

# KIC 006790592

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006790592-01	OBS	7791.01	106.108292	181.168723	183.4	7.808	13.7	13.5	152.97	3287	198.13	0.00
006790592-02	OBS	No	111.412368	147.706469	152.9	13.539	9.7	8.7	152.97	3287	173.48	0.00
006790592-04	OBS	No	70.960521	168.281974	37.8	1.924	8.6	1.7	152.97	3287	130.50	0.00
006790592-05	OBS	No	70.976750	168.417409	56.0	9.000	10.8	-1.0	152.97	3287	105.03	20277.17

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006790592-01	OBS	PC	0.81	0	0	0	0	PLANET_IN_STAR—CENT_SATURATED
006790592-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—INCONSISTENT_TRANS—CENT_SATURATED
006790592-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006790592-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_SATURATED

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

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

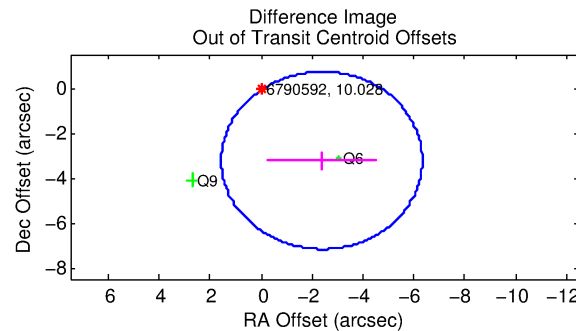
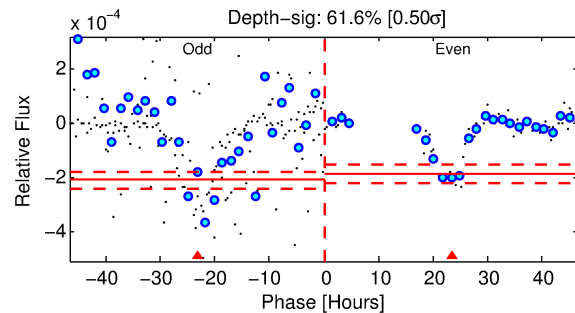
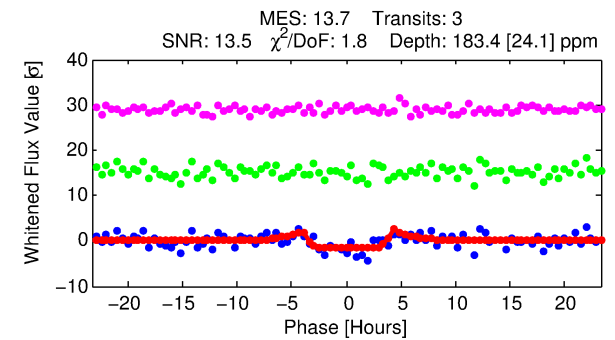
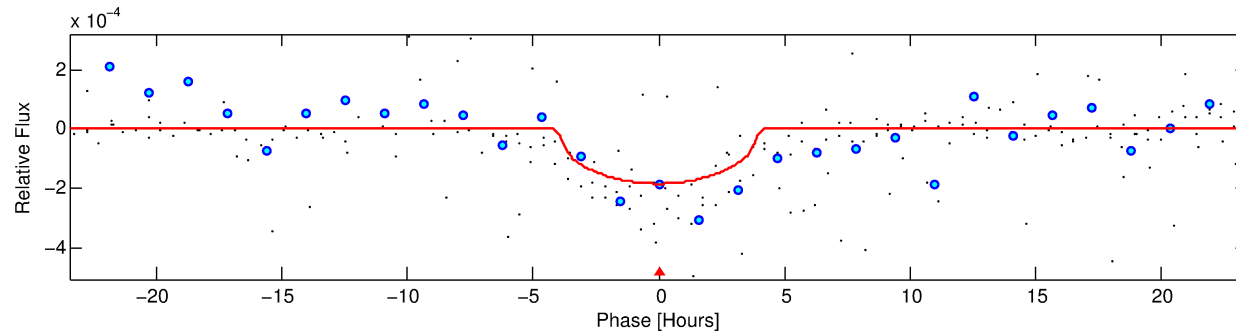
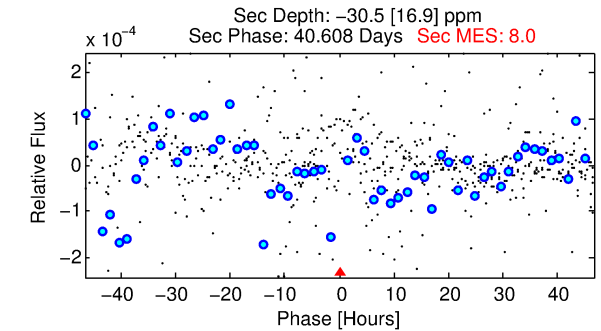
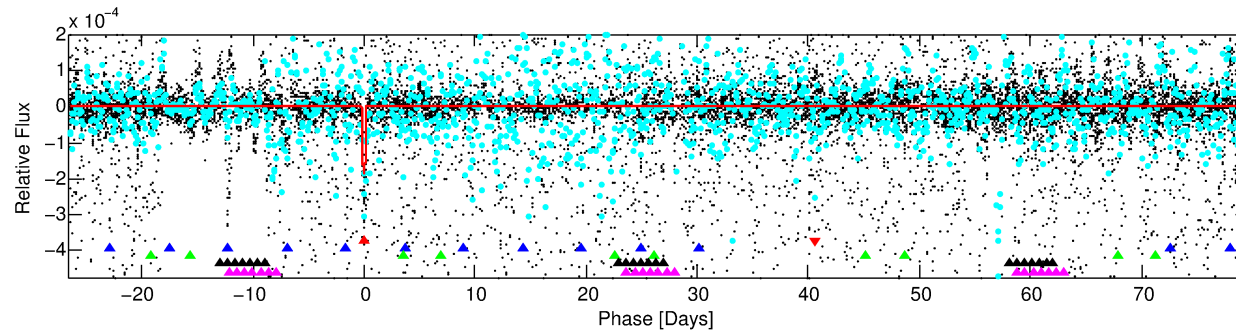
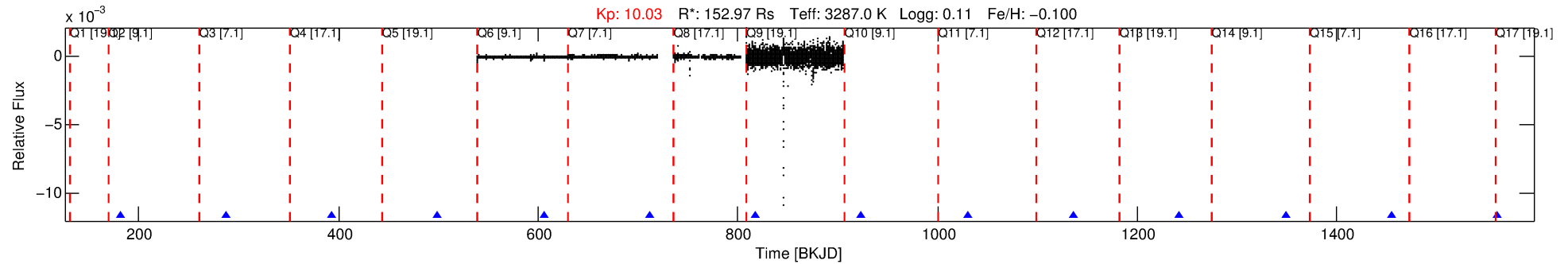
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 006790592-01

No Significant Match Found

# DV One-Page Summary

KIC: 6790592 Candidate: 1 of 5 Period: 106.108 d



## DV Fit Results:

Period = 106.10829 [0.00610] d  
Epoch = 181.1687 [0.0255] BKJD  
 $R_p/R^*$  = 0.0119 [0.0046]  
 $a/R^*$  = 96.31 [77.92]  
 $b$  = 0.40 [1.75]  
 $S_{\text{eff}}$  = N/A  
 $T_{\text{eq}}$  = N/A  
 **$R_p$  = 198.13 [84.34] Re**  
 $a$  = N/A  
 $A_g$  = N/A  
 $T_{\text{eff}}$  = N/A

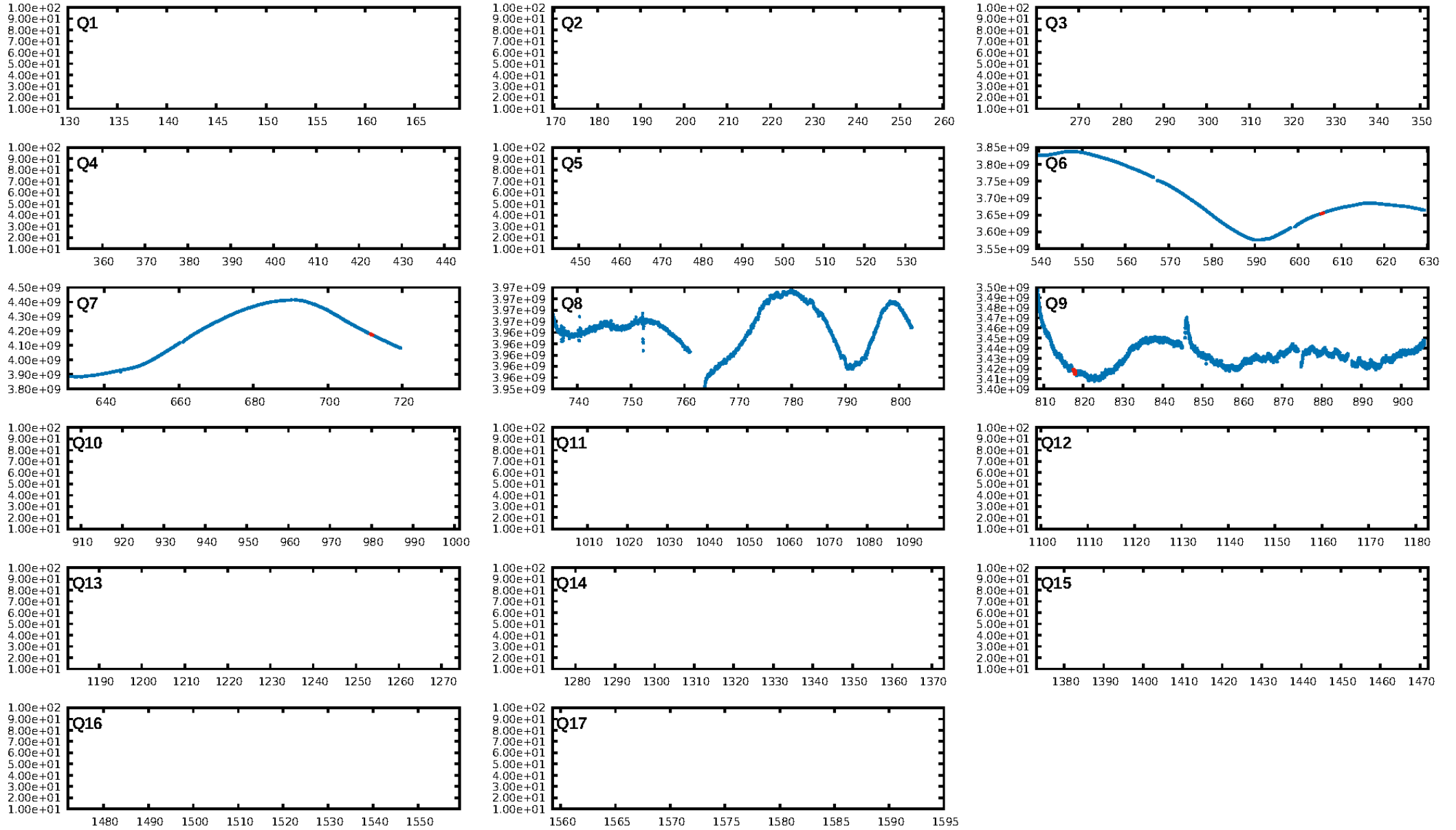
## DV Diagnostic Results:

ShortPeriod-sig: 100.0% [70.77 $\sigma$ ]  
LongPeriod-sig: 100.0% [8.15 $\sigma$ ]  
ModelChiSquare2-sig: 80.5%  
ModelChiSquareGof-sig: 46.9%  
Bootstrap-pfa: 2.27e-16  
RollingBand-fgt: 1.00 [3/3]  
**GhostDiagnostic-chr: 0.4221**  
Centroid-sig: 50.9%  
Centroid-so: 1.676 arcsec [0.69 $\sigma$ ]  
**OotOffset-rm: 4.012 arcsec [3.05 $\sigma$ ]**  
**KicOffset-rm: 4.772 arcsec [7.61 $\sigma$ ]**  
OotOffset-st: 1/0/0/1 [2]  
KicOffset-st: 1/0/0/1 [2]  
DiffImageQuality-fgm: 0.00 [0/2]  
DiffImageOverlap-fno: 1.00 [2/2]

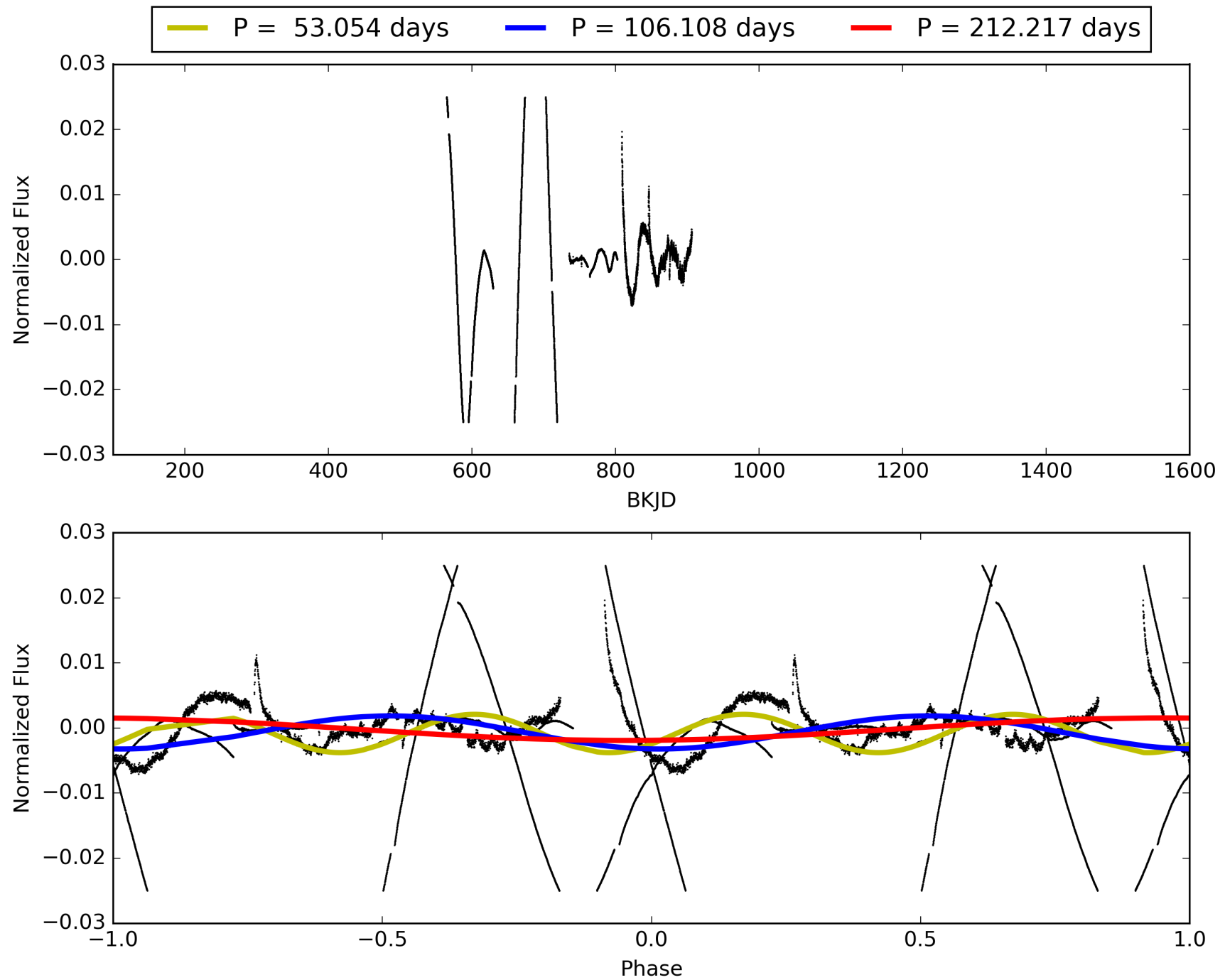
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:47:37 Z

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

# TCE 006790592-01, PDC Light Curves

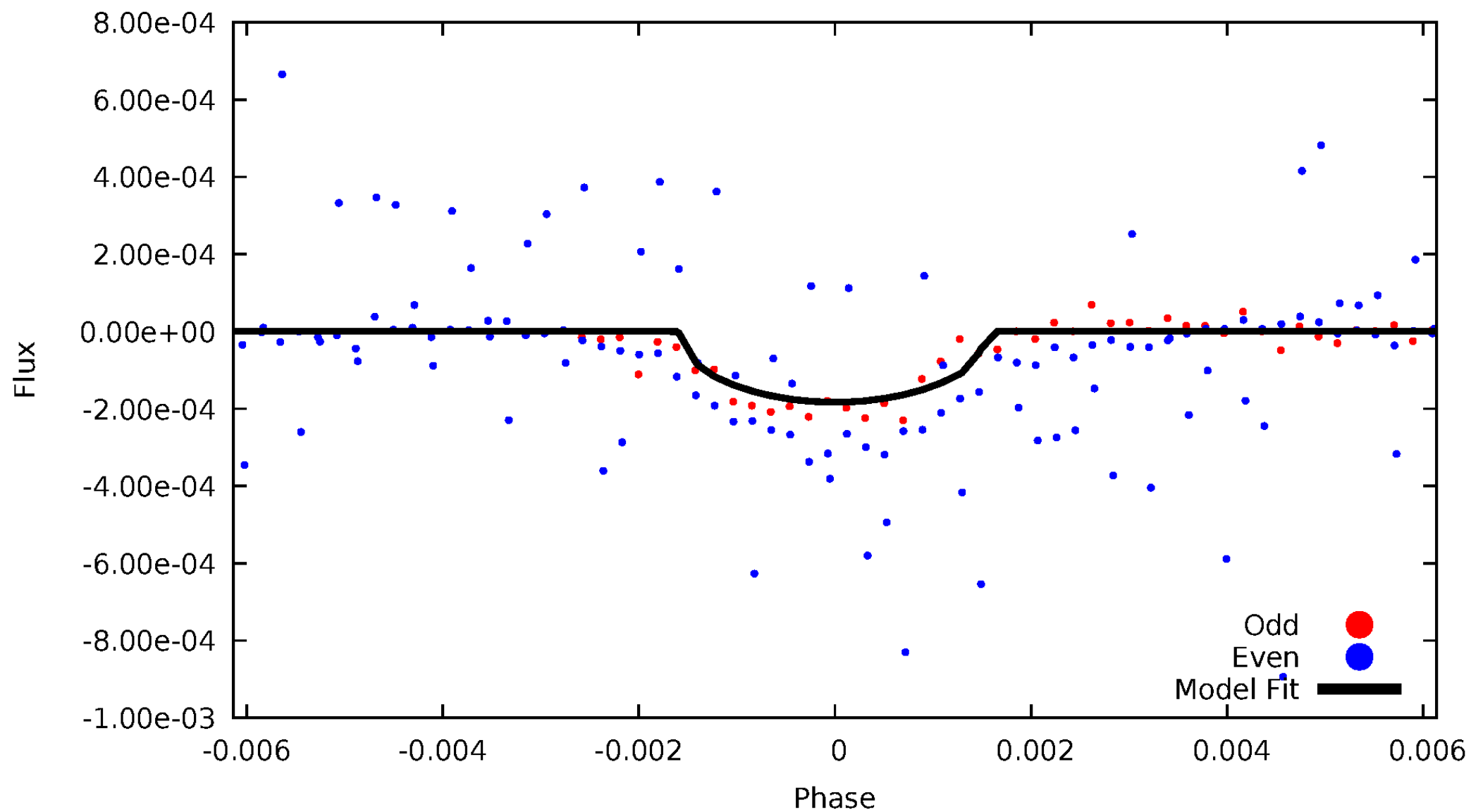


TCE 006790592-01



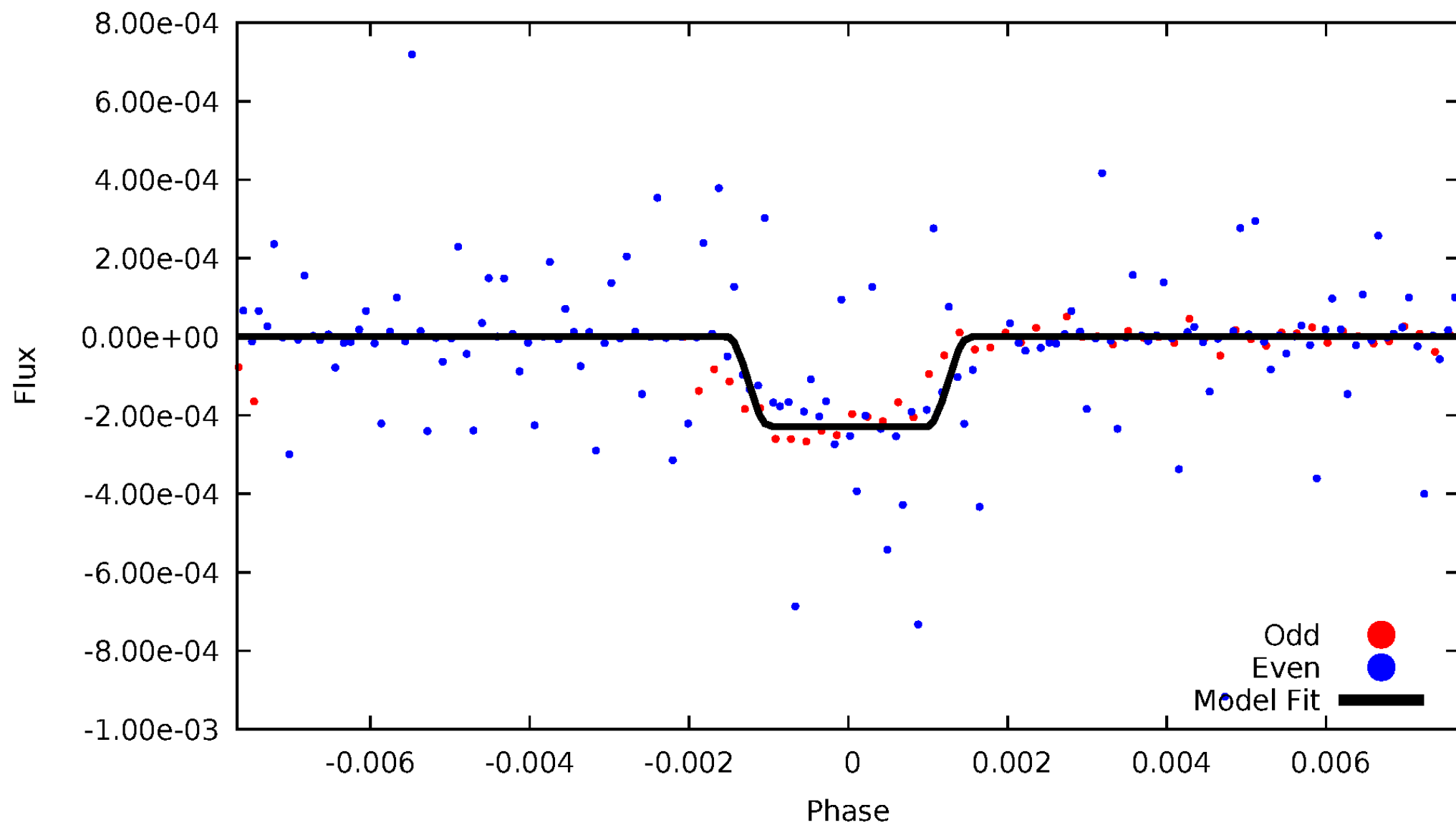
# DV Odd/Even

TCE 006790592-01

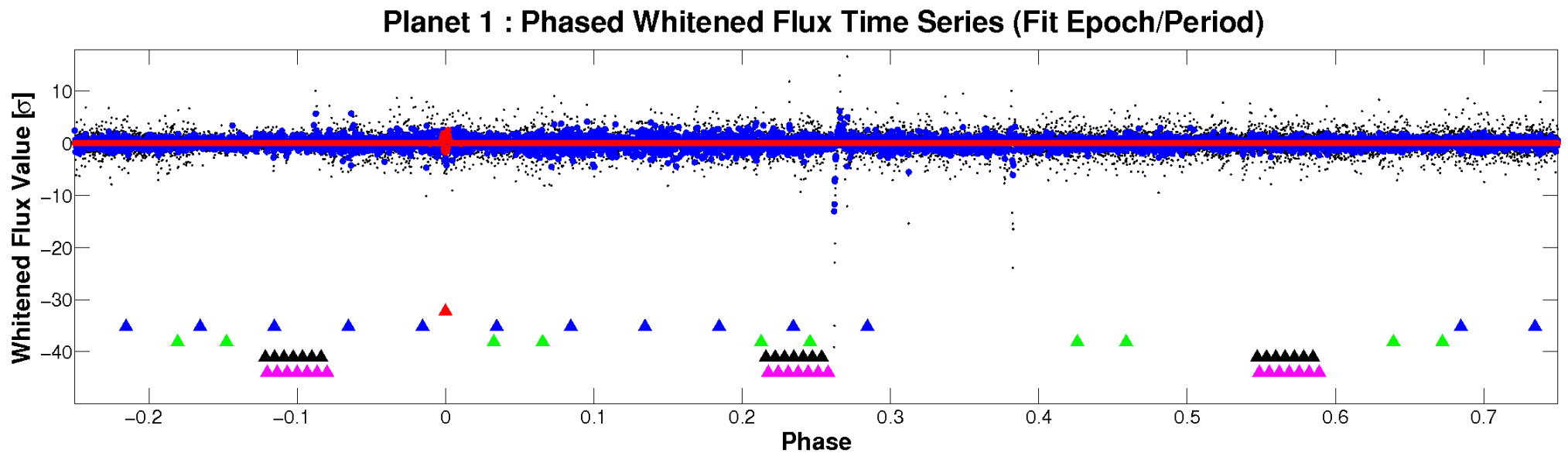
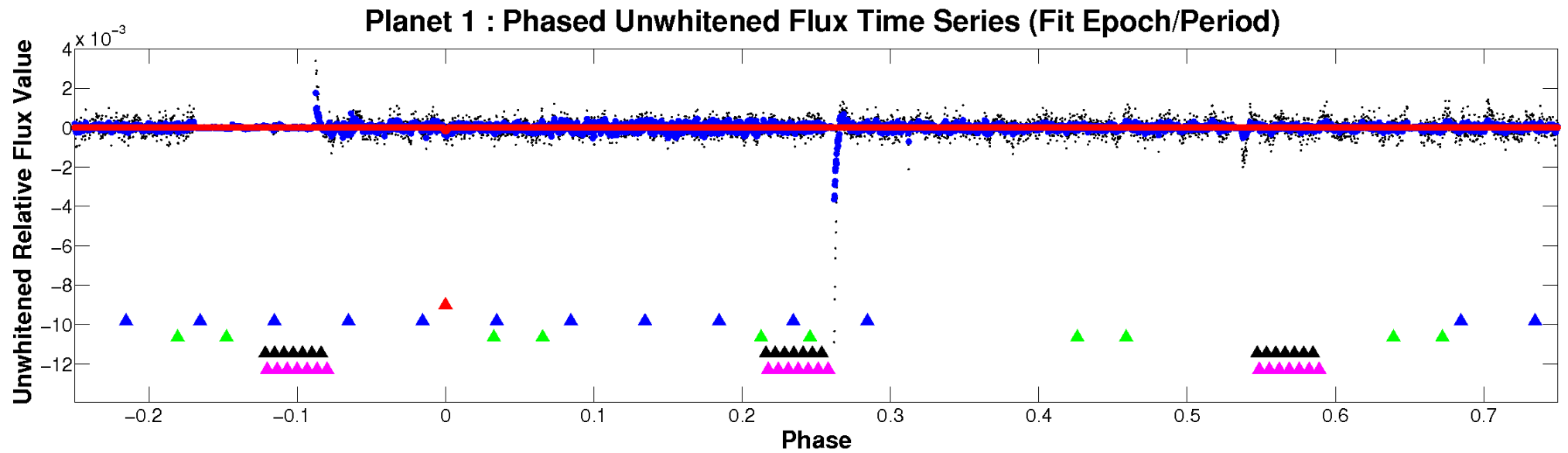


