

KIC 006924968

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})
006924968-01	OBS	No	0.940180	132.081852	8.2	4.522	9.0	6.8	2.29	6824	0.69	21709.99
006924968-02	OBS	No	0.940102	131.721564	2.6	7.621	11.2	2.2	2.29	6824	0.39	21712.39

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006924968-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
006924968-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—SWEET_NTL—LPP_DV—LPP_ALT—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.

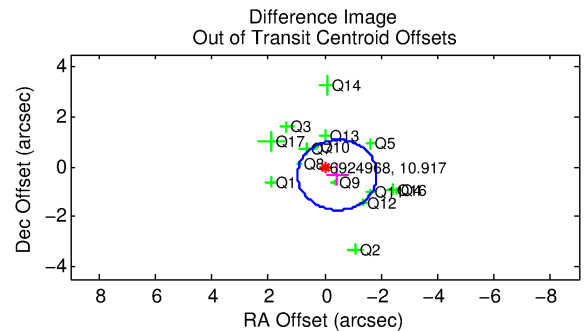
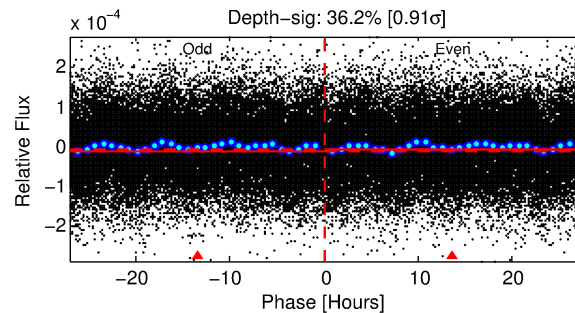
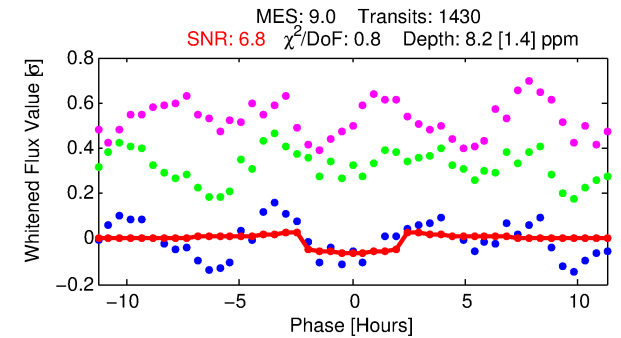
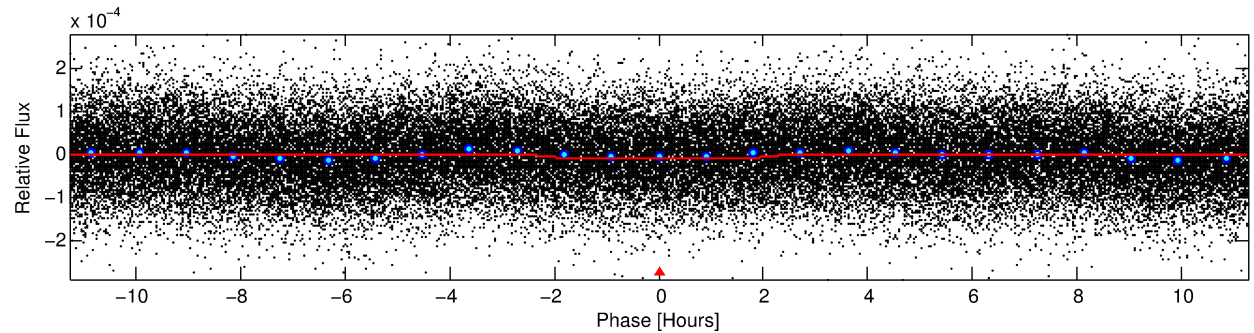
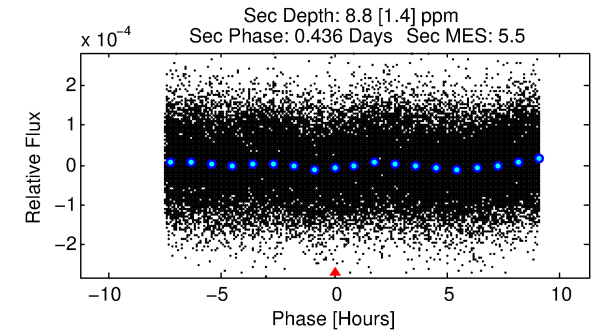
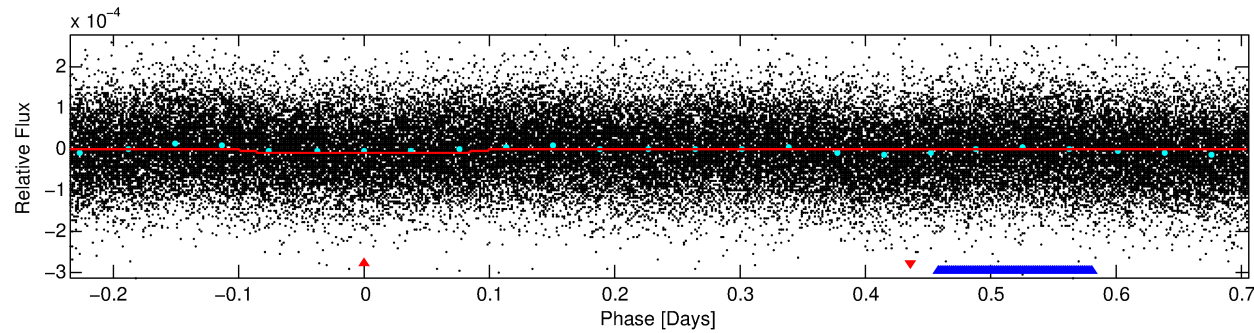
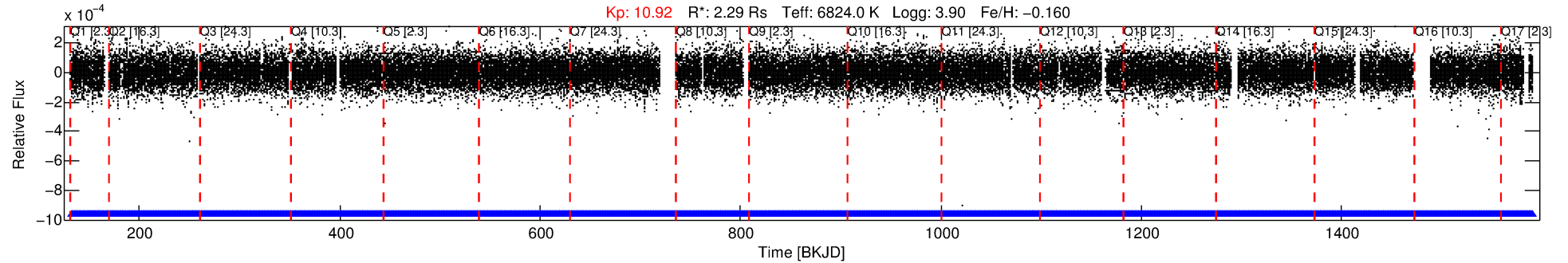
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006924968-01

No Significant Match Found

DV One-Page Summary

KIC: 6924968 Candidate: 1 of 2 Period: 0.940 d



DV Fit Results:

Period = 0.94018 [0.00002] d
Epoch = 132.0819 [0.0043] BKJD
 $R_p/R^* = 0.0028$ [0.0005]
 $a/R^* = 1.47$ [0.74]
 $b = 0.62$ [0.92]
 $S_{\text{eff}} = 21709.99$ [10077.12]
 $T_{\text{eq}} = 3095$ [359] K
 $R_p = 0.69$ [0.25] R_e
 $a = 0.0217$ [0.0062] AU
 $A_g = 4.77$ [2.86] [1.32σ]
 $T_{\text{eff}} = 7072$ [736] K [4.85σ]

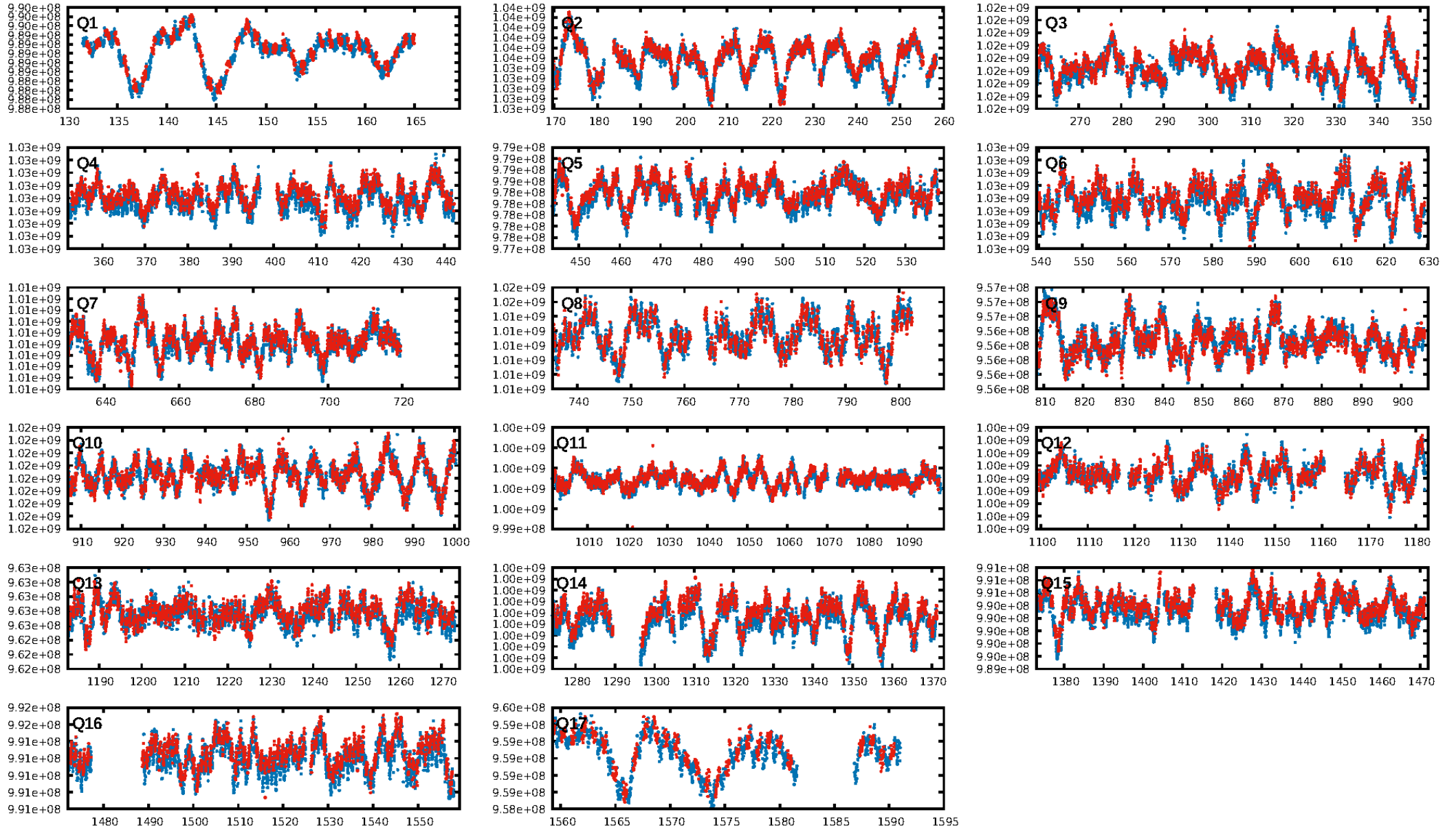
DV Diagnostic Results:

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 [1366/1366]
GhostDiagnostic-chr: -4.562
Centroid-sig: 8.0%
Centroid-so: 1.362 arcsec [1.38σ]
OotOffset-rm: 0.558 arcsec [1.19σ]
OotOffset-st: 3/3/4/5 [15]
KicOffset-rm: 0.450 arcsec [0.99σ]
KicOffset-st: 3/3/4/5 [15]
DiffImageQuality-fgm: 0.53 [8/15]
DiffImageOverlap-fno: 0.00 [0/17]

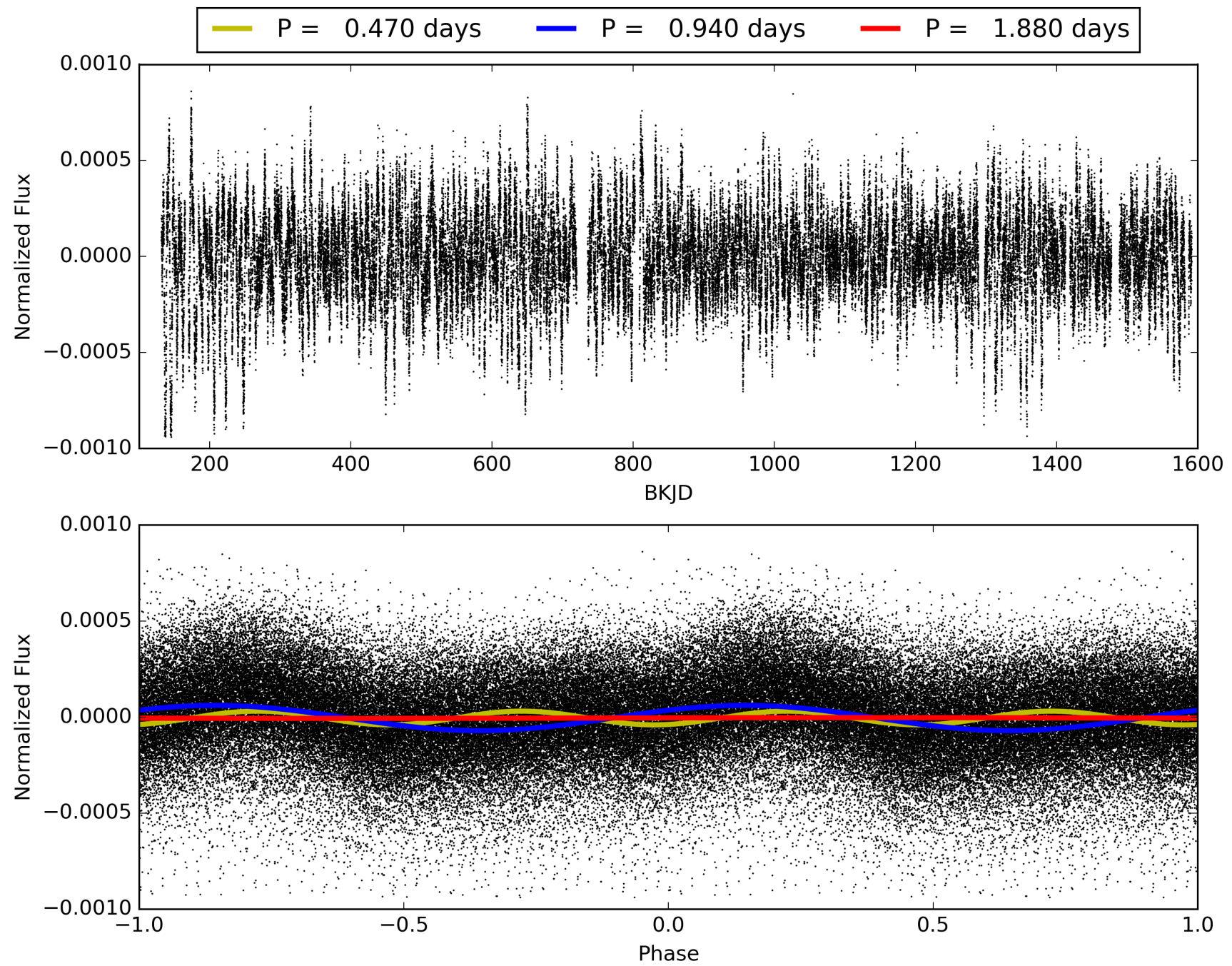
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 006924968-01, PDC Light Curves

