-2%	+125%/-150%	+9%/-52%	+9%/-27%	+674%/-21%
Source	KIC0	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 006386823-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-10 ± 1	$1.16^{+0.34}_{-0.36}$	5096^{+353}_{-682}	6791^{+1139}_{-812}	$2.668^{+2.593}_{-1.074}$
Alt.	-9 ± 1	$2.01^{+0.43}_{-0.55}$	5120^{+336}_{-689}	4847^{+467}_{-450}	$0.826^{+0.672}_{-0.246}$

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

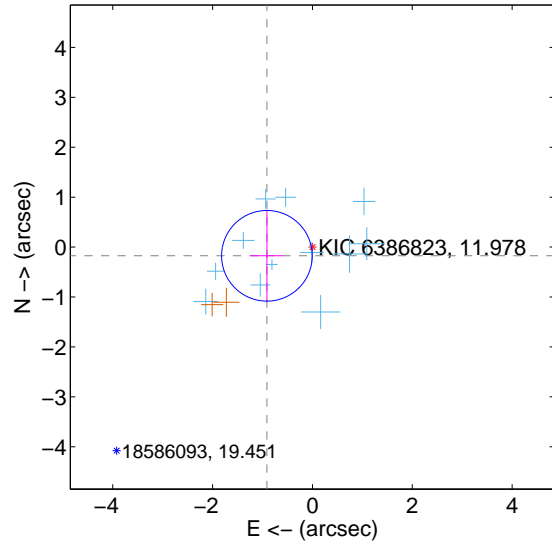
Supplemental centroid analysis for 006386823-02. **Kepler magnitude: 11.98.** Transit SNR 9.05

There are 12 quarters with good PRF difference image offsets

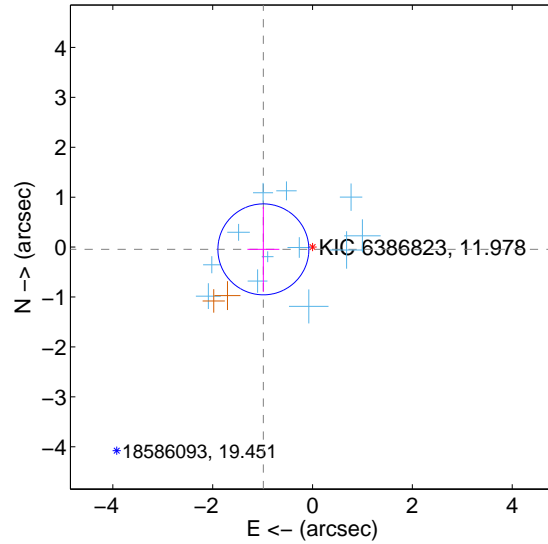
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.929 ± 0.303	3.07	0.912 ± 0.329	-0.174 ± 0.925
PRF-fit source offset from KIC position	0.986 ± 0.304	3.25	0.985 ± 0.319	-0.045 ± 0.851
photometric centroid source offset	0.95 ± 1.03	0.92	0.75 ± 1.10	0.58 ± 0.90

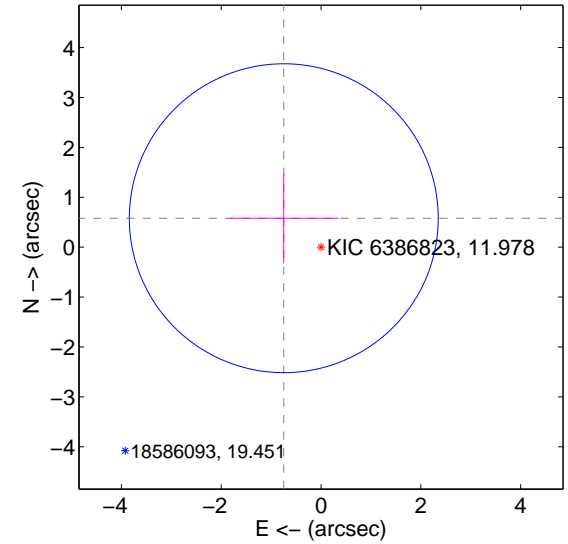
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