# ALT Odd/Even

TCE 006790592-01

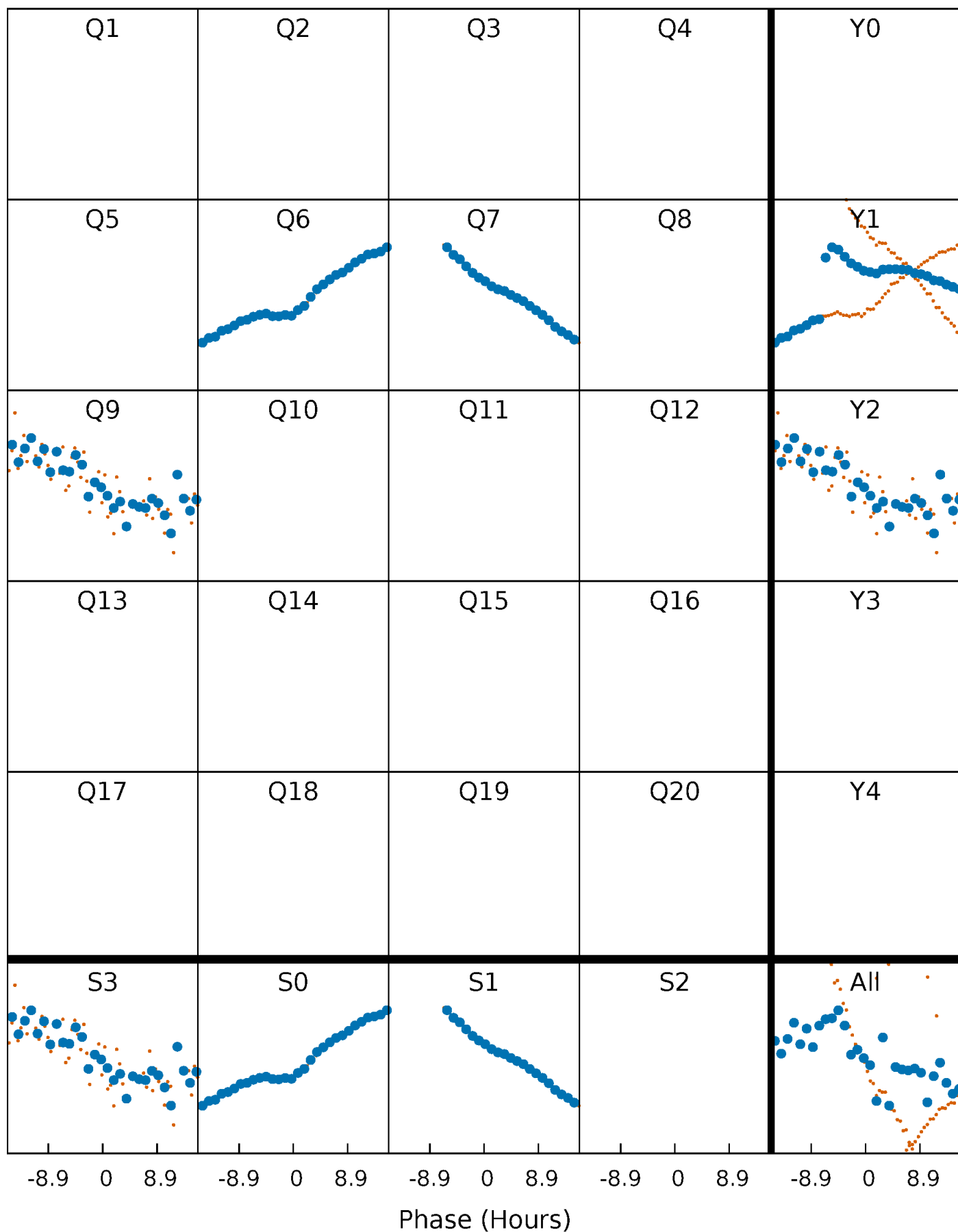


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

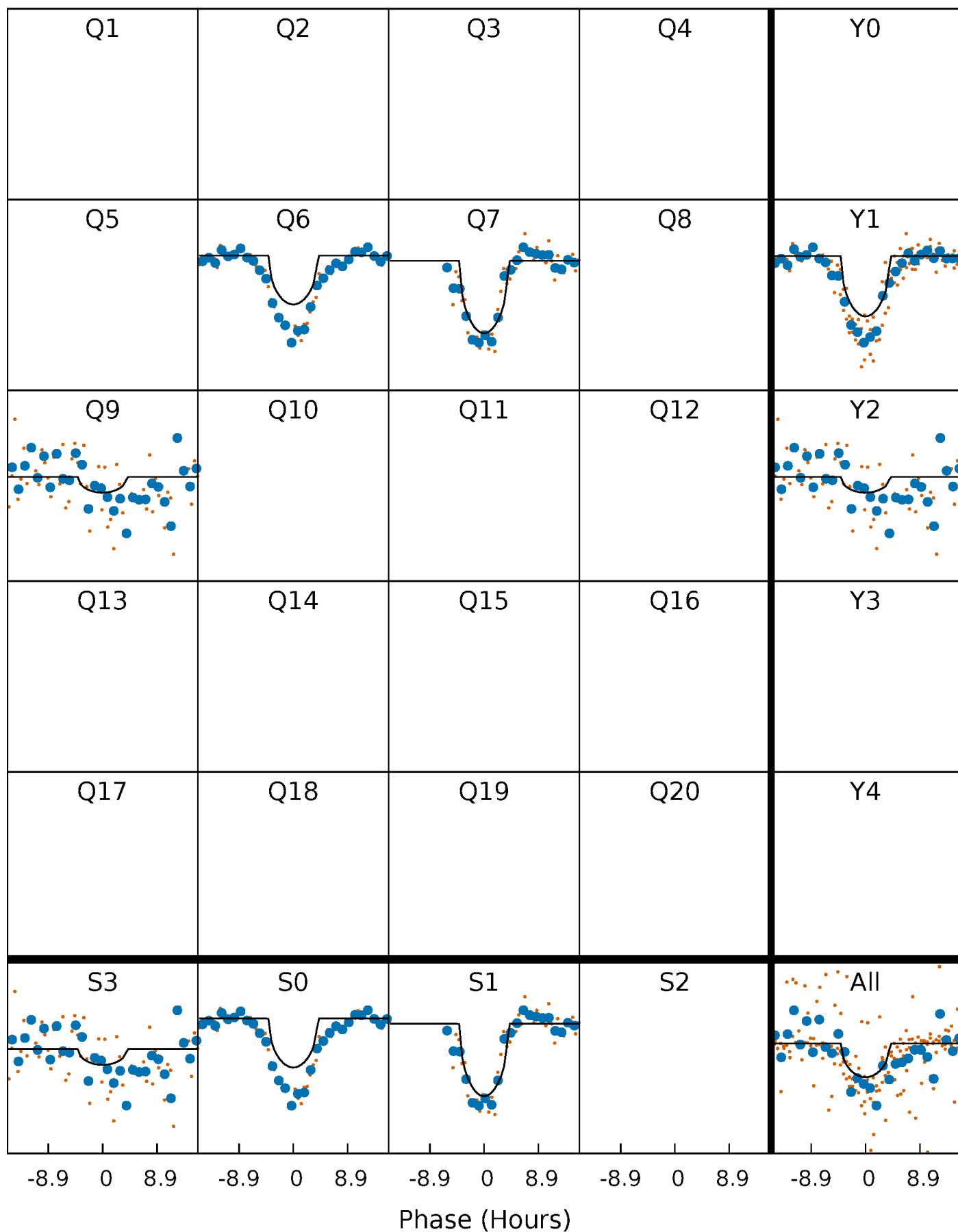
TCE 006790592-01 P=106.108292 Days  $T_0=181.168723$  (BKJD)





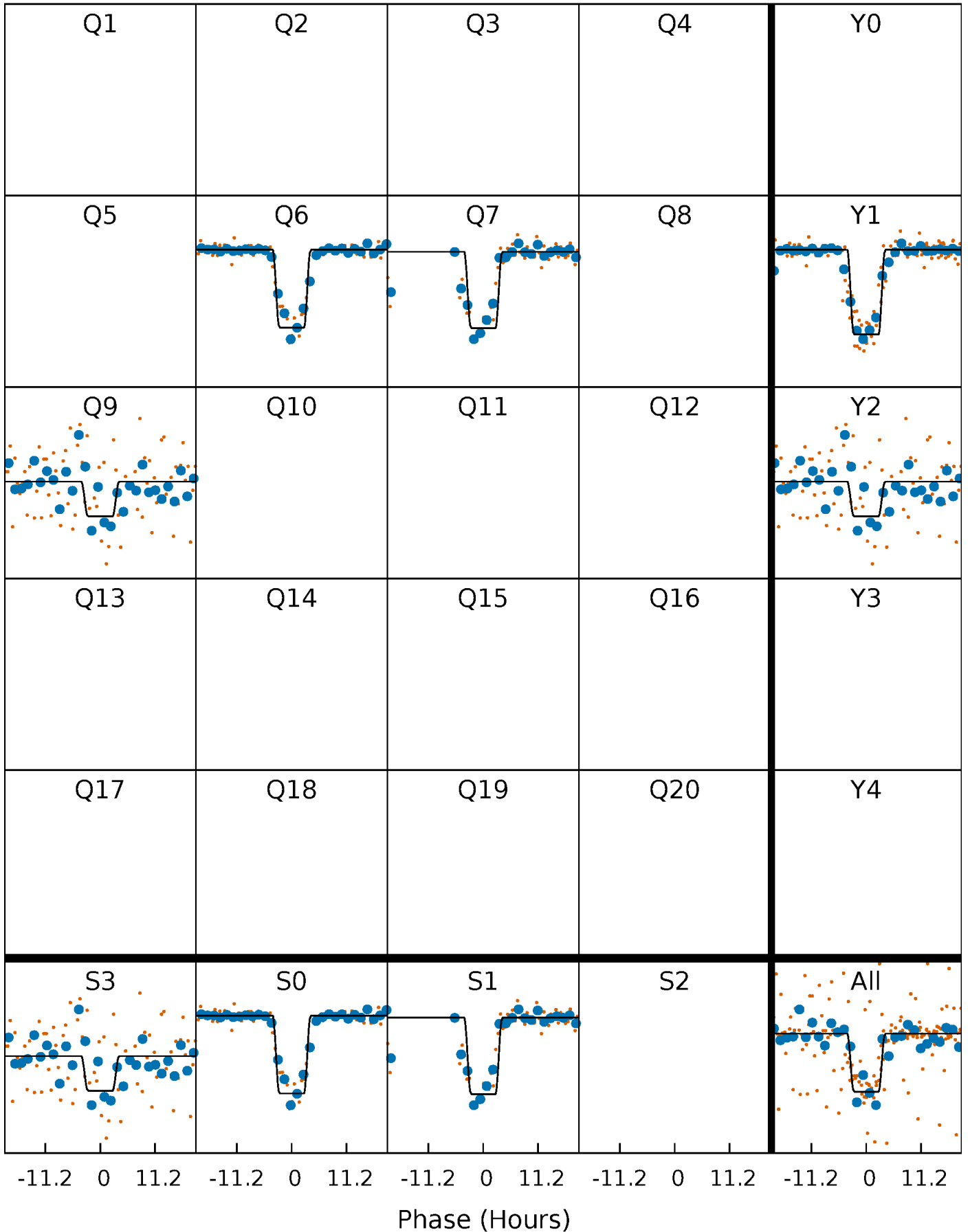
# DV Quarter-Phased Transit Curves

TCE 006790592-01 P=106.108292 Days  $T_0=181.168723$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

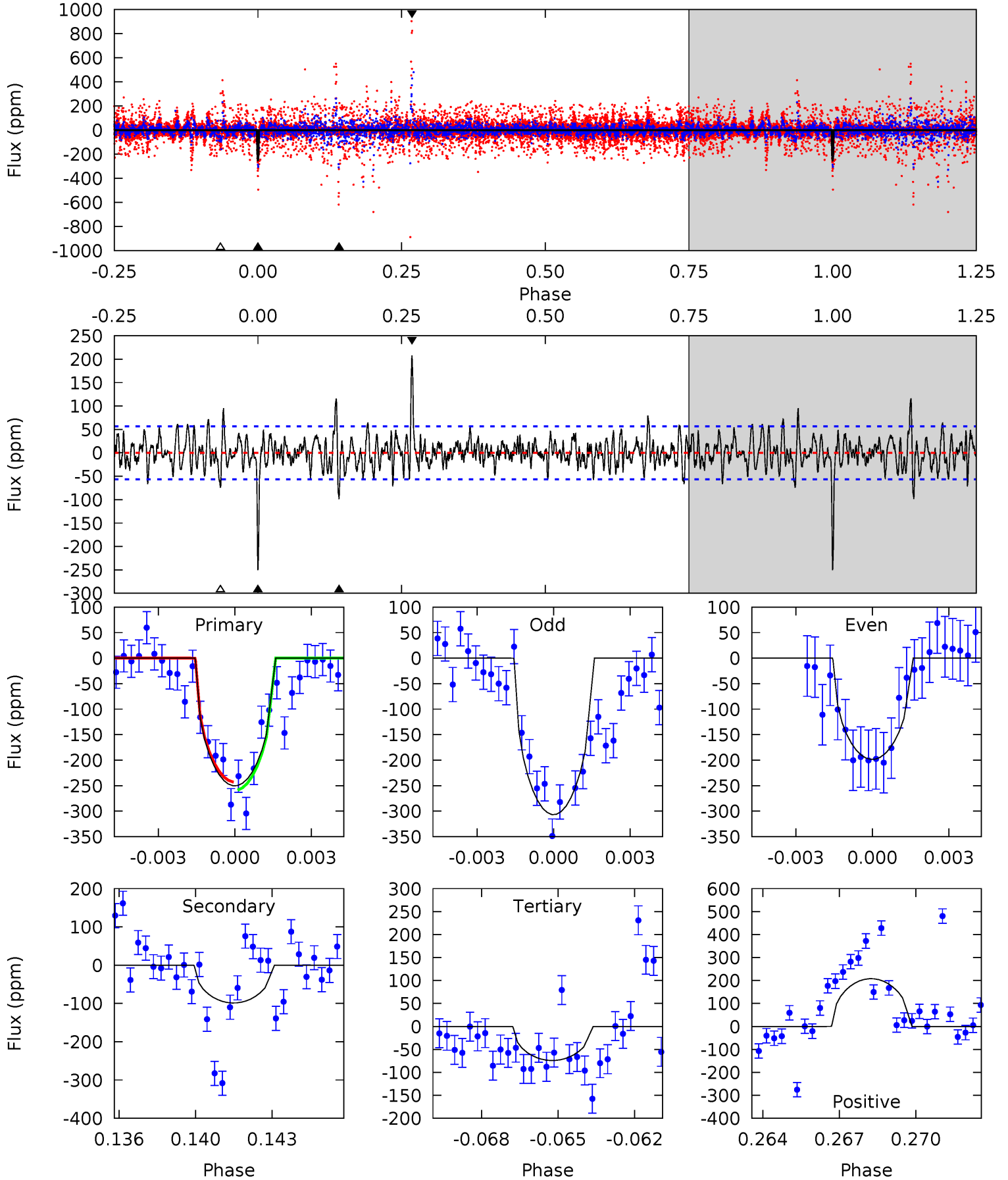
TCE 006790592-01 P=106.104858 Days  $T_0=181.172664$  (BKJD)



# DV Model-Shift Uniqueness Test

006790592-01, P = 106.108292 Days, E = 181.168723 Days

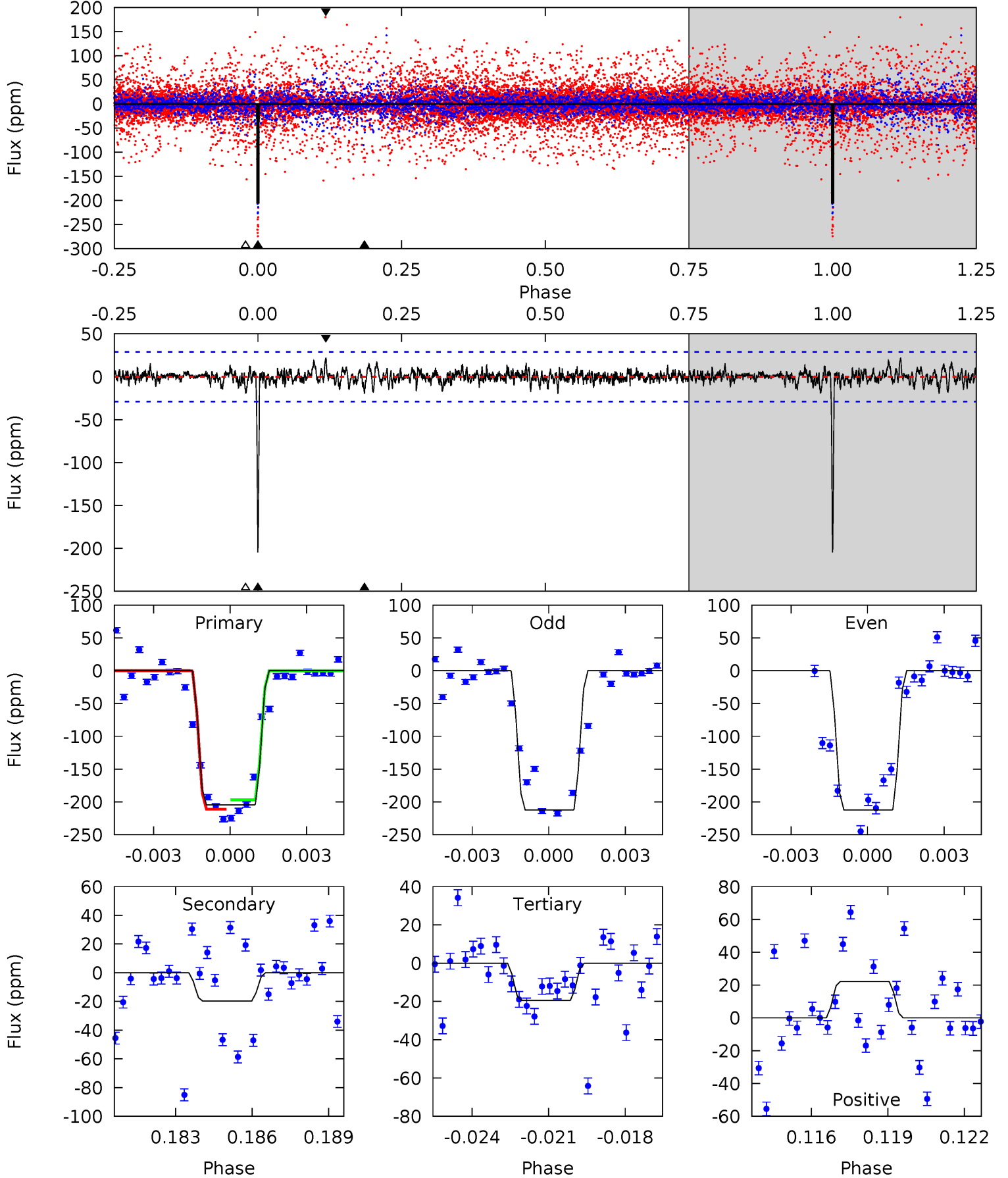
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.2	9.17	6.89	19.3	5.25	2.96	2.35	16.3	3.94	2.28	-10.1	3.26	0.97	0.45	0.72



# Alt Model-Shift Uniqueness Test

006790592-01, P = 106.104858 Days, E = 181.172664 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
37.0	3.58	3.53	4.00	5.25	2.96	0.90	33.5	33.0	0.05	-0.43	0.02	1.00	0.10	0



### Stellar Parameters For KIC 006790592

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	$3287^{+117}_{-78}$	$0.114^{+0.208}_{-0.052}$	$-0.100^{+0.250}_{-0.150}$	$152.969^{+9.192}_{-27.576}$	$1.110^{+0.207}_{-0.128}$	$0.000^{+0.000}_{-0.000}$
	+4%/-2%	+182%/-46%	+250%/-150%	+6%/-18%	+19%/-12%	+95%/-11%
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 006790592-01 / KOI 7791.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-99 \pm 11$	$186.16^{+77.78}_{-67.64}$	$3667^{+163}_{-208}$	$2261^{+1079}_{-5056}$	$0.325^{+0.487}_{-0.158}$
Alt.	$-20 \pm 6$	$240.82^{+81.57}_{-75.87}$	$3658^{+181}_{-200}$	$-3034^{+155}_{-132}$	$0.039^{+0.051}_{-0.019}$

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

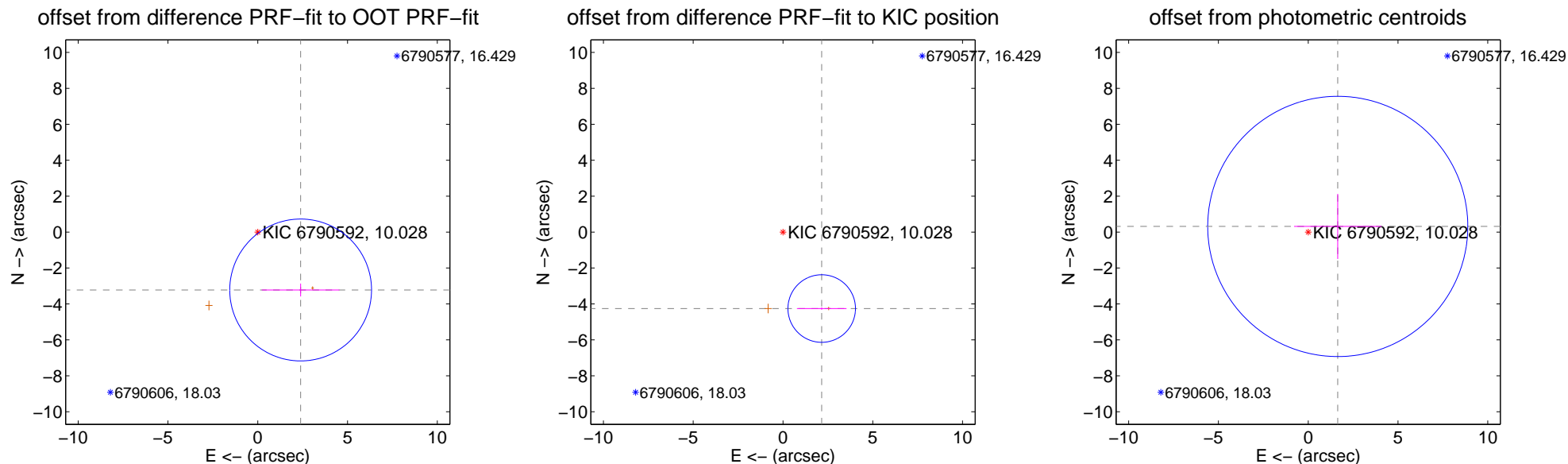
## DV Centroid Data

Supplemental centroid analysis for 006790592-01. **Kepler magnitude: 10.03.** Transit SNR 13.48

**There are 0 quarters with good PRF difference image offsets**

The direct PRF centroid is offset from the target star catalog position by about 1.90 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	<b><math>4.012 \pm 1.316</math></b>	<b>3.05</b>	$-2.389 \pm 2.156$	$-3.223 \pm 0.361$
PRF-fit source offset from KIC position	<b><math>4.772 \pm 0.627</math></b>	<b>7.61</b>	$-2.157 \pm 1.380$	$-4.256 \pm 0.067$
photometric centroid source offset	$1.68 \pm 2.41$	0.69	$-1.65 \pm 2.43$	$0.31 \pm 1.81$

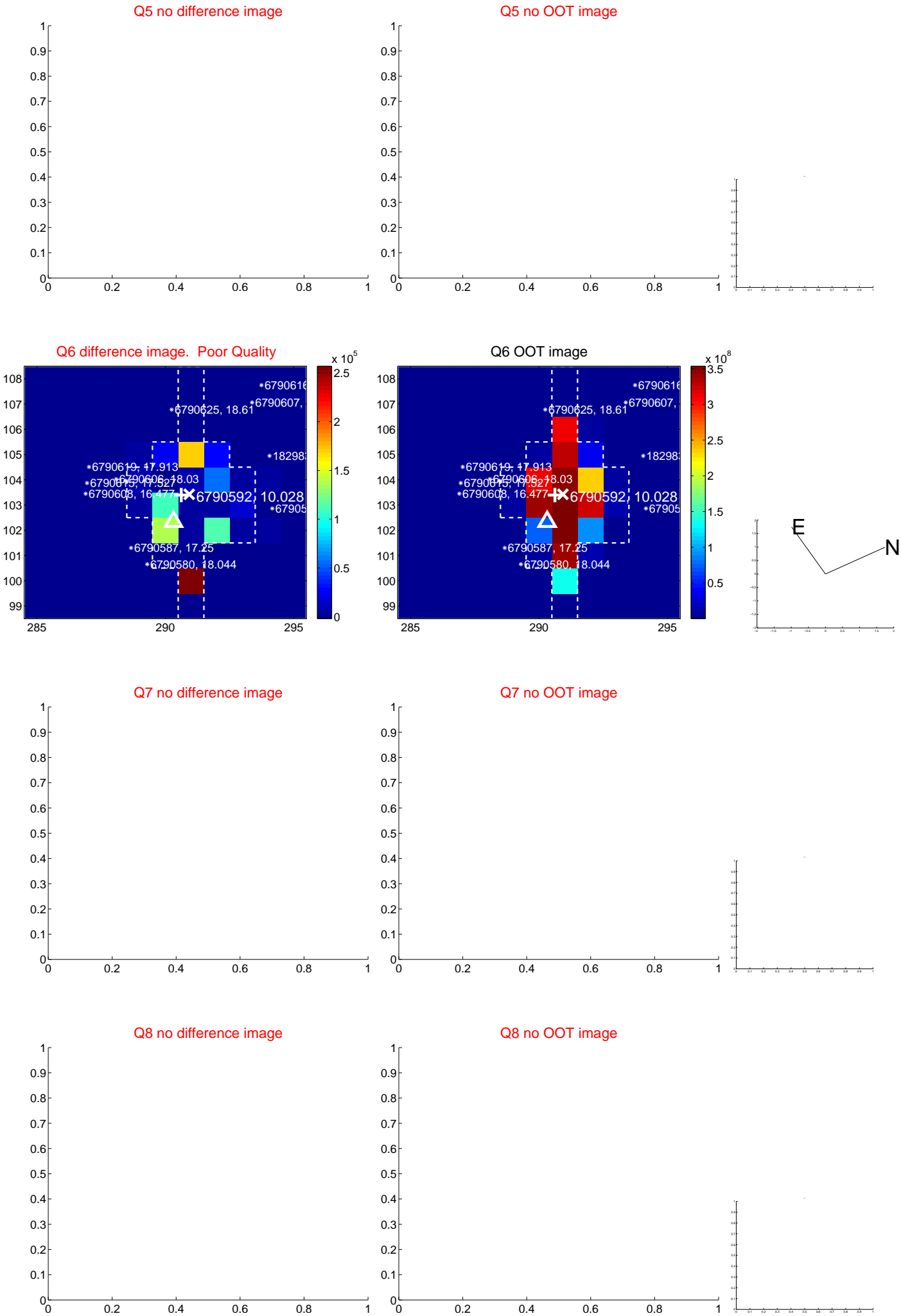


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

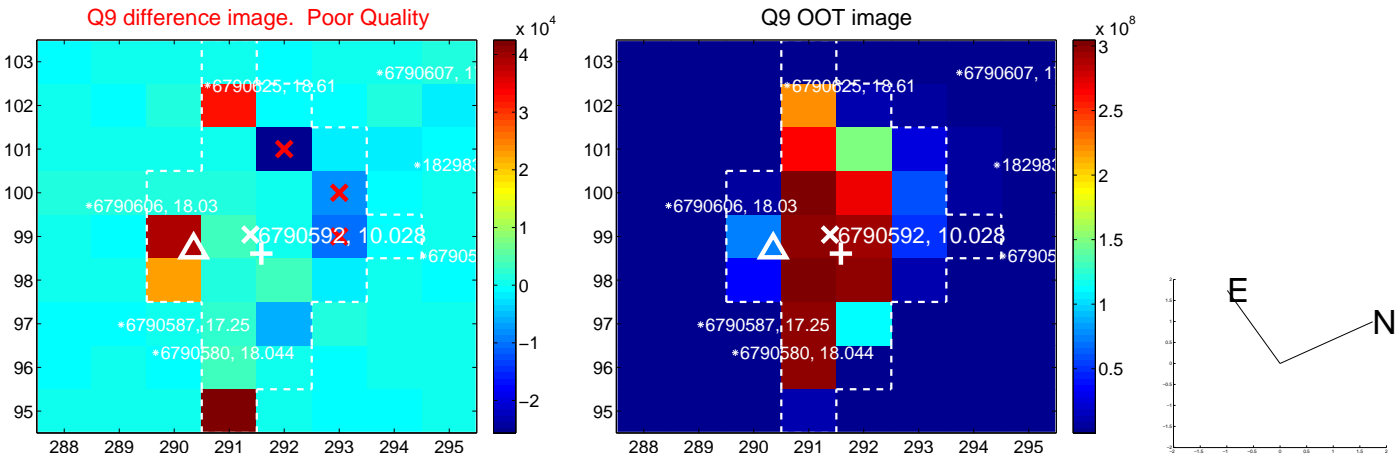


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.





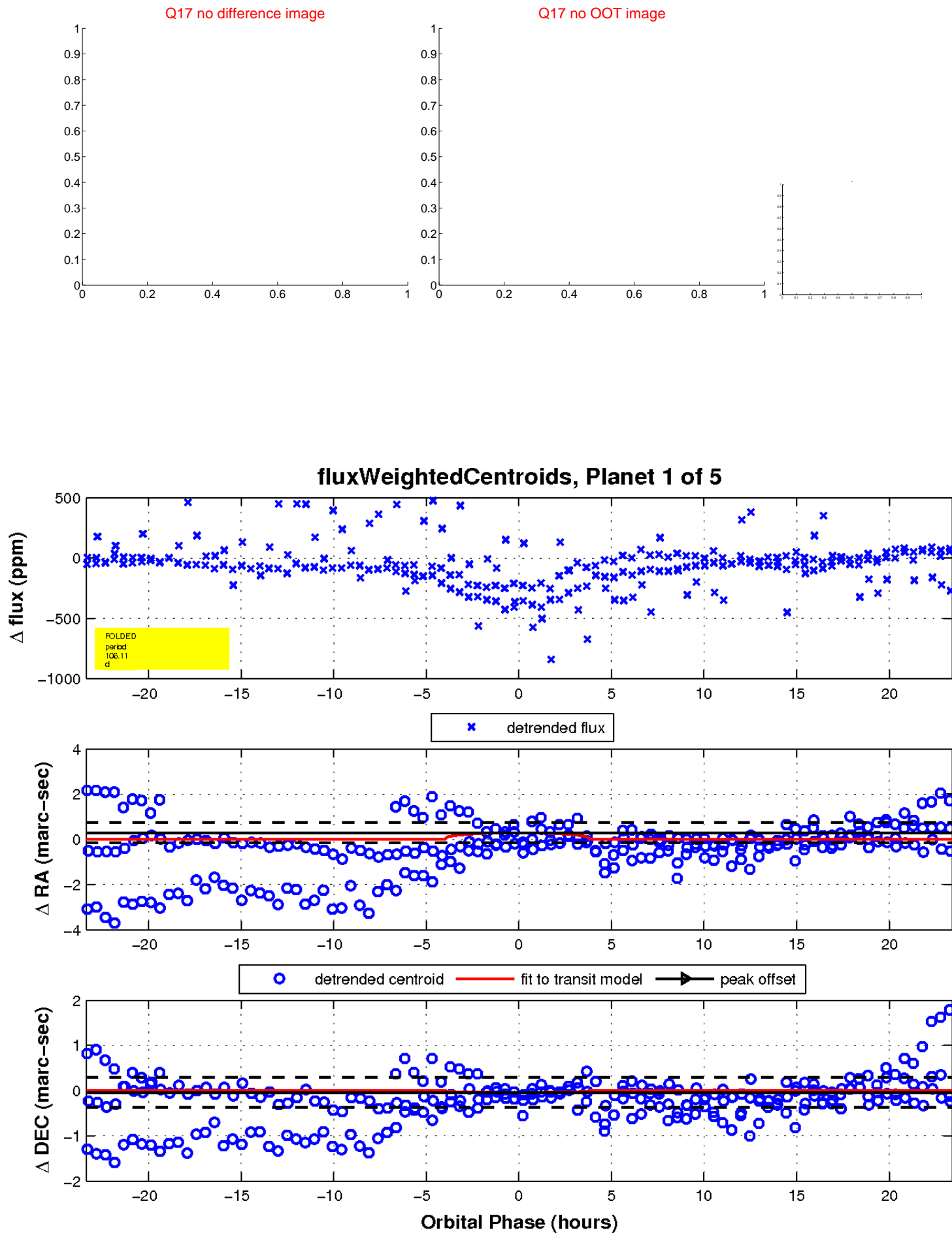
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

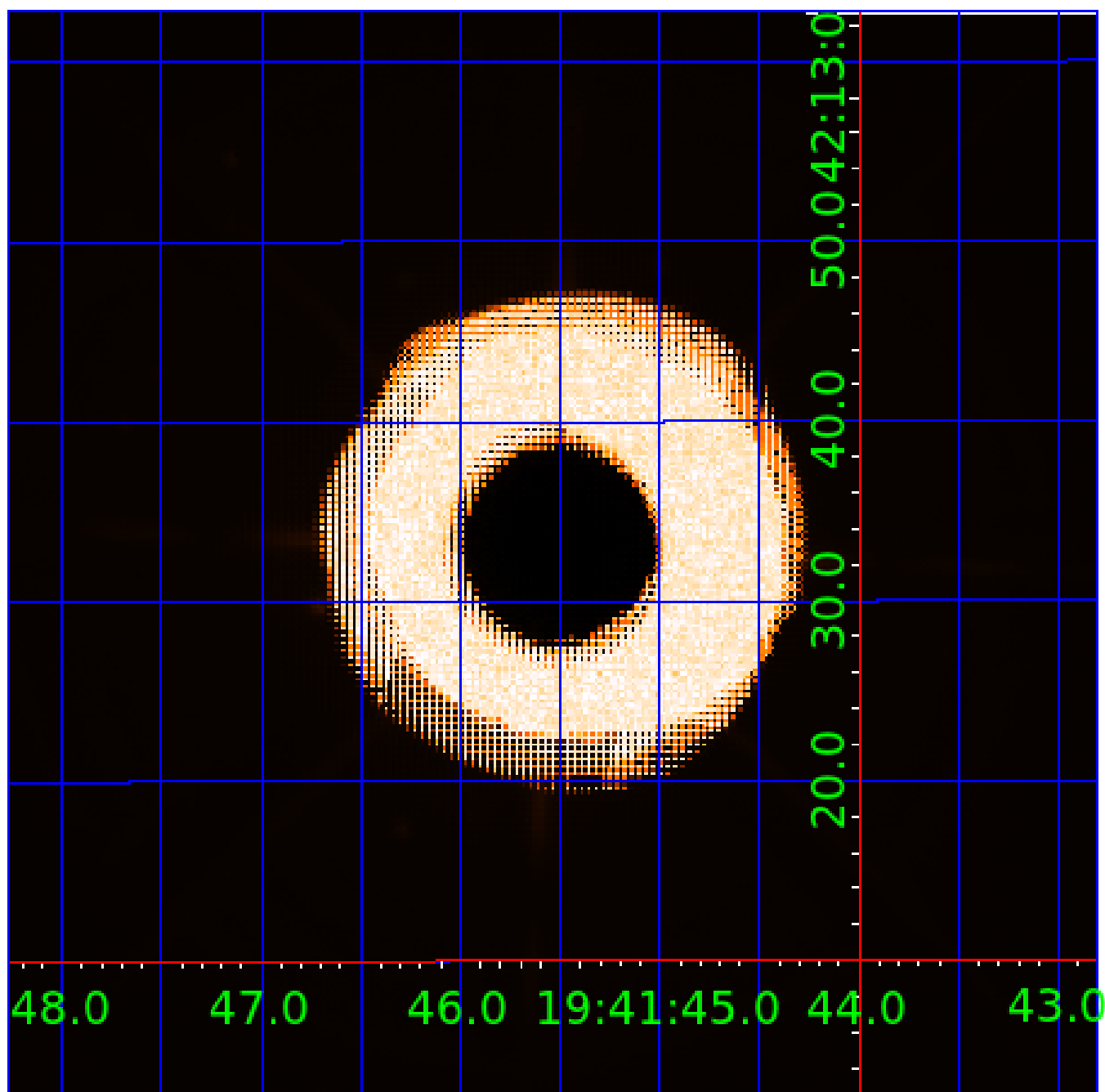


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination



# KIC 006790592

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006790592-01	OBS	7791.01	106.108292	181.168723	183.4	7.808	13.7	13.5	152.97	3287	198.13	0.00
006790592-02	OBS	No	111.412368	147.706469	152.9	13.539	9.7	8.7	152.97	3287	173.48	0.00
006790592-04	OBS	No	70.960521	168.281974	37.8	1.924	8.6	1.7	152.97	3287	130.50	0.00
006790592-05	OBS	No	70.976750	168.417409	56.0	9.000	10.8	-1.0	152.97	3287	105.03	20277.17

