

KIC 008916266

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})
008916266-01	OBS	No	0.548051	131.691703	258.6	1.257	10.3	9.9	20.91	5542	40.02	0.00
008916266-02	OBS	No	0.735108	132.140881	280.0	5.825	9.6	9.7	20.91	5542	35.86	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008916266-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
008916266-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT

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

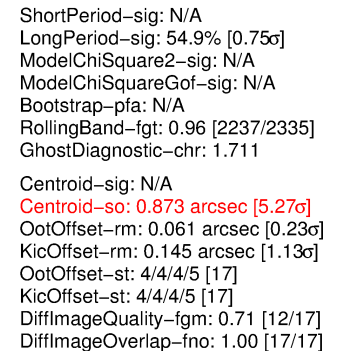
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

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

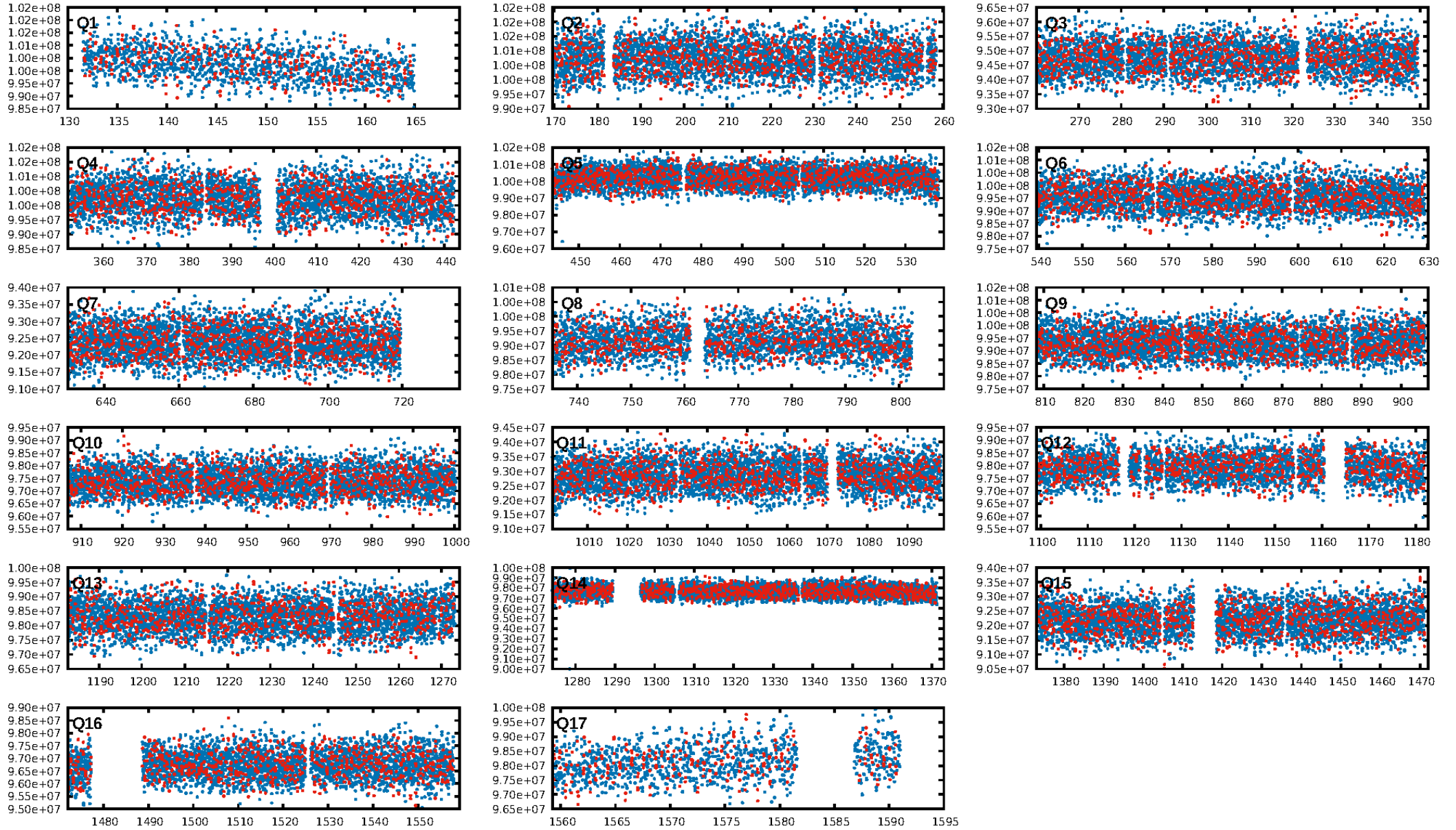
Ephemeris Match Information For 008916266-01

No Significant Match Found

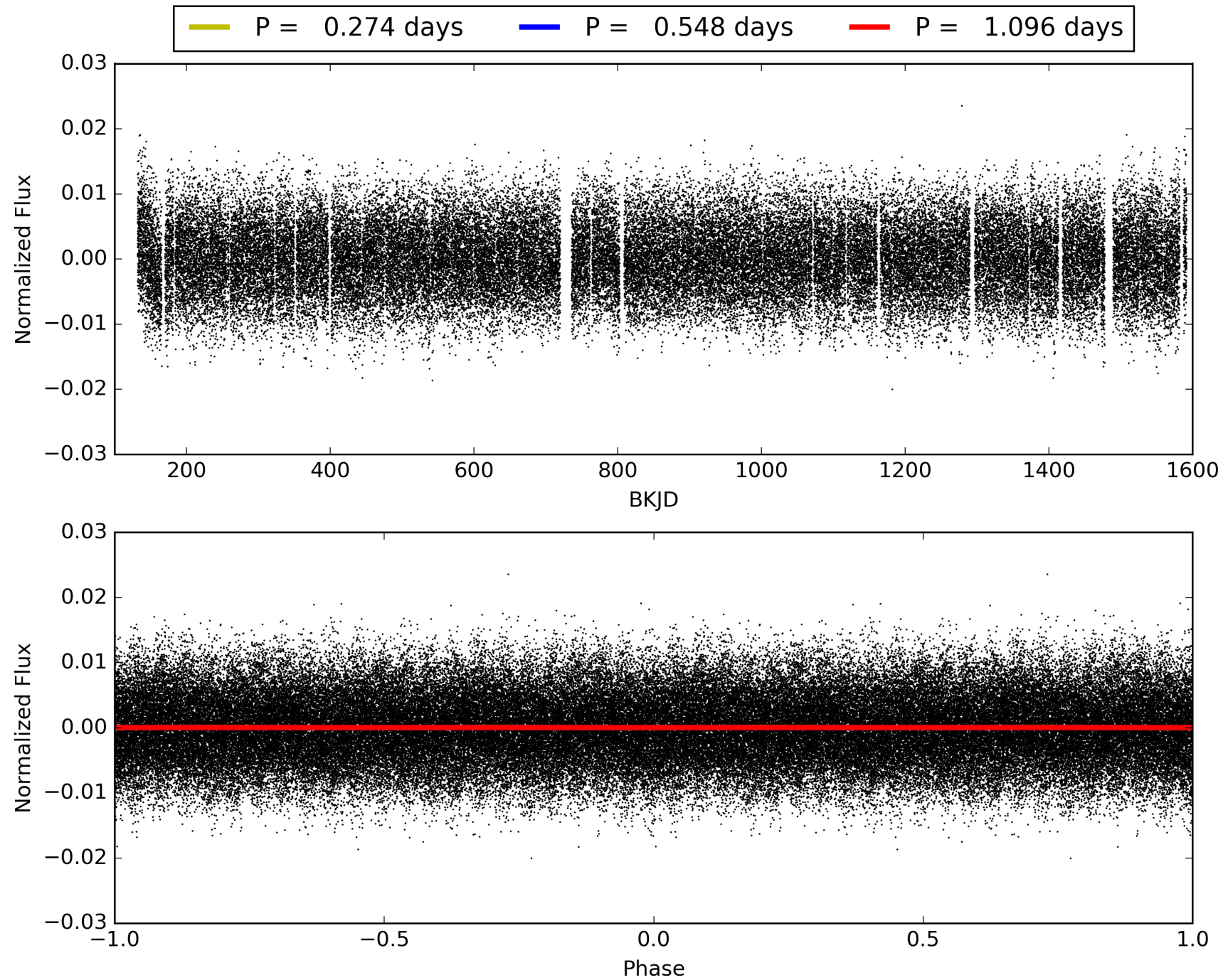
KIC: 8916266 Candidate: 1 of 2 Period: 0.548 d



