

KIC 008177179

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})
008177179-01	OBS	No	0.912153	131.611249	26.1	5.323	10.9	4.6	2.84	8018	1.69	53614.27
008177179-02	OBS	No	0.912137	131.956666	106.1	2.219	9.9	9.4	2.84	8018	3.02	53615.56

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008177179-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
008177179-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—MOD_NONUNIQ_DV—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.

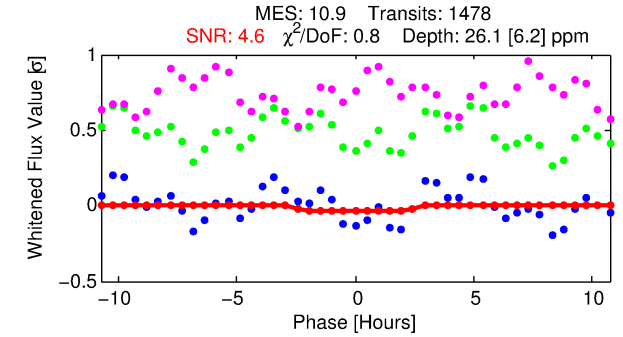
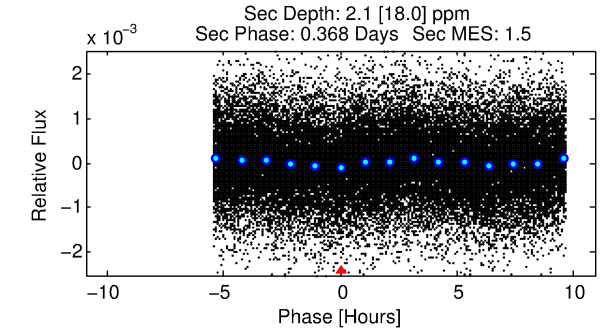
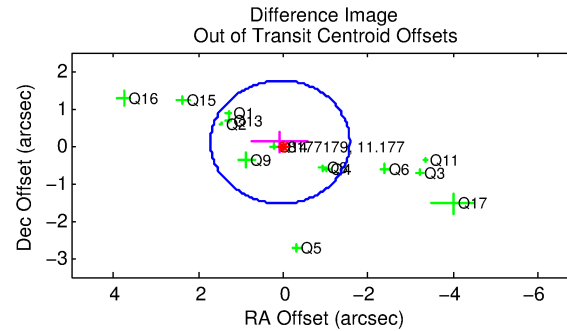
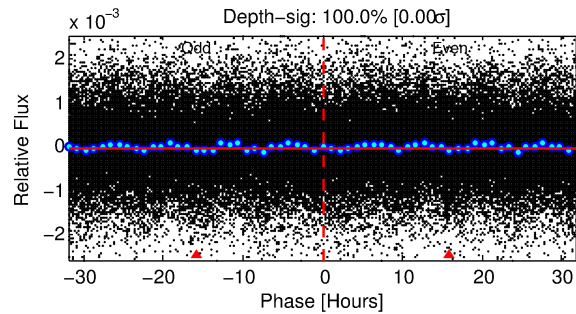
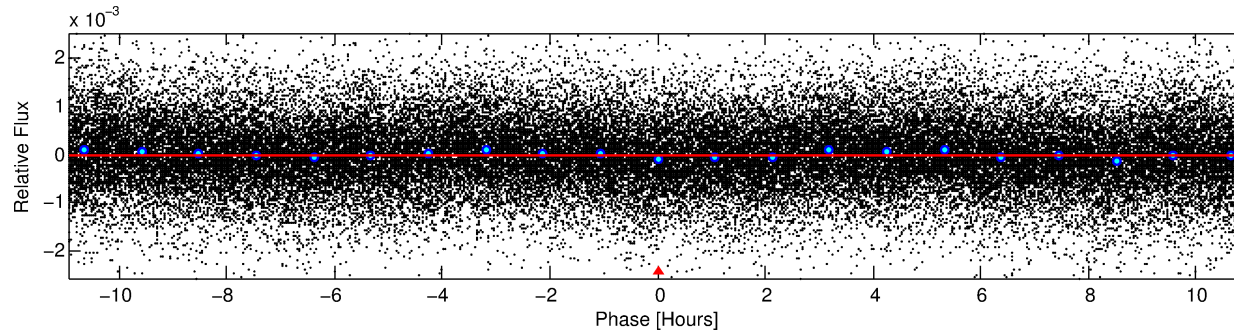
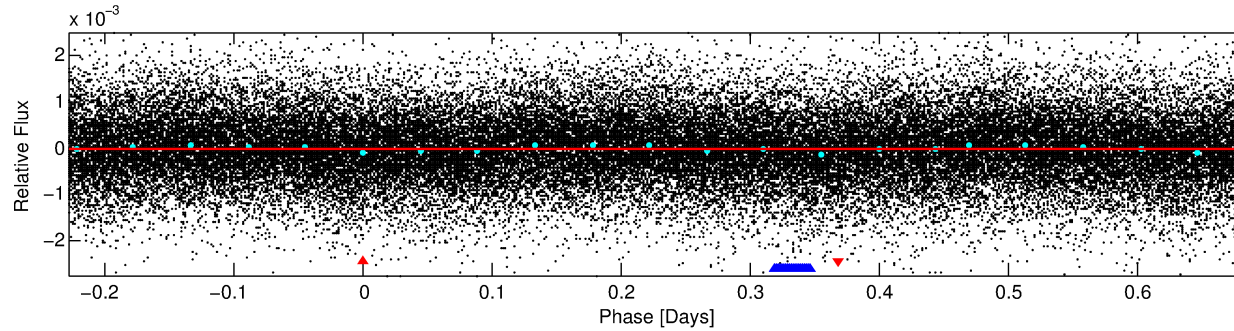
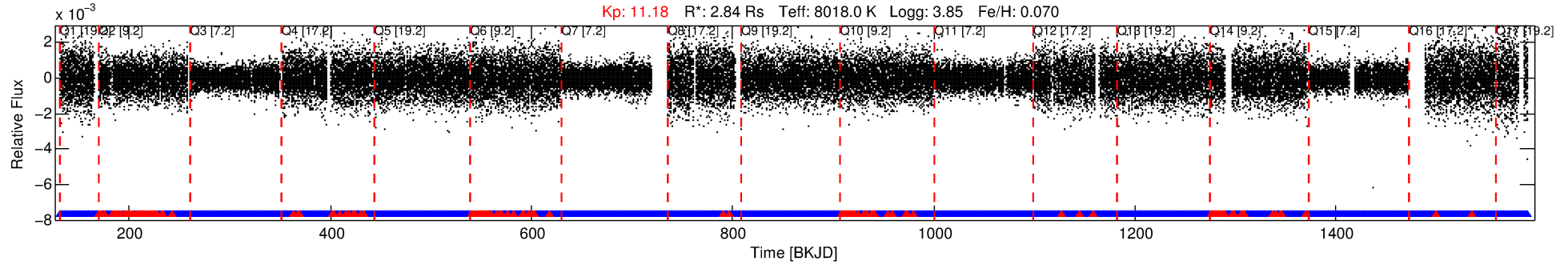
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008177179-01

No Significant Match Found

DV One-Page Summary

KIC: 8177179 Candidate: 1 of 2 Period: 0.912 d



DV Fit Results:

Period = 0.91215 [0.00003] d
Epoch = 131.6112 [0.0110] BKJD
 $R_p/R^* = 0.0054$ [0.0059]
 $a/R^* = 1.11$ [1.42]
 $b = 0.90$ [1.47]
 $\text{Seff} = 53614.27$ [28857.62]
 $\text{Teq} = 3880$ [522] K
 $R_p = 1.69$ [1.94] R_e
 $a = 0.0236$ [0.0081] AU
 $\text{Ag} = 0.23$ [2.00] [-0.38 σ]
 $\text{Teff} = 4156$ [9022] K [0.03 σ]

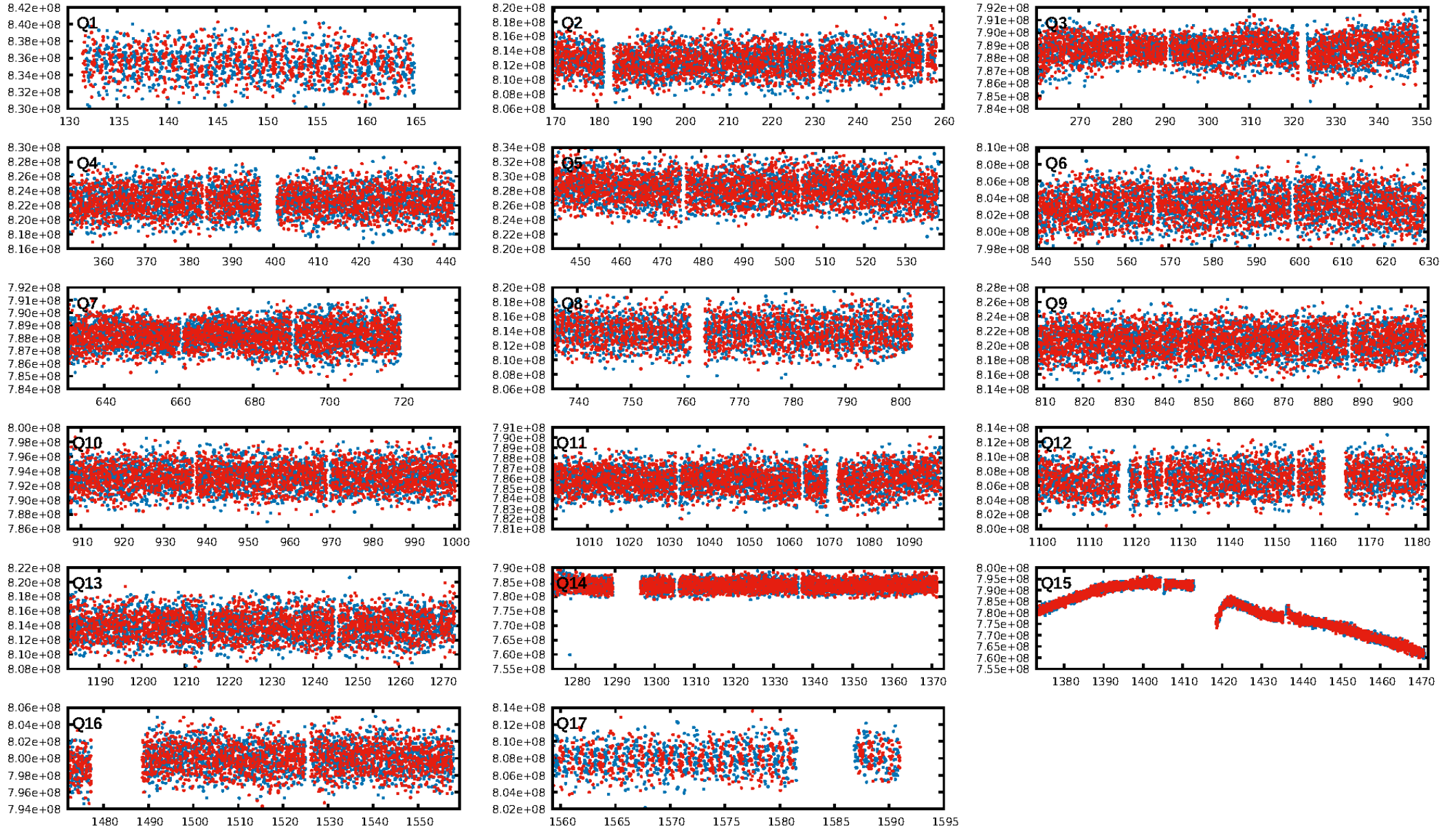
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.10e-34
RollingBand-fgt: 0.88 [1245/1411]
GhostDiagnostic-chr: 0.4063
Centroid-sig: 0.0%
Centroid-so: 1.081 arcsec [2.17 σ]
OotOffset-rm: 0.122 arcsec [0.22 σ]
KicOffset-rm: 0.127 arcsec [0.19 σ]
OotOffset-st: 3/3/3/5 [14]
KicOffset-st: 3/3/3/5 [14]
DiffImageQuality-fgm: 0.71 [10/14]
DiffImageOverlap-fno: 0.00 [0/17]

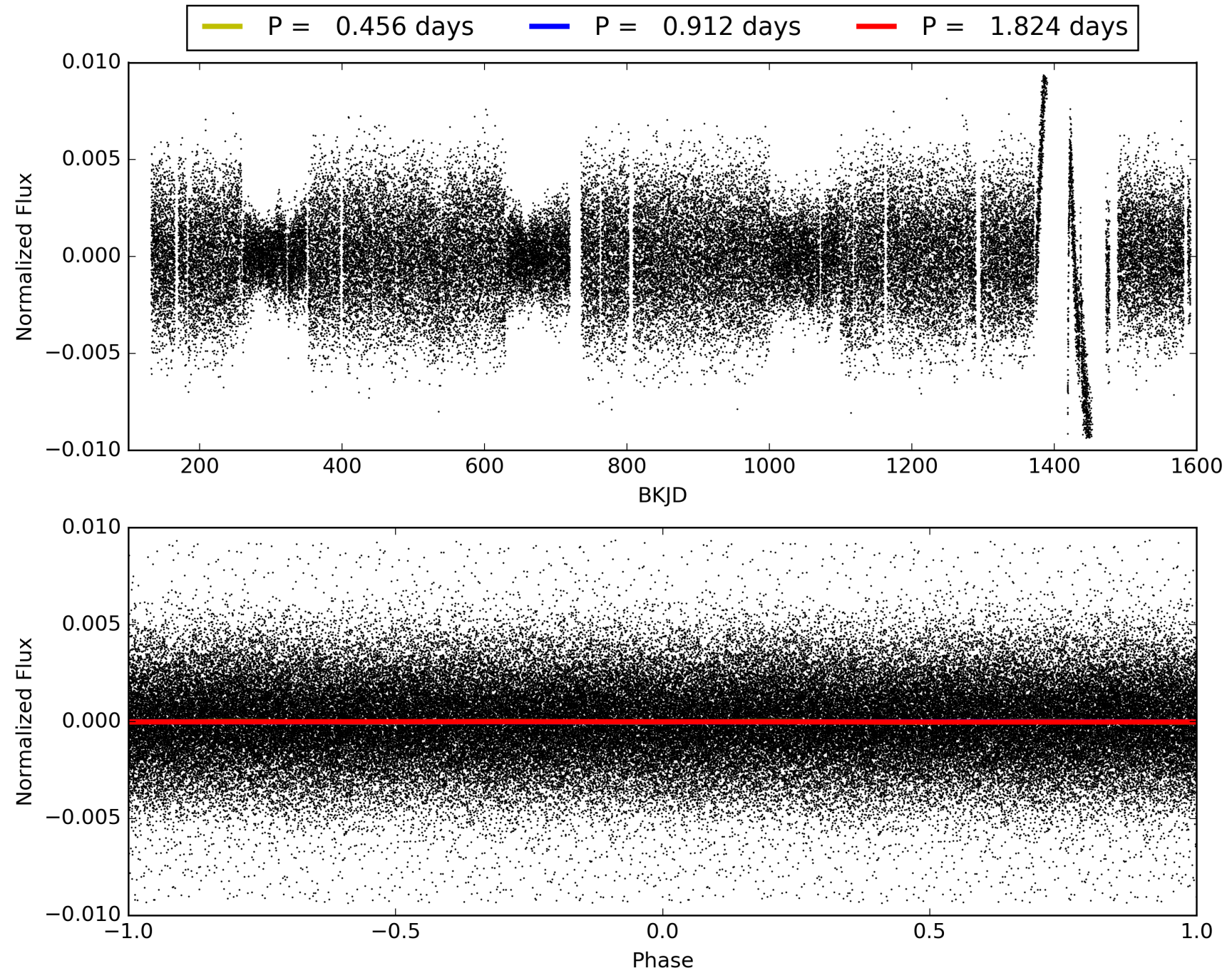
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 14:13:30 Z