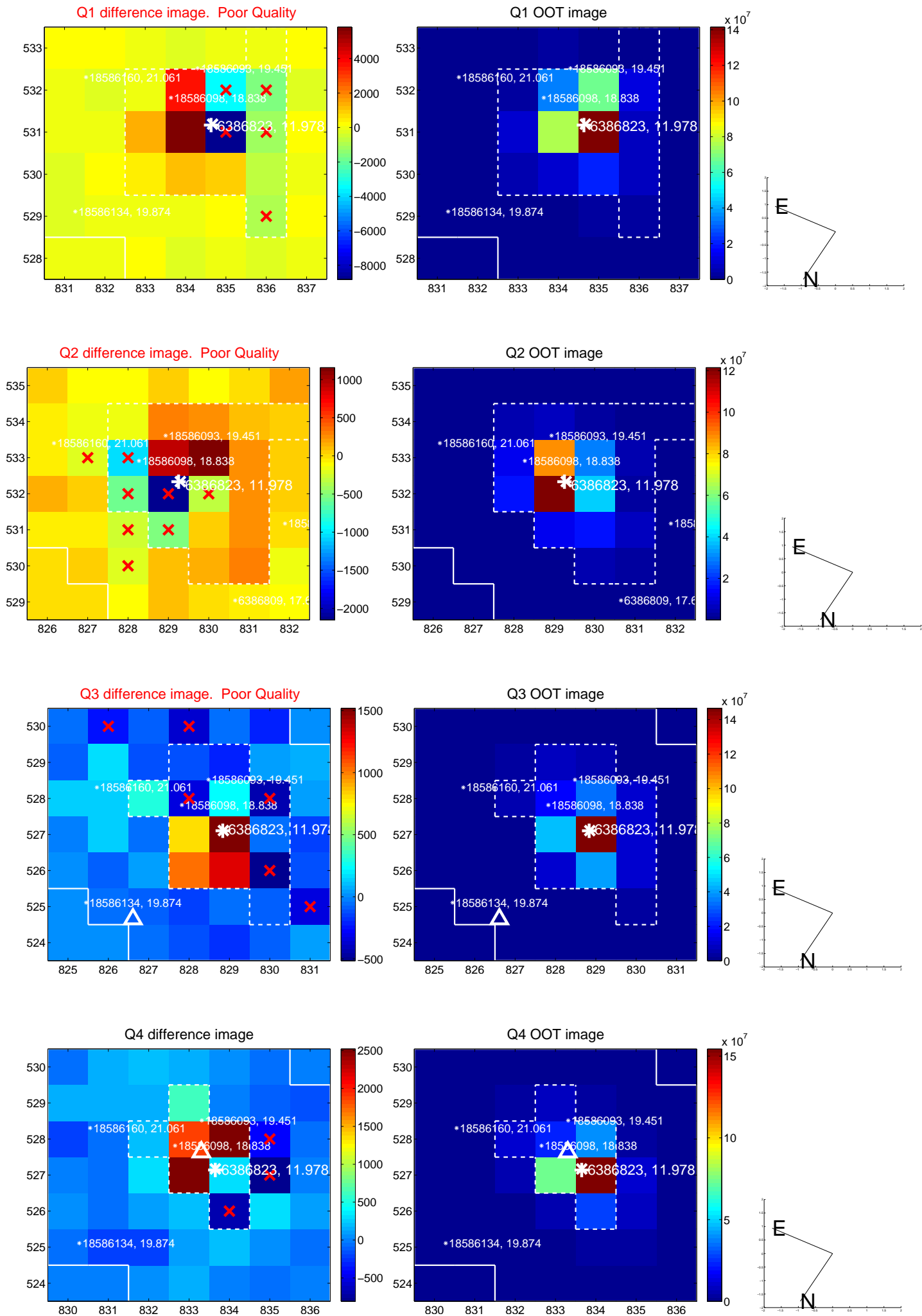


offset from photometric centroids

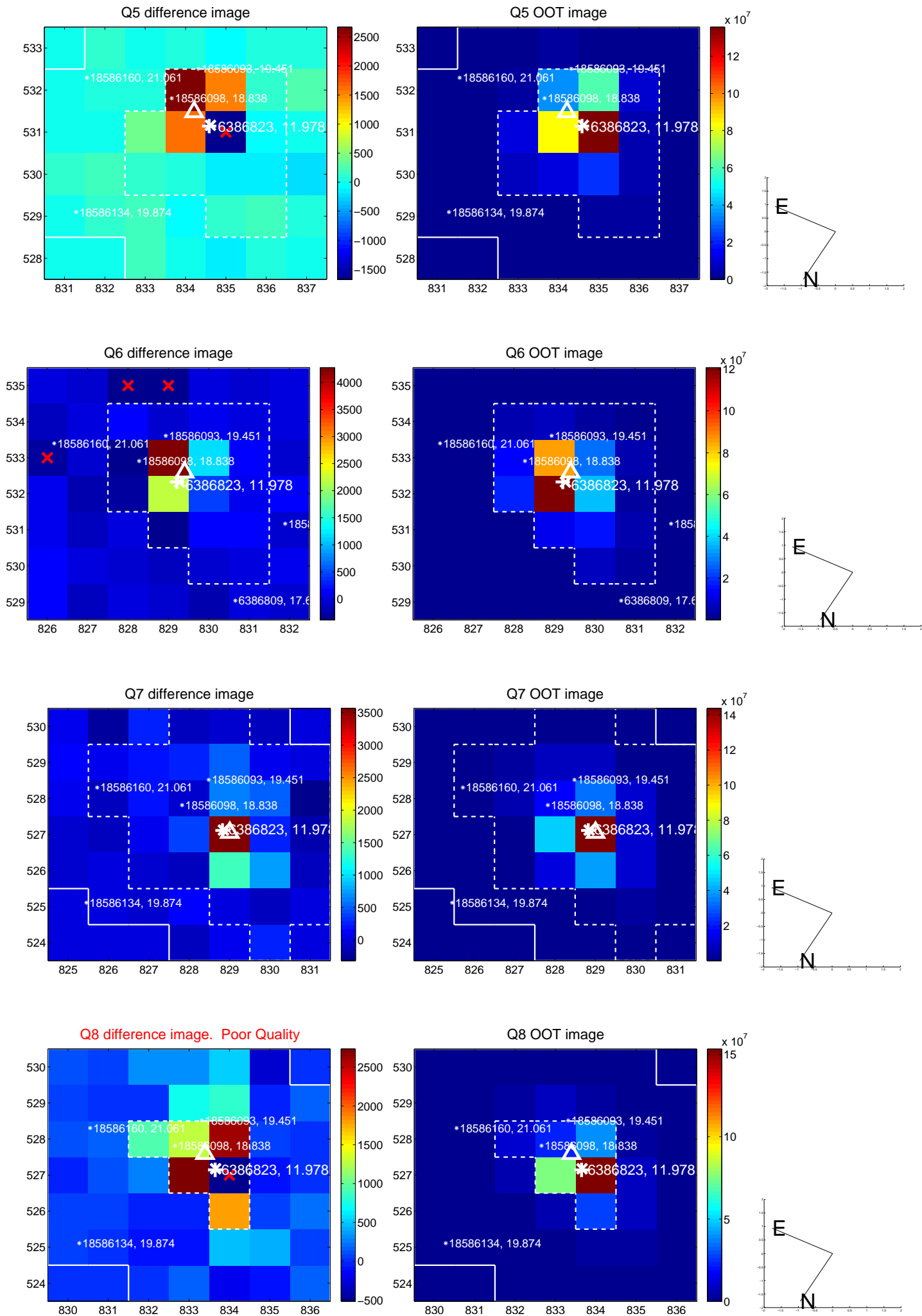


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

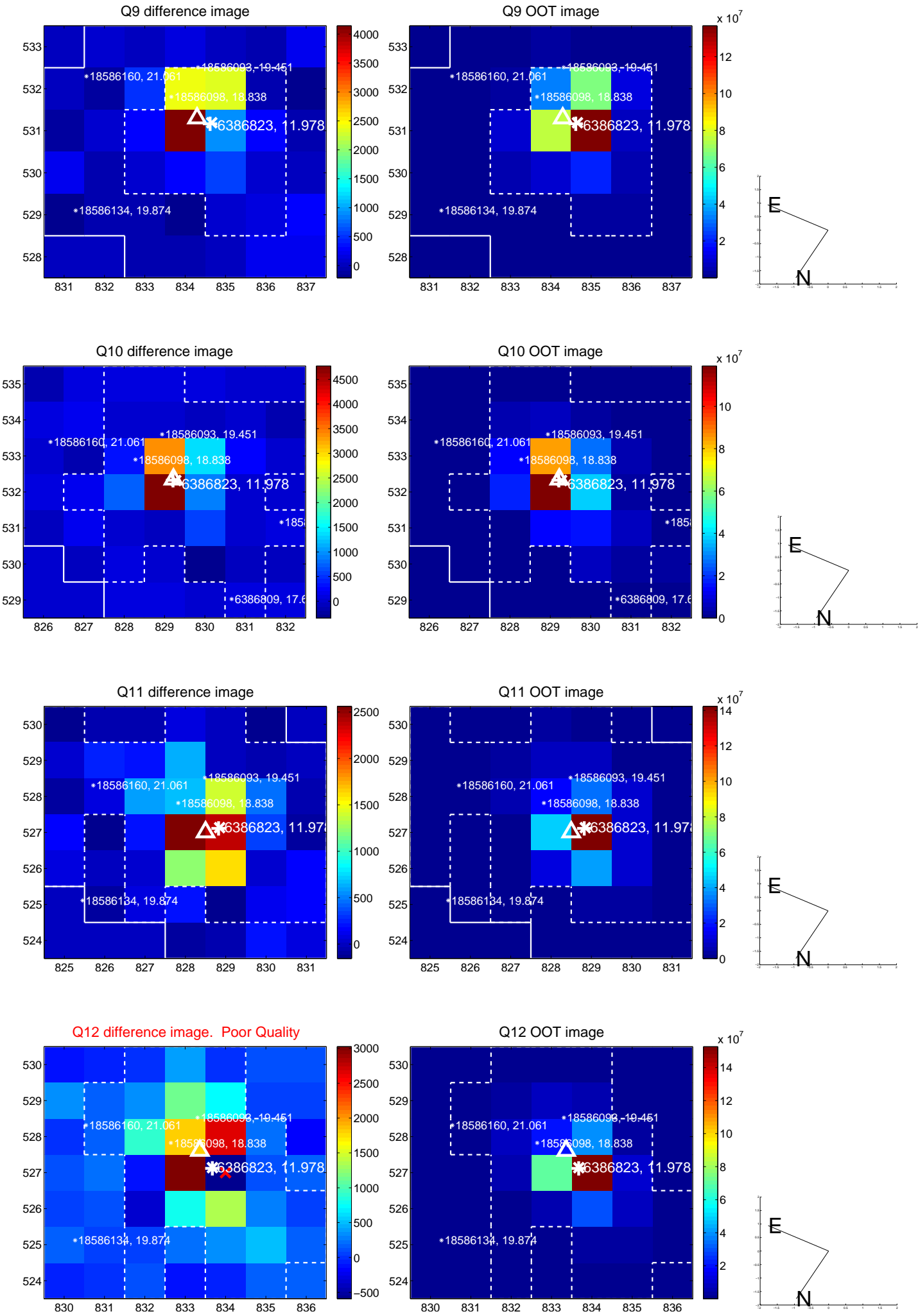
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



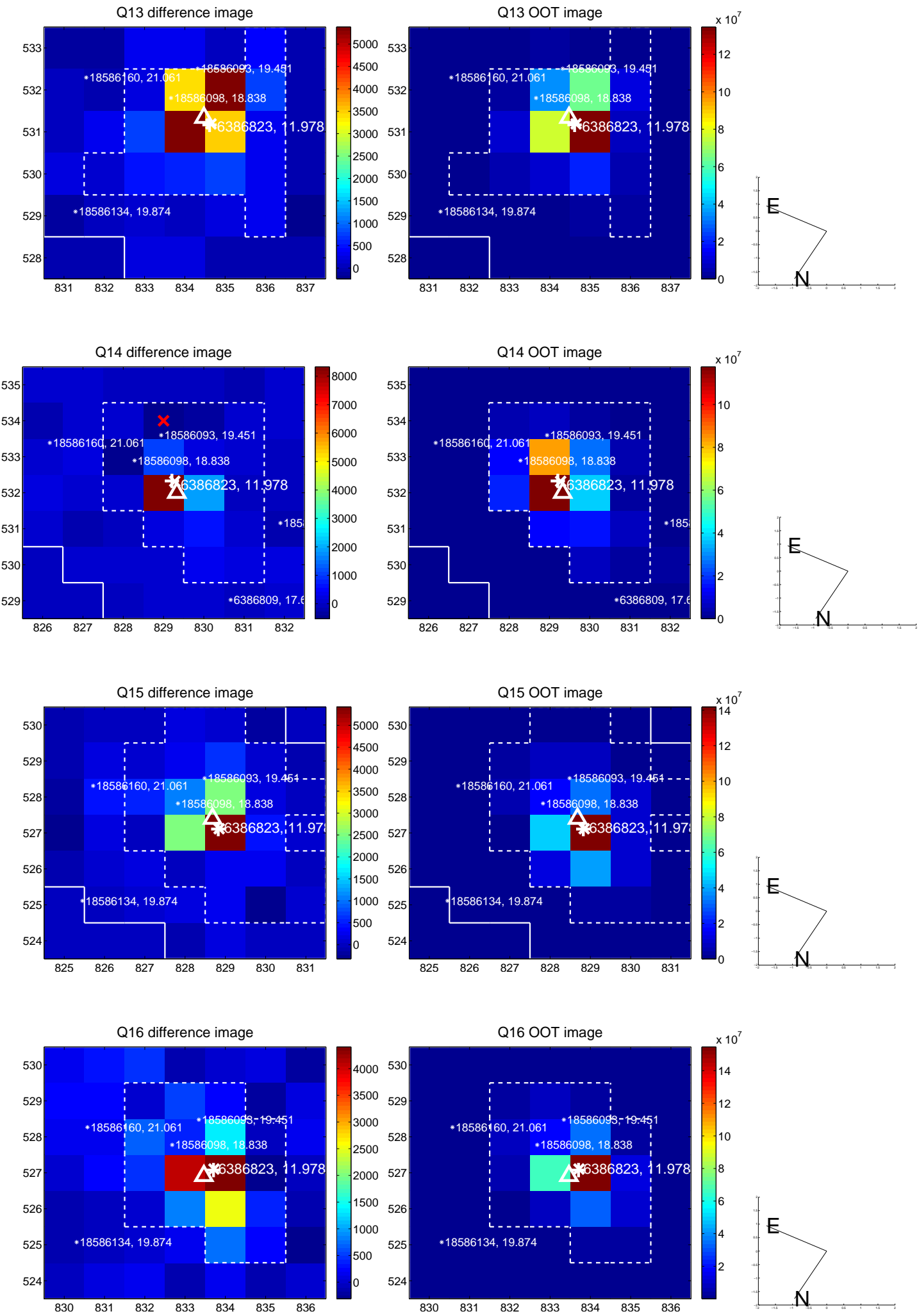
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



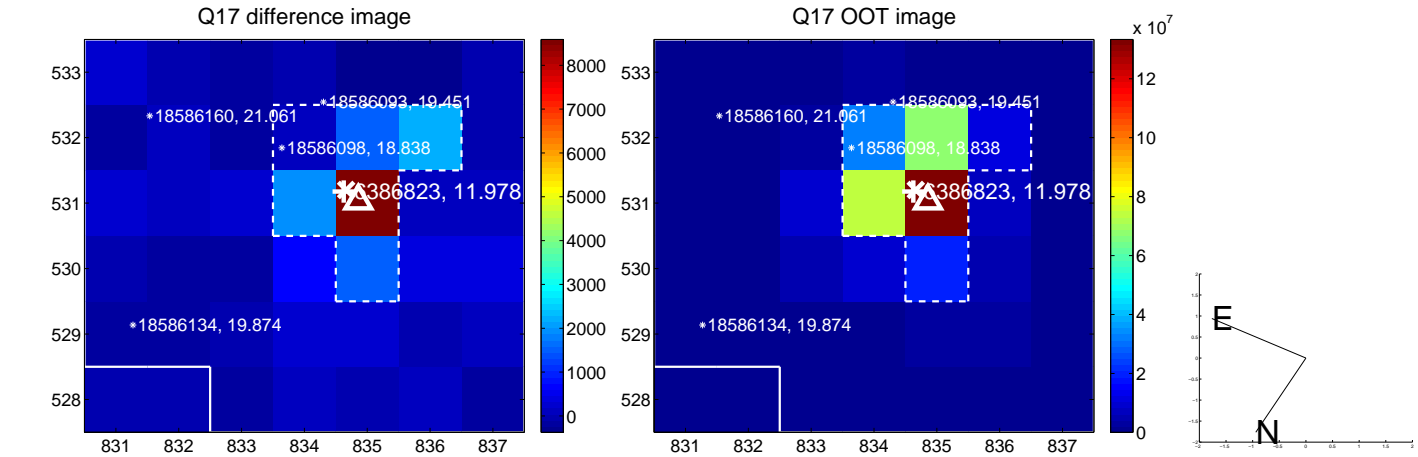
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