TCE 008916266-01, PDC Light Curves

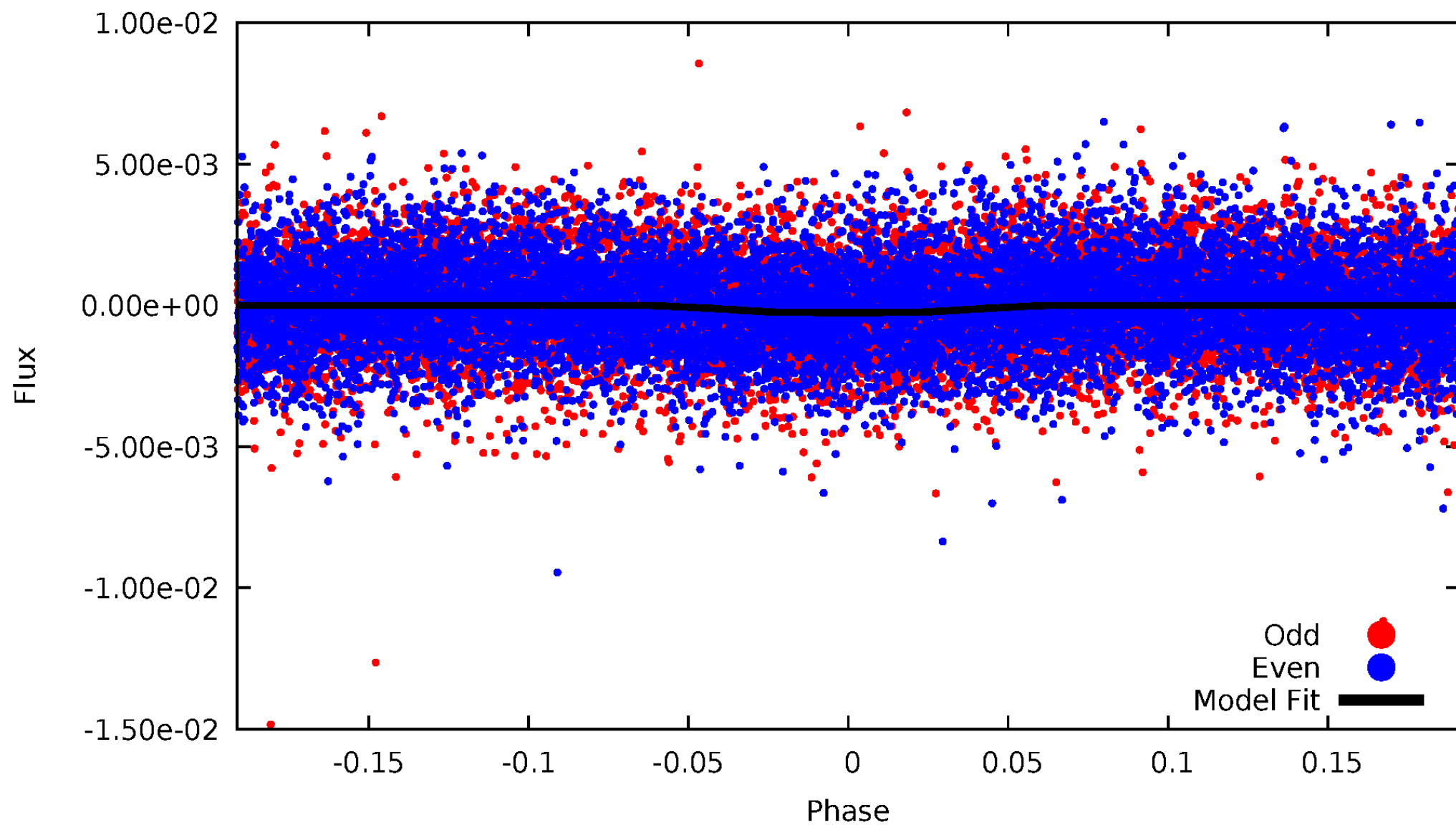


TCE 008916266-01



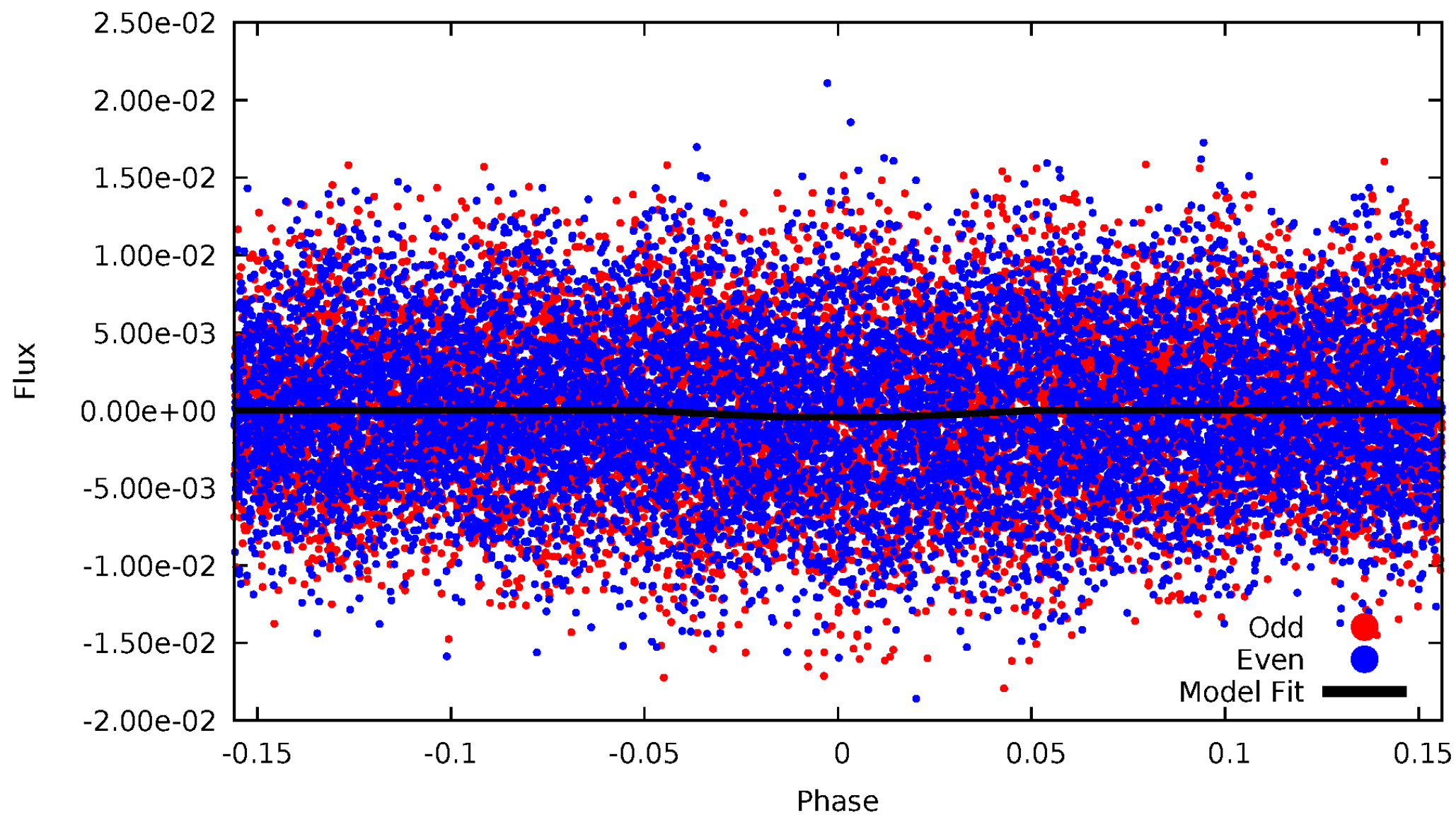
DV Odd/Even

TCE 008916266-01



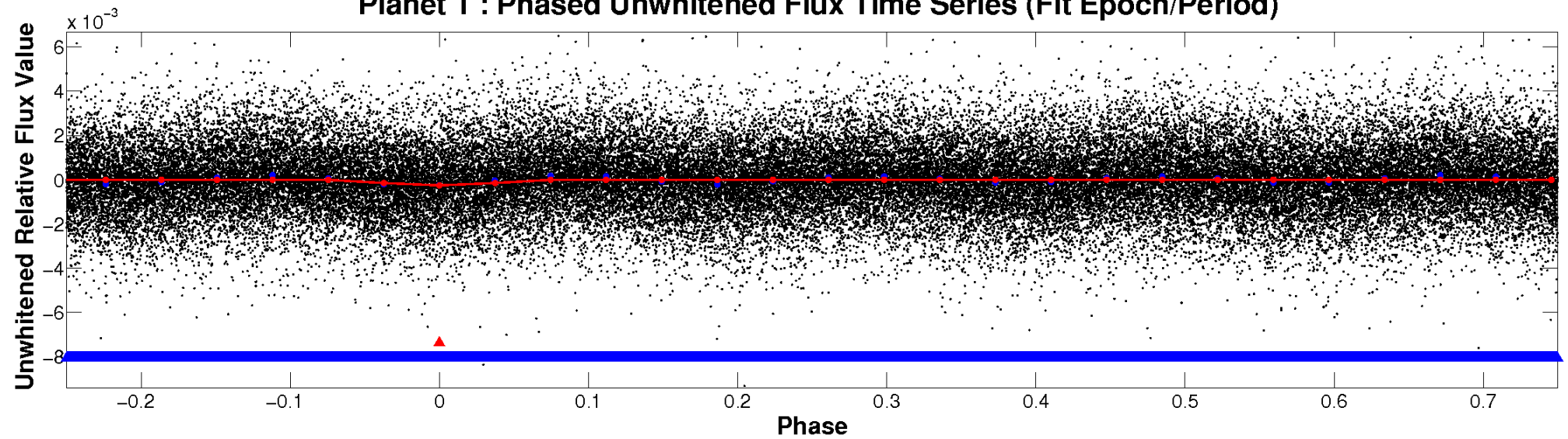
ALT Odd/Even

TCE 008916266-01

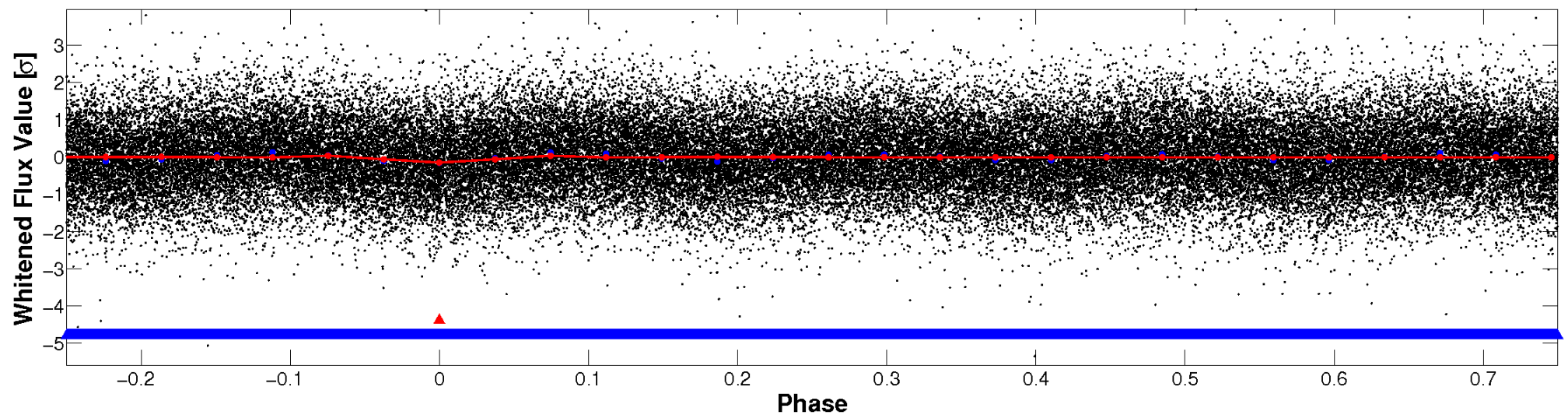


Non-Whitened Vs. Whitened Light Curve

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

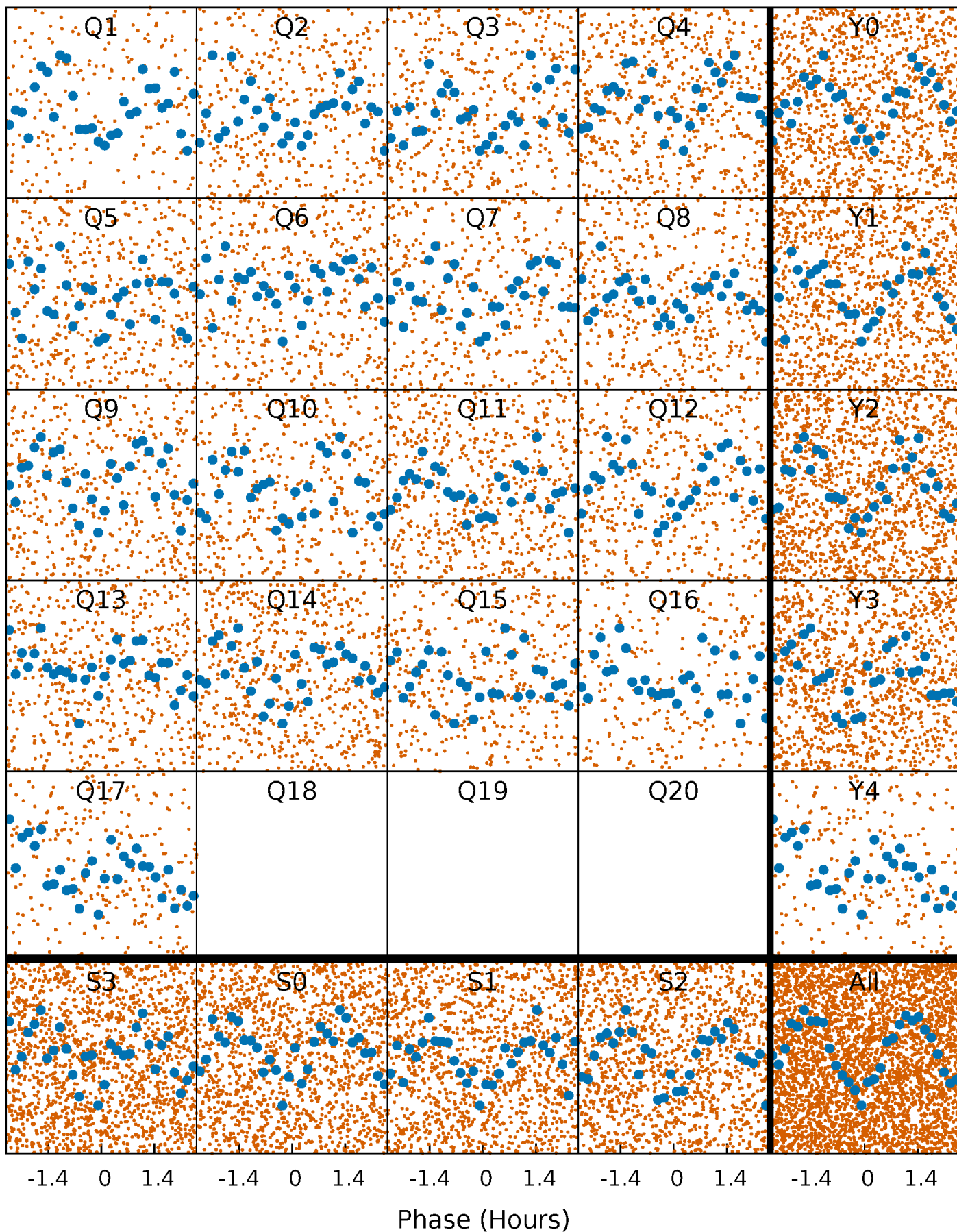


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



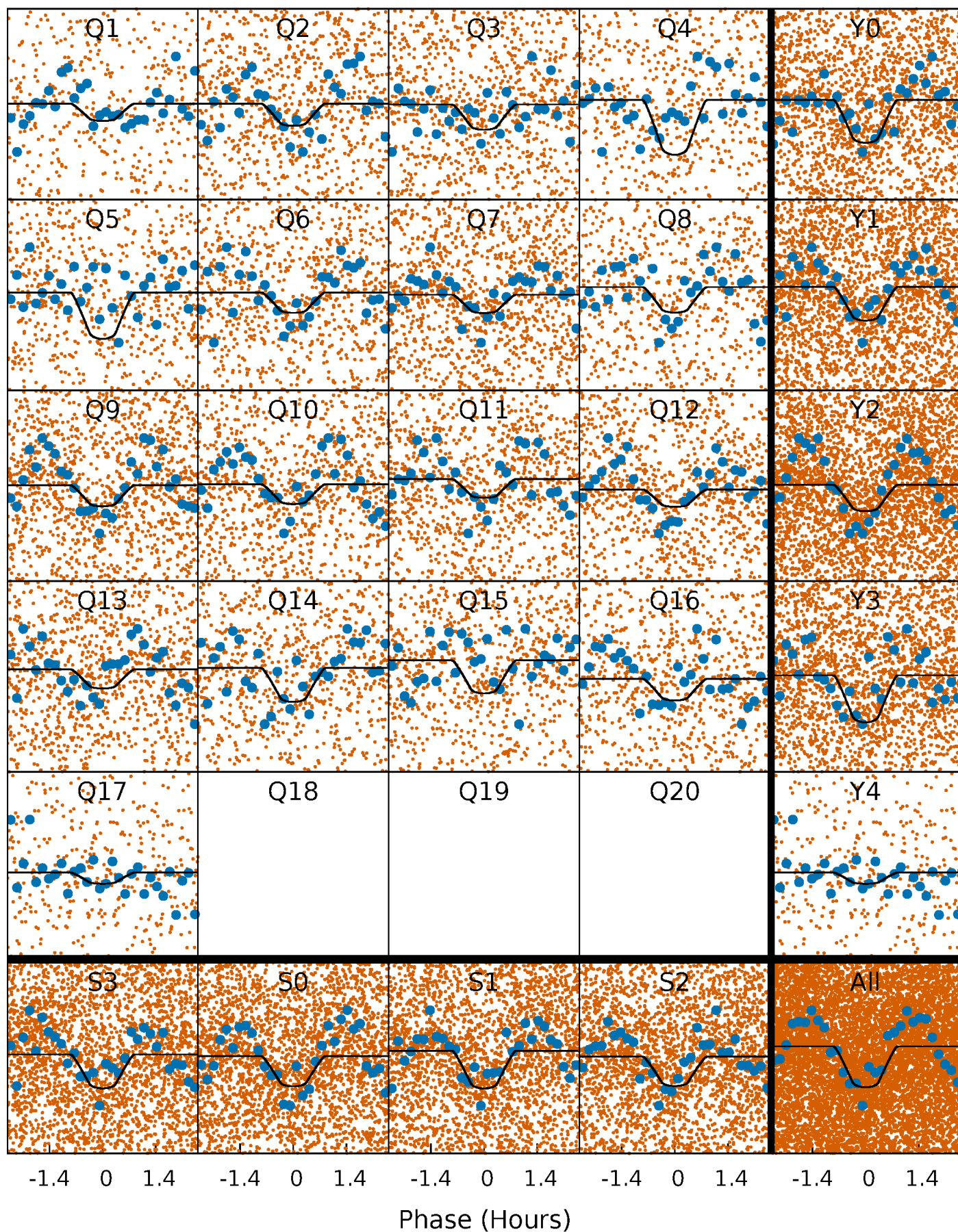
PDC Quarter-Phased Transit Curves

TCE 008916266-01 P= 0.548051 Days $T_0=131.691703$ (BKJD)



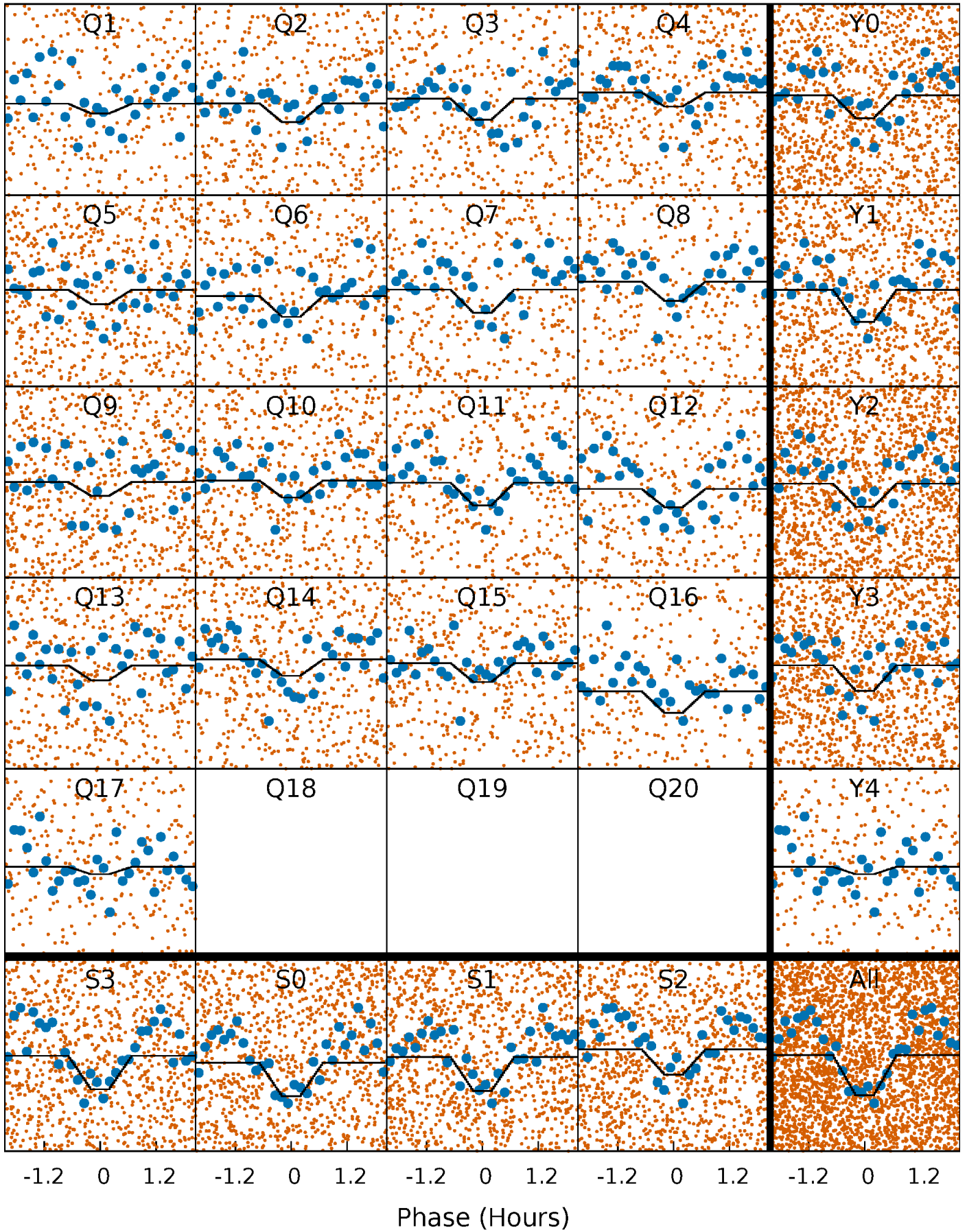
DV Quarter-Phased Transit Curves

TCE 008916266-01 P= 0.548051 Days $T_0=131.691703$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

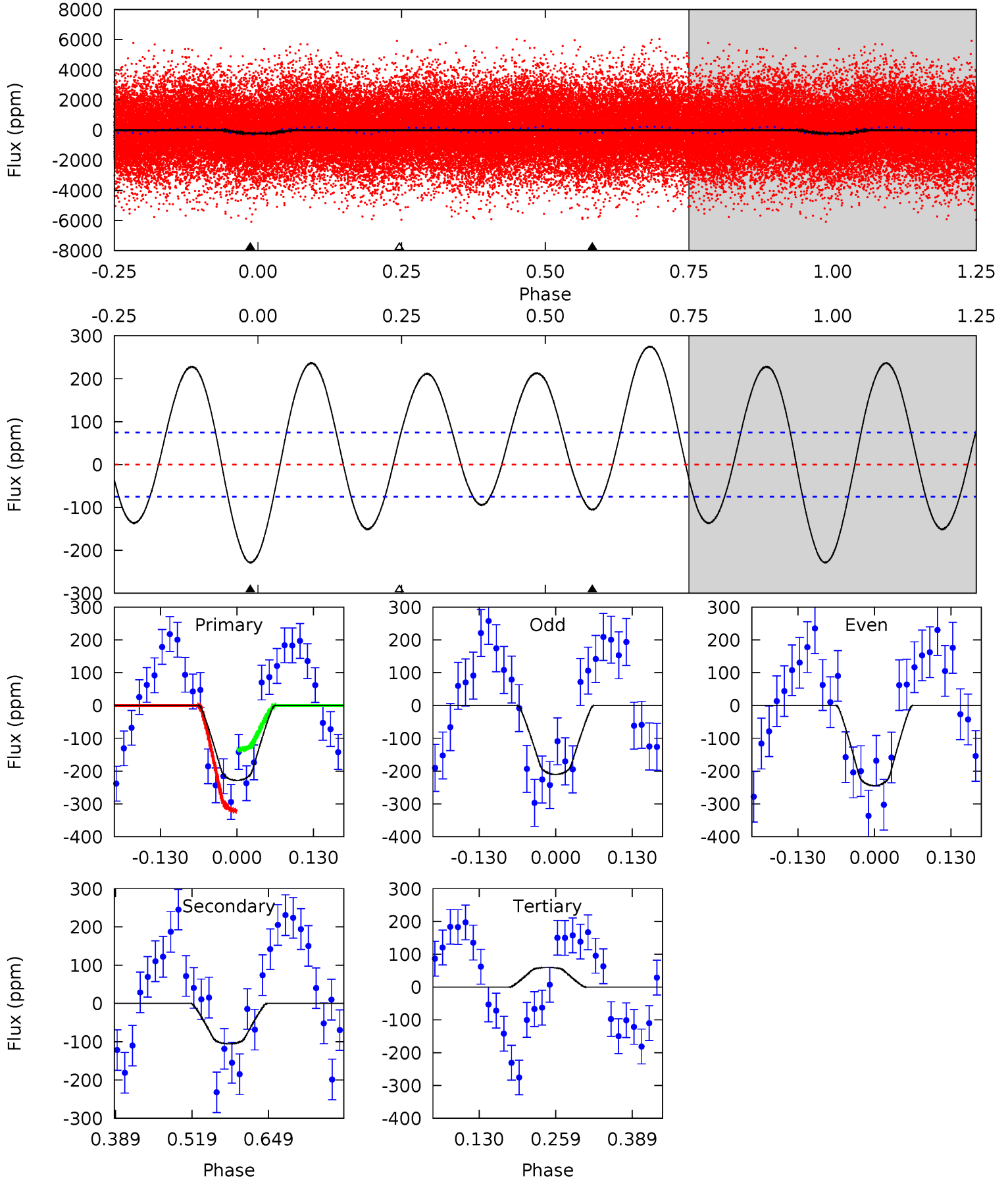
TCE 008916266-01 P= 0.548047 Days $T_0=131.691338$ (BKJD)



