

# KIC 006294889

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006294889-01	OBS	No	0.699310	131.977578	25.9	3.995	8.8	4.4	2.18	8529	1.19	59378.51
006294889-02	OBS	No	46.197178	164.078108	988.1	2.367	8.0	9.1	2.18	8529	12.54	222.35
006294889-03	OBS	No	46.704267	155.330056	931.9	1.370	7.8	8.0	2.18	8529	7.17	219.14

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006294889-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
006294889-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—HALO_GHOST
006294889-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—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.

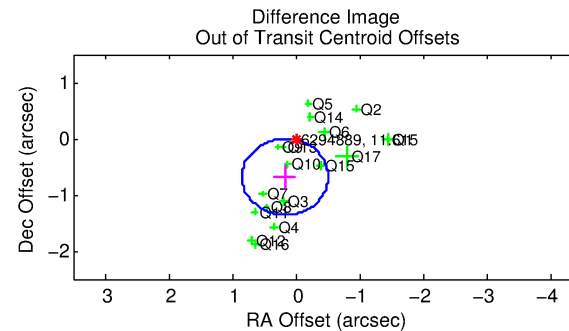
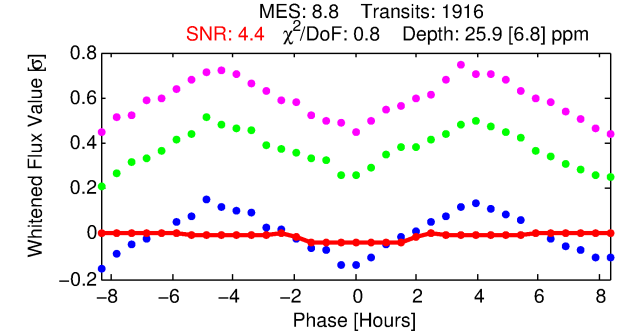
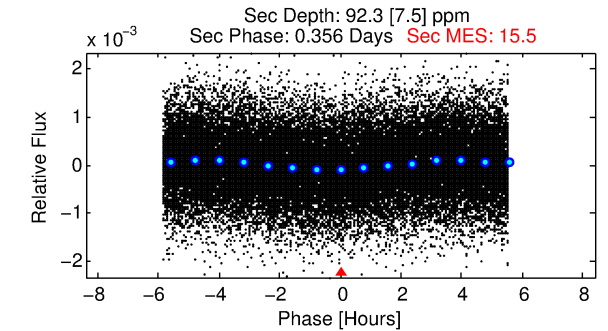
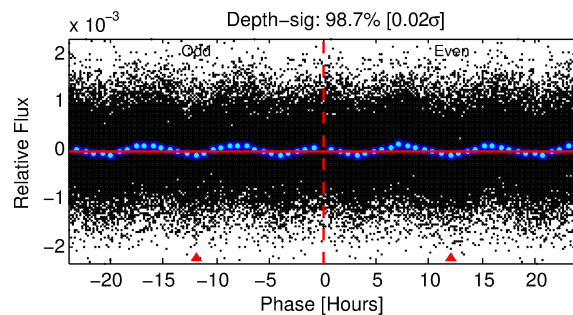
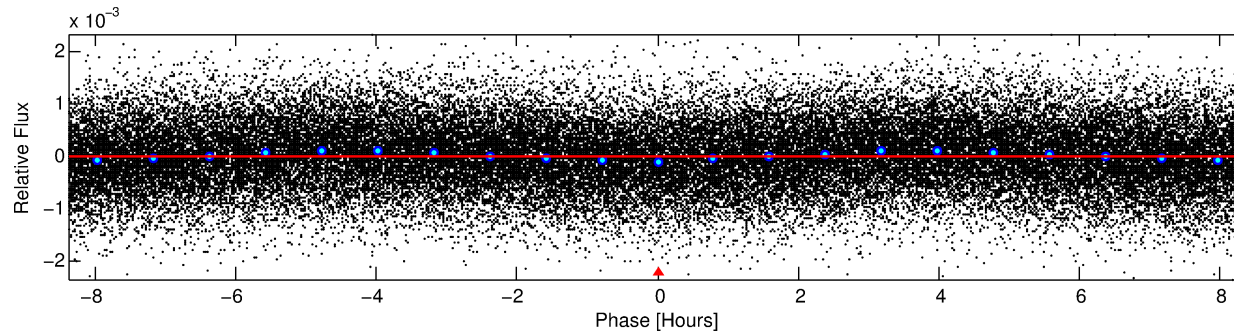
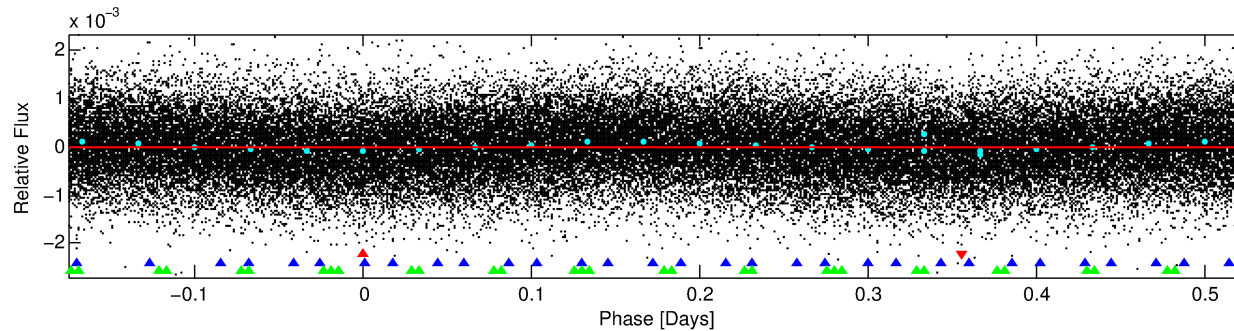
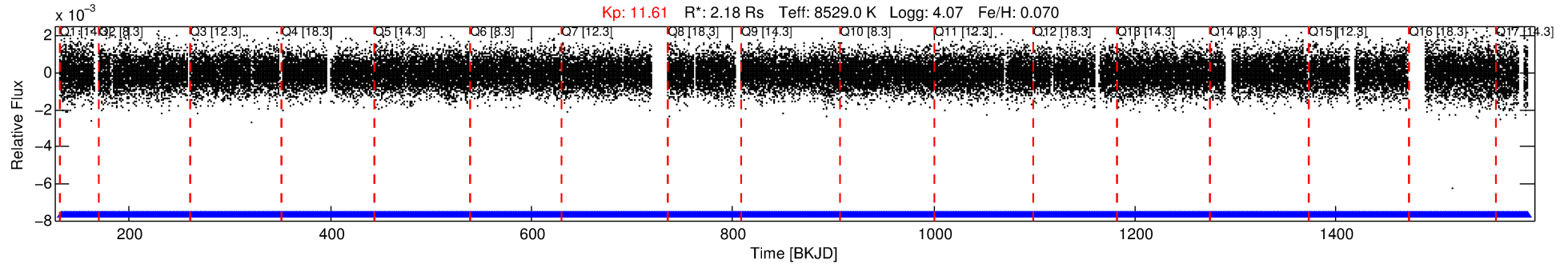
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 006294889-01

No Significant Match Found

# DV One-Page Summary

KIC: 6294889 Candidate: 1 of 3 Period: 0.699 d



## DV Fit Results:

Period = 0.69931 [0.00003] d  
 Epoch = 131.9776 [0.0095] BKJD  
 Rp/R\* = 0.0050 [0.0048]  
 a/R\* = 1.27 [2.84]  
 b = 0.70 [4.33]  
 Seff = 59378.51 [20903.49]  
 Teq = 3980 [350] K  
 Rp = 1.19 [1.18] Re  
 a = 0.0195 [0.0042] AU  
 Ag = 13.61 [26.42] [0.48σ]  
 Tefp = 11821 [5687] K [1.38σ]

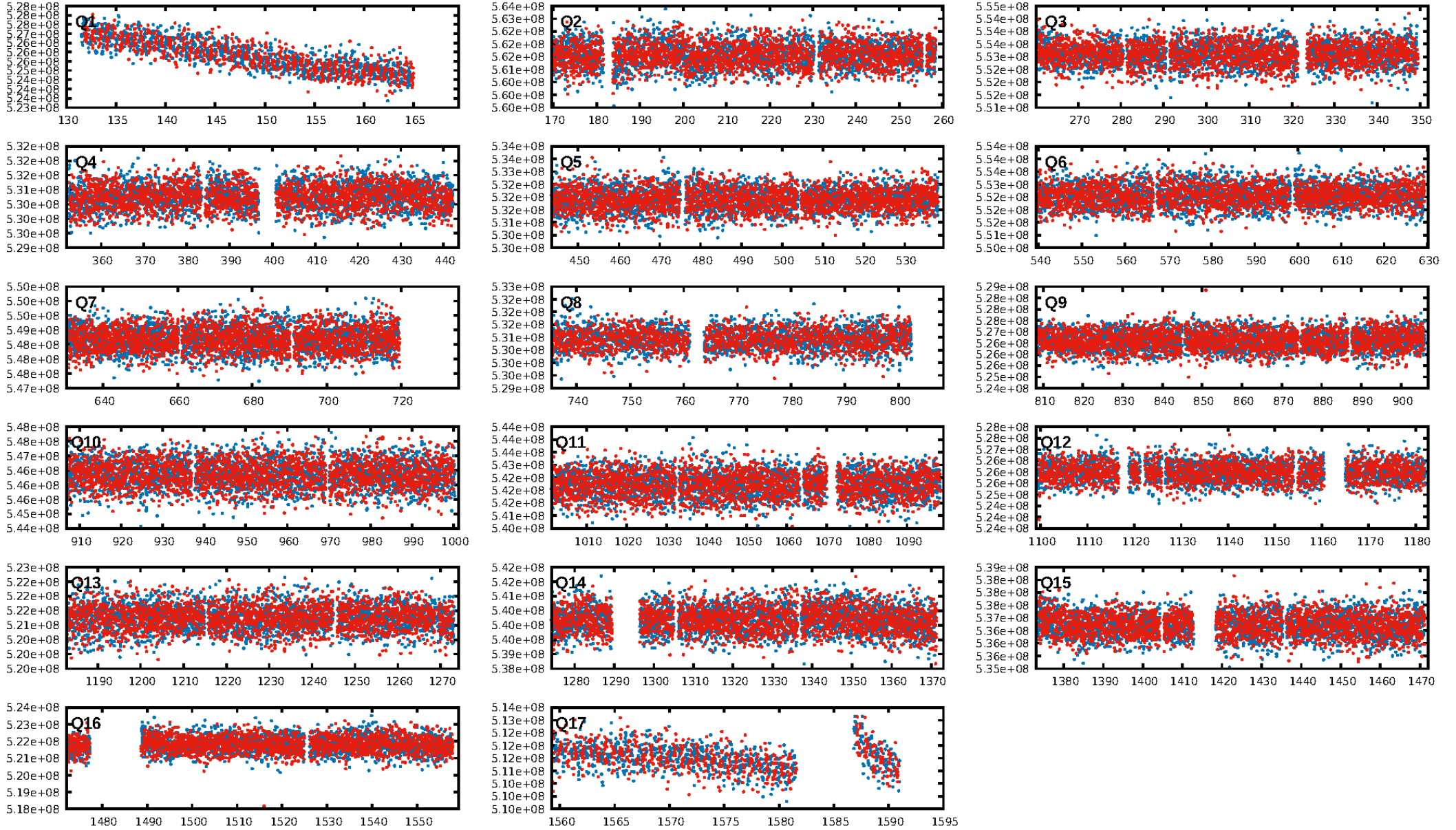
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
 LongPeriod-sig: 100.0% [235.16σ]  
 ModelChiSquare2-sig: N/A  
 ModelChiSquareGof-sig: N/A  
 Bootstrap-pfa: 1.42e-08  
 RollingBand-fgt: 1.00 [1829/1829]  
 GhostDiagnostic-chr: 2.251  
 Centroid-sig: N/A  
 Centroid-so: 0.199 arcsec [0.63σ]  
 OotOffset-rm: 0.704 arcsec [3.12σ]  
 KicOffset-rm: 0.734 arcsec [3.53σ]  
 OotOffset-st: 4/4/4/5 [17]  
 KicOffset-st: 4/4/4/5 [17]  
 DiffImageQuality-fgm: 1.00 [17/17]  
 DiffImageOverlap-fno: 1.00 [17/17]

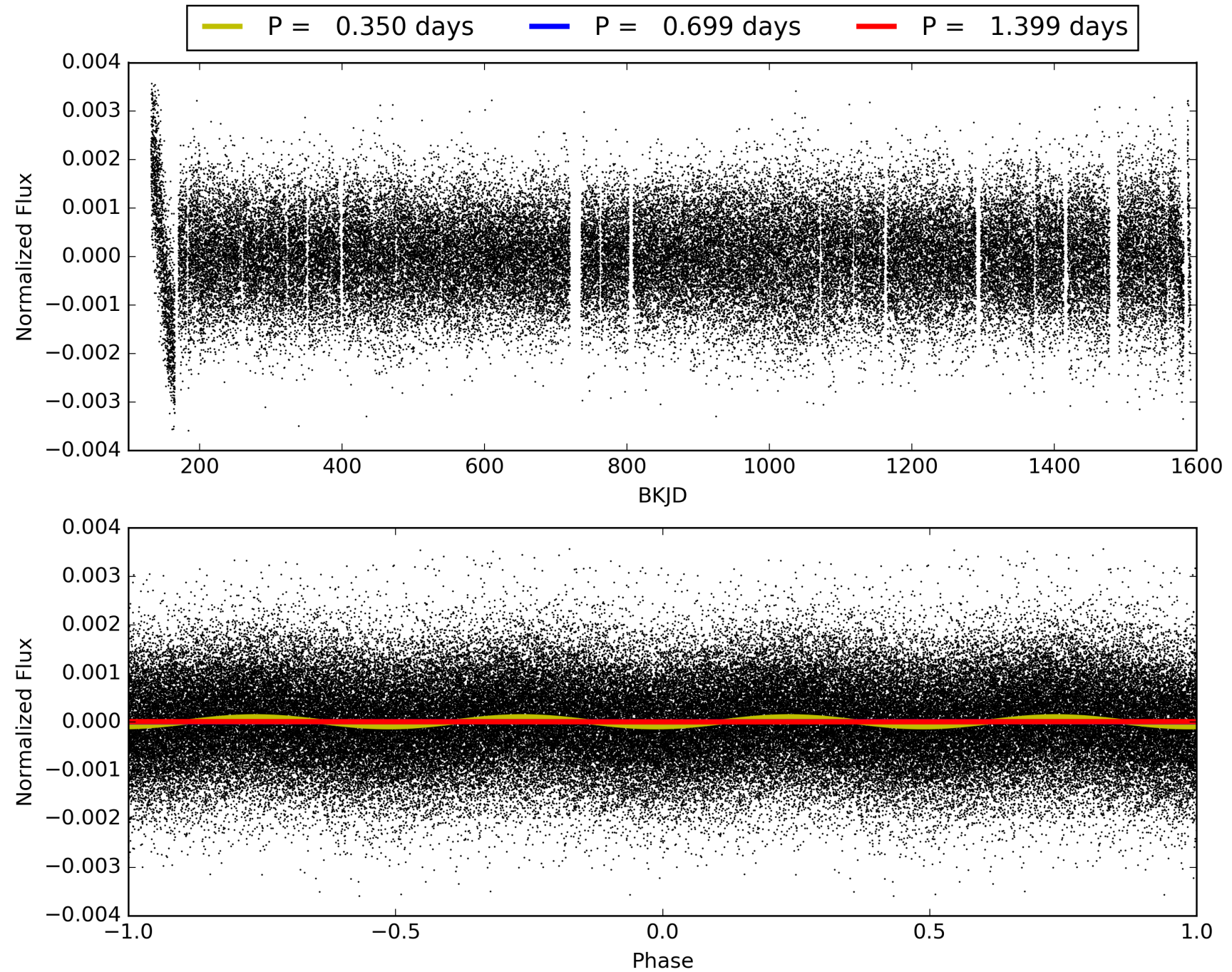
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 12:00:58 Z

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

# TCE 006294889-01, PDC Light Curves

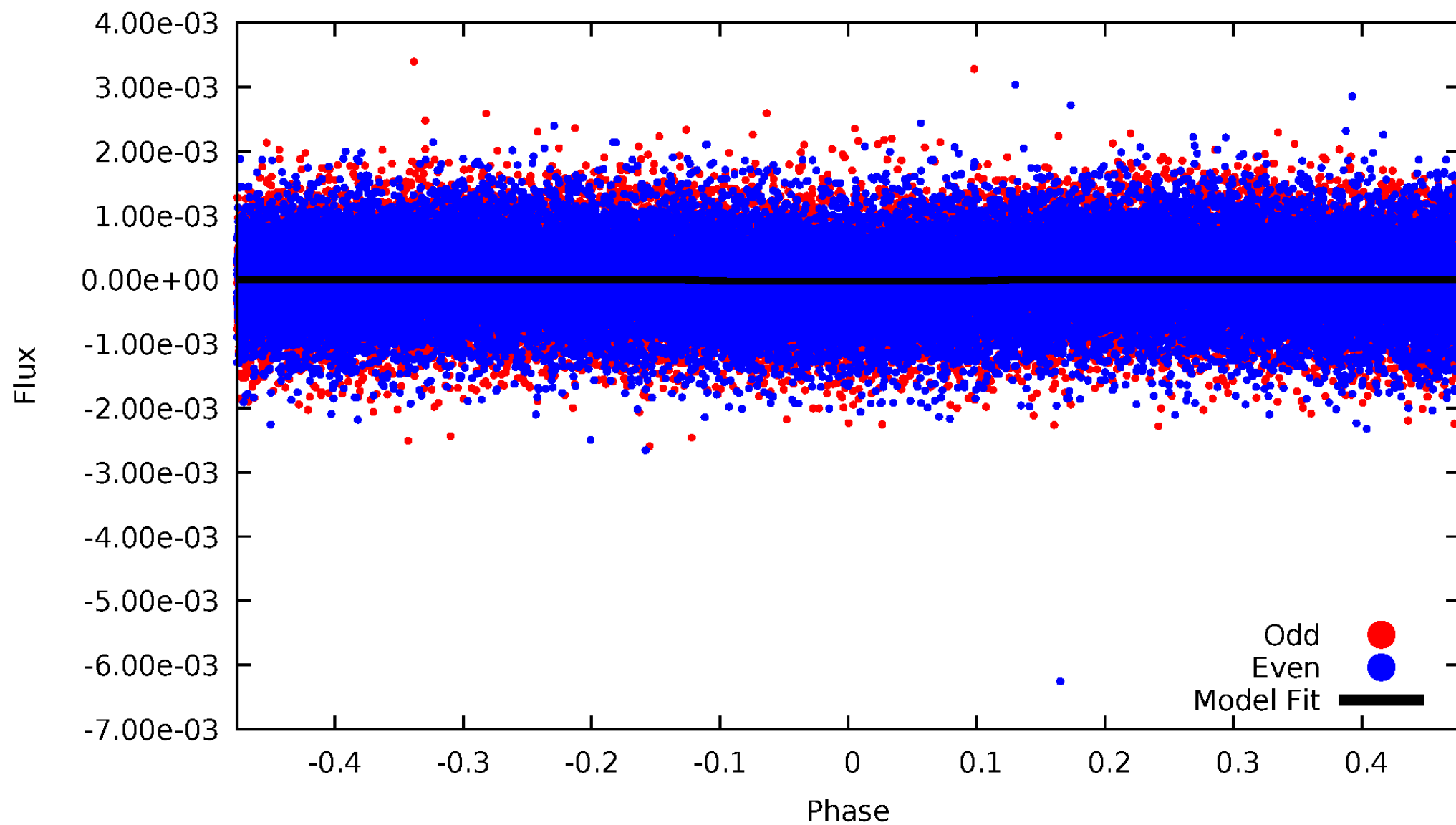


# TCE 006294889-01



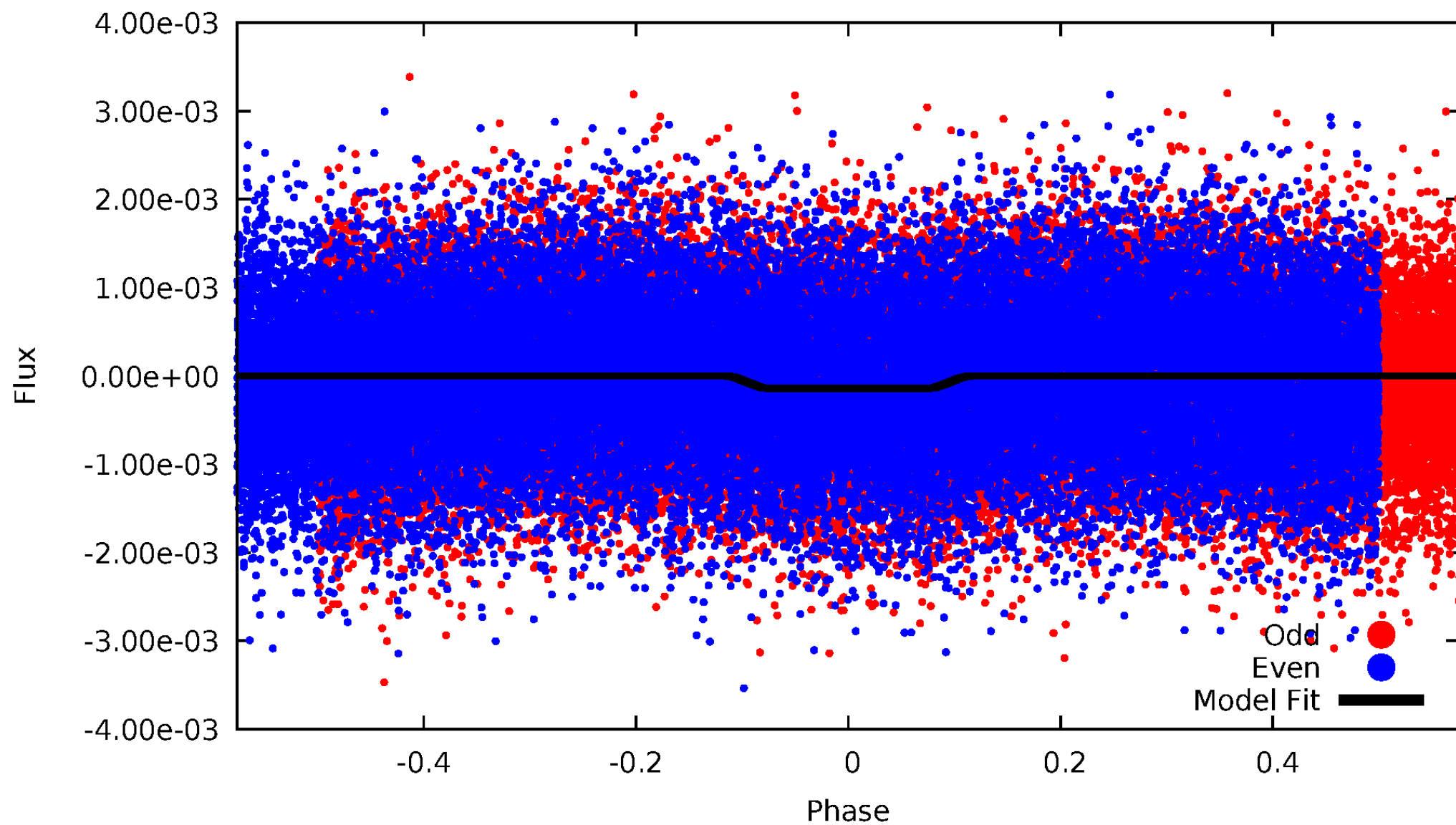
# DV Odd/Even

TCE 006294889-01

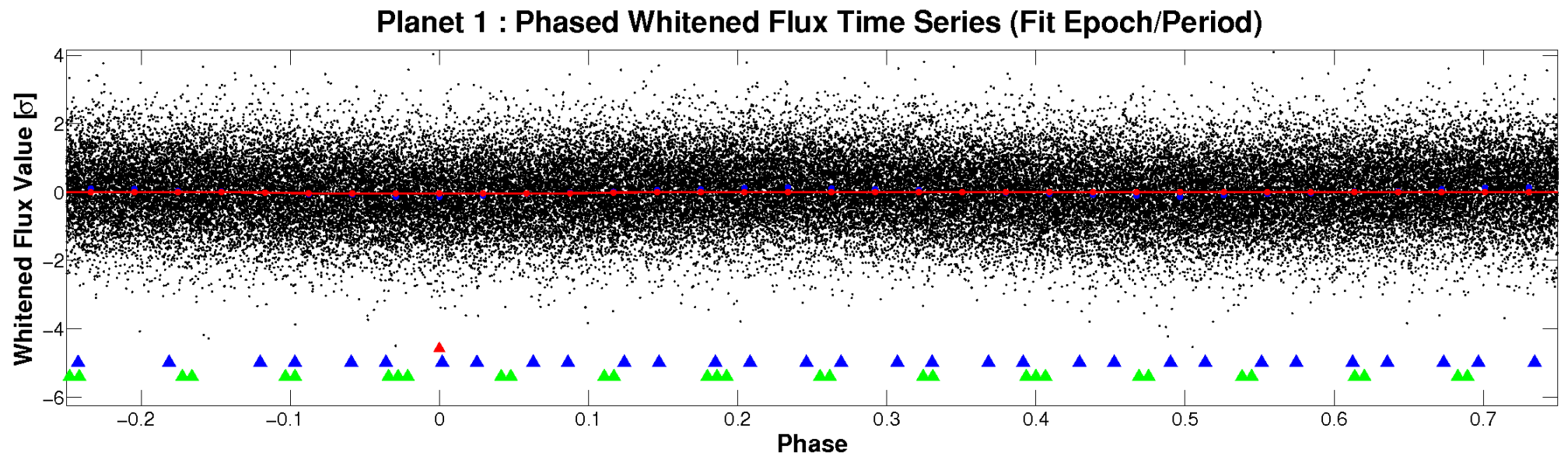
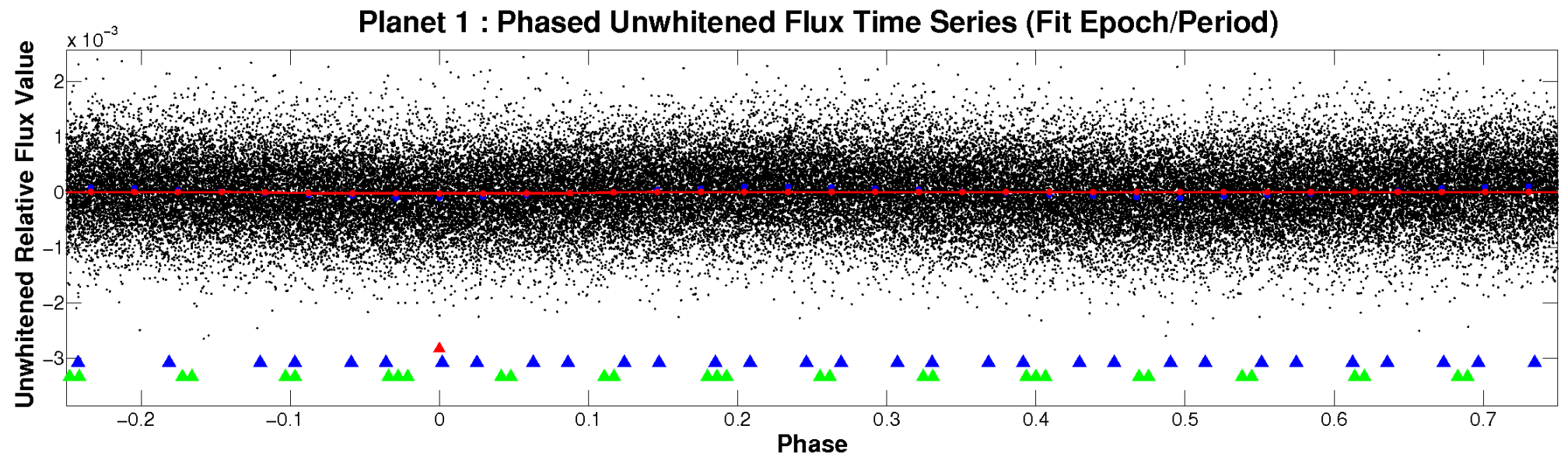


