

KIC 009181012

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})
009181012-01	OBS	No	1.281650	131.563277	864.8	3.000	9.1	-1.0	0.99	5815	2.88	1946.79
009181012-02	OBS	No	1.281642	132.122154	52.0	3.227	9.1	8.5	0.99	5815	0.70	1946.80

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009181012-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_NOFITS
009181012-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—SAME_NTL_PERIOD—CENT_FEW_DIFFS

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

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

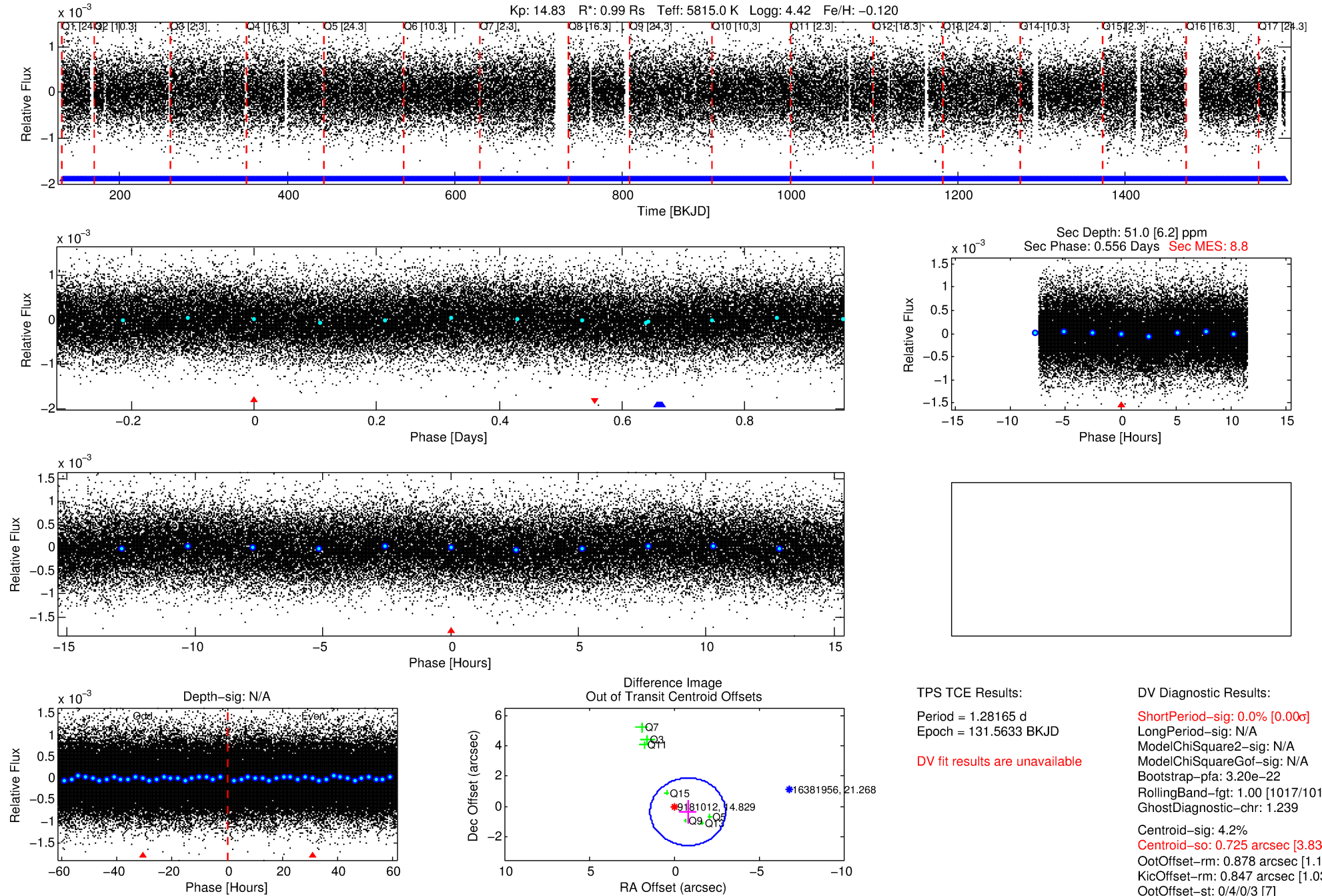
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009181012-01

No Significant Match Found

DV One-Page Summary

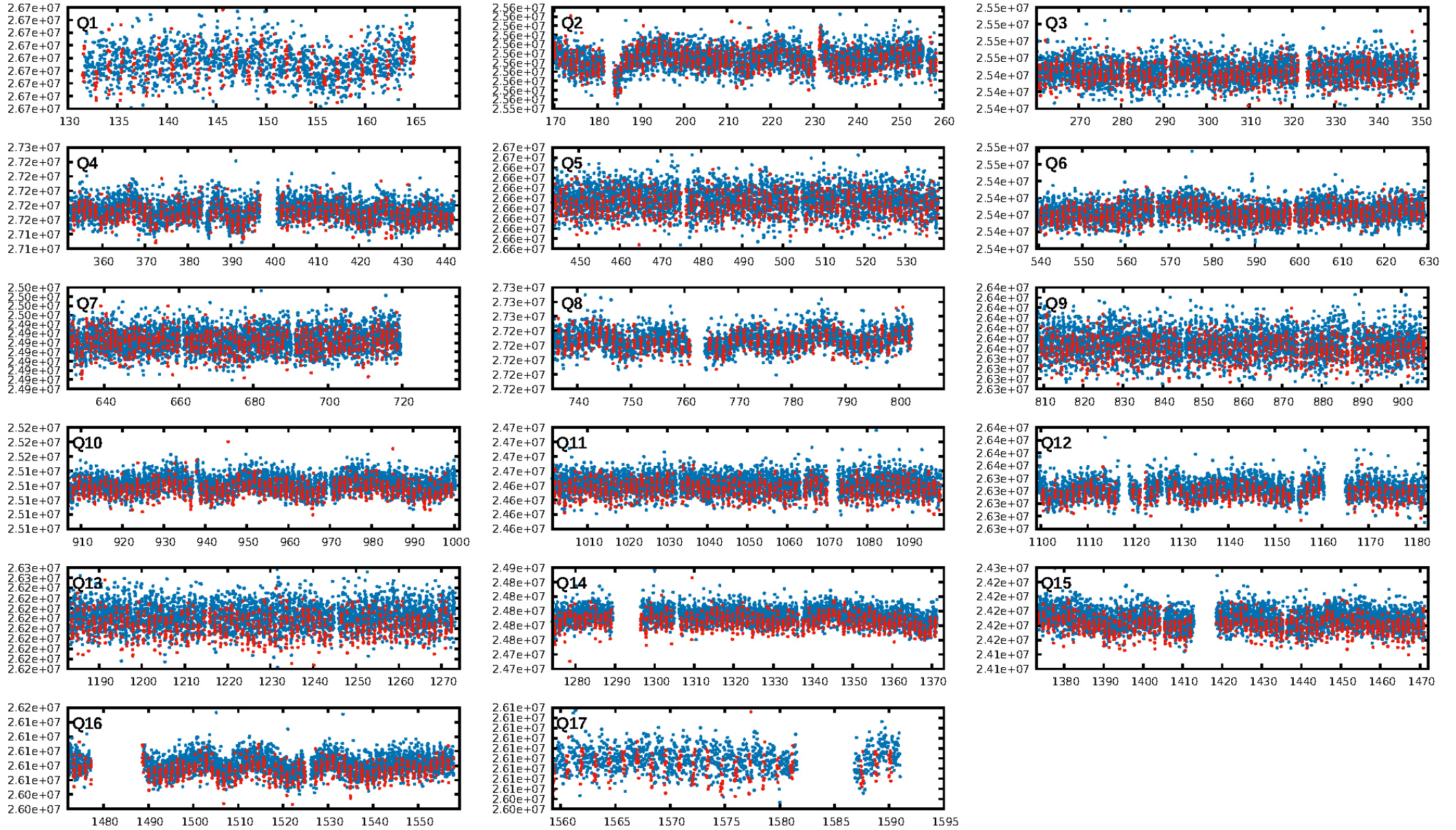
KIC: 9181012 Candidate: 1 of 2 Period: 1.282 d



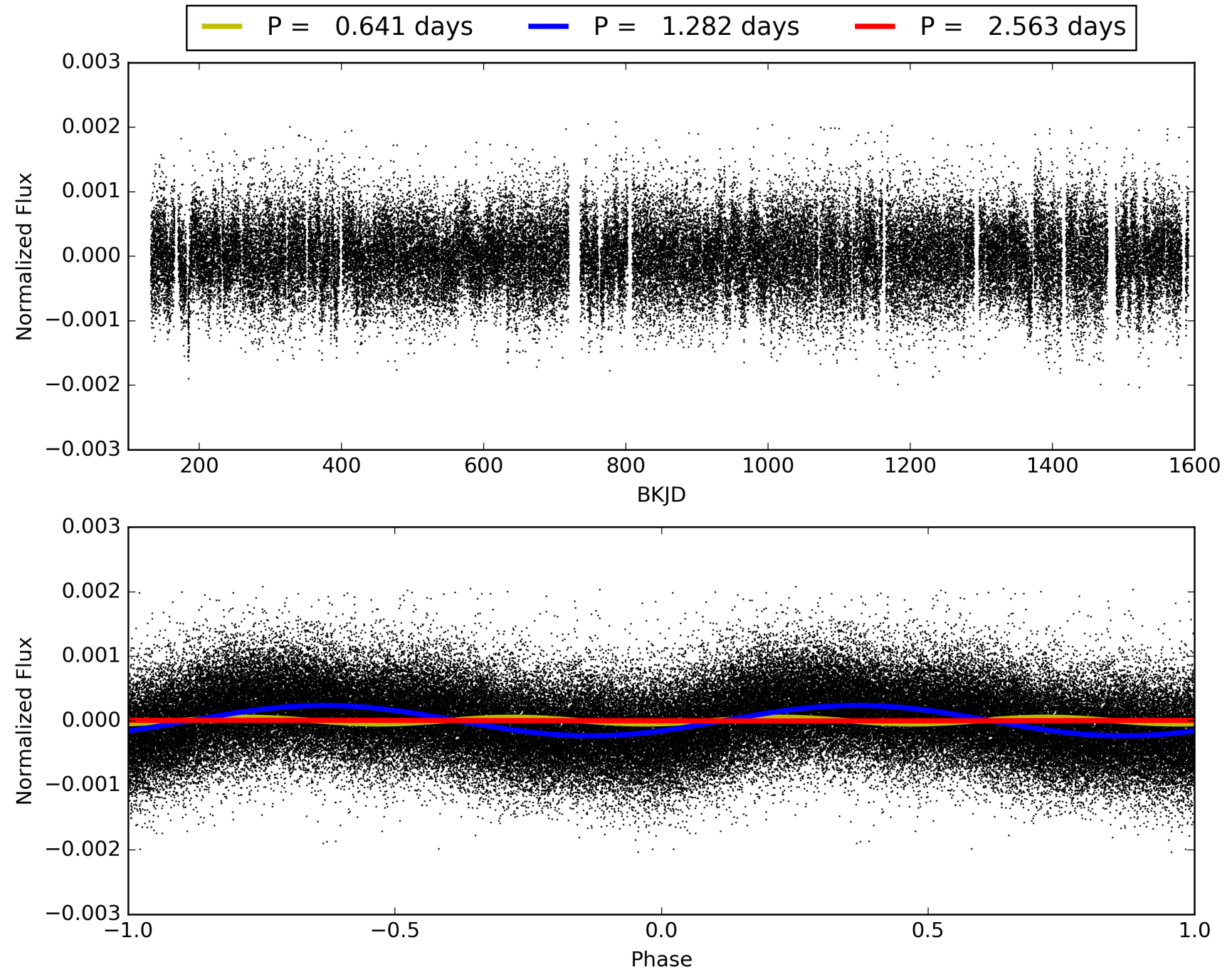
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 09:28:19 Z

