

KIC 006065651

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})
006065651-01	OBS	No	0.821329	131.690161	44.0	5.077	10.0	9.4	1.88	7550	1.27	24730.13
006065651-02	OBS	No	91.375464	134.533113	1083.6	2.079	8.9	9.8	1.88	7550	10.90	46.22
006065651-03	OBS	No	27.837571	138.728483	665.3	2.154	8.0	11.0	1.88	7550	5.83	225.46

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006065651-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
006065651-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
006065651-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

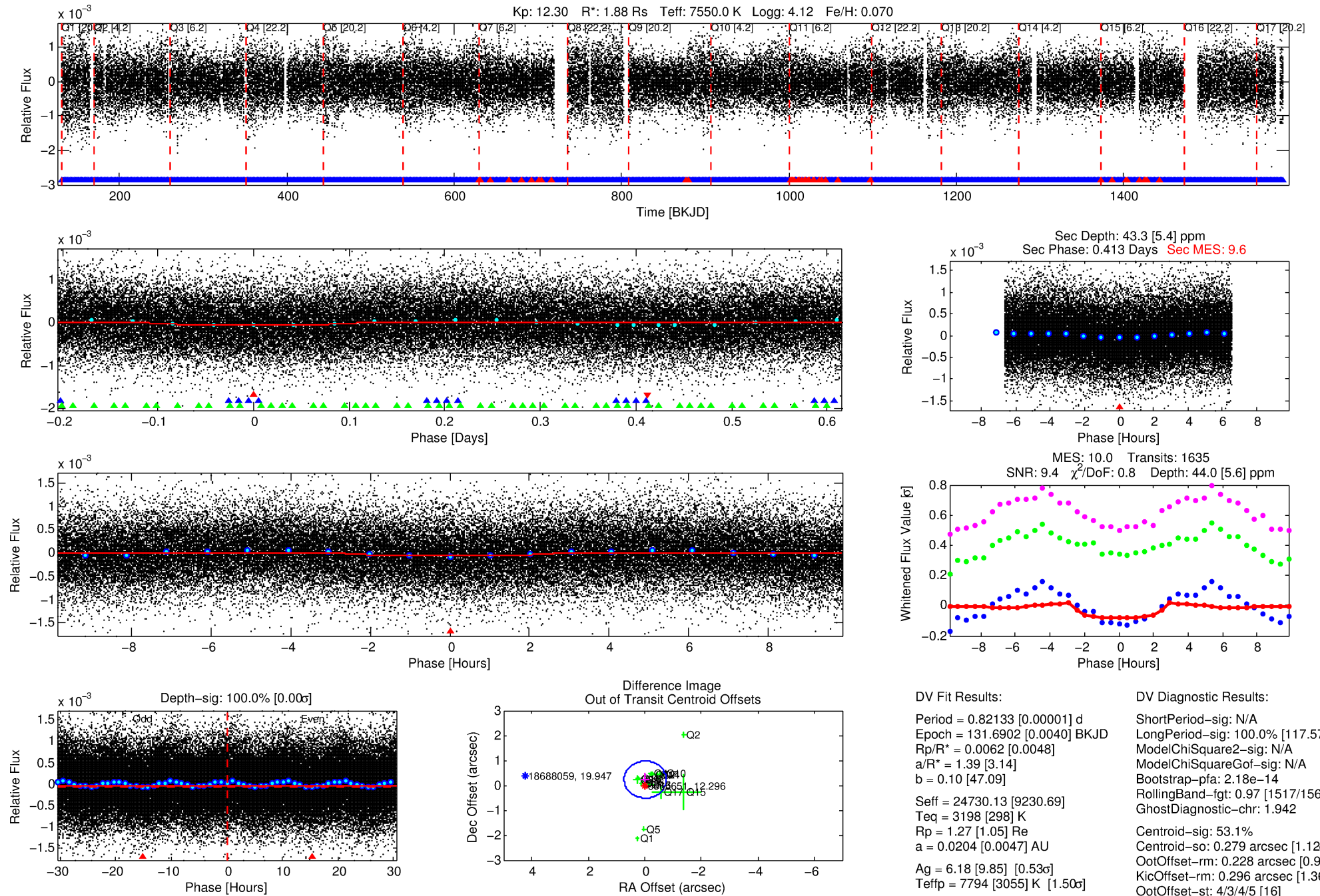
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006065651-01

No Significant Match Found

DV One-Page Summary

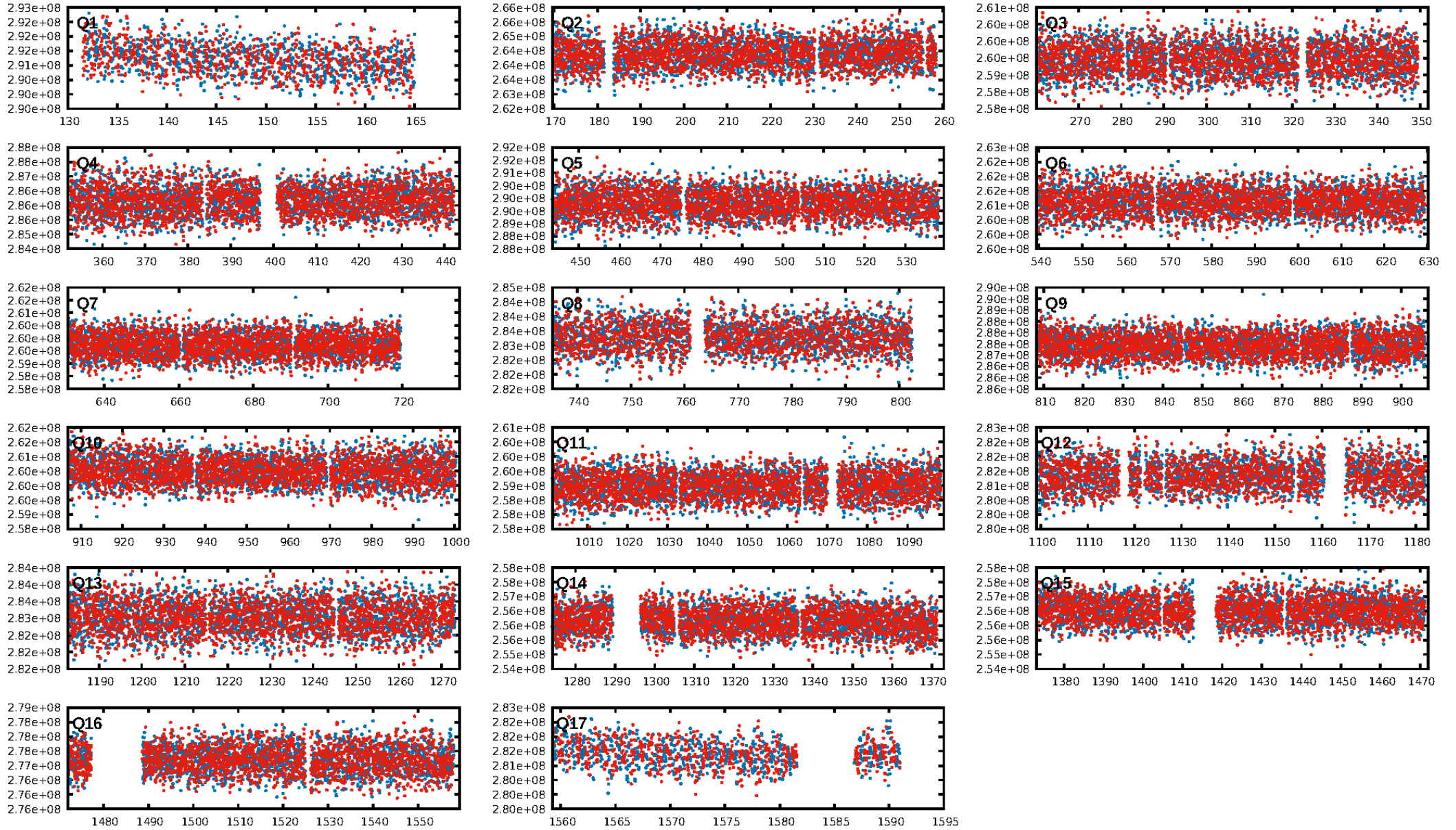
KIC: 6065651 Candidate: 1 of 3 Period: 0.821 d



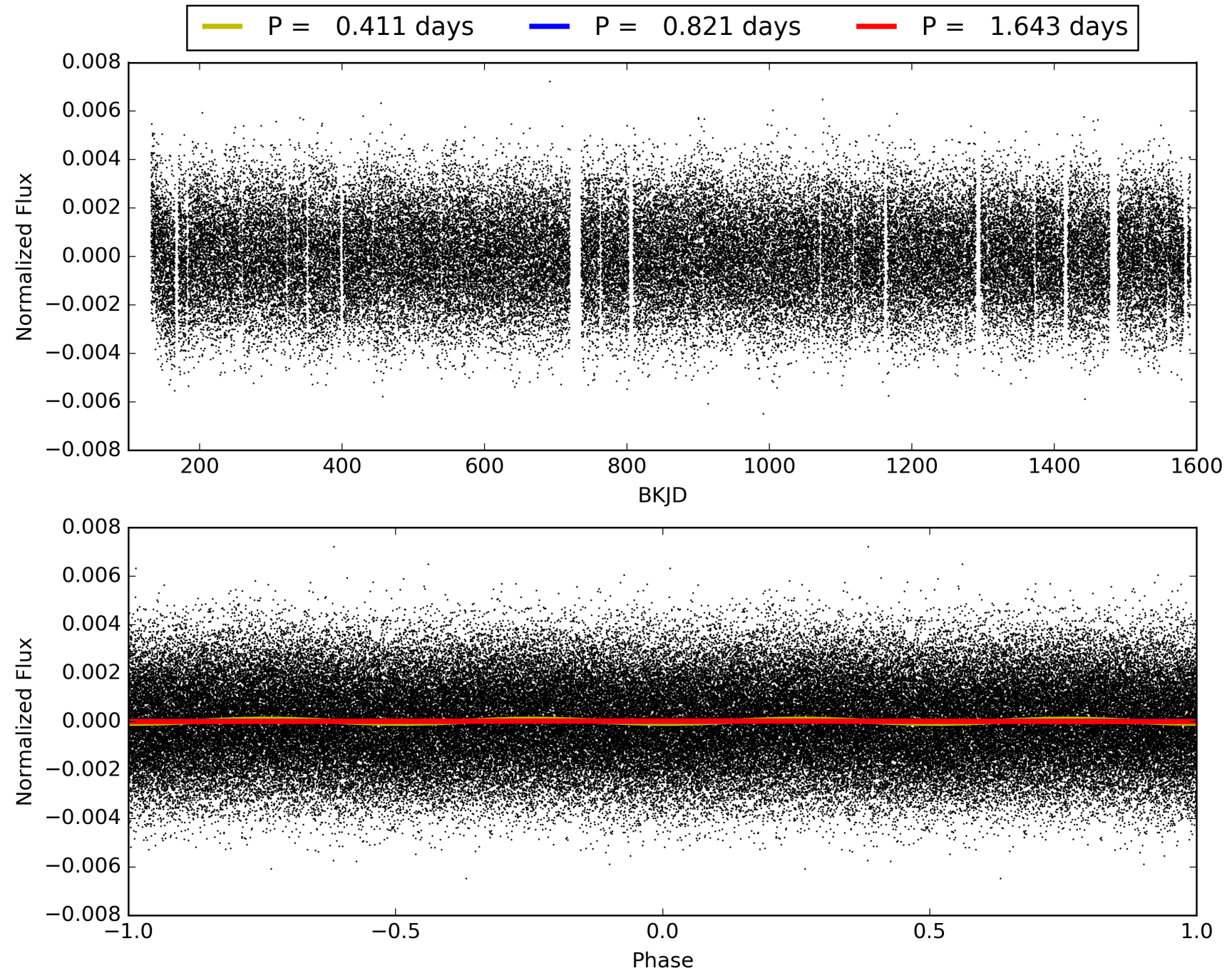
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 09:47:45 Z

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

TCE 006065651-01, PDC Light Curves

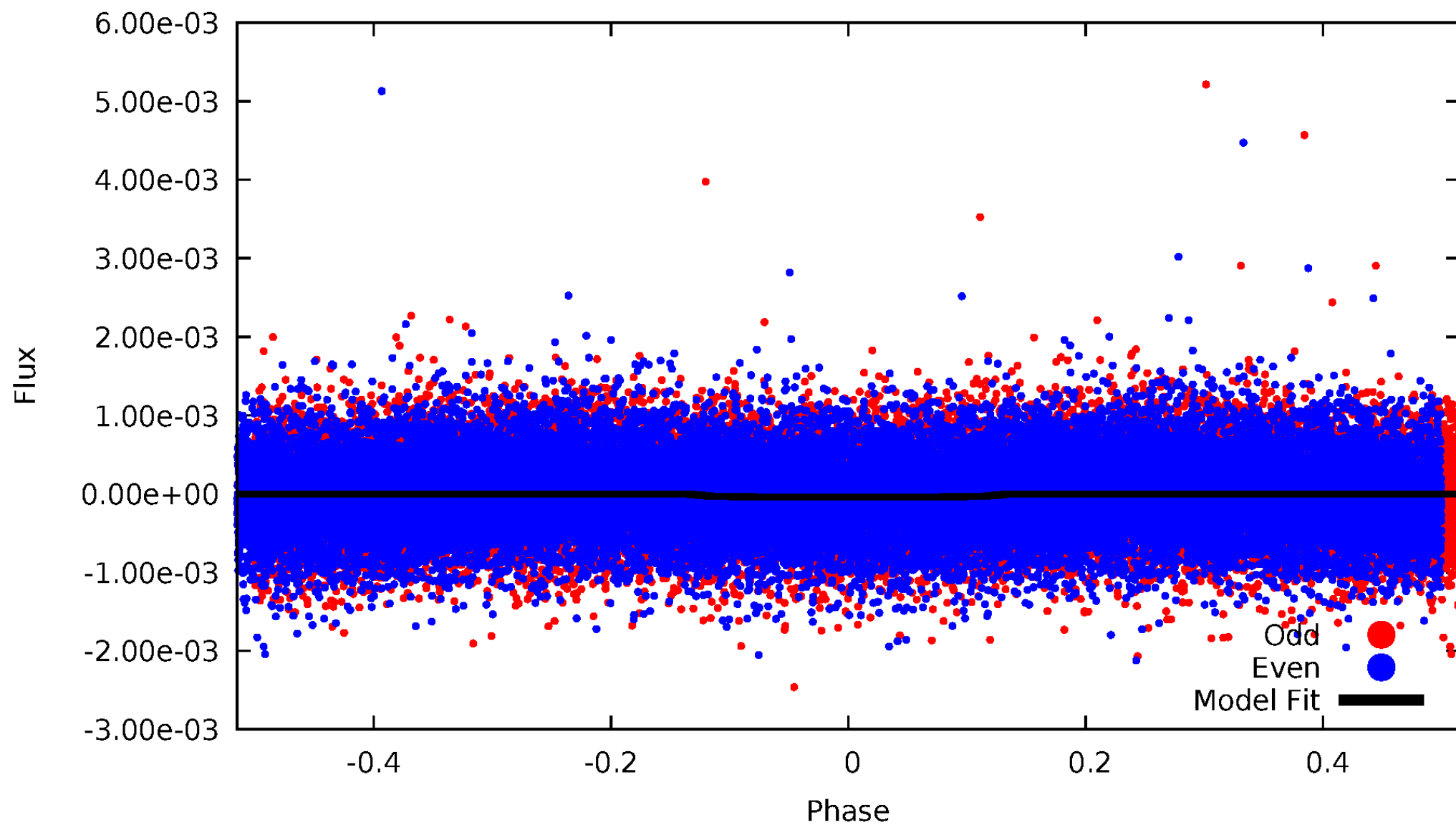


TCE 006065651-01



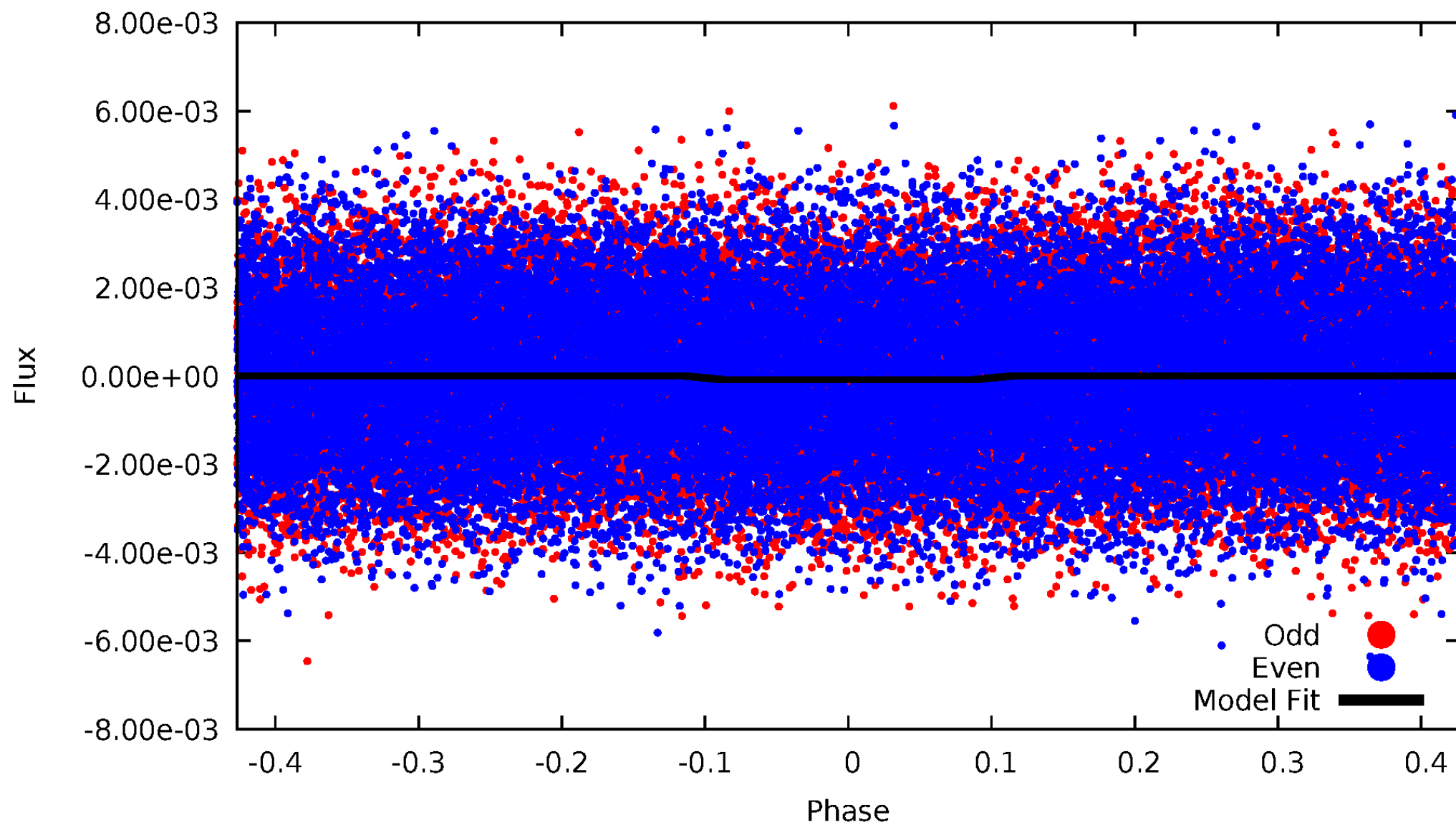
DV Odd/Even

TCE 006065651-01

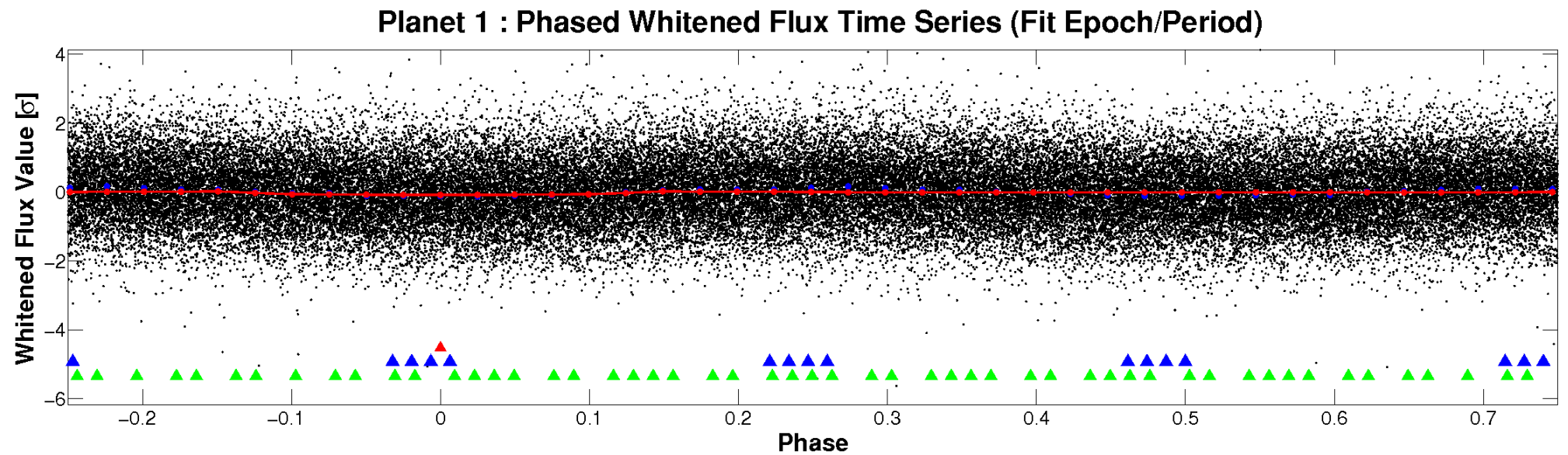
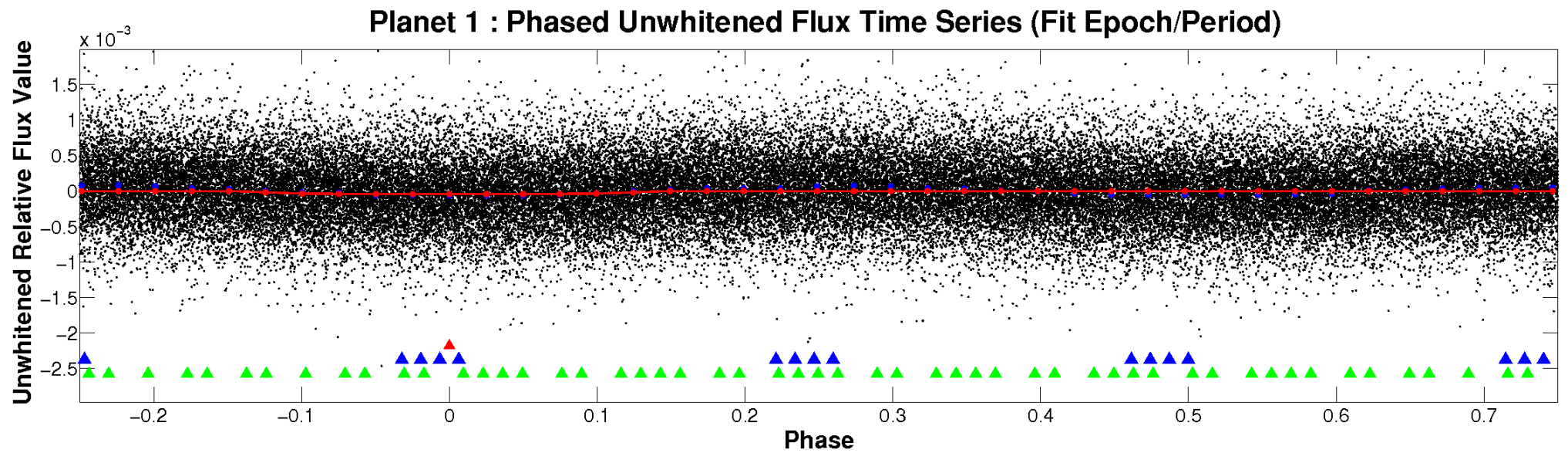