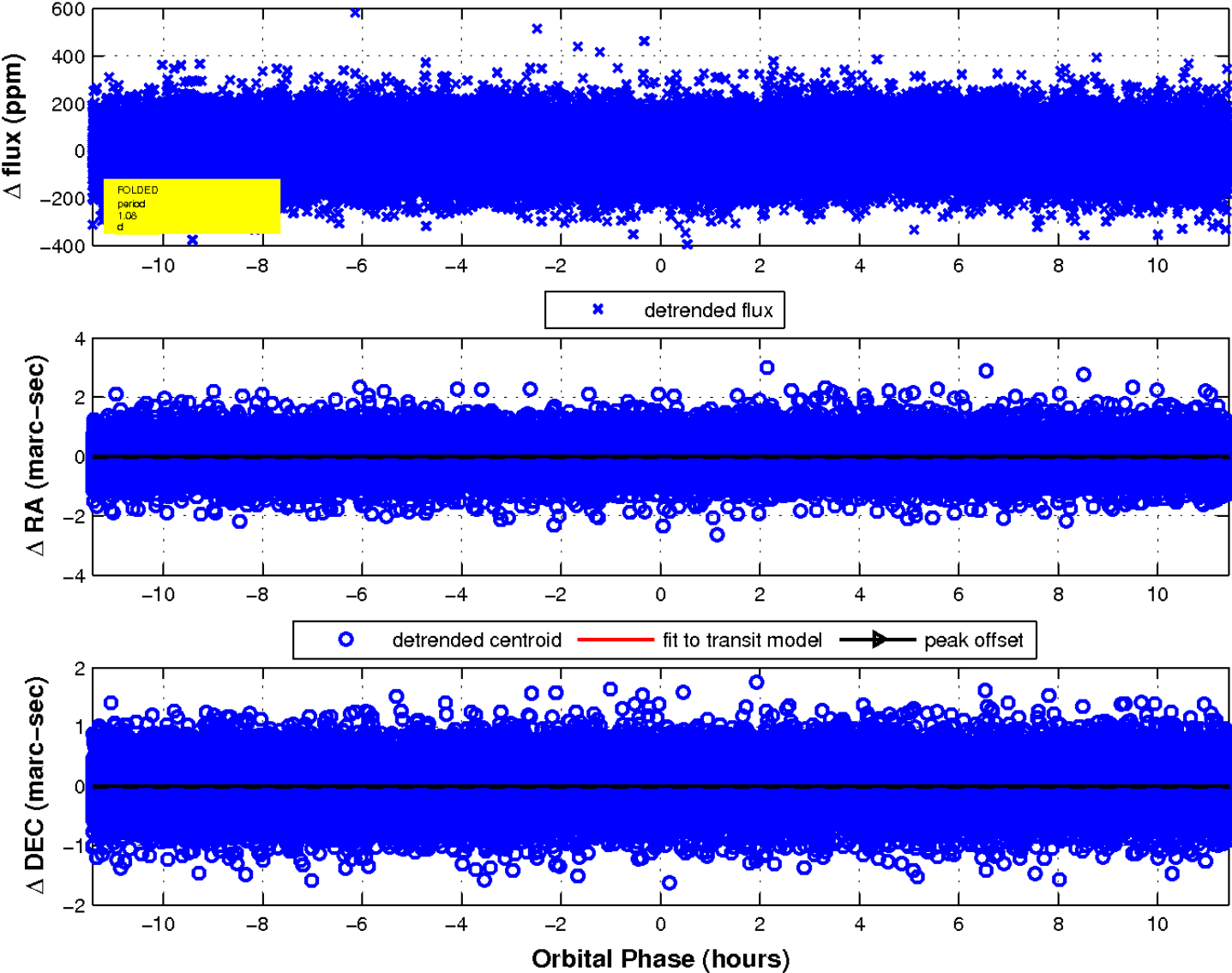
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

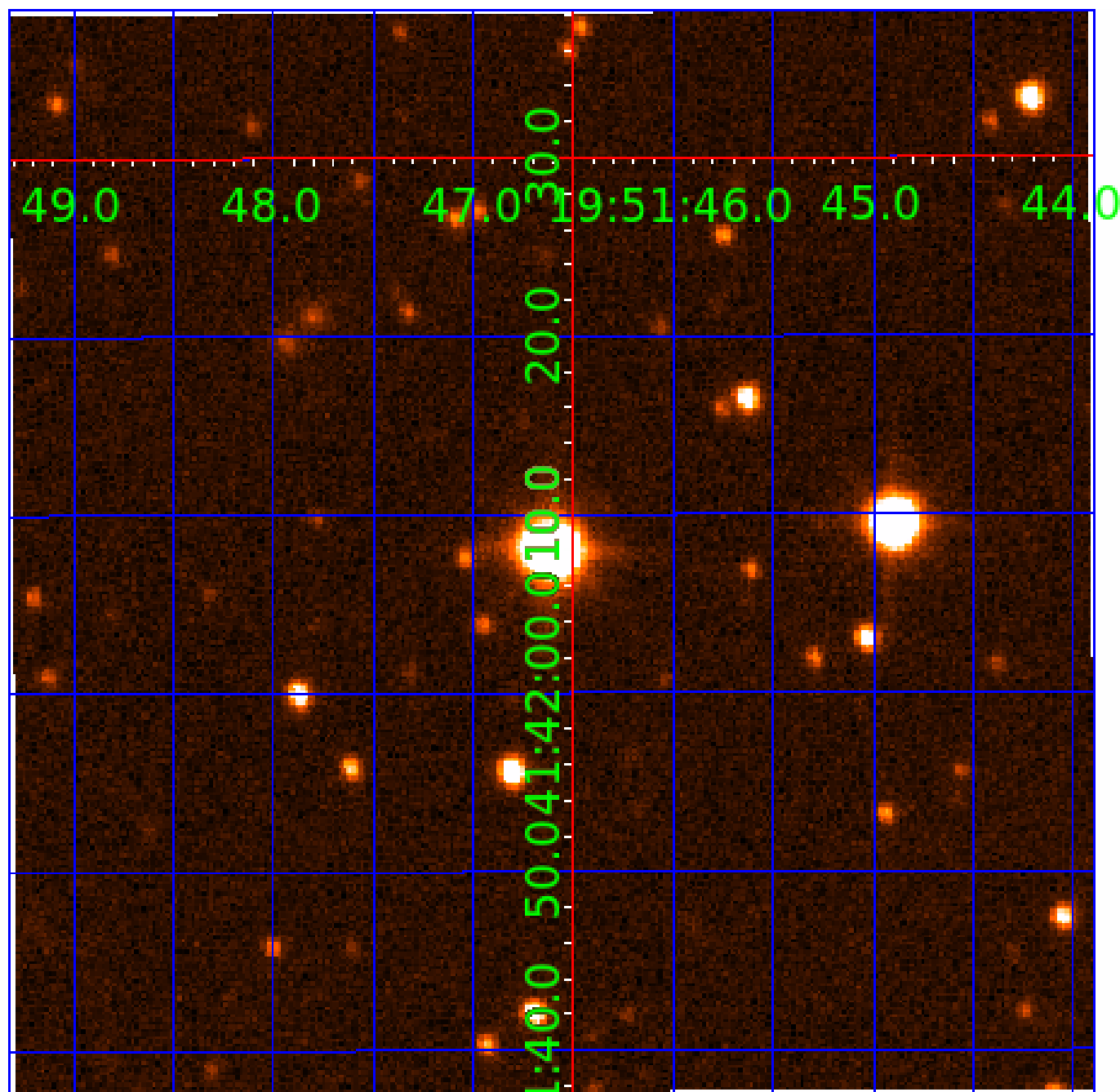


fluxWeightedCentroids, Planet 2 of 3



UKIRT Image

Declination



KIC 006386823

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})
006386823-01	OBS	No	379.574605	206.568455	196.5	13.717	14.0	11.2	3.60	7217	5.50	19.80
006386823-02	OBS	No	1.076850	131.861510	12.0	3.810	9.4	9.0	3.60	7217	1.30	49306.27
006386823-03	OBS	No	383.388007	407.702888	146.3	26.054	10.9	7.8	3.60	7217	4.64	19.54

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006386823-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006386823-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT
006386823-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

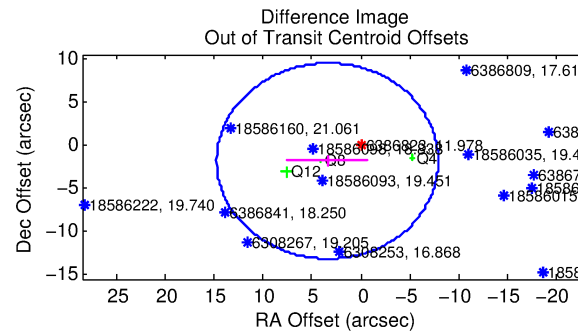
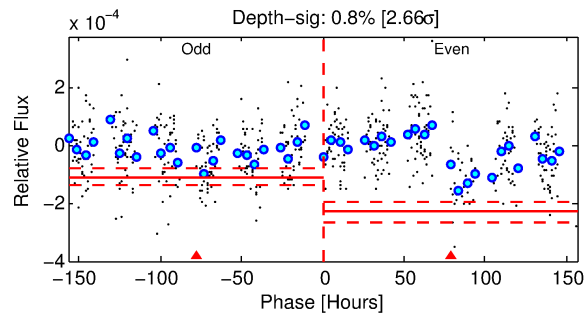
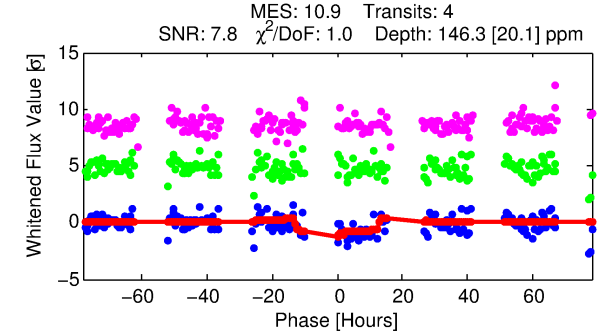
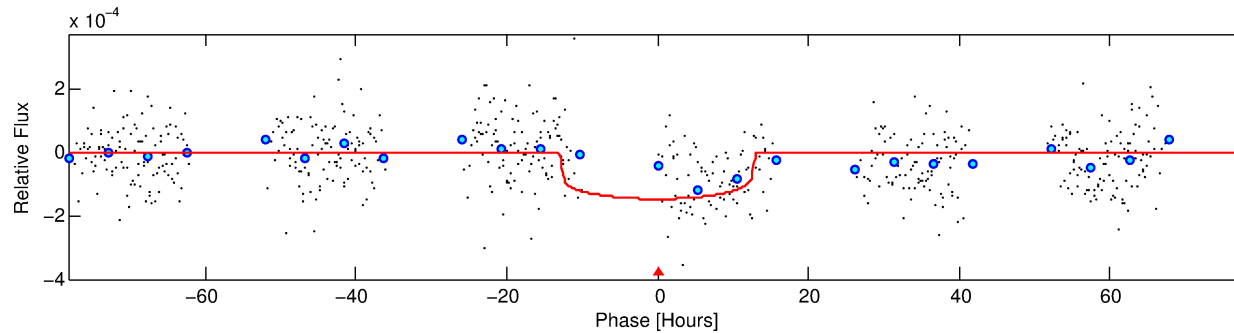
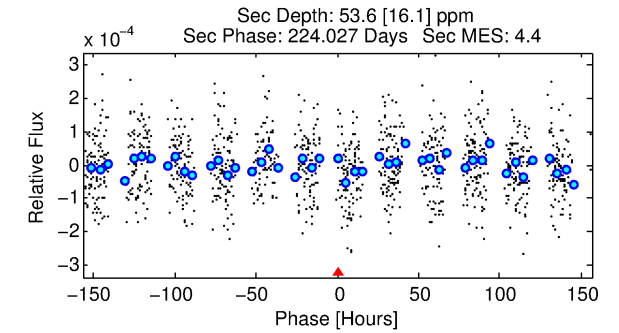
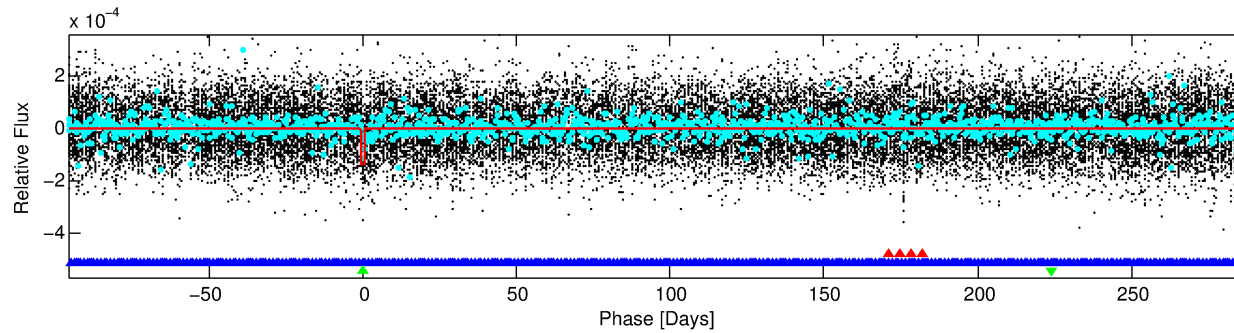
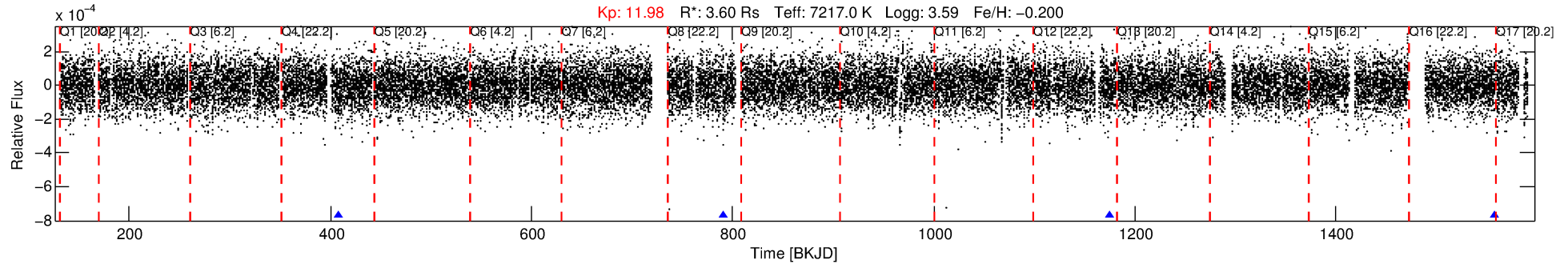
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006386823-03

