

KIC 006263470

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})
006263470-01	OBS	No	4.633576	132.453536	133.1	12.151	12.2	15.0	2.21	6608	5.07	2250.10
006263470-02	OBS	No	429.131372	177.674761	378.2	15.037	10.3	6.3	2.21	6608	4.60	5.37

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006263470-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV
006263470-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS

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

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

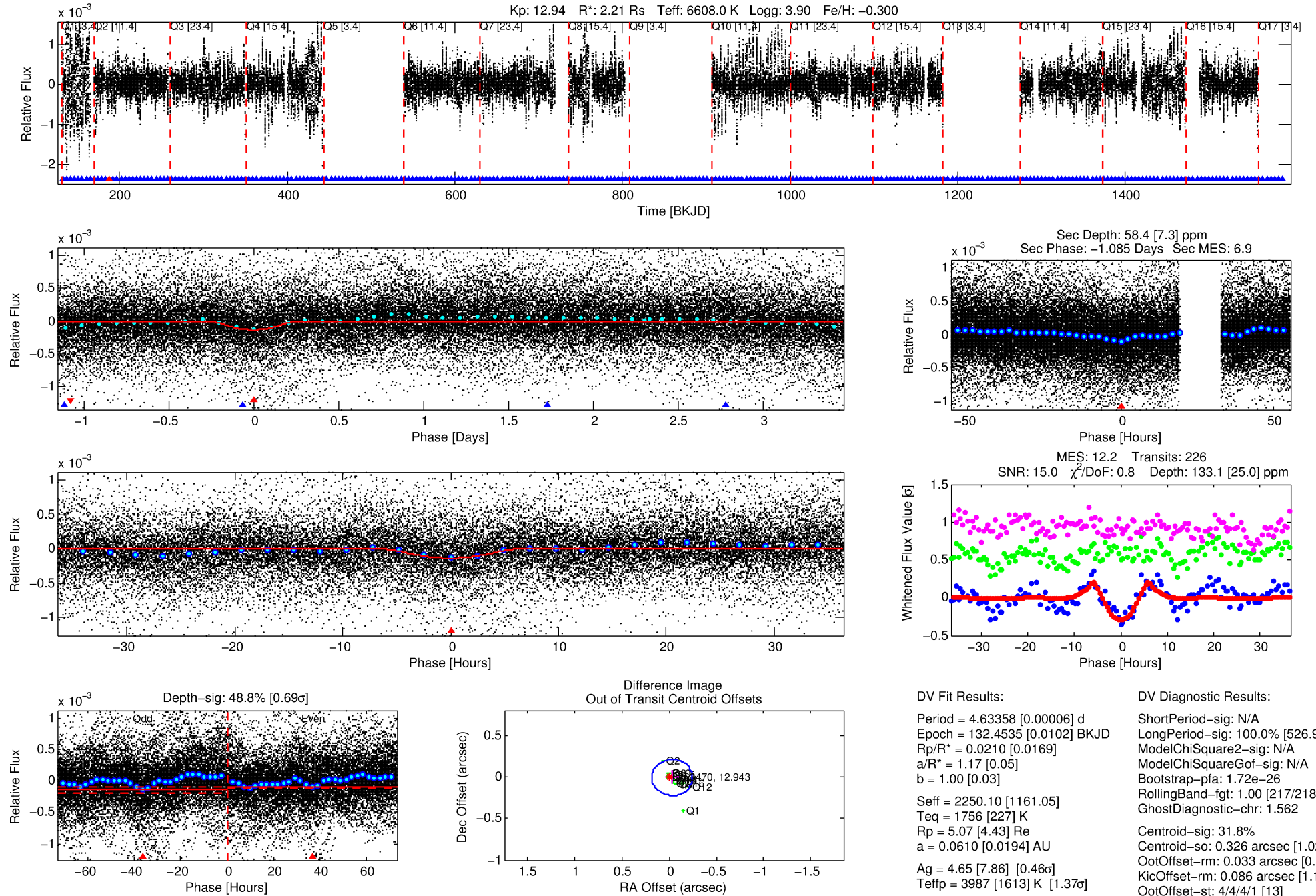
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006263470-01

No Significant Match Found

DV One-Page Summary

KIC: 6263470 Candidate: 1 of 2 Period: 4.634 d



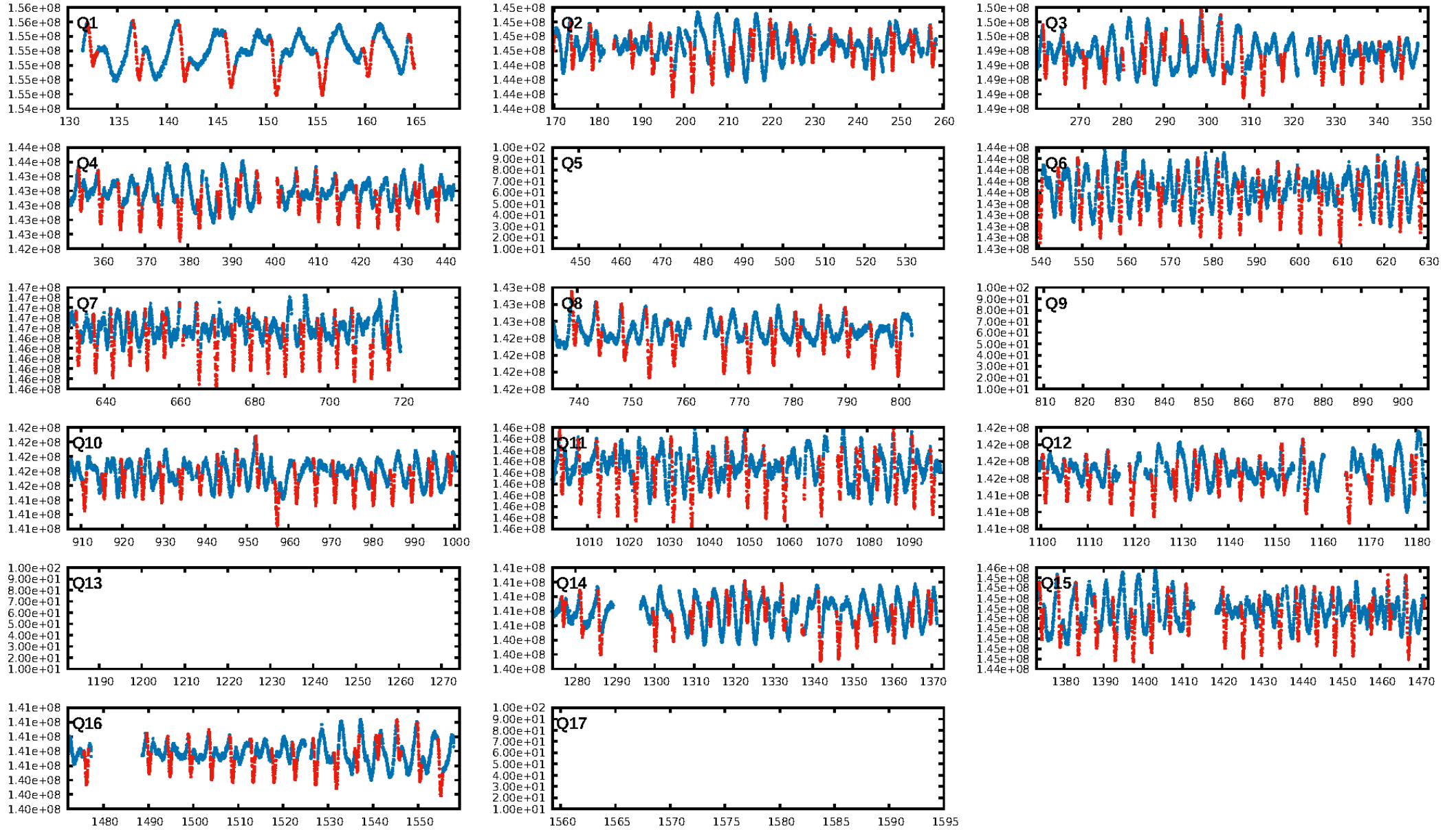
DV Fit Results:

Period = 4.63358 [0.00006] d
Epoch = 132.4535 [0.0102] BKJD
Rp/R* = 0.0210 [0.0169]
a/R* = 1.17 [0.05]
b = 1.00 [0.03]
Seff = 2250.10 [1161.05]
Teff = 1756 [227] K
Rp = 5.07 [4.43] Re
a = 0.0610 [0.0194] AU
Ag = 4.65 [7.86] [0.46 σ]
Teffp = 3987 [1613] K [1.37 σ]

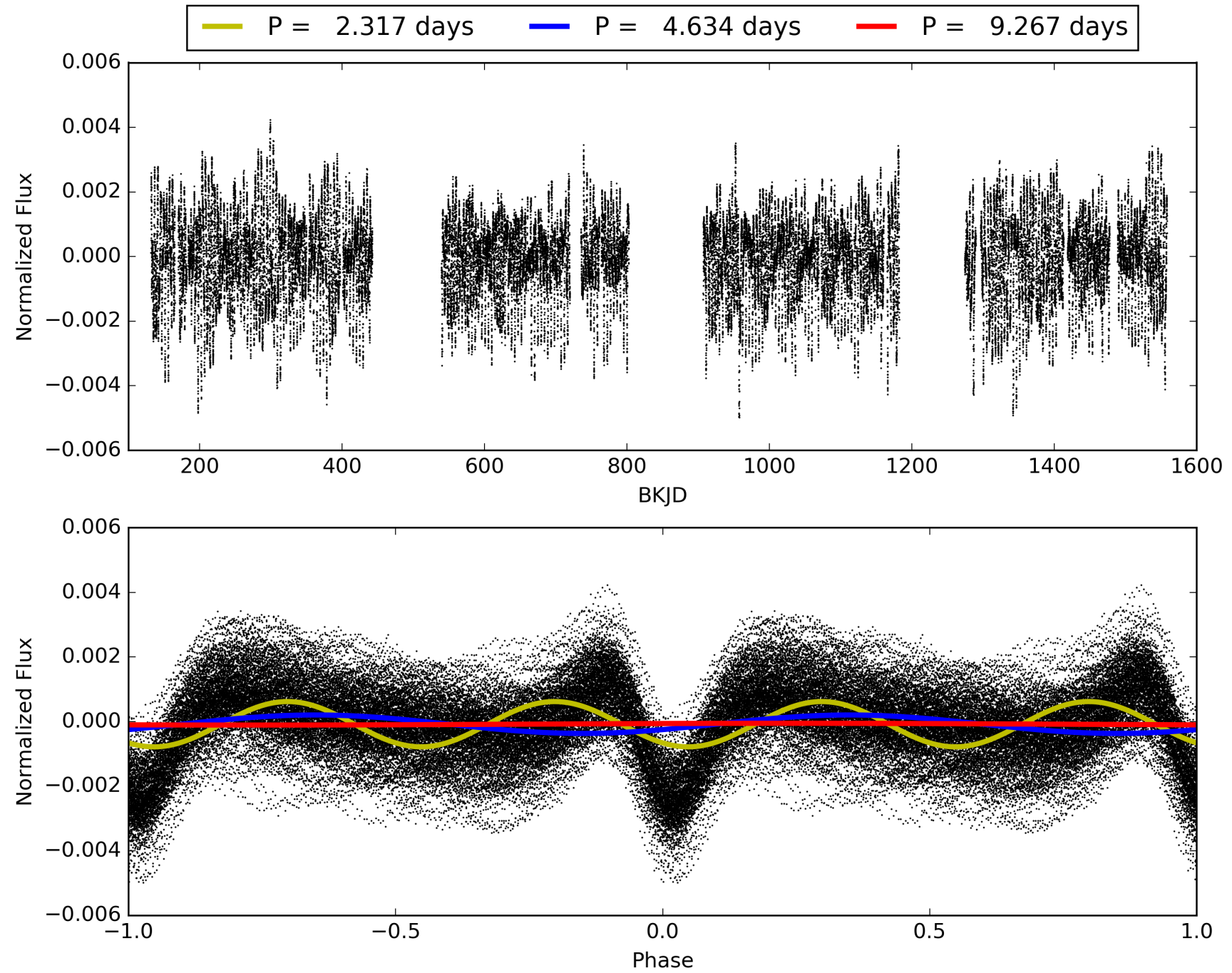
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [526.97 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.72e-26
RollingBand-fgt: 1.00 [217/218]
GhostDiagnostic-chr: 1.562
Centroid-sig: 31.8%
Centroid-so: 0.326 arcsec [1.02 σ]
OotOffset-rm: 0.033 arcsec [0.46 σ]
KicOffset-rm: 0.086 arcsec [1.18 σ]
OotOffset-st: 4/4/4/1 [13]
KicOffset-st: 4/4/4/1 [13]
DiffImageQuality-fgm: 1.00 [13/13]
DiffImageOverlap-fno: 1.00 [13/13]

