

# KIC 007211635

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007211635-01	OBS	No	0.568920	131.609758	26.3	4.278	8.6	5.3	1.11	6446	0.58	9701.46
007211635-02	OBS	No	3.704573	132.231331	671.6	0.899	14.4	17.5	1.11	6446	3.00	797.85
007211635-03	OBS	No	4.451632	134.964343	563.7	0.729	13.1	11.7	1.11	6446	3.16	624.52
007211635-04	OBS	No	7.479120	136.488587	946.5	0.880	14.1	18.7	1.11	6446	3.48	312.68

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007211635-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET
007211635-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_RESOLVED_OFFSET
007211635-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_RESOLVED_OFFSET
007211635-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—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.

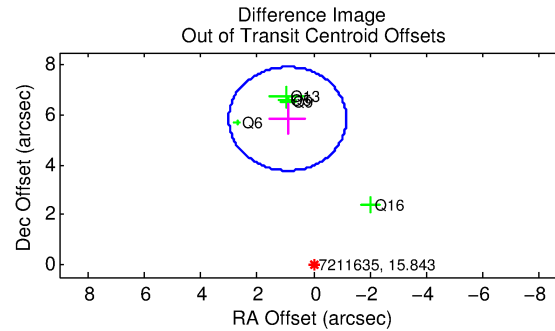
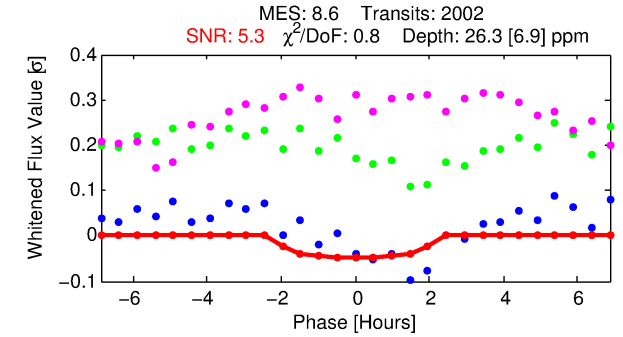
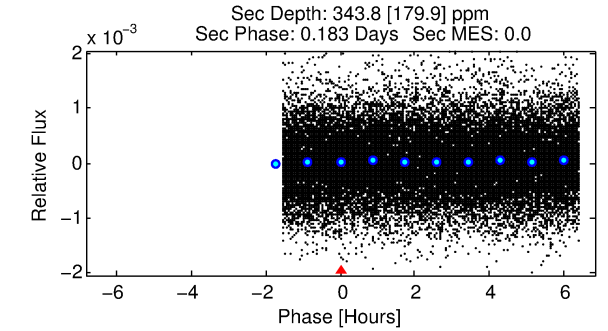
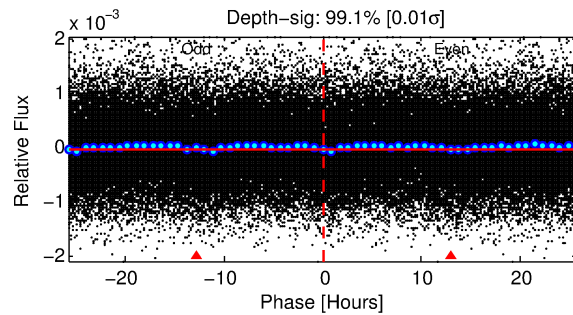
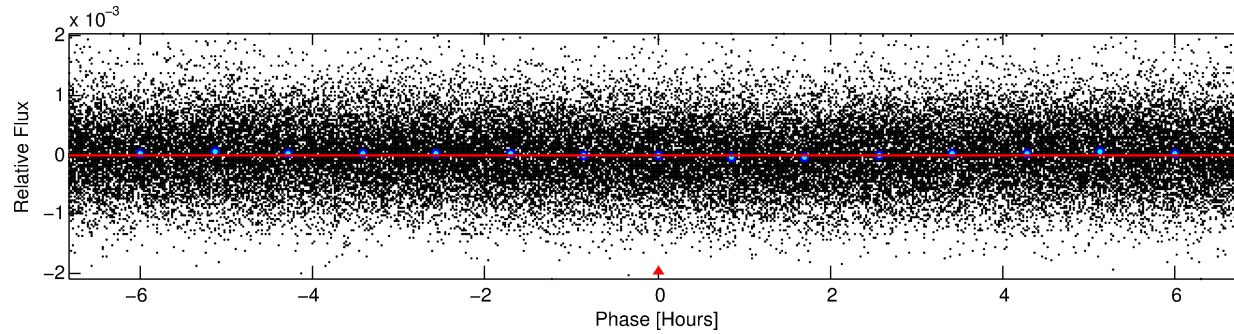
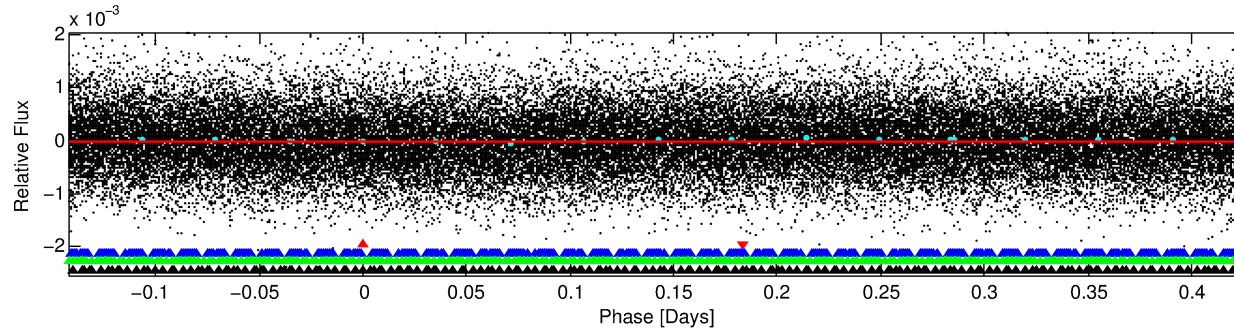
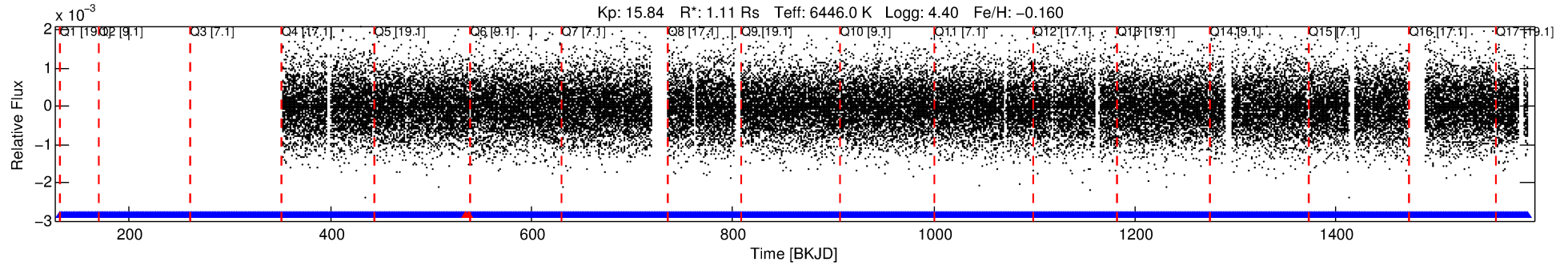
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 007211635-01

No Significant Match Found

# DV One-Page Summary

KIC: 7211635 Candidate: 1 of 4 Period: 0.569 d



## DV Fit Results:

Period = 0.56892 [0.00002] d  
Epoch = 131.6098 [0.0093] BKJD  
Rp/R\* = 0.0048 [0.0103]  
a/R\* = 1.18 [3.85]  
b = 0.34 [29.65]  
Seff = 9701.46 [3666.33]  
Teq = 2531 [239] K  
Rp = 0.58 [1.26] Re  
a = 0.0141 [0.0035] AU  
Ag = 111.10 [483.33] [0.23 $\sigma$ ]  
Teffp = 12703 [13781] K [0.74 $\sigma$ ]

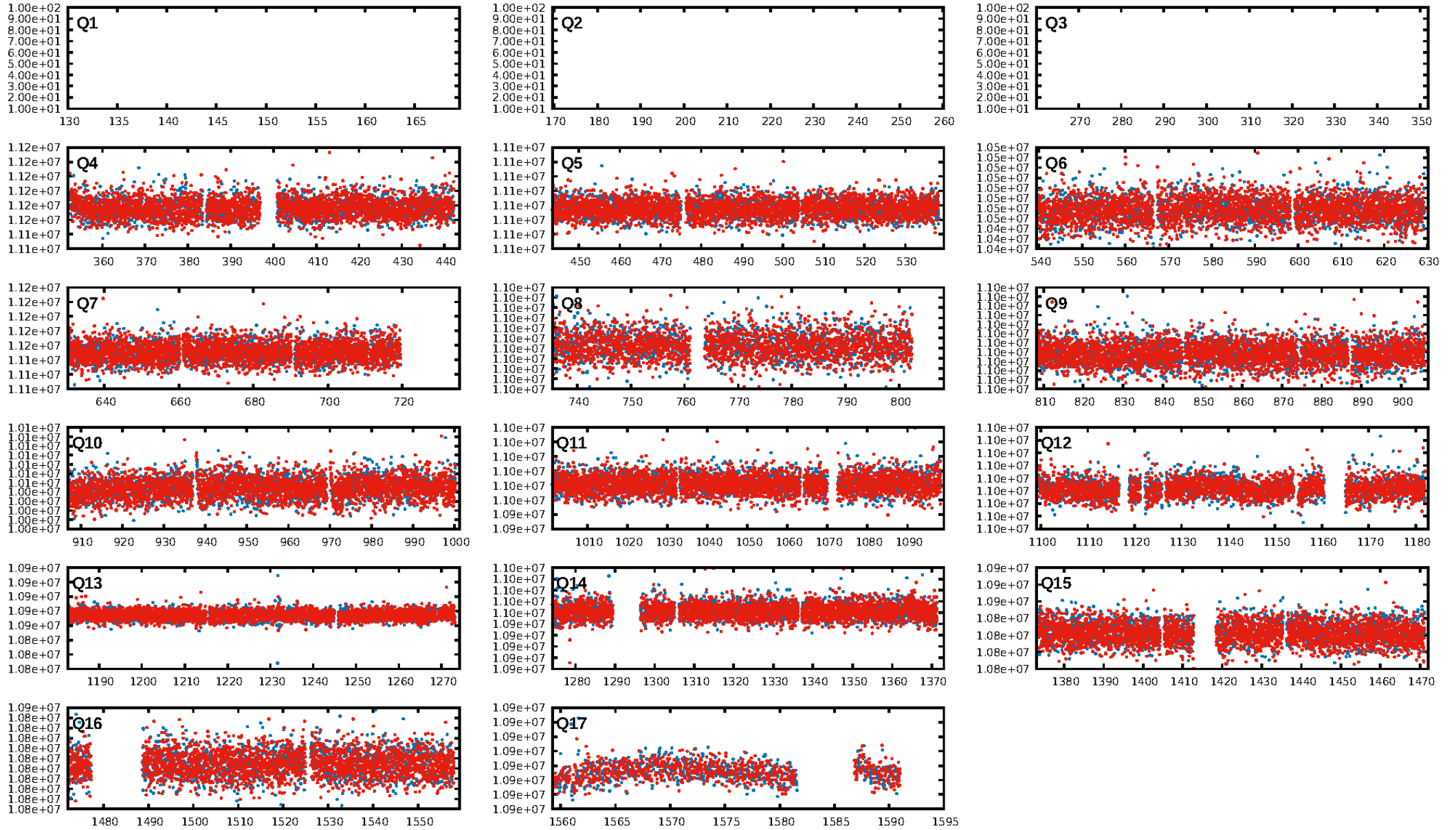
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: 100.0% [17.21 $\sigma$ ]  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 2.29e-04  
RollingBand-fgm: 1.00 [1953/1955]  
GhostDiagnostic-chr: -1.015  
Centroid-sig: 0.0%  
Centroid-so: 9.349 arcsec [3.04 $\sigma$ ]  
OotOffset-rm: 5.910 arcsec [8.53 $\sigma$ ]  
KicOffset-rm: 5.866 arcsec [7.01 $\sigma$ ]  
OotOffset-st: 1/0/1/3 [5]  
KicOffset-st: 1/0/1/3 [5]  
DiffImageQuality-fgm: 0.80 [4/5]  
DiffImageOverlap-fno: 1.00 [14/14]

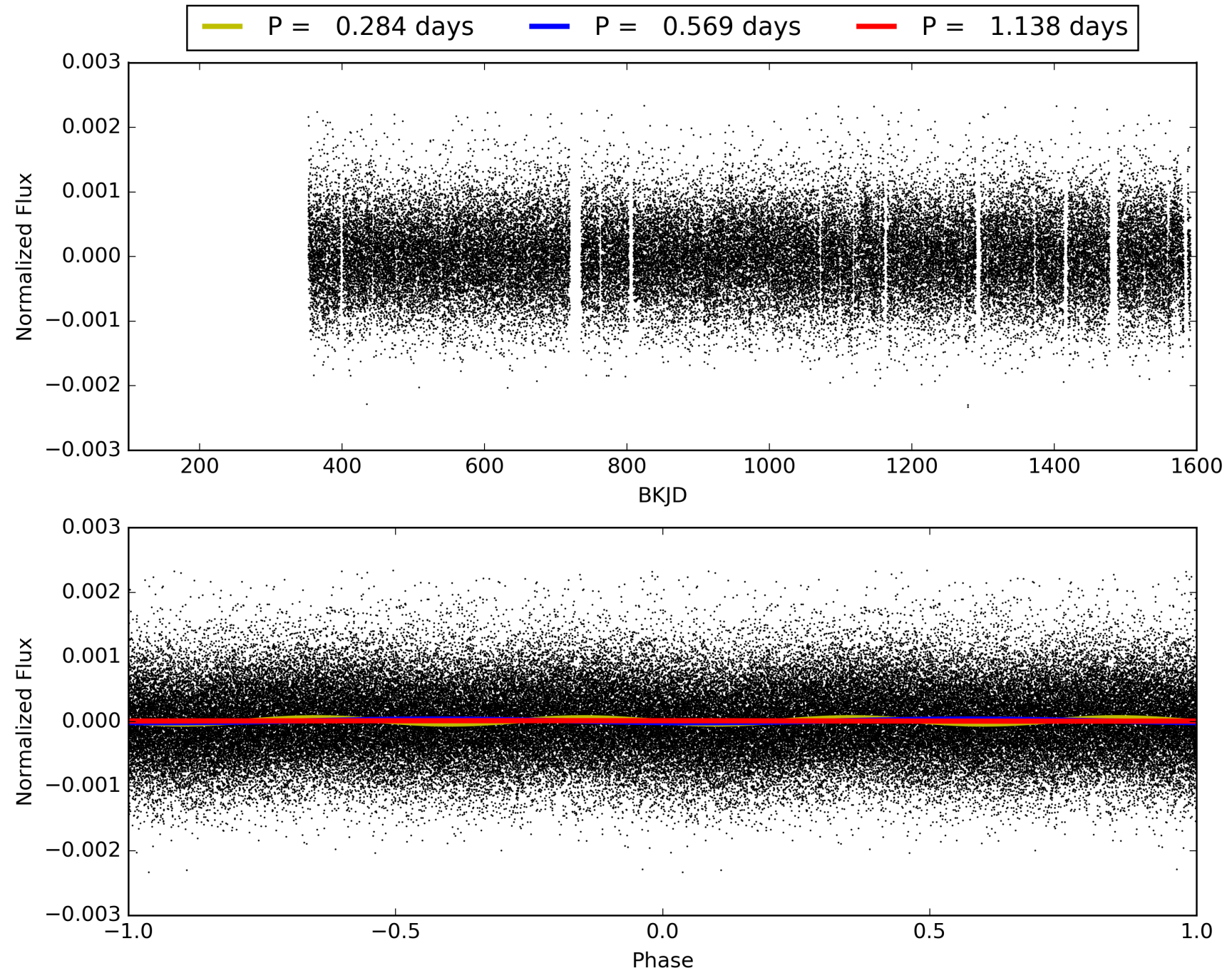
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 09:20:45 Z

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

# TCE 007211635-01, PDC Light Curves



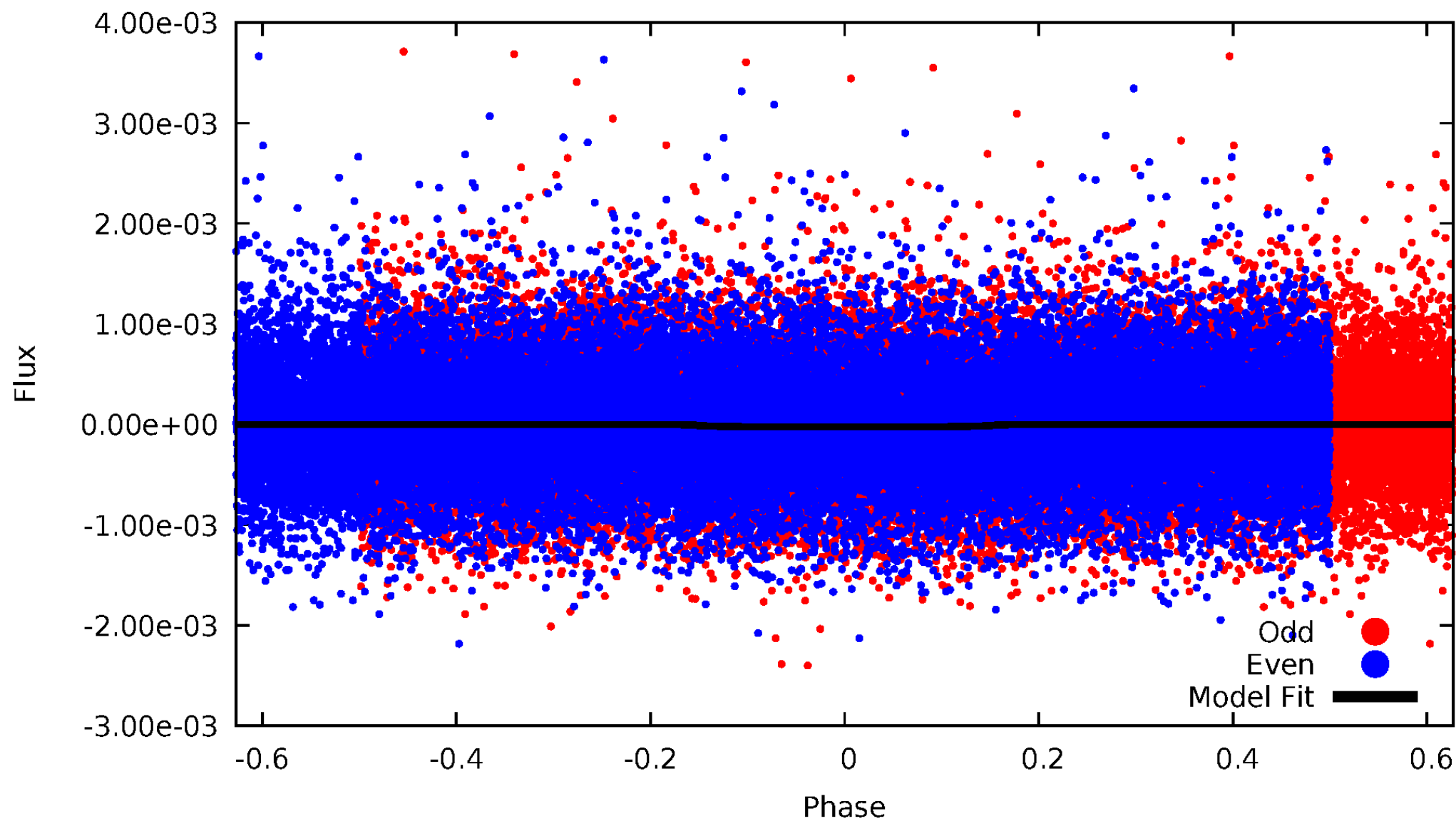
TCE 007211635-01





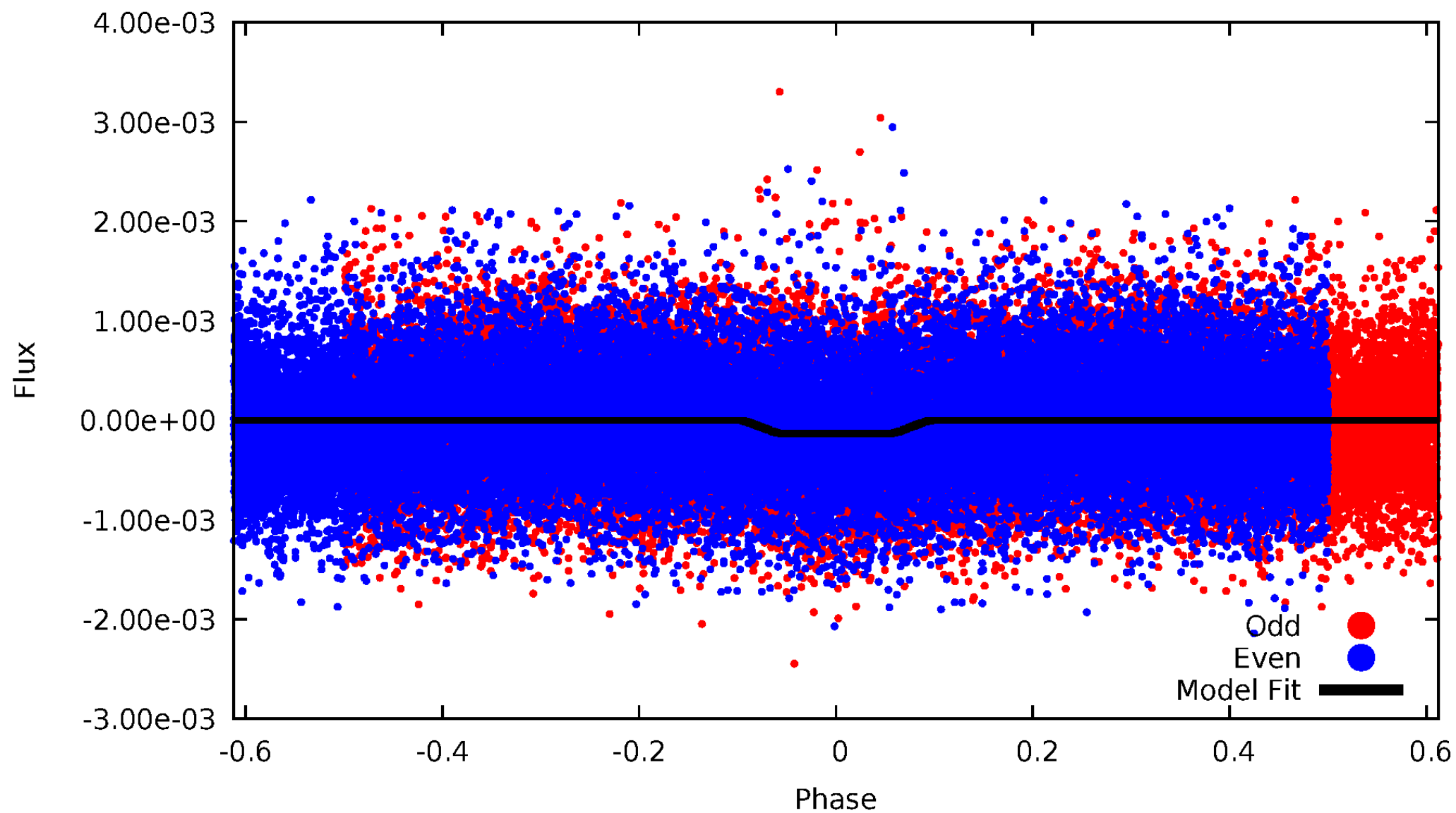
# DV Odd/Even

TCE 007211635-01

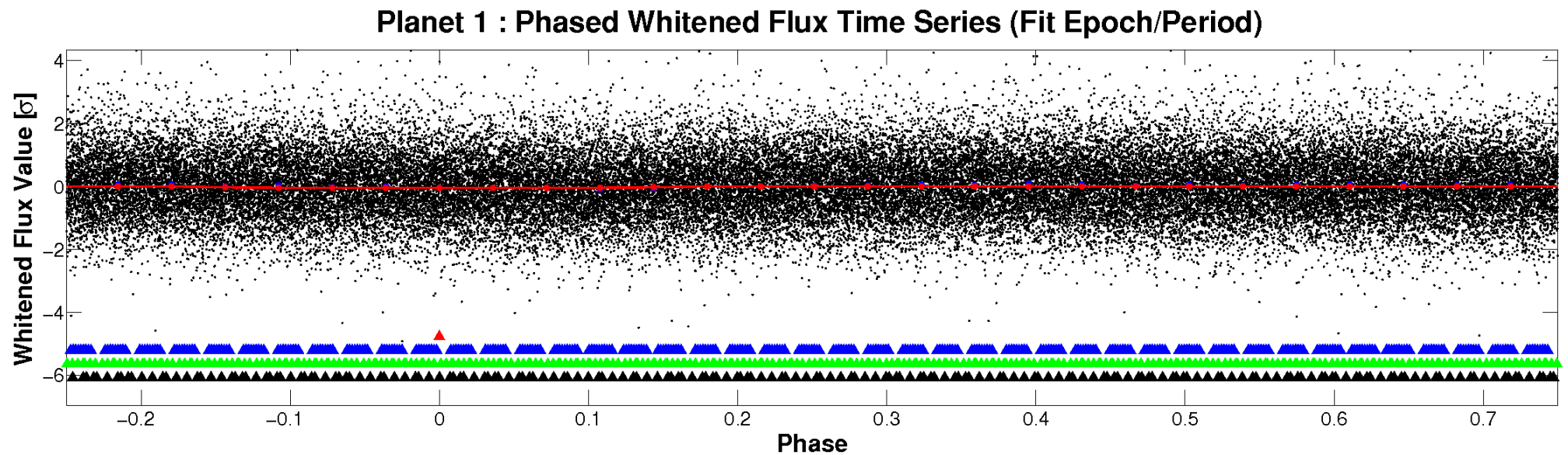
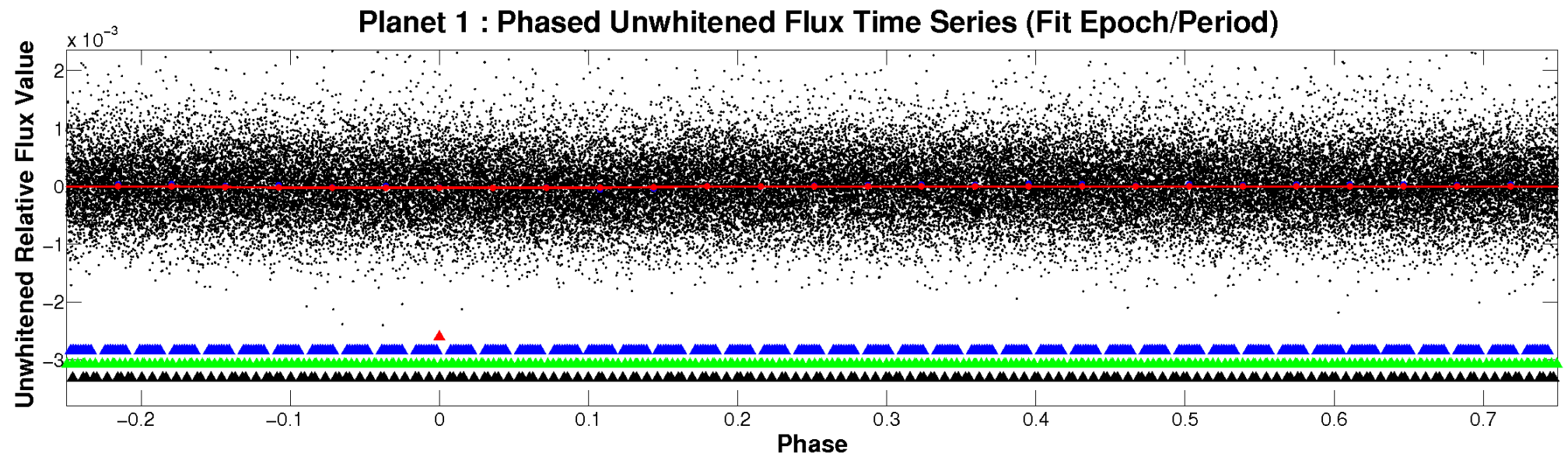


# ALT Odd/Even

TCE 007211635-01

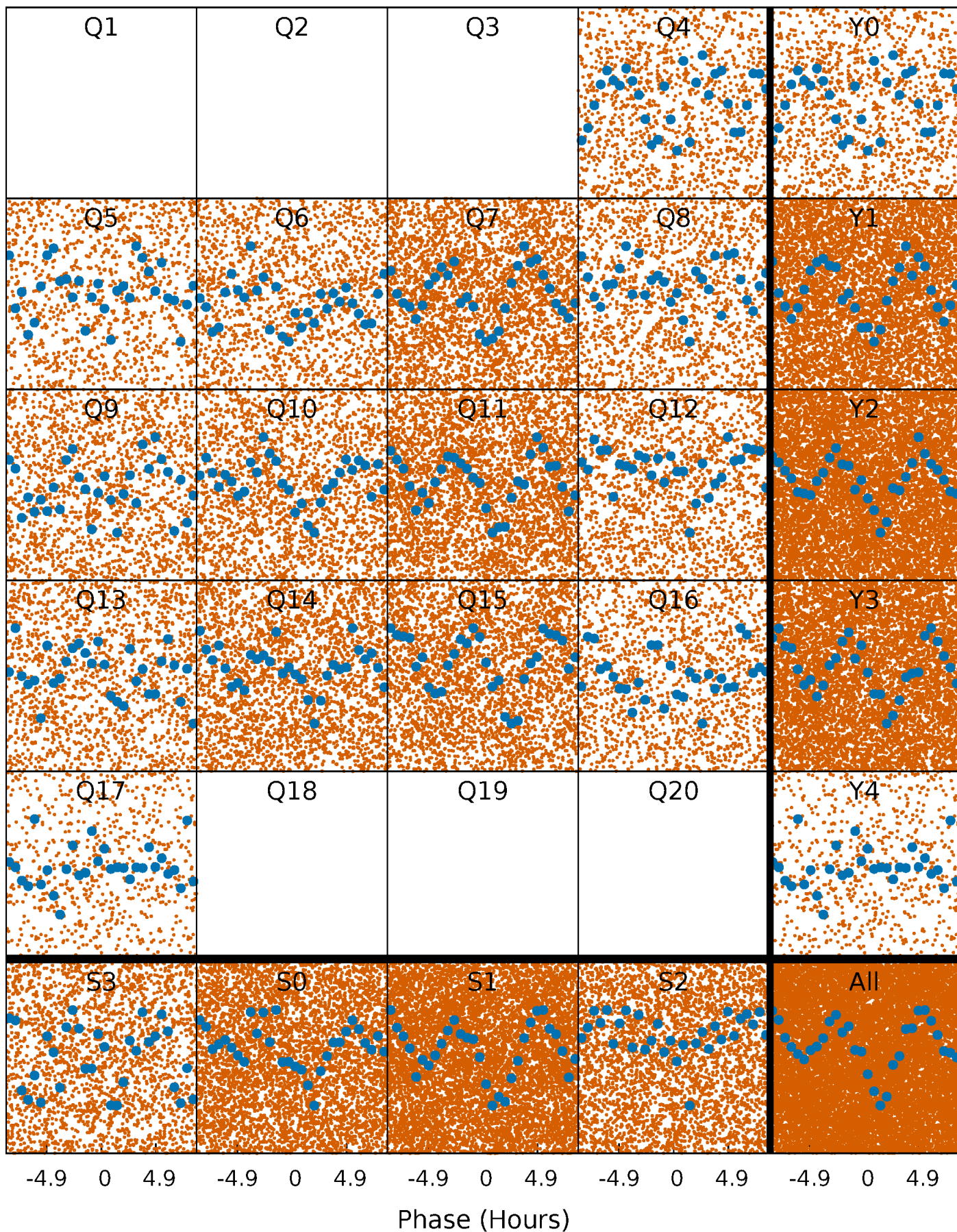


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

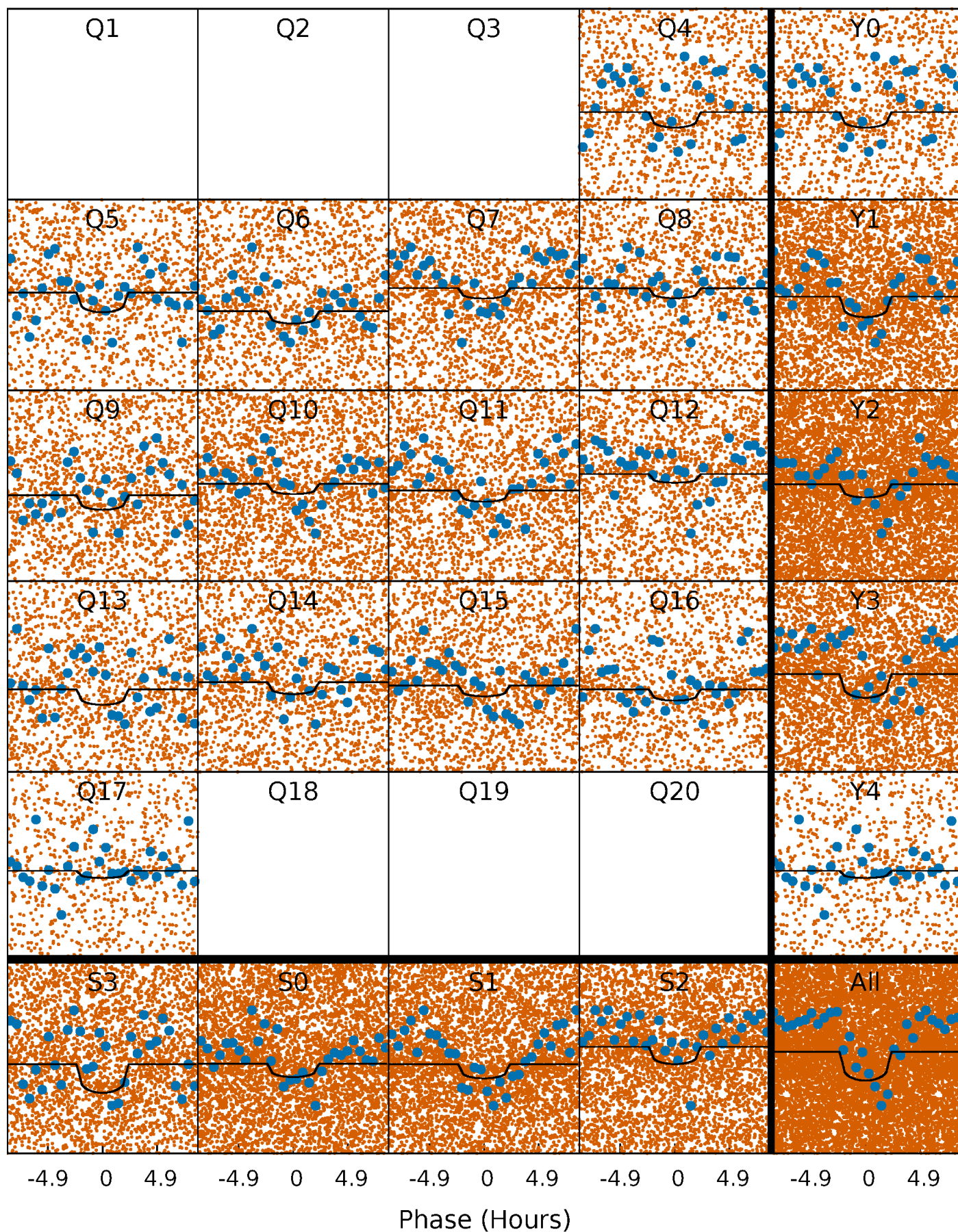
TCE 007211635-01 P= 0.568920 Days  $T_0=131.609758$  (BKJD)





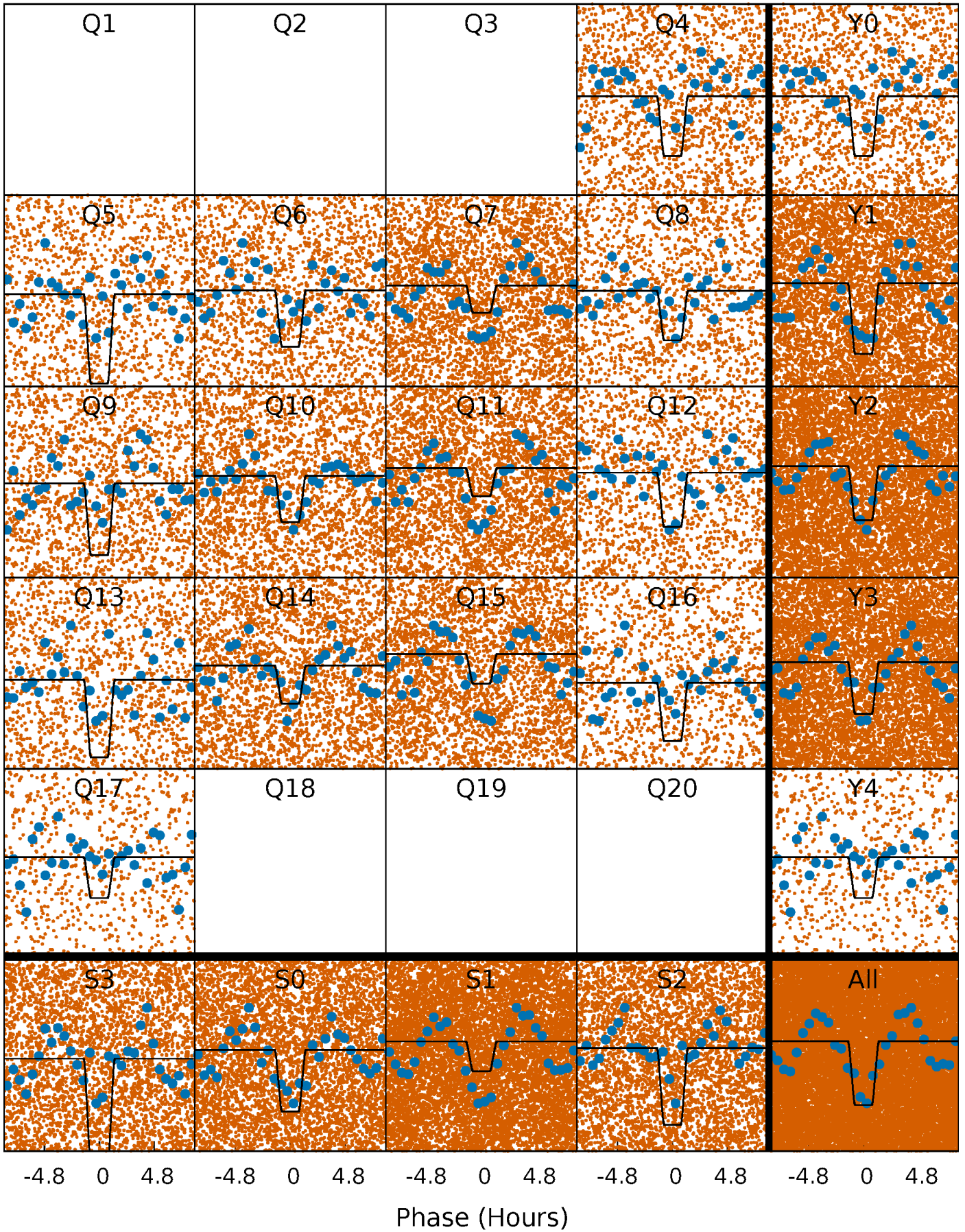
# DV Quarter-Phased Transit Curves

TCE 007211635-01 P= 0.568920 Days  $T_0=131.609758$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 007211635-01 P= 0.568973 Days  $T_0=131.584037$  (BKJD)