# ALT Odd/Even

TCE 006294889-01

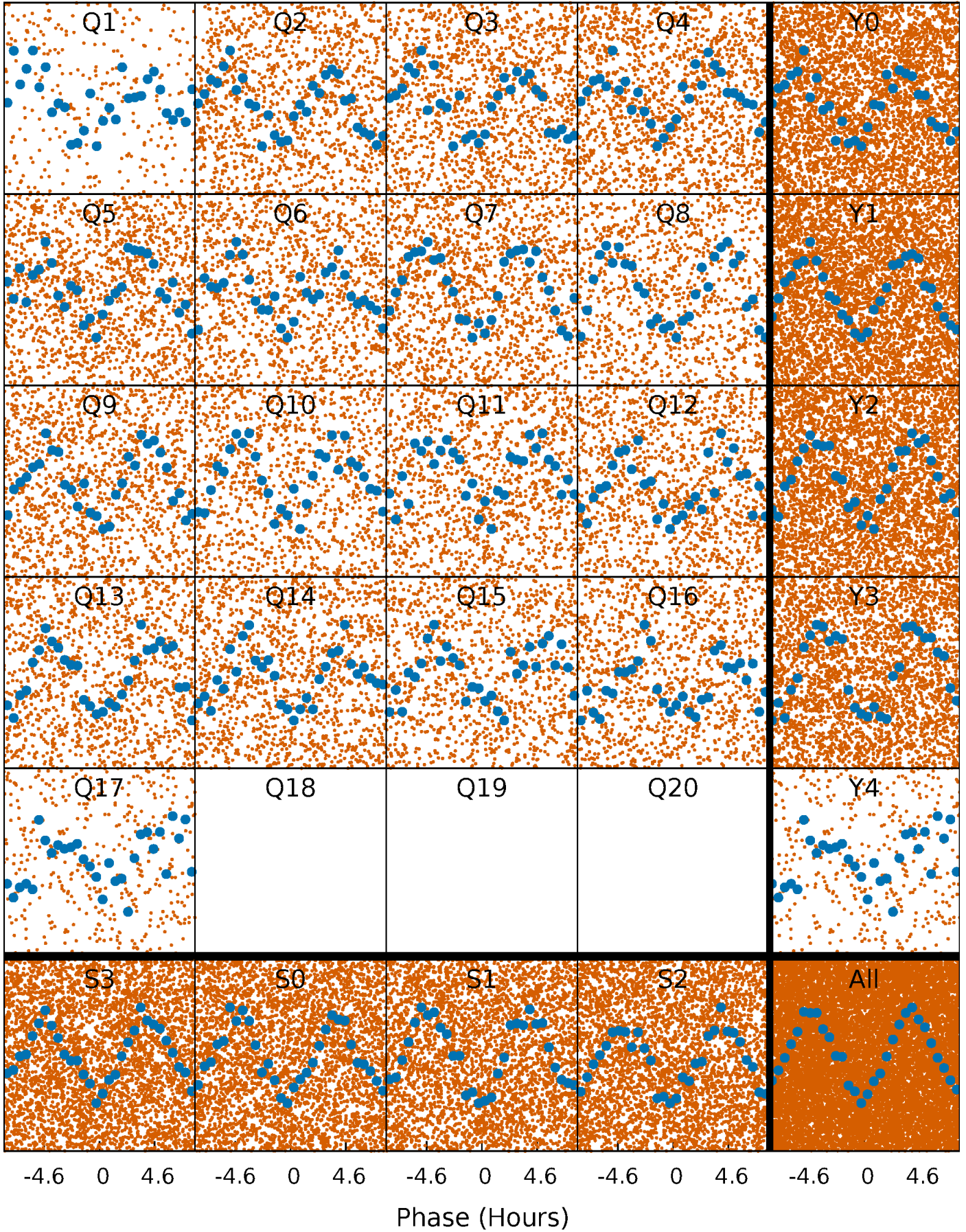


# Non-Whitened Vs. Whitened Light Curve



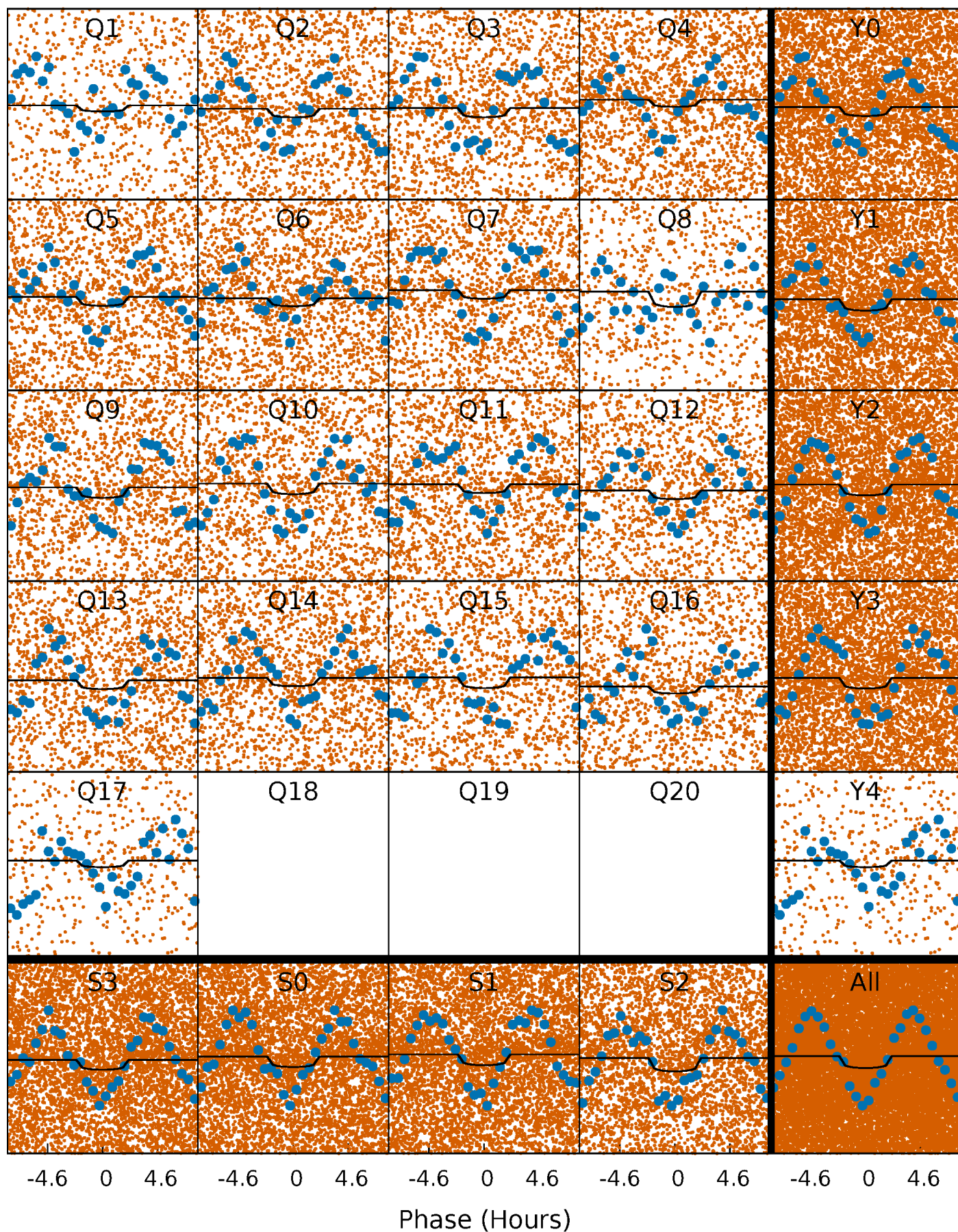
# PDC Quarter-Phased Transit Curves

TCE 006294889-01 P= 0.699310 Days  $T_0=131.977578$  (BKJD)



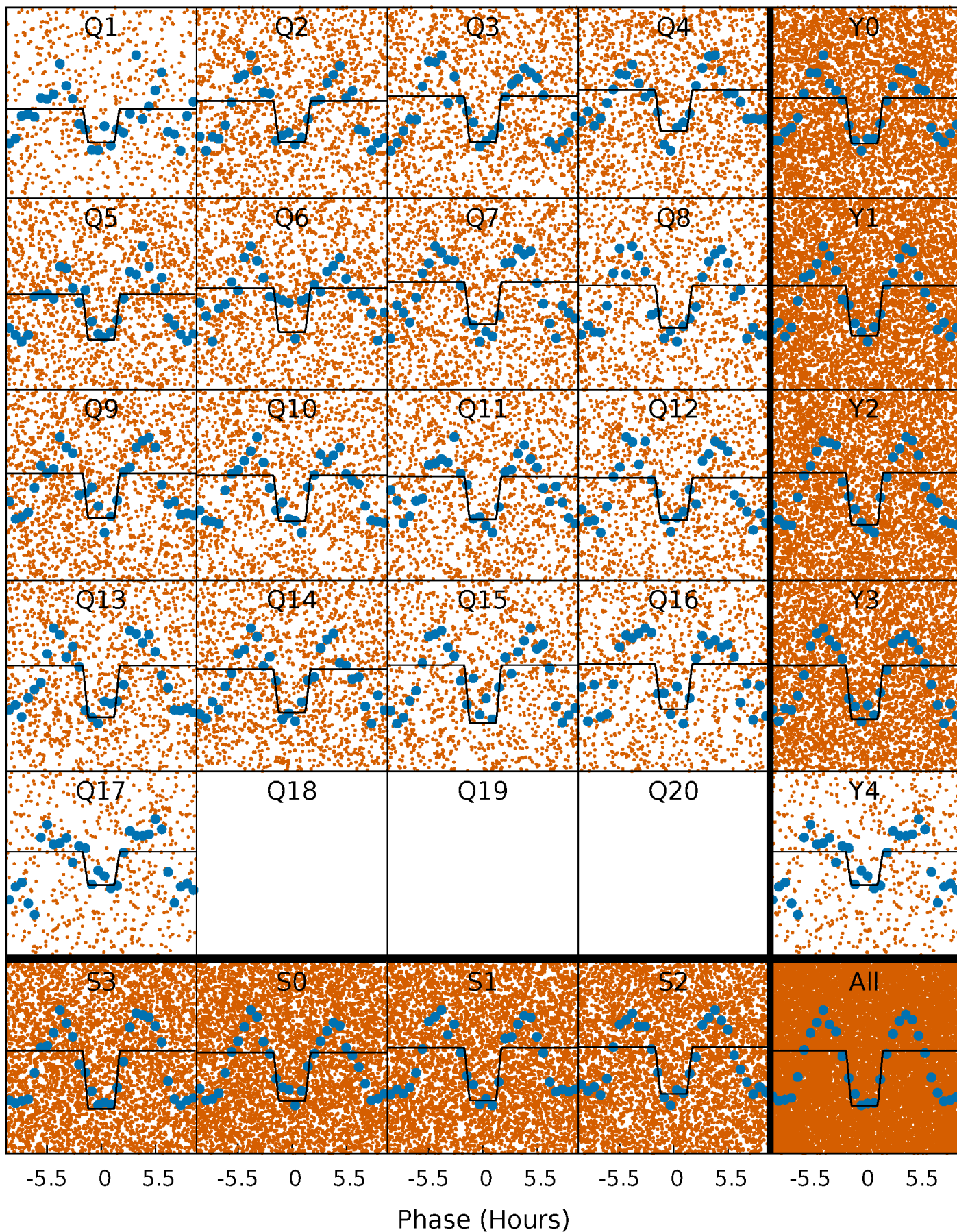
# DV Quarter-Phased Transit Curves

TCE 006294889-01 P= 0.699310 Days  $T_0=131.977578$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

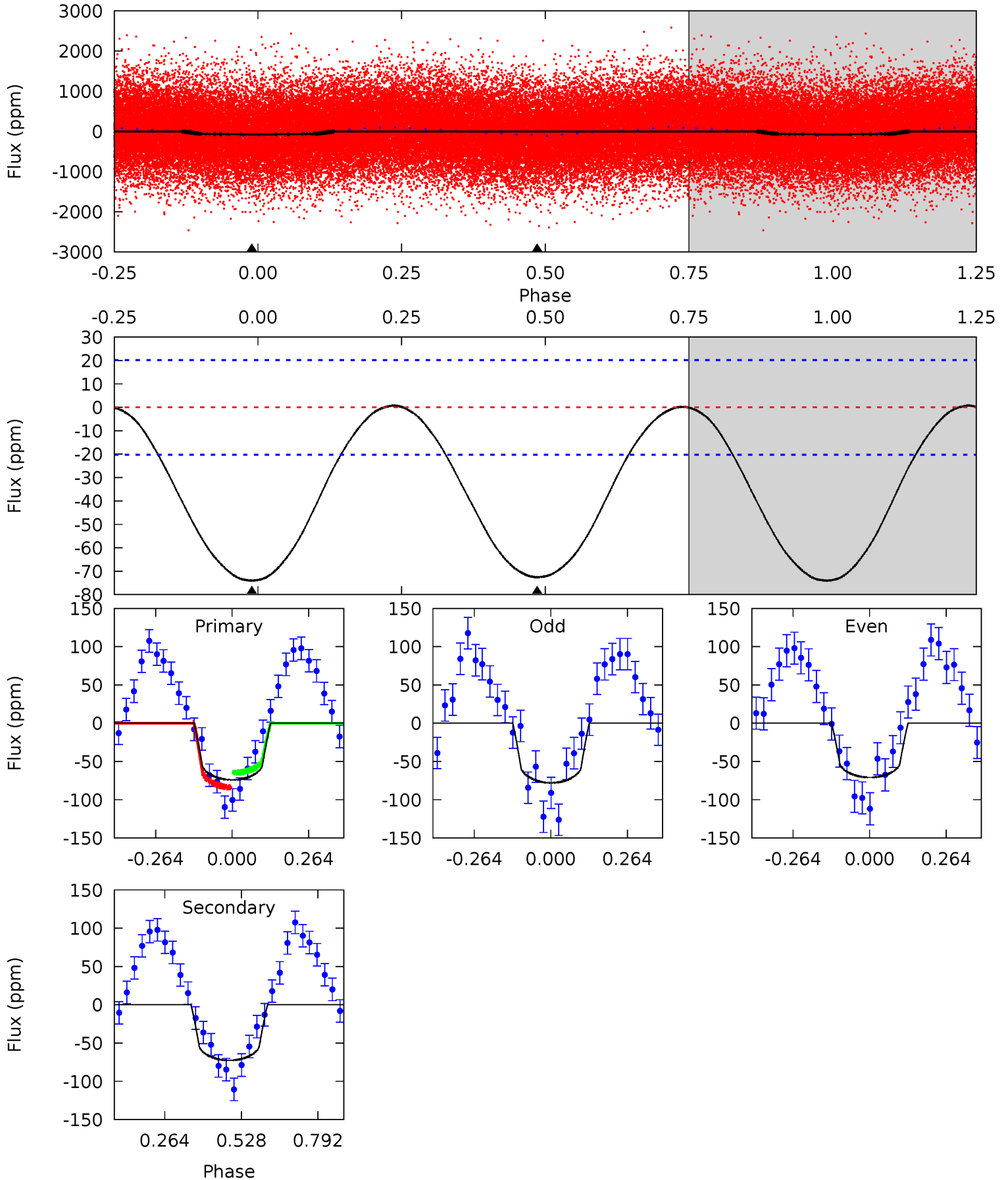
TCE 006294889-01 P= 0.699353 Days  $T_0=131.924309$  (BKJD)



# DV Model-Shift Uniqueness Test

006294889-01, P = 0.699310 Days, E = 131.278268 Days

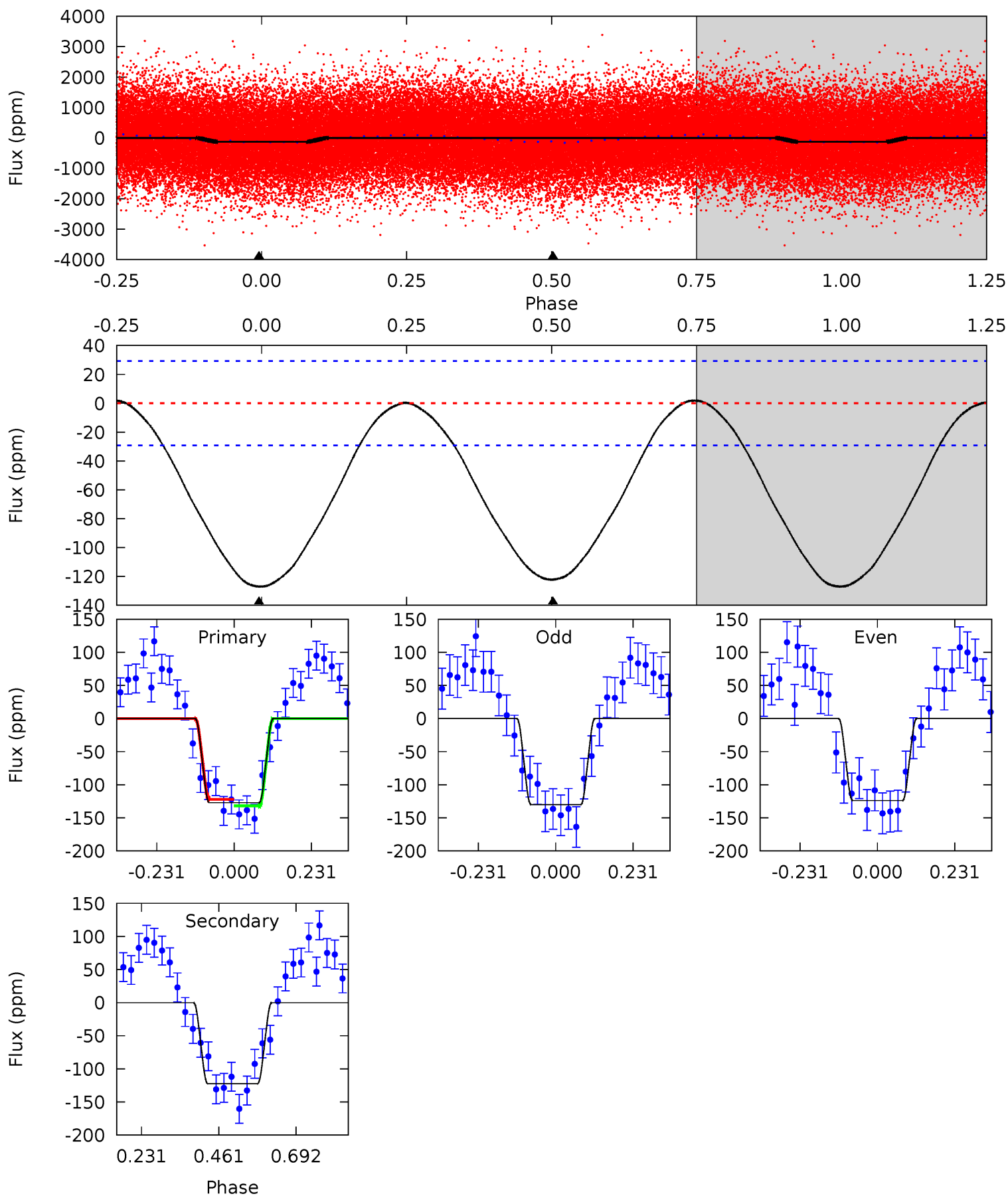
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.0	15.6	0	0	4.36	1.12	0.13	16.0	16.0	15.6	15.6	0.76	1.04	0.01	2.08



# Alt Model-Shift Uniqueness Test

006294889-01, P = 0.699353 Days, E = 131.224956 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
19.1	18.3	0	0	4.39	1.20	0.25	19.1	19.1	18.3	18.3	0.45	0.95	0.01	0.72



### Stellar Parameters For KIC 006294889

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$8529^{+235}_{-370}$	$4.066^{+0.165}_{-0.135}$	$0.070^{+0.250}_{-0.600}$	$2.183^{+0.462}_{-0.564}$	$2.024^{+0.317}_{-0.476}$	$0.274^{+0.276}_{-0.101}$
	+3%/-4%	+4%/-3%	+357%/-857%	+21%/-26%	+16%/-24%	+101%/-37%
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 006294889-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-73 \pm 5$	$1.44^{+1.06}_{-0.88}$	$5541^{+355}_{-376}$	$10541^{+16918}_{-3378}$	$7.108^{+40.526}_{-4.735}$
Alt.	$-122 \pm 7$	$2.82^{+1.21}_{-1.10}$	$5533^{+368}_{-366}$	$7788^{+3465}_{-1483}$	$3.167^{+5.424}_{-1.571}$

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

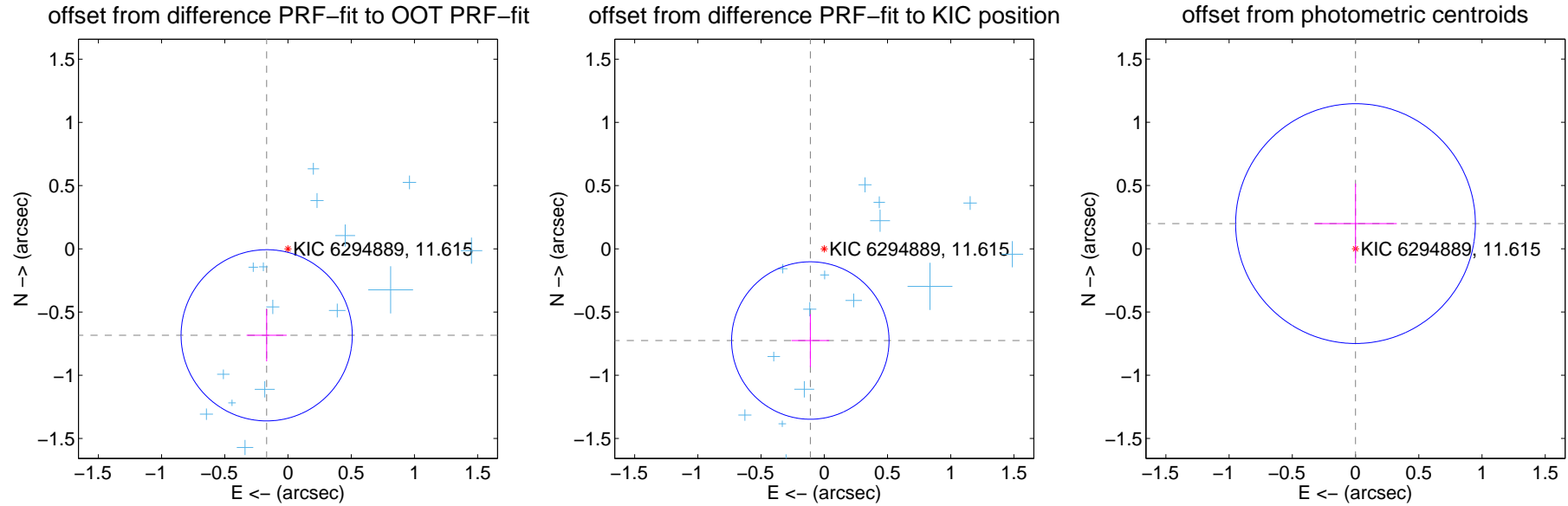
## DV Centroid Data

Supplemental centroid analysis for 006294889-01. **Kepler magnitude: 11.62.** Transit SNR 4.41

There are 17 quarters with good PRF difference image offsets

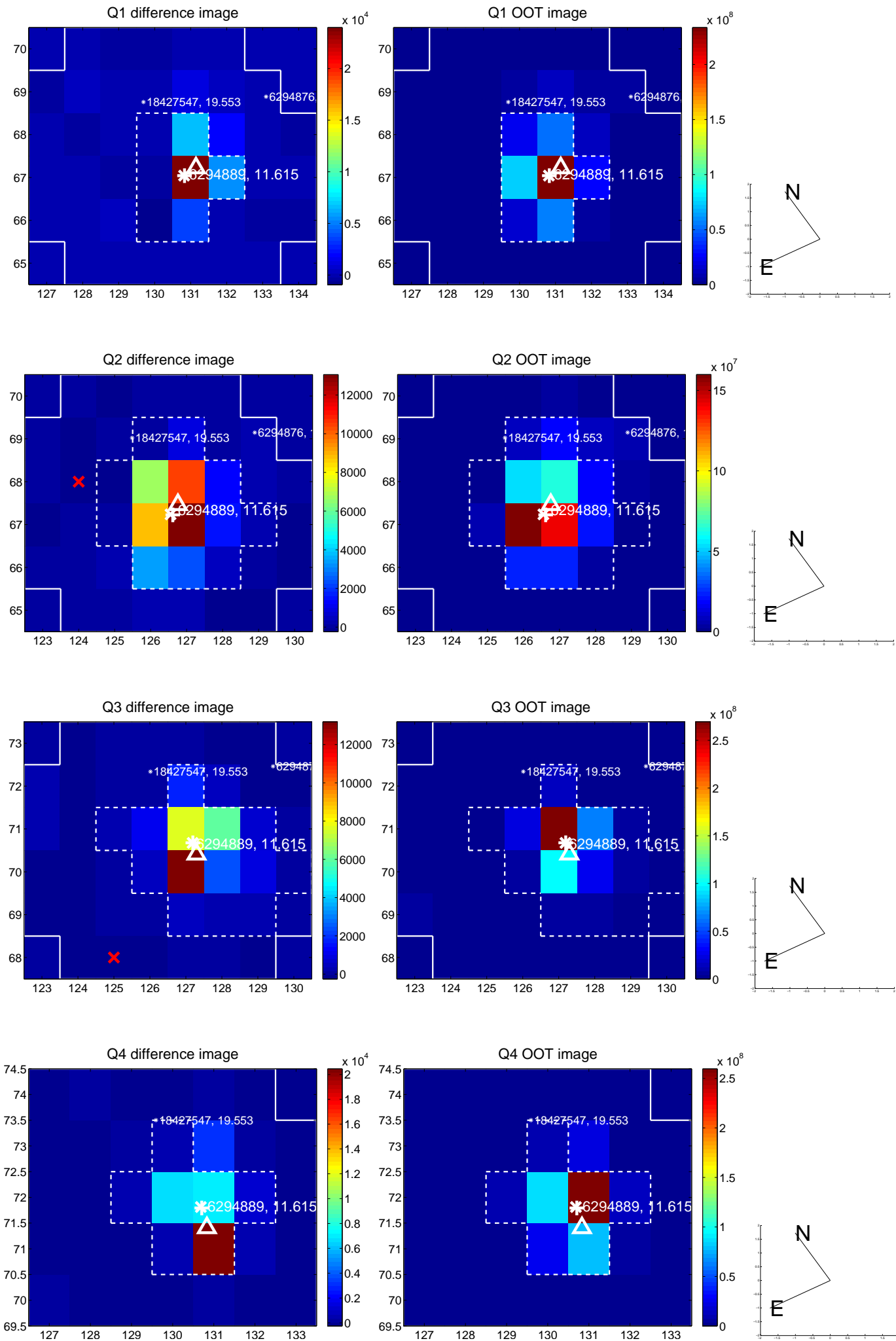
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	<b><math>0.704 \pm 0.226</math></b>	<b>3.12</b>	$0.169 \pm 0.159$	$-0.684 \pm 0.206$
PRF-fit source offset from KIC position	<b><math>0.734 \pm 0.208</math></b>	<b>3.53</b>	$0.111 \pm 0.148$	$-0.725 \pm 0.209$
photometric centroid source offset	$0.20 \pm 0.32$	0.63	$0.00 \pm 0.33$	$0.20 \pm 0.32$

