

KIC 012208769

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})
012208769-01	OBS	No	4.188599	135.578259	46.7	11.826	10.7	9.1	3.20	6742	2.80	6030.62
012208769-02	OBS	No	4.189263	134.657155	65.0	19.949	11.5	11.3	3.20	6742	3.38	6029.35
012208769-03	OBS	No	4.185484	133.249424	11.9	27.554	7.2	4.0	3.20	6742	1.34	6036.61

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012208769-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL —LPP_DV —CENT_SATURATED
012208769-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA —LPP_DV —MOD_NONUNIQ_DV —SAME_NTL_PERIOD —CENT_SATURATED
012208769-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA —SWEET_NTL —LPP_DV —LPP_ALT —MOD_NONUNIQ_DV —CENT_SATURATED

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

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

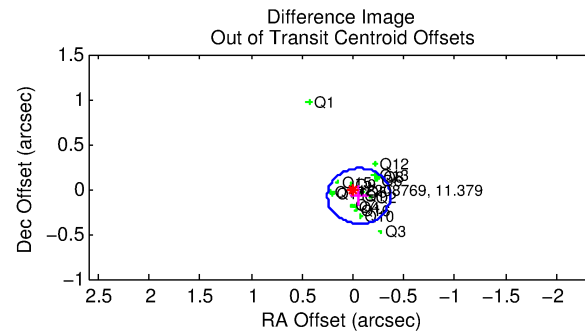
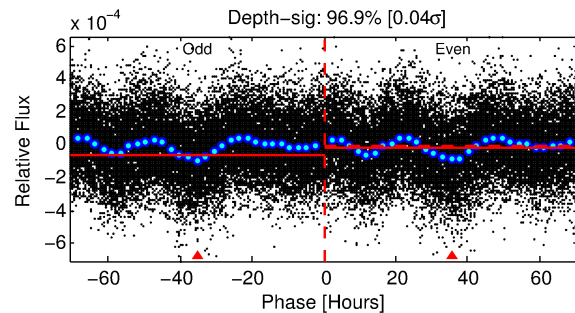
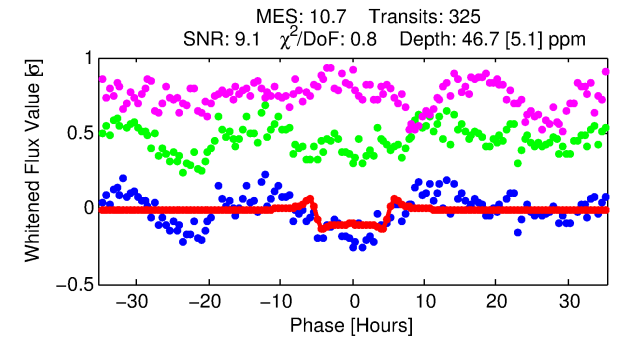
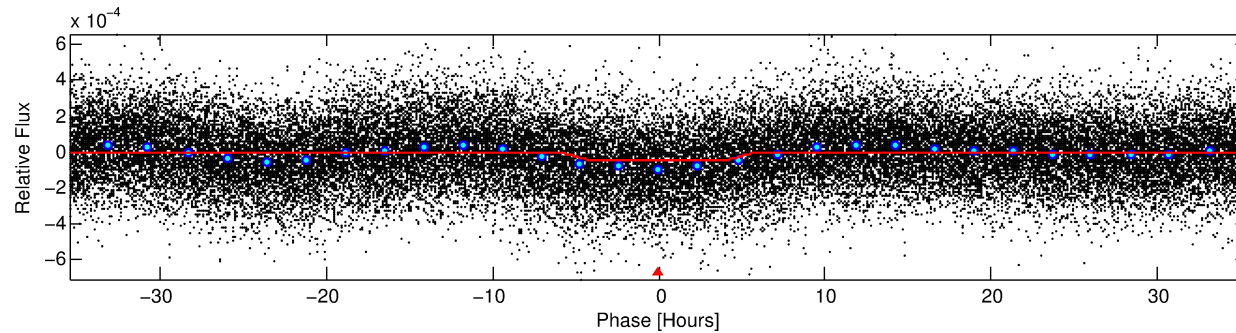
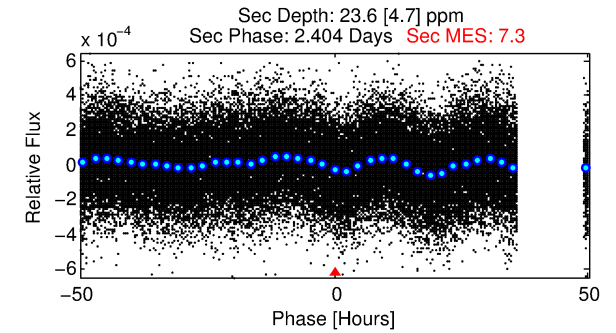
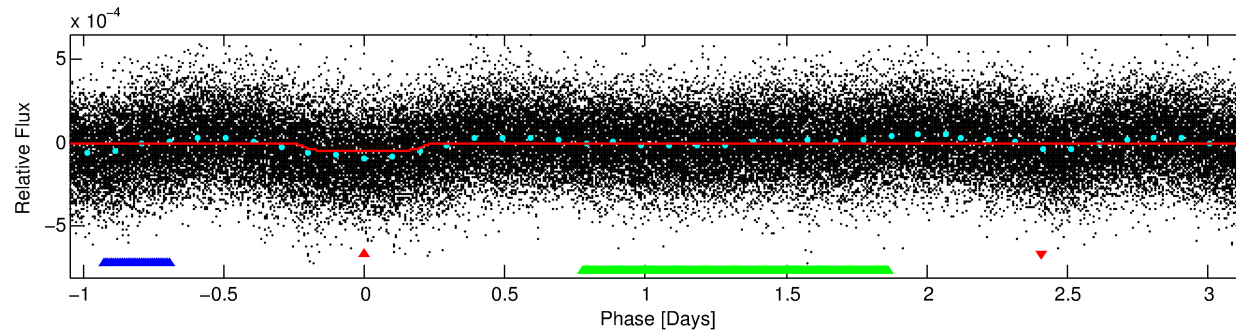
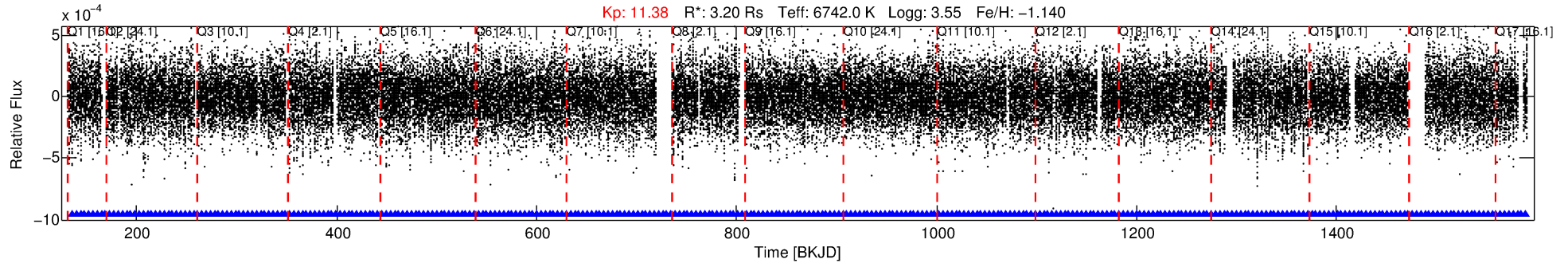
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012208769-01

No Significant Match Found

DV One-Page Summary

KIC: 12208769 Candidate: 1 of 3 Period: 4.189 d



DV Fit Results:

Period = 4.18860 [0.00006] d
Epoch = 135.5783 [0.0107] BKJD
Rp/R* = 0.0080 [0.0005]
a/R* = 1.22 [0.07]
b = 0.97 [0.01]
Seff = 6030.62 [3876.70]
Teq = 2247 [361] K
Rp = 2.80 [1.18] Re
a = 0.0560 [0.0221] AU
Ag = 5.20 [3.49] [1.20σ]
Teffp = 5245 [352] K [5.94σ]

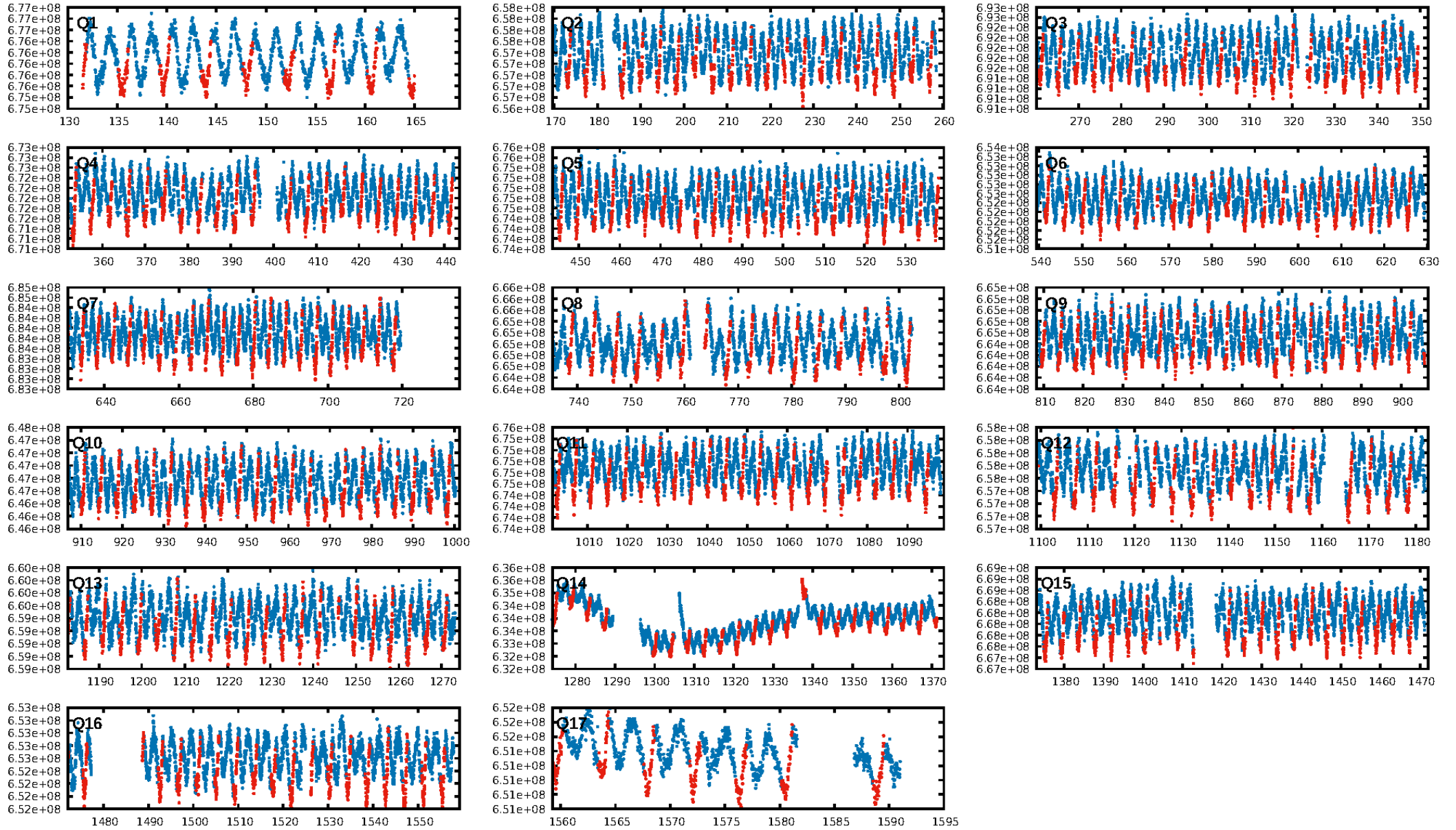
DV Diagnostic Results:

ShortPeriod-sig: 0.2% [0.00σ]
LongPeriod-sig: 0.1% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [309/309]
GhostDiagnostic-chr: 1.144
Centroid-sig: 0.0%
Centroid-so: 0.887 arcsec [2.93σ]
OotOffset-rm: 0.097 arcsec [0.94σ]
KicOffset-rm: 0.165 arcsec [1.54σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

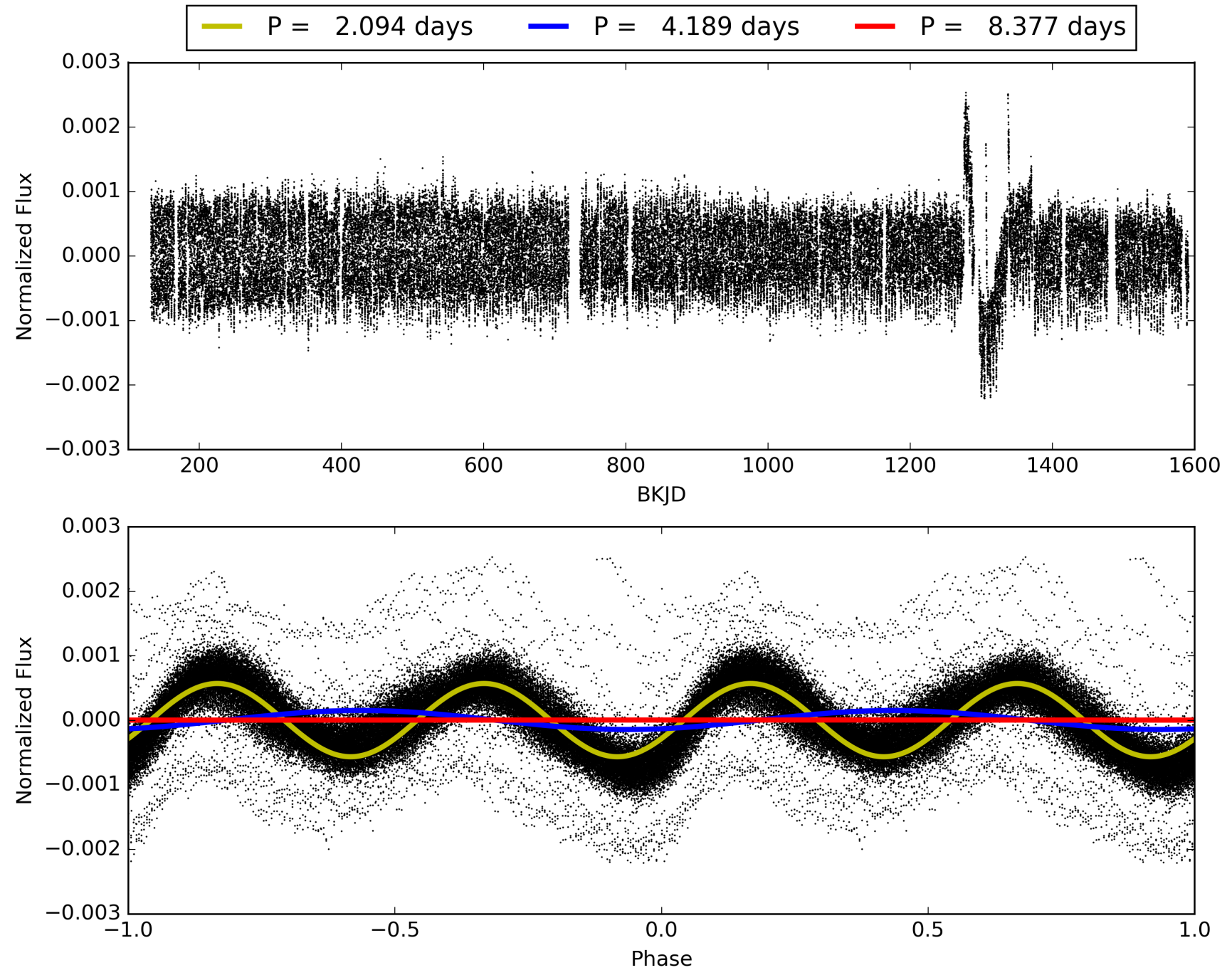
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 08:41:53 Z

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

TCE 012208769-01, PDC Light Curves

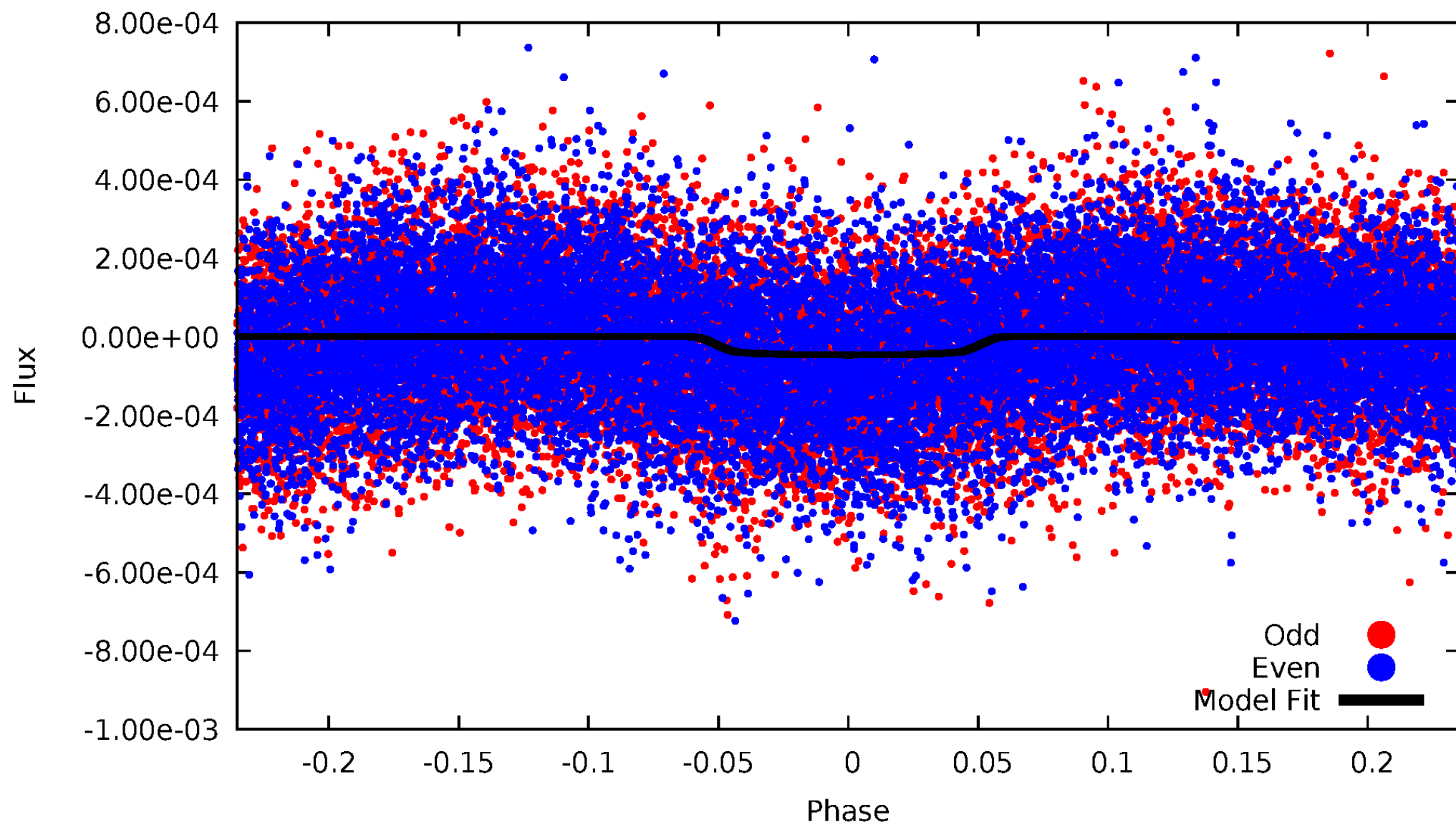


TCE 012208769-01



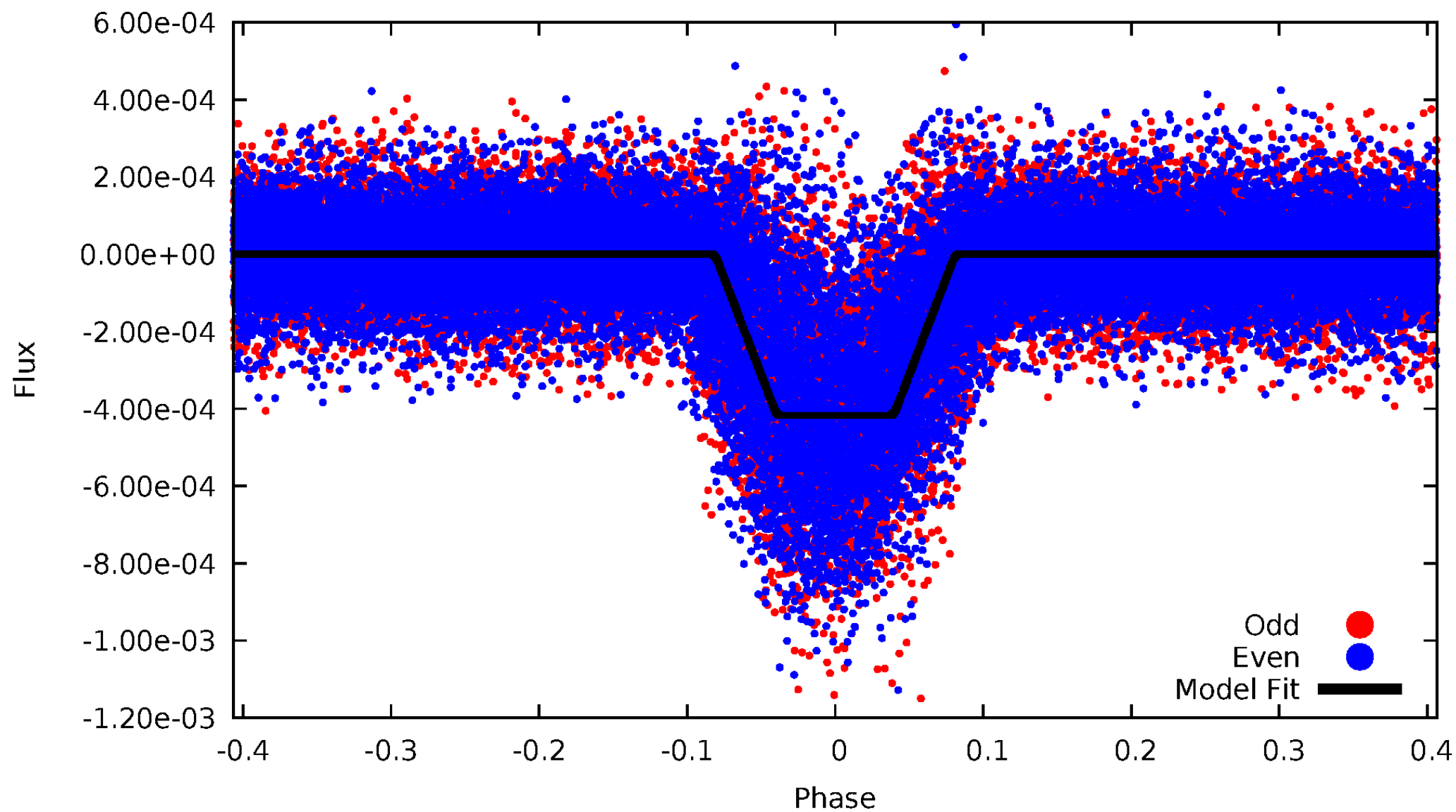
DV Odd/Even

TCE 012208769-01

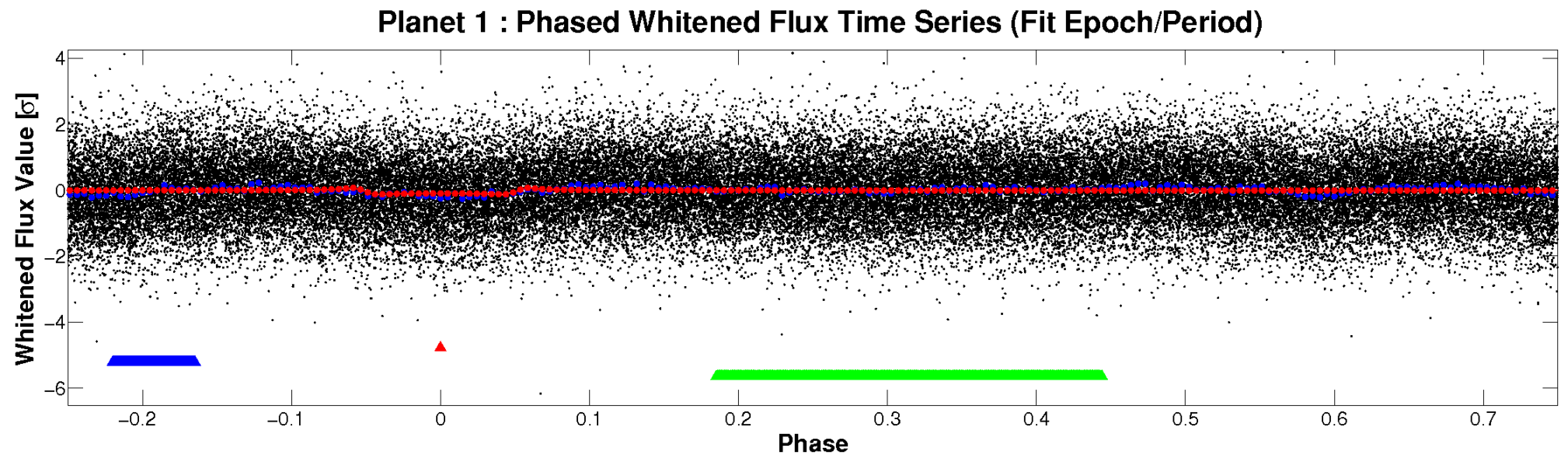
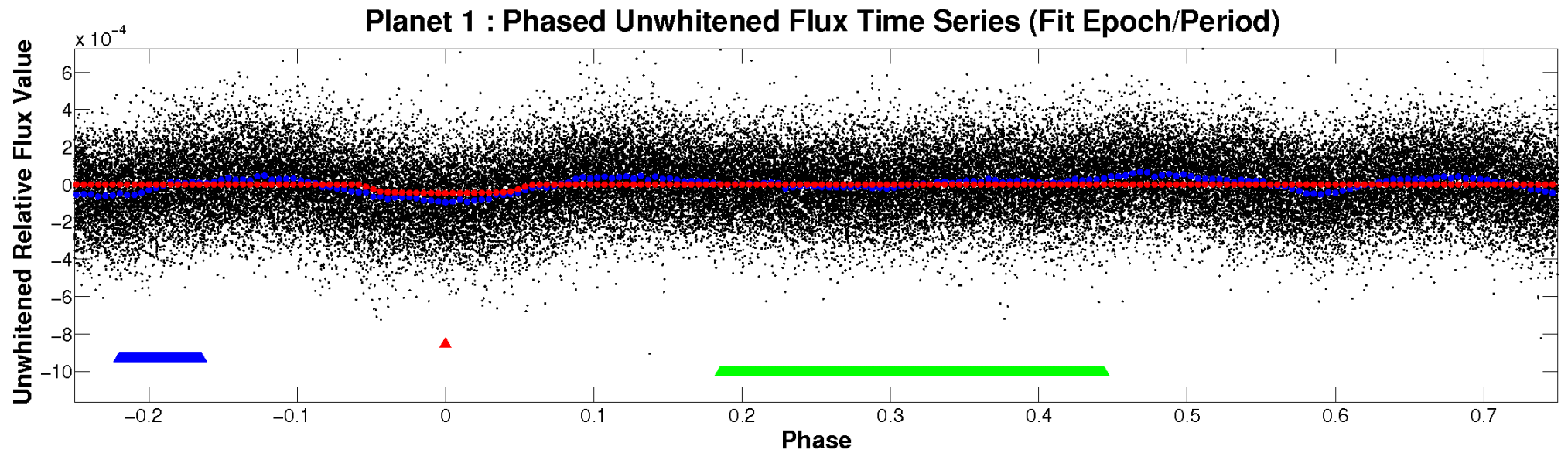