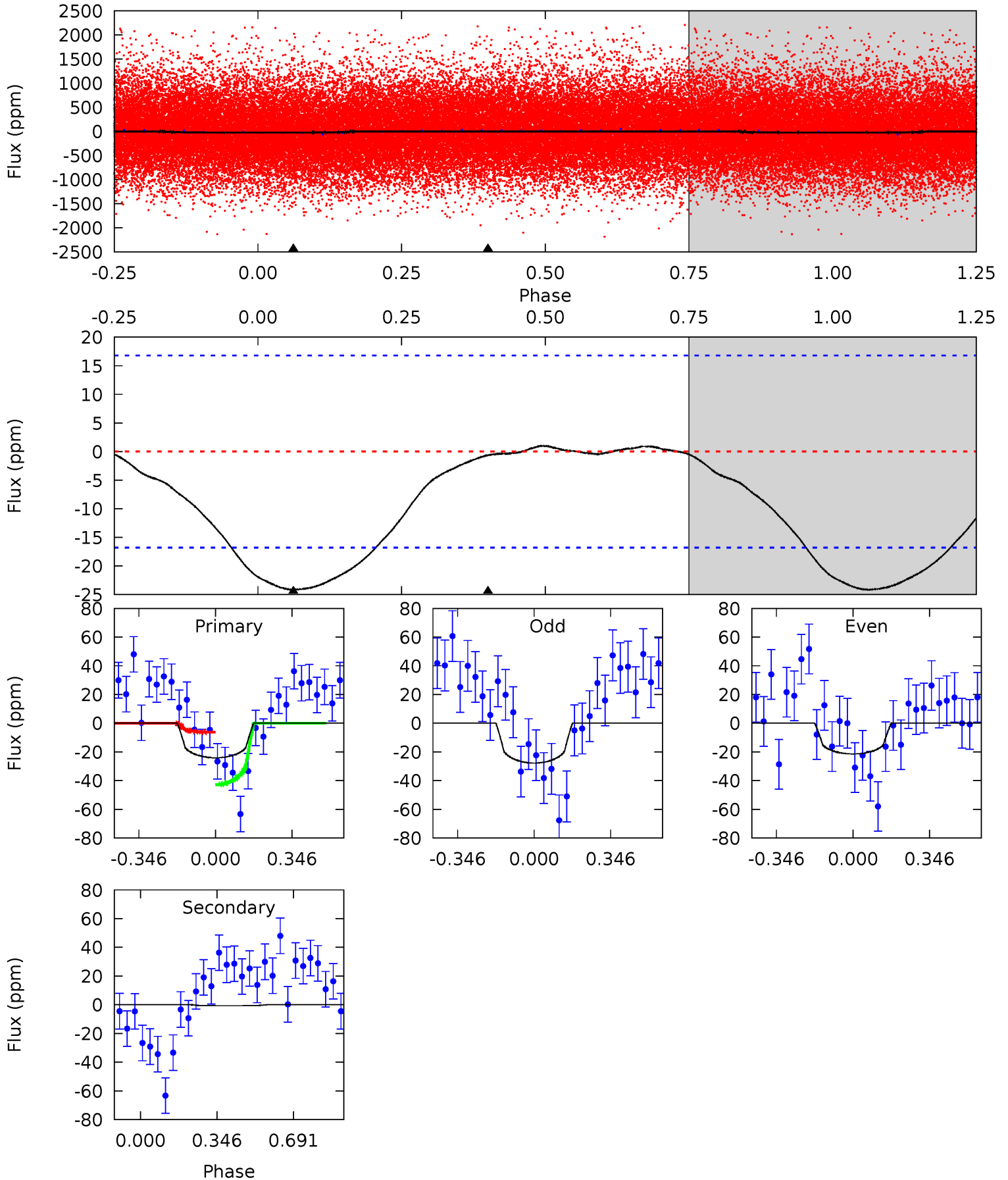




# DV Model-Shift Uniqueness Test

007211635-01, P = 0.568920 Days, E = 131.609758 Days

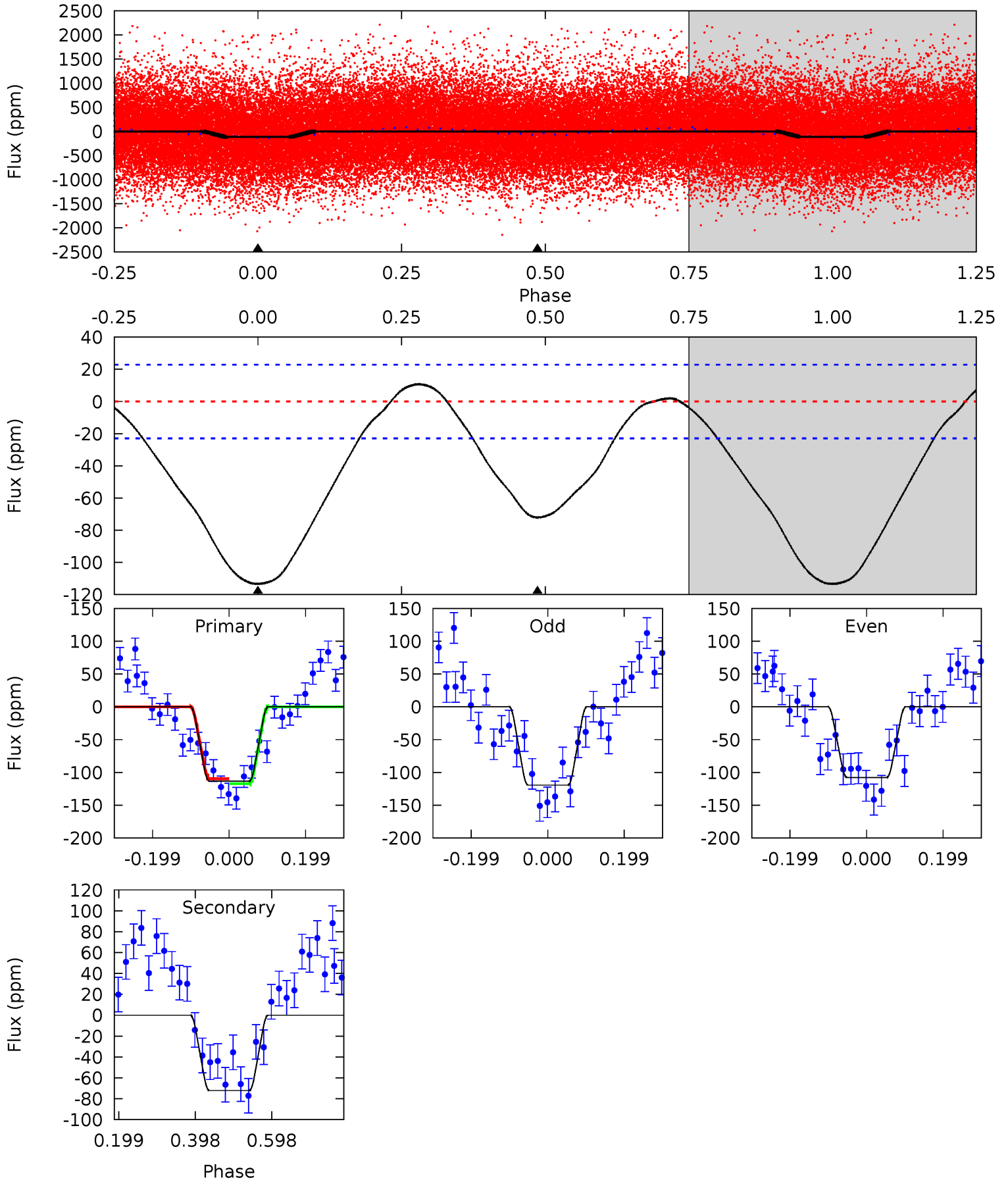
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.18	0.16	0	0	4.30	0.94	0.23	6.18	6.18	0.16	0.16	0.81	0.77	0.04	4.68



# Alt Model-Shift Uniqueness Test

007211635-01, P = 0.568973 Days, E = 131.584037 Days

Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.9	13.9	0	0	4.42	1.28	1.64	21.9	21.9	13.9	13.9	1.12	0.99	0.09	0.72





### Stellar Parameters For KIC 007211635

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6446^{+180}_{-248}$	$4.404^{+0.065}_{-0.182}$	$-0.160^{+0.250}_{-0.300}$	$1.115^{+0.339}_{-0.145}$	$1.150^{+0.164}_{-0.164}$	$1.166^{+0.401}_{-0.586}$
	+3%/-4%	+1%/-4%	+156%/-188%	+30%/-13%	+14%/-14%	+34%/-50%
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 007211635-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-1 \pm 4$	$1.12^{+1.12}_{-0.75}$	$3589^{+255}_{-191}$	$-3394^{+7103}_{-649}$	$0.025^{+0.779}_{-0.464}$
Alt.	$-72 \pm 5$	$1.71^{+1.17}_{-1.02}$	$3600^{+244}_{-191}$	$5010^{+3152}_{-1090}$	$2.688^{+14.696}_{-1.766}$

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

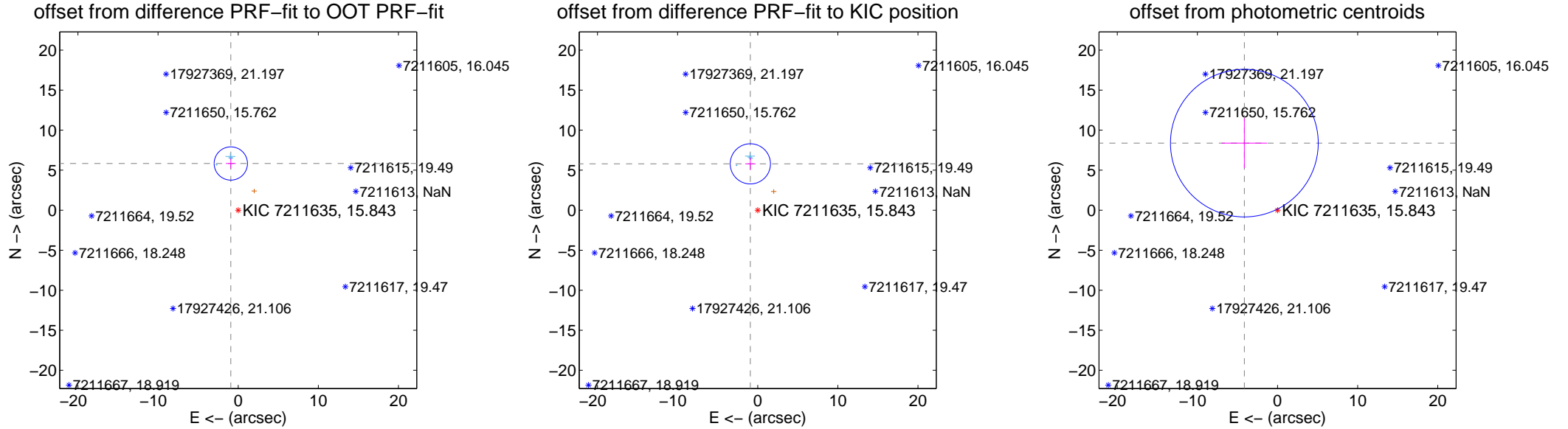
## DV Centroid Data

Supplemental centroid analysis for 007211635-01. Kepler magnitude: 15.84. Transit SNR 5.28

There are 4 quarters with good PRF difference image offsets

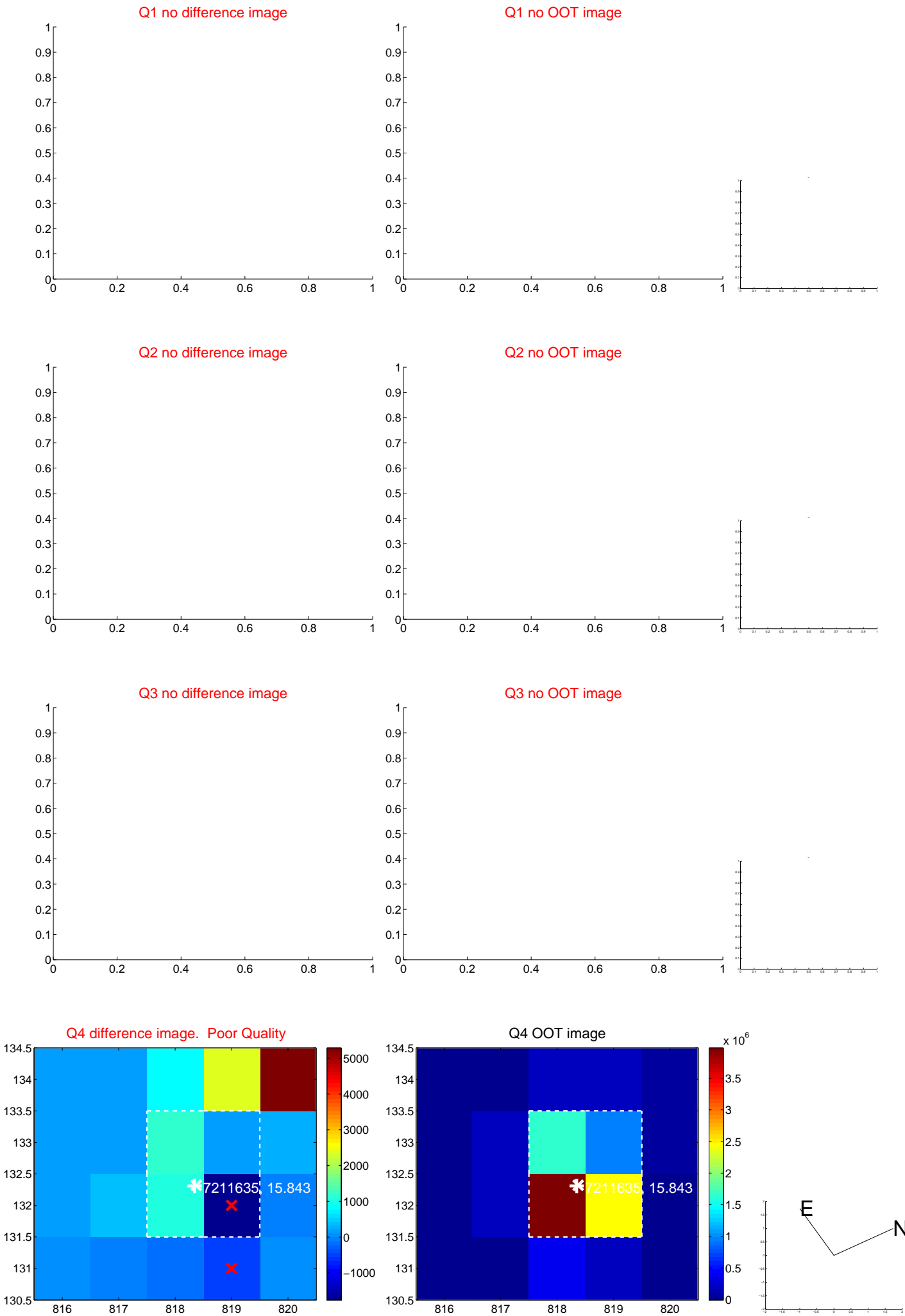
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	<b>5.910 <math>\pm</math> 0.693</b>	<b>8.53</b>	0.923 $\pm$ 0.610	5.837 $\pm$ 0.634
PRF-fit source offset from KIC position	<b>5.866 <math>\pm</math> 0.837</b>	<b>7.01</b>	0.921 $\pm$ 0.639	5.793 $\pm$ 0.766
photometric centroid source offset	<b>9.35 <math>\pm</math> 3.07</b>	<b>3.04</b>	4.14 $\pm$ 2.84	8.38 $\pm$ 3.13

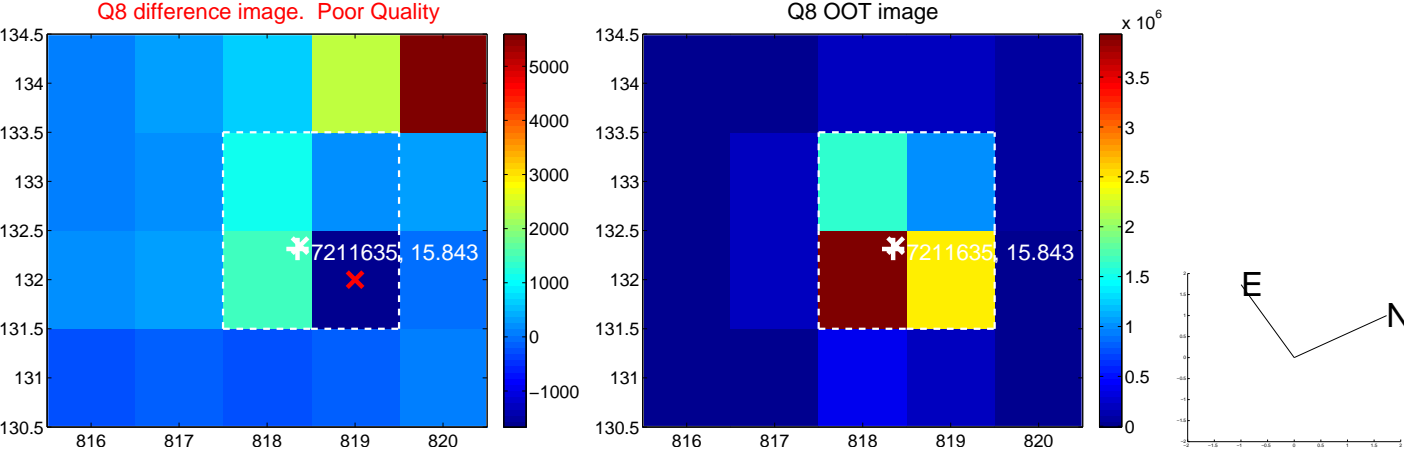
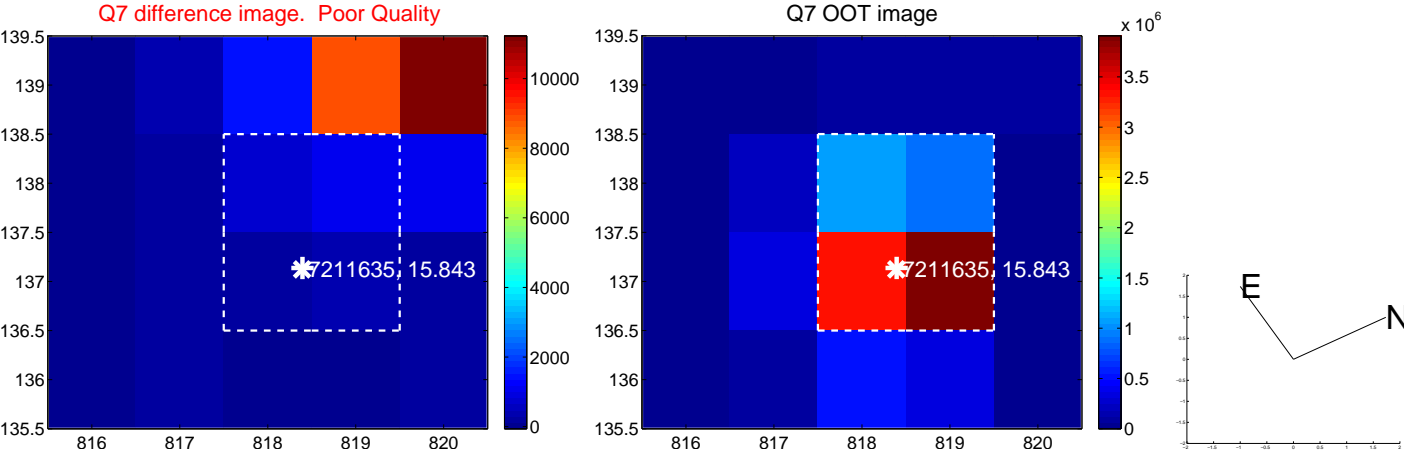
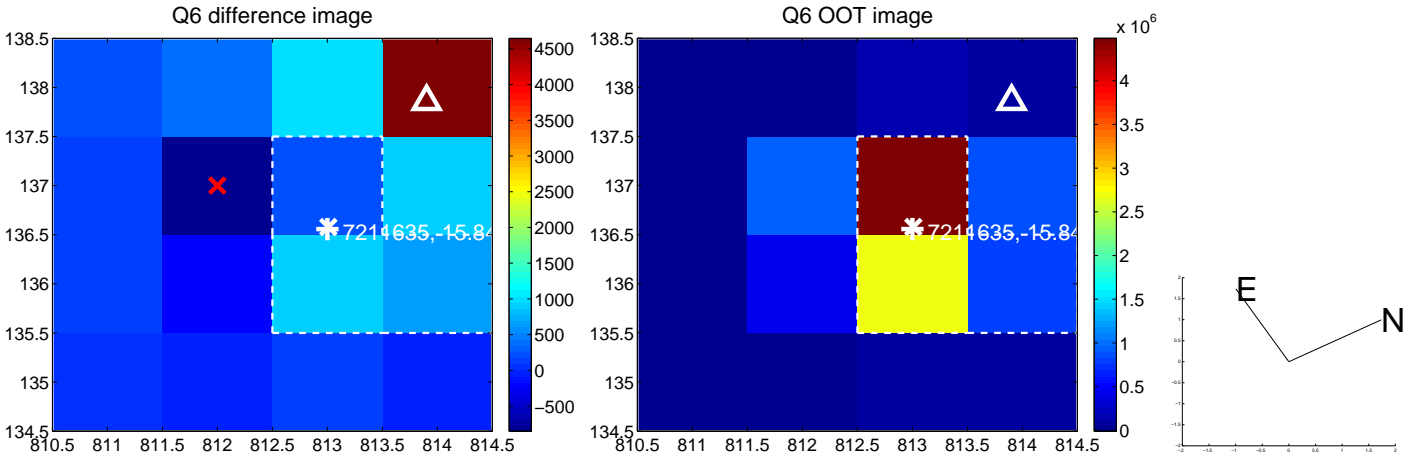
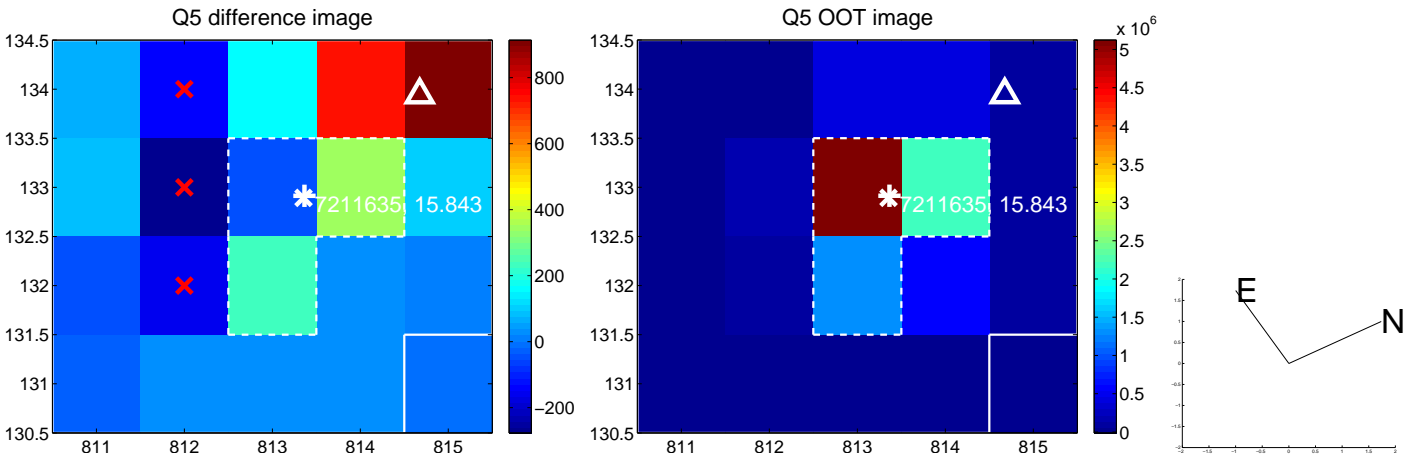


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three- $\sigma$ . 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 ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

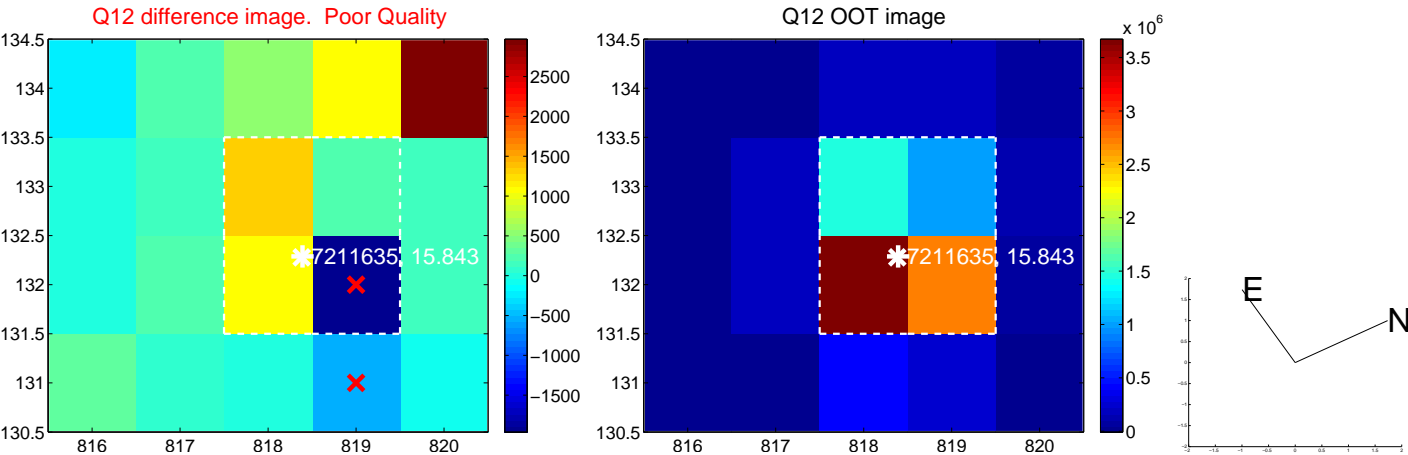
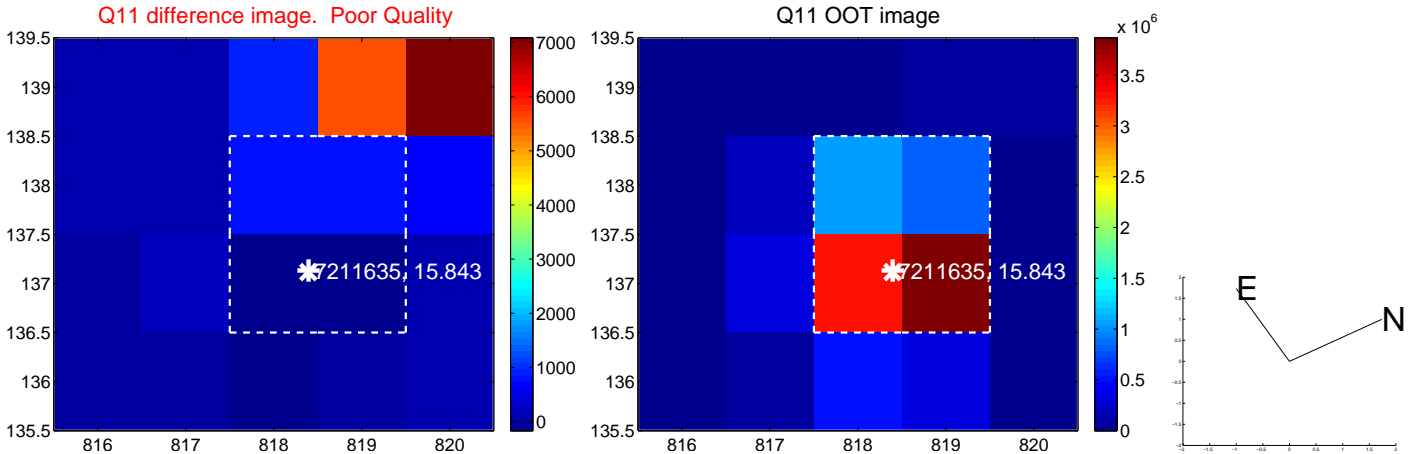
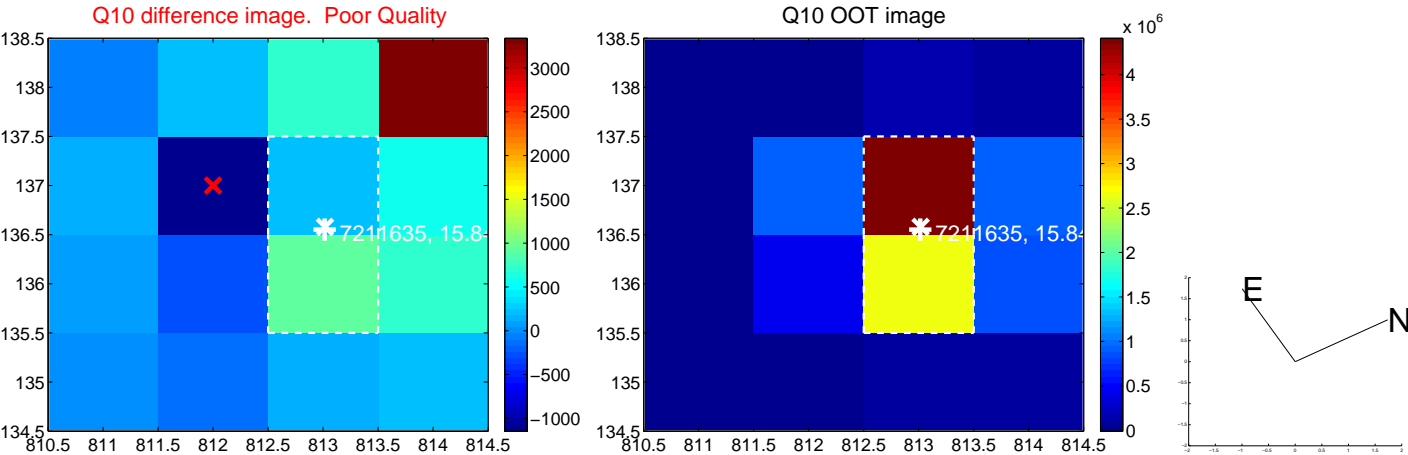
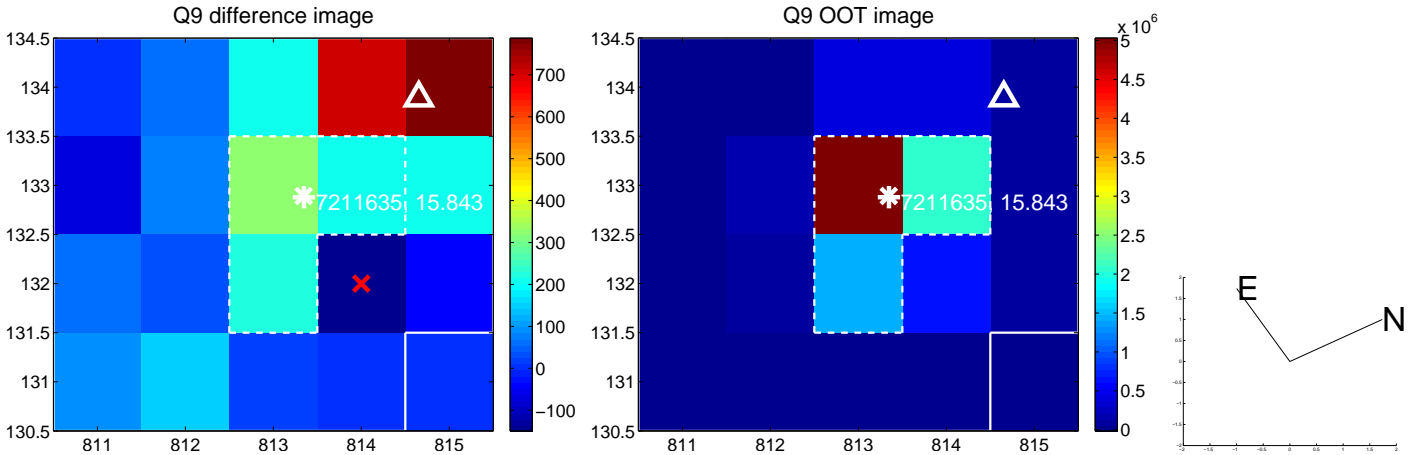


