

KIC 008265876

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})
008265876-01	OBS	No	1.908139	132.599297	28.6	7.199	10.2	10.6	1.98	7693	1.23	9422.33
008265876-02	OBS	No	1.908234	131.581440	25.0	12.166	9.1	8.7	1.98	7693	1.01	9421.71

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008265876-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—CENT_CROWDED
008265876-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—SAME_NTL_PERIOD

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

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

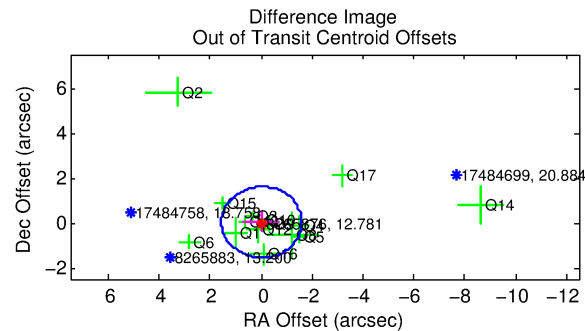
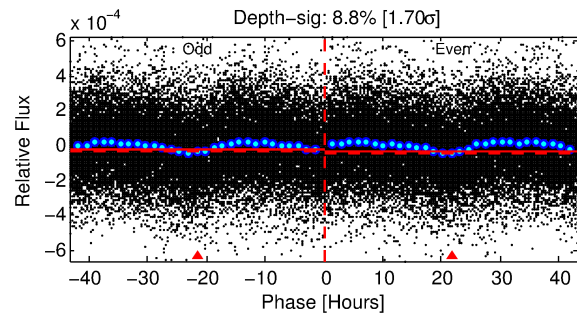
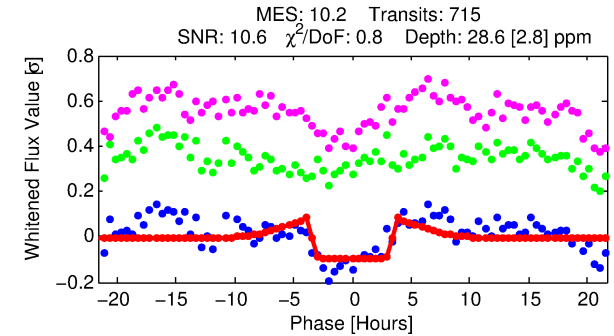
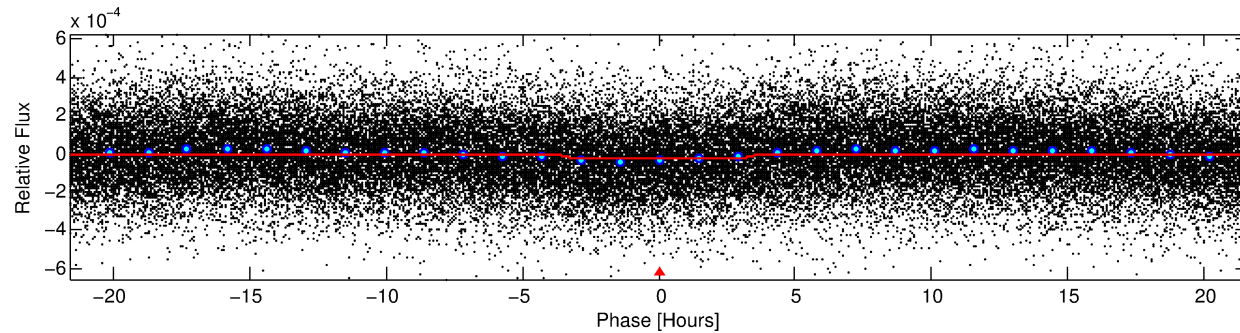
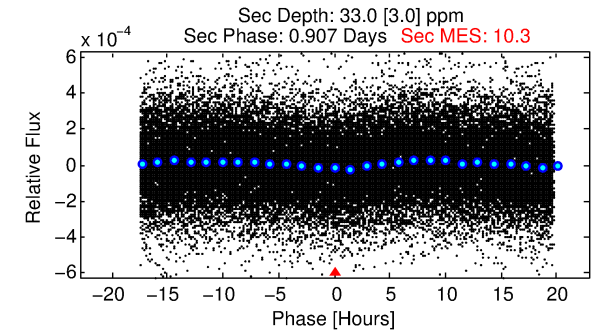
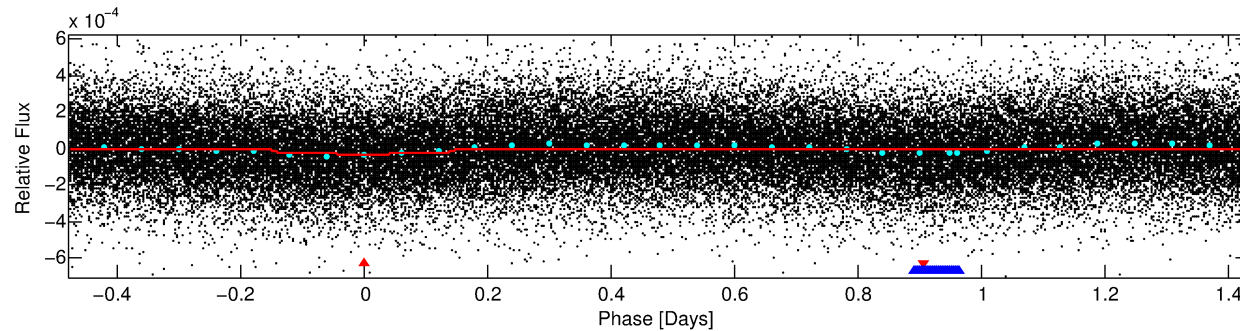
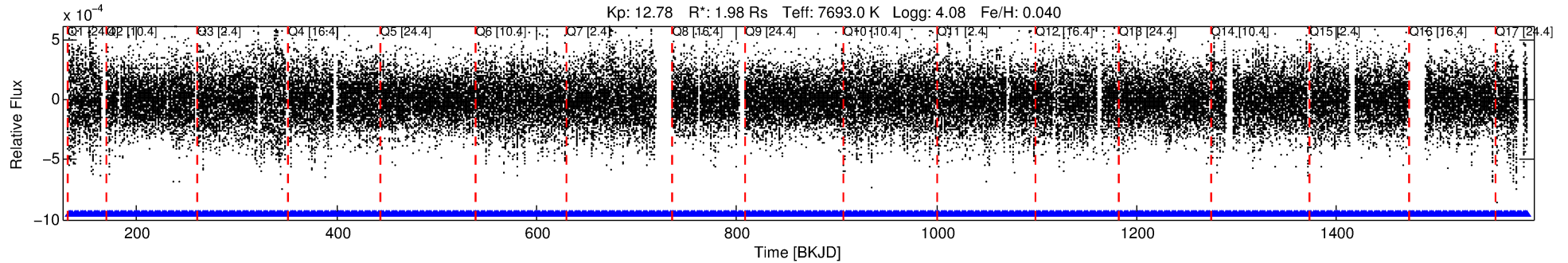
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008265876-01

No Significant Match Found

DV One-Page Summary

KIC: 8265876 Candidate: 1 of 2 Period: 1.908 d



DV Fit Results:

Period = 1.90814 [0.00002] d
Epoch = 132.5993 [0.0038] BKJD
Rp/R* = 0.0057 [0.0009]
a/R* = 1.31 [0.56]
b = 0.90 [0.22]
Seff = 9422.33 [3291.28]
Teff = 2512 [219] K
Rp = 1.23 [0.38] Re
a = 0.0362 [0.0078] AU
Ag = 15.81 [7.28] [2.04σ]
Teffp = 7745 [739] K [6.78σ]

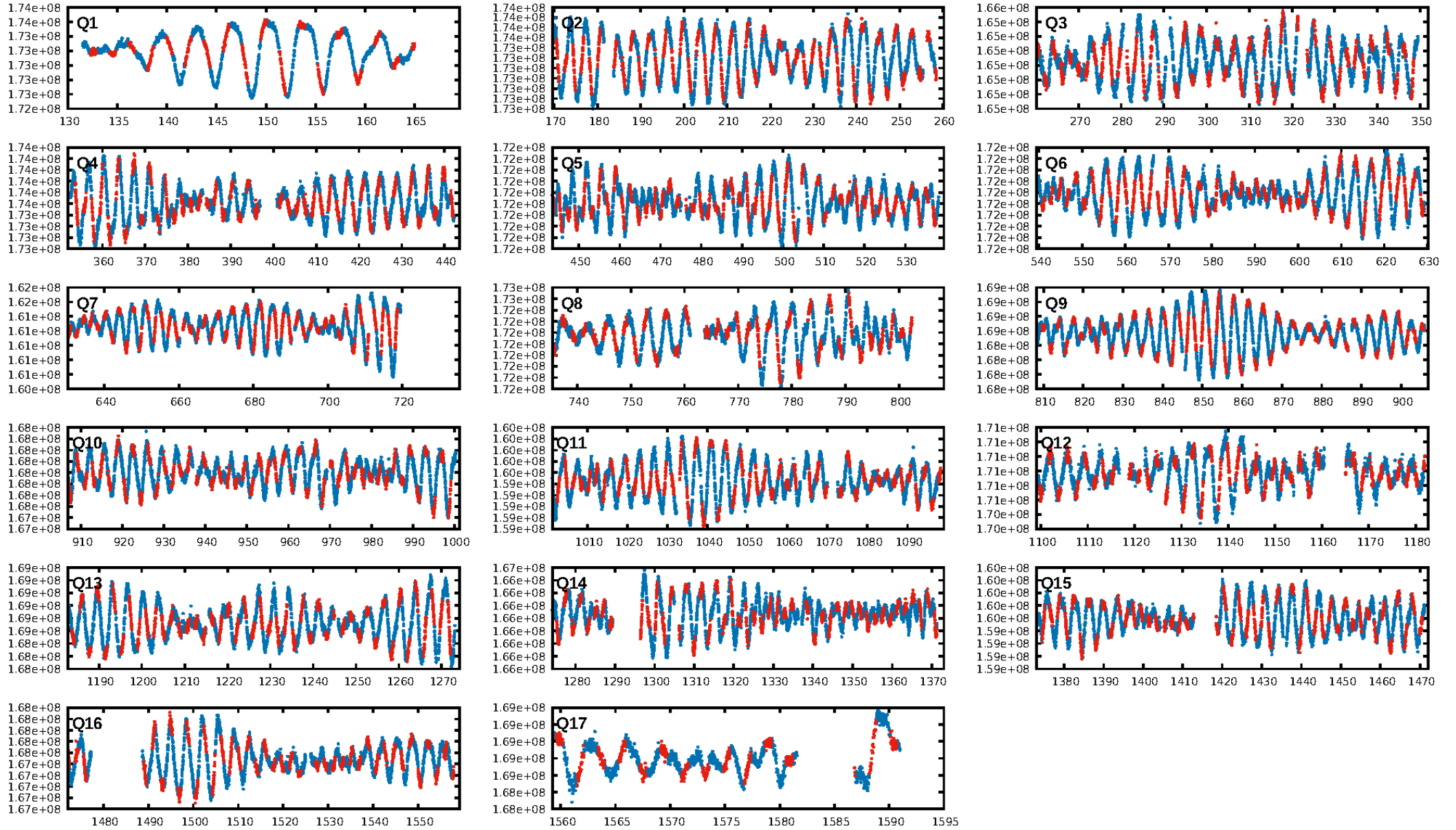
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [683/683]
GhostDiagnostic-chr: 10.7
Centroid-sig: 74.9%
Centroid-so: 0.685 arcsec [0.78σ]
OotOffset-rm: 0.033 arcsec [0.06σ]
KicOffset-rm: 0.142 arcsec [0.23σ]
OotOffset-st: 4/2/4/5 [15]
KicOffset-st: 4/2/4/5 [15]
DiffImageQuality-fgm: 0.73 [11/15]
DiffImageOverlap-fno: 1.00 [17/17]

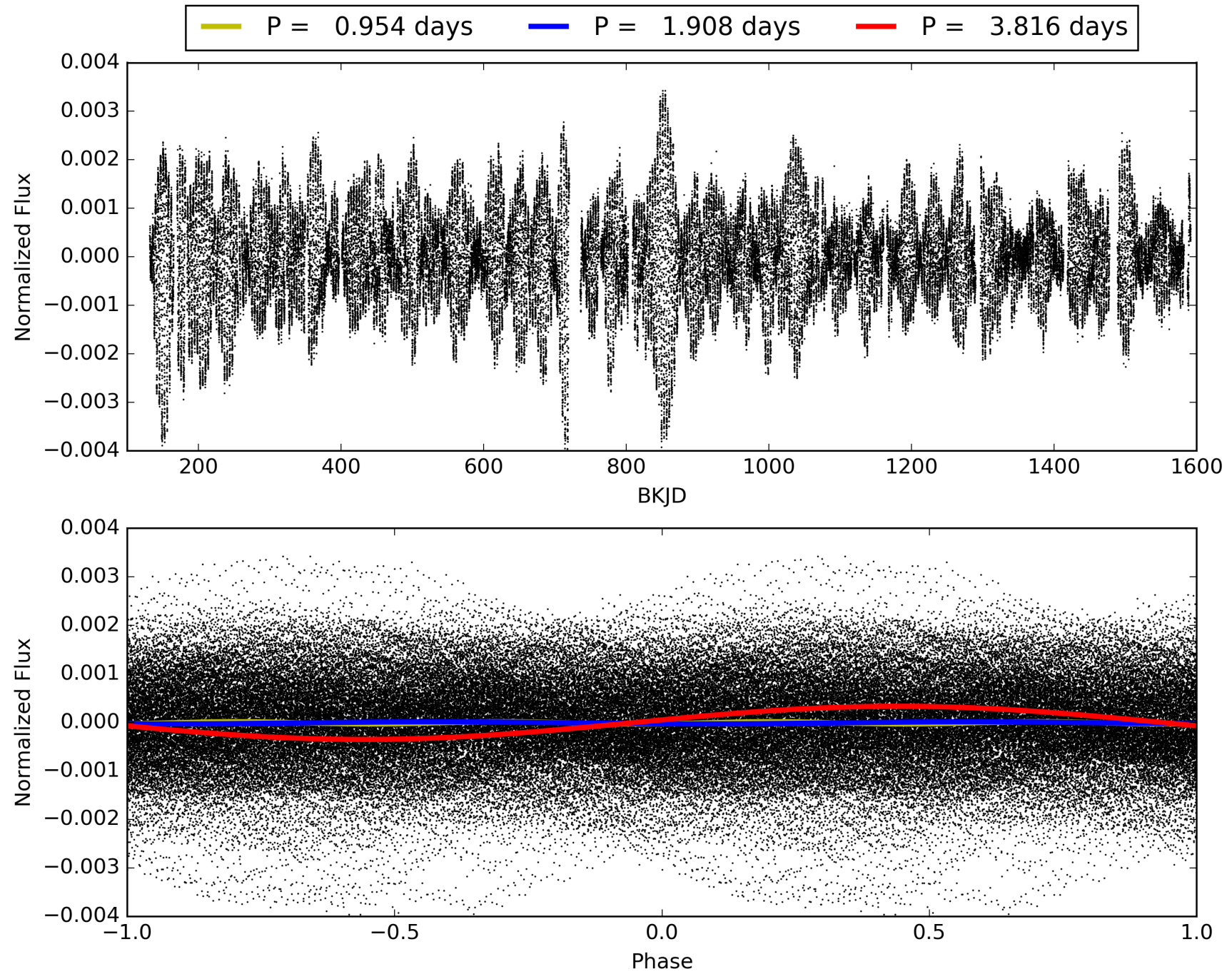
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 02:16:37 Z

