

# KIC 003546192

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
003546192-01	OBS	No	598.834520	152.775984	3229.8	9.837	11.4	5.3	0.73	5205	4.61	0.23
003546192-02	OBS	No	0.877084	131.994527	1320.4	3.000	9.5	-1.0	0.73	5205	2.62	1401.50
003546192-03	OBS	No	0.874482	132.334618	307.5	3.540	8.4	8.9	0.73	5205	1.32	1407.06

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003546192-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
003546192-02	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_NOFITS
003546192-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—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.

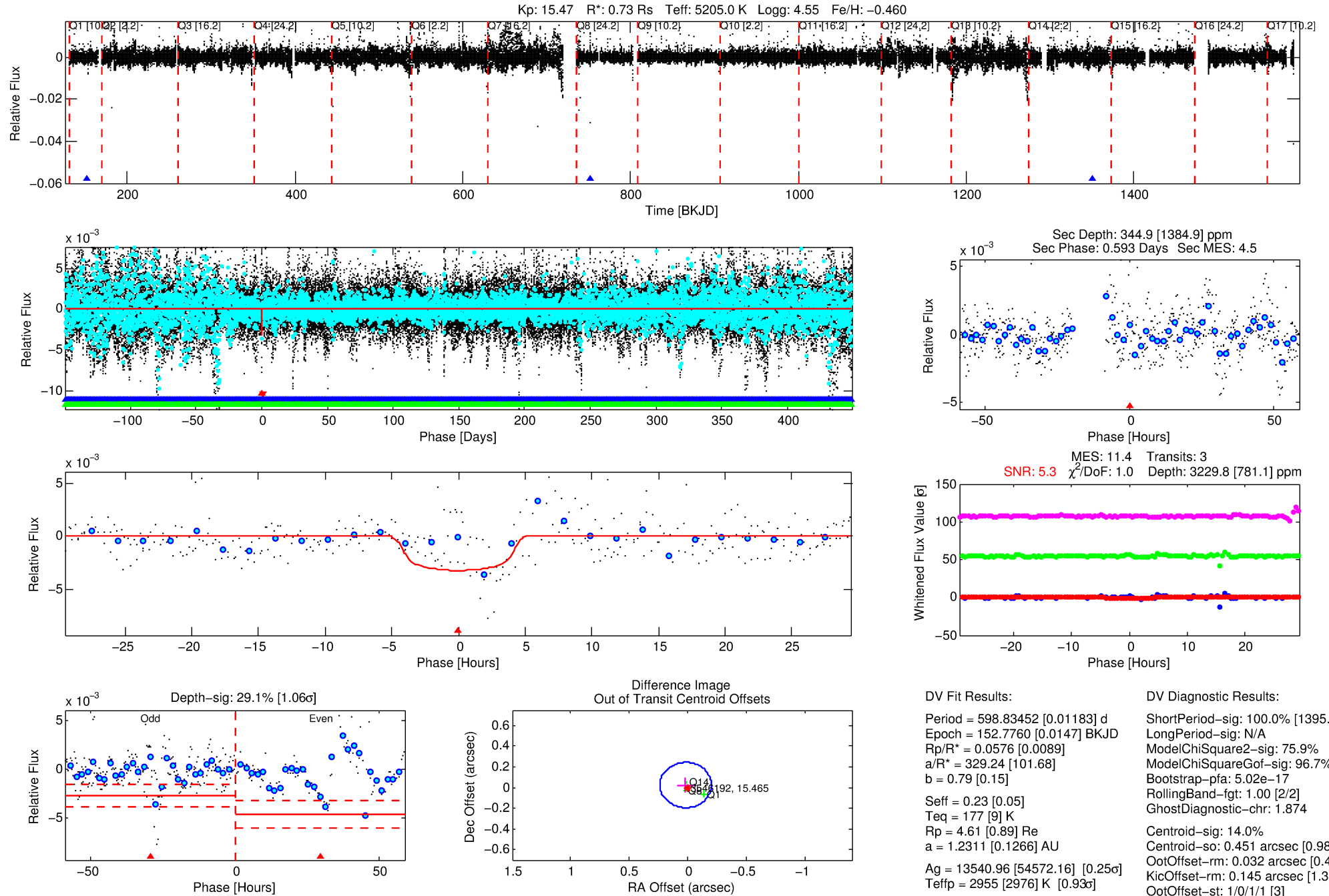
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 003546192-01

No Significant Match Found

# DV One-Page Summary

KIC: 3546192 Candidate: 1 of 3 Period: 598.835 d



## DV Fit Results:

Period = 598.83452 [0.01183] d  
Epoch = 152.7760 [0.0147] BKJD  
Rp/R\* = 0.0576 [0.0089]  
a/R\* = 329.24 [101.68]  
b = 0.79 [0.15]  
Seff = 0.23 [0.05]  
Teq = 177 [9] K  
Rp = 4.61 [0.89] Re  
a = 1.2311 [0.1266] AU  
Ag = 13540.96 [54572.16] [0.25σ]  
Teffp = 2955 [2976] K [0.93σ]

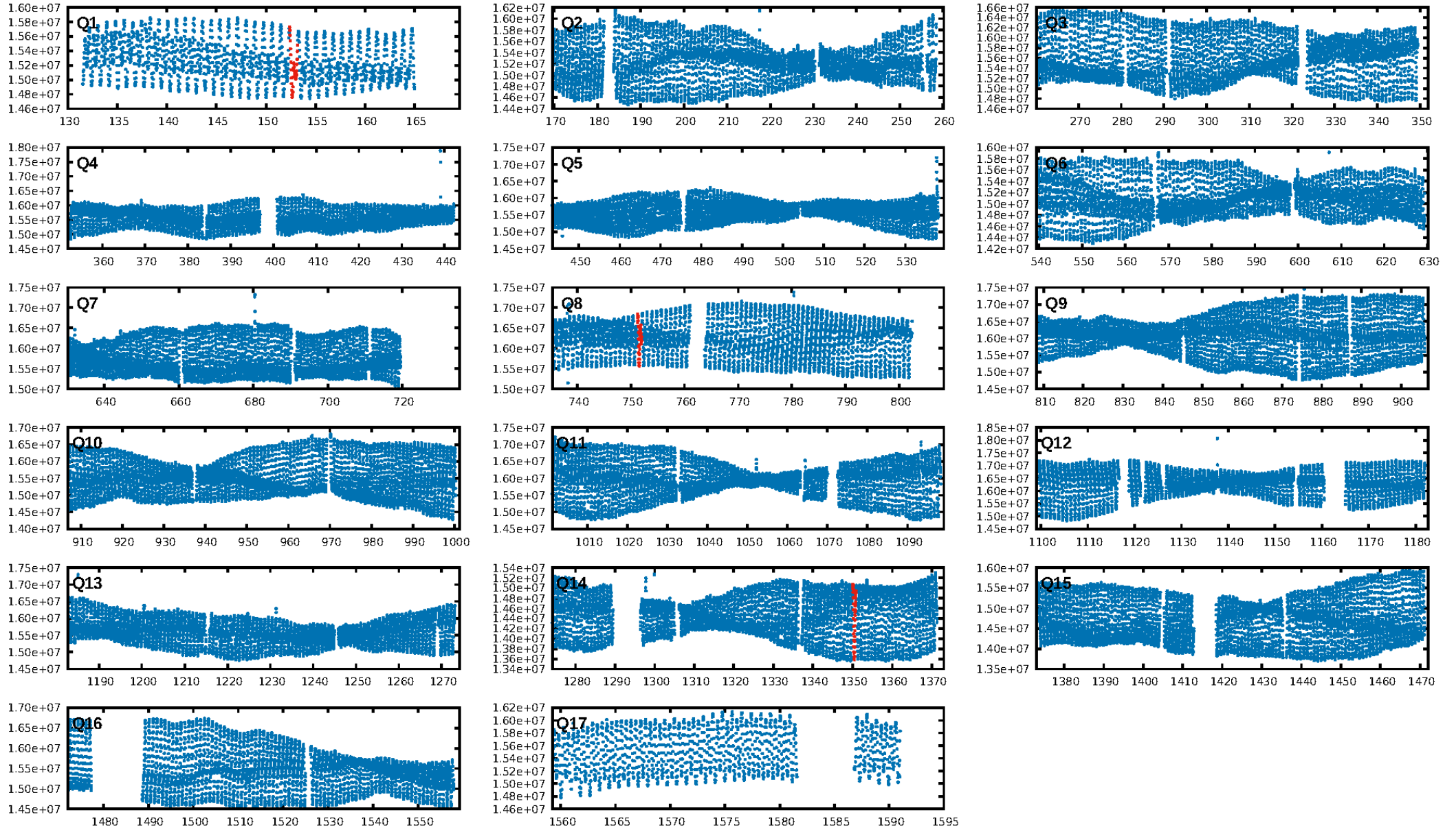
## DV Diagnostic Results:

ShortPeriod-sig: 100.0% [1395.40σ]  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 75.9%  
ModelChiSquareGof-sig: 96.7%  
Bootstrap-pfa: 5.02e-17  
RollingBand-fgt: 1.00 [2/2]  
GhostDiagnostic-chr: 1.874  
Centroid-sig: 14.0%  
Centroid-so: 0.451 arcsec [0.98σ]  
OotOffset-rm: 0.032 arcsec [0.44σ]  
KicOffset-rm: 0.145 arcsec [1.39σ]  
OotOffset-st: 1/0/1/1 [3]  
KicOffset-st: 1/0/1/1 [3]  
DiffImageQuality-fgm: 1.00 [3/3]  
DiffImageOverlap-fno: 0.00 [0/3]

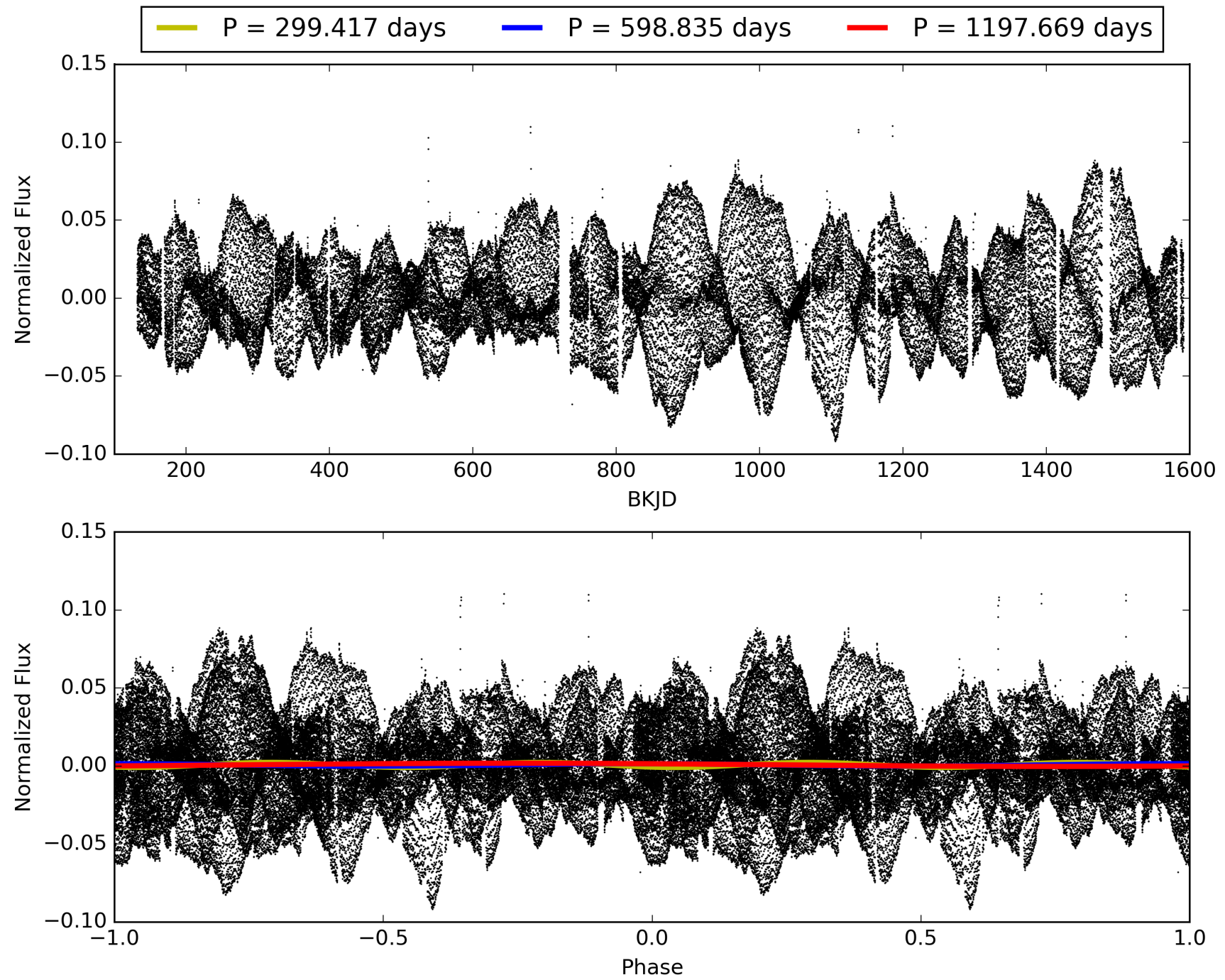
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 00:47:39 Z

