

KIC 008262409

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})
008262409-01	OBS	No	0.997297	132.009110	118.6	2.000	10.8	-1.0	3.28	6763	3.61	37678.35
008262409-02	OBS	No	0.997206	132.483815	1.7	8.843	10.8	1.2	3.28	6763	0.44	37682.92

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008262409-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_NOFITS
008262409-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—SAME_NTL_PERIOD

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

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

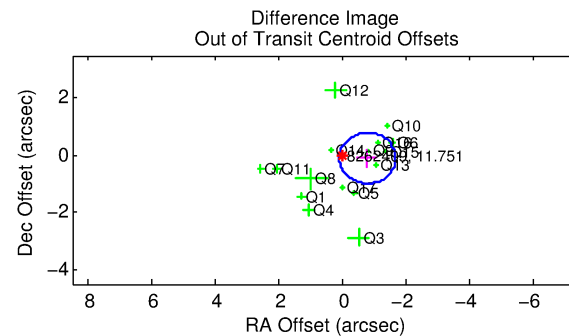
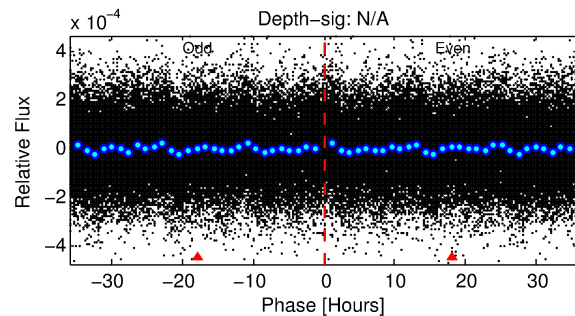
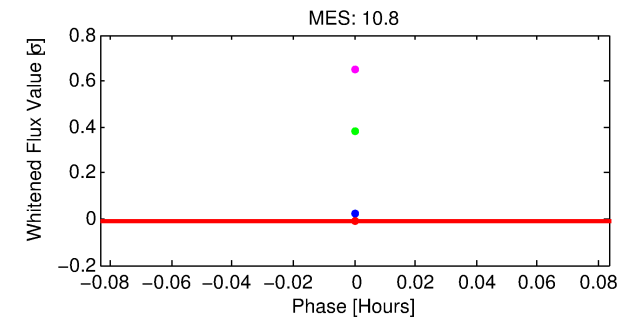
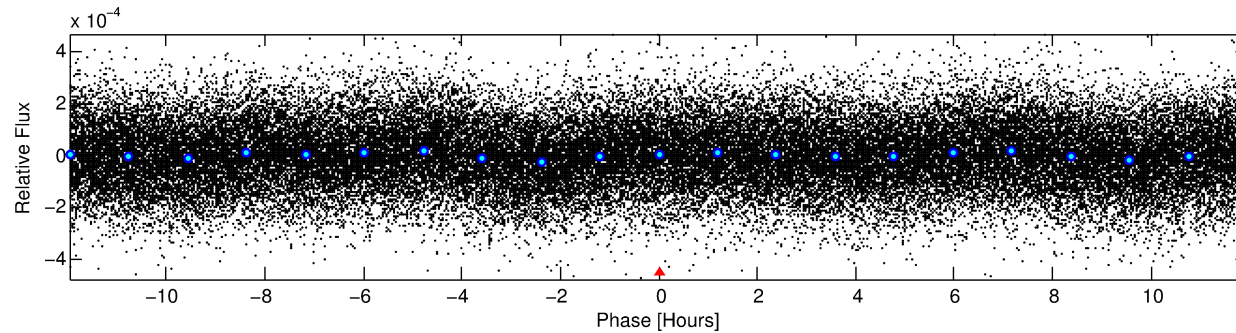
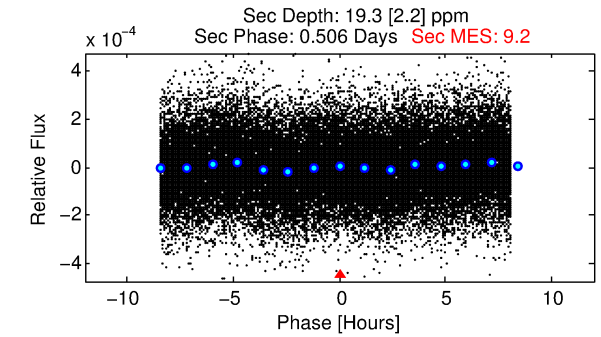
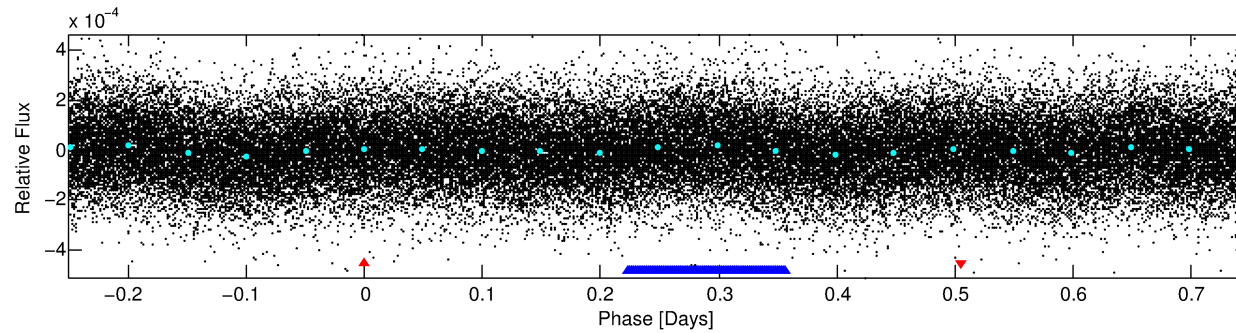
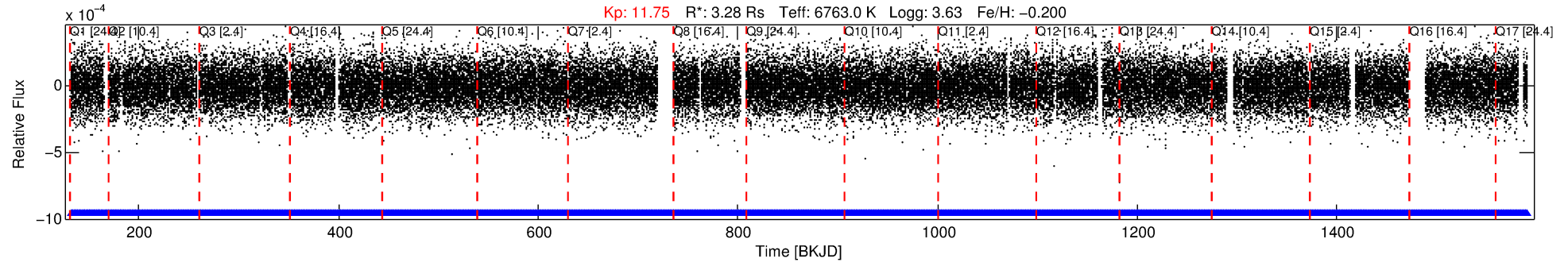
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008262409-01

No Significant Match Found

DV One-Page Summary

KIC: 8262409 Candidate: 1 of 2 Period: 0.997 d



TPS TCE Results:

Period = 0.99730 d
Epoch = 132.0091 BKJD

DV fit results are unavailable

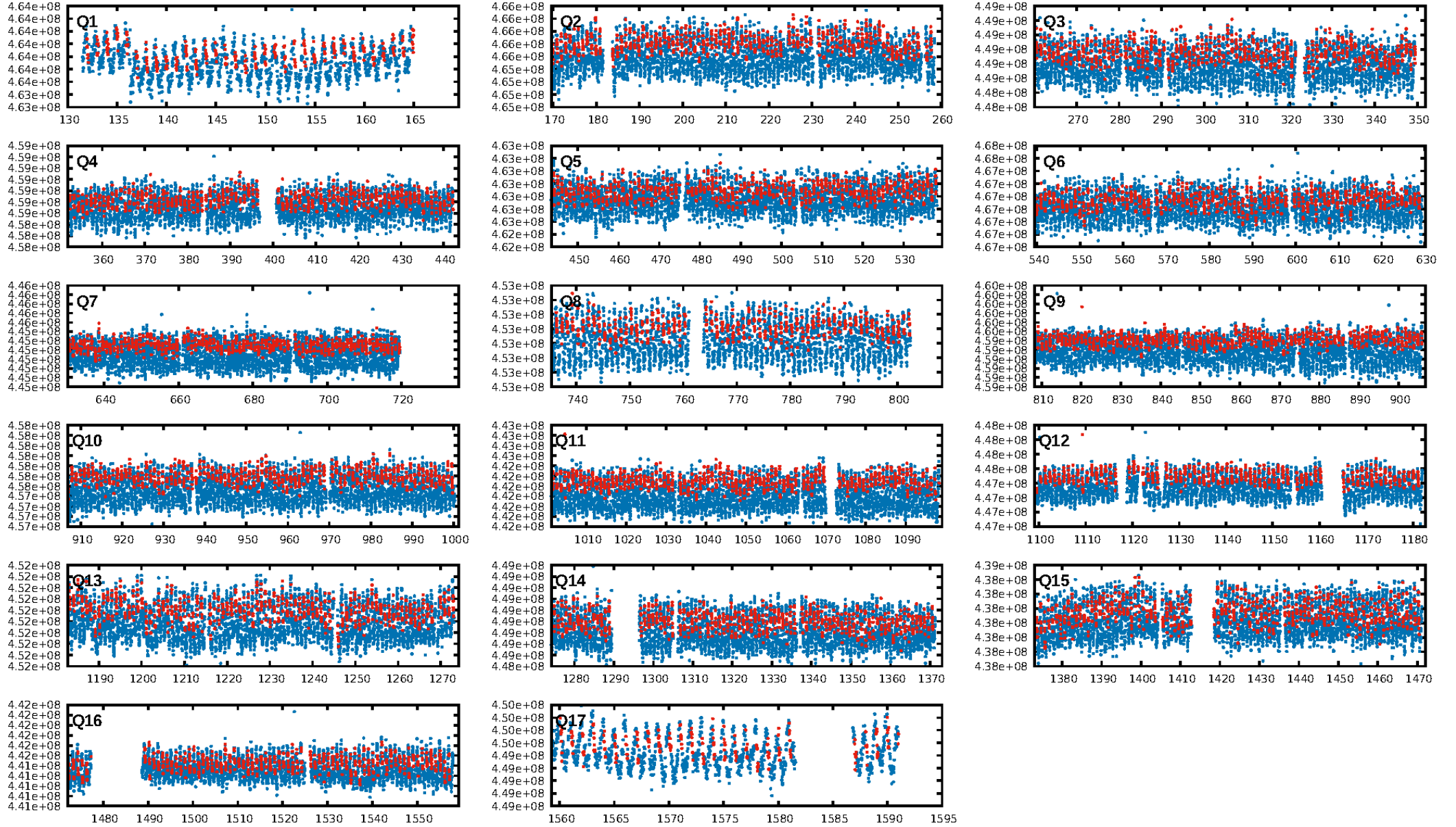
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1283/1283]
GhostDiagnostic-chr: 0.3601
Centroid-sig: 5.9%
Centroid-so: 2.610 arcsec [1.37σ]
OotOffset-rm: 0.786 arcsec [2.67σ]
KicOffset-rm: 0.889 arcsec [2.78σ]
OotOffset-st: 3/4/4/5 [16]
KicOffset-st: 3/4/4/5 [16]
DiffImageQuality-fgm: 0.50 [8/16]
DiffImageOverlap-fno: 0.00 [0/17]

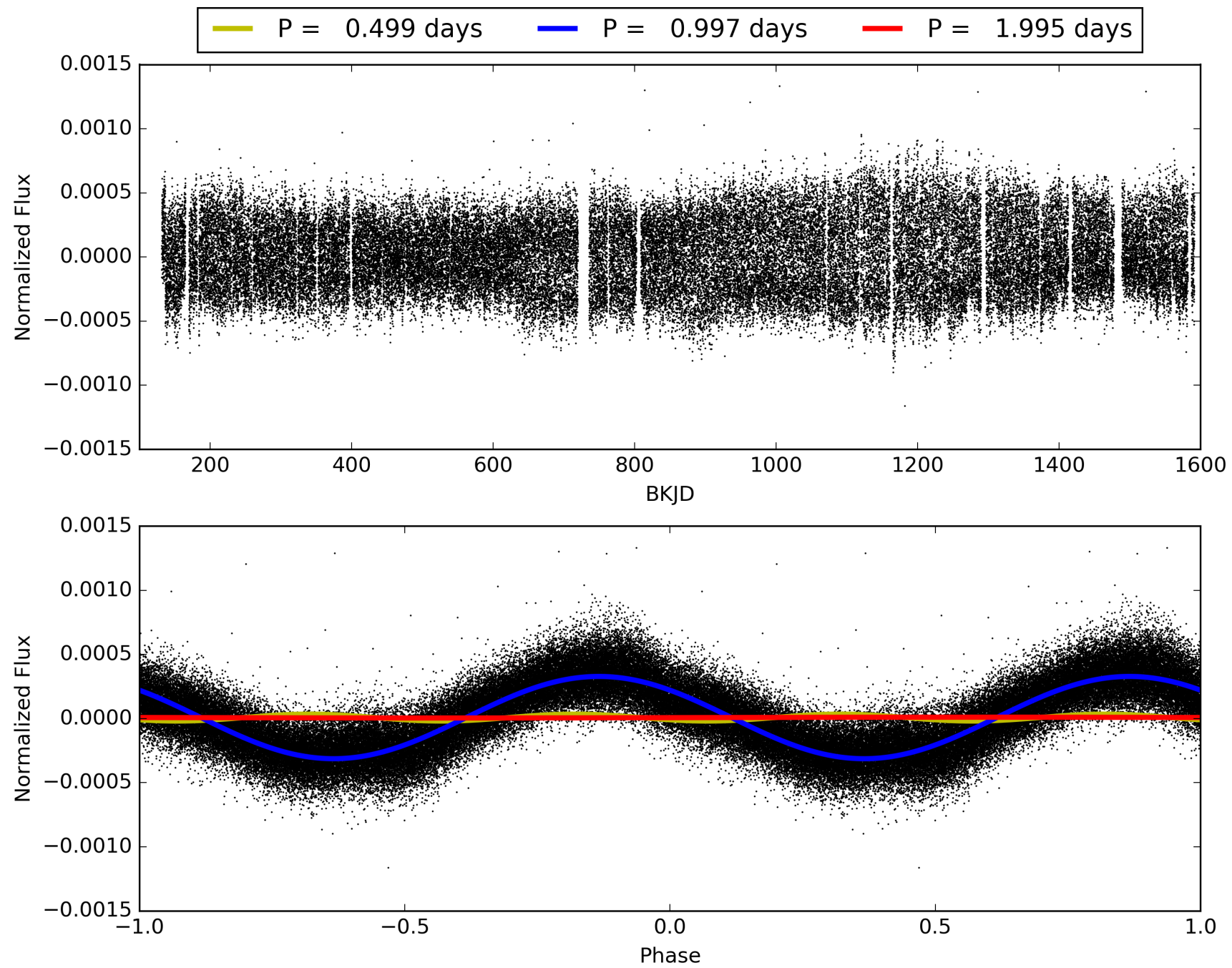
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 03:59:04 Z

