

KIC 005979866

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})
005979866-01	OBS	No	1.485076	131.503461	253.9	7.182	10.3	10.6	1.86	7230	3.01	9362.96
005979866-02	OBS	No	1.485009	132.281661	269.2	6.769	10.7	12.4	1.86	7230	3.23	9363.53

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005979866-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_SATURATED
005979866-02	OBS	FP	0.00	1	0	0	0	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.

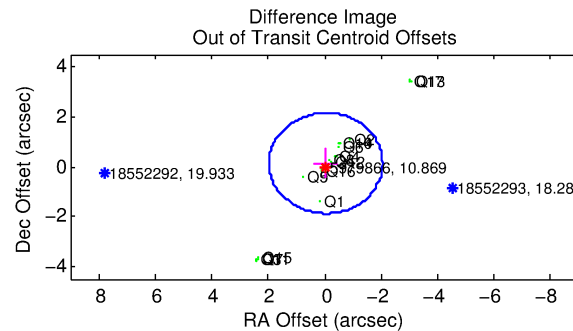
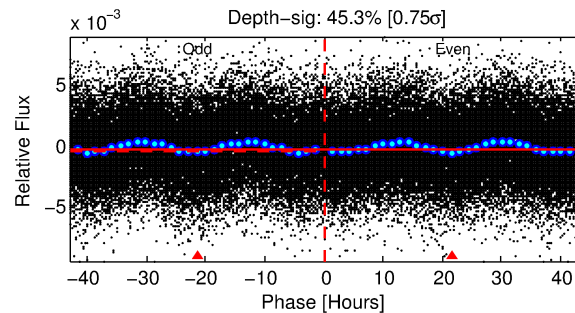
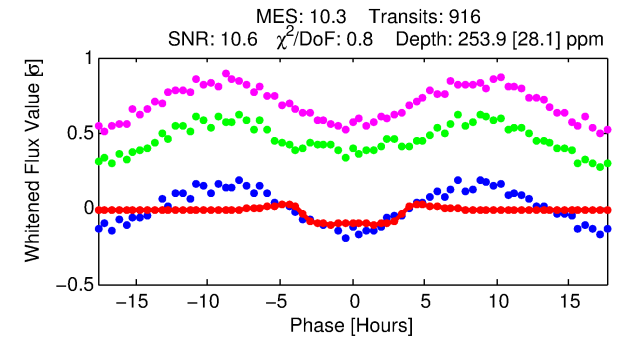
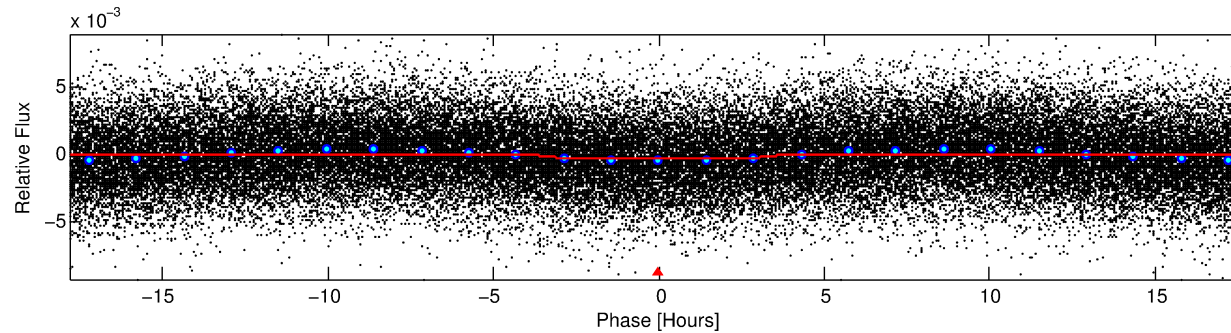
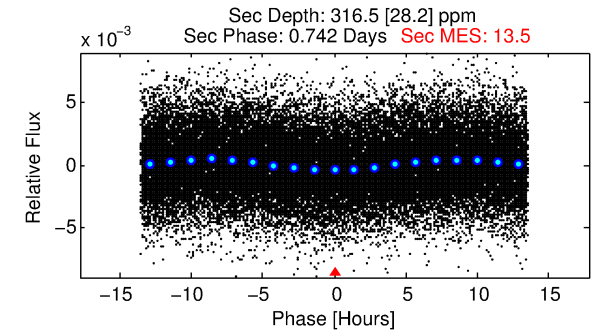
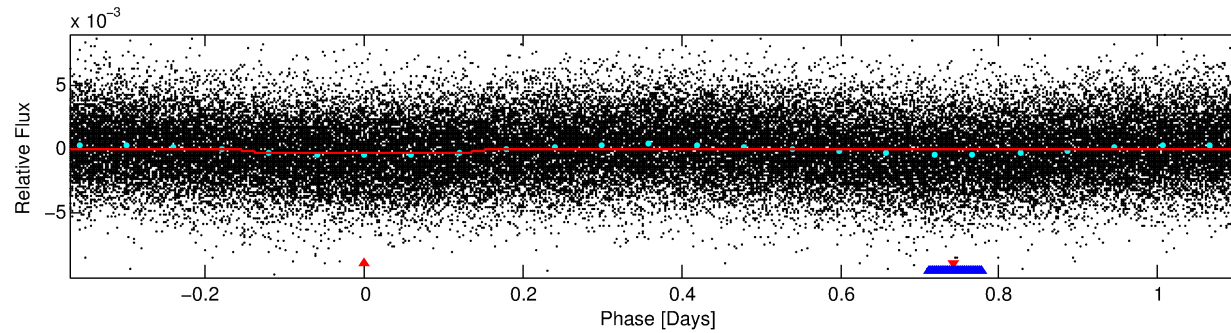
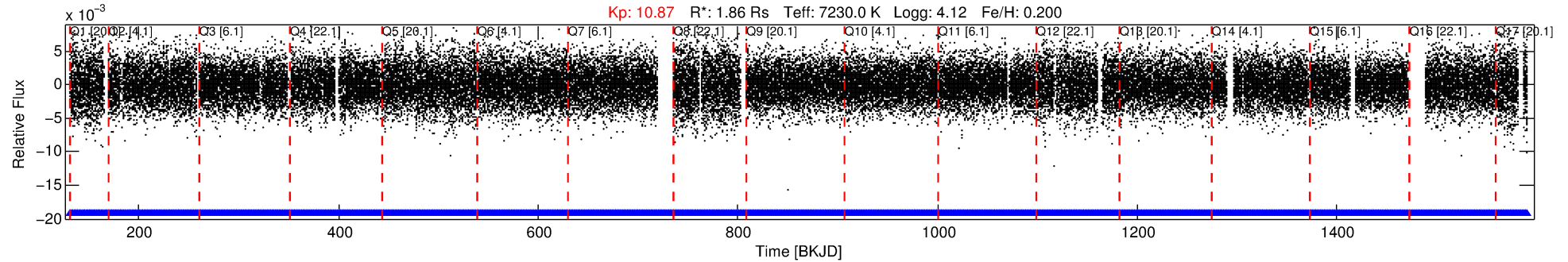
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005979866-01

No Significant Match Found

DV One-Page Summary

KIC: 5979866 Candidate: 1 of 2 Period: 1.485 d



DV Fit Results:

Period = 1.48508 [0.00002] d
Epoch = 131.5035 [0.0065] BKJD
 R_p/R^* = 0.0148 [0.0182]
 a/R^* = 1.72 [8.12]
 b = 0.01 [678.20]
 Seff = 9362.96 [3862.04]
 T_{eq} = 2508 [259] K
 R_p = 3.01 [3.82] R_e
 a = 0.0301 [0.0078] AU
 A_g = 17.50 [43.56] [0.38σ]
 T_{eff} = 7932 [4896] K [1.11σ]

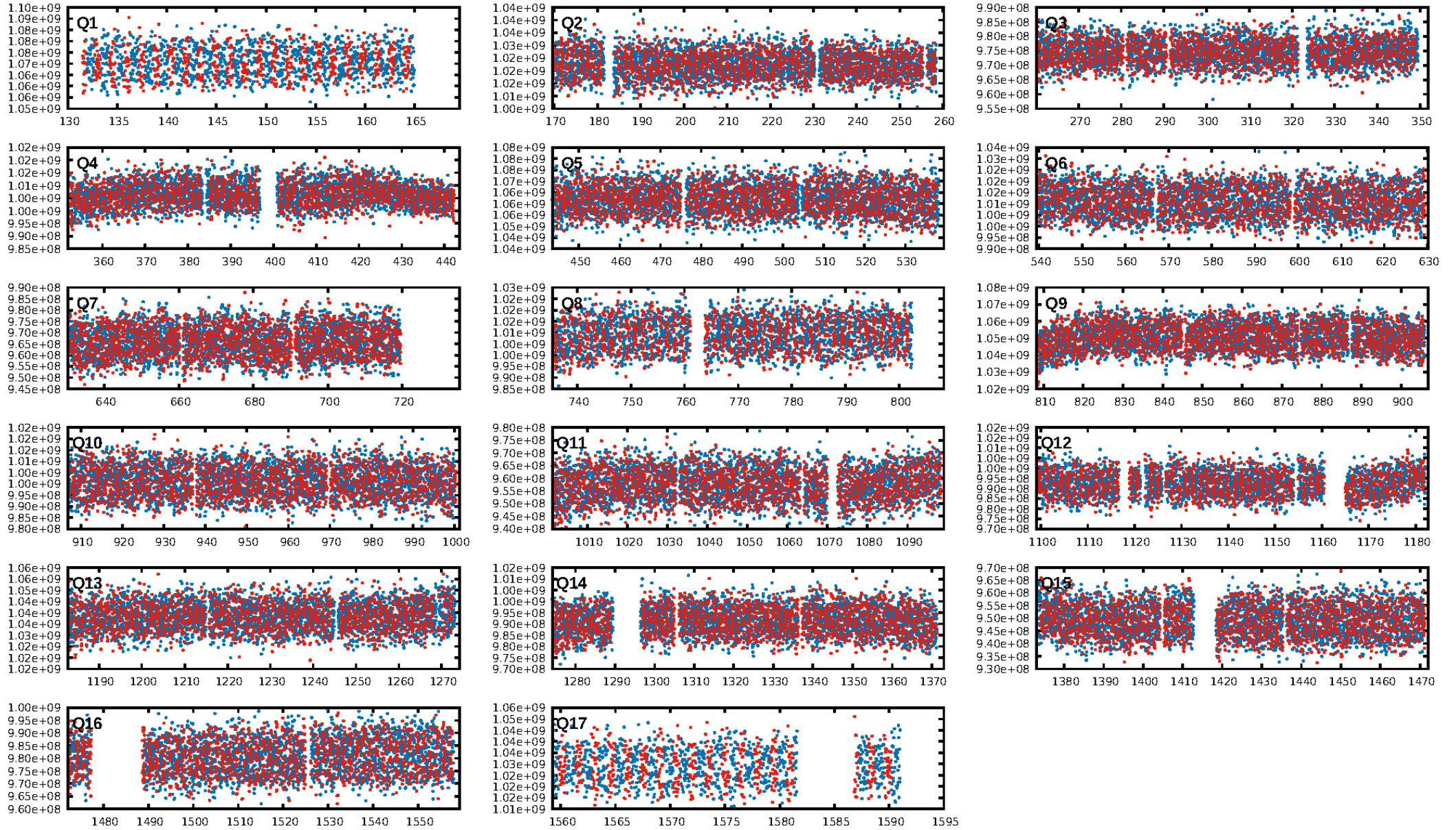
DV Diagnostic Results:

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 [875/875]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.142 arcsec [0.21σ]
KicOffset-rm: 0.257 arcsec [0.47σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.76 [13/17]
DiffImageOverlap-fno: 0.82 [14/17]

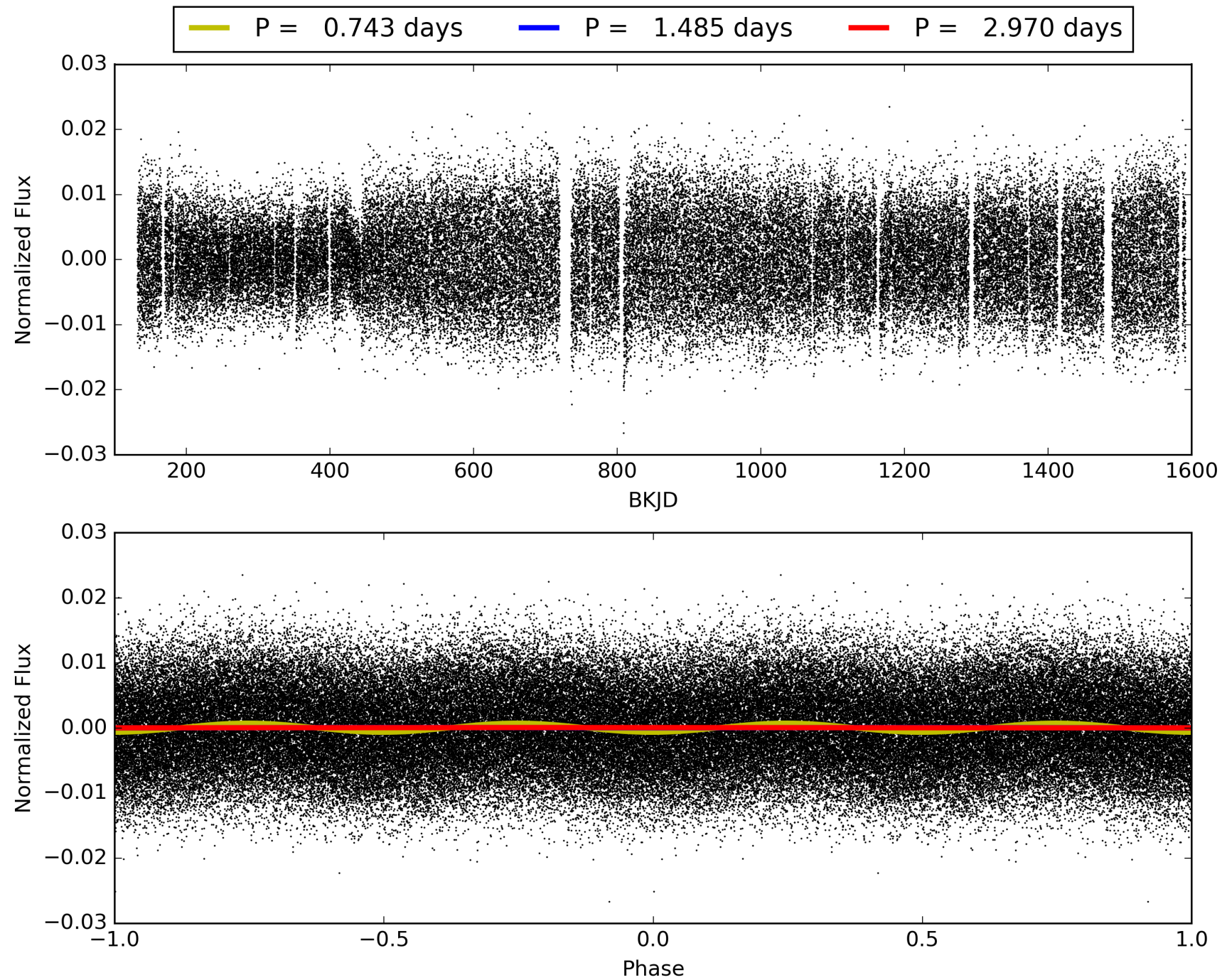
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 09:57:29 Z