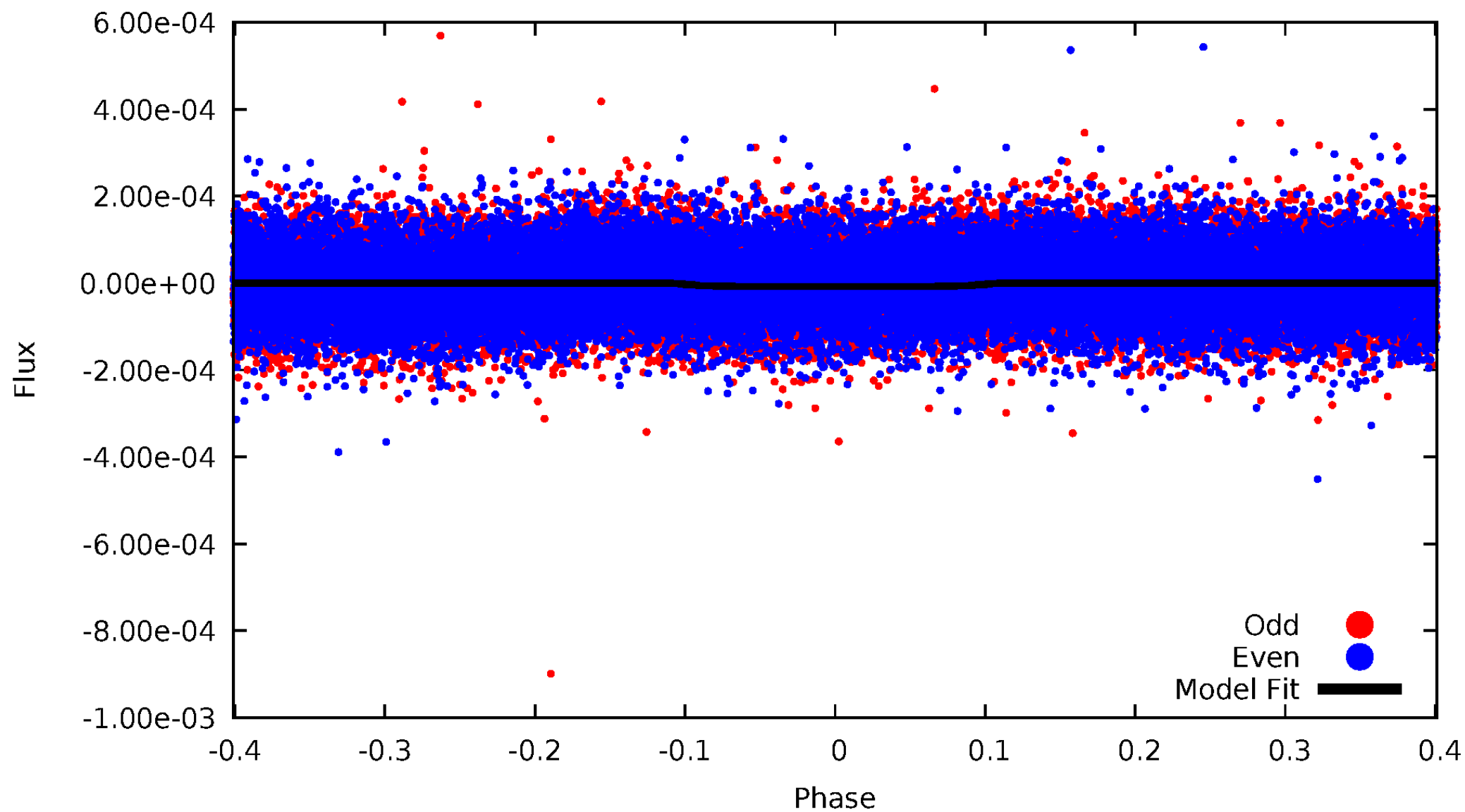


TCE 006924968-01



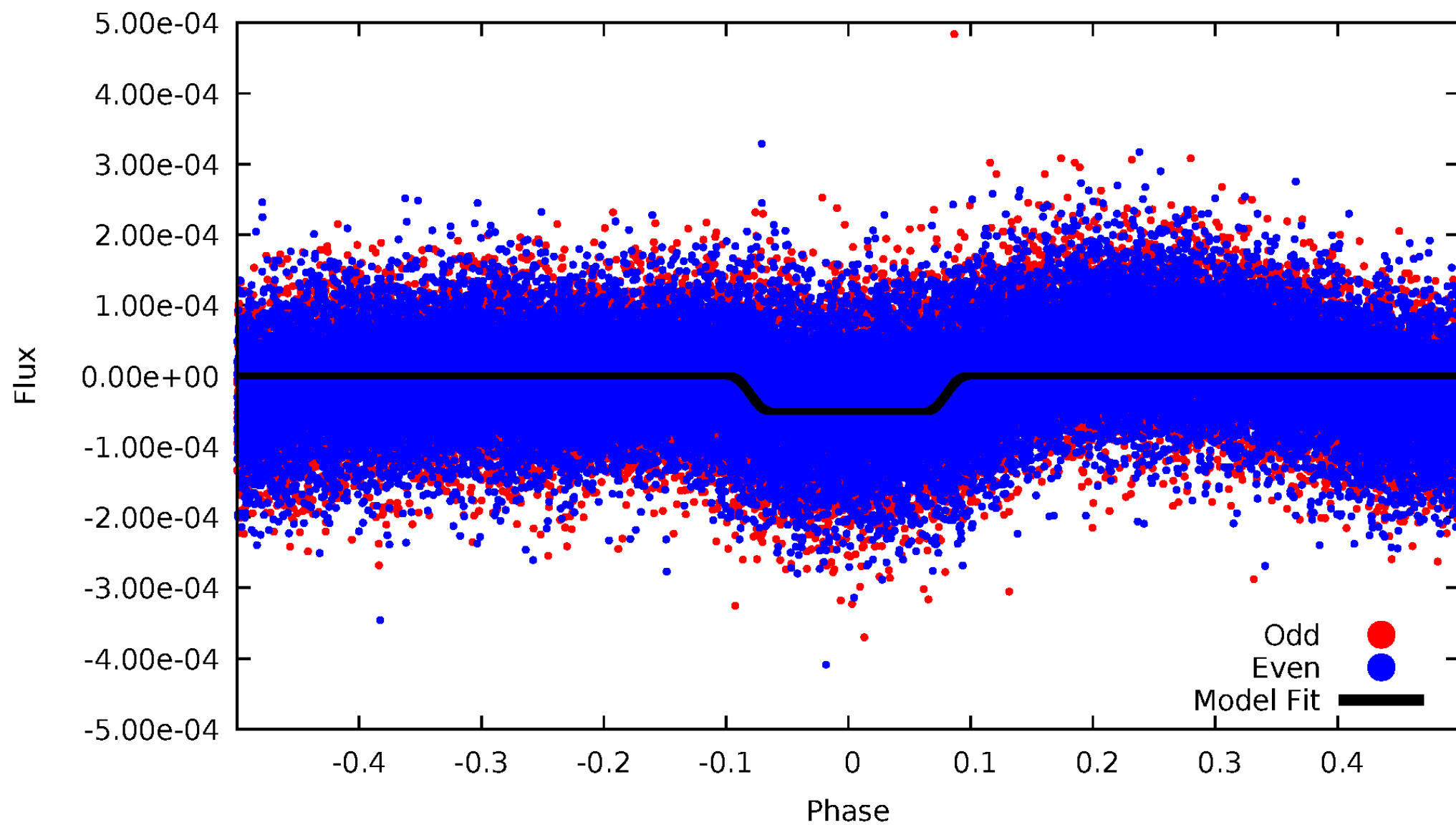
DV Odd/Even

TCE 006924968-01



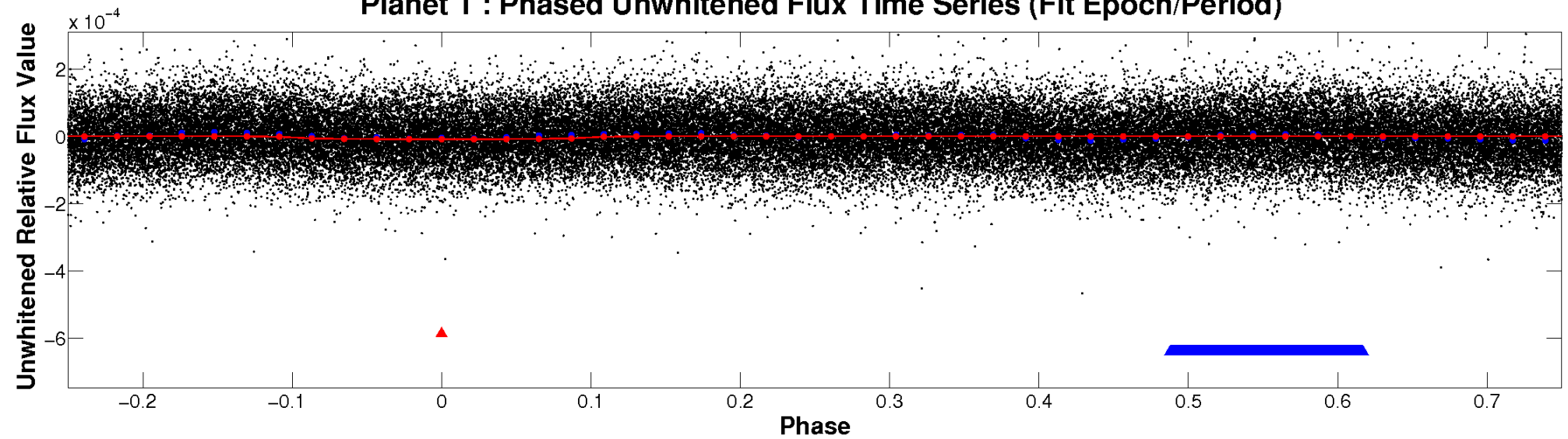
ALT Odd/Even

TCE 006924968-01

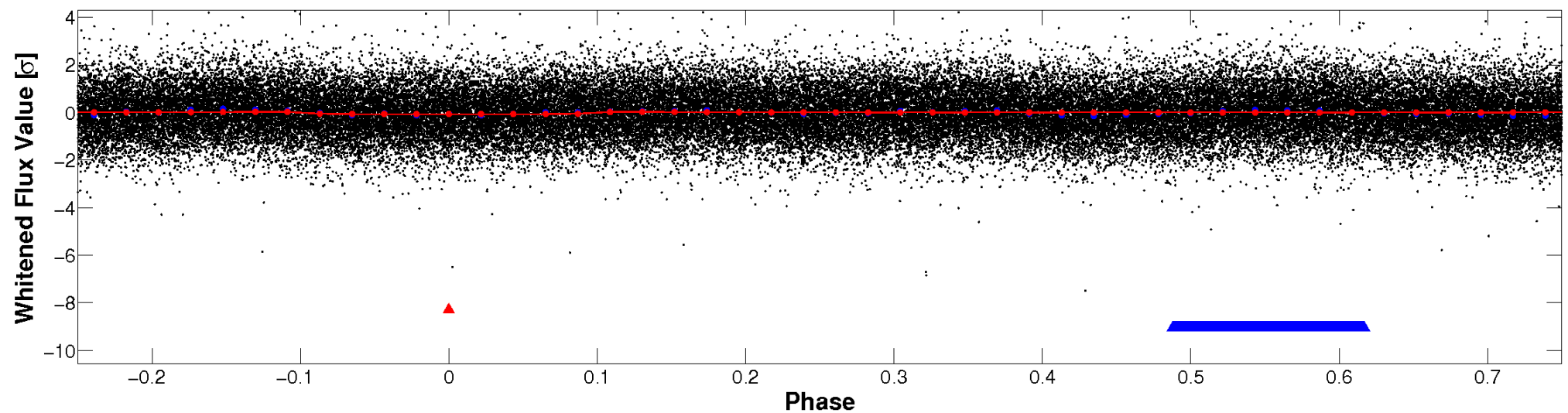


Non-Whitened Vs. Whitened Light Curve

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

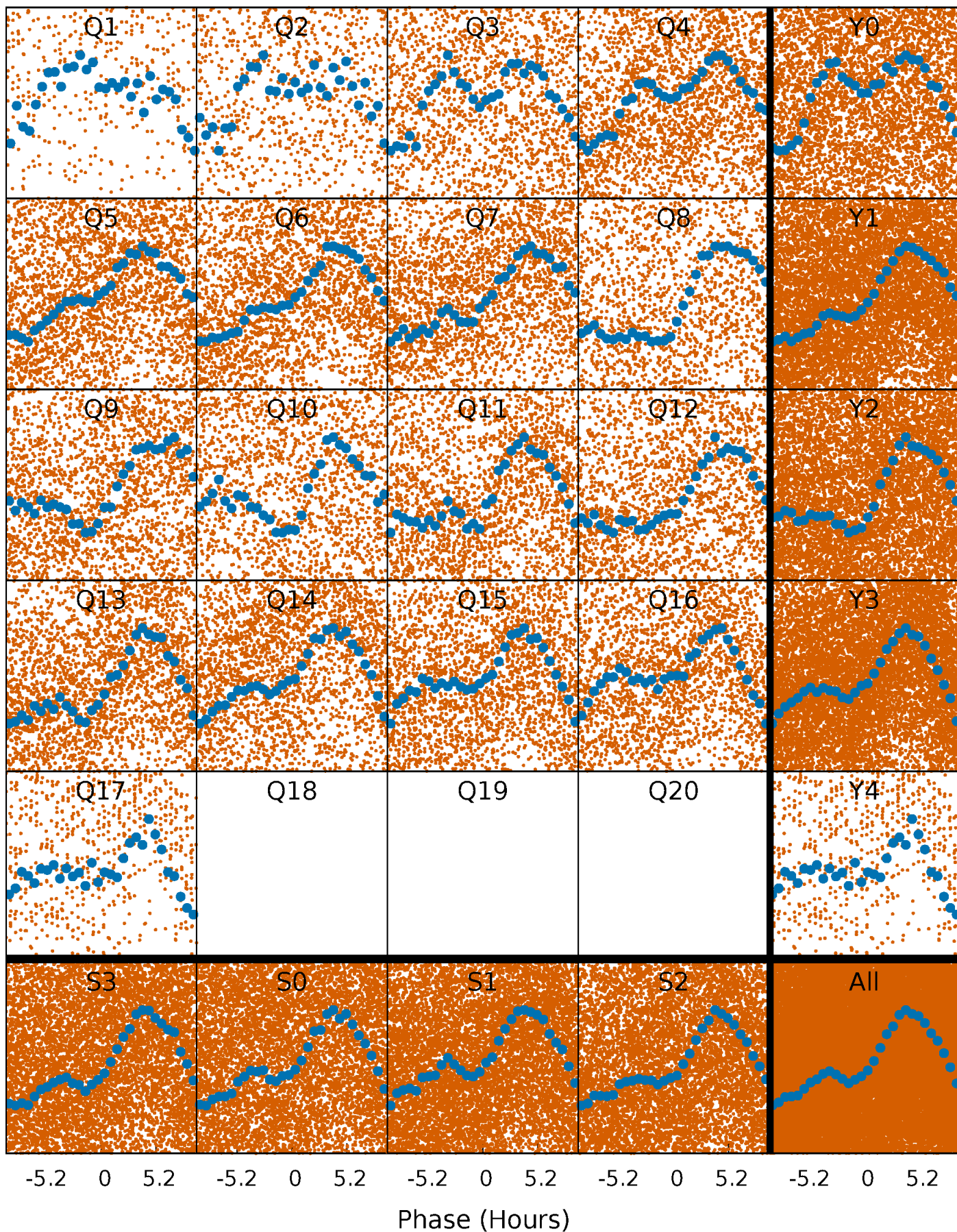


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



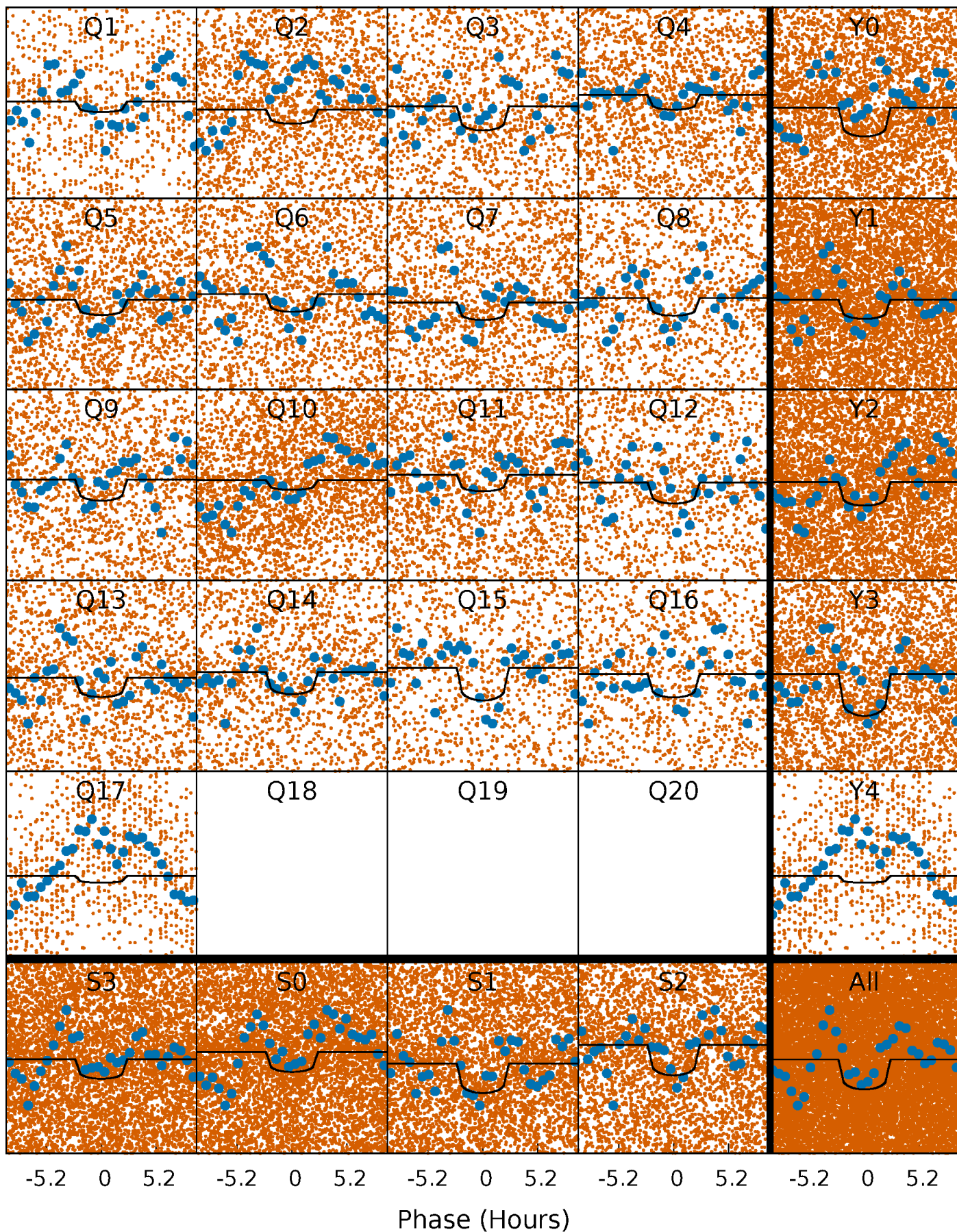
PDC Quarter-Phased Transit Curves

TCE 006924968-01 P= 0.940180 Days $T_0=132.081852$ (BKJD)



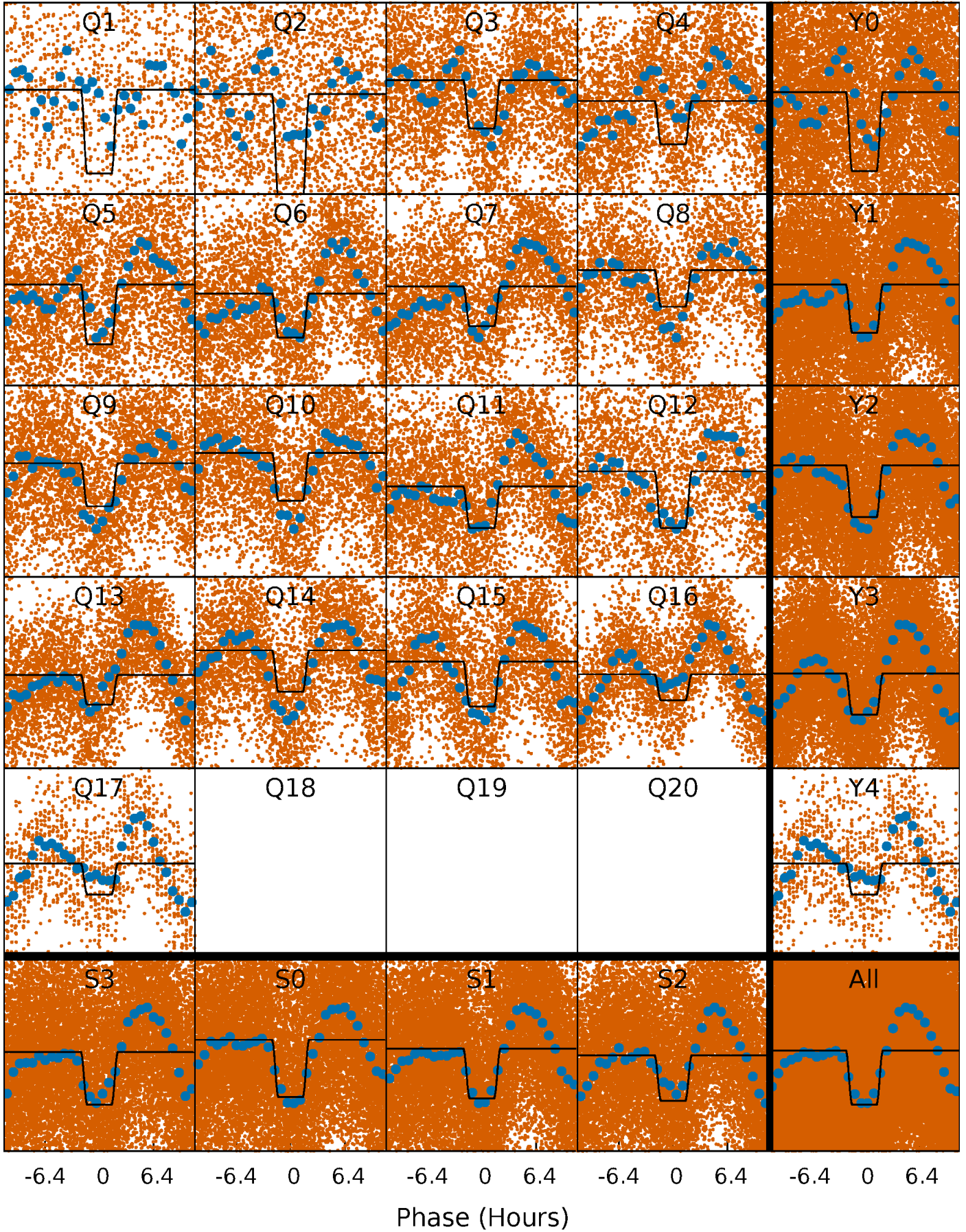
DV Quarter-Phased Transit Curves

TCE 006924968-01 P= 0.940180 Days $T_0=132.081852$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