TCE 006263470-01, PDC Light Curves

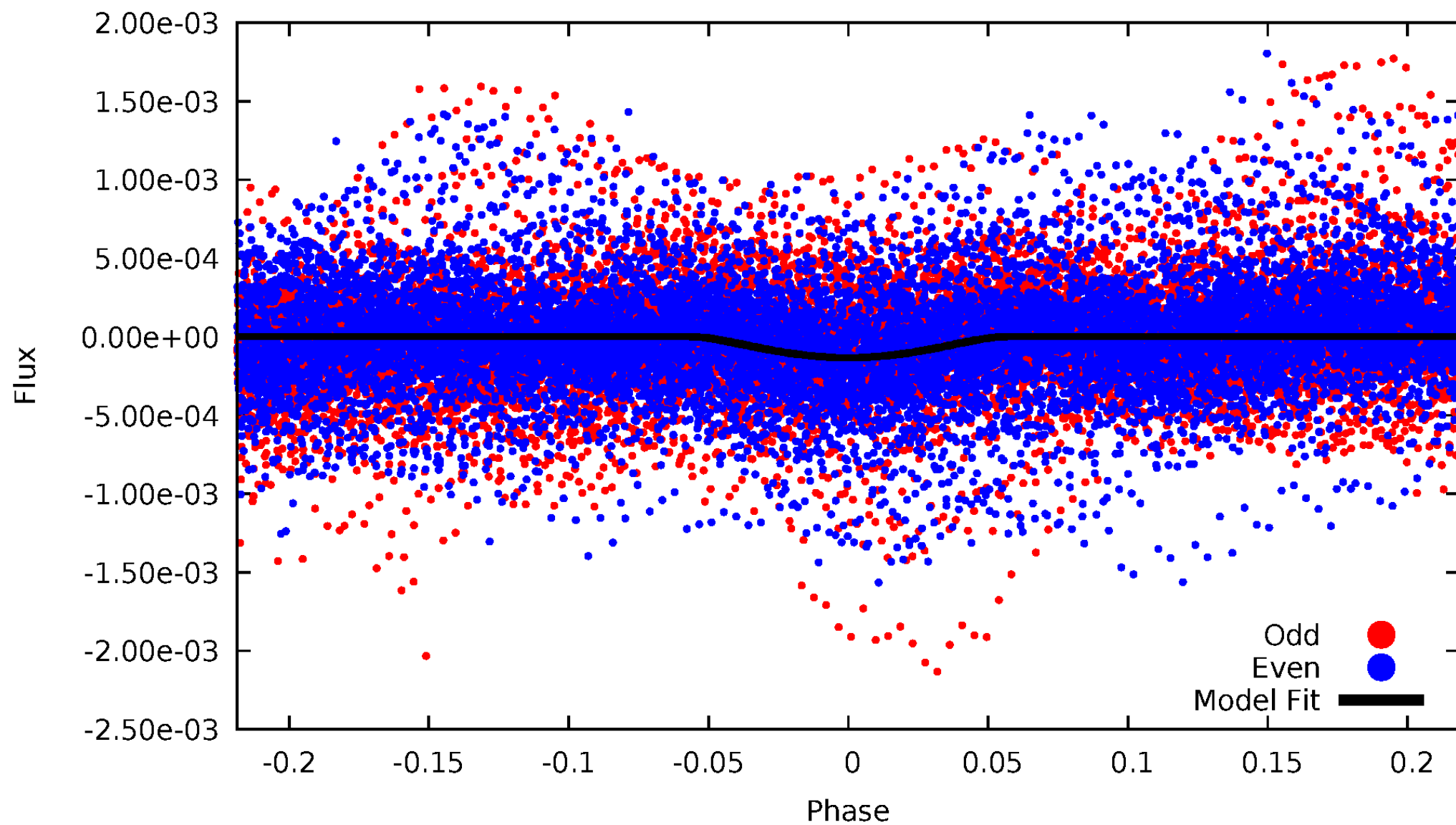


TCE 006263470-01



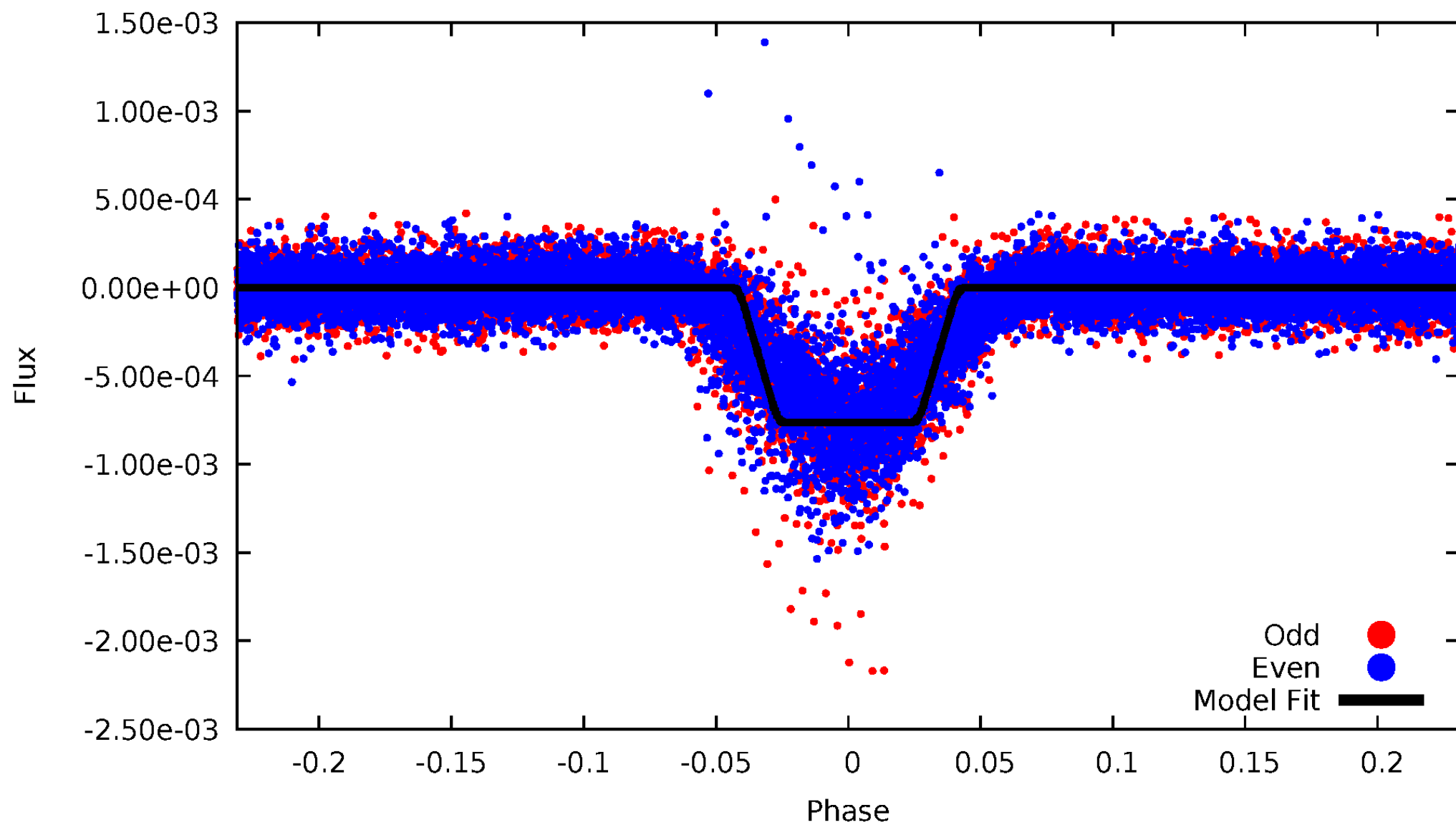
DV Odd/Even

TCE 006263470-01



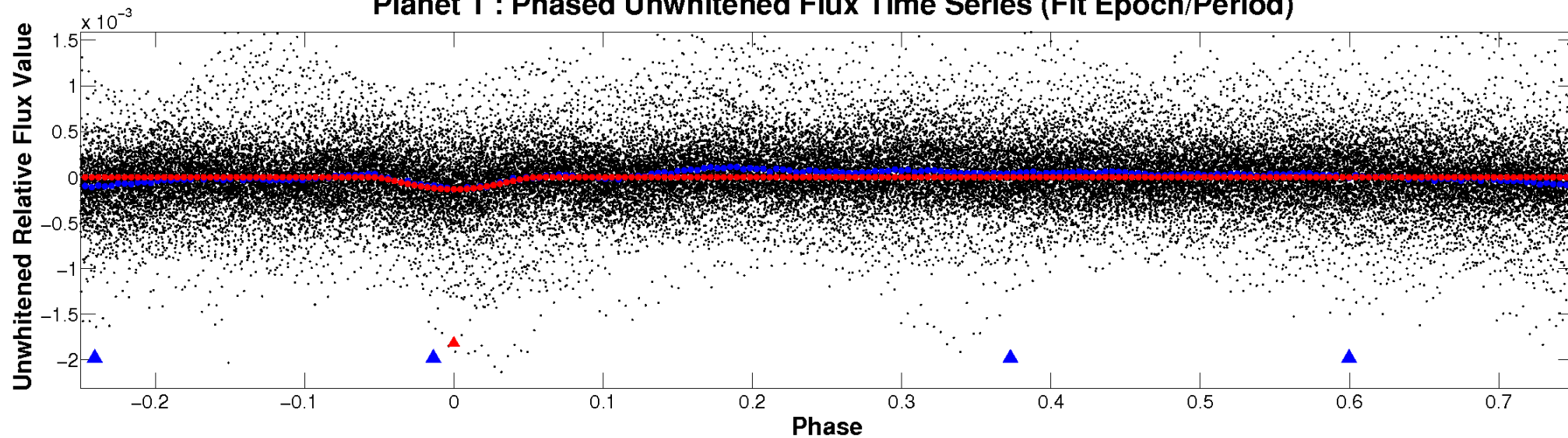
ALT Odd/Even

TCE 006263470-01

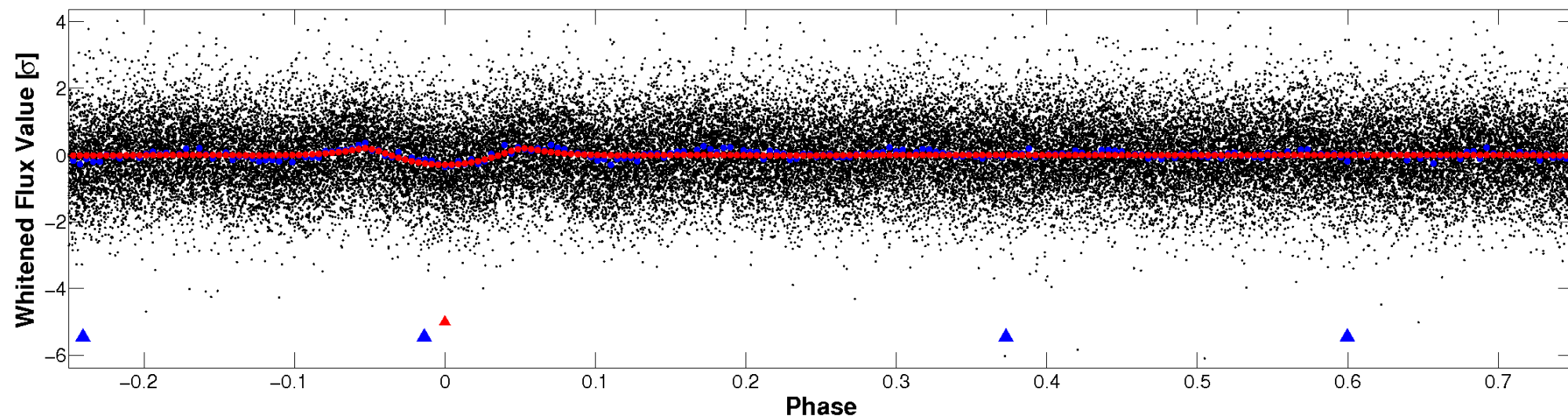


Non-Whitened Vs. Whitened Light Curve

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

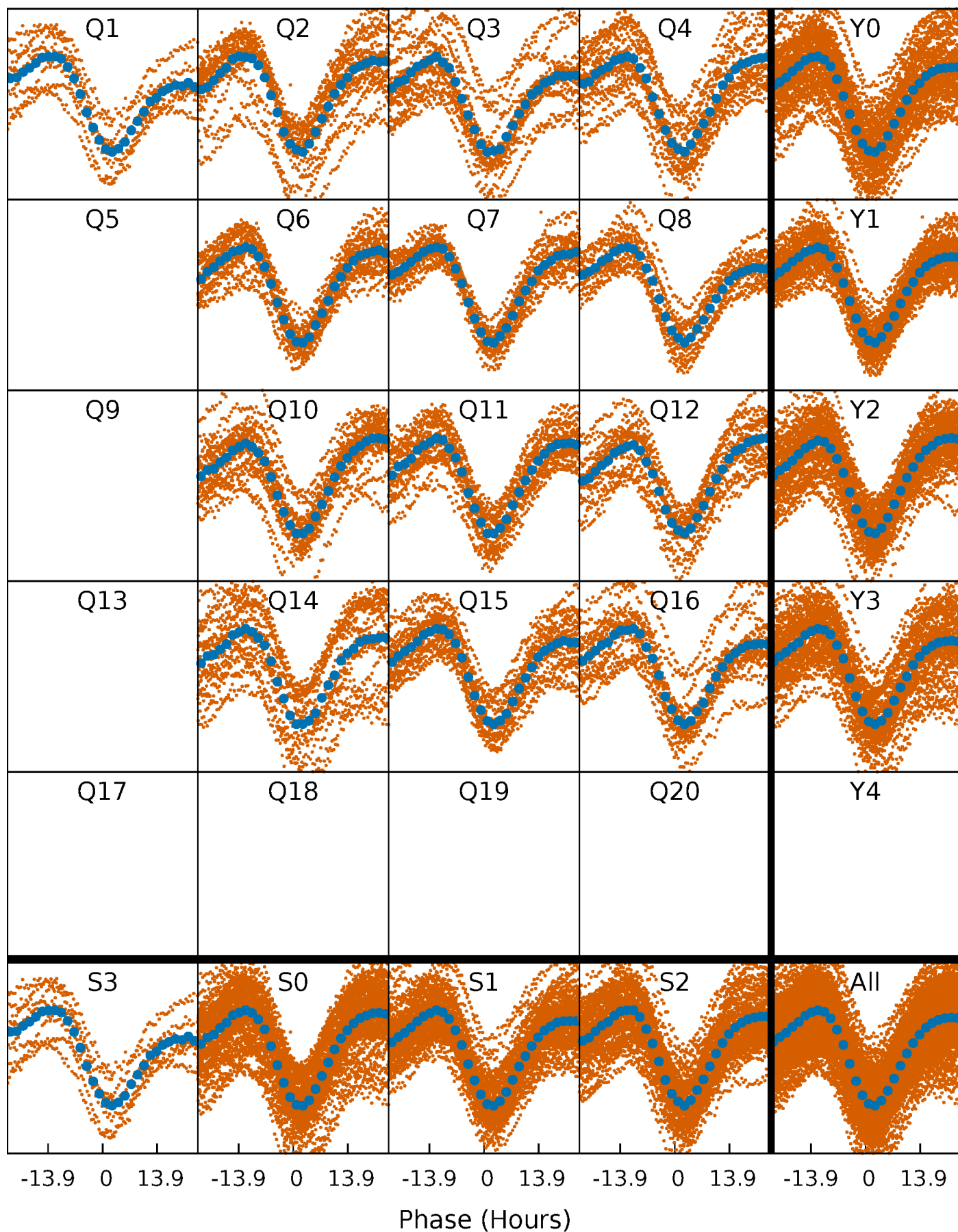


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



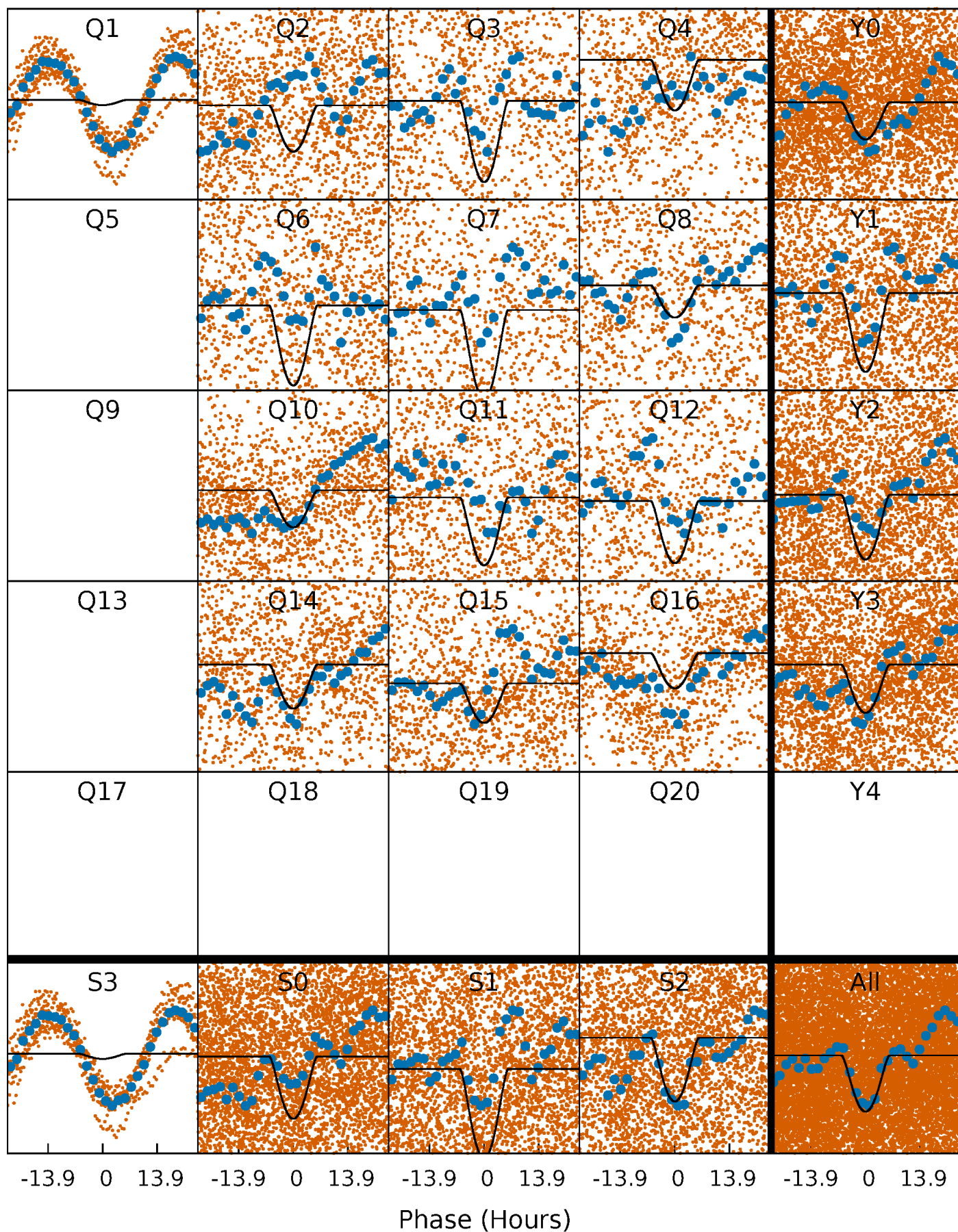
PDC Quarter-Phased Transit Curves

TCE 006263470-01 P= 4.633576 Days $T_0=132.453536$ (BKJD)



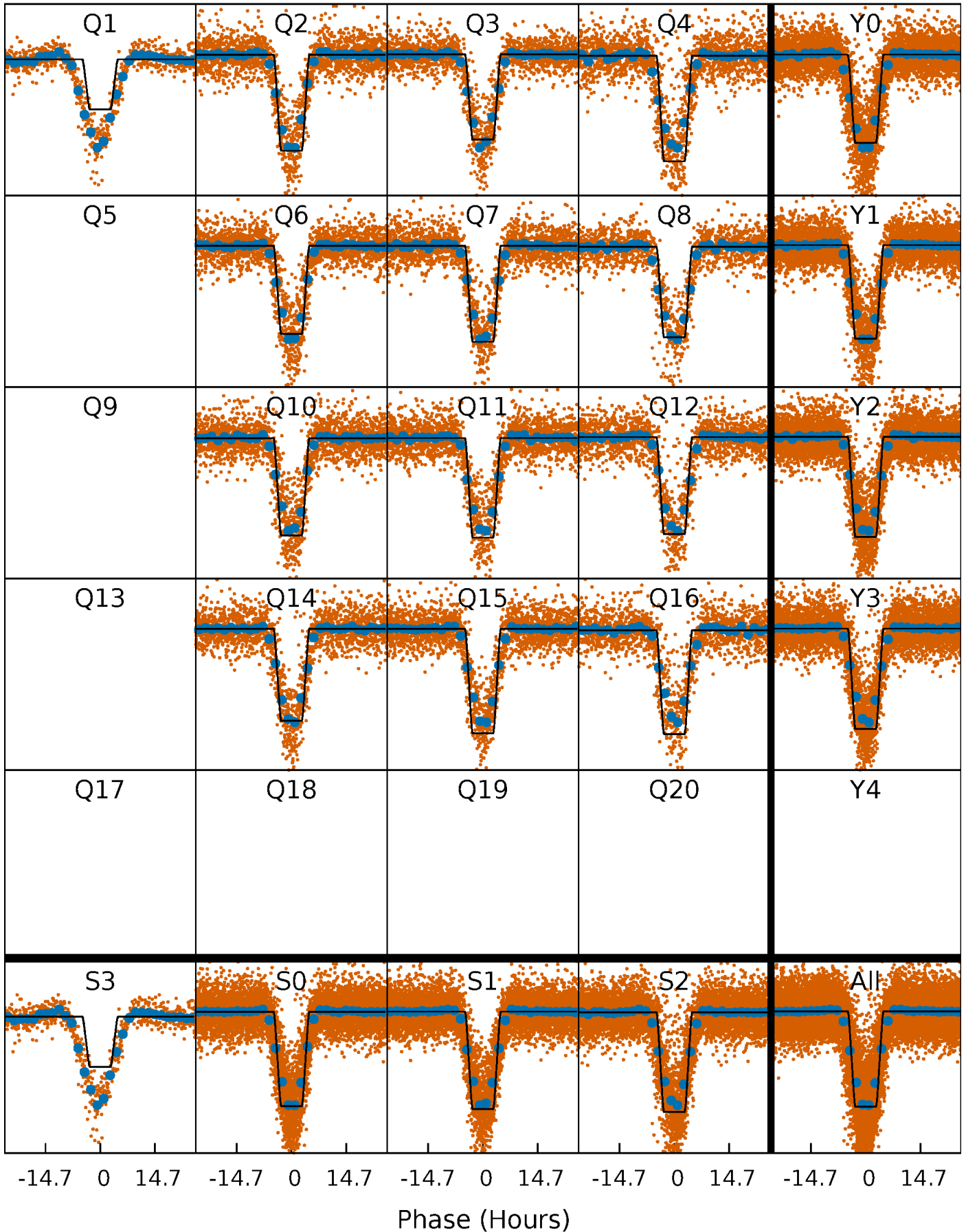
DV Quarter-Phased Transit Curves

TCE 006263470-01 P= 4.633576 Days $T_0=132.453536$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