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

TCE 008262409-01, PDC Light Curves

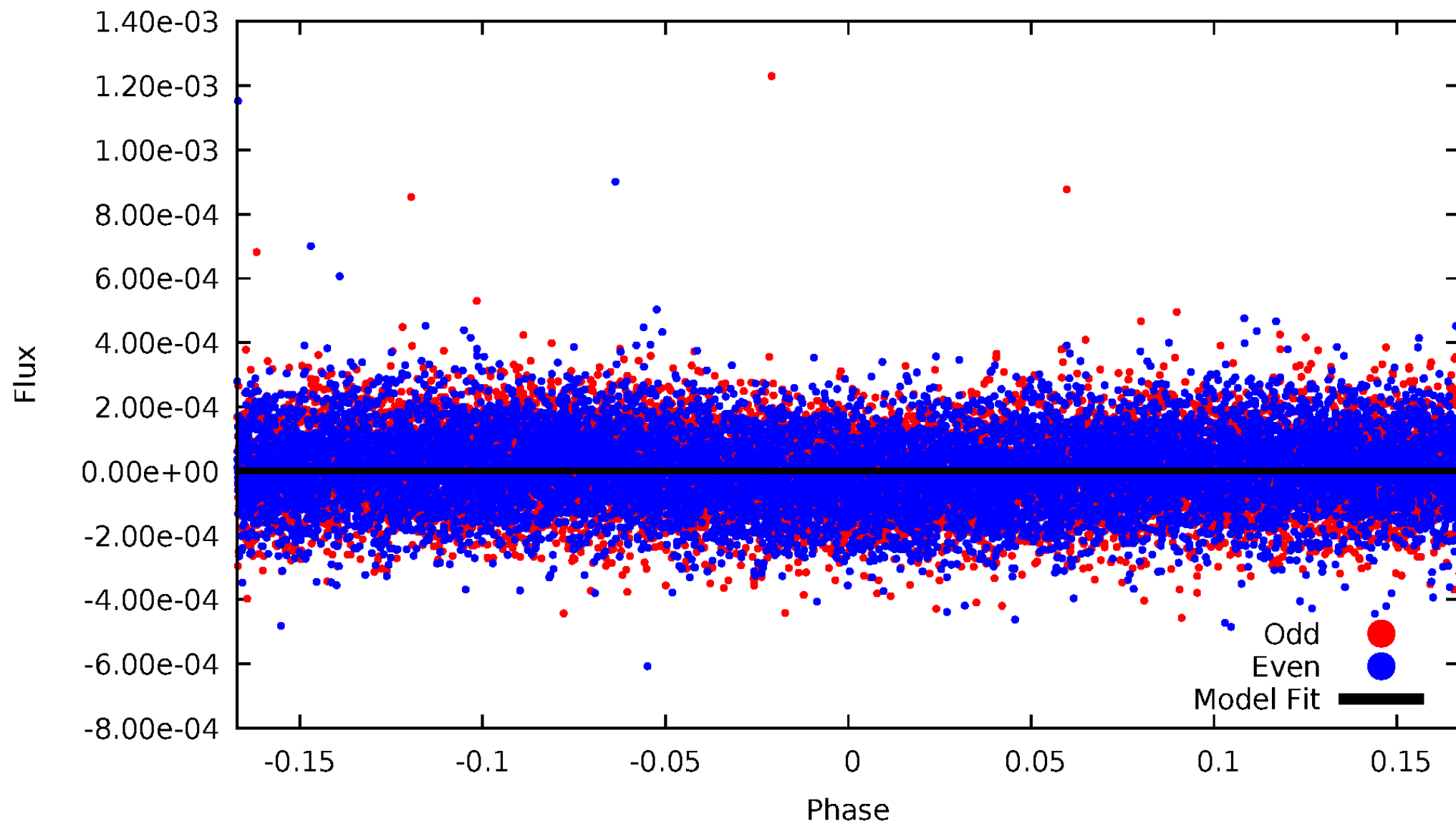


TCE 008262409-01



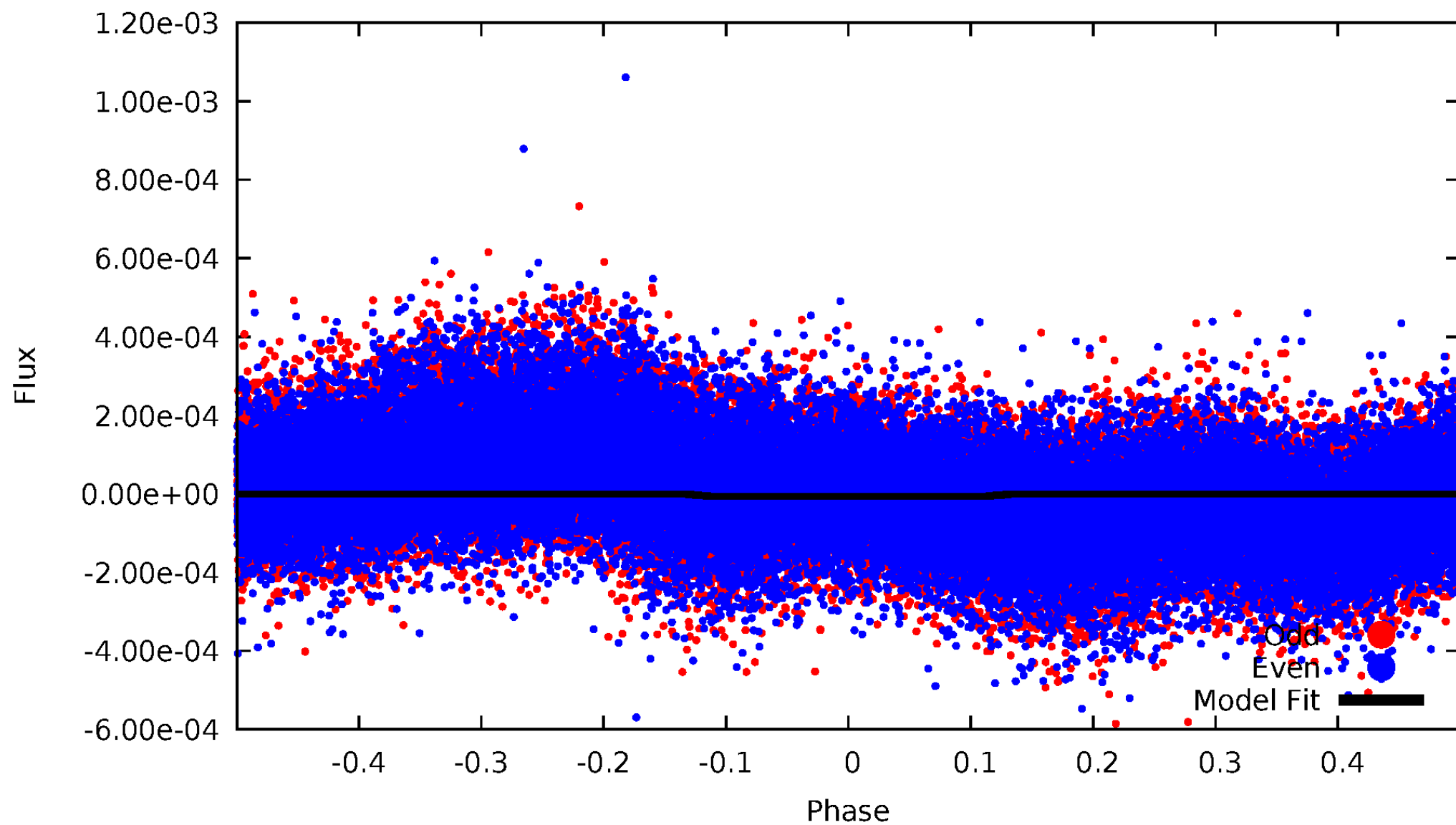
DV Odd/Even

TCE 008262409-01

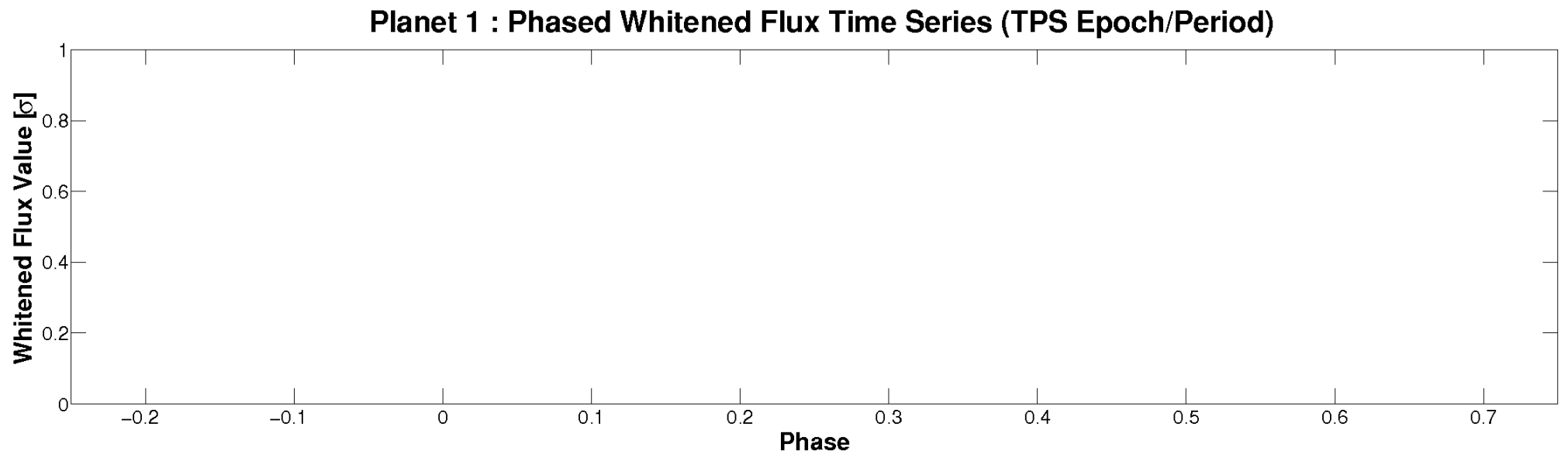
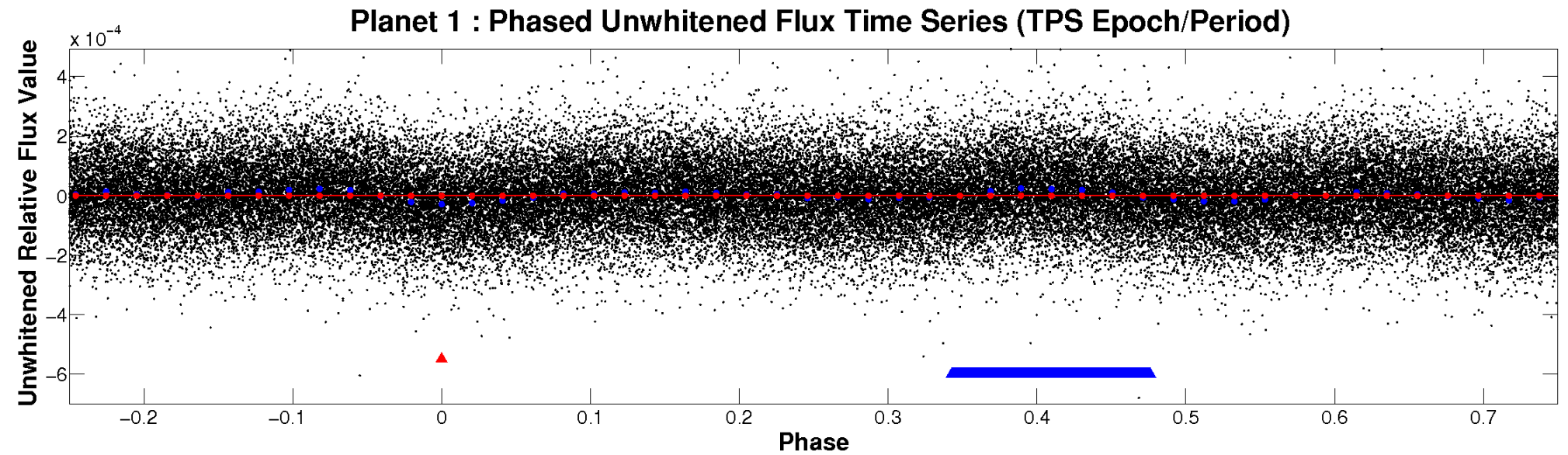


ALT Odd/Even

TCE 008262409-01

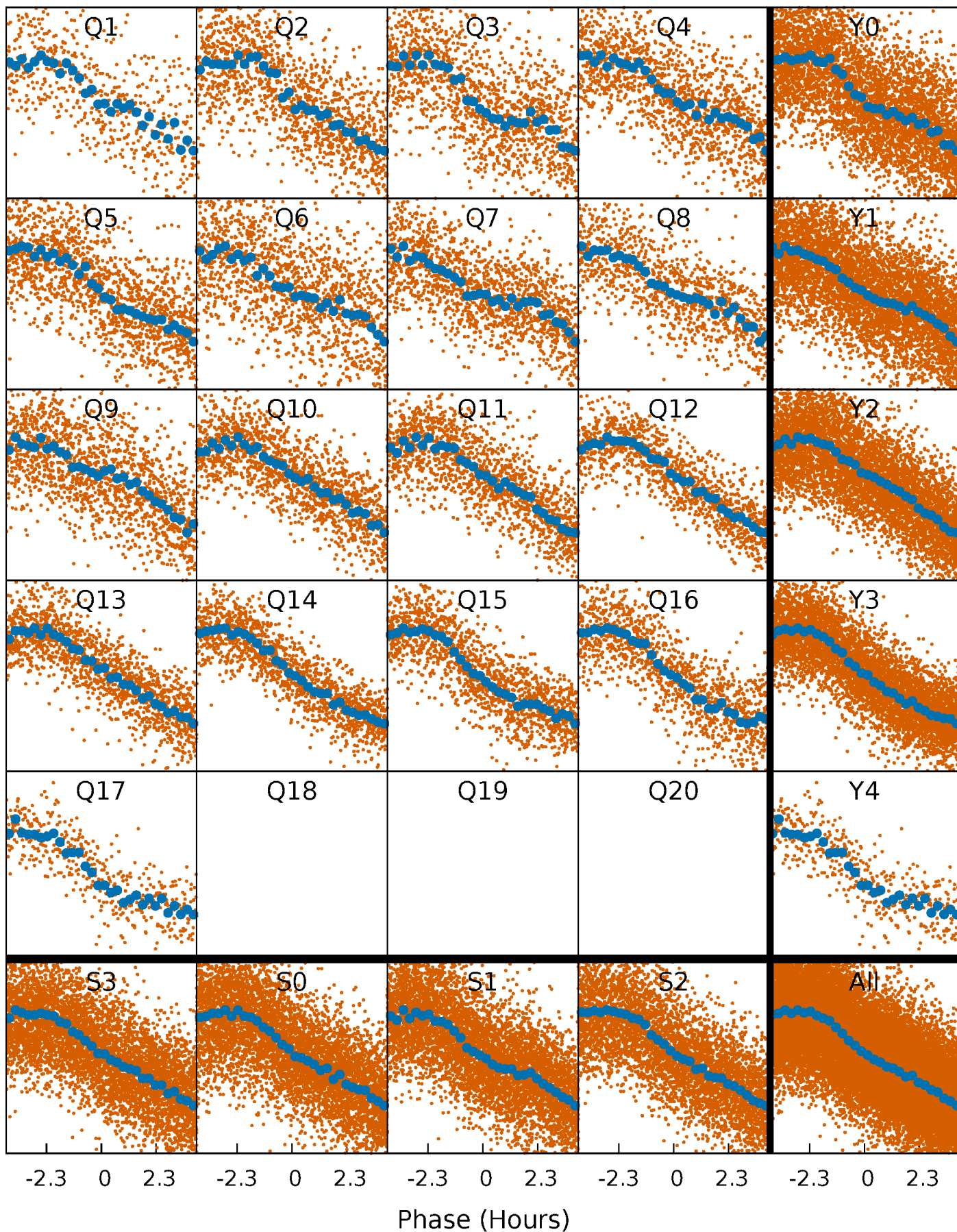


Non-Whitened Vs. Whitened Light Curve



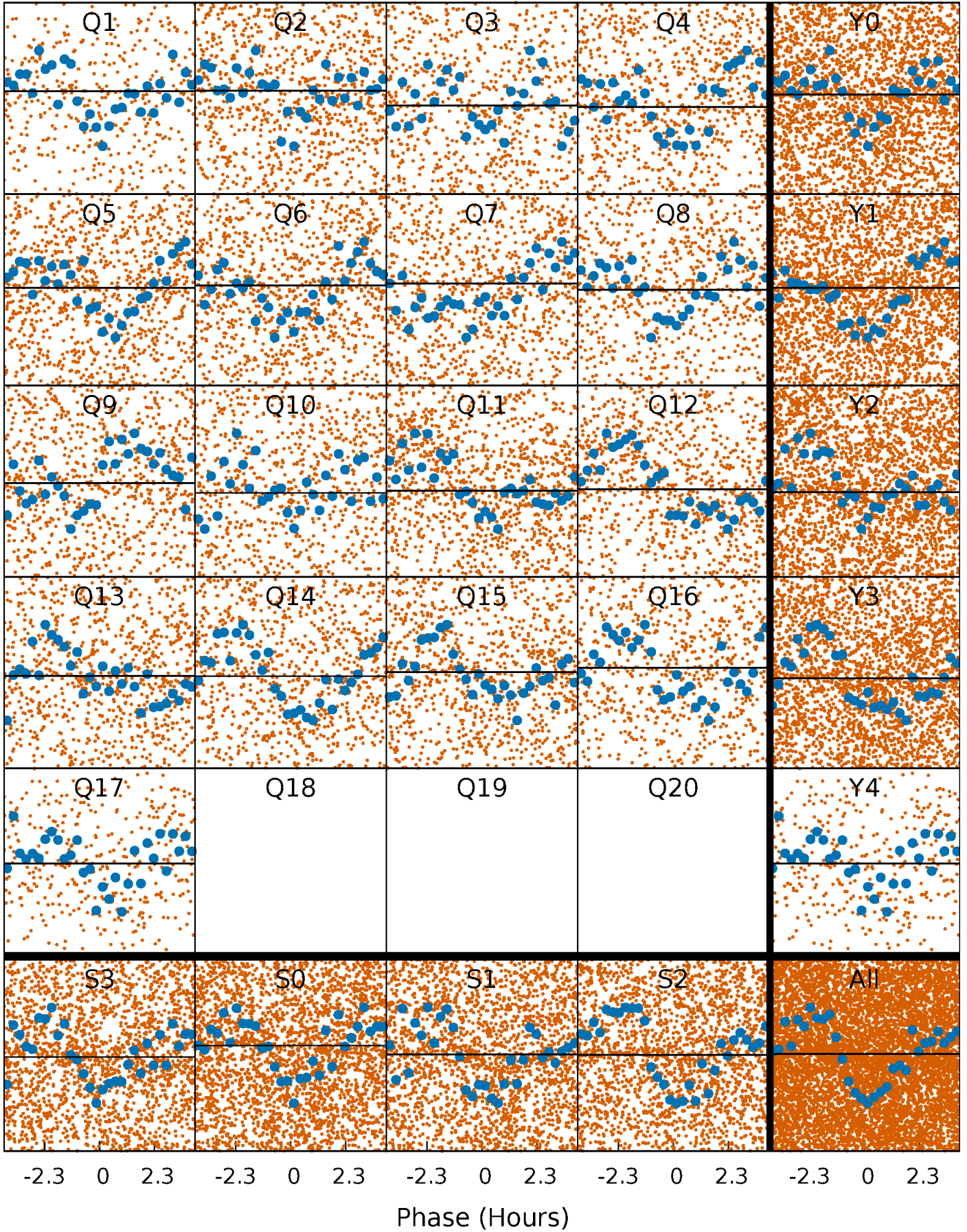
PDC Quarter-Phased Transit Curves

TCE 008262409-01 P= 0.997297 Days $T_0=132.009110$ (BKJD)