ALT Odd/Even

TCE 006065651-01

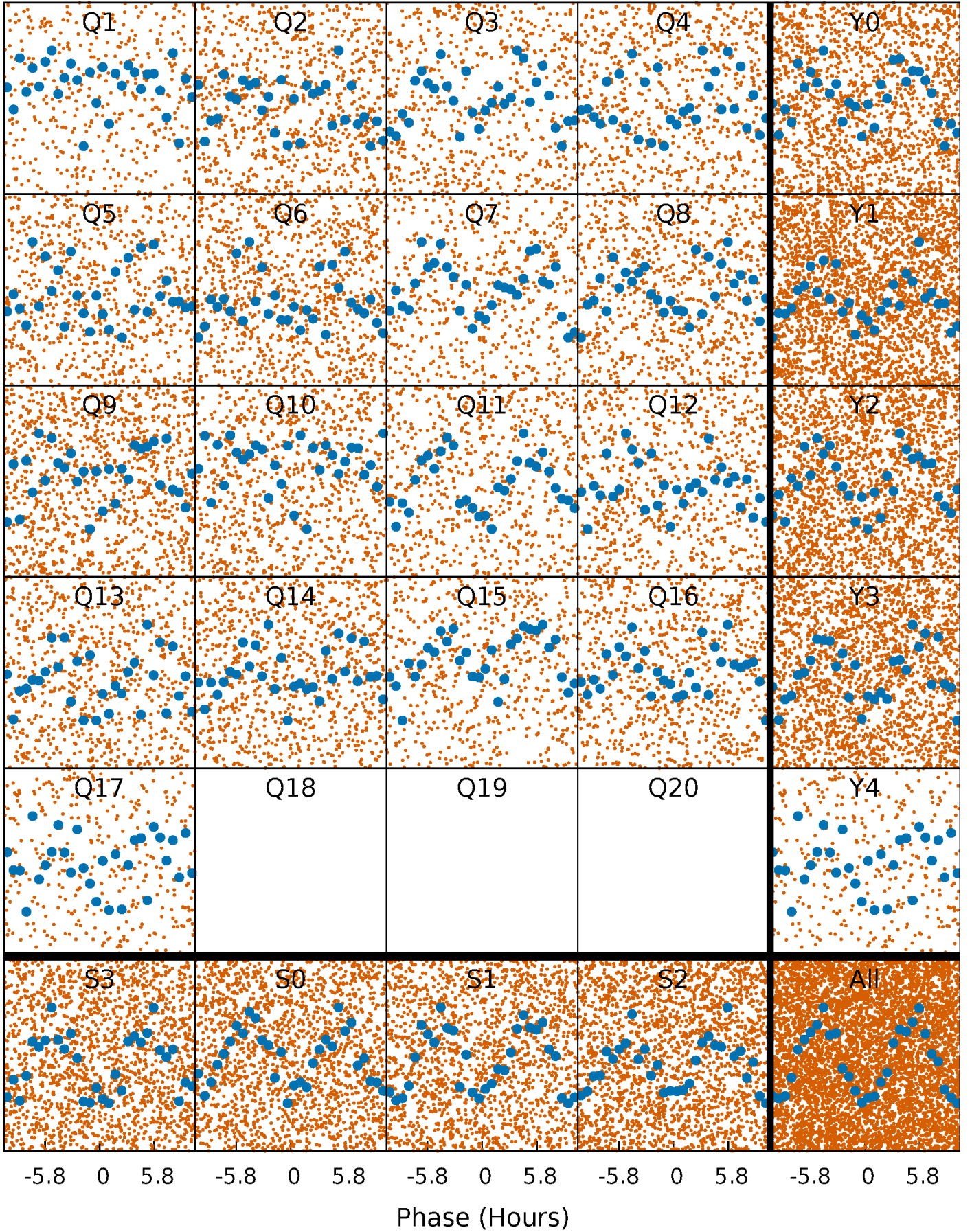


Non-Whitened Vs. Whitened Light Curve



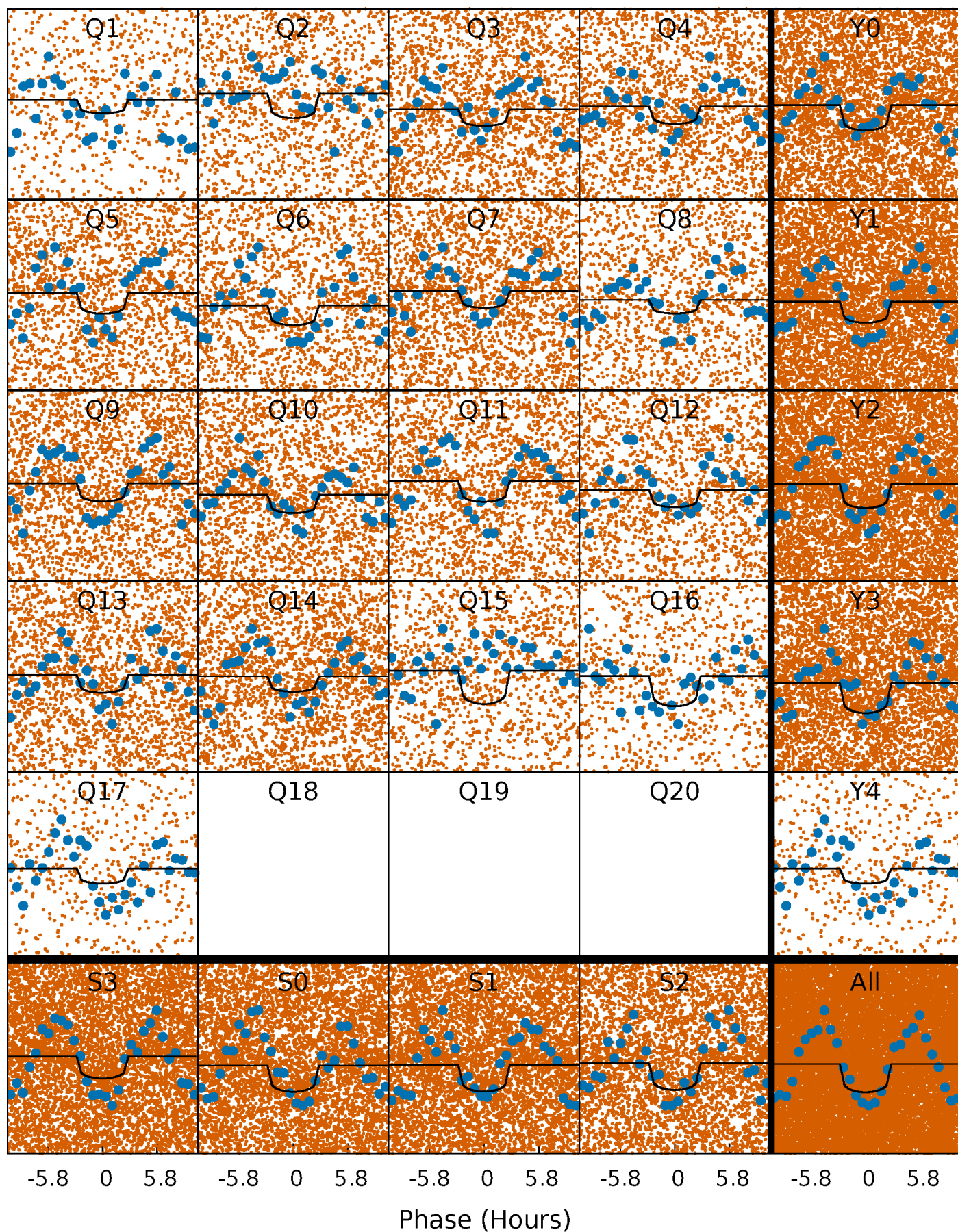
PDC Quarter-Phased Transit Curves

TCE 006065651-01 P= 0.821329 Days $T_0=131.690161$ (BKJD)



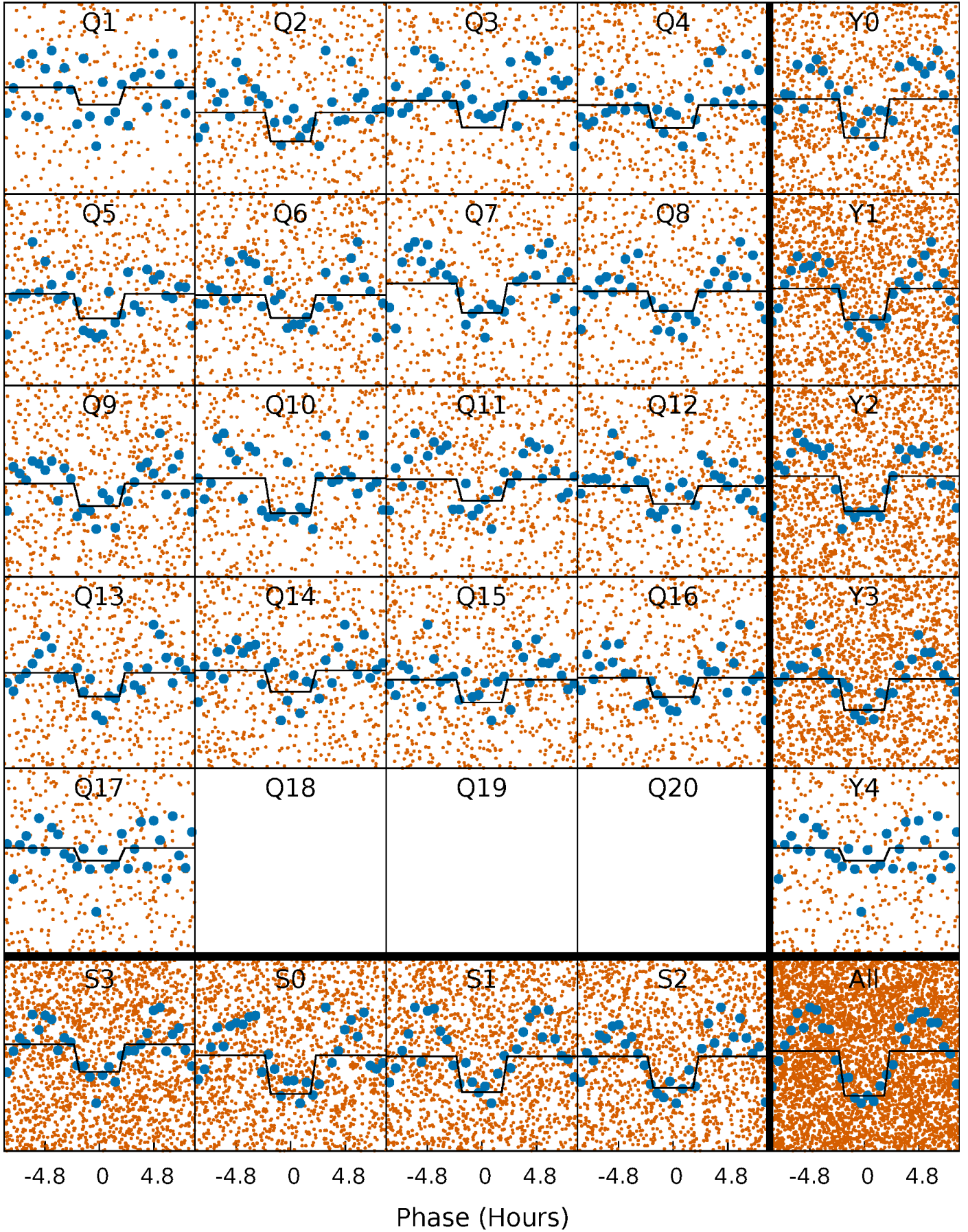
DV Quarter-Phased Transit Curves

TCE 006065651-01 P= 0.821329 Days $T_0=131.690161$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

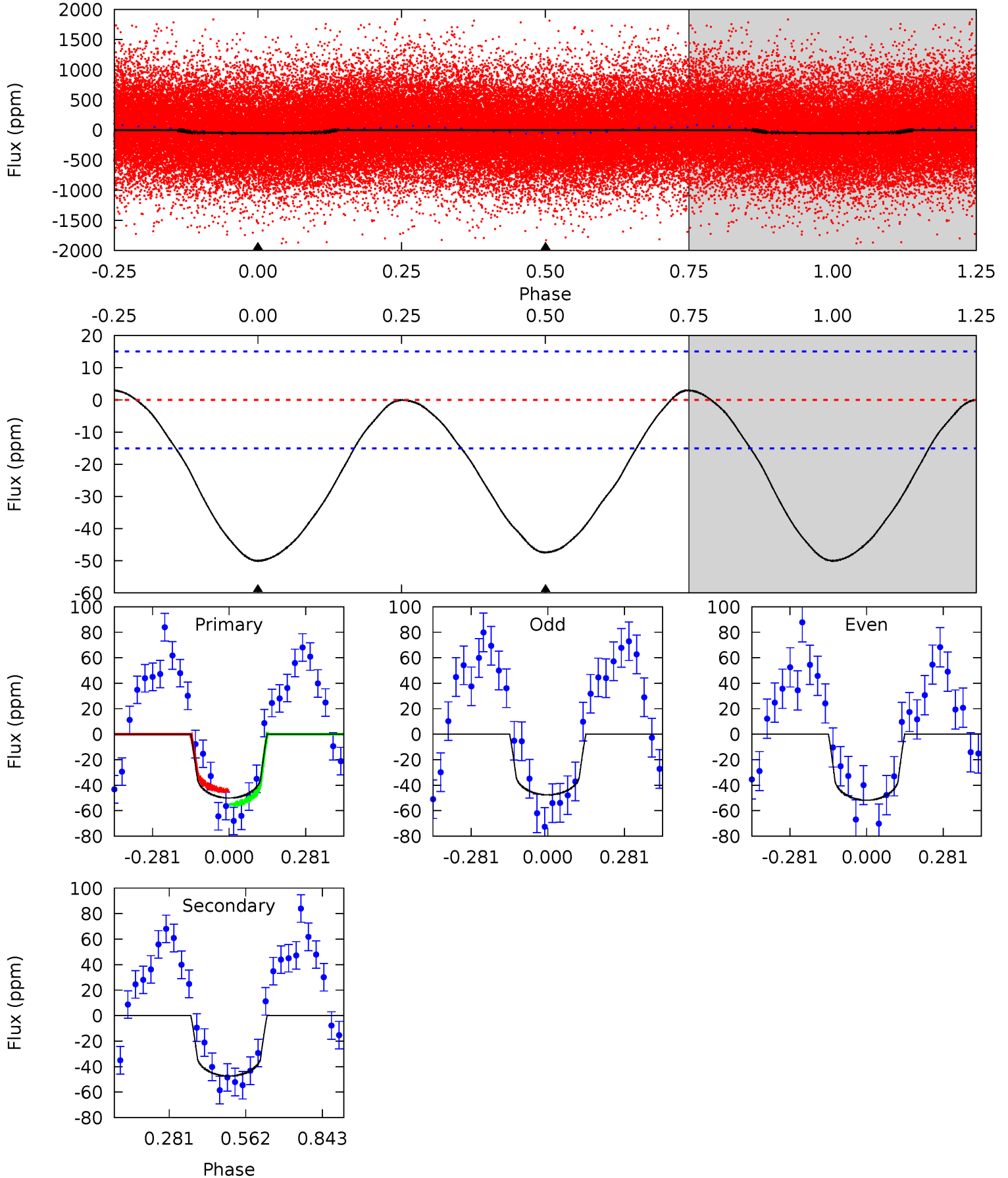
TCE 006065651-01 P= 0.821364 Days $T_0=131.661473$ (BKJD)



DV Model-Shift Uniqueness Test

006065651-01, P = 0.821329 Days, E = 130.868832 Days

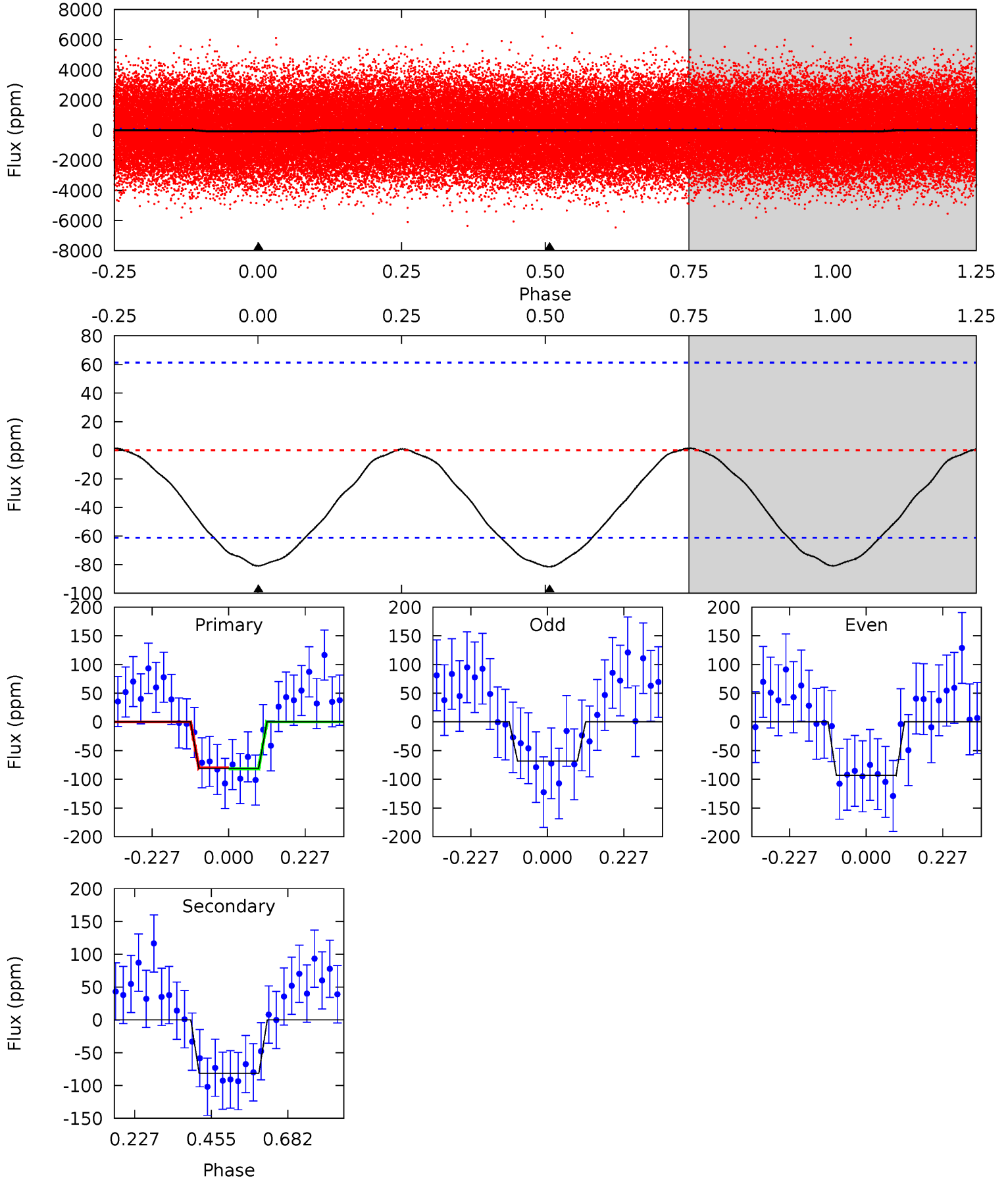
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.4	13.7	0	0	4.34	1.08	0.45	14.4	14.4	13.7	13.7	0.61	1.05	0.06	1.58



Alt Model-Shift Uniqueness Test

006065651-01, P = 0.821364 Days, E = 130.840109 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.80	5.84	0	0	4.39	1.21	0.09	5.80	5.80	5.84	5.84	0.89	1.15	0.02	0.06



Stellar Parameters For KIC 006065651

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7550^{+211}_{-316}	$4.115^{+0.120}_{-0.180}$	$0.070^{+0.200}_{-0.350}$	$1.883^{+0.528}_{-0.352}$	$1.685^{+0.204}_{-0.272}$	$0.355^{+0.209}_{-0.179}$
	+3%/-4%	+3%/-4%	+286%/-500%	+28%/-19%	+12%/-16%	+59%/-50%
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 006065651-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-47 ± 3	$1.43^{+0.99}_{-0.81}$	4491^{+303}_{-308}	7231^{+6299}_{-1814}	$5.097^{+22.935}_{-3.282}$
Alt.	-81 ± 14	$1.86^{+1.08}_{-0.91}$	4484^{+333}_{-291}	7275^{+4826}_{-1460}	$5.123^{+16.121}_{-2.973}$

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

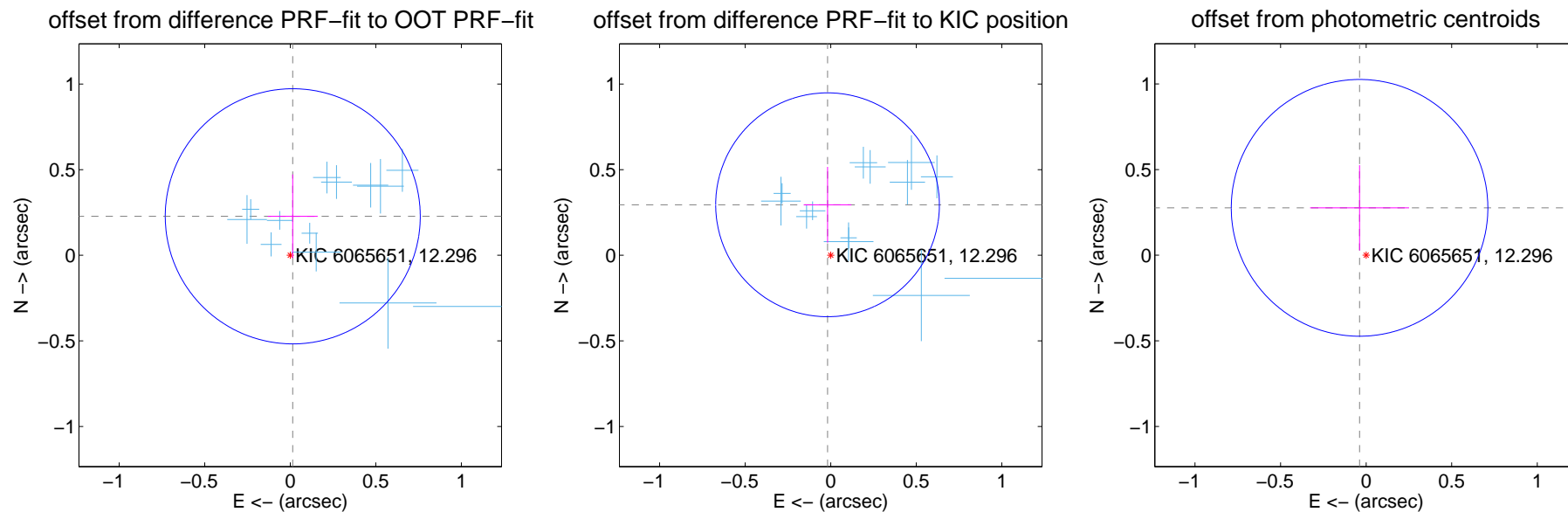
DV Centroid Data

Supplemental centroid analysis for 006065651-01. Kepler magnitude: 12.30. Transit SNR 9.43

There are 16 quarters with good PRF difference image offsets

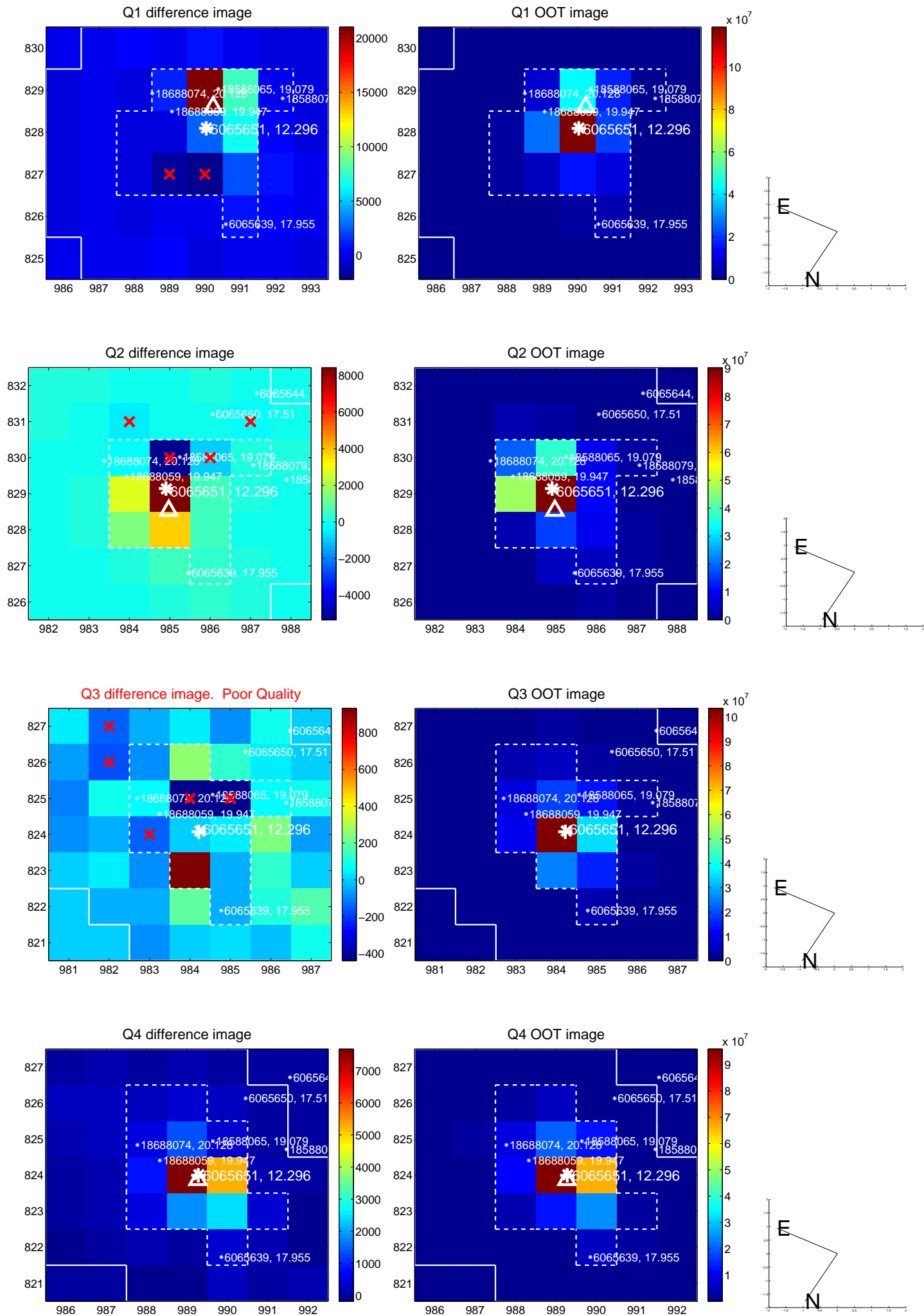
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.228 ± 0.248	0.92	-0.015 ± 0.146	0.228 ± 0.244
PRF-fit source offset from KIC position	0.296 ± 0.218	1.36	0.019 ± 0.139	0.295 ± 0.221
photometric centroid source offset	0.28 ± 0.25	1.12	0.04 ± 0.29	0.28 ± 0.25