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

TCE 008265876-01, PDC Light Curves

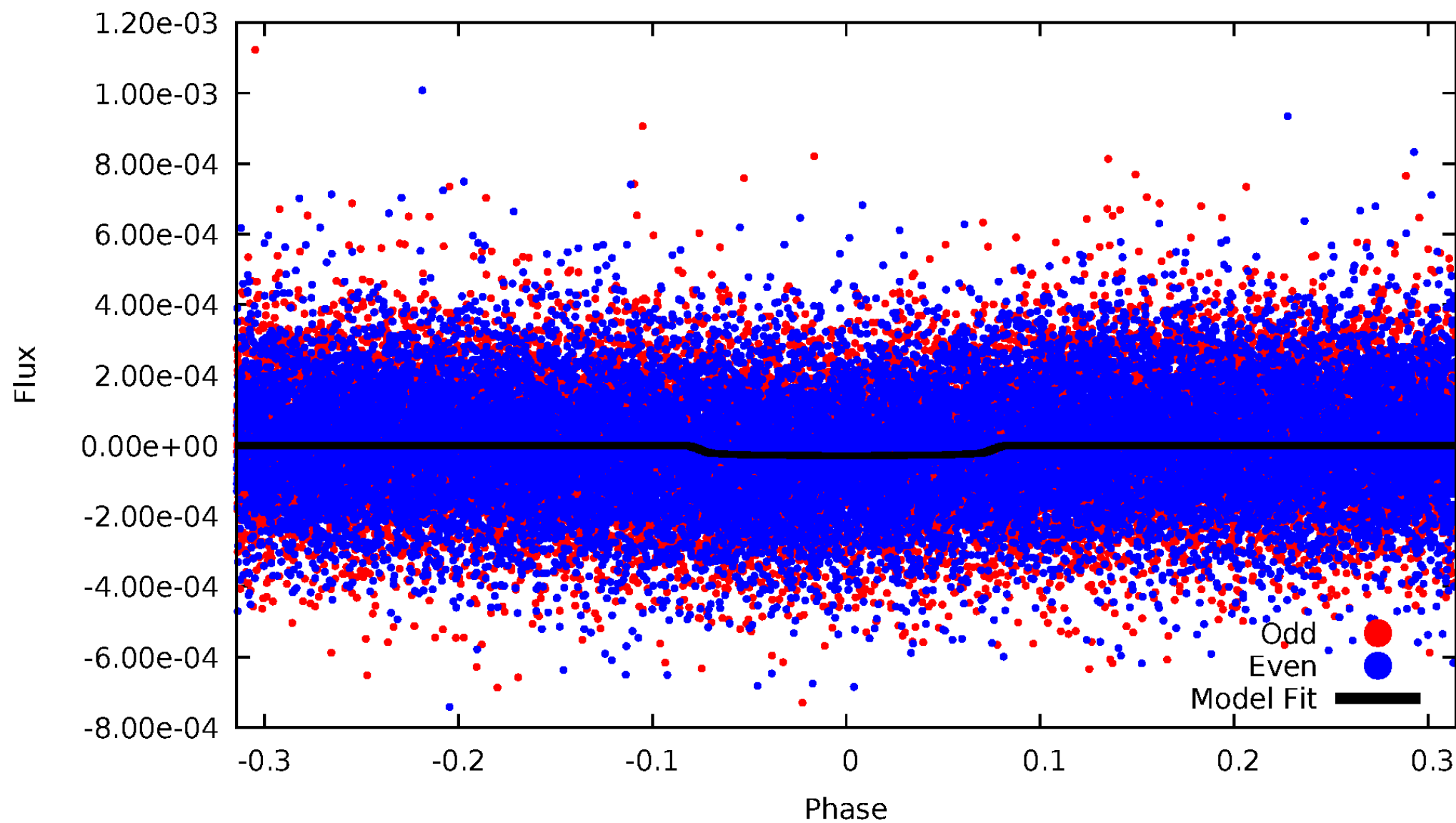


TCE 008265876-01



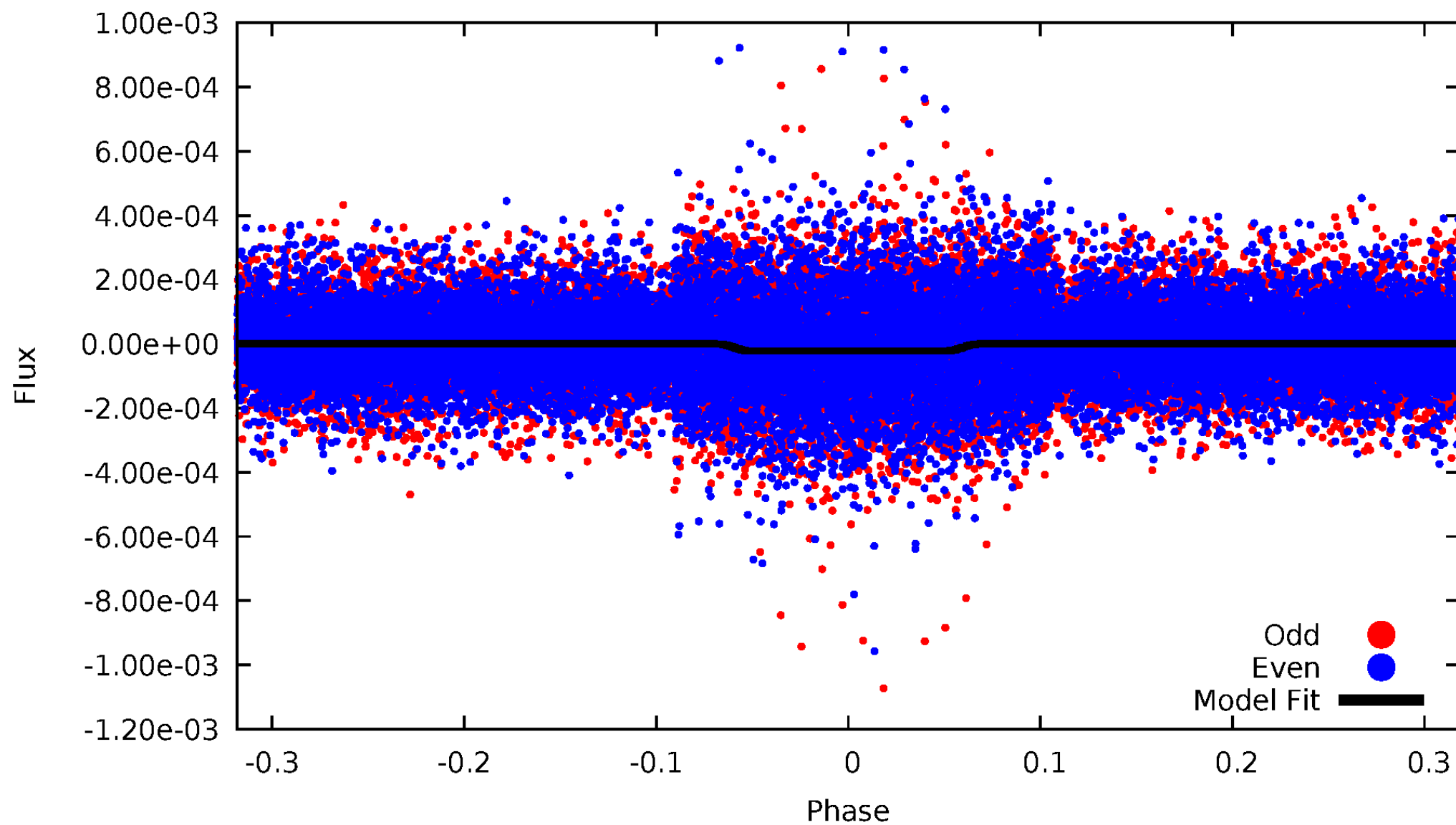
DV Odd/Even

TCE 008265876-01



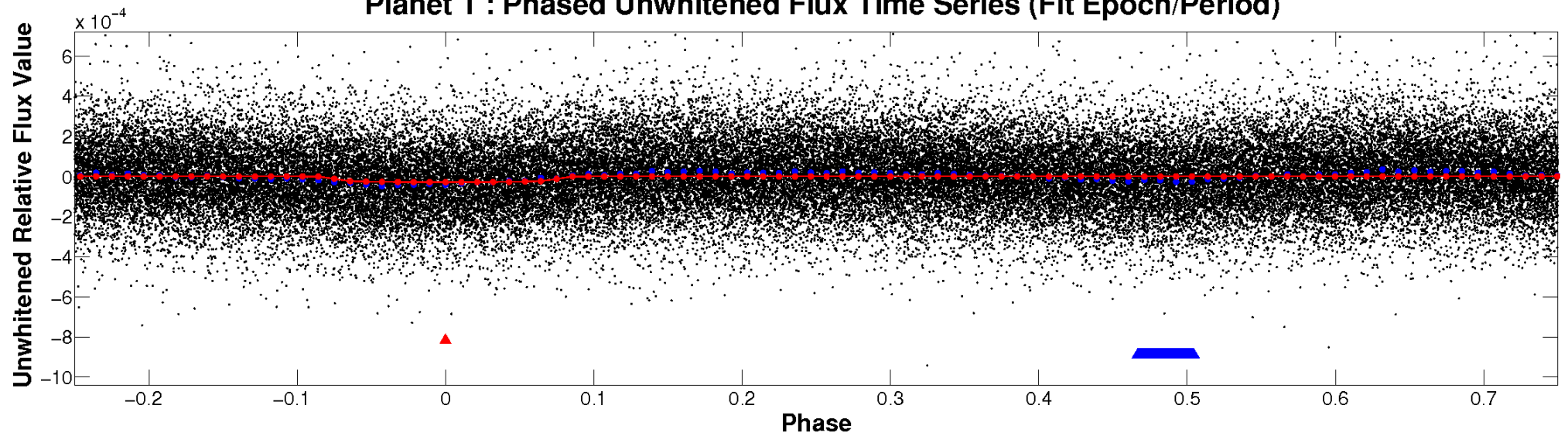
ALT Odd/Even

TCE 008265876-01

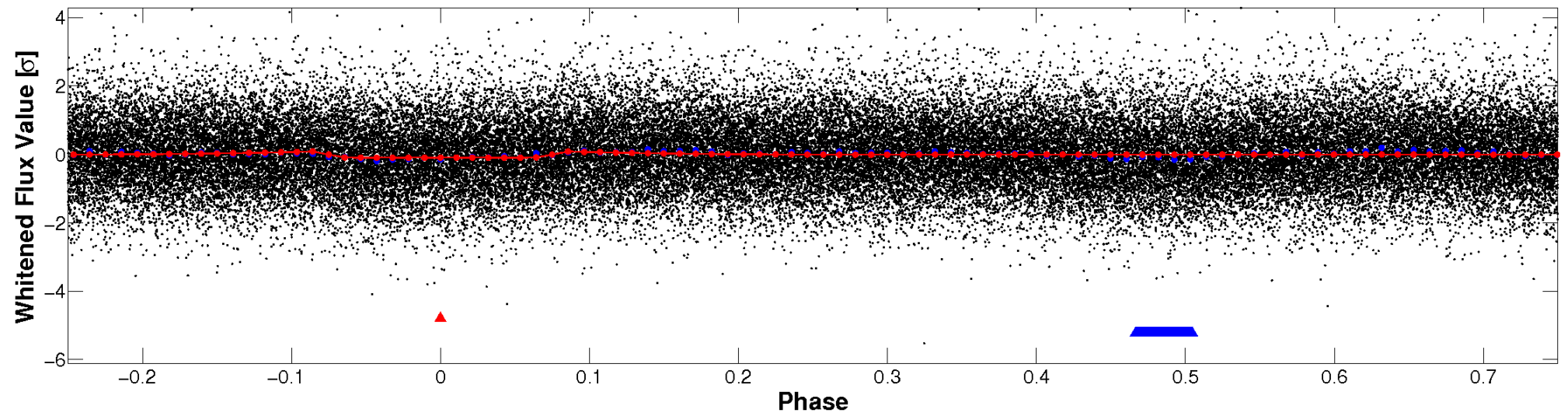


Non-Whitened Vs. Whitened Light Curve

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

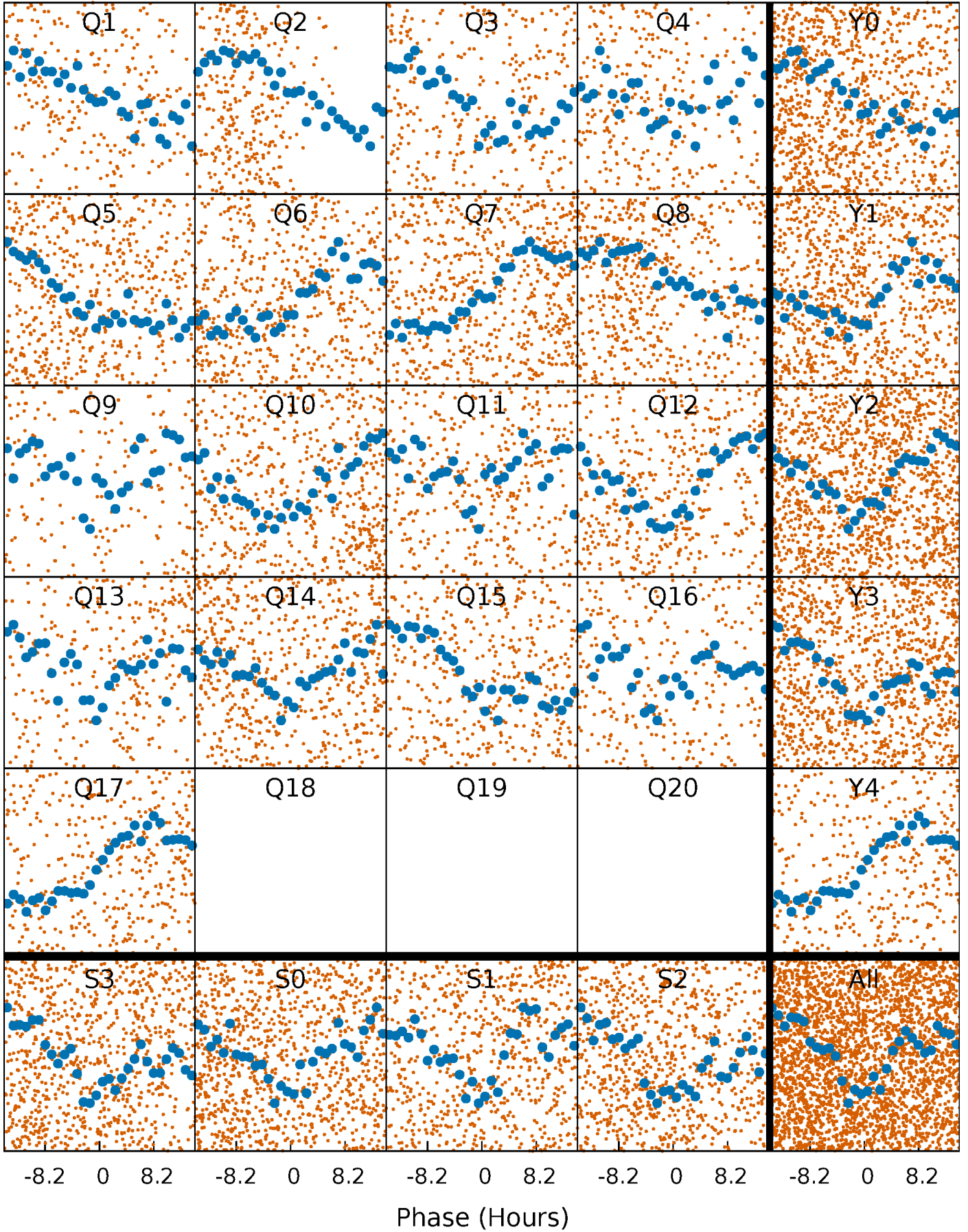


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



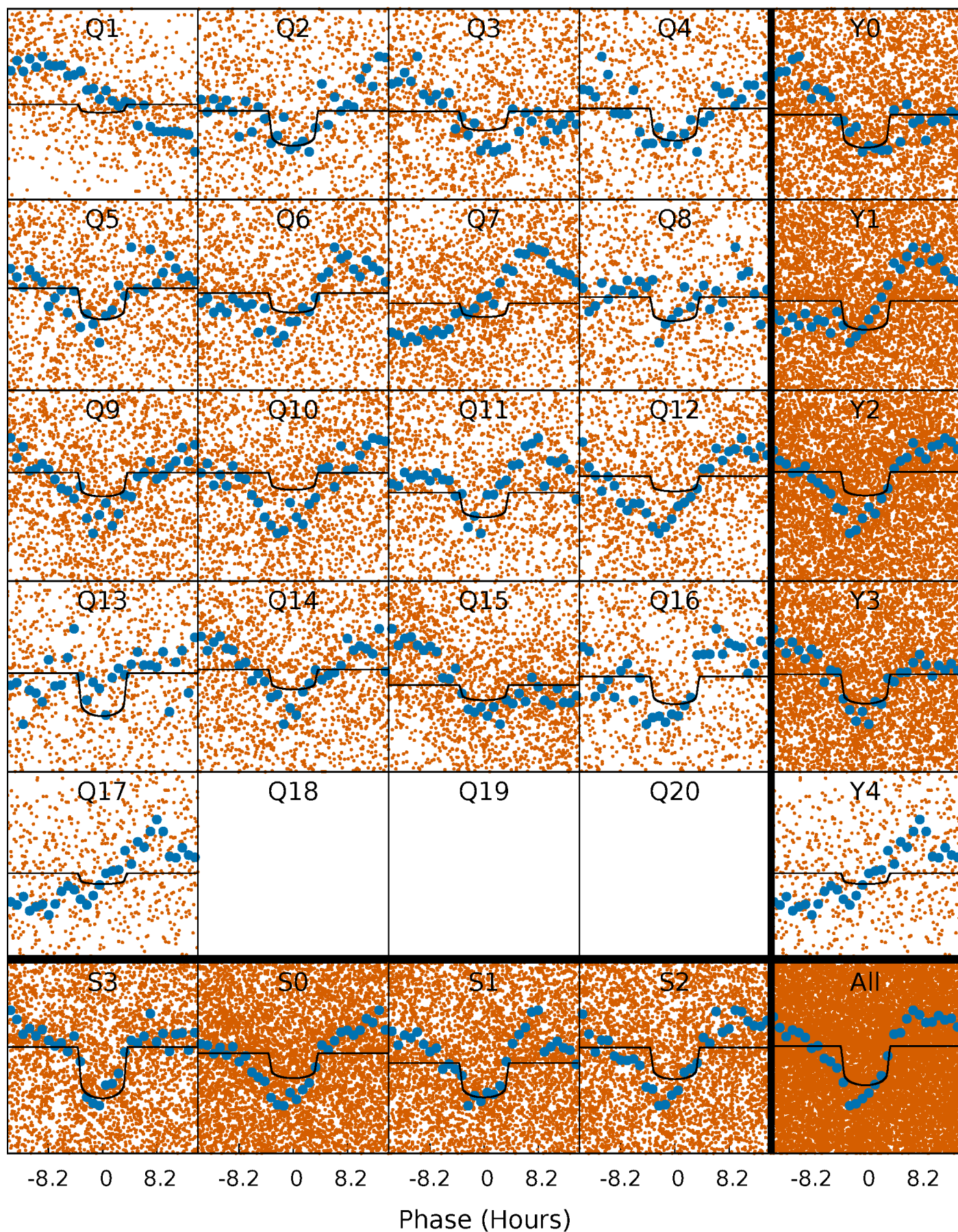
PDC Quarter-Phased Transit Curves

TCE 008265876-01 P= 1.908139 Days $T_0=132.599297$ (BKJD)



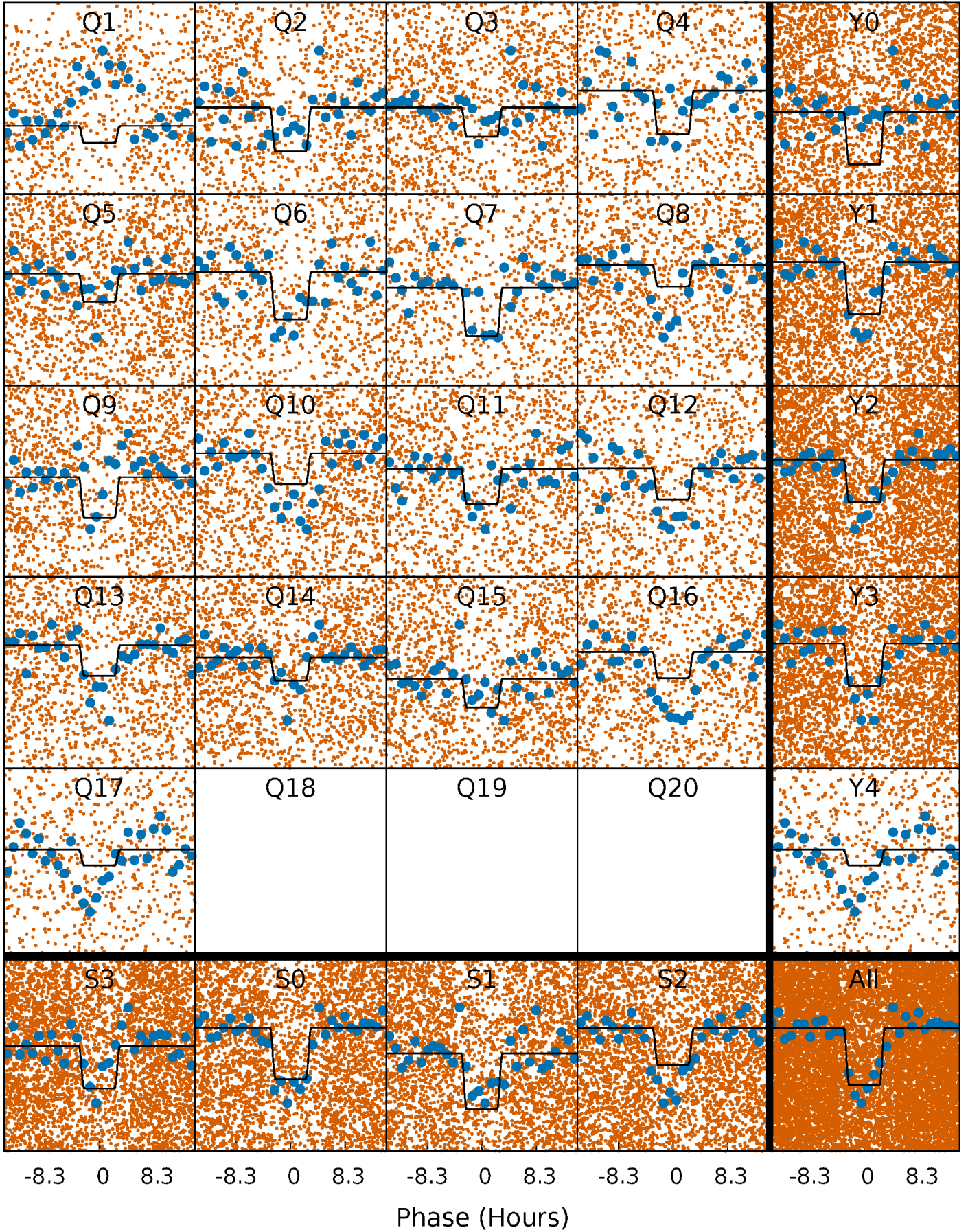
DV Quarter-Phased Transit Curves

TCE 008265876-01 P= 1.908139 Days $T_0=132.599297$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

