

# KIC 006292803

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006292803-01	OBS	No	1.253313	132.668896	295490.2	4.500	7143.2	-1.0	1.11	6555	31.83	4008.13
006292803-02	OBS	No	1.253267	132.076619	4974.6	1.500	179.3	-1.0	1.11	6555	7.89	4008.33

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006292803-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_NOFITS
006292803-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—SAME_NTL_PERIOD—CENT_NOFITS

**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.

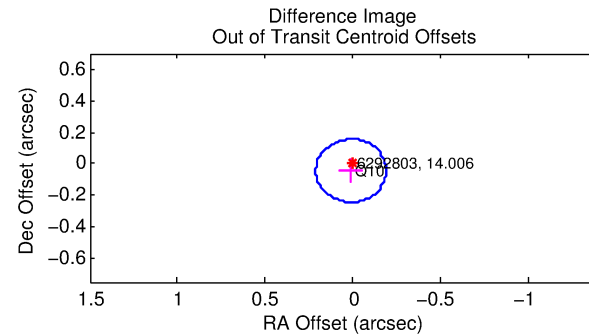
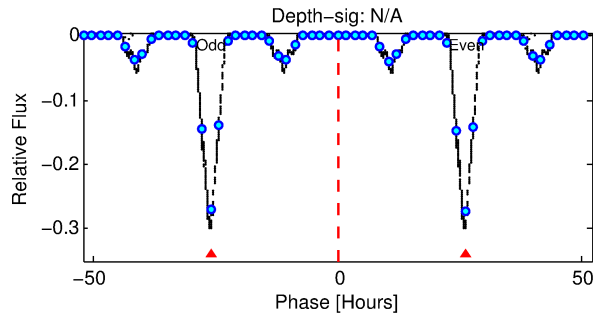
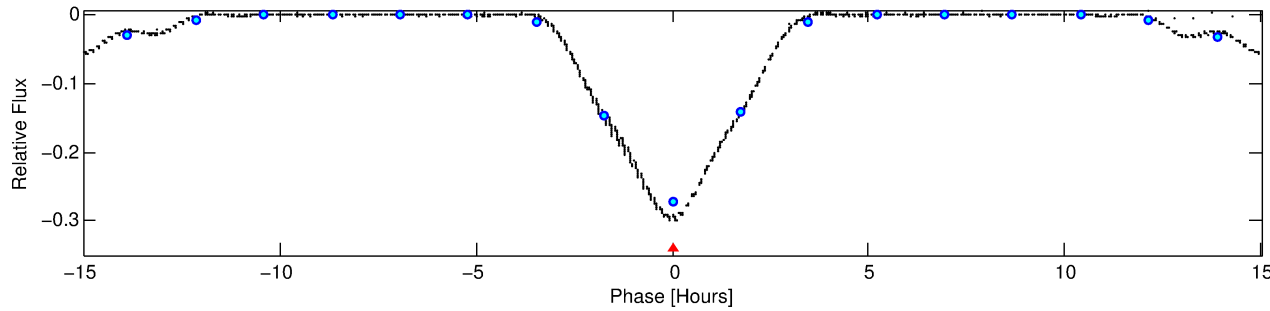
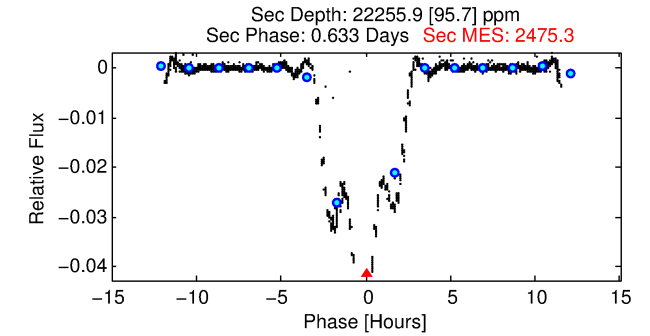
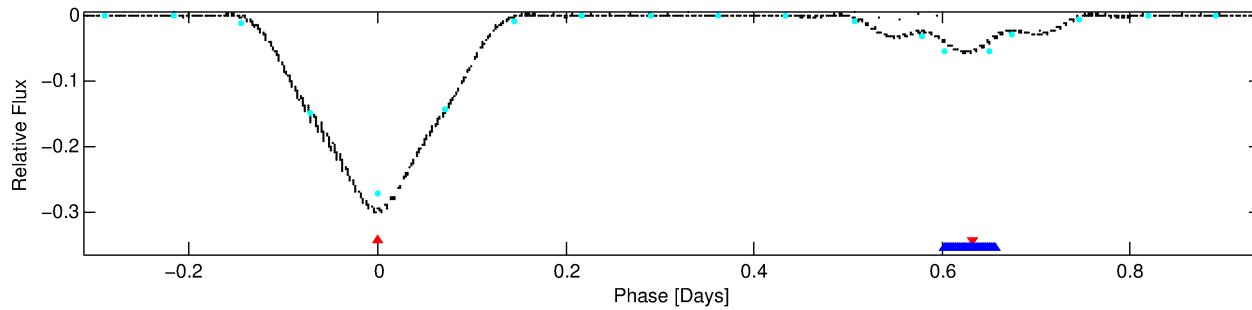
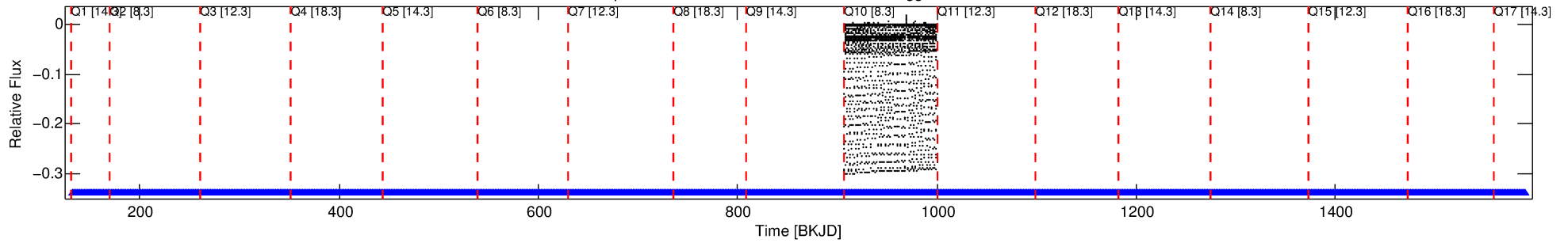
## Ephemeris Match Information For 006292803-01

No Significant Match Found

# DV One-Page Summary

KIC: 6292803 Candidate: 1 of 2 Period: 1.253 d

Kp: 14.01 R\*: 1.11 Rs Teff: 6555.0 K Logg: 4.33 Fe/H: -0.720



## TPS TCE Results:

Period = 1.25331 d  
Epoch = 132.6689 BKJD

DV fit results are unavailable

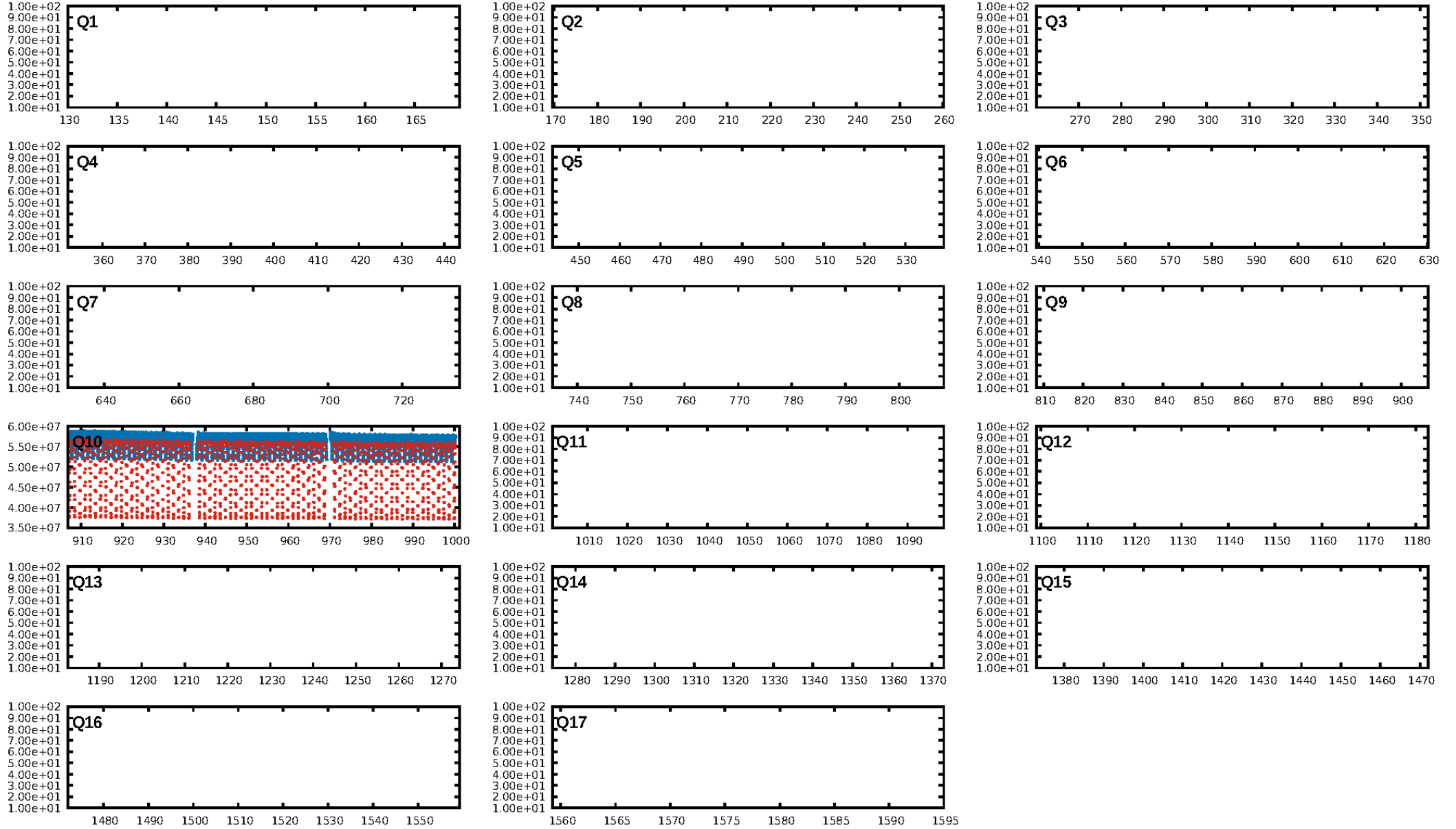
## DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 $\sigma$ ]  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [73/73]  
GhostDiagnostic-chr: -0.5377  
Centroid-sig: 0.0%  
Centroid-so: 0.156 arcsec [115.98 $\sigma$ ]  
OotOffset-rm: 0.045 arcsec [0.67 $\sigma$ ]  
KicOffset-rm: 0.112 arcsec [1.67 $\sigma$ ]  
OotOffset-st: 1/0/0/0 [1]  
KicOffset-st: 1/0/0/0 [1]  
DiffImageQuality-fgm: 1.00 [1/1]  
DiffImageOverlap-fno: 0.00 [0/1]

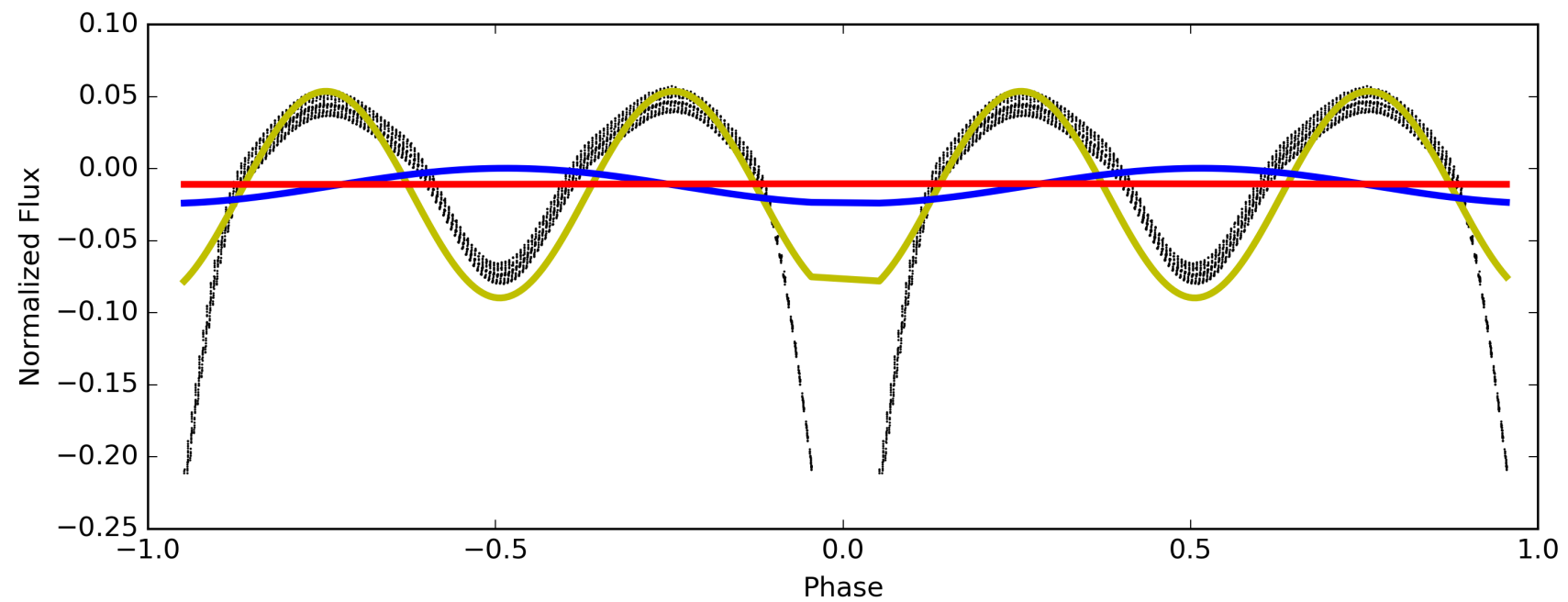
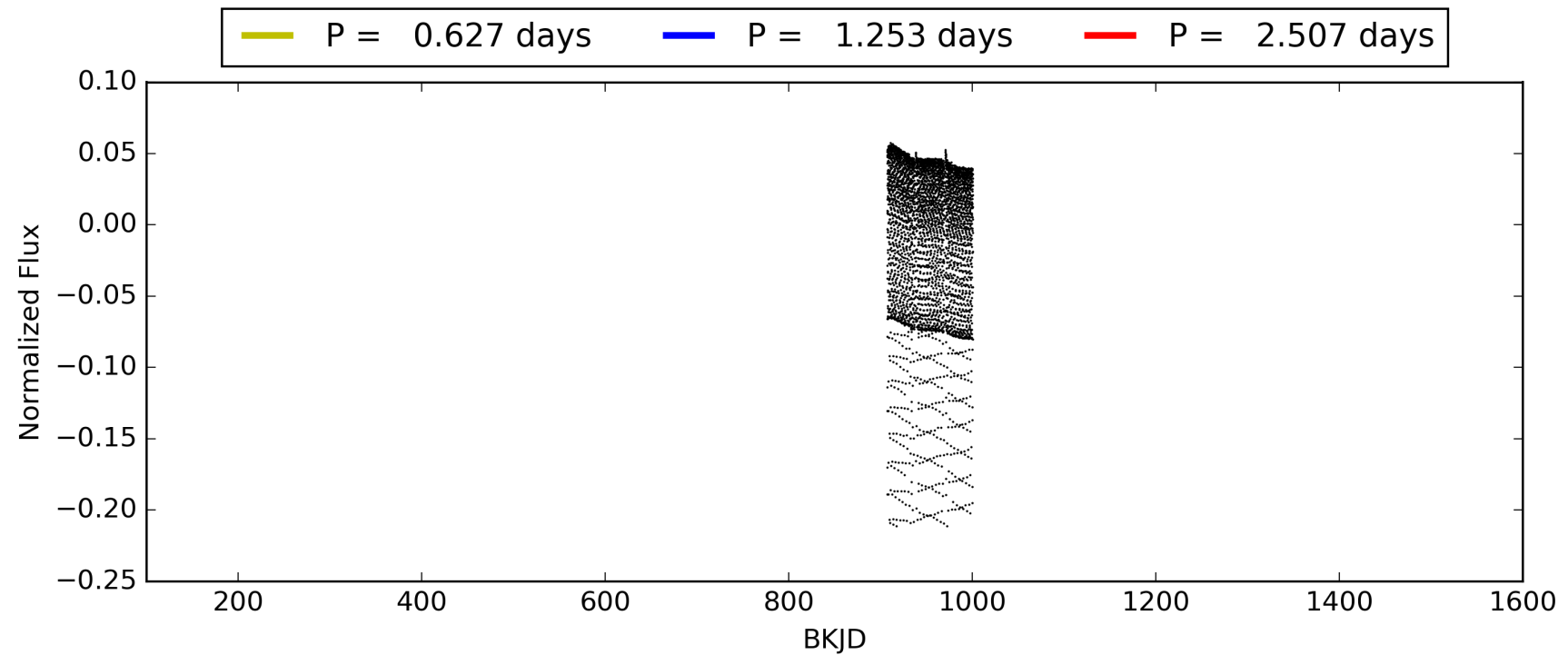
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 08:02:14 Z