No Significant Match Found

DV One-Page Summary

KIC: 6386823 Candidate: 3 of 3 Period: 383.388 d



DV Fit Results:

Period = 383.38801 [0.00974] d
Epoch = 407.7029 [0.0172] BKJD
Rp/R* = 0.0118 [0.0019]
a/R* = 83.06 [56.65]
b = 0.69 [0.52]
Seff = 19.54 [18.12]
Teq = 536 [124] K
Rp = 4.64 [2.53] Re
R = 1.2693 [0.6942] AU
Ag = 2204.82 [2226.07] [0.99σ]
Teffp = 5680 [659] K [7.6σ]

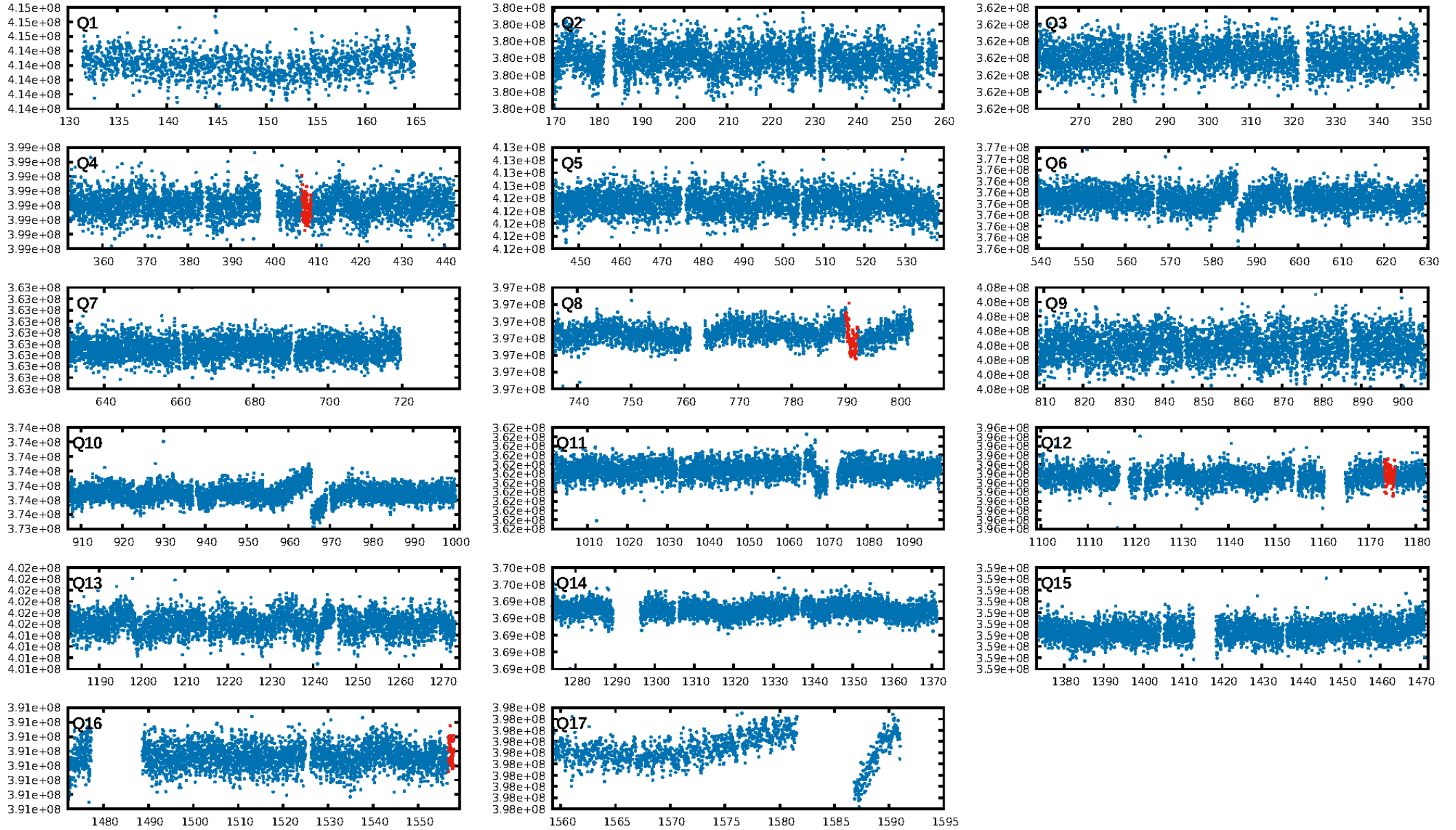
DV Diagnostic Results:

ShortPeriod-sig: 99.8% [3.11σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.95e-18
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.6241
Centroid-sig: 15.7%
Centroid-so: 0.896 arcsec [1.04σ]
OotOffset-rm: 3.879 arcsec [1.03σ]
OotOffset-st: 0/0/3/0 [3]
KicOffset-rm: 3.820 arcsec [1.17σ]
KicOffset-st: 0/0/3/0 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 0.00 [0/3]

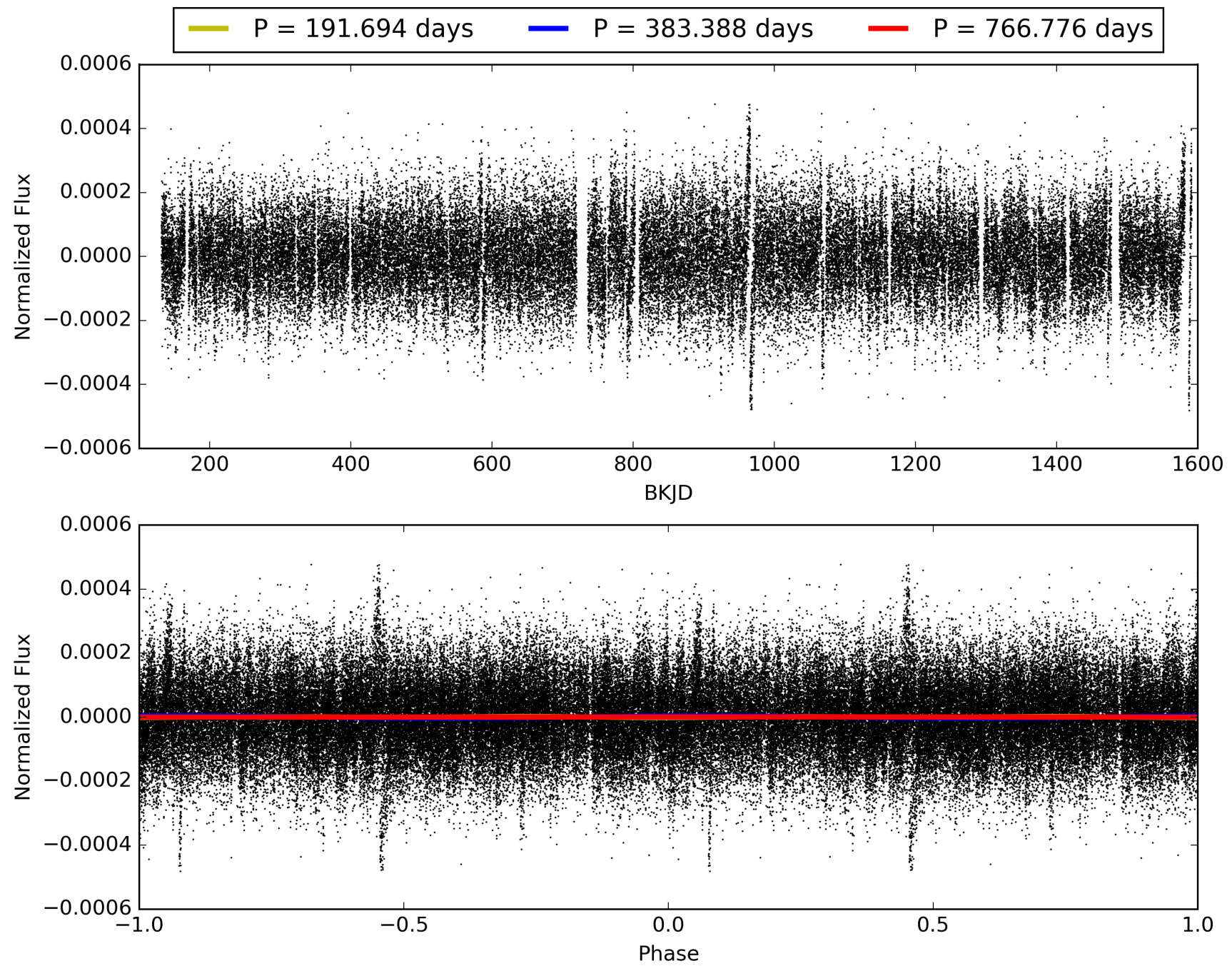
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:01:21 Z