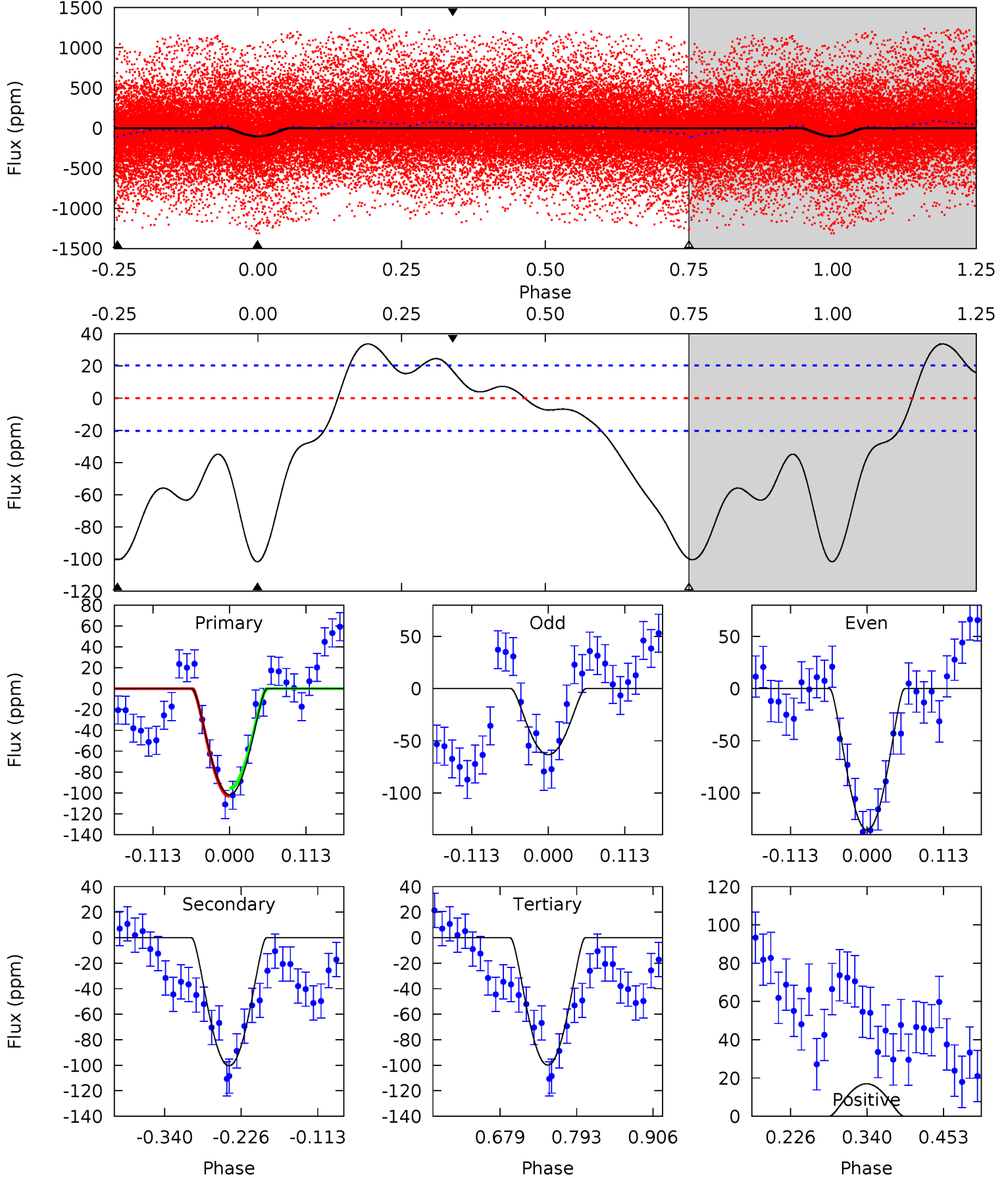
TCE 006263470-01 P= 4.633430 Days $T_0=132.487460$ (BKJD)



DV Model-Shift Uniqueness Test

006263470-01, P = 4.633576 Days, E = 127.819960 Days

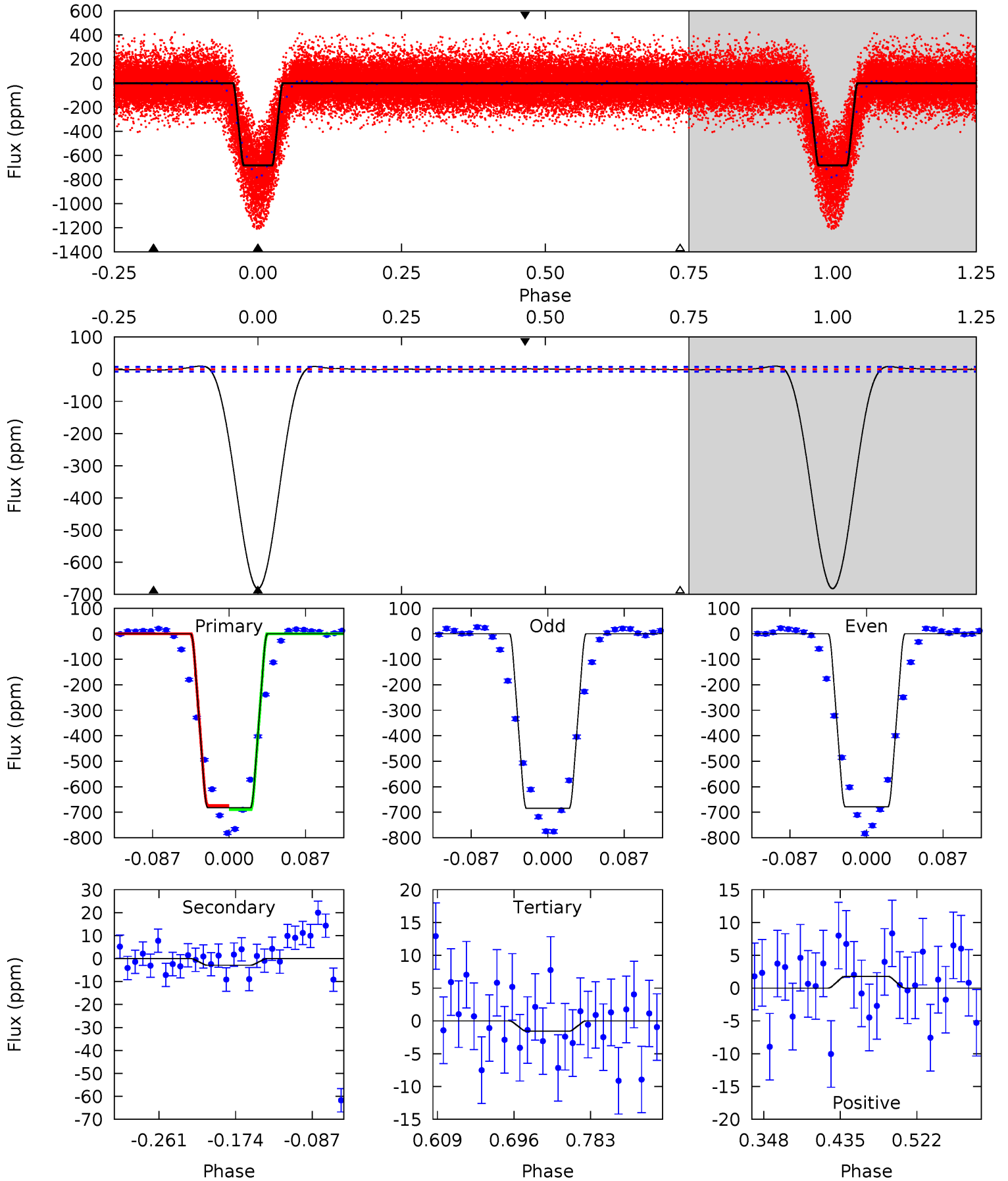
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.7	22.4	22.3	3.79	4.54	1.58	7.59	0.39	18.9	0.11	18.6	8.12	1.03	0.25	0.81



Alt Model-Shift Uniqueness Test

006263470-01, P = 4.633430 Days, E = 127.854030 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
411.4	1.75	0.94	1.08	4.59	1.71	1.12	410.5	410.4	0.81	0.68	1.77	1.03	0.01	4.76



Stellar Parameters For KIC 006263470

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6608^{+160}_{-200}	$3.897^{+0.292}_{-0.097}$	$-0.300^{+0.300}_{-0.250}$	$2.215^{+0.403}_{-0.748}$	$1.411^{+0.175}_{-0.301}$	$0.183^{+0.340}_{-0.066}$
	+2%/-3%	+7%/-2%	+100%/-83%	+18%/-34%	+12%/-21%	+186%/-36%
Source	PHO1	FLK73	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 006263470-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-100 ± 4	$5.26^{+3.81}_{-3.06}$	2408^{+138}_{-213}	4487^{+2346}_{-849}	$7.507^{+38.027}_{-4.987}$
Alt.	-3 ± 2	$6.57^{+3.89}_{-3.63}$	2402^{+152}_{-211}	-2520^{+5261}_{-202}	$0.123^{+0.545}_{-0.088}$

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 $A_{obs} \gg 1.0$

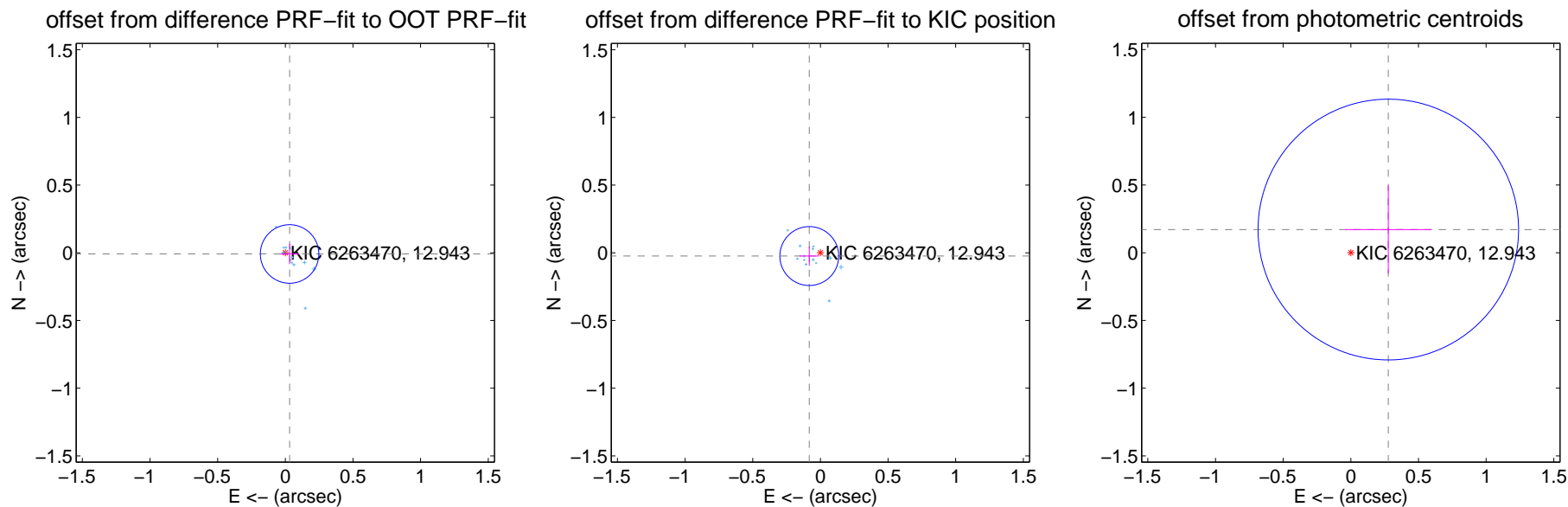
DV Centroid Data

Supplemental centroid analysis for 006263470-01. Kepler magnitude: 12.94. Transit SNR 15.04

There are 13 quarters with good PRF difference image offsets

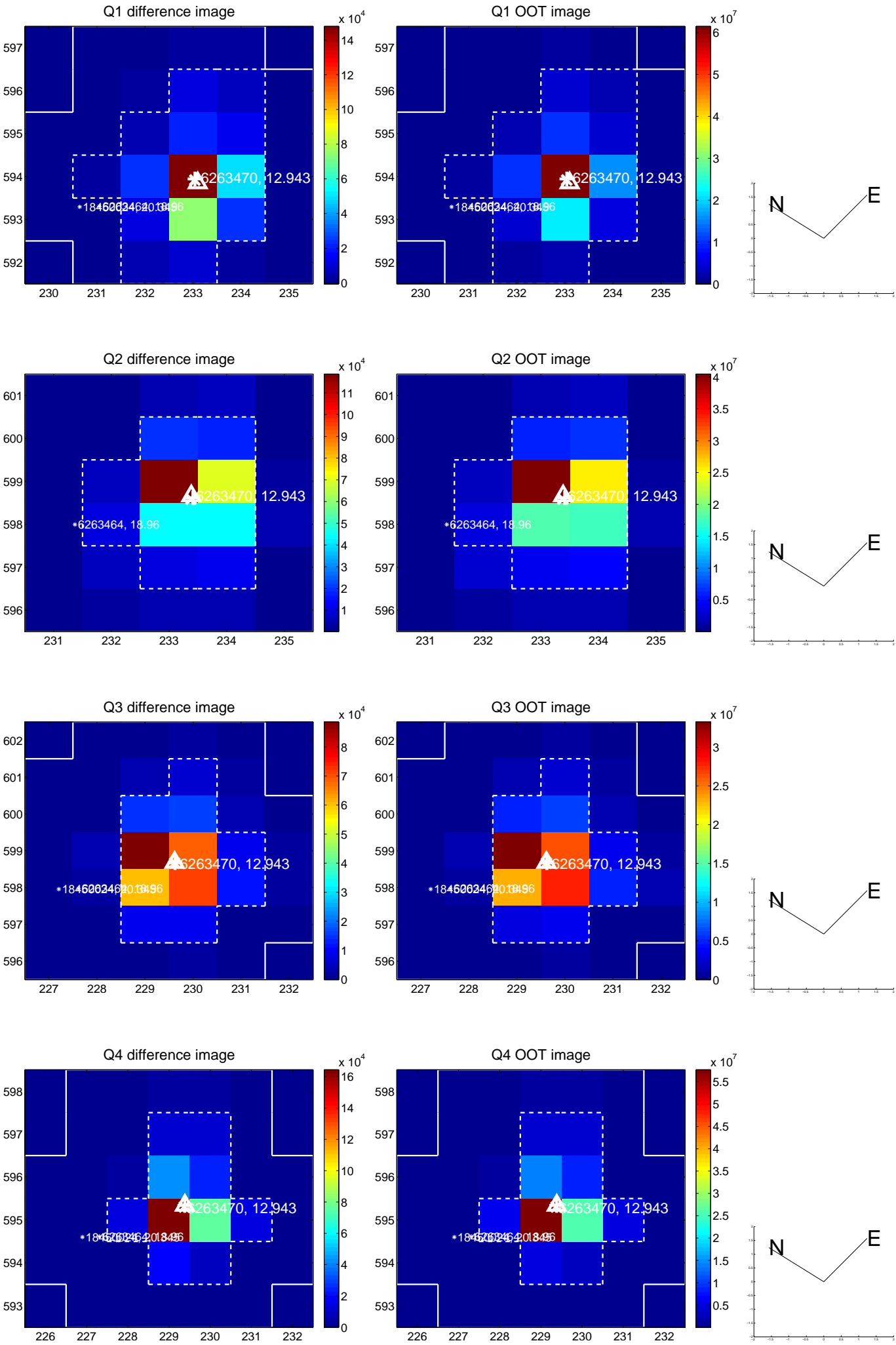
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.033 ± 0.072	0.46	-0.032 ± 0.070	-0.009 ± 0.076
PRF-fit source offset from KIC position	0.086 ± 0.072	1.18	0.082 ± 0.073	-0.024 ± 0.071
photometric centroid source offset	0.33 ± 0.32	1.02	-0.28 ± 0.32	0.17 ± 0.32