DV Model-Shift Uniqueness Test

008916266-01, P = 0.548051 Days, E = 131.143652 Days

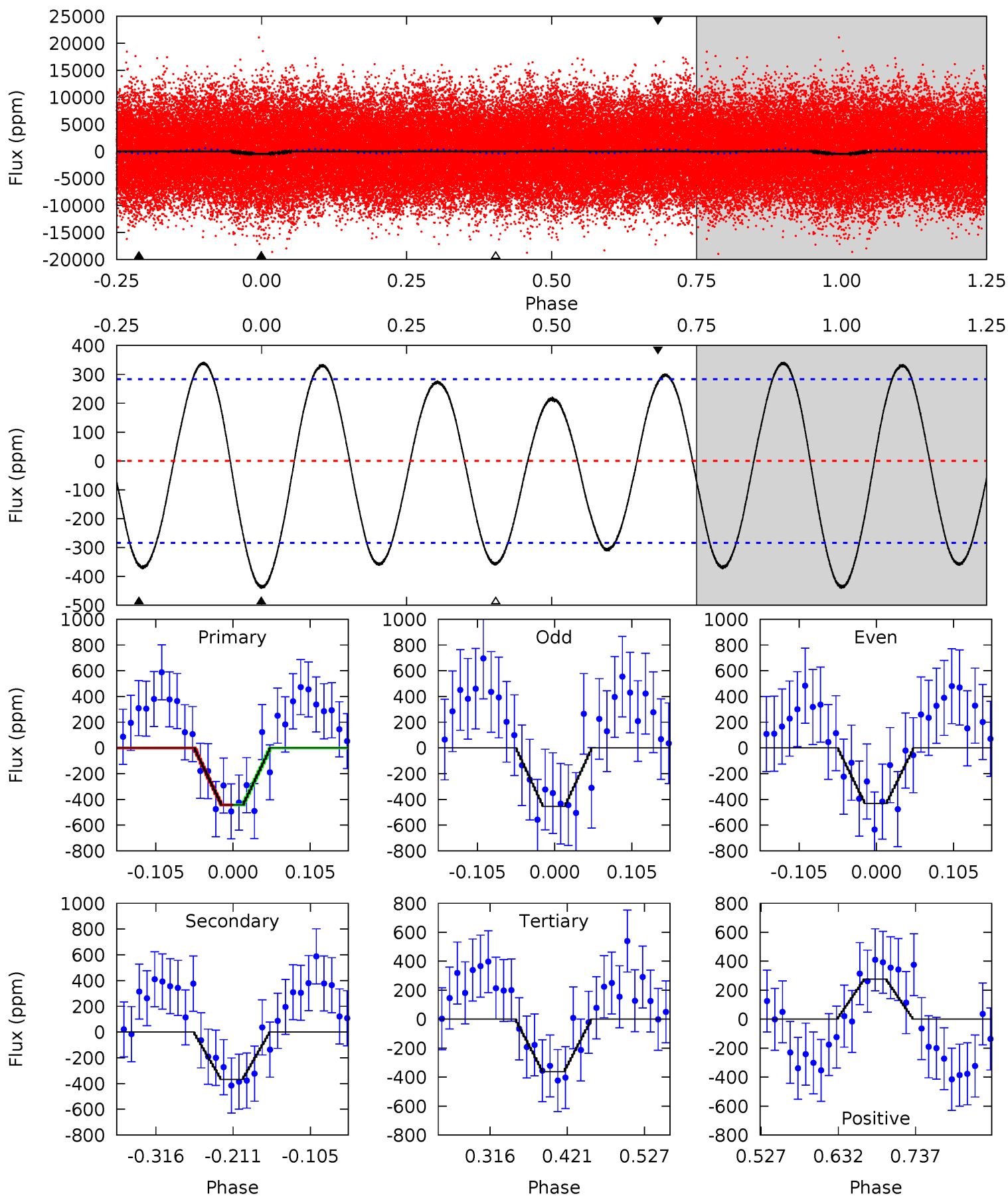
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.8	6.33	-3.59	0	4.51	1.52	6.65	17.3	13.8	9.93	6.33	1.03	0.93	0.55	5.51



Alt Model-Shift Uniqueness Test

008916266-01, P = 0.548047 Days, E = 131.143291 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.11	5.89	5.81	4.45	4.55	1.62	3.48	1.30	2.66	0.08	1.45	0.20	0.82	0.44	0.00



Stellar Parameters For KIC 008916266

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5542^{+482}_{-1125}	$2.292^{+0.207}_{-0.384}$	$-0.500^{+0.400}_{-0.200}$	$20.912^{+6.399}_{-7.821}$	$3.119^{+0.218}_{-1.856}$	$0.000^{+0.001}_{-0.000}$
	+9%/-20%	+9%/-17%	+80%/-40%	+31%/-37%	+7%/-60%	+140%/-64%
Source	PHO1	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 008916266-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-105 ± 17	$39.82^{+23.02}_{-18.13}$	11468^{+1744}_{-2145}	-9773^{+2952}_{-2774}	$0.012^{+0.027}_{-0.007}$
Alt.	-367 ± 62	$49.16^{+22.52}_{-19.87}$	11456^{+1751}_{-2177}	-9440^{+2653}_{-2887}	$0.028^{+0.050}_{-0.015}$

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

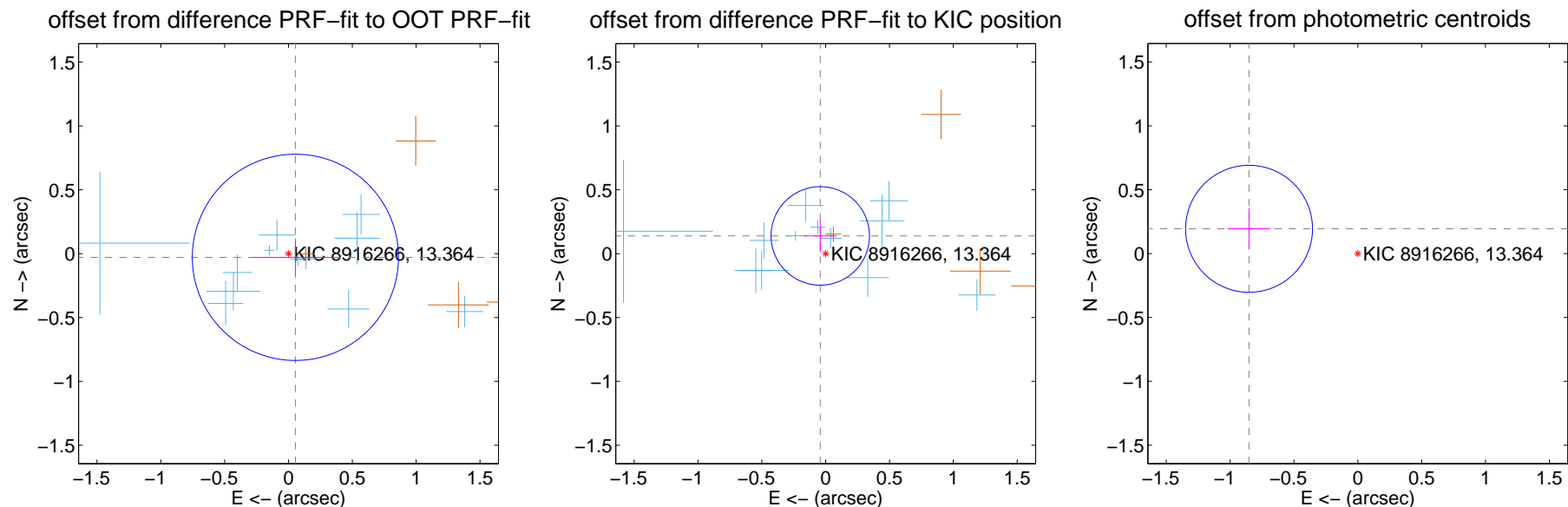
DV Centroid Data

Supplemental centroid analysis for 008916266-01. Kepler magnitude: 13.36. Transit SNR 9.87

There are 12 quarters with good PRF difference image offsets

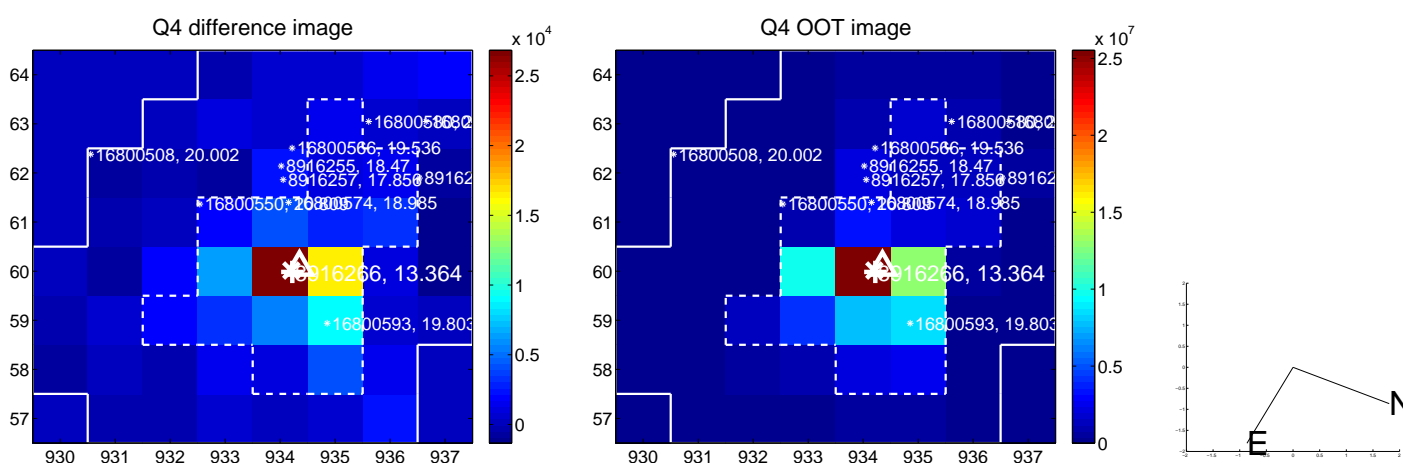
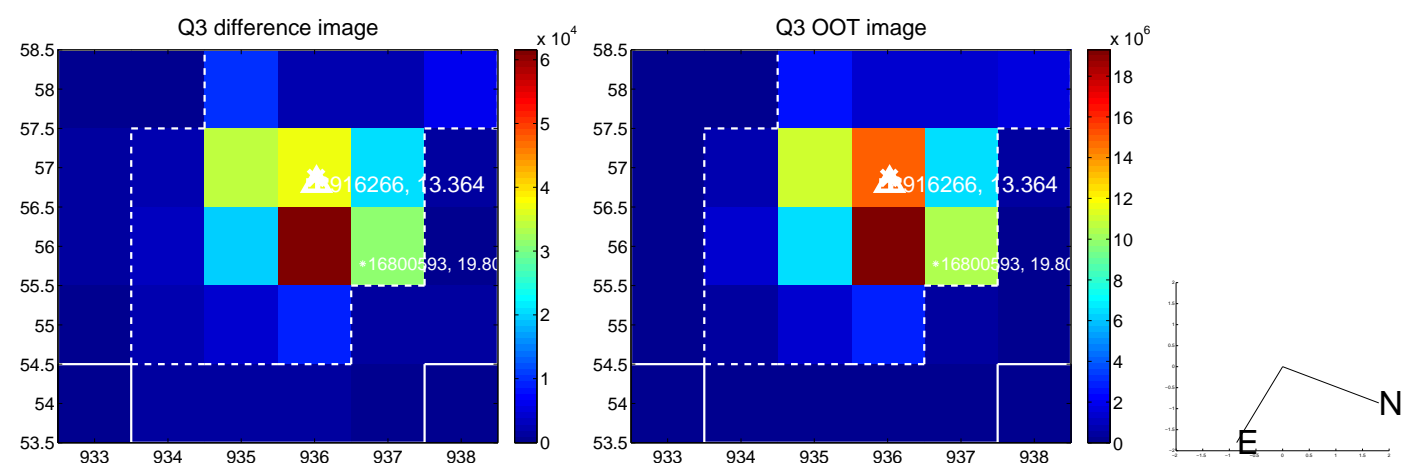
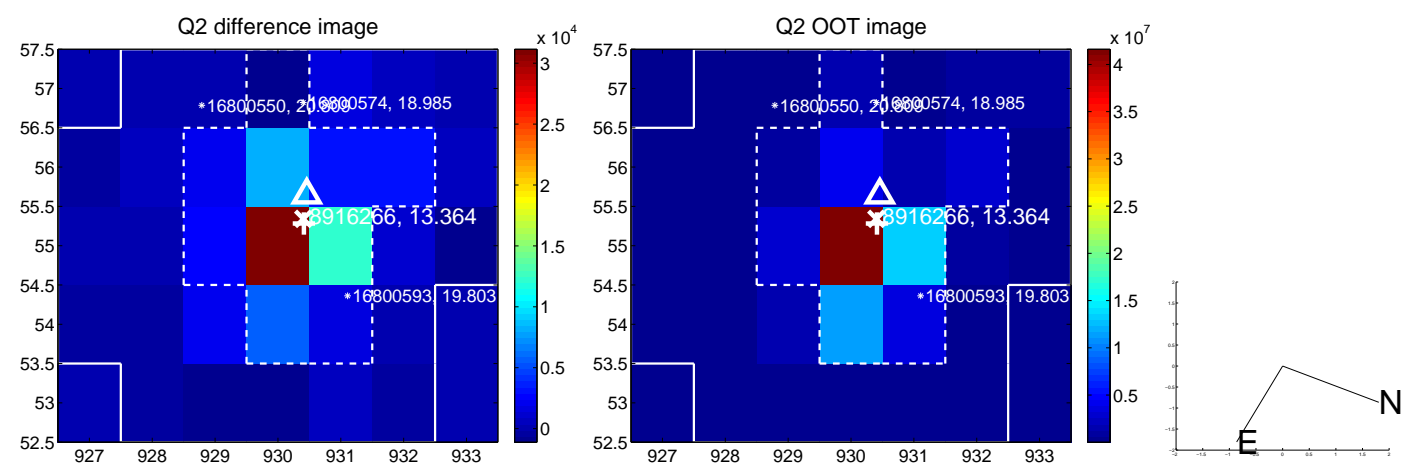
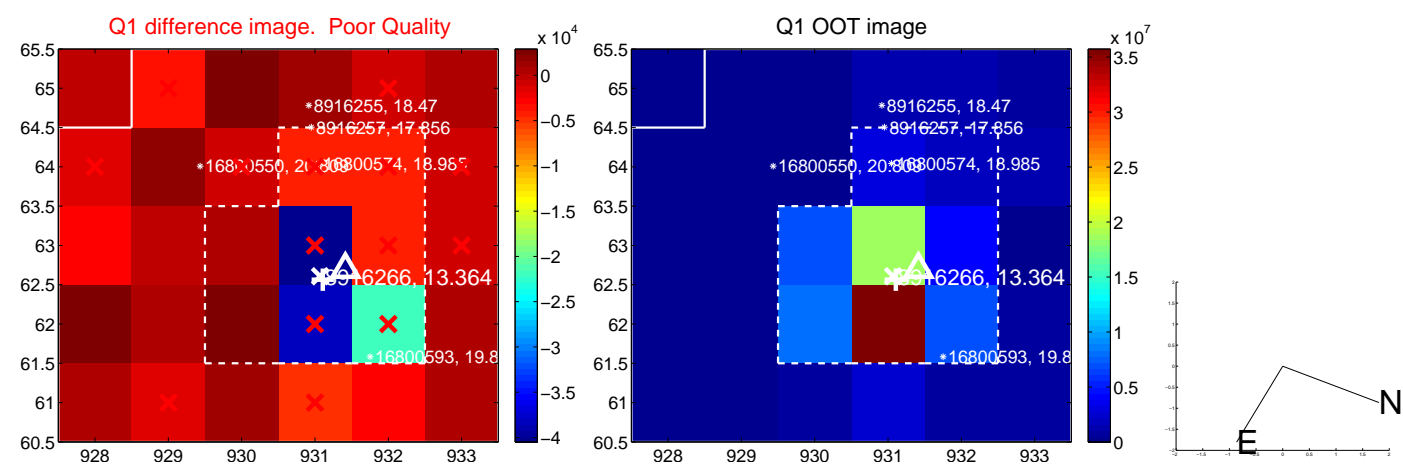
The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.061 ± 0.269	0.23	-0.054 ± 0.338	-0.029 ± 0.145
PRF-fit source offset from KIC position	0.145 ± 0.128	1.13	0.042 ± 0.127	0.139 ± 0.129
photometric centroid source offset	0.87 ± 0.17	5.27	0.85 ± 0.17	0.19 ± 0.16

