

KIC 007959579

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})
007959579-01	OBS	No	1.654692	132.412616	2.2	3.880	7.3	4.4	2.11	7771	0.36	13134.88
007959579-02	OBS	No	0.827699	132.177177	1.5	6.718	8.8	3.6	2.11	7771	0.27	33079.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007959579-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
007959579-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_SATURATED

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

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

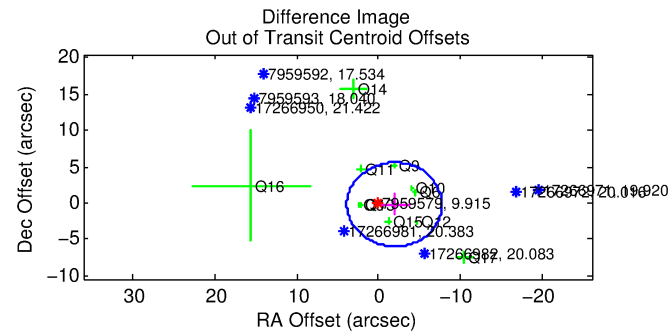
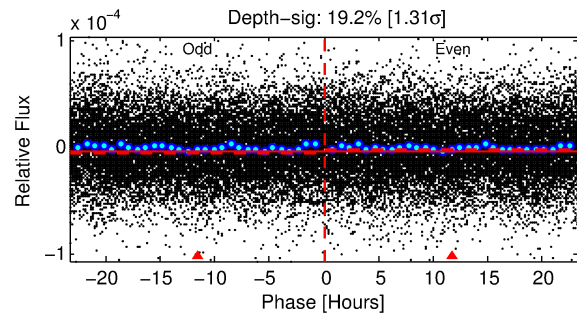
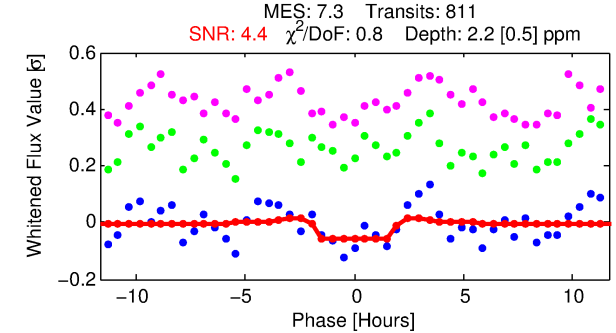
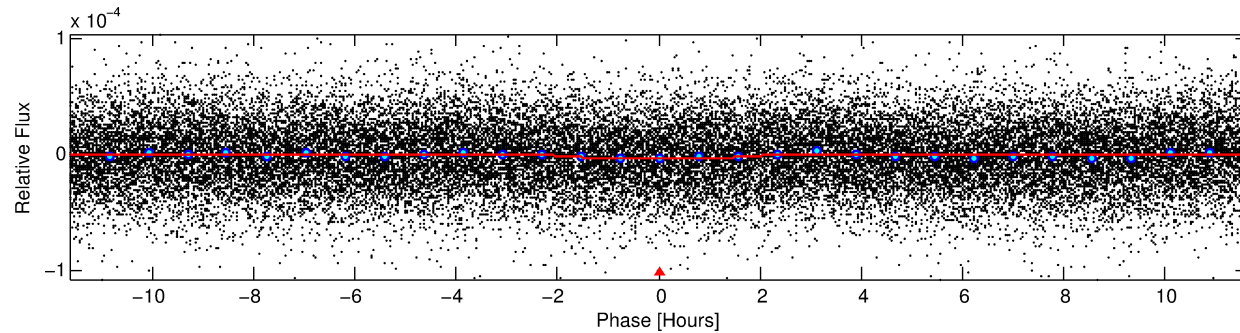
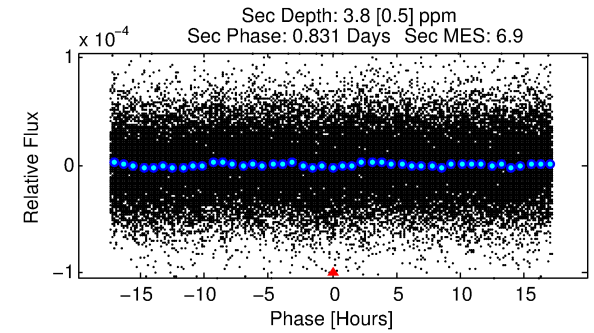
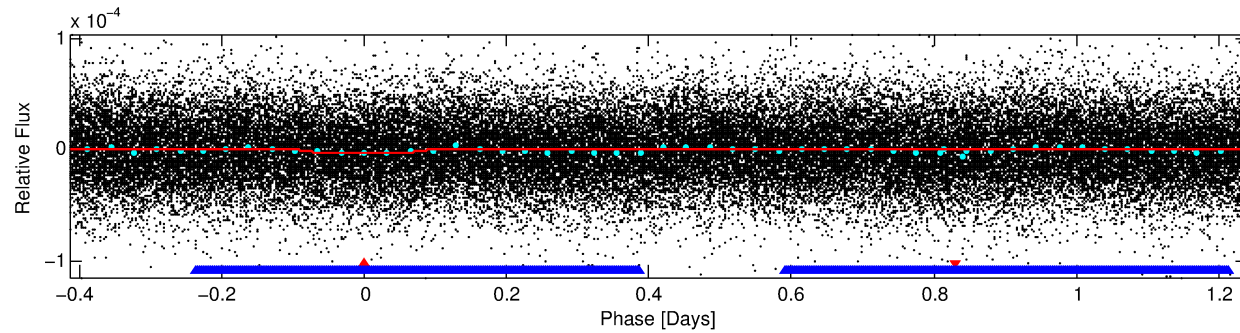
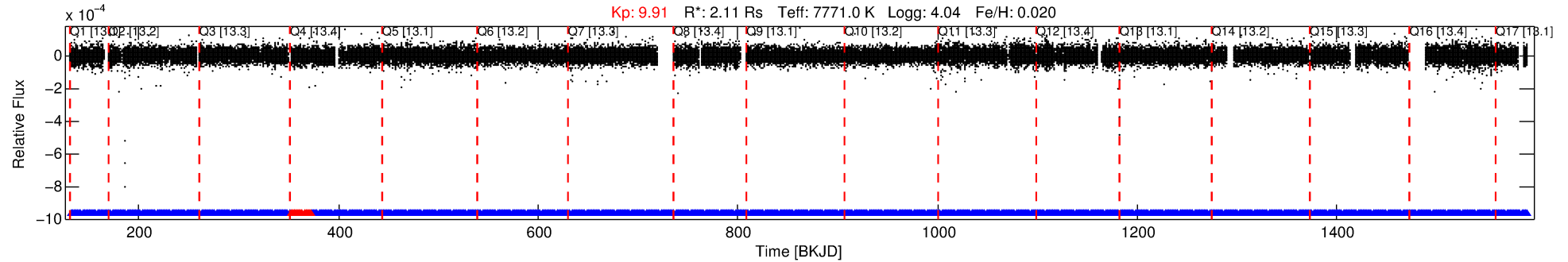
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007959579-01

No Significant Match Found

DV One-Page Summary

KIC: 7959579 Candidate: 1 of 2 Period: 1.655 d



DV Fit Results:

Period = 1.65469 [0.00003] d
Epoch = 132.4126 [0.0079] BKJD
Rp/R* = 0.0015 [0.0002]
a/R* = 1.89 [0.68]
b = 0.86 [0.15]
Seff = 13134.88 [4415.35]
Teq = 2730 [229] K
Rp = 0.36 [0.10] Re
a = 0.0332 [0.0067] AU
Ag = 18.40 [8.00] [2.17σ]
Teffp = 8741 [792] K [7.29σ]

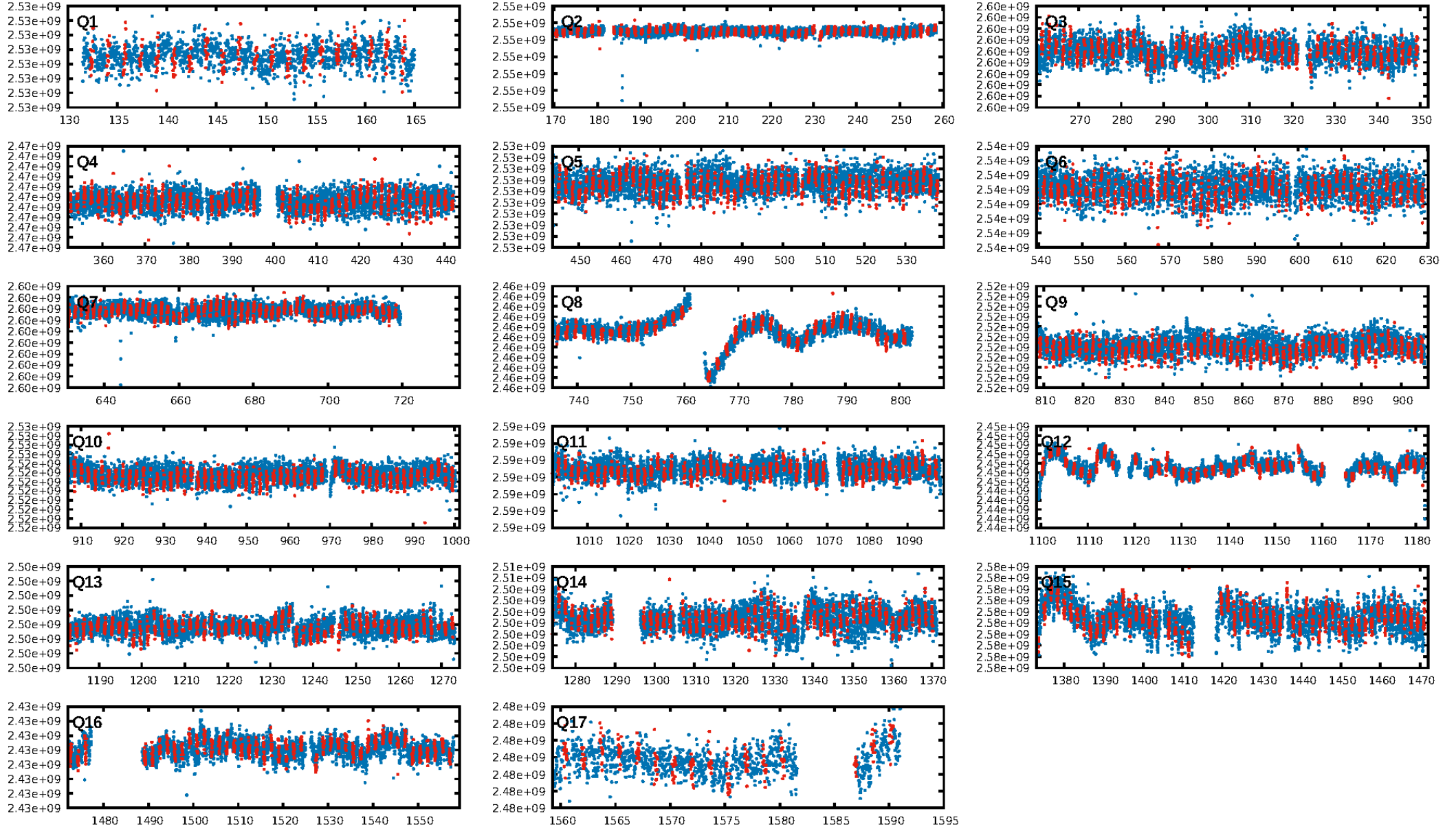
DV Diagnostic Results:

ShortPeriod-sig: 98.9% [2.56σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.98 [762/775]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 1.923 arcsec [1.00σ]
KicOffset-rm: 1.120 arcsec [0.47σ]
OotOffset-st: 3/2/2/4 [11]
KicOffset-st: 3/2/2/4 [11]
DiffImageQuality-fgm: 0.09 [1/11]
DiffImageOverlap-fno: 0.00 [0/17]

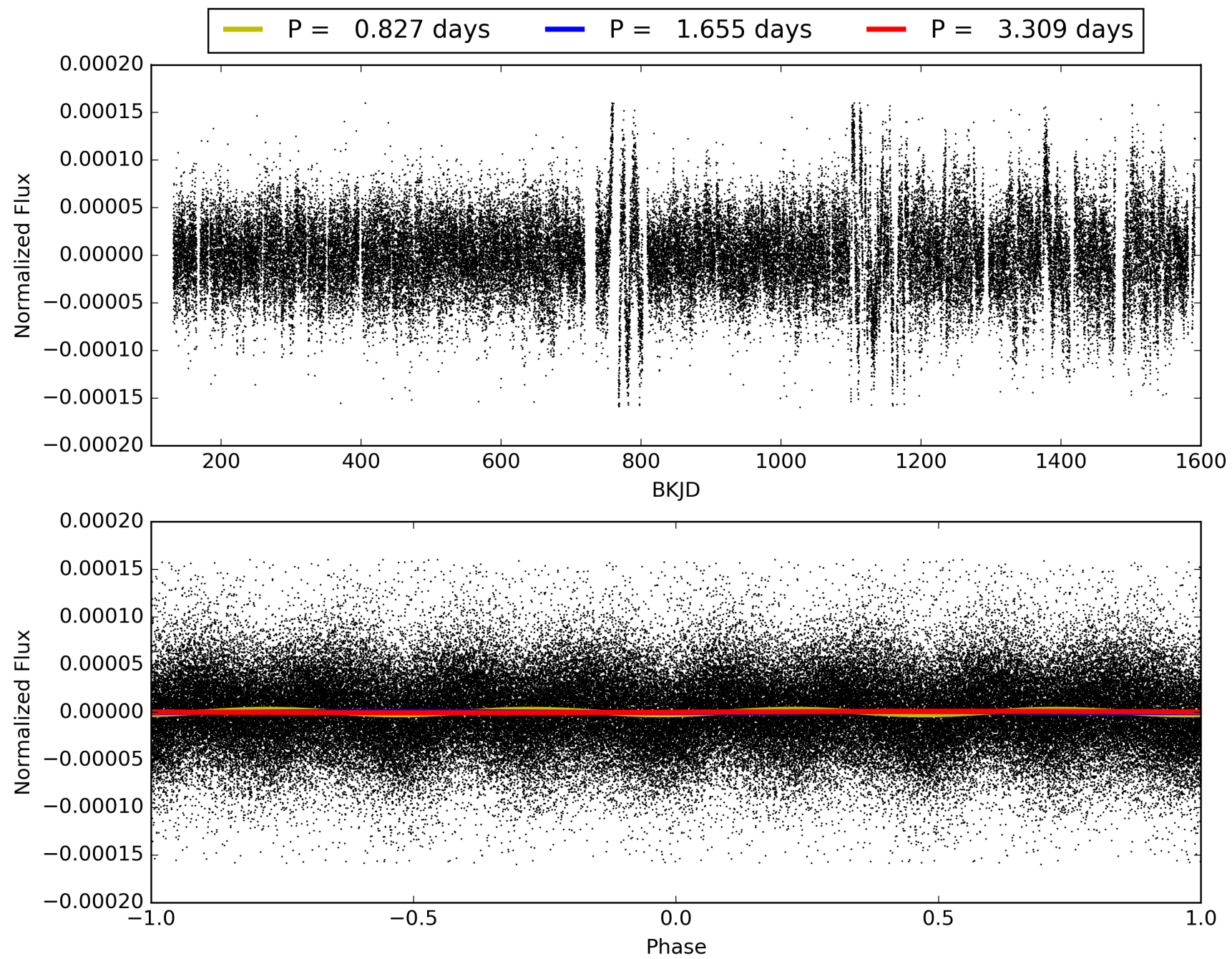
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:41:02 Z