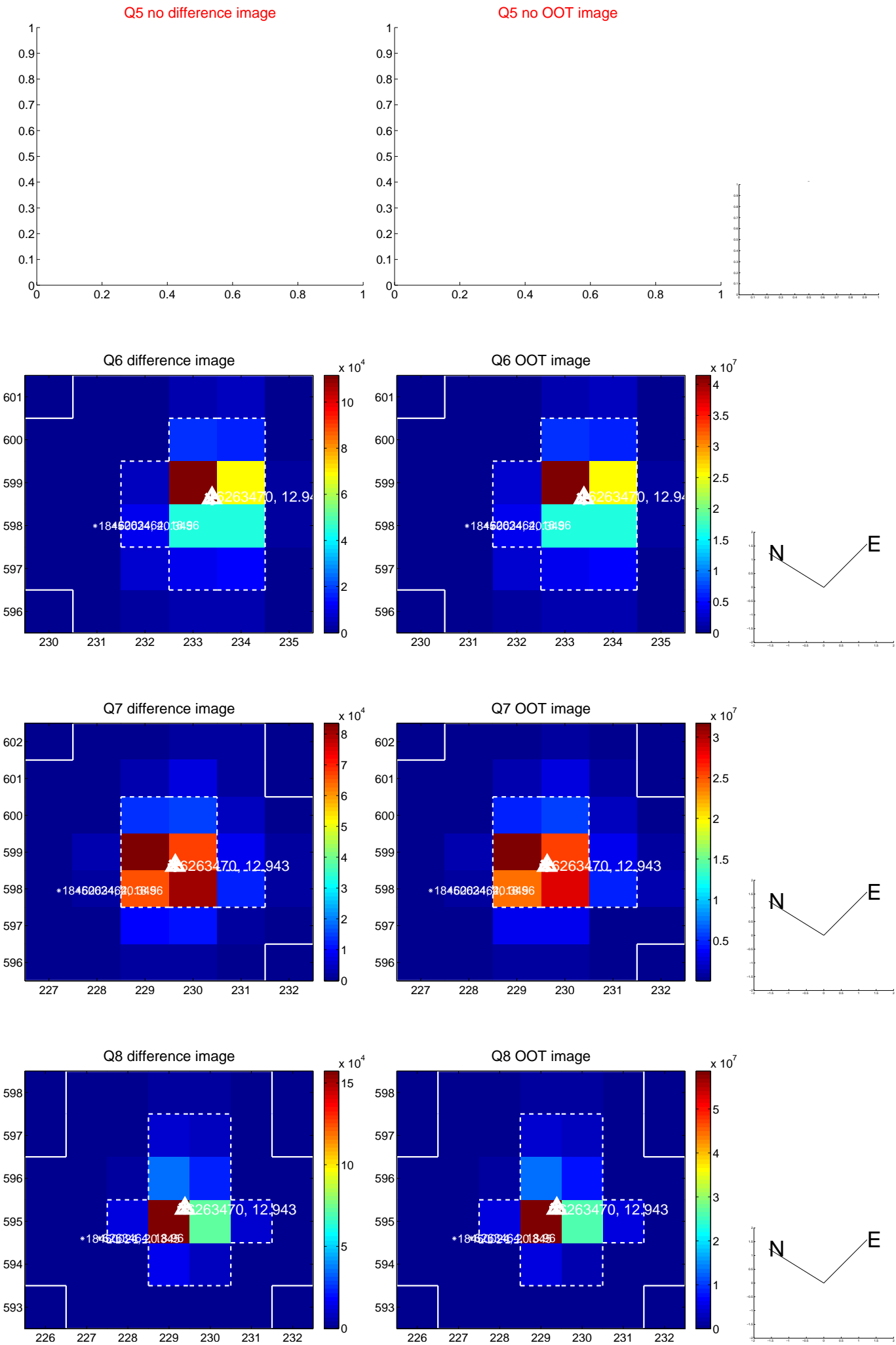


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

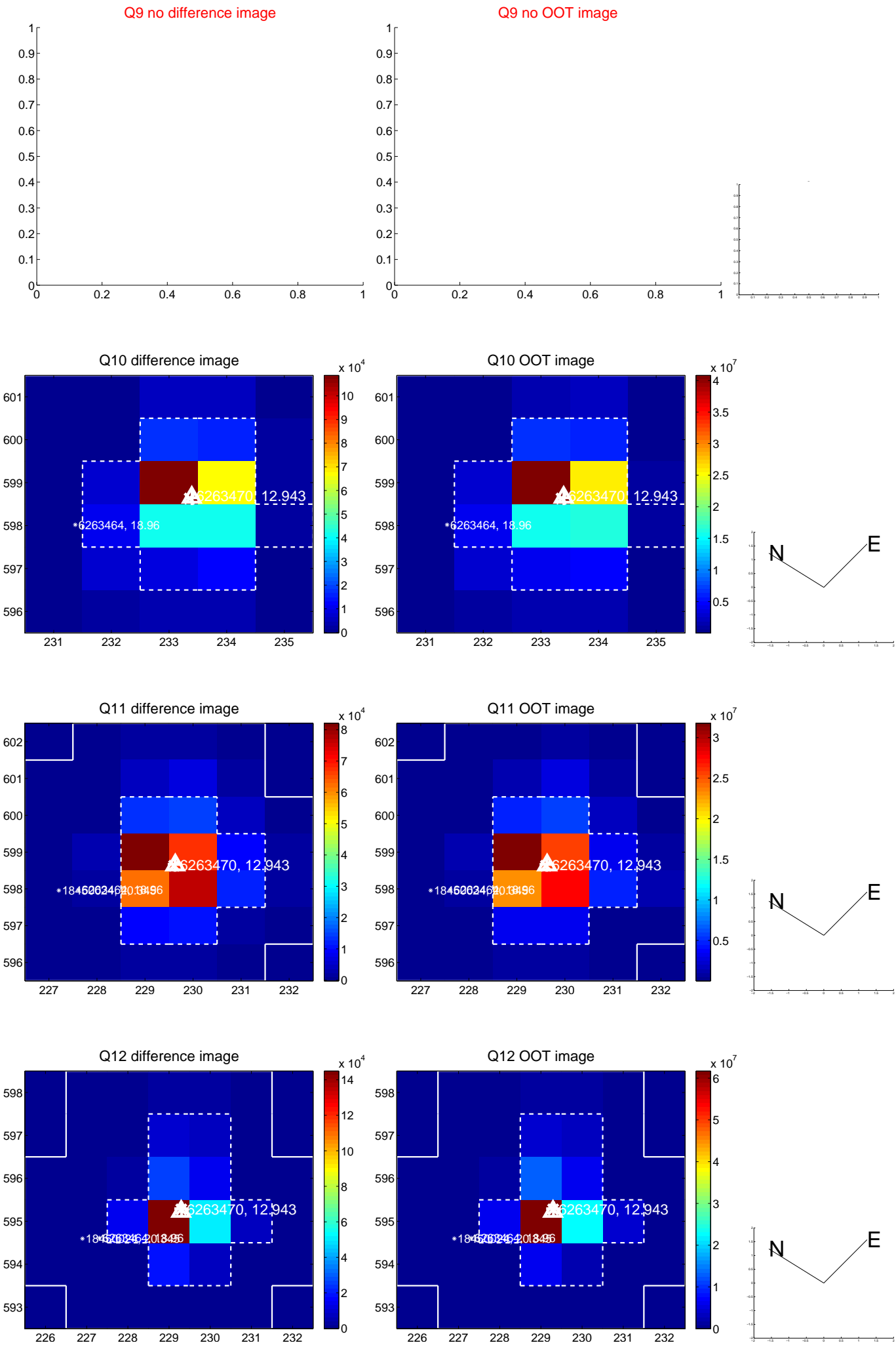
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



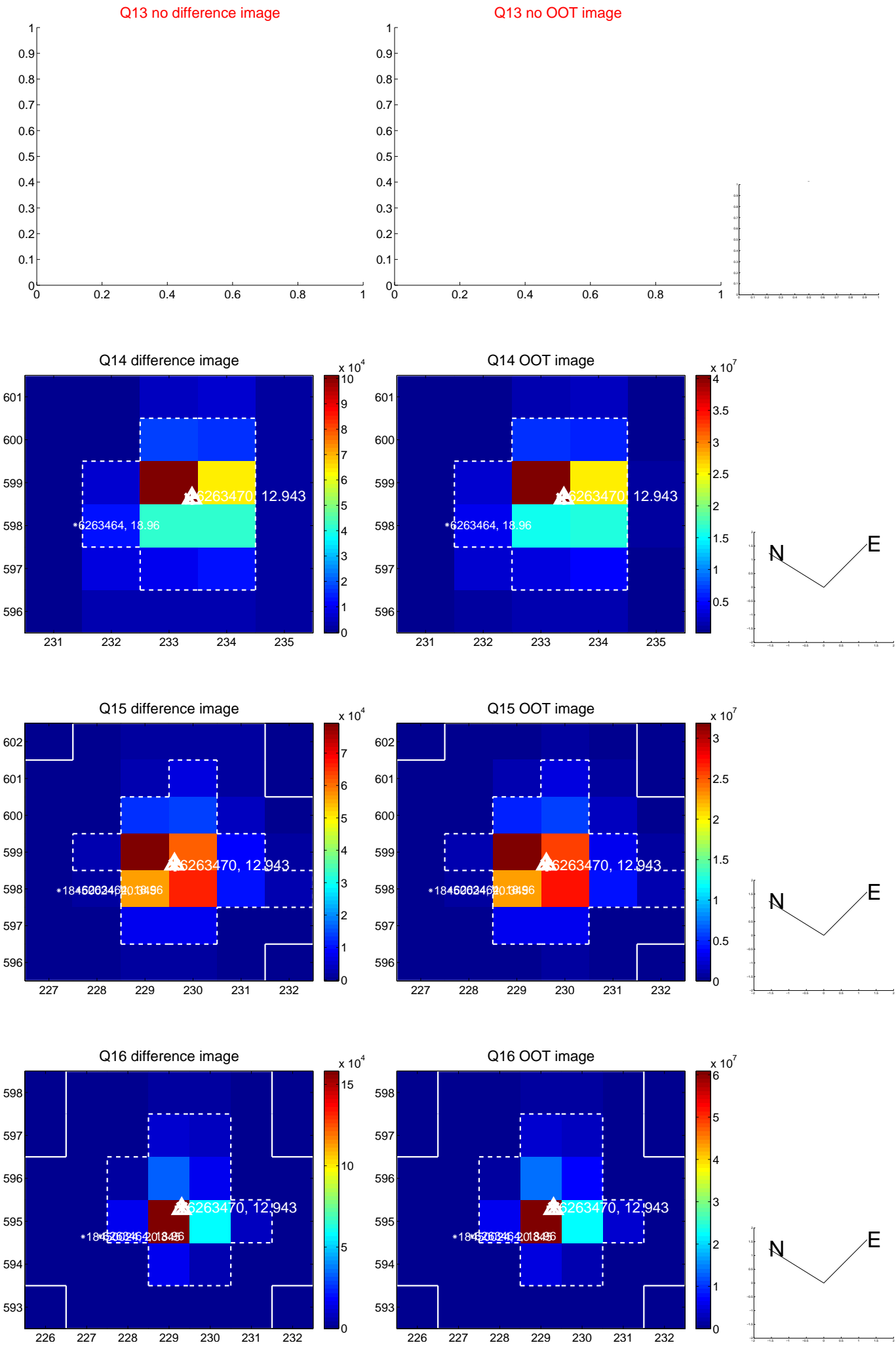
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



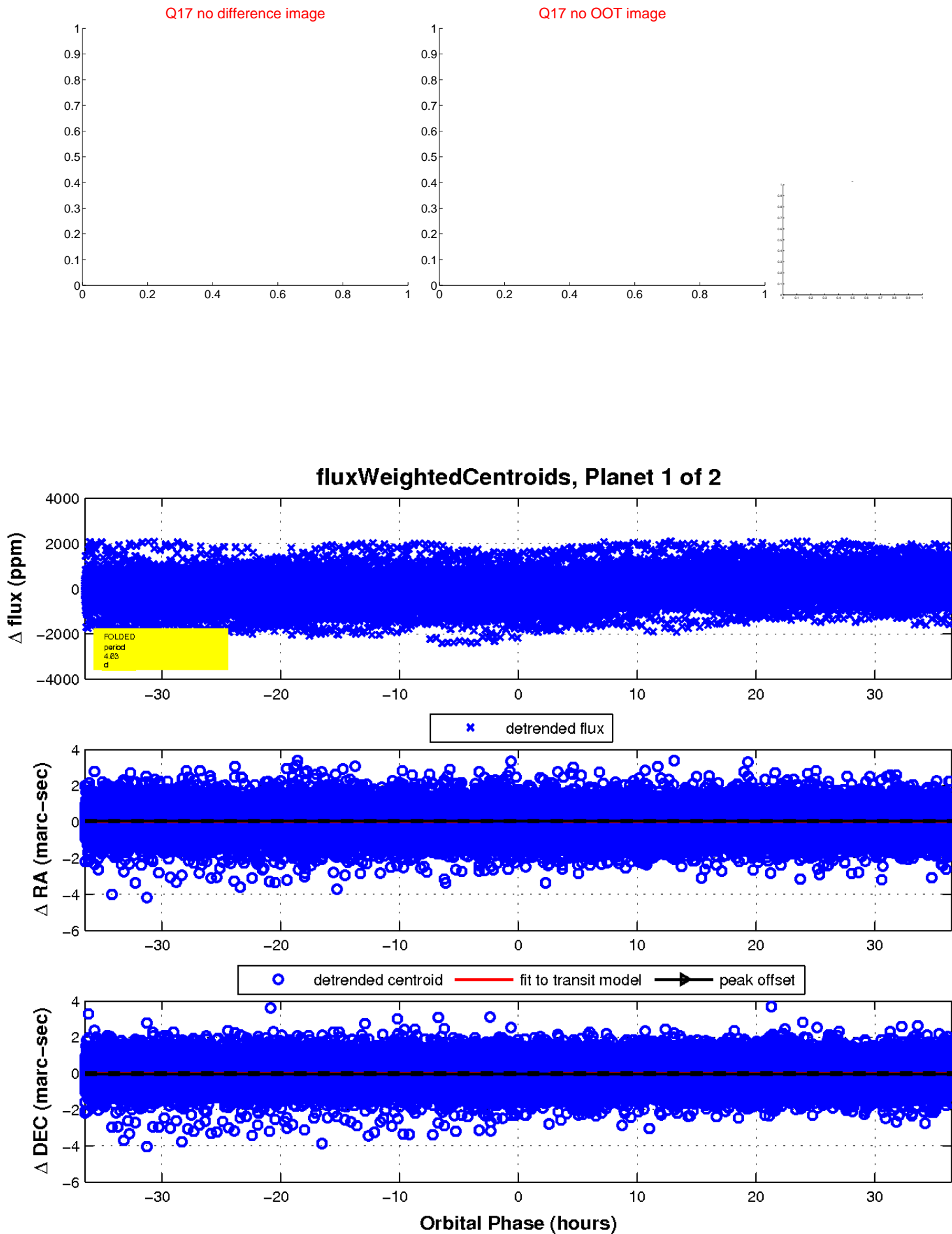
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



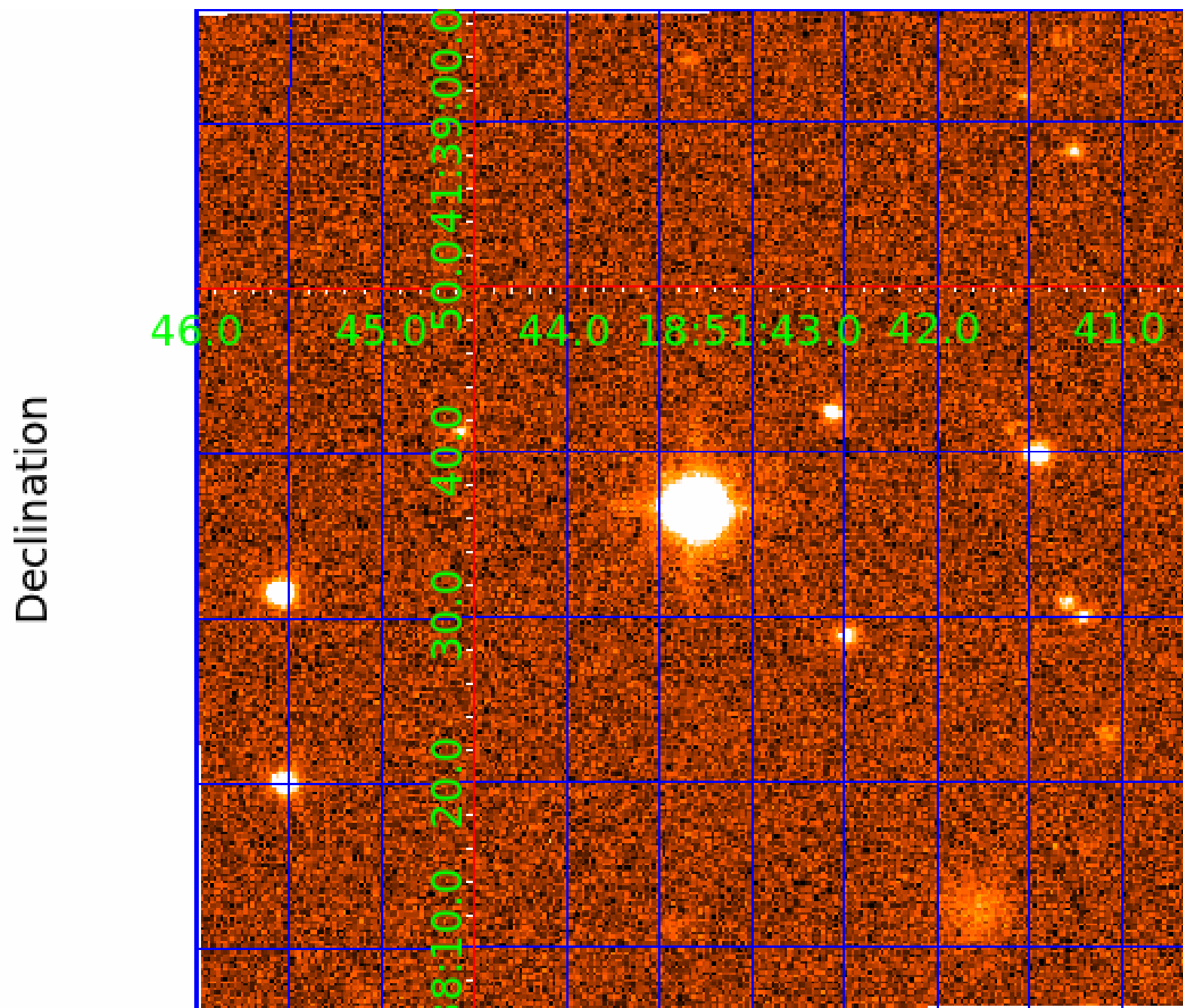
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 006263470

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})
006263470-01	OBS	No	4.633576	132.453536	133.1	12.151	12.2	15.0	2.21	6608	5.07	2250.10
006263470-02	OBS	No	429.131372	177.674761	378.2	15.037	10.3	6.3	2.21	6608	4.60	5.37

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006263470-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV
006263470-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS

