

# KIC 011283805

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011283805-01	OBS	No	292.926649	386.571496	567.7	7.855	9.4	6.8	1.44	5425	4.59	2.30
011283805-02	OBS	No	413.102216	145.545611	504.7	5.087	7.7	7.1	1.44	5425	3.41	1.46
011283805-03	OBS	No	490.277508	484.034527	493.7	5.796	10.3	6.2	1.44	5425	3.39	1.16

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011283805-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011283805-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—ALL_TRANS_CHASES—MOD_POS_DV
011283805-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS

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

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

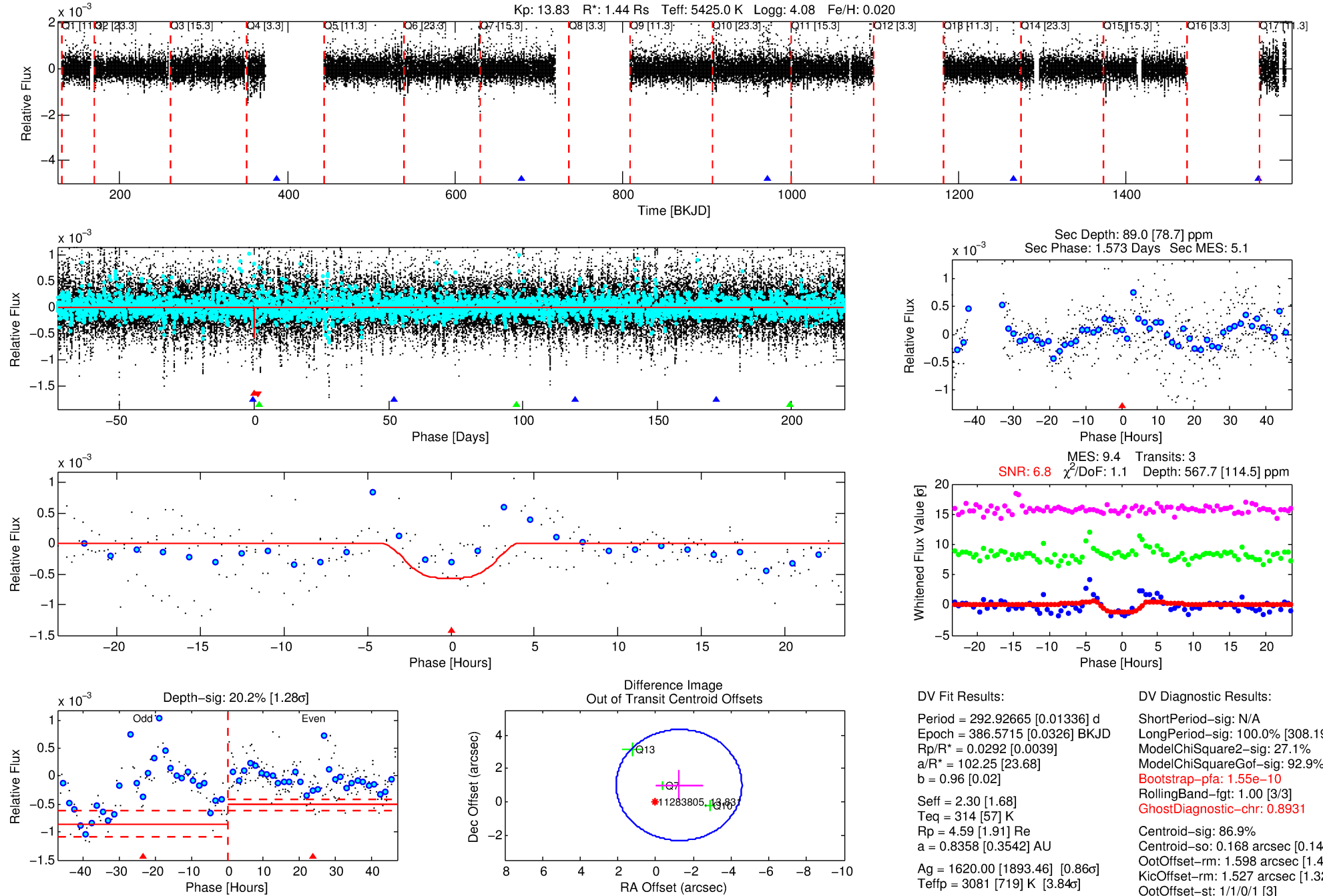
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 011283805-01