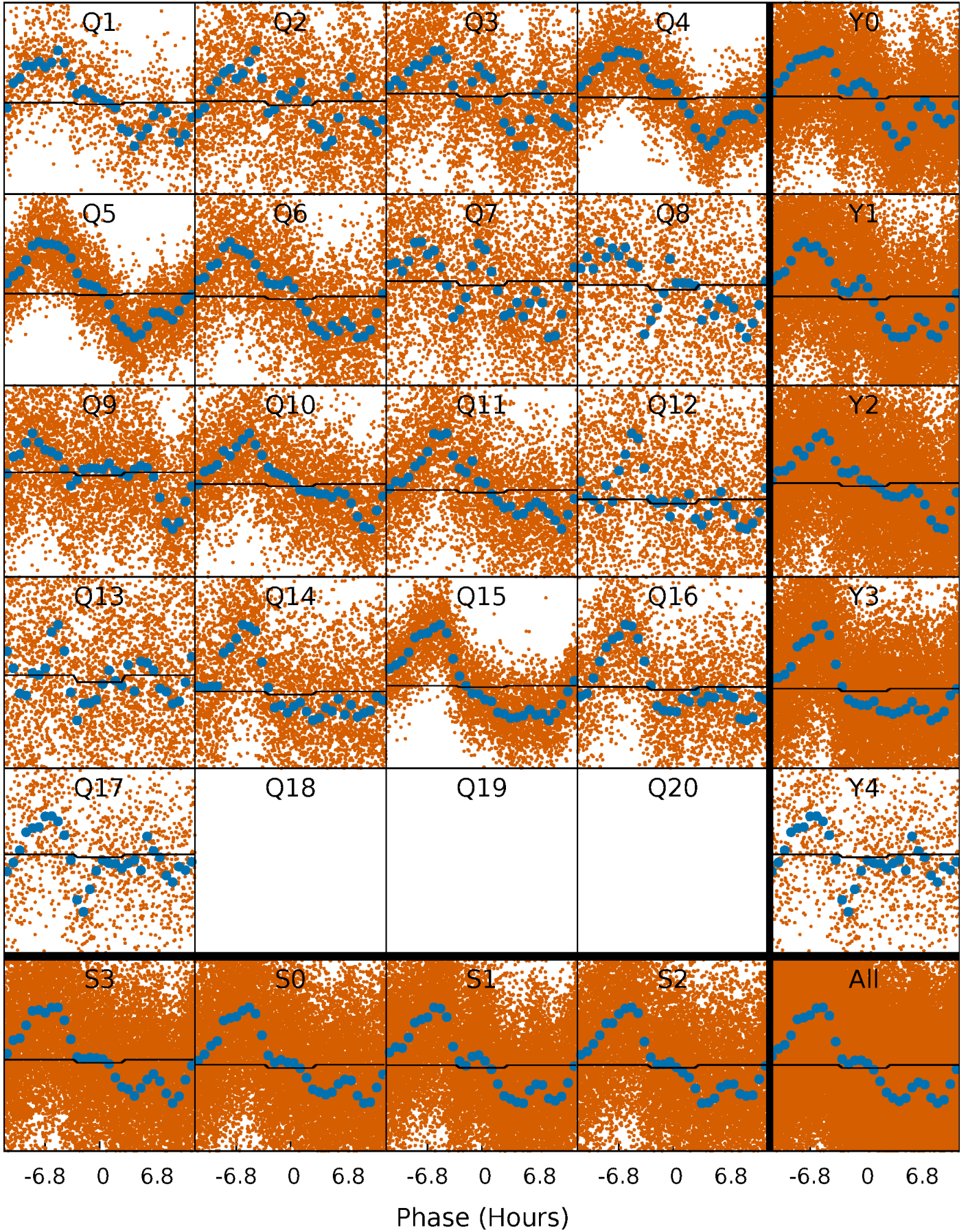
DV Quarter-Phased Transit Curves

TCE 008262409-01 P= 0.997297 Days $T_0=132.009110$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

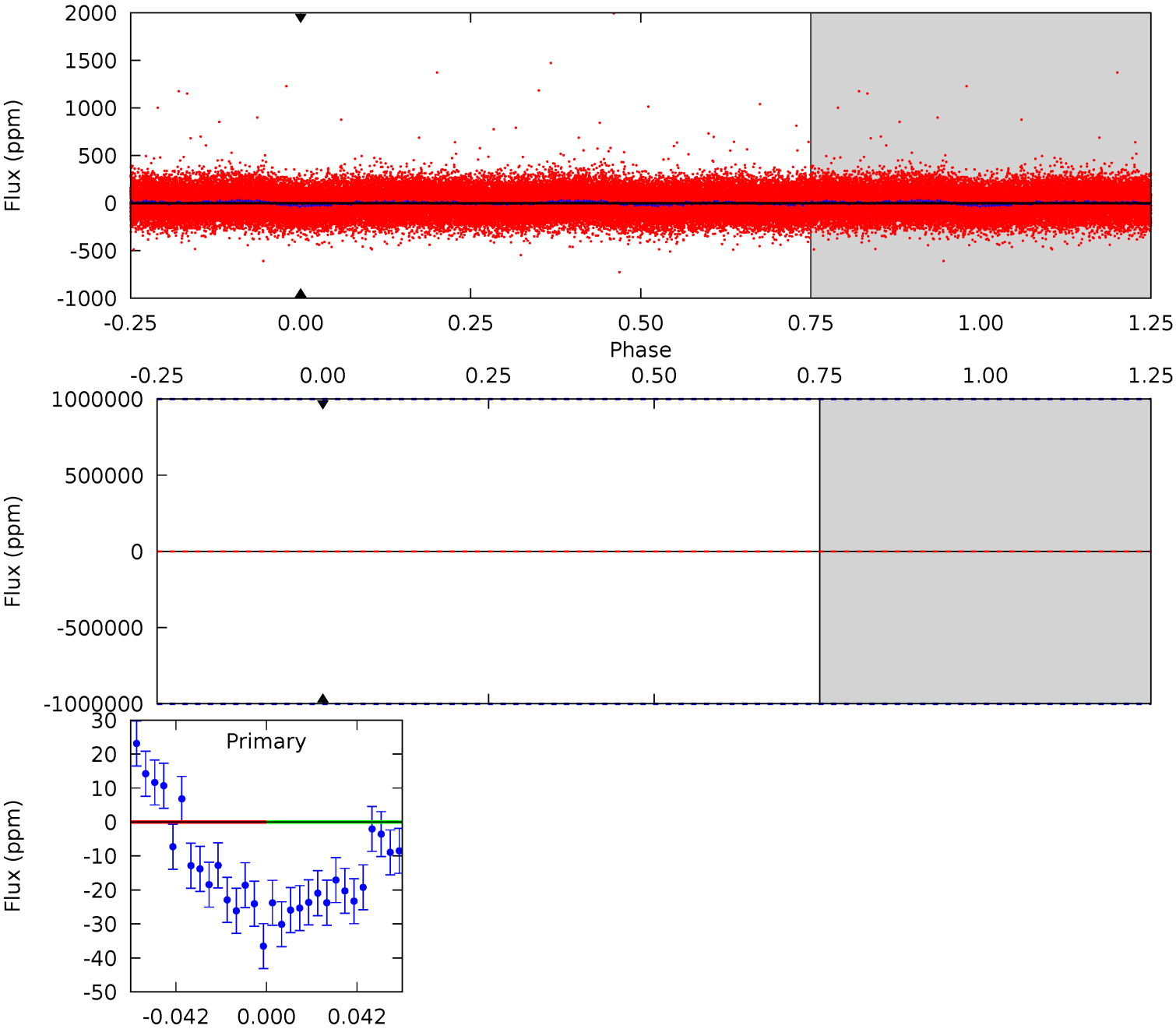
TCE 008262409-01 P= 0.997297 Days $T_0=132.127068$ (BKJD)



DV Model-Shift Uniqueness Test

008262409-01, P = 0.997297 Days, E = 131.011813 Days

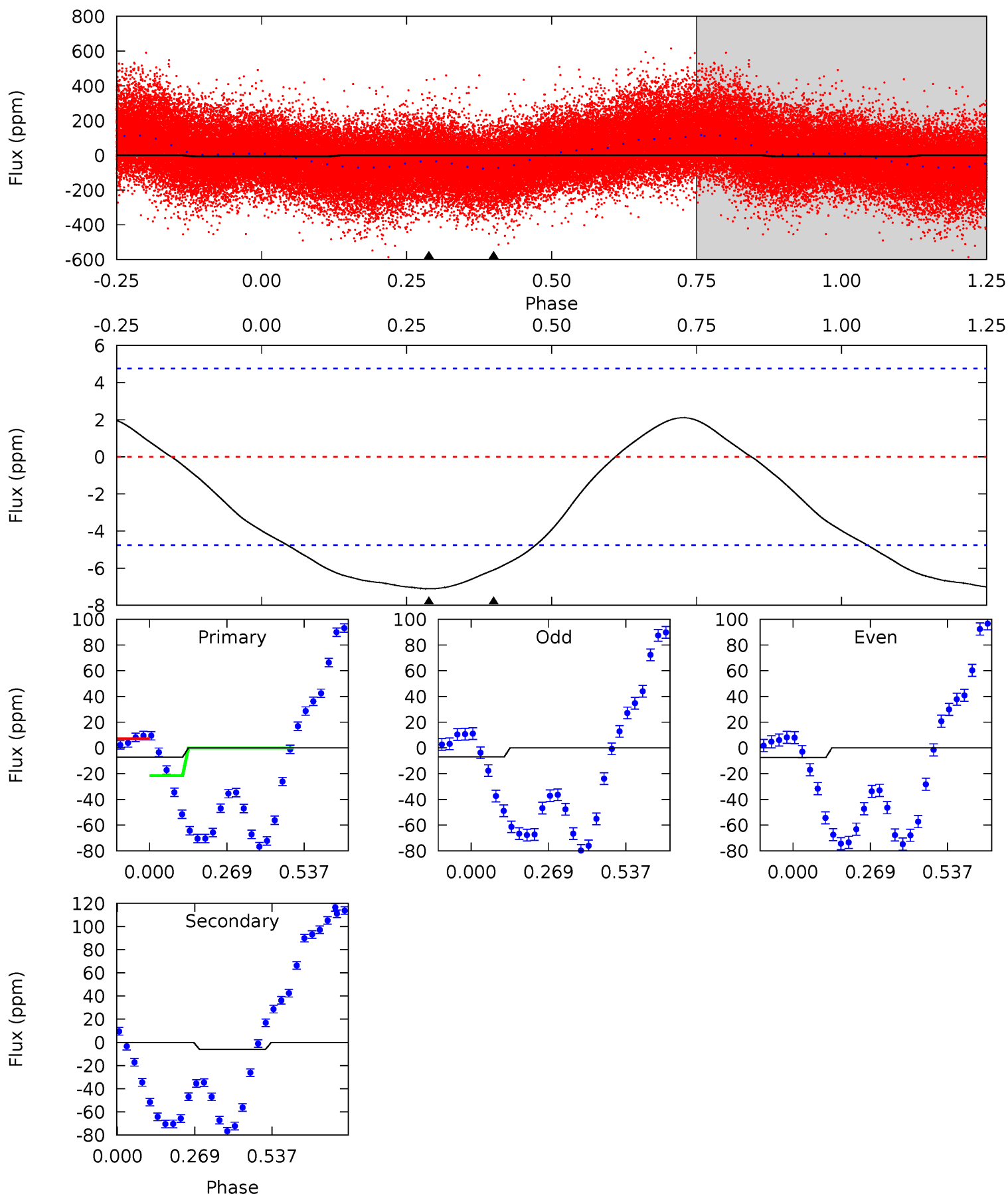
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

008262409-01, P = 0.997297 Days, E = 131.129771 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.51	5.58	0	0	4.35	1.11	1.94	6.51	6.51	5.58	5.58	0.21	1.22	0.23	8.26



Stellar Parameters For KIC 008262409

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6763^{+169}_{-203}	$3.626^{+0.315}_{-0.056}$	$-0.200^{+0.300}_{-0.250}$	$3.278^{+0.392}_{-1.175}$	$1.657^{+0.211}_{-0.317}$	$0.066^{+0.132}_{-0.016}$
	+2%/-3%	+9%/-2%	+150%/-125%	+12%/-36%	+13%/-19%	+199%/-24%
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 008262409-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$23.15^{+26.80}_{-16.02}$	4824^{+268}_{-429}	-2581^{+35346}_{-28396}	$0.291^{+95.679}_{-92.830}$
Alt.	-6 ± 1	$22.47^{+24.45}_{-15.52}$	4816^{+263}_{-411}	-4144^{+350}_{-189}	$0.004^{+0.034}_{-0.003}$

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

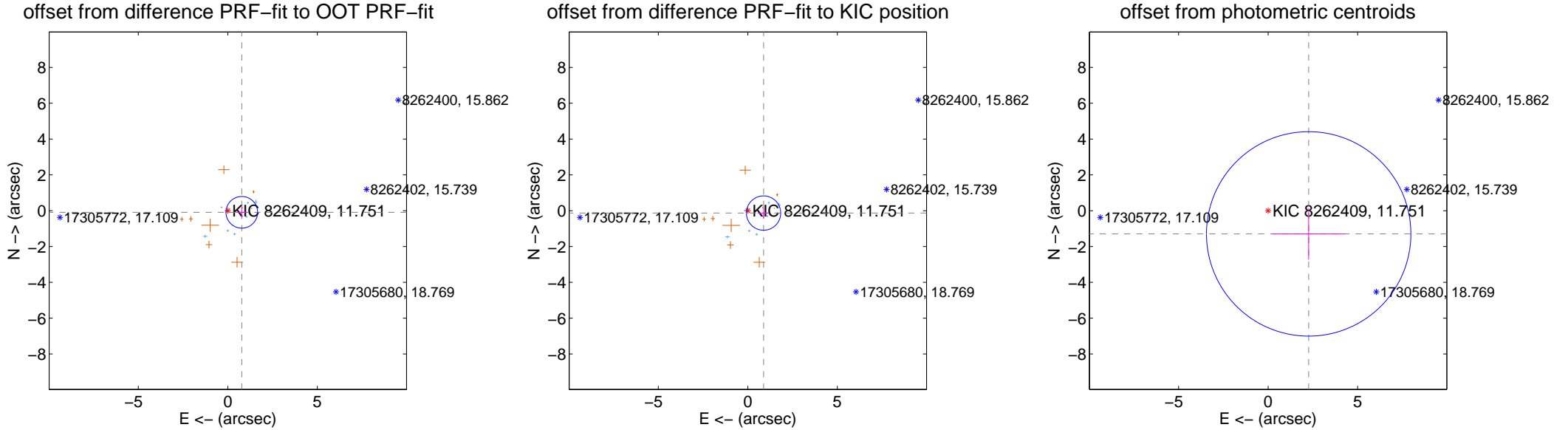
DV Centroid Data

Supplemental centroid analysis for 008262409-01. **Kepler magnitude: 11.75**. Transit SNR -1.00