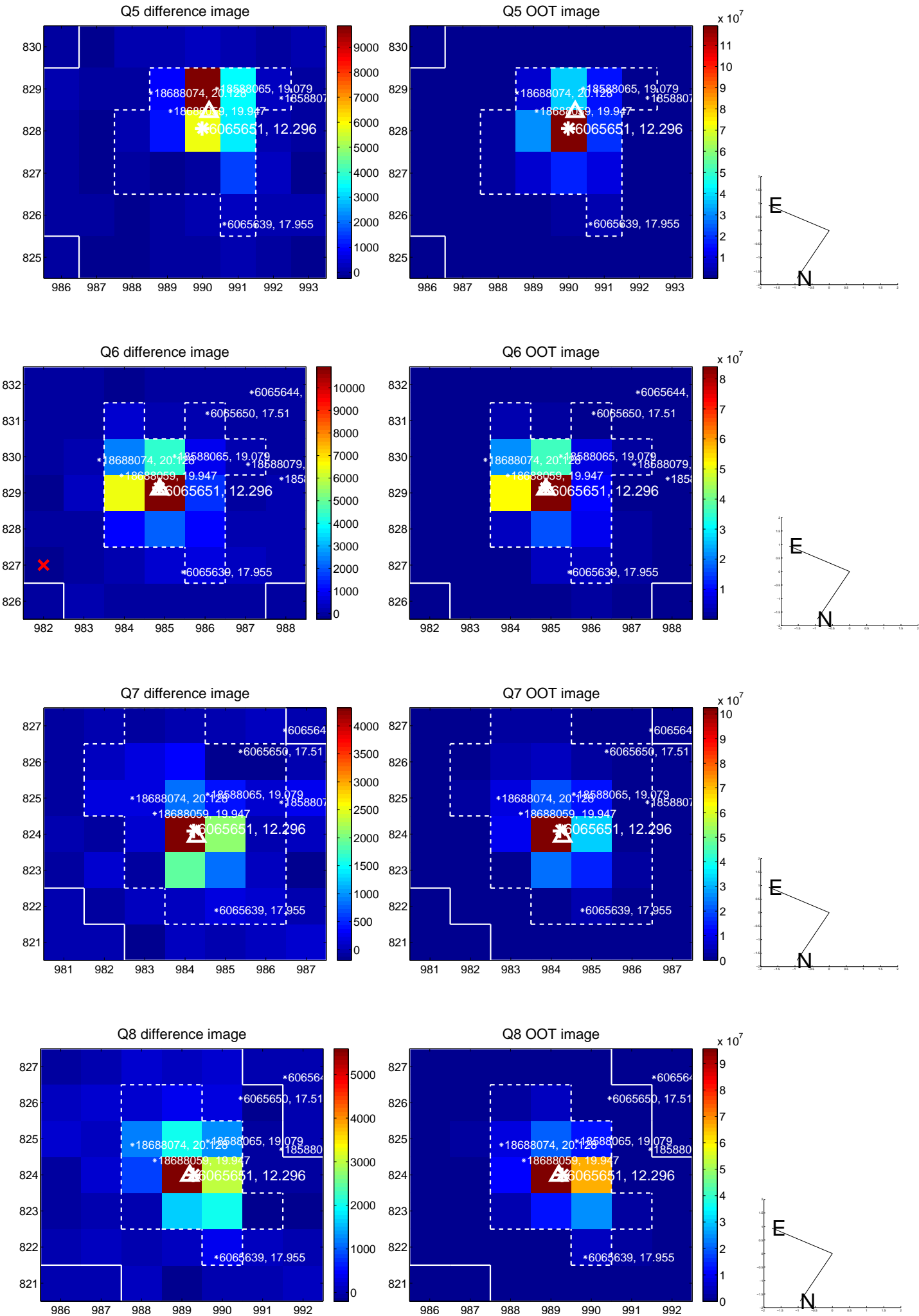


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

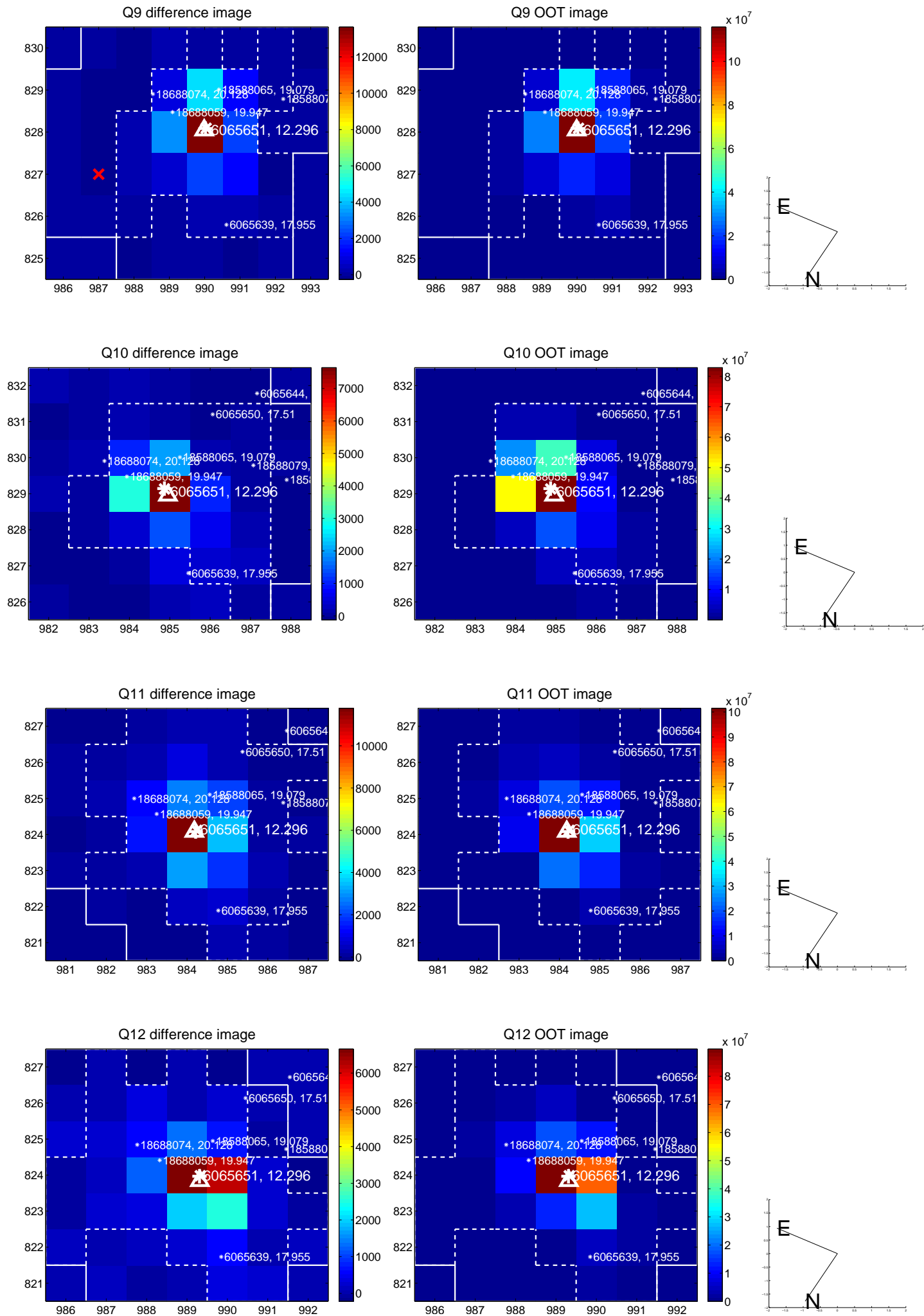
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



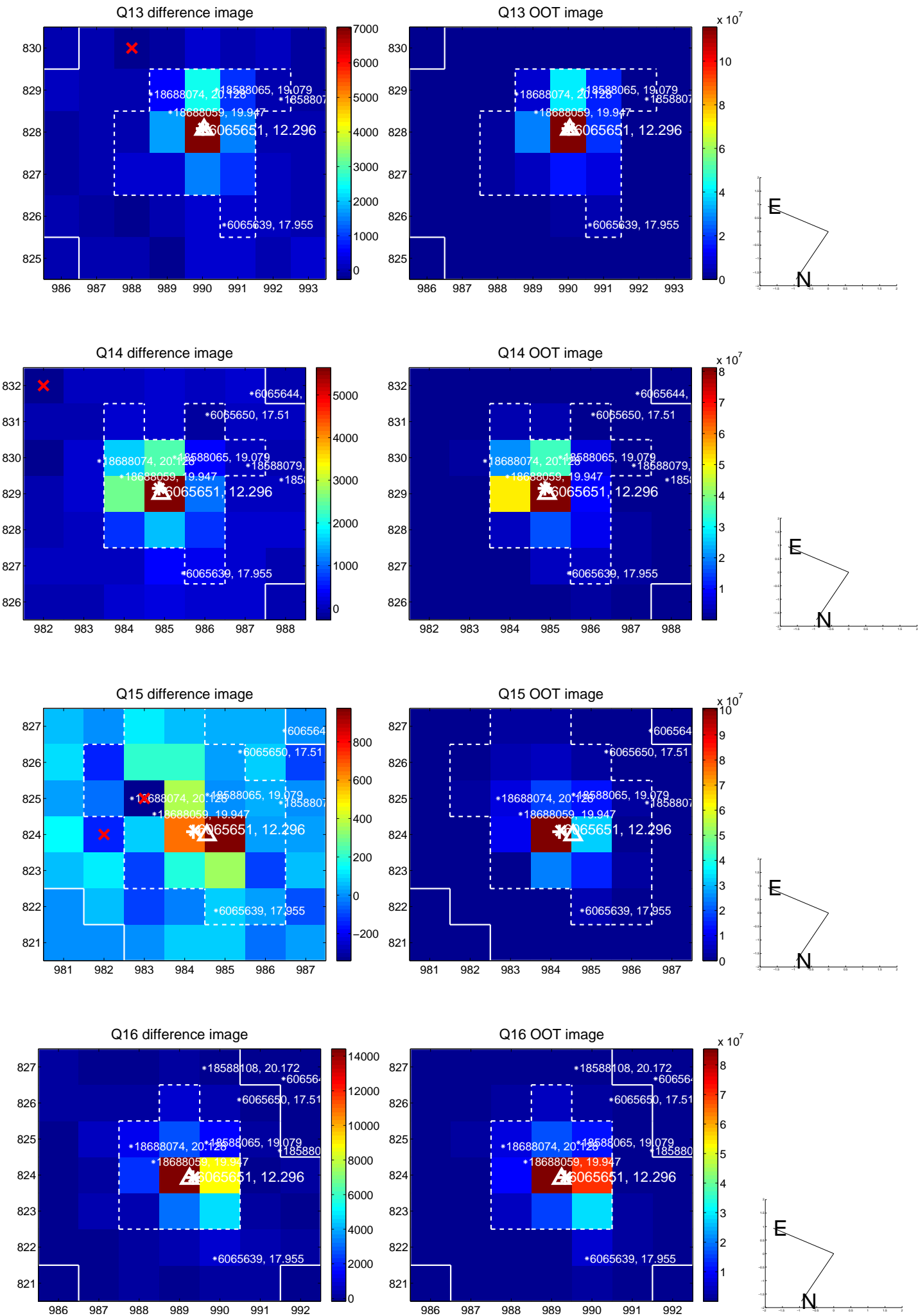
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



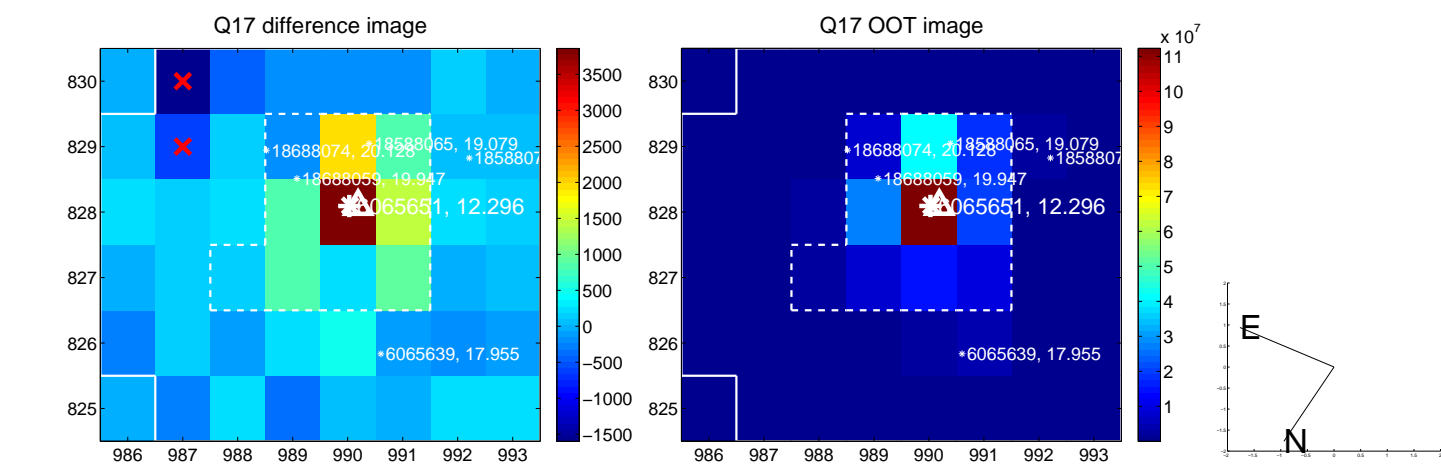
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



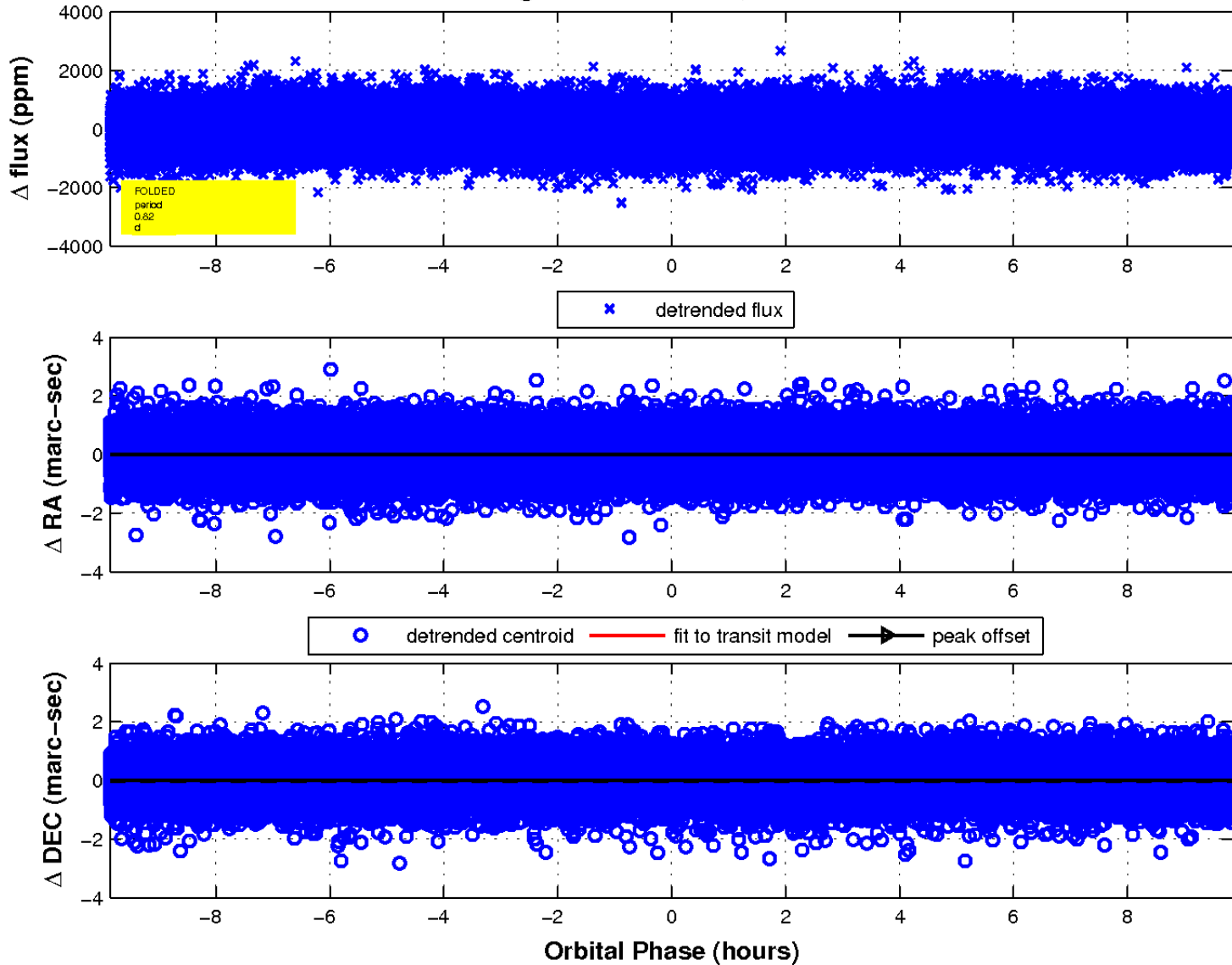
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



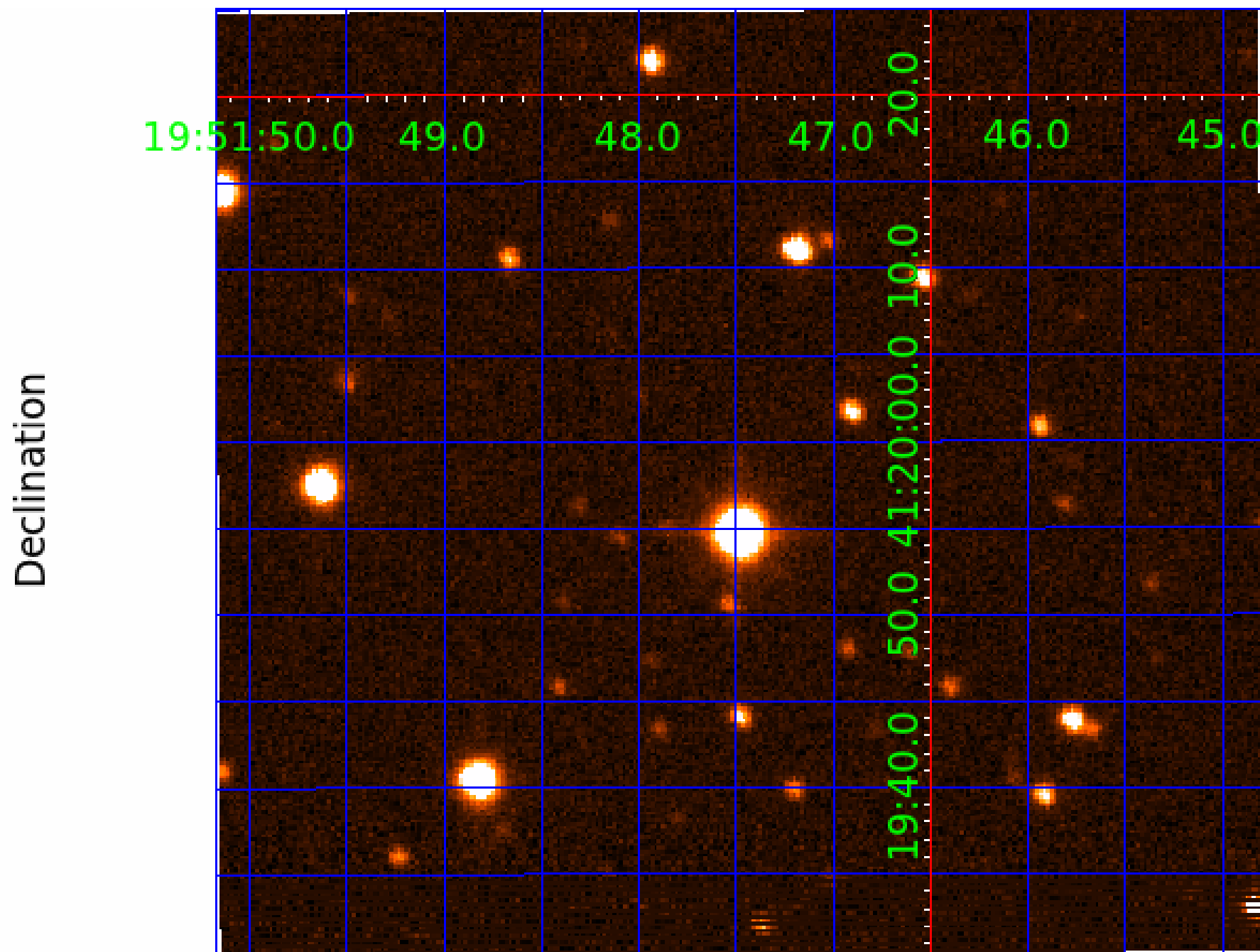
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 3



UKIRT Image



KIC 006065651

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})
006065651-01	OBS	No	0.821329	131.690161	44.0	5.077	10.0	9.4	1.88	7550	1.27	24730.13
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006065651-03	OBS	No	27.837571	138.728483	665.3	2.154	8.0	11.0	1.88	7550	5.83	225.46

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006065651-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
006065651-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
006065651-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

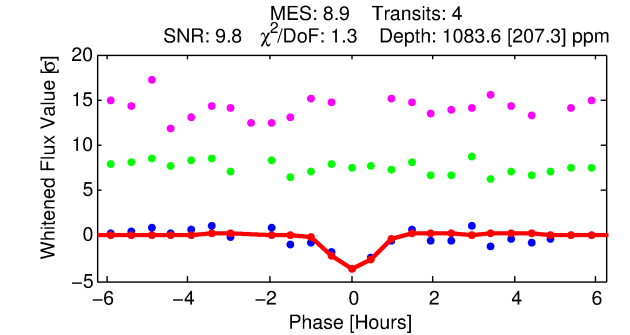
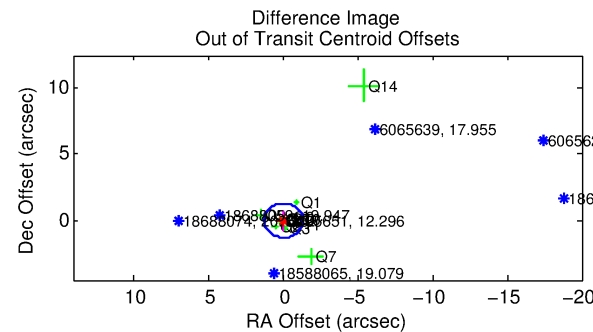
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