No Significant Match Found

# DV One-Page Summary

KIC: 11283805 Candidate: 1 of 3 Period: 292.927 d



## DV Fit Results:

Period = 292.92665 [0.01336] d  
Epoch = 386.5715 [0.0326] BKJD  
Rp/R\* = 0.0292 [0.0039]  
a/R\* = 102.25 [23.68]  
b = 0.96 [0.02]  
Seff = 2.30 [1.68]  
Teff = 314 [57] K  
Rp = 4.59 [1.91] Re  
a = 0.8358 [0.3542] AU  
Ag = 1620.00 [1893.46] [0.86 $\sigma$ ]  
Teffp = 3081 [719] K [3.84 $\sigma$ ]

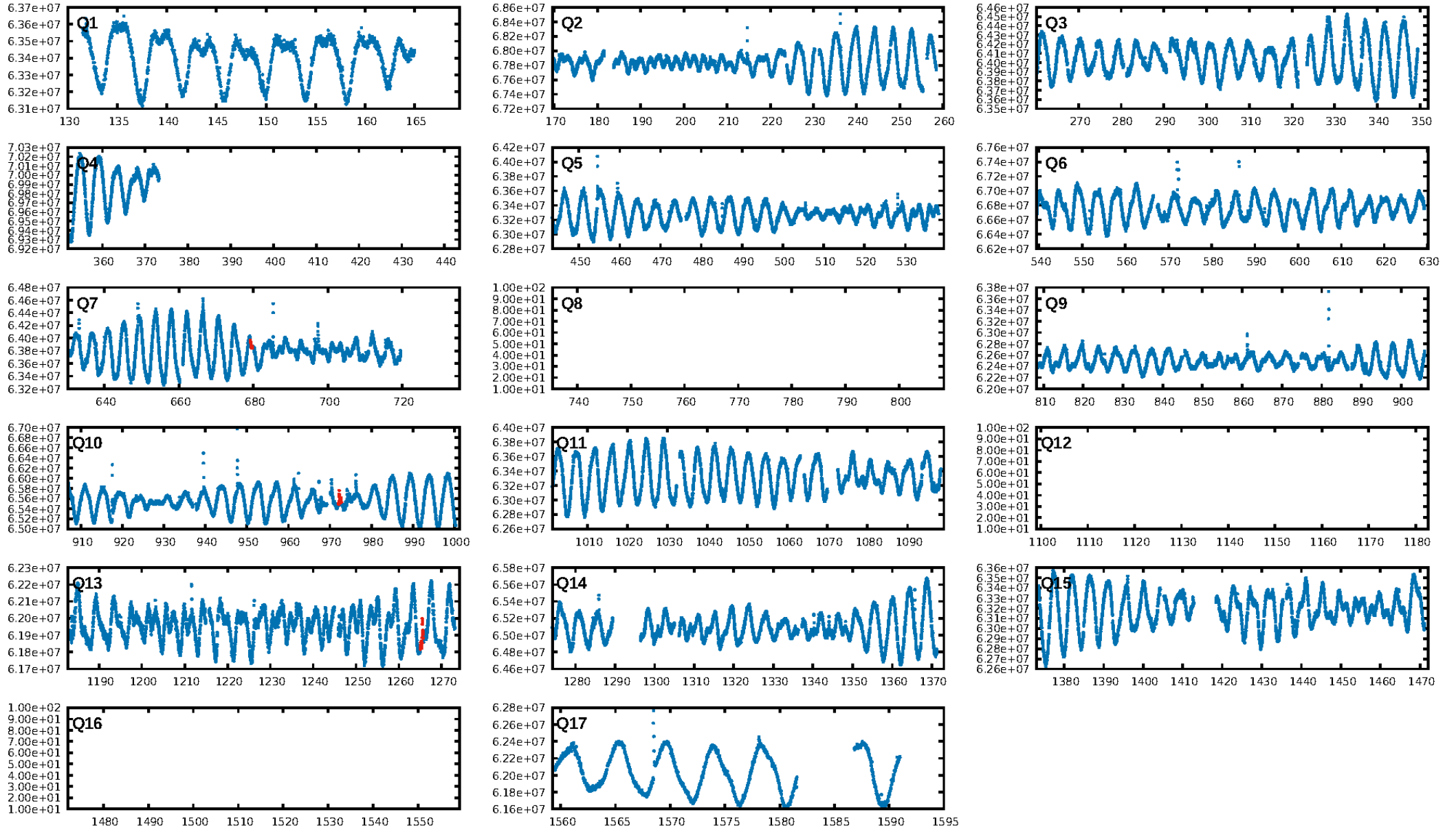
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: 100.0% [308.19 $\sigma$ ]  
ModelChiSquare2-sig: 27.1%  
ModelChiSquareGof-sig: 92.9%  
**Bootstrap-pfa: 1.55e-10**  
**RollingBand-fgt: 1.00 [3/3]**  
**GhostDiagnostic-chr: 0.8931**  
Centroid-sig: 86.9%  
Centroid-so: 0.168 arcsec [0.14 $\sigma$ ]  
OotOffset-rm: 1.598 arcsec [1.44 $\sigma$ ]  
KicOffset-rm: 1.527 arcsec [1.32 $\sigma$ ]  
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]