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

TCE 005979866-01, PDC Light Curves

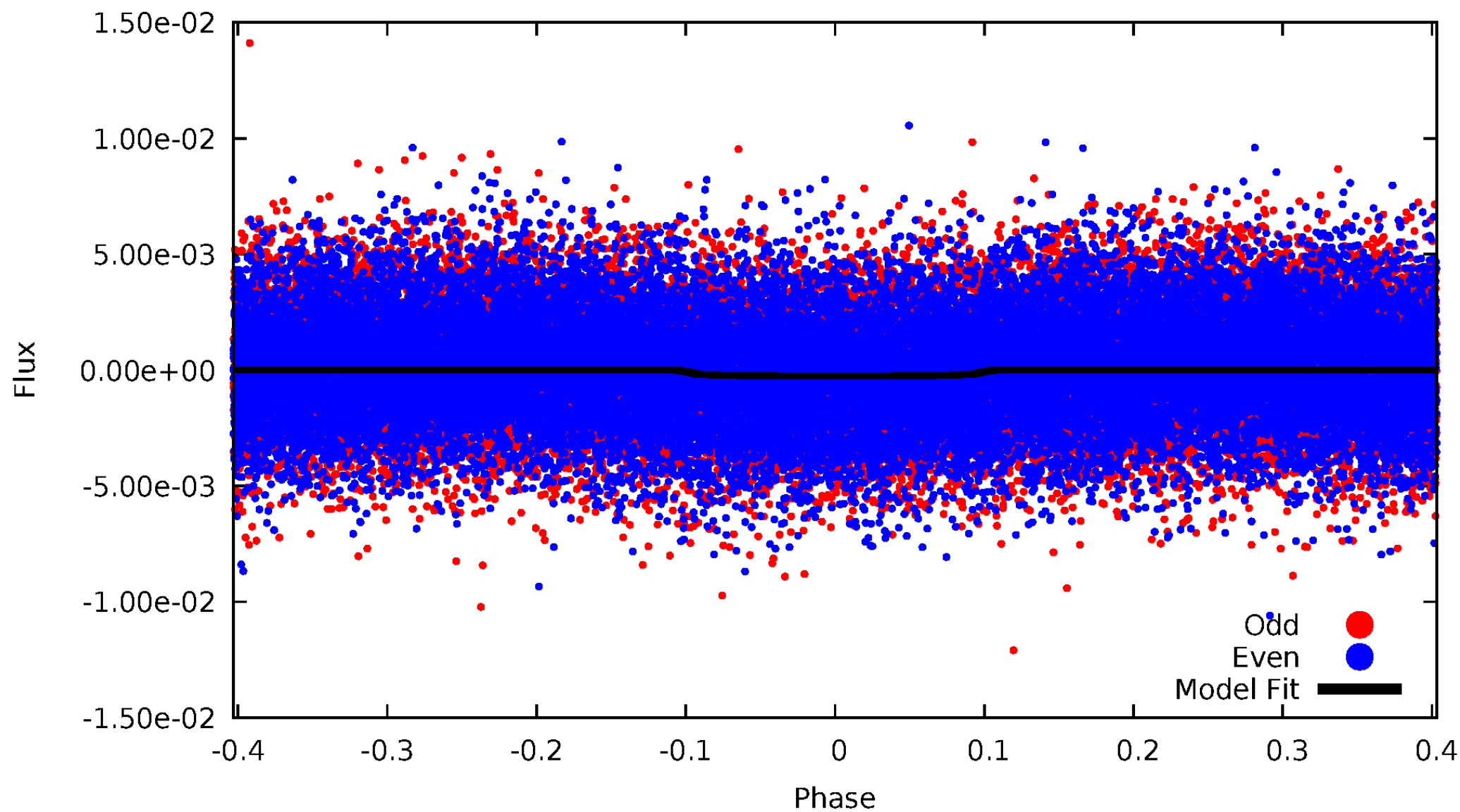


TCE 005979866-01



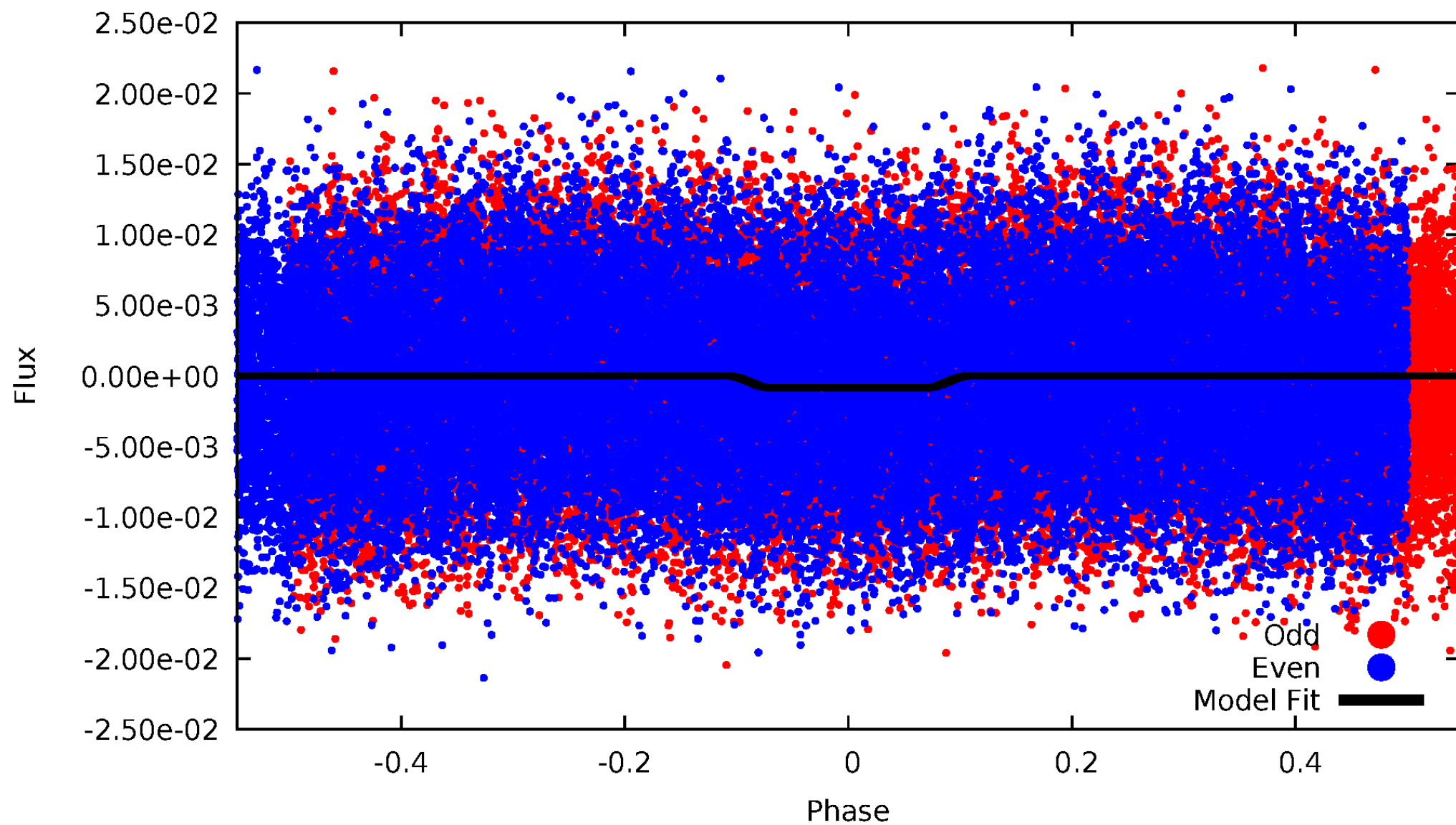
DV Odd/Even

TCE 005979866-01



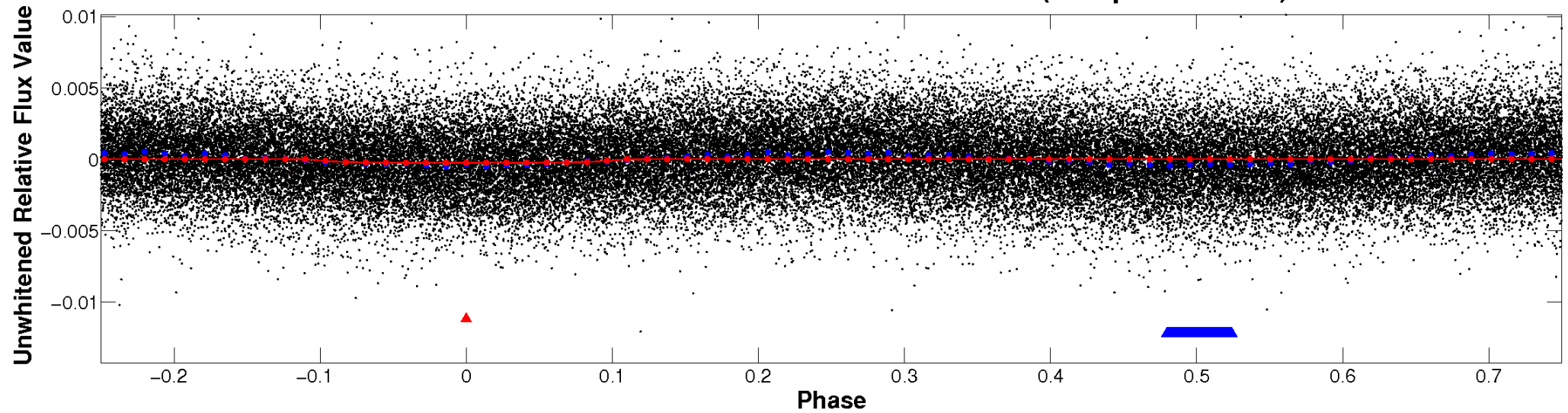
ALT Odd/Even

TCE 005979866-01

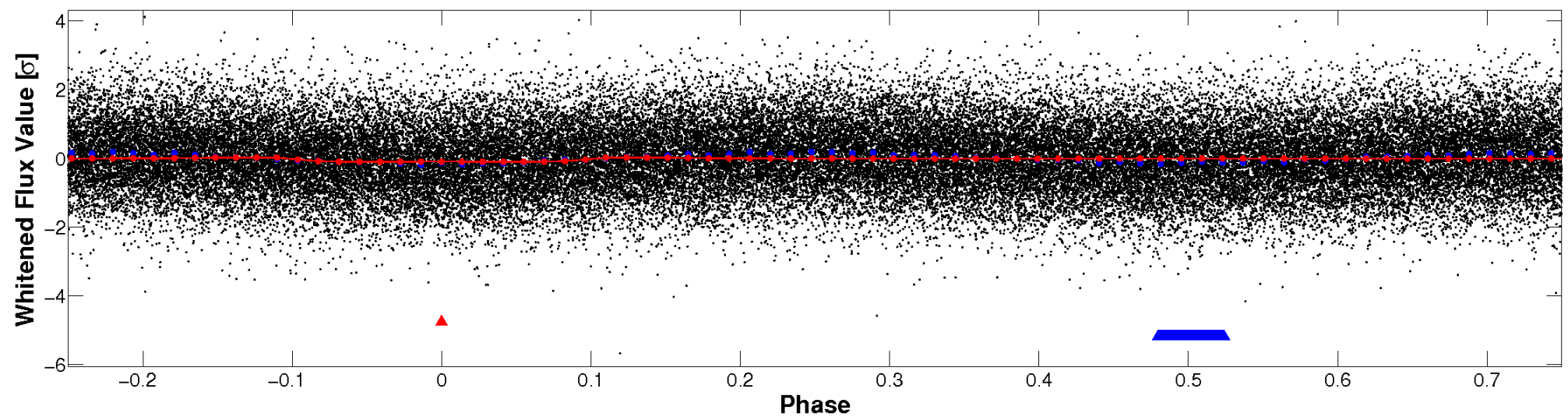


Non-Whitened Vs. Whitened Light Curve

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

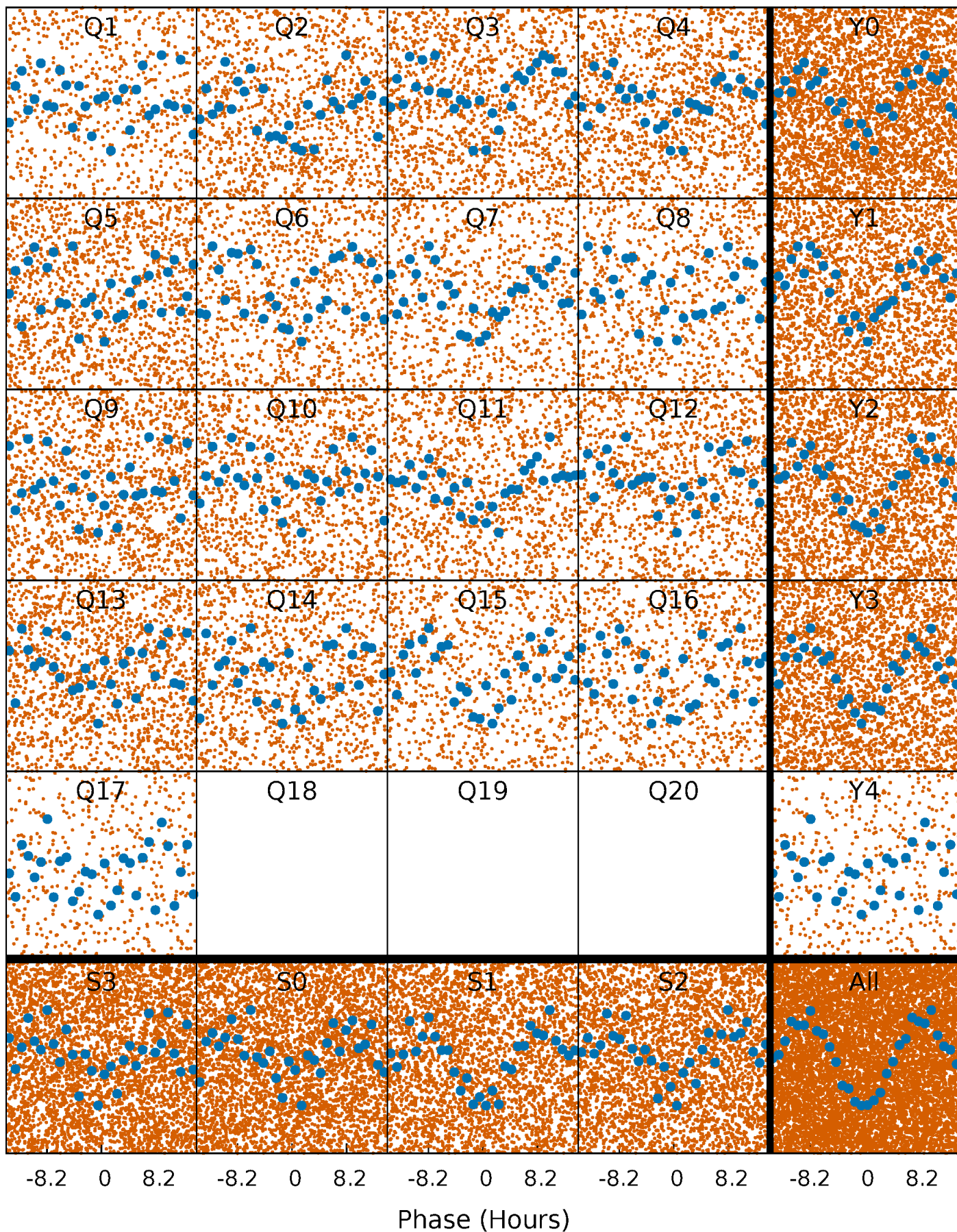


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



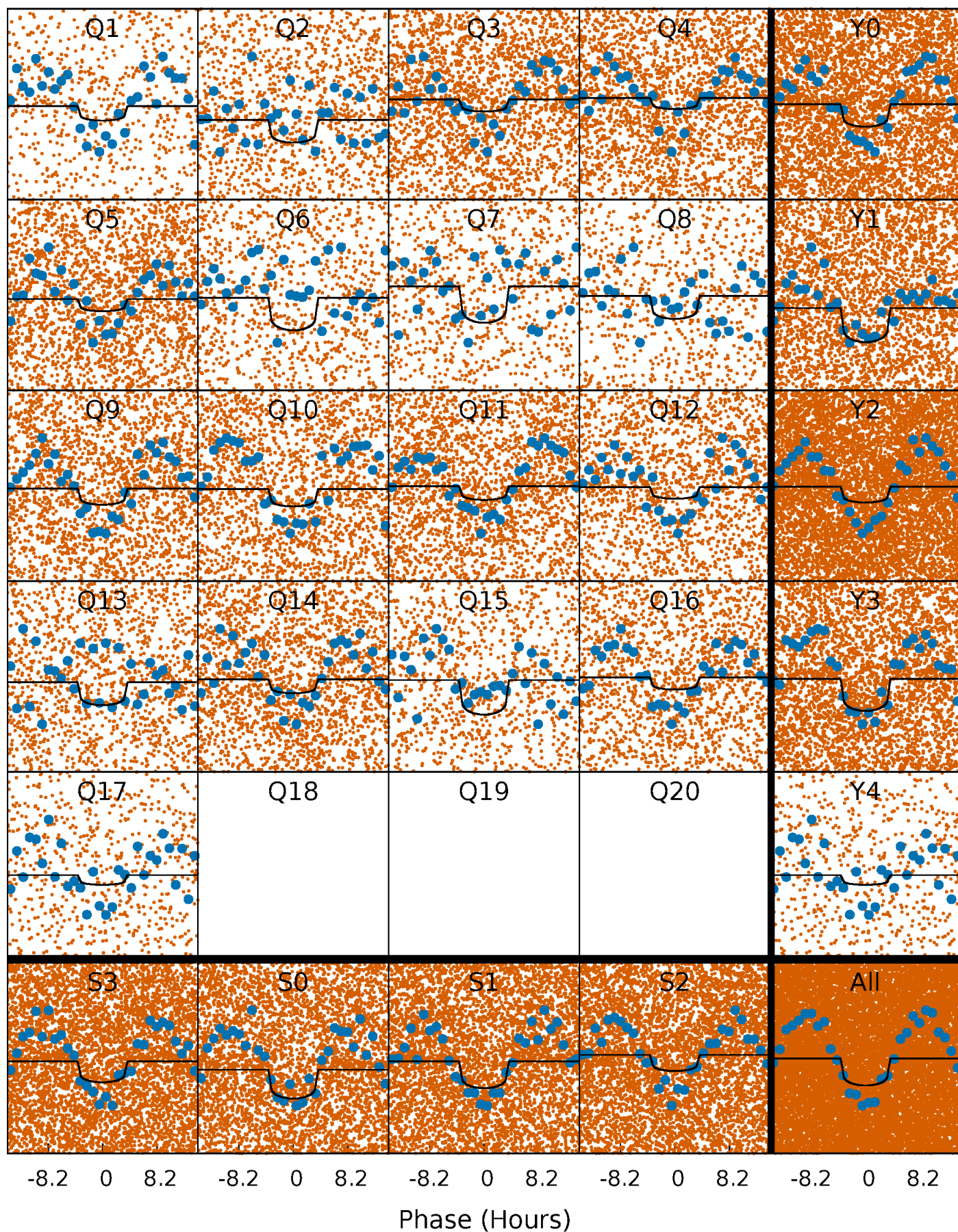
PDC Quarter-Phased Transit Curves

TCE 005979866-01 P= 1.485076 Days $T_0=131.503461$ (BKJD)