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

# TCE 006292803-01, PDC Light Curves

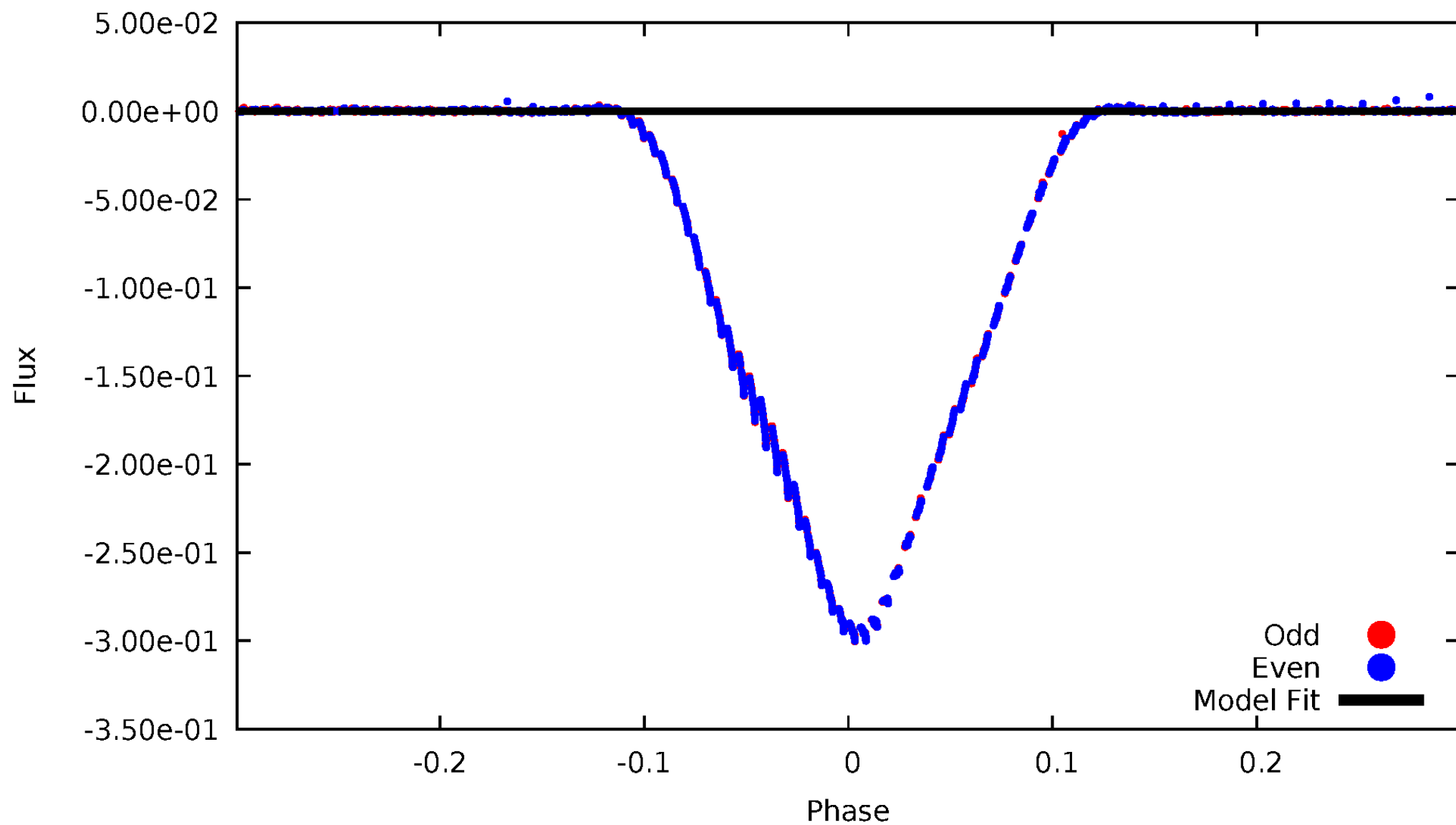


TCE 006292803-01



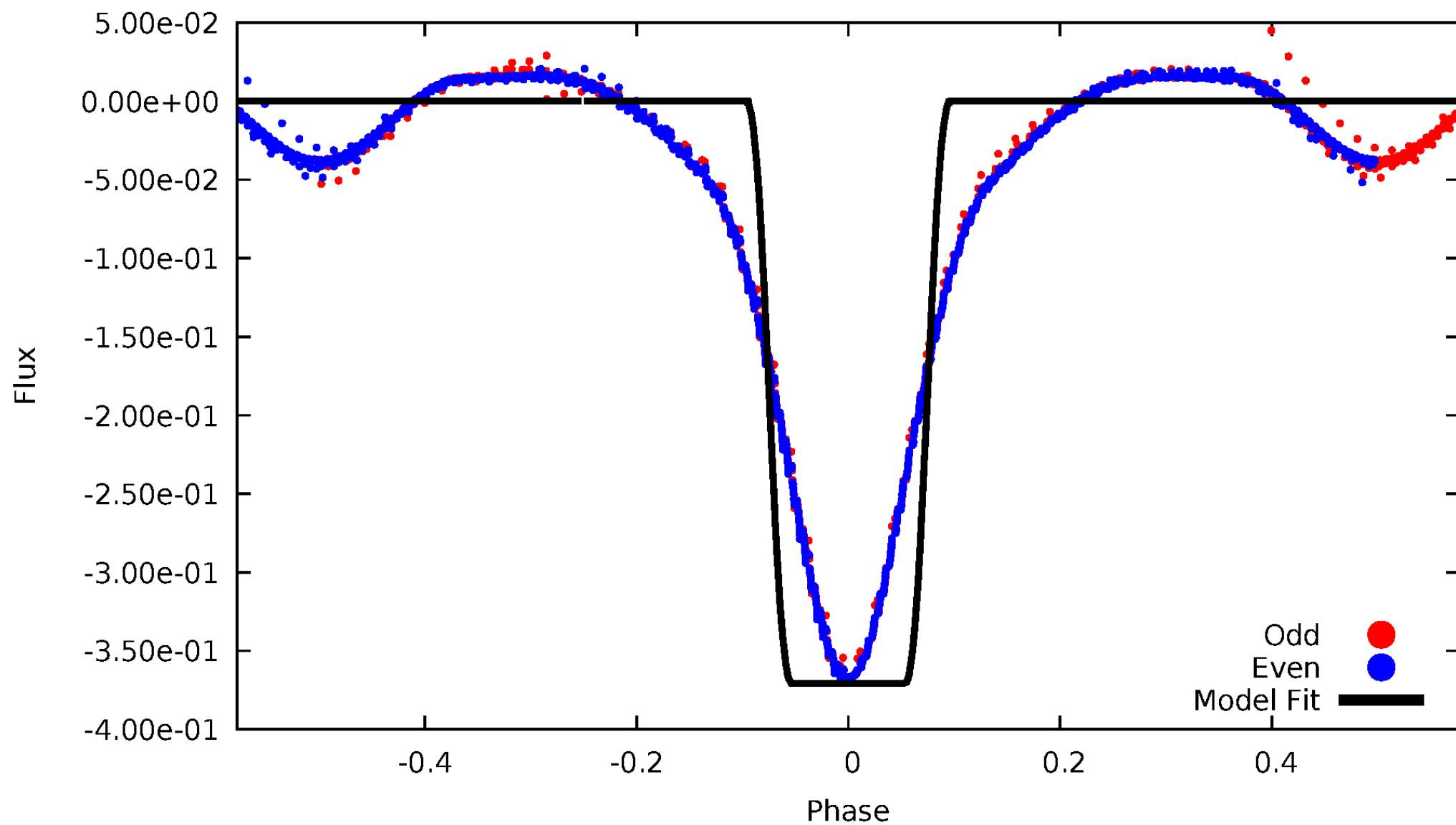
# DV Odd/Even

TCE 006292803-01



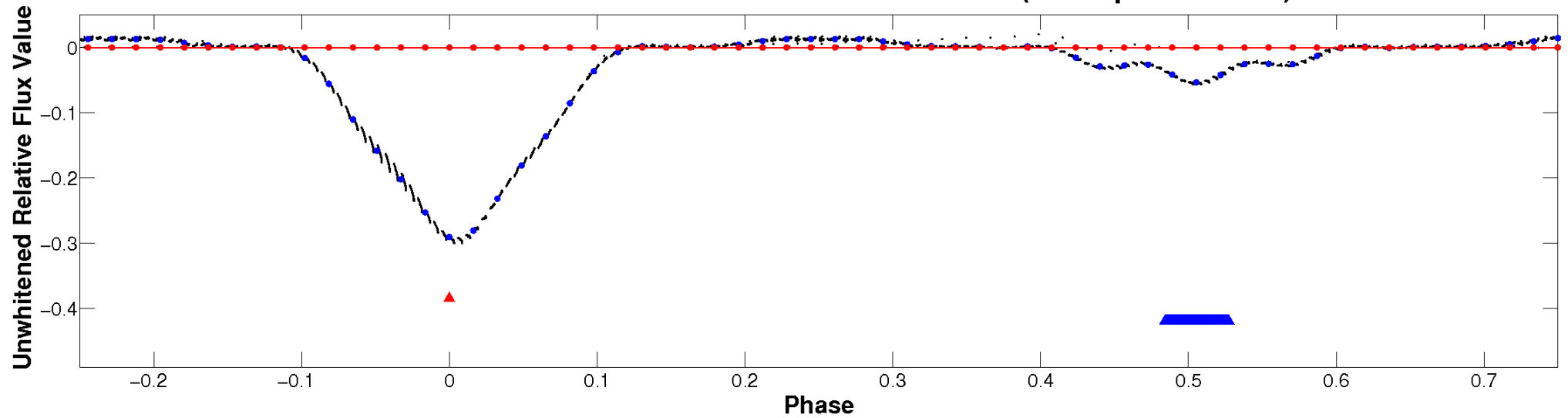
# ALT Odd/Even

TCE 006292803-01



# Non-Whitened Vs. Whitened Light Curve

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

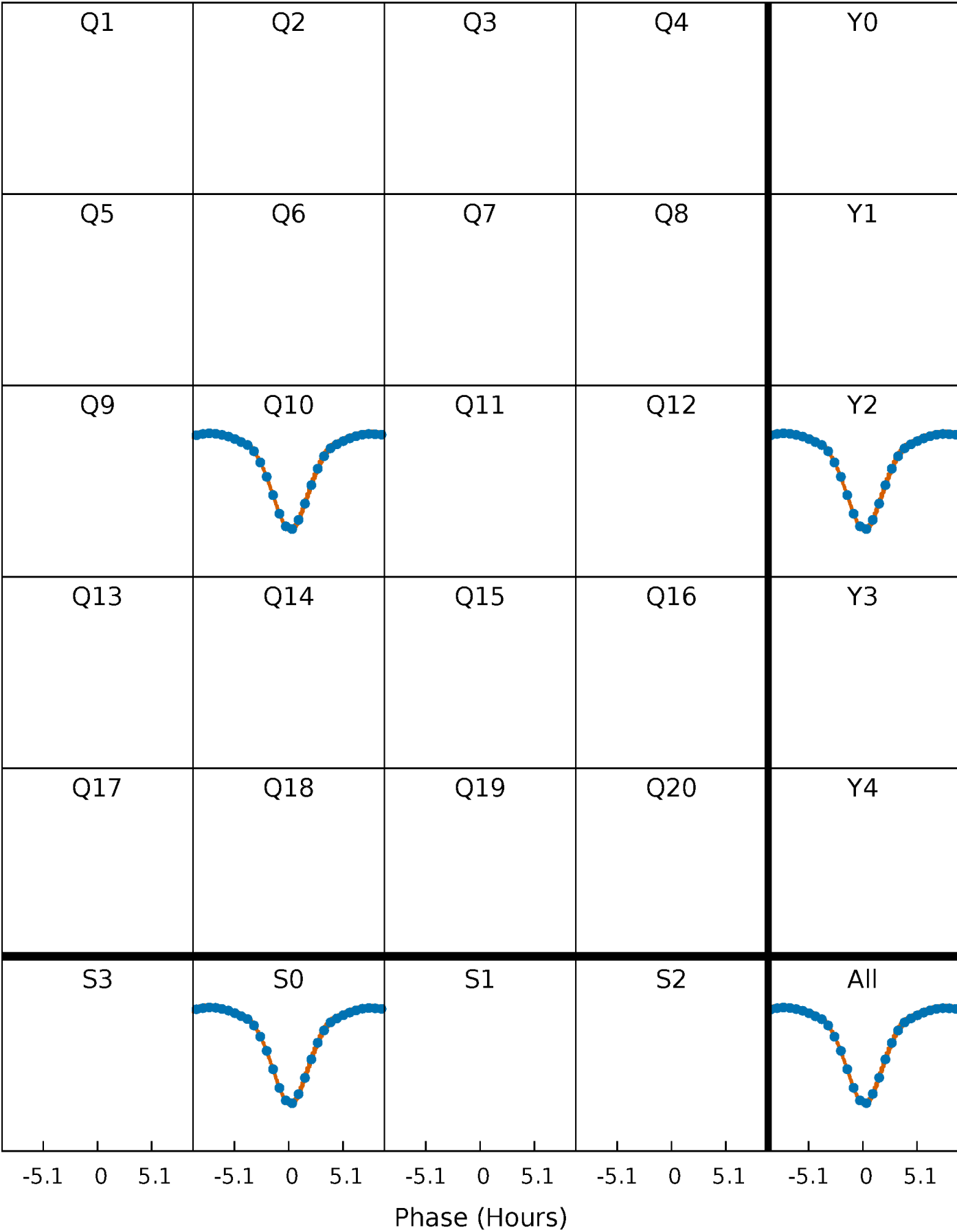


**Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)**



PDC Quarter-Phased Transit Curves

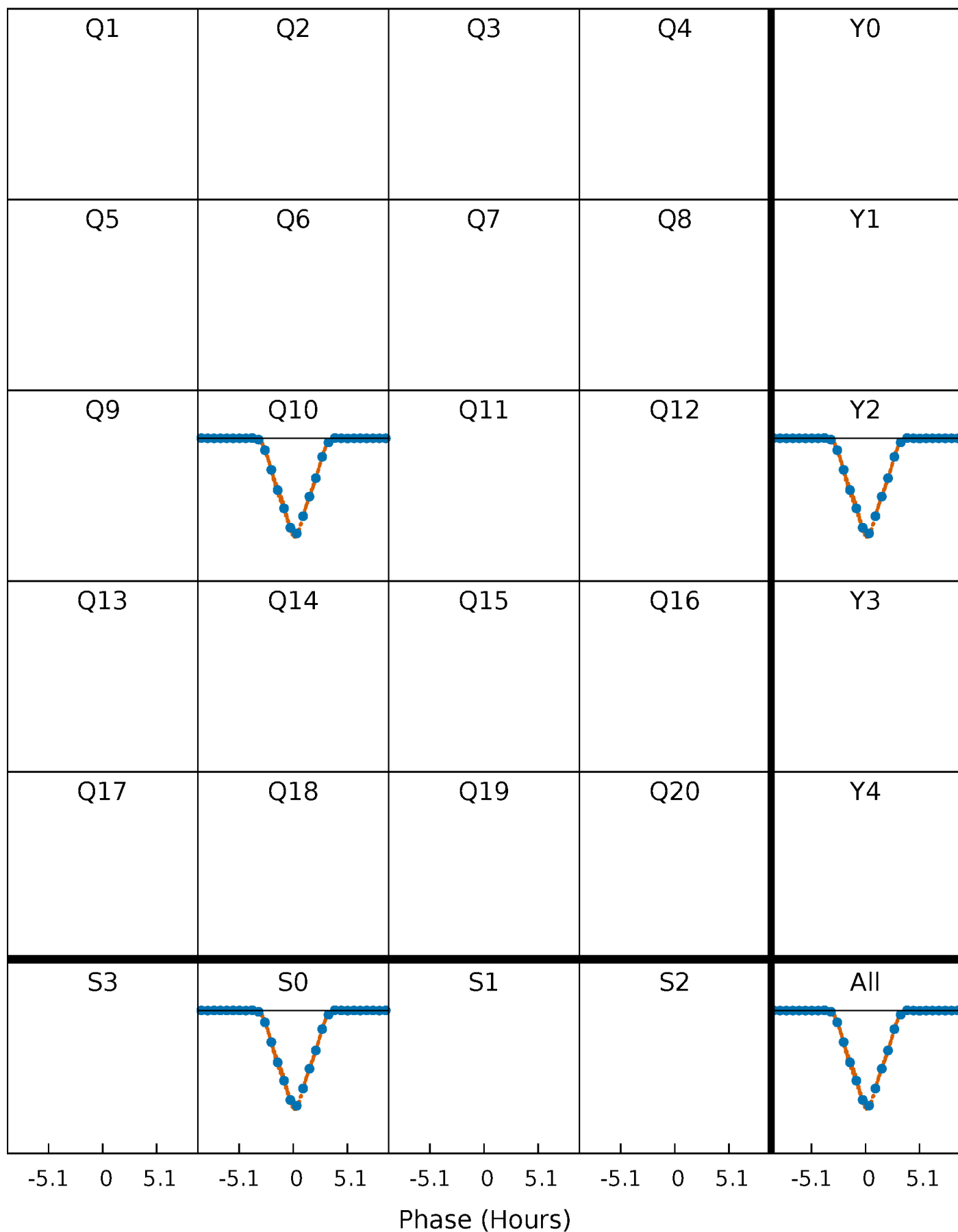
TCE 006292803-01    P= 1.253314 Days    T<sub>0</sub>=132.668896 (BKJD)





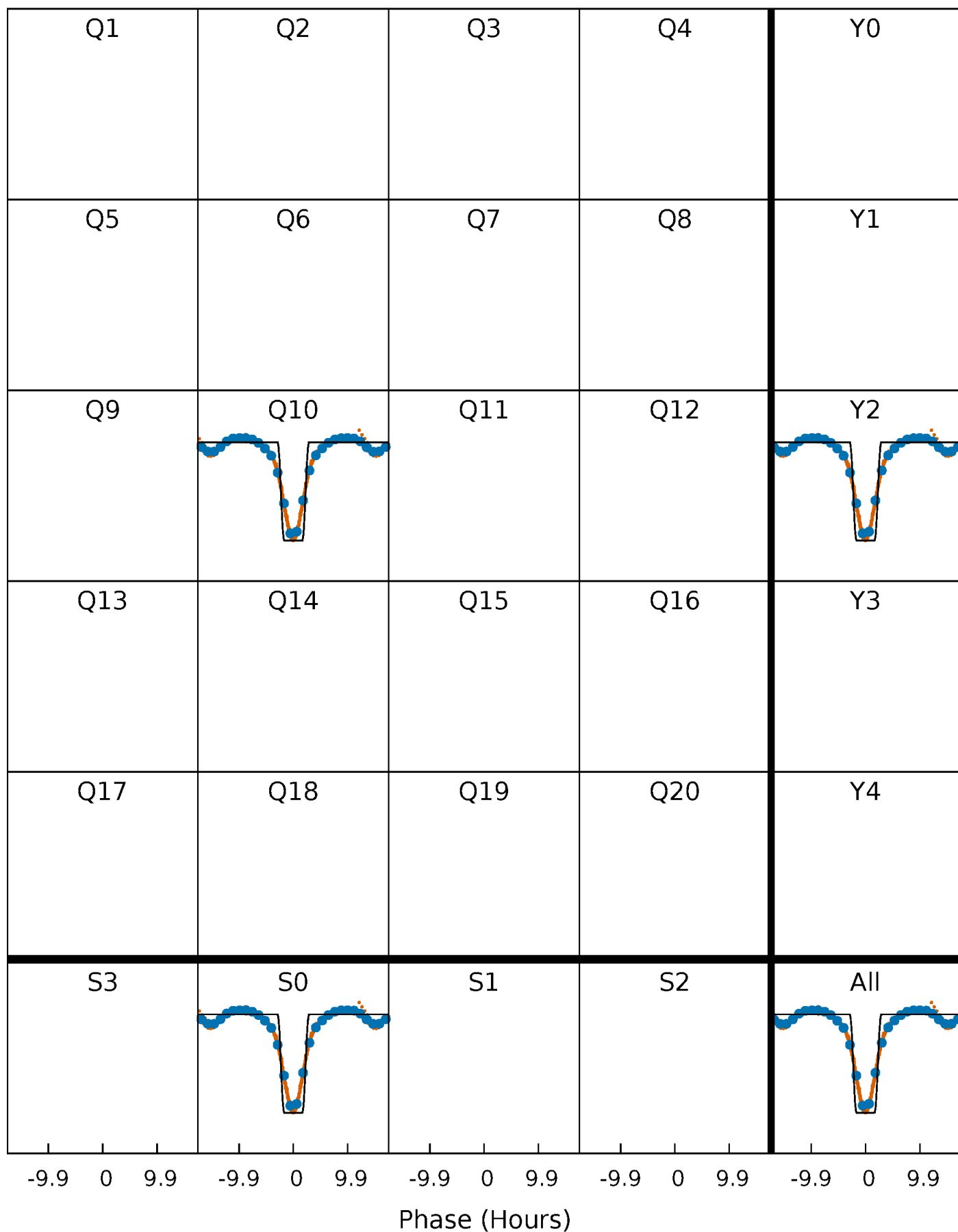
# DV Quarter-Phased Transit Curves

TCE 006292803-01 P= 1.253314 Days  $T_0=132.668896$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

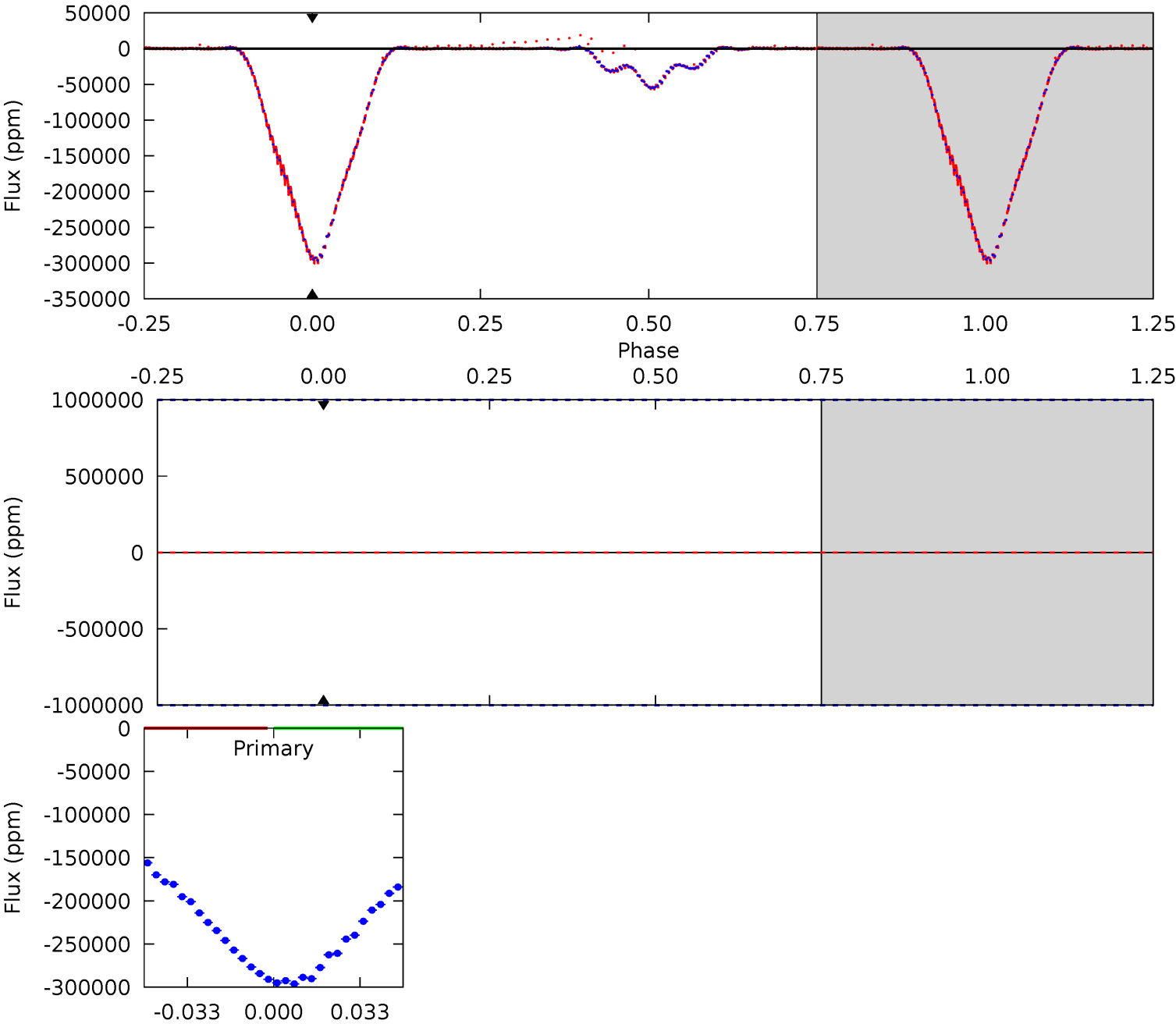
TCE 006292803-01   P= 1.253314 Days    $T_0=132.675686$  (BKJD)



