

KIC 007836330

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})
007836330-01	OBS	No	0.657331	131.860921	143.5	1.945	15.4	7.9	0.57	5168	0.81	1372.15
007836330-02	OBS	No	0.655174	132.084111	1044.5	2.000	11.4	-1.0	0.57	5168	1.85	1378.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007836330-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
007836330-02	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_NOFITS

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

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

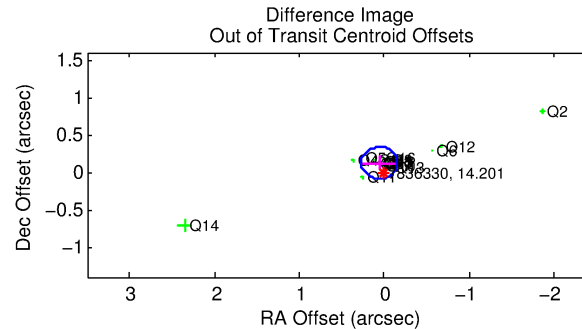
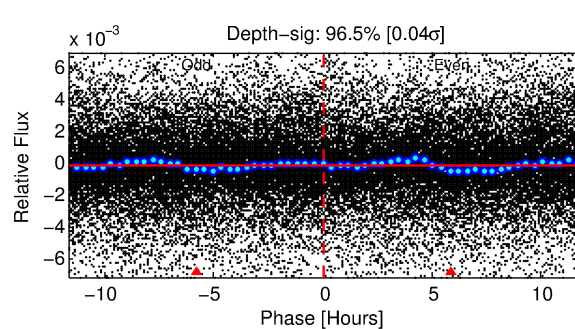
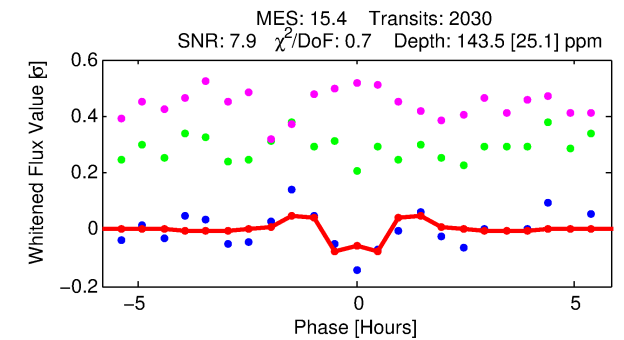
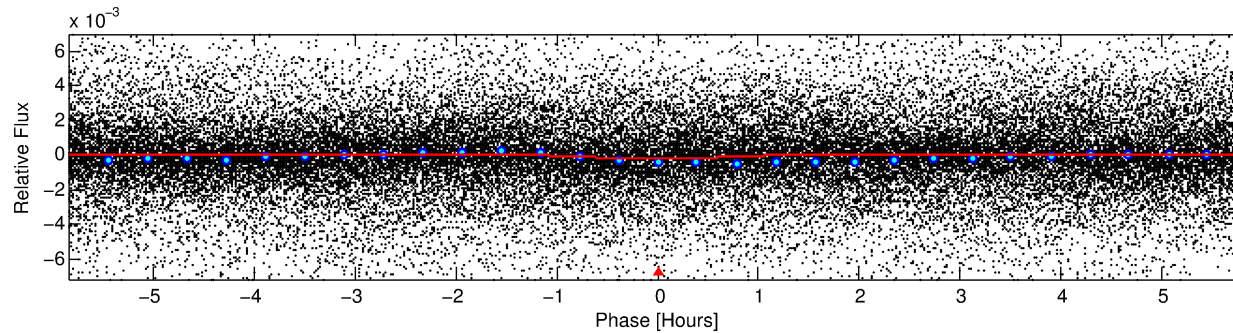
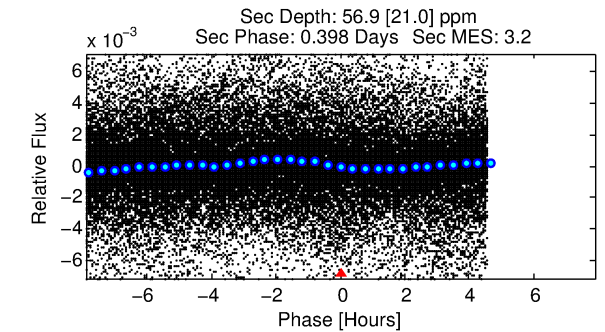
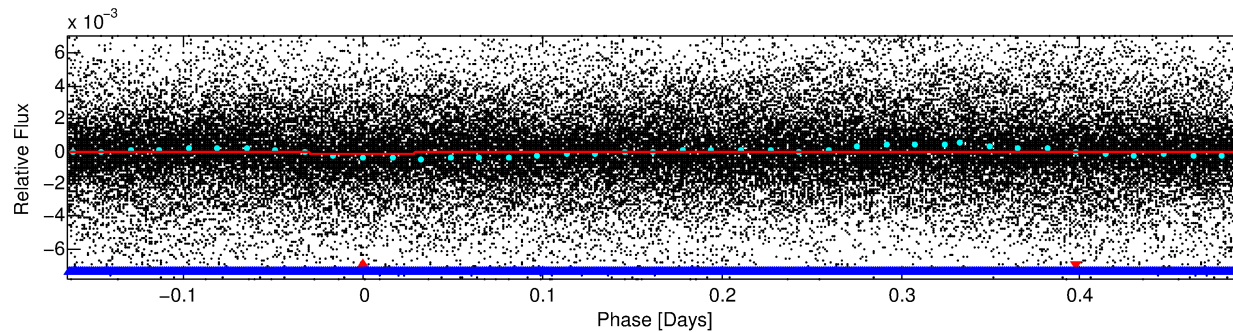
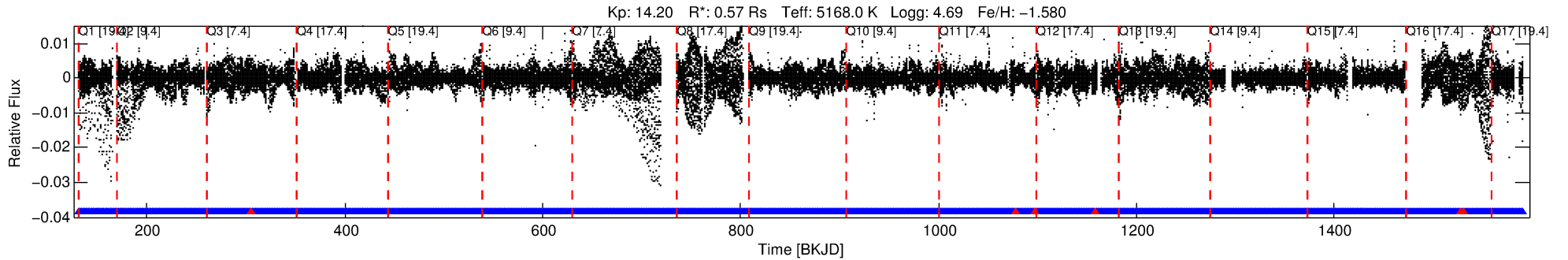
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007836330-01

No Significant Match Found

DV One-Page Summary

KIC: 7836330 Candidate: 1 of 2 Period: 0.657 d



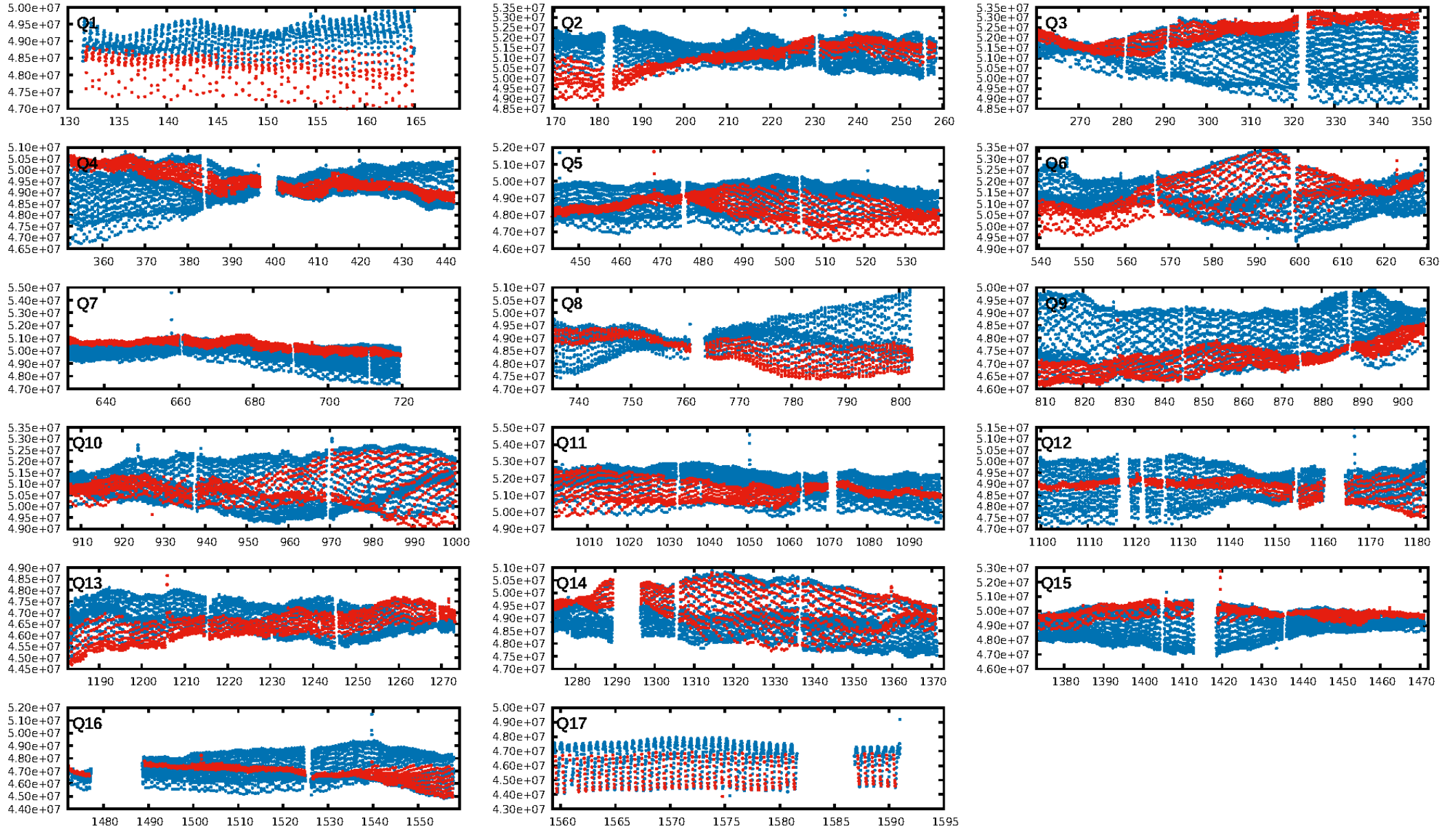
DV Fit Results:

Period = 0.65733 [0.00001] d
Epoch = 131.8609 [0.0014] BKJD
Rp/R* = 0.0129 [0.0046]
a/R* = 1.54 [1.50]
b = 0.90 [0.38]
Seff = 1372.15 [218.06]
Teff = 1552 [62] K
Rp = 0.81 [0.29] Re
a = 0.0123 [0.0007] AU
Ag = 7.36 [5.93] [1.07σ]
Teffp = 3952 [802] K [2.98σ]

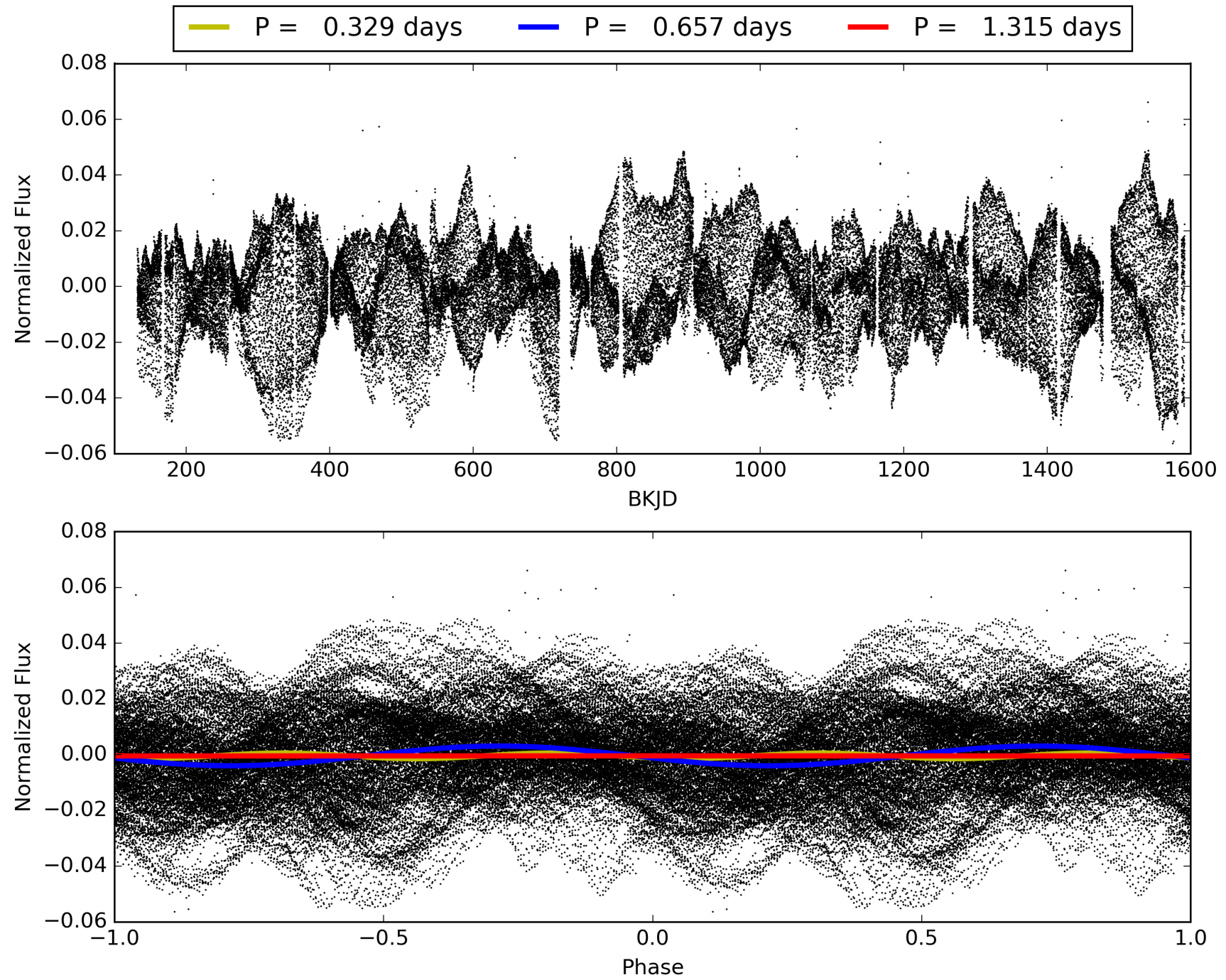
DV Diagnostic Results:

ShortPeriod-sig: 1.5% [0.02σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1934/1940]
GhostDiagnostic-chr: 0.6476
Centroid-sig: 38.6%
Centroid-so: 0.625 arcsec [1.58σ]
OotOffset-rm: 0.135 arcsec [1.91σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 0.088 arcsec [0.76σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.76 [13/17]
DiffImageOverlap-fno: 0.00 [0/17]