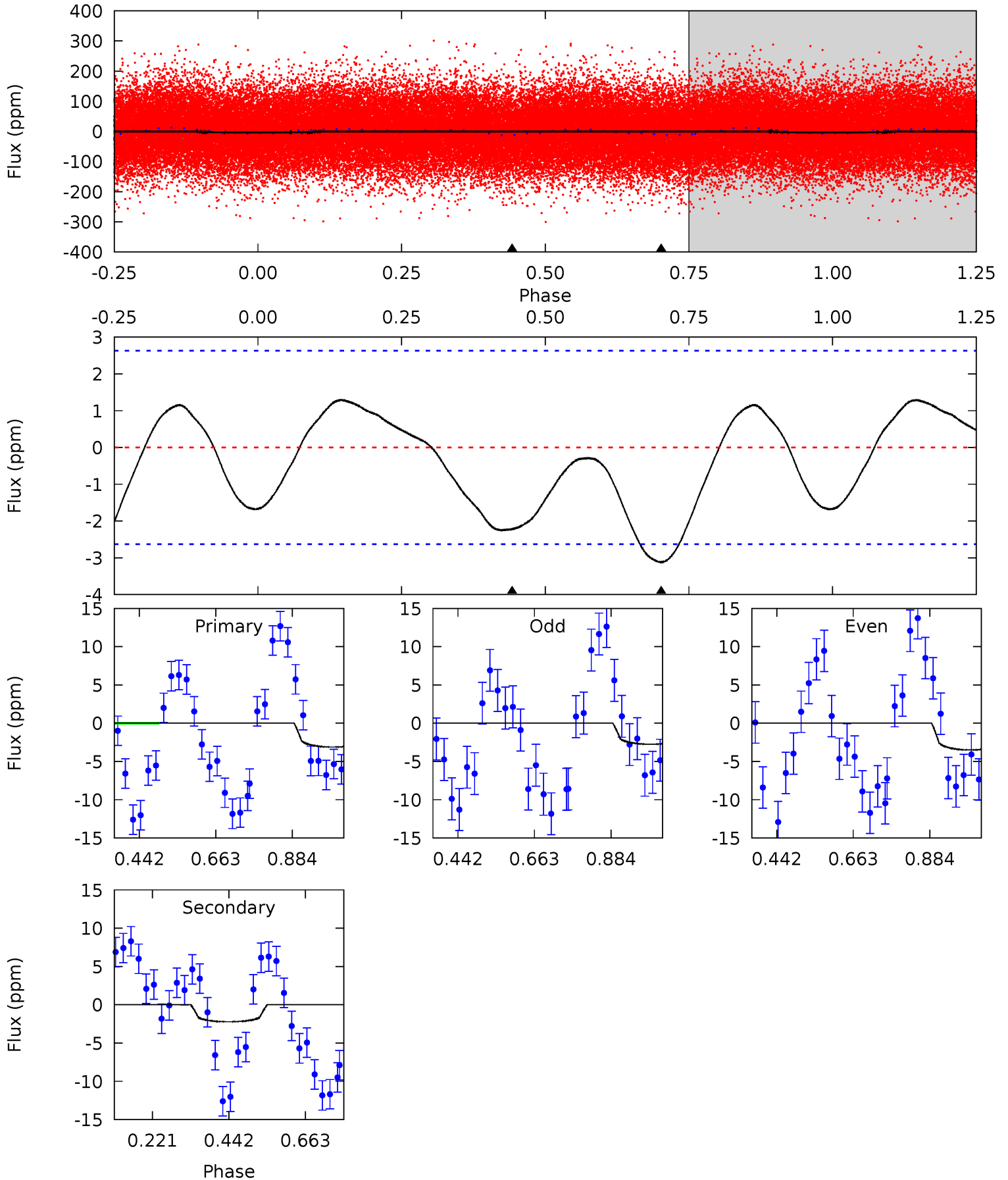
TCE 006924968-01 P= 0.940198 Days $T_0=132.044697$ (BKJD)



DV Model-Shift Uniqueness Test

006924968-01, P = 0.940180 Days, E = 131.141672 Days

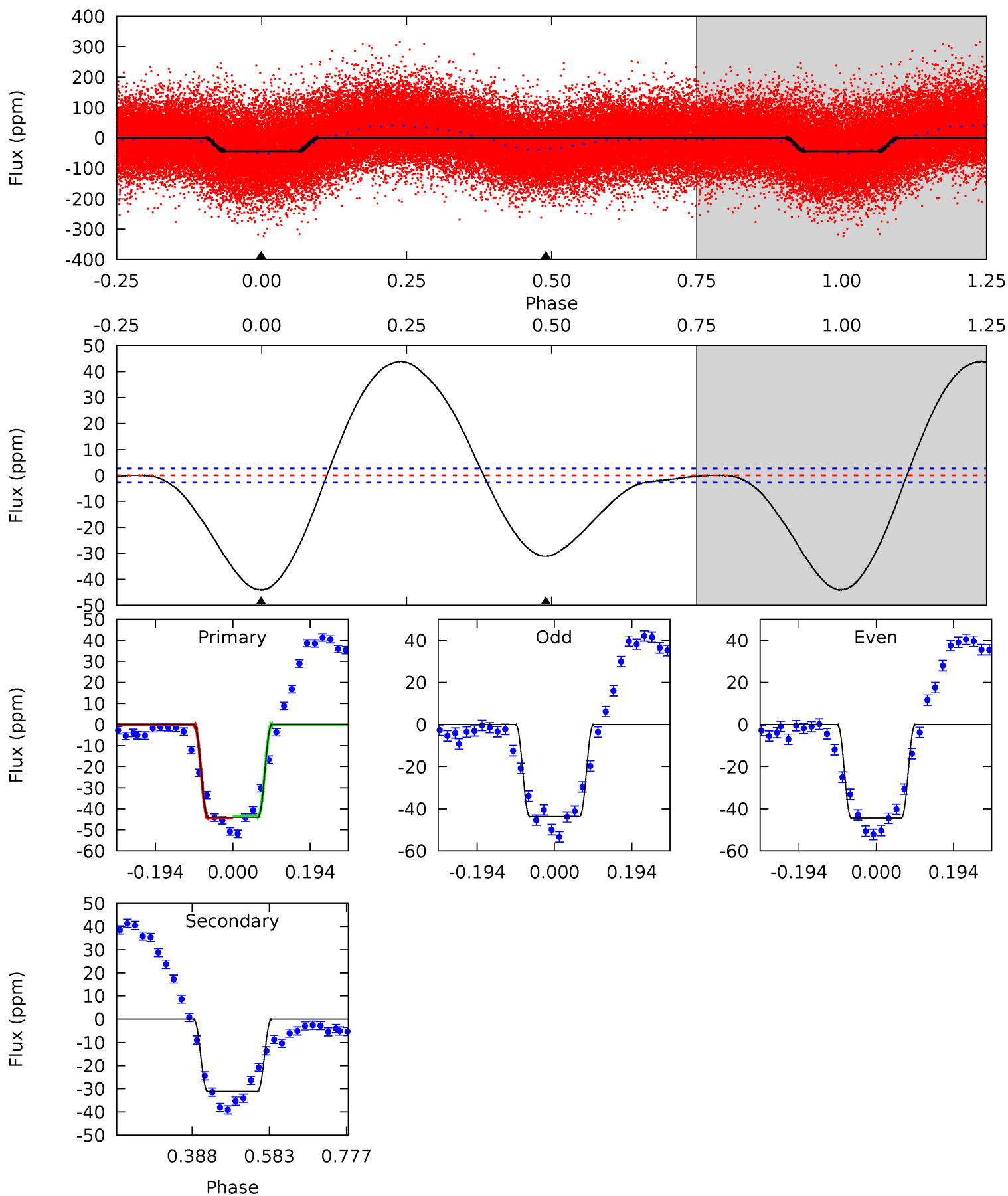
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.22	3.71	0	0	4.40	1.22	1.82	5.22	5.22	3.71	3.71	0.62	0.60	0.29	2.51



Alt Model-Shift Uniqueness Test

006924968-01, P = 0.940198 Days, E = 131.104499 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
70.1	49.6	0	0	4.42	1.30	33.4	70.1	70.1	49.6	49.6	0.58	0.95	0.50	0.55



Stellar Parameters For KIC 006924968

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6824^{+170}_{-204}	$3.904^{+0.259}_{-0.111}$	$-0.160^{+0.300}_{-0.300}$	$2.290^{+0.475}_{-0.713}$	$1.530^{+0.194}_{-0.292}$	$0.179^{+0.291}_{-0.060}$
	+2%/-3%	+7%/-3%	+188%/-188%	+21%/-31%	+13%/-19%	+162%/-33%
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 006924968-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-2 ± 1	$0.66^{+0.17}_{-0.15}$	4276^{+253}_{-356}	4761^{+600}_{-581}	$1.235^{+1.005}_{-0.477}$
Alt.	-31 ± 1	$1.71^{+0.27}_{-0.30}$	4257^{+272}_{-351}	5867^{+264}_{-280}	$2.752^{+1.138}_{-0.621}$

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

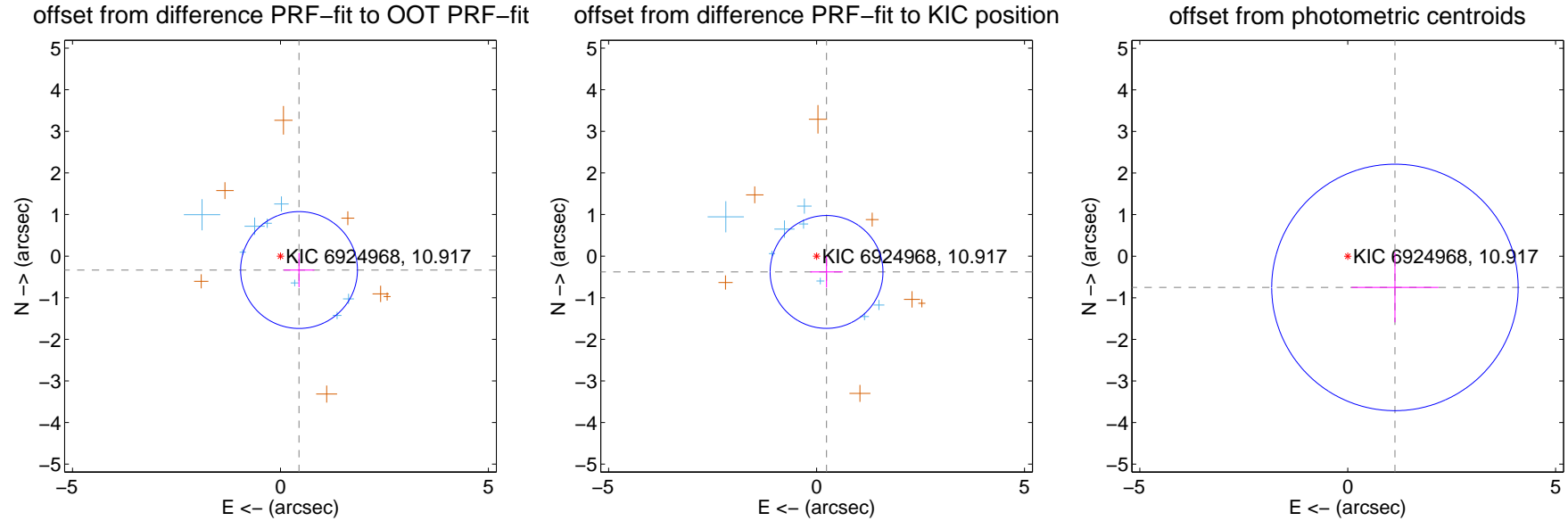
DV Centroid Data

Supplemental centroid analysis for 006924968-01. **Kepler magnitude: 10.92.** Transit SNR 6.82

There are 8 quarters with good PRF difference image offsets

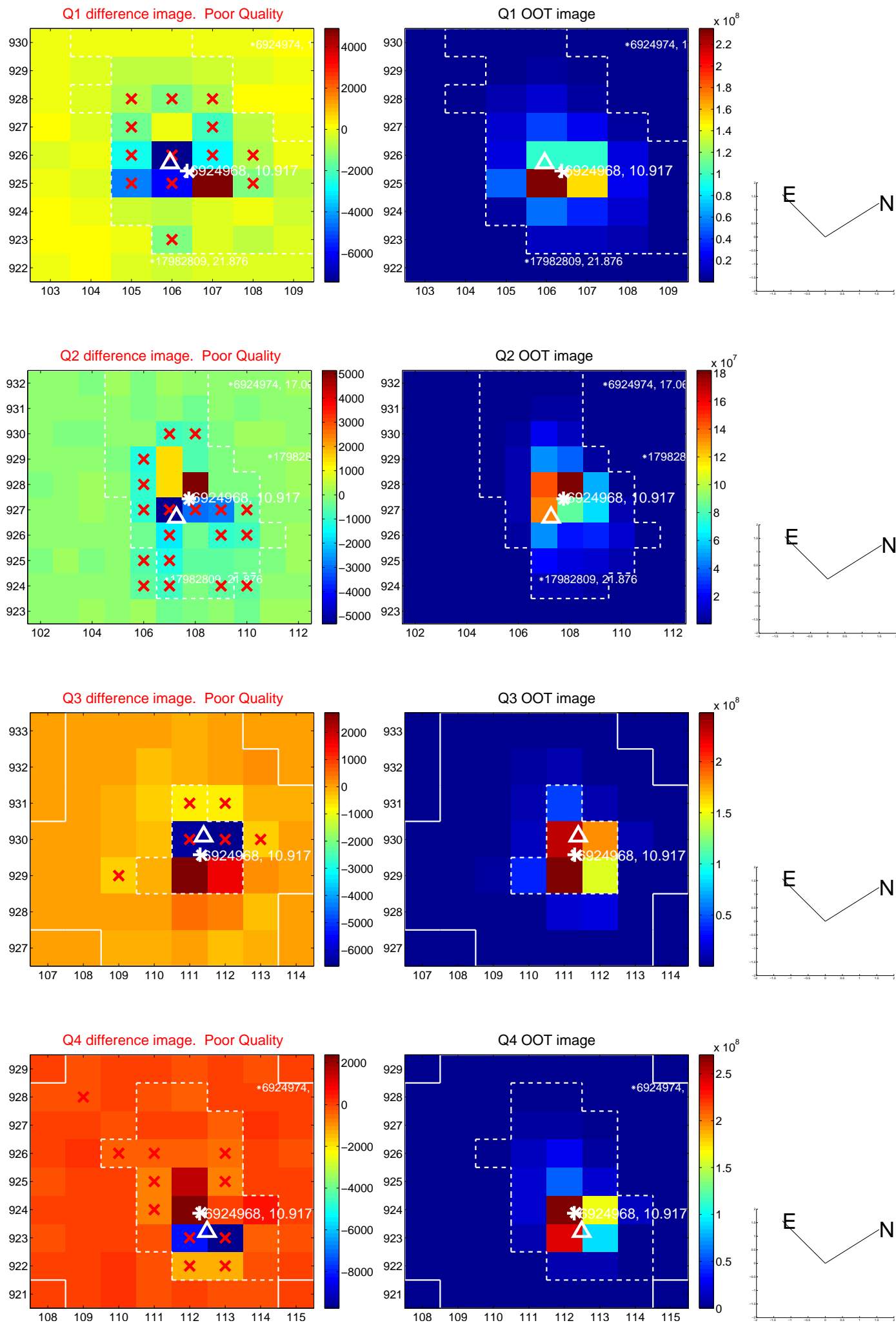
The direct PRF centroid is offset from the target star catalog position by about 0.30 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.558 ± 0.468	1.19	-0.447 ± 0.369	-0.334 ± 0.413
PRF-fit source offset from KIC position	0.450 ± 0.452	0.99	-0.240 ± 0.391	-0.380 ± 0.375
photometric centroid source offset	1.36 ± 0.99	1.38	-1.14 ± 1.05	-0.75 ± 0.84