ALT Odd/Even

TCE 012208769-01

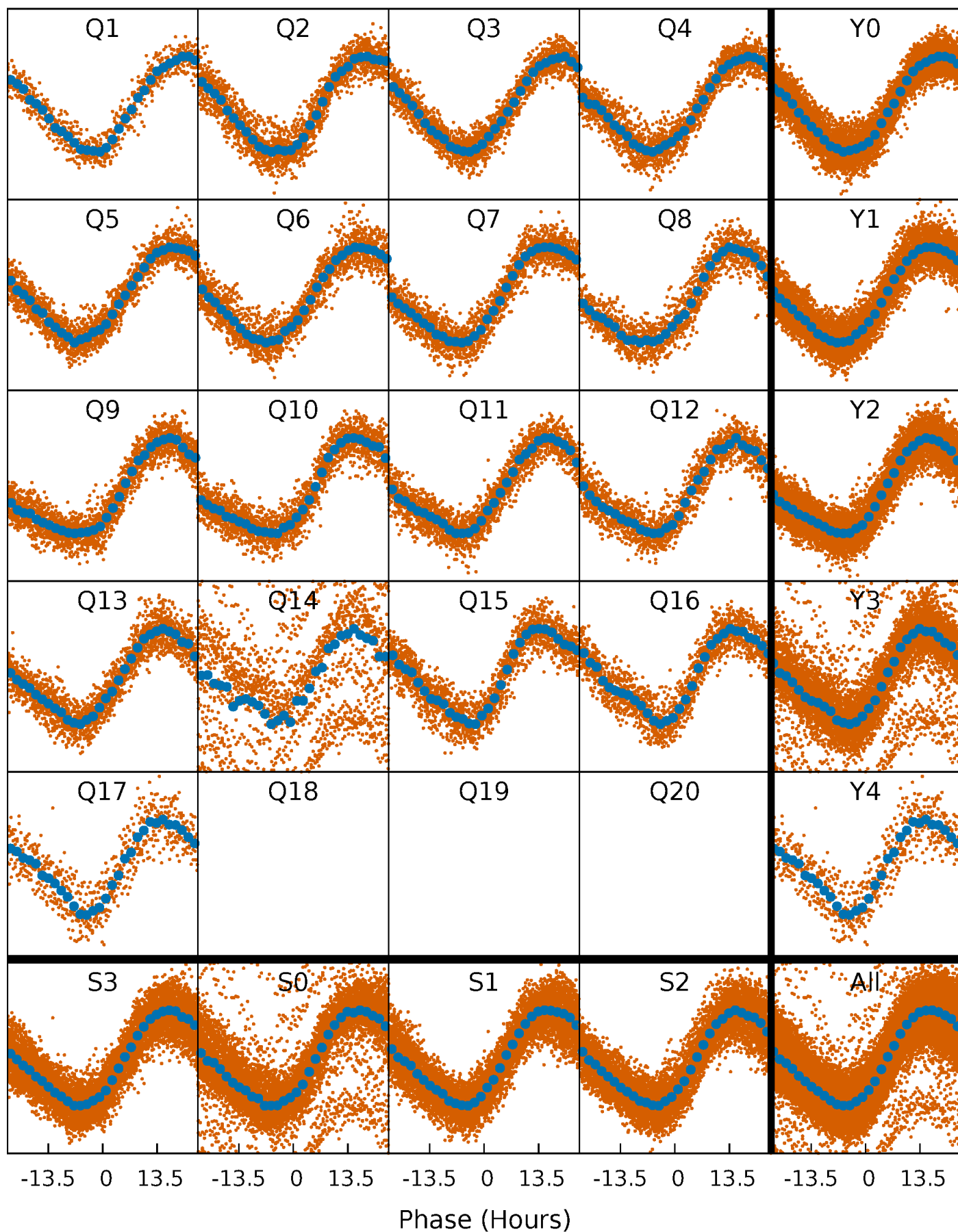


Non-Whitened Vs. Whitened Light Curve



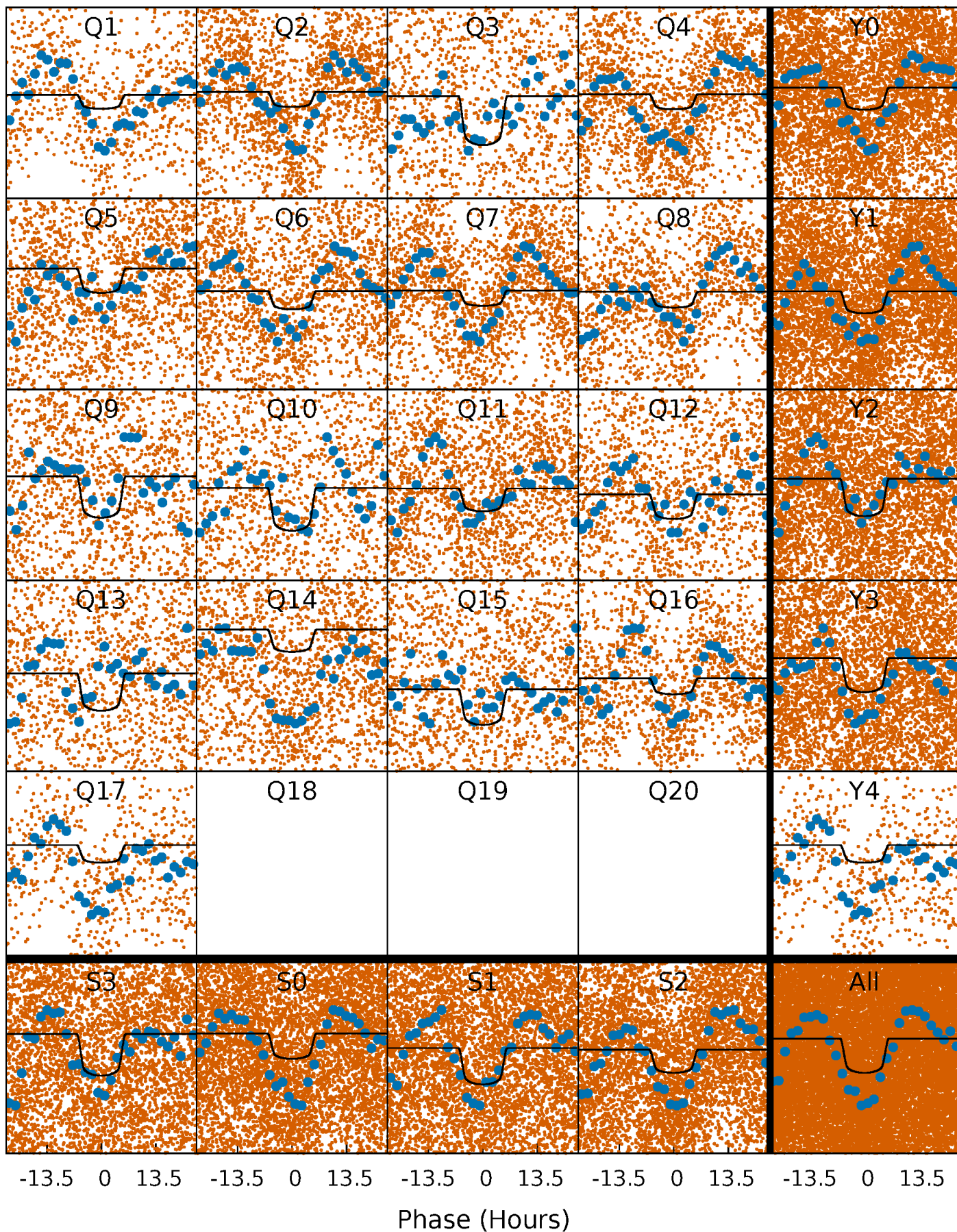
PDC Quarter-Phased Transit Curves

TCE 012208769-01 P= 4.188599 Days $T_0=135.578259$ (BKJD)



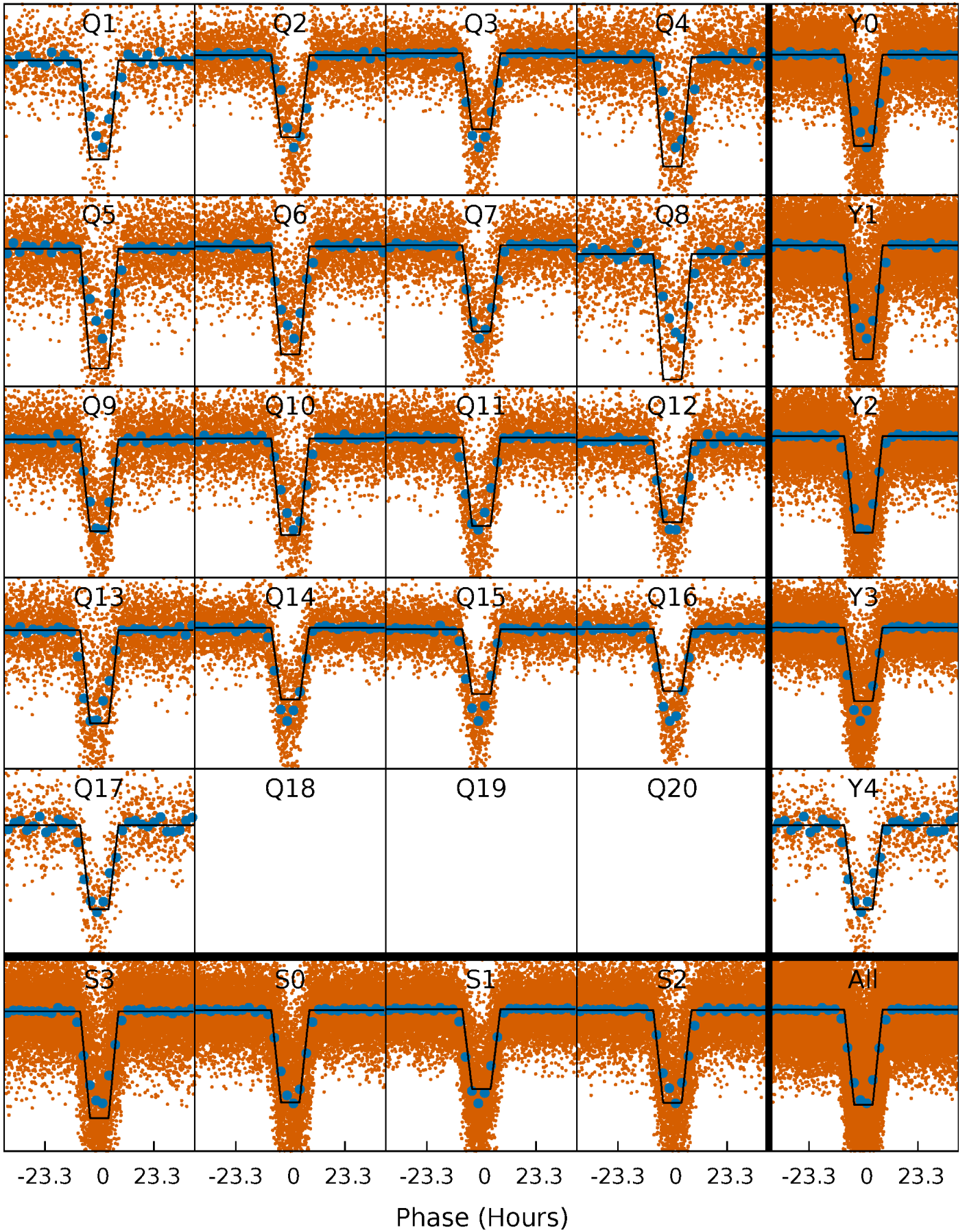
DV Quarter-Phased Transit Curves

TCE 012208769-01 P= 4.188599 Days $T_0=135.578259$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

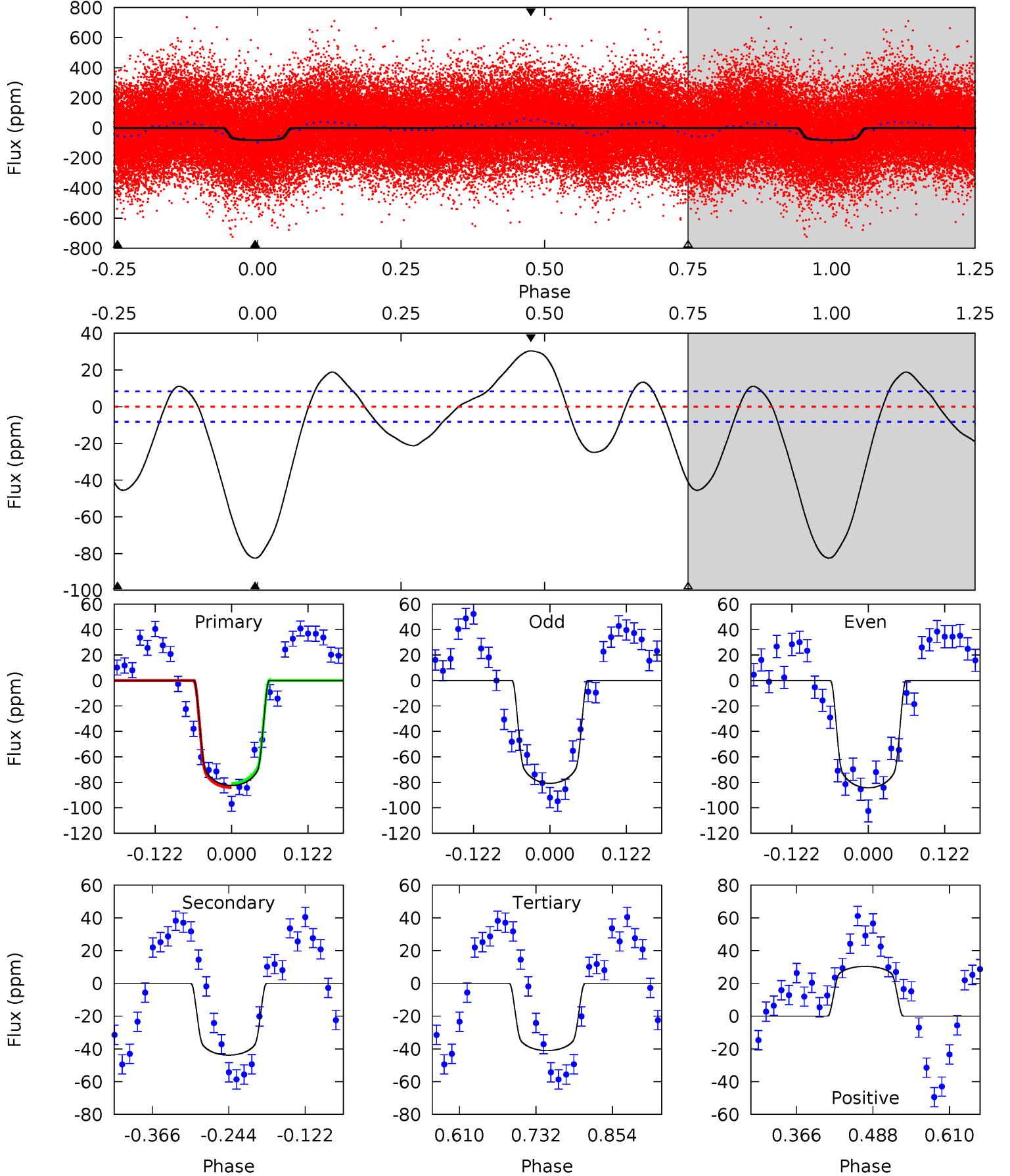
TCE 012208769-01 P= 4.188604 Days $T_0=135.562131$ (BKJD)



DV Model-Shift Uniqueness Test

012208769-01, P = 4.188599 Days, E = 131.389660 Days

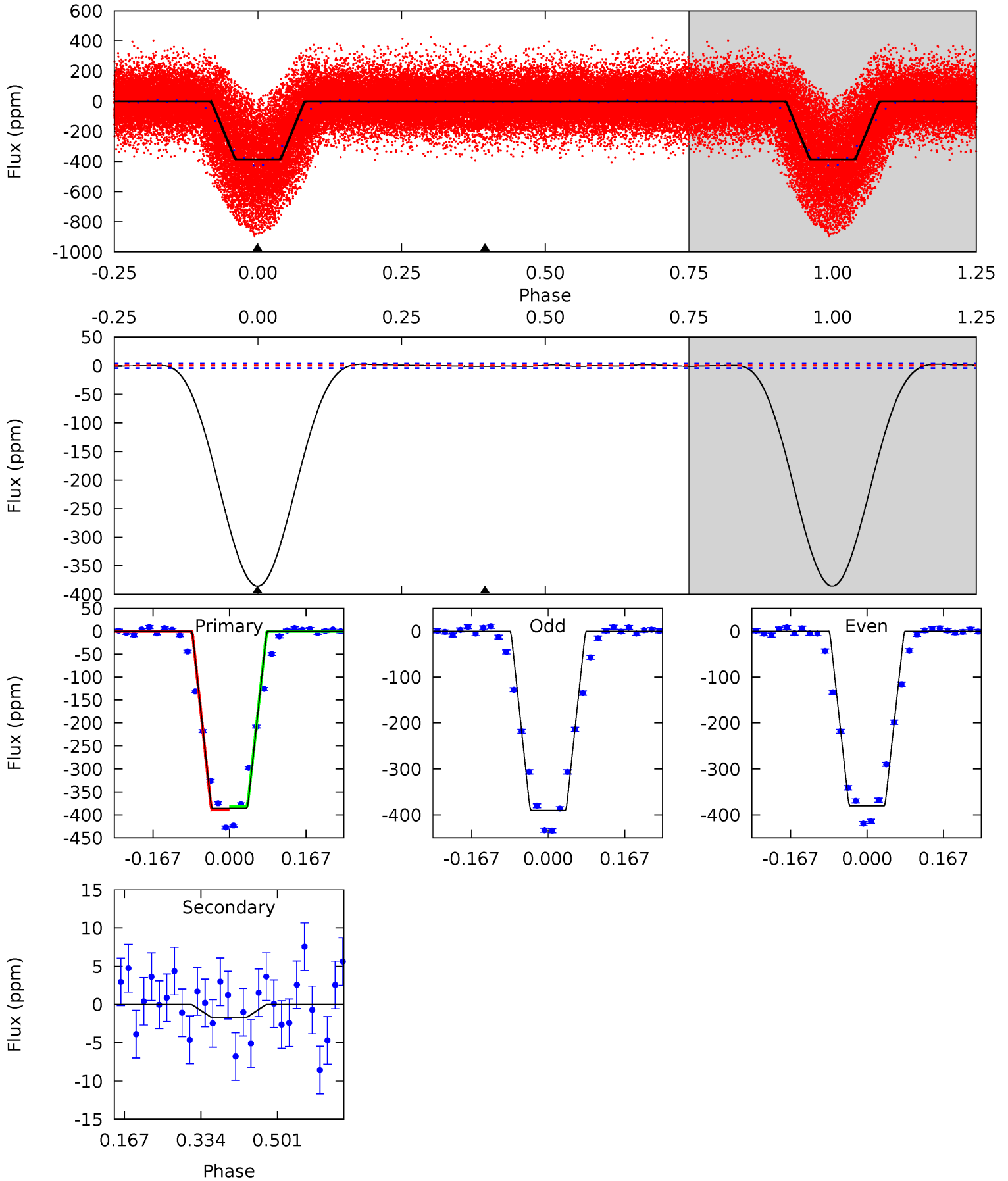
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
45.0	23.9	22.4	16.6	4.52	1.55	9.35	22.6	28.4	1.52	7.32	0.95	1.02	0.27	0.87



Alt Model-Shift Uniqueness Test

012208769-01, P = 4.188604 Days, E = 131.373527 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
392.2	1.68	0	0	4.46	1.38	1.02	392.2	392.2	1.68	1.68	4.81	1.00	0.01	3.74



Stellar Parameters For KIC 012208769

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6742^{+182}_{-223}	$3.554^{+0.368}_{-0.092}$	$-1.140^{+0.350}_{-0.300}$	$3.196^{+0.569}_{-1.327}$	$1.331^{+0.156}_{-0.338}$	$0.057^{+0.170}_{-0.016}$
	+3%/-3%	+10%/-3%	+31%/-26%	+18%/-42%	+12%/-25%	+296%/-29%
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 012208769-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-44 ± 2	$2.65^{+0.42}_{-0.57}$	3051^{+216}_{-321}	6060^{+279}_{-246}	11^{+6}_{-3}
Alt.	-2 ± 1	$6.78^{+0.89}_{-1.46}$	3038^{+212}_{-313}	-2998^{+227}_{-162}	$0.064^{+0.056}_{-0.037}$

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

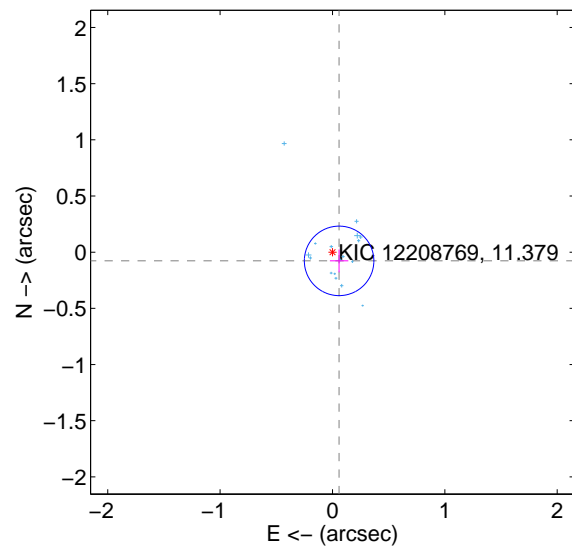
Supplemental centroid analysis for 012208769-01. **Kepler magnitude: 11.38.** Transit SNR 9.11

There are 17 quarters with good PRF difference image offsets

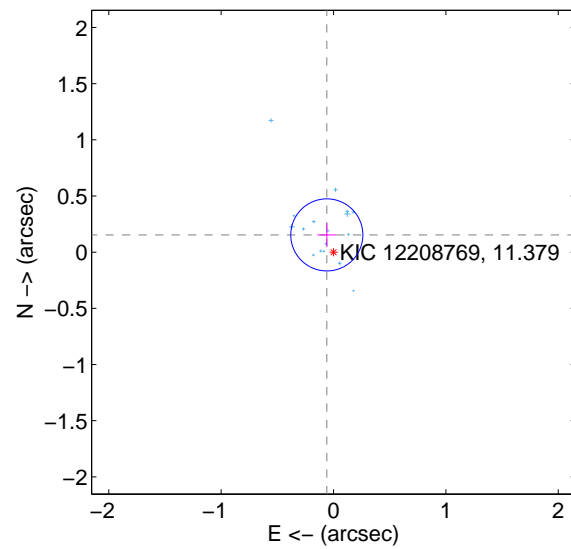
The direct PRF centroid is offset from the target star catalog position by about 0.30 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.097 ± 0.103	0.94	-0.059 ± 0.082	-0.077 ± 0.101
PRF-fit source offset from KIC position	0.165 ± 0.107	1.54	0.060 ± 0.085	0.154 ± 0.103
photometric centroid source offset	0.89 ± 0.30	2.93	0.80 ± 0.25	-0.39 ± 0.45

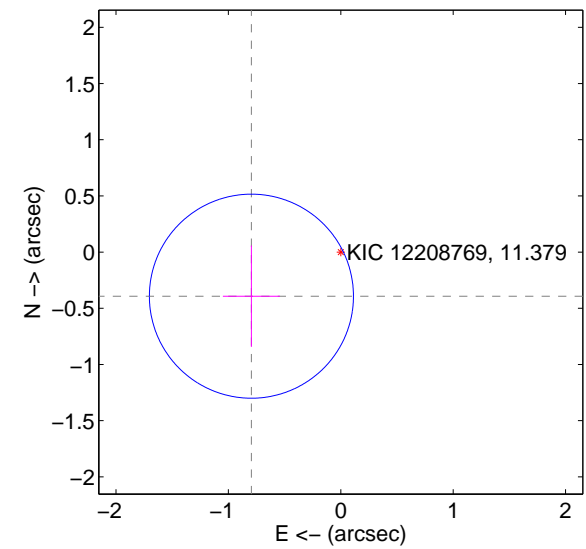
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

