

KIC 006756386

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})
006756386-01	OBS	No	0.567759	132.068789	143.4	1.105	10.5	15.3	6.61	7855	9.32	0.00
006756386-02	OBS	No	0.567758	131.829976	82.8	3.611	8.8	11.9	6.61	7855	7.04	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006756386-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
006756386-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_SATURATED

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

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

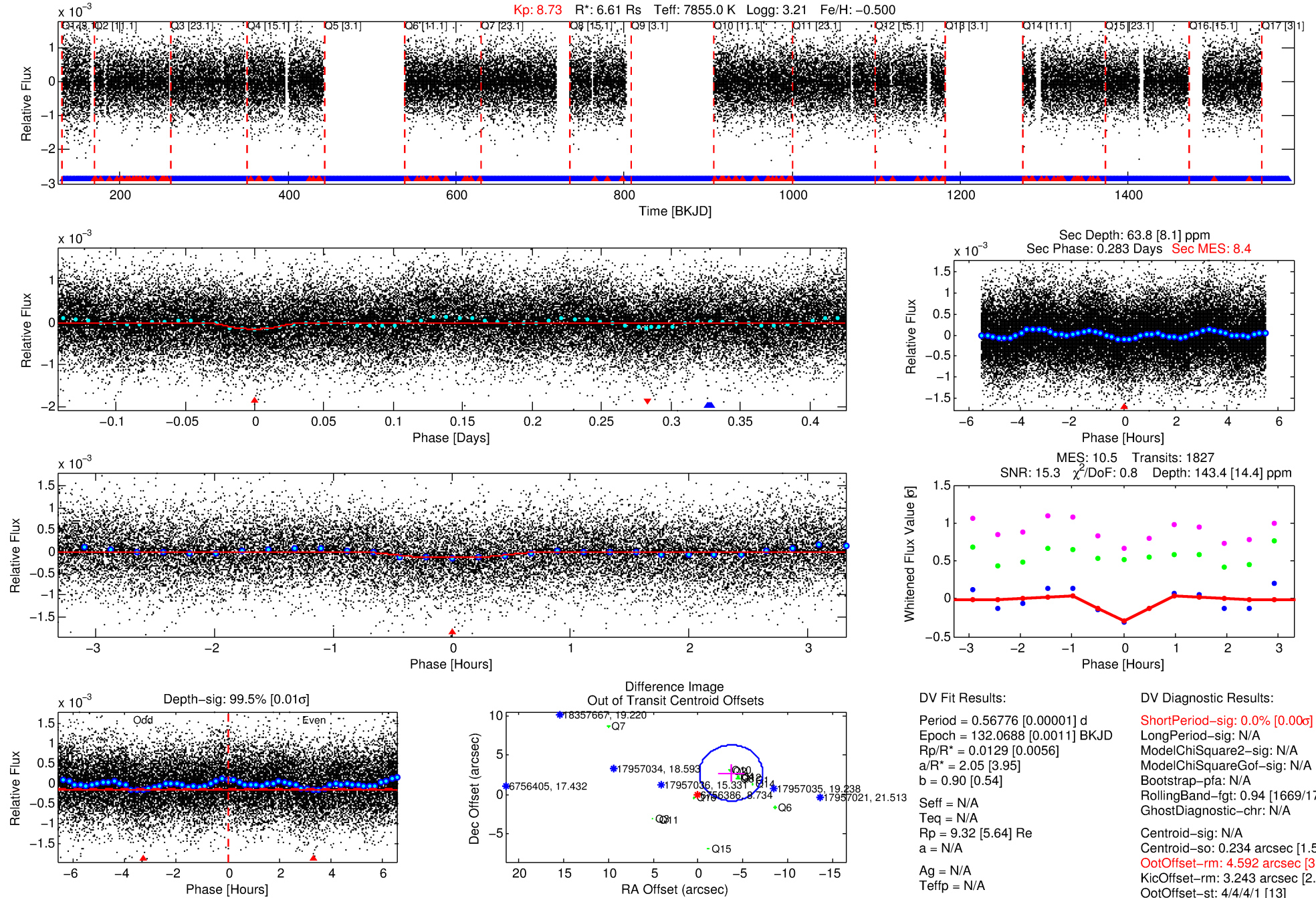
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006756386-01

No Significant Match Found

DV One-Page Summary

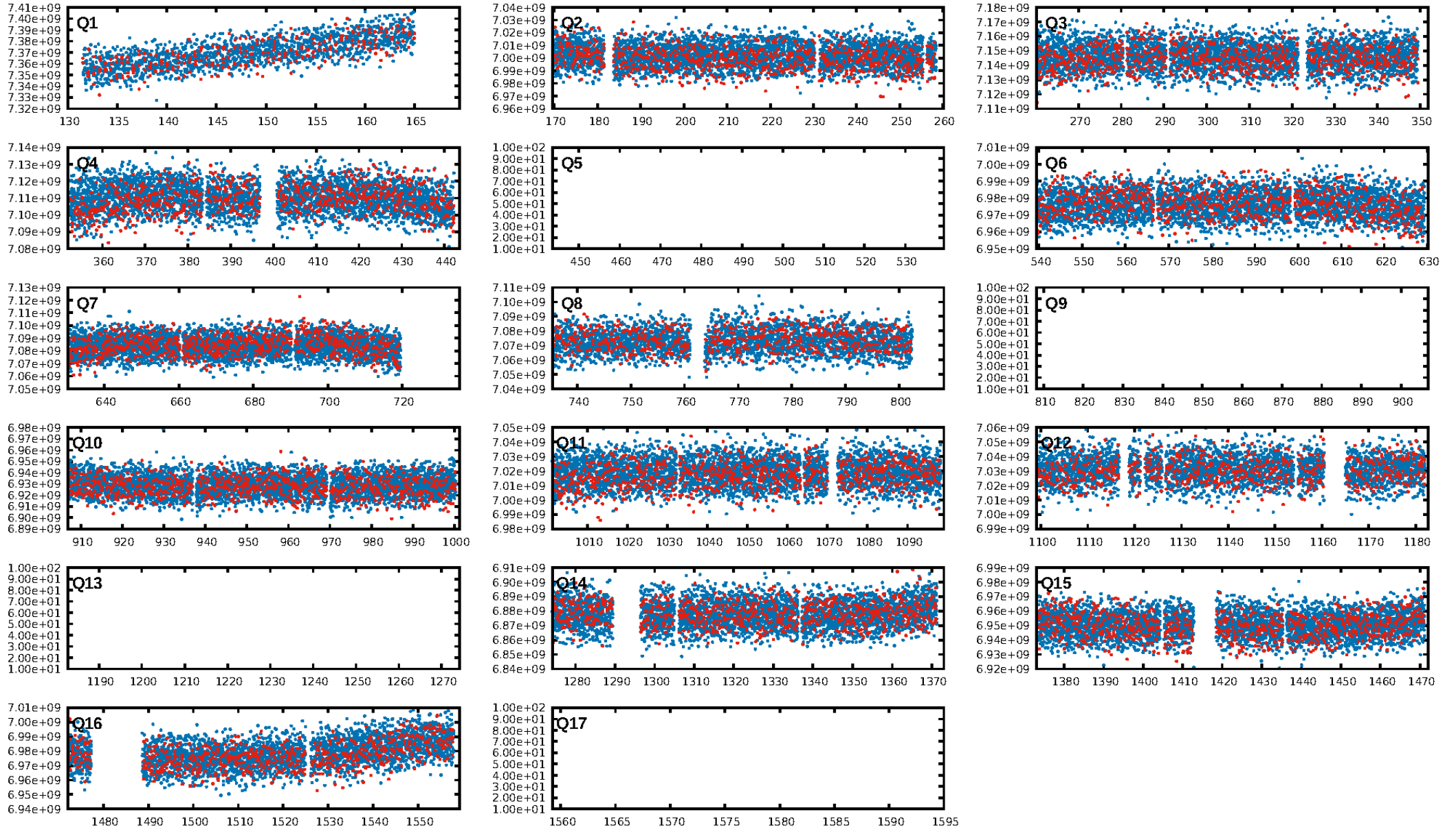
KIC: 6756386 Candidate: 1 of 2 Period: 0.568 d



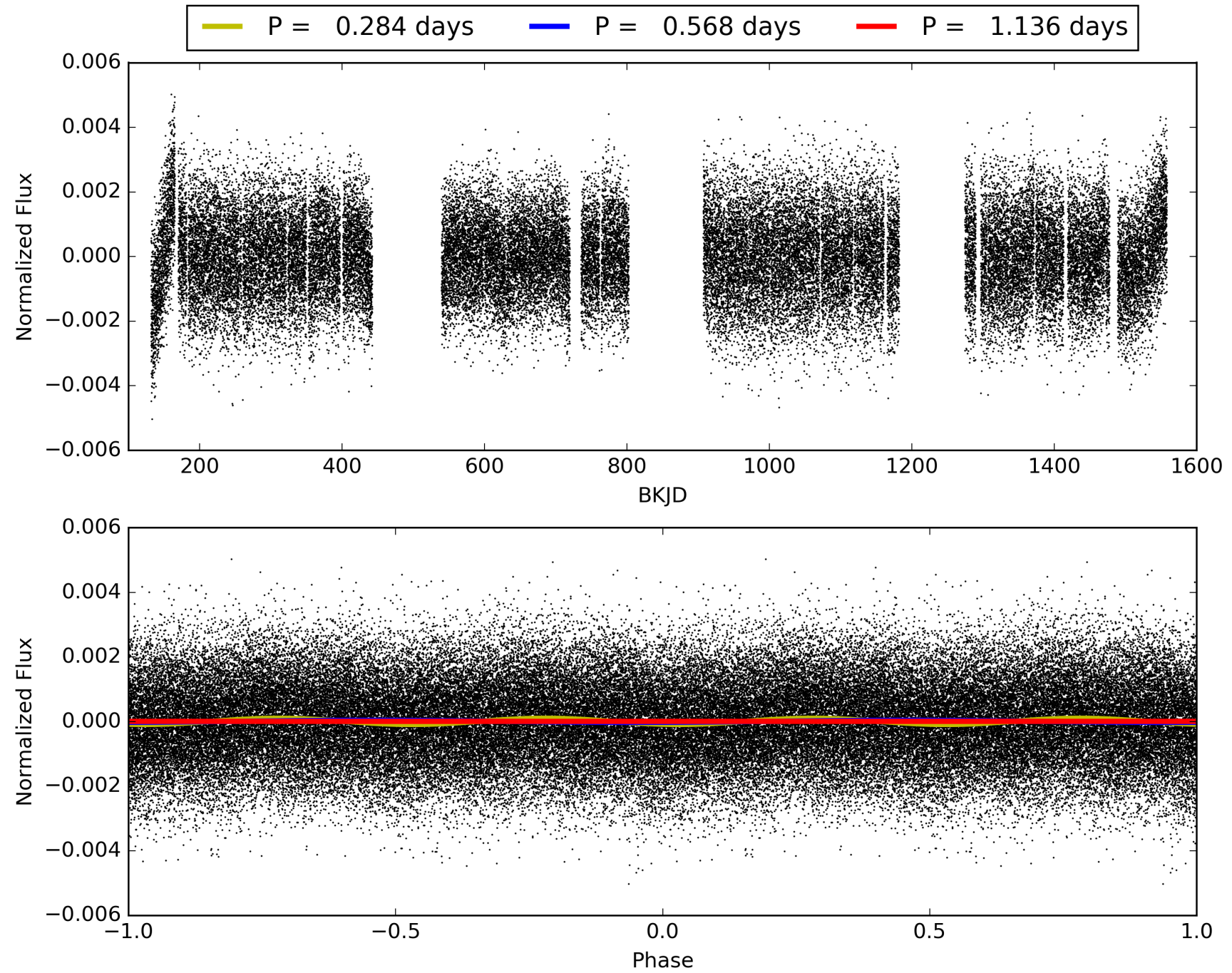
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 13:07:26 Z