TCE 007836330-01, PDC Light Curves

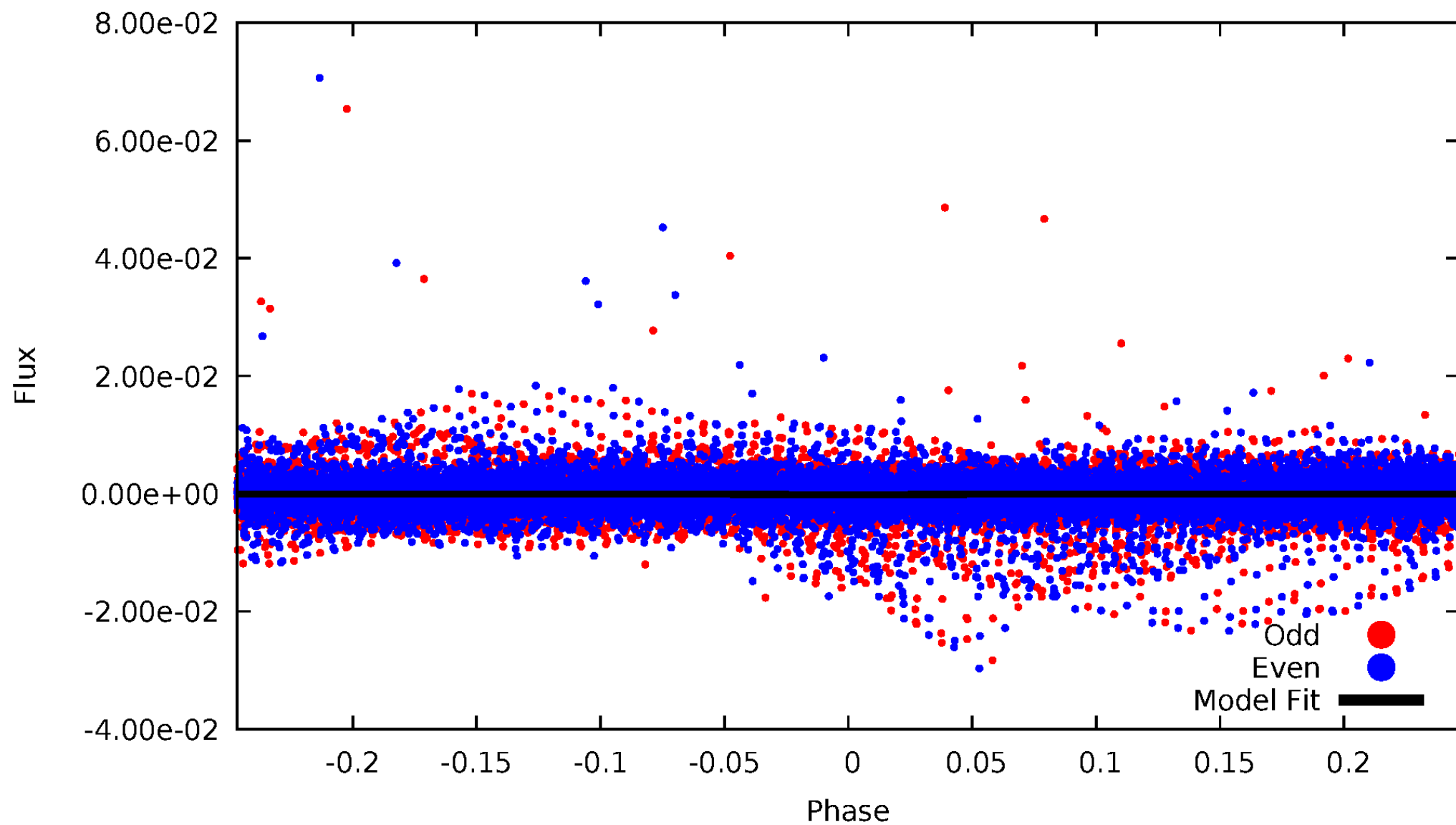


TCE 007836330-01



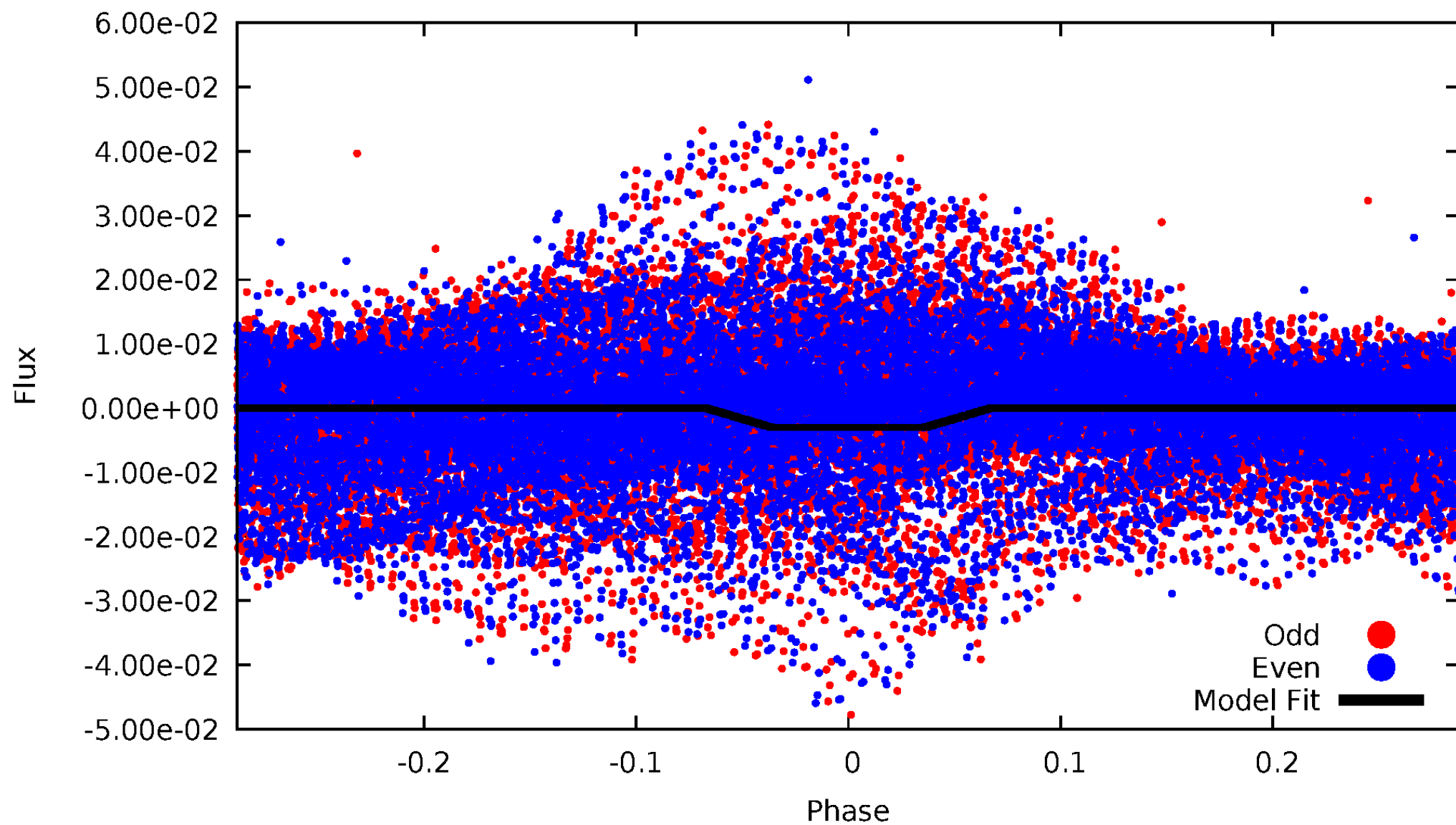
DV Odd/Even

TCE 007836330-01



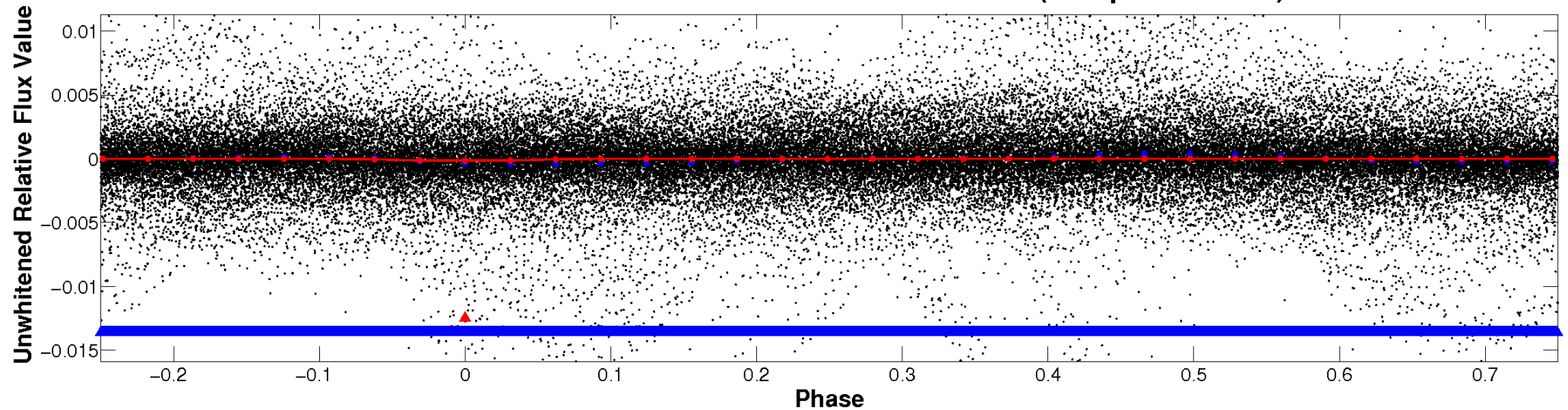
ALT Odd/Even

TCE 007836330-01

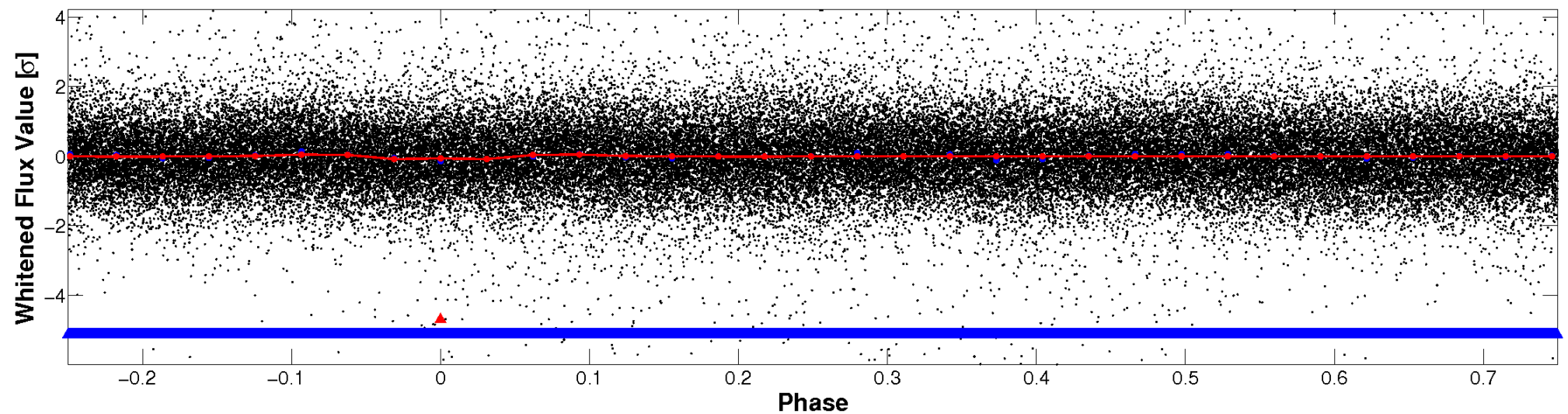


Non-Whitened Vs. Whitened Light Curve

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

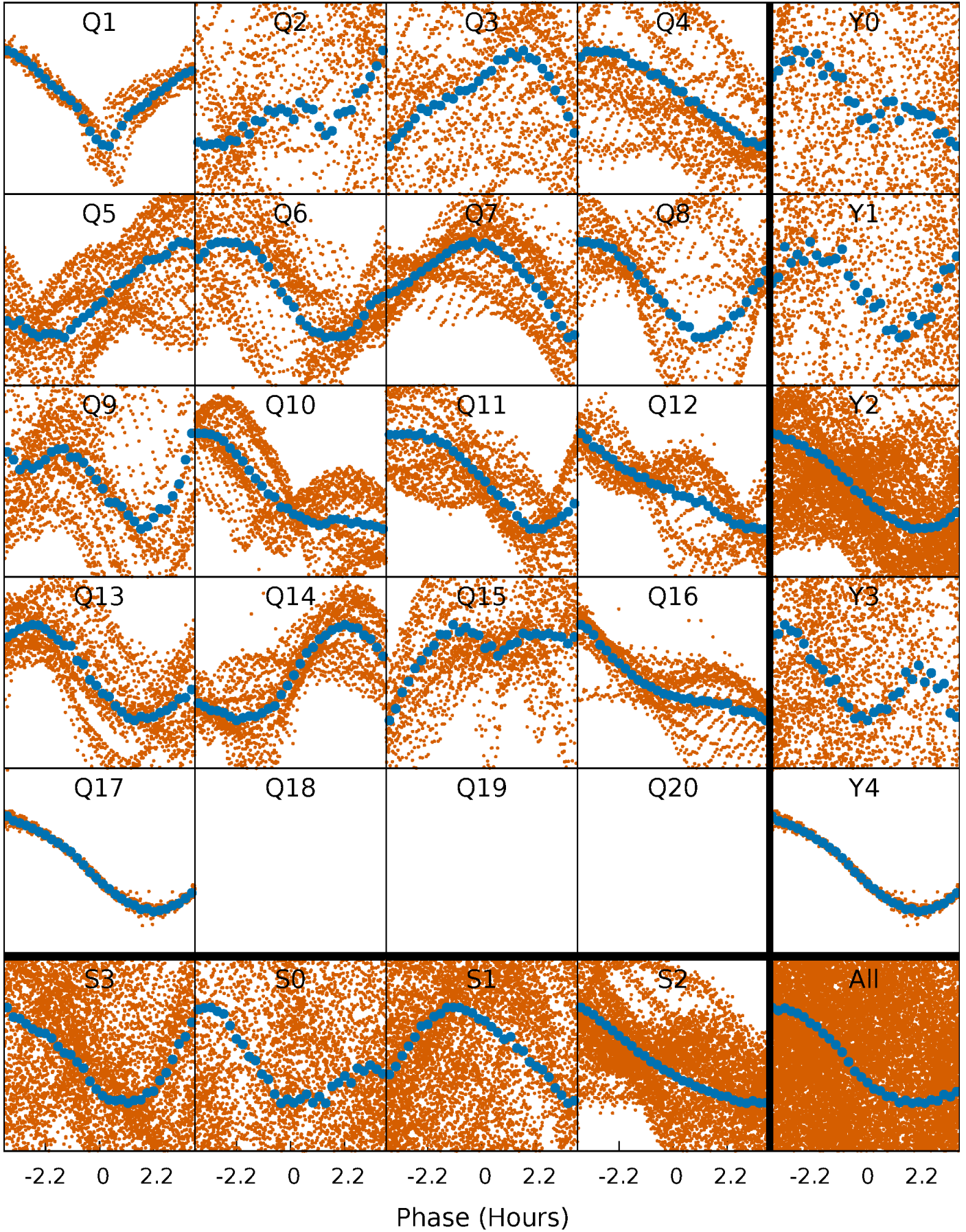


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



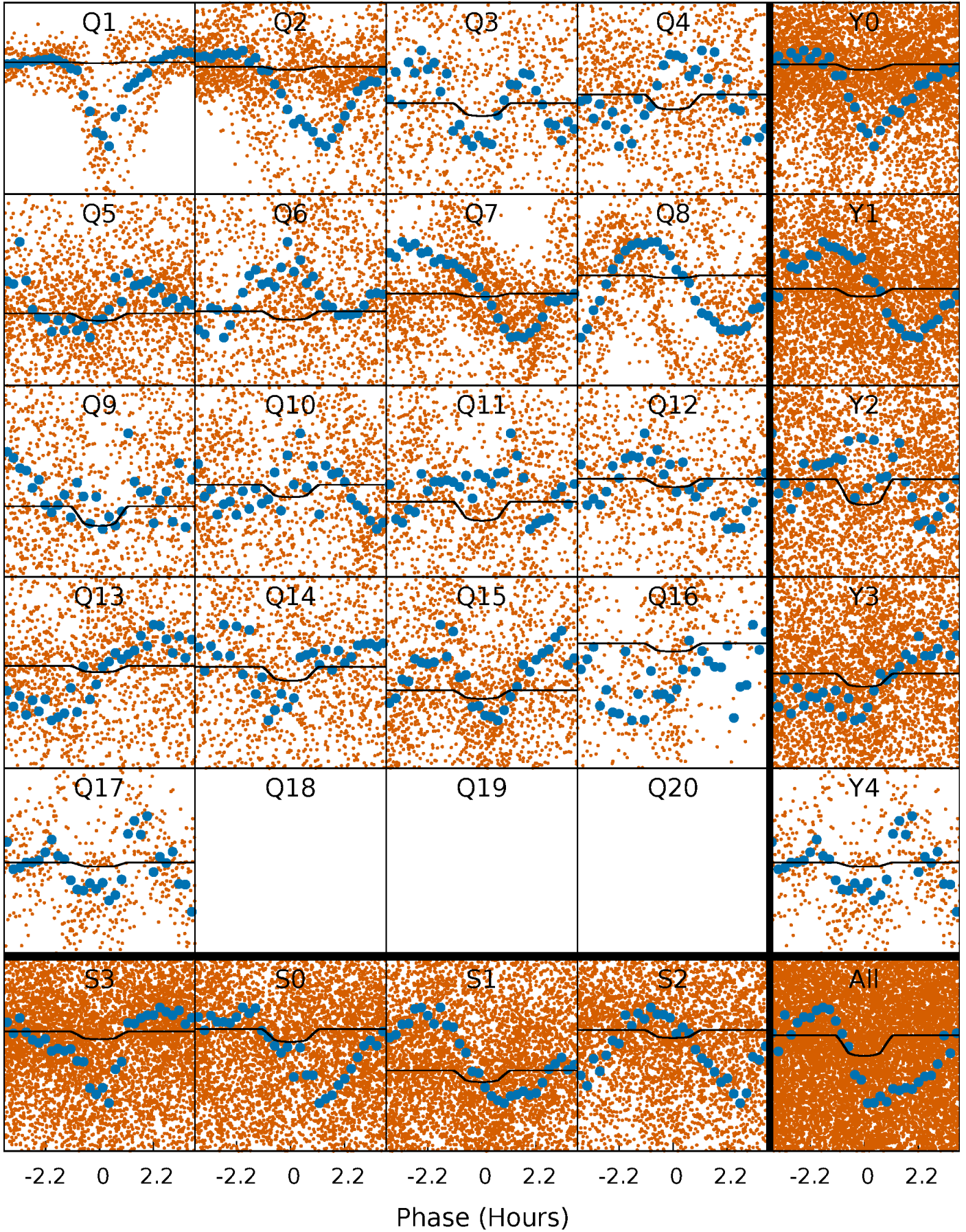
PDC Quarter-Phased Transit Curves

TCE 007836330-01 P= 0.657331 Days $T_0=131.860921$ (BKJD)