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

Ephemeris Match Information For 006065651-02

No Significant Match Found

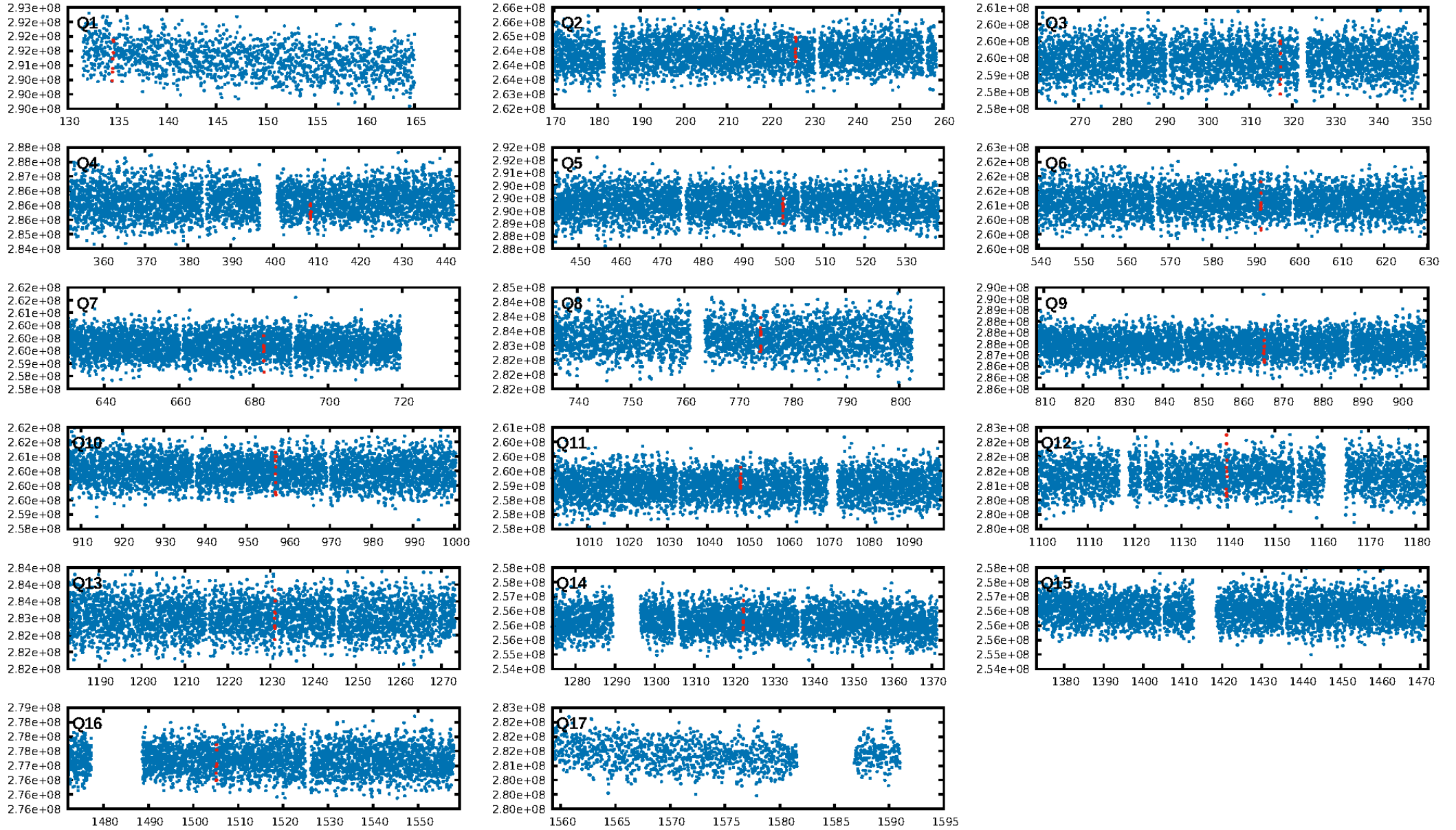
KIC: 6065651 Candidate: 2 of 3 Period: 91.375 d



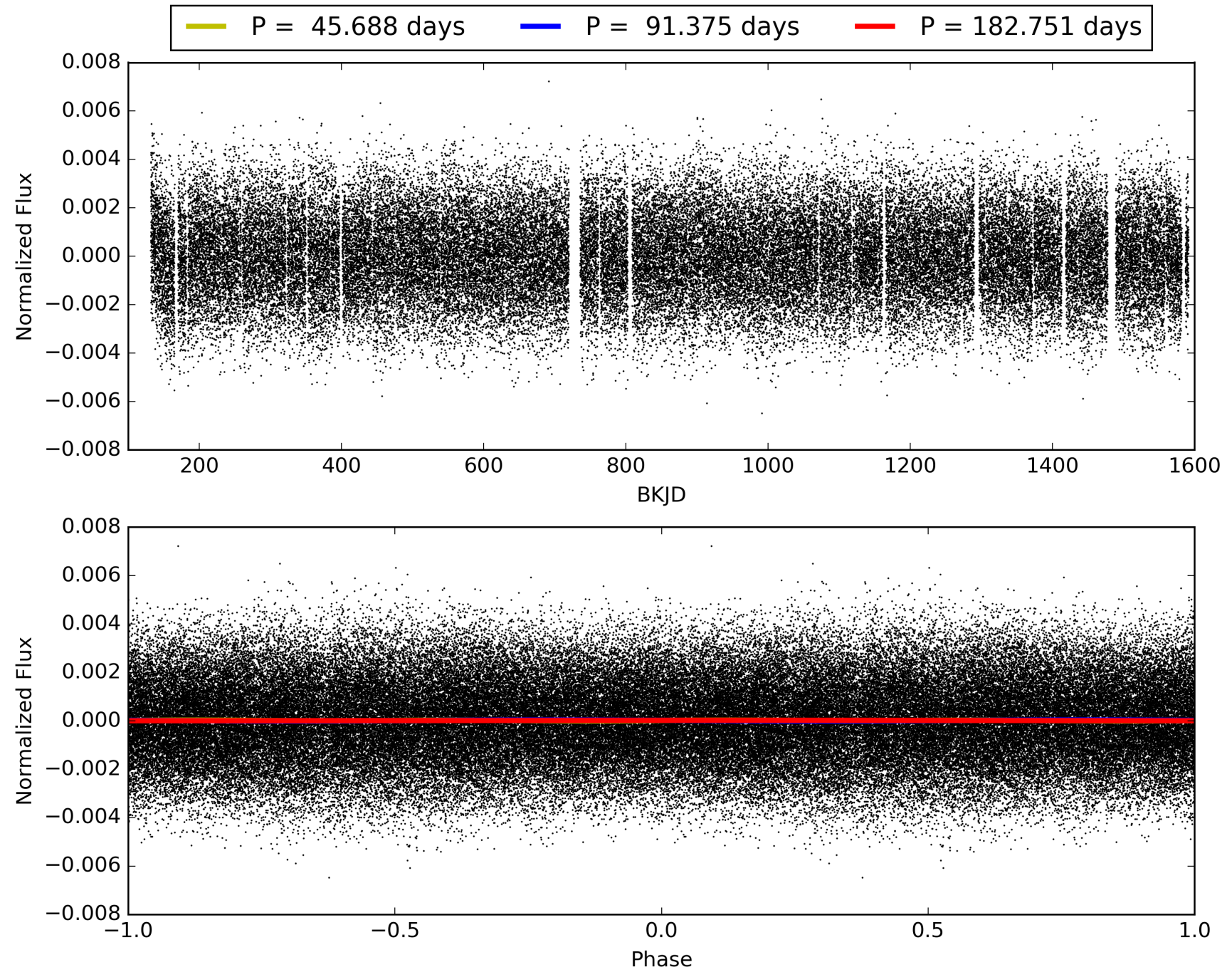
Centroid-sig: 86.3%
Centroid-so: 0.180 arcsec [0.90σ]
OotOffset-rm: 0.043 arcsec [0.10σ]
KicOffset-rm: 0.061 arcsec [0.08σ]
OotOffset-st: 4/3/4/3 [14]
KicOffset-st: 4/3/4/3 [14]
DiffImageQuality-fgm: 0.50 [7/14]
DiffImageOverlap-fno: 0.27 [4/15]

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

TCE 006065651-02, PDC Light Curves

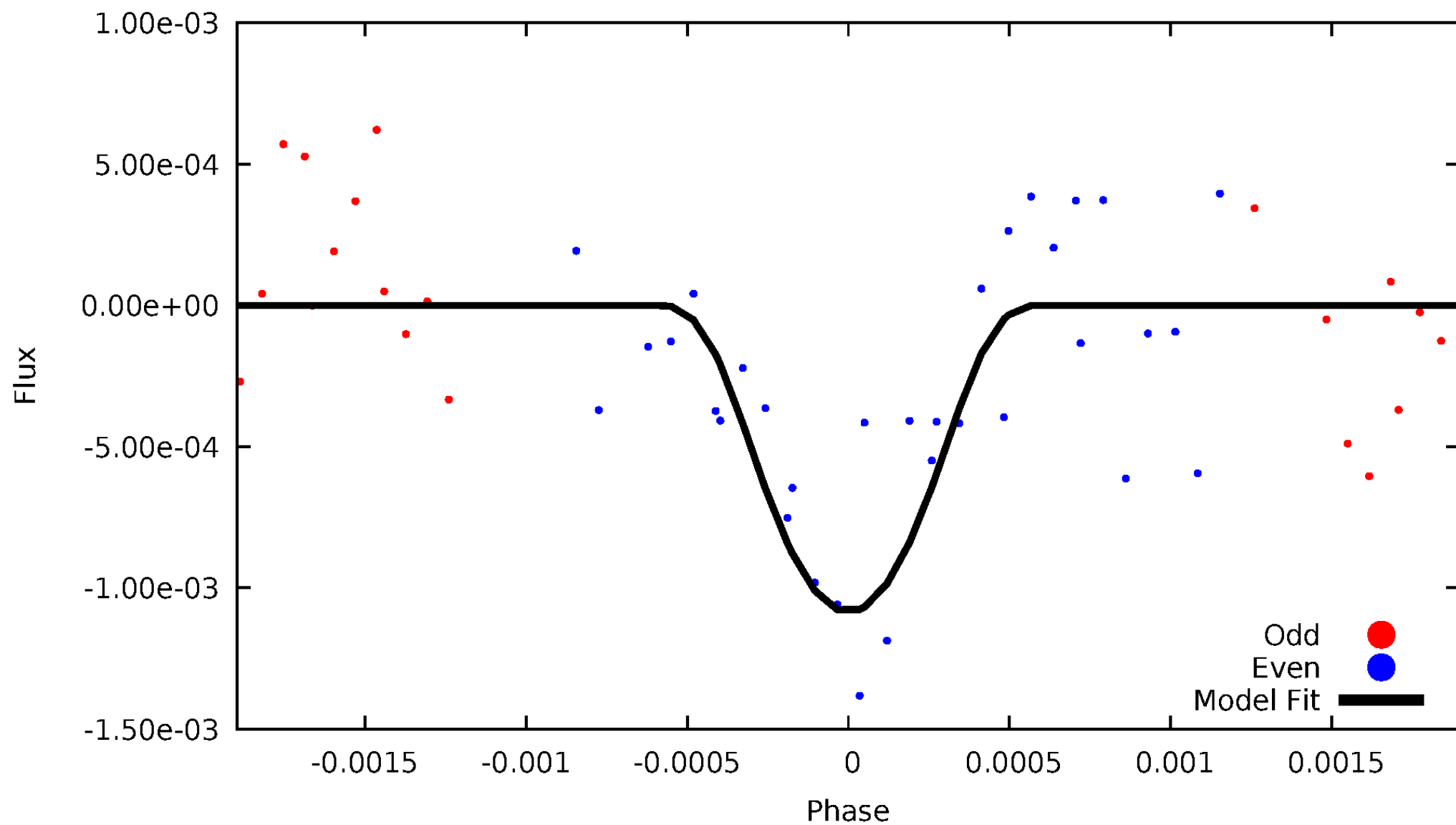


TCE 006065651-02



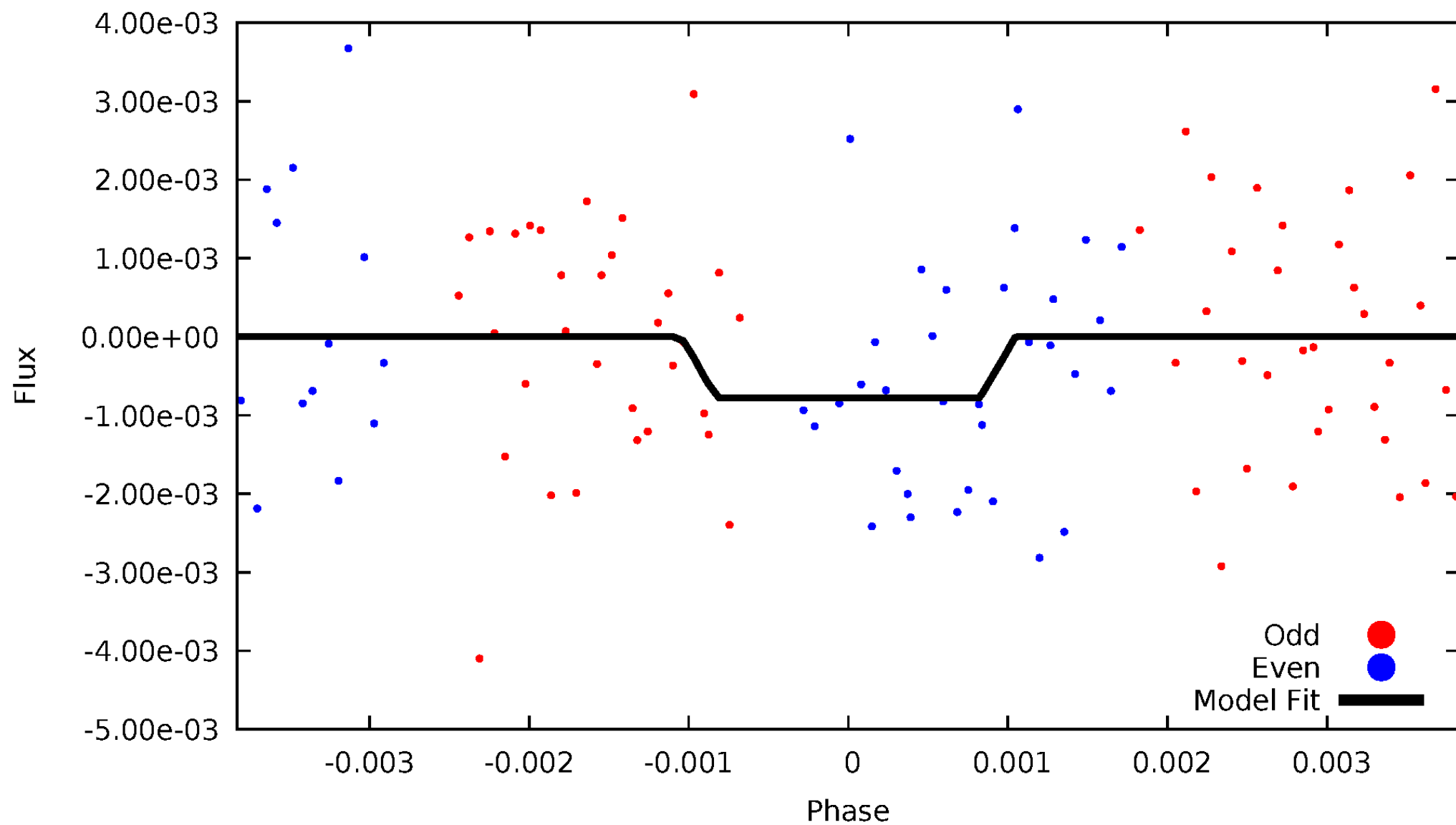
DV Odd/Even

TCE 006065651-02



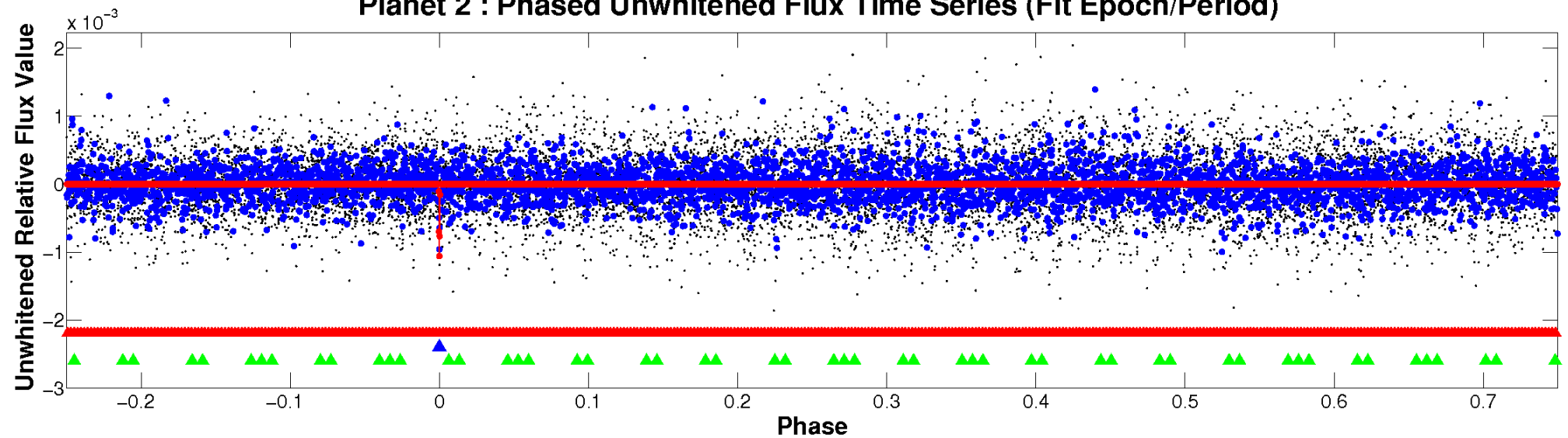
ALT Odd/Even

TCE 006065651-02

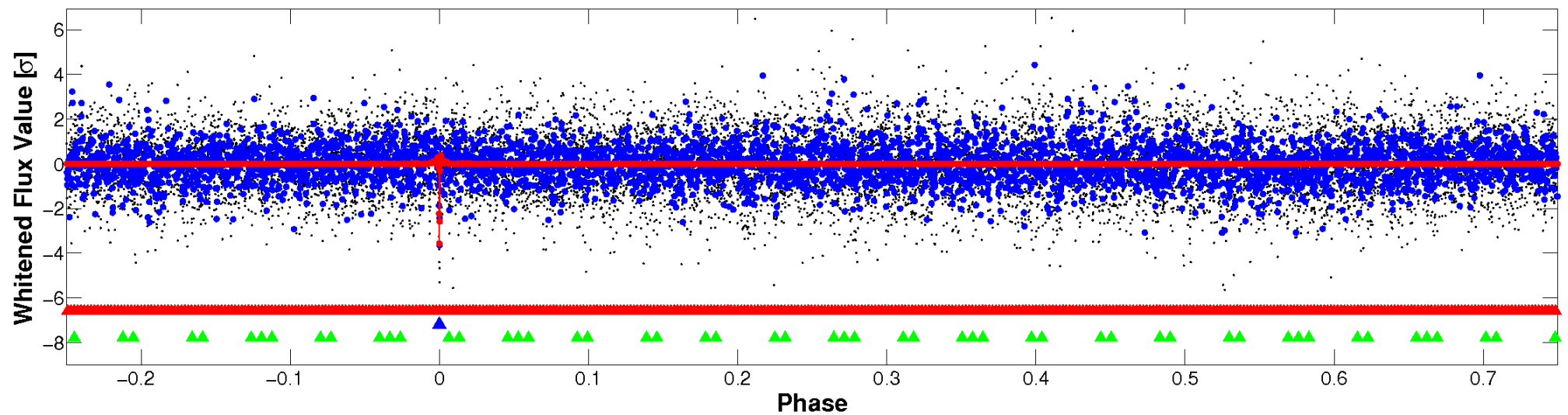


Non-Whitened Vs. Whitened Light Curve

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

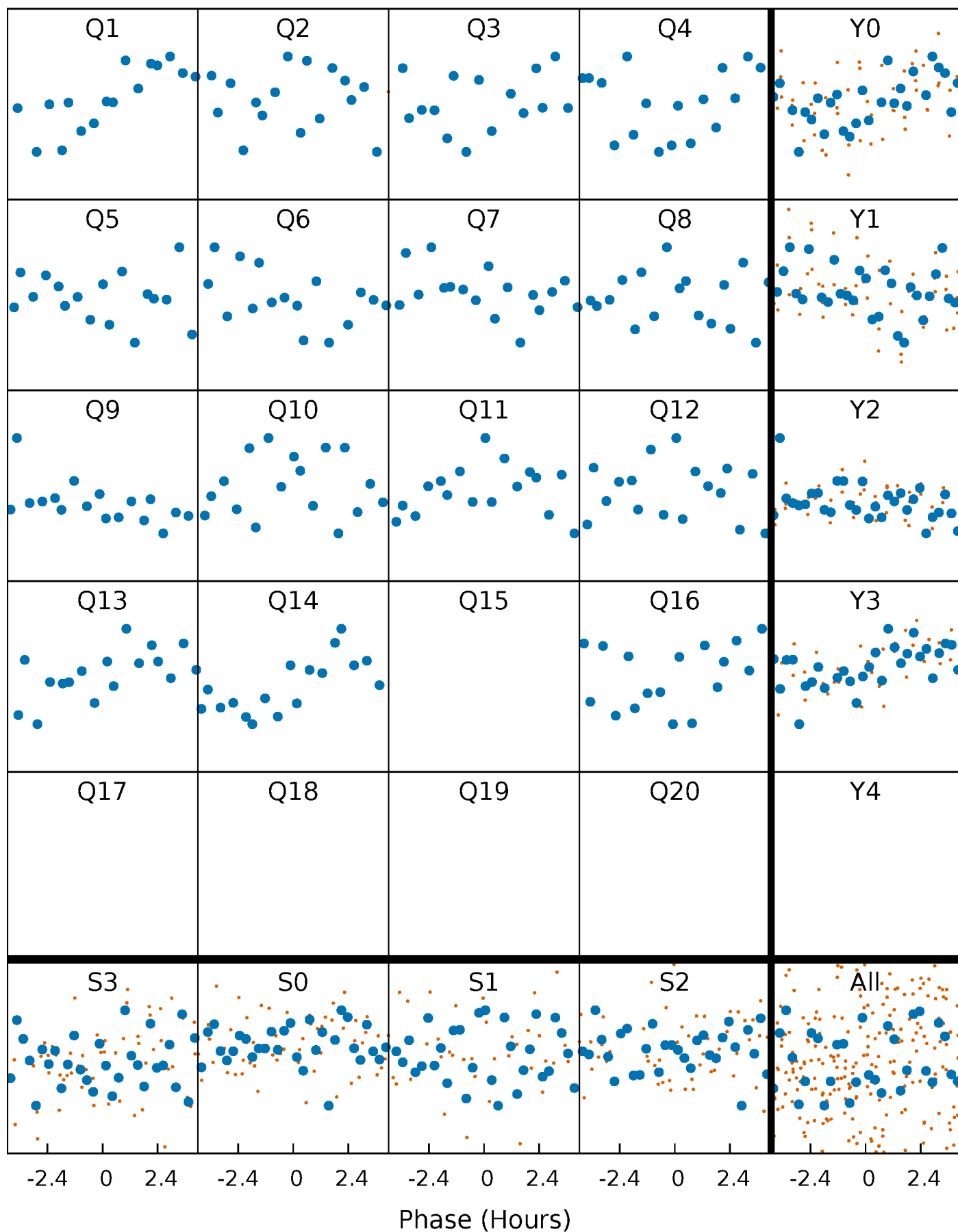


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



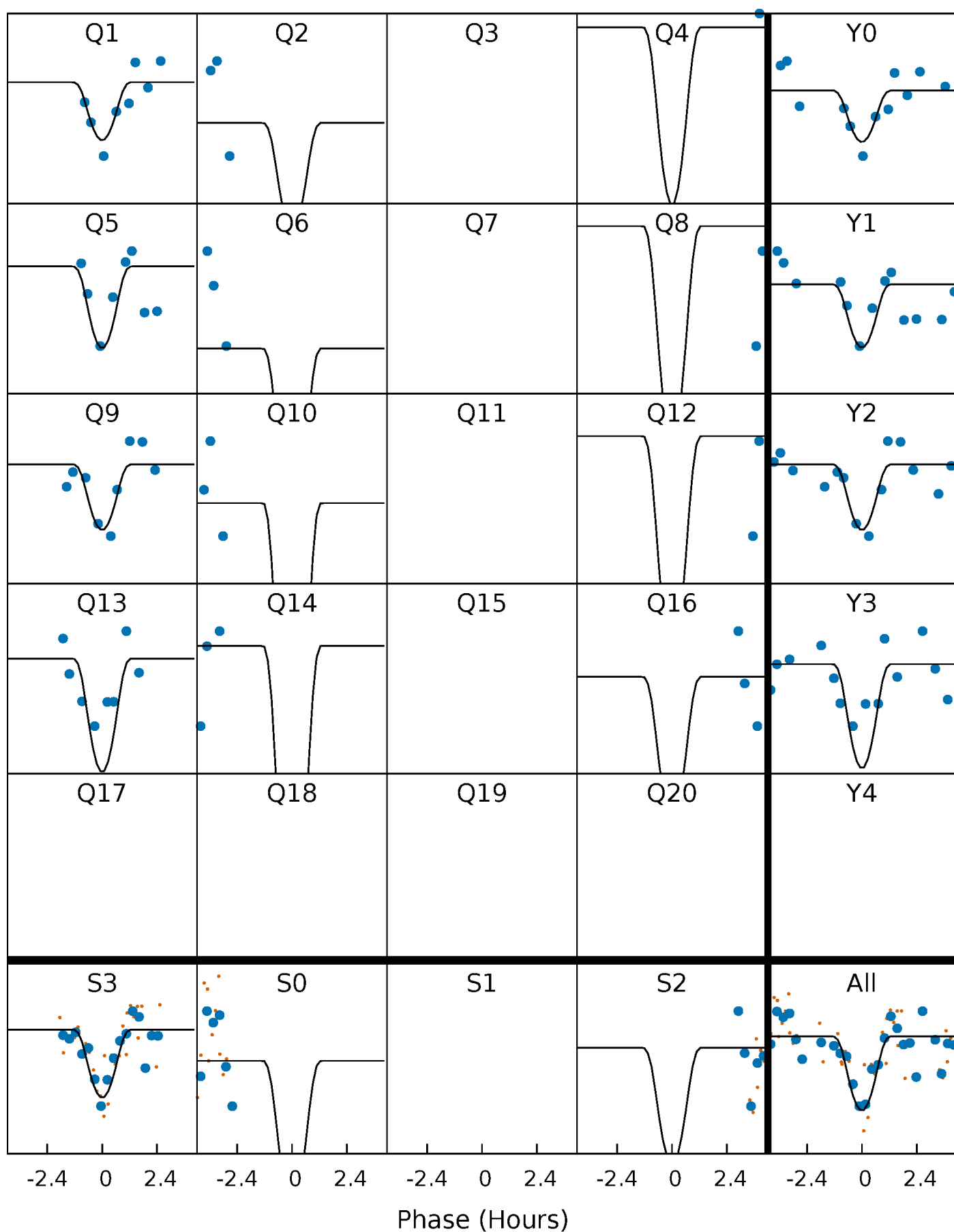
PDC Quarter-Phased Transit Curves

TCE 006065651-02 P= 91.375464 Days $T_0=134.533113$ (BKJD)