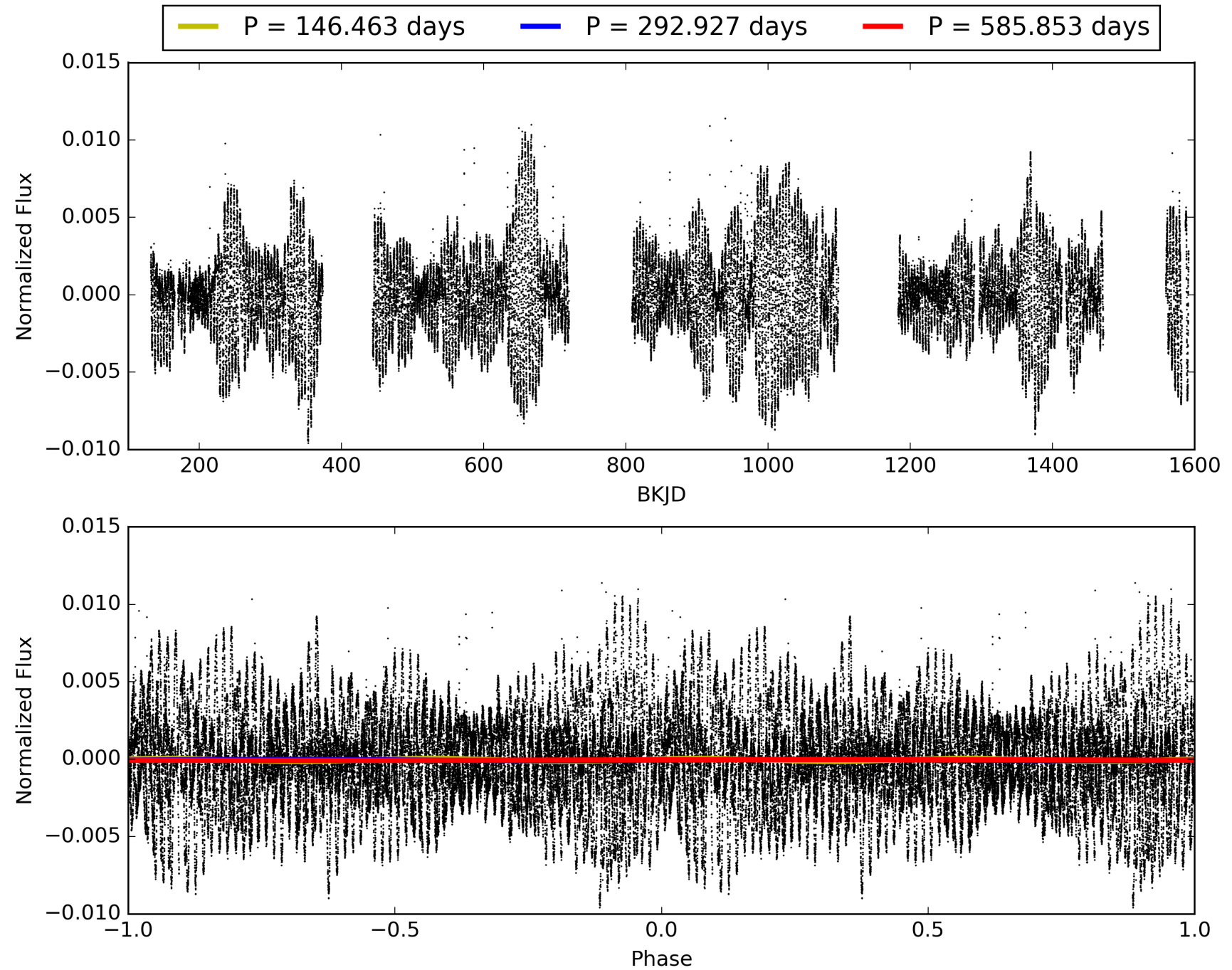
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 08:46:59 Z