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

TCE 007959579-01, PDC Light Curves

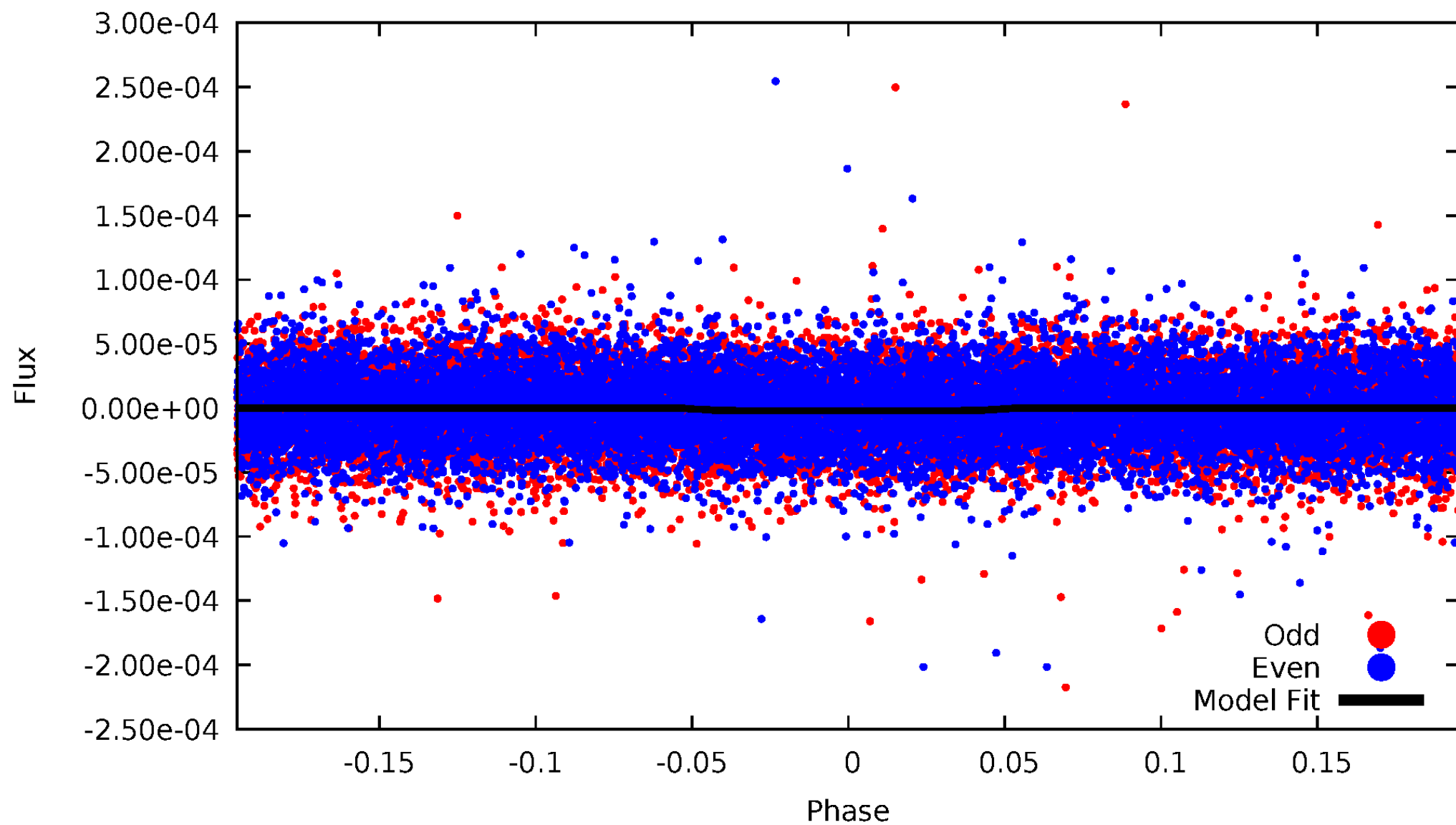


TCE 007959579-01



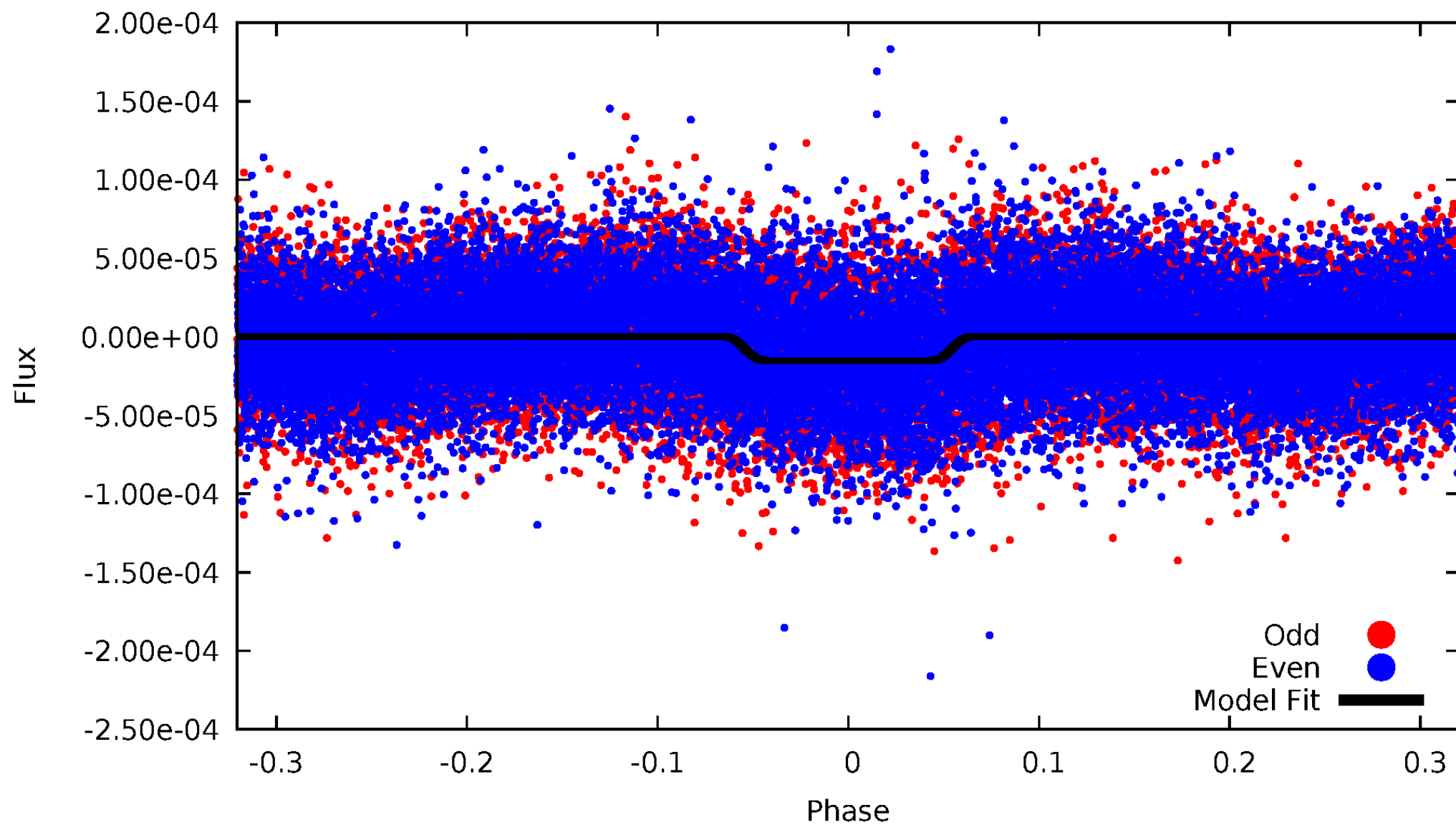
DV Odd/Even

TCE 007959579-01



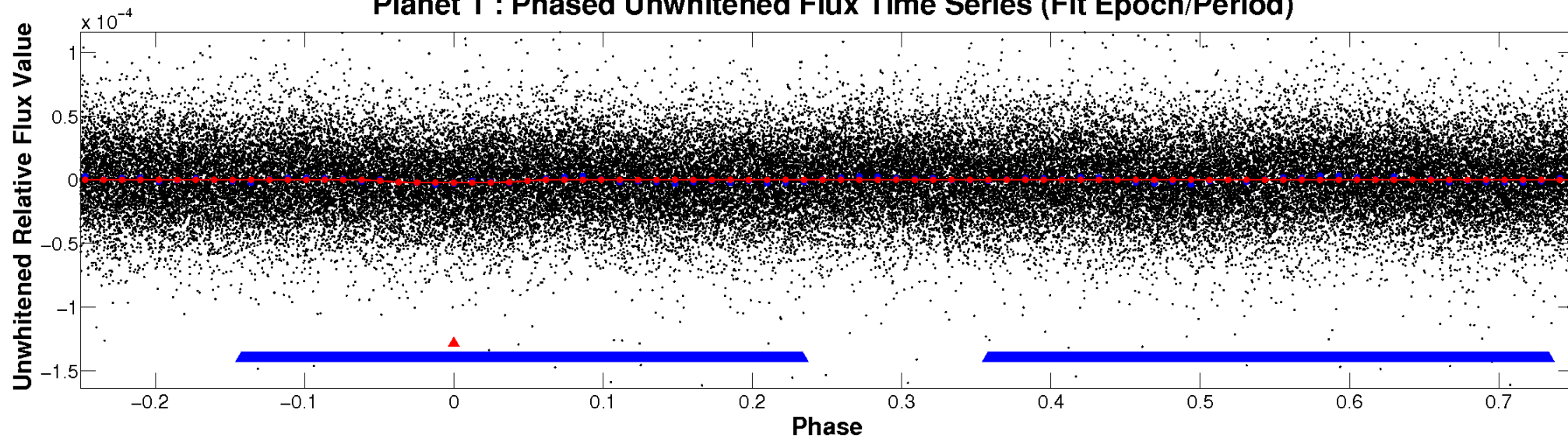
ALT Odd/Even

TCE 007959579-01

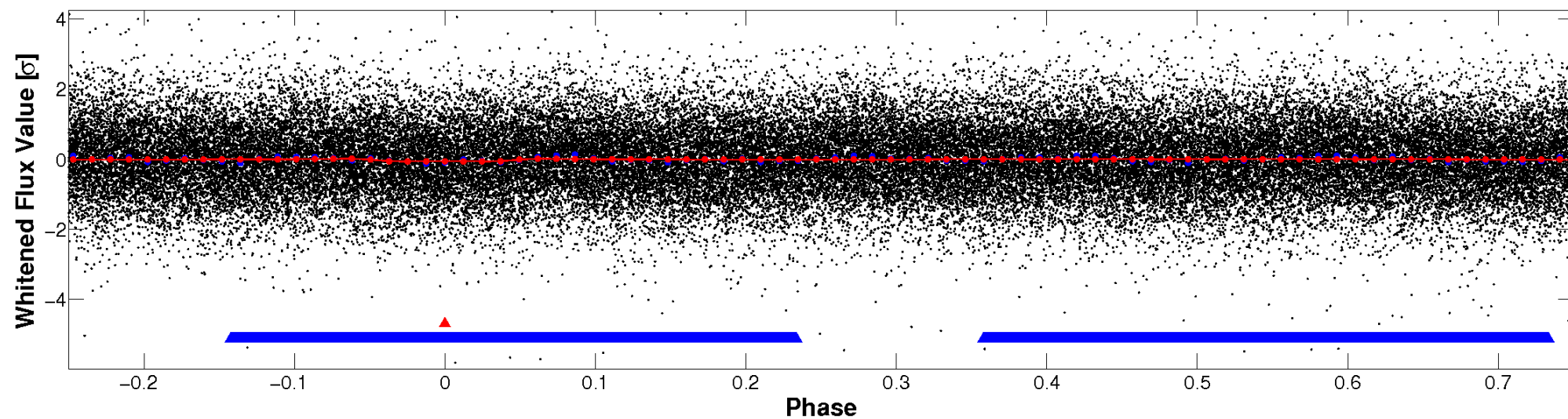


Non-Whitened Vs. Whitened Light Curve

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

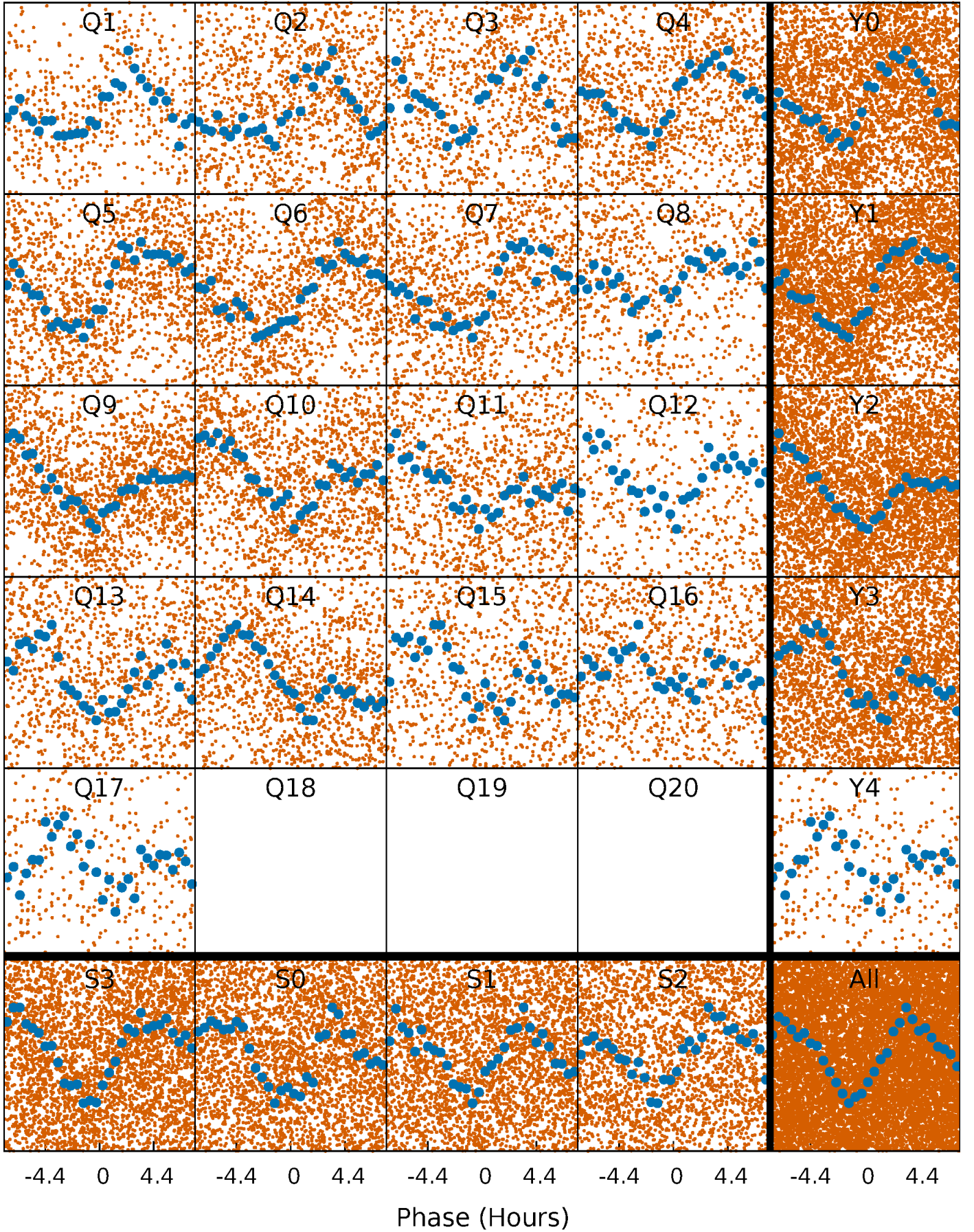


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



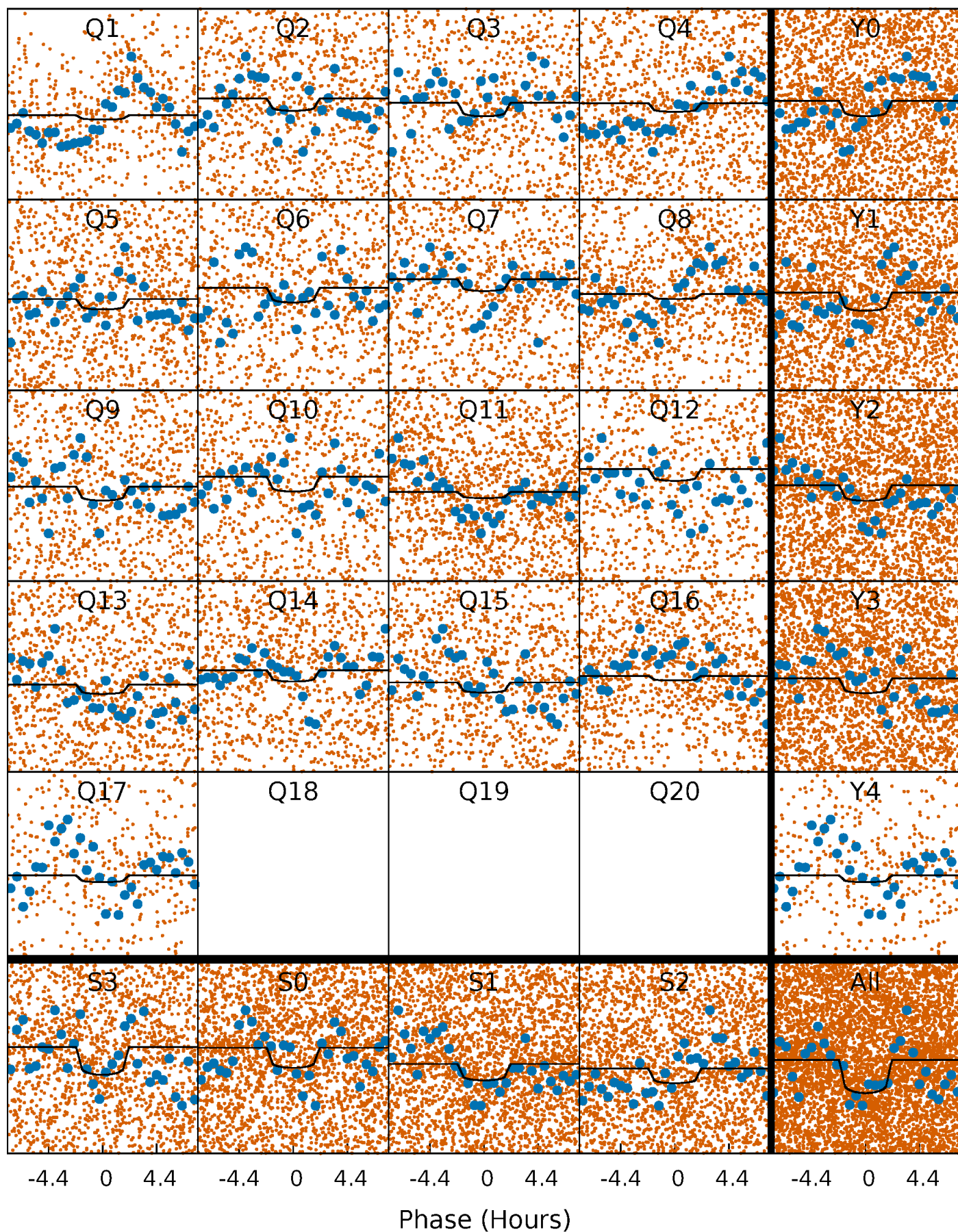
PDC Quarter-Phased Transit Curves

TCE 007959579-01 P= 1.654692 Days $T_0=132.412615$ (BKJD)



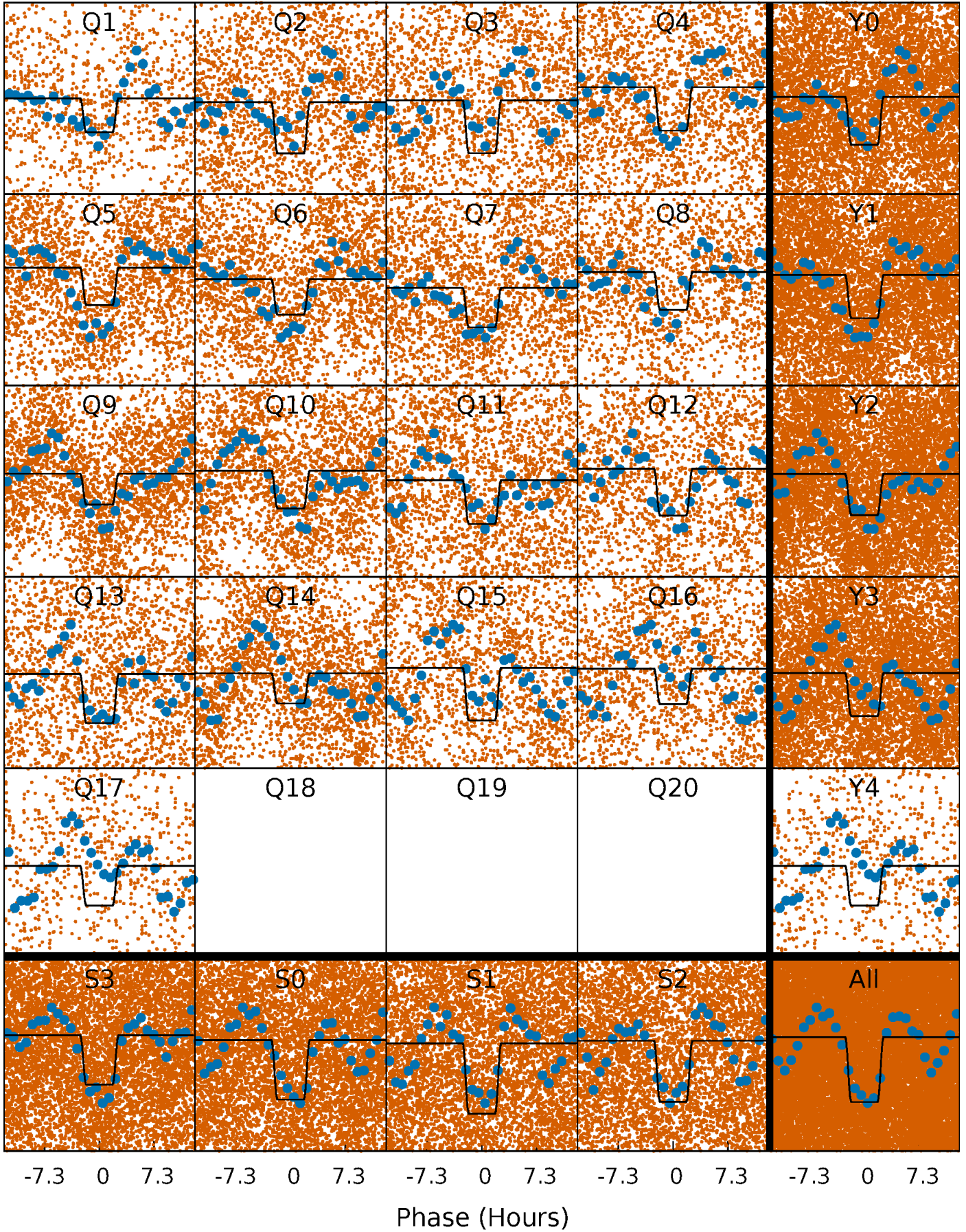
DV Quarter-Phased Transit Curves

TCE 007959579-01 P= 1.654692 Days $T_0=132.412615$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

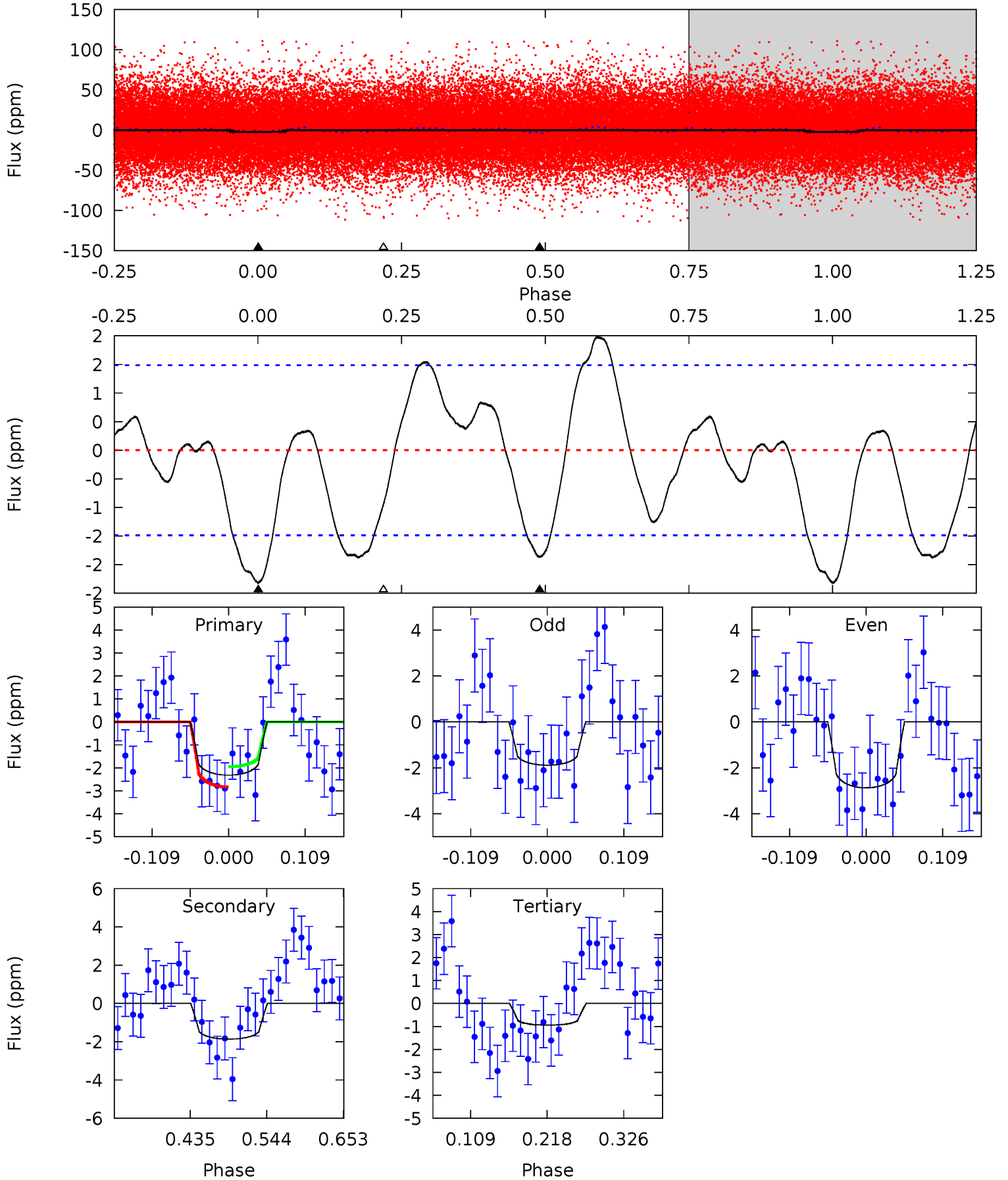
TCE 007959579-01 P= 1.654815 Days $T_0=132.317080$ (BKJD)