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

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

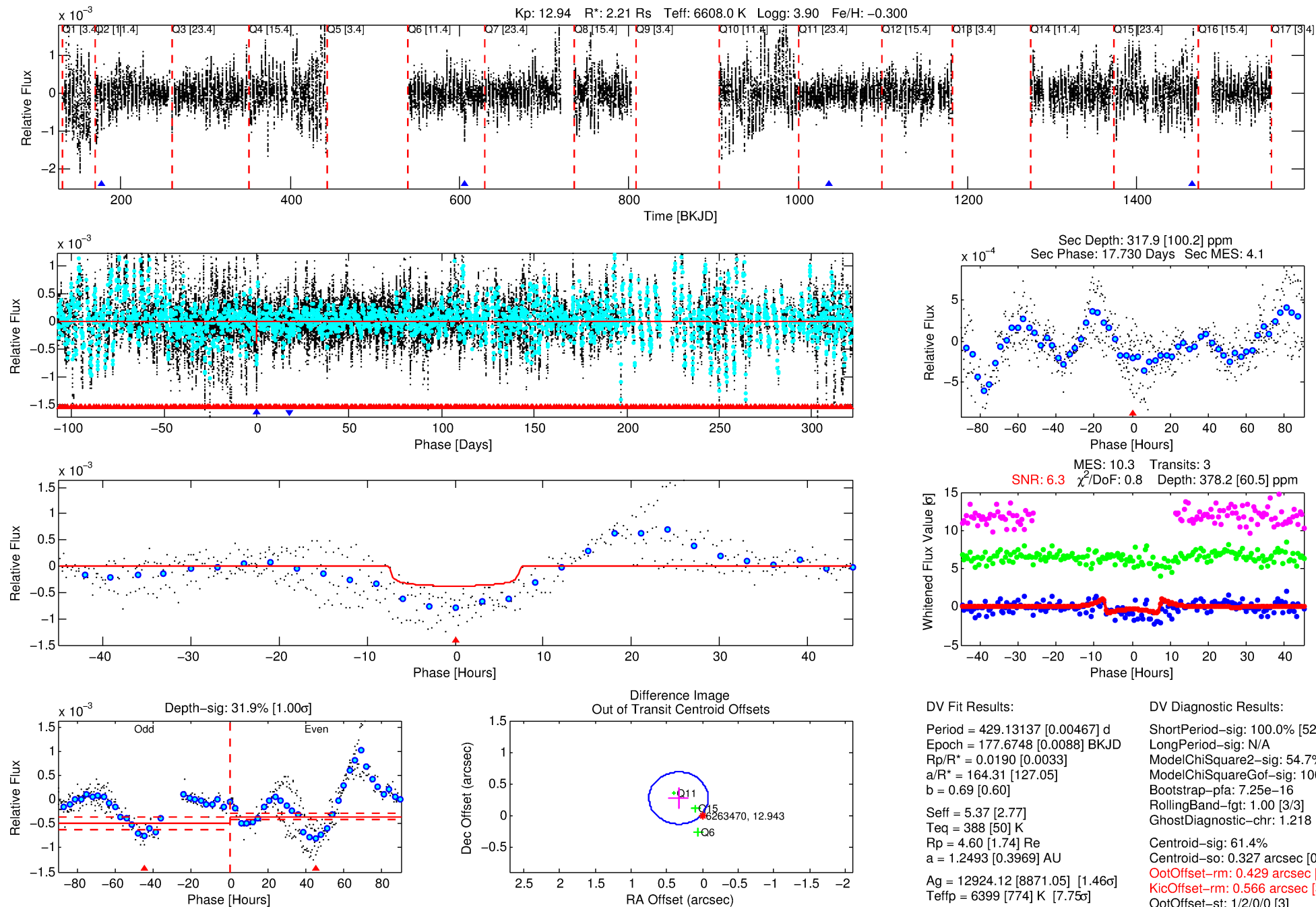
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006263470-02

No Significant Match Found

DV One-Page Summary

KIC: 6263470 Candidate: 2 of 2 Period: 429.131 d



DV Fit Results:

Period = 429.13137 [0.00467] d
Epoch = 177.6748 [0.0088] BKJD
Rp/R* = 0.0190 [0.0033]
a/R* = 164.31 [127.05]
b = 0.69 [0.60]
Seff = 5.37 [2.77]
Teq = 388 [50] K
Rp = 4.60 [1.74] Re
a = 1.2493 [0.3969] AU
Ag = 12924.12 [8871.05] [1.46 σ]
Teffp = 6399 [774] K [7.75 σ]

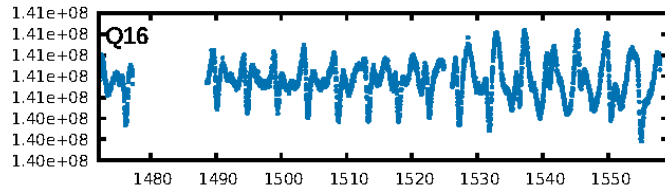
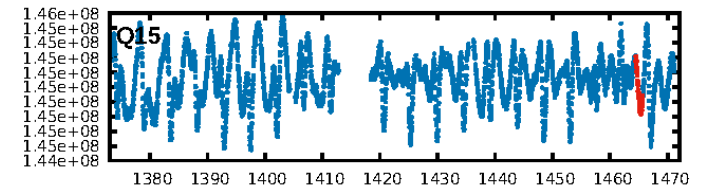
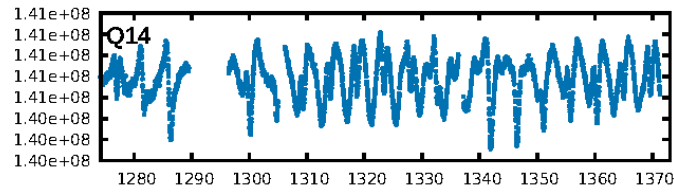
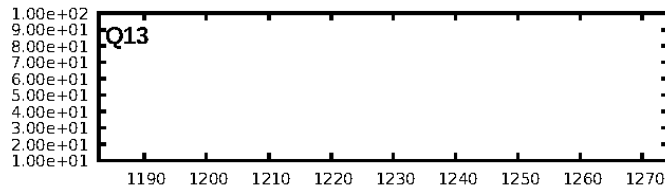
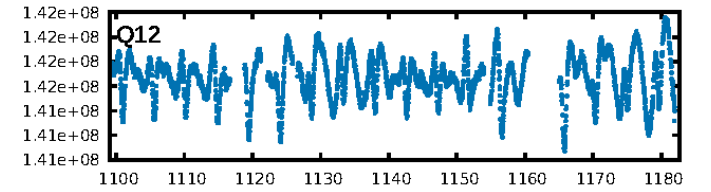
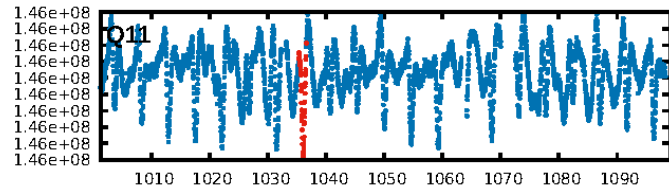
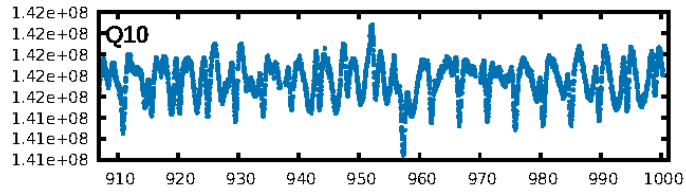
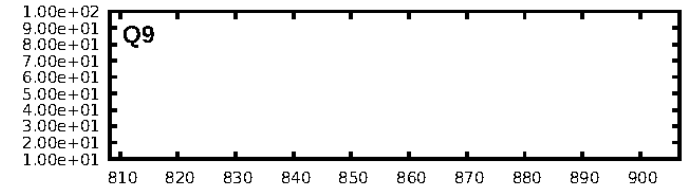
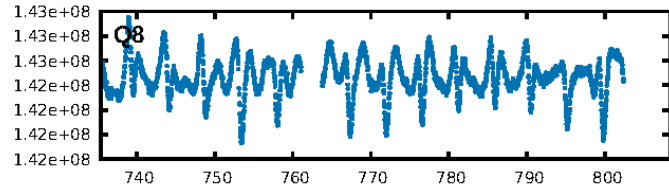
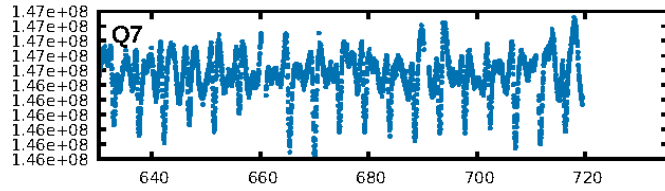
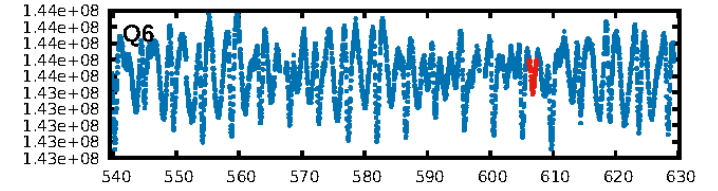
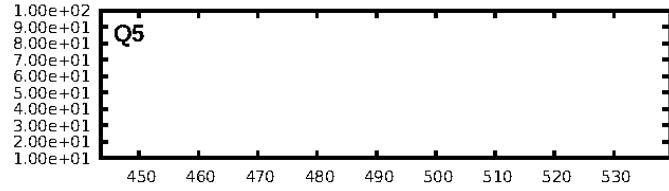
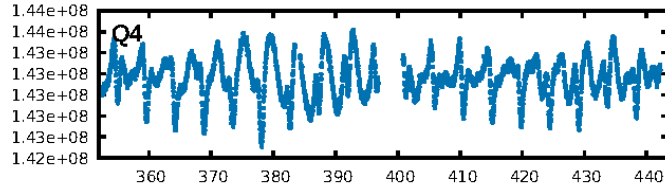
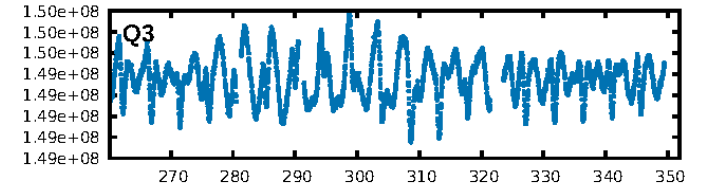
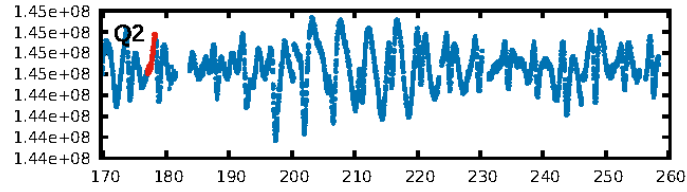
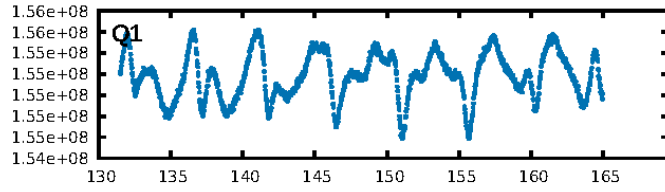
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [526.97 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 54.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 7.25e-16
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.218
Centroid-sig: 61.4%
Centroid-so: 0.327 arcsec [0.53 σ]
OotOffset-rm: 0.429 arcsec [3.11 σ]
KicOffset-rm: 0.566 arcsec [3.09 σ]
OotOffset-st: 1/2/0/0 [3]
KicOffset-st: 1/2/0/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 0.50 [2/4]

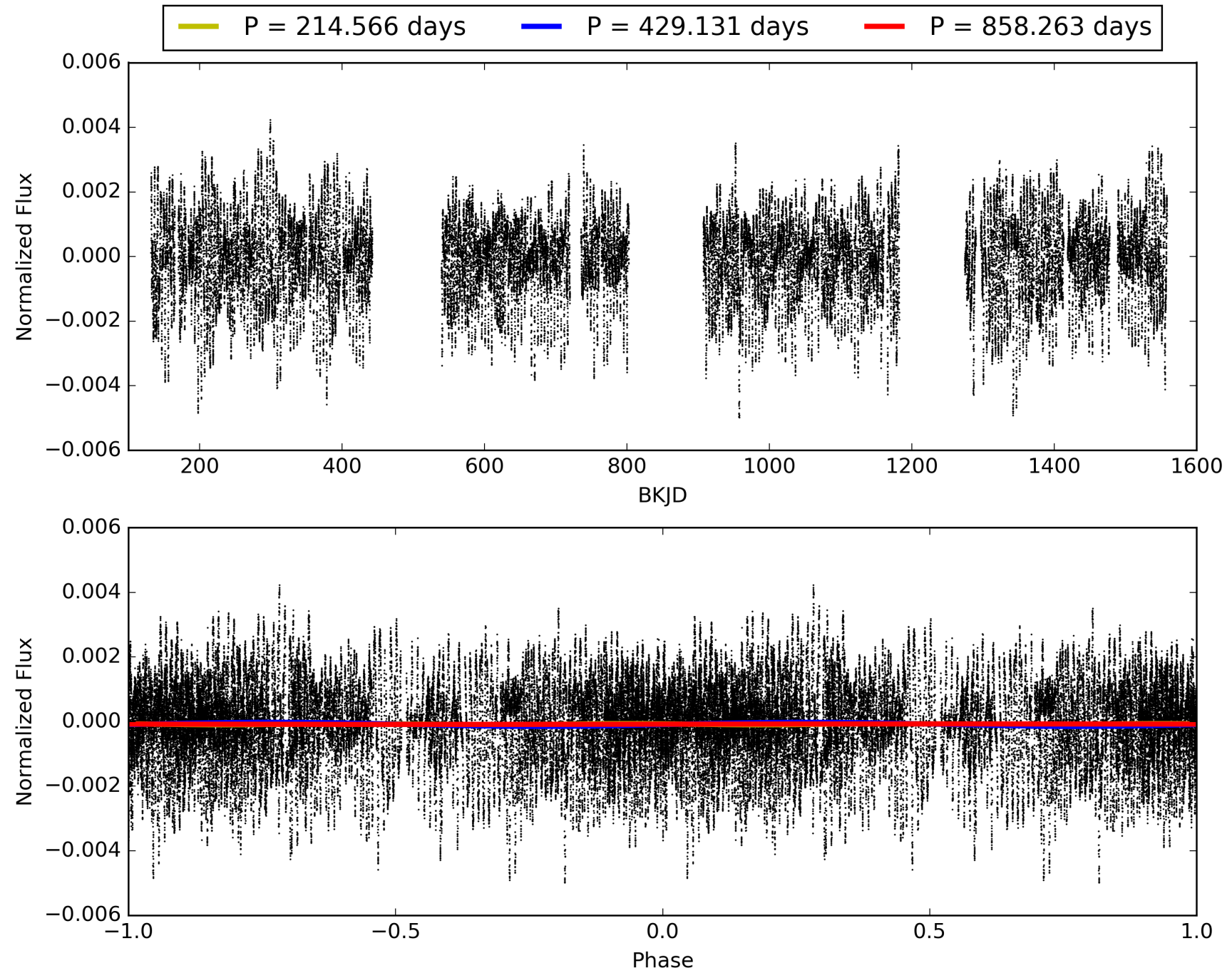
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 11:32:59 Z