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

# TCE 003546192-01, PDC Light Curves



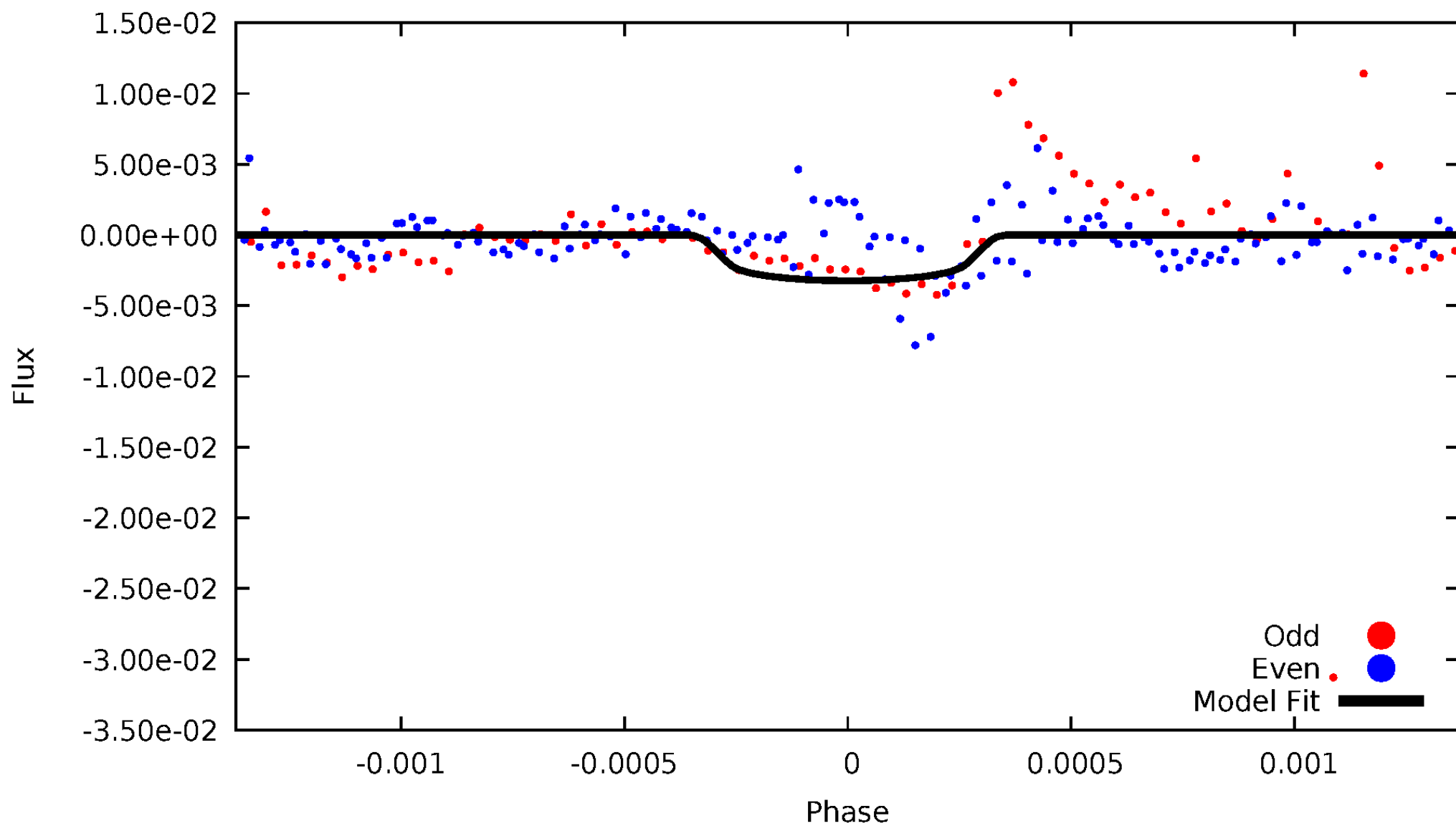
TCE 003546192-01





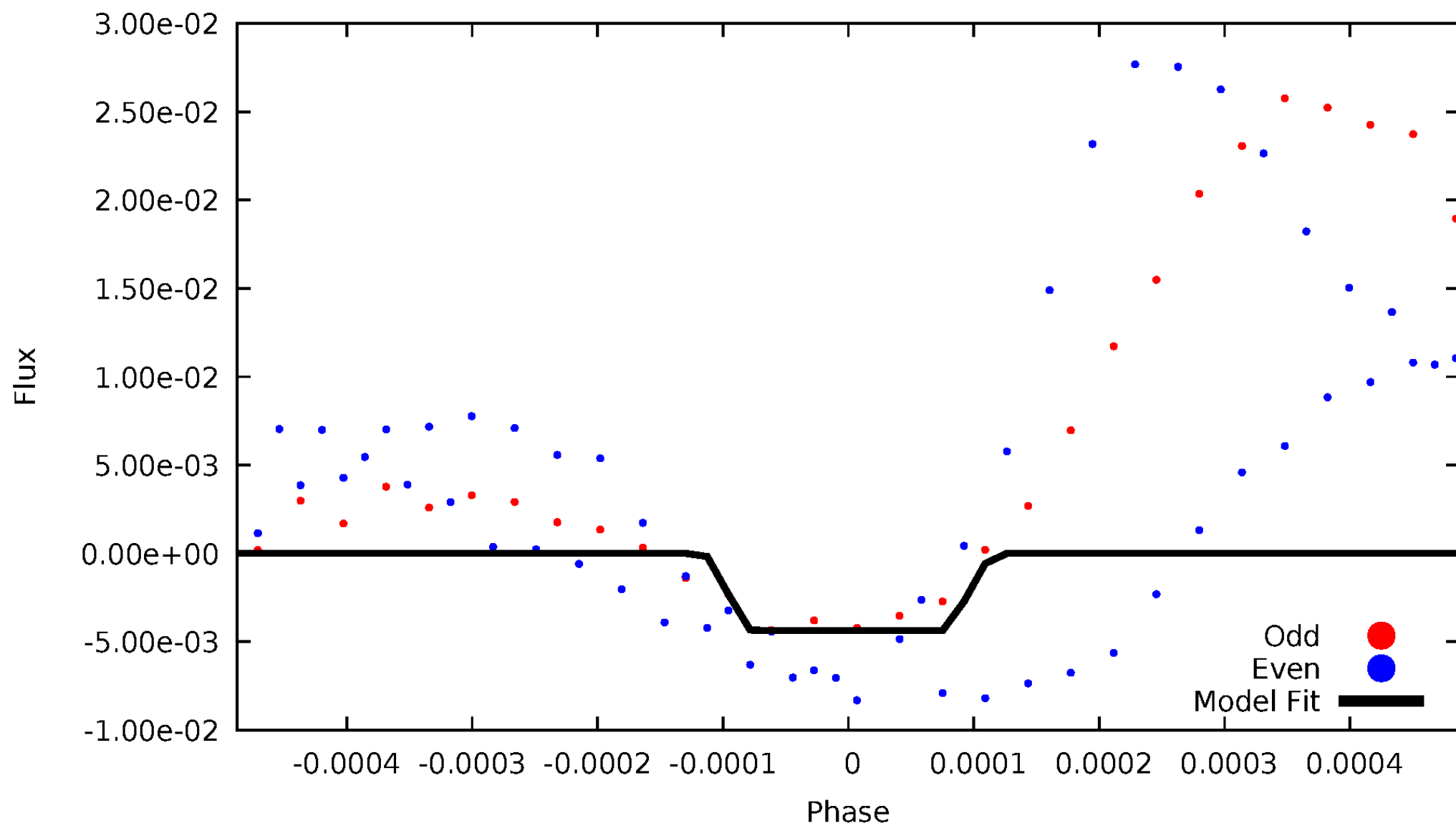
# DV Odd/Even

TCE 003546192-01



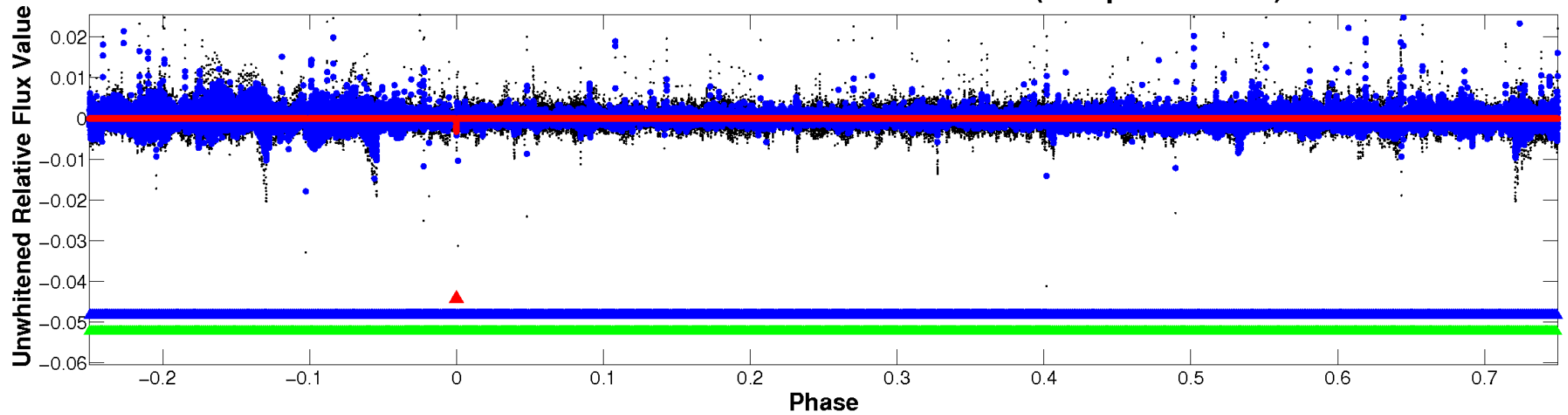
# ALT Odd/Even

TCE 003546192-01

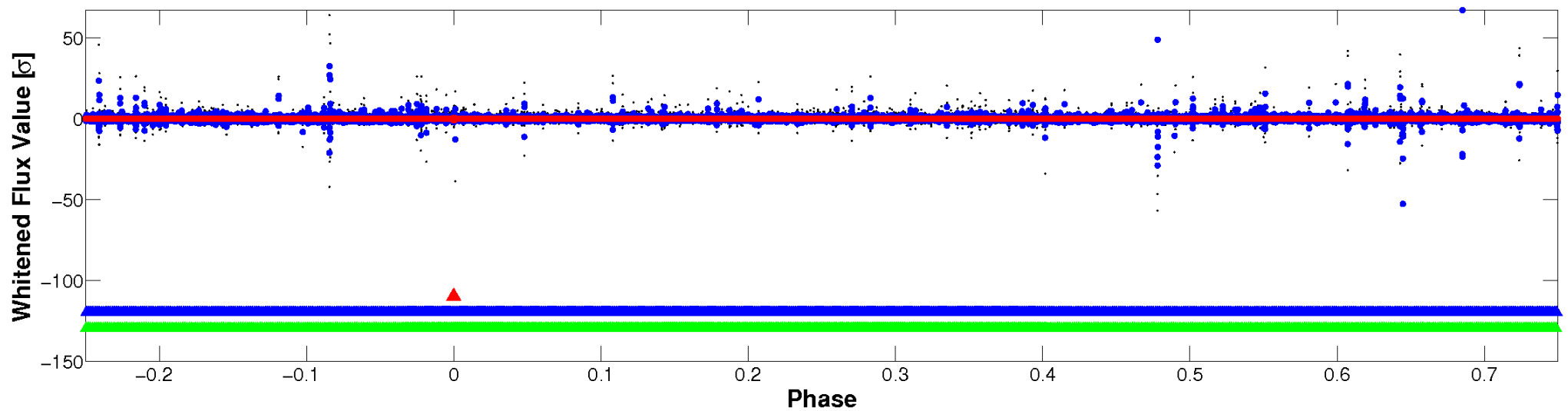


# Non-Whitened Vs. Whitened Light Curve

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

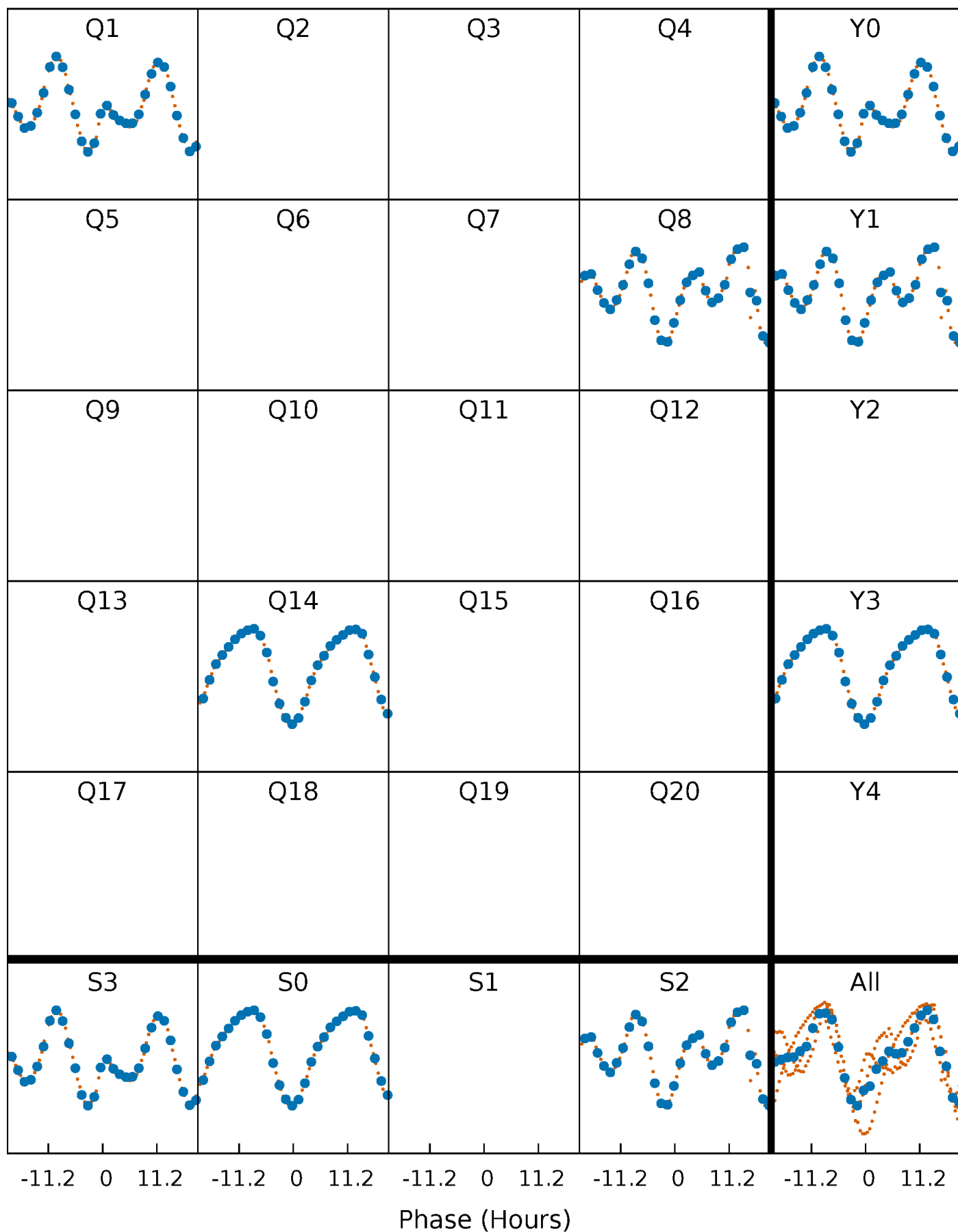


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



# PDC Quarter-Phased Transit Curves

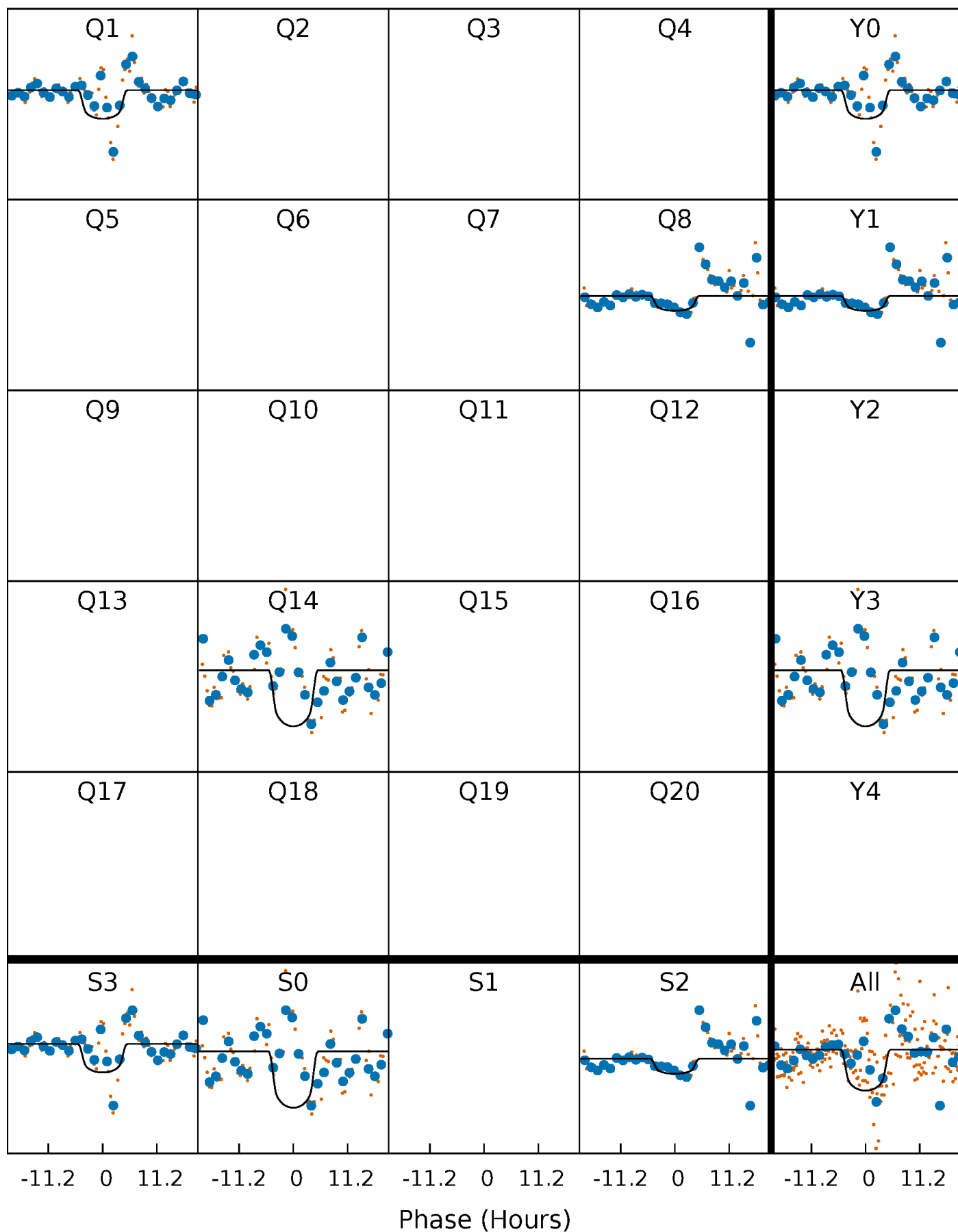
TCE 003546192-01 P=598.834520 Days  $T_0=152.775984$  (BKJD)





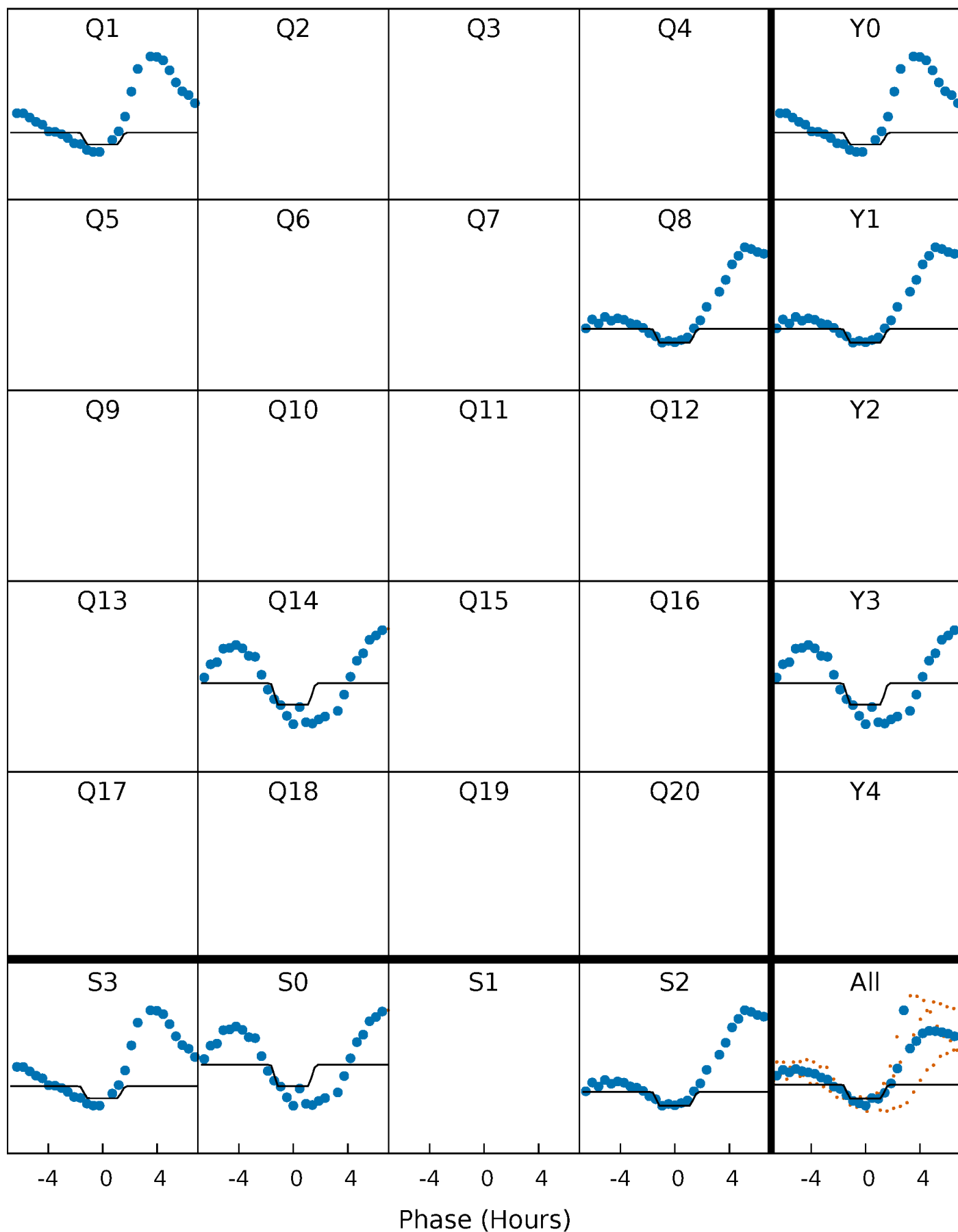
# DV Quarter-Phased Transit Curves

TCE 003546192-01 P=598.834520 Days  $T_0=152.775984$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

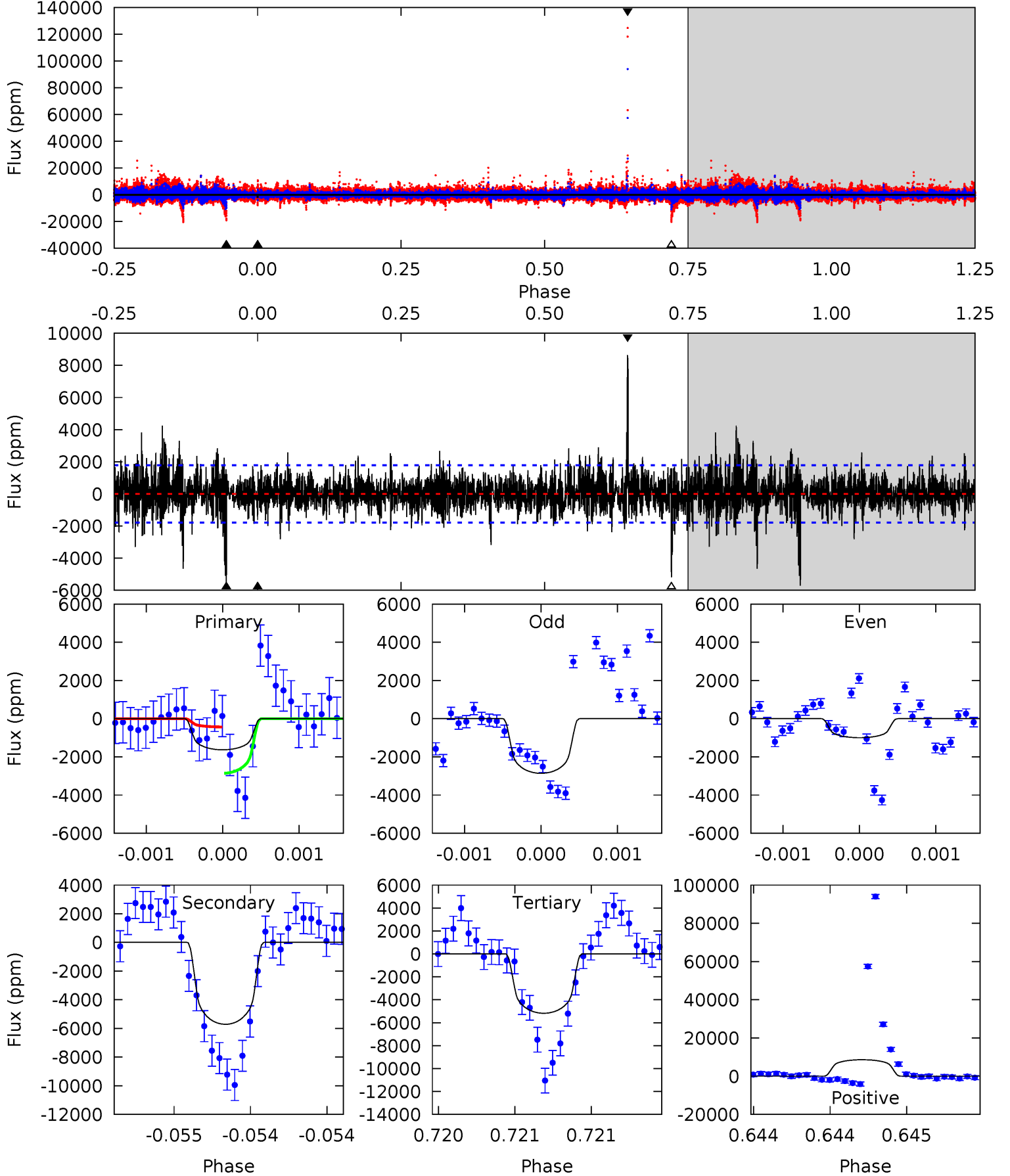
TCE 003546192-01 P=598.853154 Days  $T_0=152.647899$  (BKJD)



# DV Model-Shift Uniqueness Test

003546192-01, P = 598.834520 Days, E = 152.775984 Days

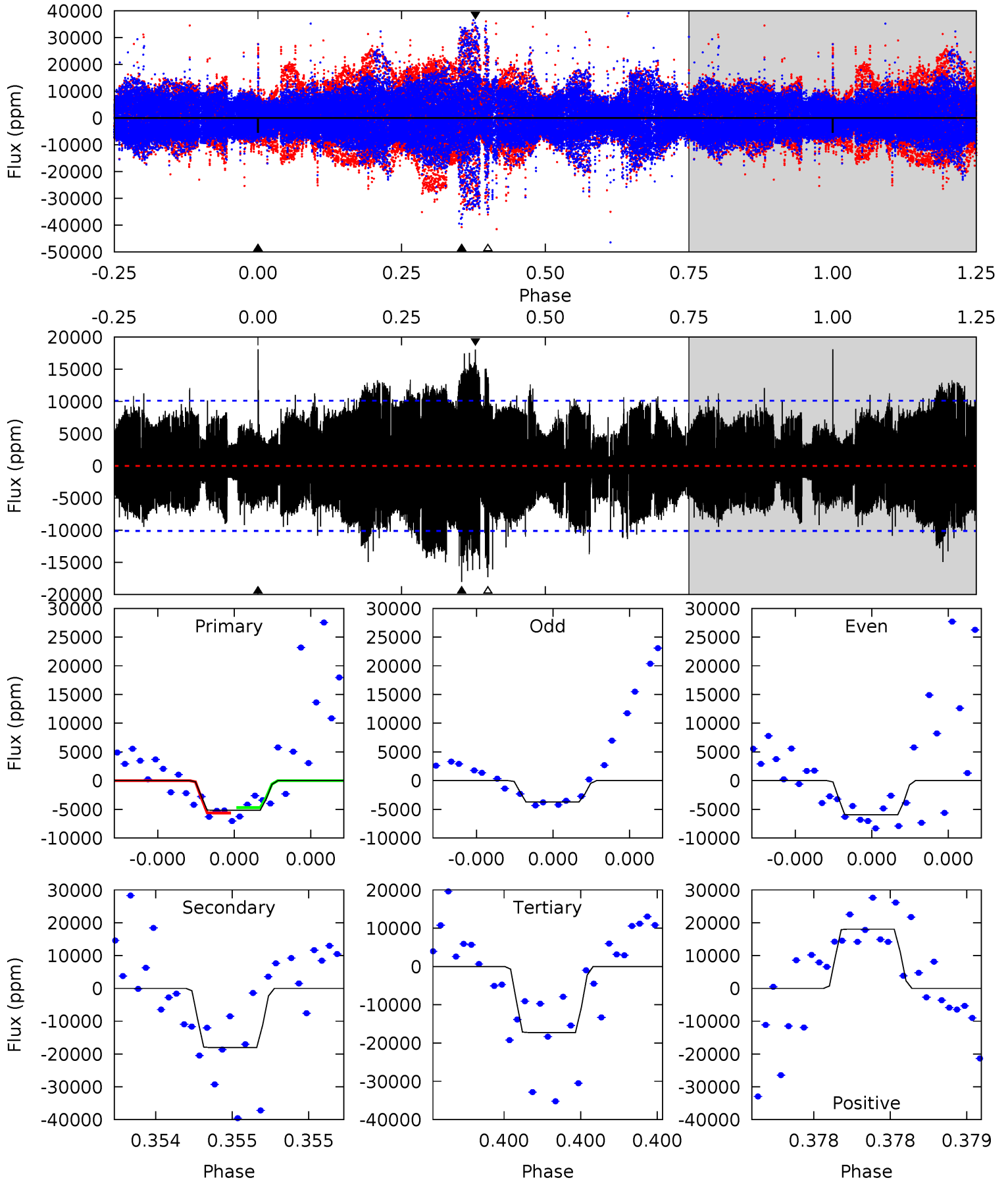
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.04	17.7	16.0	26.7	5.51	3.38	2.71	-11.0	-21.7	1.66	-9.03	2.49	0.76	0.60	3.59



# Alt Model-Shift Uniqueness Test

003546192-01, P = 598.853154 Days, E = 152.647899 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
2.92	10.2	9.74	10.2	5.71	3.69	3.05	-6.82	-7.26	0.44	-0.00	0.61	0.99	0.50	0.27





### Stellar Parameters For KIC 003546192

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5205^{+155}_{-155}$	$4.549^{+0.091}_{-0.056}$	$-0.460^{+0.300}_{-0.300}$	$0.733^{+0.083}_{-0.083}$	$0.694^{+0.094}_{-0.043}$	$2.481^{+0.917}_{-0.468}$
	+3%/-3%	+2%/-1%	+65%/-65%	+11%/-11%	+14%/-6%	+37%/-19%
Source	PHO1	KIC0	KIC0	DSEP		

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

### Secondary Eclipse Parameters for KIC 003546192-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-5713 \pm 323$	$4.60^{+0.70}_{-0.82}$	$246^{+10}_{-10}$	$5908^{+574}_{-437}$	$229588^{+112434}_{-58632}$
Alt.	$-18036 \pm 1771$	$5.24^{+0.80}_{-0.78}$	$245^{+10}_{-10}$	$7482^{+816}_{-644}$	$572739^{+207304}_{-153391}$

$T_{max}$  = 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

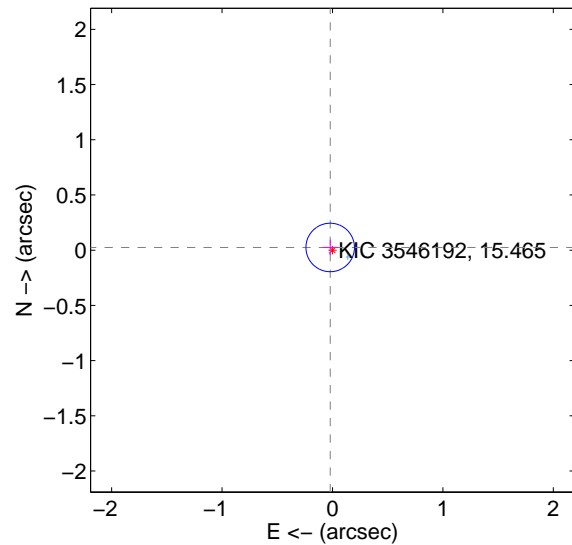
Supplemental centroid analysis for 003546192-01. Kepler magnitude: 15.46. Transit SNR 5.28

There are 3 quarters with good PRF difference image offsets

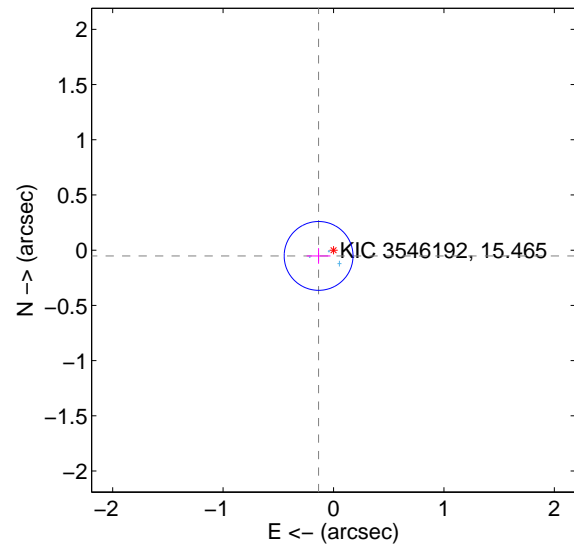
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.032 \pm 0.073$	0.44	$0.021 \pm 0.072$	$0.025 \pm 0.071$
PRF-fit source offset from KIC position	$0.145 \pm 0.104$	1.39	$0.135 \pm 0.108$	$-0.052 \pm 0.071$
photometric centroid source offset	$0.45 \pm 0.46$	0.98	$-0.33 \pm 0.45$	$-0.31 \pm 0.46$

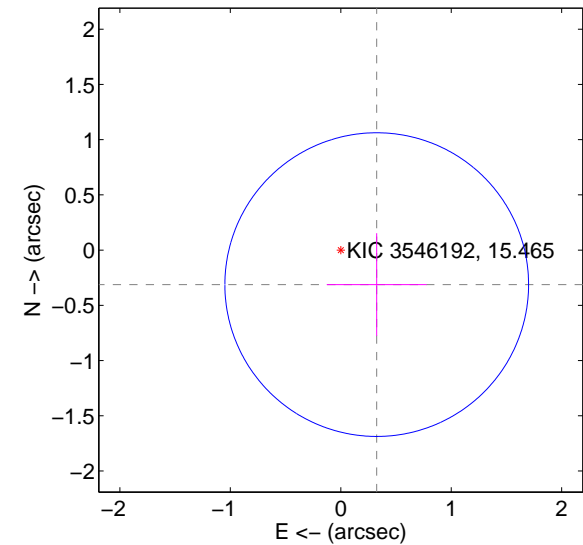
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