There are 8 quarters with good PRF difference image offsets

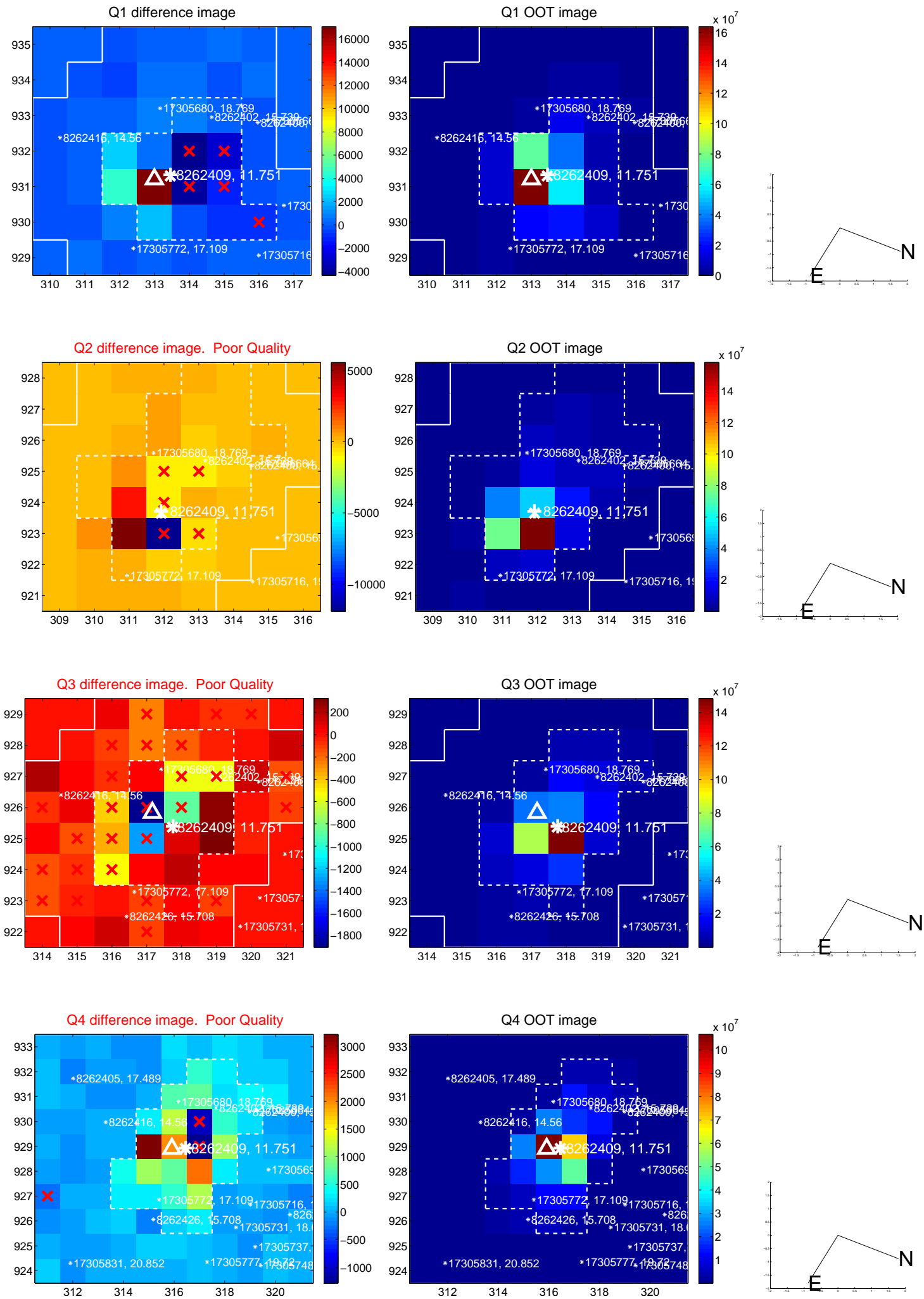
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.786 ± 0.295	2.67	-0.781 ± 0.305	-0.091 ± 0.309
PRF-fit source offset from KIC position	0.889 ± 0.319	2.78	-0.879 ± 0.329	-0.132 ± 0.292
photometric centroid source offset	2.61 ± 1.90	1.37	-2.27 ± 2.03	-1.30 ± 1.44

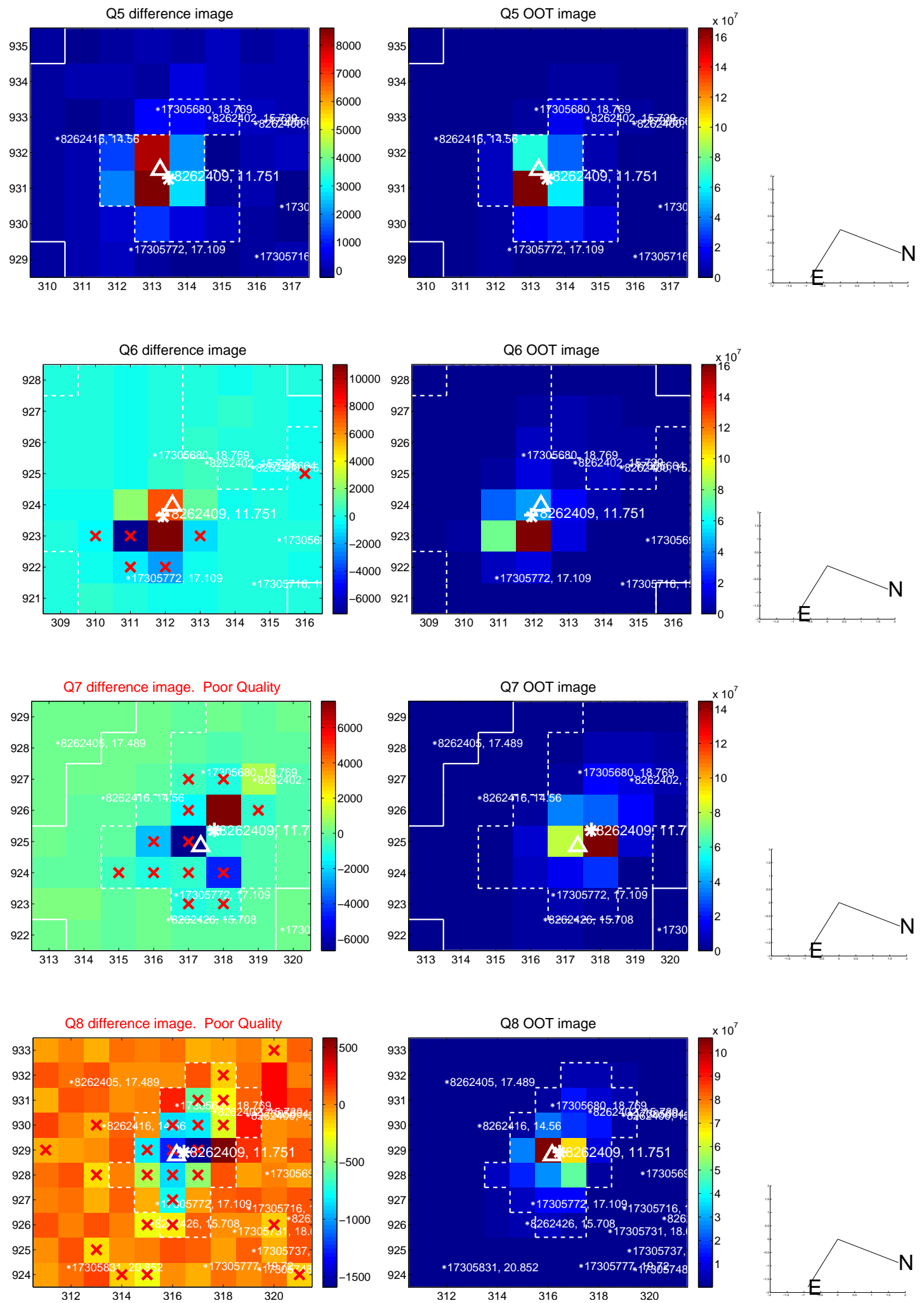


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

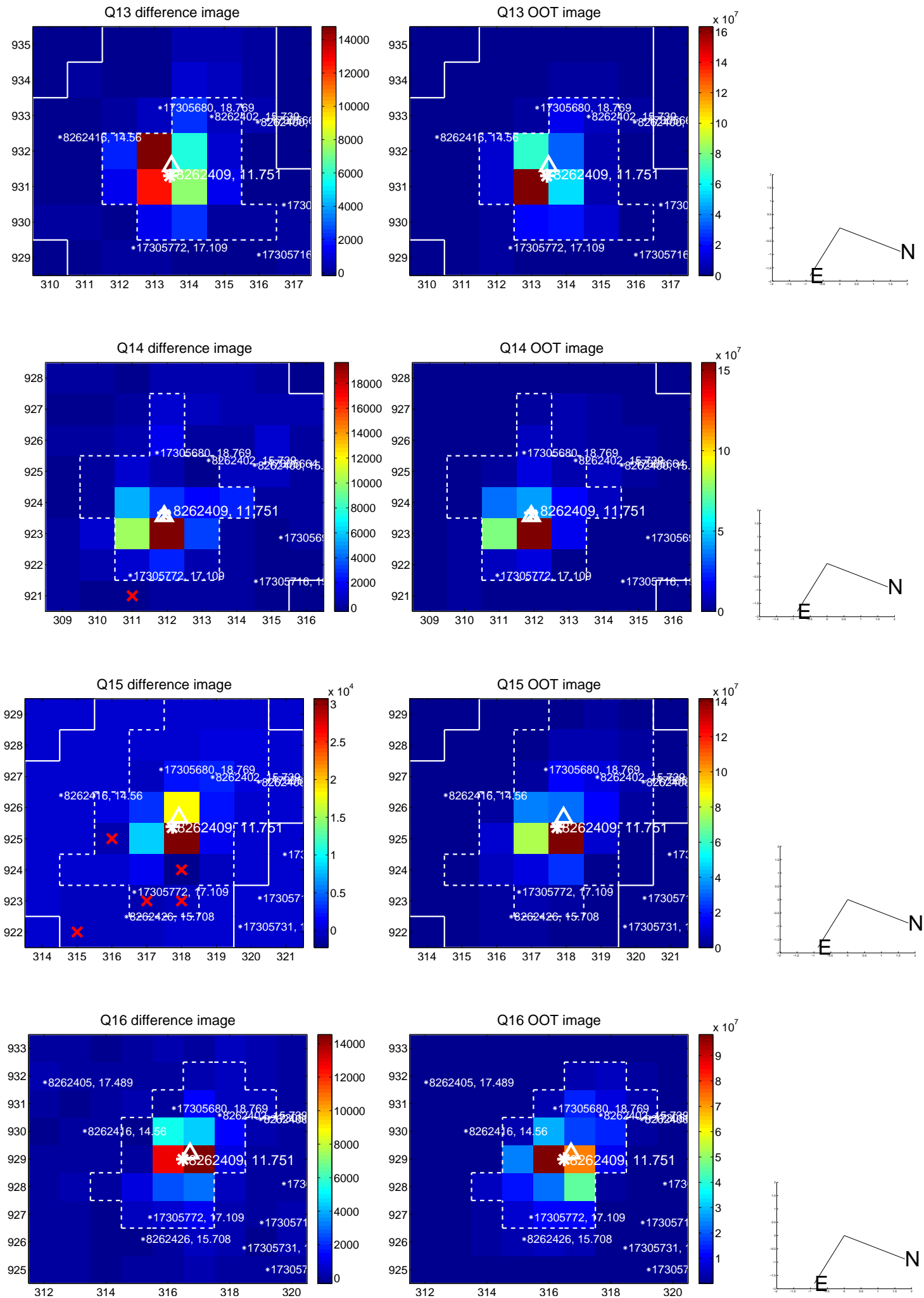
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



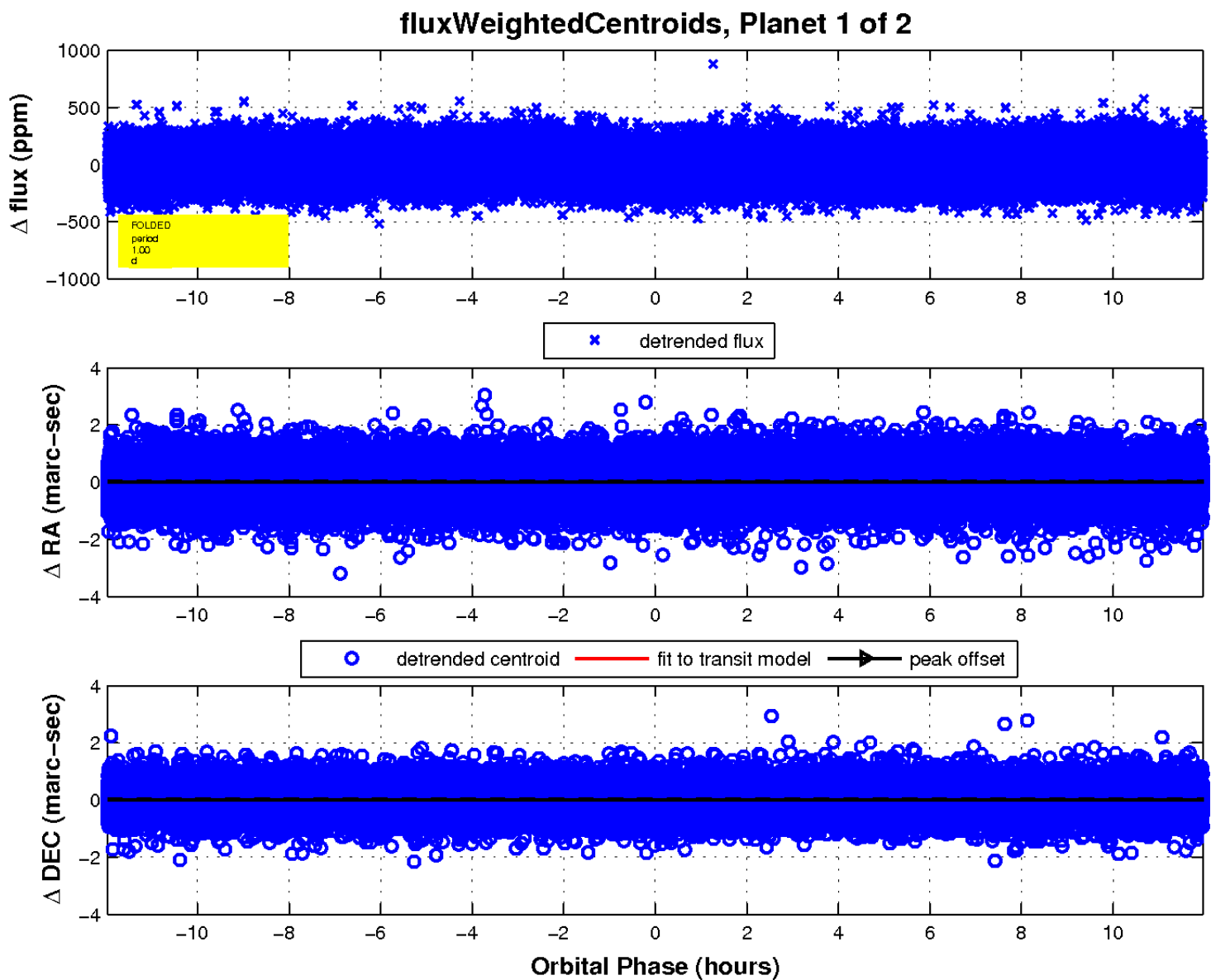
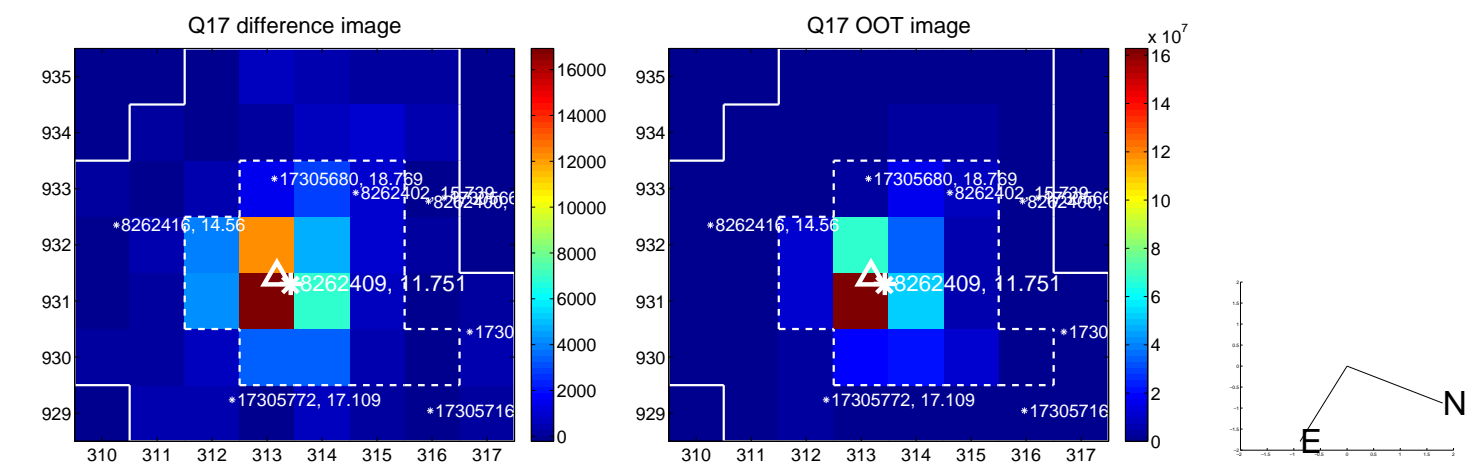
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