DV Model-Shift Uniqueness Test

007959579-01, P = 1.654692 Days, E = 130.757923 Days

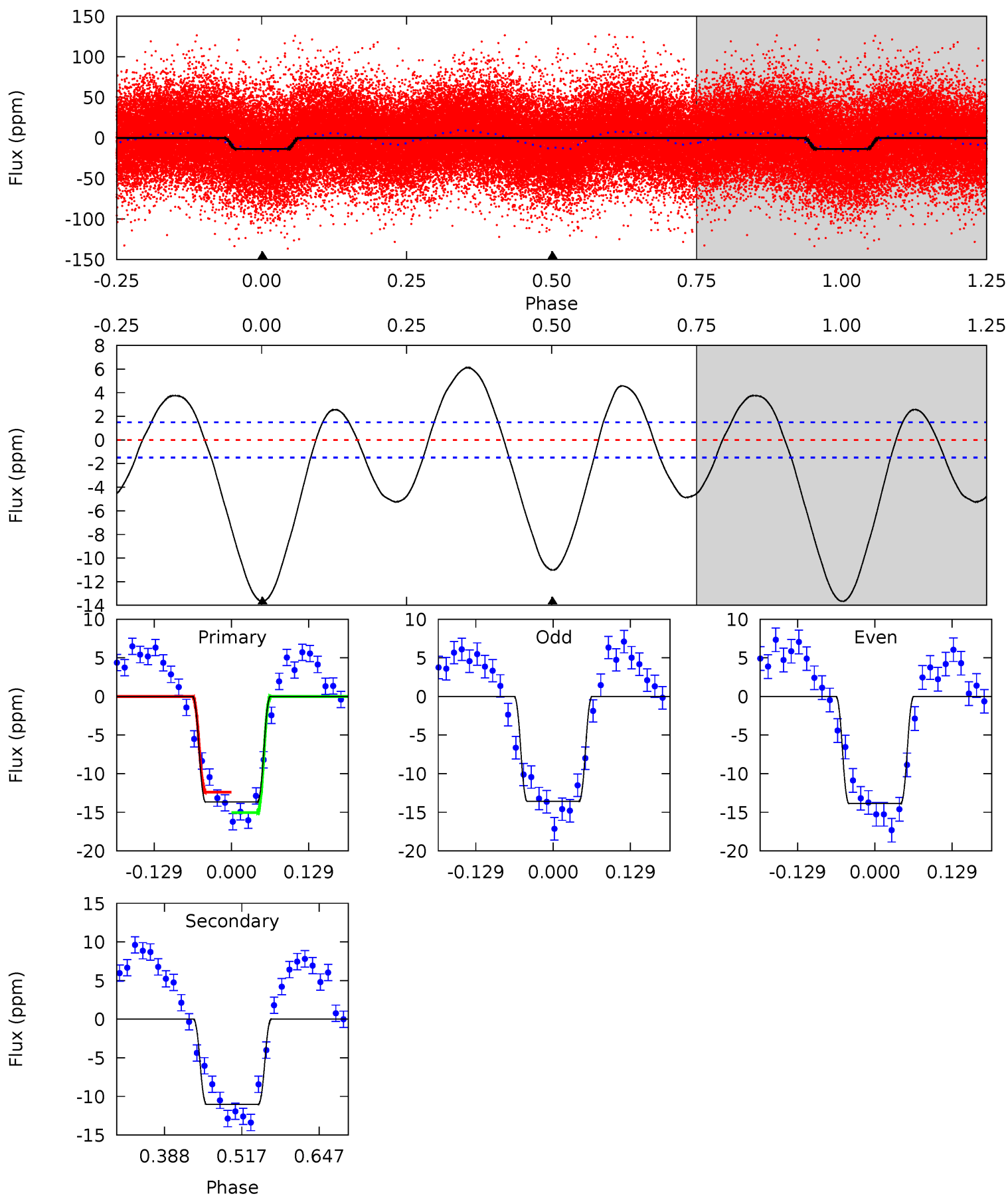
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.10	5.70	2.89	0	4.55	1.60	3.00	4.21	7.10	2.81	5.70	1.51	0.86	0.46	1.34



Alt Model-Shift Uniqueness Test

007959579-01, P = 1.654815 Days, E = 130.662265 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
41.2	33.3	0	0	4.51	1.52	10.9	41.2	41.2	33.3	33.3	0.43	0.94	0.31	3.97



Stellar Parameters For KIC 007959579

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7771^{+214}_{-322}	$4.043^{+0.160}_{-0.160}$	$0.020^{+0.200}_{-0.400}$	$2.108^{+0.502}_{-0.502}$	$1.787^{+0.145}_{-0.315}$	$0.269^{+0.256}_{-0.114}$
	+3%/-4%	+4%/-4%	+1000%/-2000%	+24%/-24%	+8%/-18%	+95%/-42%
Source	KIC0	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 007959579-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-2 ± 0	$0.35^{+0.08}_{-0.07}$	3814^{+262}_{-242}	7074^{+862}_{-674}	$8.756^{+4.909}_{-3.106}$
Alt.	-11 ± 0	$0.89^{+0.13}_{-0.12}$	3807^{+255}_{-269}	6959^{+354}_{-310}	$8.301^{+2.596}_{-1.869}$

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

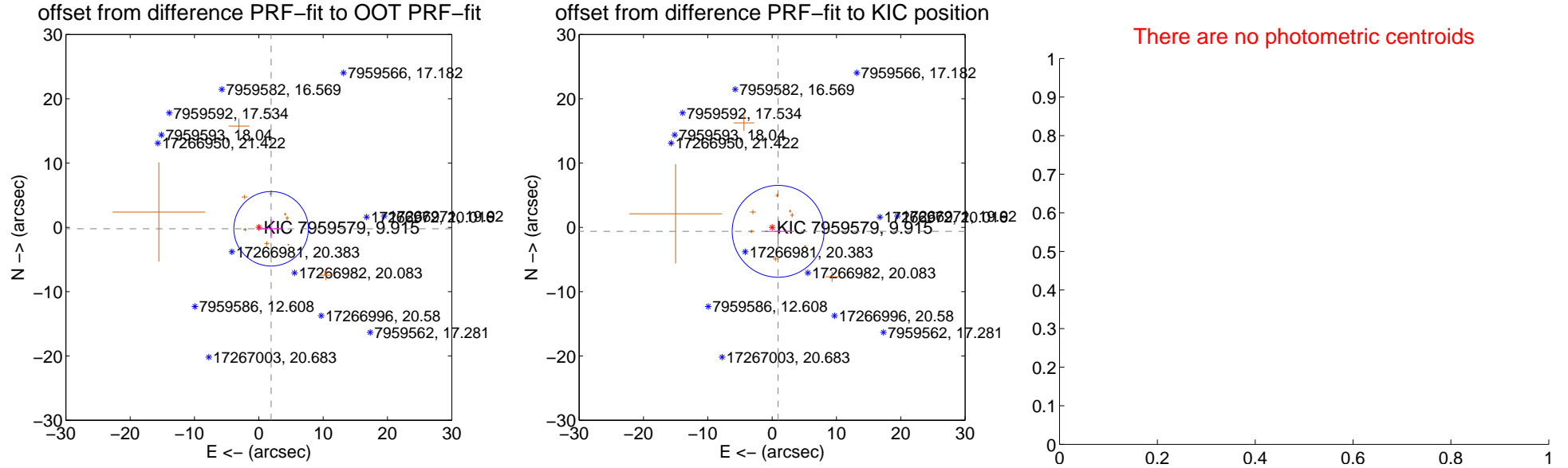
DV Centroid Data

Supplemental centroid analysis for 007959579-01. **Kepler magnitude: 9.91.** Transit SNR 4.39

There are 1 quarters with good PRF difference image offsets

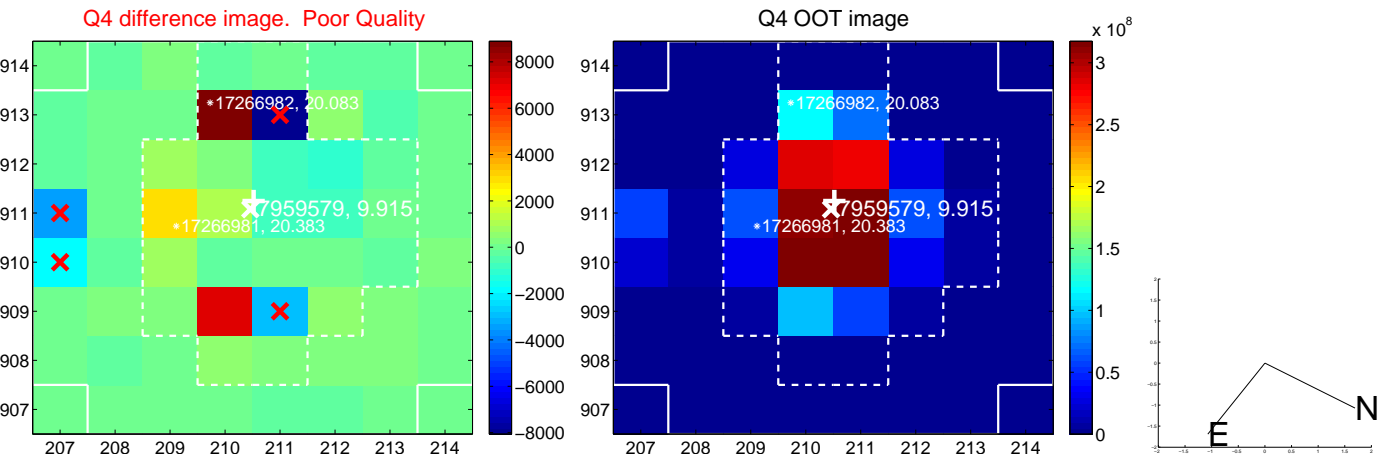
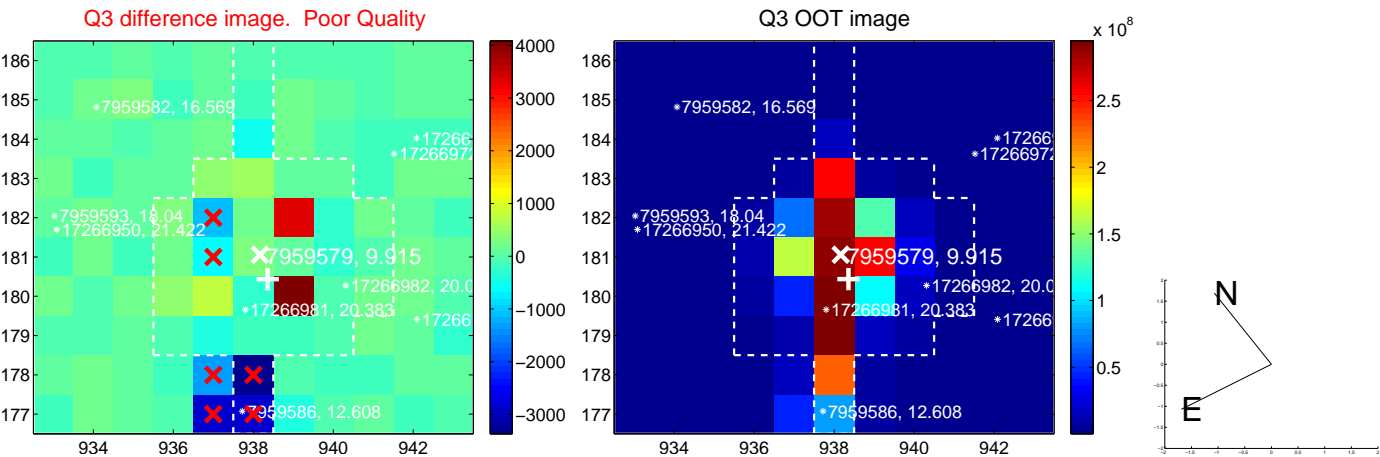
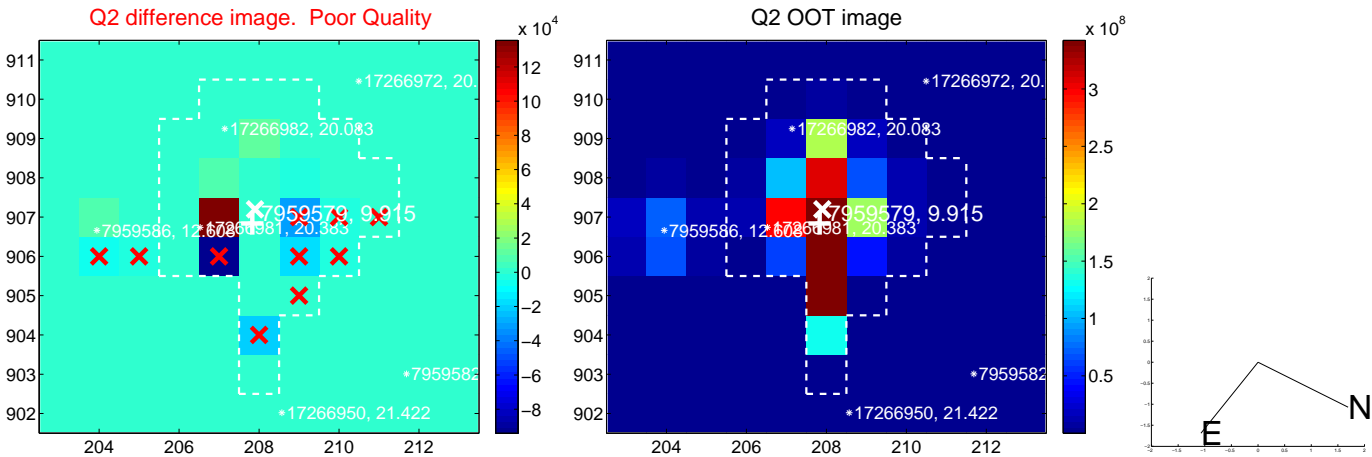
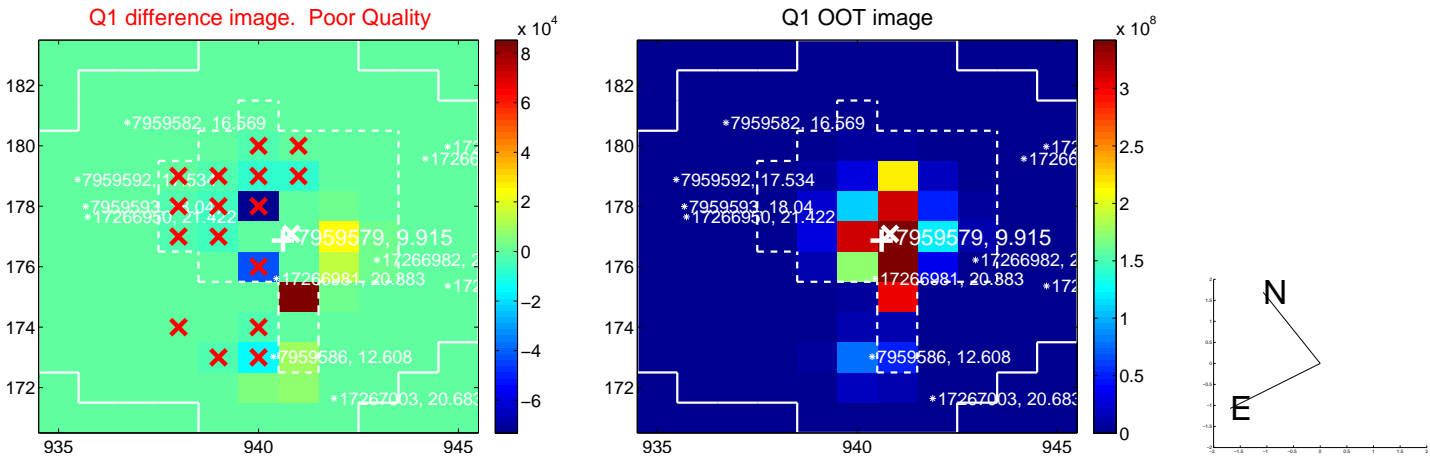
The direct PRF centroid is offset from the target star catalog position by about 1.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.923 ± 1.930	1.00	-1.911 ± 1.869	-0.222 ± 1.492
PRF-fit source offset from KIC position	1.120 ± 2.382	0.47	-0.936 ± 2.073	-0.616 ± 1.884
photometric centroid source offset	—	—	—	—