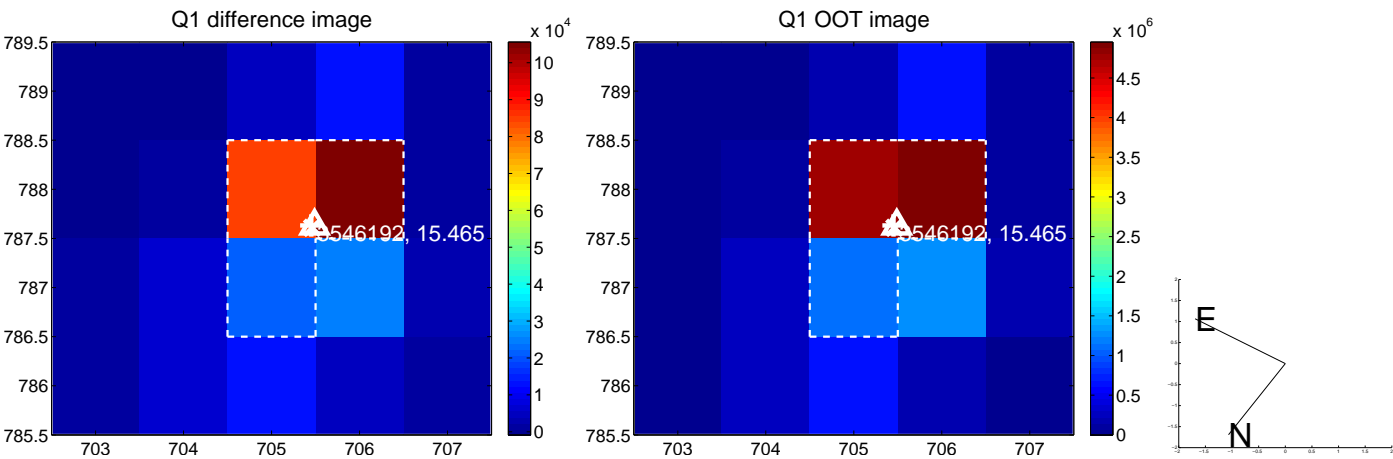


offset from photometric centroids

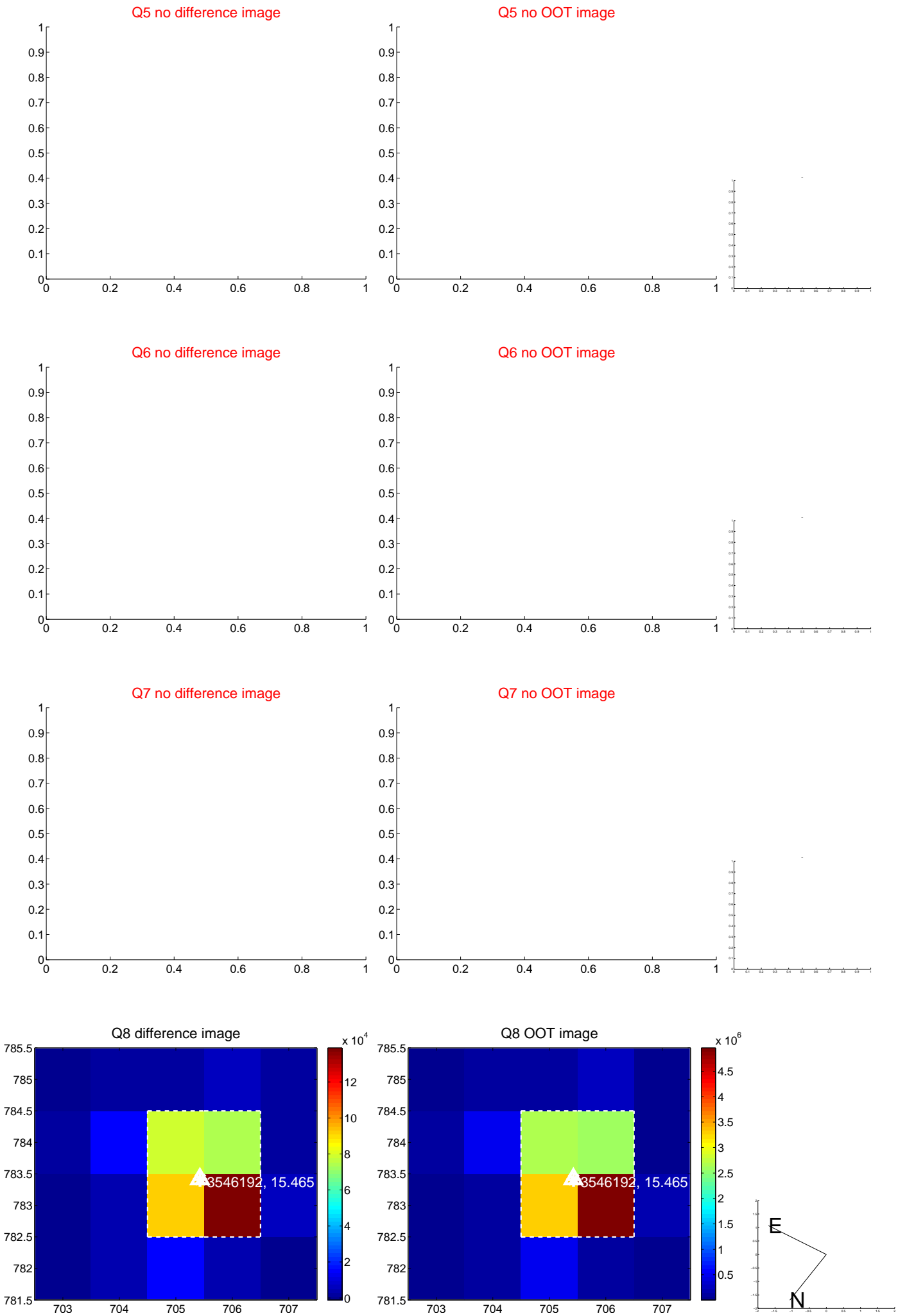


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

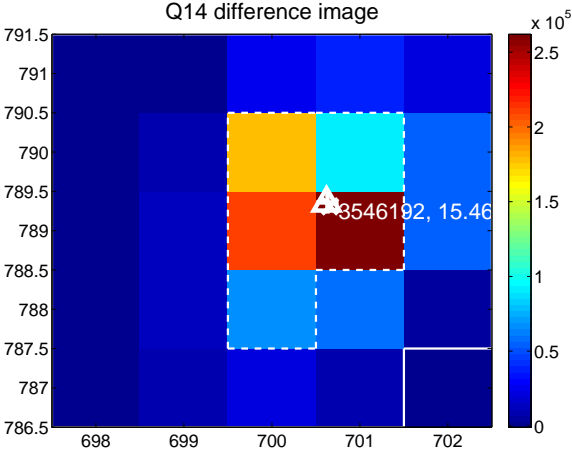
Q13 no difference image



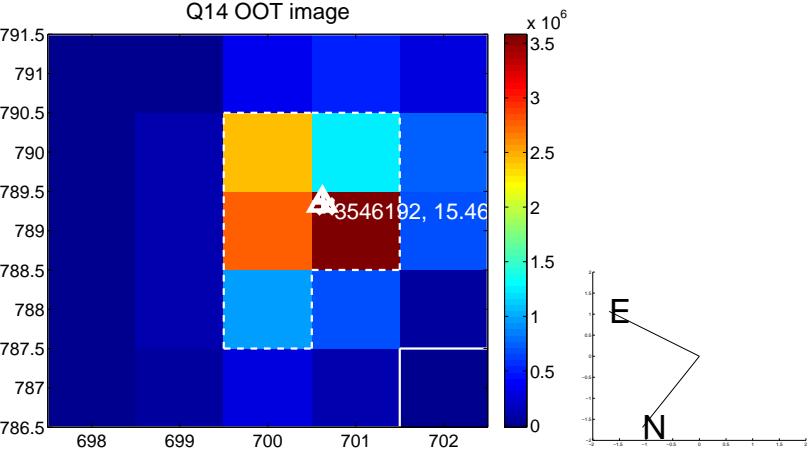
Q13 no OOT image



Q14 difference image



Q14 OOT image



Q15 no difference image



Q15 no OOT image



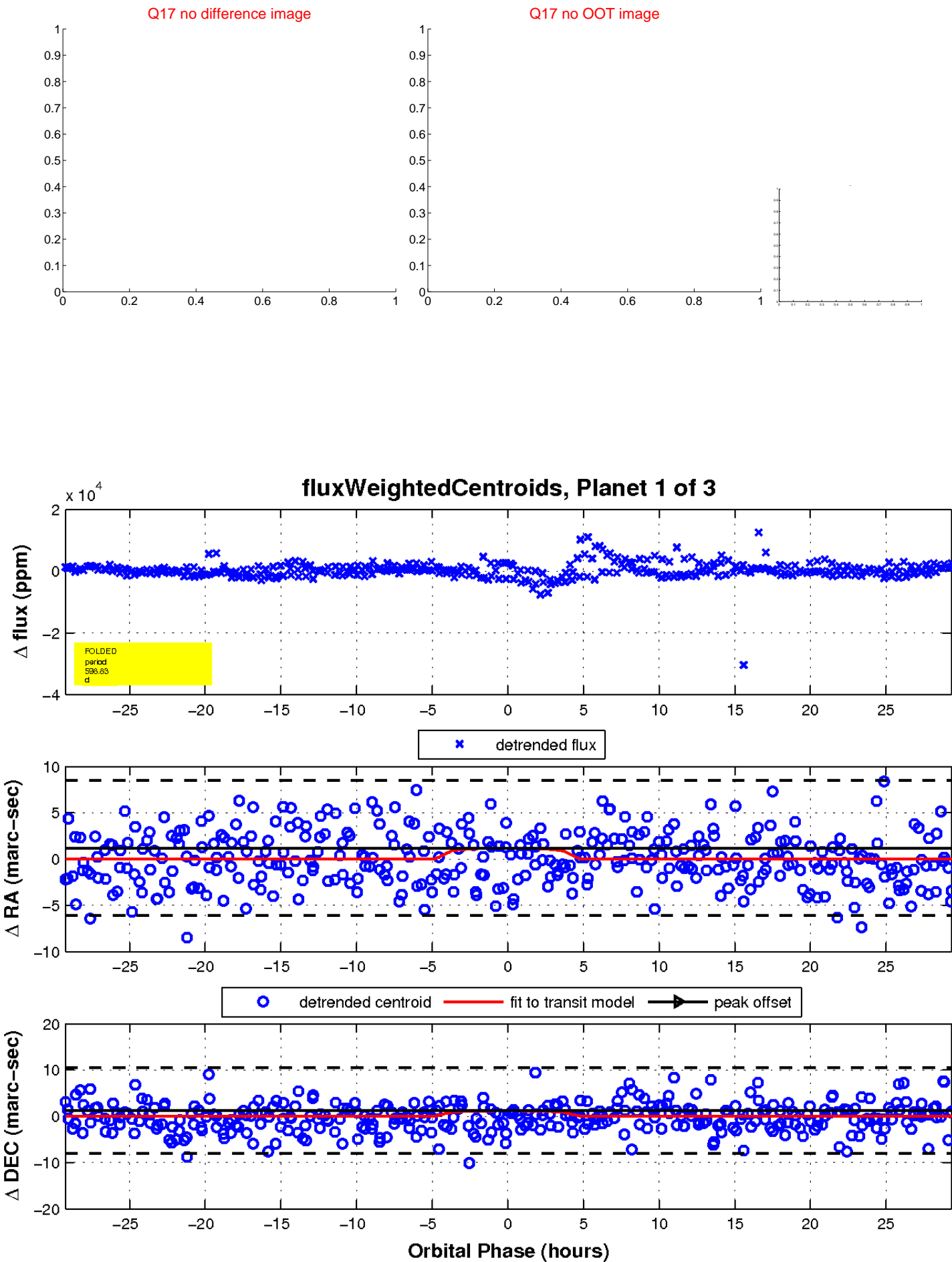
Q16 no difference image



Q16 no OOT image

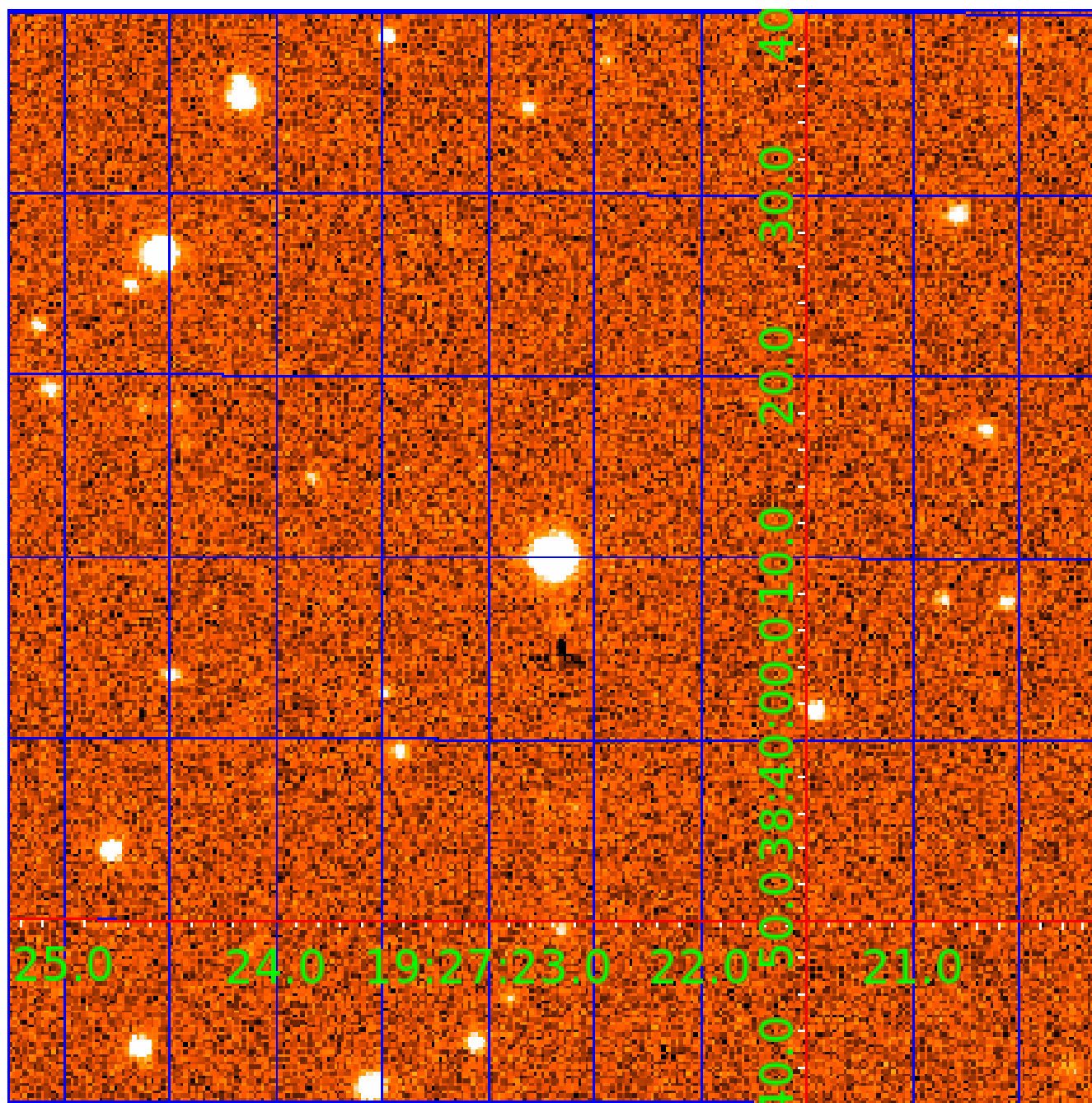


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination





# KIC 003546192

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
003546192-01	OBS	No	598.834520	152.775984	3229.8	9.837	11.4	5.3	0.73	5205	4.61	0.23
003546192-02	OBS	No	0.877084	131.994527	1320.4	3.000	9.5	-1.0	0.73	5205	2.62	1401.50
003546192-03	OBS	No	0.874482	132.334618	307.5	3.540	8.4	8.9	0.73	5205	1.32	1407.06

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003546192-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
003546192-02	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_NOFITS
003546192-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—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.

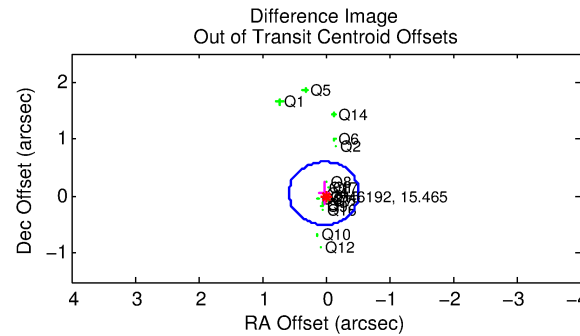
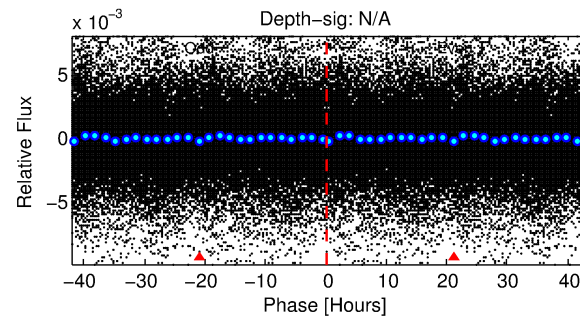
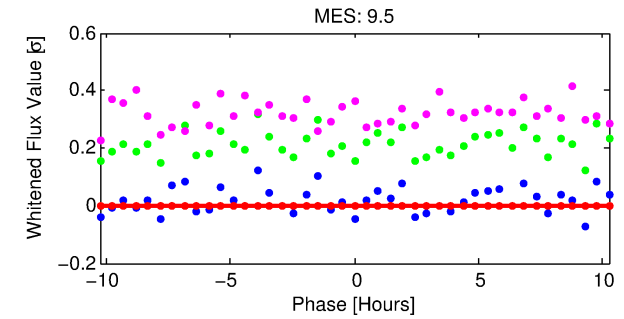
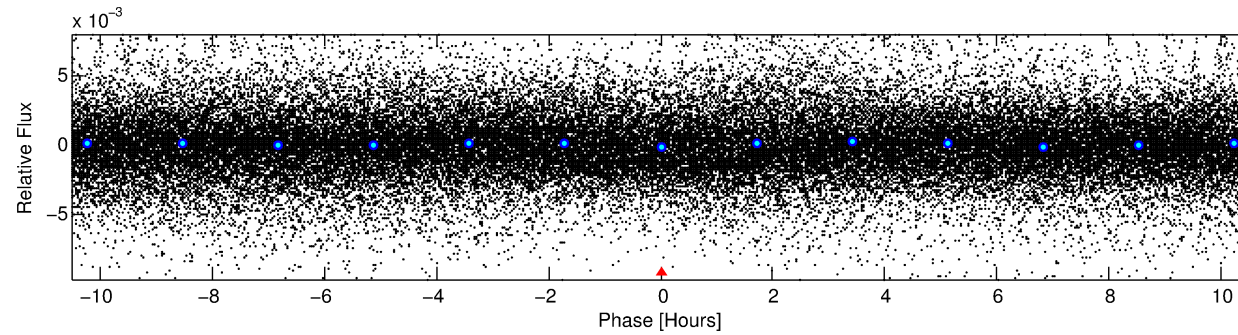
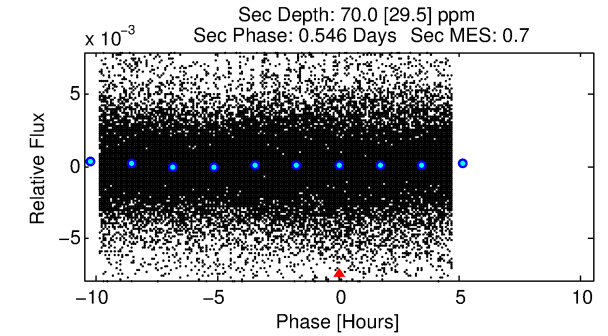
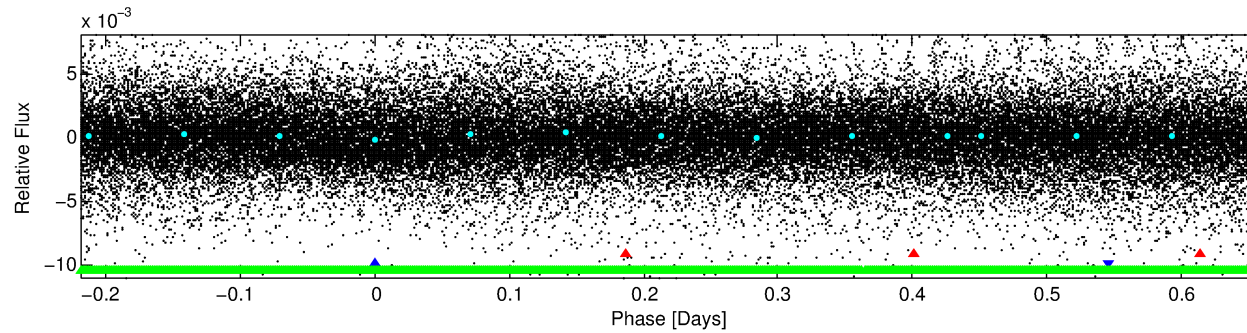
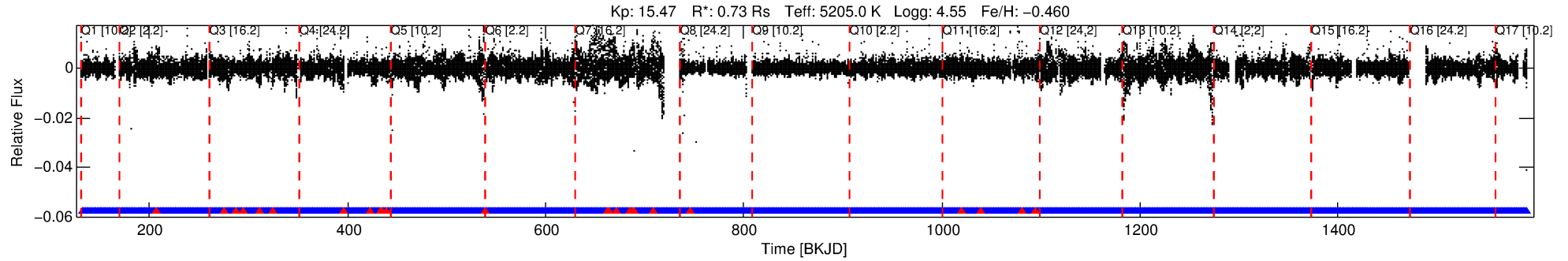
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 003546192-02

No Significant Match Found

# DV One-Page Summary

KIC: 3546192 Candidate: 2 of 3 Period: 0.877 d



## TPS TCE Results:

Period = 0.87708 d  
Epoch = 131.9945 BKJD

DV fit results are unavailable

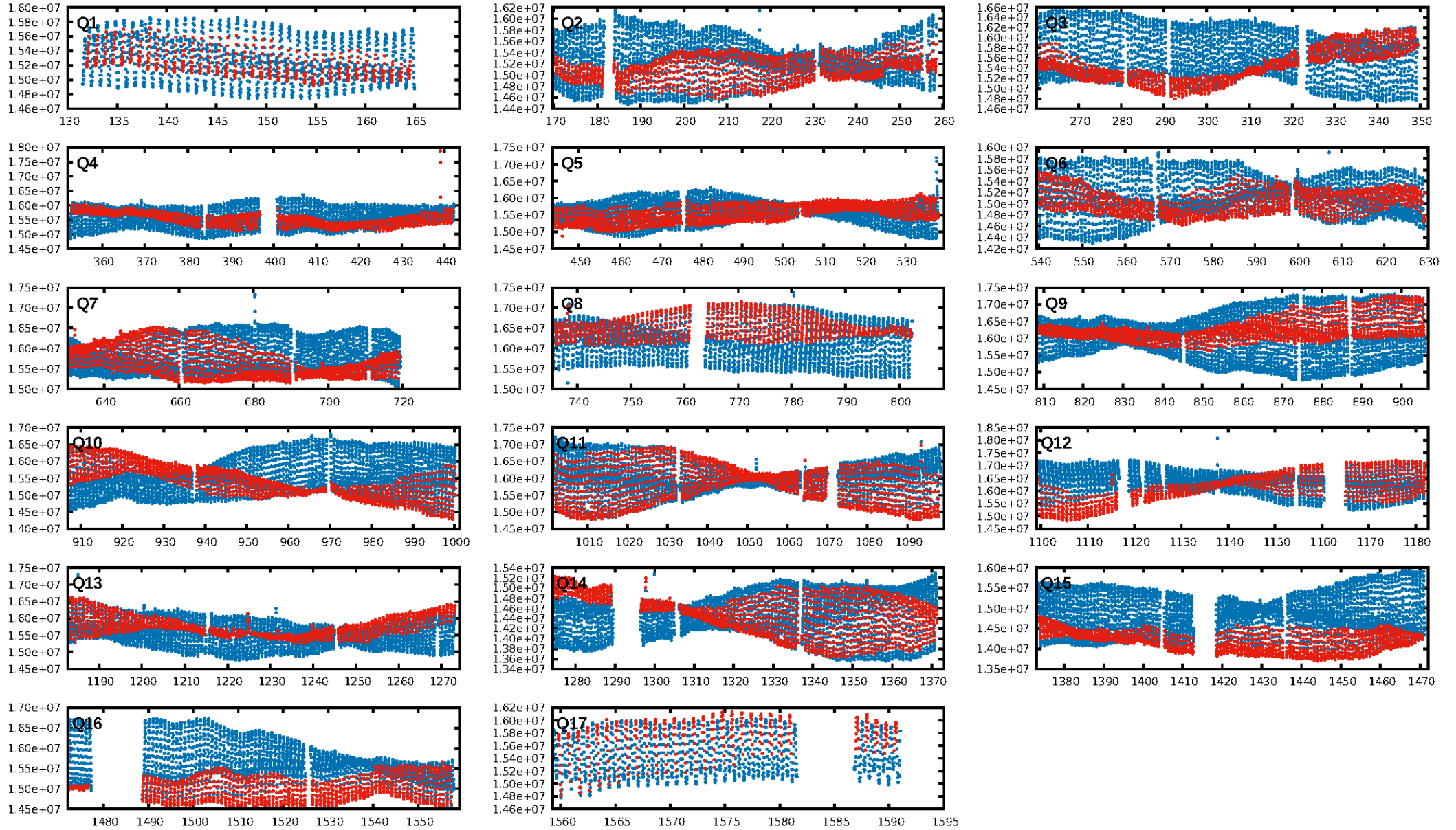
## DV Diagnostic Results:

ShortPeriod-sig: 1.1% [0.01σ]  
LongPeriod-sig: 100.0% [1395.40σ]  
ModelChiSquare2-sig: N/A  
ModelChiSquareGoF-sig: N/A  
Bootstrap-pfa: 6.38e-17  
RollingBand-fgt: 0.98 [1448/1472]  
GhostDiagnostic-chr: 0.3215  
Centroid-sig: 85.3%  
Centroid-so: 0.047 arcsec [0.76σ]  
OotOffset-rm: 0.059 arcsec [0.32σ]  
KicOffset-rm: 0.169 arcsec [1.08σ]  
OotOffset-st: 4/4/4/5 [17]  
KicOffset-st: 4/4/4/5 [17]  
DiffImageQuality-fgm: 0.71 [12/17]  
DiffImageOverlap-fno: 0.00 [0/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 00:47:48 Z

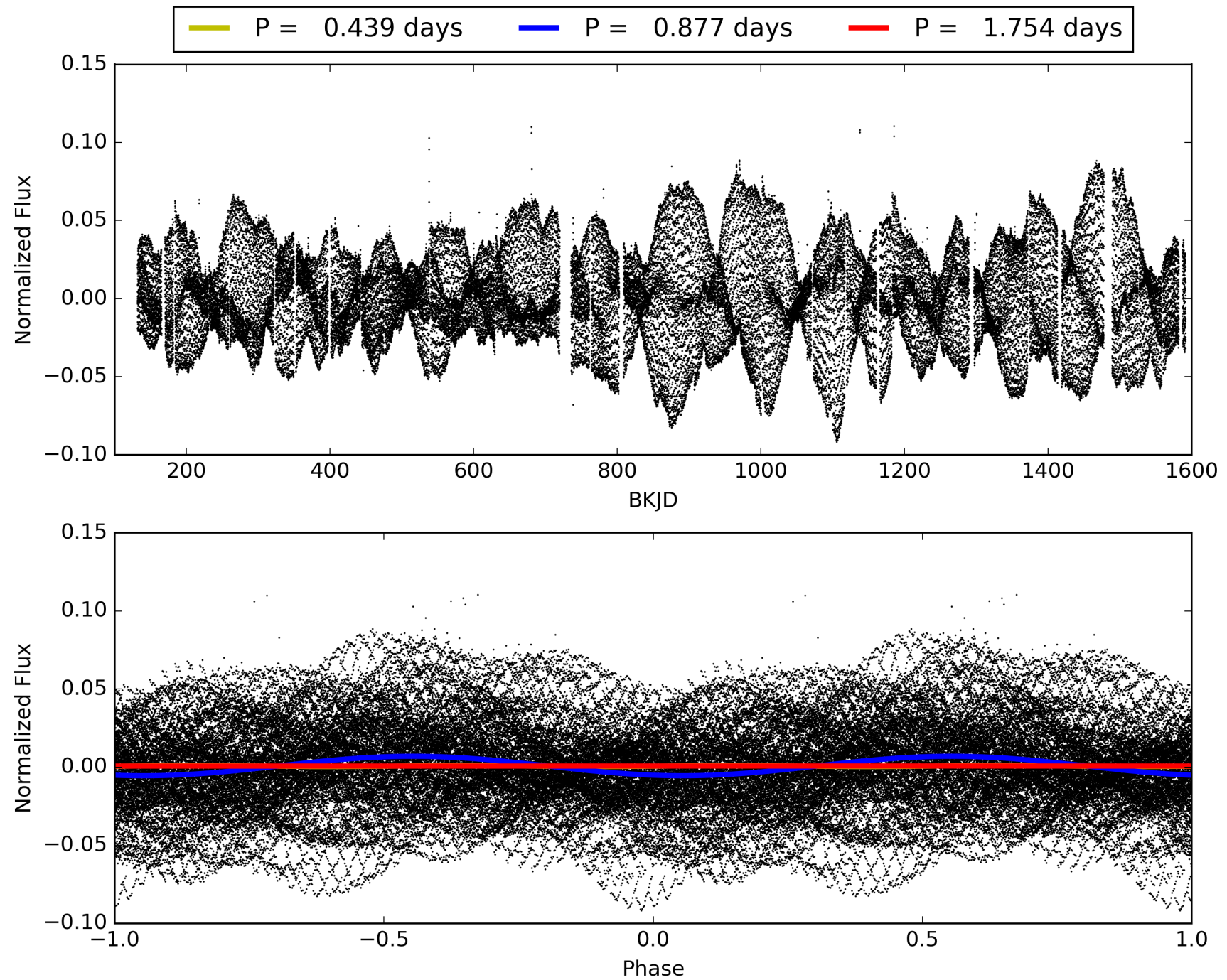
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 003546192-02, PDC Light Curves