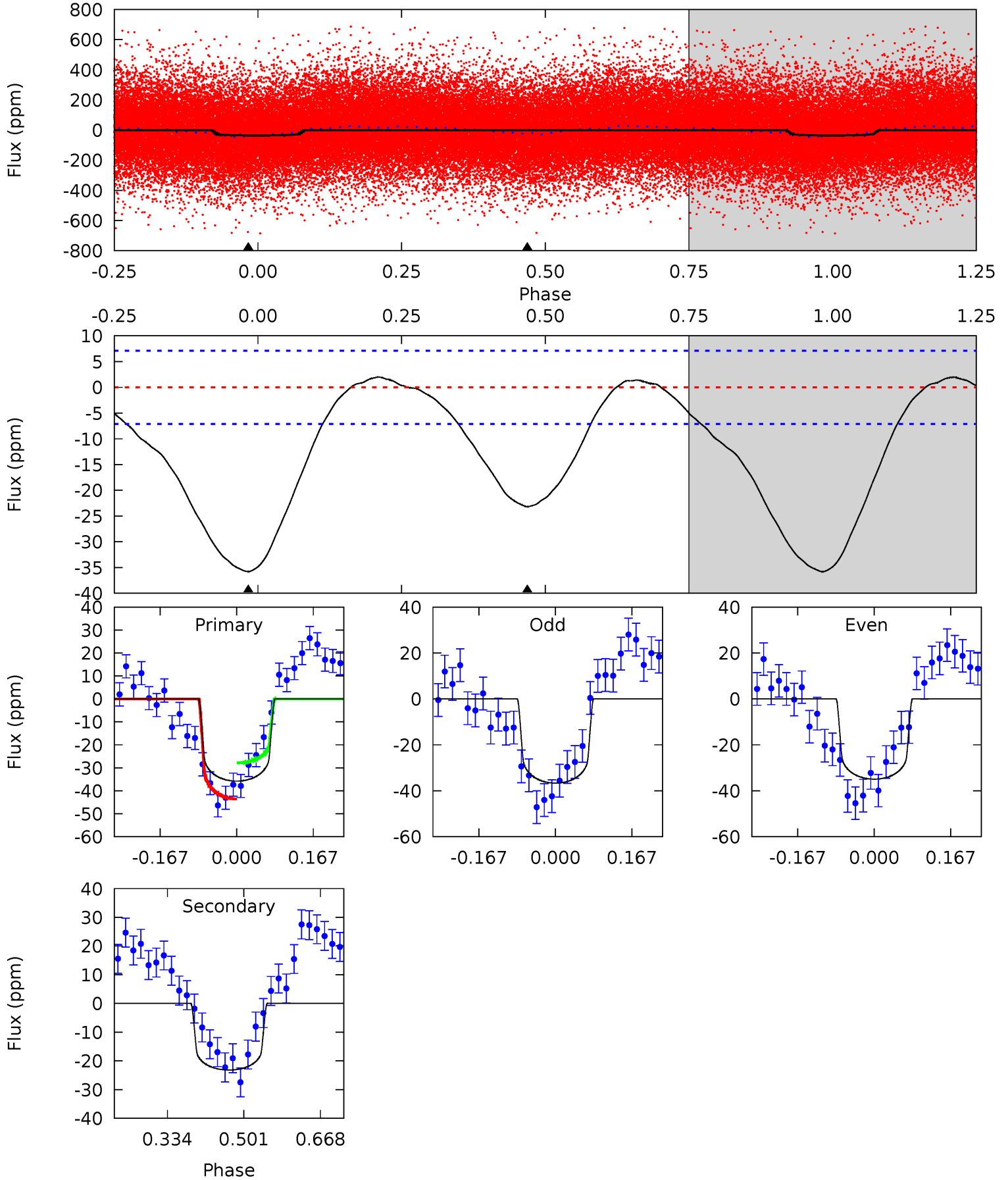
TCE 008265876-01 P= 1.908077 Days $T_0=132.600743$ (BKJD)



DV Model-Shift Uniqueness Test

008265876-01, P = 1.908139 Days, E = 130.691158 Days

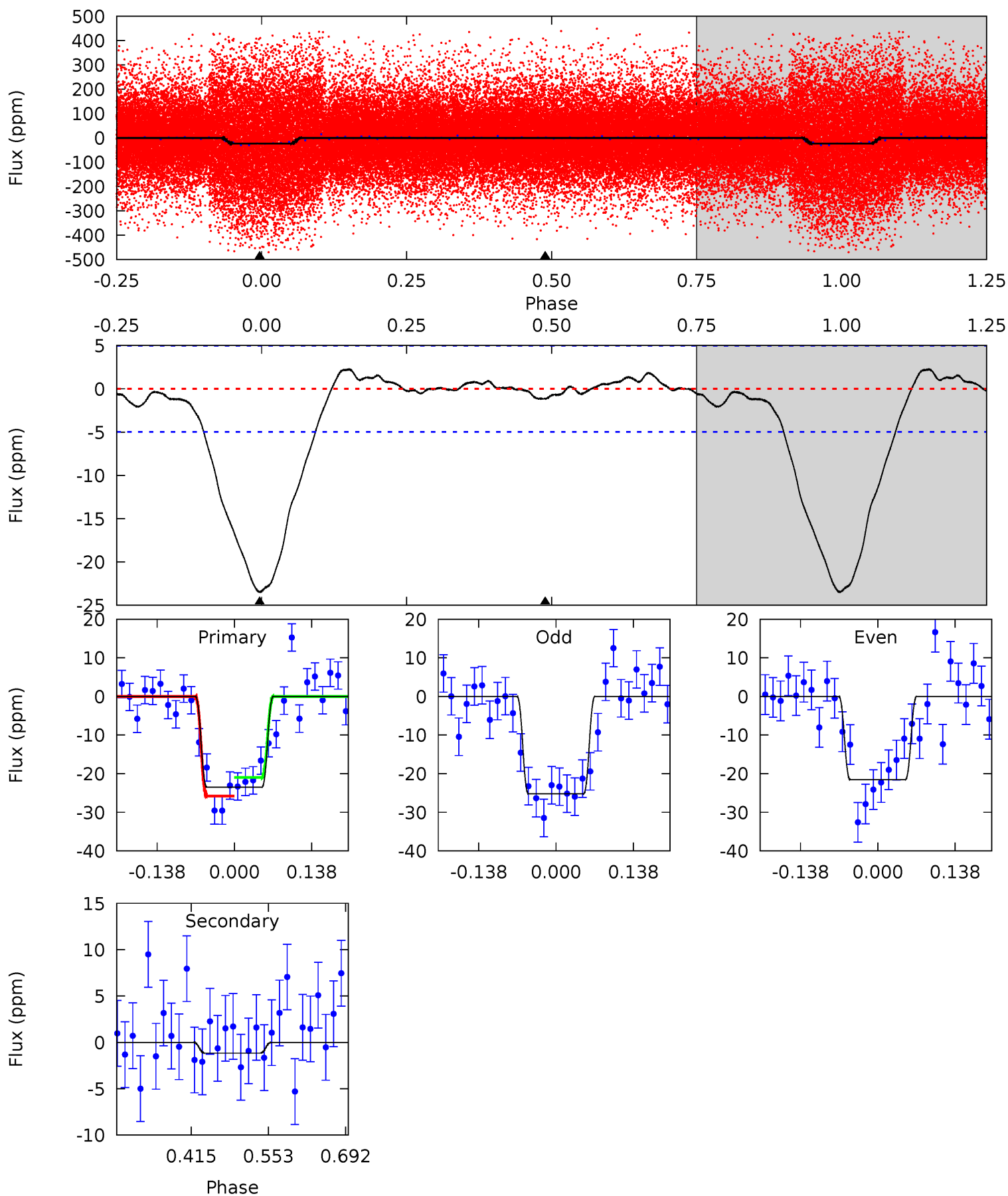
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.4	14.5	0	0	4.46	1.38	2.36	22.4	22.4	14.5	14.5	0.54	0.99	0.05	4.96



Alt Model-Shift Uniqueness Test

008265876-01, P = 1.908077 Days, E = 130.692666 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.2	1.05	0	0	4.50	1.48	0.92	21.2	21.2	1.05	1.05	1.64	1.21	0.09	2.17



Stellar Parameters For KIC 008265876

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7693^{+214}_{-322}	$4.083^{+0.135}_{-0.165}$	$0.040^{+0.200}_{-0.350}$	$1.984^{+0.514}_{-0.420}$	$1.737^{+0.194}_{-0.291}$	$0.313^{+0.252}_{-0.140}$
	+3%/-4%	+3%/-4%	+500%/-875%	+26%/-21%	+11%/-17%	+80%/-45%
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 008265876-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-23±2	$1.22^{+0.28}_{-0.24}$	3506^{+247}_{-243}	6952^{+817}_{-662}	11^{+6}_{-4}
Alt.	-1±1	$1.01^{+0.27}_{-0.21}$	3525^{+239}_{-245}	3610^{+813}_{-6872}	$0.790^{+1.034}_{-0.733}$

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 $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

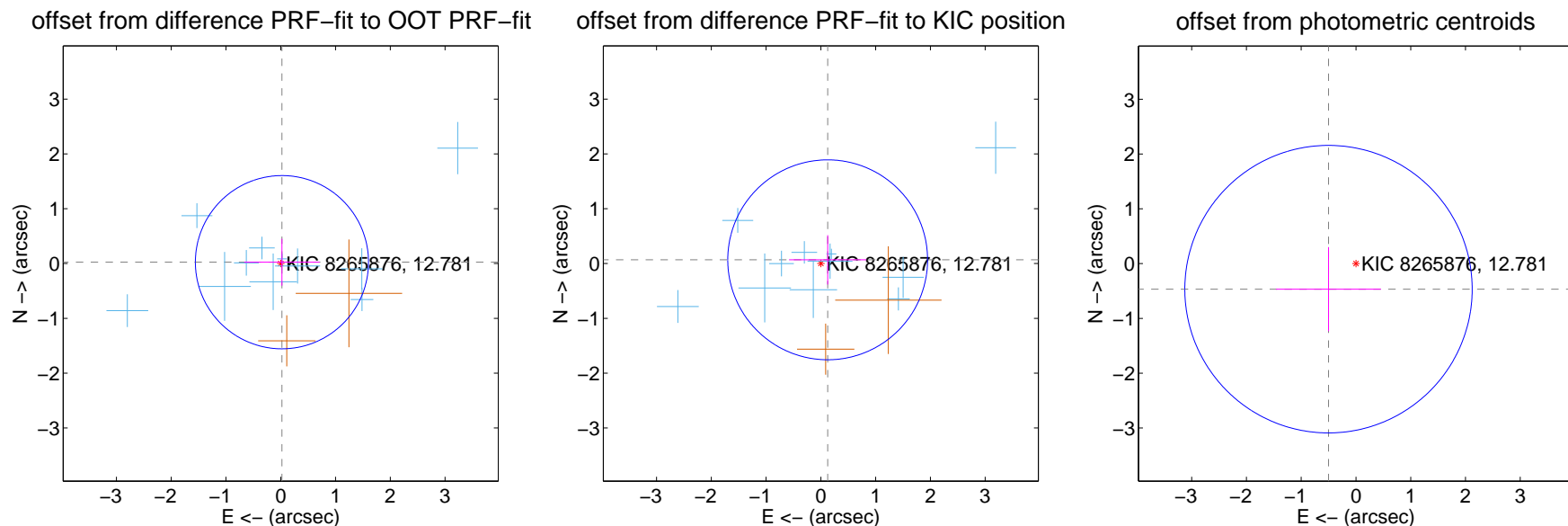
DV Centroid Data

Supplemental centroid analysis for 008265876-01. Kepler magnitude: 12.78. Transit SNR 10.58

There are 11 quarters with good PRF difference image offsets

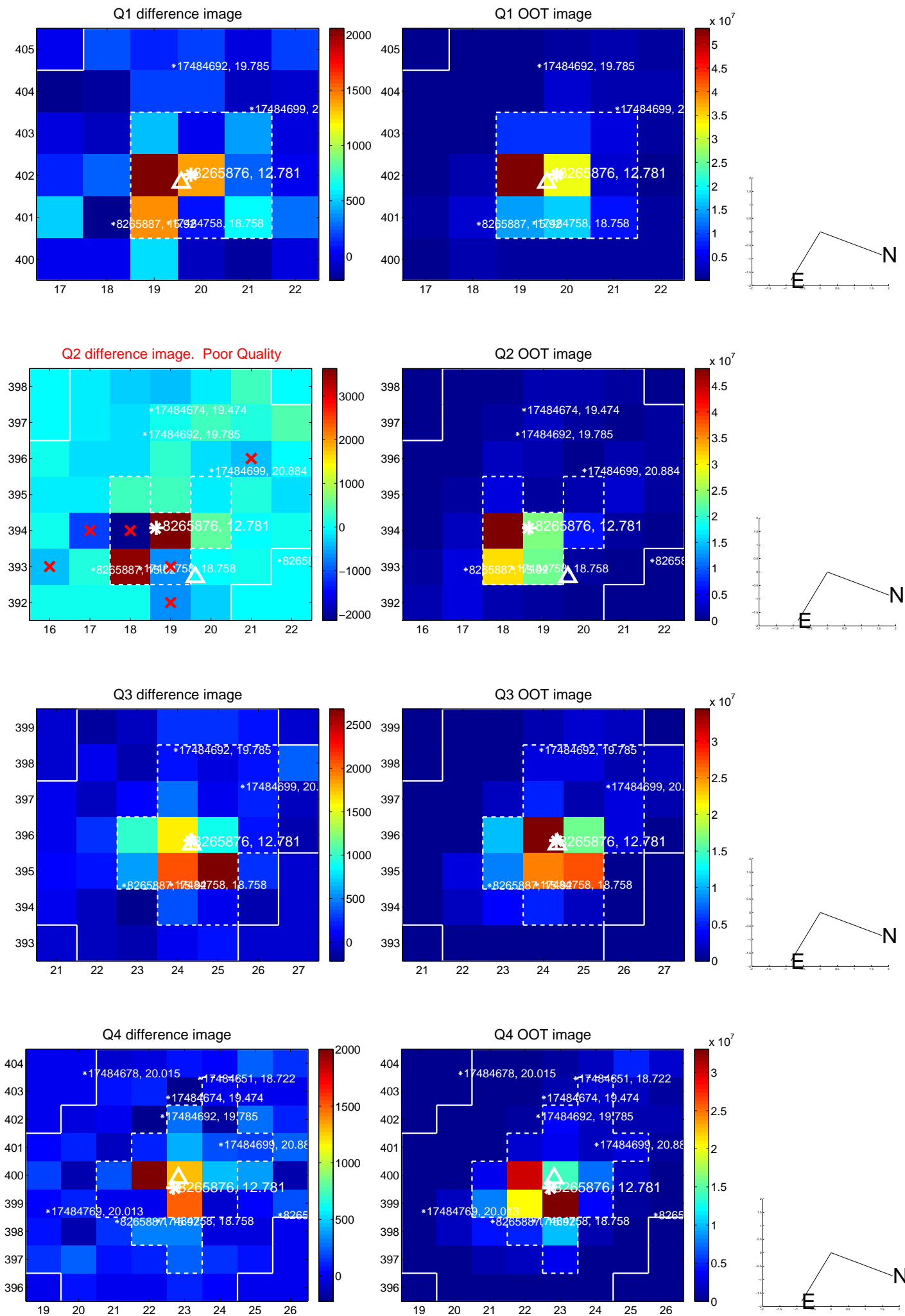
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.033 ± 0.527	0.06	-0.022 ± 0.688	0.025 ± 0.427
PRF-fit source offset from KIC position	0.142 ± 0.608	0.23	-0.124 ± 0.706	0.068 ± 0.450
photometric centroid source offset	0.68 ± 0.87	0.78	0.50 ± 0.96	-0.47 ± 0.77