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006790592-01	OBS	PC	0.81	0	0	0	0	PLANET_IN_STAR—CENT_SATURATED
006790592-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—INCONSISTENT_TRANS—CENT_SATURATED
006790592-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006790592-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_SATURATED

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

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

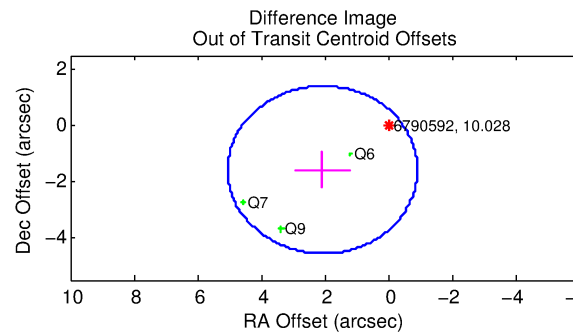
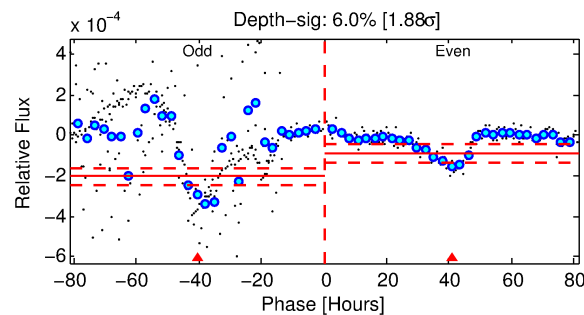
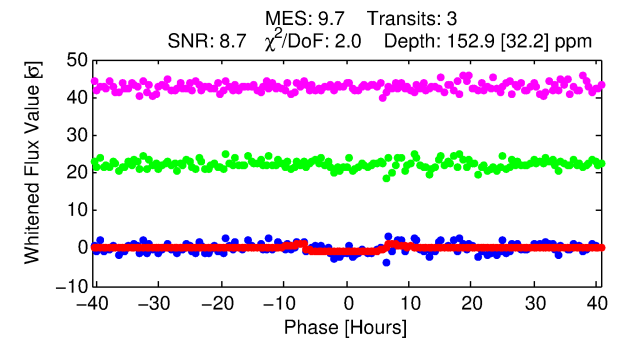
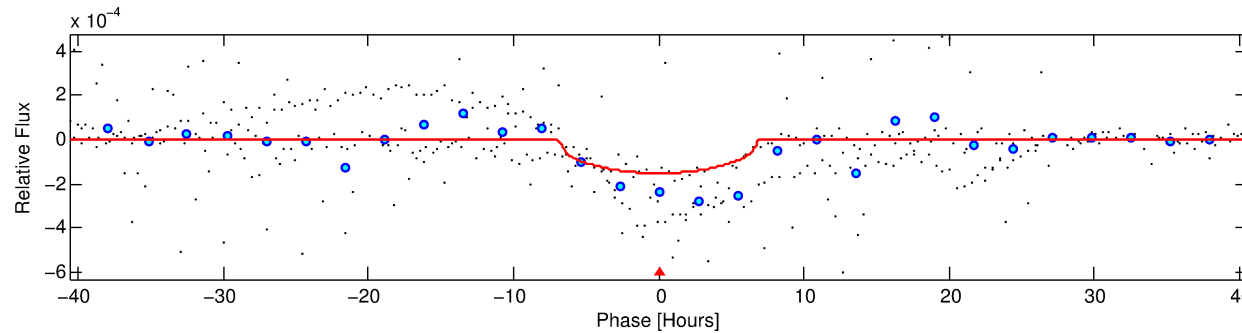
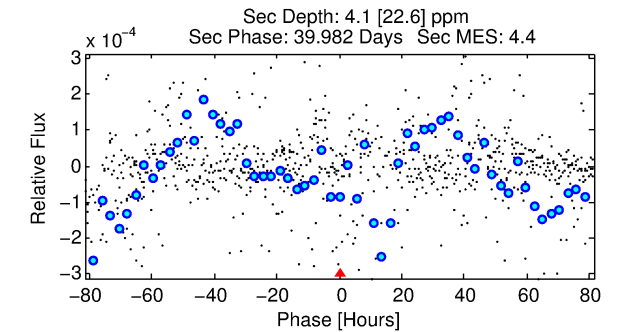
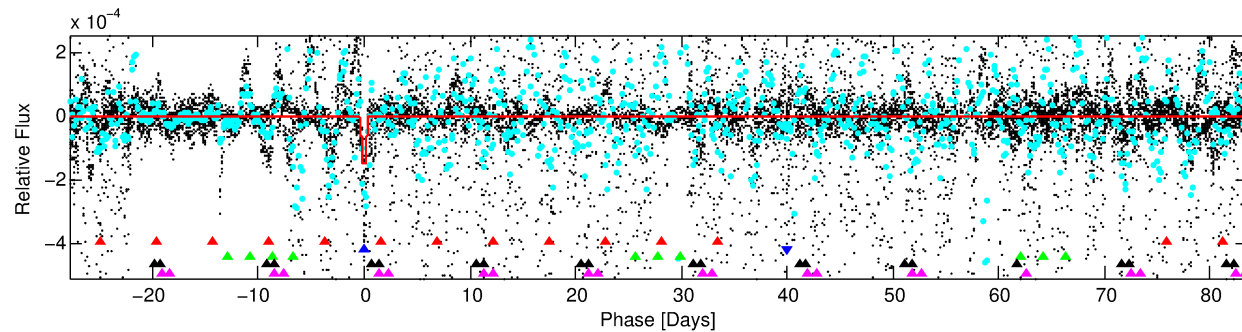
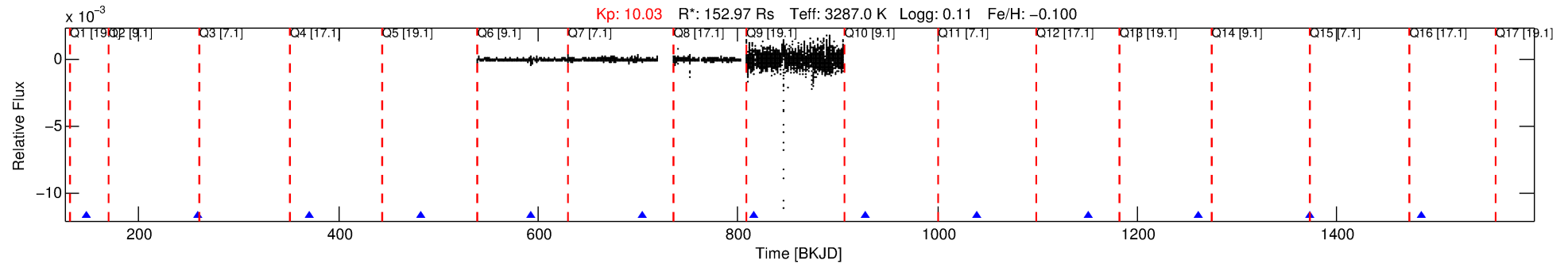
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 006790592-02

No Significant Match Found

# DV One-Page Summary

KIC: 6790592 Candidate: 2 of 5 Period: 111.412 d



## DV Fit Results:

Period = 111.41237 [0.00636] d  
Epoch = 147.7065 [0.0291] BKJD  
 $R_p/R^*$  = 0.0104 [0.0038]  
 $a/R^*$  = 63.24 [48.09]  
 $b$  = 0.09 [8.14]  
 $S_{\text{eff}}$  = N/A  
 $T_{\text{eq}}$  = N/A  
 $R_p$  = 173.48 [70.36] Re  
 $a$  = N/A  
 $A_g$  = N/A  
 $T_{\text{eff}}$  = N/A

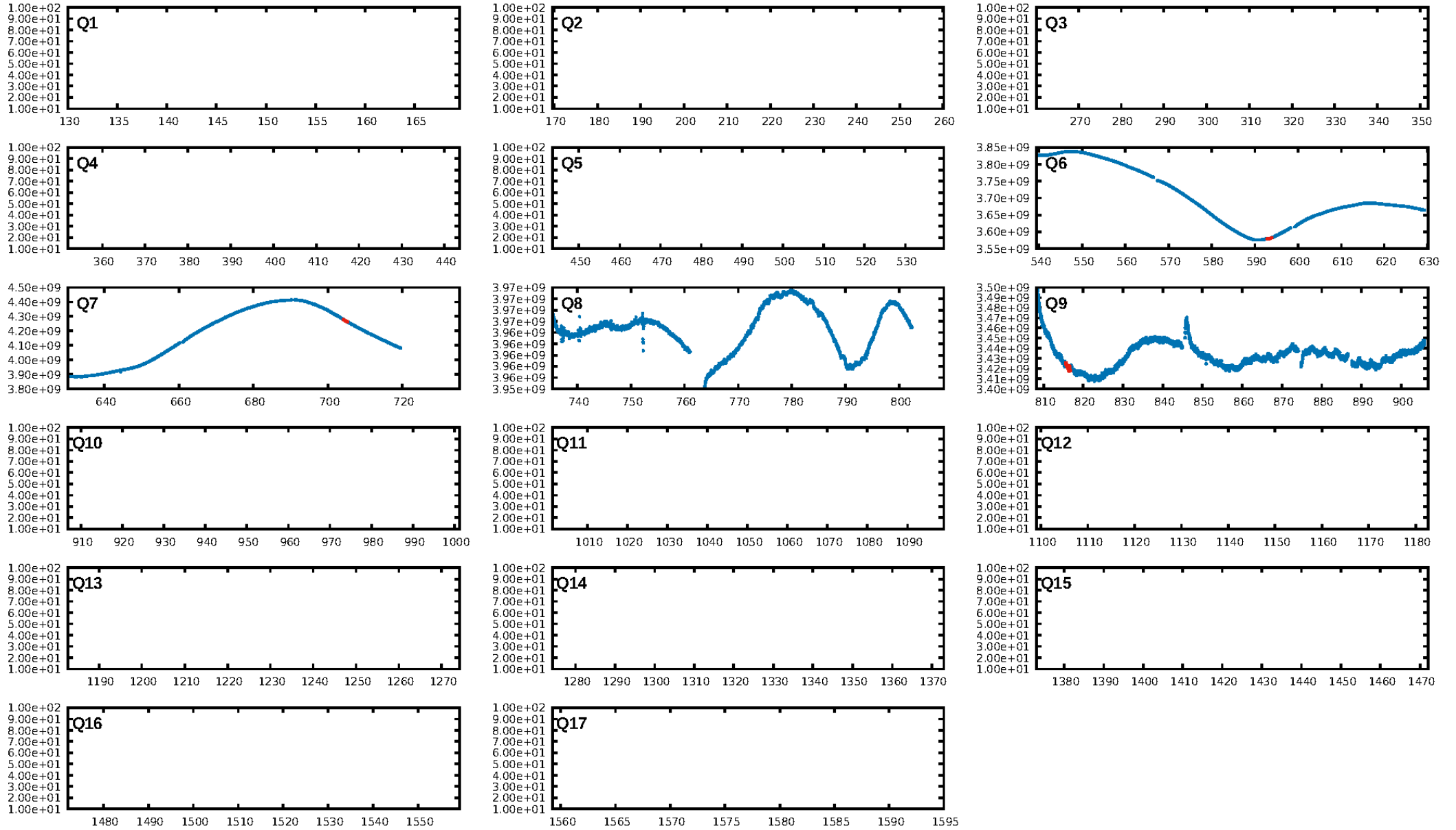
## DV Diagnostic Results:

ShortPeriod-sig: 100.0% [8.15 $\sigma$ ]  
LongPeriod-sig: 100.0% [58.81 $\sigma$ ]  
ModelChiSquare2-sig: 5.2%  
ModelChiSquareGof-sig: 22.3%  
Bootstrap-pfa: 1.34e-07  
RollingBand-fgt: 1.00 [3/3]  
GhostDiagnostic-chr: -0.3758  
Centroid-sig: 14.7%  
Centroid-so: 4.100 arcsec [1.22 $\sigma$ ]  
OotOffset-rm: 2.599 arcsec [2.61 $\sigma$ ]  
KicOffset-rm: 3.306 arcsec [5.62 $\sigma$ ]  
OotOffset-st: 1/1/0/1 [3]  
KicOffset-st: 1/1/0/1 [3]  
DiffImageQuality-fgm: 0.33 [1/3]  
DiffImageOverlap-fno: 0.67 [2/3]

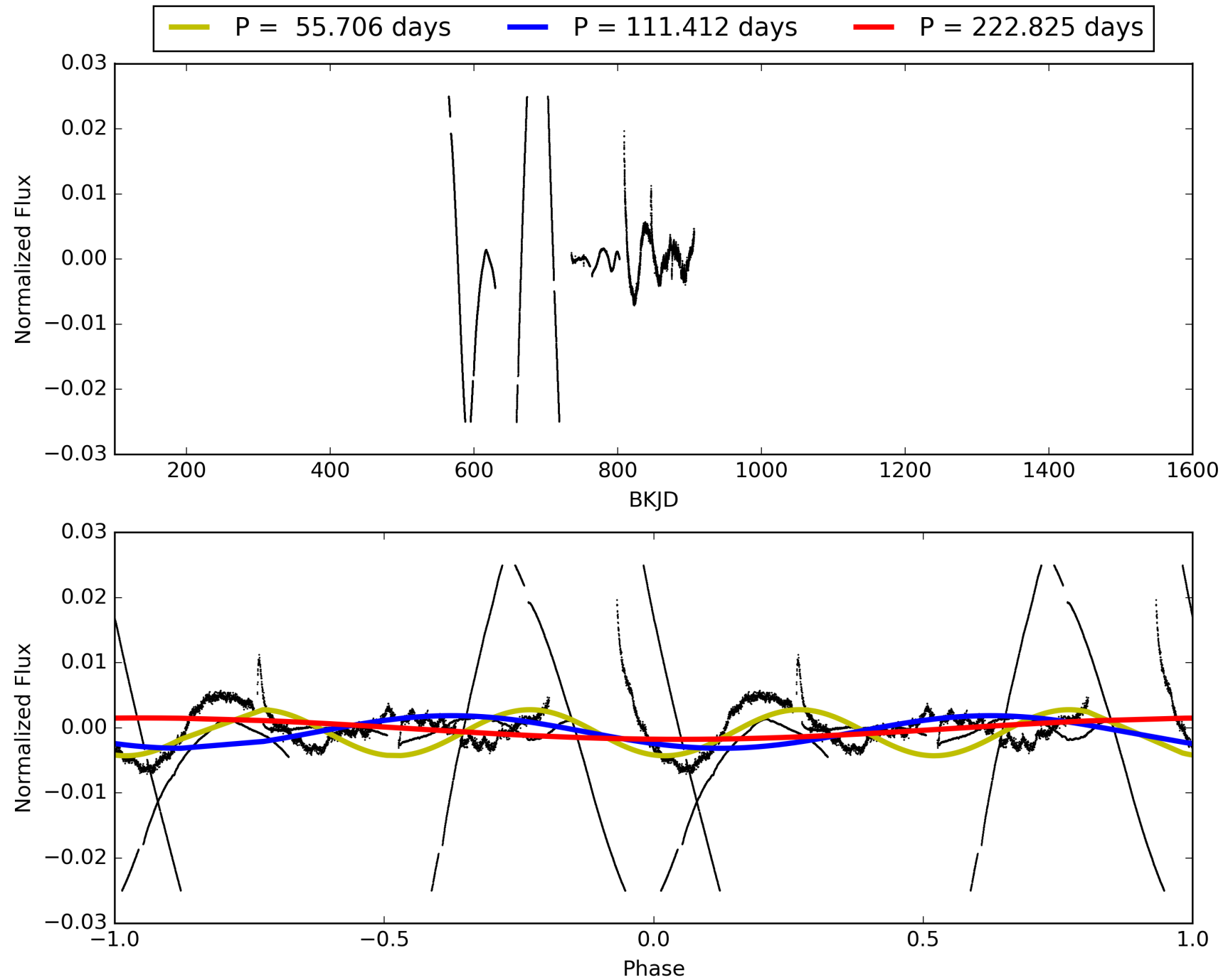
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:47:41 Z

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

# TCE 006790592-02, PDC Light Curves



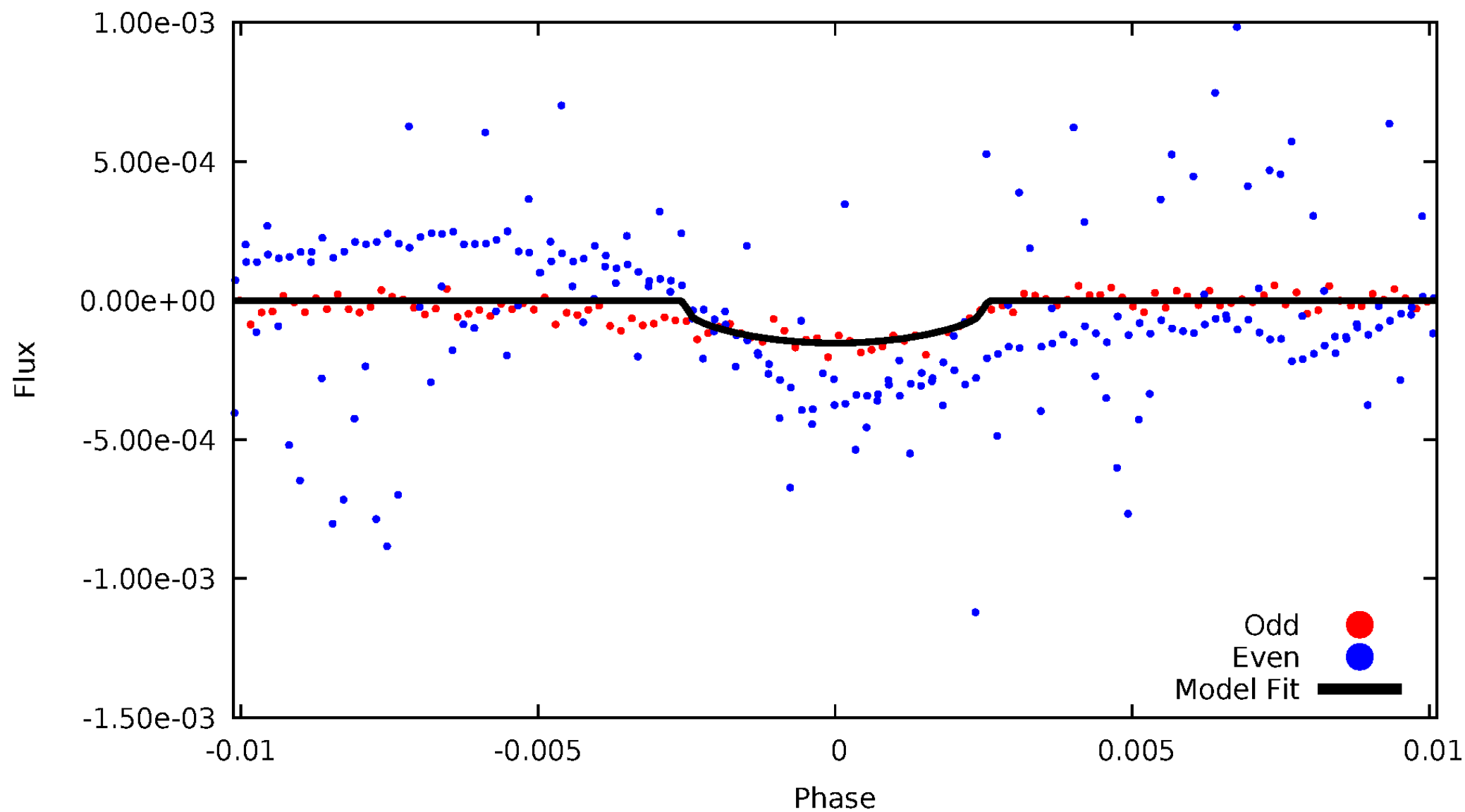
TCE 006790592-02





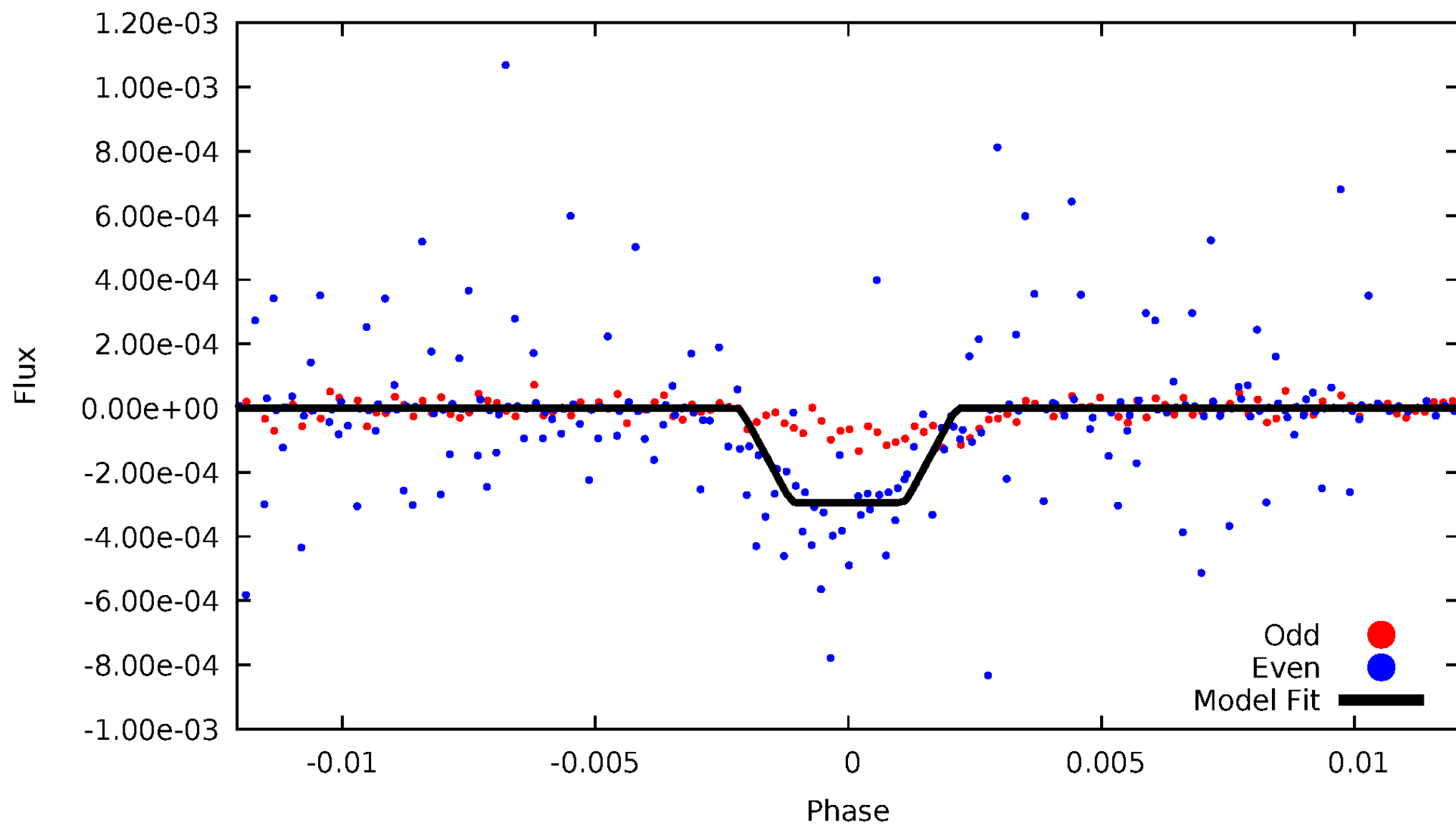
# DV Odd/Even

TCE 006790592-02



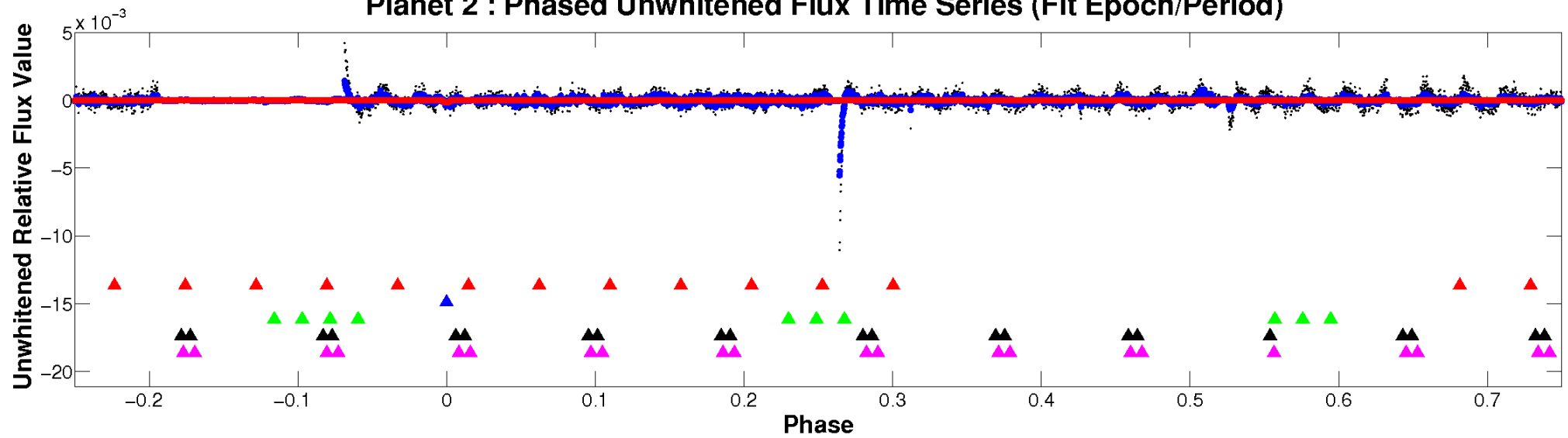
# ALT Odd/Even

TCE 006790592-02

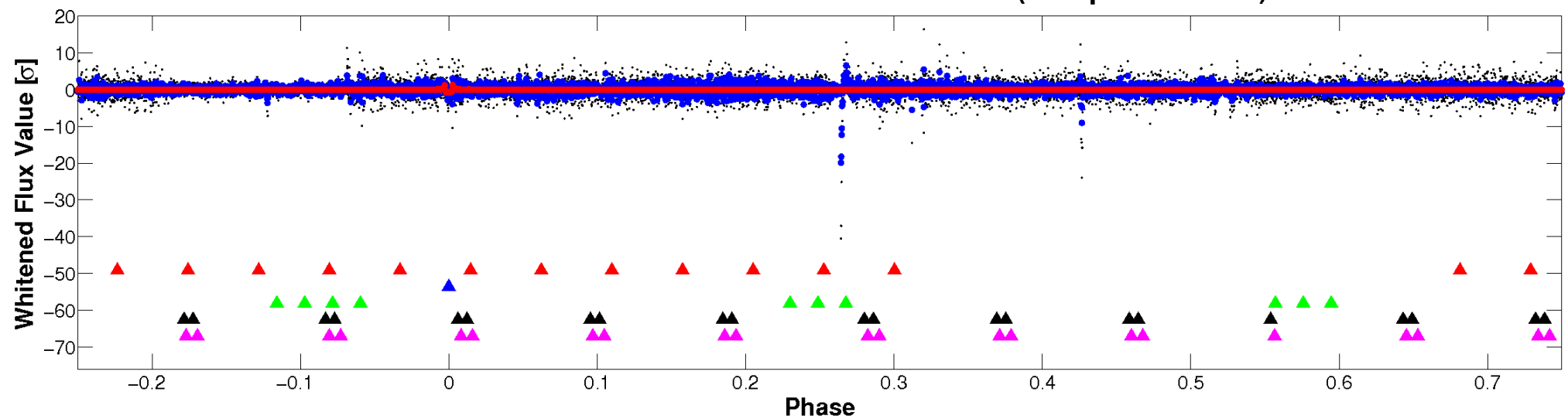


# Non-Whitened Vs. Whitened Light Curve

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

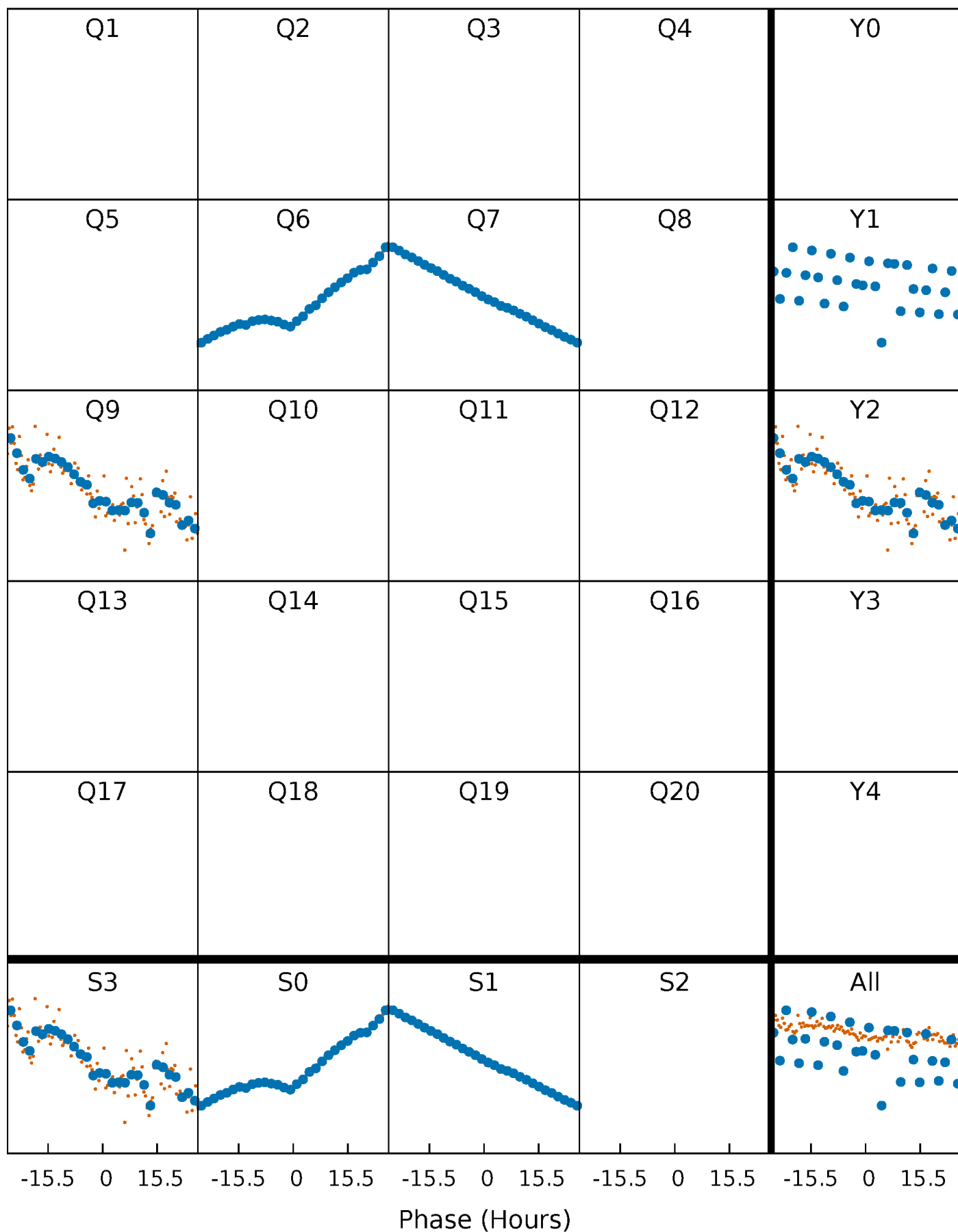


## Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



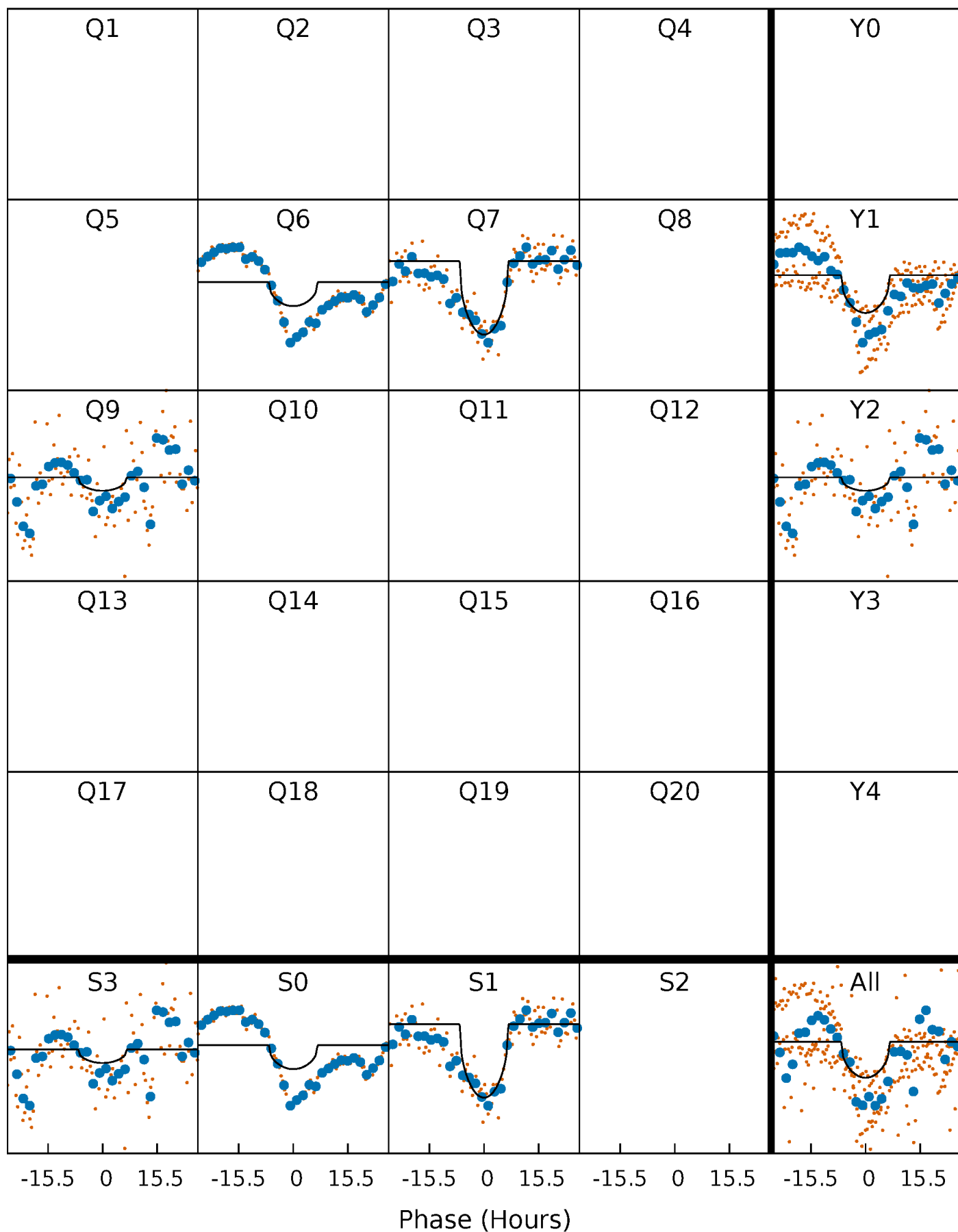
# PDC Quarter-Phased Transit Curves

TCE 006790592-02     $P=111.412368$  Days     $T_0=147.706468$  (BKJD)