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

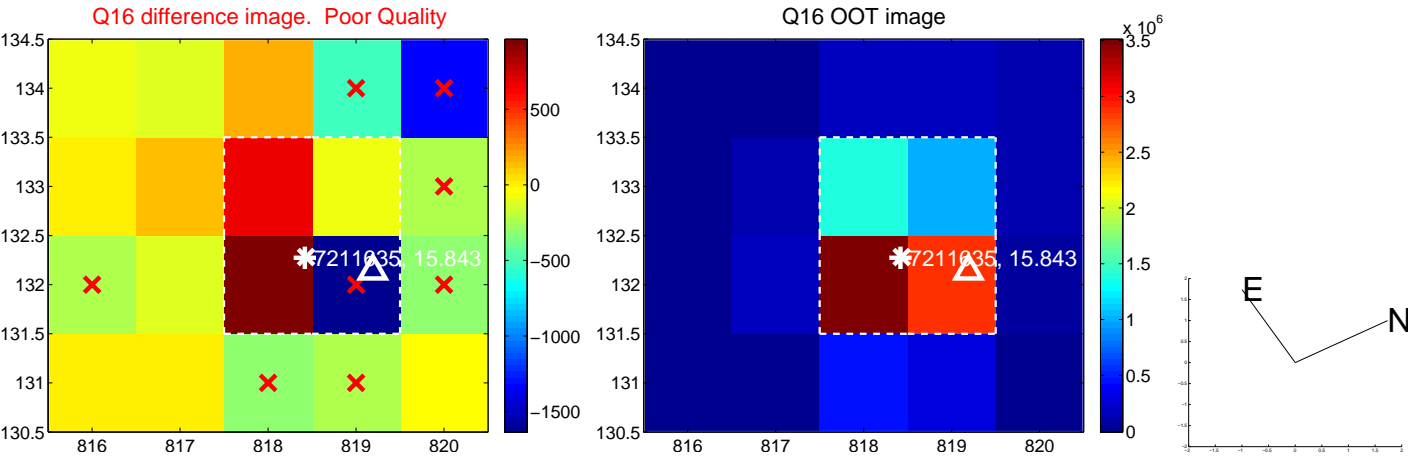
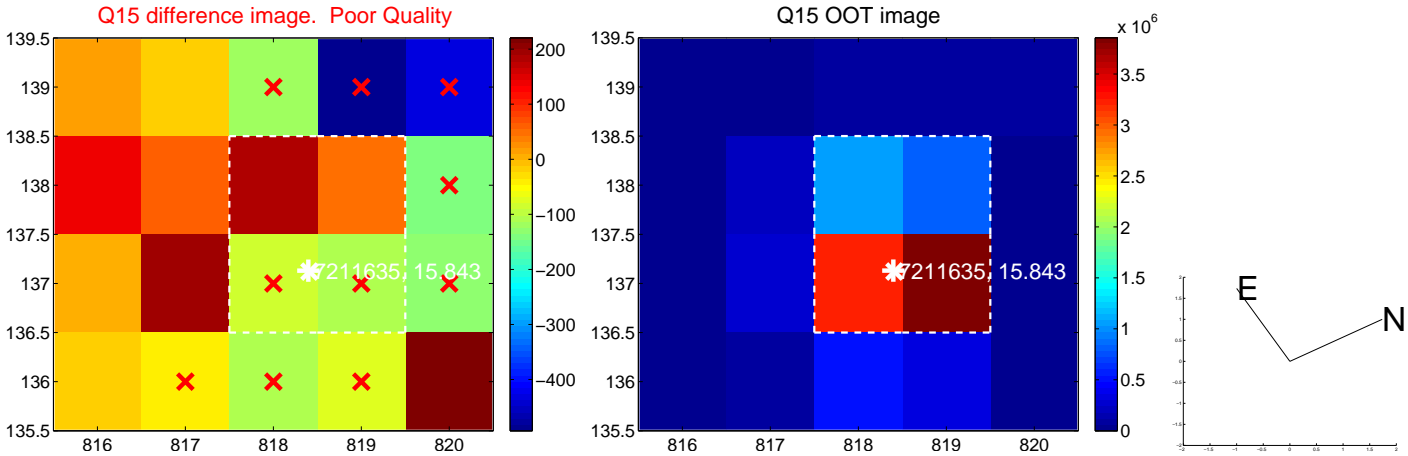
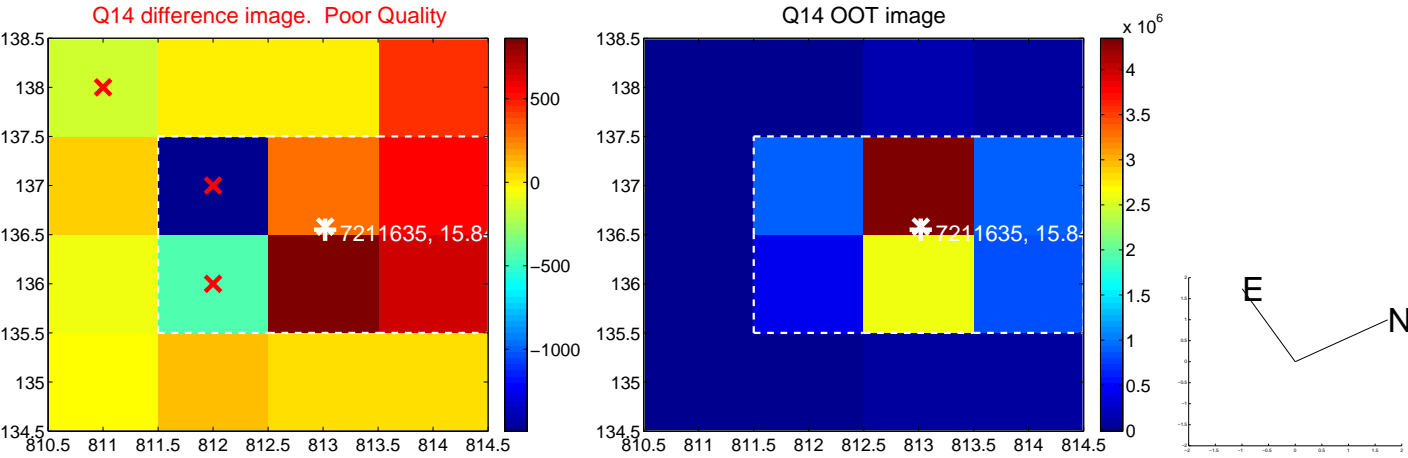
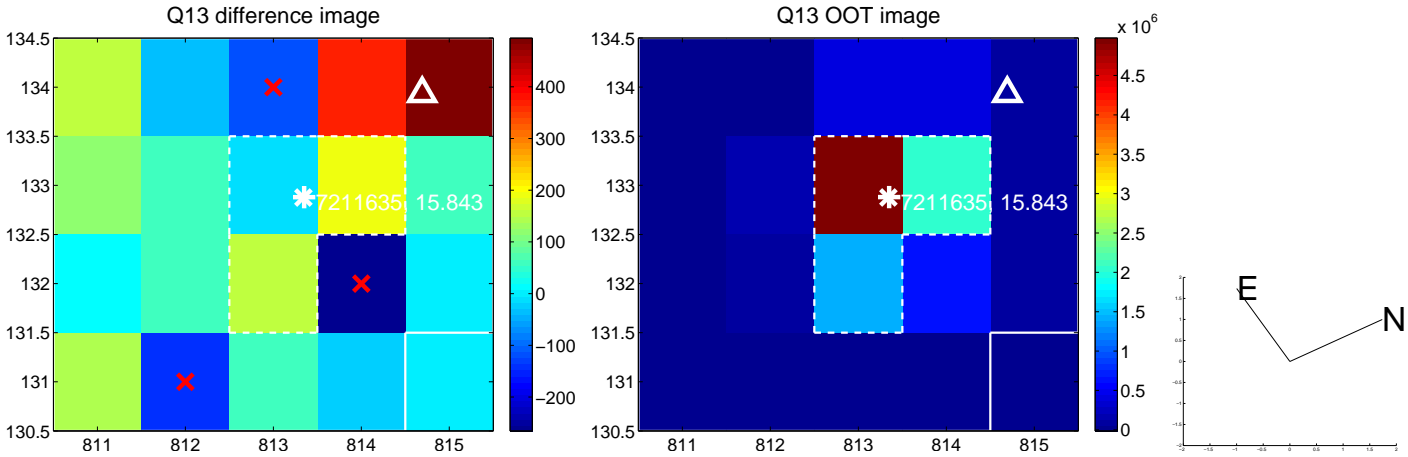




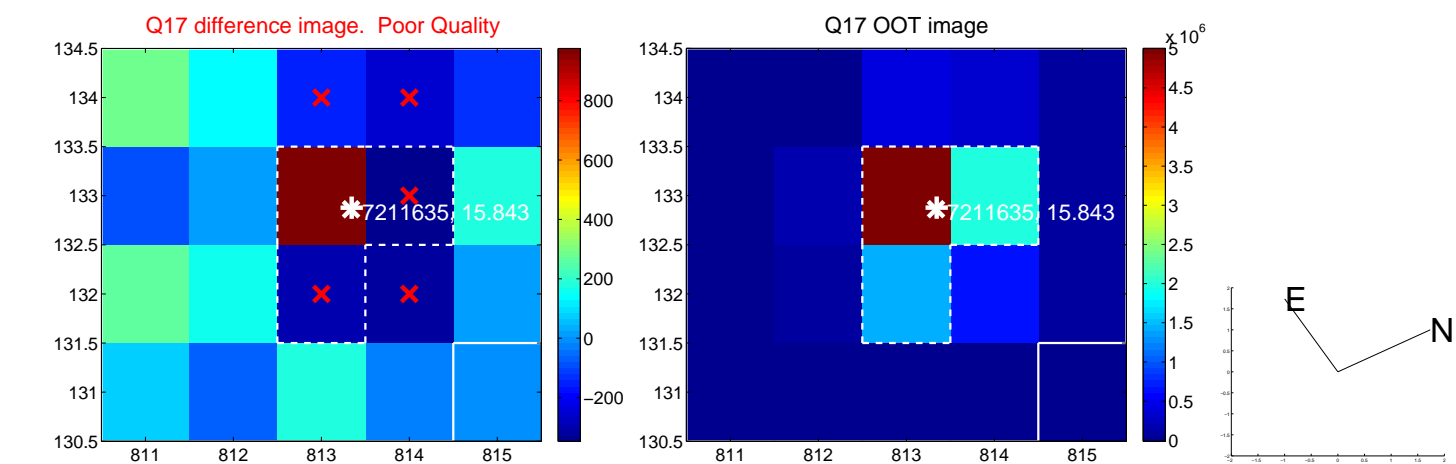
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



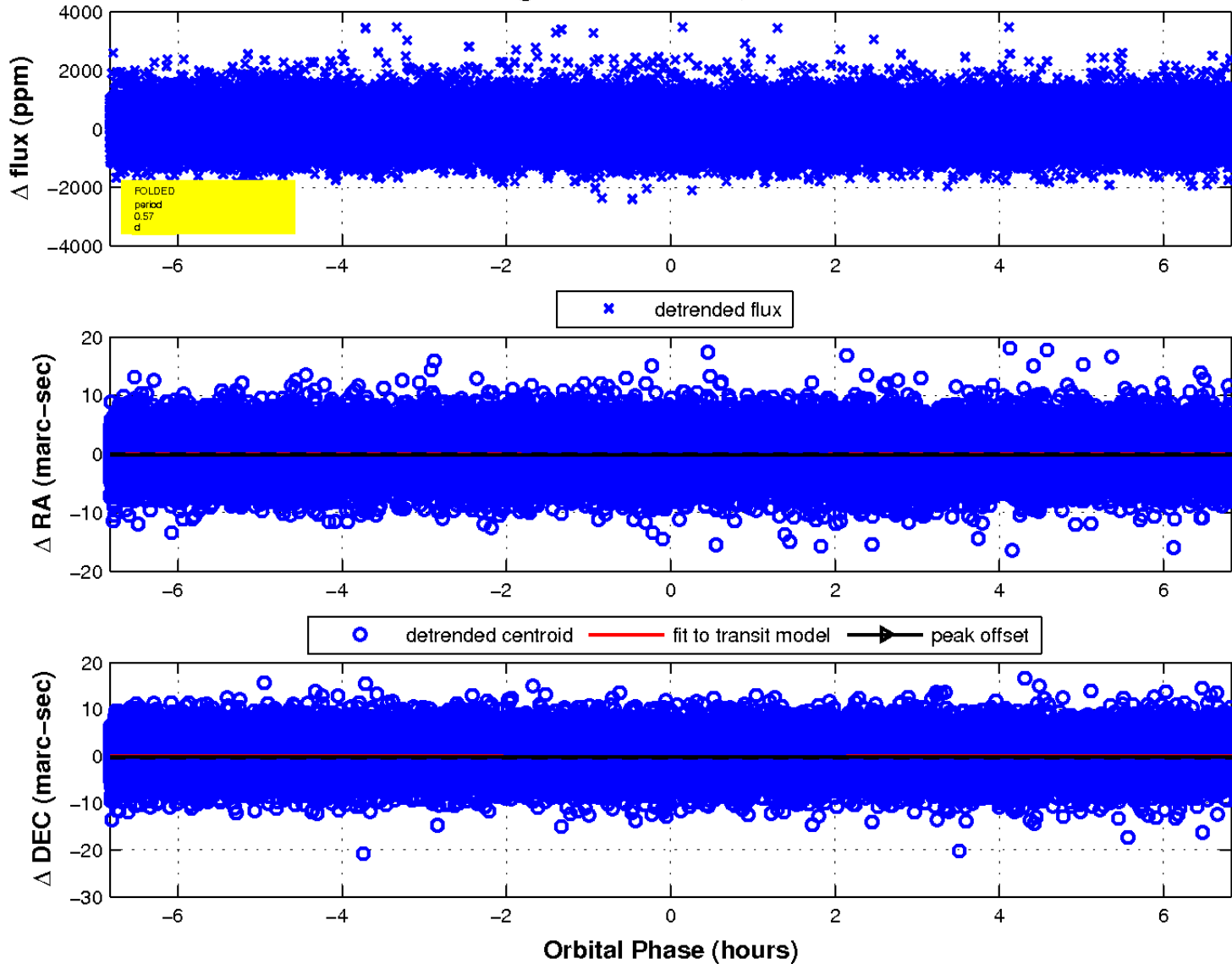
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

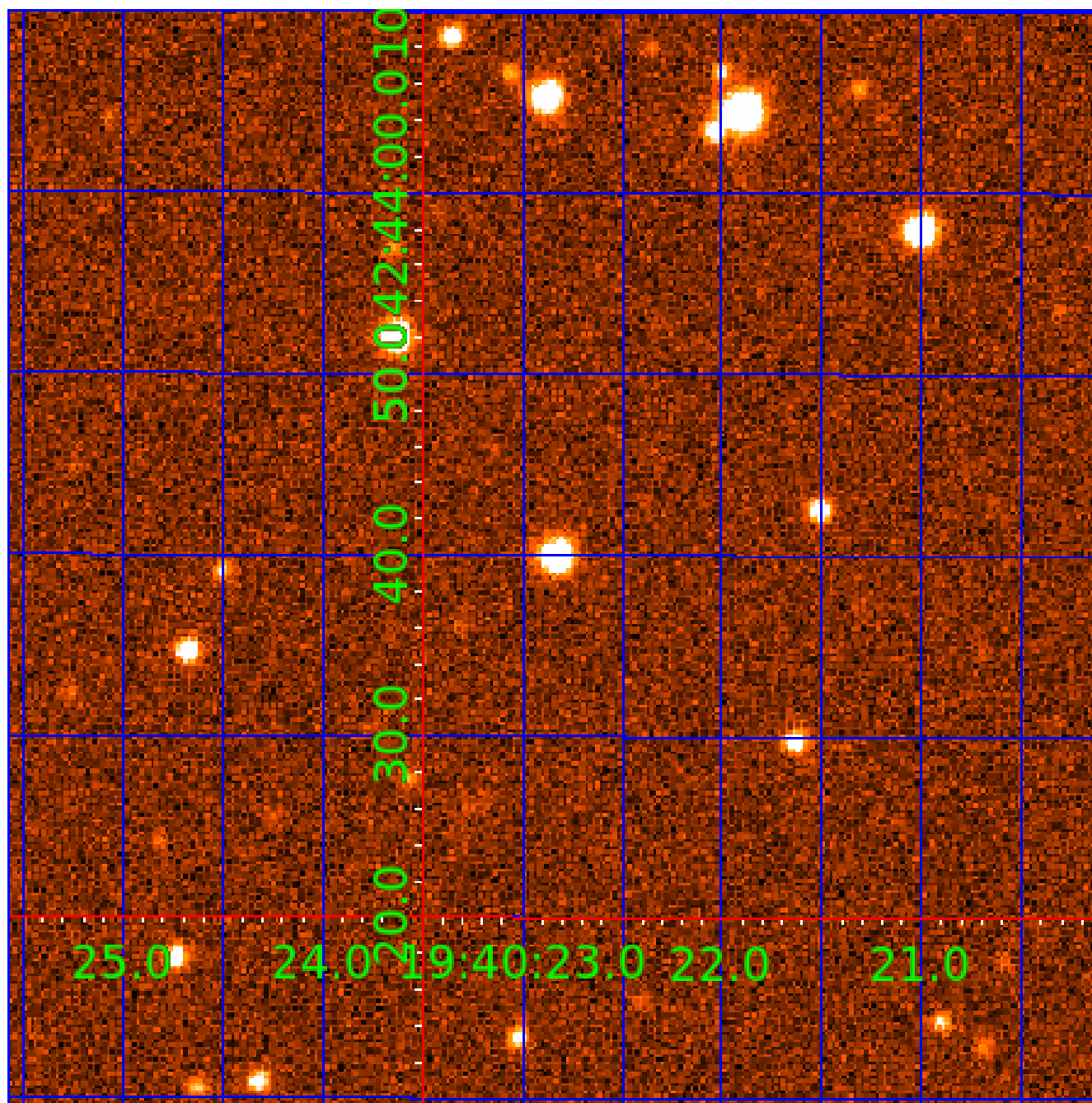


fluxWeightedCentroids, Planet 1 of 4



UKIRT Image

Declination





# KIC 007211635

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
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007211635-04	OBS	No	7.479120	136.488587	946.5	0.880	14.1	18.7	1.11	6446	3.48	312.68

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007211635-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_RESOLVED_OFFSET
007211635-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_RESOLVED_OFFSET
007211635-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—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.

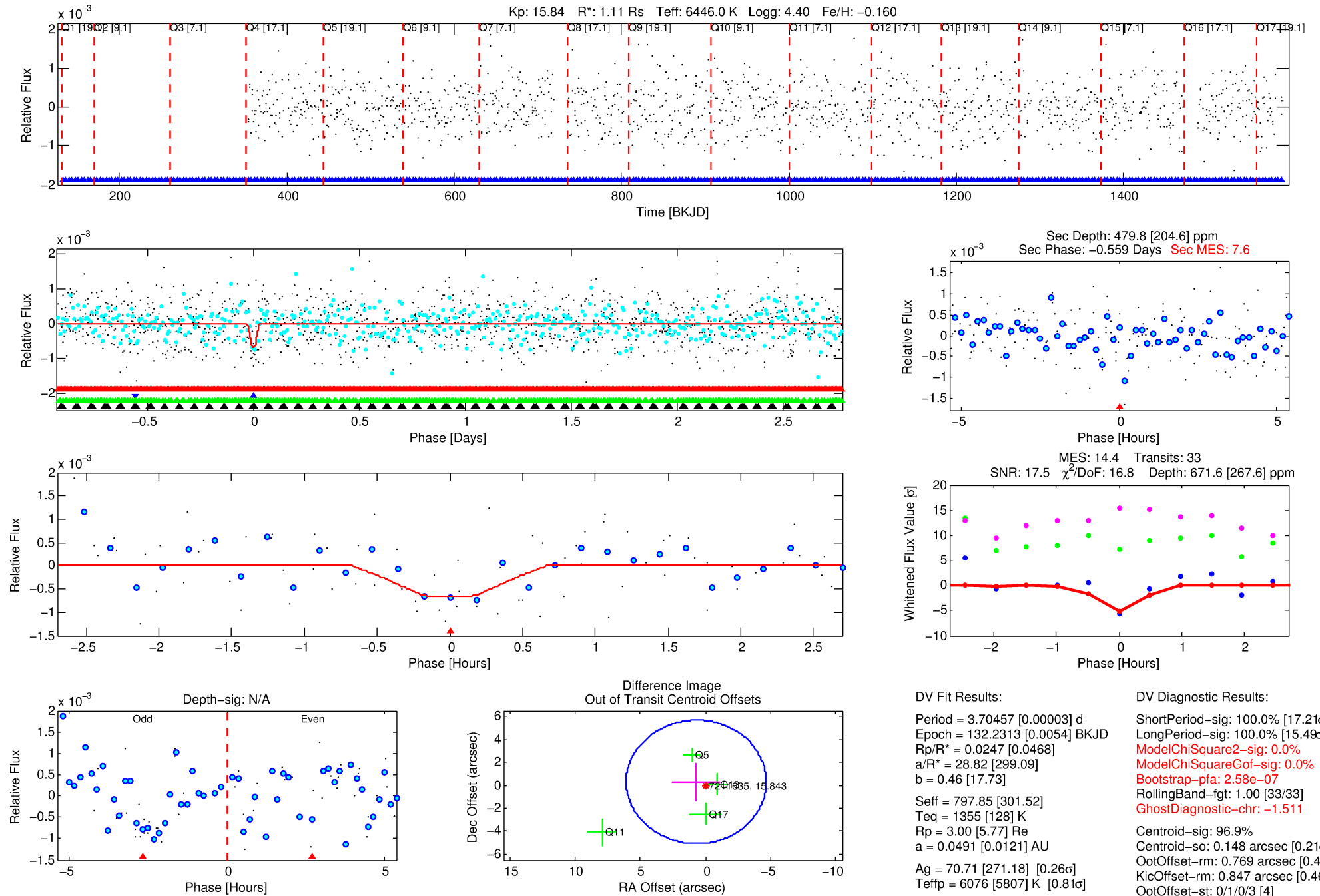
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 007211635-02

No Significant Match Found

# DV One-Page Summary

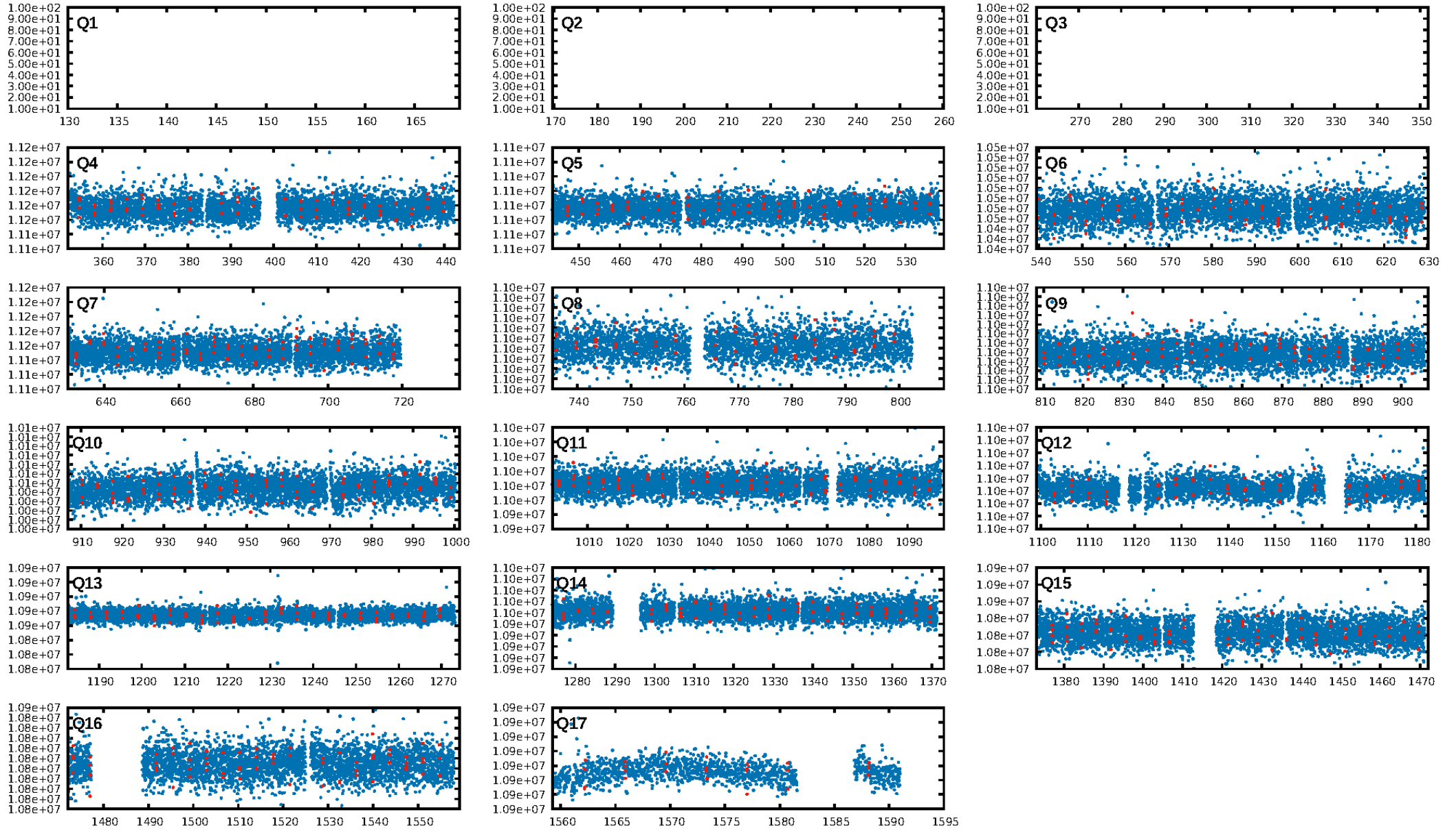
KIC: 7211635 Candidate: 2 of 4 Period: 3.705 d



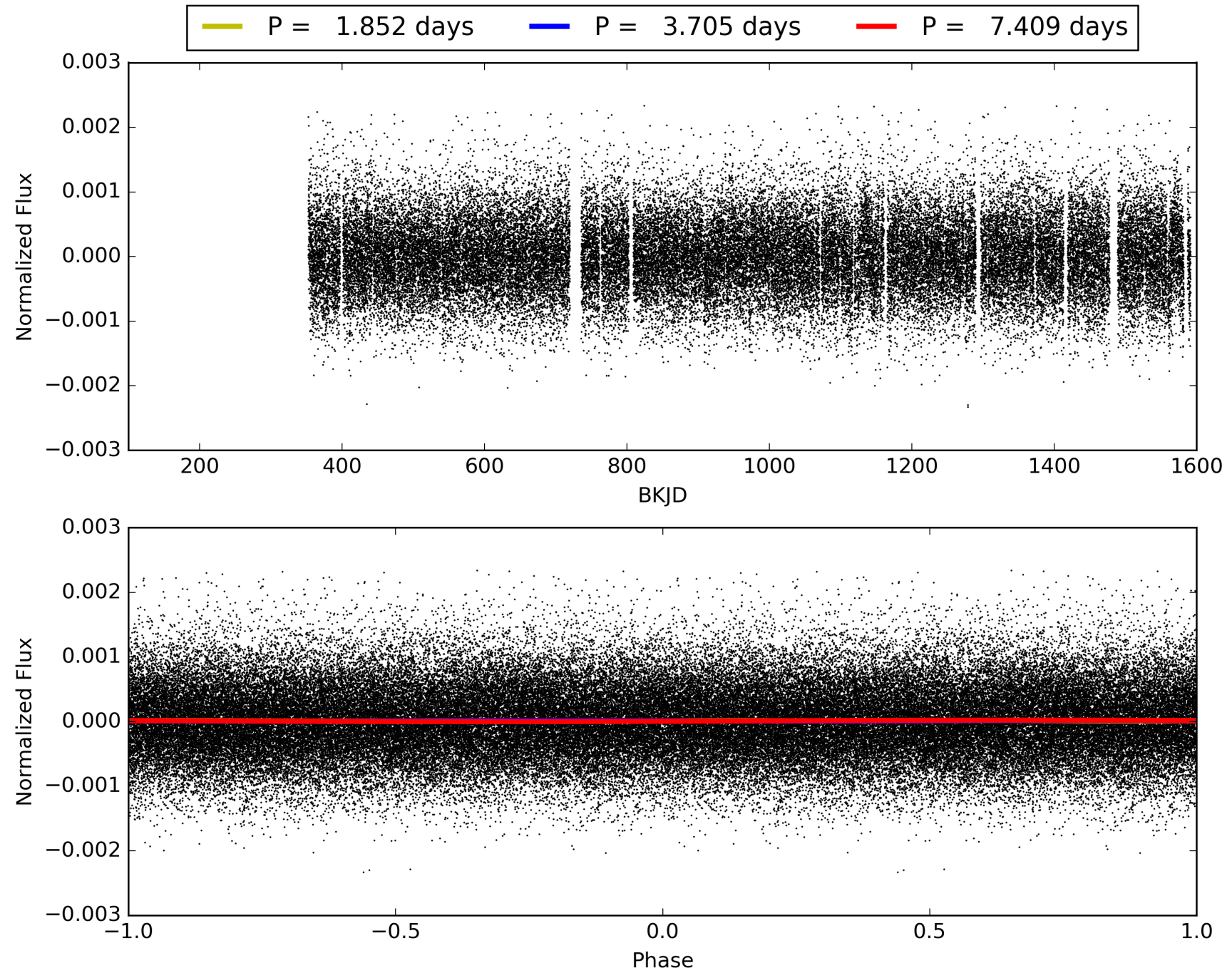
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 09:20:55 Z

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

# TCE 007211635-02, PDC Light Curves

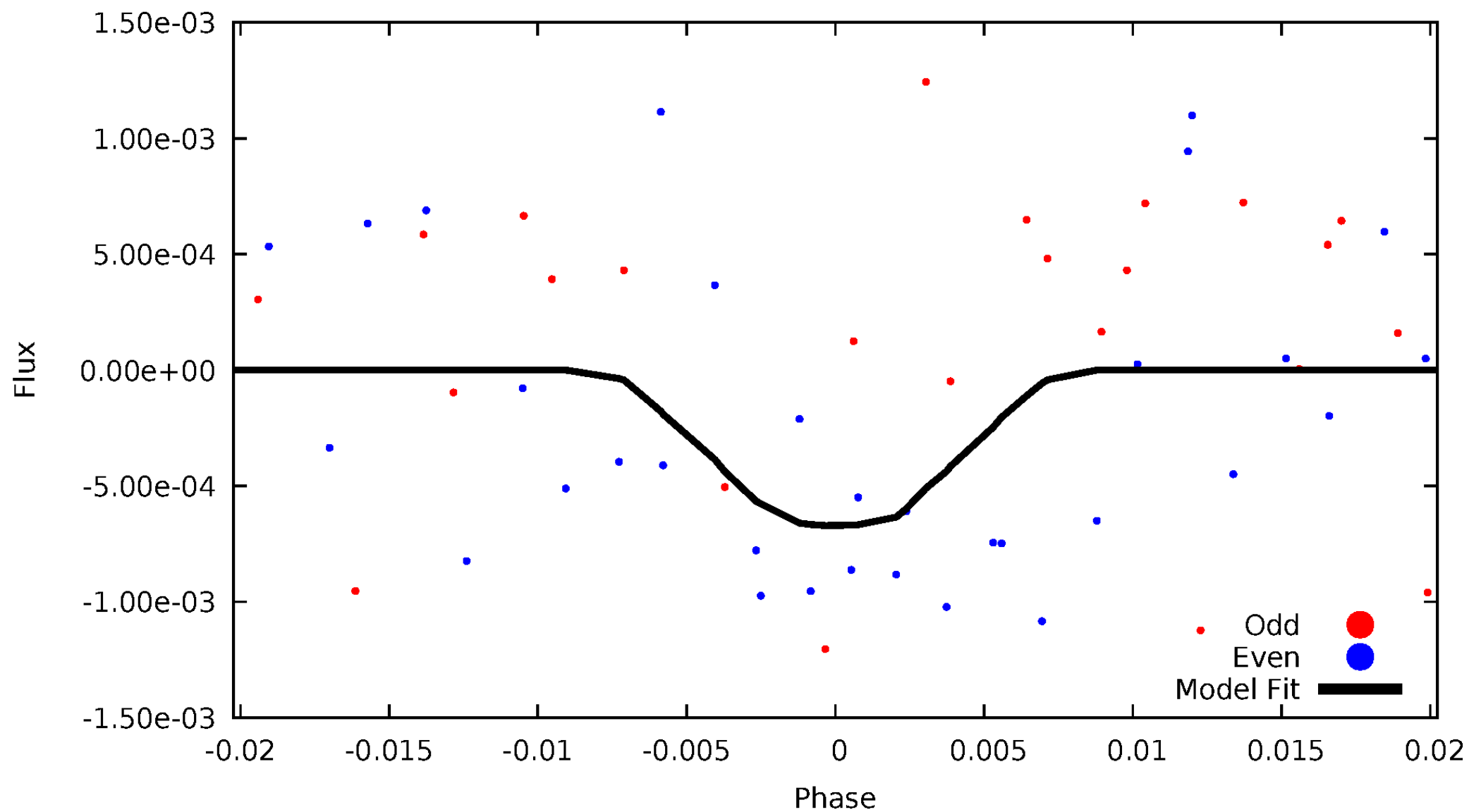


TCE 007211635-02



# DV Odd/Even

TCE 007211635-02





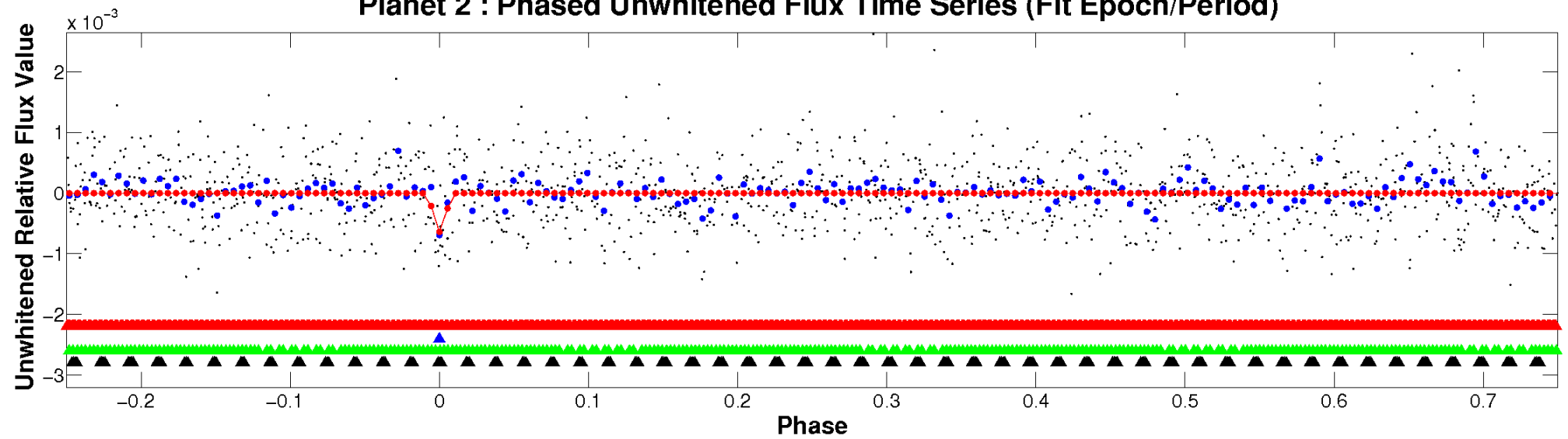


ALT Odd/Even

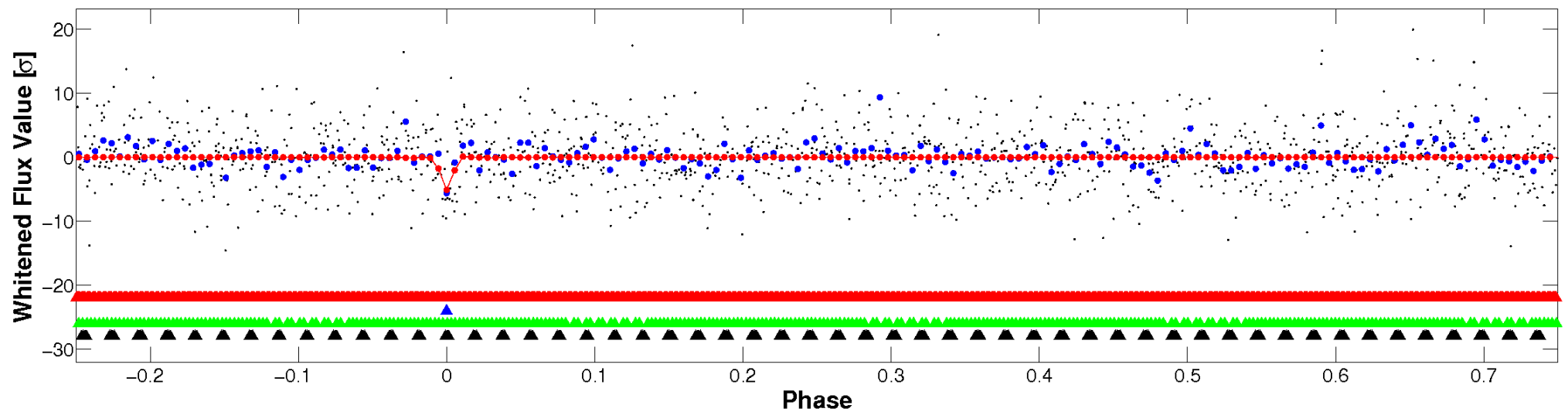
This plot does not exist for this TCE.