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

TCE 006756386-01, PDC Light Curves

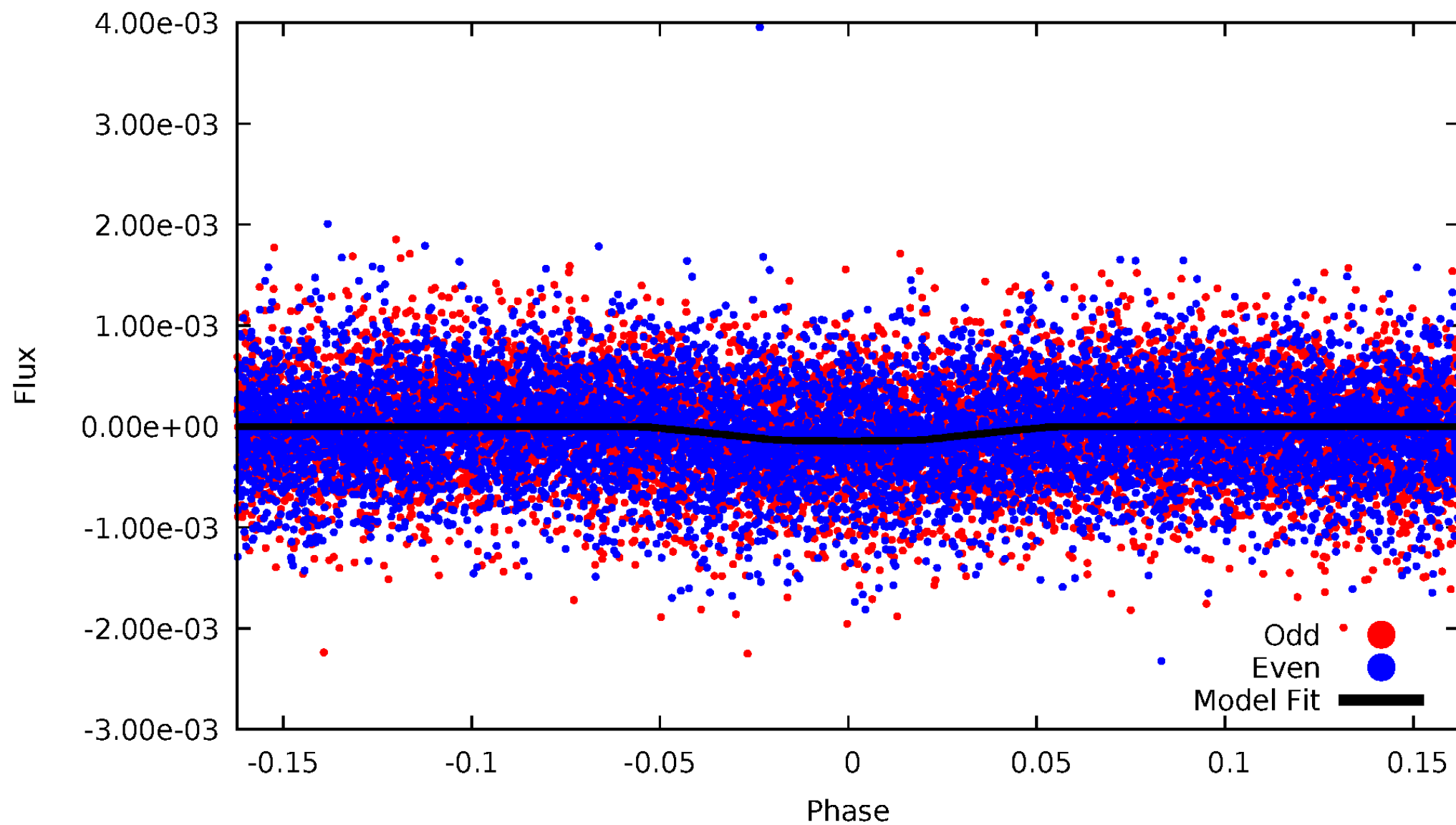


TCE 006756386-01



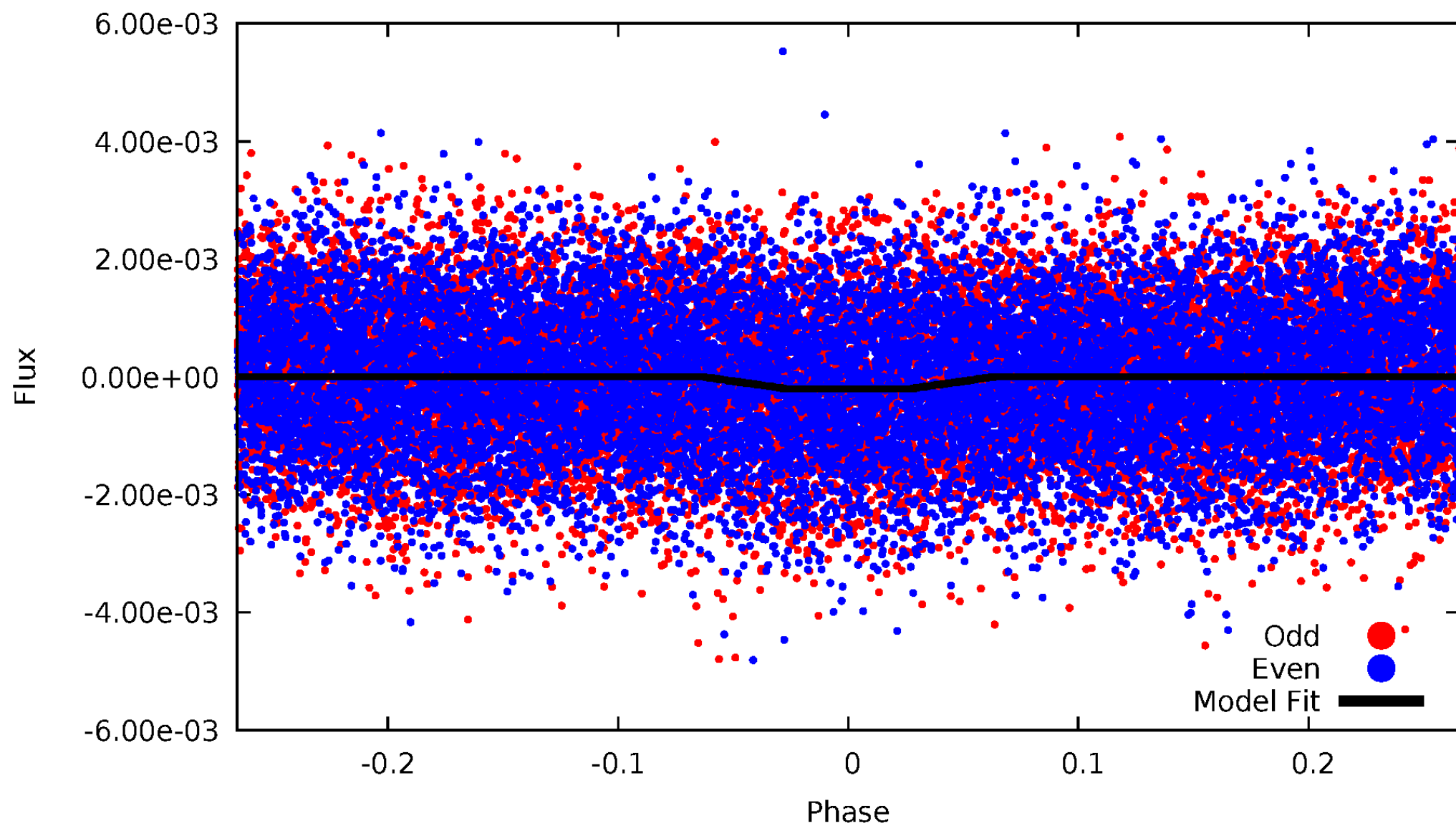
DV Odd/Even

TCE 006756386-01

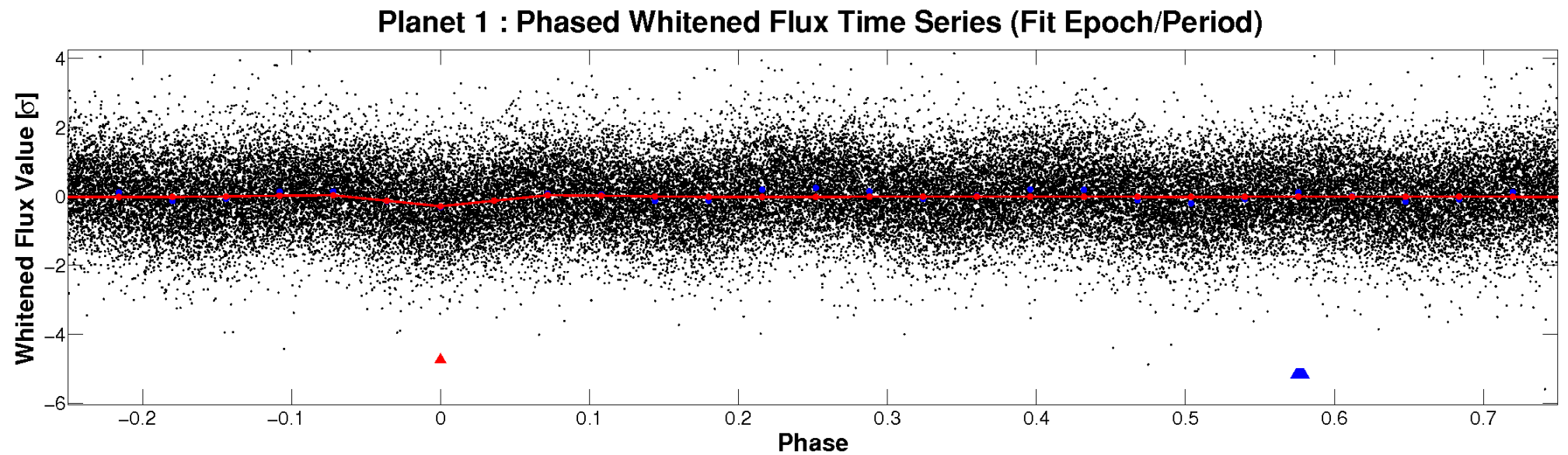
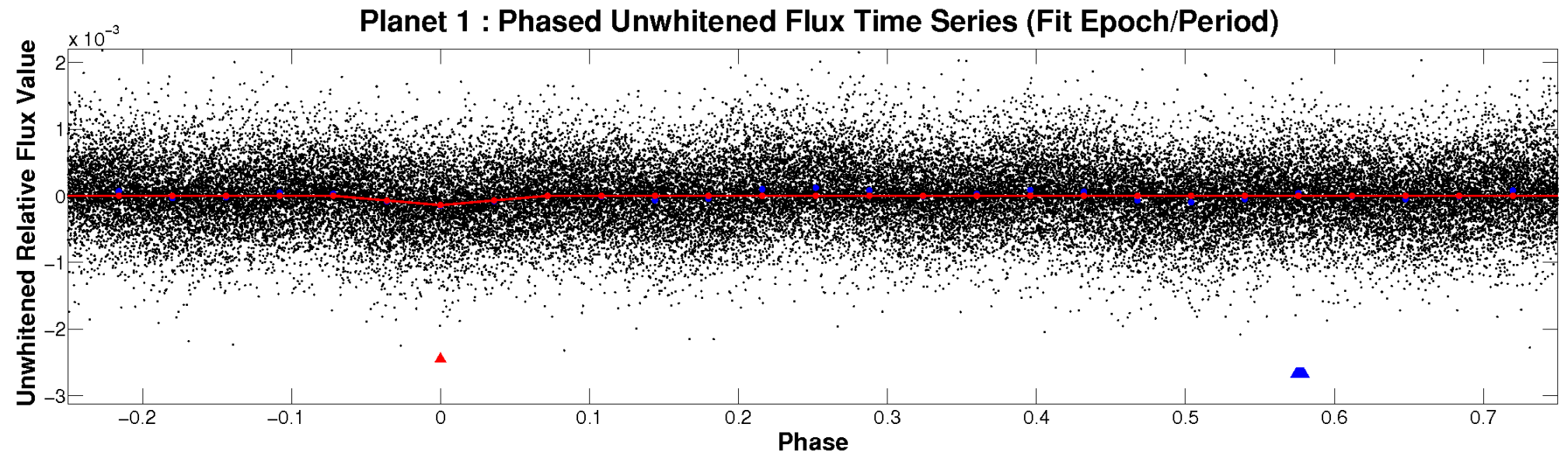


ALT Odd/Even

TCE 006756386-01

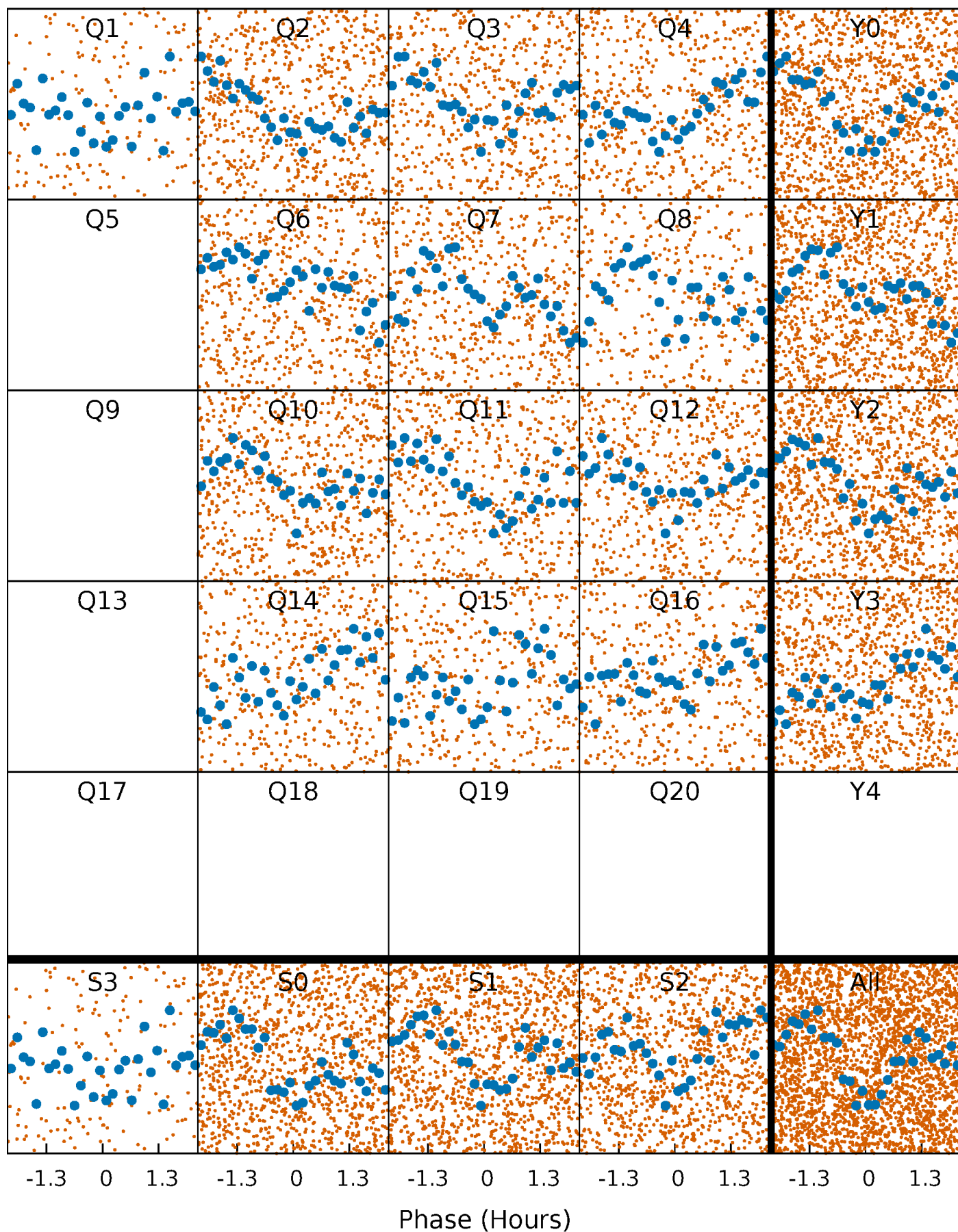


Non-Whitened Vs. Whitened Light Curve



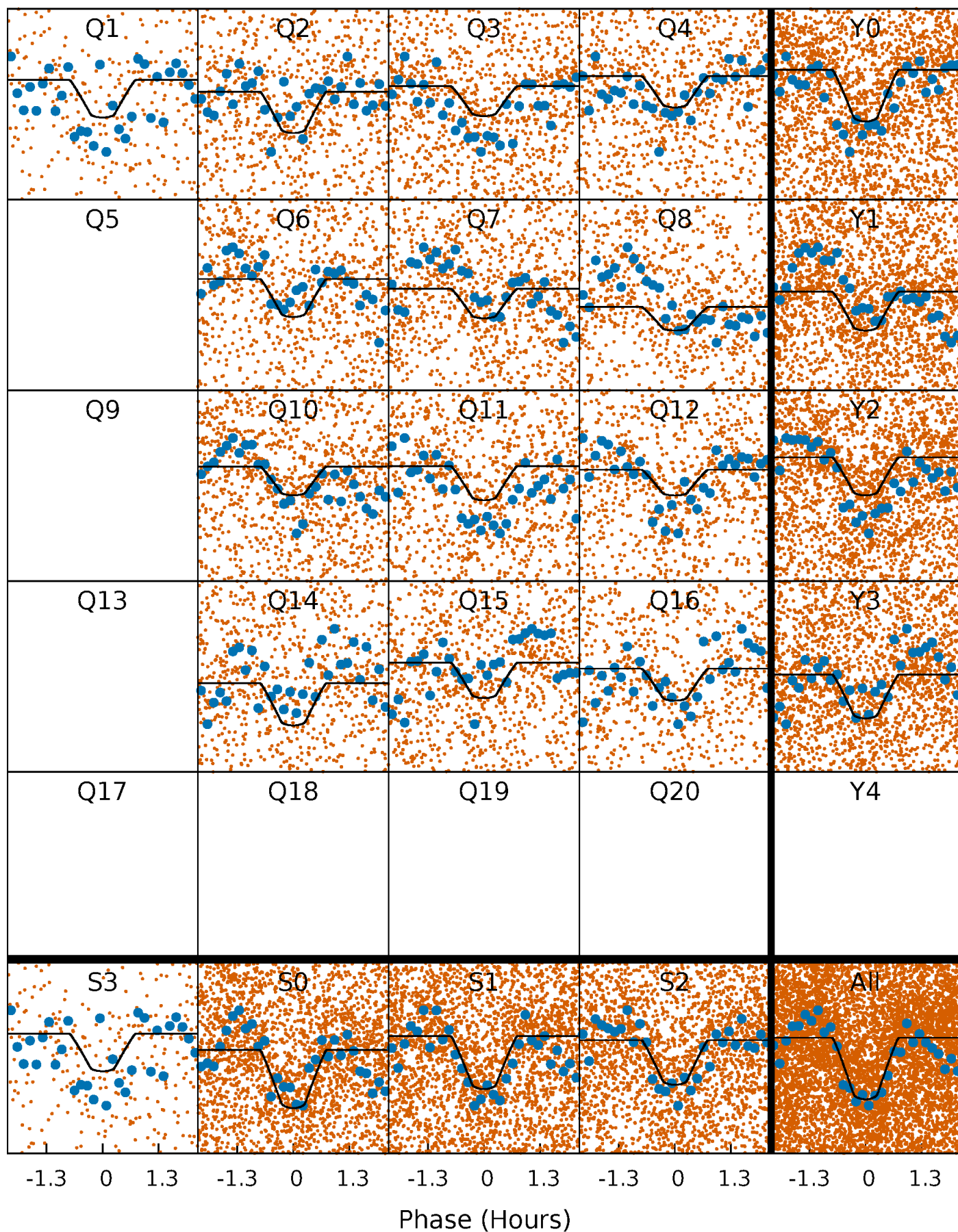
PDC Quarter-Phased Transit Curves

TCE 006756386-01 P= 0.567759 Days $T_0=132.068789$ (BKJD)



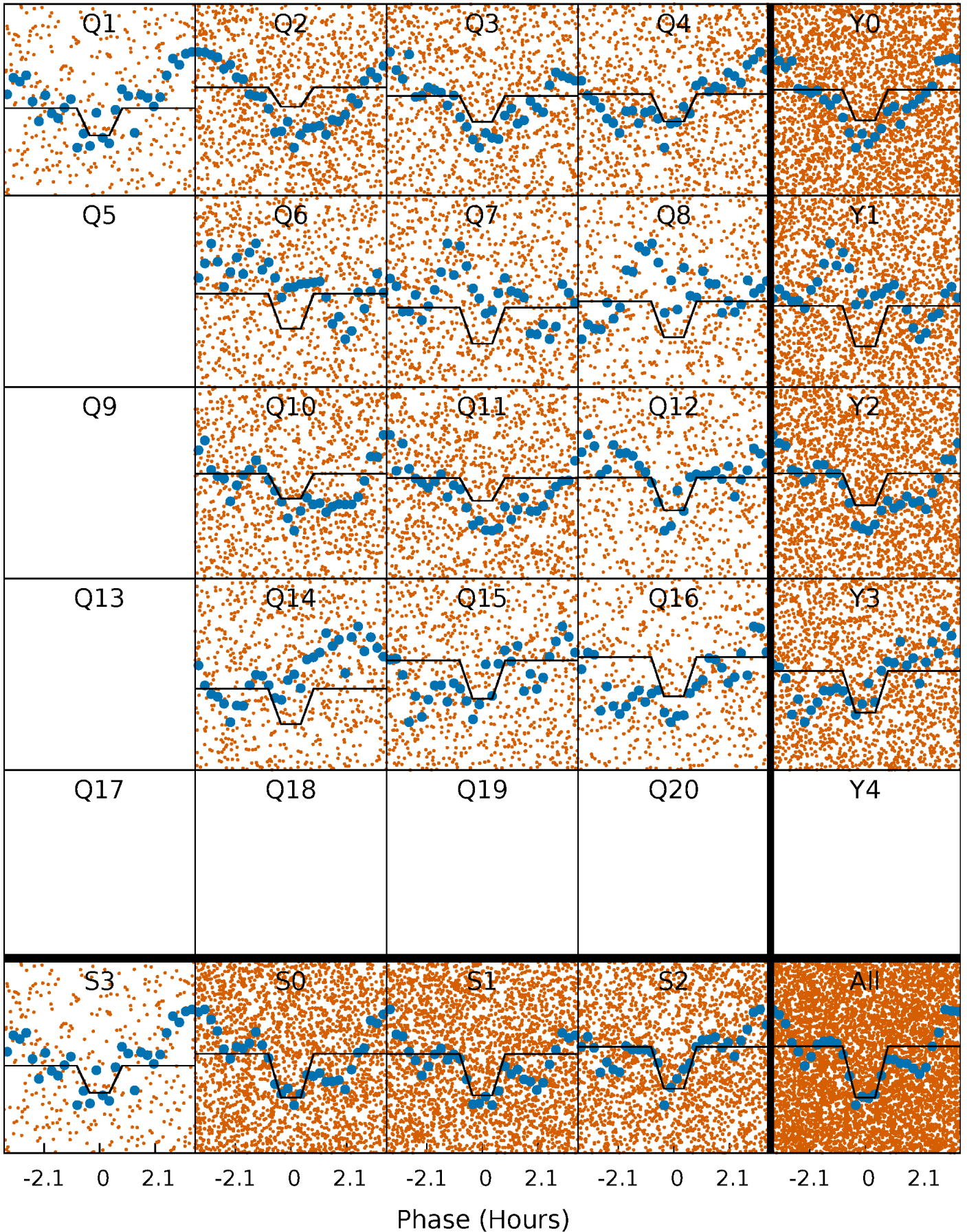
DV Quarter-Phased Transit Curves

TCE 006756386-01 P= 0.567759 Days $T_0=132.068789$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