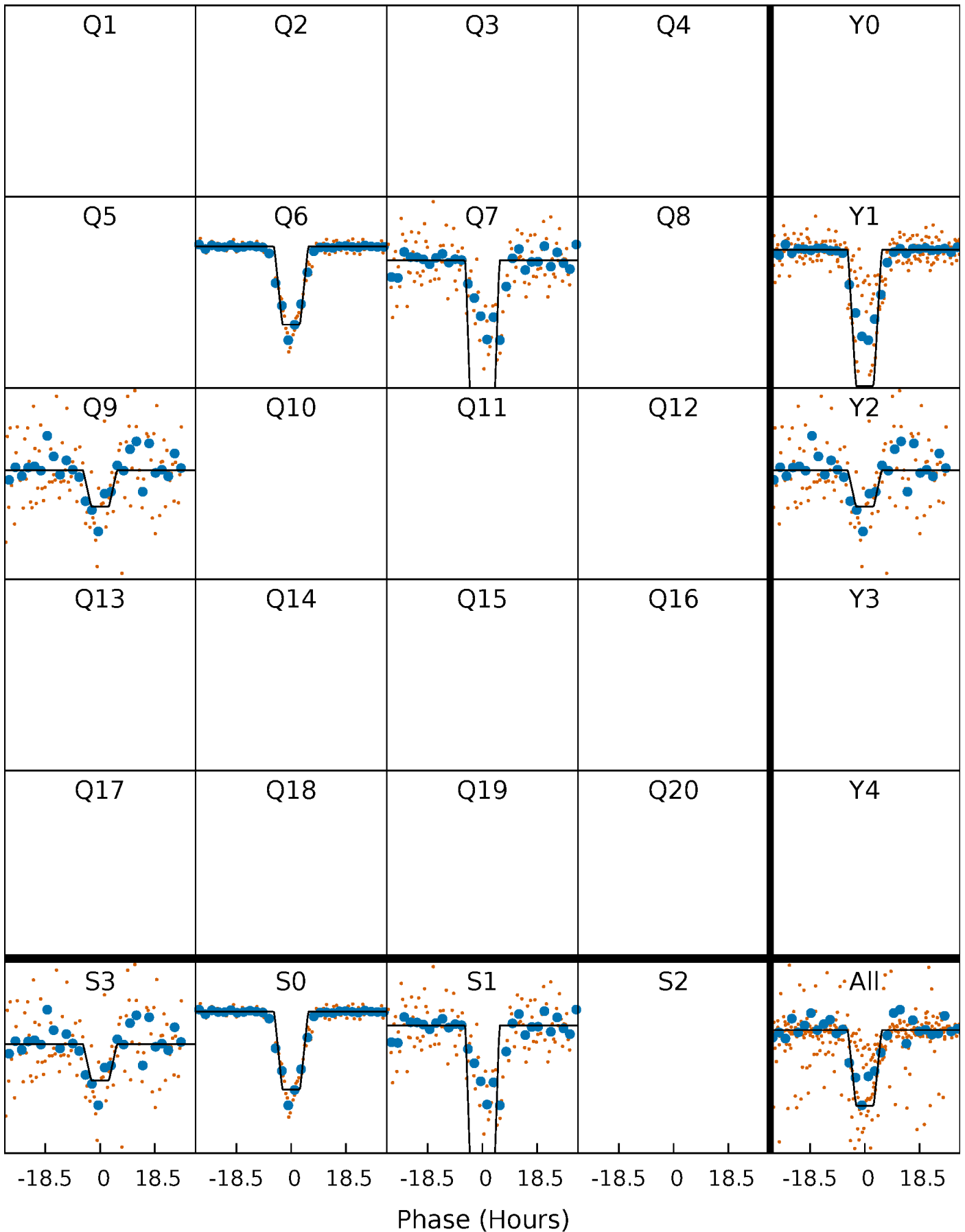
# DV Quarter-Phased Transit Curves

TCE 006790592-02     $P=111.412368$  Days     $T_0=147.706468$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

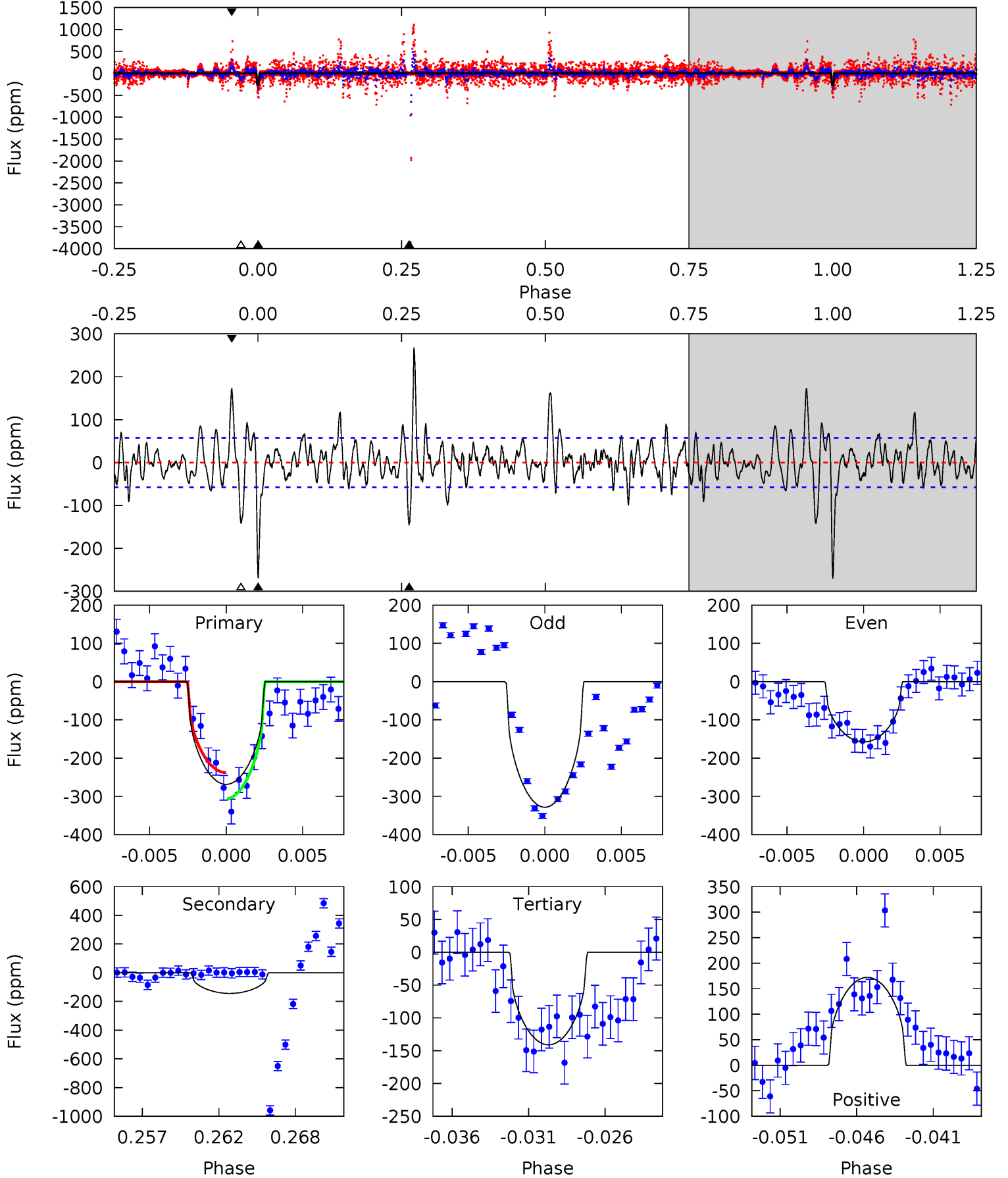
TCE 006790592-02     $P=111.404282$  Days     $T_0=147.710483$  (BKJD)



# DV Model-Shift Uniqueness Test

006790592-02, P = 111.412368 Days, E = 147.706468 Days

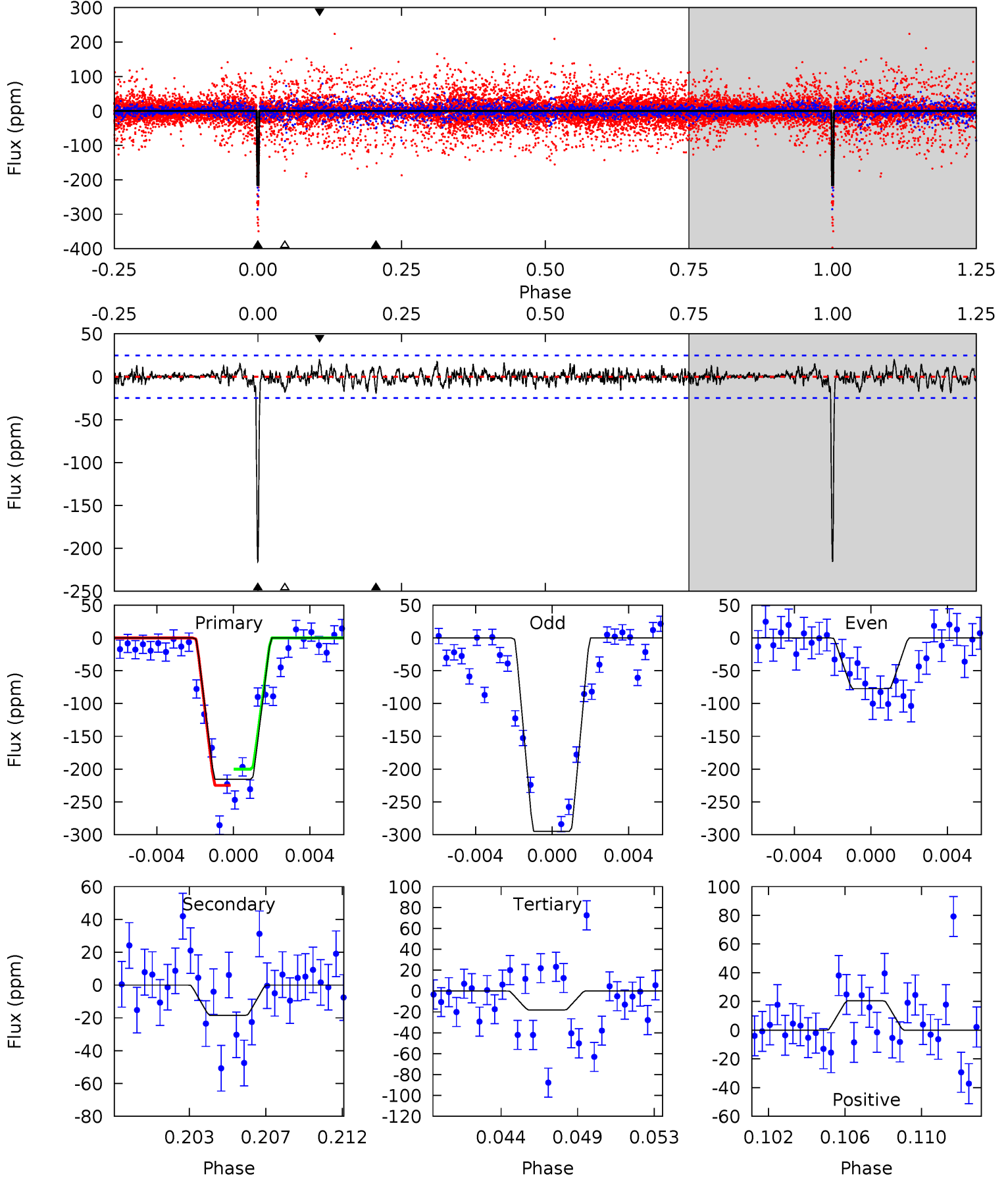
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.0	12.9	12.6	15.4	5.15	2.80	3.52	11.4	8.61	0.26	-2.52	4.39	0.83	0.50	2.71



# Alt Model-Shift Uniqueness Test

006790592-02, P = 111.404282 Days, E = 147.710483 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
44.9	3.85	3.79	4.26	5.18	2.85	1.04	41.1	40.7	0.05	-0.42	21.8	0.79	0.09	0





### Stellar Parameters For KIC 006790592

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$3287^{+117}_{-78}$	$0.114^{+0.208}_{-0.052}$	$-0.100^{+0.250}_{-0.150}$	$152.969^{+9.192}_{-27.576}$	$1.110^{+0.207}_{-0.128}$	$0.000^{+0.000}_{-0.000}$
	+4%/-2%	+182%/-46%	+250%/-150%	+6%/-18%	+19%/-12%	+95%/-11%
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 006790592-02 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-144 \pm 11$	$160.34^{+66.22}_{-58.91}$	$3596^{+162}_{-187}$	$3189^{+759}_{-778}$	$0.691^{+1.081}_{-0.343}$
Alt.	$-18 \pm 5$	$273.84^{+67.79}_{-61.22}$	$3591^{+170}_{-204}$	$-3021^{+122}_{-120}$	$0.030^{+0.024}_{-0.012}$

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

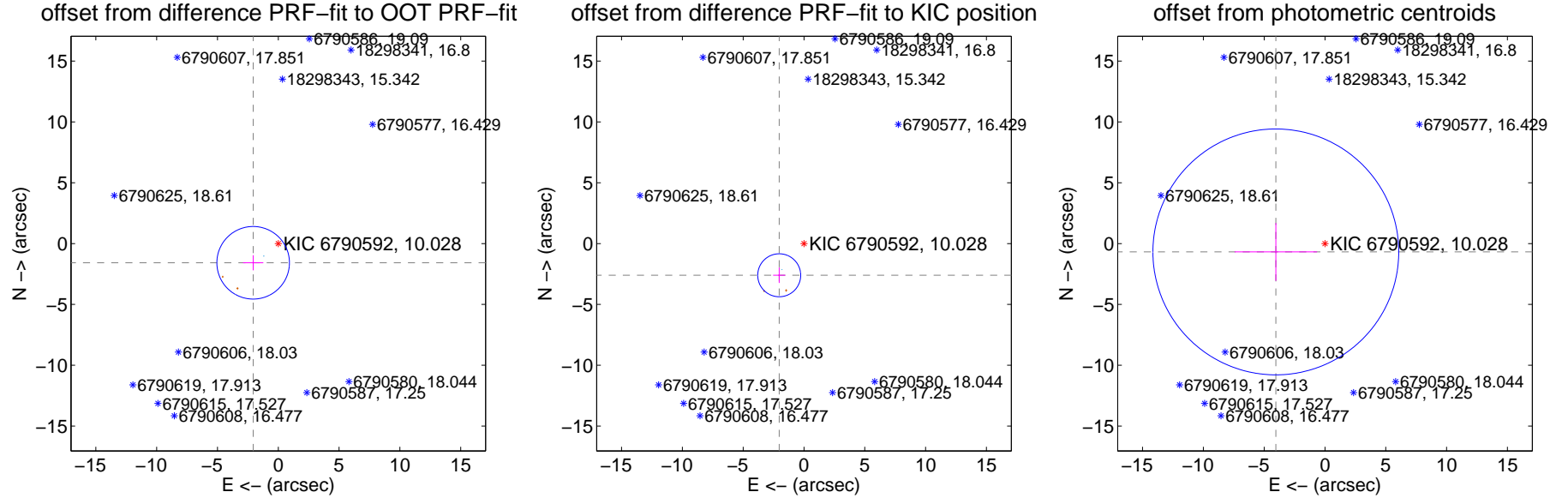
## DV Centroid Data

Supplemental centroid analysis for 006790592-02. **Kepler magnitude: 10.03.** Transit SNR 8.70

**There are 1 quarters with good PRF difference image offsets**

The direct PRF centroid is offset from the target star catalog position by about 1.90 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$2.599 \pm 0.995$	2.61	$2.066 \pm 0.837$	$-1.578 \pm 0.622$
PRF-fit source offset from KIC position	<b><math>3.306 \pm 0.589</math></b>	<b>5.62</b>	$2.037 \pm 0.497$	$-2.605 \pm 0.638$
photometric centroid source offset	$4.10 \pm 3.37$	1.22	$4.04 \pm 3.39$	$-0.69 \pm 2.38$

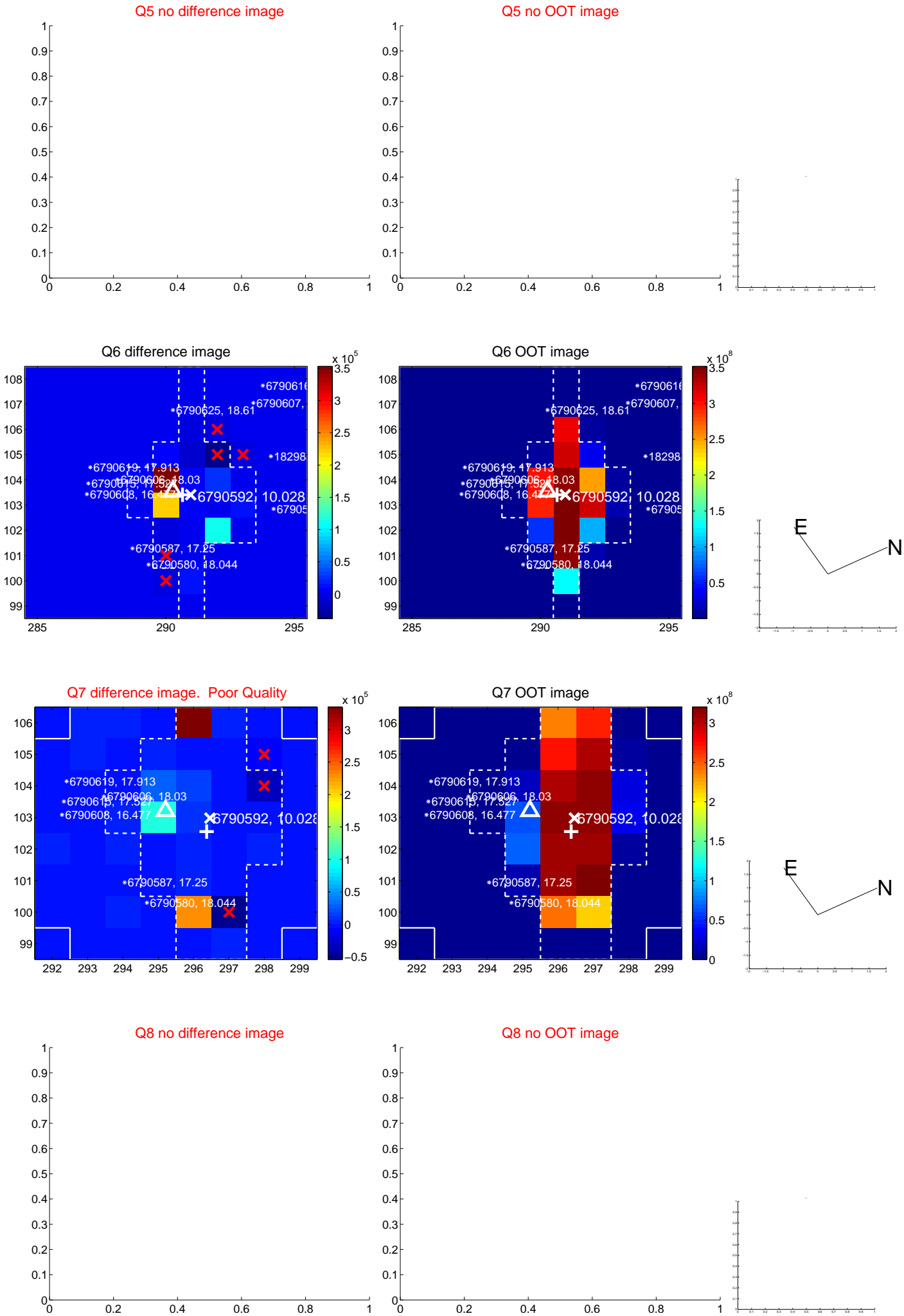


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

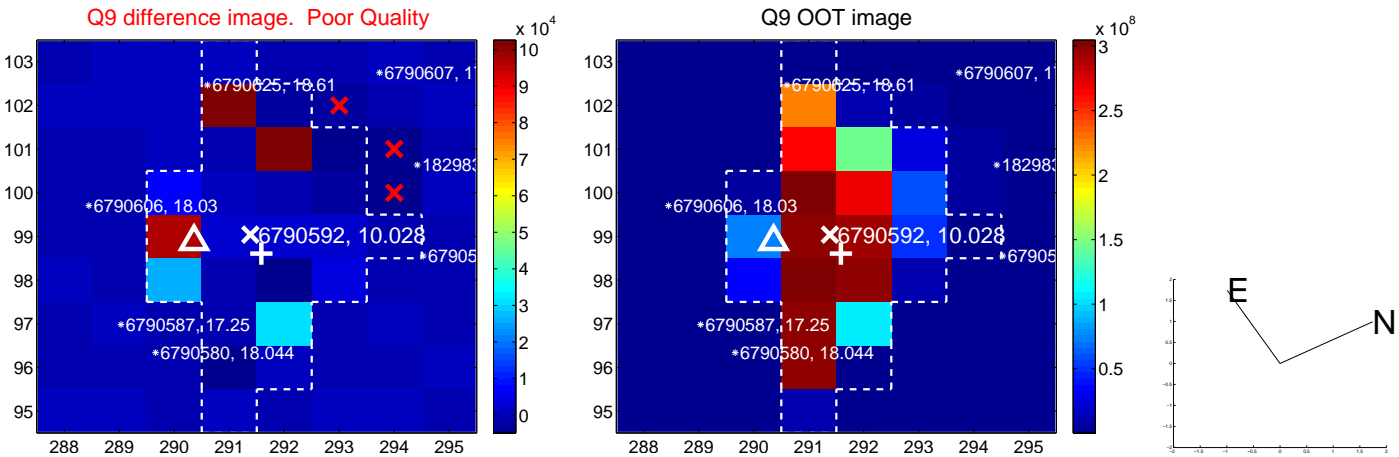
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



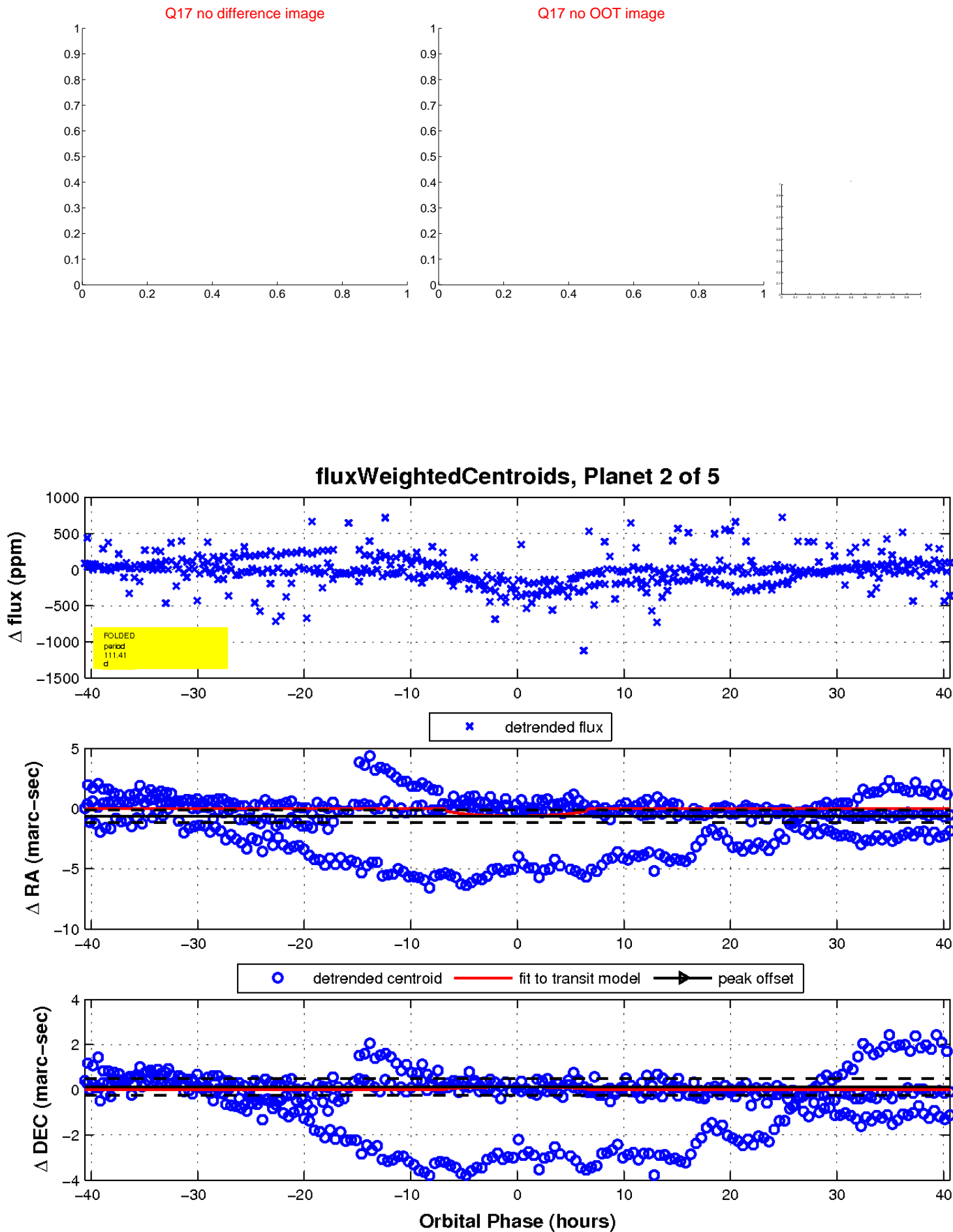
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