DV Model-Shift Uniqueness Test

006292803-01, P = 1.253314 Days, E = 132.668896 Days

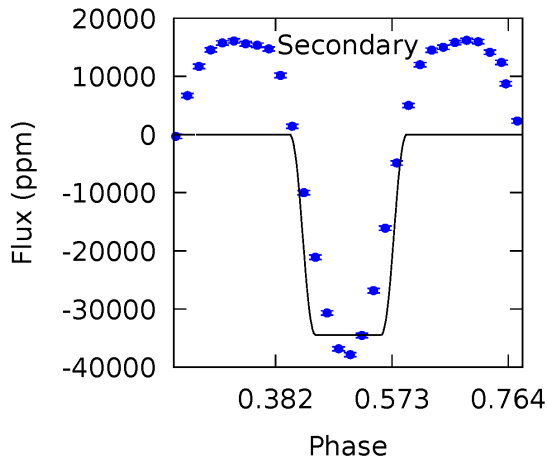
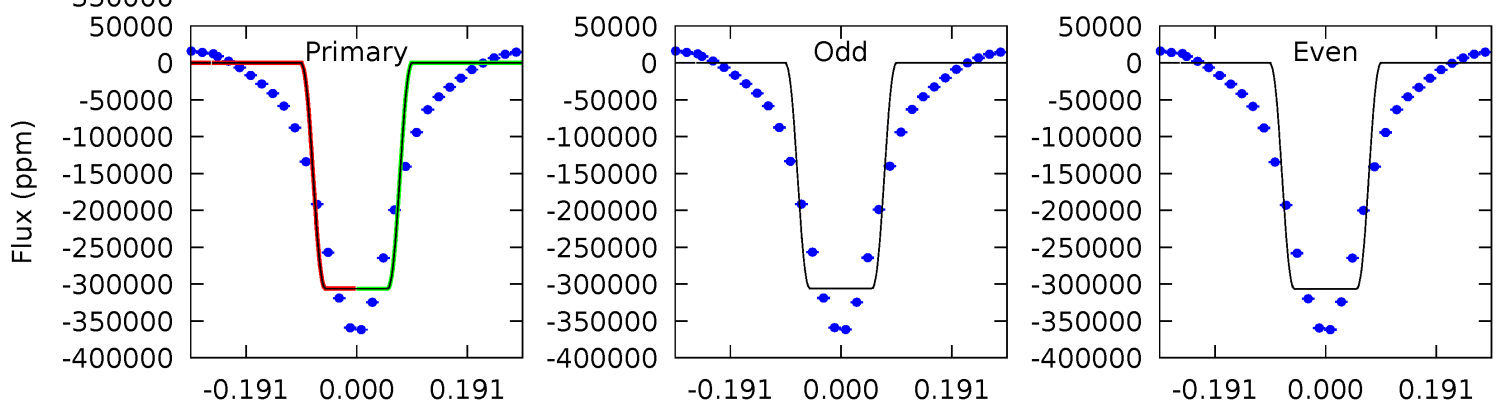
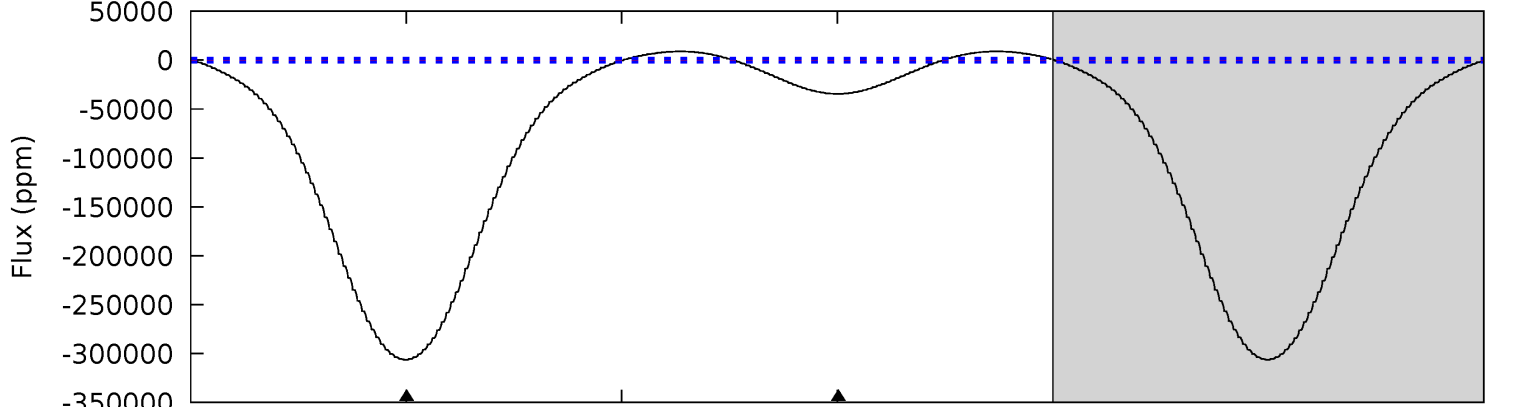
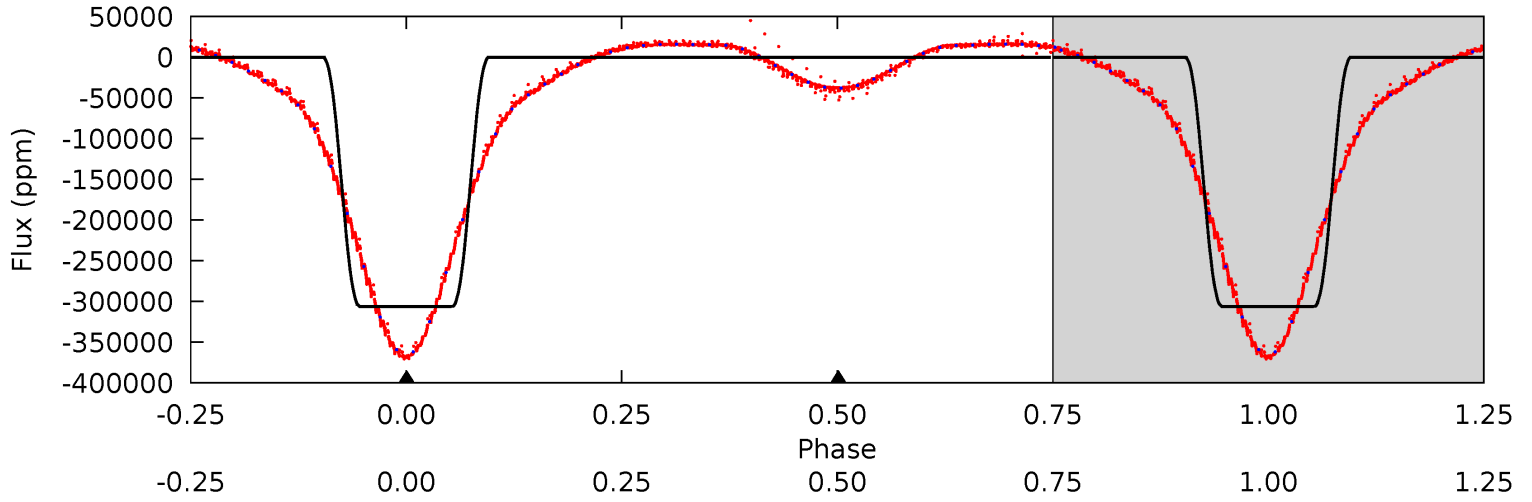
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



# Alt Model-Shift Uniqueness Test

006292803-01, P = 1.253314 Days, E = 132.675686 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
765.2	86.1	0	0	4.43	1.31	24.3	765.2	765.2	86.1	86.1	0.84	1.00	0.03	0.10



### Stellar Parameters For KIC 006292803

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6555^{+184}_{-253}$	$4.334^{+0.140}_{-0.171}$	$-0.720^{+0.300}_{-0.300}$	$1.106^{+0.287}_{-0.192}$	$0.961^{+0.125}_{-0.103}$	$1.001^{+0.672}_{-0.470}$
	+3%/-4%	+3%/-4%	+42%/-42%	+26%/-17%	+13%/-11%	+67%/-47%
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 006292803-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$0 \pm 1000000$	$31.72^{+14.54}_{-11.68}$	$2848^{+192}_{-188}$	$-3098^{+11063}_{-4374}$	$-0.094^{+35.351}_{-30.673}$
Alt.	$-34471 \pm 400$	$74.08^{+15.72}_{-14.43}$	$2833^{+195}_{-161}$	$3833^{+318}_{-244}$	$1.803^{+0.955}_{-0.563}$

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

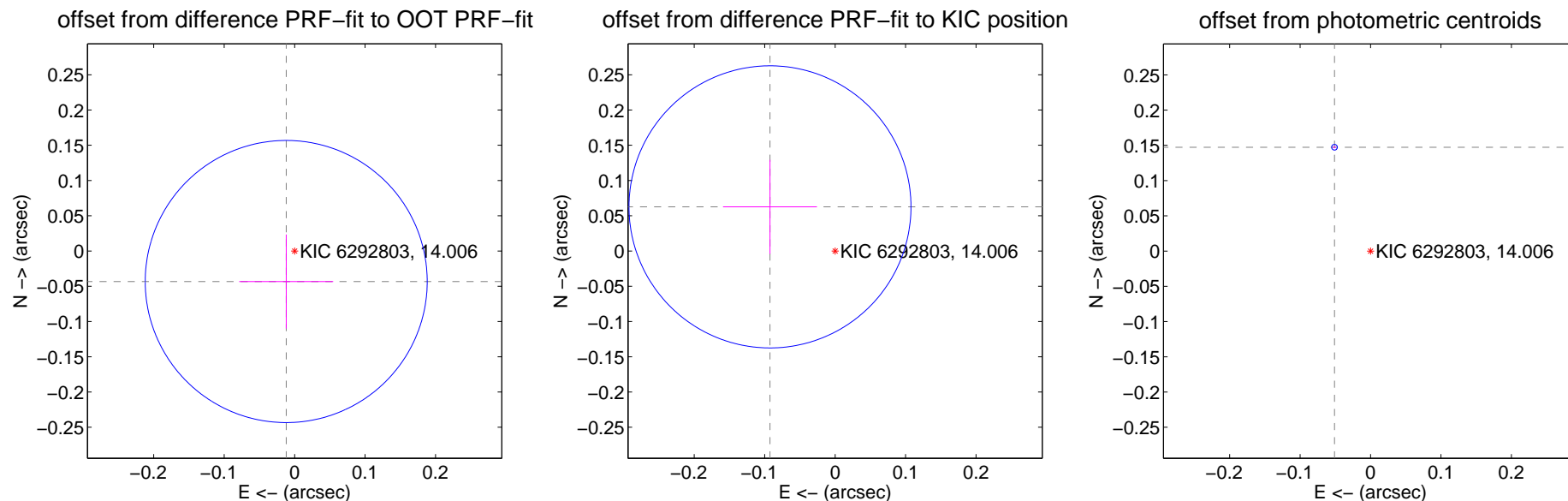
## DV Centroid Data

Supplemental centroid analysis for 006292803-01. Kepler magnitude: 14.01. Transit SNR -1.00

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.045 \pm 0.067$	0.67	$0.012 \pm 0.067$	$-0.043 \pm 0.067$
PRF-fit source offset from KIC position	$0.112 \pm 0.067$	1.67	$0.092 \pm 0.067$	$0.063 \pm 0.067$
photometric centroid source offset	$0.16 \pm 0.00$	115.98	$0.05 \pm 0.00$	$0.15 \pm 0.00$



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.