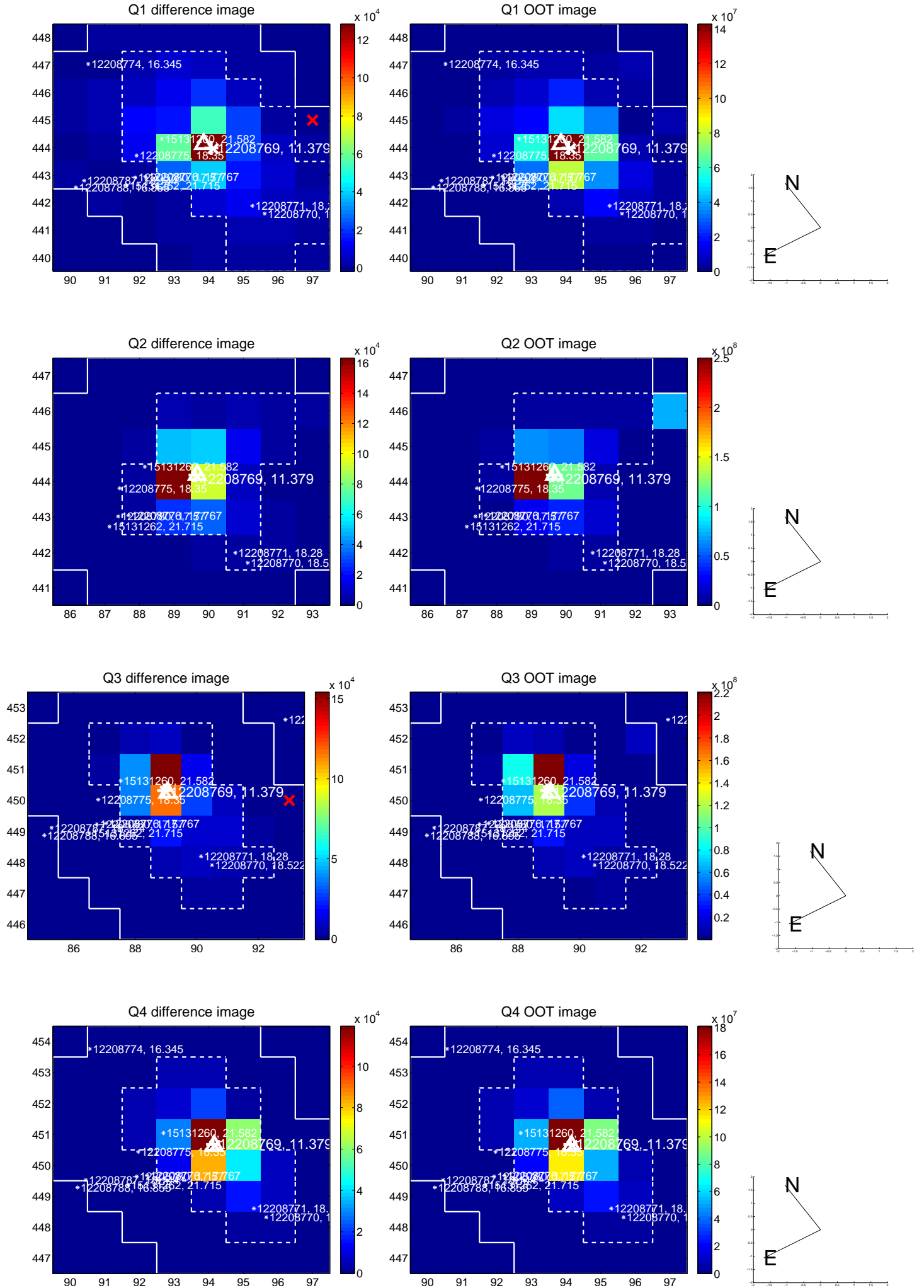


offset from photometric centroids

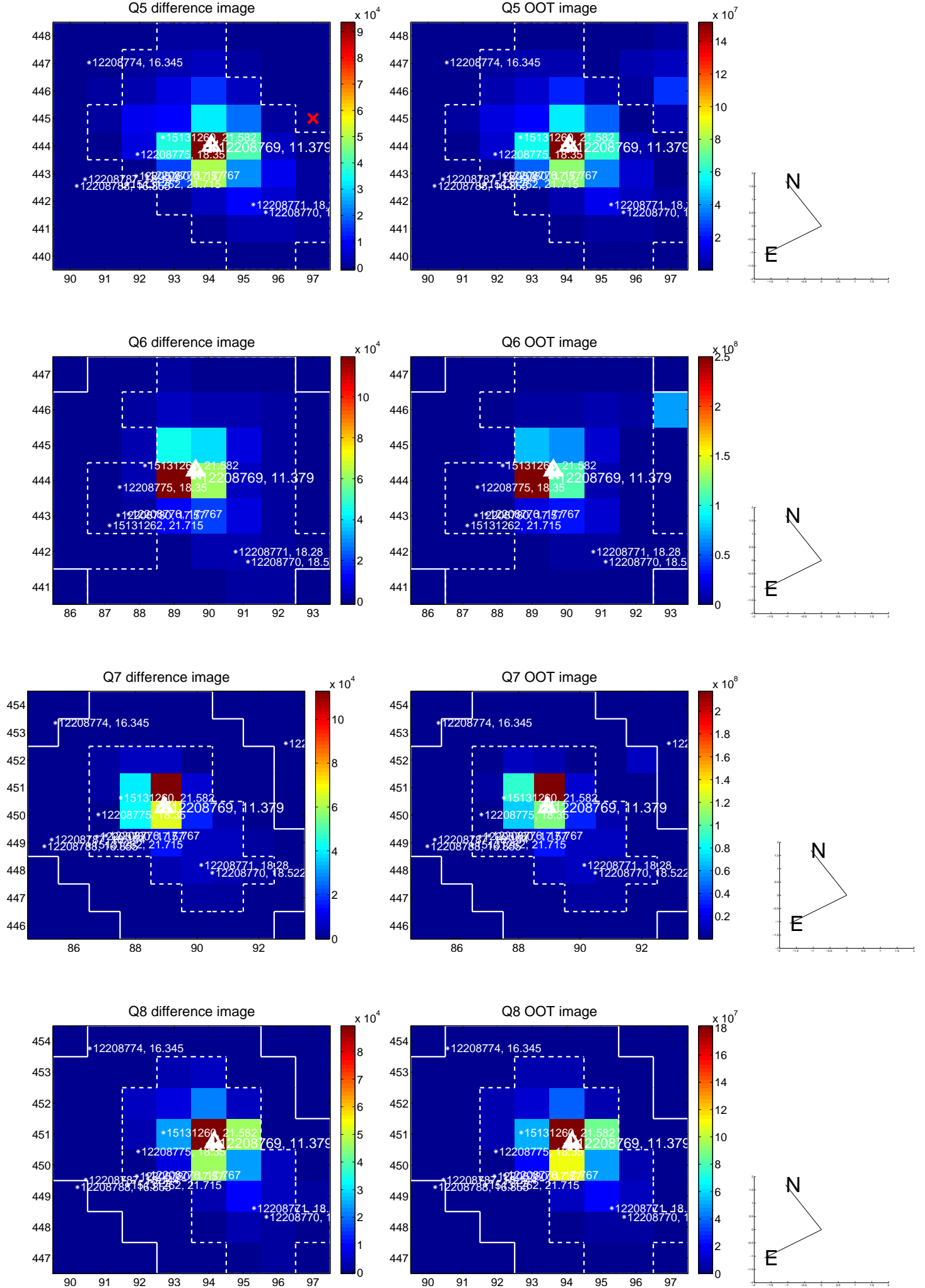


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

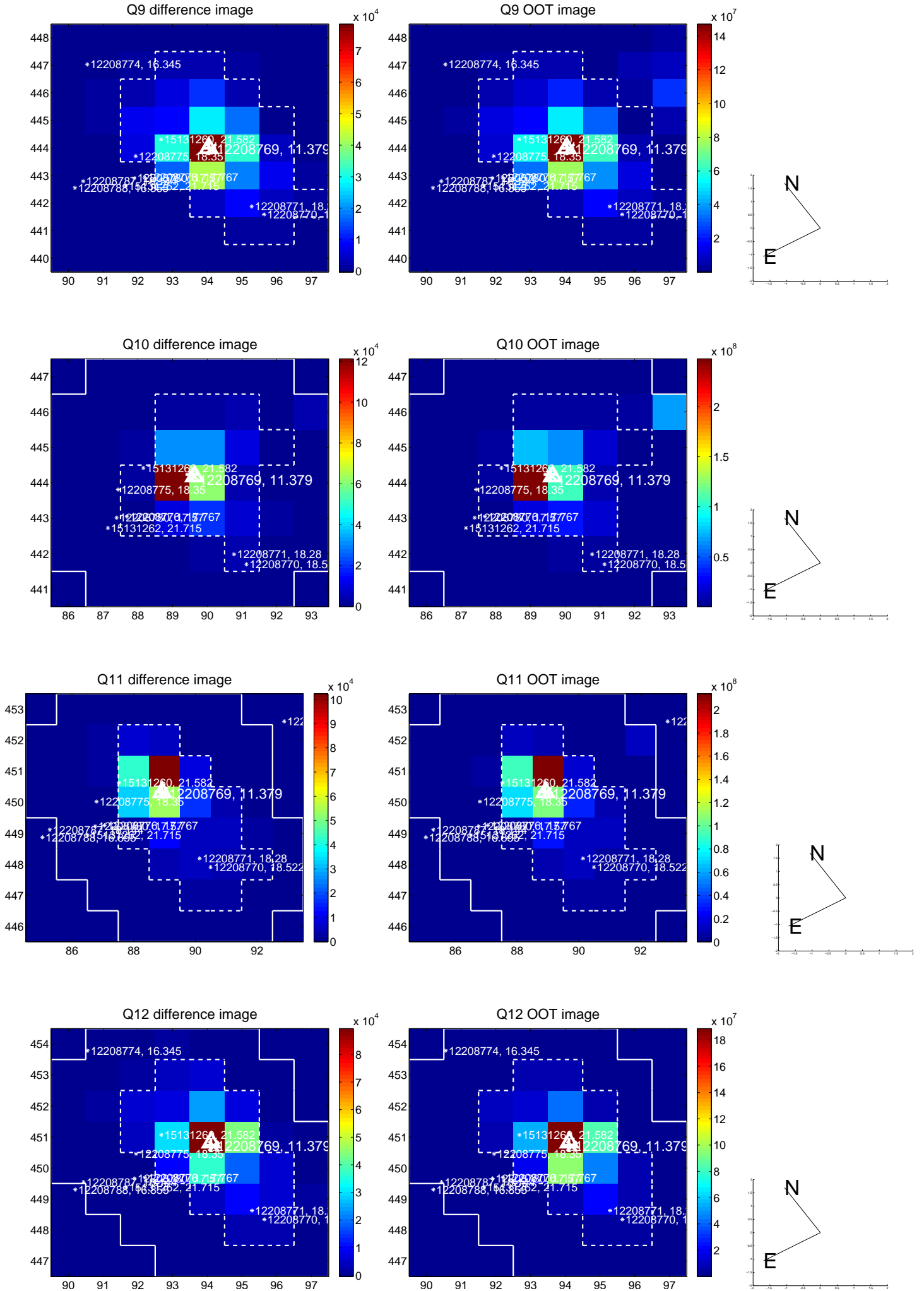
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



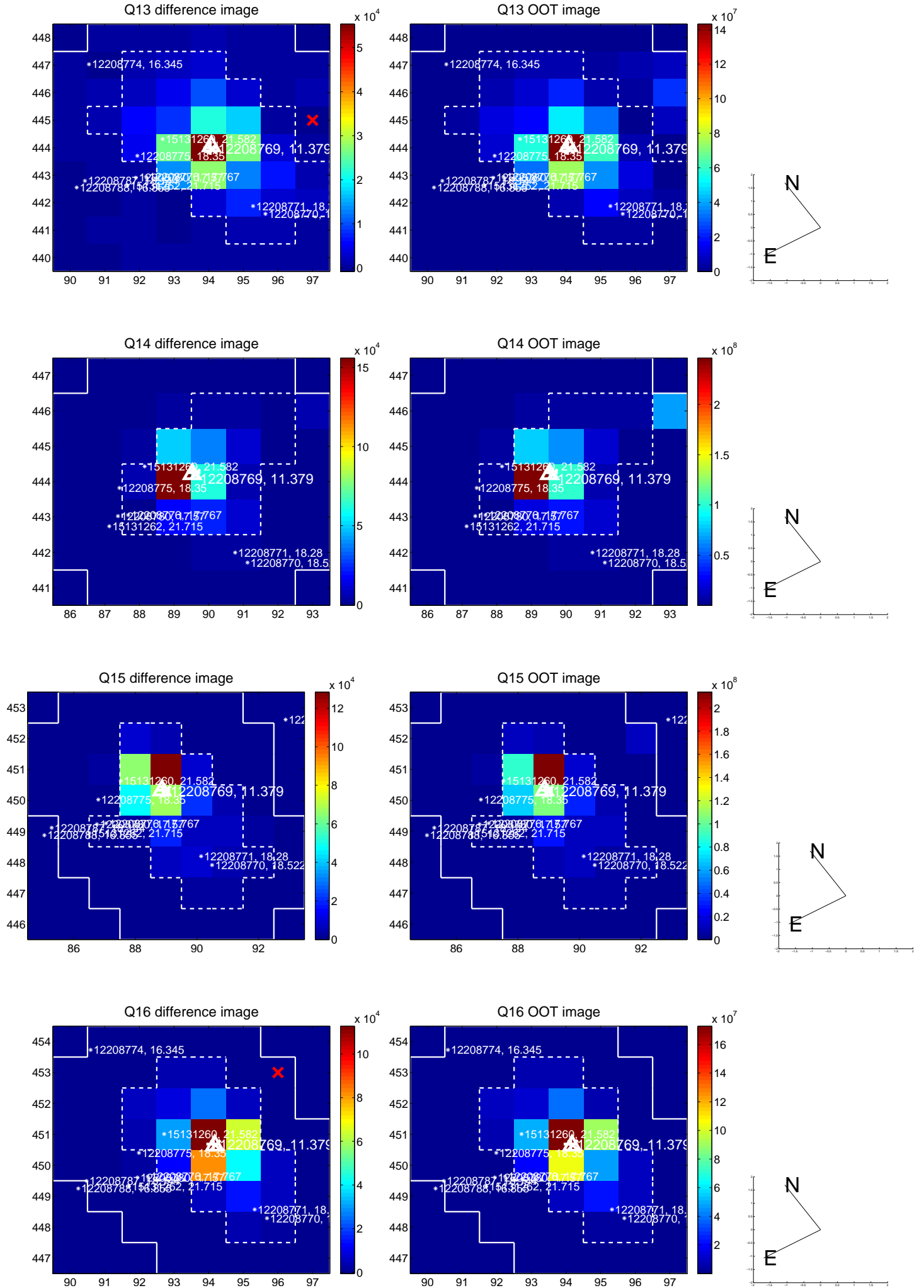
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



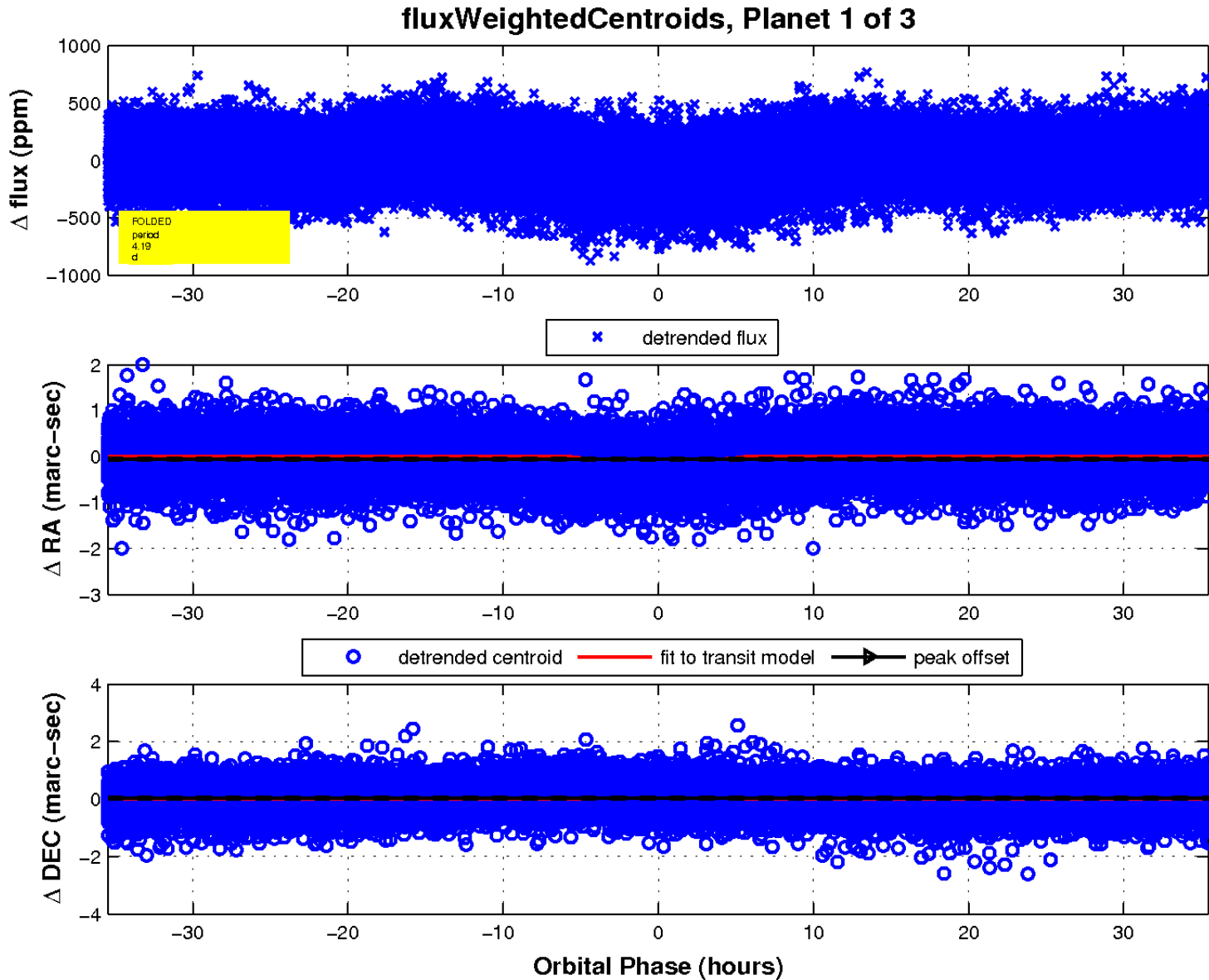
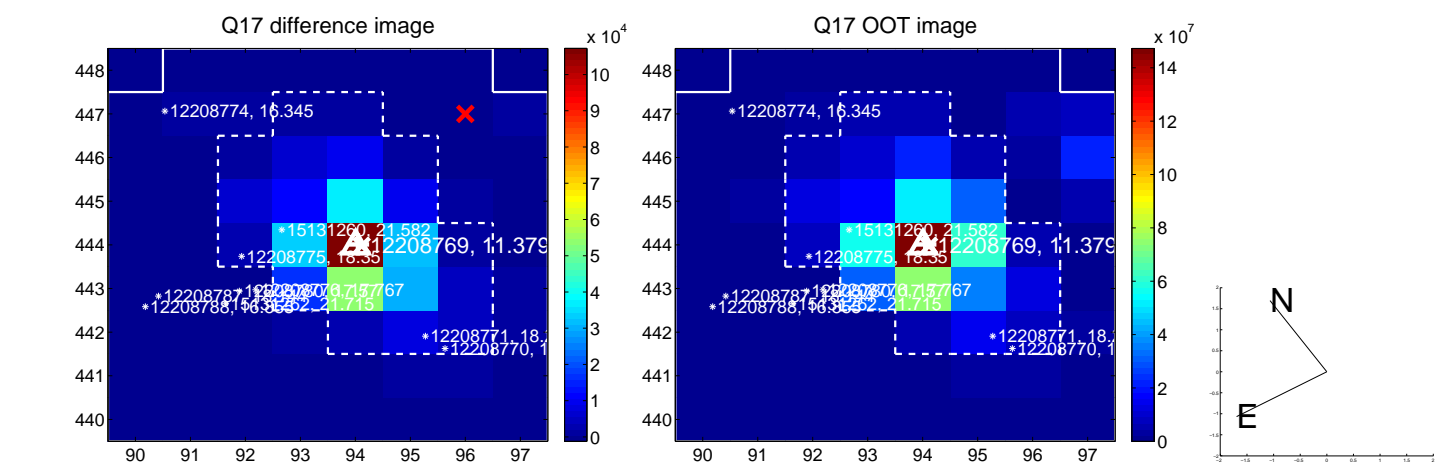
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



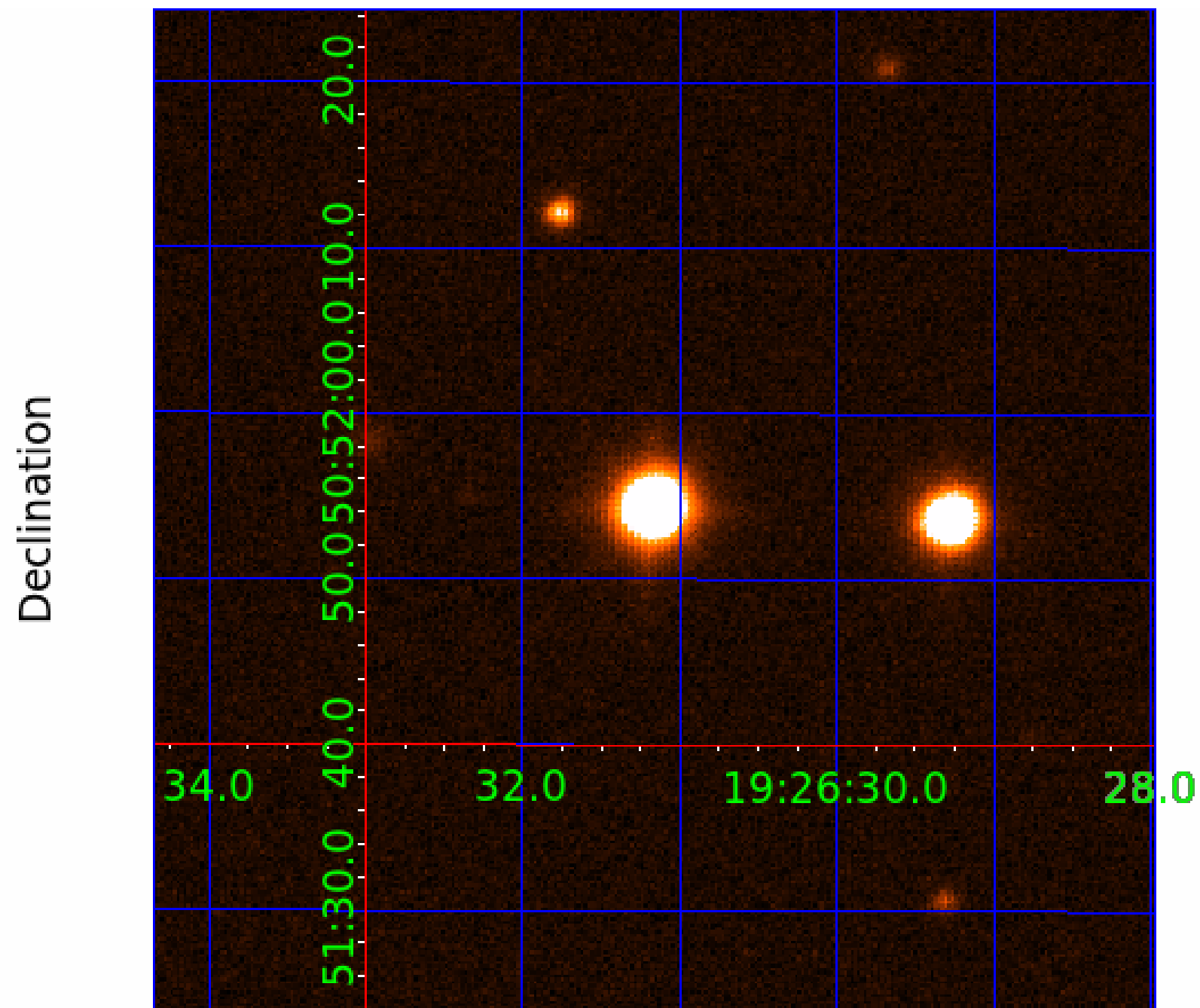
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 012208769

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})
012208769-01	OBS	No	4.188599	135.578259	46.7	11.826	10.7	9.1	3.20	6742	2.80	6030.62
012208769-02	OBS	No	4.189263	134.657155	65.0	19.949	11.5	11.3	3.20	6742	3.38	6029.35
012208769-03	OBS	No	4.185484	133.249424	11.9	27.554	7.2	4.0	3.20	6742	1.34	6036.61

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012208769-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—CENT_SATURATED
012208769-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—MOD_NONUNIQ_DV—SAME_NTL_PERIOD—CENT_SATURATED
012208769-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—CENT_SATURATED

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

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

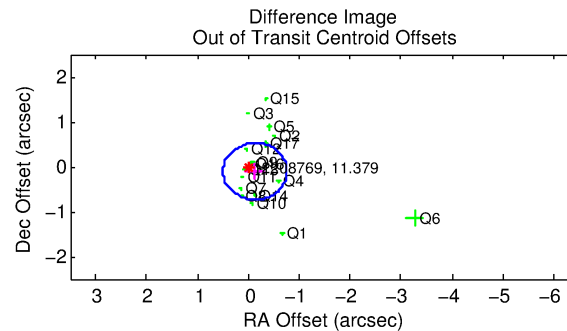
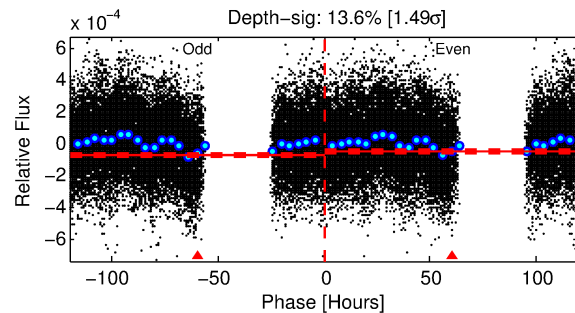
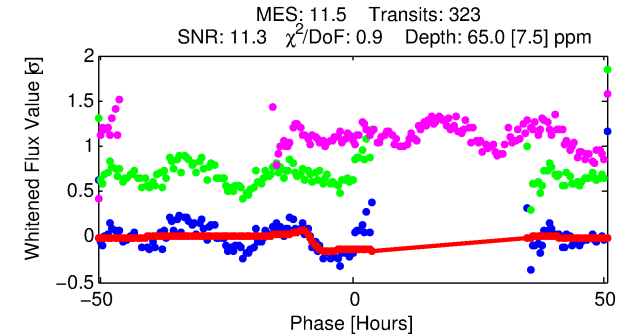
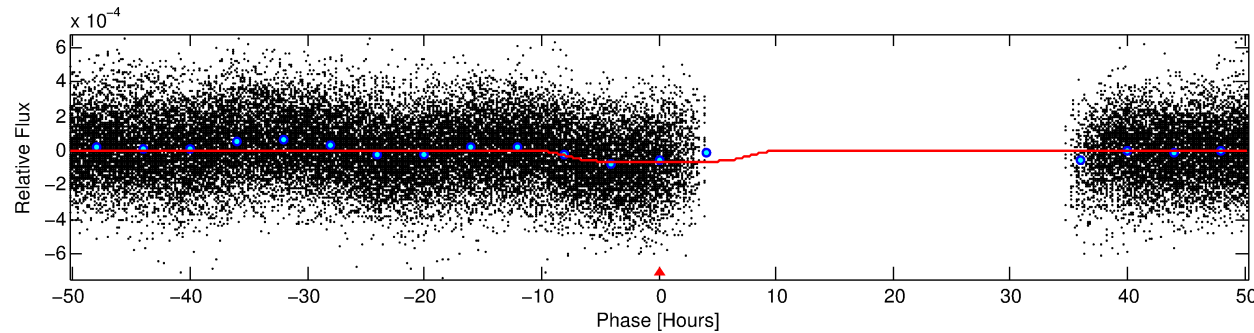
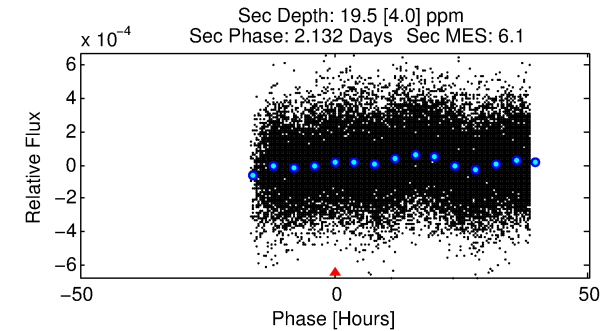
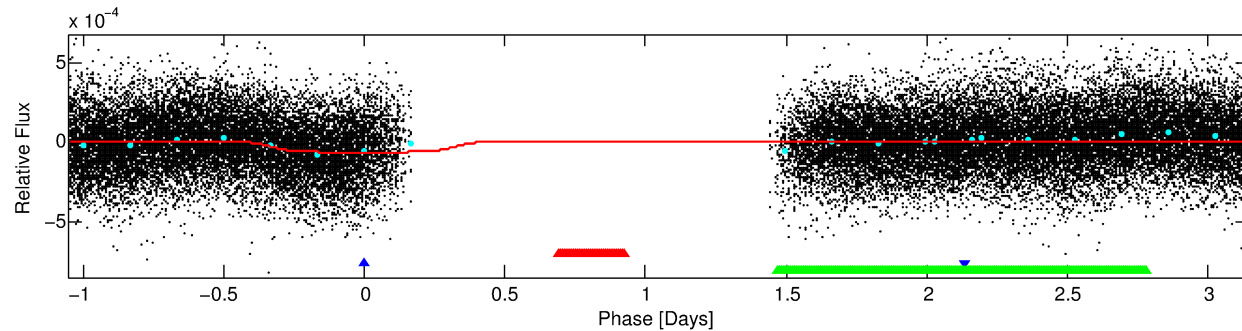
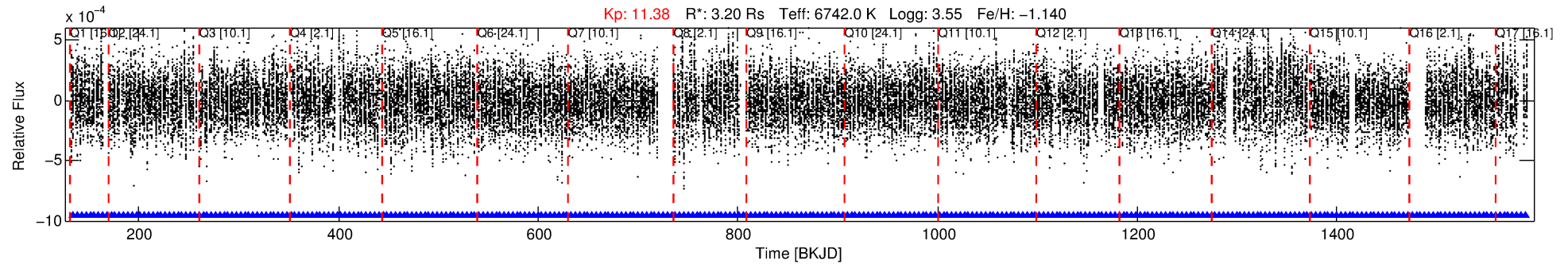
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012208769-02

No Significant Match Found

DV One-Page Summary

KIC: 12208769 Candidate: 2 of 3 Period: 4.189 d



DV Fit Results:

Period = 4.18926 [0.00013] d
Epoch = 134.6572 [0.1002] BKJD
Rp/R* = 0.0097 [0.0005]
a/R* = 1.06 [0.03]
b = 0.98 [0.01]
Seff = 6029.35 [3875.88]
Teq = 2247 [361] K
Rp = 3.38 [1.42] Re
a = 0.0560 [0.0221] AU
Ag = 2.94 [1.97] [0.98σ]
Teffp = 4548 [305] K [4.87σ]