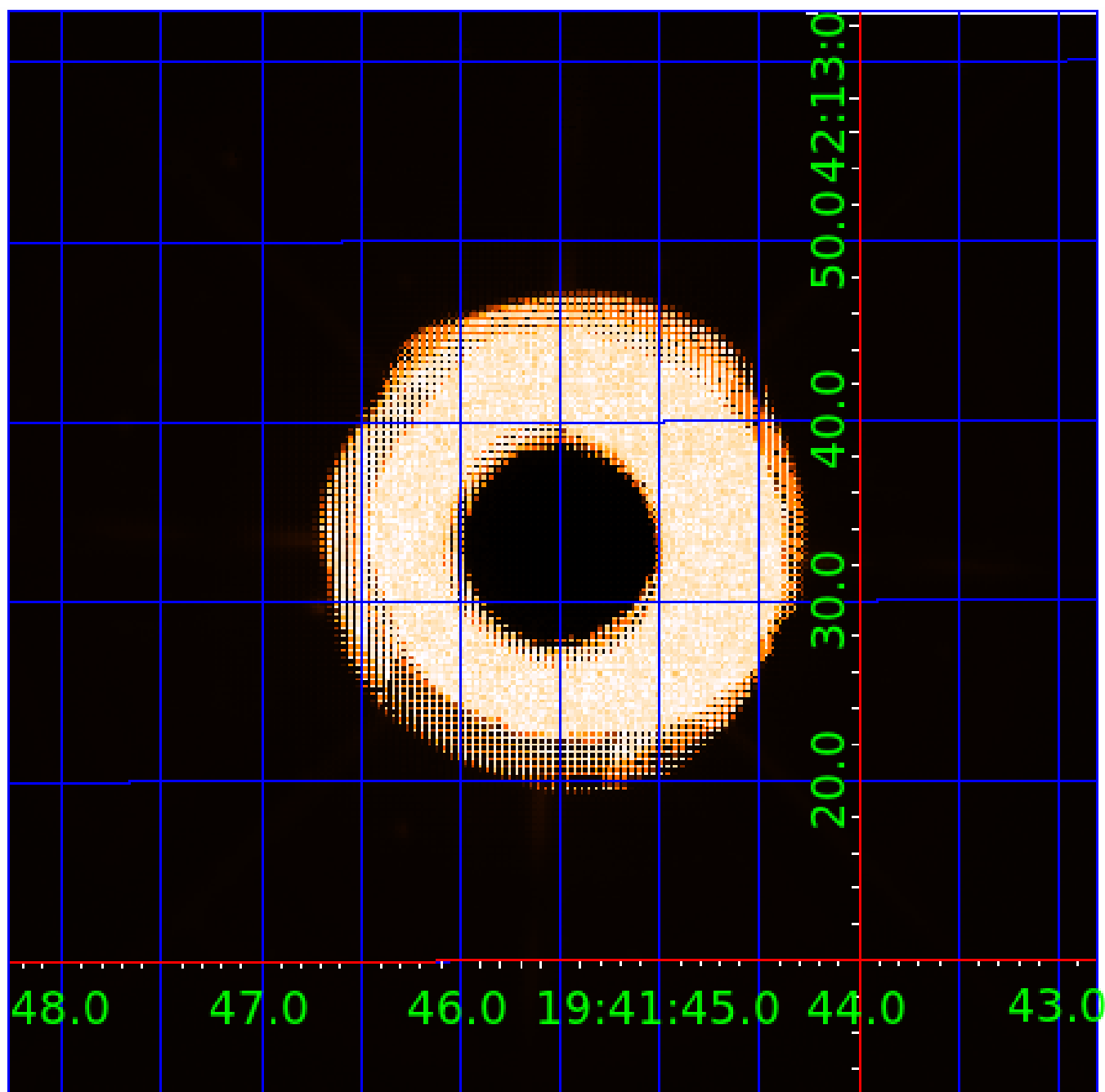


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination





# KIC 006790592

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006790592-01	OBS	7791.01	106.108292	181.168723	183.4	7.808	13.7	13.5	152.97	3287	198.13	0.00
006790592-02	OBS	No	111.412368	147.706469	152.9	13.539	9.7	8.7	152.97	3287	173.48	0.00
006790592-04	OBS	No	70.960521	168.281974	37.8	1.924	8.6	1.7	152.97	3287	130.50	0.00
006790592-05	OBS	No	70.976750	168.417409	56.0	9.000	10.8	-1.0	152.97	3287	105.03	20277.17

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006790592-01	OBS	PC	0.81	0	0	0	0	PLANET_IN_STAR—CENT_SATURATED
006790592-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—INCONSISTENT_TRANS—CENT_SATURATED
006790592-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006790592-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_SATURATED

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

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

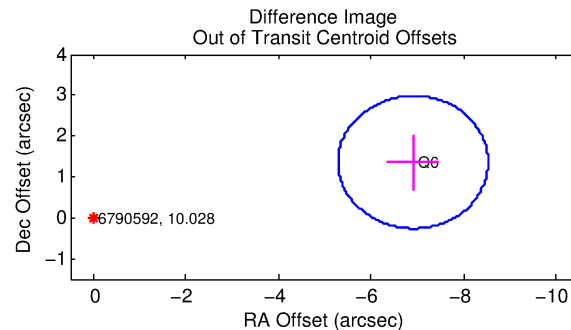
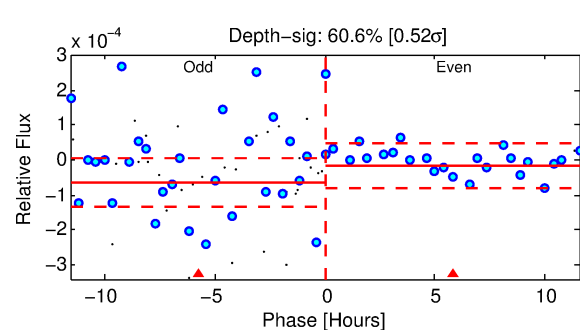
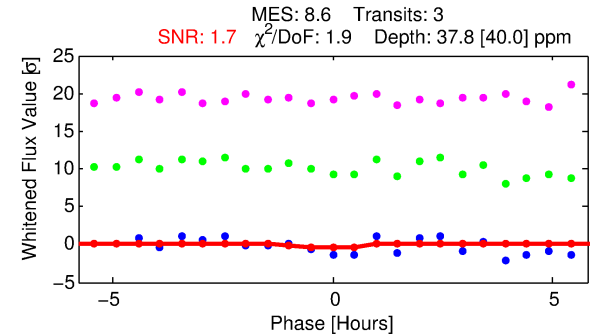
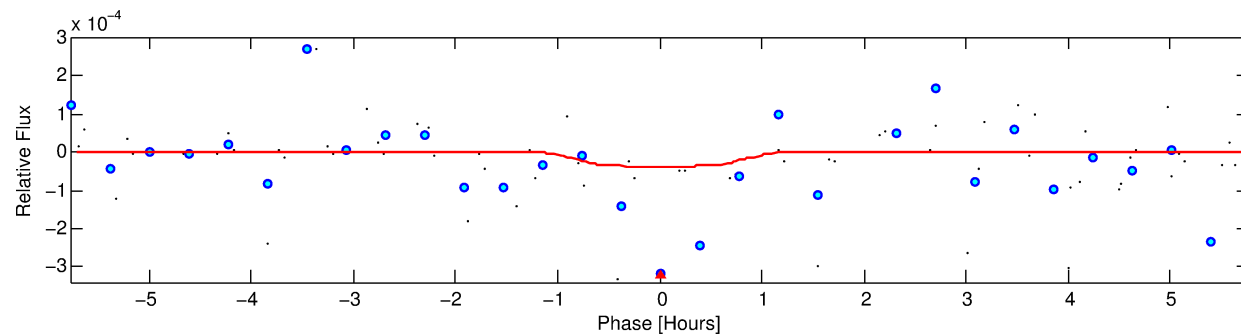
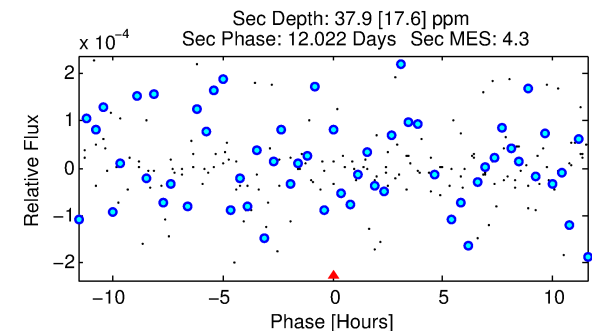
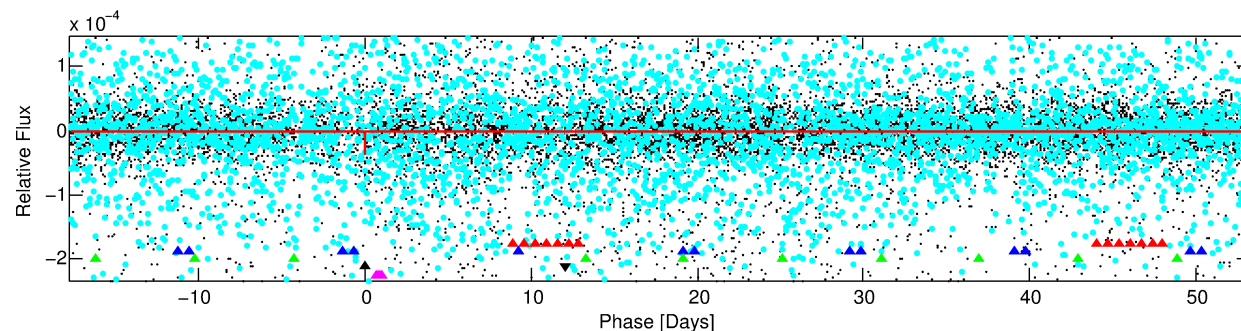
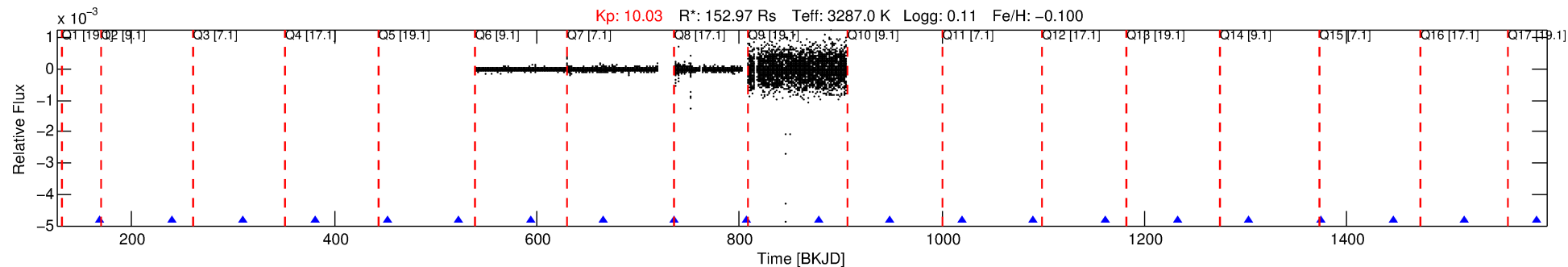
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 006790592-04

No Significant Match Found

# DV One-Page Summary

KIC: 6790592 Candidate: 4 of 5 Period: 70.961 d



## DV Fit Results:

Period = 70.96052 [0.01390] d  
Epoch = 168.2820 [0.1160] BKJD  
Rp/R\* = 0.0078 [0.0583]  
a/R\* = 102.16 [2617.45]  
b = 0.94 [3.34]  
Seff = N/A  
Teq = N/A  
Rp = 130.50 [972.72] Re  
a = N/A  
Ag = N/A  
Teff = N/A

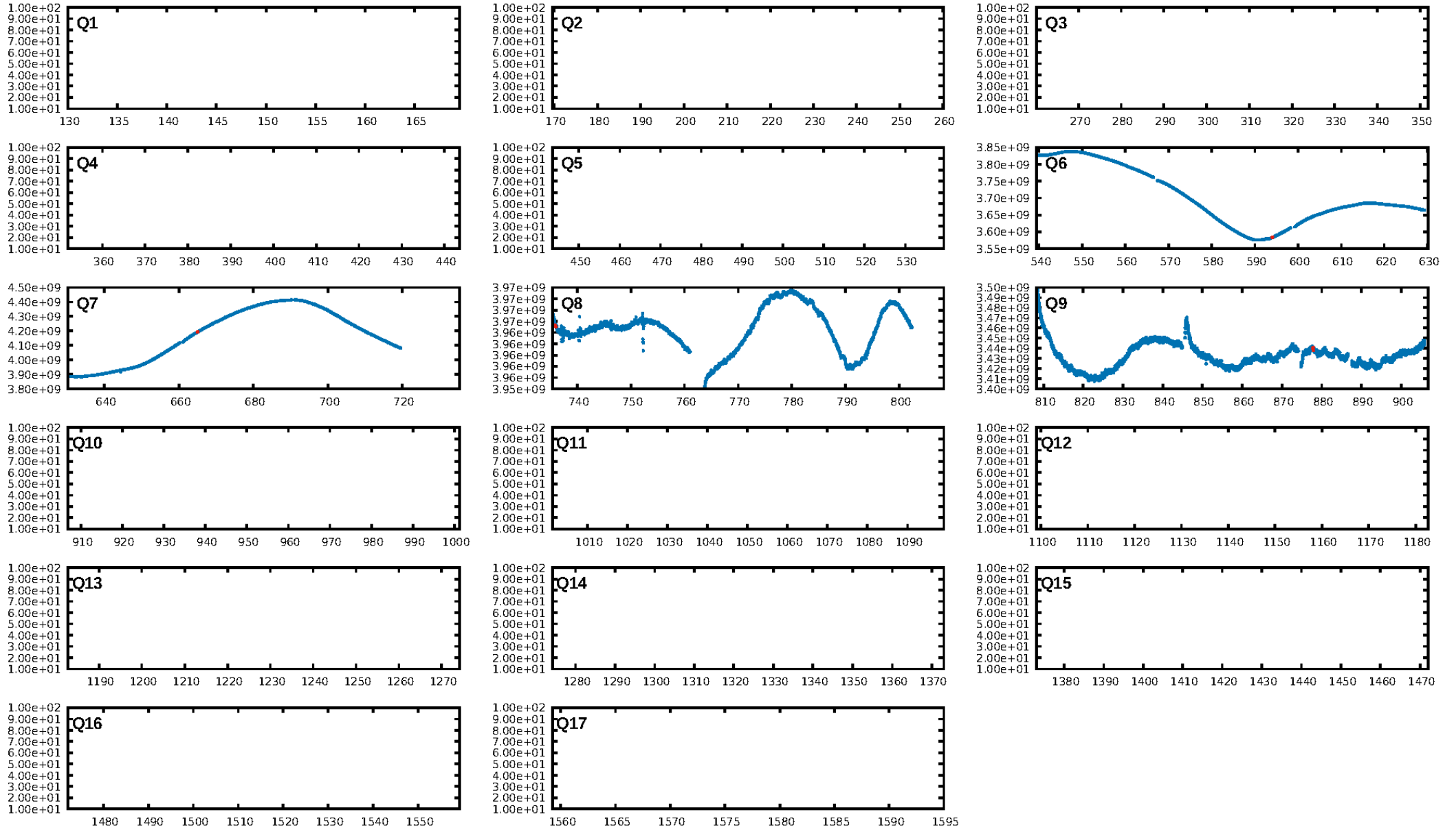
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: 3.4% [0.04σ]  
ModelChiSquare2-sig: 2.6%  
ModelChiSquareGoF-sig: 34.0%  
Bootstrap-pfa: 2.67e-09  
RollingBand-fgt: 1.00 [3/3]  
GhostDiagnostic-chr: -0.526  
Centroid-sig: 68.3%  
Centroid-so: 3.558 arcsec [0.40σ]  
OotOffset-rm: 7.040 arcsec [13.01σ]  
KicOffset-rm: 6.298 arcsec [11.76σ]  
OotOffset-st: 1/0/0/0 [1]  
KicOffset-st: 1/0/0/0 [1]  
DiffImageQuality-fgm: 0.00 [0/1]  
DiffImageOverlap-fno: 1.00 [3/3]

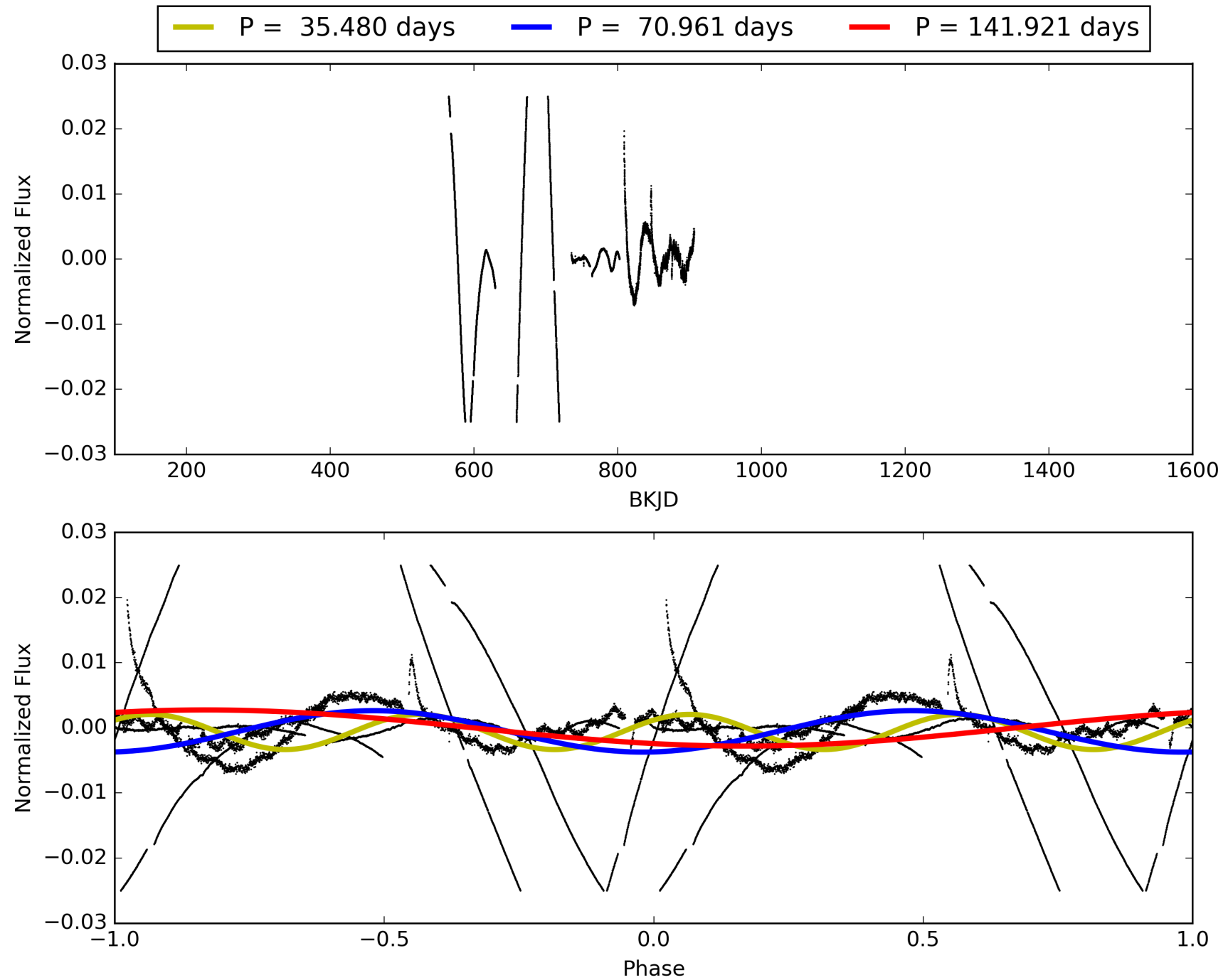
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:47:48 Z