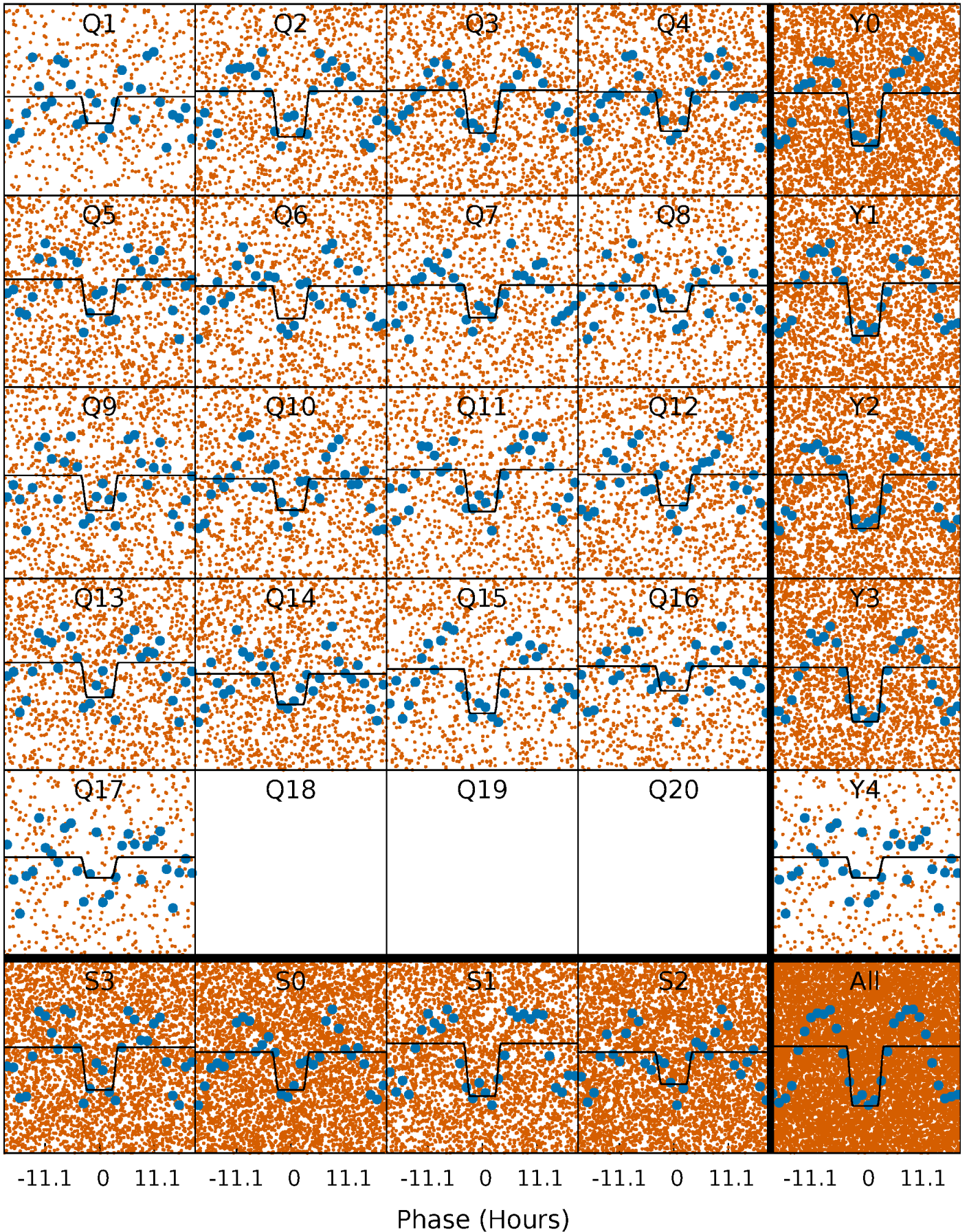
DV Quarter-Phased Transit Curves

TCE 005979866-01 P= 1.485076 Days $T_0=131.503461$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

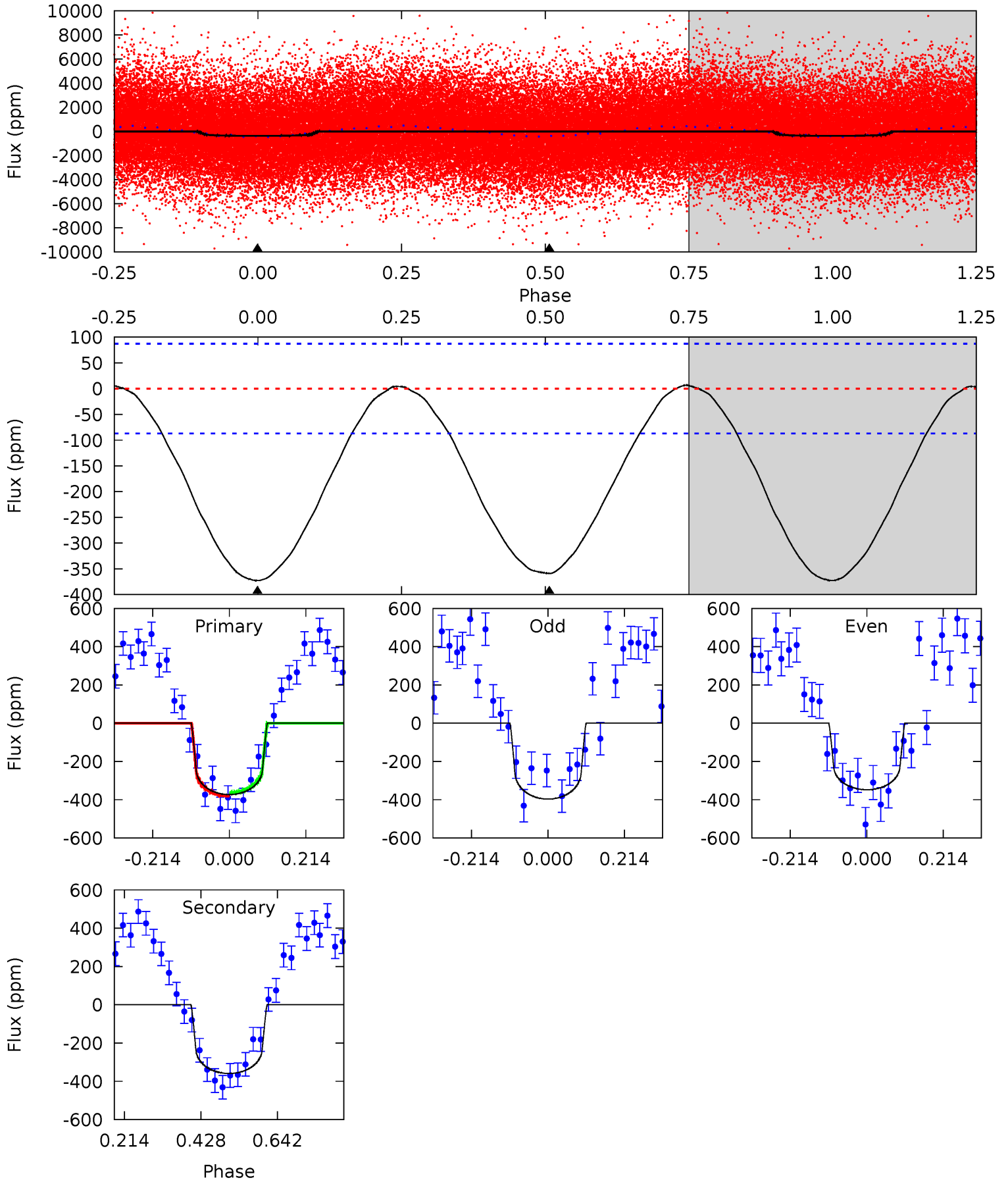
TCE 005979866-01 P= 1.485056 Days $T_0=131.510761$ (BKJD)



DV Model-Shift Uniqueness Test

005979866-01, P = 1.485076 Days, E = 131.503461 Days

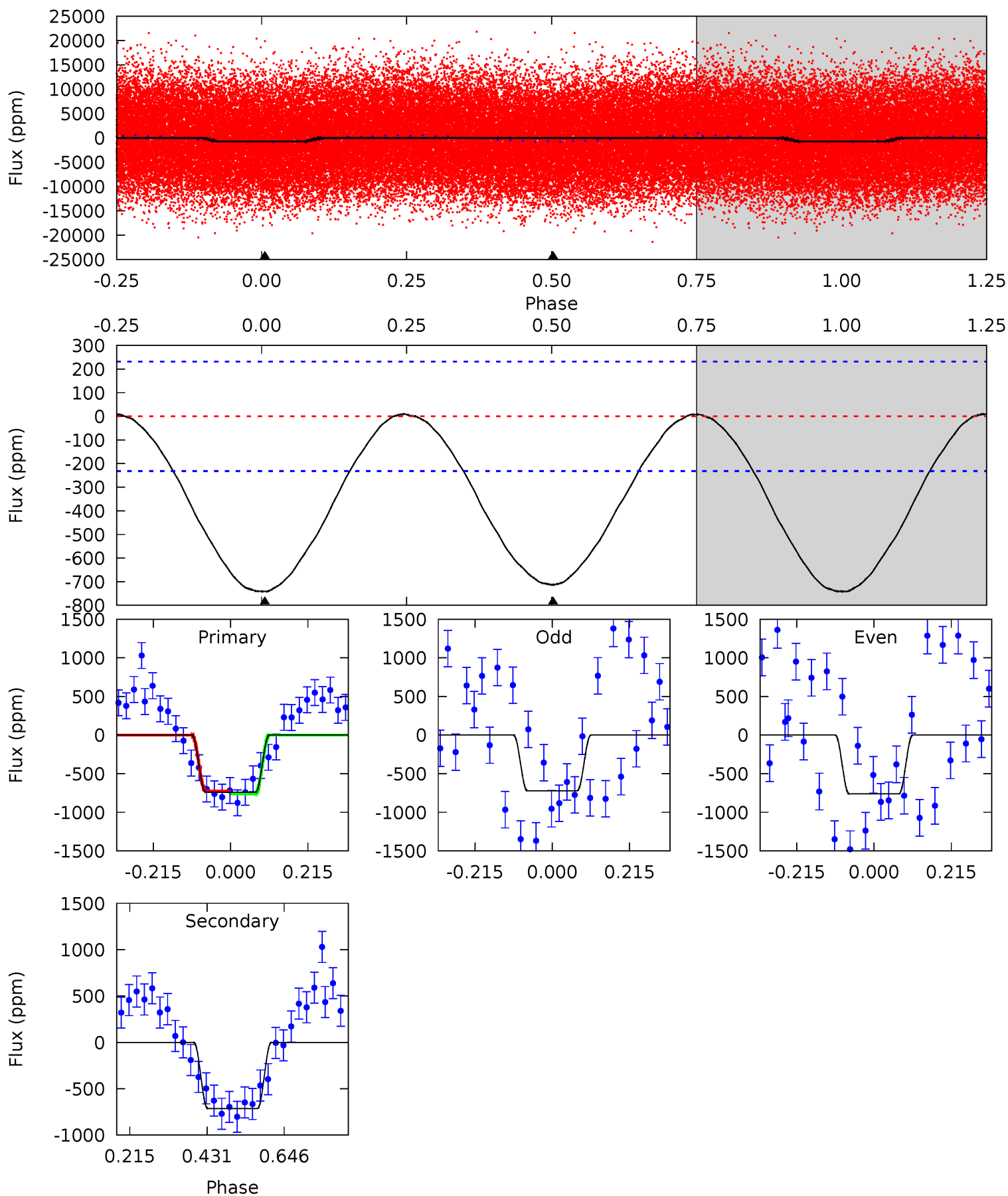
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.8	18.1	0	0	4.40	1.24	0.35	18.8	18.8	18.1	18.1	1.23	1.02	0.02	0.44



Alt Model-Shift Uniqueness Test

005979866-01, P = 1.485056 Days, E = 131.510761 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.1	13.5	0	0	4.40	1.24	0.21	14.1	14.1	13.5	13.5	0.38	1.02	0.01	0.35



Stellar Parameters For KIC 005979866

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7230^{+200}_{-343}	$4.116^{+0.105}_{-0.195}$	$0.200^{+0.150}_{-0.350}$	$1.864^{+0.590}_{-0.318}$	$1.657^{+0.204}_{-0.249}$	$0.361^{+0.212}_{-0.179}$
	+3%/-5%	+3%/-5%	+75%/-175%	+32%/-17%	+12%/-15%	+59%/-50%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 005979866-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-359 ± 20	$4.23^{+3.14}_{-2.64}$	3526^{+258}_{-222}	6905^{+7248}_{-1739}	10^{+61}_{-7}
Alt.	-713 ± 53	$6.53^{+3.61}_{-3.72}$	3523^{+280}_{-206}	6540^{+4774}_{-1358}	$8.243^{+35.524}_{-4.791}$

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

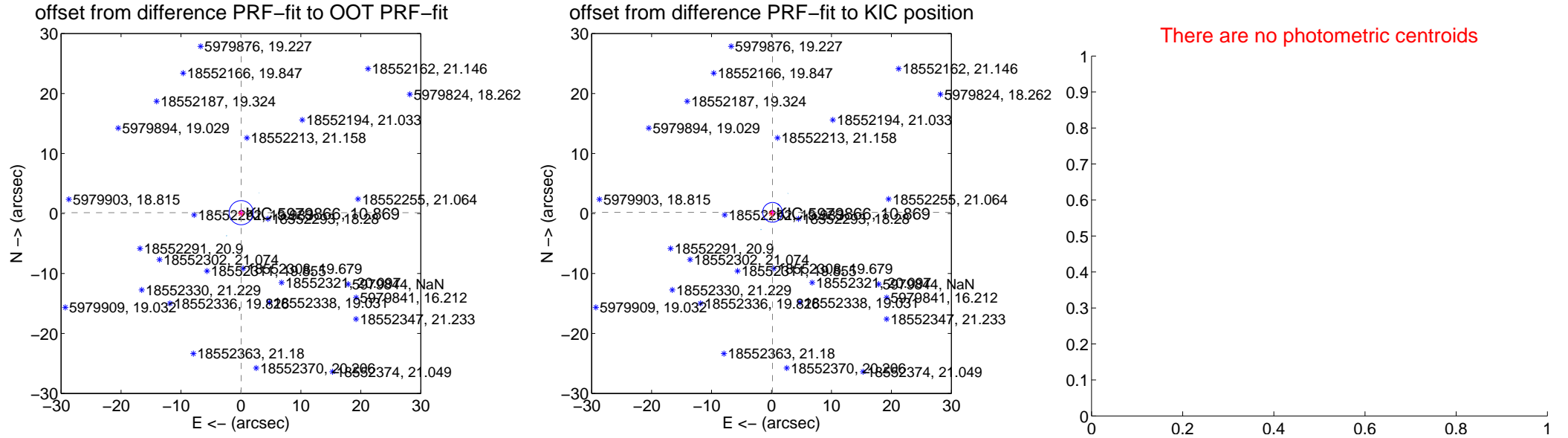
DV Centroid Data

Supplemental centroid analysis for 005979866-01. **Kepler magnitude: 10.87**. Transit SNR 10.62

There are 13 quarters with good PRF difference image offsets

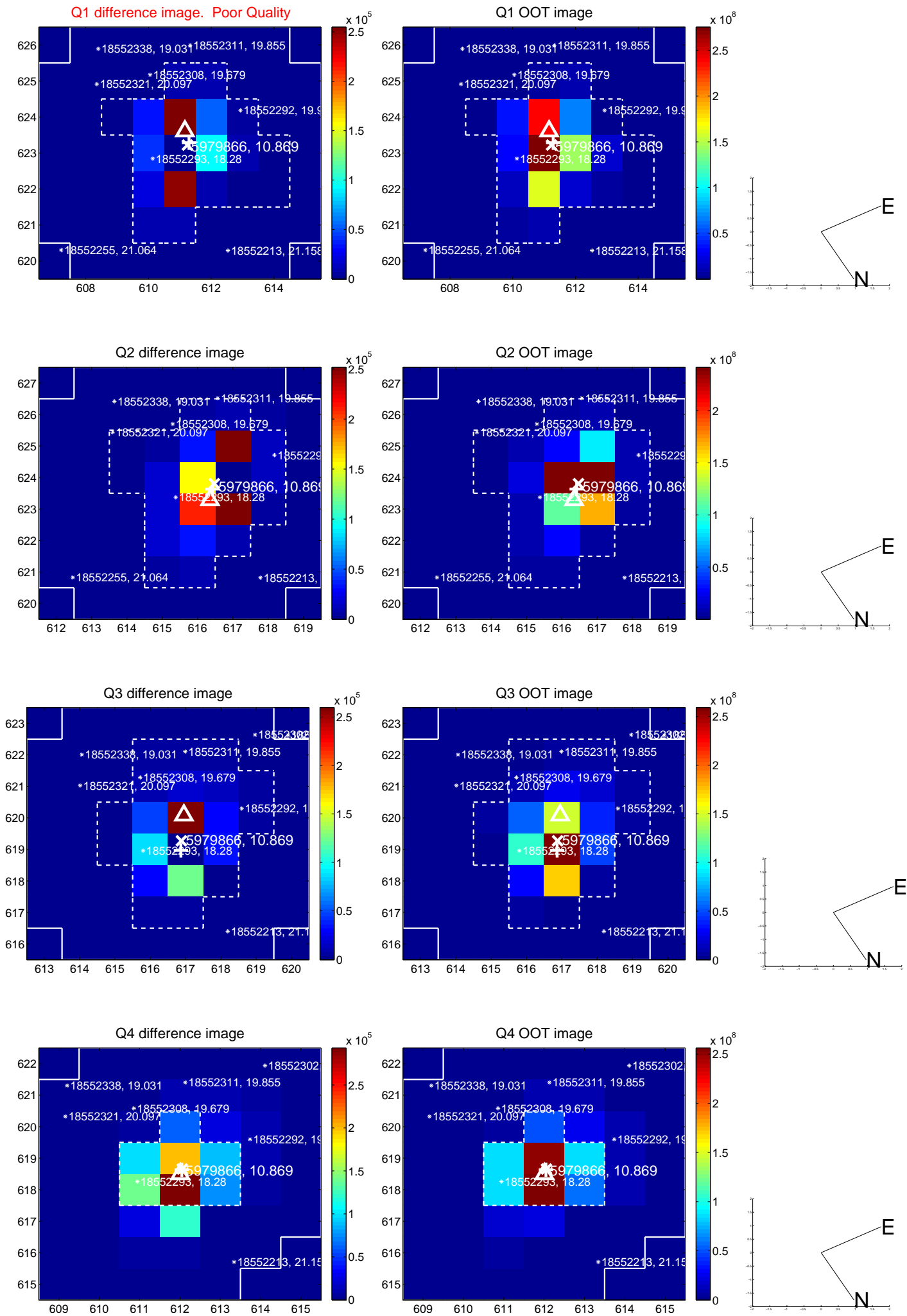
The direct PRF centroid is offset from the target star catalog position by about 0.32 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.142 ± 0.671	0.21	-0.040 ± 0.419	0.136 ± 0.581
PRF-fit source offset from KIC position	0.257 ± 0.547	0.47	-0.168 ± 0.339	0.195 ± 0.442
photometric centroid source offset	—	—	—	—