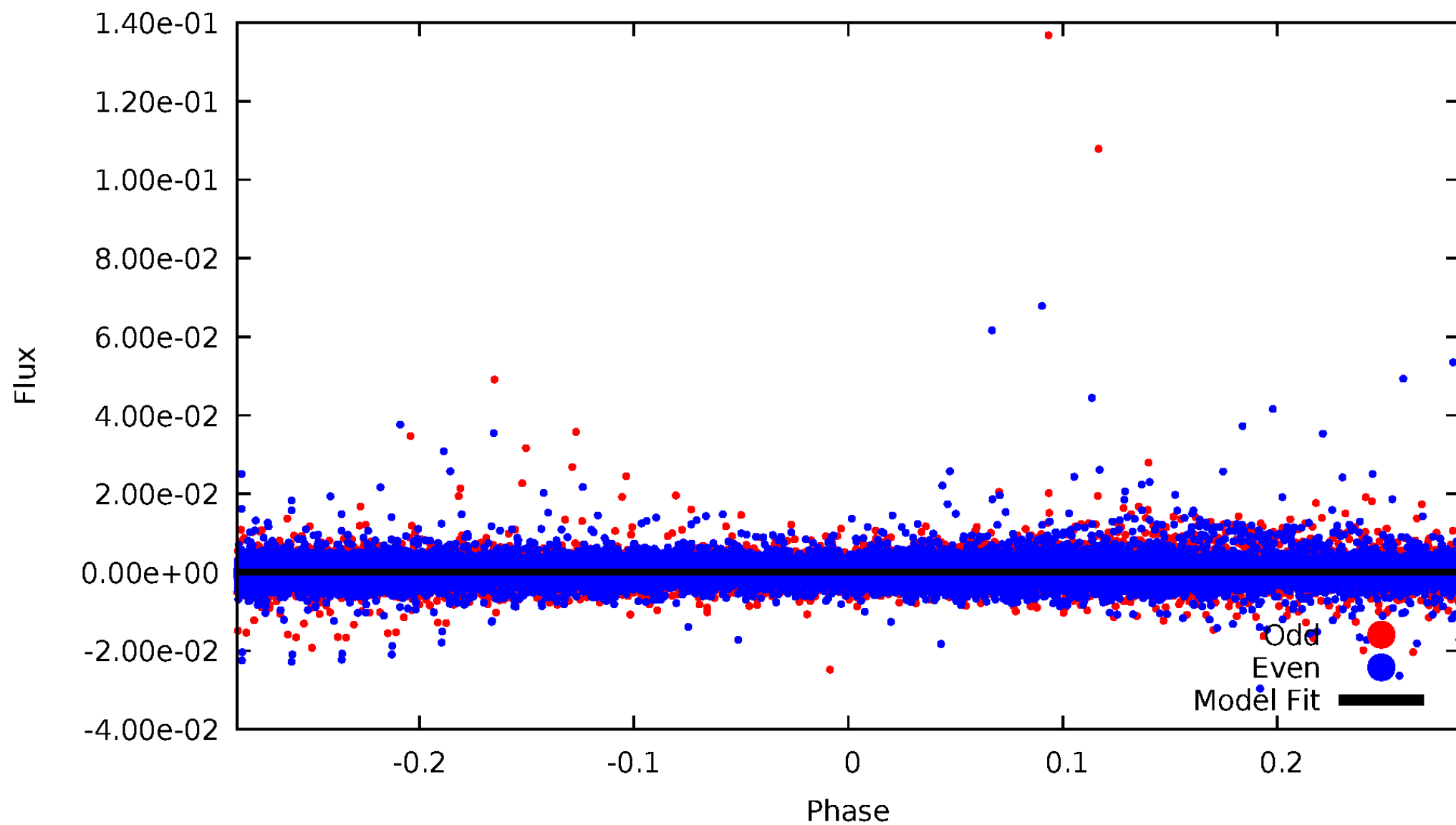


TCE 003546192-02



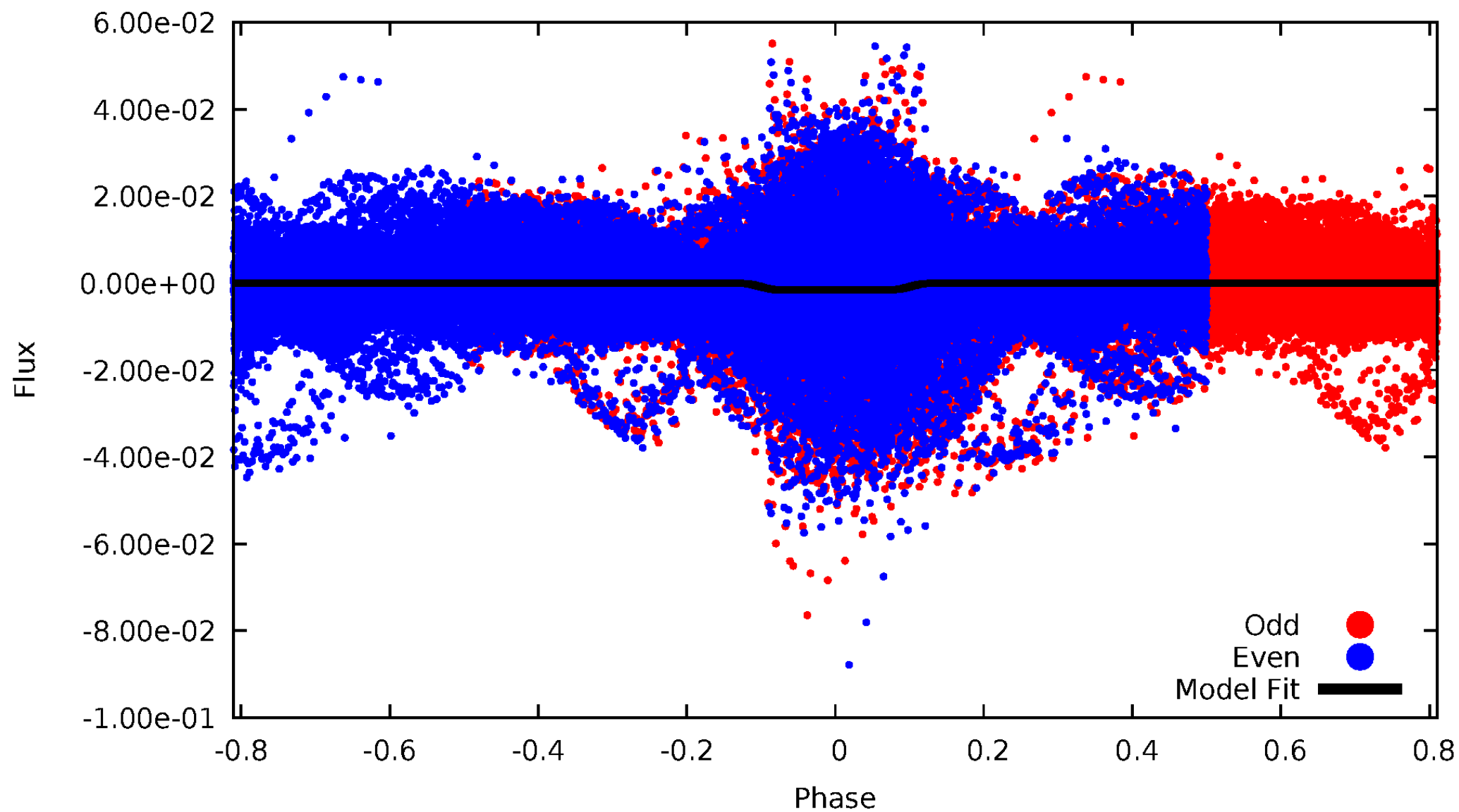
# DV Odd/Even

TCE 003546192-02



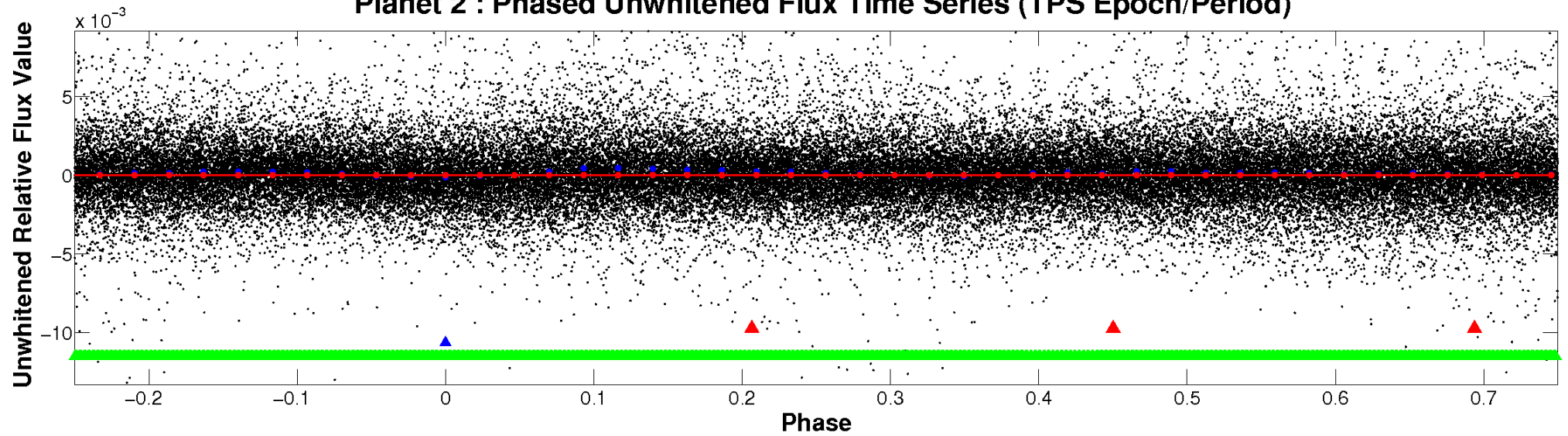
# ALT Odd/Even

TCE 003546192-02

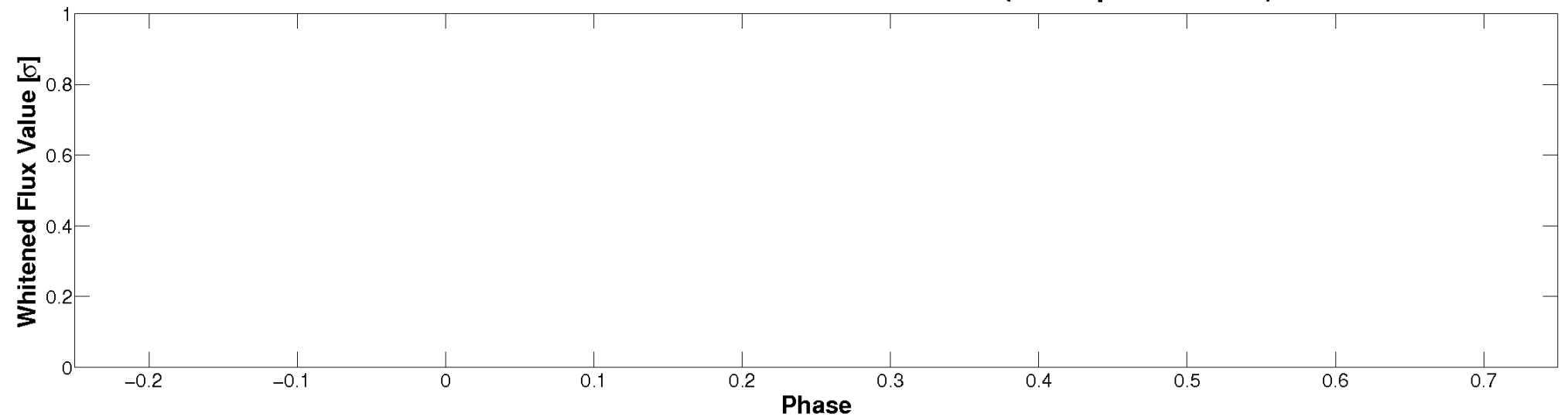


# Non-Whitened Vs. Whitened Light Curve

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



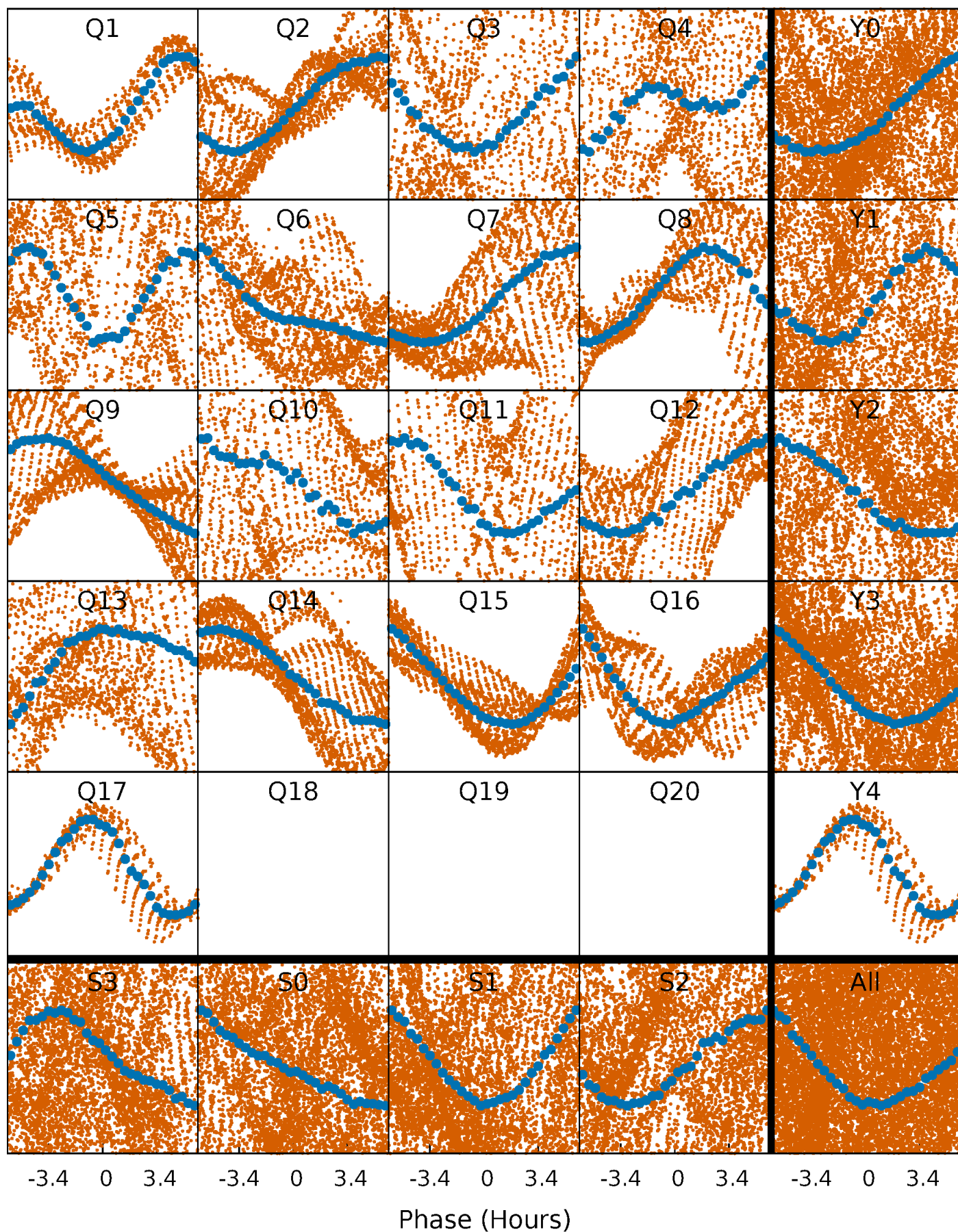
**Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)**





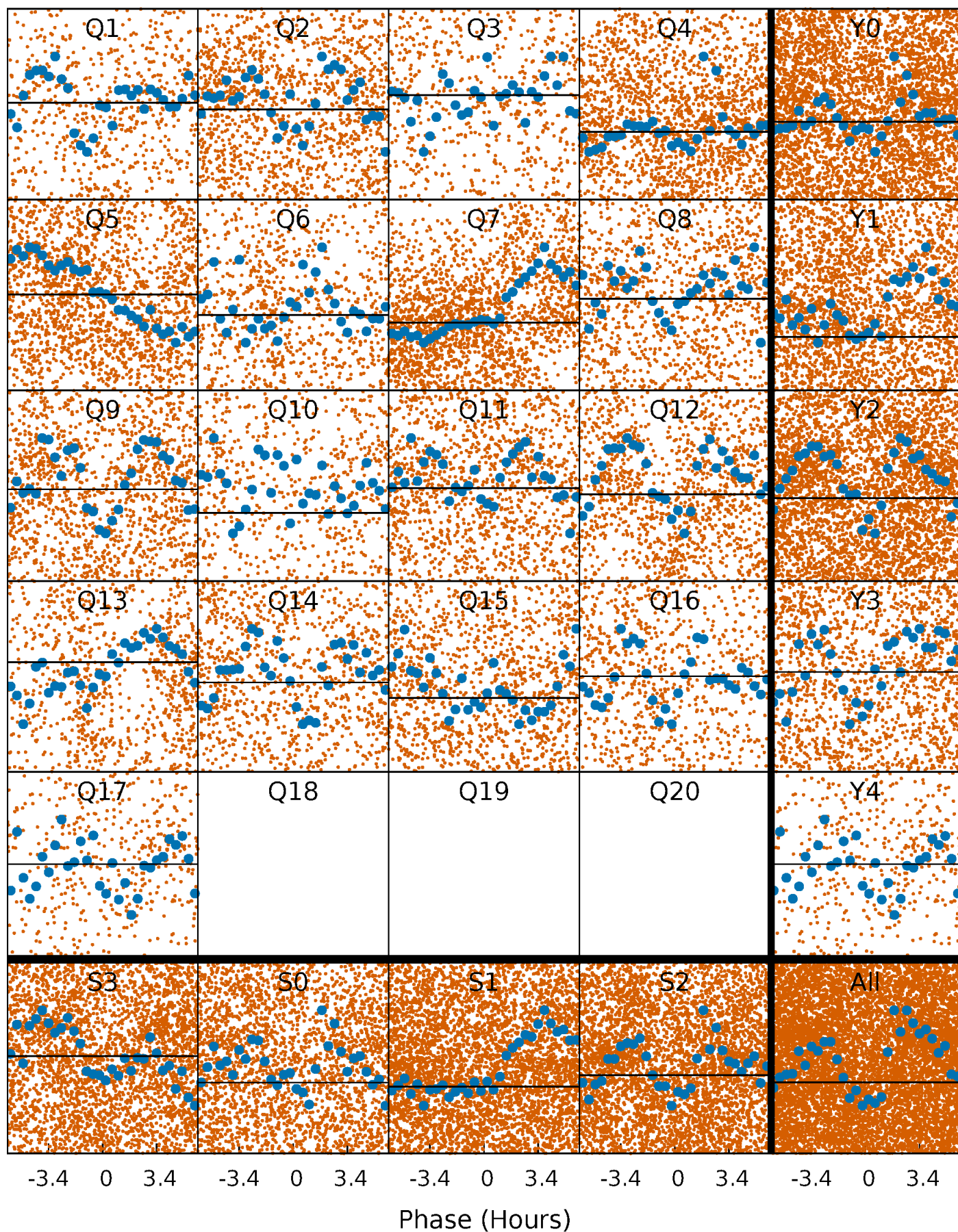
# PDC Quarter-Phased Transit Curves

TCE 003546192-02   P= 0.877084 Days    $T_0=131.994527$  (BKJD)



# DV Quarter-Phased Transit Curves

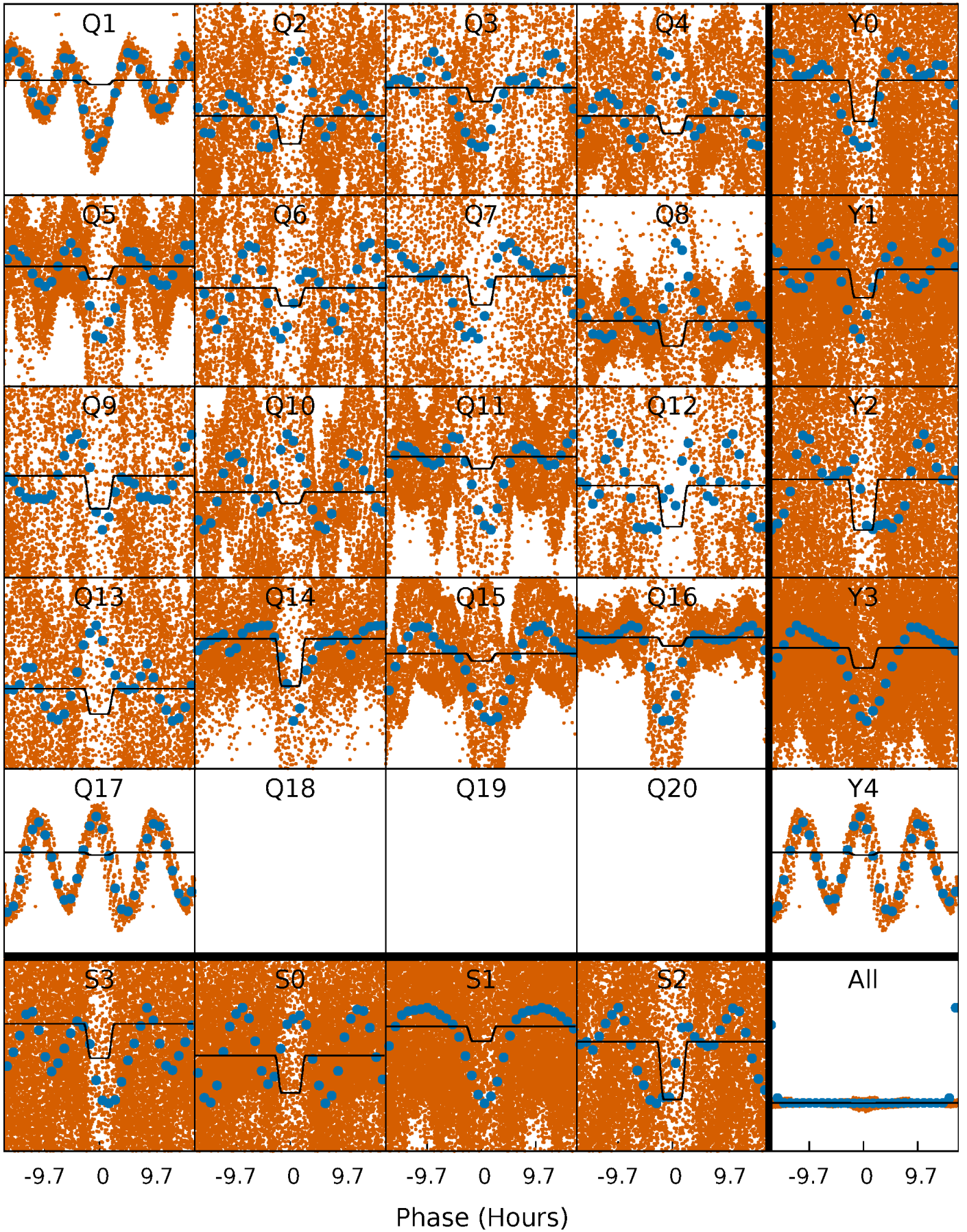
TCE 003546192-02   P= 0.877084 Days    $T_0=131.994527$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

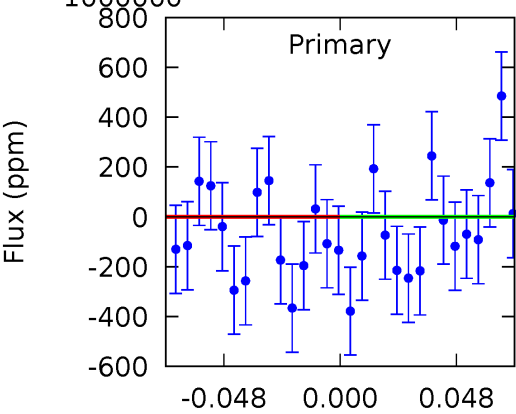
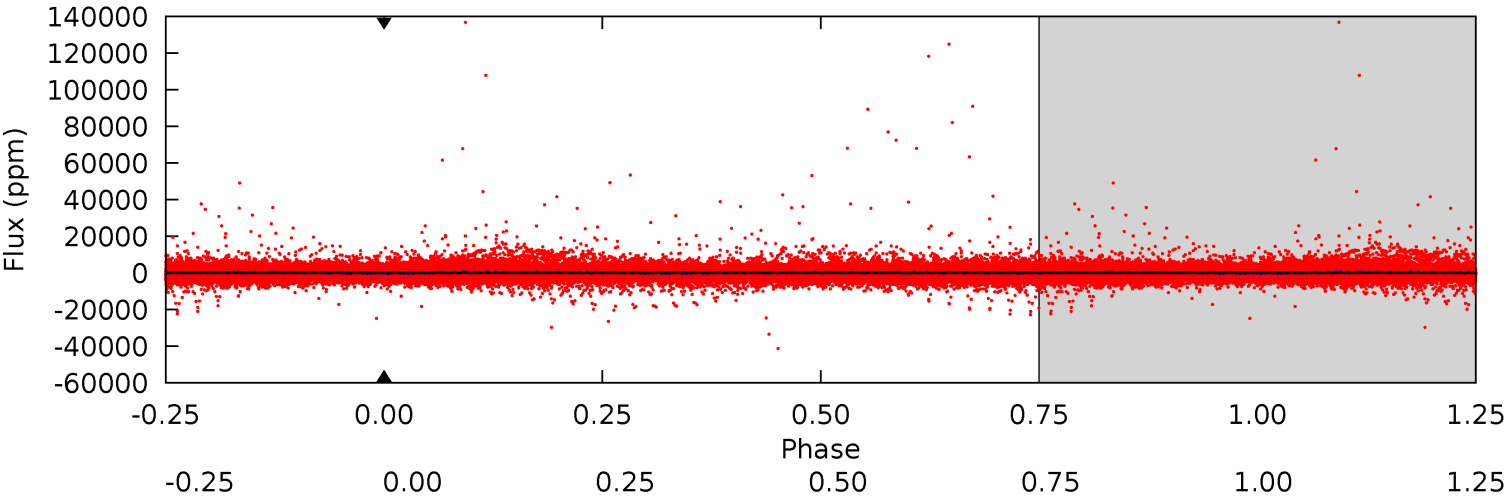
TCE 003546192-02   P= 0.877084 Days    $T_0=131.989062$  (BKJD)



DV Model-Shift Uniqueness Test

003546192-02, P = 0.877084 Days, E = 131.117443 Days

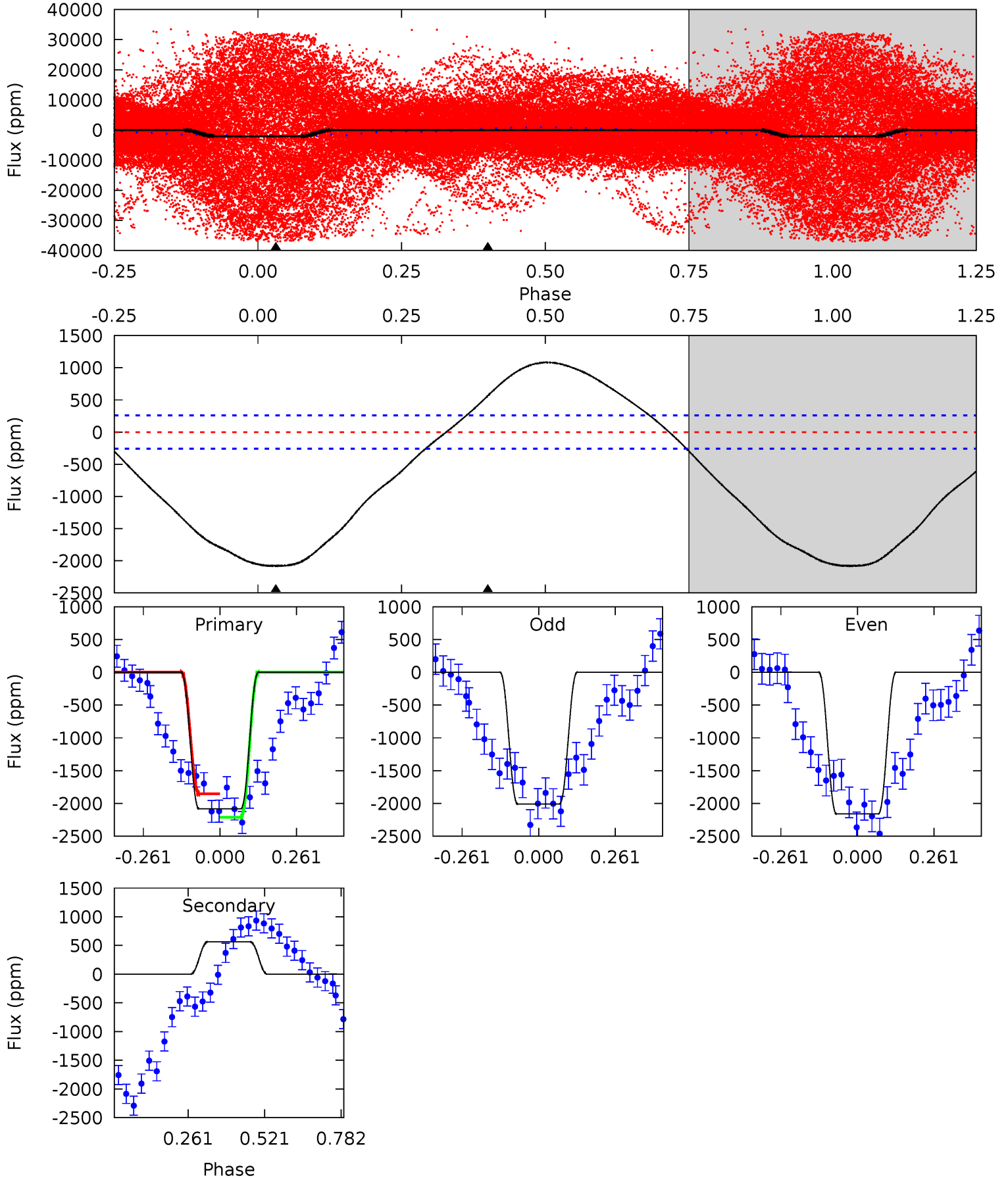
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



