

# KIC 007293769

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007293769-01	OBS	No	0.706854	131.723375	0.0	4.478	8.8	0.0	3.24	7004	0.03	62233.47
007293769-02	OBS	No	93.453873	144.111803	349.2	1.728	9.6	10.1	3.24	7004	7.00	92.40
007293769-03	OBS	No	74.001039	164.807404	237.6	3.079	8.4	9.4	3.24	7004	5.66	126.13

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007293769-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
007293769-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
007293769-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

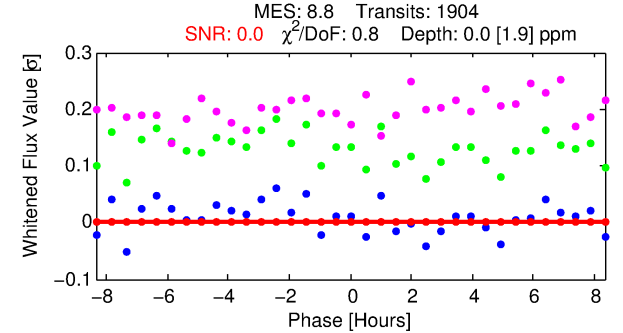
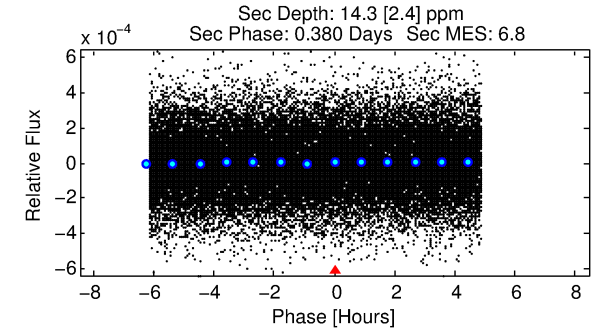
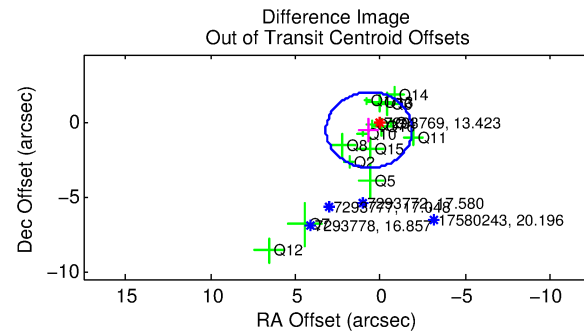
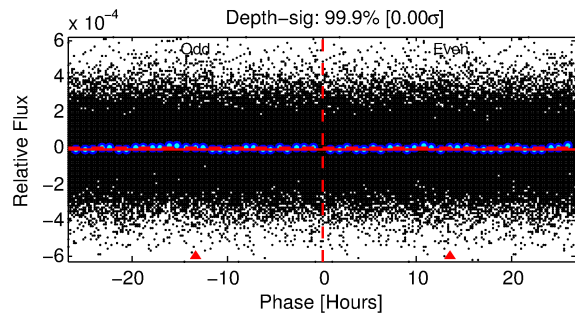
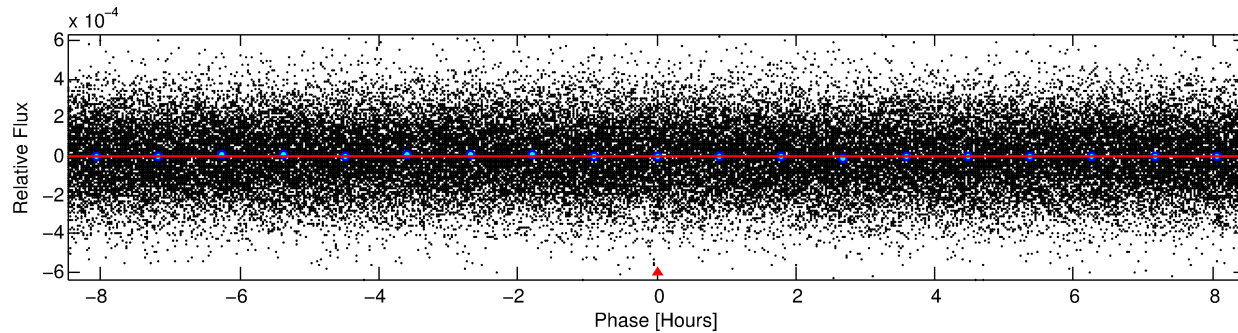
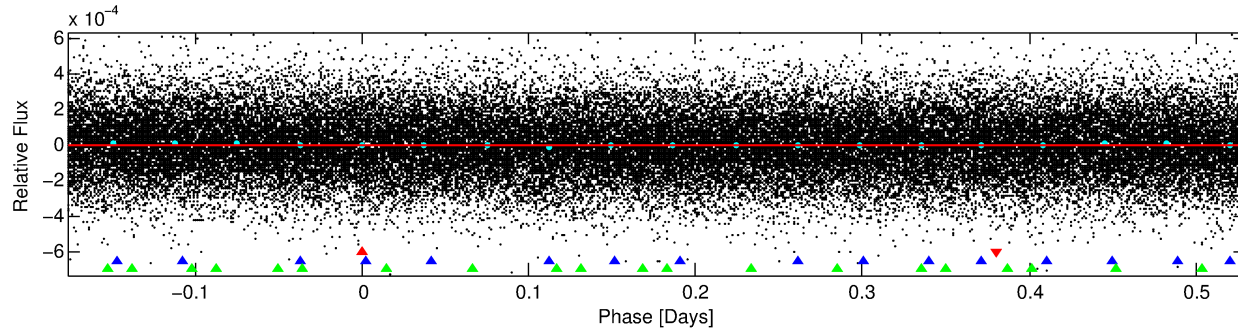
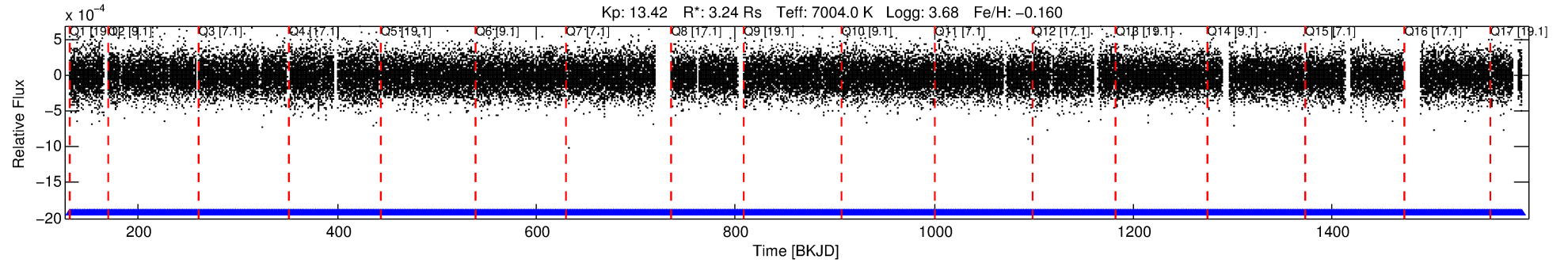
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 007293769-01

No Significant Match Found

# DV One-Page Summary

KIC: 7293769 Candidate: 1 of 3 Period: 0.707 d



## DV Fit Results:

Period = 0.70685 [0.03098] d  
Epoch = 131.7234 [10.5253] BKJD  
Rp/R\* = 0.0001 [0.0124]  
a/R\* = 1.35 [291.92]  
b = 0.10 [4820.34]  
Seff = 62233.47 [33814.55]  
Teq = 4027 [547] K  
Rp = 0.03 [4.39] Re  
a = 0.0191 [0.0064] AU  
Ag = 4031.14 [1328792.65] [0.00 $\sigma$ ]  
Teffp = 49617 [4089125] K [0.01 $\sigma$ ]

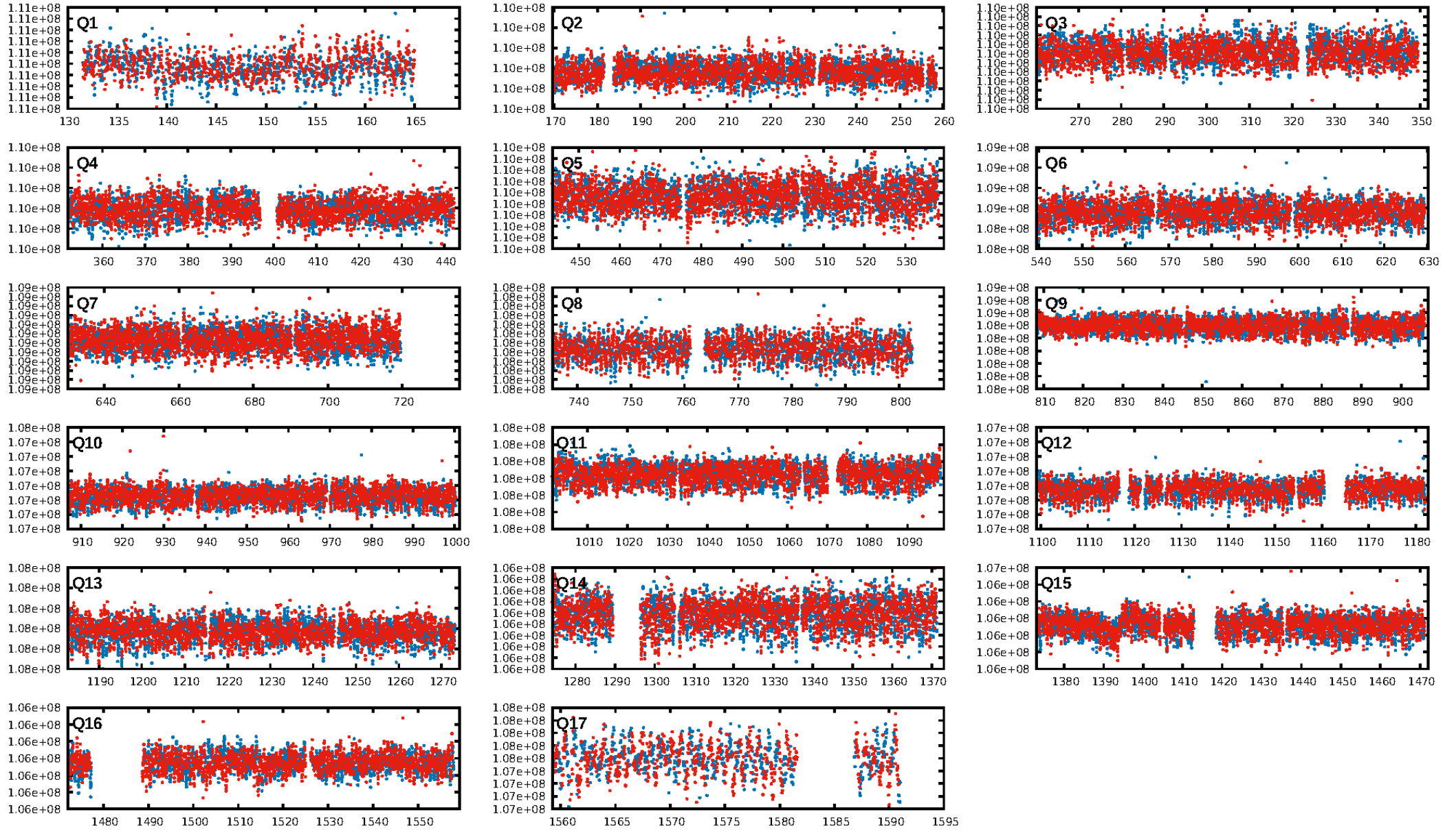
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: 100.0% [323.66 $\sigma$ ]  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
**Bootstrap-pfa: 3.25e-10**  
RollingBand-fgt: 1.00 [1818/1818]  
GhostDiagnostic-chr: N/A  
Centroid-sig: N/A  
Centroid-so: N/A  
OotOffset-rm: 0.846 arcsec [1.00 $\sigma$ ]  
KicOffset-rm: 0.871 arcsec [1.00 $\sigma$ ]  
OotOffset-st: 4/3/4/4 [15]  
KicOffset-st: 4/3/4/4 [15]  
DiffImageQuality-fgm: 0.33 [5/15]  
DiffImageOverlap-fno: 1.00 [17/17]

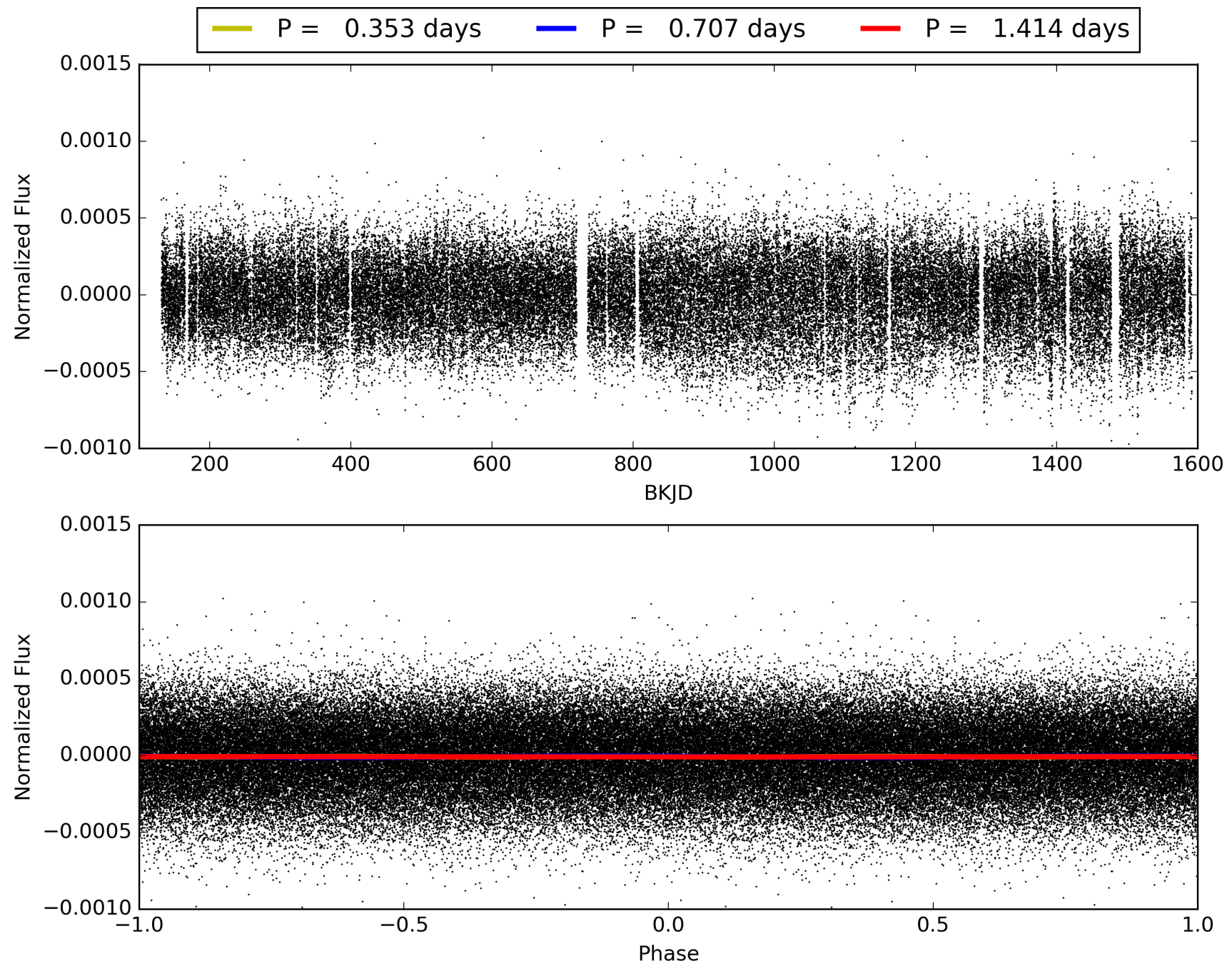
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 04:40:38 Z

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

# TCE 007293769-01, PDC Light Curves



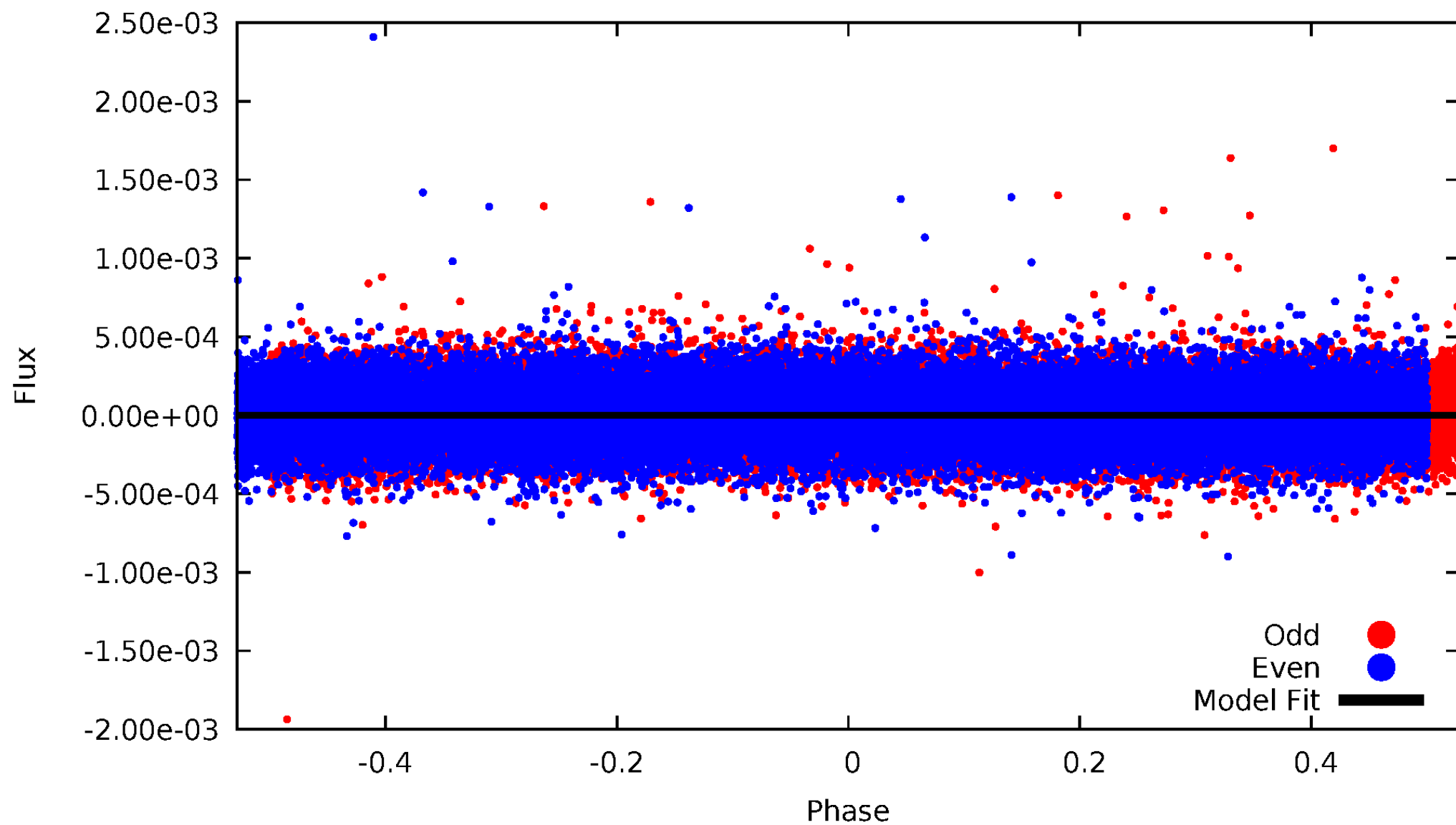
TCE 007293769-01





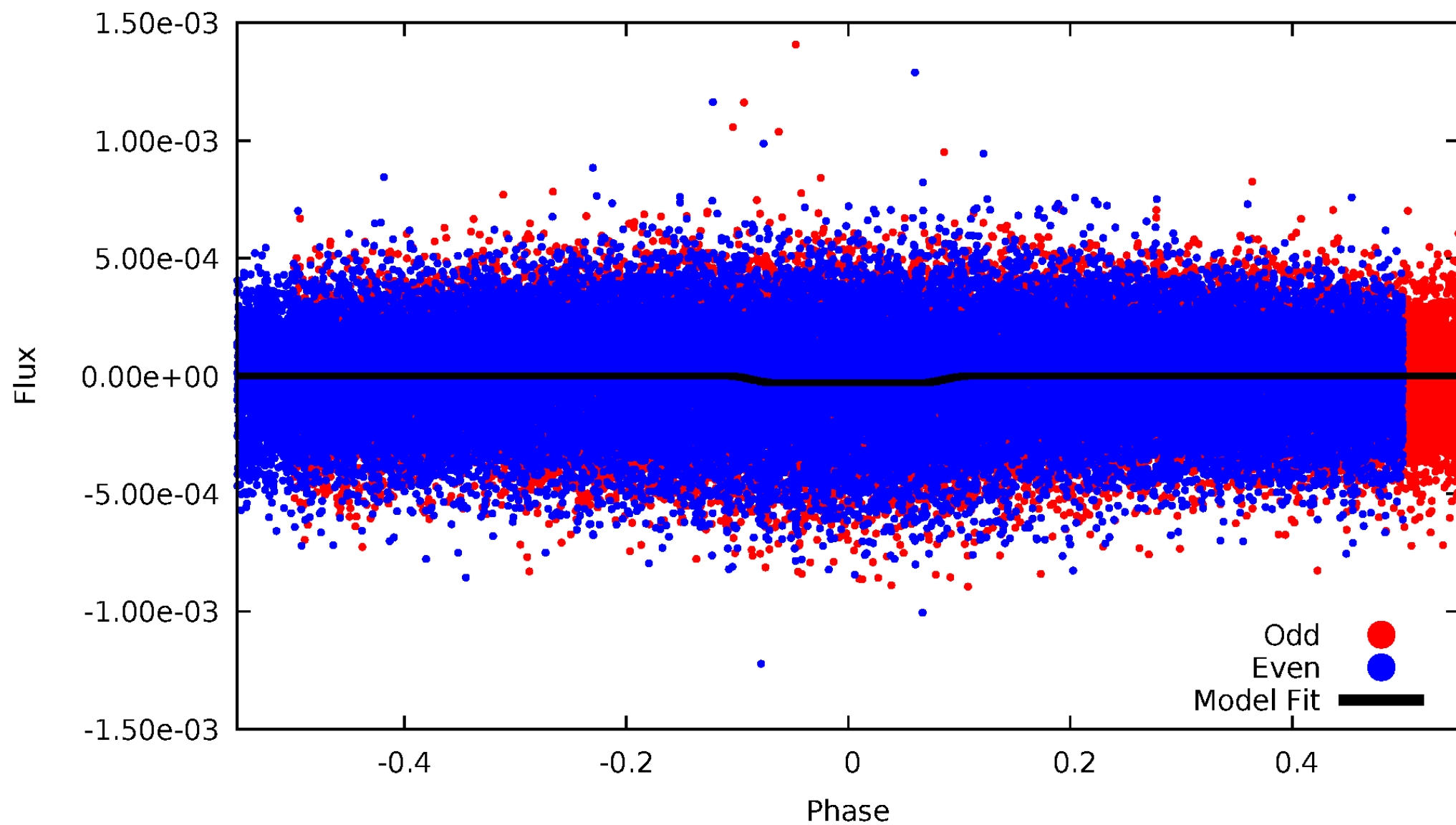
# DV Odd/Even

TCE 007293769-01

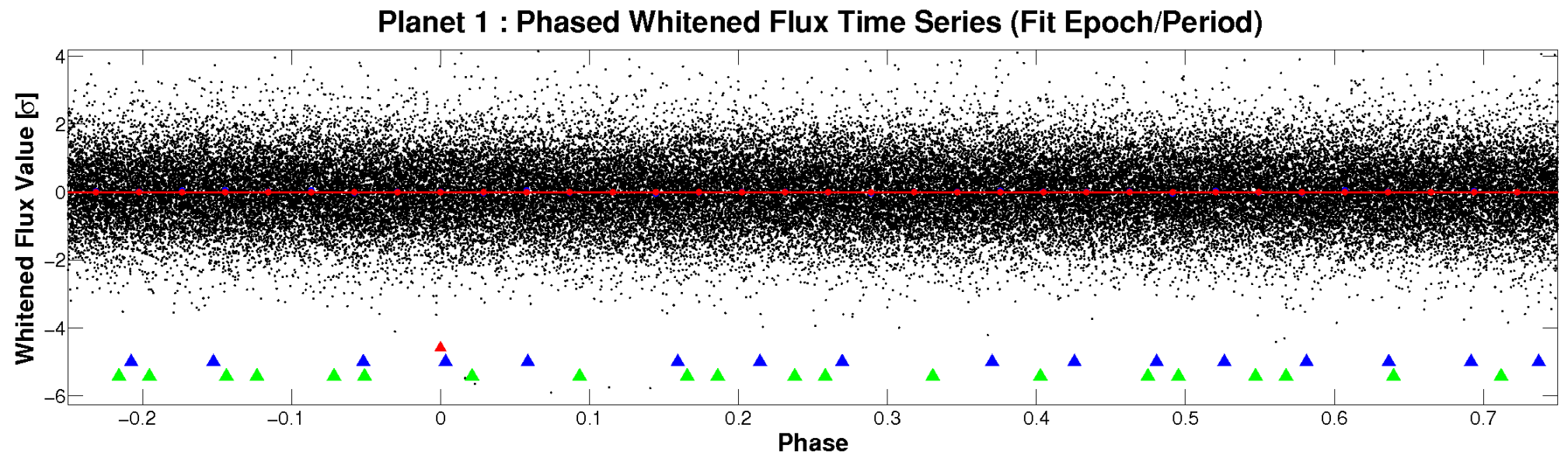
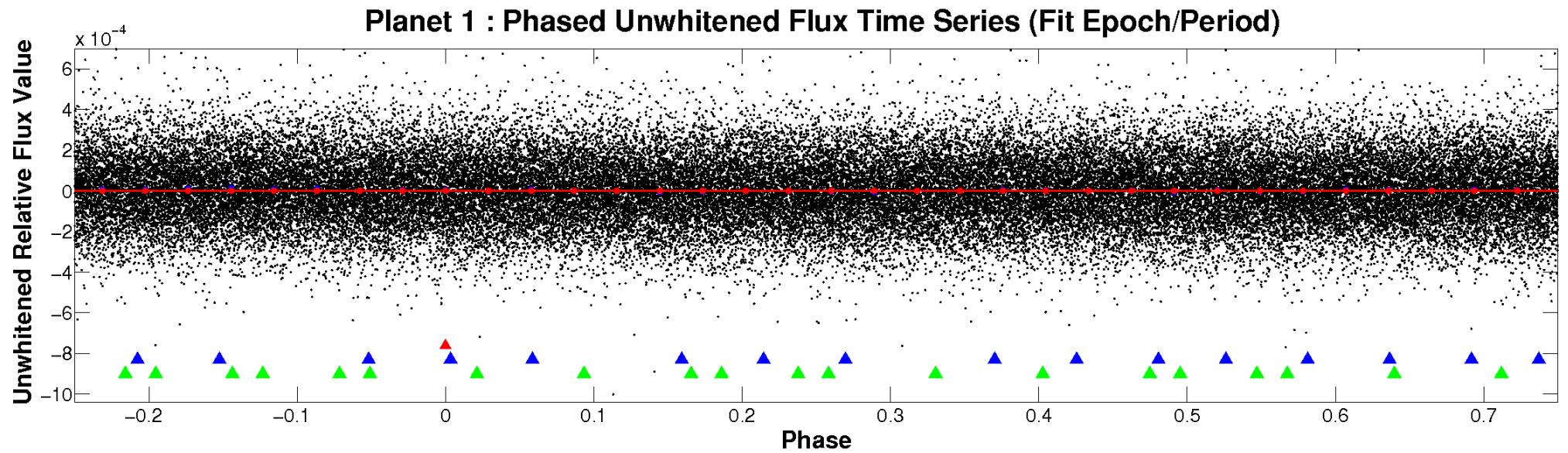