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

TCE 008177179-01, PDC Light Curves

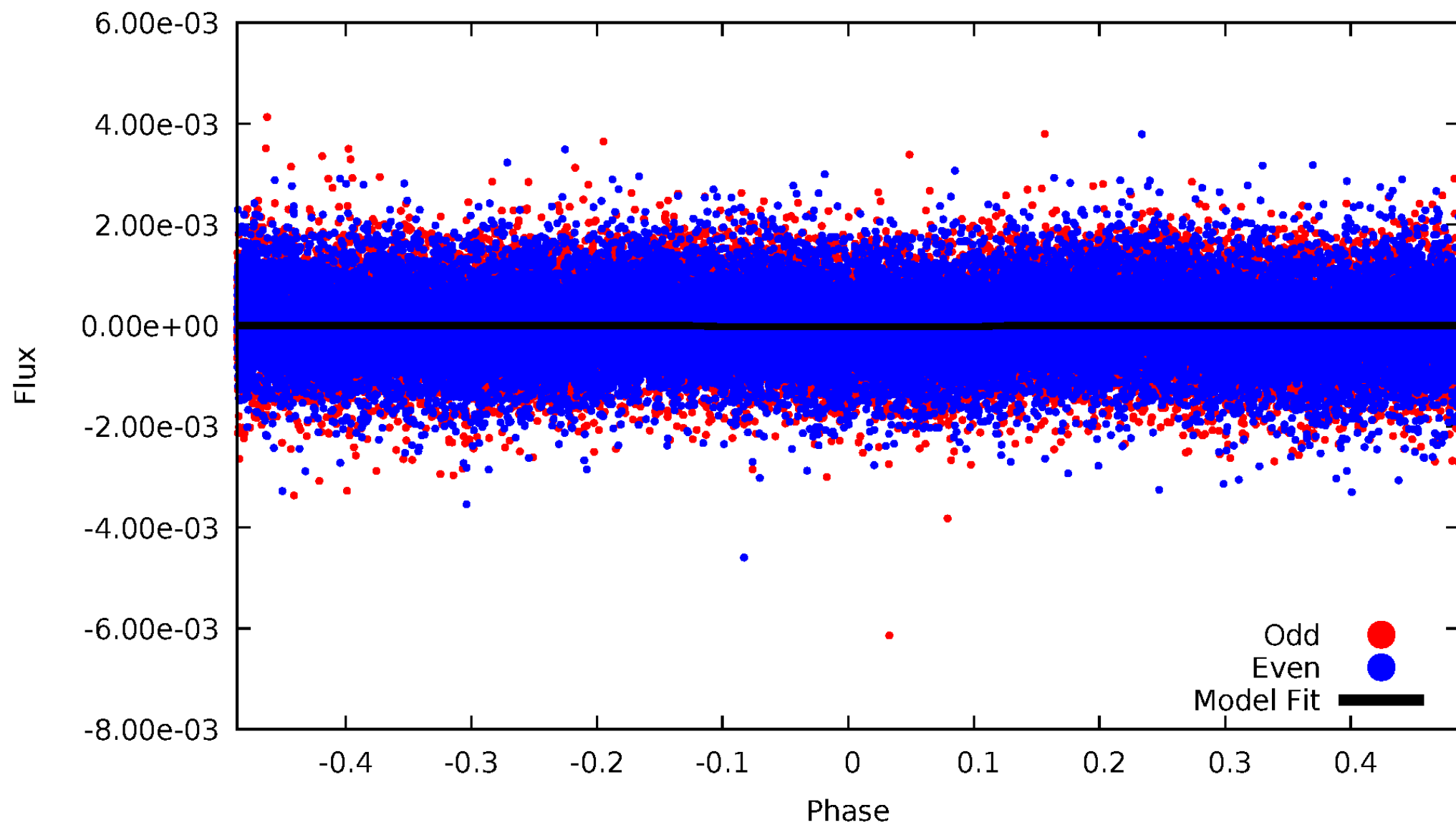


TCE 008177179-01



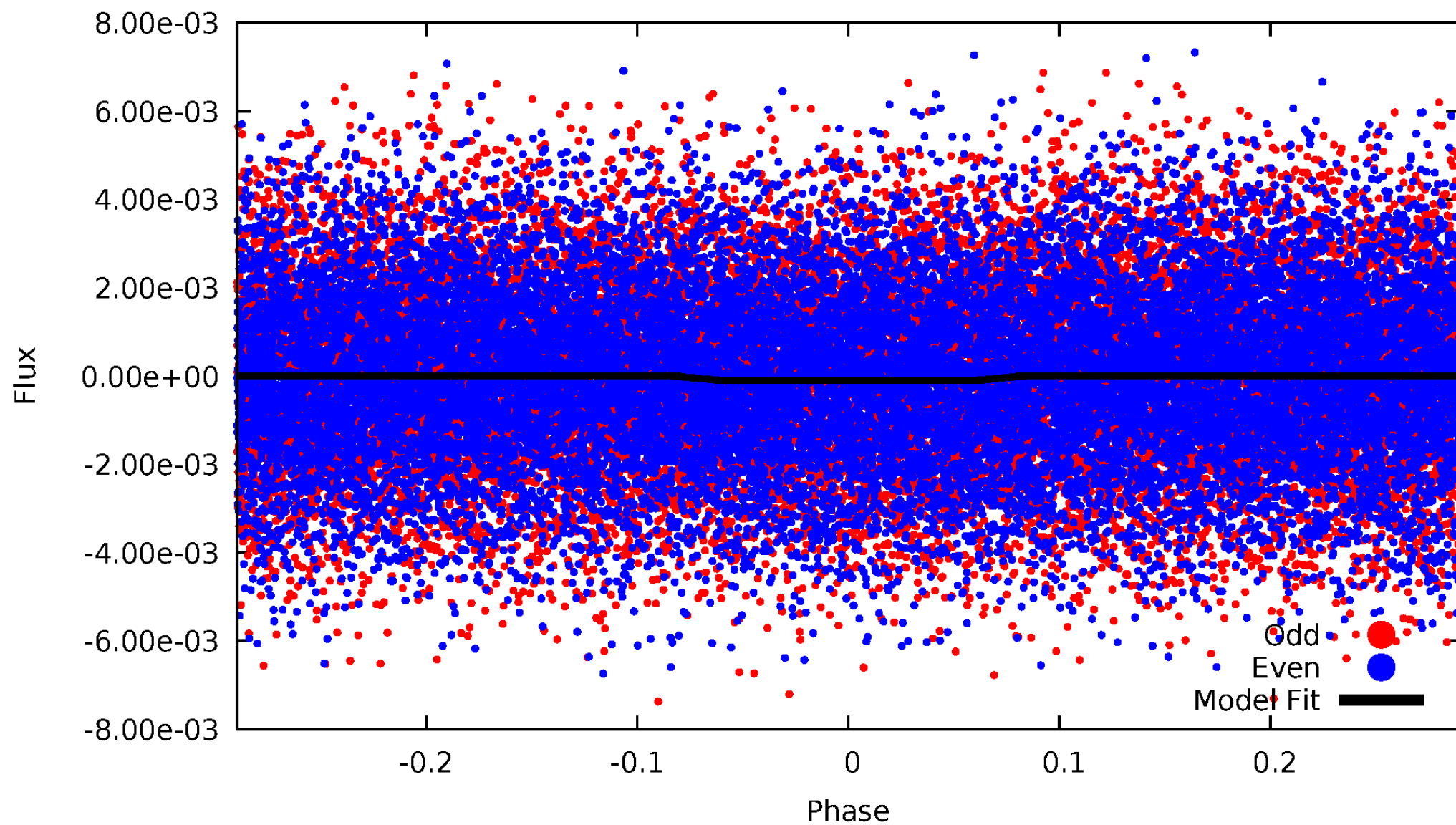
DV Odd/Even

TCE 008177179-01



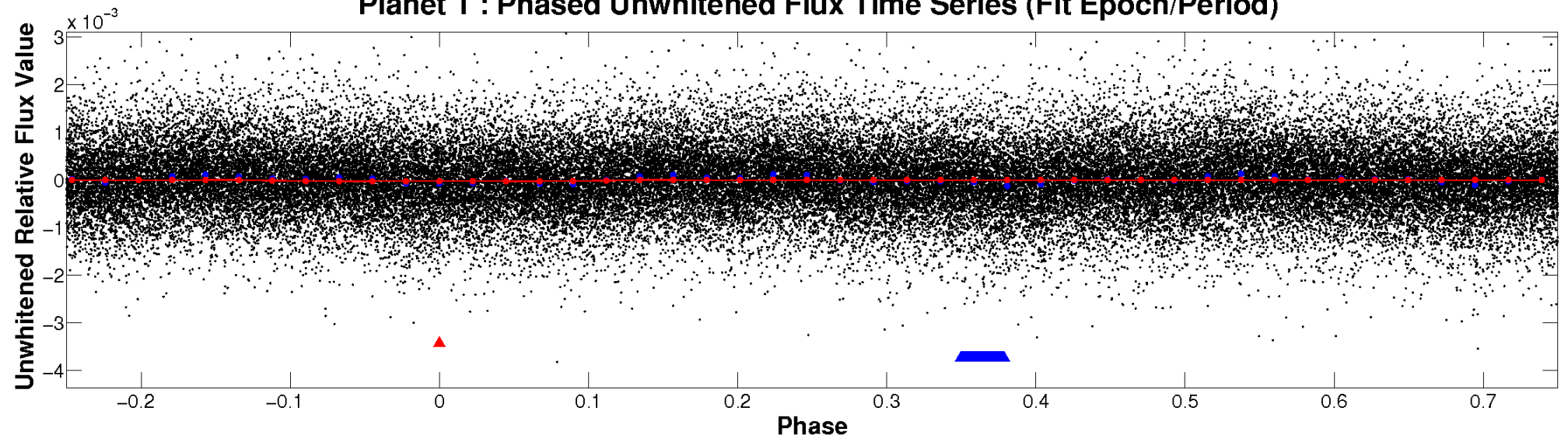
ALT Odd/Even

TCE 008177179-01

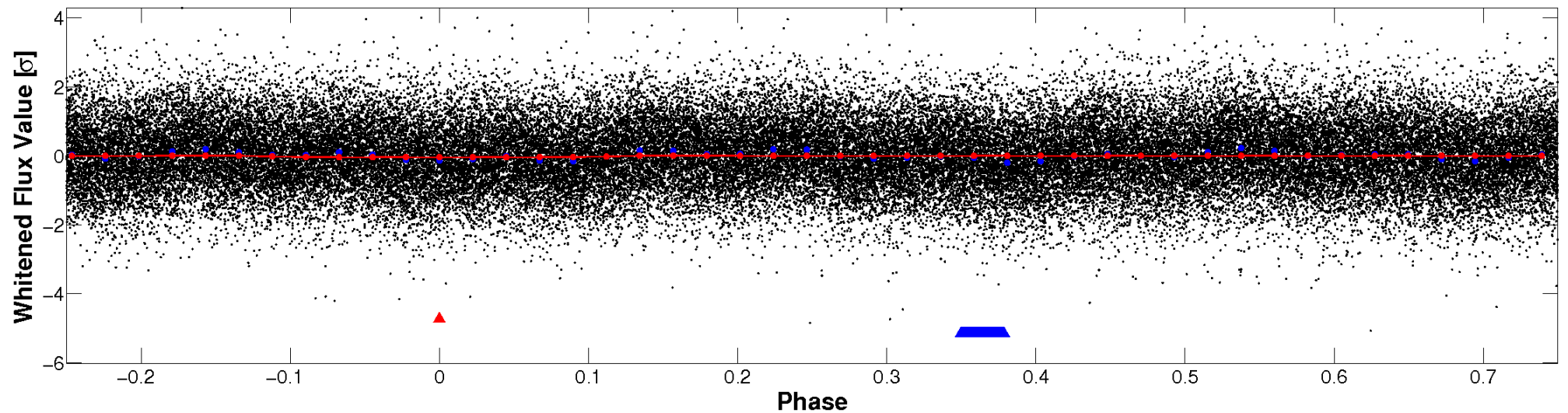


Non-Whitened Vs. Whitened Light Curve

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

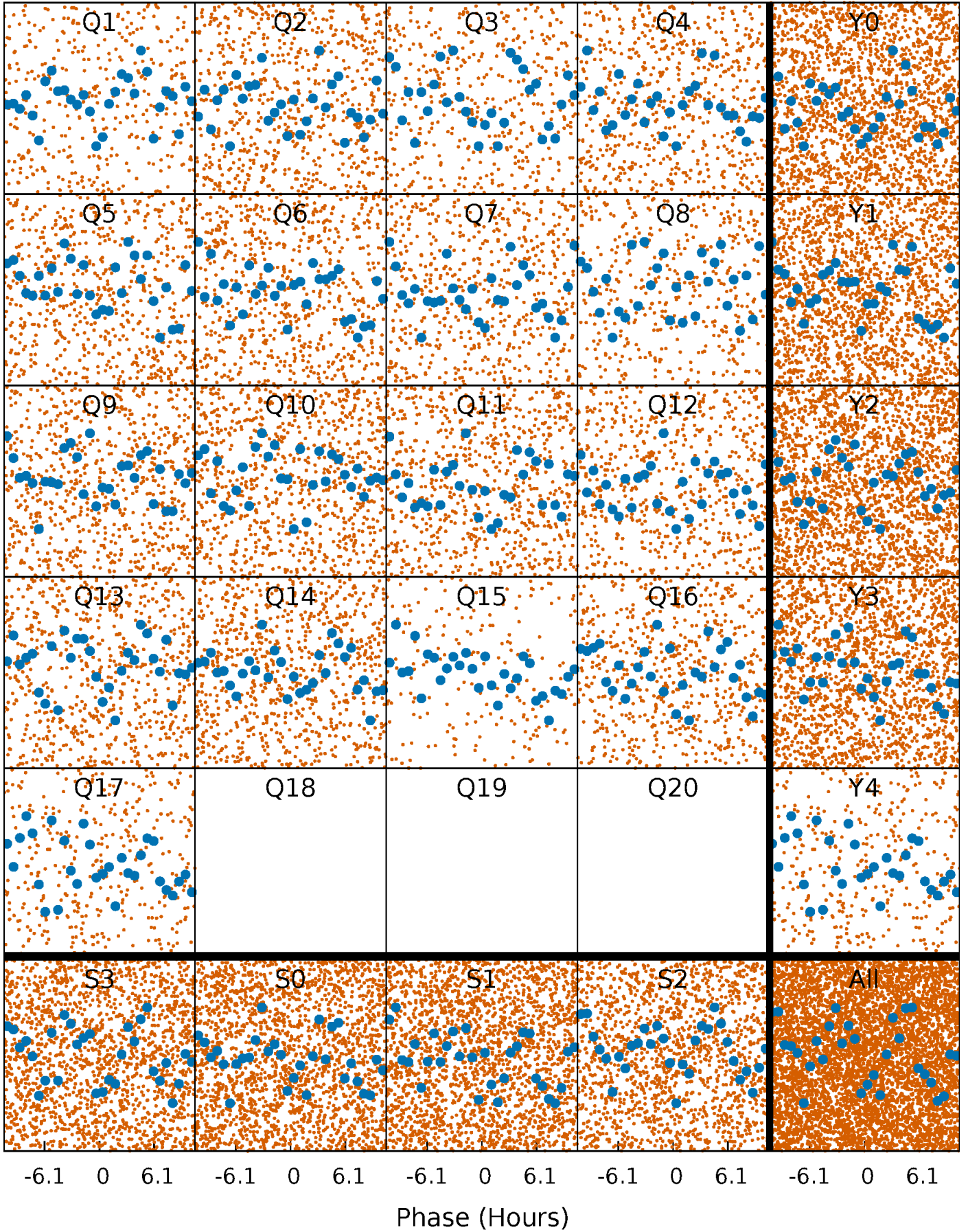


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



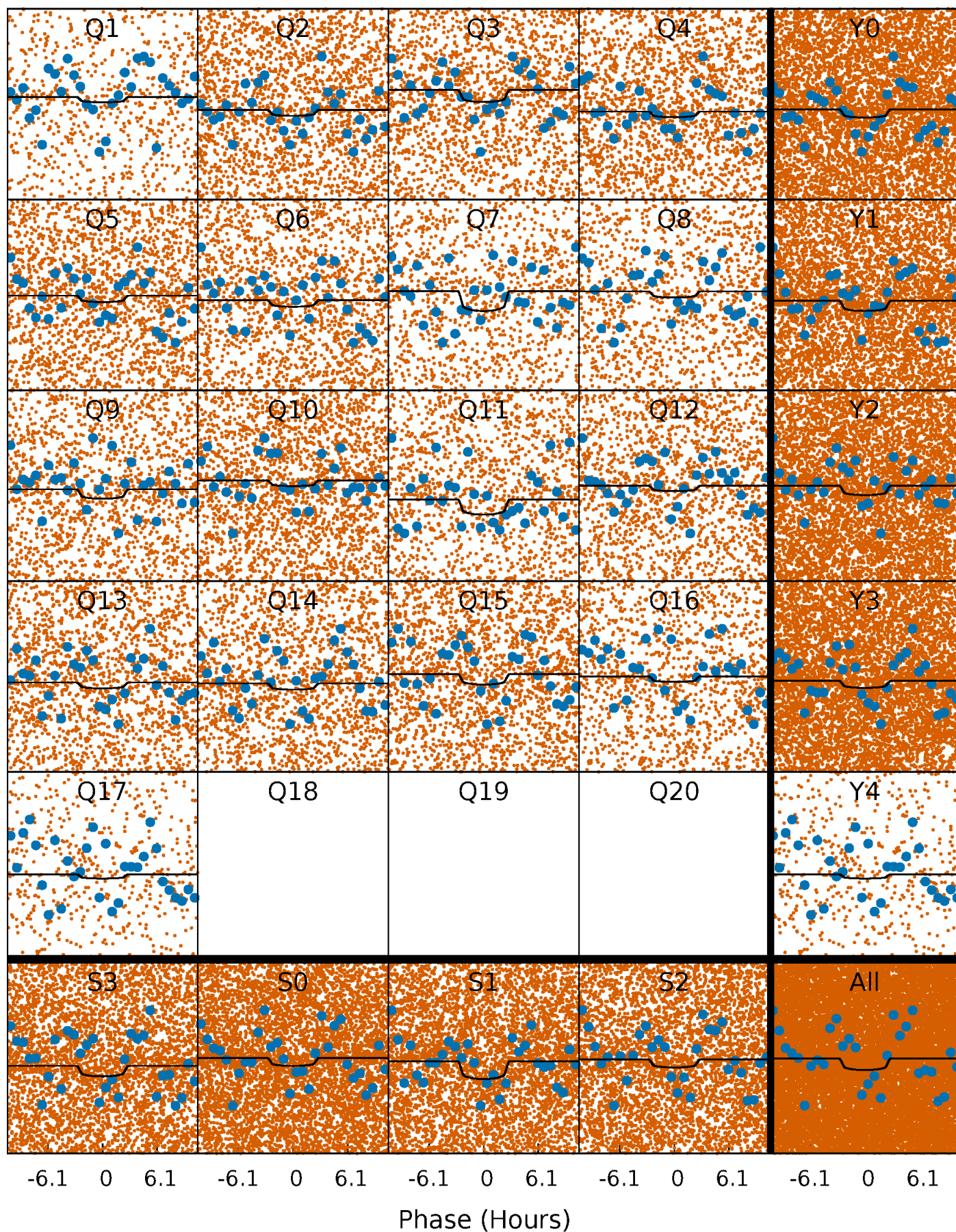
PDC Quarter-Phased Transit Curves

TCE 008177179-01 P= 0.912153 Days $T_0=131.611248$ (BKJD)