# Alt Model-Shift Uniqueness Test

003546192-02, P = 0.877084 Days, E = 131.111978 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
35.0	-9.52	0	0	4.36	1.13	4.34	35.0	35.0	-9.52	-9.52	1.29	1.03	0.34	3.38



### Stellar Parameters For KIC 003546192

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$5205^{+155}_{-155}$	$4.549^{+0.091}_{-0.056}$	$-0.460^{+0.300}_{-0.300}$	$0.733^{+0.083}_{-0.083}$	$0.694^{+0.094}_{-0.043}$	$2.481^{+0.917}_{-0.468}$
	+3%/-3%	+2%/-1%	+65%/-65%	+11%/-11%	+14%/-6%	+37%/-19%
Source	PHO1	KIC0	KIC0	DSEP		

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

### Secondary Eclipse Parameters for KIC 003546192-02 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$0 \pm 1000000$	$6.38^{+6.47}_{-4.38}$	$2165^{+86}_{-92}$	$3899^{+10510}_{-18729}$	$5.168^{+525.159}_{-579.751}$
Alt.	$565 \pm 59$	$6.37^{+6.76}_{-4.23}$	$2163^{+92}_{-90}$	$-3414^{+509}_{-1590}$	$-1.955^{+1.491}_{-15.798}$

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

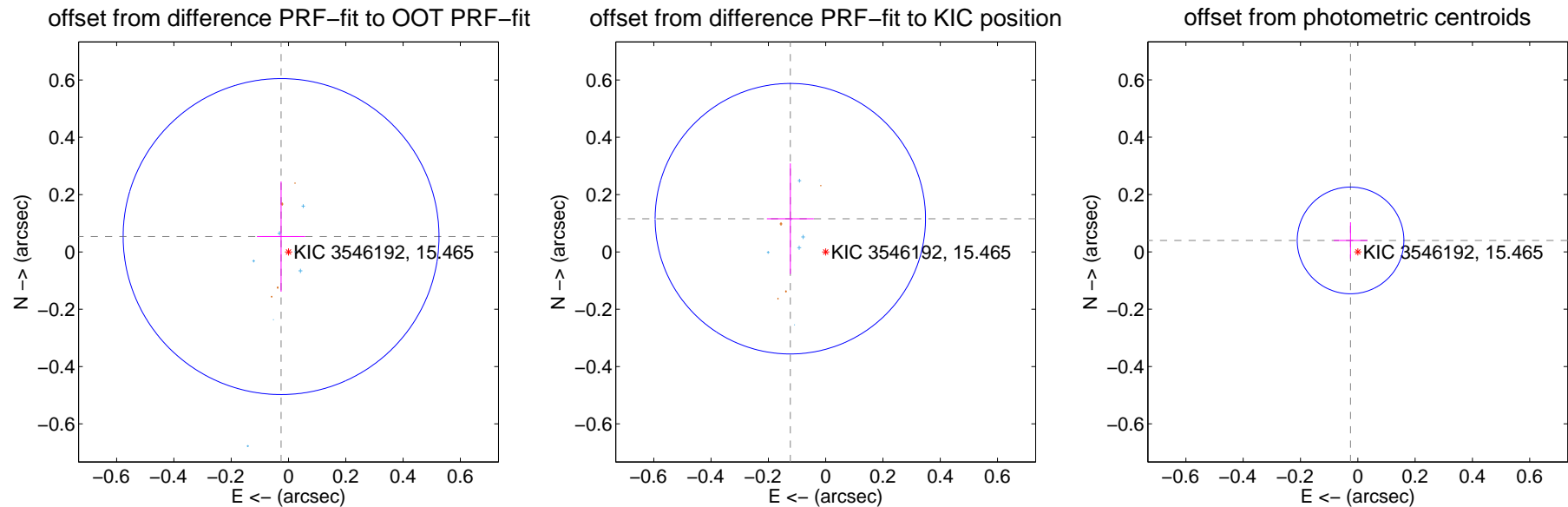
## DV Centroid Data

Supplemental centroid analysis for 003546192-02. Kepler magnitude: 15.46. Transit SNR -1.00

There are 12 quarters with good PRF difference image offsets

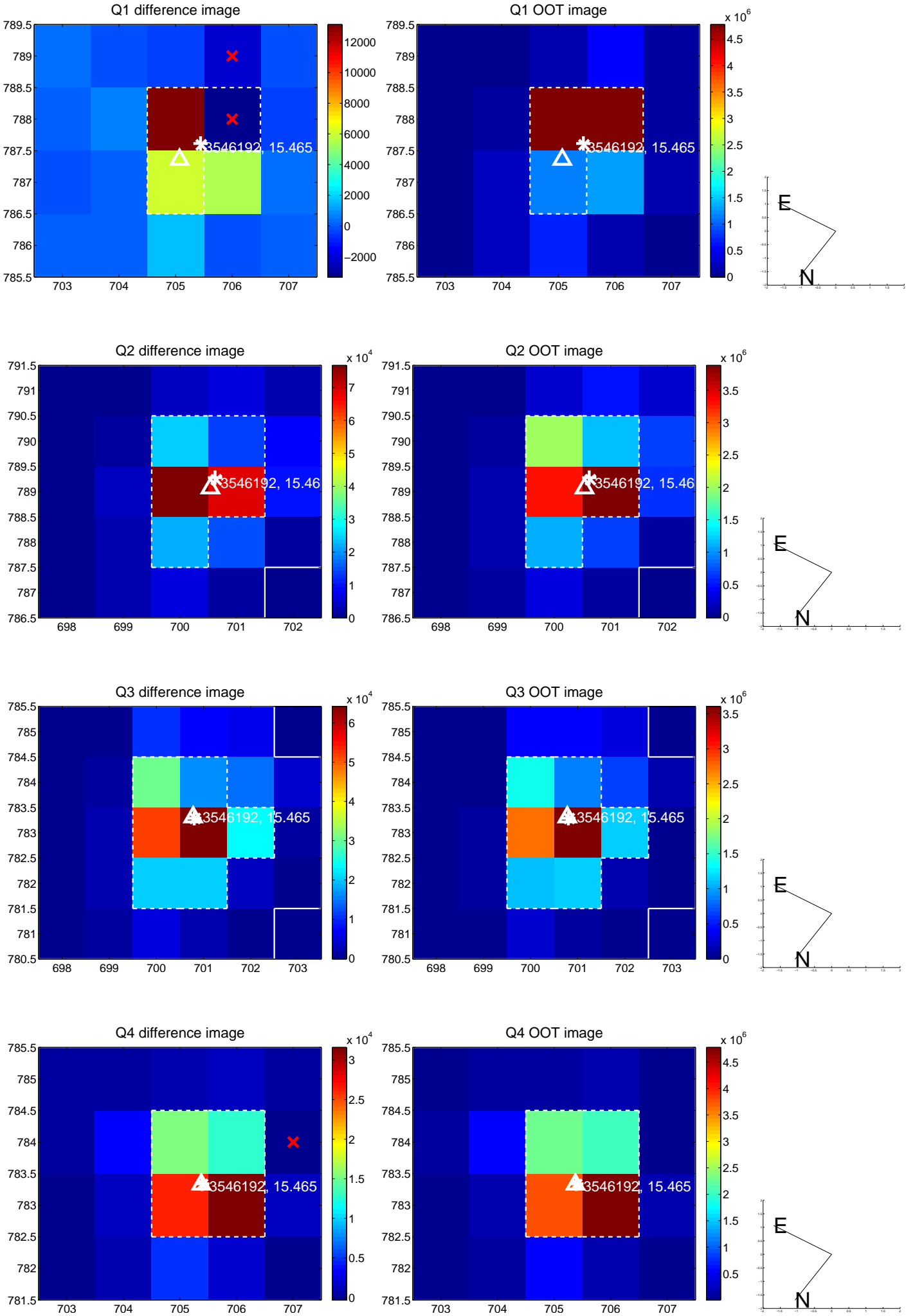
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.059 \pm 0.184$	0.32	$0.026 \pm 0.084$	$0.054 \pm 0.192$
PRF-fit source offset from KIC position	$0.169 \pm 0.157$	1.08	$0.123 \pm 0.082$	$0.116 \pm 0.193$
photometric centroid source offset	$0.05 \pm 0.06$	0.76	$0.03 \pm 0.06$	$0.04 \pm 0.06$



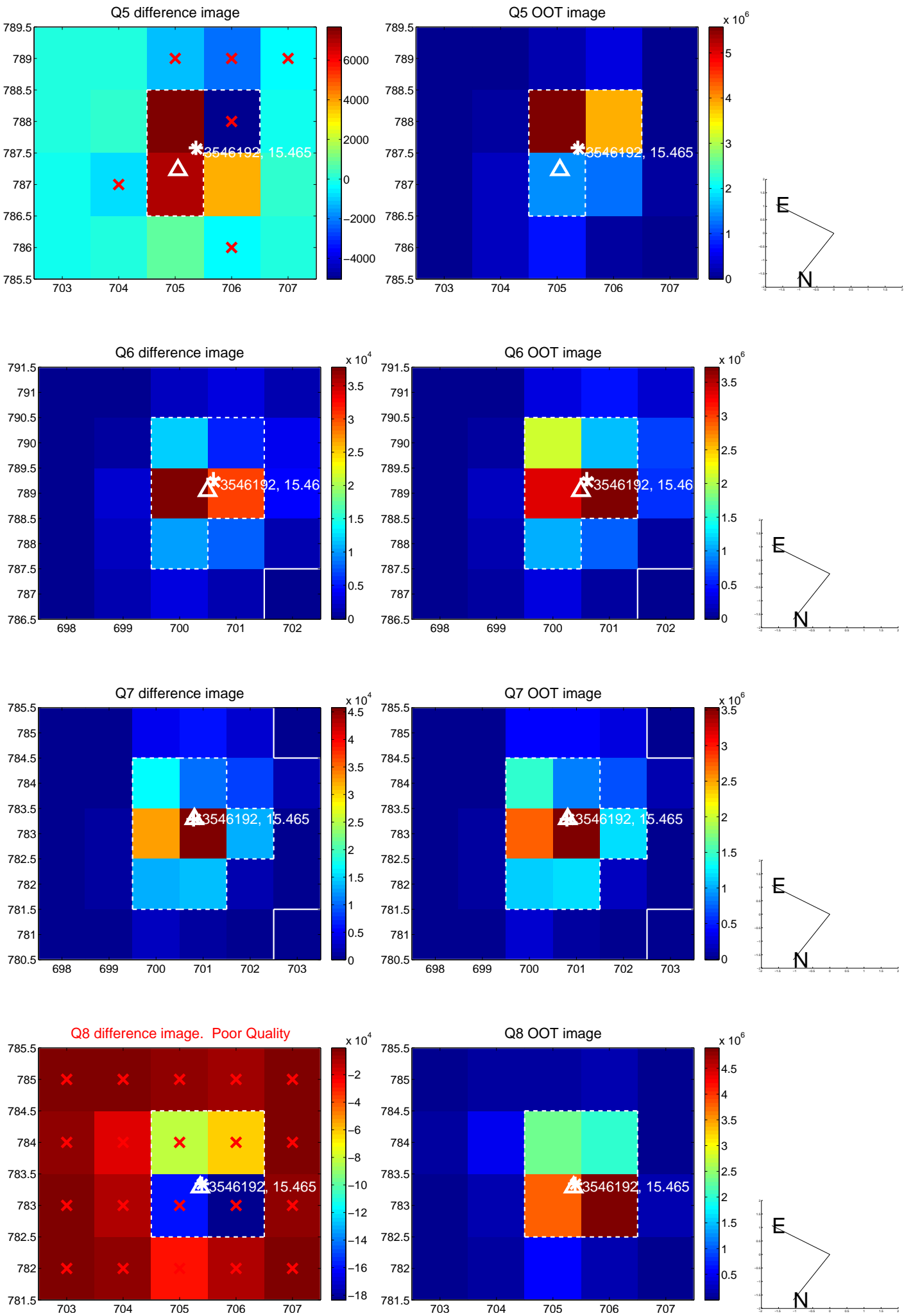
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

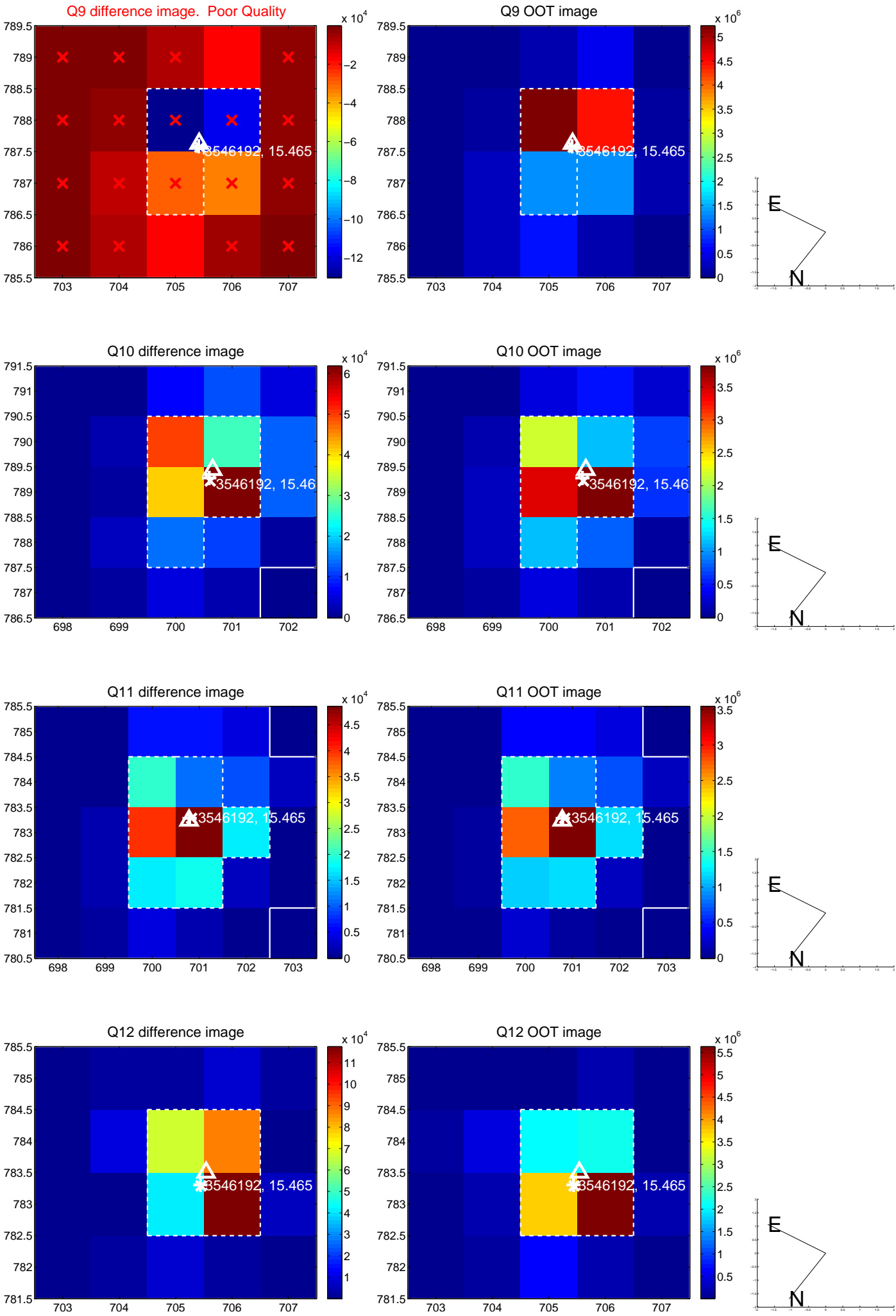




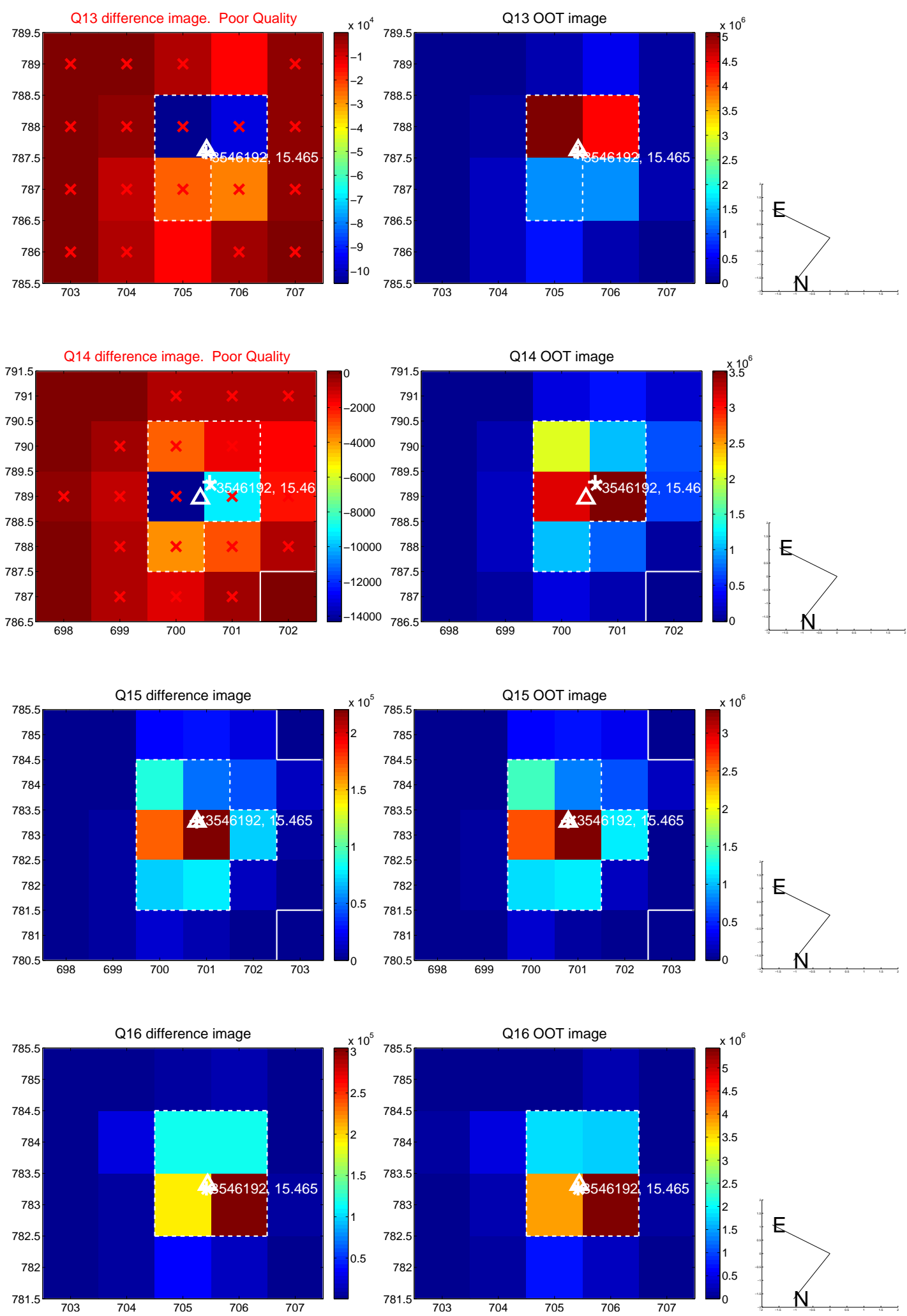
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



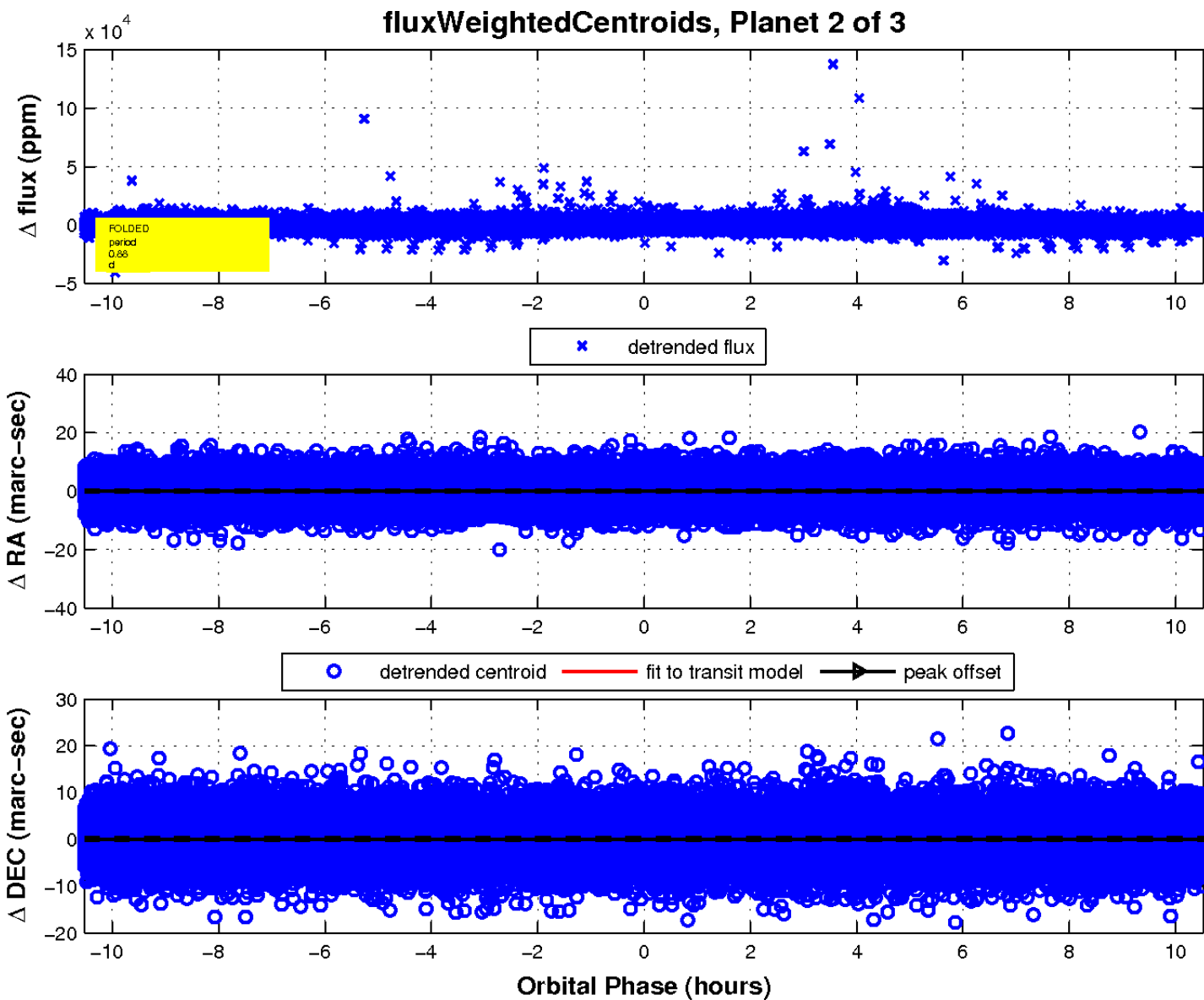
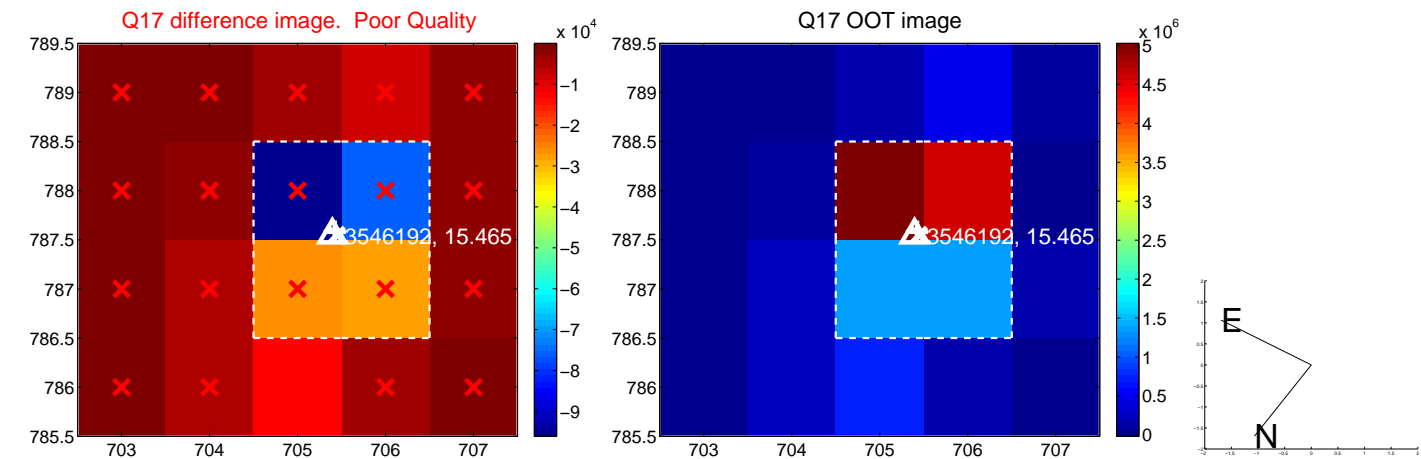
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

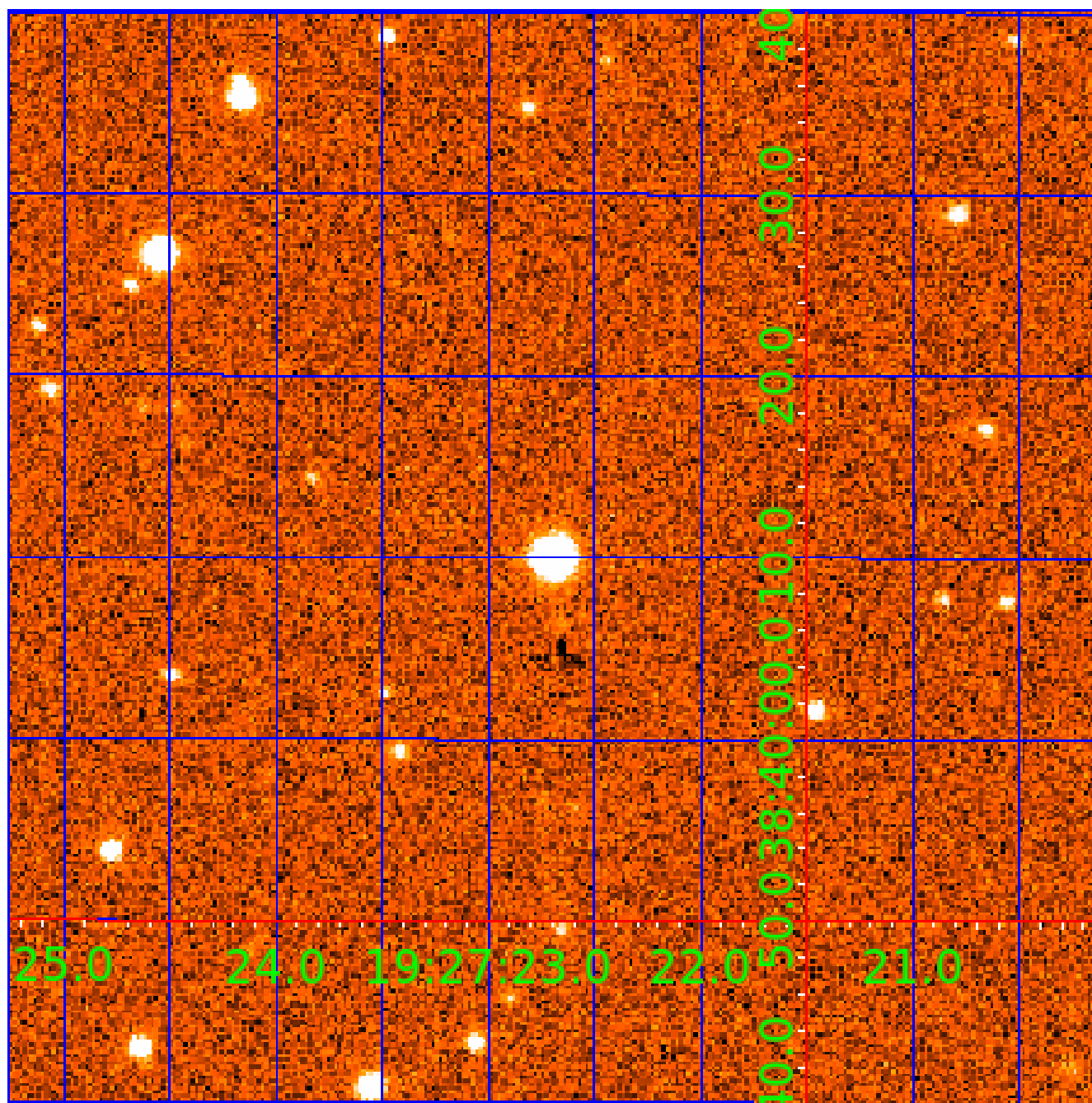


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination



# KIC 003546192

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
003546192-01	OBS	No	598.834520	152.775984	3229.8	9.837	11.4	5.3	0.73	5205	4.61	0.23
003546192-02	OBS	No	0.877084	131.994527	1320.4	3.000	9.5	-1.0	0.73	5205	2.62	1401.50
003546192-03	OBS	No	0.874482	132.334618	307.5	3.540	8.4	8.9	0.73	5205	1.32	1407.06

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003546192-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
003546192-02	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_NOFITS
003546192-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—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.