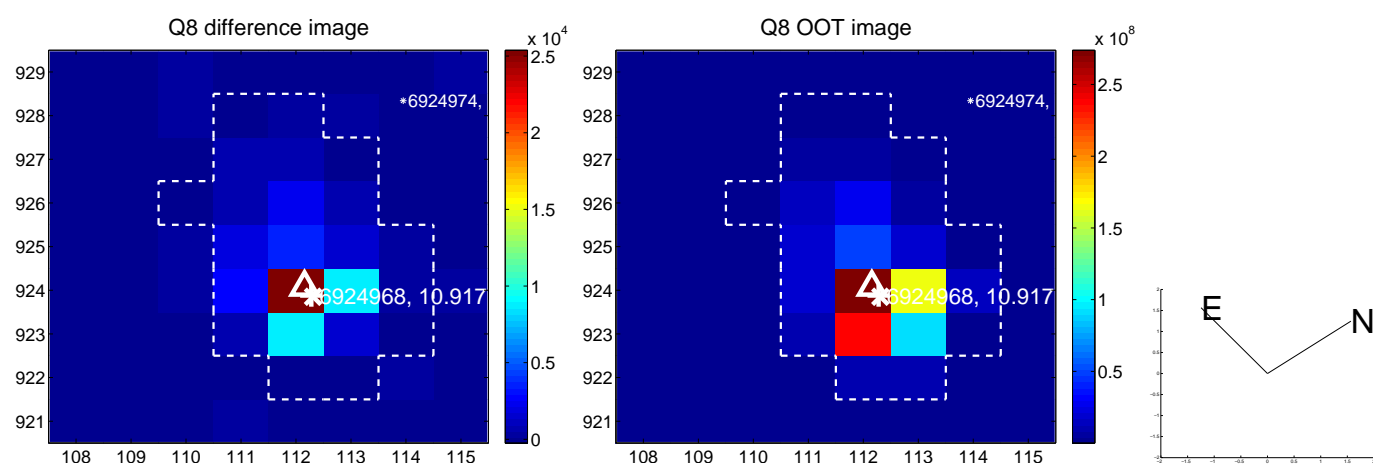
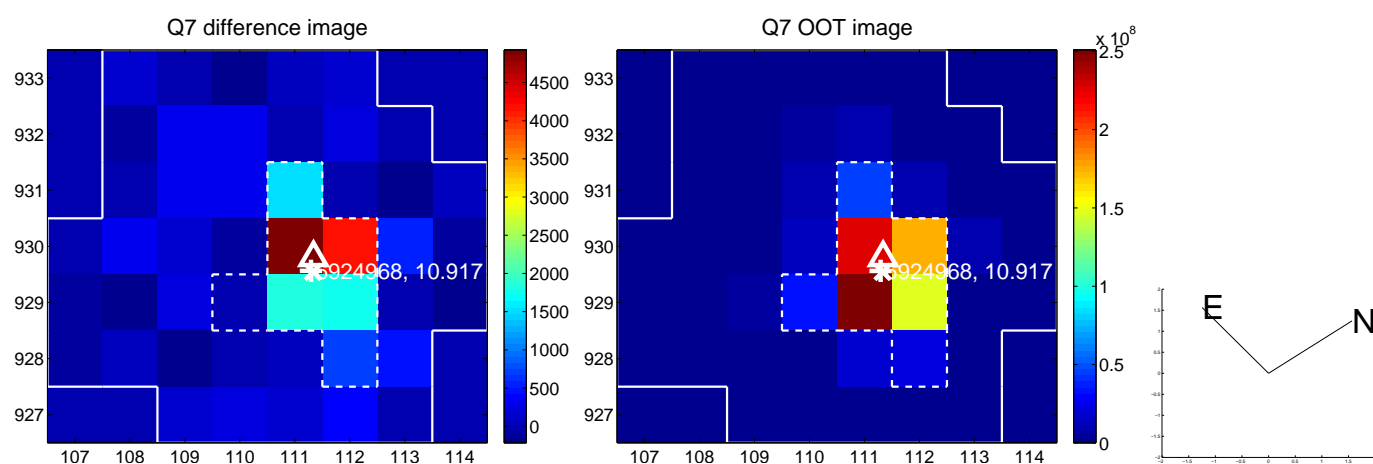
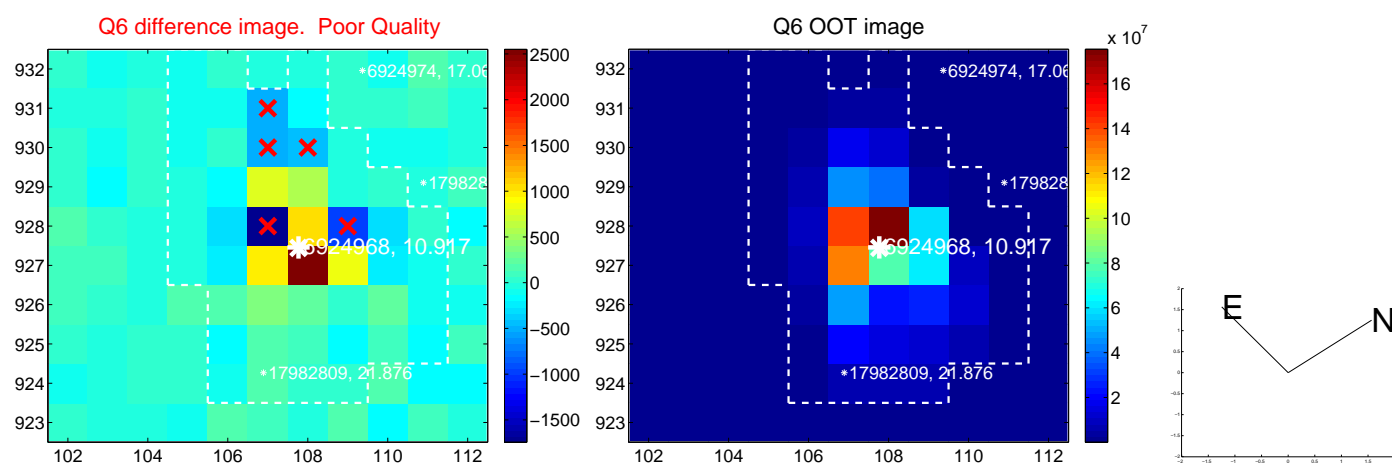
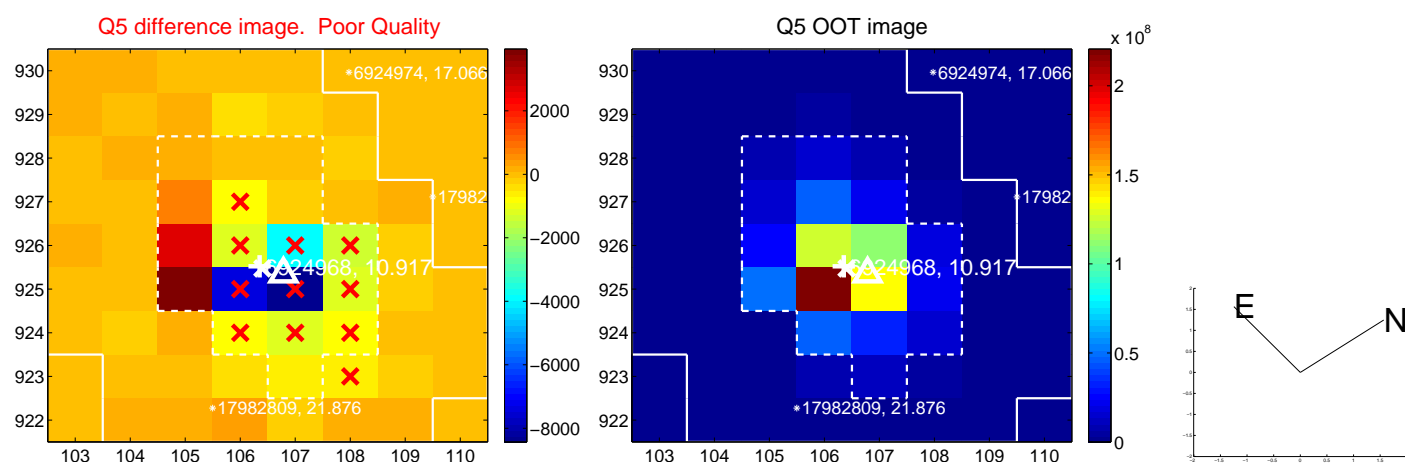


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

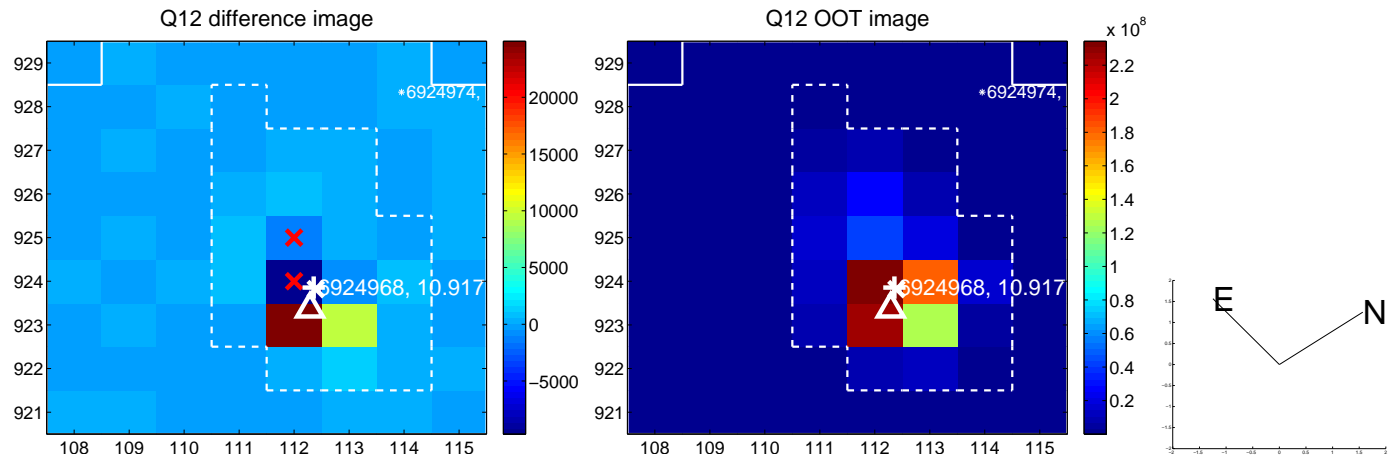
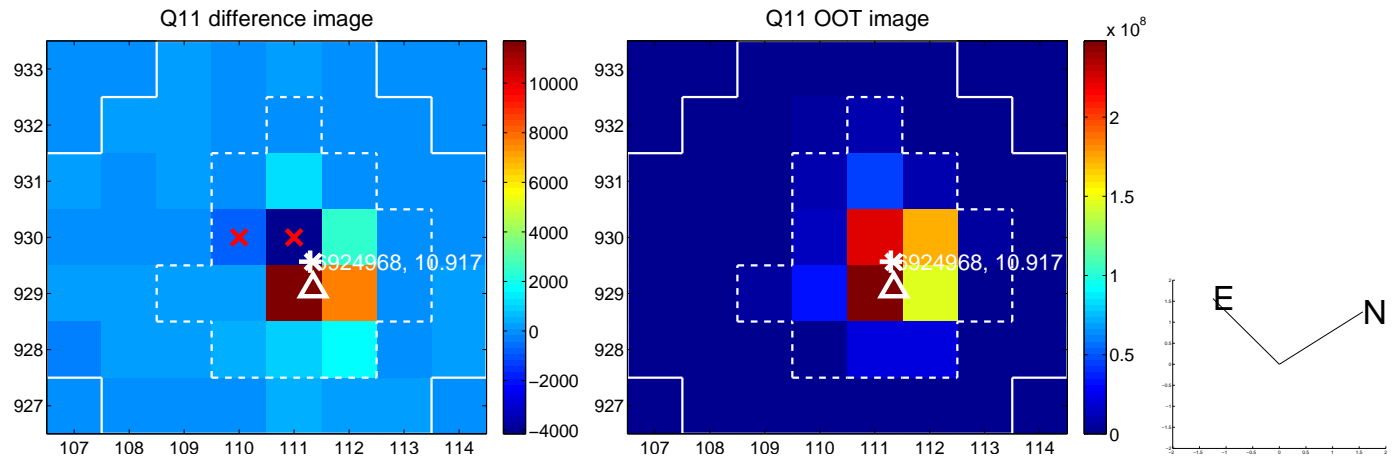
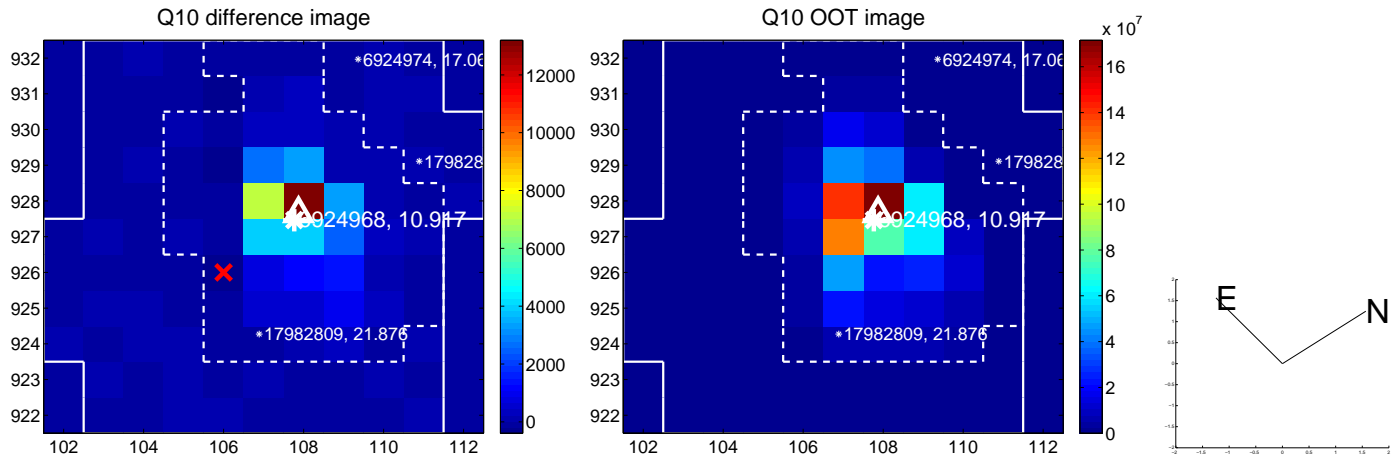
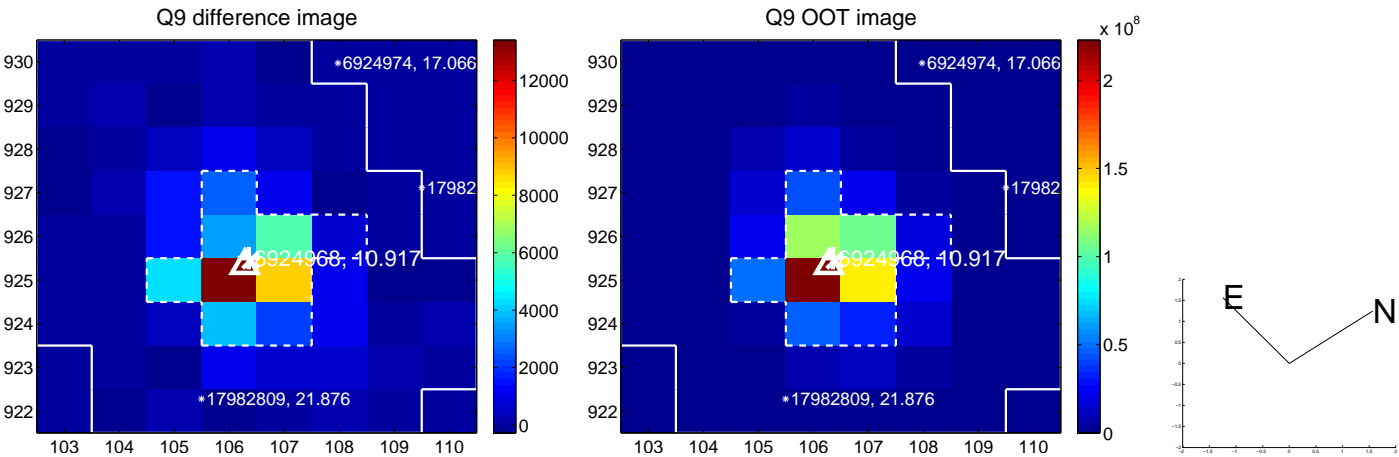
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



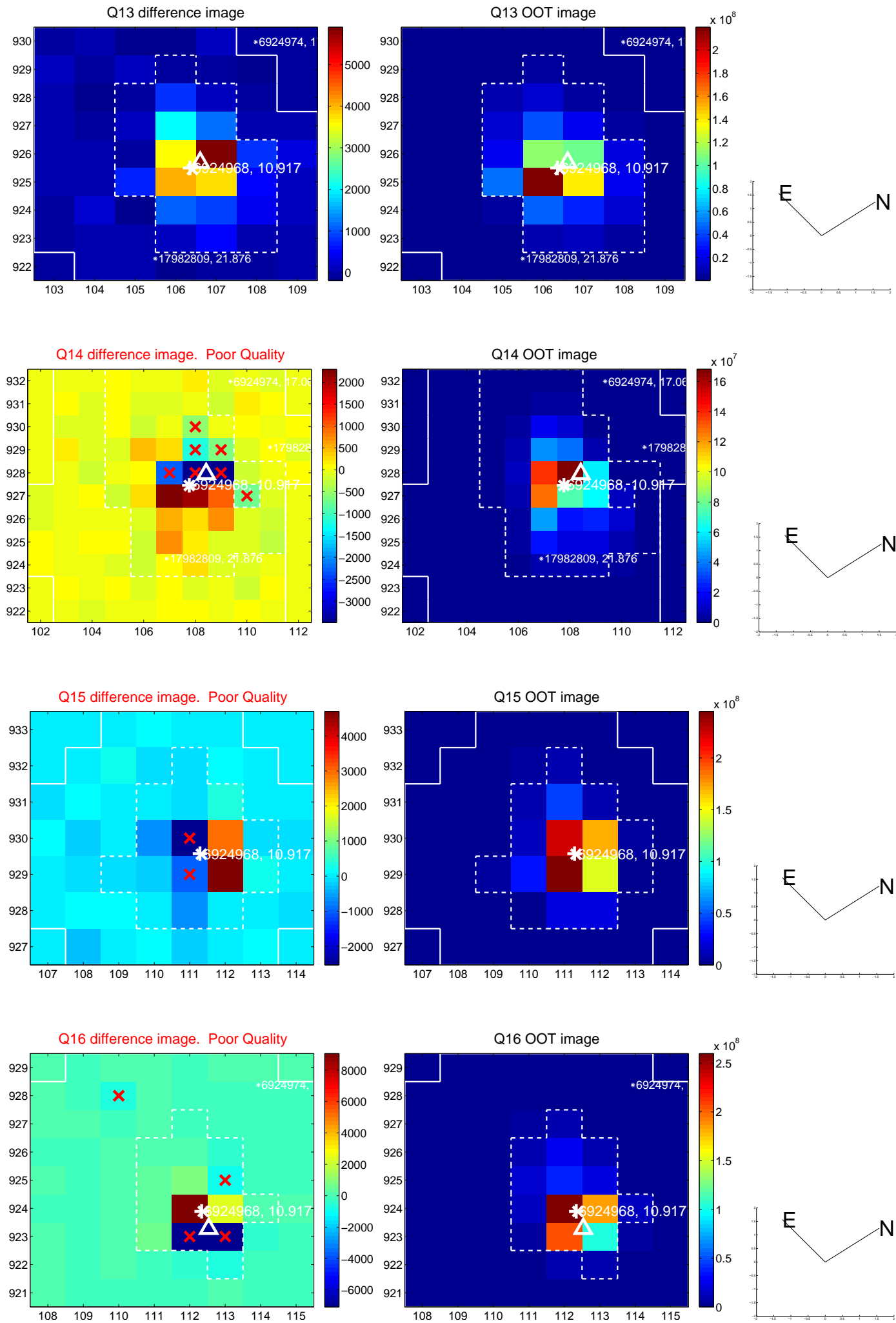
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



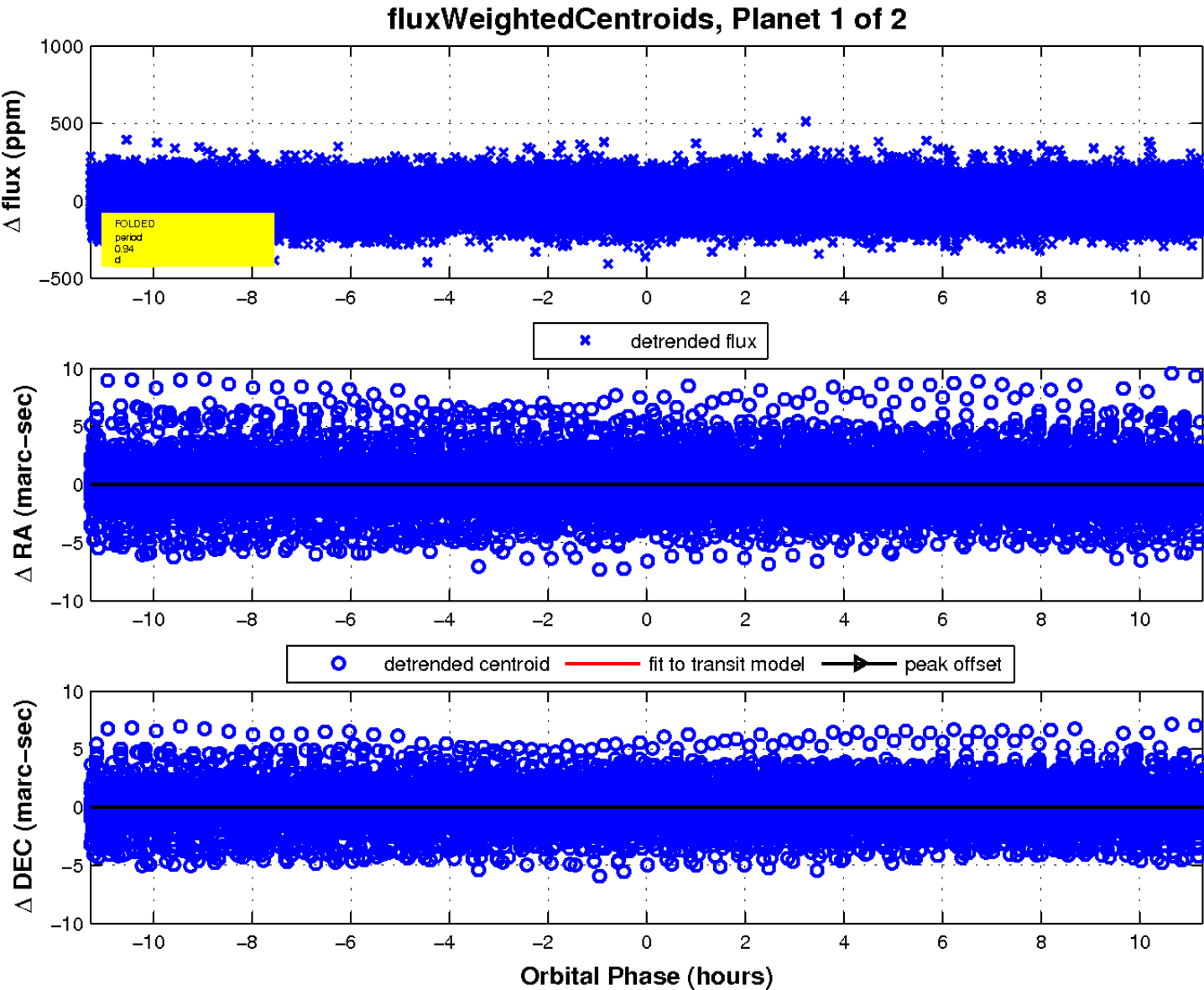
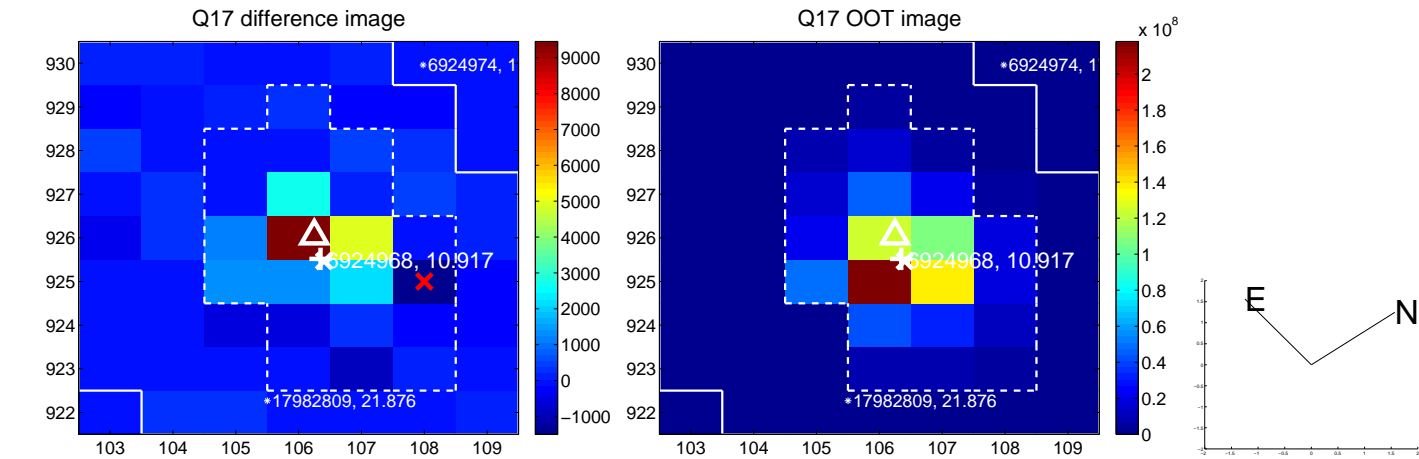
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