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

TCE 009181012-01, PDC Light Curves

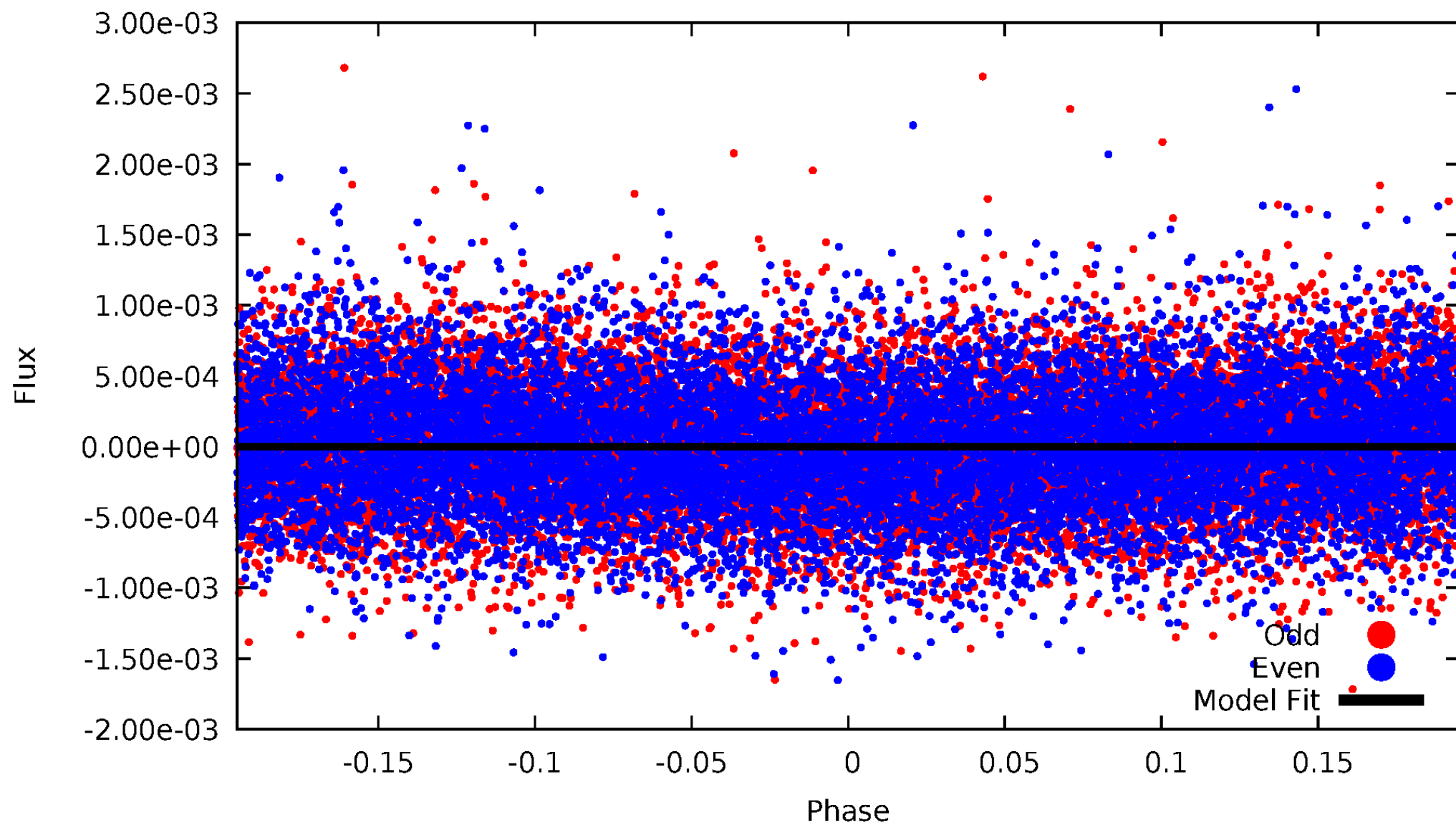


TCE 009181012-01



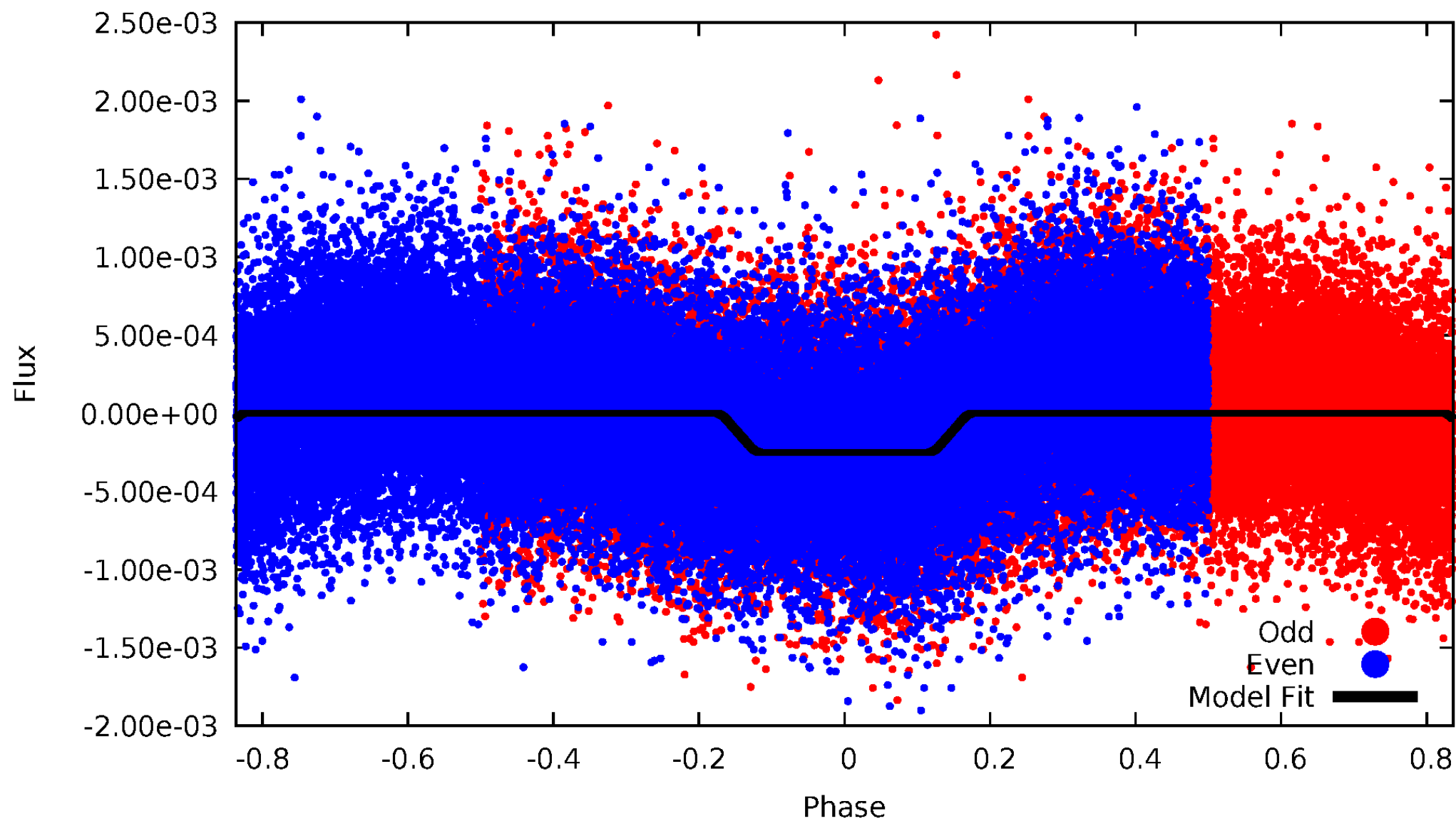
DV Odd/Even

TCE 009181012-01

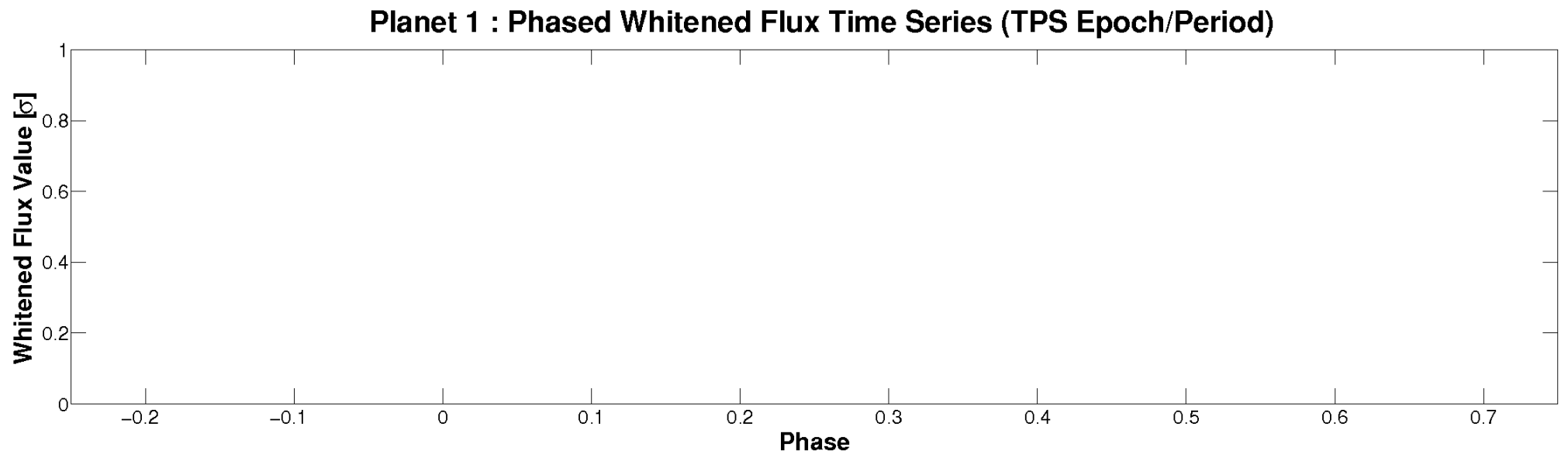
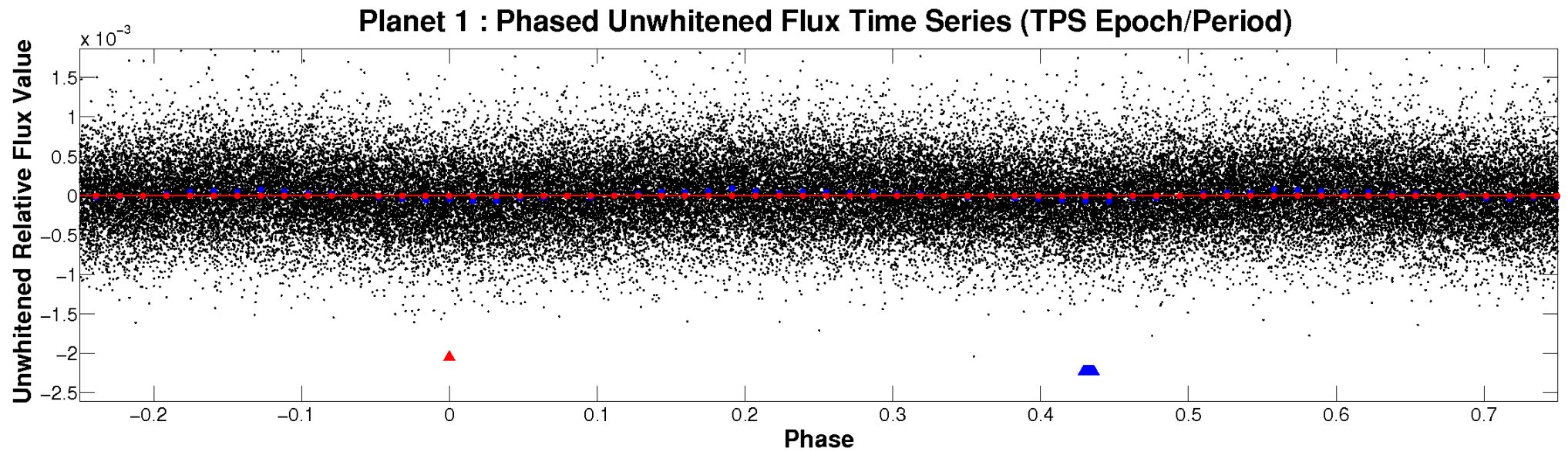


ALT Odd/Even

TCE 009181012-01

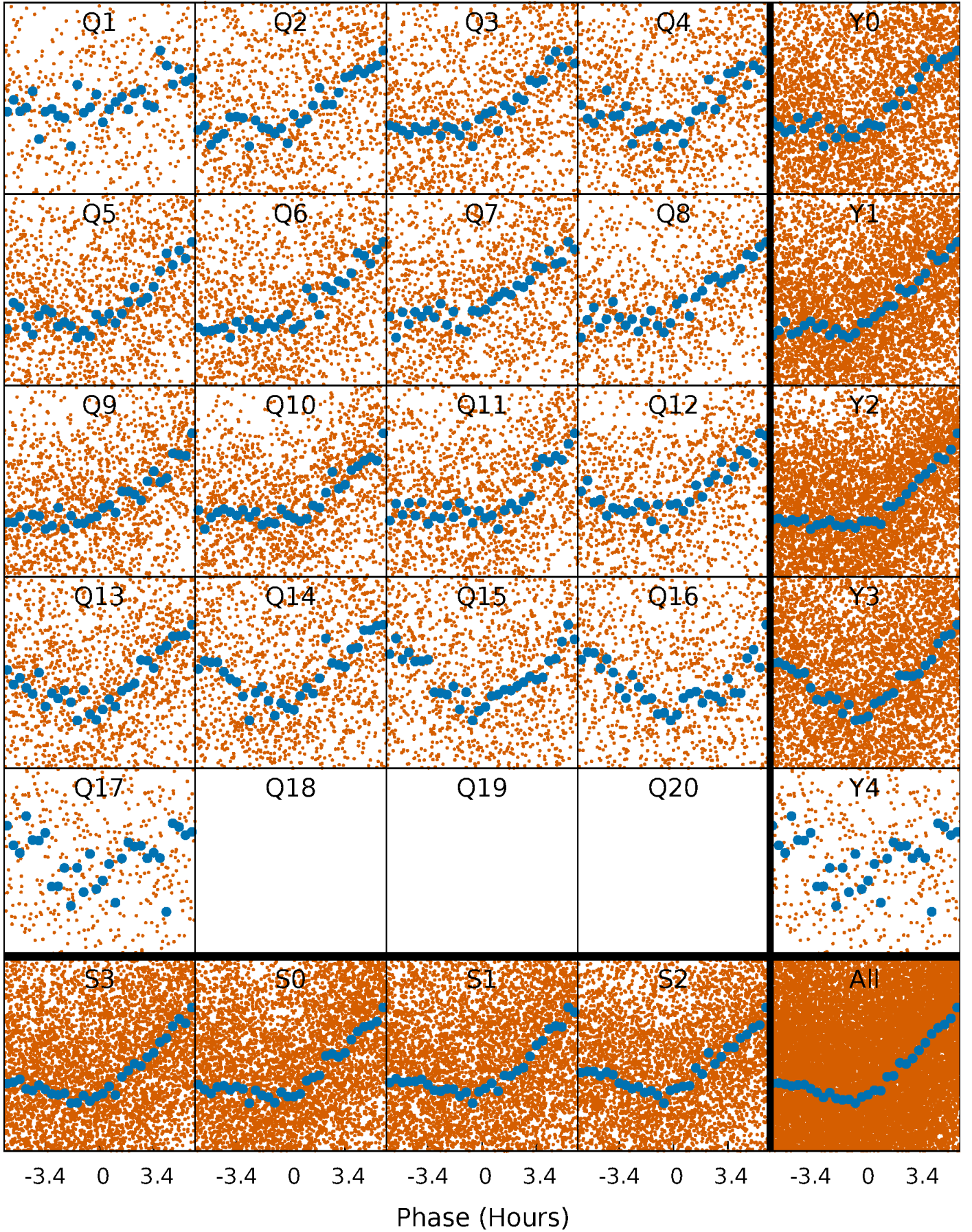


Non-Whitened Vs. Whitened Light Curve



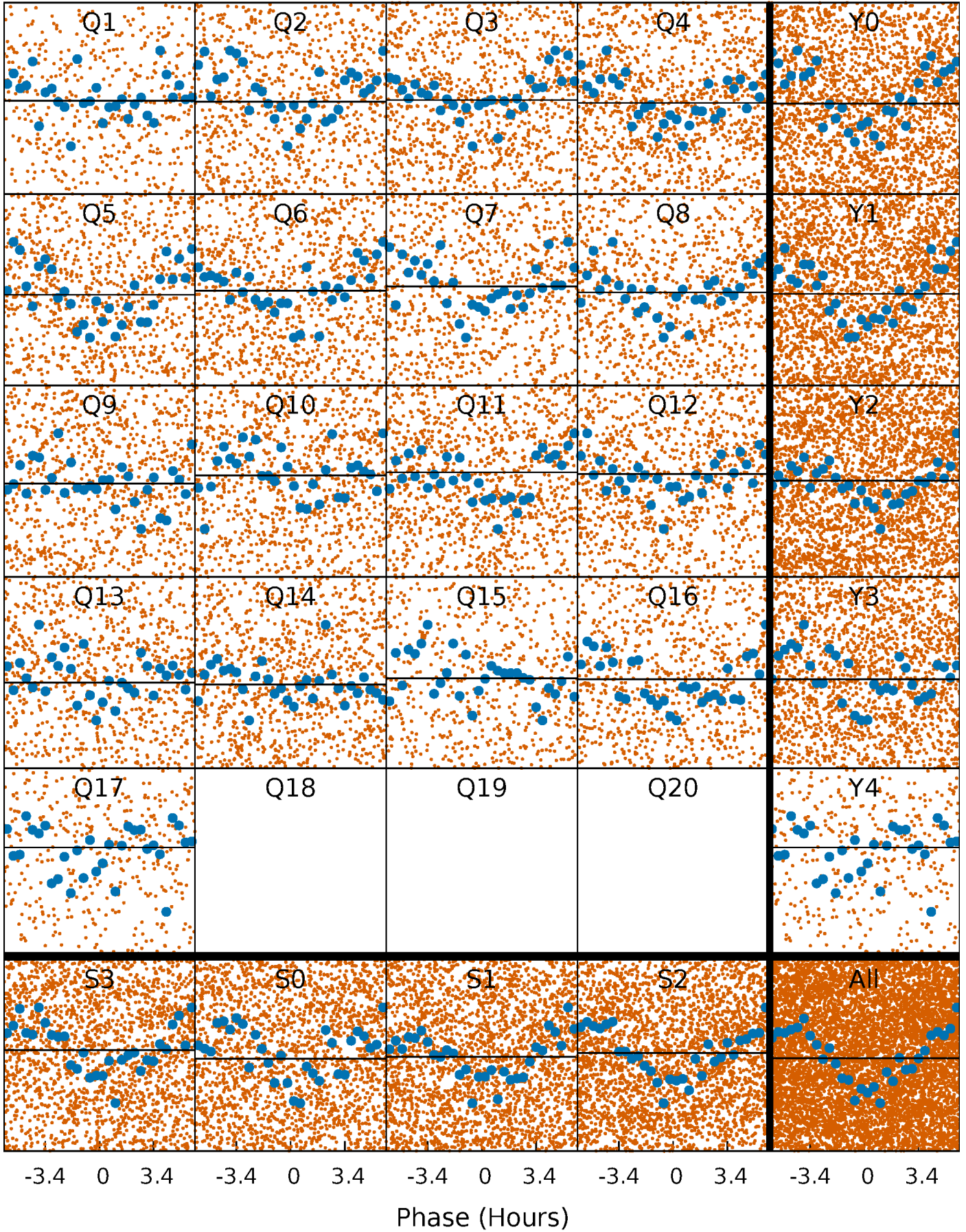
PDC Quarter-Phased Transit Curves

TCE 009181012-01 P= 1.281650 Days $T_0=131.563277$ (BKJD)



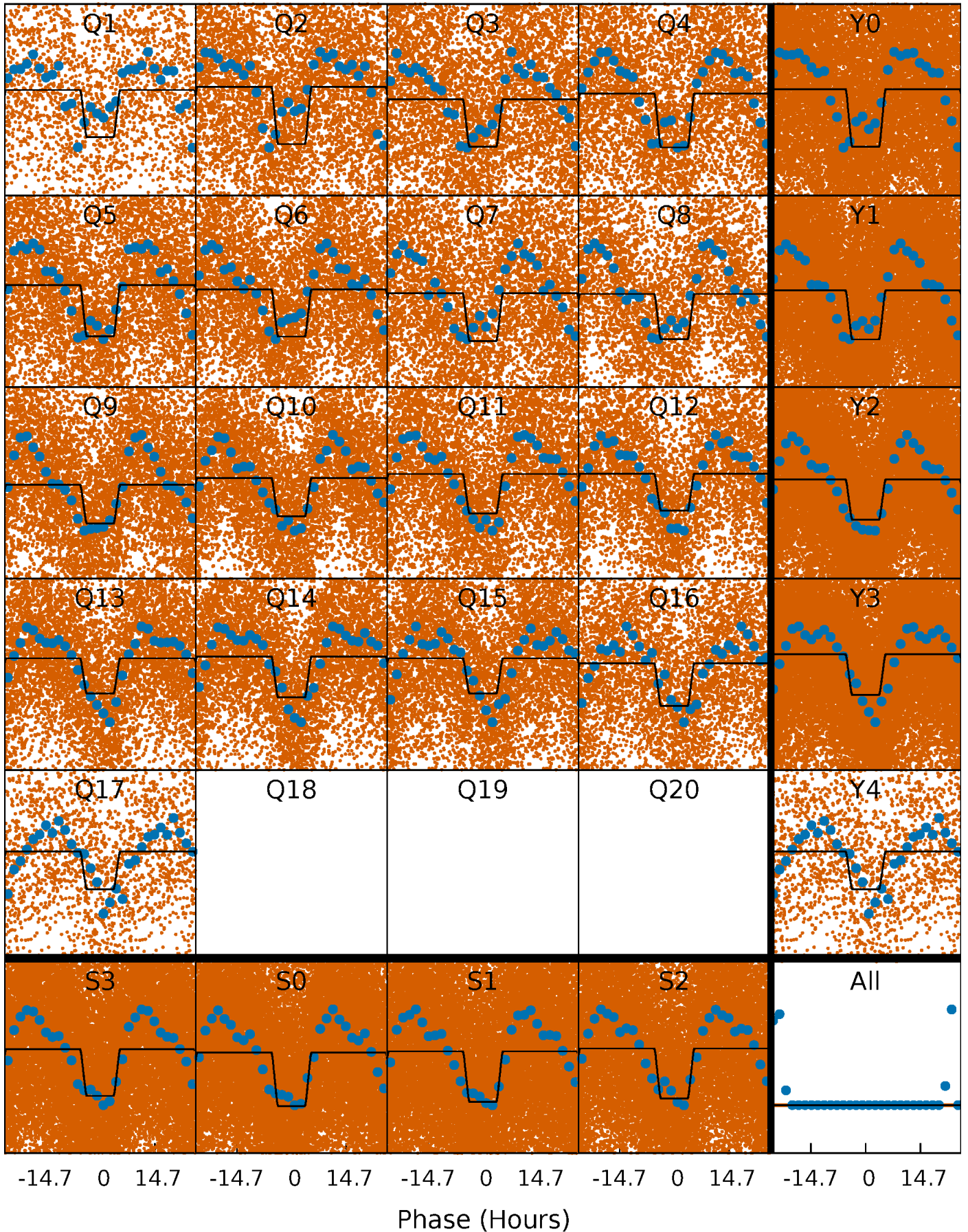
DV Quarter-Phased Transit Curves

TCE 009181012-01 P= 1.281650 Days $T_0=131.563277$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