# ALT Odd/Even

TCE 007293769-01

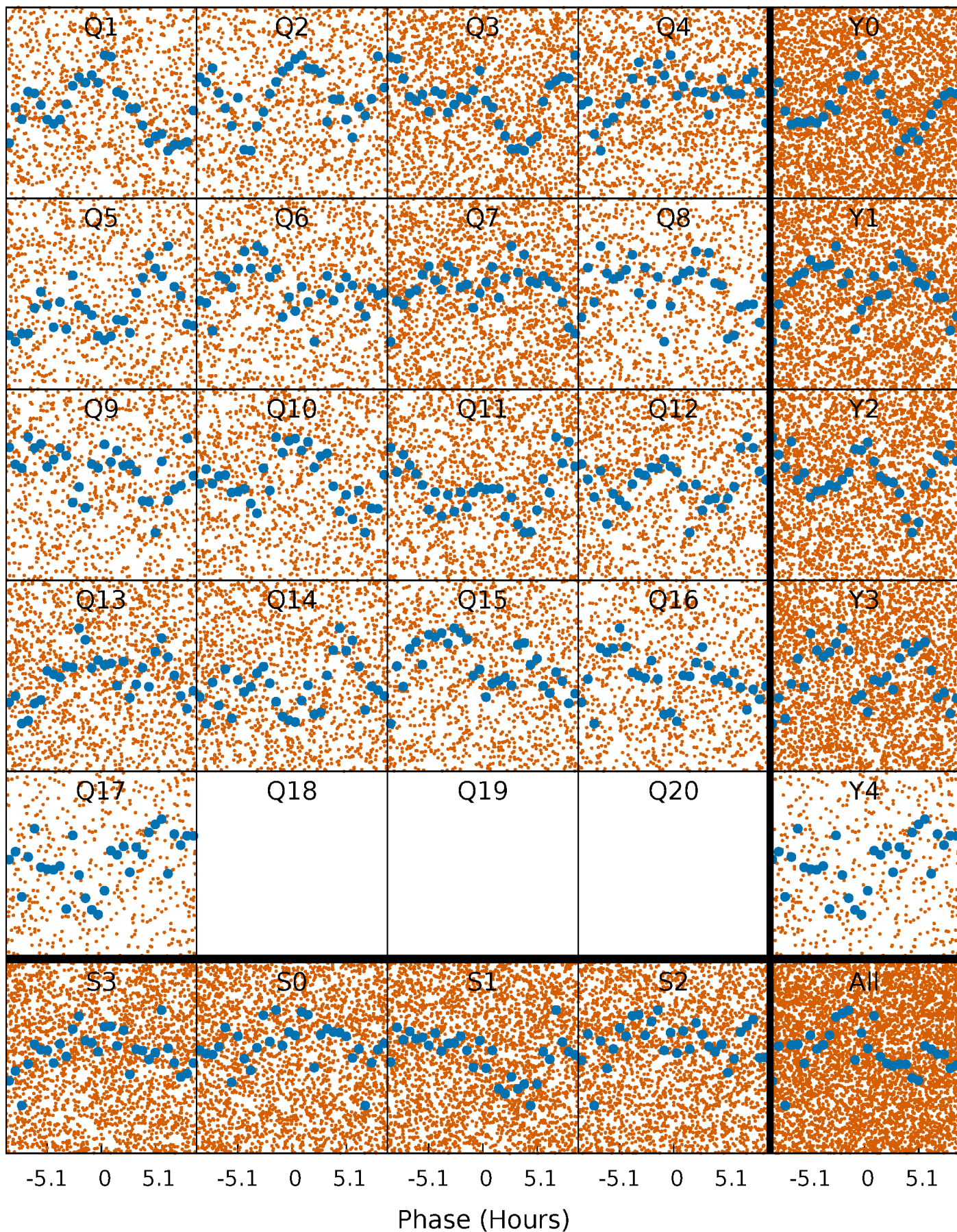


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

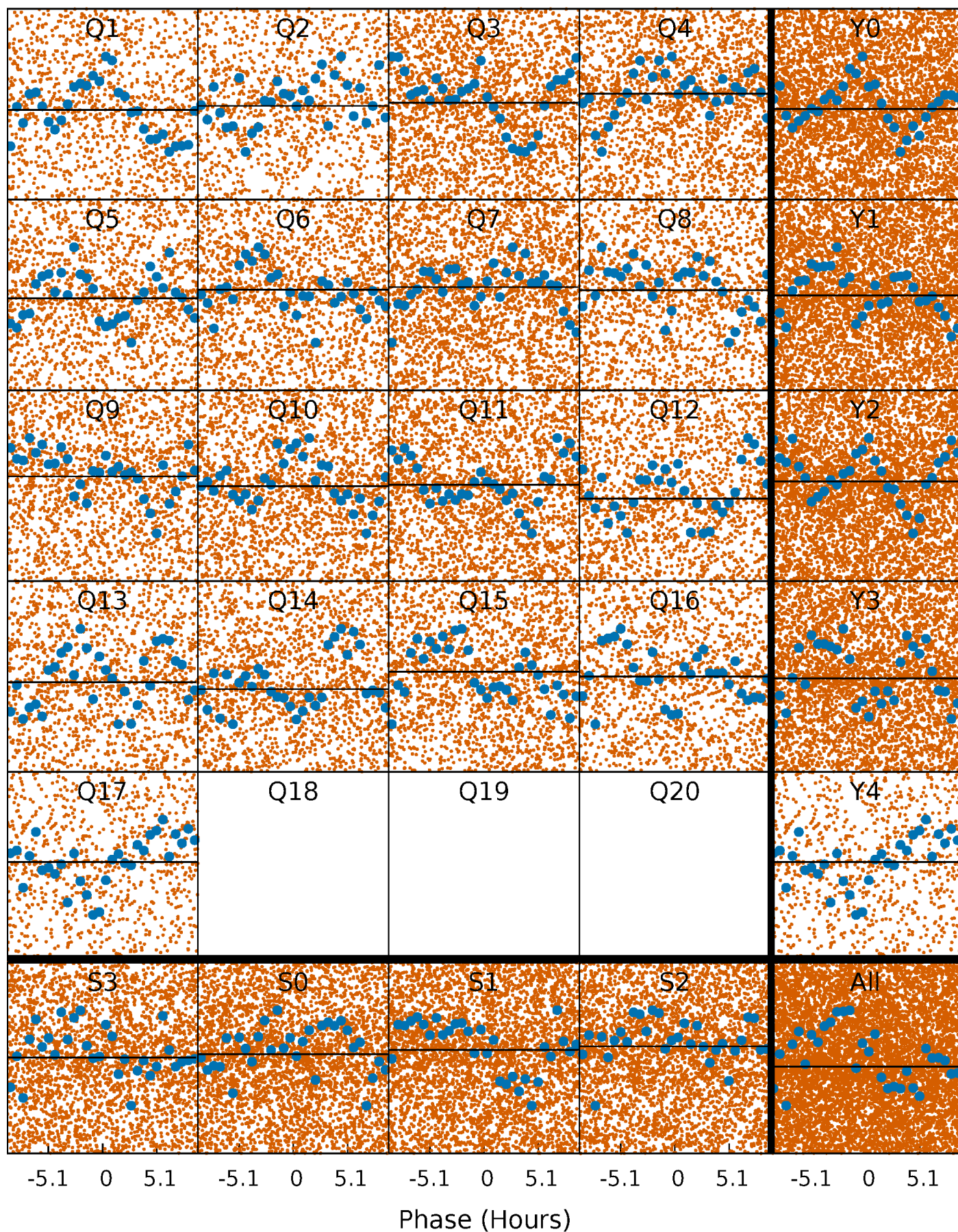
TCE 007293769-01 P= 0.706854 Days  $T_0=131.723375$  (BKJD)





# DV Quarter-Phased Transit Curves

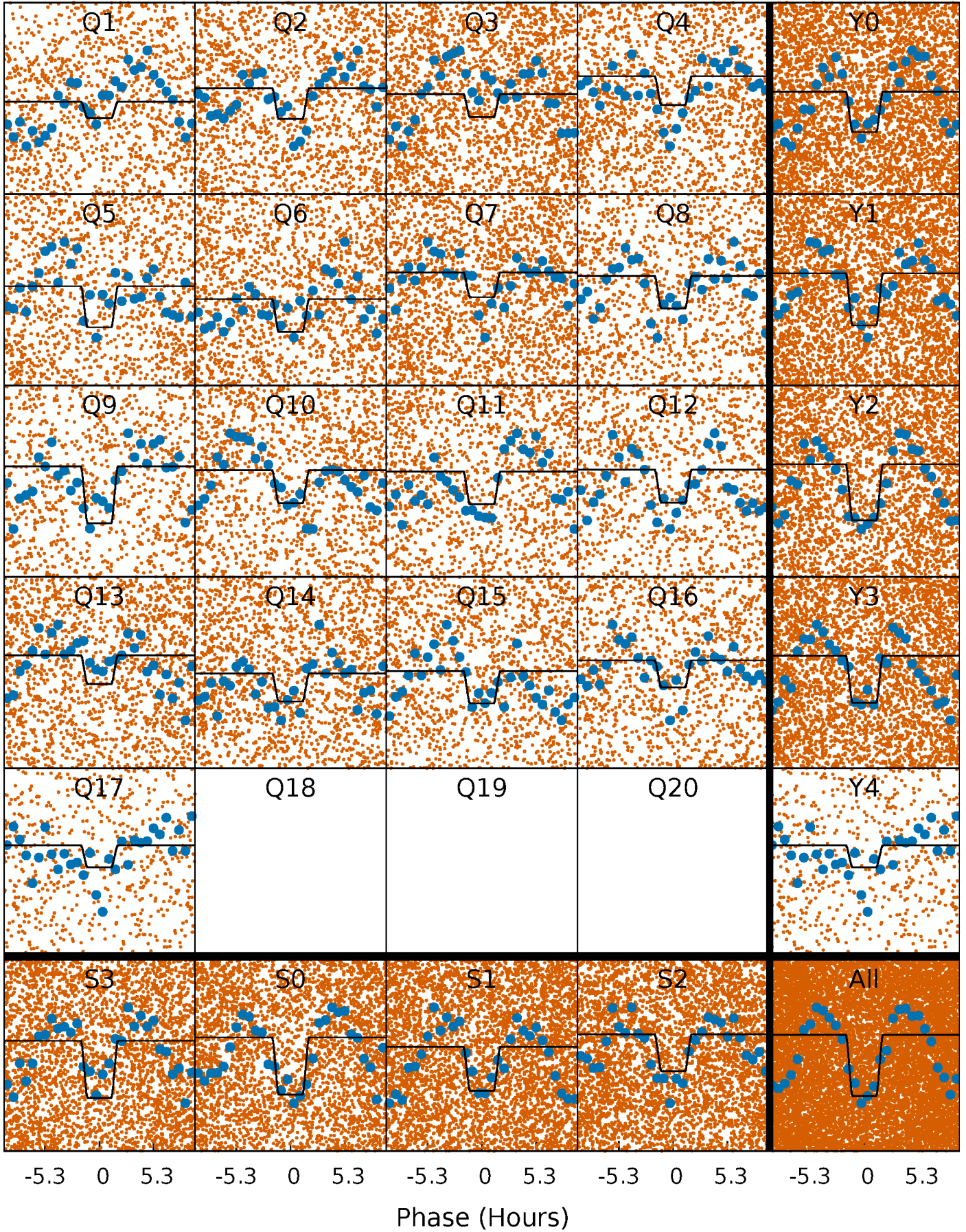
TCE 007293769-01   P= 0.706854 Days    $T_0=131.723375$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

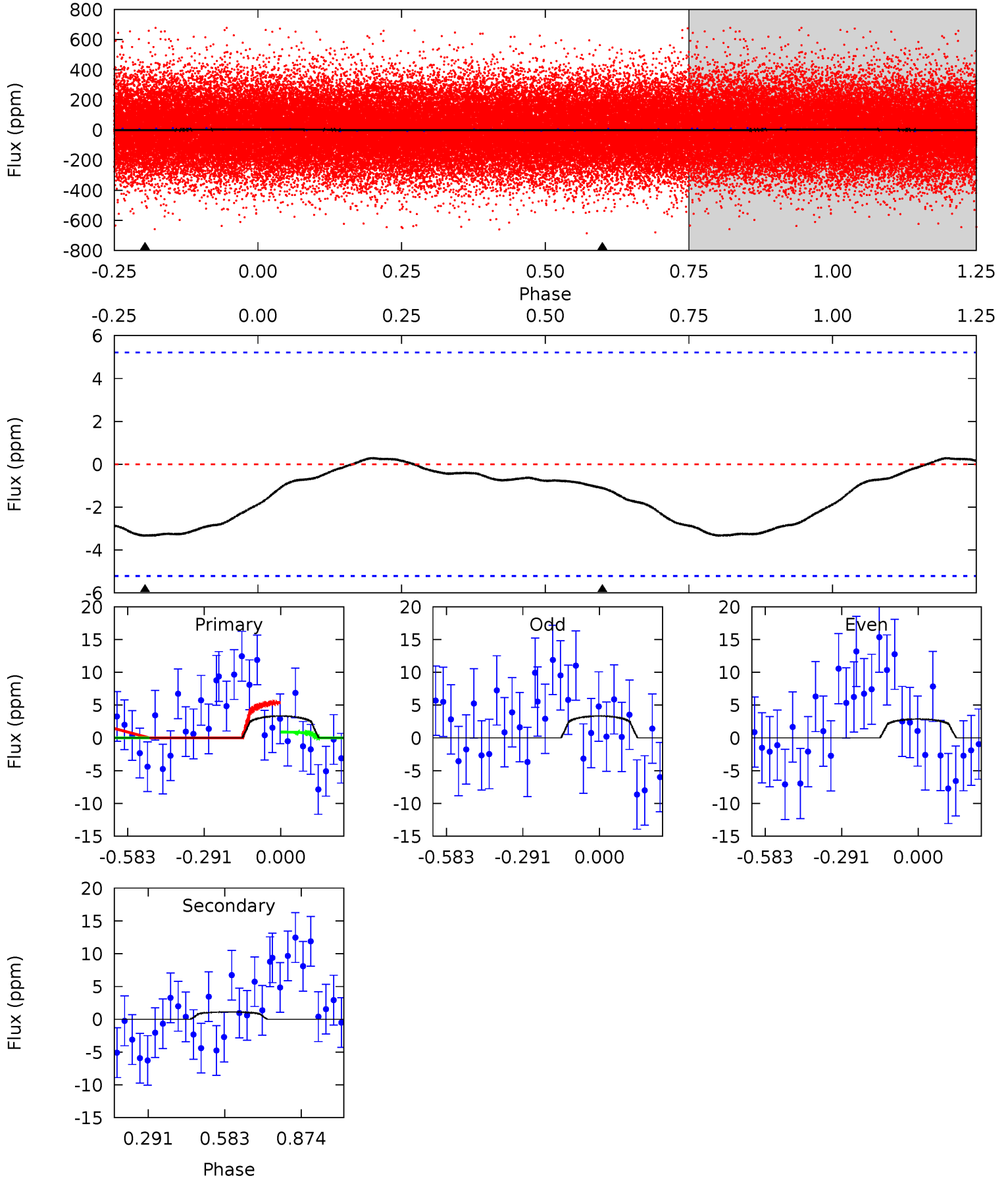
TCE 007293769-01 P= 0.706566 Days  $T_0=131.563443$  (BKJD)



# DV Model-Shift Uniqueness Test

007293769-01, P = 0.706854 Days, E = 131.016521 Days

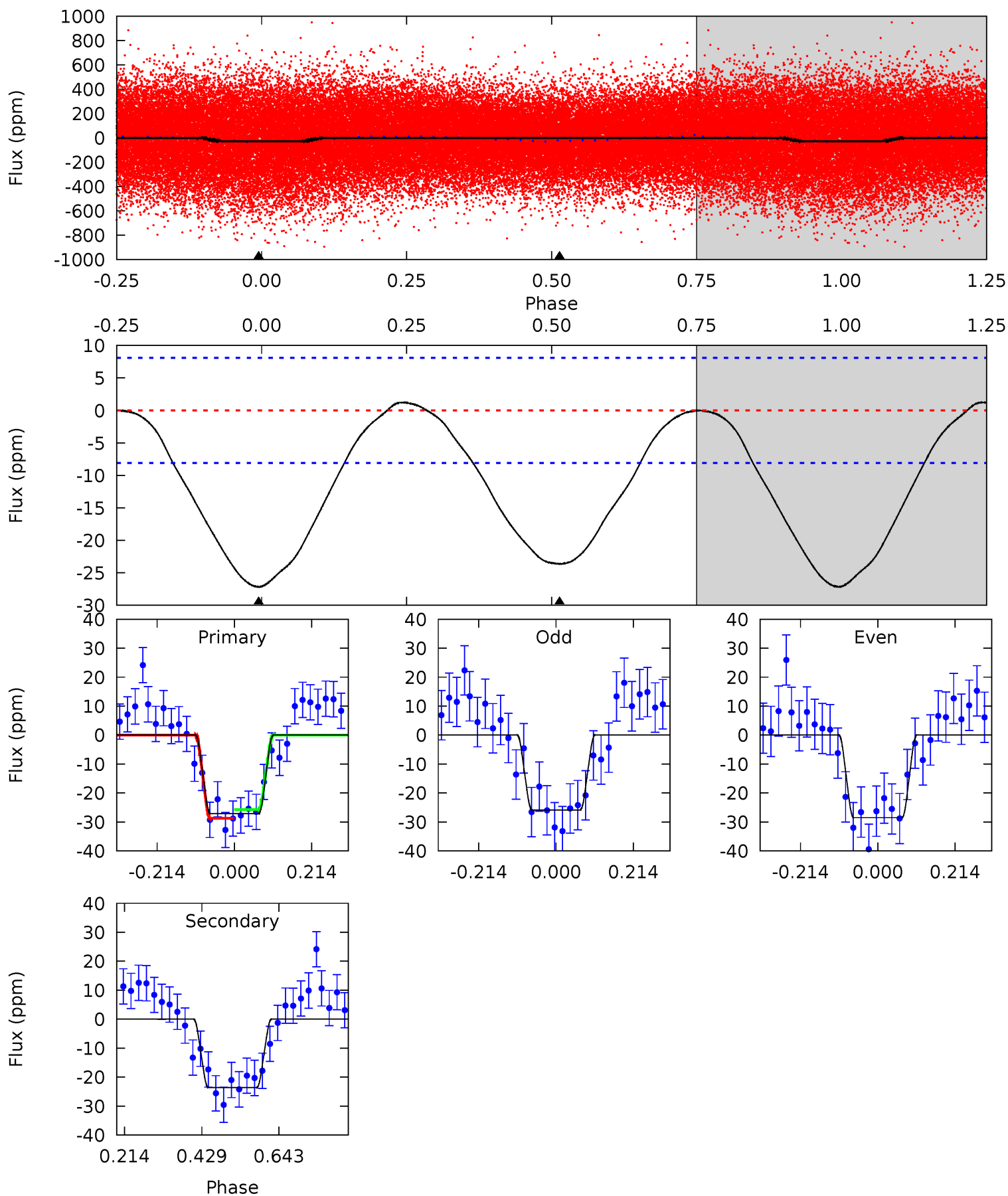
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.77	0.93	0	0	4.34	1.06	0.23	2.77	2.77	0.93	0.93	0.19	1.06	0.08	1.88



# Alt Model-Shift Uniqueness Test

007293769-01, P = 0.706566 Days, E = 130.856877 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
14.8	12.8	0	0	4.40	1.24	0.32	14.8	14.8	12.8	12.8	0.73	2.35	0.04	0.80





### Stellar Parameters For KIC 007293769

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M$ ( $M_{\odot}$ )	$\rho_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$7004^{+220}_{-269}$	$3.684^{+0.296}_{-0.074}$	$-0.160^{+0.300}_{-0.250}$	$3.238^{+0.402}_{-1.207}$	$1.847^{+0.178}_{-0.414}$	$0.077^{+0.164}_{-0.019}$
	+3%/-4%	+8%/-2%	+188%/-156%	+12%/-37%	+10%/-22%	+214%/-25%
Source	PHO1	FLK73	KIC0	DSEP		

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

### Secondary Eclipse Parameters for KIC 007293769-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$-1 \pm 1$	$2.97^{+3.18}_{-2.26}$	$5505^{+323}_{-489}$	$-4502^{+1994}_{-324}$	$0.017^{+0.276}_{-0.019}$
Alt.	$-24 \pm 2$	$3.39^{+3.53}_{-2.38}$	$5498^{+315}_{-477}$	$3650^{+4843}_{-7954}$	$0.404^{+3.882}_{-0.307}$

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

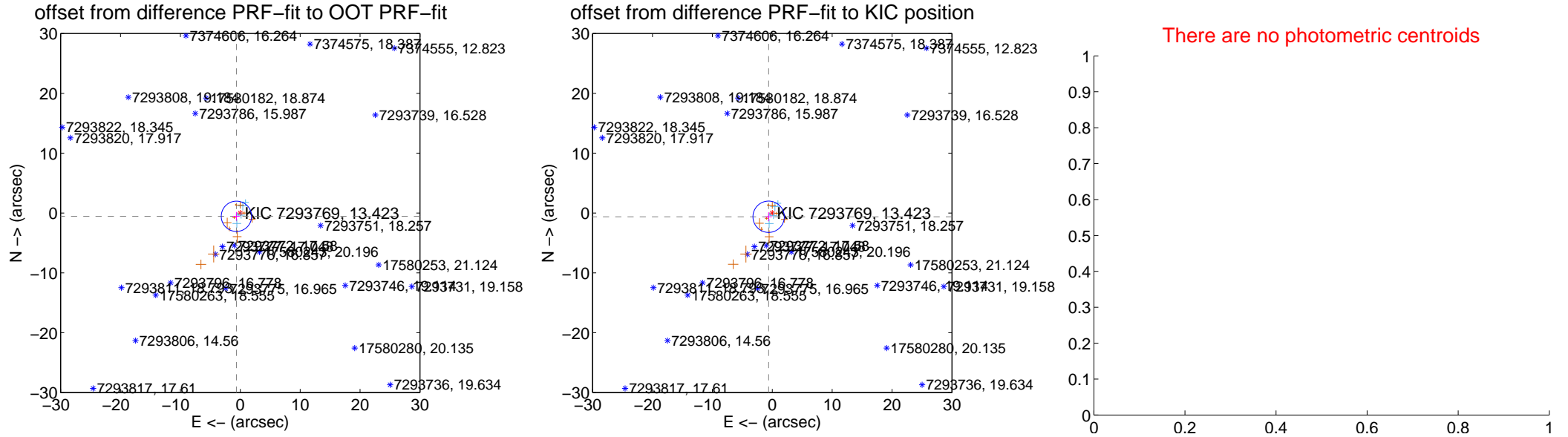
## DV Centroid Data

Supplemental centroid analysis for 007293769-01. Kepler magnitude: 13.42. Transit SNR 0.00

There are 5 quarters with good PRF difference image offsets

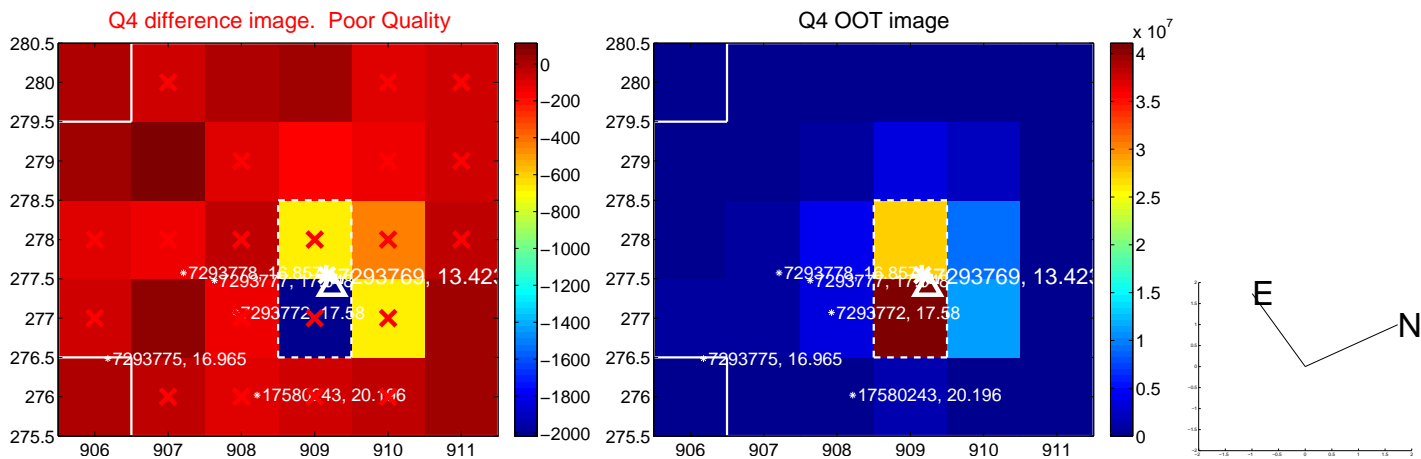
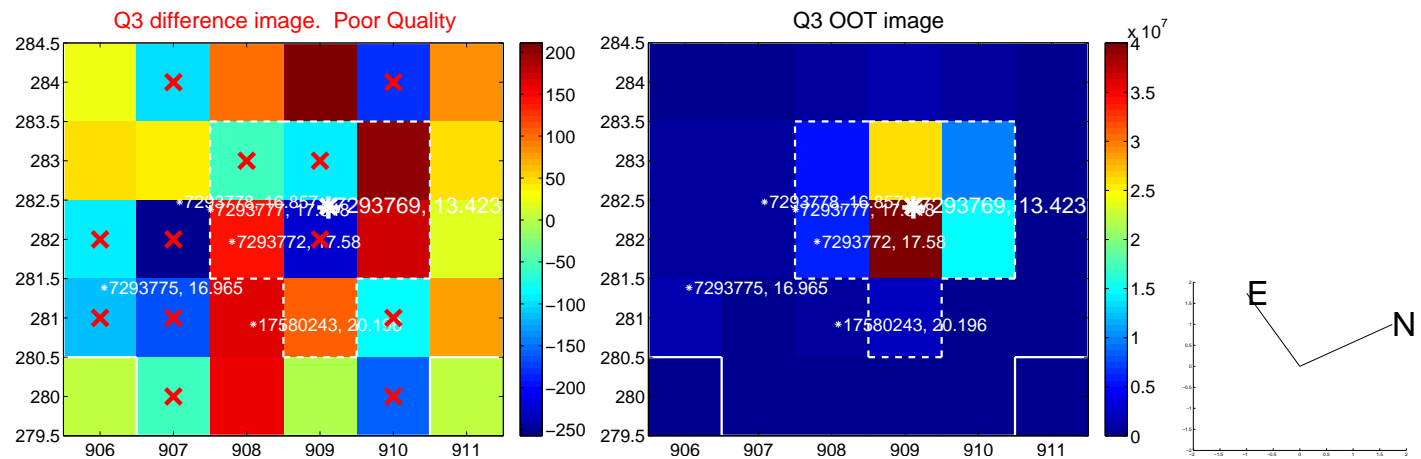
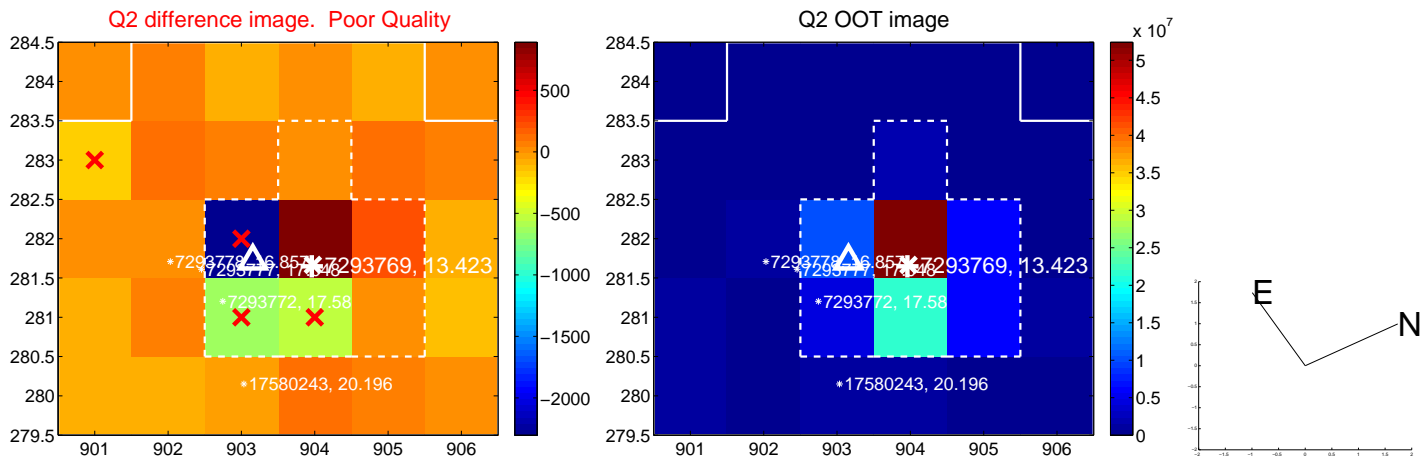
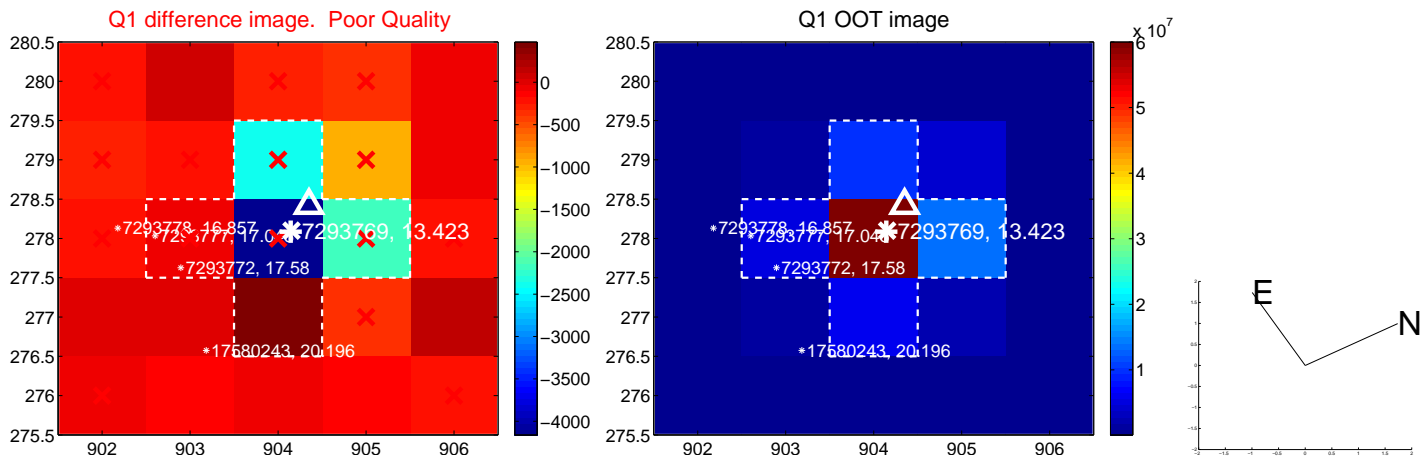
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.846 \pm 0.844$	1.00	$0.644 \pm 0.535$	$-0.549 \pm 0.728$
PRF-fit source offset from KIC position	$0.871 \pm 0.872$	1.00	$0.607 \pm 0.530$	$-0.625 \pm 0.748$
photometric centroid source offset	—	—	—	—