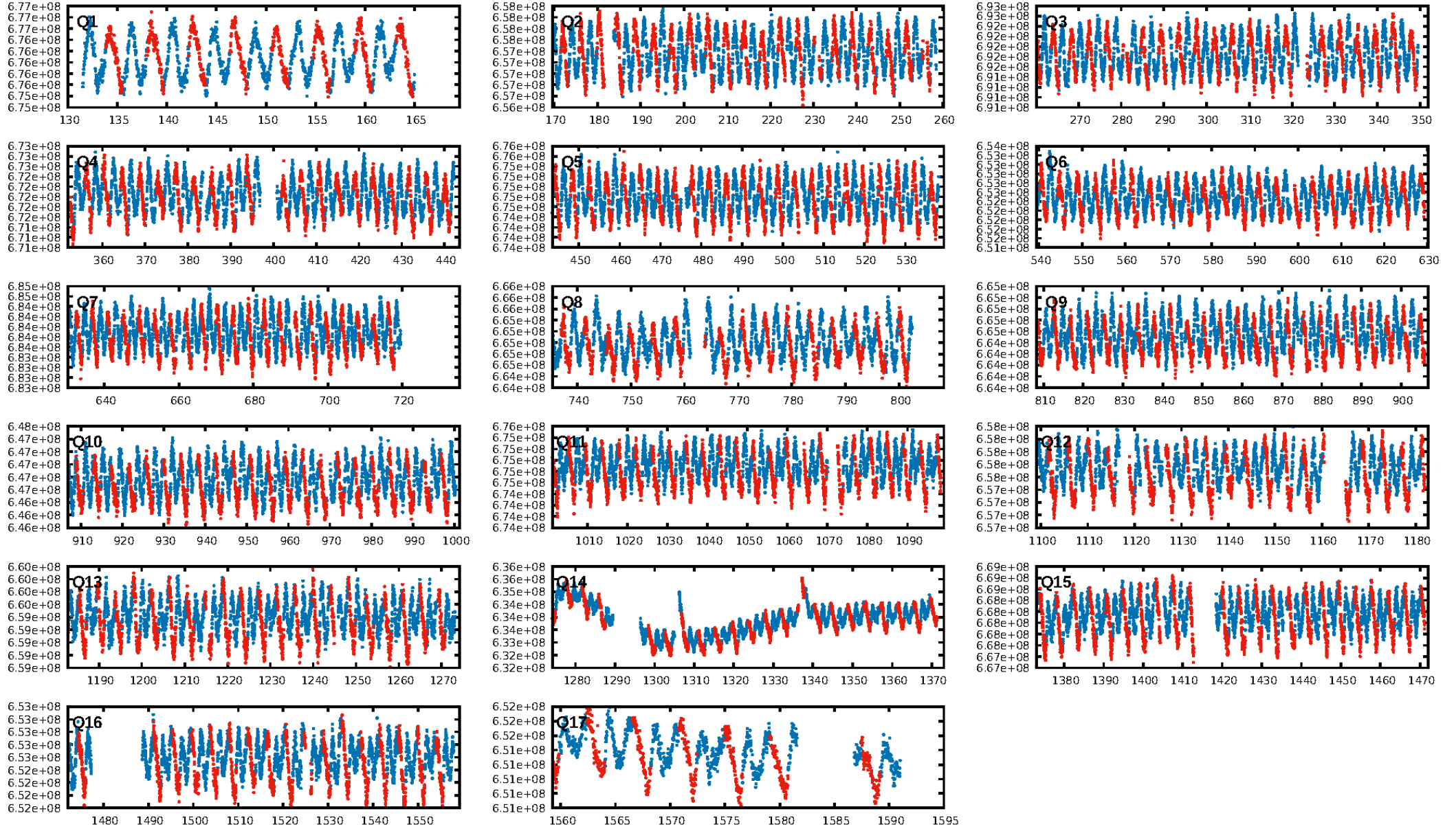
DV Diagnostic Results:

ShortPeriod-sig: 0.1% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [309/309]
GhostDiagnostic-chr: 1.366
Centroid-sig: 0.0%
Centroid-so: 0.796 arcsec [2.45σ]
OotOffset-rm: 0.167 arcsec [0.79σ]
KicOffset-rm: 0.100 arcsec [0.48σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.65 [11/17]
DiffImageOverlap-fno: 0.00 [0/17]

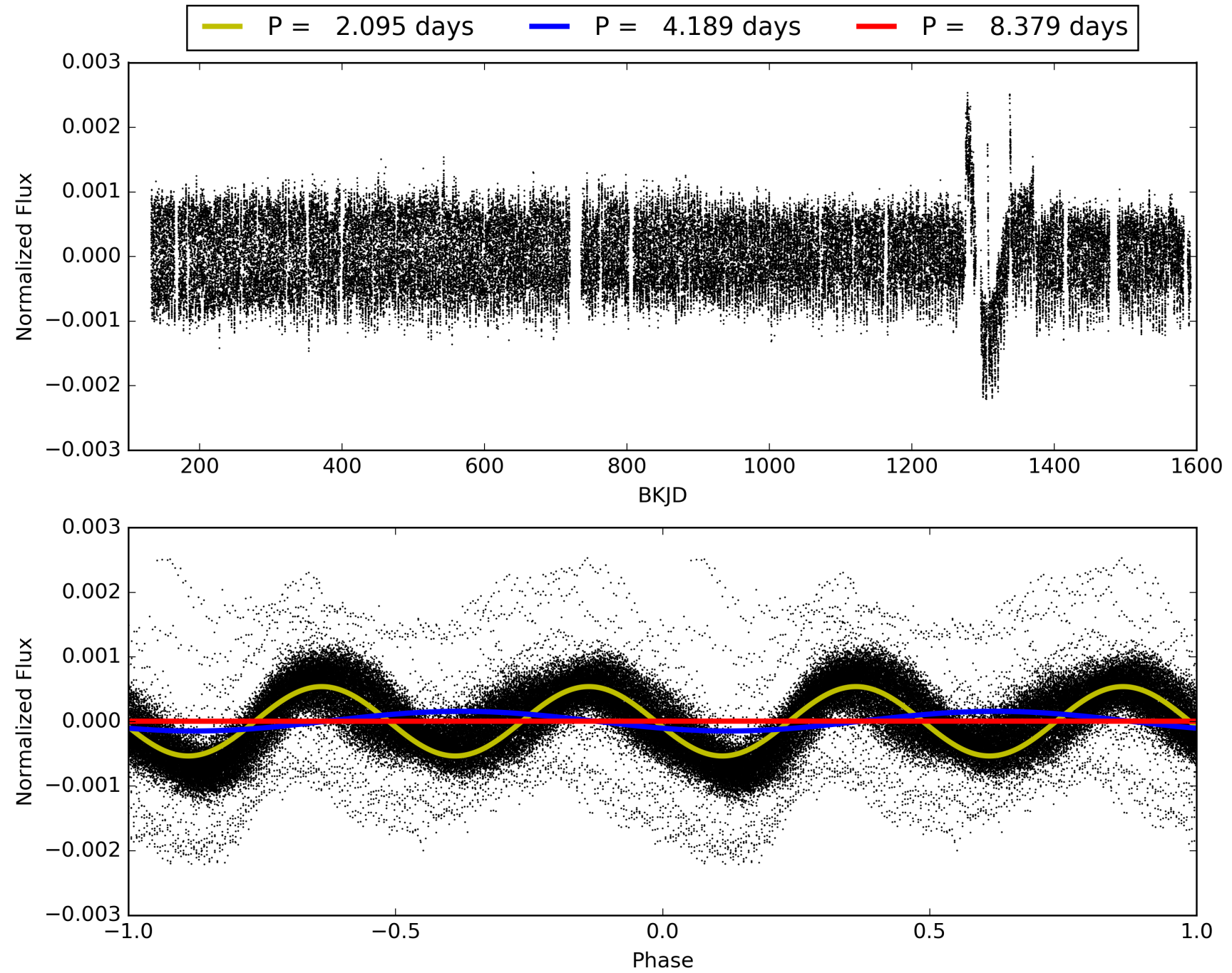
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 08:42:05 Z

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

TCE 012208769-02, PDC Light Curves

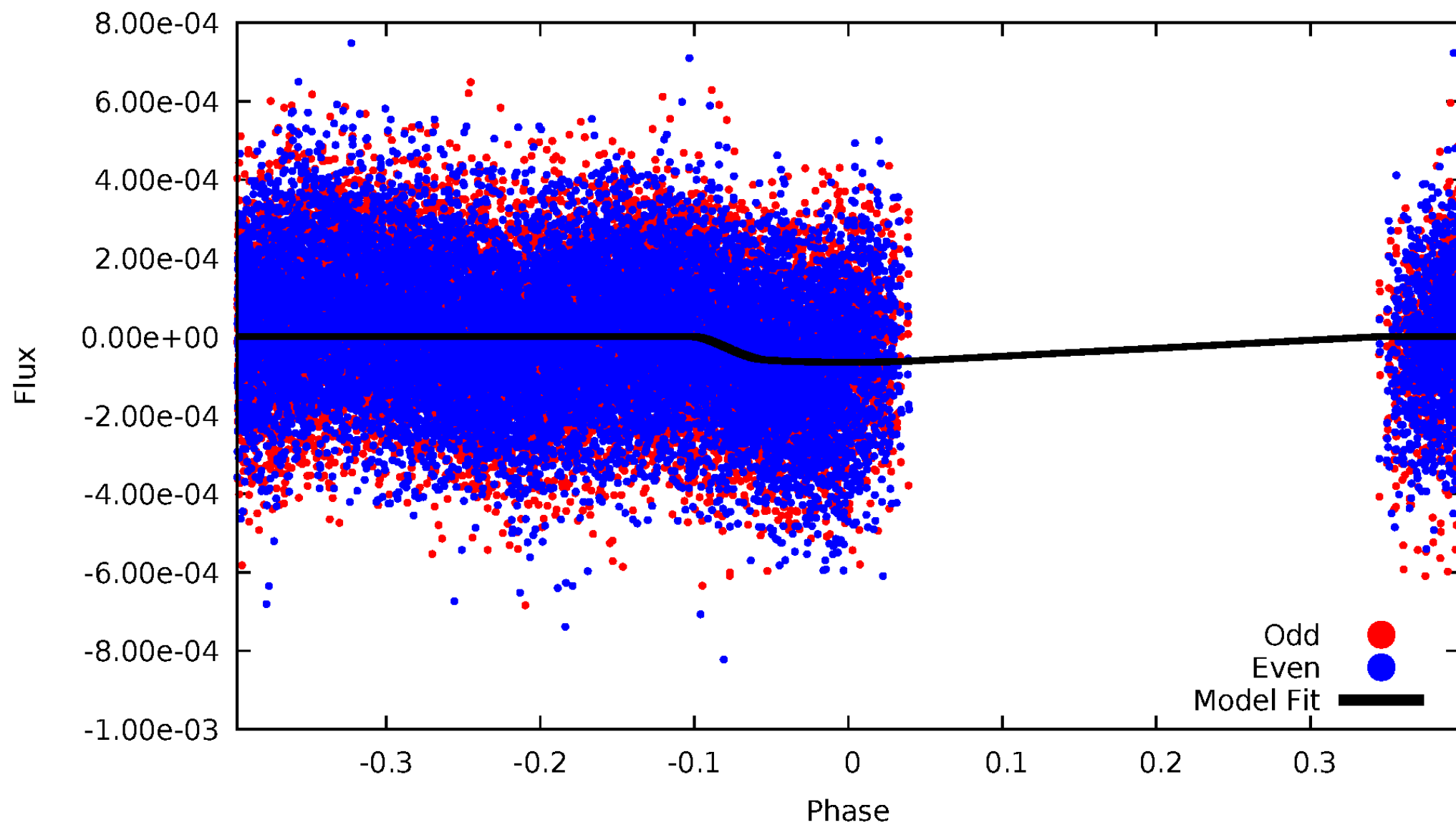


TCE 012208769-02



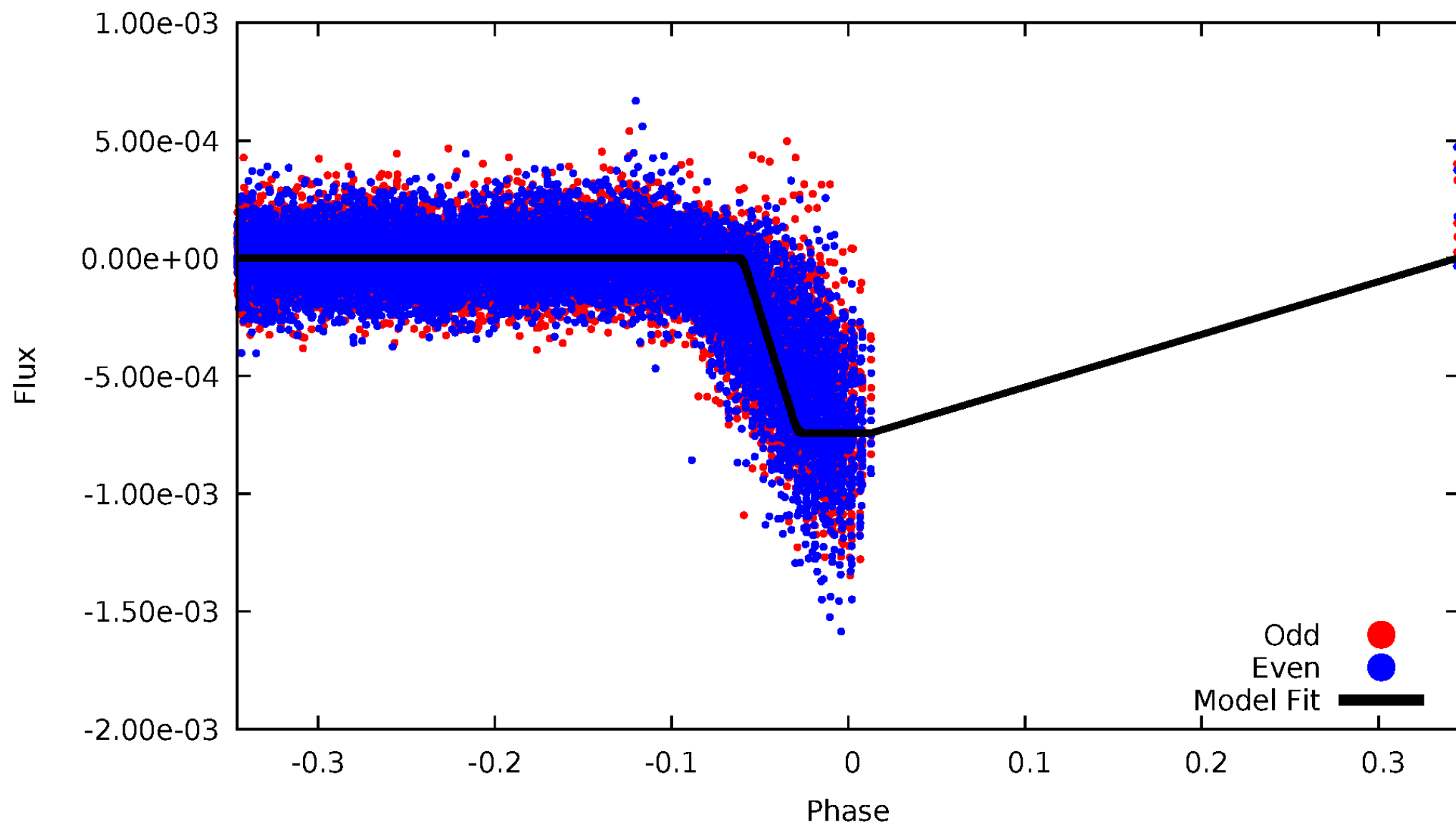
DV Odd/Even

TCE 012208769-02



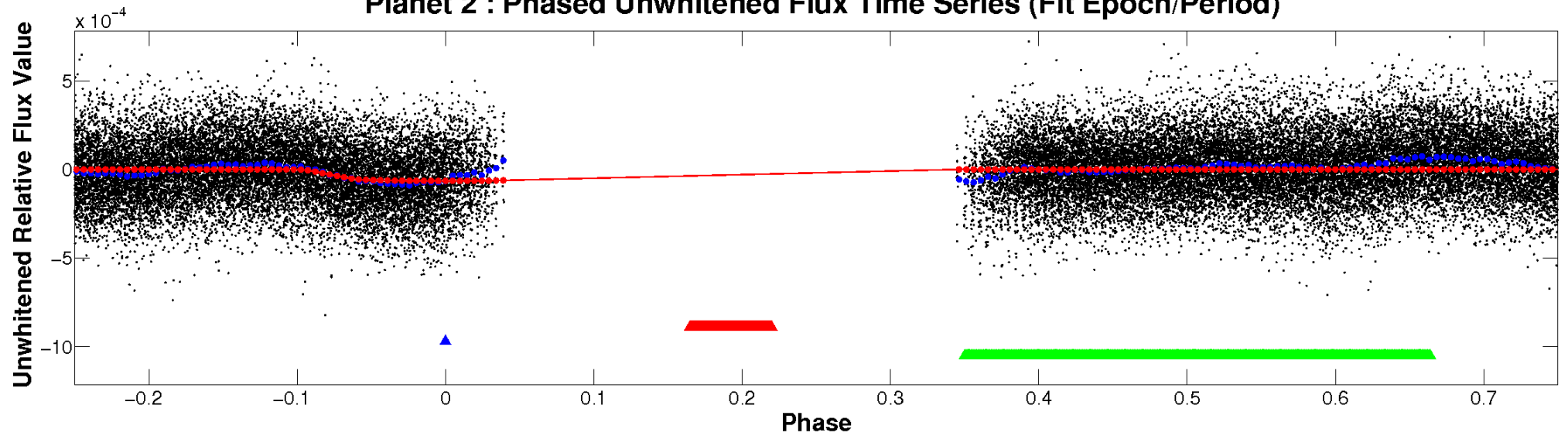
ALT Odd/Even

TCE 012208769-02

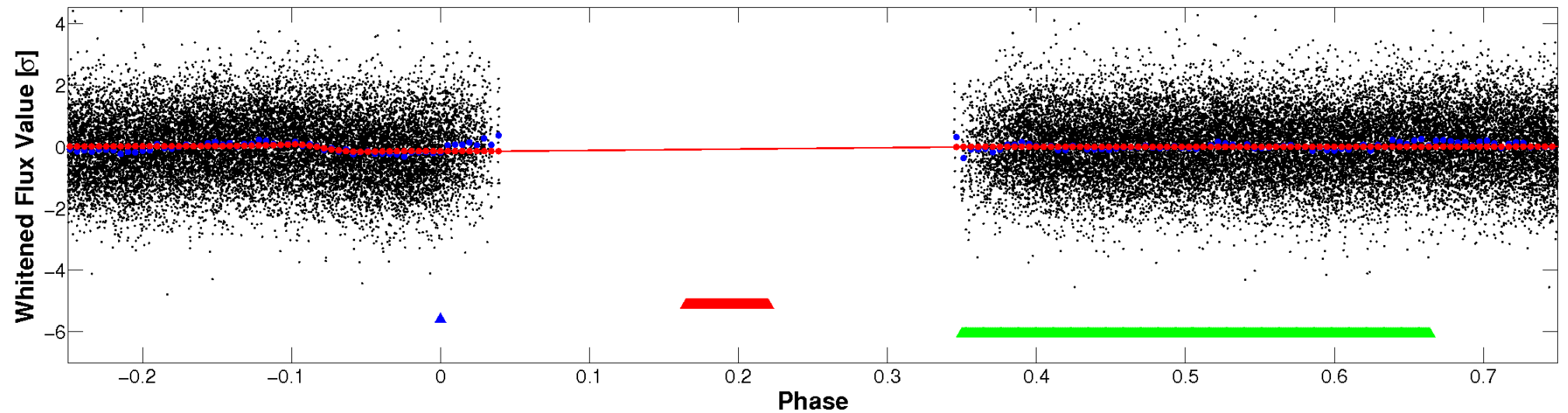


Non-Whitened Vs. Whitened Light Curve

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

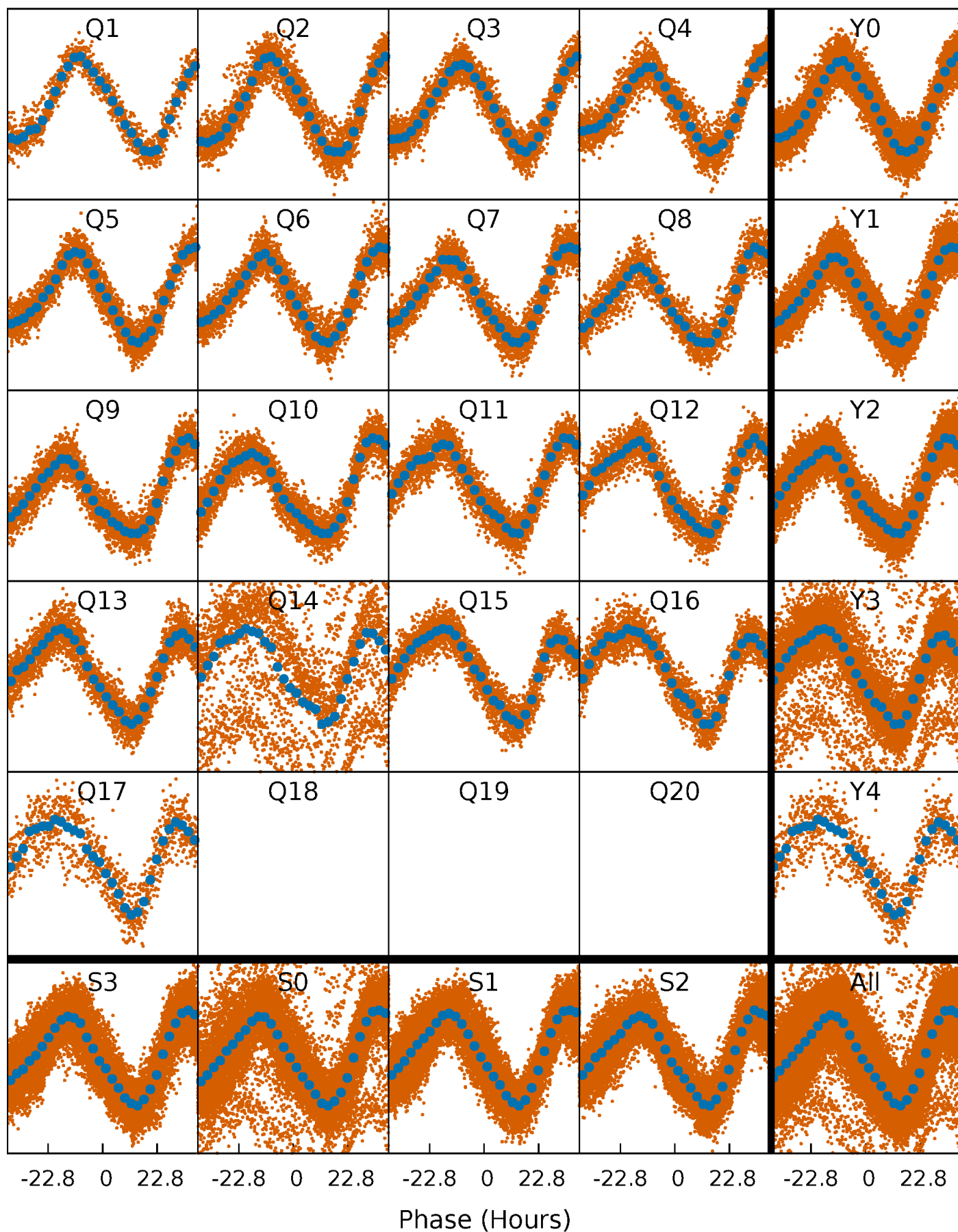


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



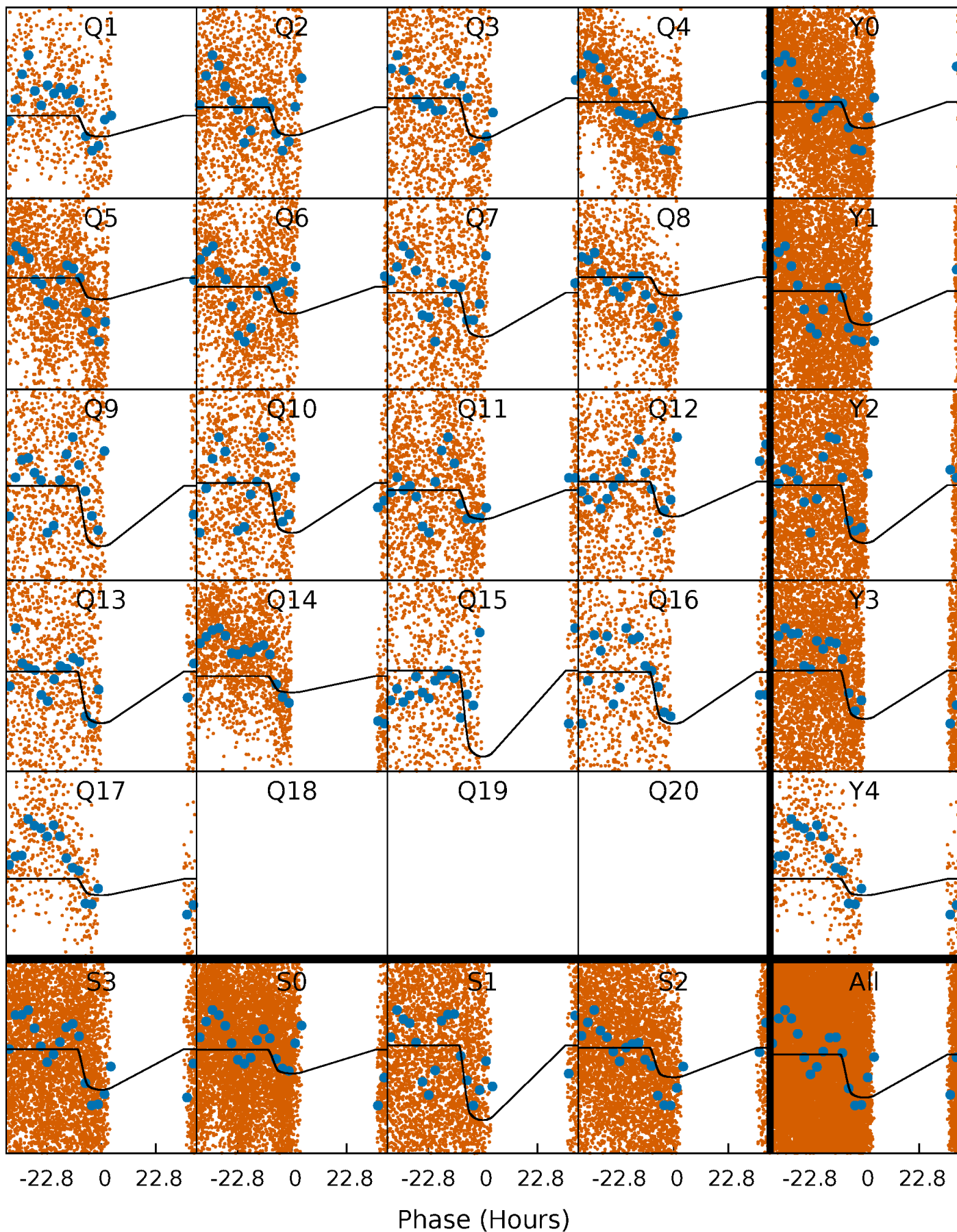
PDC Quarter-Phased Transit Curves

TCE 012208769-02 P= 4.189263 Days $T_0=134.657155$ (BKJD)



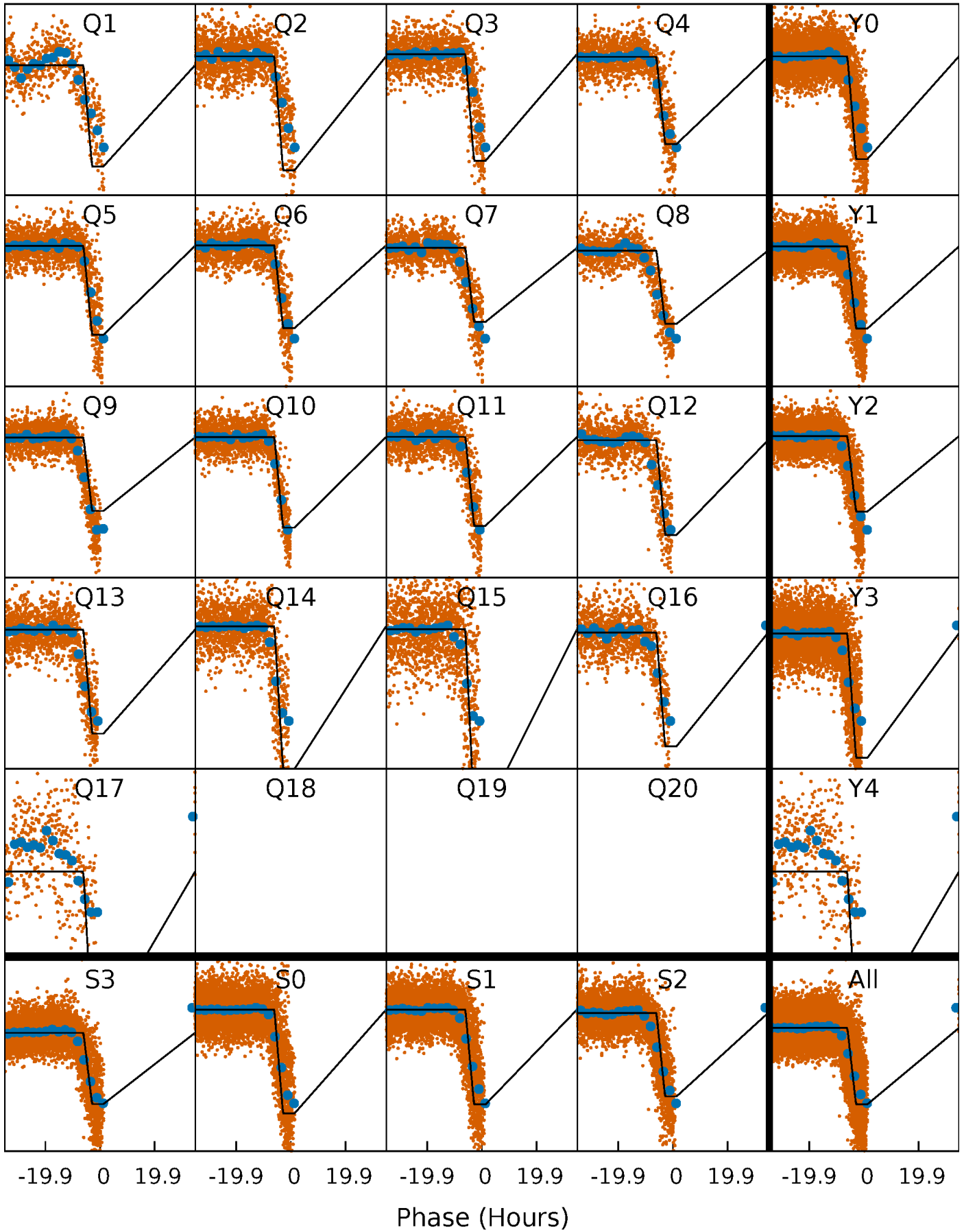
DV Quarter-Phased Transit Curves

TCE 012208769-02 P= 4.189263 Days $T_0=134.657155$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