# Non-Whitened Vs. Whitened Light Curve

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

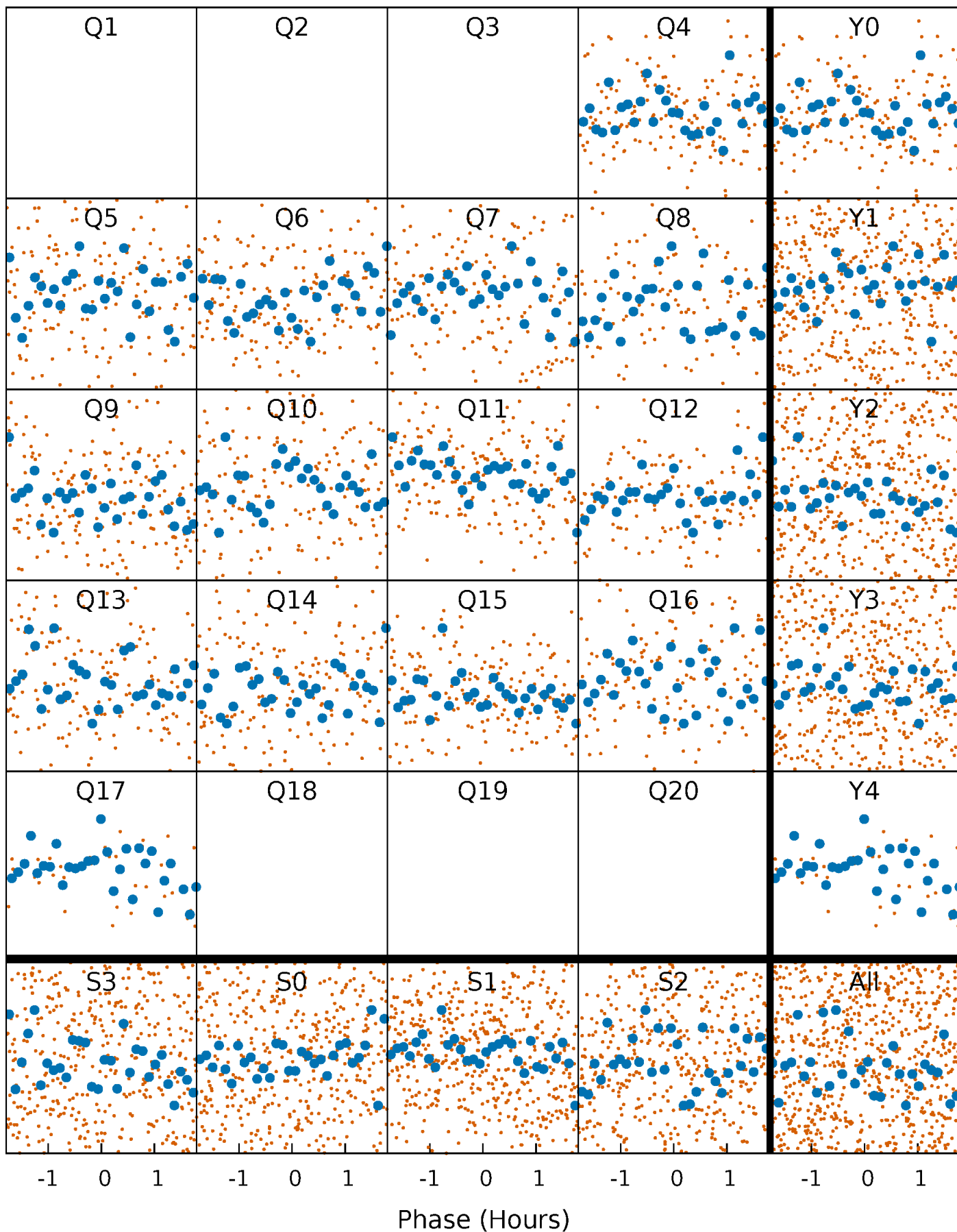


## Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



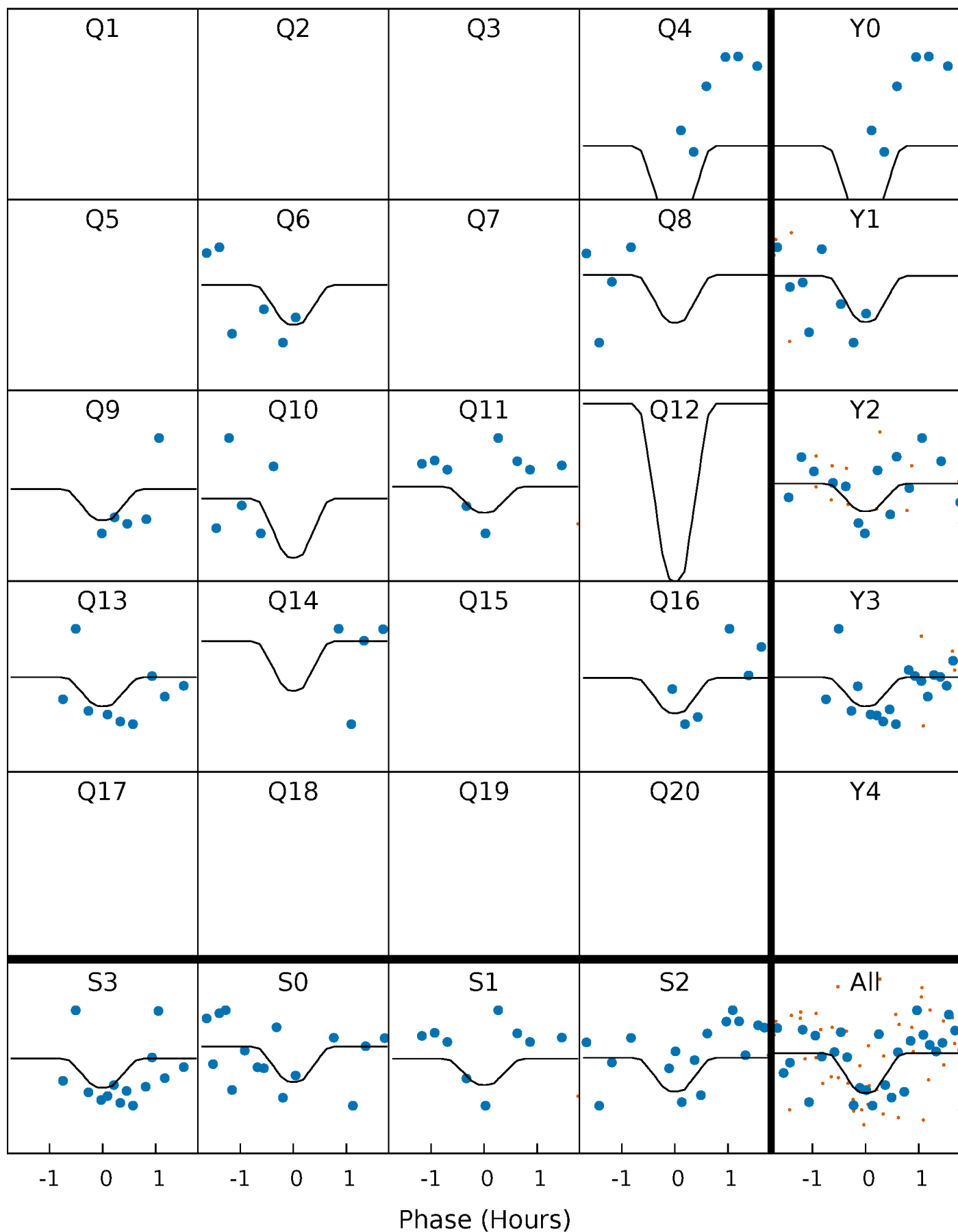
# PDC Quarter-Phased Transit Curves

TCE 007211635-02 P= 3.704573 Days  $T_0=132.231331$  (BKJD)



# DV Quarter-Phased Transit Curves

TCE 007211635-02 P= 3.704573 Days  $T_0=132.231331$  (BKJD)

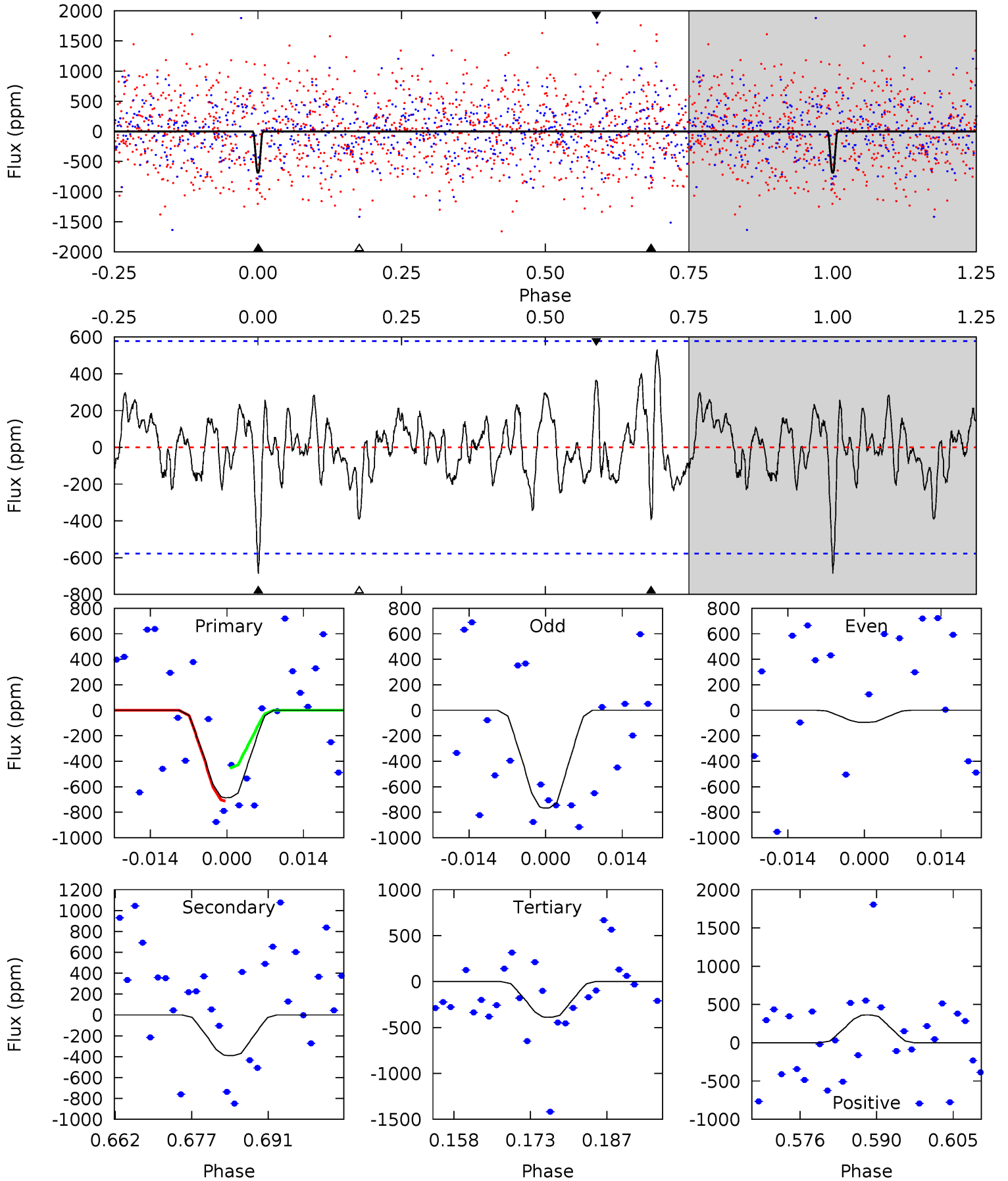


This plot does not exist for this TCE.

# DV Model-Shift Uniqueness Test

007211635-02, P = 3.704573 Days, E = 132.231331 Days

Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.89	3.34	3.34	3.12	4.96	2.45	1.19	2.55	2.77	0.00	0.22	2.88	0	0.44	1.14





## Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

### Stellar Parameters For KIC 007211635

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6446^{+180}_{-248}$	$4.404^{+0.065}_{-0.182}$	$-0.160^{+0.250}_{-0.300}$	$1.115^{+0.339}_{-0.145}$	$1.150^{+0.164}_{-0.164}$	$1.166^{+0.401}_{-0.586}$
	+3%/-4%	+1%/-4%	+156%/-188%	+30%/-13%	+14%/-14%	+34%/-50%
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 007211635-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-390 \pm 117$	$5.36^{+5.33}_{-3.35}$	$1917^{+125}_{-96}$	$4504^{+2533}_{-1035}$	$17^{+93}_{-13}$
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  $A_{obs} \gg 1.0$

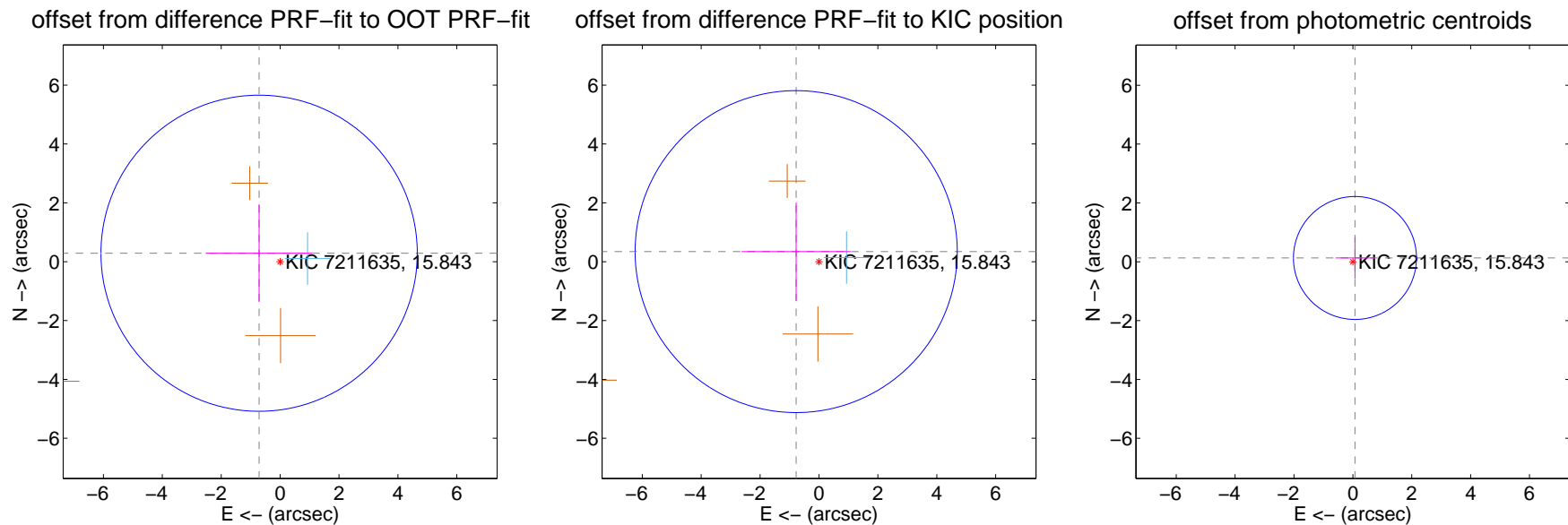
## DV Centroid Data

Supplemental centroid analysis for 007211635-02. Kepler magnitude: 15.84. Transit SNR 17.46

There are 1 quarters with good PRF difference image offsets

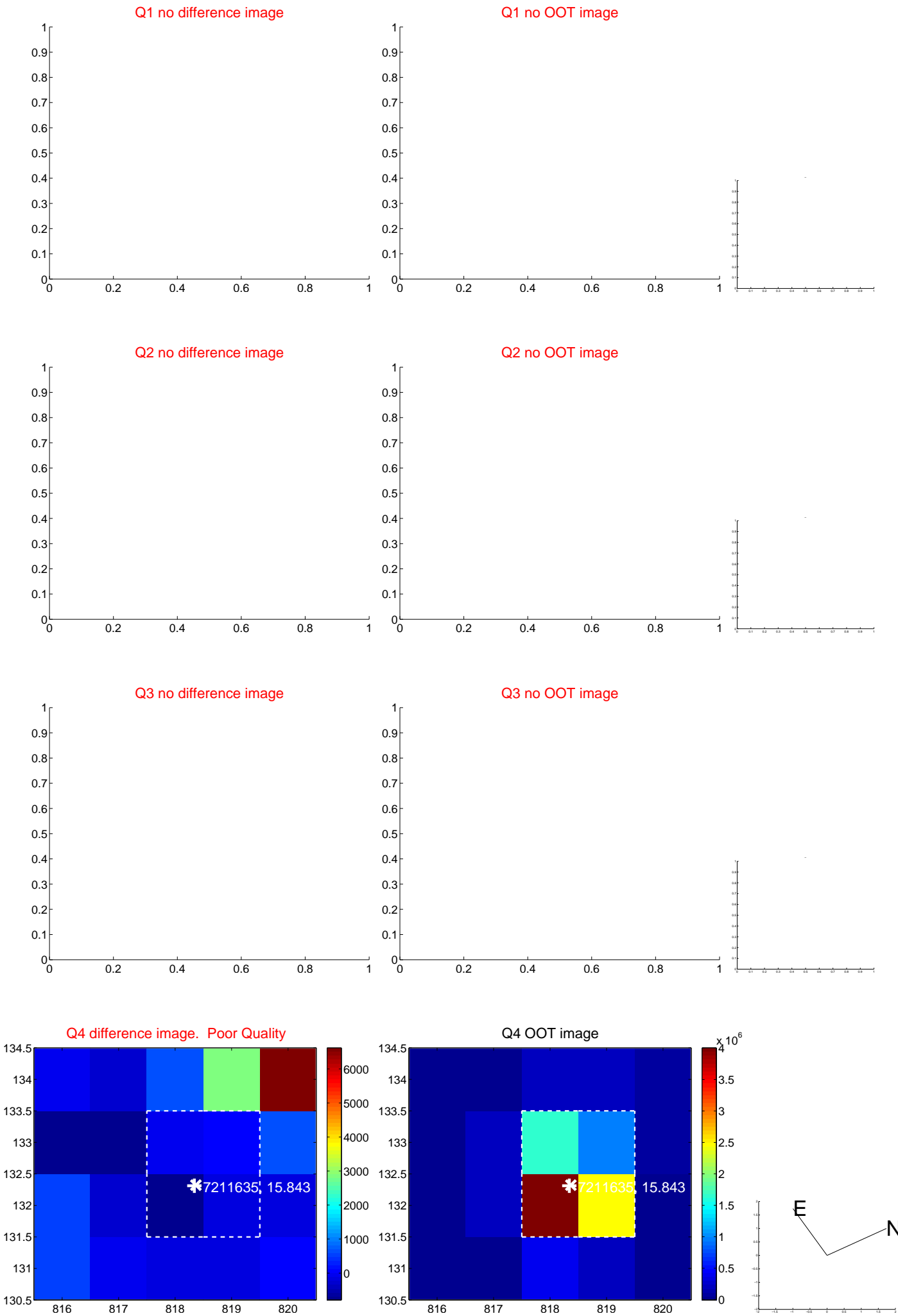
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.769 \pm 1.790$	0.43	$0.713 \pm 1.811$	$0.287 \pm 1.661$
PRF-fit source offset from KIC position	$0.847 \pm 1.823$	0.46	$0.775 \pm 1.852$	$0.343 \pm 1.669$
photometric centroid source offset	$0.15 \pm 0.70$	0.21	$-0.07 \pm 0.66$	$0.13 \pm 0.71$

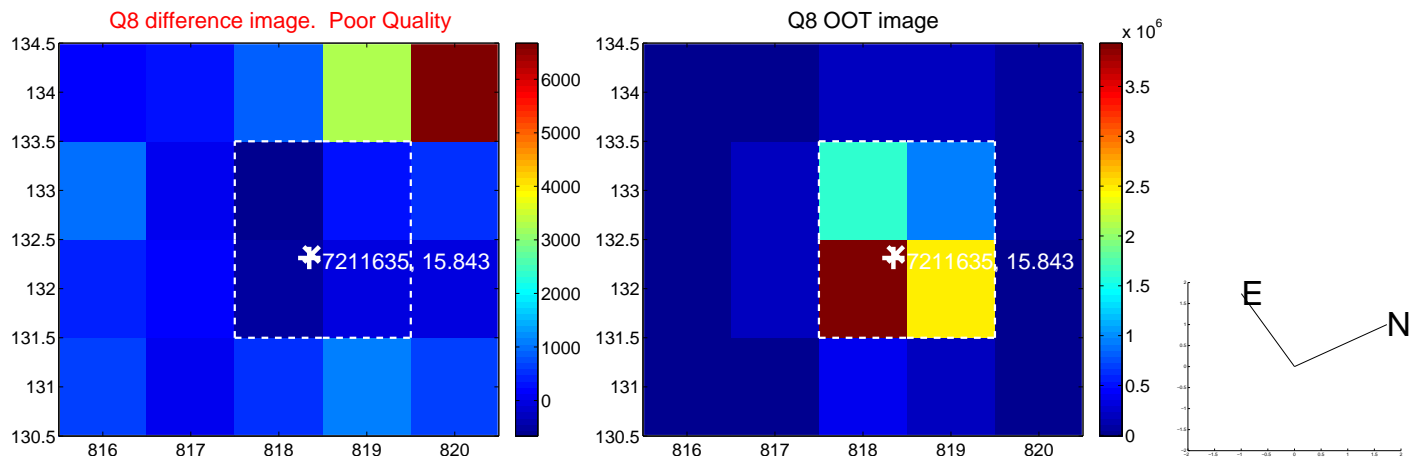
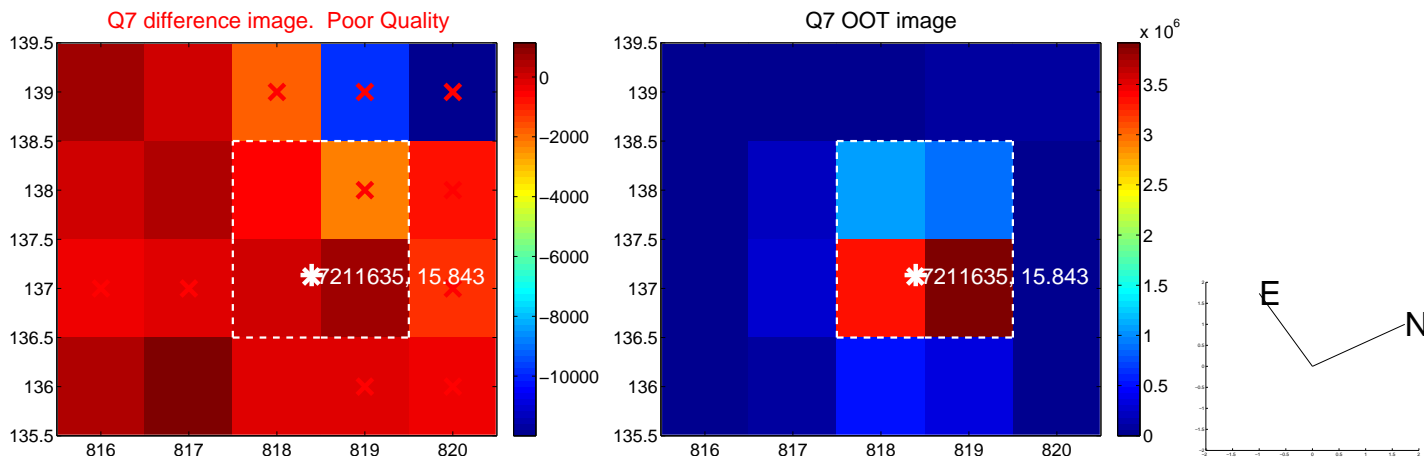
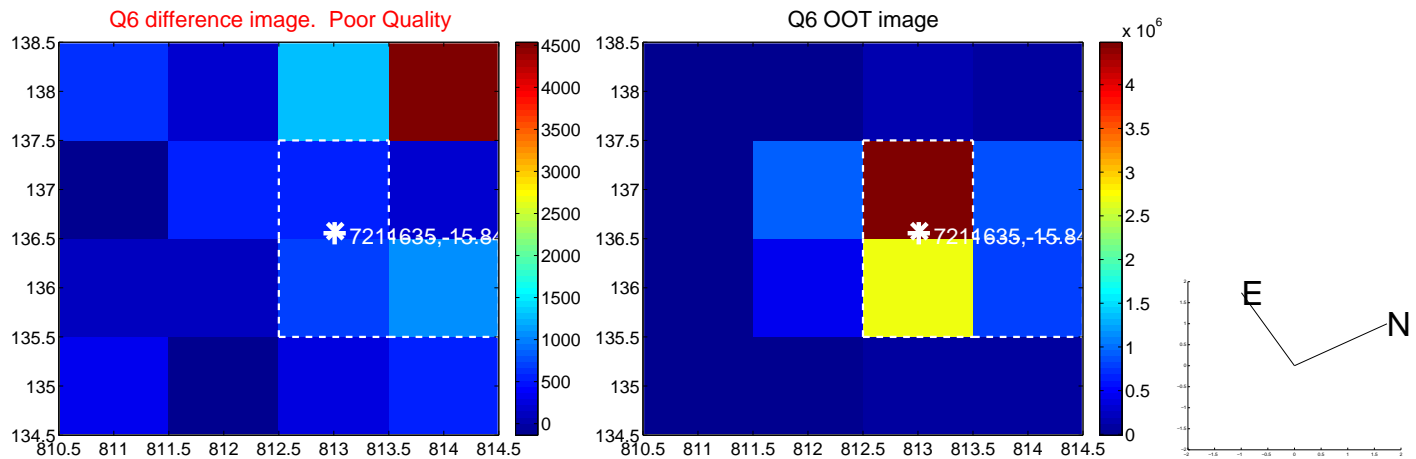
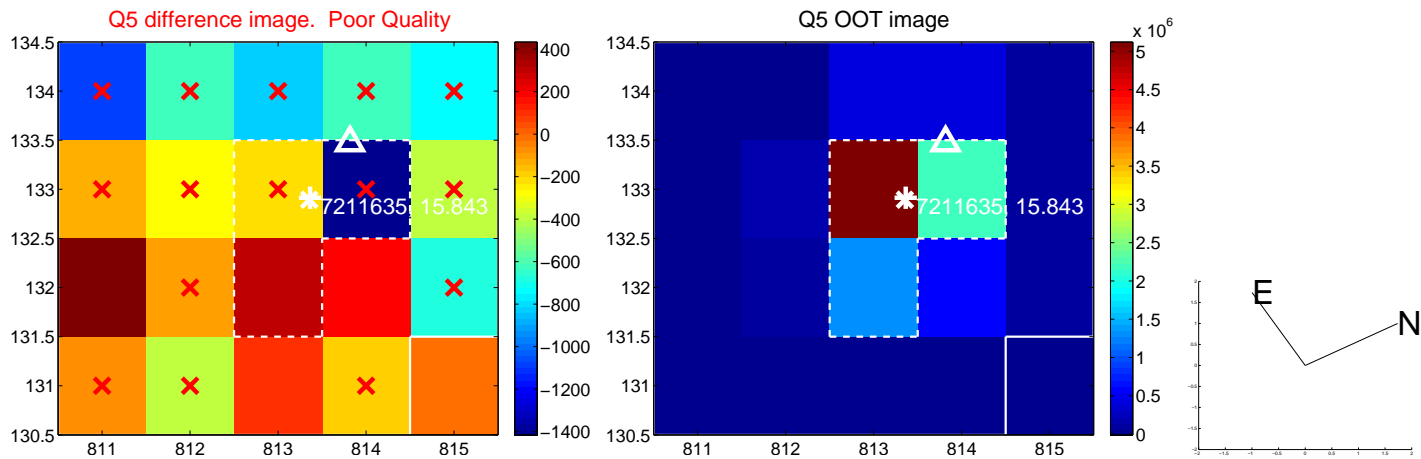


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

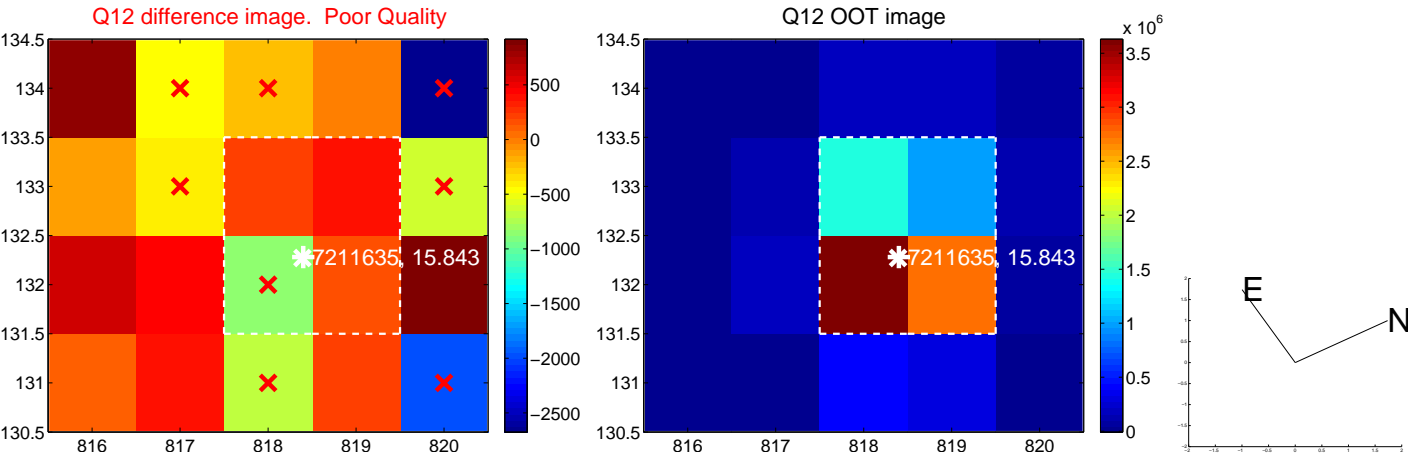
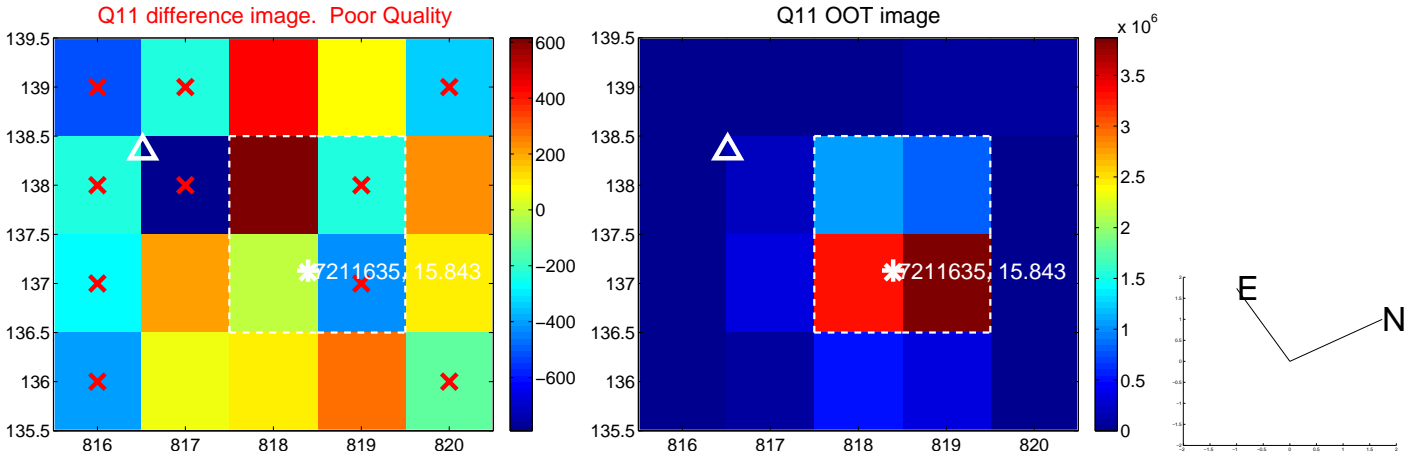
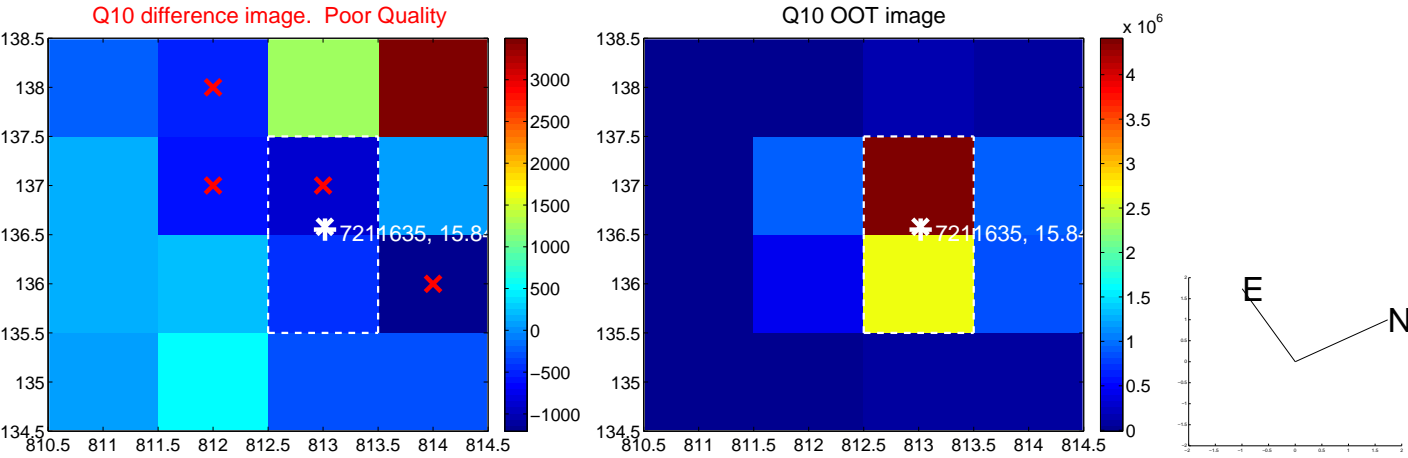
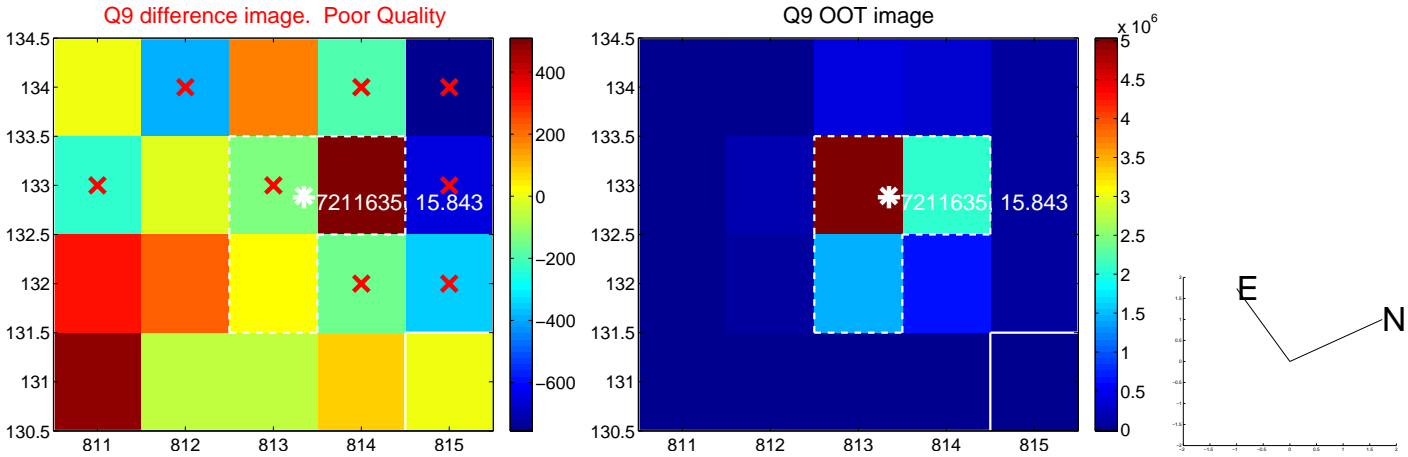


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

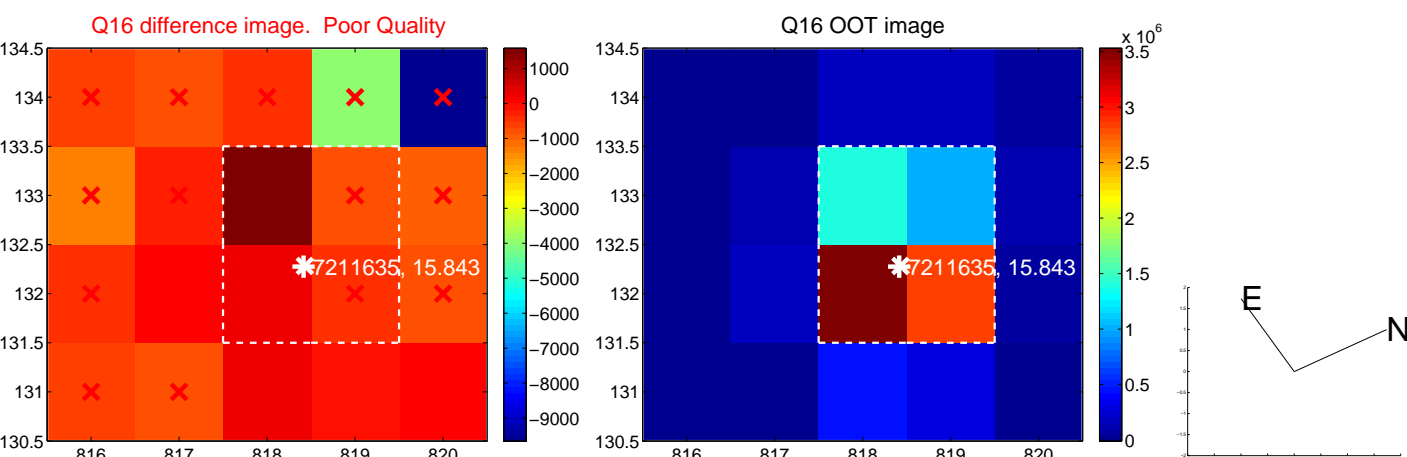
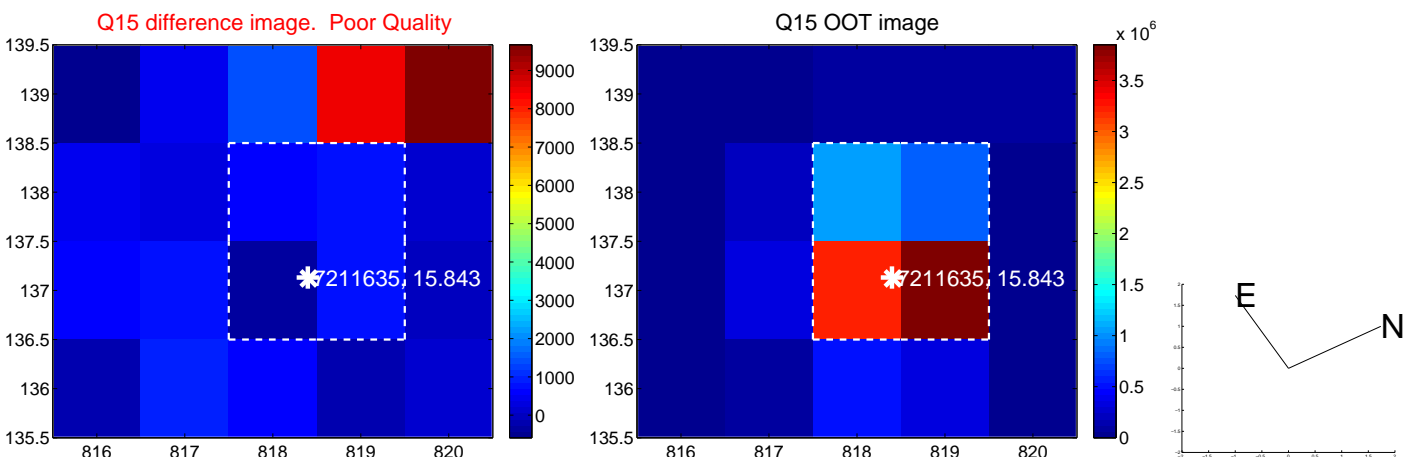
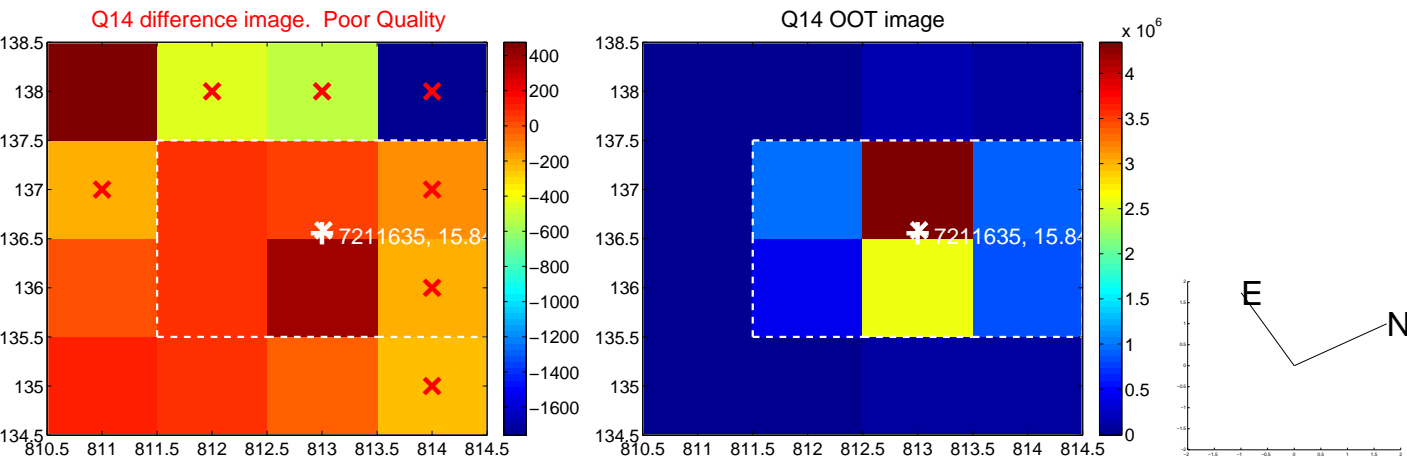
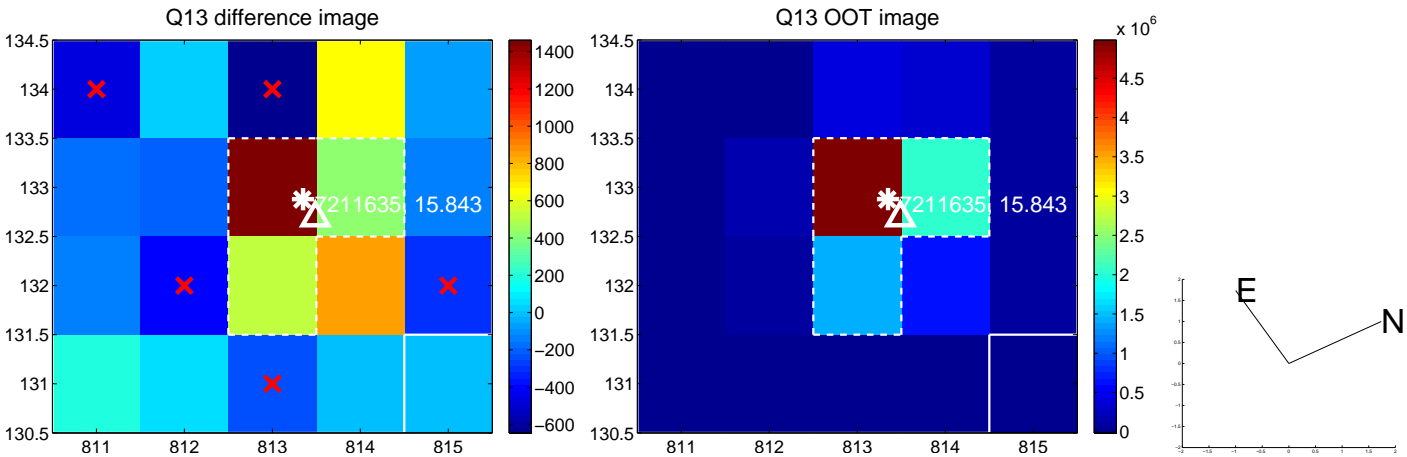