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

TCE 006386823-03, PDC Light Curves

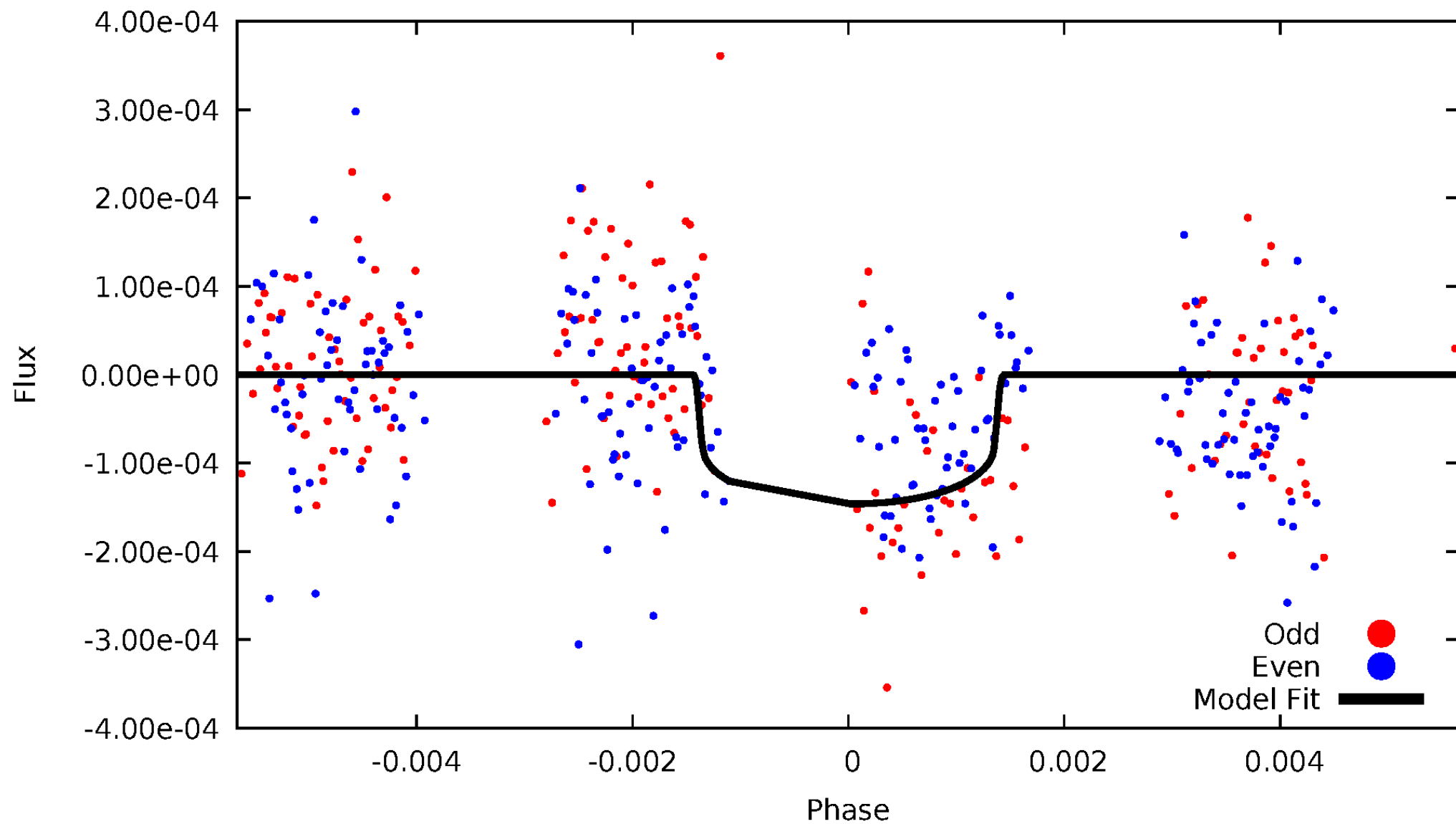


TCE 006386823-03



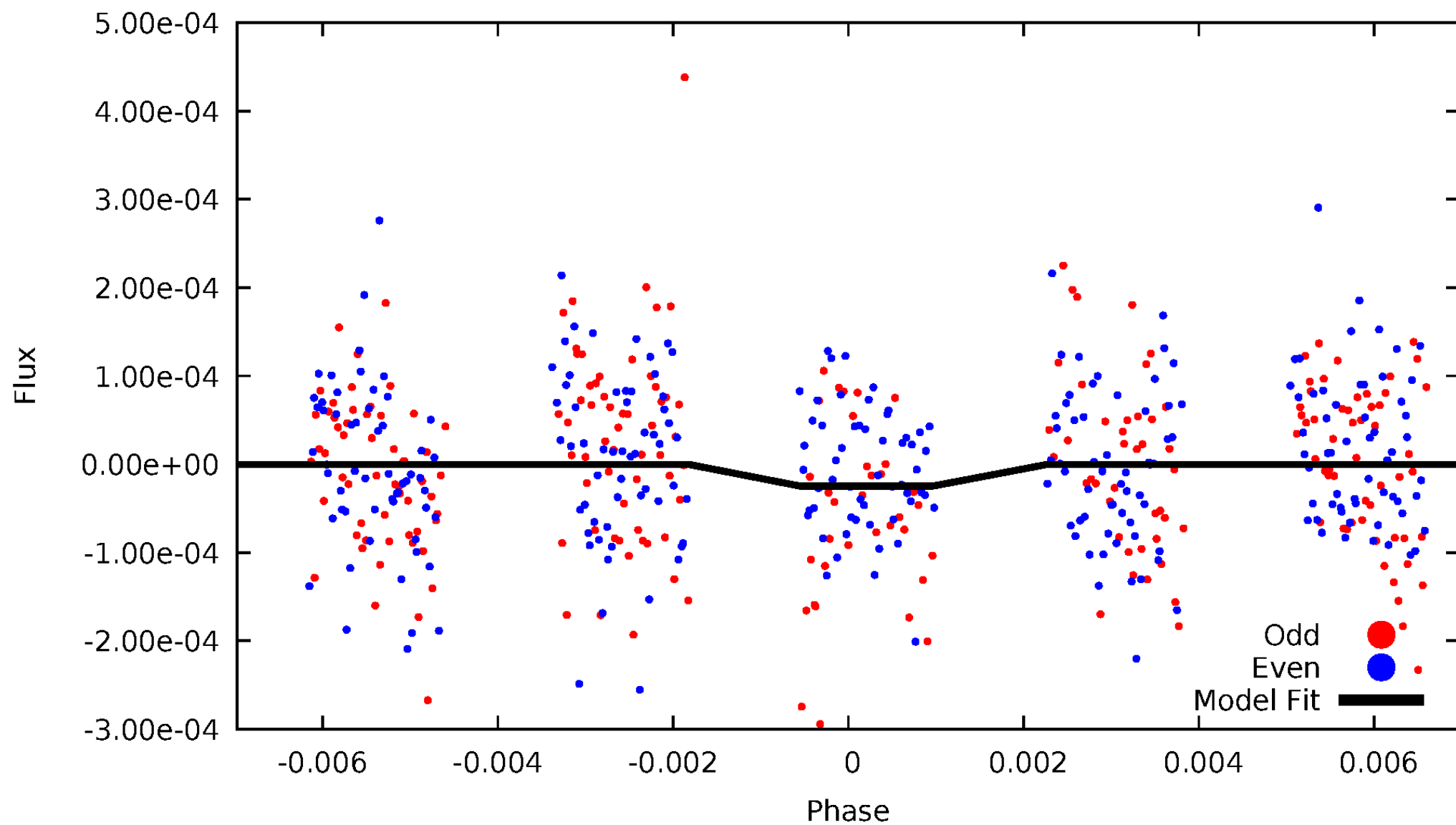
DV Odd/Even

TCE 006386823-03



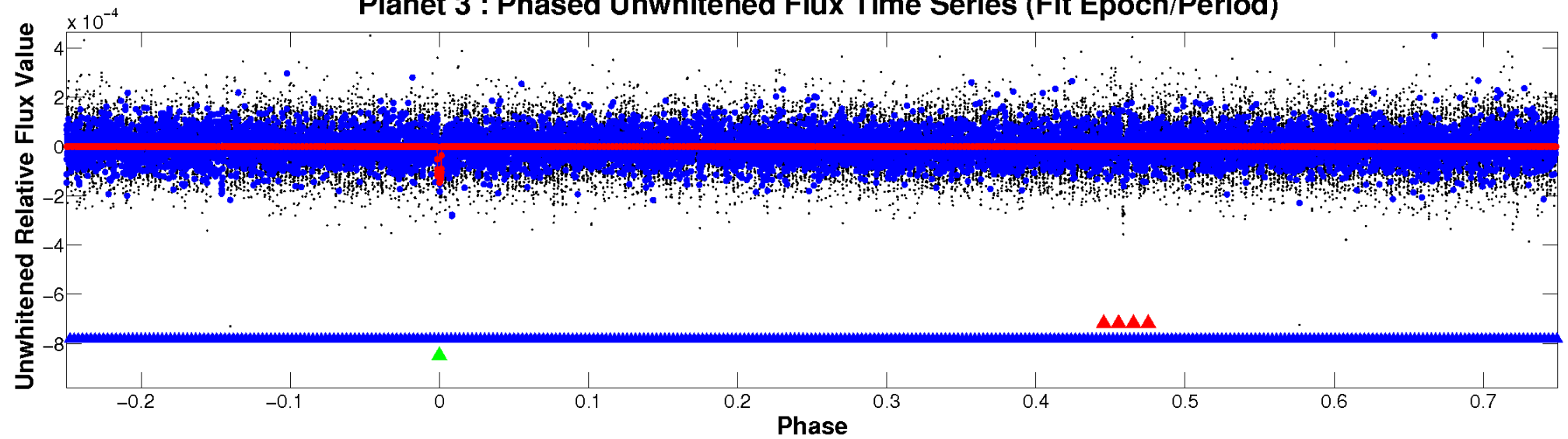
ALT Odd/Even

TCE 006386823-03

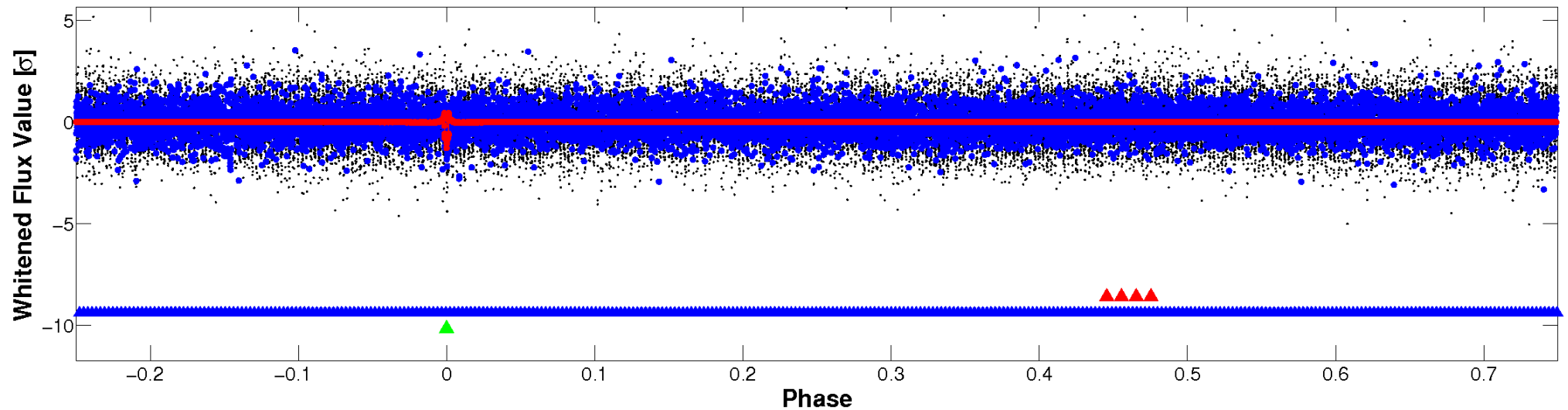


Non-Whitened Vs. Whitened Light Curve

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