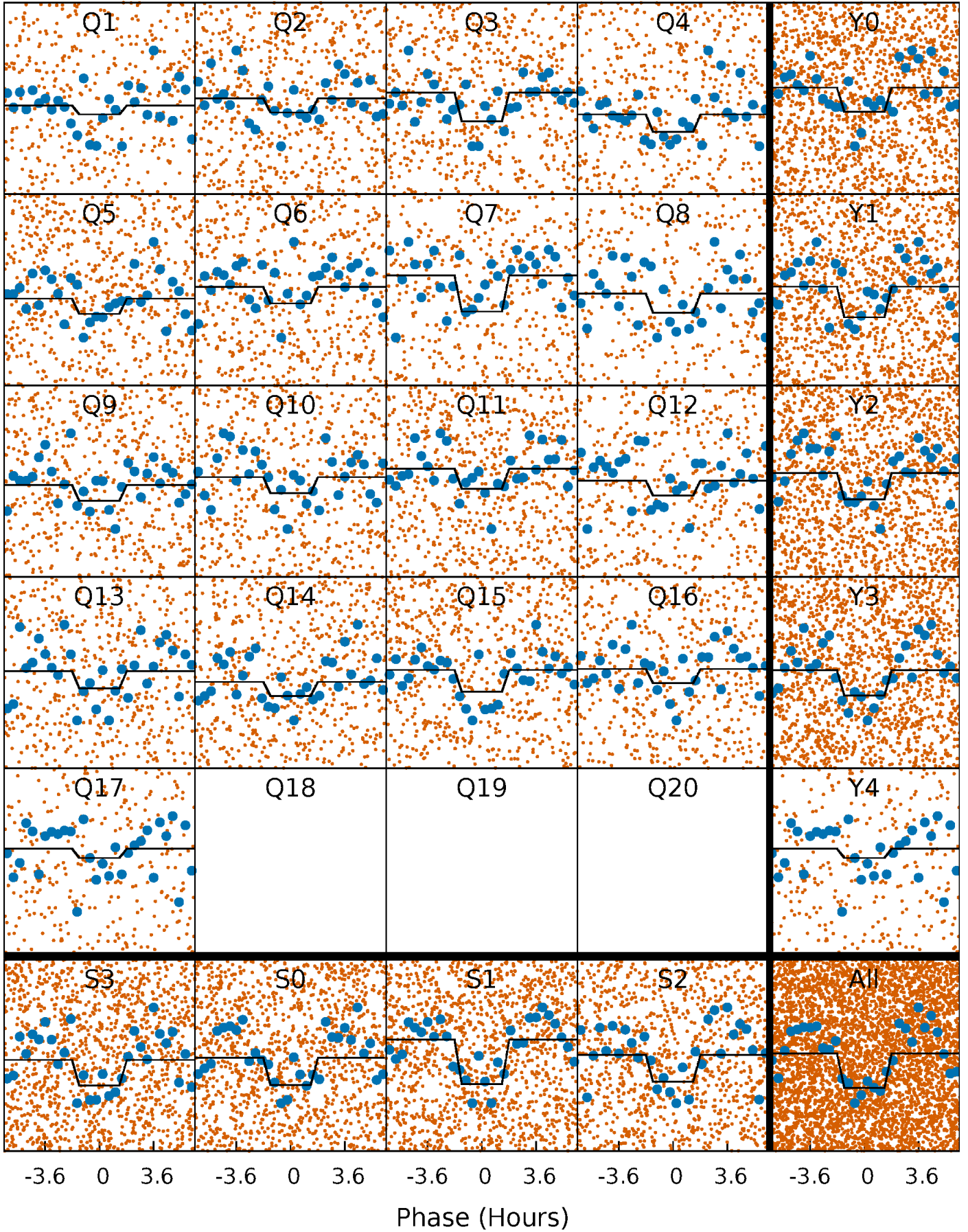
DV Quarter-Phased Transit Curves

TCE 008177179-01 P= 0.912153 Days $T_0=131.611248$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

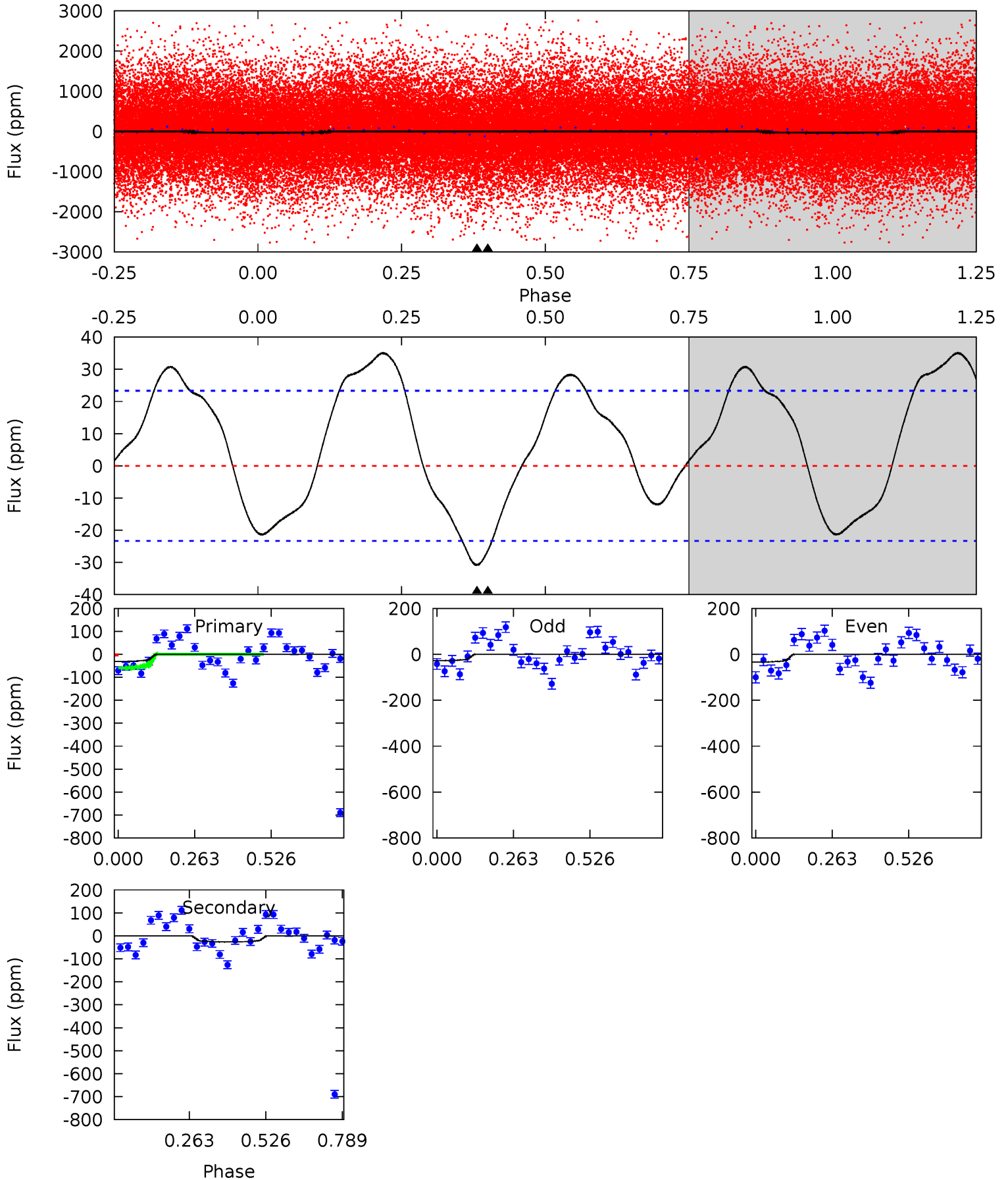
TCE 008177179-01 P= 0.912187 Days $T_0=131.613751$ (BKJD)



DV Model-Shift Uniqueness Test

008177179-01, P = 0.912153 Days, E = 130.699095 Days

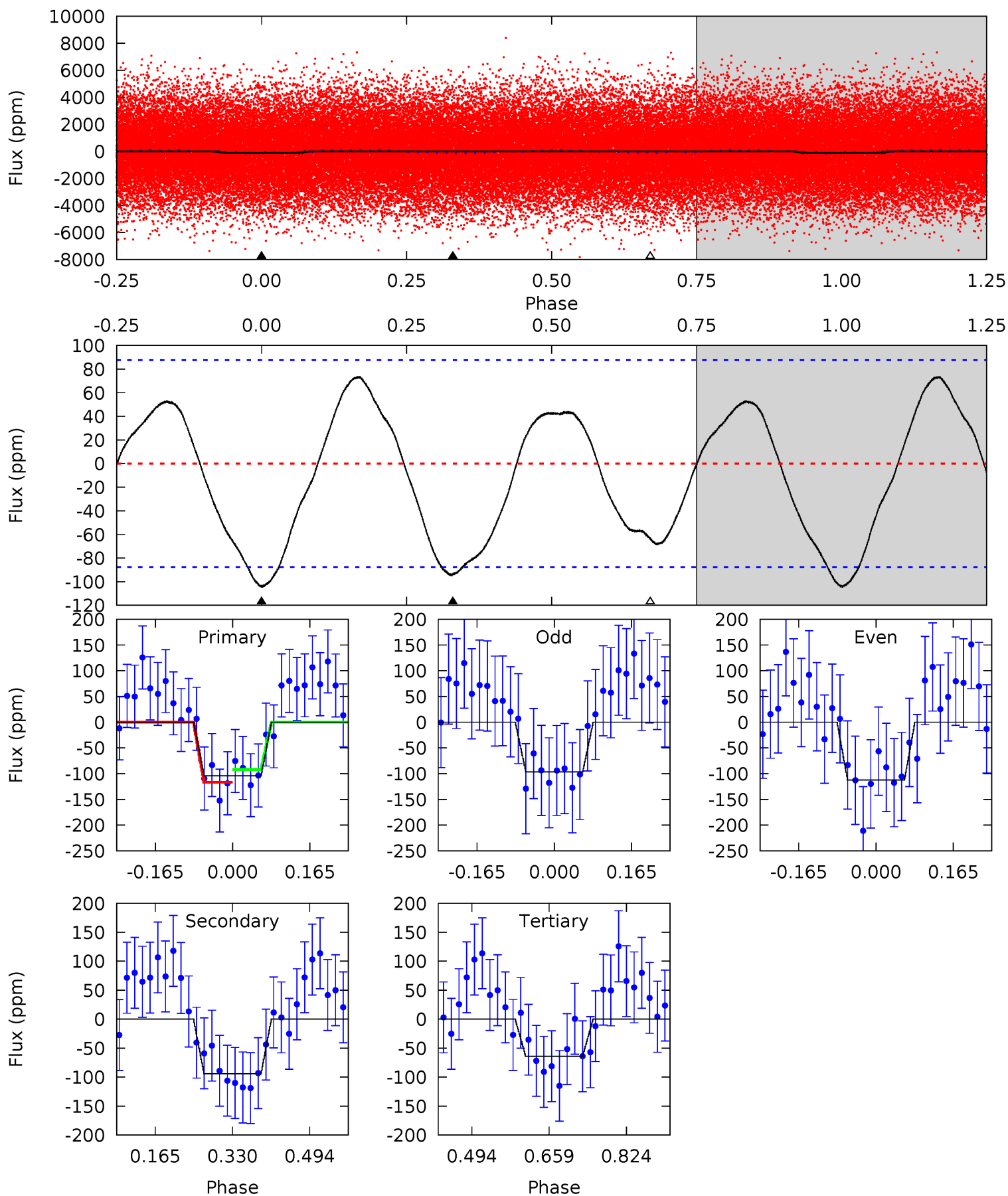
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.75	4.92	0	0	4.36	1.12	3.01	5.75	5.75	4.92	4.92	0.60	1.06	0.53	5.31



Alt Model-Shift Uniqueness Test

008177179-01, P = 0.912187 Days, E = 130.701564 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.31	4.80	3.27	0	4.46	1.39	2.14	2.05	5.31	1.54	4.80	0.40	1.01	0.41	0.63



Stellar Parameters For KIC 008177179

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8018^{+222}_{-333}	$3.855^{+0.287}_{-0.123}$	$0.070^{+0.150}_{-0.400}$	$2.840^{+0.555}_{-1.111}$	$2.106^{+0.321}_{-0.521}$	$0.130^{+0.279}_{-0.044}$
	+3%/-4%	+7%/-3%	+214%/-571%	+20%/-39%	+15%/-25%	+216%/-34%
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 008177179-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-26 ± 5	$1.87^{+1.68}_{-1.23}$	5340^{+327}_{-490}	6812^{+7831}_{-2304}	$2.361^{+18.861}_{-1.733}$
Alt.	-94 ± 20	$3.06^{+1.87}_{-1.63}$	5343^{+368}_{-488}	7339^{+5501}_{-1761}	$3.021^{+10.504}_{-1.782}$

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 $A_{obs} \gg 1.0$

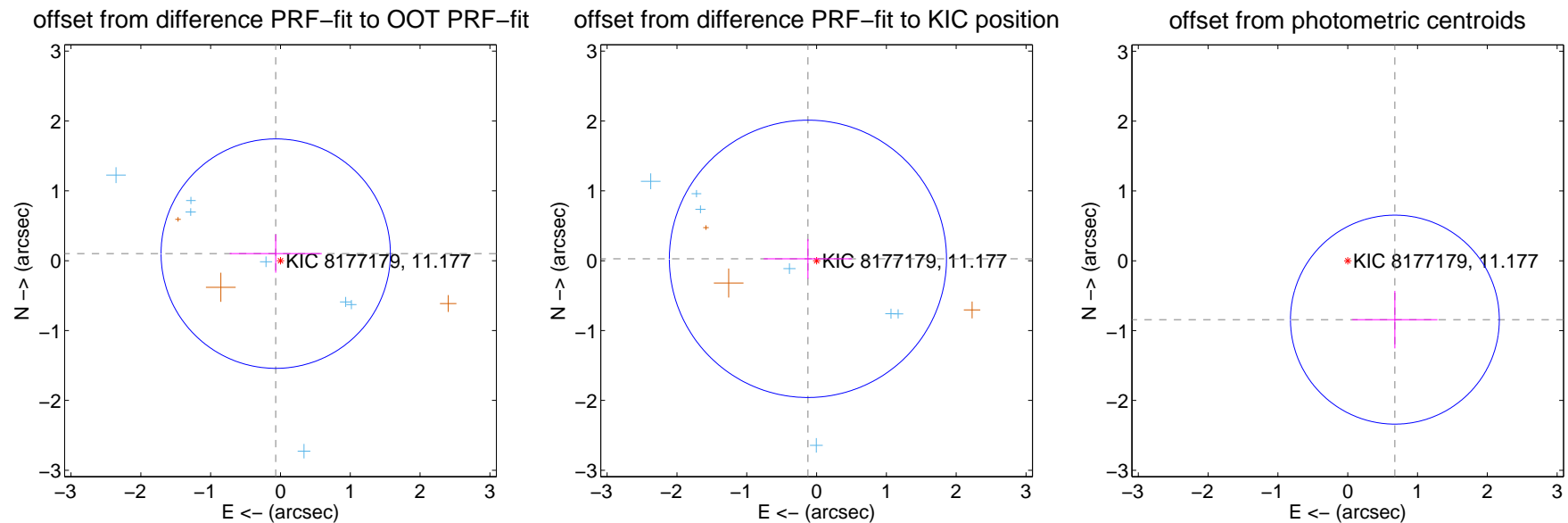
DV Centroid Data

Supplemental centroid analysis for 008177179-01. **Kepler magnitude: 11.18.** Transit SNR 4.62

There are 10 quarters with good PRF difference image offsets

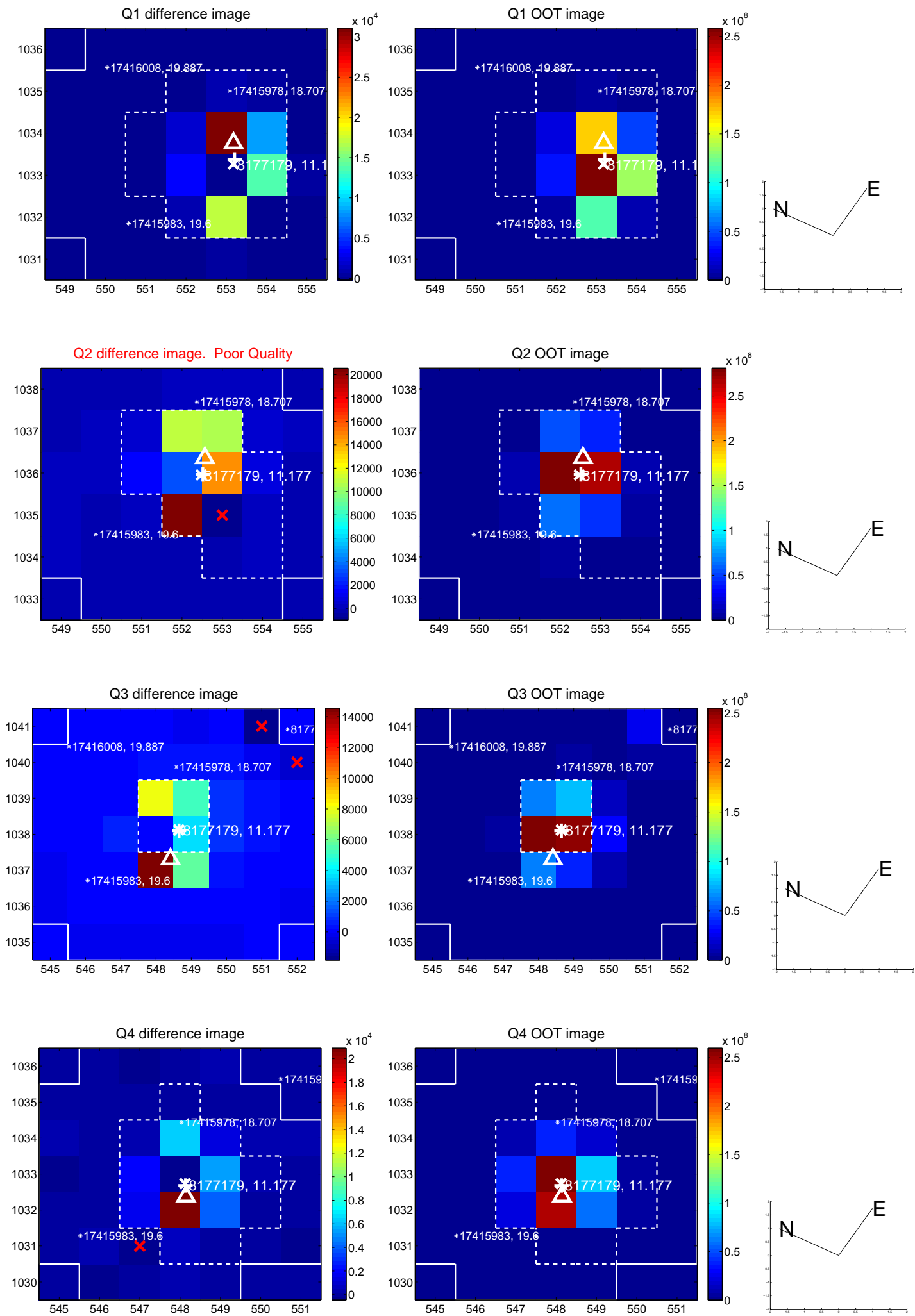
The direct PRF centroid is offset from the target star catalog position by about 0.36 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.122 ± 0.547	0.22	0.068 ± 0.660	0.101 ± 0.274
PRF-fit source offset from KIC position	0.127 ± 0.662	0.19	0.124 ± 0.633	0.027 ± 0.283
photometric centroid source offset	1.08 ± 0.50	2.17	-0.68 ± 0.61	-0.84 ± 0.41