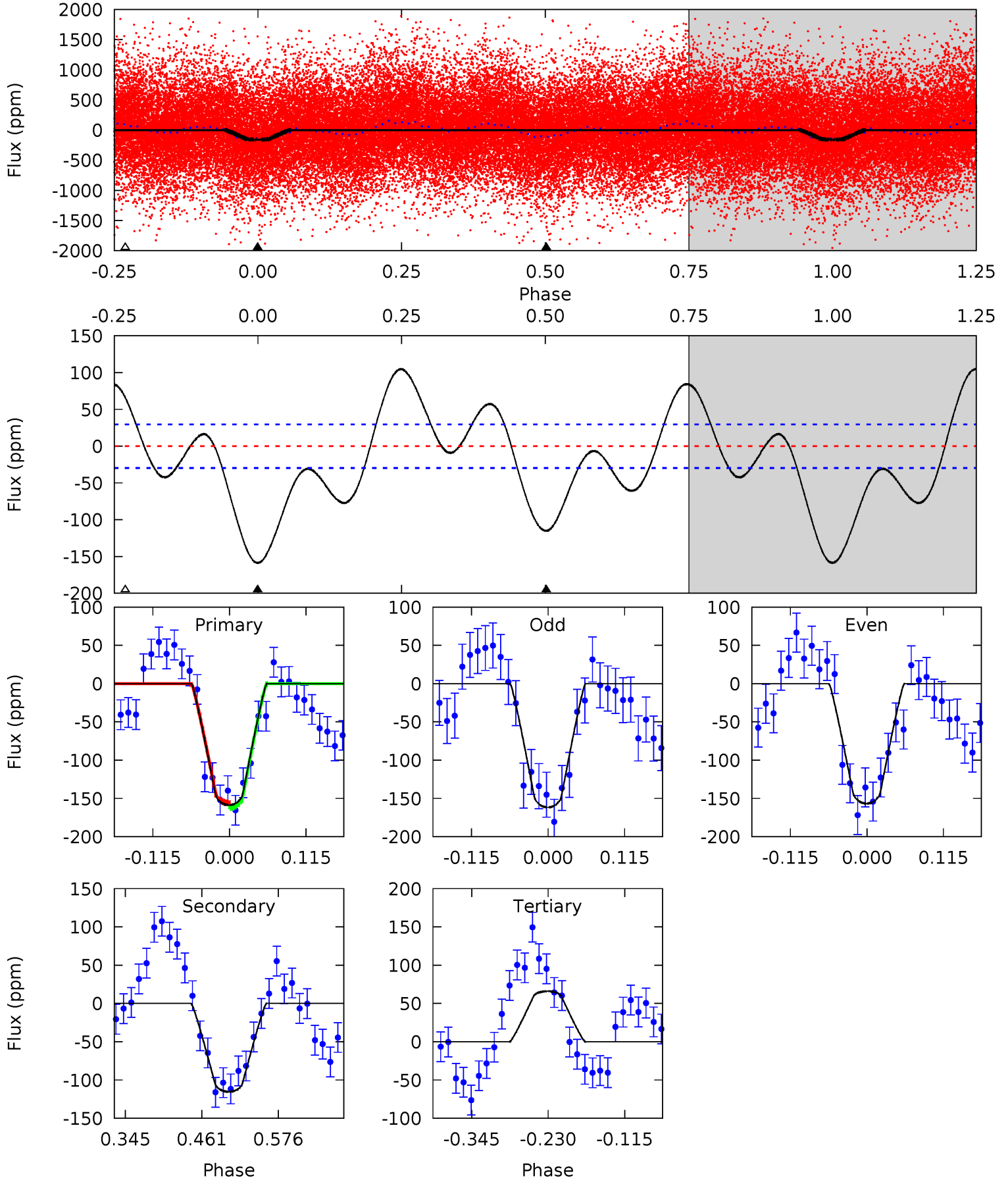
TCE 006756386-01 P= 0.567760 Days $T_0=132.070233$ (BKJD)



DV Model-Shift Uniqueness Test

006756386-01, P = 0.567759 Days, E = 131.501030 Days

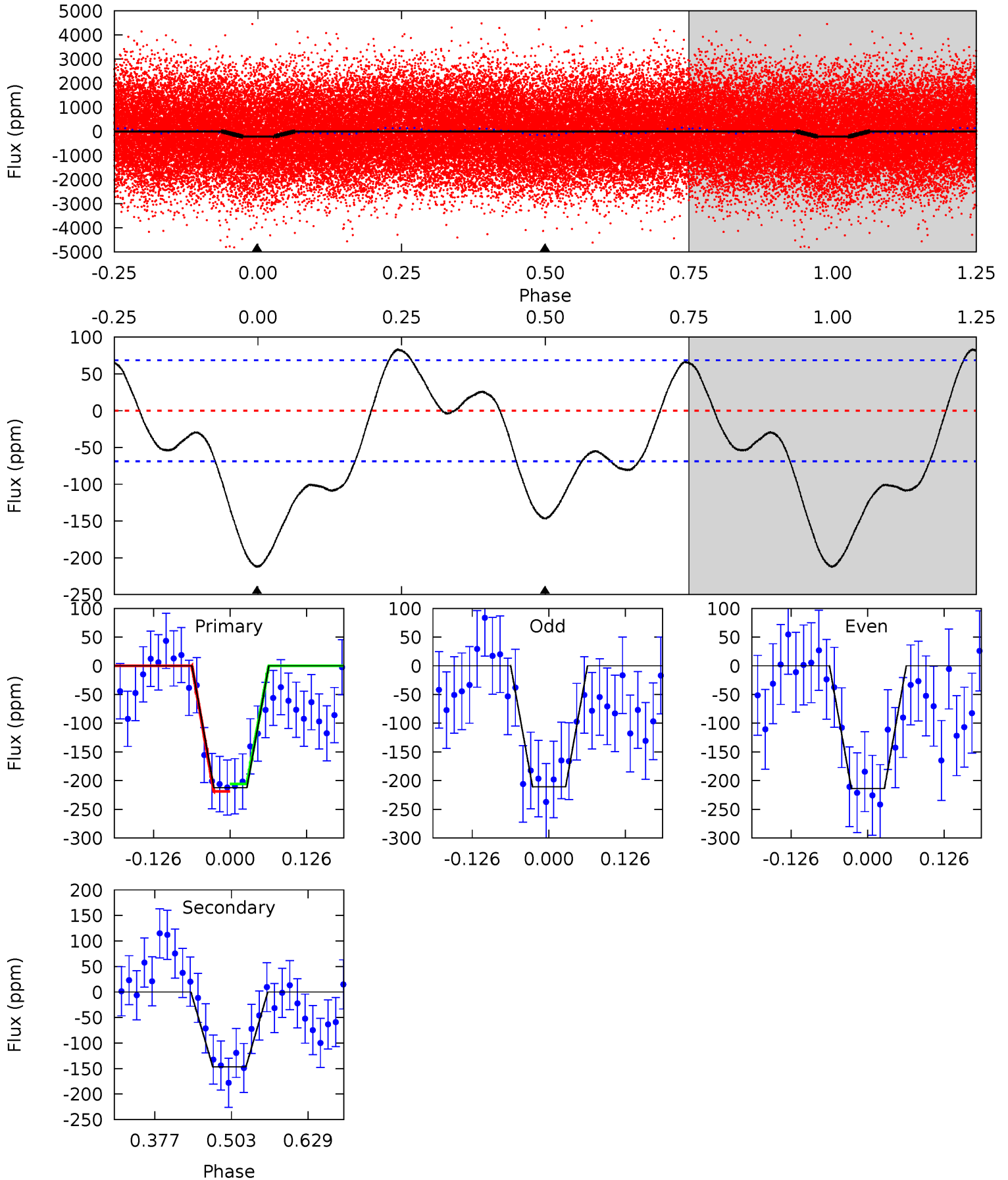
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.3	17.7	-10.1	0	4.54	1.58	8.17	34.5	24.3	27.8	17.7	0.39	1.07	0.40	0.47



Alt Model-Shift Uniqueness Test

006756386-01, P = 0.567760 Days, E = 131.502473 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.0	9.66	0	0	4.52	1.53	3.59	14.0	14.0	9.66	9.66	0.10	0.93	0.28	0.42



Stellar Parameters For KIC 006756386

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7855^{+424}_{-989}	$3.209^{+0.315}_{-0.105}$	$-0.500^{+0.050}_{-0.200}$	$6.612^{+1.190}_{-2.777}$	$2.578^{+0.284}_{-0.851}$	$0.013^{+0.033}_{-0.004}$
	+5%/-13%	+10%/-3%	+10%/-40%	+18%/-42%	+11%/-33%	+260%/-35%
Source	SPE4	SPE4	SPE4	DSEP		

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

Secondary Eclipse Parameters for KIC 006756386-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-115 ± 7	$8.57^{+4.02}_{-3.78}$	8734^{+940}_{-1274}	-3488^{+11528}_{-2663}	$0.288^{+0.603}_{-0.150}$
Alt.	-147 ± 15	$9.18^{+4.44}_{-3.57}$	8721^{+991}_{-1123}	3113^{+4929}_{-9116}	$0.306^{+0.517}_{-0.163}$

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 $A_{obs} \gg 1.0$

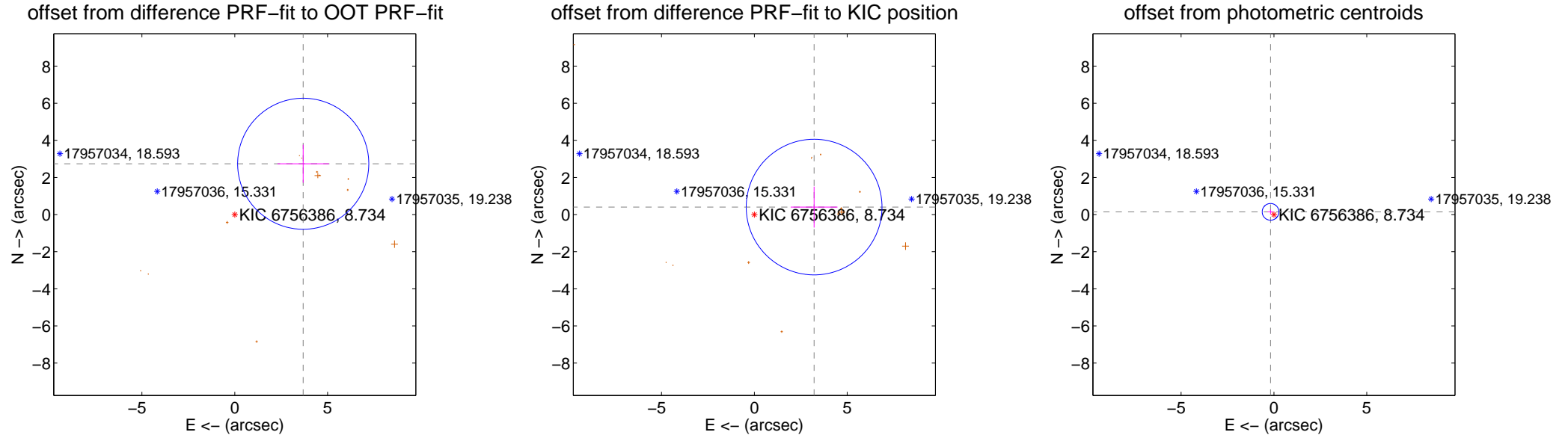
DV Centroid Data

Supplemental centroid analysis for 006756386-01. **Kepler magnitude: 8.73.** Transit SNR 15.33

There are 0 quarters with good PRF difference image offsets

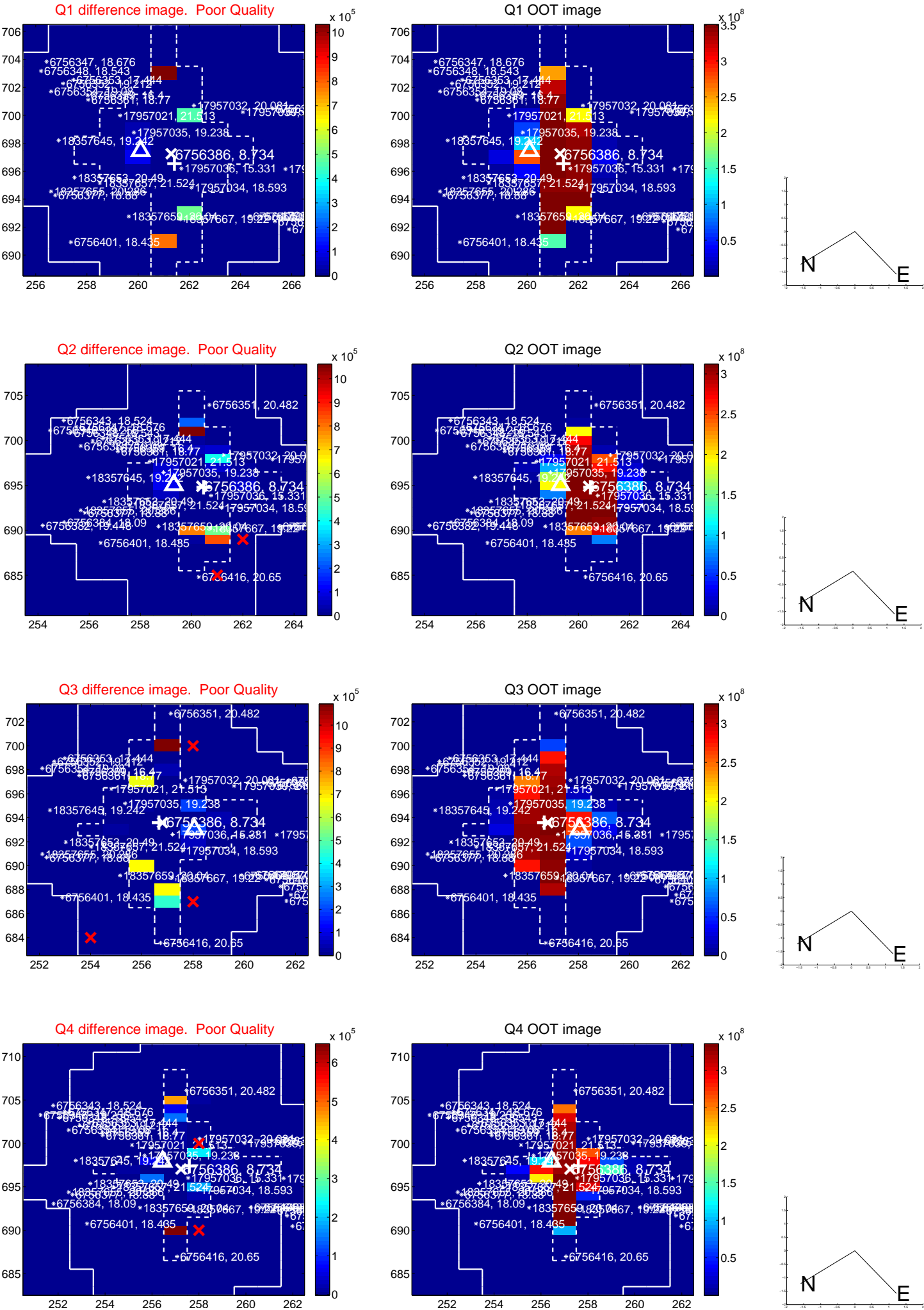
The OOT PRF centroid is offset from the target star catalog position by about 2.16 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.592 \pm 1.177	3.90	-3.686 \pm 1.385	2.740 \pm 1.027
PRF-fit source offset from KIC position	3.243 \pm 1.218	2.66	-3.218 \pm 1.260	0.405 \pm 1.103
photometric centroid source offset	0.23 \pm 0.15	1.56	0.18 \pm 0.16	0.15 \pm 0.14