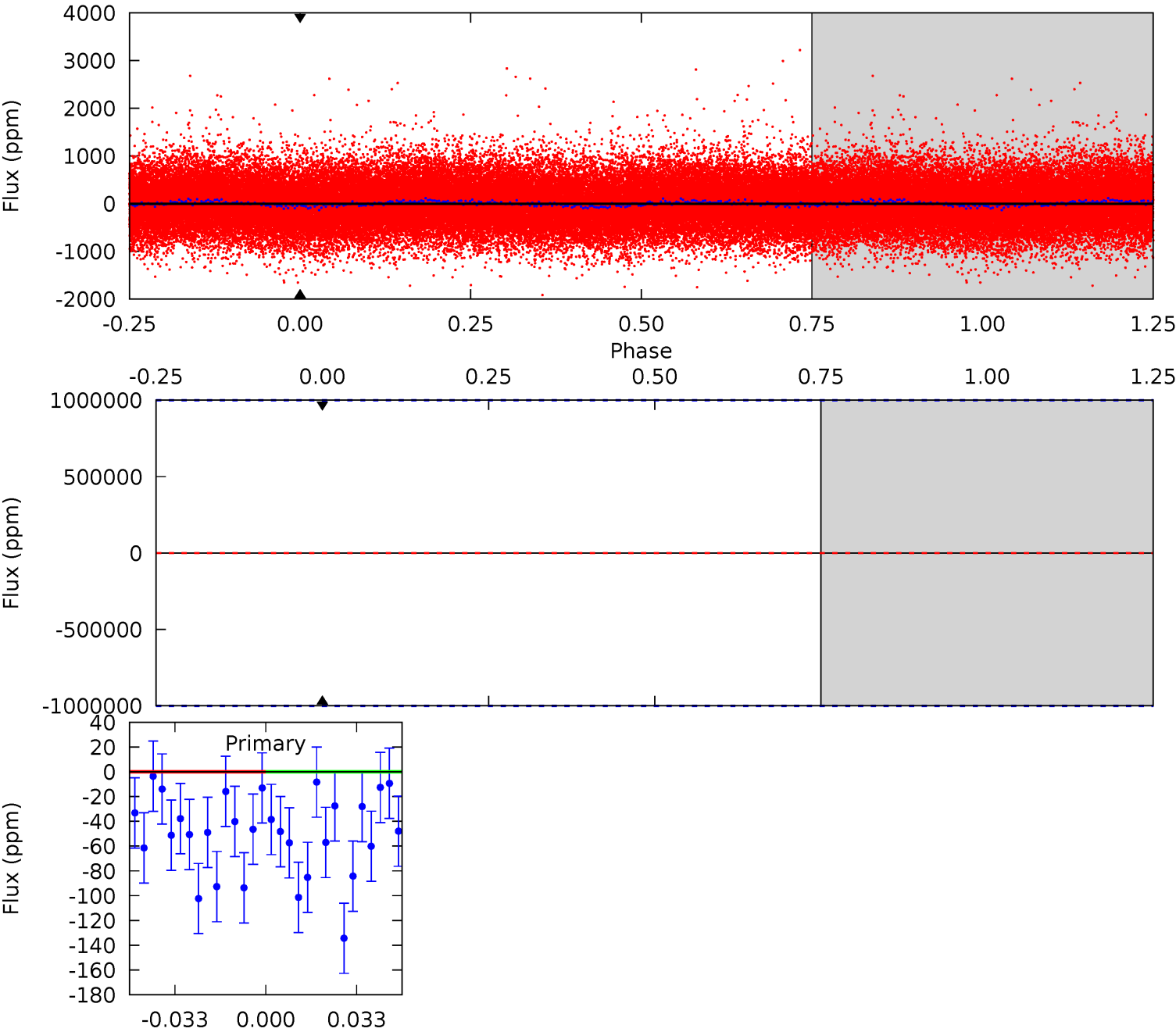
TCE 009181012-01 P= 1.281650 Days $T_0=132.738484$ (BKJD)



DV Model-Shift Uniqueness Test

009181012-01, P = 1.281650 Days, E = 130.281627 Days

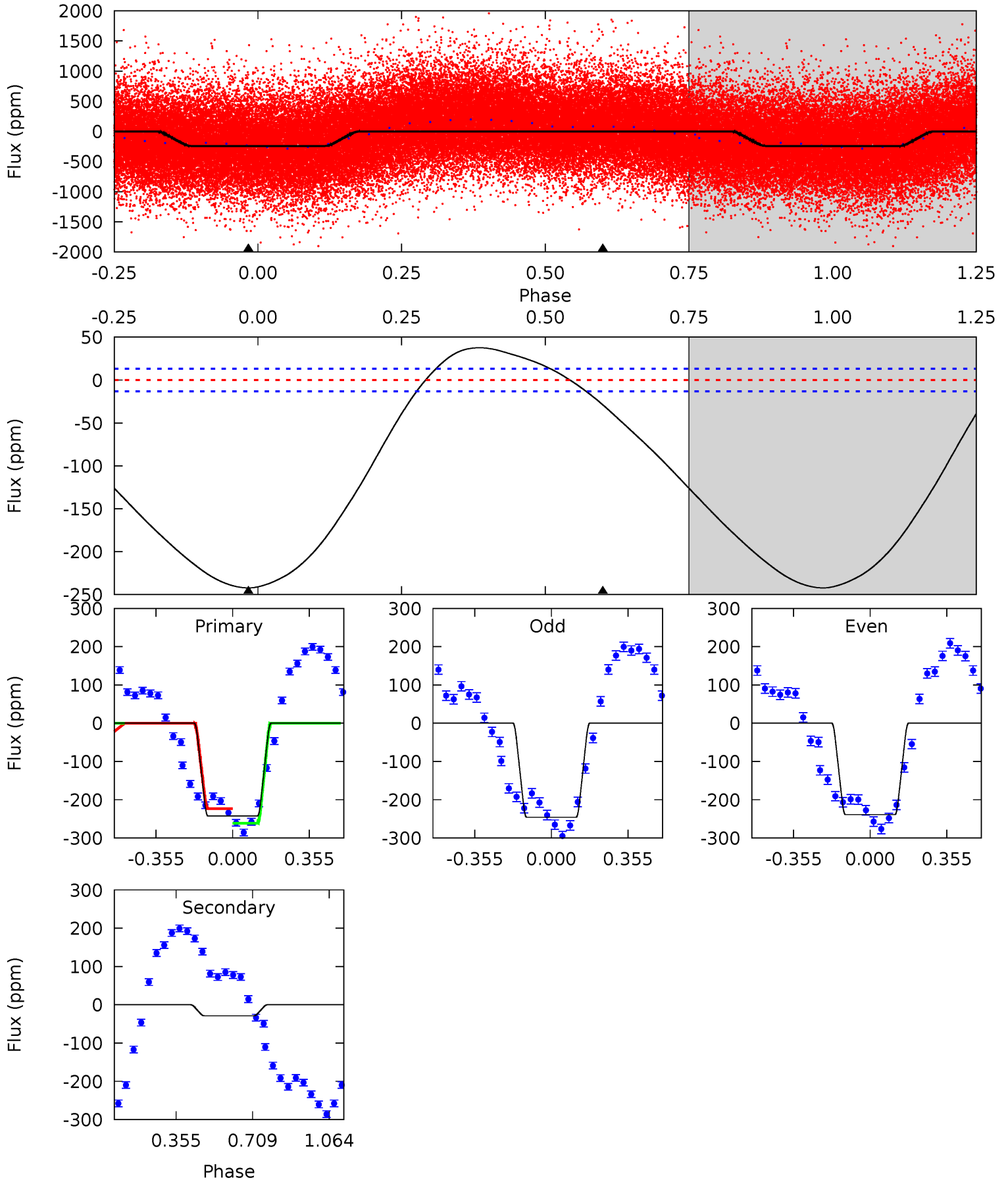
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

009181012-01, P = 1.281650 Days, E = 131.456834 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
78.8	9.41	0	0	4.29	0.93	7.69	78.8	78.8	9.41	9.41	1.11	0.98	0.13	6.55



Stellar Parameters For KIC 009181012

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5815^{+157}_{-175}	$4.423^{+0.101}_{-0.188}$	$-0.120^{+0.300}_{-0.300}$	$0.986^{+0.276}_{-0.127}$	$0.940^{+0.127}_{-0.104}$	$1.383^{+0.635}_{-0.705}$
	+3%/-3%	+2%/-4%	+250%/-250%	+28%/-13%	+14%/-11%	+46%/-51%
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 009181012-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$8.34^{+8.85}_{-5.89}$	2387^{+160}_{-132}	5314^{+17041}_{-25910}	15^{+839}_{-686}
Alt.	-29 ± 3	$7.64^{+9.00}_{-5.33}$	2389^{+158}_{-120}	-2504^{+5804}_{-211}	$0.136^{+1.412}_{-0.107}$

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 $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

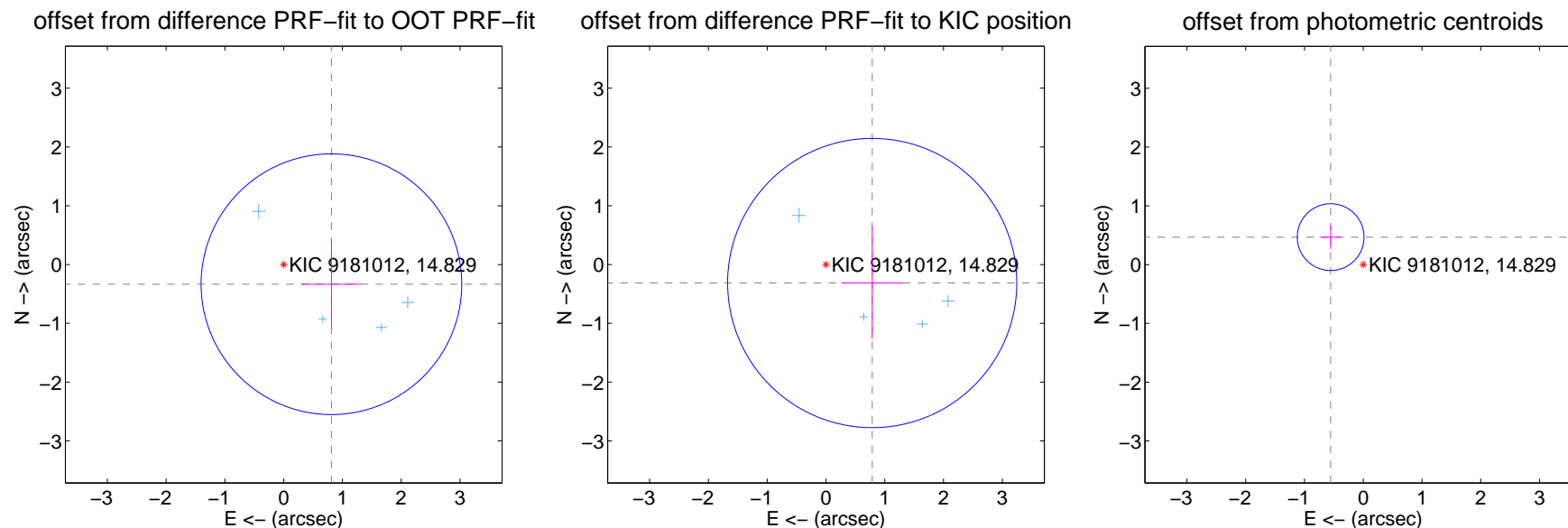
DV Centroid Data

Supplemental centroid analysis for 009181012-01. Kepler magnitude: 14.83. Transit SNR -1.00

There are 4 quarters with good PRF difference image offsets

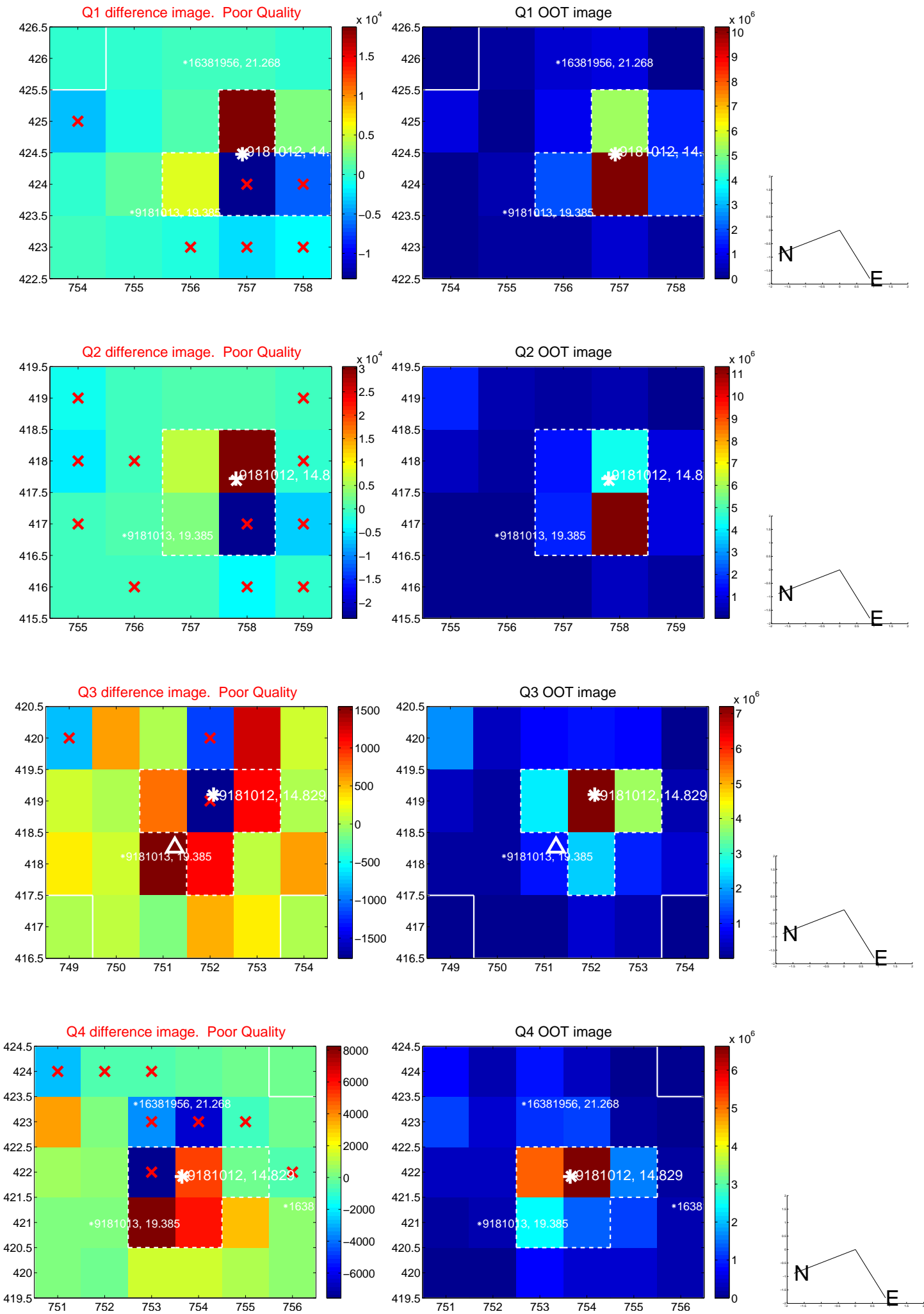
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.878 ± 0.739	1.19	-0.812 ± 0.509	-0.334 ± 0.758
PRF-fit source offset from KIC position	0.847 ± 0.820	1.03	-0.786 ± 0.523	-0.314 ± 0.953
photometric centroid source offset	0.73 ± 0.19	3.83	0.55 ± 0.18	0.47 ± 0.20