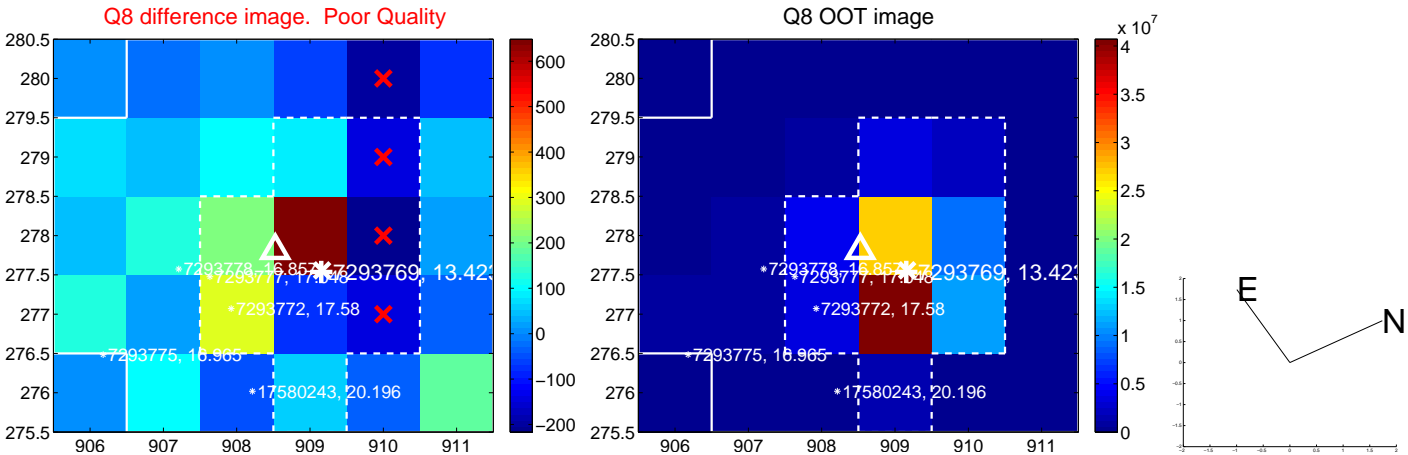
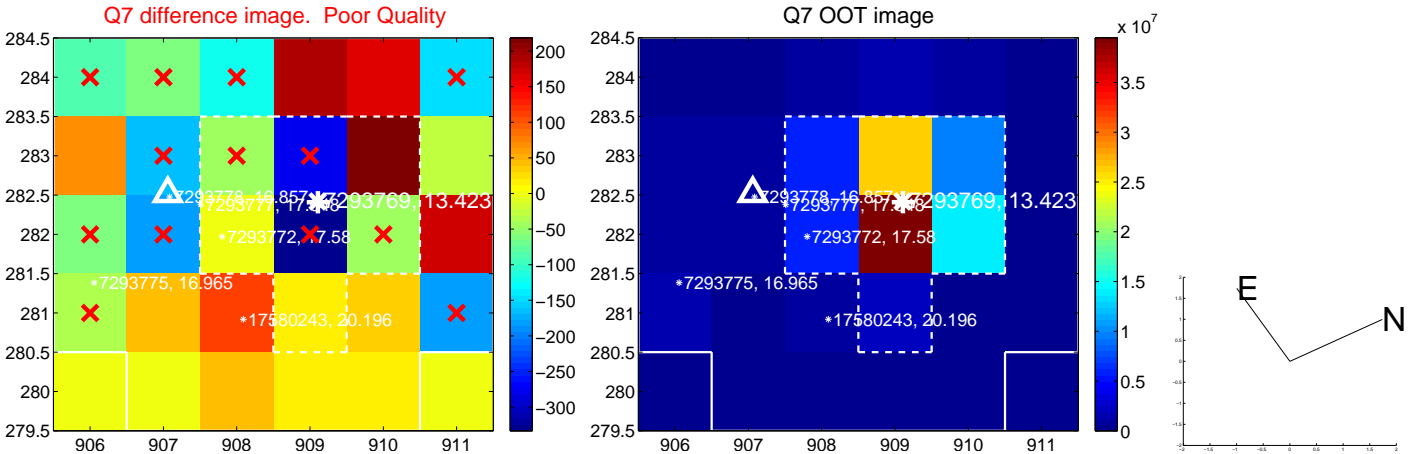
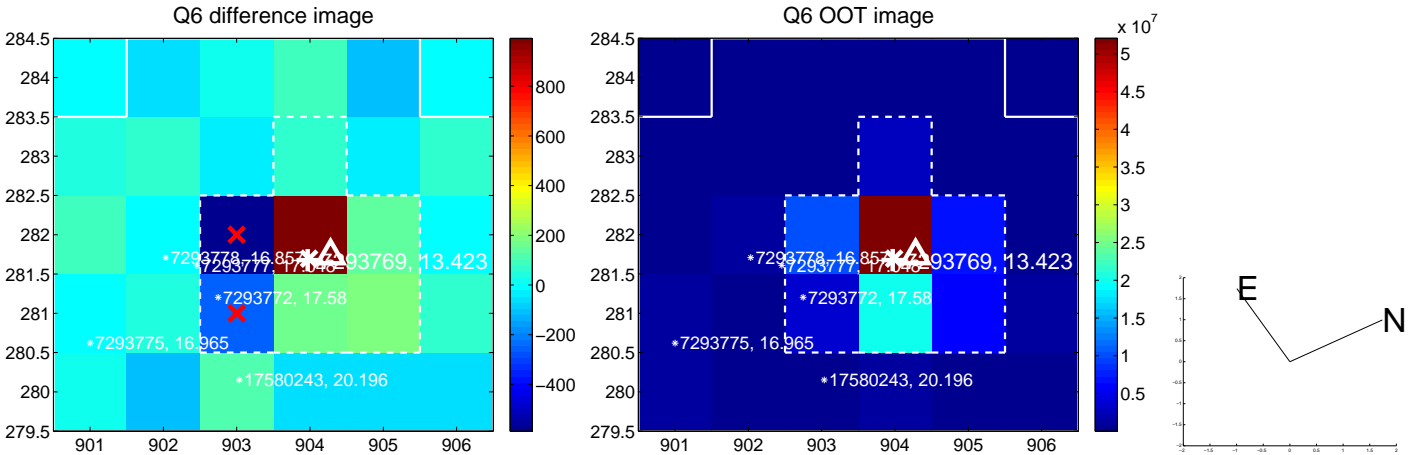
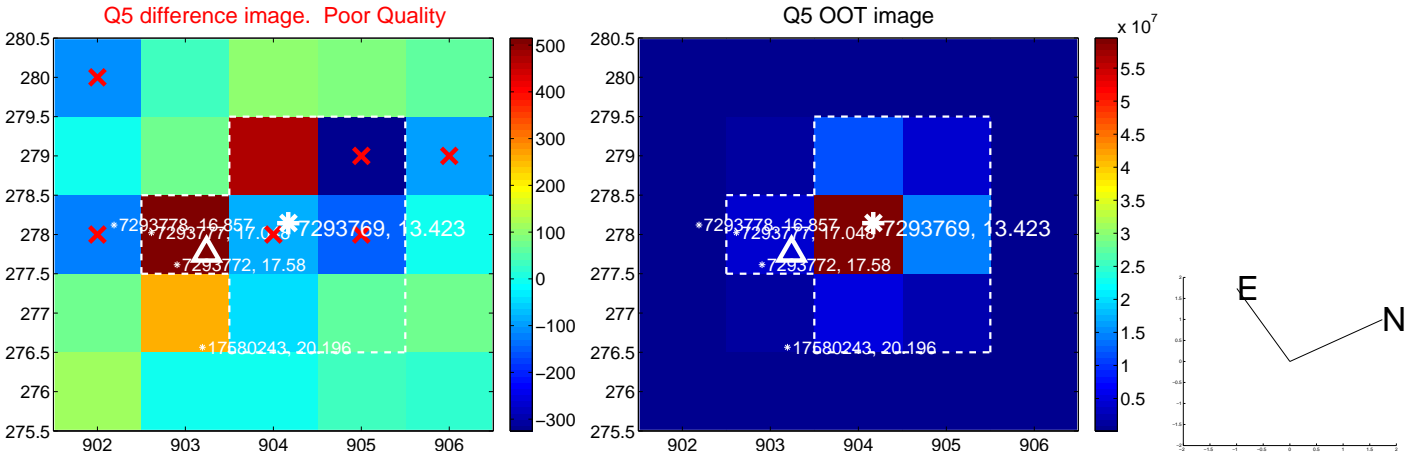


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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



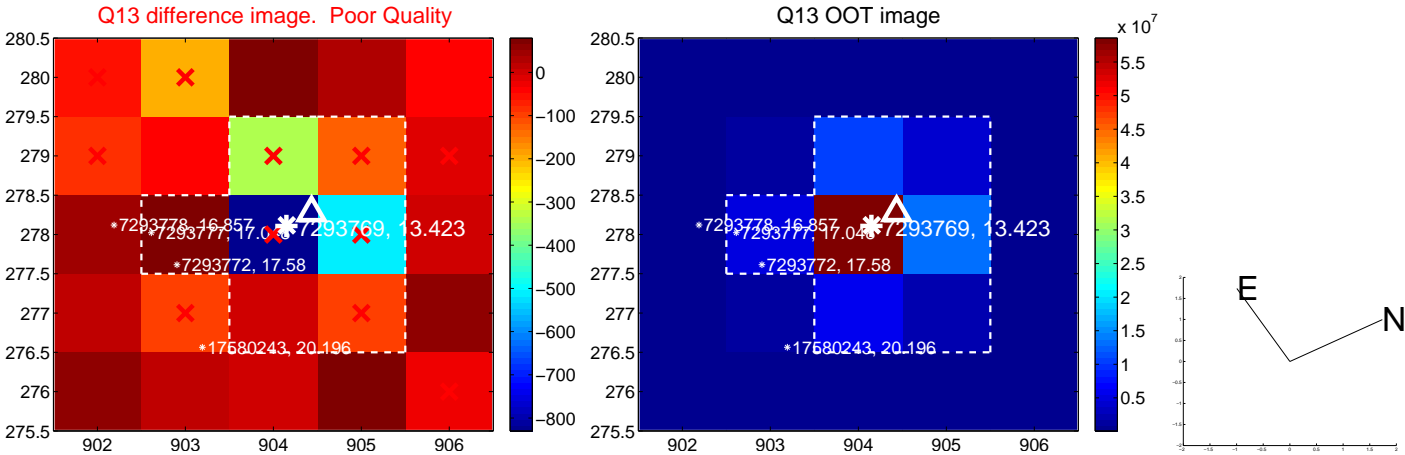
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



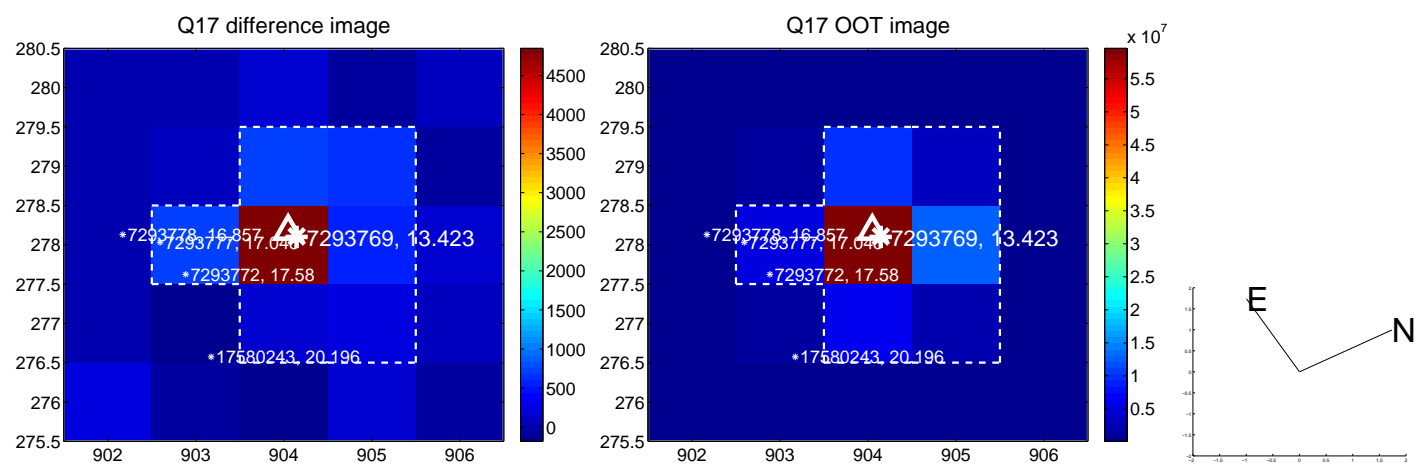




white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

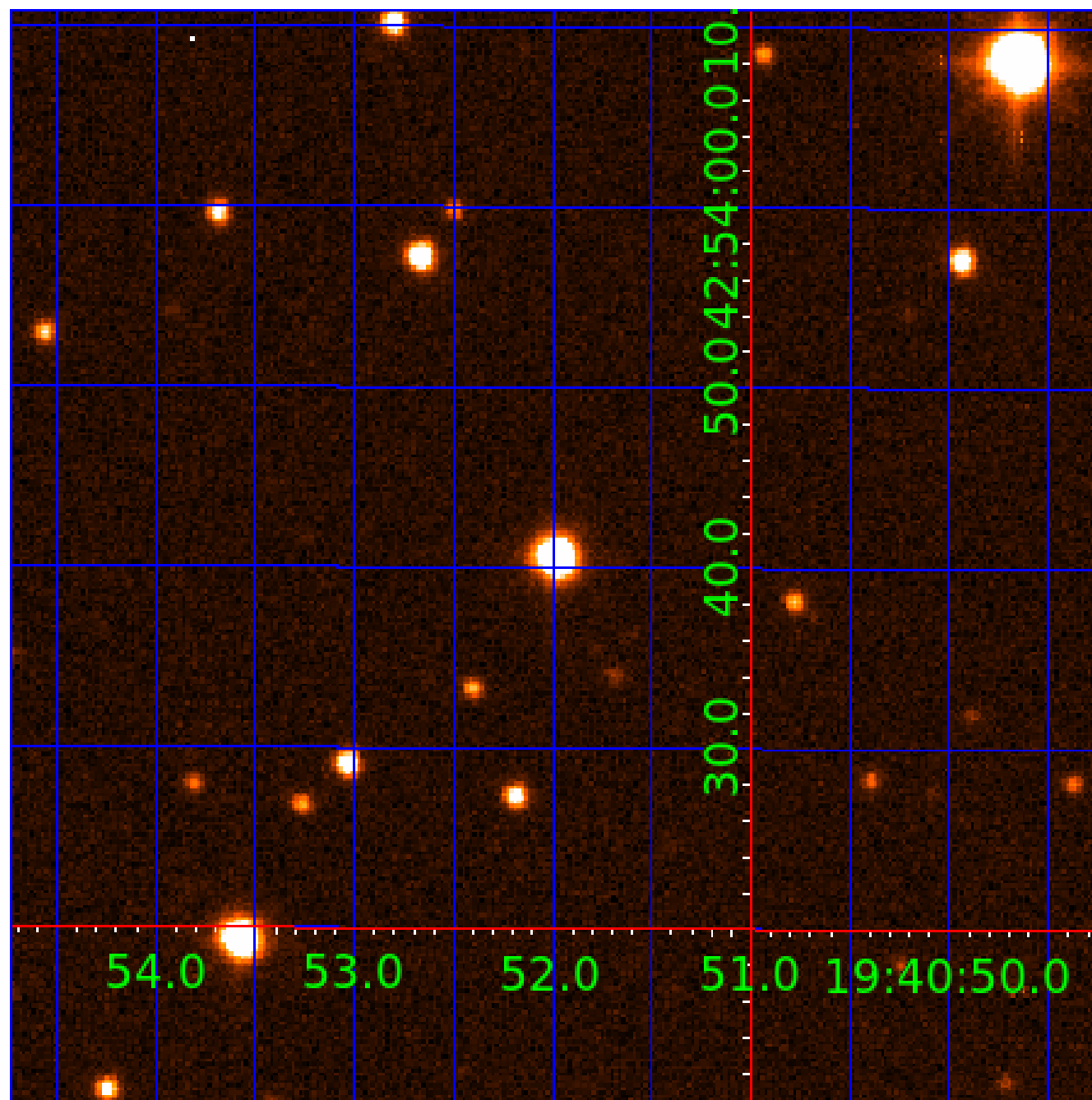


folded centroid time series figure for this object.



UKIRT Image

Declination





# KIC 007293769

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007293769-01	OBS	No	0.706854	131.723375	0.0	4.478	8.8	0.0	3.24	7004	0.03	62233.47
007293769-02	OBS	No	93.453873	144.111803	349.2	1.728	9.6	10.1	3.24	7004	7.00	92.40
007293769-03	OBS	No	74.001039	164.807404	237.6	3.079	8.4	9.4	3.24	7004	5.66	126.13

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007293769-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
007293769-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
007293769-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

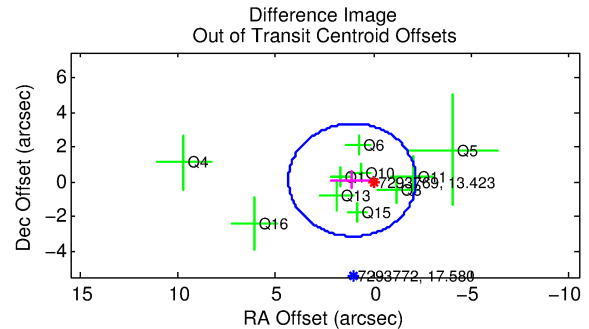
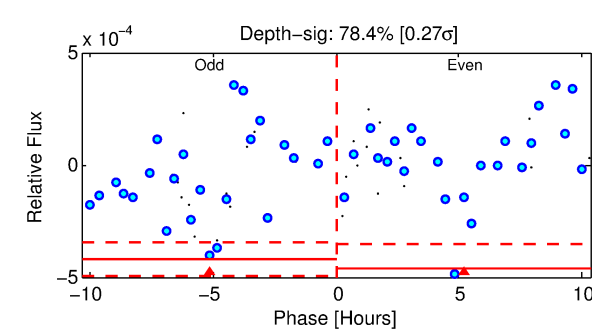
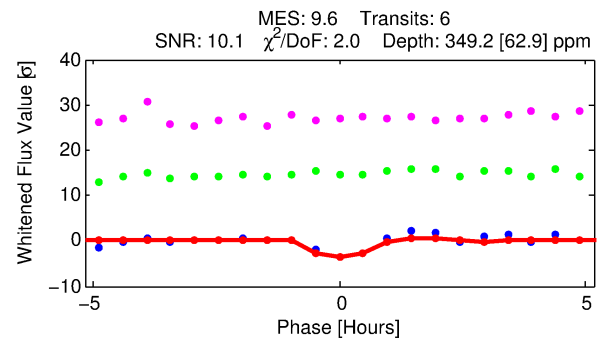
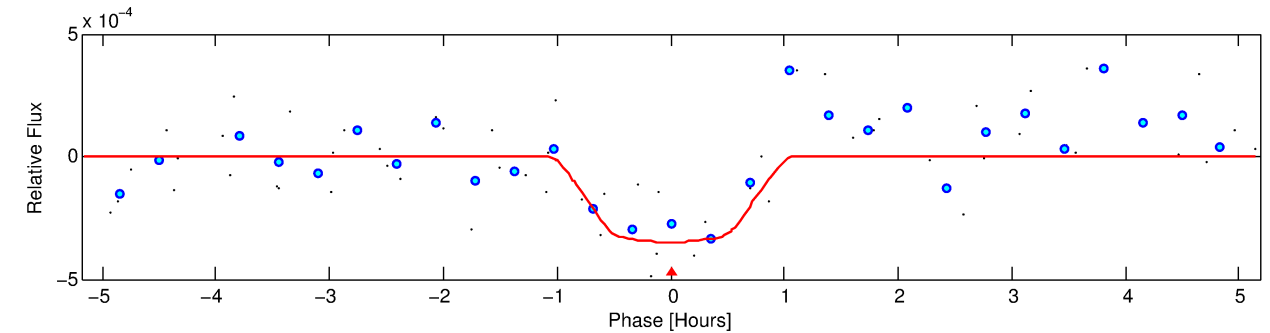
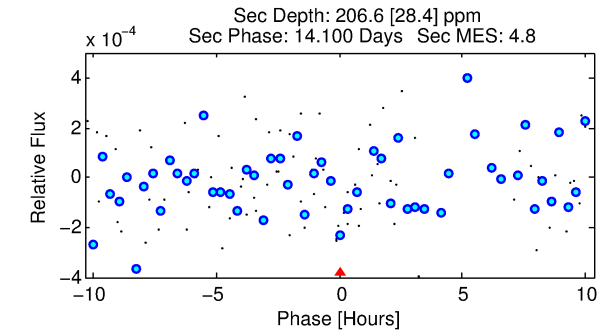
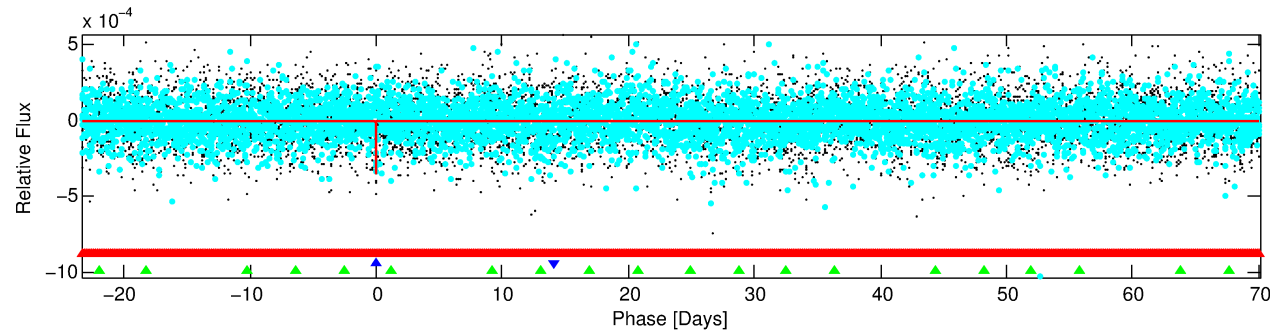
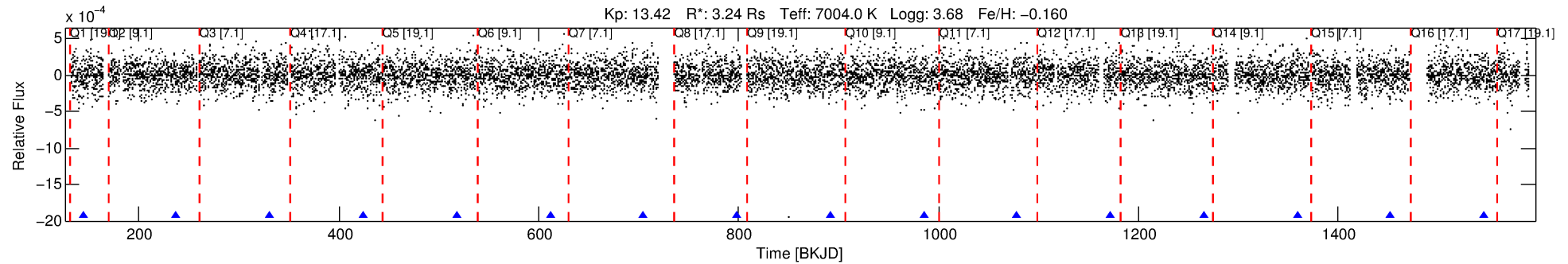
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 007293769-02

No Significant Match Found

# DV One-Page Summary

KIC: 7293769 Candidate: 2 of 3 Period: 93.454 d



## DV Fit Results:

Period = 93.45387 [0.00066] d  
Epoch = 144.1118 [0.0072] BKJD  
Rp/R\* = 0.0198 [0.0190]  
a/R\* = 205.02 [1185.18]  
b = 0.89 [1.36]  
Seff = 92.40 [49.91]  
Teq = 791 [107] K  
Rp = 7.00 [7.20] Re  
a = 0.4946 [0.1665] AU  
Ag = 567.12 [1129.16] [0.50 $\sigma$ ]  
Teffp = 5965 [2876] K [1.80 $\sigma$ ]

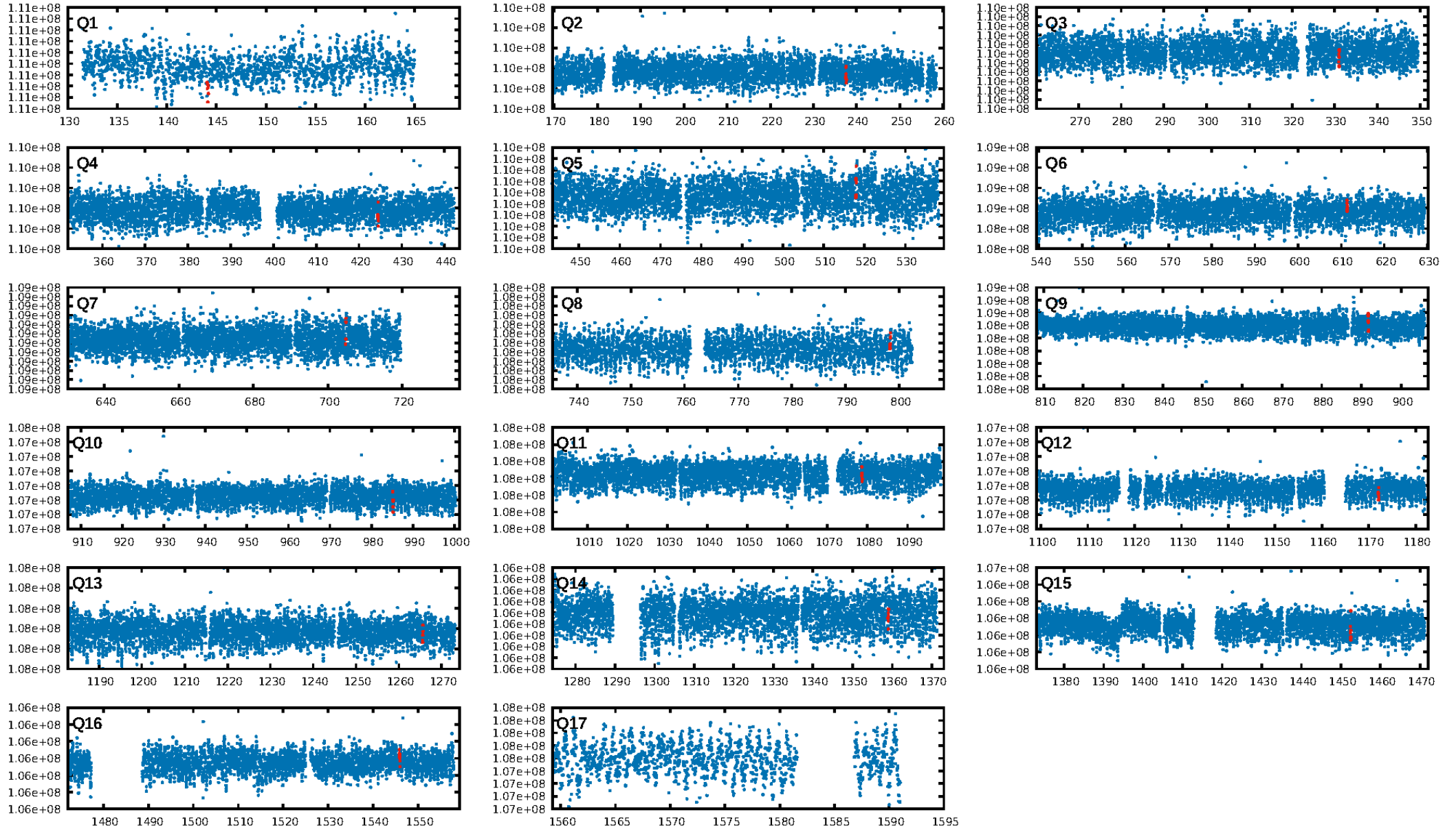
## DV Diagnostic Results:

ShortPeriod-sig: 100.0% [132.22 $\sigma$ ]  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 2.1%  
ModelChiSquareGof-sig: 49.3%  
**Bootstrap-pfa: 2.52e-10**  
RollingBand-fgt: 1.00 [5/5]  
GhostDiagnostic-chr: -1.684  
Centroid-sig: 24.1%  
Centroid-so: 0.724 arcsec [1.16 $\sigma$ ]  
OotOffset-rm: 1.092 arcsec [1.00 $\sigma$ ]  
OotOffset-st: 2/3/2/3 [10]  
KicOffset-rm: 1.050 arcsec [0.91 $\sigma$ ]  
KicOffset-st: 2/3/2/3 [10]  
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DiffImageOverlap-fno: 0.07 [1/15]

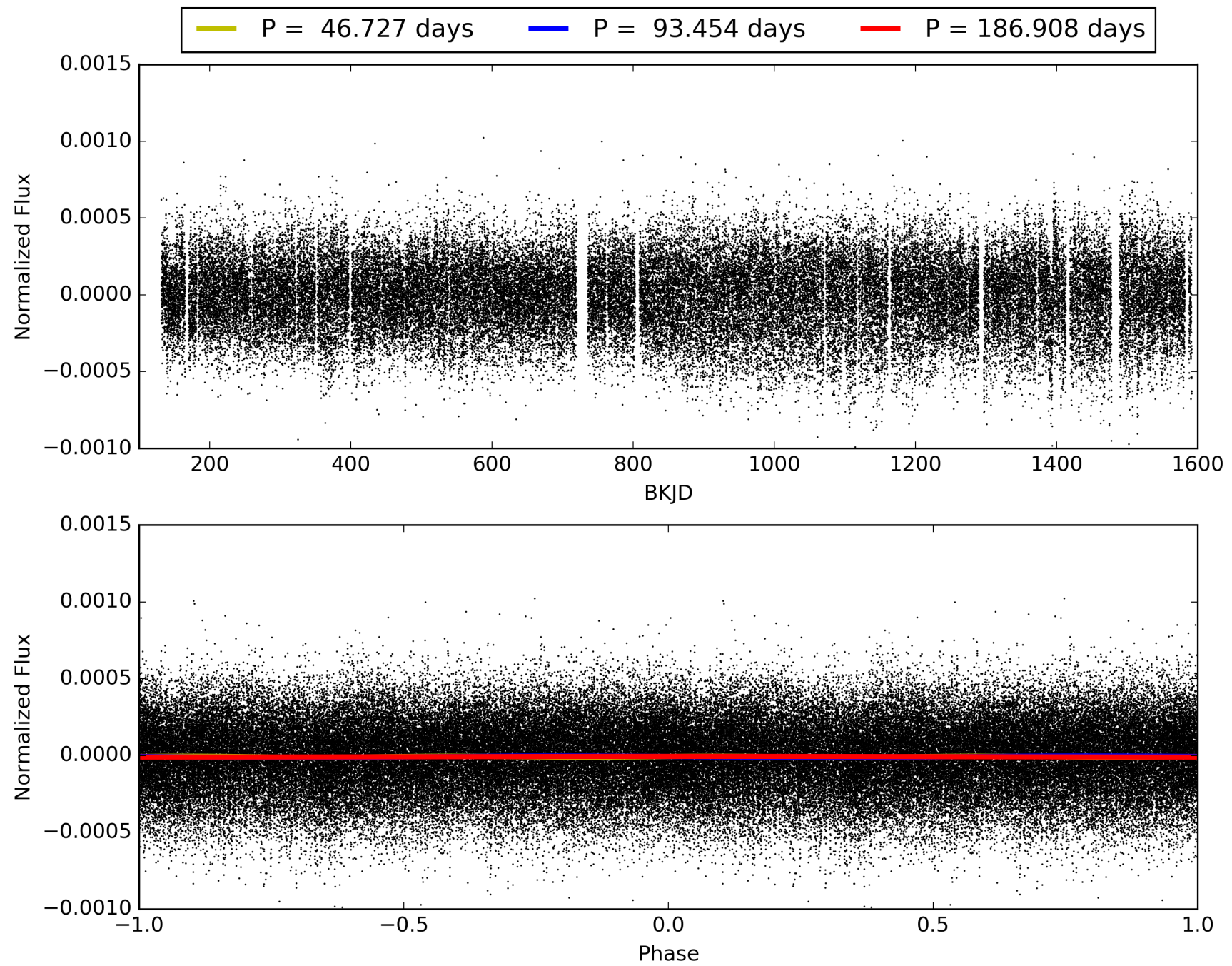
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 04:40:50 Z