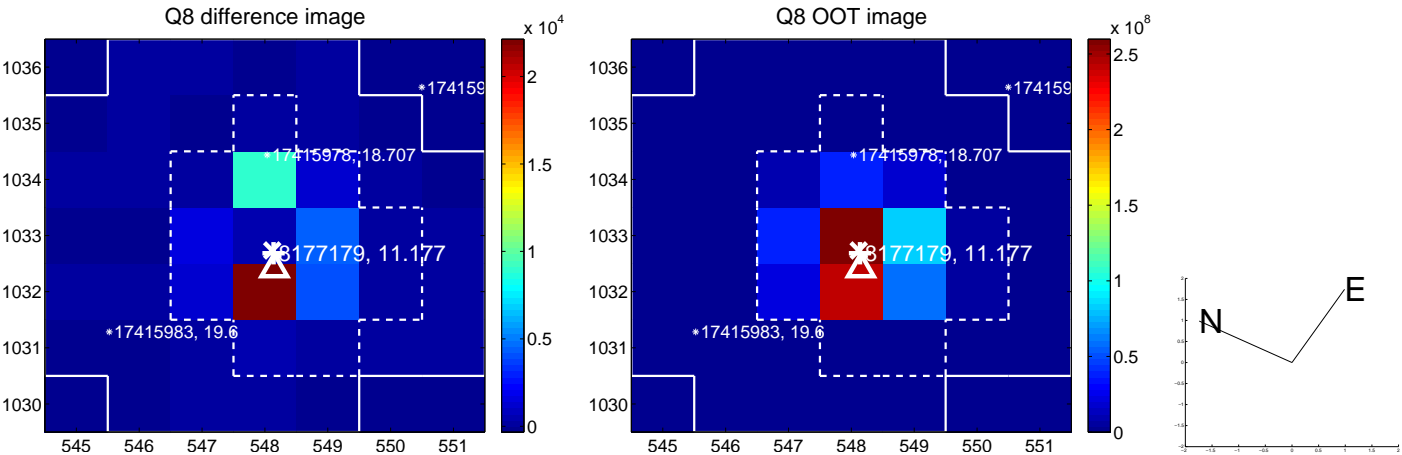
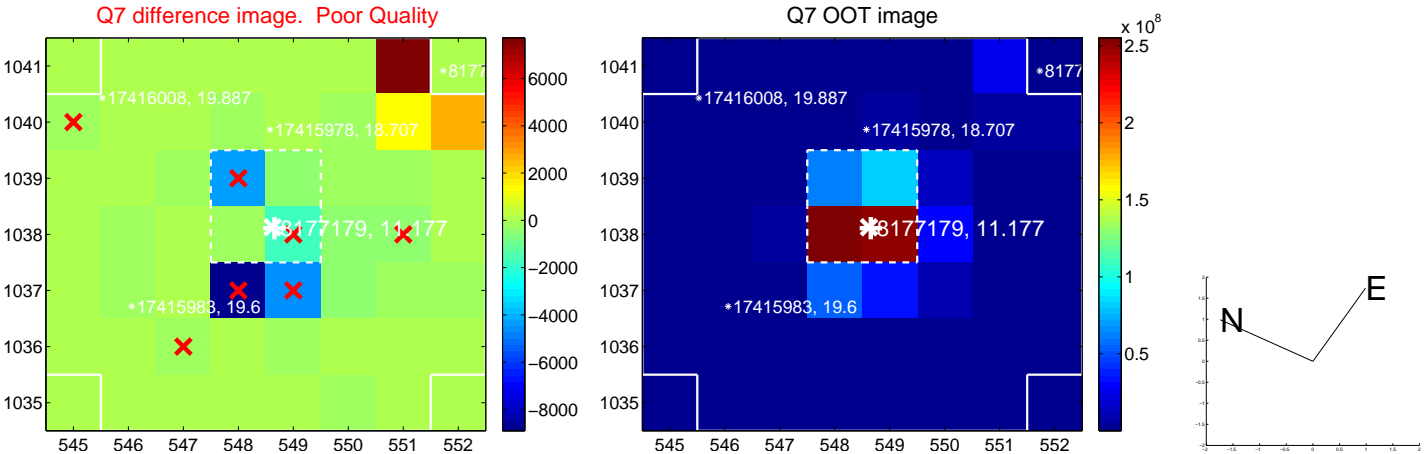
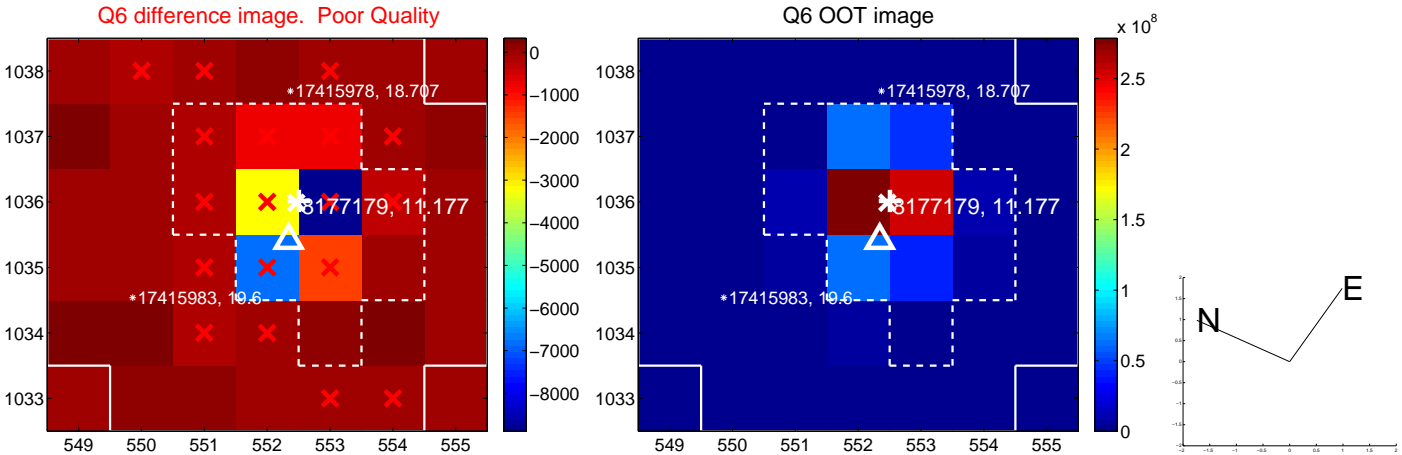
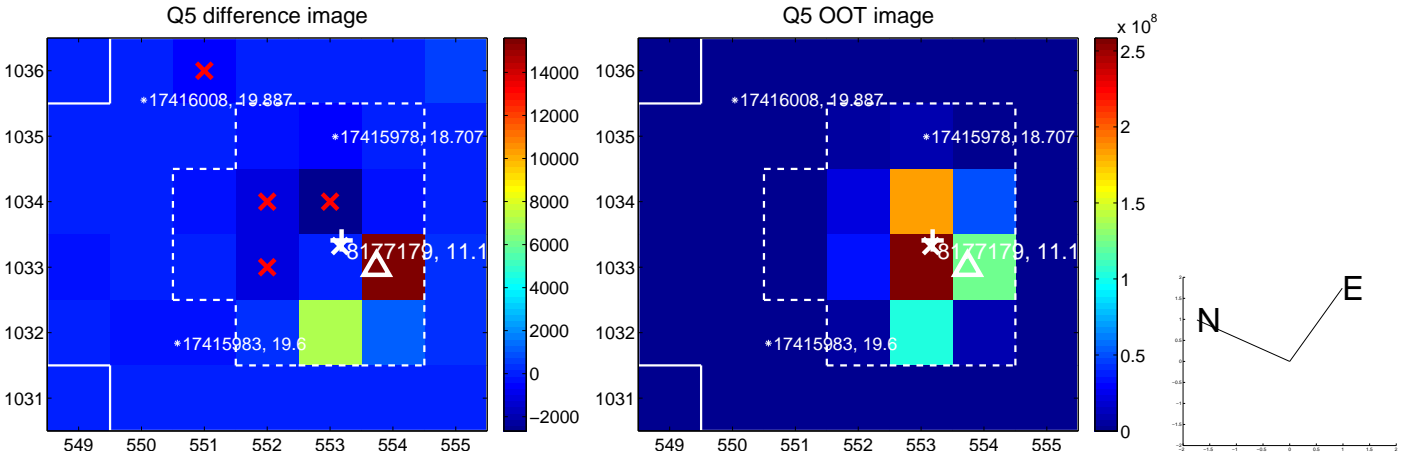


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

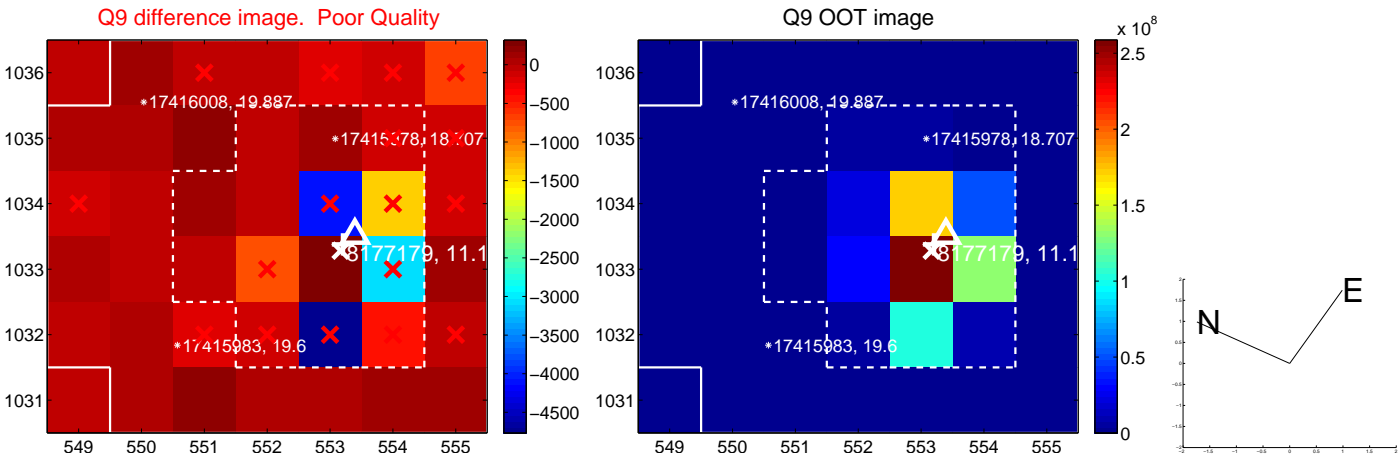
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



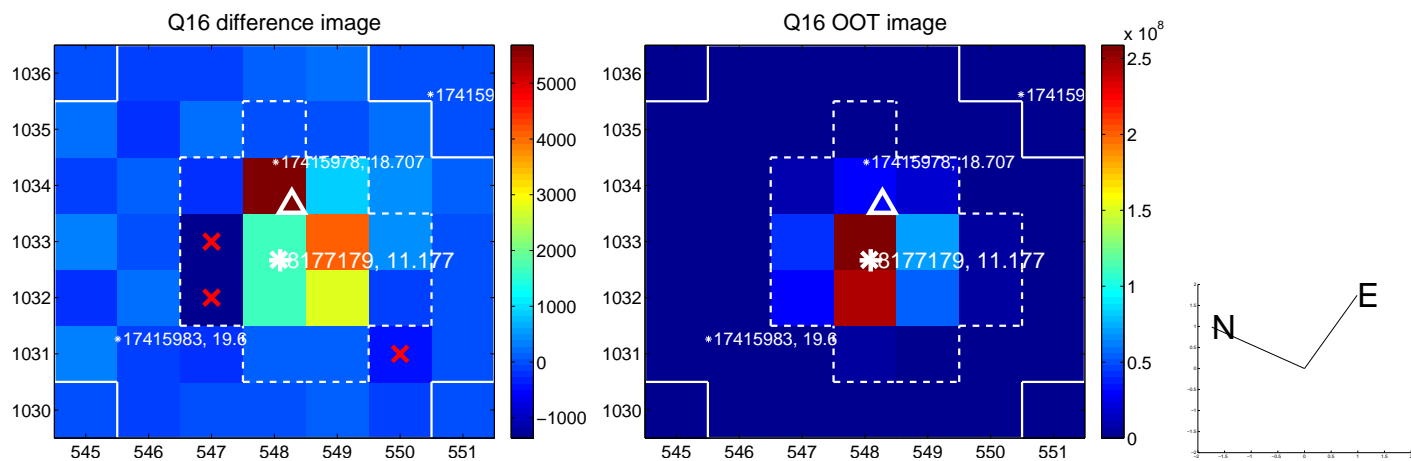
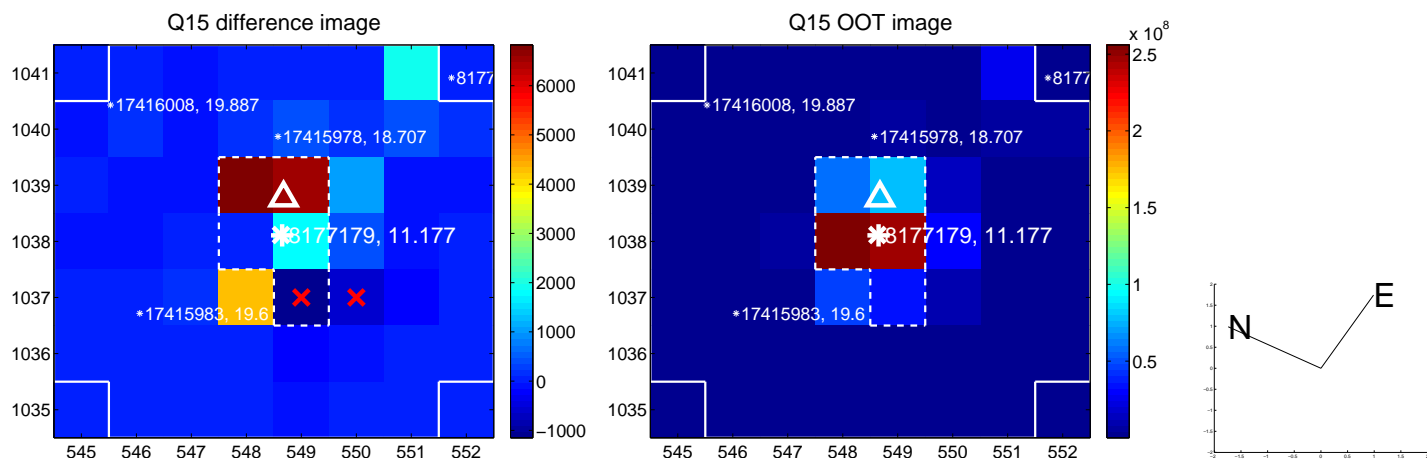
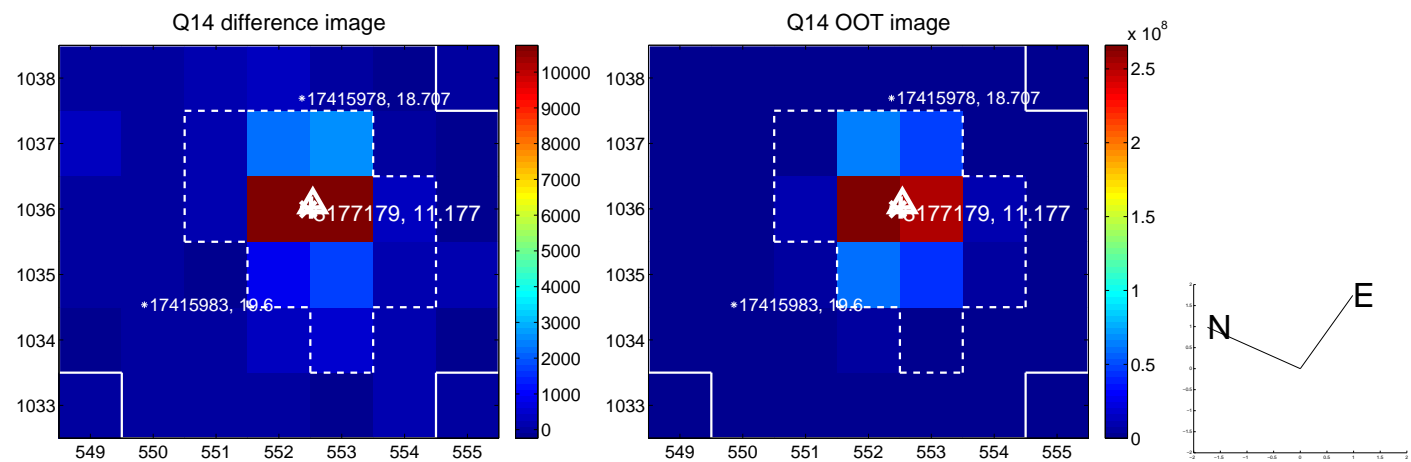
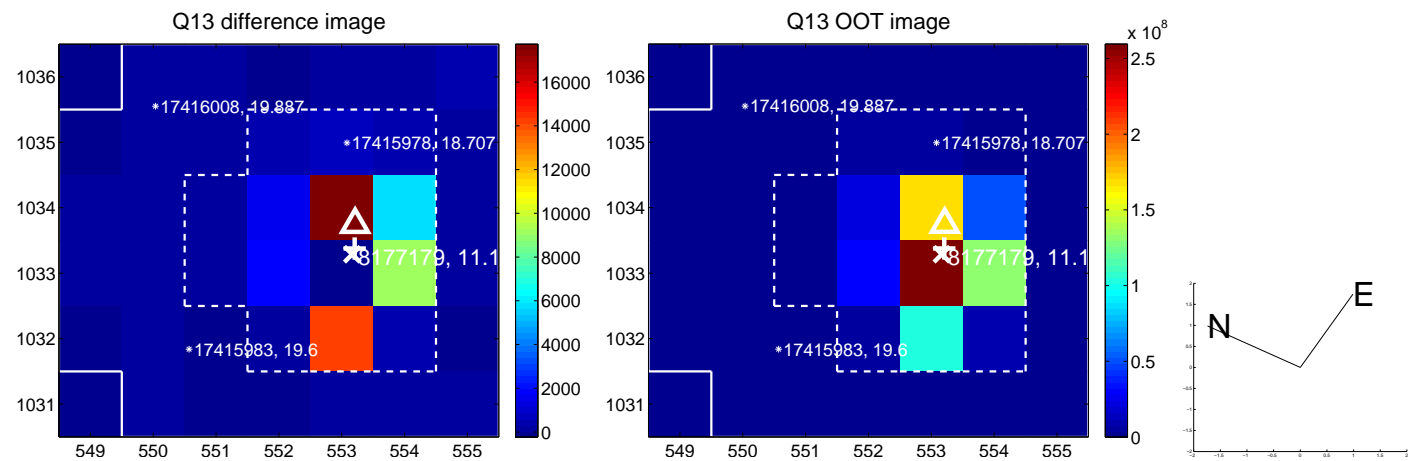
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