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

# TCE 011283805-01, PDC Light Curves

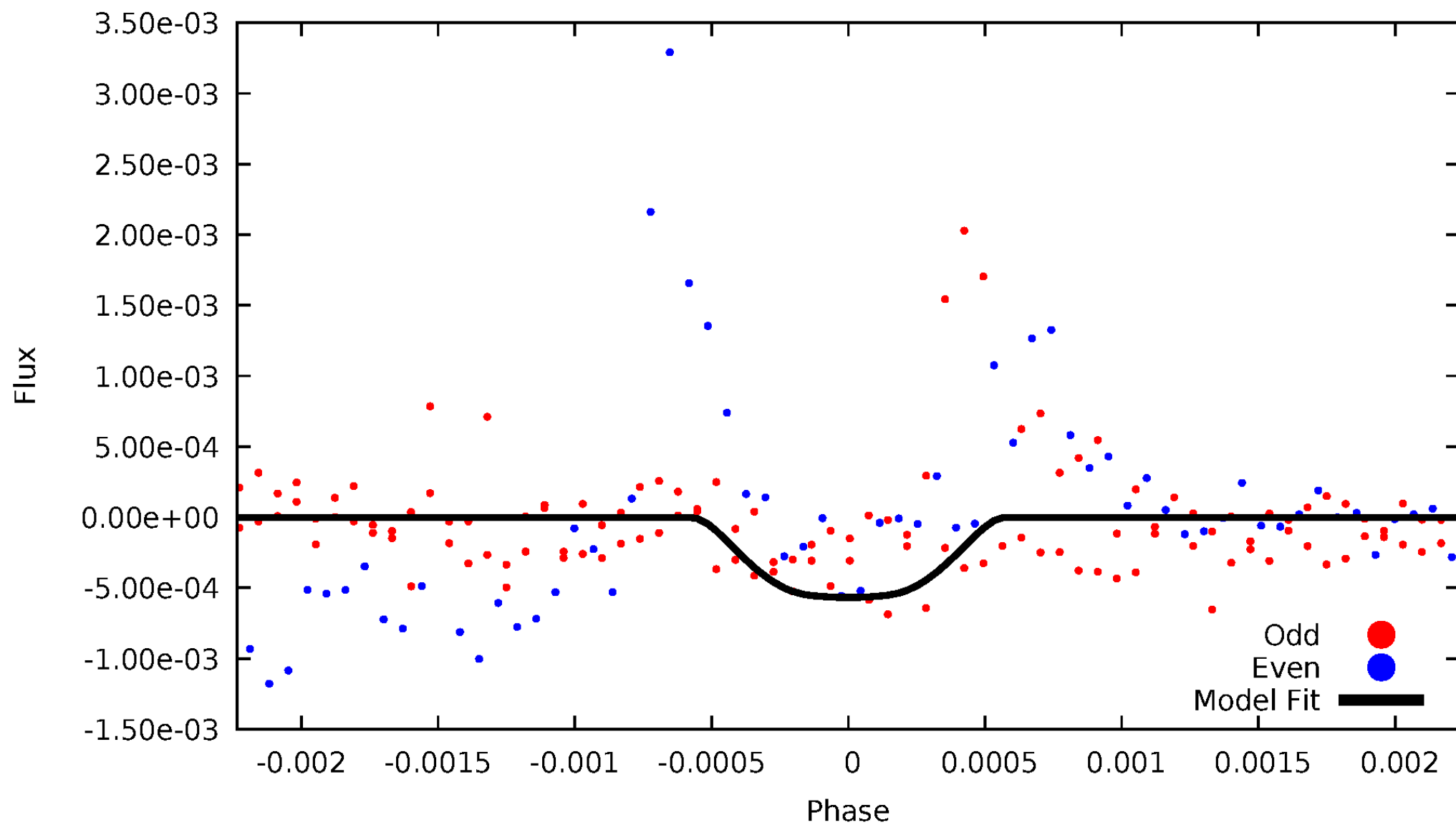


# TCE 011283805-01