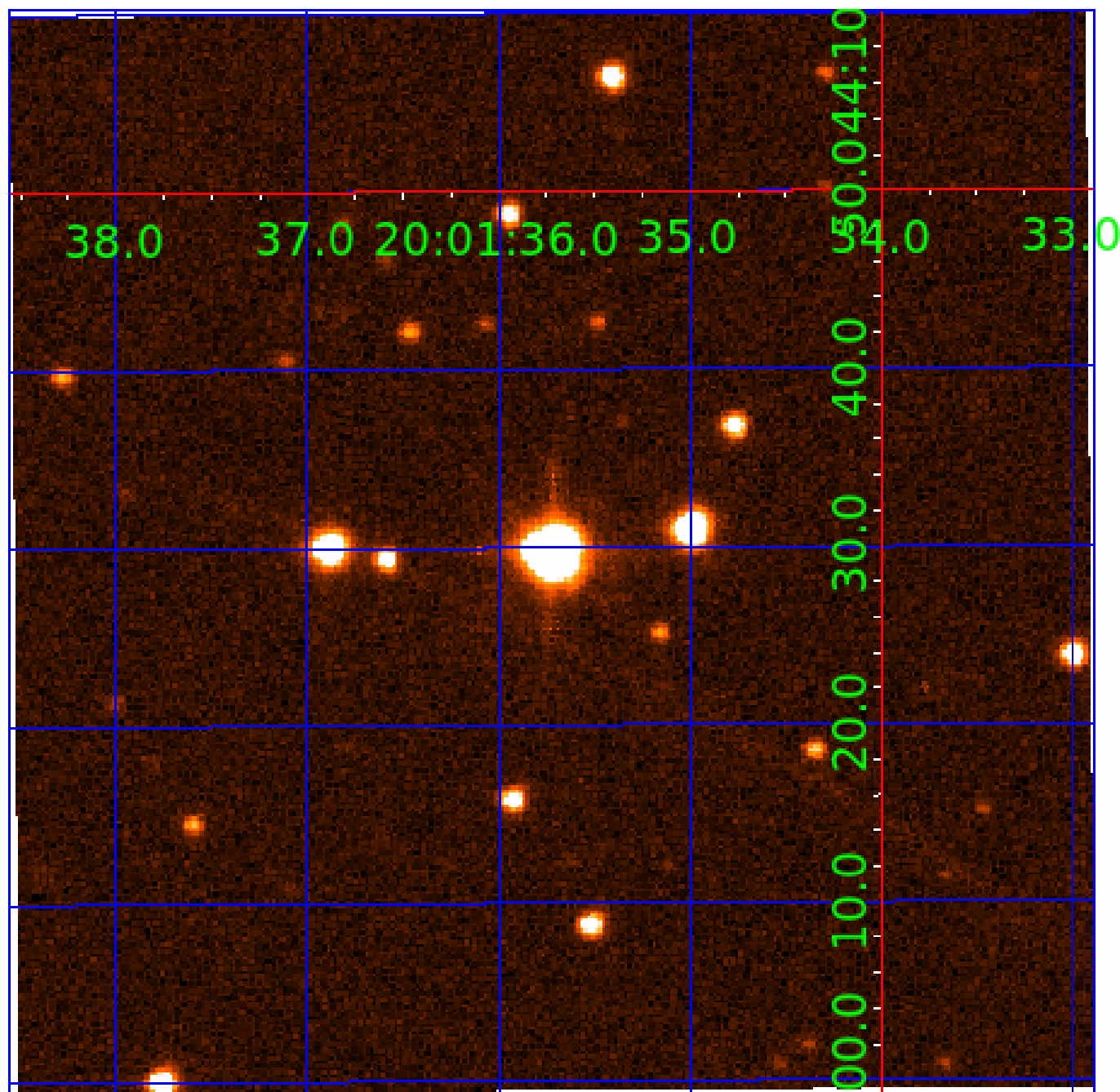


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008262409

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})
008262409-01	OBS	No	0.997297	132.009110	118.6	2.000	10.8	-1.0	3.28	6763	3.61	37678.35
008262409-02	OBS	No	0.997206	132.483815	1.7	8.843	10.8	1.2	3.28	6763	0.44	37682.92

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008262409-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_NOFITS
008262409-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—SAME_NTL_PERIOD

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

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

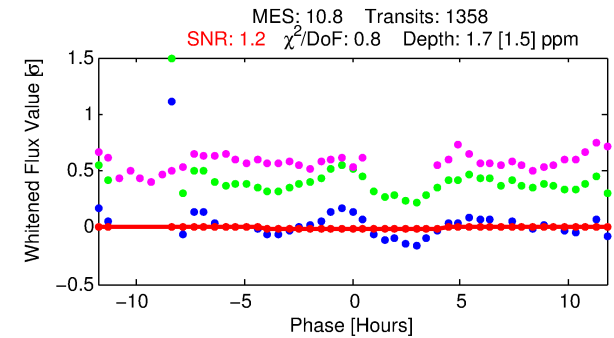
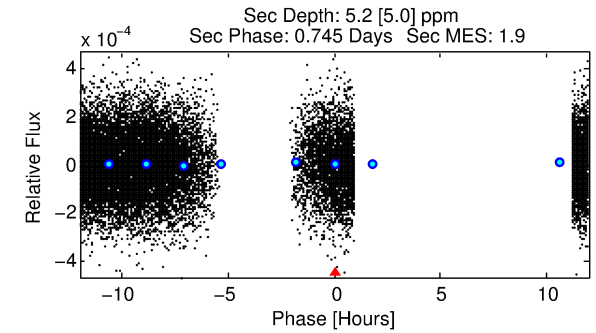
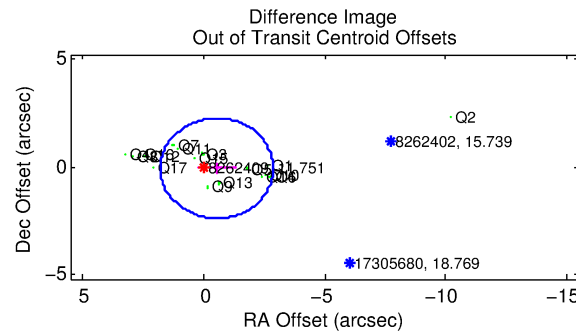
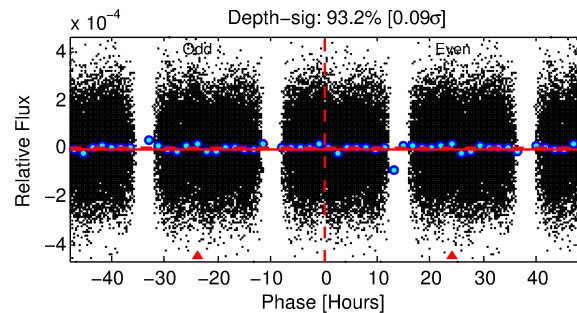
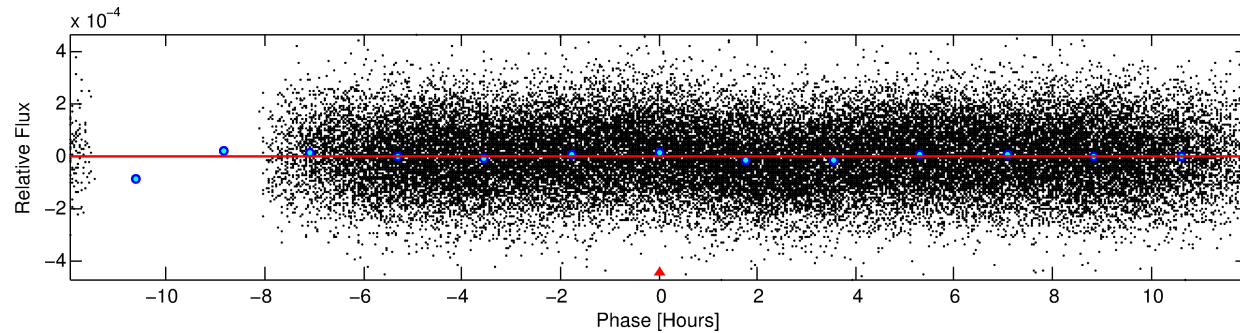
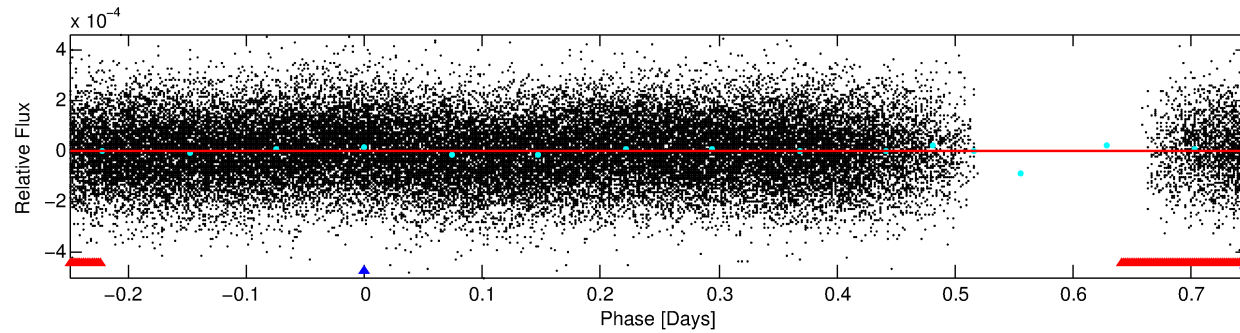
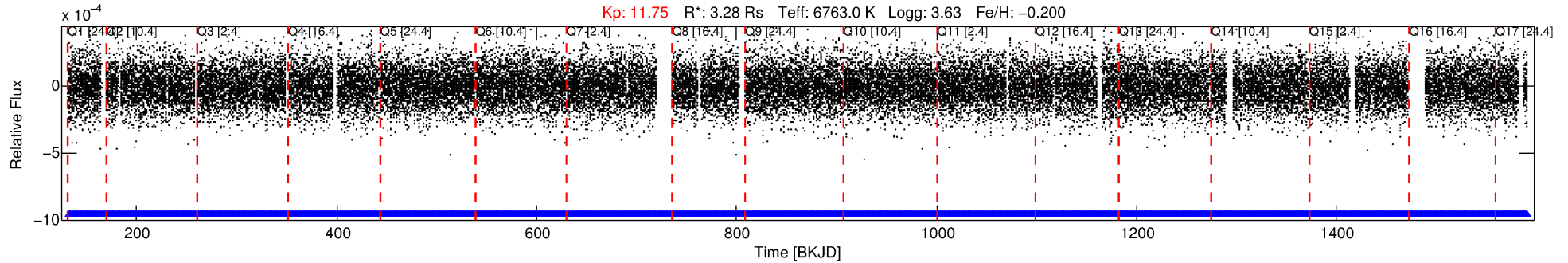
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008262409-02

No Significant Match Found

DV One-Page Summary

KIC: 8262409 Candidate: 2 of 2 Period: 0.997 d



DV Fit Results:

Period = 0.99721 [0.00014] d
Epoch = 132.4838 [0.0435] BKJD
 $R_p/R^* = 0.0012$ [0.0043]
 $a/R^* = 1.06$ [2.46]
 $b = 0.56$ [24.40]
 $S_{\text{eff}} = 37682.92$ [20822.48]
 $T_{\text{eq}} = 3553$ [491] K
 $R_p = 0.44$ [1.54] R_e
 $a = 0.0231$ [0.0079] AU
 $A_g = 7.86$ [55.25] [0.12 σ]
 $T_{\text{eff}} = 9197$ [16118] K [0.35 σ]

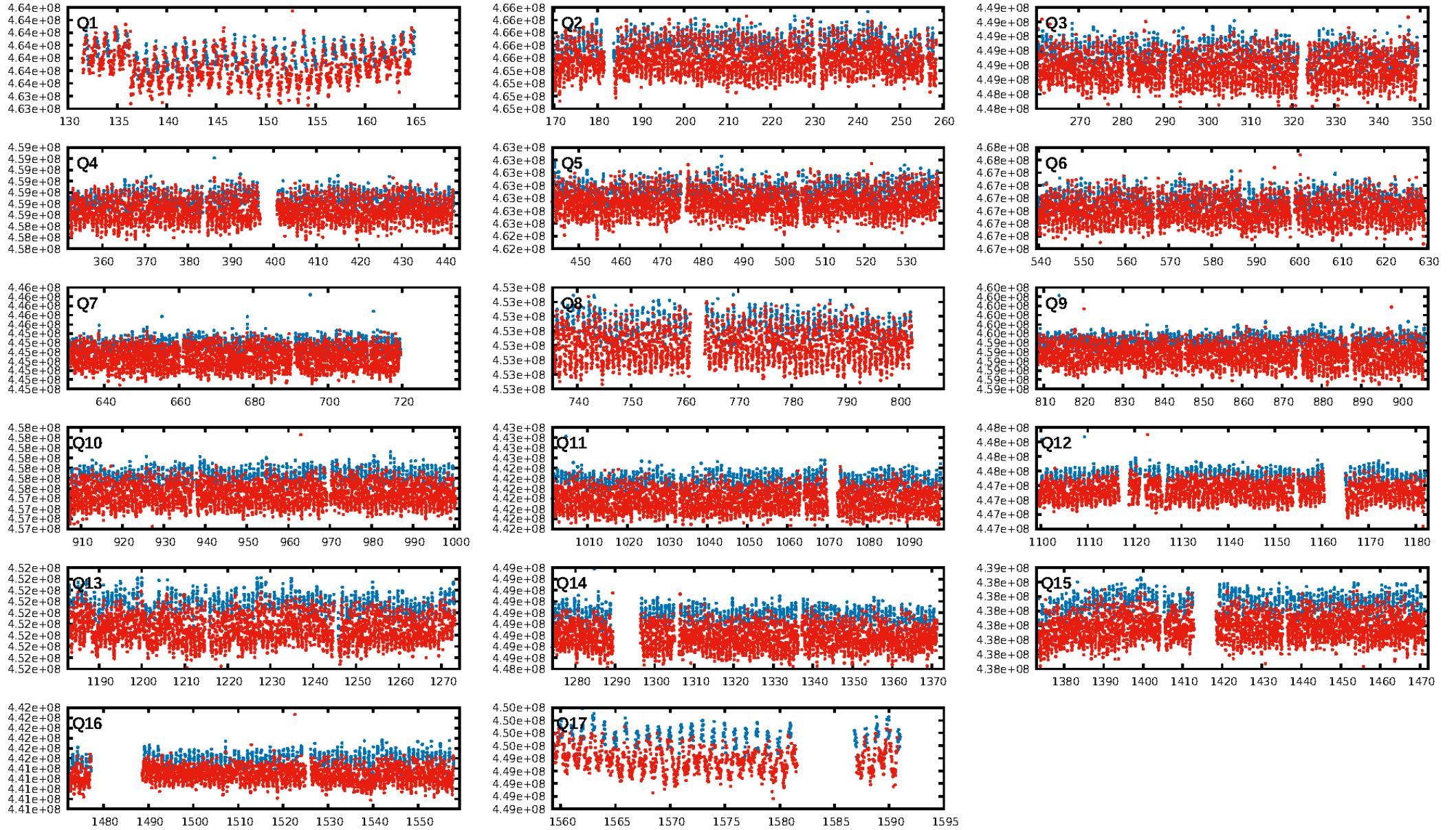
DV Diagnostic Results:

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: 1.00 [1297/1297]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.551 arcsec [0.71 σ]
KicOffset-rm: 0.685 arcsec [0.90 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.71 [12/17]
DiffImageOverlap-fno: 0.00 [0/17]

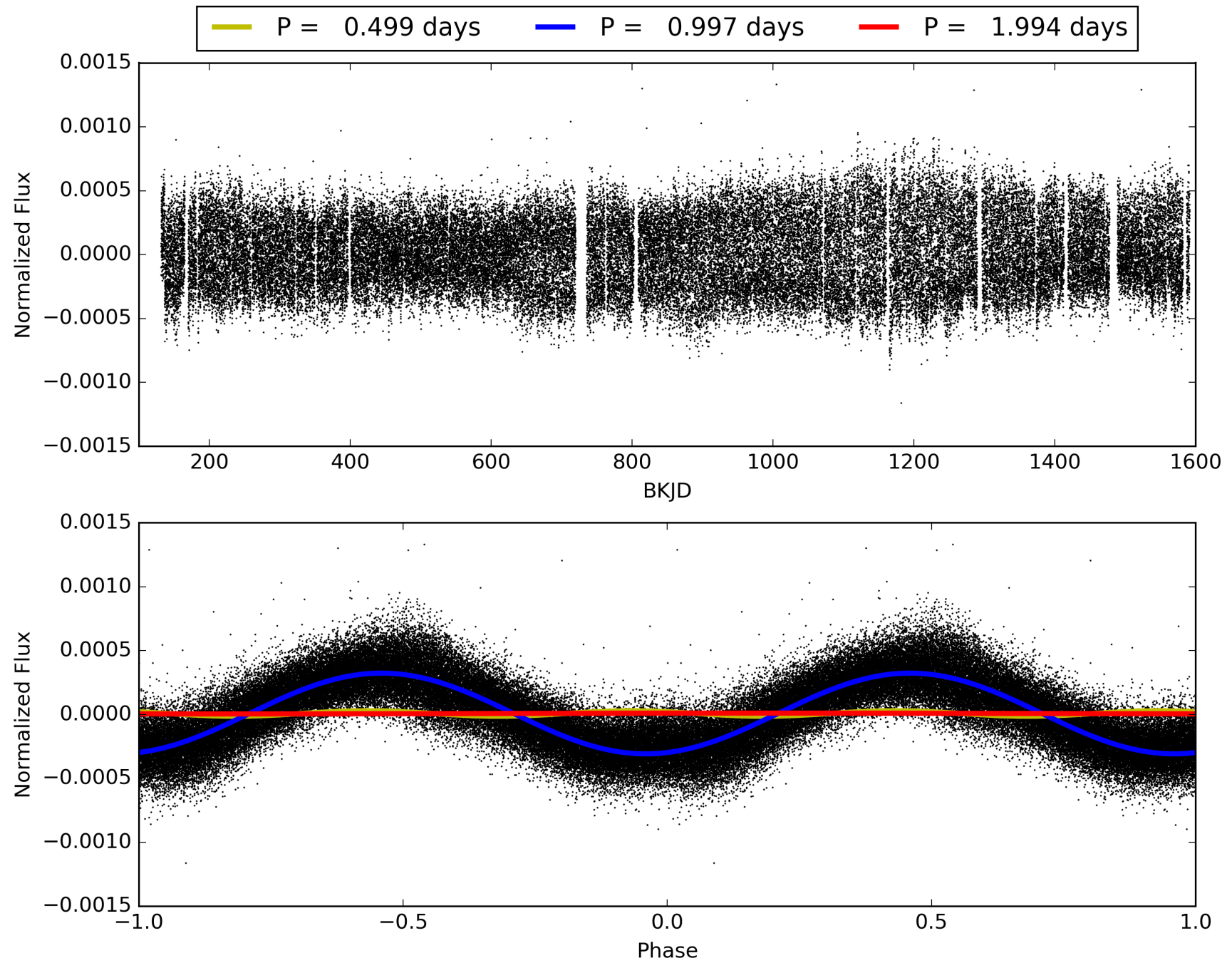
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 03:59:20 Z