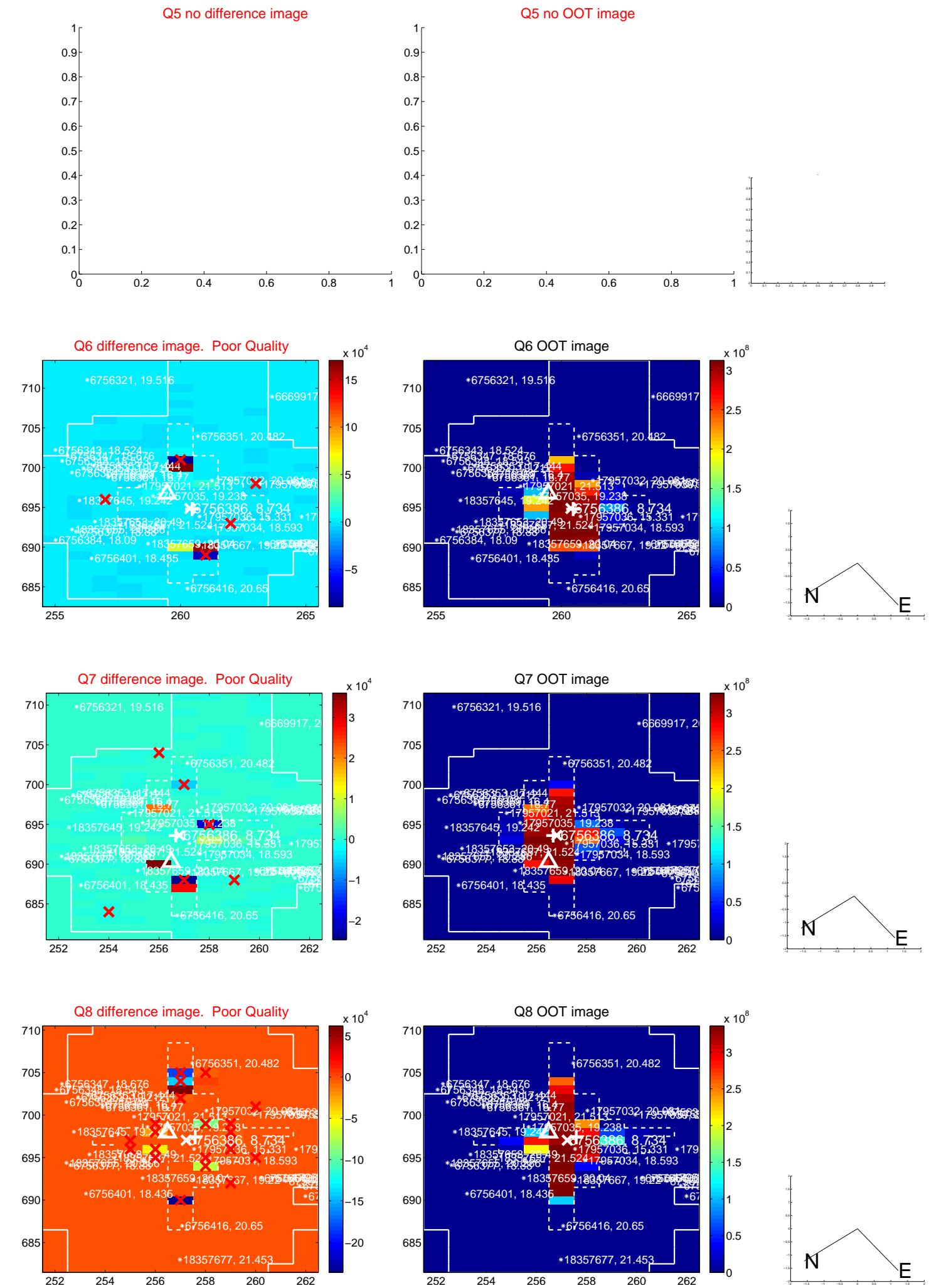


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

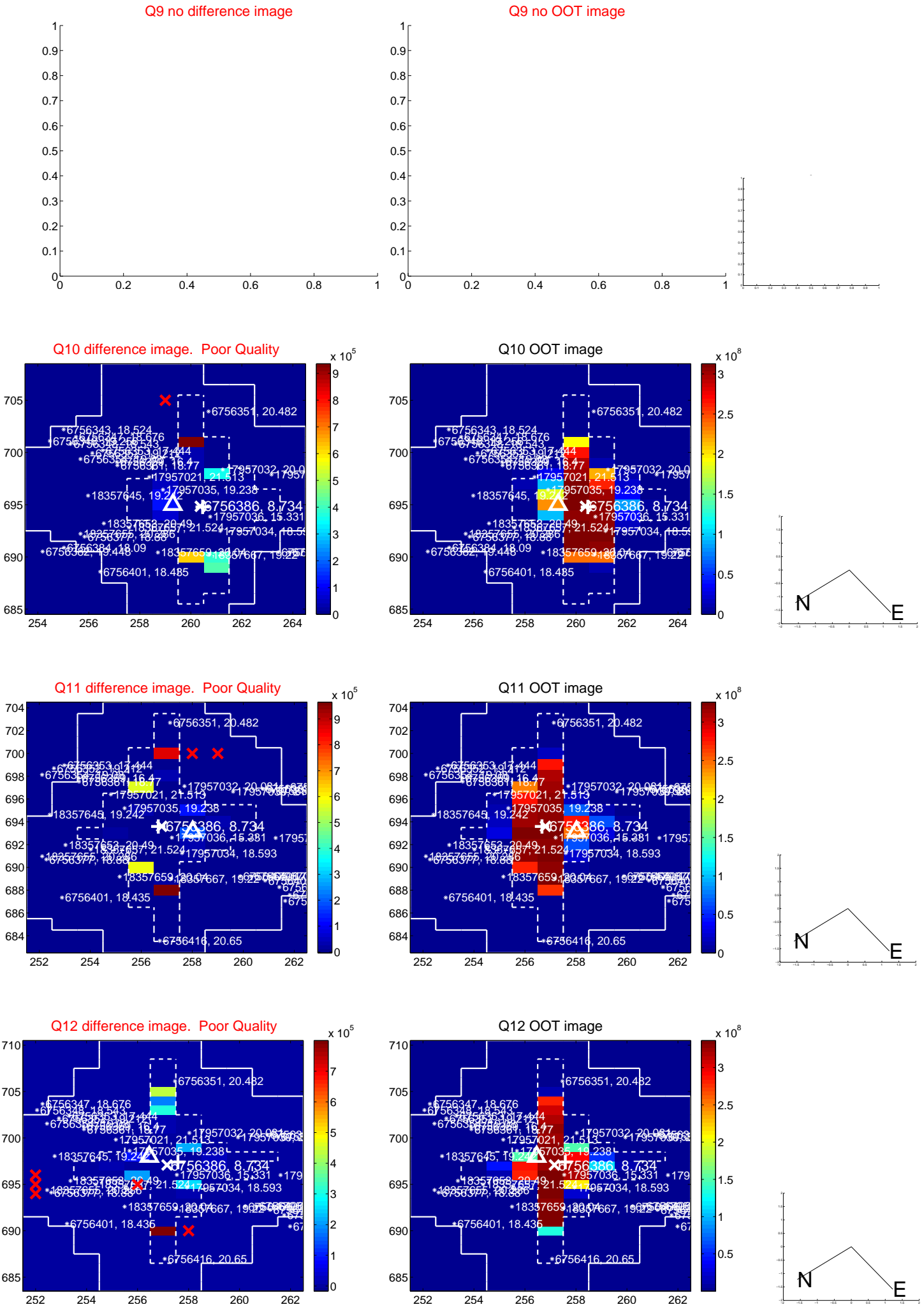
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



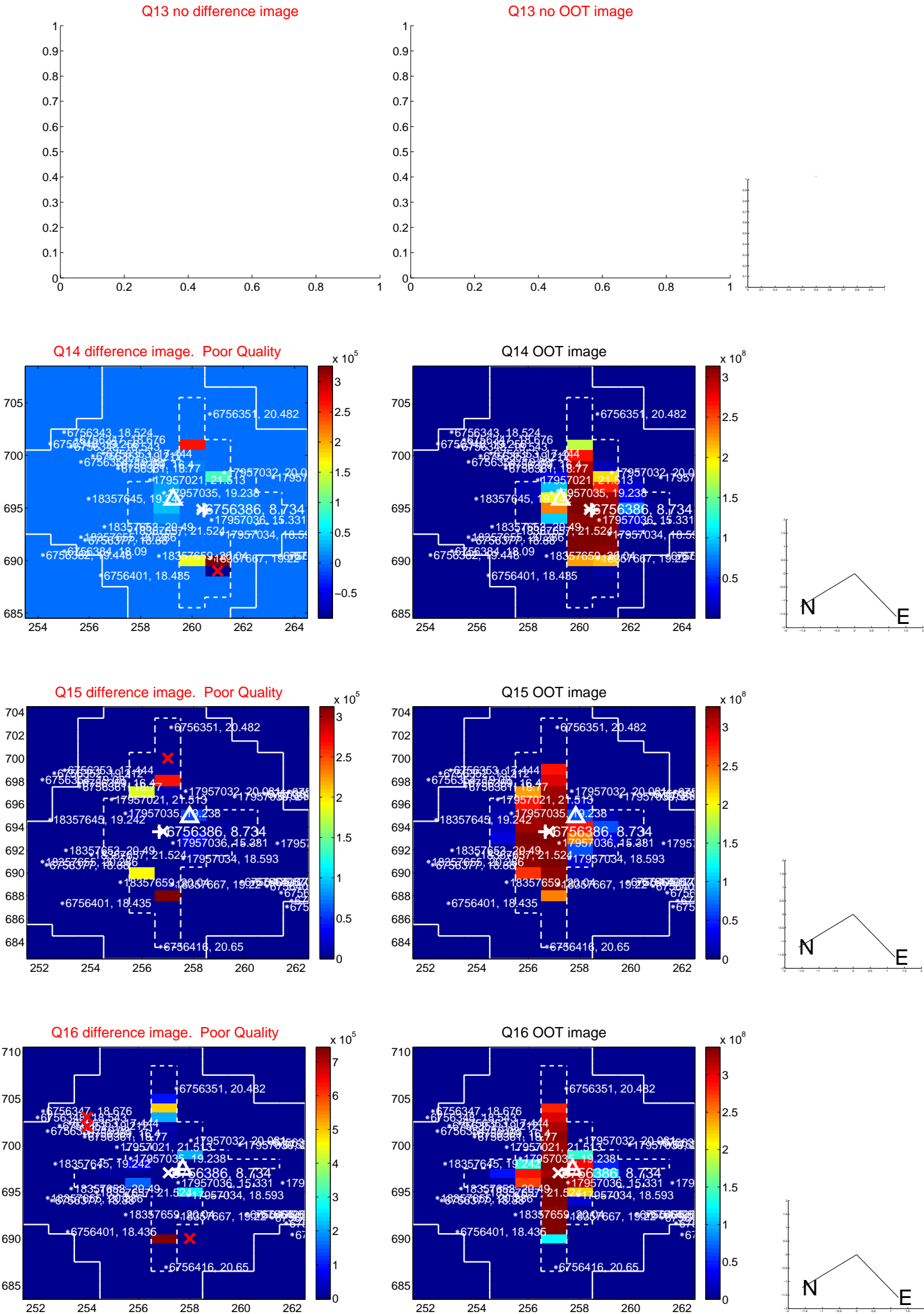
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



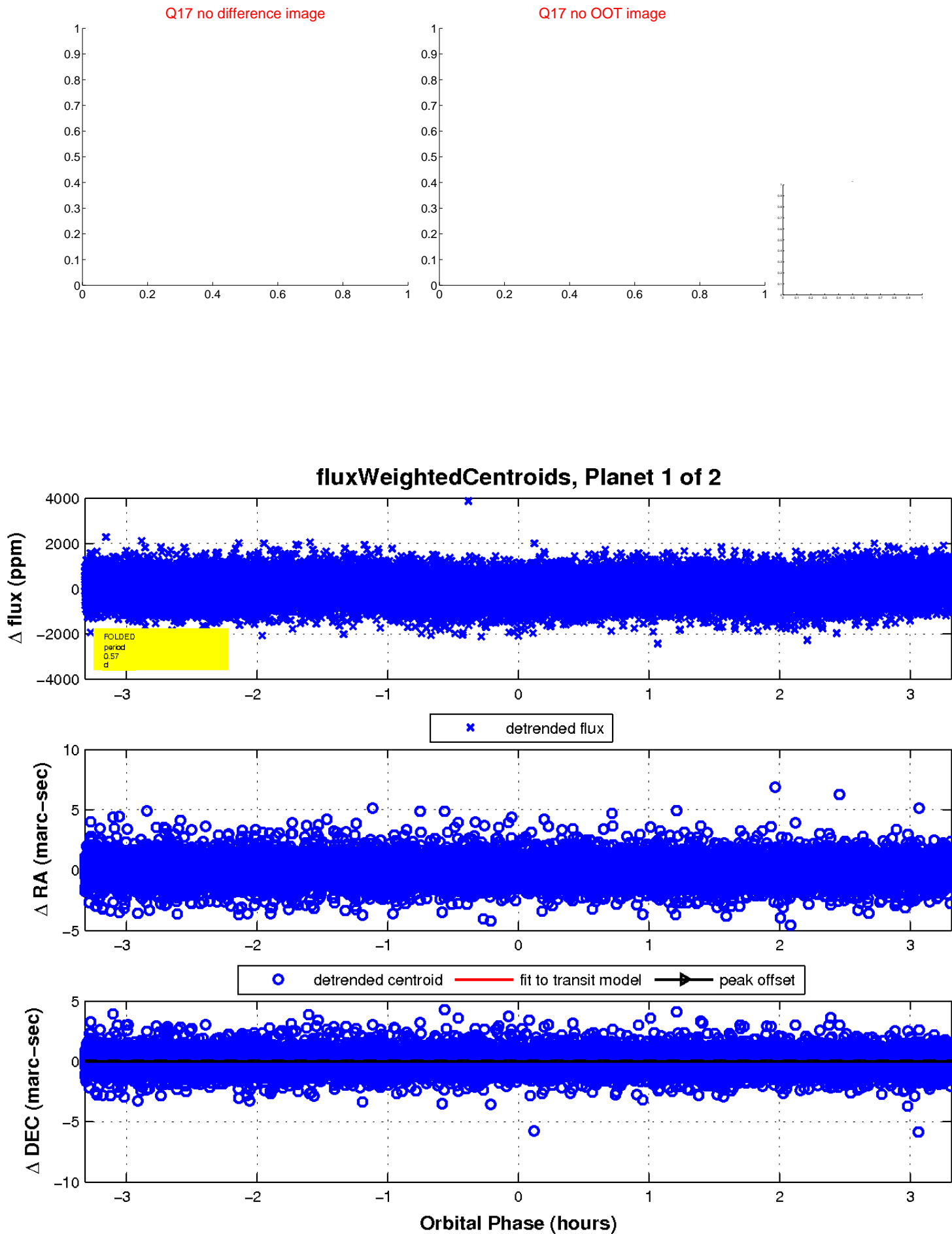
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



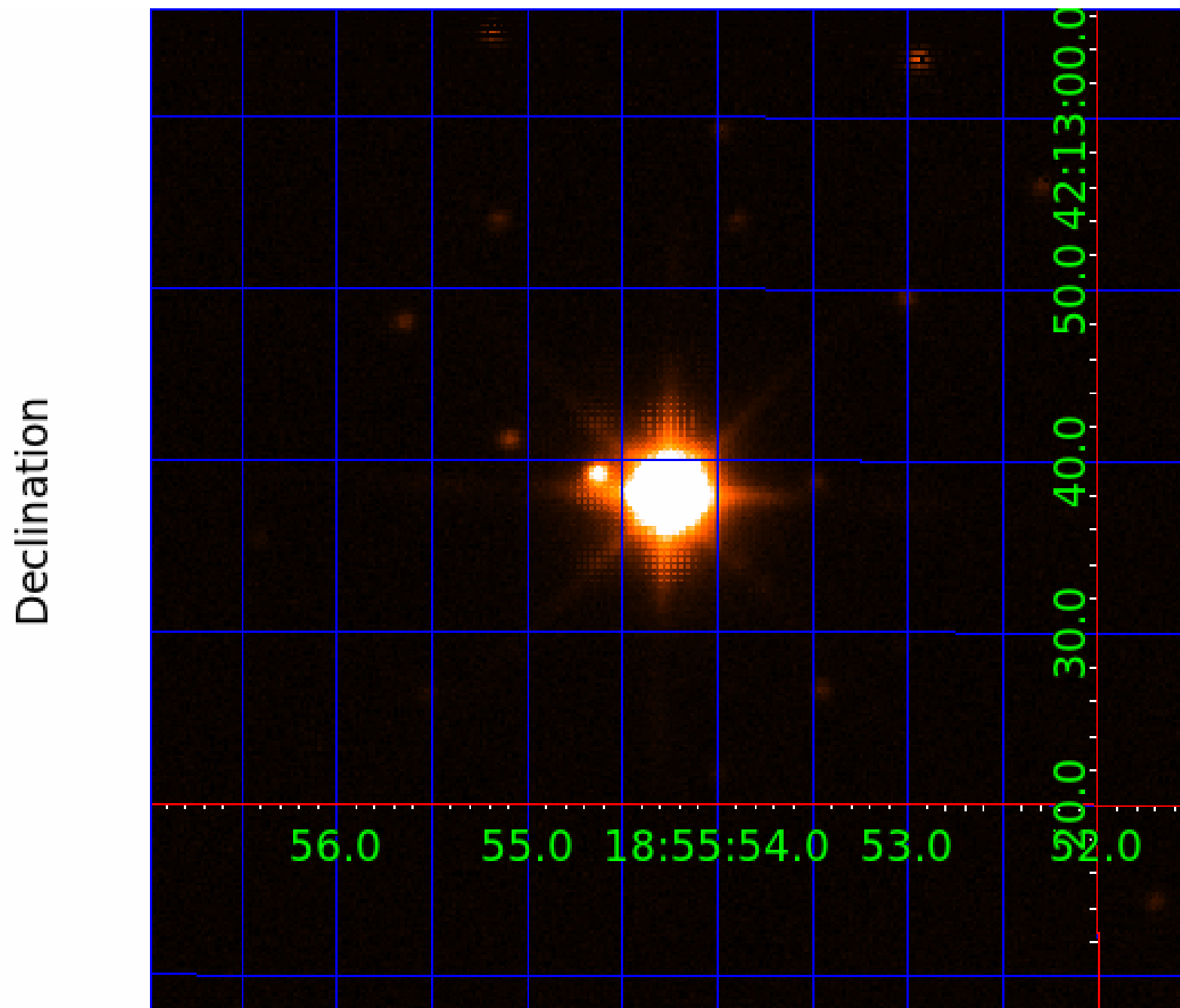
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 006756386