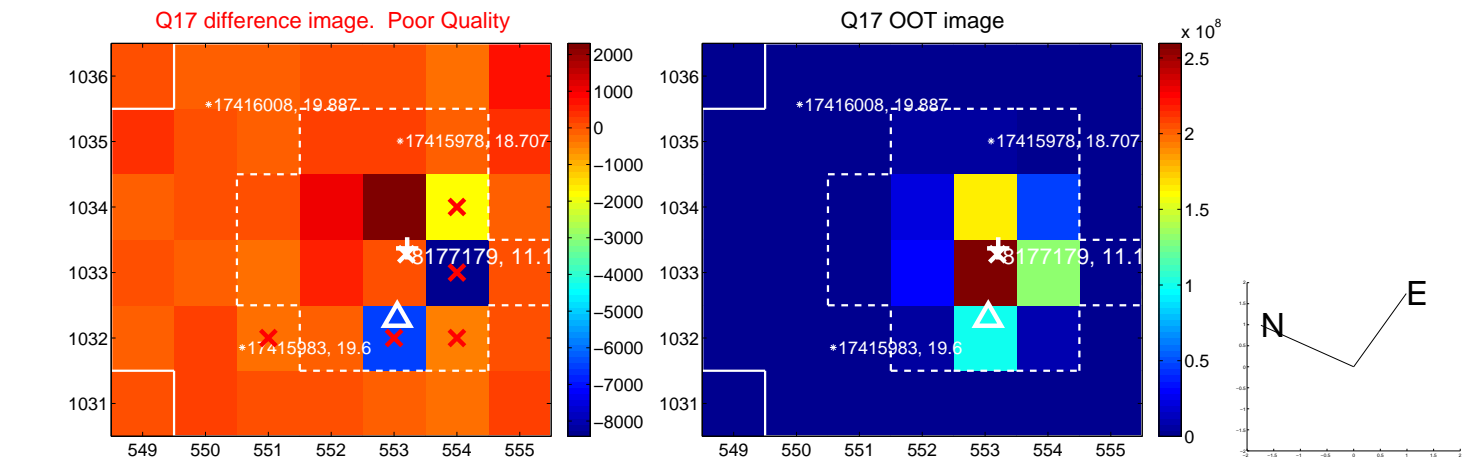
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



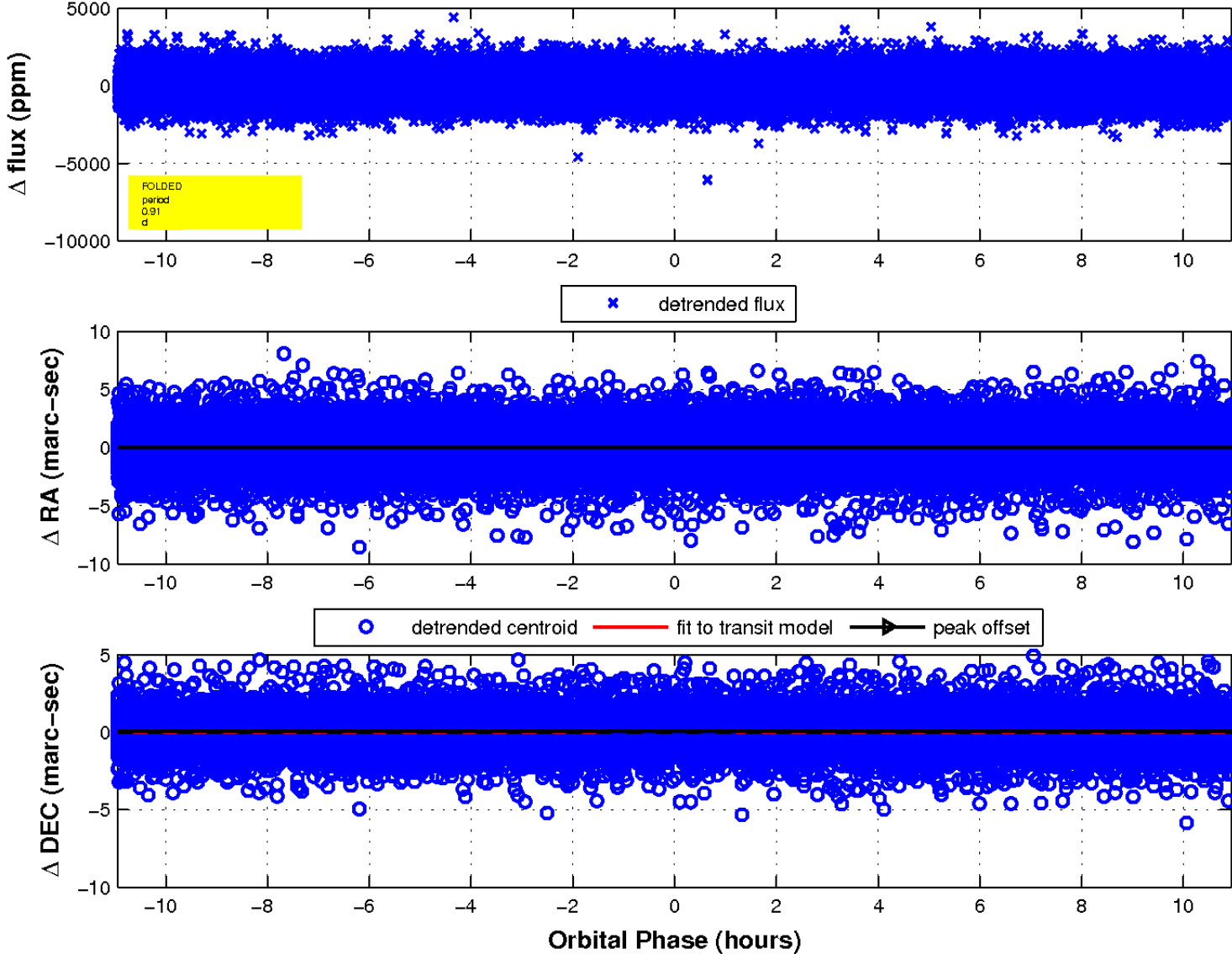
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

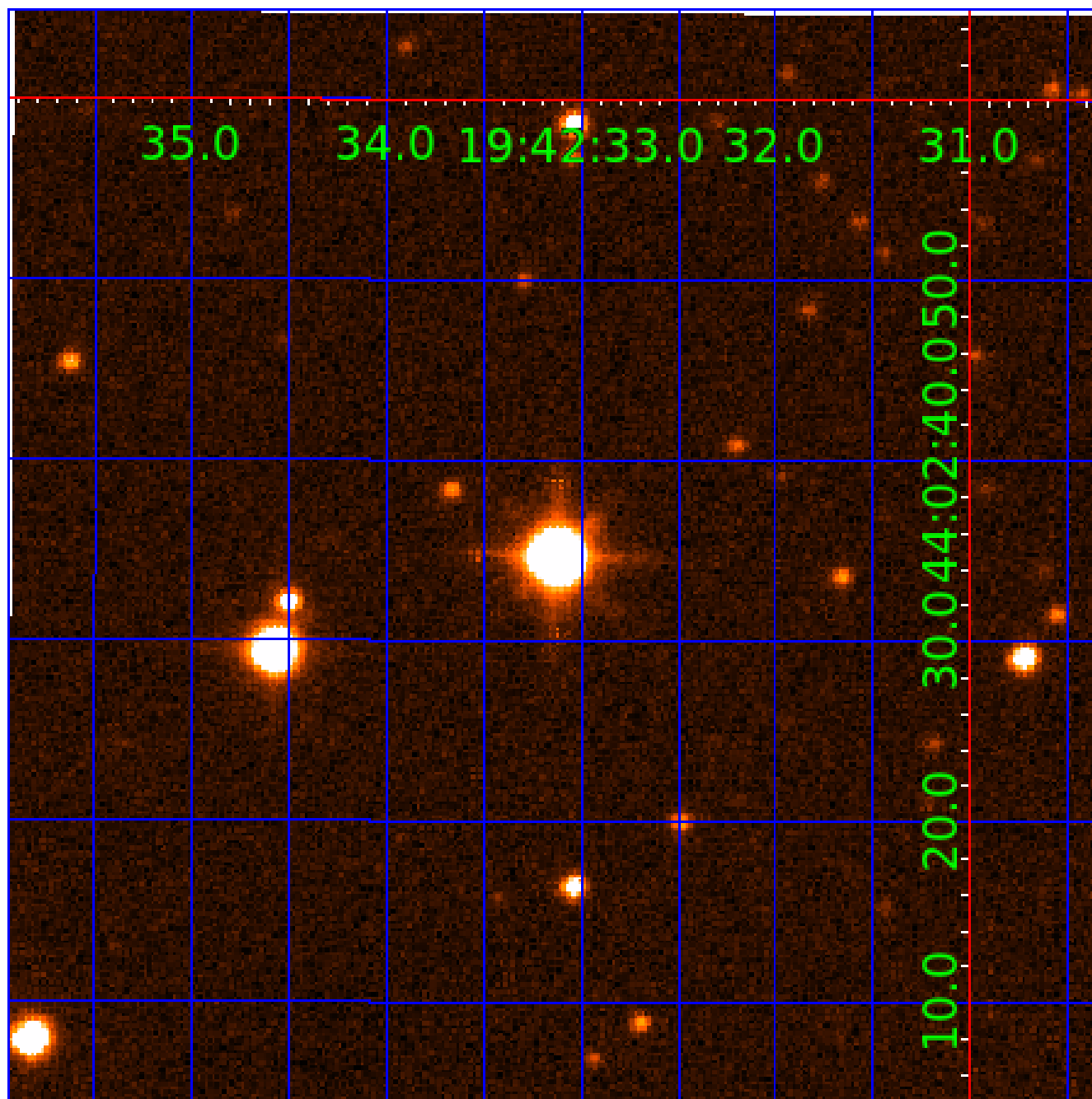


fluxWeightedCentroids, Planet 1 of 2



UKIRT Image

Declination



KIC 008177179

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})
008177179-01	OBS	No	0.912153	131.611249	26.1	5.323	10.9	4.6	2.84	8018	1.69	53614.27
008177179-02	OBS	No	0.912137	131.956666	106.1	2.219	9.9	9.4	2.84	8018	3.02	53615.56

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008177179-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
008177179-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—MOD_NONUNIQ_DV—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.

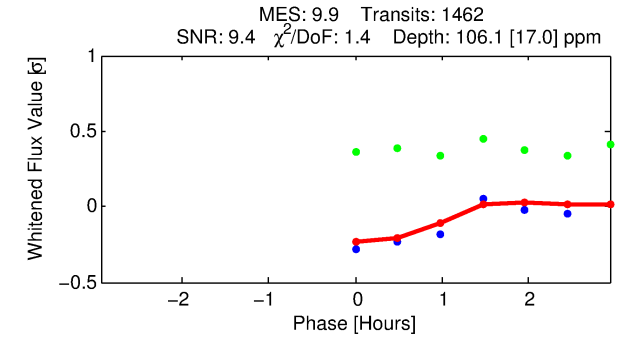
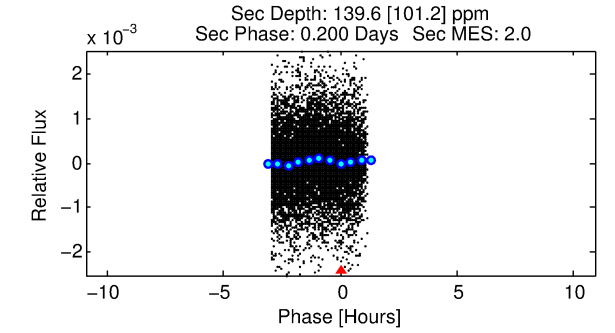
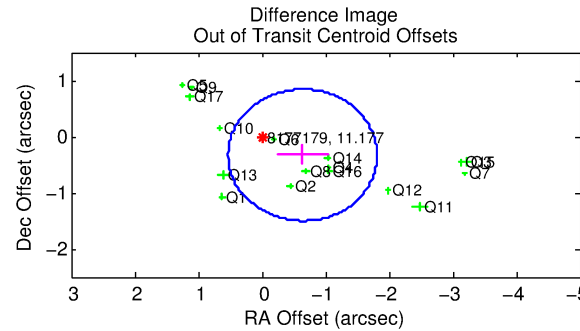
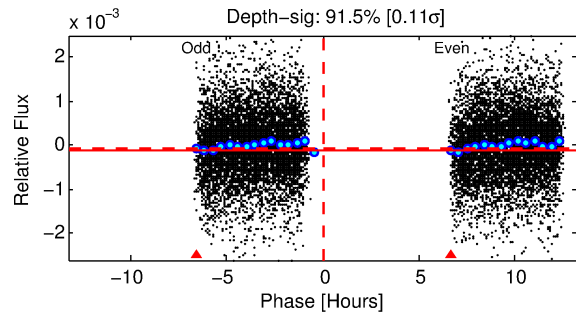
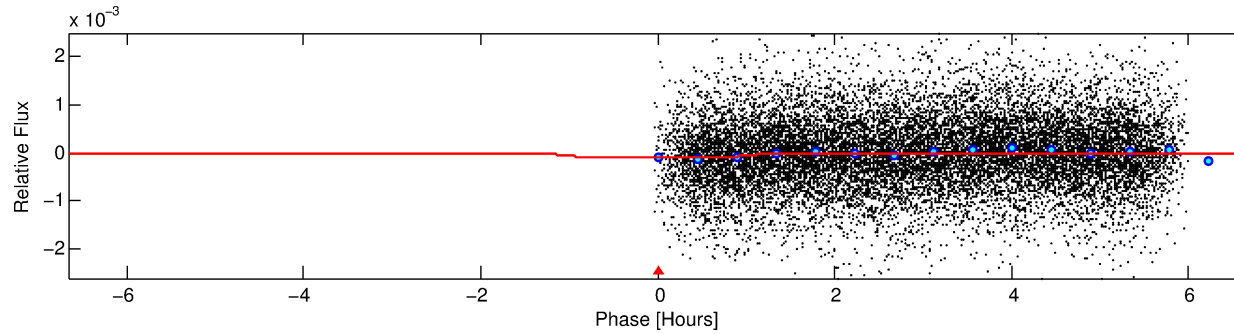
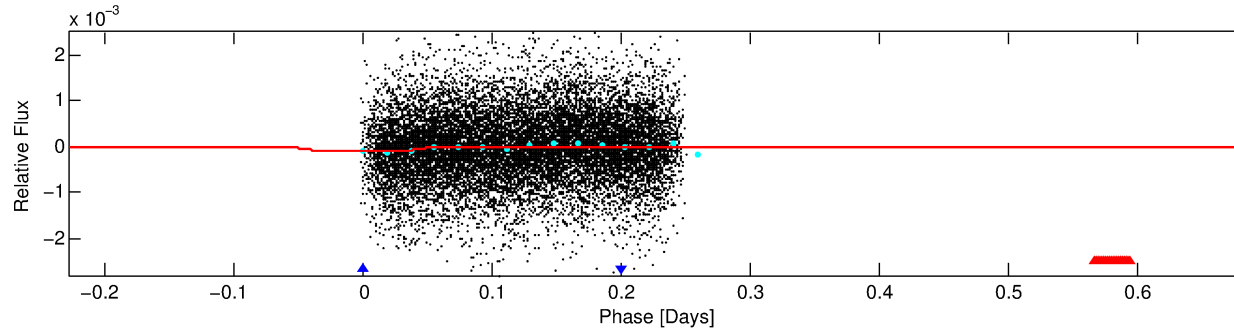
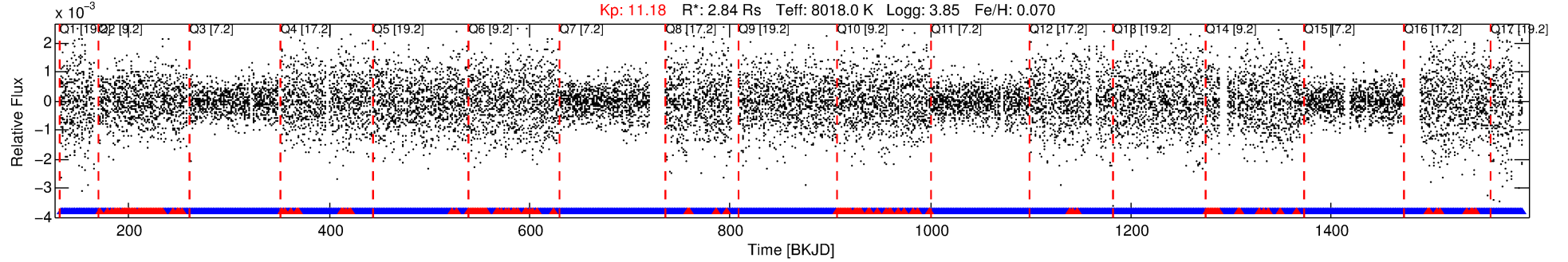
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008177179-02

No Significant Match Found

DV One-Page Summary

KIC: 8177179 Candidate: 2 of 2 Period: 0.912 d



DV Fit Results:

Period = 0.91214 [0.00001] d
Epoch = 131.9567 [0.0070] BKJD
Rp/R* = 0.0097 [0.0069]
a/R* = 2.92 [10.48]
b = 0.45 [7.12]
Seff = 53615.56 [28858.32]
Teq = 3880 [522] K
Rp = 3.02 [2.45] Re
a = 0.0236 [0.0081] AU
Ag = 4.69 [7.86] [0.47 σ]
Teffp = 8828 [3544] K [1.38 σ]