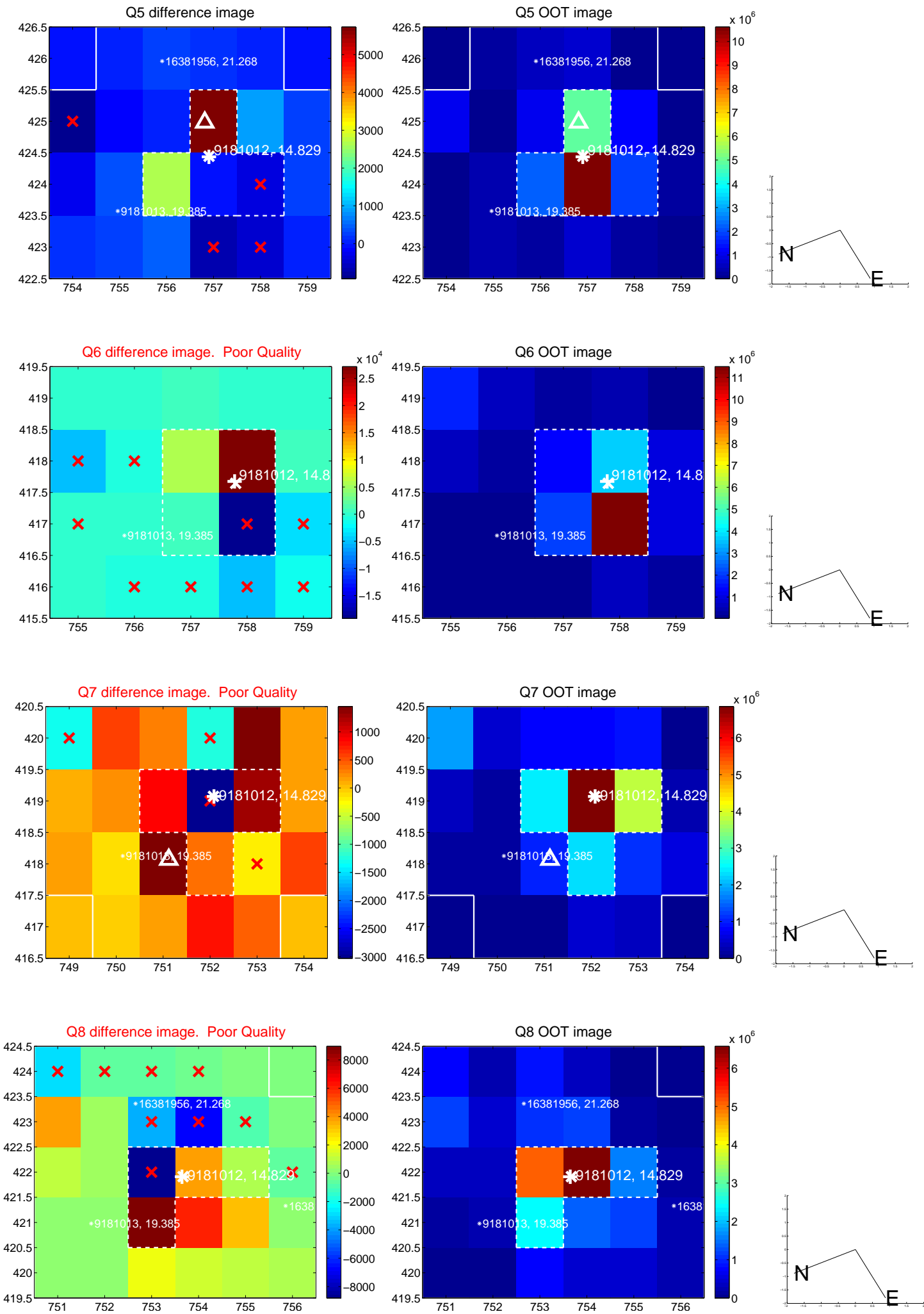


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

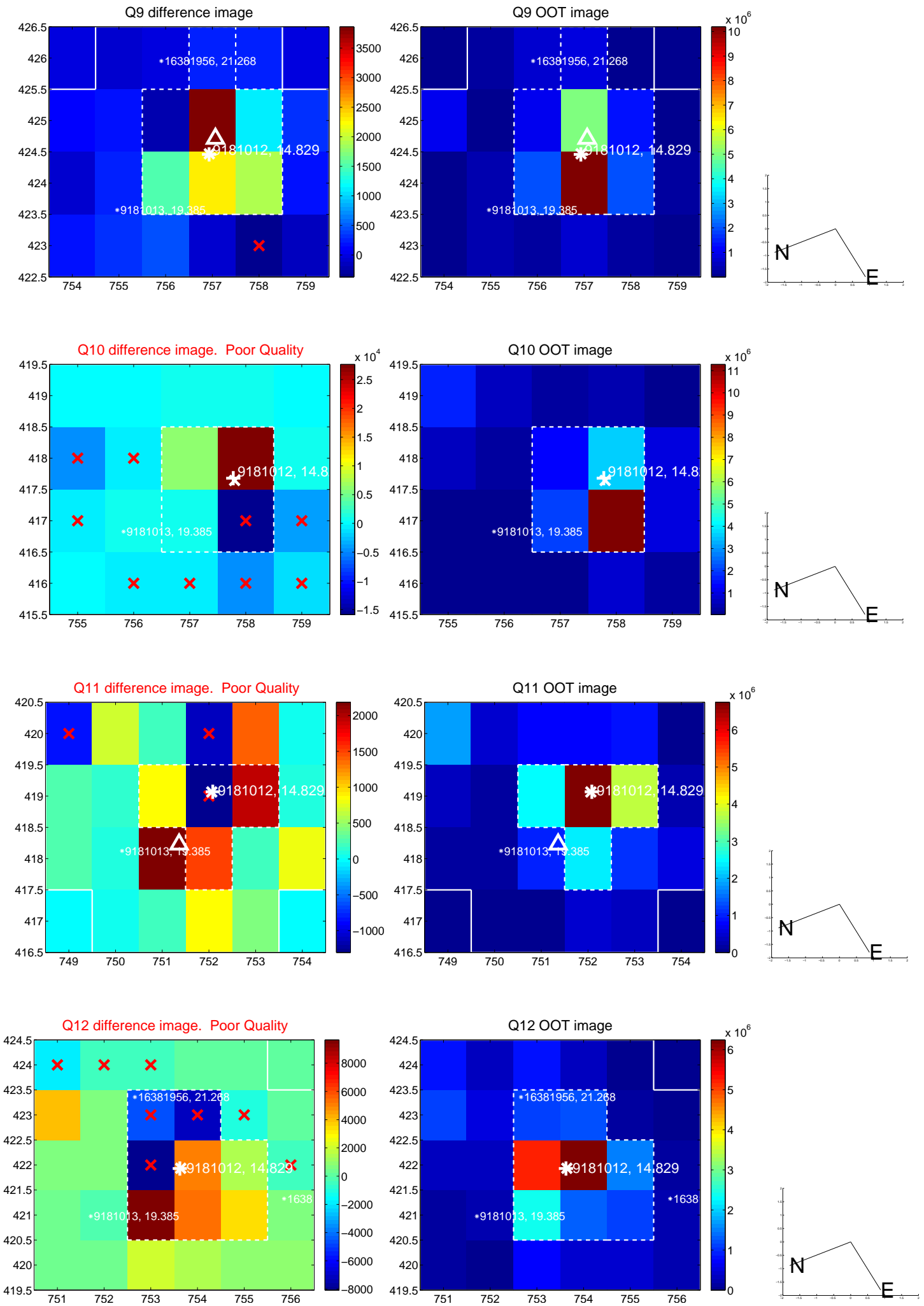
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



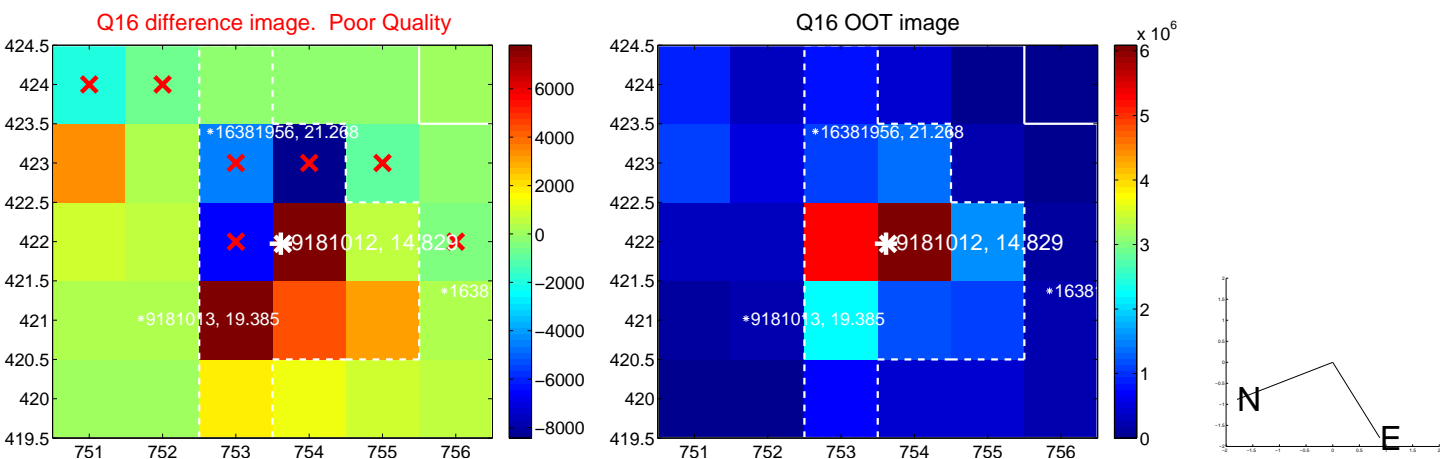
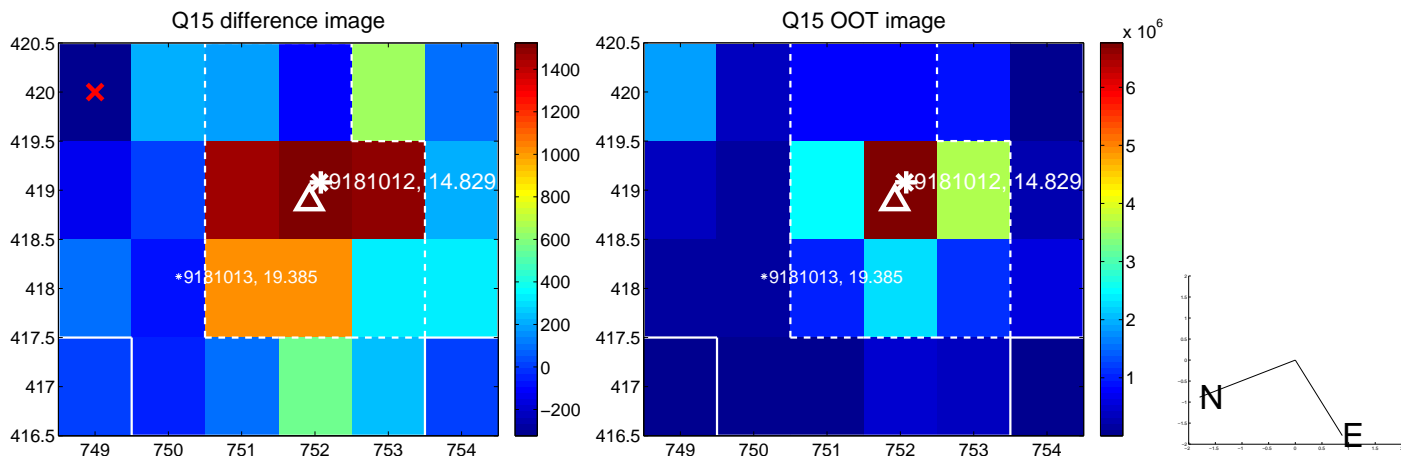
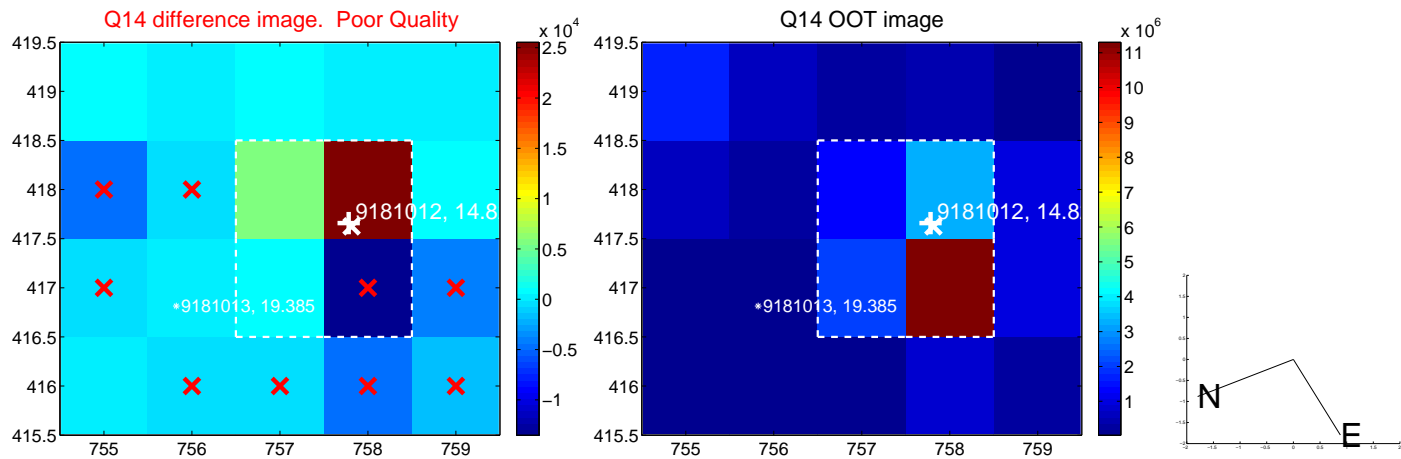
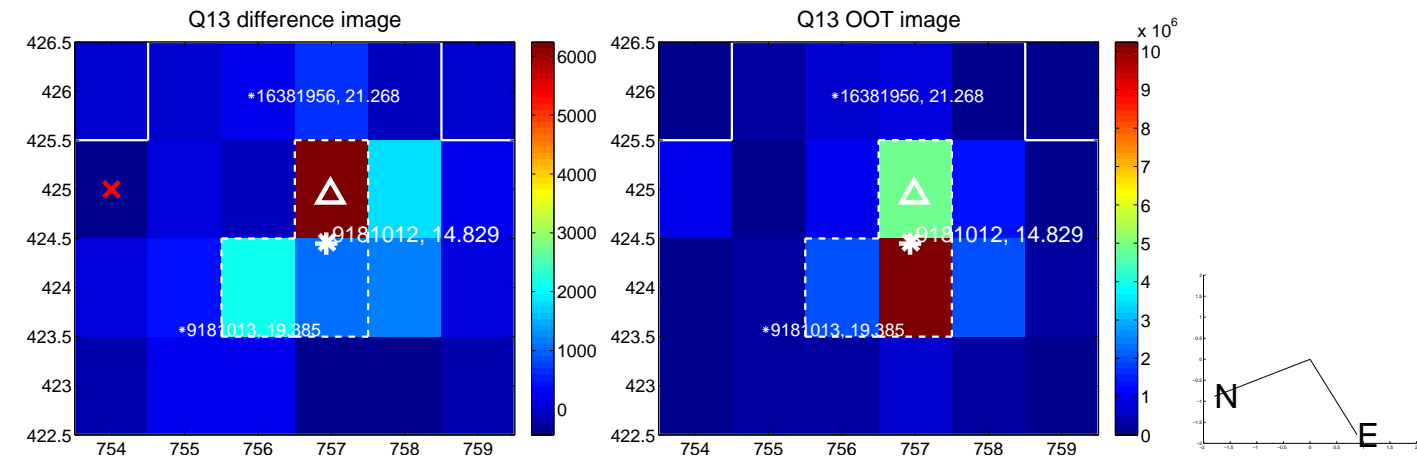
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



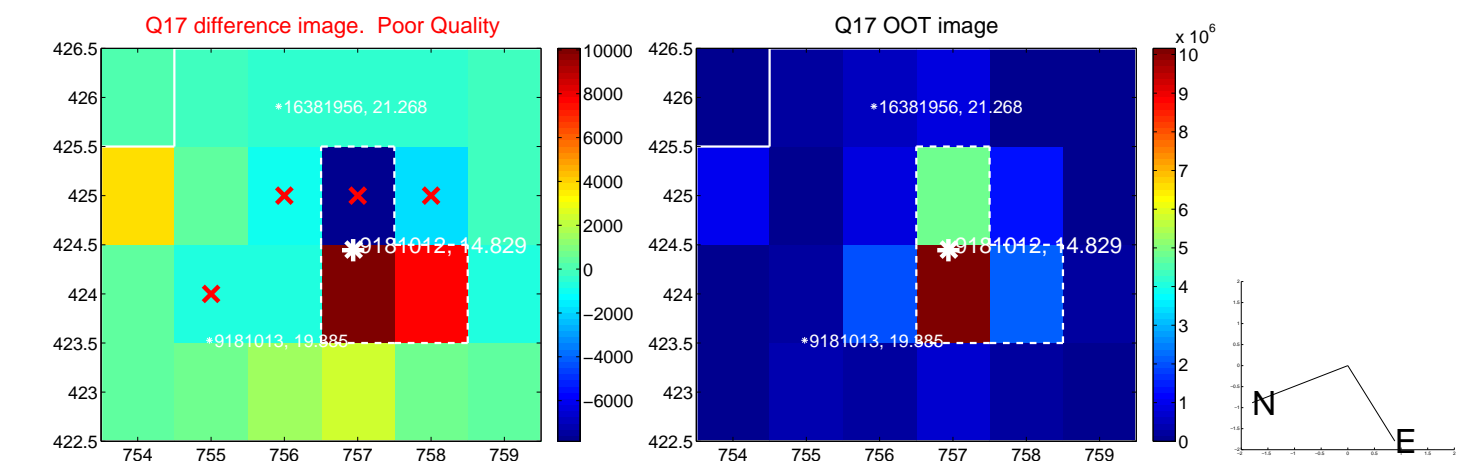
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



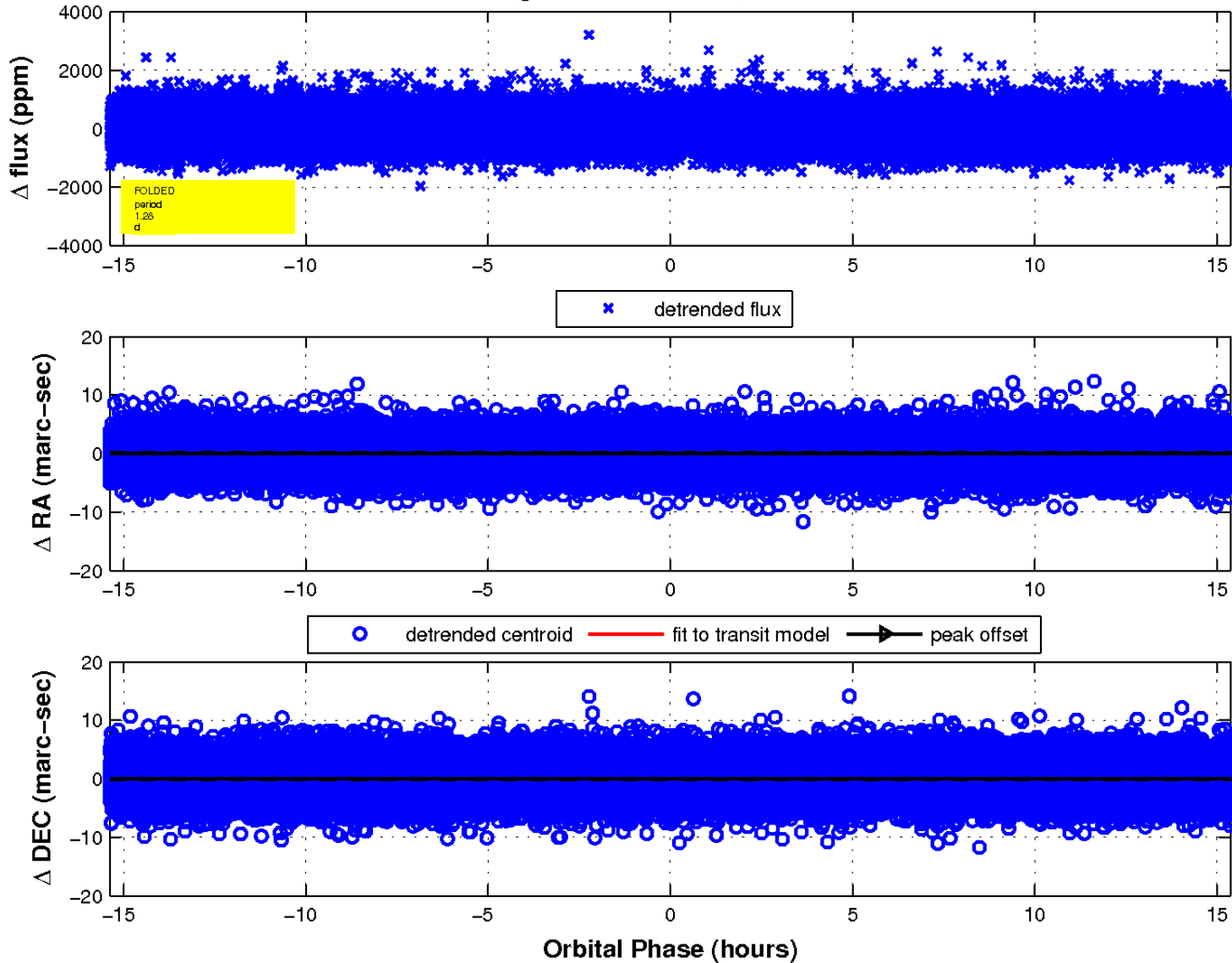
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