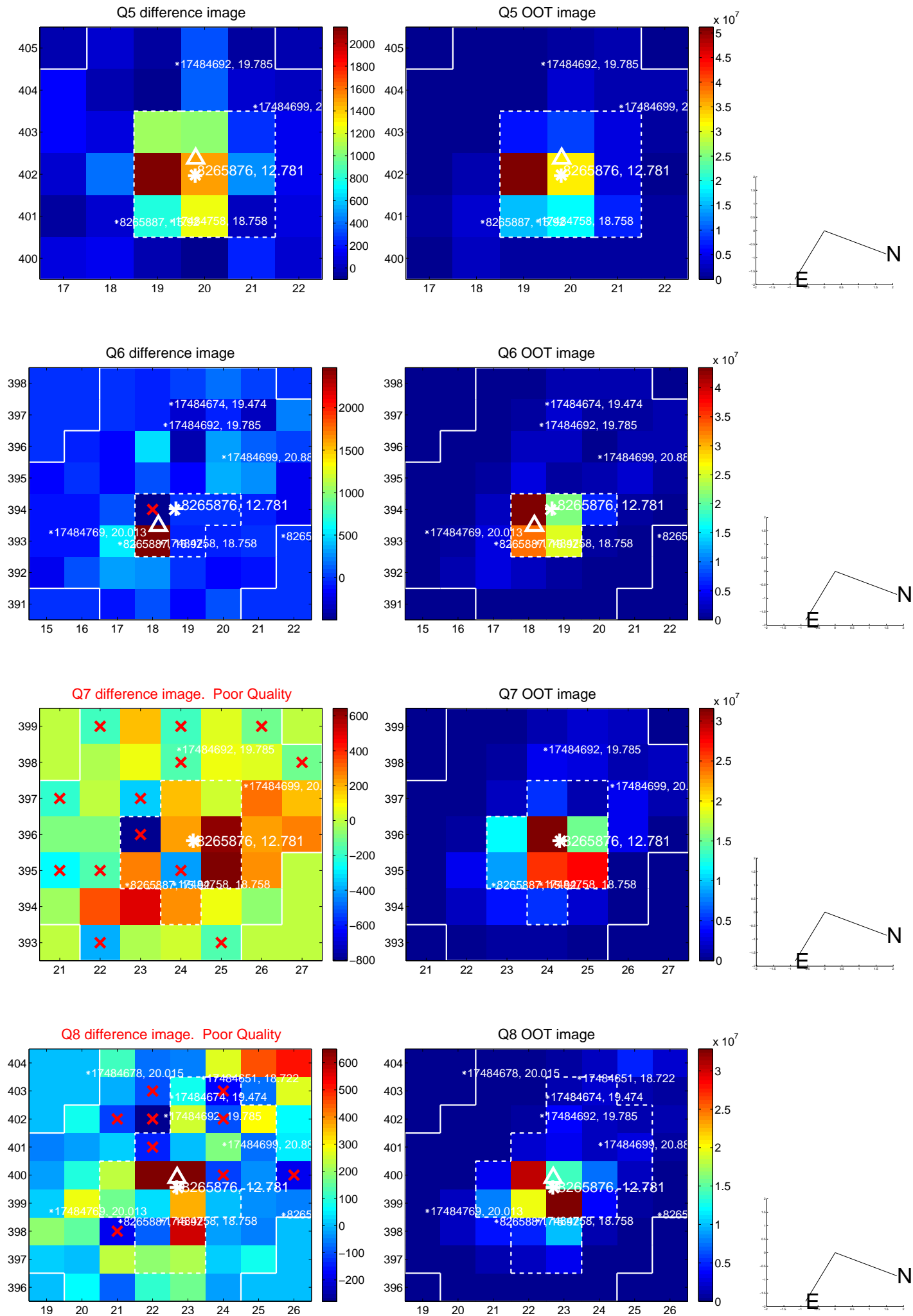


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

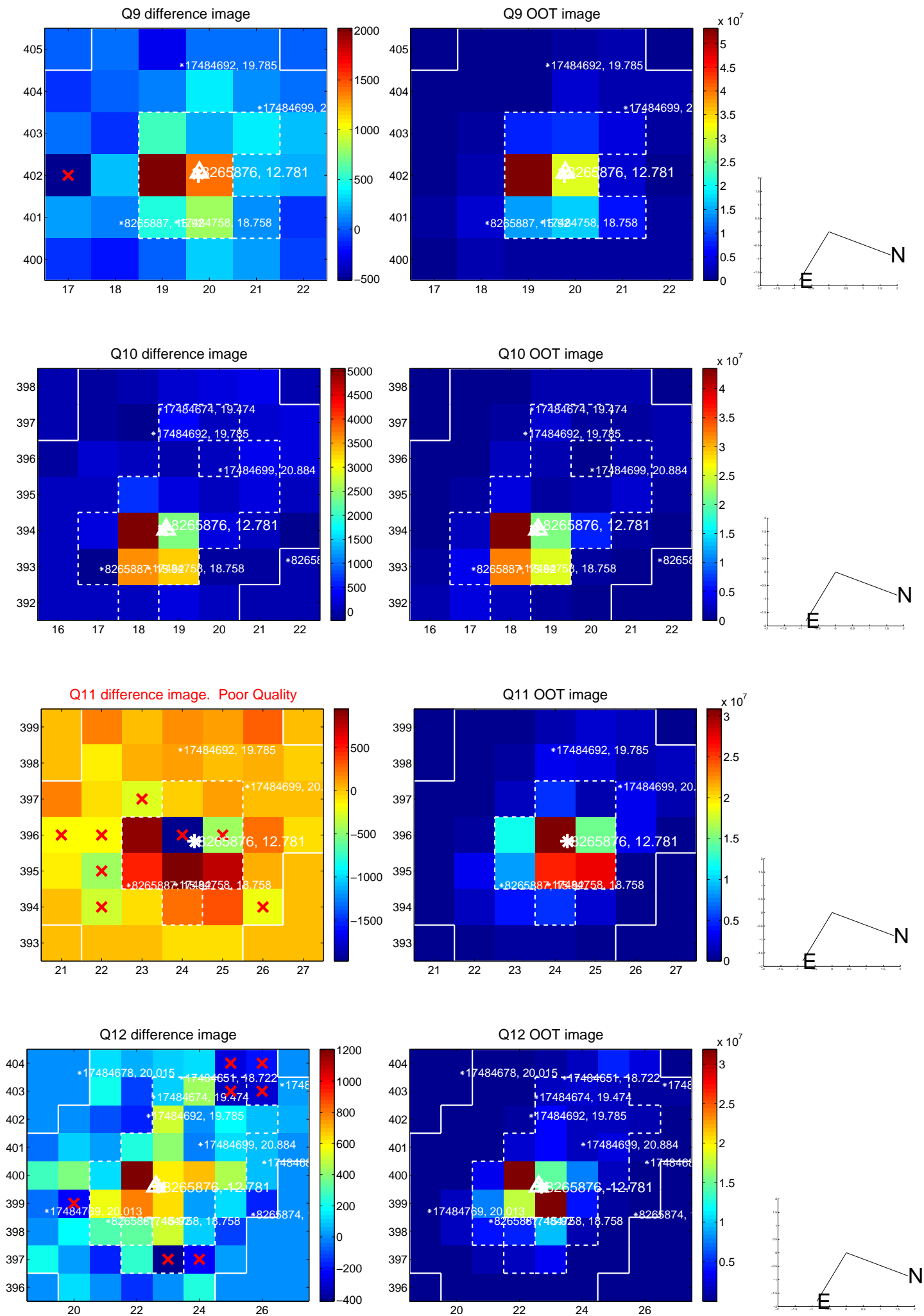
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



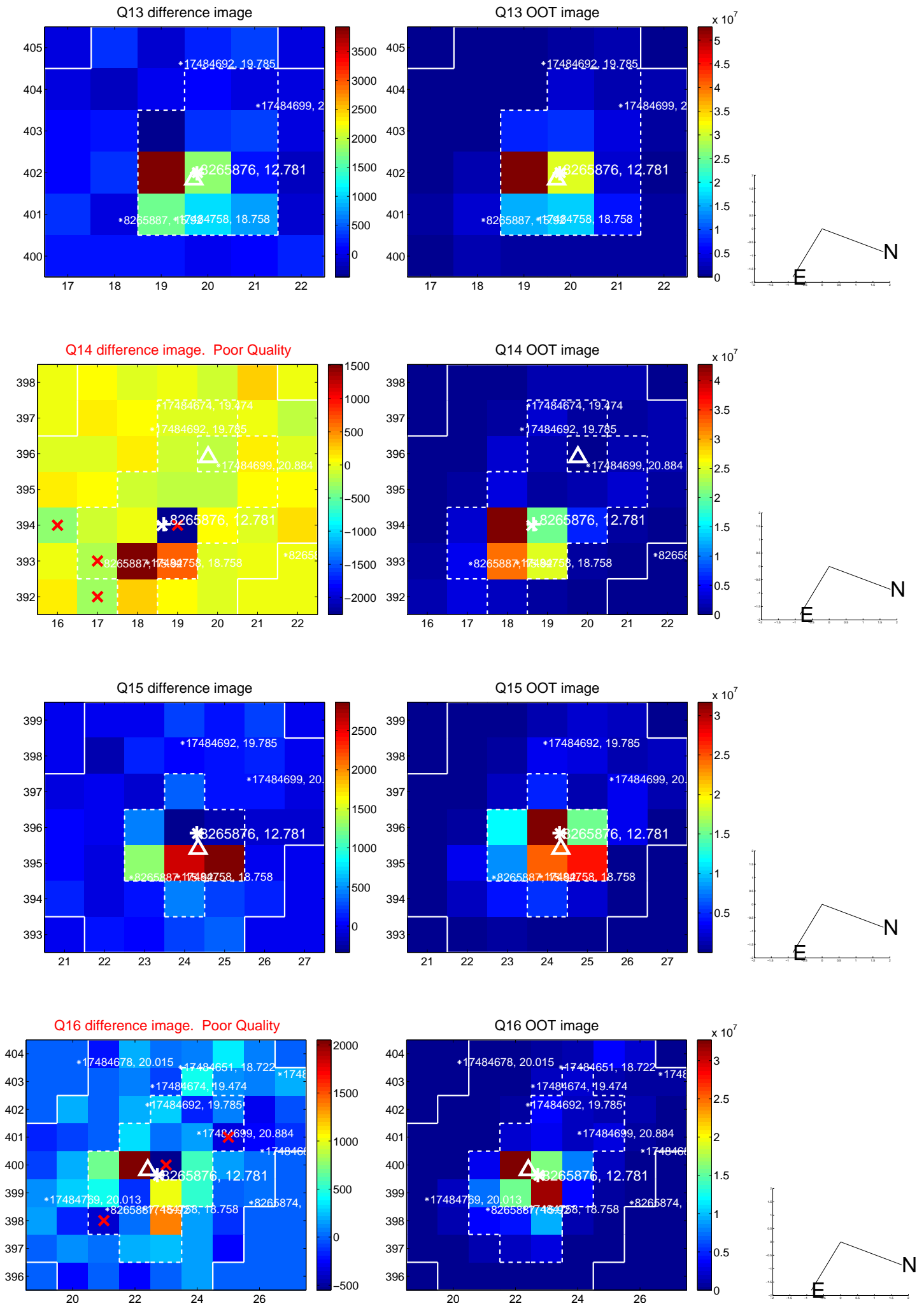
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



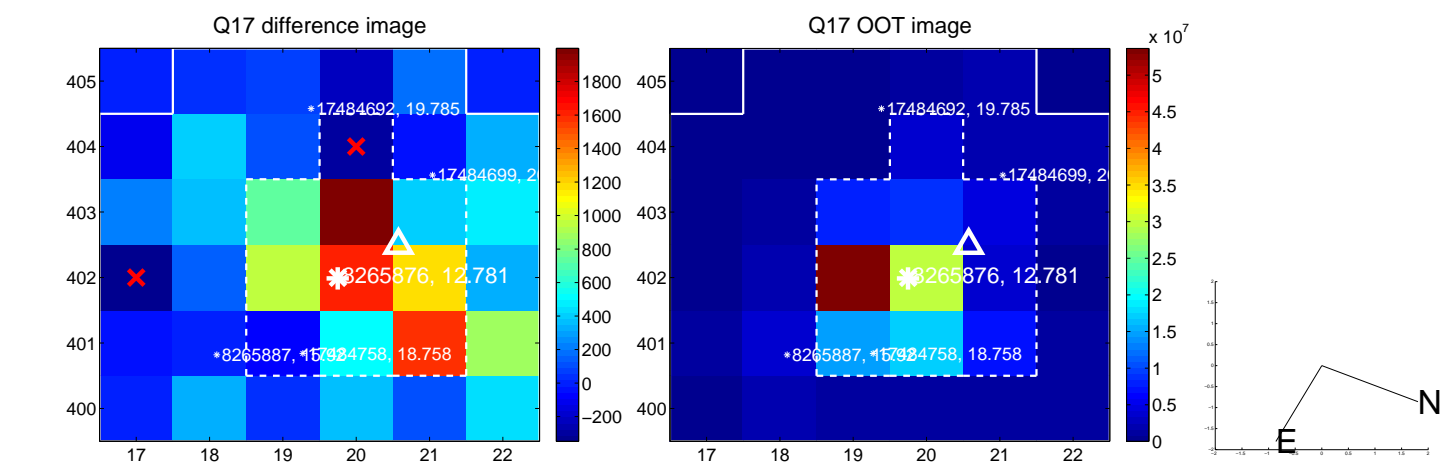
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



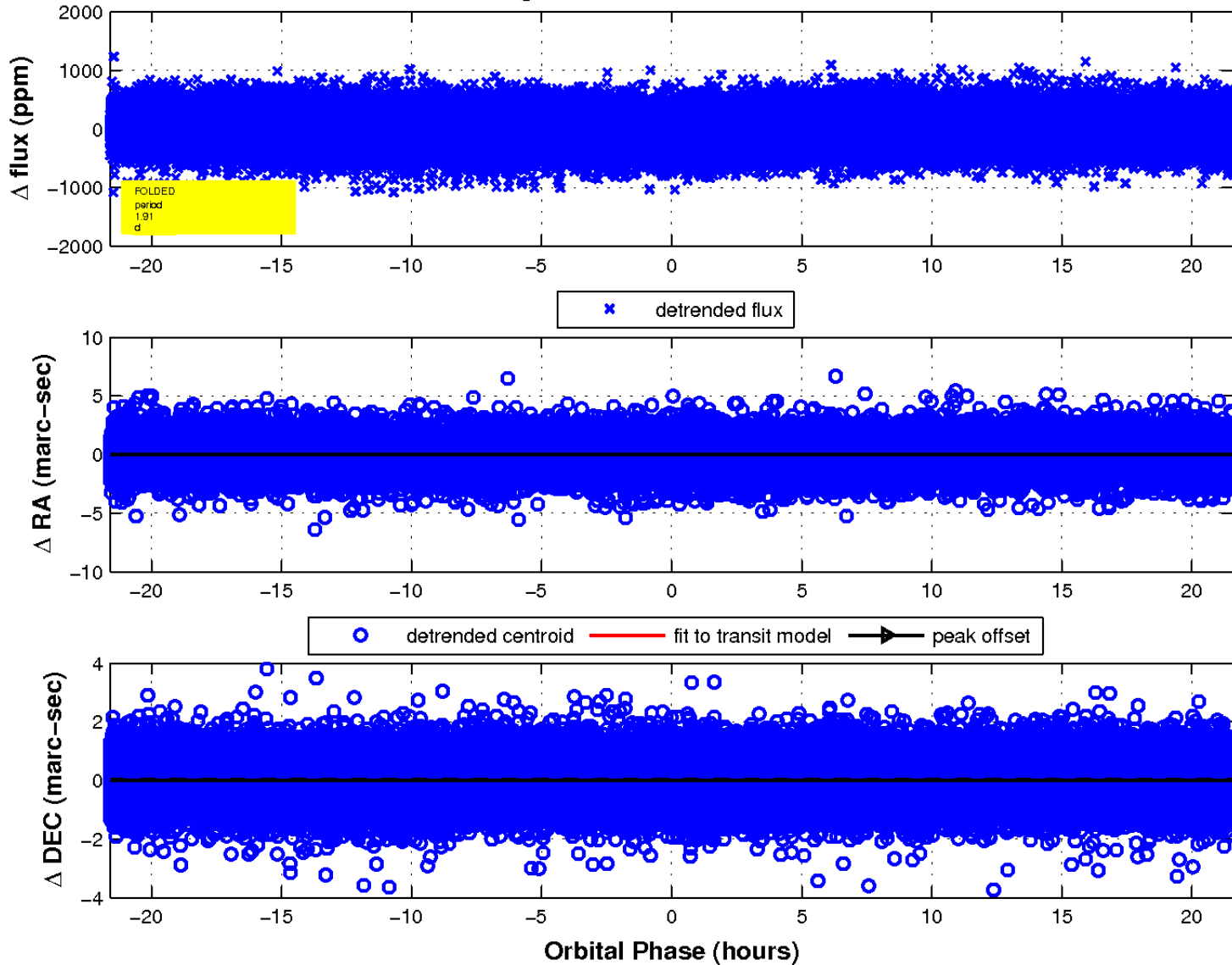
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

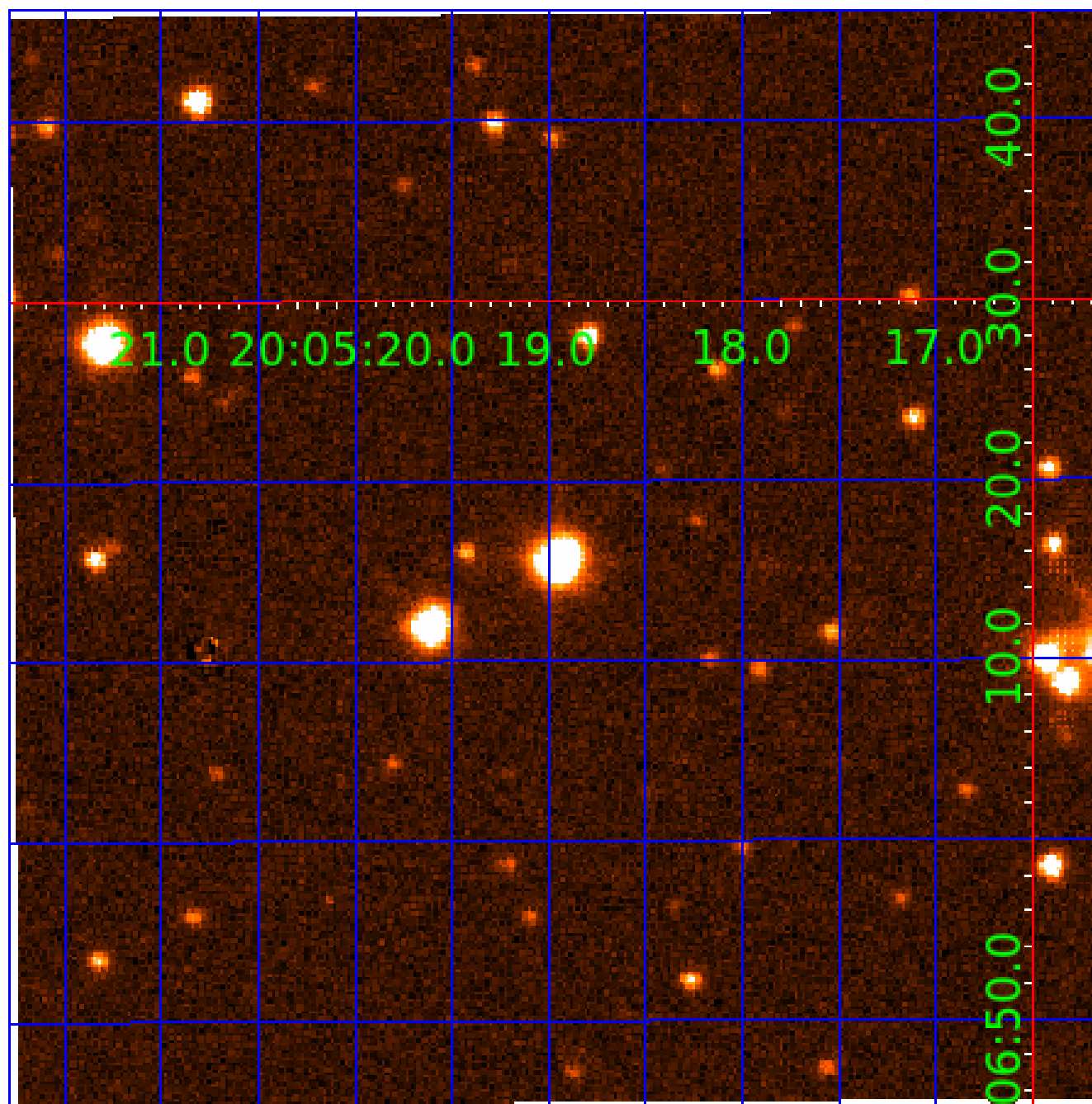


fluxWeightedCentroids, Planet 1 of 2



UKIRT Image

Declination



KIC 008265876

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})
008265876-01	OBS	No	1.908139	132.599297	28.6	7.199	10.2	10.6	1.98	7693	1.23	9422.33
008265876-02	OBS	No	1.908234	131.581440	25.0	12.166	9.1	8.7	1.98	7693	1.01	9421.71

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008265876-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—CENT_CROWDED
008265876-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—SAME_NTL_PERIOD