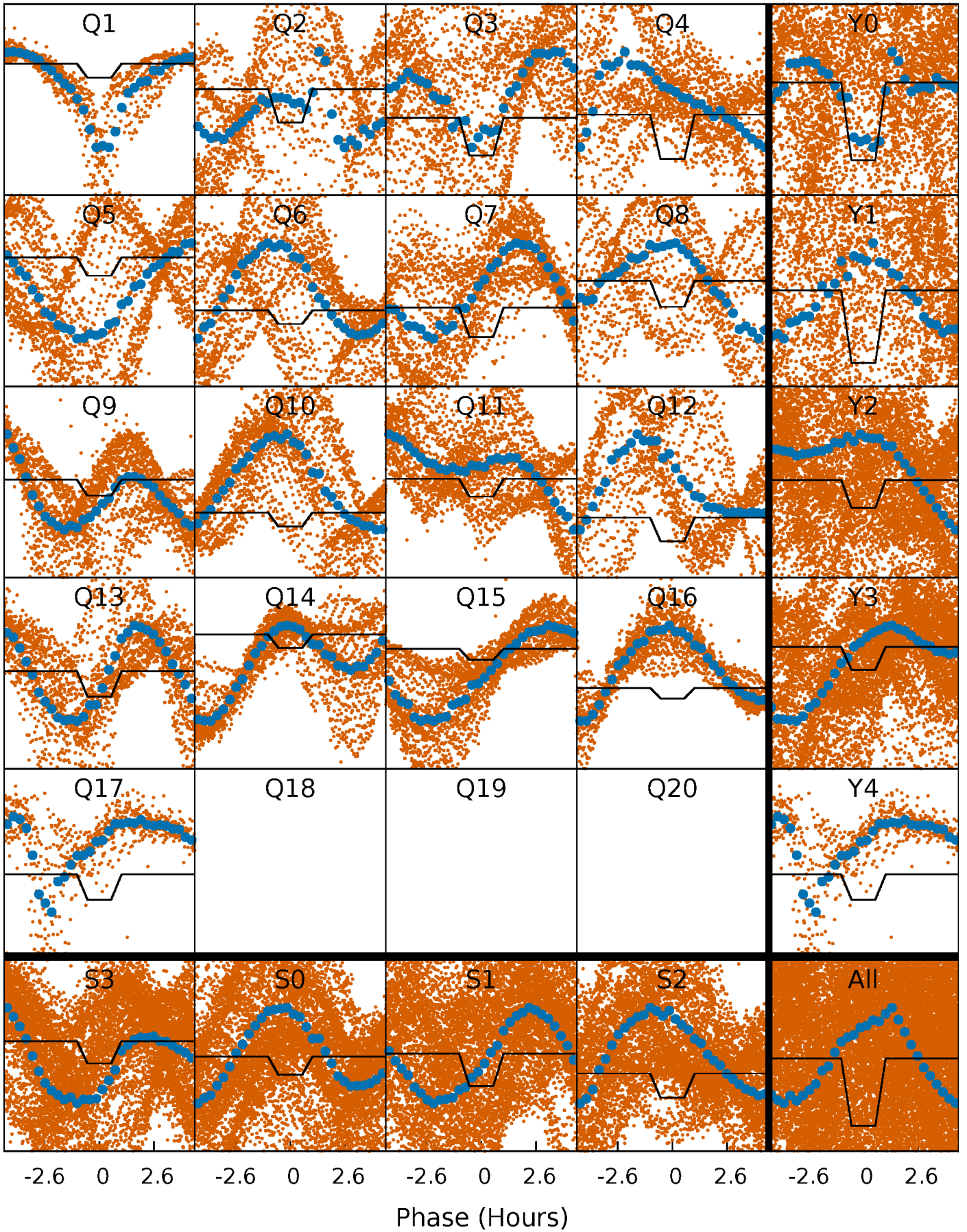
DV Quarter-Phased Transit Curves

TCE 007836330-01 P= 0.657331 Days $T_0=131.860921$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

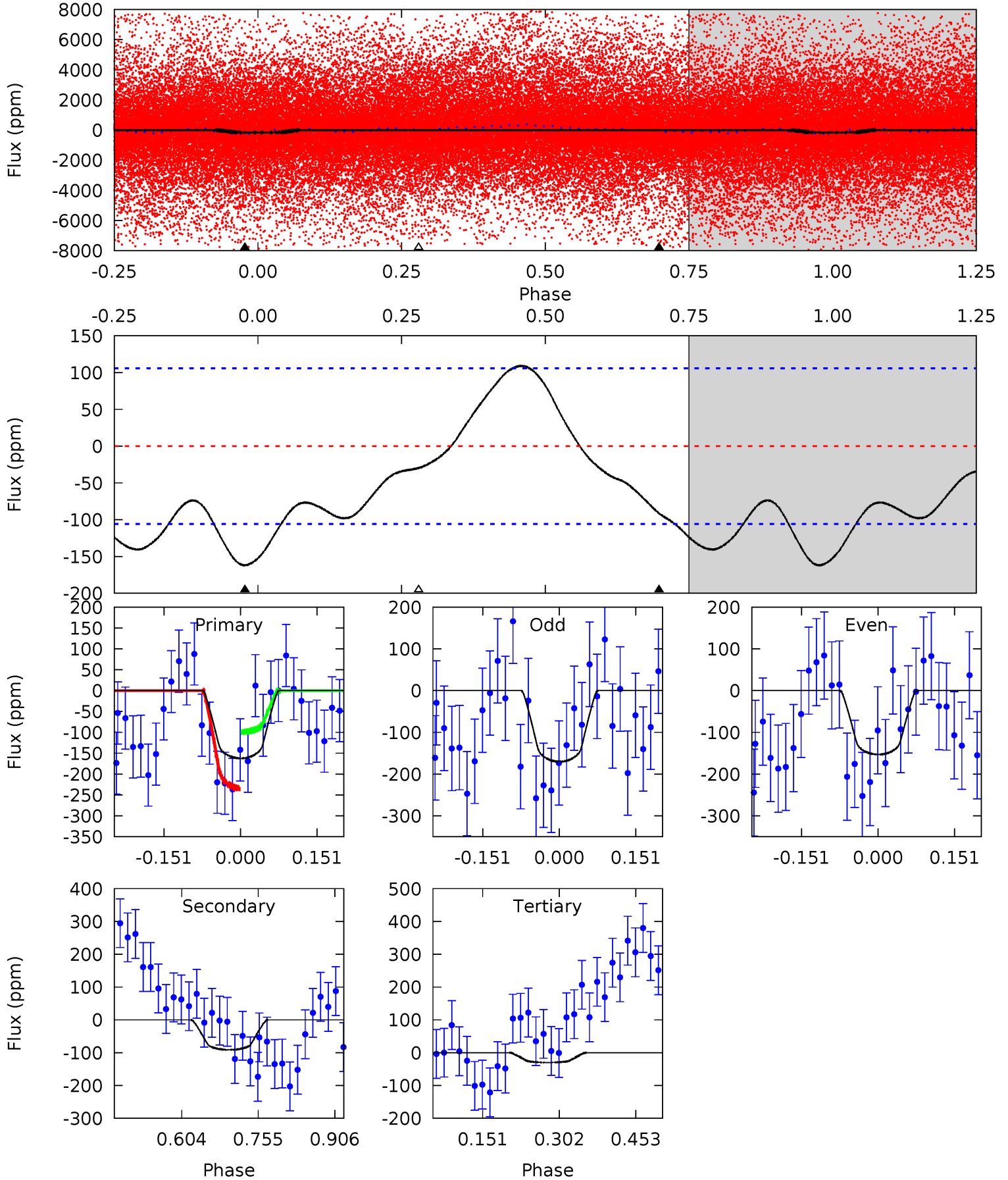
TCE 007836330-01 P= 0.657226 Days $T_0=131.864107$ (BKJD)



DV Model-Shift Uniqueness Test

007836330-01, P = 0.657331 Days, E = 131.203590 Days

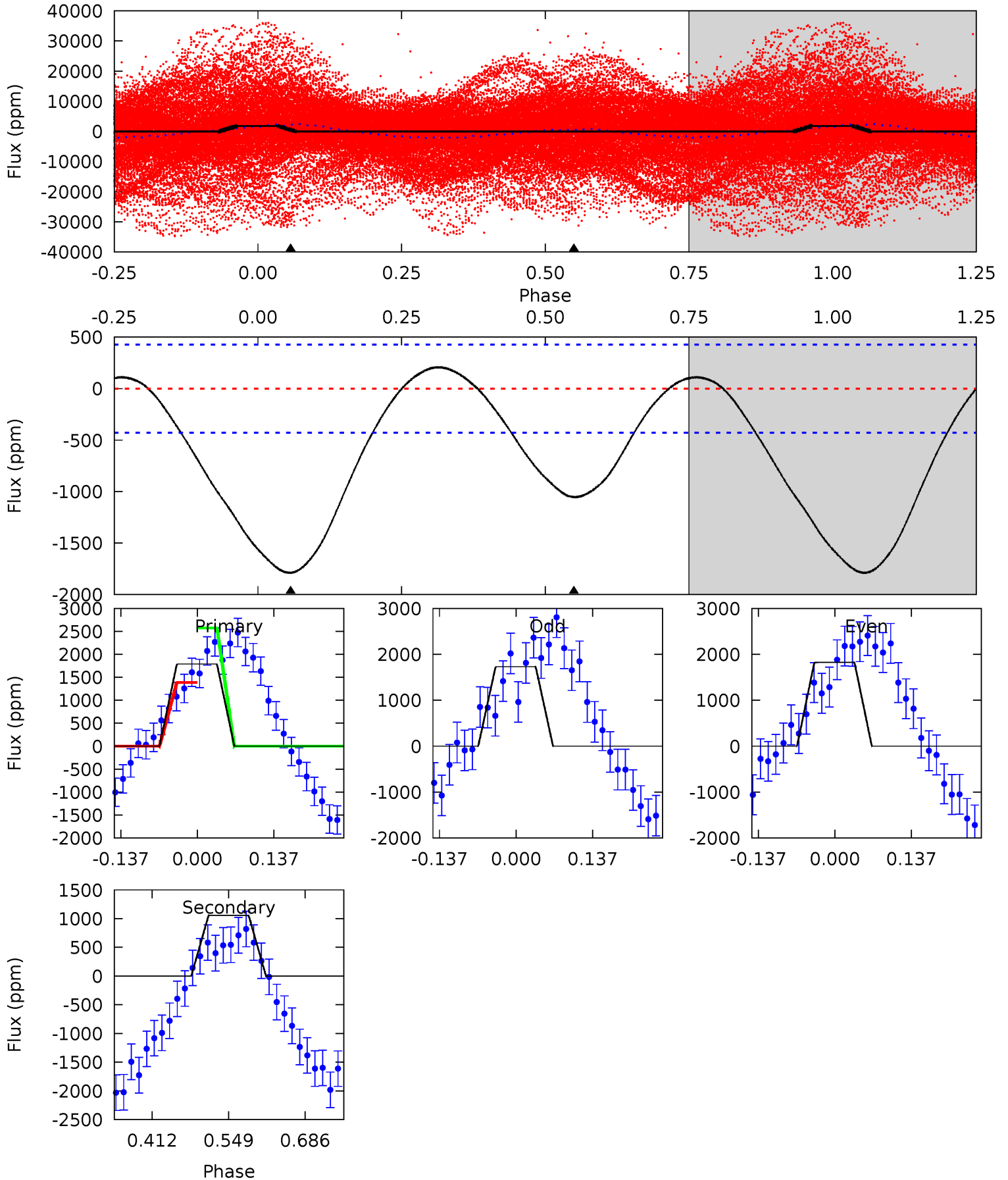
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.86	3.86	1.27	0	4.48	1.44	2.85	5.60	6.86	2.60	3.86	0.36	1.65	0.40	2.98



Alt Model-Shift Uniqueness Test

007836330-01, P = 0.657226 Days, E = 131.206881 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.8	11.1	0	0	4.50	1.49	2.83	18.8	18.8	11.1	11.1	0.49	0.78	0.10	6.54



Stellar Parameters For KIC 007836330

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5168^{+155}_{-170}	$4.687^{+0.052}_{-0.024}$	$-1.580^{+0.300}_{-0.250}$	$0.572^{+0.027}_{-0.034}$	$0.580^{+0.039}_{-0.018}$	$4.369^{+0.854}_{-0.400}$
	+3%/-3%	+1%/-1%	+19%/-16%	+5%/-6%	+7%/-3%	+20%/-9%
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 007836330-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-91 ± 24	$0.80^{+0.30}_{-0.28}$	2157^{+70}_{-77}	4498^{+1029}_{-554}	12^{+17}_{-6}
Alt.	-1055 ± 95	$3.42^{+0.32}_{-0.30}$	2159^{+70}_{-82}	4151^{+189}_{-173}	$7.605^{+1.739}_{-1.296}$

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

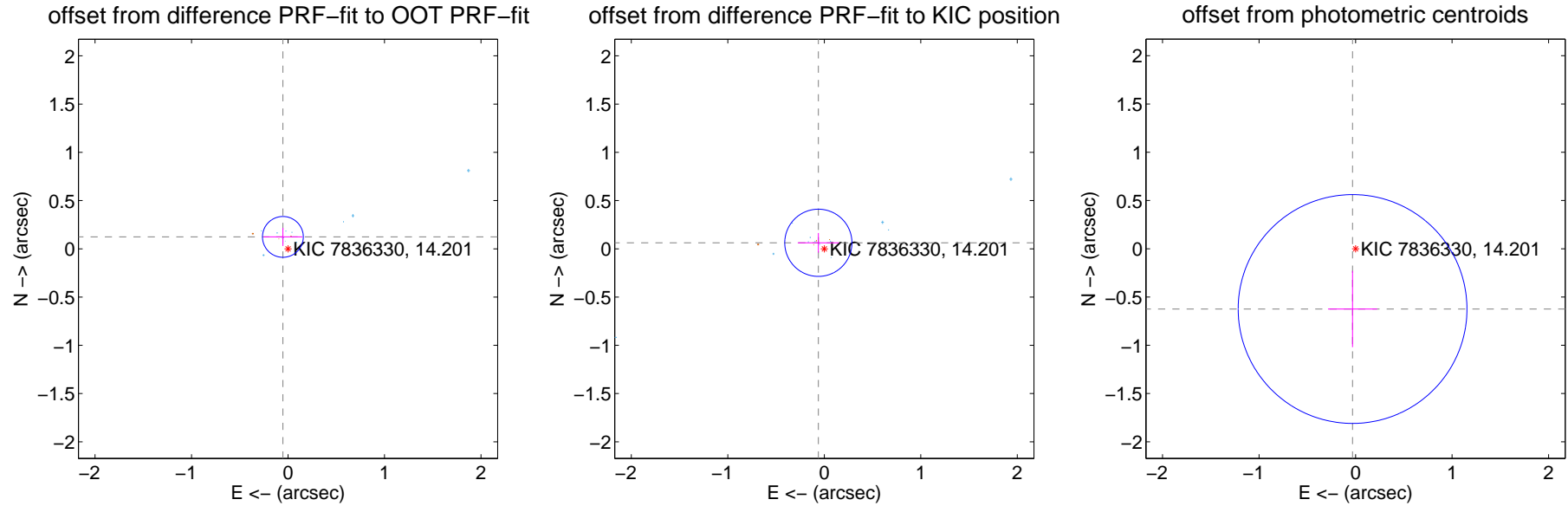
DV Centroid Data

Supplemental centroid analysis for 007836330-01. Kepler magnitude: 14.20. Transit SNR 7.95

There are 13 quarters with good PRF difference image offsets

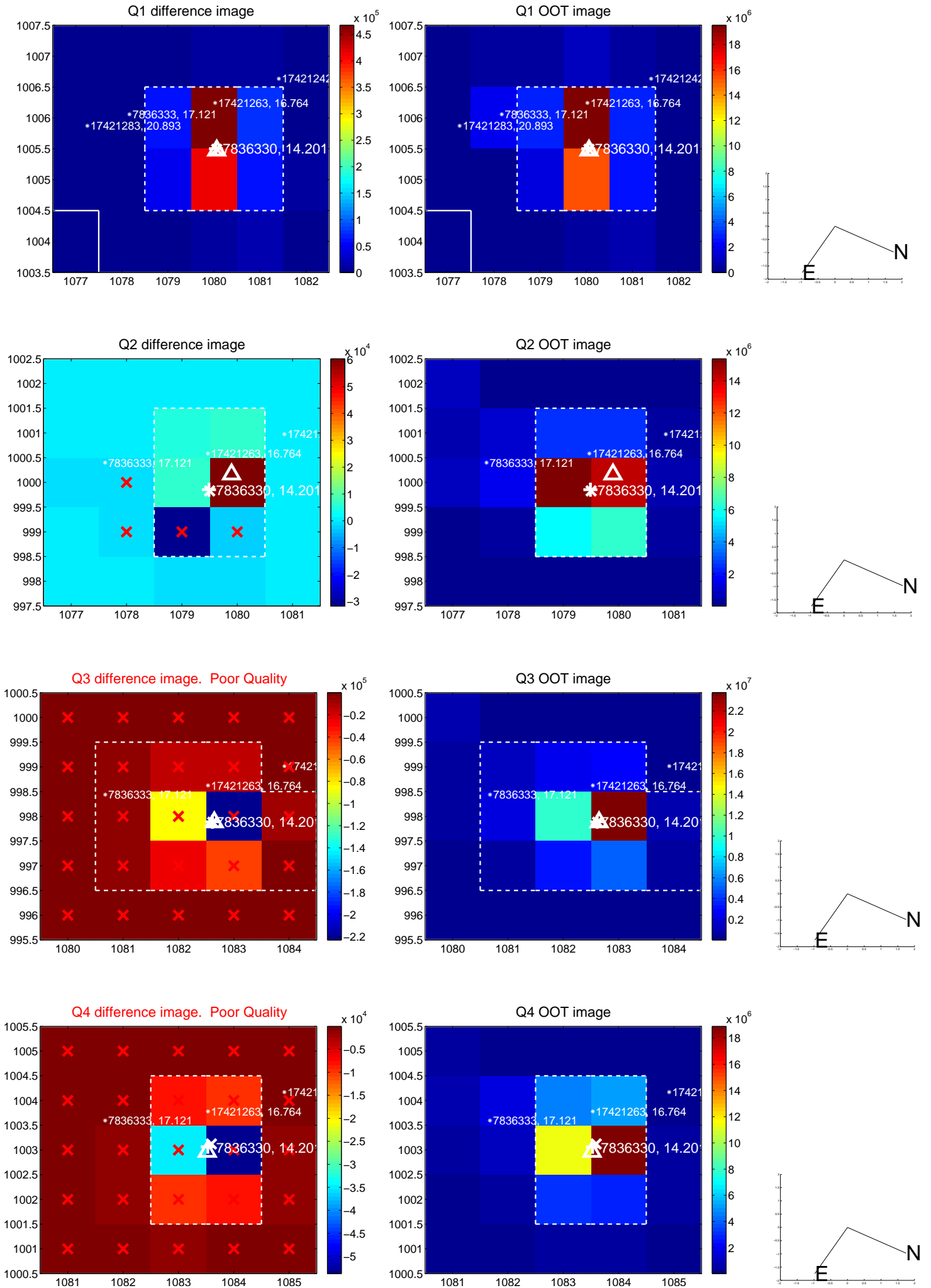
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.135 ± 0.071	1.91	0.053 ± 0.201	0.124 ± 0.094
PRF-fit source offset from KIC position	0.088 ± 0.116	0.76	0.062 ± 0.214	0.062 ± 0.102
photometric centroid source offset	0.63 ± 0.40	1.58	0.03 ± 0.25	-0.62 ± 0.40