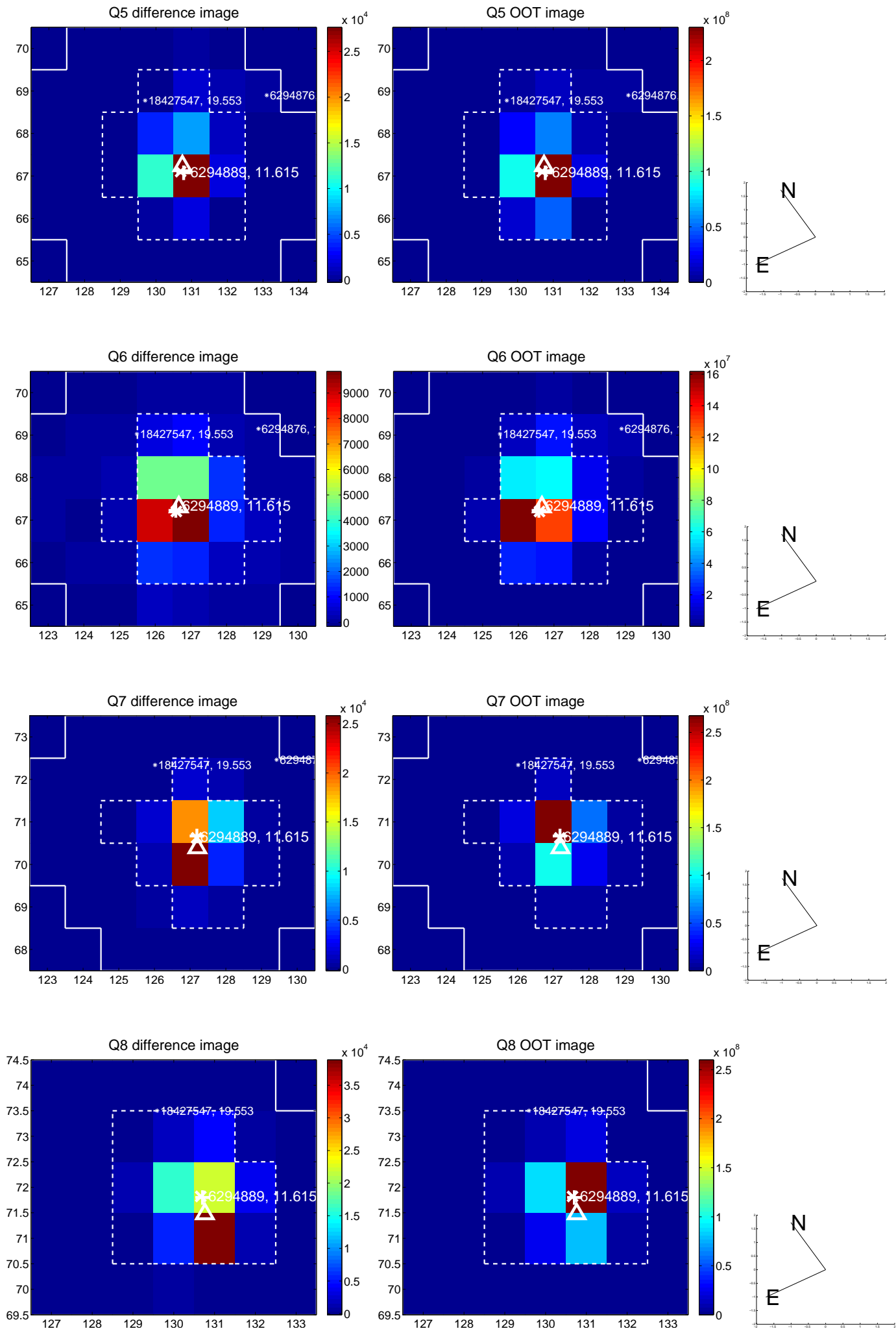


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

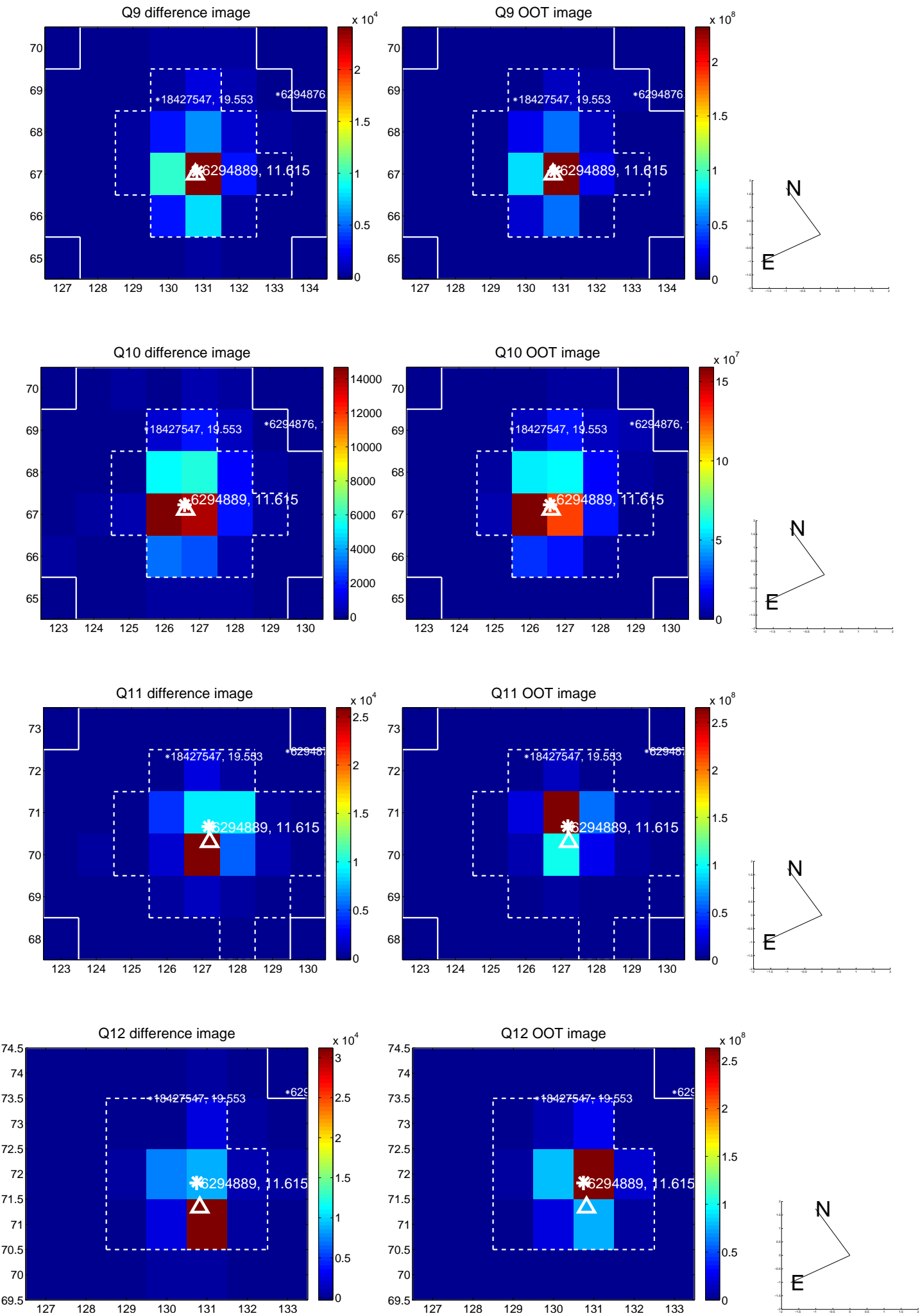
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



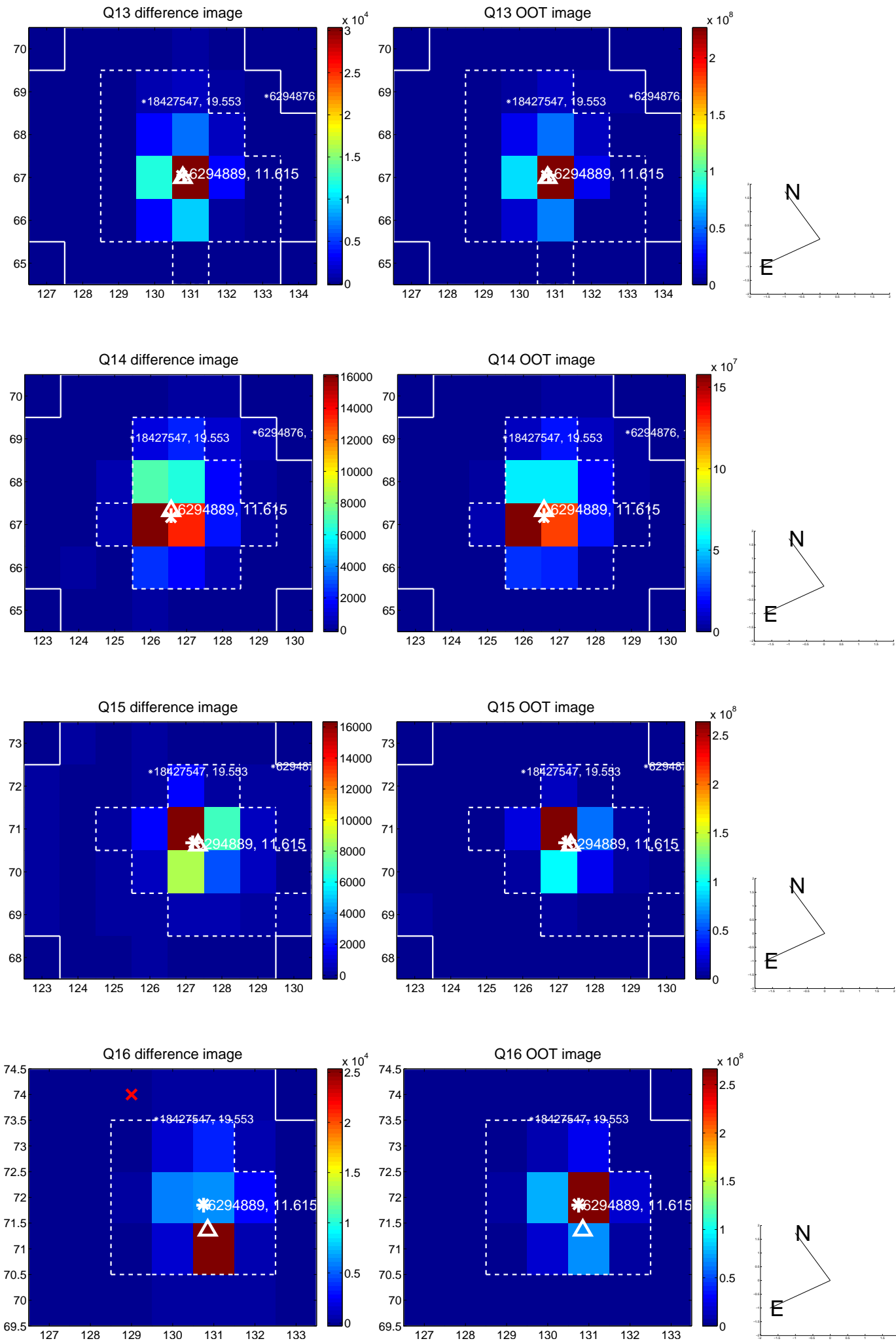
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



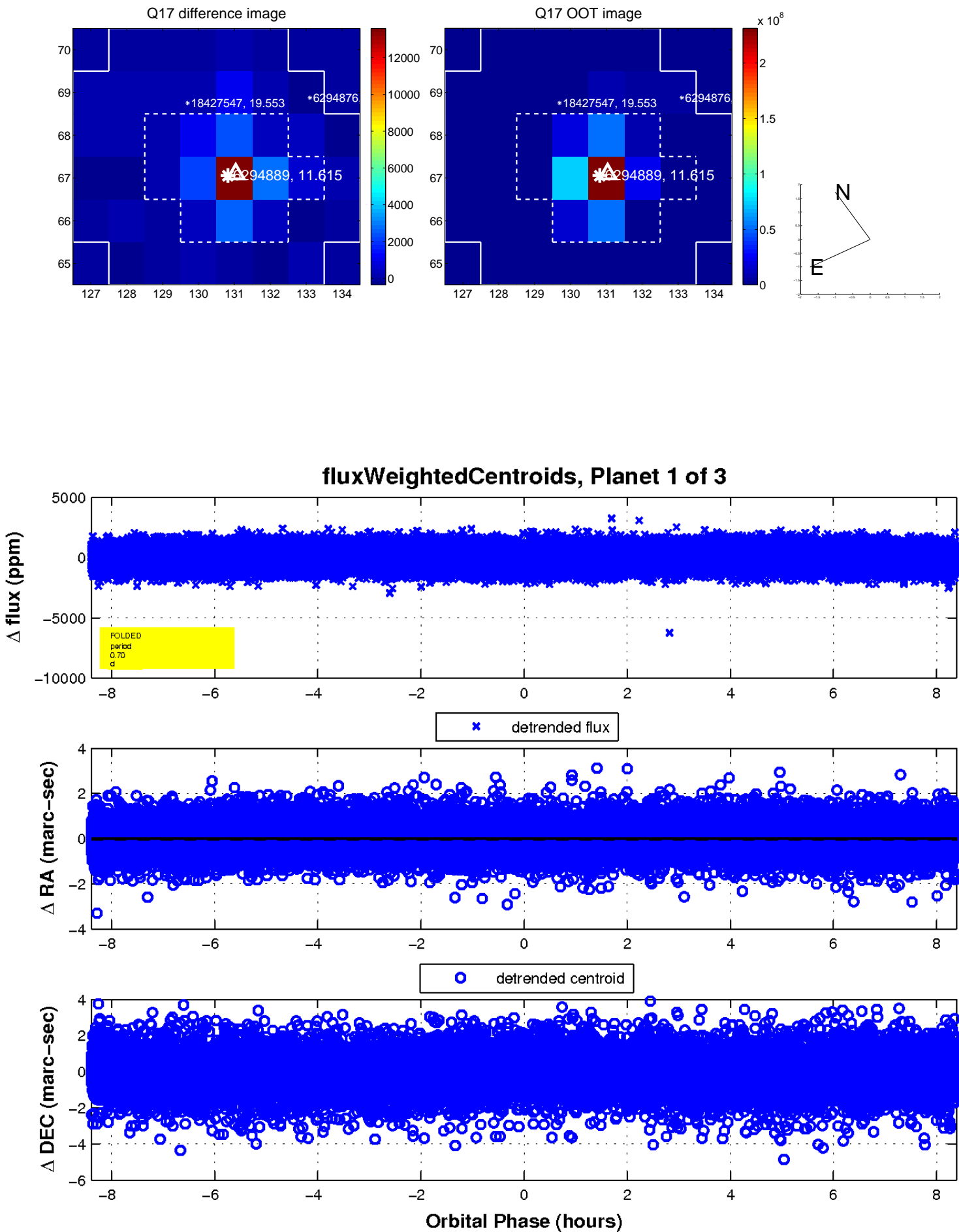
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

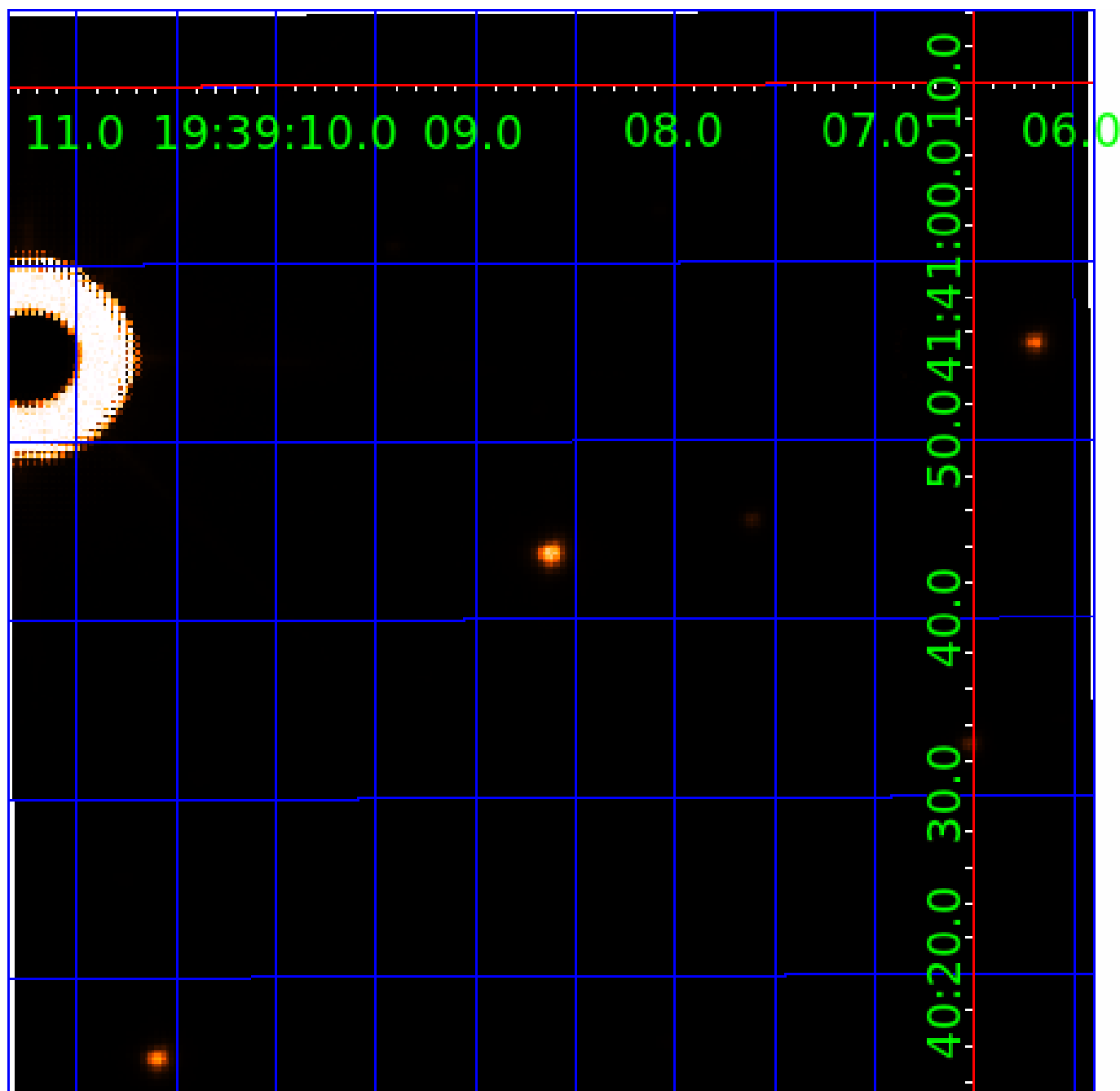


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination



# KIC 006294889

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006294889-01	OBS	No	0.699310	131.977578	25.9	3.995	8.8	4.4	2.18	8529	1.19	59378.51
006294889-02	OBS	No	46.197178	164.078108	988.1	2.367	8.0	9.1	2.18	8529	12.54	222.35
006294889-03	OBS	No	46.704267	155.330056	931.9	1.370	7.8	8.0	2.18	8529	7.17	219.14

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006294889-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
006294889-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—HALO_GHOST
006294889-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—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.

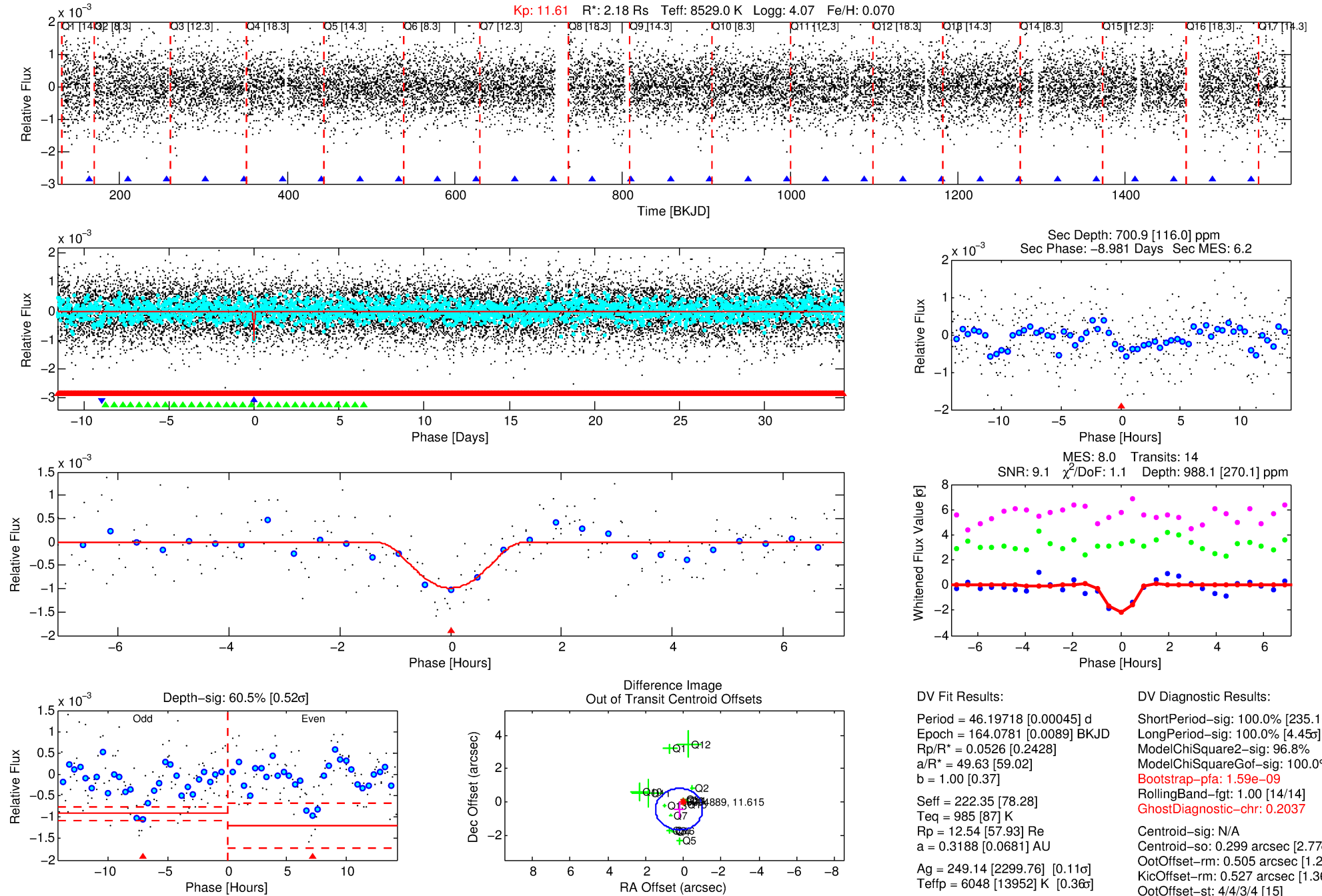
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 006294889-02

No Significant Match Found

# DV One-Page Summary

KIC: 6294889 Candidate: 2 of 3 Period: 46.197 d



## DV Fit Results:

Period = 46.19718 [0.00045] d  
Epoch = 164.0781 [0.0089] BKJD  
 $R_p/R^* = 0.0526$  [0.2428]  
 $a/R^* = 49.63$  [59.02]  
 $b = 1.00$  [0.37]  
 $T_{\text{eff}} = 222.35$  [78.28]  
 $T_{\text{eq}} = 985$  [87] K  
 $R_p = 12.54$  [57.93]  $R_{\text{e}}$   
 $a = 0.3188$  [0.0681] AU  
 $A_g = 249.14$  [2299.76] [0.11 $\sigma$ ]  
 $T_{\text{eff}} = 6048$  [13952] K [0.36 $\sigma$ ]

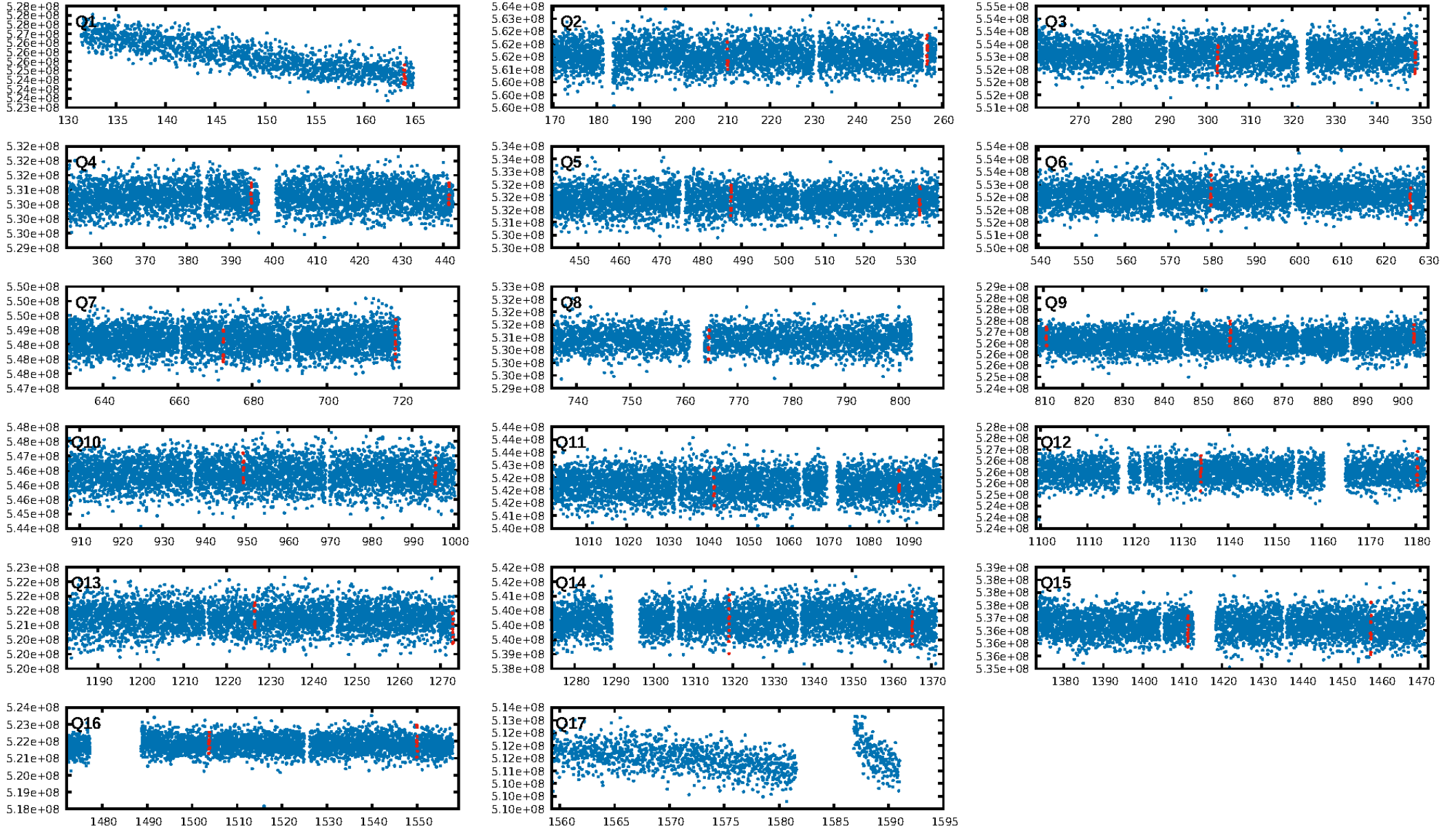
## DV Diagnostic Results:

ShortPeriod-sig: 100.0% [235.16 $\sigma$ ]  
LongPeriod-sig: 100.0% [4.45 $\sigma$ ]  
ModelChiSquare2-sig: 96.8%  
ModelChiSquareGof-sig: 100.0%  
**Bootstrap-pfa: 1.59e-09**  
RollingBand-fgt: 1.00 [14/14]  
**GhostDiagnostic-chr: 0.2037**  
Centroid-sig: N/A  
Centroid-so: 0.299 arcsec [2.77 $\sigma$ ]  
OotOffset-rm: 0.505 arcsec [1.21 $\sigma$ ]  
KicOffset-rm: 0.527 arcsec [1.36 $\sigma$ ]  
OotOffset-st: 4/4/3/4 [15]  
KicOffset-st: 4/4/3/4 [15]  
DiffImageQuality-fgm: 0.53 [8/15]  
DiffImageOverlap-fno: 0.00 [0/15]

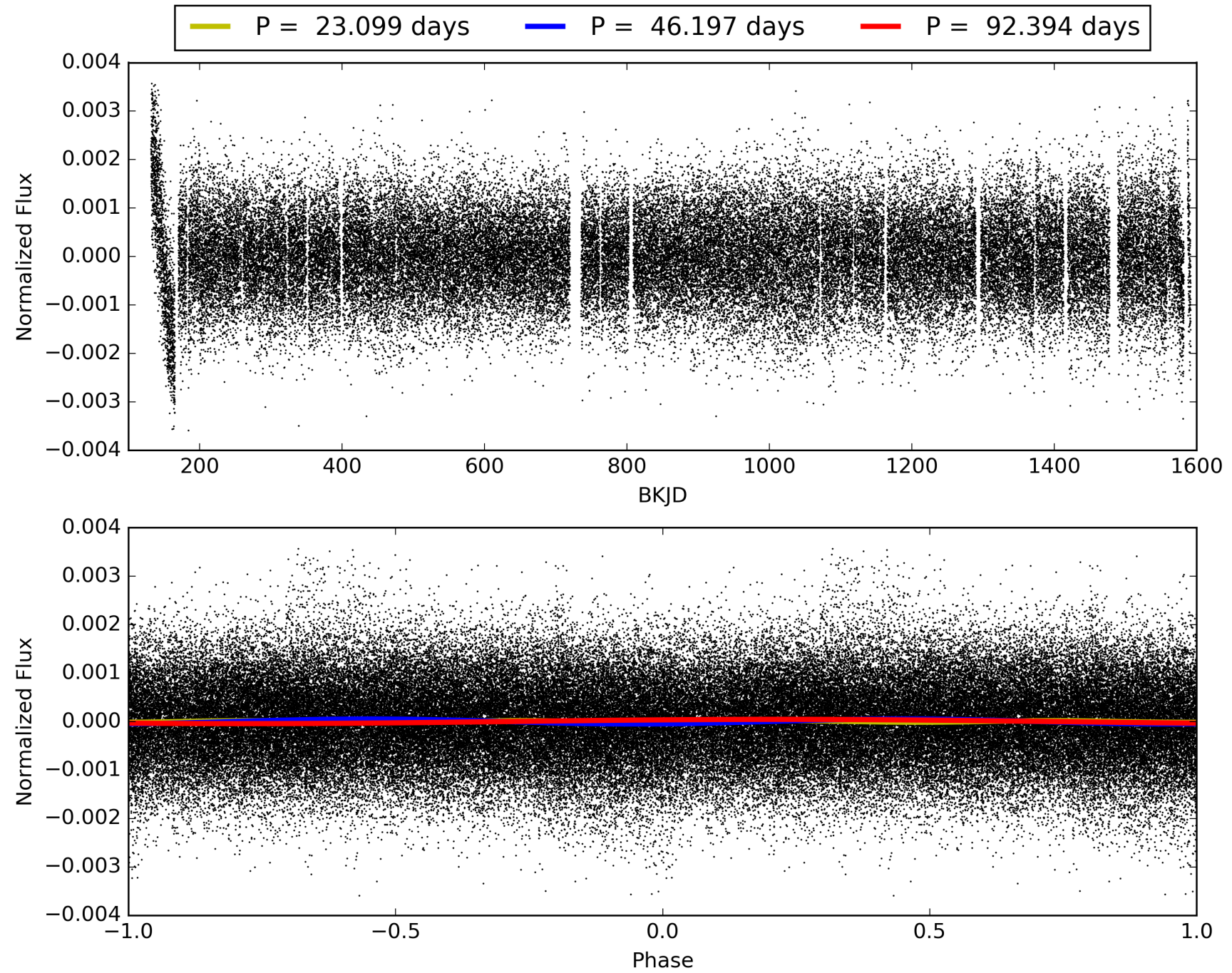
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 12:01:09 Z