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})
006756386-01	OBS	No	0.567759	132.068789	143.4	1.105	10.5	15.3	6.61	7855	9.32	0.00
006756386-02	OBS	No	0.567758	131.829976	82.8	3.611	8.8	11.9	6.61	7855	7.04	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006756386-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
006756386-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_SATURATED

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

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

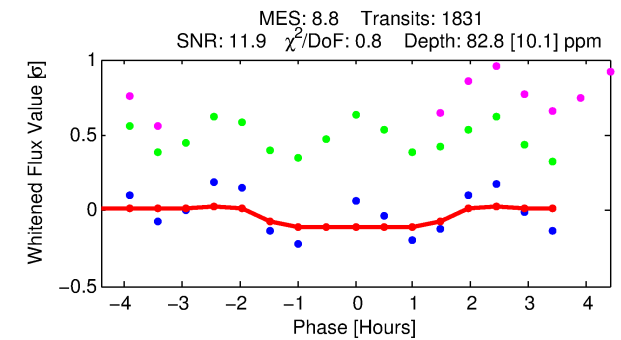
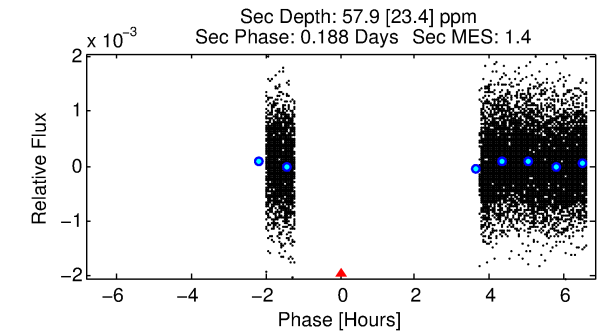
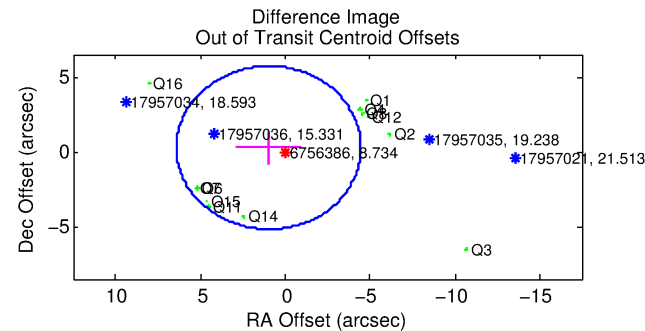
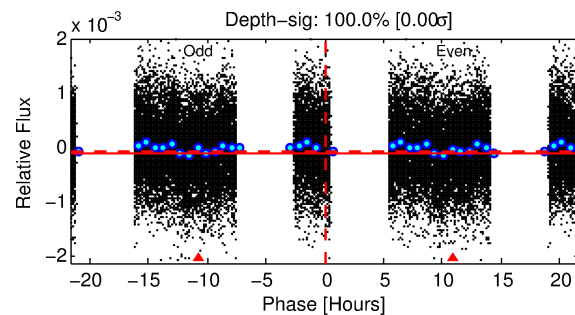
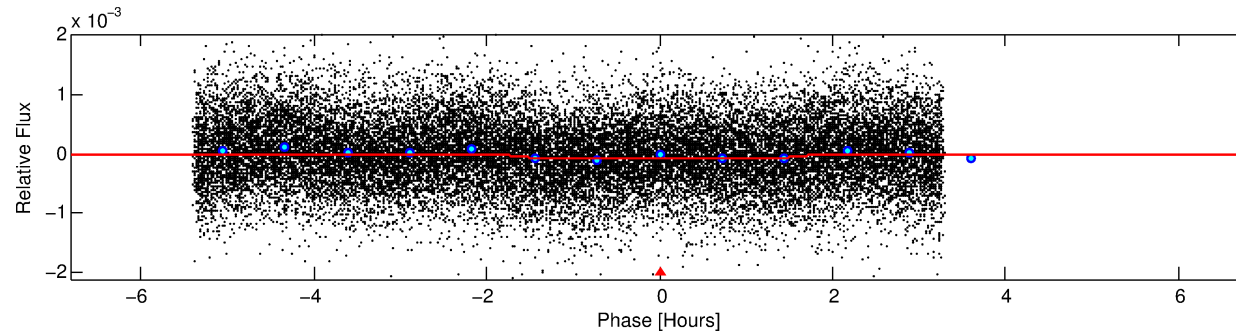
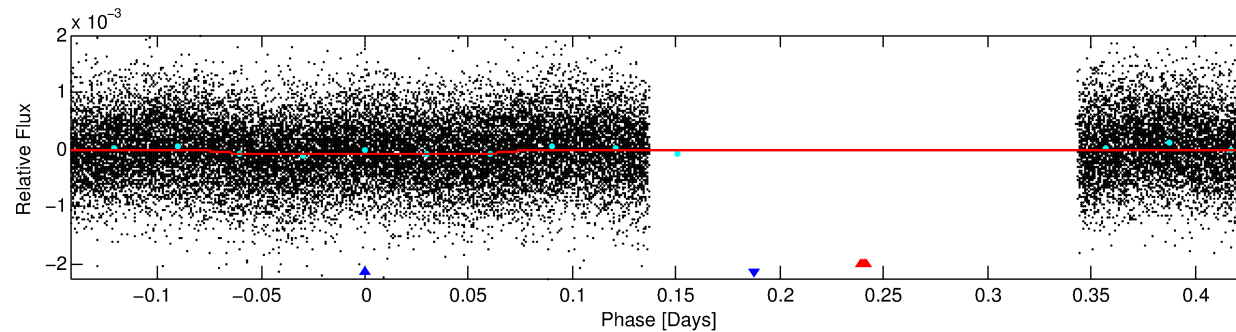
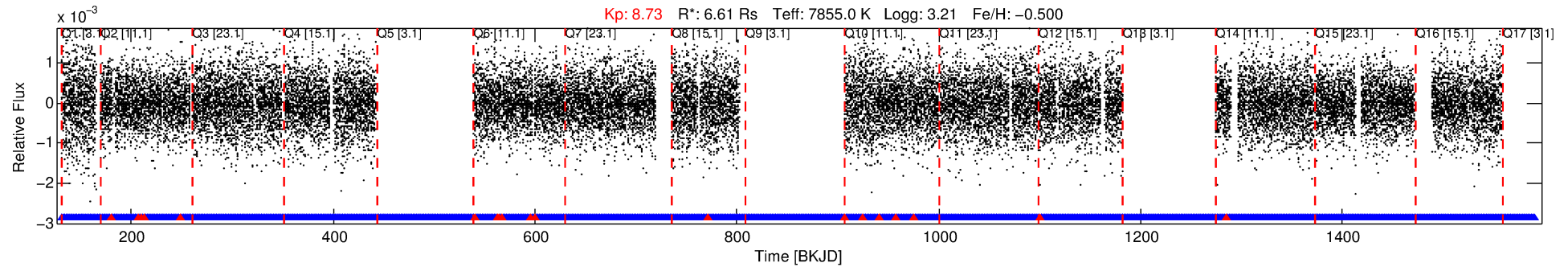
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006756386-02

No Significant Match Found

DV One-Page Summary

KIC: 6756386 Candidate: 2 of 2 Period: 0.568 d



DV Fit Results:

Period = 0.56776 [0.00001] d
Epoch = 131.8300 [0.0026] BKJD
 $R_p/R^* = 0.0098$ [0.0033]
 $a/R^* = 1.09$ [0.34]
 $b = 0.90$ [0.42]
 $\text{Seff} = \text{N/A}$
 $\text{Teq} = \text{N/A}$
 $R_p = 7.04$ [3.78] R_e
 $a = \text{N/A}$
 $\text{Ag} = \text{N/A}$
 $\text{Teff} = \text{N/A}$

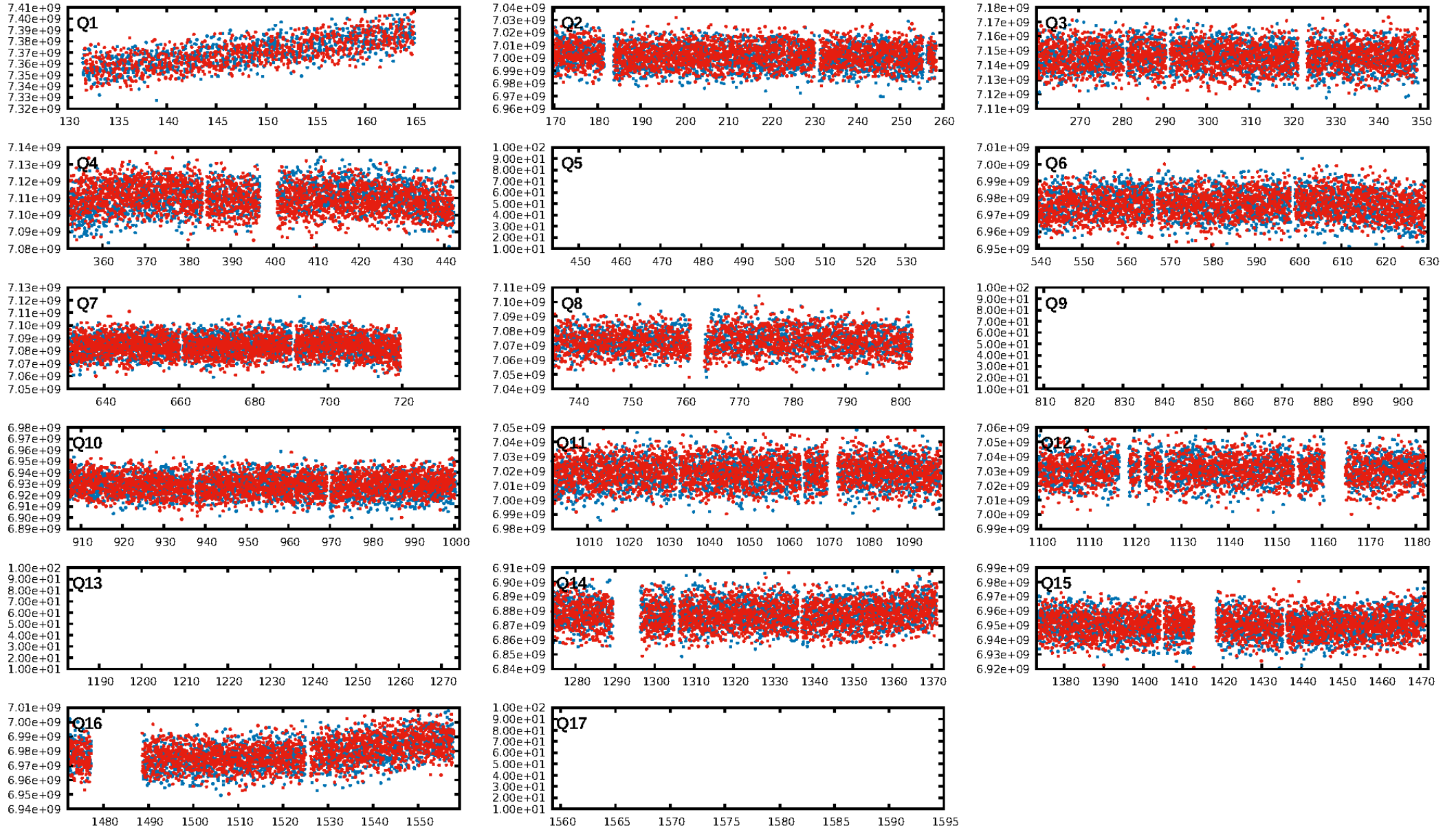
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.99 [1753/1772]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: 0.060 arcsec [0.37 σ]
OotOffset-rm: 1.010 arcsec [0.56 σ]
KicOffset-rm: 0.797 arcsec [0.46 σ]
OotOffset-st: 3/4/4/1 [12]
KicOffset-st: 3/4/4/1 [12]
DiffImageQuality-fgm: 0.00 [0/12]
DiffImageOverlap-fno: 0.00 [0/13]

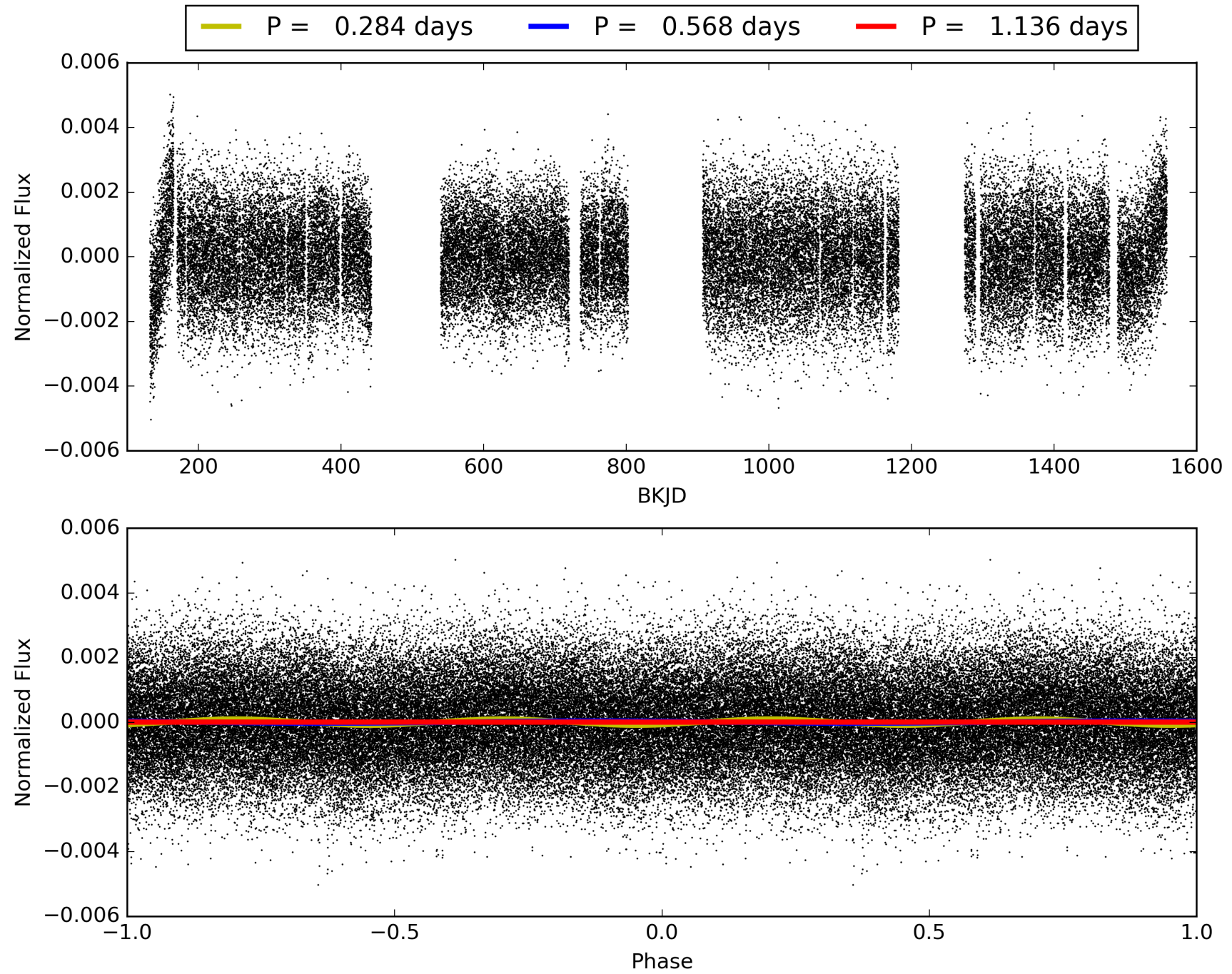
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 13:07:37 Z