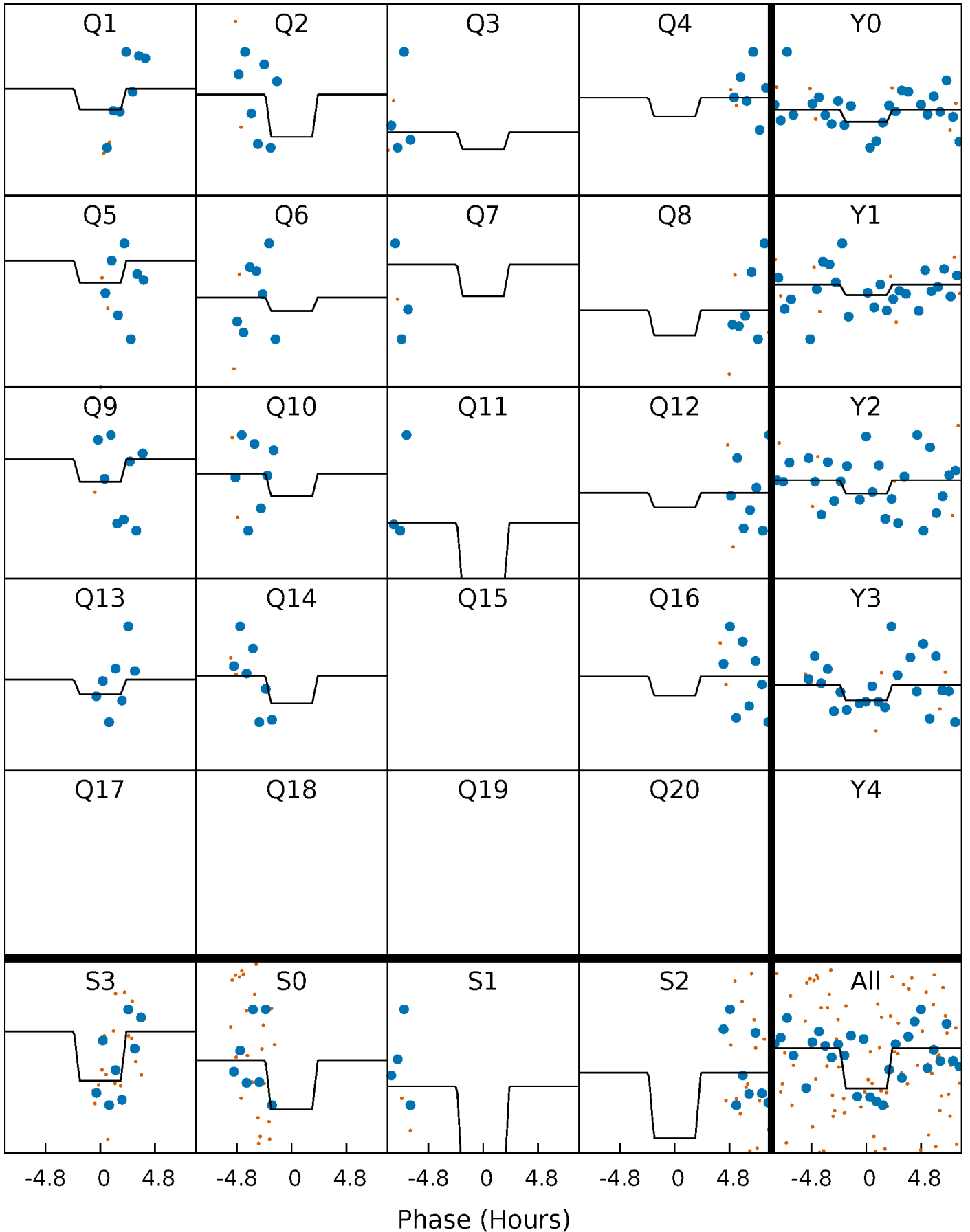
DV Quarter-Phased Transit Curves

TCE 006065651-02 P= 91.375464 Days $T_0=134.533113$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

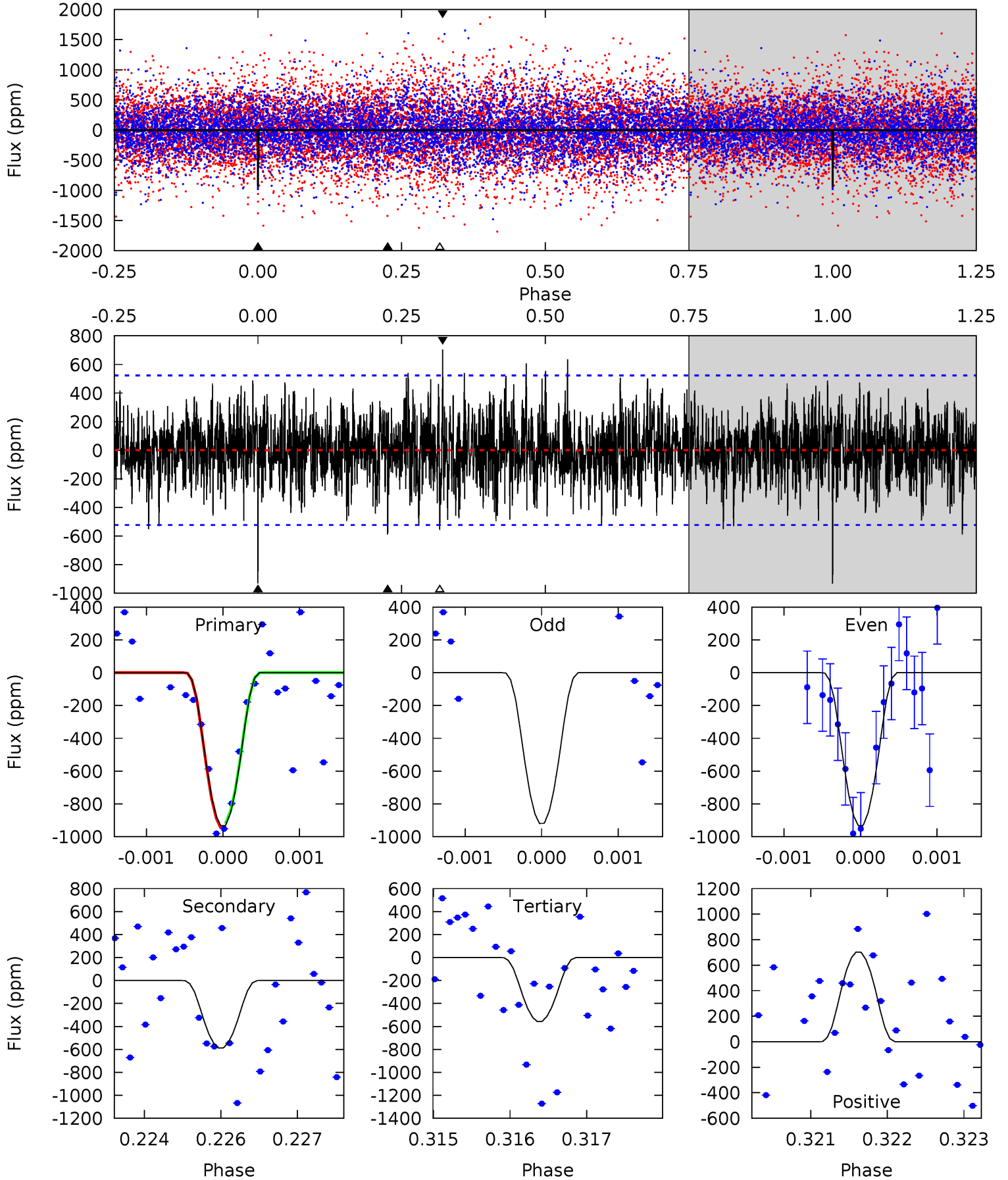
TCE 006065651-02 P= 91.375427 Days $T_0=134.482003$ (BKJD)



DV Model-Shift Uniqueness Test

006065651-02, P = 91.375464 Days, E = 43.157649 Days

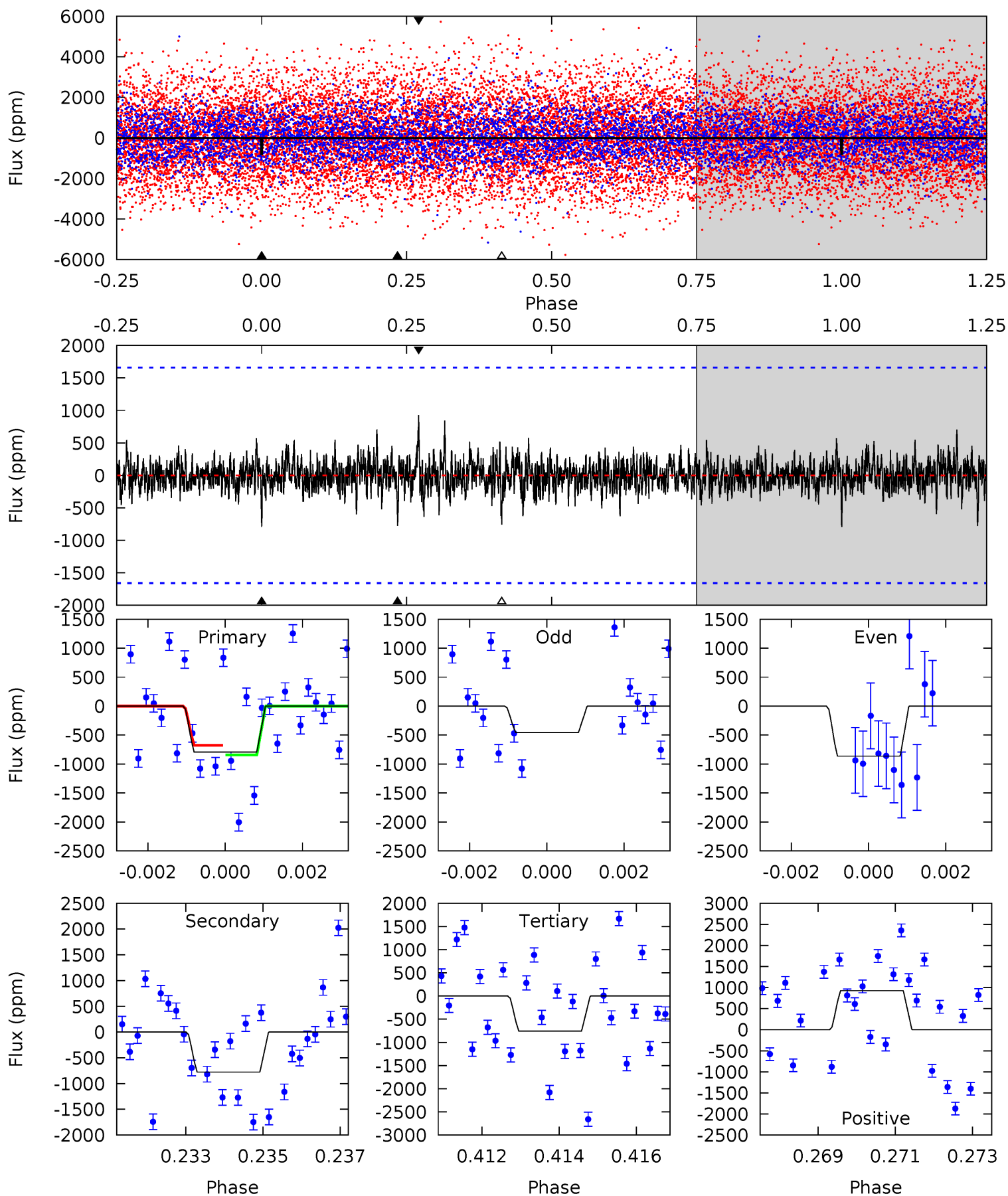
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.67	6.10	5.77	7.29	5.42	3.24	1.79	3.89	2.38	0.32	-1.19	0.08	0.97	0.43	0.14



Alt Model-Shift Uniqueness Test

006065651-02, P = 91.375427 Days, E = 43.106576 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.55	2.50	2.44	2.98	5.33	3.09	0.60	0.11	-0.43	0.06	-0.48	0.53	0.79	0.54	0.25



Stellar Parameters For KIC 006065651

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7550^{+211}_{-316}	$4.115^{+0.120}_{-0.180}$	$0.070^{+0.200}_{-0.350}$	$1.883^{+0.528}_{-0.352}$	$1.685^{+0.204}_{-0.272}$	$0.355^{+0.209}_{-0.179}$
	+3%/-4%	+3%/-4%	+286%/-500%	+28%/-19%	+12%/-16%	+59%/-50%
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 006065651-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-588 ± 96	$46.14^{+51.61}_{-31.38}$	936^{+71}_{-59}	3084^{+1523}_{-555}	34^{+293}_{-26}
Alt.	-778 ± 311	$41.27^{+44.37}_{-29.08}$	927^{+72}_{-55}	3313^{+1706}_{-650}	54^{+500}_{-43}

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

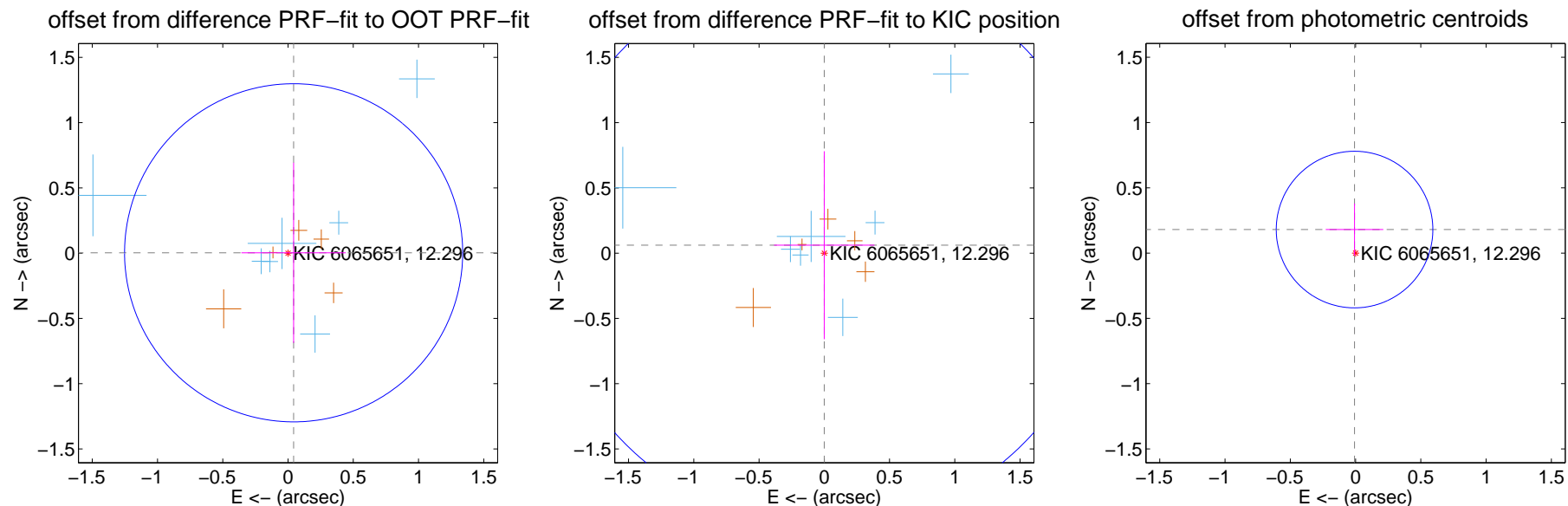
DV Centroid Data

Supplemental centroid analysis for 006065651-02. Kepler magnitude: 12.30. Transit SNR 9.80

There are 7 quarters with good PRF difference image offsets

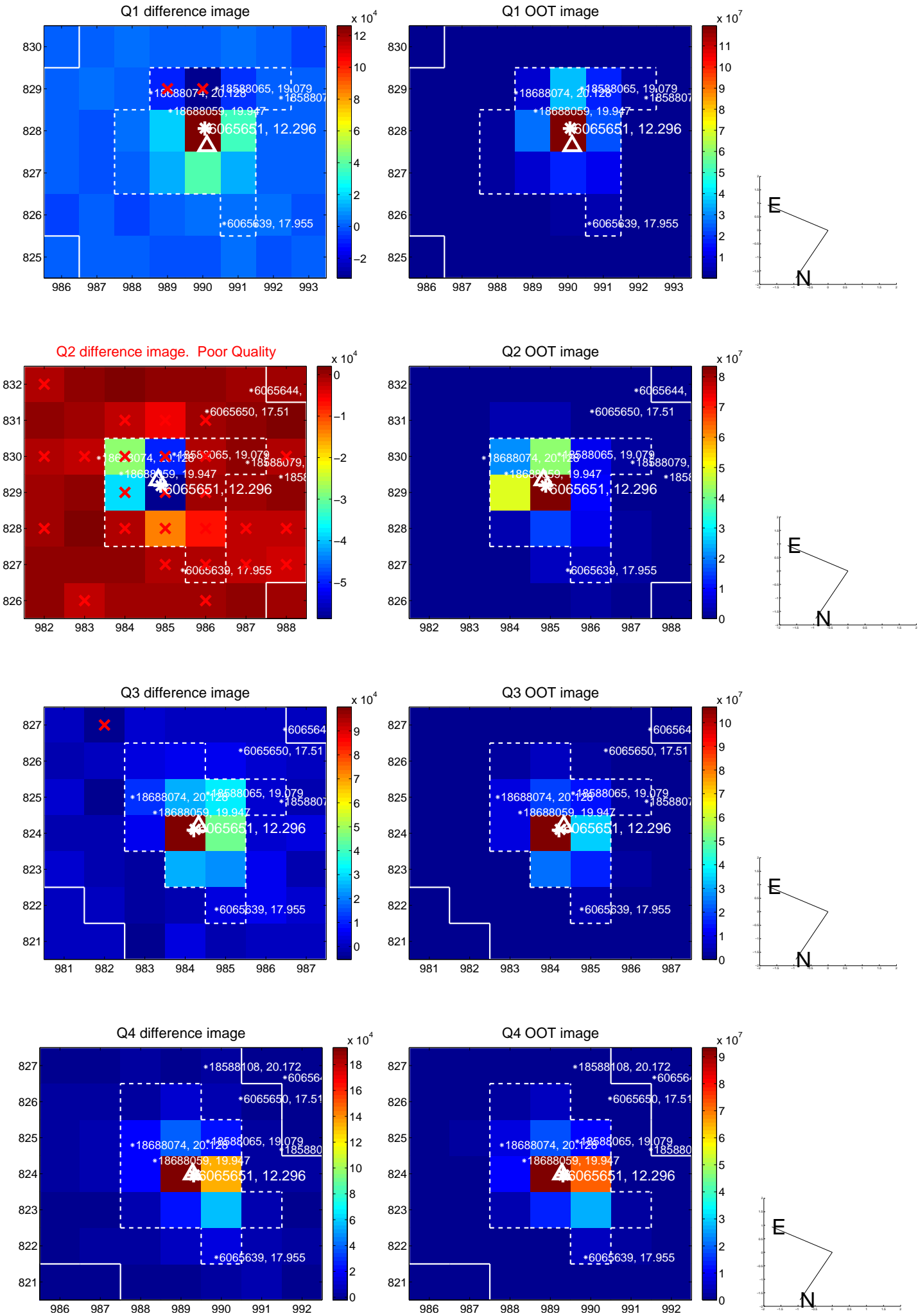
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.043 ± 0.432	0.10	-0.043 ± 0.400	0.003 ± 0.691
PRF-fit source offset from KIC position	0.061 ± 0.718	0.08	0.001 ± 0.385	0.061 ± 0.720
photometric centroid source offset	0.18 ± 0.20	0.90	0.01 ± 0.22	0.18 ± 0.20

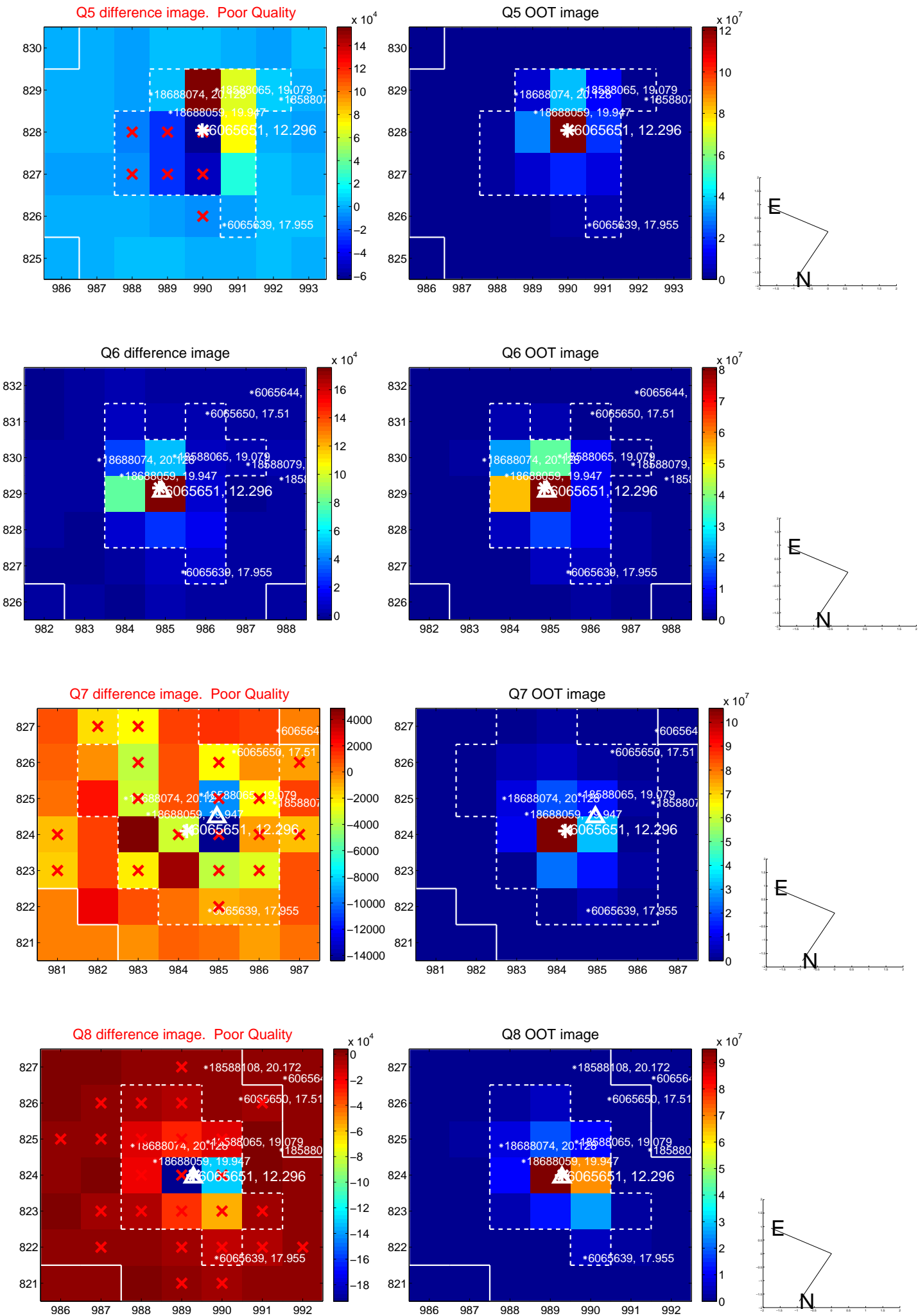


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

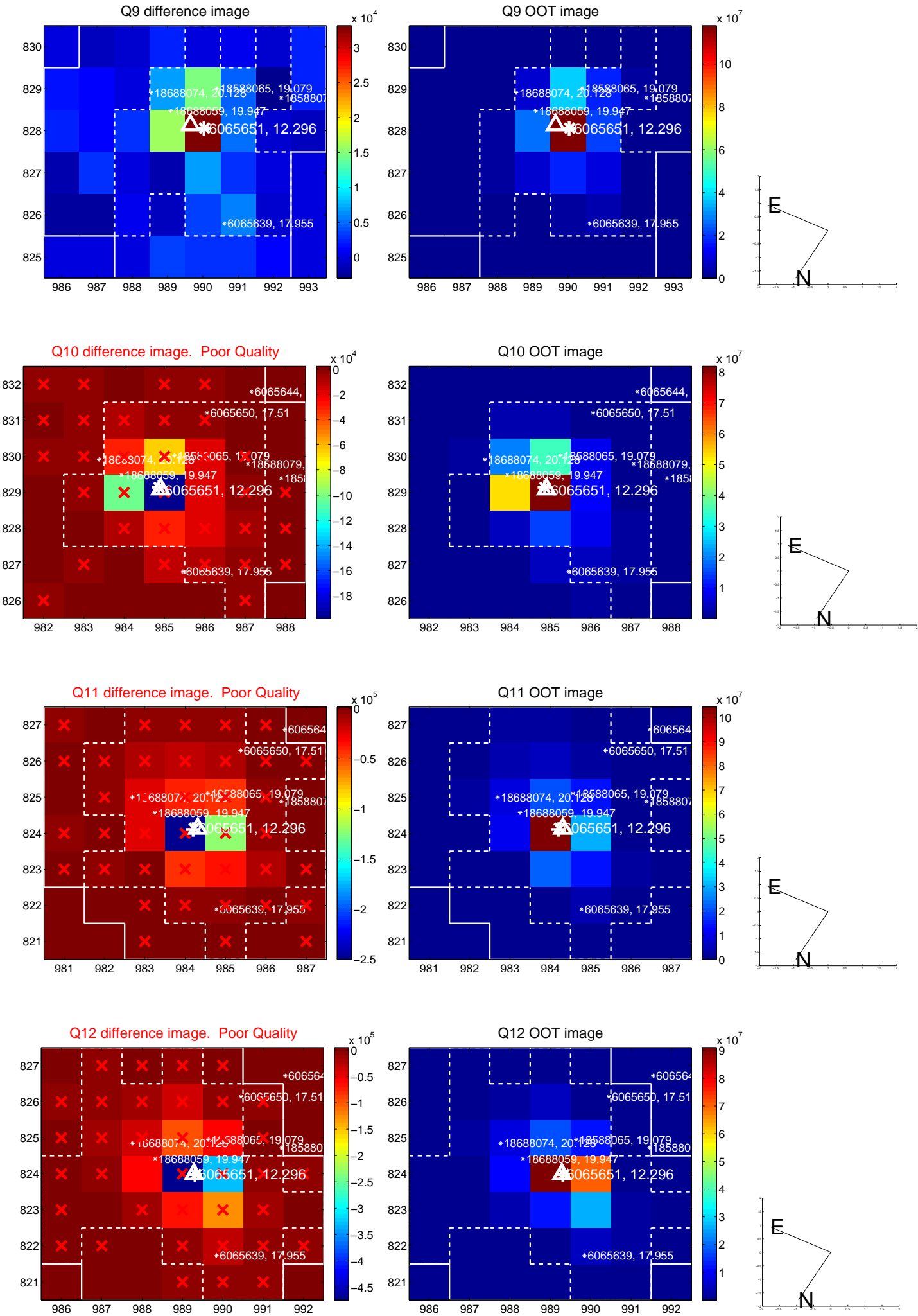
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