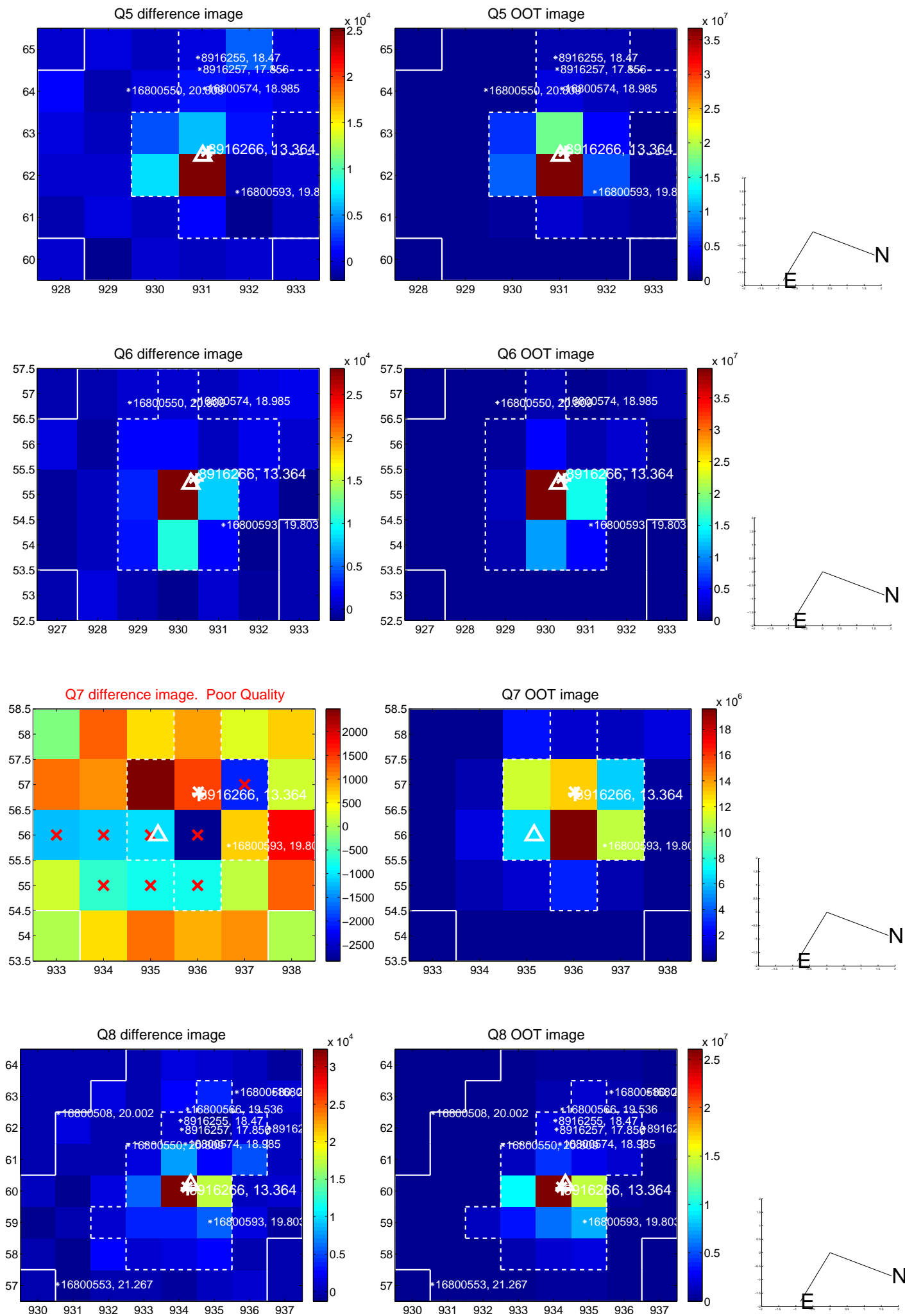


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

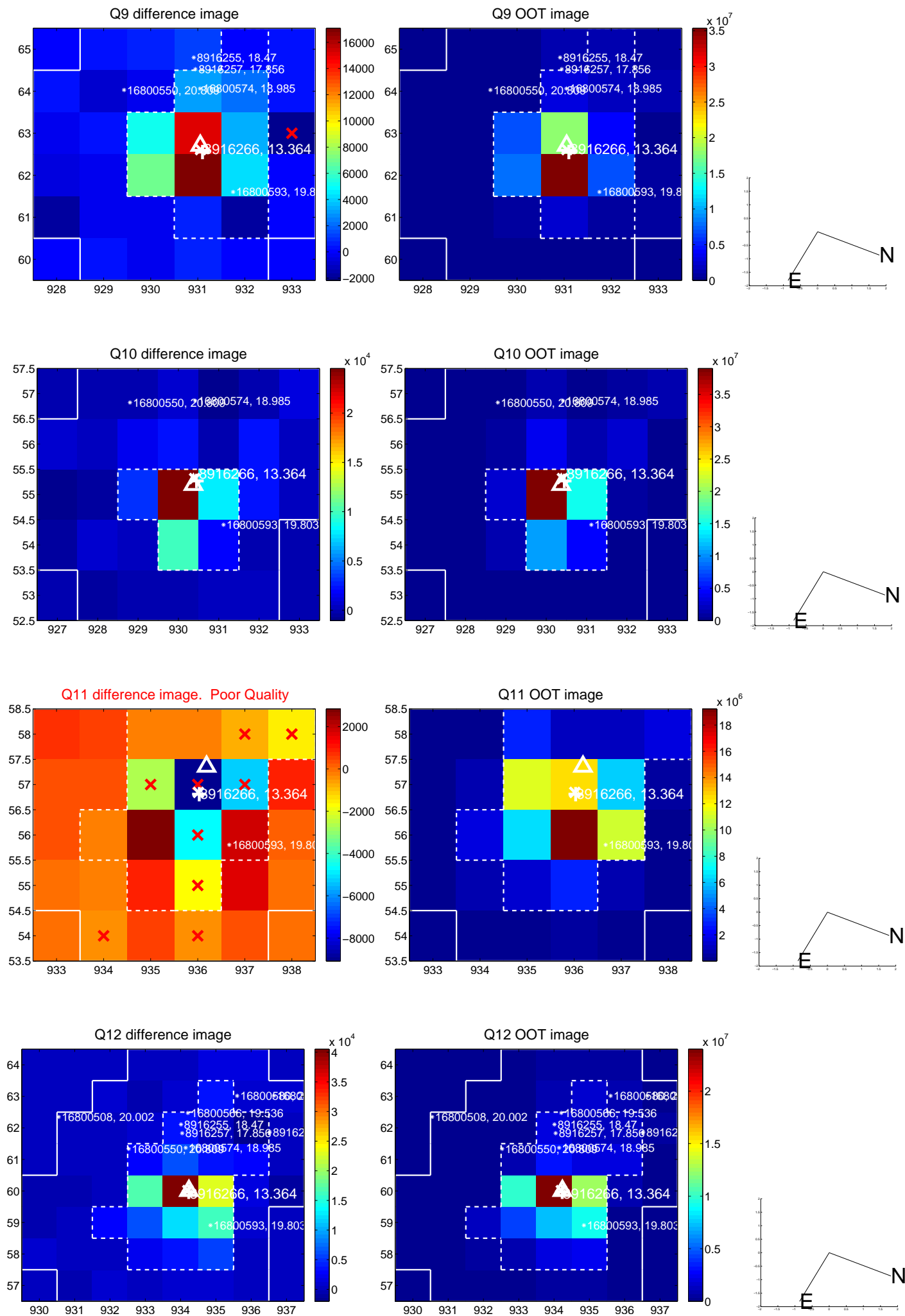
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



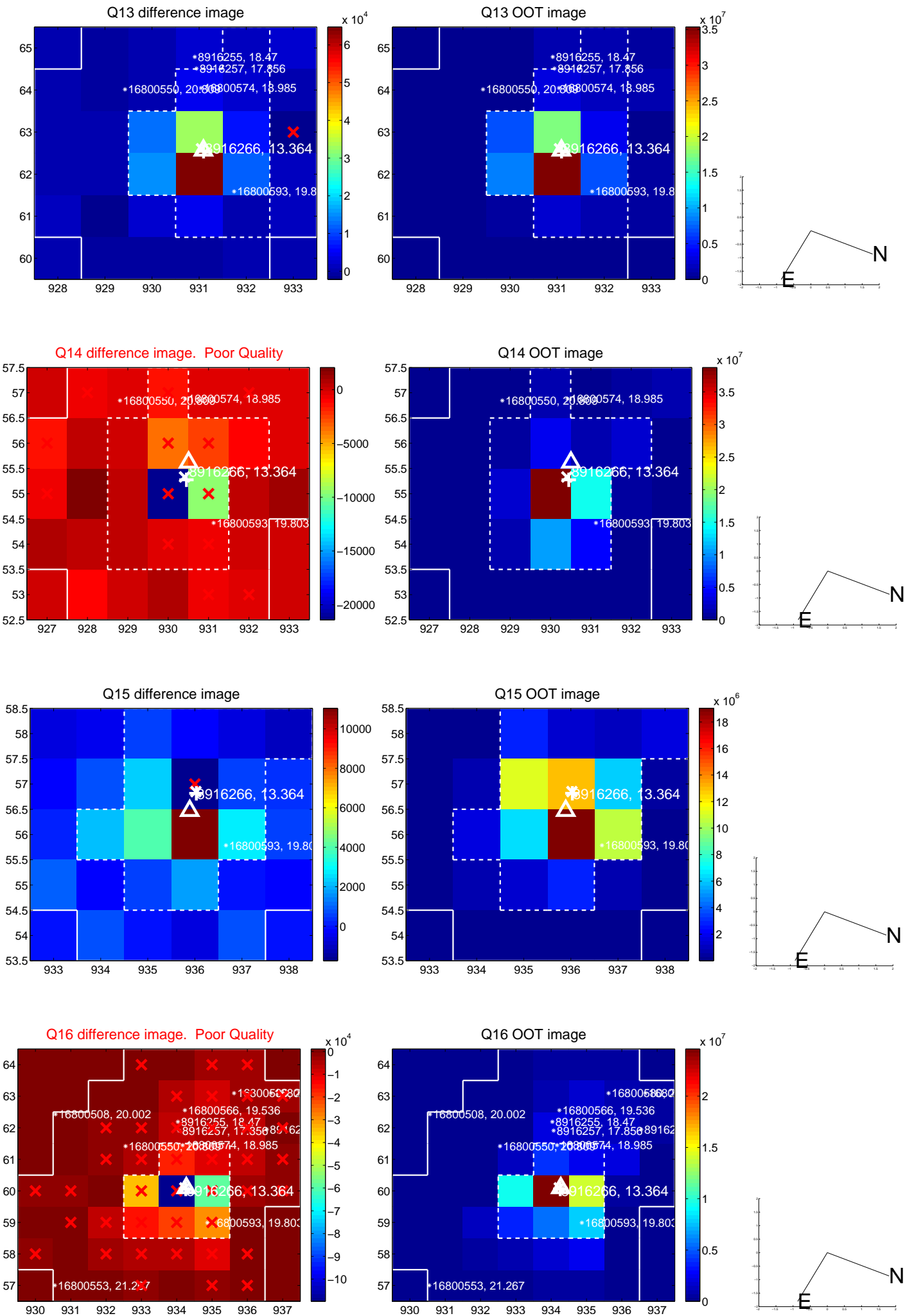
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



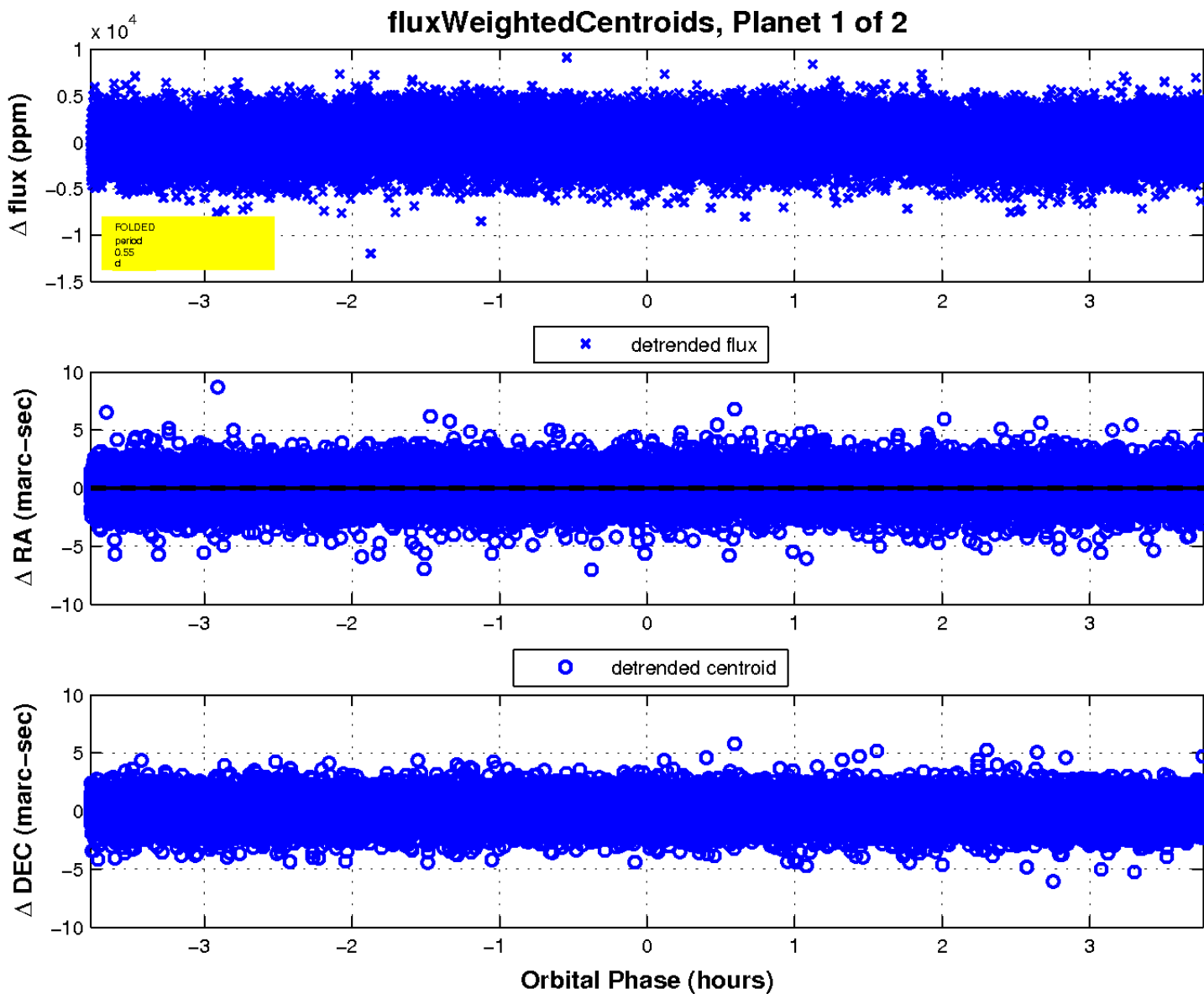
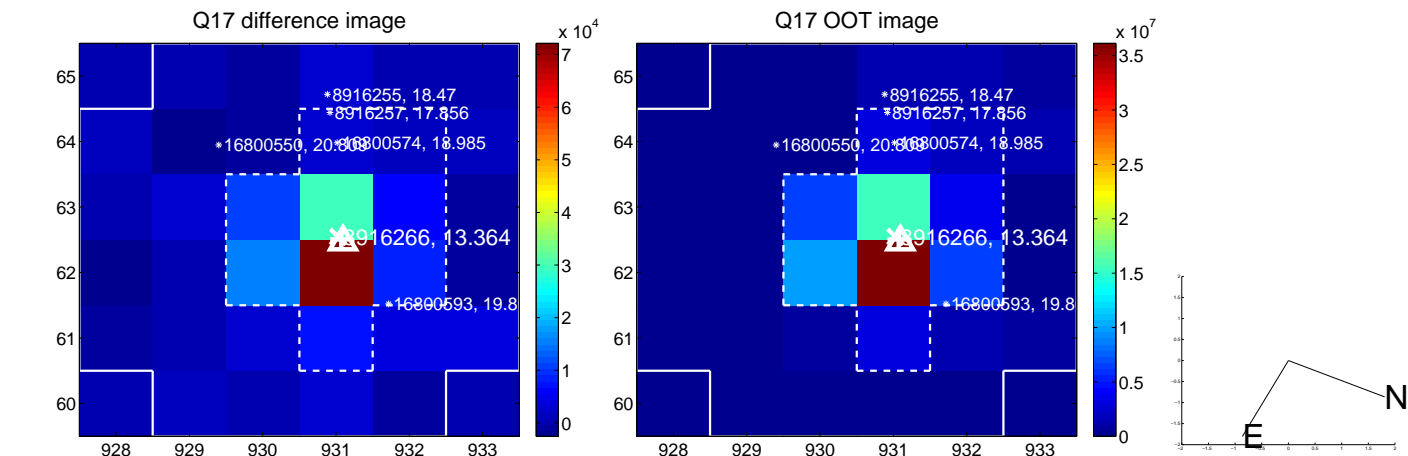
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

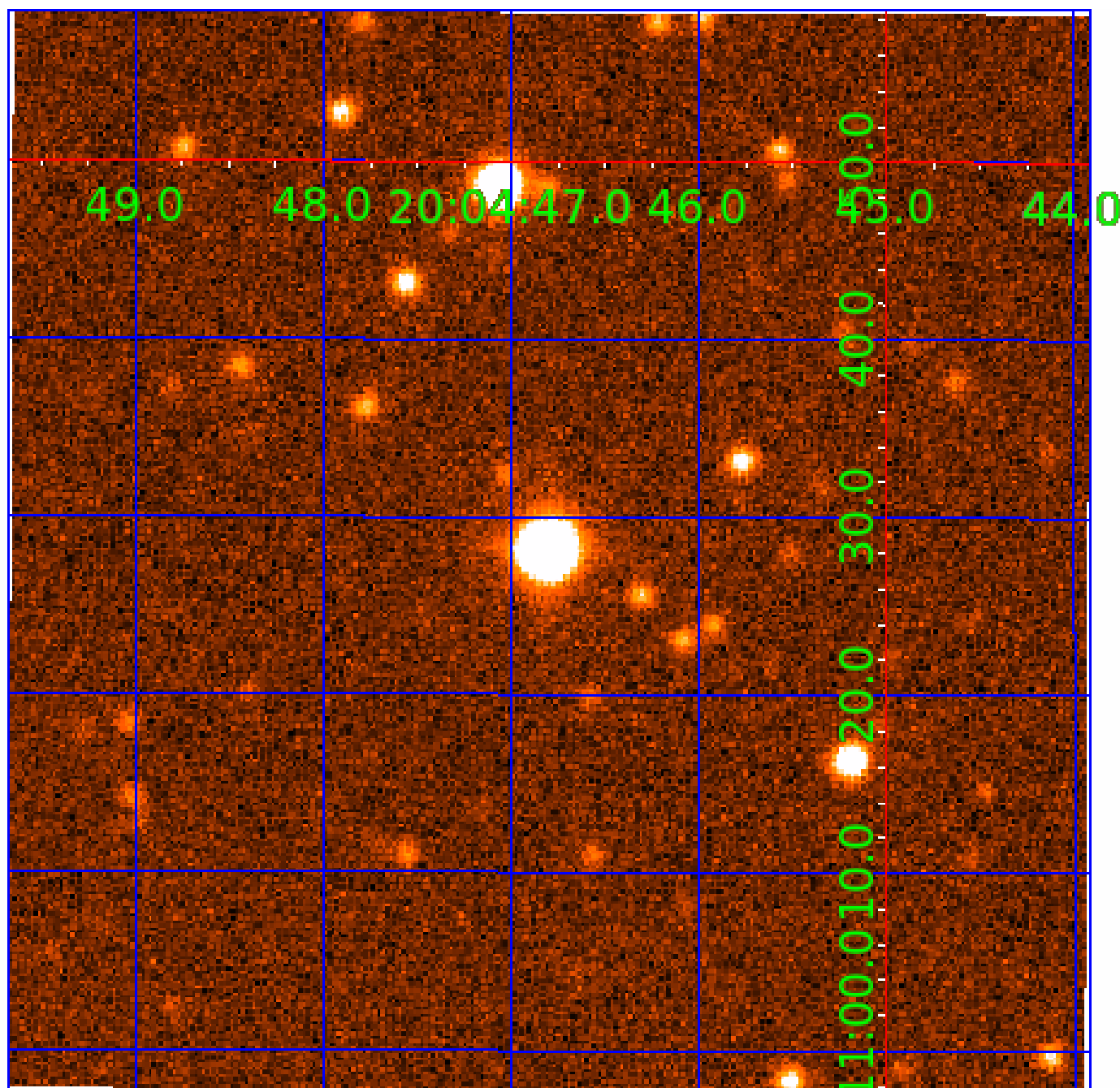


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008916266

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})
008916266-01	OBS	No	0.548051	131.691703	258.6	1.257	10.3	9.9	20.91	5542	40.02	0.00
008916266-02	OBS	No	0.735108	132.140881	280.0	5.825	9.6	9.7	20.91	5542	35.86	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008916266-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
008916266-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT

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

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

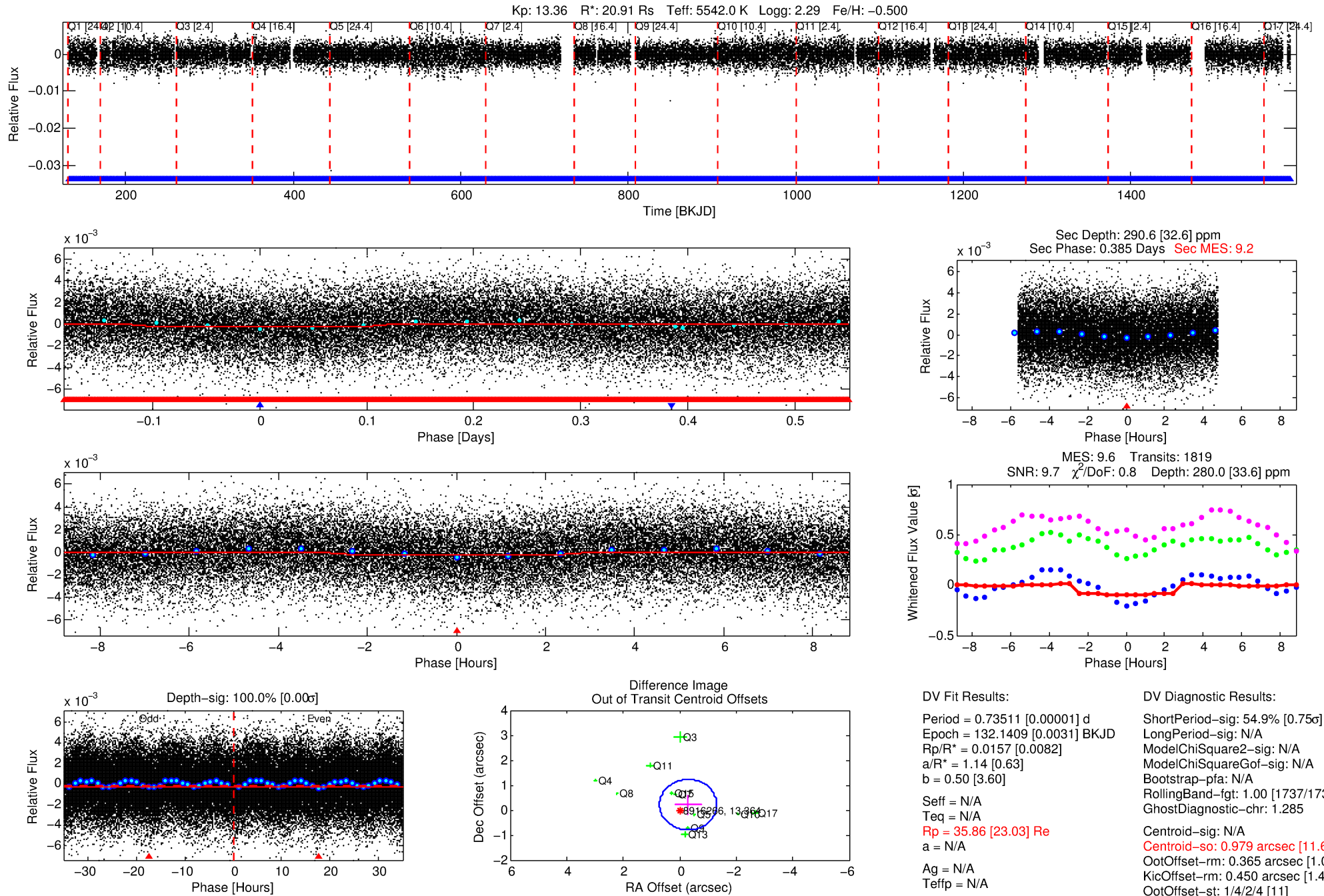
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008916266-02

No Significant Match Found

DV One-Page Summary

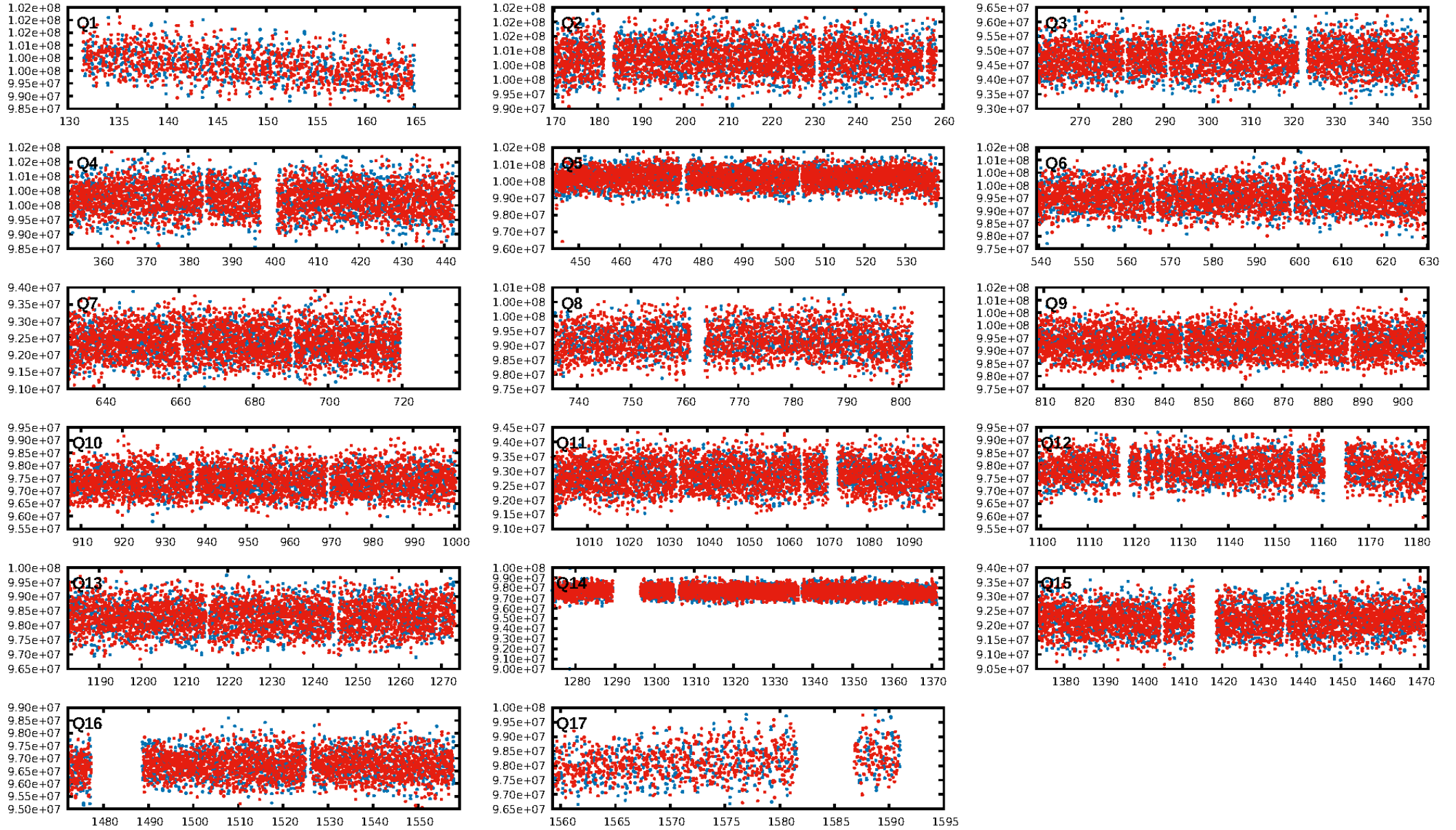
KIC: 8916266 Candidate: 2 of 2 Period: 0.735 d



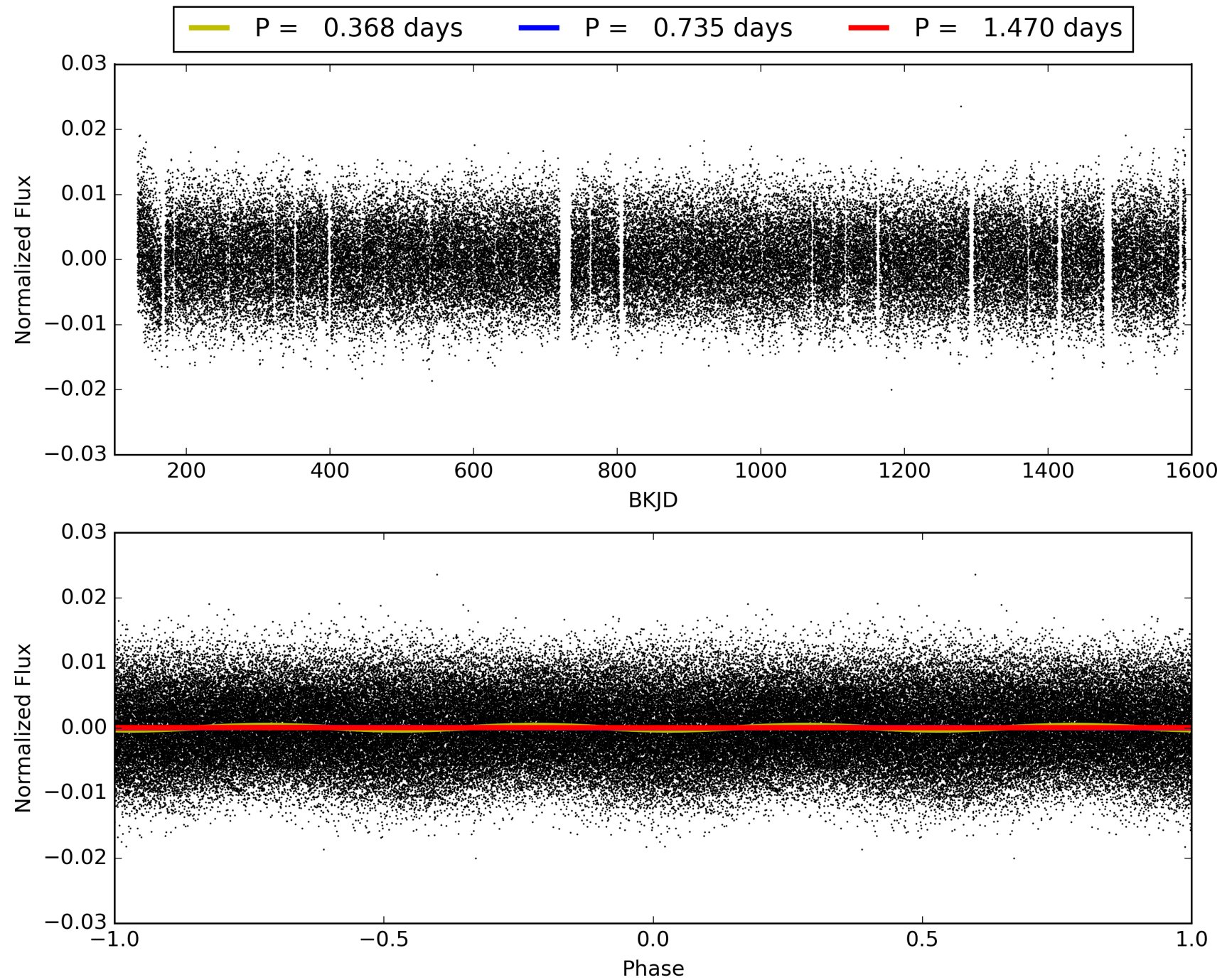
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 23:25:59 Z