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

TCE 006263470-02, PDC Light Curves

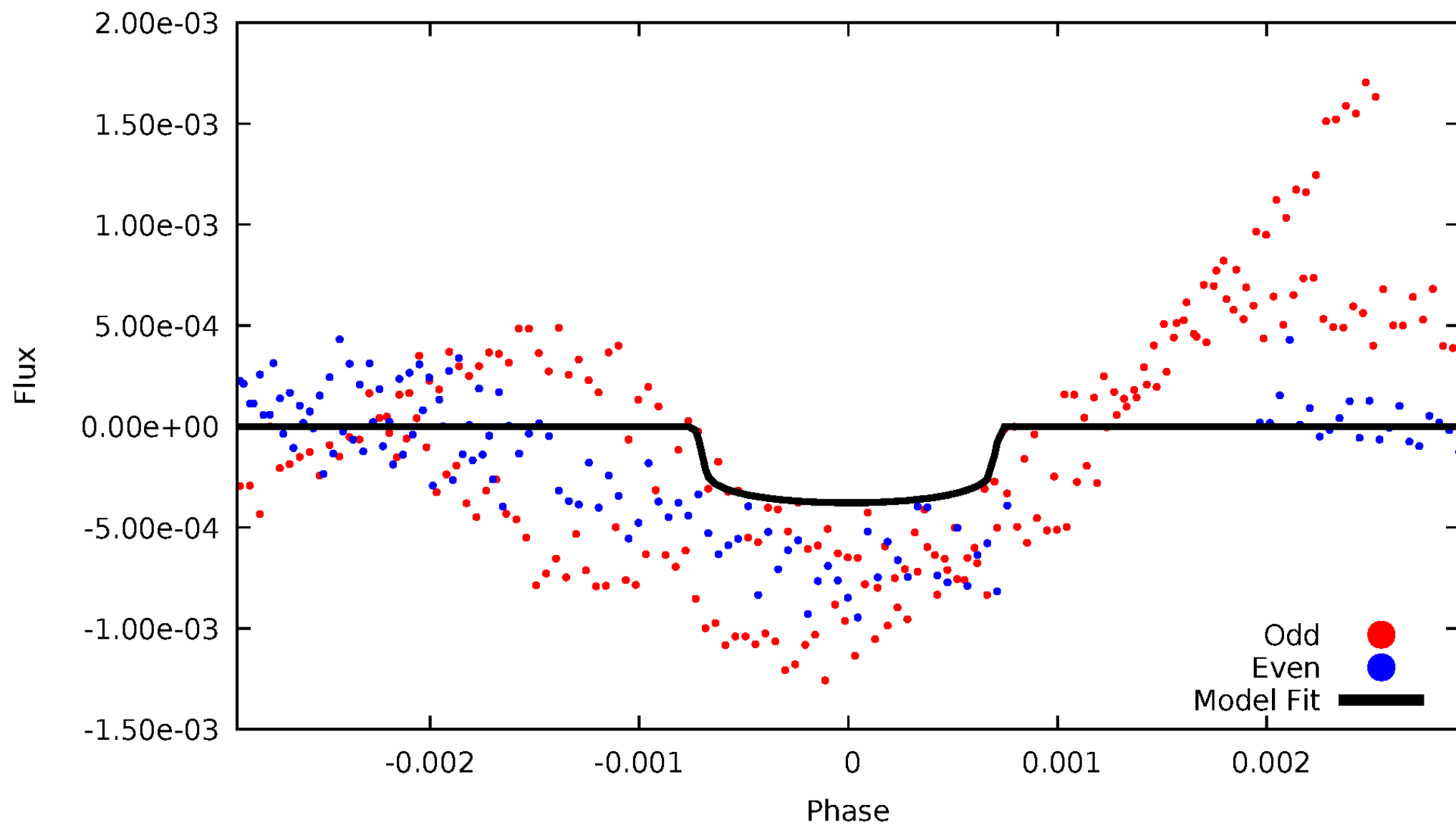


TCE 006263470-02



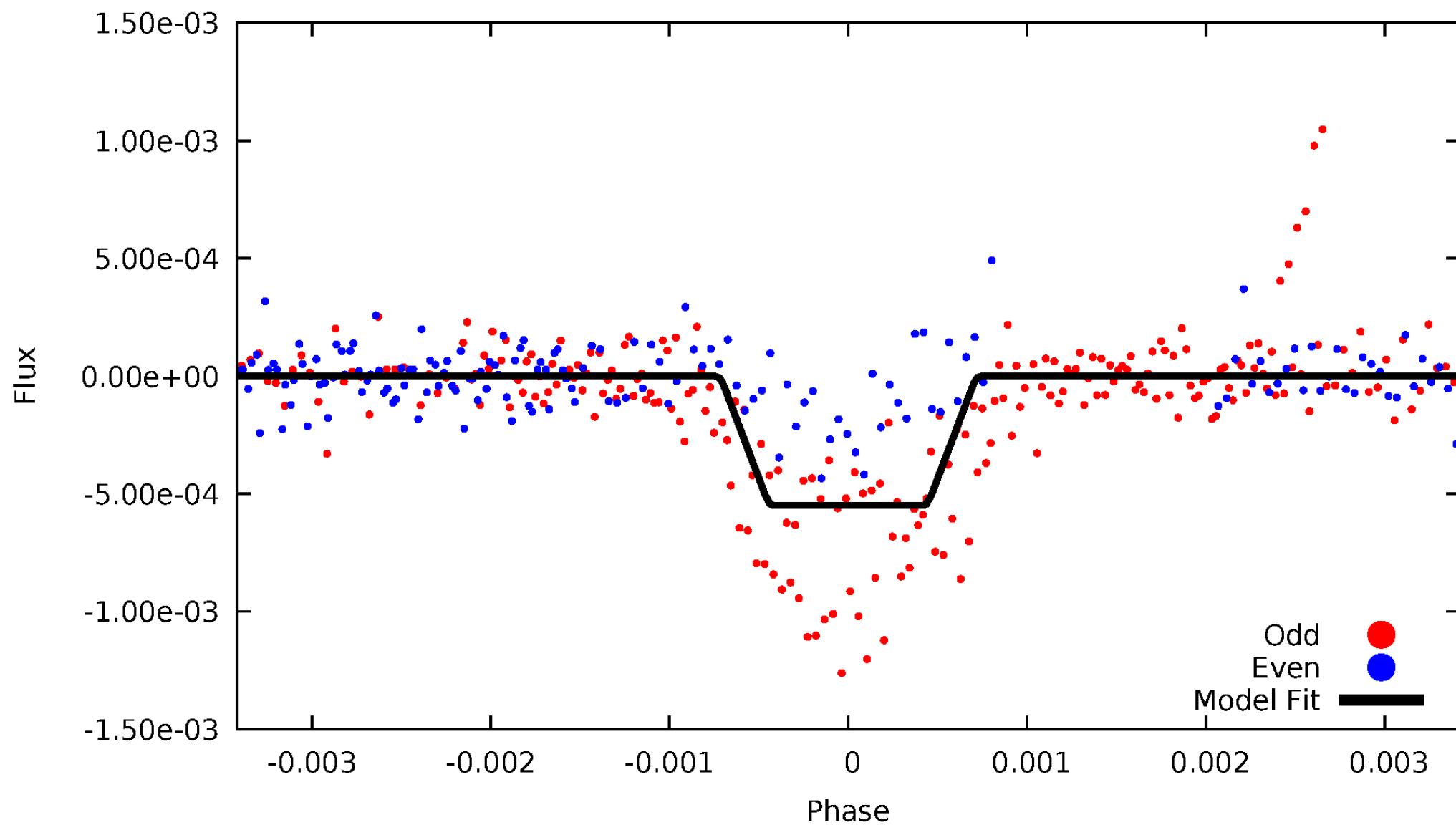
DV Odd/Even

TCE 006263470-02



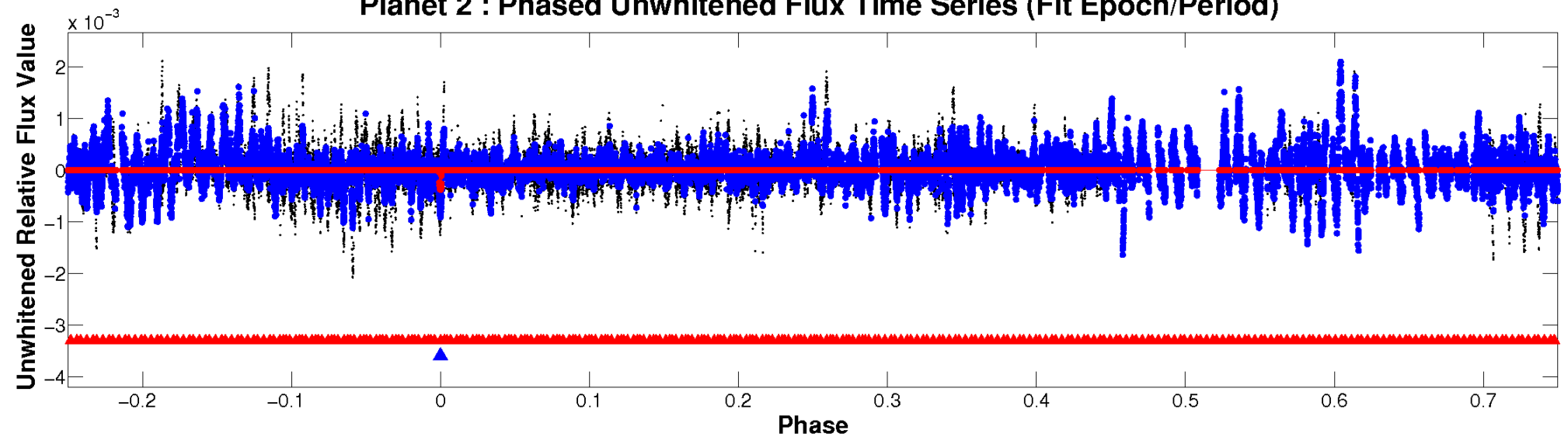
ALT Odd/Even

TCE 006263470-02

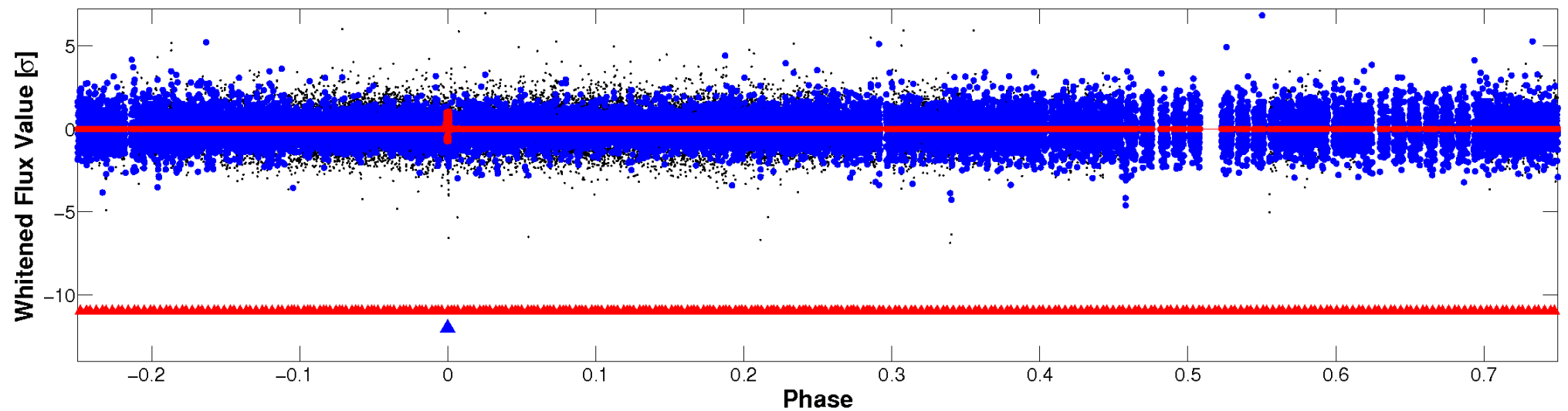


Non-Whitened Vs. Whitened Light Curve

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

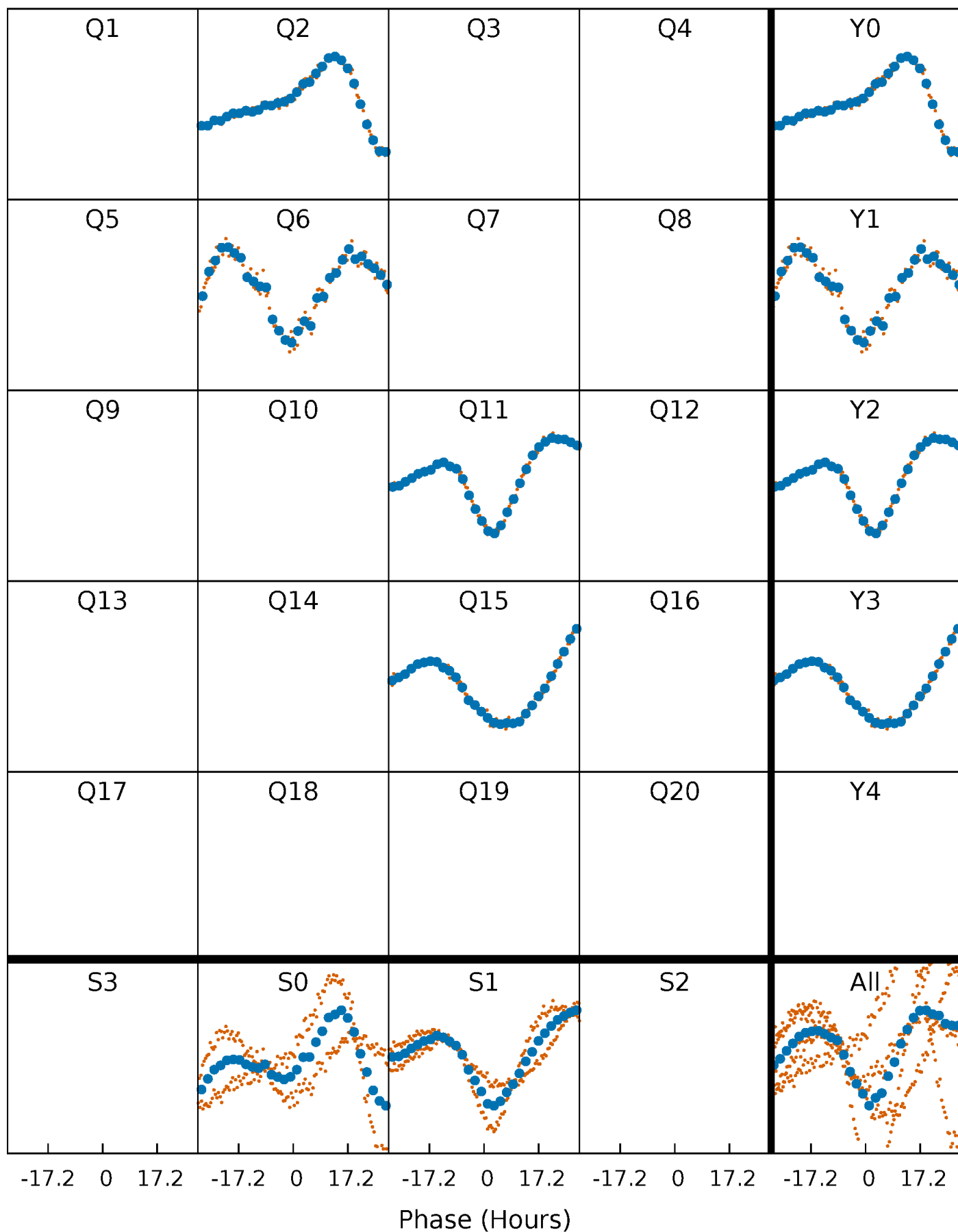


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



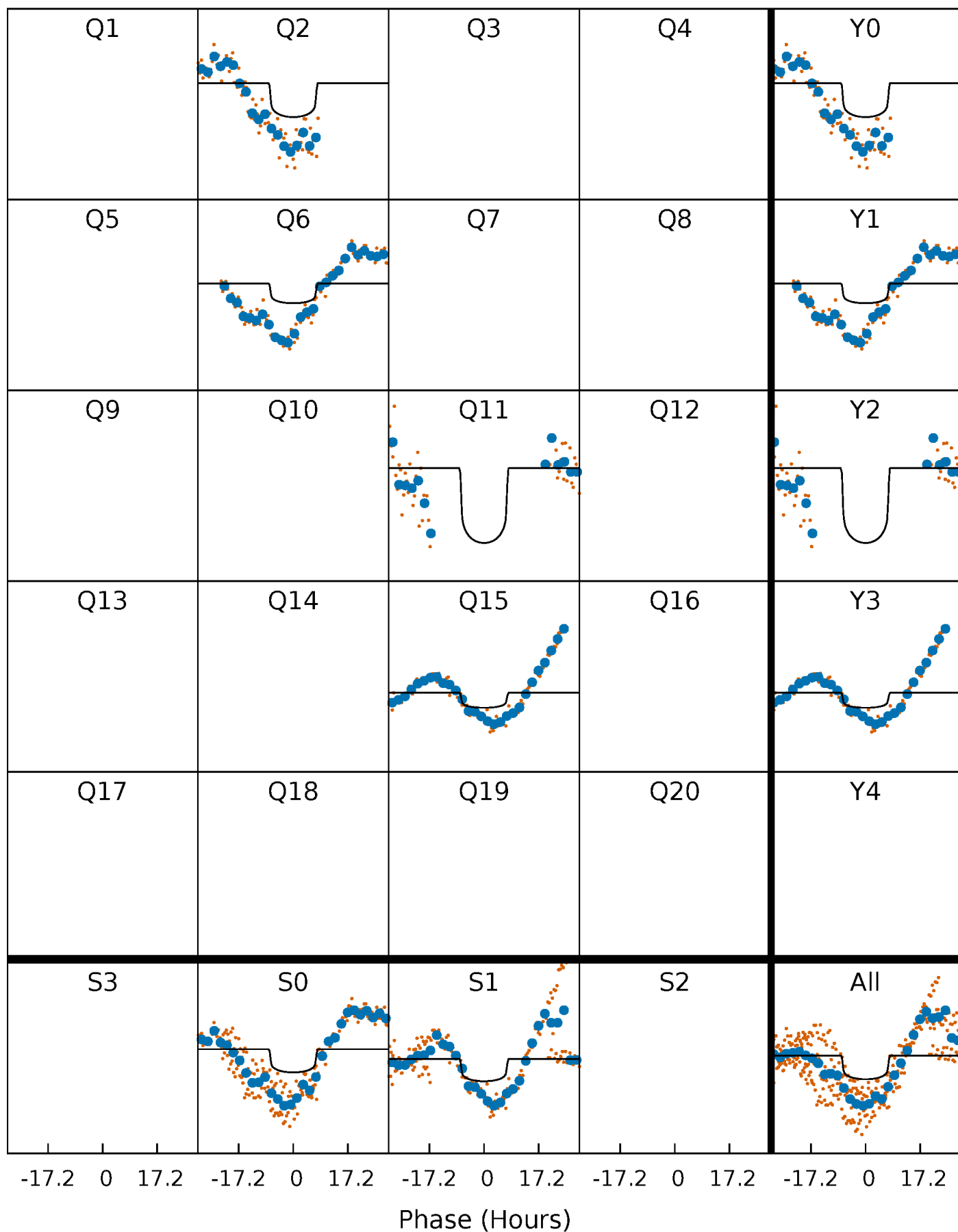
PDC Quarter-Phased Transit Curves

TCE 006263470-02 P=429.131372 Days $T_0=177.674761$ (BKJD)