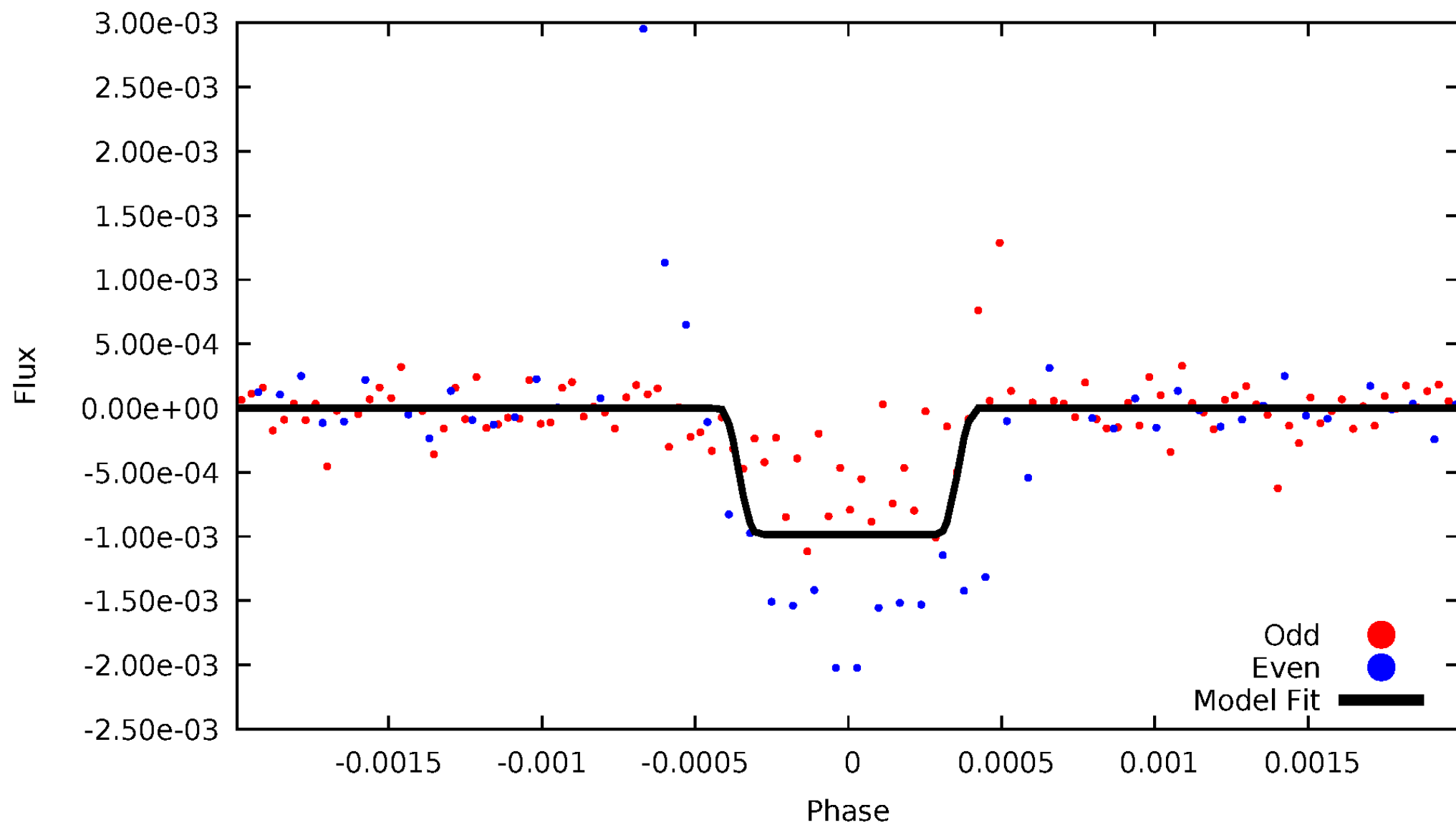
# DV Odd/Even

TCE 011283805-01



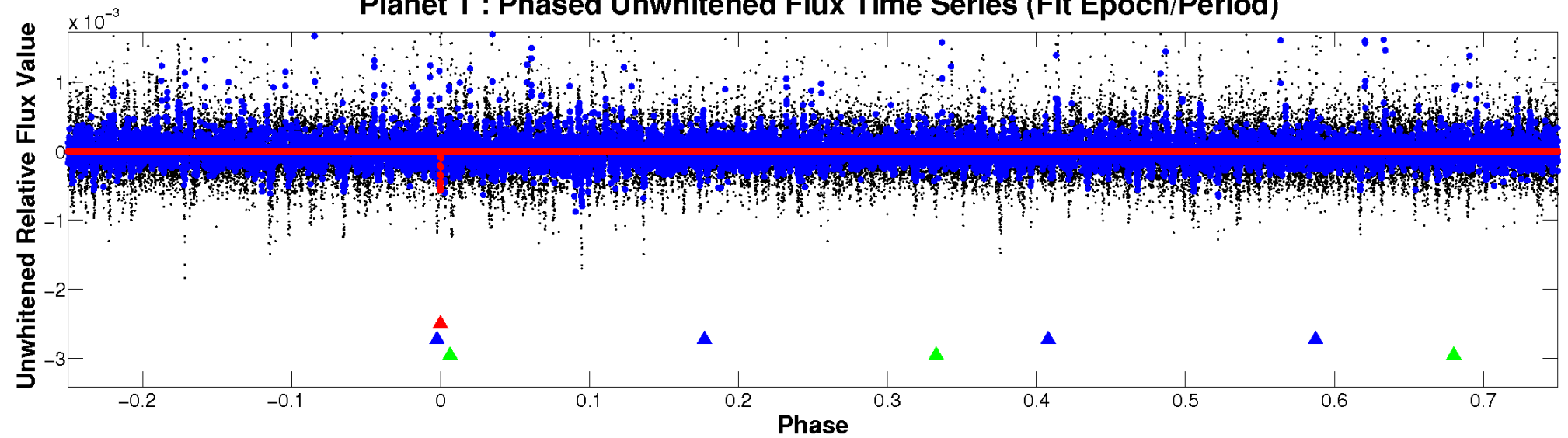
# ALT Odd/Even

TCE 011283805-01

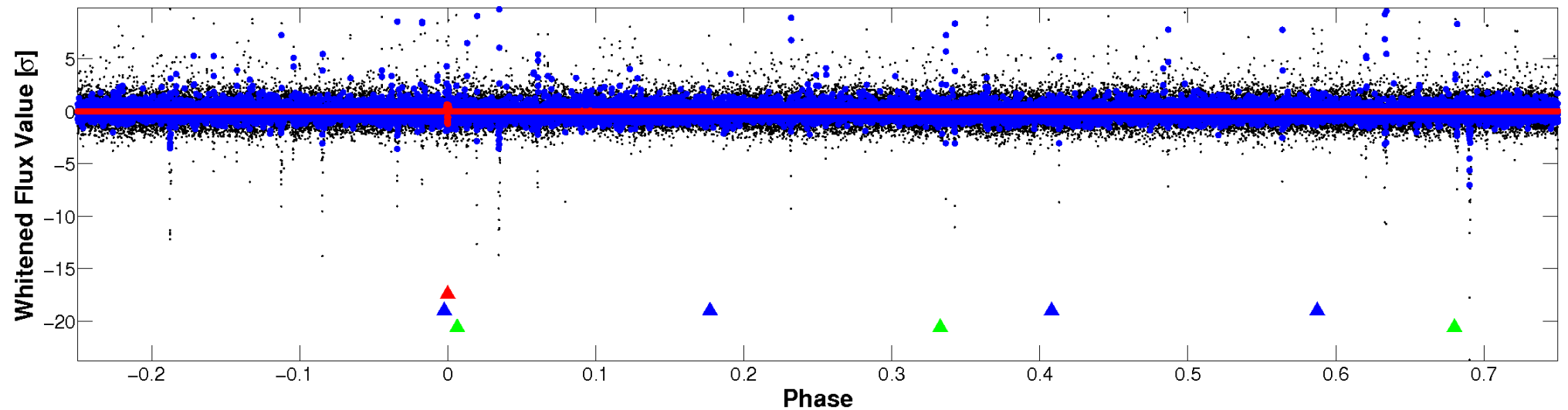