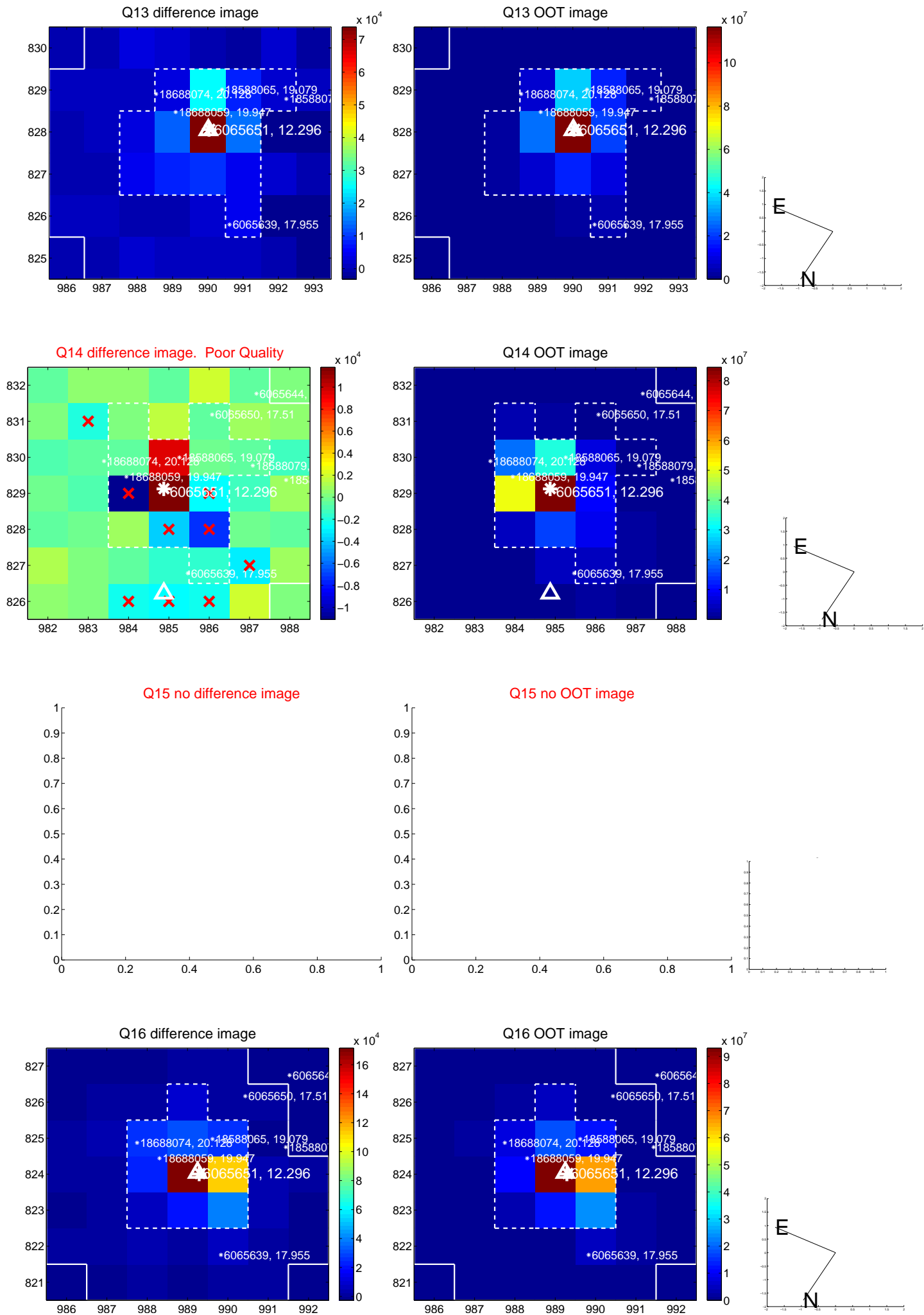
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



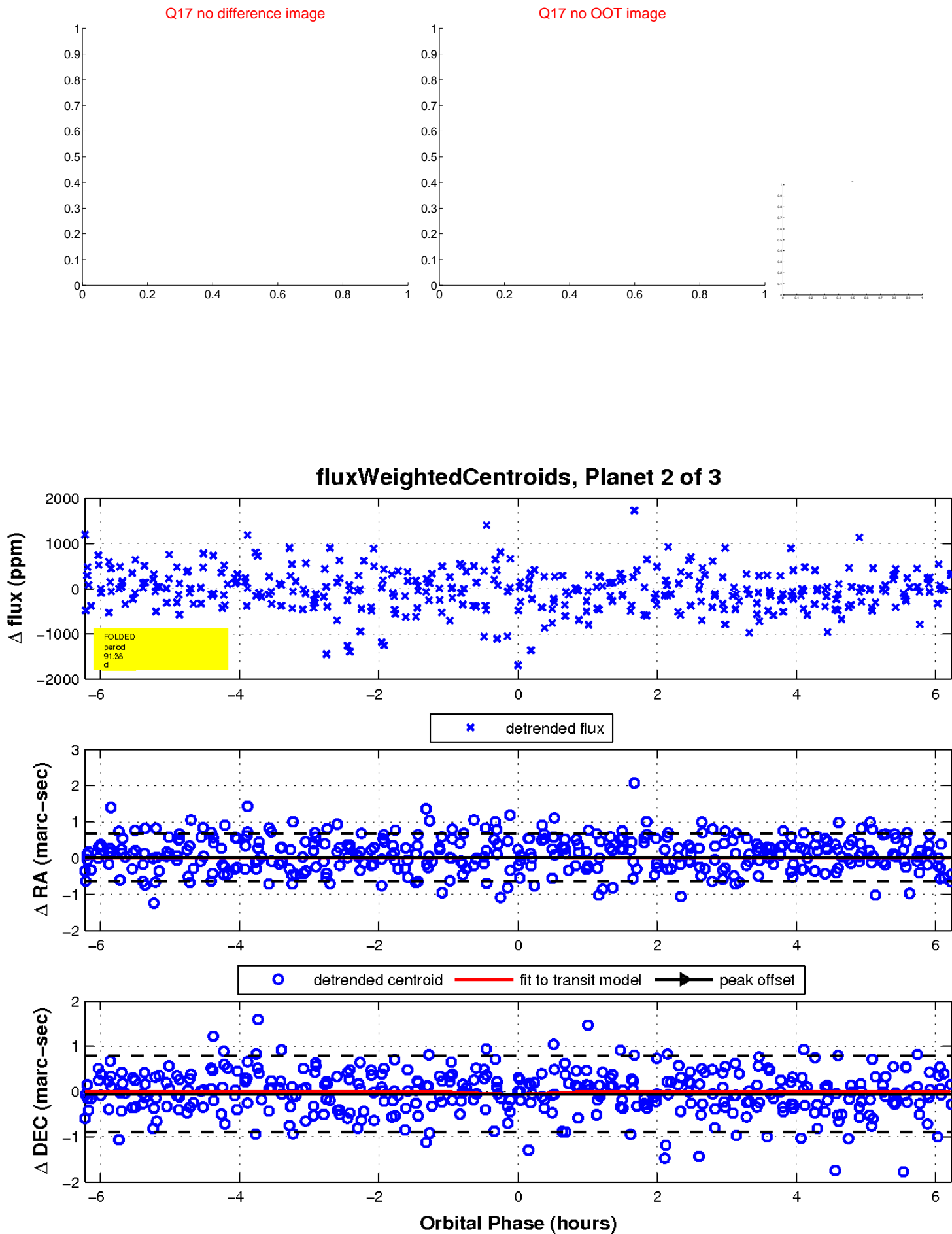
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

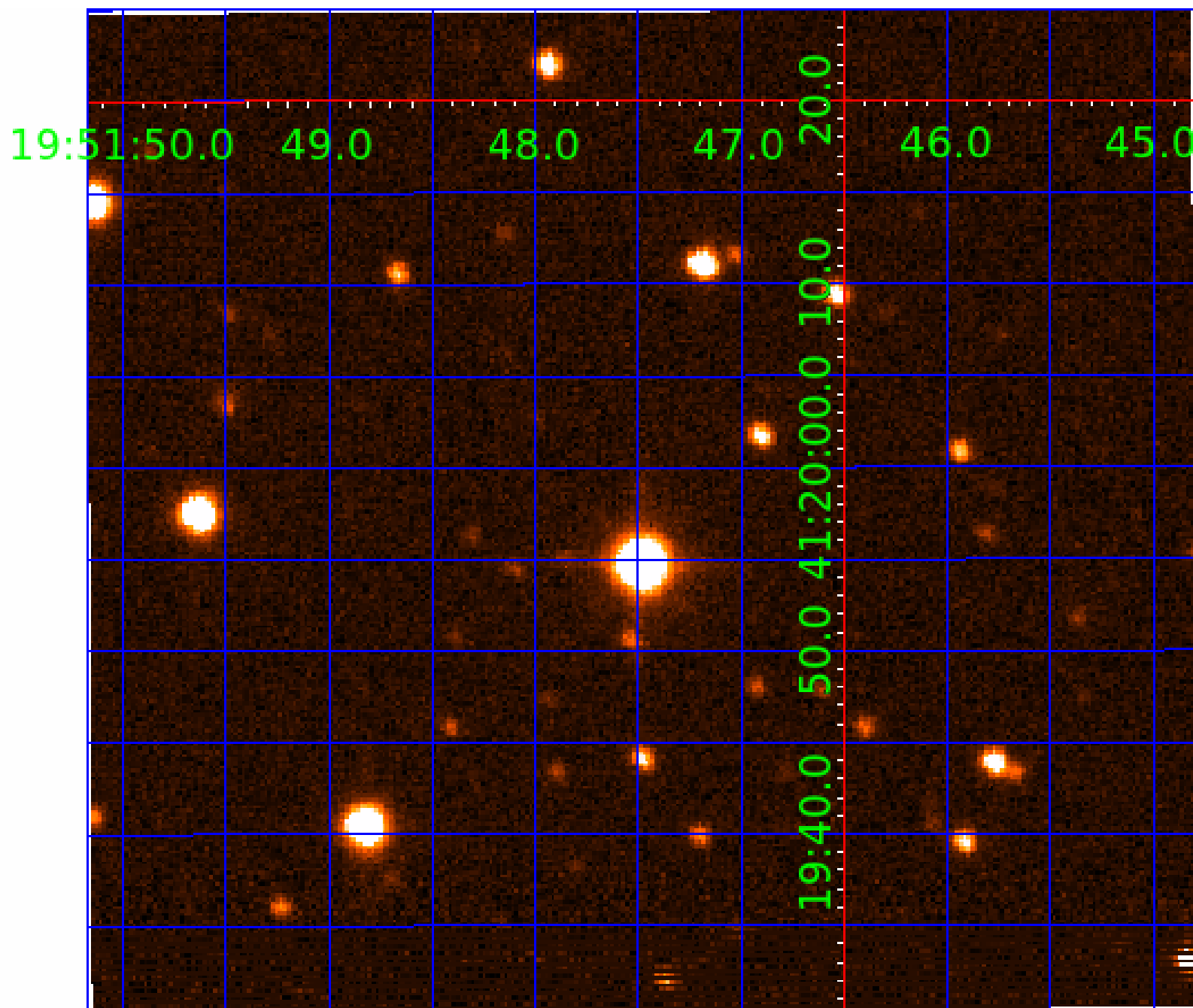


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006065651

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
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Robovetter Results

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006065651-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
006065651-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
006065651-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

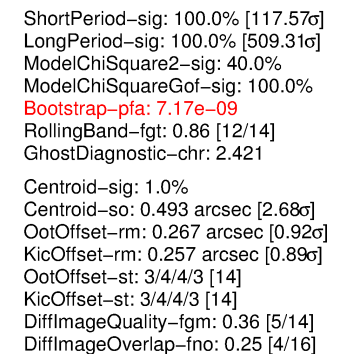
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

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

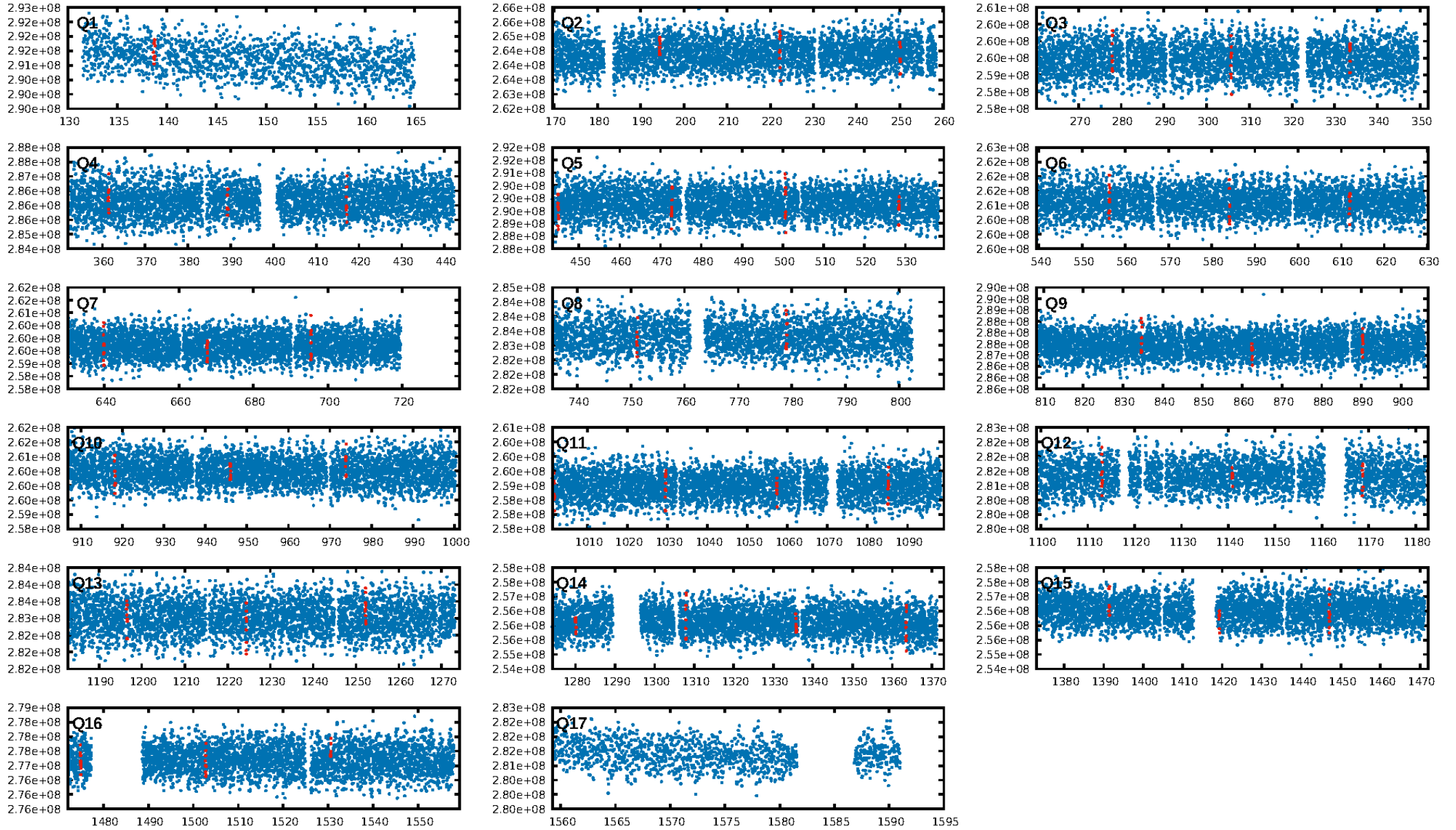
Ephemeris Match Information For 006065651-03

No Significant Match Found

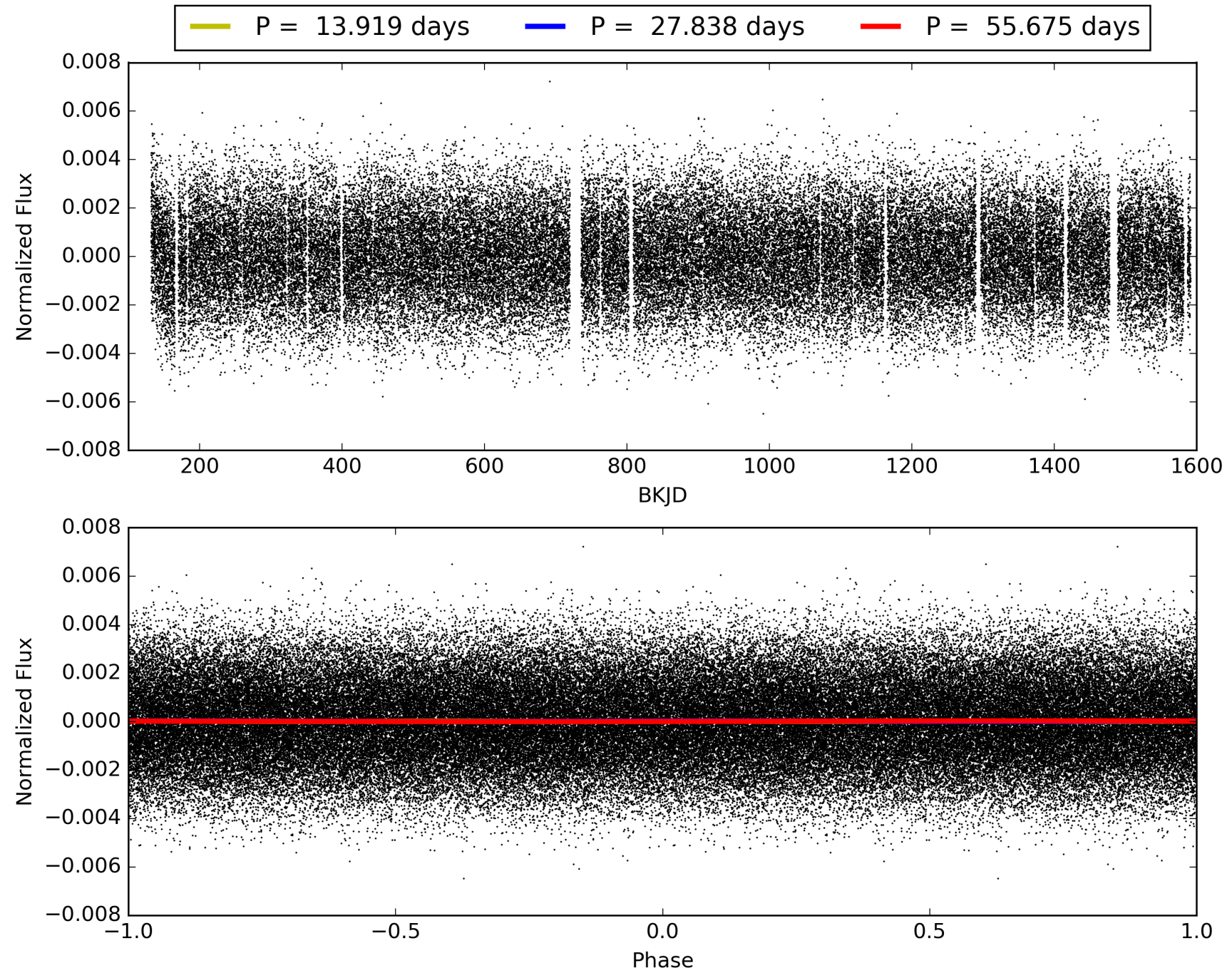
KIC: 6065651 Candidate: 3 of 3 Period: 27.838 d