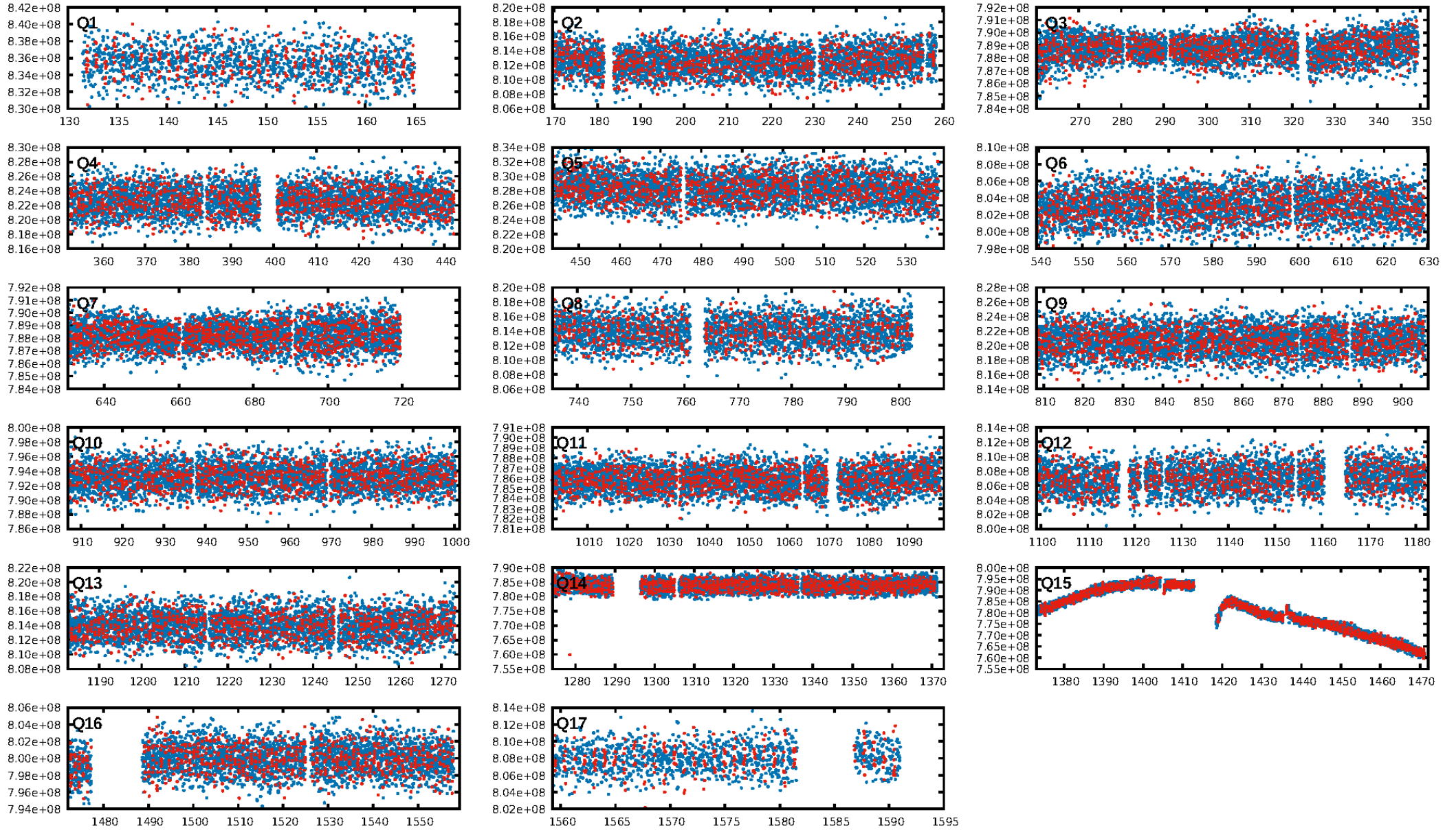
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGo-sig: N/A
Bootstrap-pfa: 5.16e-29
RollingBand-fgt: 0.88 [1228/1395]
GhostDiagnostic-chr: 0.8718
Centroid-sig: 0.0%
Centroid-so: 0.433 arcsec [3.35 σ]
OotOffset-rm: 0.720 arcsec [1.84 σ]
KicOffset-rm: 0.846 arcsec [2.40 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.76 [13/17]
DiffImageOverlap-fno: 0.00 [0/17]

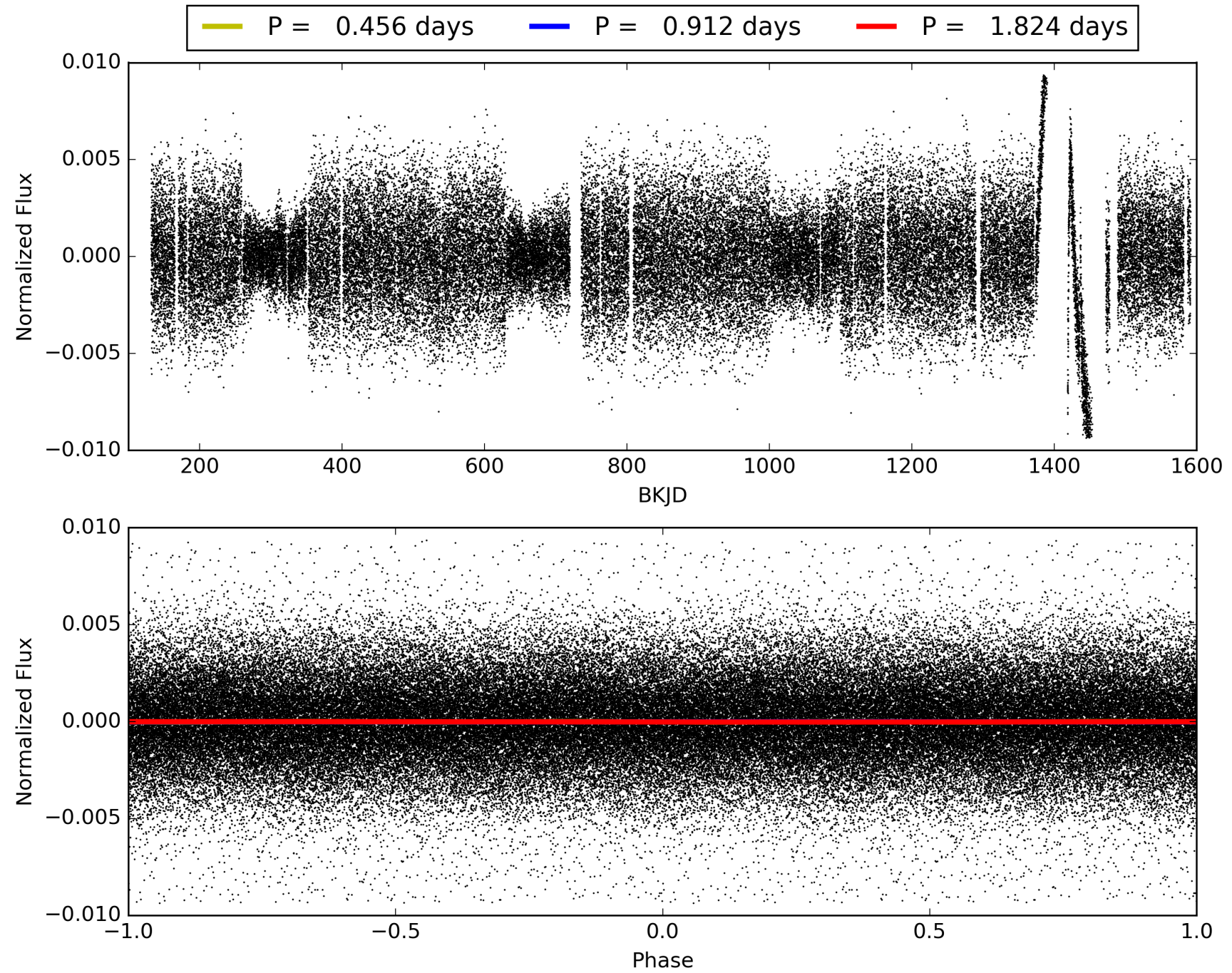
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 14:13:42 Z

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

TCE 008177179-02, PDC Light Curves

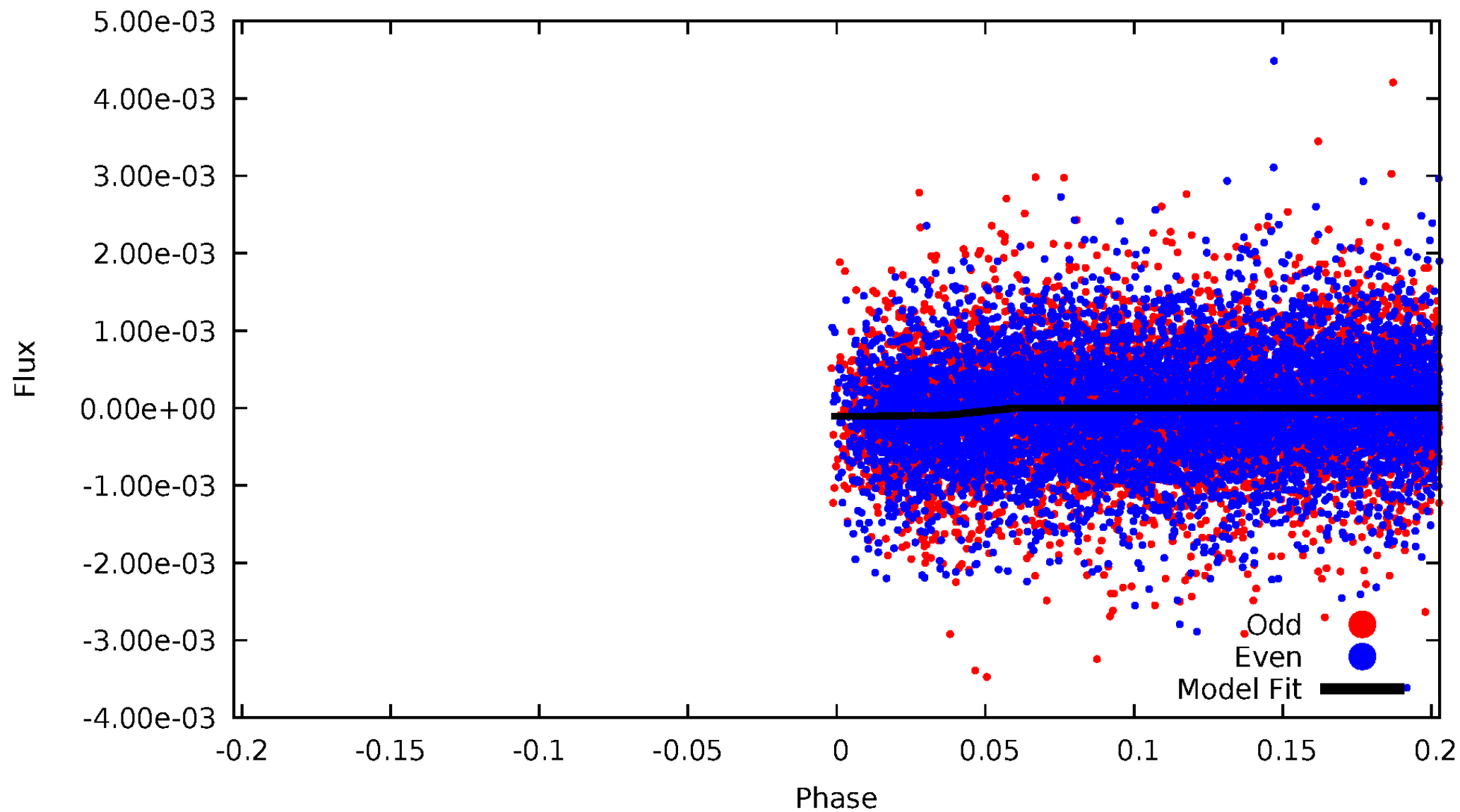


TCE 008177179-02



DV Odd/Even

TCE 008177179-02

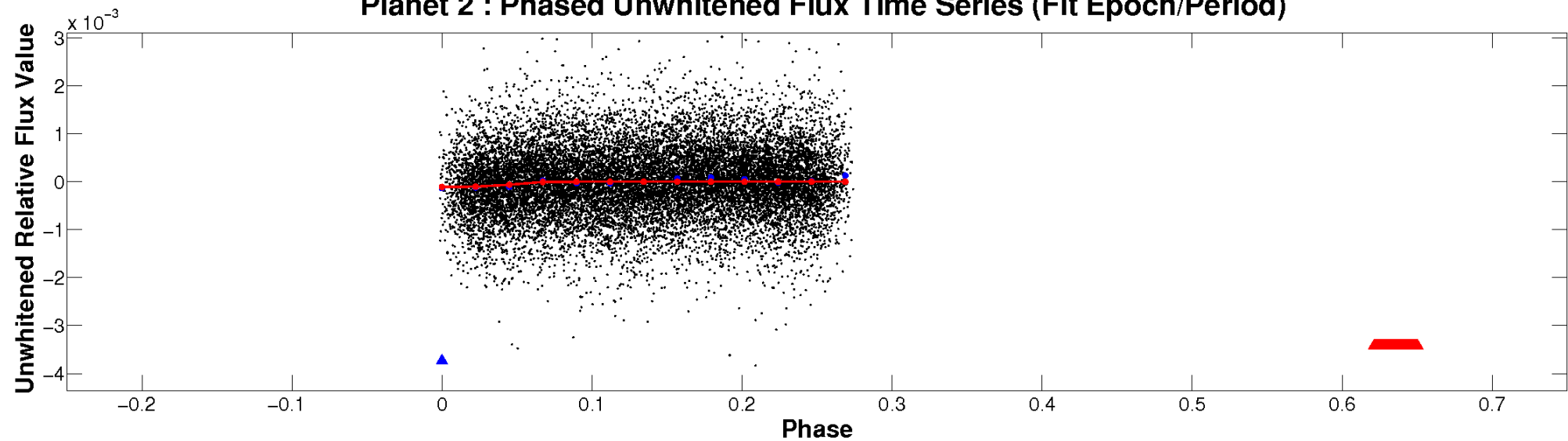


ALT Odd/Even

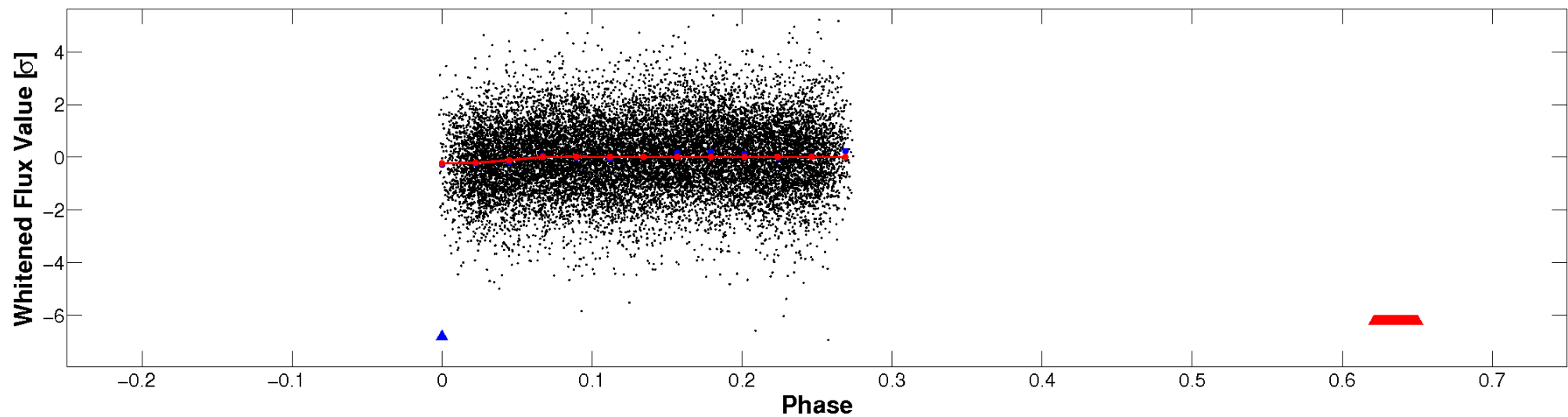
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