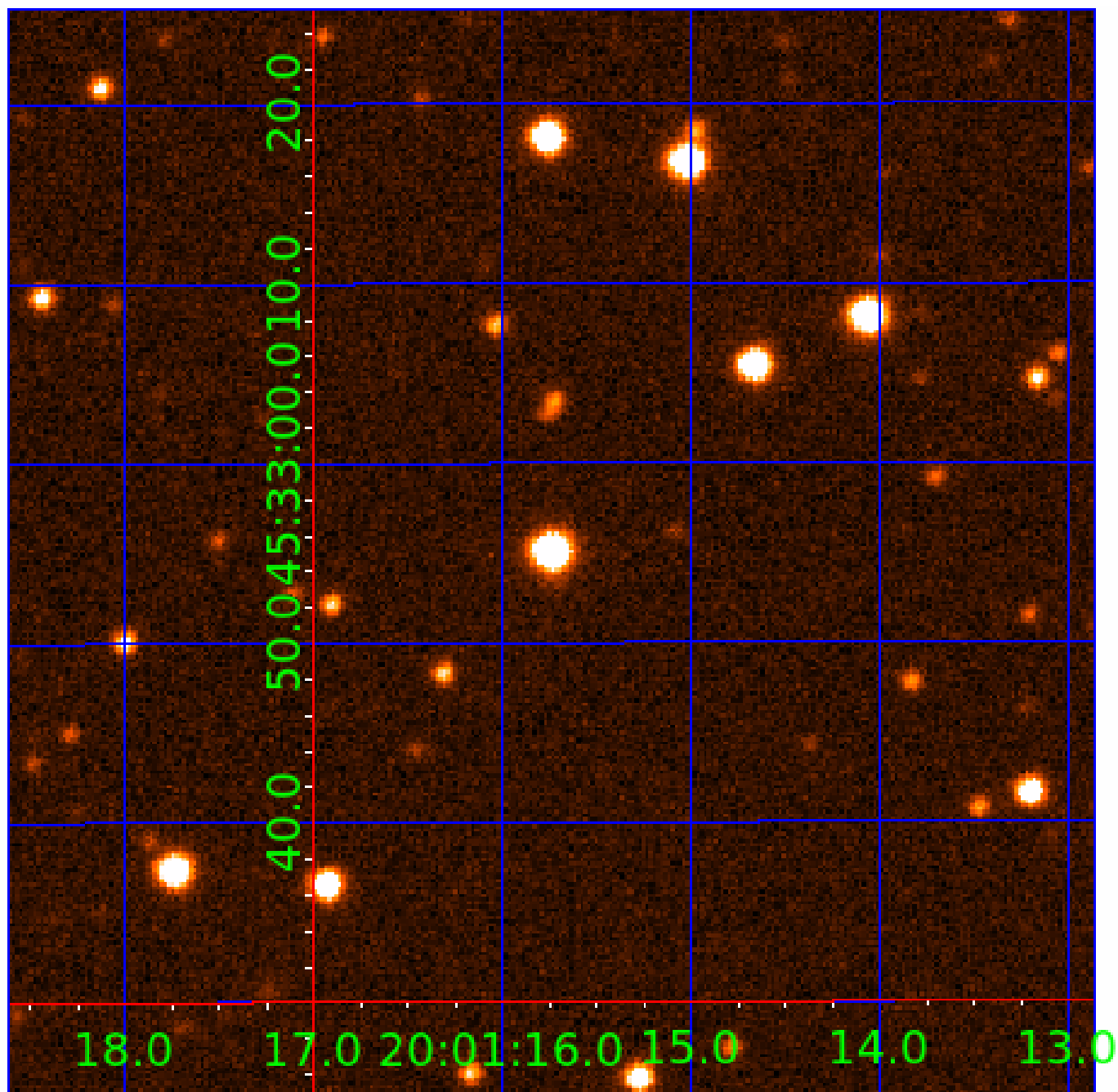


fluxWeightedCentroids, Planet 1 of 2



UKIRT Image

Declination



KIC 009181012

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})
009181012-01	OBS	No	1.281650	131.563277	864.8	3.000	9.1	-1.0	0.99	5815	2.88	1946.79
009181012-02	OBS	No	1.281642	132.122154	52.0	3.227	9.1	8.5	0.99	5815	0.70	1946.80

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009181012-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_NOFITS
009181012-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—SAME_NTL_PERIOD—CENT_FEW_DIFFS

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

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

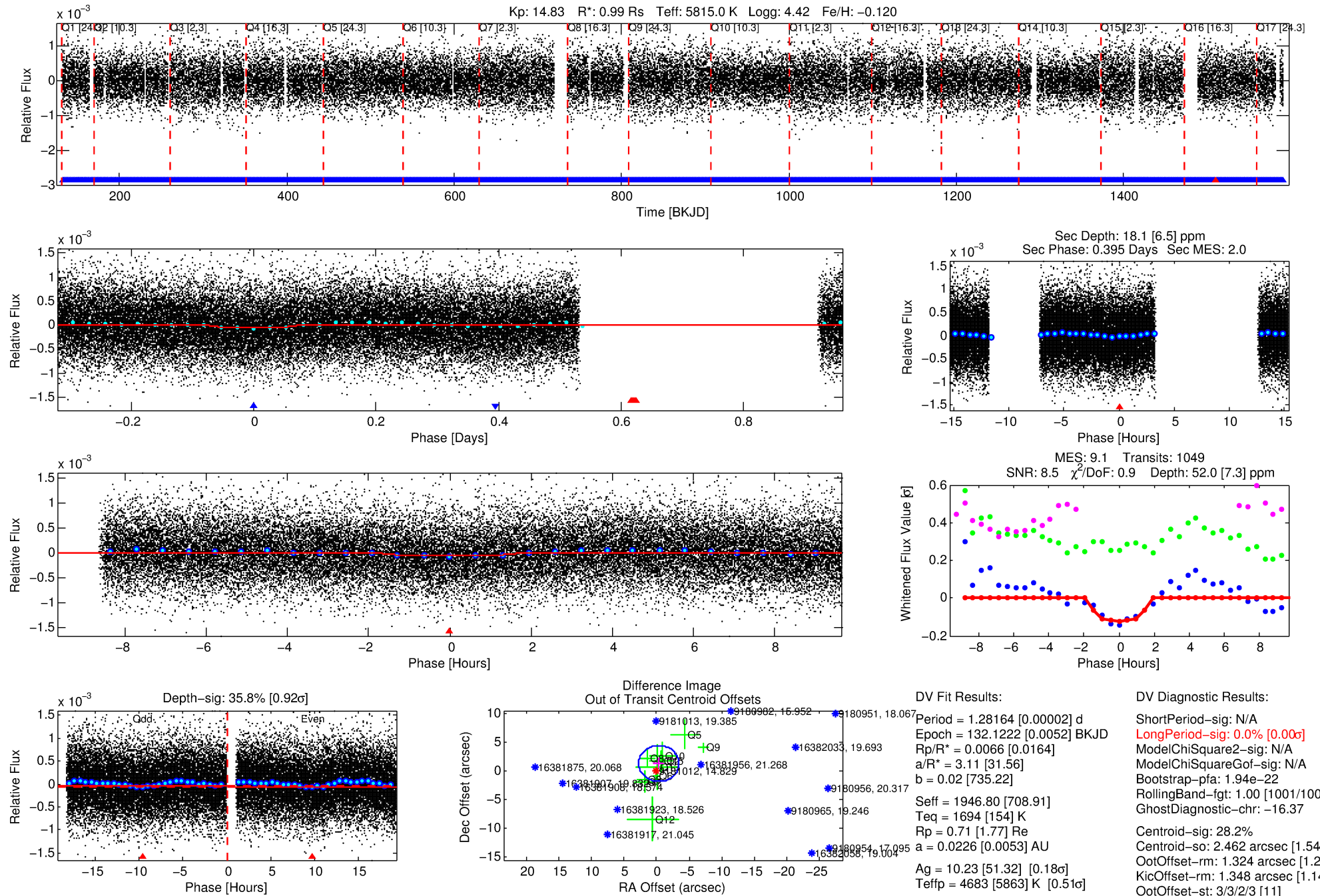
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009181012-02

No Significant Match Found

DV One-Page Summary

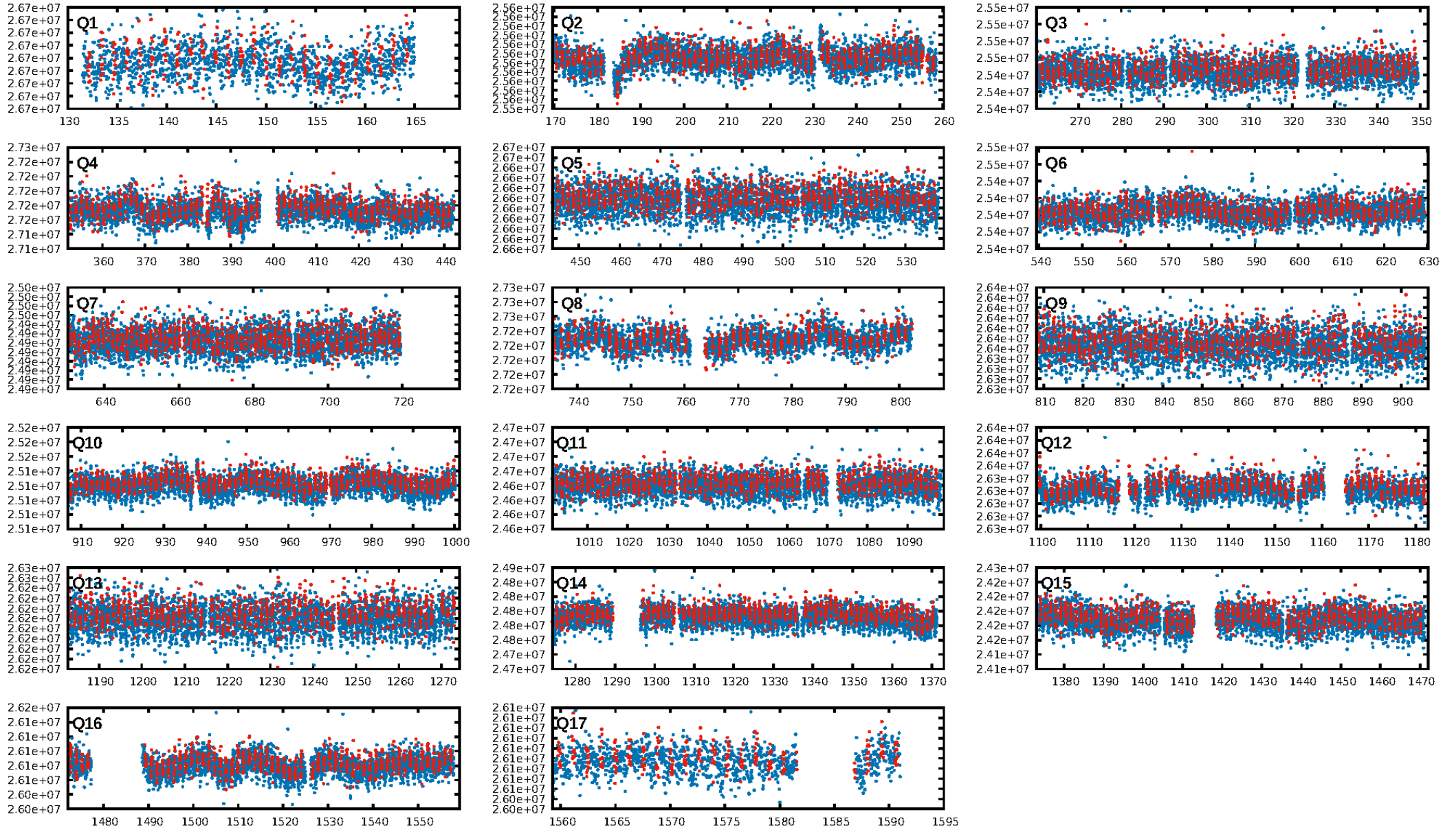
KIC: 9181012 Candidate: 2 of 2 Period: 1.282 d



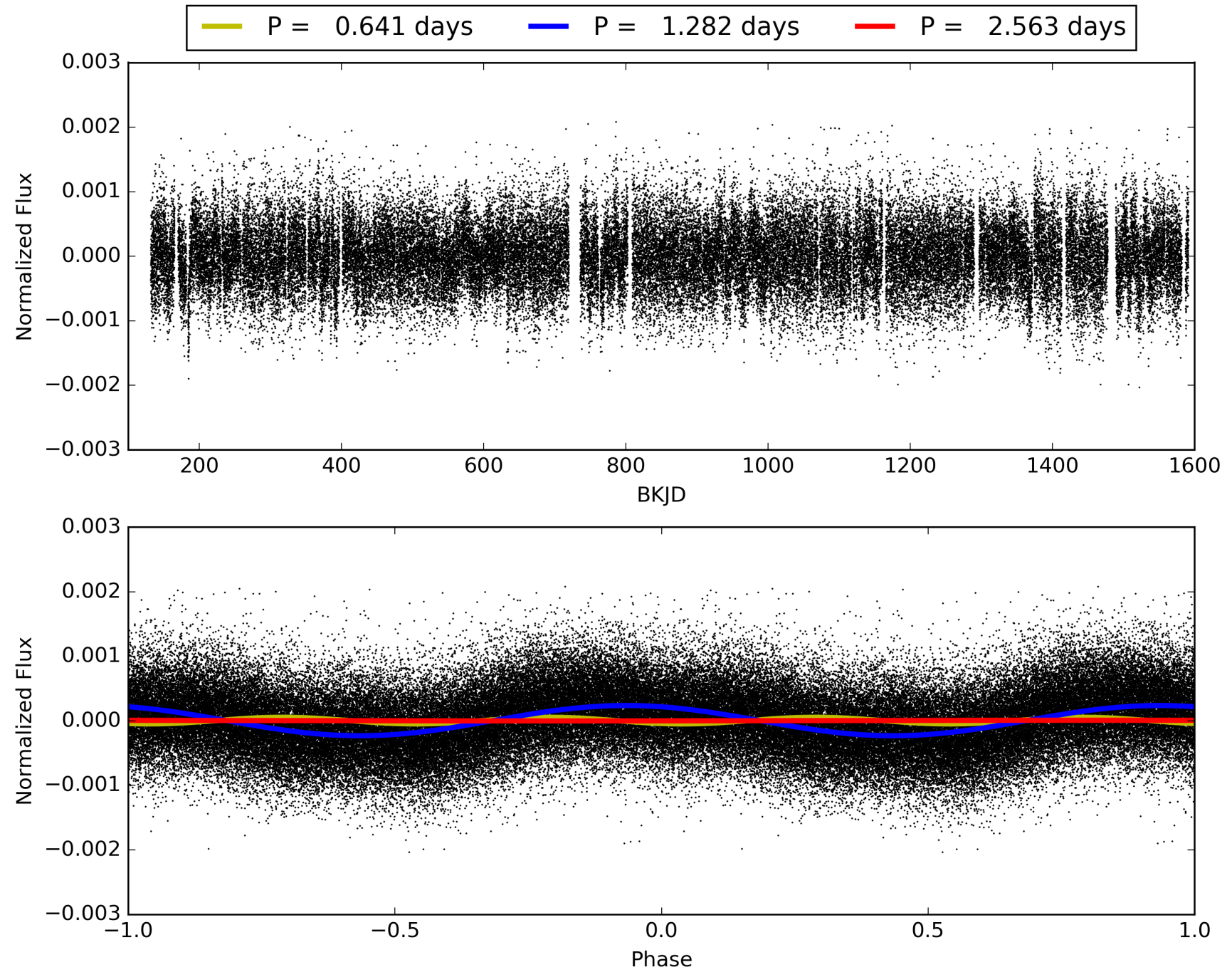
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 09:28:33 Z