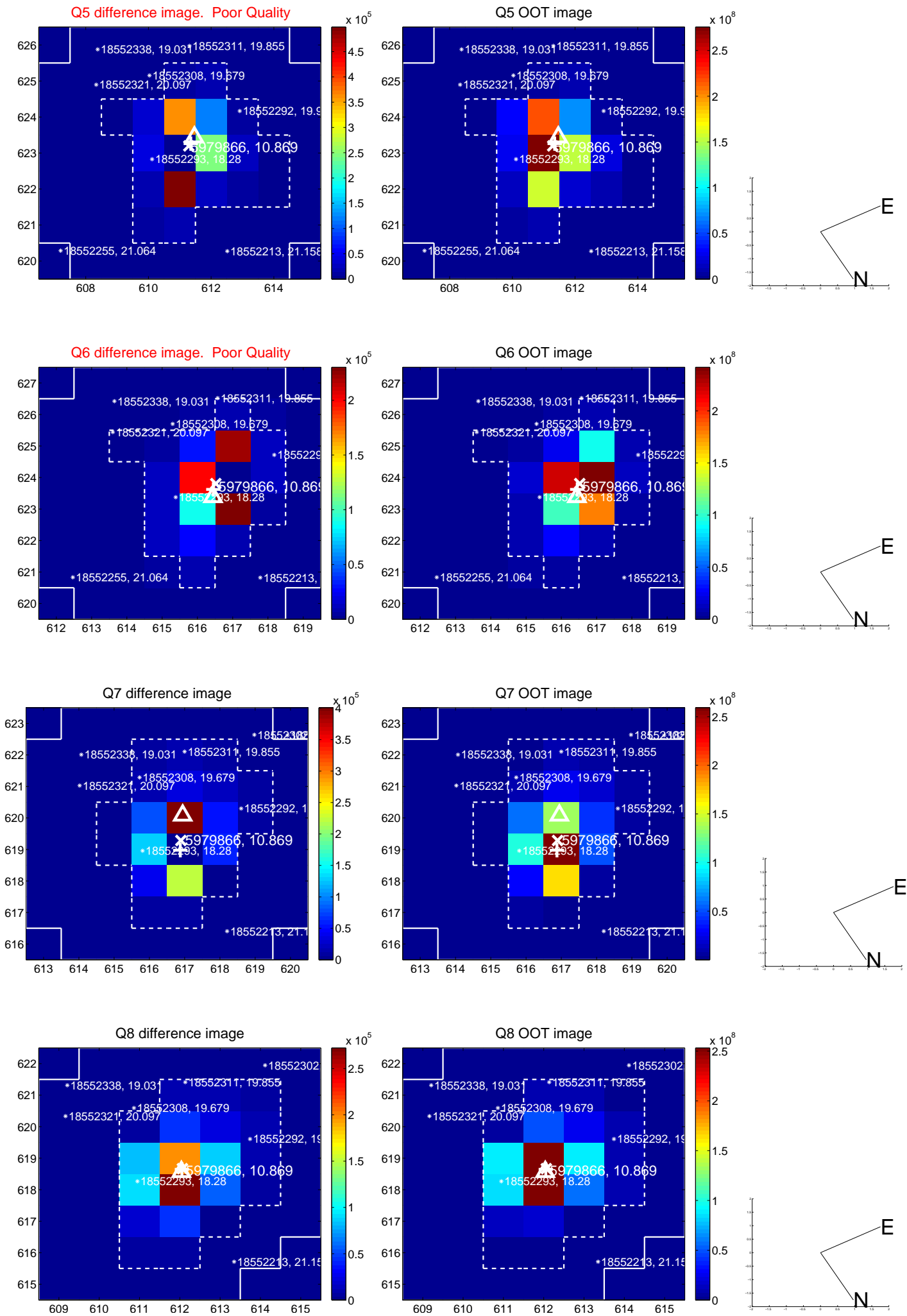


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

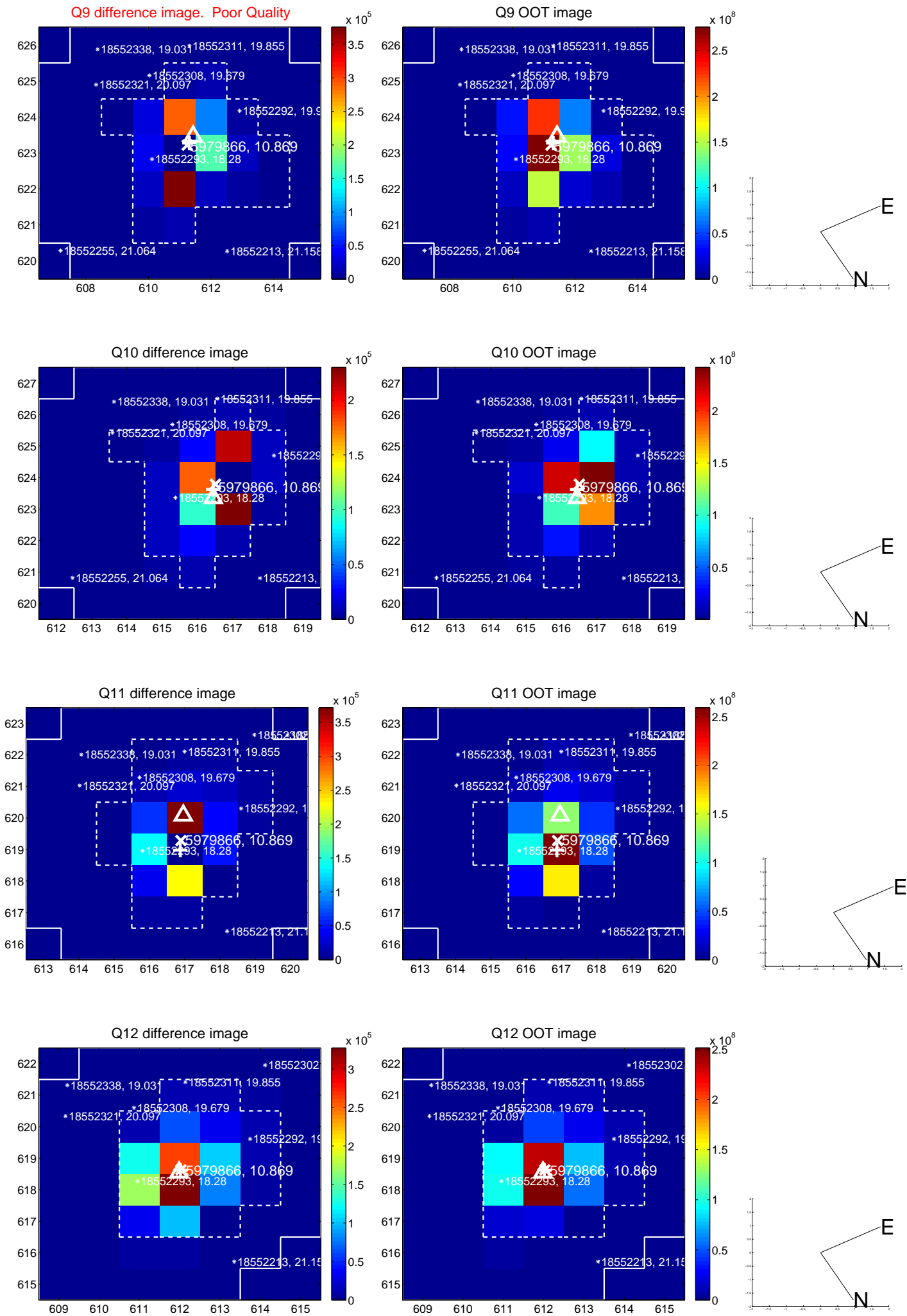
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



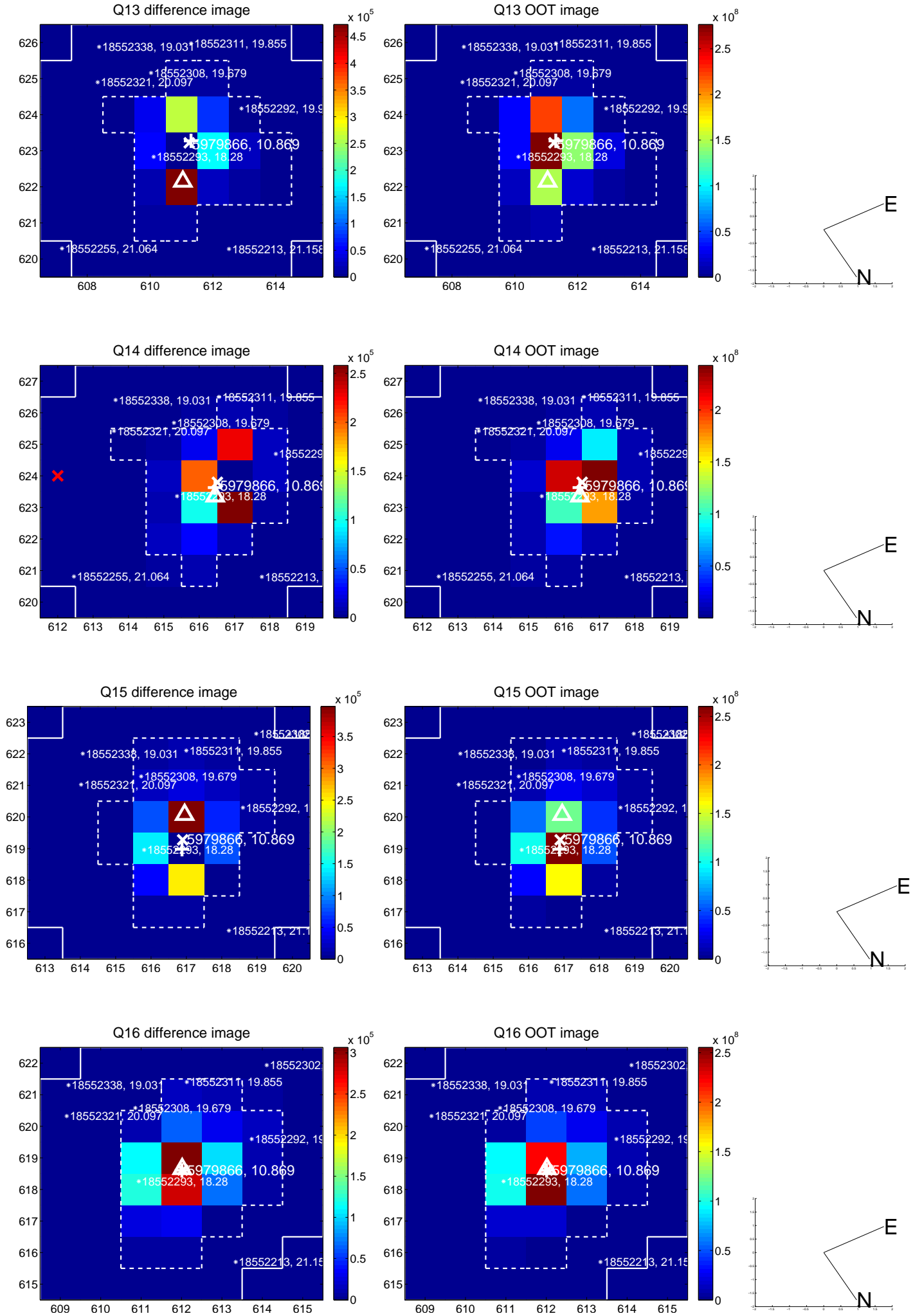
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



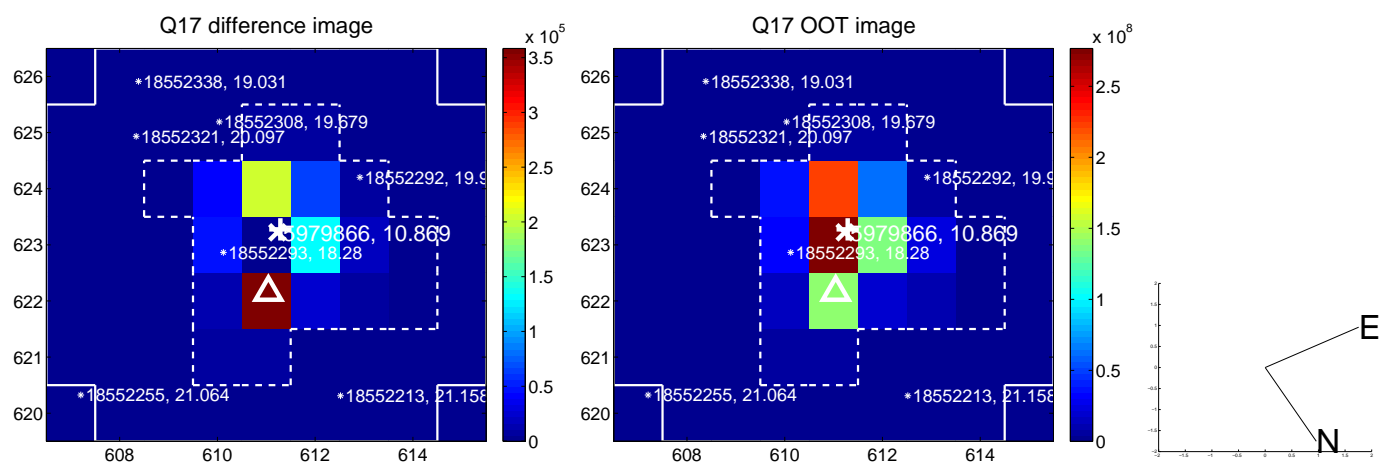
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



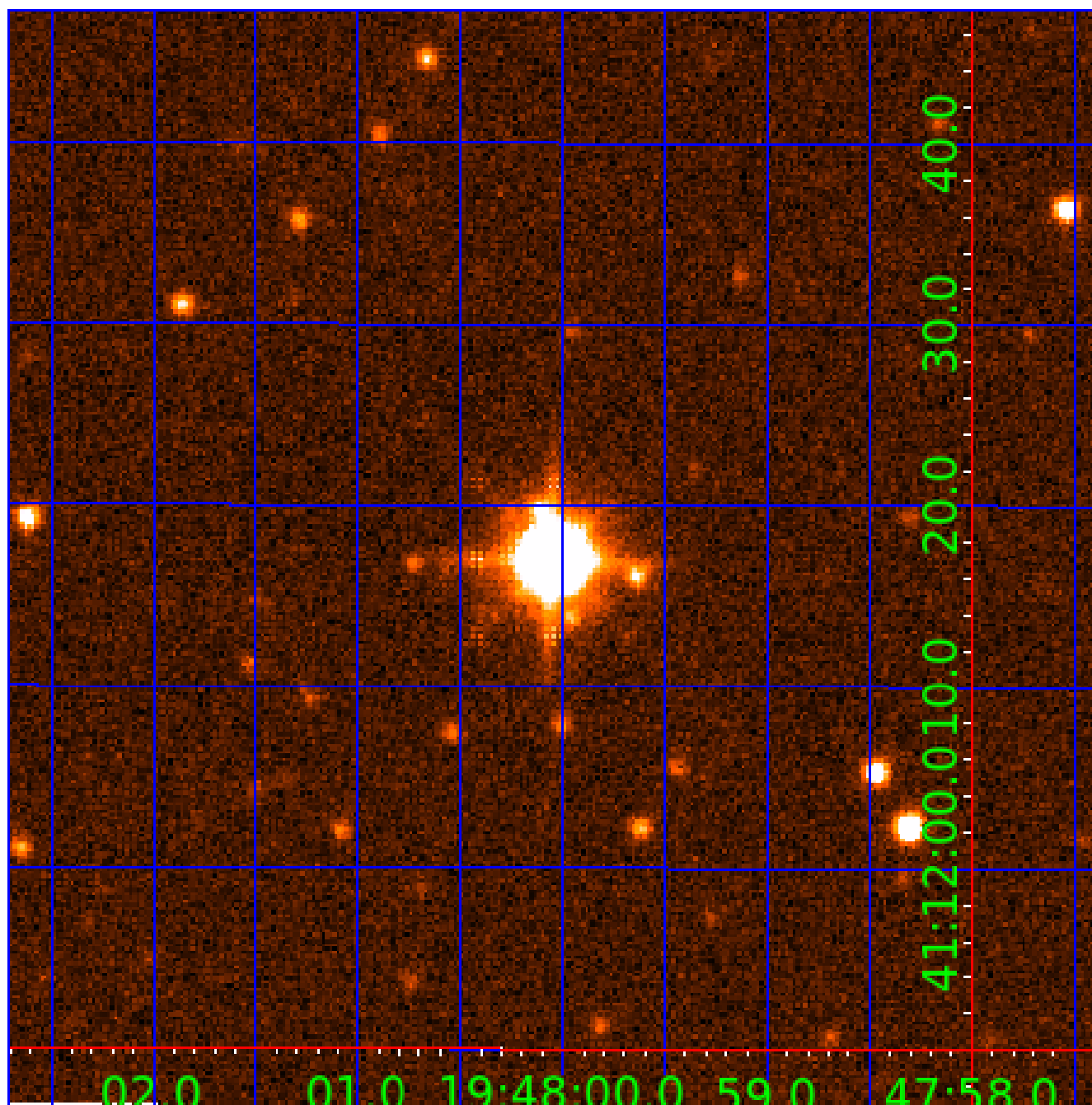
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 005979866

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})
005979866-01	OBS	No	1.485076	131.503461	253.9	7.182	10.3	10.6	1.86	7230	3.01	9362.96
005979866-02	OBS	No	1.485009	132.281661	269.2	6.769	10.7	12.4	1.86	7230	3.23	9363.53

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005979866-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_SATURATED
005979866-02	OBS	FP	0.00	1	0	0	0	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.