# Non-Whitened Vs. Whitened Light Curve

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

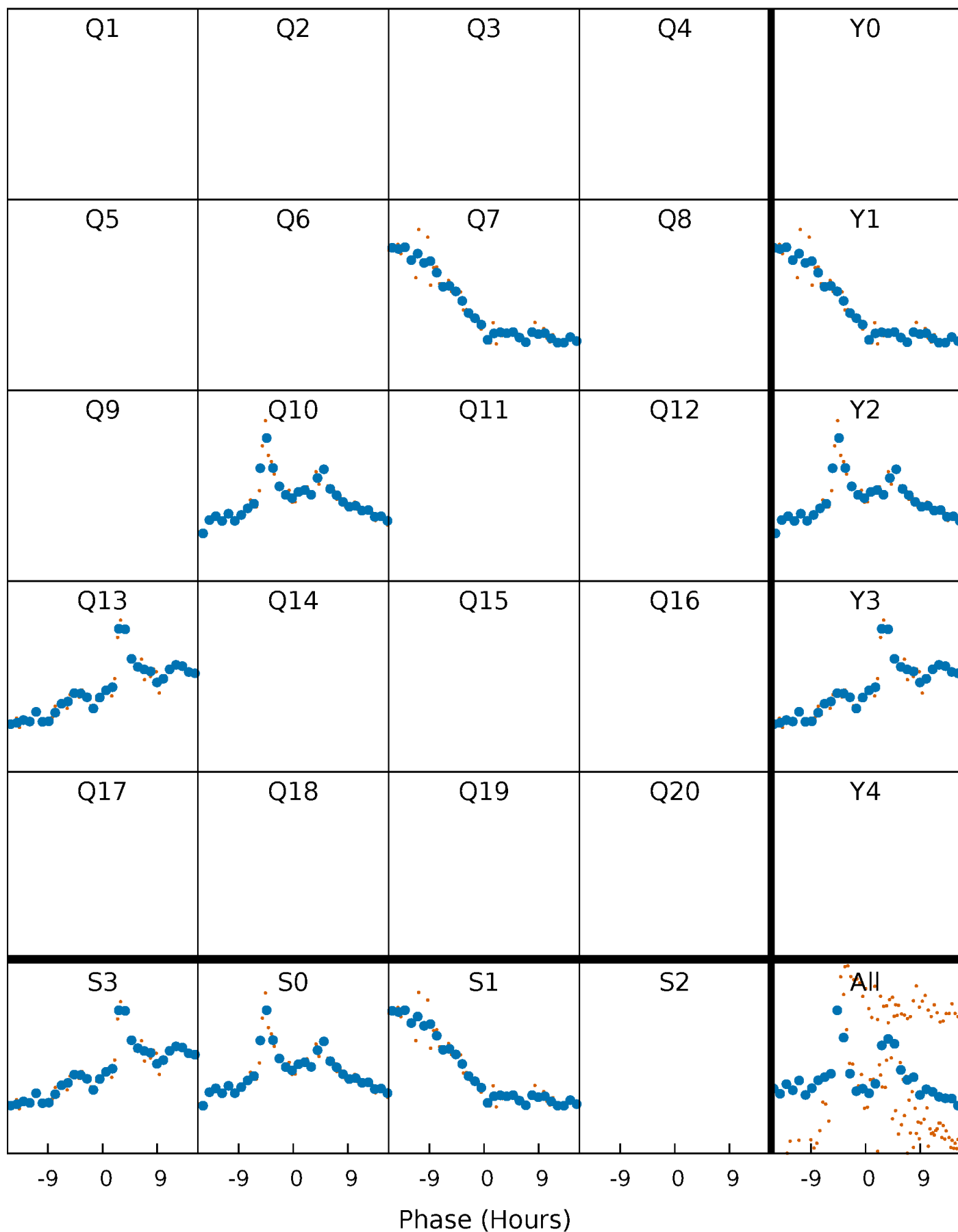


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