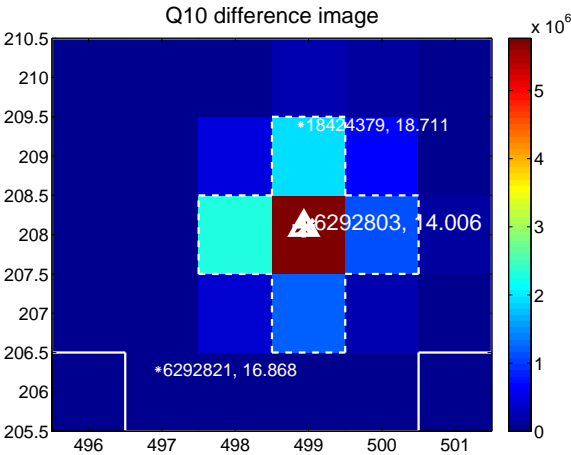
Q9 no difference image



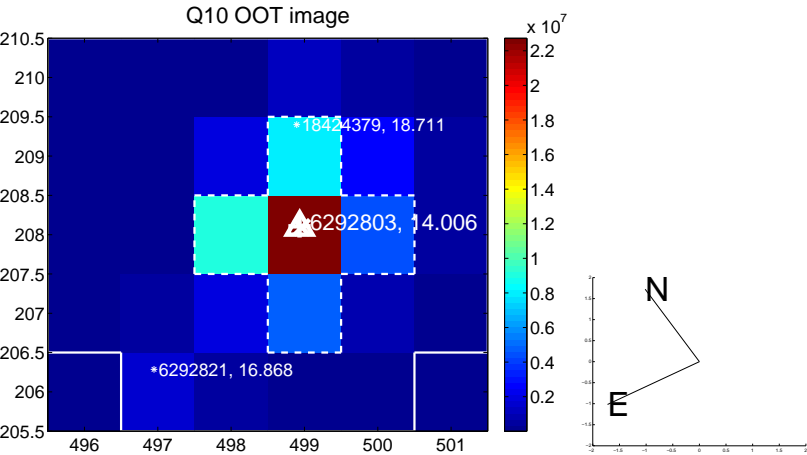
Q9 no OOT image



Q10 difference image



Q10 OOT image



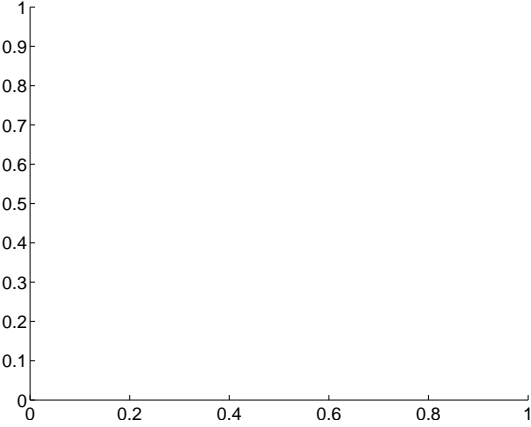
Q11 no difference image



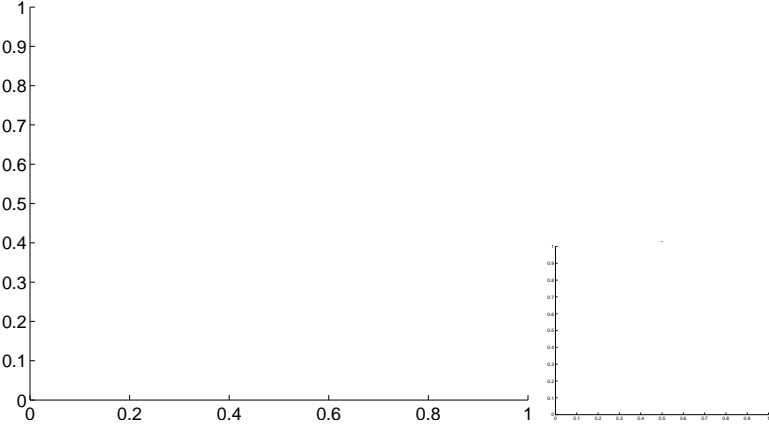
Q11 no OOT image



Q12 no difference image



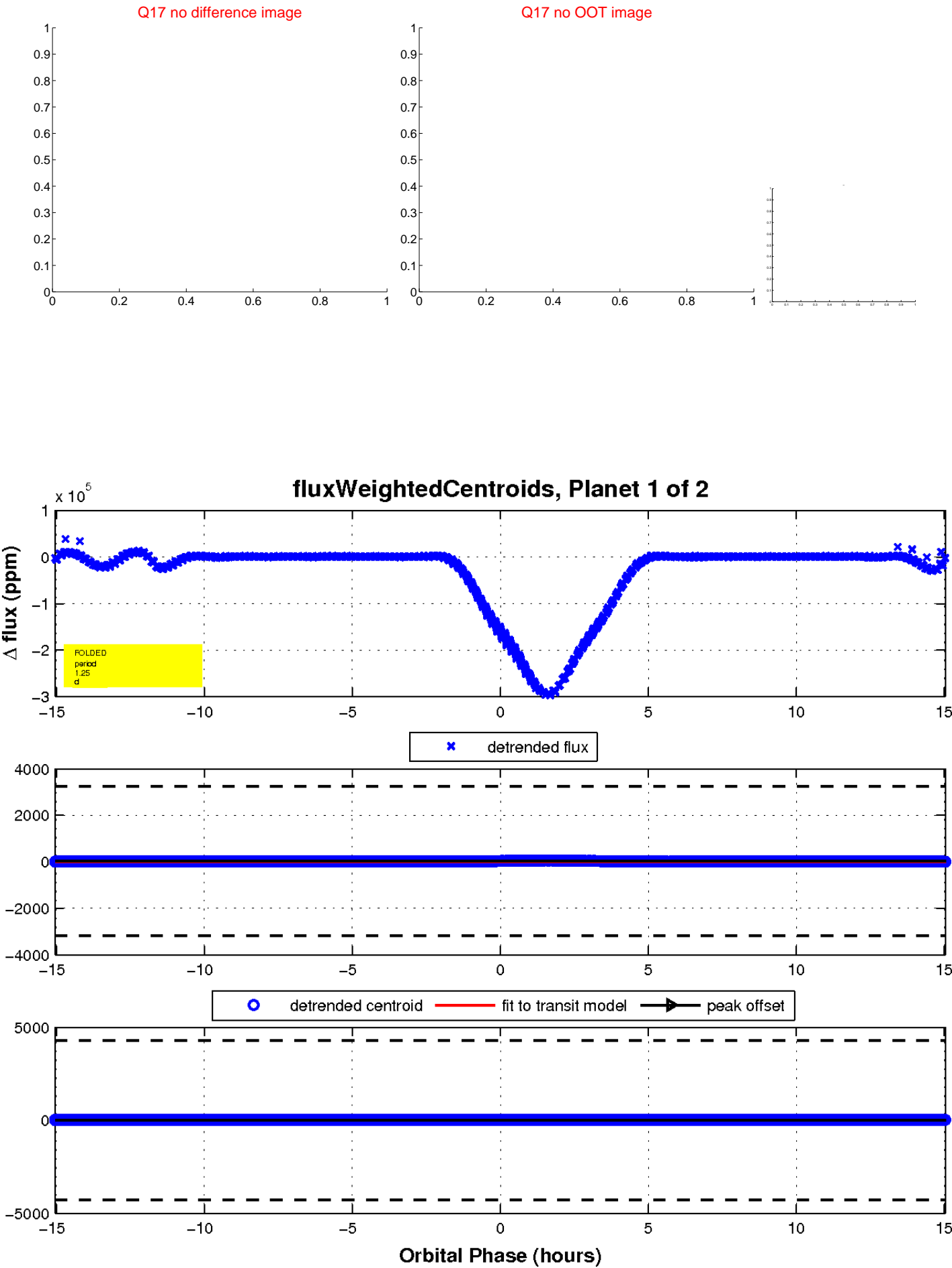
Q12 no OOT image



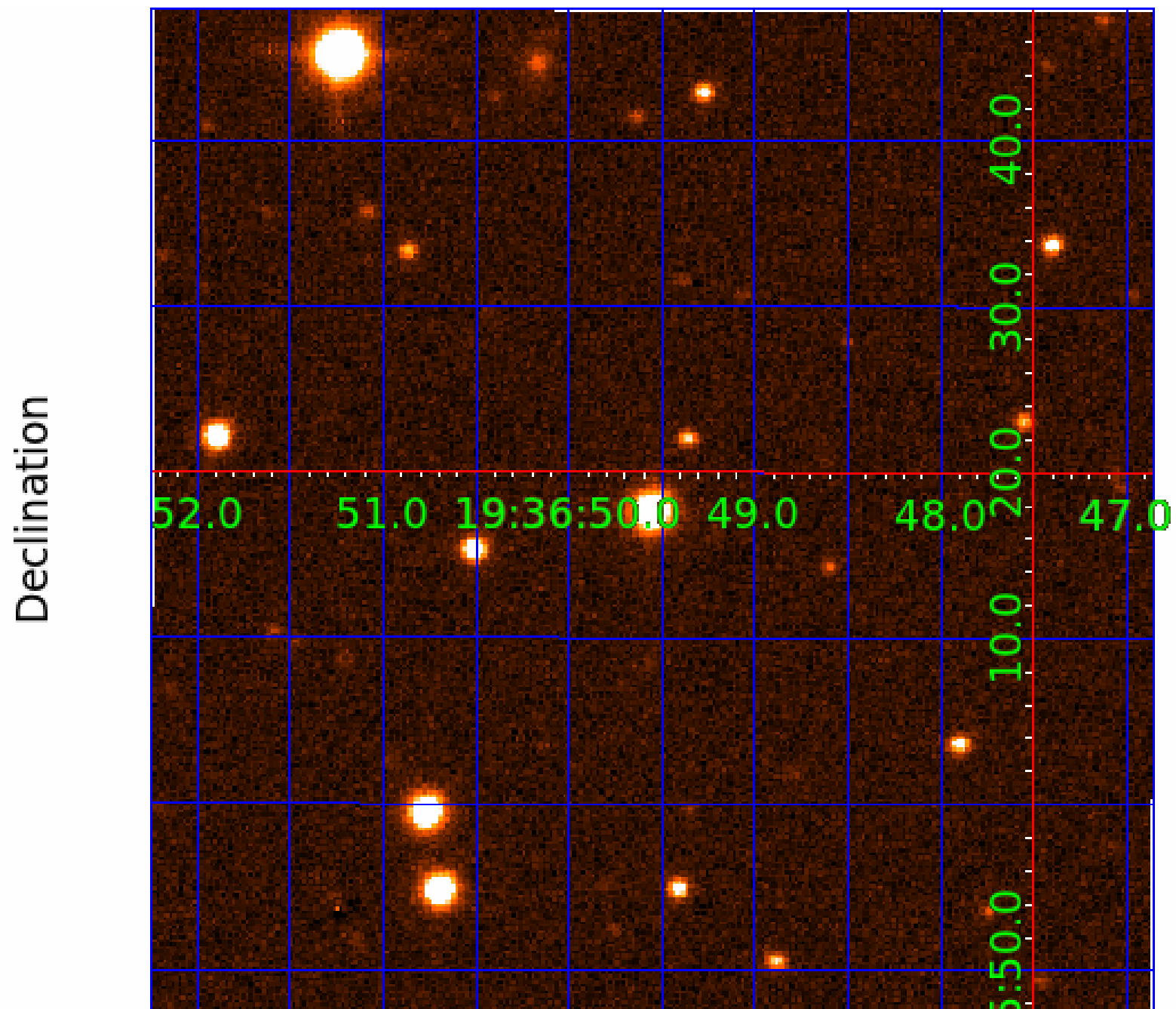
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



UKIRT Image



# KIC 006292803

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006292803-01	OBS	No	1.253313	132.668896	295490.2	4.500	7143.2	-1.0	1.11	6555	31.83	4008.13
006292803-02	OBS	No	1.253267	132.076619	4974.6	1.500	179.3	-1.0	1.11	6555	7.89	4008.33

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006292803-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_NOFITS
006292803-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—SAME_NTL_PERIOD—CENT_NOFITS

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

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

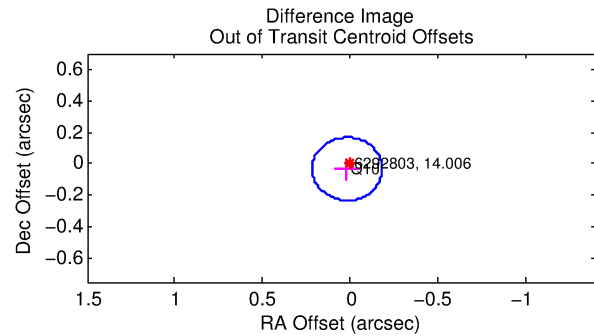
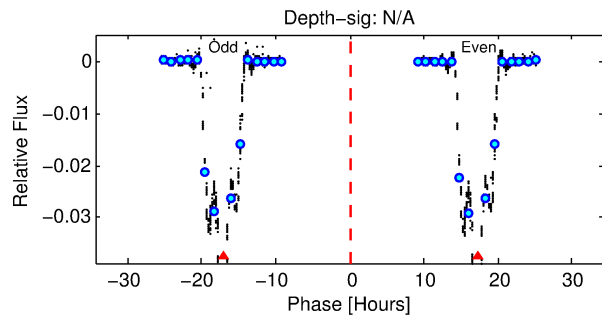
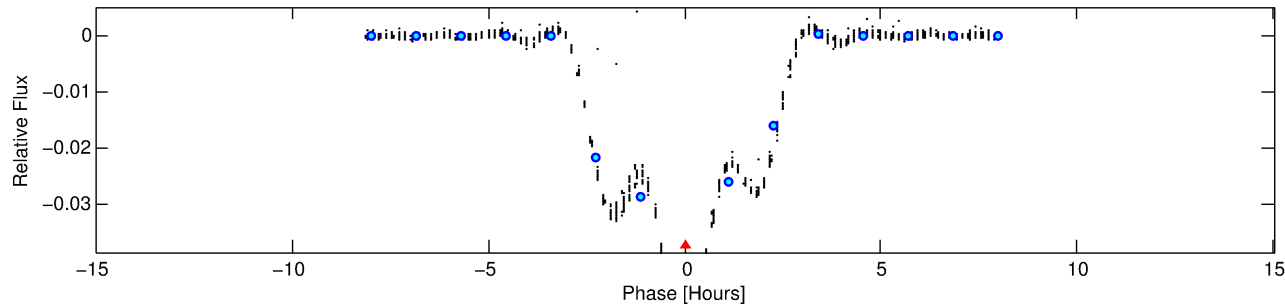
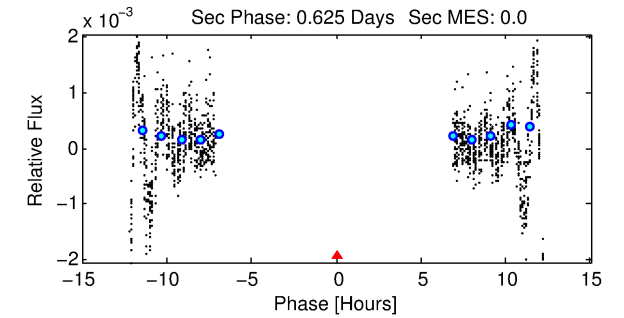
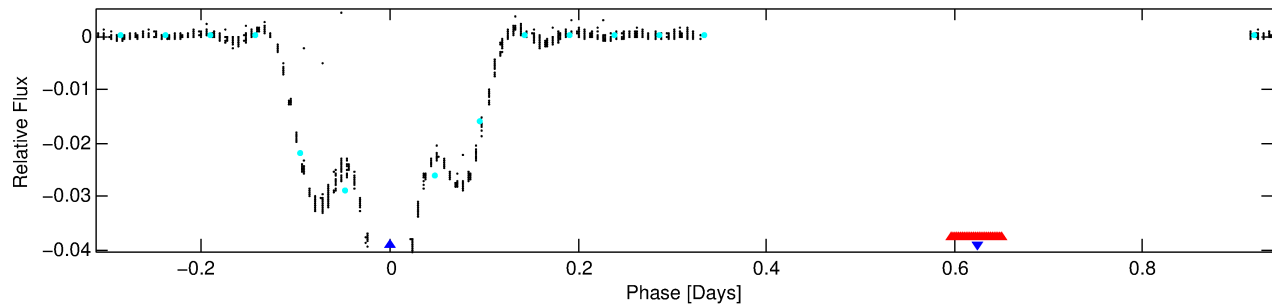
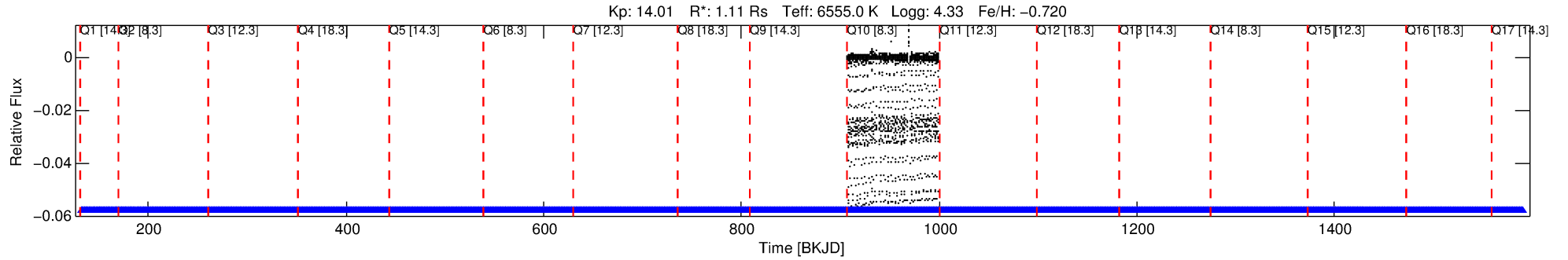
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 006292803-02

No Significant Match Found

# DV One-Page Summary

KIC: 6292803 Candidate: 2 of 2 Period: 1.253 d



## TPS TCE Results:

Period = 1.25327 d  
Epoch = 132.0766 BKJD

DV fit results are unavailable

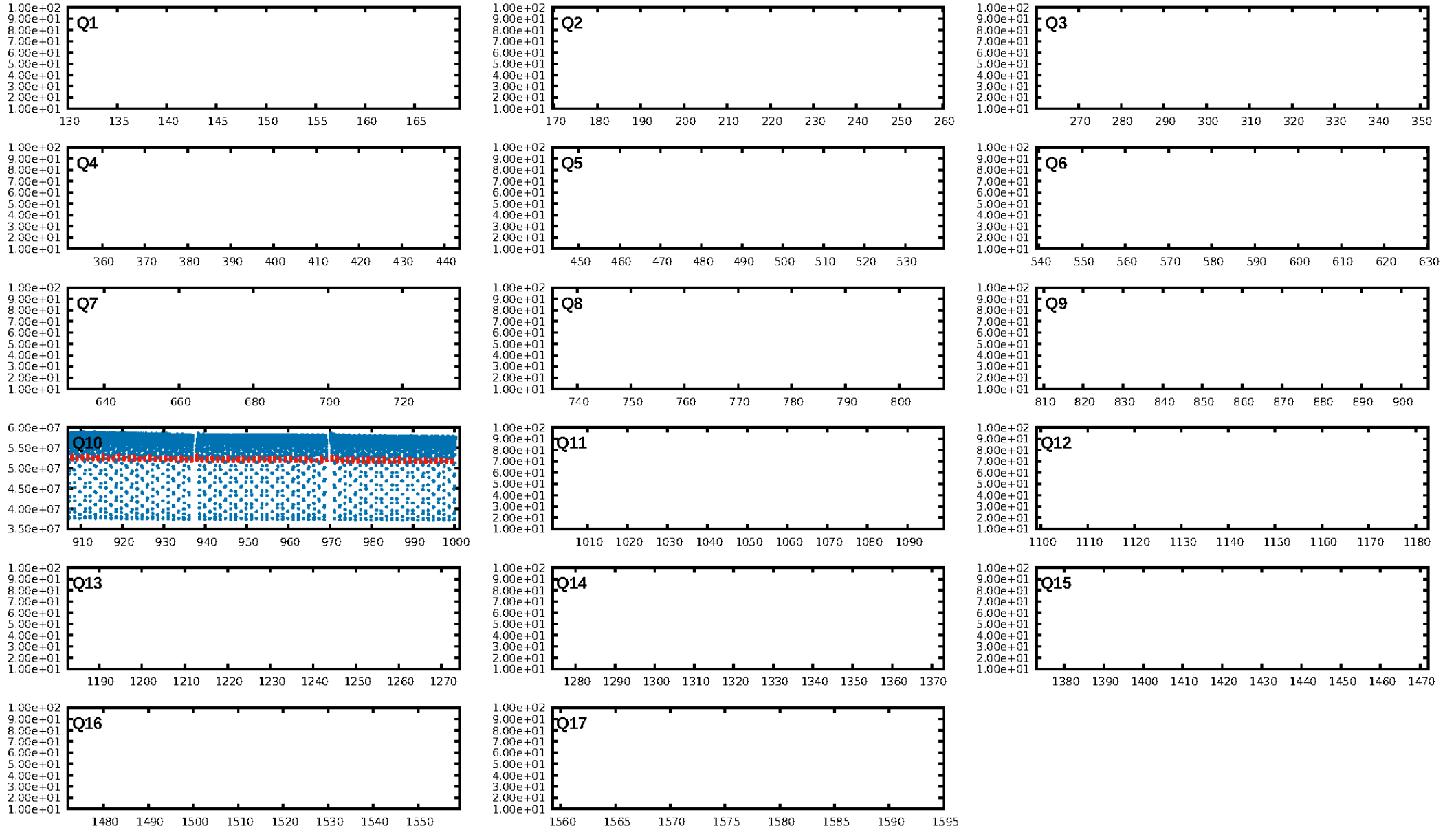
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: 0.0% [0.00σ]  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [73/73]  
GhostDiagnostic-chr: -0.9905  
Centroid-sig: 0.0%  
Centroid-so: 0.200 arcsec [27.55σ]  
OotOffset-rm: 0.038 arcsec [0.57σ]  
KicOffset-rm: 0.124 arcsec [1.86σ]  
OotOffset-st: 1/0/0/0 [1]  
KicOffset-st: 1/0/0/0 [1]  
DiffImageQuality-fgm: 1.00 [1/1]  
DiffImageOverlap-fno: 0.00 [0/1]