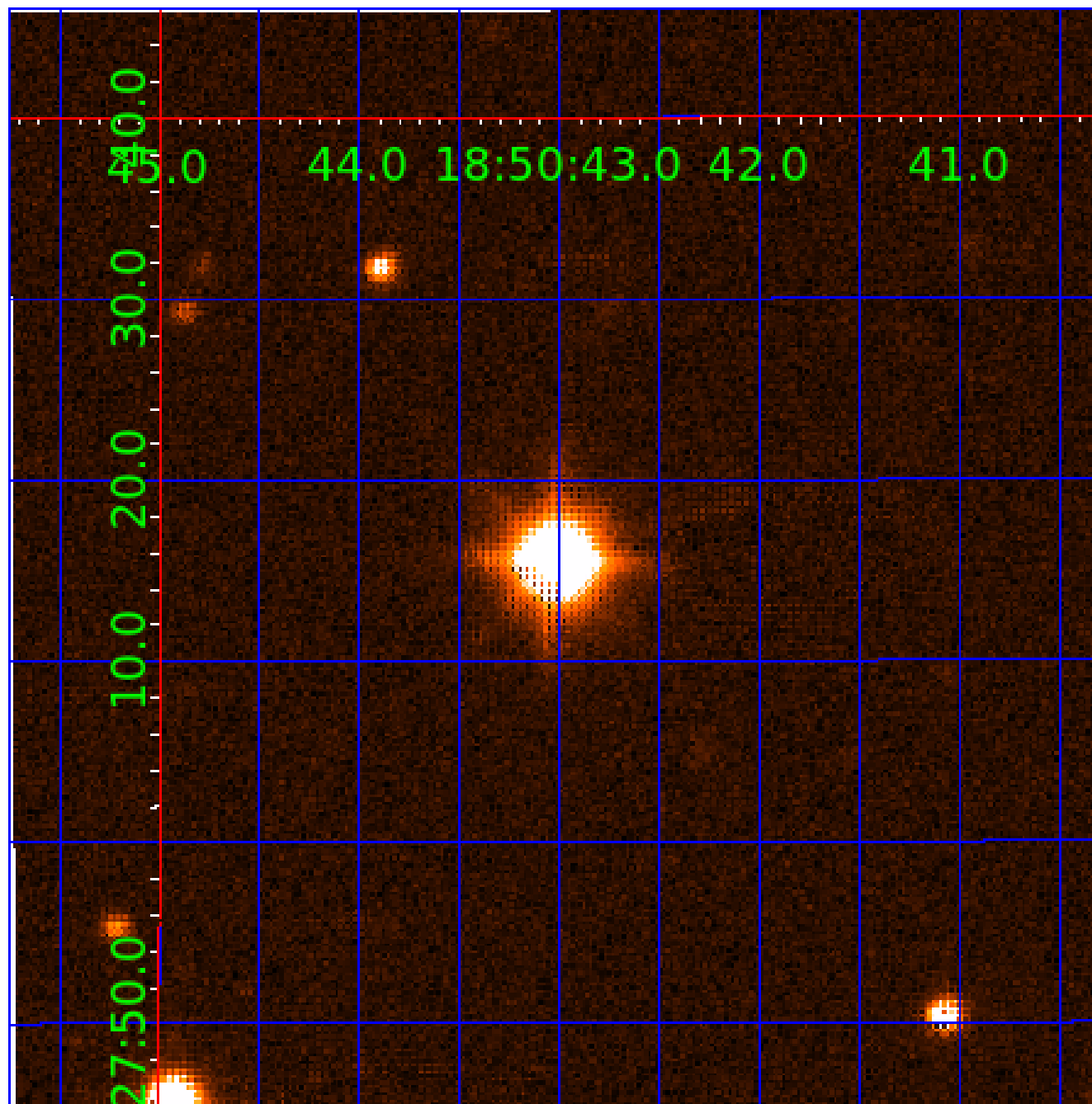


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006924968

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})
006924968-01	OBS	No	0.940180	132.081852	8.2	4.522	9.0	6.8	2.29	6824	0.69	21709.99
006924968-02	OBS	No	0.940102	131.721564	2.6	7.621	11.2	2.2	2.29	6824	0.39	21712.39

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006924968-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
006924968-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—SWEET_NTL—LPP_DV—LPP_ALT—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.

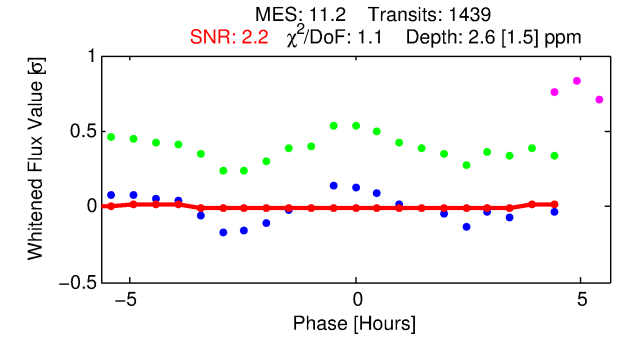
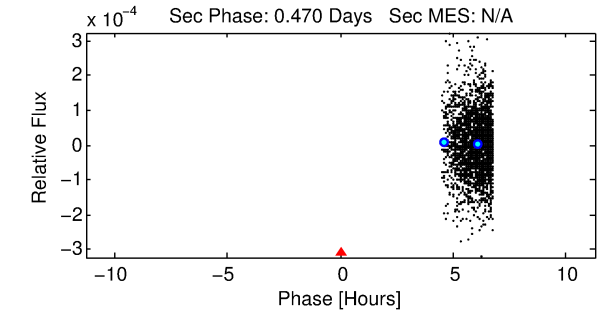
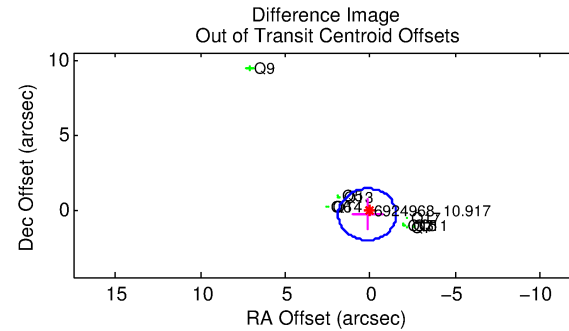
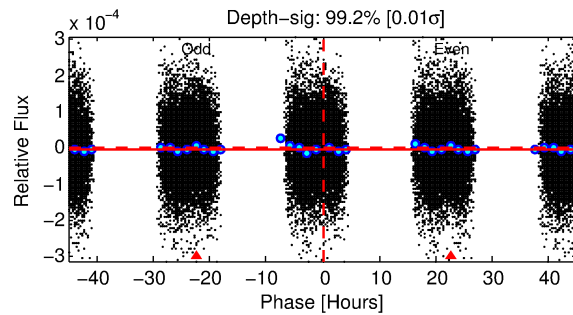
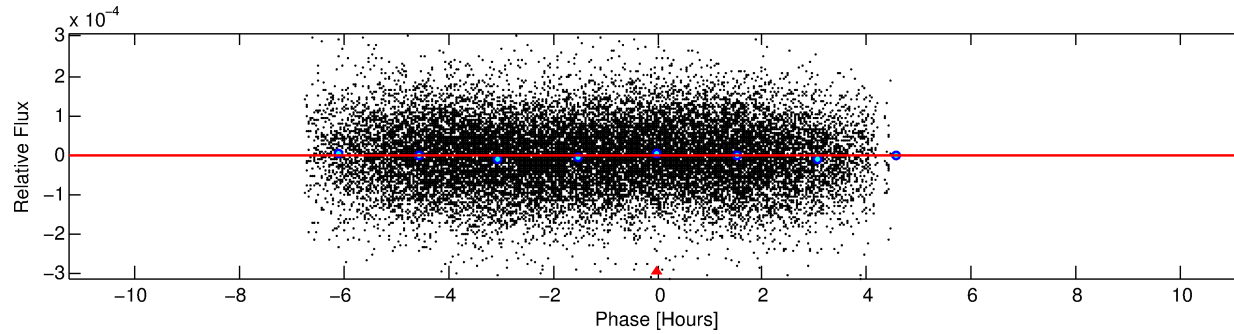
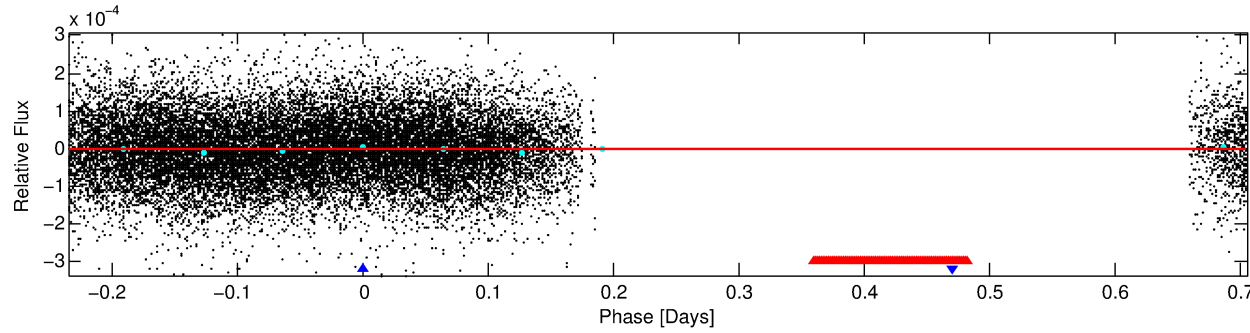
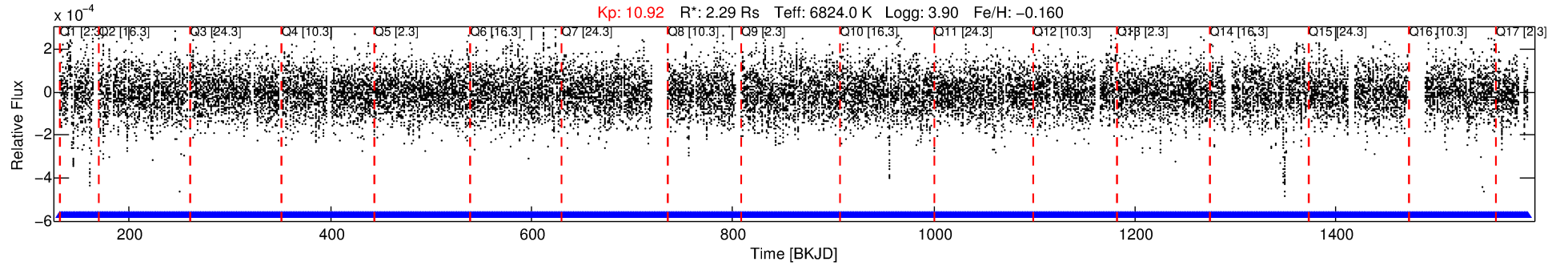
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006924968-02

No Significant Match Found

DV One-Page Summary

KIC: 6924968 Candidate: 2 of 2 Period: 0.940 d



DV Fit Results:

Period = 0.94010 [0.00008] d
Epoch = 131.7216 [0.0254] BKJD
Rp/R* = 0.0016 [0.0019]
a/R* = 1.08 [1.02]
b = 0.70 [4.99]
Seff = 21712.39 [10078.23]
Teq = 3095 [359] K
Rp = 0.39 [0.48] Re
a = 0.0217 [0.0062] AU

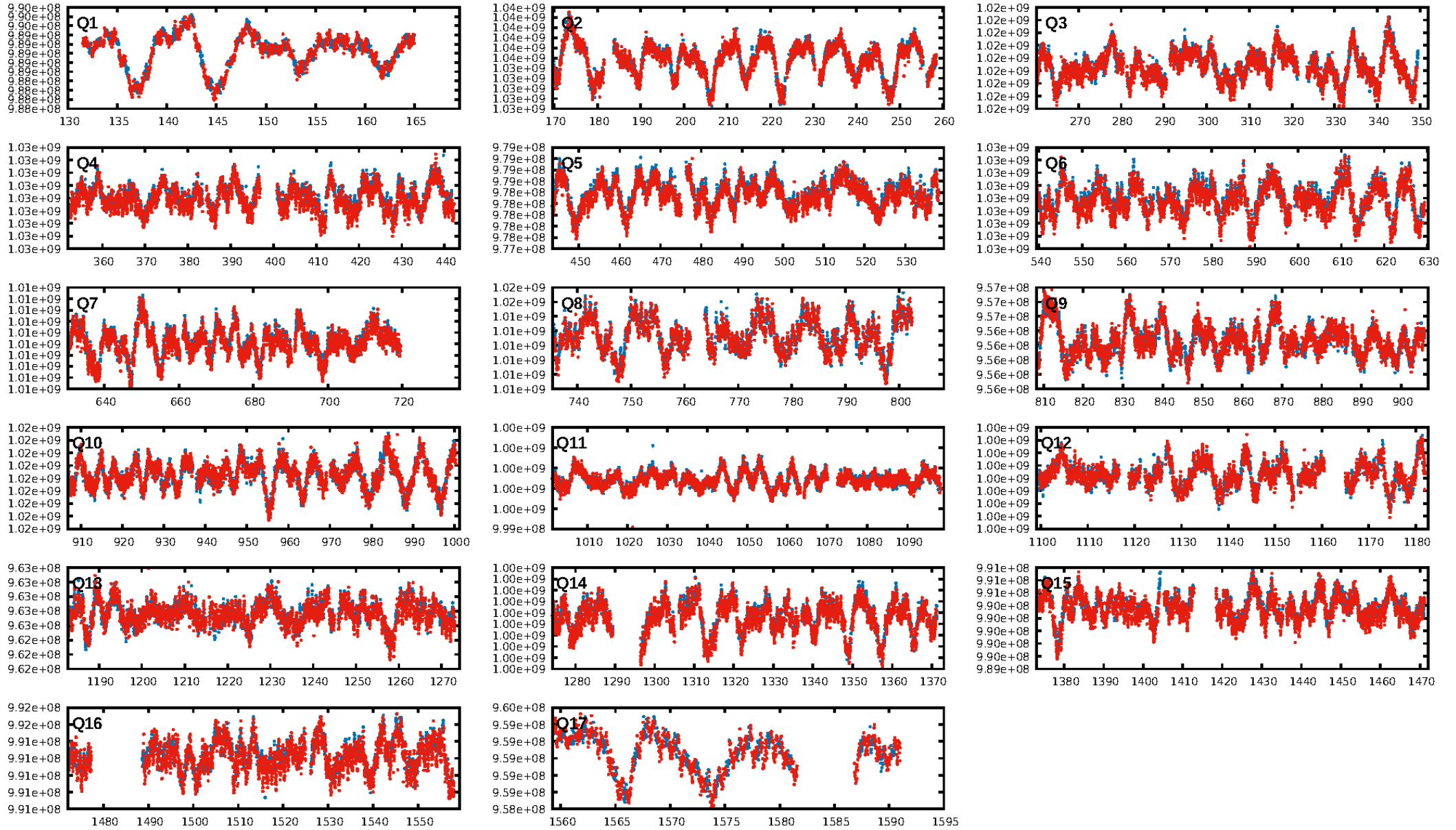
DV Diagnostic Results:

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 [1374/1374]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.362 arcsec [0.63 σ]
KicOffset-rm: 0.455 arcsec [0.81 σ]
OotOffset-st: 2/4/0/4 [10]
KicOffset-st: 2/4/0/4 [10]
DiffImageQuality-fgm: 0.80 [8/10]
DiffImageOverlap-fno: 0.00 [0/17]