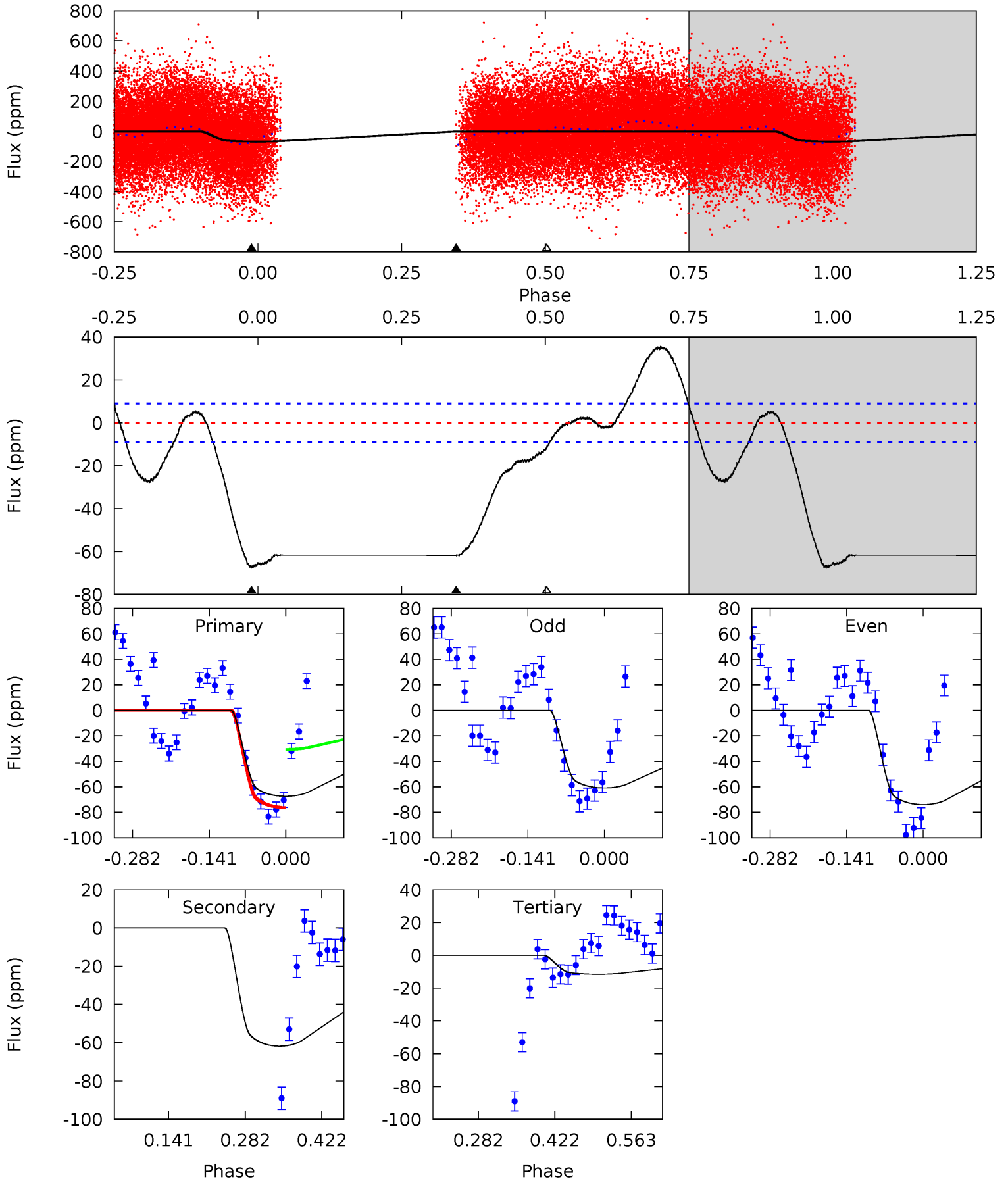
TCE 012208769-02 P= 4.188943 Days $T_0=134.768856$ (BKJD)



DV Model-Shift Uniqueness Test

012208769-02, P = 4.189263 Days, E = 130.467892 Days

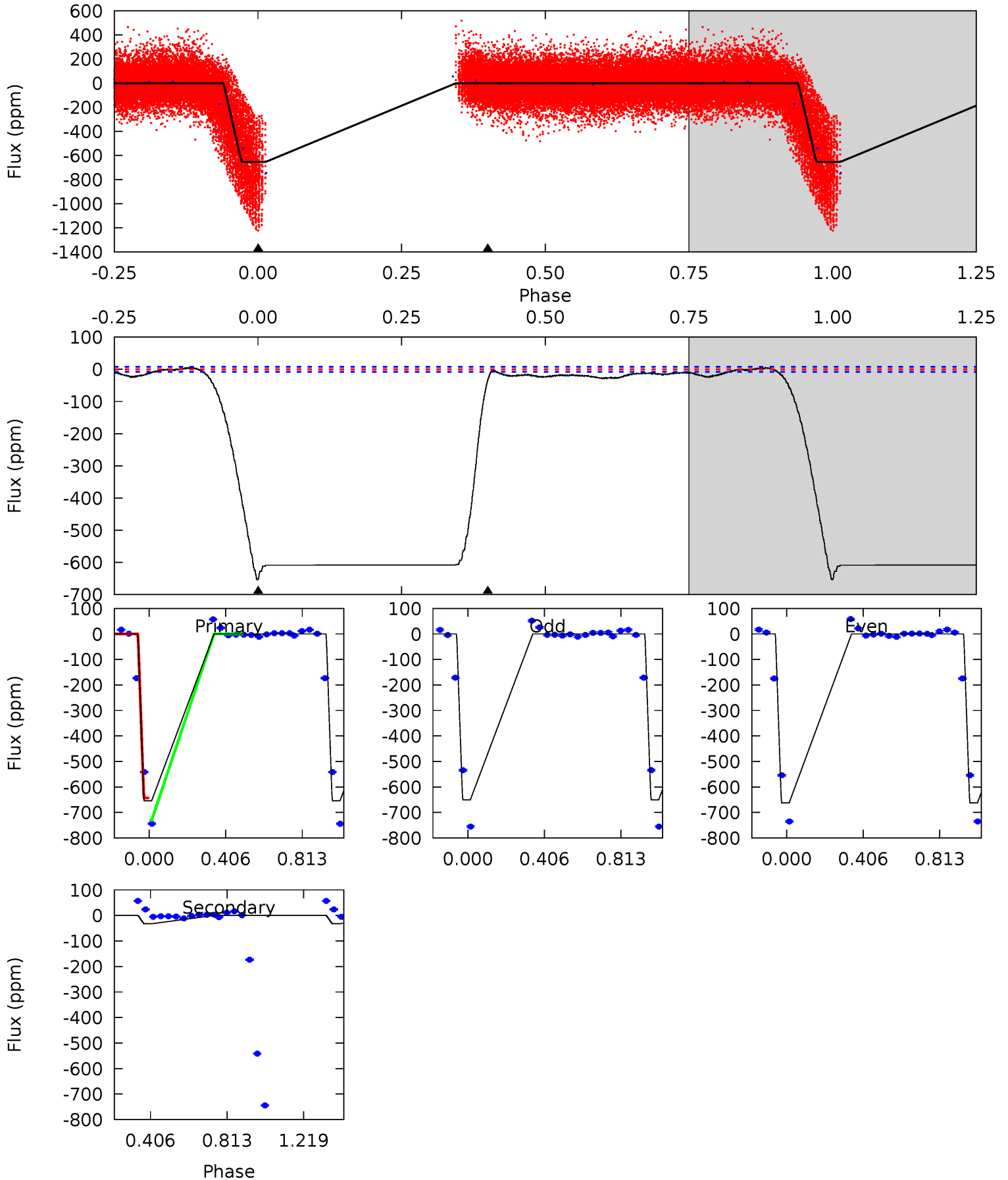
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.6	30.8	5.77	0	4.49	1.47	8.54	27.9	33.6	25.0	30.8	3.27	0.97	0.34	8.29



Alt Model-Shift Uniqueness Test

012208769-02, P = 4.188943 Days, E = 130.579913 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
352.3	17.6	0	0	4.26	0.83	5.50	352.3	352.3	17.6	17.6	3.30	0.97	0.01	11.9



Stellar Parameters For KIC 012208769

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6742^{+182}_{-223}	$3.554^{+0.368}_{-0.092}$	$-1.140^{+0.350}_{-0.300}$	$3.196^{+0.569}_{-1.327}$	$1.331^{+0.156}_{-0.338}$	$0.057^{+0.170}_{-0.016}$
	+3%/-3%	+10%/-3%	+31%/-26%	+18%/-42%	+12%/-25%	+296%/-29%
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 012208769-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-62 ± 2	$3.28^{+0.46}_{-0.72}$	3064^{+215}_{-299}	5987^{+258}_{-239}	10^{+5}_{-2}
Alt.	-33 ± 2	$9.13^{+1.17}_{-1.95}$	3048^{+206}_{-295}	3244^{+135}_{-138}	$0.682^{+0.361}_{-0.131}$

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 $A_{obs} \gg 1.0$

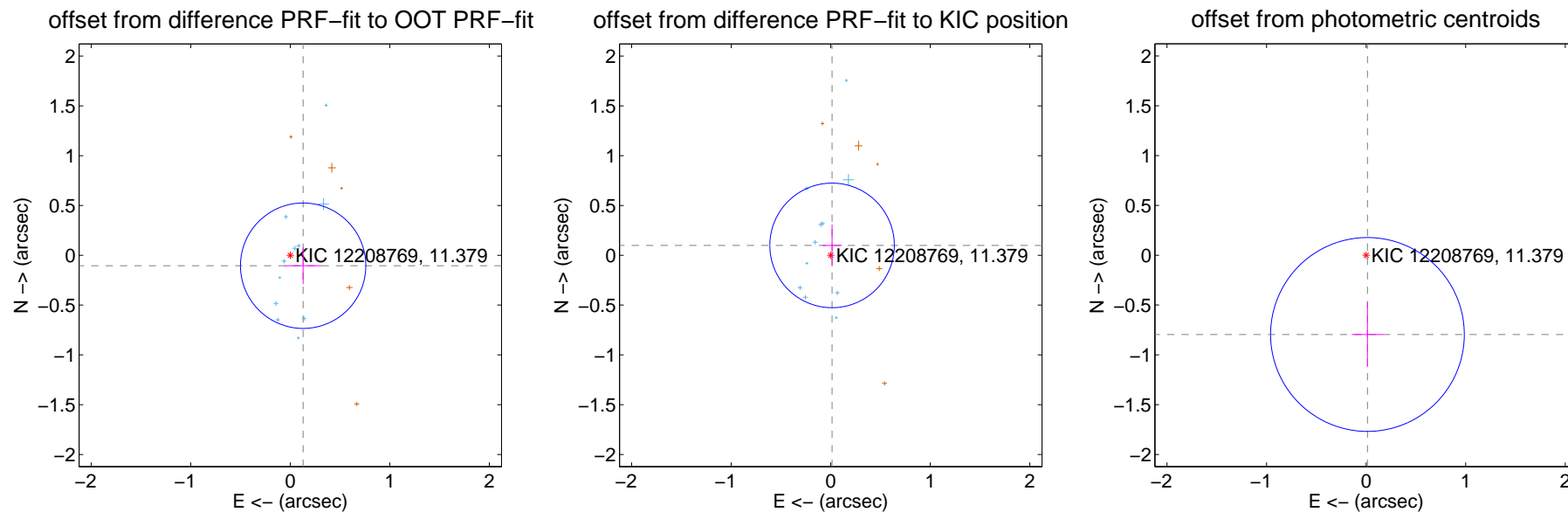
DV Centroid Data

Supplemental centroid analysis for 012208769-02. **Kepler magnitude: 11.38.** Transit SNR 11.29

There are 11 quarters with good PRF difference image offsets

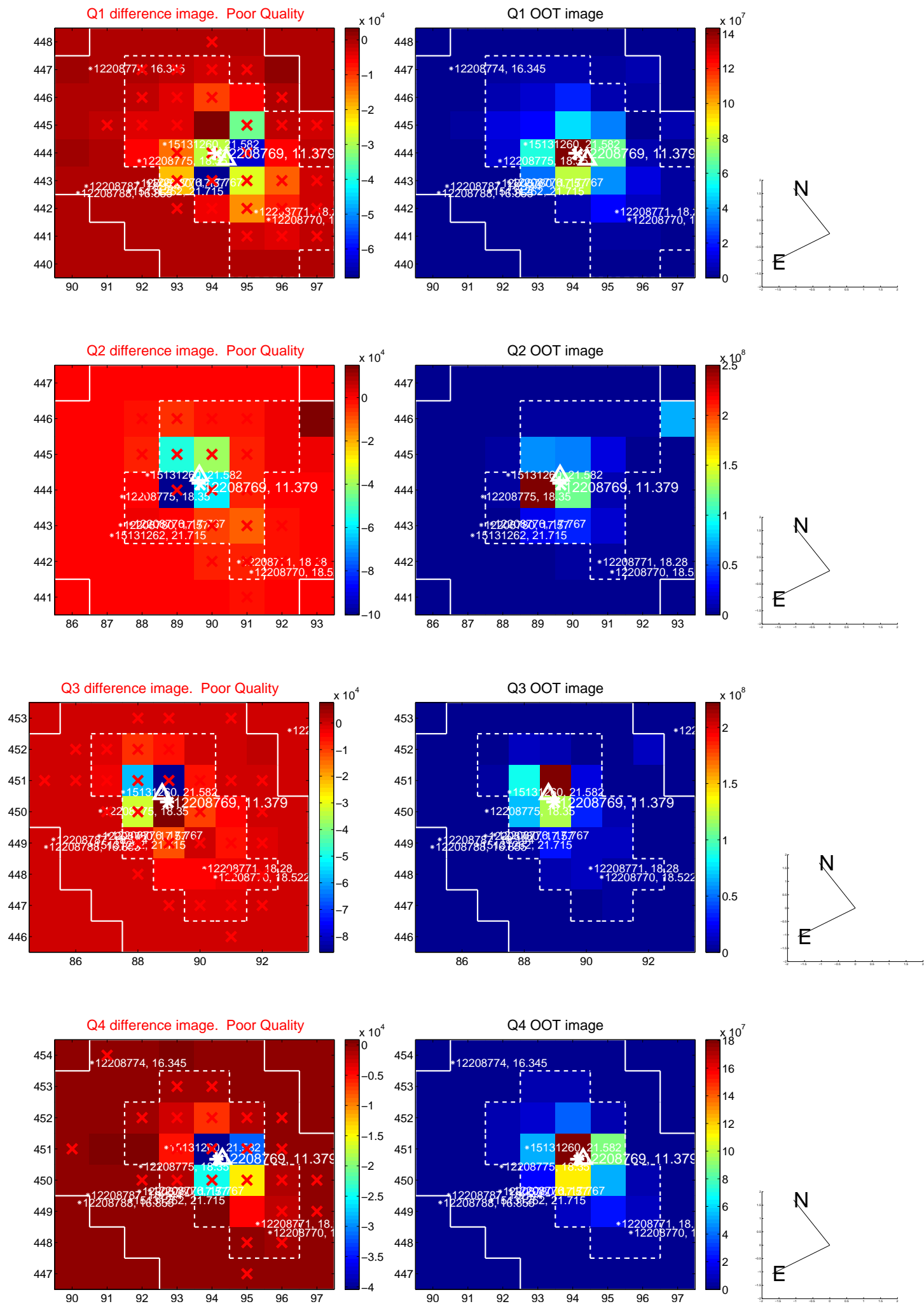
The direct PRF centroid is offset from the target star catalog position by about 0.29 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.167 ± 0.210	0.79	-0.129 ± 0.187	-0.105 ± 0.185
PRF-fit source offset from KIC position	0.100 ± 0.208	0.48	-0.014 ± 0.098	0.099 ± 0.210
photometric centroid source offset	0.80 ± 0.32	2.45	-0.01 ± 0.16	-0.80 ± 0.32

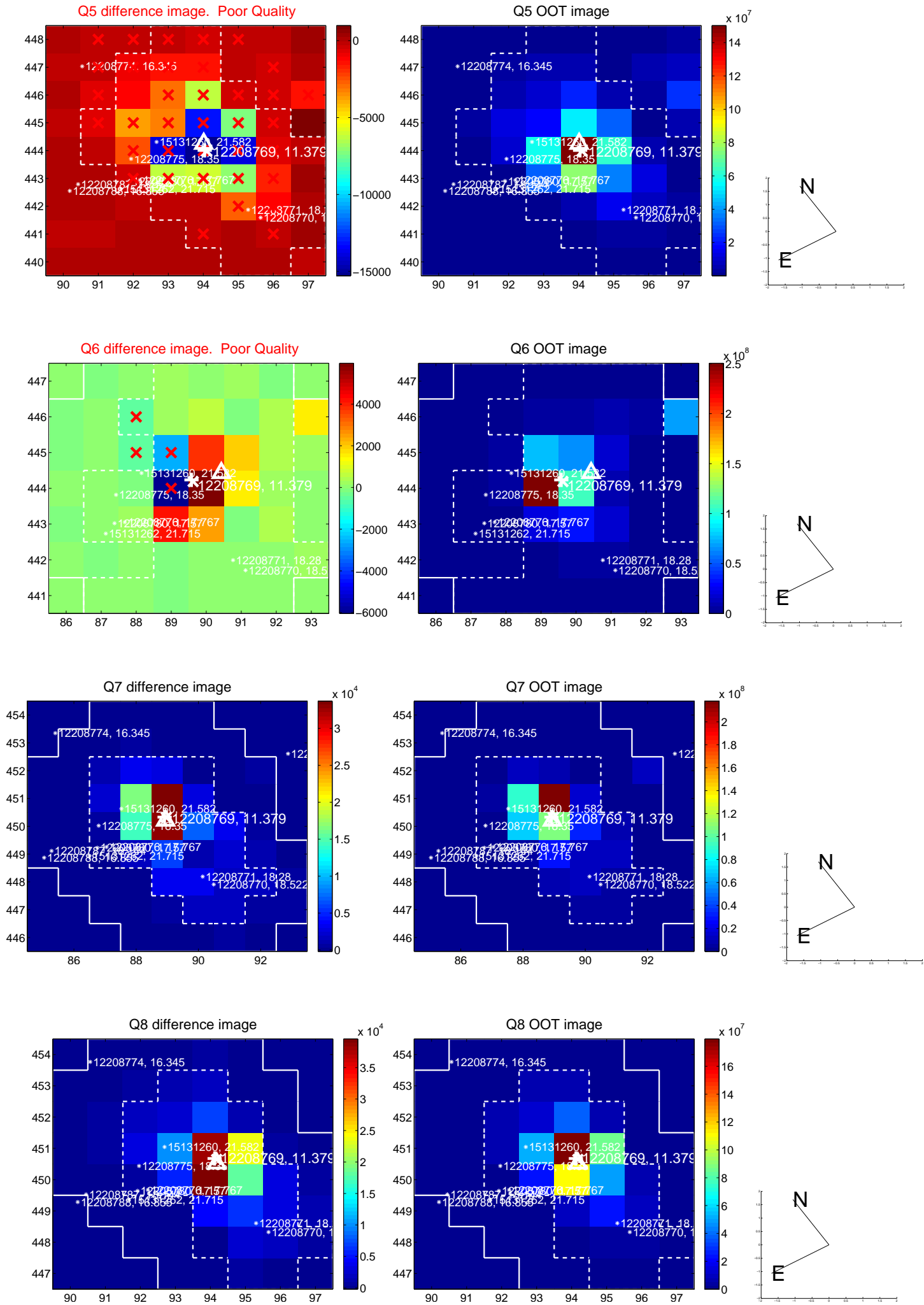


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

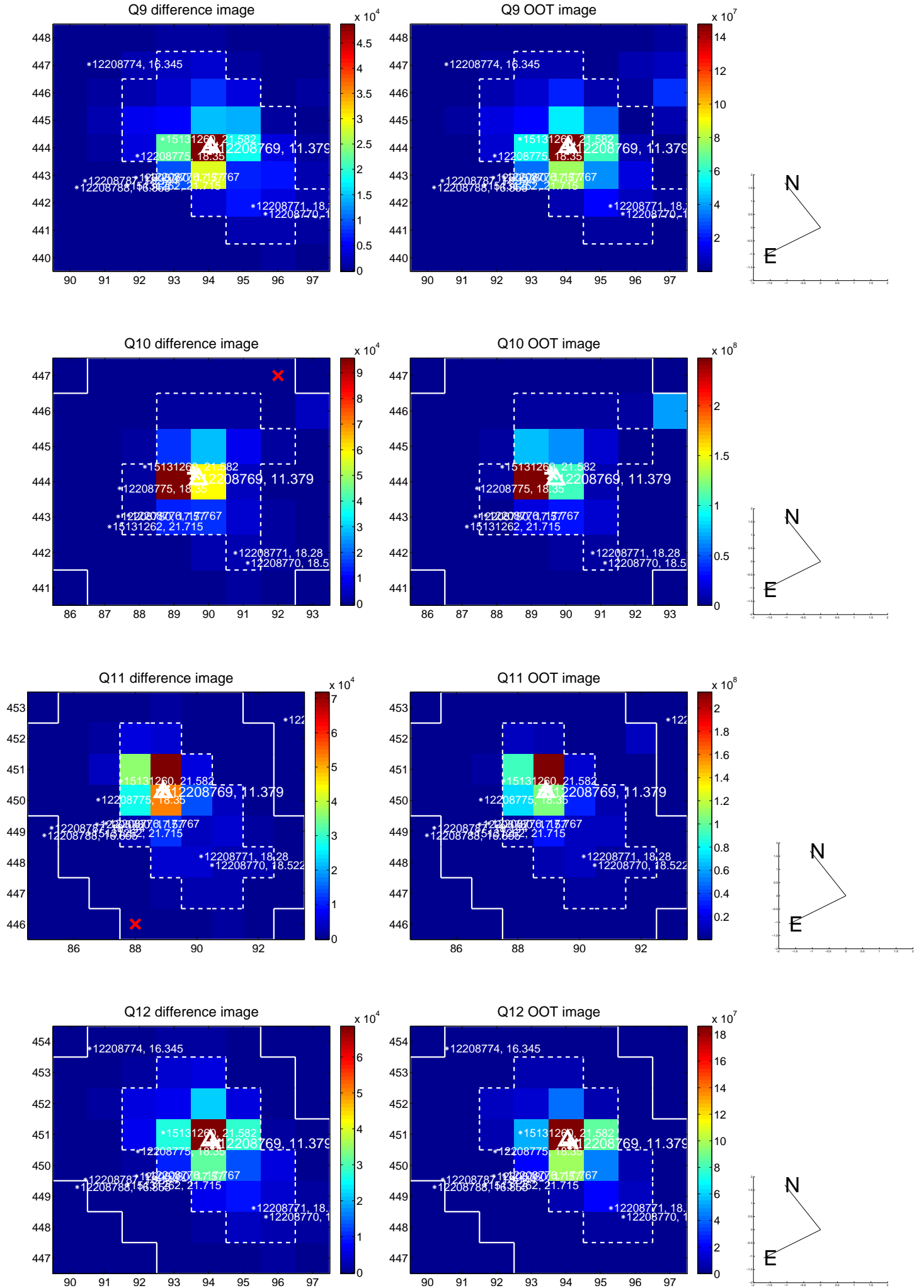
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



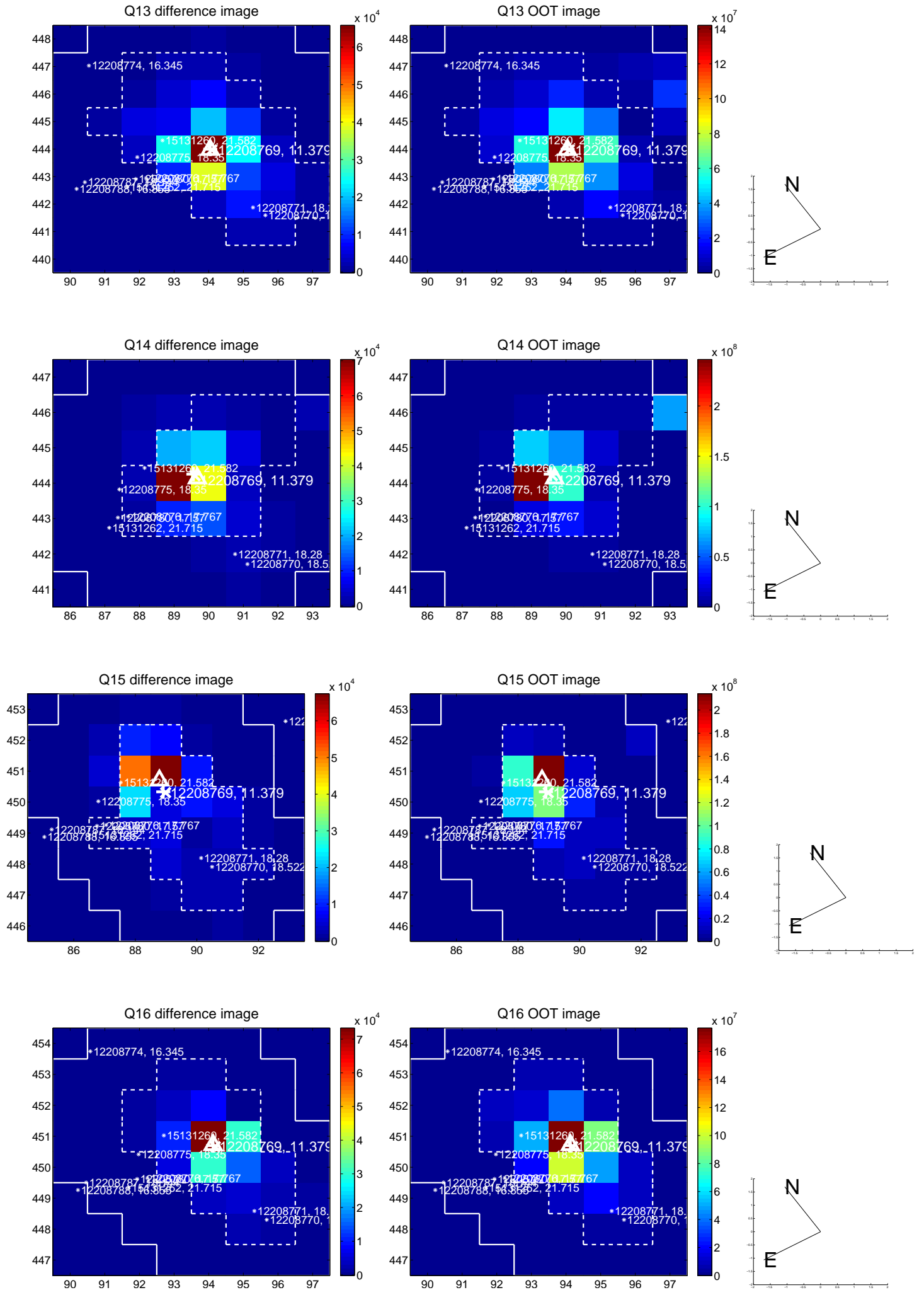
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