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

# TCE 006294889-02, PDC Light Curves

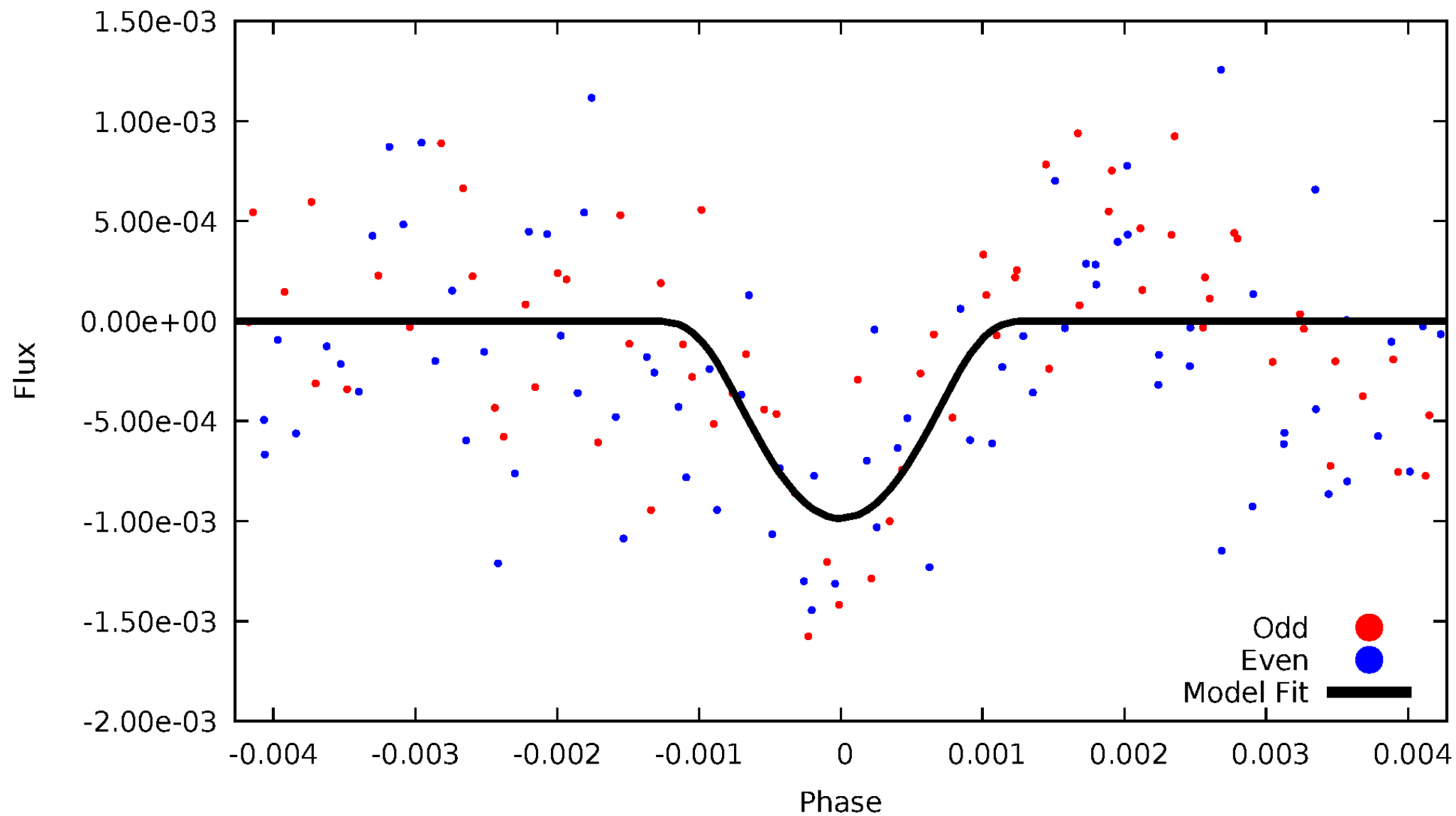


TCE 006294889-02



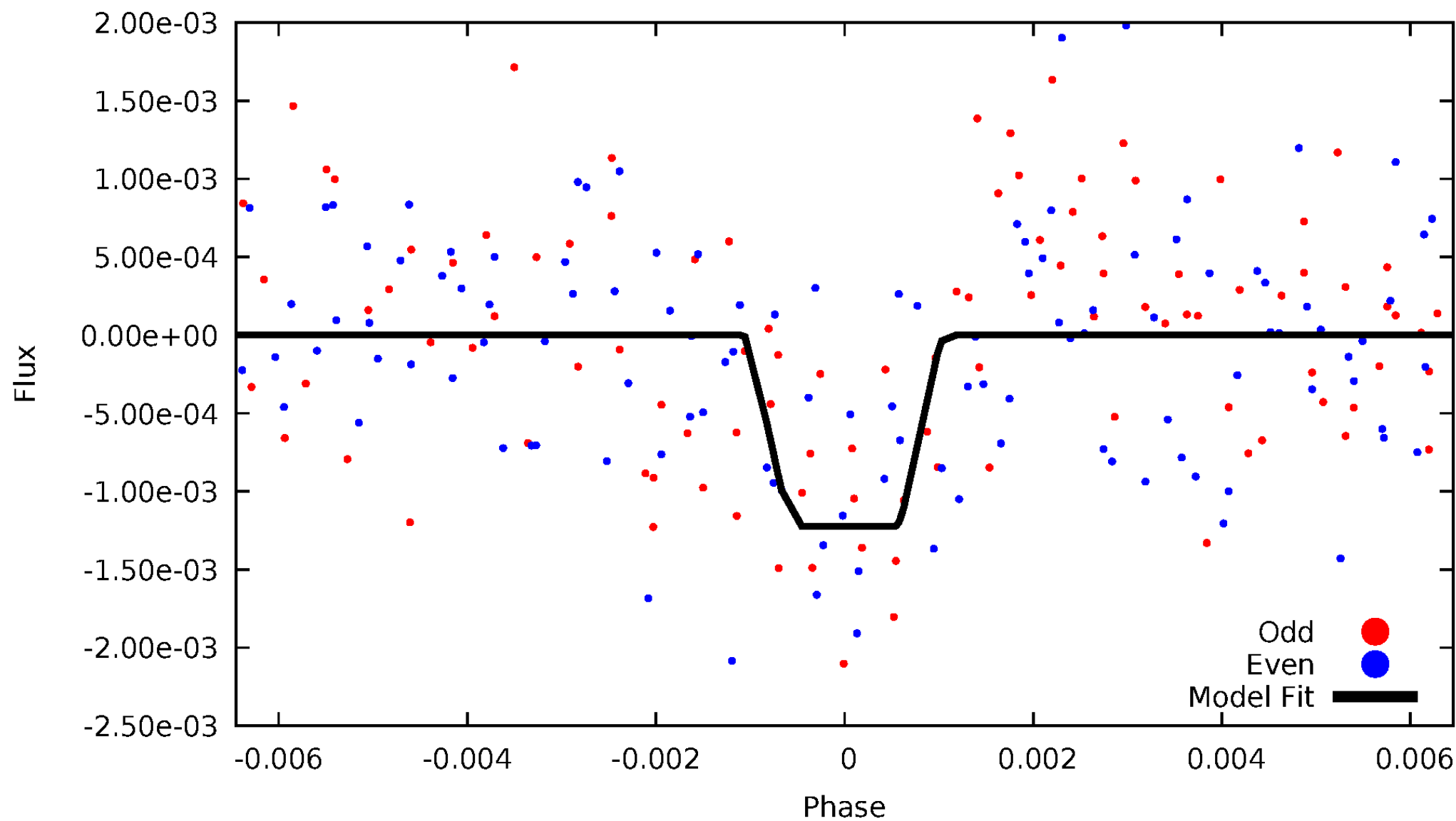
# DV Odd/Even

TCE 006294889-02



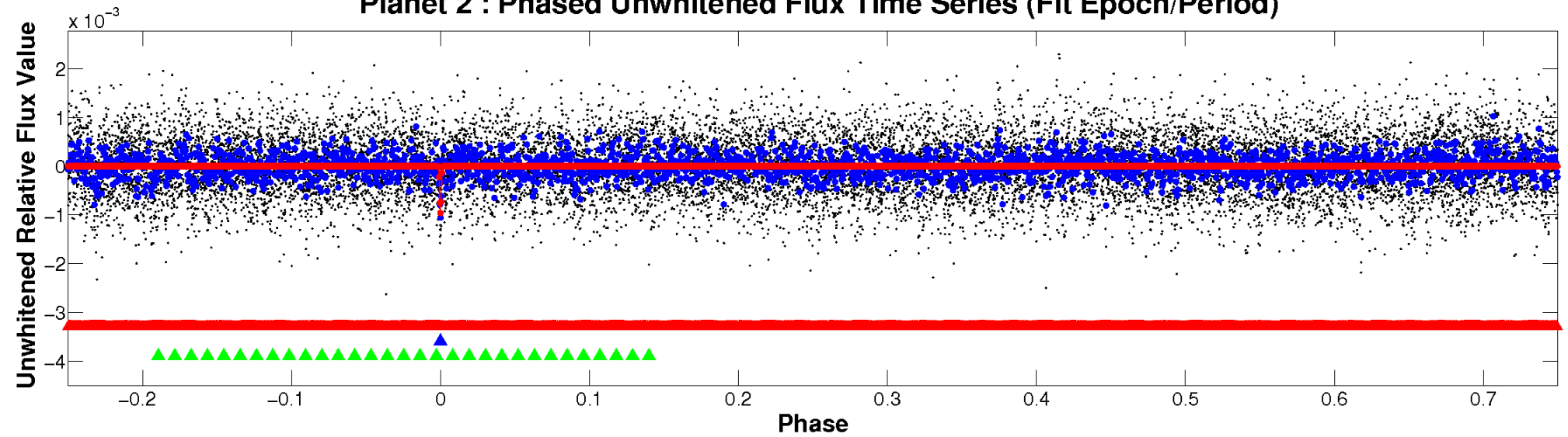
# ALT Odd/Even

TCE 006294889-02

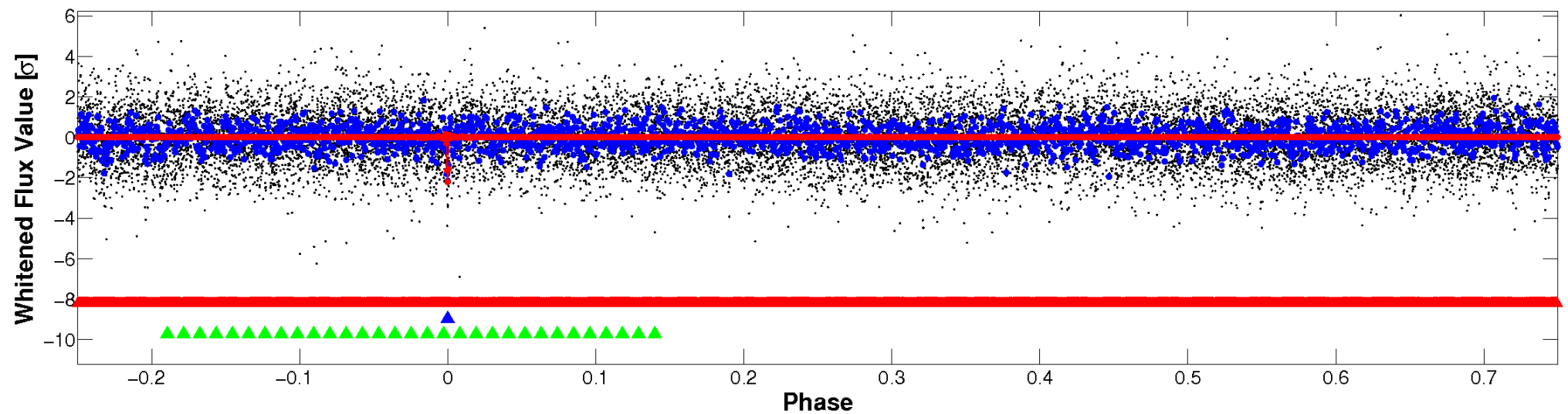


# Non-Whitened Vs. Whitened Light Curve

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

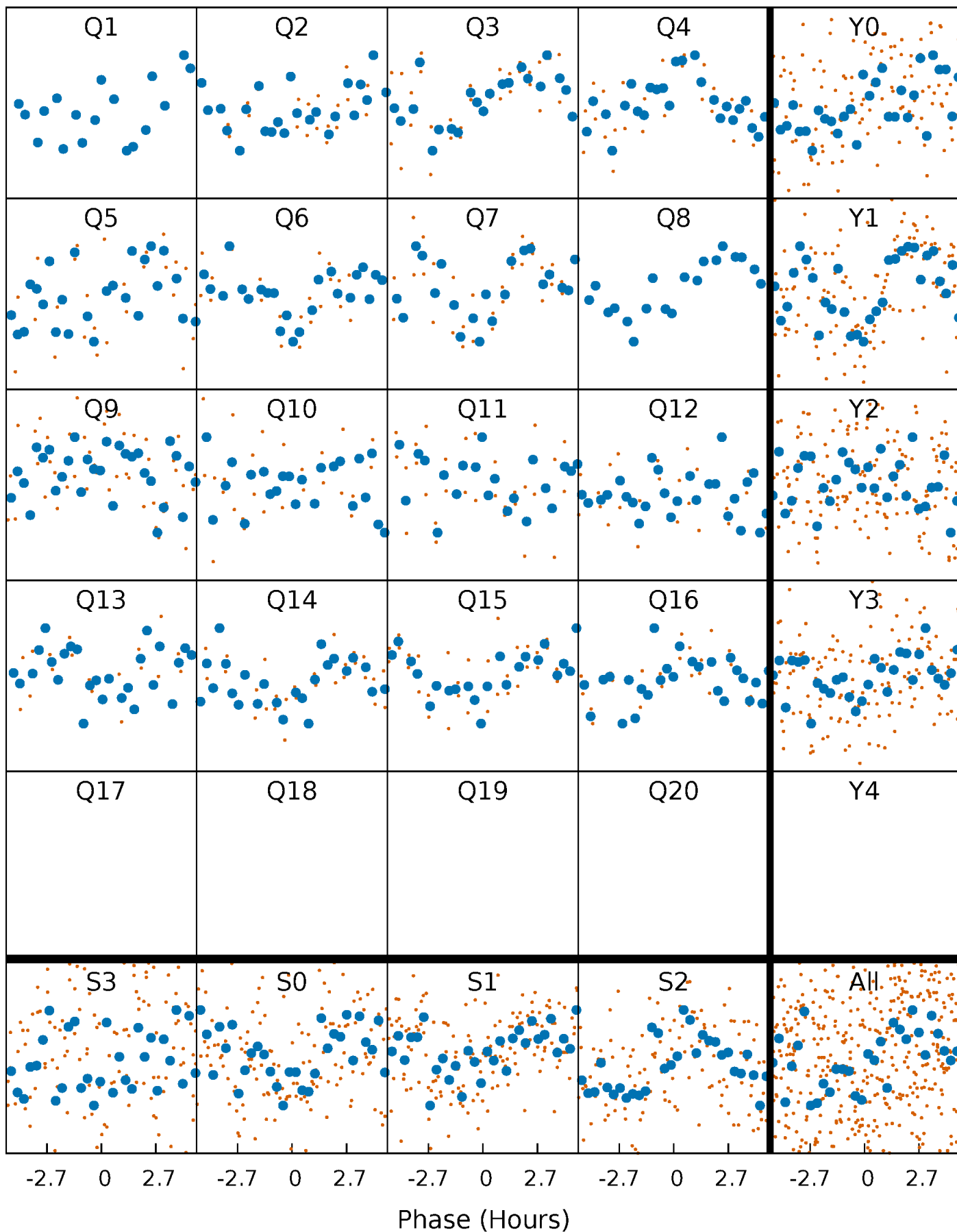


## Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



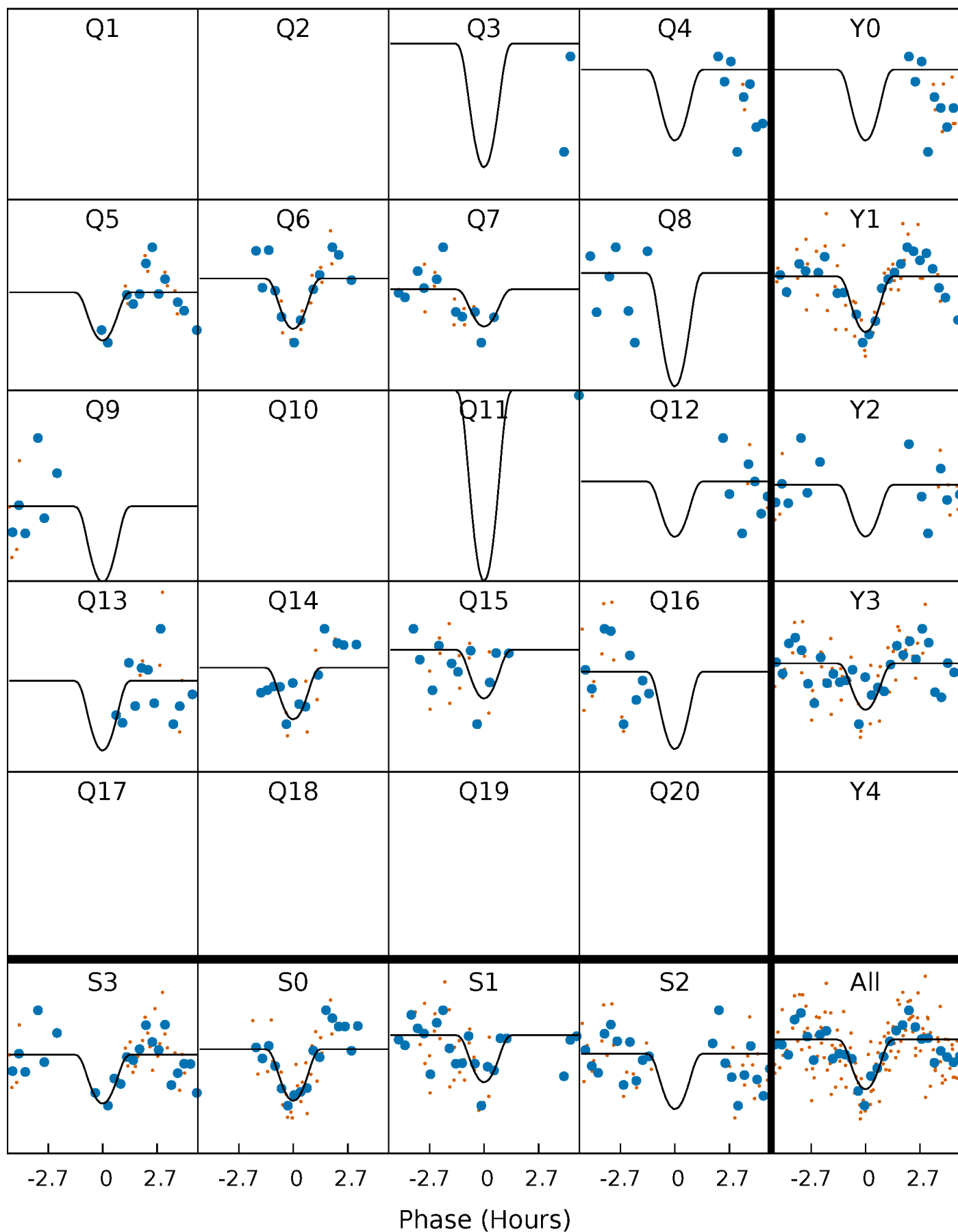
# PDC Quarter-Phased Transit Curves

TCE 006294889-02   P= 46.197178 Days    $T_0=164.078108$  (BKJD)



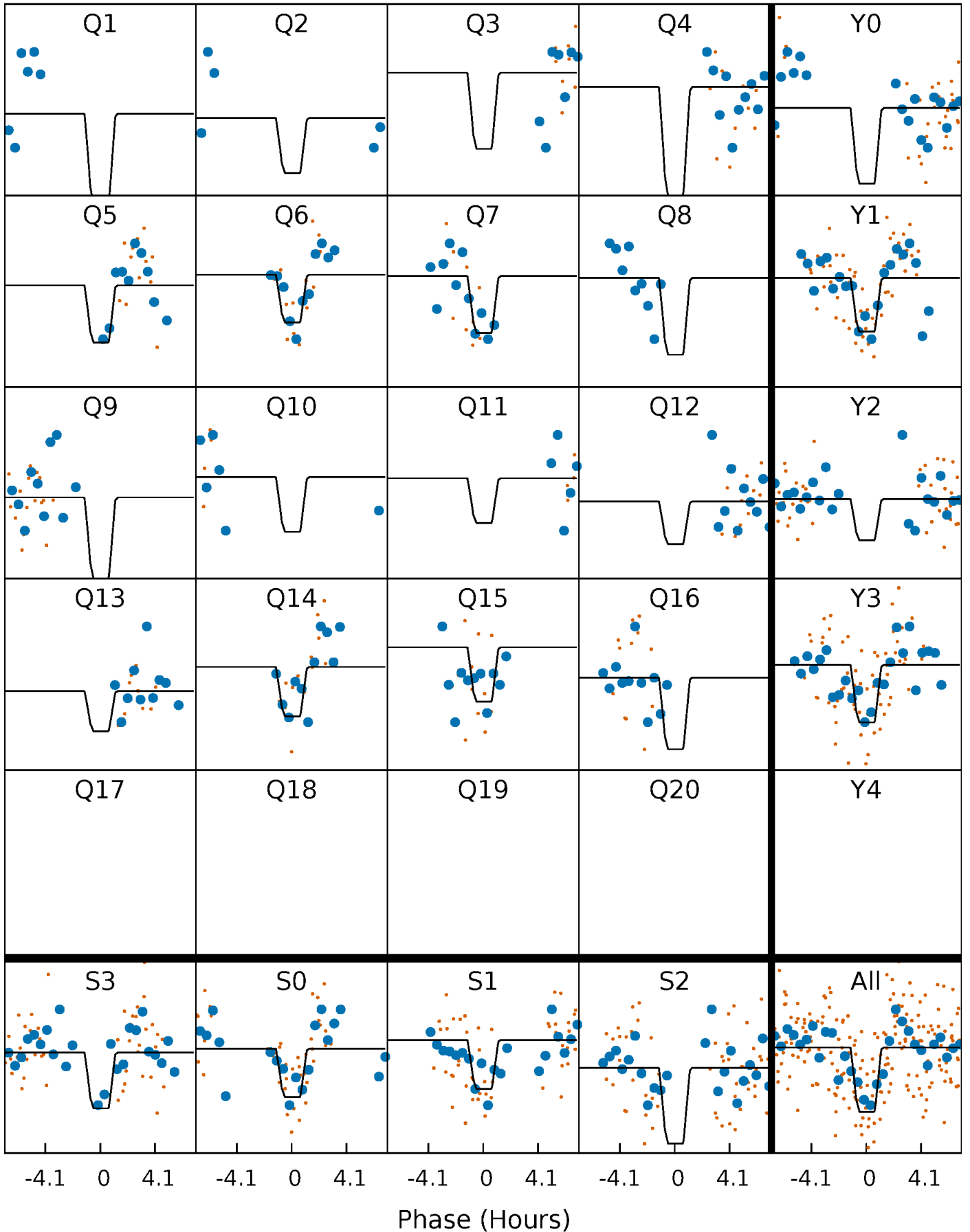
# DV Quarter-Phased Transit Curves

TCE 006294889-02 P= 46.197178 Days  $T_0=164.078108$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

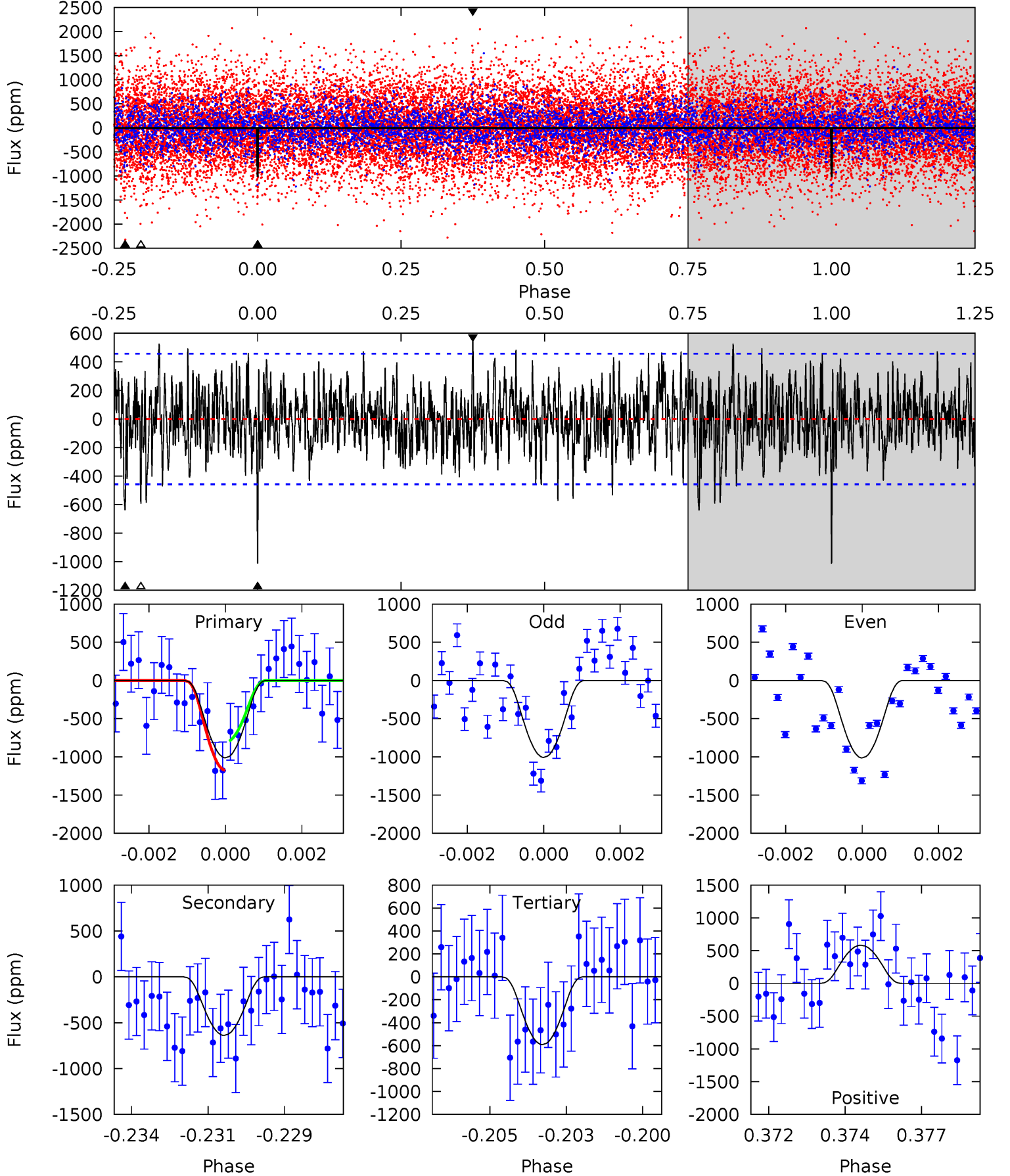
TCE 006294889-02   P= 46.196791 Days    $T_0=164.073334$  (BKJD)