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

TCE 008916266-02, PDC Light Curves

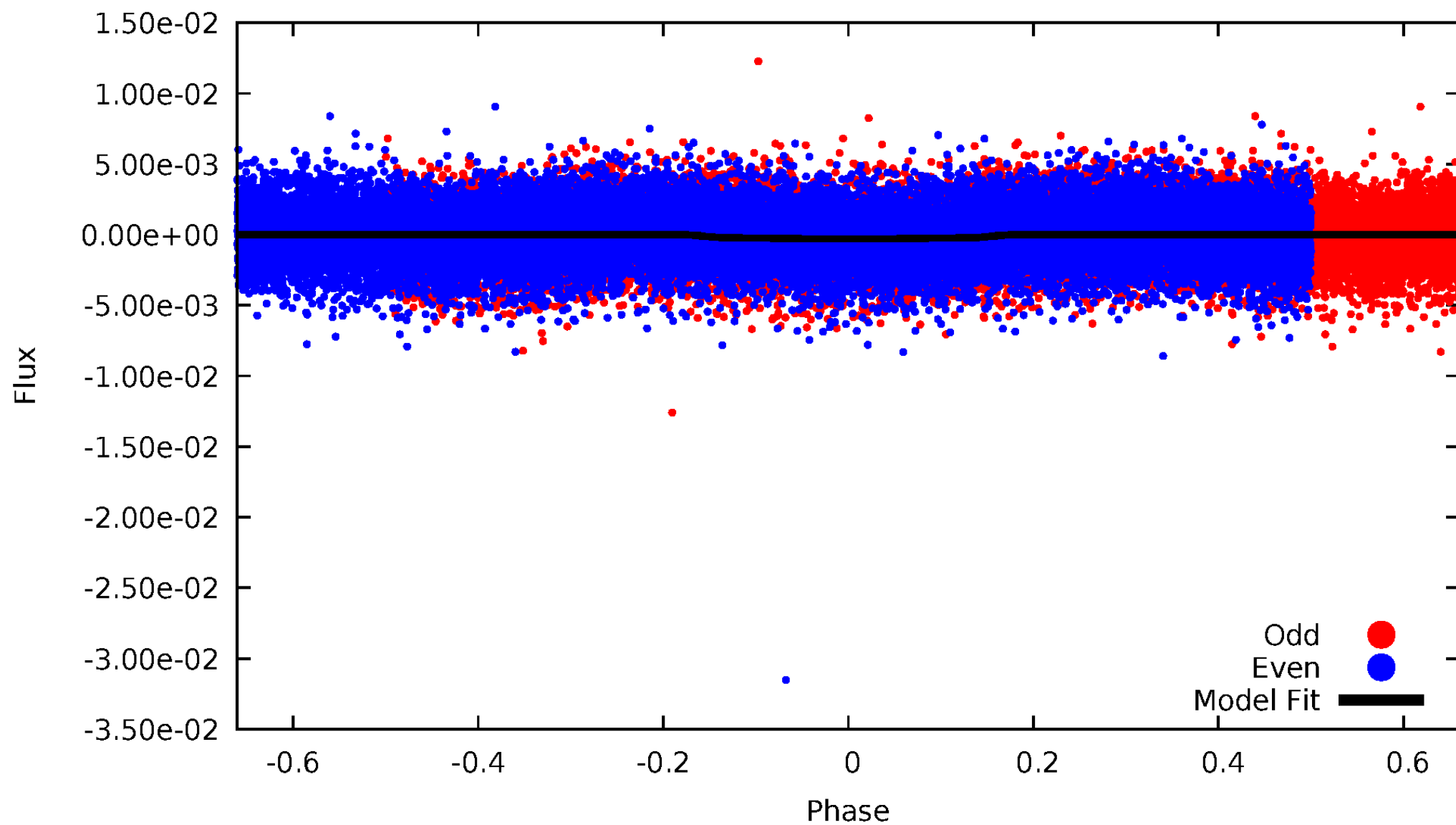


TCE 008916266-02



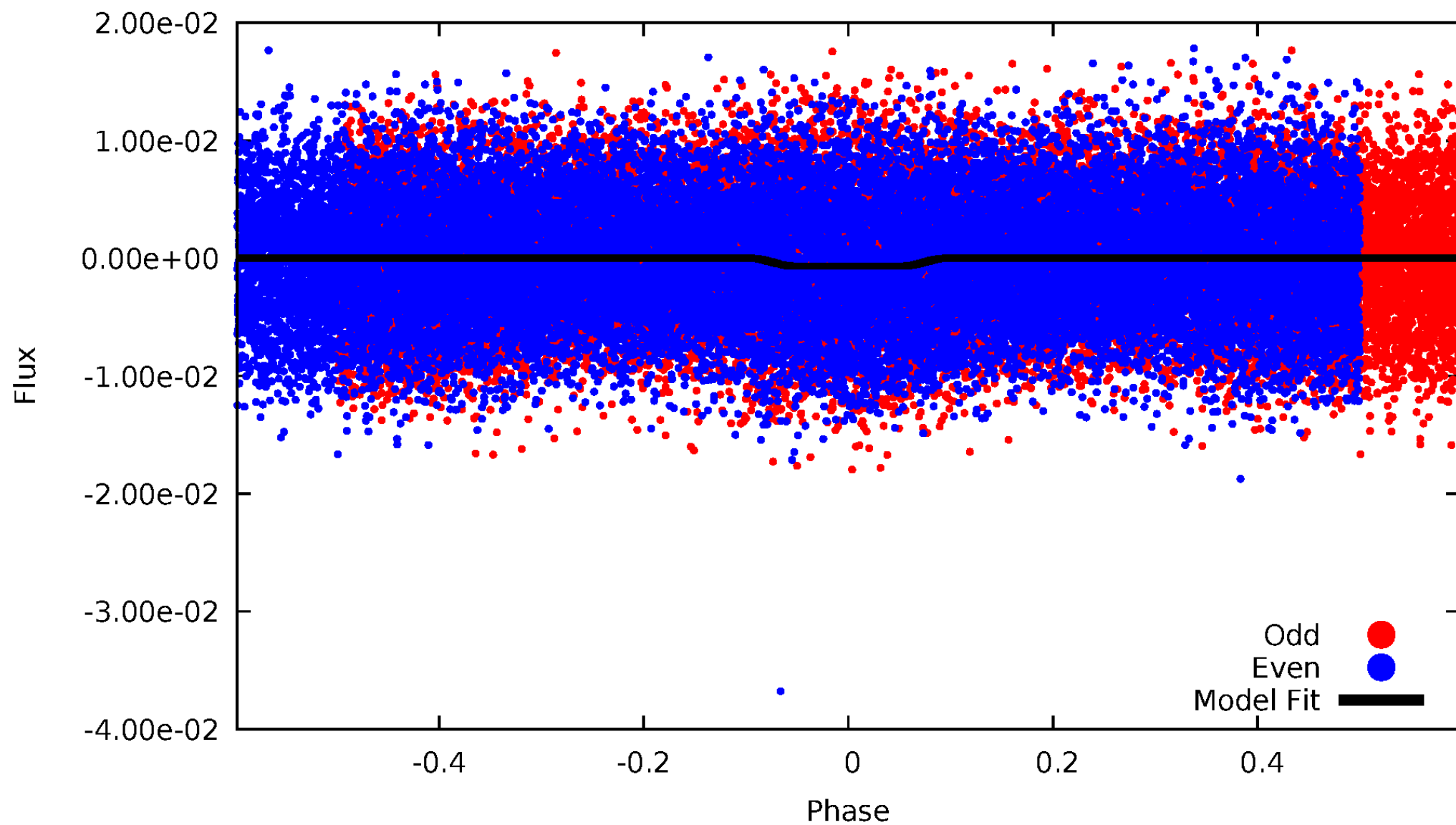
DV Odd/Even

TCE 008916266-02



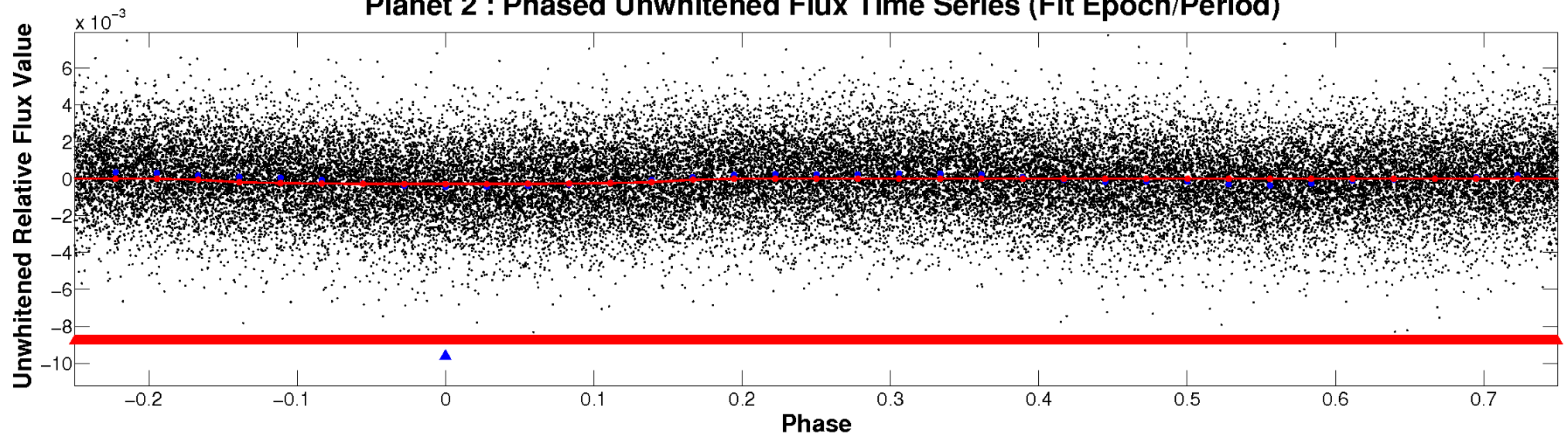
ALT Odd/Even

TCE 008916266-02

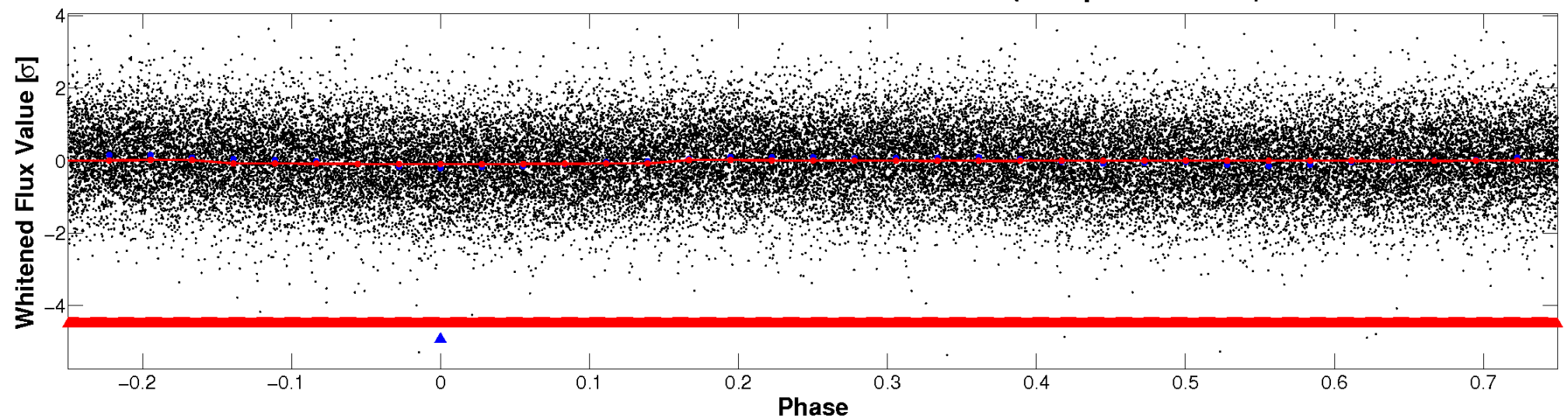


Non-Whitened Vs. Whitened Light Curve

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

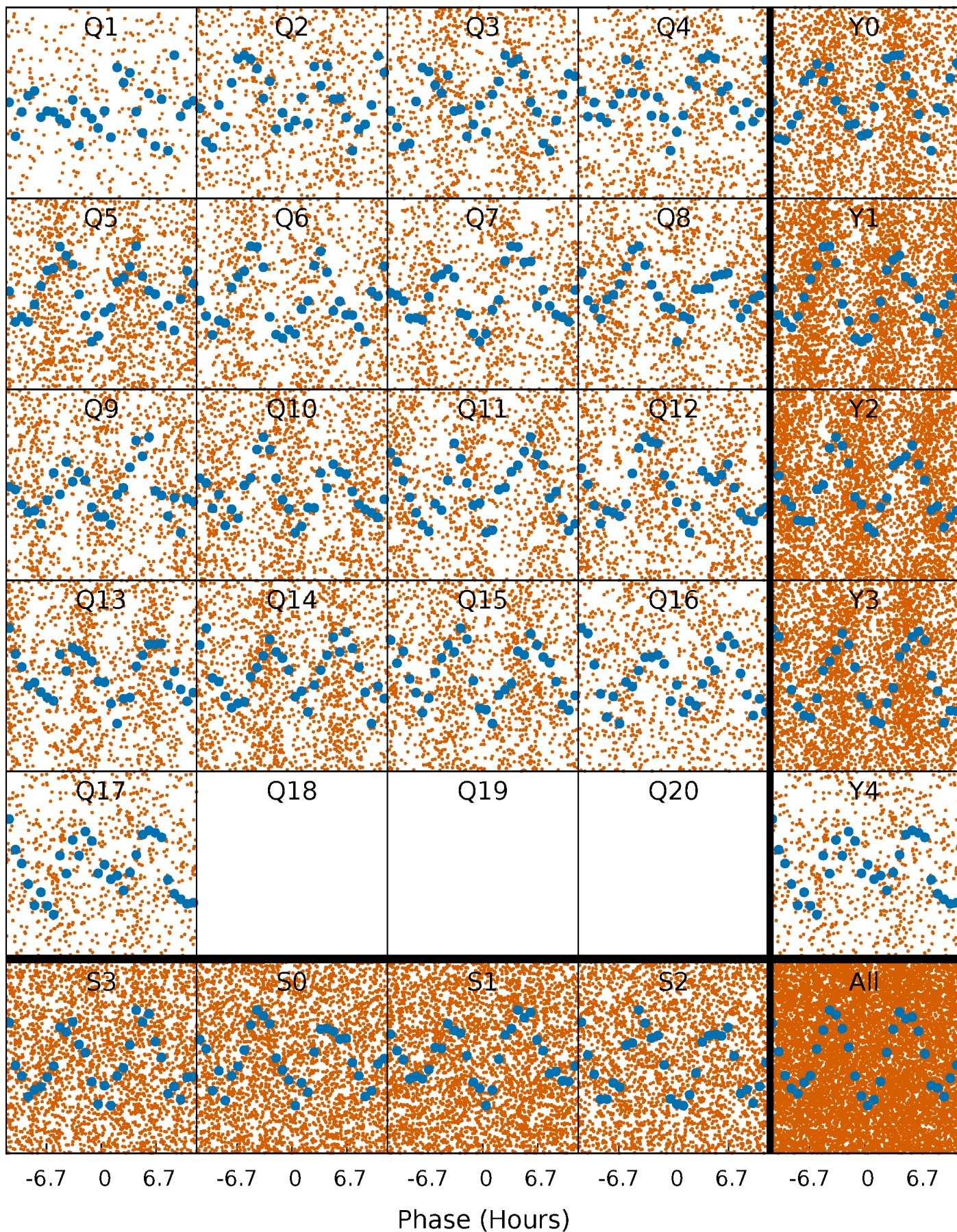


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



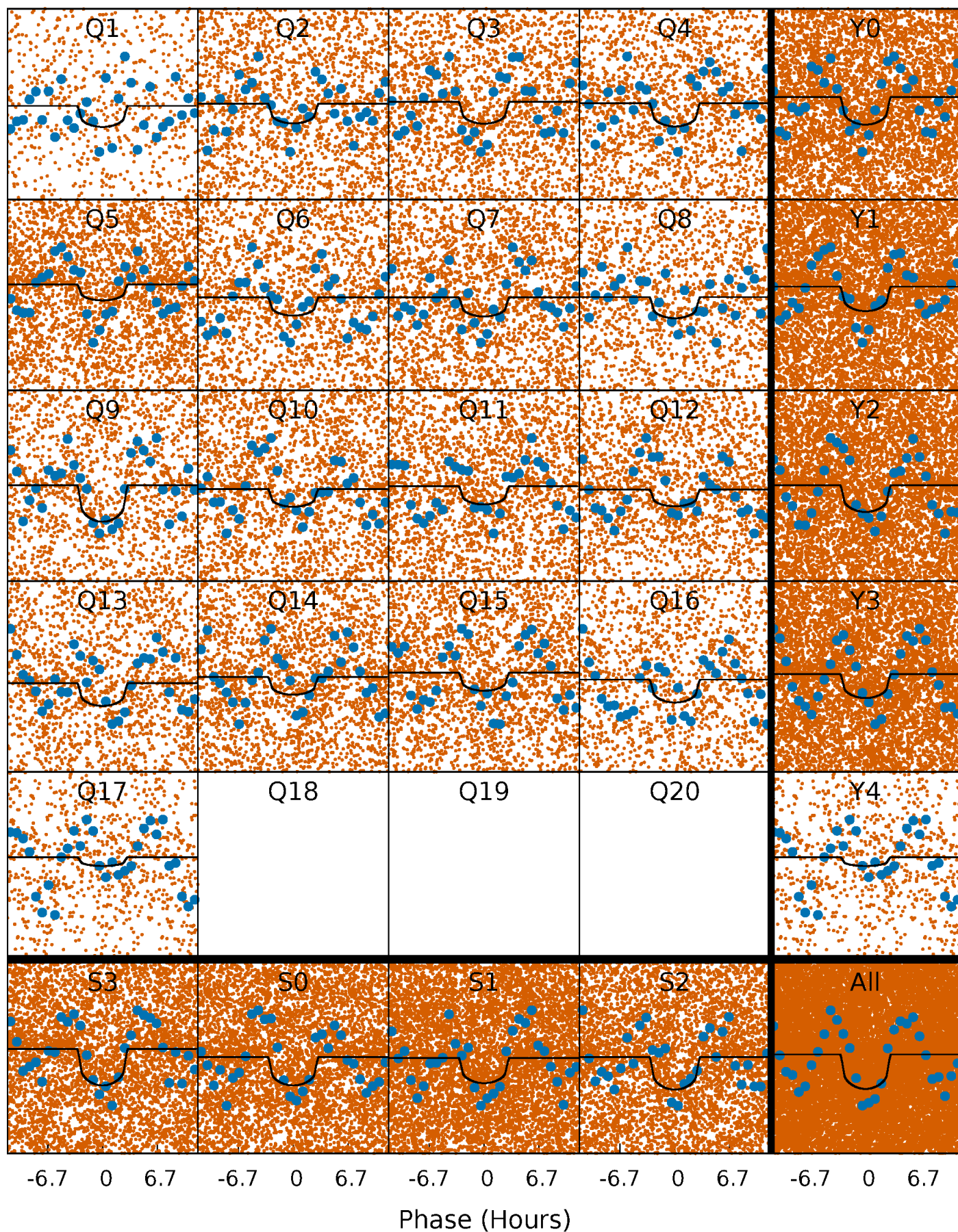
PDC Quarter-Phased Transit Curves

TCE 008916266-02 P= 0.735108 Days $T_0=132.140881$ (BKJD)



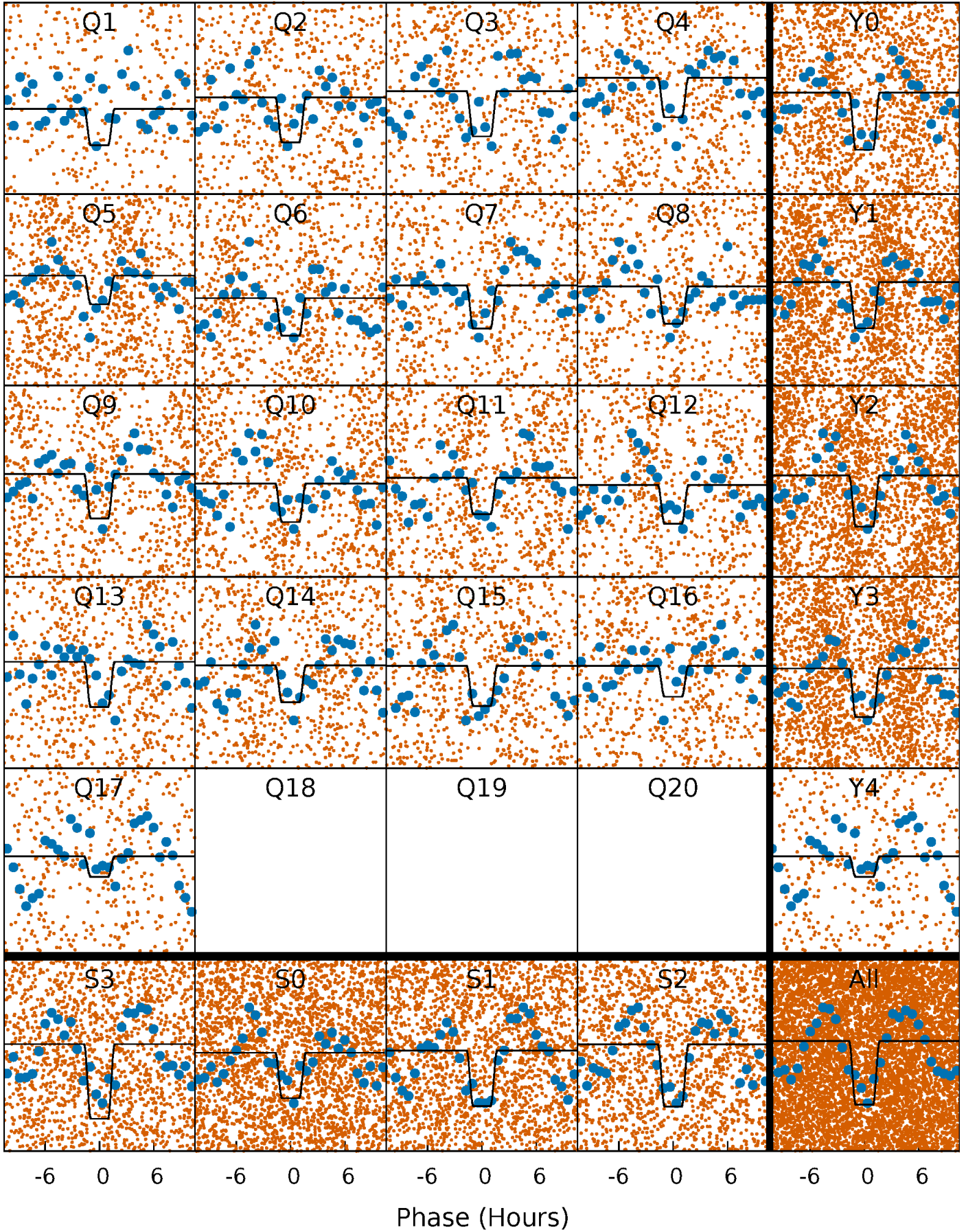
DV Quarter-Phased Transit Curves

TCE 008916266-02 P= 0.735108 Days $T_0=132.140881$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