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

TCE 008262409-02, PDC Light Curves

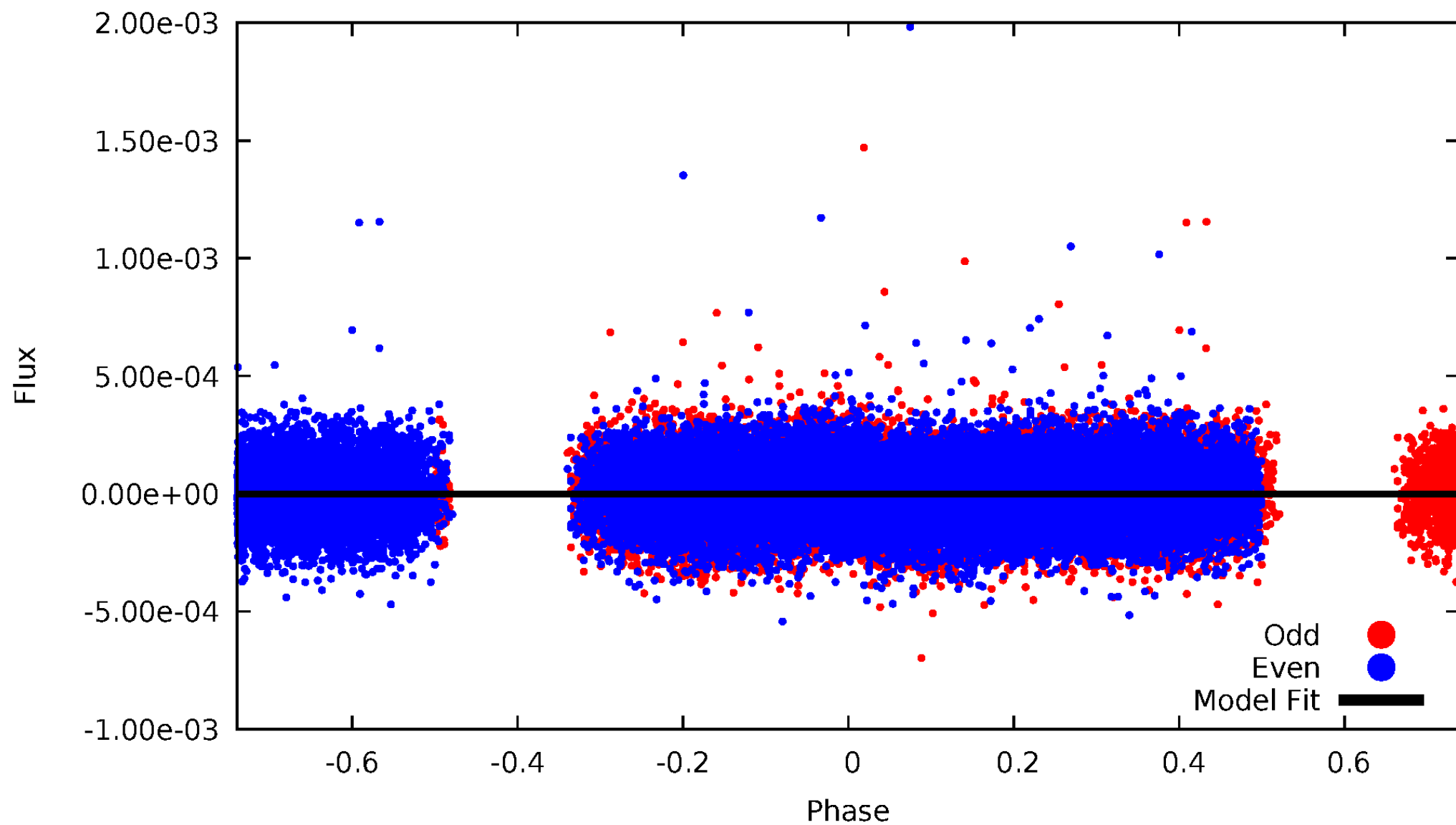


TCE 008262409-02



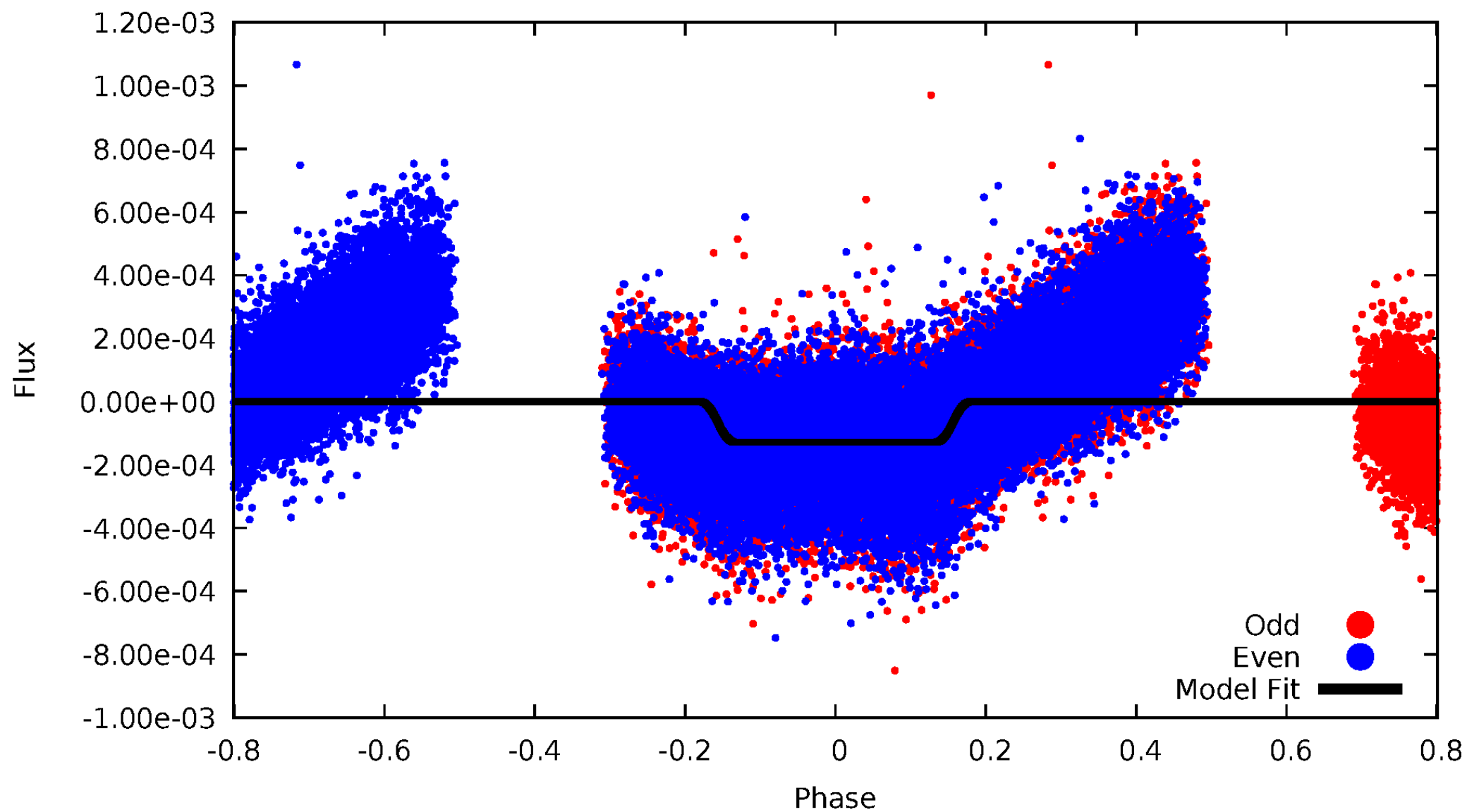
DV Odd/Even

TCE 008262409-02



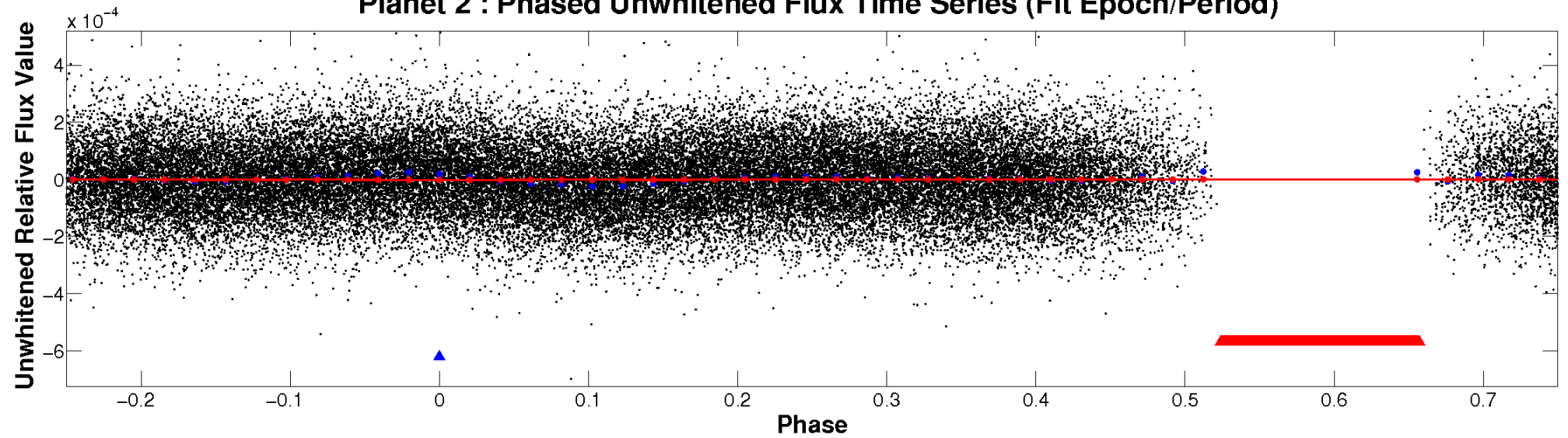
ALT Odd/Even

TCE 008262409-02

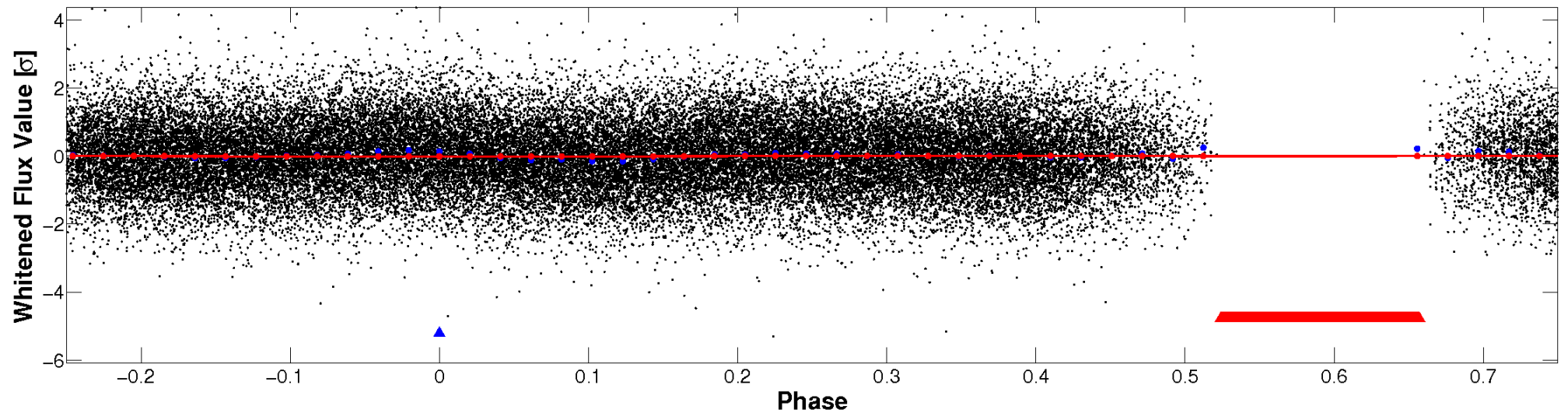


Non-Whitened Vs. Whitened Light Curve

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

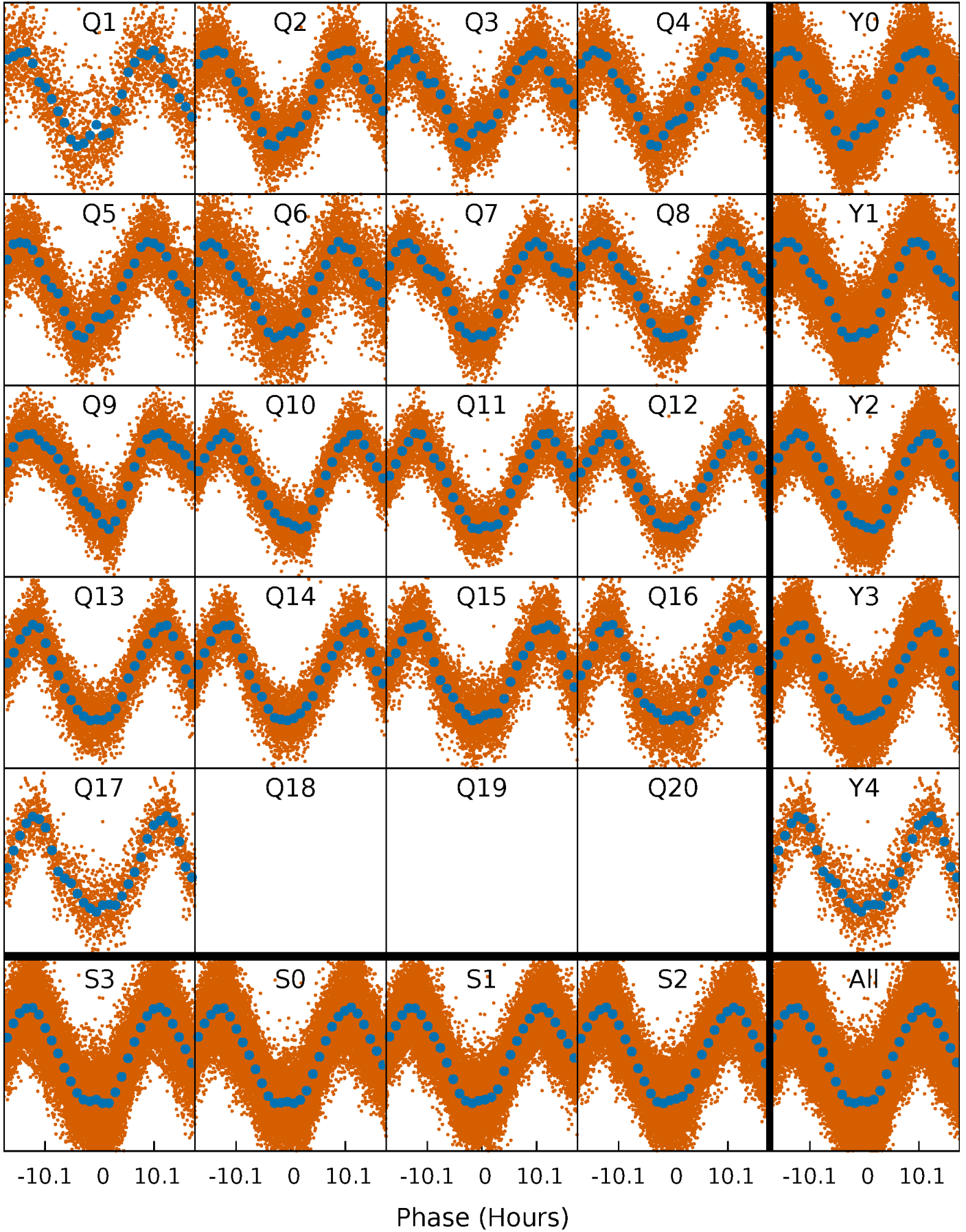


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



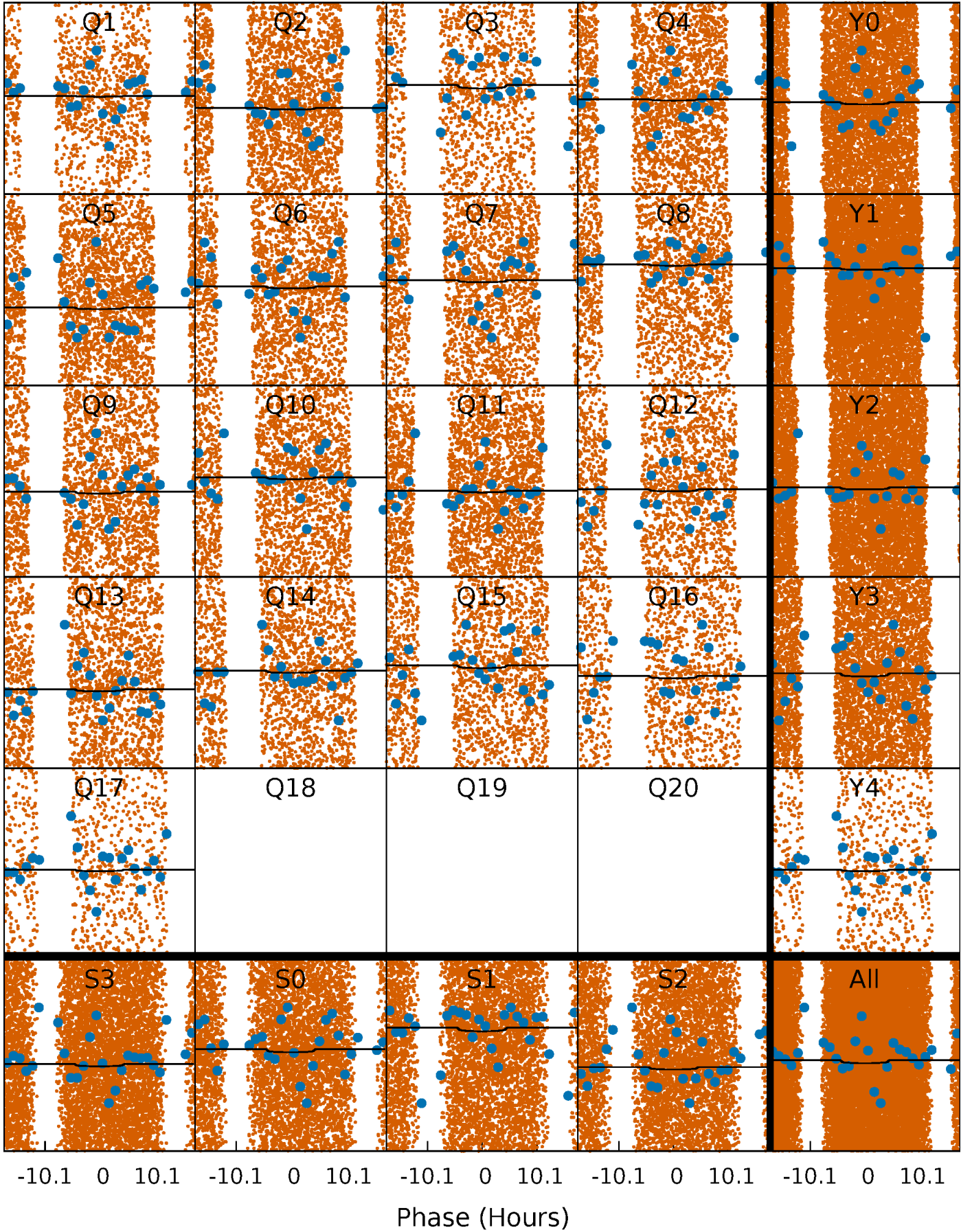
PDC Quarter-Phased Transit Curves

TCE 008262409-02 P= 0.997206 Days $T_0=132.483815$ (BKJD)