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

# TCE 006790592-04, PDC Light Curves

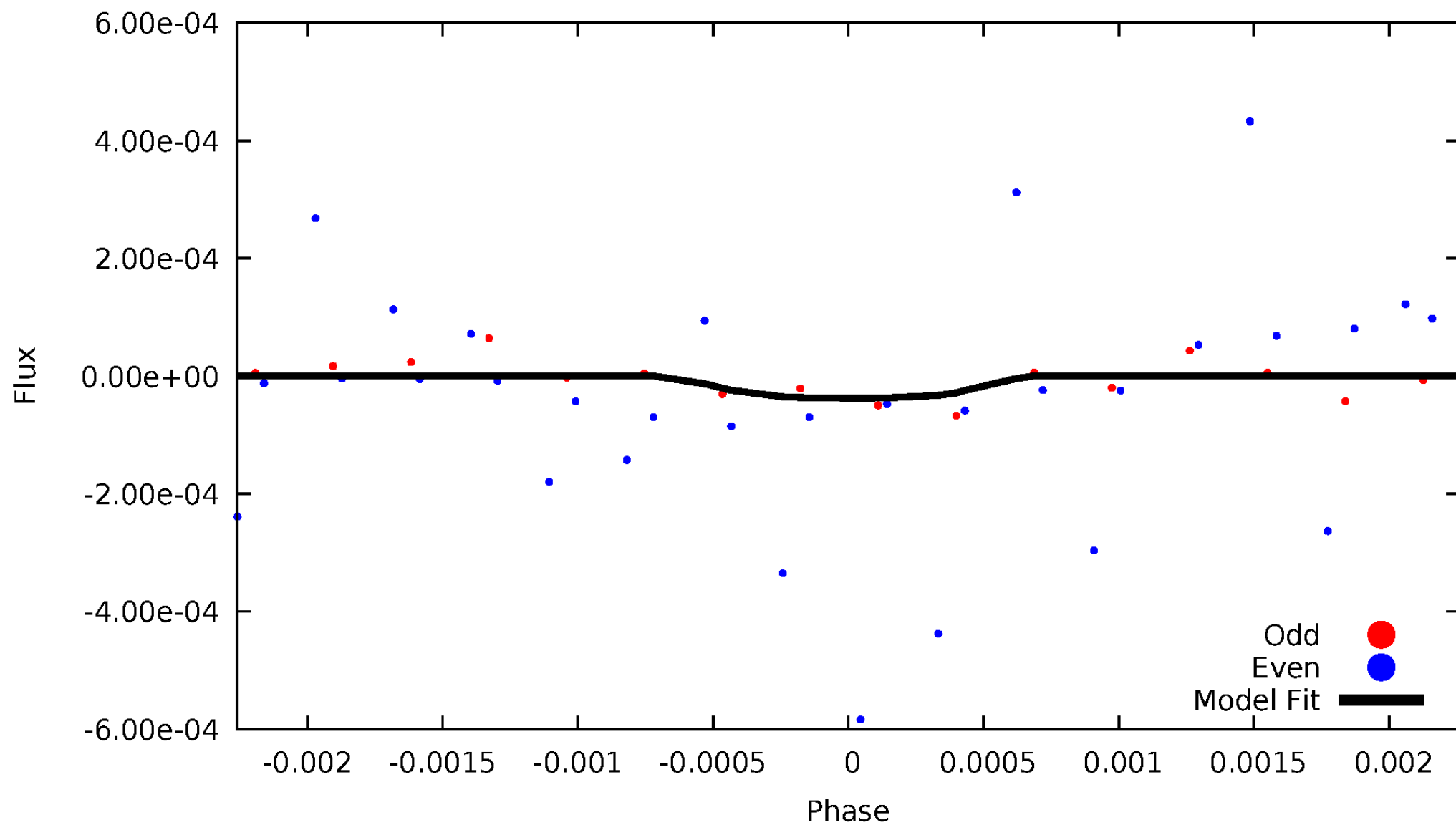


TCE 006790592-04



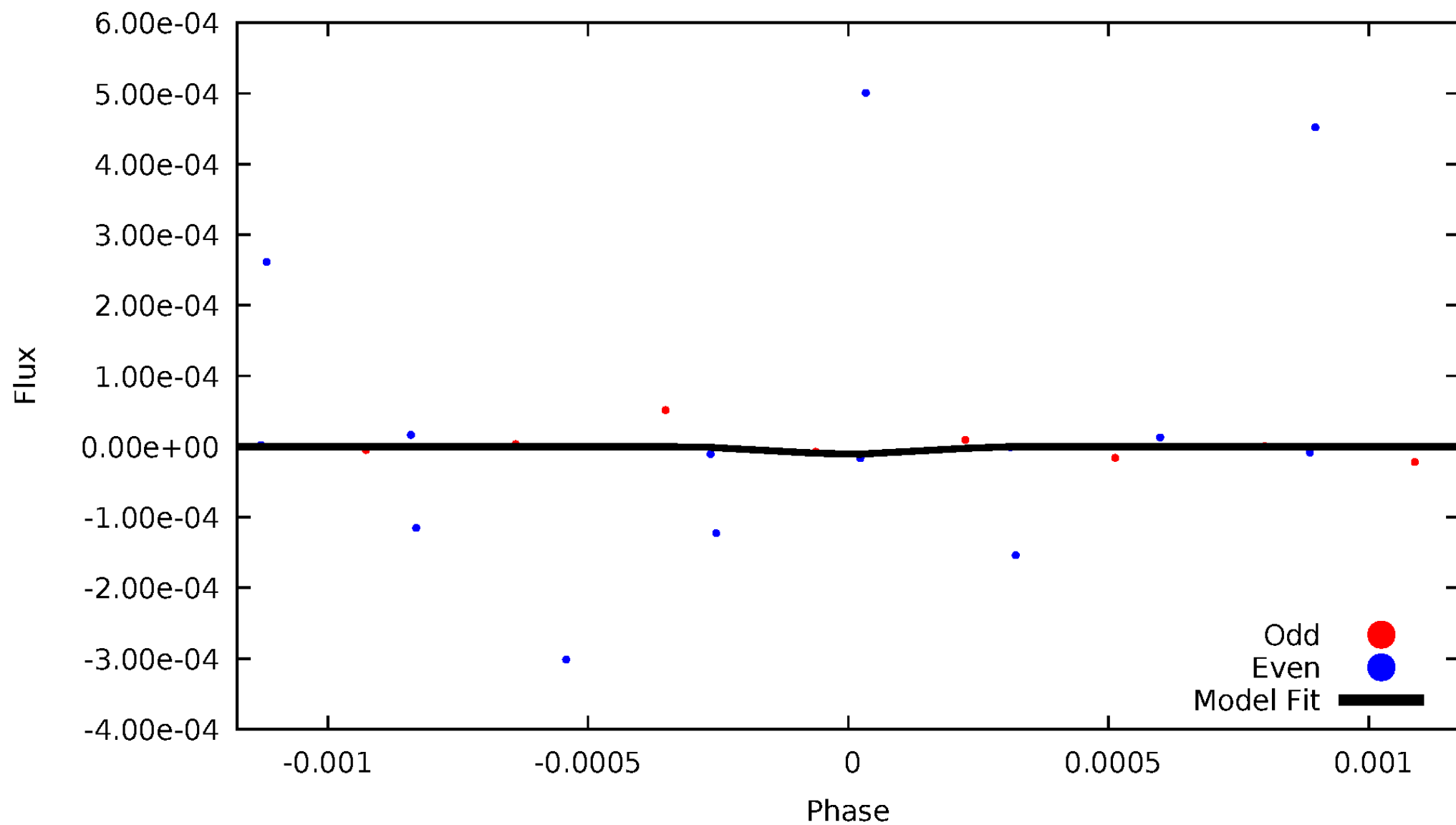
# DV Odd/Even

TCE 006790592-04



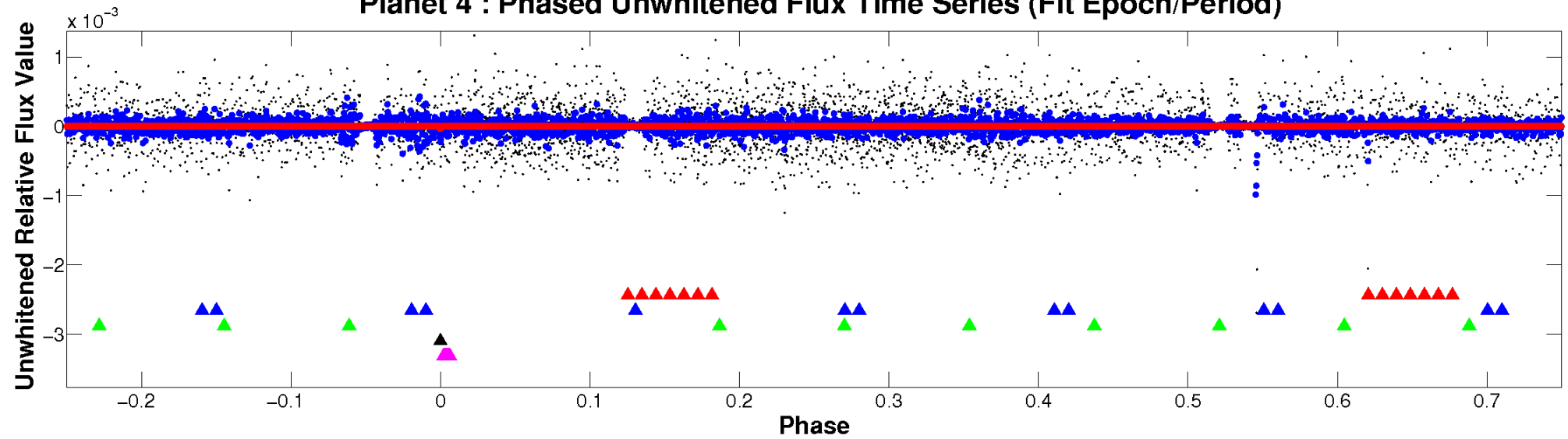
# ALT Odd/Even

TCE 006790592-04

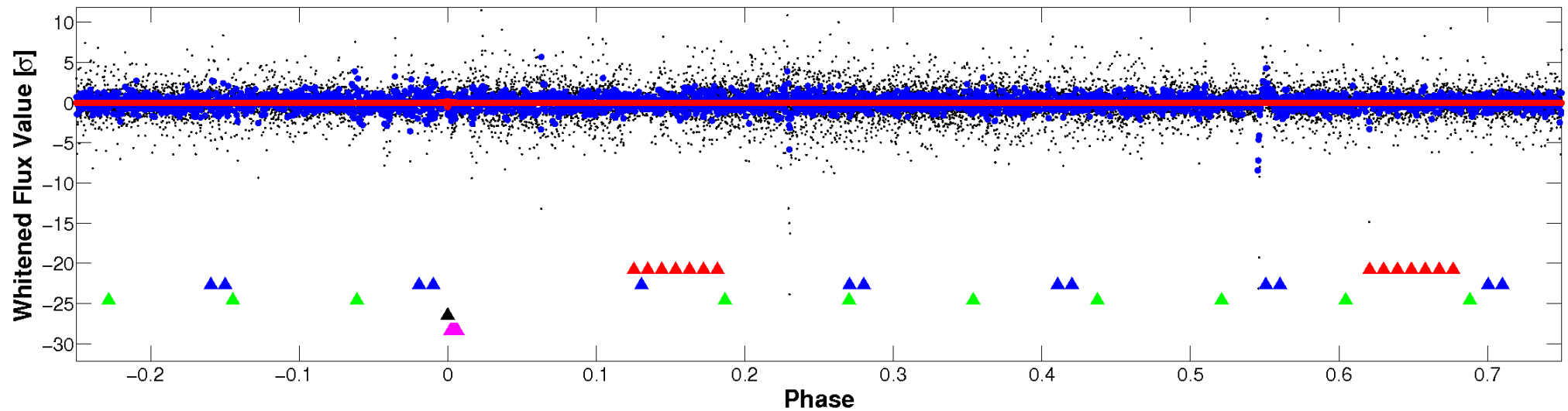


# Non-Whitened Vs. Whitened Light Curve

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

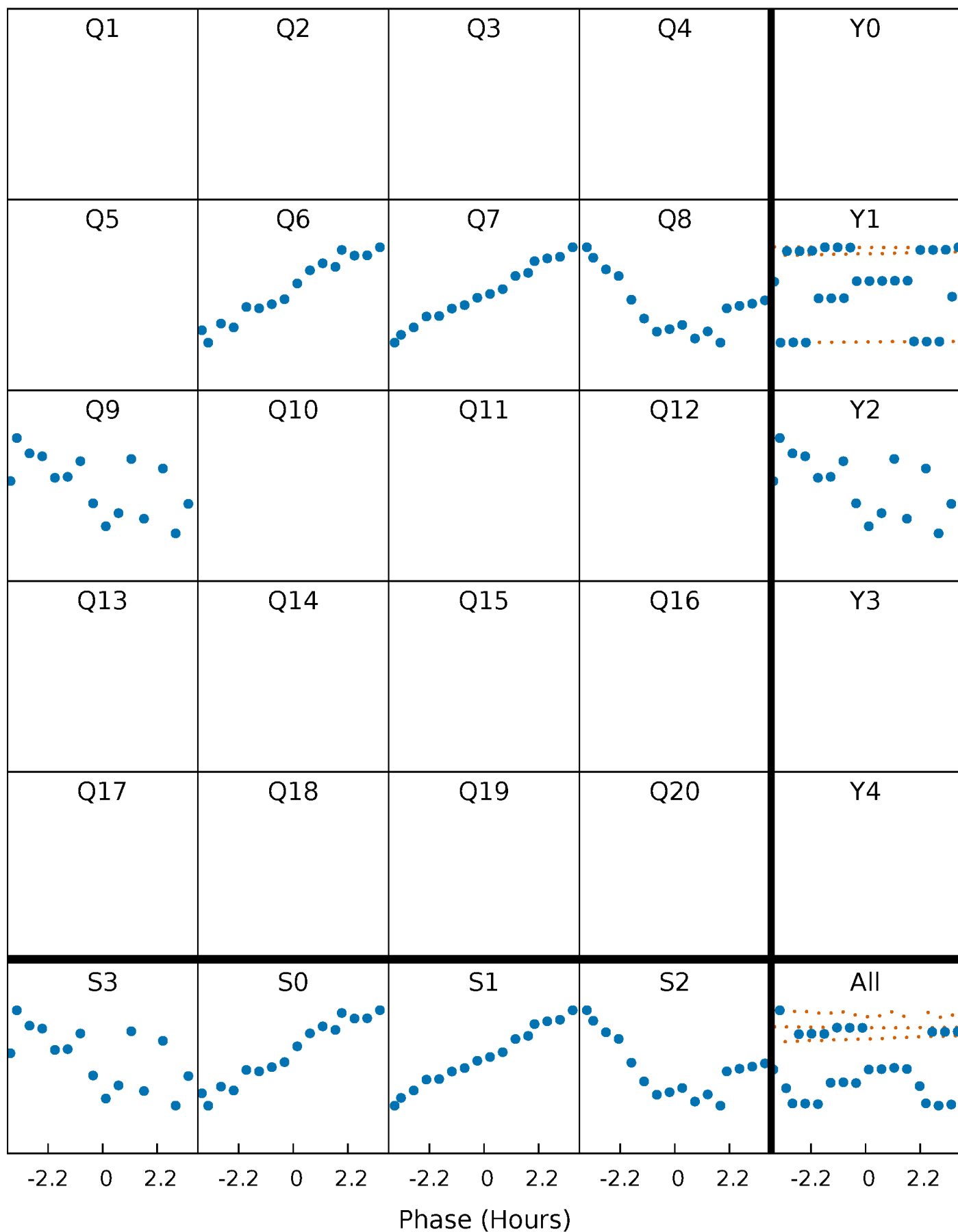


## Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



# PDC Quarter-Phased Transit Curves

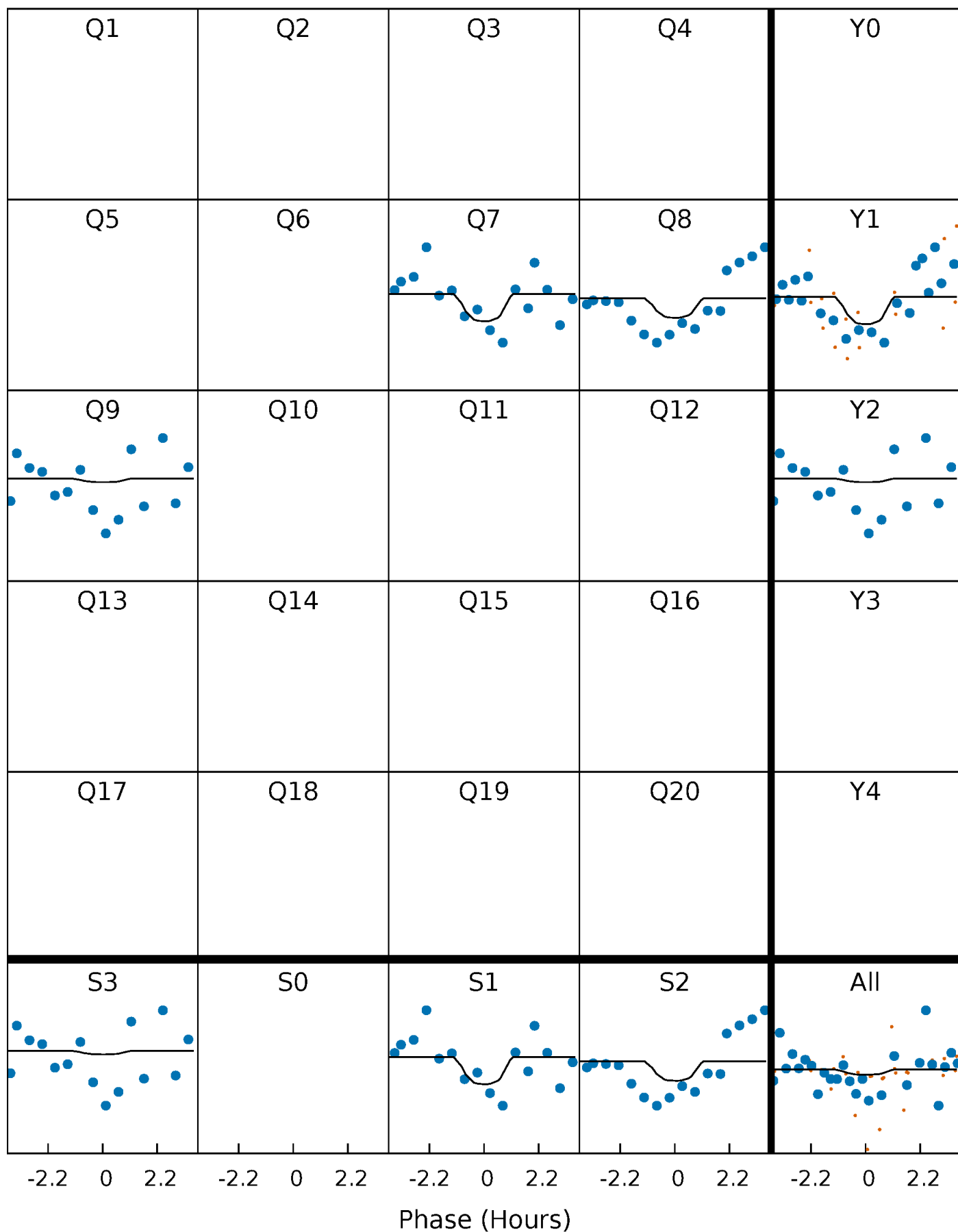
TCE 006790592-04     $P = 70.960521$  Days     $T_0 = 168.281974$  (BKJD)





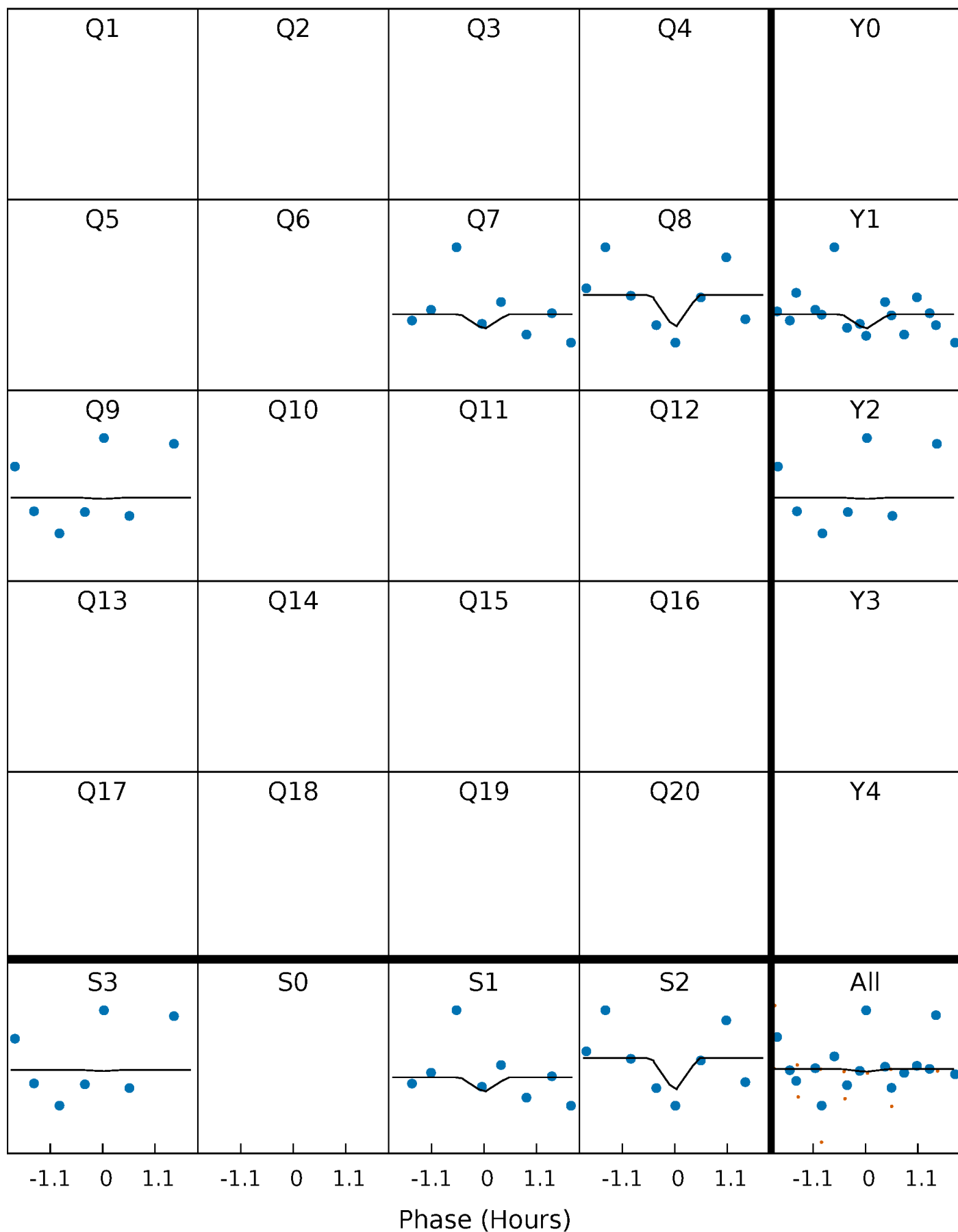
# DV Quarter-Phased Transit Curves

TCE 006790592-04   P= 70.960521 Days    $T_0=168.281974$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

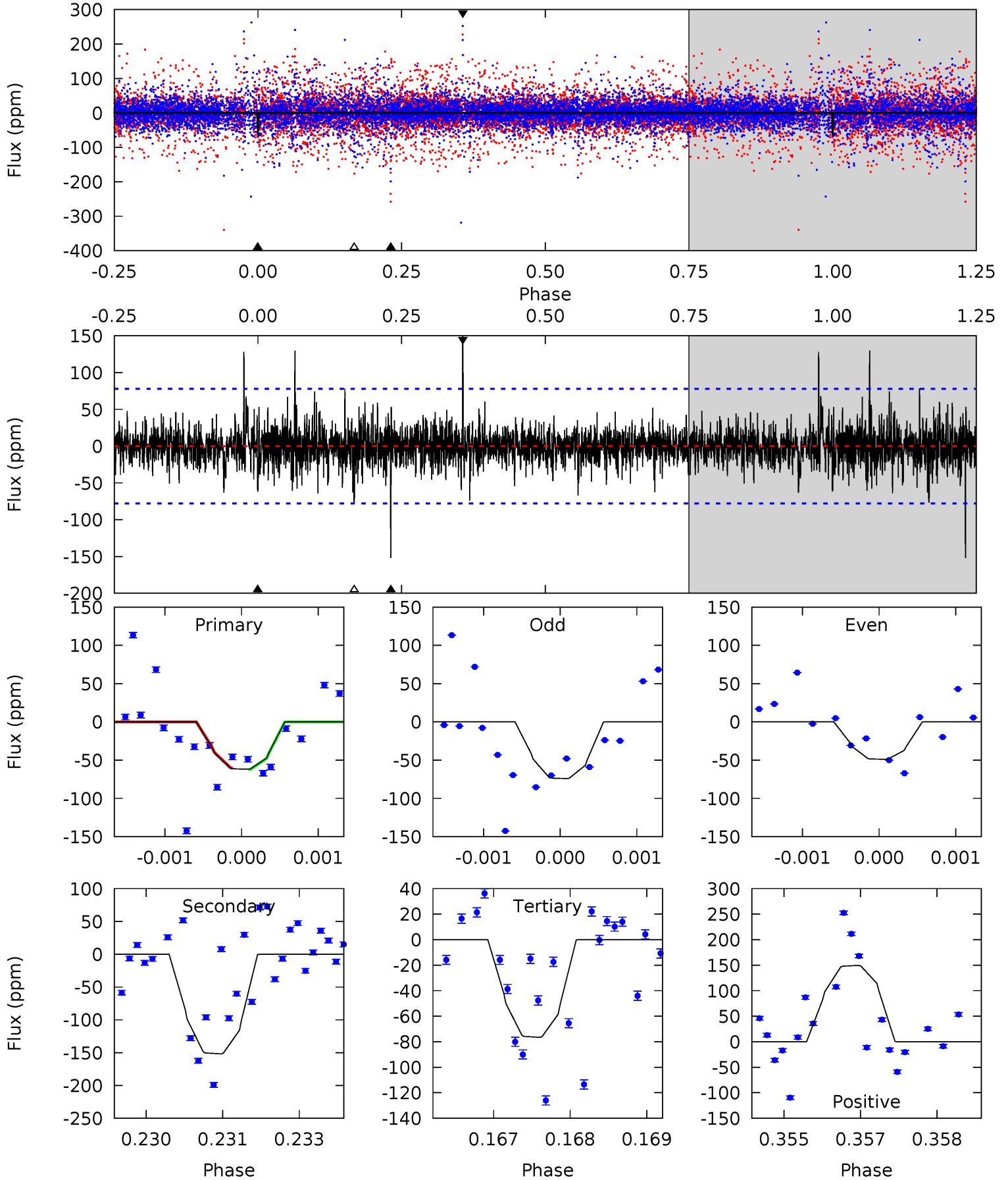
TCE 006790592-04 P= 70.997547 Days  $T_0=167.953399$  (BKJD)



# DV Model-Shift Uniqueness Test

006790592-04, P = 70.960521 Days, E = 168.281974 Days

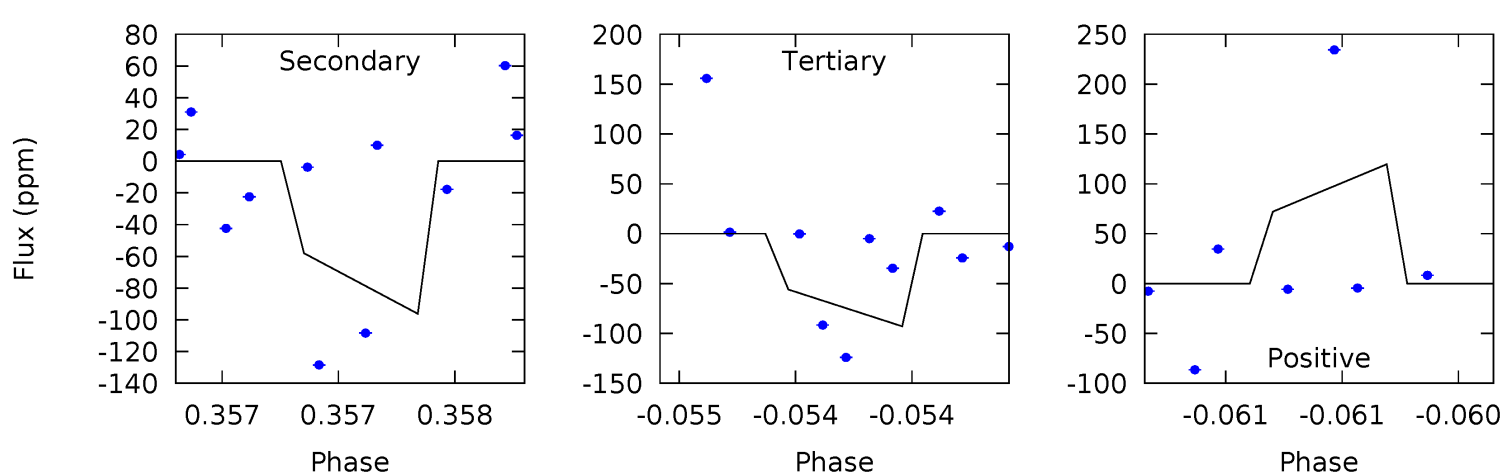
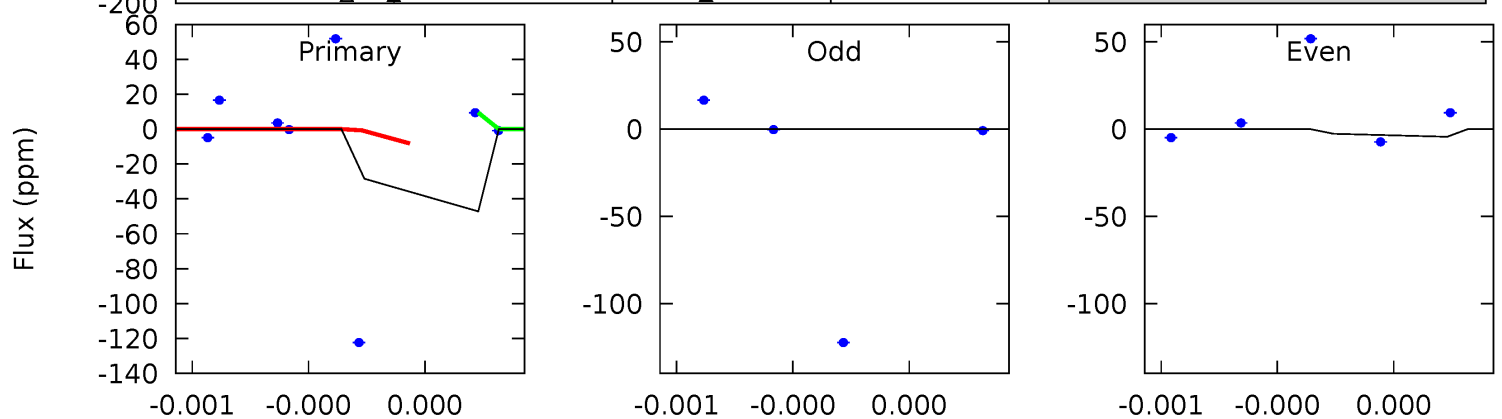
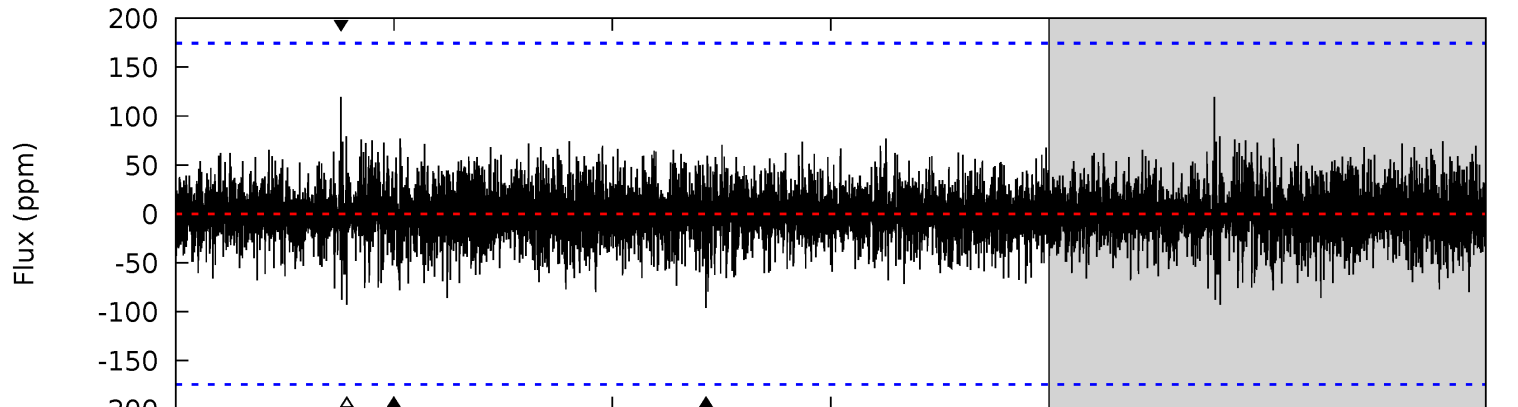
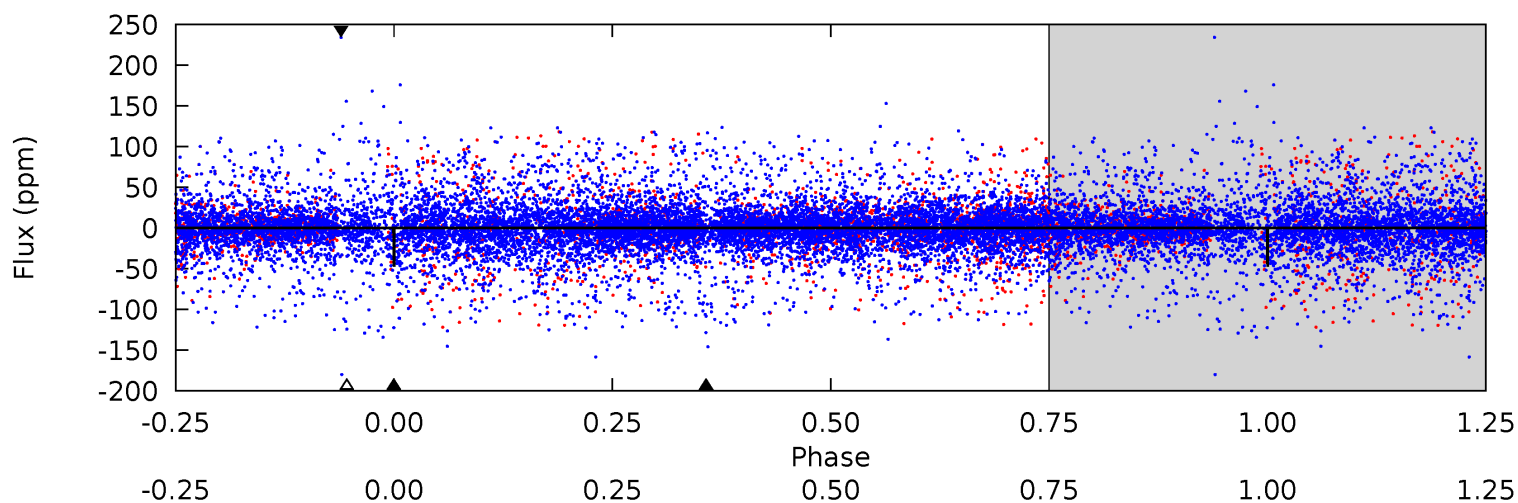
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.31	10.6	5.33	10.4	5.42	3.23	1.22	-1.02	-6.10	5.24	0.17	0.78	2.48	0.50	0.07



# Alt Model-Shift Uniqueness Test

006790592-04, P = 70.997547 Days, E = 167.953399 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
1.51	3.08	2.97	3.82	5.58	3.49	0.61	-1.46	-2.31	0.11	-0.75	0	-31.2	0.55	0.03



### Stellar Parameters For KIC 006790592

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M$ ( $M_{\odot}$ )	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$3287^{+117}_{-78}$	$0.114^{+0.208}_{-0.052}$	$-0.100^{+0.250}_{-0.150}$	$152.969^{+9.192}_{-27.576}$	$1.110^{+0.207}_{-0.128}$	$0.000^{+0.000}_{-0.000}$
	+4%/-2%	+182%/-46%	+250%/-150%	+6%/-18%	+19%/-12%	+95%/-11%
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 006790592-04 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-152 \pm 14$	$657.69^{+717.80}_{-458.39}$	$4188^{+194}_{-220}$	$-3277^{+860}_{-164}$	$0.024^{+0.238}_{-0.018}$
Alt.	$-96 \pm 31$	$634.71^{+691.36}_{-452.07}$	$4190^{+194}_{-235}$	$-3290^{+442}_{-163}$	$0.017^{+0.176}_{-0.013}$

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

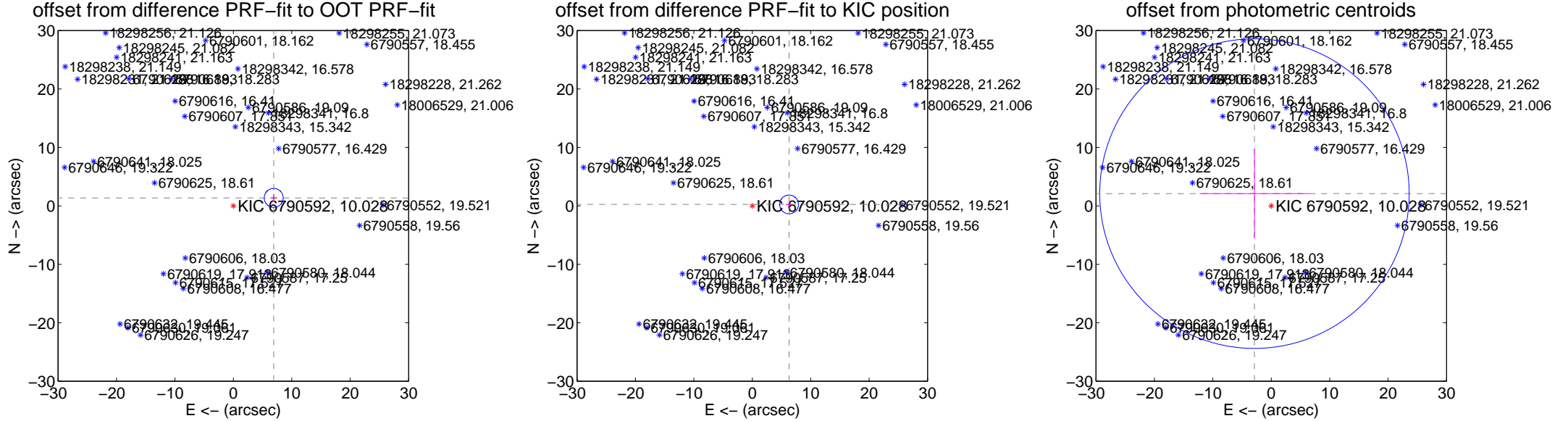
## DV Centroid Data

Supplemental centroid analysis for 006790592-04. **Kepler magnitude: 10.03.** Transit SNR 1.72

**There are 0 quarters with good PRF difference image offsets**

The direct PRF centroid is offset from the target star catalog position by about 1.27 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	<b>7.040 <math>\pm</math> 0.541</b>	<b>13.01</b>	-6.908 $\pm$ 0.535	1.357 $\pm$ 0.668
PRF-fit source offset from KIC position	<b>6.298 <math>\pm</math> 0.536</b>	<b>11.76</b>	-6.294 $\pm$ 0.535	0.243 $\pm$ 0.668
photometric centroid source offset	3.56 $\pm$ 8.83	0.40	2.88 $\pm$ 9.39	2.10 $\pm$ 7.65

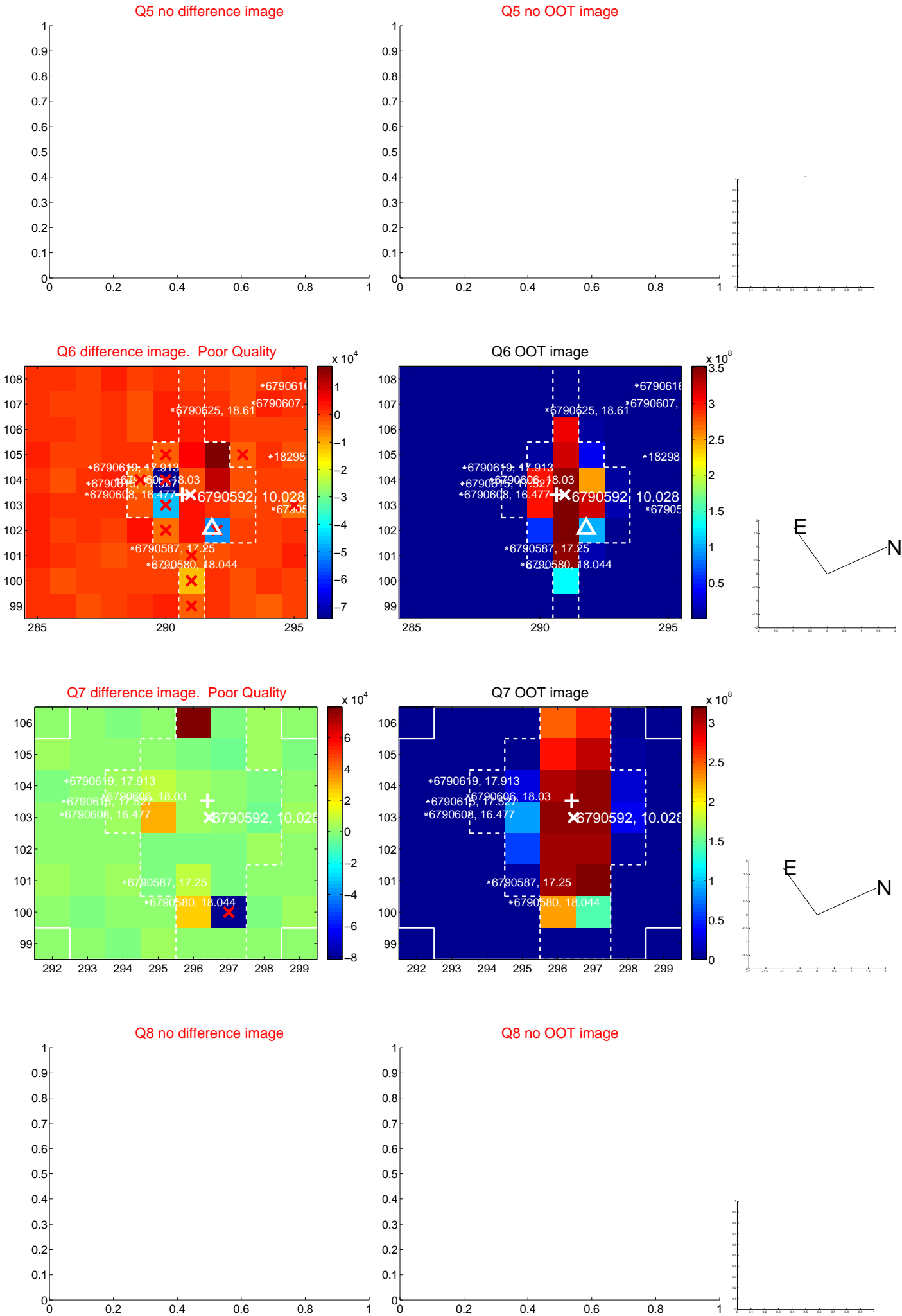


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

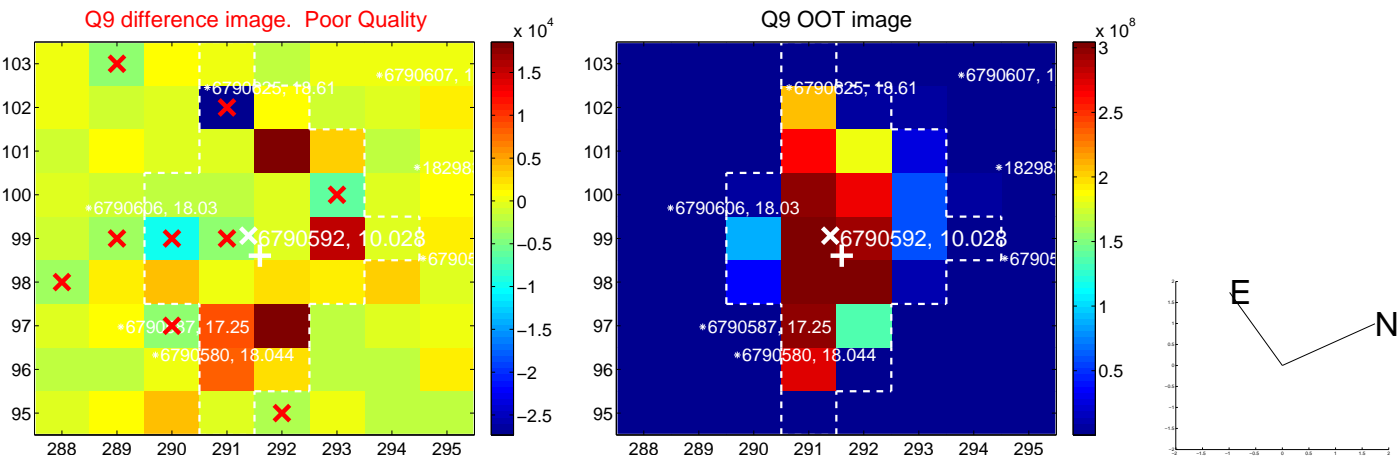


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.