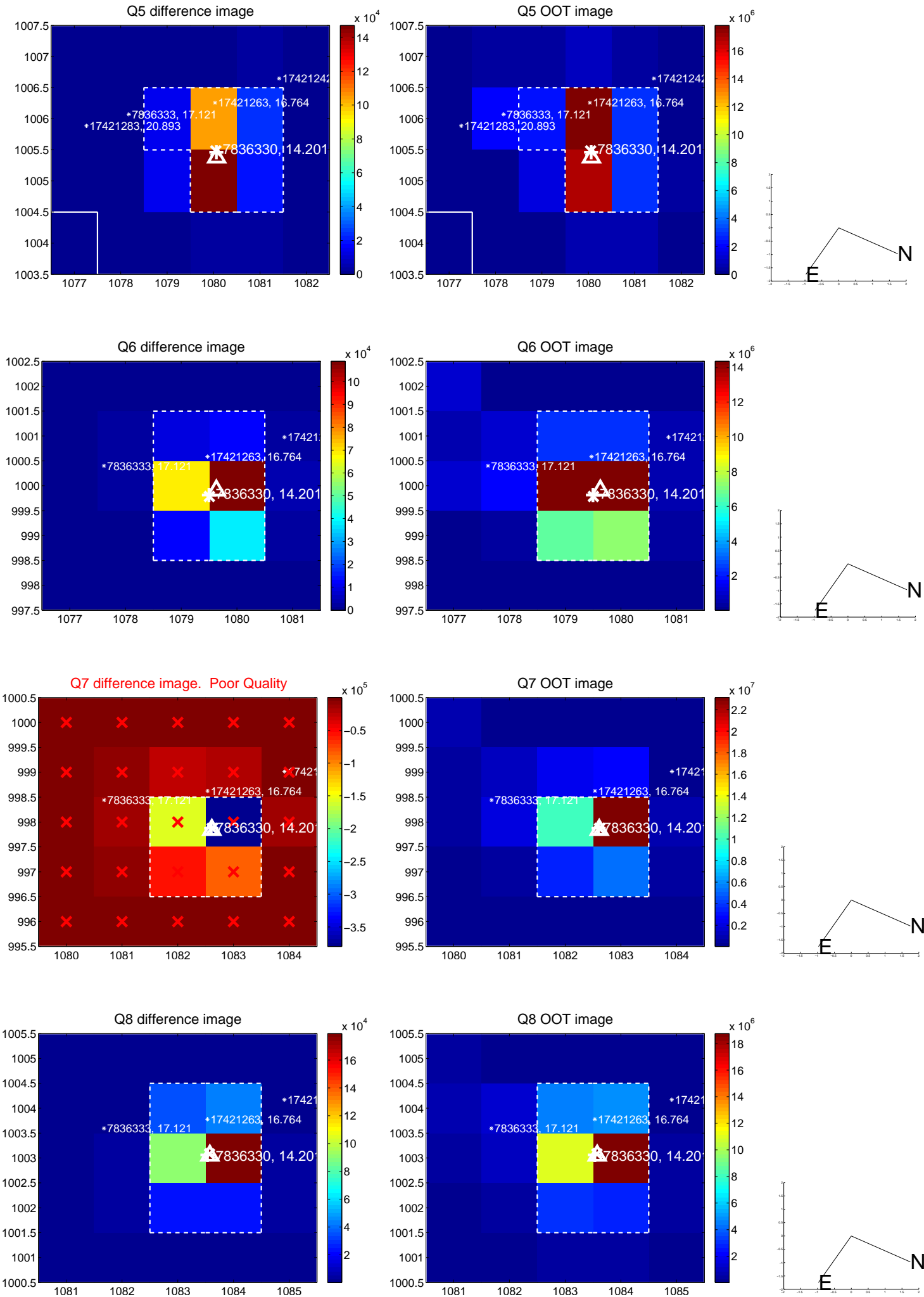


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

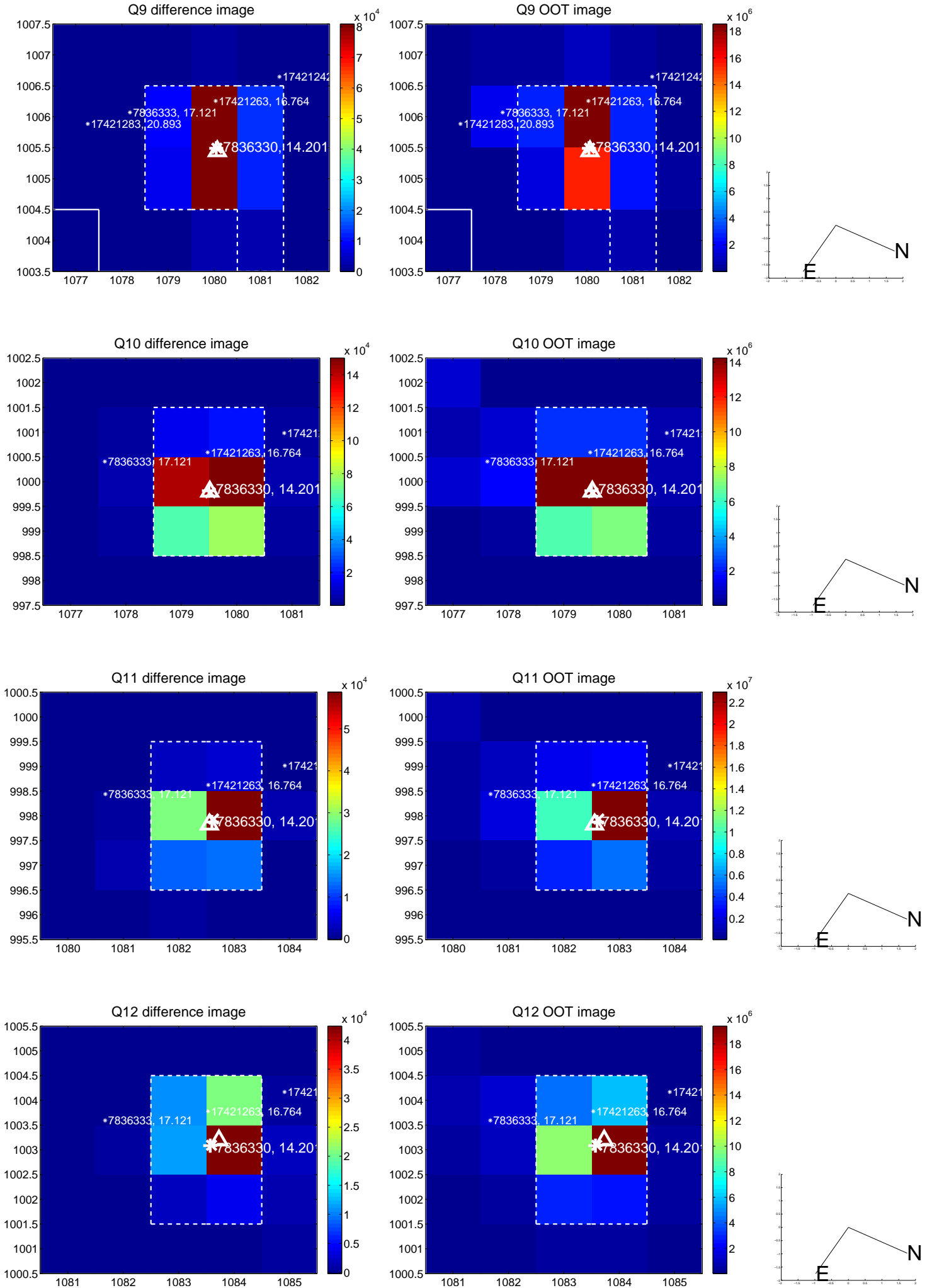
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



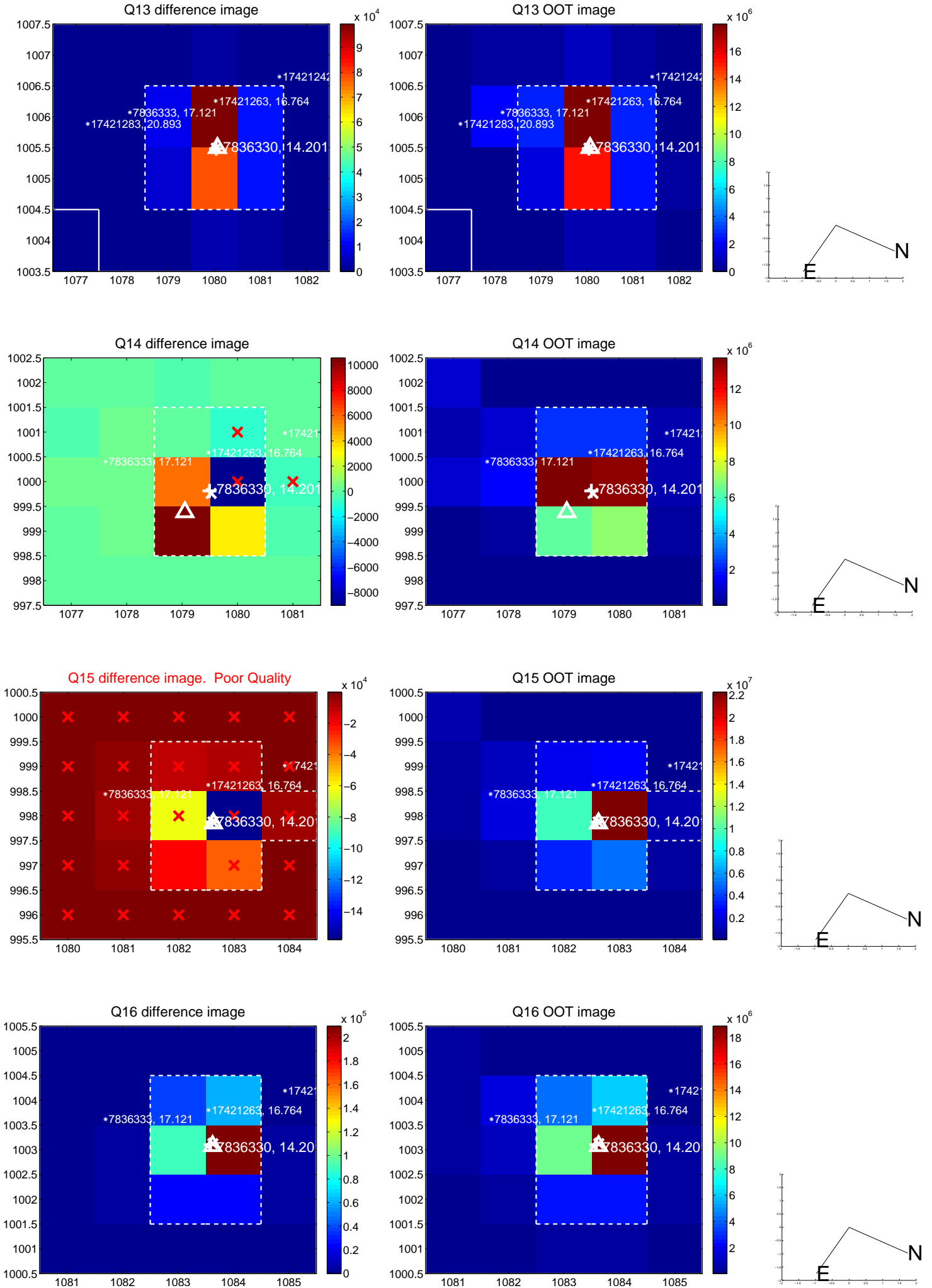
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



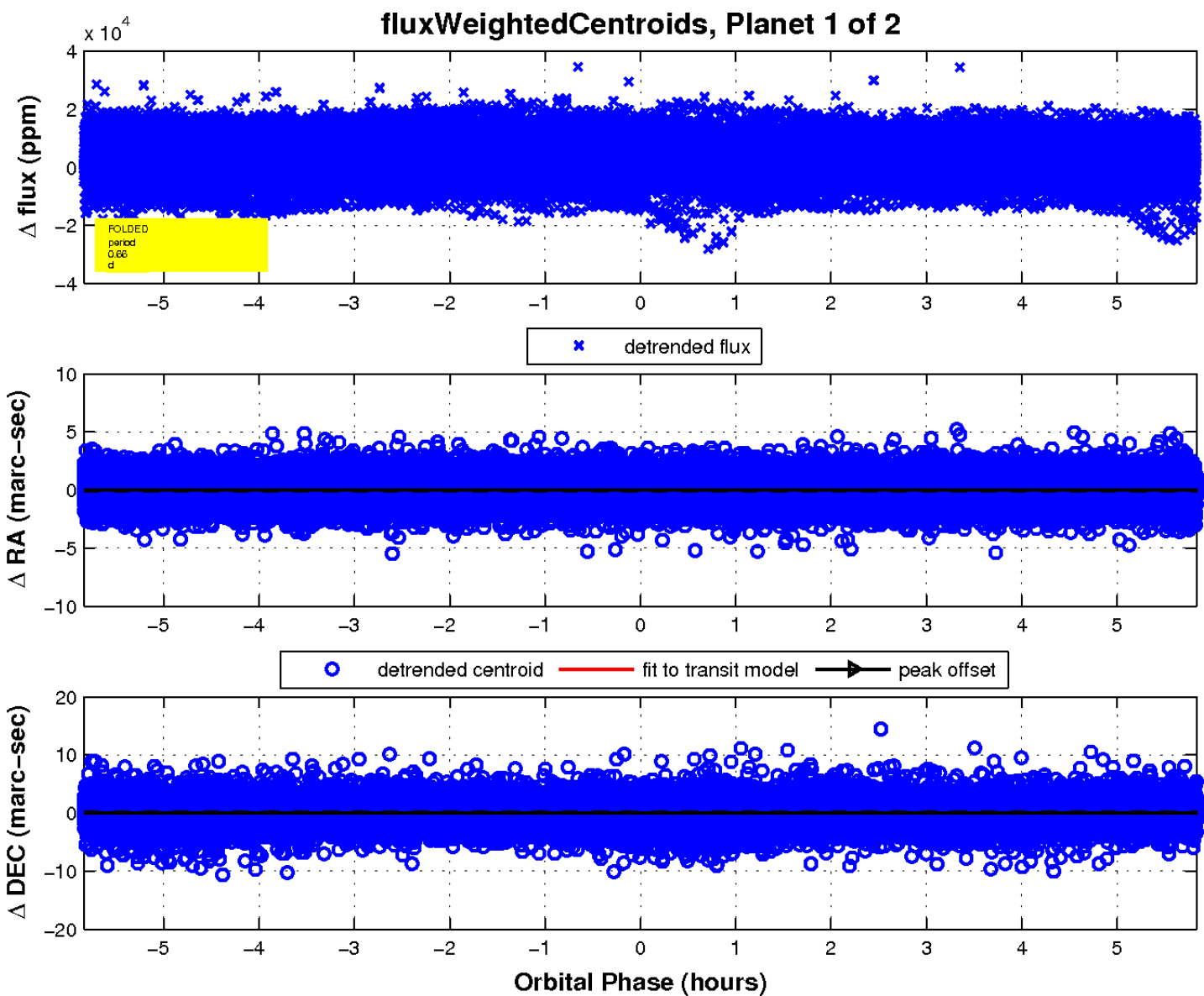
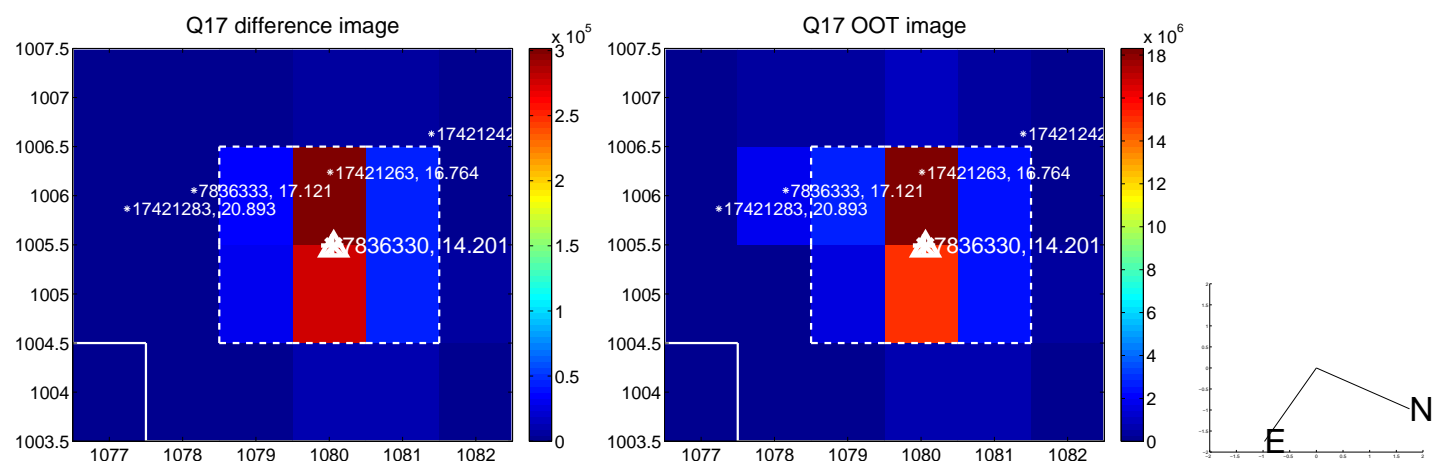
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