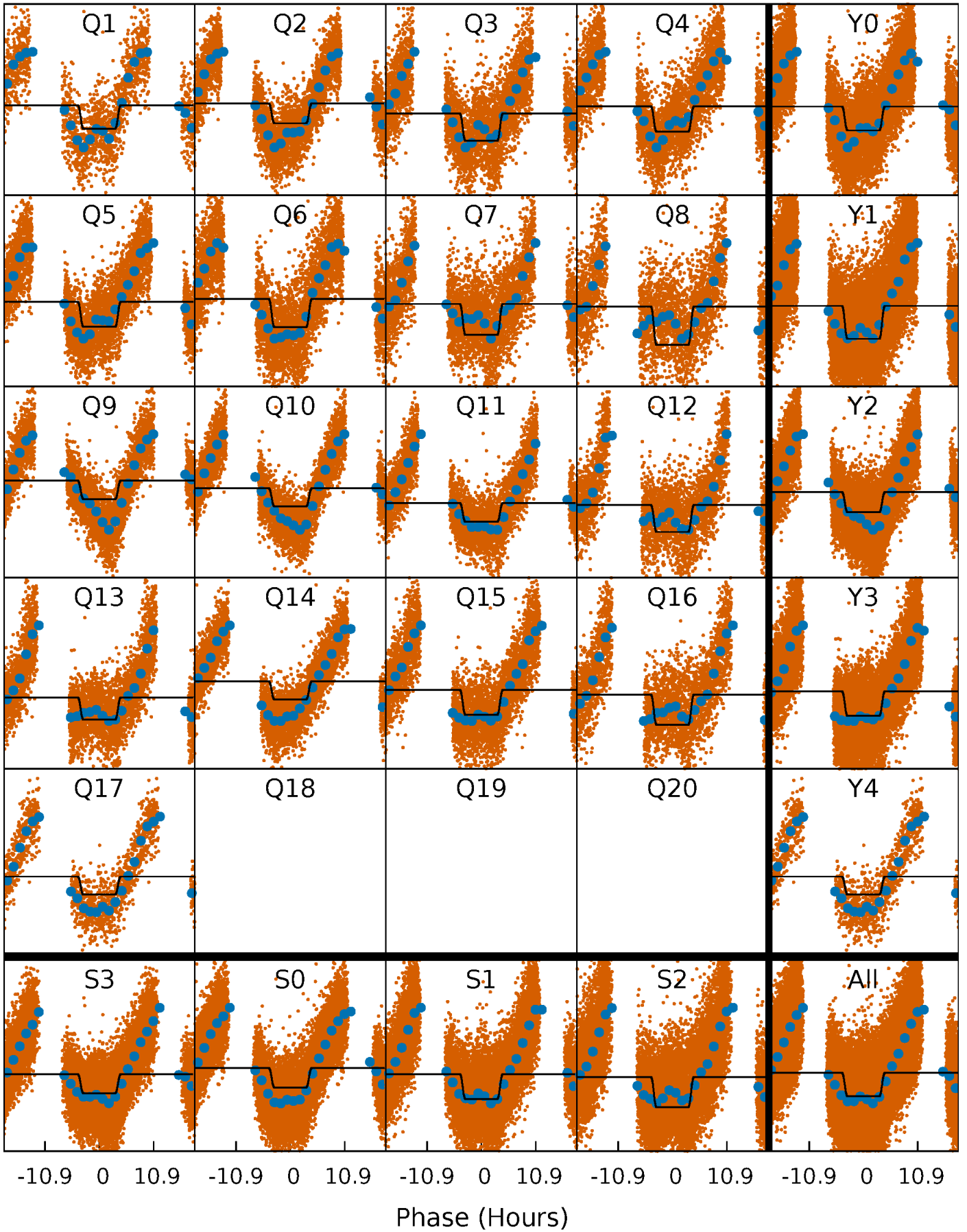
DV Quarter-Phased Transit Curves

TCE 008262409-02 $P = 0.997206$ Days $T_0 = 132.483815$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

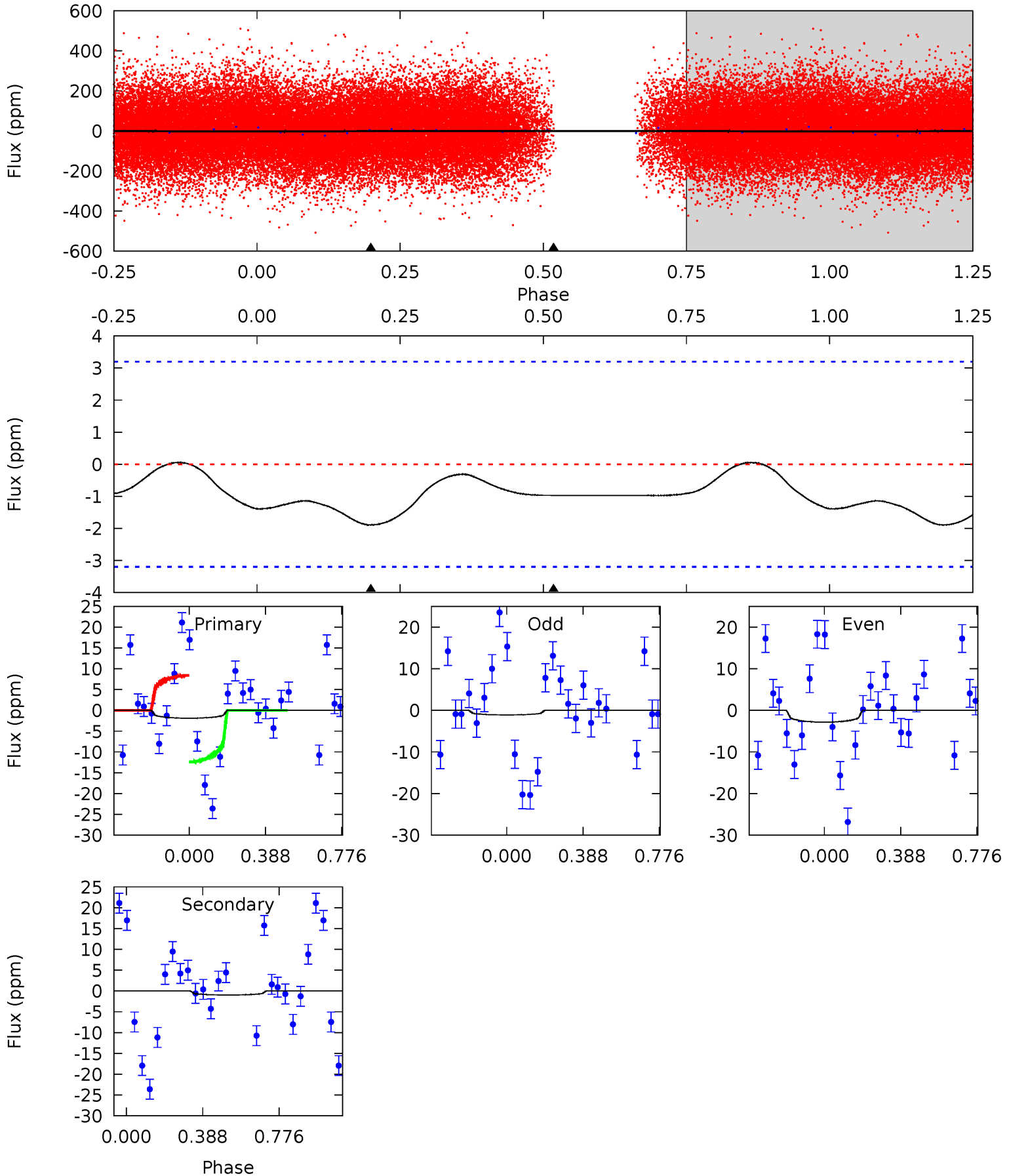
TCE 008262409-02 P= 0.997243 Days $T_0=132.454641$ (BKJD)



DV Model-Shift Uniqueness Test

008262409-02, P = 0.997206 Days, E = 131.486609 Days

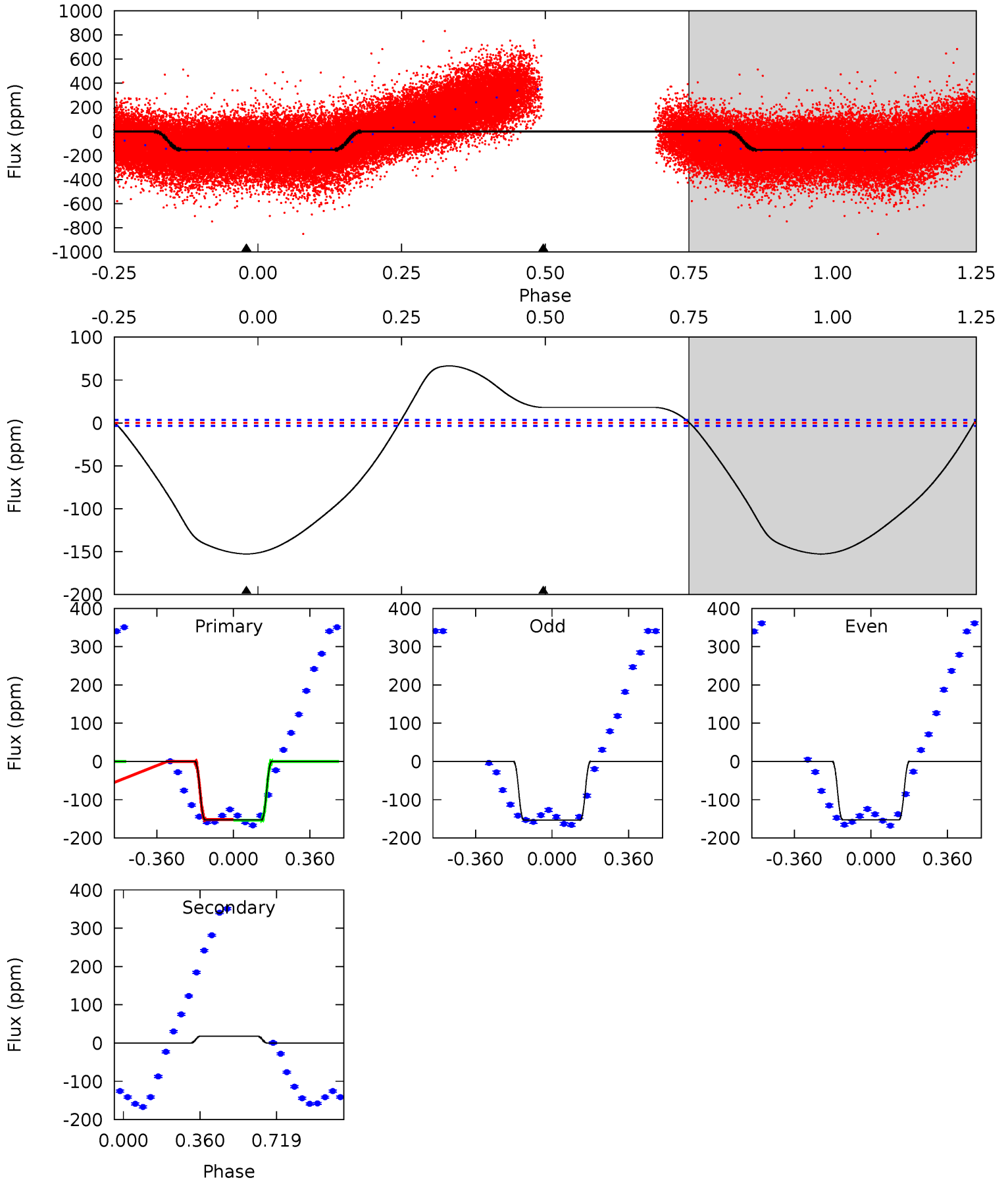
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.53	1.30	0	0	4.27	0.86	0.09	2.53	2.53	1.30	1.30	1.18	2.28	0.03	2.65



Alt Model-Shift Uniqueness Test

008262409-02, P = 0.997243 Days, E = 131.457398 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
187.8	-22.3	0	0	4.29	0.92	22.0	187.8	187.8	-22.3	-22.3	0.57	1.07	0.30	1.28



Stellar Parameters For KIC 008262409

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6763^{+169}_{-203}	$3.626^{+0.315}_{-0.056}$	$-0.200^{+0.300}_{-0.250}$	$3.278^{+0.392}_{-1.175}$	$1.657^{+0.211}_{-0.317}$	$0.066^{+0.132}_{-0.016}$
	+2%/-3%	+9%/-2%	+150%/-125%	+12%/-36%	+13%/-19%	+199%/-24%
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 008262409-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1 ± 1	$1.14^{+1.10}_{-0.77}$	4804^{+285}_{-407}	-3564^{+9142}_{-627}	$0.177^{+1.504}_{-0.156}$
Alt.	18 ± 1	$3.71^{+1.73}_{-1.48}$	4829^{+249}_{-408}	-4919^{+329}_{-714}	$-0.395^{+0.208}_{-0.656}$

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

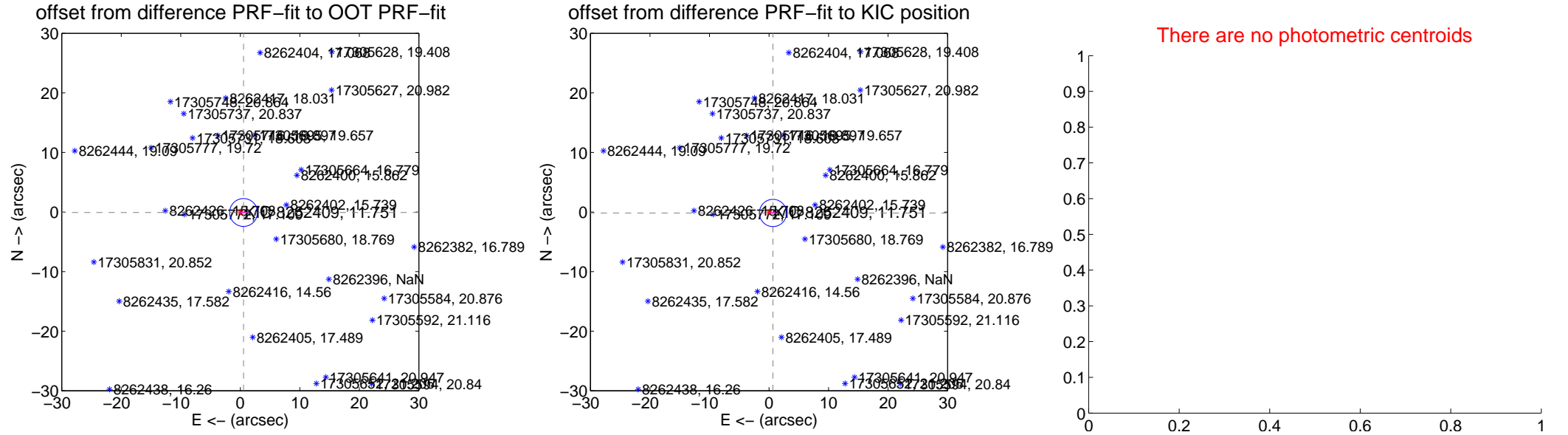
DV Centroid Data

Supplemental centroid analysis for 008262409-02. **Kepler magnitude: 11.75**. Transit SNR 1.23