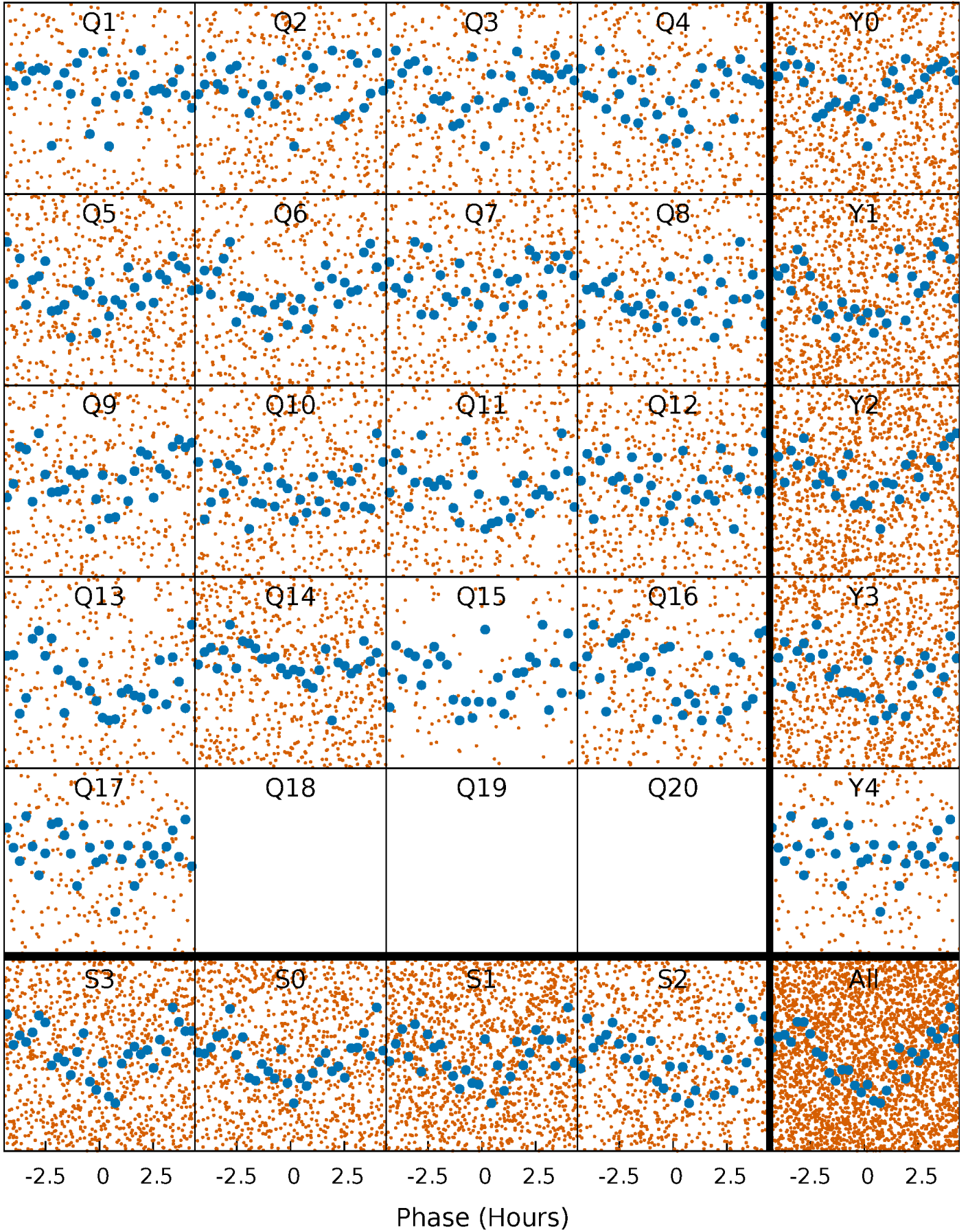


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



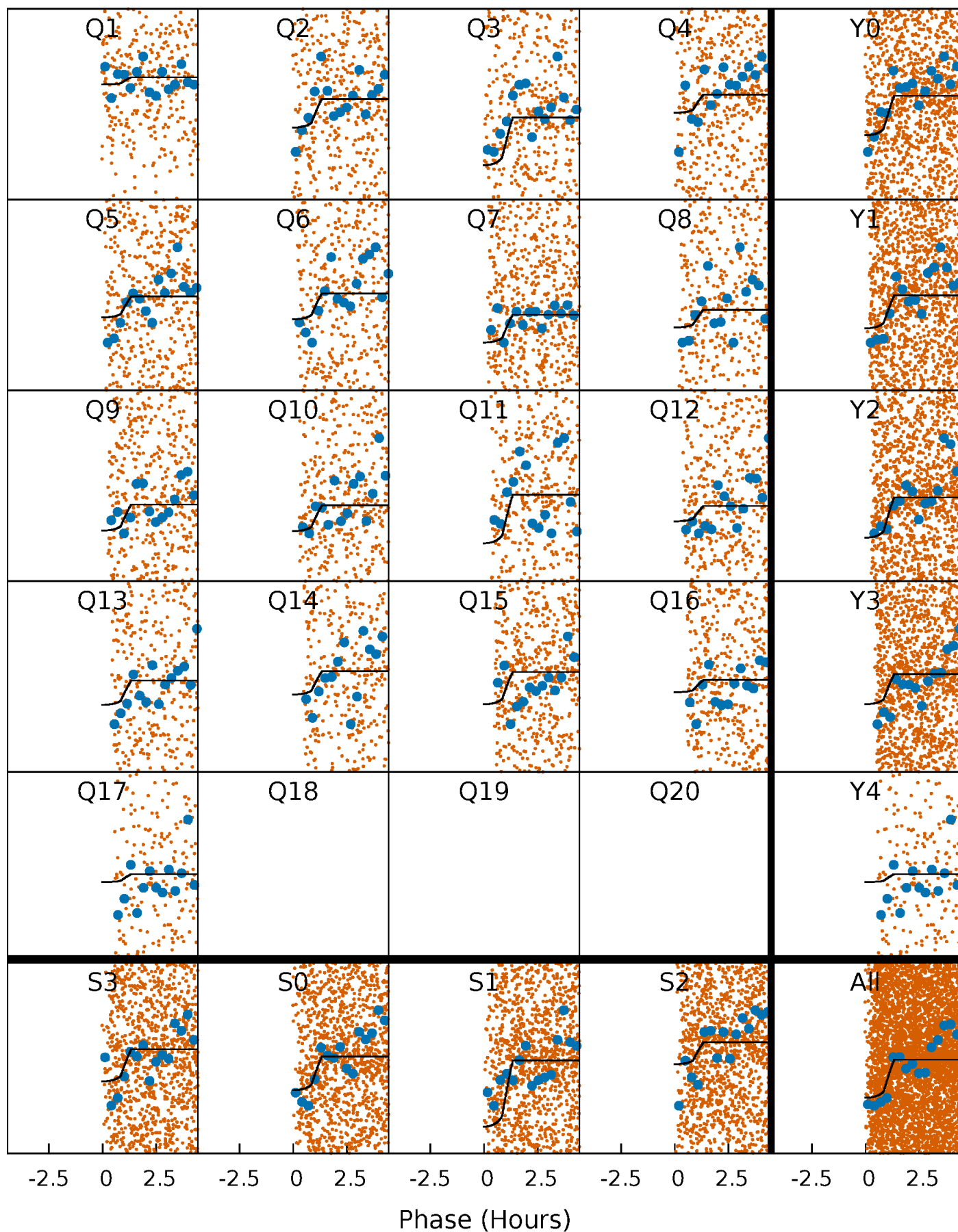
PDC Quarter-Phased Transit Curves

TCE 008177179-02 P= 0.912137 Days $T_0=131.956666$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 008177179-02 P= 0.912137 Days $T_0=131.956666$ (BKJD)

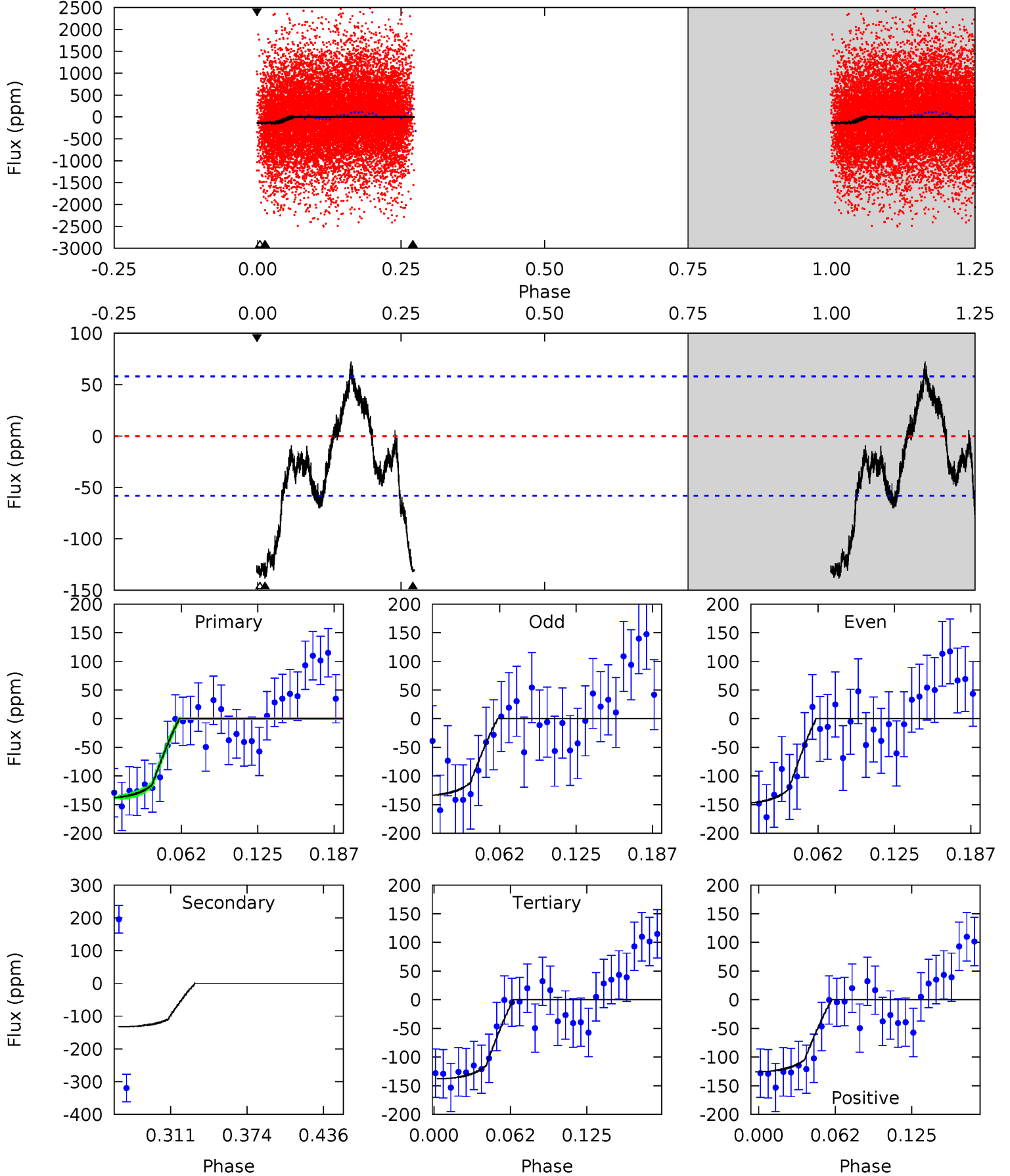


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

008177179-02, P = 0.912137 Days, E = 131.956666 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	10.6	11.1	-10.1	4.66	1.86	3.47	0.06	21.2	-0.44	20.8	0.54	1.16	0.34	0.36



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 008177179

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8018^{+222}_{-333}	$3.855^{+0.287}_{-0.123}$	$0.070^{+0.150}_{-0.400}$	$2.840^{+0.555}_{-1.111}$	$2.106^{+0.321}_{-0.521}$	$0.130^{+0.279}_{-0.044}$
	+3%/-4%	+7%/-3%	+214%/-571%	+20%/-39%	+15%/-25%	+216%/-34%
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 008177179-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-132±12	$3.11^{+2.12}_{-1.81}$	5309^{+379}_{-471}	8100^{+8744}_{-2128}	$4.280^{+19.602}_{-2.846}$
Alt.	N/A	N/A	N/A	N/A	N/A

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

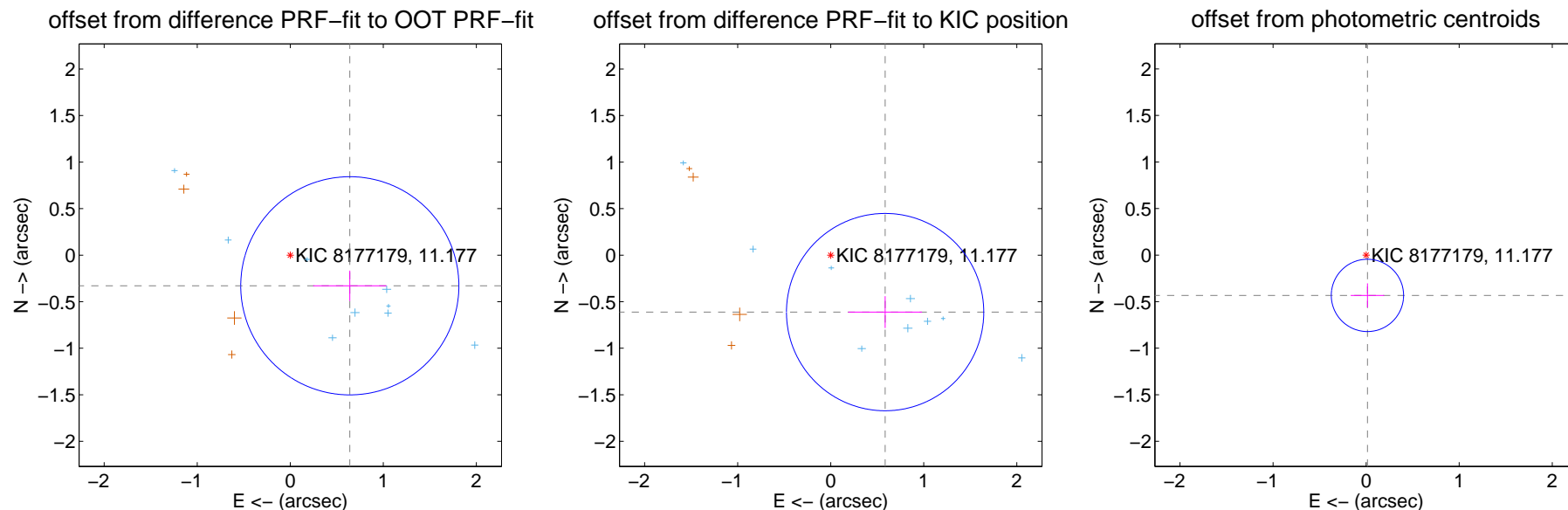
DV Centroid Data

Supplemental centroid analysis for 008177179-02. **Kepler magnitude: 11.18.** Transit SNR 9.36

There are 13 quarters with good PRF difference image offsets

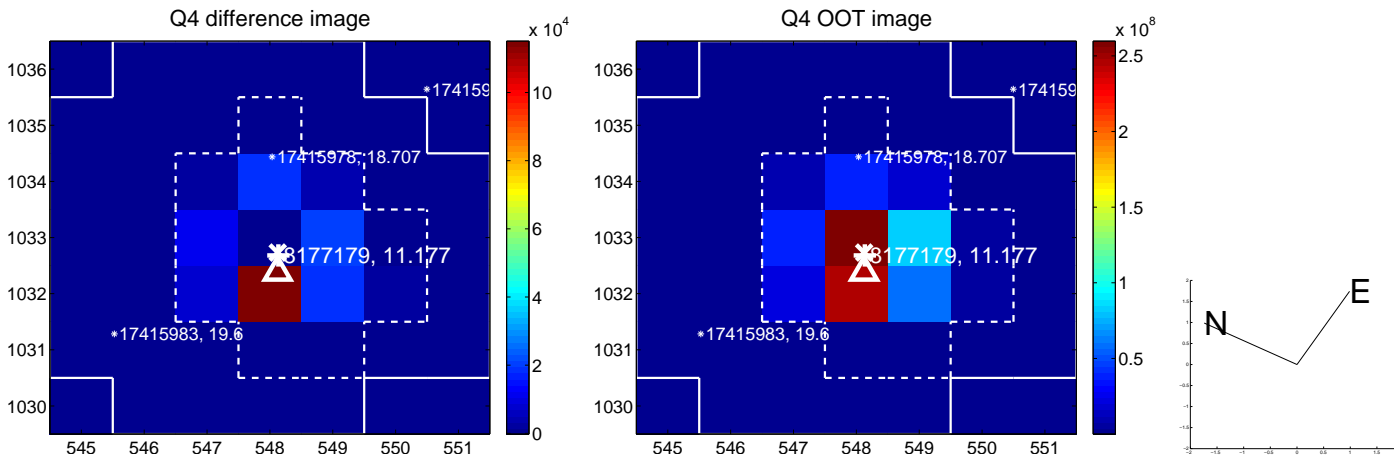
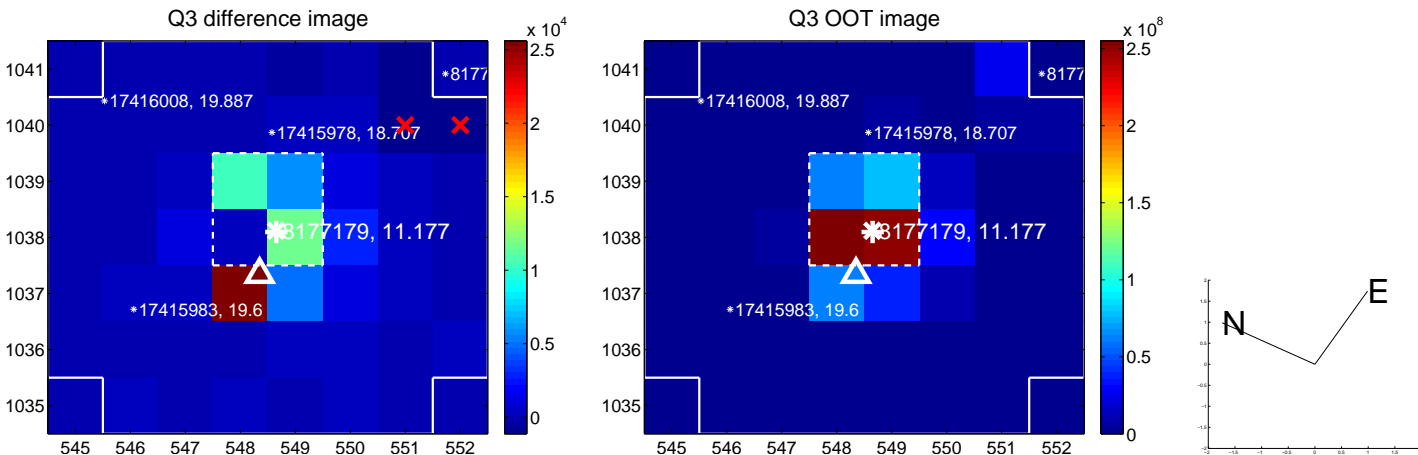
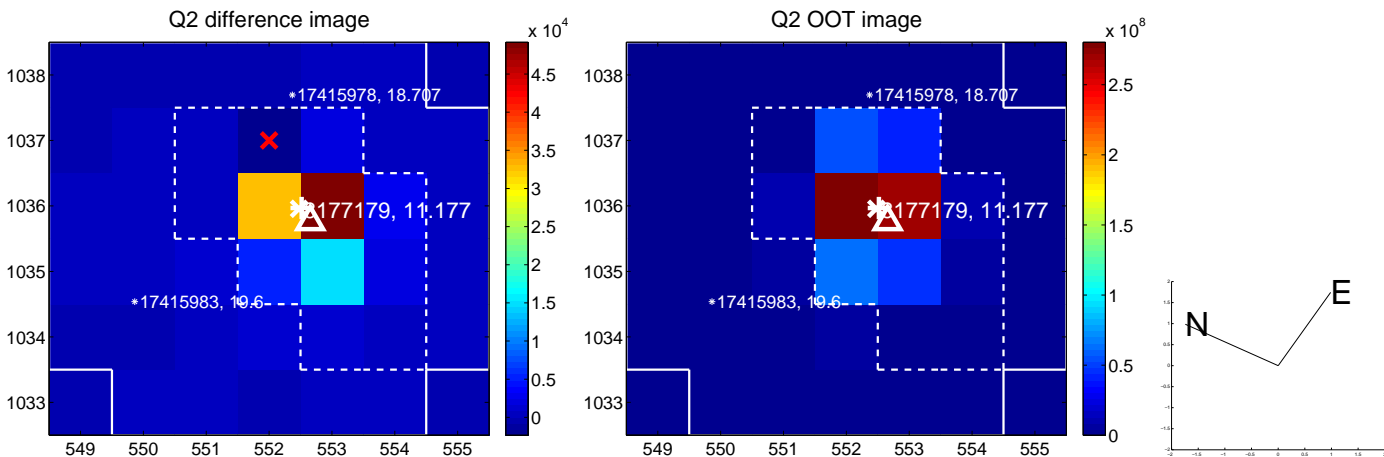
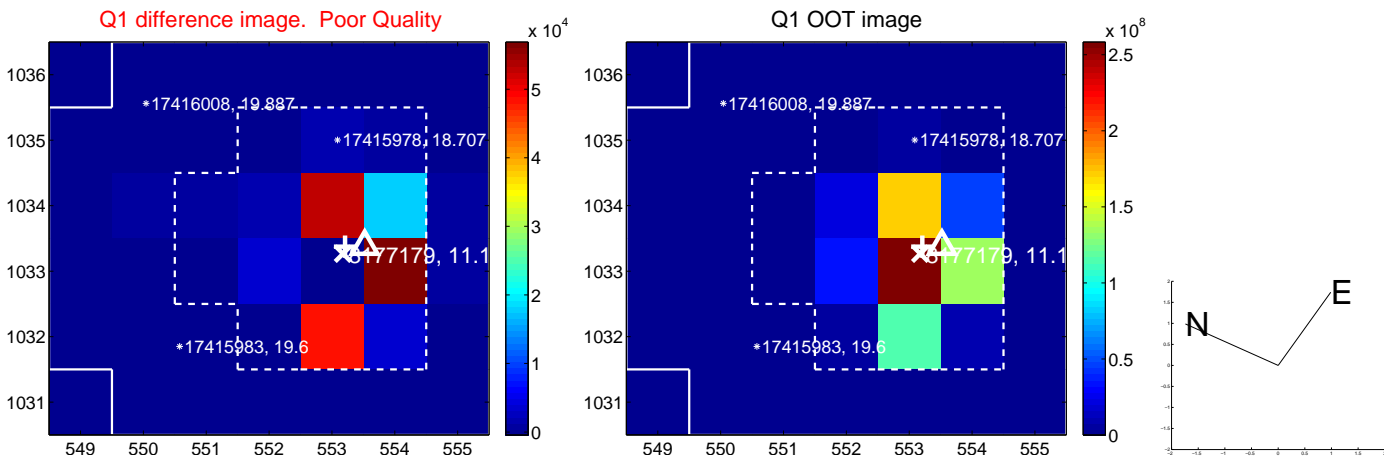
The direct PRF centroid is offset from the target star catalog position by about 0.36 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.720 ± 0.391	1.84	-0.640 ± 0.393	-0.329 ± 0.163
PRF-fit source offset from KIC position	0.846 ± 0.353	2.40	-0.585 ± 0.396	-0.612 ± 0.170
photometric centroid source offset	0.43 ± 0.13	3.35	-0.01 ± 0.18	-0.43 ± 0.13