TCE 006065651-03, PDC Light Curves

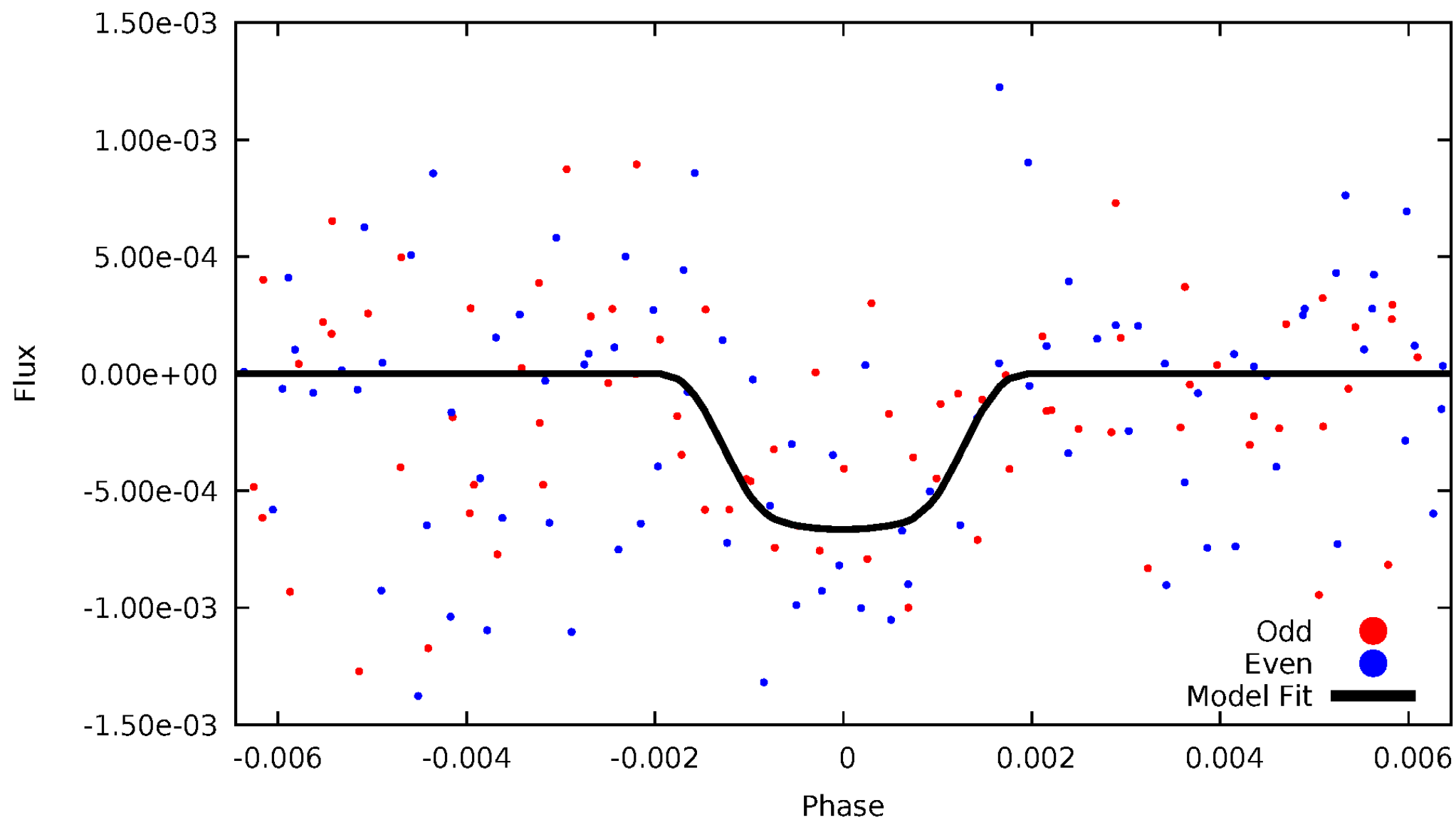


TCE 006065651-03



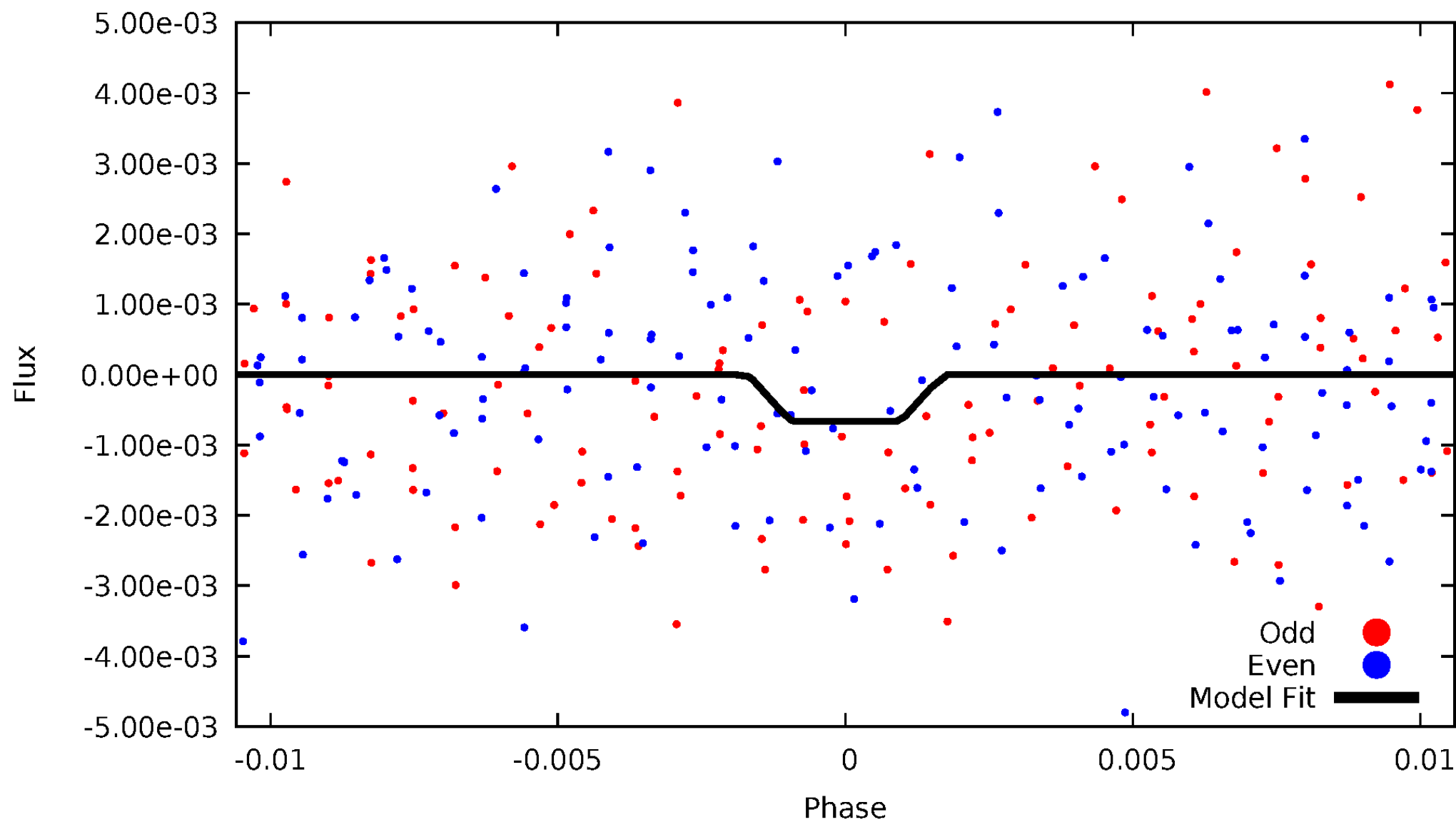
DV Odd/Even

TCE 006065651-03



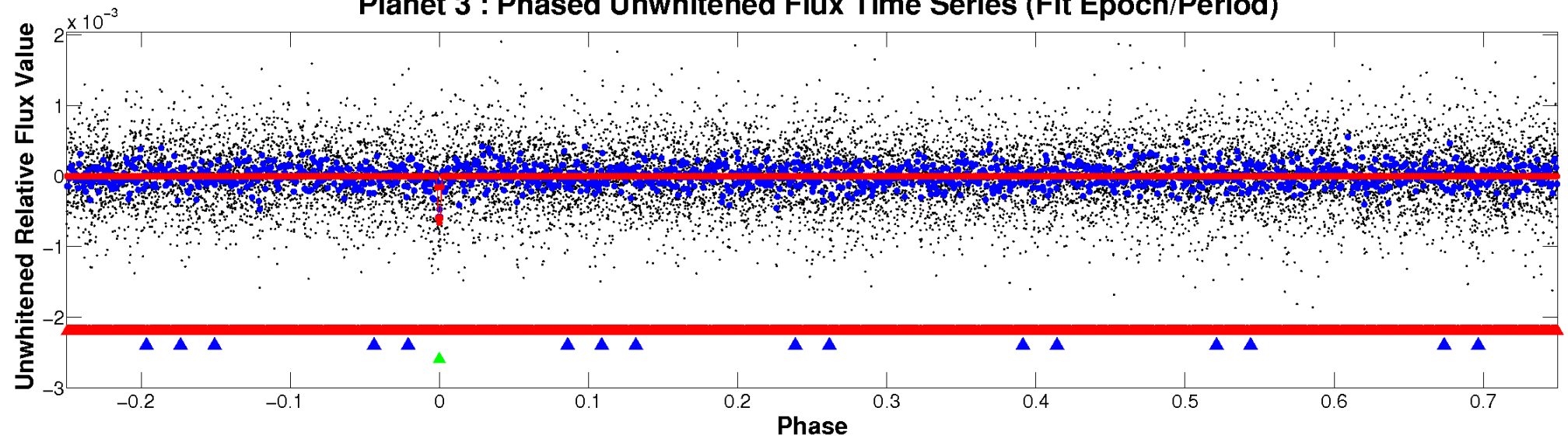
ALT Odd/Even

TCE 006065651-03

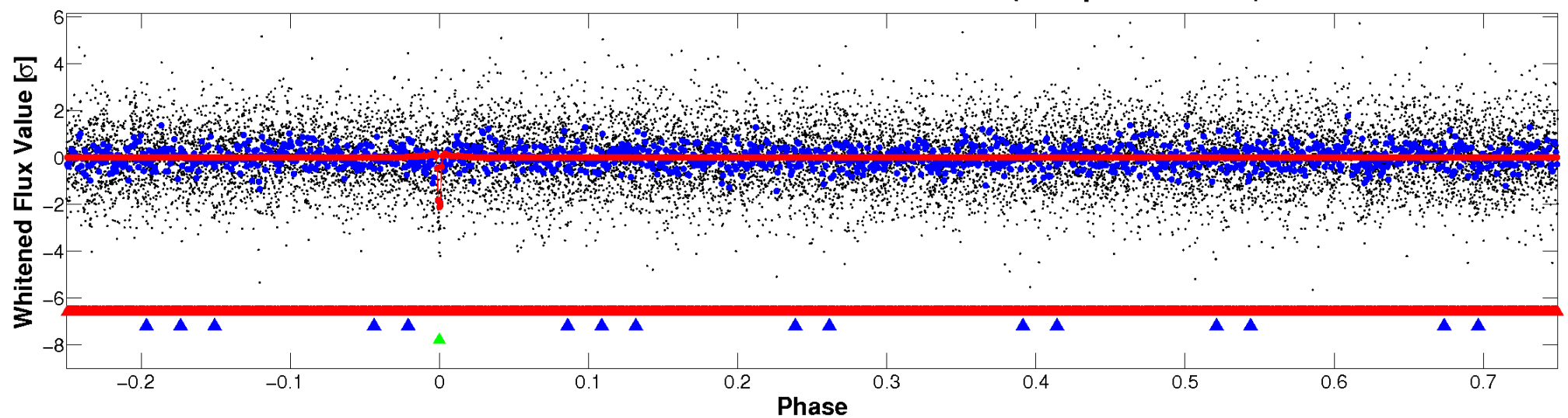


Non-Whitened Vs. Whitened Light Curve

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

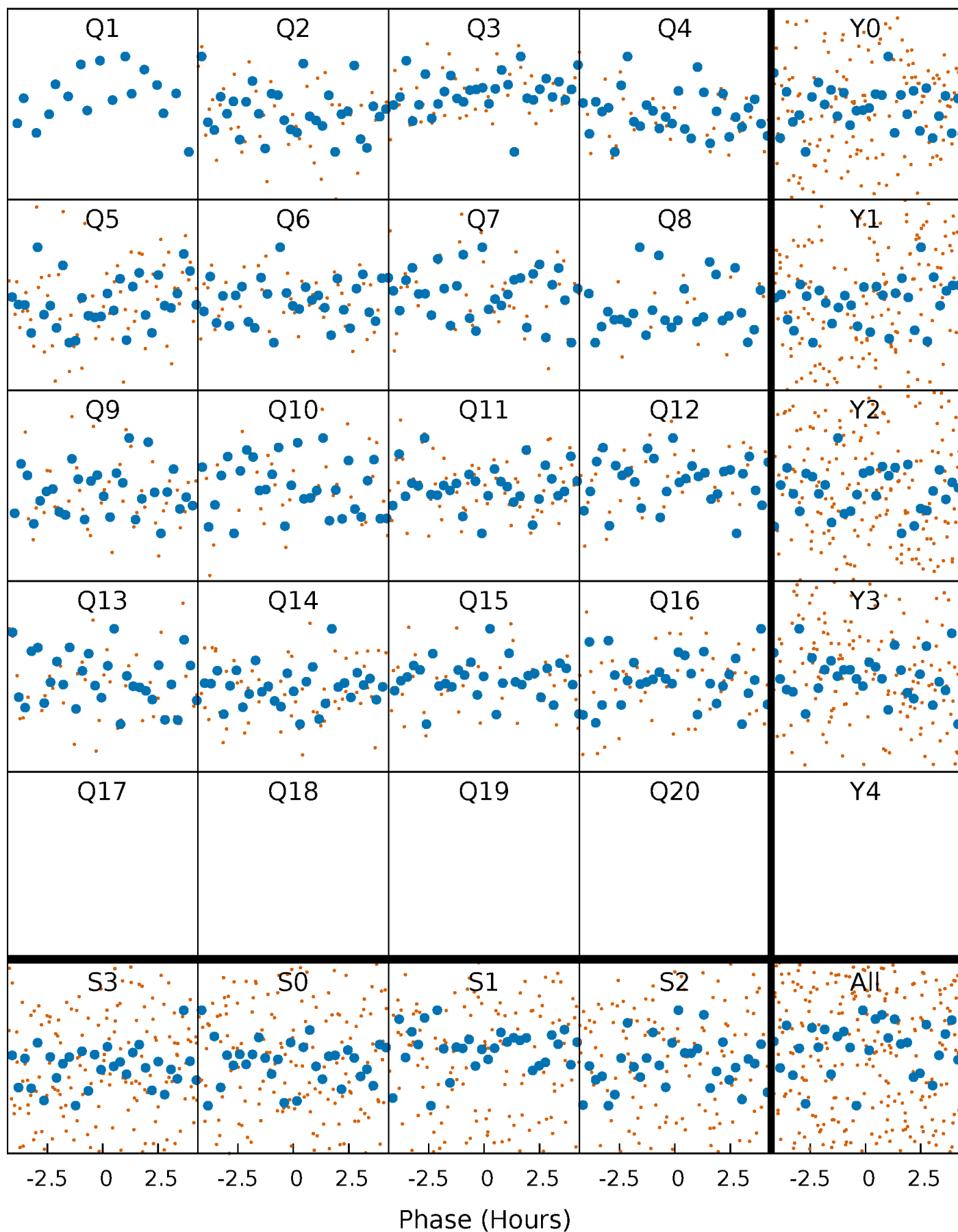


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



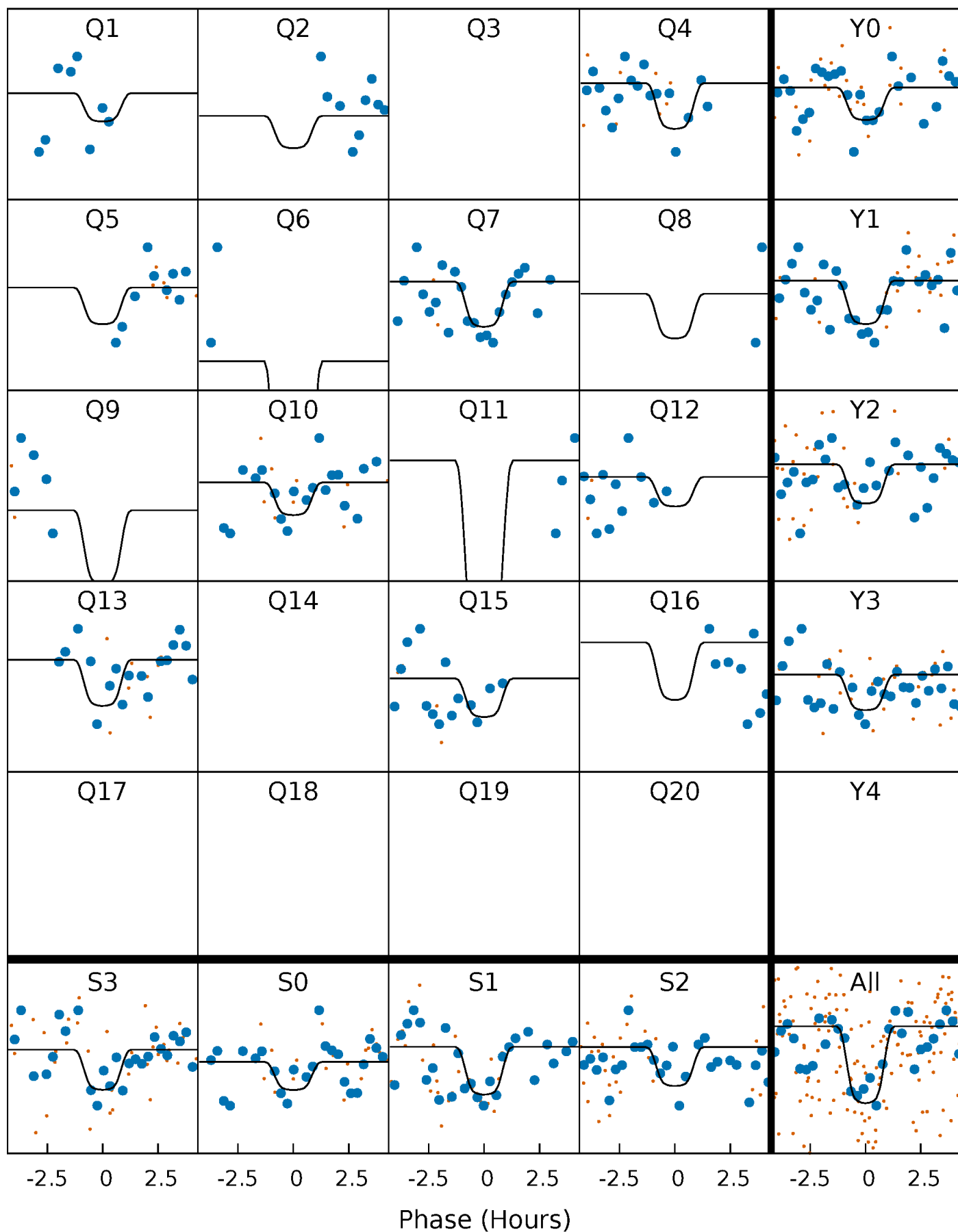
PDC Quarter-Phased Transit Curves

TCE 006065651-03 P= 27.837571 Days $T_0=138.728483$ (BKJD)



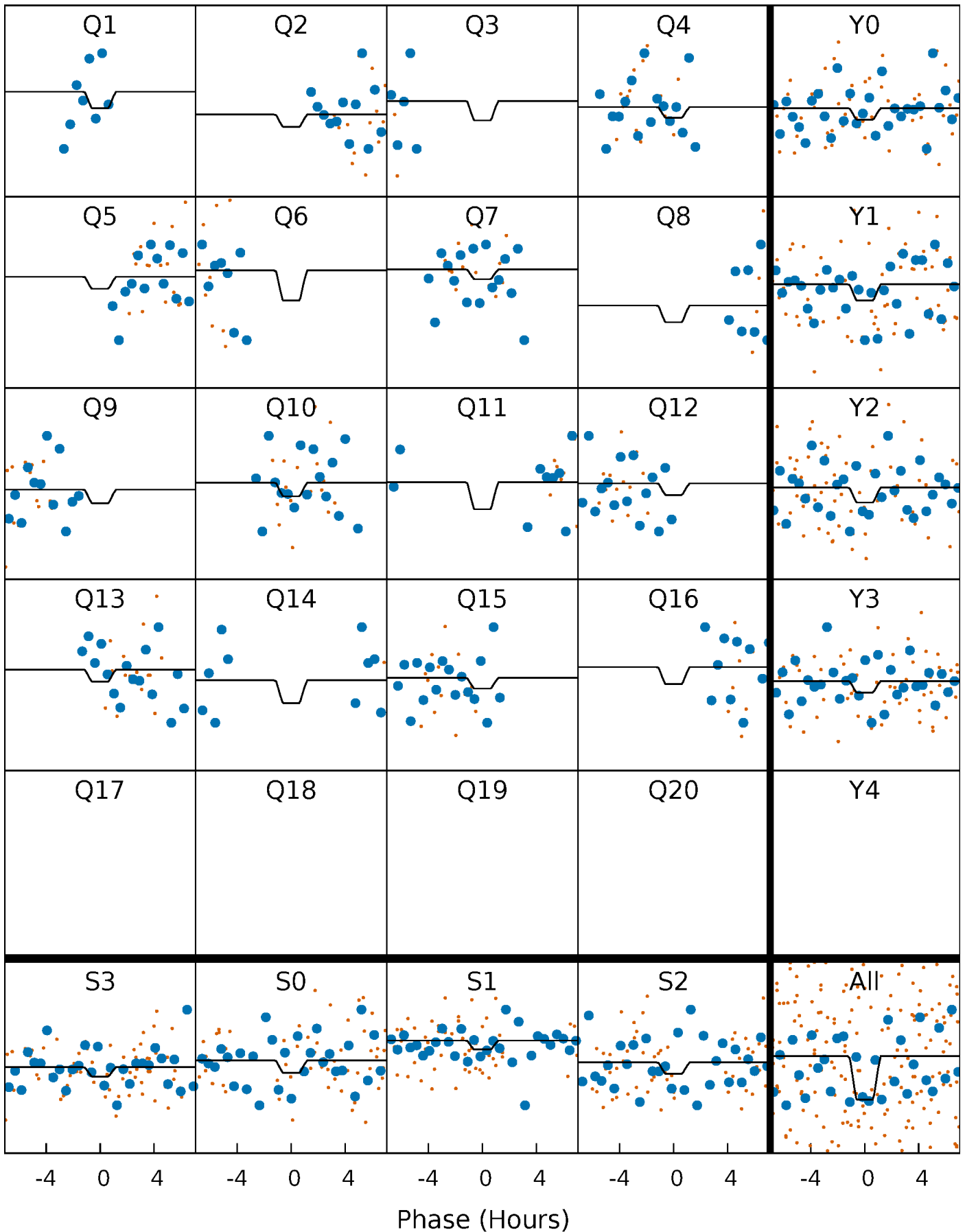
DV Quarter-Phased Transit Curves

TCE 006065651-03 P= 27.837571 Days $T_0=138.728483$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

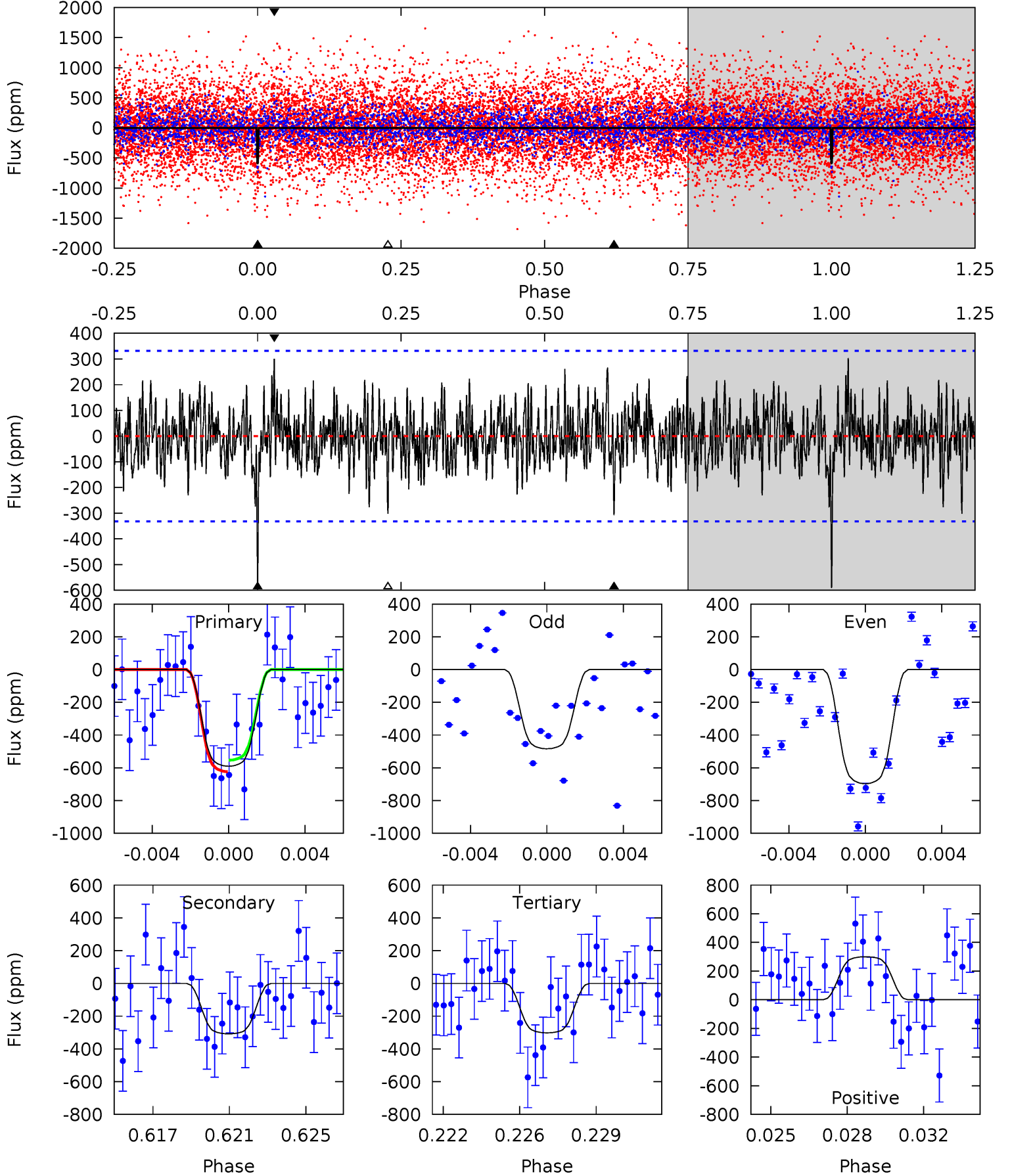
TCE 006065651-03 P= 27.837081 Days $T_0=138.724132$ (BKJD)