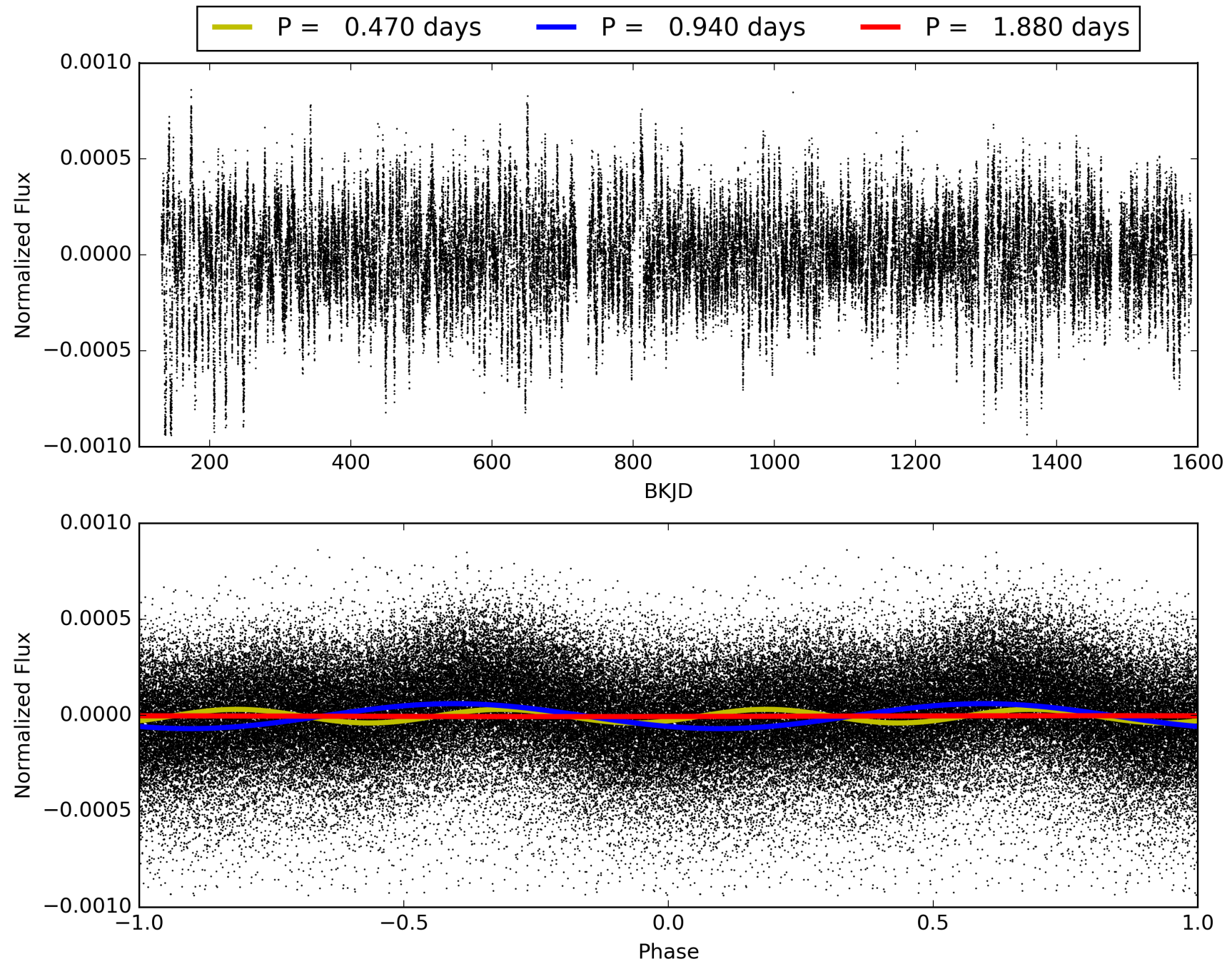
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 08:51:14 Z

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

TCE 006924968-02, PDC Light Curves

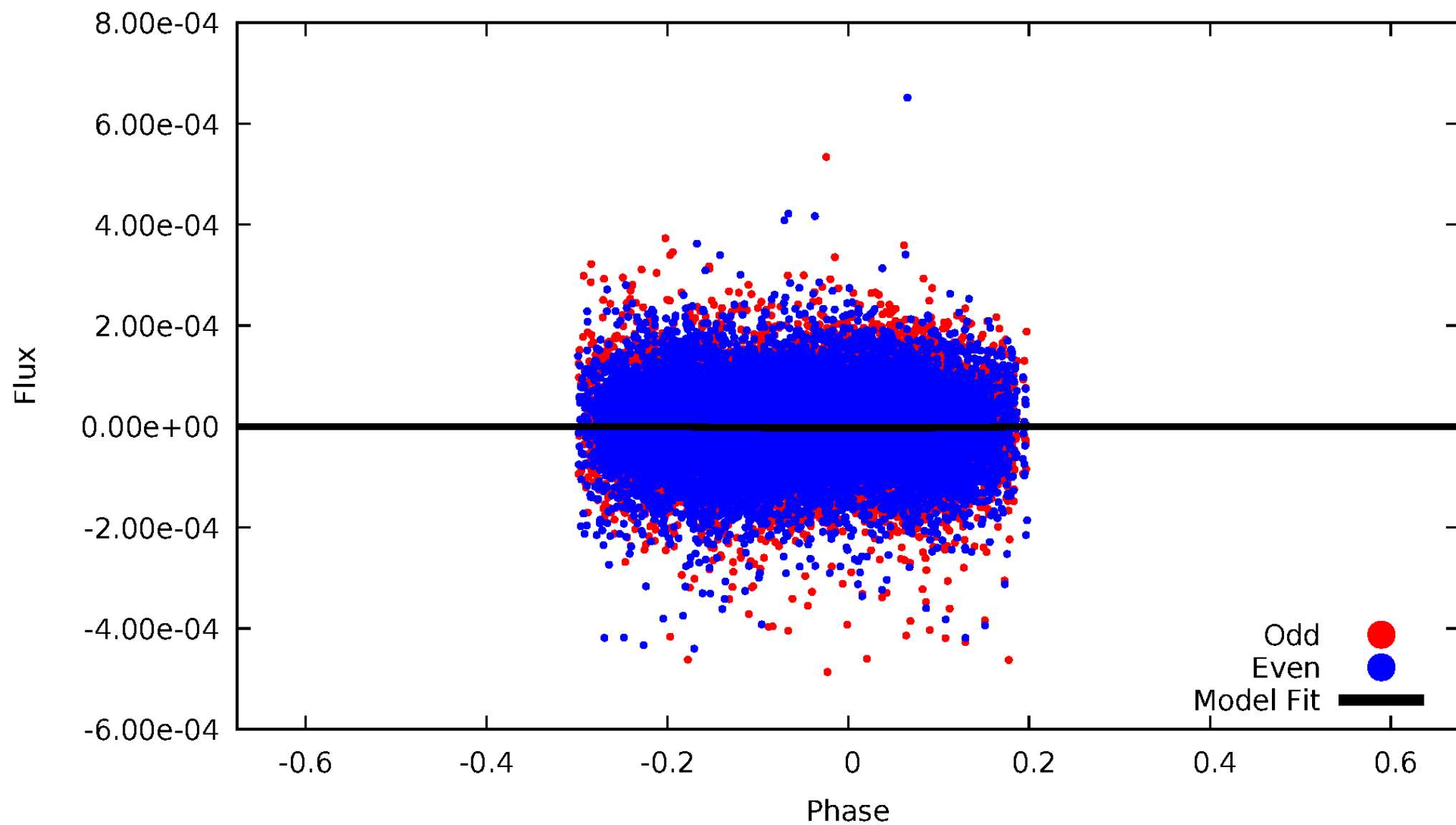


TCE 006924968-02



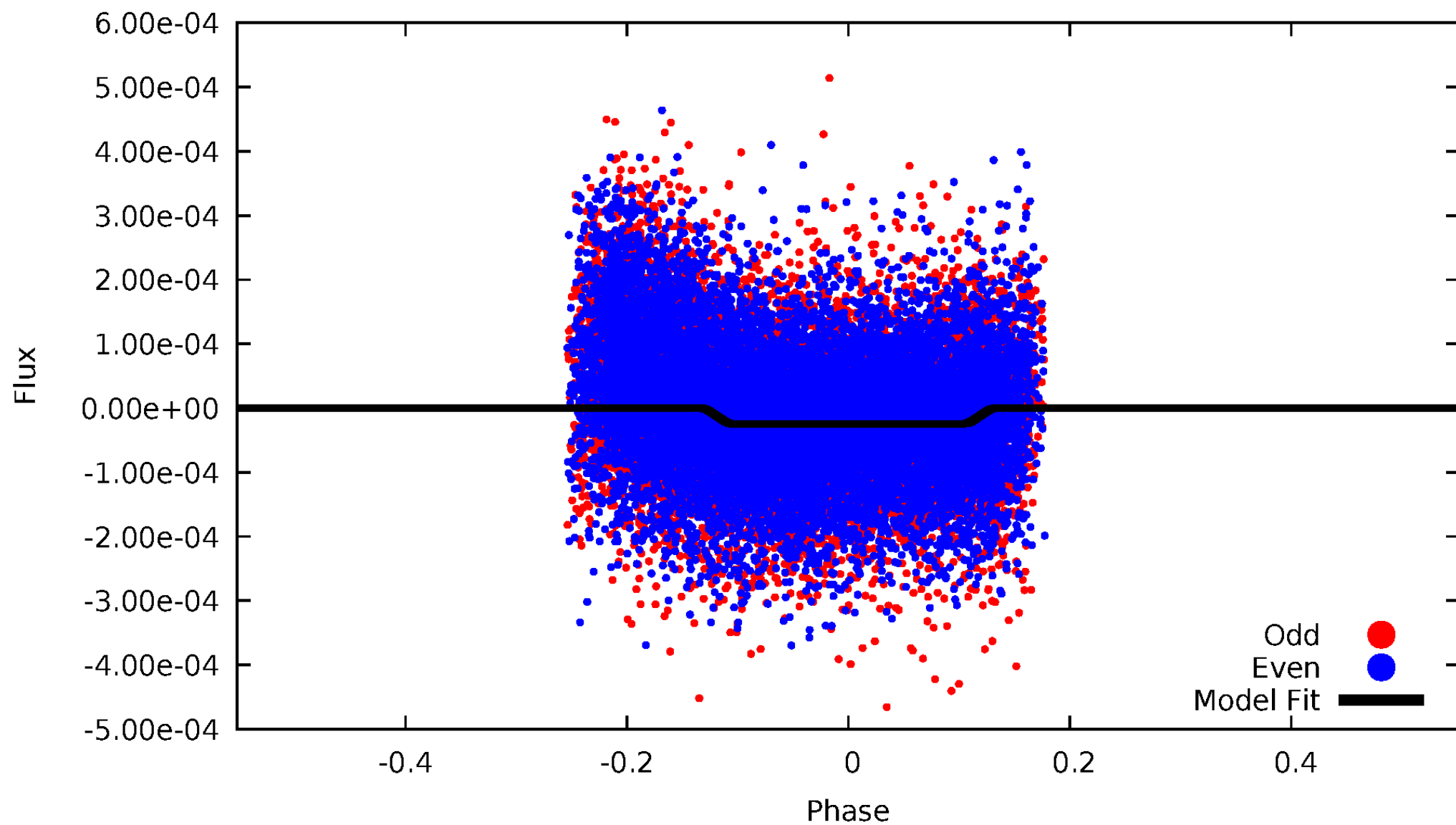
DV Odd/Even

TCE 006924968-02



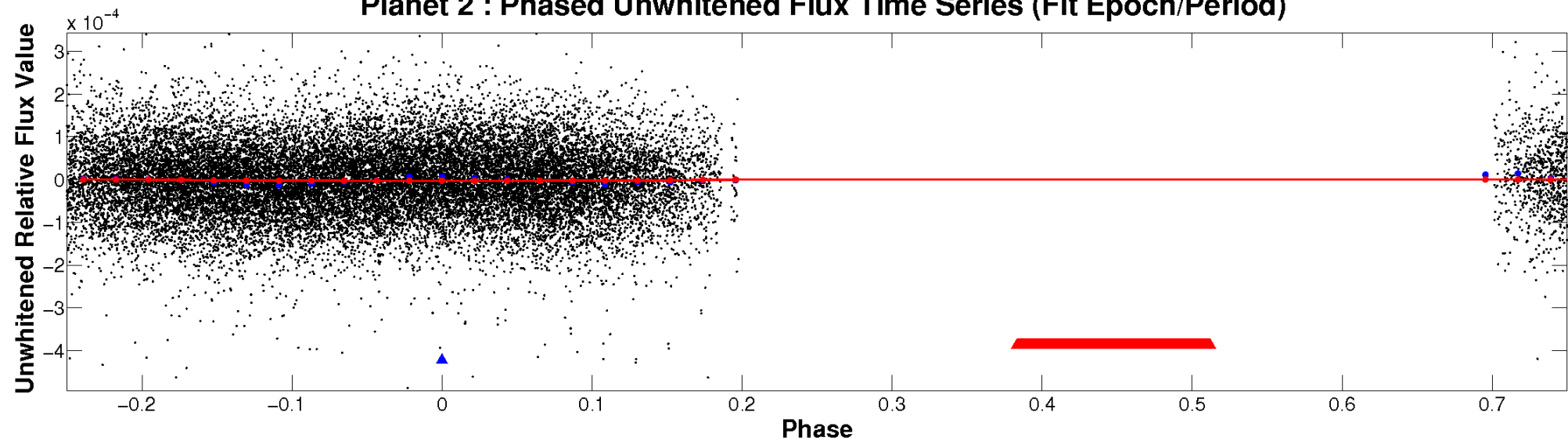
ALT Odd/Even

TCE 006924968-02

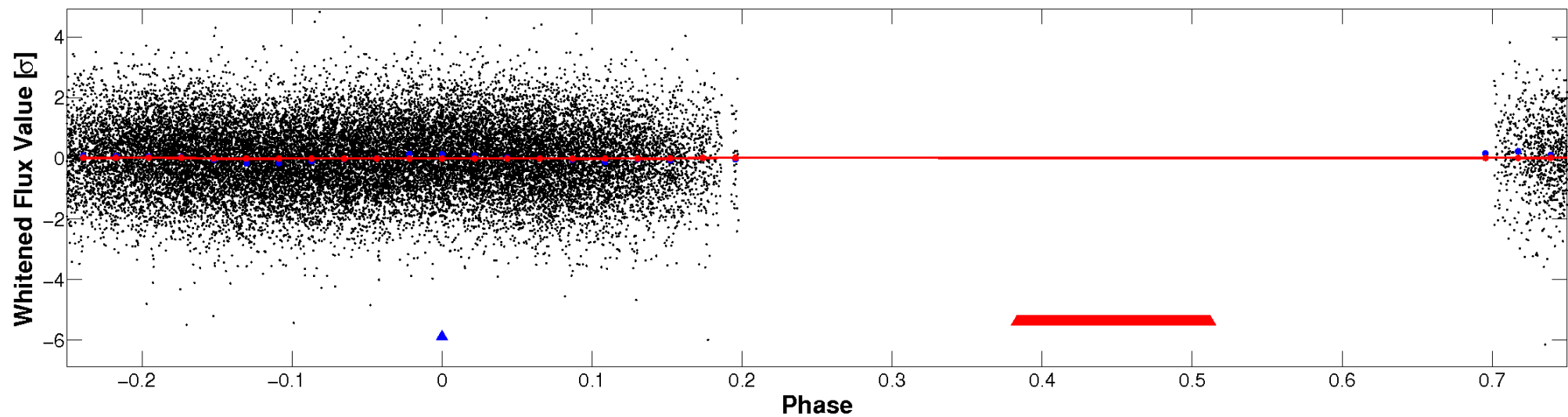


Non-Whitened Vs. Whitened Light Curve

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

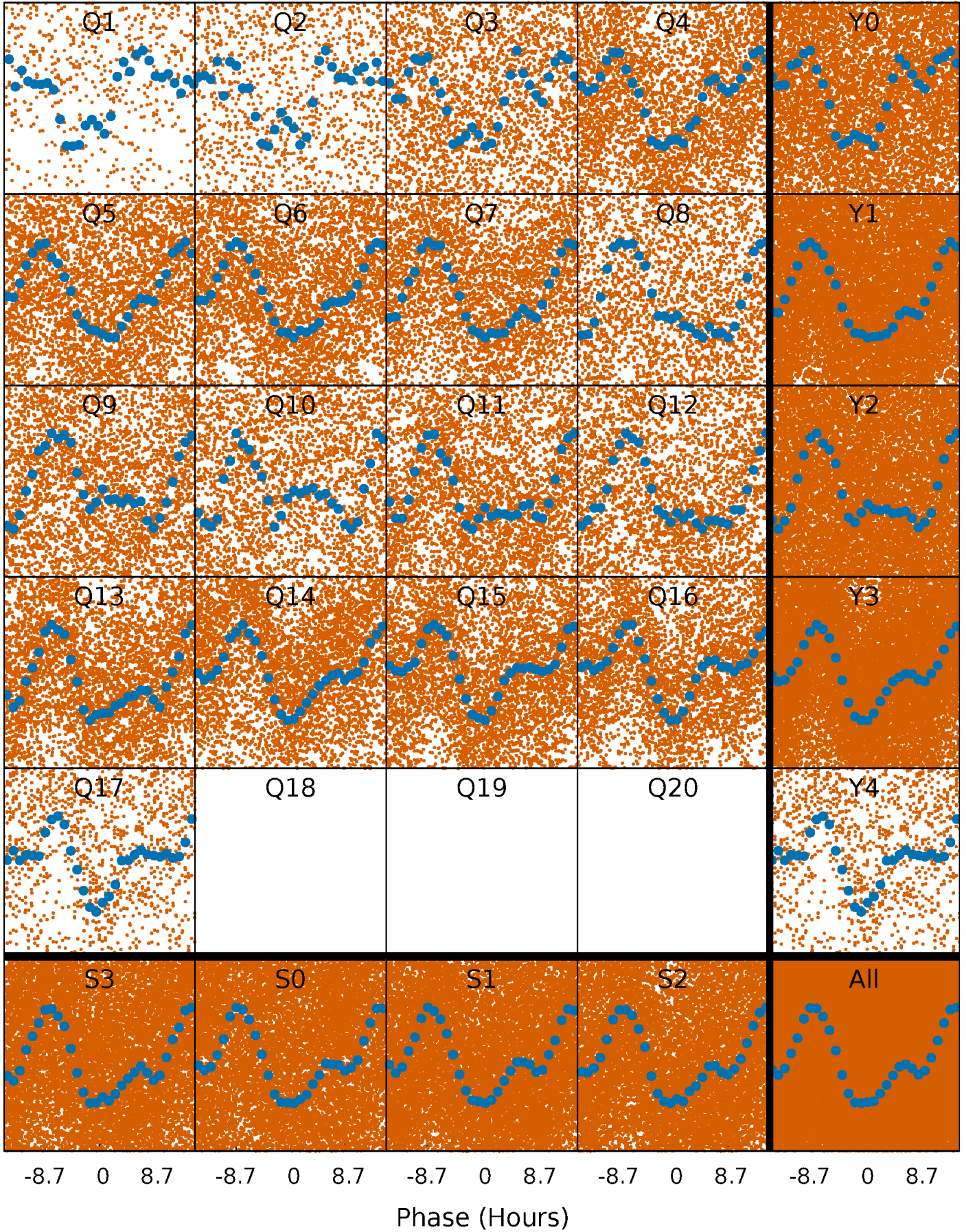


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



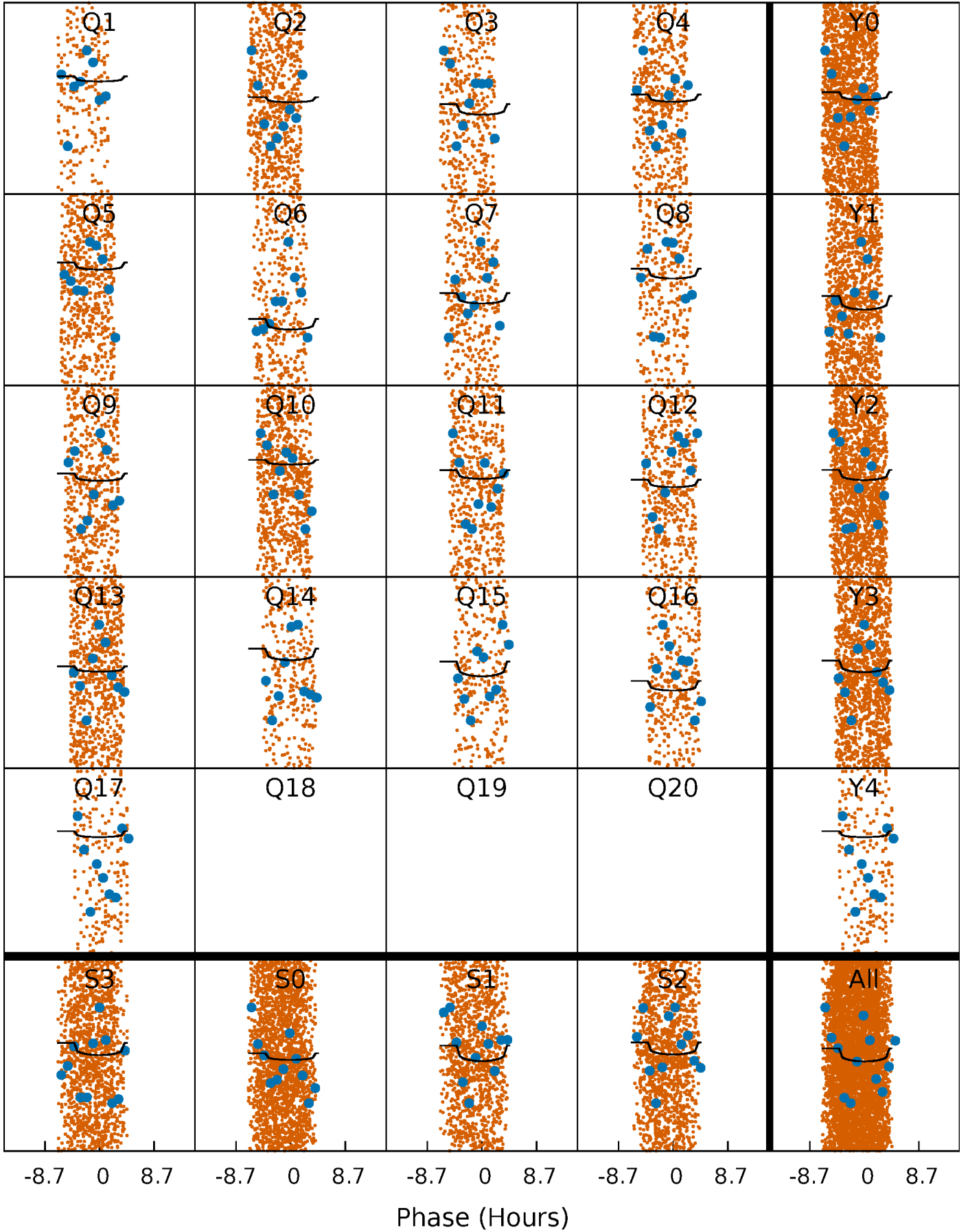
PDC Quarter-Phased Transit Curves

TCE 006924968-02 P= 0.940102 Days $T_0=131.721564$ (BKJD)