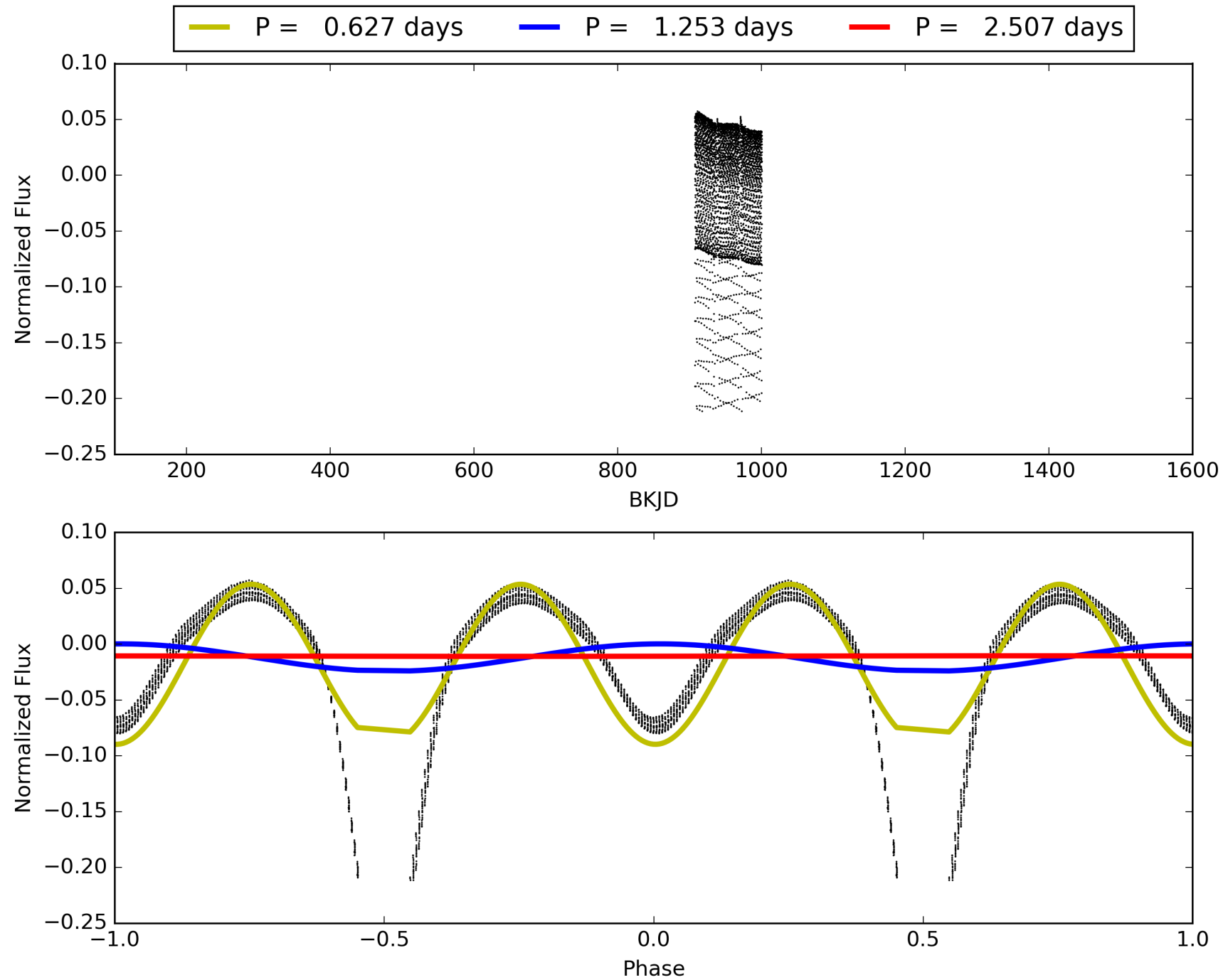
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 08:02:18 Z