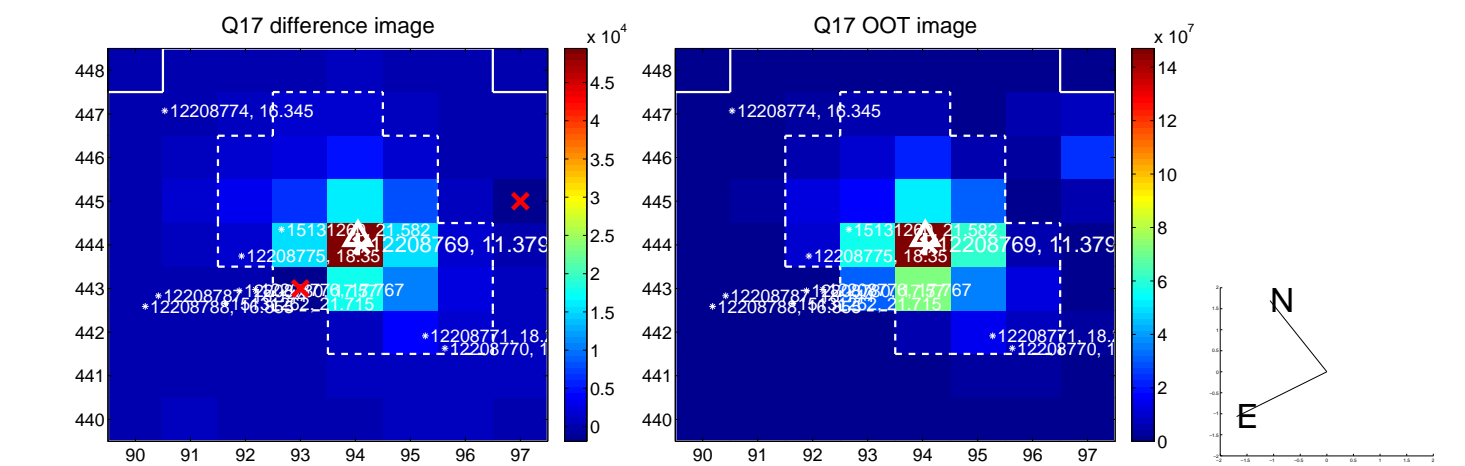
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



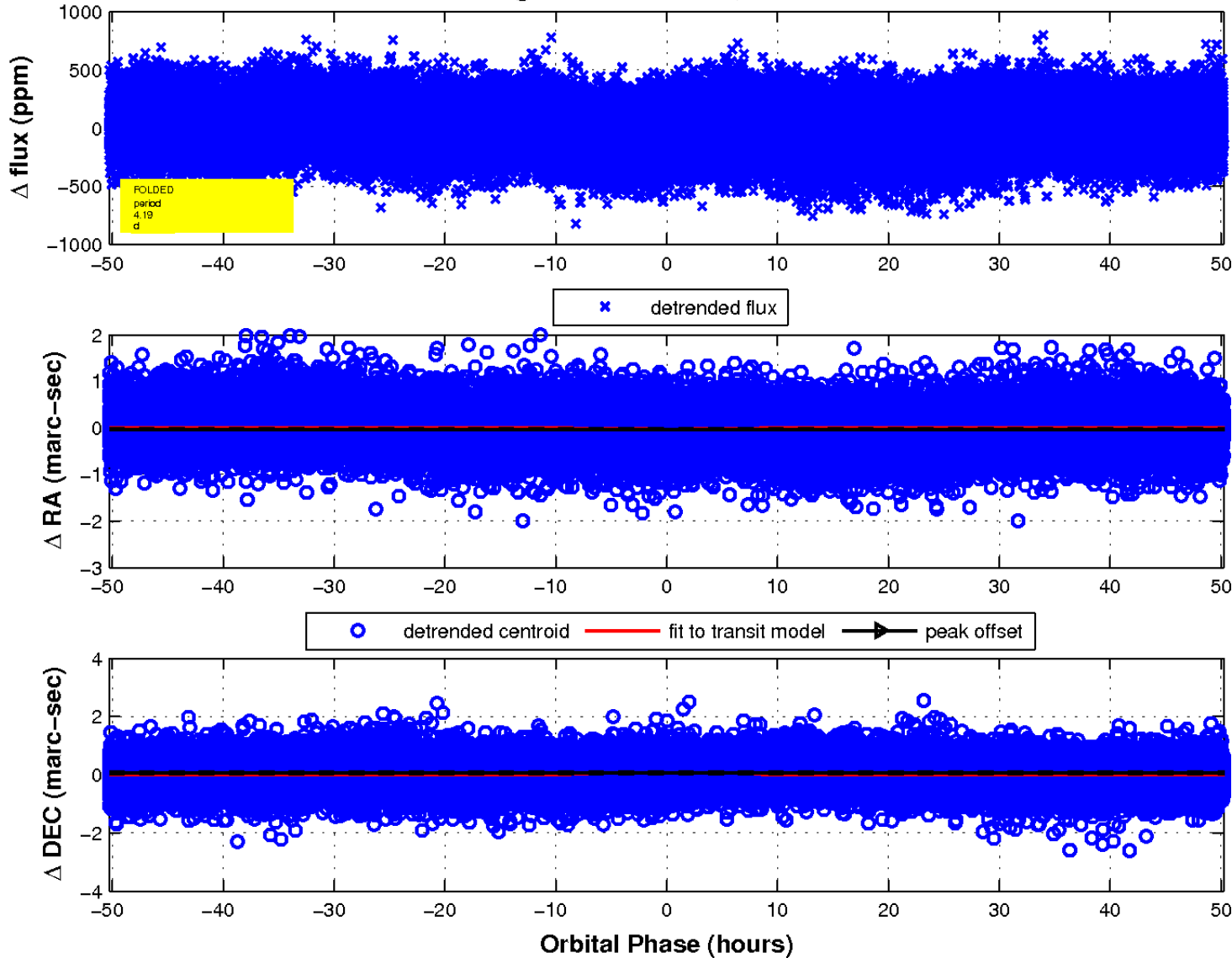
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



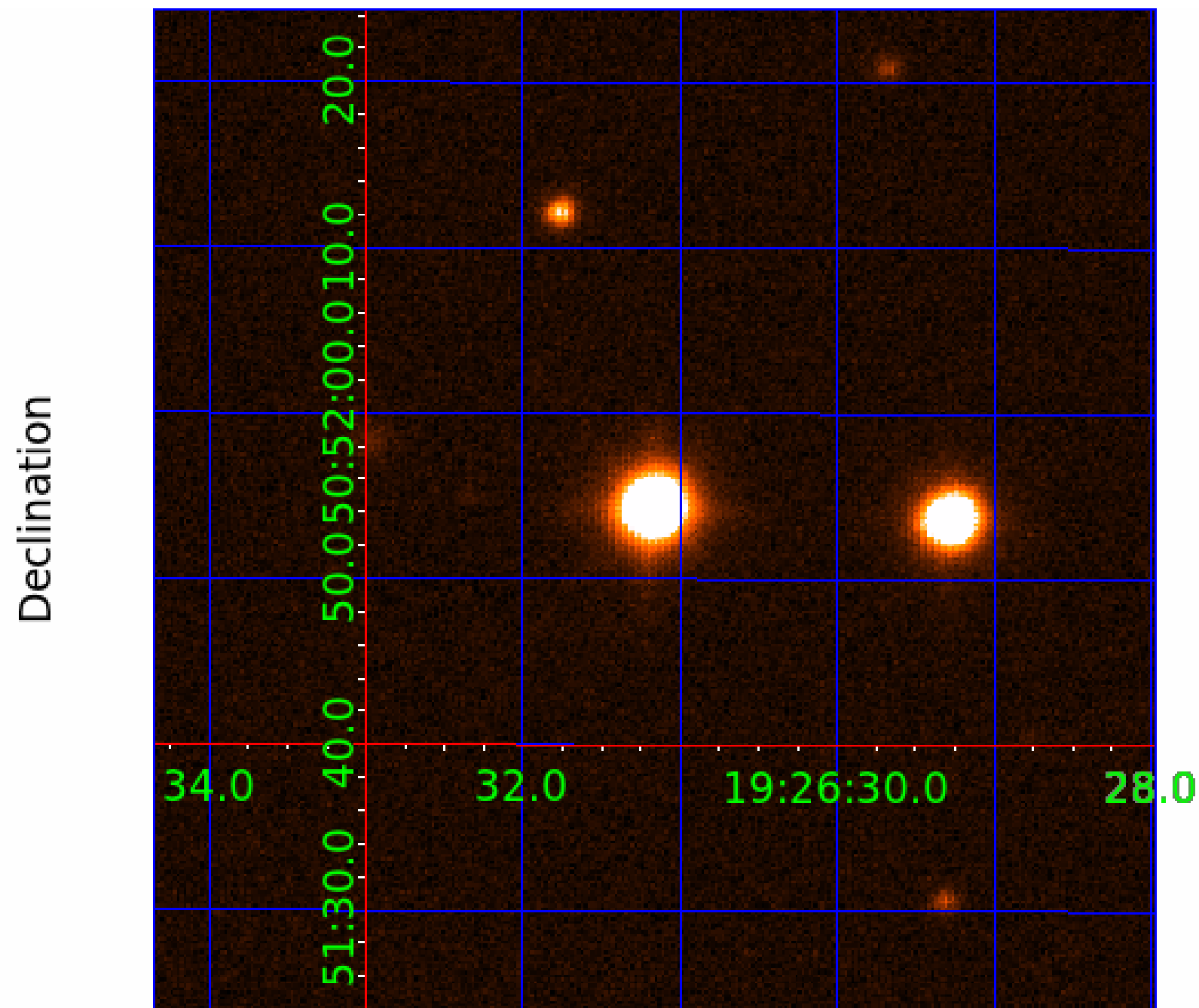
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 2 of 3



UKIRT Image



KIC 012208769

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})
012208769-01	OBS	No	4.188599	135.578259	46.7	11.826	10.7	9.1	3.20	6742	2.80	6030.62
012208769-02	OBS	No	4.189263	134.657155	65.0	19.949	11.5	11.3	3.20	6742	3.38	6029.35
012208769-03	OBS	No	4.185484	133.249424	11.9	27.554	7.2	4.0	3.20	6742	1.34	6036.61

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012208769-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—CENT_SATURATED
012208769-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—MOD_NONUNIQ_DV—SAME_NTL_PERIOD—CENT_SATURATED
012208769-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—CENT_SATURATED

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

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

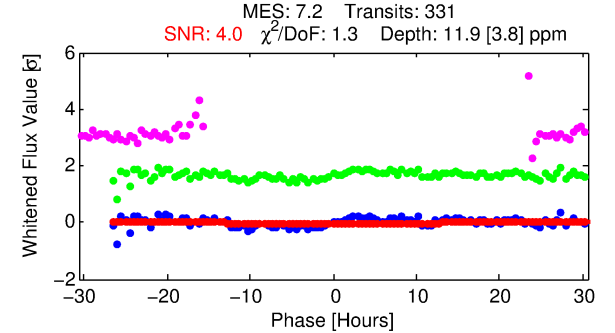
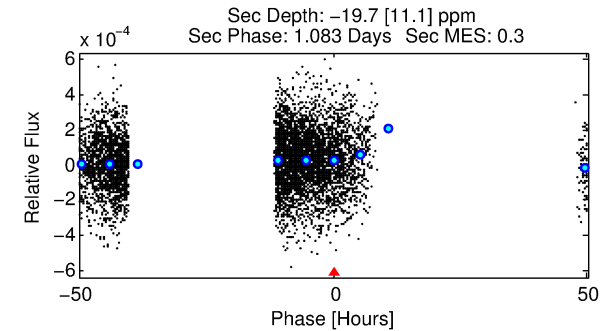
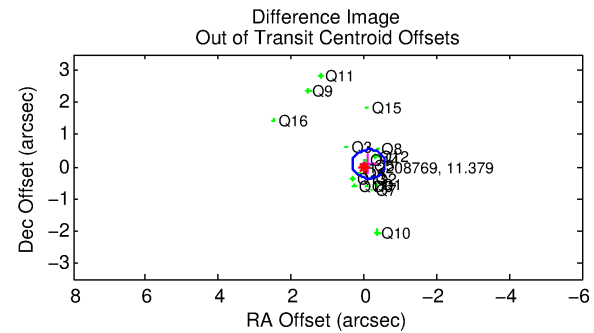
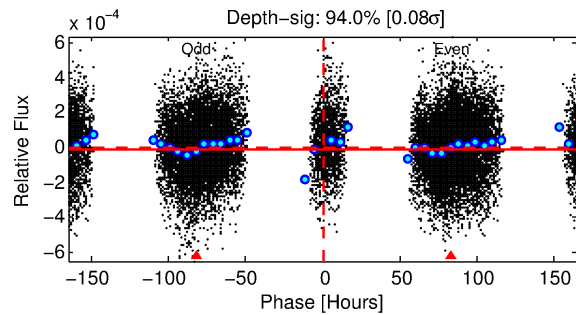
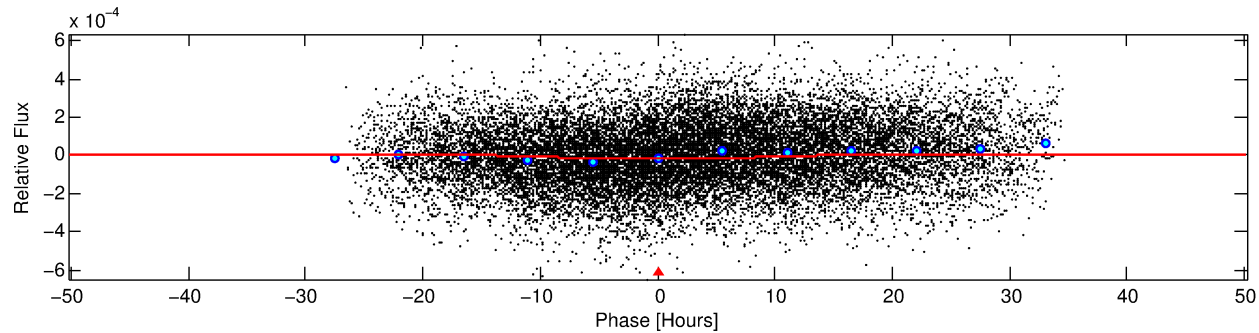
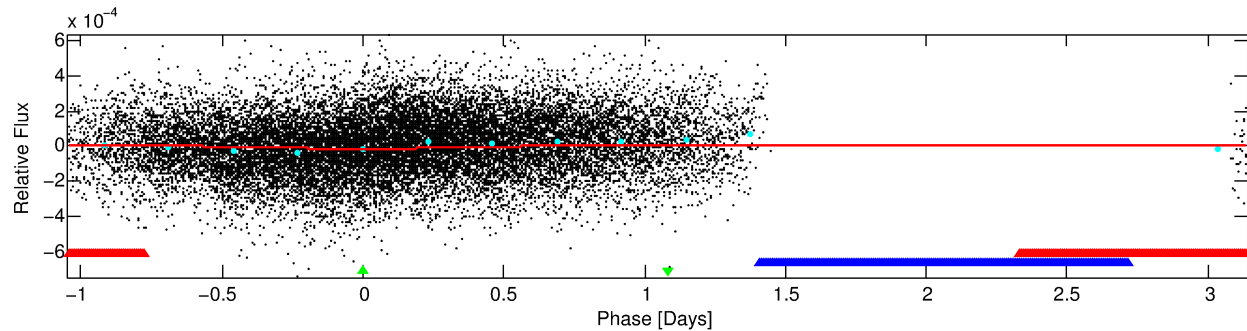
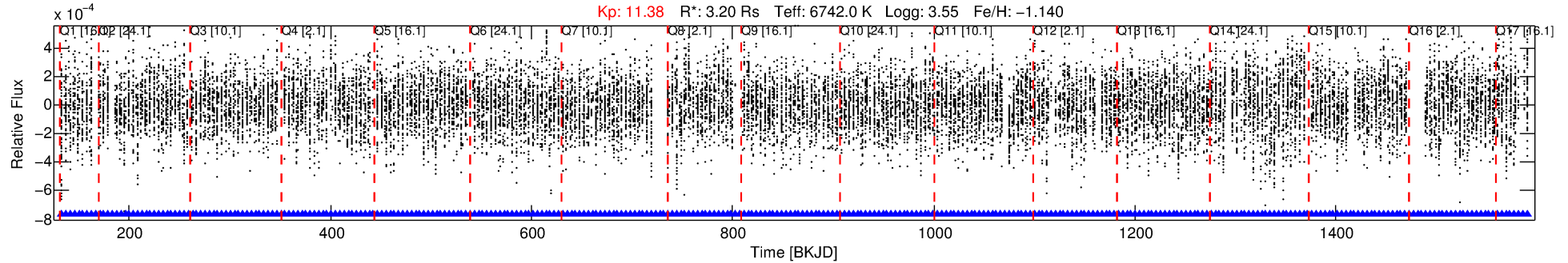
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012208769-03

No Significant Match Found

DV One-Page Summary

KIC: 12208769 Candidate: 3 of 3 Period: 4.185 d



DV Fit Results:

Period = 4.18548 [0.00033] d
Epoch = 133.2494 [0.0518] BKJD
Rp/R* = 0.0038 [0.0009]
a/R* = 1.05 [0.11]
b = 0.94 [0.14]
Seff = 6036.61 [3880.55]
Teq = 2248 [361] K
Rp = 1.34 [0.65] Re
a = 0.0560 [0.0221] AU
Ag = N/A
Teffp = N/A

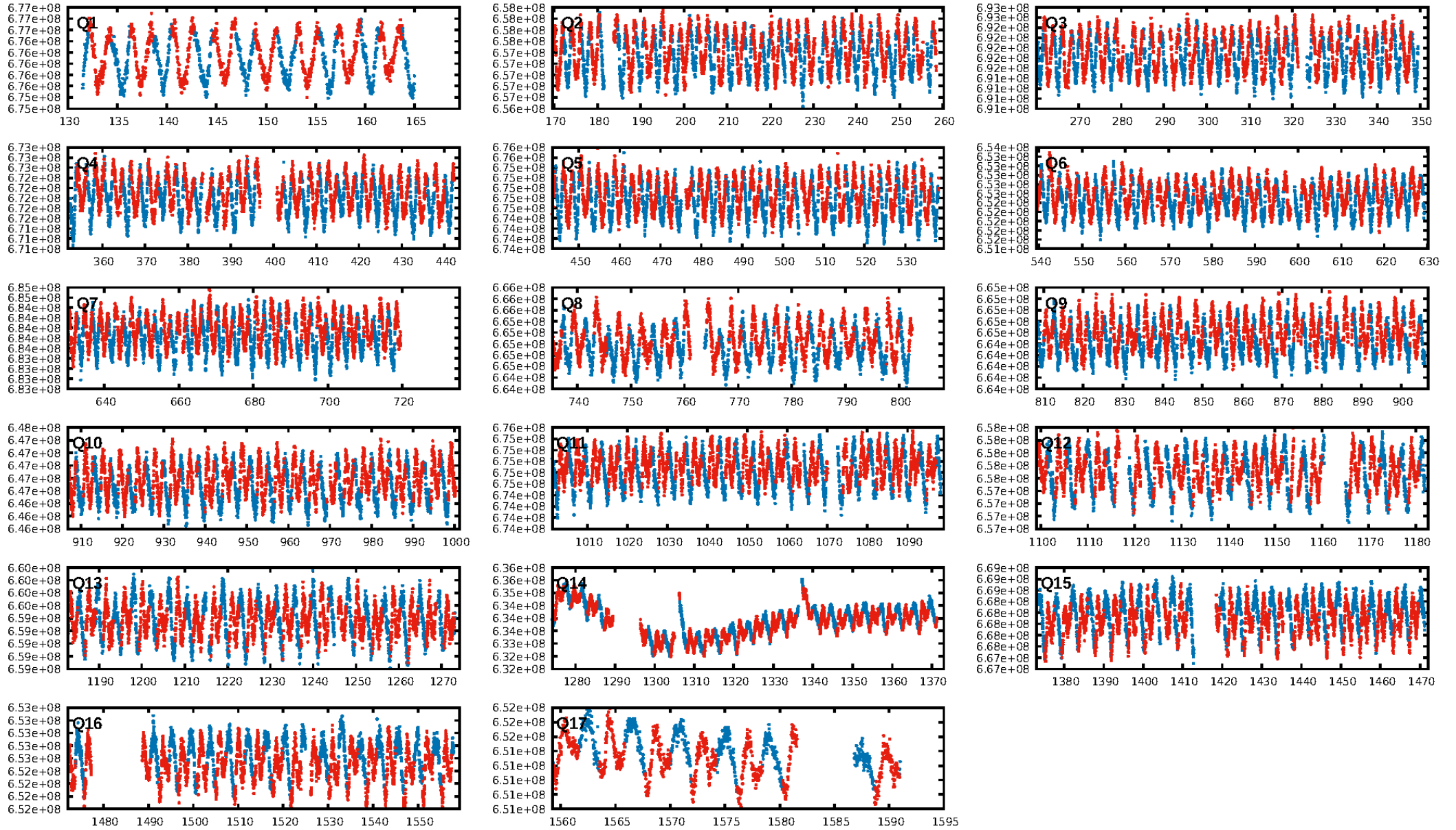
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.2% [0.00 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [316/316]
GhostDiagnostic-chr: 0.875
Centroid-sig: 0.0%
Centroid-so: 6.213 arcsec [4.64 σ]
OotOffset-rm: 0.155 arcsec [1.04 σ]
KicOffset-rm: 0.289 arcsec [0.97 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.59 [10/17]
DiffImageOverlap-fno: 0.00 [0/17]

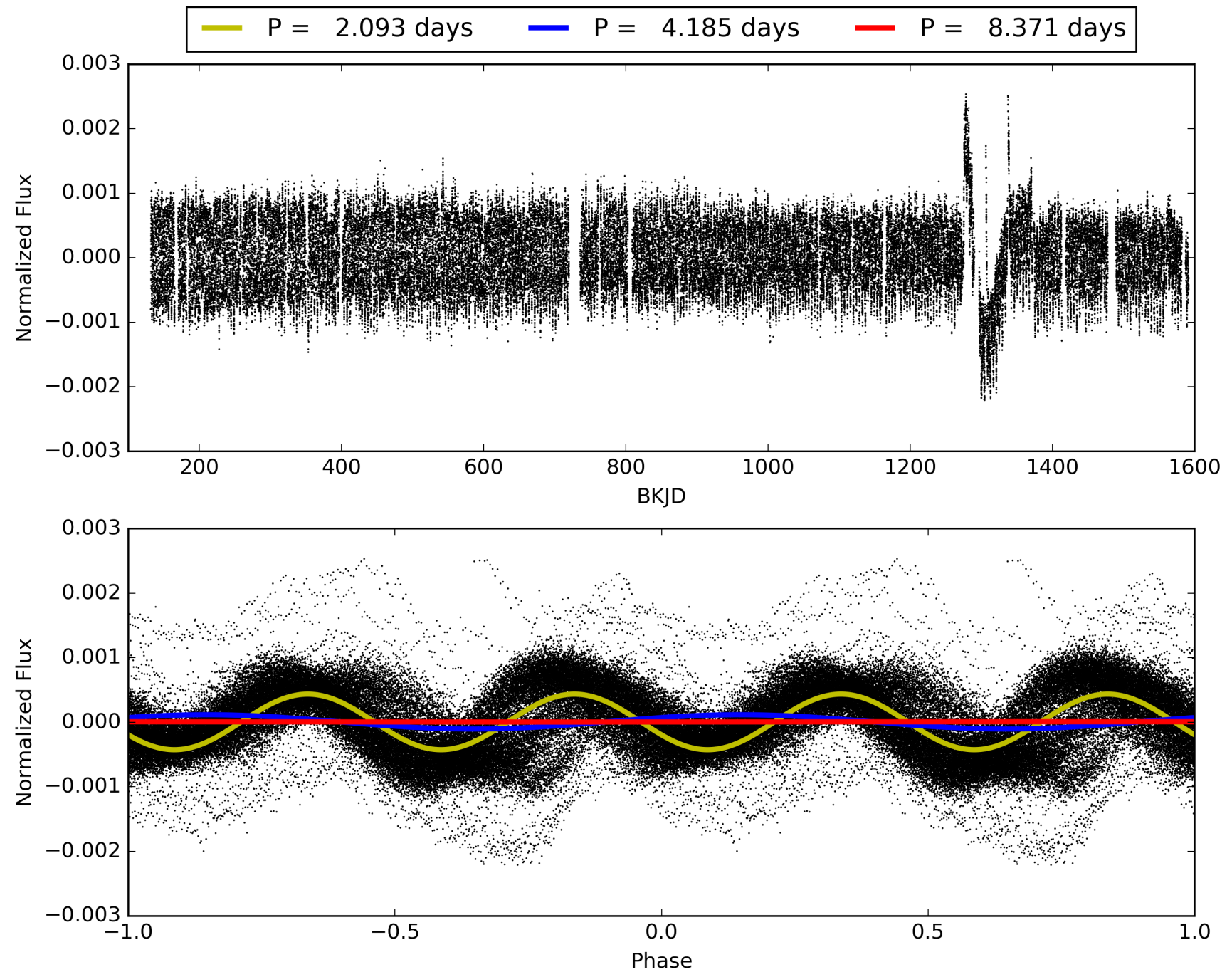
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 08:42:17 Z