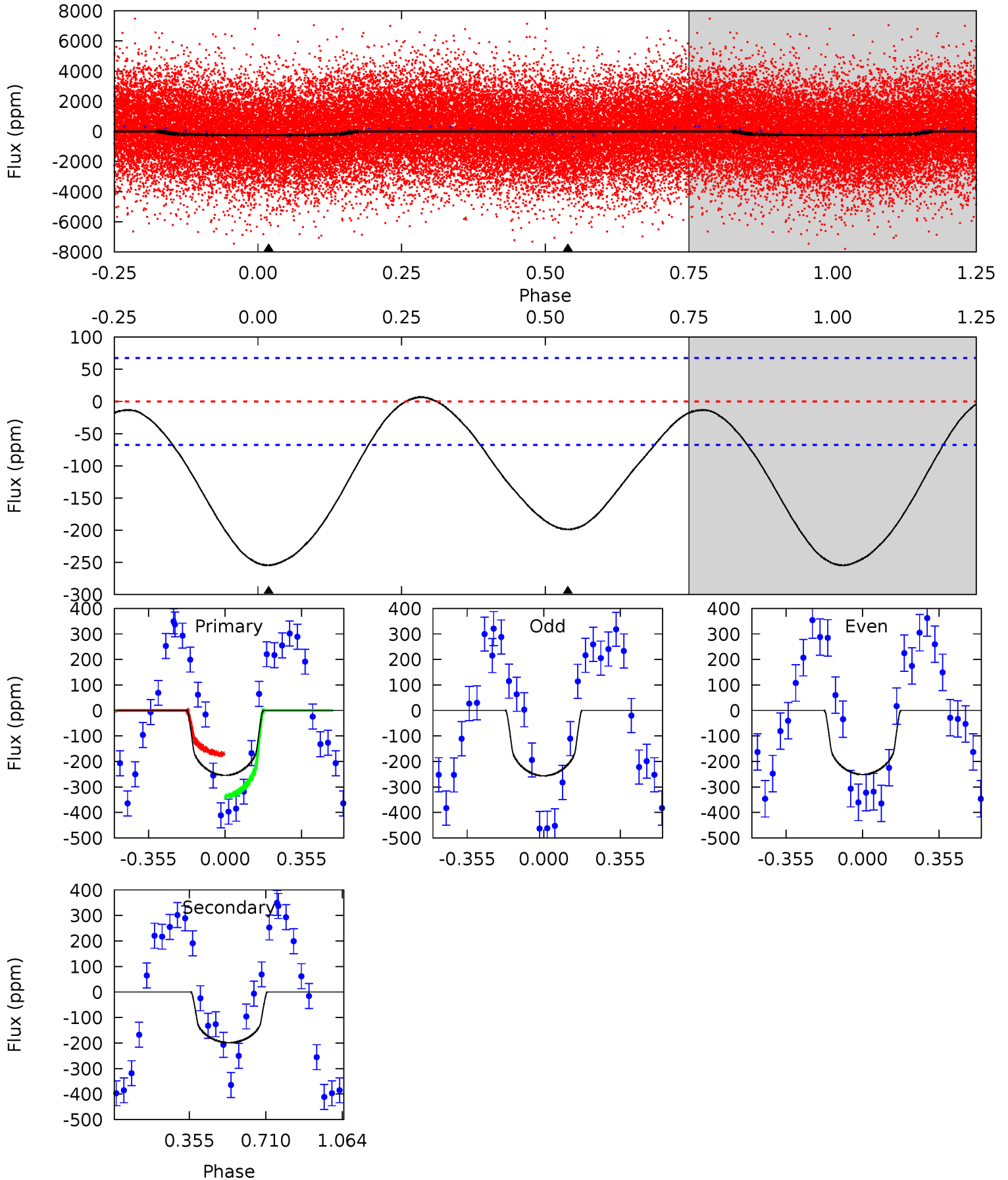
TCE 008916266-02 P= 0.735139 Days $T_0=132.126779$ (BKJD)



DV Model-Shift Uniqueness Test

008916266-02, P = 0.735108 Days, E = 131.405773 Days

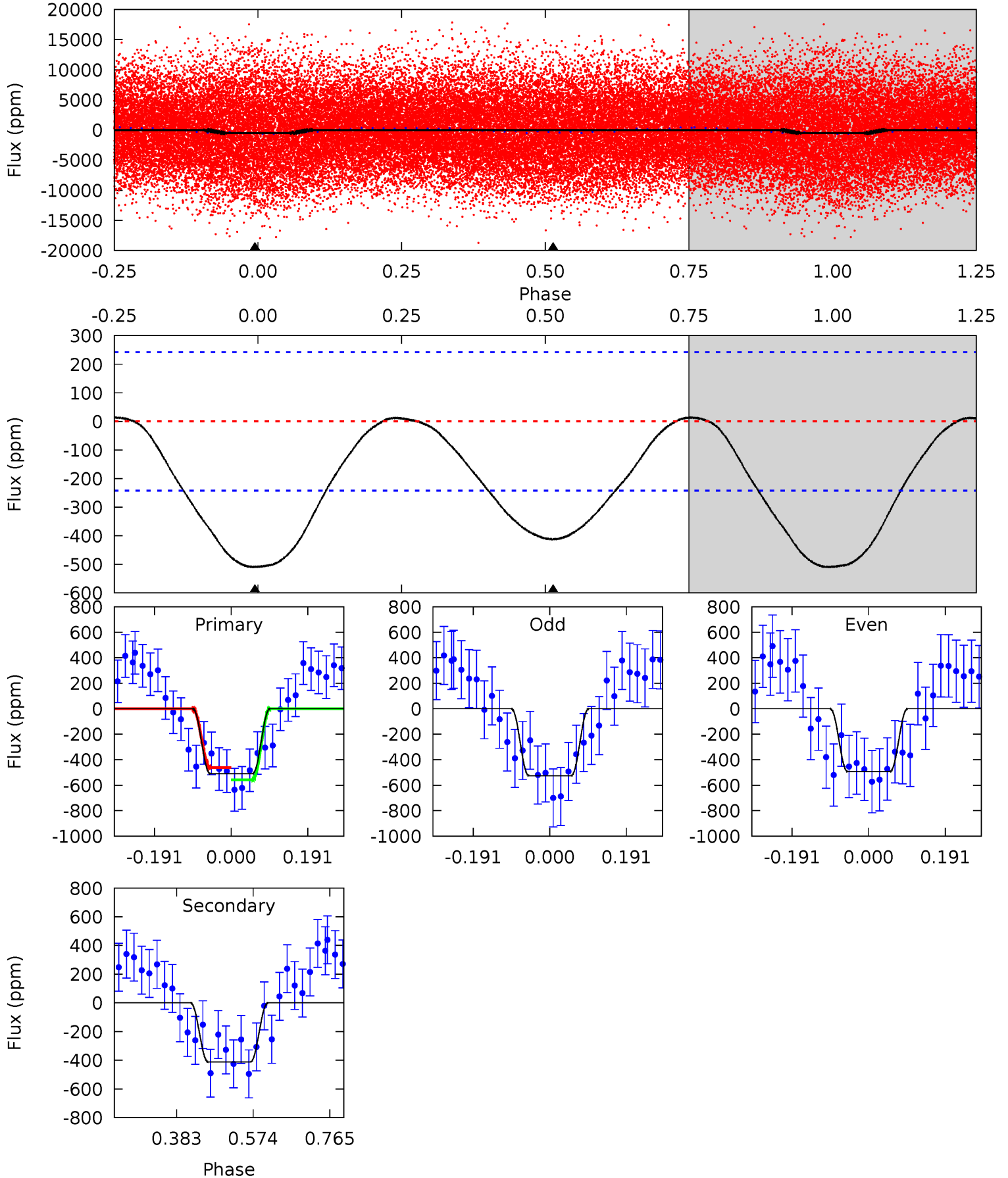
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.2	12.6	0	0	4.29	0.93	0.53	16.2	16.2	12.6	12.6	0.17	0.98	0.03	5.29



Alt Model-Shift Uniqueness Test

008916266-02, P = 0.735139 Days, E = 131.391640 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.32	7.54	0	0	4.43	1.31	0.31	9.32	9.32	7.54	7.54	0.29	0.77	0.03	0.88



Stellar Parameters For KIC 008916266

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5542^{+482}_{-1125}	$2.292^{+0.207}_{-0.384}$	$-0.500^{+0.400}_{-0.200}$	$20.912^{+6.399}_{-7.821}$	$3.119^{+0.218}_{-1.856}$	$0.000^{+0.001}_{-0.000}$
	+9%/-20%	+9%/-17%	+80%/-40%	+31%/-37%	+7%/-60%	+140%/-64%
Source	PHO1	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 008916266-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-199 ± 16	$38.51^{+22.24}_{-19.40}$	10291^{+1610}_{-2004}	-7972^{+2922}_{-2302}	$0.037^{+0.103}_{-0.022}$
Alt.	-412 ± 55	$59.95^{+27.27}_{-20.53}$	10317^{+1672}_{-1888}	-8296^{+2234}_{-2250}	$0.030^{+0.042}_{-0.015}$

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

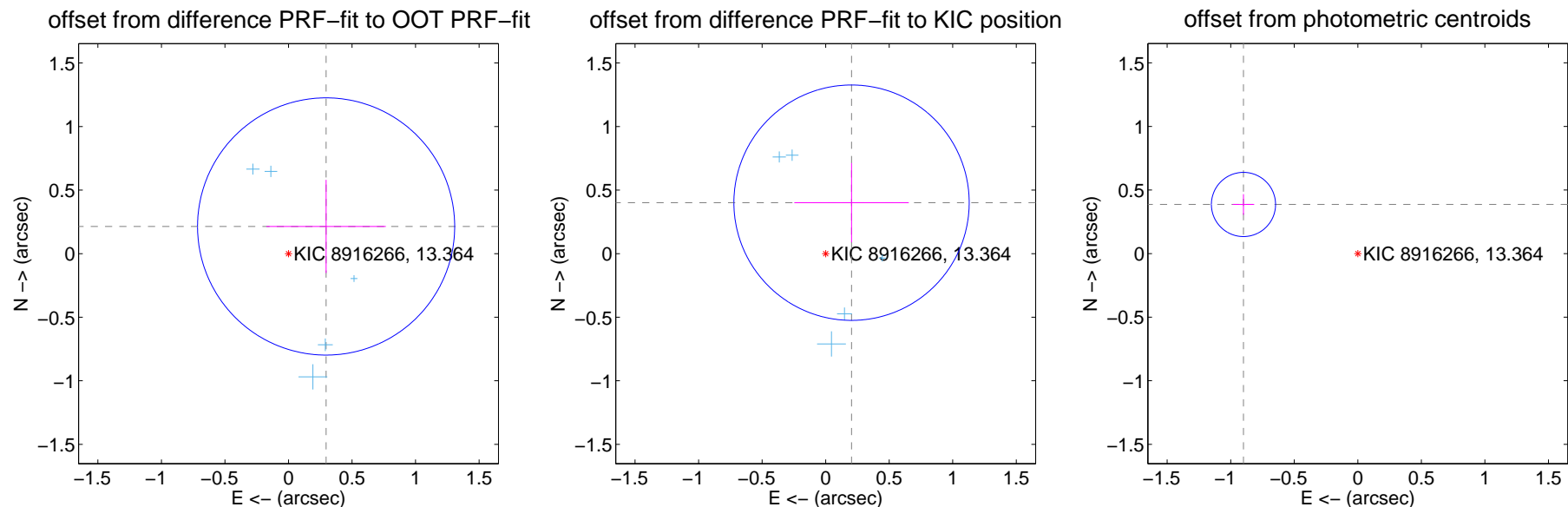
DV Centroid Data

Supplemental centroid analysis for 008916266-02. Kepler magnitude: 13.36. Transit SNR 9.68

There are 8 quarters with good PRF difference image offsets

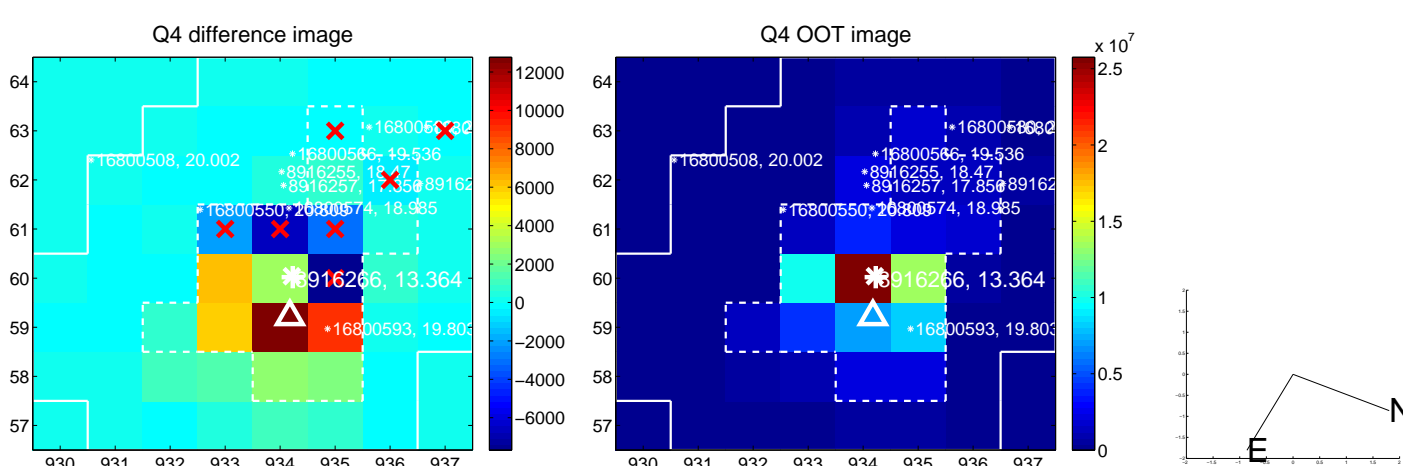
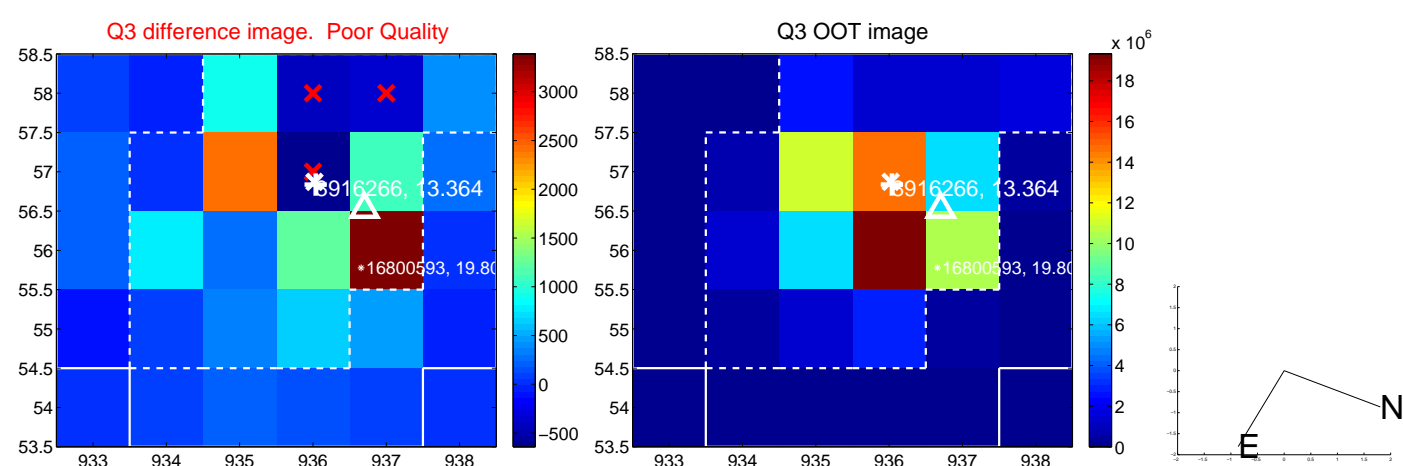
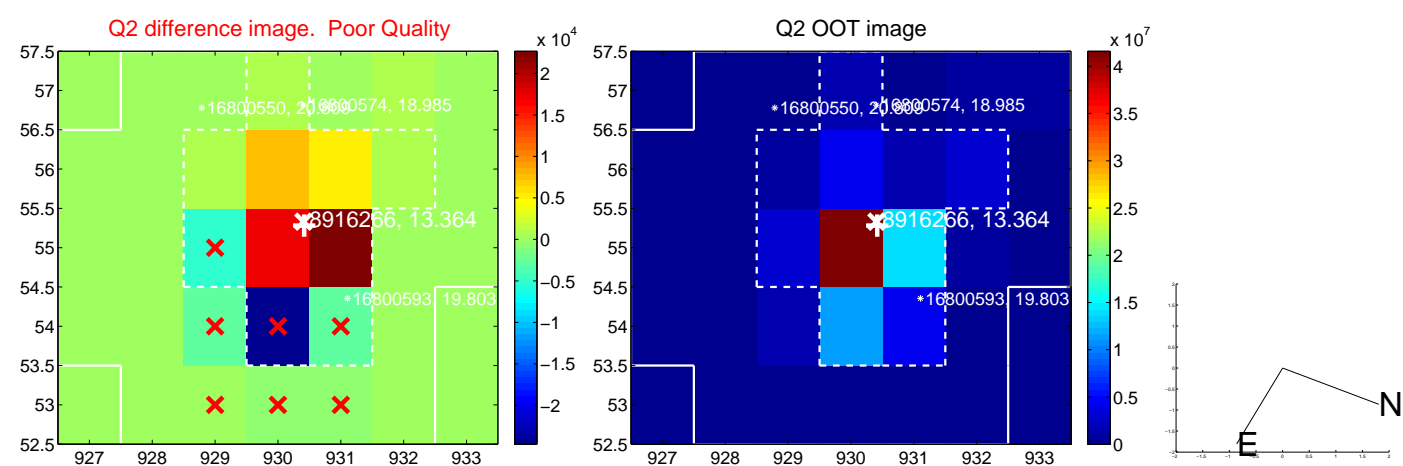
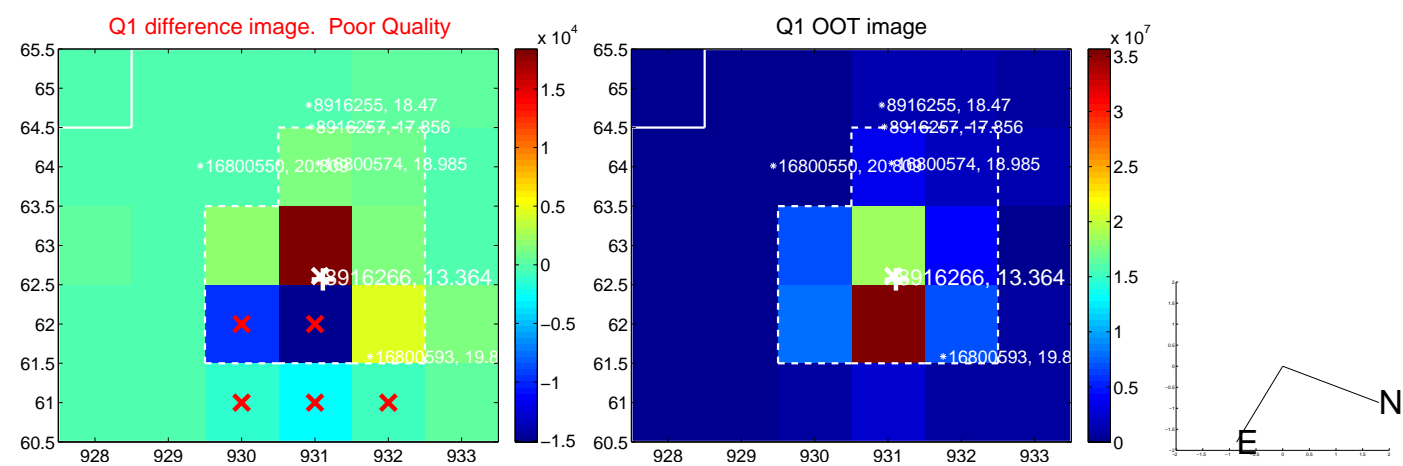
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.365 ± 0.337	1.08	-0.296 ± 0.470	0.214 ± 0.366
PRF-fit source offset from KIC position	0.450 ± 0.309	1.46	-0.204 ± 0.450	0.401 ± 0.312
photometric centroid source offset	0.98 ± 0.08	11.64	0.90 ± 0.08	0.39 ± 0.08