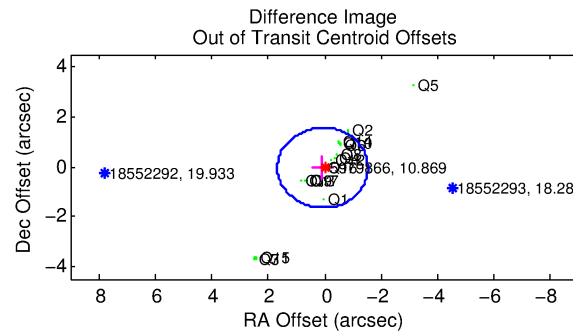
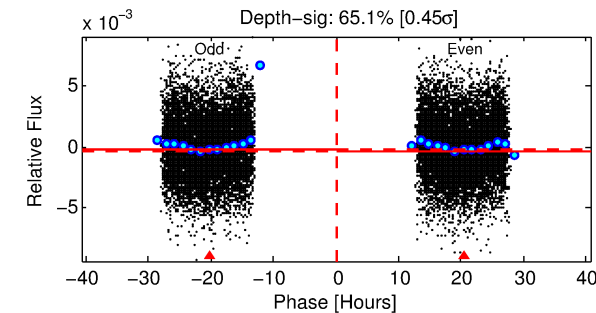
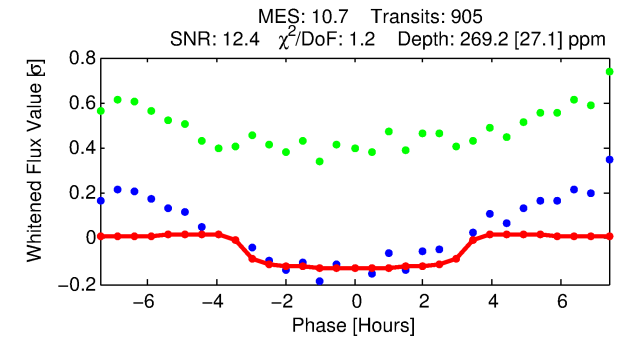
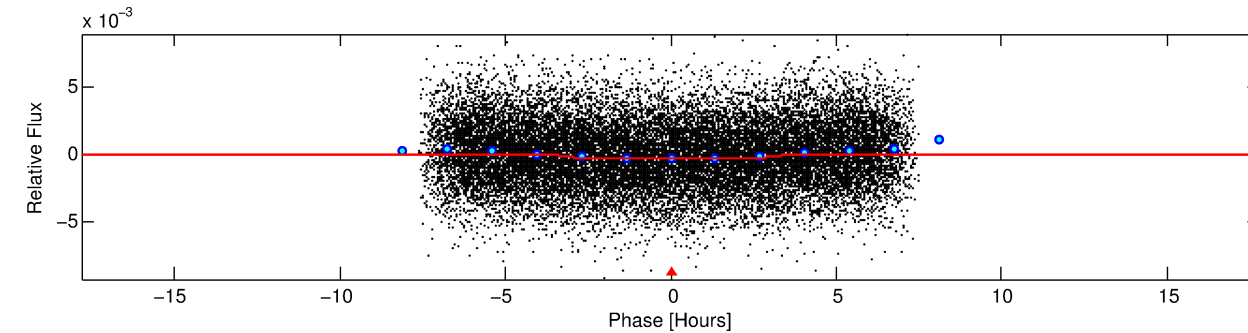
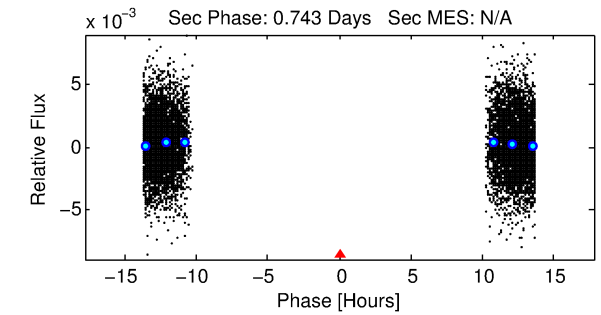
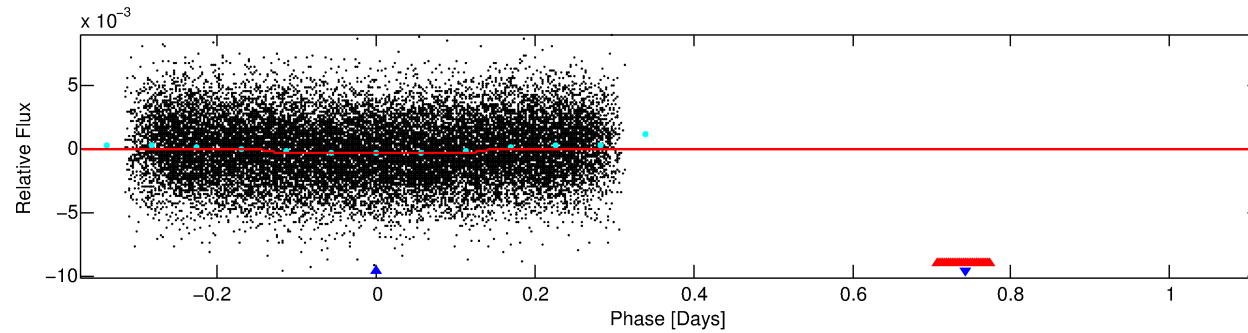
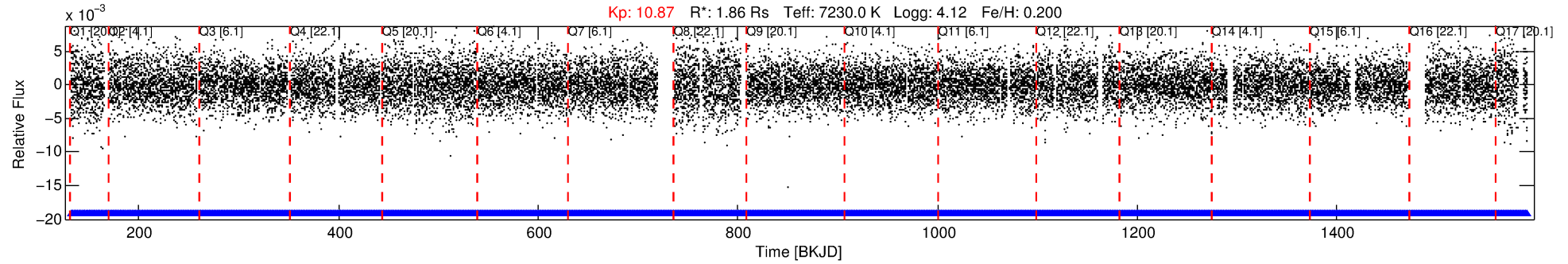
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005979866-02

No Significant Match Found

DV One-Page Summary

KIC: 5979866 Candidate: 2 of 2 Period: 1.485 d



DV Fit Results:

Period = 1.48501 [0.00002] d
Epoch = 132.2817 [0.0065] BKJD
Rp/R* = 0.0159 [0.0133]
a/R* = 1.56 [4.63]
b = 0.62 [5.03]
Seff = 9363.53 [3862.28]
Teq = 2508 [259] K
Rp = 3.23 [2.89] Re
a = 0.0301 [0.0078] AU

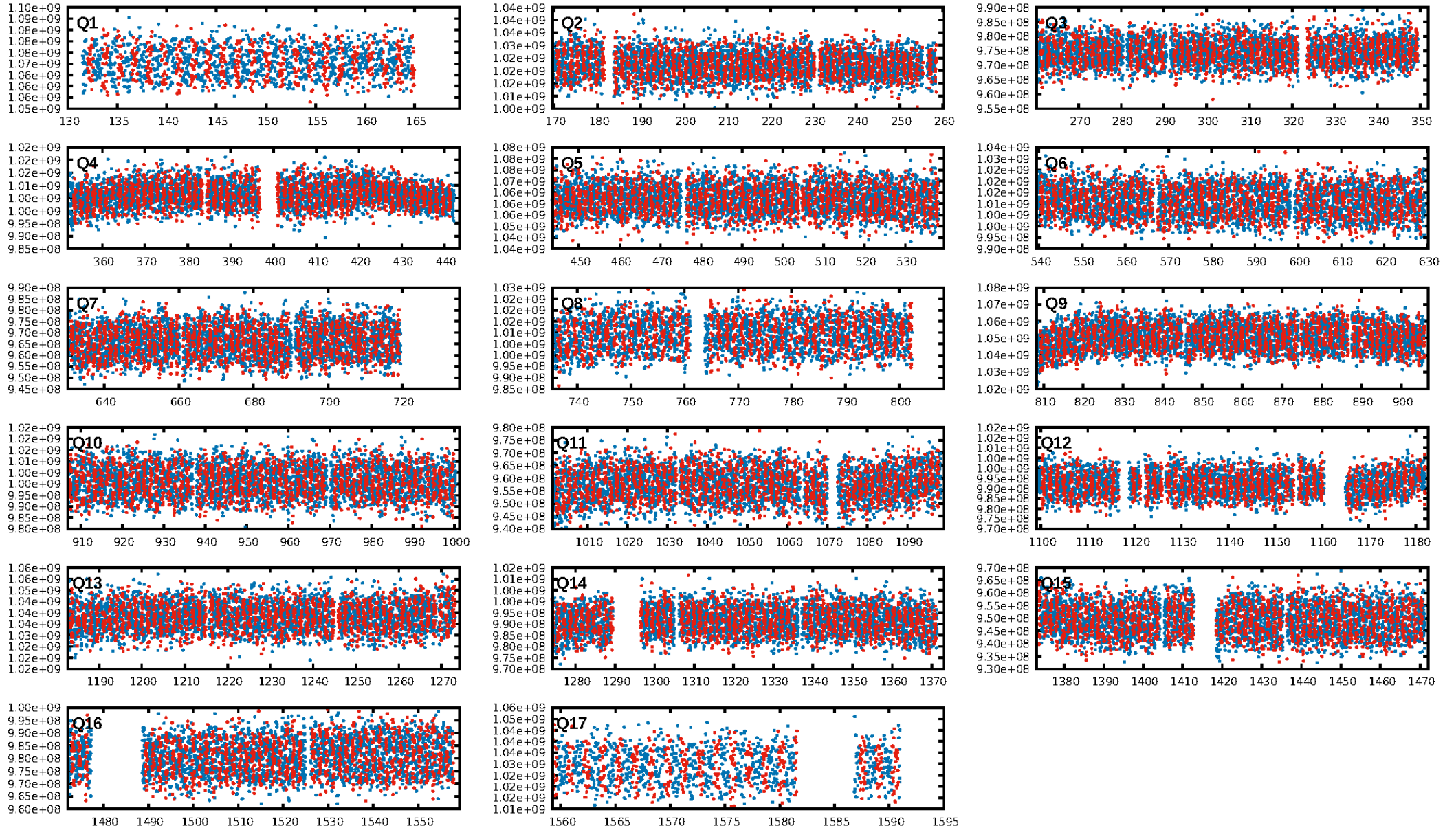
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [863/863]
GhostDiagnostic-chr: 1.983
Centroid-sig: 1.1%
Centroid-so: 0.431 arcsec [3.28σ]
OotOffset-rm: 0.087 arcsec [0.16σ]
KicOffset-rm: 0.189 arcsec [0.38σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.76 [13/17]
DiffImageOverlap-fno: 1.00 [17/17]

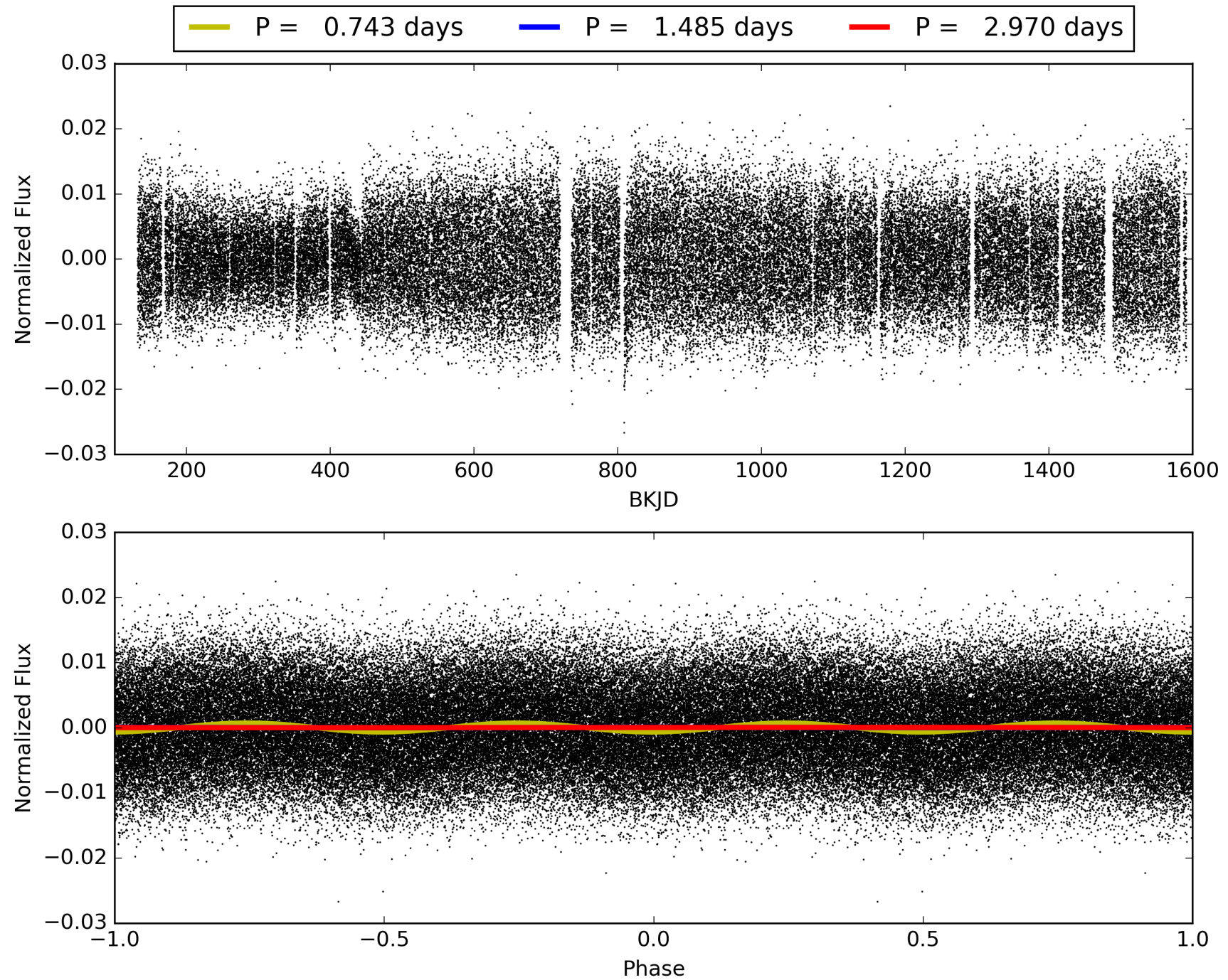
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 09:57:42 Z