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

# TCE 007293769-02, PDC Light Curves



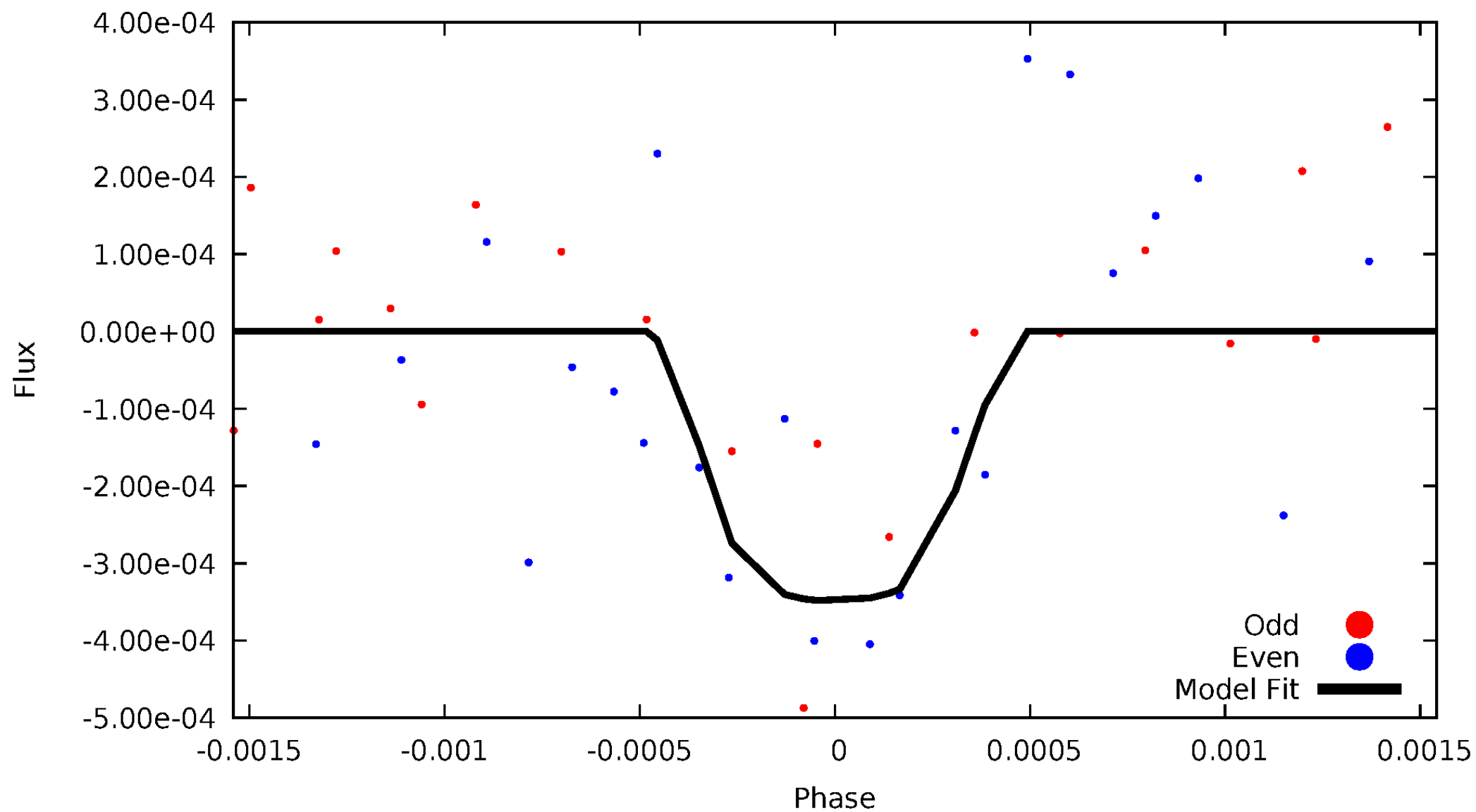
TCE 007293769-02





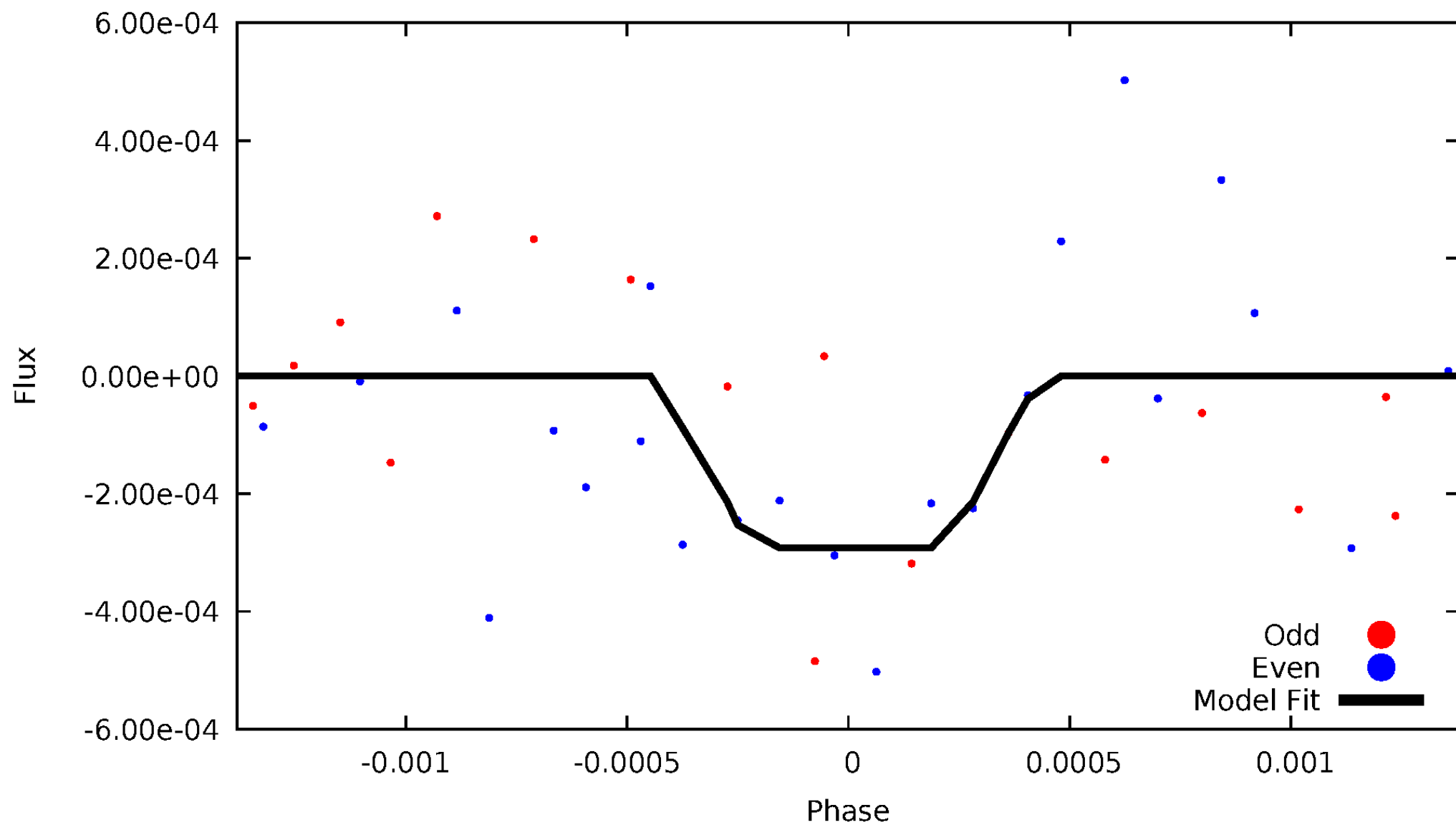
# DV Odd/Even

TCE 007293769-02



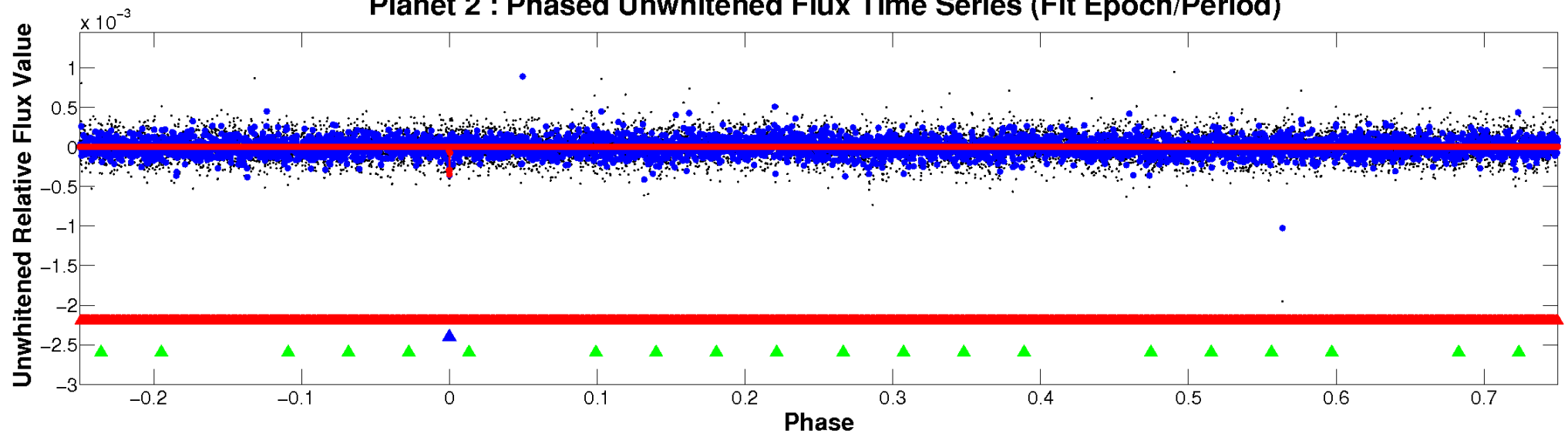
# ALT Odd/Even

TCE 007293769-02

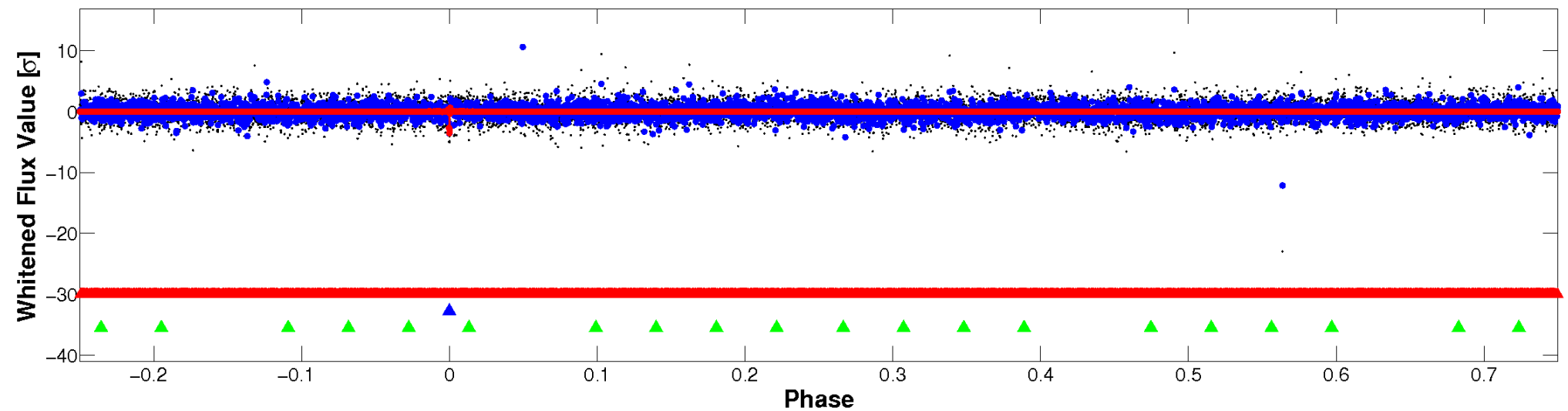


# Non-Whitened Vs. Whitened Light Curve

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

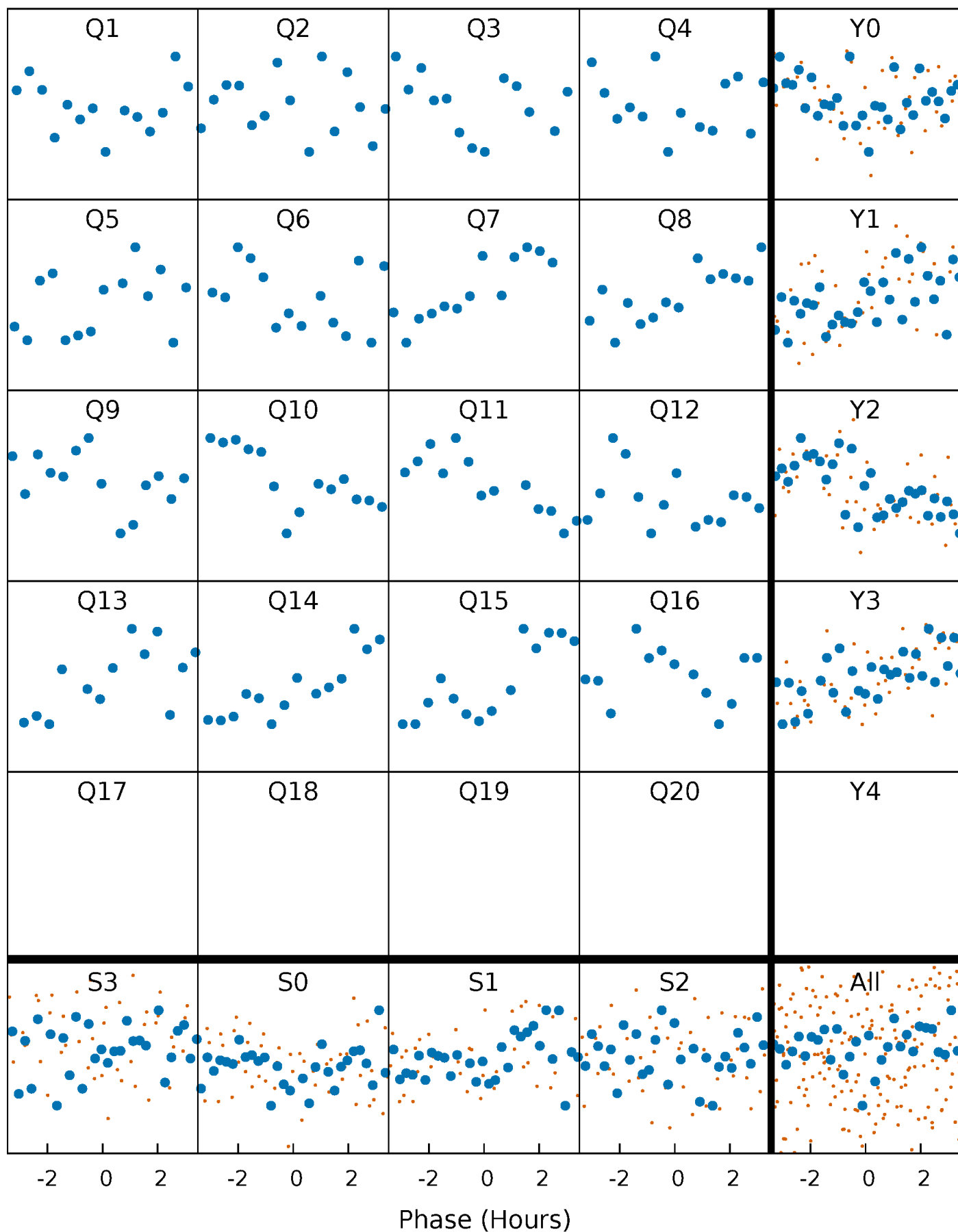


## Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



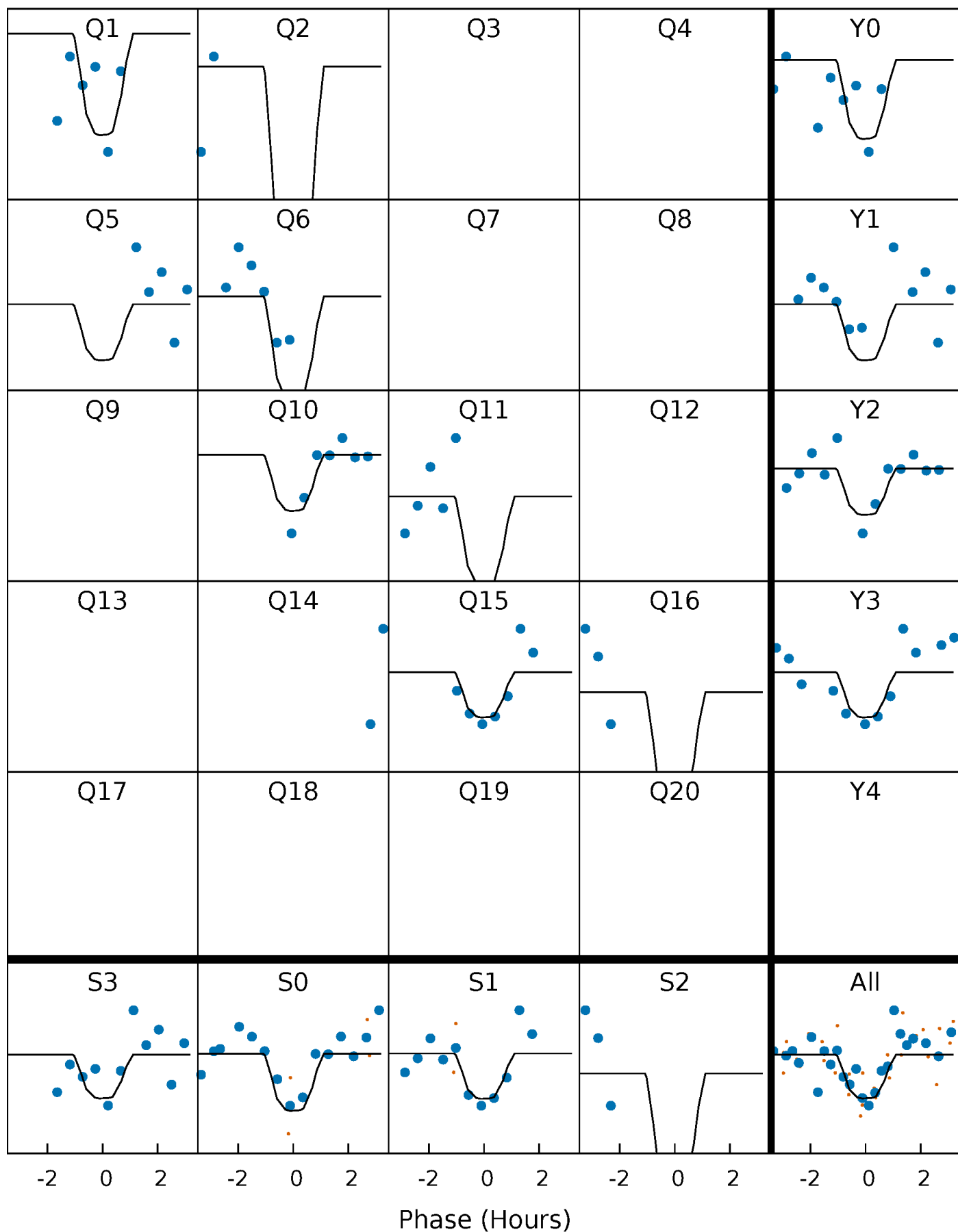
# PDC Quarter-Phased Transit Curves

TCE 007293769-02     $P = 93.453873$  Days     $T_0 = 144.111803$  (BKJD)



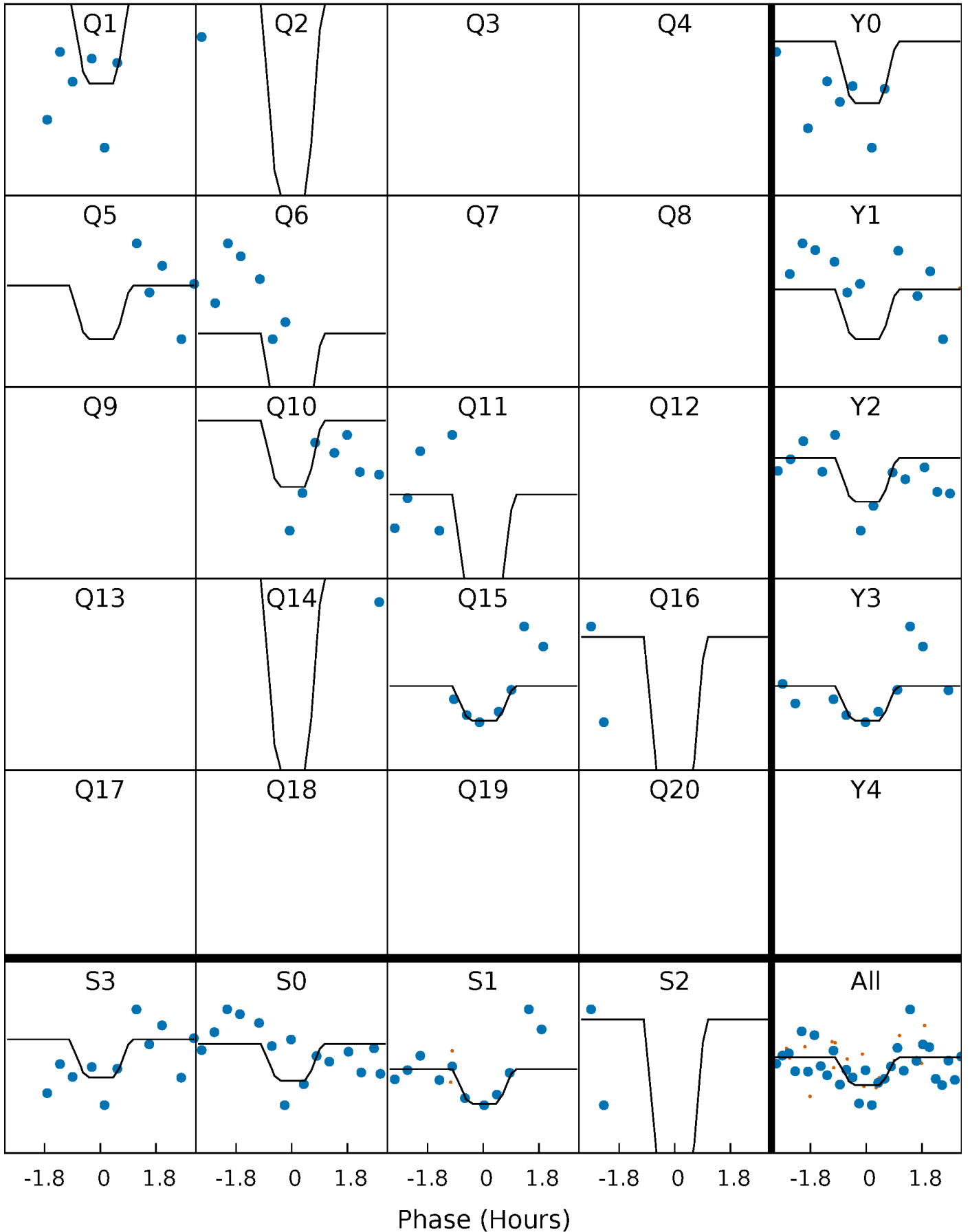
# DV Quarter-Phased Transit Curves

TCE 007293769-02 P= 93.453873 Days  $T_0=144.111803$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 007293769-02     $P = 93.453552$  Days     $T_0 = 144.114295$  (BKJD)

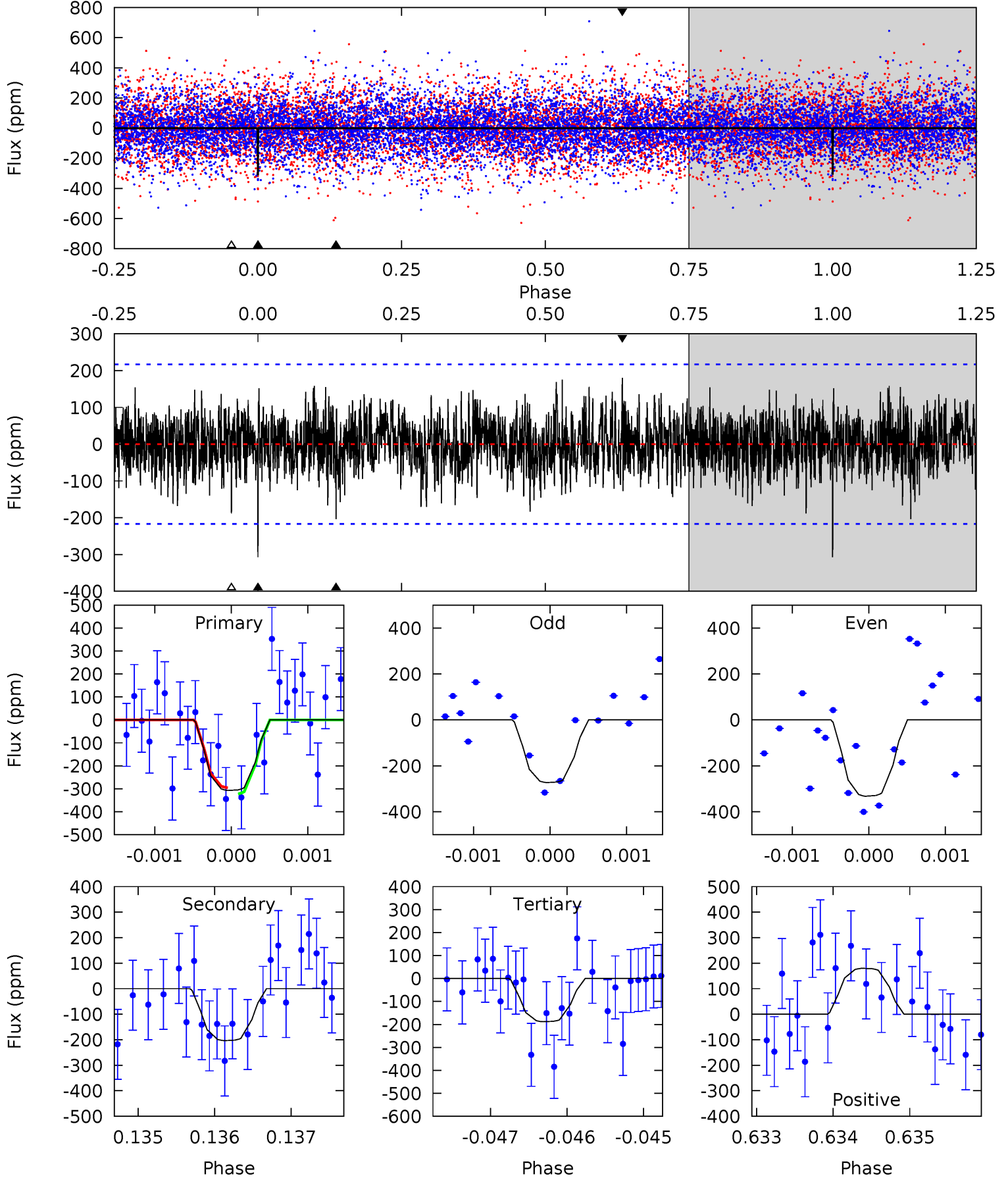




# DV Model-Shift Uniqueness Test

007293769-02, P = 93.453873 Days, E = 50.657930 Days

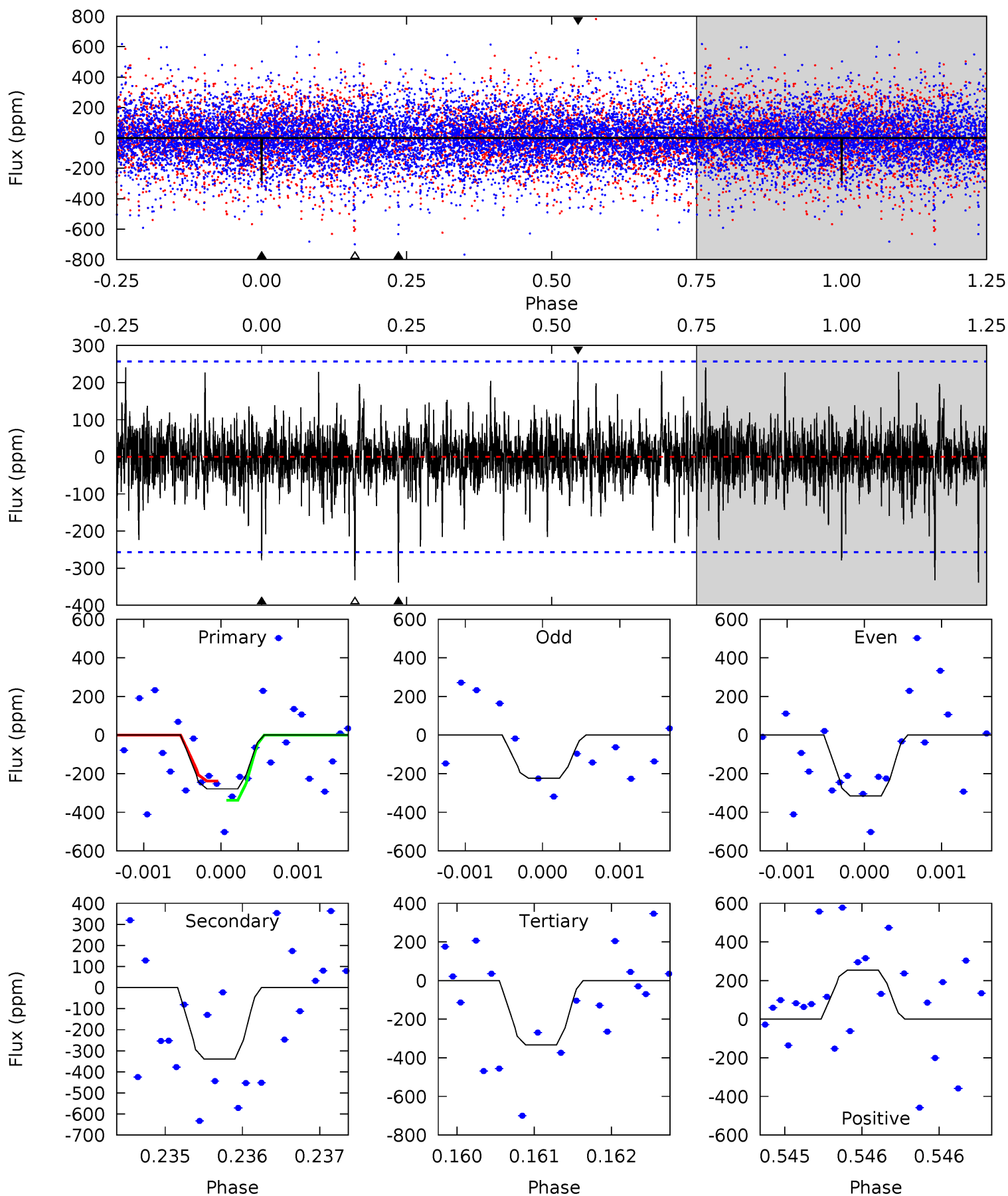
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.73	5.11	4.73	4.52	5.46	3.30	1.40	3.00	3.21	0.39	0.59	0.71	0.95	0.37	0.34