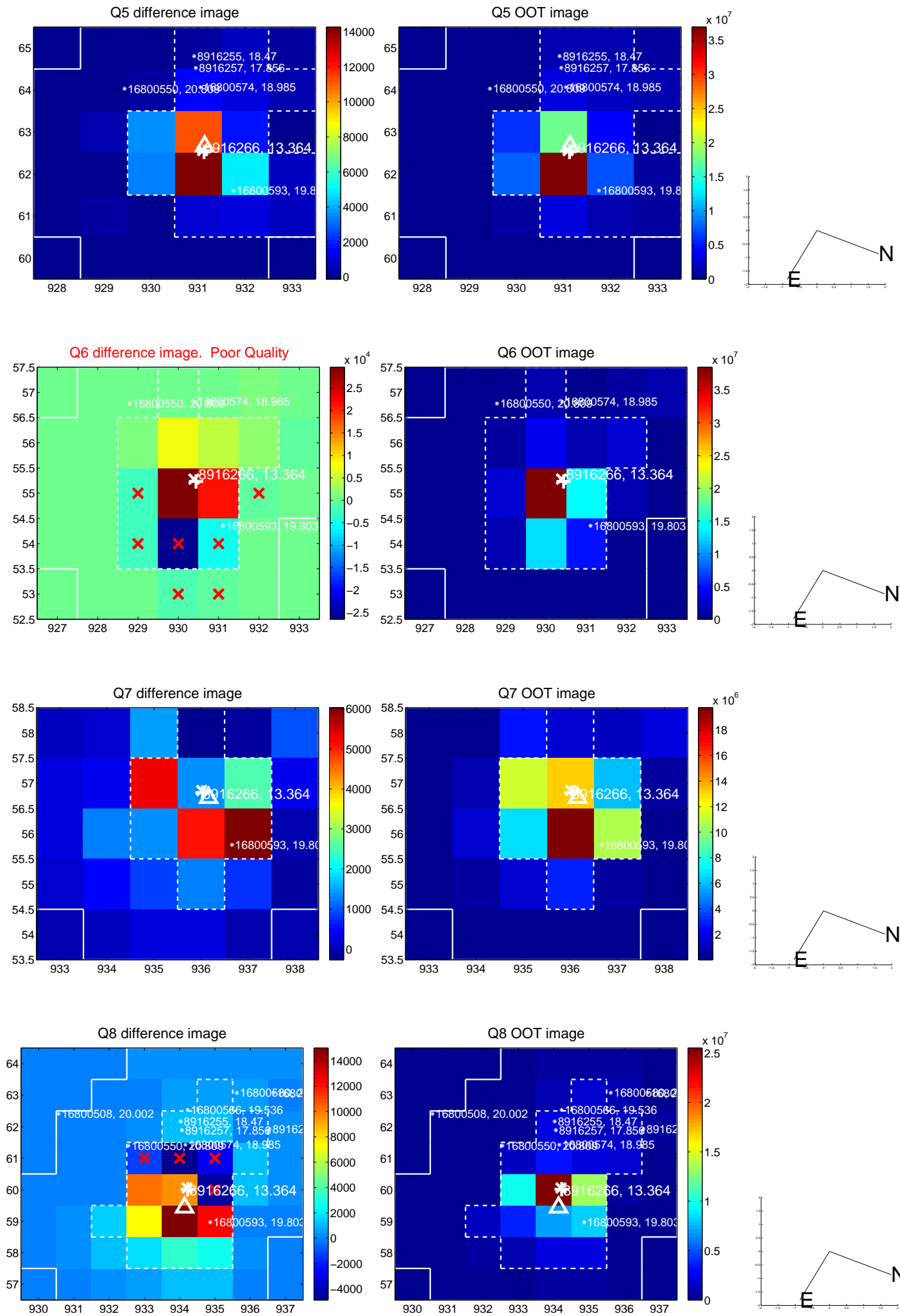


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

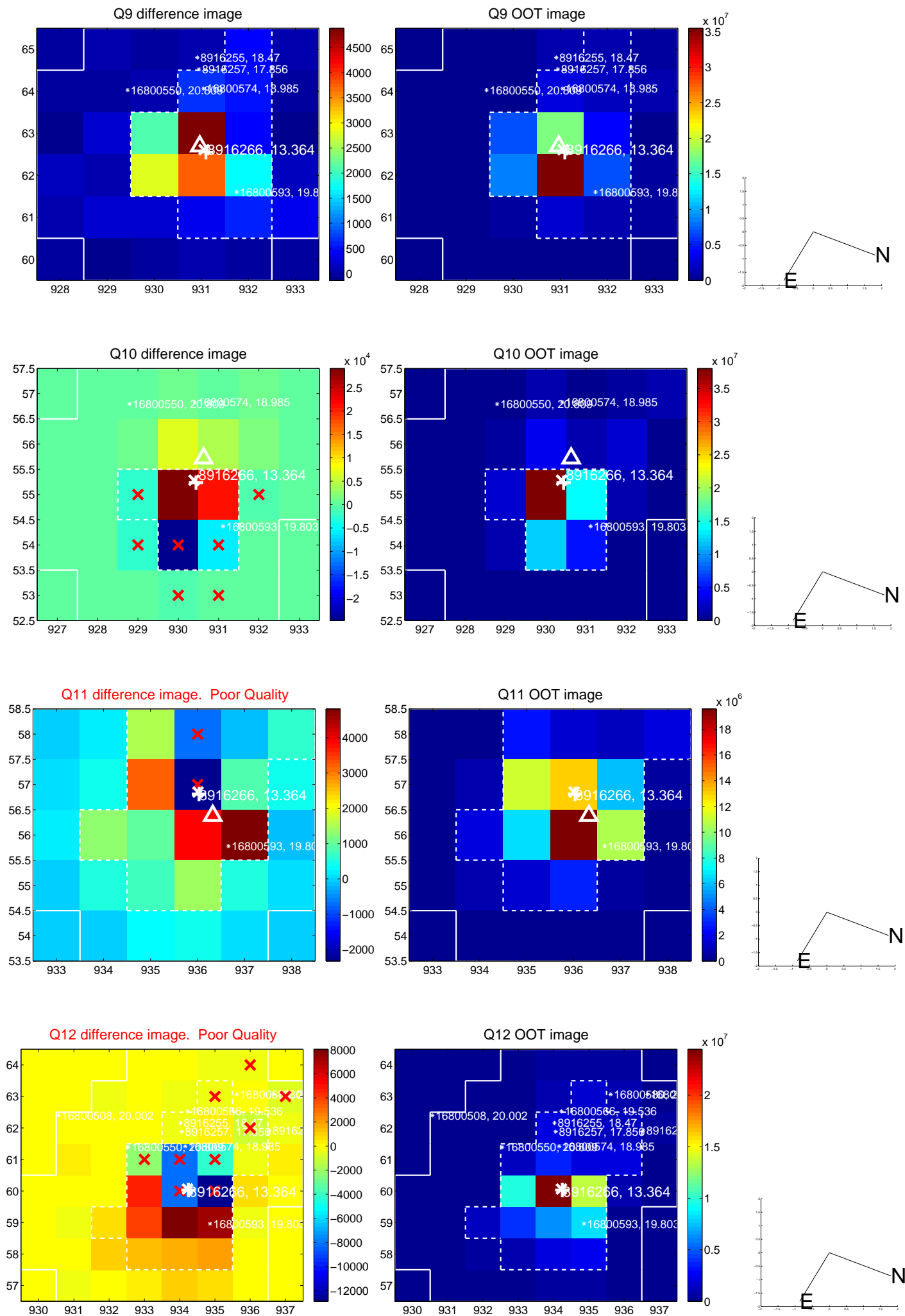
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



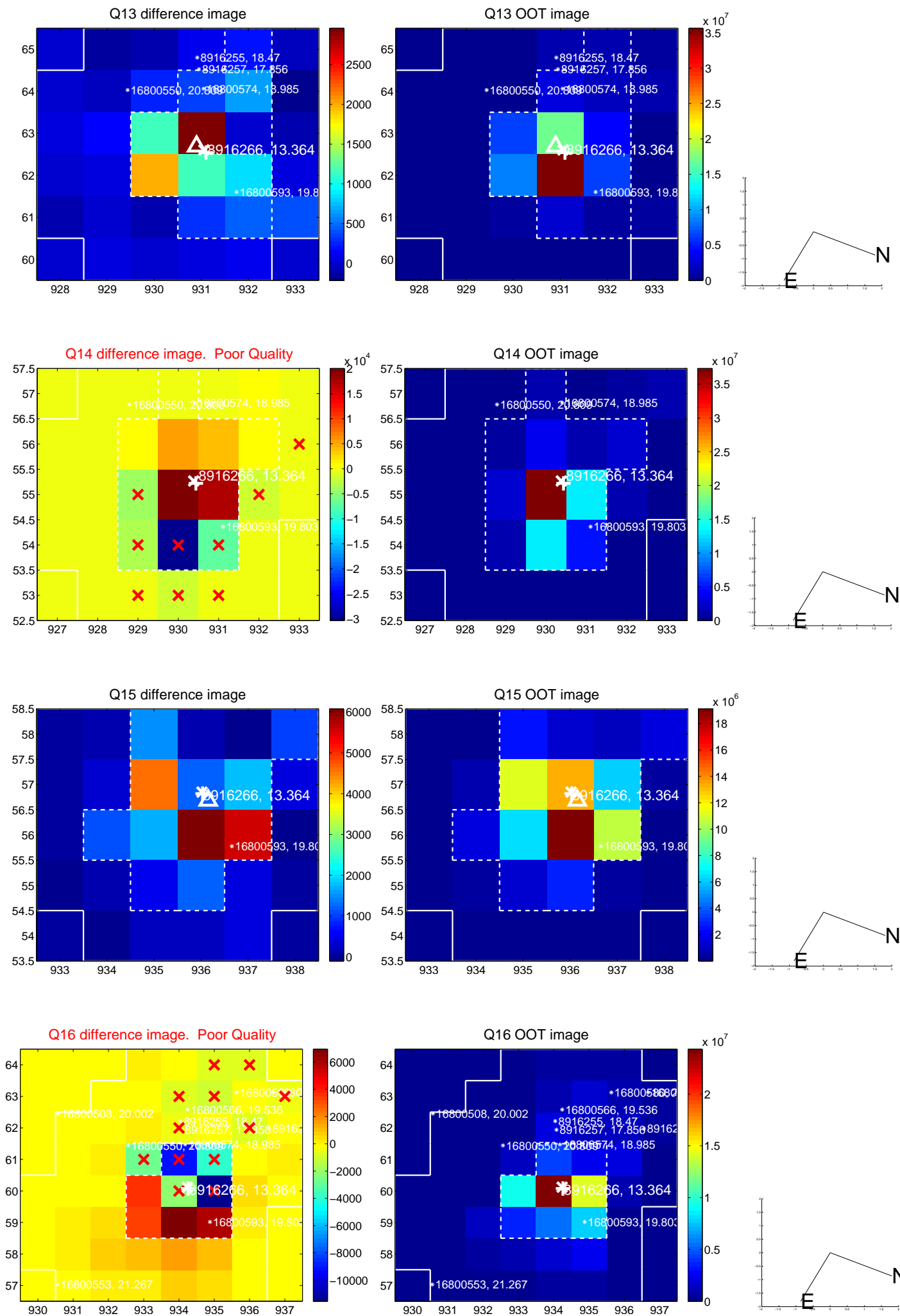
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



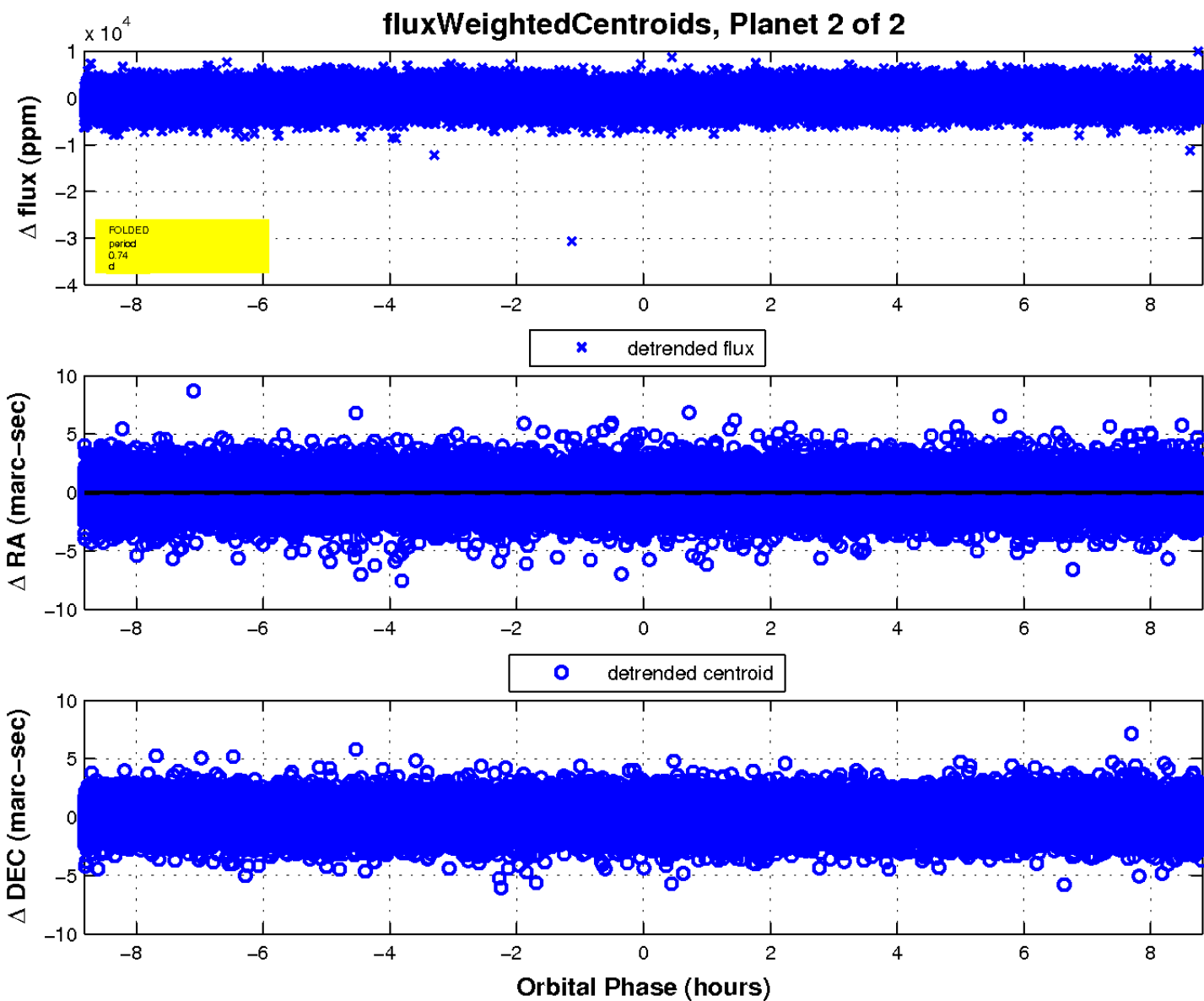
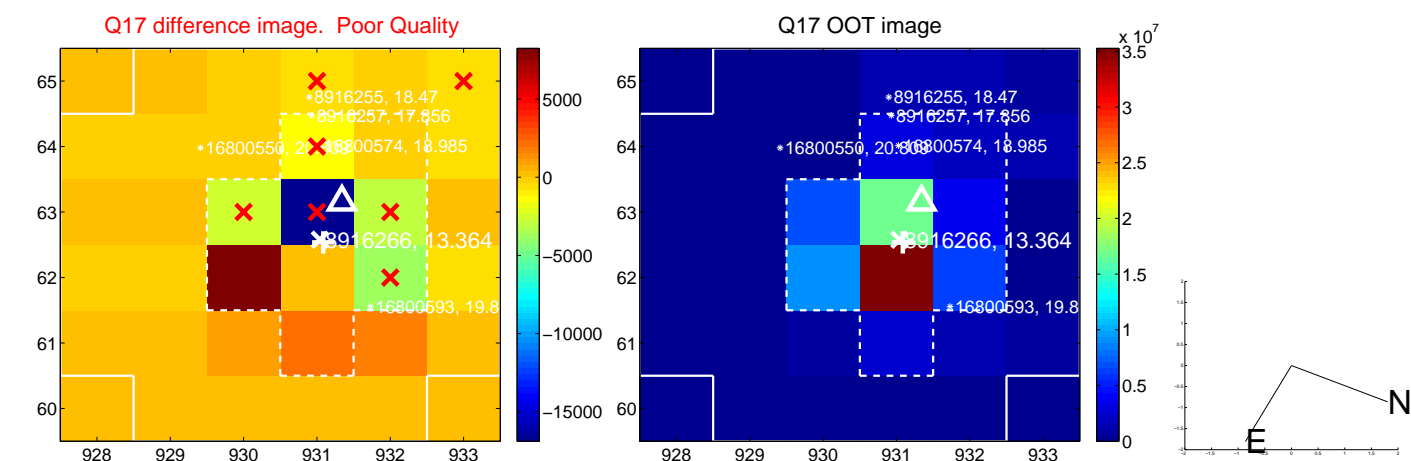
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

Declination