# DV Model-Shift Uniqueness Test

006294889-02,  $P = 46.197178$  Days,  $E = 117.880930$  Days

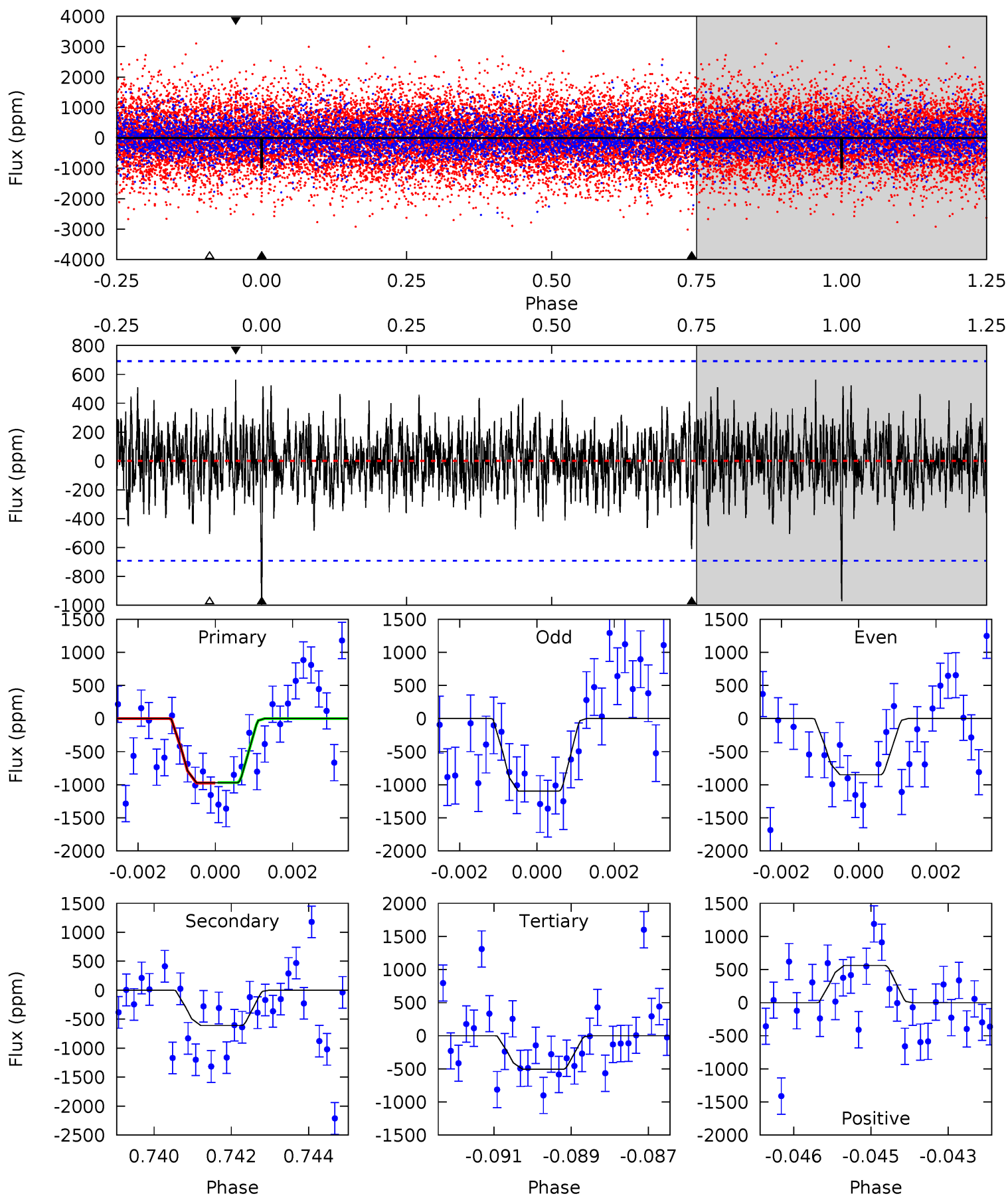
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.7	7.40	6.85	6.74	5.29	3.04	2.07	4.87	4.98	0.55	0.65	0.04	0.91	0.37	2.21



# Alt Model-Shift Uniqueness Test

006294889-02, P = 46.196791 Days, E = 117.876543 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
7.49	4.71	3.90	4.34	5.34	3.11	1.21	3.59	3.16	0.80	0.37	0.97	0.94	0.37	0.03



### Stellar Parameters For KIC 006294889

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$8529^{+235}_{-370}$	$4.066^{+0.165}_{-0.135}$	$0.070^{+0.250}_{-0.600}$	$2.183^{+0.462}_{-0.564}$	$2.024^{+0.317}_{-0.476}$	$0.274^{+0.276}_{-0.101}$
	+3%/-4%	+4%/-3%	+357%/-857%	+21%/-26%	+16%/-24%	+101%/-37%
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 006294889-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-639 \pm 86$	$44.32^{+44.45}_{-30.76}$	$1366^{+89}_{-97}$	$3459^{+2004}_{-662}$	$18^{+168}_{-14}$
Alt.	$-609 \pm 129$	$43.54^{+43.22}_{-30.74}$	$1368^{+85}_{-101}$	$3463^{+2017}_{-665}$	$18^{+185}_{-14}$

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

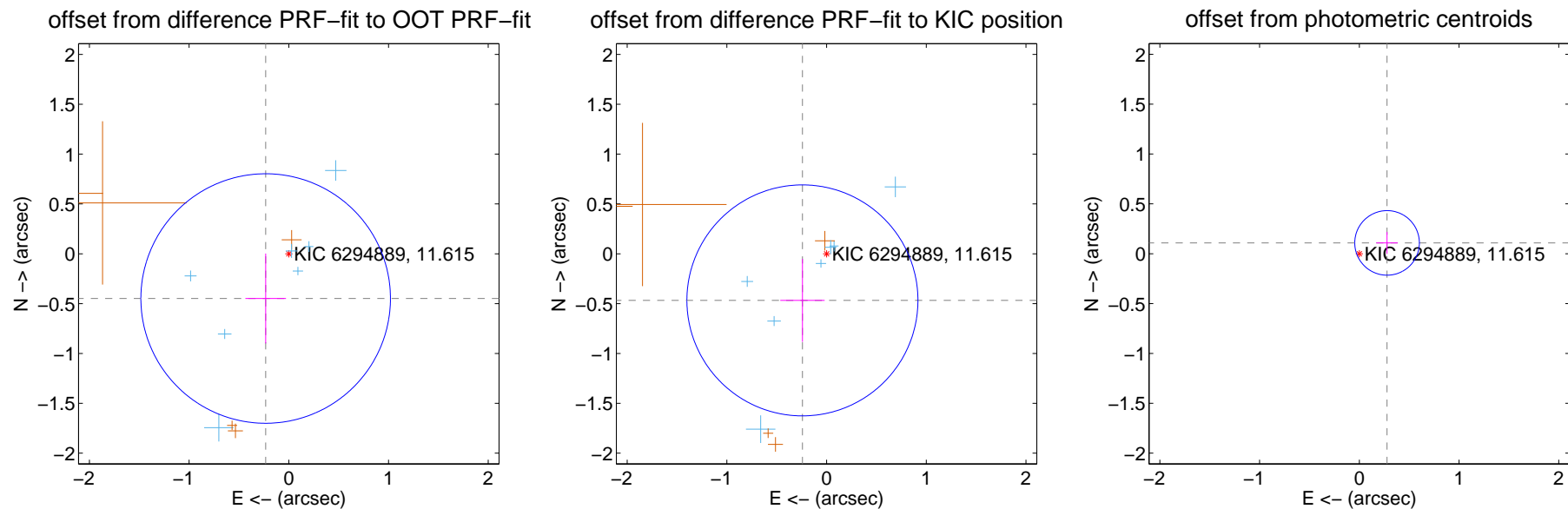
## DV Centroid Data

Supplemental centroid analysis for 006294889-02. **Kepler magnitude: 11.62.** Transit SNR 9.13

There are 8 quarters with good PRF difference image offsets

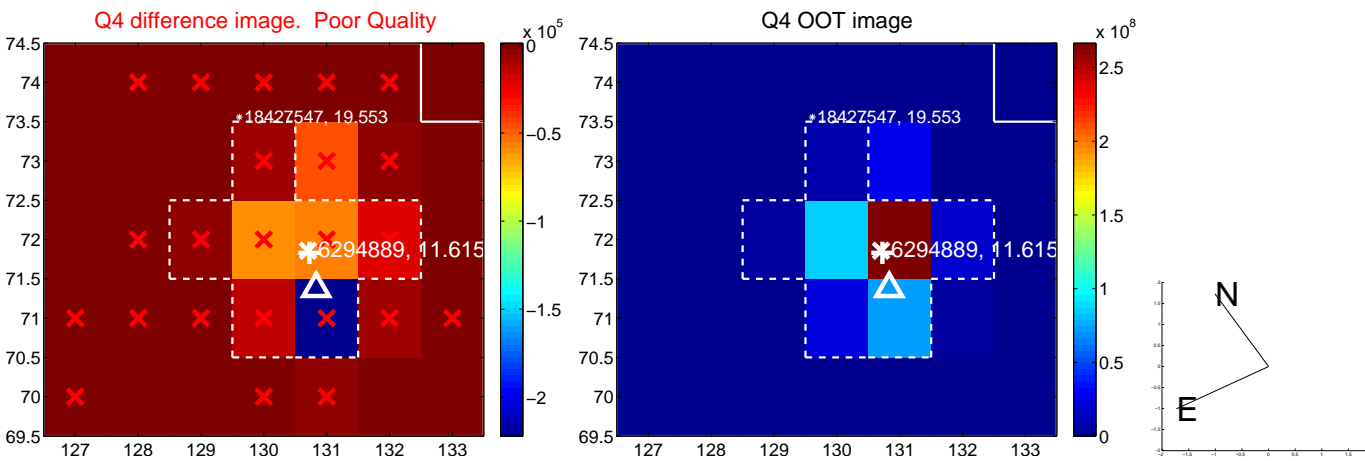
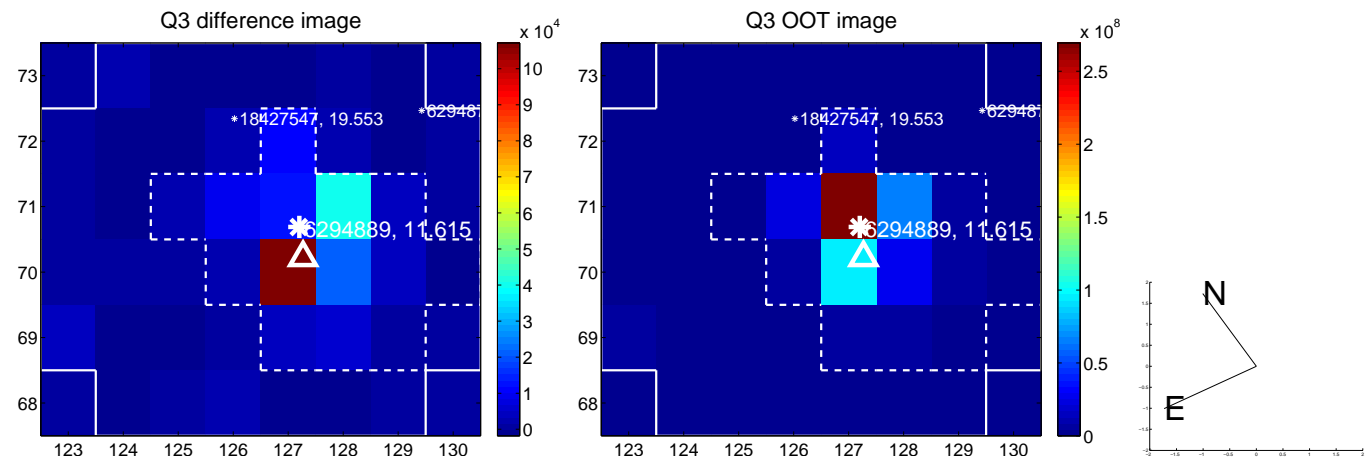
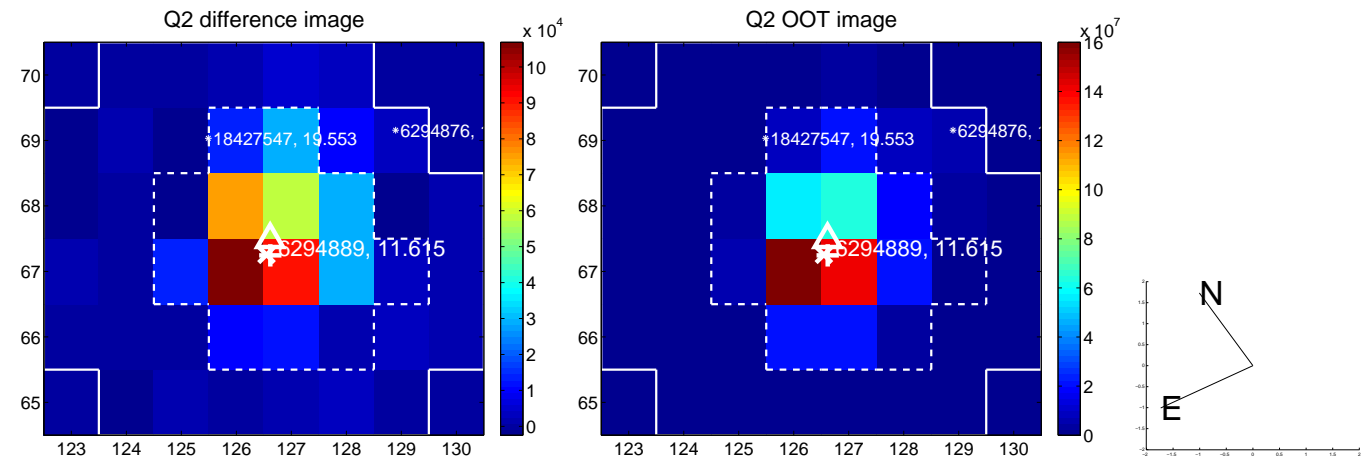
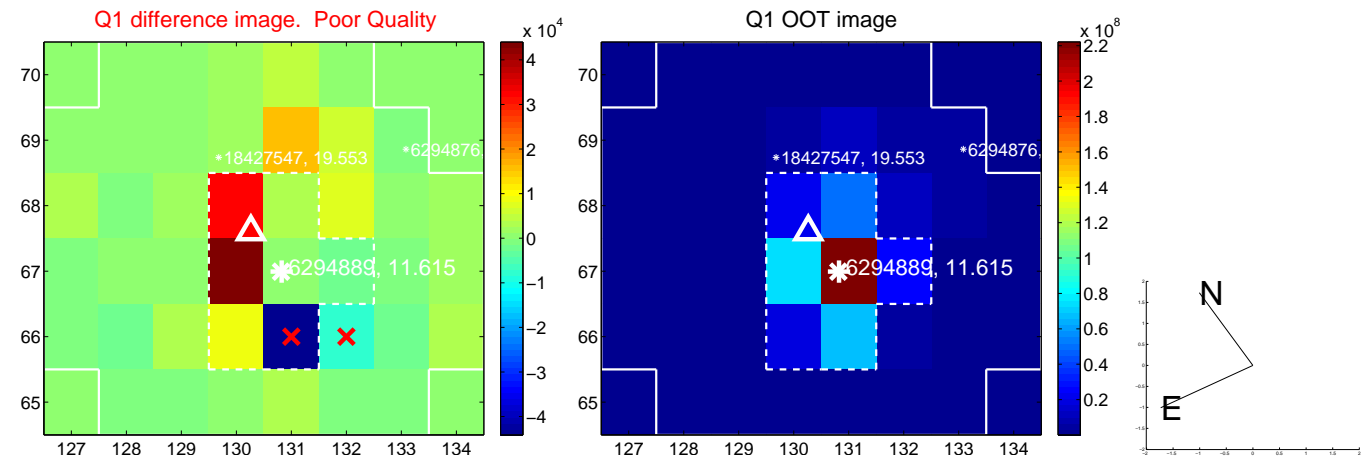
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.505 \pm 0.417$	1.21	$0.232 \pm 0.204$	$-0.449 \pm 0.451$
PRF-fit source offset from KIC position	$0.527 \pm 0.386$	1.36	$0.242 \pm 0.223$	$-0.468 \pm 0.416$
photometric centroid source offset	$0.30 \pm 0.11$	2.77	$-0.28 \pm 0.11$	$0.11 \pm 0.11$

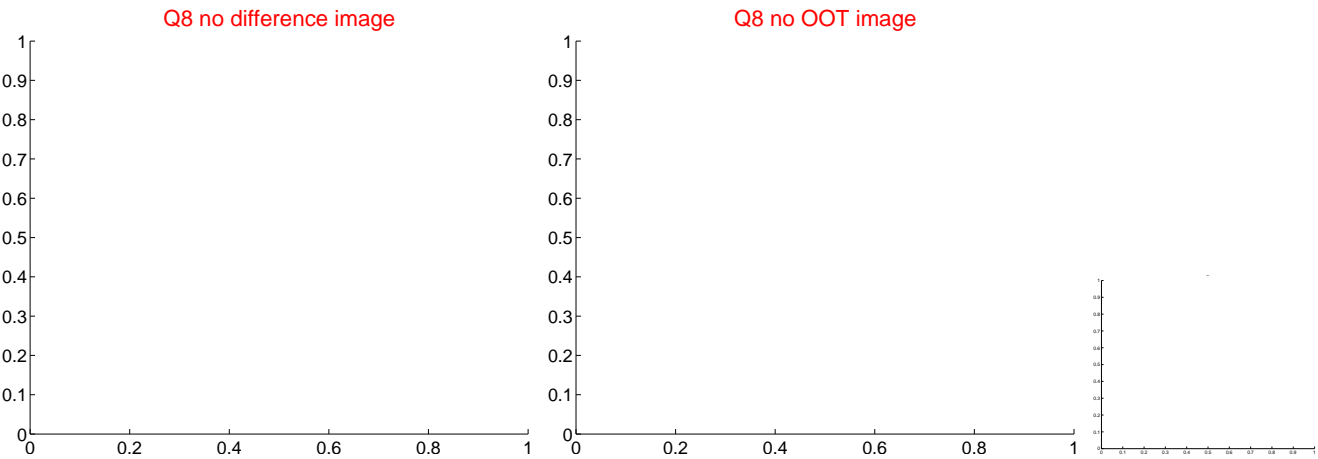
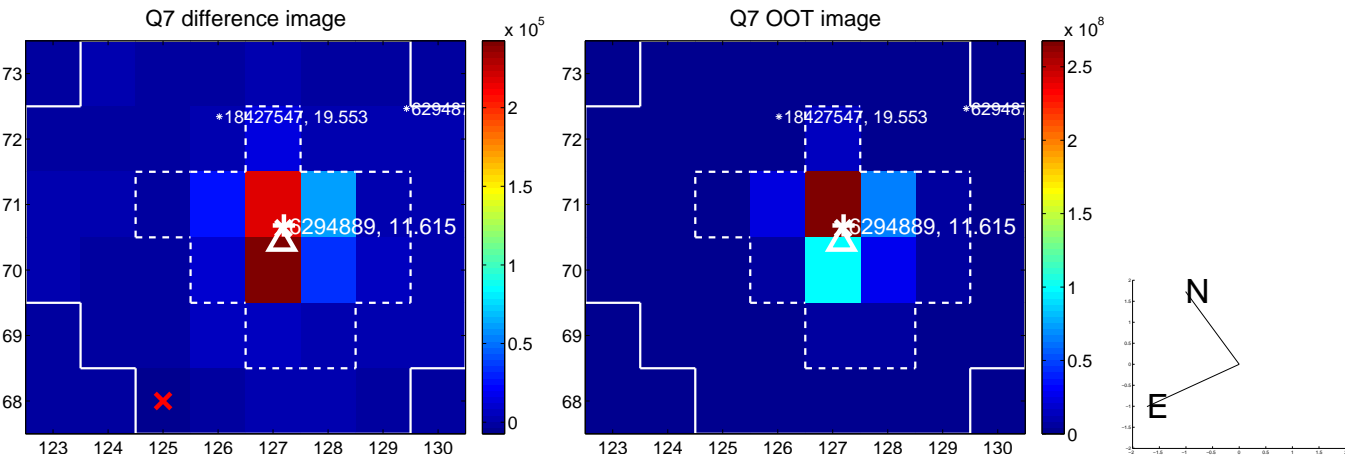
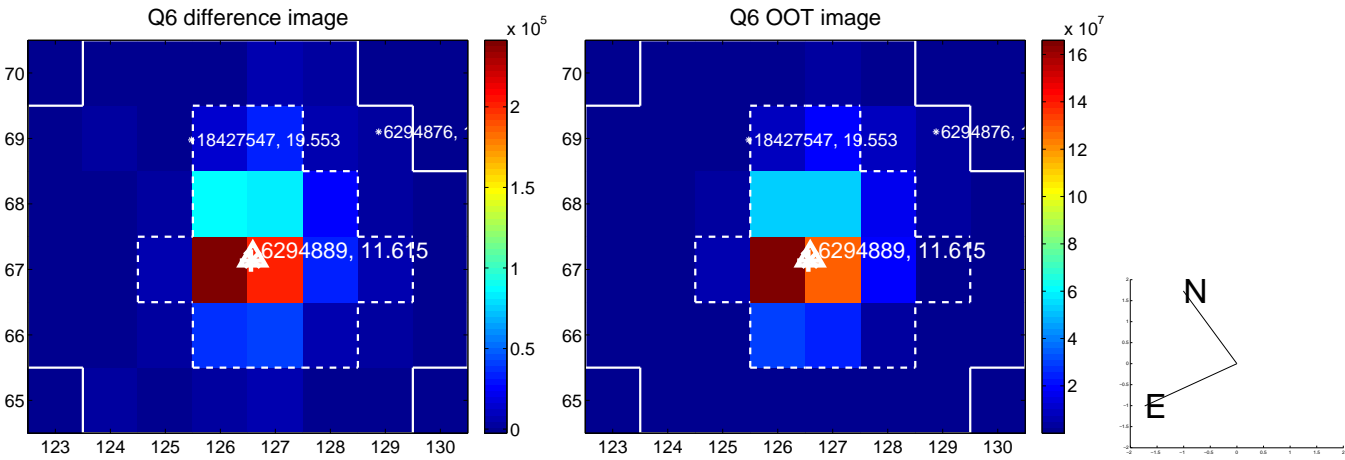
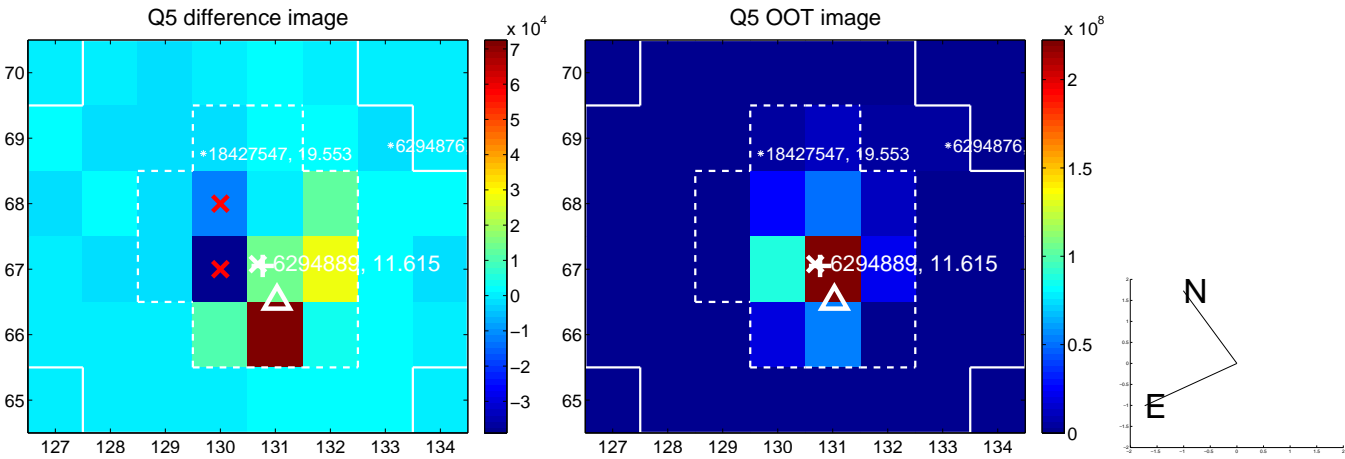


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

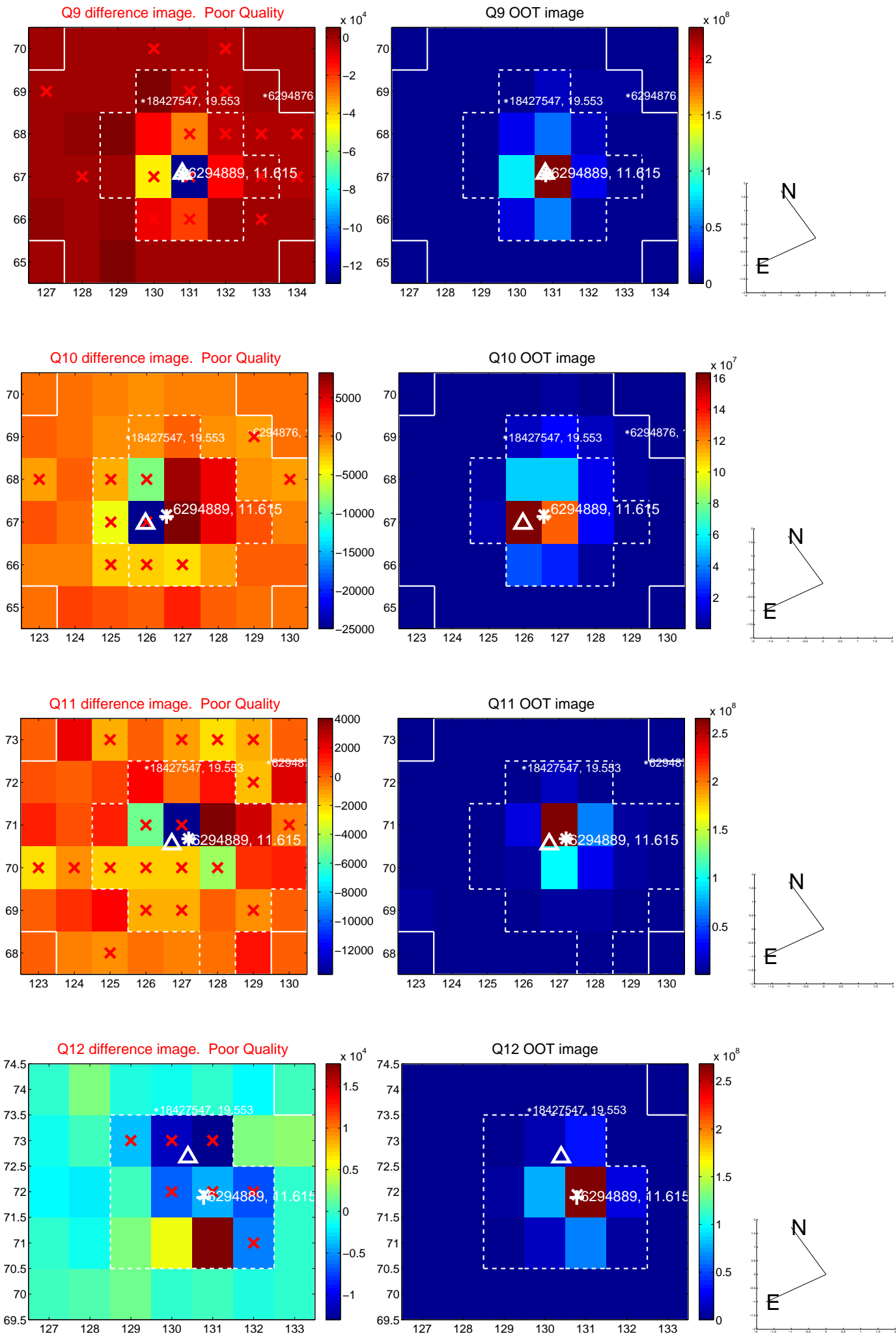
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