# Alt Model-Shift Uniqueness Test

007293769-02, P = 93.453552 Days, E = 50.660743 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
5.94	7.23	7.09	5.42	5.48	3.33	1.21	-1.15	0.52	0.14	1.81	0.97	0.80	0.43	1.07



### Stellar Parameters For KIC 007293769

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$7004^{+220}_{-269}$	$3.684^{+0.296}_{-0.074}$	$-0.160^{+0.300}_{-0.250}$	$3.238^{+0.402}_{-1.207}$	$1.847^{+0.178}_{-0.414}$	$0.077^{+0.164}_{-0.019}$
	+3%/-4%	+8%/-2%	+188%/-156%	+12%/-37%	+10%/-22%	+214%/-25%
Source	PHO1	FLK73	KIC0	DSEP		

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

### Secondary Eclipse Parameters for KIC 007293769-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-204 \pm 40$	$8.00^{+5.58}_{-4.98}$	$1078^{+60}_{-86}$	$5401^{+3806}_{-1070}$	$429^{+2659}_{-280}$
Alt.	$-339 \pm 47$	$7.05^{+6.42}_{-4.52}$	$1079^{+67}_{-98}$	$6347^{+6167}_{-1539}$	$897^{+6104}_{-639}$

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

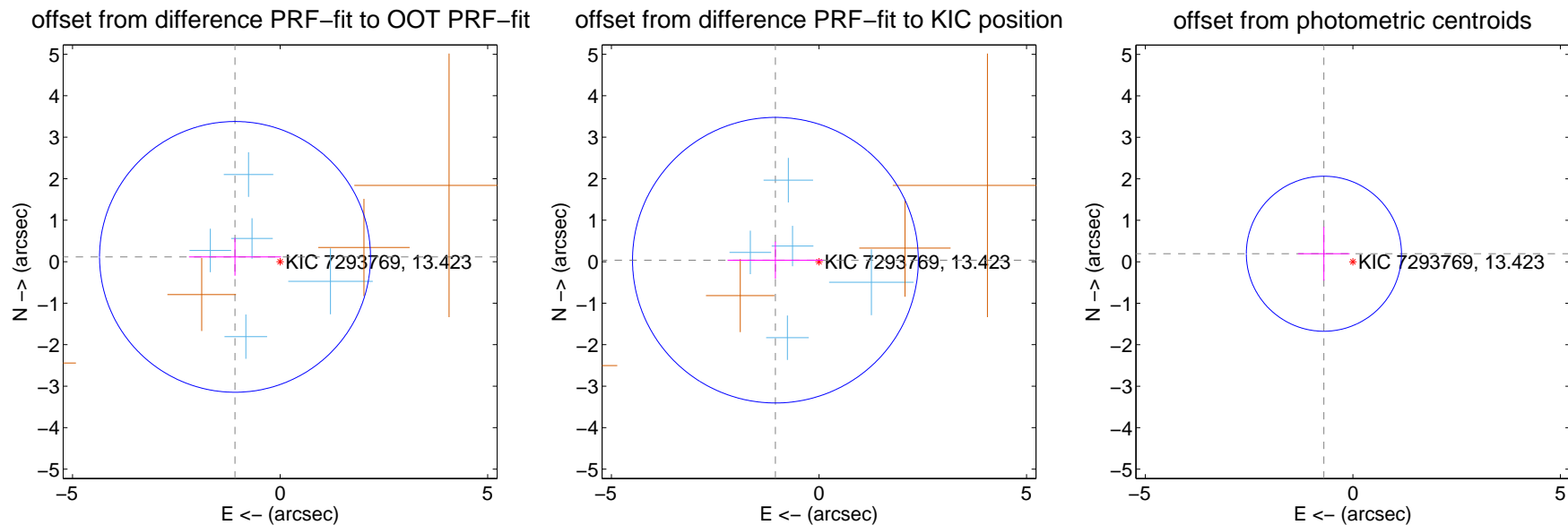
## DV Centroid Data

Supplemental centroid analysis for 007293769-02. Kepler magnitude: 13.42. Transit SNR 10.06

There are 5 quarters with good PRF difference image offsets

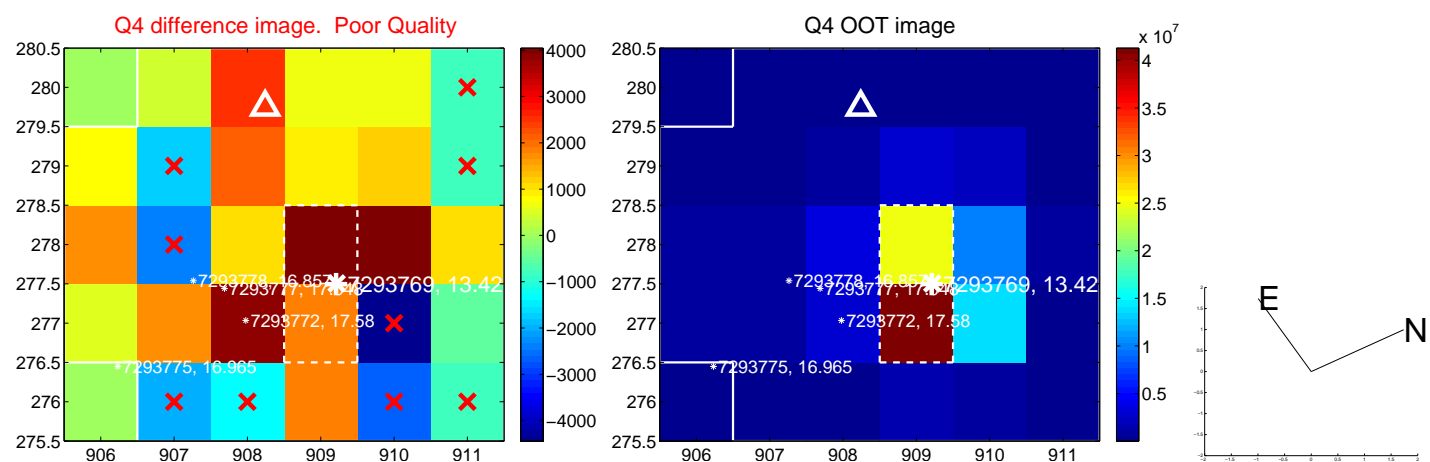
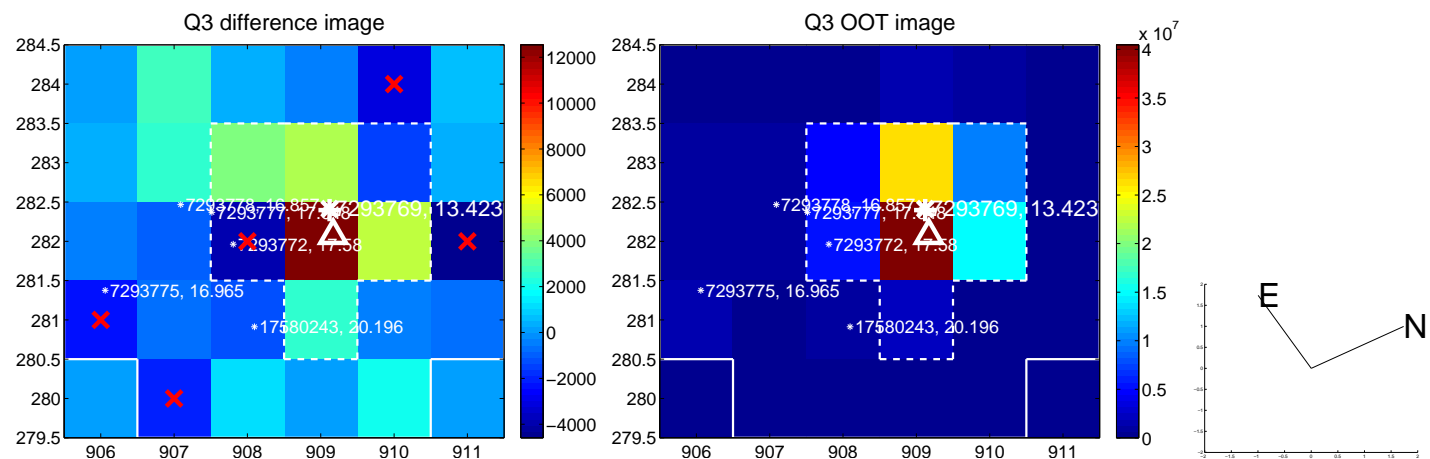
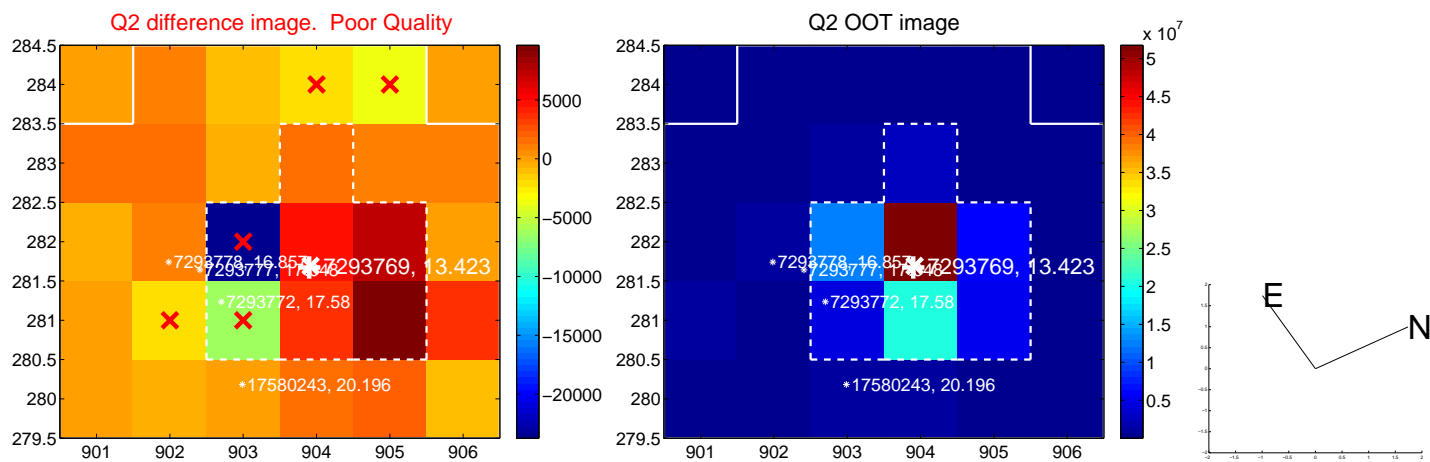
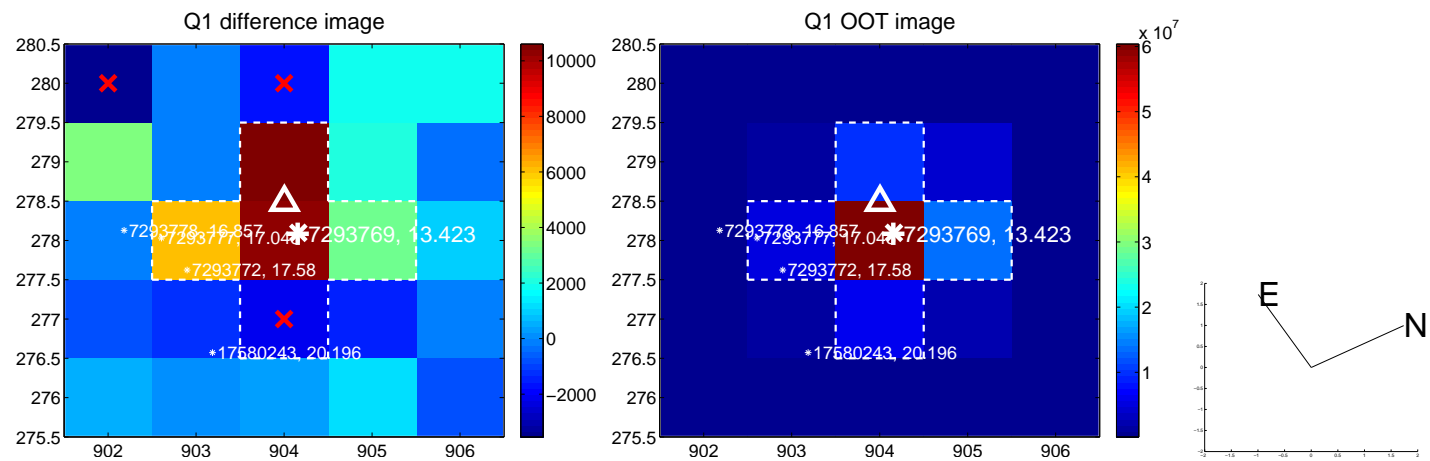
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.092 \pm 1.088$	1.00	$1.086 \pm 1.109$	$0.116 \pm 0.454$
PRF-fit source offset from KIC position	$1.050 \pm 1.147$	0.91	$1.049 \pm 1.153$	$0.036 \pm 0.446$
photometric centroid source offset	$0.72 \pm 0.62$	1.16	$0.70 \pm 0.62$	$0.19 \pm 0.65$

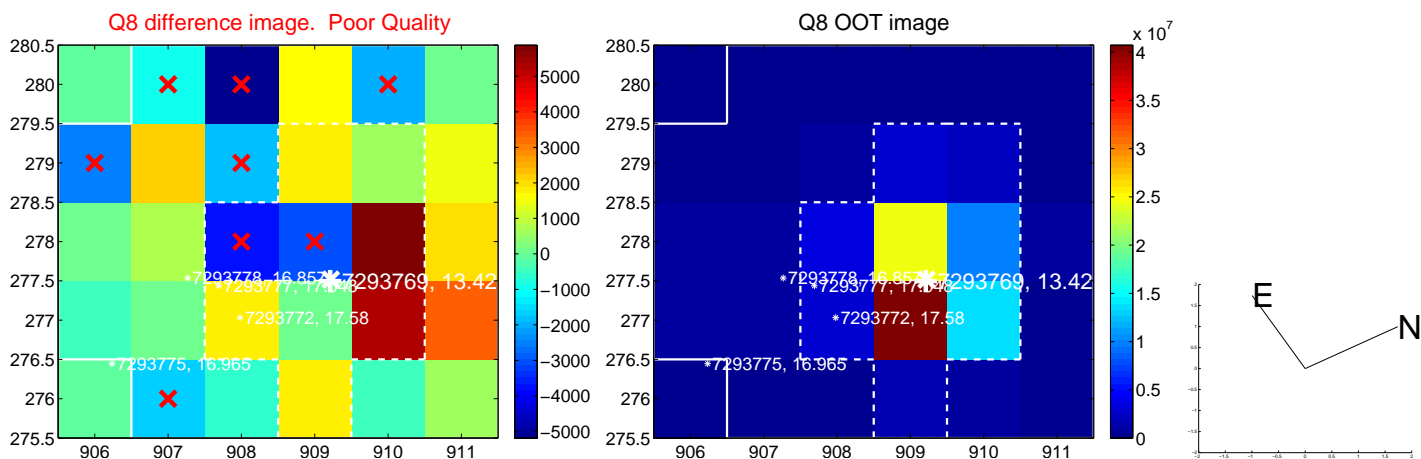
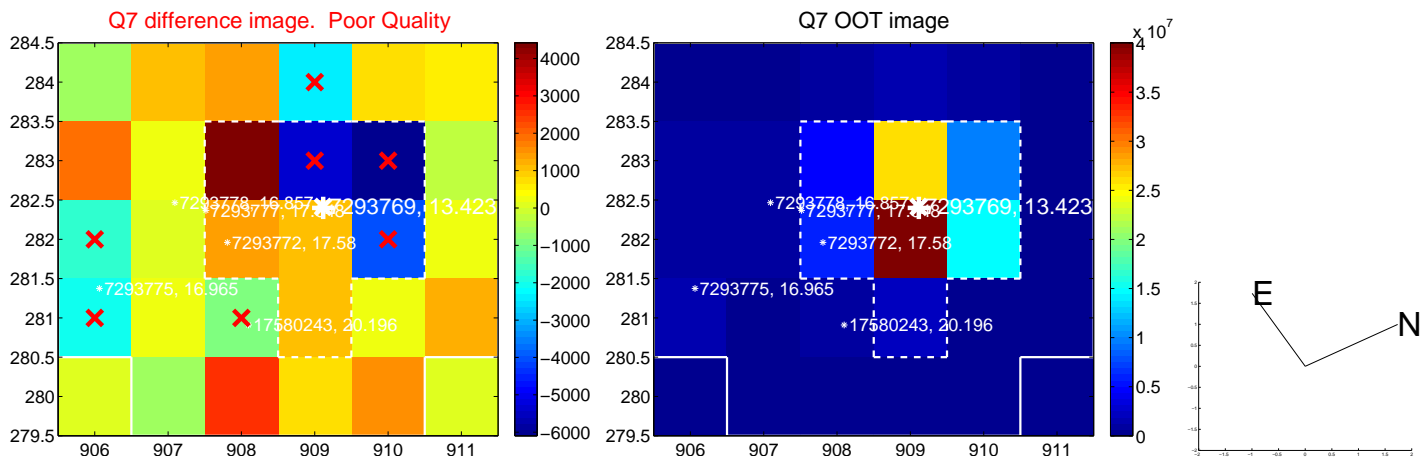
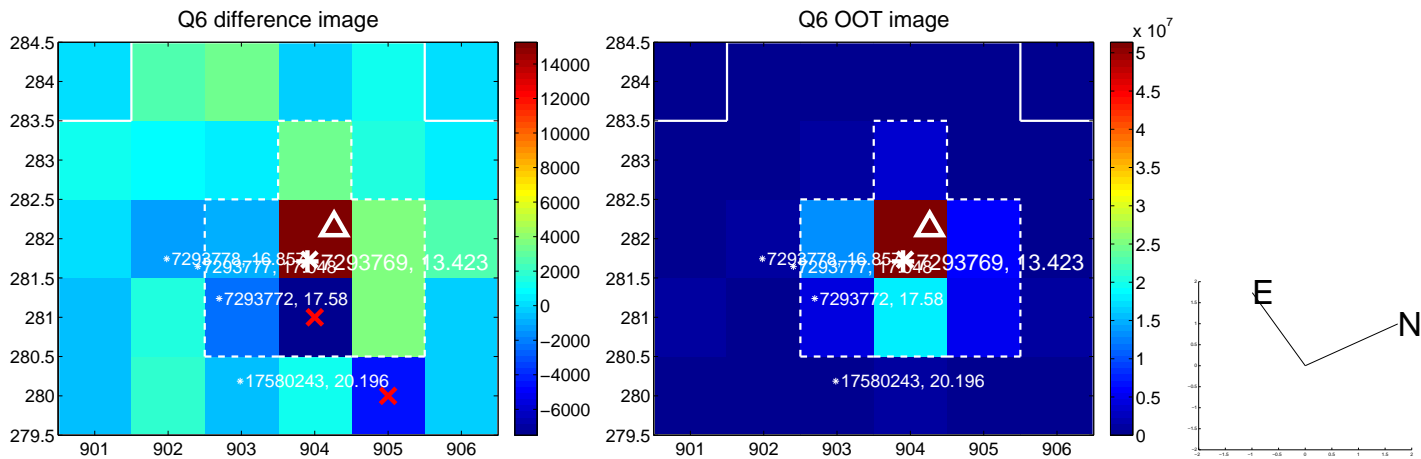
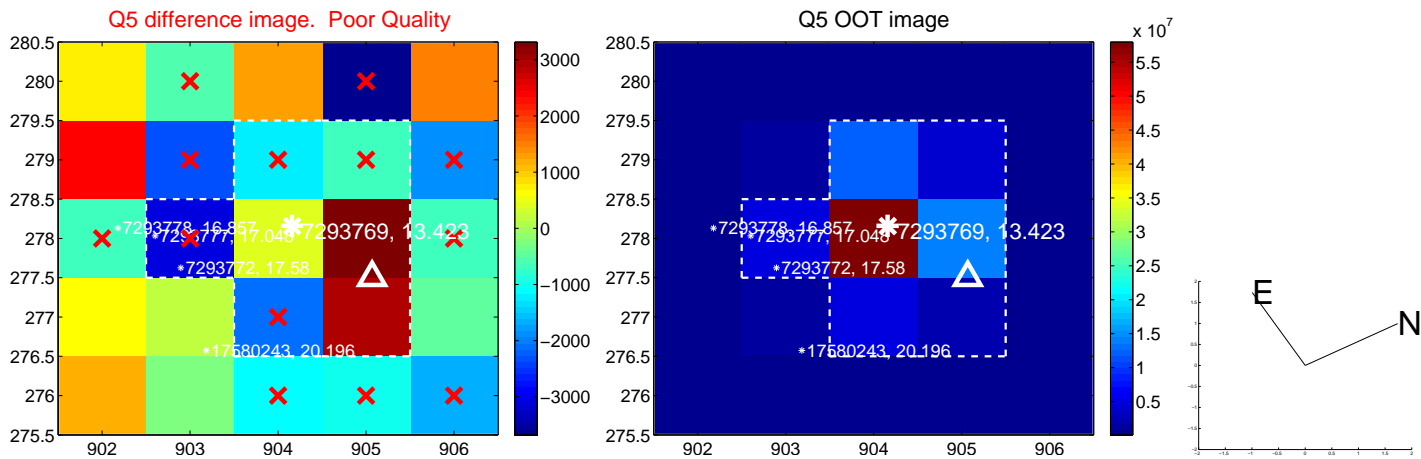


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

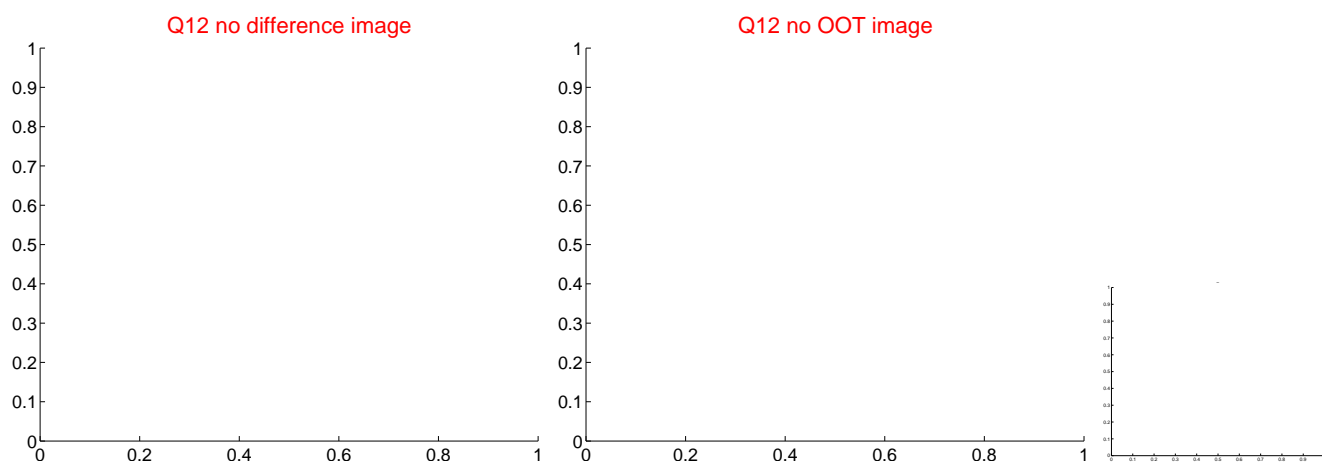
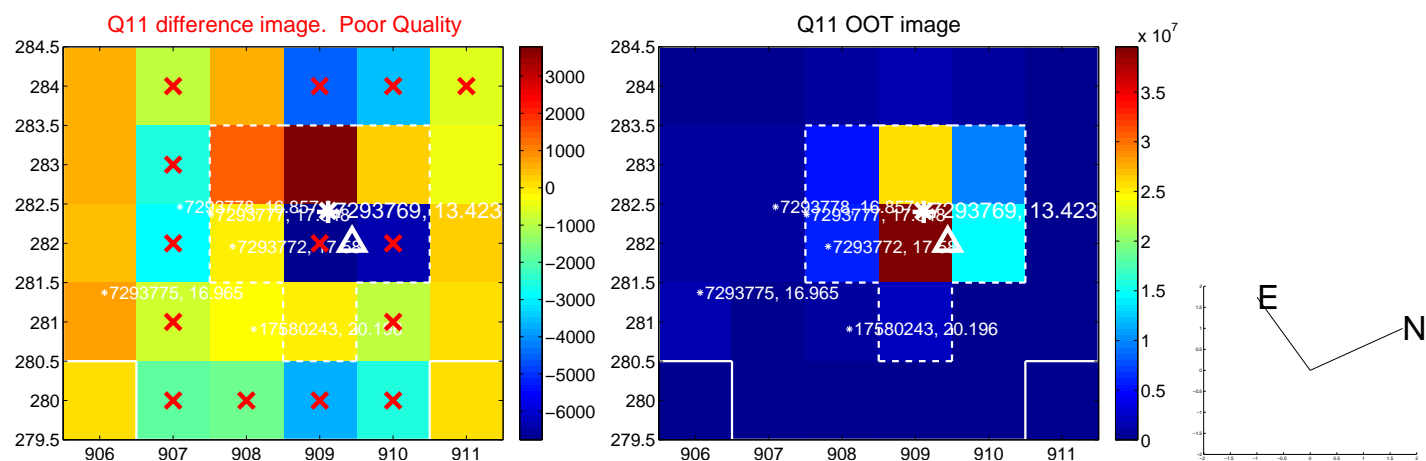
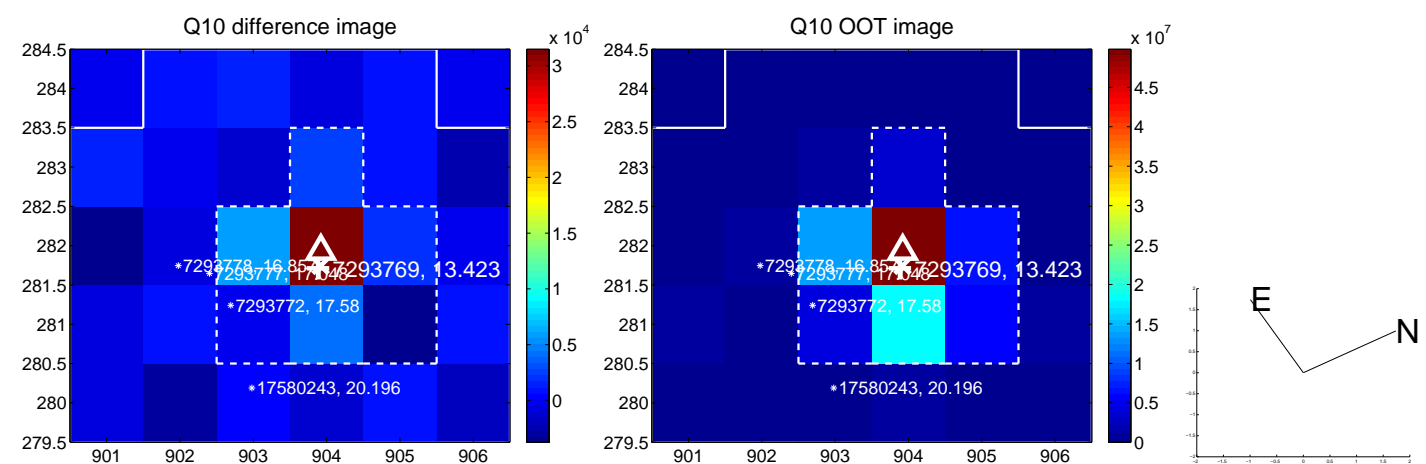
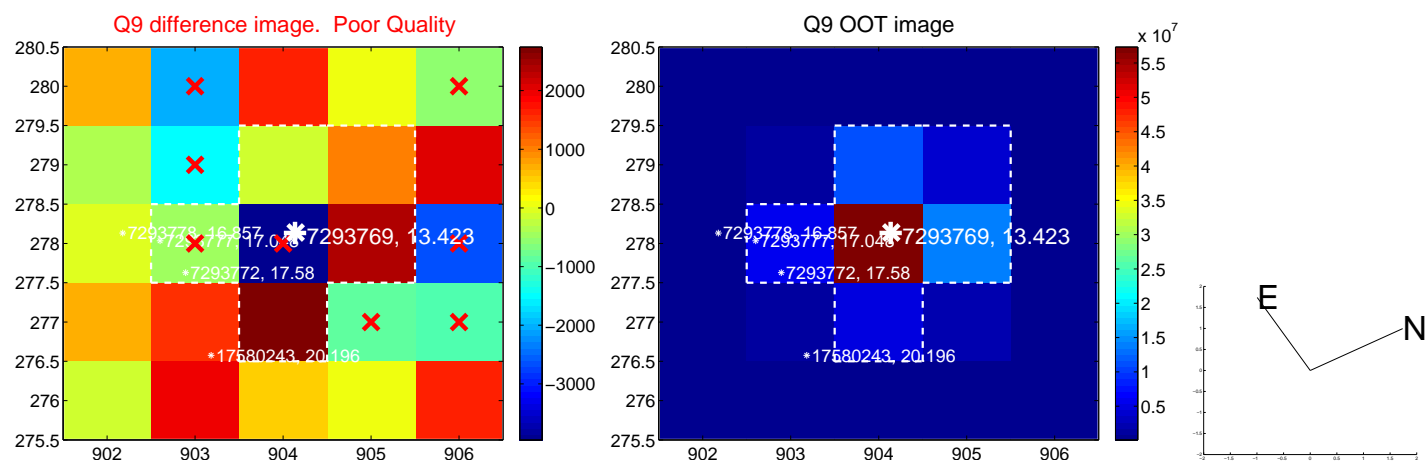