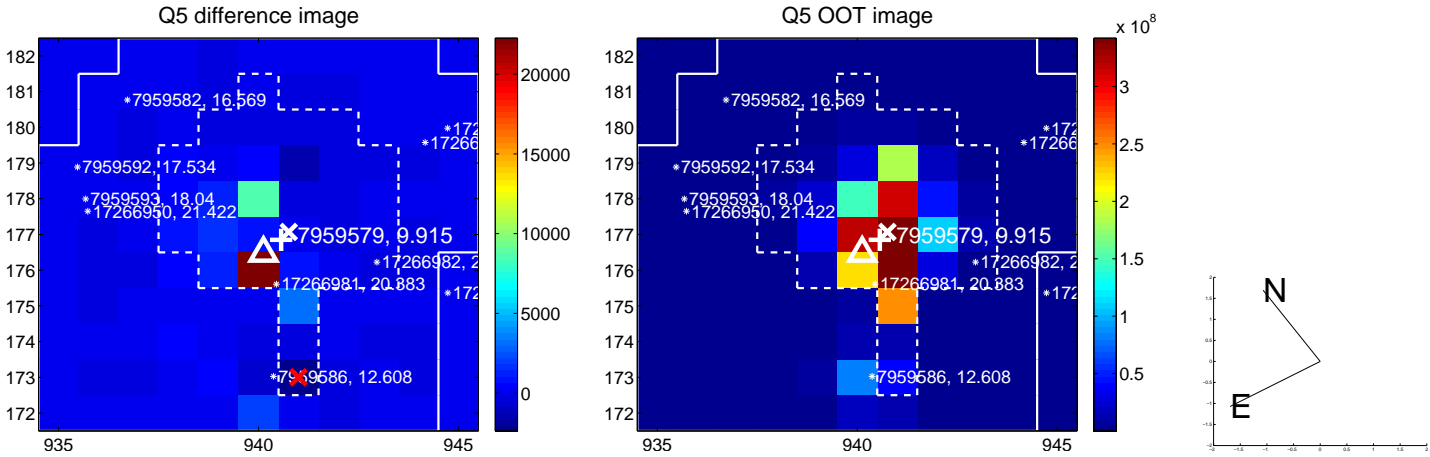


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

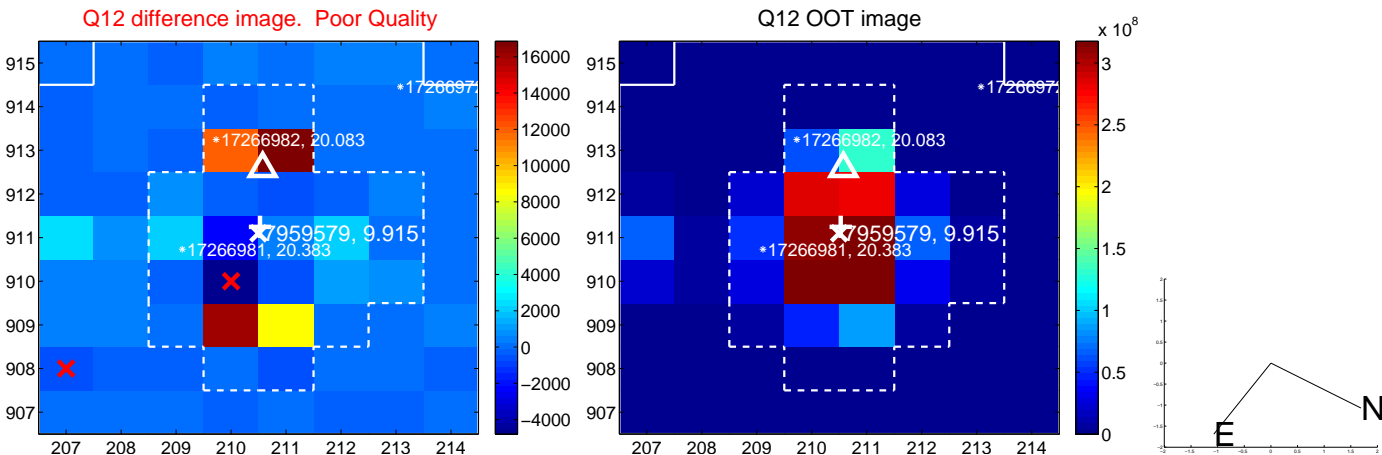
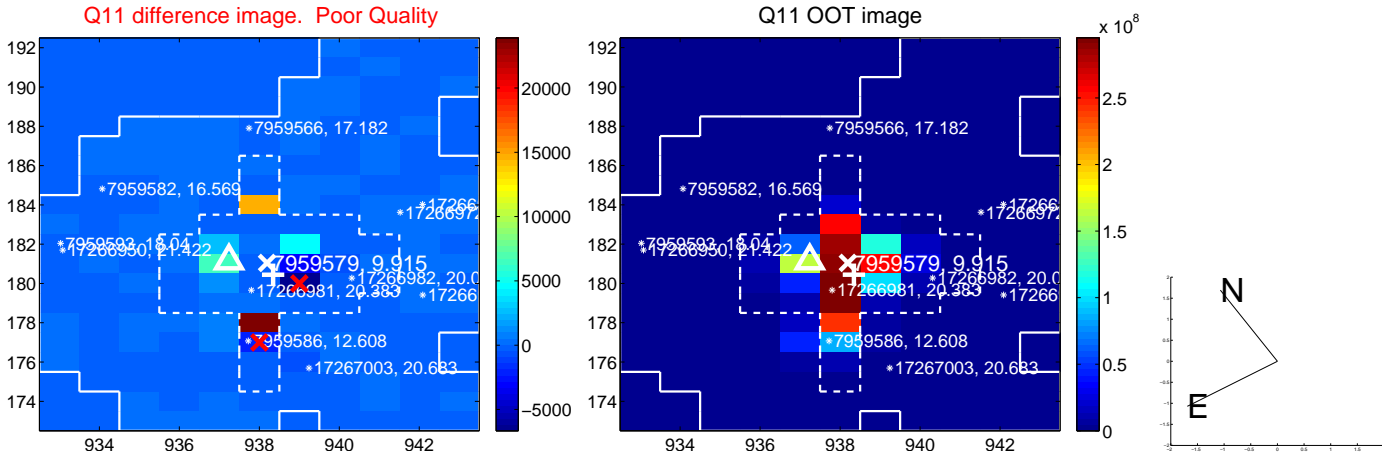
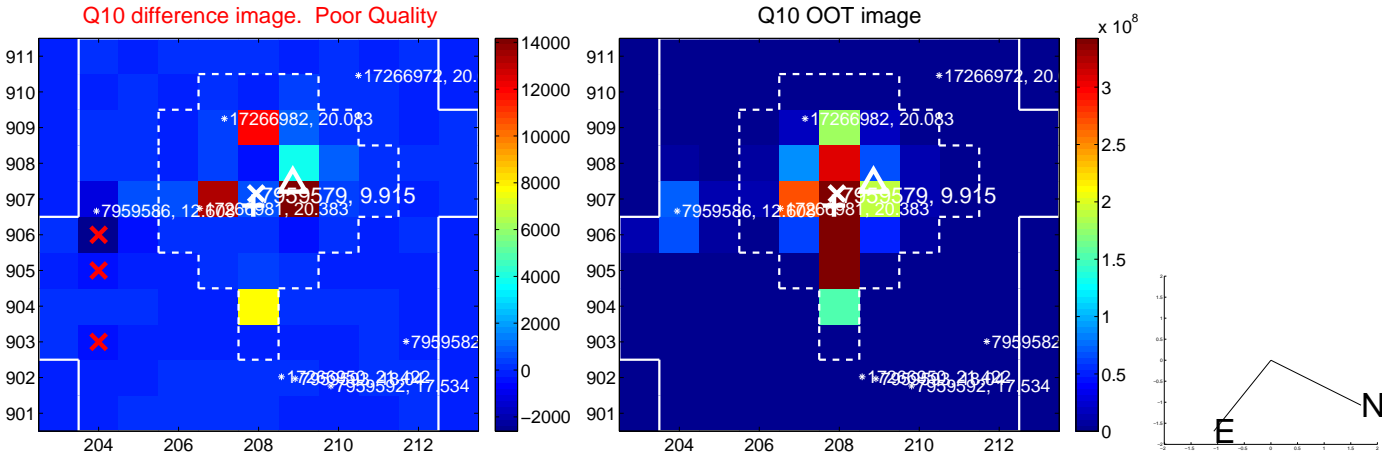
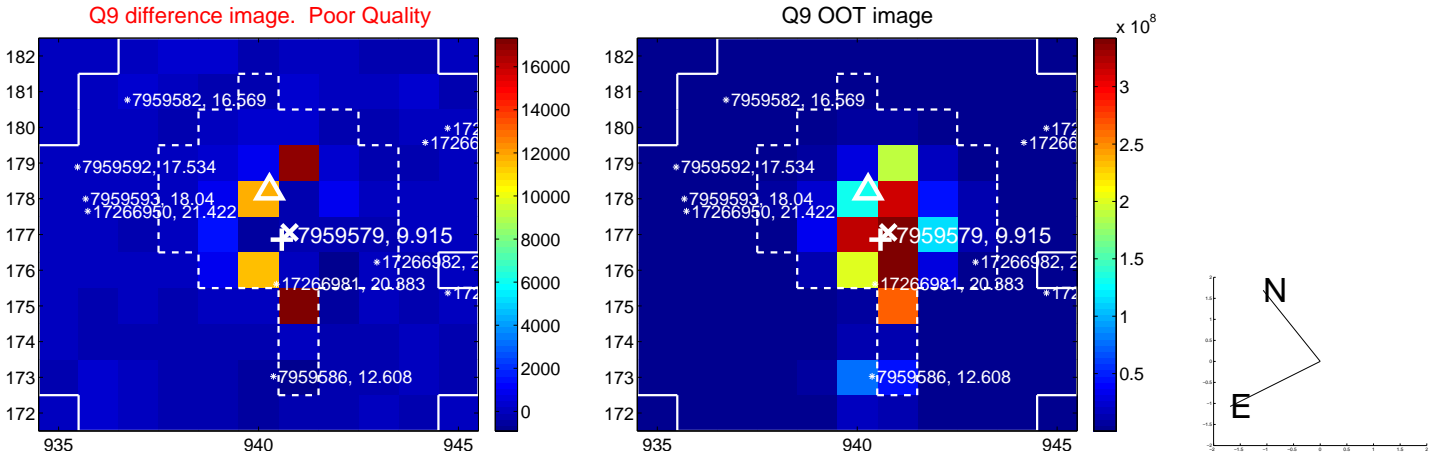
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



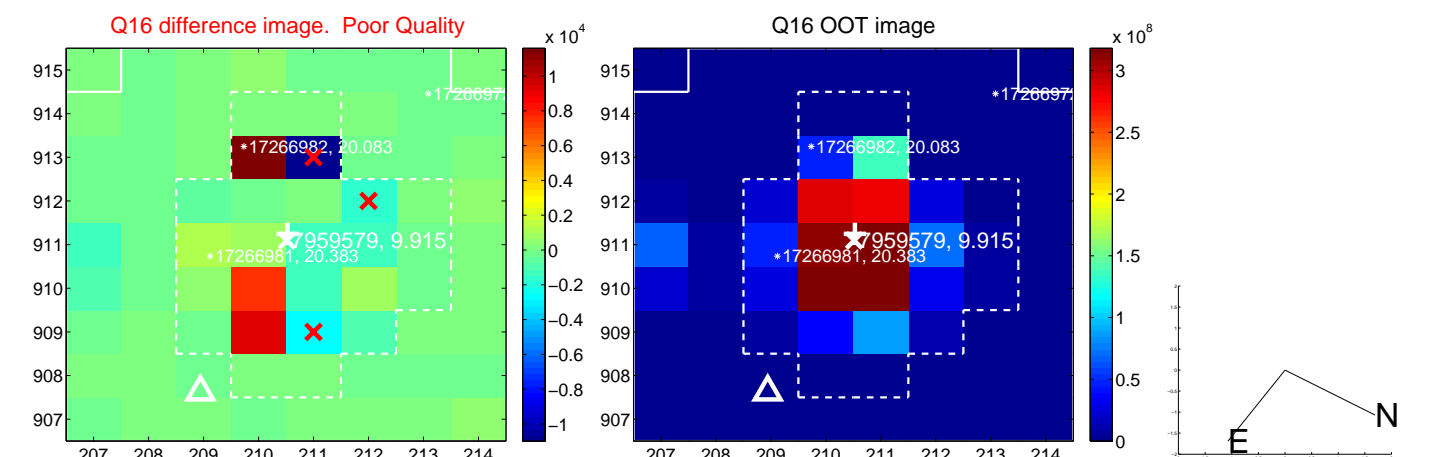
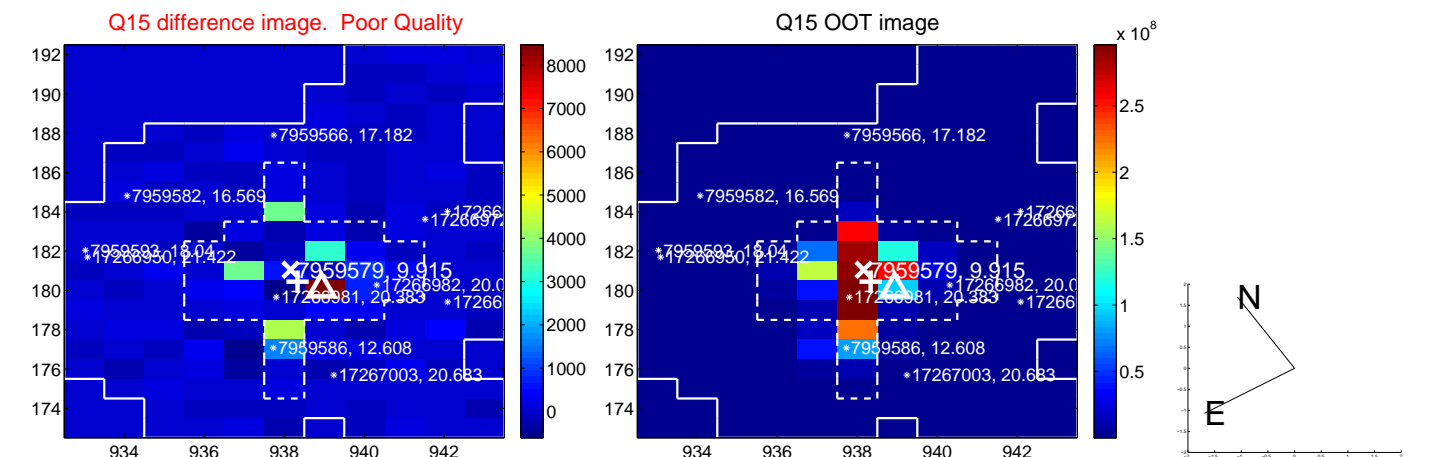
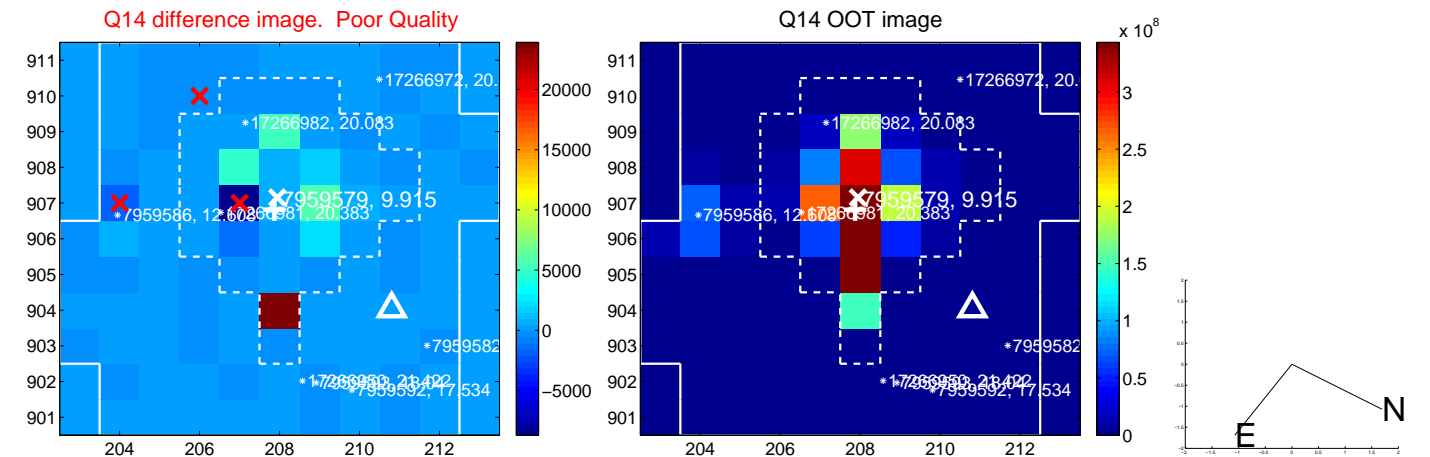
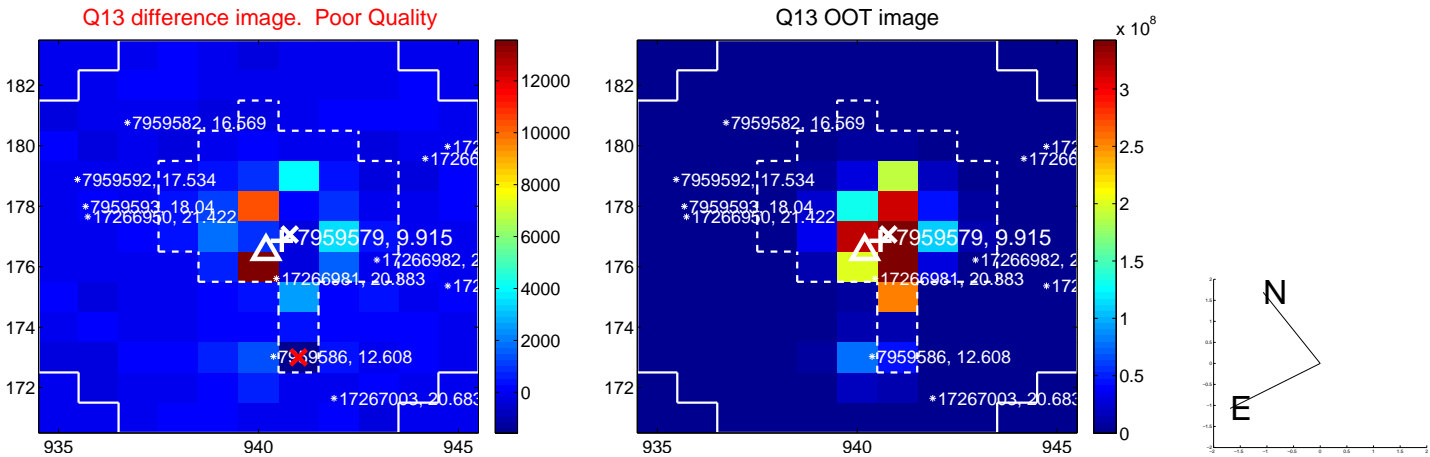
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



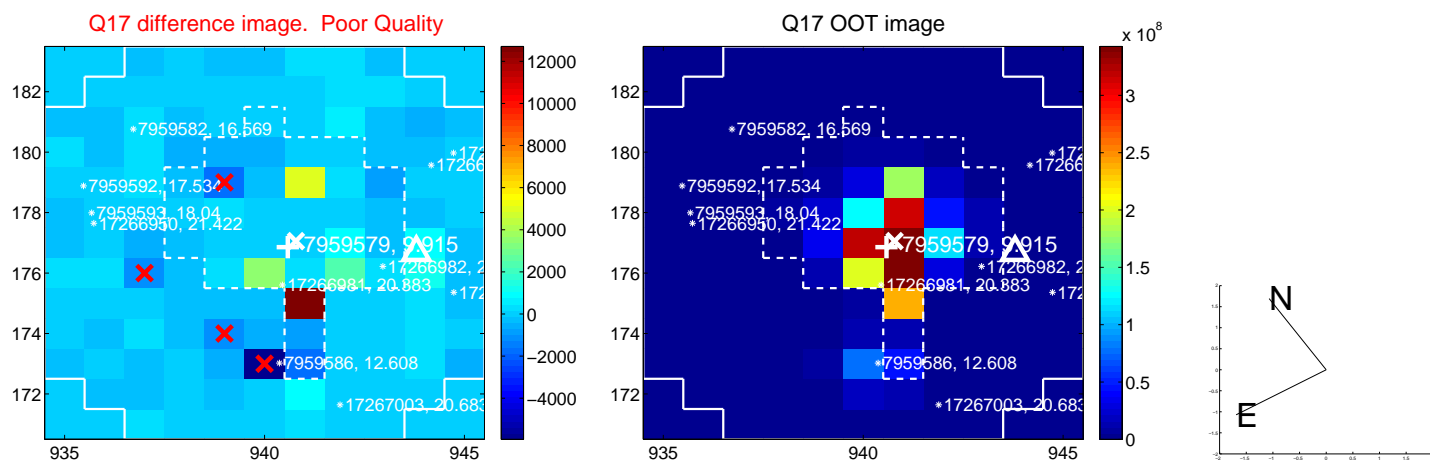
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

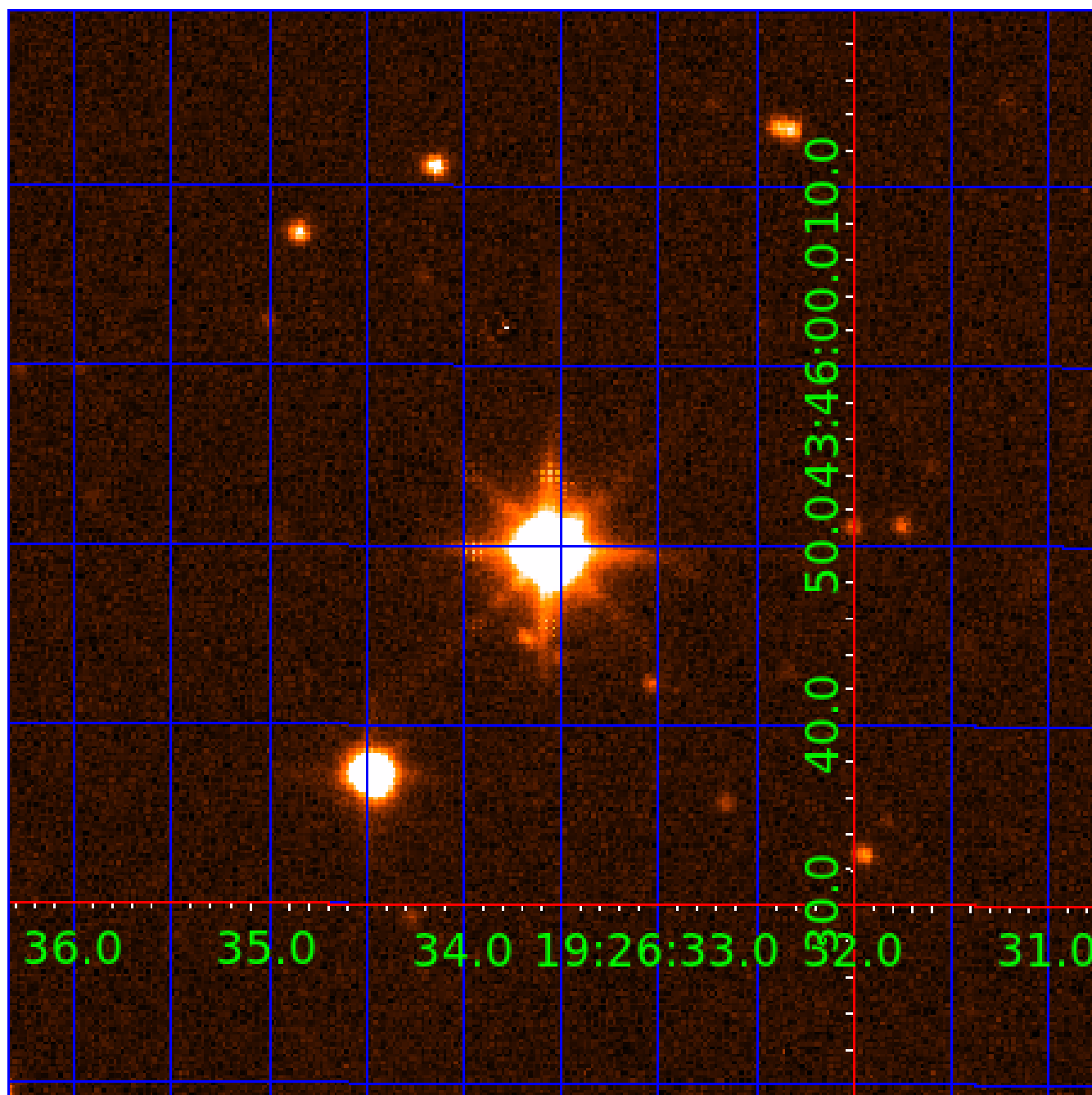


folded centroid time series figure for this object.