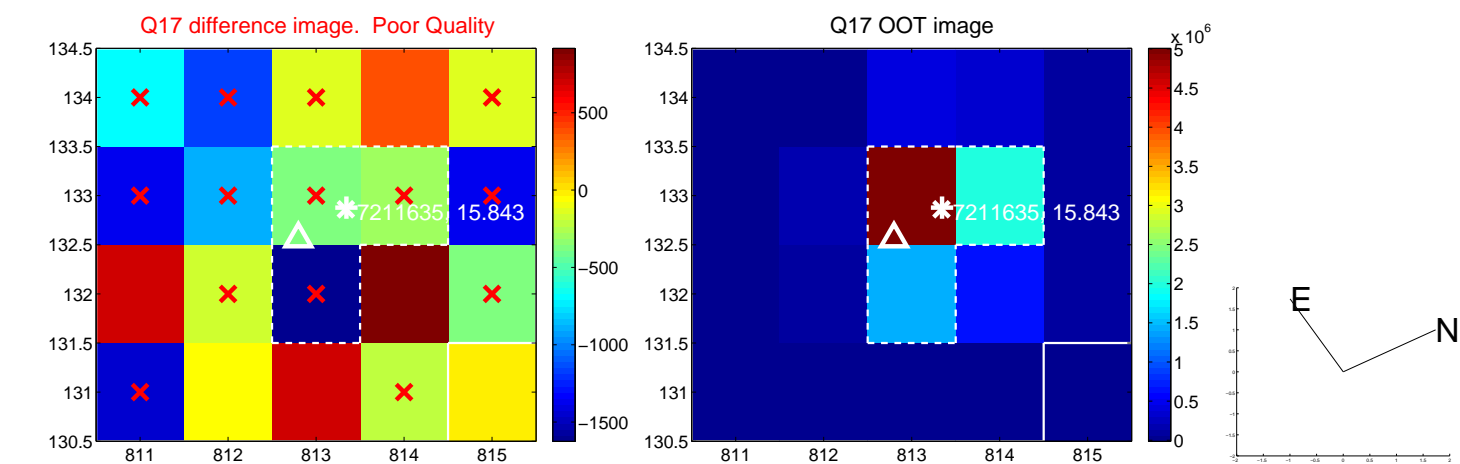
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



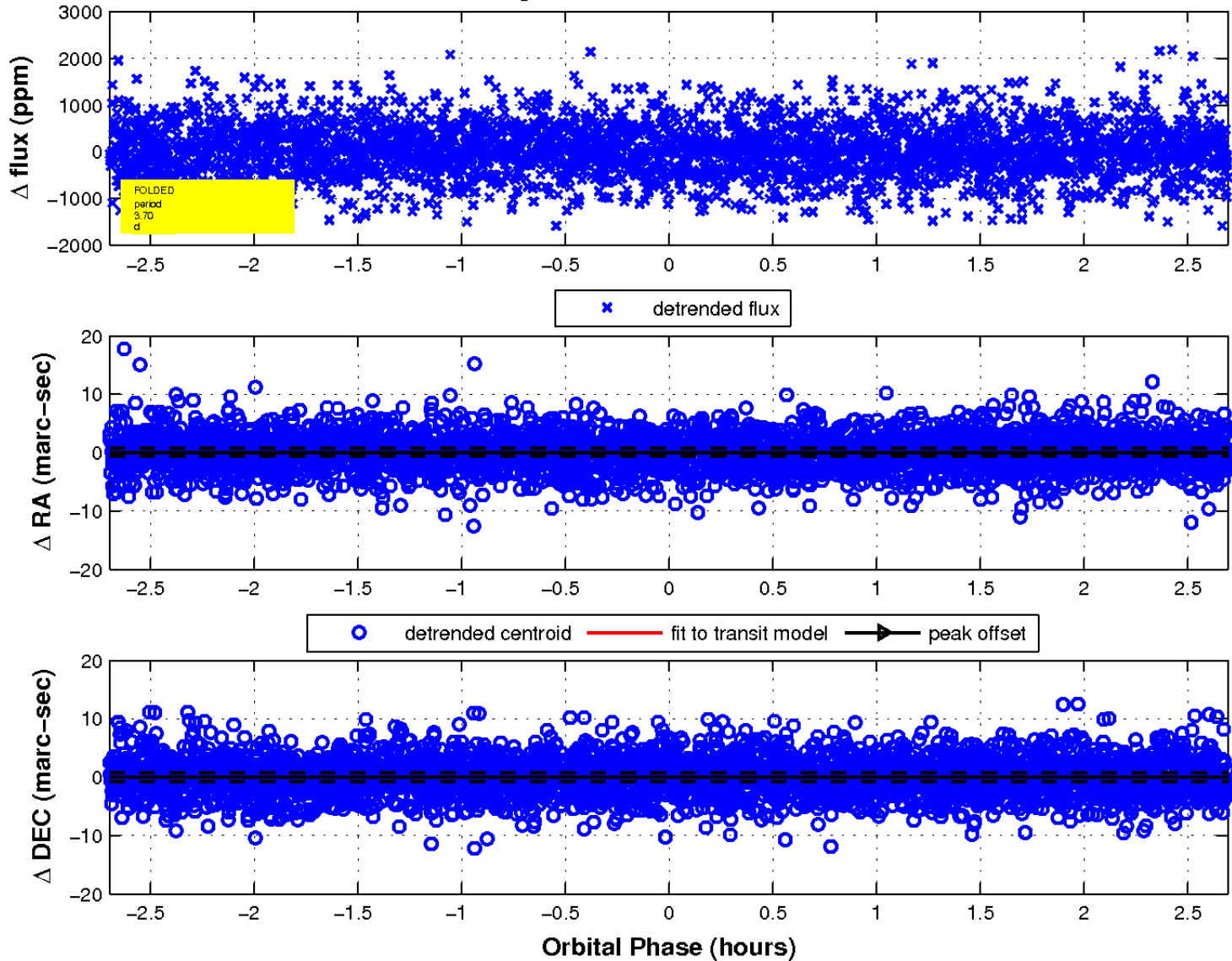
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

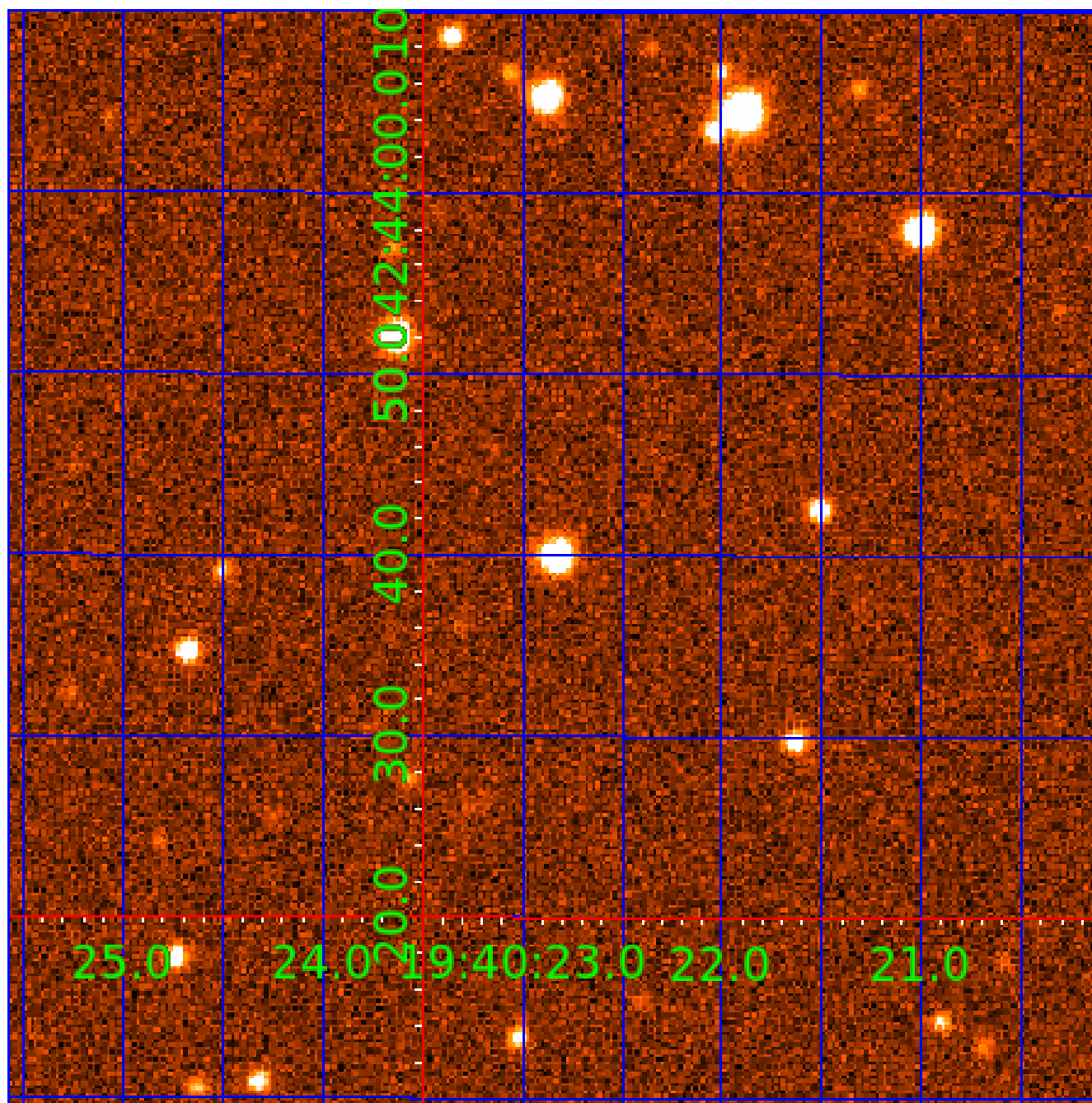


fluxWeightedCentroids, Planet 2 of 4



UKIRT Image

Declination



# KIC 007211635

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007211635-01	OBS	No	0.568920	131.609758	26.3	4.278	8.6	5.3	1.11	6446	0.58	9701.46
007211635-02	OBS	No	3.704573	132.231331	671.6	0.899	14.4	17.5	1.11	6446	3.00	797.85
007211635-03	OBS	No	4.451632	134.964343	563.7	0.729	13.1	11.7	1.11	6446	3.16	624.52
007211635-04	OBS	No	7.479120	136.488587	946.5	0.880	14.1	18.7	1.11	6446	3.48	312.68

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007211635-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET
007211635-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_RESOLVED_OFFSET
007211635-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_RESOLVED_OFFSET
007211635-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—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](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

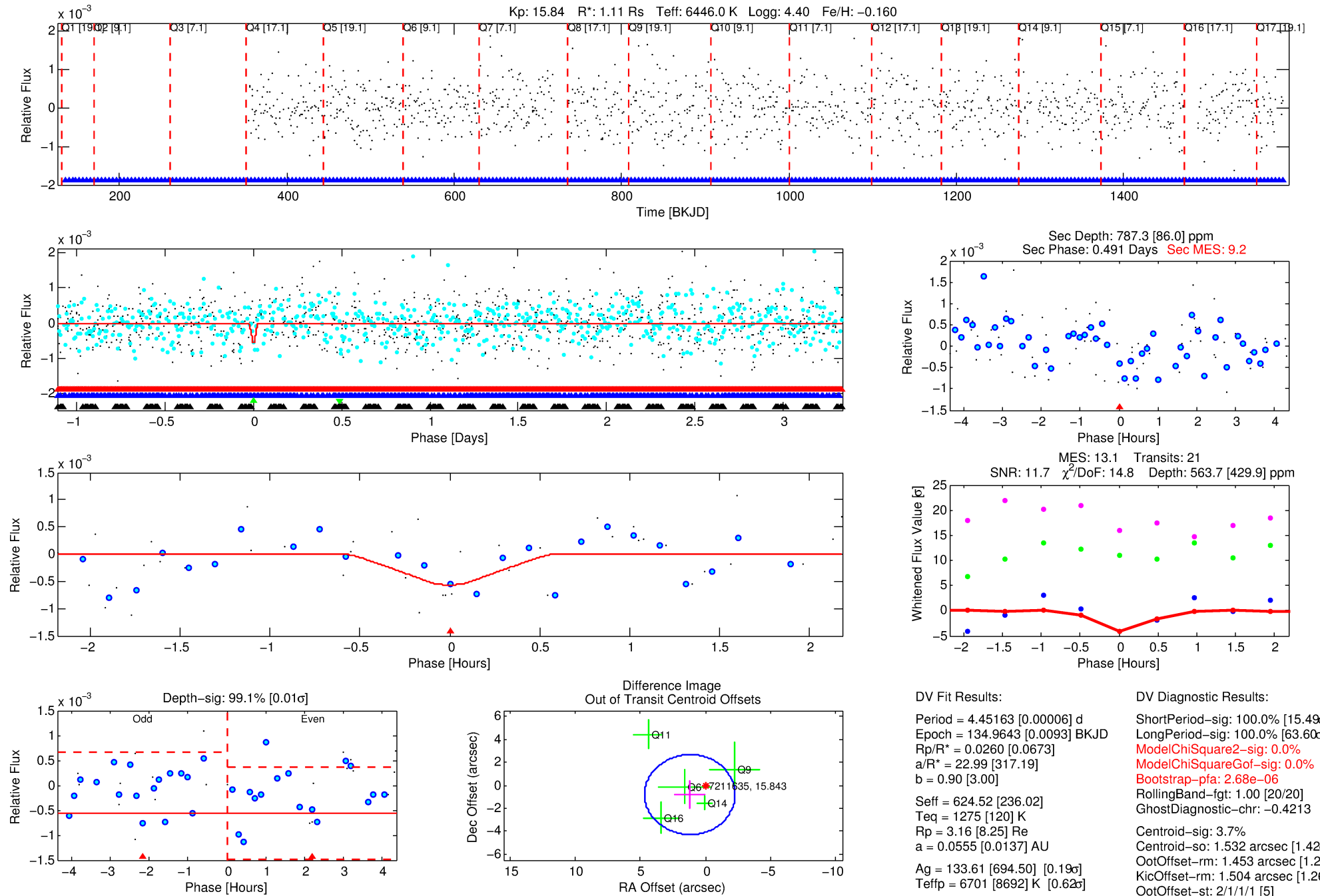
Ephemeris Match Information For 007211635-03

No Significant Match Found



# DV One-Page Summary

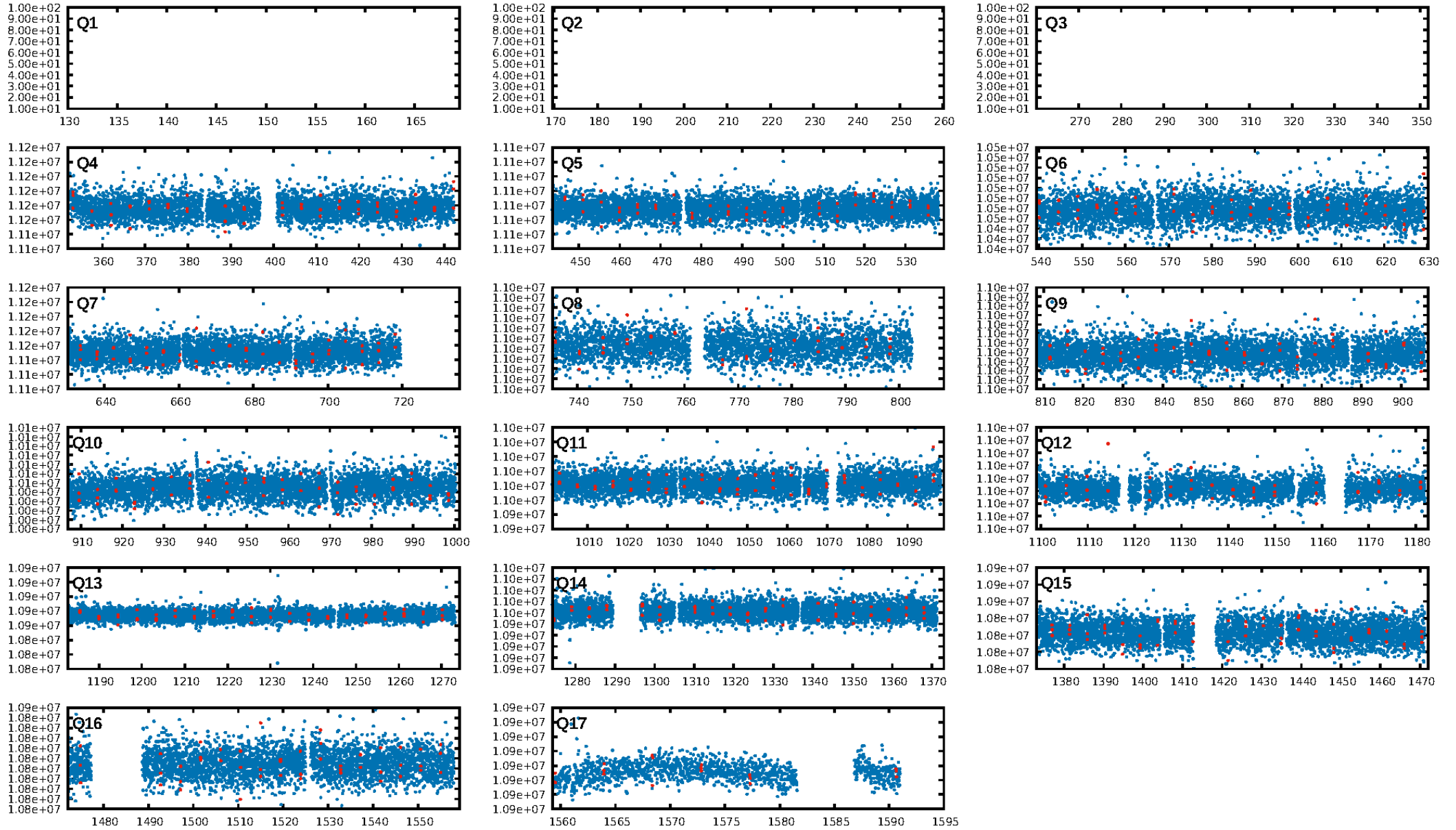
KIC: 7211635 Candidate: 3 of 4 Period: 4.452 d



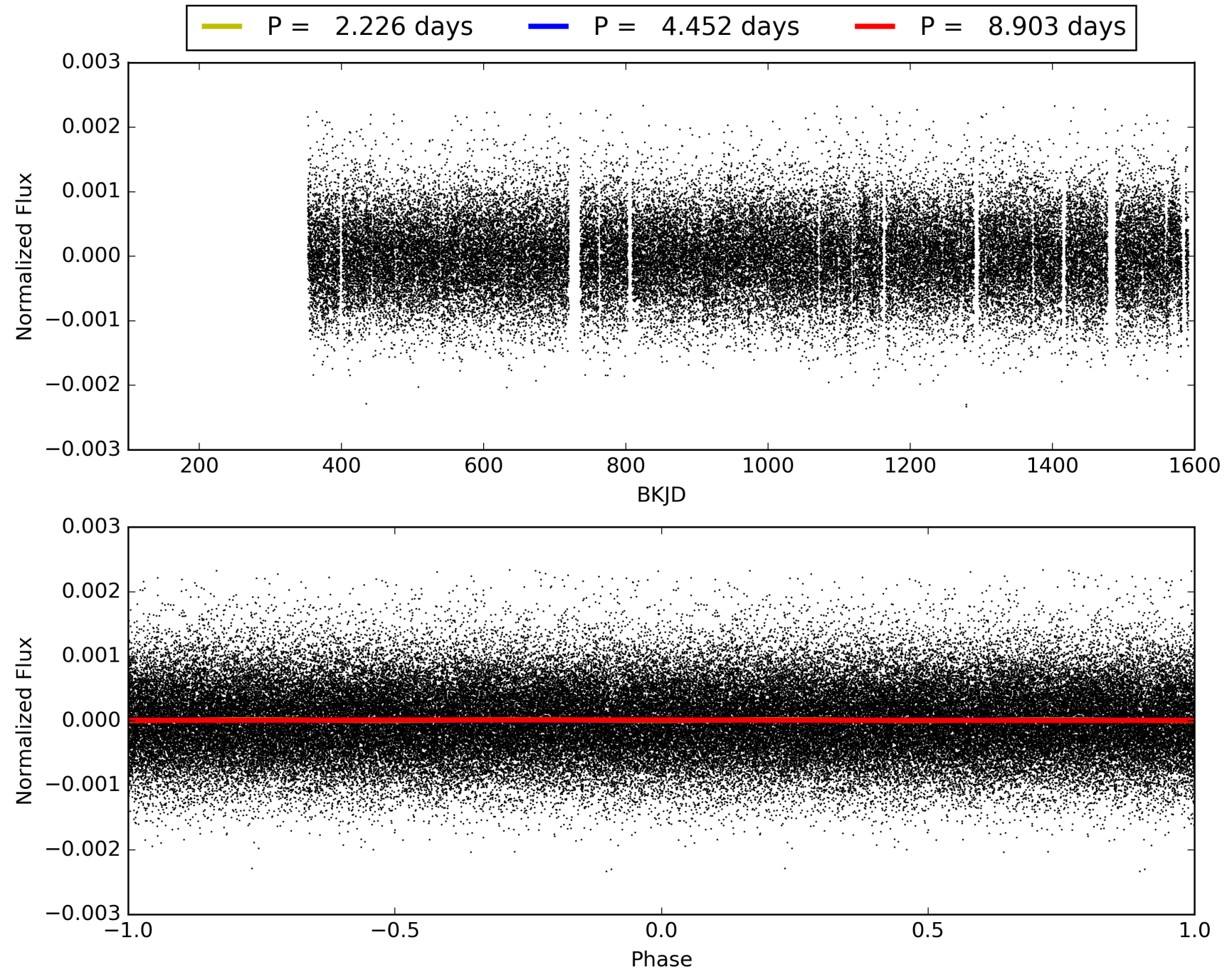
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 09:20:58 Z

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

# TCE 007211635-03, PDC Light Curves

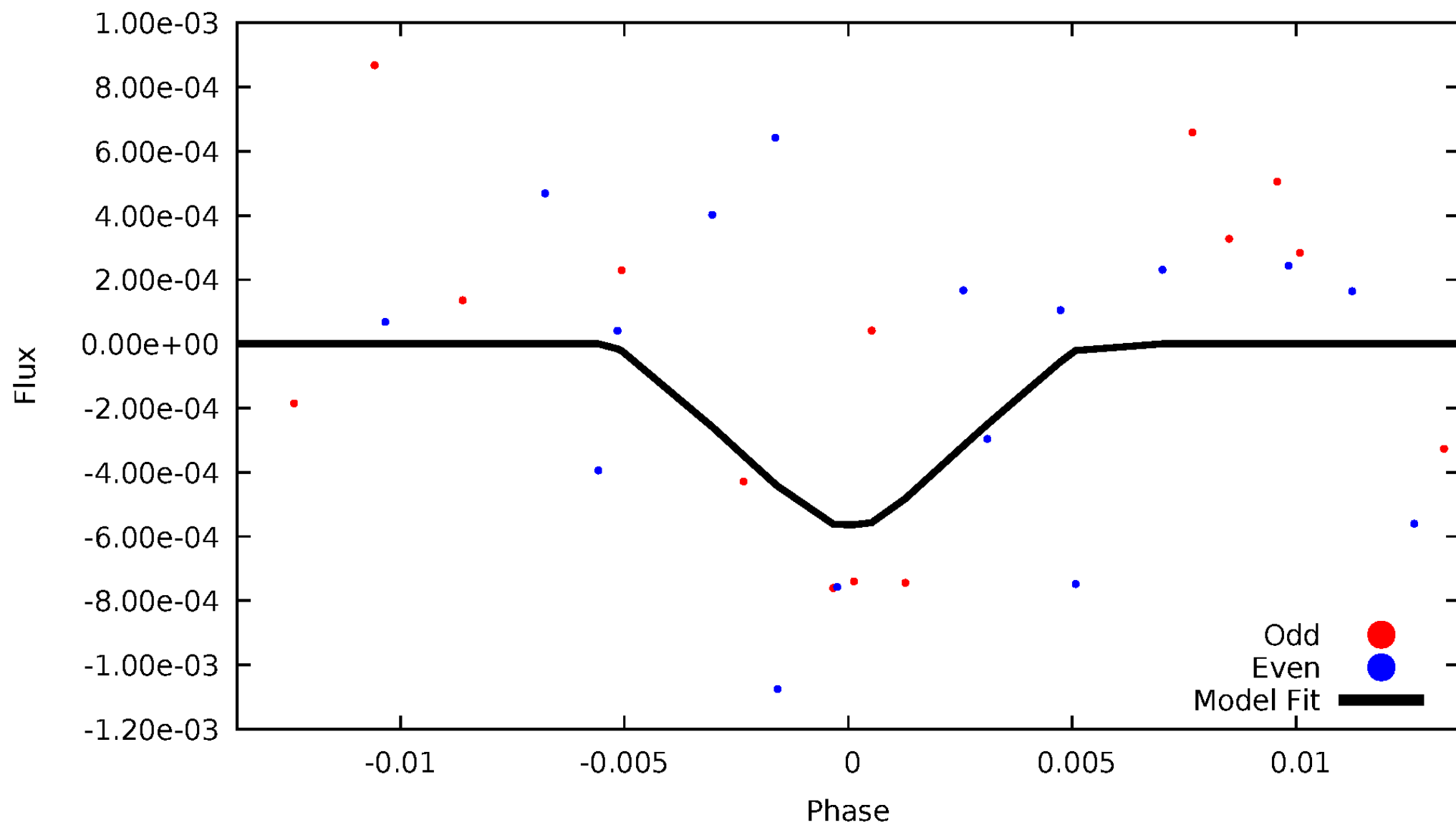


# TCE 007211635-03



# DV Odd/Even

TCE 007211635-03





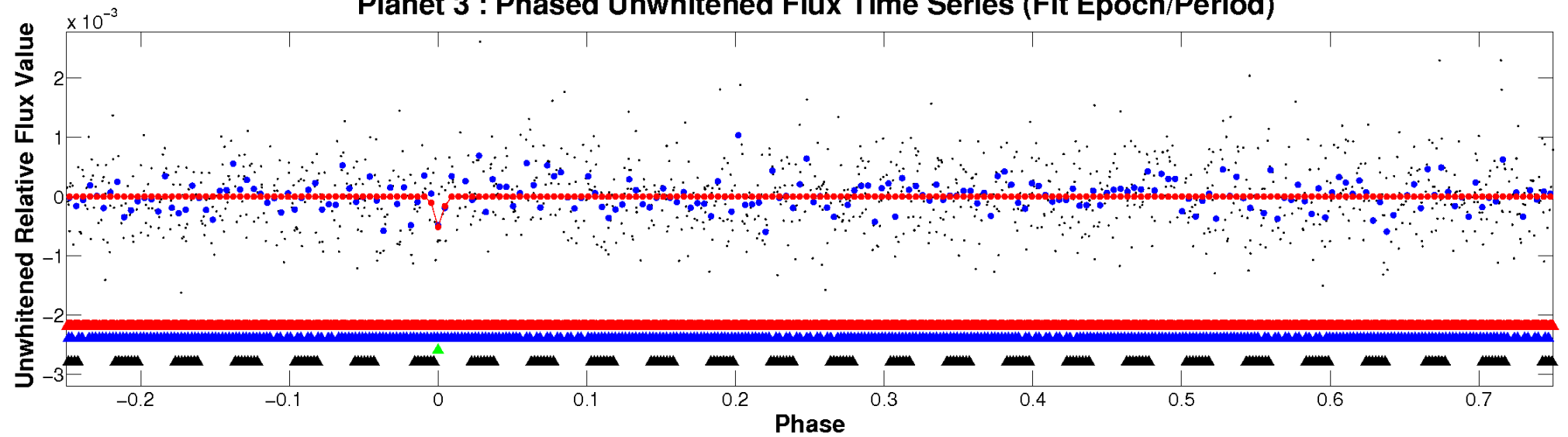
ALT Odd/Even

This plot does not exist for this TCE.

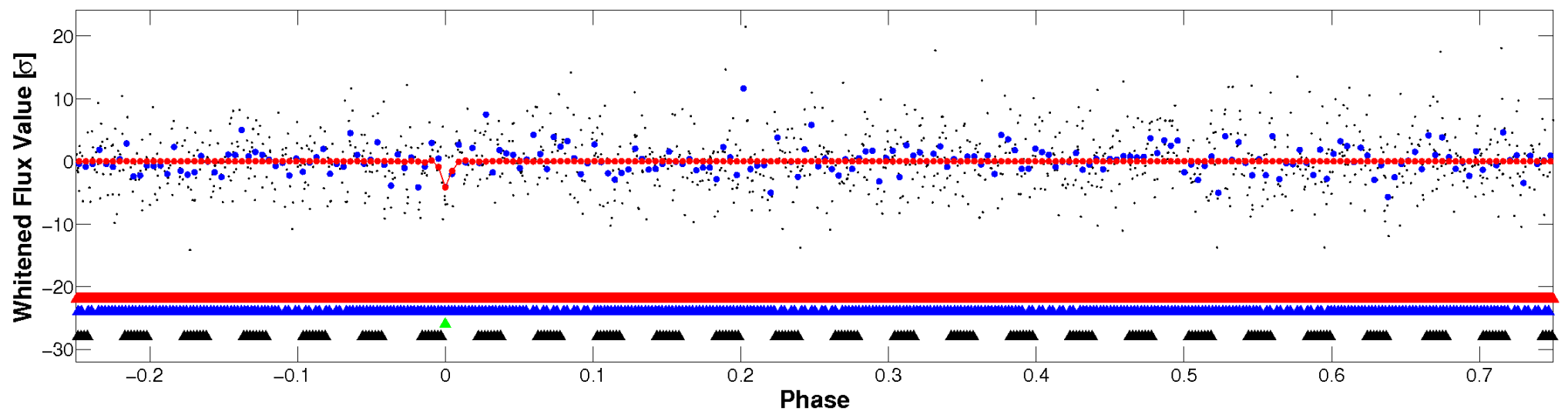


# Non-Whitened Vs. Whitened Light Curve

## Planet 3 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

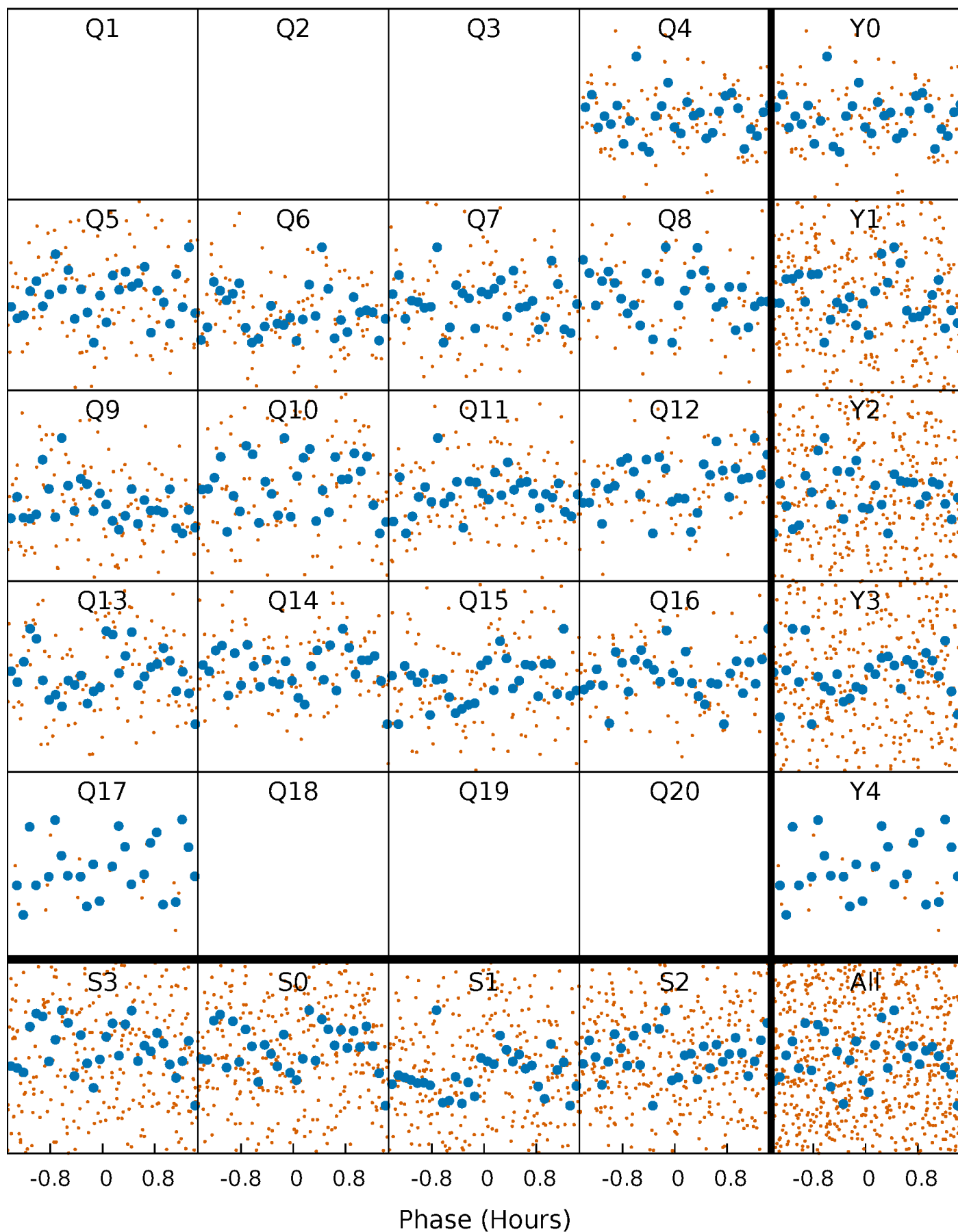


## Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



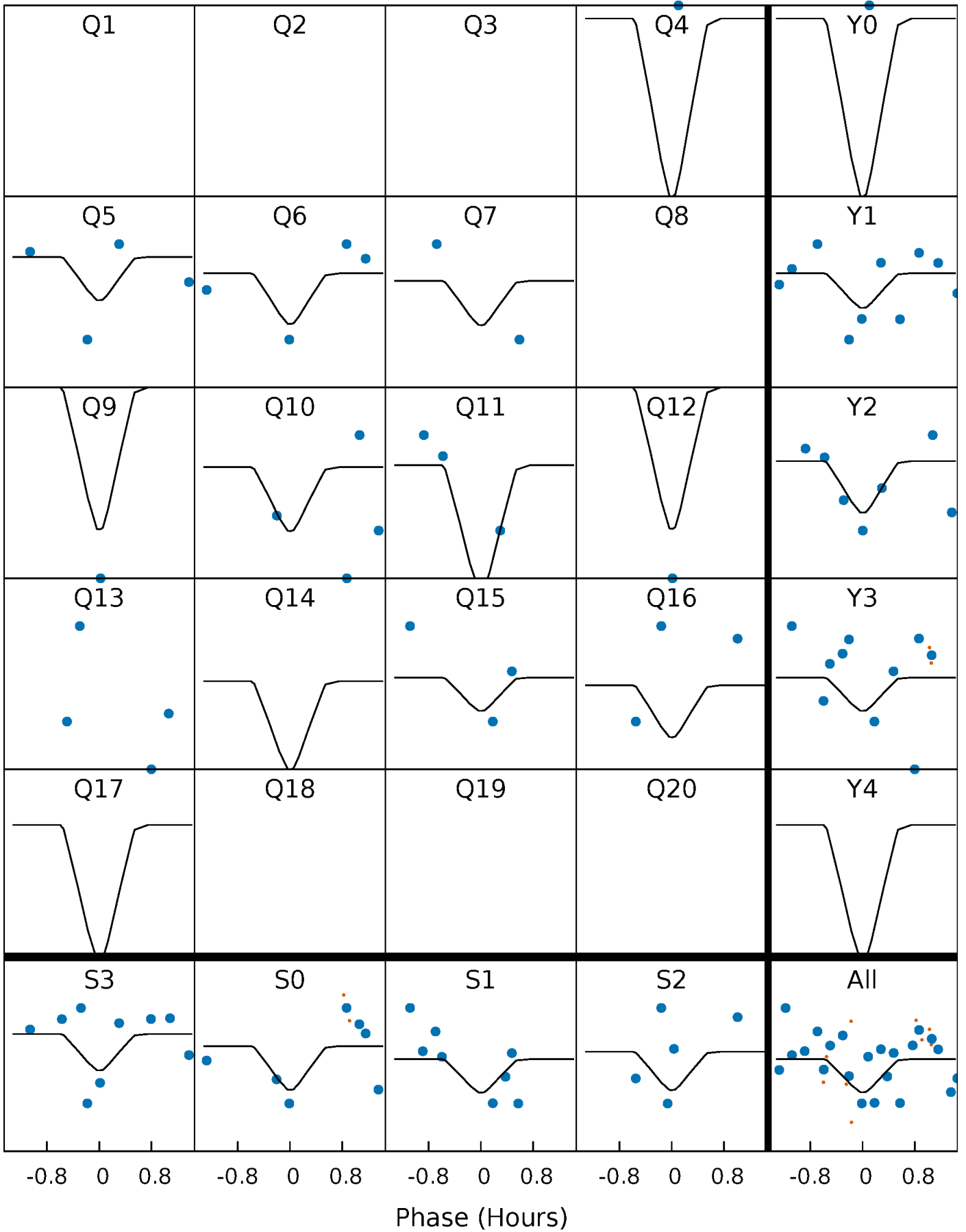
# PDC Quarter-Phased Transit Curves

TCE 007211635-03 P= 4.451632 Days  $T_0=134.964343$  (BKJD)