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

TCE 009181012-02, PDC Light Curves

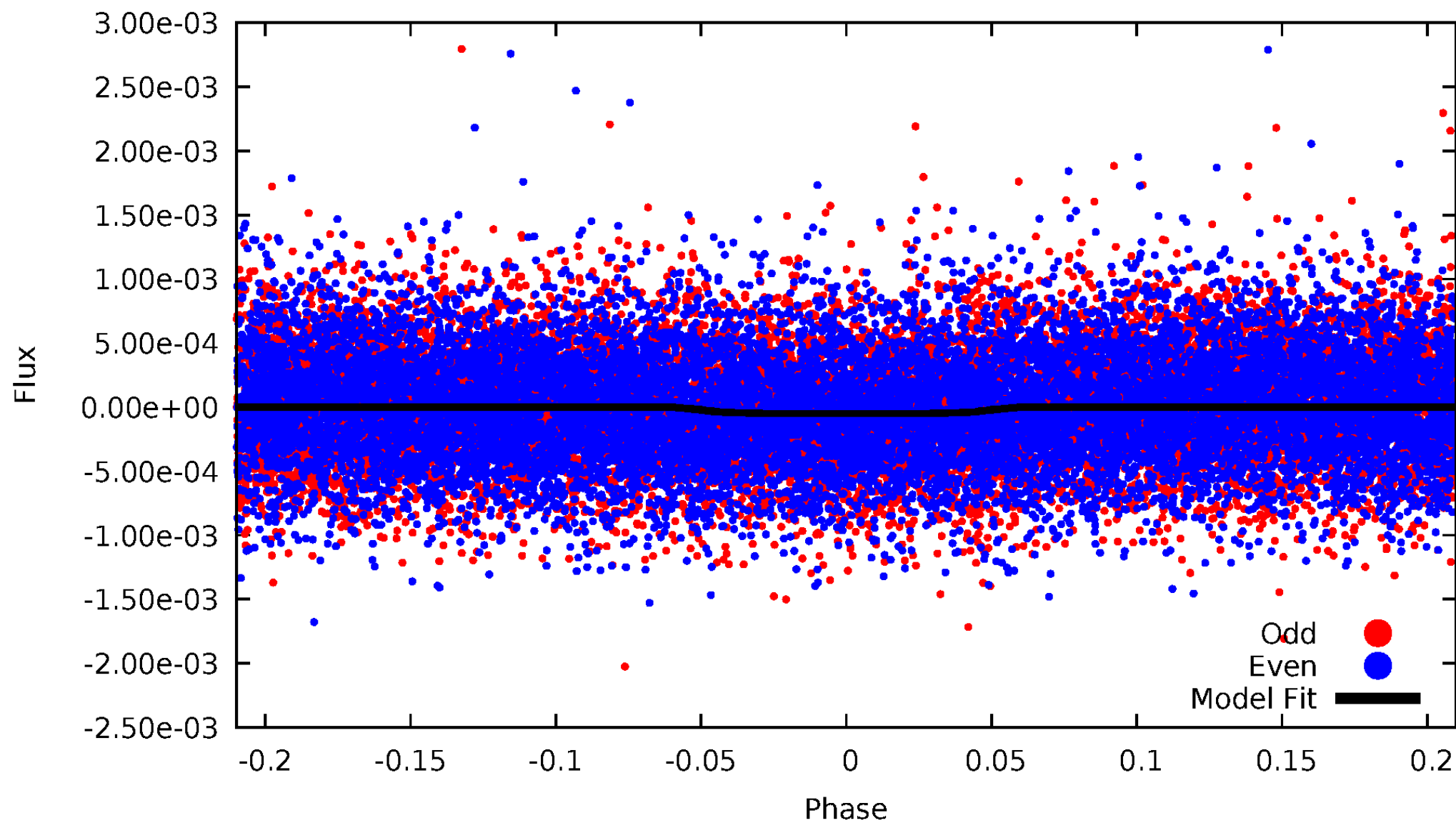


TCE 009181012-02



DV Odd/Even

TCE 009181012-02

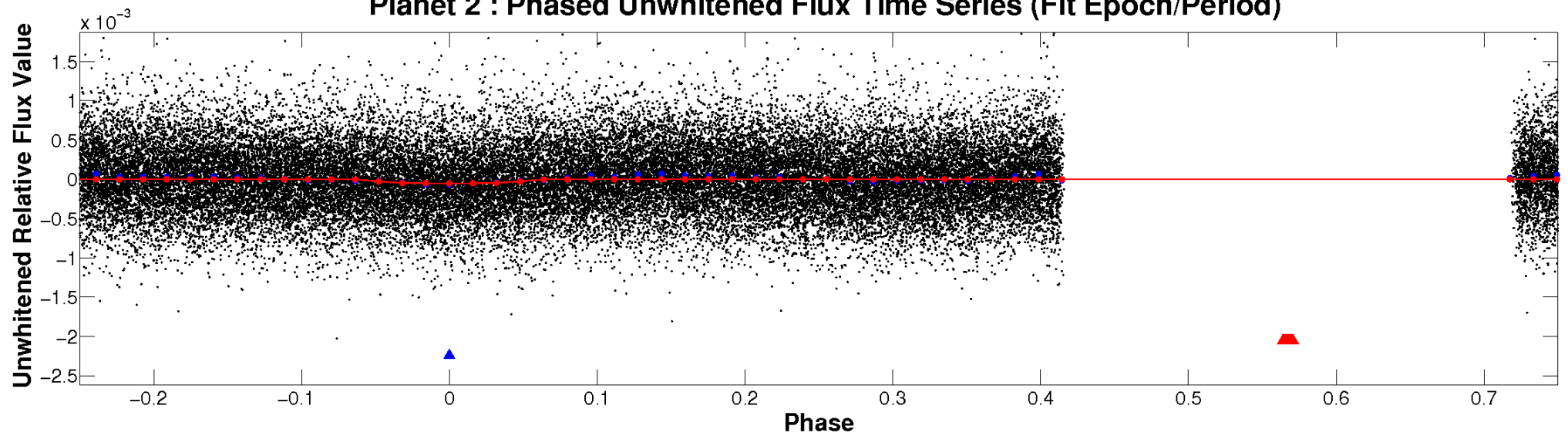


ALT Odd/Even

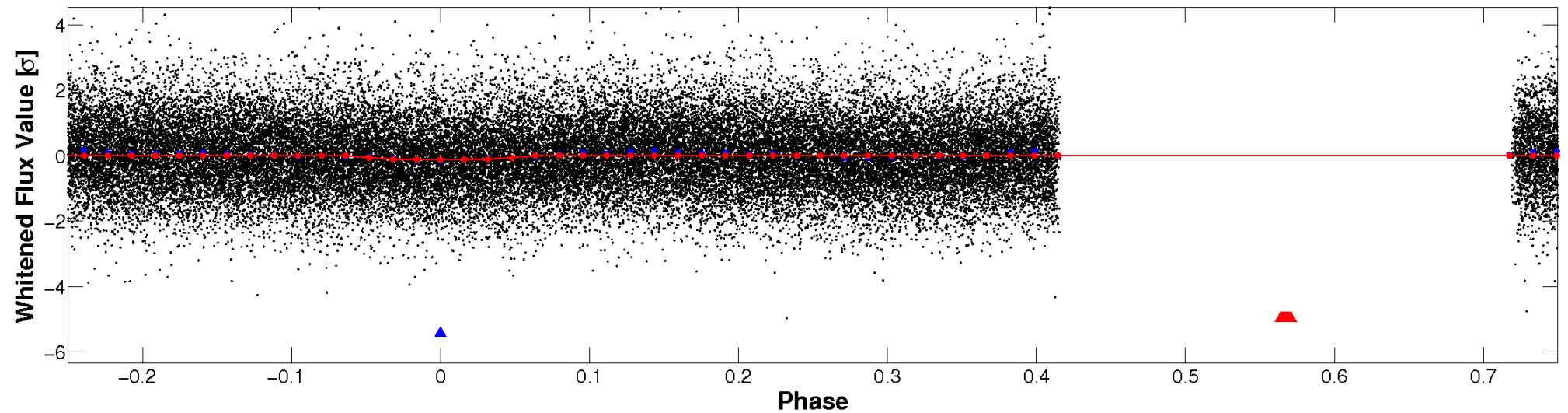
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

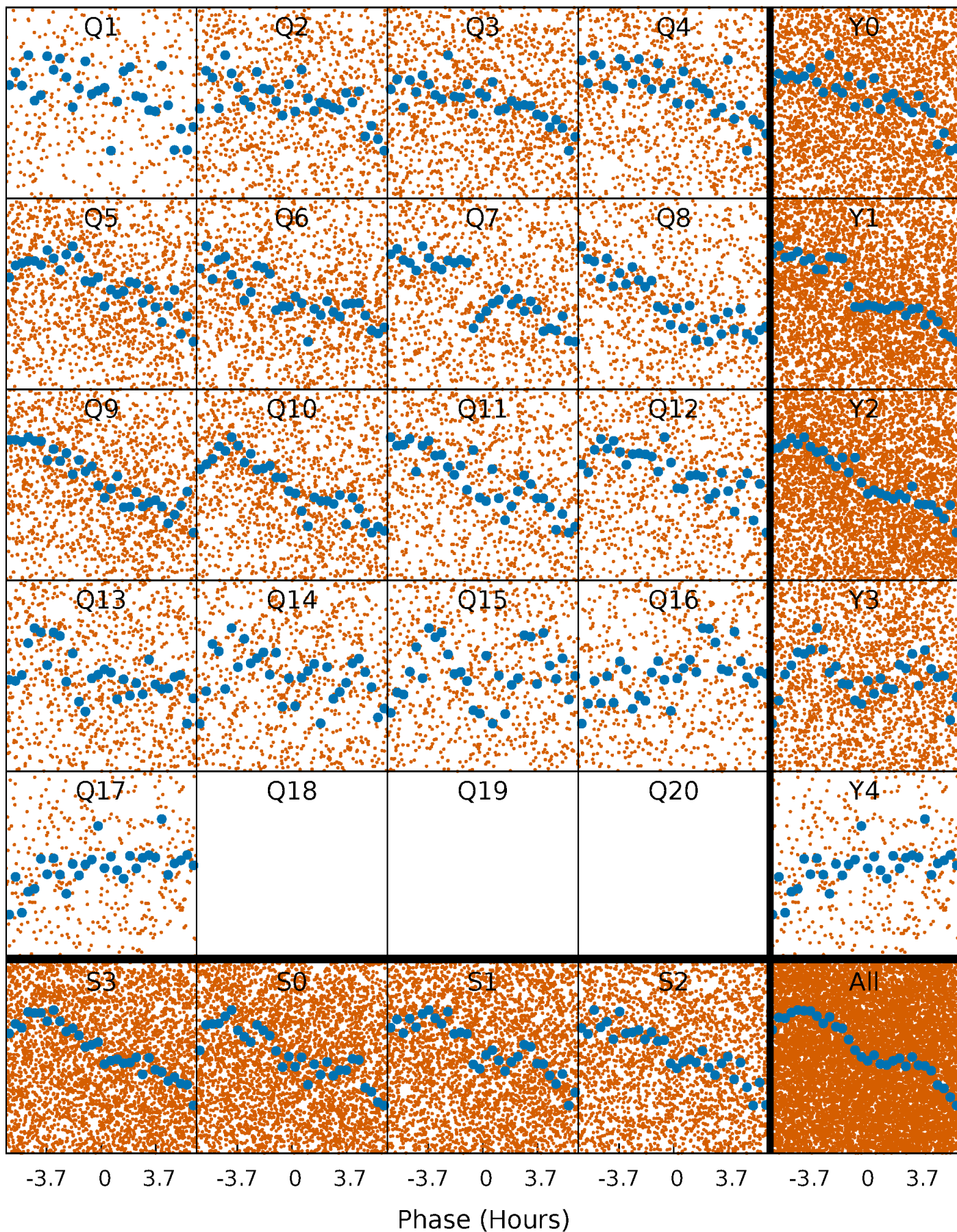


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



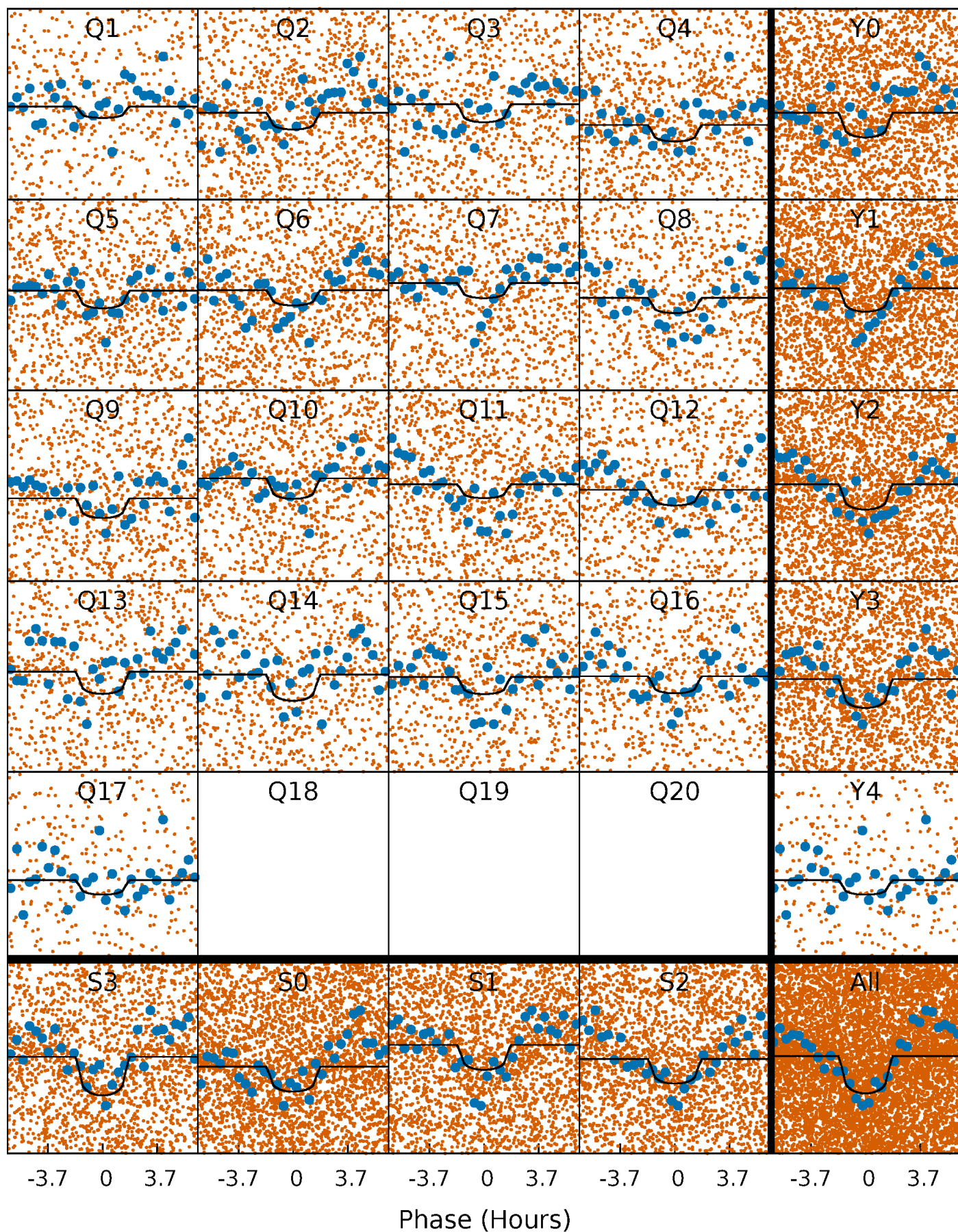
PDC Quarter-Phased Transit Curves

TCE 009181012-02 P= 1.281642 Days $T_0=132.122154$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 009181012-02 P= 1.281642 Days $T_0=132.122154$ (BKJD)

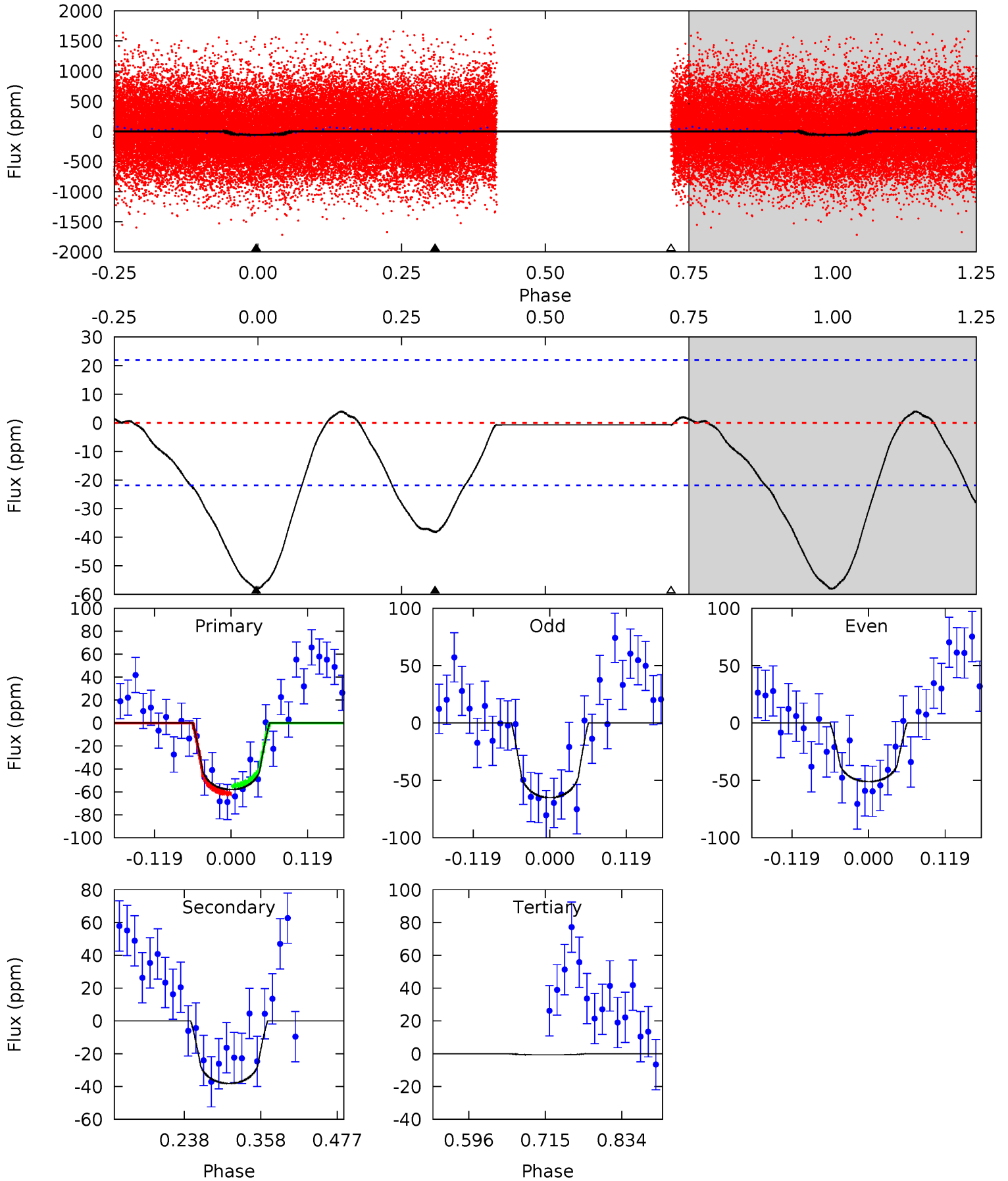


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

009181012-02, P = 1.281642 Days, E = 130.840512 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.0	7.88	0.15	0	4.53	1.56	1.36	11.8	12.0	7.74	7.88	1.45	0.99	0.06	0.69



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 009181012

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5815^{+157}_{-175}	$4.423^{+0.101}_{-0.188}$	$-0.120^{+0.300}_{-0.300}$	$0.986^{+0.276}_{-0.127}$	$0.940^{+0.127}_{-0.104}$	$1.383^{+0.635}_{-0.705}$
	+3%/-3%	+2%/-4%	+250%/-250%	+28%/-13%	+14%/-11%	+46%/-51%
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 009181012-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-38 ± 5	$1.48^{+1.59}_{-1.03}$	2380^{+171}_{-111}	4131^{+3078}_{-947}	$4.815^{+47.204}_{-3.670}$
Alt.	N/A	N/A	N/A	N/A	N/A

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 $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