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

# TCE 006292803-02, PDC Light Curves



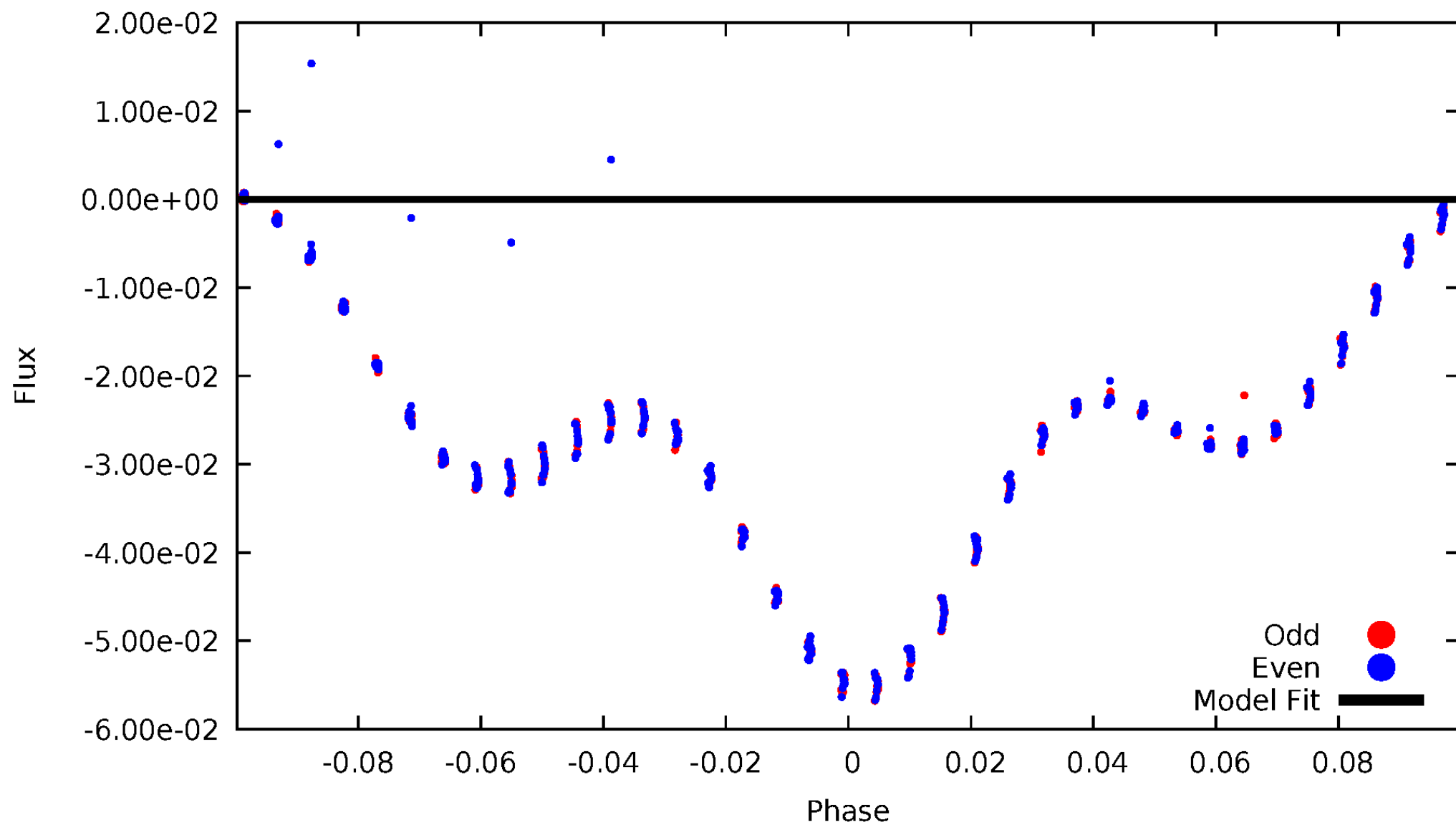
# TCE 006292803-02





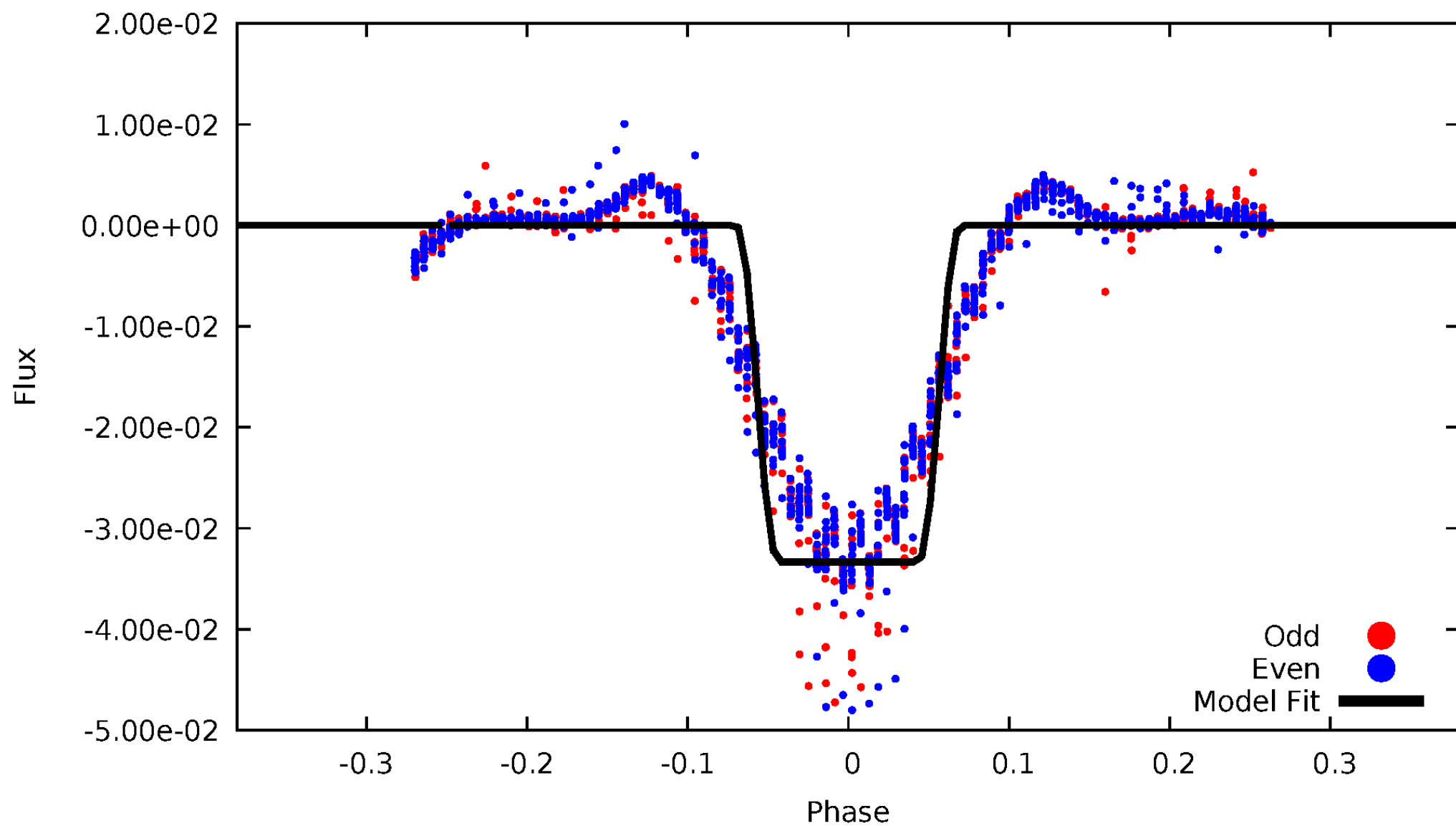
# DV Odd/Even

TCE 006292803-02



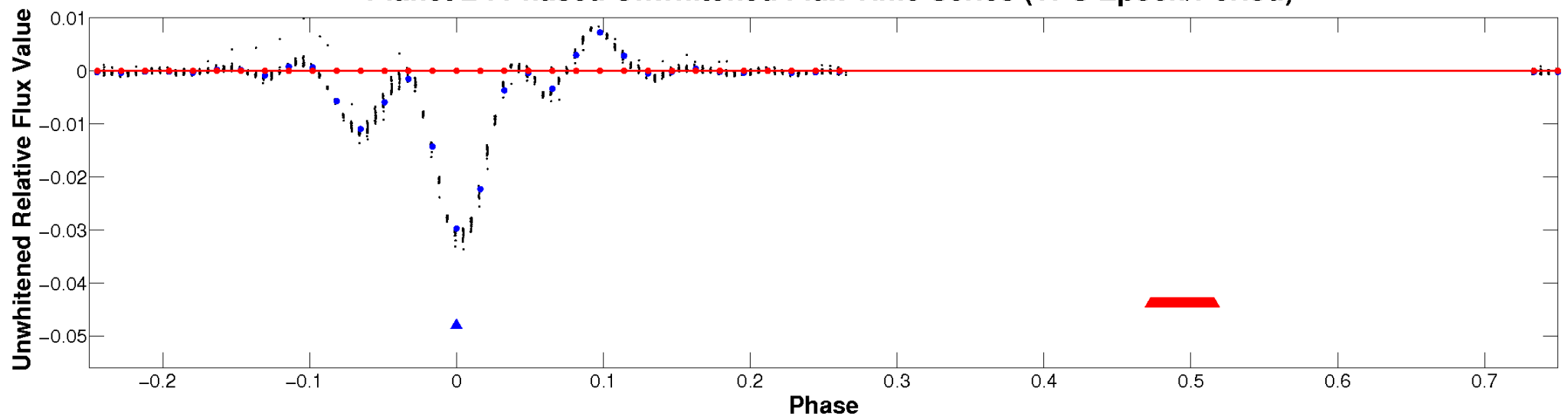
# ALT Odd/Even

TCE 006292803-02



# Non-Whitened Vs. Whitened Light Curve

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

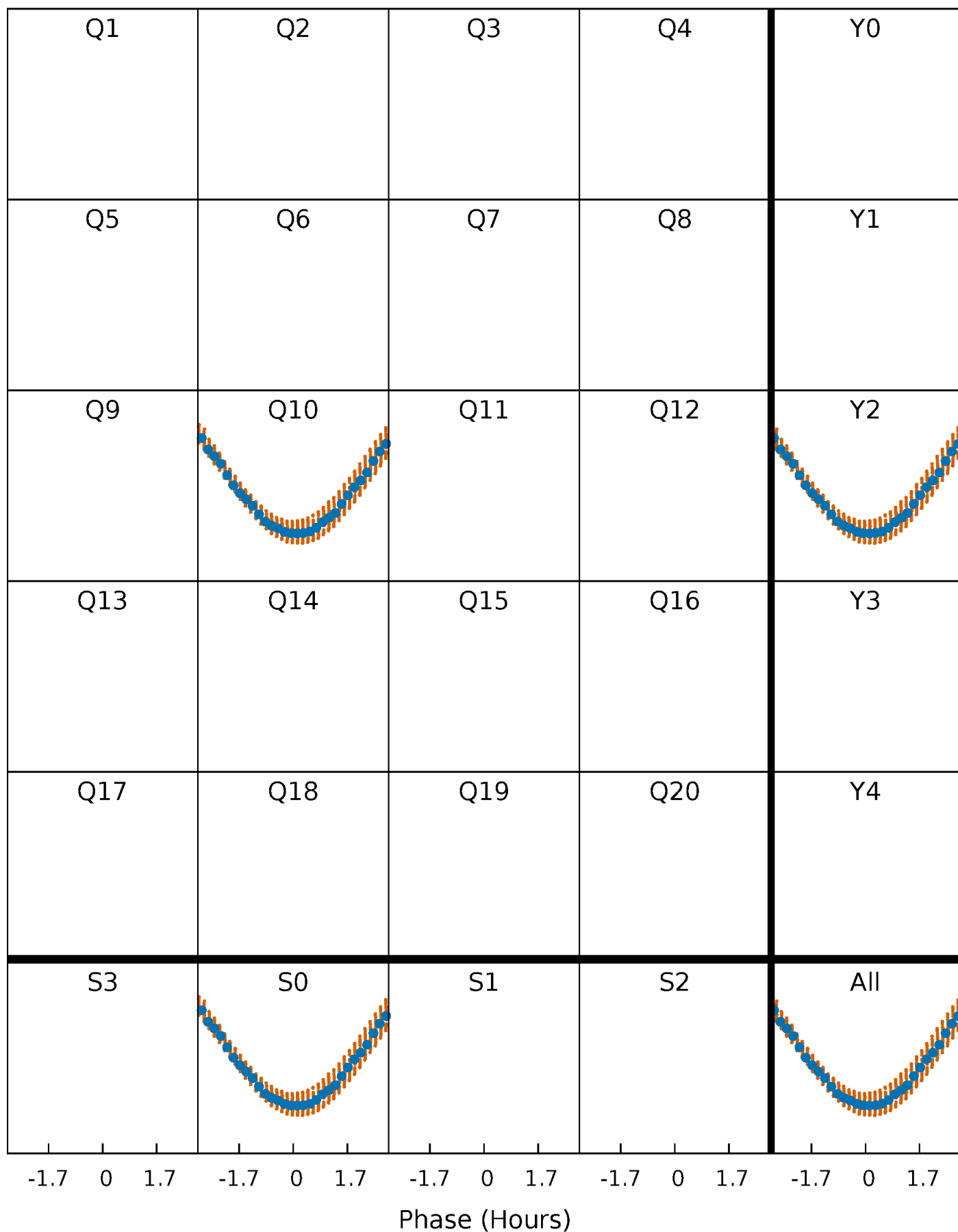


**Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)**



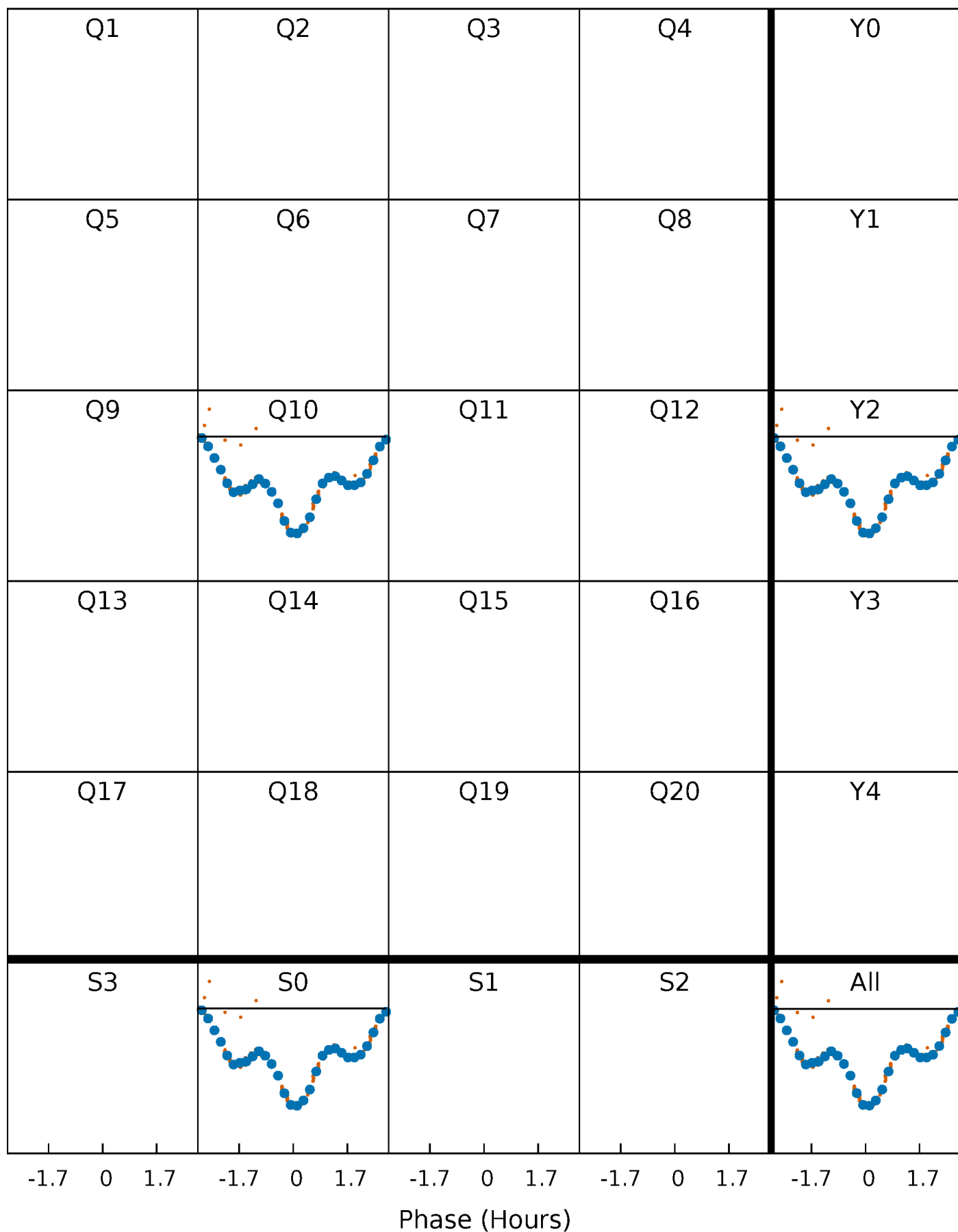