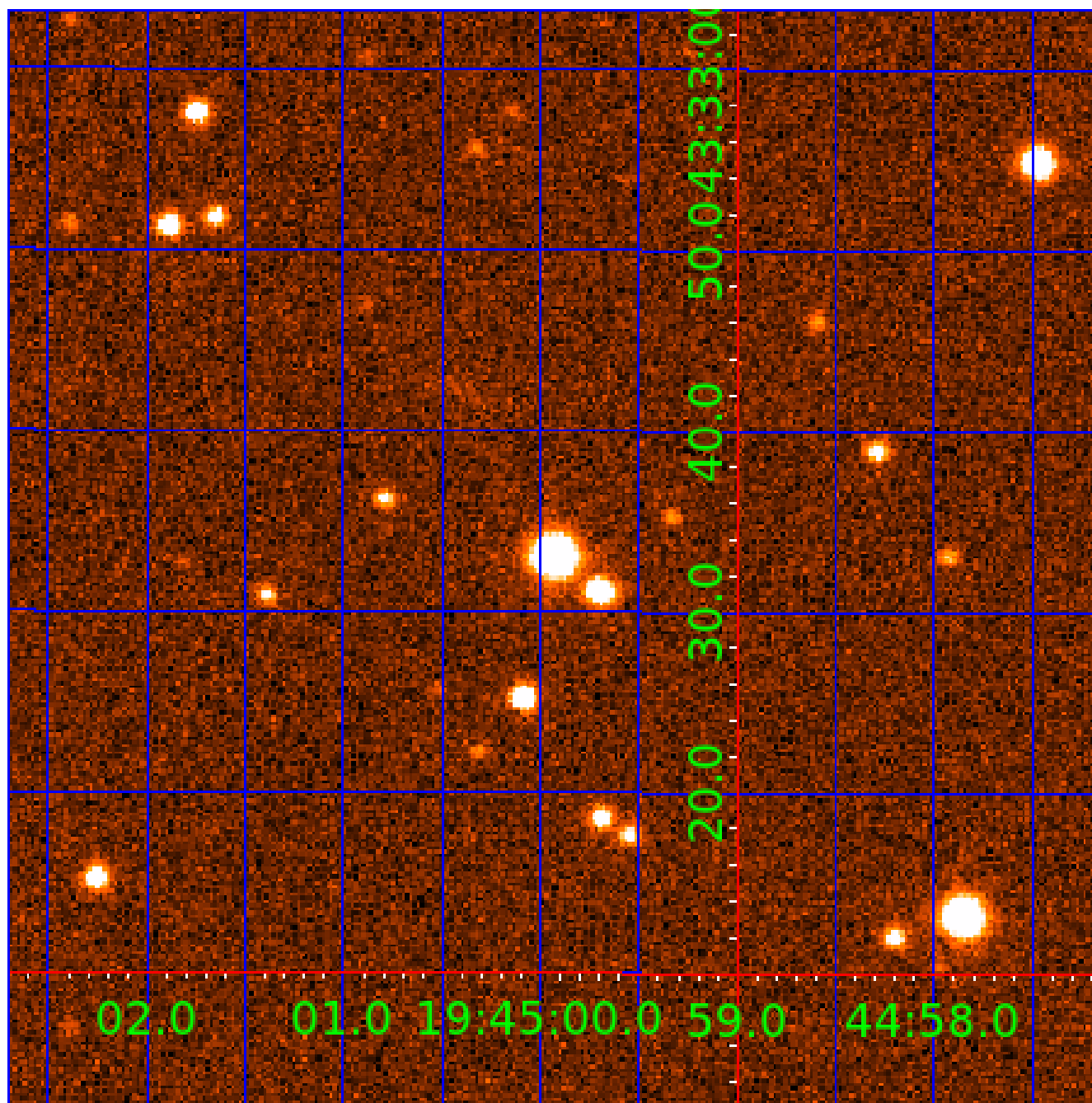


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007836330

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})
007836330-01	OBS	No	0.657331	131.860921	143.5	1.945	15.4	7.9	0.57	5168	0.81	1372.15
007836330-02	OBS	No	0.655174	132.084111	1044.5	2.000	11.4	-1.0	0.57	5168	1.85	1378.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007836330-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
007836330-02	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_NOFITS

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

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

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

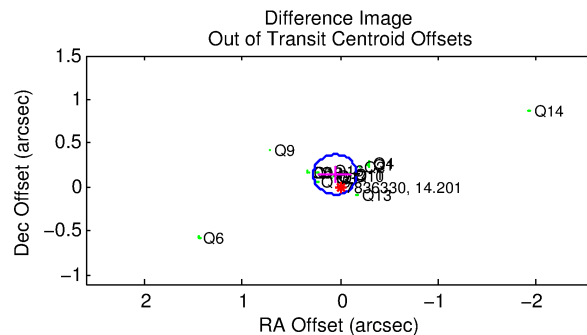
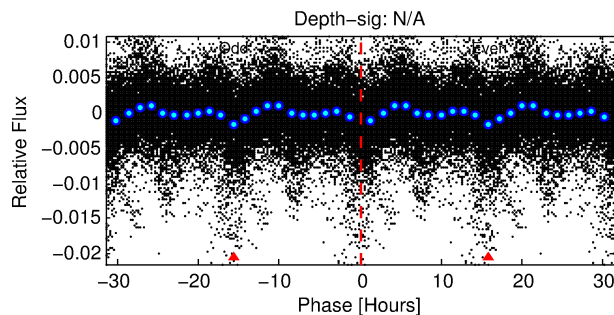
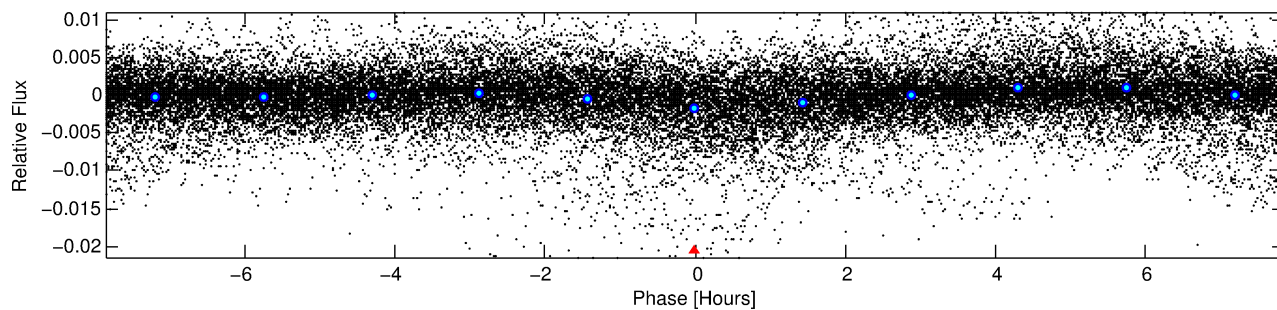
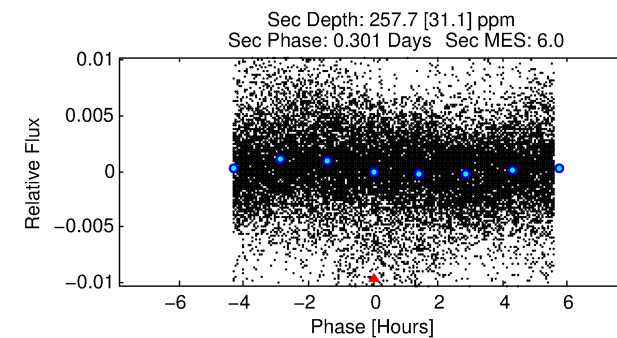
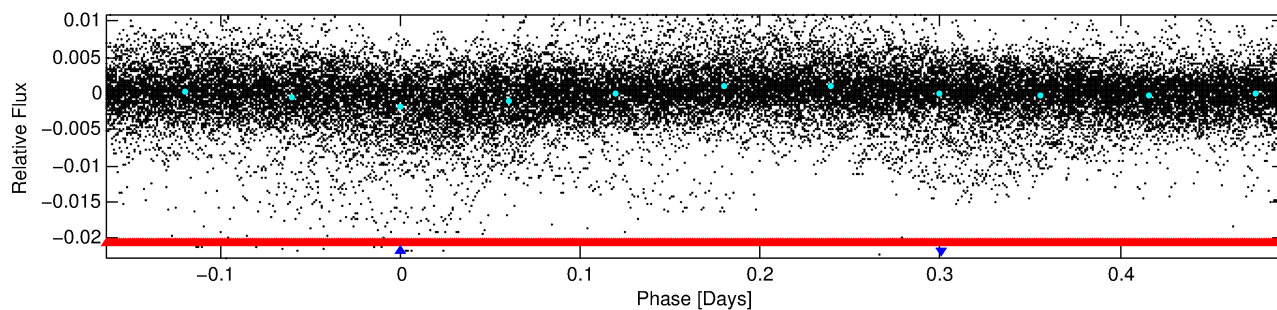
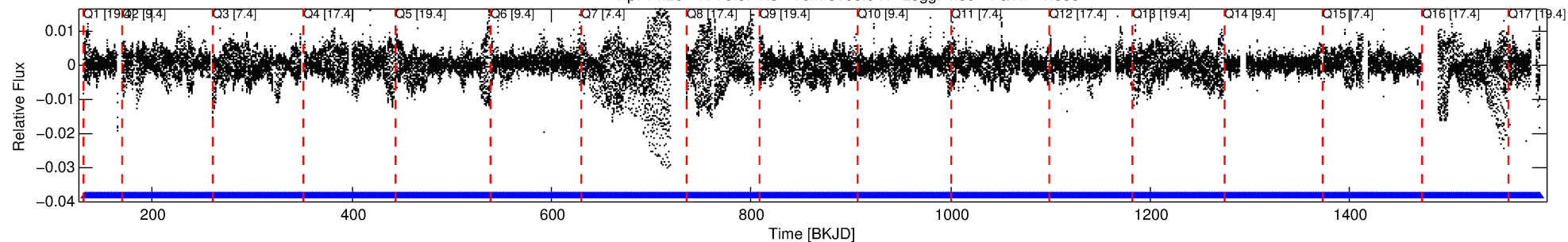
Ephemeris Match Information For 007836330-02

No Significant Match Found

DV One-Page Summary

KIC: 7836330 Candidate: 2 of 2 Period: 0.655 d

Kp: 14.20 R*: 0.57 Rs Teff: 5168.0 K Logg: 4.69 Fe/H: -1.580



TPS TCE Results:

Period = 0.65517 d
Epoch = 132.0841 BKJD

DV fit results are unavailable

DV Diagnostic Results:

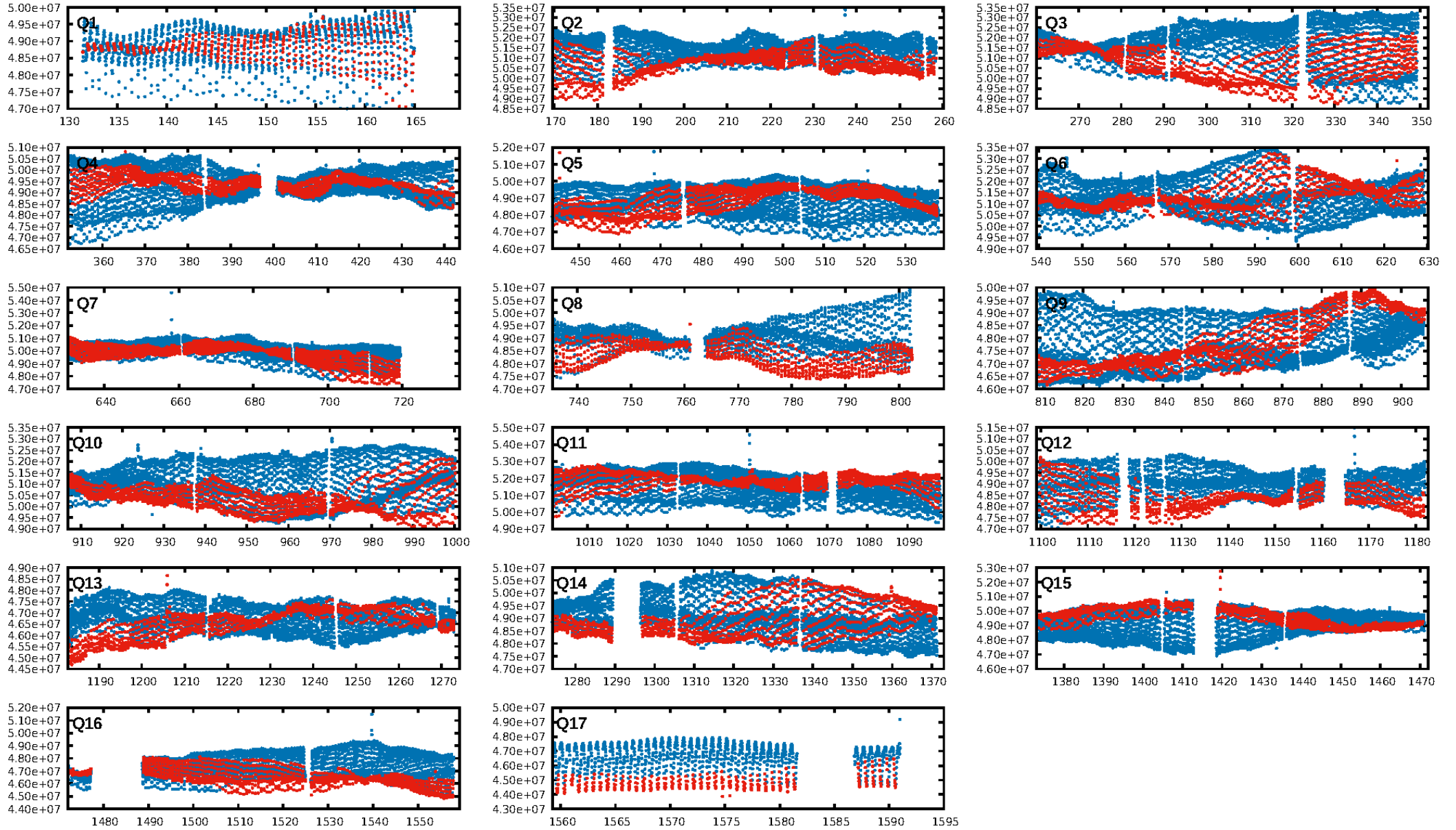
ShortPeriod-sig: N/A
LongPeriod-sig: 1.5% [0.02σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1963/1963]
GhostDiagnostic-chr: 1.369

Centroid-sig: 6.1%
Centroid-so: 0.343 arcsec [85.08σ]
OotOffset-rm: 0.155 arcsec [2.06σ]
KicOffset-rm: 0.114 arcsec [0.96σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.65 [11/17]
DiffImageOverlap-fno: 0.00 [0/17]

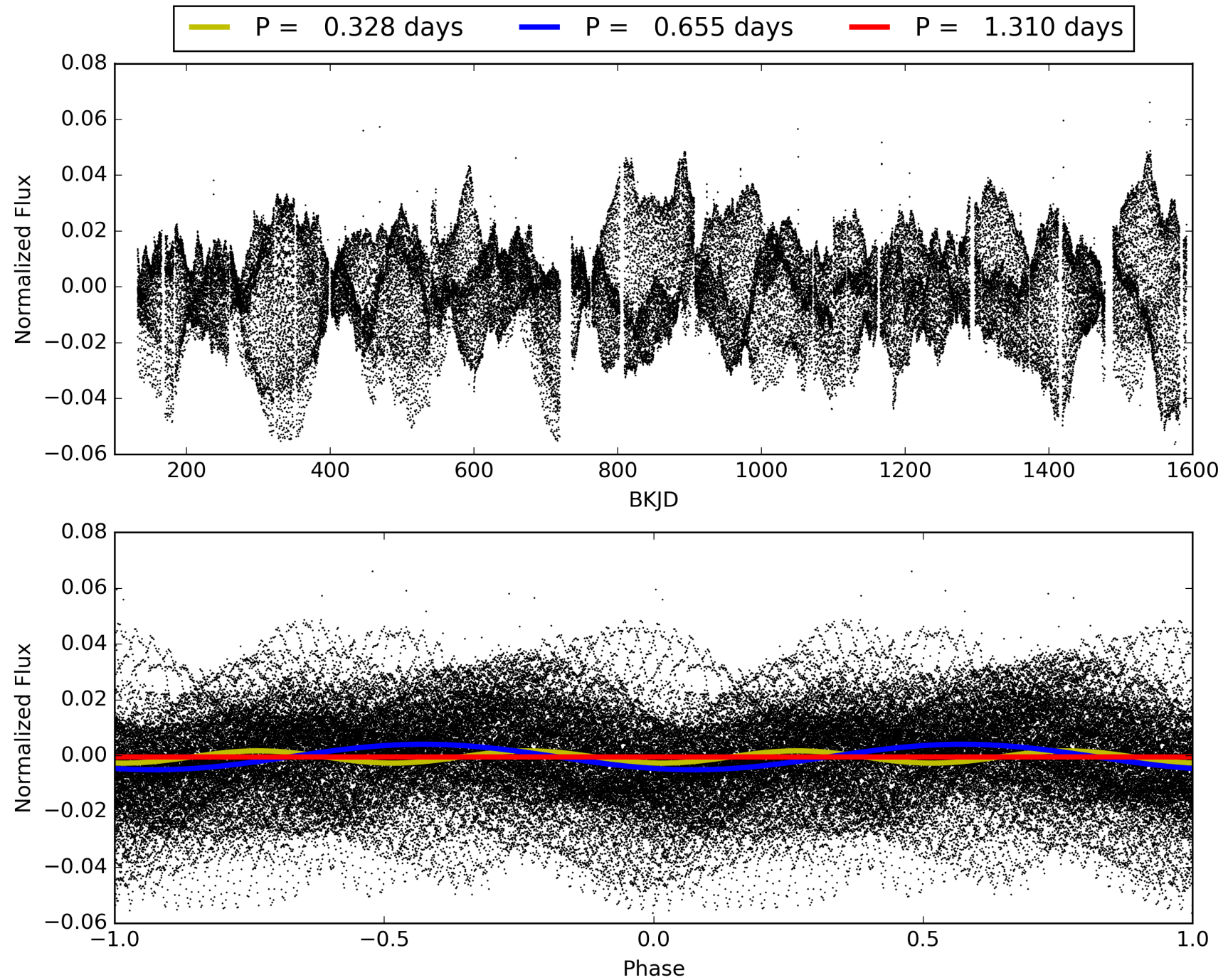
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 06:22:27 Z