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

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

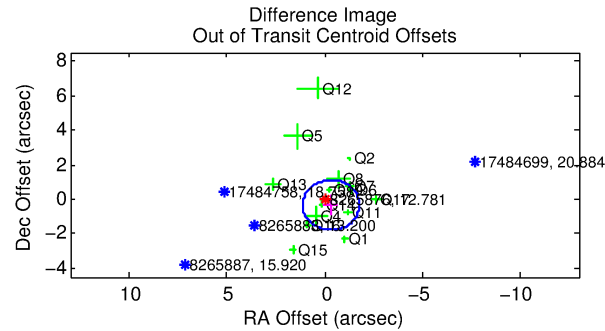
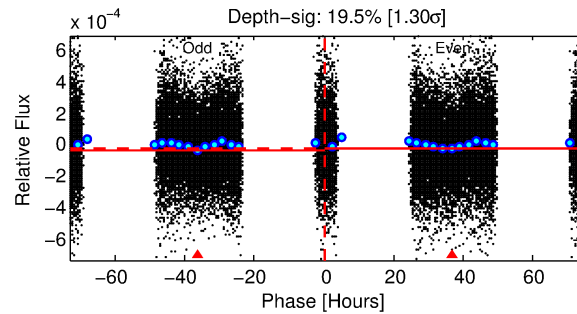
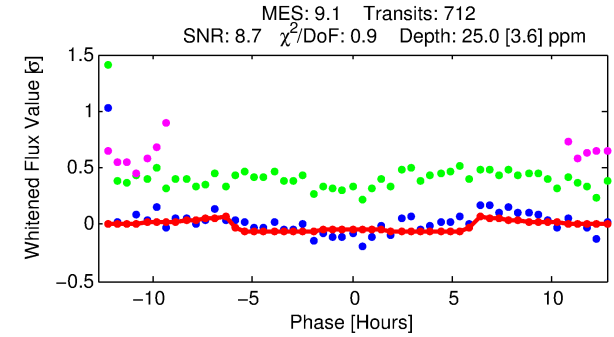
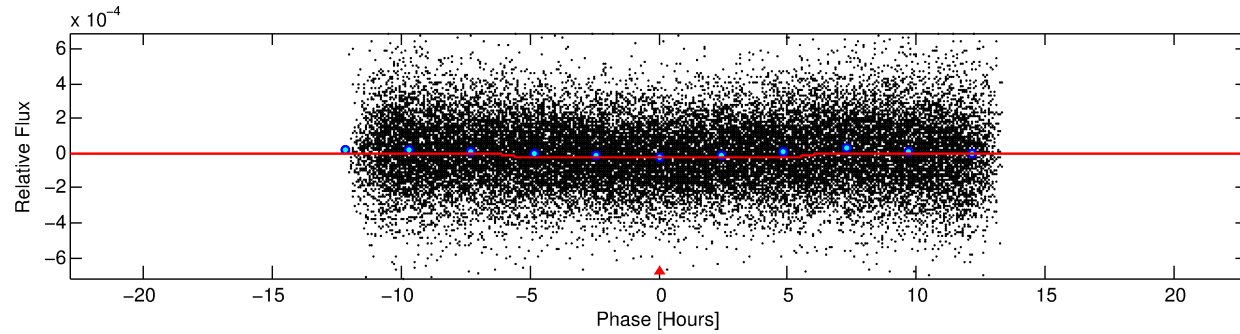
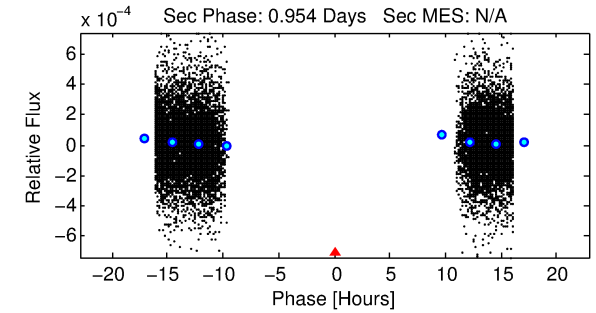
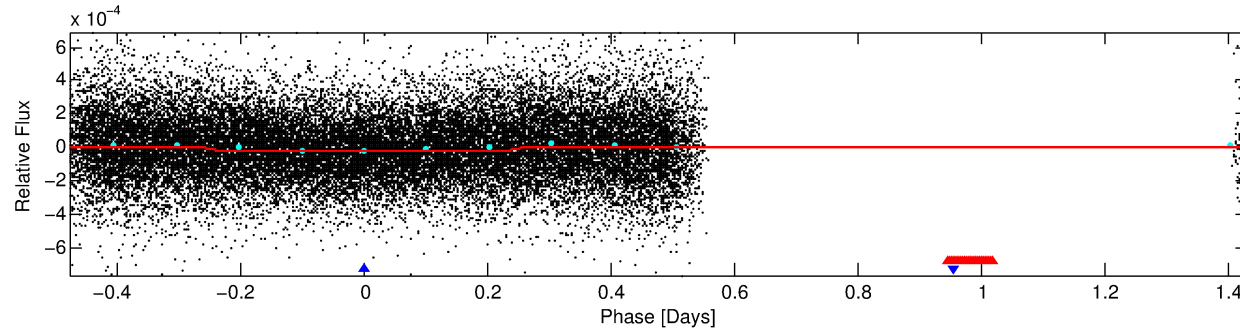
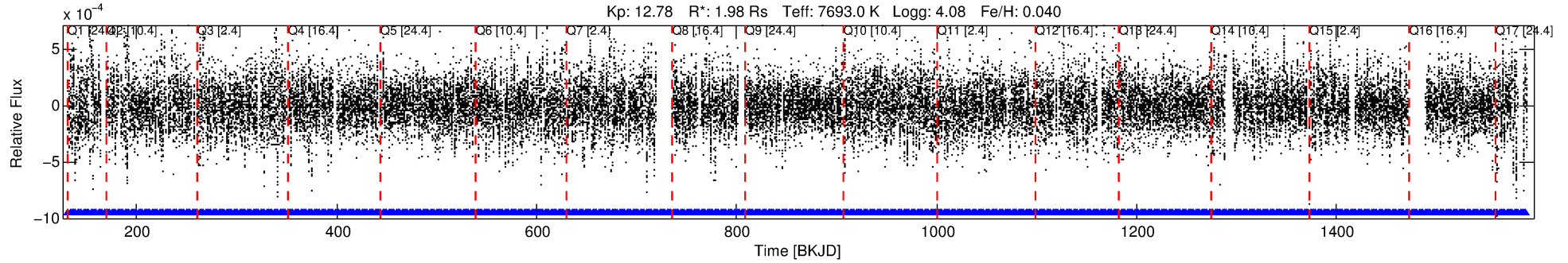
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008265876-02

No Significant Match Found

DV One-Page Summary

KIC: 8265876 Candidate: 2 of 2 Period: 1.908 d



DV Fit Results:

Period = 1.90823 [0.00002] d
Epoch = 131.5814 [0.0051] BKJD
Rp/R* = 0.0047 [0.0032]
a/R* = 1.34 [2.57]
b = 0.19 [21.73]
Seff = 9421.71 [3291.06]
Teq = 2512 [219] K
Rp = 1.01 [0.75] Re
a = 0.0362 [0.0078] AU

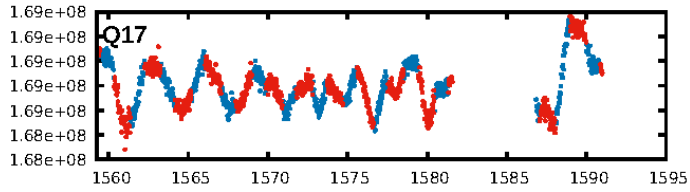
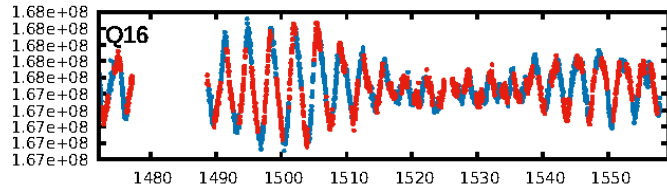
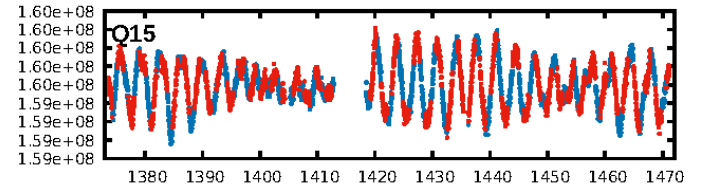
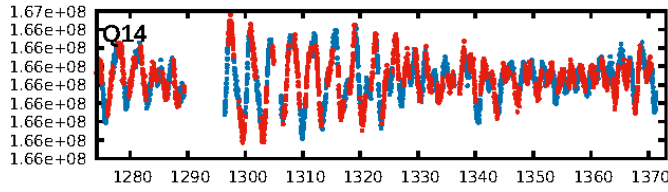
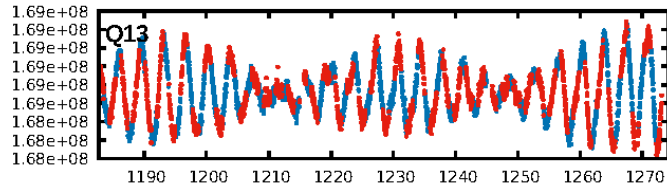
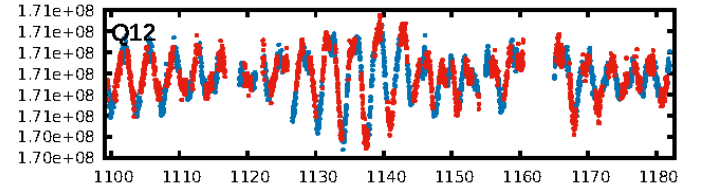
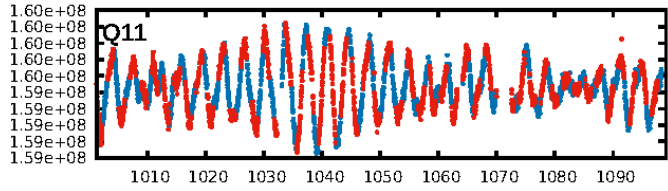
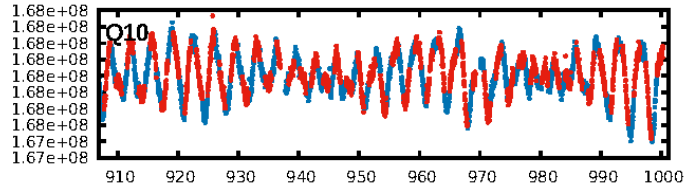
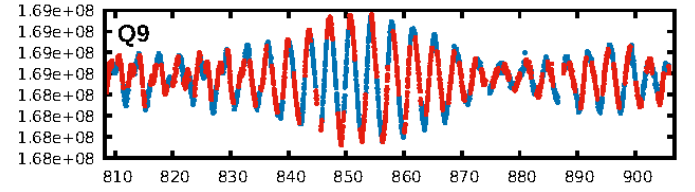
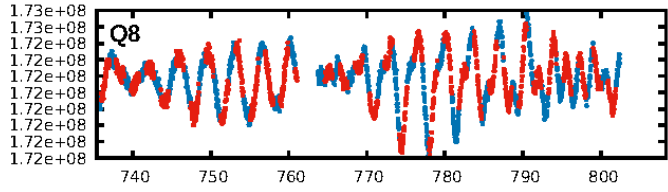
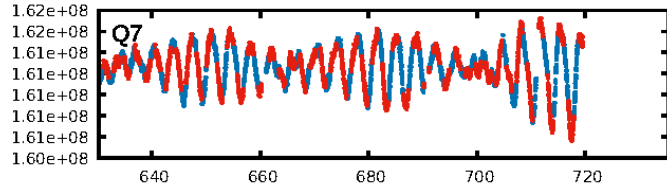
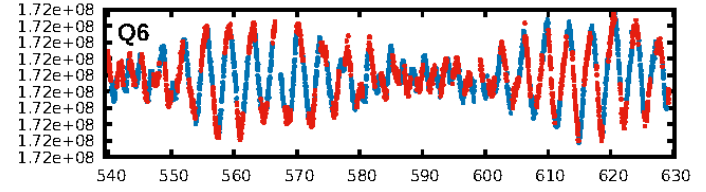
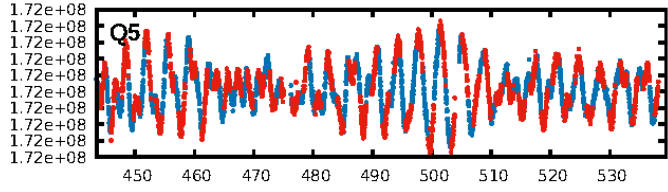
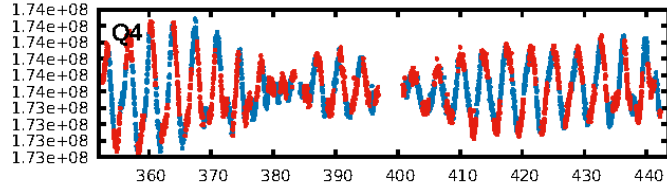
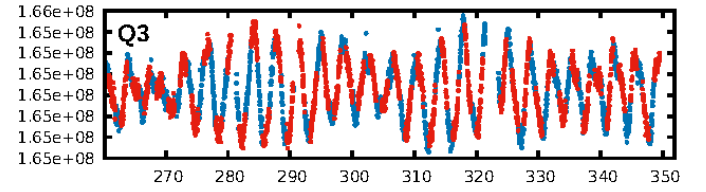
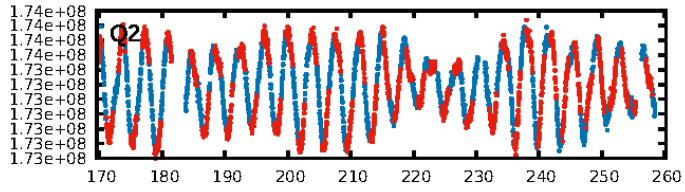
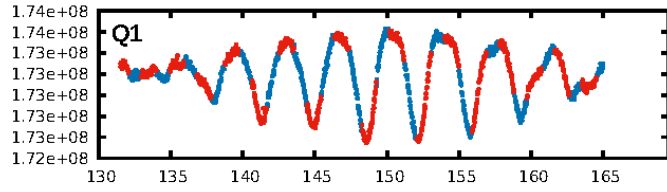
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [680/680]
GhostDiagnostic-chr: 5.51
Centroid-sig: 5.0%
Centroid-so: 1.049 arcsec [1.13σ]
OotOffset-rm: 0.462 arcsec [0.96σ]
KicOffset-rm: 0.504 arcsec [1.02σ]
OotOffset-st: 4/3/4/4 [15]
KicOffset-st: 4/3/4/4 [15]
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DiffImageOverlap-fno: 0.00 [0/17]

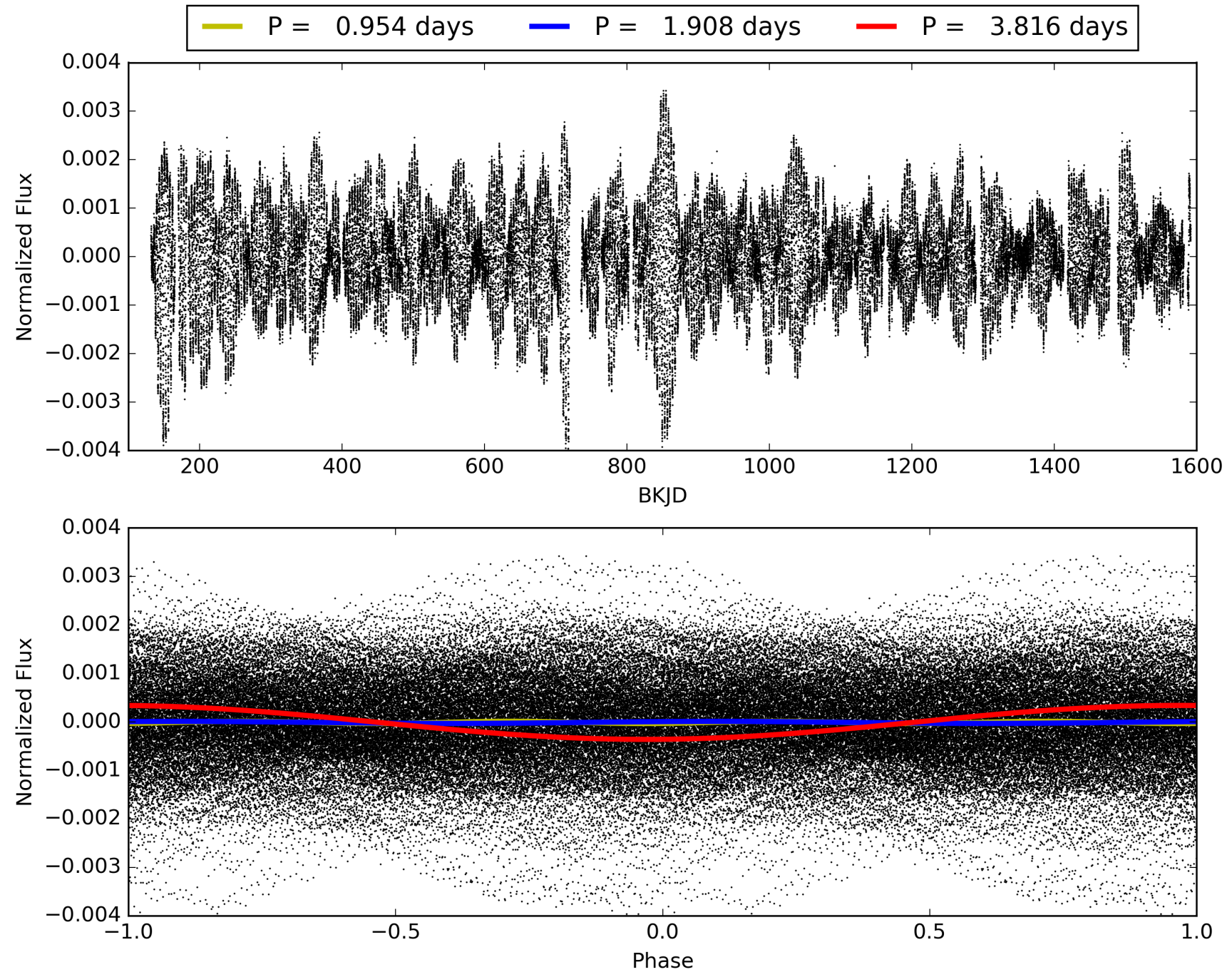
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 02:16:50 Z