# PDC Quarter-Phased Transit Curves

TCE 006292803-02     $P = 1.253267$  Days     $T_0 = 132.076619$  (BKJD)



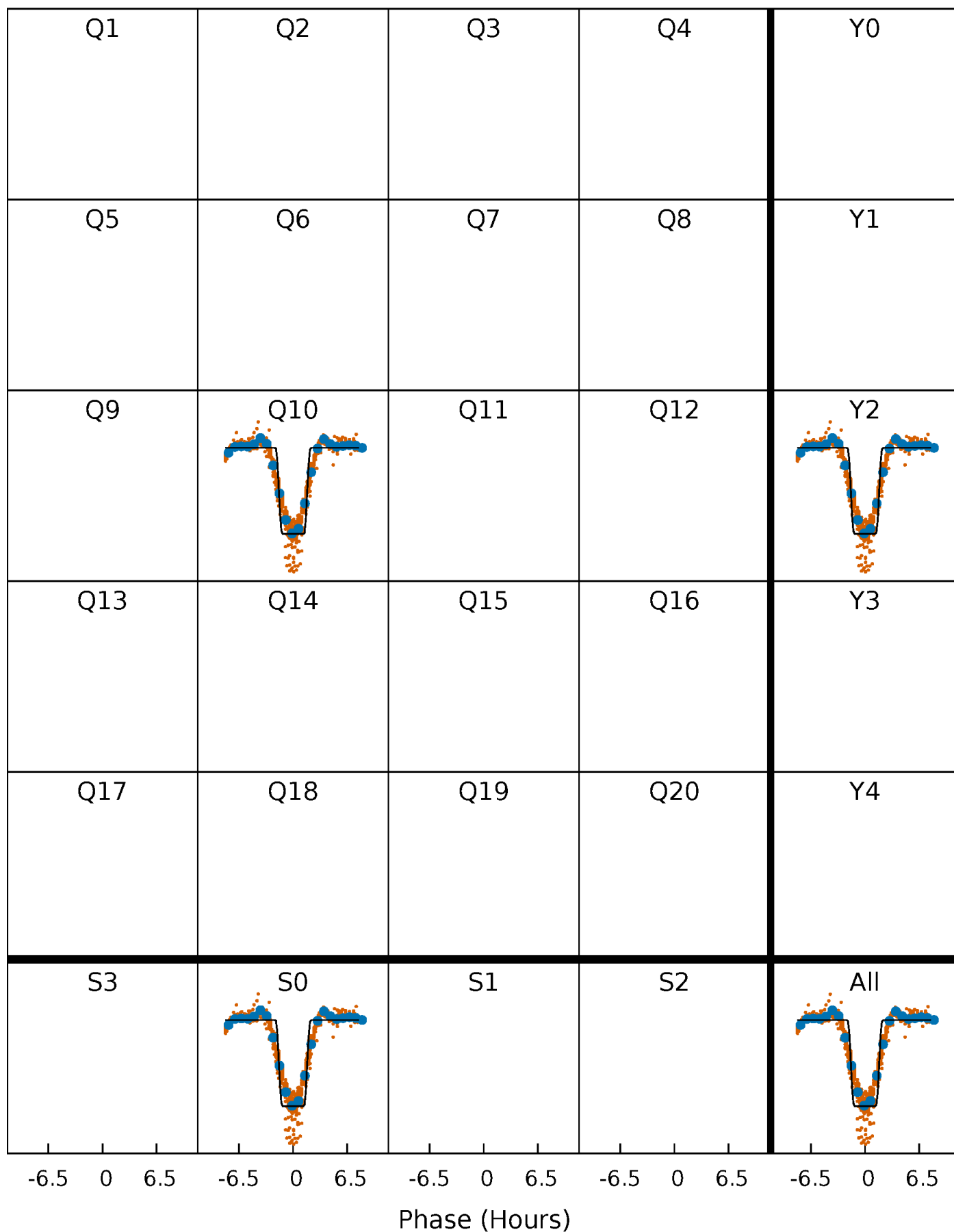
# DV Quarter-Phased Transit Curves

TCE 006292803-02   P= 1.253267 Days    $T_0=132.076619$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

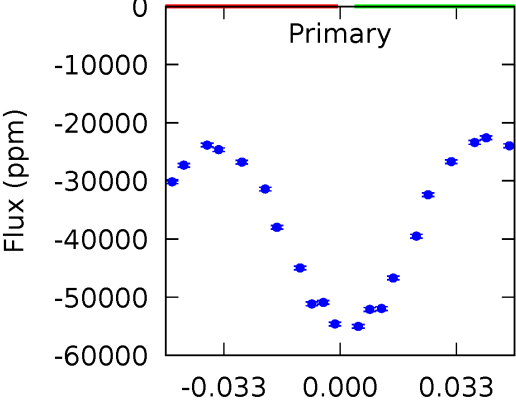
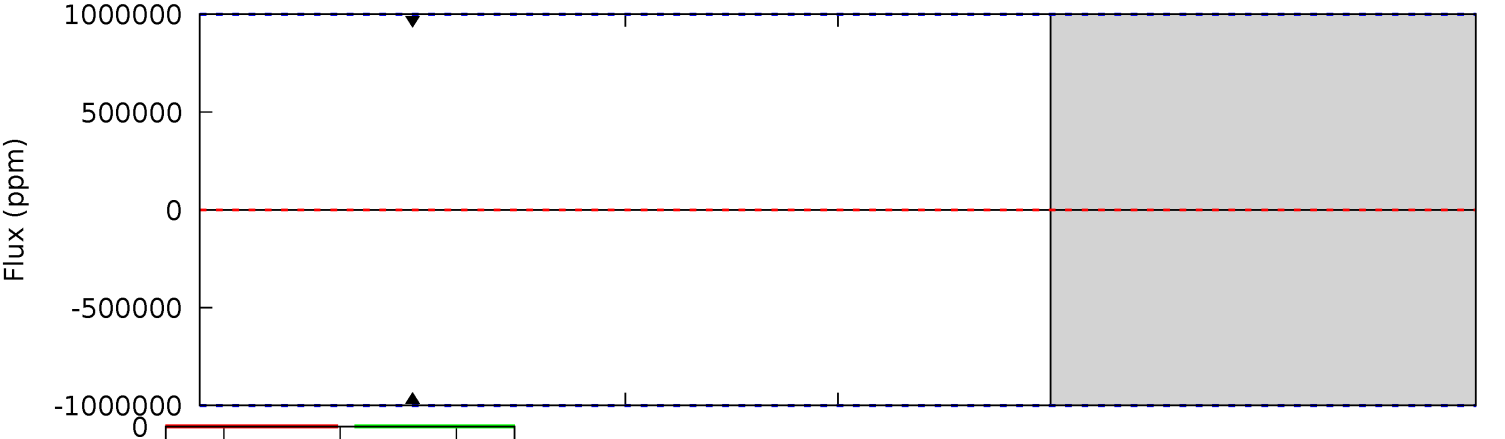
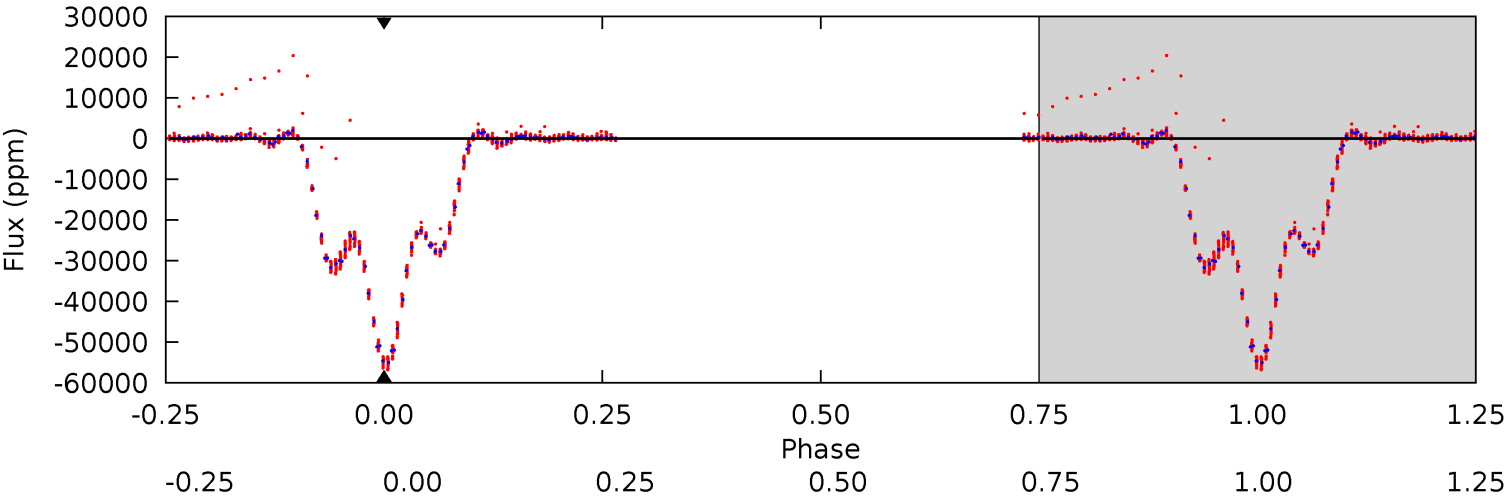
TCE 006292803-02     $P = 1.253267$  Days     $T_0 = 132.079622$  (BKJD)