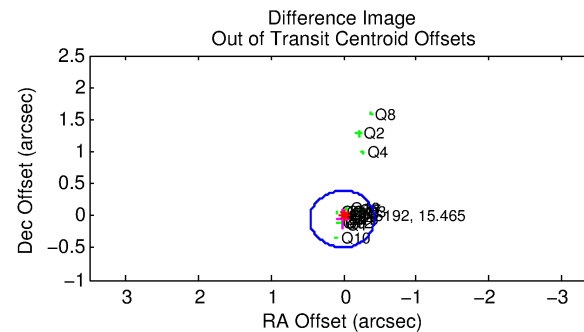
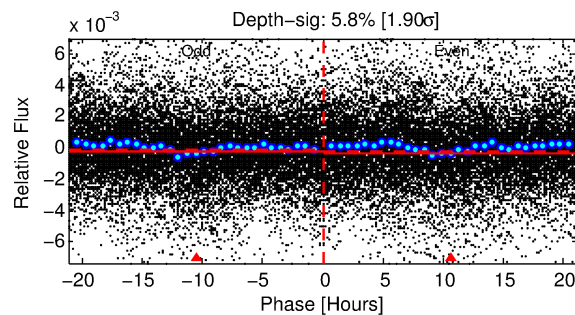
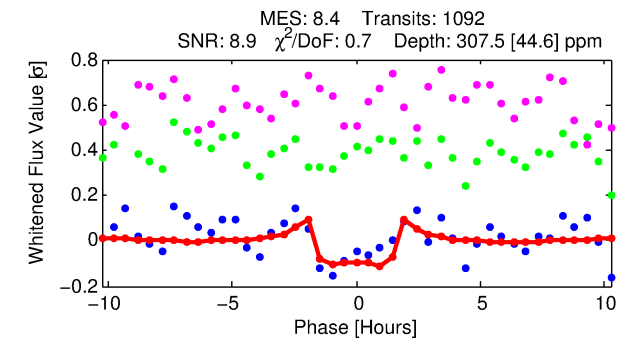
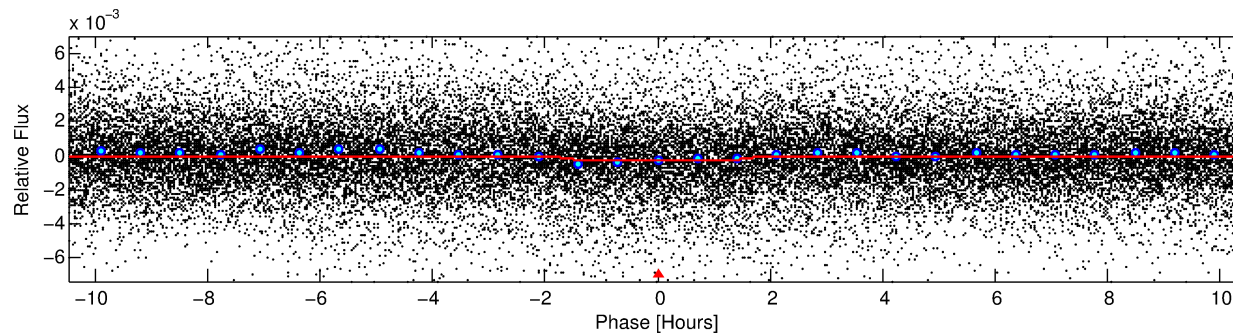
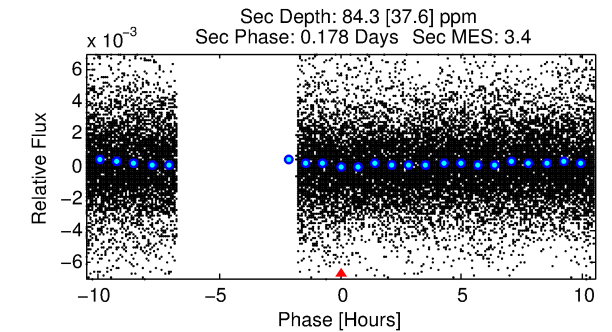
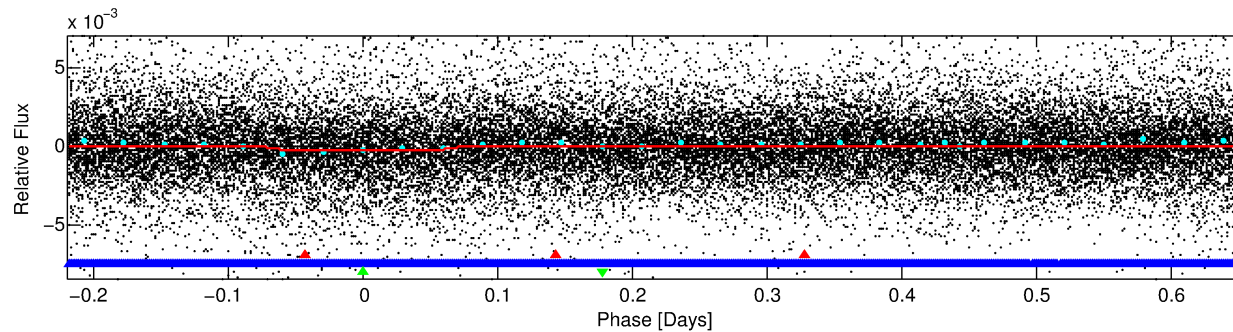
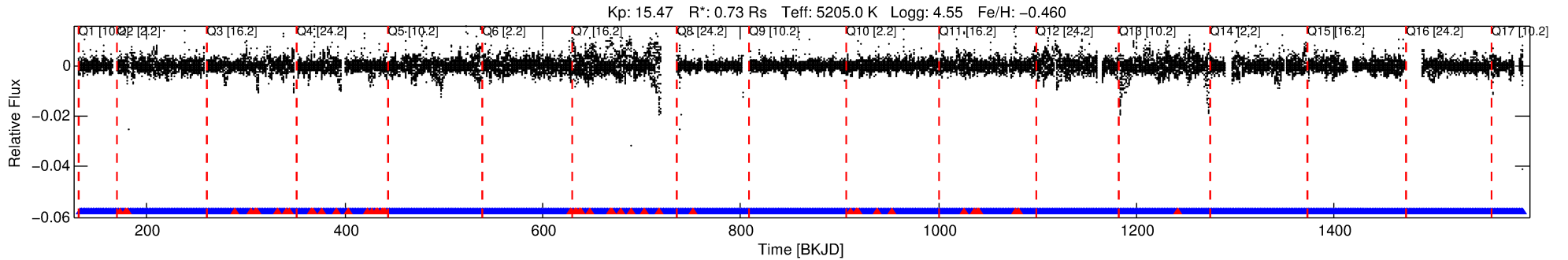
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 003546192-03

No Significant Match Found

# DV One-Page Summary

KIC: 3546192 Candidate: 3 of 3 Period: 0.874 d



## DV Fit Results:

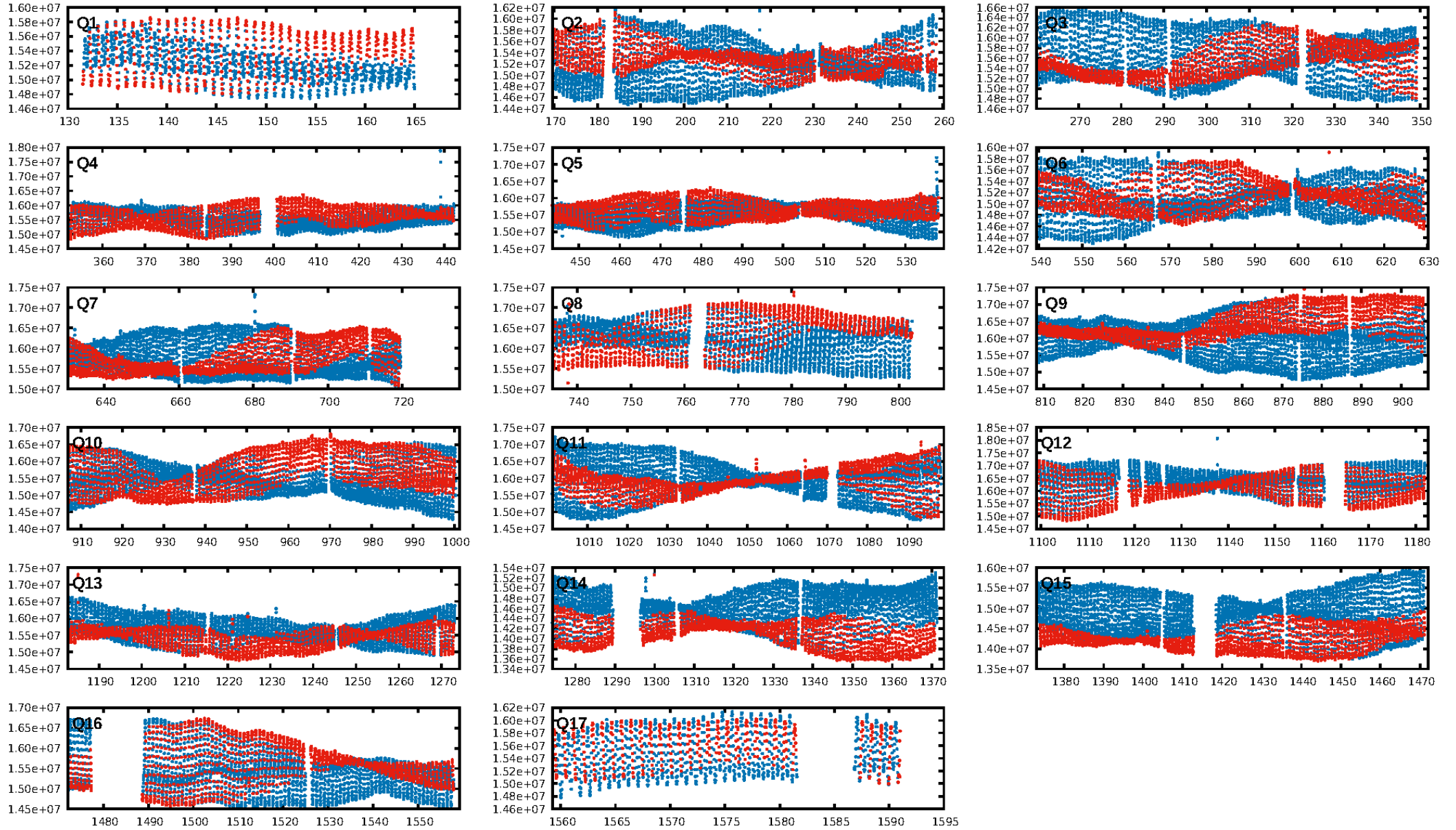
Period = 0.87448 [0.00001] d  
Epoch = 132.3346 [0.0020] BKJD  
Rp/R\* = 0.0165 [0.0110]  
a/R\* = 1.77 [3.16]  
b = 0.56 [3.30]  
Seff = 1407.06 [279.30]  
Teff = 1562 [77] K  
Rp = 1.32 [0.90] Re  
a = 0.0158 [0.0016] AU  
Ag = 6.68 [9.48] [0.60 $\sigma$ ]  
Teffp = 3882 [1373] K [1.69 $\sigma$ ]

## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: 1.1% [0.01 $\sigma$ ]  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 8.34e-17  
RollingBand-fgt: 0.95 [976/1024]  
**GhostDiagnostic-chr: 0.7014**  
Centroid-sig: 0.0%  
Centroid-so: 0.785 arcsec [2.00 $\sigma$ ]  
OotOffset-rm: 0.054 arcsec [0.37 $\sigma$ ]  
KicOffset-rm: 0.154 arcsec [1.28 $\sigma$ ]  
OotOffset-st: 4/4/4/5 [17]  
KicOffset-st: 4/4/4/5 [17]  
DiffImageQuality-fgm: 0.29 [5/17]  
DiffImageOverlap-fno: 0.00 [0/17]

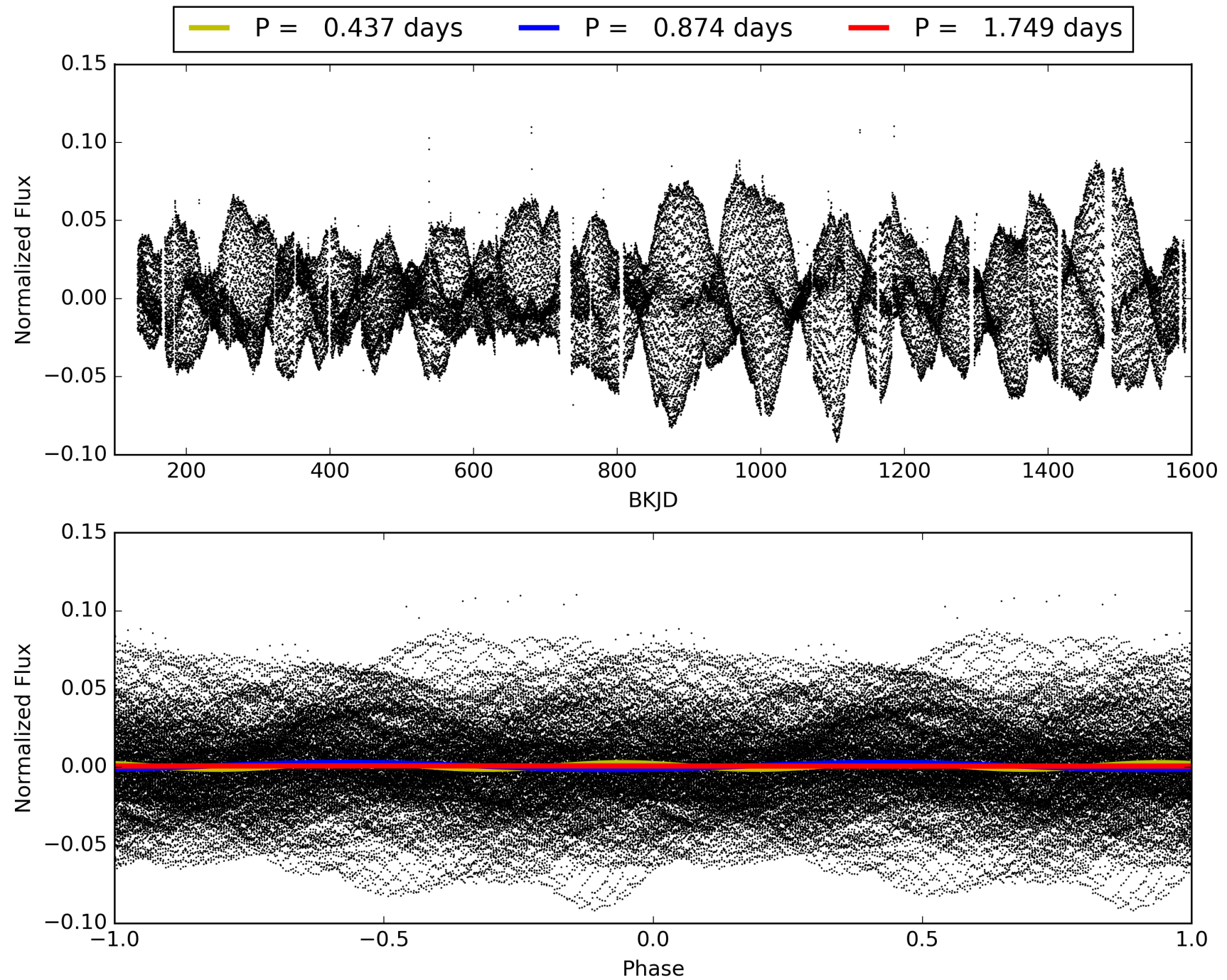


# TCE 003546192-03, PDC Light Curves



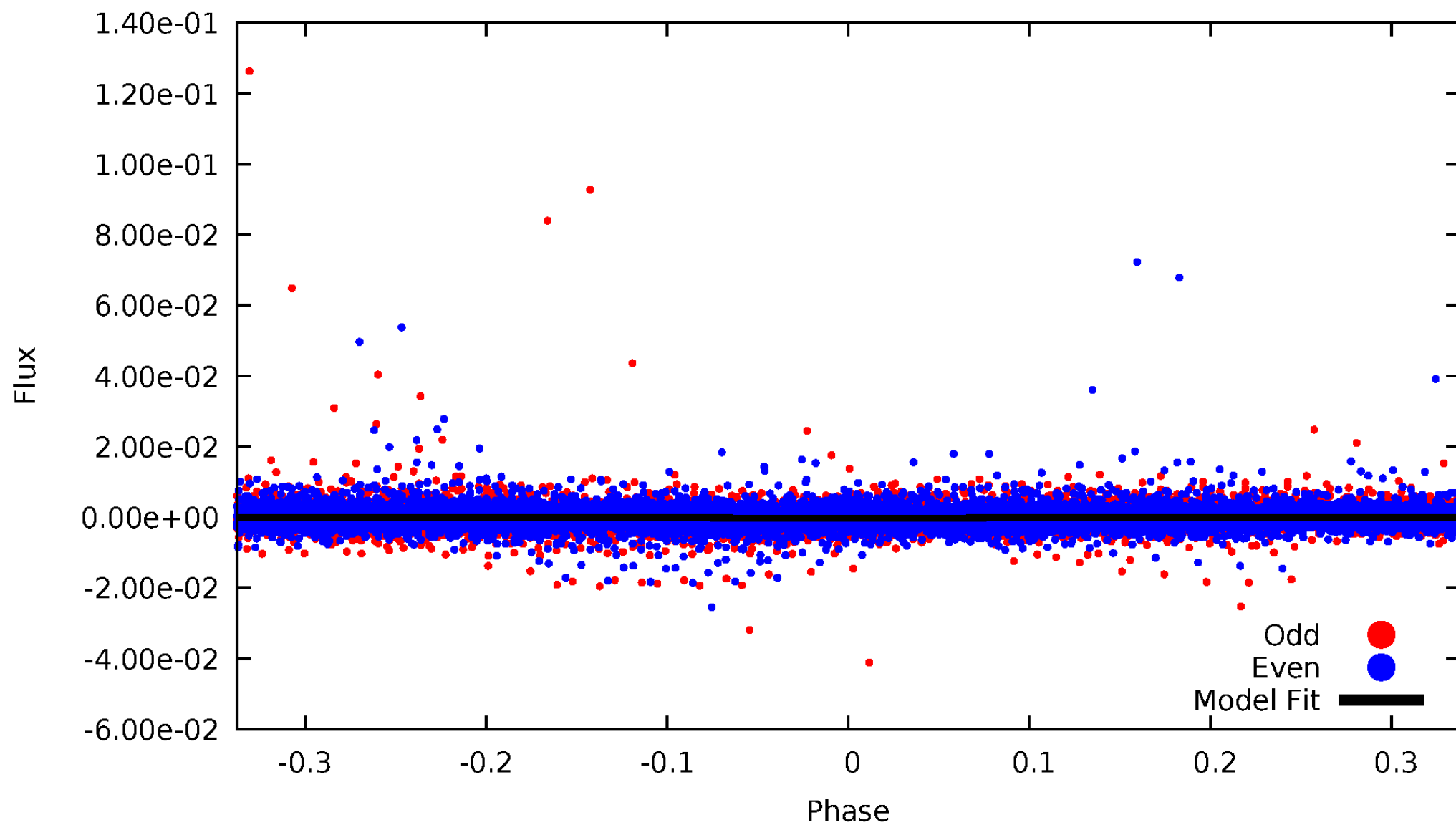


TCE 003546192-03



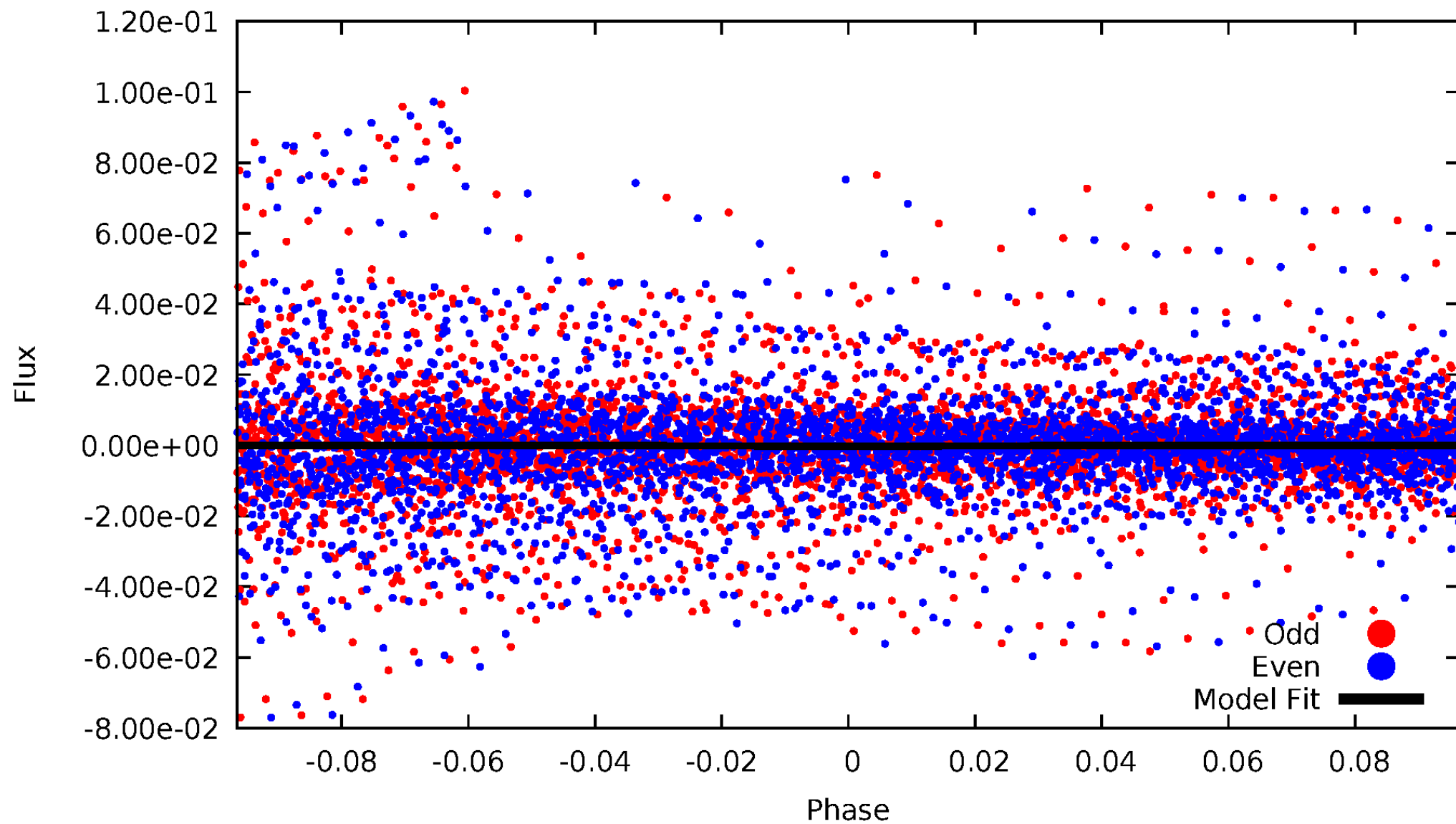
# DV Odd/Even

TCE 003546192-03

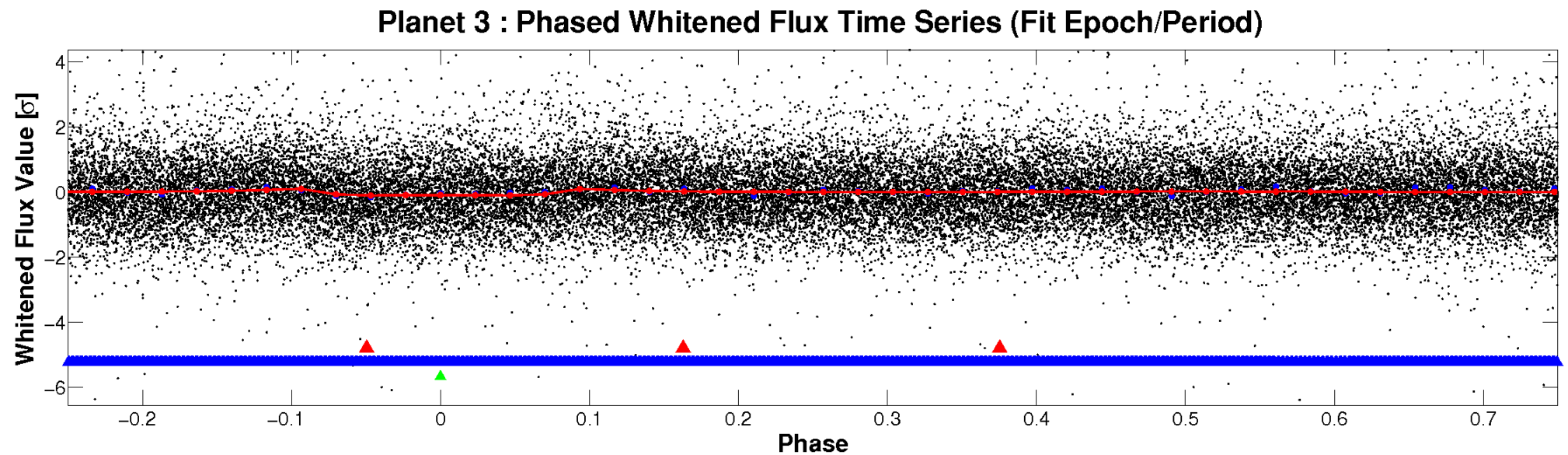
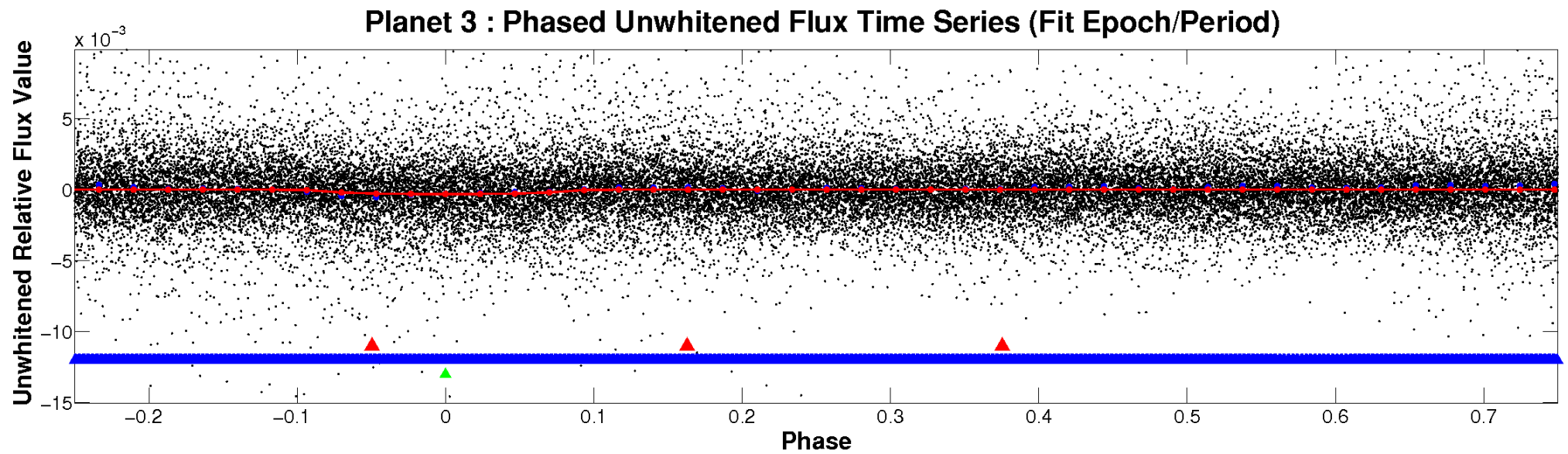