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

TCE 006756386-02, PDC Light Curves

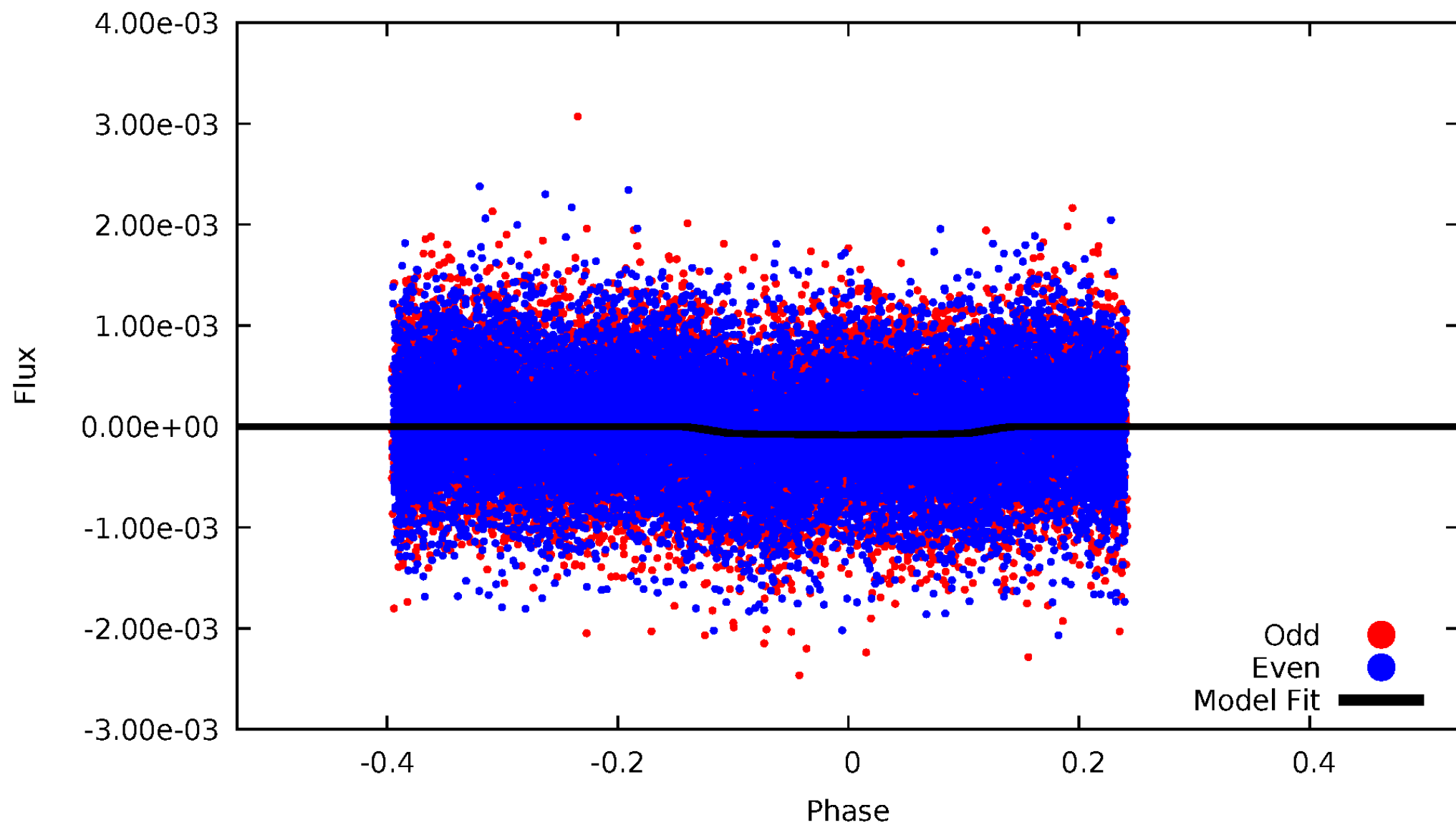


TCE 006756386-02



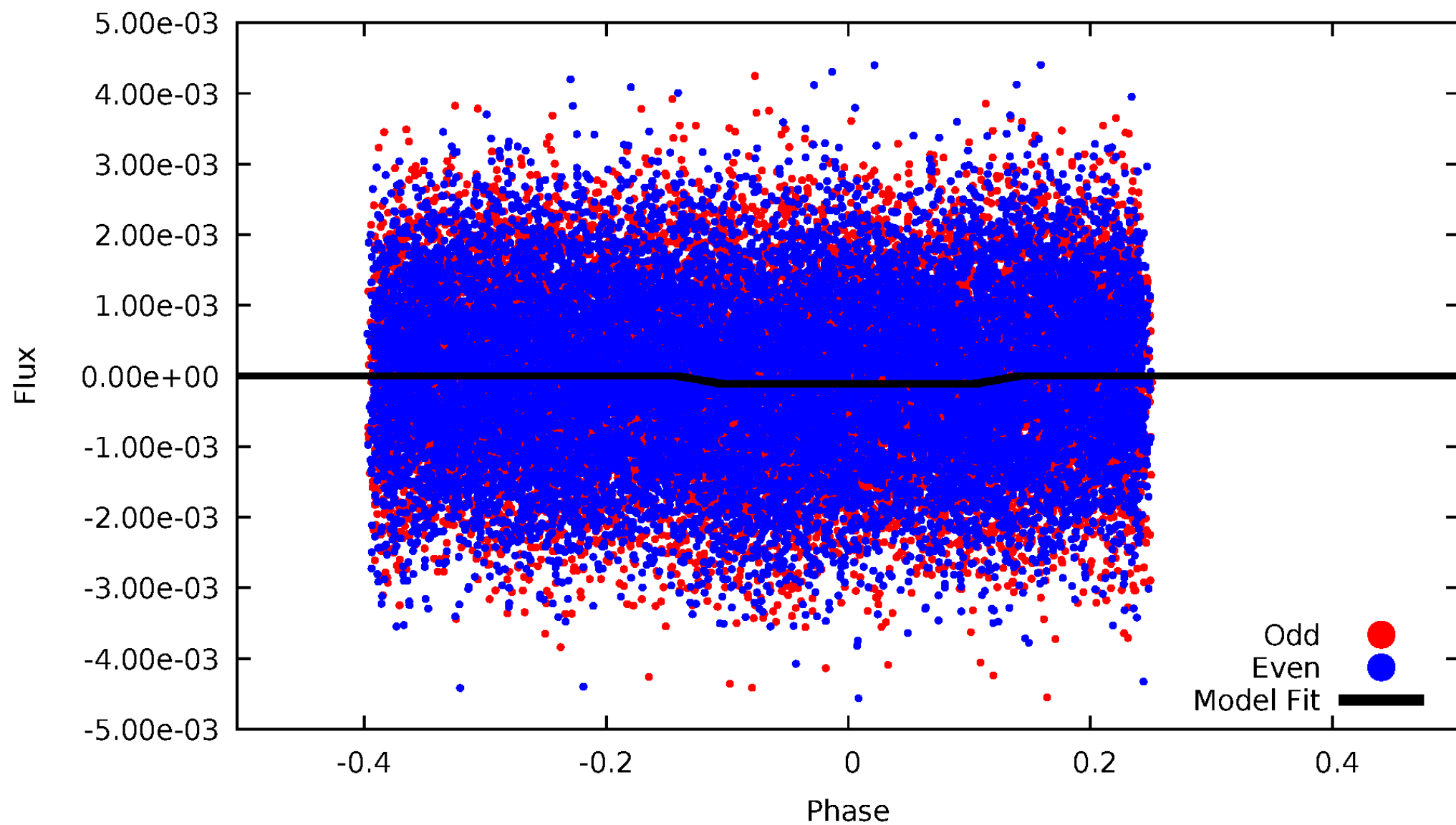
DV Odd/Even

TCE 006756386-02



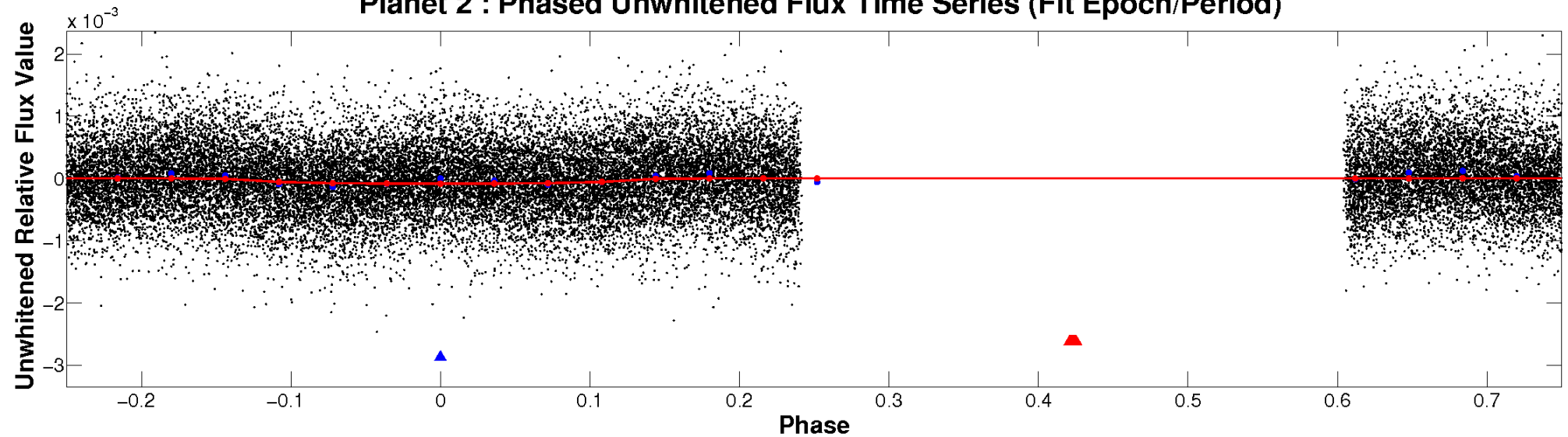
ALT Odd/Even

TCE 006756386-02

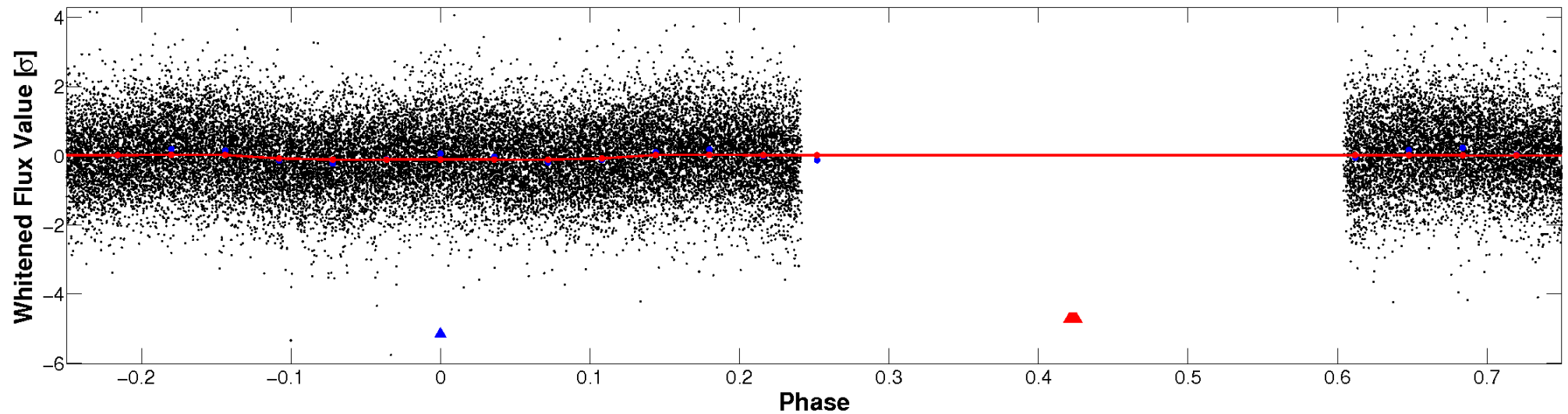


Non-Whitened Vs. Whitened Light Curve

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

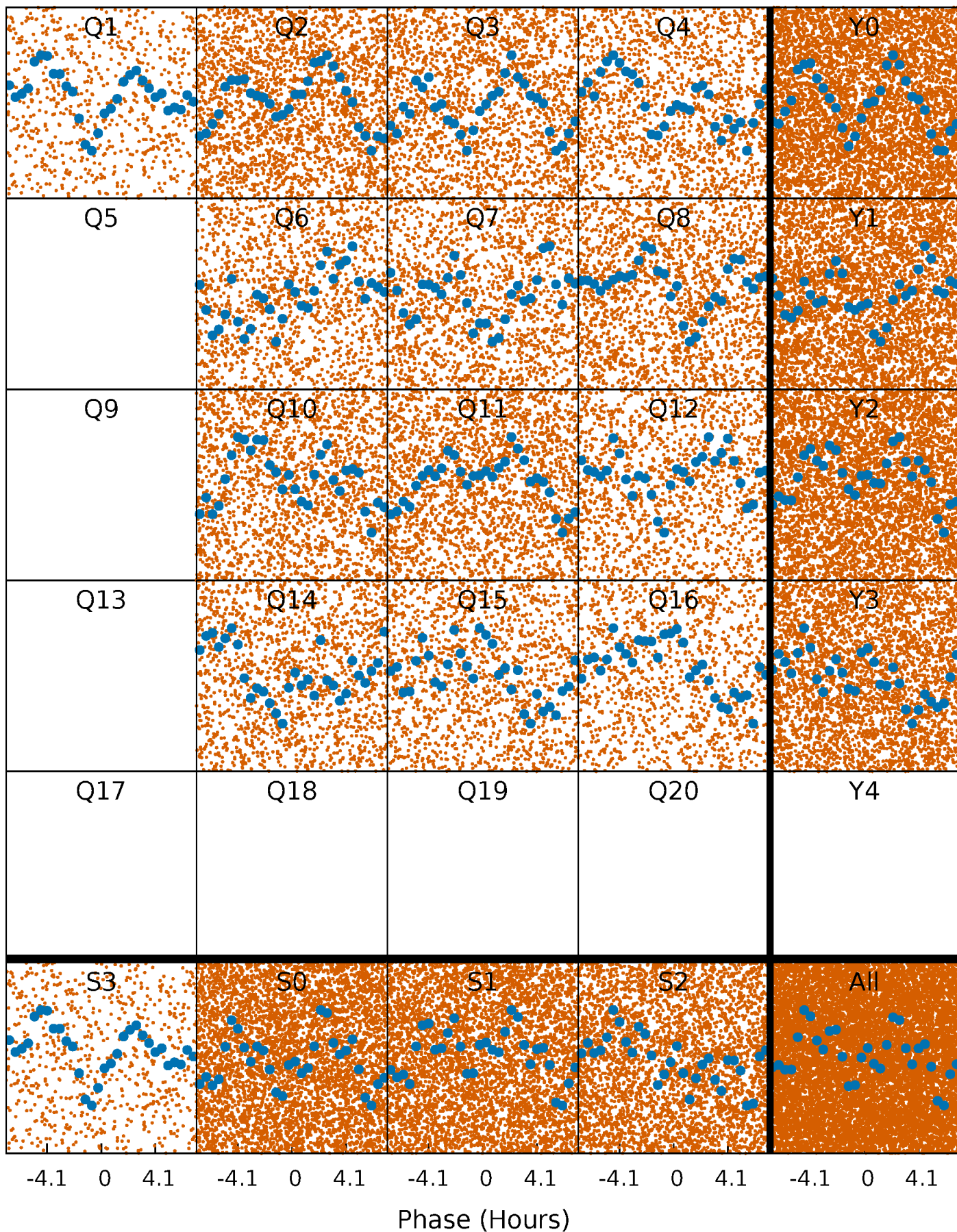


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



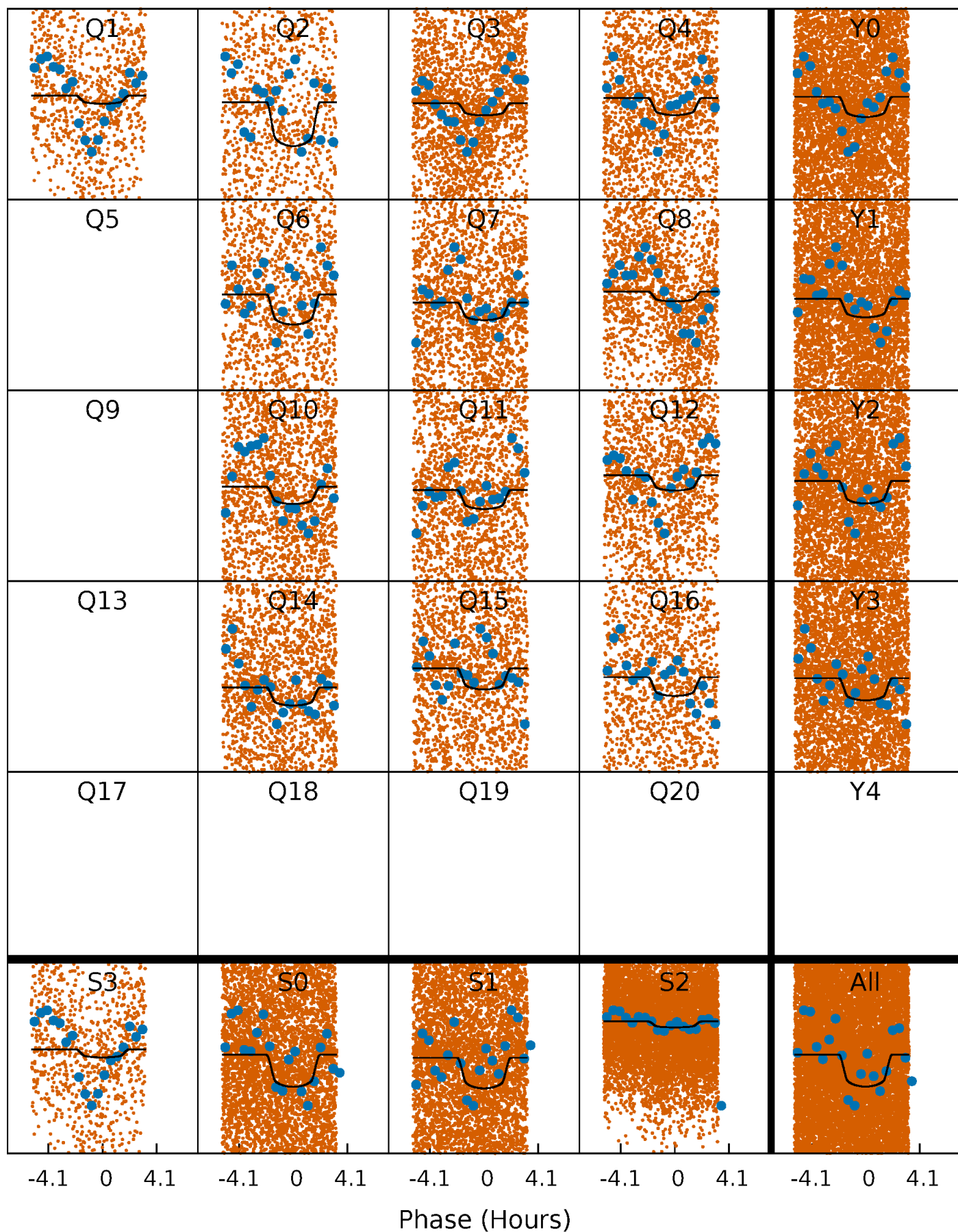
PDC Quarter-Phased Transit Curves

TCE 006756386-02 P= 0.567758 Days $T_0=131.829976$ (BKJD)