UKIRT Image

Declination



KIC 007959579

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})
007959579-01	OBS	No	1.654692	132.412616	2.2	3.880	7.3	4.4	2.11	7771	0.36	13134.88
007959579-02	OBS	No	0.827699	132.177177	1.5	6.718	8.8	3.6	2.11	7771	0.27	33079.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007959579-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
007959579-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_SATURATED

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

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

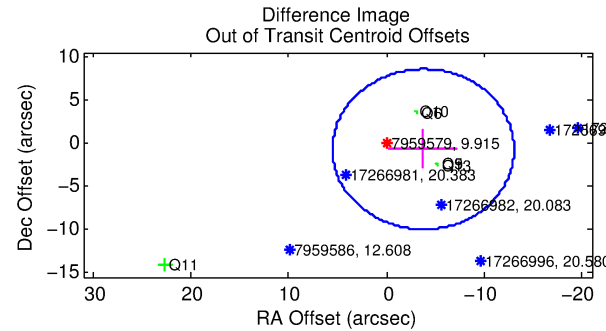
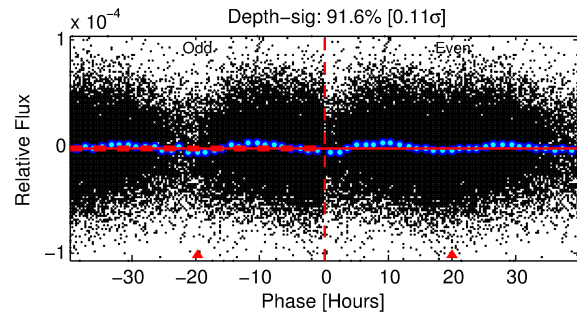
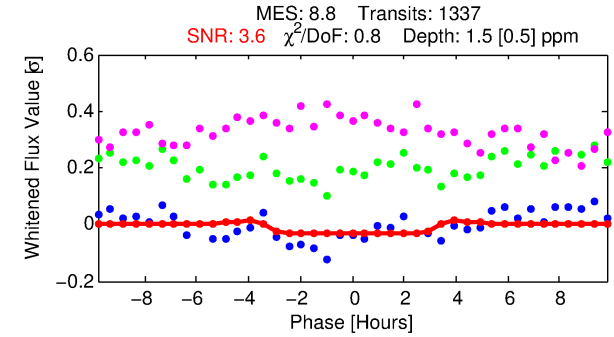
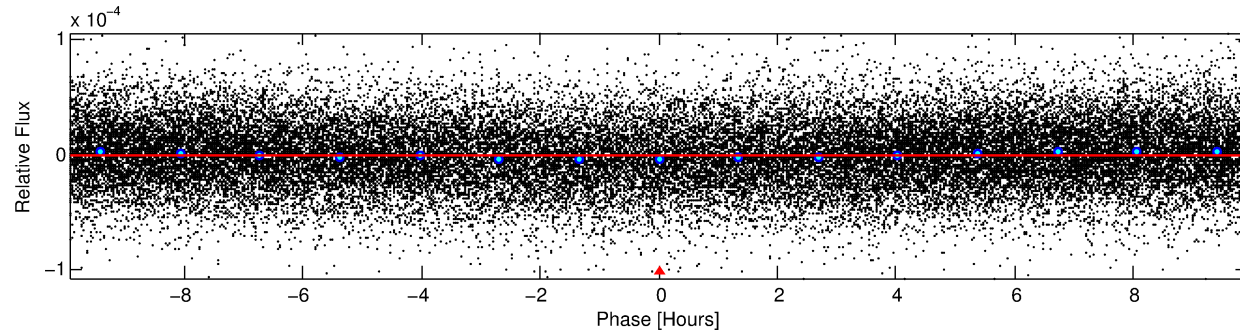
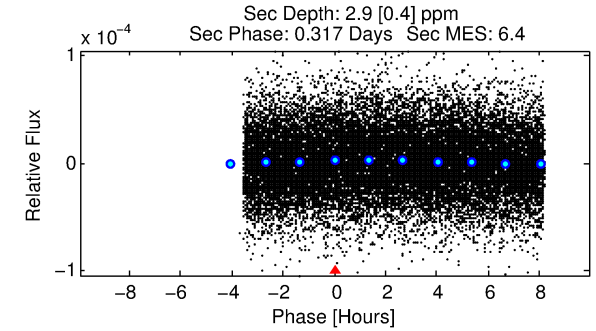
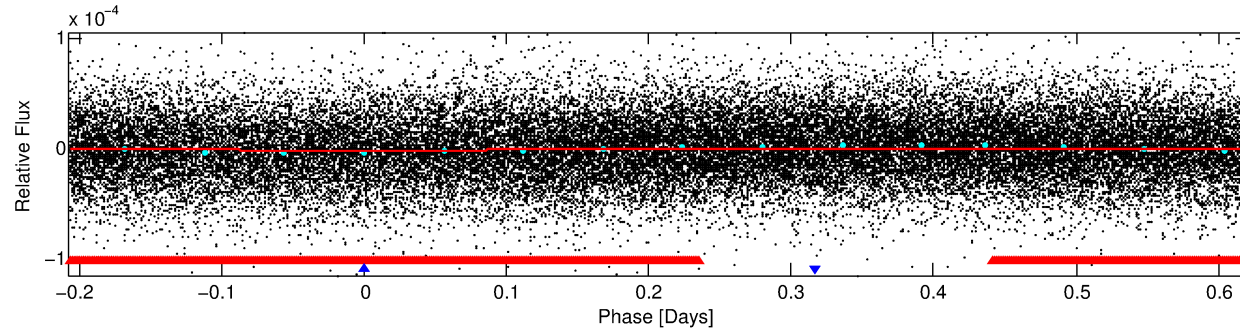
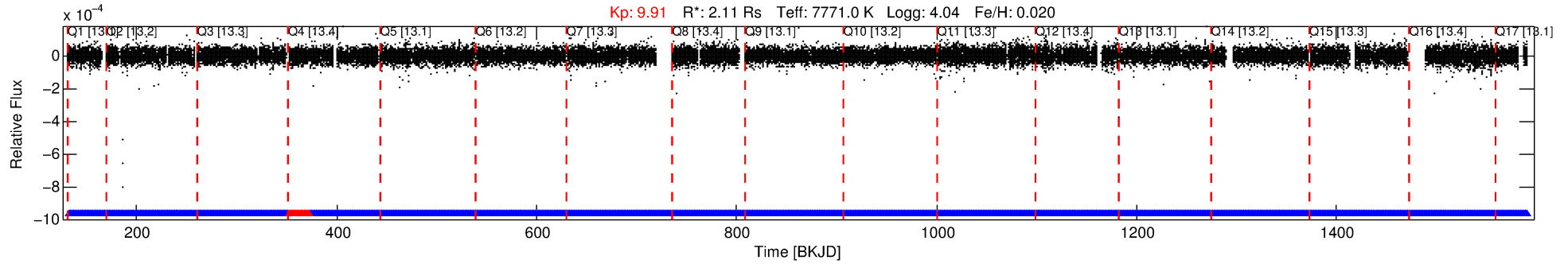
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007959579-02

No Significant Match Found

DV One-Page Summary

KIC: 7959579 Candidate: 2 of 2 Period: 0.828 d



DV Fit Results:

Period = 0.82770 [0.00003] d
Epoch = 132.1772 [0.0112] BKJD
 $R_p/R^* = 0.0012$ [0.0008]
 $b = 0.50$ [6.15]
 $S_{\text{eff}} = 33079.00$ [11119.66]
 $T_{\text{eq}} = 3439$ [289] K
 $R_p = 0.27$ [0.19] R_e
 $a = 0.0210$ [0.0042] AU
 $A_g = 9.74$ [13.44] [0.65 σ]
 $T_{\text{eff}} = 9393$ [3191] K [1.86 σ]

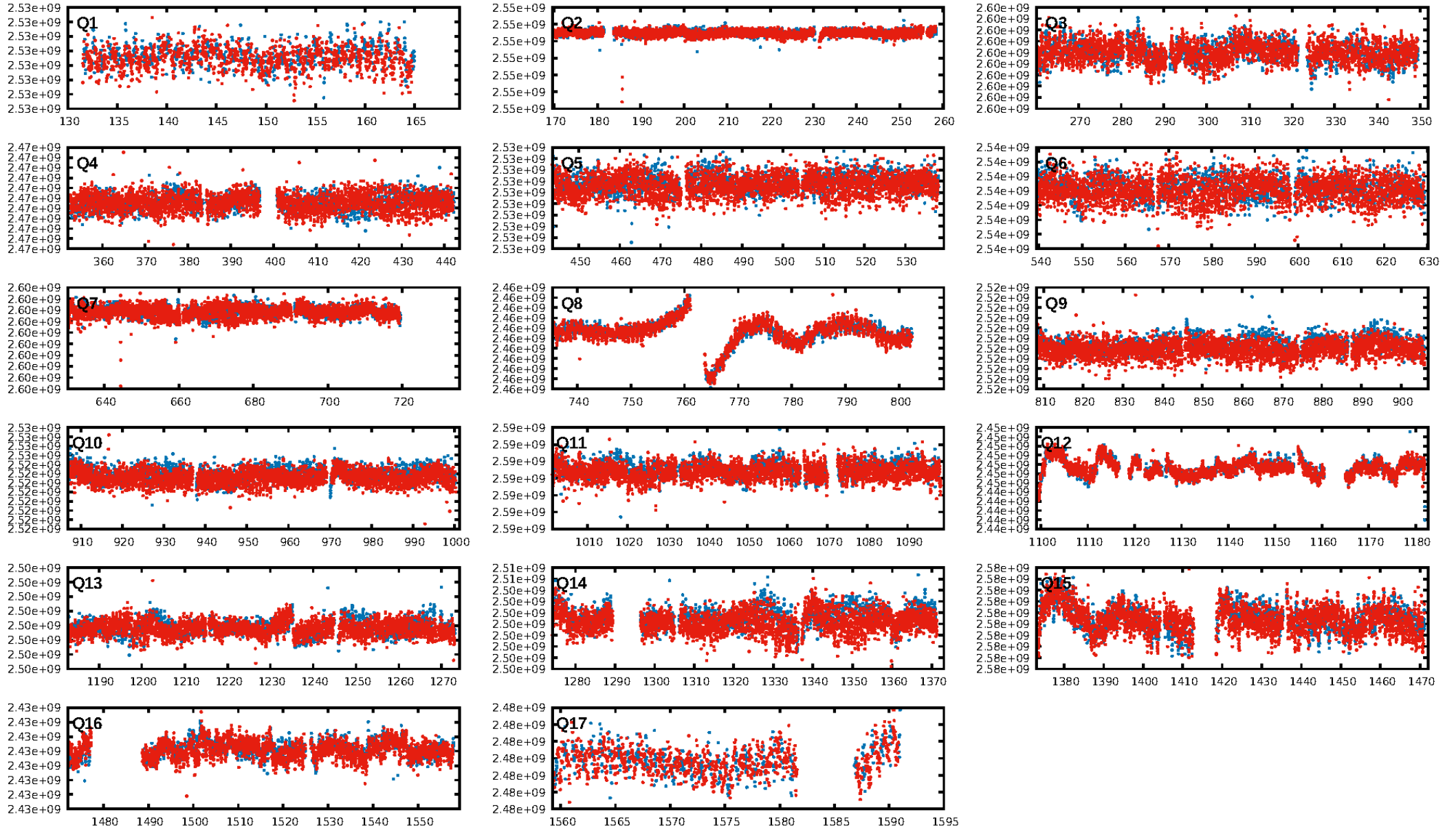
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 98.9% [2.56 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.98 [1239/1264]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 3.827 arcsec [1.24 σ]
OotOffset-st: 2/1/0/3 [6]
KicOffset-rm: 2.653 arcsec [0.69 σ]
KicOffset-st: 2/1/0/3 [6]
DiffImageQuality-fgm: 0.00 [0/6]
DiffImageOverlap-fno: 0.88 [15/17]

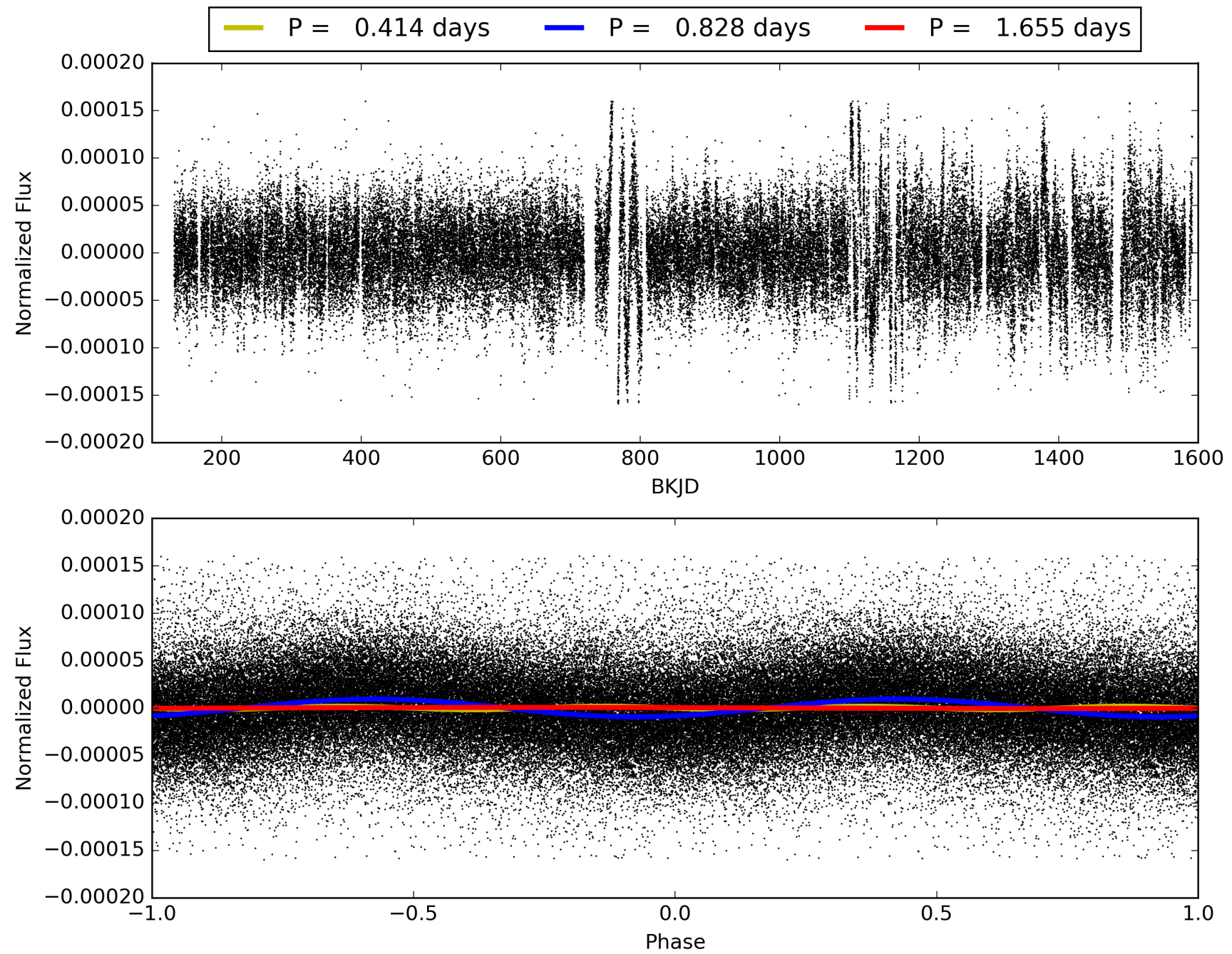
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:41:16 Z

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TCE 007959579-02, PDC Light Curves