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



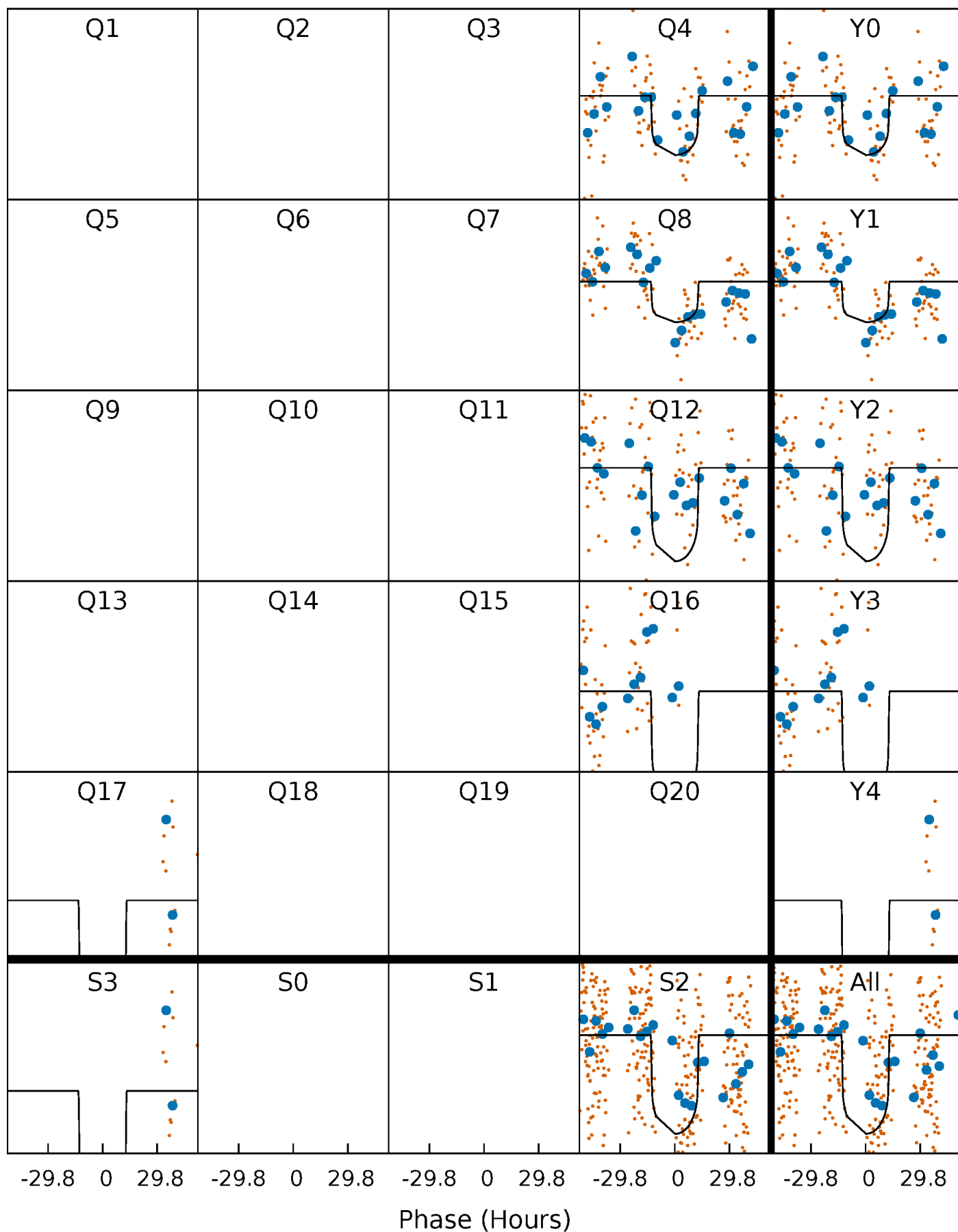
PDC Quarter-Phased Transit Curves

TCE 006386823-03 P=383.388007 Days $T_0=407.702888$ (BKJD)



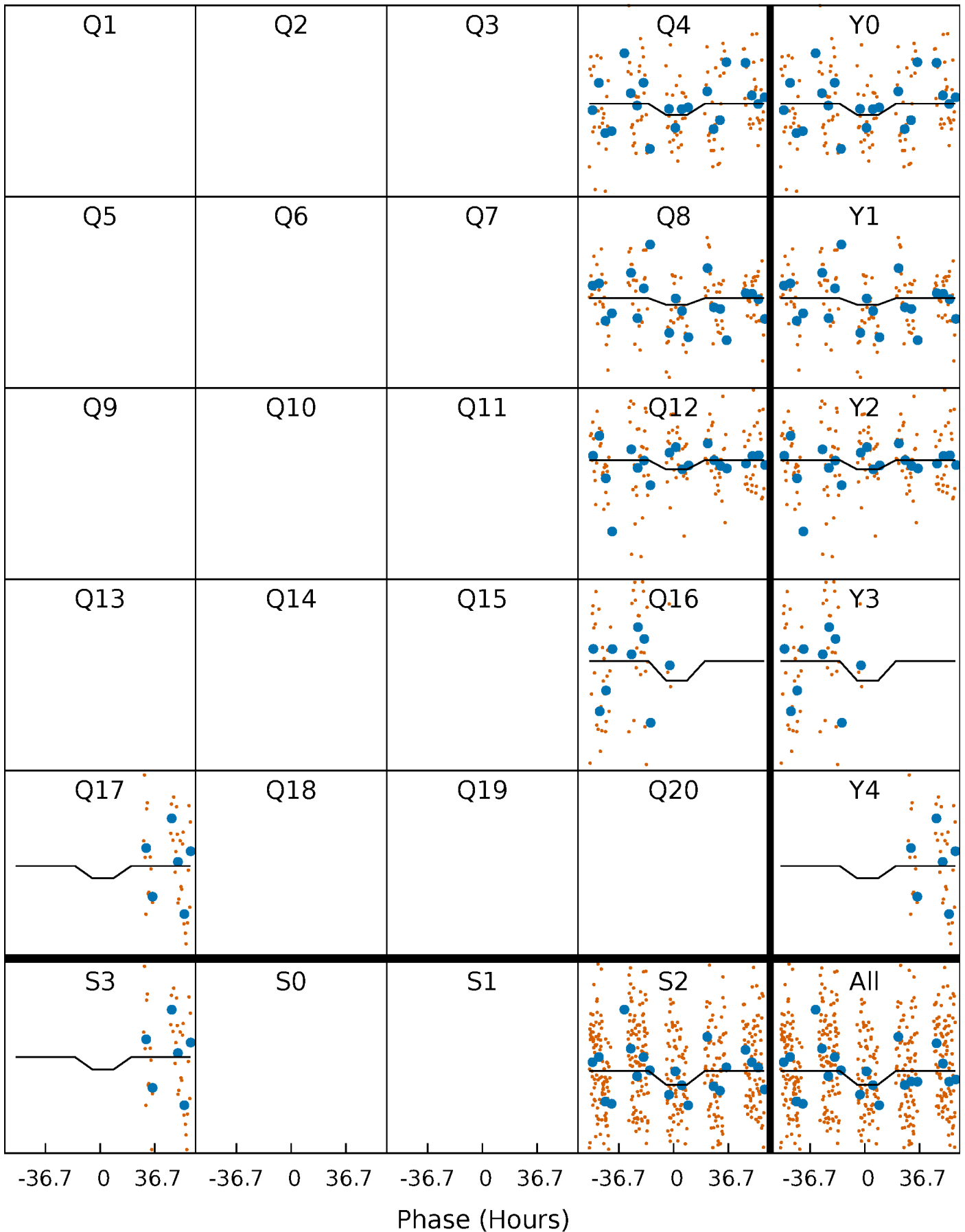
DV Quarter-Phased Transit Curves

TCE 006386823-03 $P=383.388007$ Days $T_0=407.702888$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

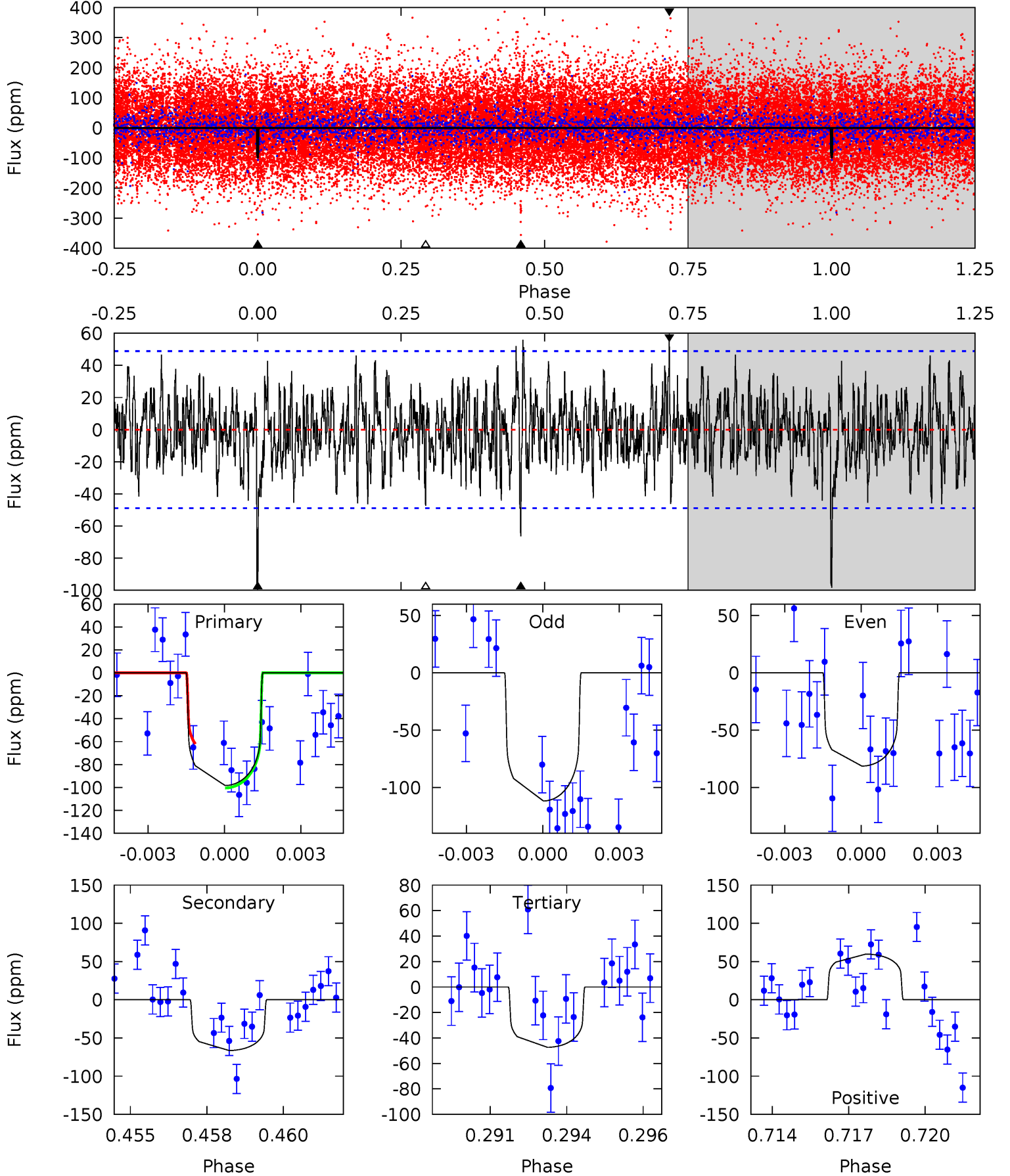
TCE 006386823-03 P=383.347208 Days $T_0=408.003828$ (BKJD)