# DV Model-Shift Uniqueness Test

006292803-02, P = 1.253267 Days, E = 132.076619 Days

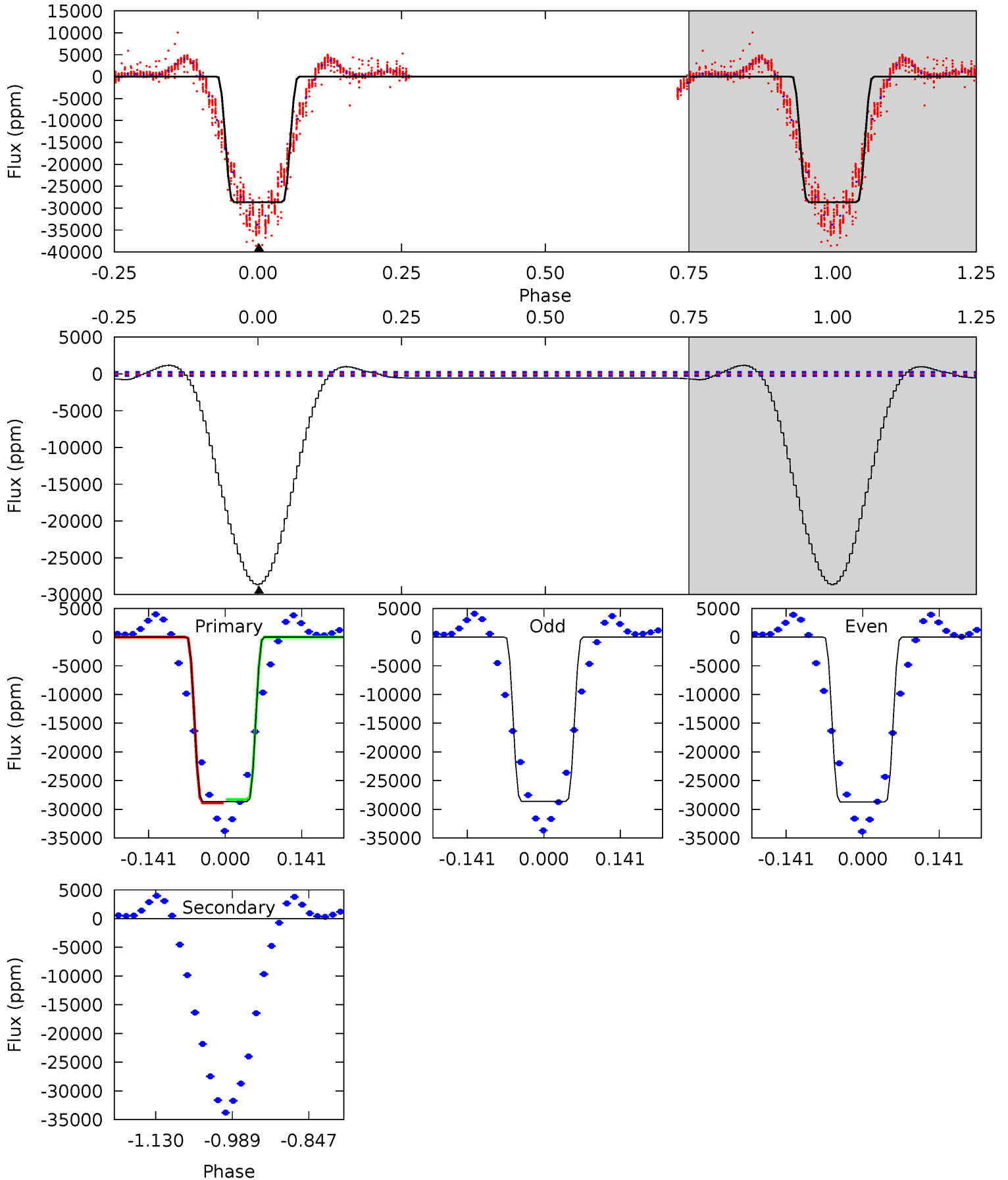
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



# Alt Model-Shift Uniqueness Test

006292803-02, P = 1.253267 Days, E = 132.079622 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
483.7	0	0	0	4.49	1.47	11.2	483.7	483.7	0	0	1.01	1.01	0.04	5.58





### Stellar Parameters For KIC 006292803

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6555^{+184}_{-253}$	$4.334^{+0.140}_{-0.171}$	$-0.720^{+0.300}_{-0.300}$	$1.106^{+0.287}_{-0.192}$	$0.961^{+0.125}_{-0.103}$	$1.001^{+0.672}_{-0.470}$
	+3%/-4%	+3%/-4%	+42%/-42%	+26%/-17%	+13%/-11%	+67%/-47%
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 006292803-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$0 \pm 1000000$	$12.20^{+10.22}_{-7.94}$	$2838^{+196}_{-177}$	$3995^{+15332}_{-20881}$	$1.917^{+305.034}_{-270.948}$
Alt.	$0 \pm 59$	$22.34^{+12.91}_{-11.30}$	$2840^{+195}_{-168}$	$-2997^{+144}_{-161}$	$-0.002^{+0.041}_{-0.045}$

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

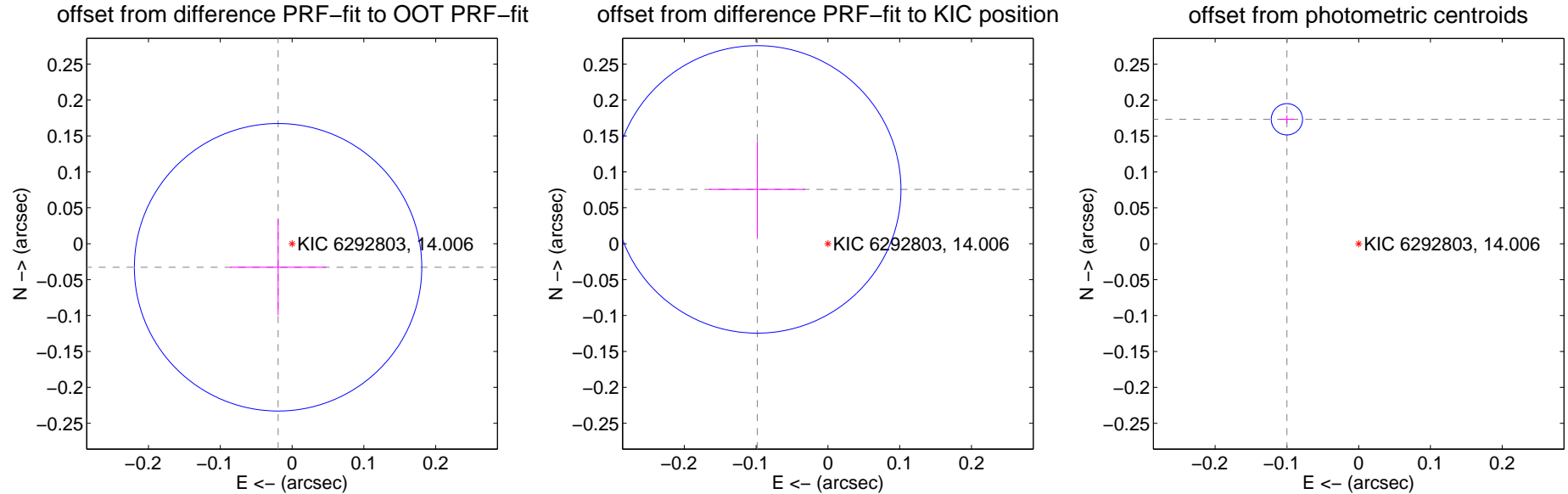
## DV Centroid Data

Supplemental centroid analysis for 006292803-02. Kepler magnitude: 14.01. Transit SNR -1.00

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.038 \pm 0.067$	0.57	$0.019 \pm 0.067$	$-0.033 \pm 0.067$
PRF-fit source offset from KIC position	$0.124 \pm 0.067$	1.86	$0.098 \pm 0.067$	$0.076 \pm 0.067$
photometric centroid source offset	$0.20 \pm 0.01$	27.55	$0.10 \pm 0.01$	$0.17 \pm 0.01$



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.

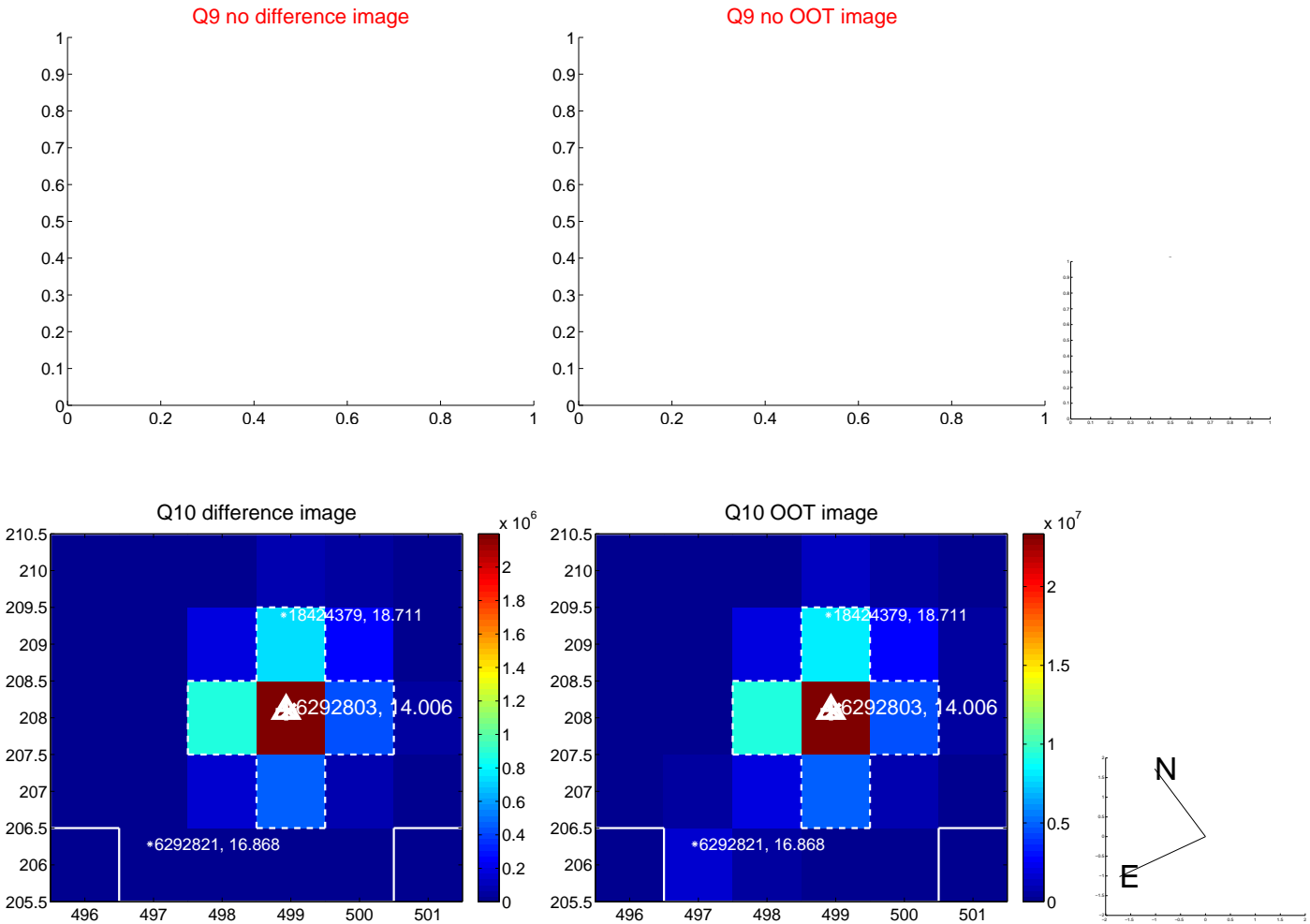
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



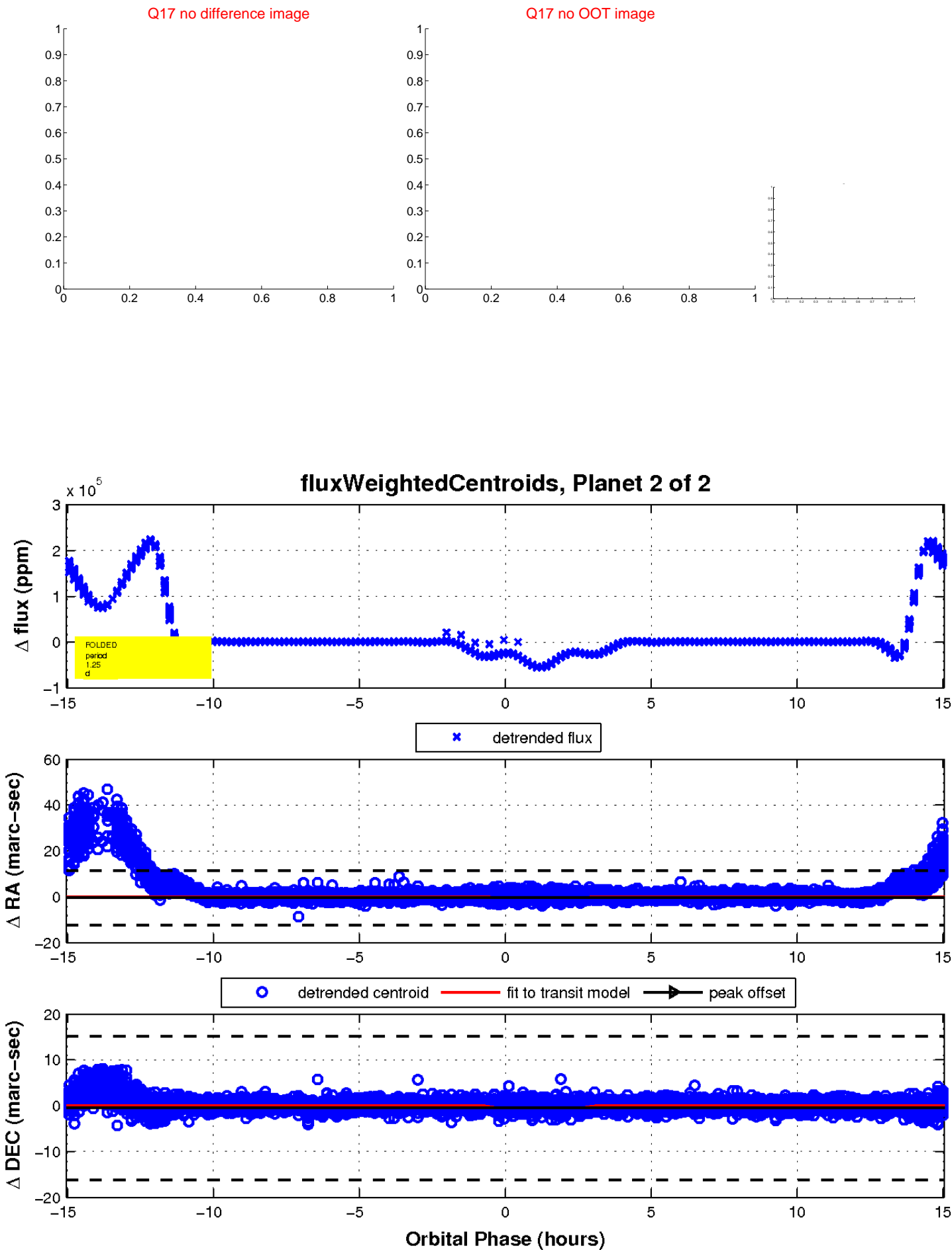
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UKIRT Image