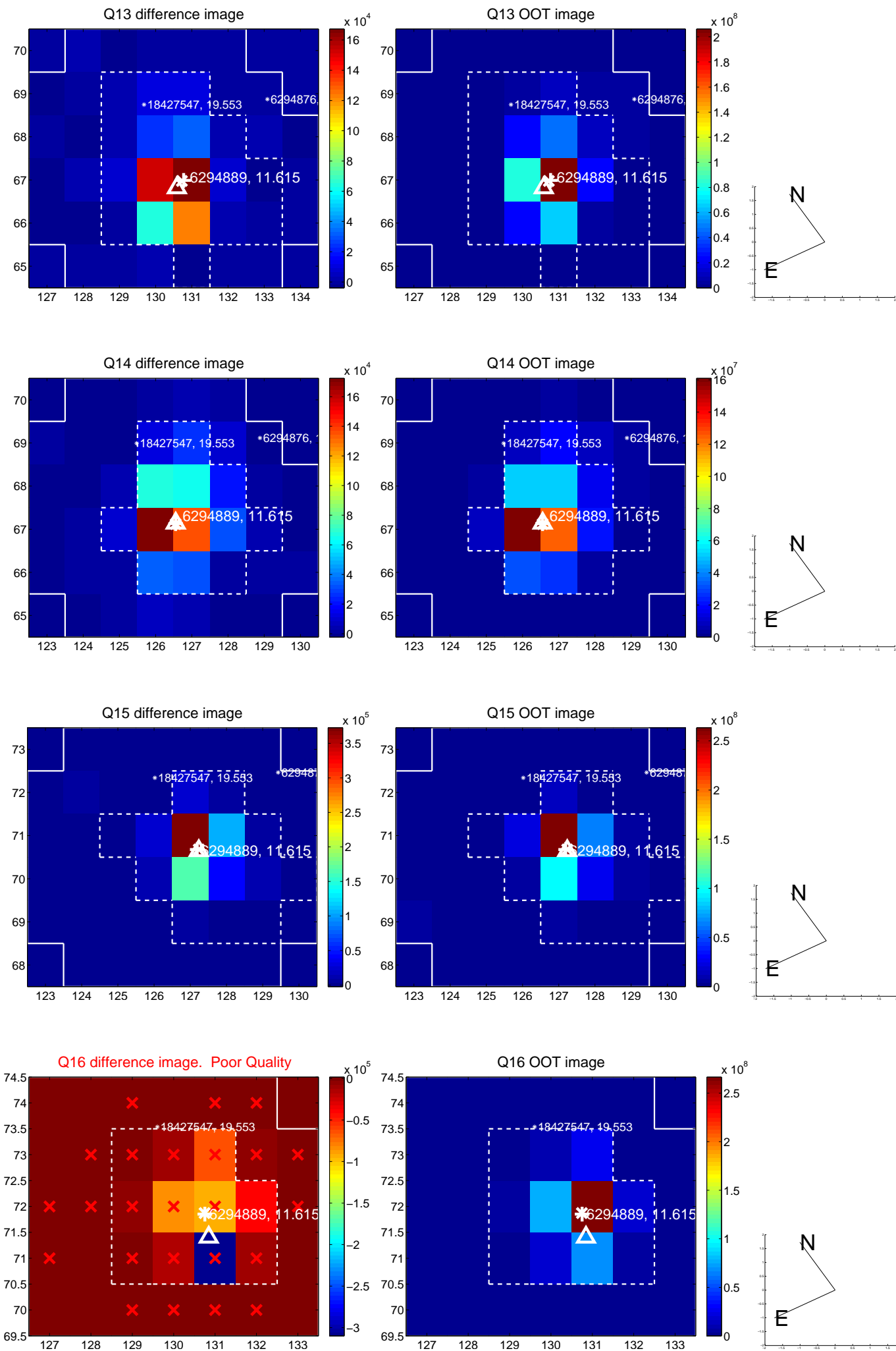
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



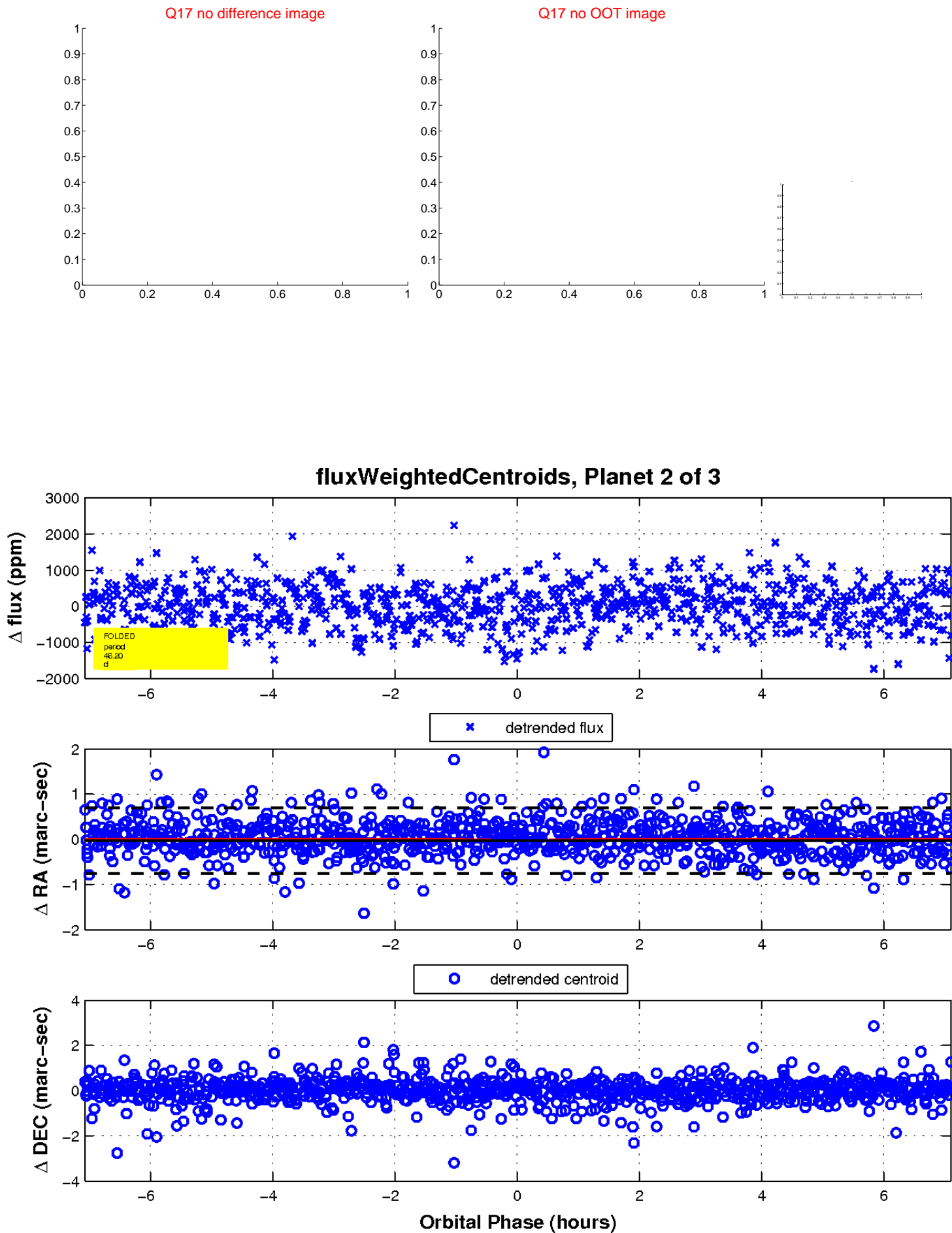
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

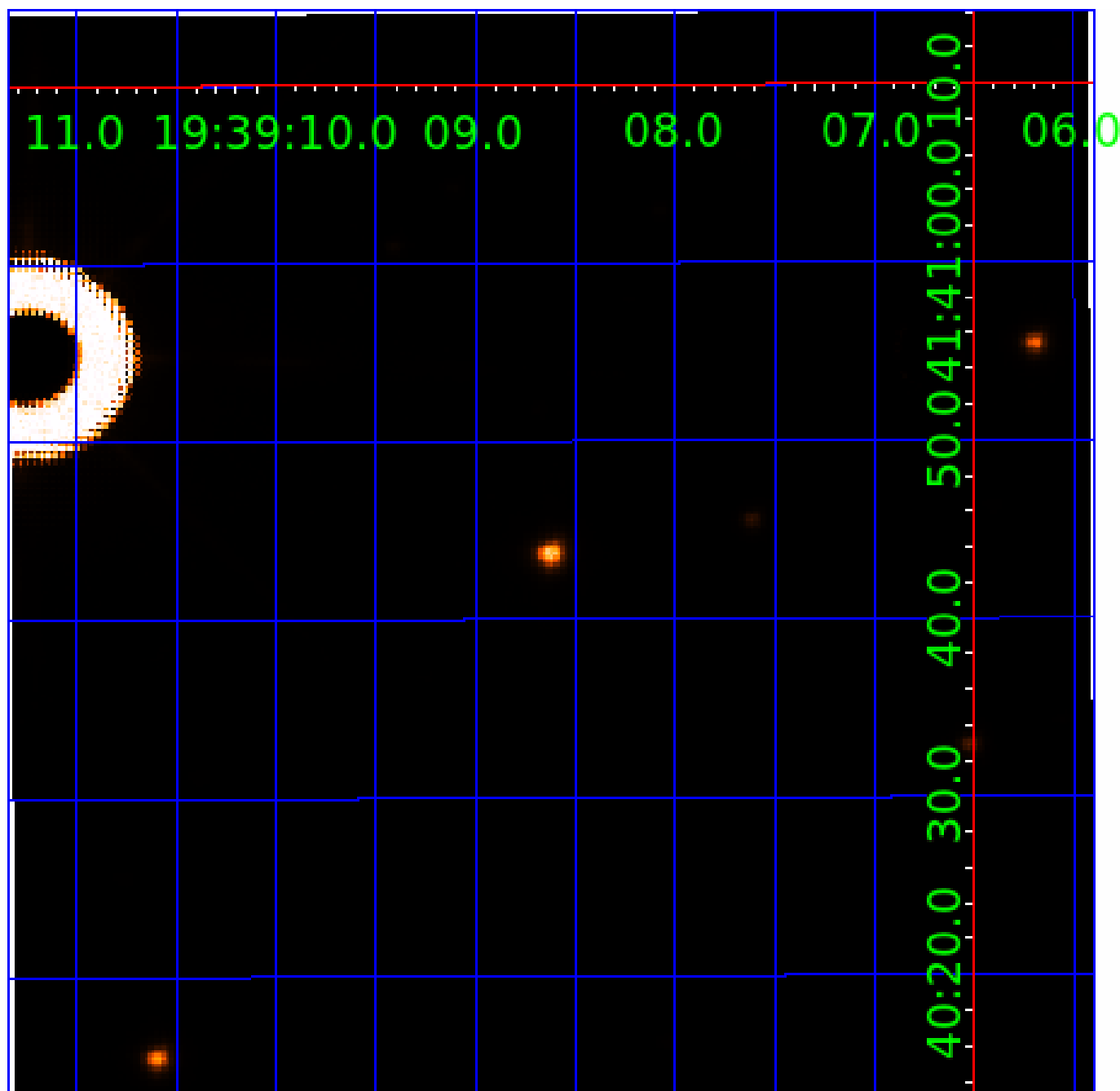


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination



# KIC 006294889

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006294889-01	OBS	No	0.699310	131.977578	25.9	3.995	8.8	4.4	2.18	8529	1.19	59378.51
006294889-02	OBS	No	46.197178	164.078108	988.1	2.367	8.0	9.1	2.18	8529	12.54	222.35
006294889-03	OBS	No	46.704267	155.330056	931.9	1.370	7.8	8.0	2.18	8529	7.17	219.14

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006294889-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
006294889-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—HALO_GHOST
006294889-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—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.

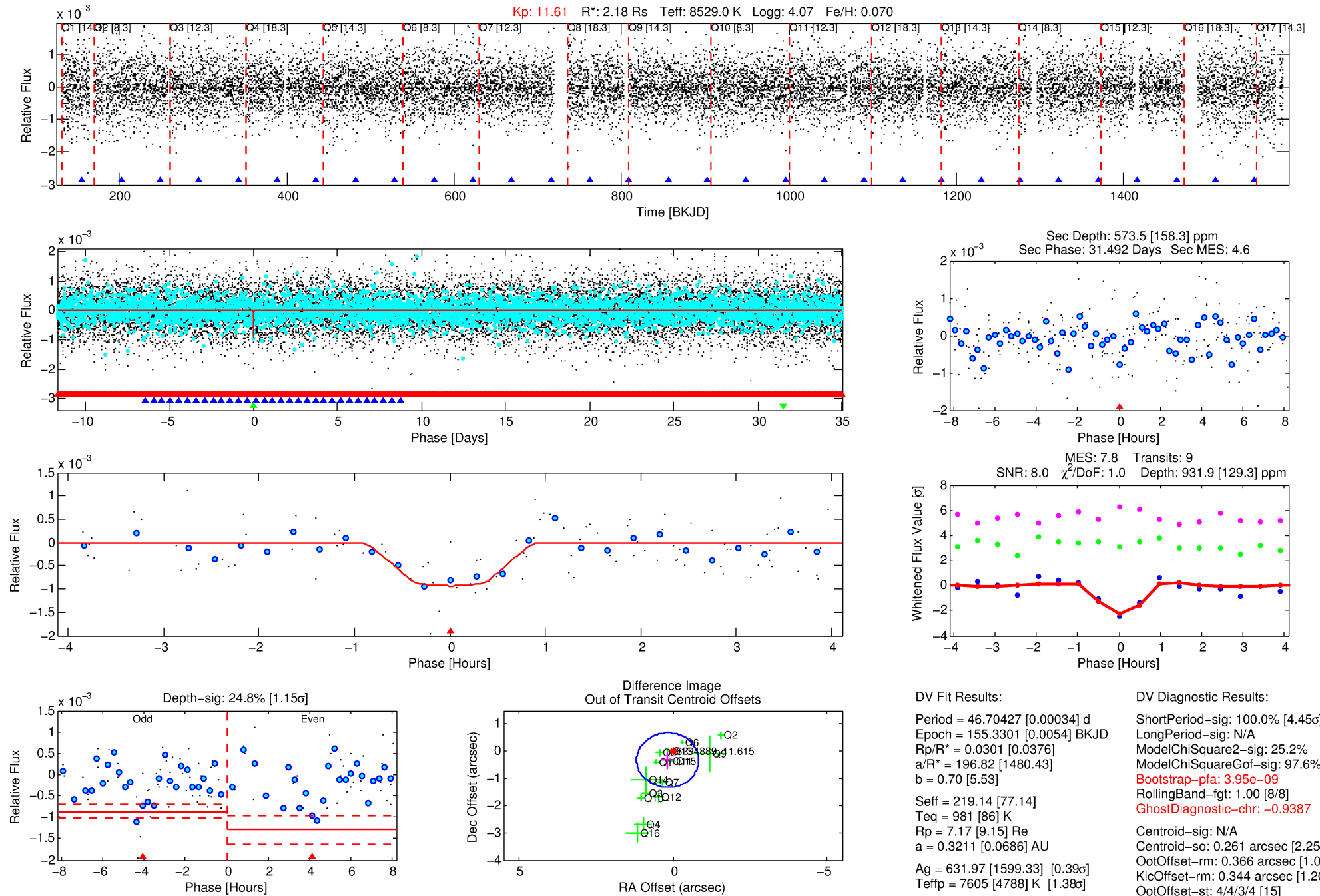
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 006294889-03

No Significant Match Found

# DV One-Page Summary

KIC: 6294889 Candidate: 3 of 3 Period: 46.704 d



## DV Fit Results:

Period = 46.70427 [0.00034] d  
Epoch = 155.3301 [0.0054] BKJD  
Rp/R\* = 0.0301 [0.0376]  
a/R\* = 196.82 [1480.43]  
b = 0.70 [5.53]  
Seff = 219.14 [77.14]  
Teq = 981 [86] K  
Rp = 7.17 [9.15] Re  
a = 0.3211 [0.0686] AU  
Ag = 631.97 [1599.33] [0.39σ]  
Teff = 7605 [4788] K [1.38σ]

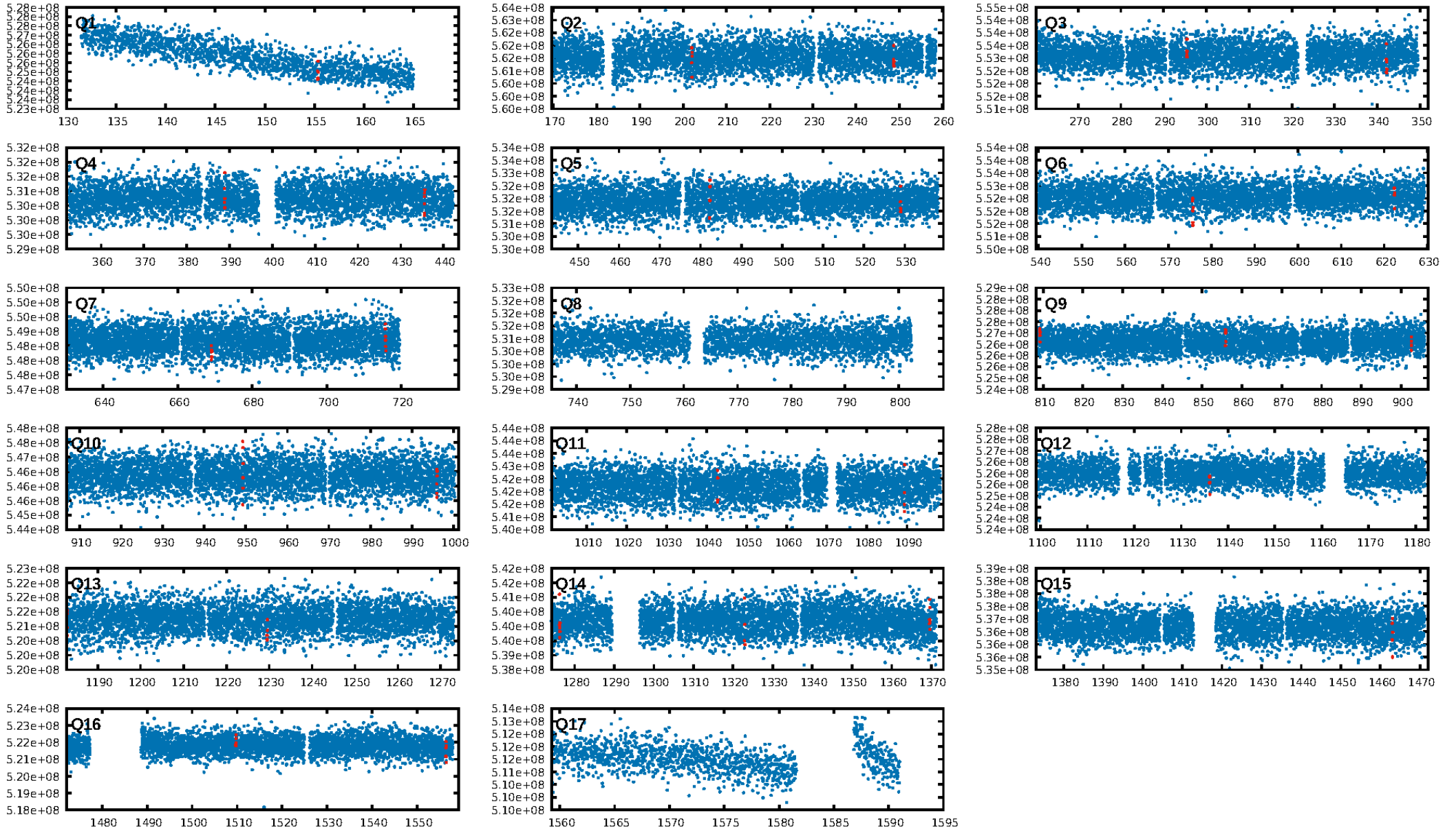
## DV Diagnostic Results:

ShortPeriod-sig: 100.0% [4.45σ]  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 25.2%  
ModelChiSquareGof-sig: 97.6%  
**Bootstrap-pfa: 3.95e-09**  
RollingBand-fgt: 1.00 [8/8]  
**GhostDiagnostic-chr: -0.9387**  
Centroid-sig: N/A  
Centroid-so: 0.261 arcsec [2.25σ]  
OotOffset-rm: 0.366 arcsec [1.09σ]  
KicOffset-rm: 0.344 arcsec [1.20σ]  
OotOffset-st: 4/4/3/4 [15]  
KicOffset-st: 4/4/3/4 [15]  
DiffImageQuality-fgm: 0.60 [9/15]  
DiffImageOverlap-fno: 0.27 [4/15]

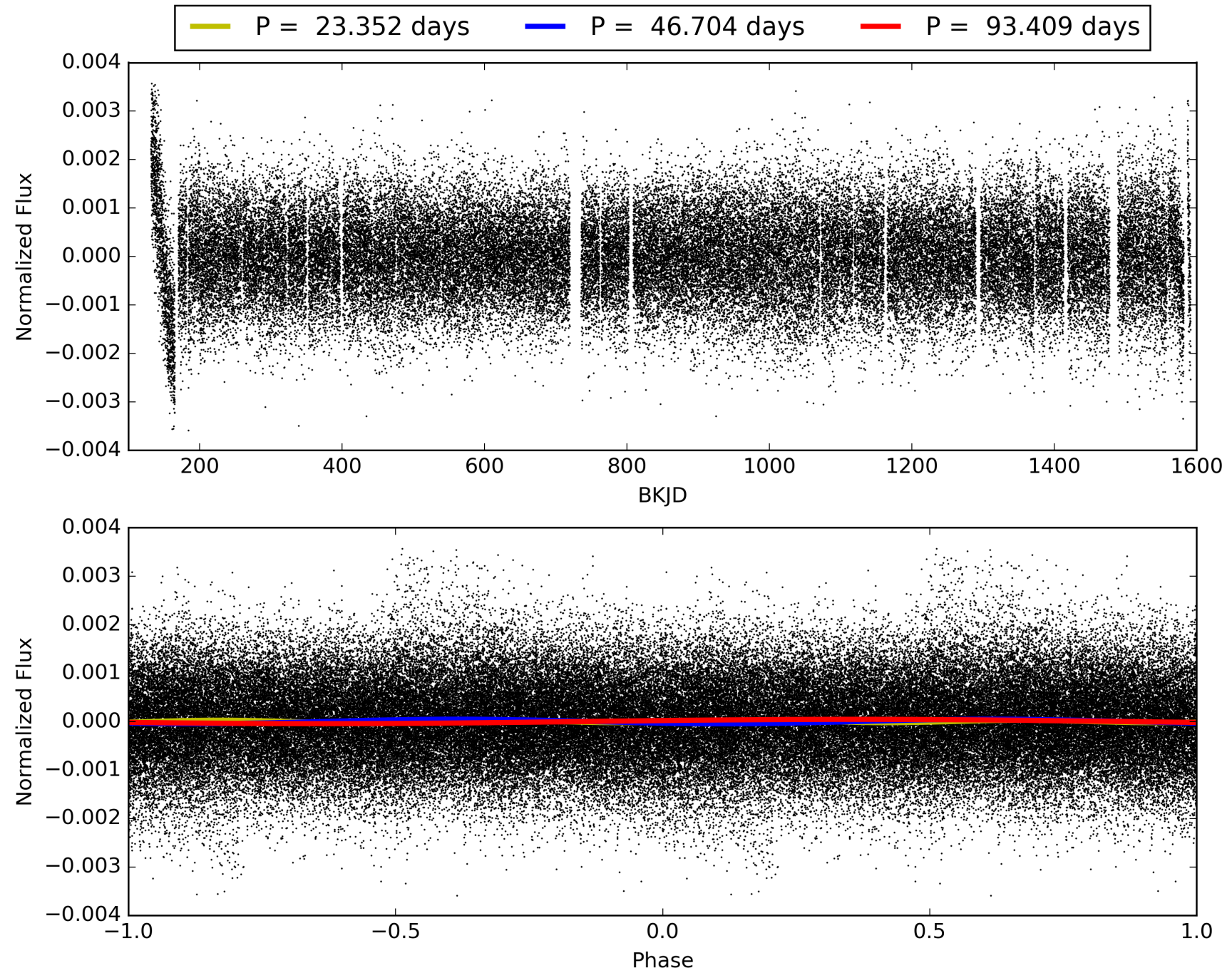
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 12:01:14 Z