DV Model-Shift Uniqueness Test

006386823-03, P = 383.388007 Days, E = 24.314881 Days

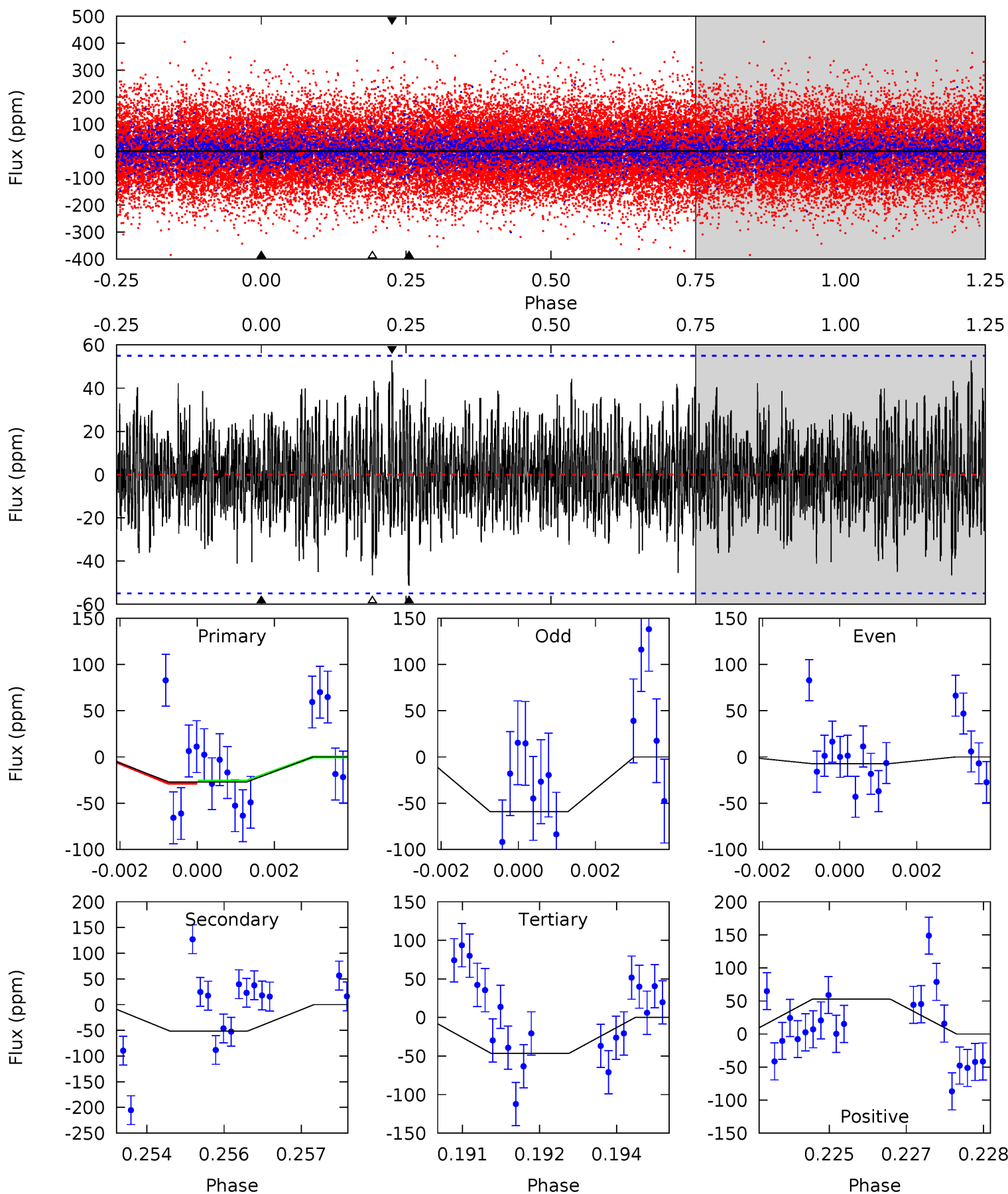
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.6	7.15	5.10	6.43	5.26	2.98	1.81	5.49	4.15	2.05	0.71	1.62	0.92	0.38	1.56



Alt Model-Shift Uniqueness Test

006386823-03, P = 383.347208 Days, E = 24.656620 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.64	5.03	4.55	5.16	5.38	3.17	1.38	-1.91	-2.52	0.47	-0.14	2.46	1.45	0.51	0.13



Stellar Parameters For KIC 006386823

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7217^{+226}_{-302}	$3.594^{+0.549}_{-0.061}$	$-0.200^{+0.250}_{-0.300}$	$3.599^{+0.332}_{-1.882}$	$1.857^{+0.164}_{-0.493}$	$0.056^{+0.378}_{-0.012}$
	+3%/-4%	+15%/-2%	+125%/-150%	+9%/-52%	+9%/-27%	+674%/-21%
Source	KIC0	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 006386823-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-66 ± 9	$4.18^{+1.05}_{-1.15}$	722^{+47}_{-93}	5936^{+602}_{-474}	3409^{+2796}_{-1233}
Alt.	-51 ± 10	$1.71^{+0.88}_{-0.68}$	724^{+48}_{-93}	9043^{+3791}_{-1840}	15230^{+26315}_{-8200}

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

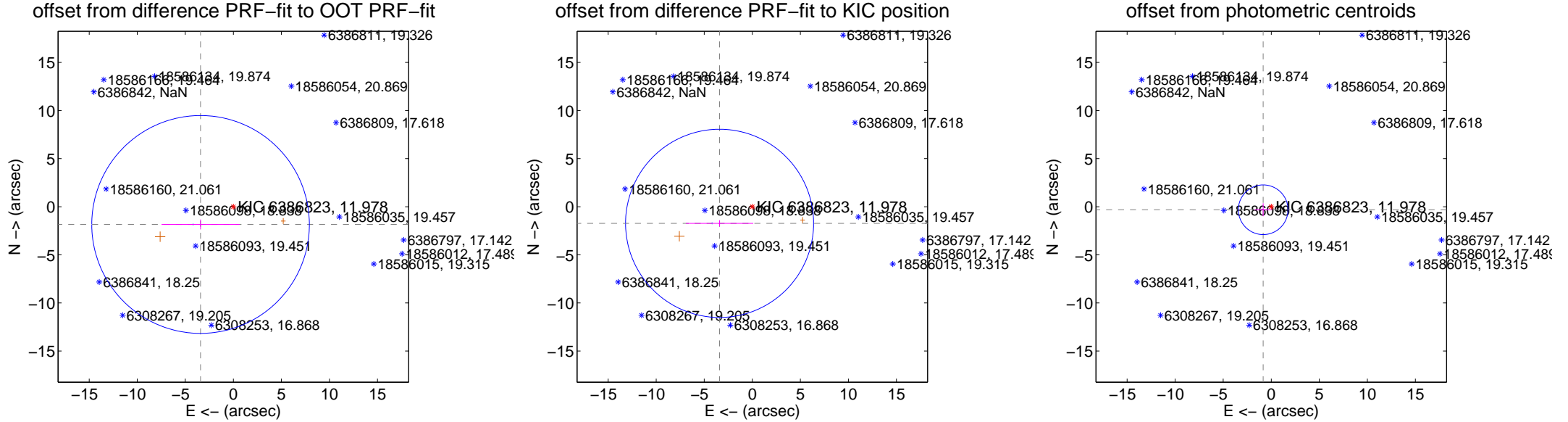
DV Centroid Data

Supplemental centroid analysis for 006386823-03. **Kepler magnitude: 11.98.** Transit SNR 7.78

There are 1 quarters with good PRF difference image offsets

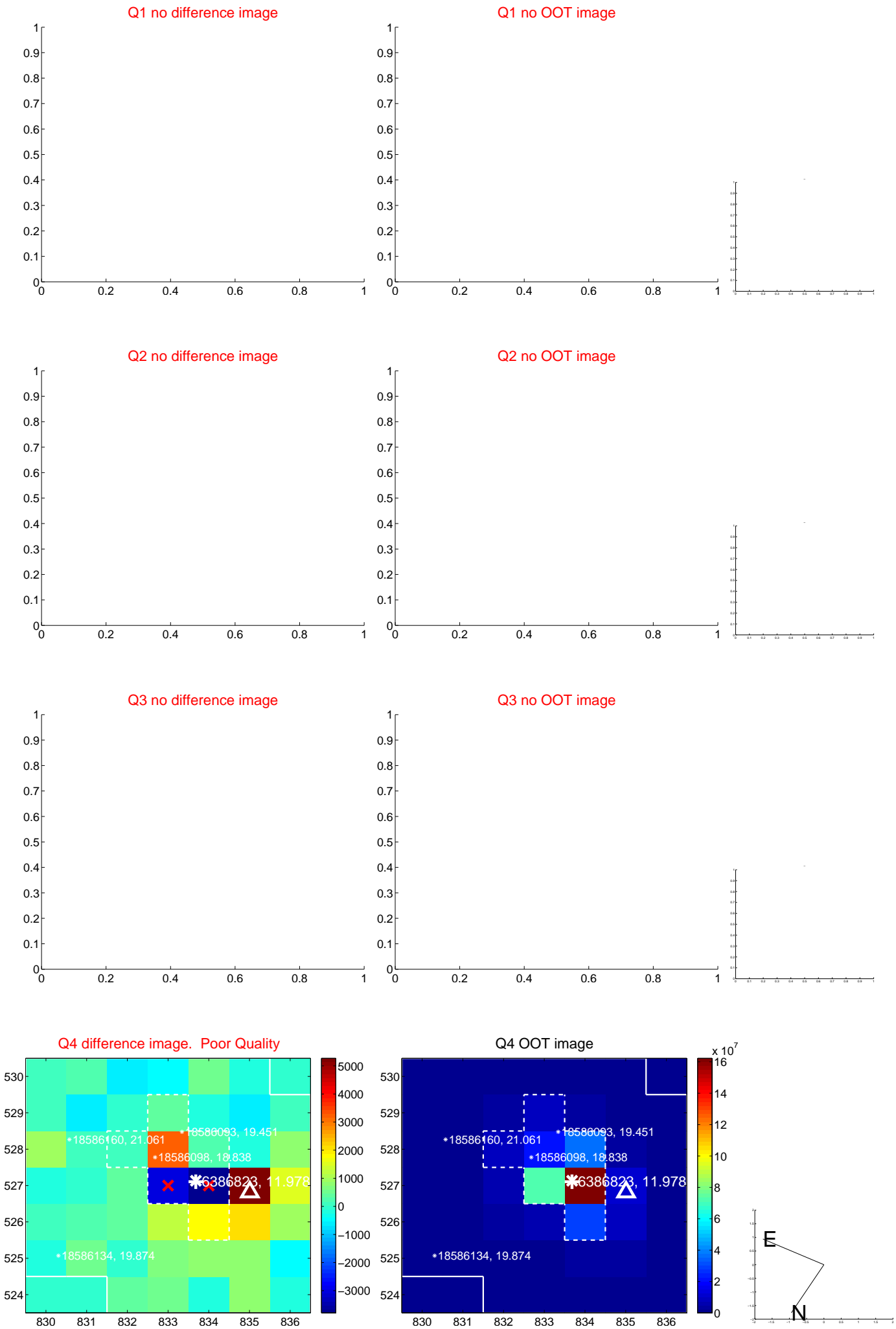
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.879 ± 3.775	1.03	3.412 ± 4.064	-1.844 ± 0.520
PRF-fit source offset from KIC position	3.820 ± 3.262	1.17	3.406 ± 3.507	-1.730 ± 0.323
photometric centroid source offset	0.90 ± 0.86	1.04	0.84 ± 0.88	-0.31 ± 0.68