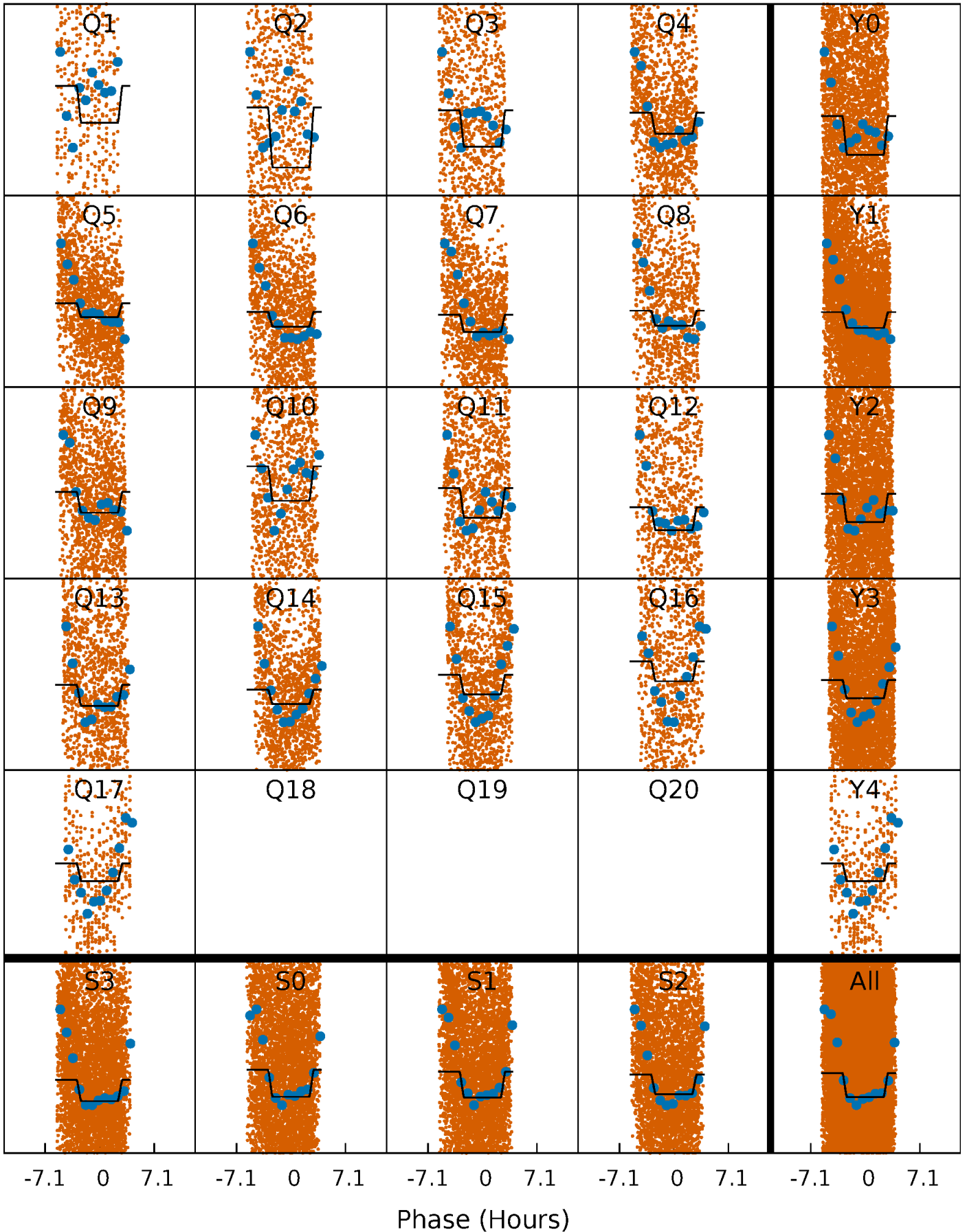
DV Quarter-Phased Transit Curves

TCE 006924968-02 P= 0.940102 Days $T_0=131.721564$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

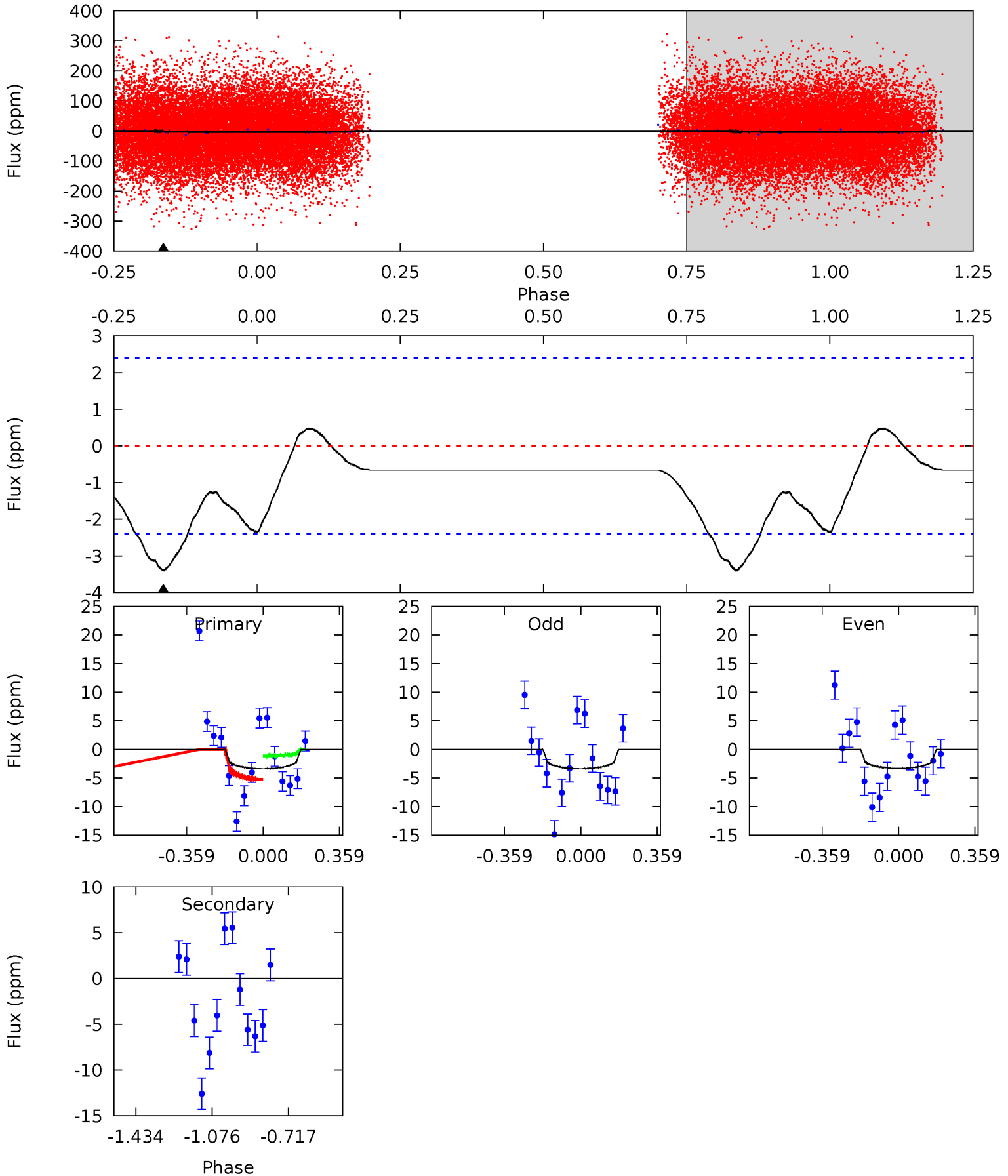
TCE 006924968-02 P= 0.940144 Days $T_0=131.676088$ (BKJD)



DV Model-Shift Uniqueness Test

006924968-02, P = 0.940102 Days, E = 130.781462 Days

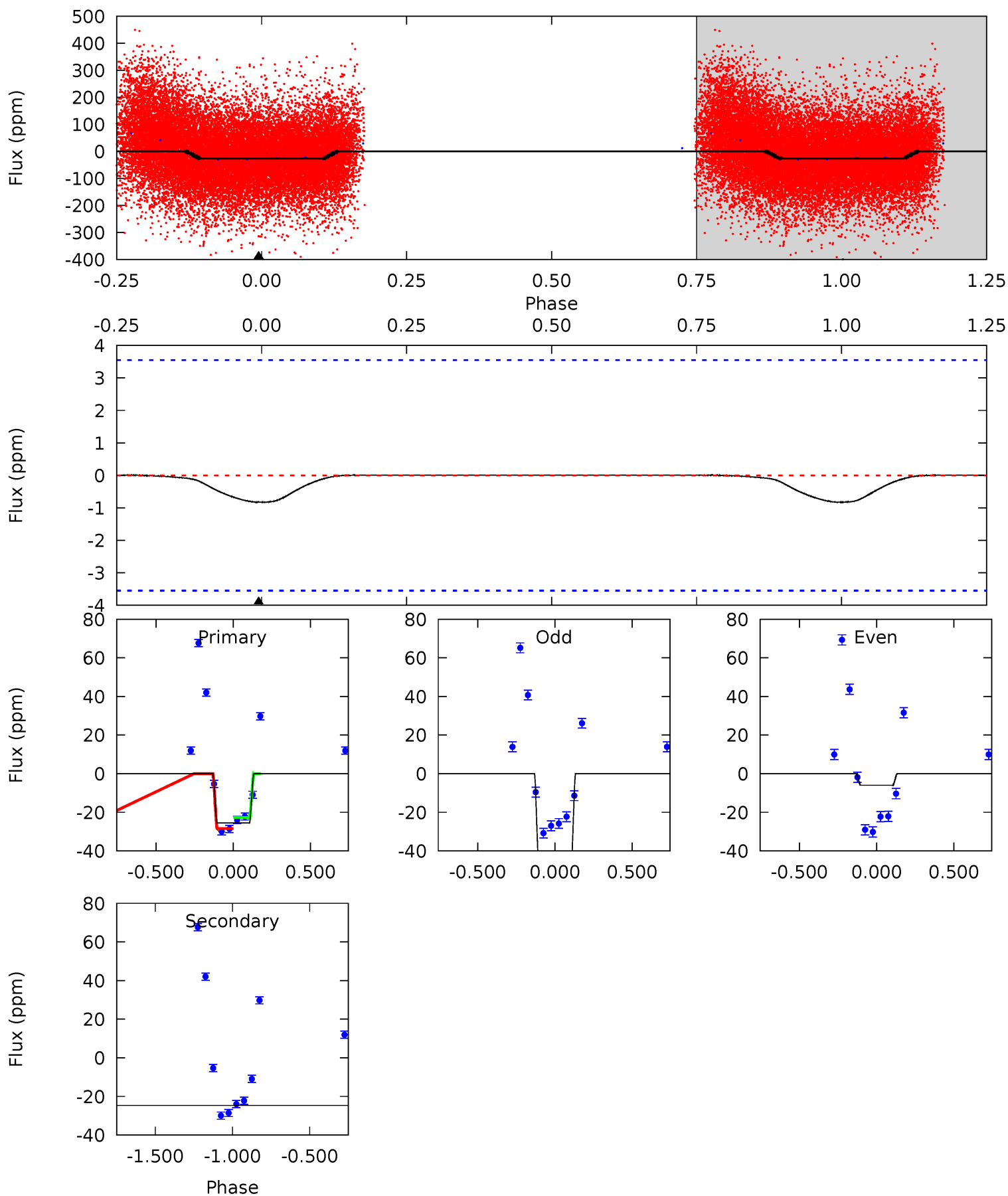
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.10	0	0	0	4.29	0.92	0.60	6.10	6.10	0	0	0.06	1.05	0.12	3.56



Alt Model-Shift Uniqueness Test

006924968-02, P = 0.940144 Days, E = 130.735944 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.98	0	0	0	4.21	0.67	0.01	0.98	0.98	0	0	0.81	0	0.01	1.13



Stellar Parameters For KIC 006924968

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6824^{+170}_{-204}	$3.904^{+0.259}_{-0.111}$	$-0.160^{+0.300}_{-0.300}$	$2.290^{+0.475}_{-0.713}$	$1.530^{+0.194}_{-0.292}$	$0.179^{+0.291}_{-0.060}$
	+2%/-3%	+7%/-3%	+188%/-188%	+21%/-31%	+13%/-19%	+162%/-33%
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 006924968-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1	$0.48^{+0.41}_{-0.31}$	4240^{+267}_{-356}	-3854^{+8071}_{-1334}	$-0.009^{+0.855}_{-1.195}$
Alt.	0 ± 1	$1.16^{+0.50}_{-0.44}$	4262^{+270}_{-365}	-3828^{+570}_{-384}	$0.012^{+0.165}_{-0.192}$

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

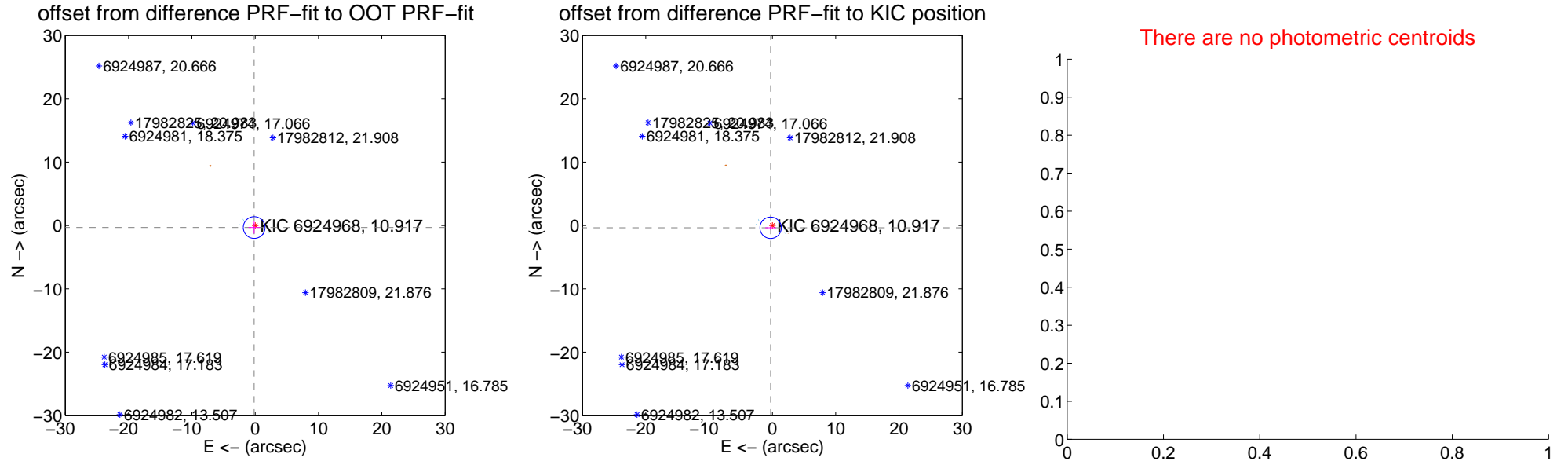
DV Centroid Data

Supplemental centroid analysis for 006924968-02. **Kepler magnitude: 10.92.** Transit SNR 2.20

There are 8 quarters with good PRF difference image offsets

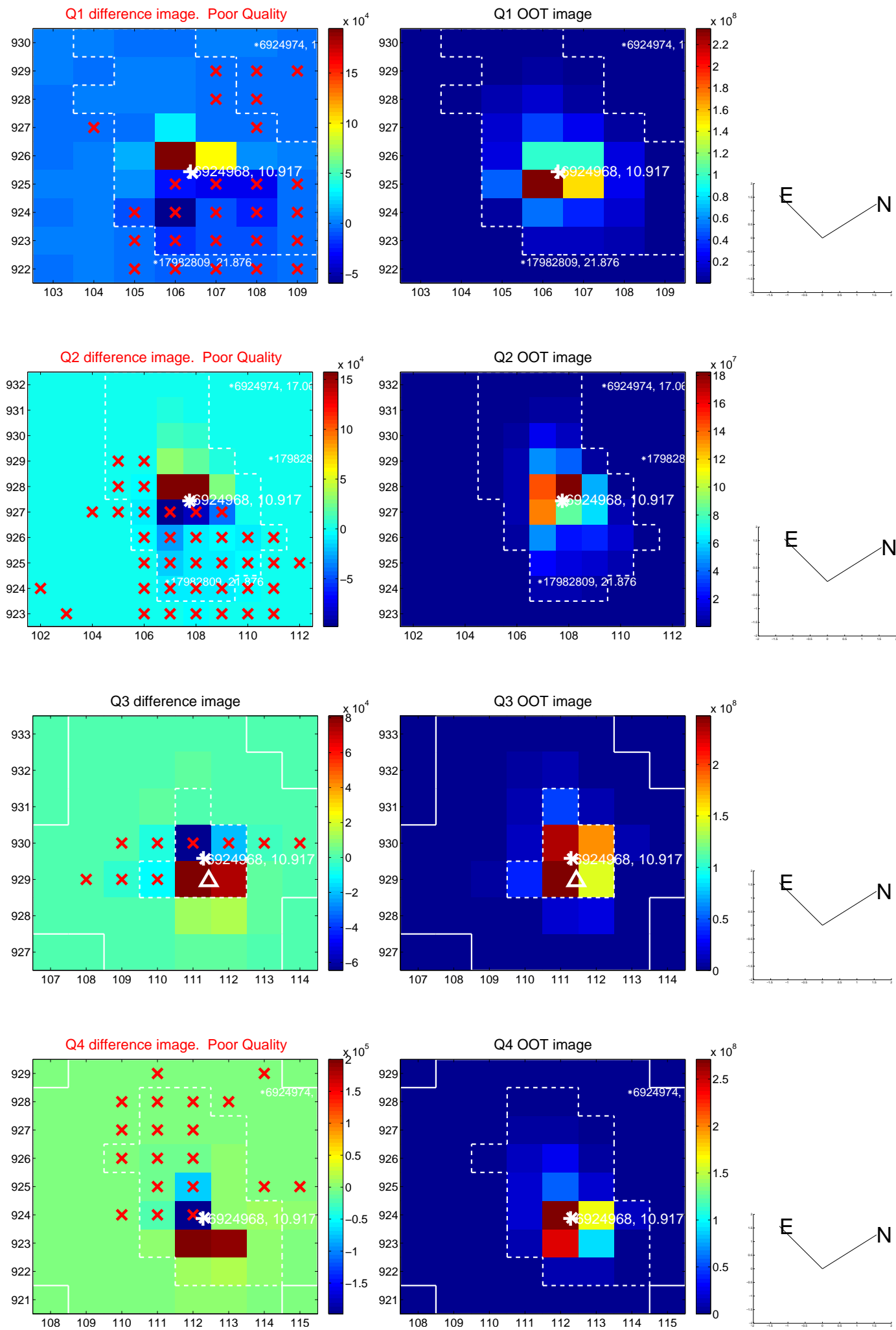
The direct PRF centroid is offset from the target star catalog position by about 0.30 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.362 ± 0.573	0.63	0.160 ± 0.903	-0.325 ± 0.955
PRF-fit source offset from KIC position	0.455 ± 0.564	0.81	0.277 ± 0.831	-0.361 ± 0.315
photometric centroid source offset	—	—	—	—