# PDC Quarter-Phased Transit Curves

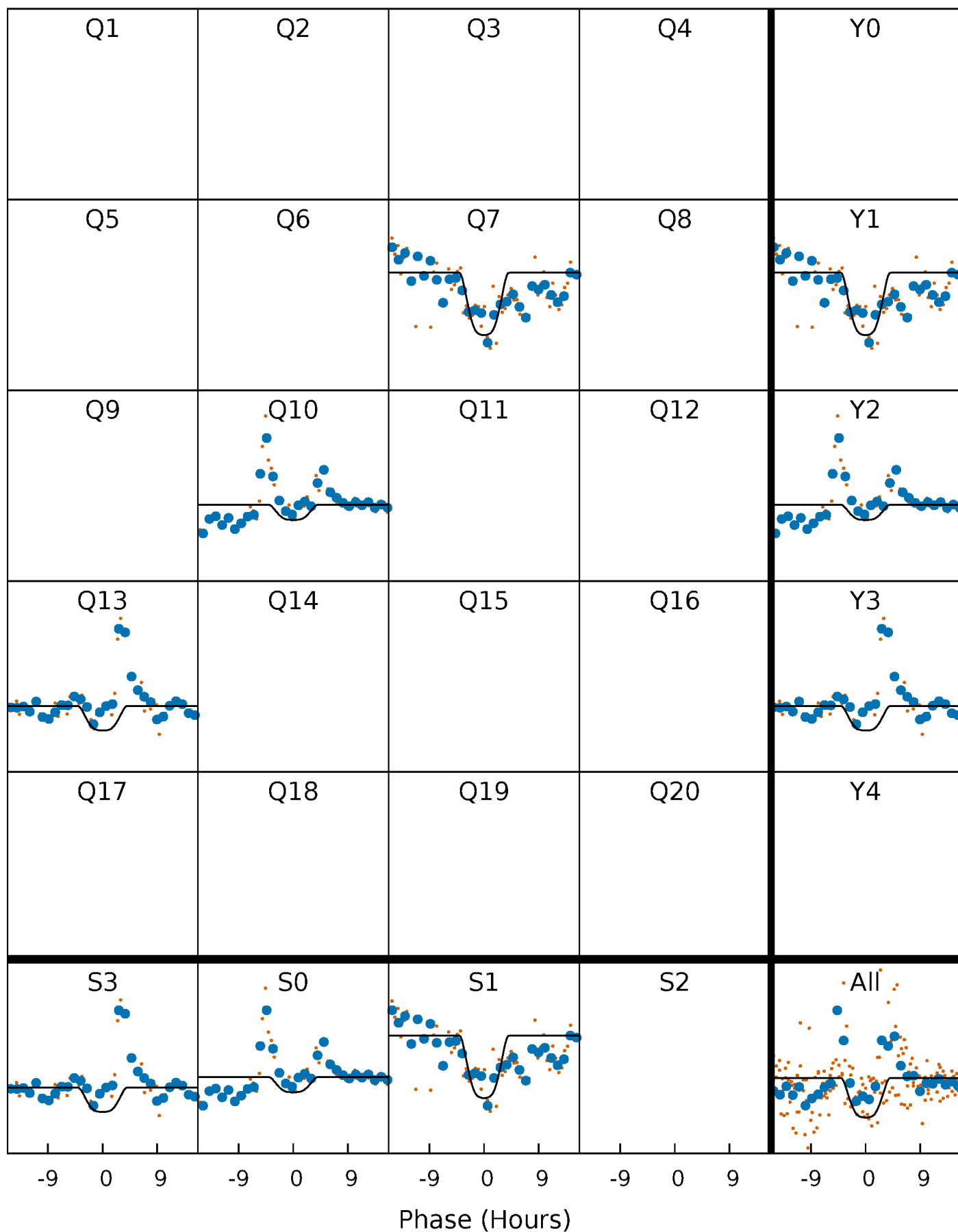
TCE 011283805-01 P=292.926649 Days  $T_0=386.571496$  (BKJD)