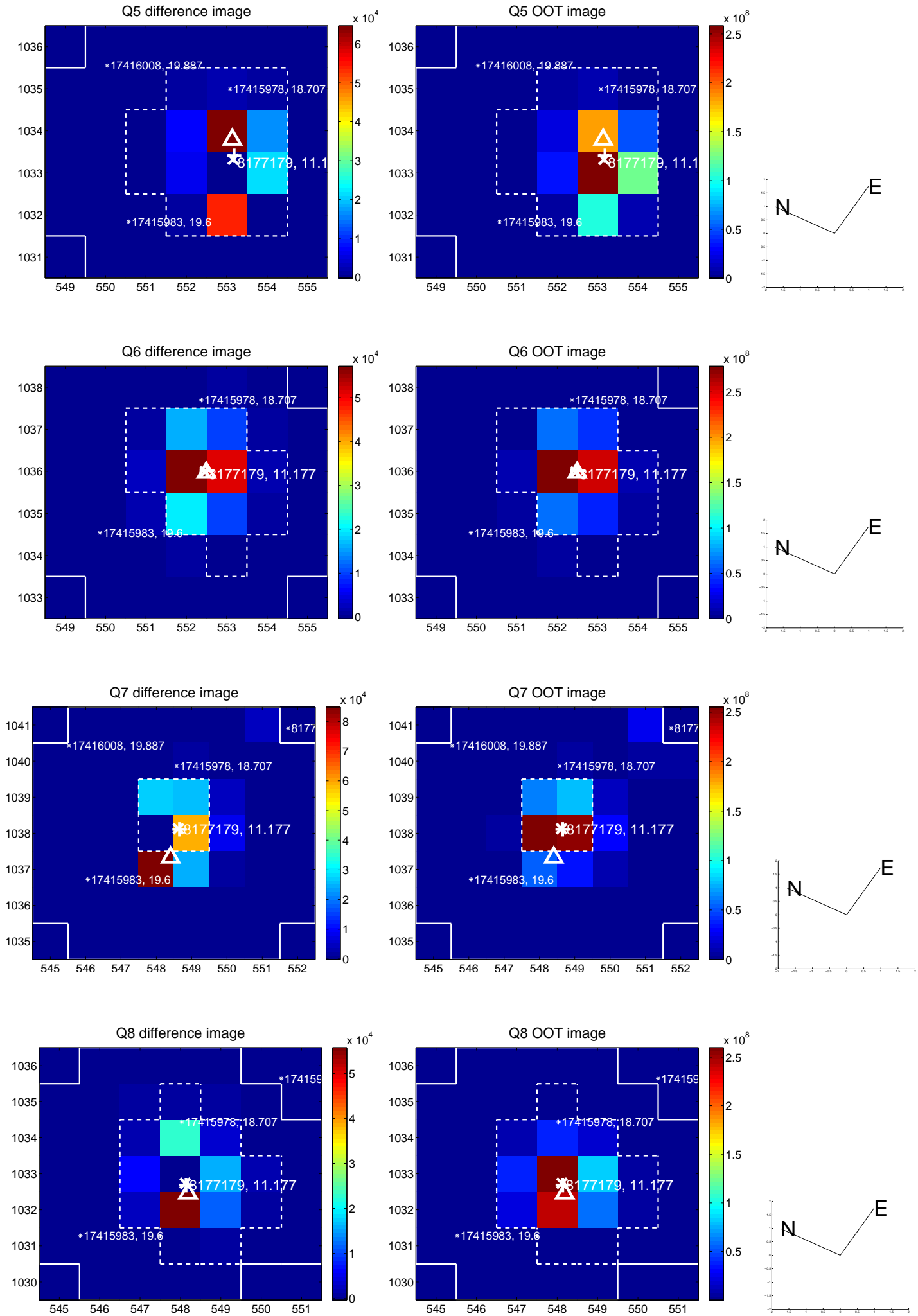


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

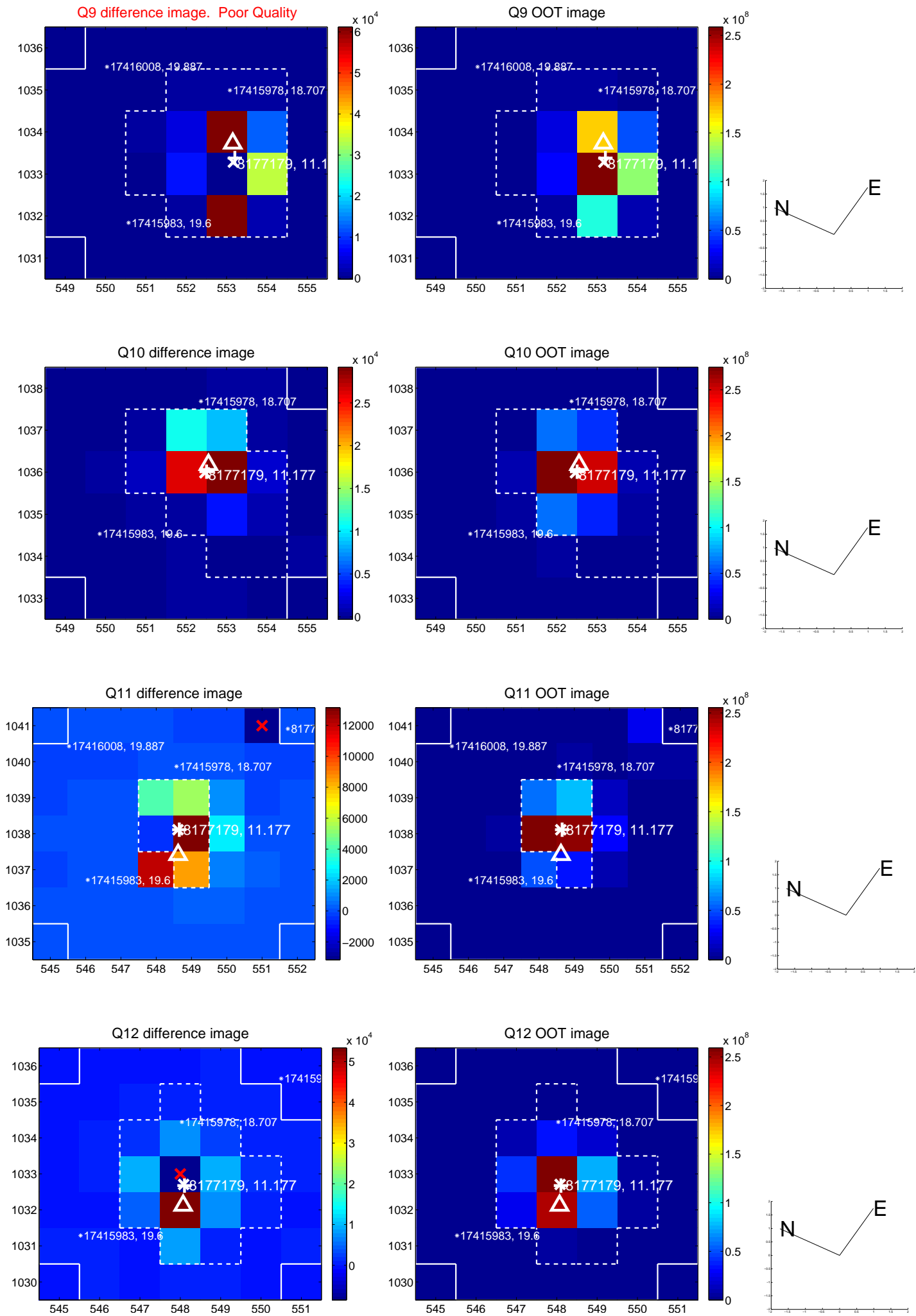
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



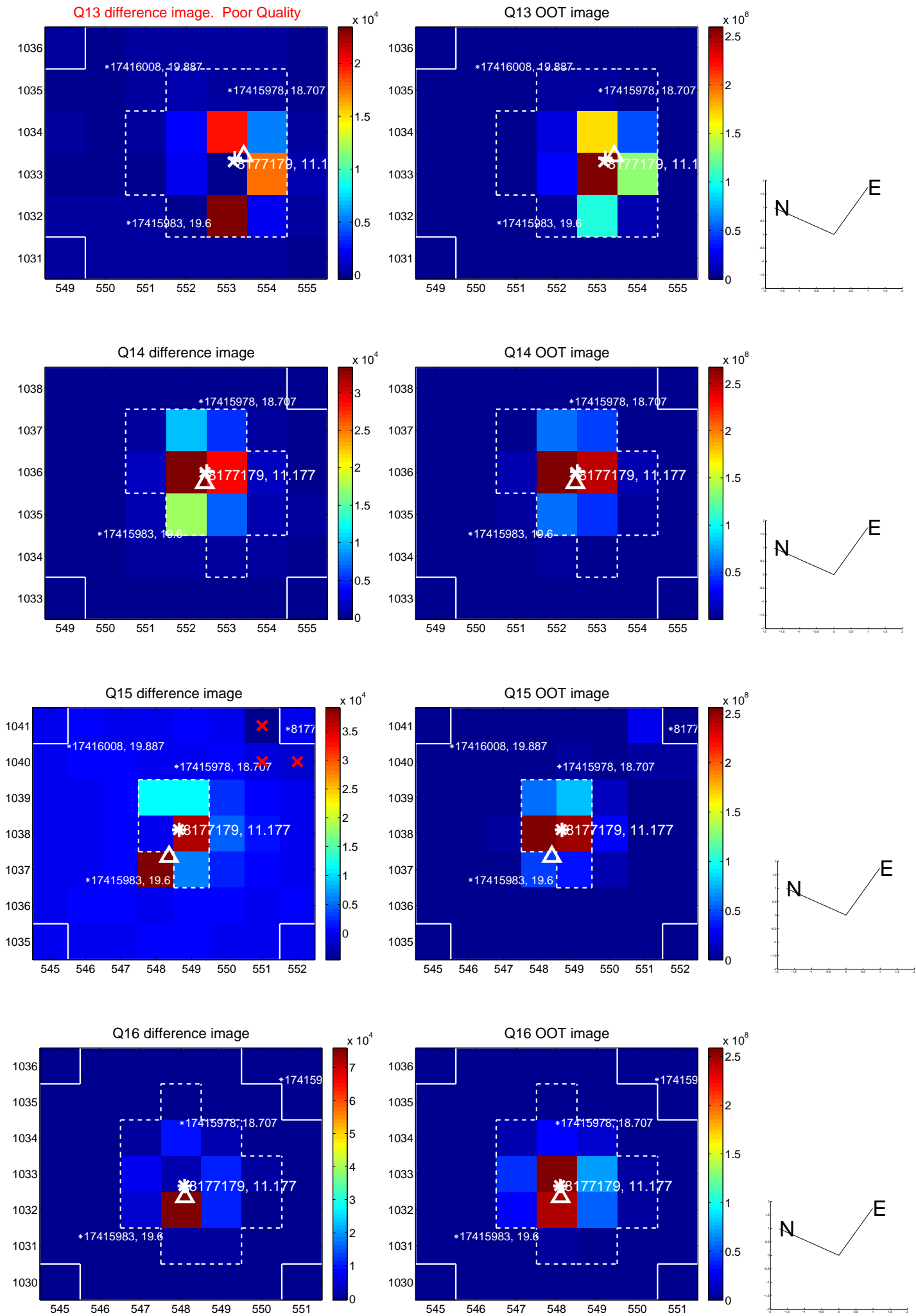
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



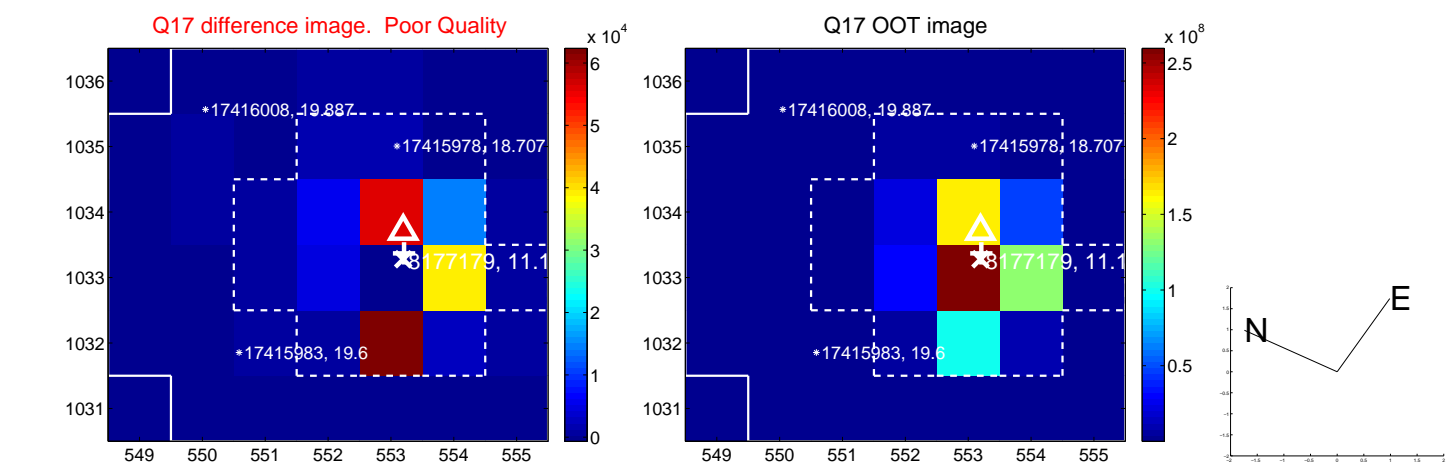
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



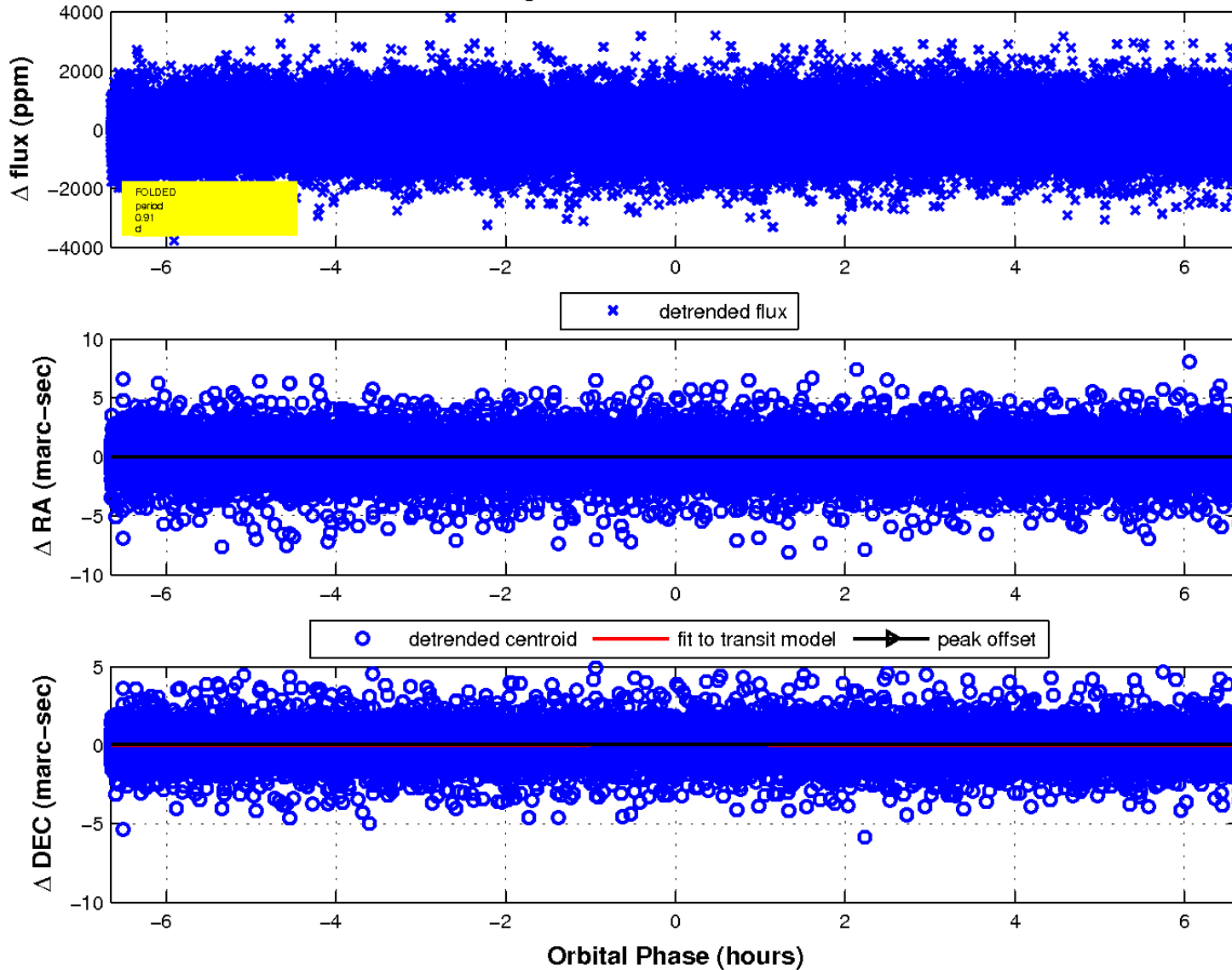
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 2 of 2



UKIRT Image

Declination