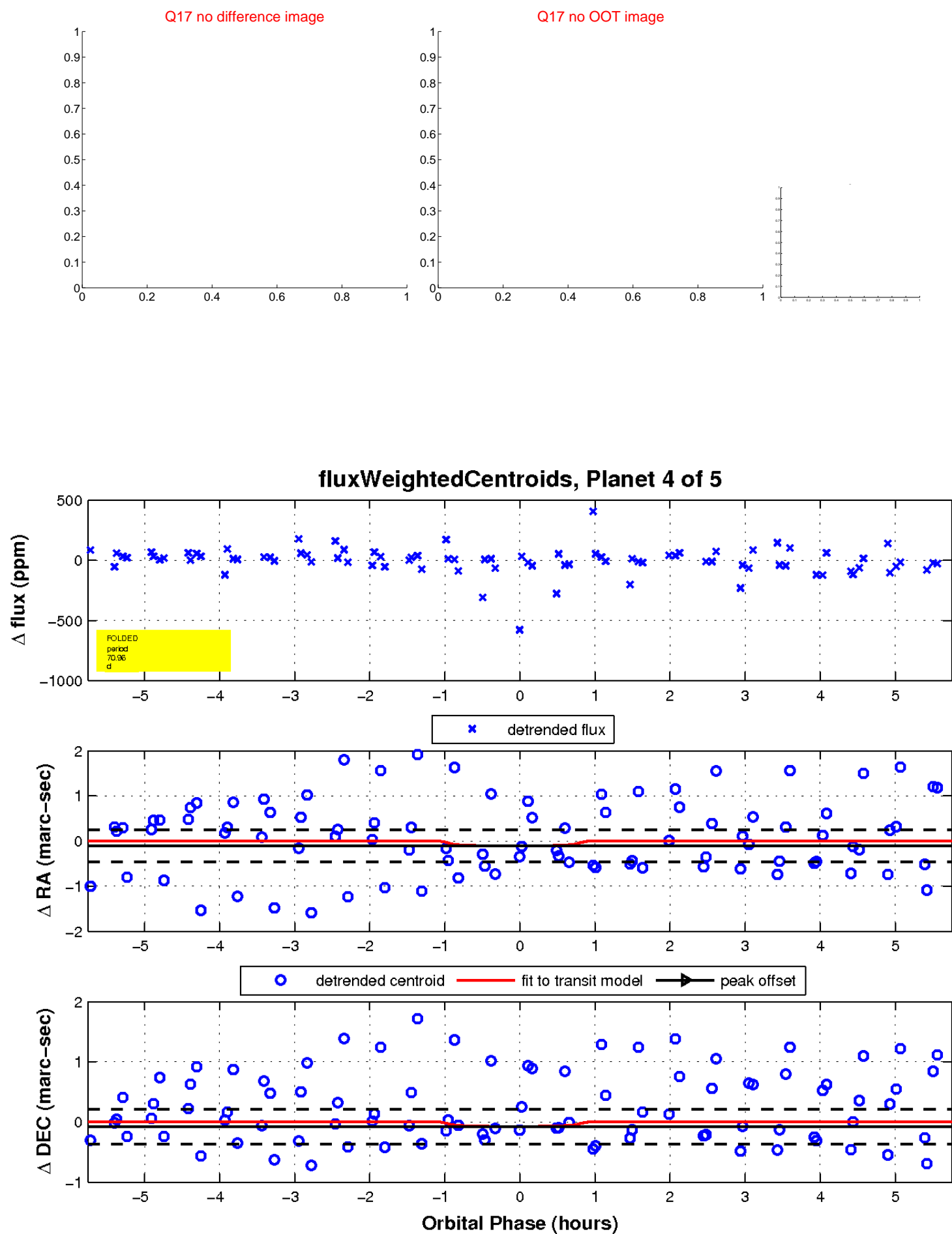
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

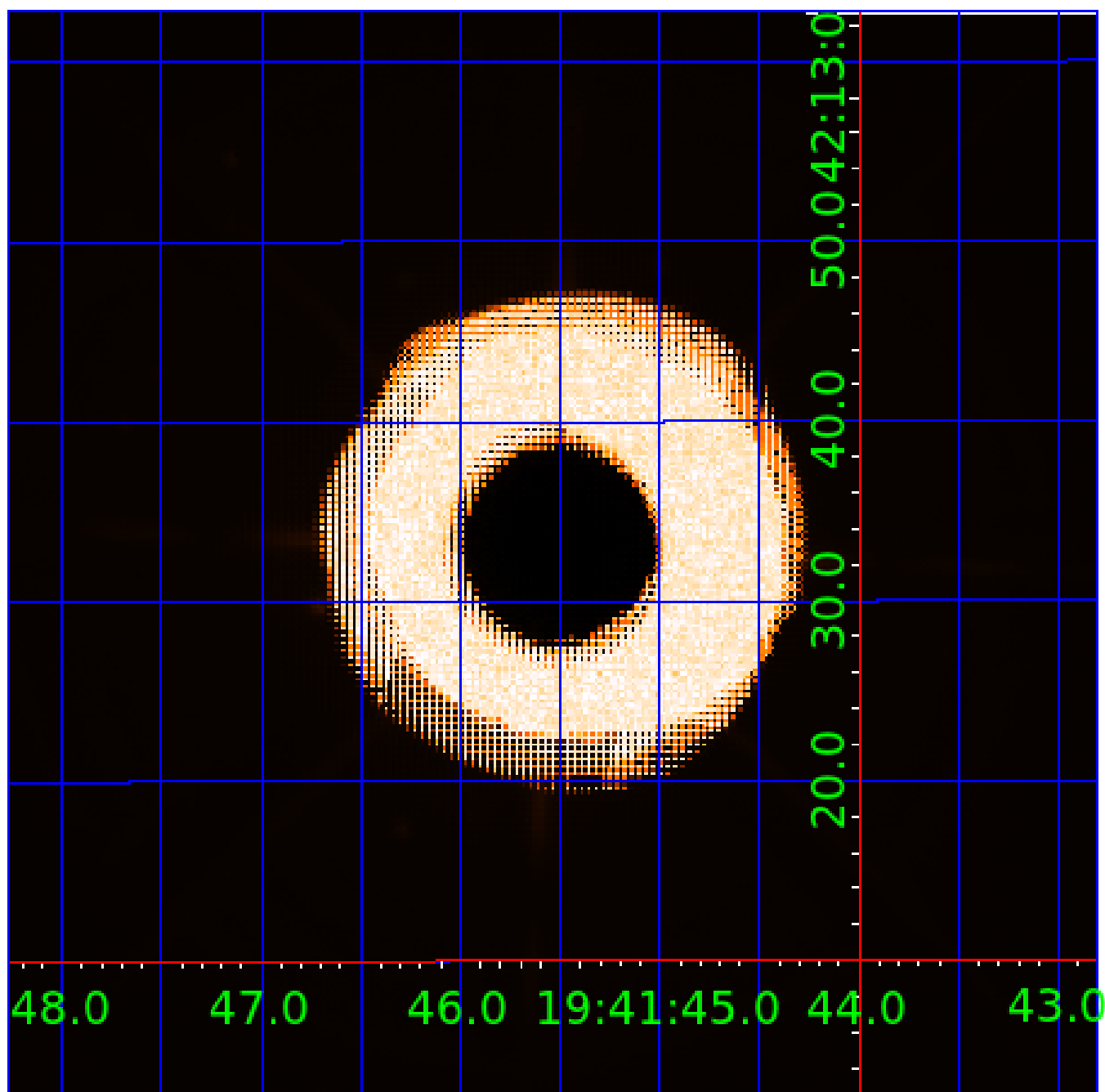


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination



# KIC 006790592

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006790592-01	OBS	7791.01	106.108292	181.168723	183.4	7.808	13.7	13.5	152.97	3287	198.13	0.00
006790592-02	OBS	No	111.412368	147.706469	152.9	13.539	9.7	8.7	152.97	3287	173.48	0.00
006790592-04	OBS	No	70.960521	168.281974	37.8	1.924	8.6	1.7	152.97	3287	130.50	0.00
006790592-05	OBS	No	70.976750	168.417409	56.0	9.000	10.8	-1.0	152.97	3287	105.03	20277.17

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006790592-01	OBS	PC	0.81	0	0	0	0	PLANET_IN_STAR—CENT_SATURATED
006790592-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—INCONSISTENT_TRANS—CENT_SATURATED
006790592-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006790592-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_SATURATED

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

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

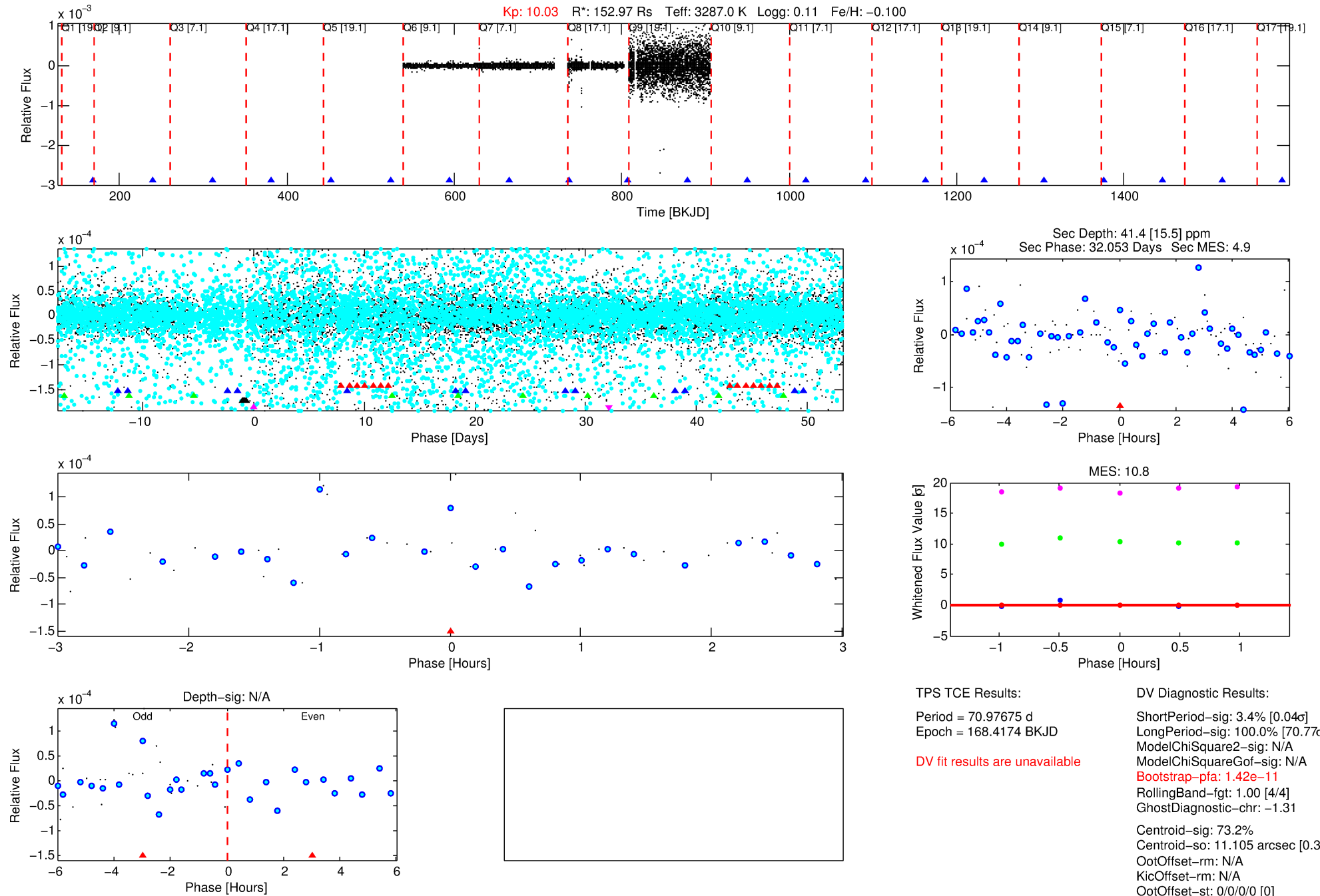
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 006790592-05

No Significant Match Found

# DV One-Page Summary

KIC: 6790592 Candidate: 5 of 5 Period: 70.977 d



## TPS TCE Results:

Period = 70.97675 d  
Epoch = 168.4174 BKJD

DV fit results are unavailable

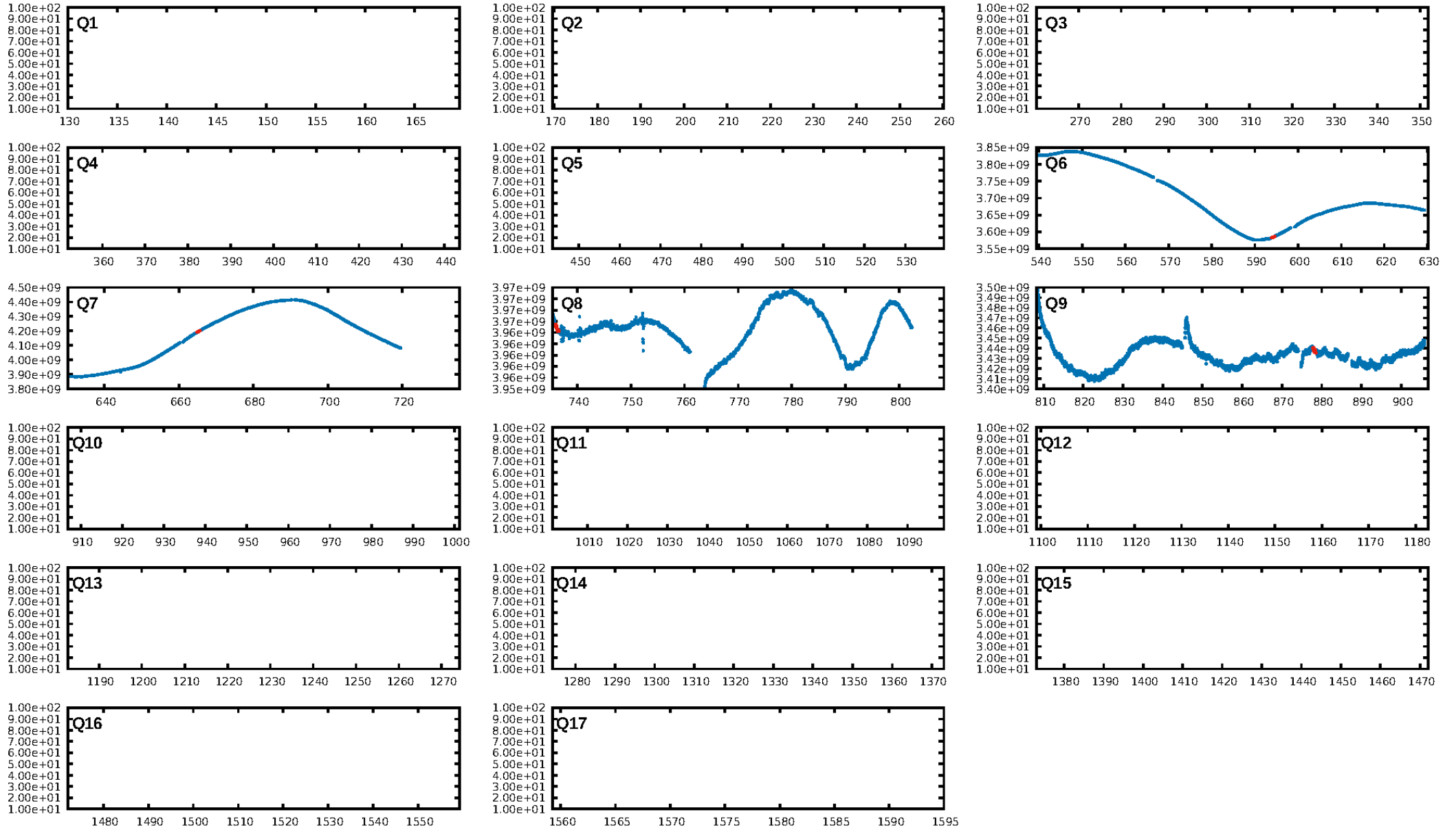
## DV Diagnostic Results:

ShortPeriod-sig: 3.4% [0.04 $\sigma$ ]  
LongPeriod-sig: 100.0% [70.77 $\sigma$ ]  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 1.42e-11  
RollingBand-fgt: 1.00 [4/4]  
GhostDiagnostic-chr: -1.31  
Centroid-sig: 73.2%  
Centroid-so: 11.105 arcsec [0.30 $\sigma$ ]  
OotOffset-rm: N/A  
KicOffset-rm: N/A  
OotOffset-st: 0/0/0 [0]  
KicOffset-st: 0/0/0 [0]  
DiffImageQuality-fgm: N/A  
DiffImageOverlap-fno: 1.00 [2/2]

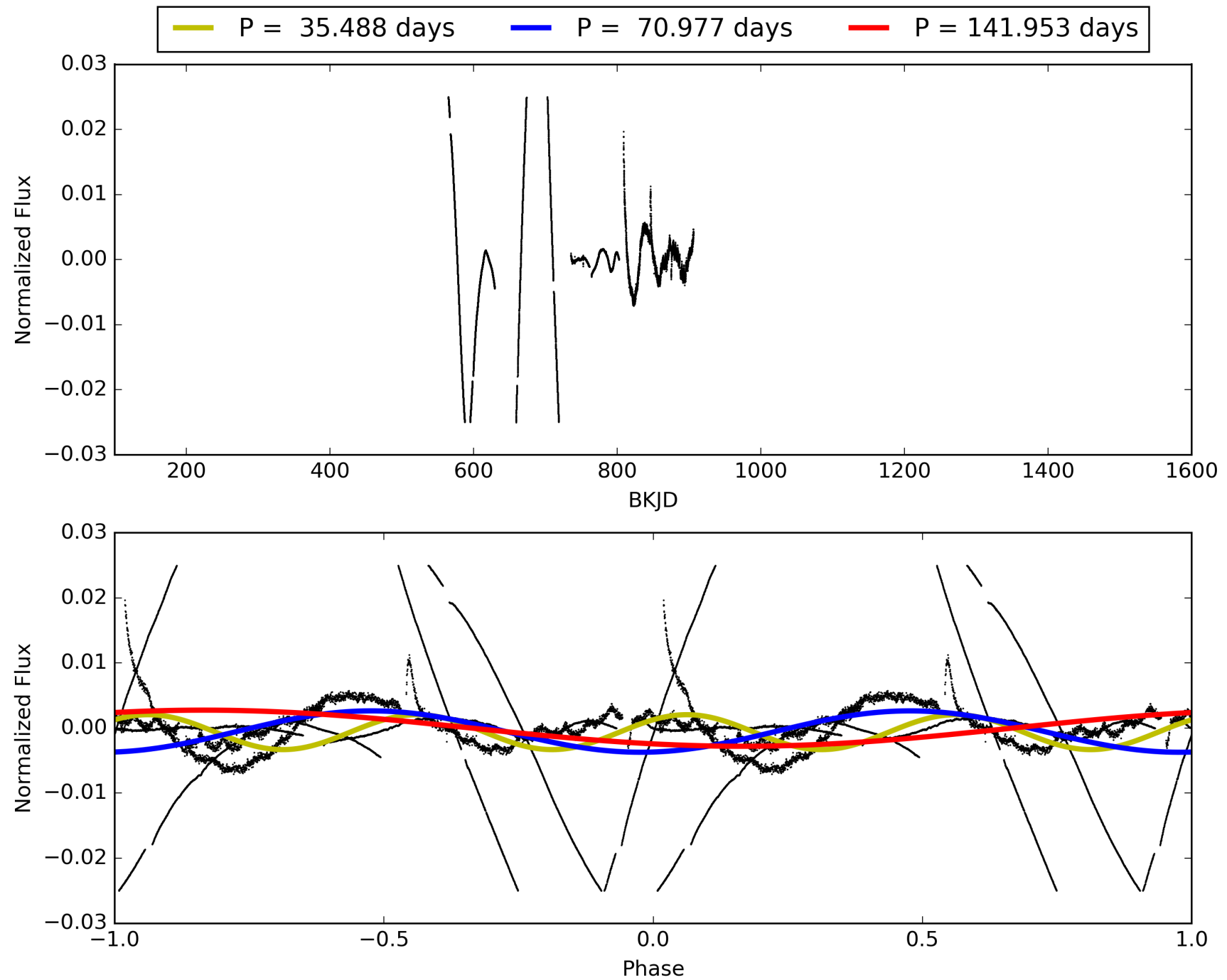
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:47:53 Z

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

# TCE 006790592-05, PDC Light Curves



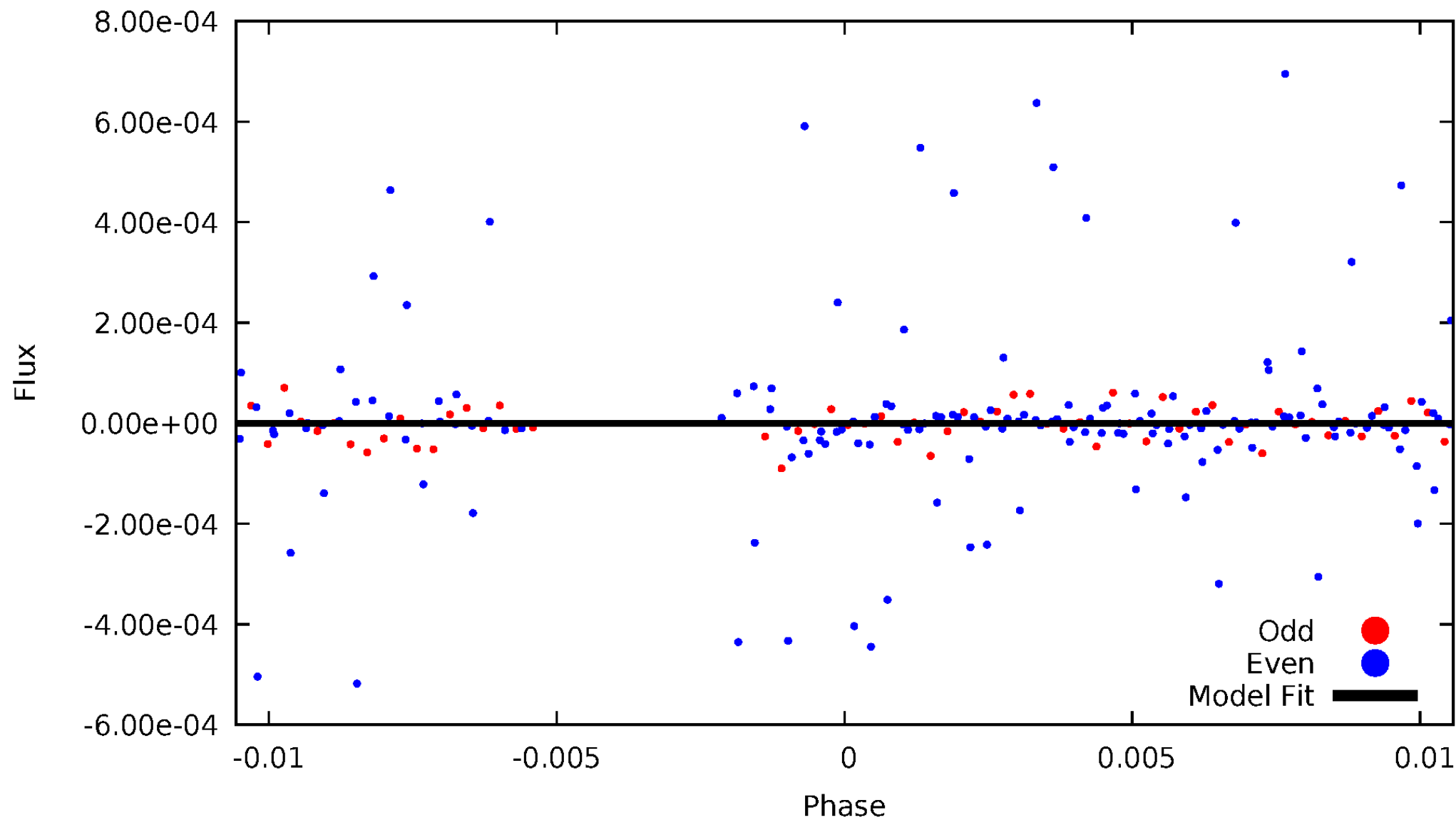
TCE 006790592-05





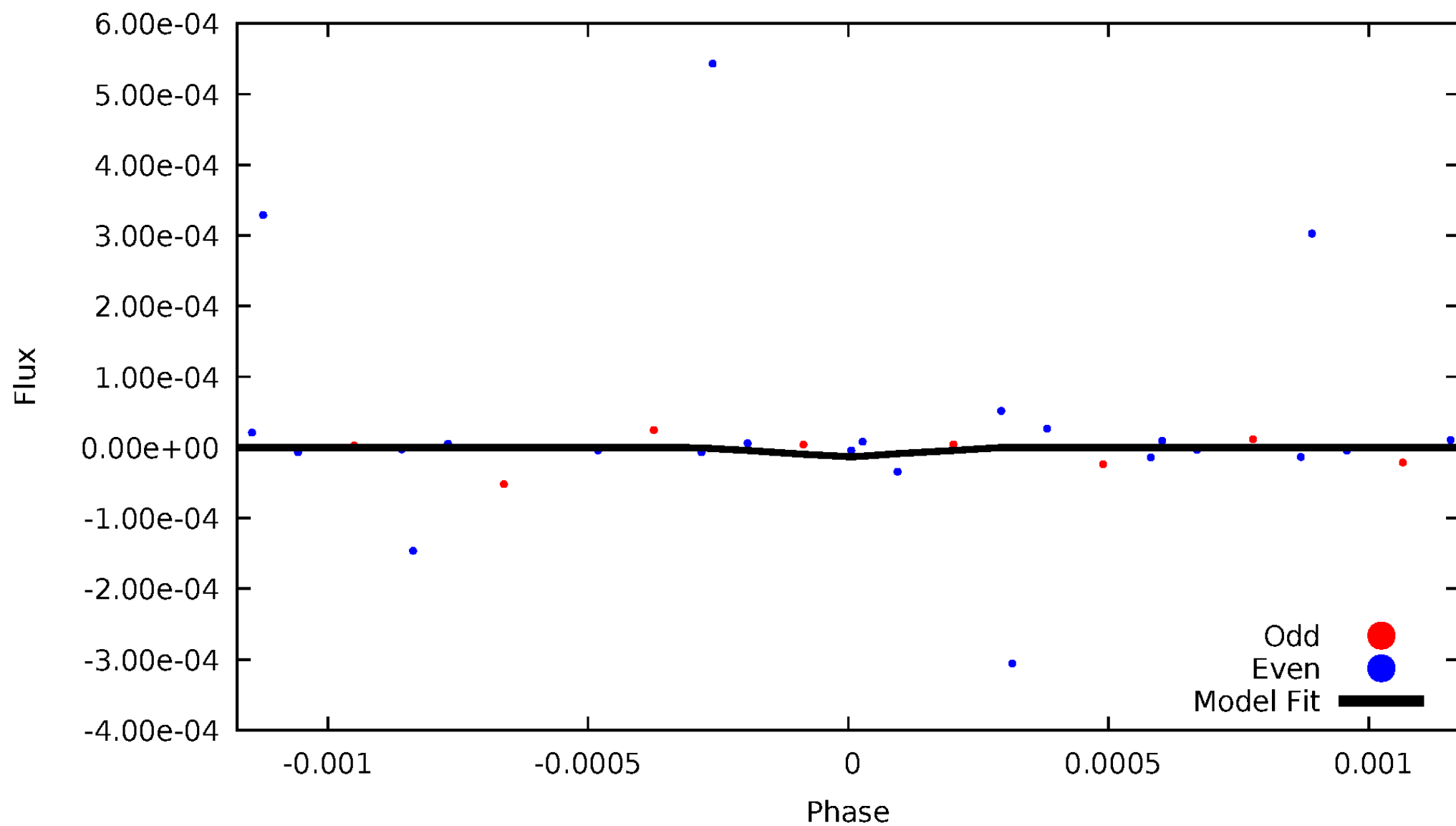
# DV Odd/Even

TCE 006790592-05

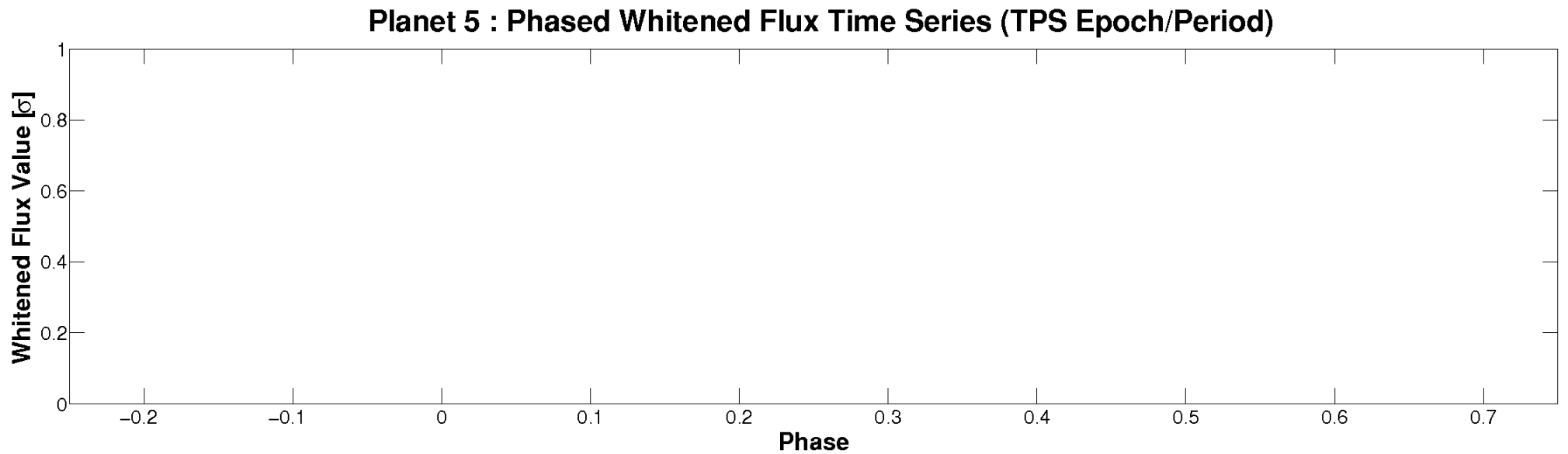
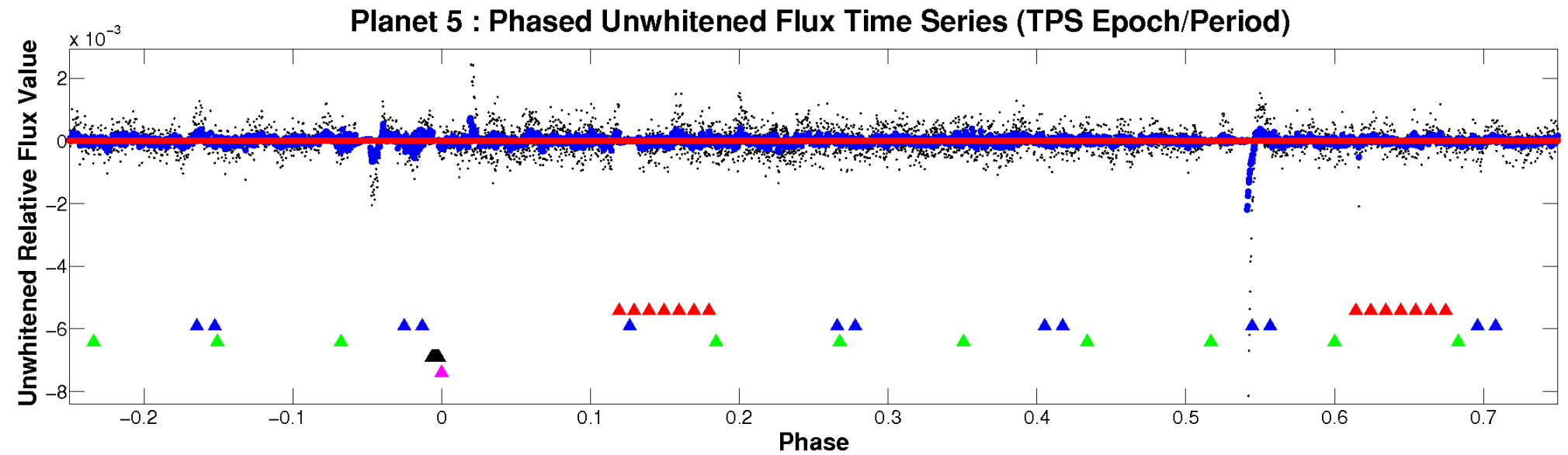