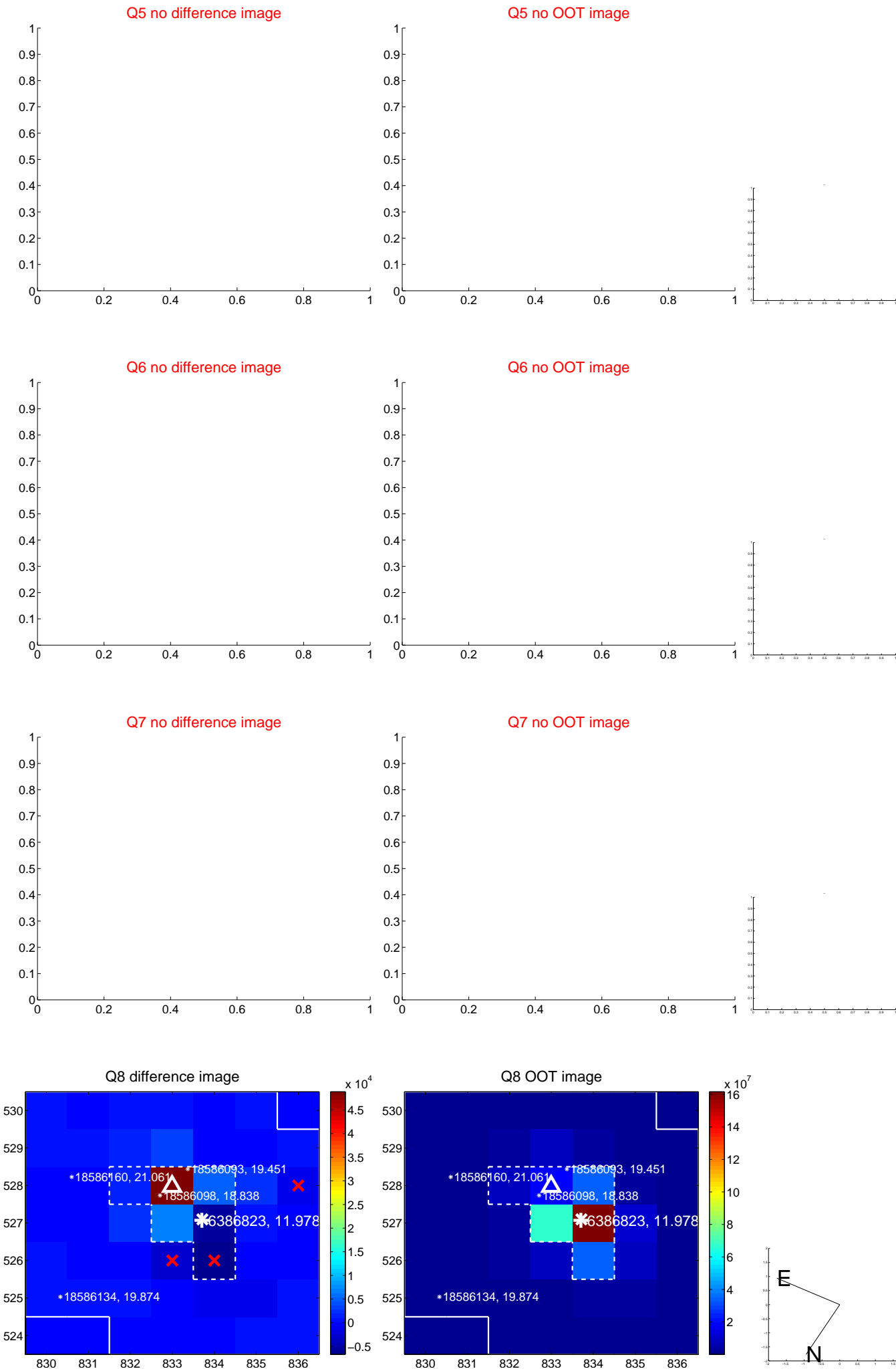


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

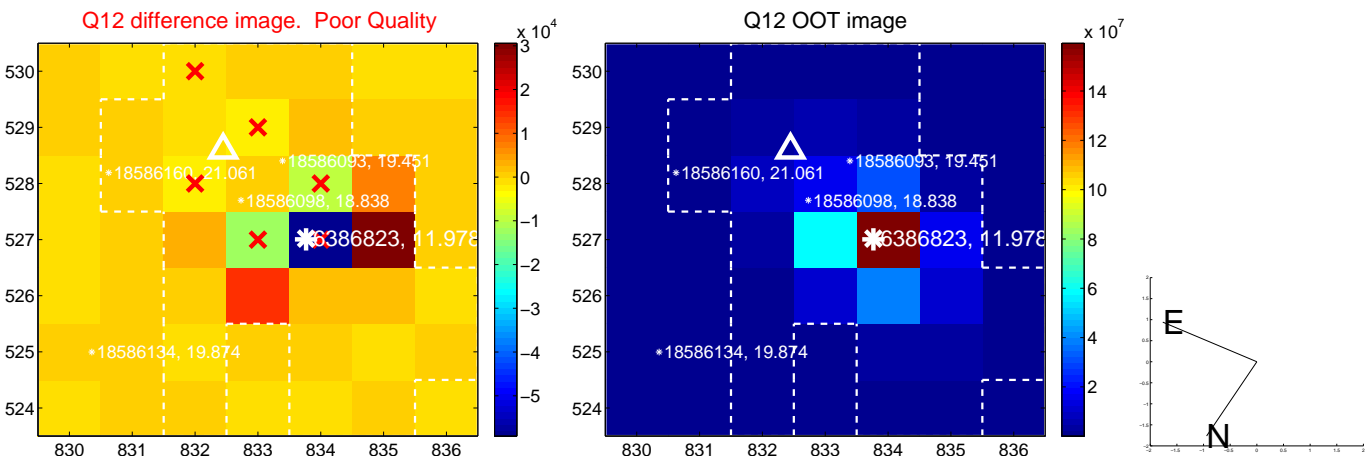
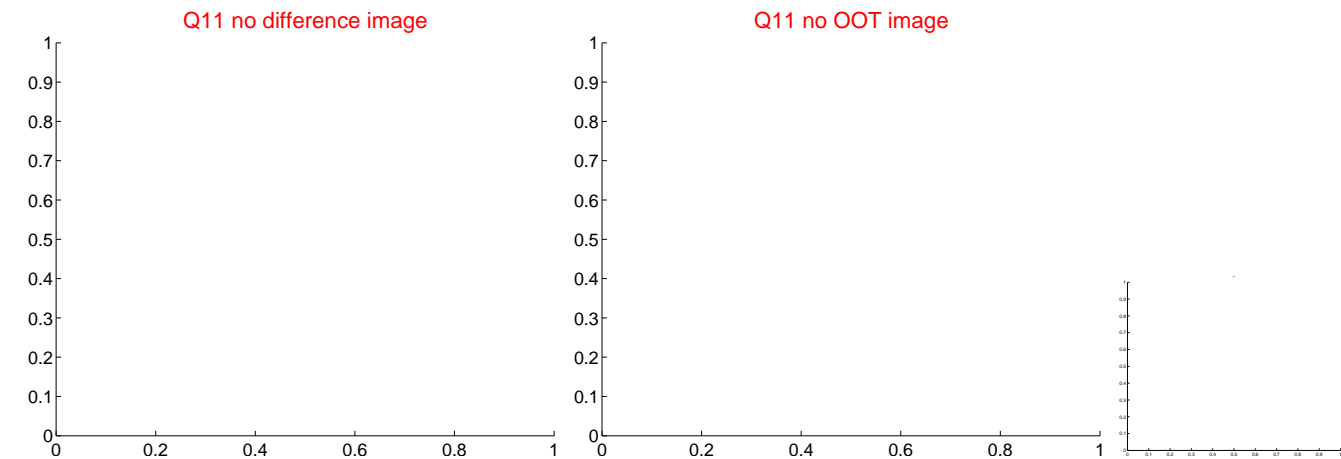
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



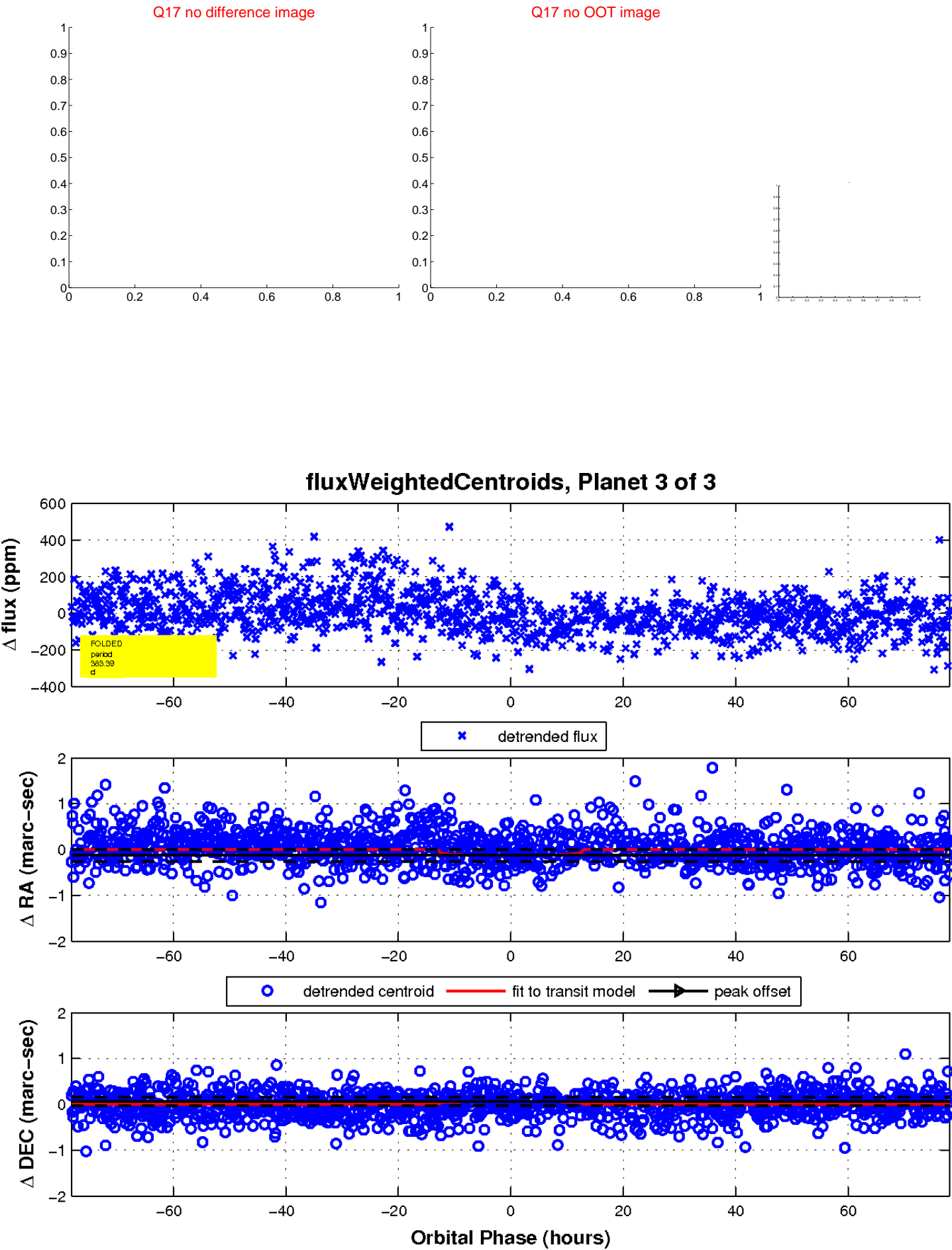
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