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

TCE 007836330-02, PDC Light Curves

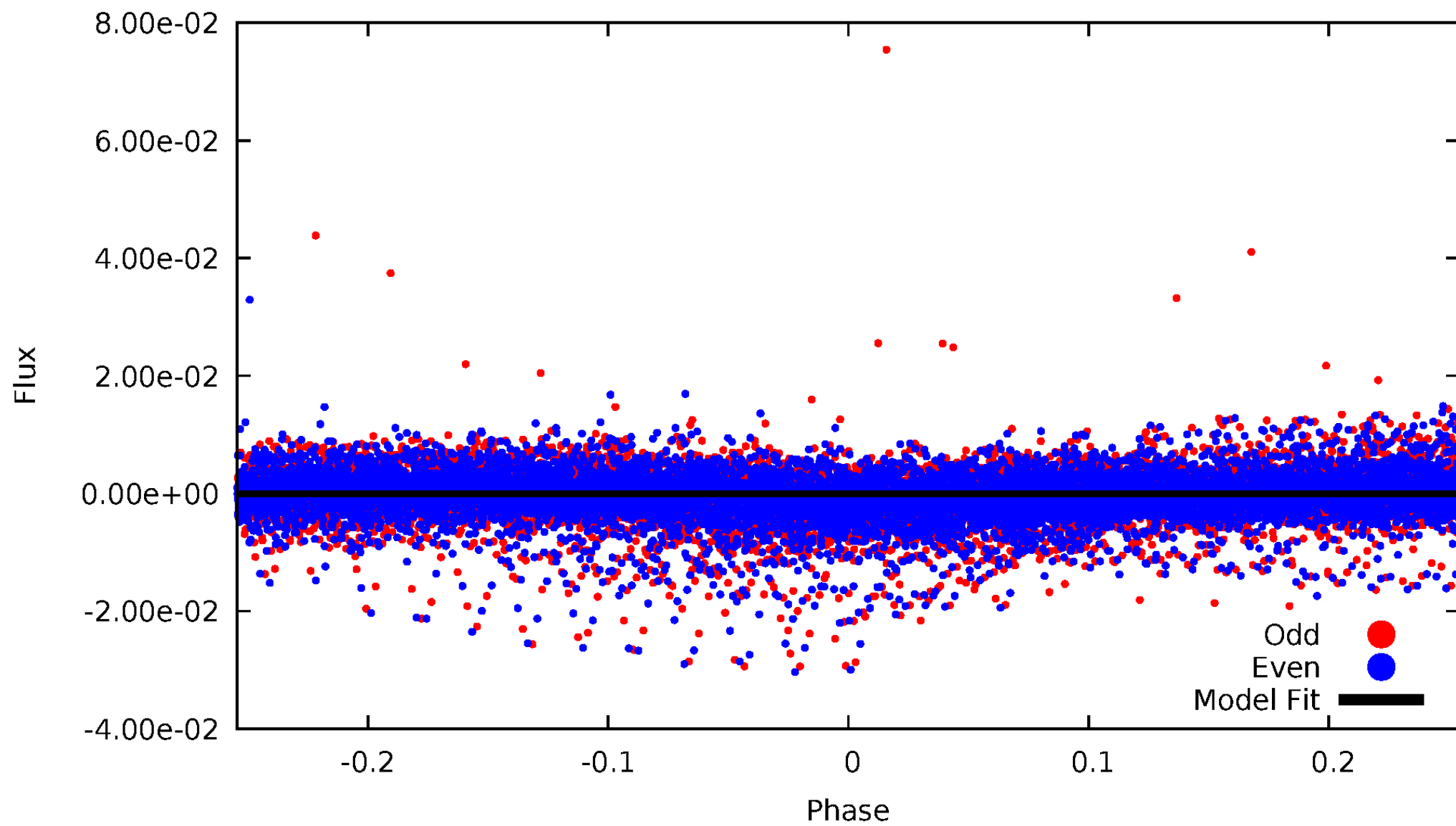


TCE 007836330-02



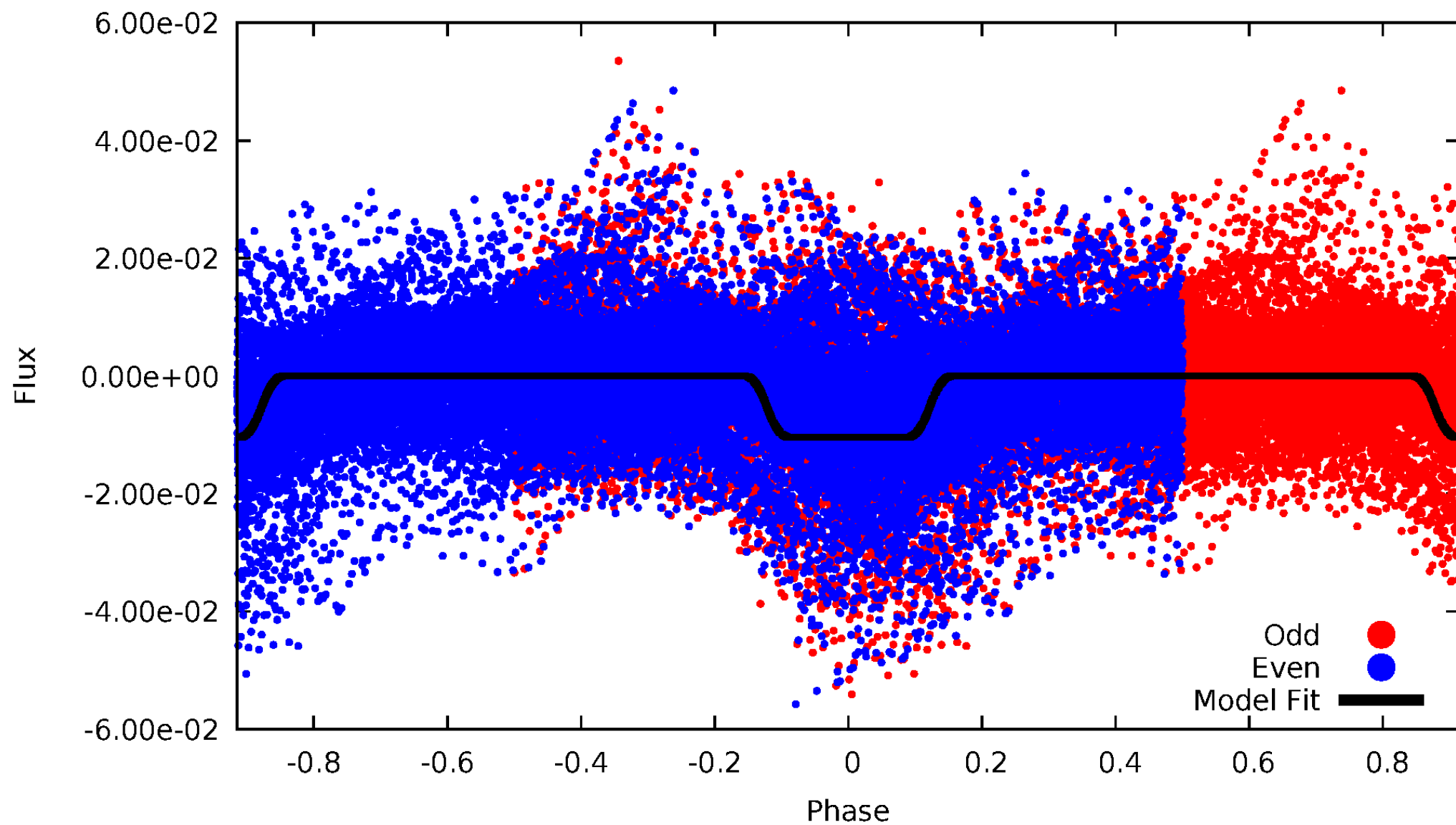
DV Odd/Even

TCE 007836330-02



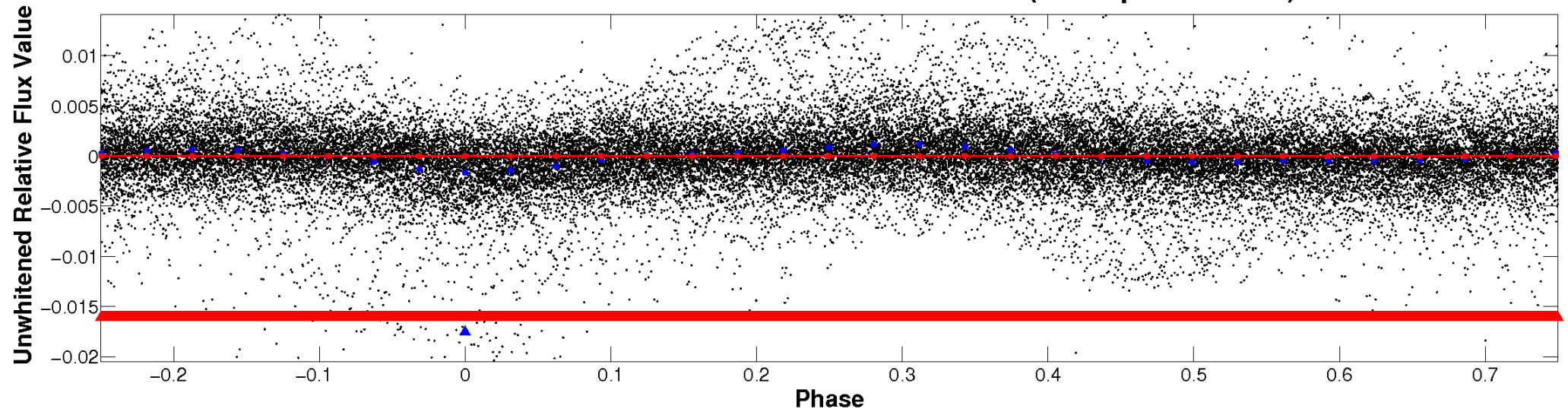
ALT Odd/Even

TCE 007836330-02



Non-Whitened Vs. Whitened Light Curve

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

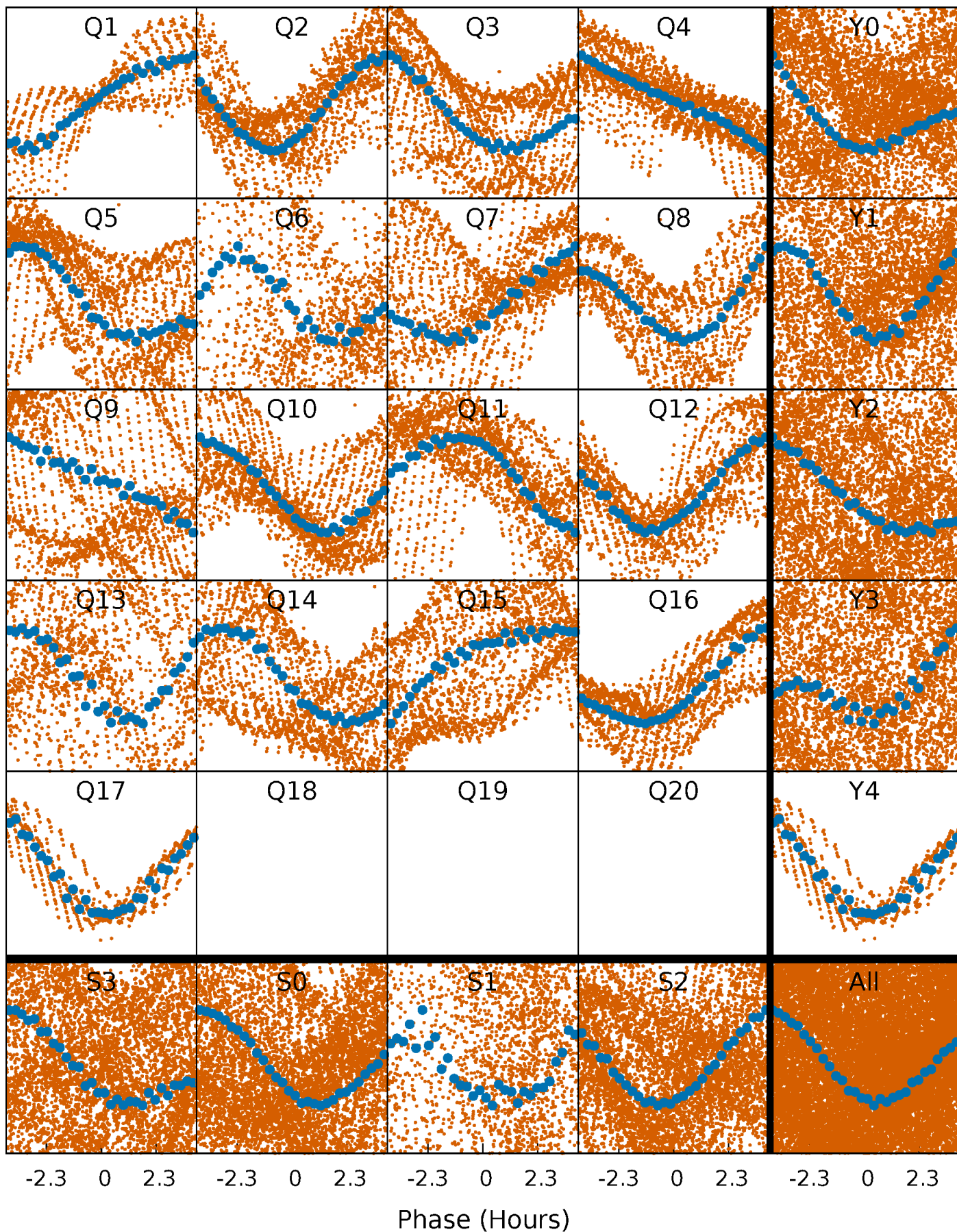


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



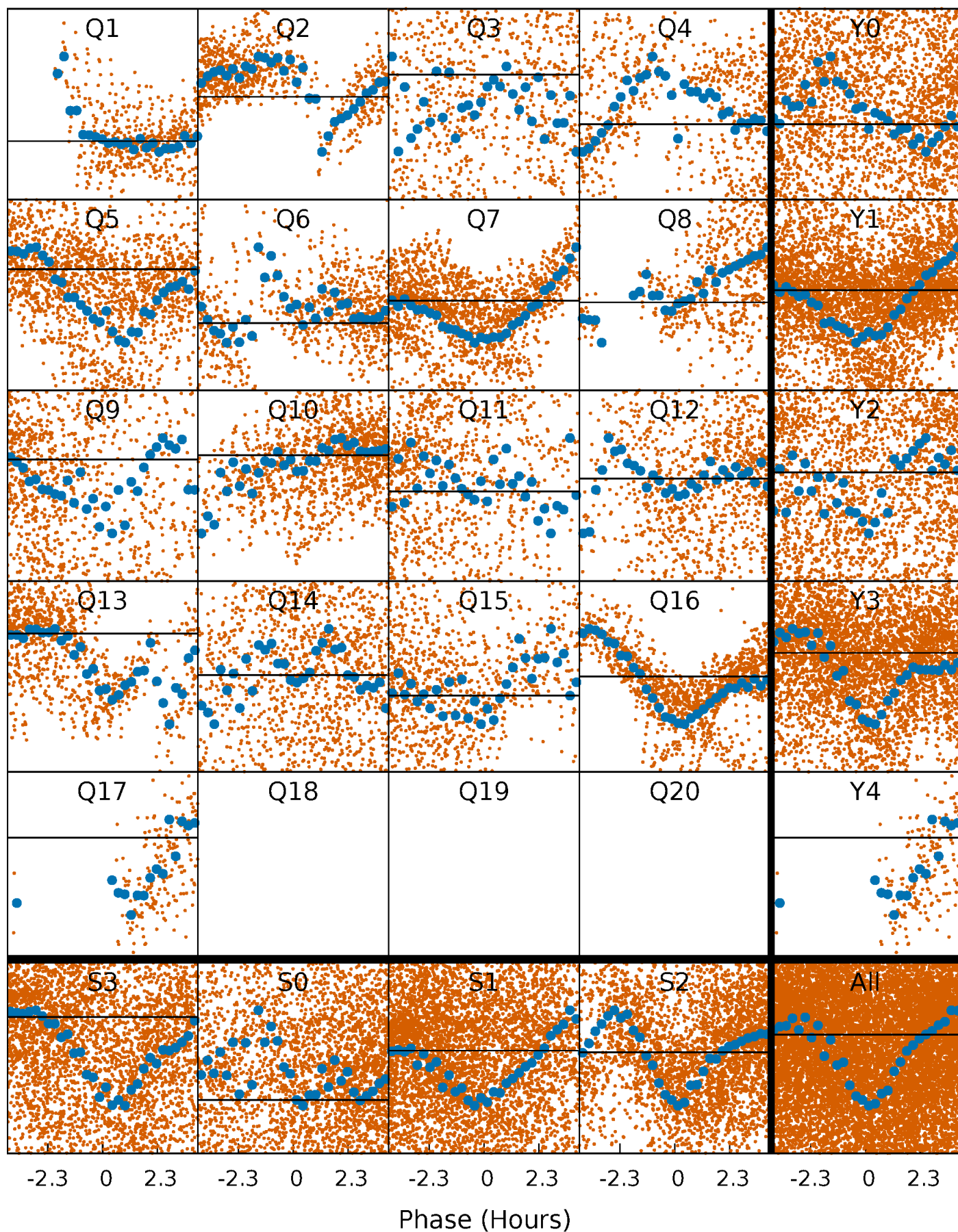
PDC Quarter-Phased Transit Curves

TCE 007836330-02 P= 0.655174 Days $T_0=132.084111$ (BKJD)