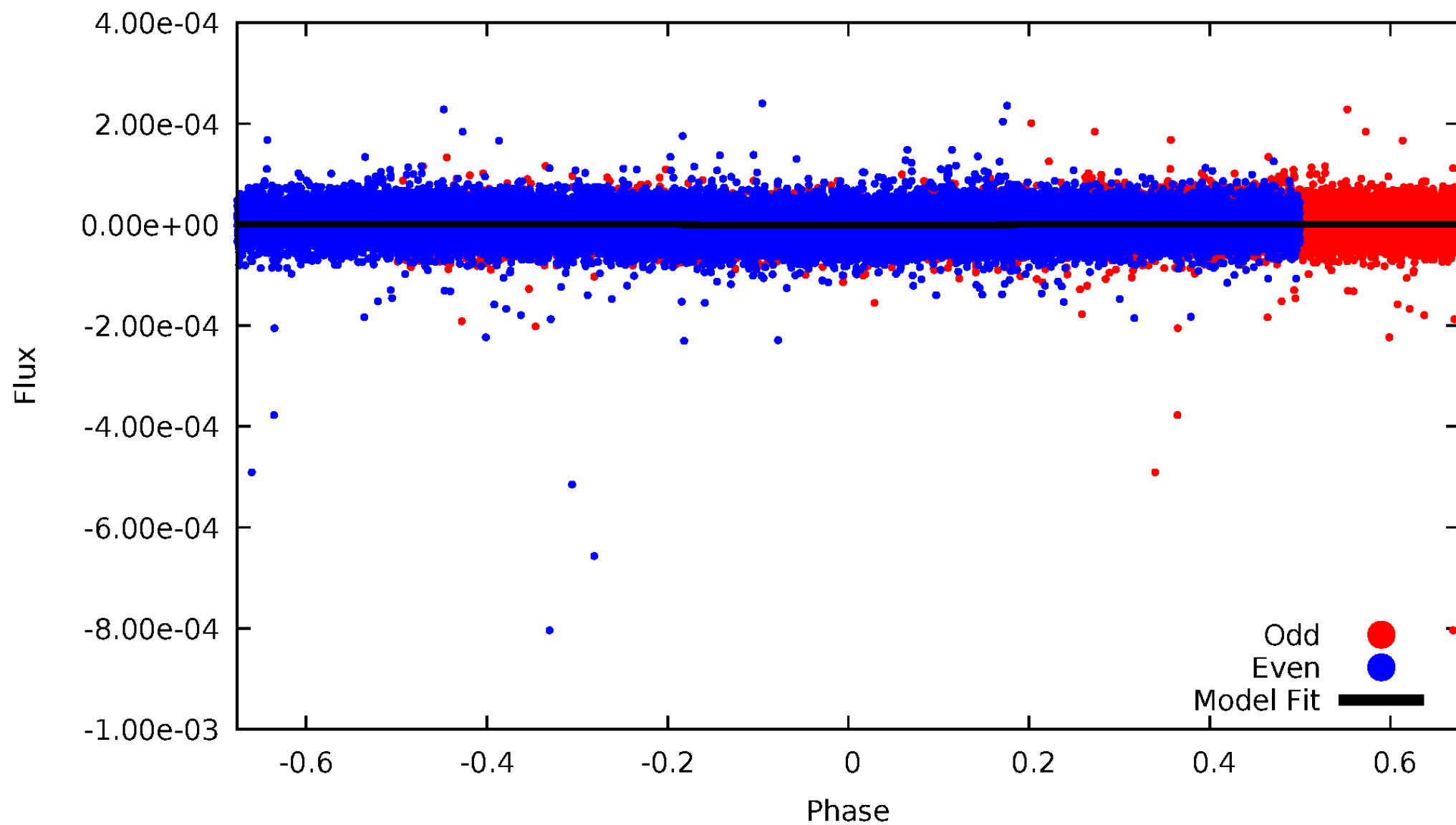


TCE 007959579-02



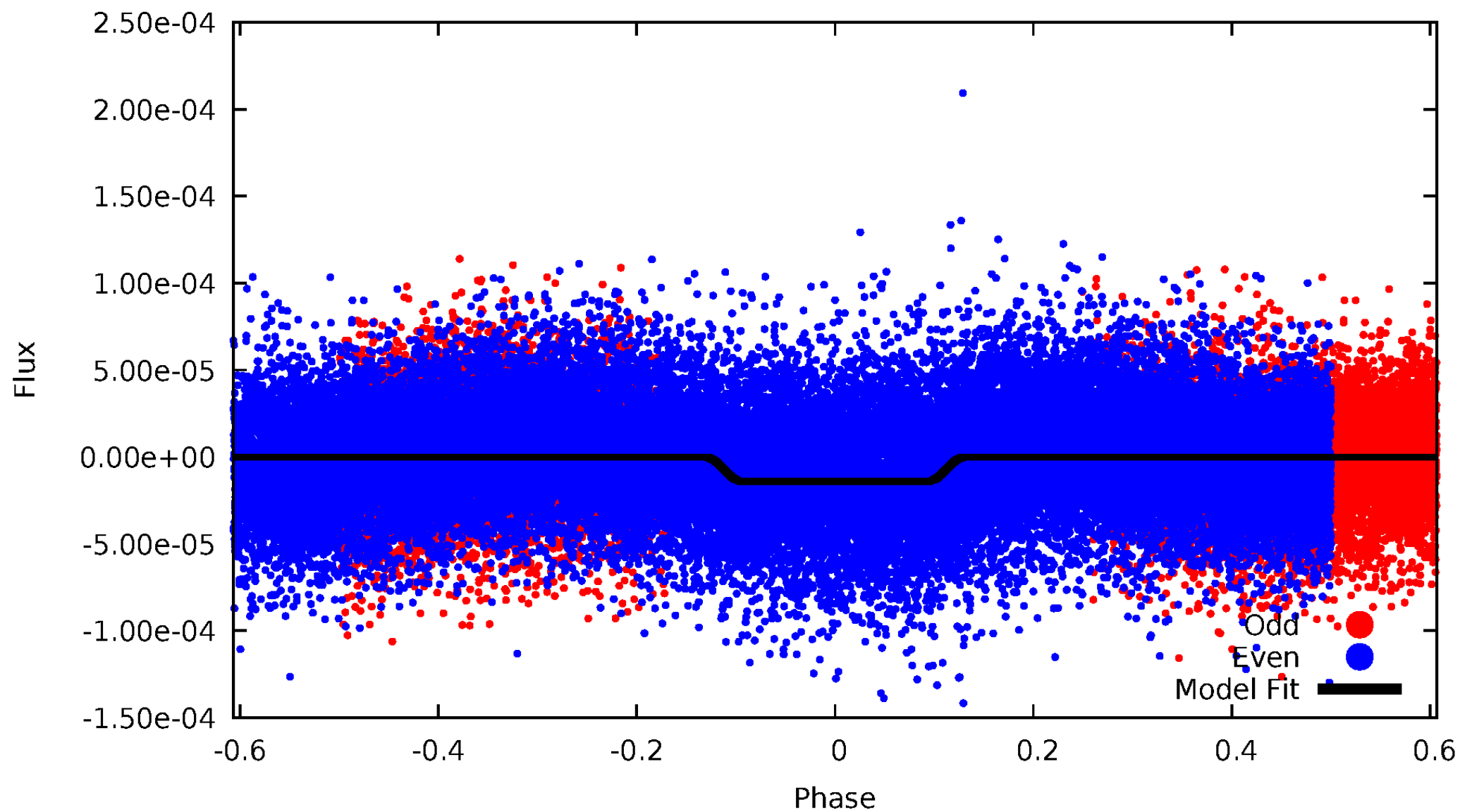
DV Odd/Even

TCE 007959579-02



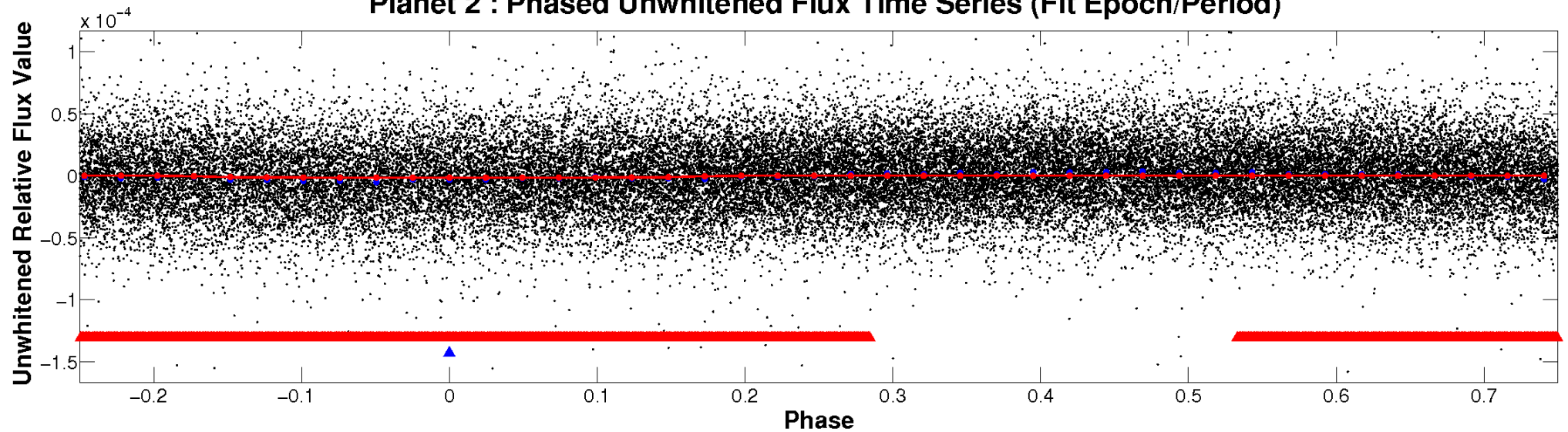
ALT Odd/Even

TCE 007959579-02

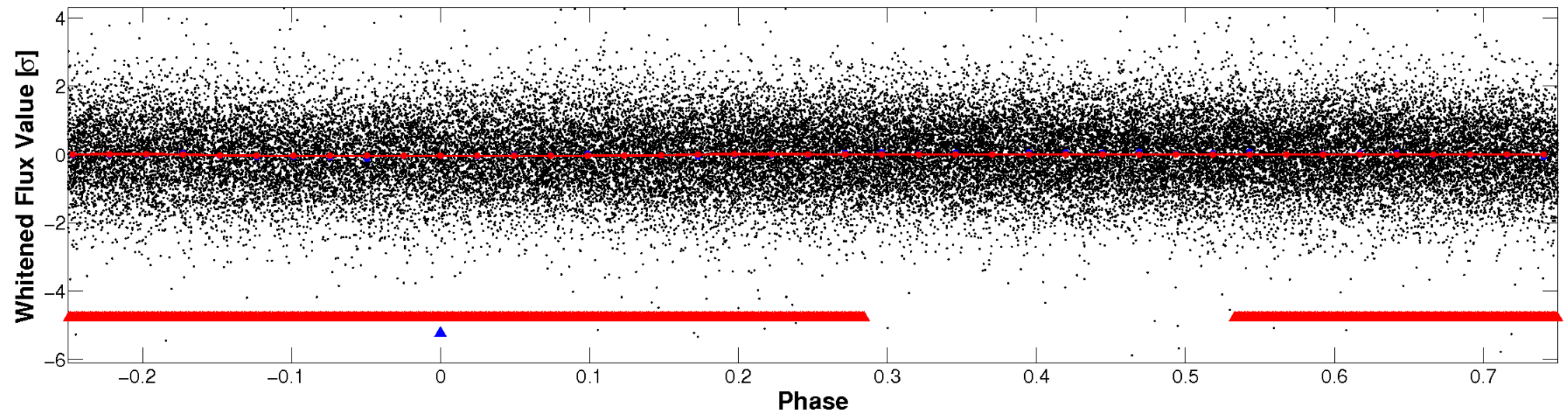


Non-Whitened Vs. Whitened Light Curve

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

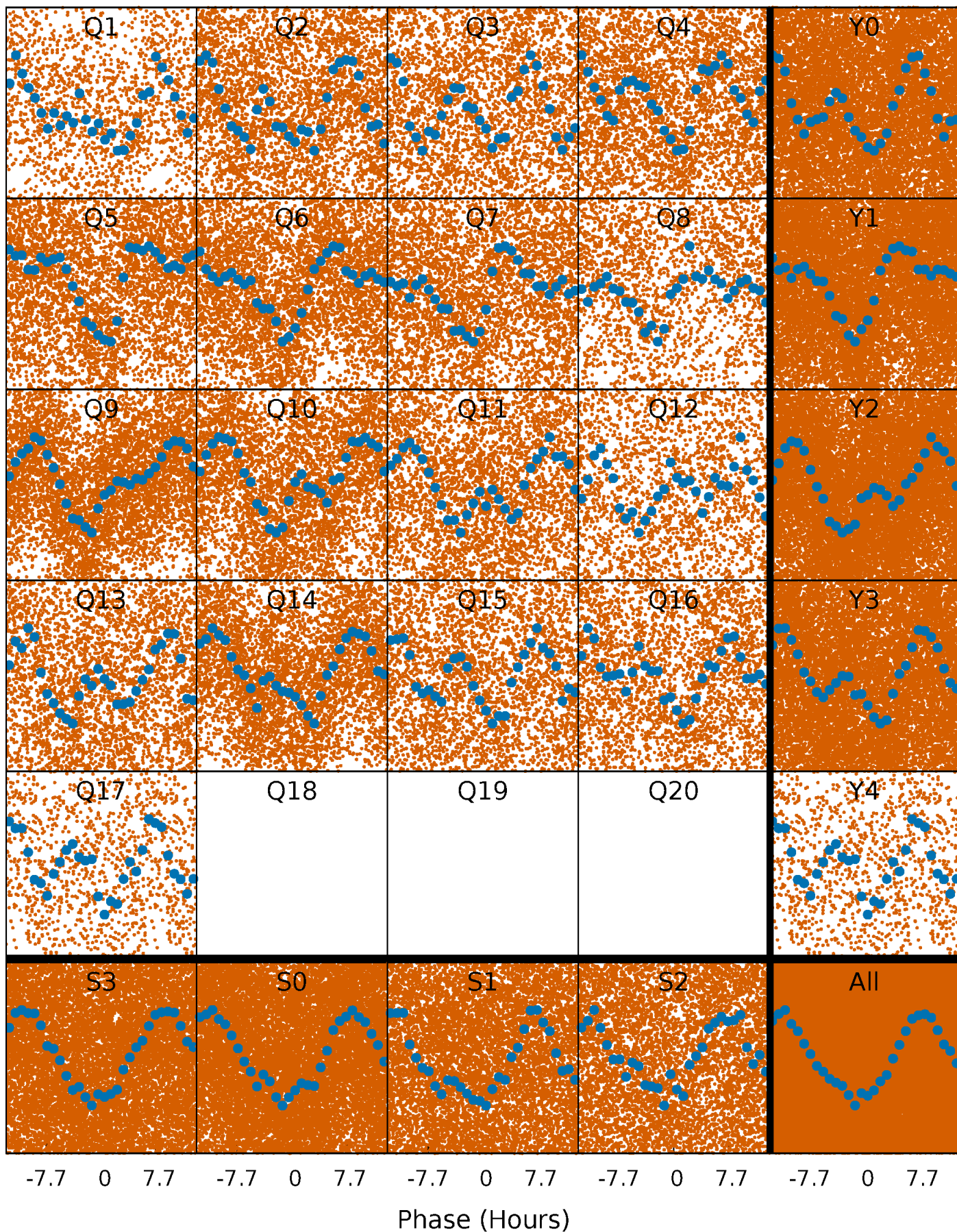


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



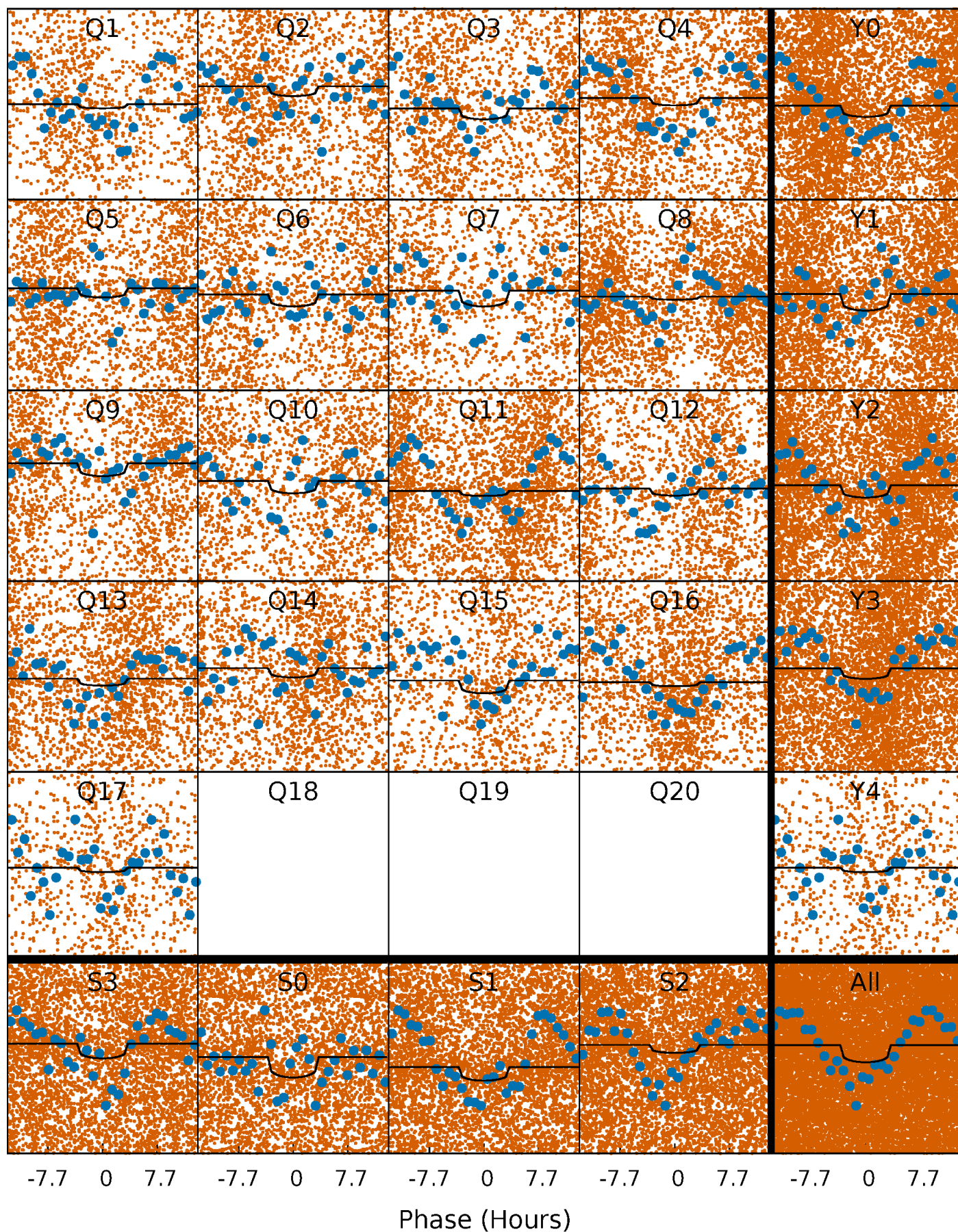
PDC Quarter-Phased Transit Curves

TCE 007959579-02 P= 0.827699 Days $T_0=132.177177$ (BKJD)



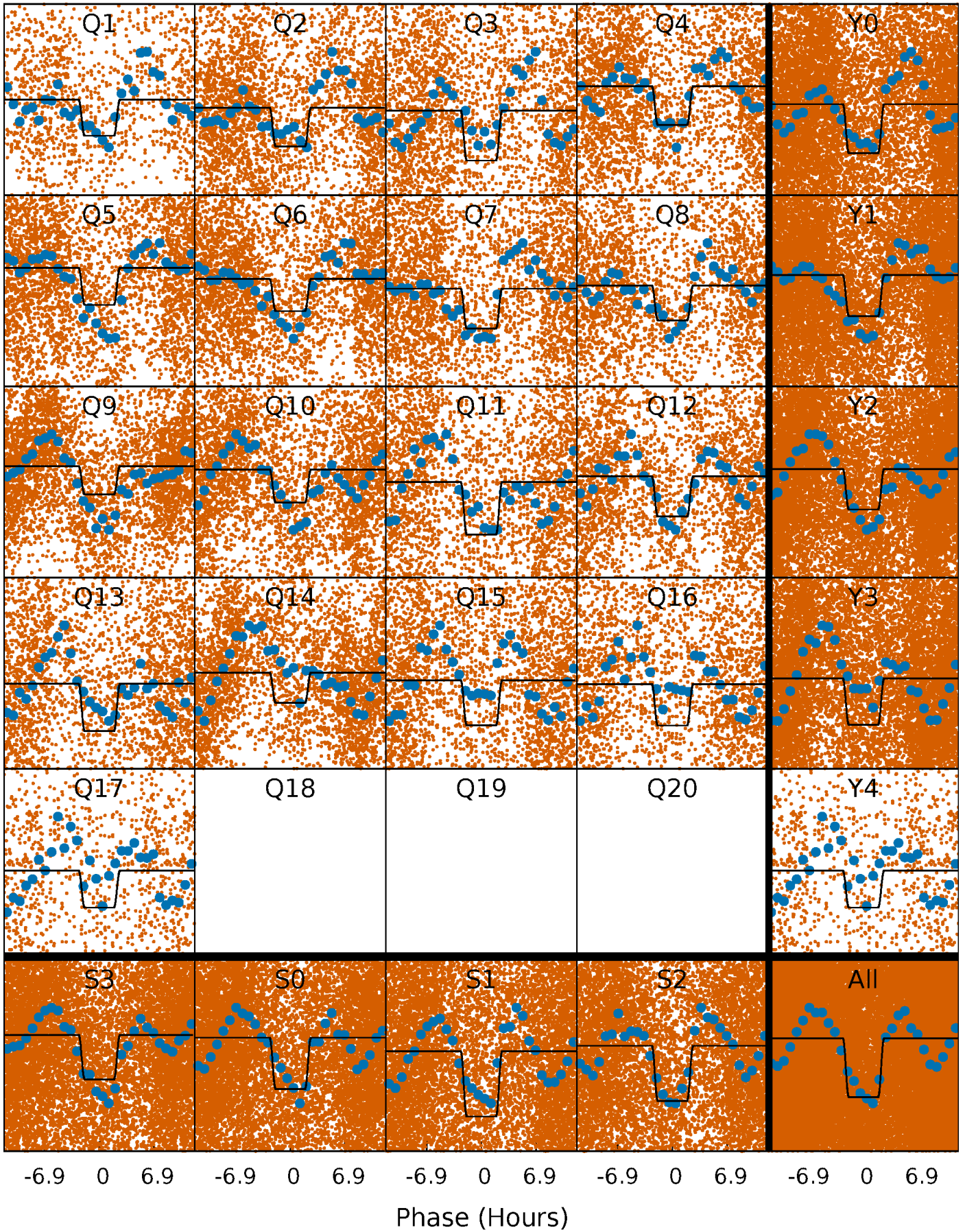
DV Quarter-Phased Transit Curves

TCE 007959579-02 P= 0.827699 Days $T_0=132.177177$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

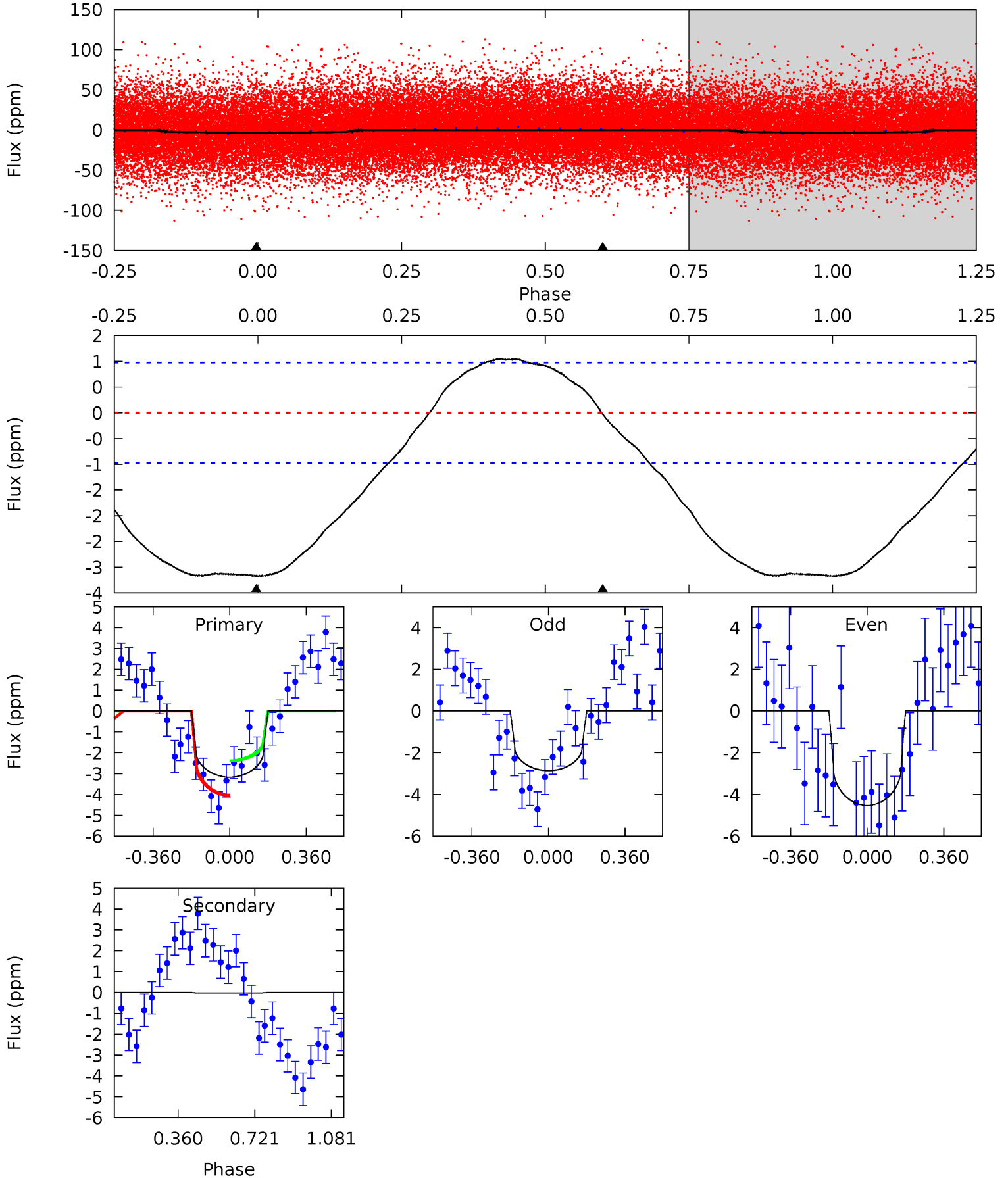
TCE 007959579-02 P= 0.827446 Days $T_0=132.283257$ (BKJD)