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

TCE 012208769-03, PDC Light Curves

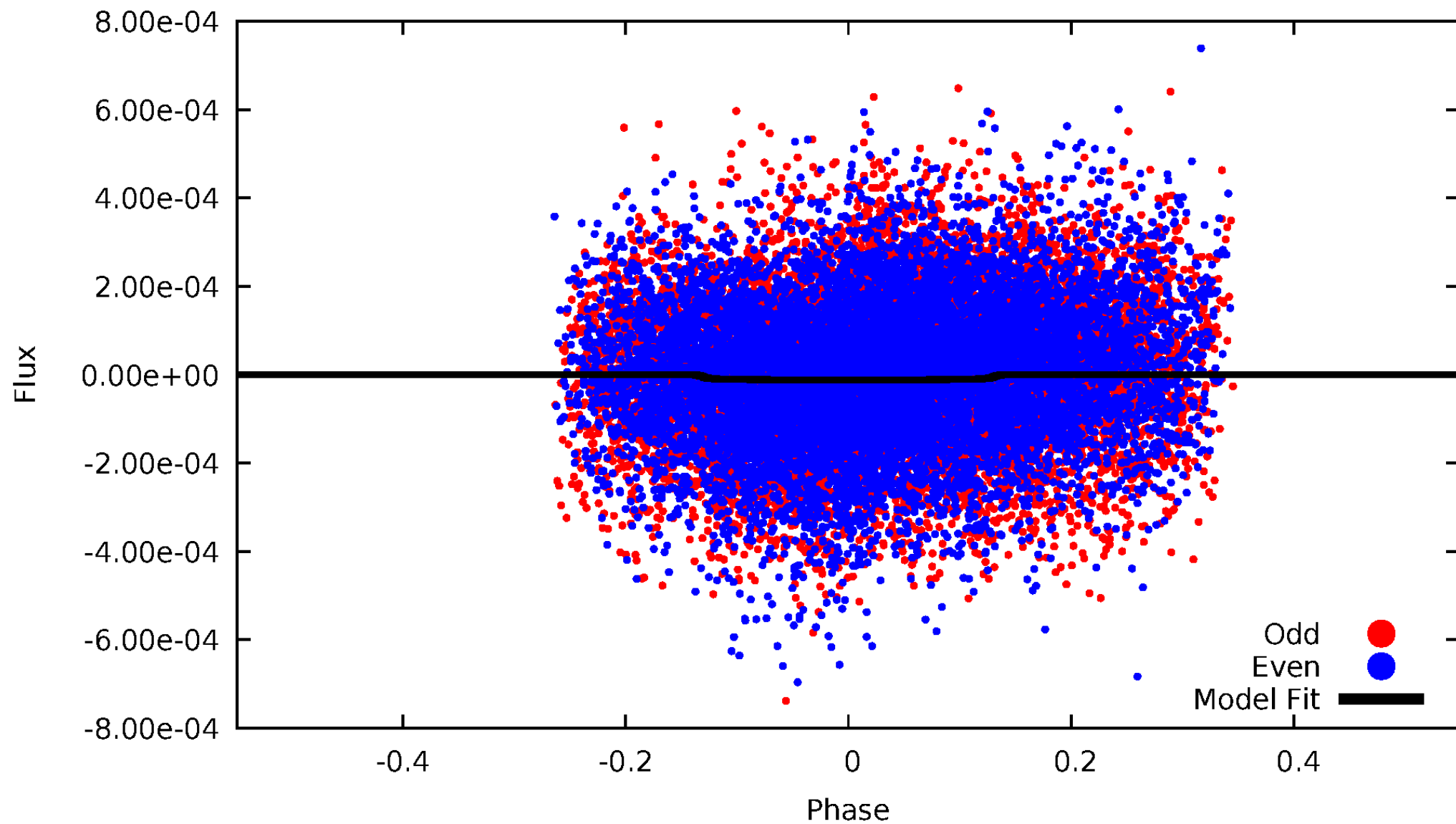


TCE 012208769-03



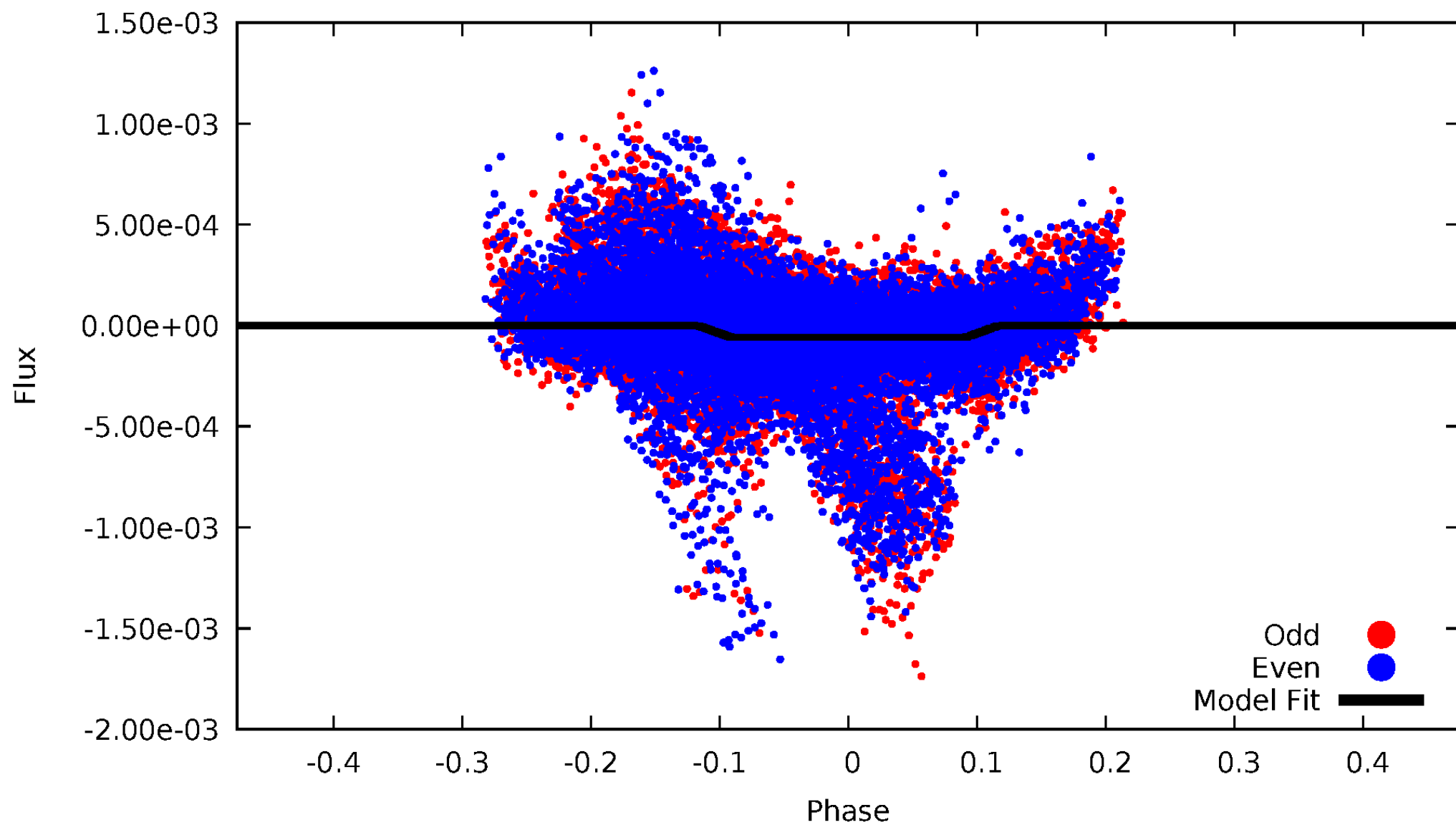
DV Odd/Even

TCE 012208769-03



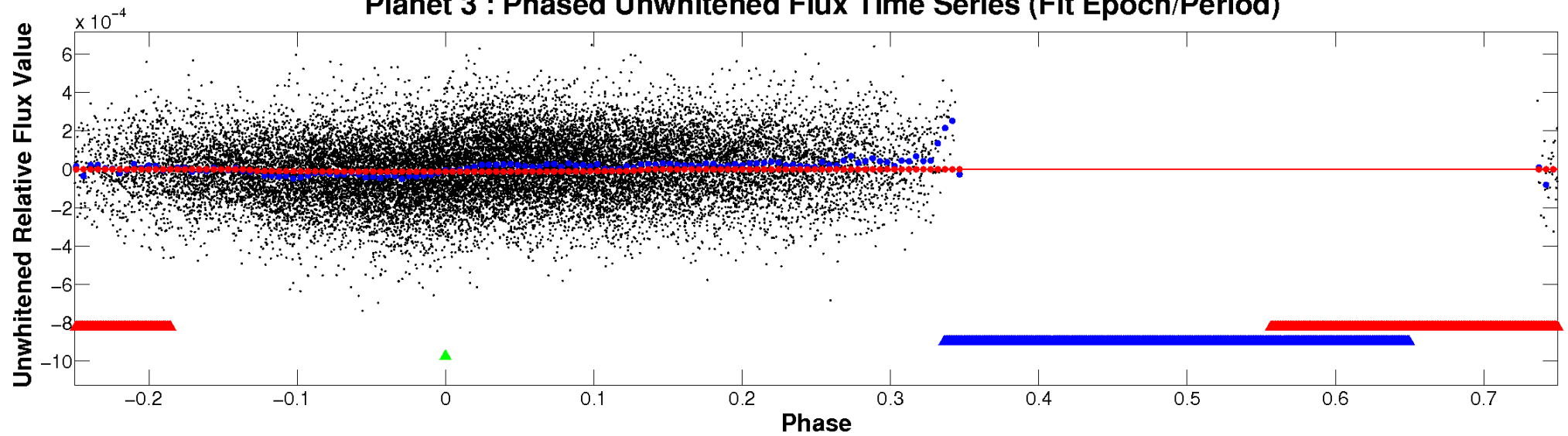
ALT Odd/Even

TCE 012208769-03

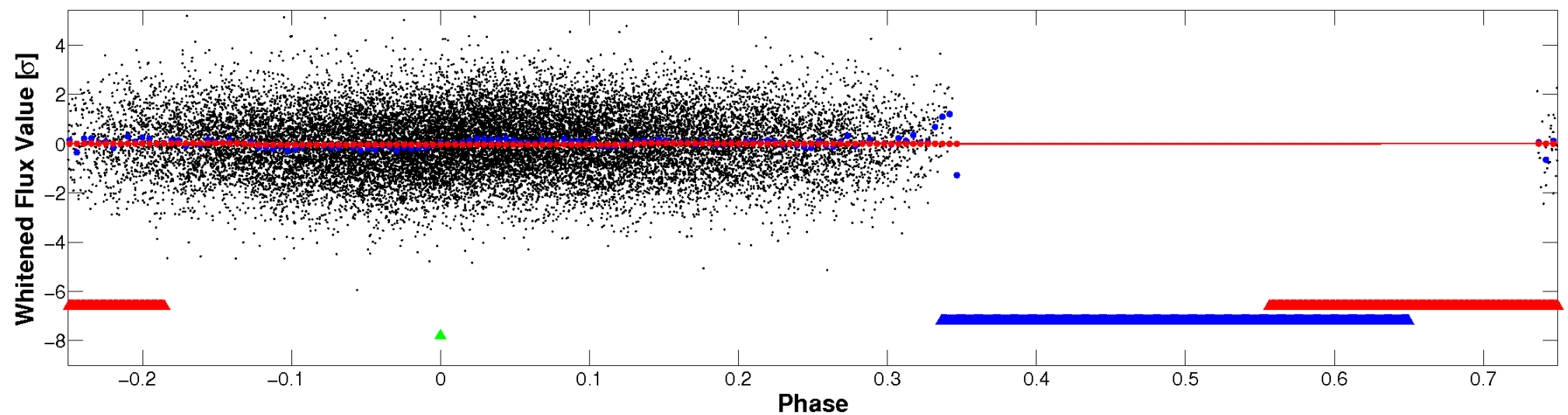


Non-Whitened Vs. Whitened Light Curve

Planet 3 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

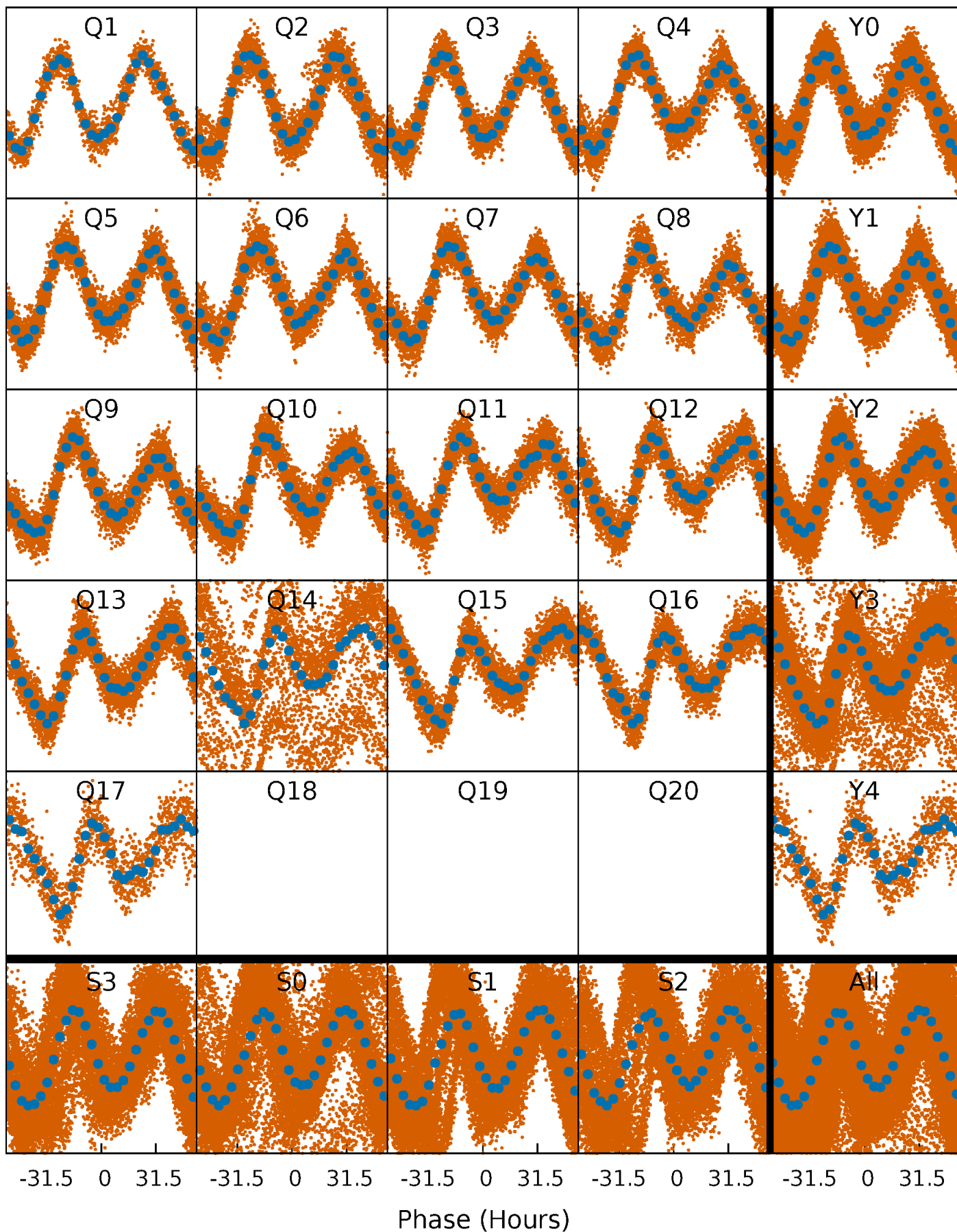


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



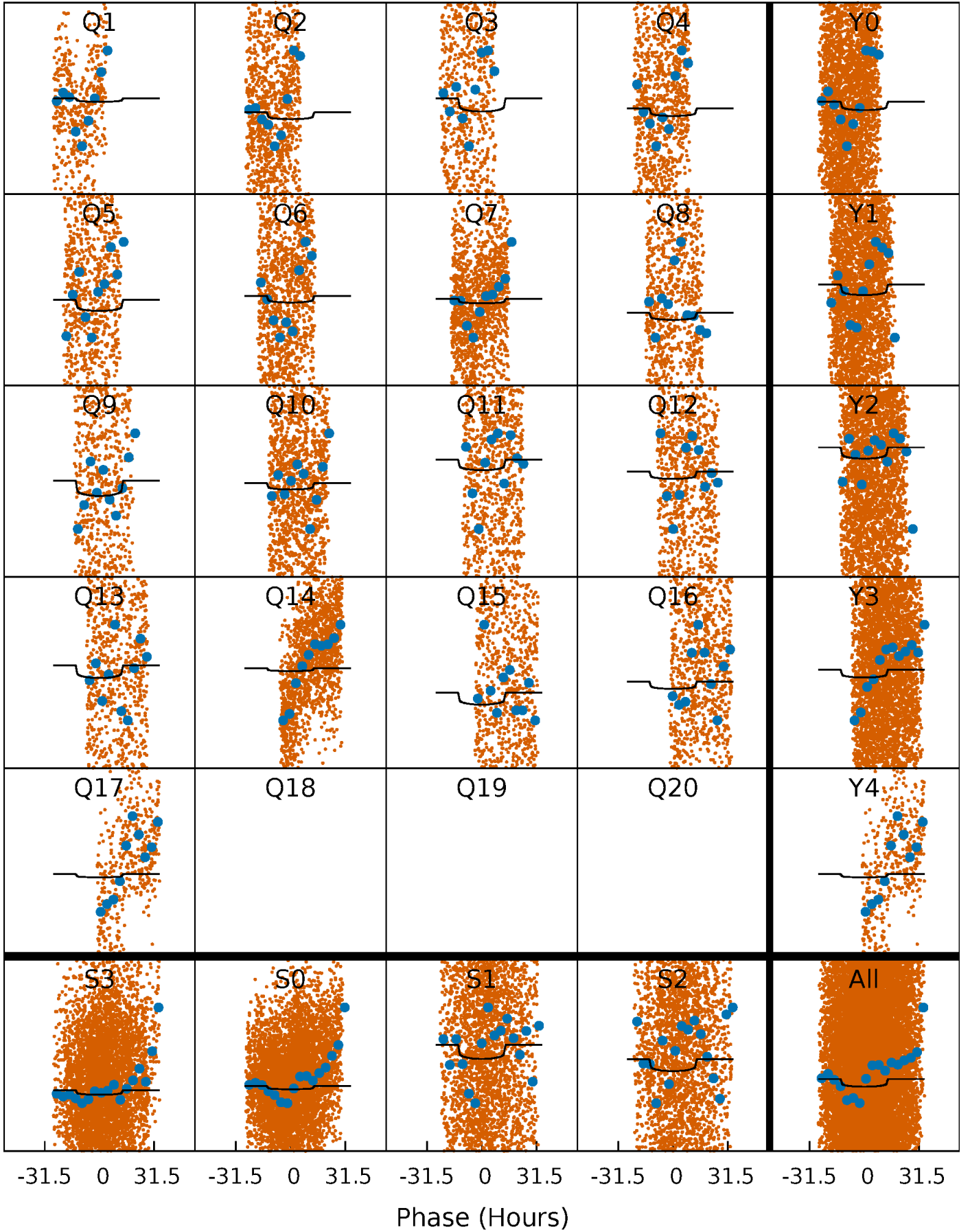
PDC Quarter-Phased Transit Curves

TCE 012208769-03 P= 4.185484 Days $T_0=133.249424$ (BKJD)



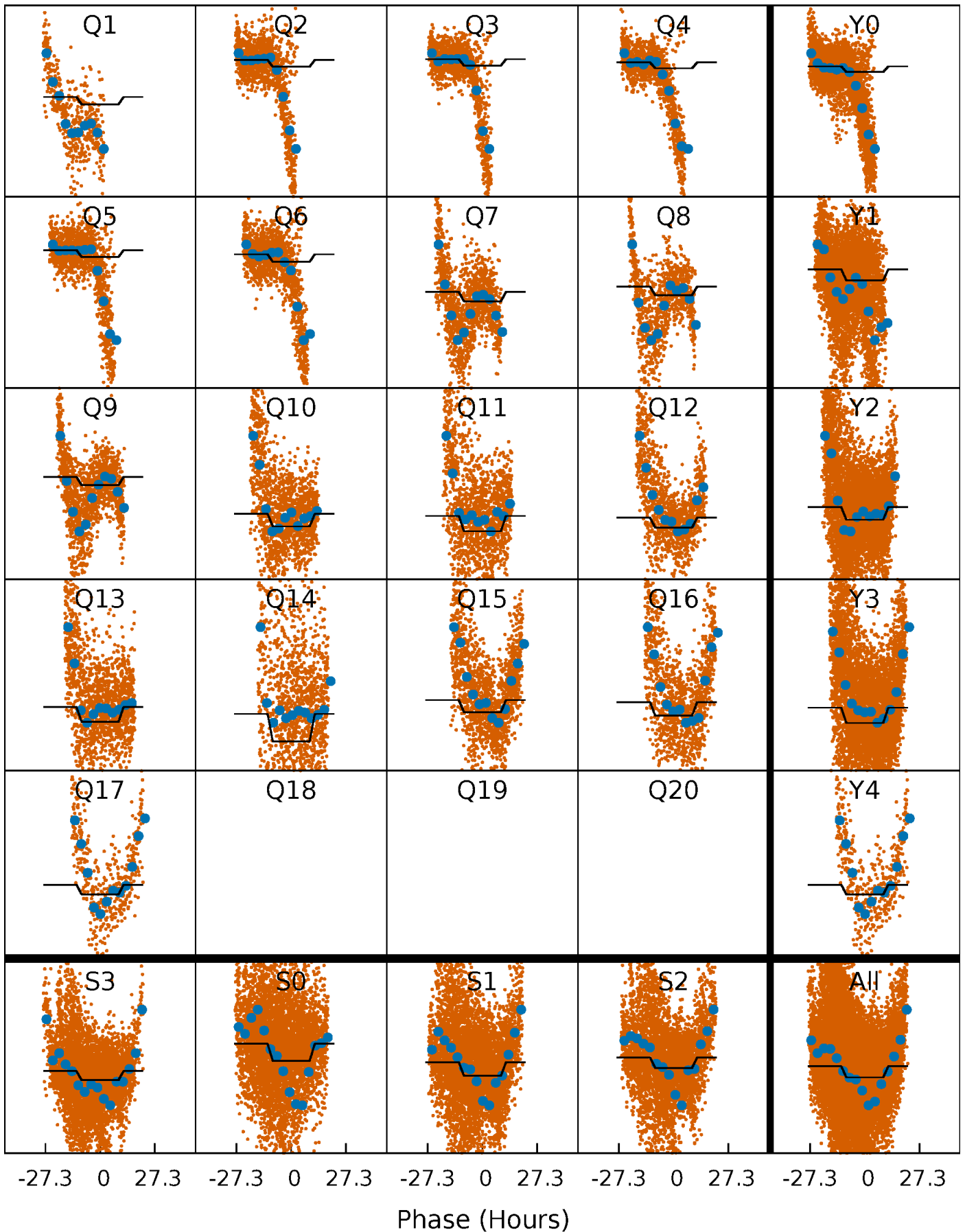
DV Quarter-Phased Transit Curves

TCE 012208769-03 $P = 4.185484$ Days $T_0 = 133.249424$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

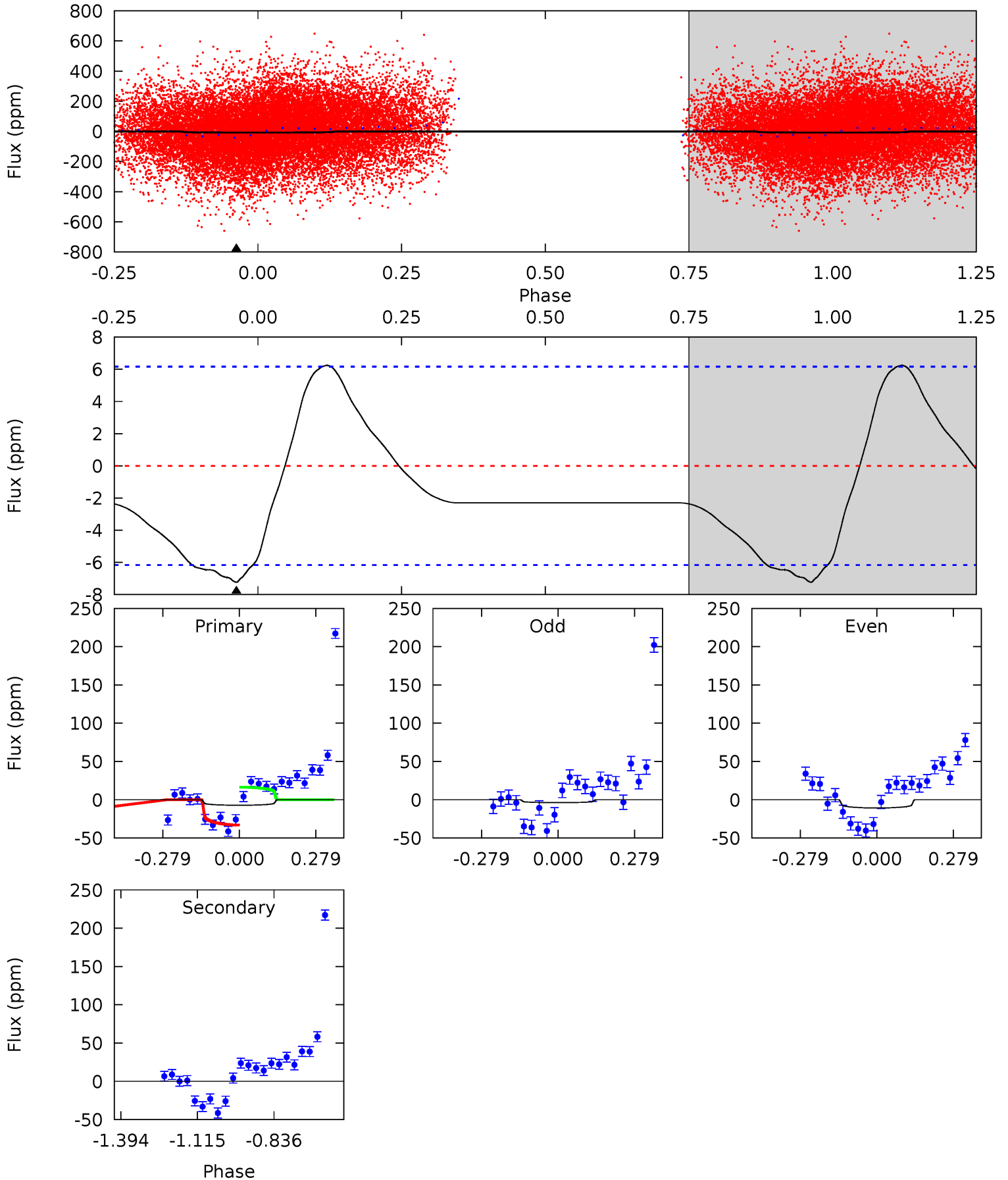
TCE 012208769-03 $P = 4.186852$ Days $T_0 = 133.325400$ (BKJD)



DV Model-Shift Uniqueness Test

012208769-03, P = 4.185484 Days, E = 129.063940 Days

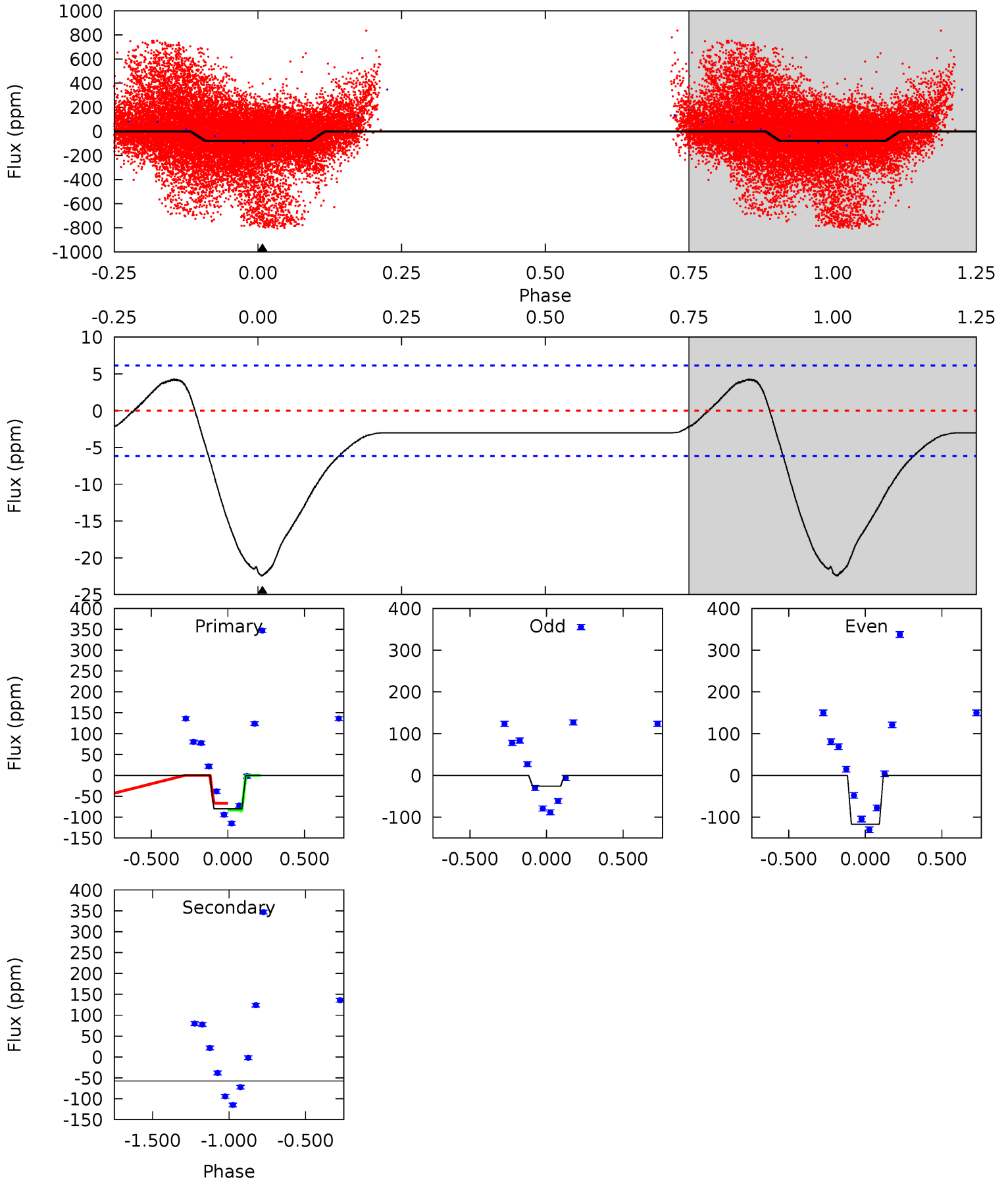
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.10	0	0	0	4.34	1.08	0.88	5.10	5.10	0	0	2.50	2.60	0.46	6.21



Alt Model-Shift Uniqueness Test

012208769-03, P = 4.186852 Days, E = 129.138548 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.4	0	0	0	4.21	0.67	1.06	15.4	15.4	0	0	8.77	0	0.16	5.40



Stellar Parameters For KIC 012208769

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6742^{+182}_{-223}	$3.554^{+0.368}_{-0.092}$	$-1.140^{+0.350}_{-0.300}$	$3.196^{+0.569}_{-1.327}$	$1.331^{+0.156}_{-0.338}$	$0.057^{+0.170}_{-0.016}$
	+3%/-3%	+10%/-3%	+31%/-26%	+18%/-42%	+12%/-25%	+296%/-29%
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 012208769-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1	$1.23^{+0.42}_{-0.36}$	3061^{+199}_{-308}	-3161^{+7106}_{-1075}	$-0.043^{+1.728}_{-1.740}$
Alt.	0 ± 1	$2.46^{+0.48}_{-0.55}$	3058^{+207}_{-334}	-3090^{+5877}_{-486}	$0.012^{+0.441}_{-0.443}$