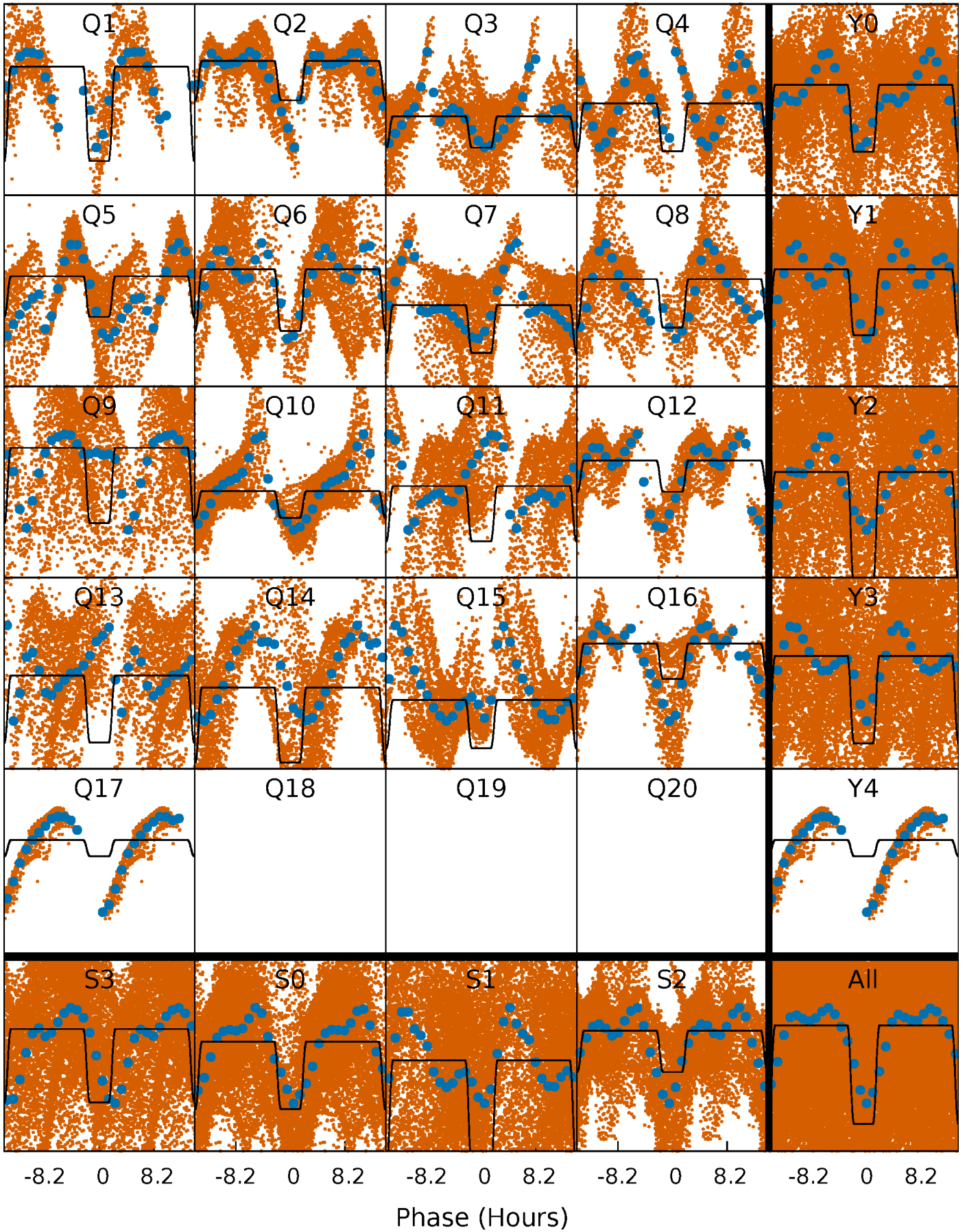
DV Quarter-Phased Transit Curves

TCE 007836330-02 P= 0.655174 Days $T_0=132.084111$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

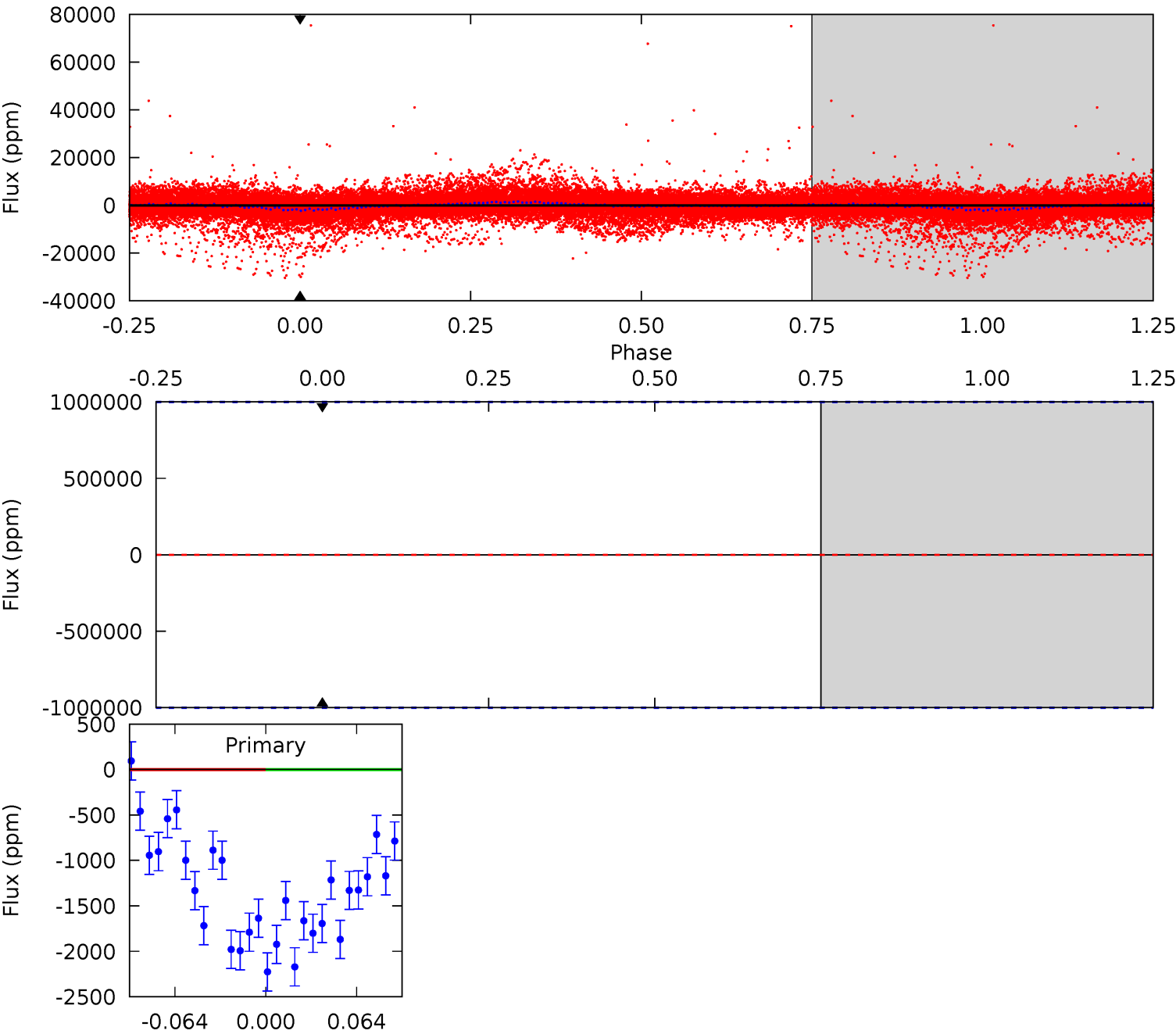
TCE 007836330-02 P= 0.655174 Days $T_0=132.079755$ (BKJD)



DV Model-Shift Uniqueness Test

007836330-02, P = 0.655174 Days, E = 131.428937 Days

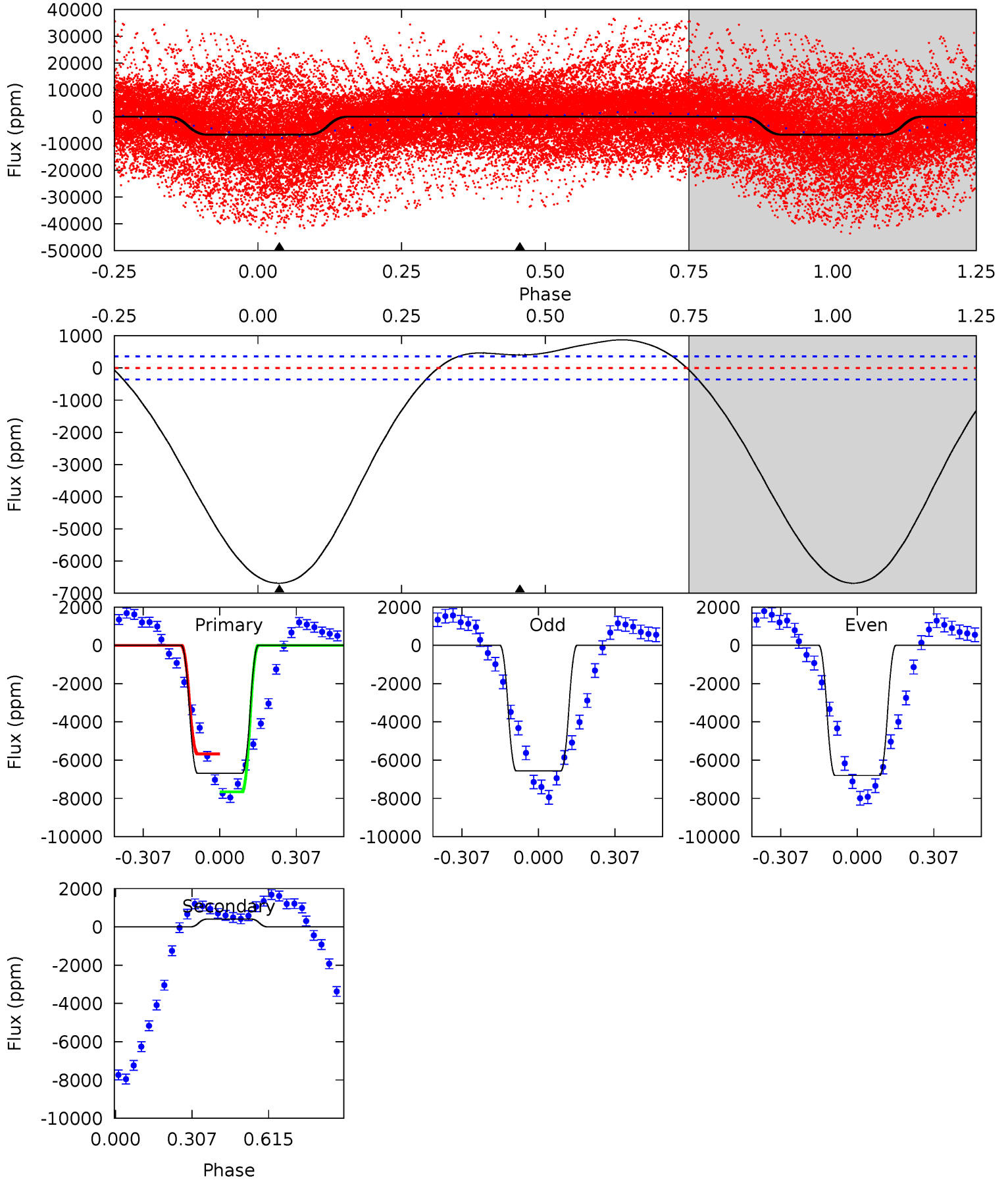
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

007836330-02, P = 0.655174 Days, E = 131.424581 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
80.9	-4.90	0	0	4.32	1.02	6.15	80.9	80.9	-4.90	-4.90	1.46	1.14	0.12	11.1



Stellar Parameters For KIC 007836330

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5168^{+155}_{-170}	$4.687^{+0.052}_{-0.024}$	$-1.580^{+0.300}_{-0.250}$	$0.572^{+0.027}_{-0.034}$	$0.580^{+0.039}_{-0.018}$	$4.369^{+0.854}_{-0.400}$
	+3%/-3%	+1%/-1%	+19%/-16%	+5%/-6%	+7%/-3%	+20%/-9%
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 007836330-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$5.10^{+4.63}_{-3.59}$	2158^{+72}_{-77}	4037^{+10940}_{-17785}	$6.110^{+600.971}_{-536.356}$
Alt.	405 ± 83	$7.81^{+5.60}_{-4.61}$	2164^{+69}_{-77}	-2959^{+224}_{-733}	$-0.525^{+0.341}_{-2.733}$

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

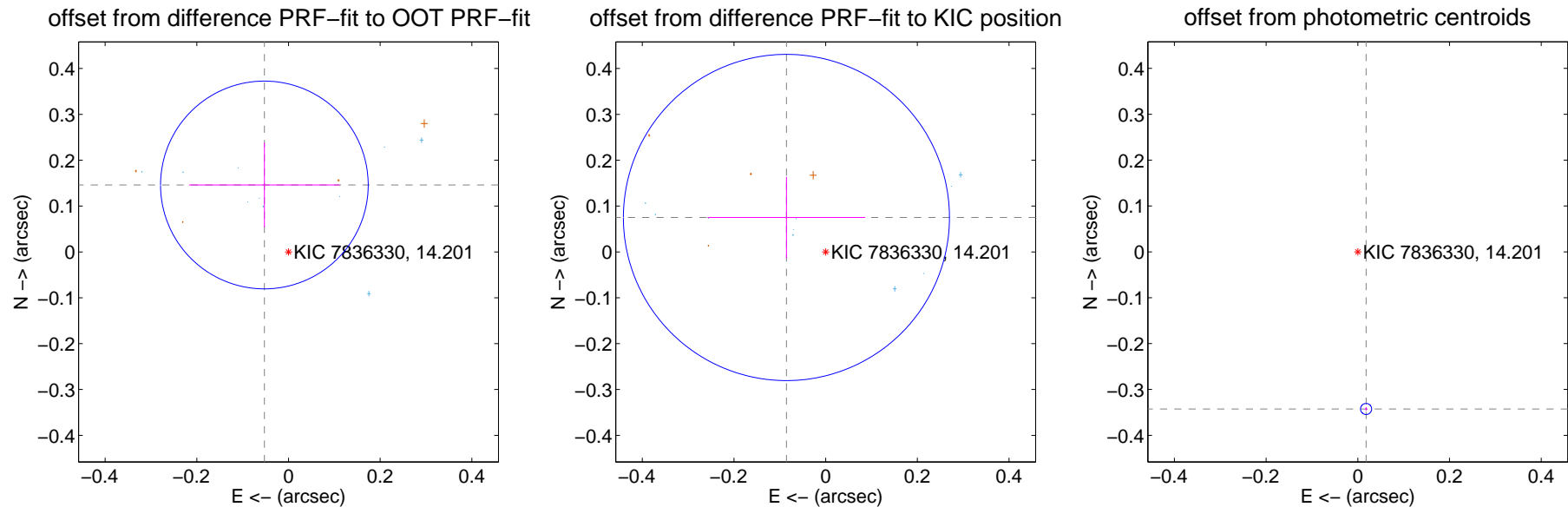
DV Centroid Data

Supplemental centroid analysis for 007836330-02. Kepler magnitude: 14.20. Transit SNR -1.00

There are 11 quarters with good PRF difference image offsets

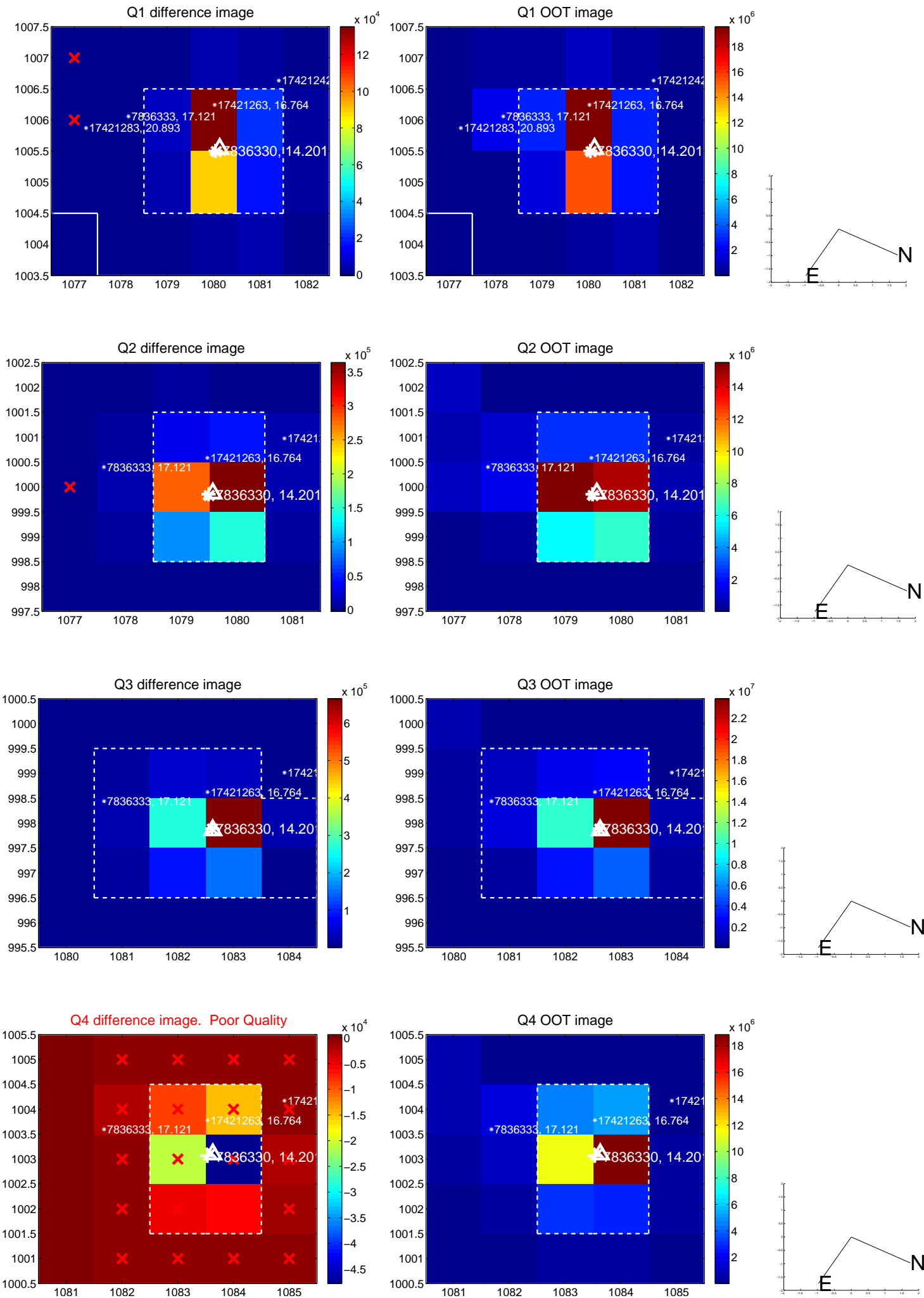
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.155 ± 0.076	2.06	0.053 ± 0.164	0.146 ± 0.092
PRF-fit source offset from KIC position	0.114 ± 0.119	0.96	0.086 ± 0.172	0.075 ± 0.089
photometric centroid source offset	0.34 ± 0.00	85.08	-0.02 ± 0.00	-0.34 ± 0.00