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

TCE 005979866-02, PDC Light Curves

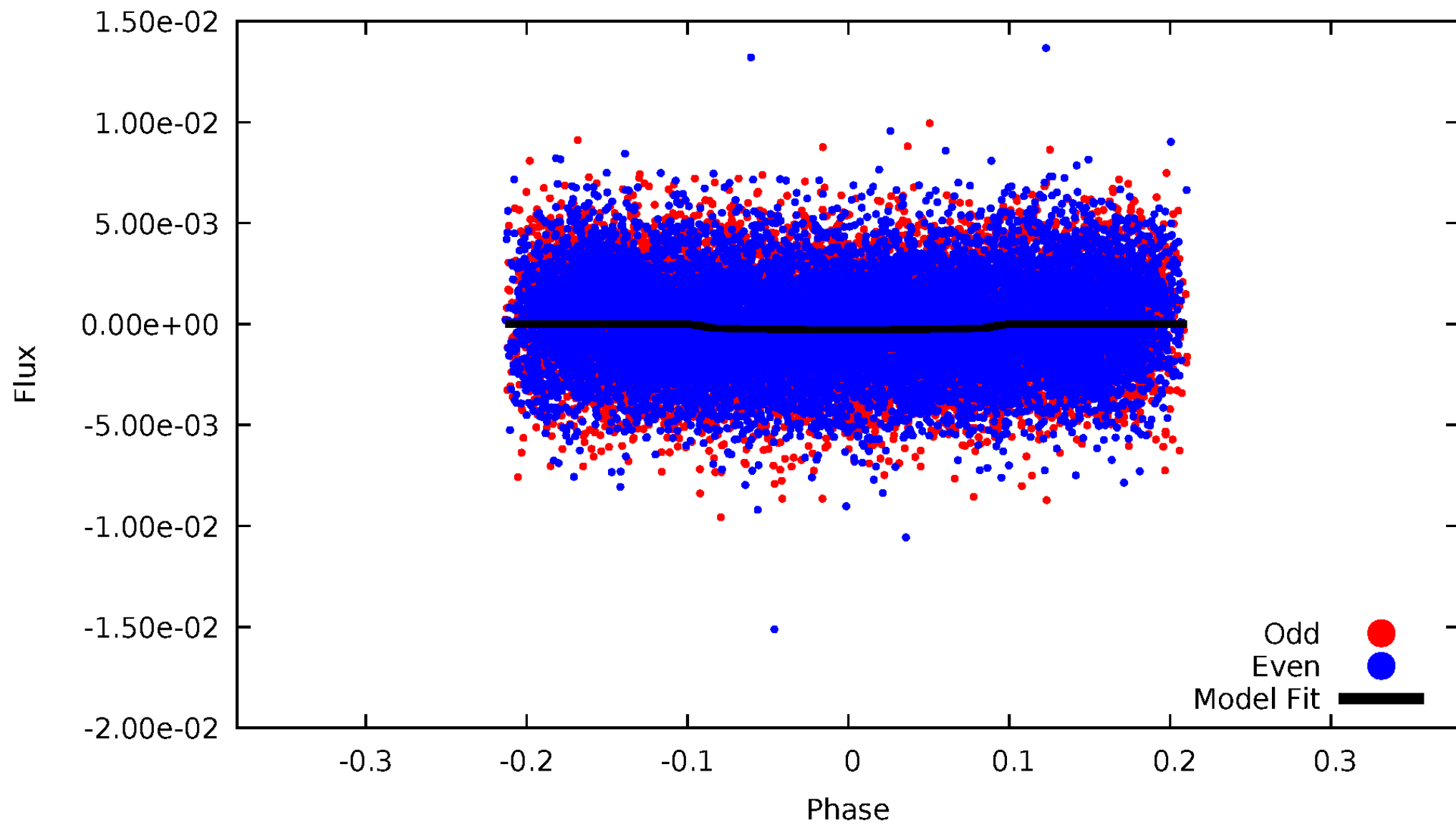


TCE 005979866-02



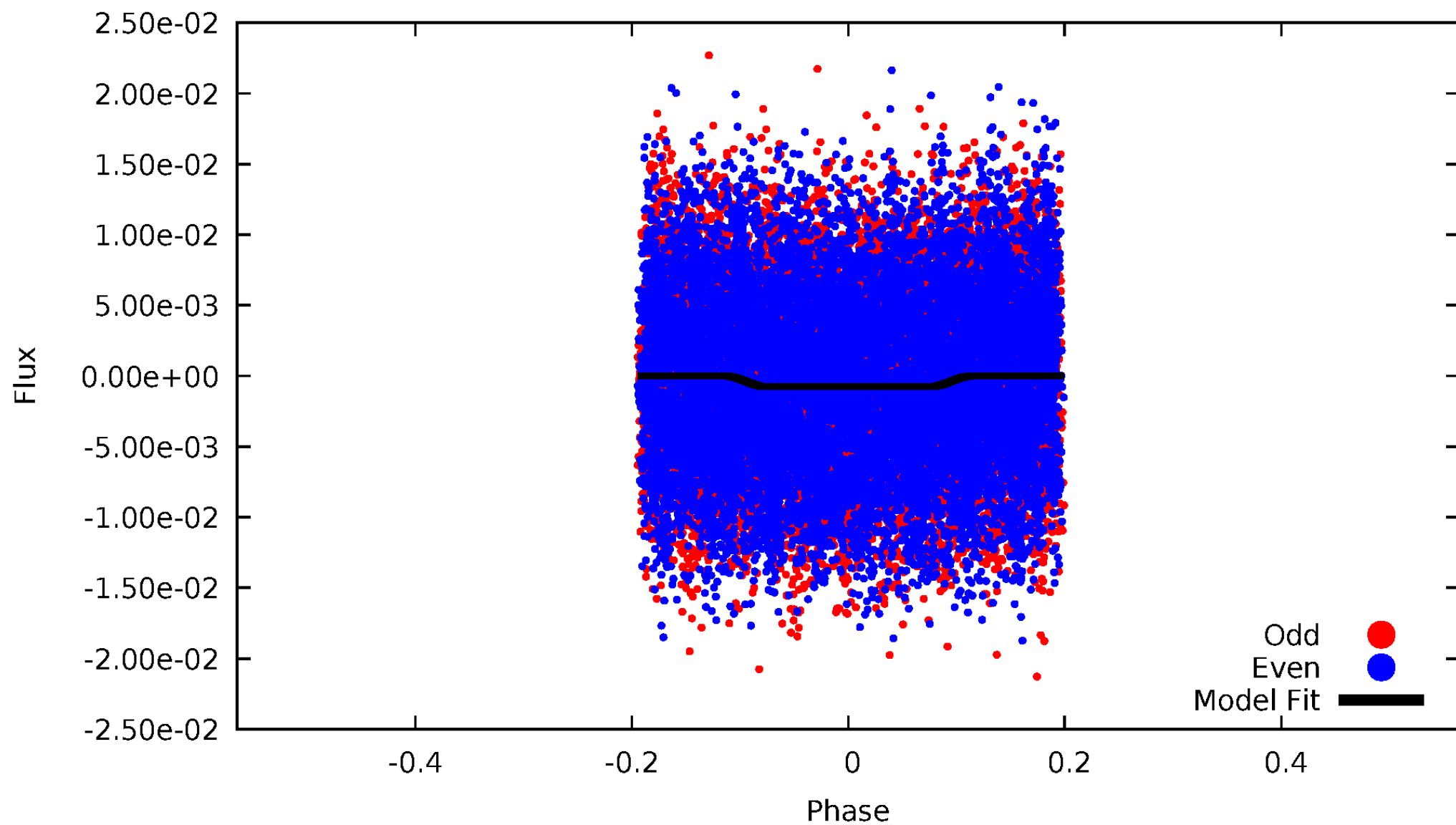
DV Odd/Even

TCE 005979866-02



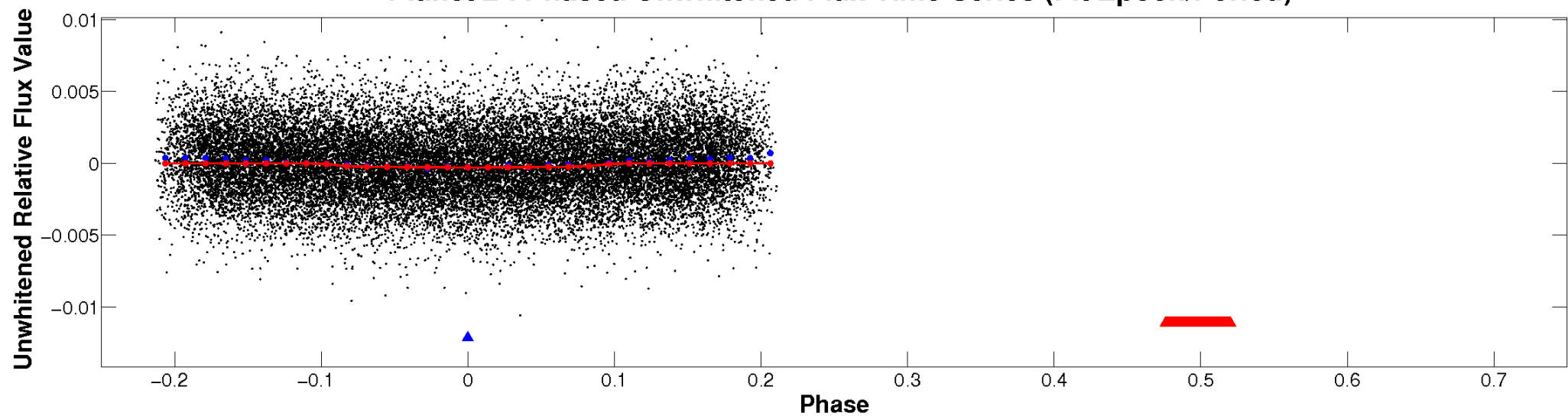
ALT Odd/Even

TCE 005979866-02

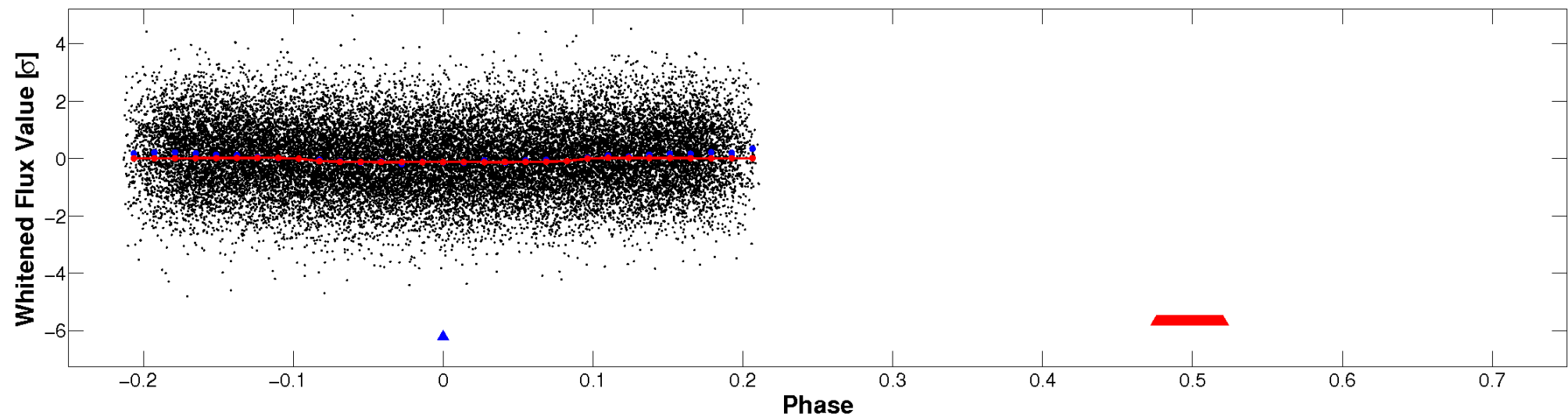


Non-Whitened Vs. Whitened Light Curve

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

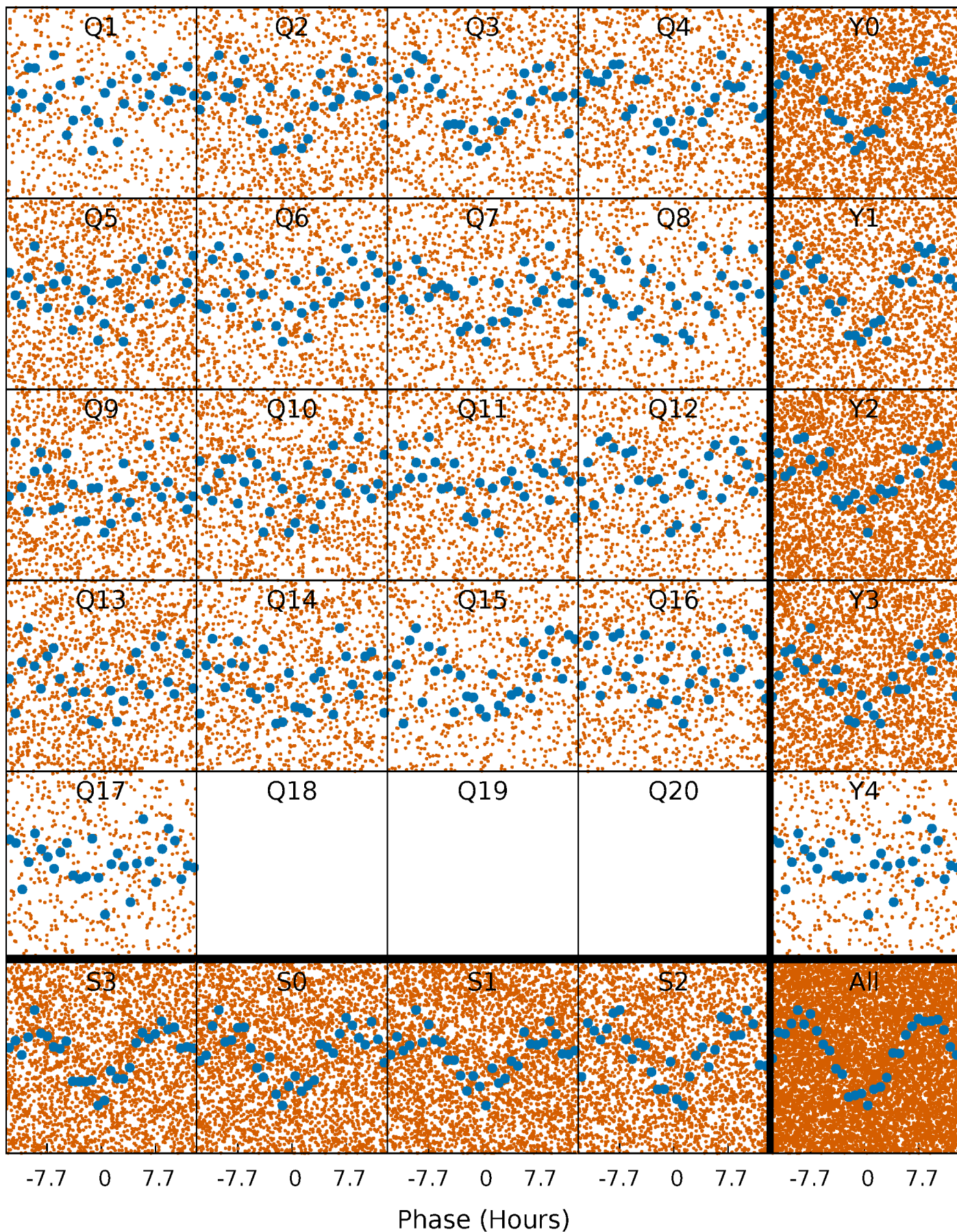


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



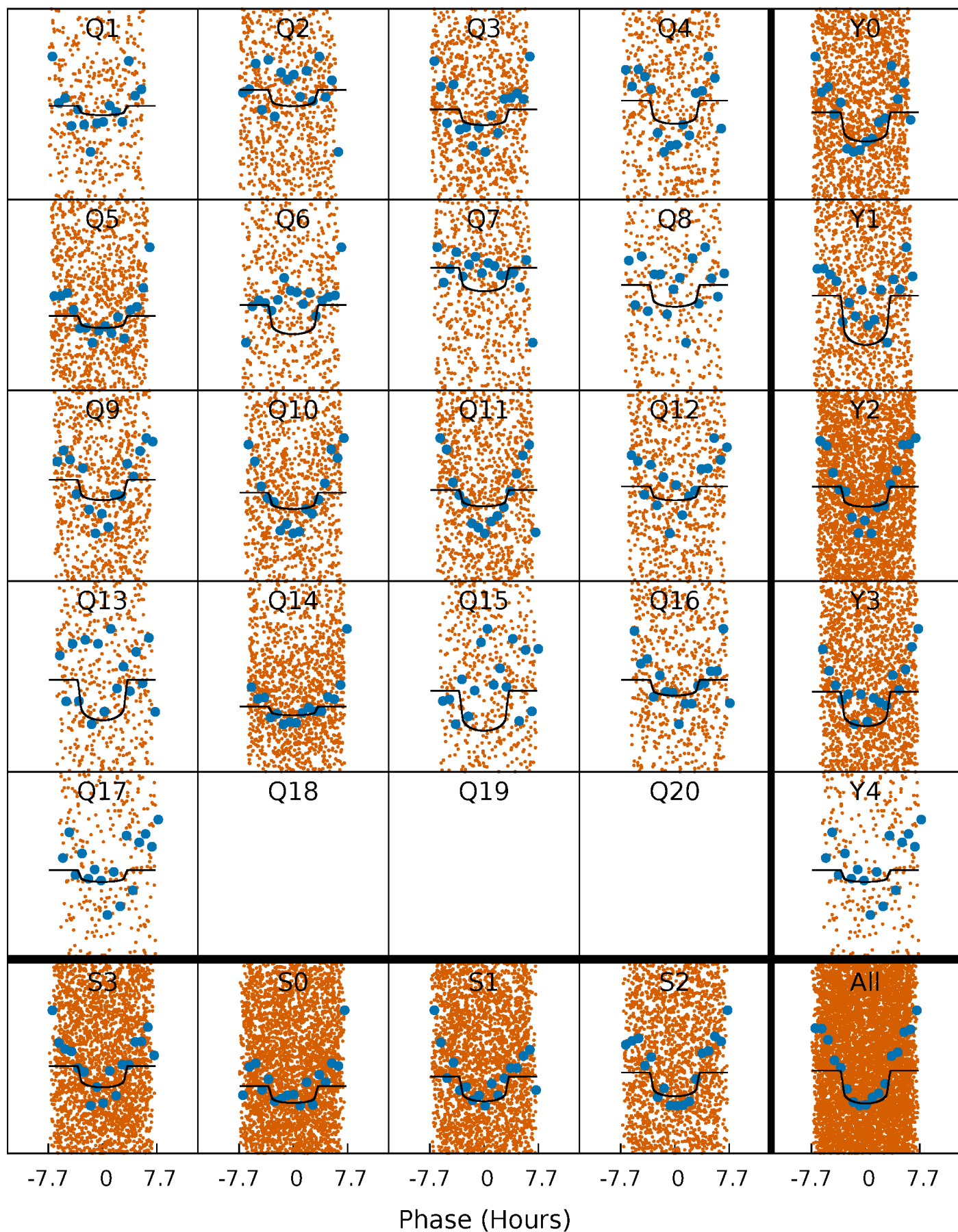
PDC Quarter-Phased Transit Curves

TCE 005979866-02 P= 1.485009 Days $T_0=132.281661$ (BKJD)