# ALT Odd/Even

TCE 003546192-03



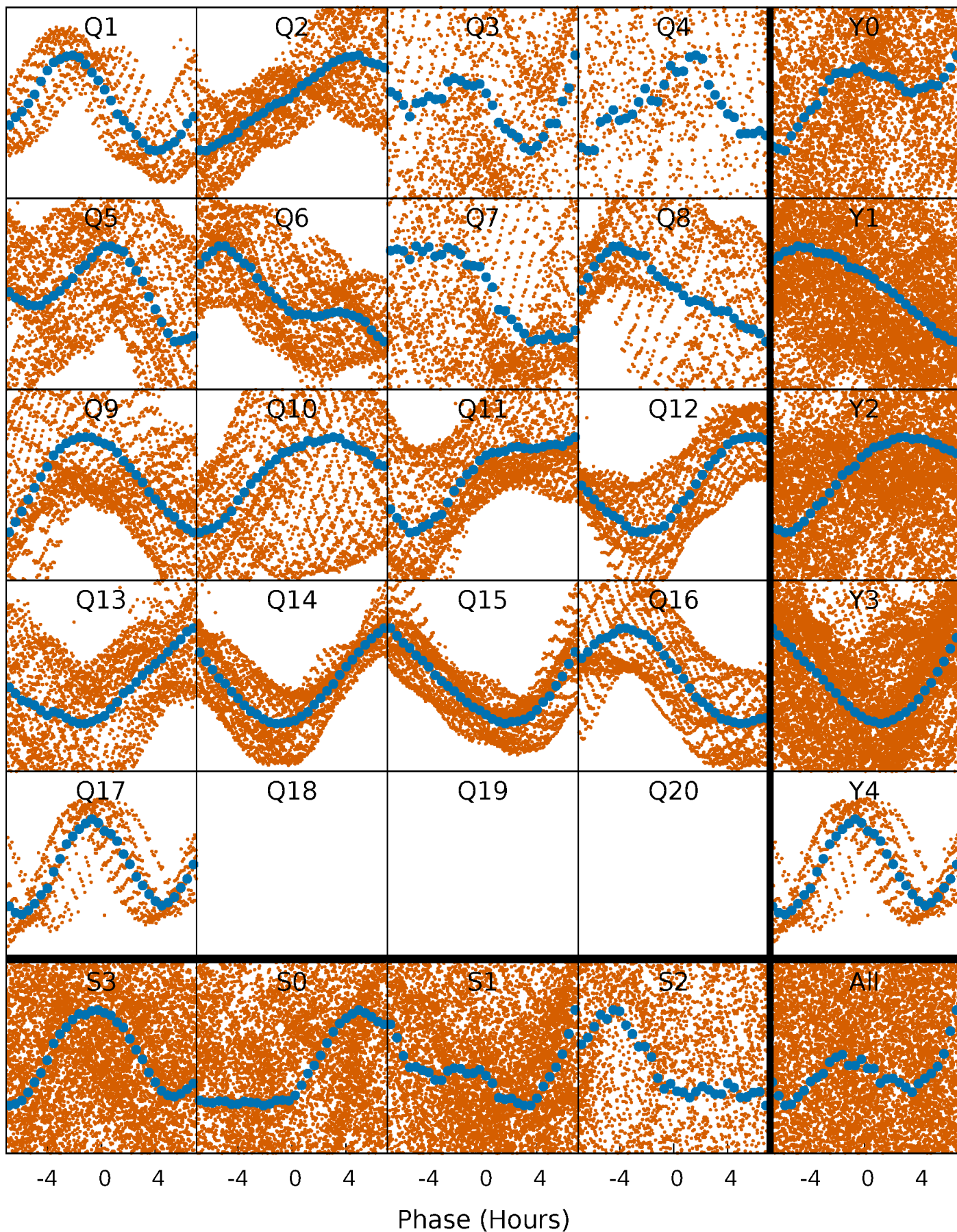
# Non-Whitened Vs. Whitened Light Curve





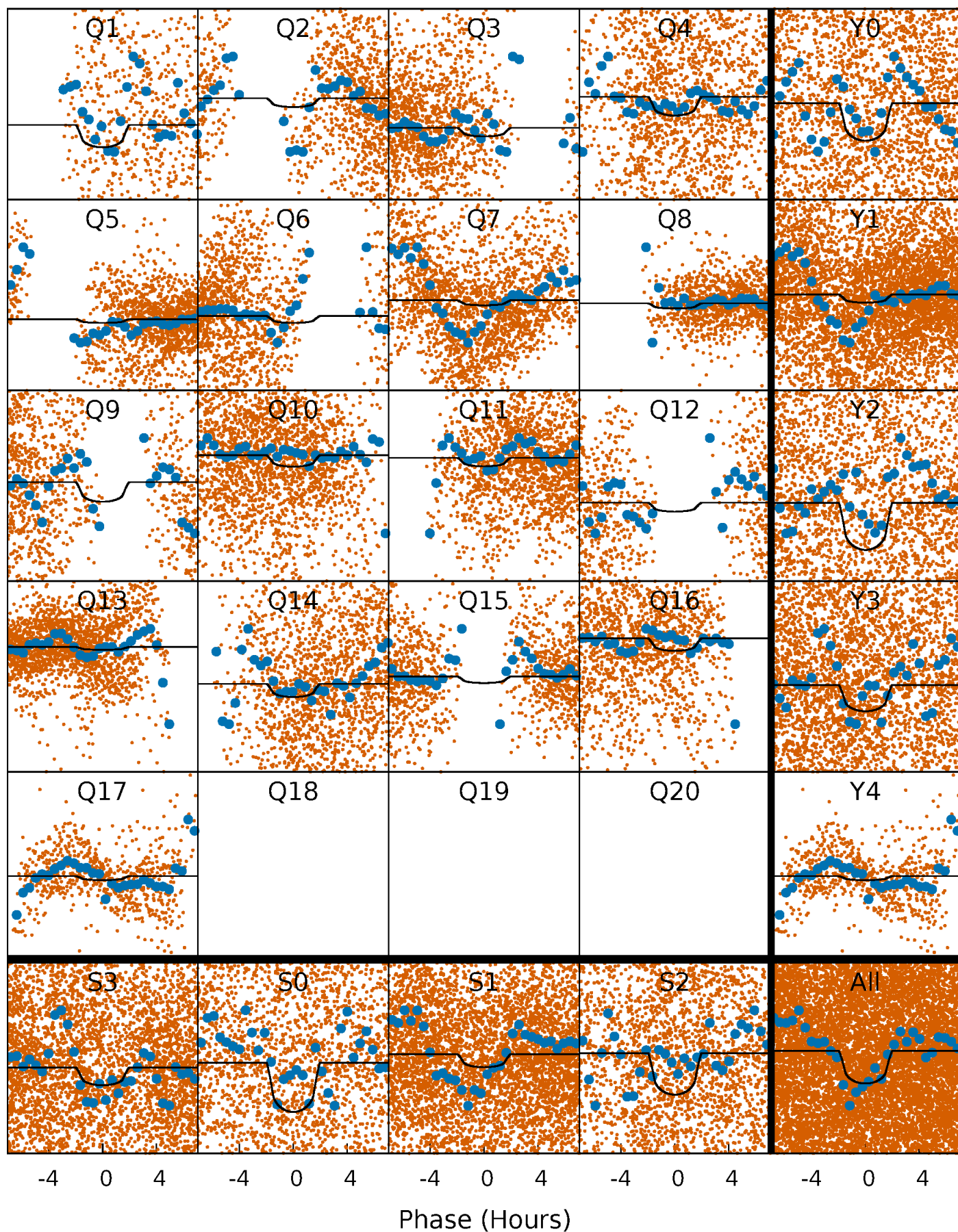
# PDC Quarter-Phased Transit Curves

TCE 003546192-03   P= 0.874482 Days    $T_0=132.334618$  (BKJD)



# DV Quarter-Phased Transit Curves

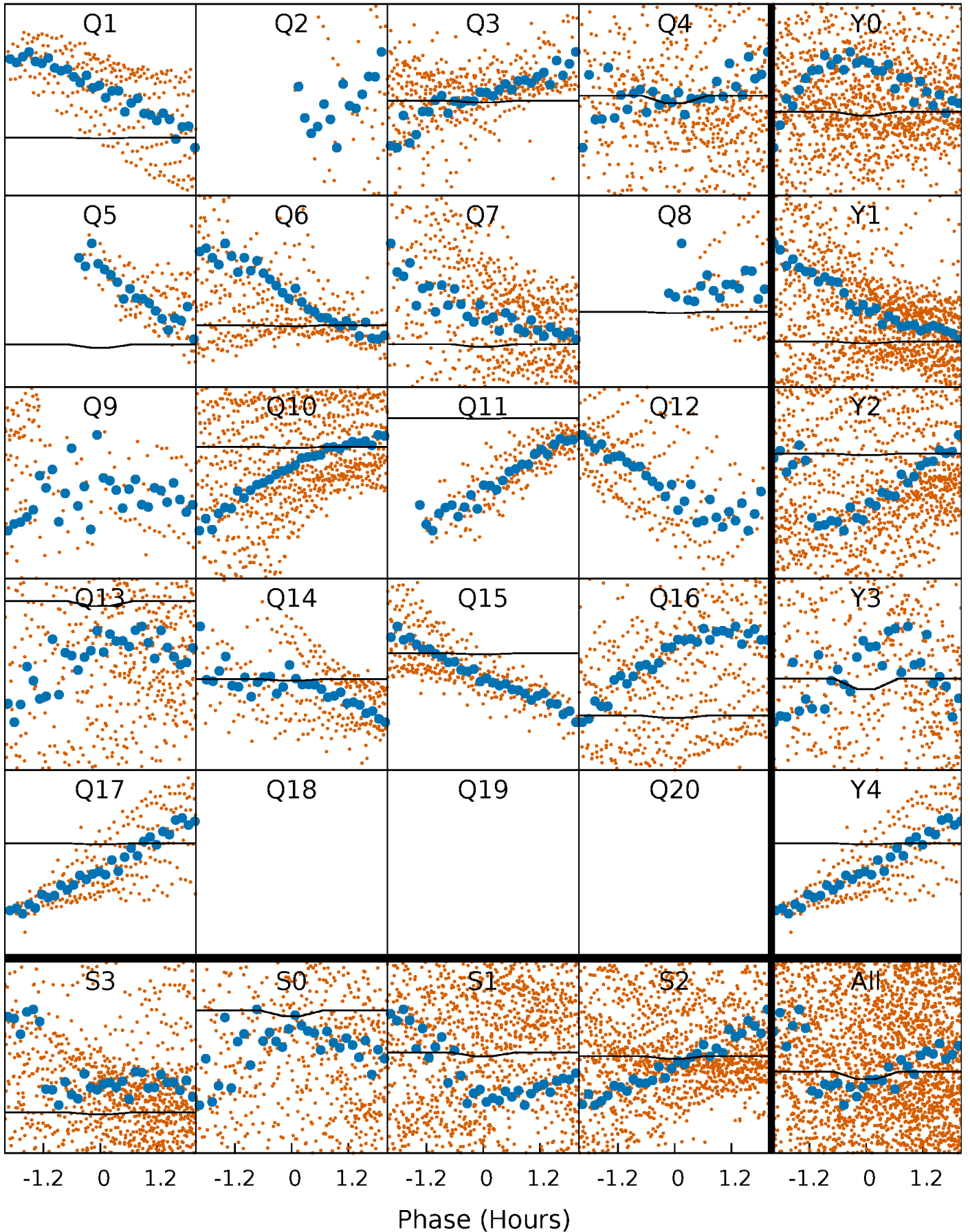
TCE 003546192-03 P= 0.874482 Days  $T_0=132.334618$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

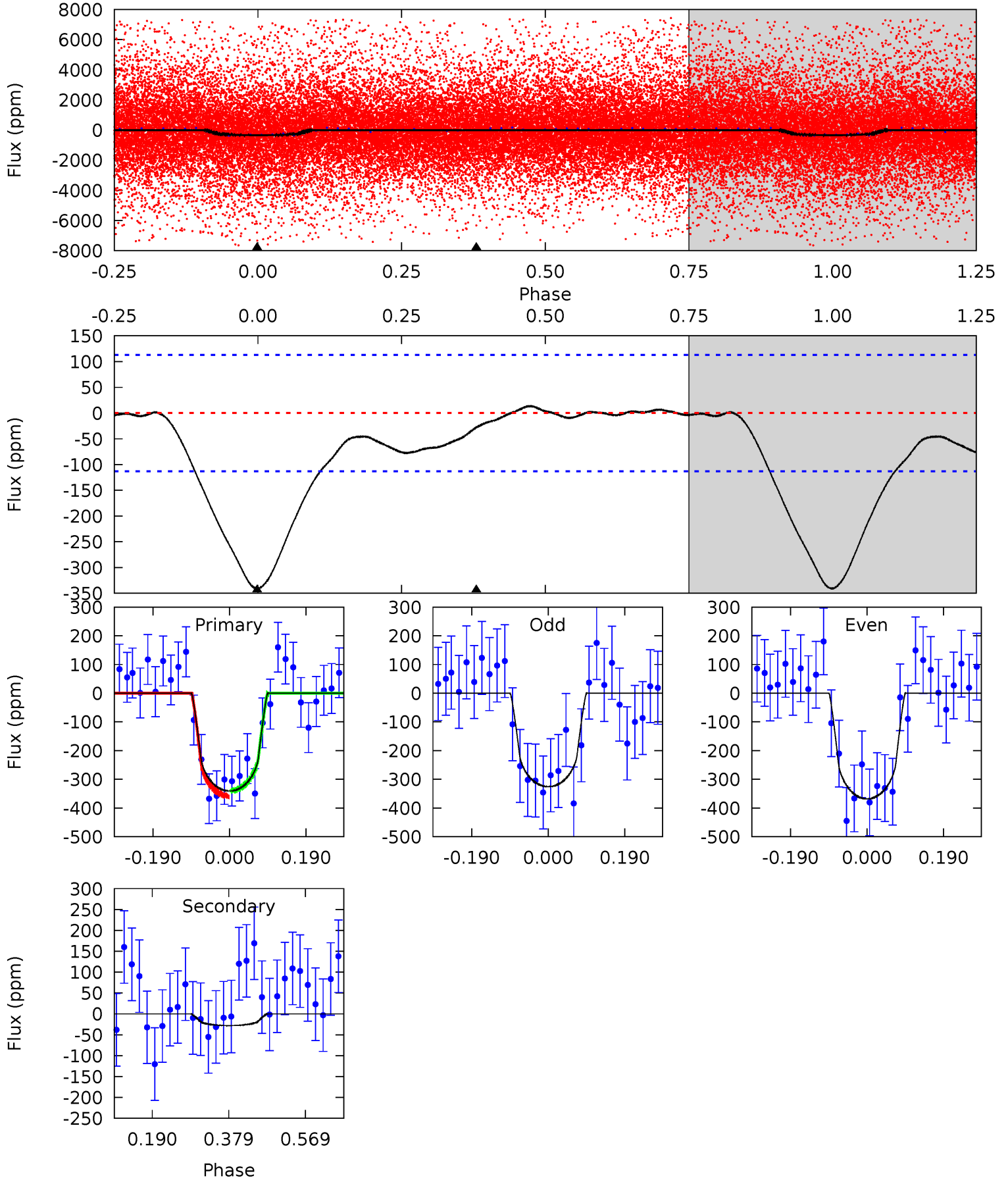
TCE 003546192-03     $P = 0.874391$  Days     $T_0 = 132.306859$  (BKJD)



# DV Model-Shift Uniqueness Test

003546192-03, P = 0.874482 Days, E = 131.460136 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
13.4	1.10	0	0	4.43	1.31	0.20	13.4	13.4	1.10	1.10	0.84	1.71	0.04	0.36

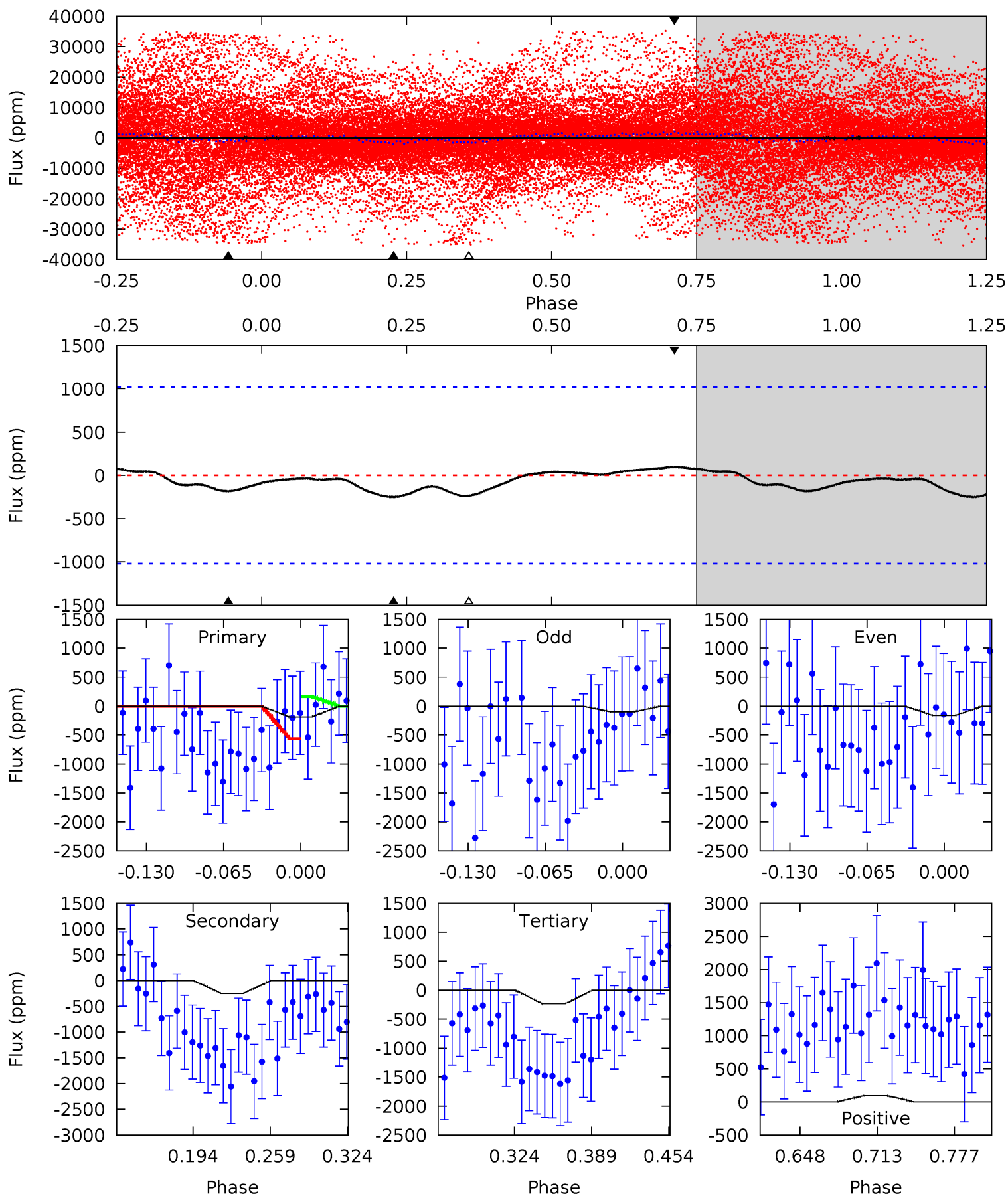




# Alt Model-Shift Uniqueness Test

003546192-03, P = 0.874391 Days, E = 131.432468 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
0.85	1.14	1.08	0.45	4.66	1.85	0.41	-0.24	0.40	0.06	0.70	0.14	2.62	0.28	0.89



### Stellar Parameters For KIC 003546192

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$5205^{+155}_{-155}$	$4.549^{+0.091}_{-0.056}$	$-0.460^{+0.300}_{-0.300}$	$0.733^{+0.083}_{-0.083}$	$0.694^{+0.094}_{-0.043}$	$2.481^{+0.917}_{-0.468}$
	+3%/-3%	+2%/-1%	+65%/-65%	+11%/-11%	+14%/-6%	+37%/-19%
Source	PHO1	KIC0	KIC0	DSEP		

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

### Secondary Eclipse Parameters for KIC 003546192-03 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-28 \pm 26$	$1.40^{+0.83}_{-0.80}$	$2163^{+92}_{-85}$	$3164^{+1259}_{-5574}$	$1.644^{+8.666}_{-1.526}$
Alt.	$-251 \pm 219$	$1.41^{+0.82}_{-0.76}$	$2173^{+89}_{-97}$	$4711^{+2409}_{-1702}$	$14^{+63}_{-13}$

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

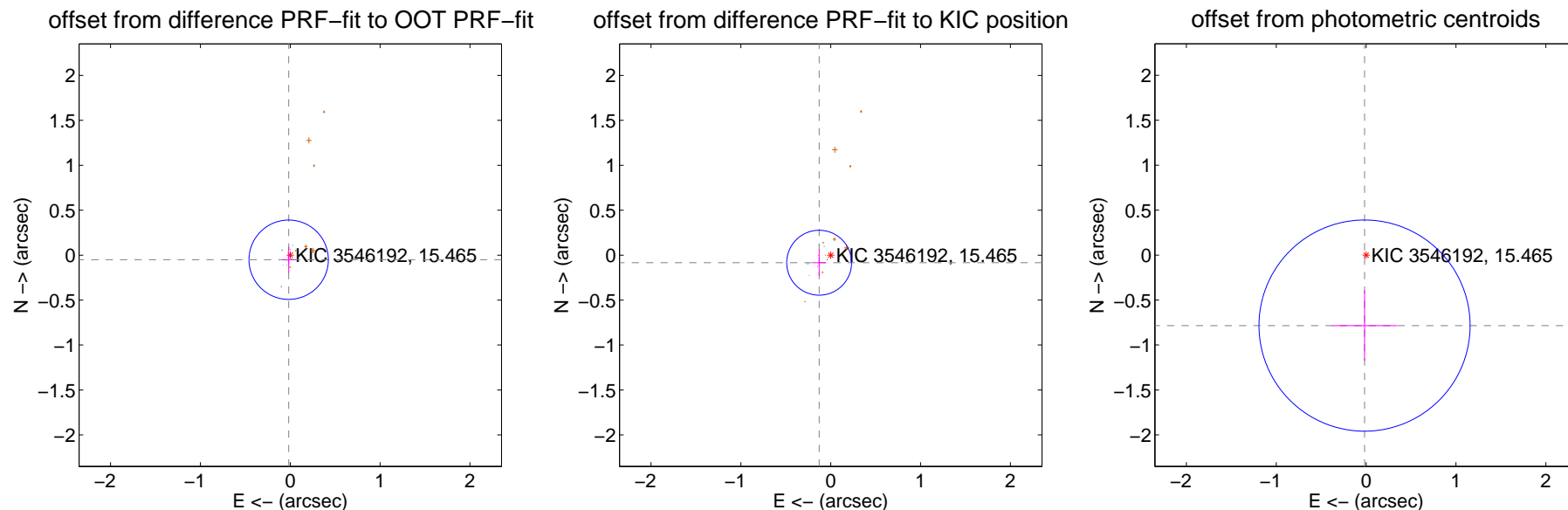
## DV Centroid Data

Supplemental centroid analysis for 003546192-03. Kepler magnitude: 15.46. Transit SNR 8.91

There are 5 quarters with good PRF difference image offsets

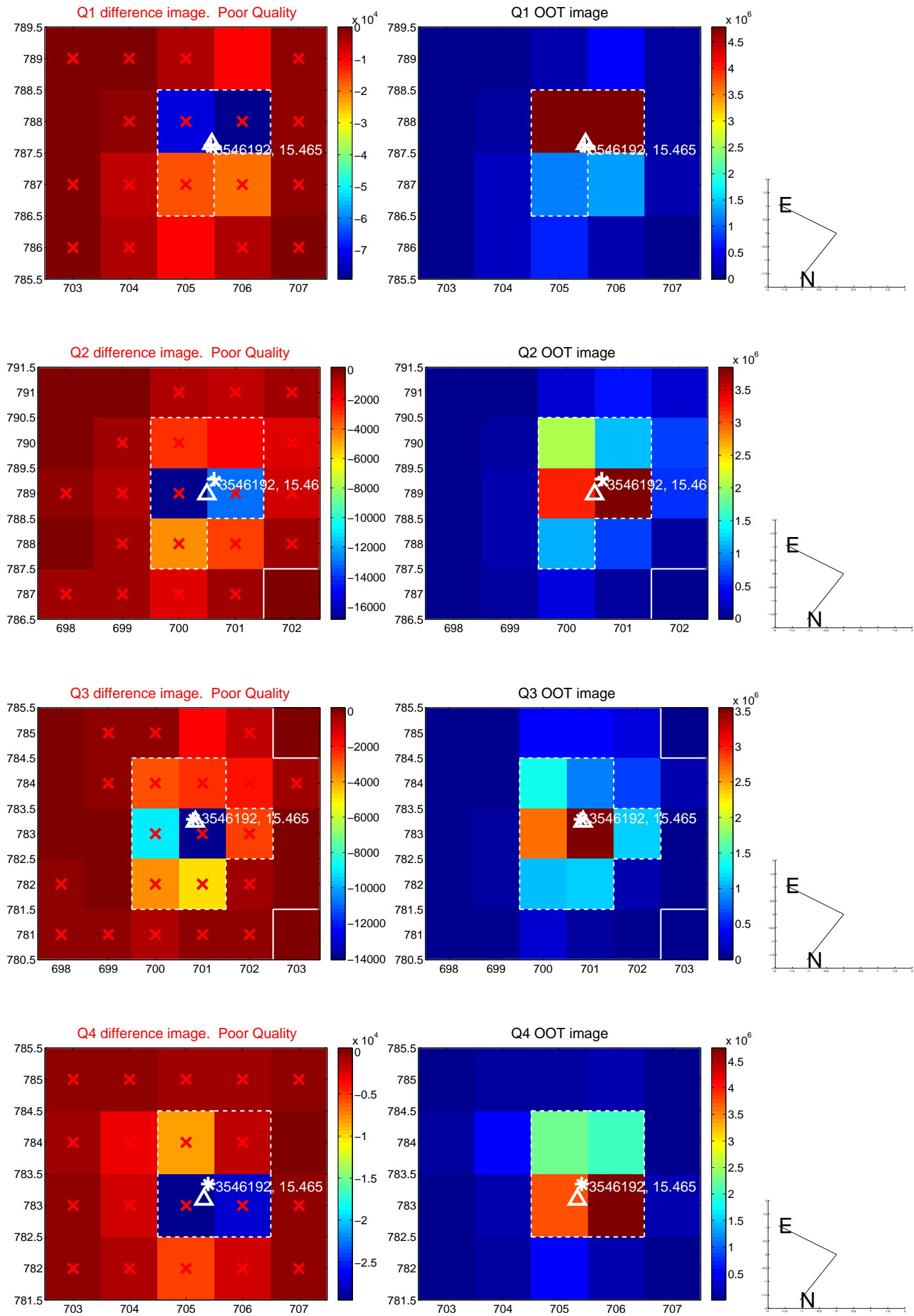
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.054 \pm 0.147$	0.37	$0.018 \pm 0.075$	$-0.051 \pm 0.146$
PRF-fit source offset from KIC position	$0.154 \pm 0.120$	1.28	$0.129 \pm 0.077$	$-0.084 \pm 0.147$
photometric centroid source offset	$0.78 \pm 0.39$	2.00	$0.02 \pm 0.36$	$-0.78 \pm 0.39$