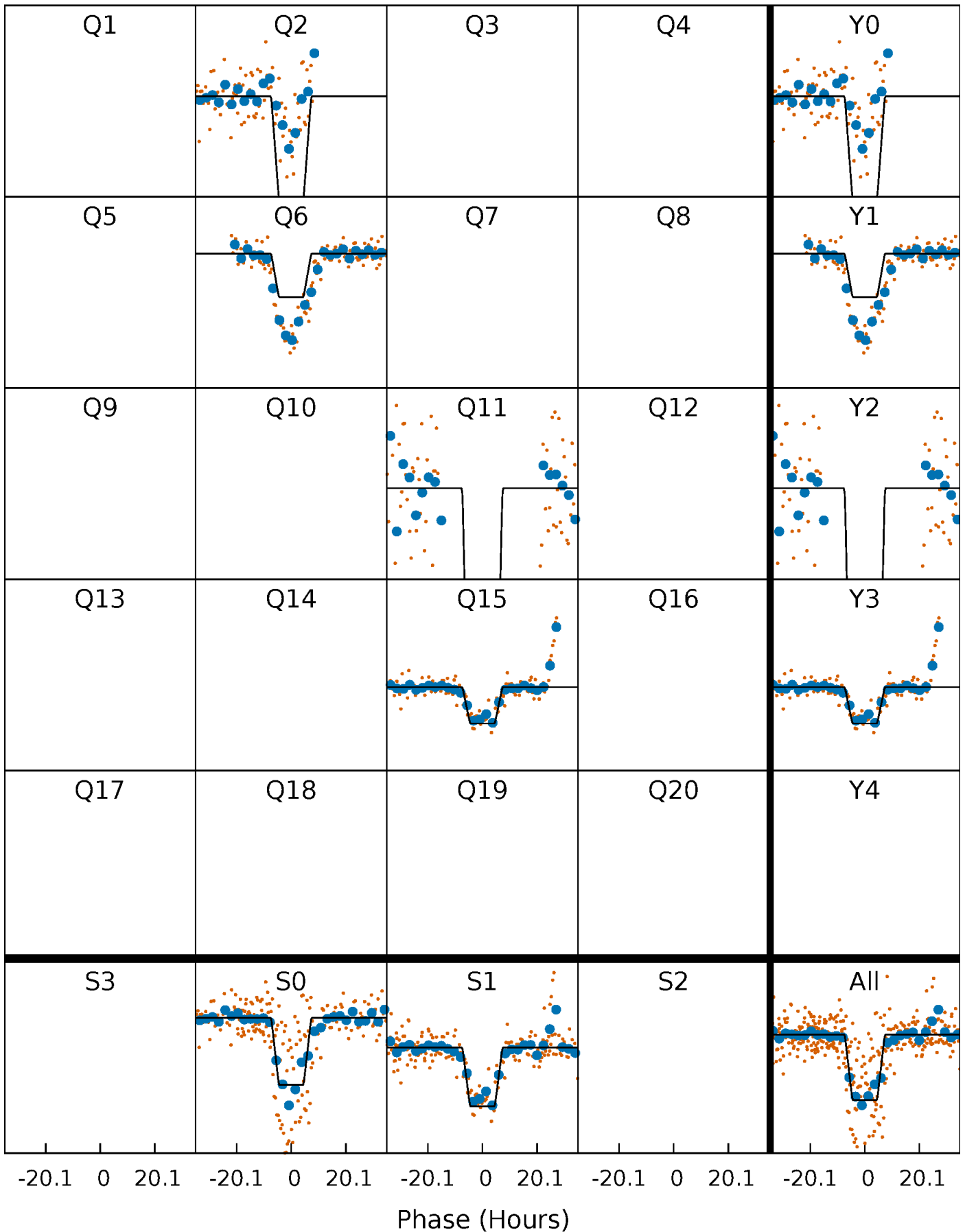
DV Quarter-Phased Transit Curves

TCE 006263470-02 P=429.131372 Days $T_0=177.674761$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

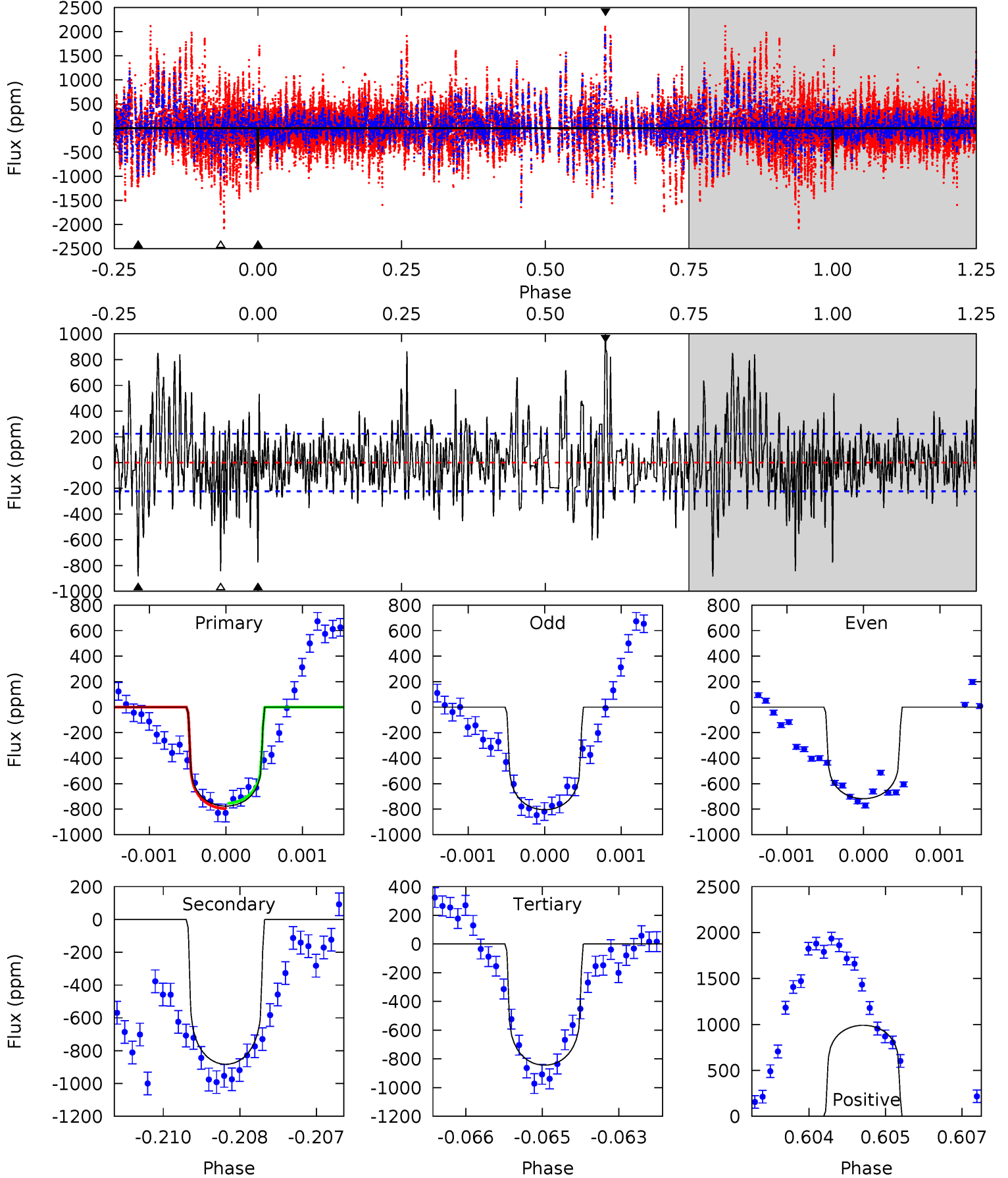
TCE 006263470-02 P=429.118382 Days $T_0=177.656535$ (BKJD)



DV Model-Shift Uniqueness Test

006263470-02, P = 429.131372 Days, E = 177.674761 Days

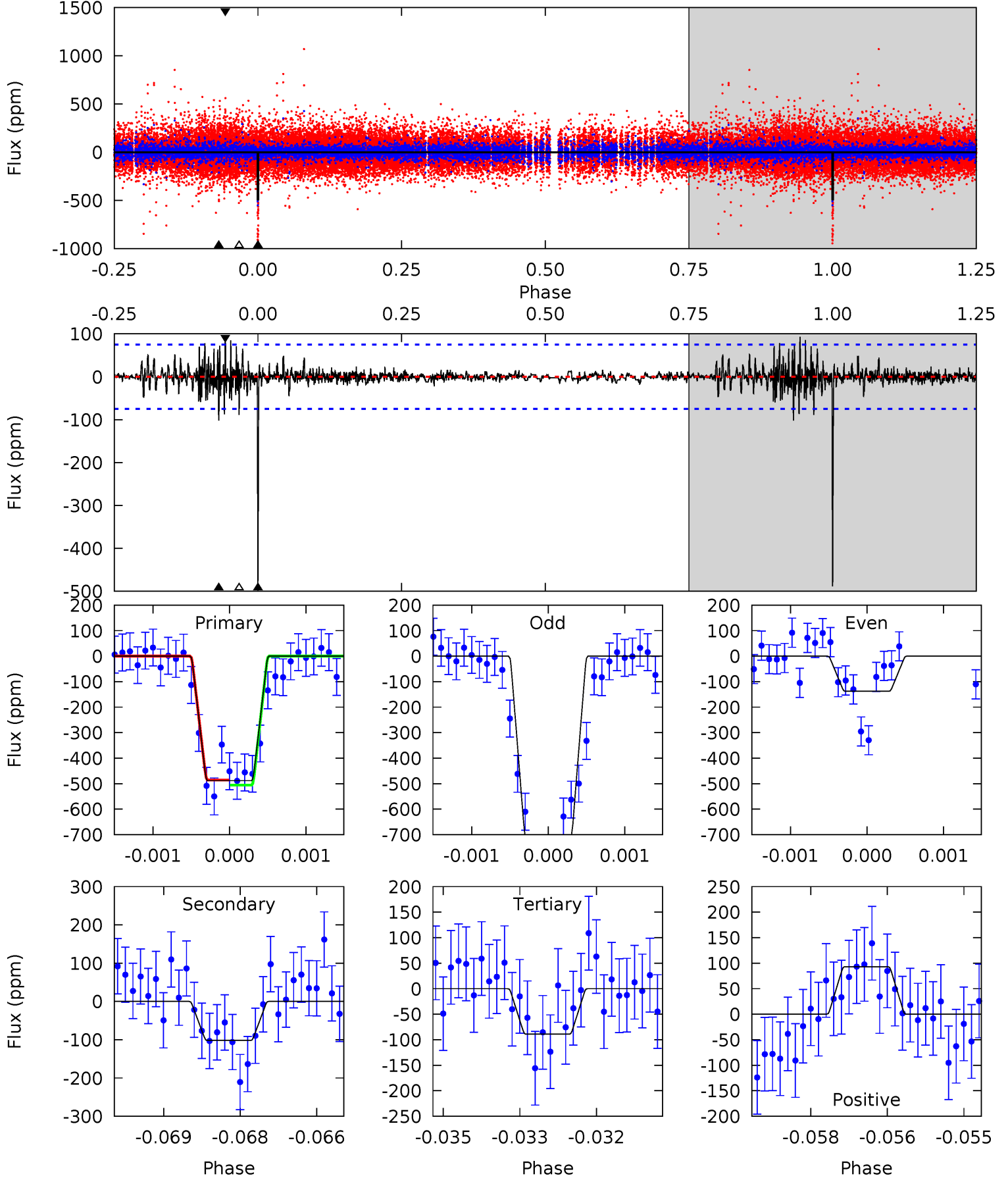
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.7	21.3	20.3	23.8	5.38	3.18	5.14	-1.65	-5.18	0.94	-2.59	0.98	1.08	0.53	0.49



Alt Model-Shift Uniqueness Test

006263470-02, P = 429.118382 Days, E = 177.656535 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
35.2	7.33	6.41	6.69	5.39	3.19	1.03	28.8	28.5	0.92	0.64	20.9	1.09	0.16	0.72



Stellar Parameters For KIC 006263470

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6608^{+160}_{-200}	$3.897^{+0.292}_{-0.097}$	$-0.300^{+0.300}_{-0.250}$	$2.215^{+0.403}_{-0.748}$	$1.411^{+0.175}_{-0.301}$	$0.183^{+0.340}_{-0.066}$
	+2%/-3%	+7%/-2%	+100%/-83%	+18%/-34%	+12%/-21%	+186%/-36%
Source	PHO1	FLK73	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 006263470-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-883±42	$4.25^{+1.07}_{-0.95}$	529^{+34}_{-48}	8566^{+1259}_{-866}	41146^{+25917}_{-13998}
Alt.	-102±14	$5.27^{+1.17}_{-1.09}$	531^{+33}_{-46}	4523^{+332}_{-269}	3142^{+1707}_{-1056}

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 $A_{obs} \gg 1.0$

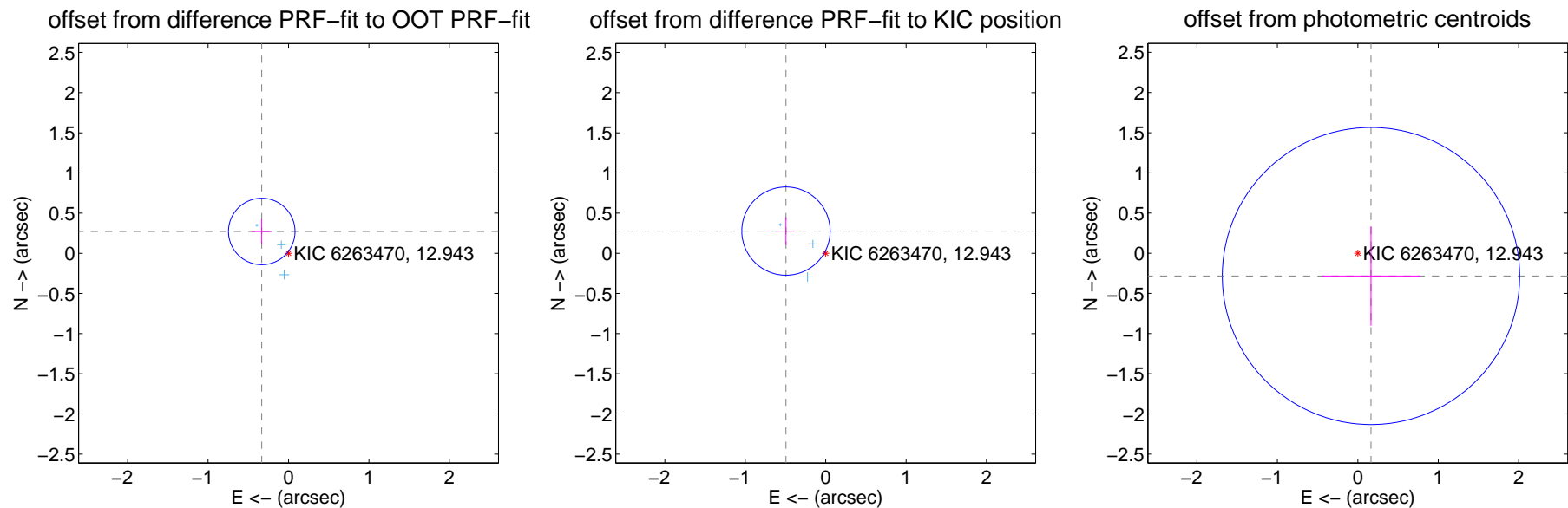
DV Centroid Data

Supplemental centroid analysis for 006263470-02. Kepler magnitude: 12.94. Transit SNR 6.29

There are 3 quarters with good PRF difference image offsets

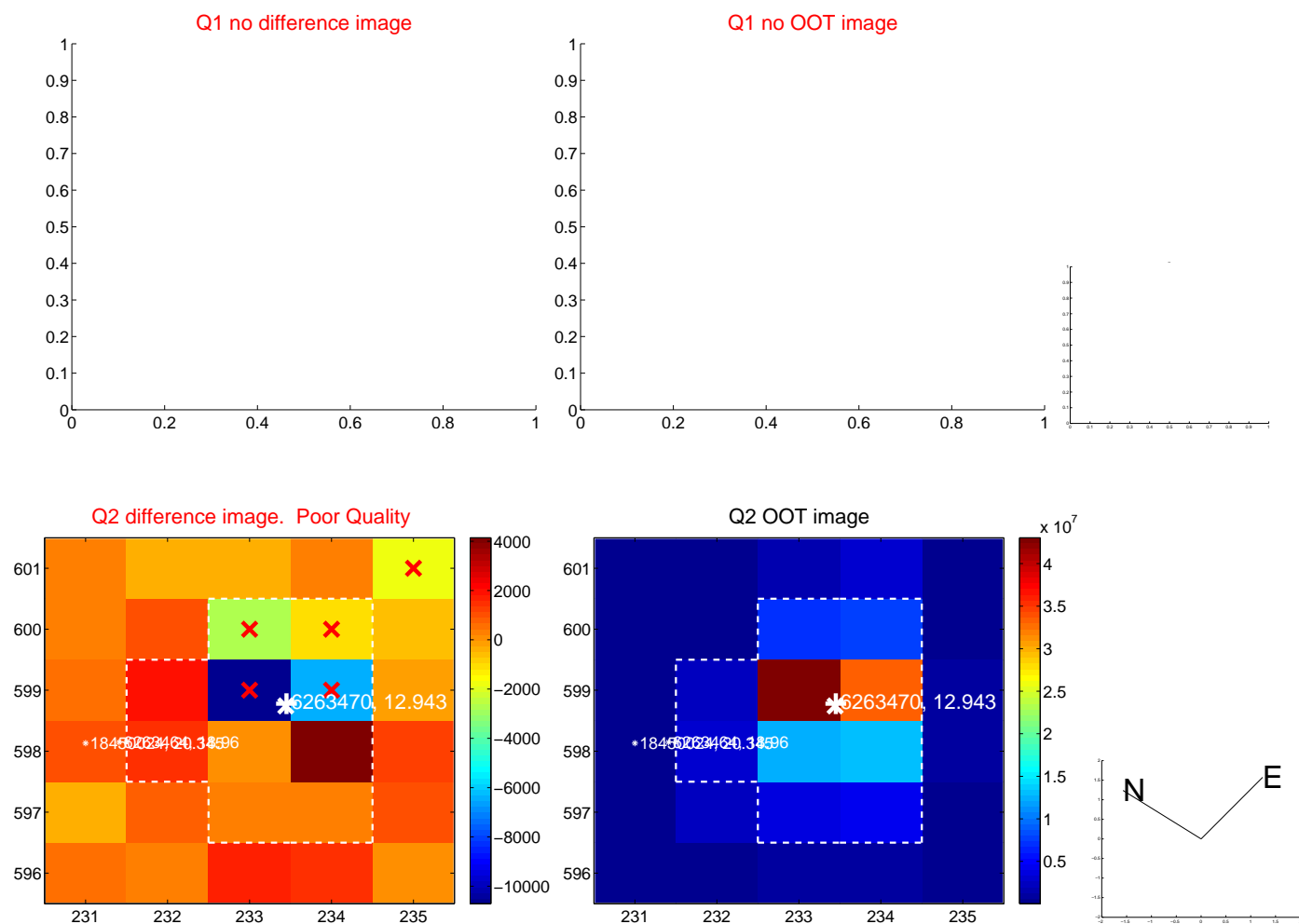
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.429 ± 0.138	3.11	0.333 ± 0.127	0.271 ± 0.153
PRF-fit source offset from KIC position	0.566 ± 0.183	3.09	0.494 ± 0.133	0.276 ± 0.172
photometric centroid source offset	0.33 ± 0.62	0.53	-0.16 ± 0.61	-0.28 ± 0.62