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

TCE 008265876-02, PDC Light Curves

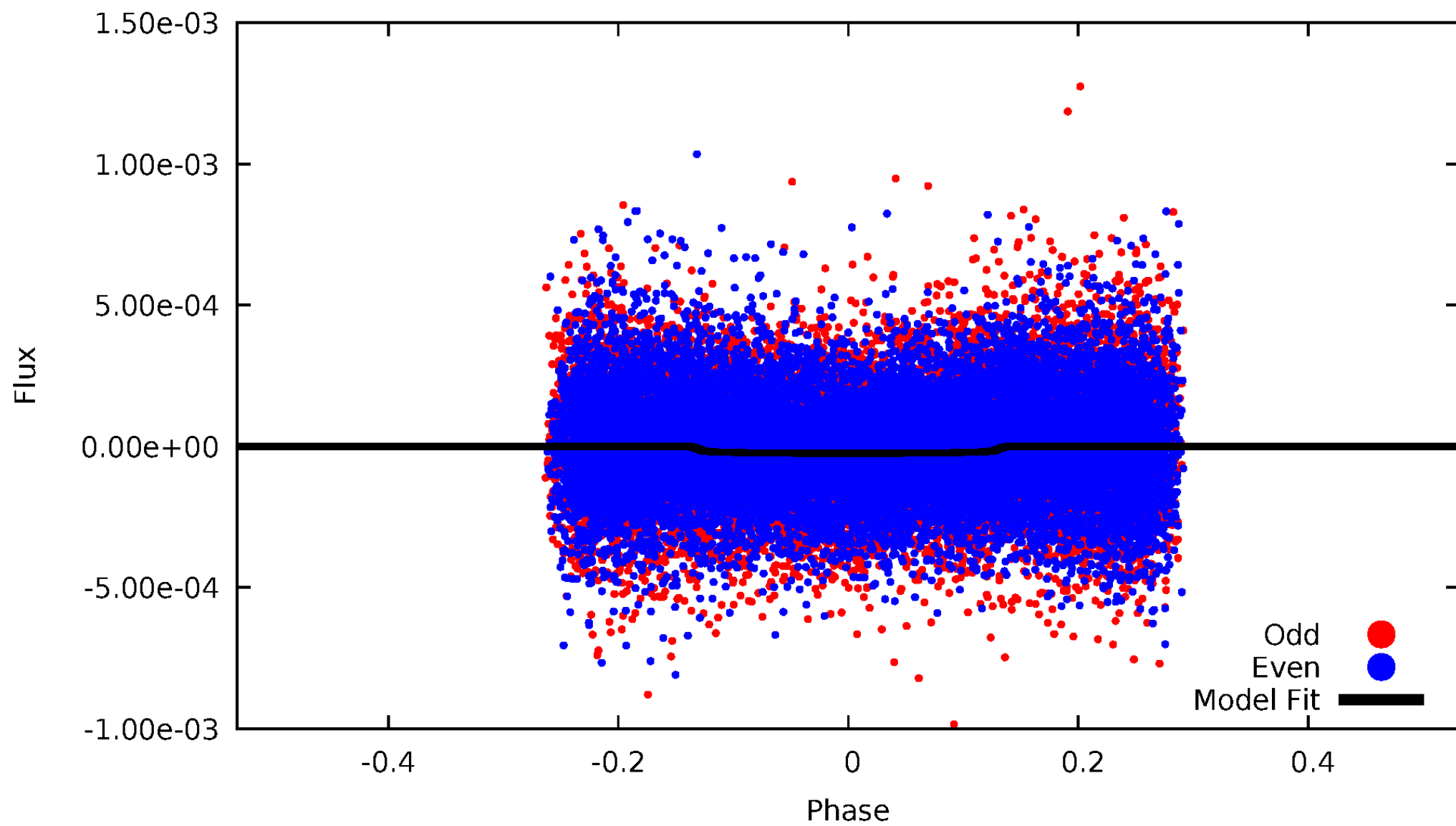


TCE 008265876-02



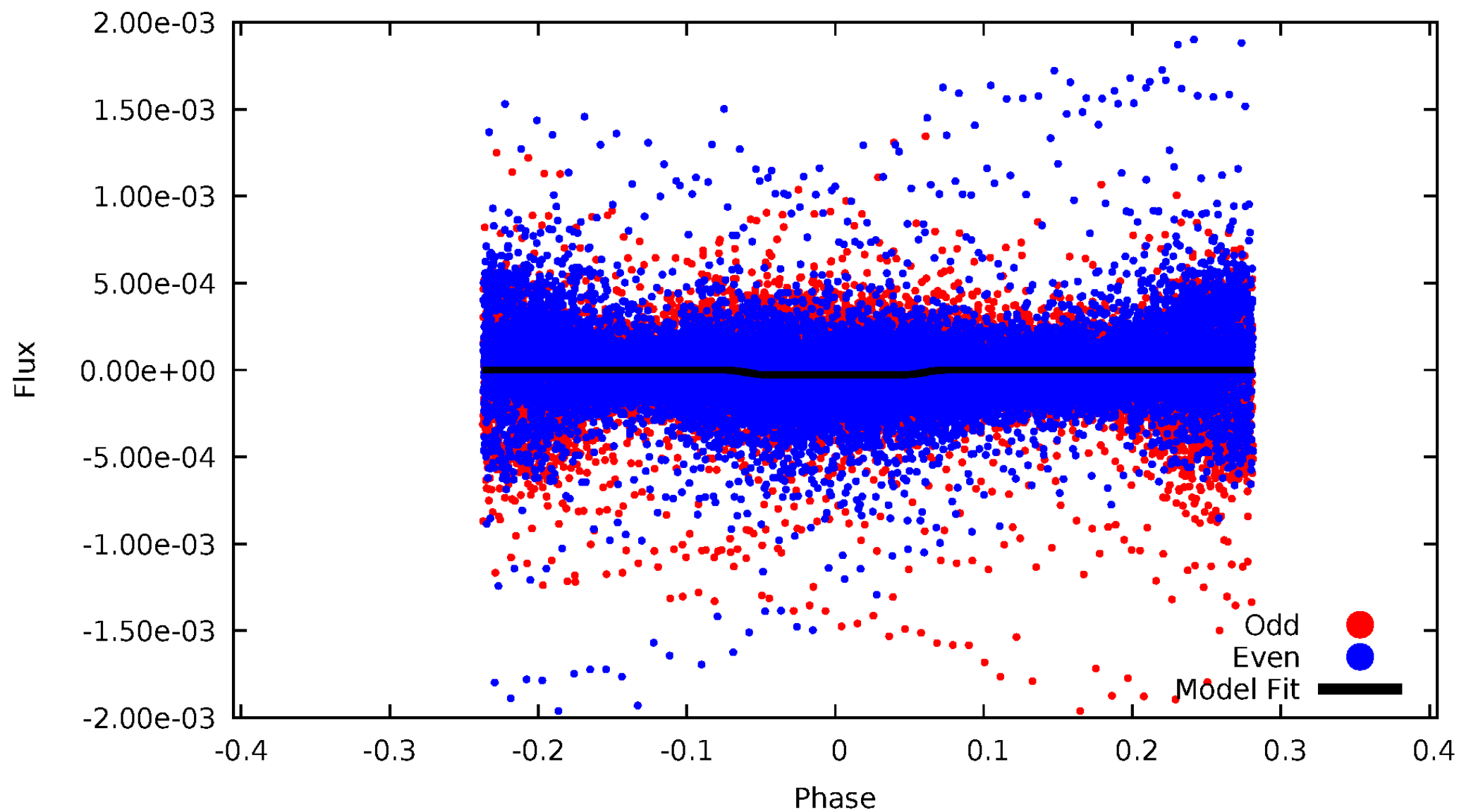
DV Odd/Even

TCE 008265876-02



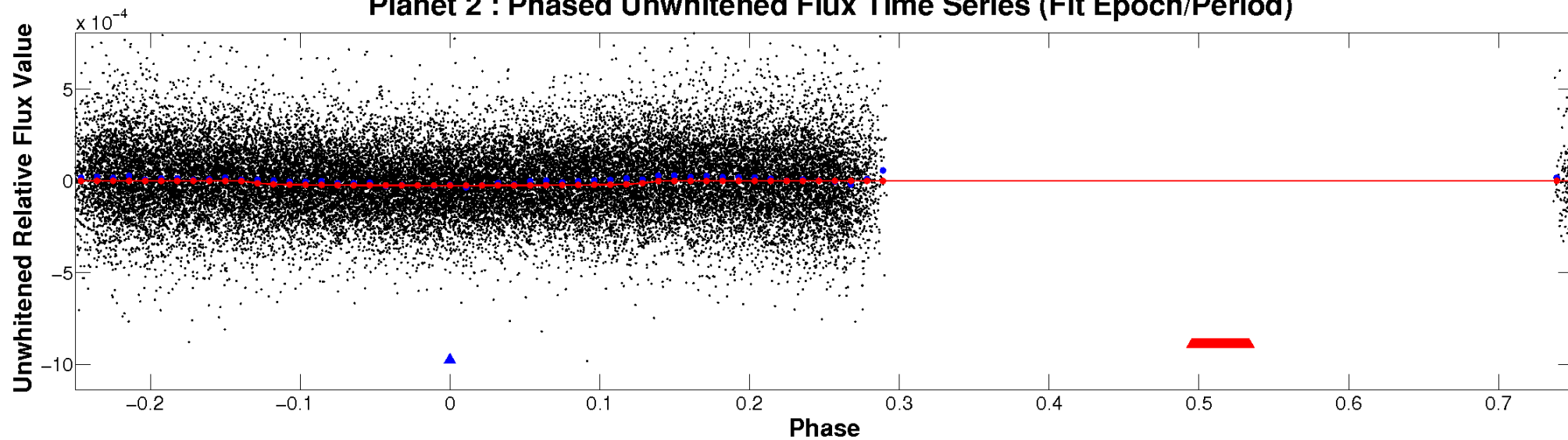
ALT Odd/Even

TCE 008265876-02

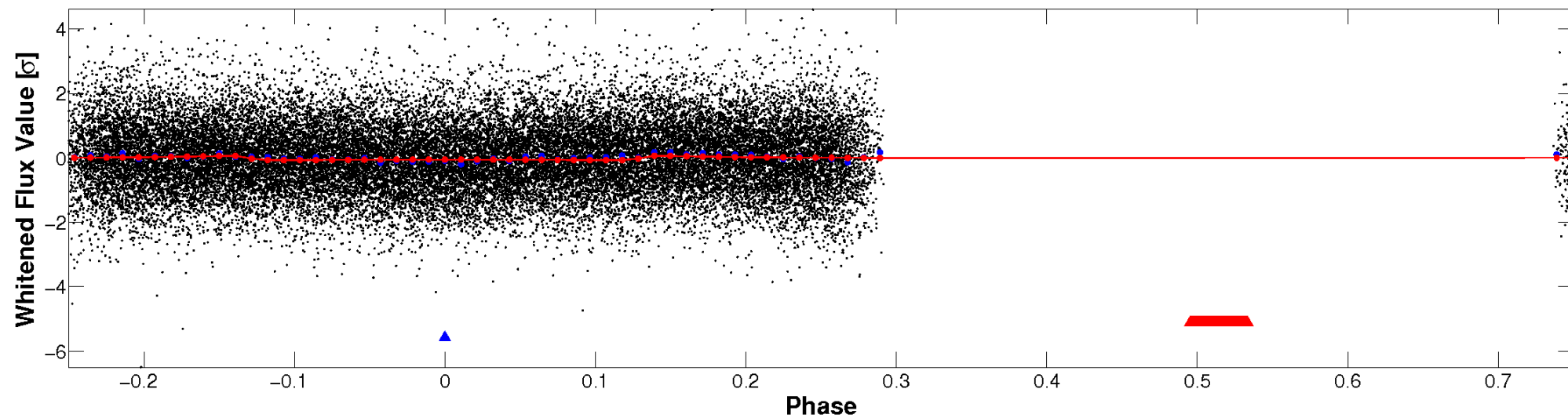


Non-Whitened Vs. Whitened Light Curve

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

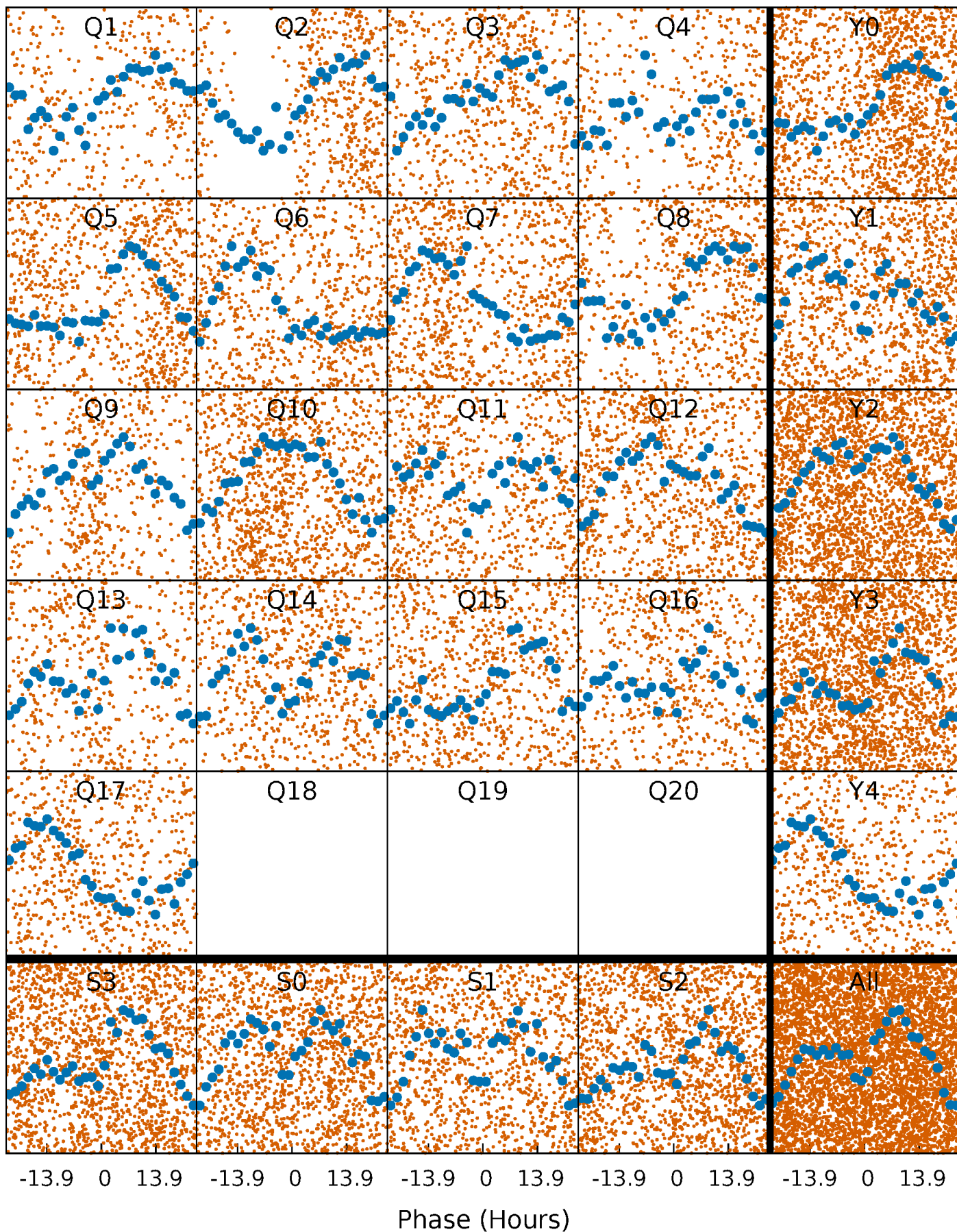


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



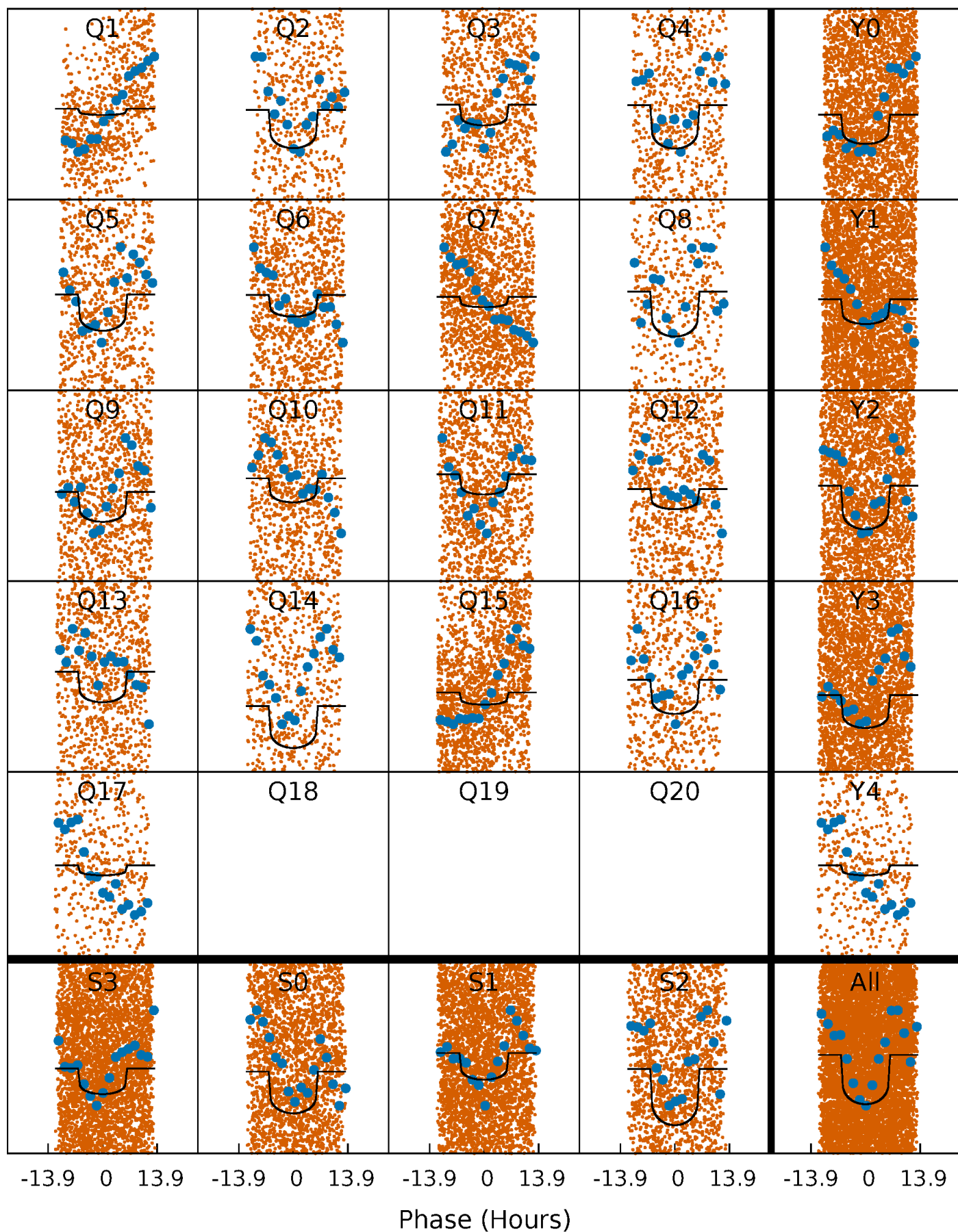
PDC Quarter-Phased Transit Curves

TCE 008265876-02 P= 1.908234 Days $T_0=131.581440$ (BKJD)



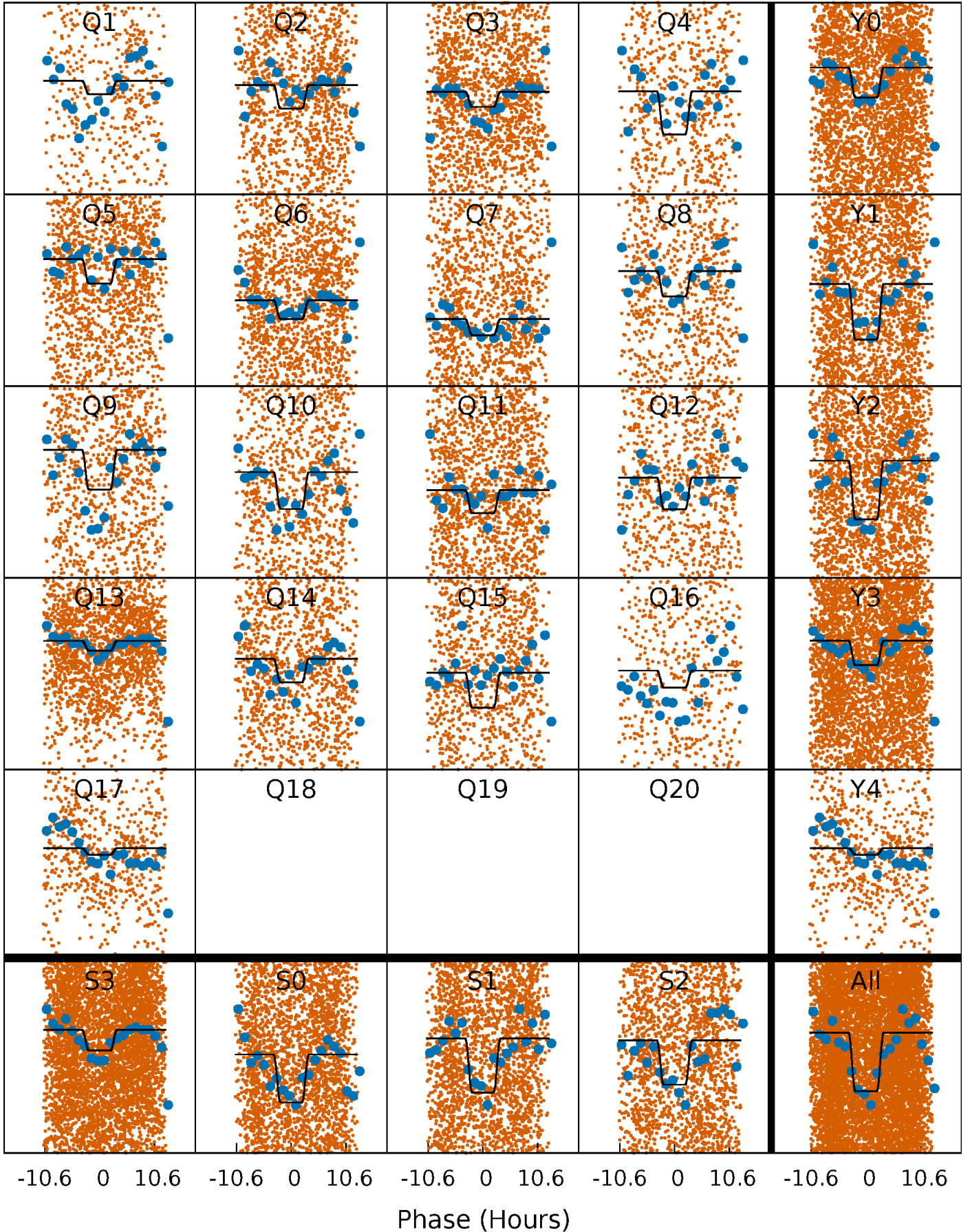
DV Quarter-Phased Transit Curves

TCE 008265876-02 $P = 1.908234$ Days $T_0 = 131.581440$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