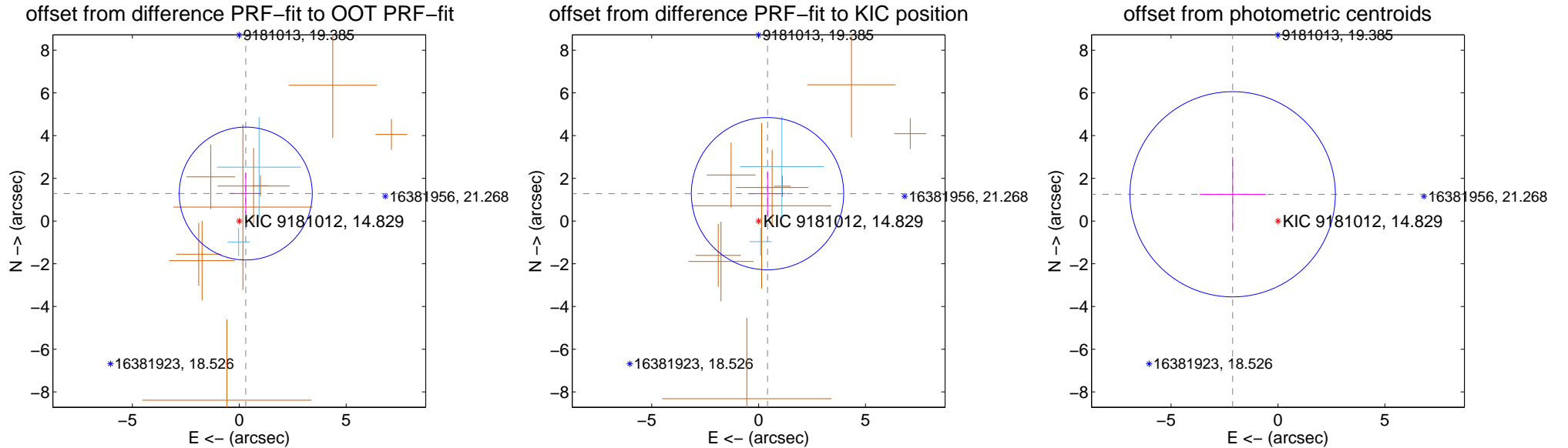
DV Centroid Data

Supplemental centroid analysis for 009181012-02. Kepler magnitude: 14.83. Transit SNR 8.53

There are 2 quarters with good PRF difference image offsets

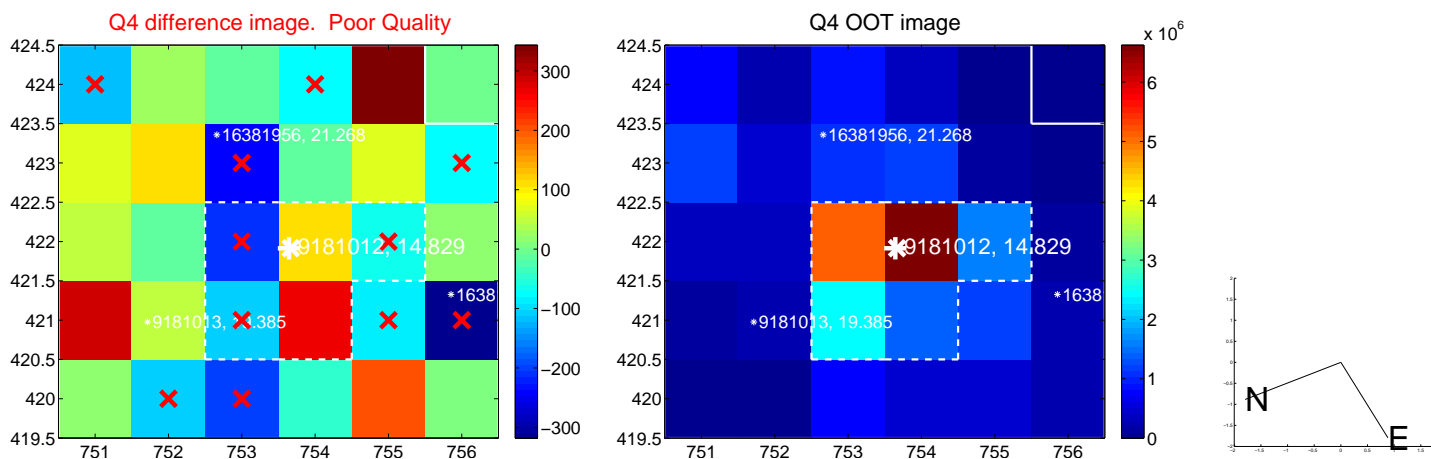
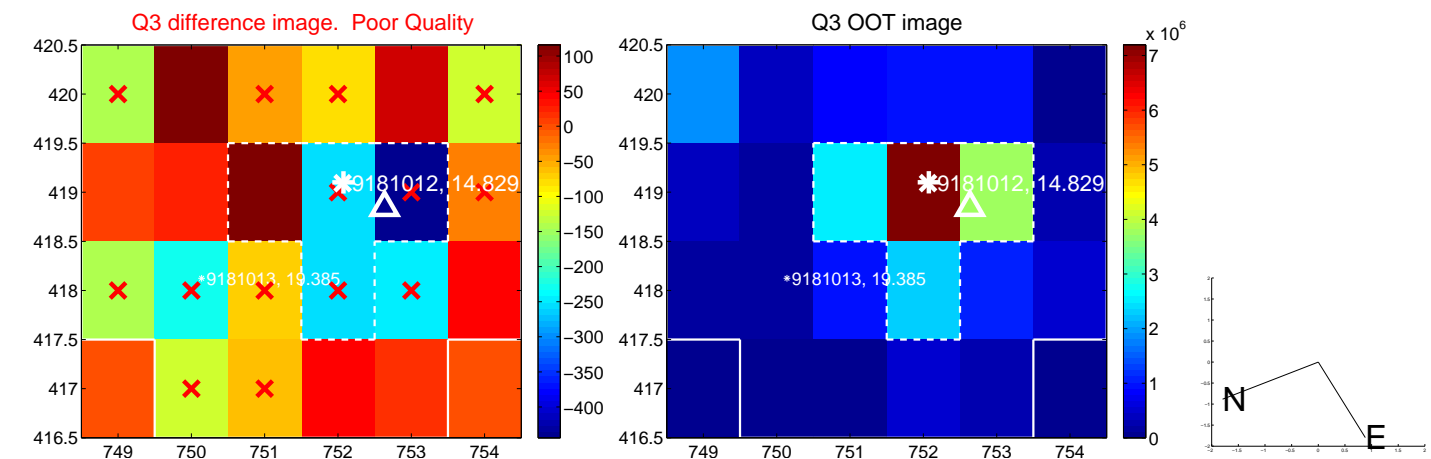
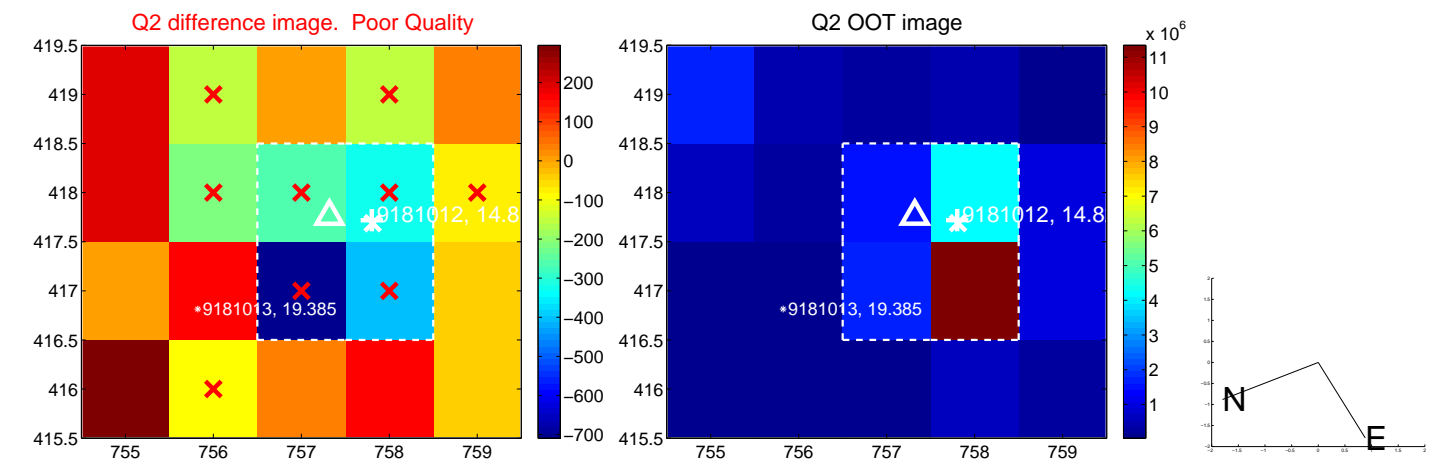
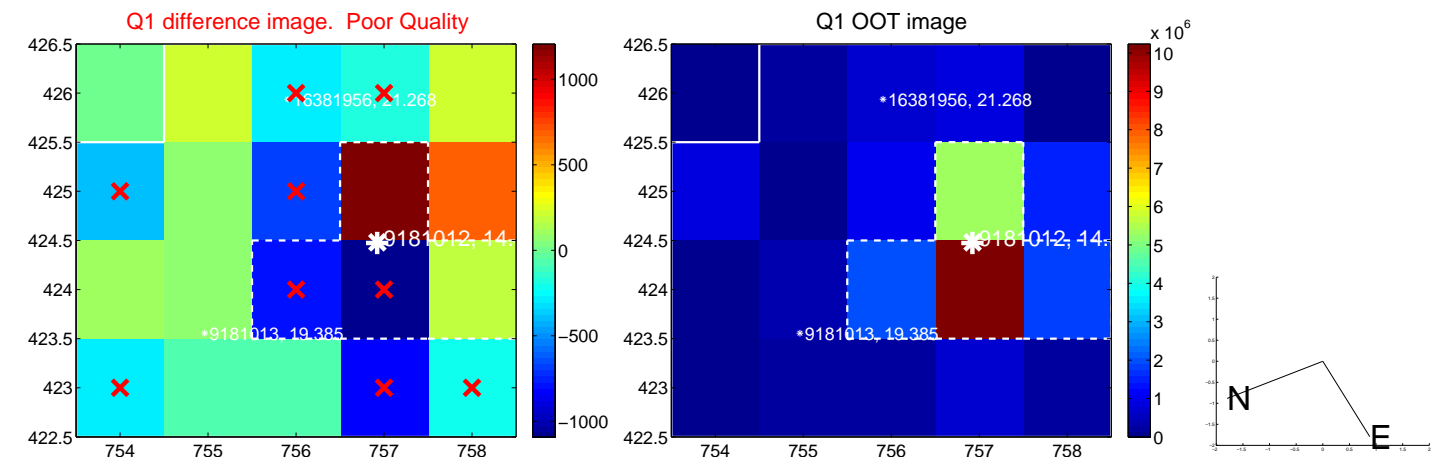
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.324 ± 1.037	1.28	-0.304 ± 0.708	1.288 ± 0.964
PRF-fit source offset from KIC position	1.348 ± 1.188	1.14	-0.417 ± 0.839	1.282 ± 1.053
photometric centroid source offset	2.46 ± 1.60	1.54	2.12 ± 1.55	1.25 ± 1.74

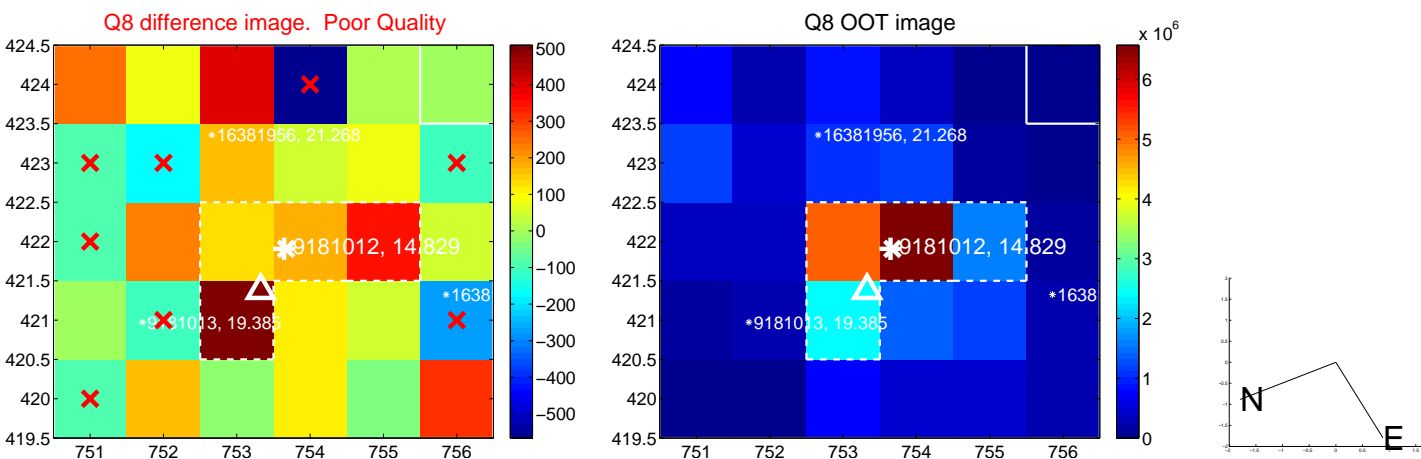
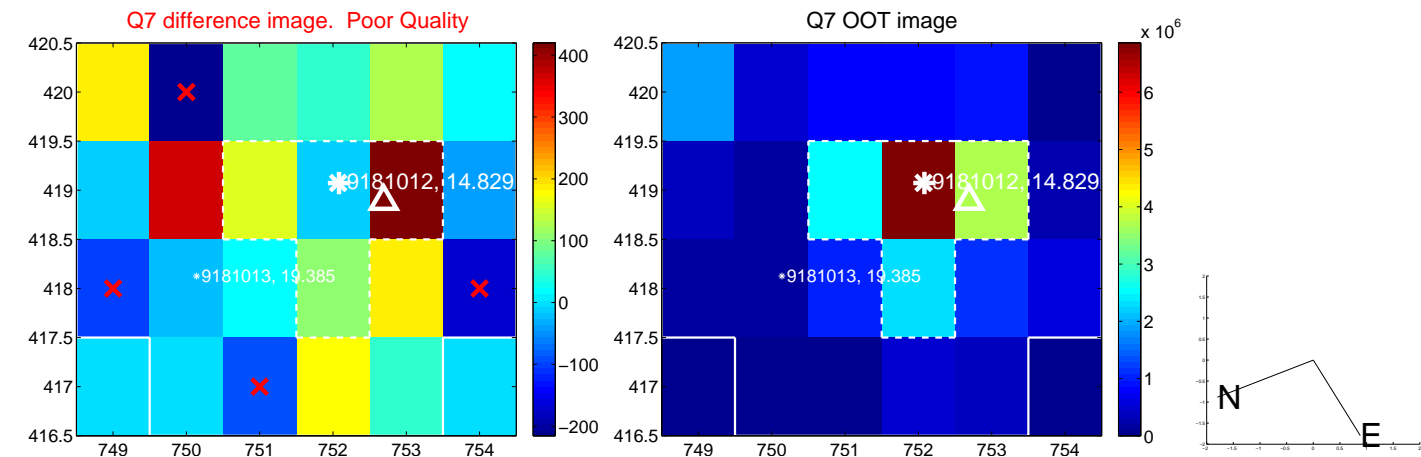
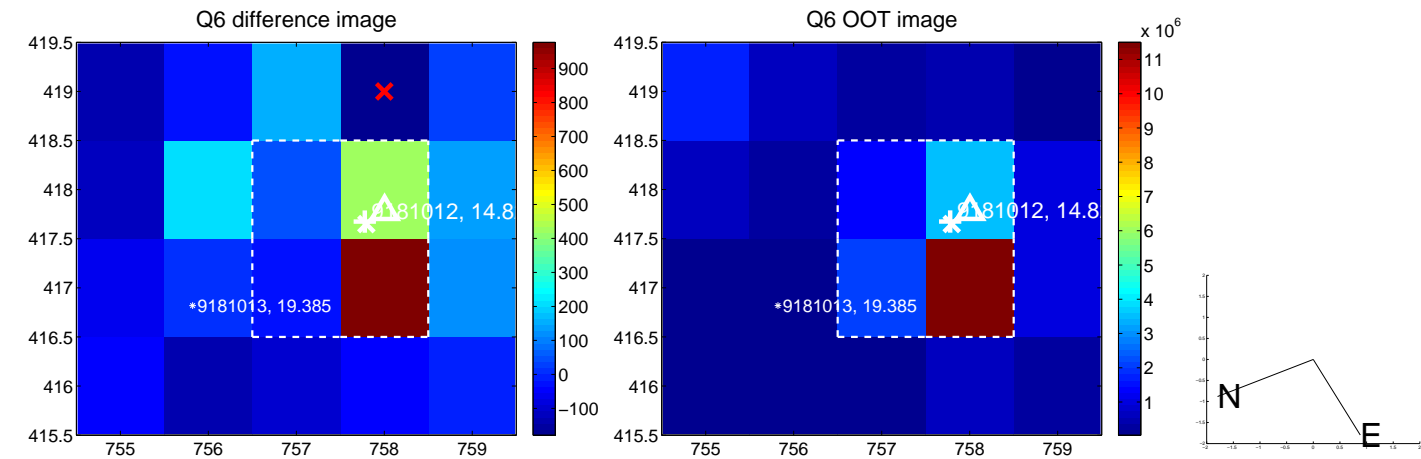
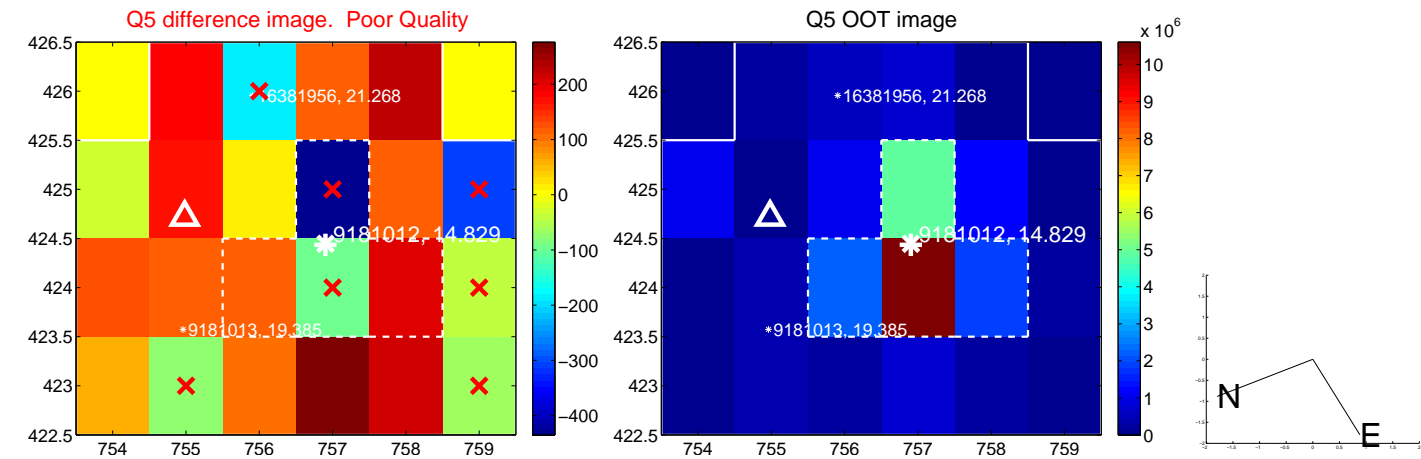