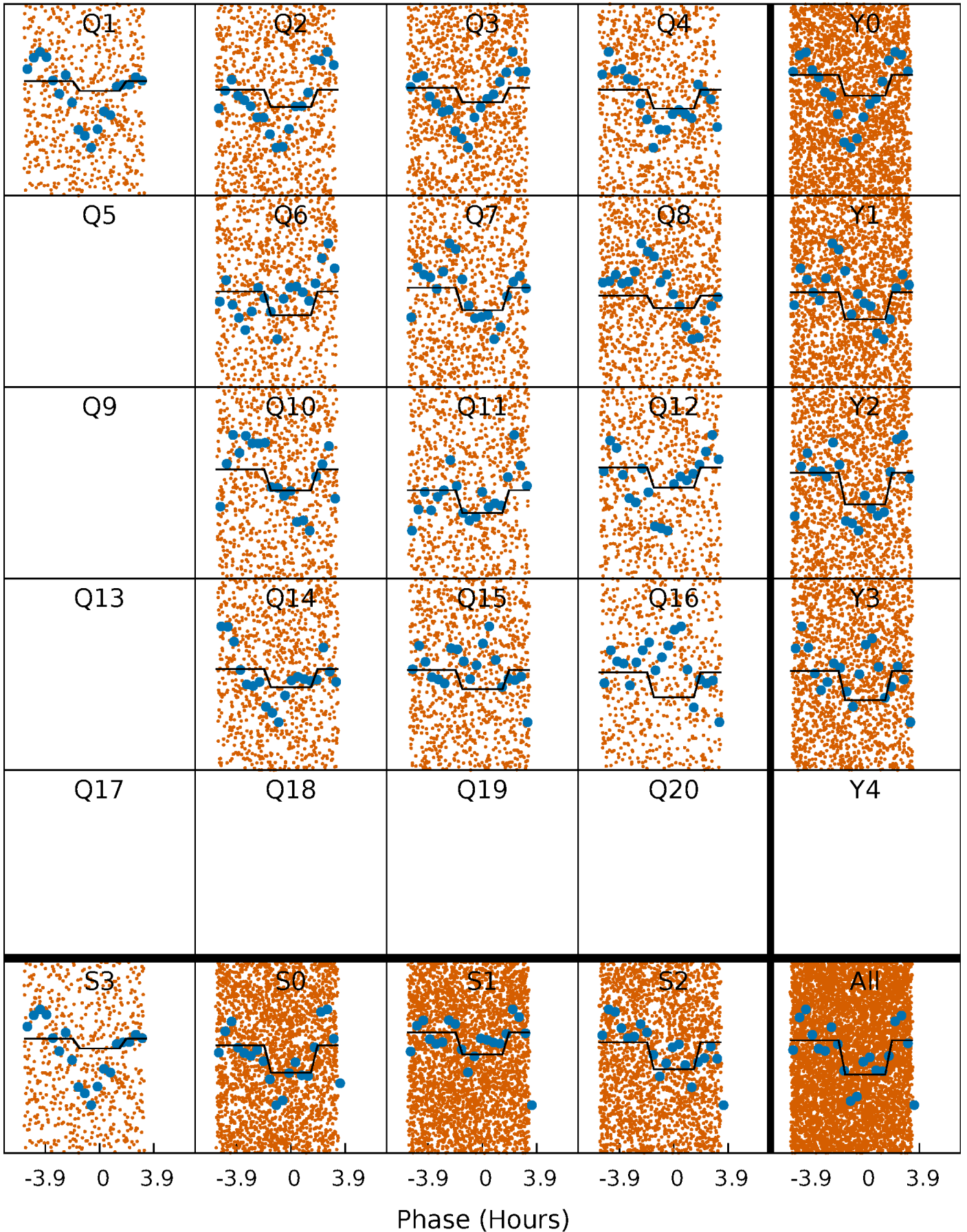
DV Quarter-Phased Transit Curves

TCE 006756386-02 P= 0.567758 Days $T_0=131.829976$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

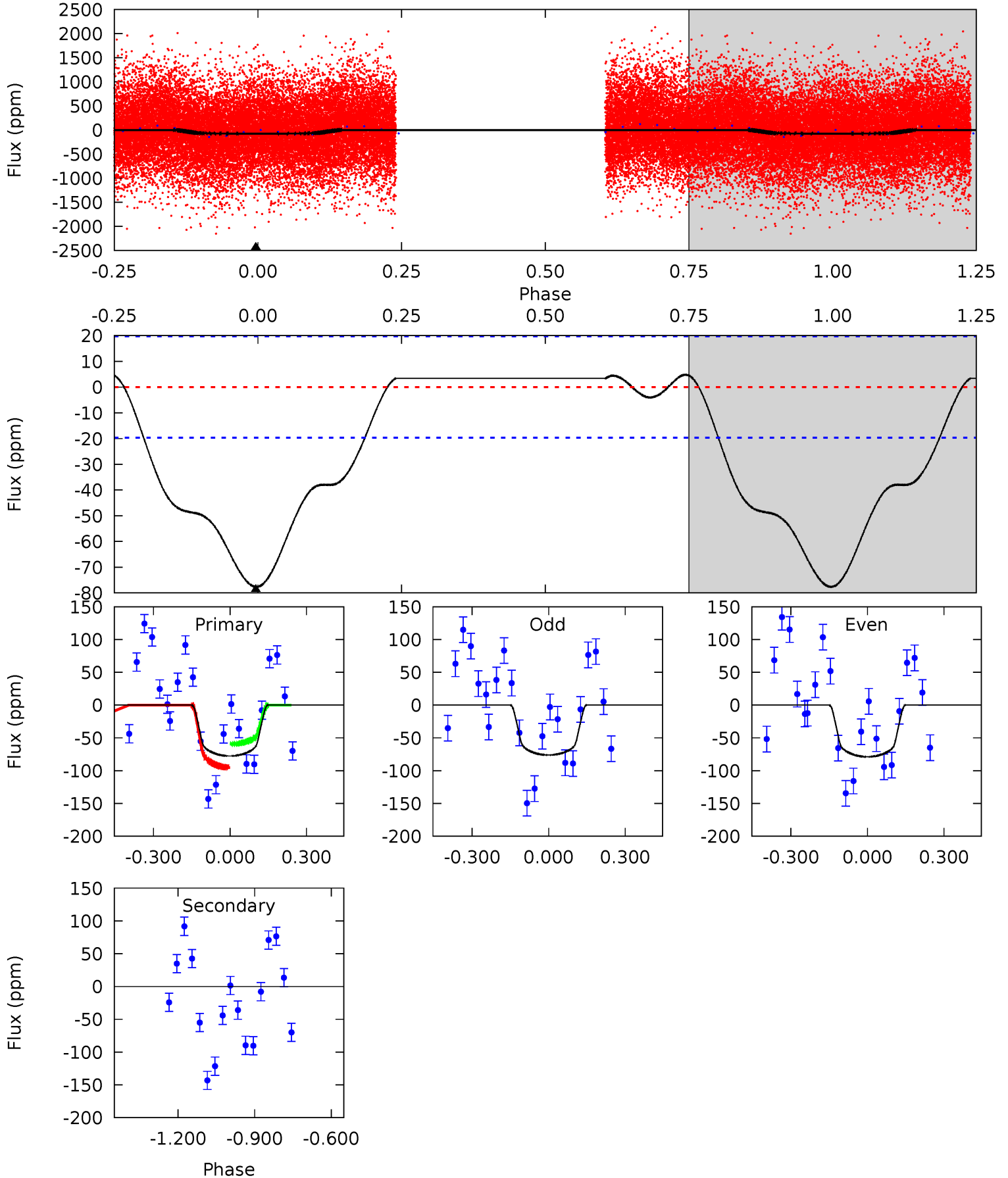
TCE 006756386-02 P= 0.567755 Days $T_0=131.830660$ (BKJD)



DV Model-Shift Uniqueness Test

006756386-02, P = 0.567758 Days, E = 131.262218 Days

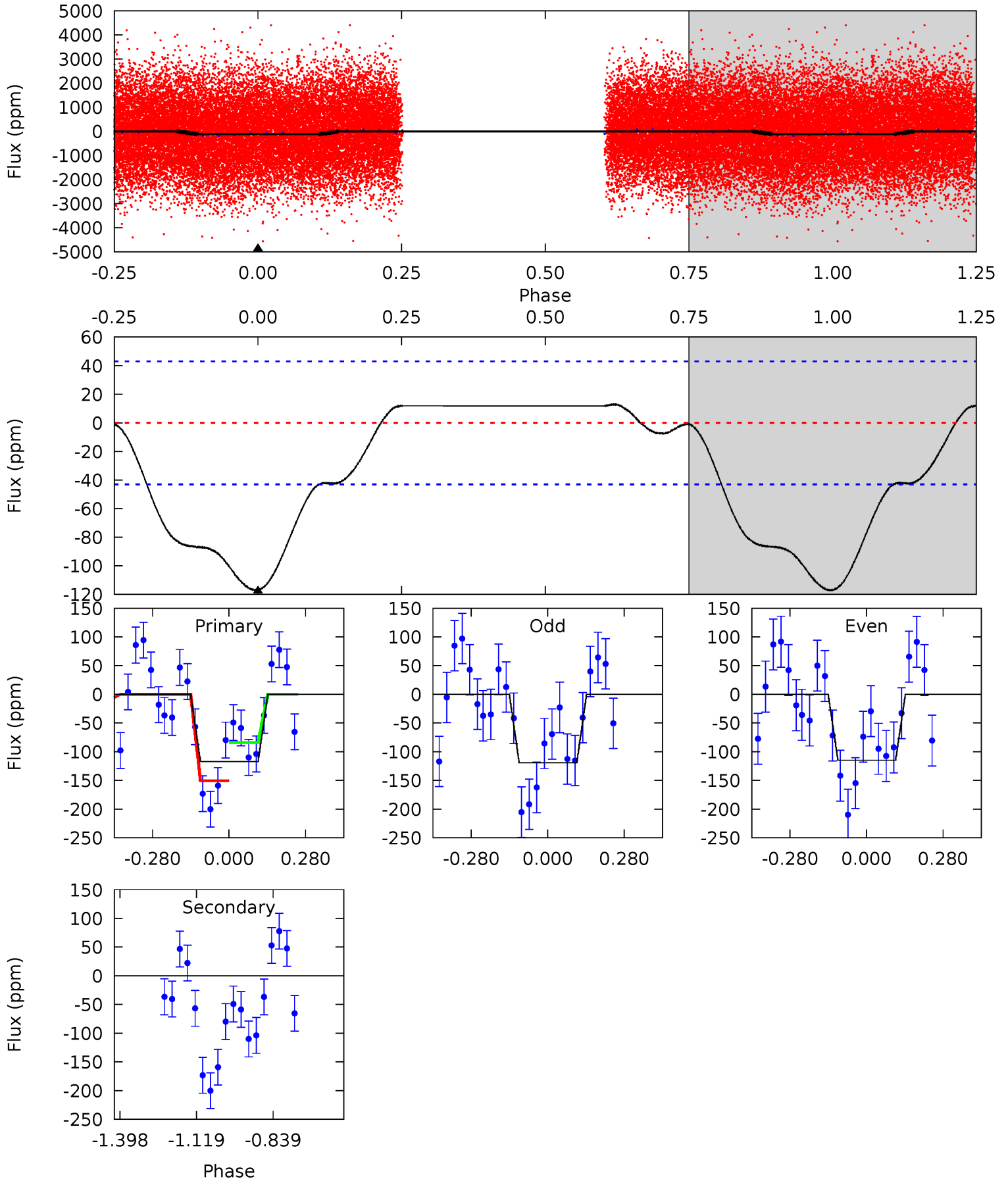
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.1	0	0	0	4.33	1.04	0.72	17.1	17.1	0	0	0.29	1.32	0.06	3.96



Alt Model-Shift Uniqueness Test

006756386-02, P = 0.567755 Days, E = 131.262905 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.8	0	0	0	4.34	1.08	0.79	11.8	11.8	0	0	0.23	1.10	0.10	3.30



Stellar Parameters For KIC 006756386

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7855^{+424}_{-989}	$3.209^{+0.315}_{-0.105}$	$-0.500^{+0.050}_{-0.200}$	$6.612^{+1.190}_{-2.777}$	$2.578^{+0.284}_{-0.851}$	$0.013^{+0.033}_{-0.004}$
	+5%/-13%	+10%/-3%	+10%/-40%	+18%/-42%	+11%/-33%	+260%/-35%
Source	SPE4	SPE4	SPE4	DSEP		

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

Secondary Eclipse Parameters for KIC 006756386-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 5	$6.53^{+2.64}_{-2.39}$	8747^{+926}_{-1234}	-7073^{+990}_{-849}	$-0.001^{+0.021}_{-0.025}$
Alt.	0 ± 10	$6.87^{+2.81}_{-2.33}$	8776^{+935}_{-1245}	-7101^{+1099}_{-885}	$0.000^{+0.041}_{-0.044}$

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 $A_{obs} \gg 1.0$

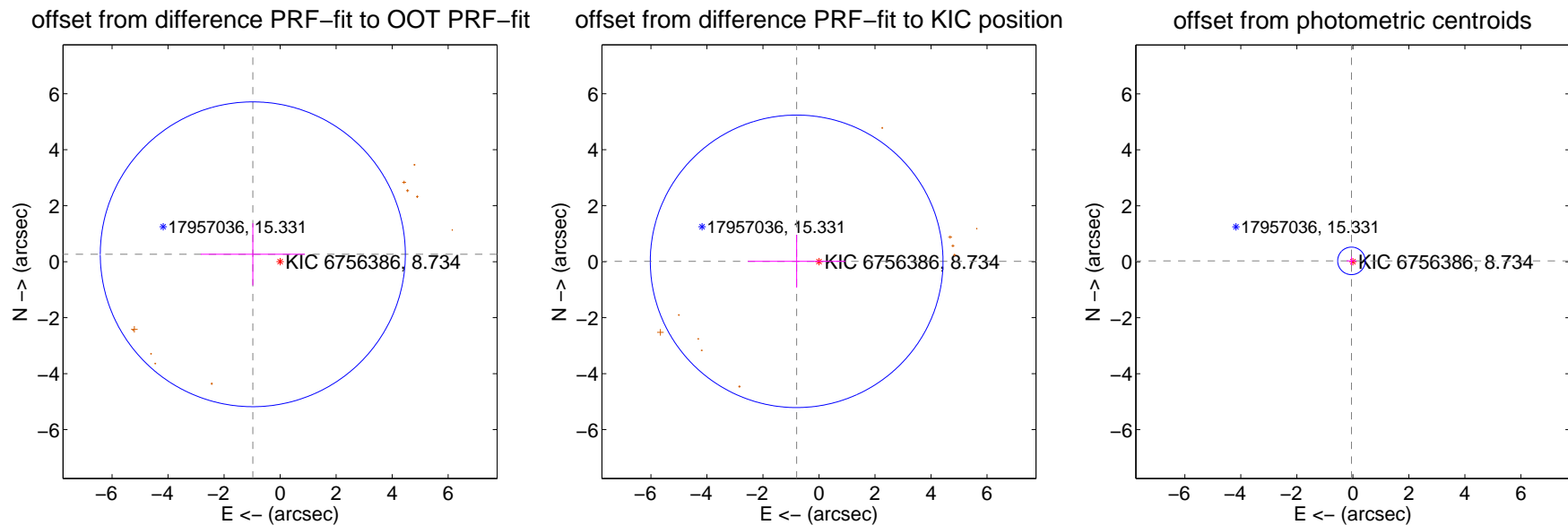
DV Centroid Data

Supplemental centroid analysis for 006756386-02. **Kepler magnitude: 8.73.** Transit SNR 11.93