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

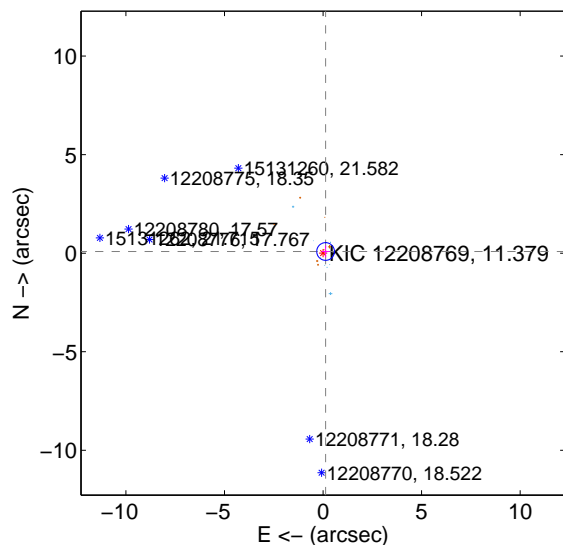
Supplemental centroid analysis for 012208769-03. **Kepler magnitude: 11.38.** Transit SNR 3.96

There are 10 quarters with good PRF difference image offsets

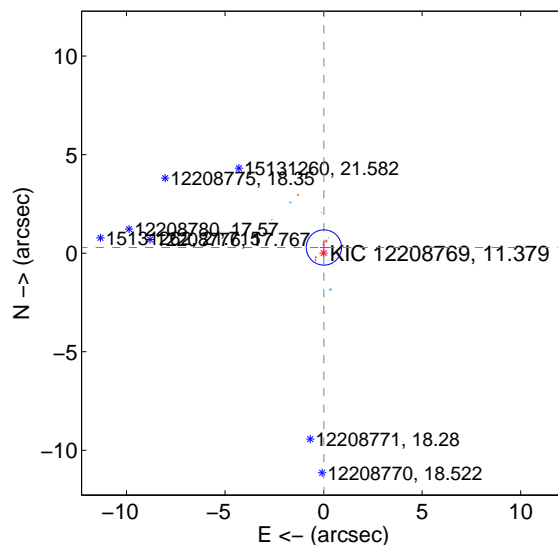
The direct PRF centroid is offset from the target star catalog position by about 0.29 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.155 ± 0.150	1.04	-0.129 ± 0.198	0.086 ± 0.308
PRF-fit source offset from KIC position	0.289 ± 0.298	0.97	-0.016 ± 0.205	0.289 ± 0.306
photometric centroid source offset	6.21 ± 1.34	4.64	2.78 ± 0.68	-5.56 ± 1.46

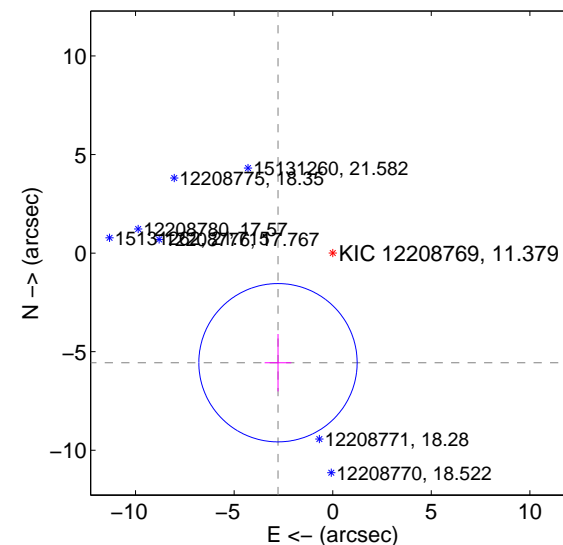
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

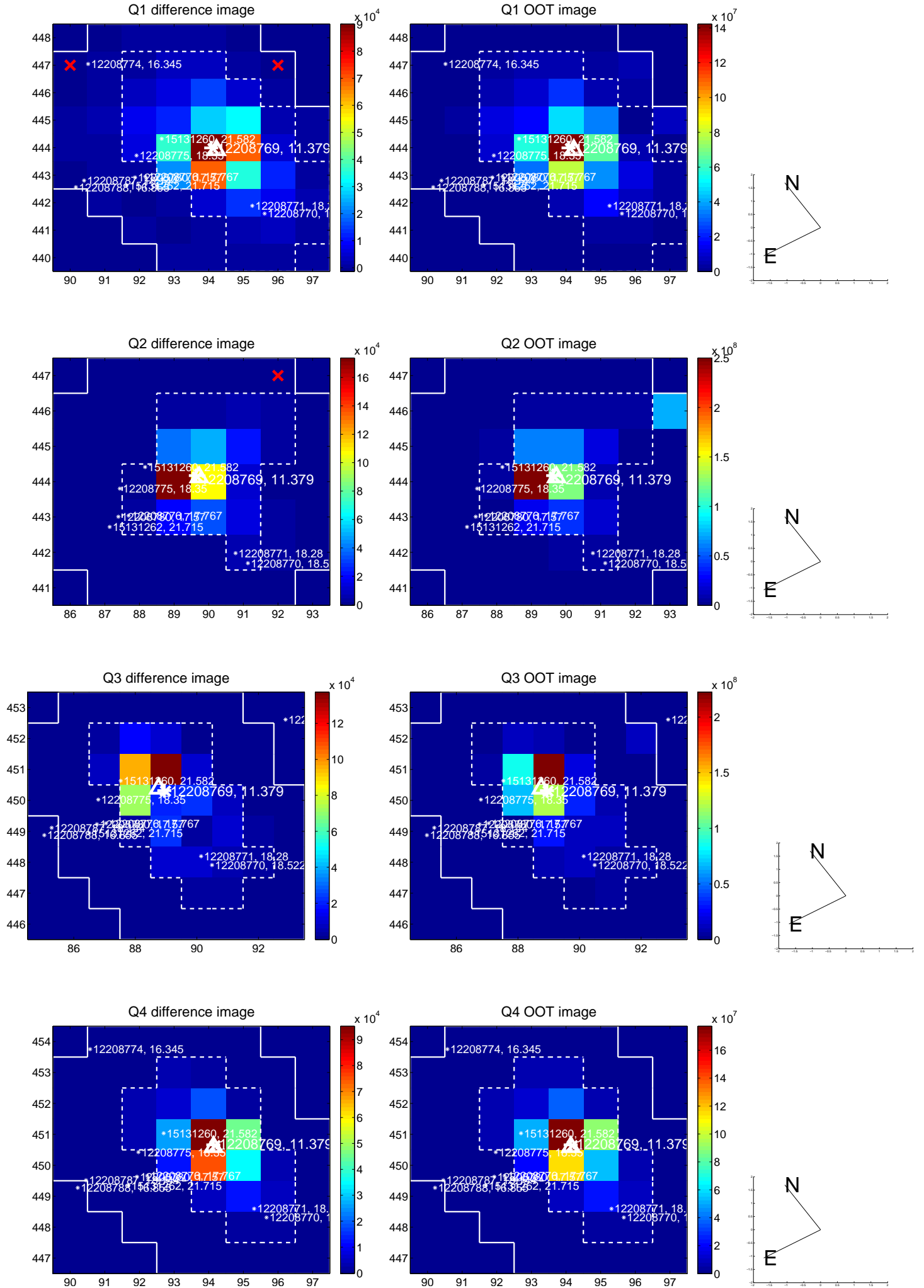


offset from photometric centroids

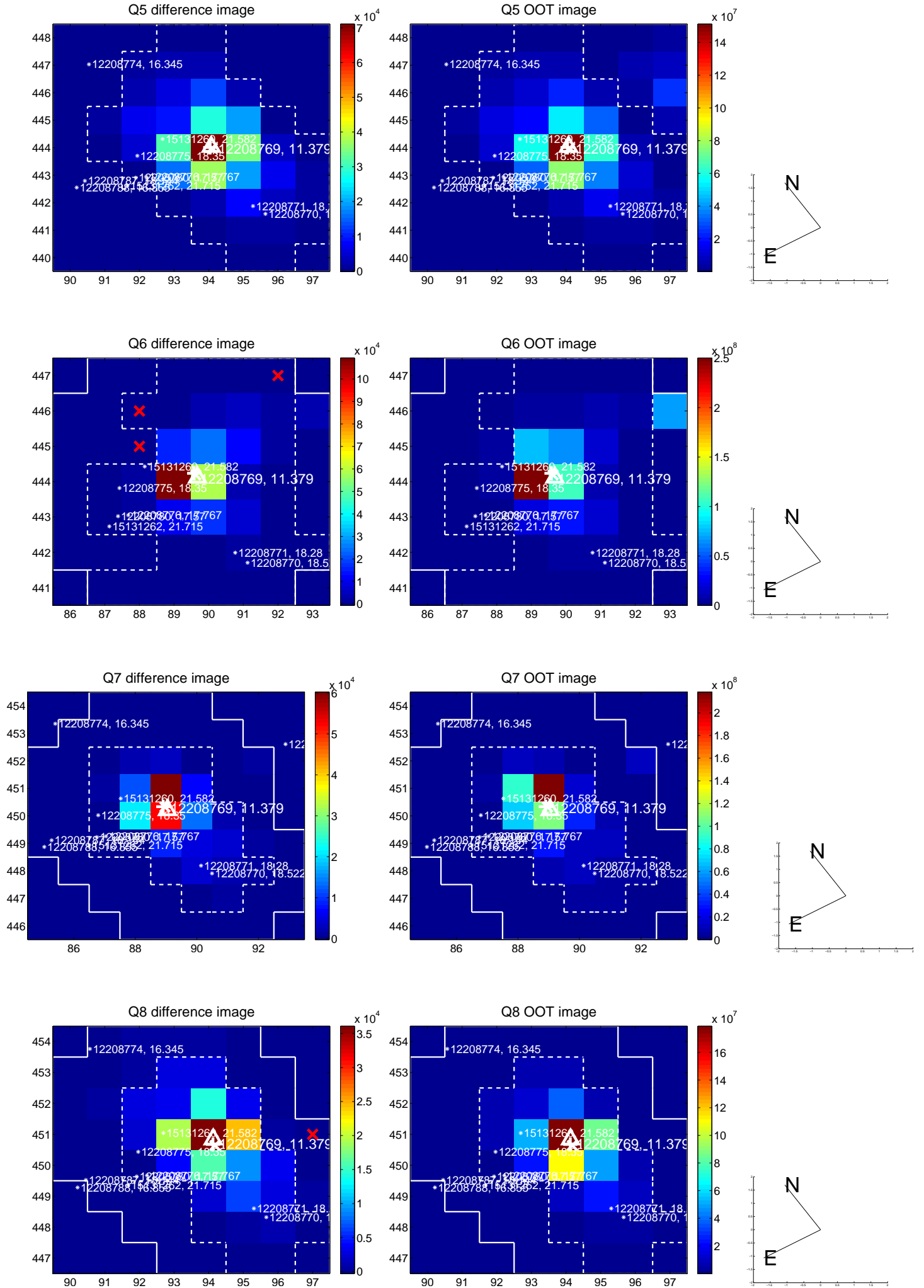


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

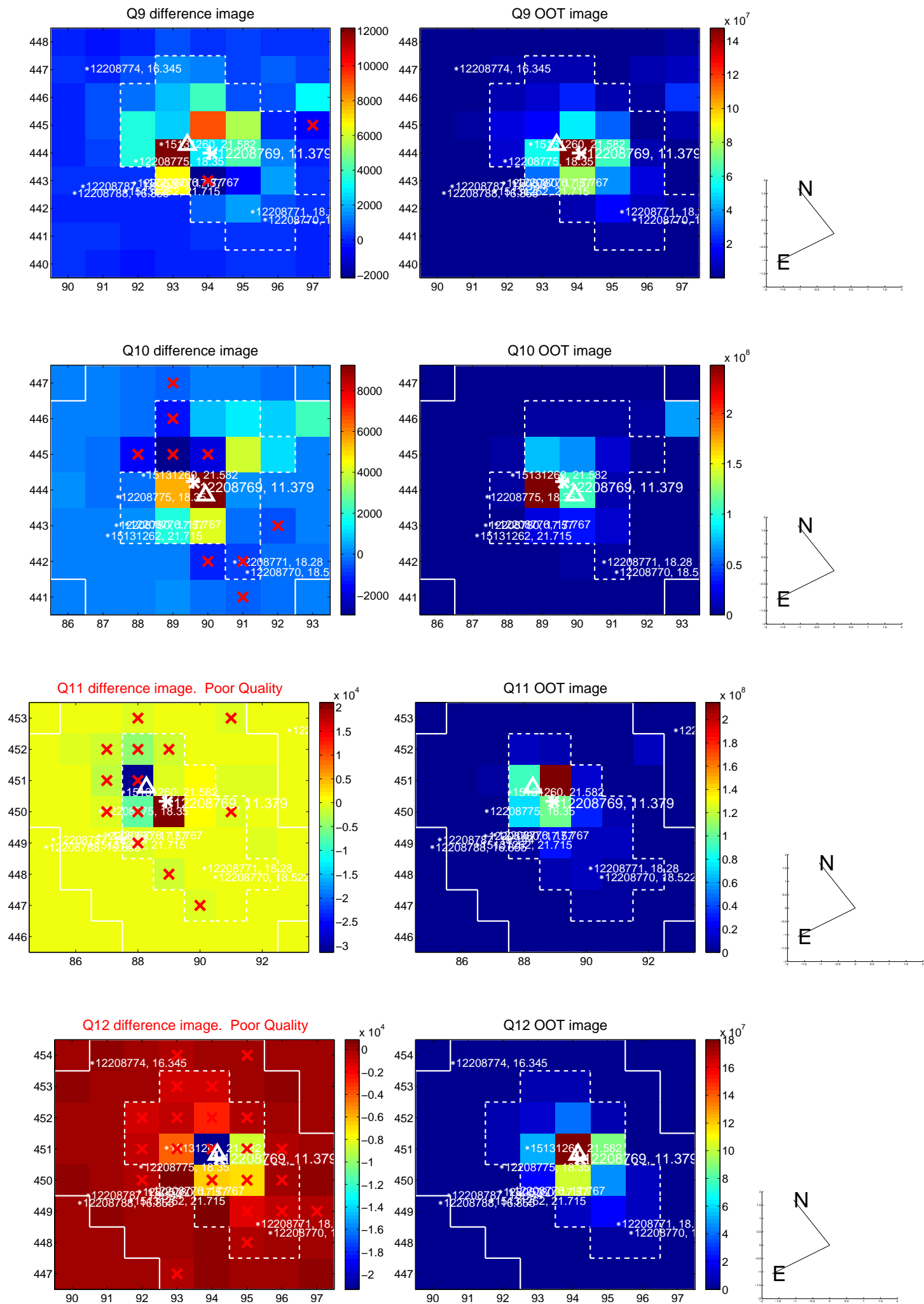
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



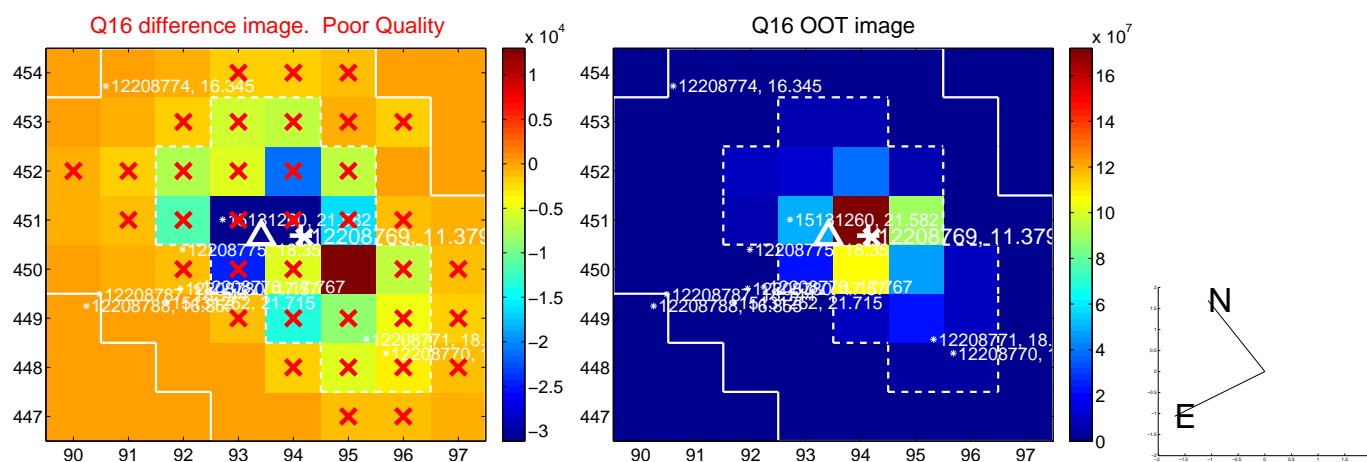
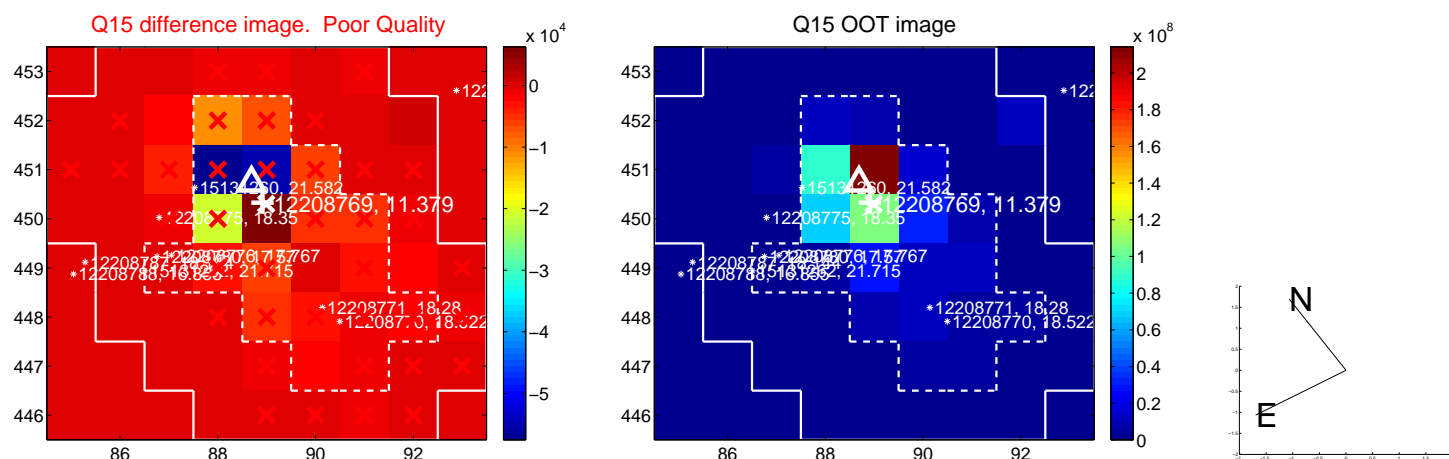
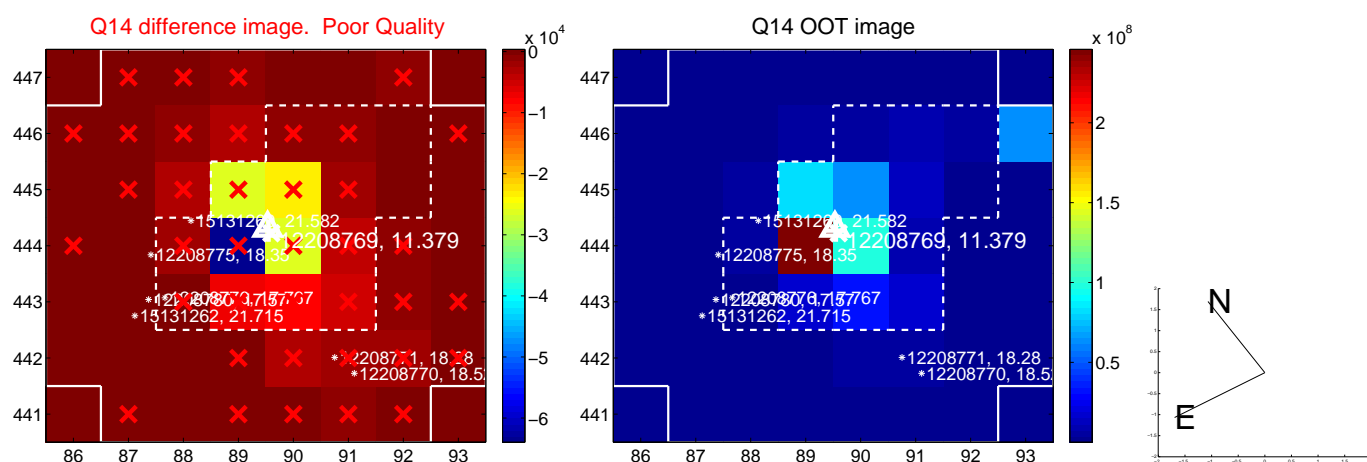
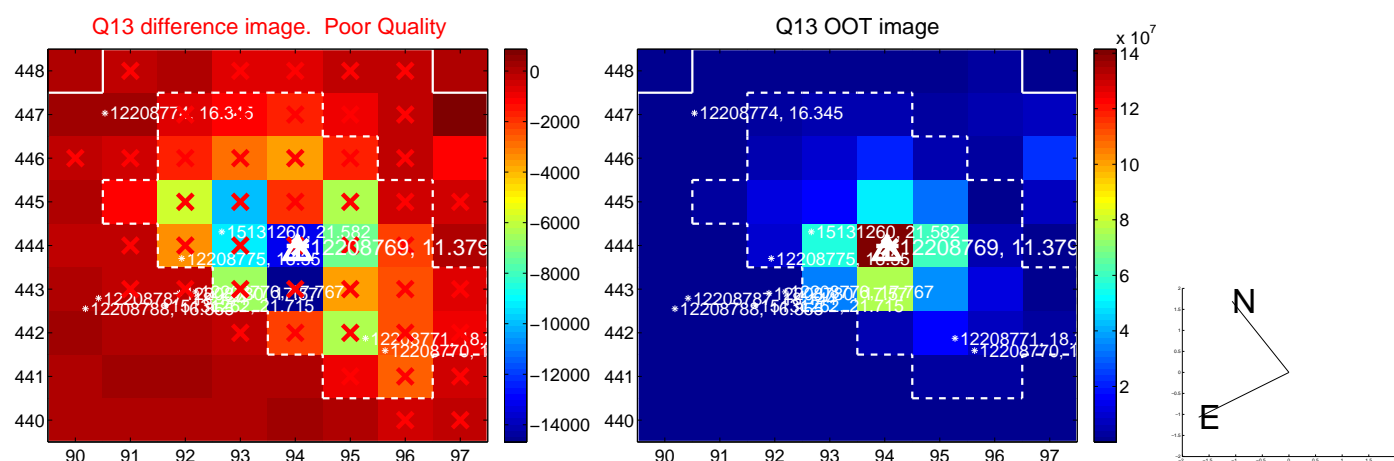
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



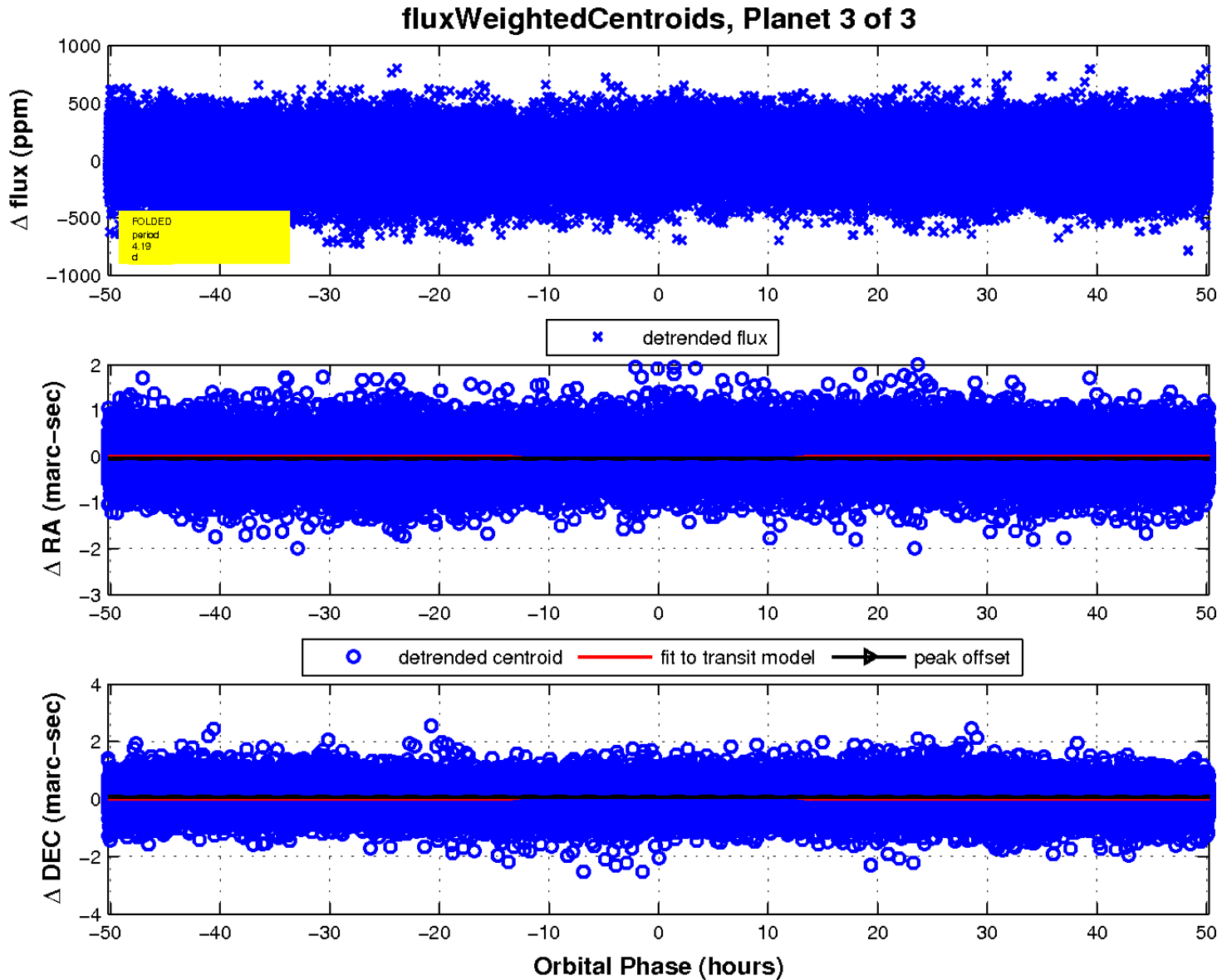
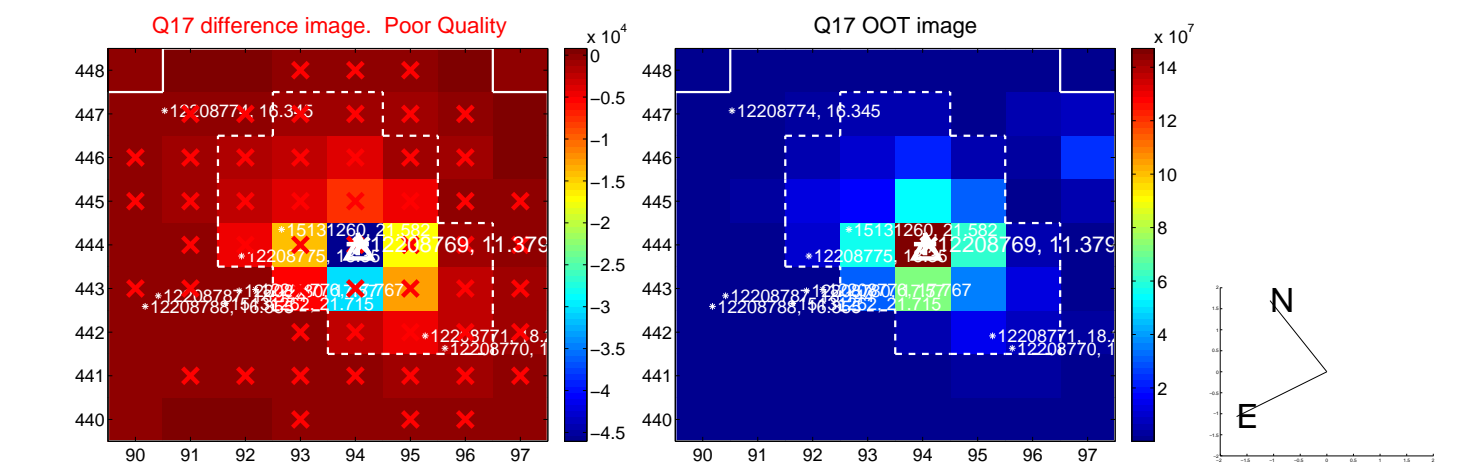
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