There are 12 quarters with good PRF difference image offsets

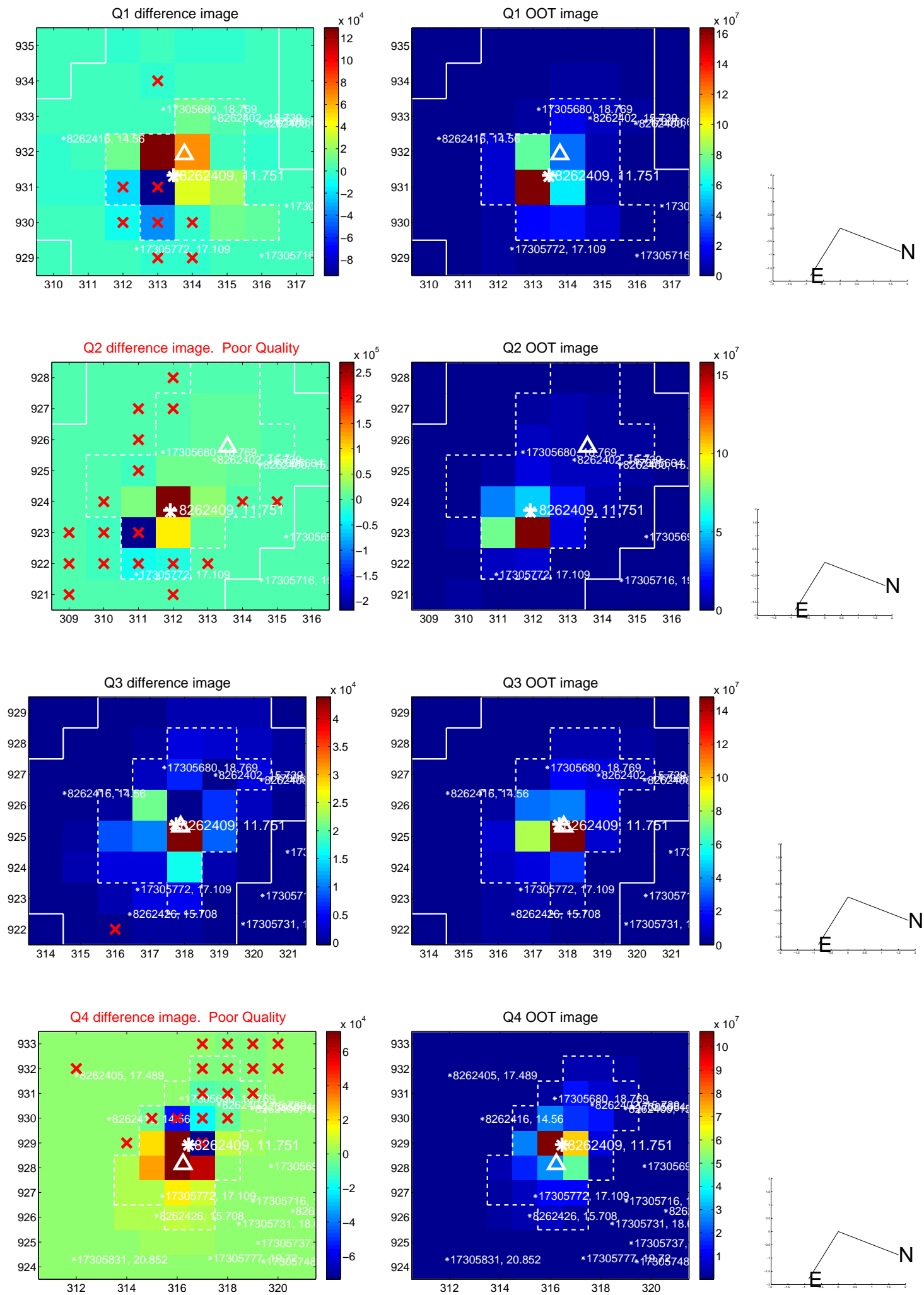
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.551 ± 0.779	0.71	-0.545 ± 0.789	-0.077 ± 0.199
PRF-fit source offset from KIC position	0.685 ± 0.762	0.90	-0.667 ± 0.787	-0.157 ± 0.195
photometric centroid source offset	—	—	—	—

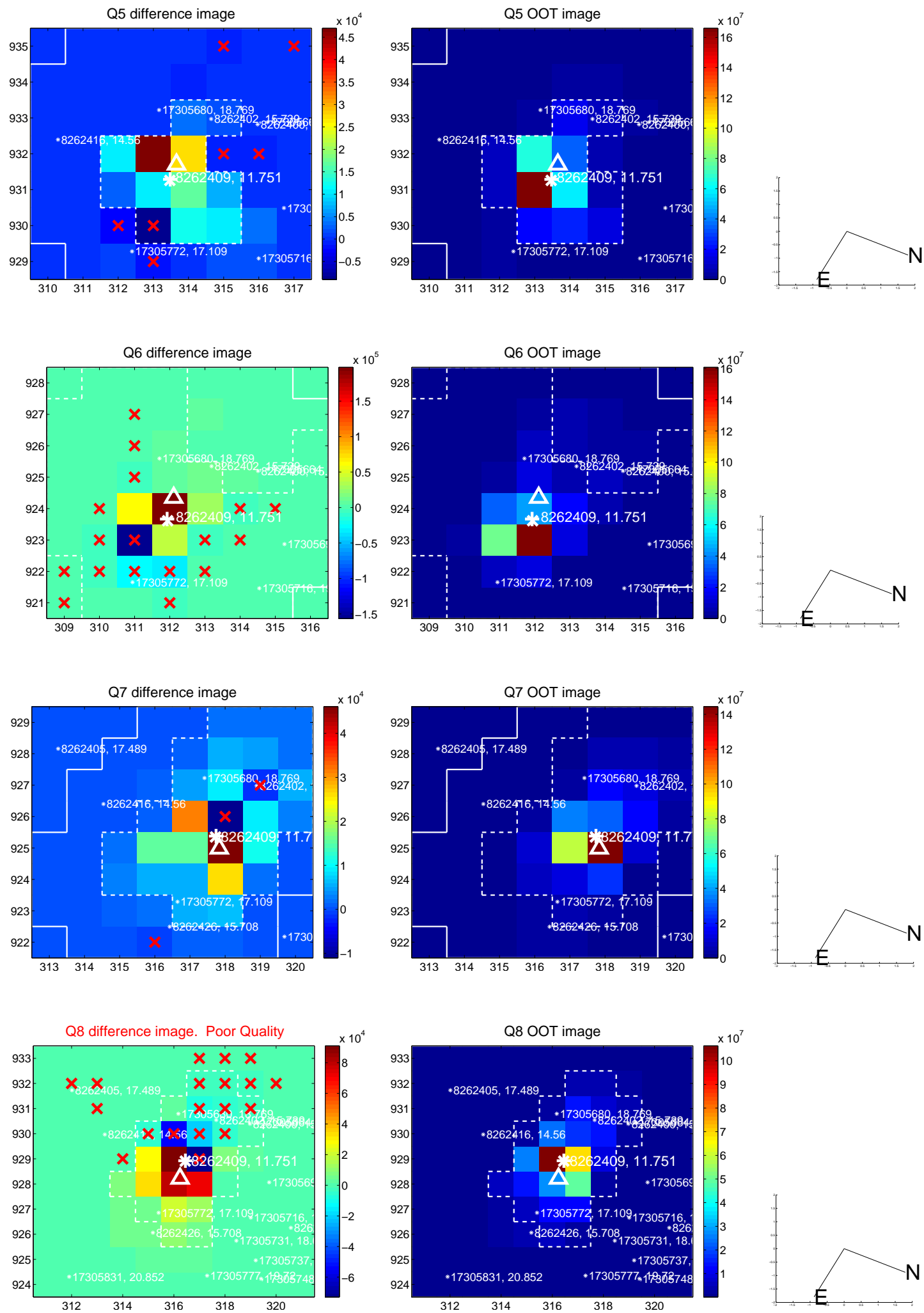


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

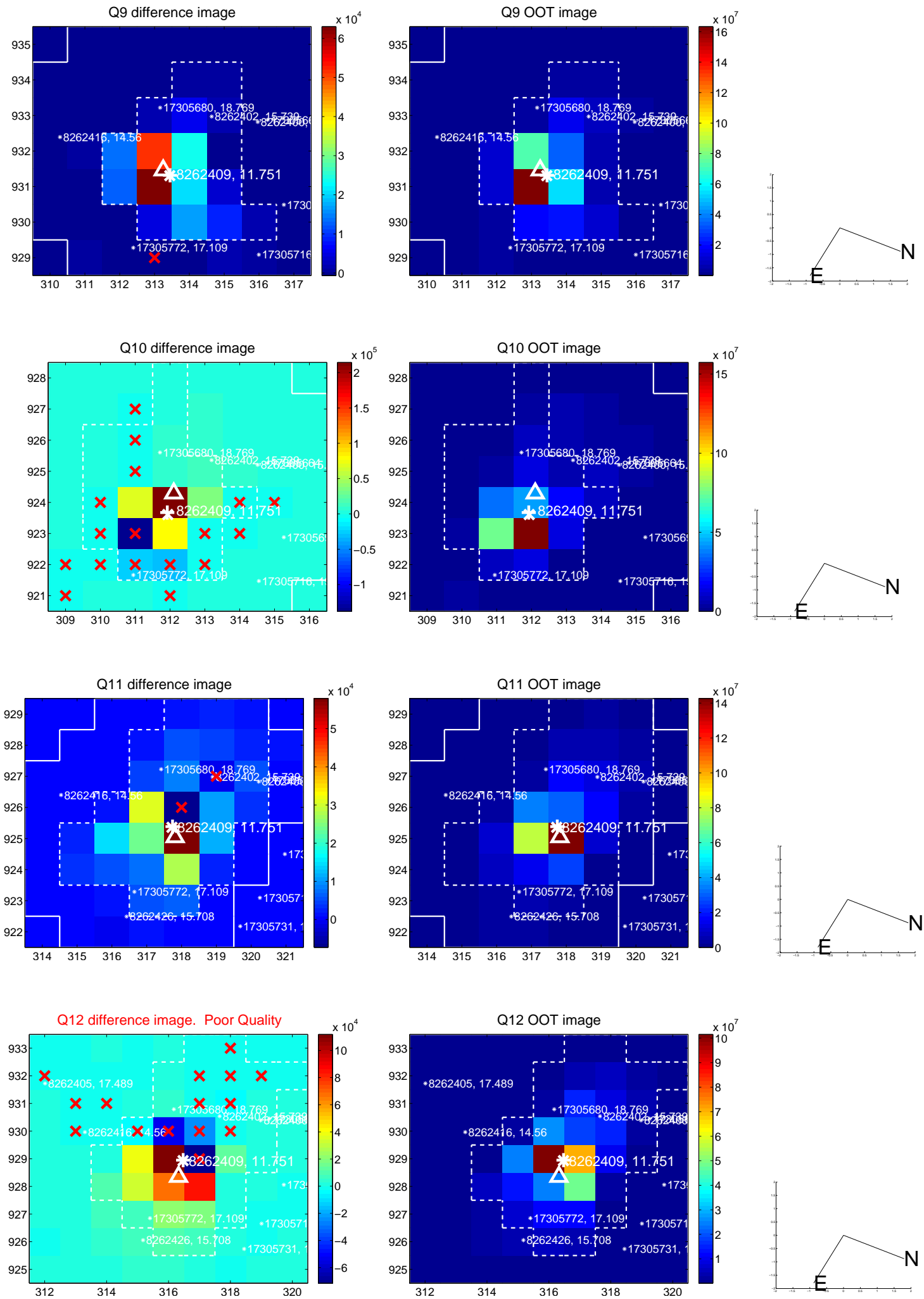
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



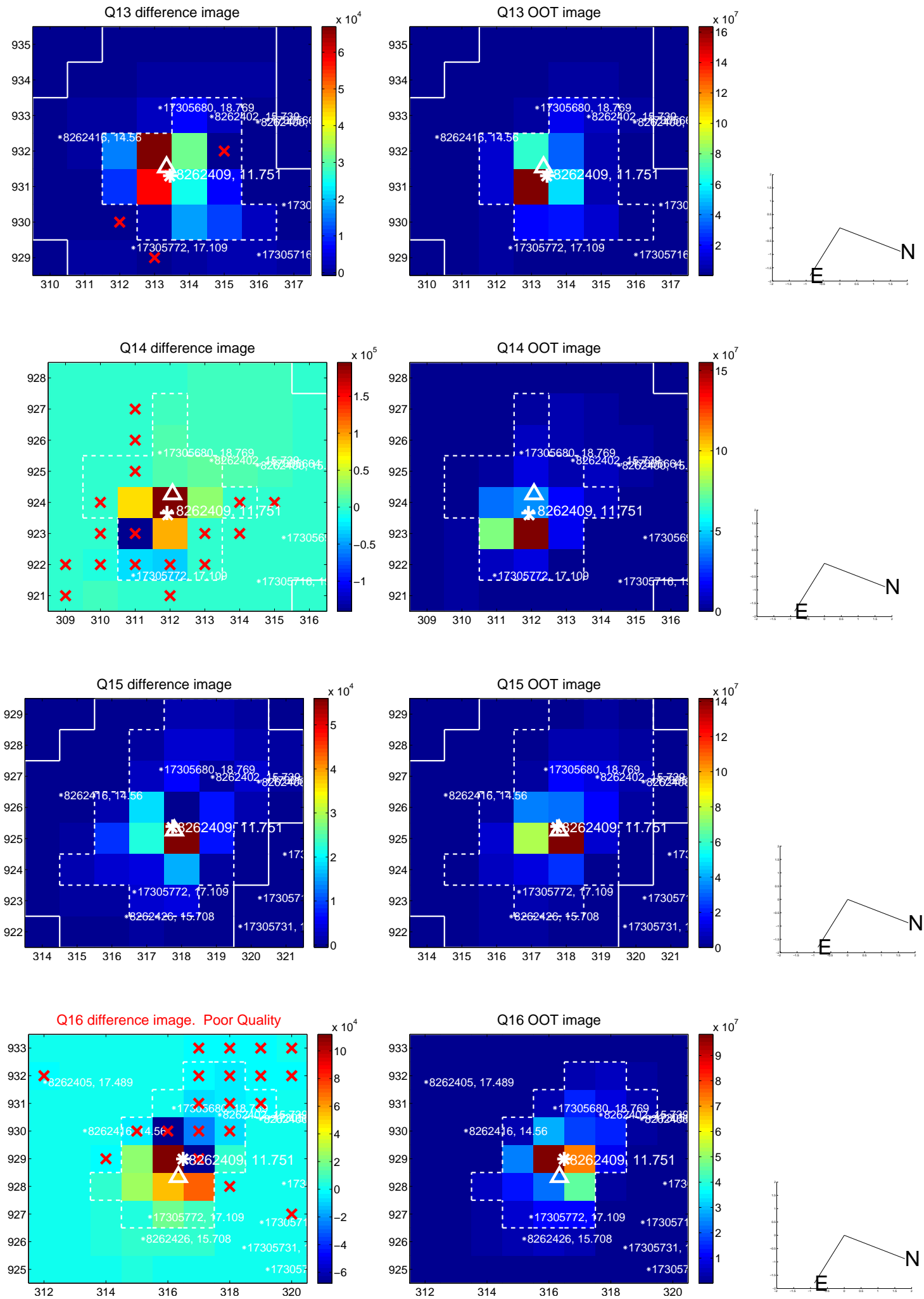
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



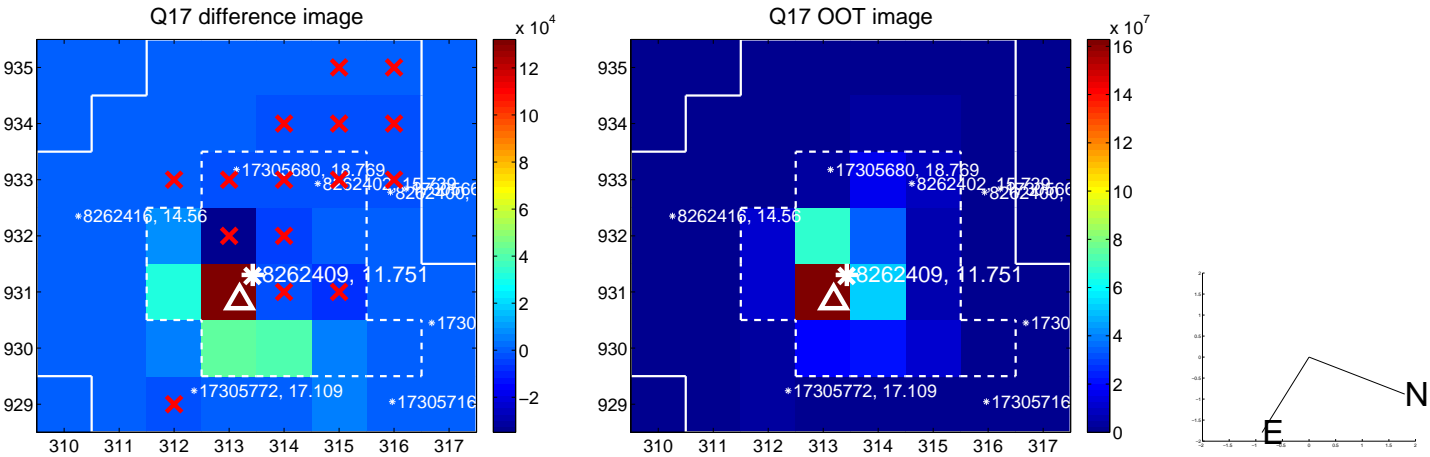
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



folded centroid time series figure for this object.

UKIRT Image

Declination