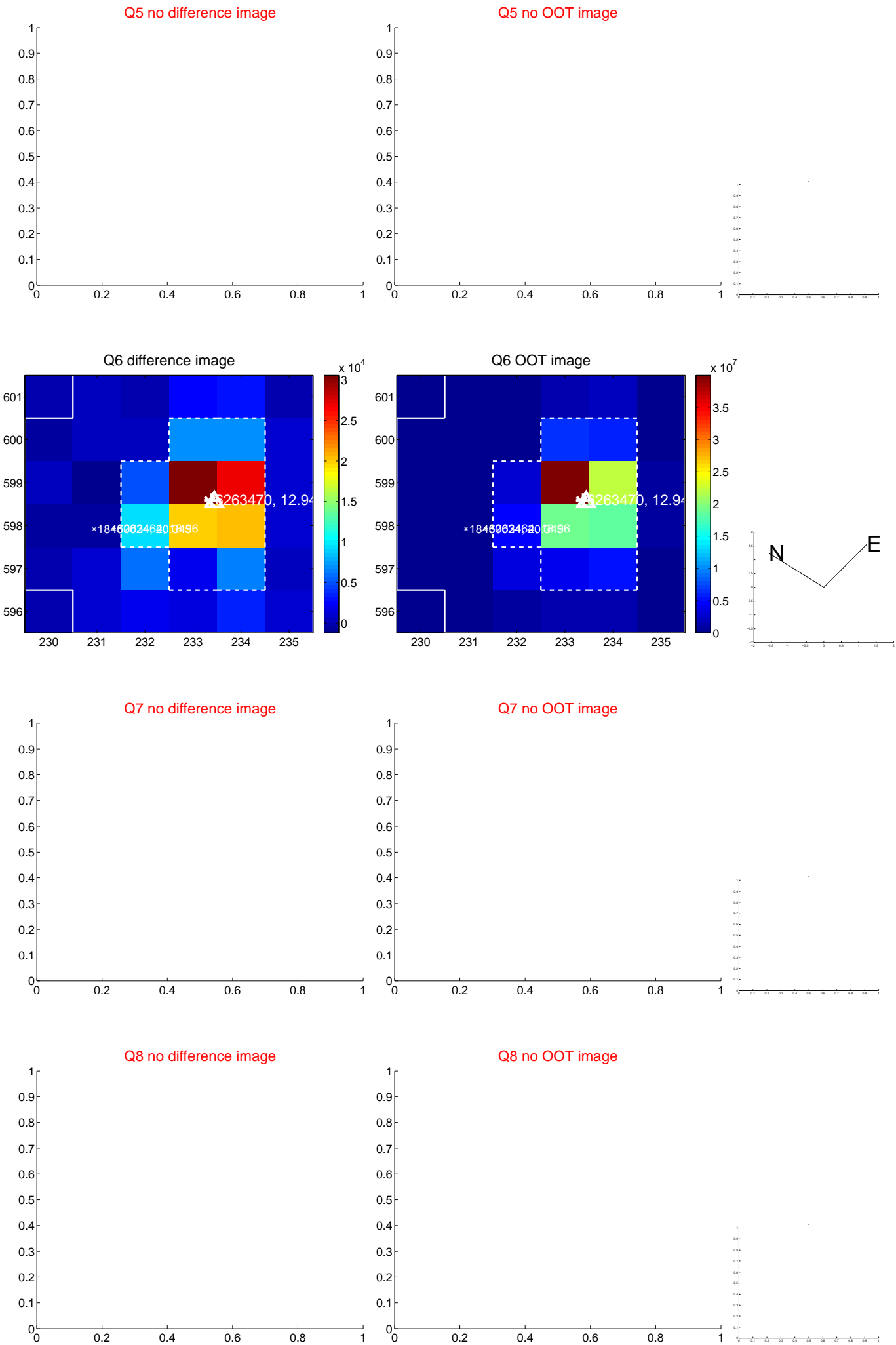


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

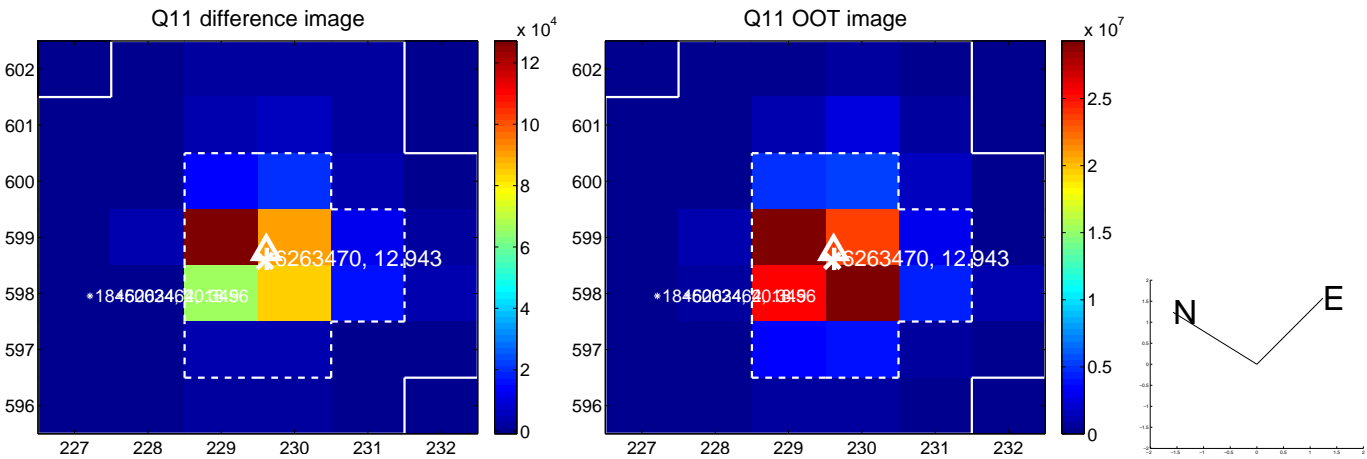
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



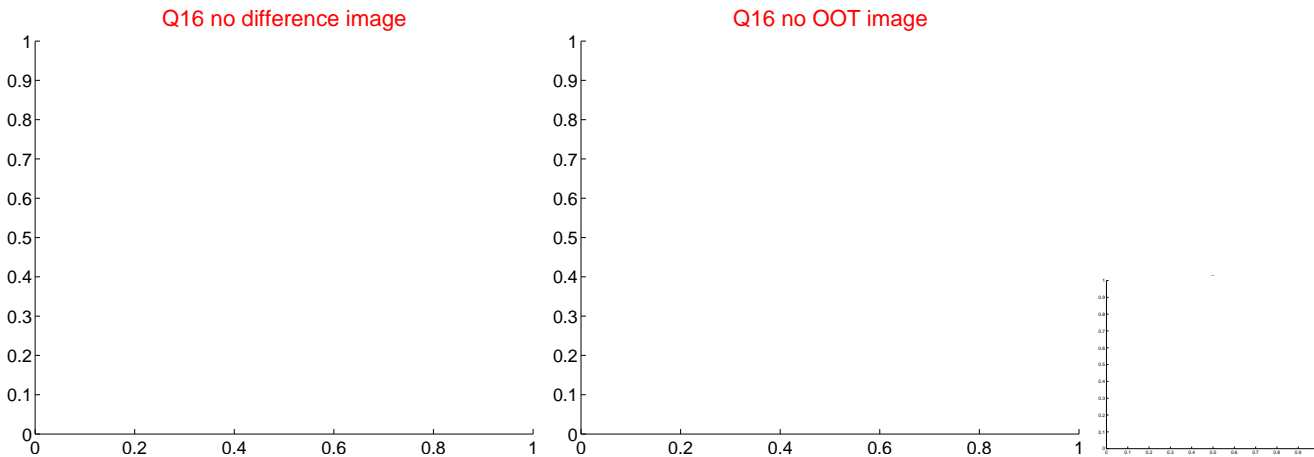
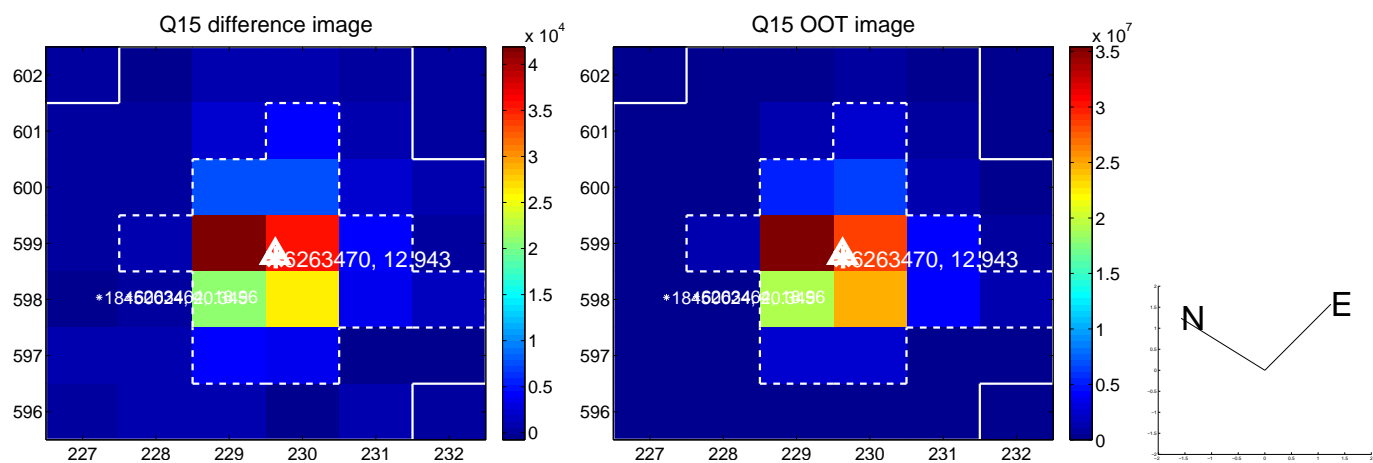
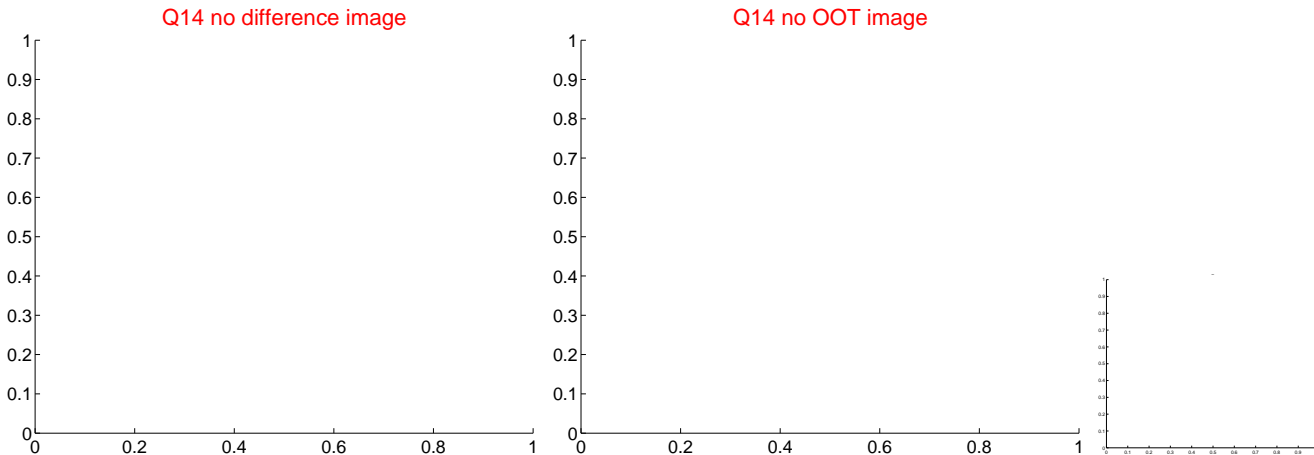
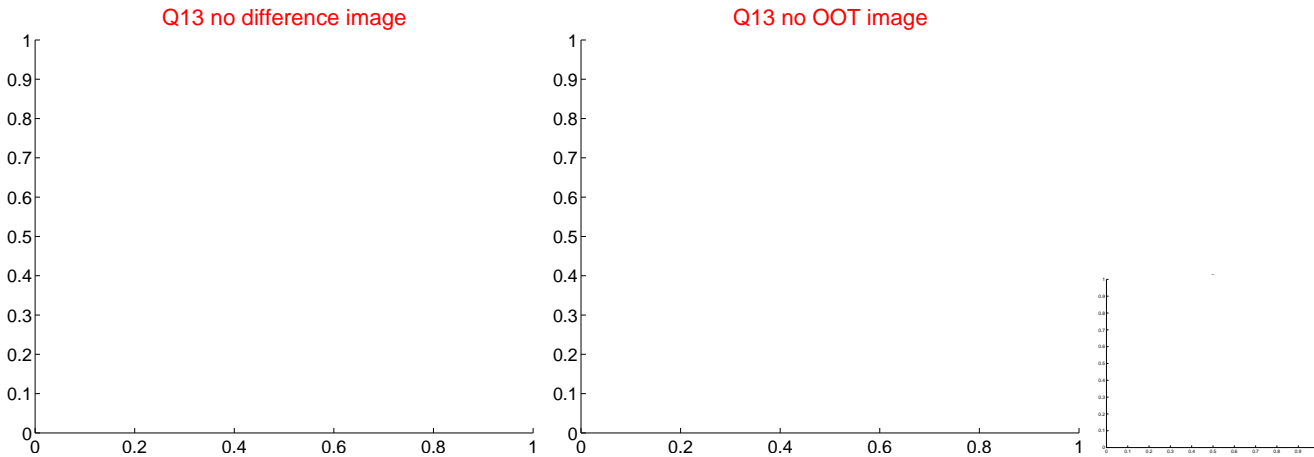
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



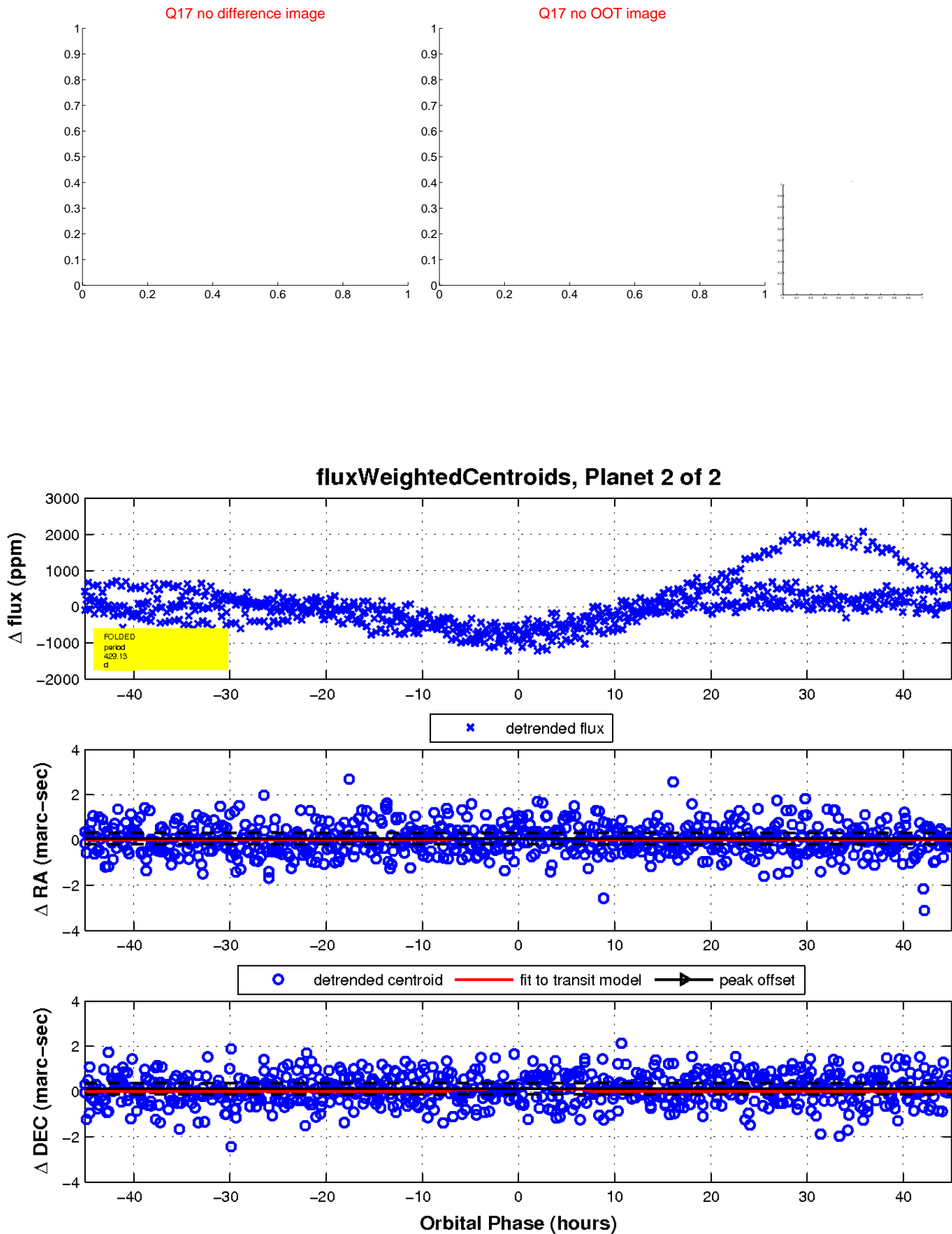
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