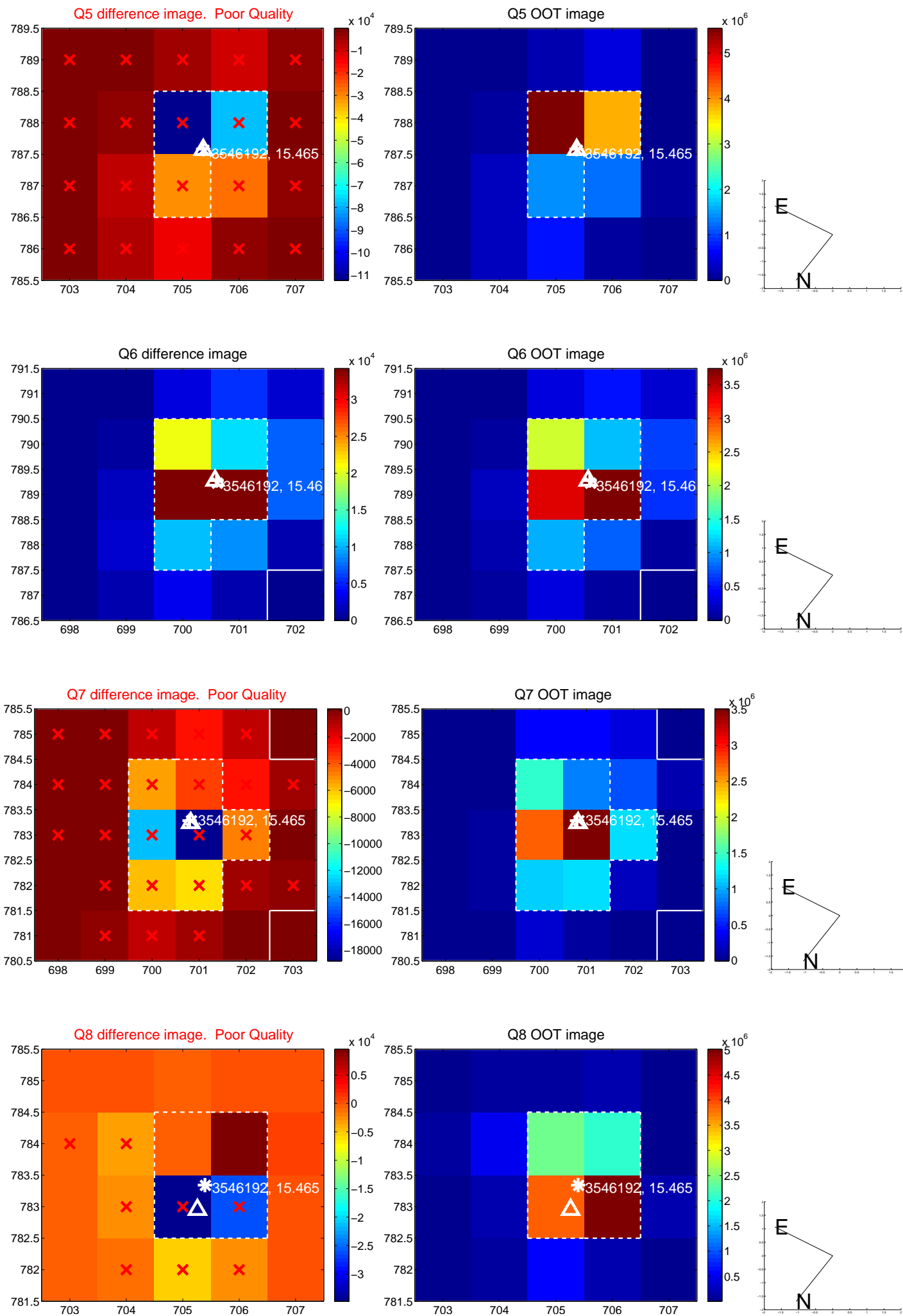


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

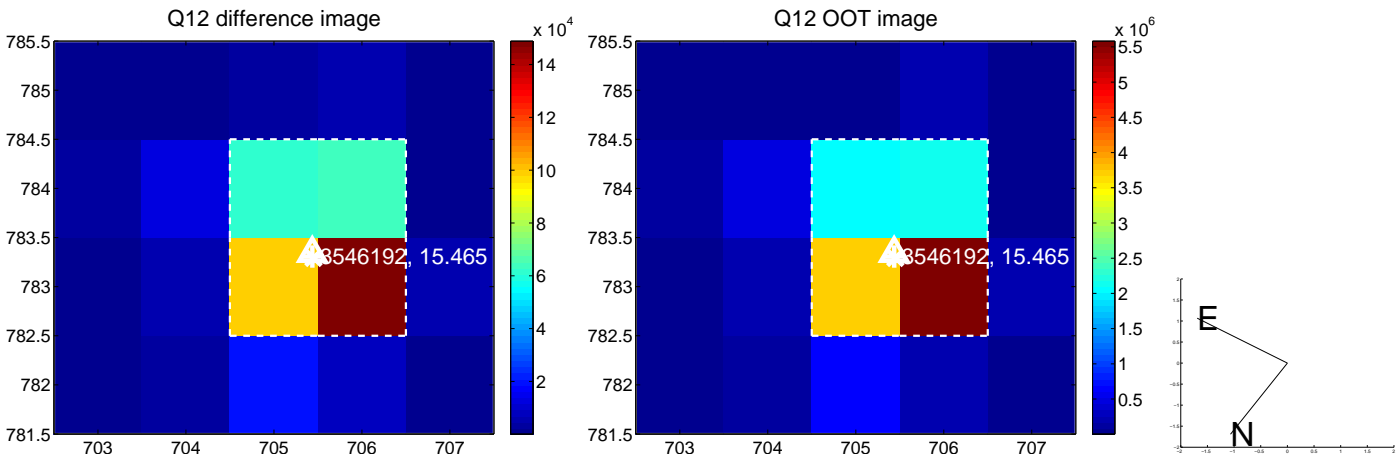
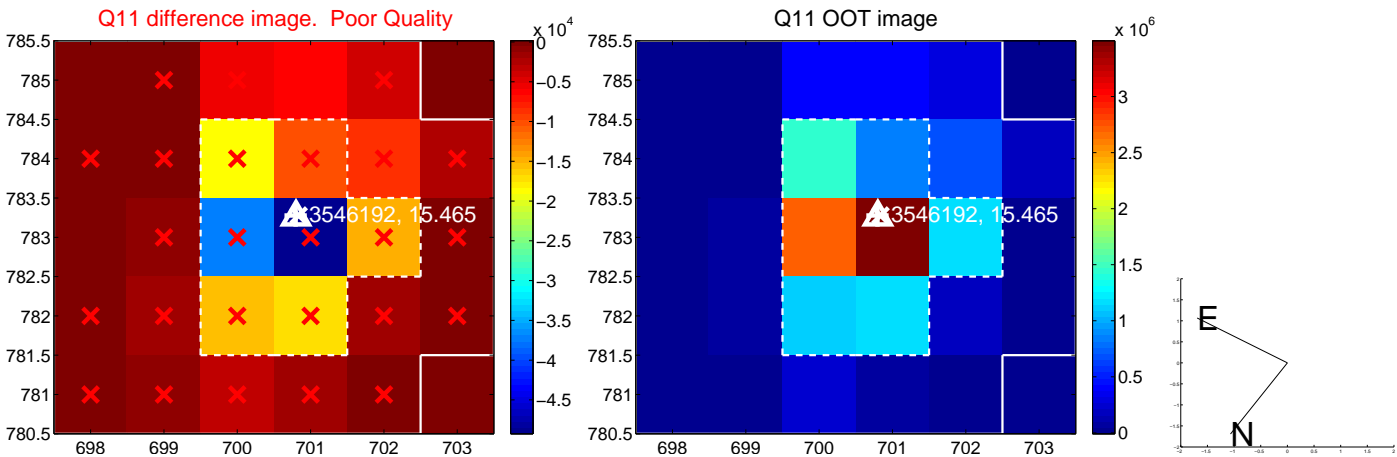
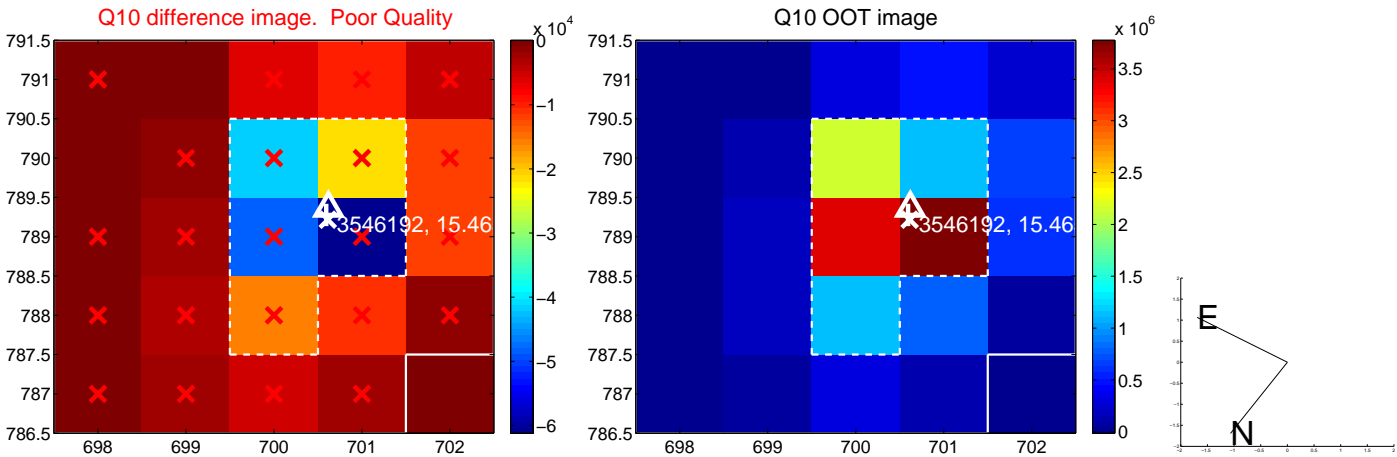
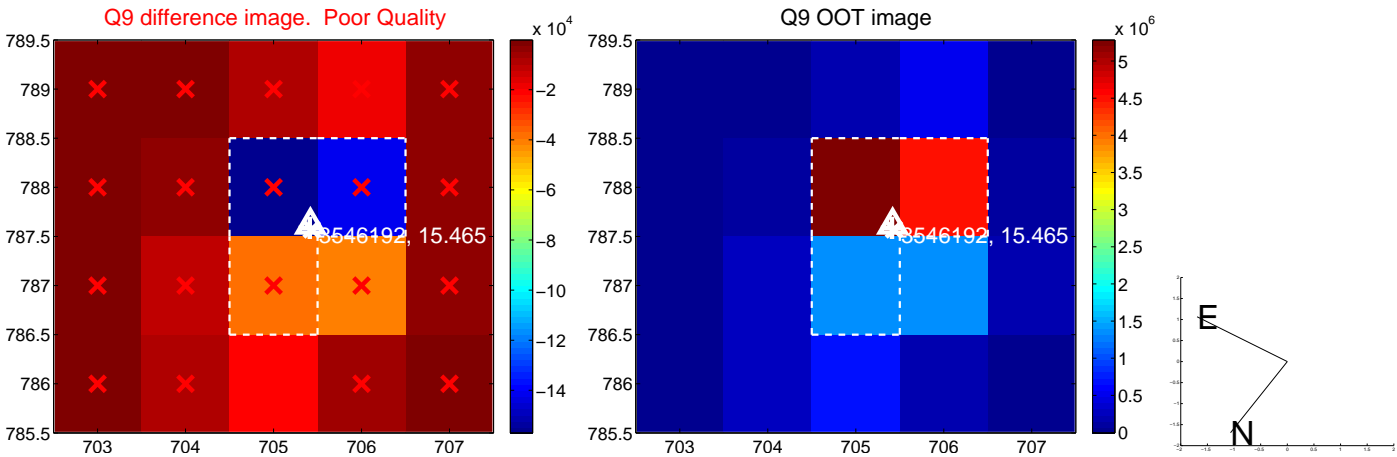
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



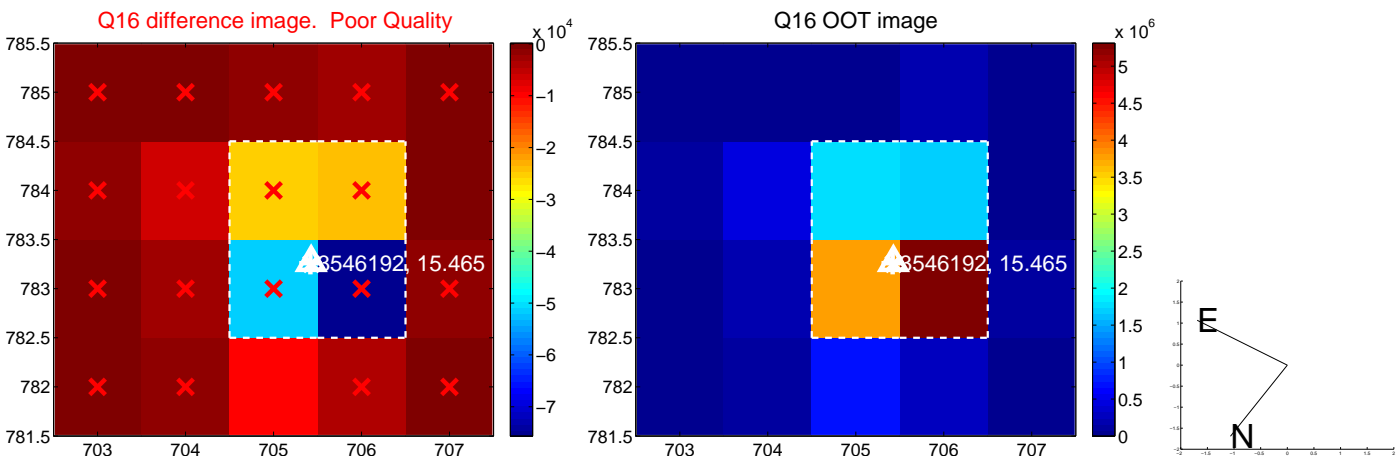
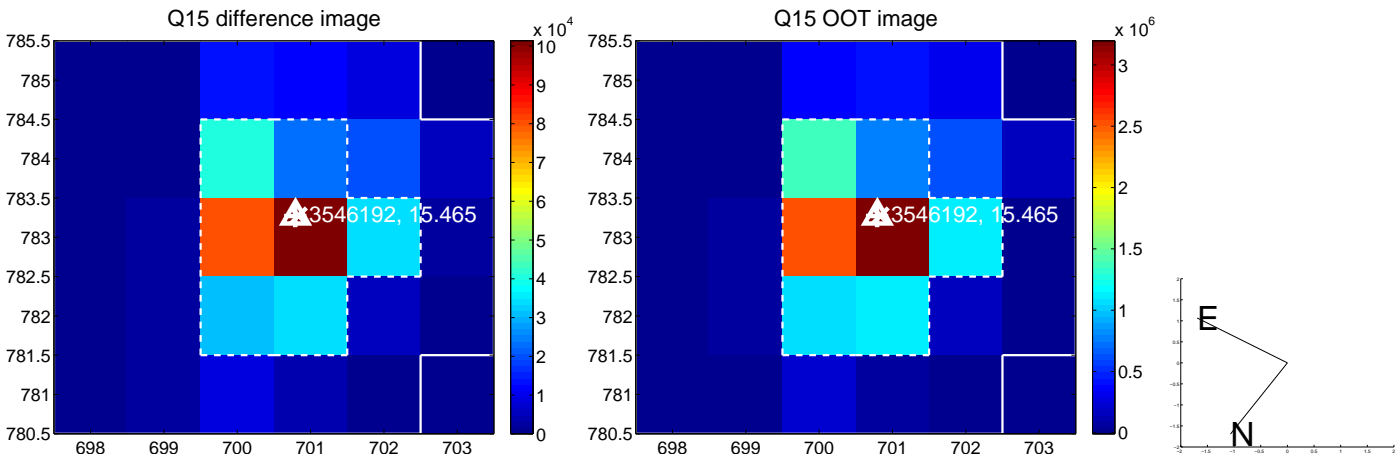
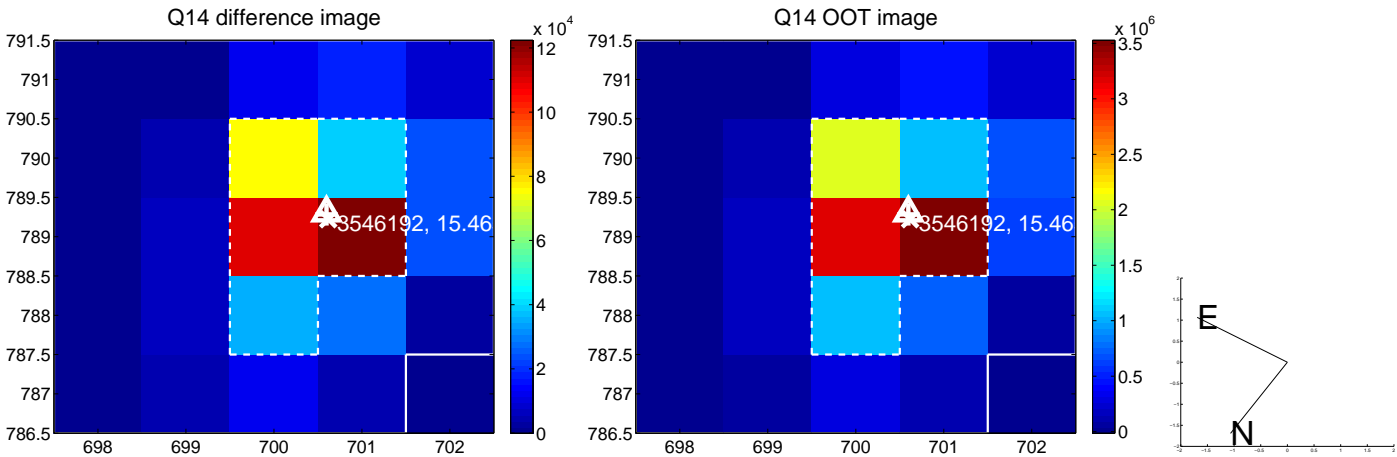
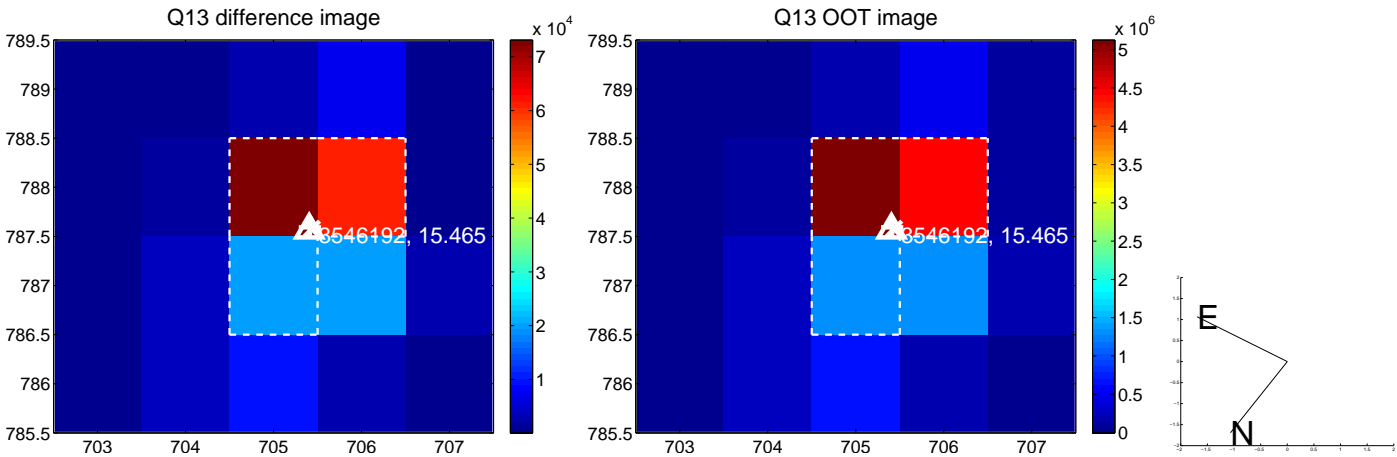
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

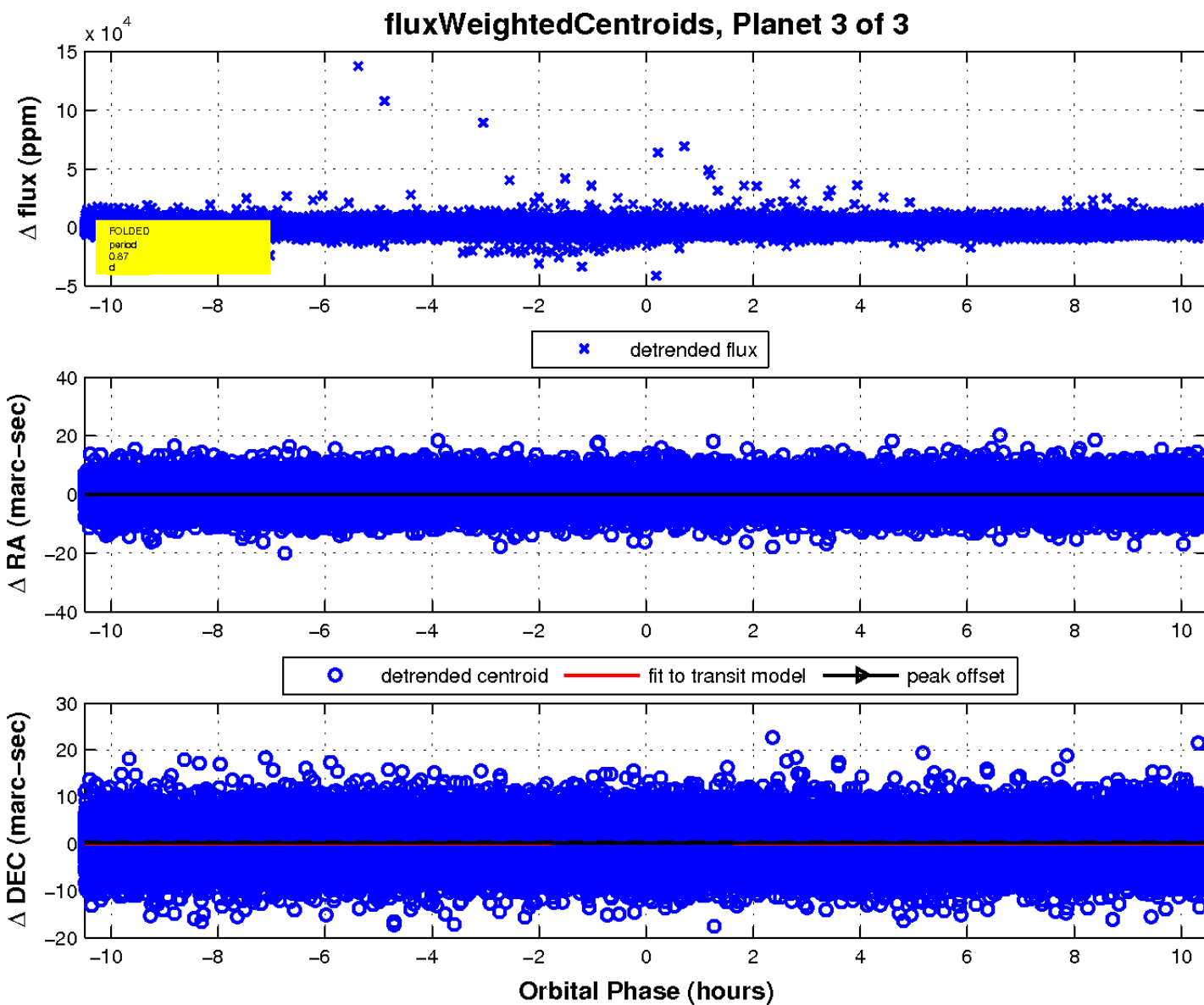
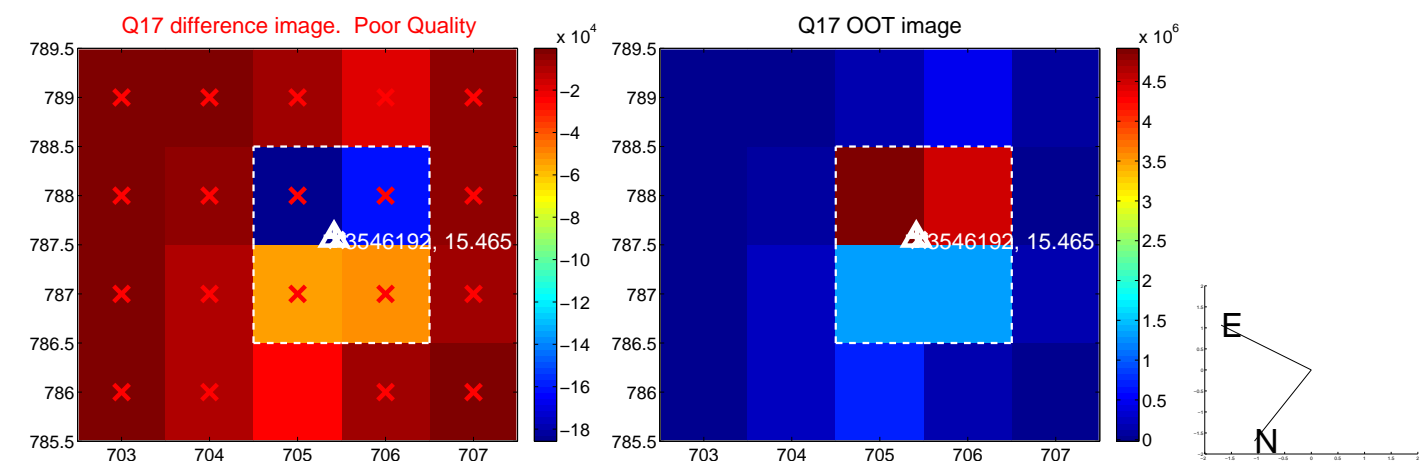


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.





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



UKIRT Image

Declination