There are 0 quarters with good PRF difference image offsets

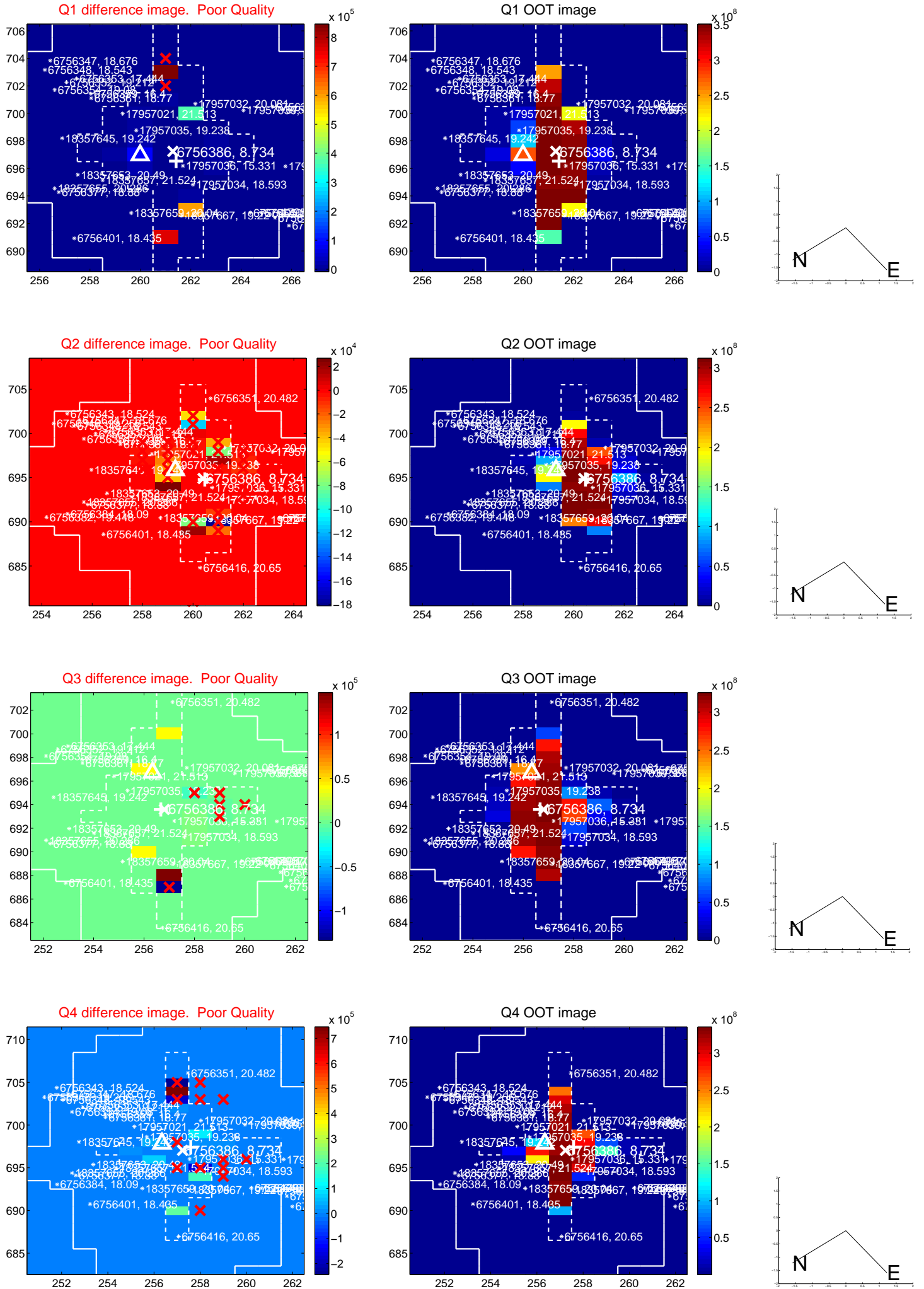
The OOT PRF centroid is offset from the target star catalog position by about 2.16 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.010 ± 1.815	0.56	0.974 ± 1.856	0.265 ± 1.109
PRF-fit source offset from KIC position	0.797 ± 1.741	0.46	0.797 ± 1.741	0.013 ± 0.944
photometric centroid source offset	0.06 ± 0.16	0.37	0.05 ± 0.17	0.03 ± 0.15

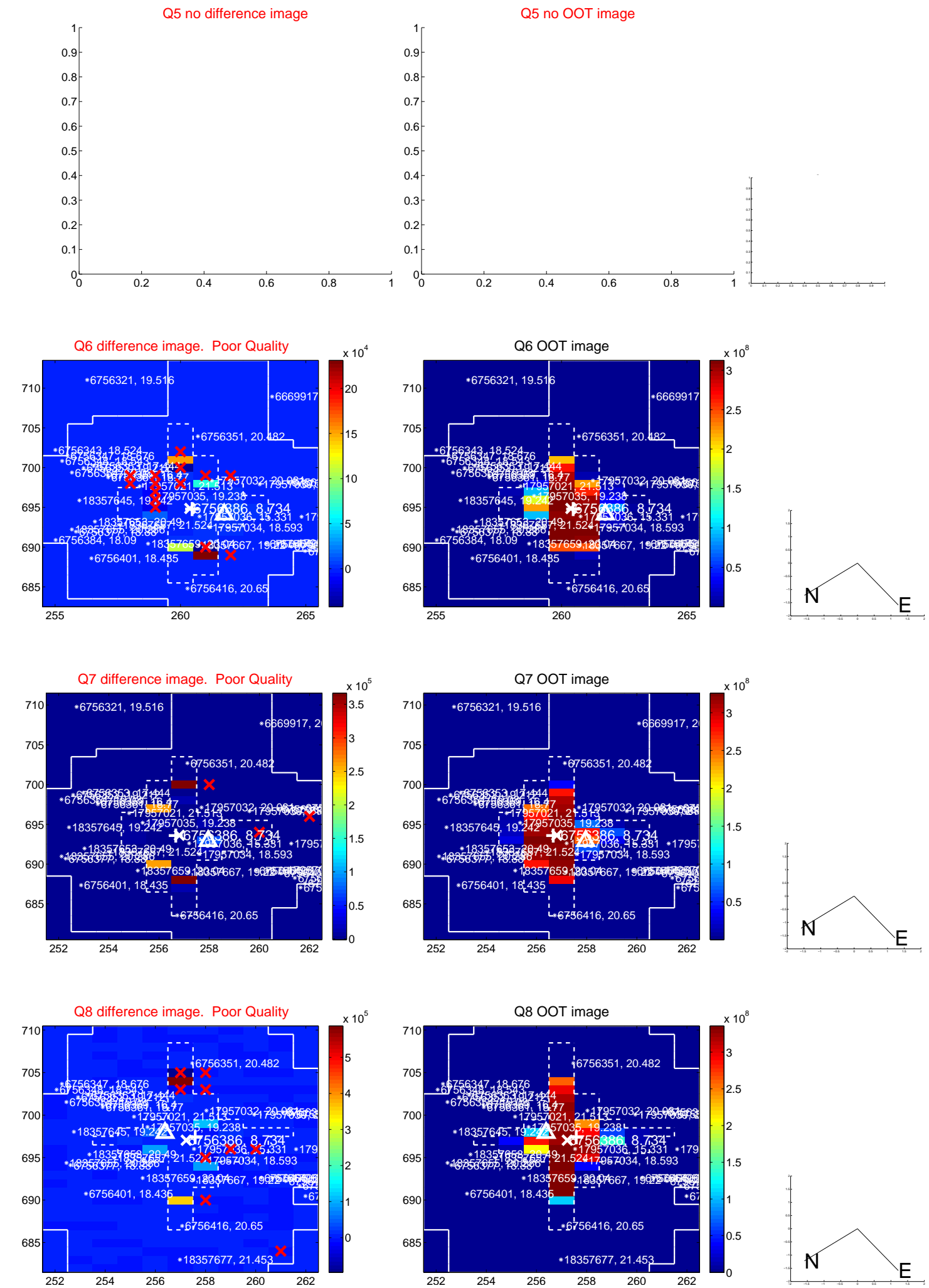


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

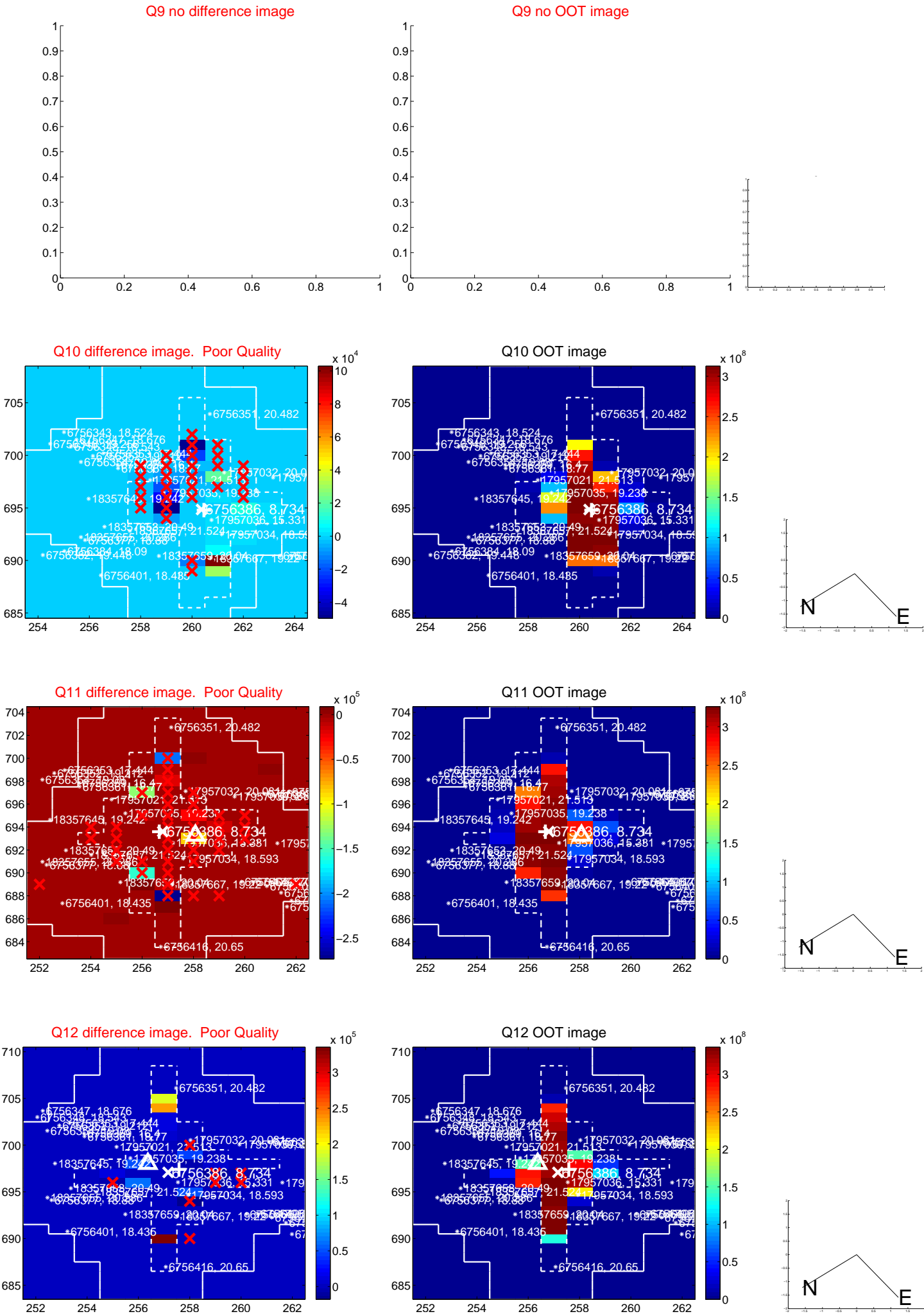
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



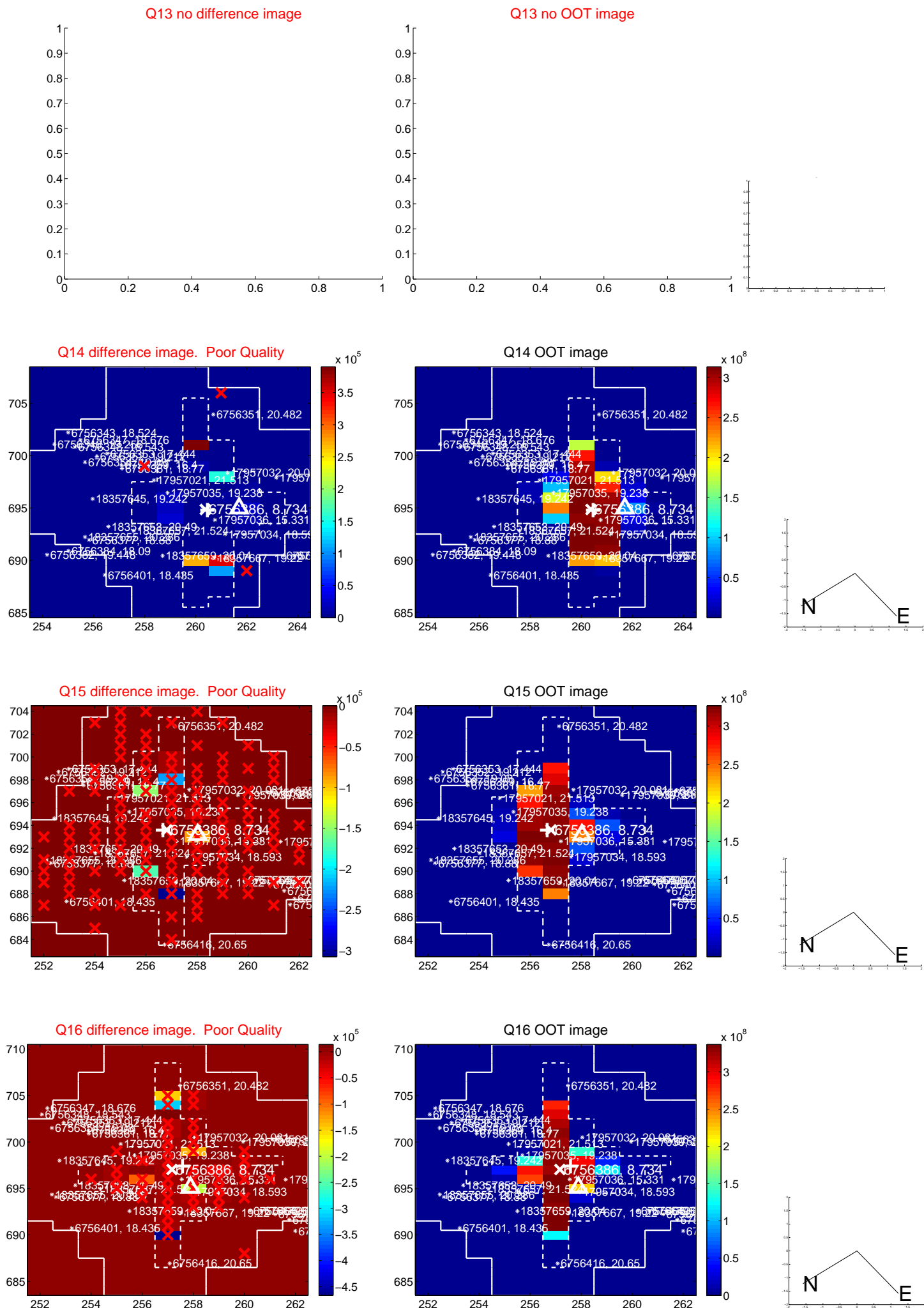
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



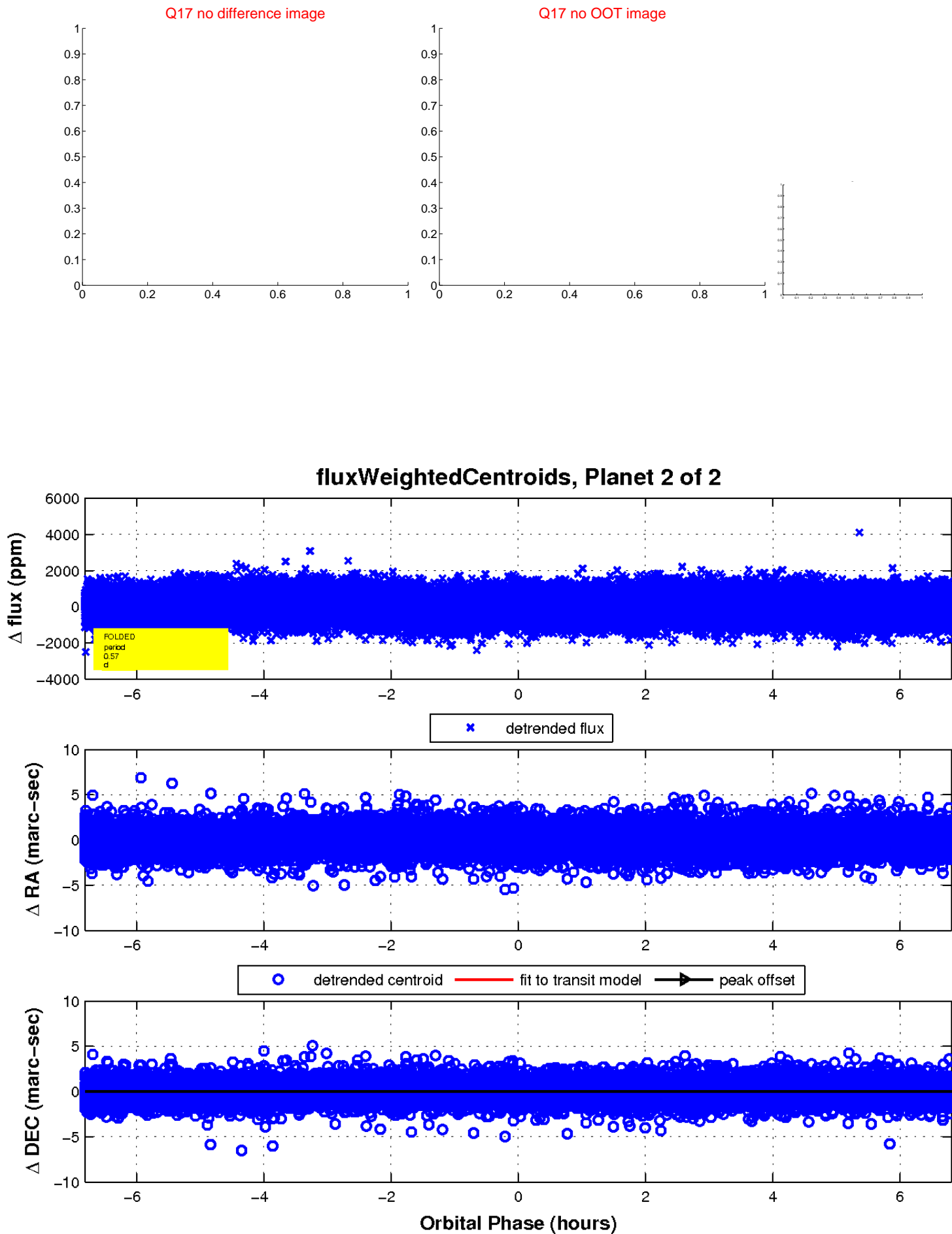
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