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

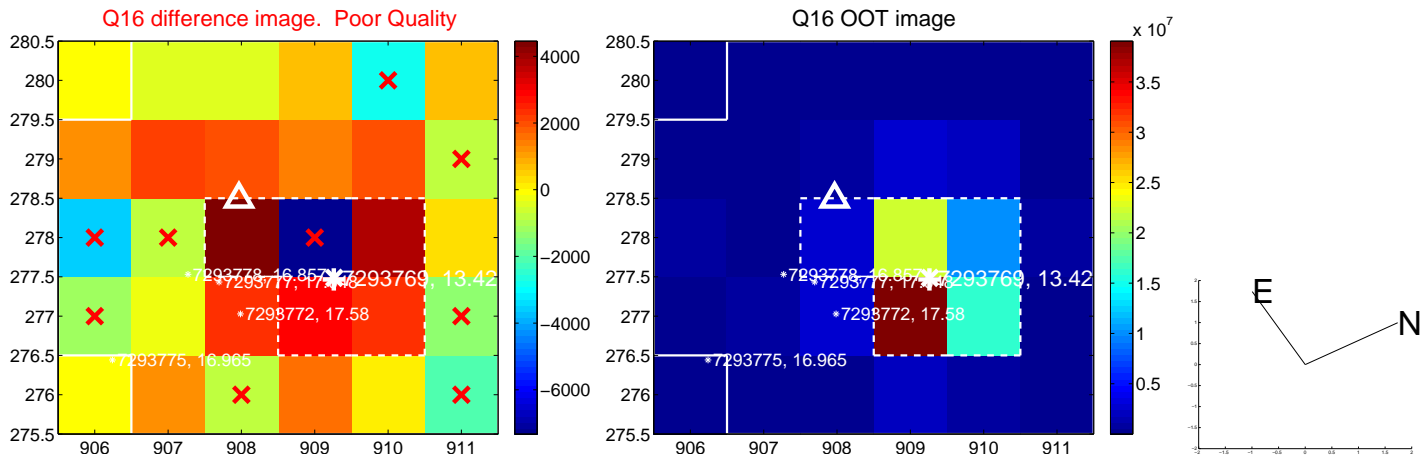
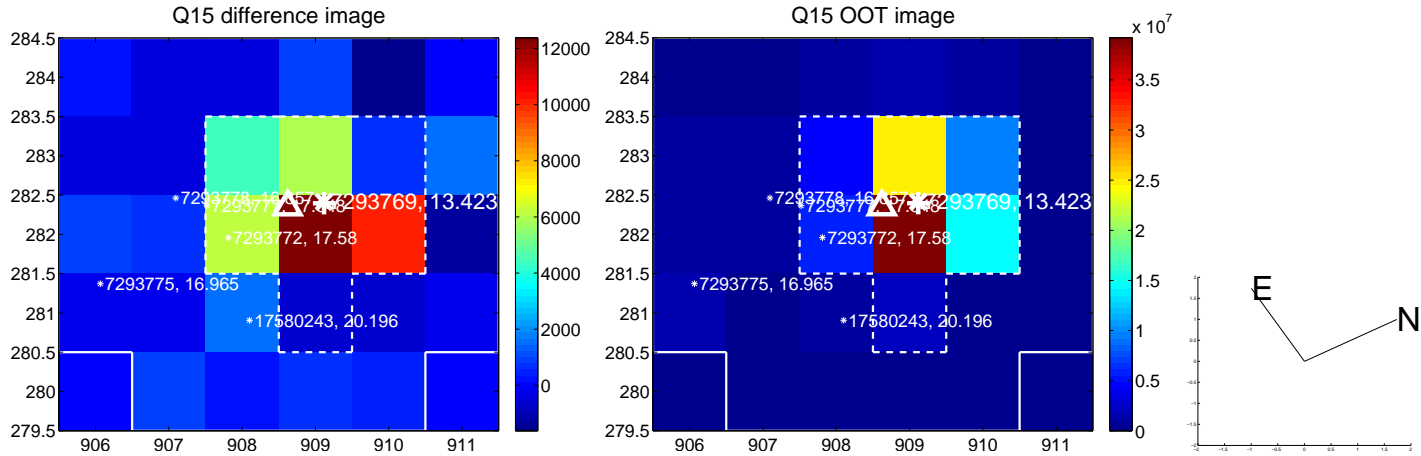
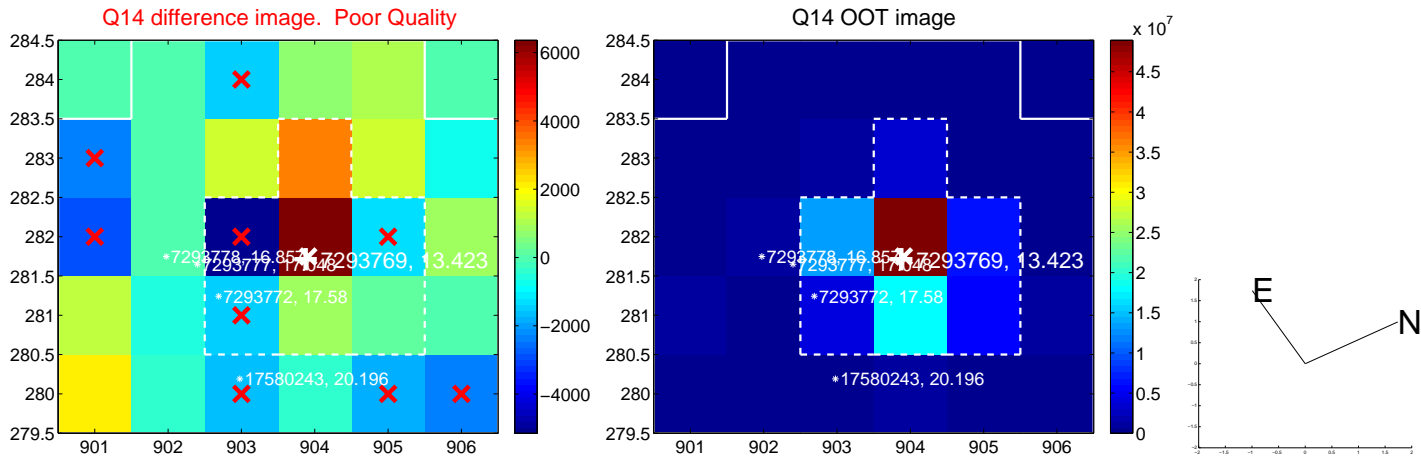
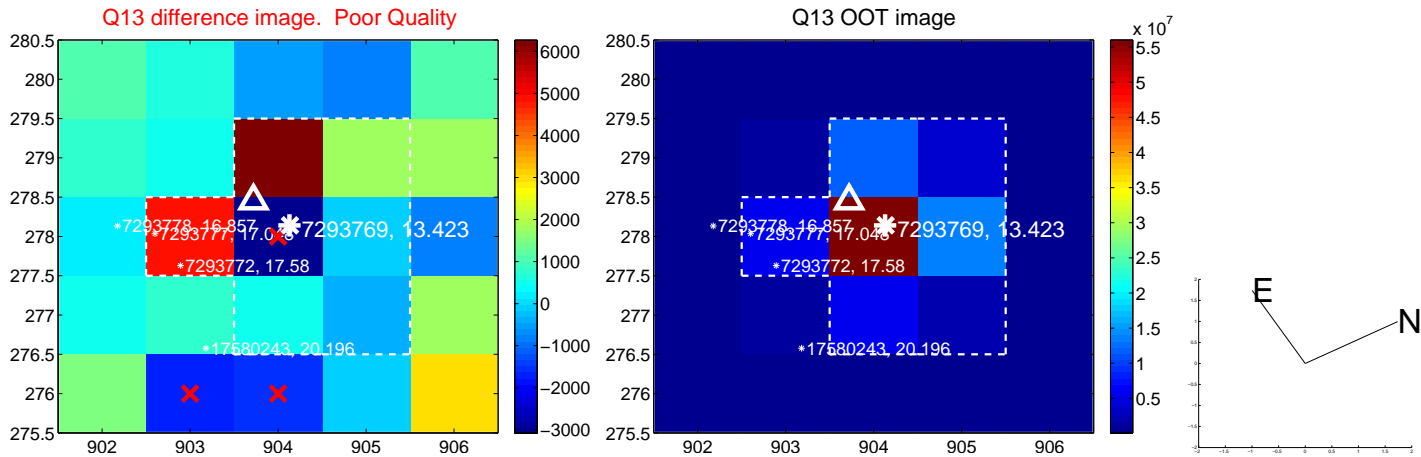




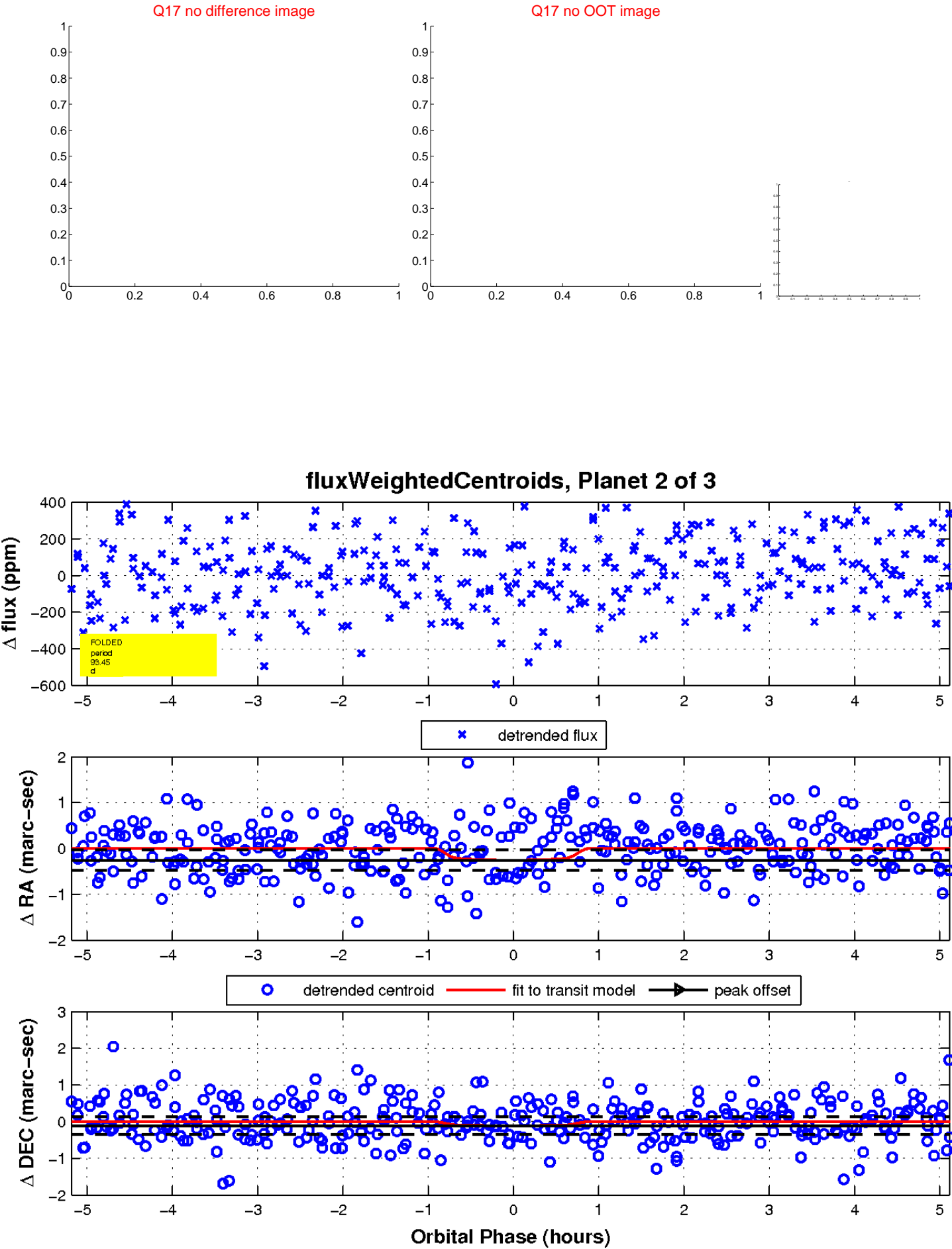
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

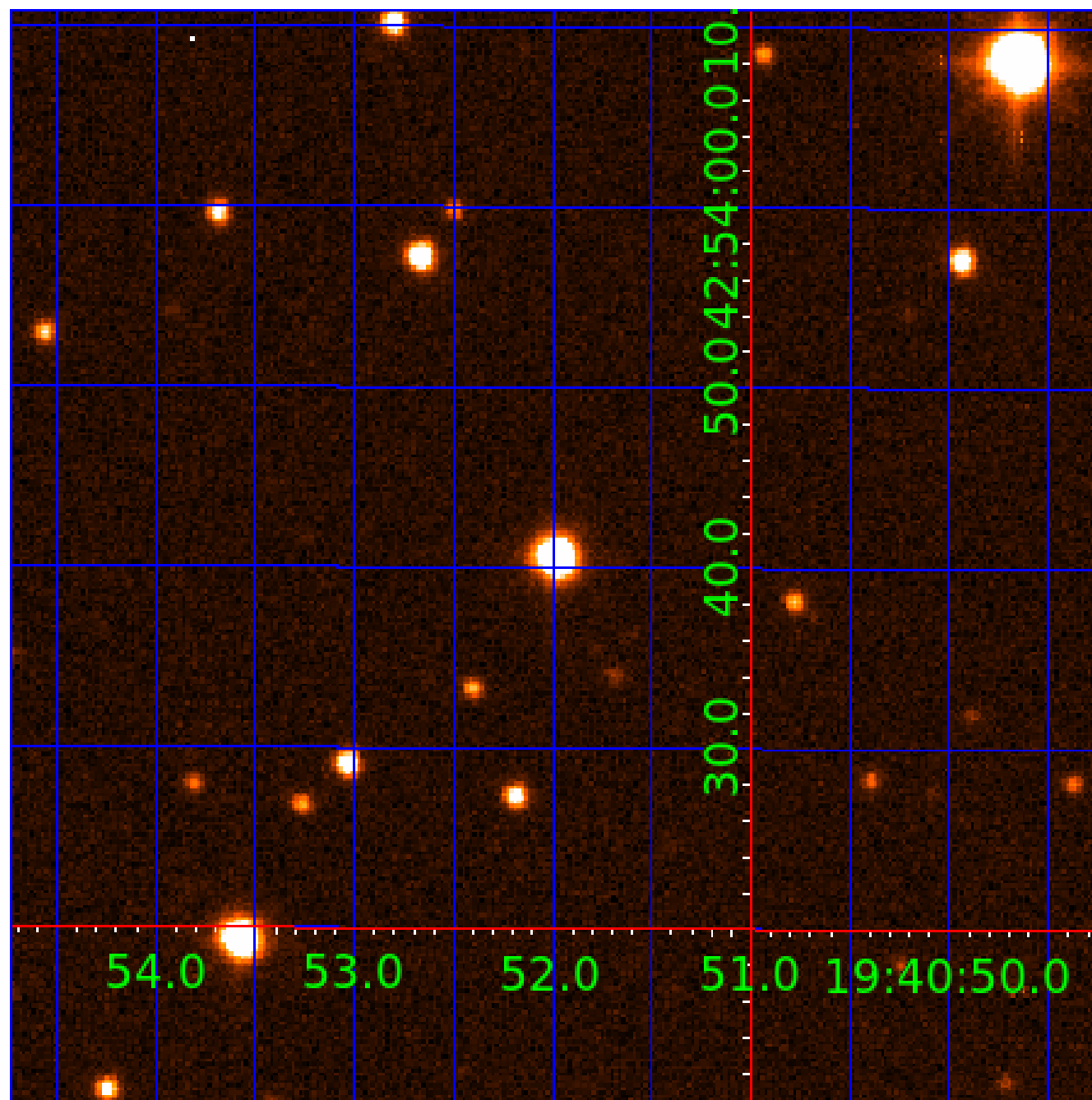


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination



# KIC 007293769

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007293769-01	OBS	No	0.706854	131.723375	0.0	4.478	8.8	0.0	3.24	7004	0.03	62233.47
007293769-02	OBS	No	93.453873	144.111803	349.2	1.728	9.6	10.1	3.24	7004	7.00	92.40
007293769-03	OBS	No	74.001039	164.807404	237.6	3.079	8.4	9.4	3.24	7004	5.66	126.13

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007293769-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
007293769-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
007293769-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

**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.

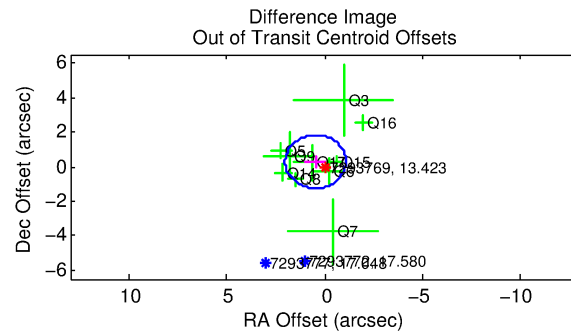
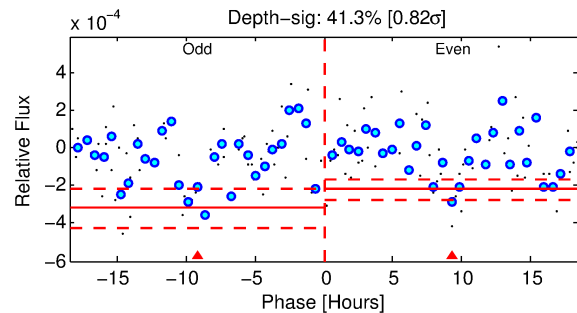
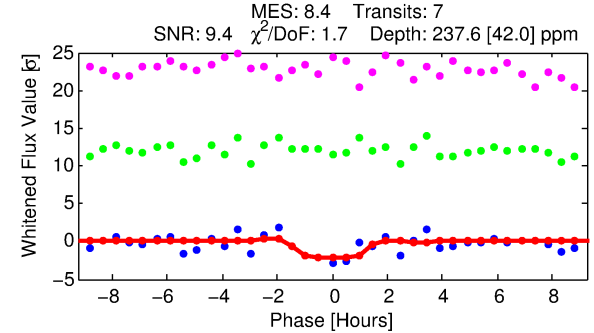
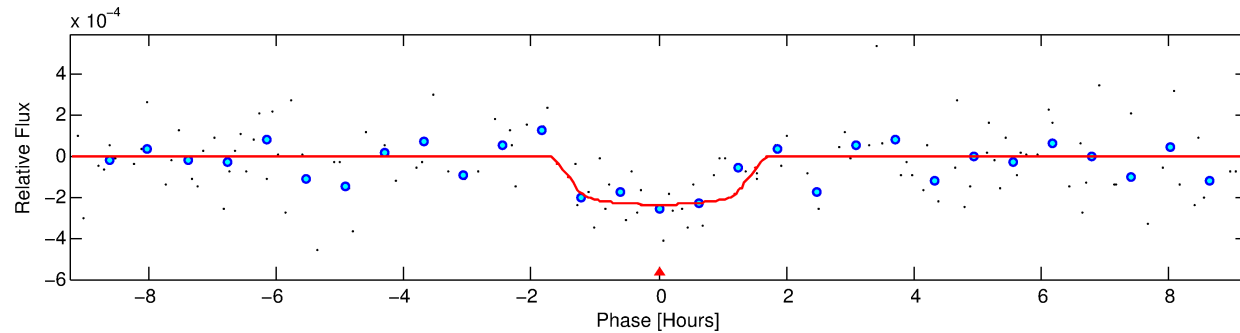
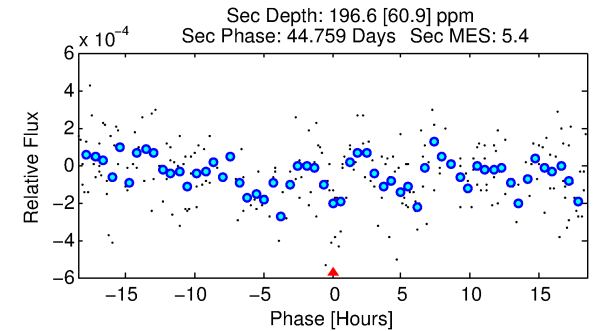
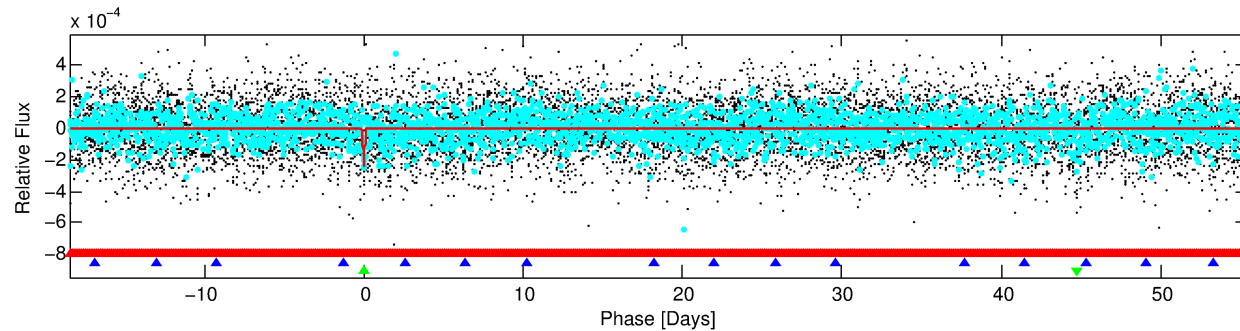
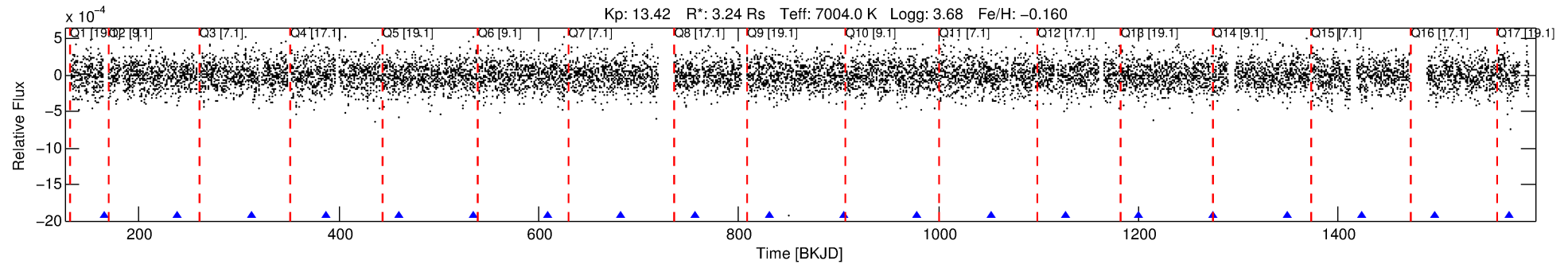
## Ephemeris Match Information For 007293769-03

No Significant Match Found



# DV One-Page Summary

KIC: 7293769 Candidate: 3 of 3 Period: 74.001 d



## DV Fit Results:

Period = 74.00104 [0.00112] d  
Epoch = 164.8074 [0.0111] BKJD  
Rp/R\* = 0.0160 [0.0331]  
a/R\* = 99.38 [1233.25]  
b = 0.86 [3.84]  
Seff = 126.13 [68.13]  
Teq = 855 [115] K  
Rp = 5.66 [11.88] Re  
a = 0.4234 [0.1425] AU  
Ag = 606.05 [2533.01] [0.24 $\sigma$ ]  
Teffp = 6555 [6801] K [0.84 $\sigma$ ]

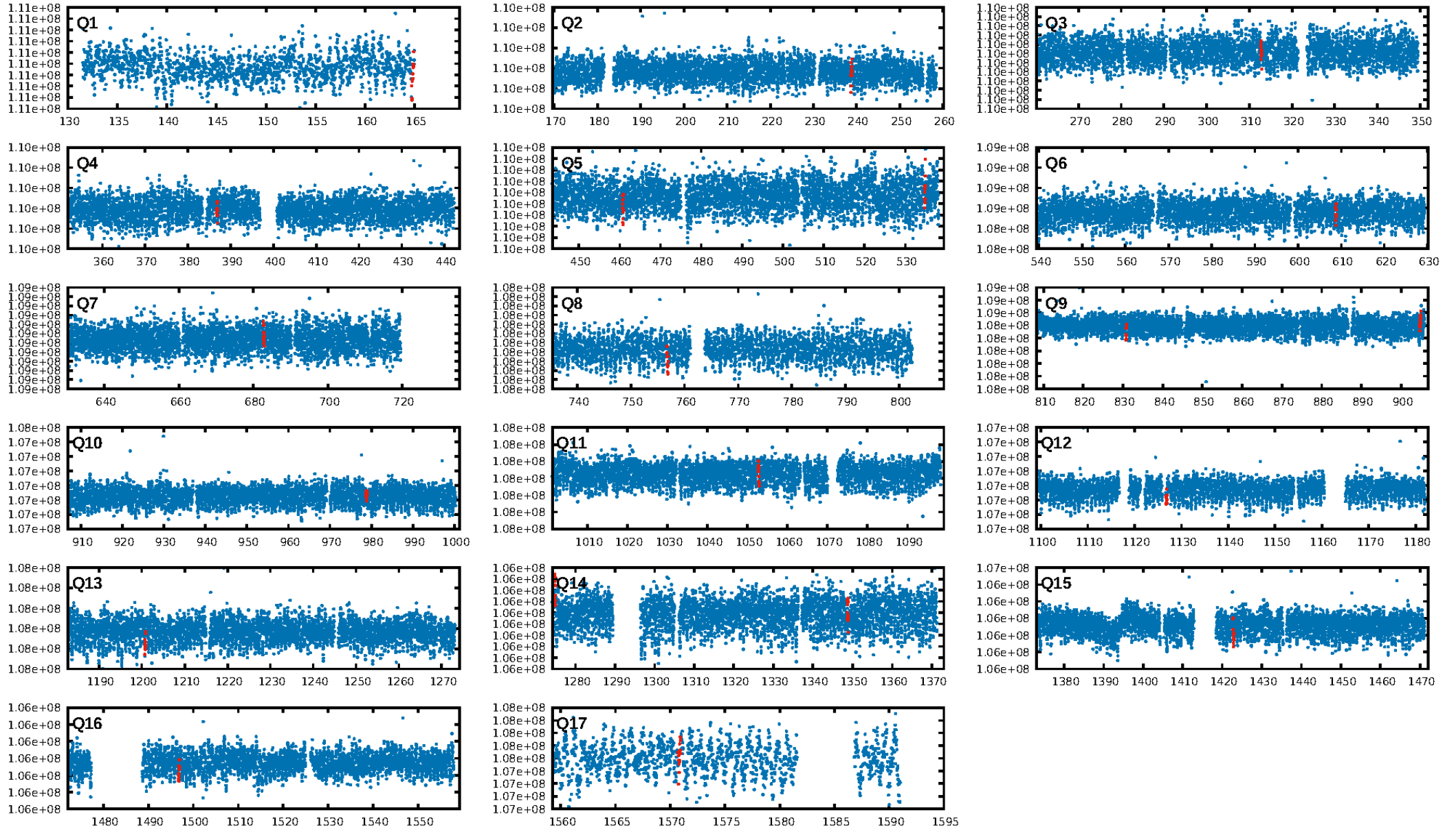
## DV Diagnostic Results:

ShortPeriod-sig: 100.0% [323.66 $\sigma$ ]  
LongPeriod-sig: 100.0% [132.22 $\sigma$ ]  
ModelChiSquare2-sig: 64.8%  
ModelChiSquareGof-sig: 99.9%  
**Bootstrap-pfa: 2.46e-08**  
RollingBand-fgt: 1.00 [7/7]  
GhostDiagnostic-chr: -17.08  
Centroid-sig: 92.2%  
Centroid-so: 0.099 arcsec [0.17 $\sigma$ ]  
OotOffset-rm: 0.555 arcsec [1.08 $\sigma$ ]  
OotOffset-st: 2/3/2/3 [10]  
KicOffset-rm: 0.523 arcsec [1.01 $\sigma$ ]  
KicOffset-st: 2/3/2/3 [10]  
DiffImageQuality-fgm: 0.70 [7/10]  
DiffImageOverlap-fno: 0.00 [0/14]

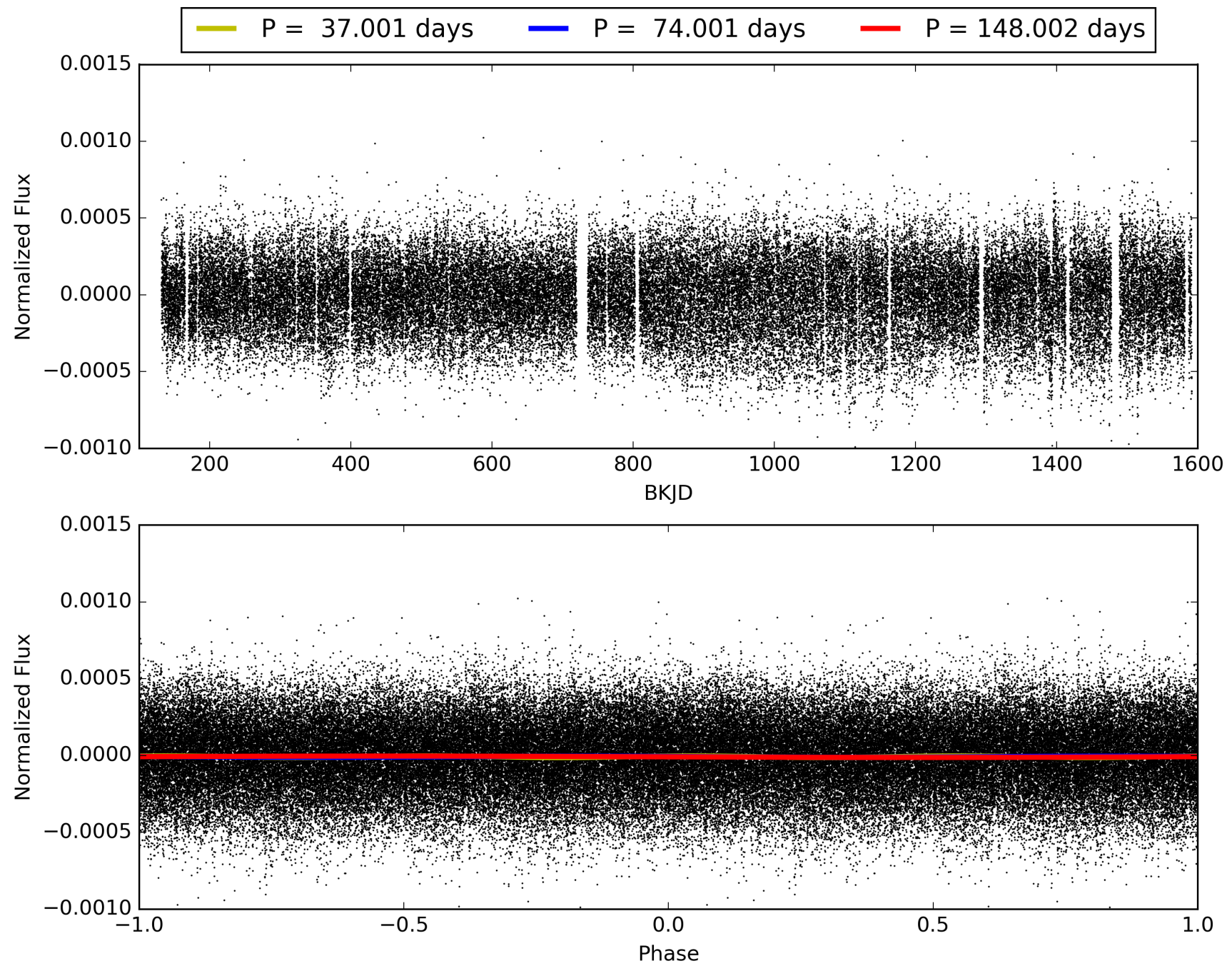
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 04:40:53 Z