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

# TCE 006294889-03, PDC Light Curves

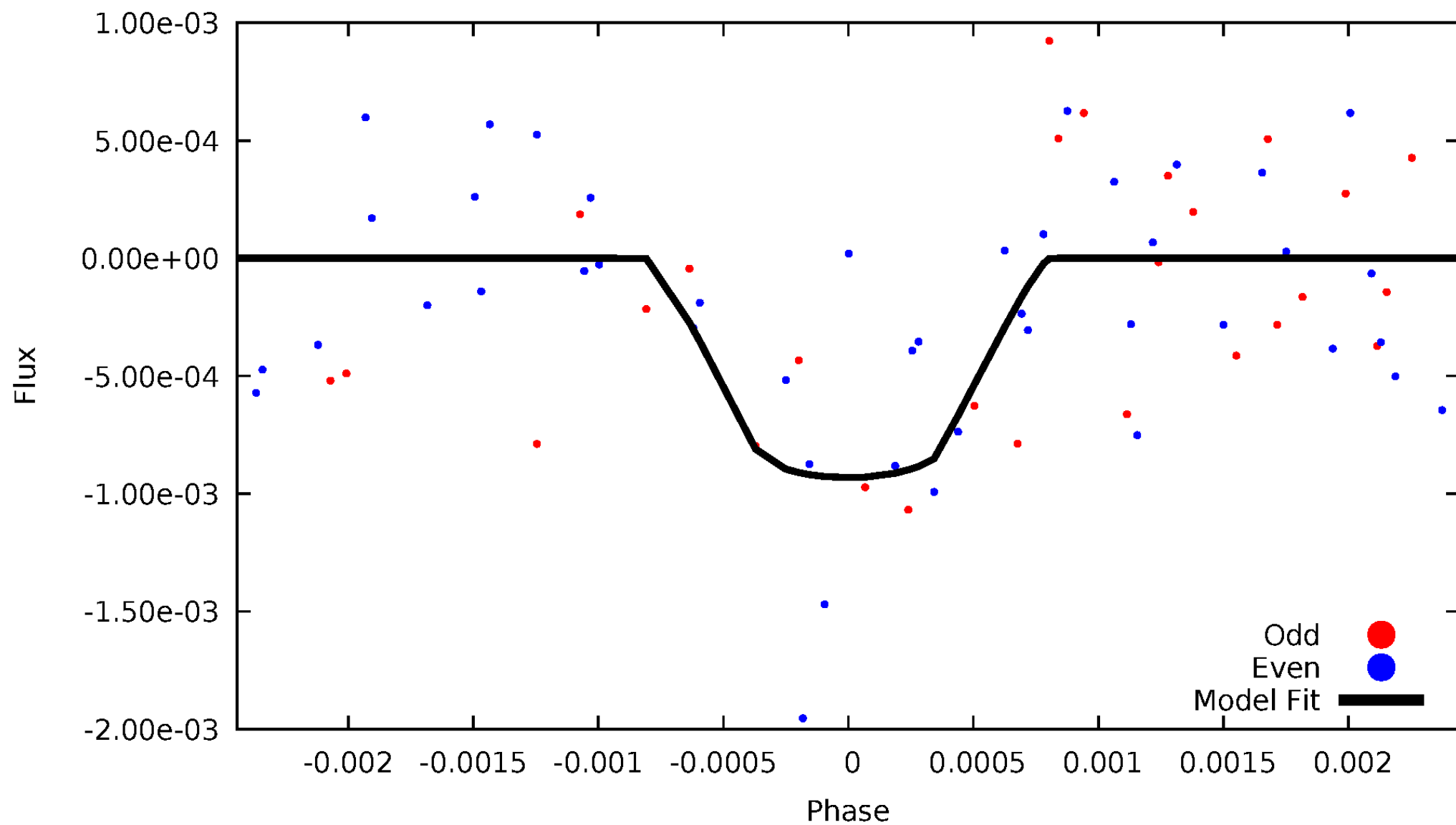


TCE 006294889-03



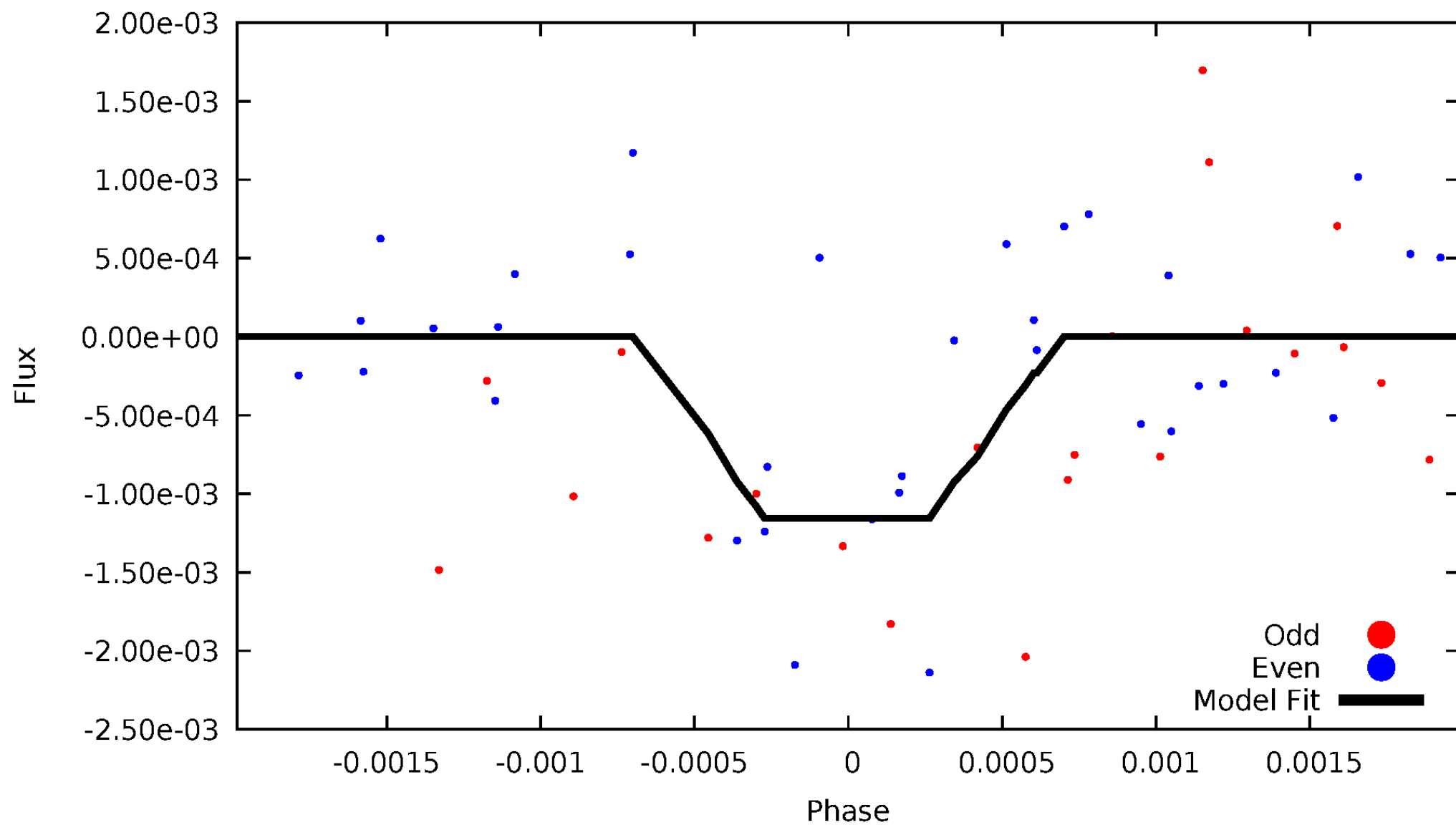
# DV Odd/Even

TCE 006294889-03

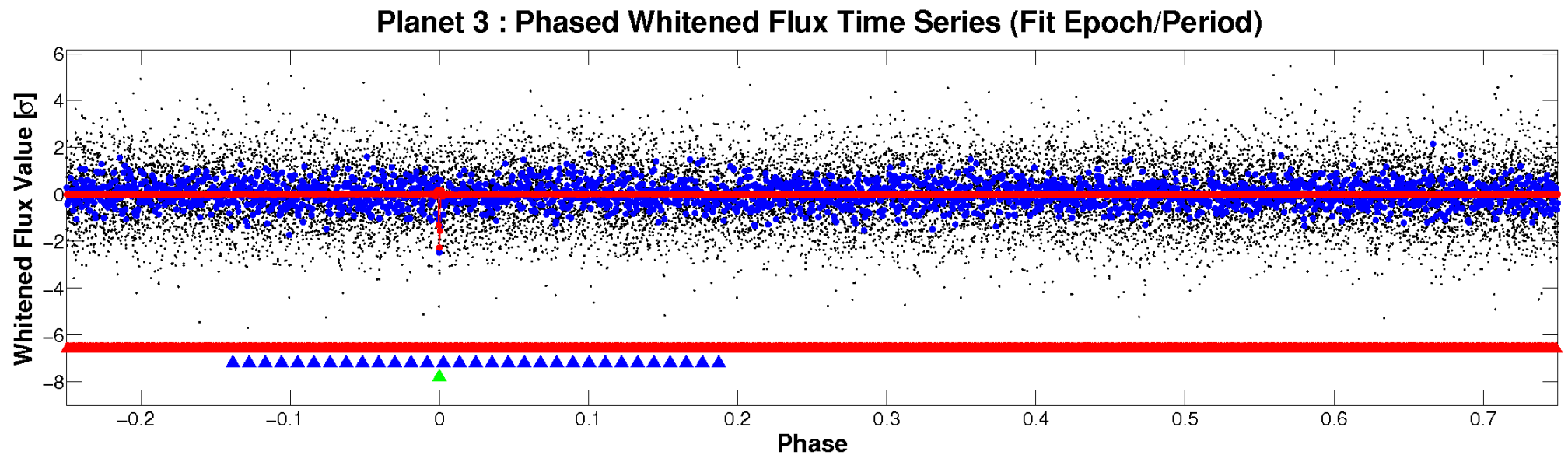
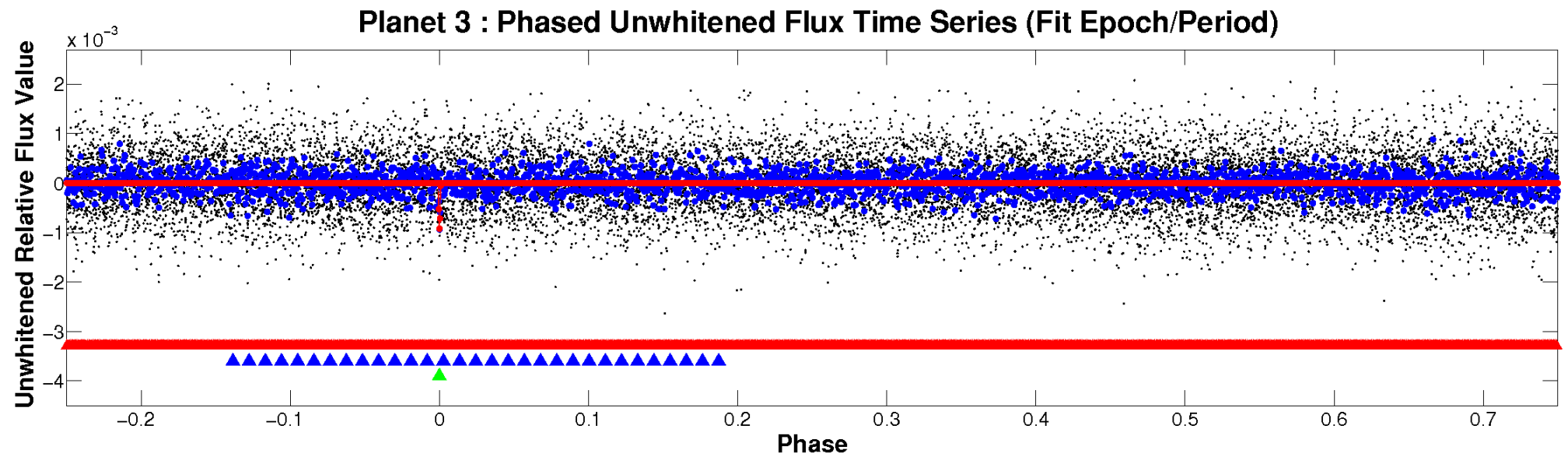


# ALT Odd/Even

TCE 006294889-03

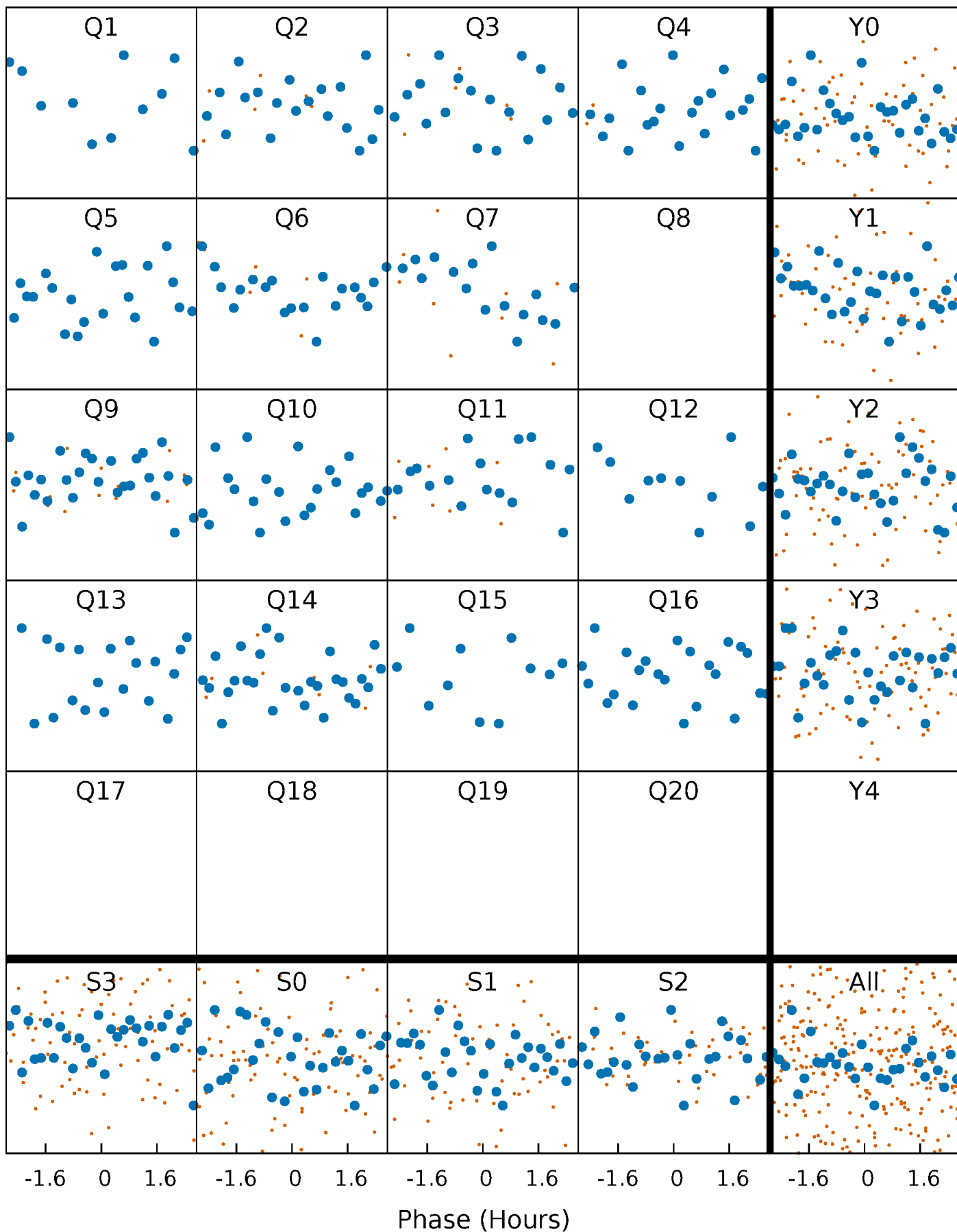


# Non-Whitened Vs. Whitened Light Curve



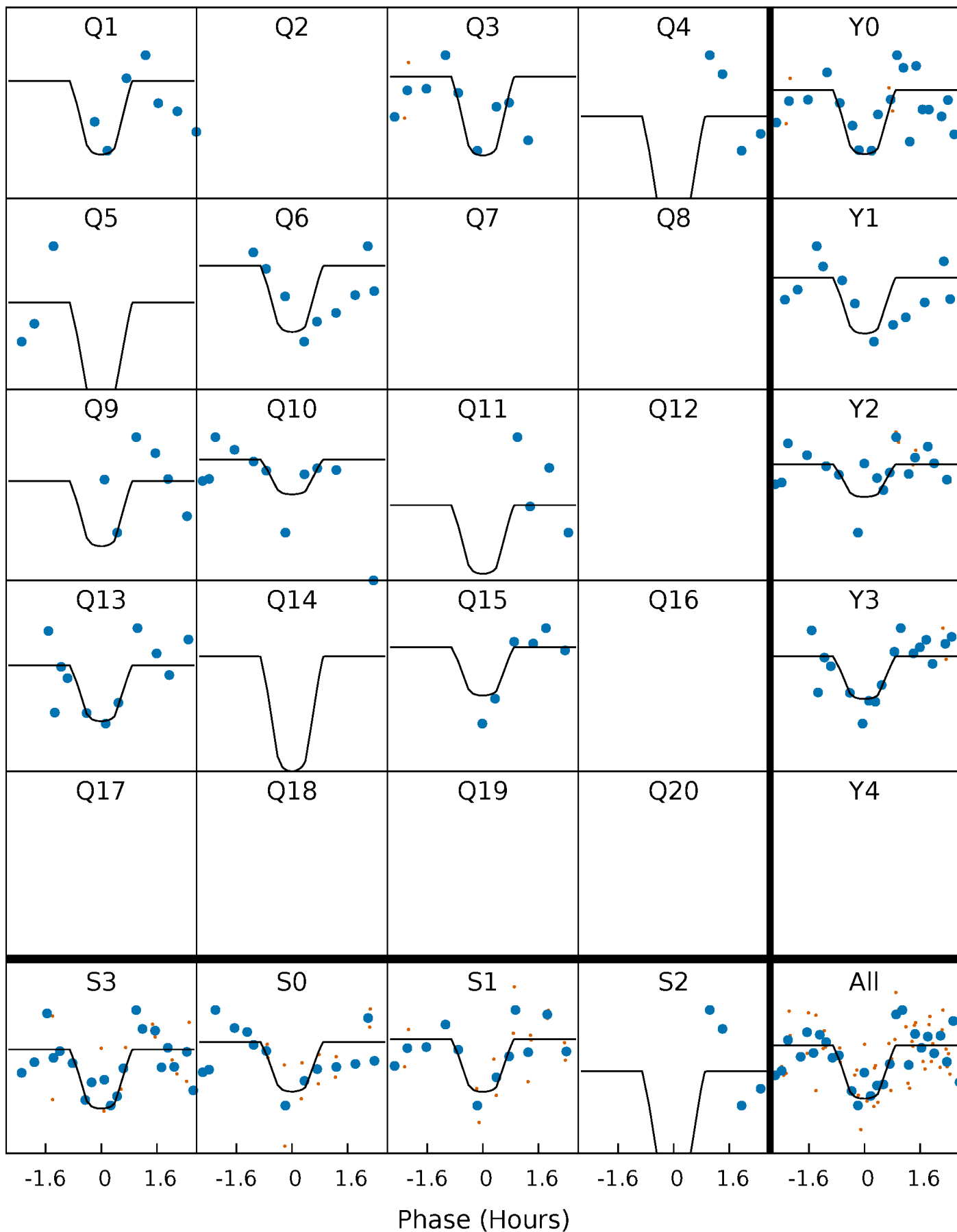
# PDC Quarter-Phased Transit Curves

TCE 006294889-03 P= 46.704267 Days  $T_0=155.330056$  (BKJD)



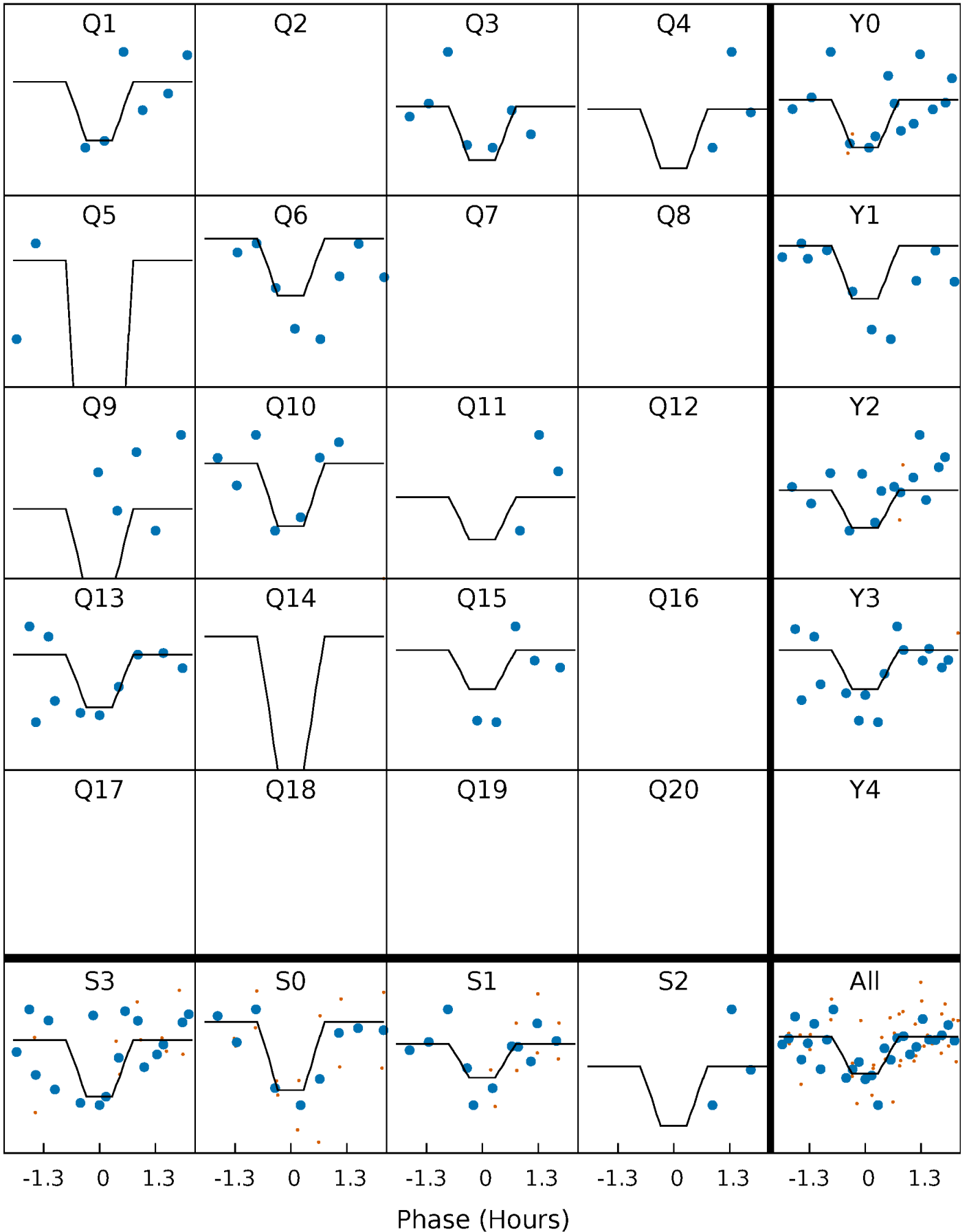
# DV Quarter-Phased Transit Curves

TCE 006294889-03 P= 46.704267 Days  $T_0=155.330056$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

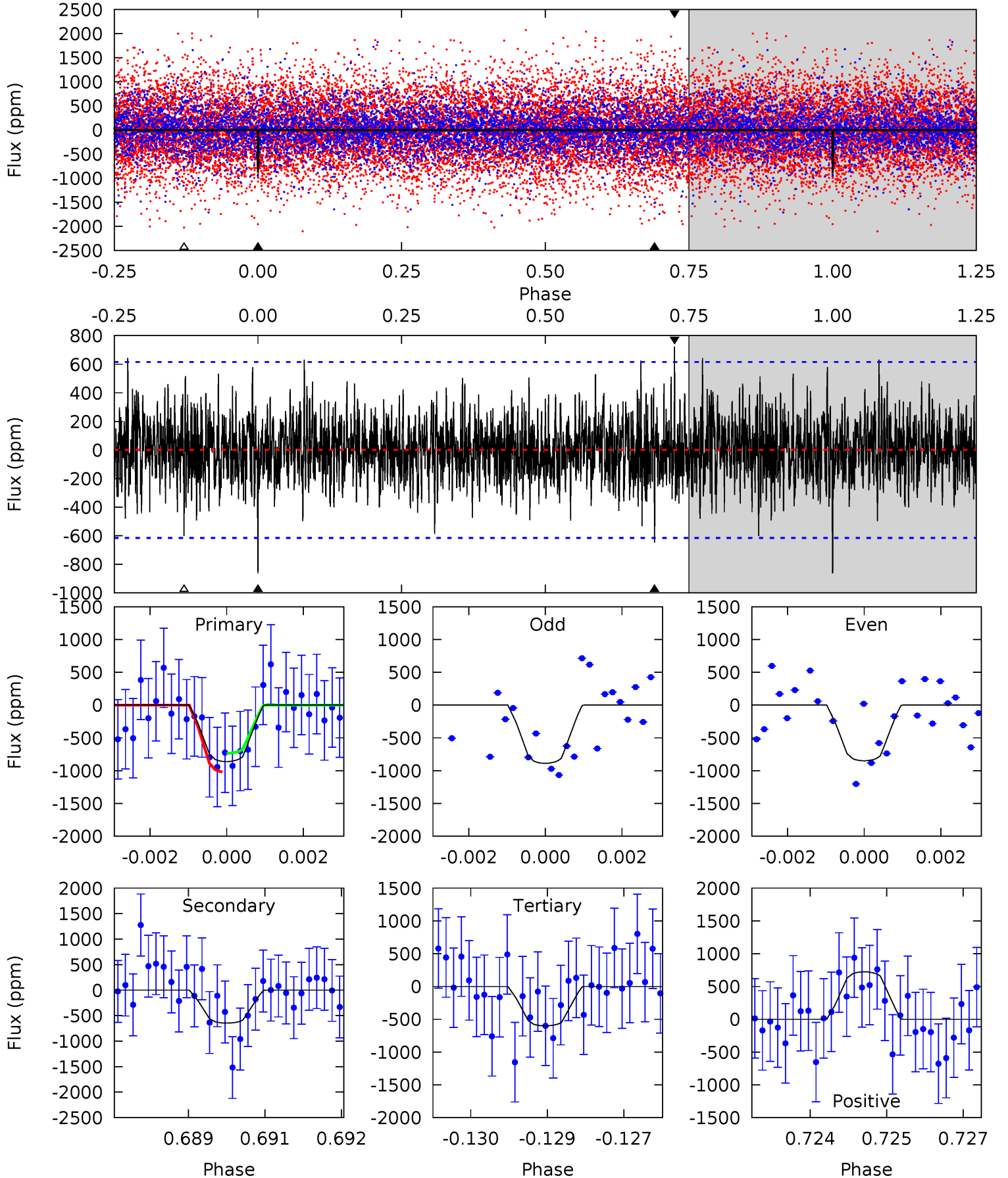
TCE 006294889-03   P= 46.704213 Days    $T_0=155.335260$  (BKJD)



# DV Model-Shift Uniqueness Test

006294889-03, P = 46.704267 Days, E = 108.625789 Days

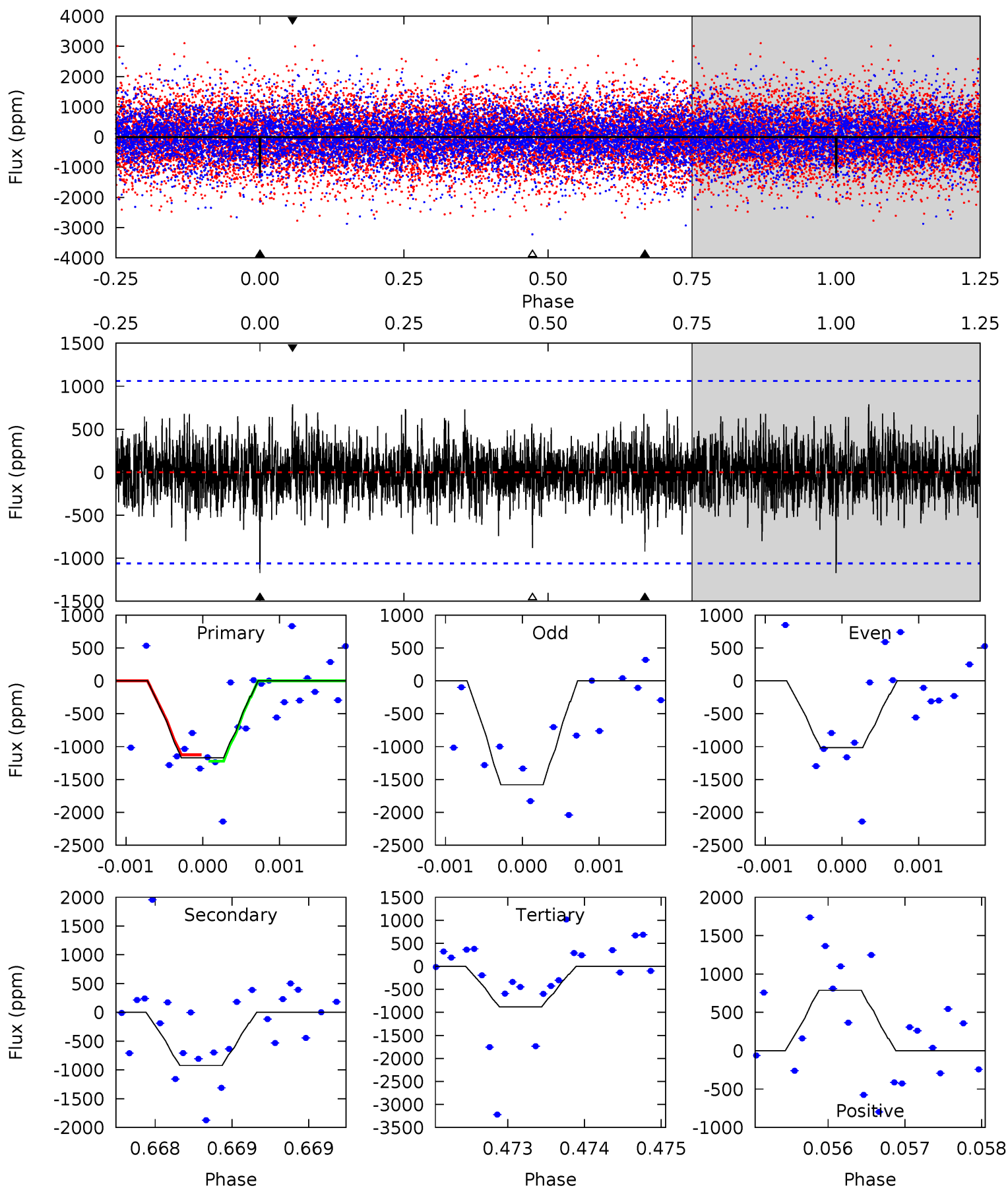
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.52	5.64	5.24	6.31	5.36	3.15	1.52	2.29	1.21	0.40	-0.67	0.16	1.05	0.46	1.19



# Alt Model-Shift Uniqueness Test

006294889-03, P = 46.704213 Days, E = 108.631047 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
6.03	4.75	4.52	4.05	5.46	3.30	1.11	1.50	1.98	0.22	0.70	1.37	1.05	0.40	0.24



### Stellar Parameters For KIC 006294889

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$8529^{+235}_{-370}$	$4.066^{+0.165}_{-0.135}$	$0.070^{+0.250}_{-0.600}$	$2.183^{+0.462}_{-0.564}$	$2.024^{+0.317}_{-0.476}$	$0.274^{+0.276}_{-0.101}$
	+3%/-4%	+4%/-3%	+357%/-857%	+21%/-26%	+16%/-24%	+101%/-37%
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 006294889-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-647 \pm 115$	$9.14^{+7.68}_{-5.89}$	$1359^{+91}_{-97}$	$6516^{+6843}_{-1547}$	$420^{+3159}_{-293}$
Alt.	$-923 \pm 194$	$10.30^{+8.10}_{-6.67}$	$1361^{+91}_{-93}$	$6876^{+7442}_{-1793}$	$491^{+3440}_{-345}$

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

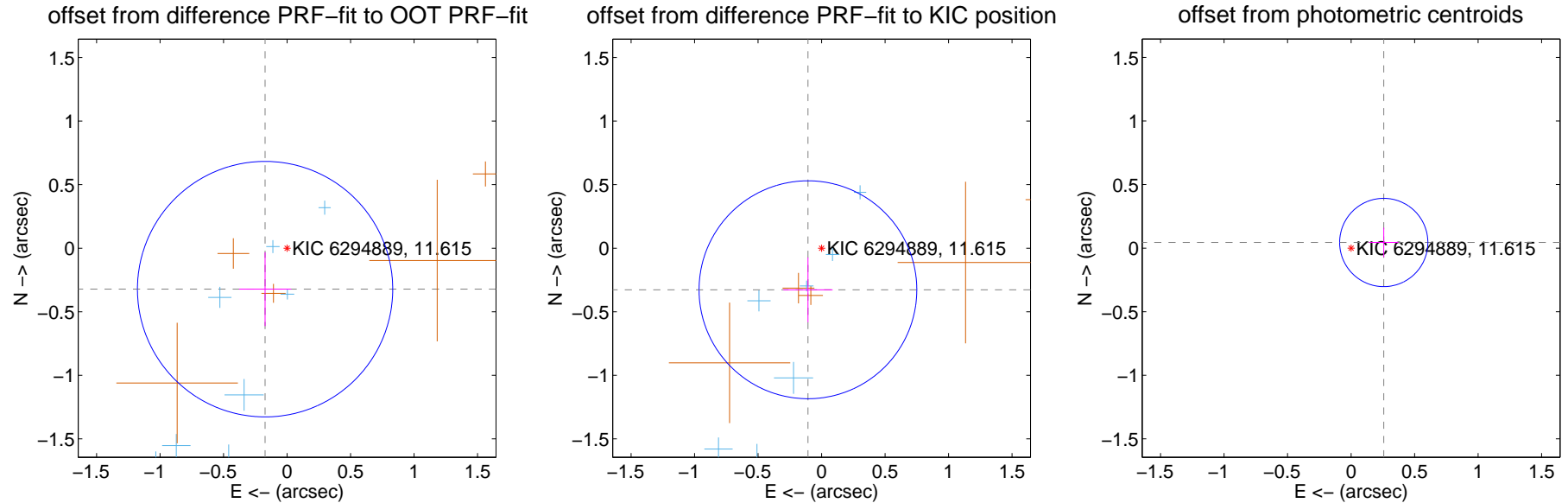
## DV Centroid Data

Supplemental centroid analysis for 006294889-03. **Kepler magnitude: 11.62.** Transit SNR 8.02