# ALT Odd/Even

TCE 006790592-05

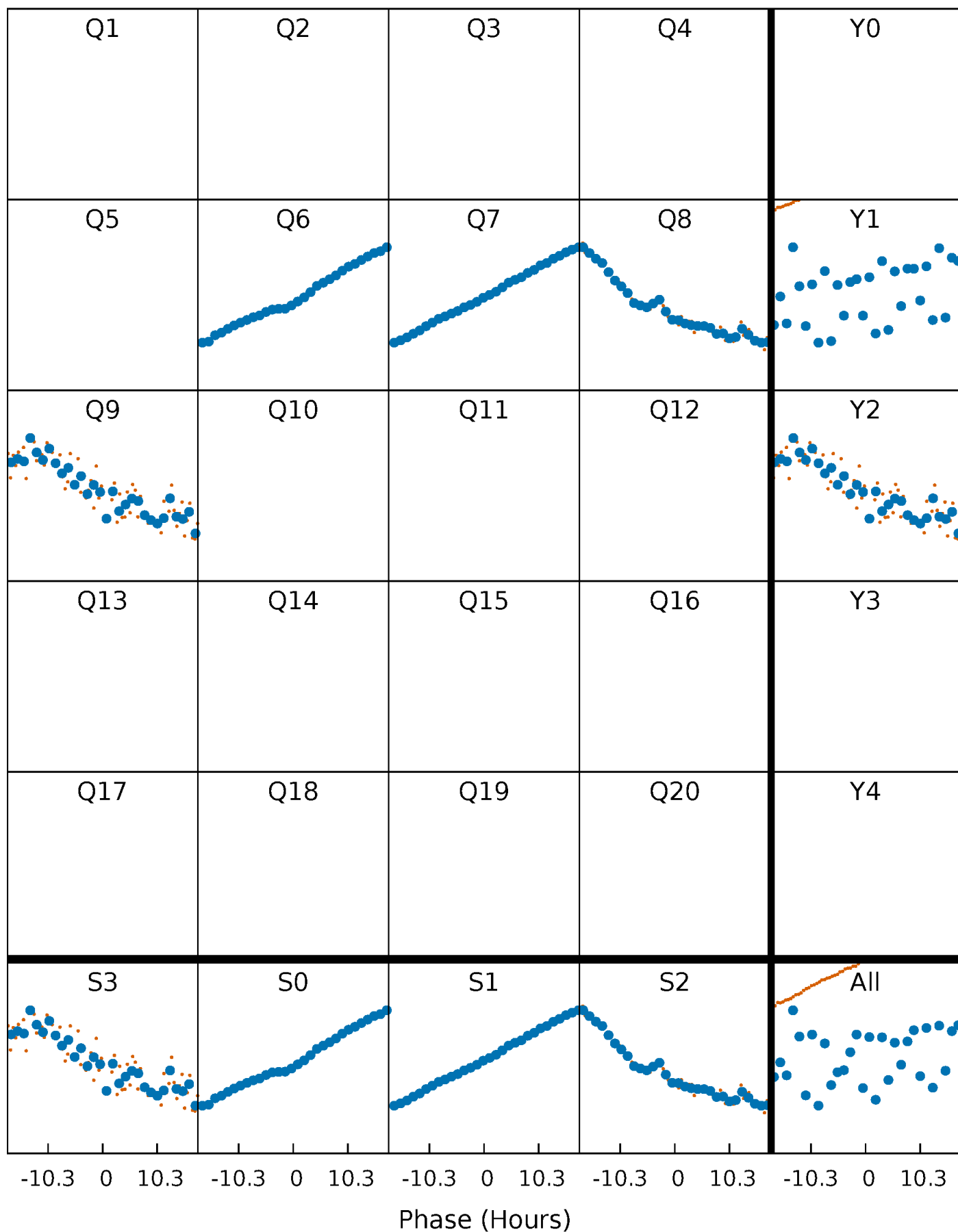


# Non-Whitened Vs. Whitened Light Curve



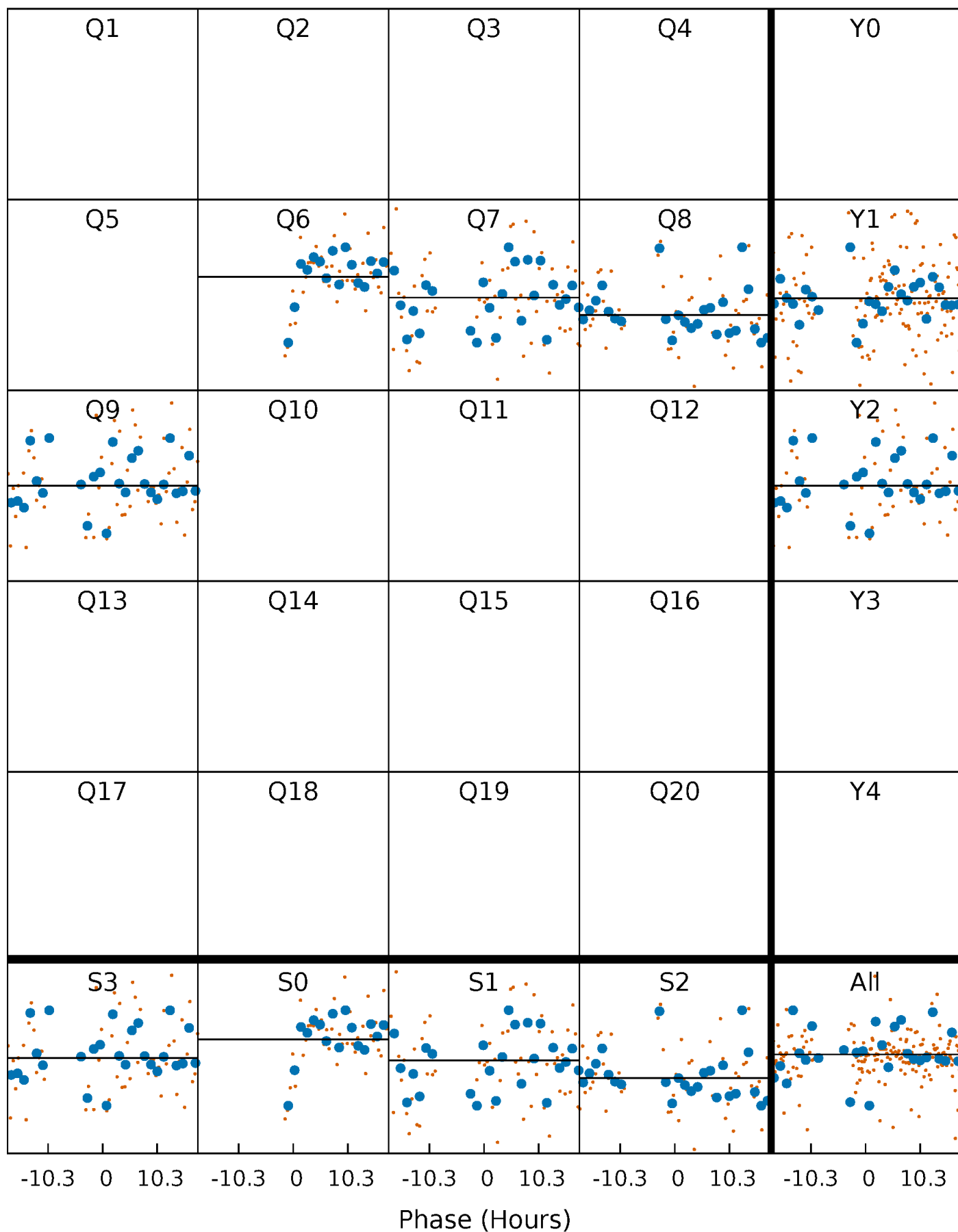
# PDC Quarter-Phased Transit Curves

TCE 006790592-05     $P = 70.976750$  Days     $T_0 = 168.417409$  (BKJD)



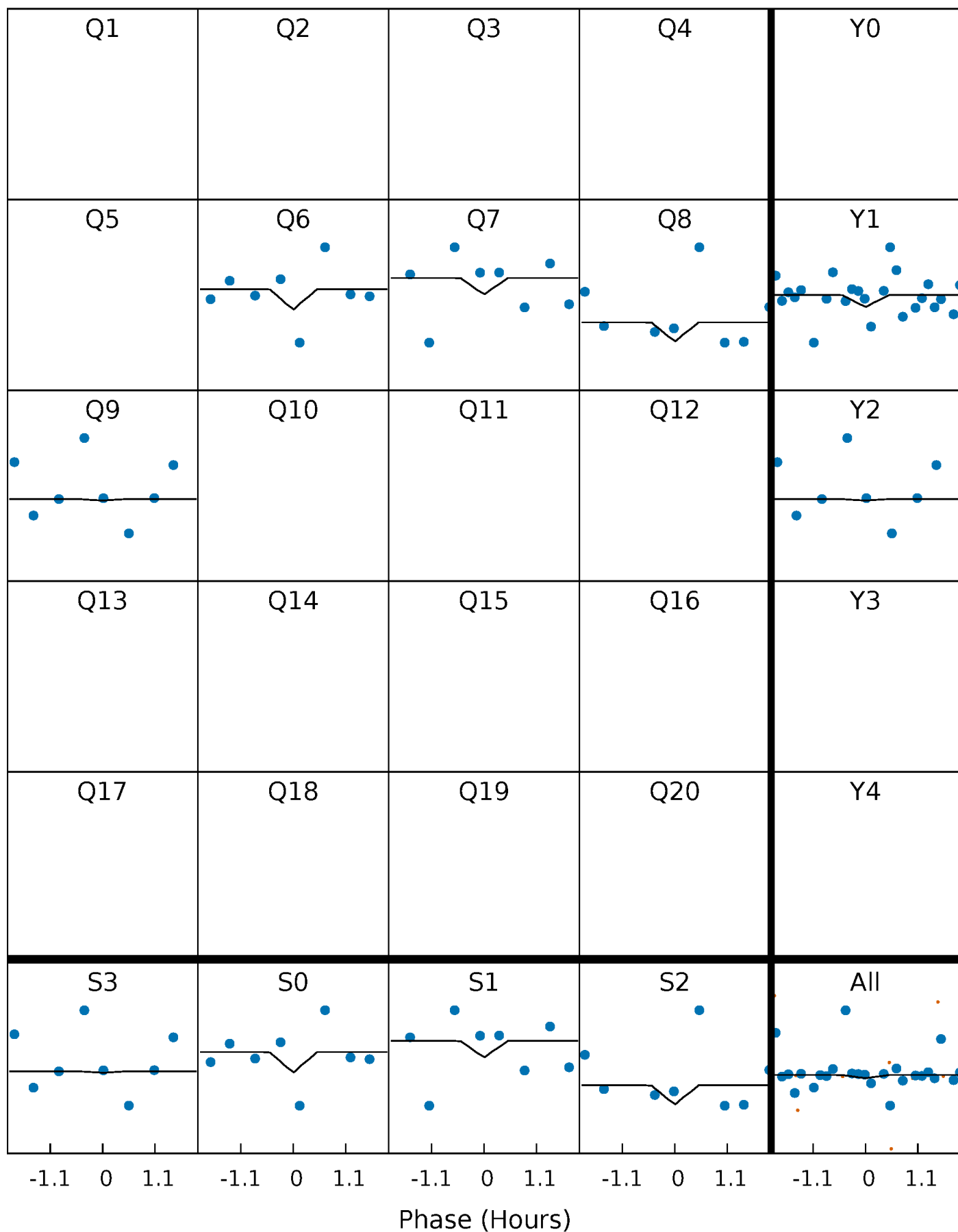
# DV Quarter-Phased Transit Curves

TCE 006790592-05     $P = 70.976750$  Days     $T_0 = 168.417409$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

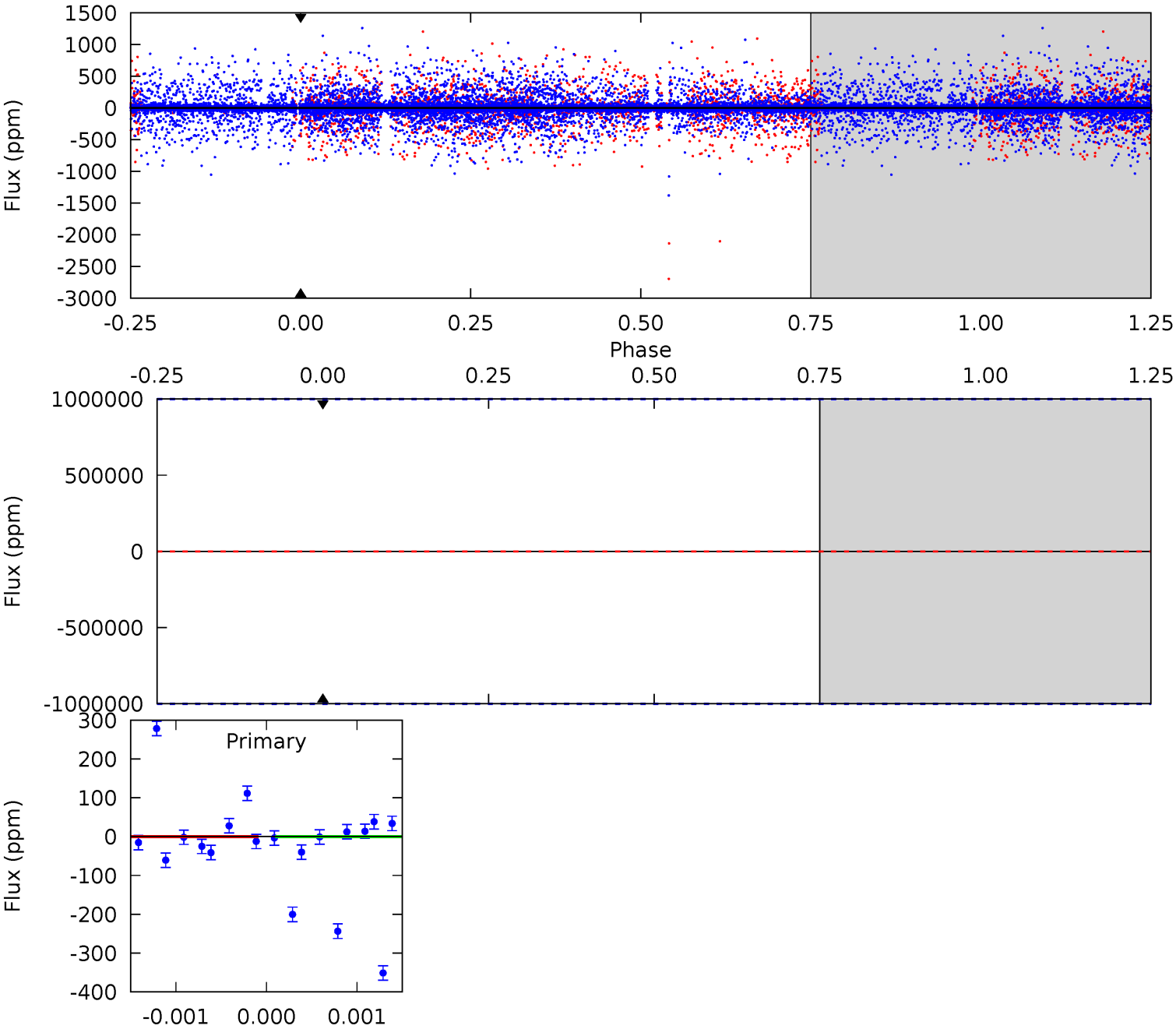
TCE 006790592-05 P= 70.976750 Days  $T_0=168.979198$  (BKJD)



# DV Model-Shift Uniqueness Test

006790592-05, P = 70.976750 Days, E = 168.417409 Days

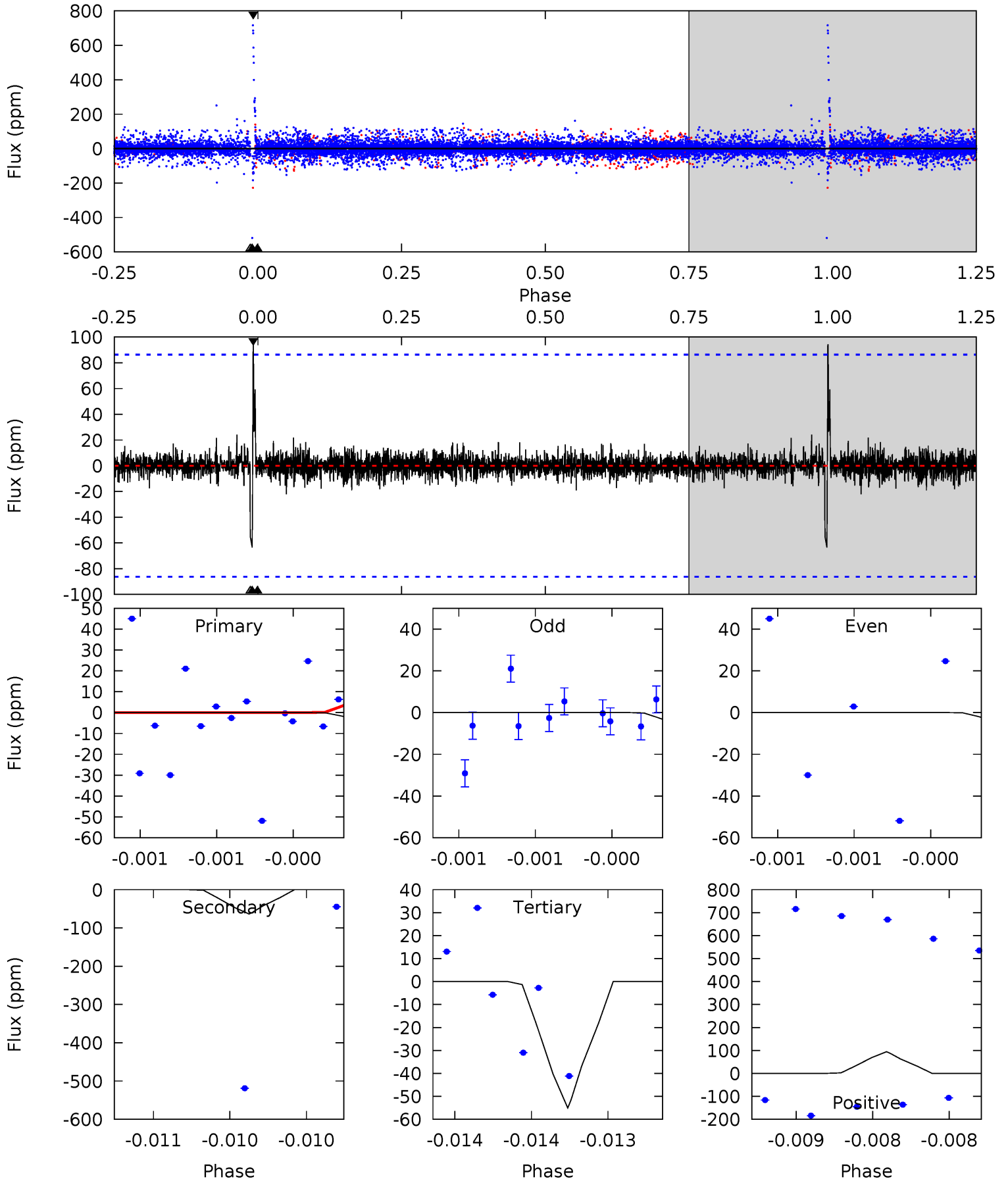
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



# Alt Model-Shift Uniqueness Test

006790592-05, P = 70.976750 Days, E = 168.979198 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
0.27	4.10	3.56	6.09	5.58	3.49	0.38	-3.29	-5.82	0.54	-2.00	0.05	8.15	0.60	0.06





### Stellar Parameters For KIC 006790592

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M$ ( $M_{\odot}$ )	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$3287^{+117}_{-78}$	$0.114^{+0.208}_{-0.052}$	$-0.100^{+0.250}_{-0.150}$	$152.969^{+9.192}_{-27.576}$	$1.110^{+0.207}_{-0.128}$	$0.000^{+0.000}_{-0.000}$
	+4%/-2%	+182%/-46%	+250%/-150%	+6%/-18%	+19%/-12%	+95%/-11%
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 006790592-05 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$0 \pm 1000000$	$1064.45^{+1244.75}_{-794.95}$	$4180^{+189}_{-218}$	$-2989^{+10150}_{-3944}$	$0.162^{+12.215}_{-11.128}$
Alt.	$-63 \pm 15$	$1163.87^{+1127.63}_{-835.15}$	$4195^{+171}_{-223}$	$-3338^{+181}_{-142}$	$0.003^{+0.039}_{-0.003}$

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

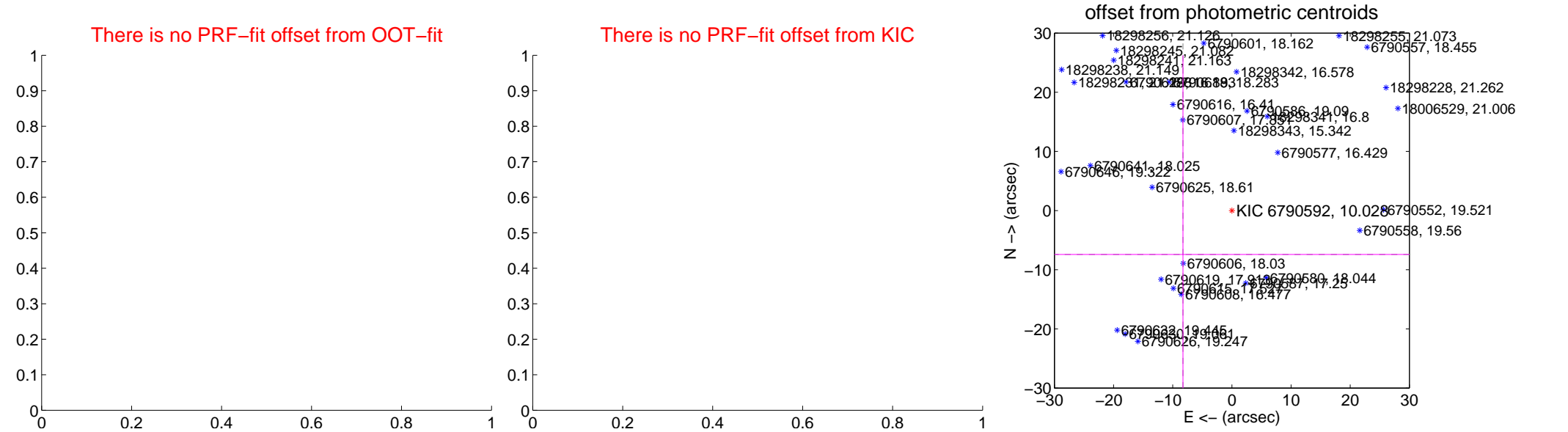
## DV Centroid Data

Supplemental centroid analysis for 006790592-05. **Kepler magnitude: 10.03.** Transit SNR -1.00

**There are 0 quarters with good PRF difference image offsets**

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

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	$11.10 \pm 36.44$	0.30	$8.27 \pm 38.54$	$-7.41 \pm 33.66$

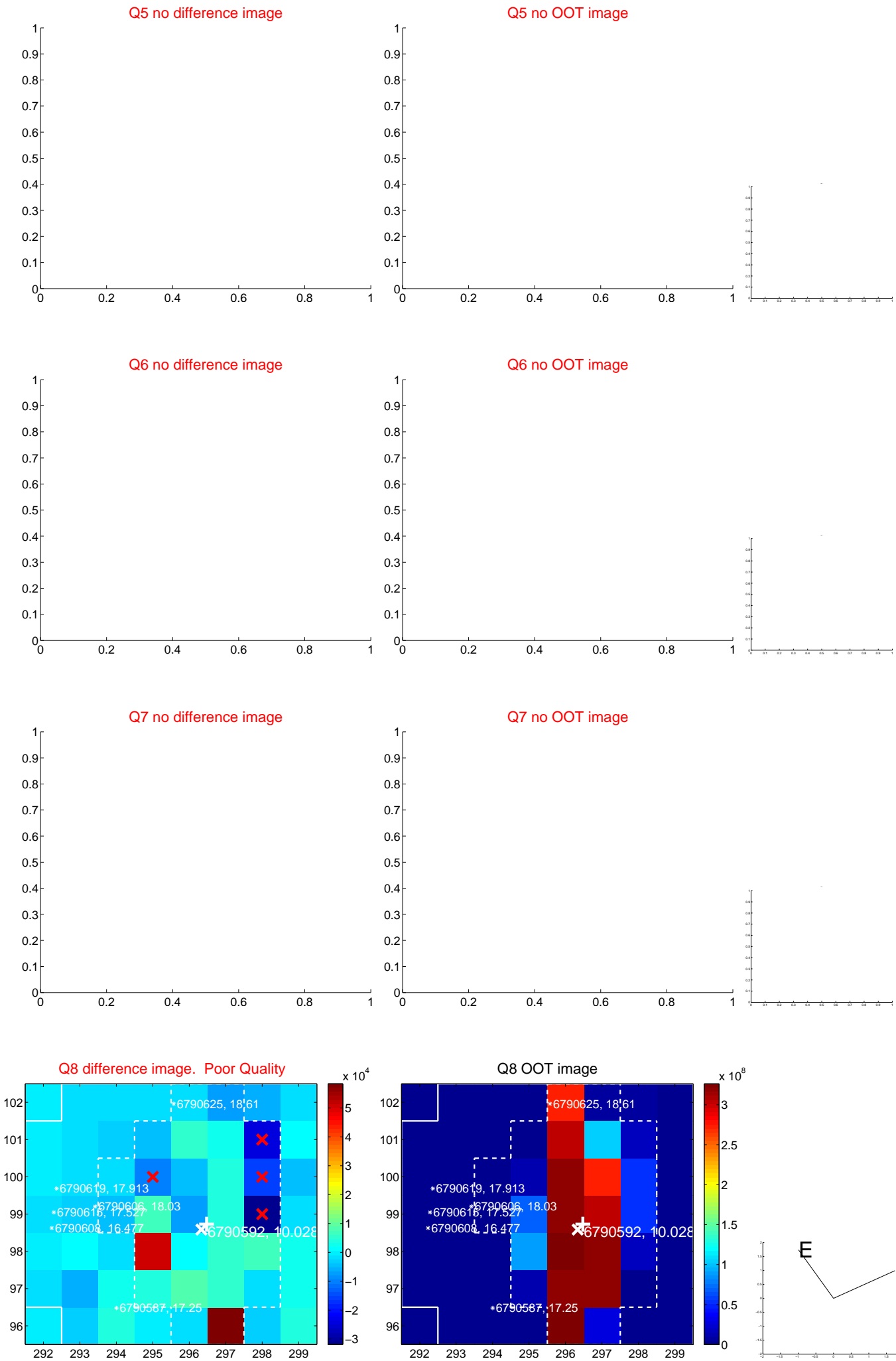


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

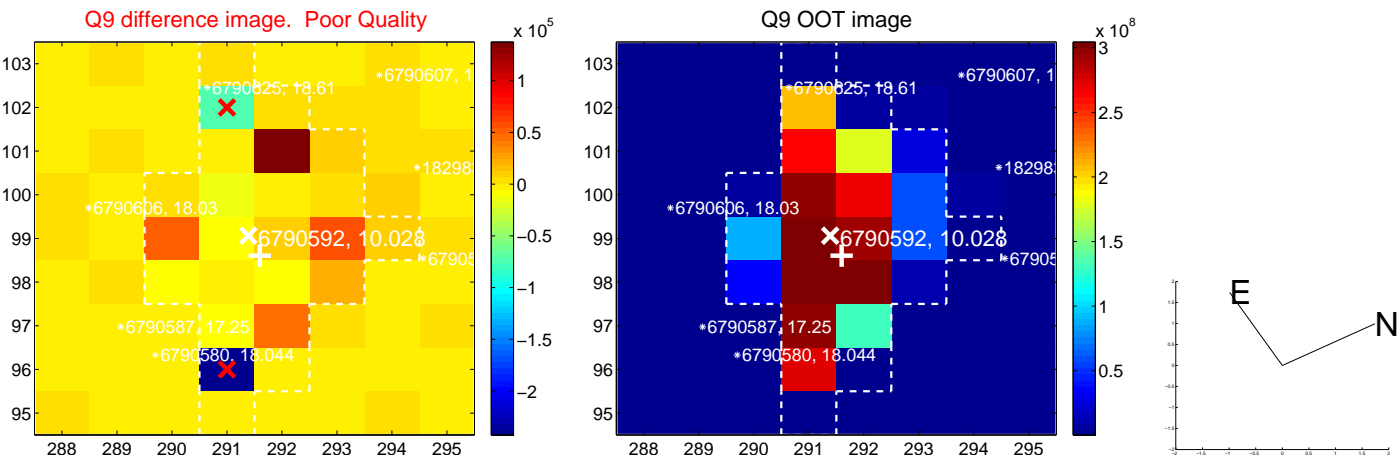
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



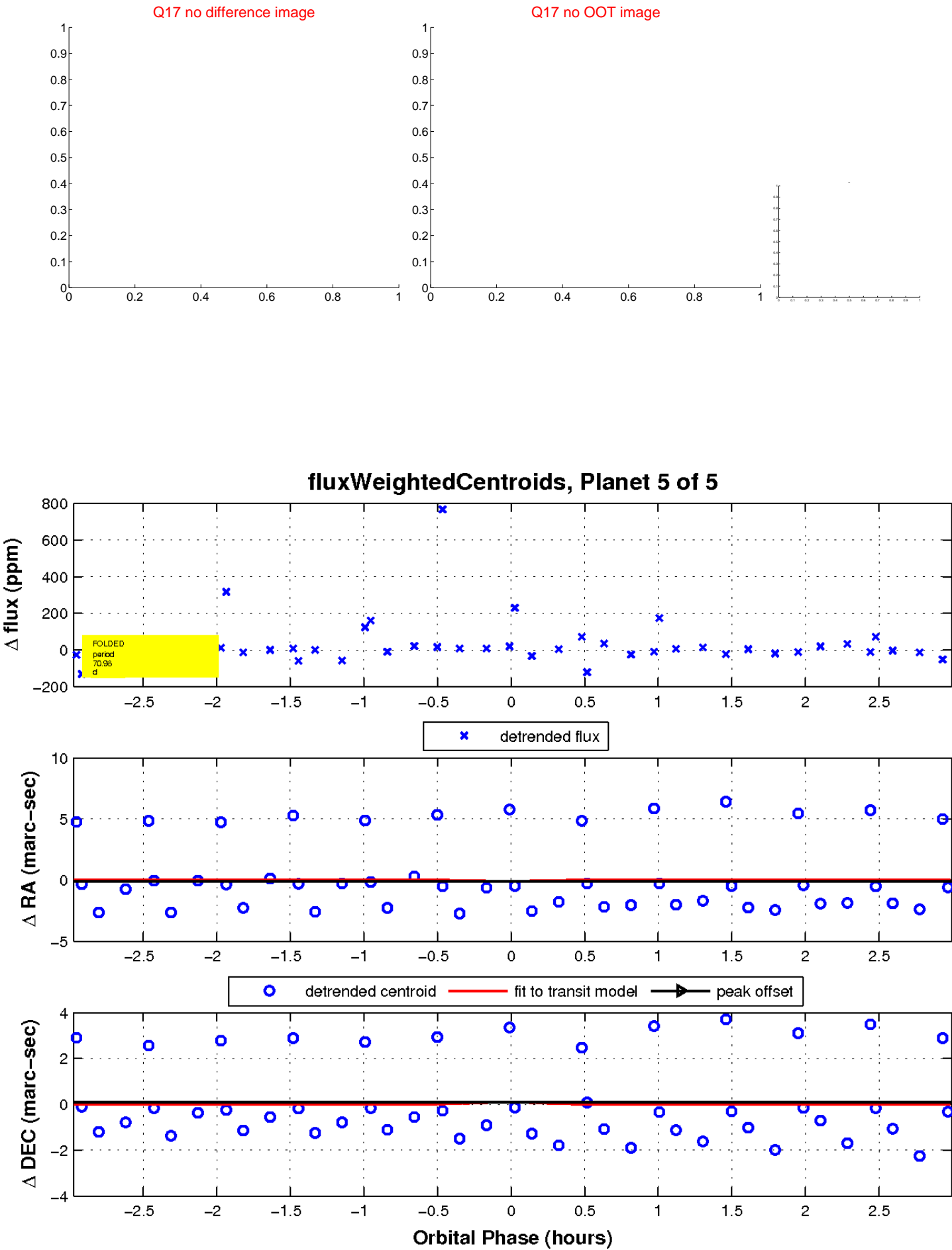
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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



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



UKIRT Image

Declination