# DV Quarter-Phased Transit Curves

TCE 007211635-03 P= 4.451632 Days  $T_0=134.964343$  (BKJD)

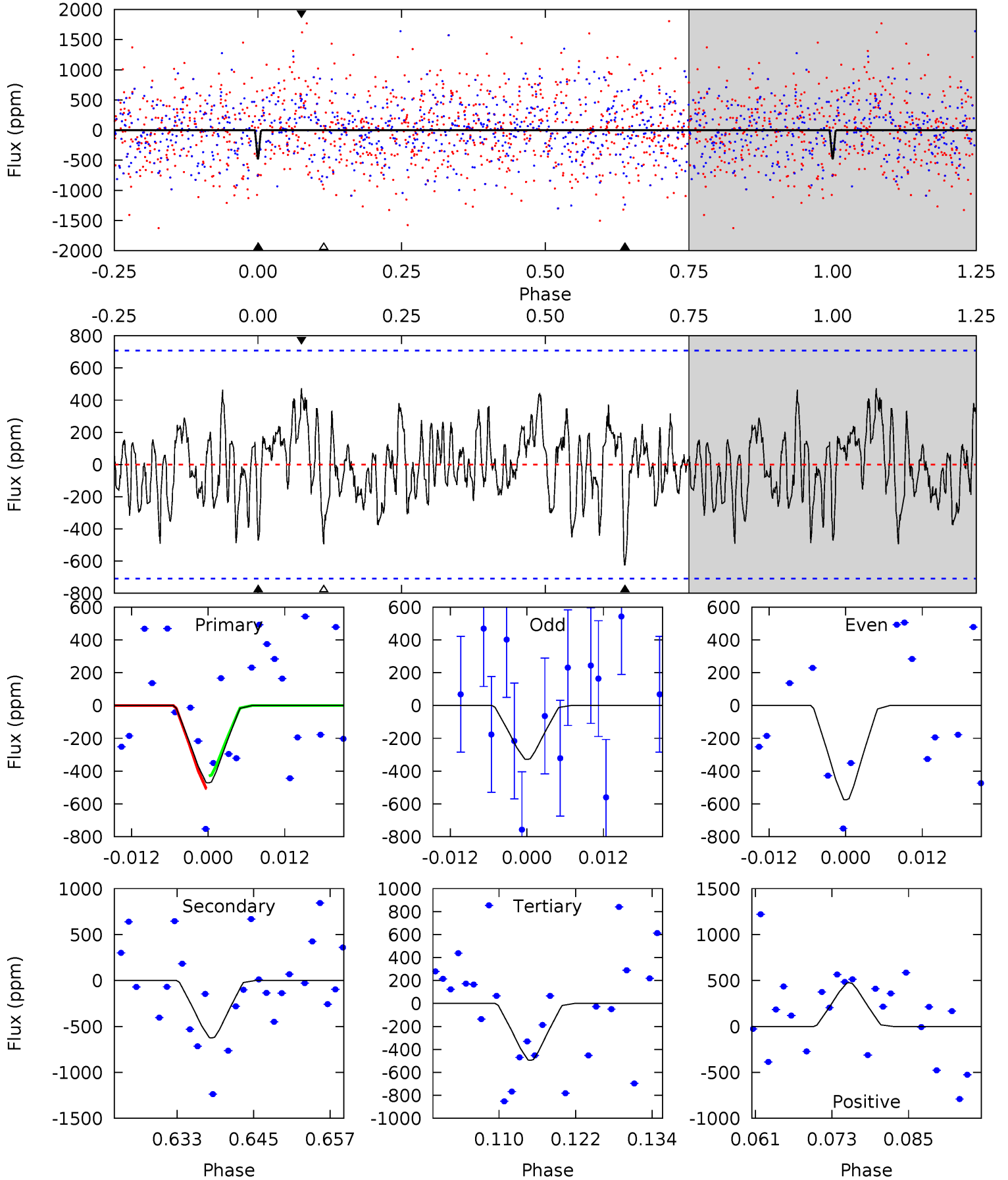


This plot does not exist for this TCE.

# DV Model-Shift Uniqueness Test

007211635-03, P = 4.451632 Days, E = 134.964343 Days

Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.32	4.39	3.48	3.34	4.99	2.51	1.33	-0.16	-0.01	0.91	1.06	0.87	0	0.43	0.28



## Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

### Stellar Parameters For KIC 007211635

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6446^{+180}_{-248}$	$4.404^{+0.065}_{-0.182}$	$-0.160^{+0.250}_{-0.300}$	$1.115^{+0.339}_{-0.145}$	$1.150^{+0.164}_{-0.164}$	$1.166^{+0.401}_{-0.586}$
	+3%/-4%	+1%/-4%	+156%/-188%	+30%/-13%	+14%/-14%	+34%/-50%
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 007211635-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	-624±142	$7.00^{+7.03}_{-4.75}$	$1810^{+126}_{-95}$	$4504^{+3129}_{-1031}$	$21^{+180}_{-16}$
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

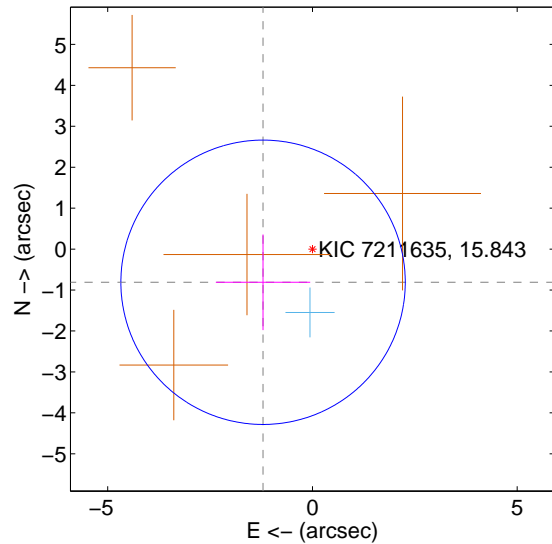
Supplemental centroid analysis for 007211635-03. Kepler magnitude: 15.84. Transit SNR 11.68

There are 1 quarters with good PRF difference image offsets

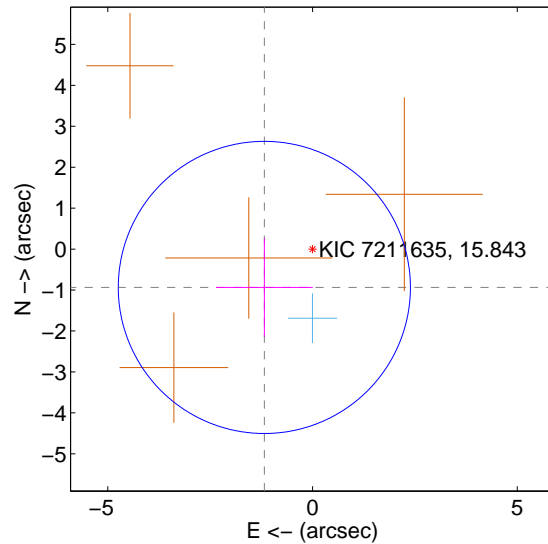
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.453 \pm 1.158$	1.26	$1.206 \pm 1.153$	$-0.811 \pm 1.169$
PRF-fit source offset from KIC position	$1.504 \pm 1.189$	1.26	$1.177 \pm 1.181$	$-0.936 \pm 1.202$
photometric centroid source offset	$1.53 \pm 1.08$	1.42	$-0.27 \pm 1.00$	$1.51 \pm 1.08$

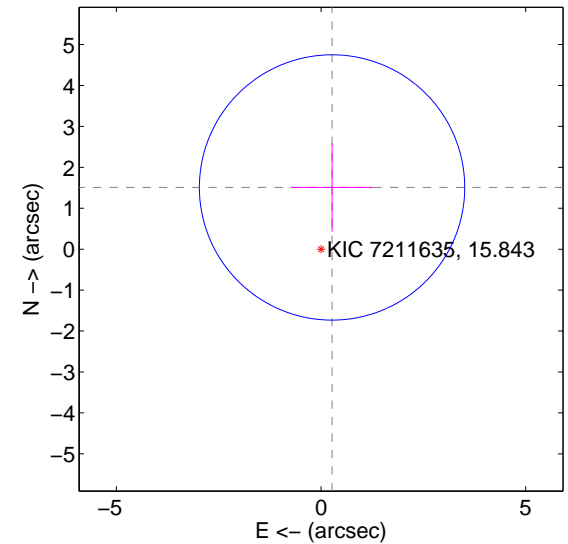
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

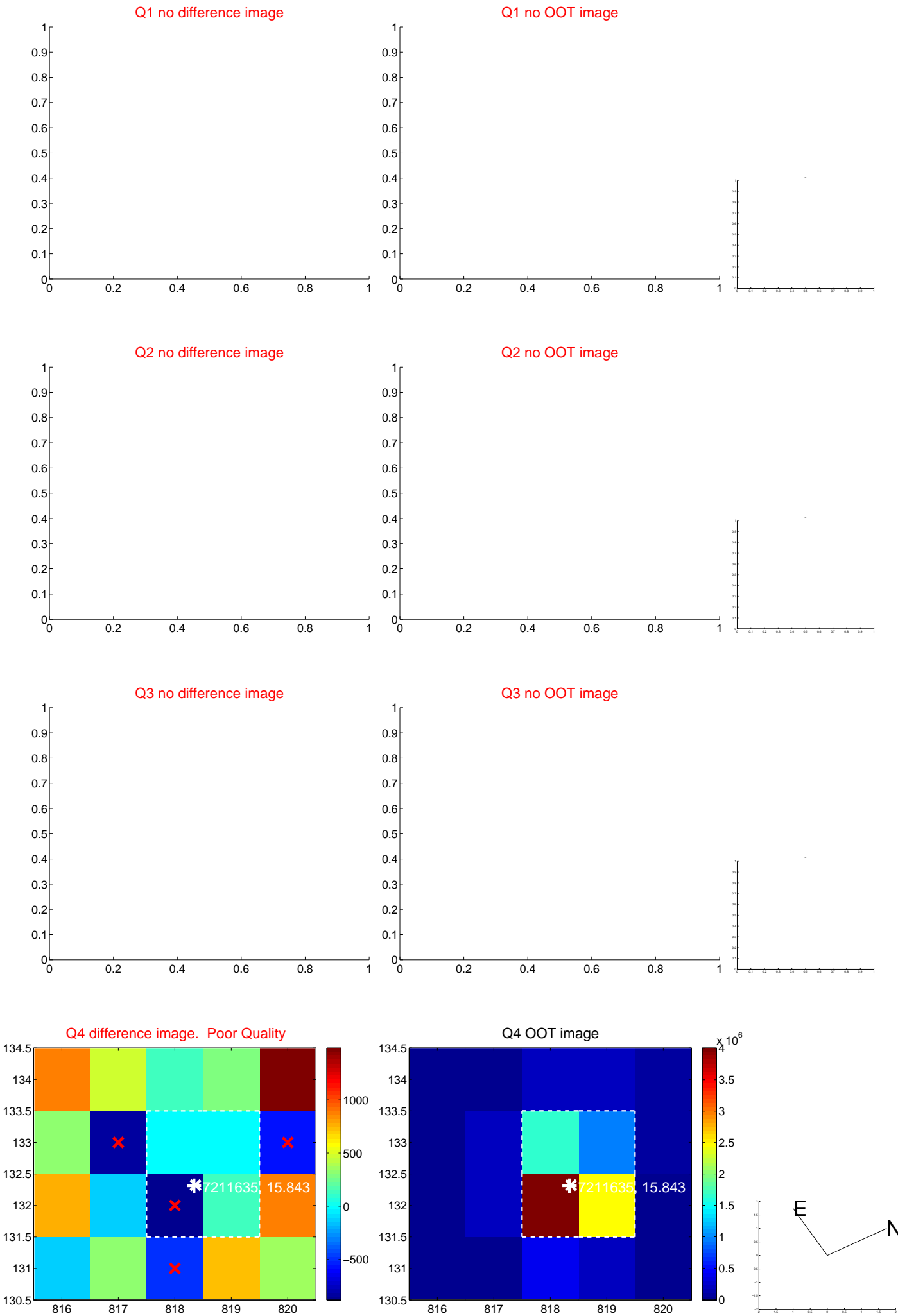


offset from photometric centroids

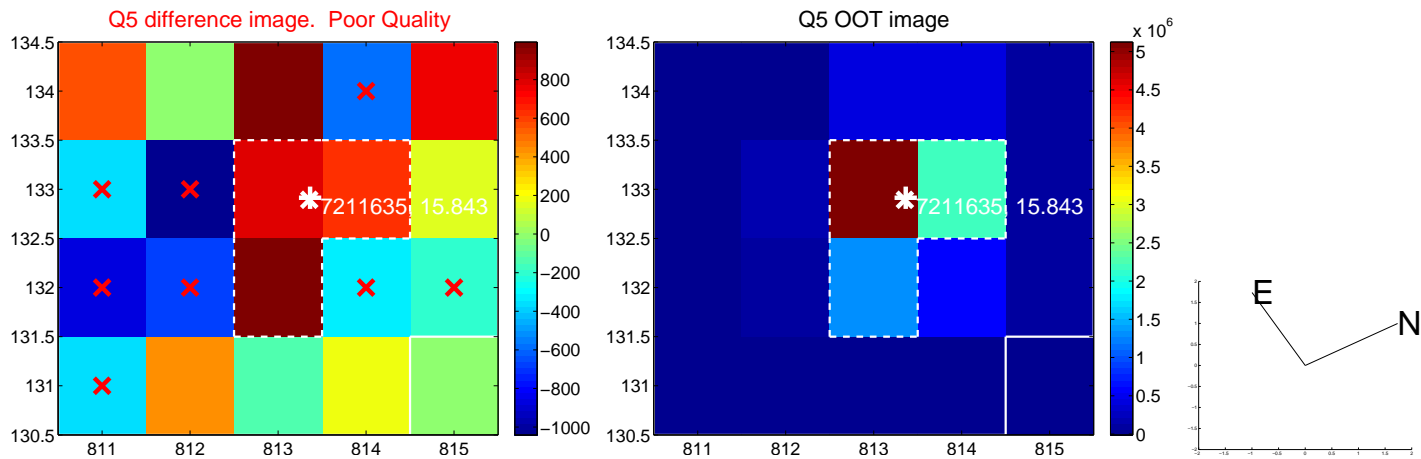


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

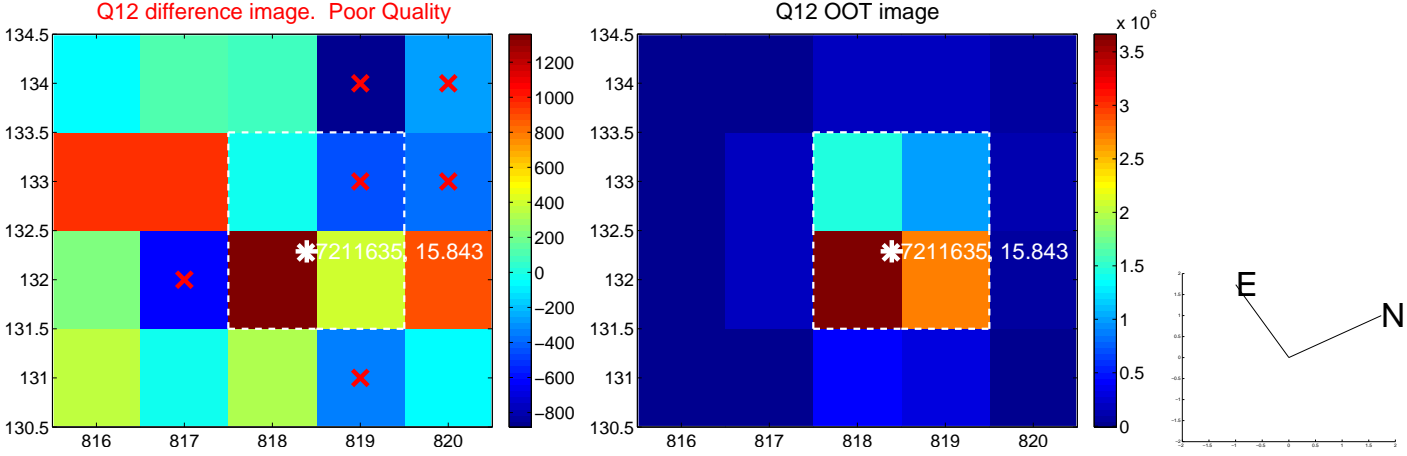
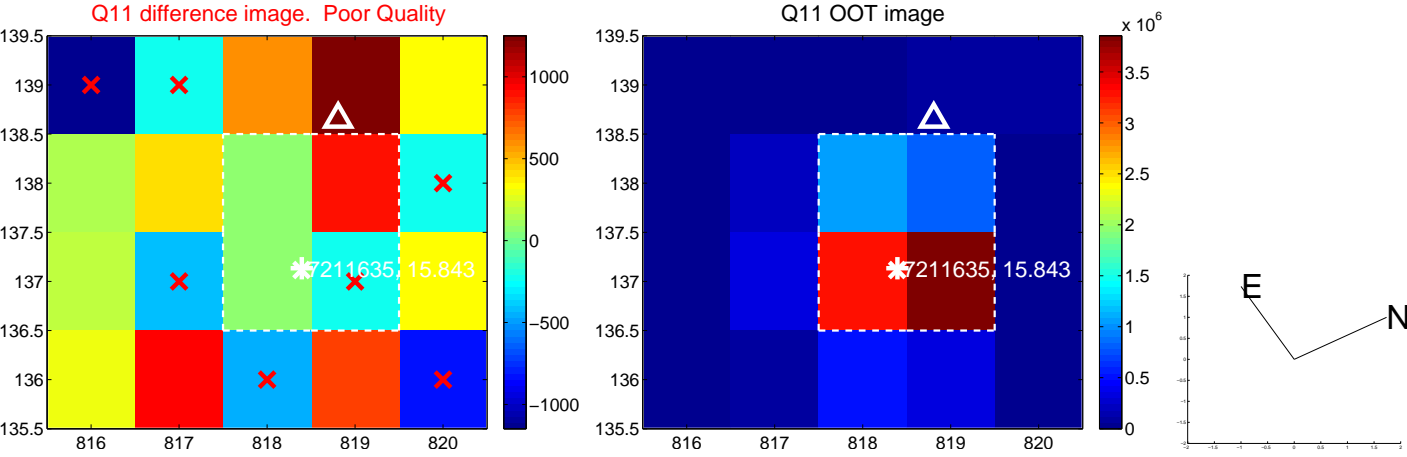
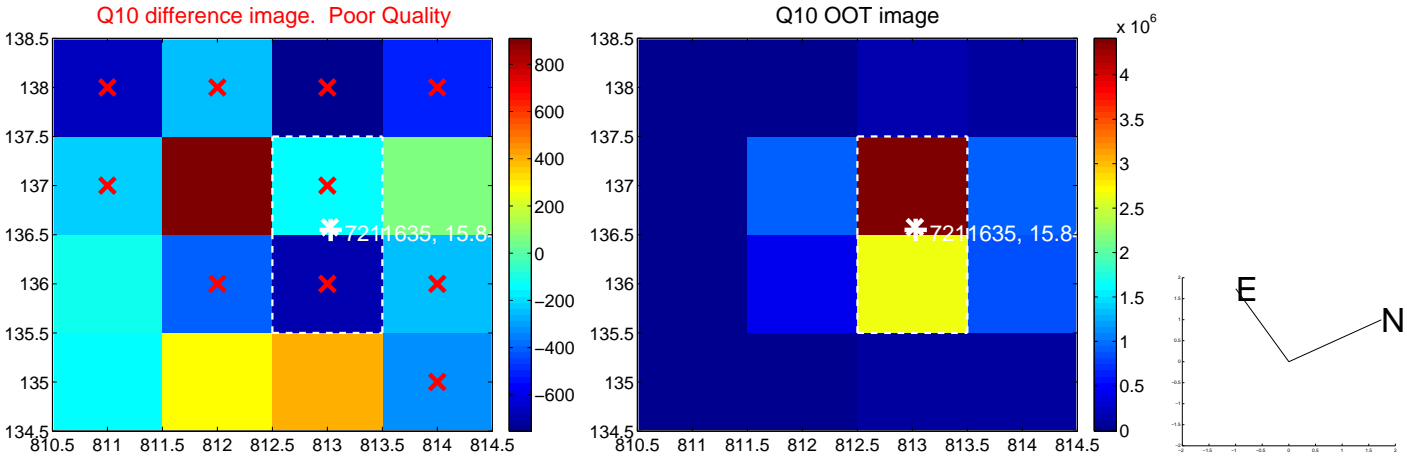
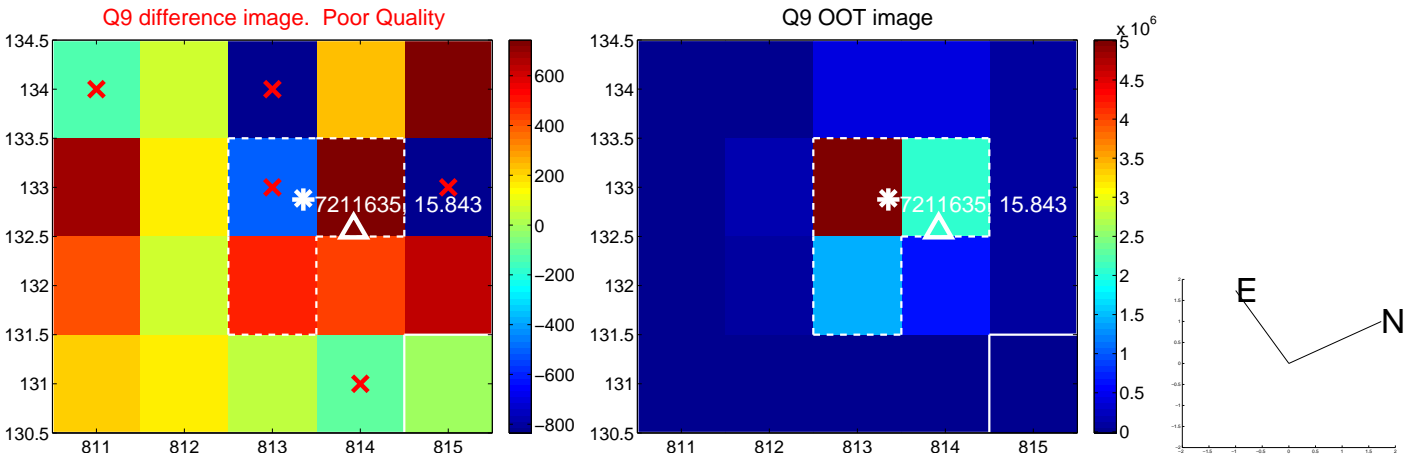
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



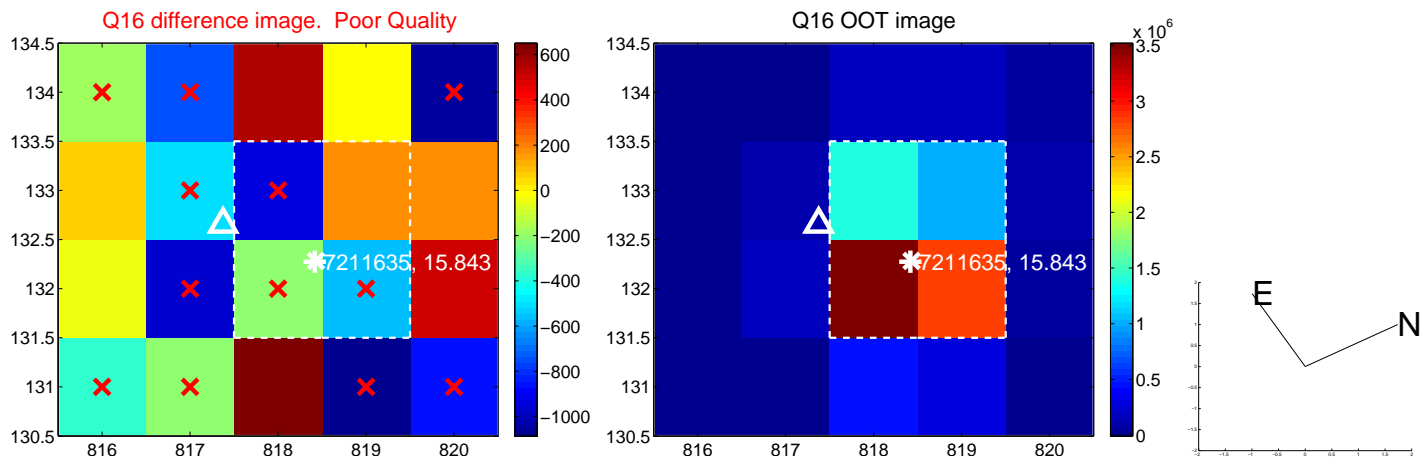
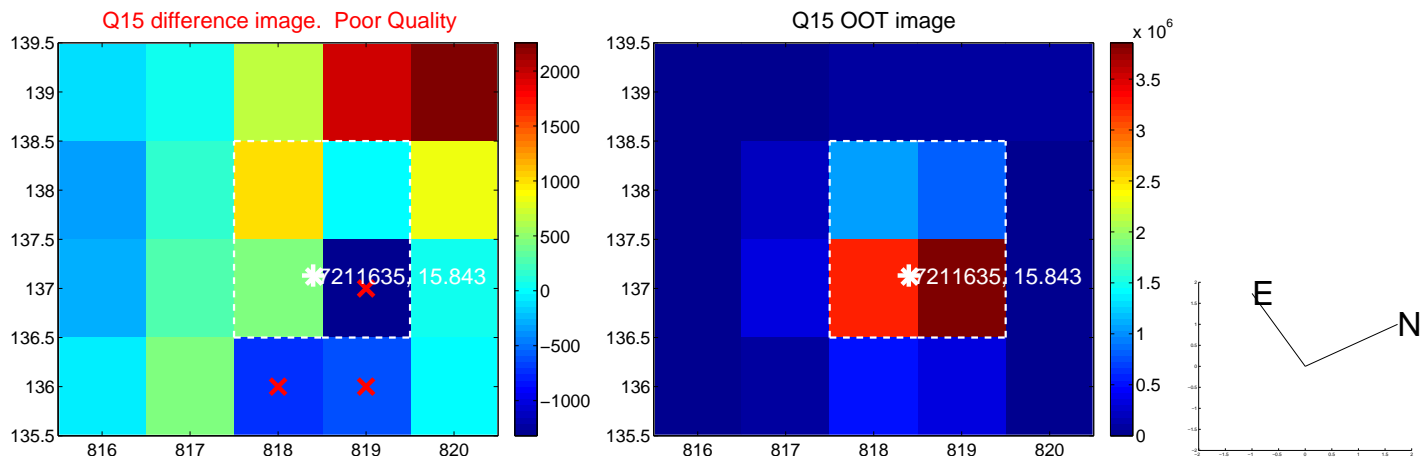
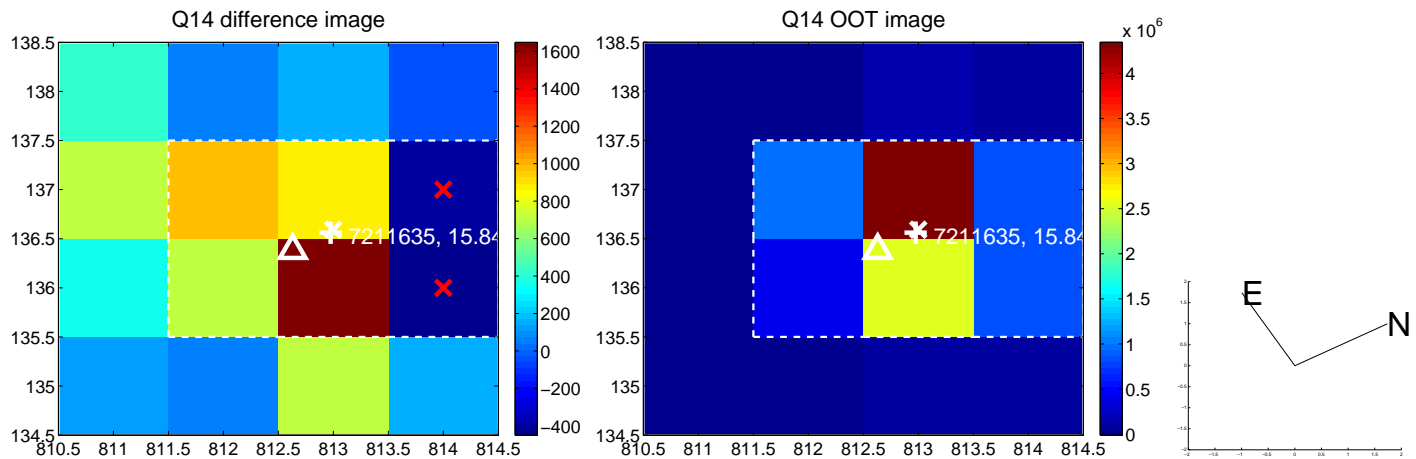
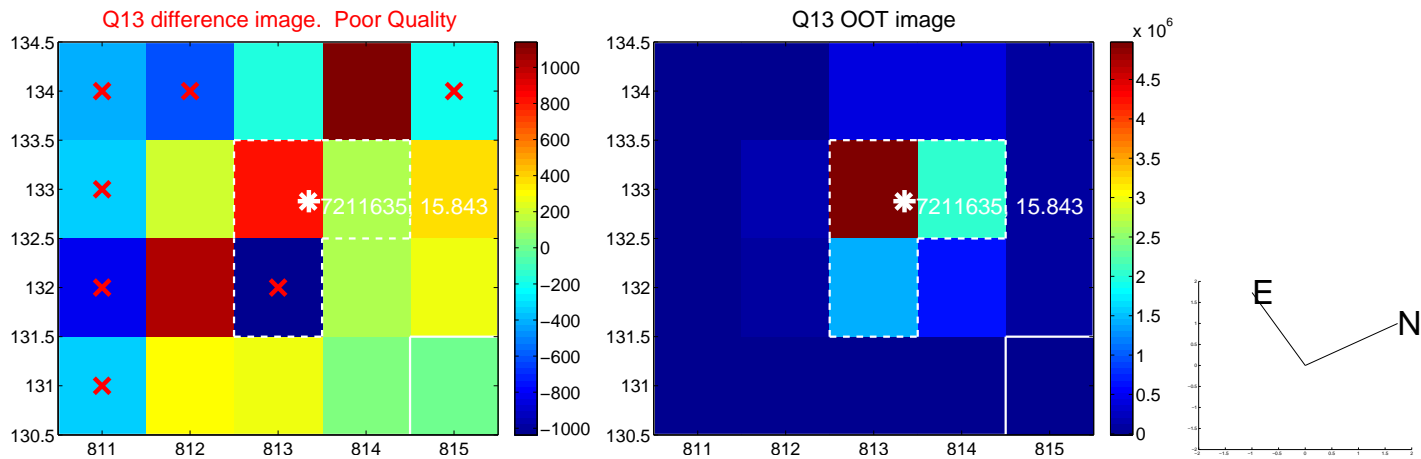
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



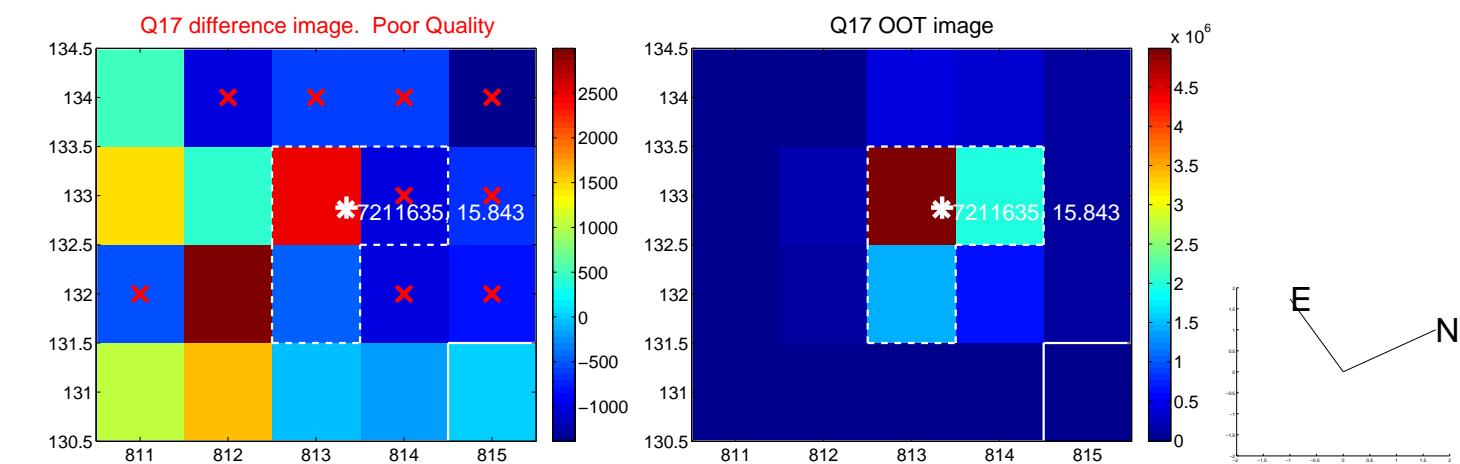
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



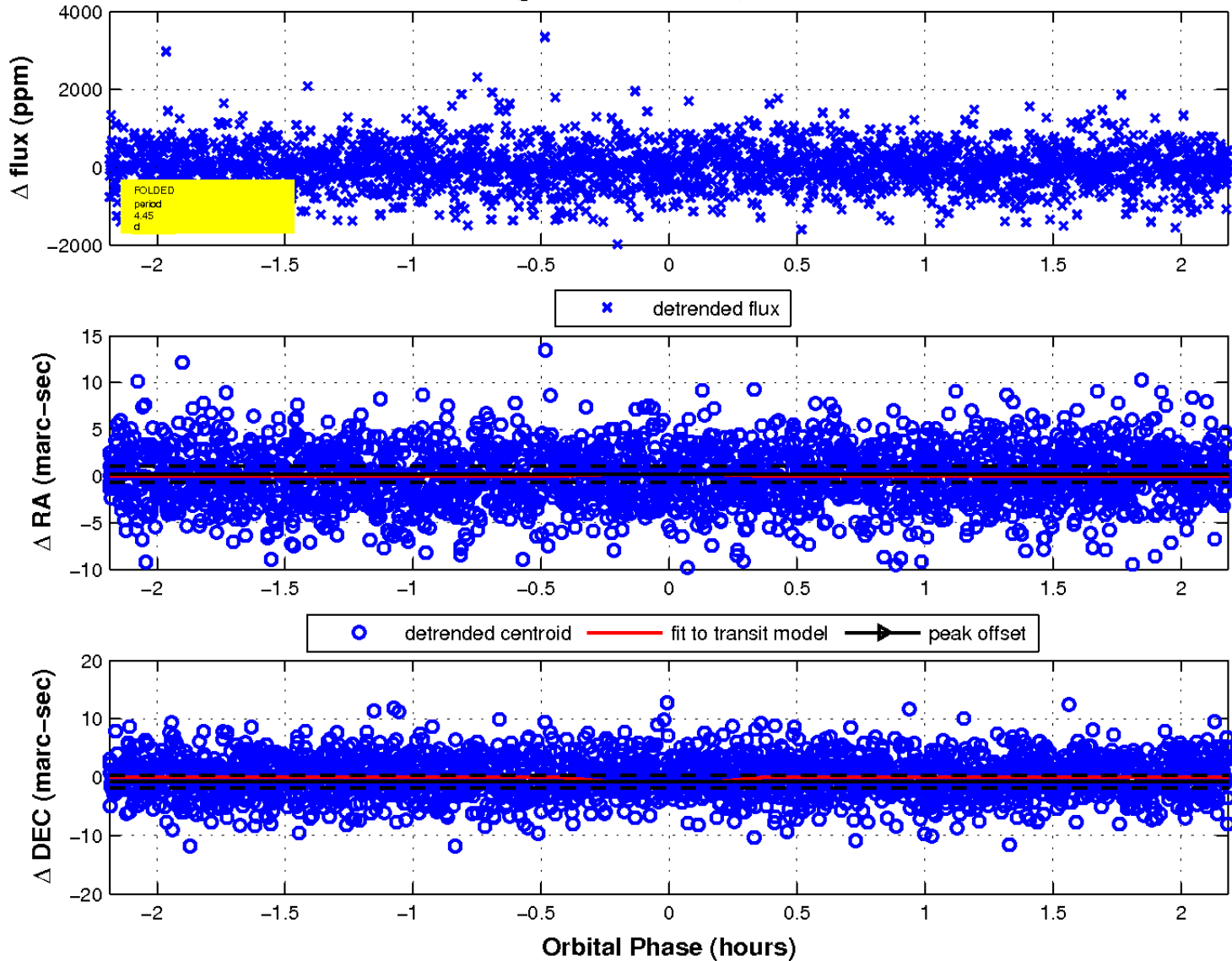
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

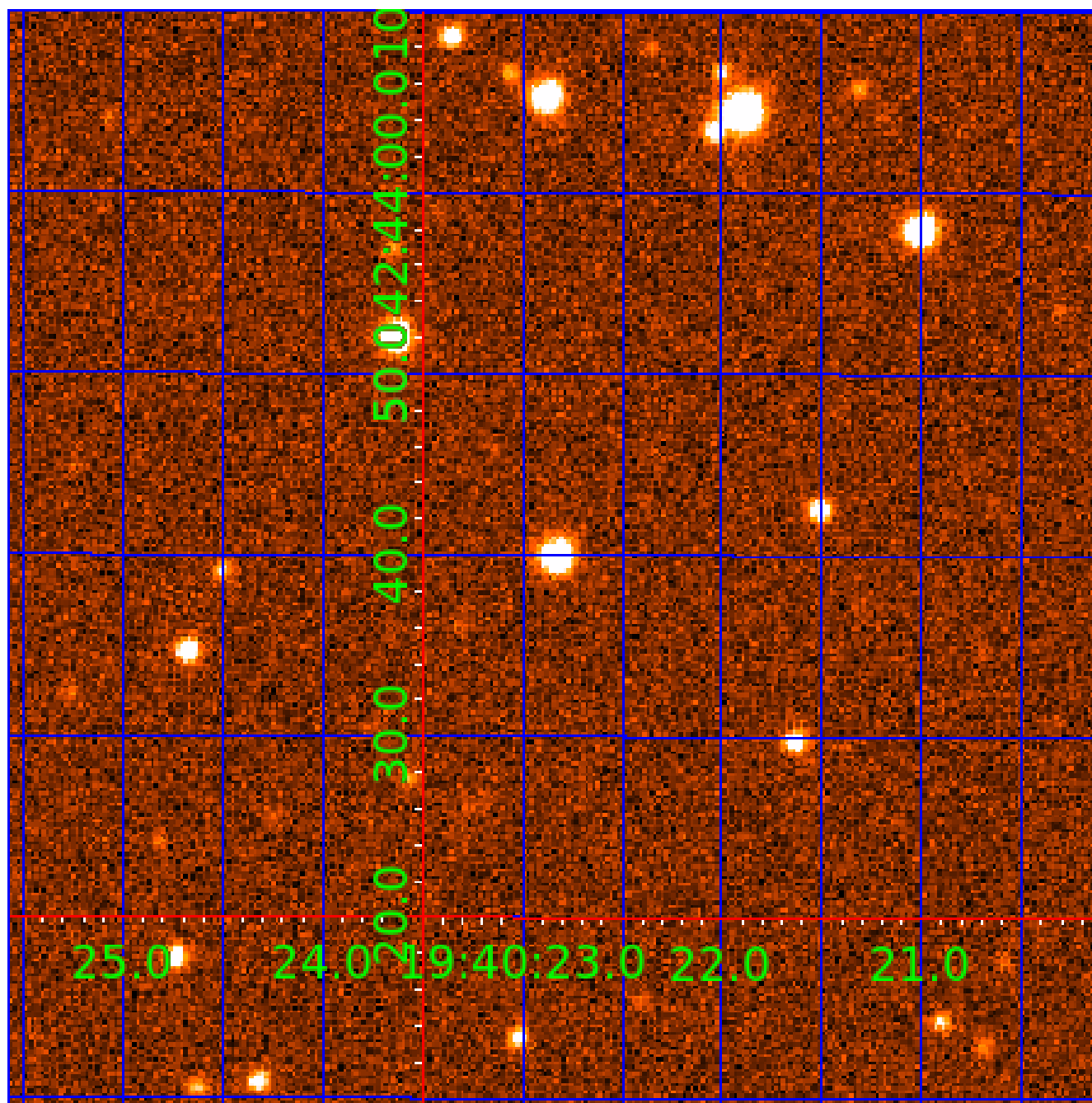


fluxWeightedCentroids, Planet 3 of 4



UKIRT Image

Declination





# KIC 007211635

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007211635-01	OBS	No	0.568920	131.609758	26.3	4.278	8.6	5.3	1.11	6446	0.58	9701.46
007211635-02	OBS	No	3.704573	132.231331	671.6	0.899	14.4	17.5	1.11	6446	3.00	797.85
007211635-03	OBS	No	4.451632	134.964343	563.7	0.729	13.1	11.7	1.11	6446	3.16	624.52
007211635-04	OBS	No	7.479120	136.488587	946.5	0.880	14.1	18.7	1.11	6446	3.48	312.68

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007211635-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET
007211635-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_RESOLVED_OFFSET
007211635-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_RESOLVED_OFFSET
007211635-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—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.