There are 9 quarters with good PRF difference image offsets

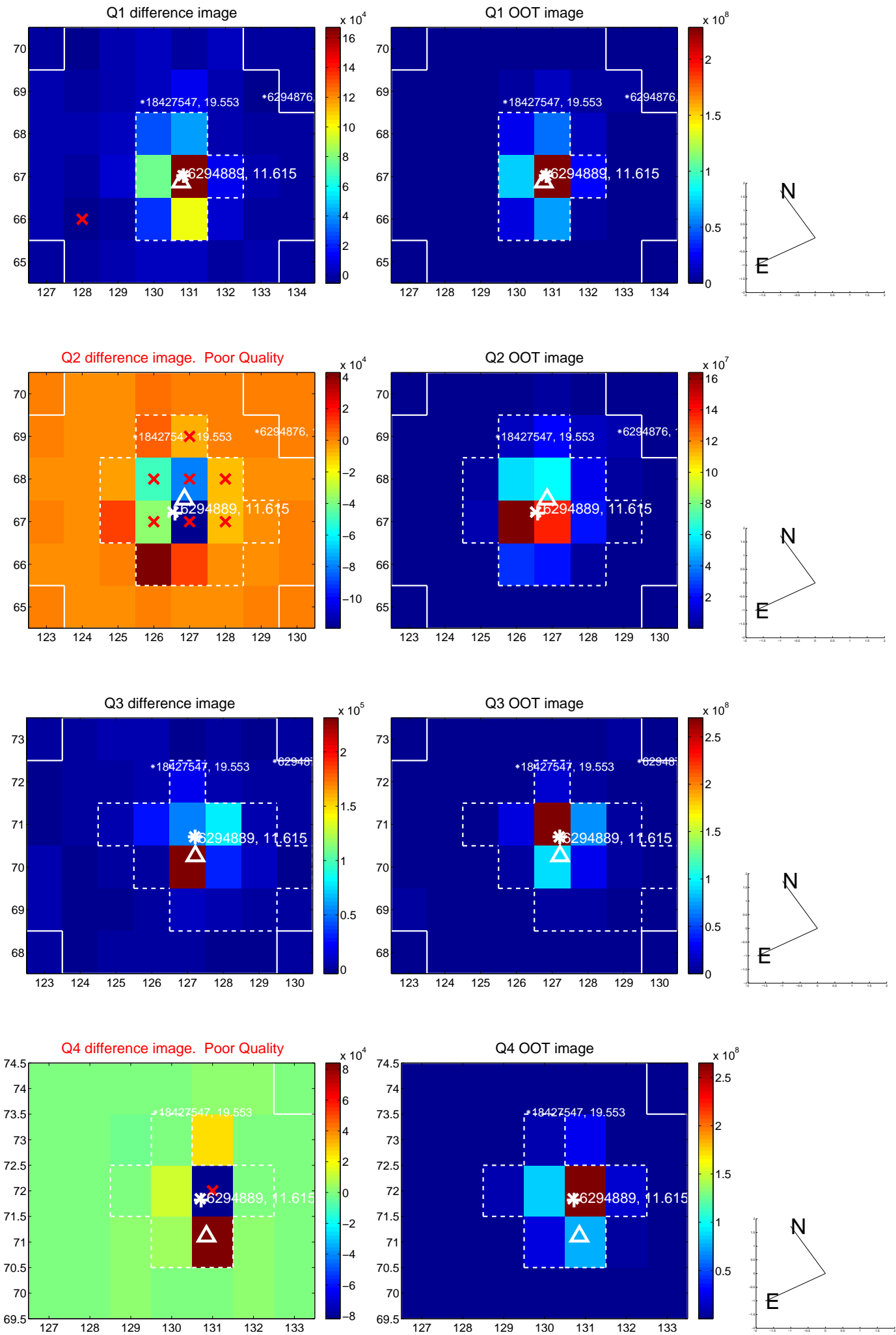
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.366 \pm 0.335$	1.09	$0.173 \pm 0.205$	$-0.322 \pm 0.290$
PRF-fit source offset from KIC position	$0.344 \pm 0.286$	1.20	$0.107 \pm 0.194$	$-0.327 \pm 0.255$
photometric centroid source offset	$0.26 \pm 0.12$	2.25	$-0.26 \pm 0.12$	$0.04 \pm 0.12$

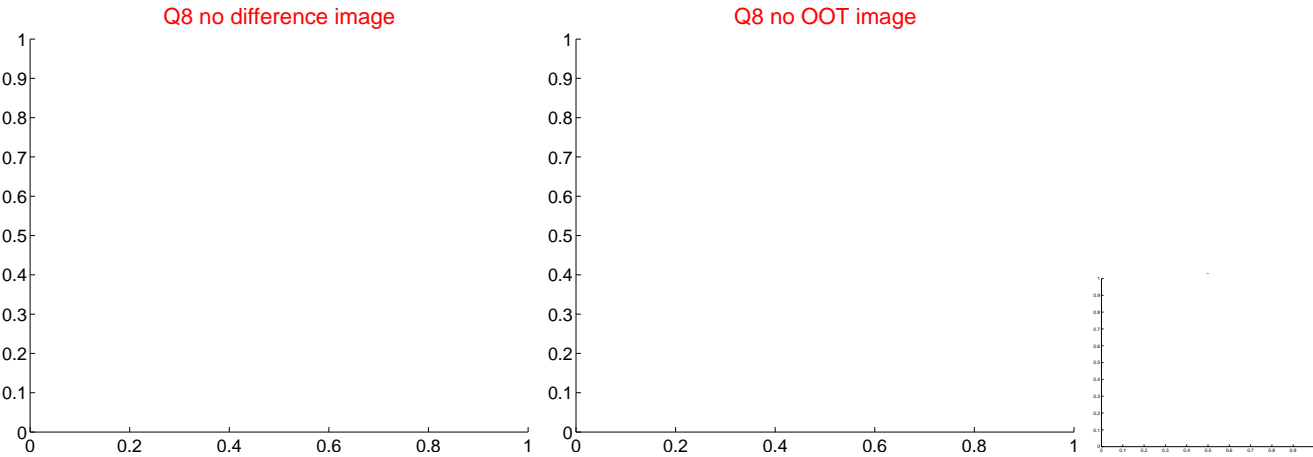
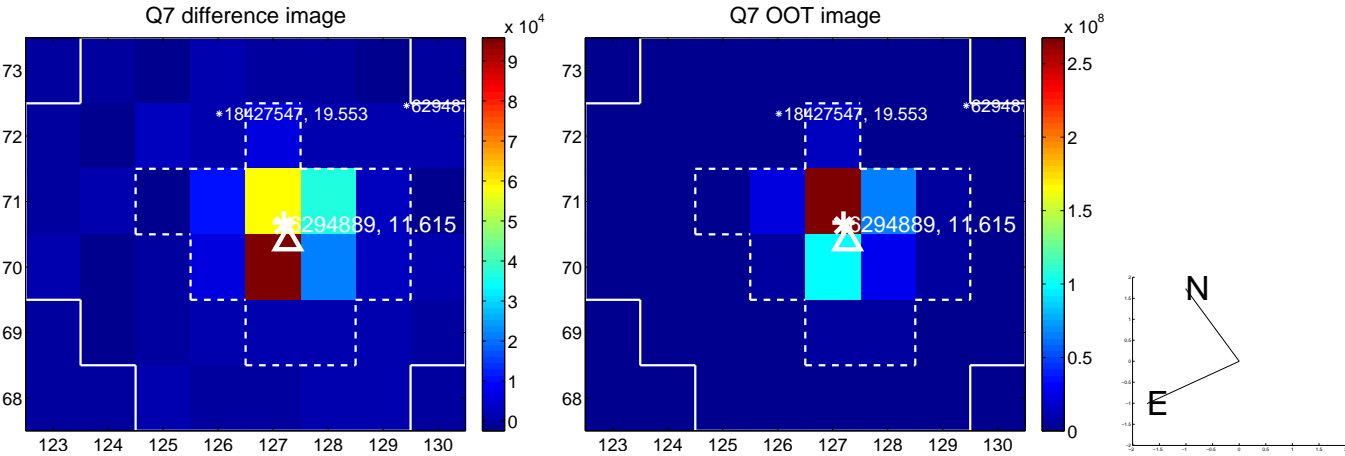
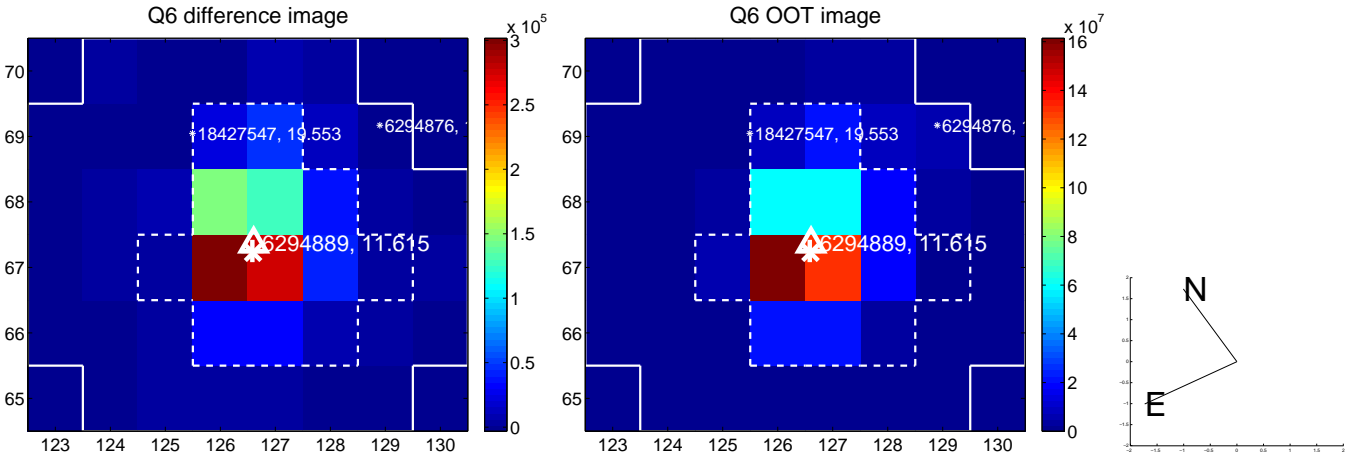
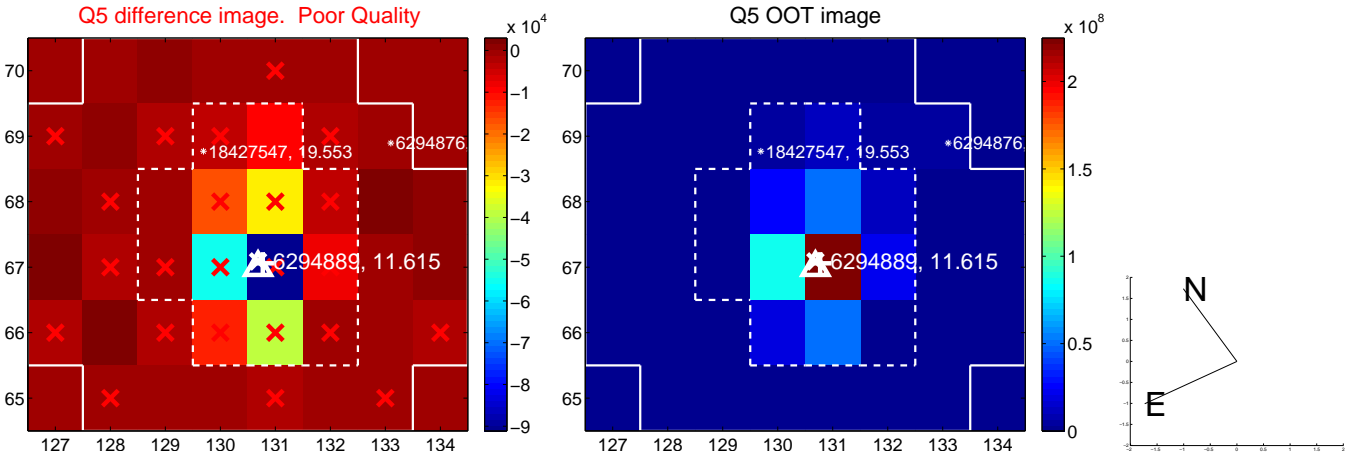


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

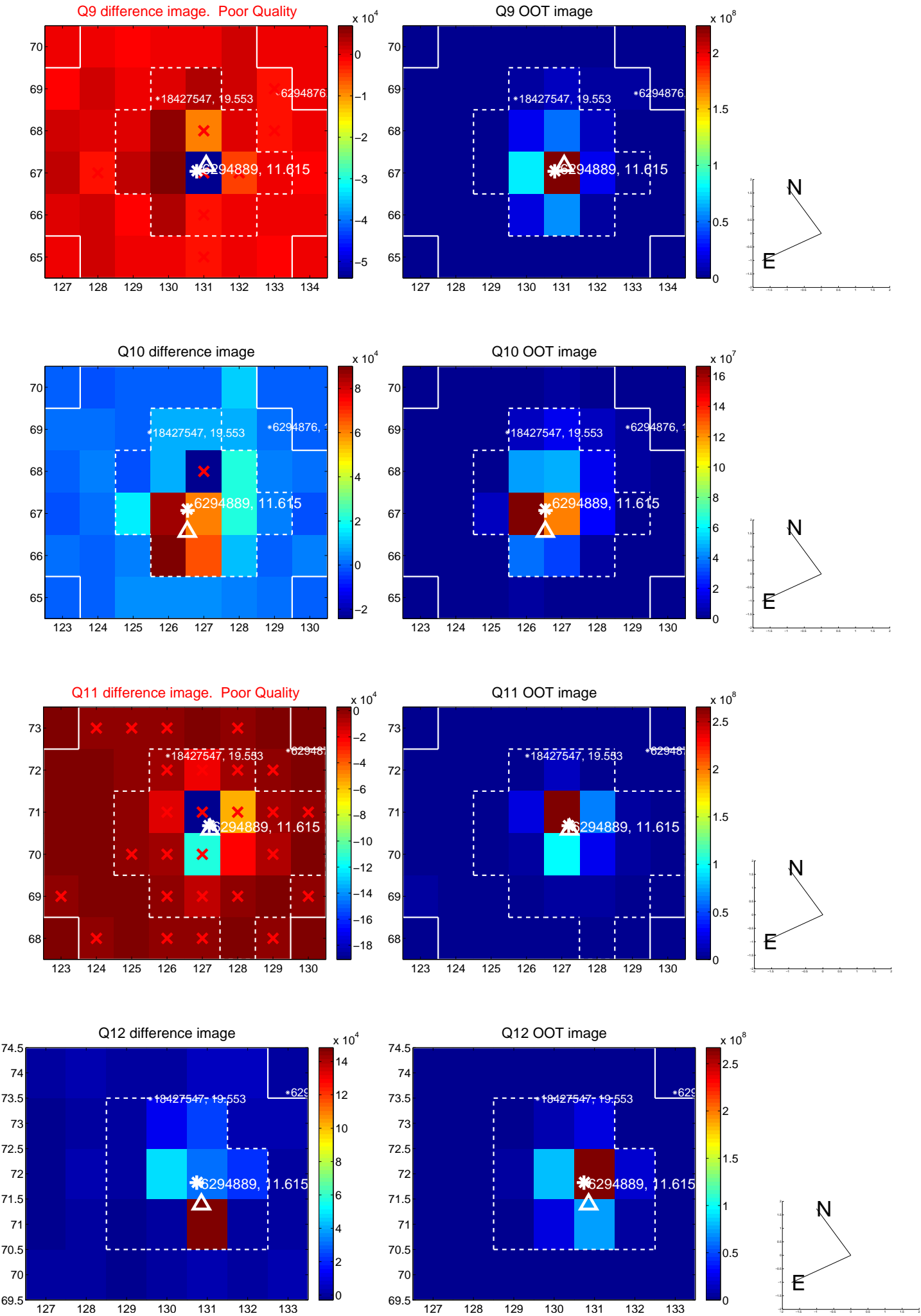
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



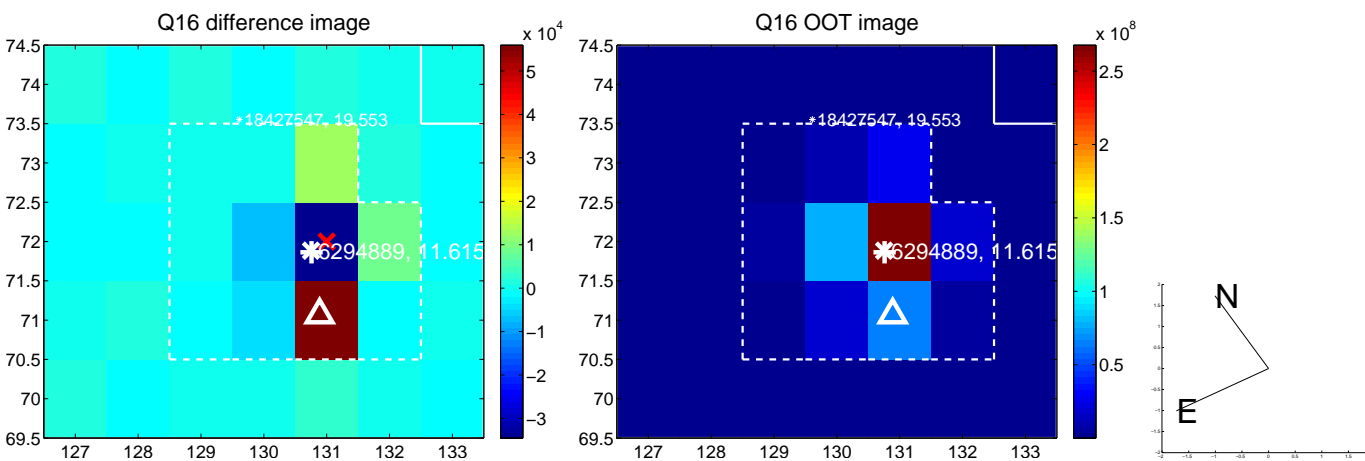
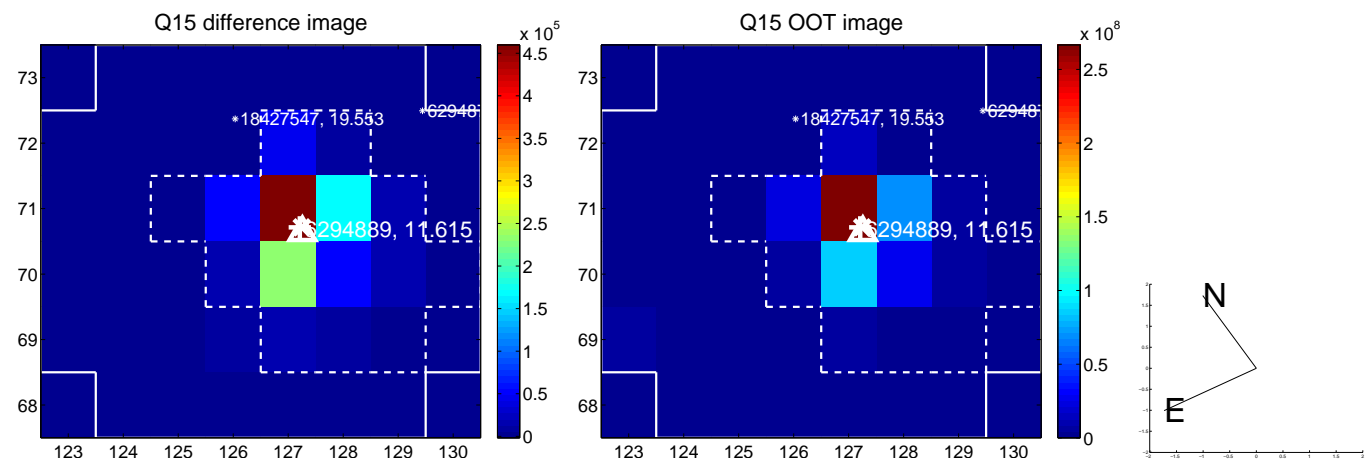
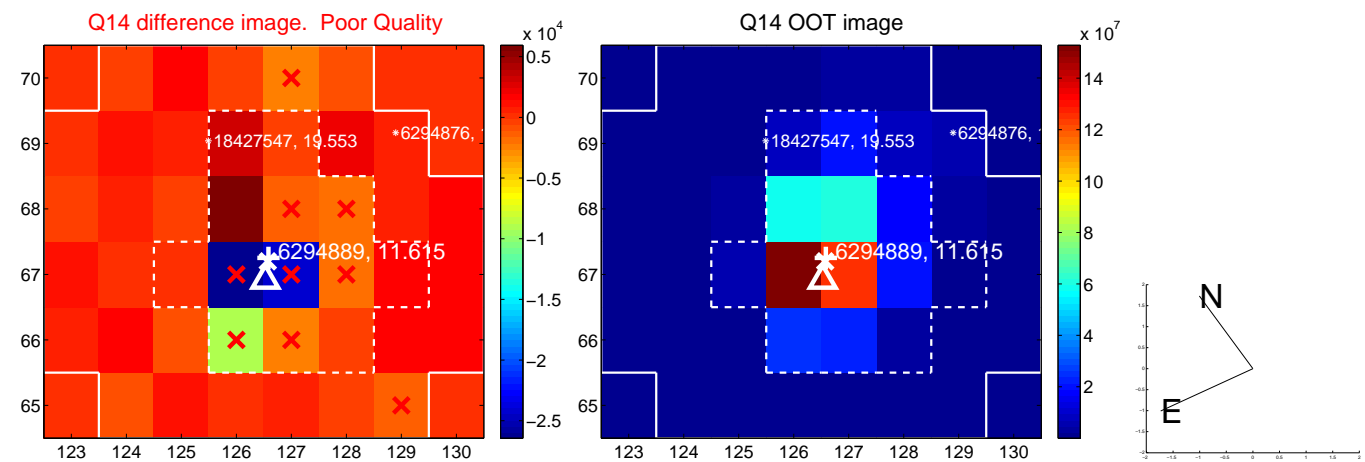
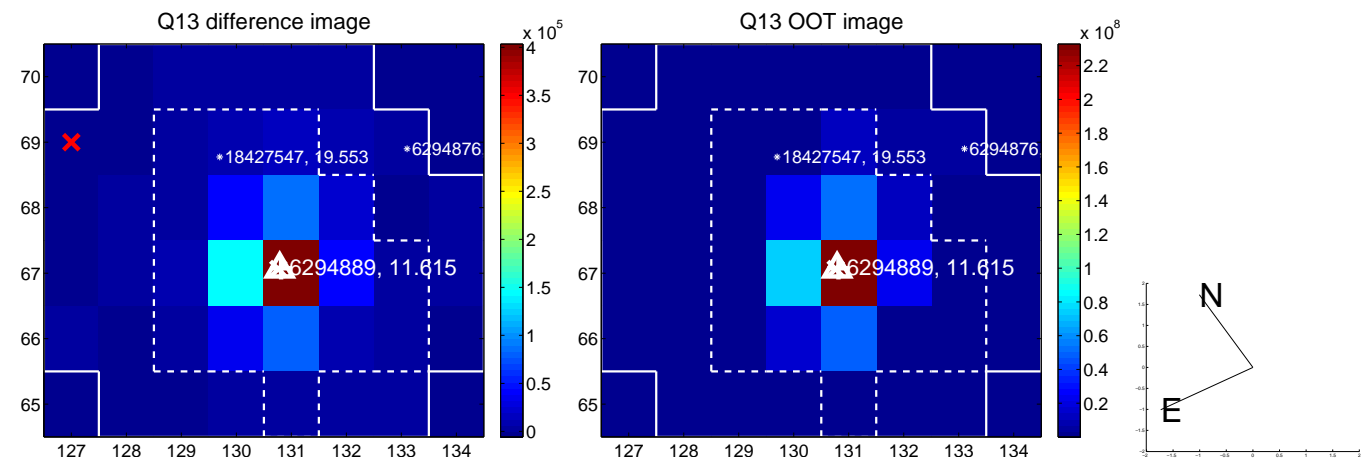
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



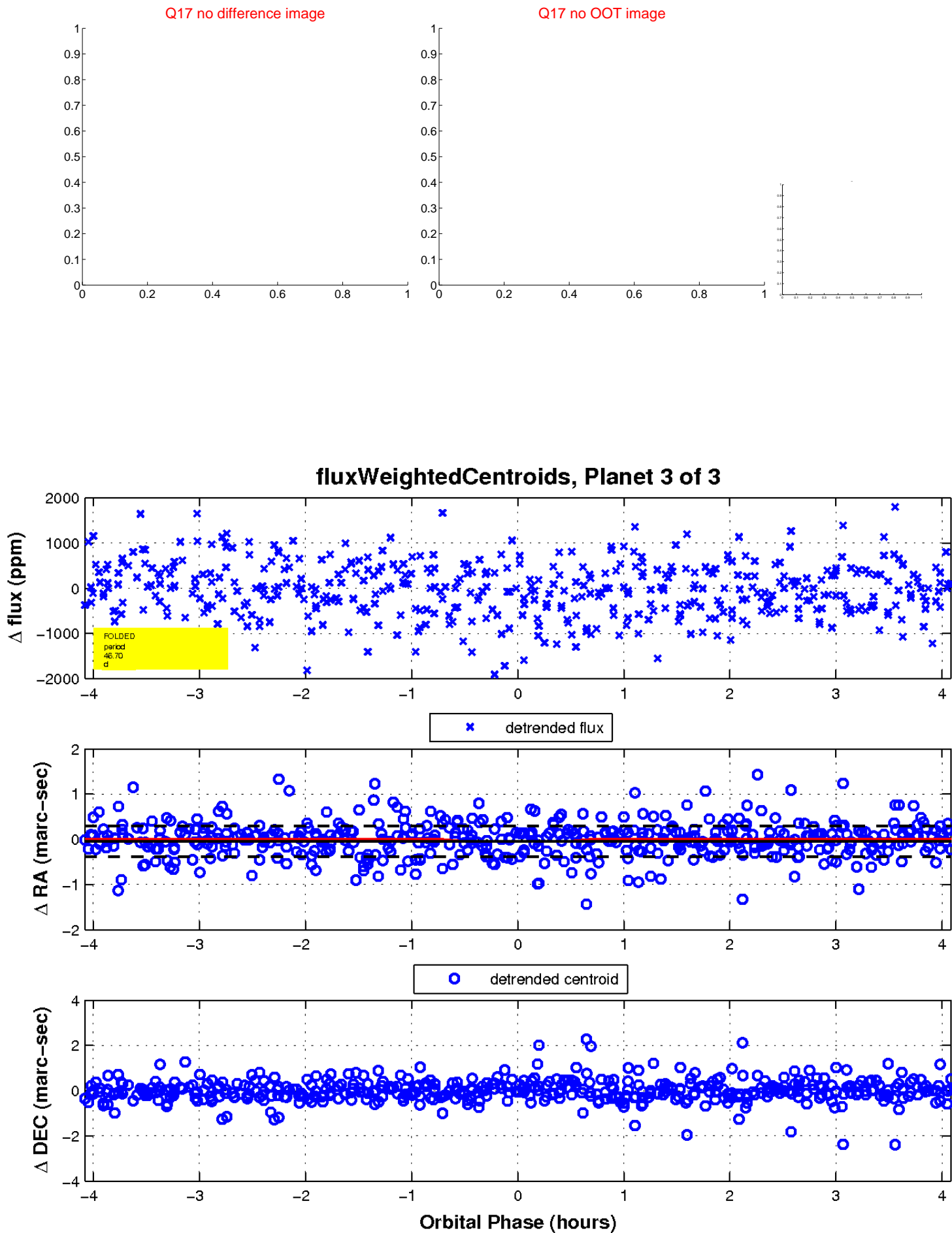
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