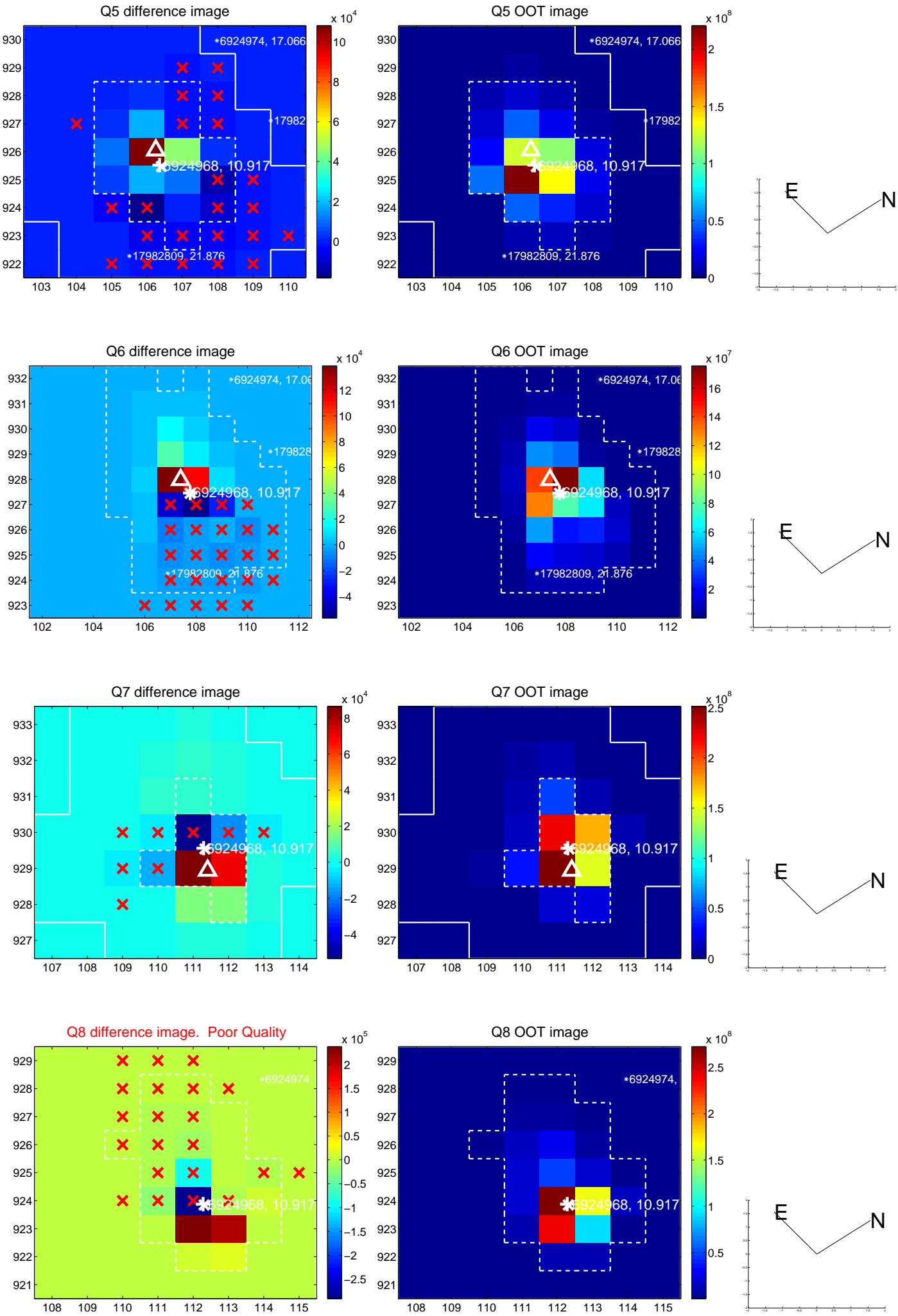


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

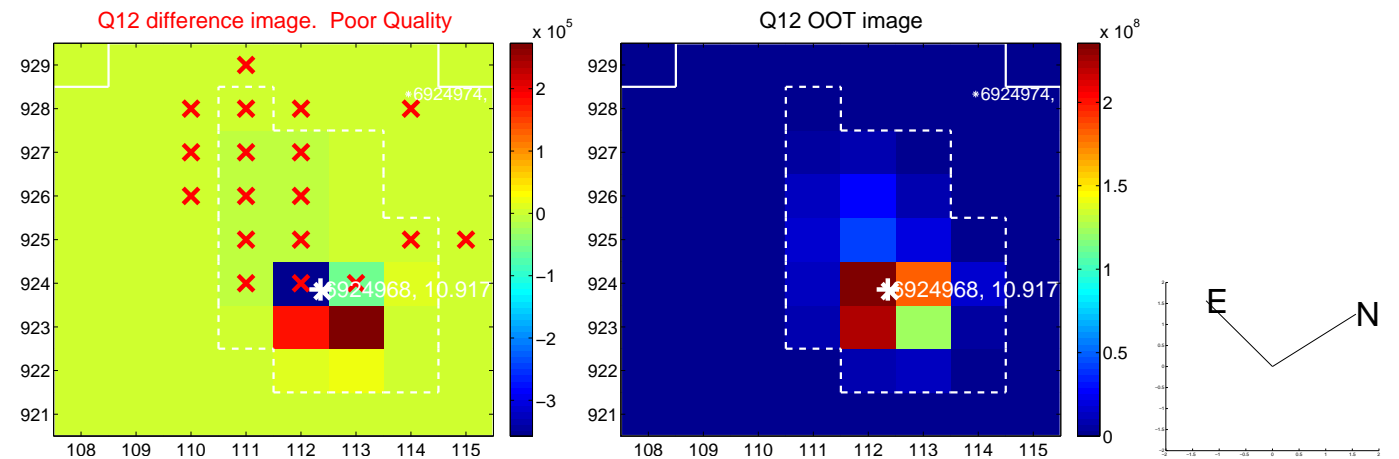
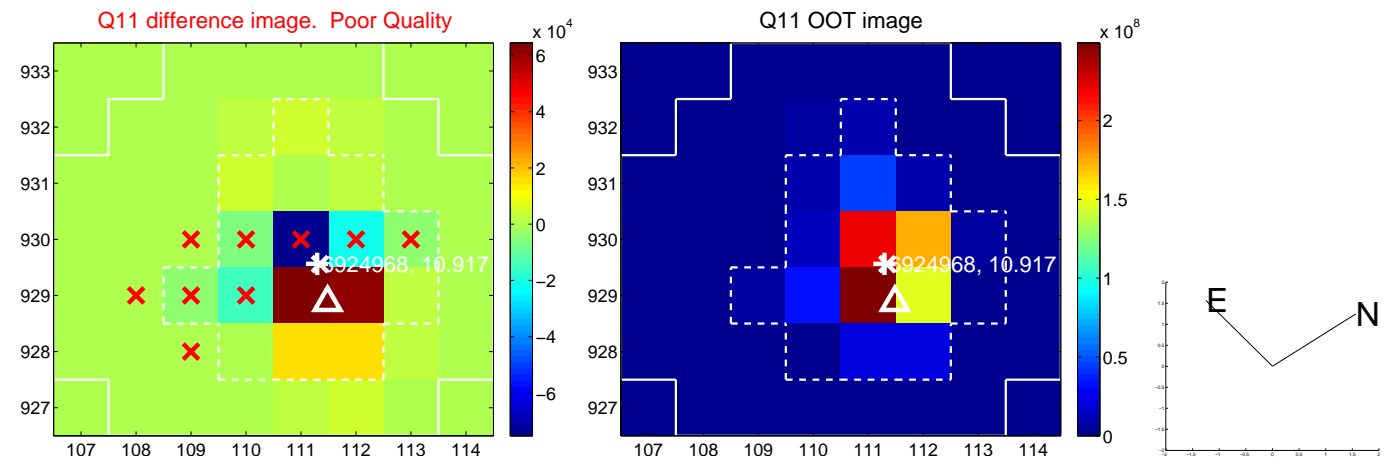
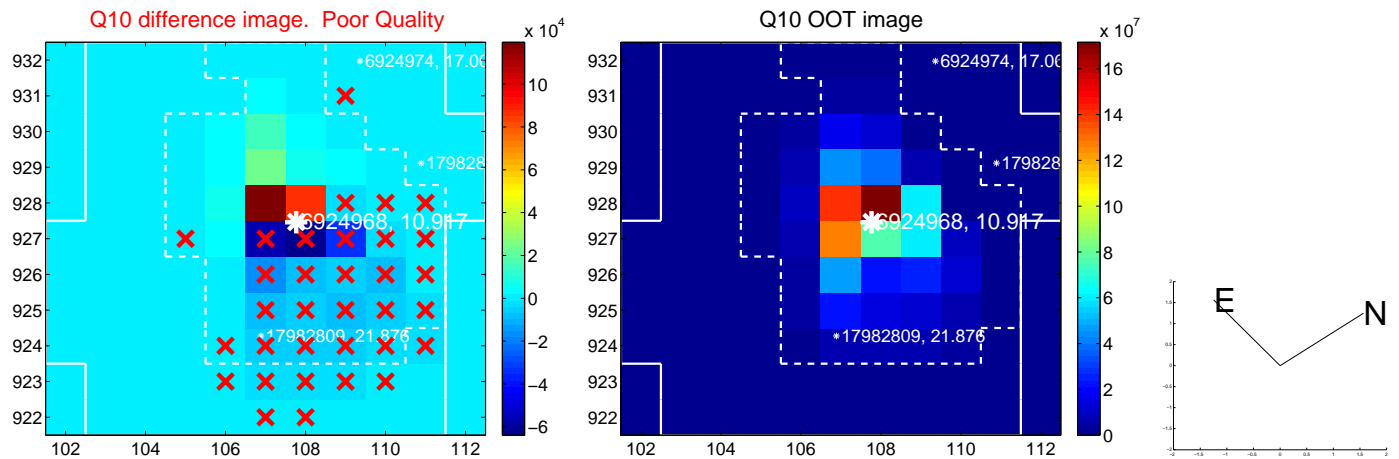
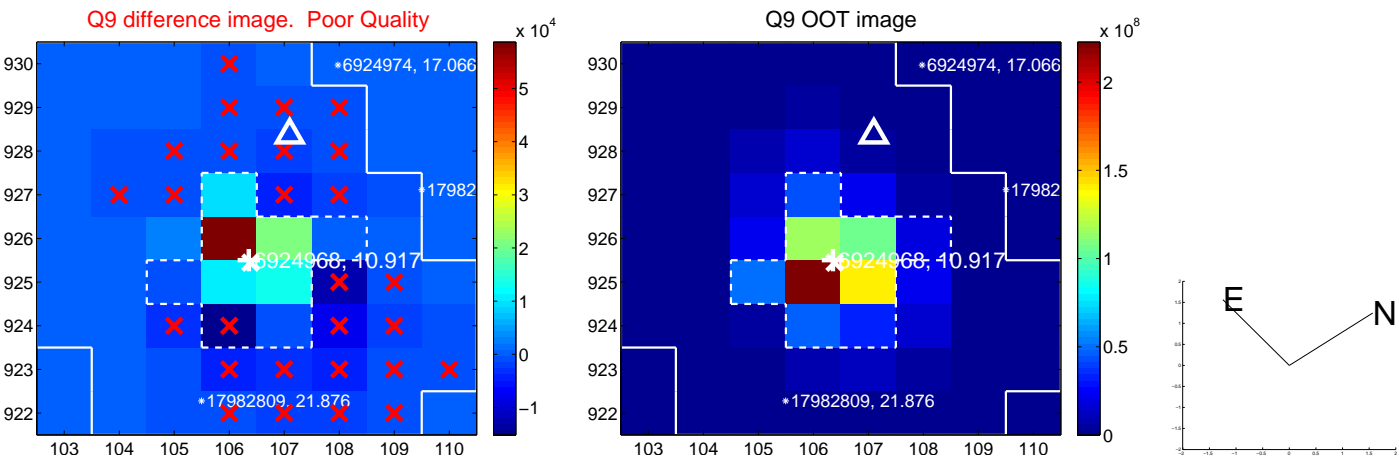
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



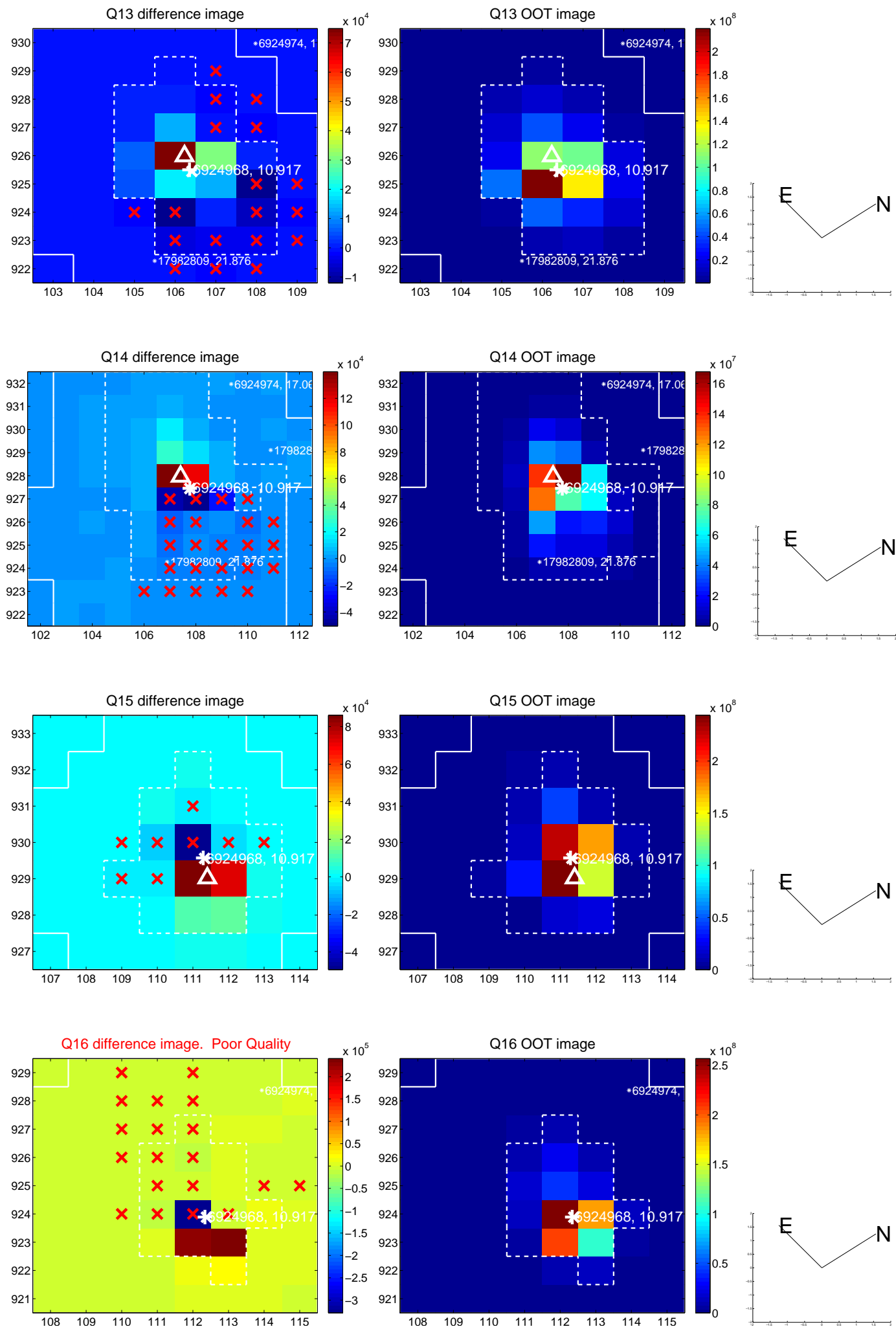
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



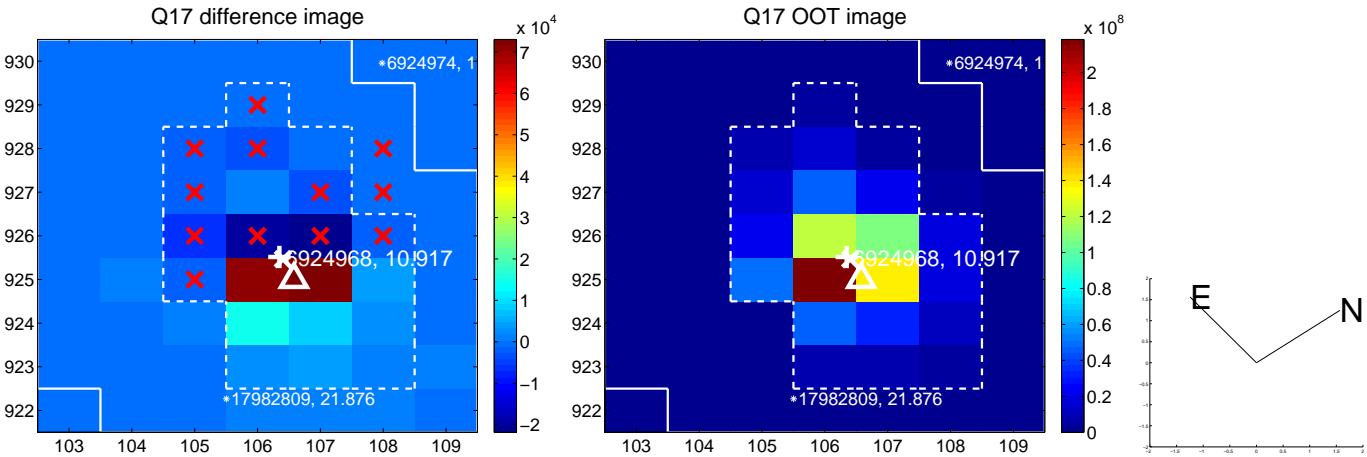
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