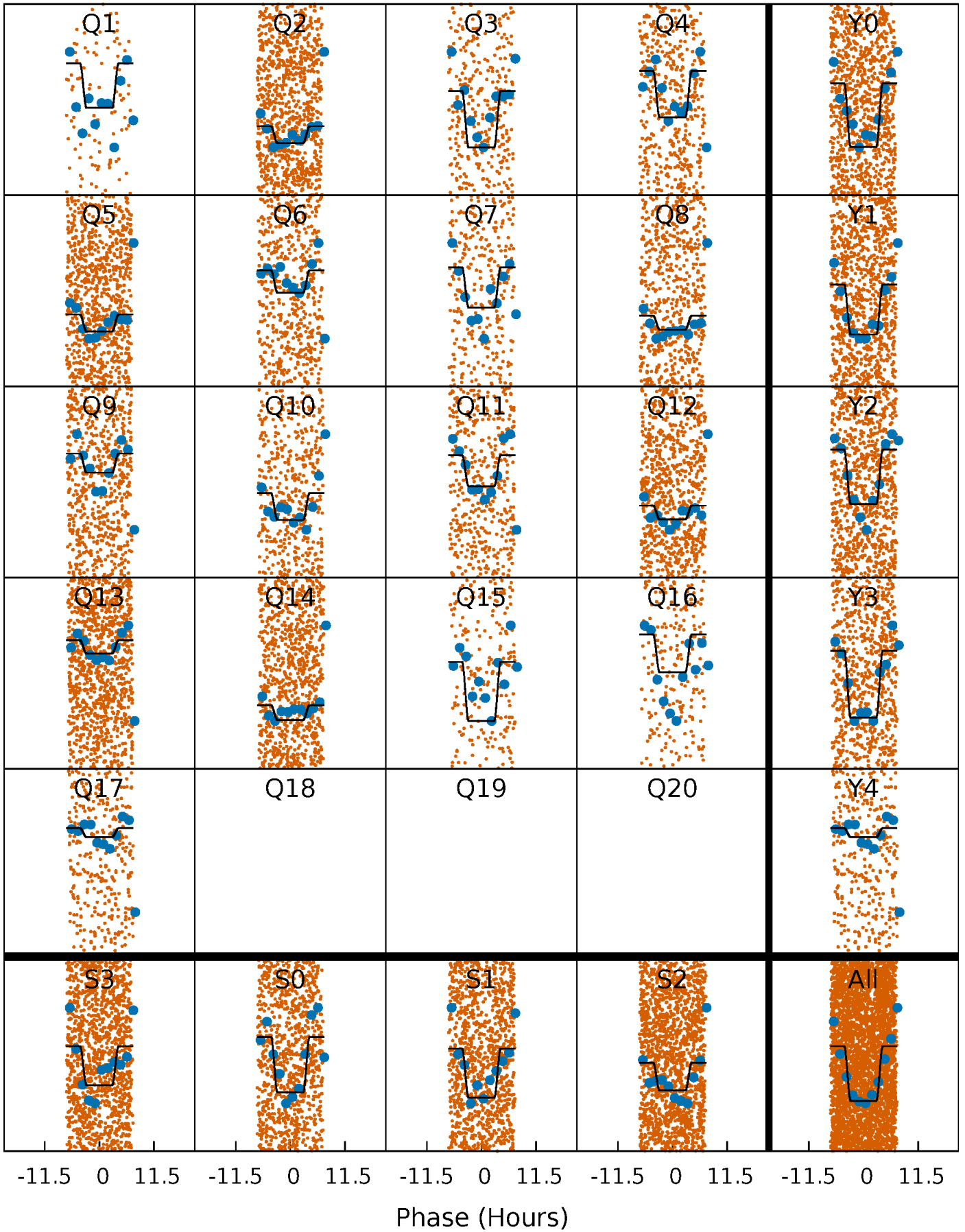
DV Quarter-Phased Transit Curves

TCE 005979866-02 P= 1.485009 Days $T_0=132.281661$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

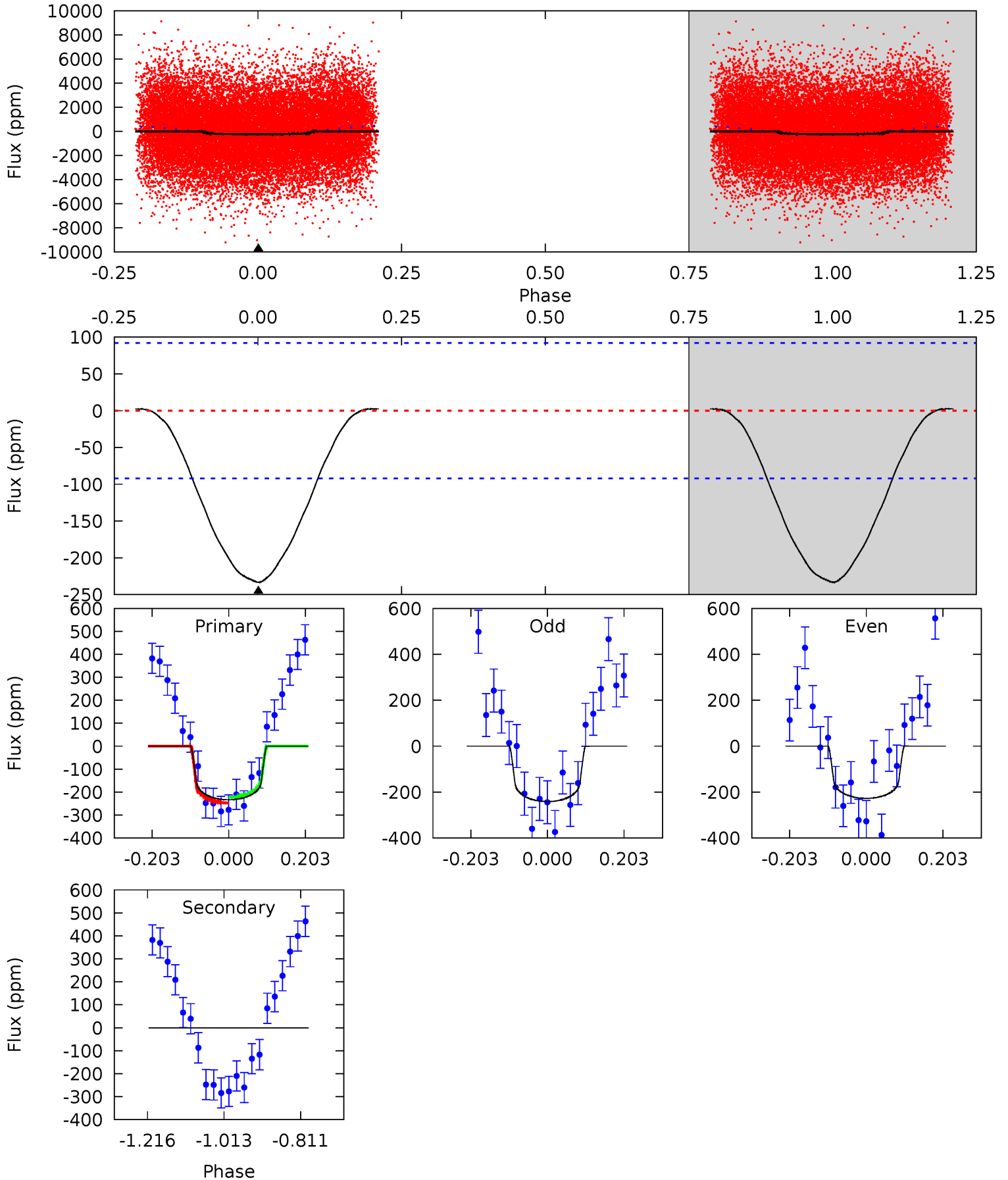
TCE 005979866-02 P= 1.485056 Days $T_0=132.252913$ (BKJD)



DV Model-Shift Uniqueness Test

005979866-02, P = 1.485009 Days, E = 130.796652 Days

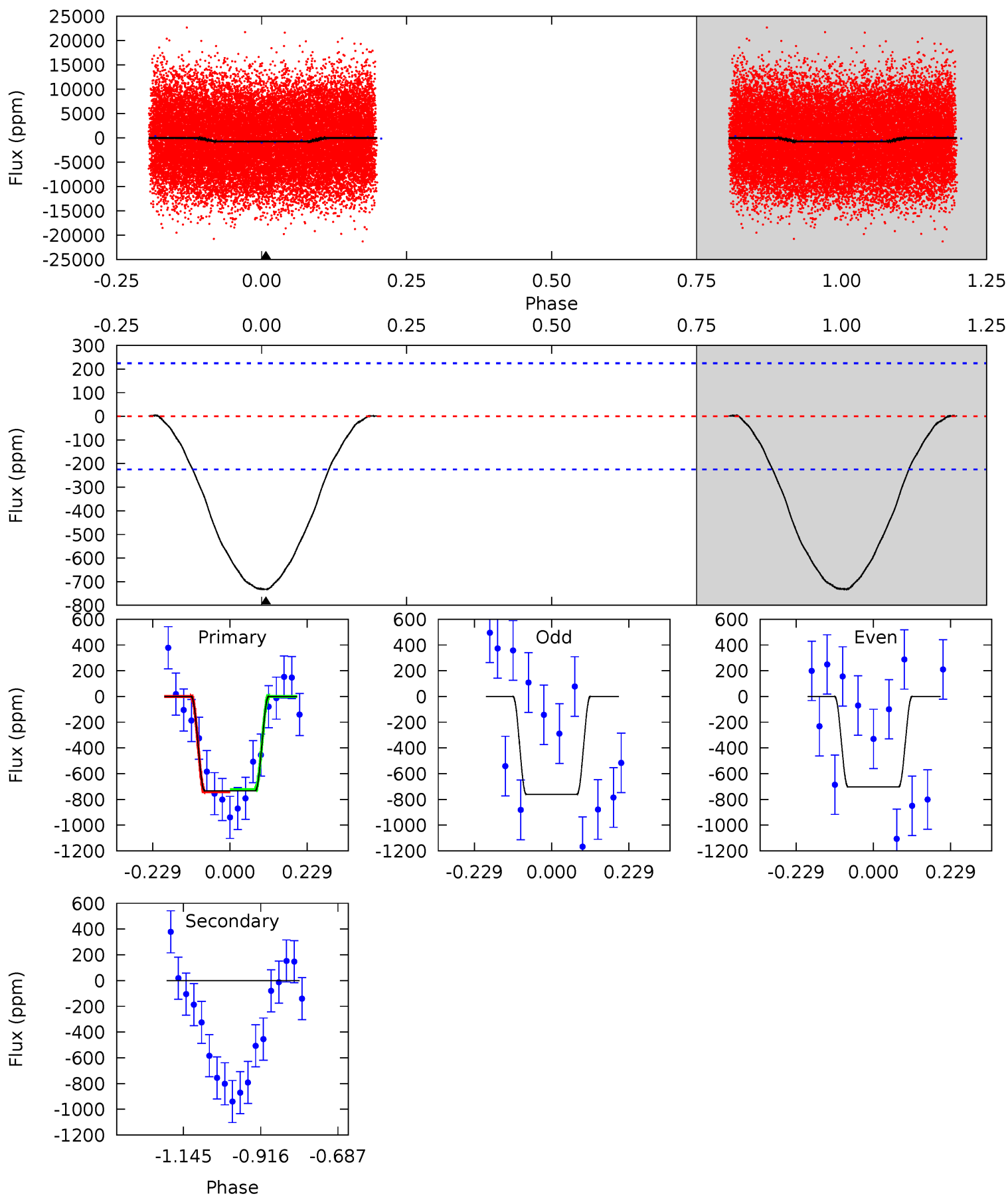
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.2	0	0	0	4.41	1.27	0.16	11.2	11.2	0	0	0.34	1.01	0.01	0.61



Alt Model-Shift Uniqueness Test

005979866-02, P = 1.485056 Days, E = 130.767857 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.3	0	0	0	4.39	1.20	0.21	14.3	14.3	0	0	0.57	1.00	0.01	0.19



Stellar Parameters For KIC 005979866

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7230^{+200}_{-343}	$4.116^{+0.105}_{-0.195}$	$0.200^{+0.150}_{-0.350}$	$1.864^{+0.590}_{-0.318}$	$1.657^{+0.204}_{-0.249}$	$0.361^{+0.212}_{-0.179}$
	+3%/-5%	+3%/-5%	+75%/-175%	+32%/-17%	+12%/-15%	+59%/-50%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 005979866-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 21	$3.67^{+2.47}_{-2.01}$	3524^{+269}_{-219}	-3399^{+7066}_{-1197}	$0.000^{+0.826}_{-1.398}$
Alt.	0 ± 51	$5.90^{+2.99}_{-2.58}$	3538^{+280}_{-222}	-3357^{+7035}_{-1014}	$0.018^{+0.784}_{-0.940}$

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

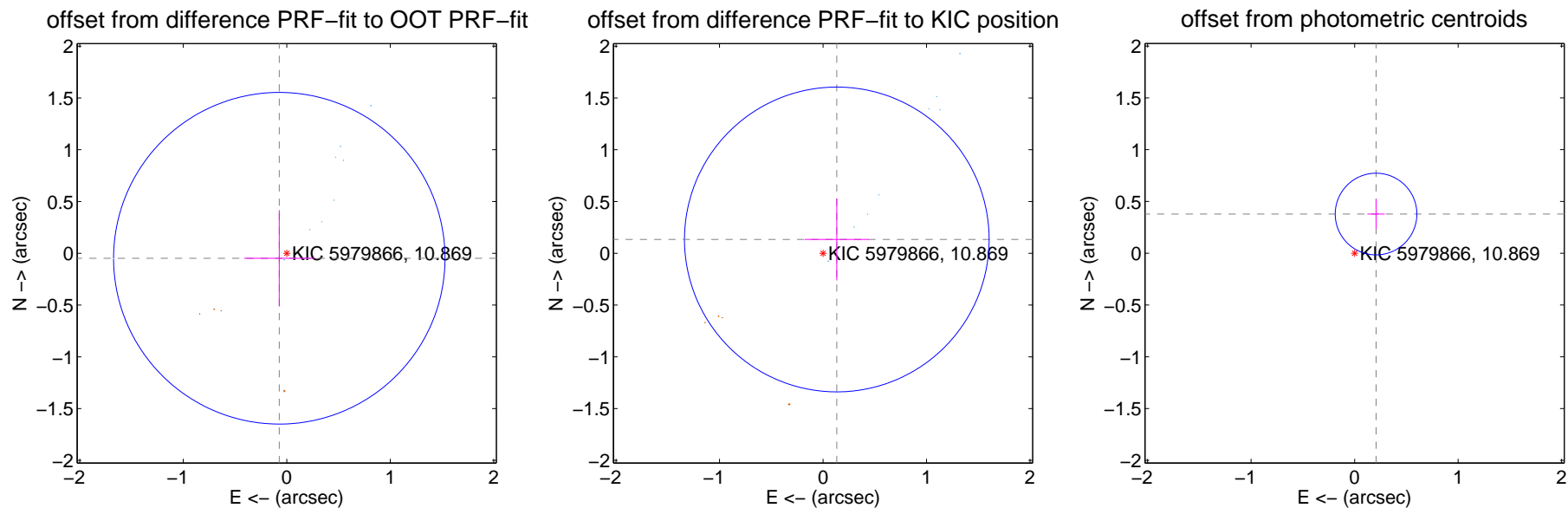
DV Centroid Data

Supplemental centroid analysis for 005979866-02. **Kepler magnitude: 10.87.** Transit SNR 12.41

There are 13 quarters with good PRF difference image offsets

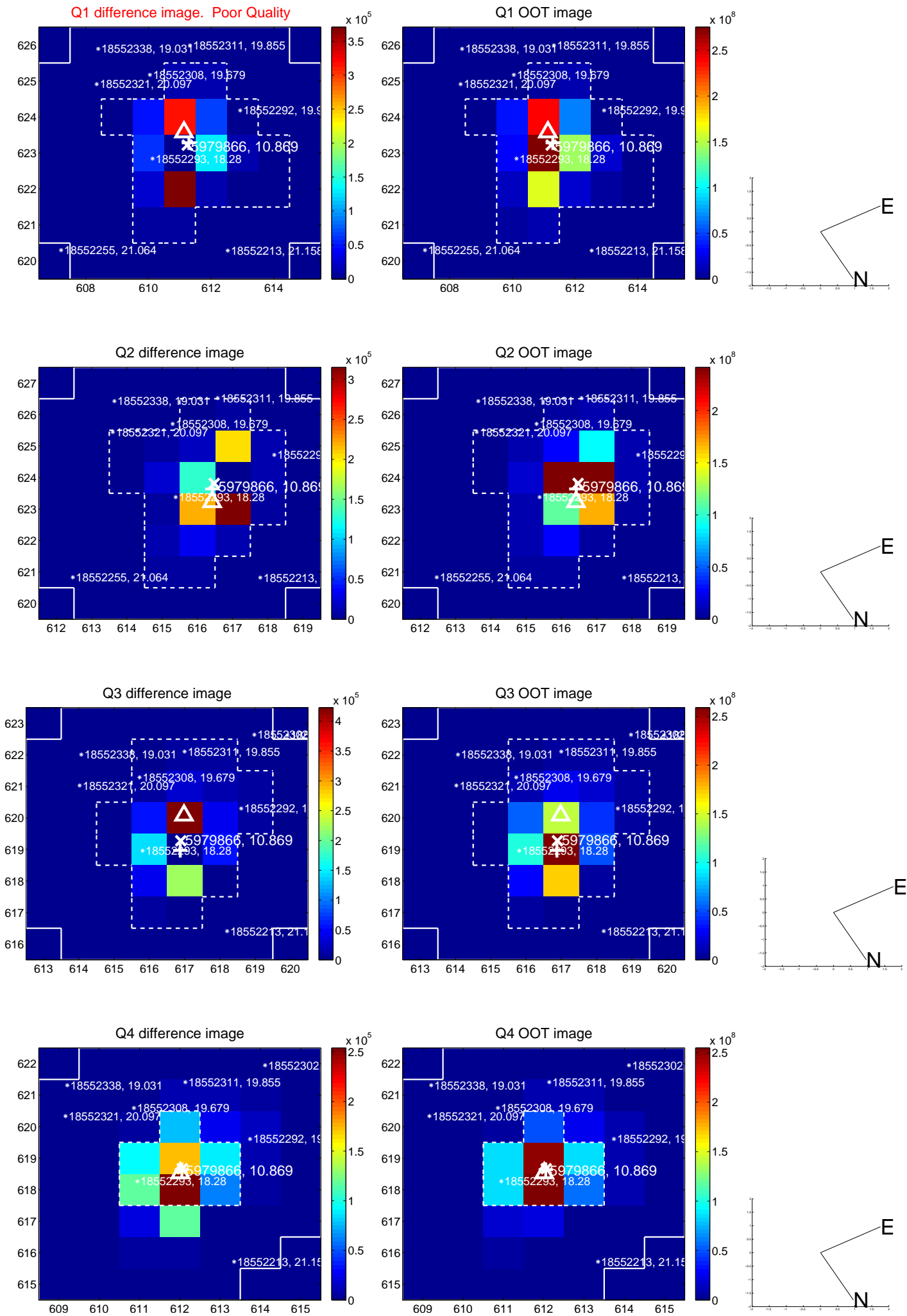
The direct PRF centroid is offset from the target star catalog position by about 0.32 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.087 ± 0.534	0.16	0.072 ± 0.340	-0.048 ± 0.465
PRF-fit source offset from KIC position	0.189 ± 0.491	0.38	-0.133 ± 0.310	0.134 ± 0.396
photometric centroid source offset	0.43 ± 0.13	3.28	-0.21 ± 0.08	0.38 ± 0.14