DV Model-Shift Uniqueness Test

007959579-02, $P = 0.827699$ Days, $E = 131.349478$ Days

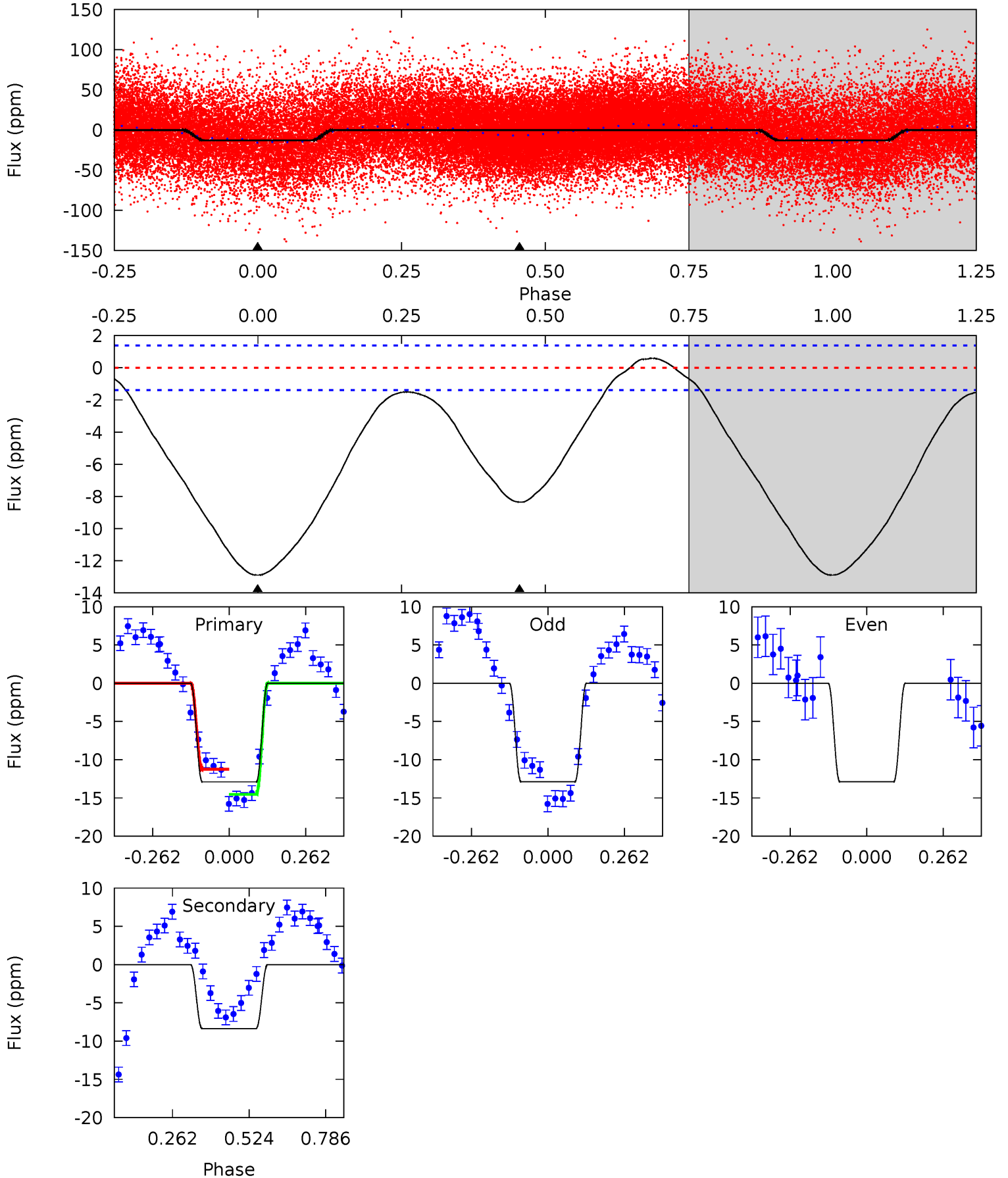
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.0	0.12	0	0	4.29	0.91	1.77	14.0	14.0	0.12	0.12	2.97	0.87	0.25	3.67



Alt Model-Shift Uniqueness Test

007959579-02, P = 0.827446 Days, E = 131.455811 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
40.4	26.2	0	0	4.36	1.12	1.91	40.4	40.4	26.2	26.2	0	0.99	0.04	4.83



Stellar Parameters For KIC 007959579

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7771^{+214}_{-322}	$4.043^{+0.160}_{-0.160}$	$0.020^{+0.200}_{-0.400}$	$2.108^{+0.502}_{-0.502}$	$1.787^{+0.145}_{-0.315}$	$0.269^{+0.256}_{-0.114}$
	+3%/-4%	+4%/-4%	+1000%/-2000%	+24%/-24%	+8%/-18%	+95%/-42%
Source	KIC0	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 007959579-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-0 ± 0	$0.28^{+0.17}_{-0.16}$	4784^{+334}_{-335}	-3943^{+8894}_{-1370}	$0.070^{+1.053}_{-0.831}$
Alt.	-8 ± 0	$0.85^{+0.23}_{-0.18}$	4793^{+318}_{-311}	6468^{+978}_{-723}	$2.779^{+1.642}_{-1.055}$

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

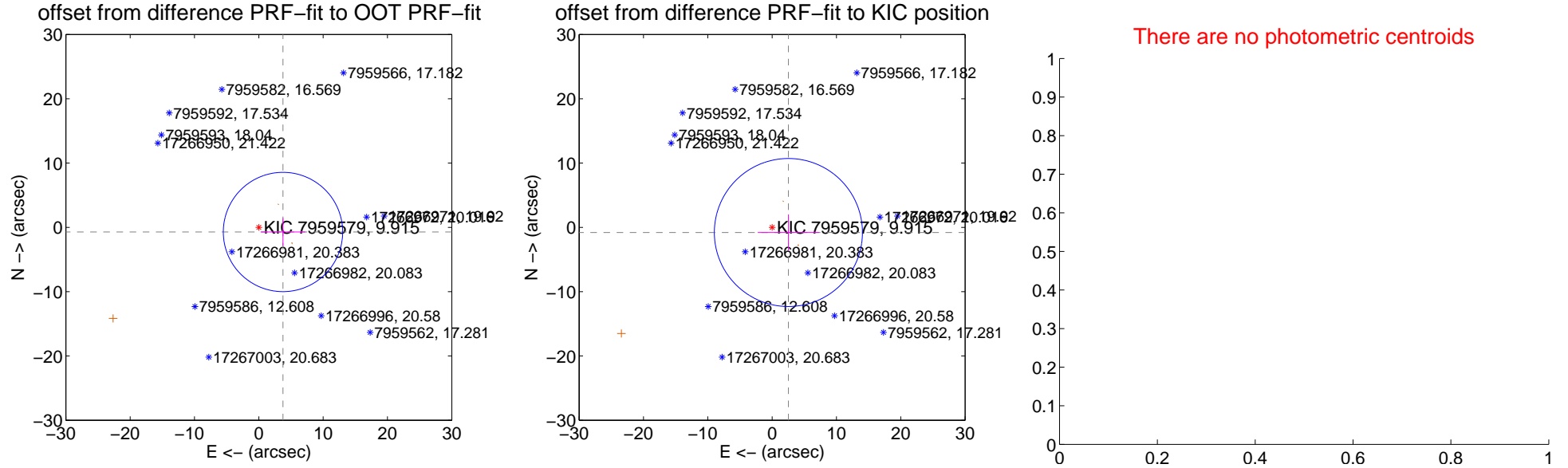
DV Centroid Data

Supplemental centroid analysis for 007959579-02. **Kepler magnitude: 9.91.** Transit SNR 3.59

There are 0 quarters with good PRF difference image offsets

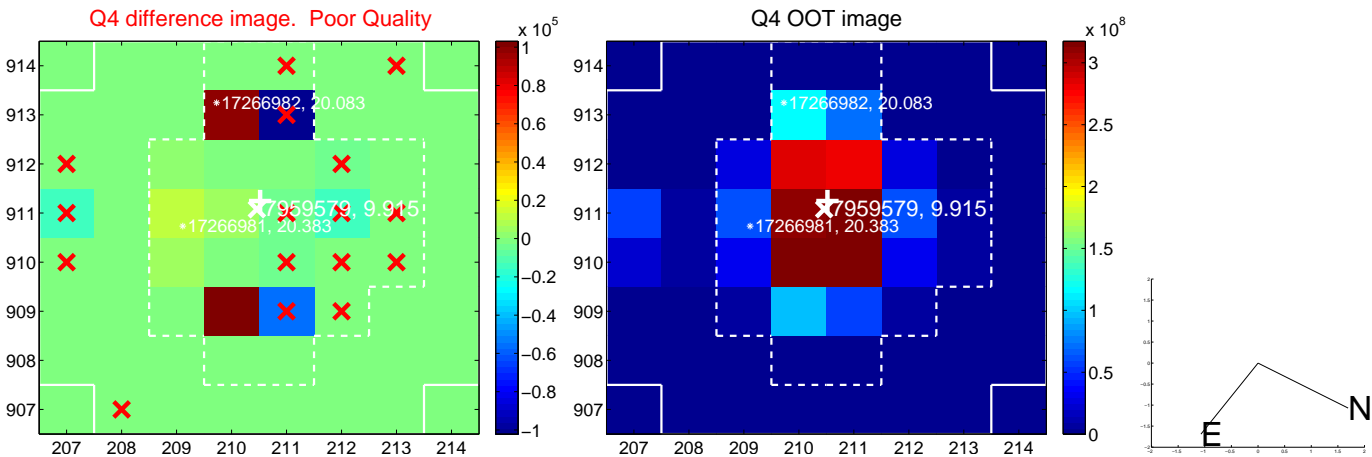
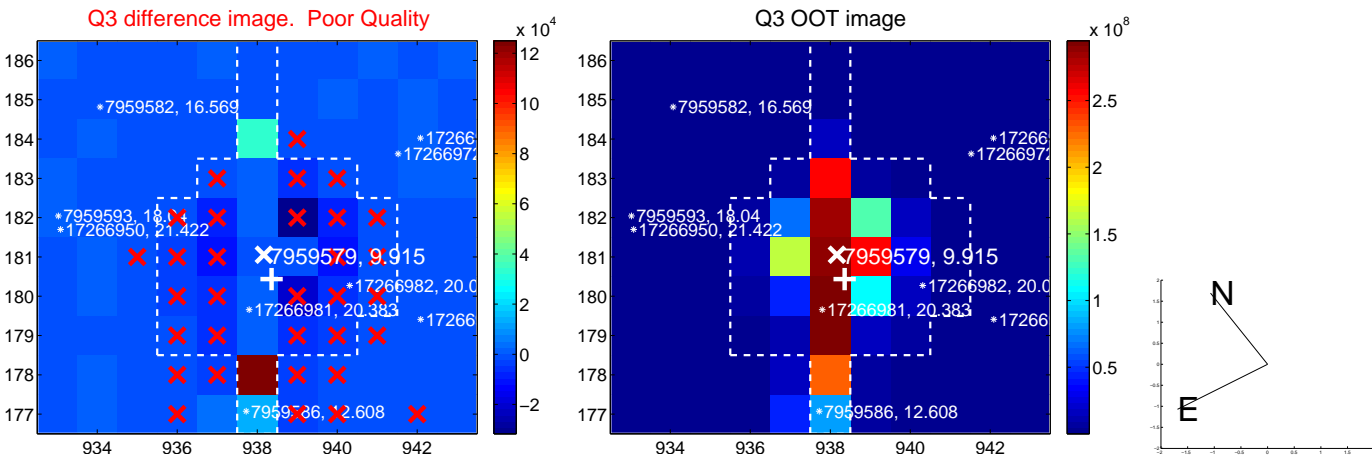
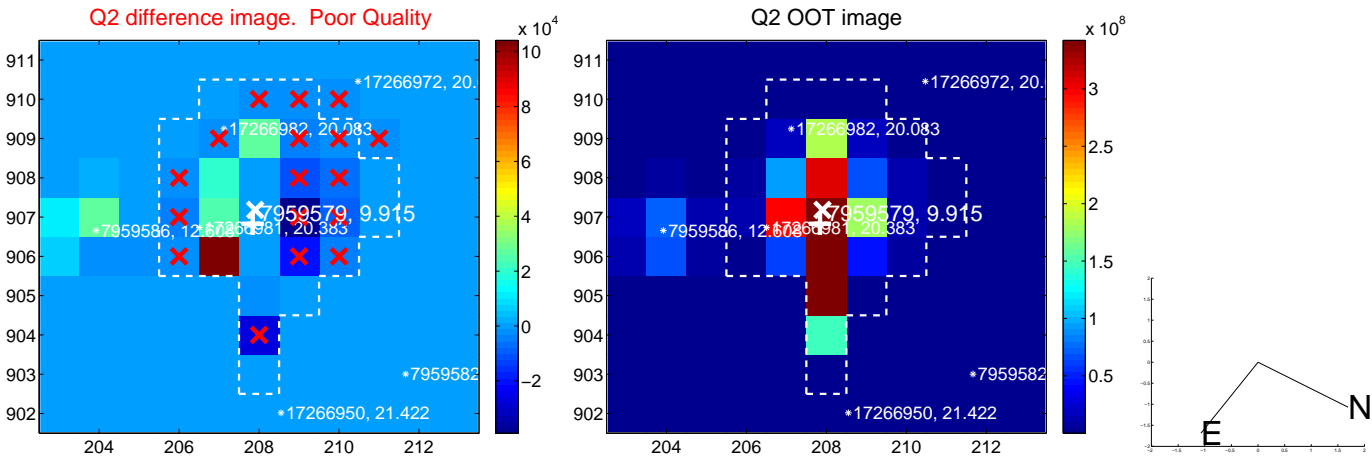
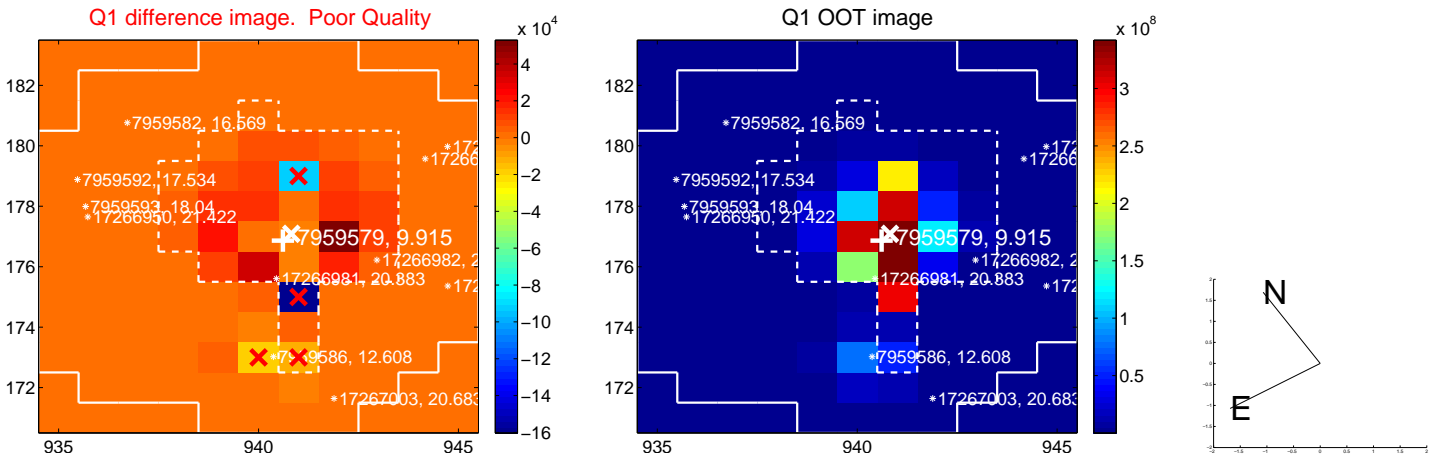
The direct PRF centroid is offset from the target star catalog position by about 1.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.827 ± 3.092	1.24	-3.759 ± 3.468	-0.720 ± 2.157
PRF-fit source offset from KIC position	2.653 ± 3.837	0.69	-2.530 ± 4.764	-0.800 ± 2.802
photometric centroid source offset	—	—	—	—

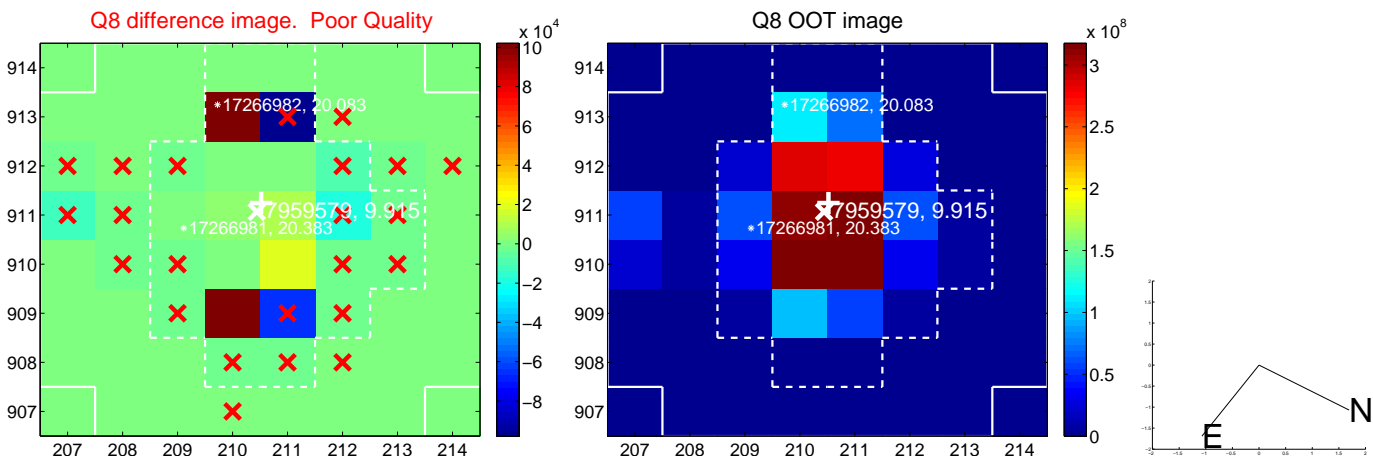
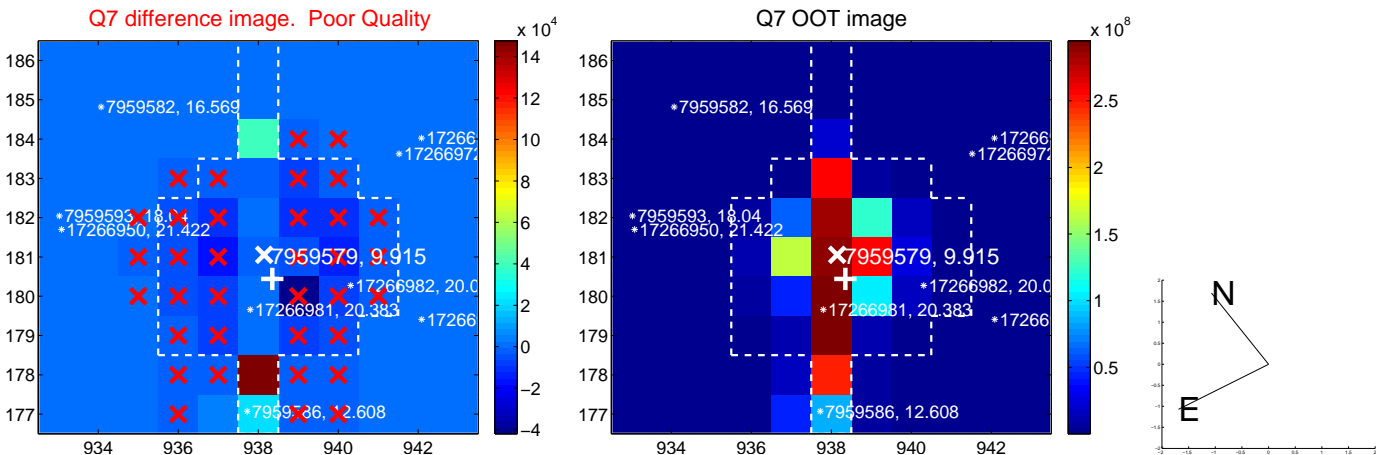
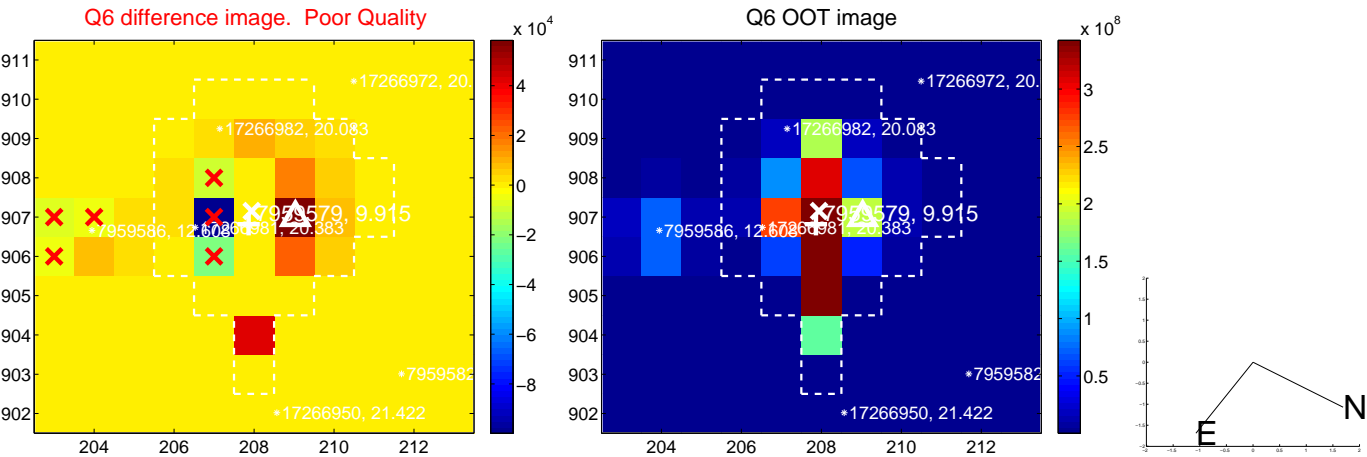
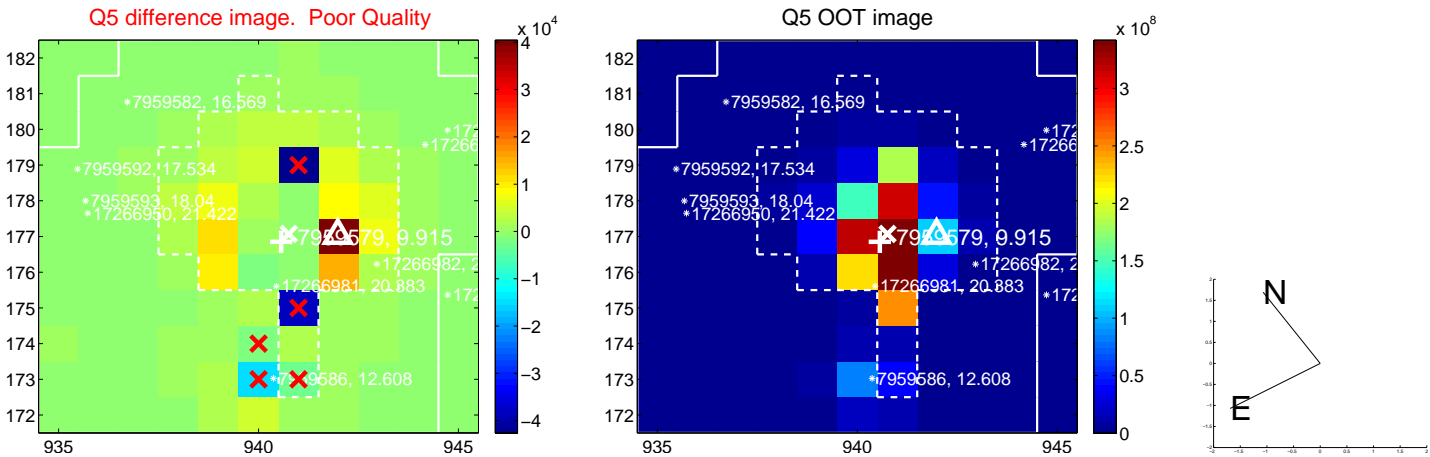