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

# TCE 007293769-03, PDC Light Curves

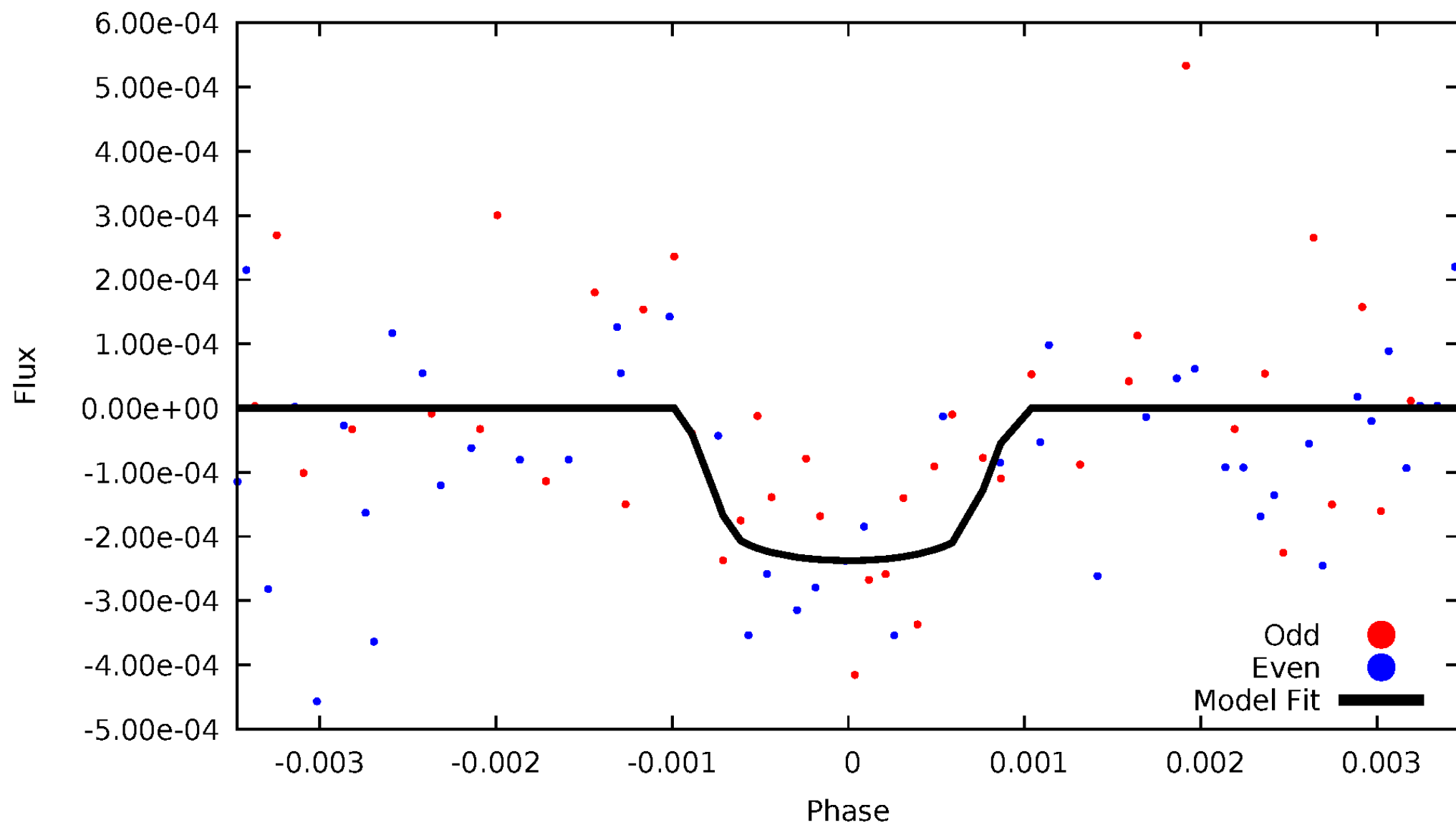


TCE 007293769-03



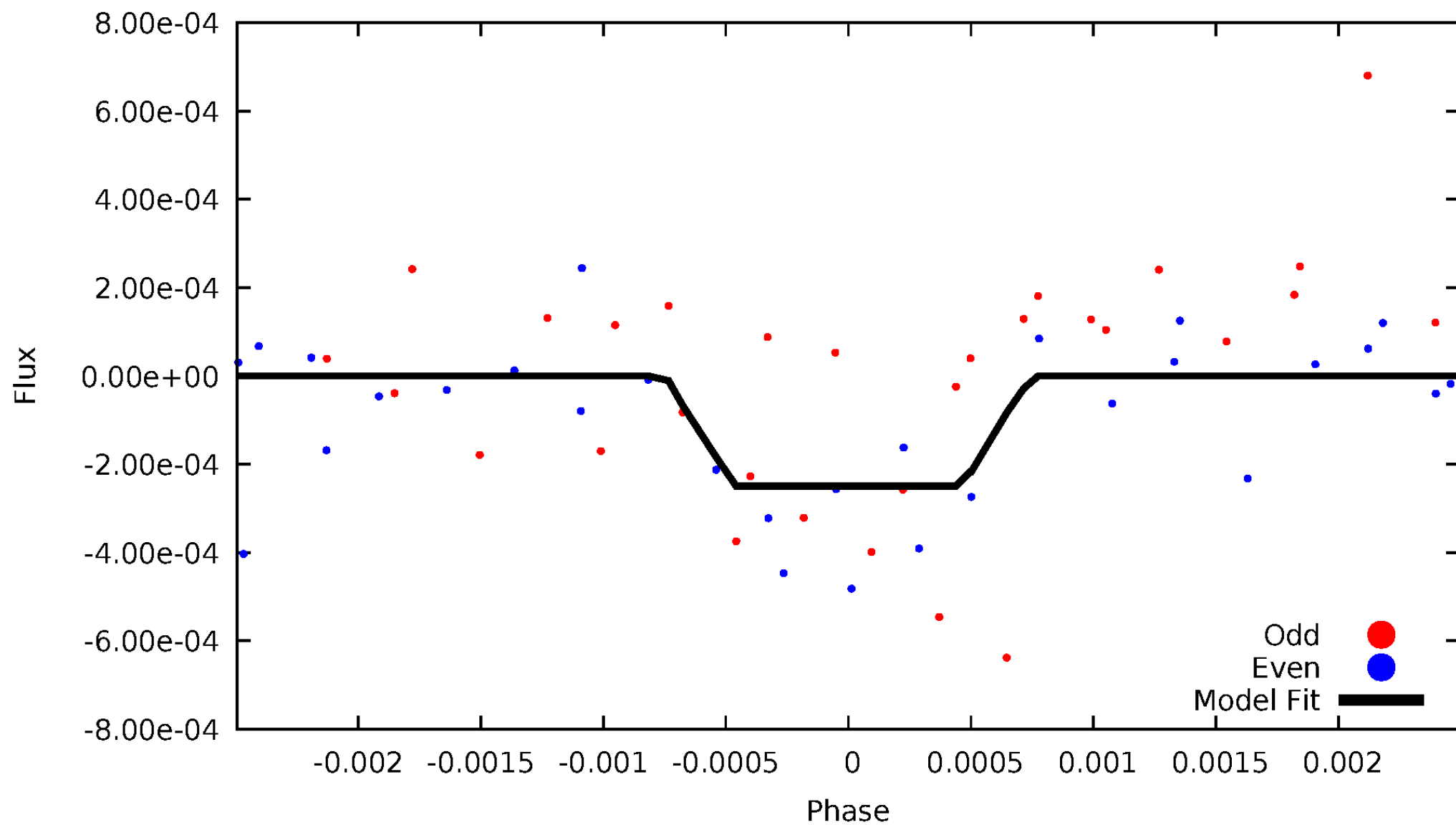
# DV Odd/Even

TCE 007293769-03



# ALT Odd/Even

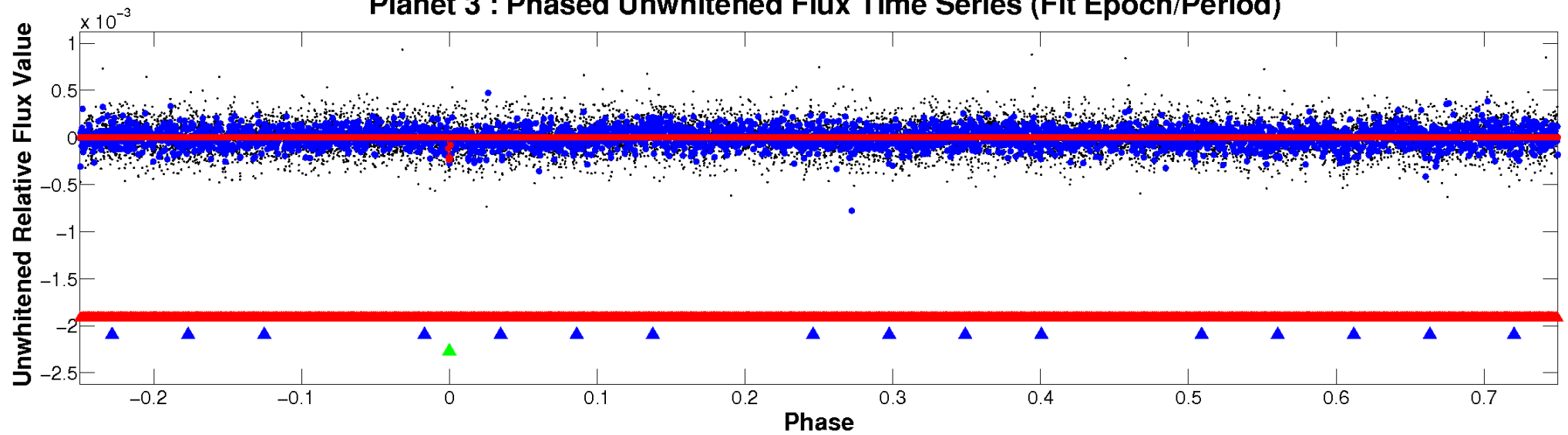
TCE 007293769-03



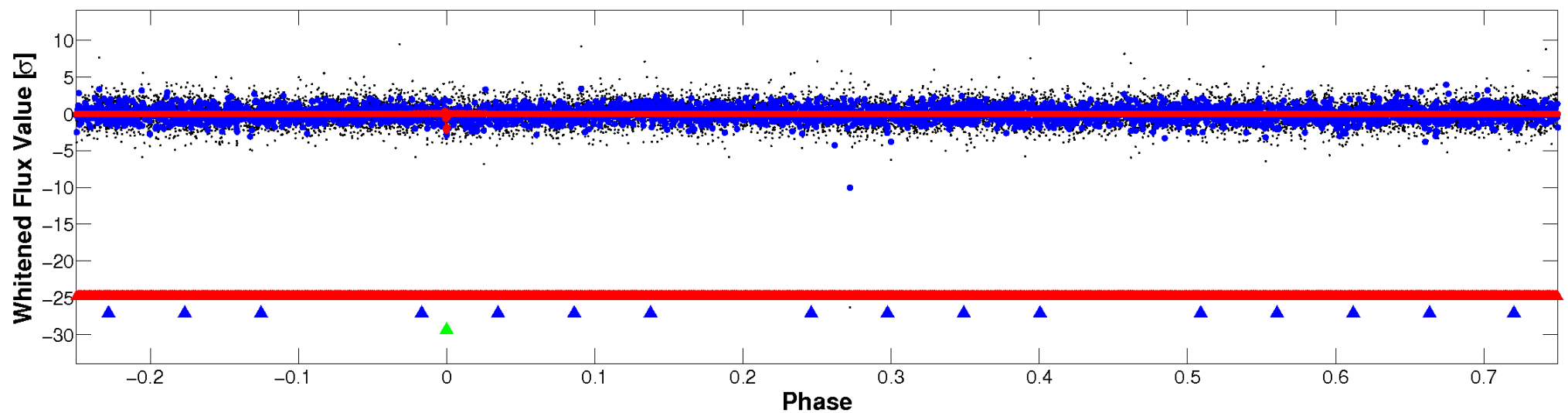


# Non-Whitened Vs. Whitened Light Curve

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

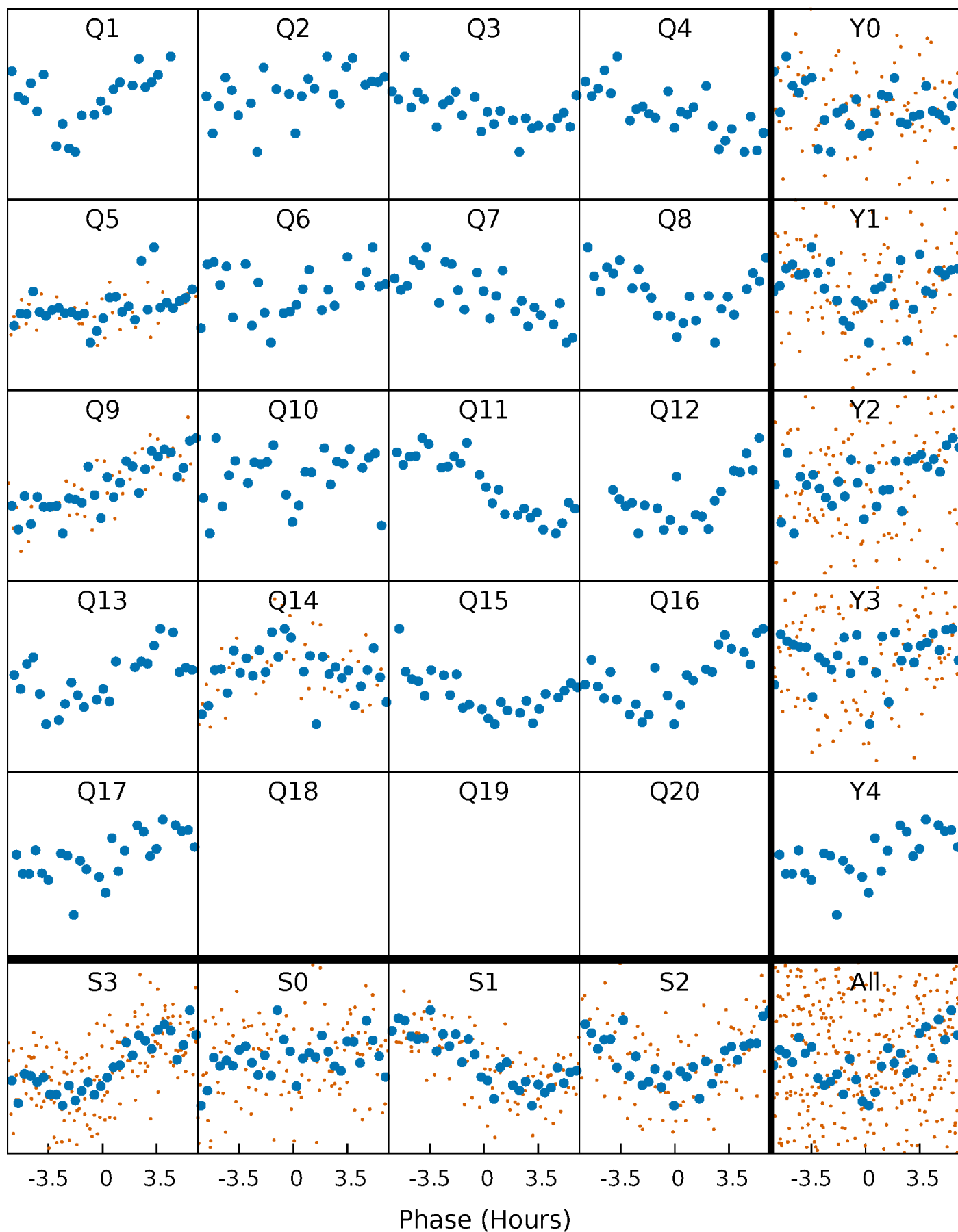


**Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



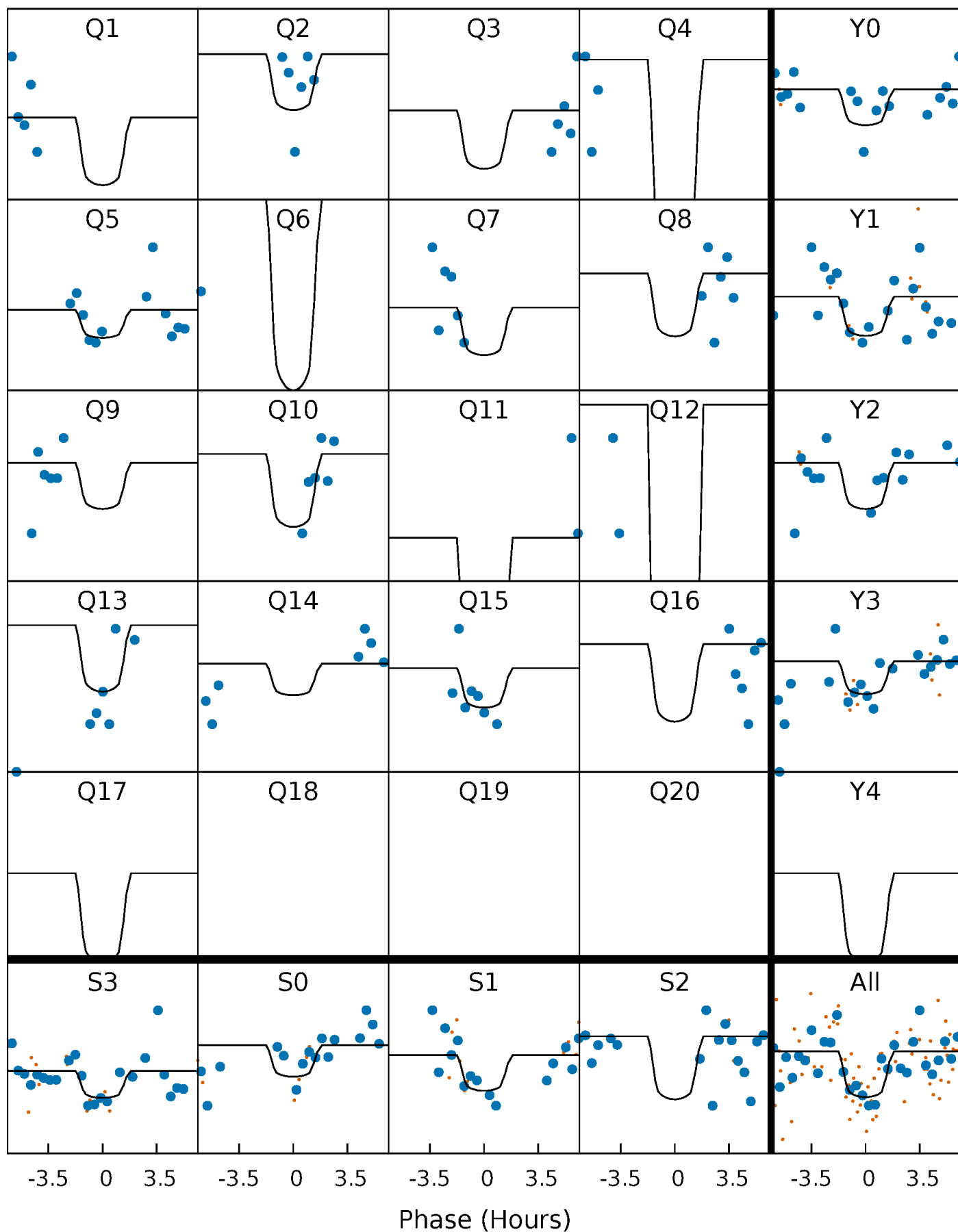
# PDC Quarter-Phased Transit Curves

TCE 007293769-03 P= 74.001039 Days  $T_0=164.807404$  (BKJD)



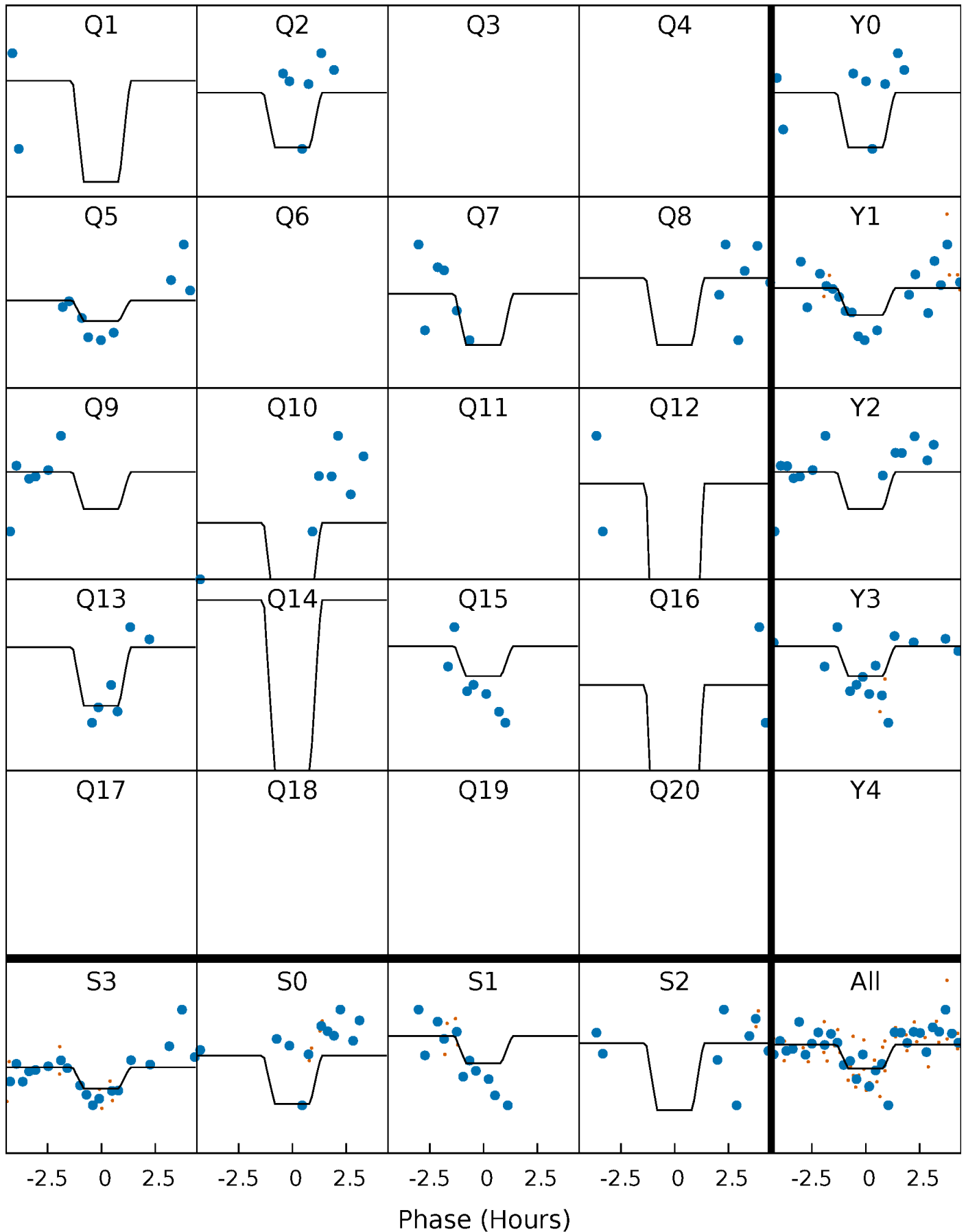
# DV Quarter-Phased Transit Curves

TCE 007293769-03 P= 74.001039 Days  $T_0=164.807404$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

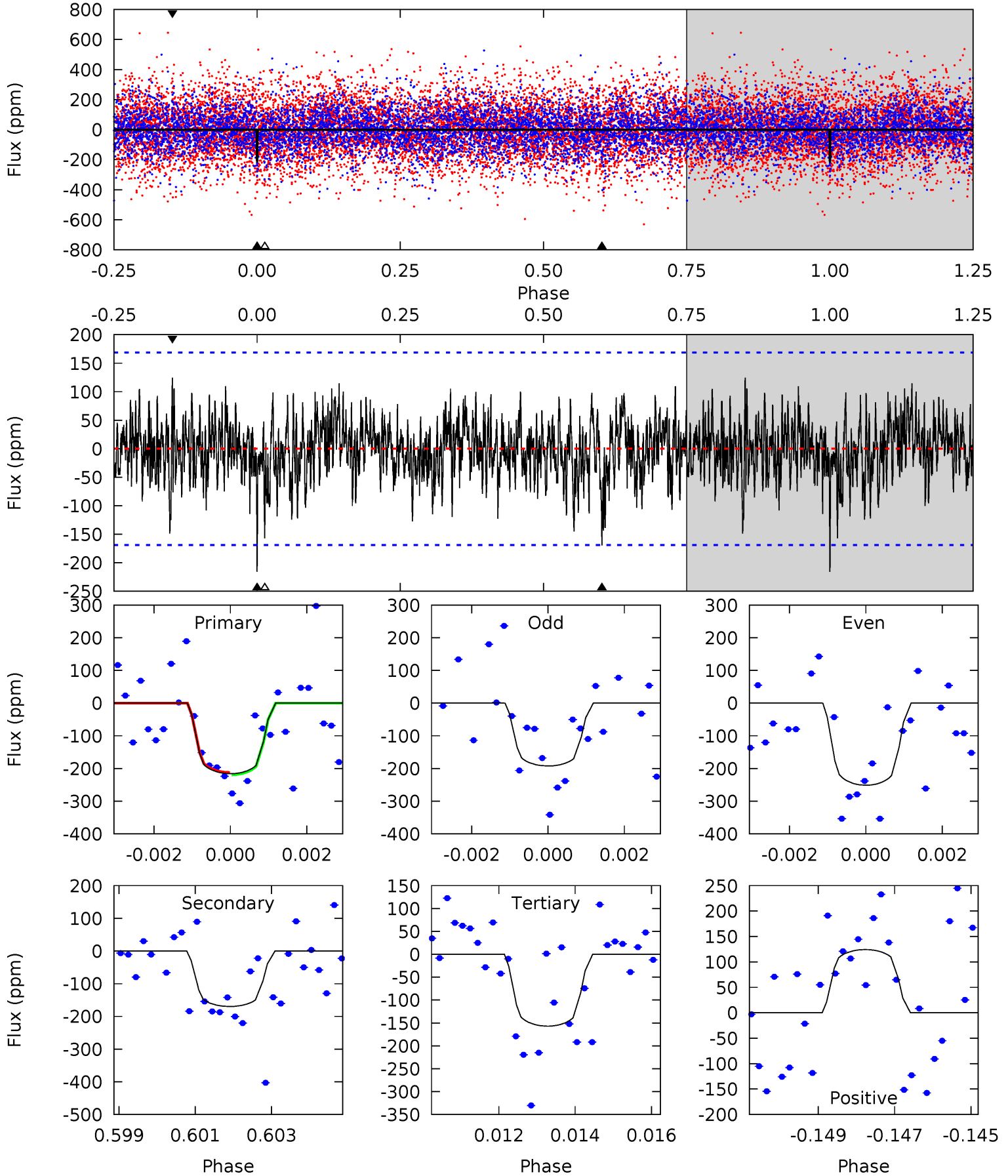
TCE 007293769-03 P= 74.000726 Days  $T_0=164.793950$  (BKJD)



# DV Model-Shift Uniqueness Test

007293769-03, P = 74.001039 Days, E = 90.806365 Days

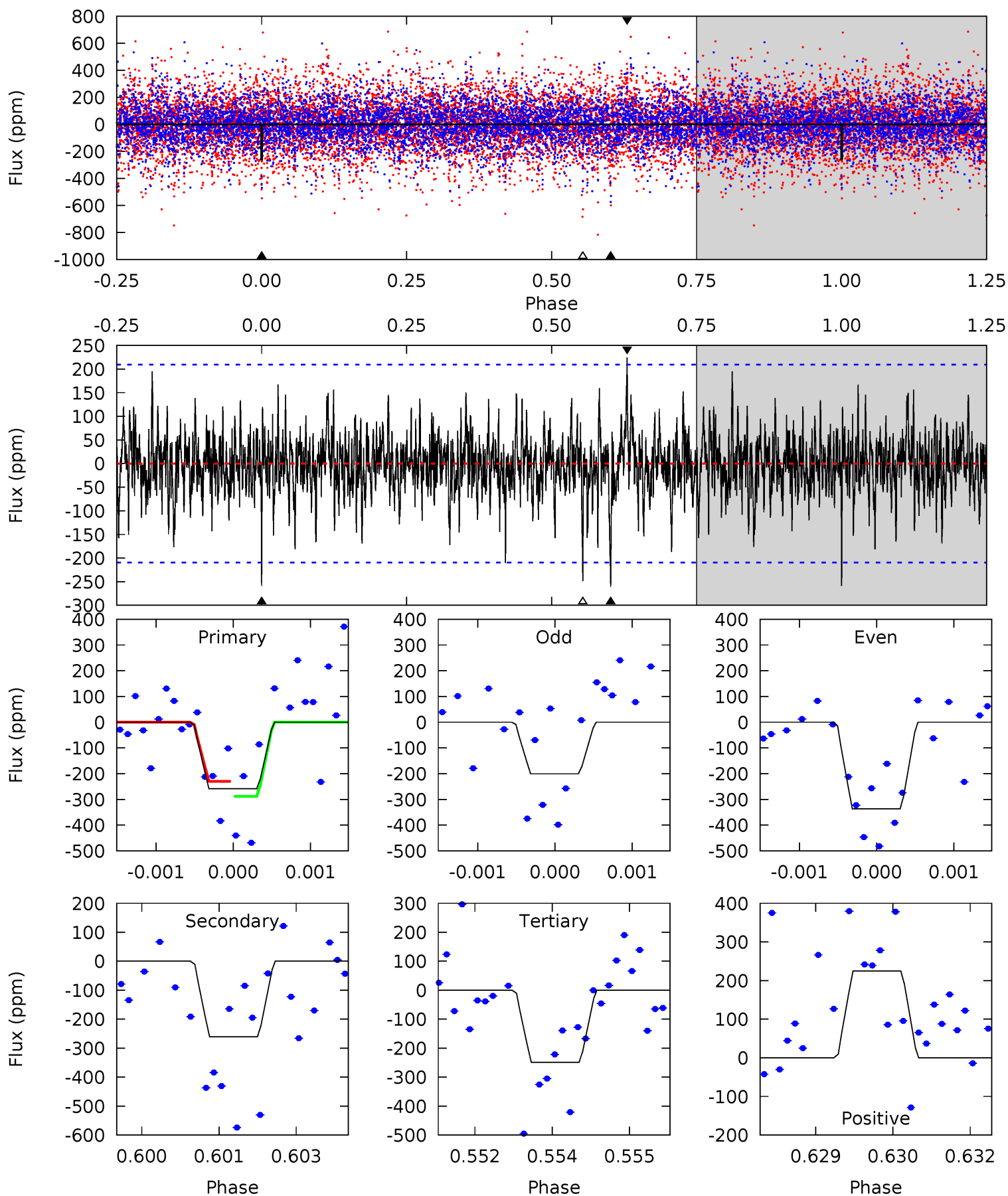
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.84	5.38	4.98	3.94	5.35	3.13	1.39	1.87	2.91	0.40	1.44	0.92	0.99	0.37	0.11