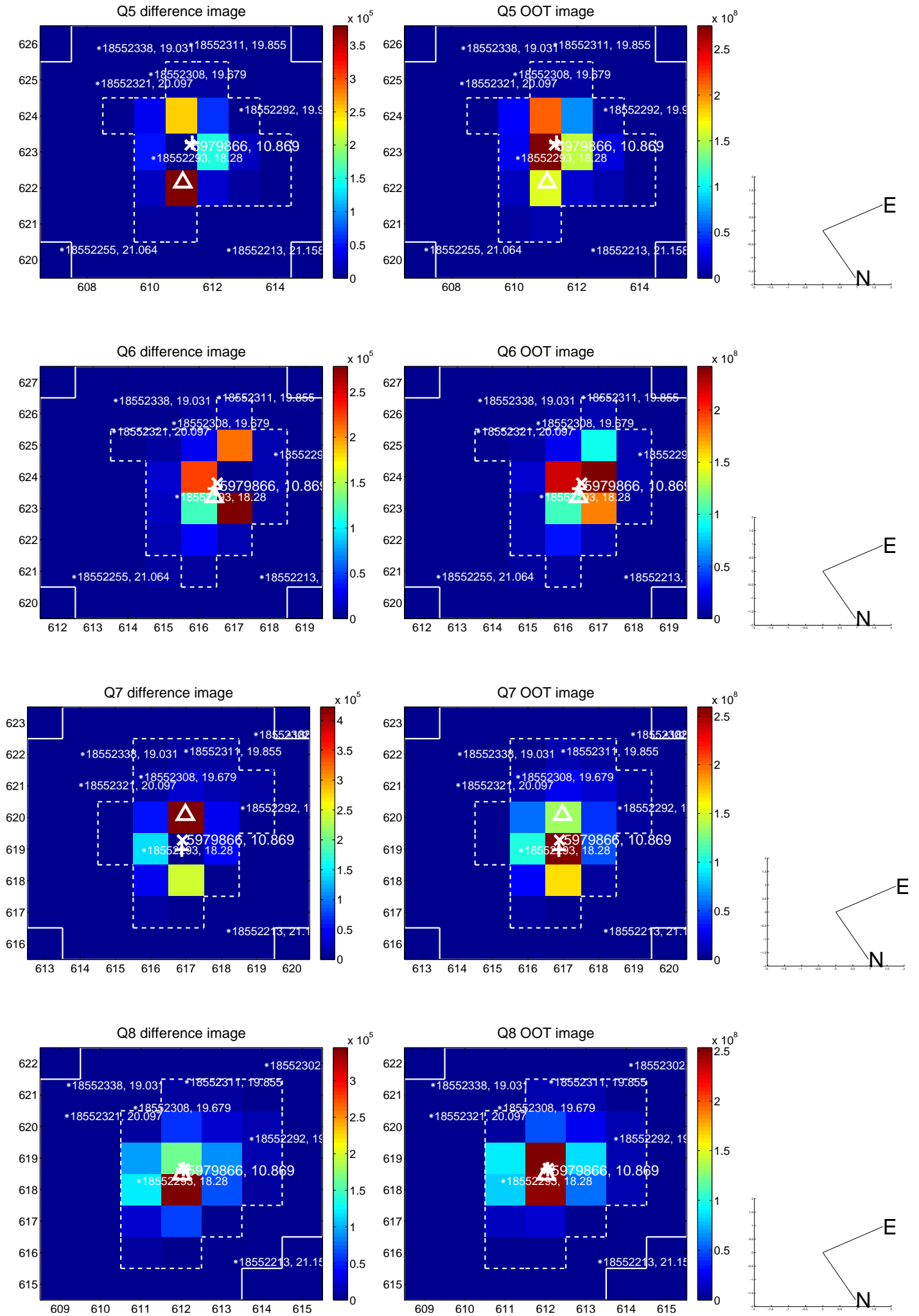


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

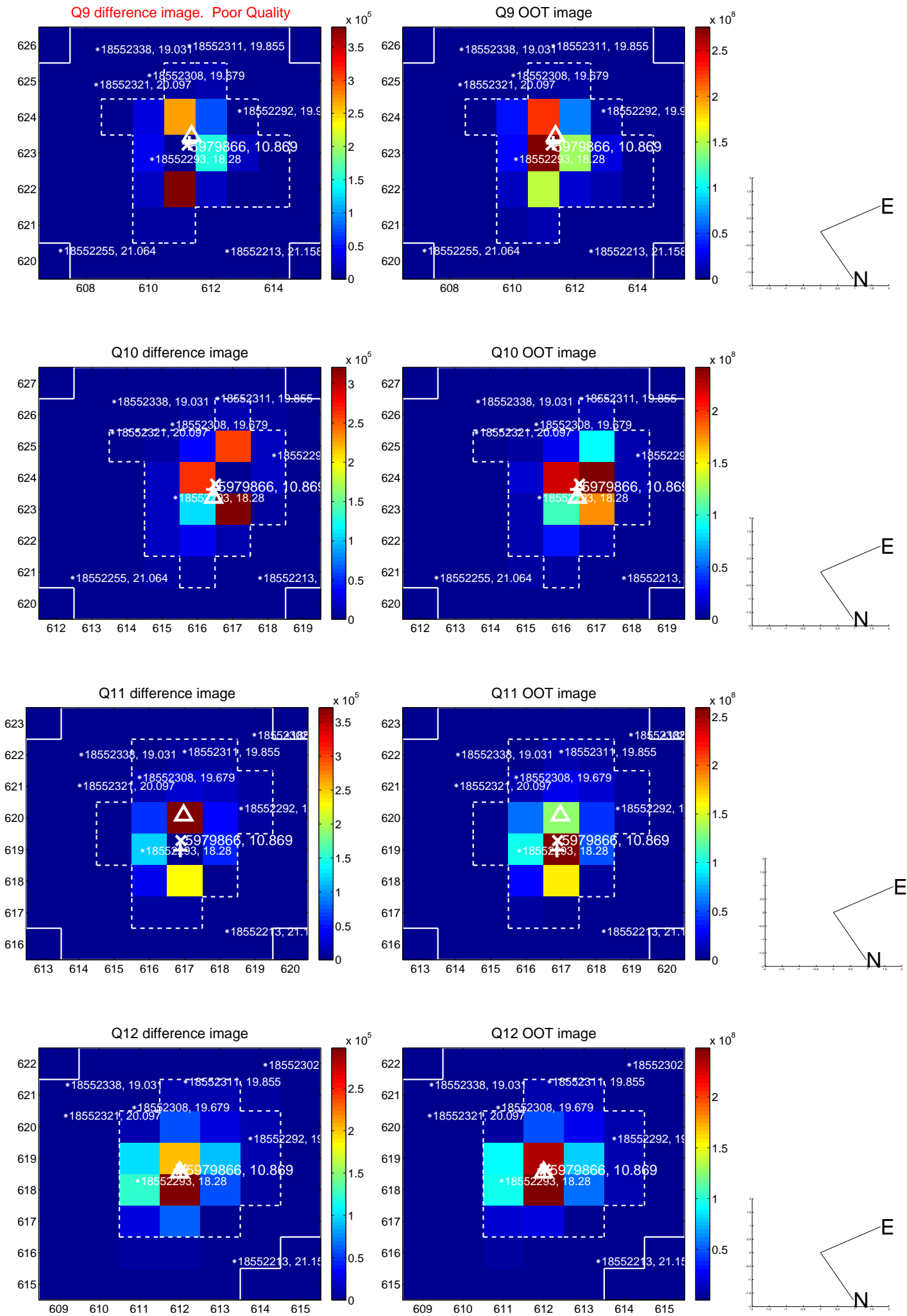
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



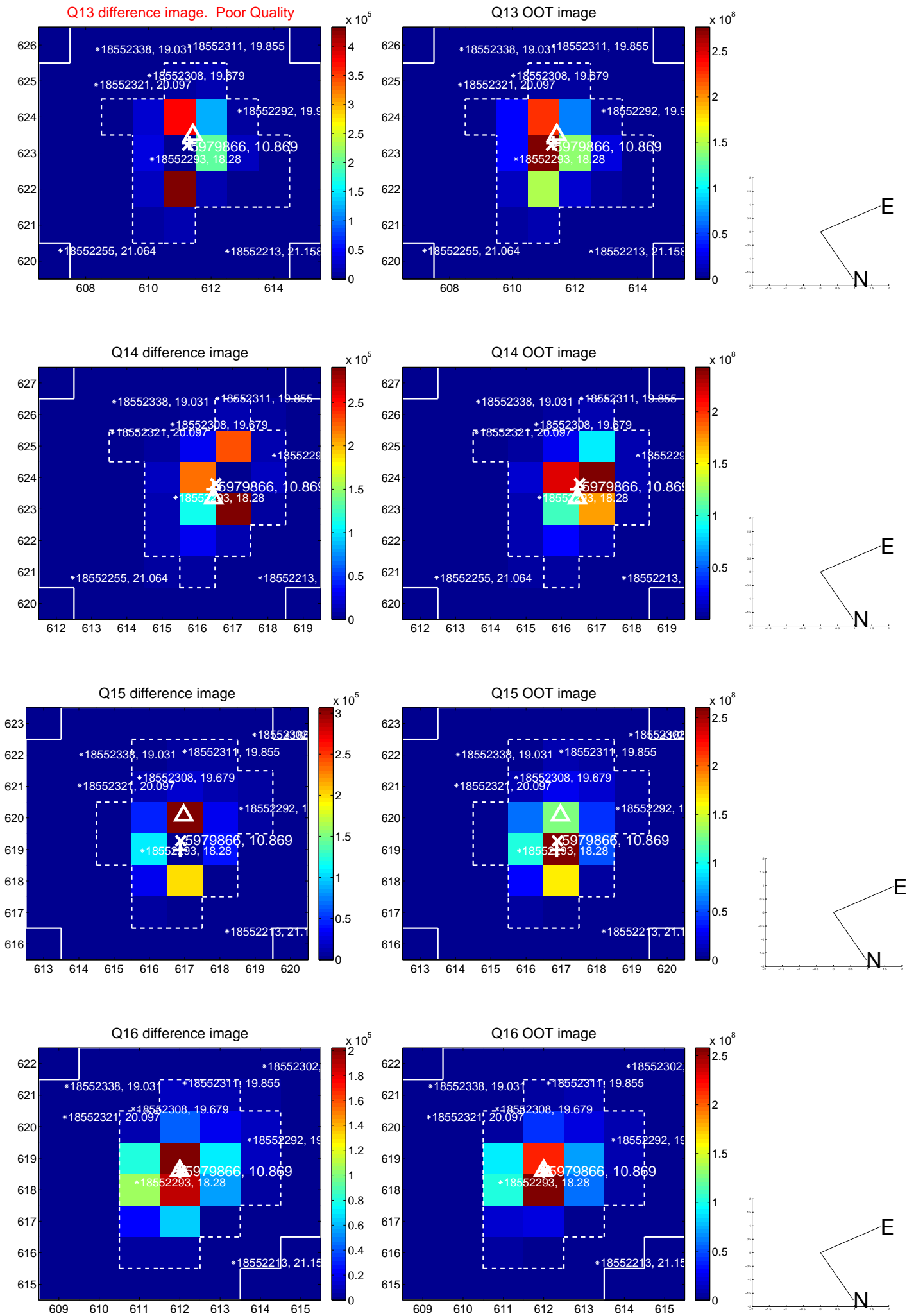
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



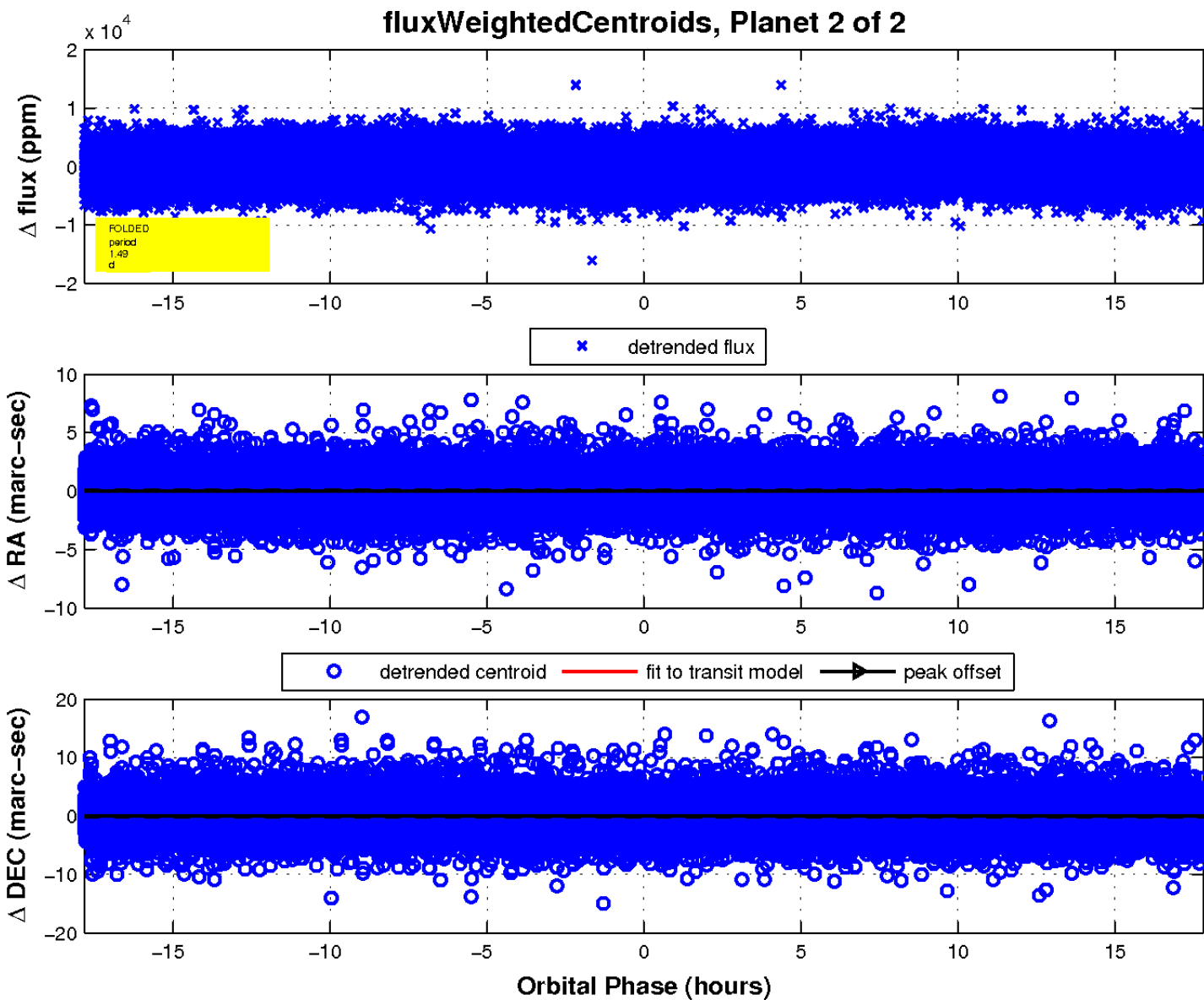
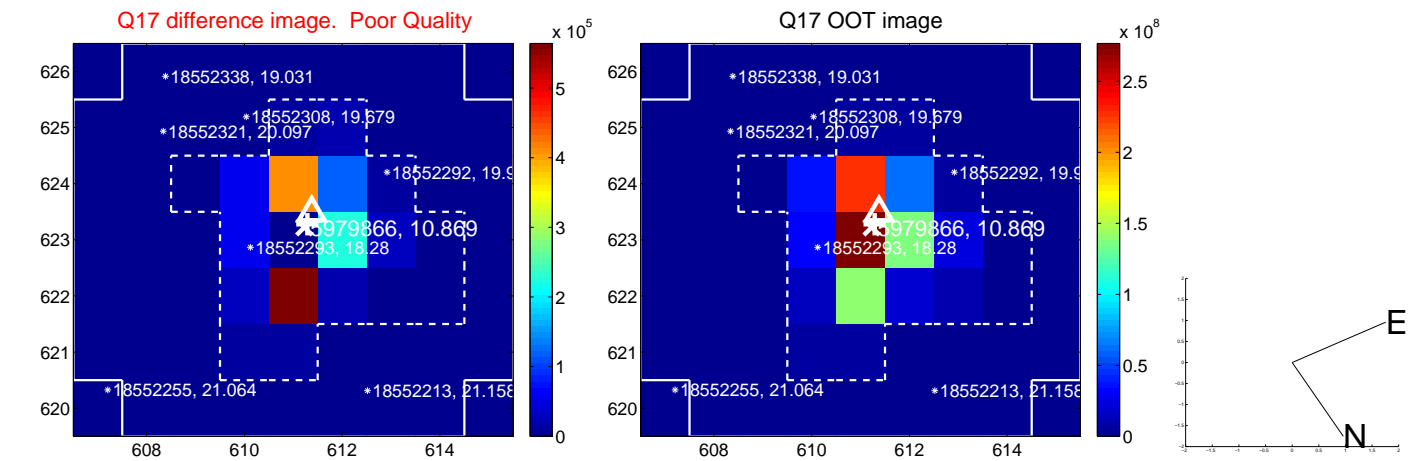
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