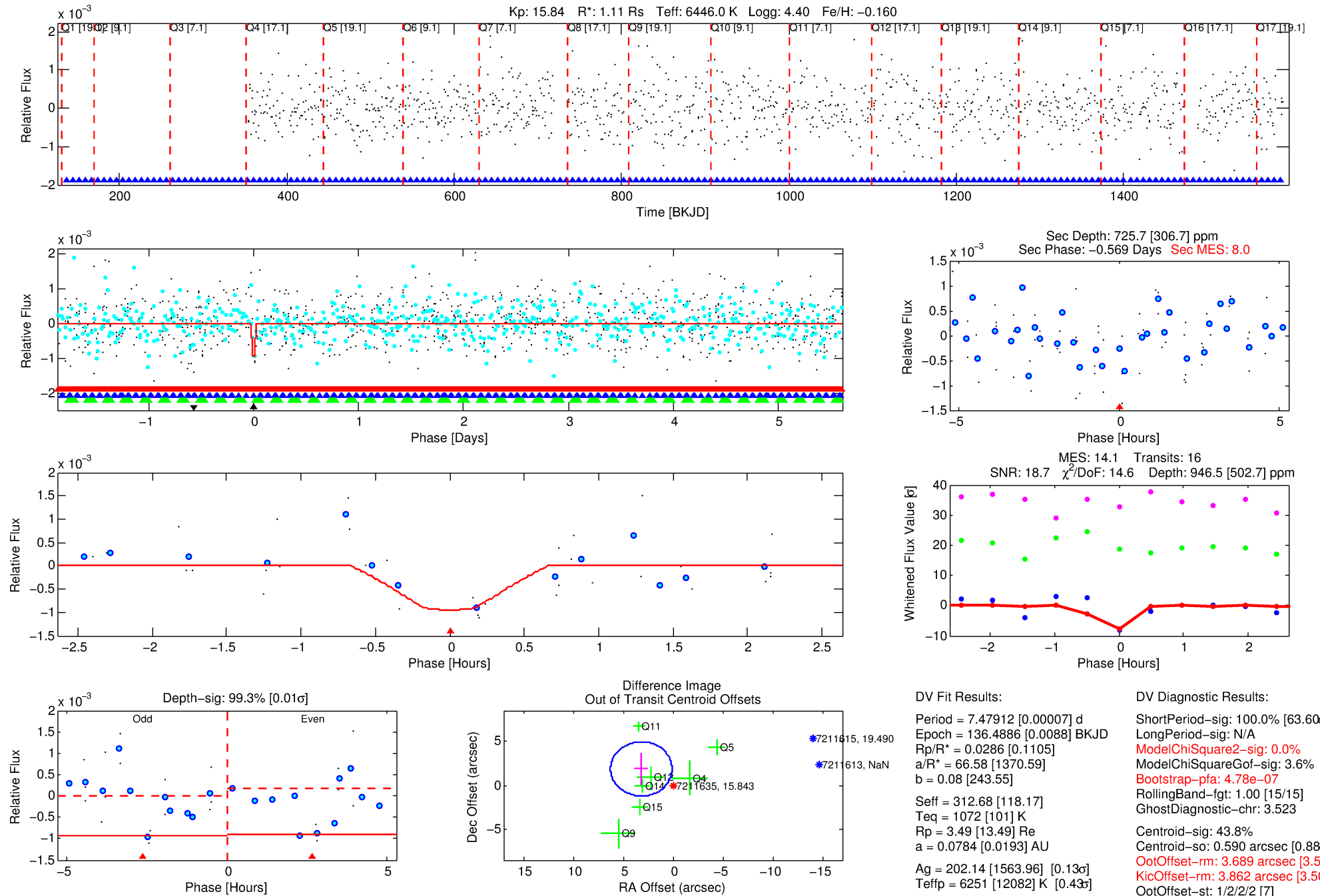
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 007211635-04

No Significant Match Found

# DV One-Page Summary

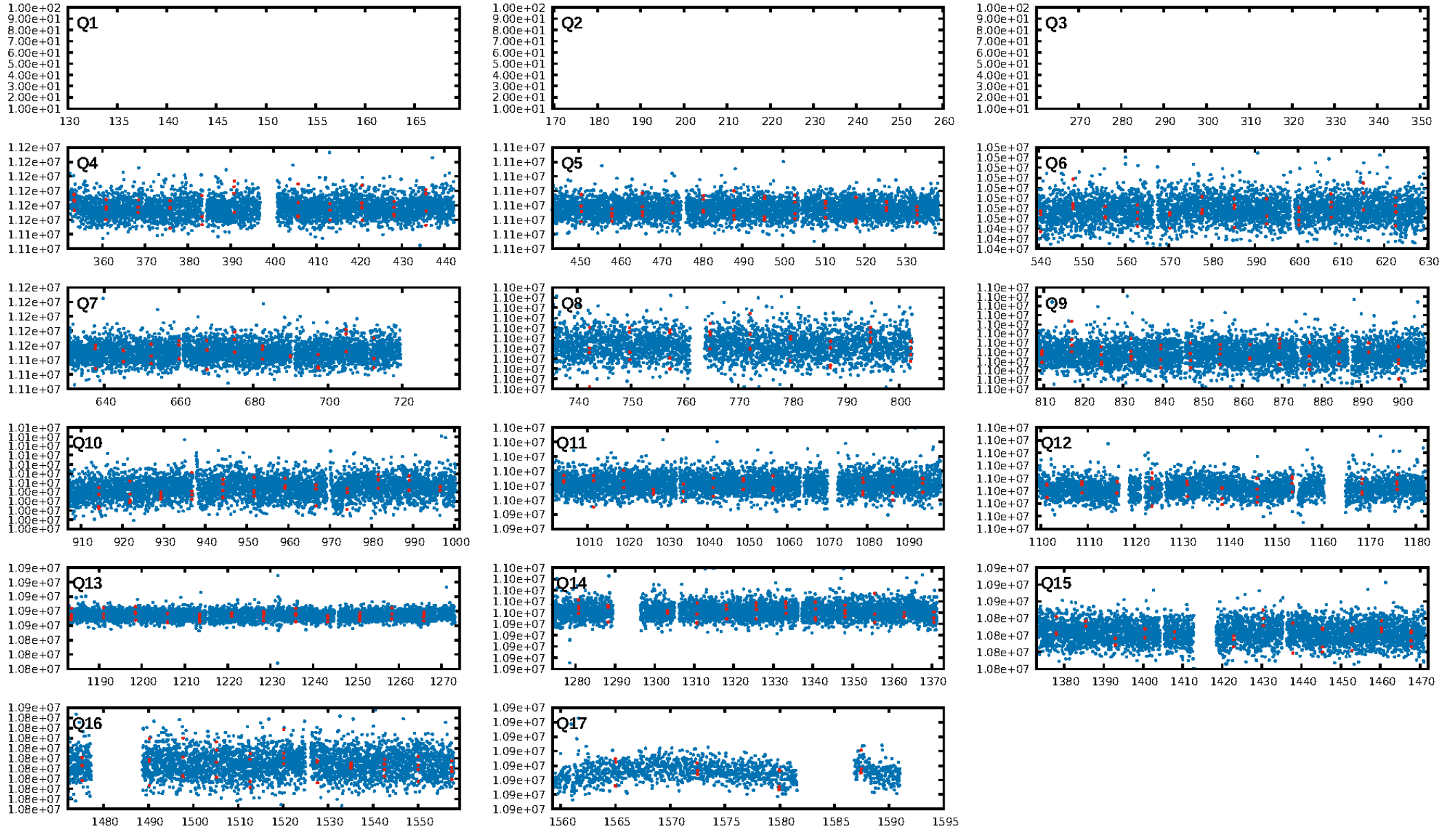
KIC: 7211635 Candidate: 4 of 4 Period: 7.479 d



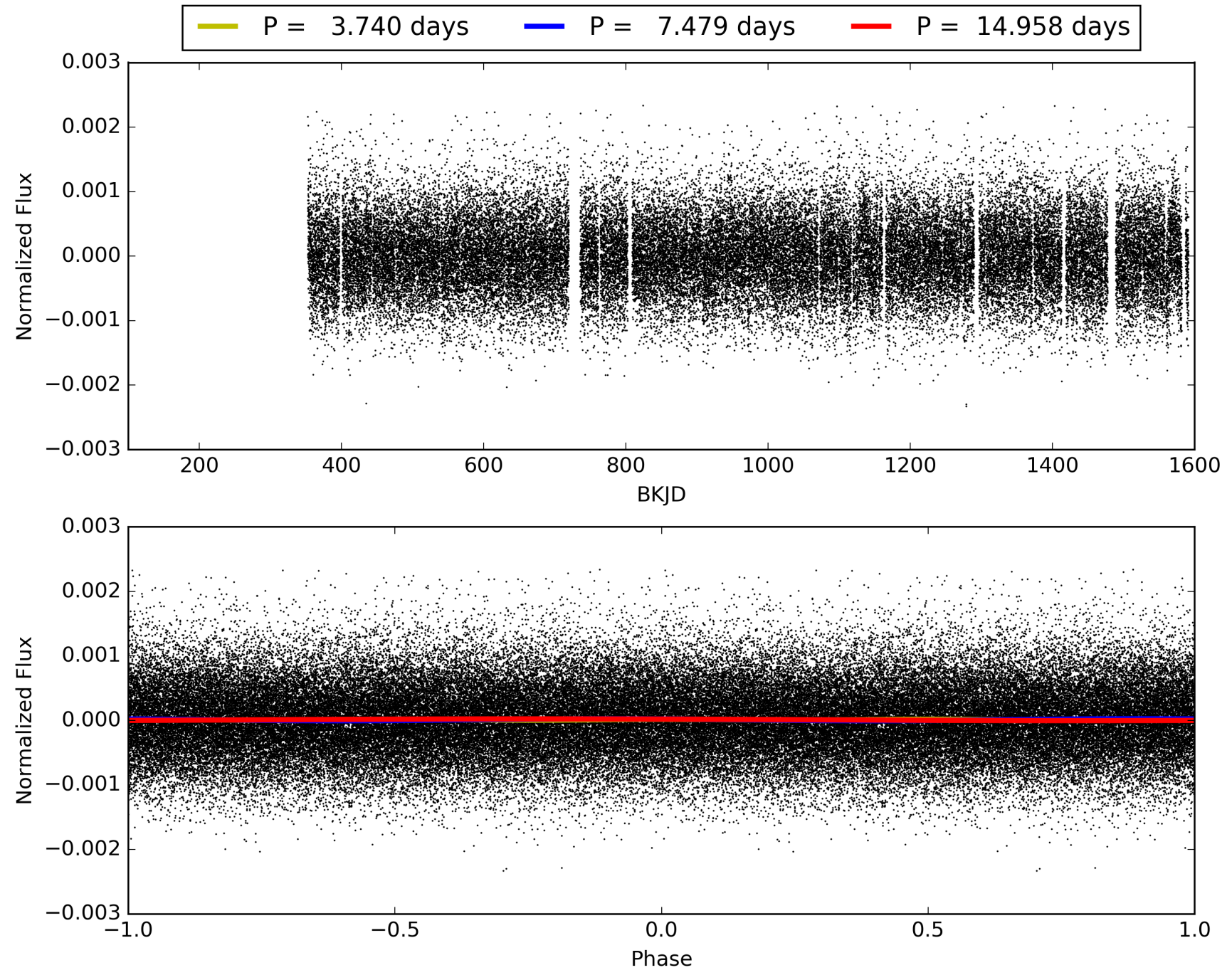
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 09:21:01 Z

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

# TCE 007211635-04, PDC Light Curves

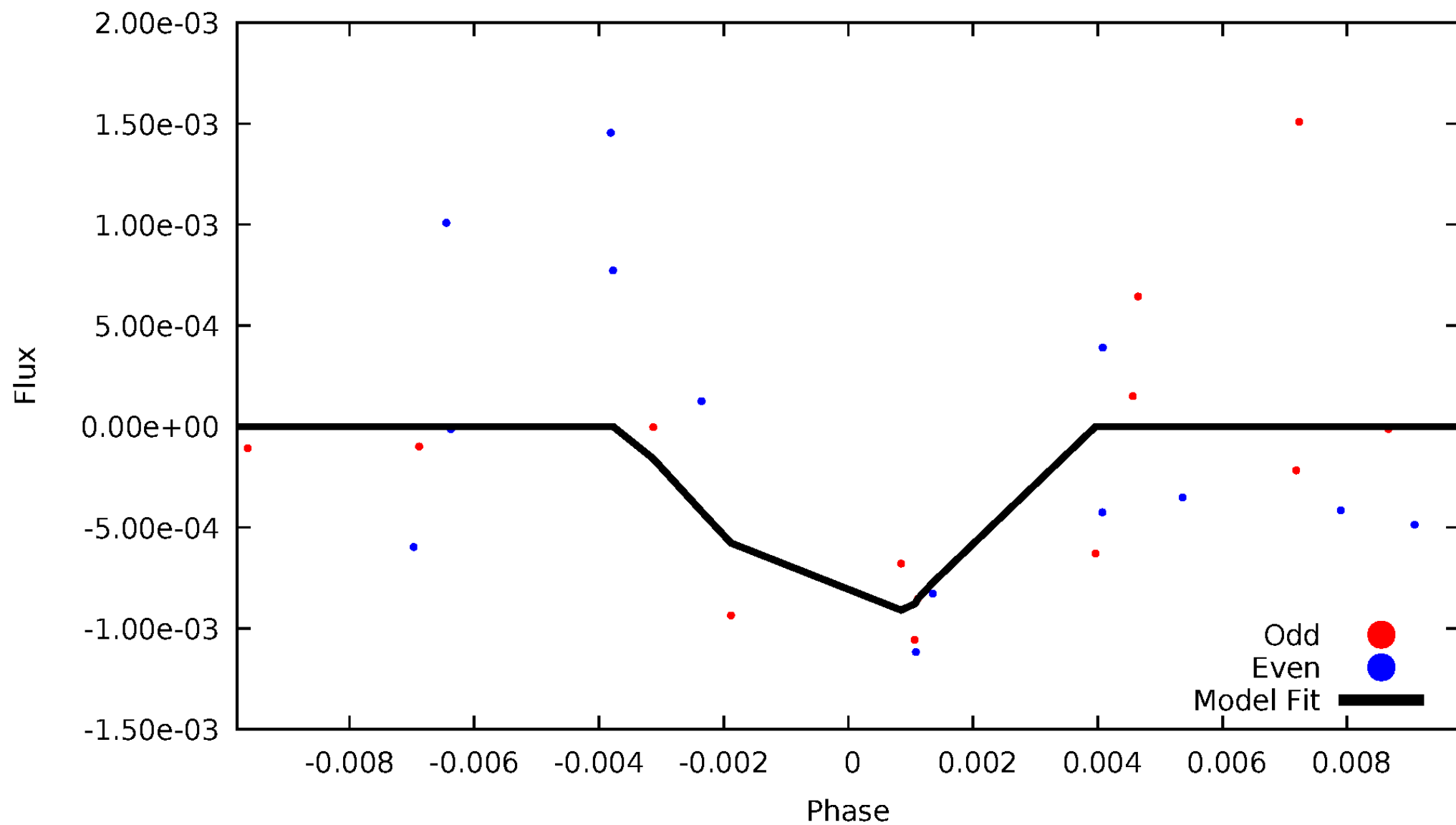


# TCE 007211635-04



# DV Odd/Even

TCE 007211635-04





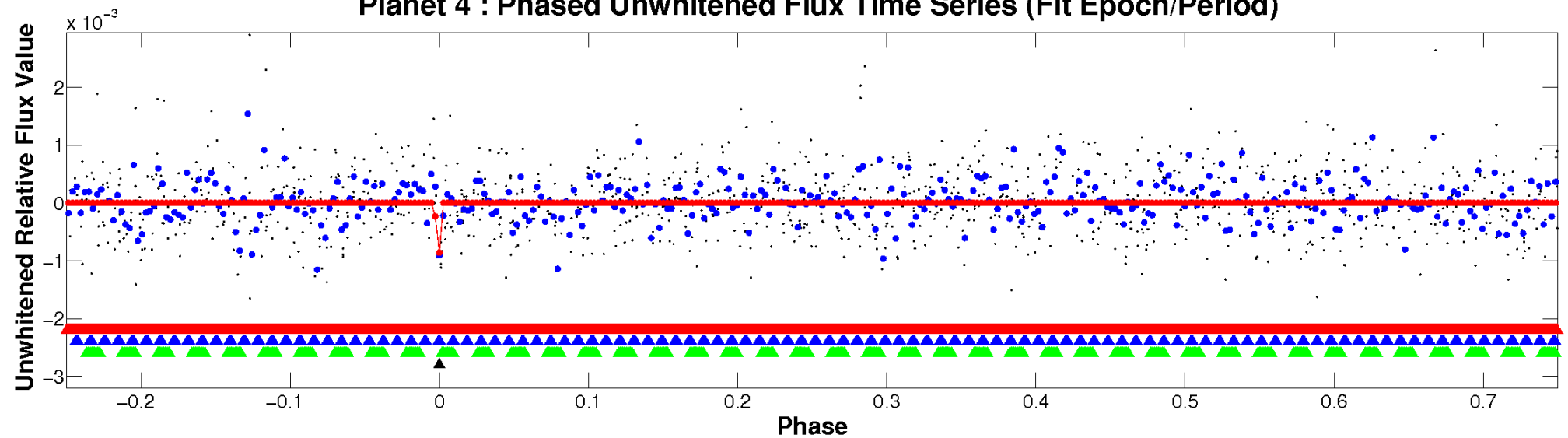
ALT Odd/Even

This plot does not exist for this TCE.

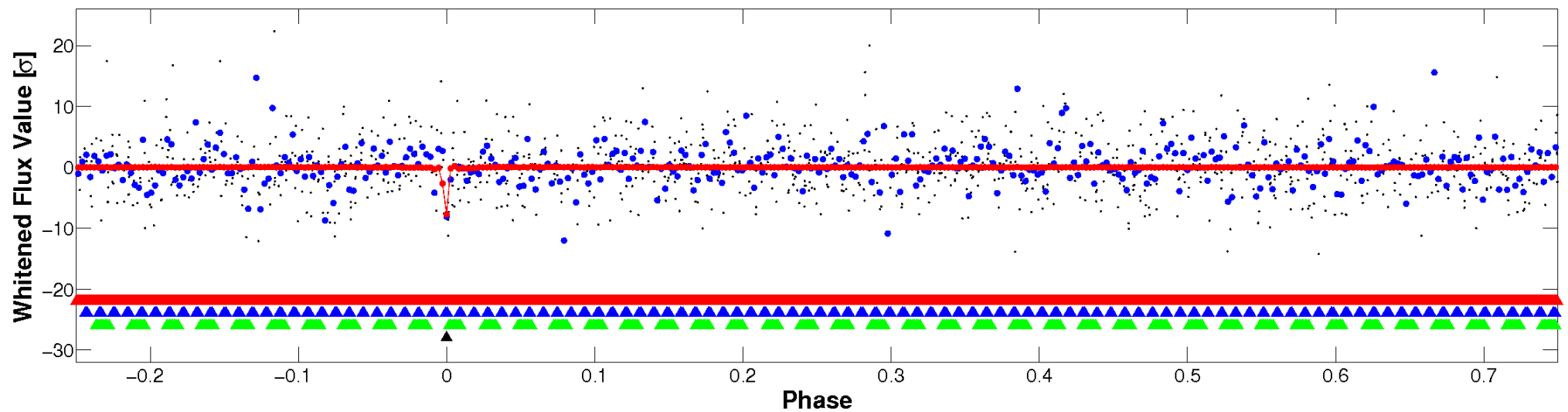


# Non-Whitened Vs. Whitened Light Curve

## Planet 4 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

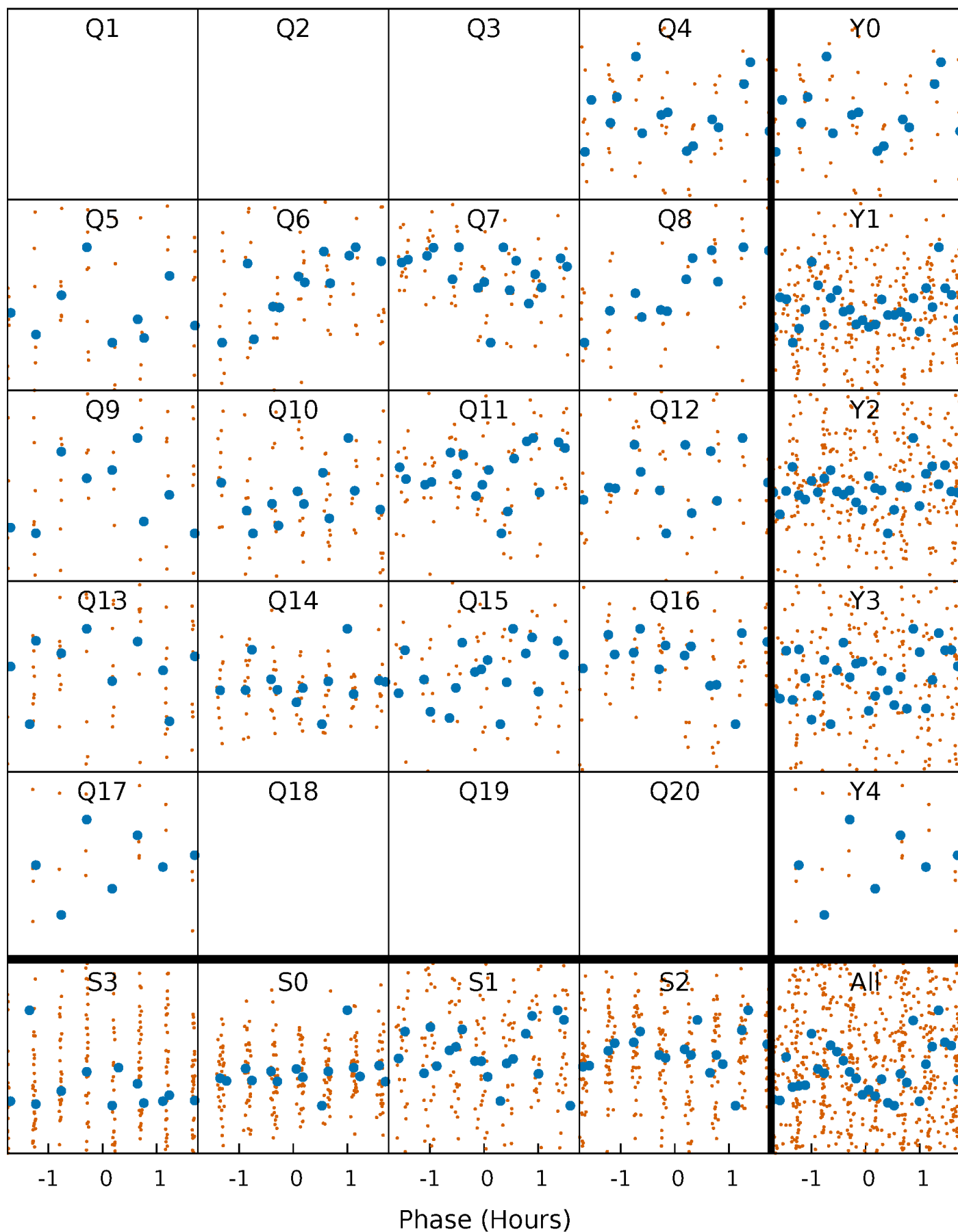


## Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



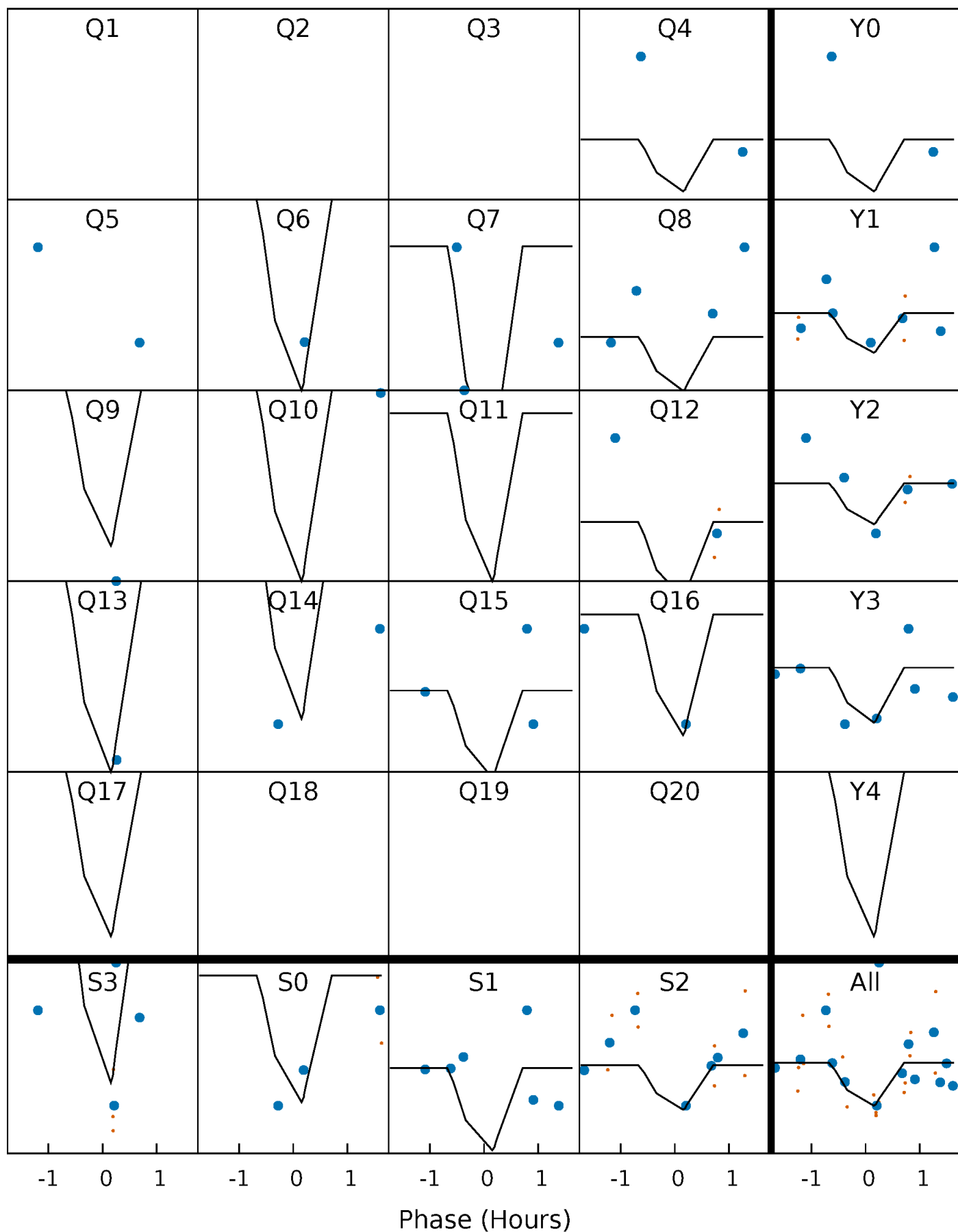
# PDC Quarter-Phased Transit Curves

TCE 007211635-04 P= 7.479120 Days  $T_0=136.488587$  (BKJD)



# DV Quarter-Phased Transit Curves

TCE 007211635-04 P= 7.479120 Days  $T_0=136.488587$  (BKJD)

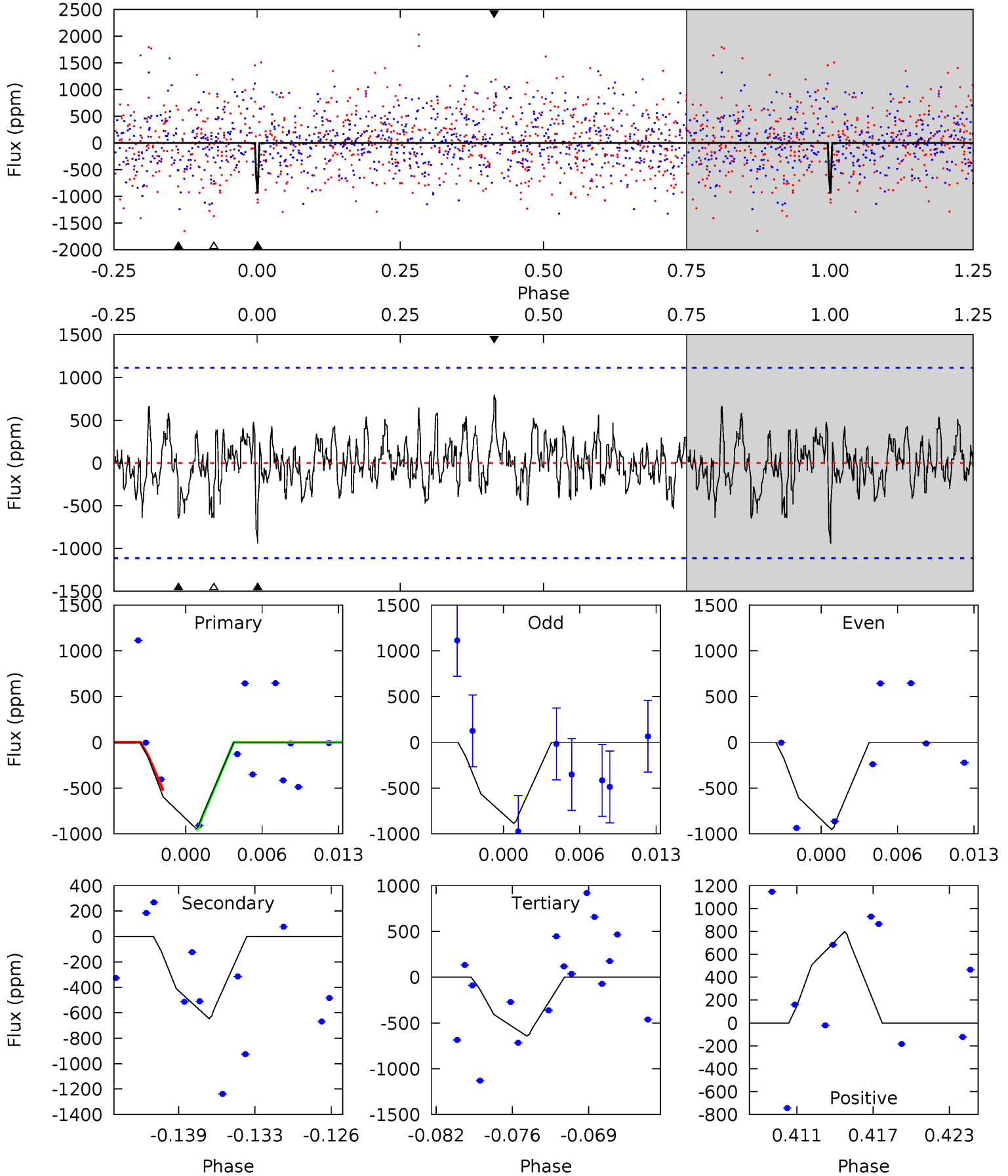


This plot does not exist for this TCE.