# Alt Model-Shift Uniqueness Test

007293769-03, P = 74.000726 Days, E = 90.793224 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
6.65	6.71	6.40	5.78	5.38	3.18	1.37	0.25	0.87	0.31	0.93	1.73	0.94	0.46	0.74





### Stellar Parameters For KIC 007293769

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$7004^{+220}_{-269}$	$3.684^{+0.296}_{-0.074}$	$-0.160^{+0.300}_{-0.250}$	$3.238^{+0.402}_{-1.207}$	$1.847^{+0.178}_{-0.414}$	$0.077^{+0.164}_{-0.019}$
	+3%/-4%	+8%/-2%	+188%/-156%	+12%/-37%	+10%/-22%	+214%/-25%
Source	PHO1	FLK73	KIC0	DSEP		

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

### Secondary Eclipse Parameters for KIC 007293769-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-170 \pm 32$	$10.04^{+9.12}_{-6.86}$	$1170^{+67}_{-113}$	$4629^{+3454}_{-951}$	$156^{+1411}_{-111}$
Alt.	$-261 \pm 39$	$9.77^{+9.64}_{-6.68}$	$1168^{+68}_{-98}$	$5144^{+4308}_{-1152}$	$261^{+2495}_{-192}$

$T_{max}$  = Theoretical Maximum Planetary Temperature  
 $T_{obs}$  = Observed Planetary Temperature (Assuming A=0.3)  
 $A_{obs}$  = Observed Albedo (Assuming T=0)

If a secondary eclipse is present, the system is likely an EB if  $T_{obs} \gg T_{max}$  AND  $A_{obs} \gg 1.0$

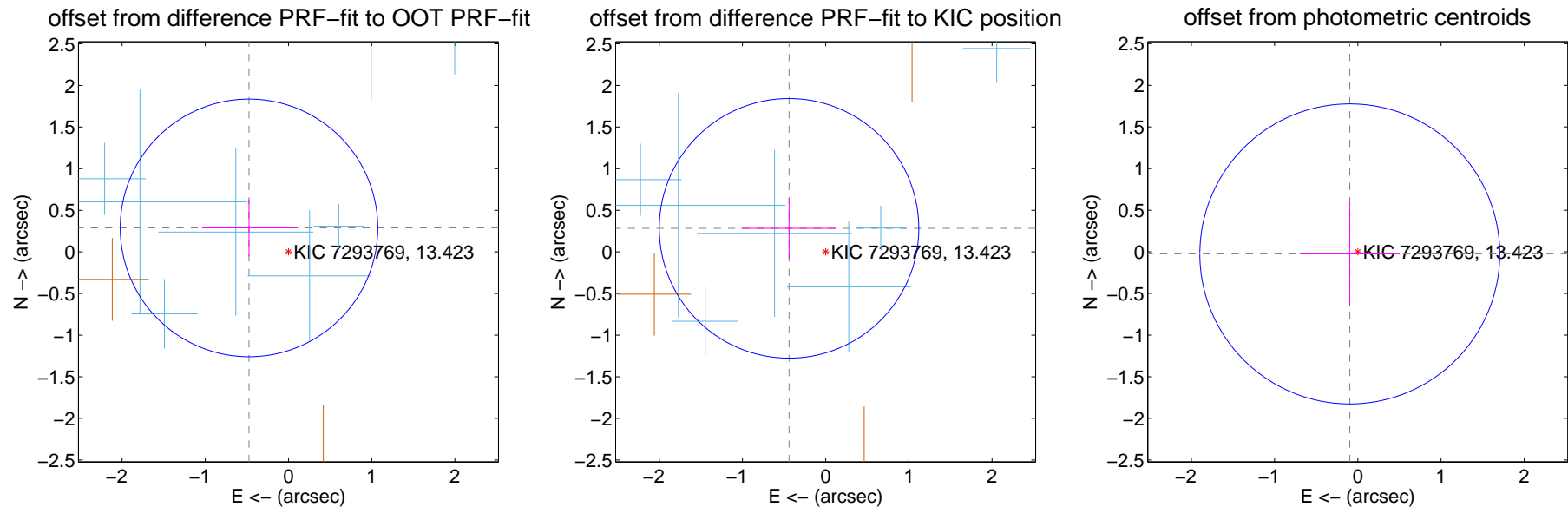
## DV Centroid Data

Supplemental centroid analysis for 007293769-03. Kepler magnitude: 13.42. Transit SNR 9.44

There are 7 quarters with good PRF difference image offsets

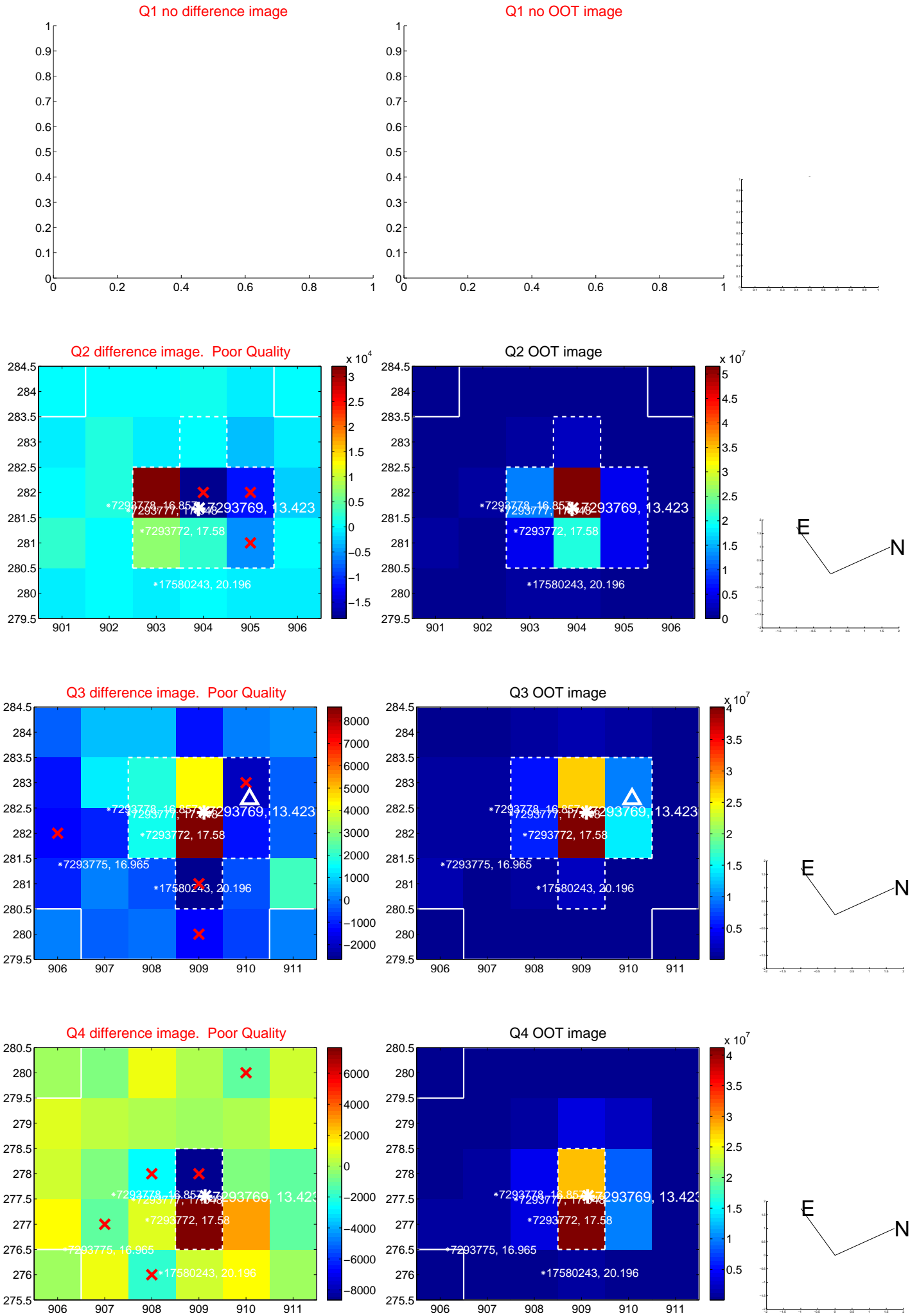
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.555 \pm 0.516$	1.08	$0.474 \pm 0.566$	$0.288 \pm 0.343$
PRF-fit source offset from KIC position	$0.523 \pm 0.520$	1.01	$0.440 \pm 0.572$	$0.283 \pm 0.362$
photometric centroid source offset	$0.10 \pm 0.60$	0.17	$0.10 \pm 0.60$	$-0.02 \pm 0.62$

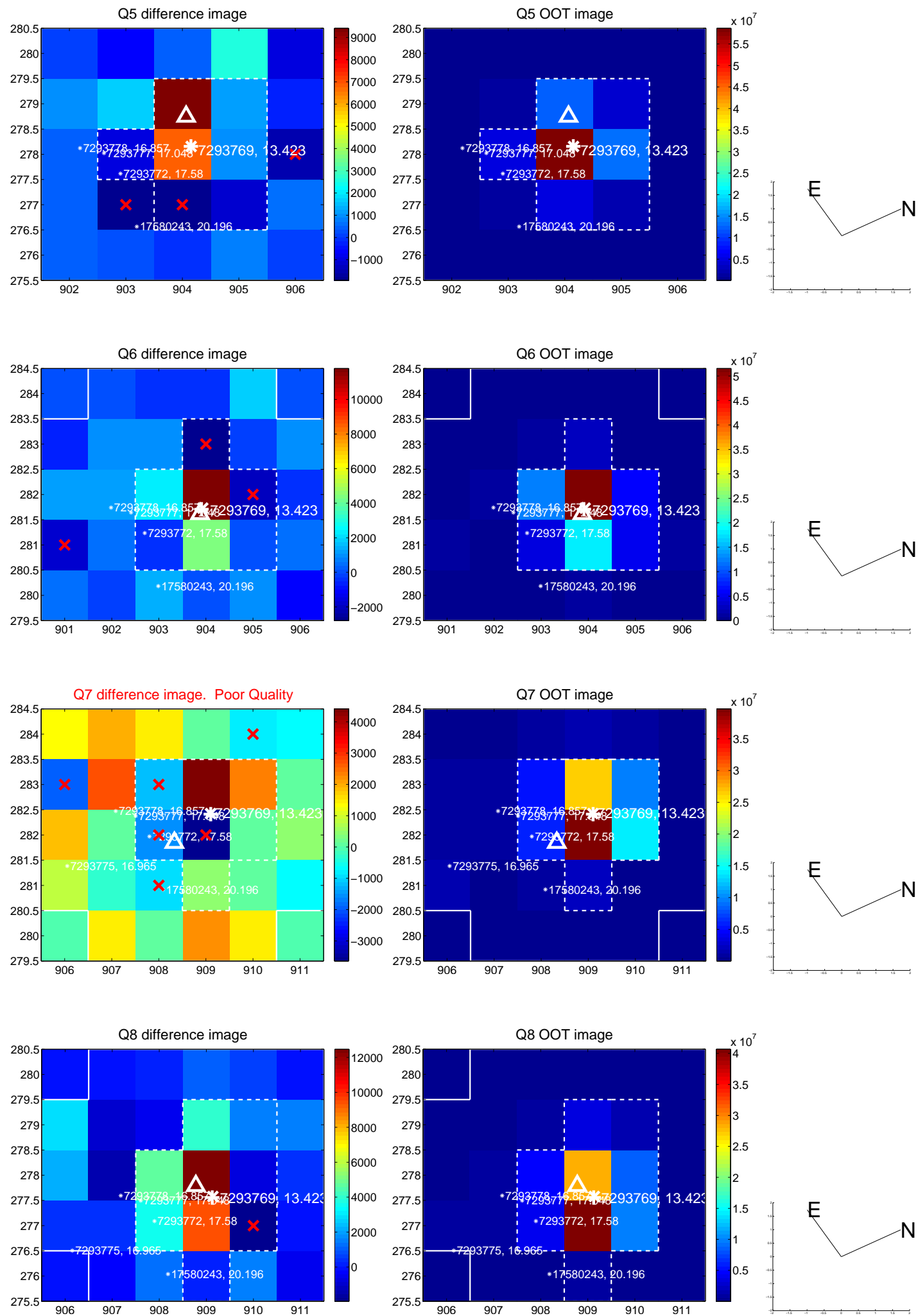


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

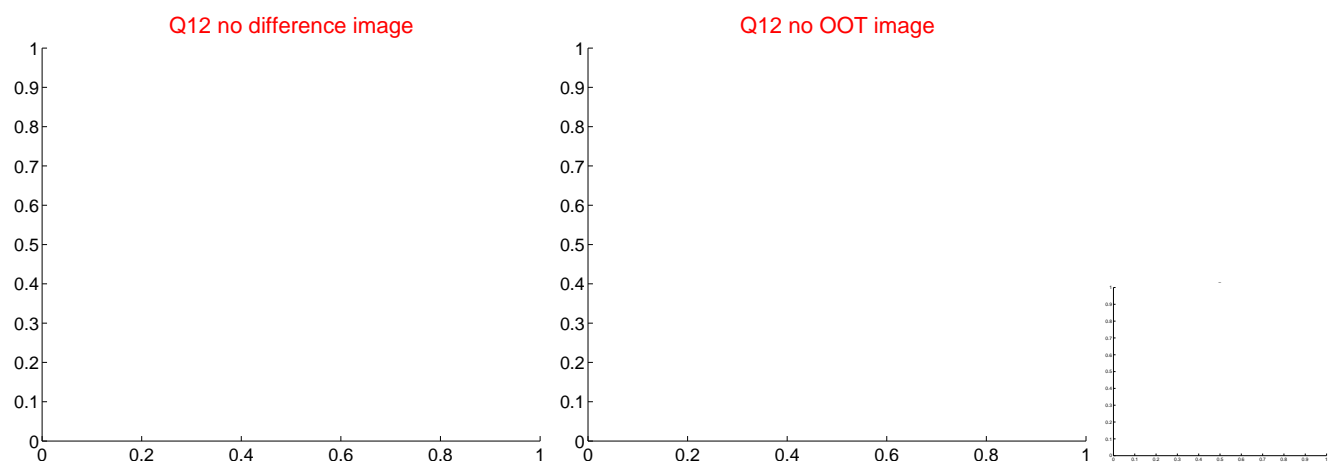
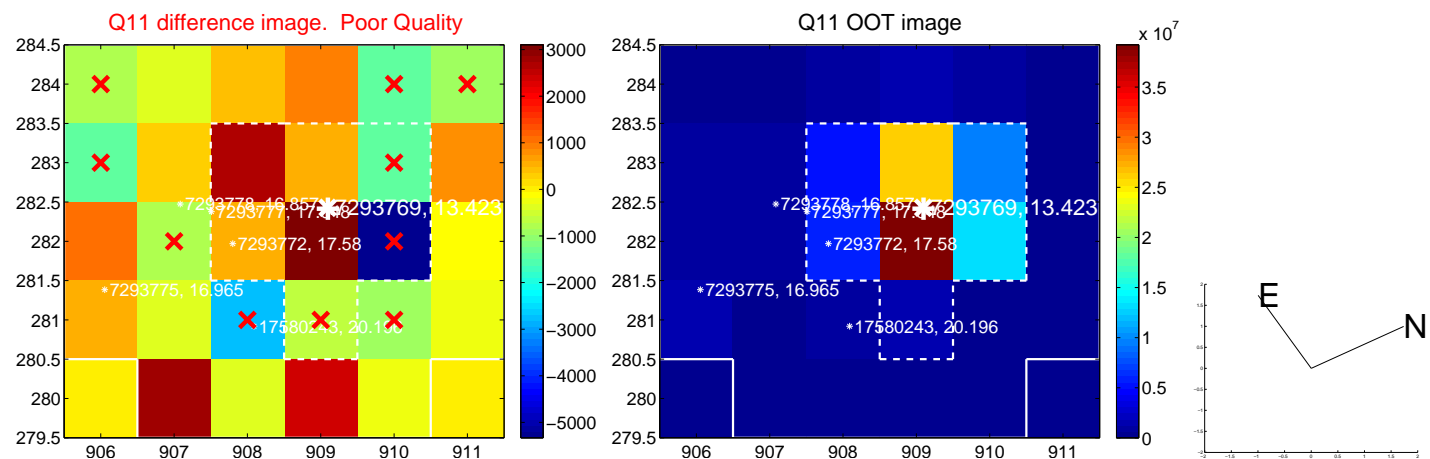
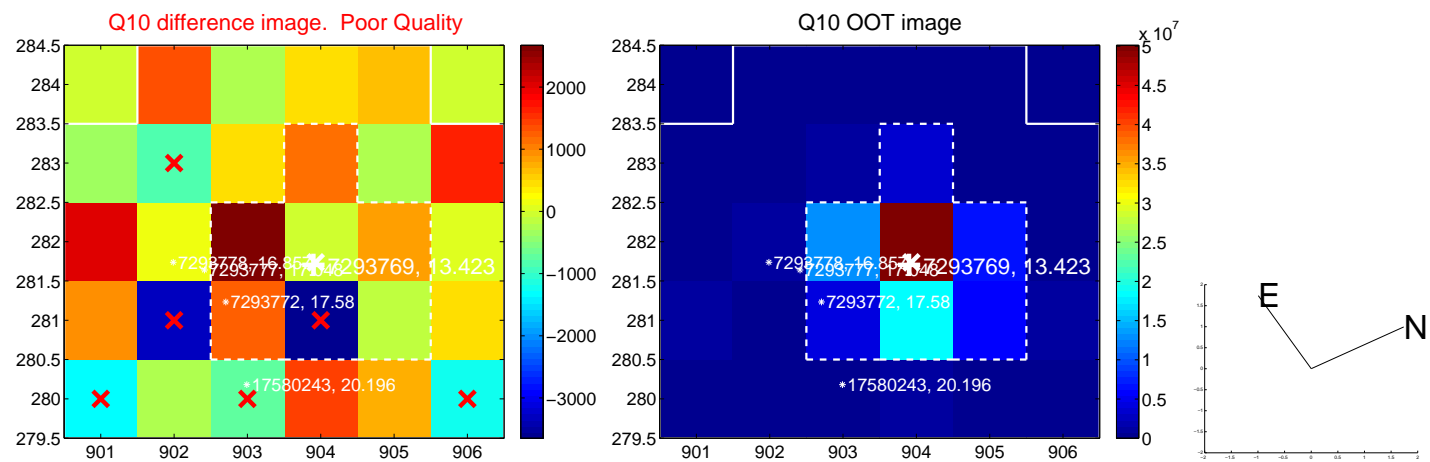
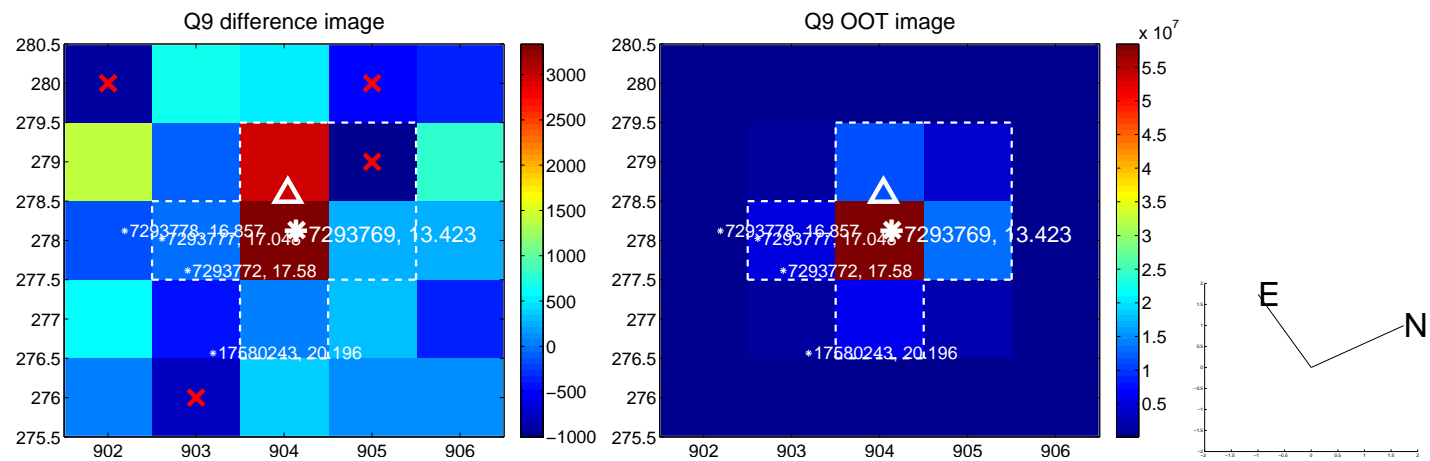
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



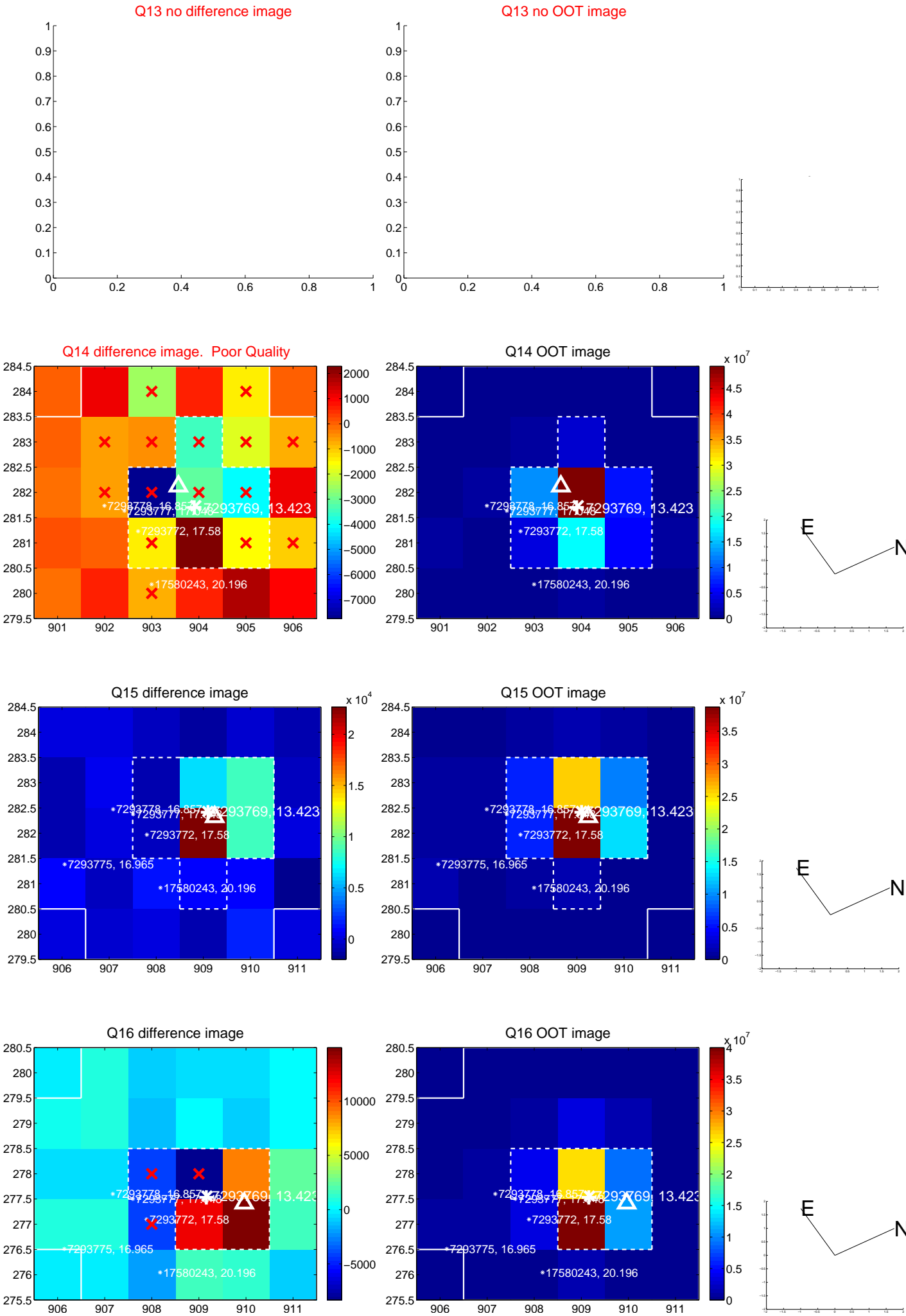
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

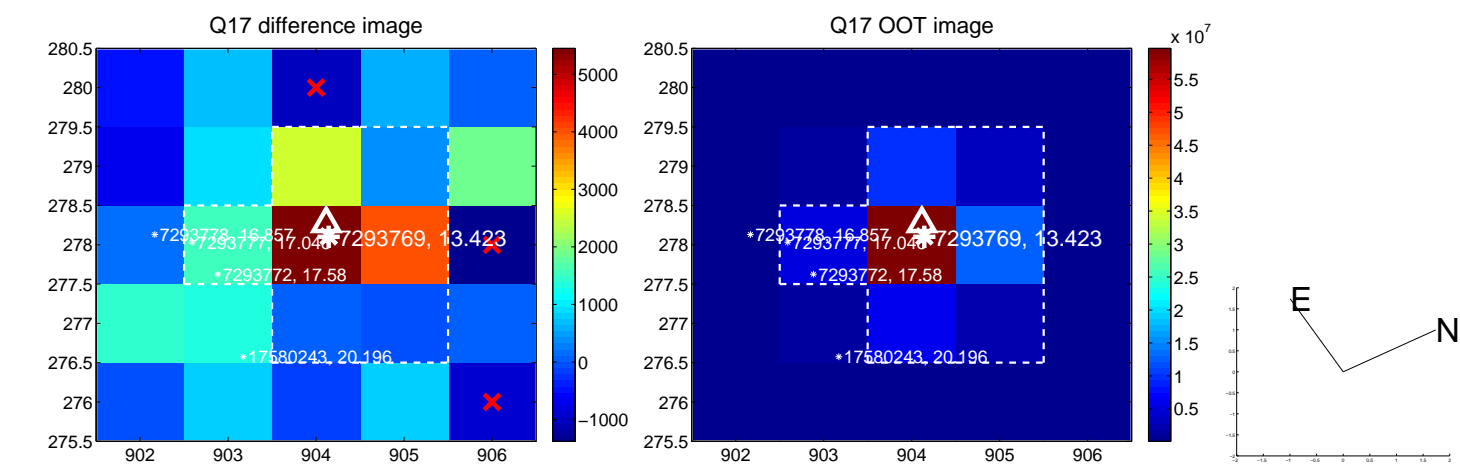


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

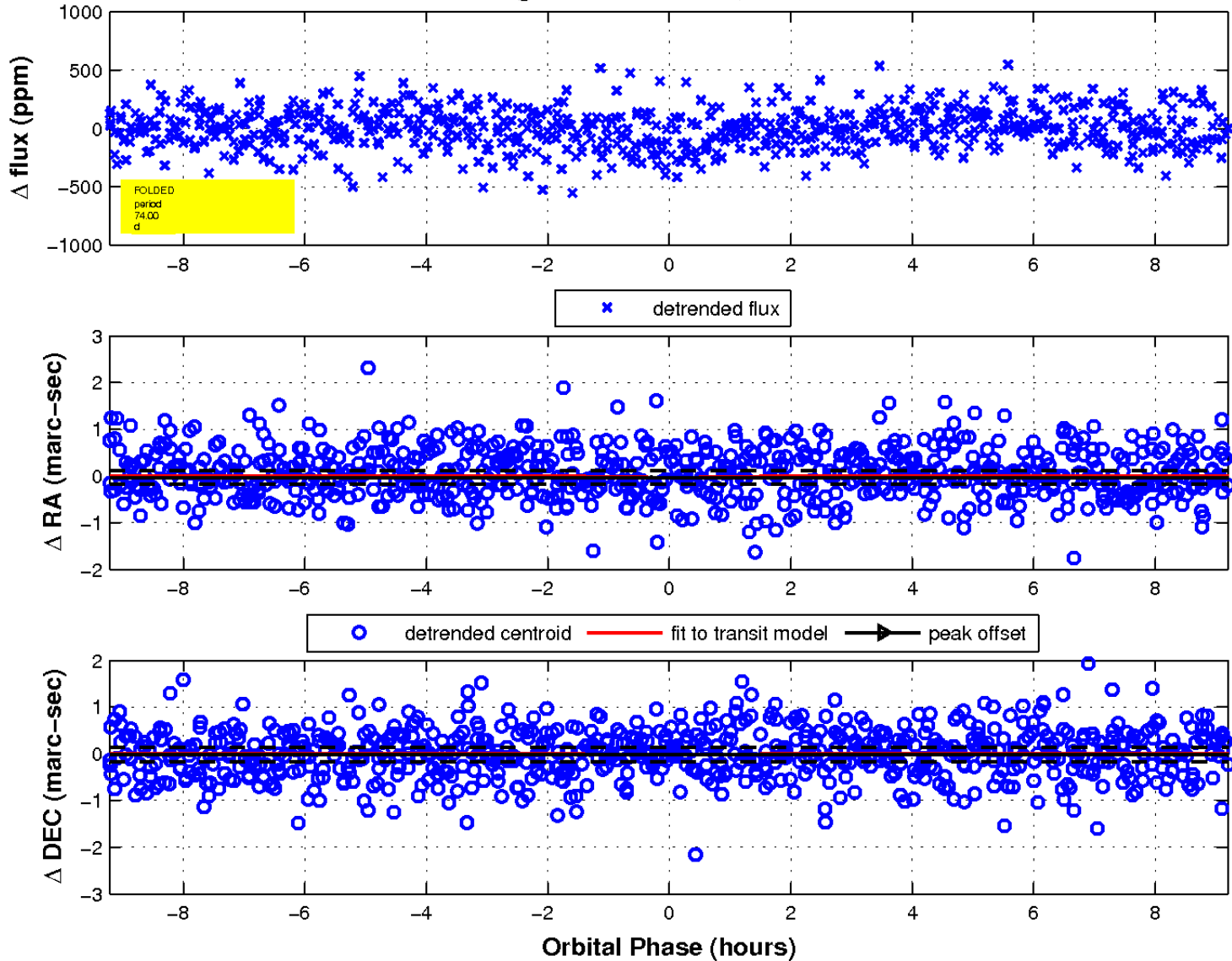




white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



fluxWeightedCentroids, Planet 3 of 3



UKIRT Image

Declination