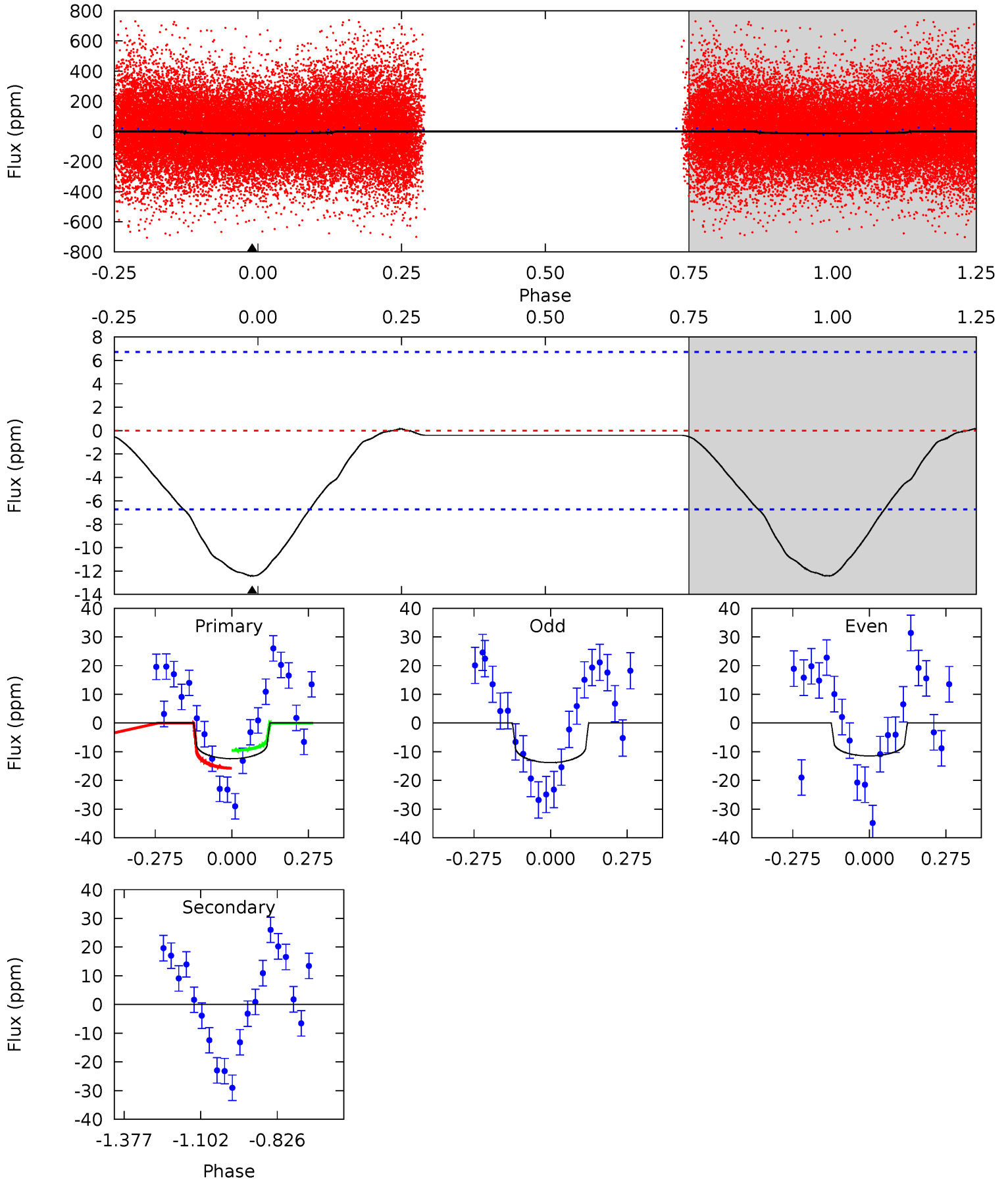
TCE 008265876-02 P= 1.908142 Days $T_0=131.602089$ (BKJD)



DV Model-Shift Uniqueness Test

008265876-02, P = 1.908234 Days, E = 129.673206 Days

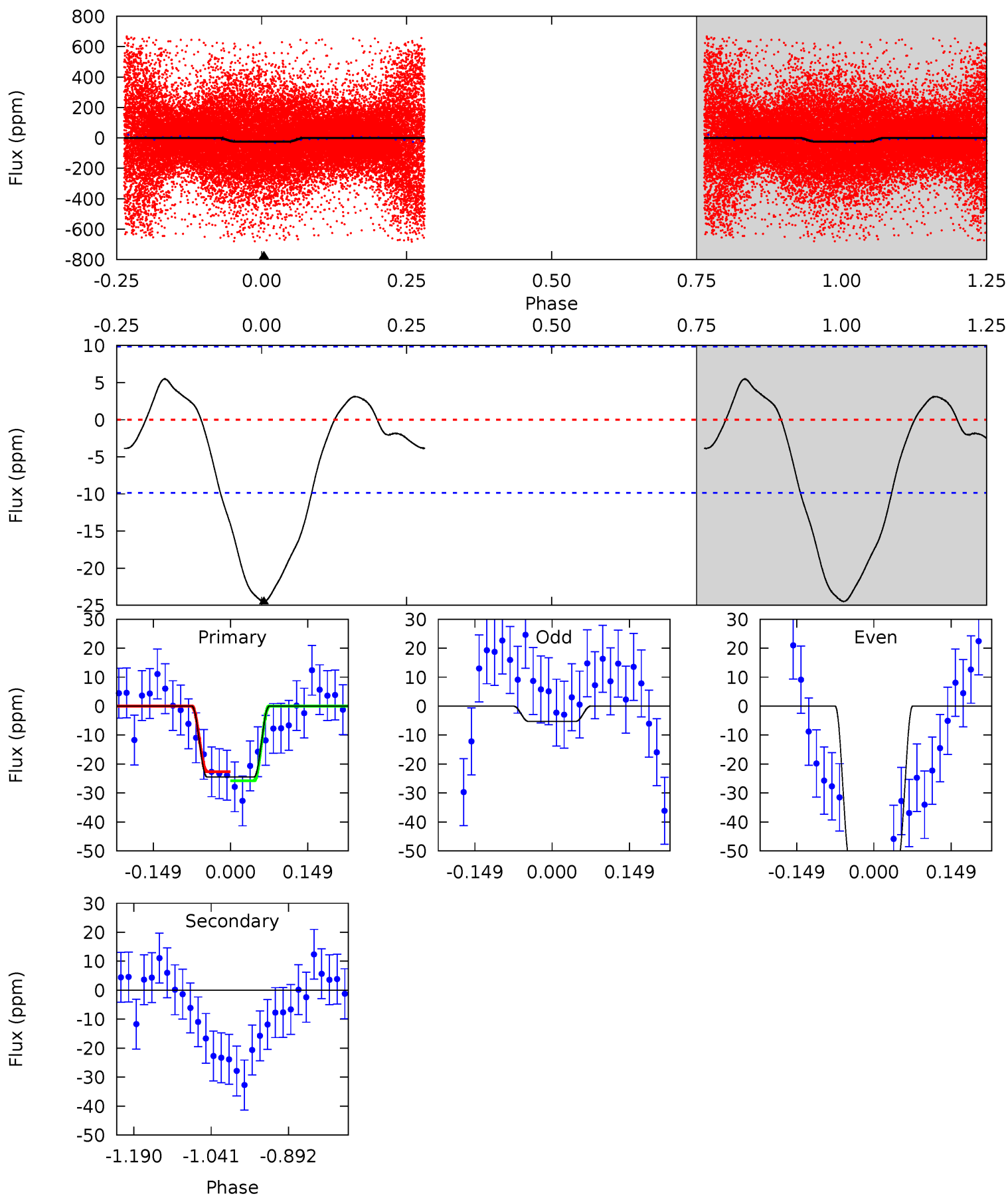
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.03	0	0	0	4.35	1.09	0.12	8.03	8.03	0	0	0.76	1.21	0.01	2.48



Alt Model-Shift Uniqueness Test

008265876-02, P = 1.908142 Days, E = 129.693947 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.1	0	0	0	4.48	1.44	1.37	11.1	11.1	0	0	12.0	1.59	0.18	0.81



Stellar Parameters For KIC 008265876

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7693^{+214}_{-322}	$4.083^{+0.135}_{-0.165}$	$0.040^{+0.200}_{-0.350}$	$1.984^{+0.514}_{-0.420}$	$1.737^{+0.194}_{-0.291}$	$0.313^{+0.252}_{-0.140}$
	+3%/-4%	+3%/-4%	+500%/-875%	+26%/-21%	+11%/-17%	+80%/-45%
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 008265876-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 2	$1.06^{+0.70}_{-0.60}$	3507^{+251}_{-200}	-3405^{+7470}_{-1193}	$-0.020^{+1.202}_{-1.541}$
Alt.	0 ± 2	$1.22^{+0.69}_{-0.69}$	3522^{+239}_{-229}	-3333^{+7603}_{-1204}	$0.000^{+1.520}_{-1.356}$

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 $A_{obs} \gg 1.0$

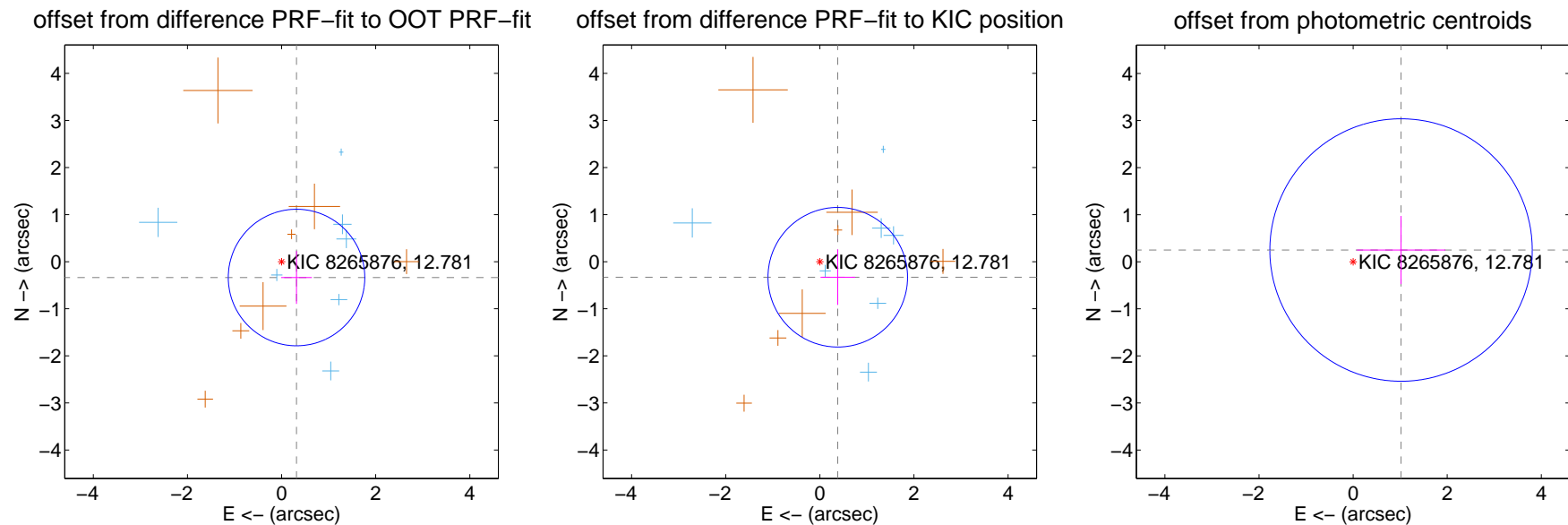
DV Centroid Data

Supplemental centroid analysis for 008265876-02. Kepler magnitude: 12.78. Transit SNR 8.67

There are 7 quarters with good PRF difference image offsets

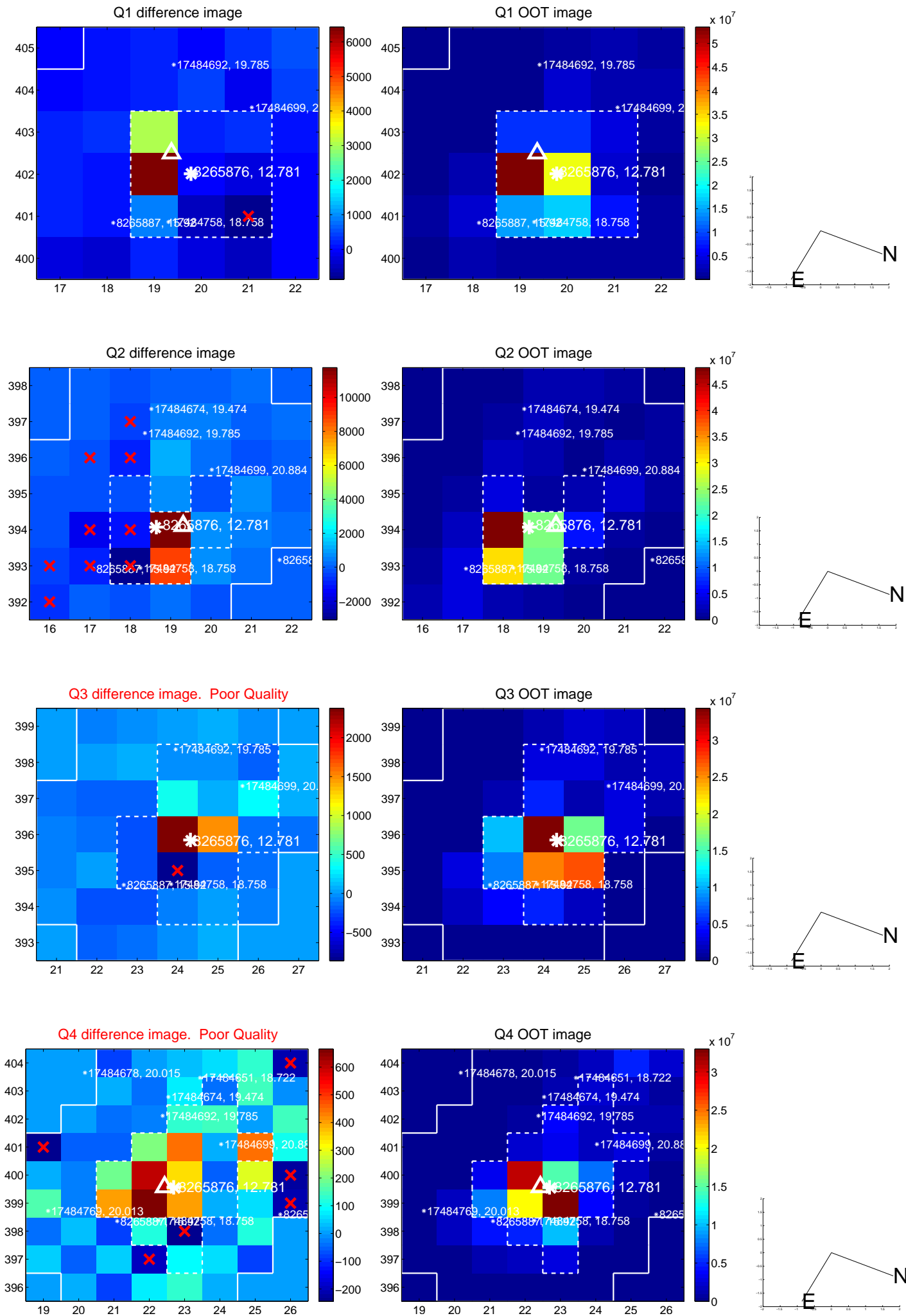
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.462 ± 0.483	0.96	-0.318 ± 0.327	-0.336 ± 0.562
PRF-fit source offset from KIC position	0.504 ± 0.494	1.02	-0.381 ± 0.367	-0.330 ± 0.589
photometric centroid source offset	1.05 ± 0.93	1.13	-1.02 ± 0.94	0.25 ± 0.72