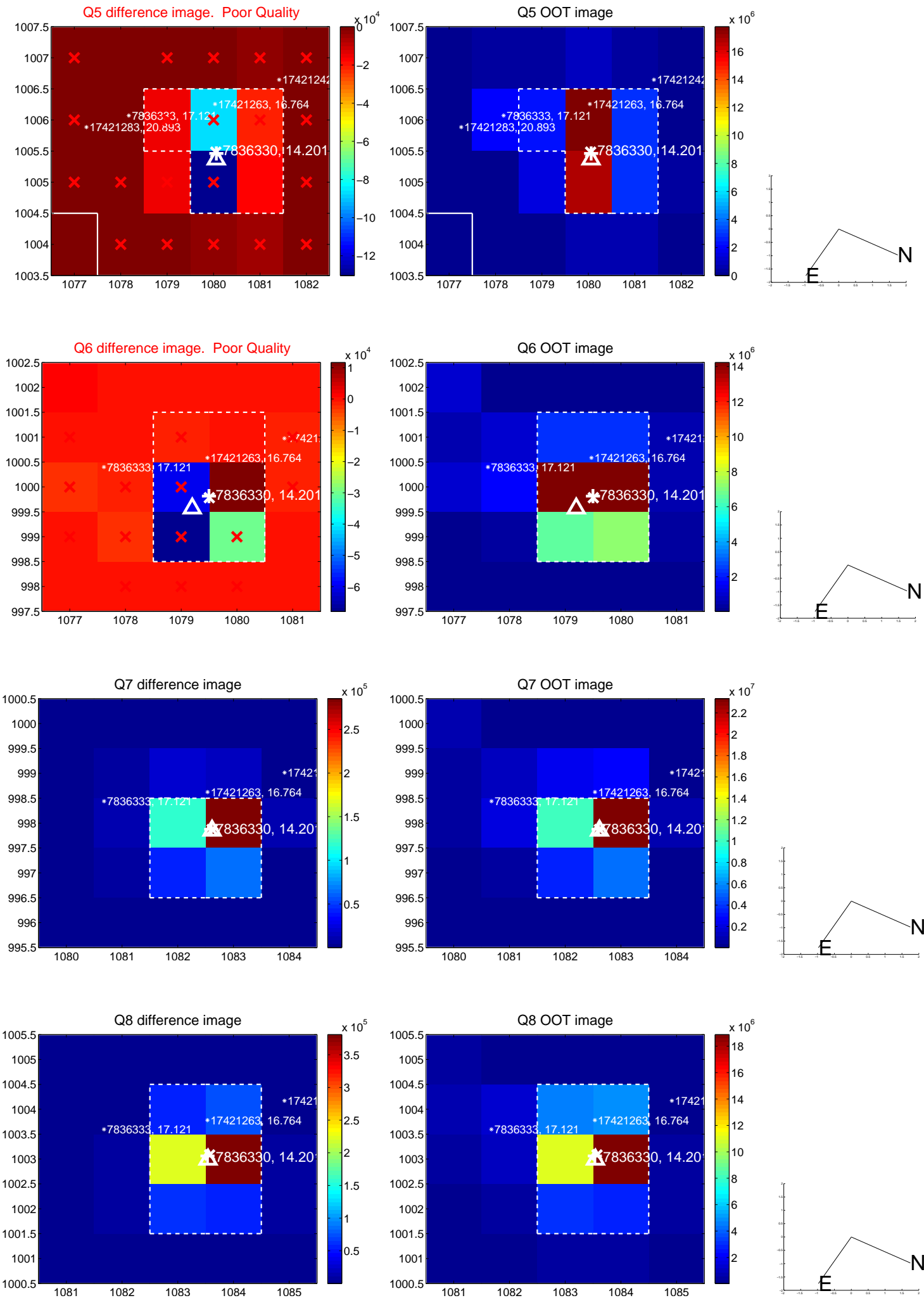


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

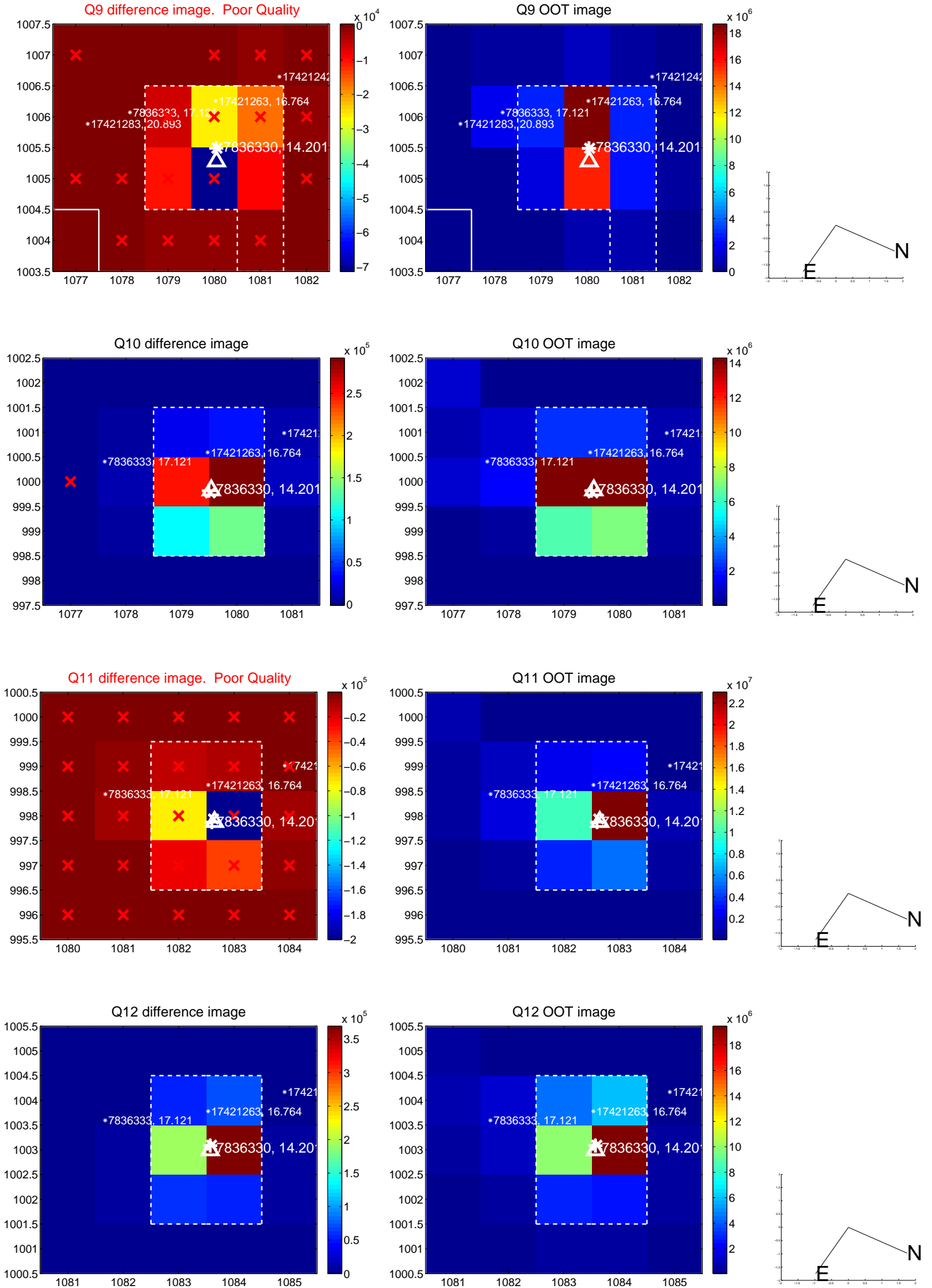
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



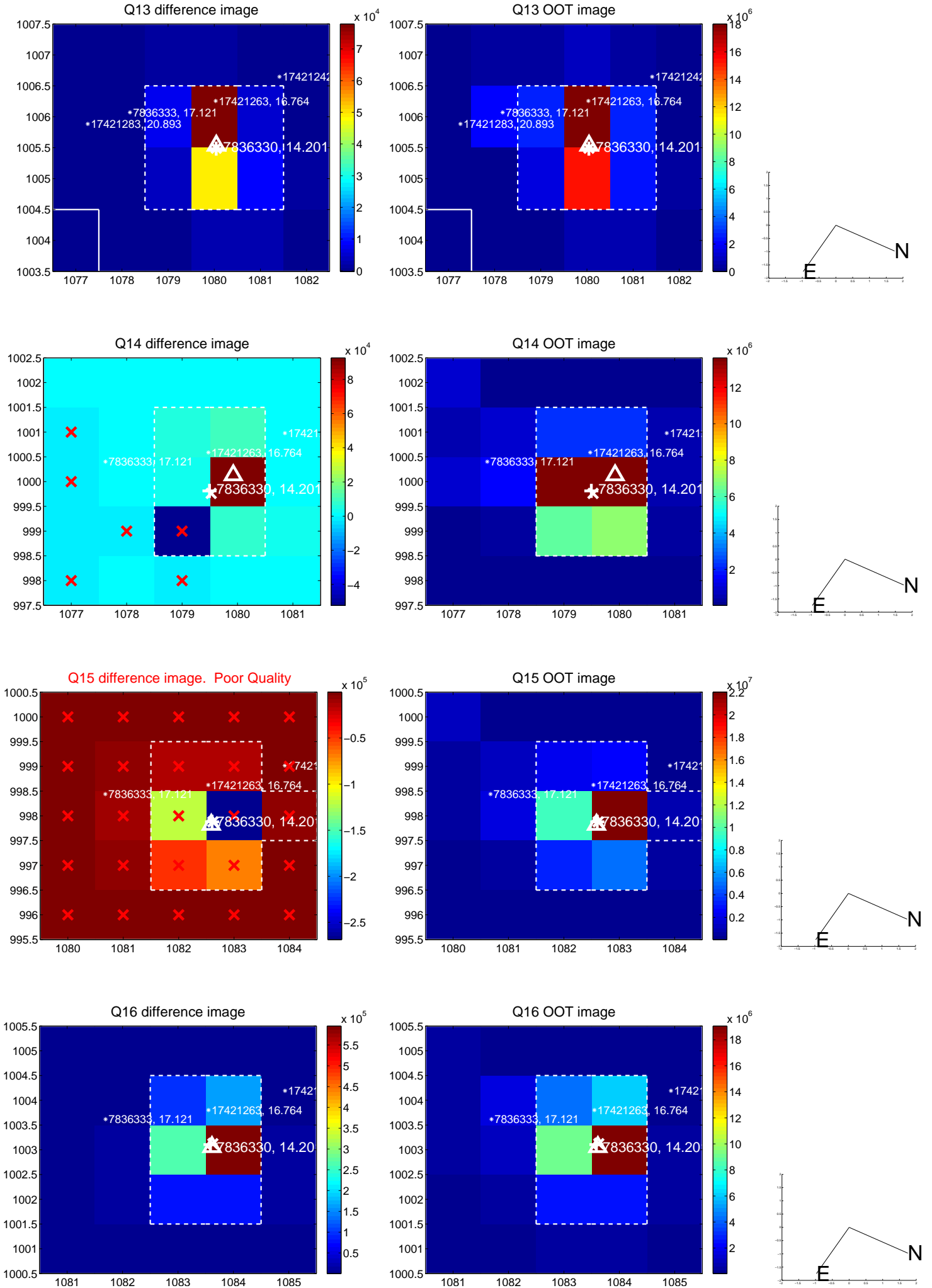
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



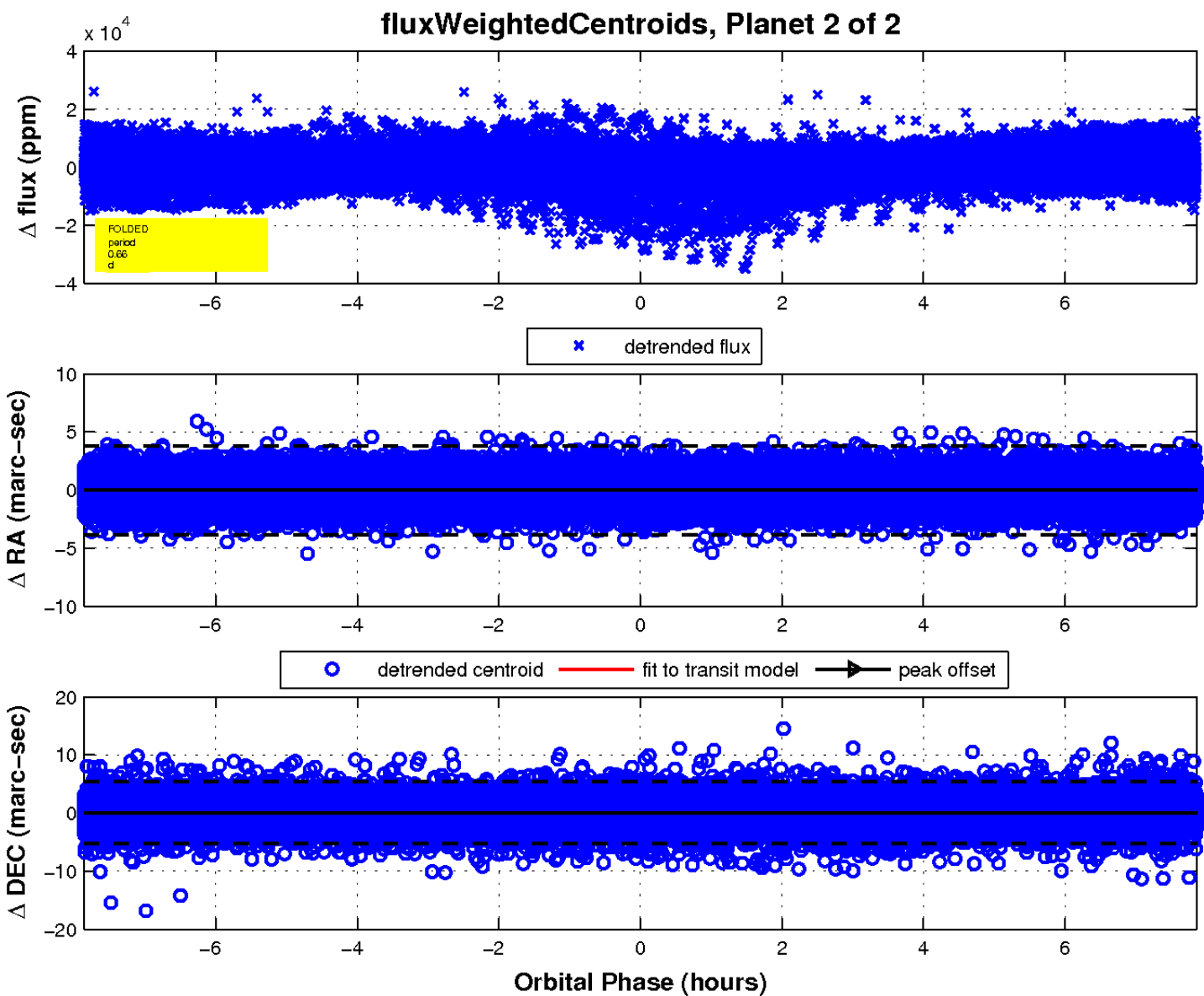
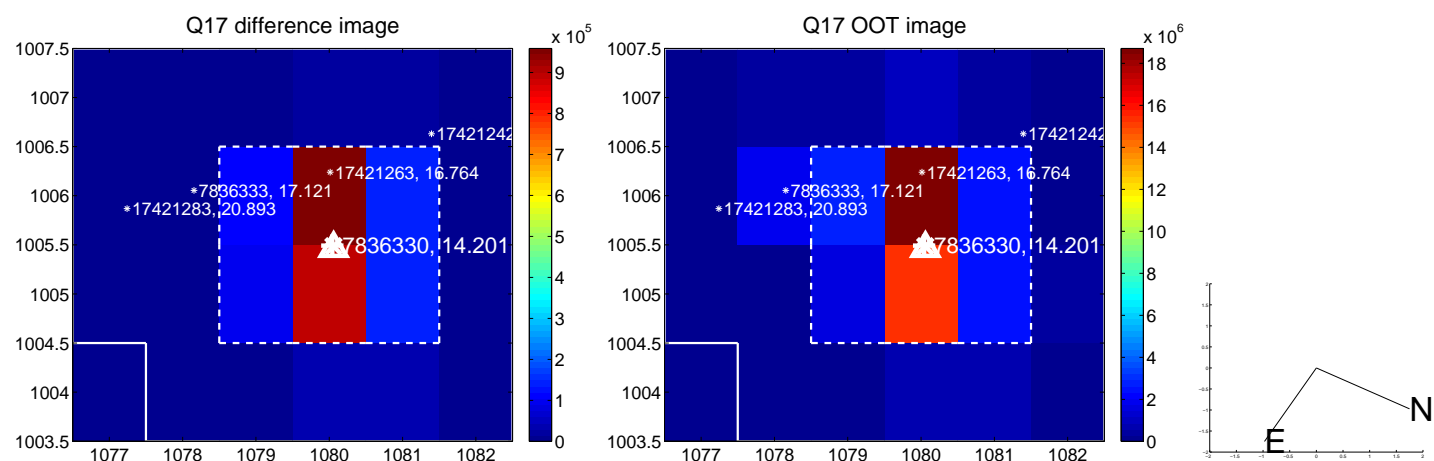
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