# DV Model-Shift Uniqueness Test

007211635-04, P = 7.479120 Days, E = 136.488587 Days

Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.33	2.97	2.96	3.66	5.11	2.73	1.09	1.38	0.67	0.01	-0.70	0.14	0	0.46	0.73



## Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

### Stellar Parameters For KIC 007211635

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6446^{+180}_{-248}$	$4.404^{+0.065}_{-0.182}$	$-0.160^{+0.250}_{-0.300}$	$1.115^{+0.339}_{-0.145}$	$1.150^{+0.164}_{-0.164}$	$1.166^{+0.401}_{-0.586}$
	+3%/-4%	+1%/-4%	+156%/-188%	+30%/-13%	+14%/-14%	+34%/-50%
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 007211635-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-646 \pm 218$	$10.23^{+10.98}_{-7.36}$	$1517^{+100}_{-75}$	$3921^{+2973}_{-861}$	$21^{+250}_{-16}$
Alt.	N/A	N/A	N/A	N/A	N/A

$T_{\text{max}}$  = Theoretical Maximum Planetary Temperature

$T_{\text{obs}}$  = Observed Planetary Temperature (Assuming  $A=0.3$ )

$A_{\text{obs}}$  = 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

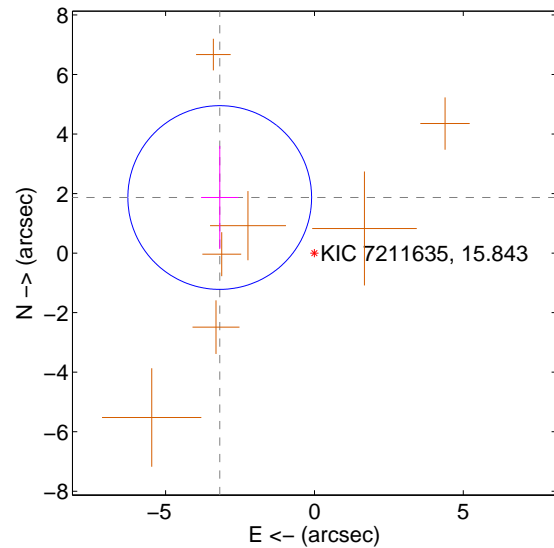
Supplemental centroid analysis for 007211635-04. Kepler magnitude: 15.84. Transit SNR 18.68

There are 0 quarters with good PRF difference image offsets

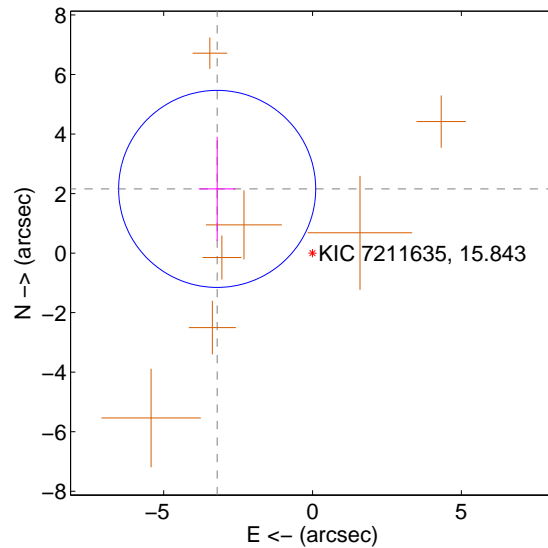
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$3.689 \pm 1.029$	$3.59$	$3.182 \pm 0.625$	$1.867 \pm 1.731$
PRF-fit source offset from KIC position	$3.862 \pm 1.103$	$3.50$	$3.203 \pm 0.621$	$2.157 \pm 1.747$
photometric centroid source offset	$0.59 \pm 0.67$	$0.88$	$-0.48 \pm 0.65$	$0.35 \pm 0.71$

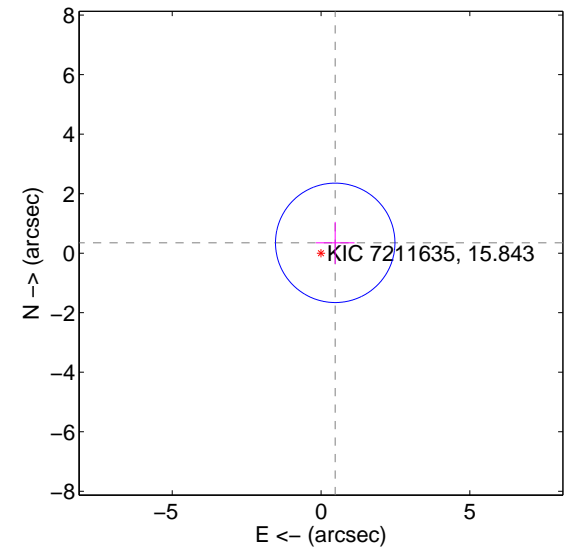
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

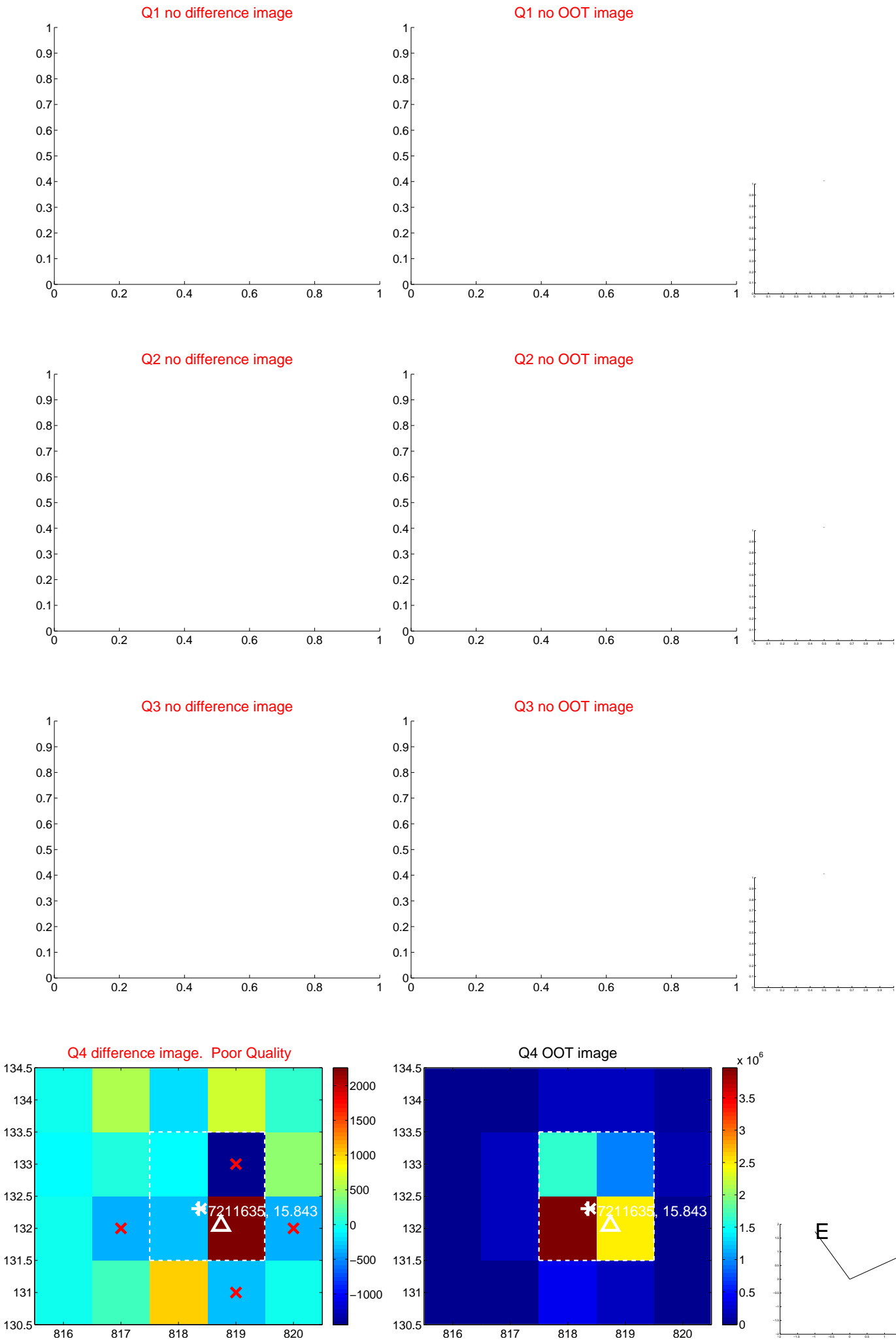


offset from photometric centroids

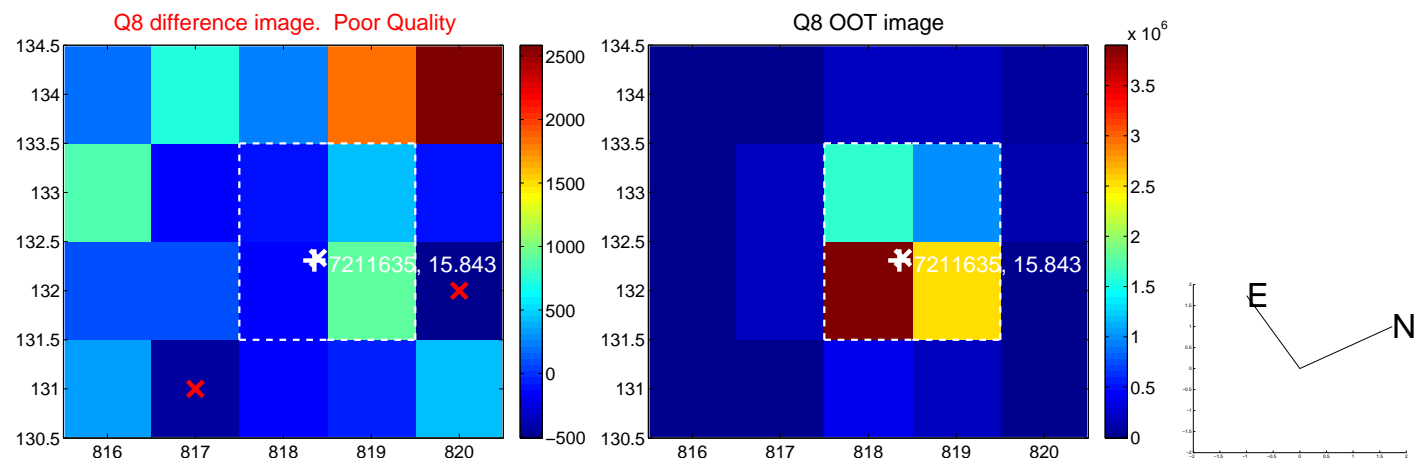
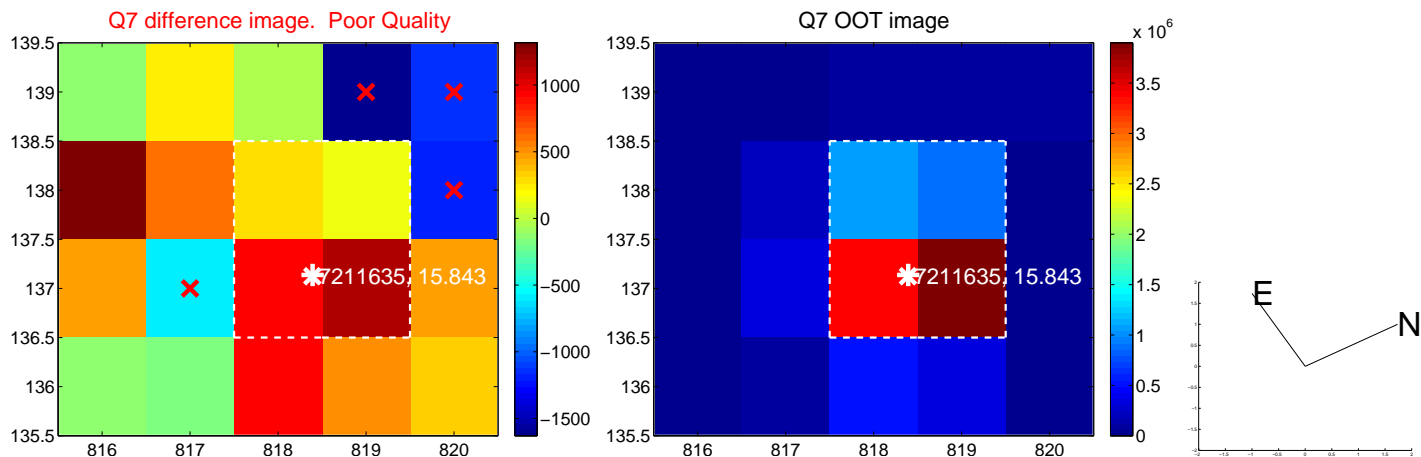
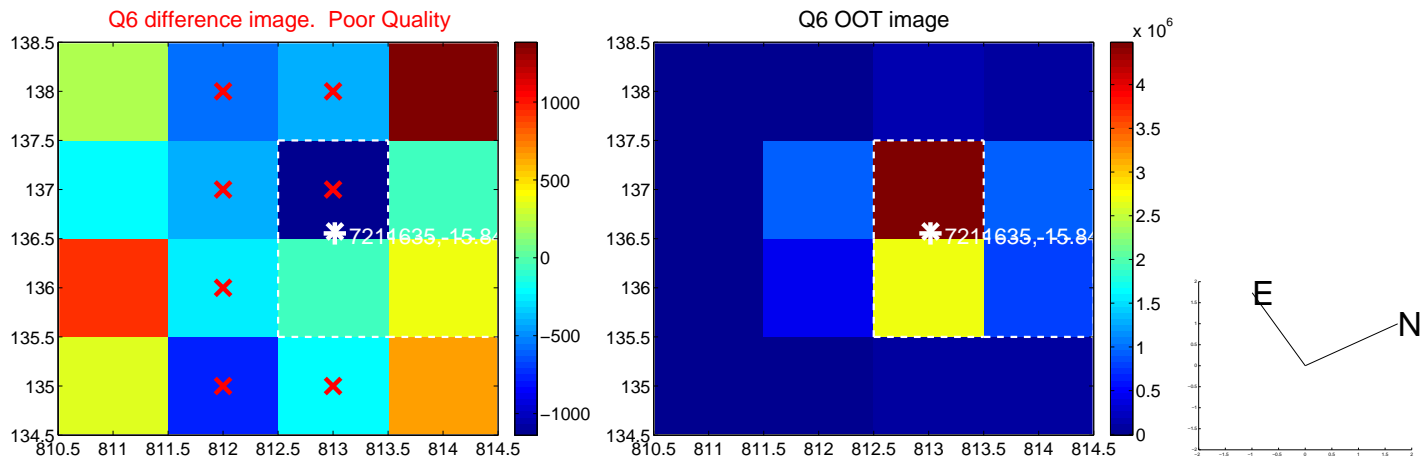
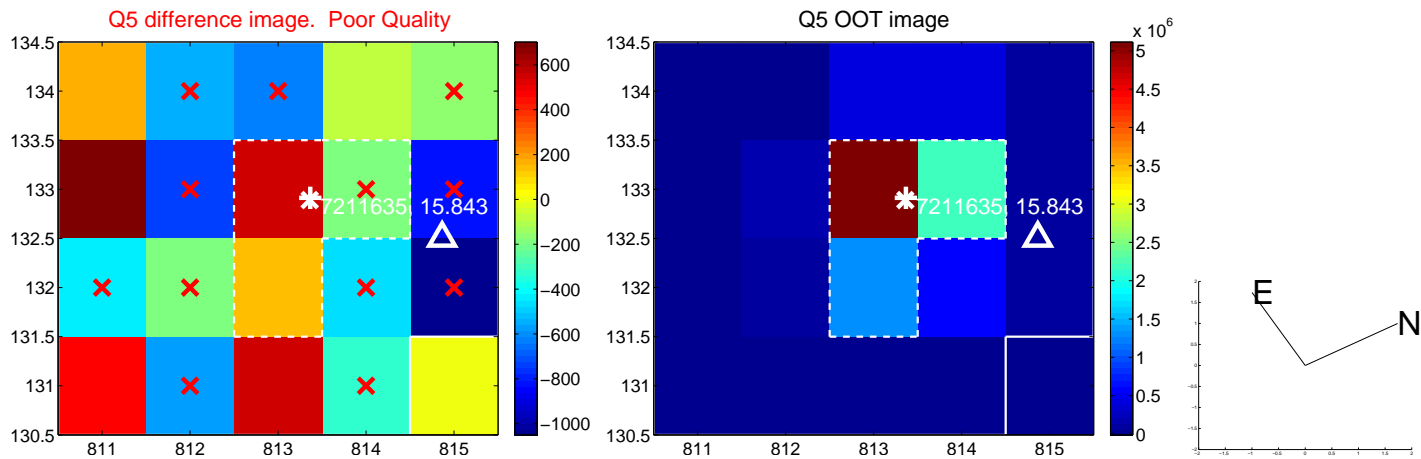


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

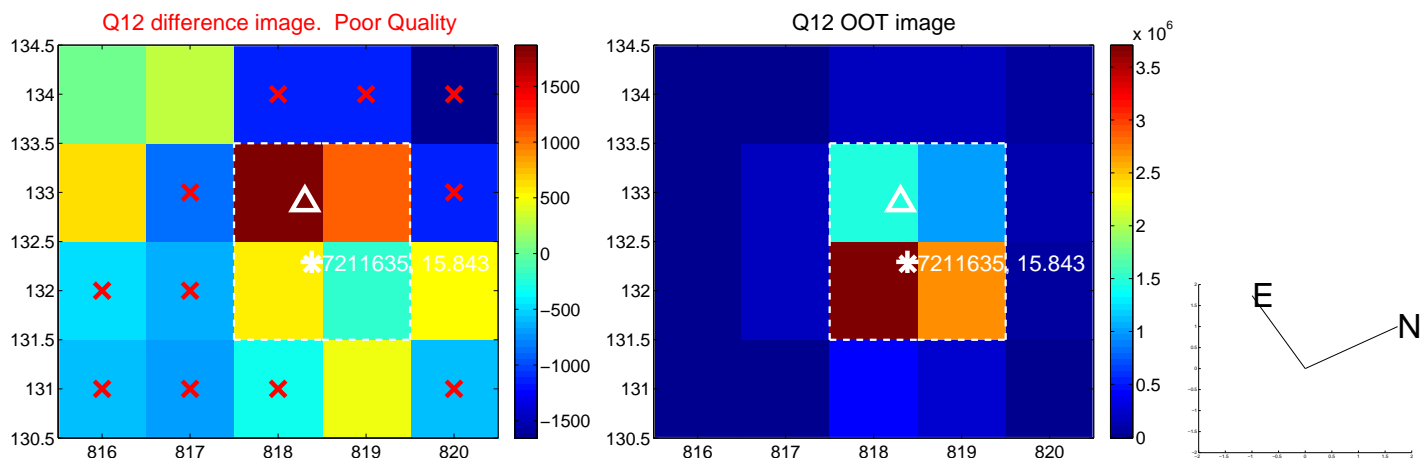
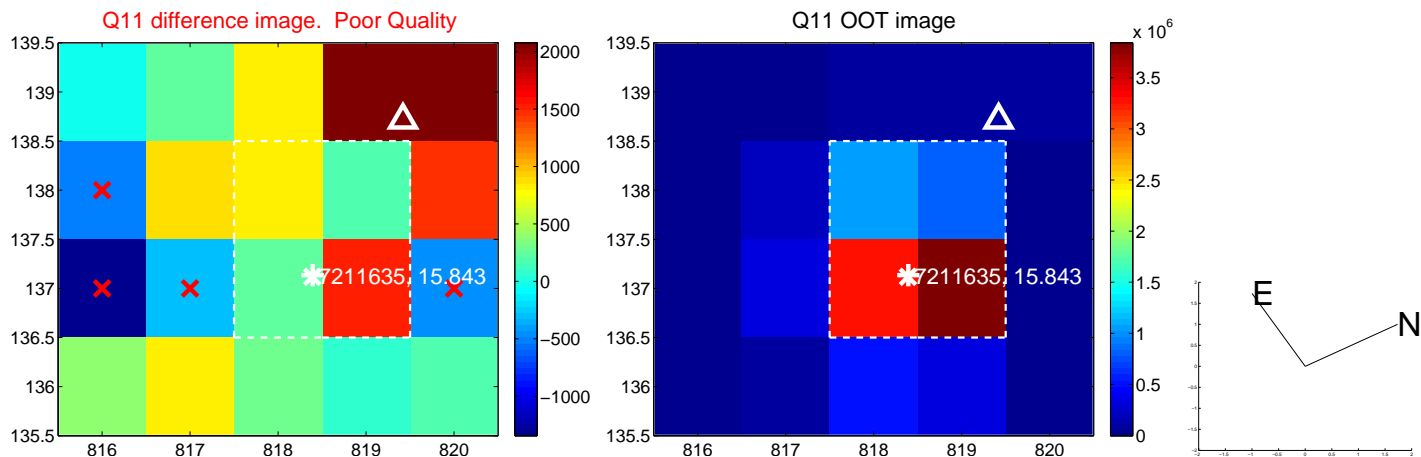
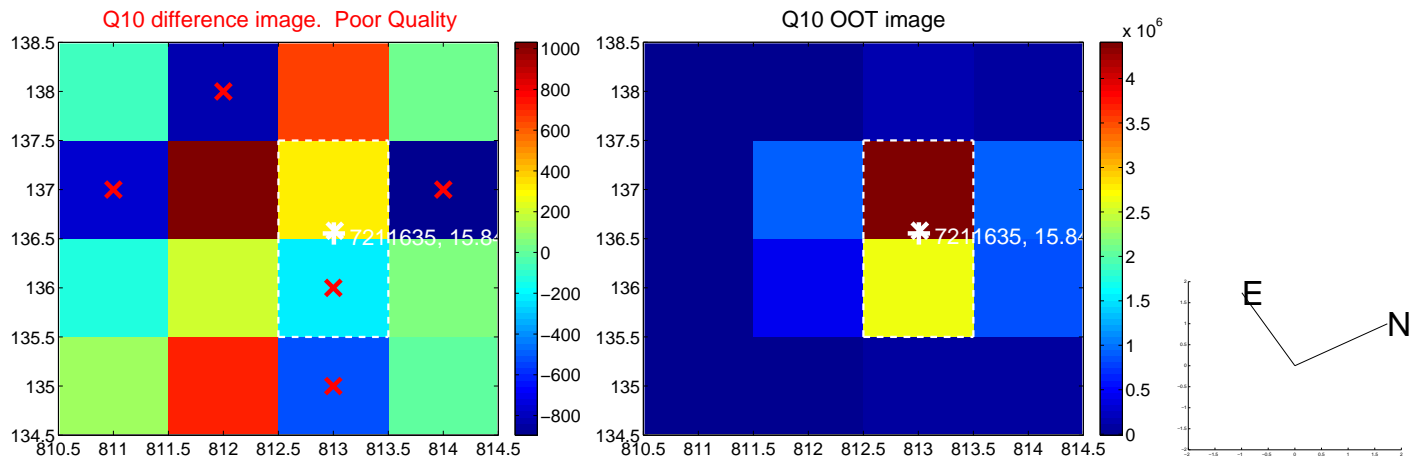
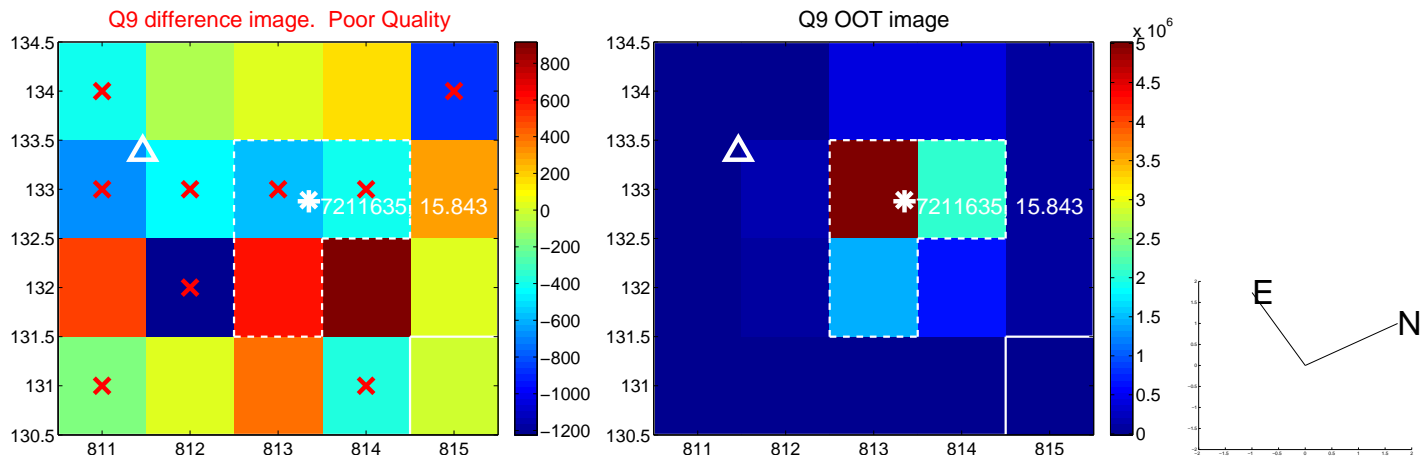
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



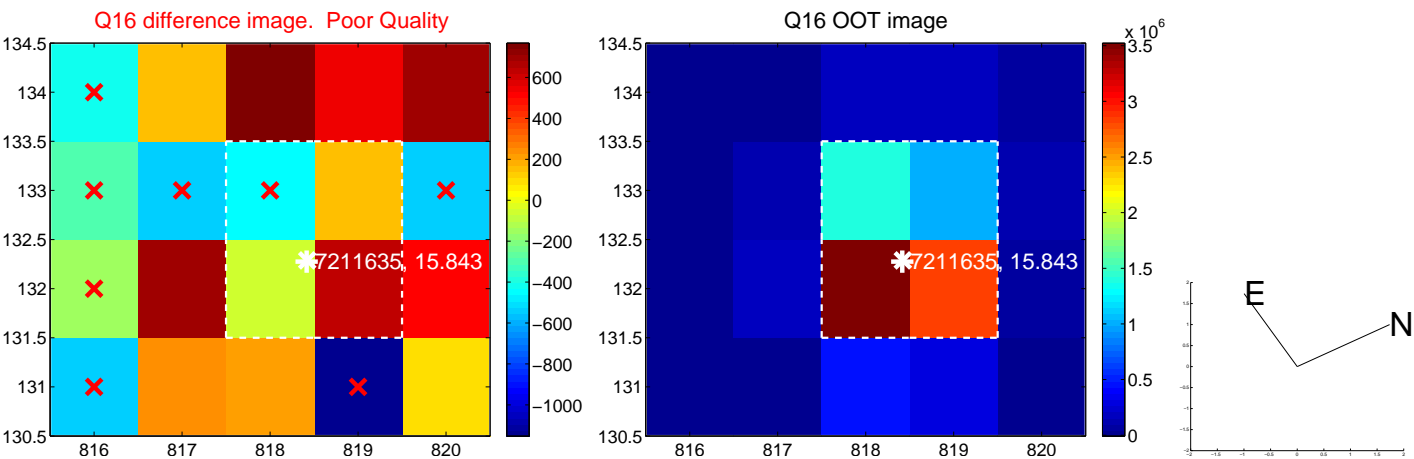
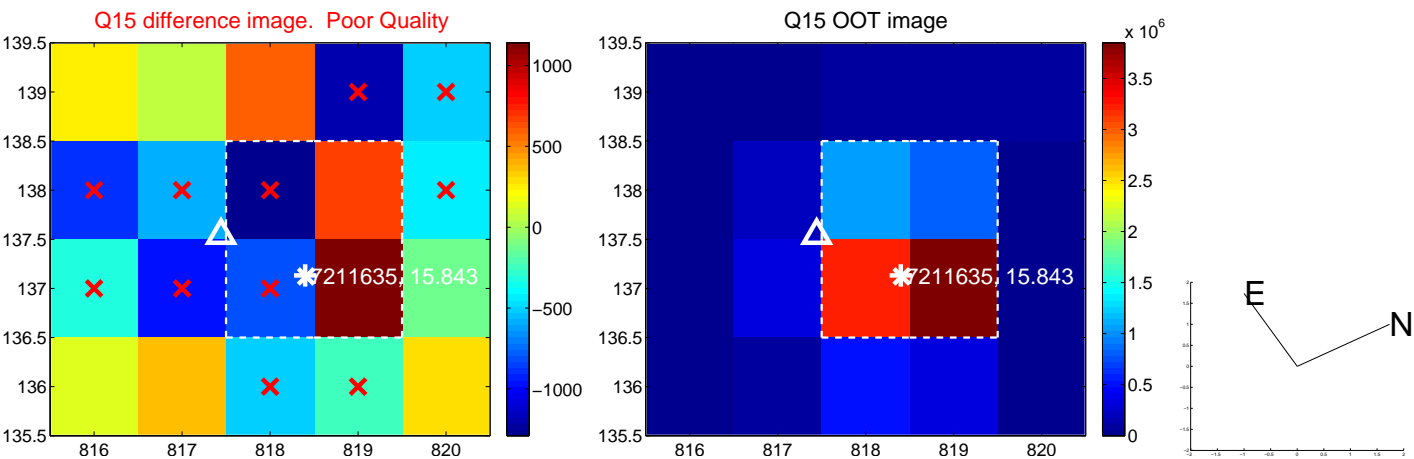
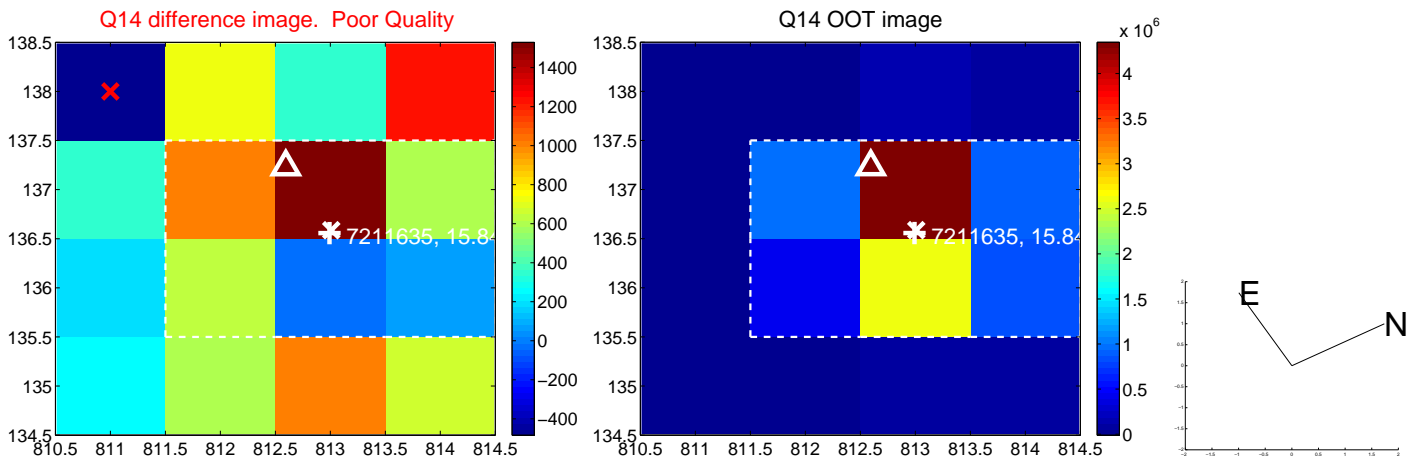
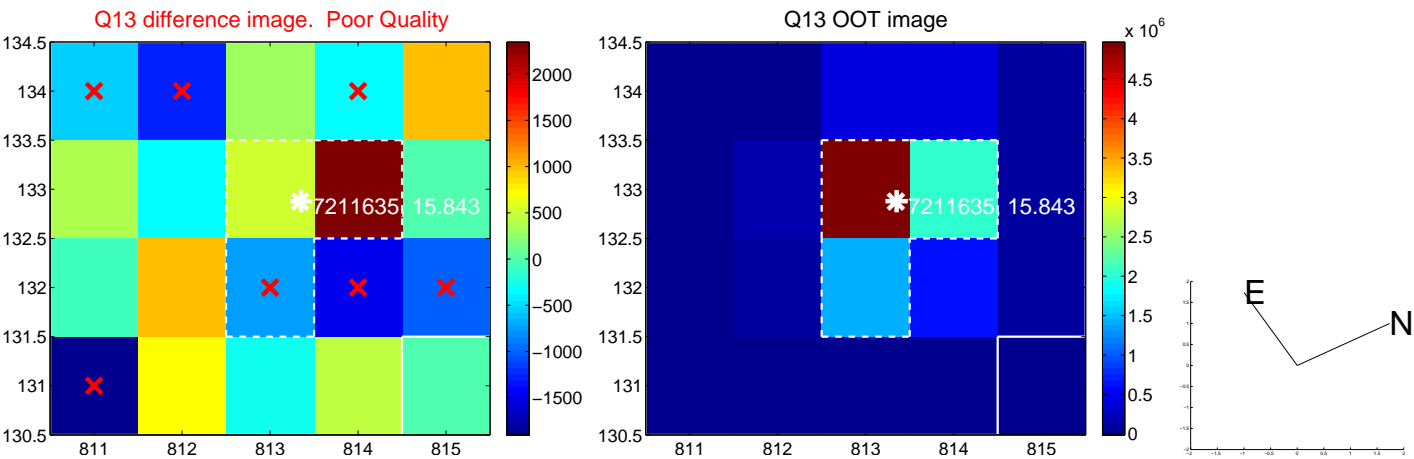
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



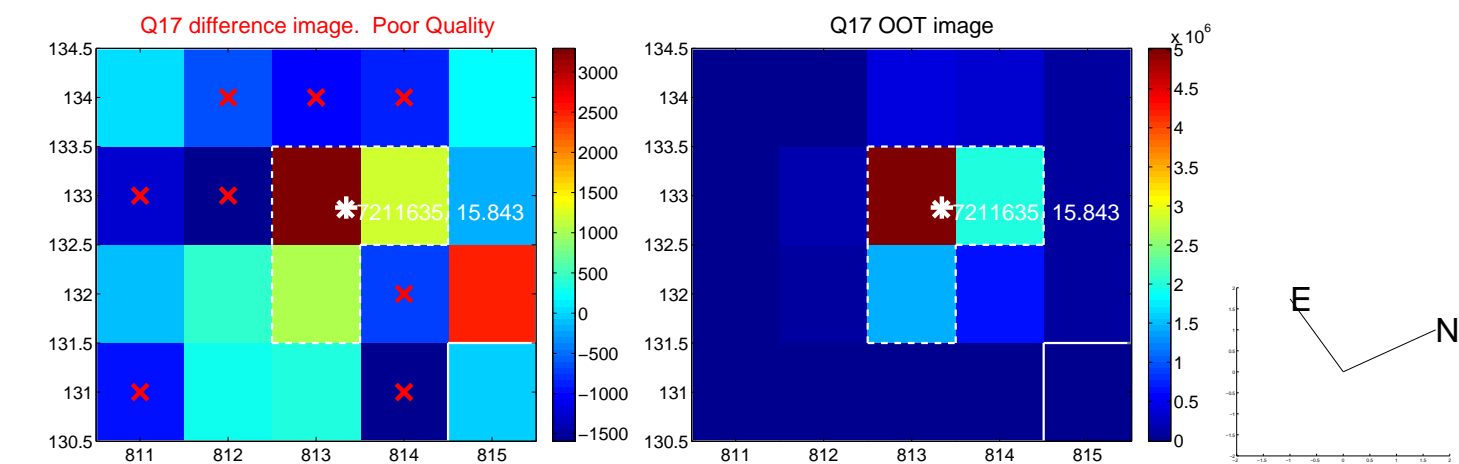
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



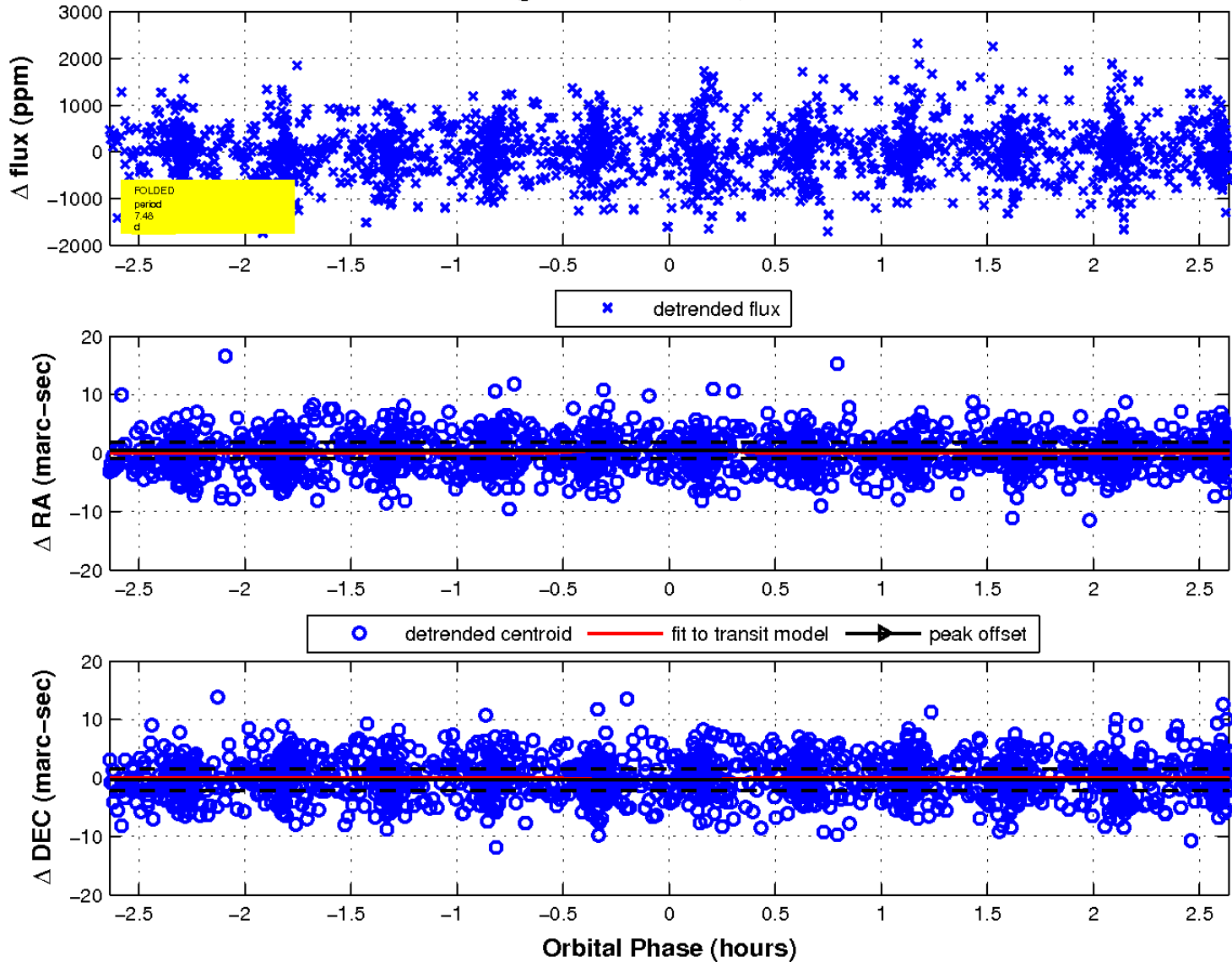
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



fluxWeightedCentroids, Planet 4 of 4



UKIRT Image

Declination