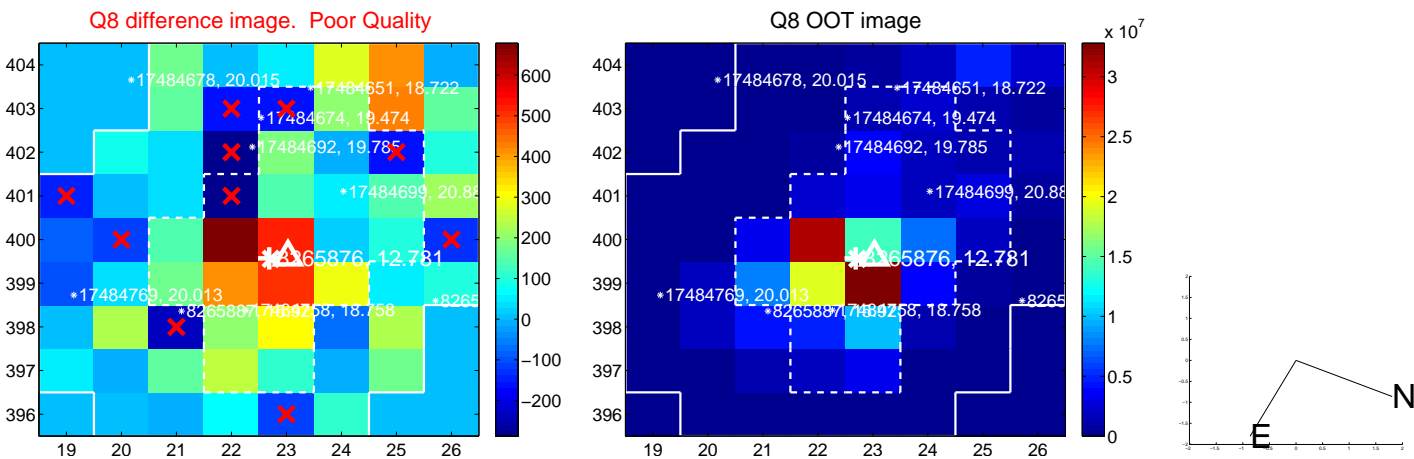
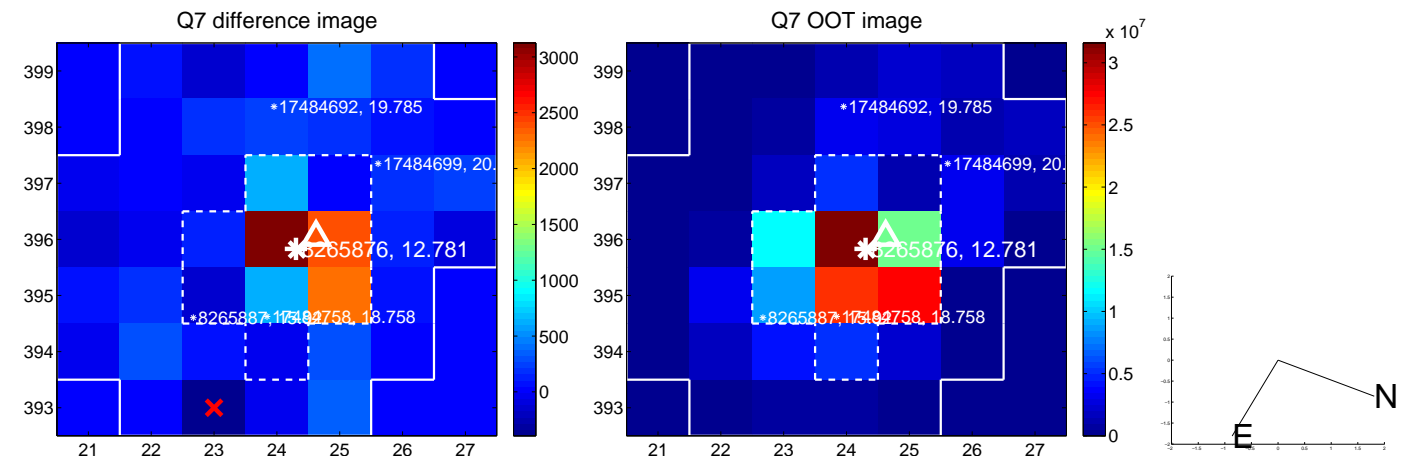
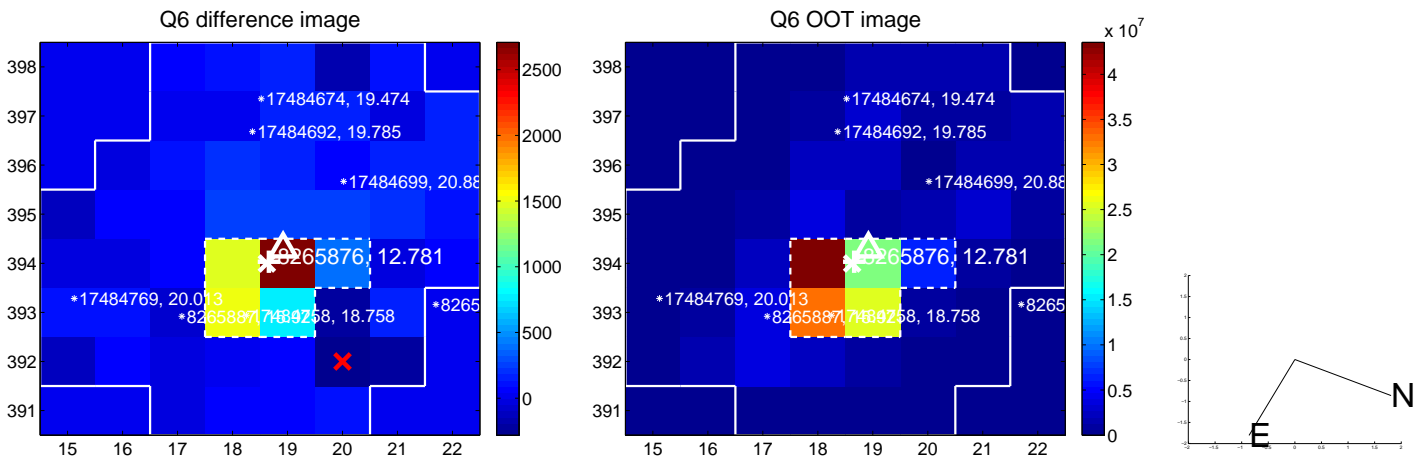
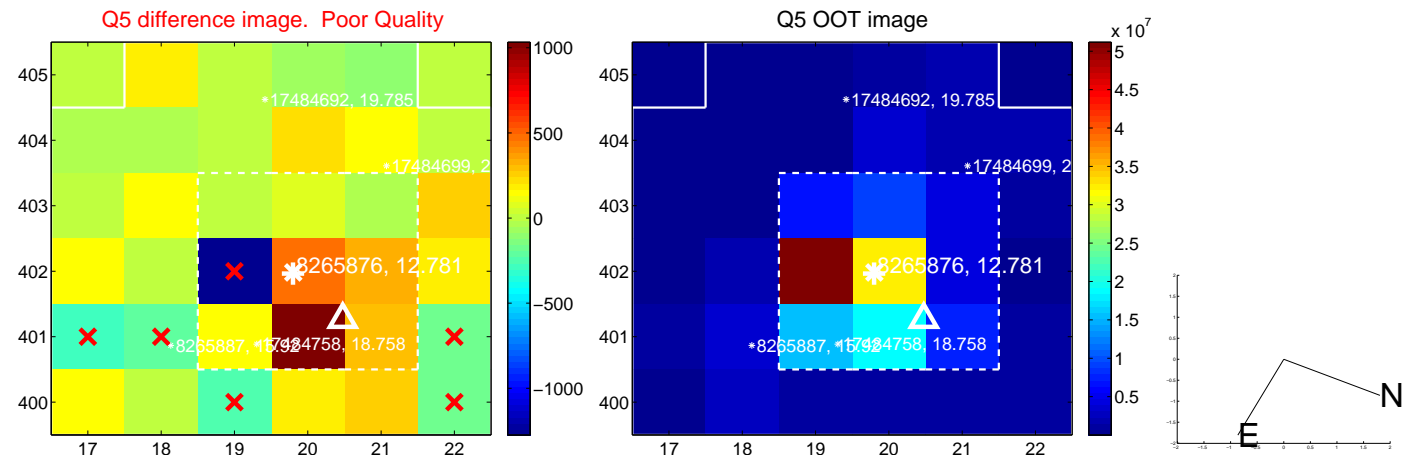


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

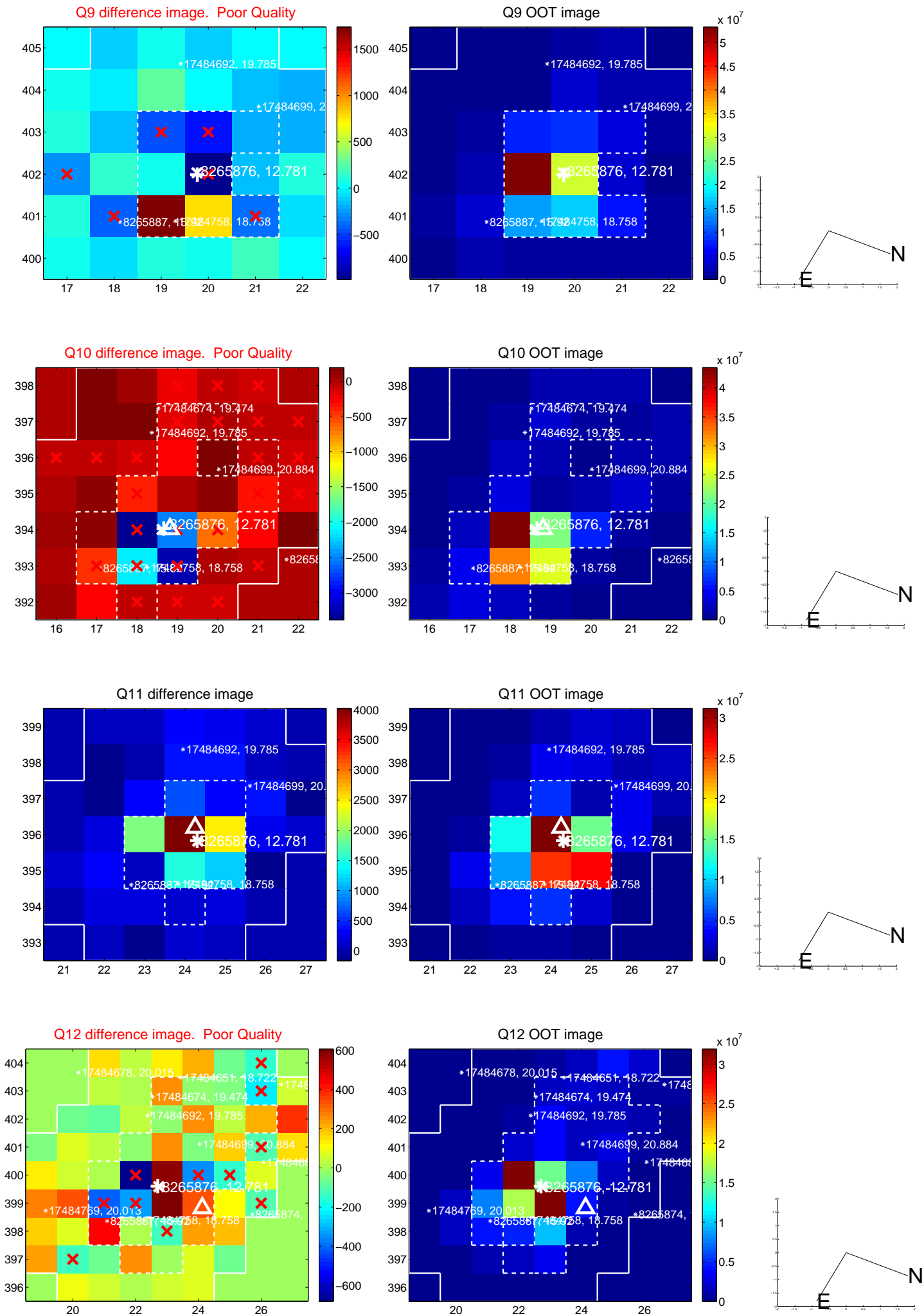
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



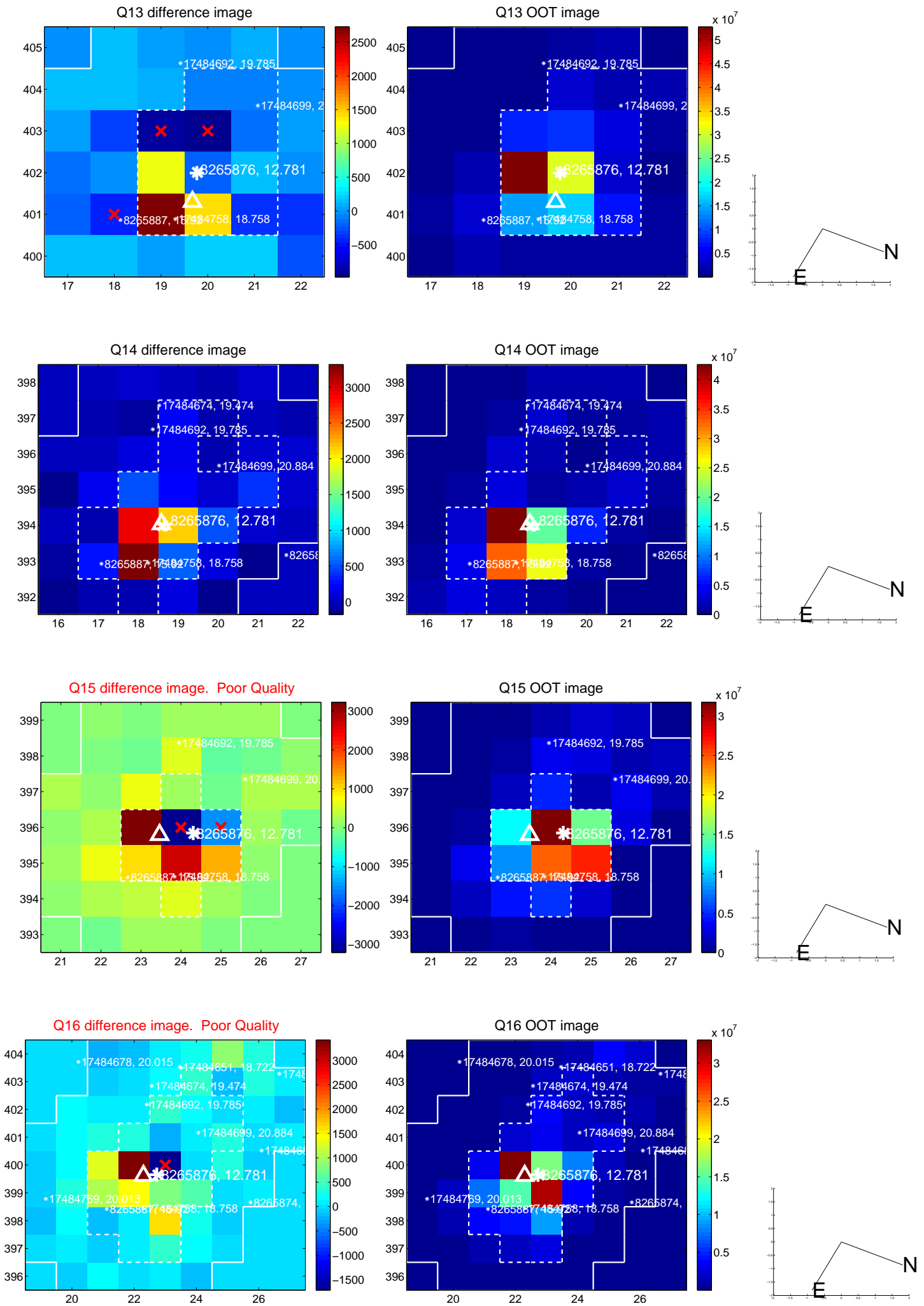
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



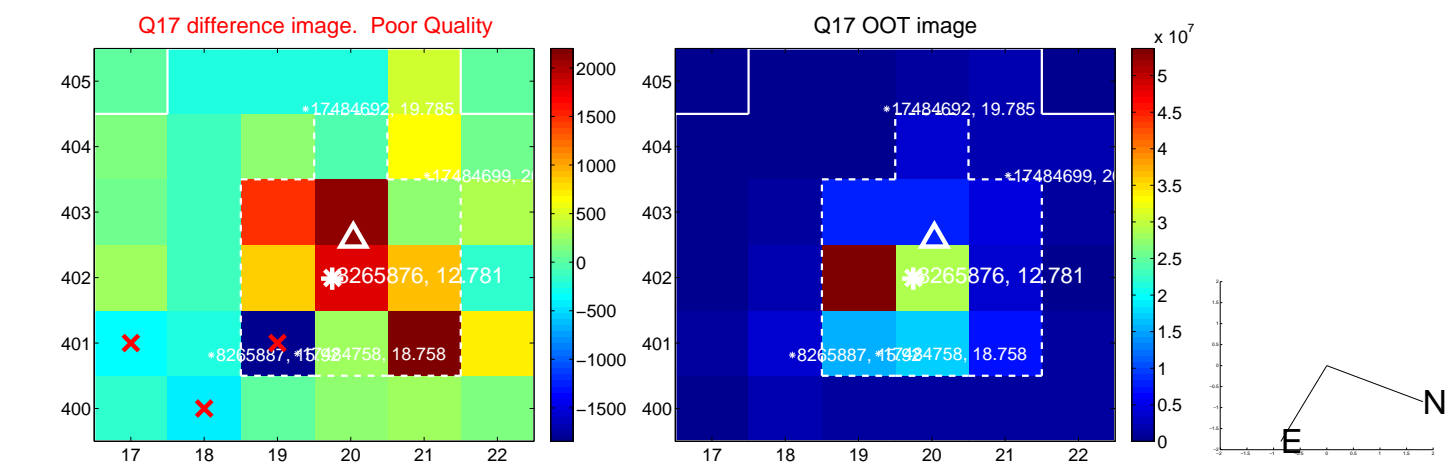
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



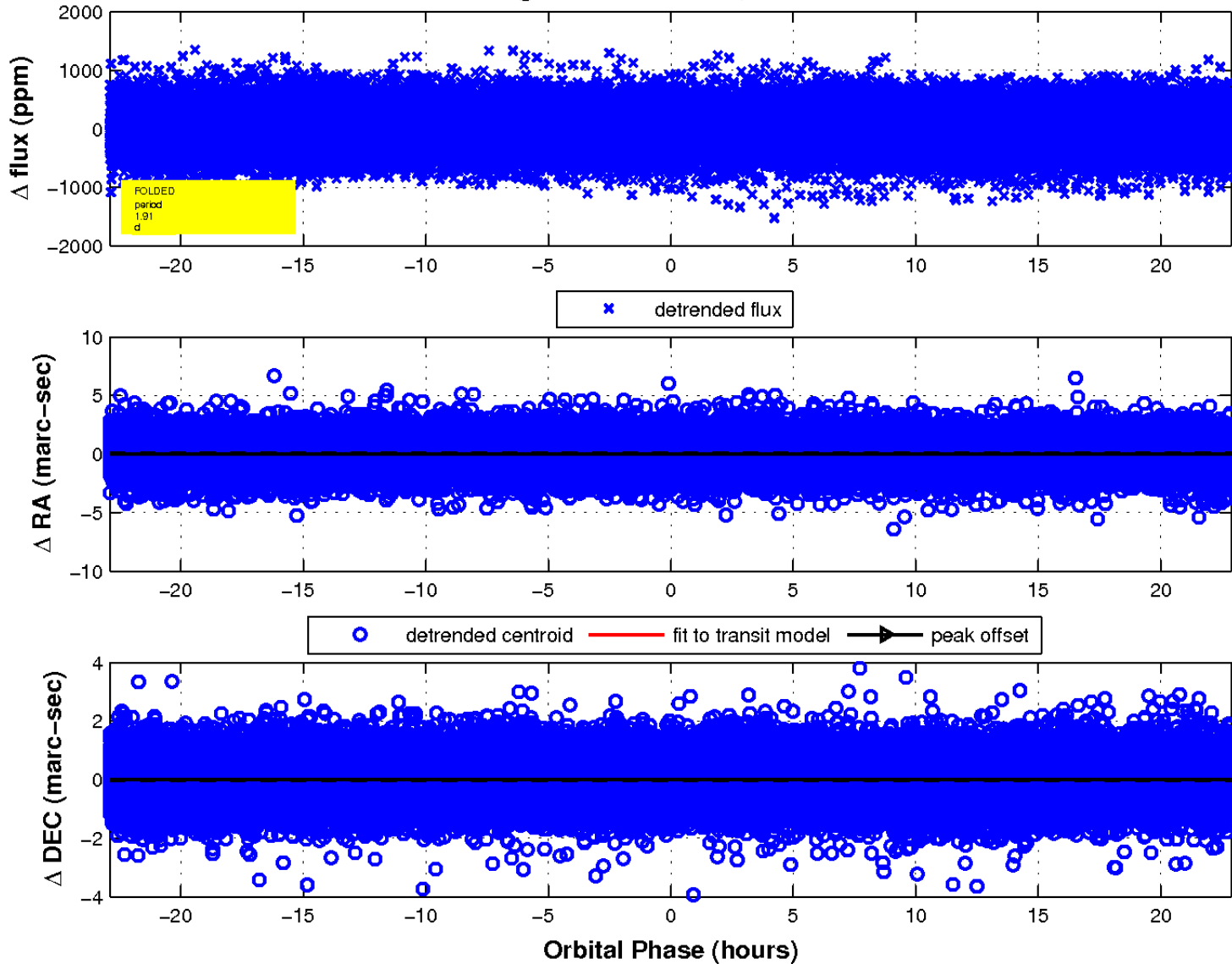
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 2 of 2



UKIRT Image

Declination