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

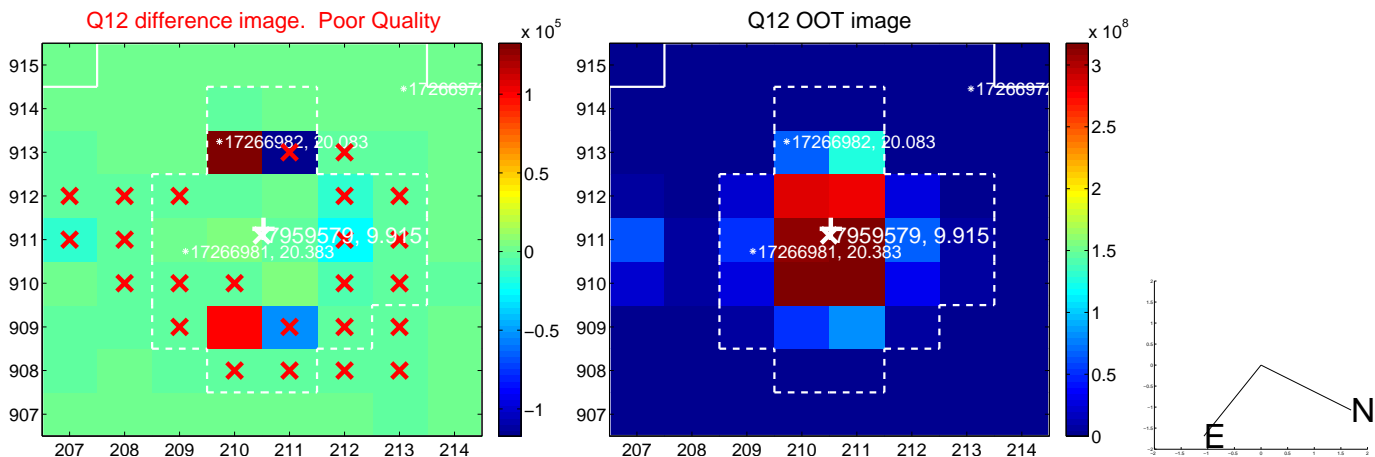
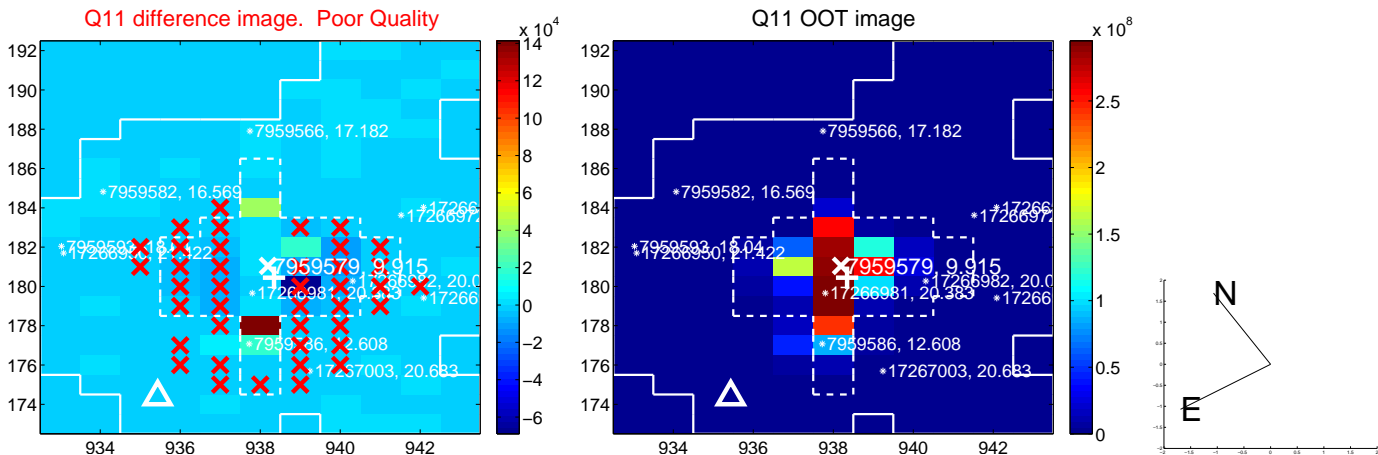
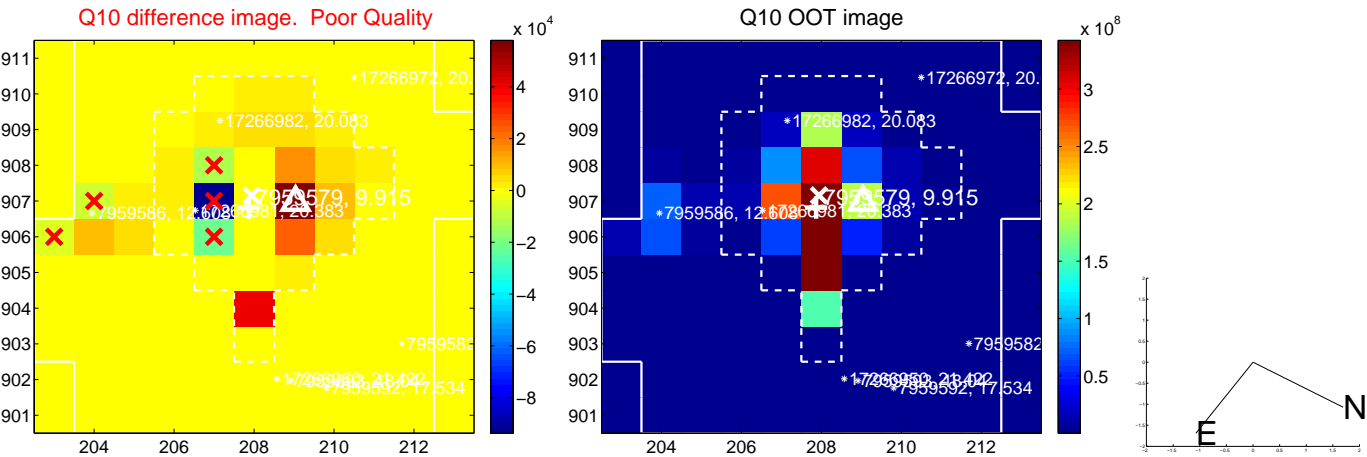
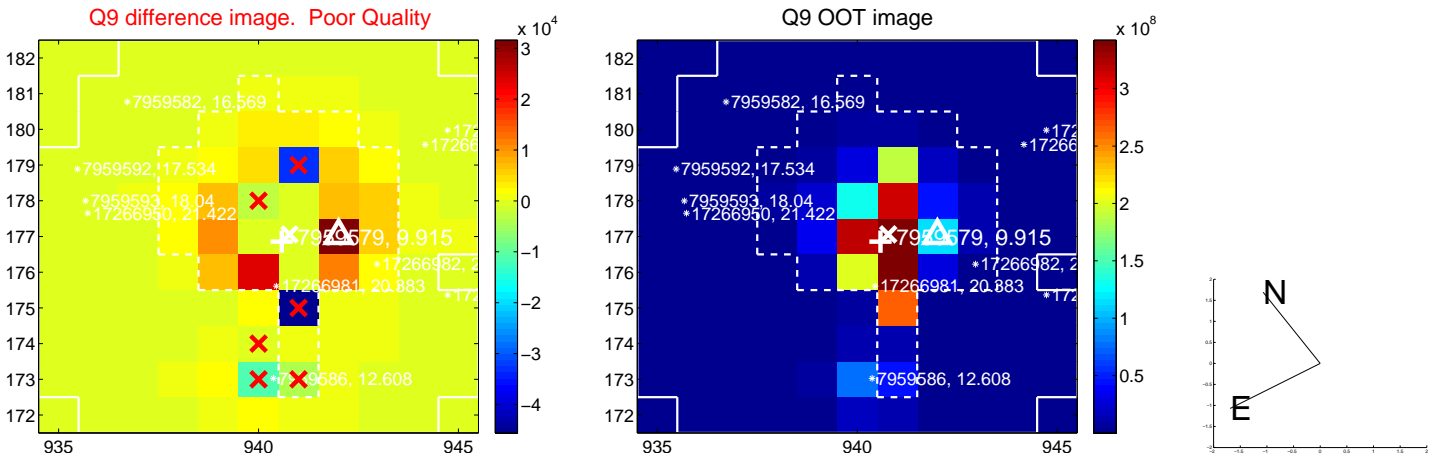
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



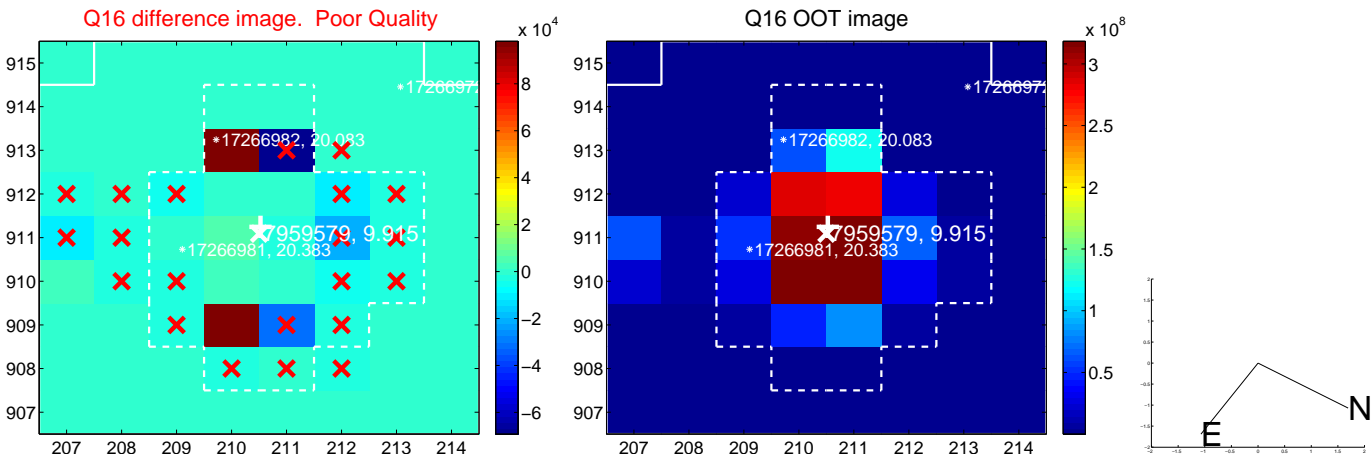
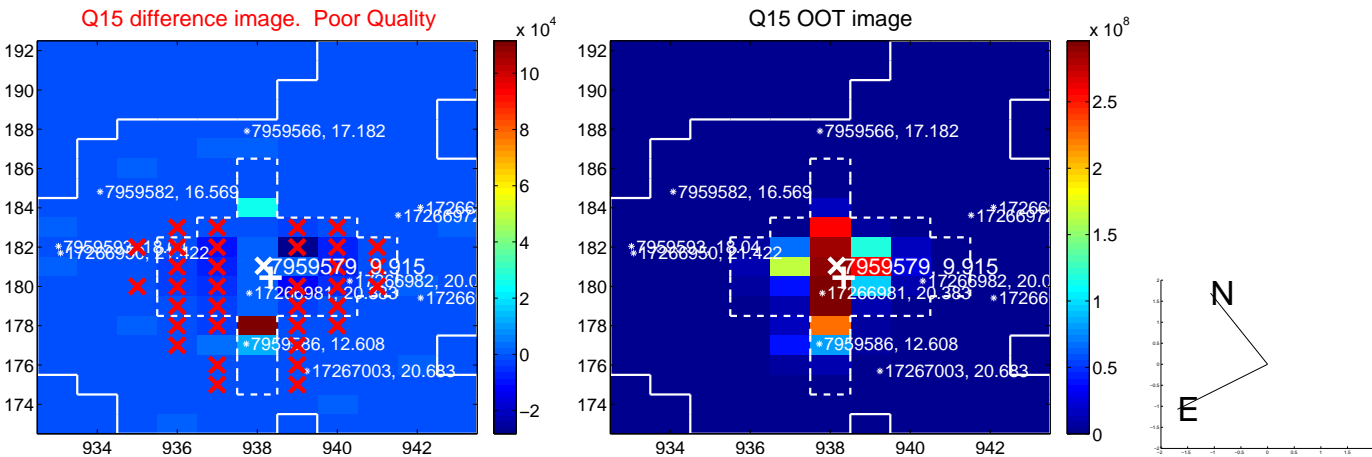
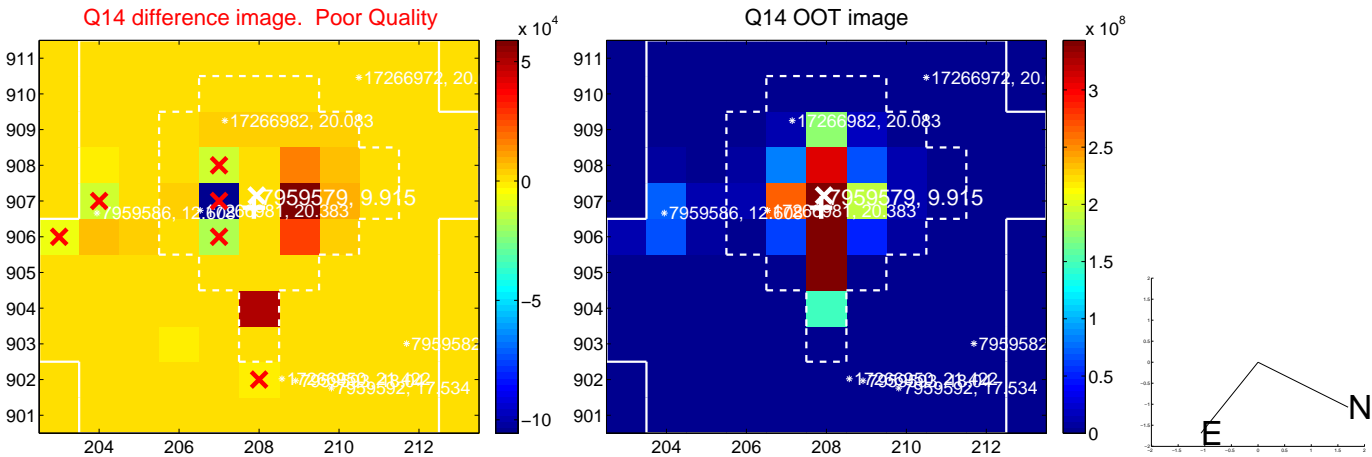
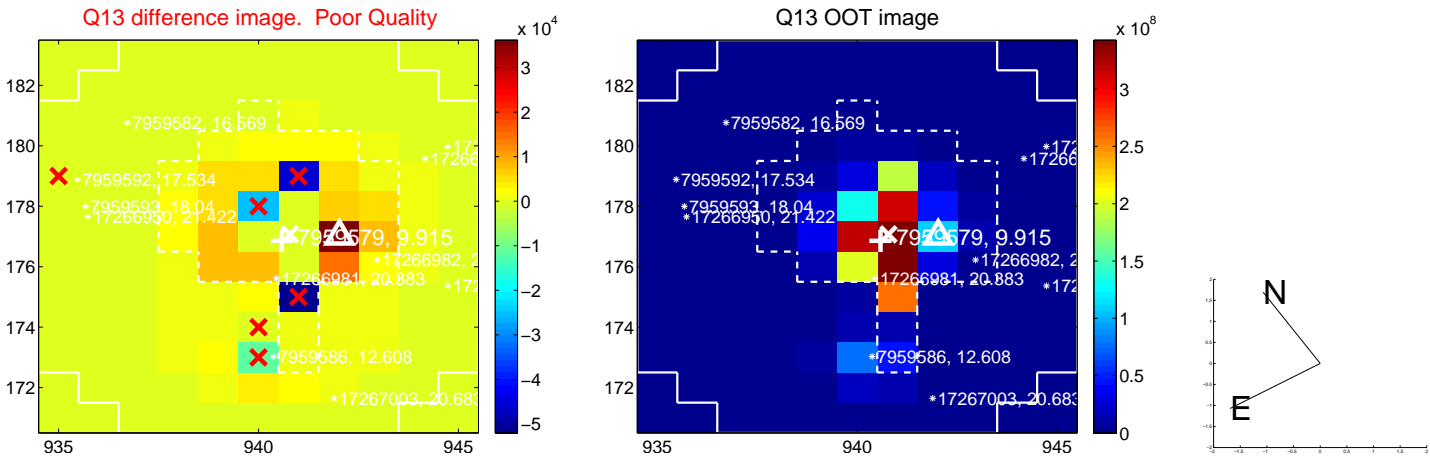
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



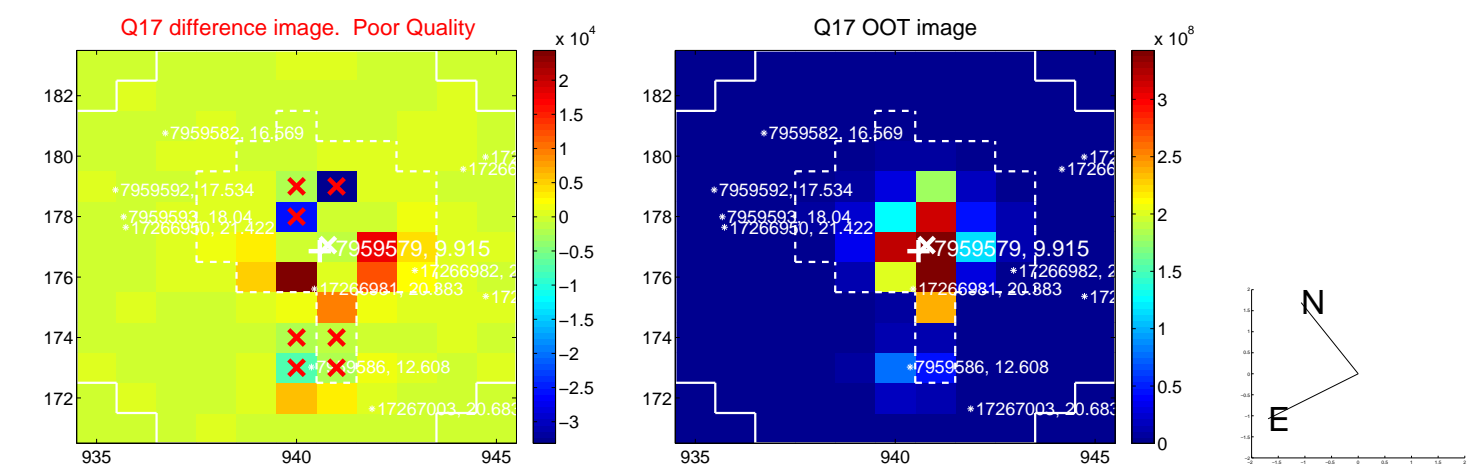
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