DV Model-Shift Uniqueness Test

006065651-03, P = 27.837571 Days, E = 110.890912 Days

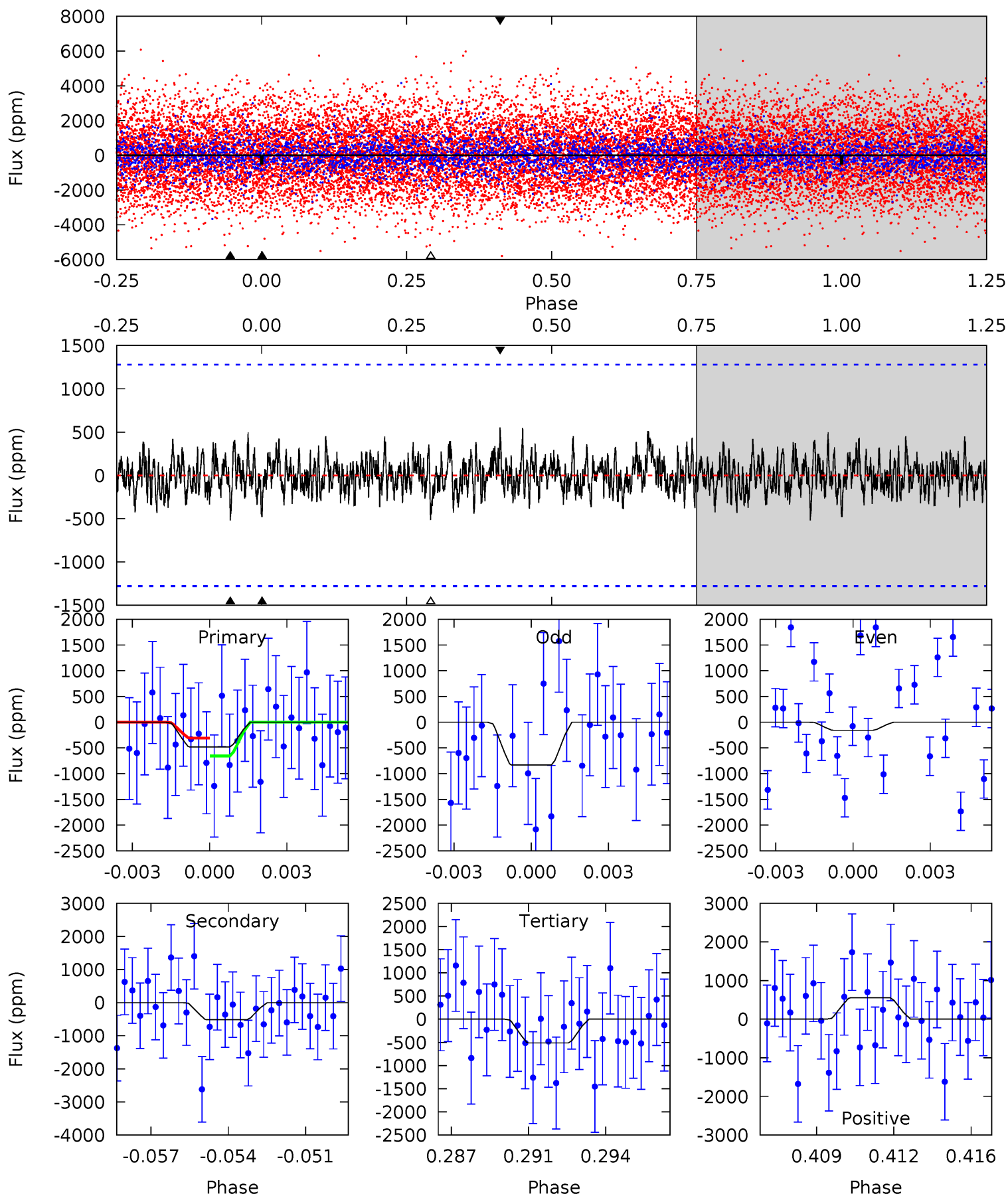
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.29	4.85	4.75	4.72	5.22	2.92	1.41	4.54	4.57	0.10	0.13	1.69	0.99	0.34	0.56



Alt Model-Shift Uniqueness Test

006065651-03, P = 27.837081 Days, E = 110.887051 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.97	2.12	2.10	2.26	5.23	2.93	0.68	-0.13	-0.29	0.02	-0.14	1.38	0.88	0.52	0.71



Stellar Parameters For KIC 006065651

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7550^{+211}_{-316}	$4.115^{+0.120}_{-0.180}$	$0.070^{+0.200}_{-0.350}$	$1.883^{+0.528}_{-0.352}$	$1.685^{+0.204}_{-0.272}$	$0.355^{+0.209}_{-0.179}$
	+3%/-4%	+3%/-4%	+286%/-500%	+28%/-19%	+12%/-16%	+59%/-50%
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 006065651-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-308 ± 64	$6.01^{+1.42}_{-1.40}$	1393^{+96}_{-86}	5796^{+733}_{-567}	218^{+141}_{-90}
Alt.	-519 ± 245	$5.34^{+1.41}_{-1.24}$	1382^{+103}_{-79}	6989^{+1446}_{-1160}	435^{+420}_{-217}

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 $A_{obs} \gg 1.0$

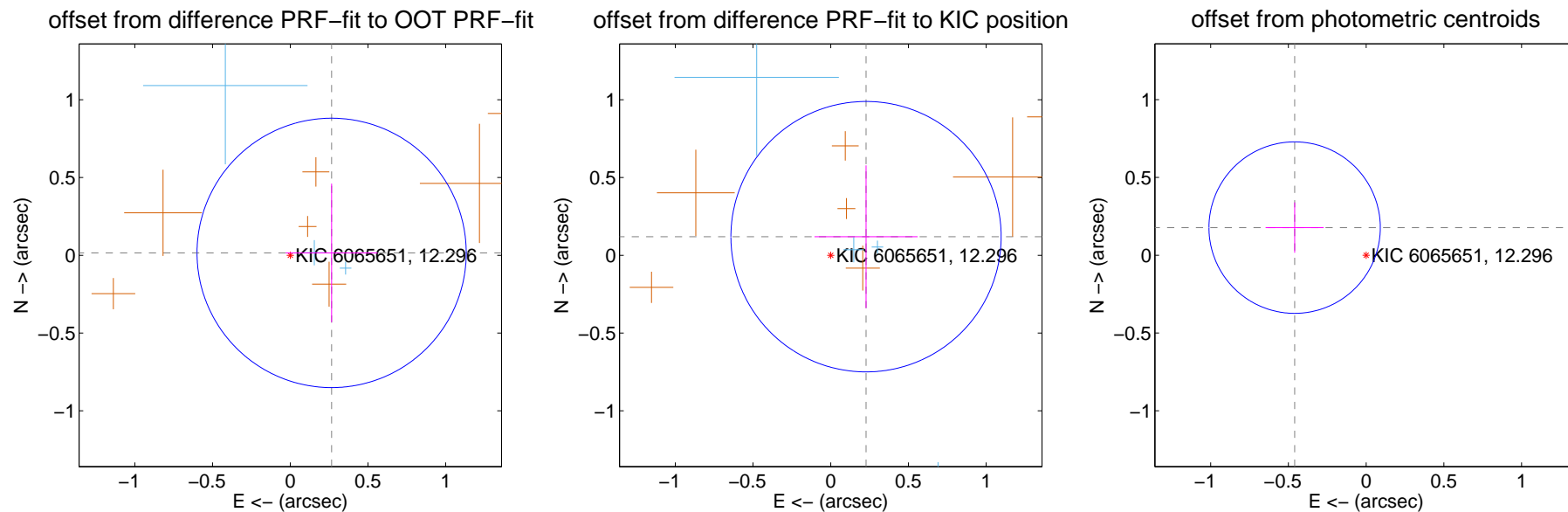
DV Centroid Data

Supplemental centroid analysis for 006065651-03. Kepler magnitude: 12.30. Transit SNR 11.02

There are 5 quarters with good PRF difference image offsets

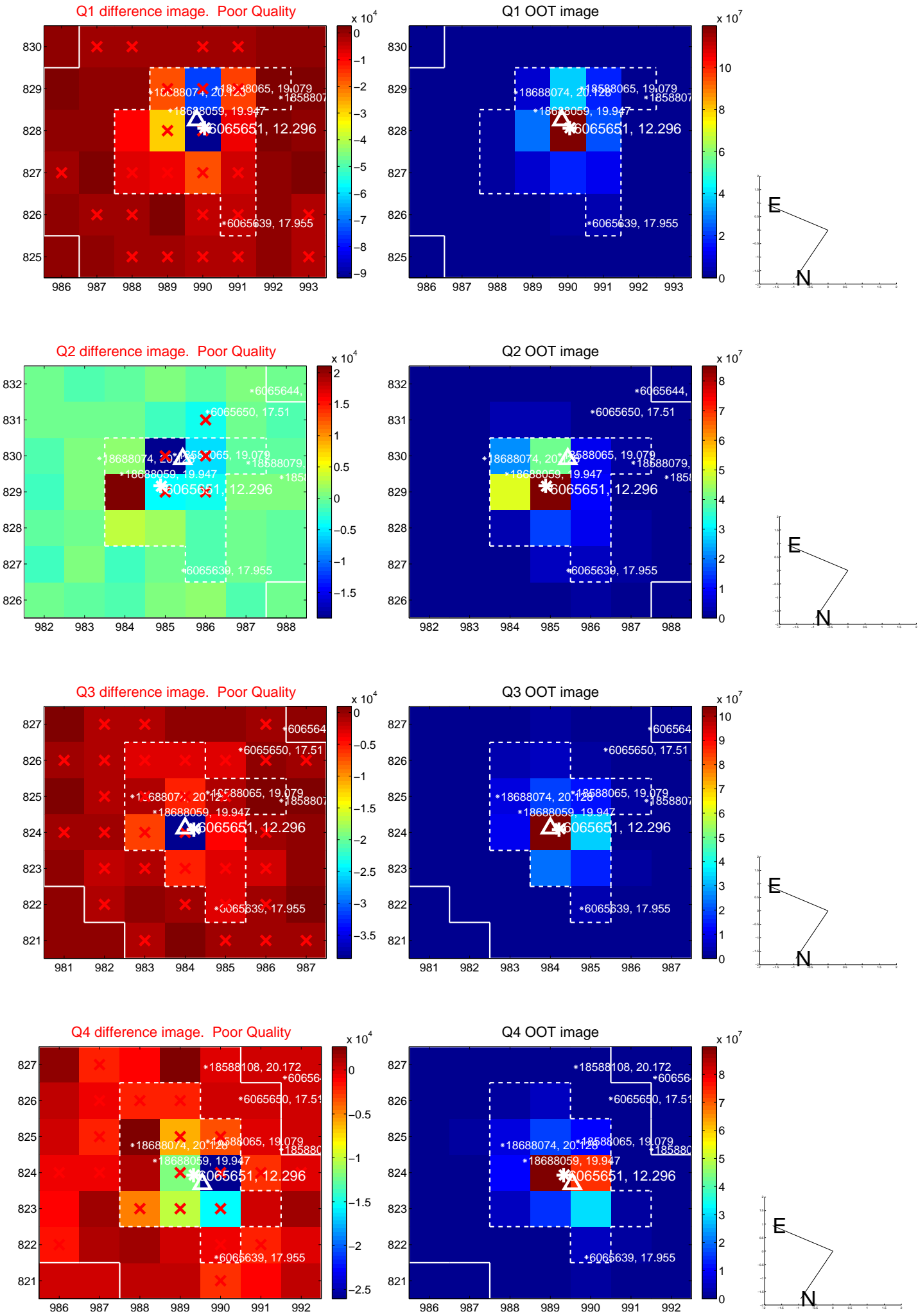
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.267 ± 0.289	0.92	-0.266 ± 0.296	0.015 ± 0.446
PRF-fit source offset from KIC position	0.257 ± 0.290	0.89	-0.227 ± 0.332	0.120 ± 0.459
photometric centroid source offset	0.49 ± 0.18	2.68	0.46 ± 0.19	0.18 ± 0.16

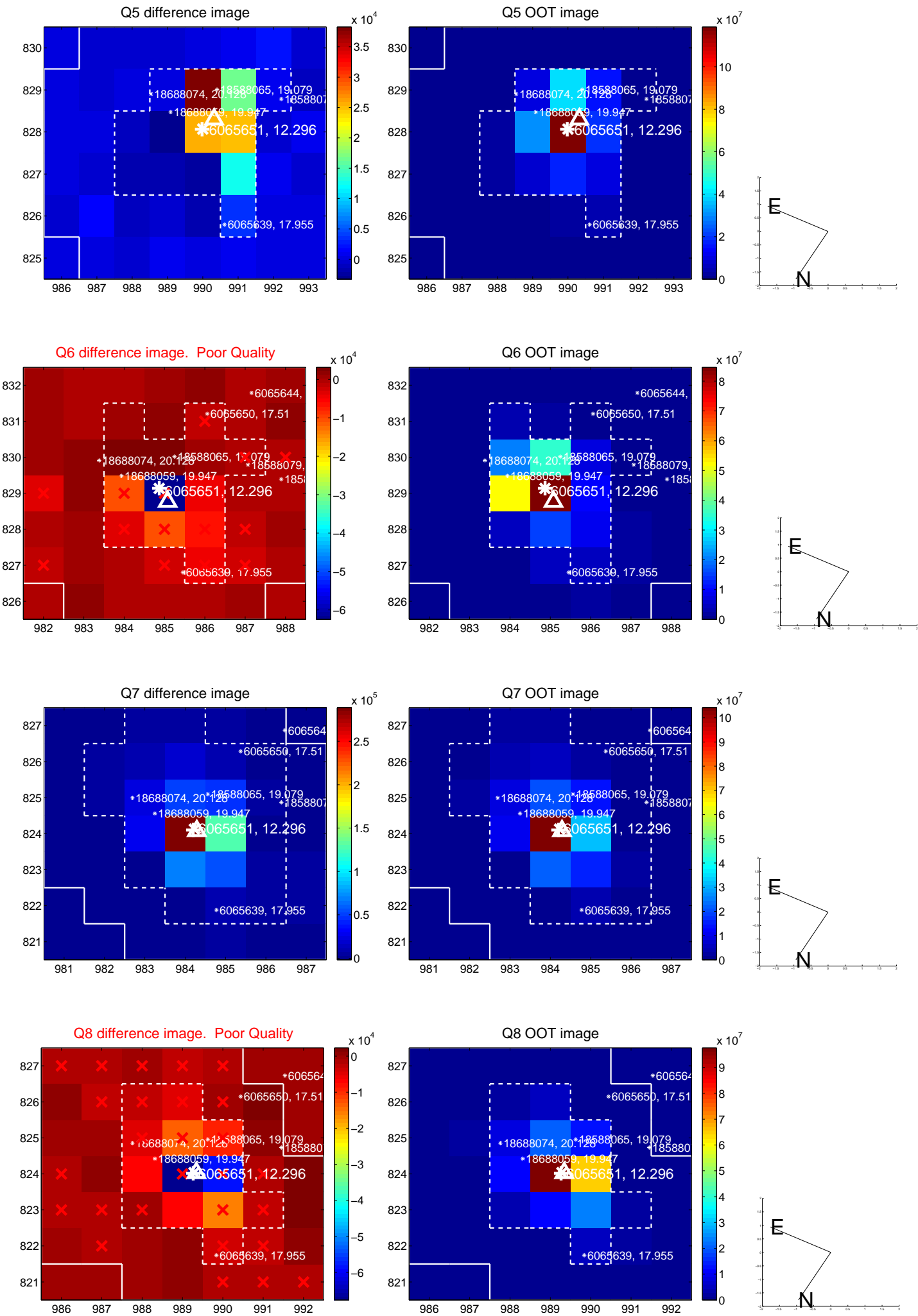


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

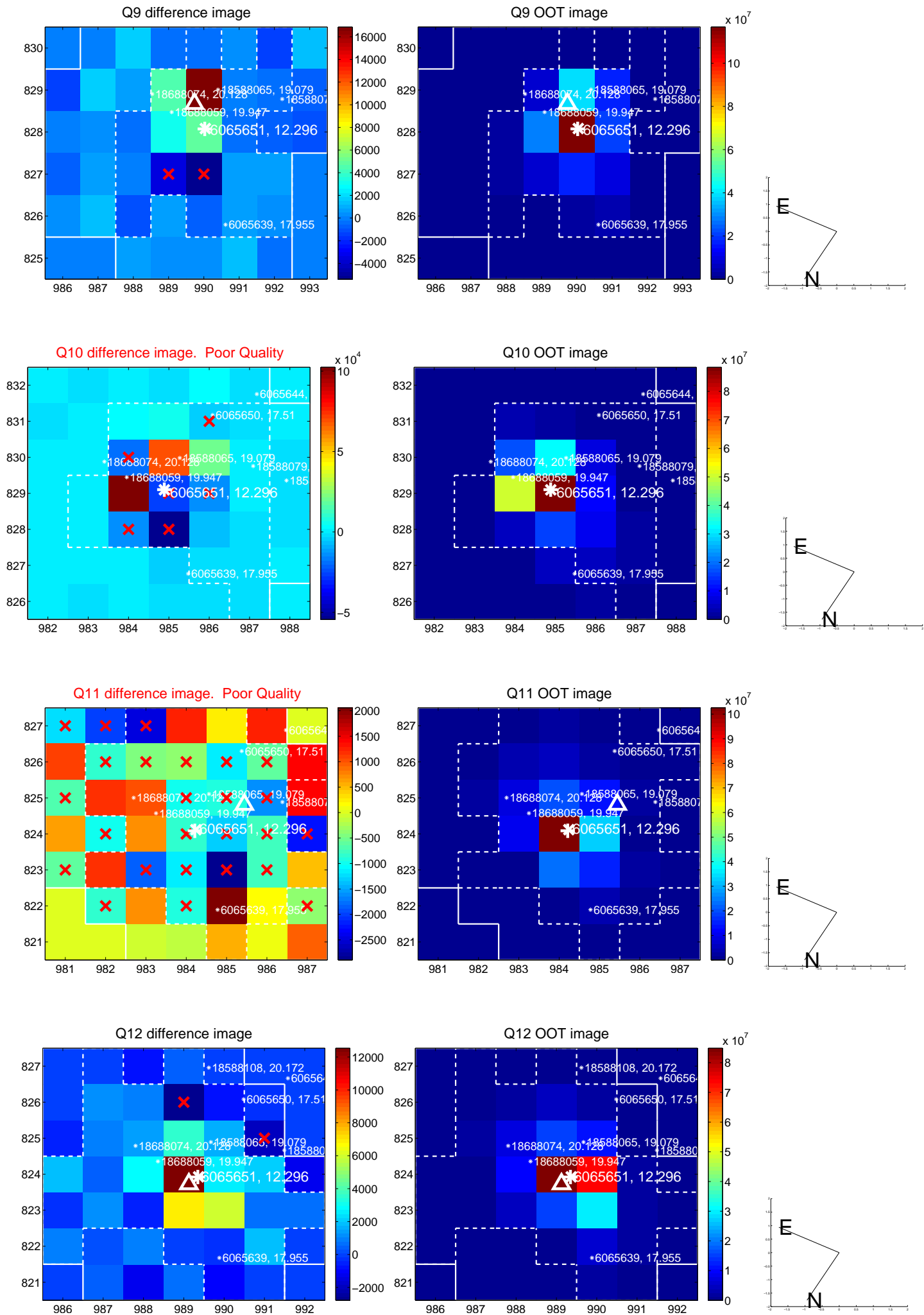
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



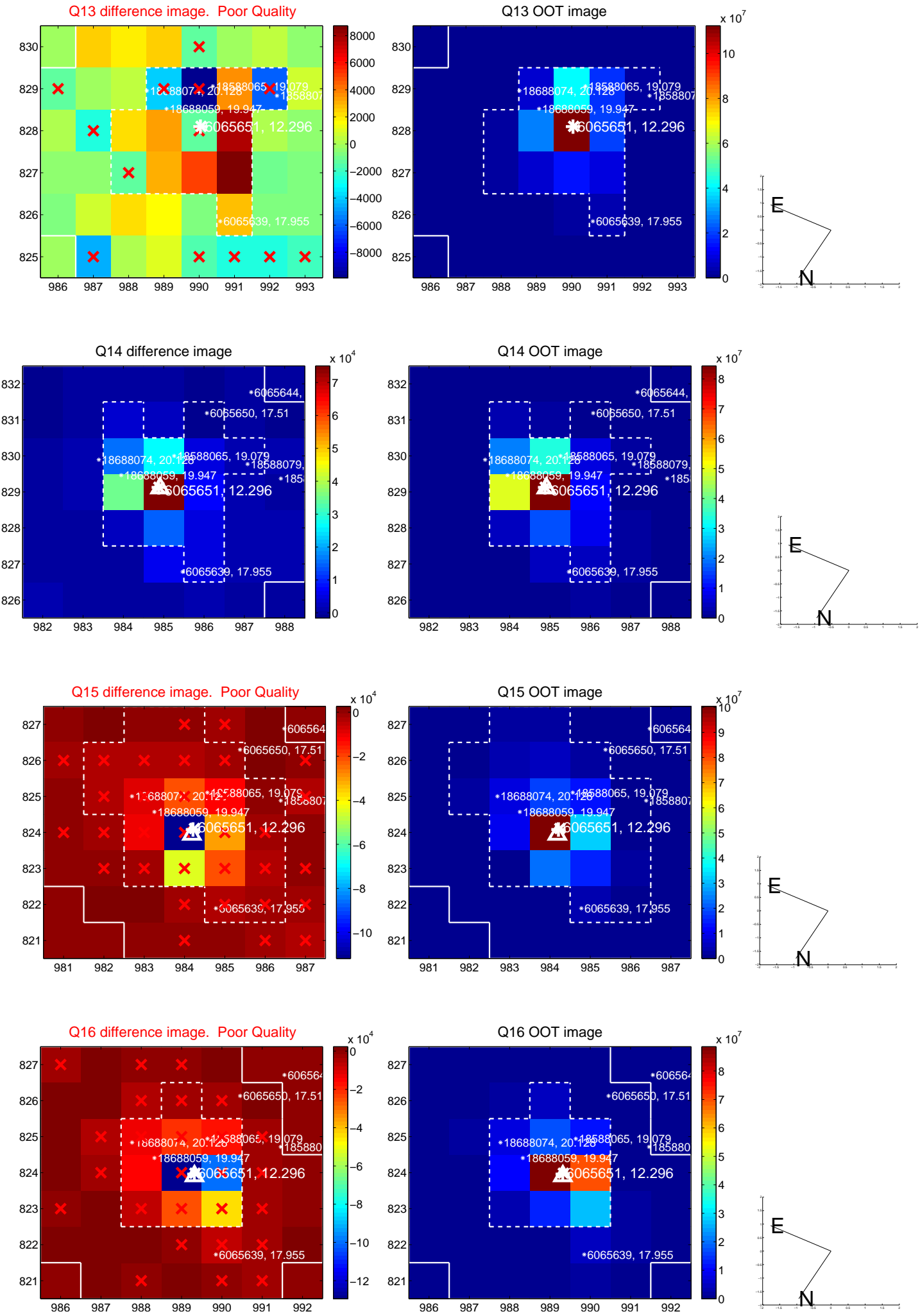
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



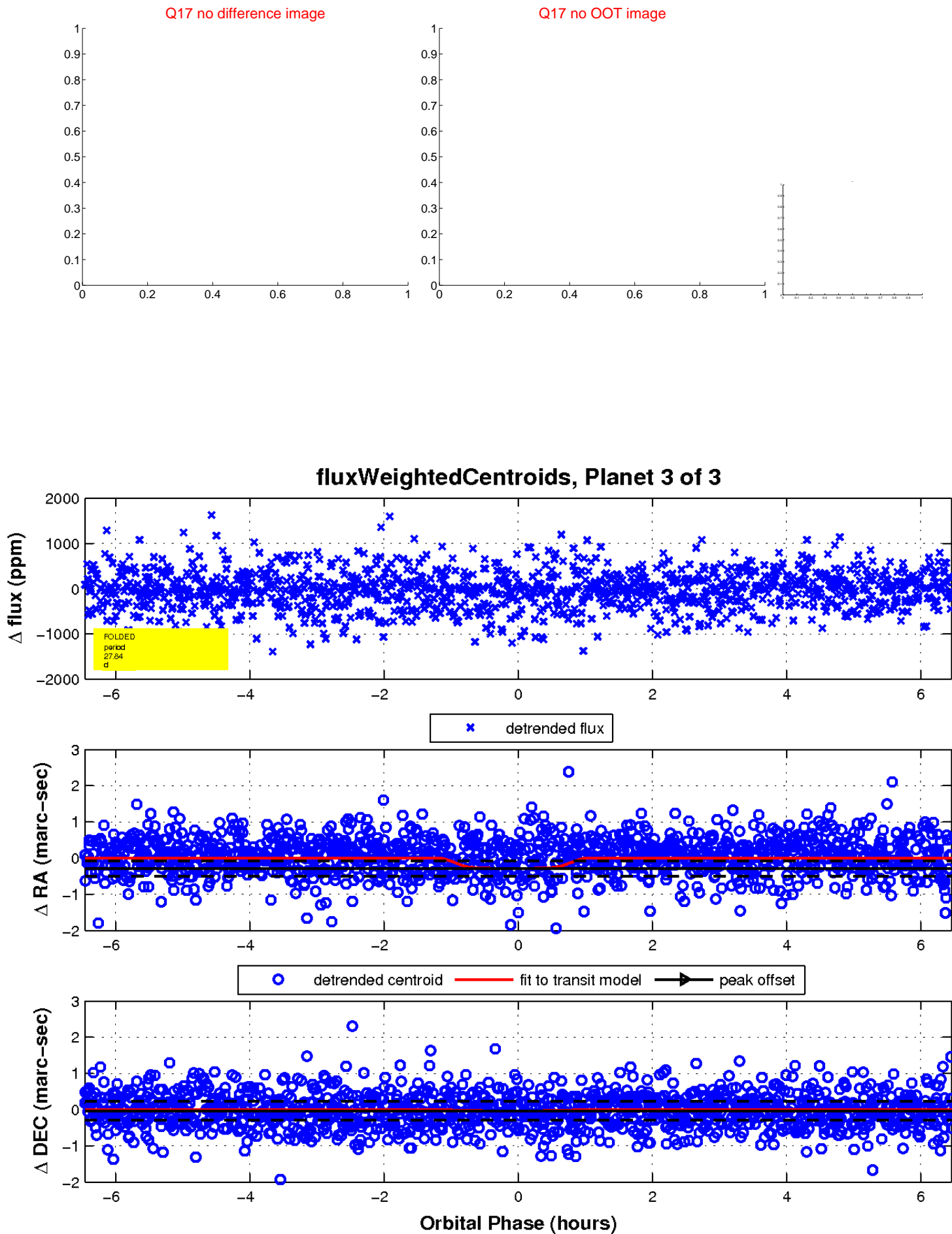
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