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

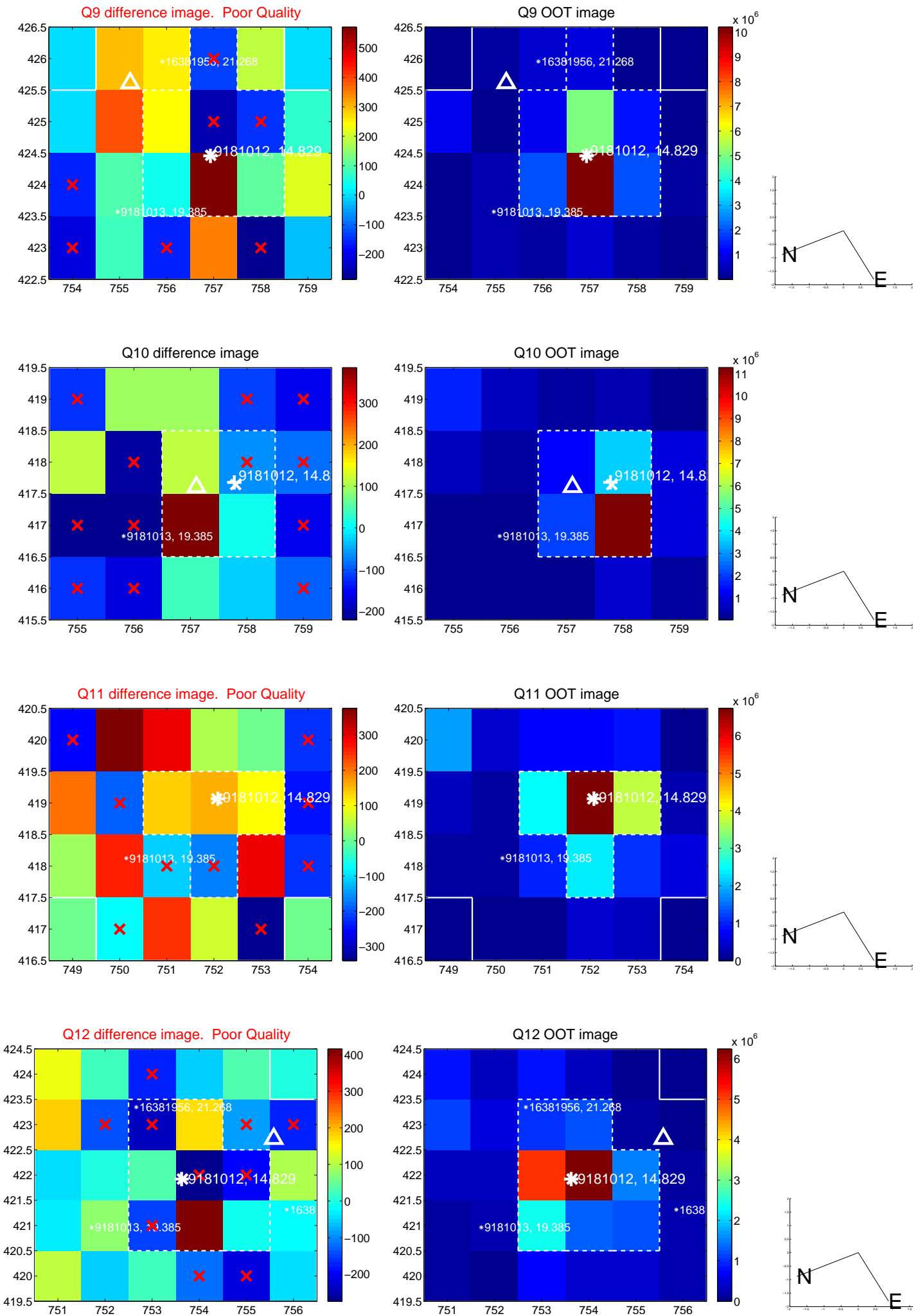
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



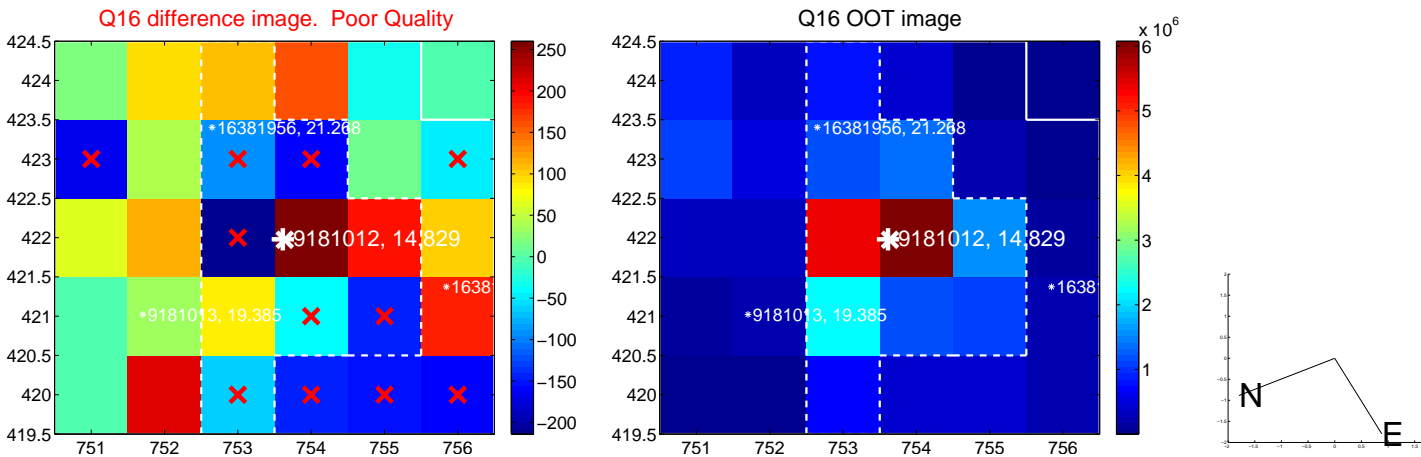
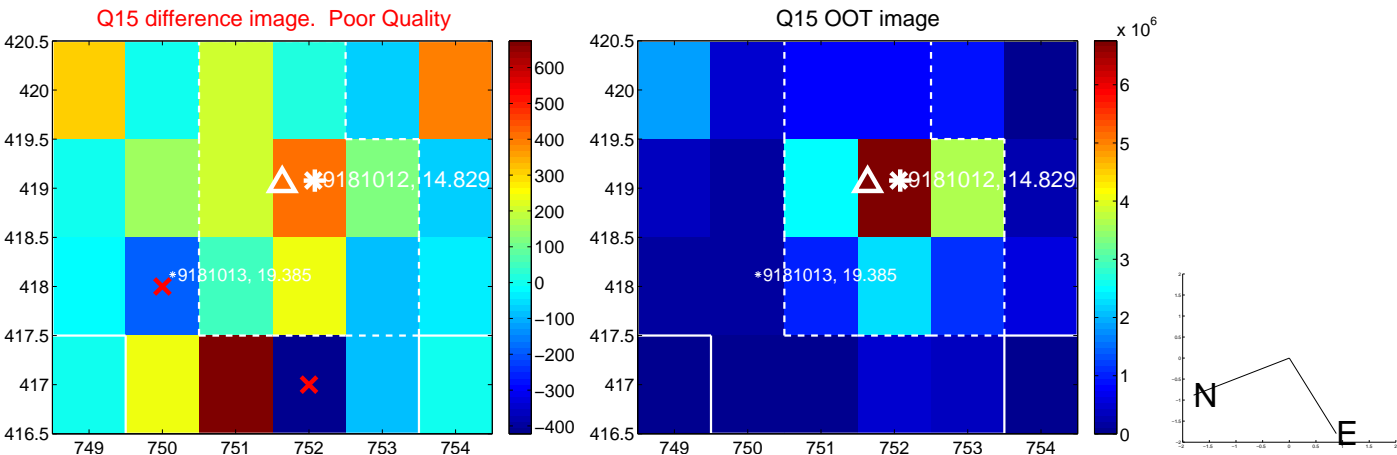
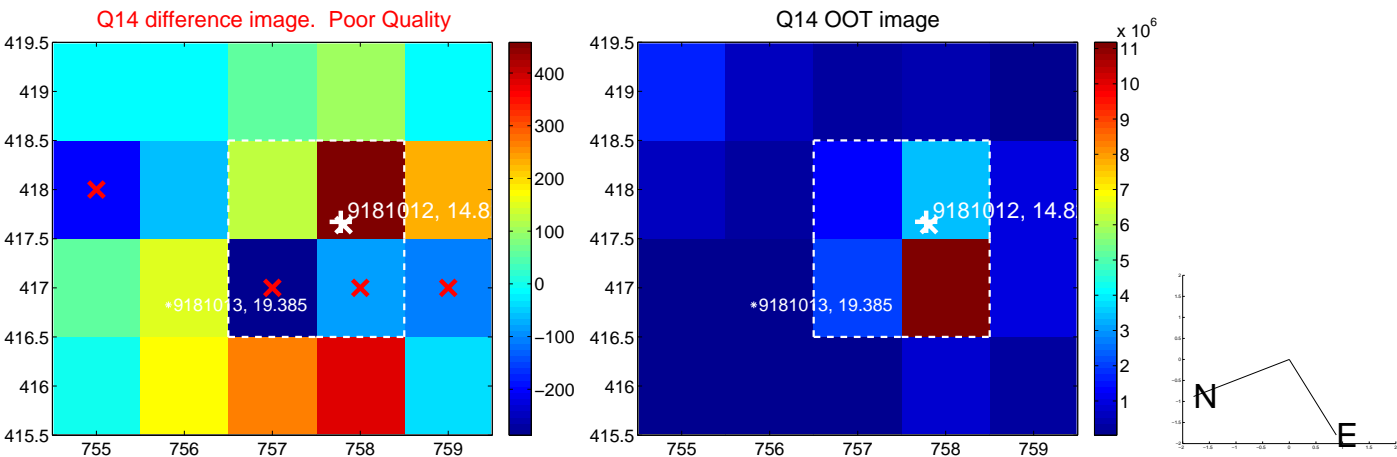
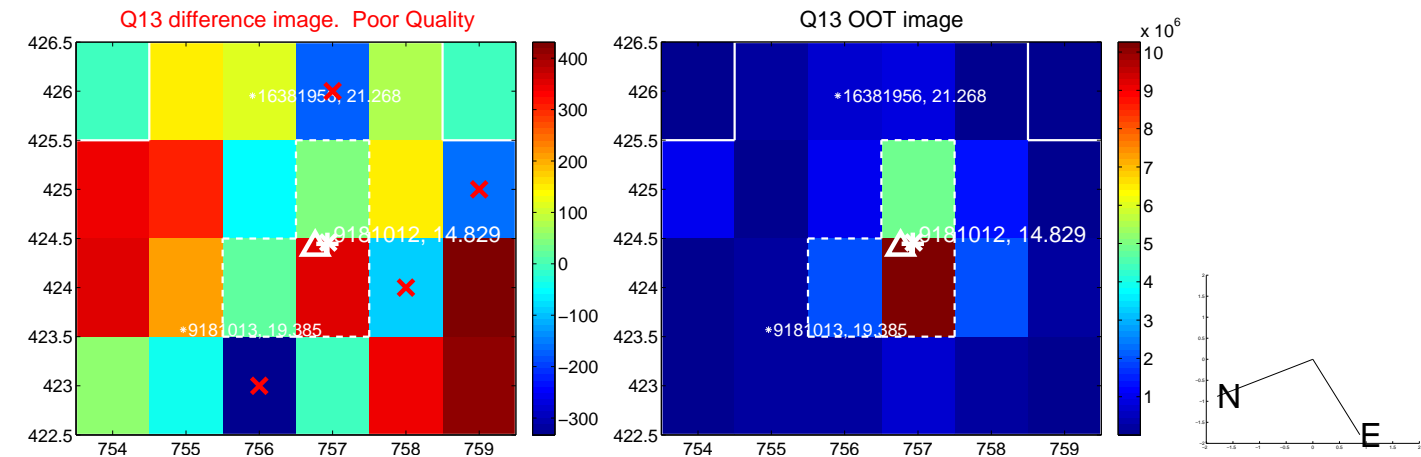
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



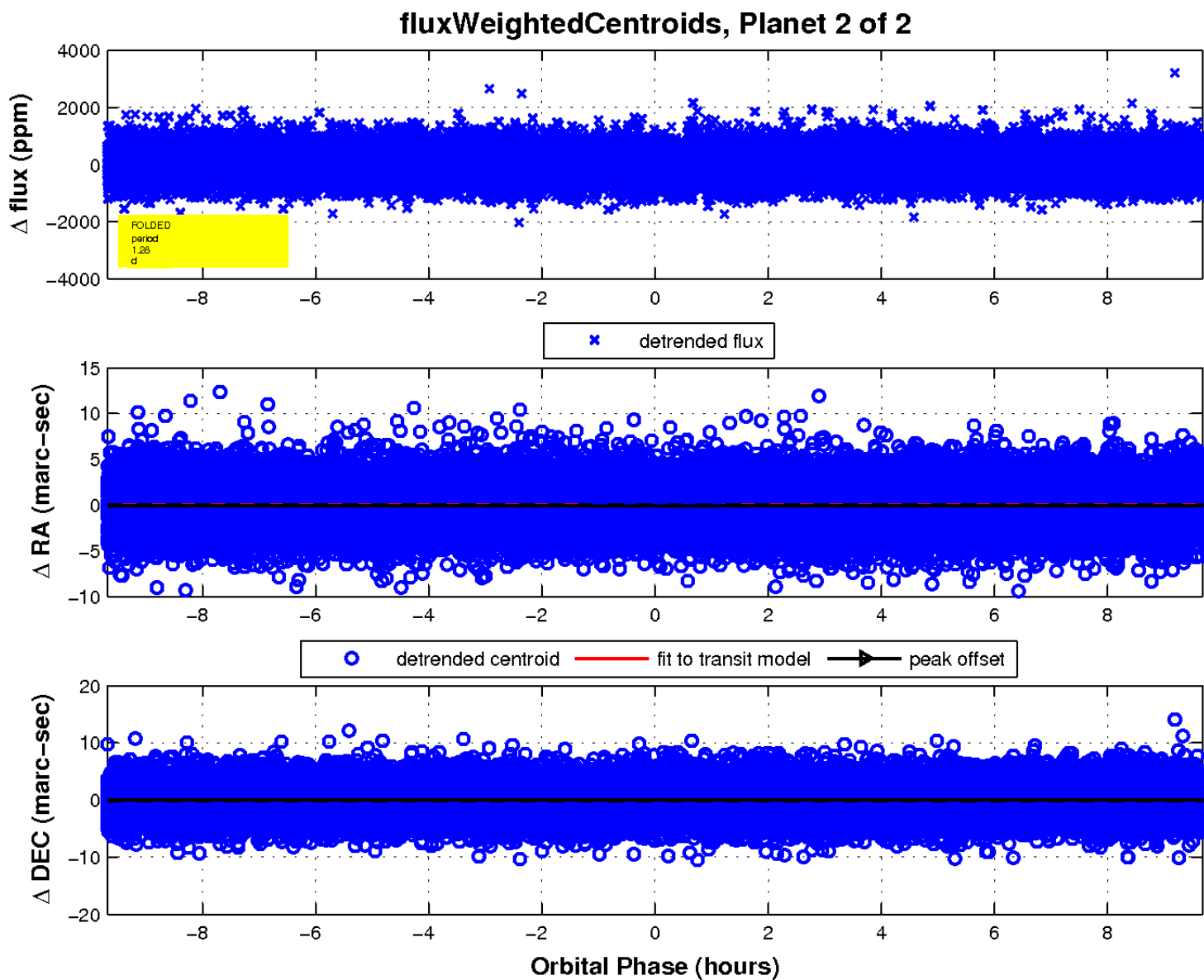
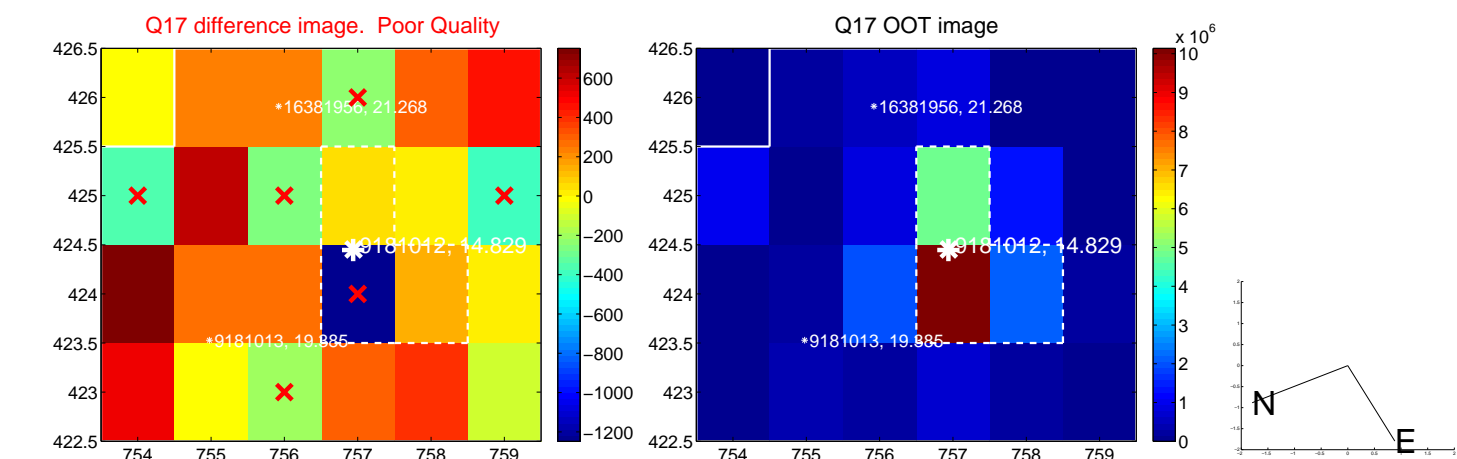
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