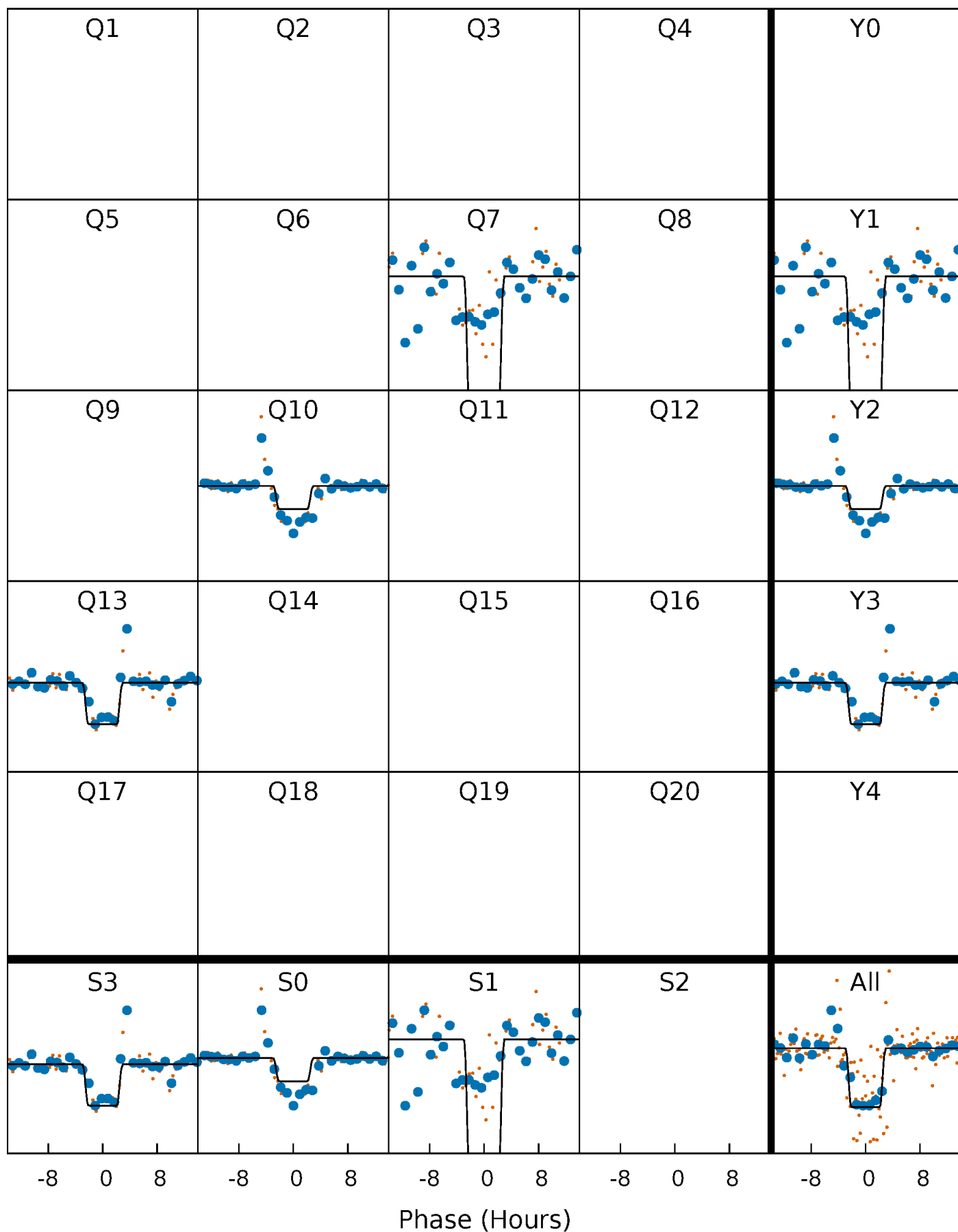
# DV Quarter-Phased Transit Curves

TCE 011283805-01     $P=292.926649$  Days     $T_0=386.571496$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

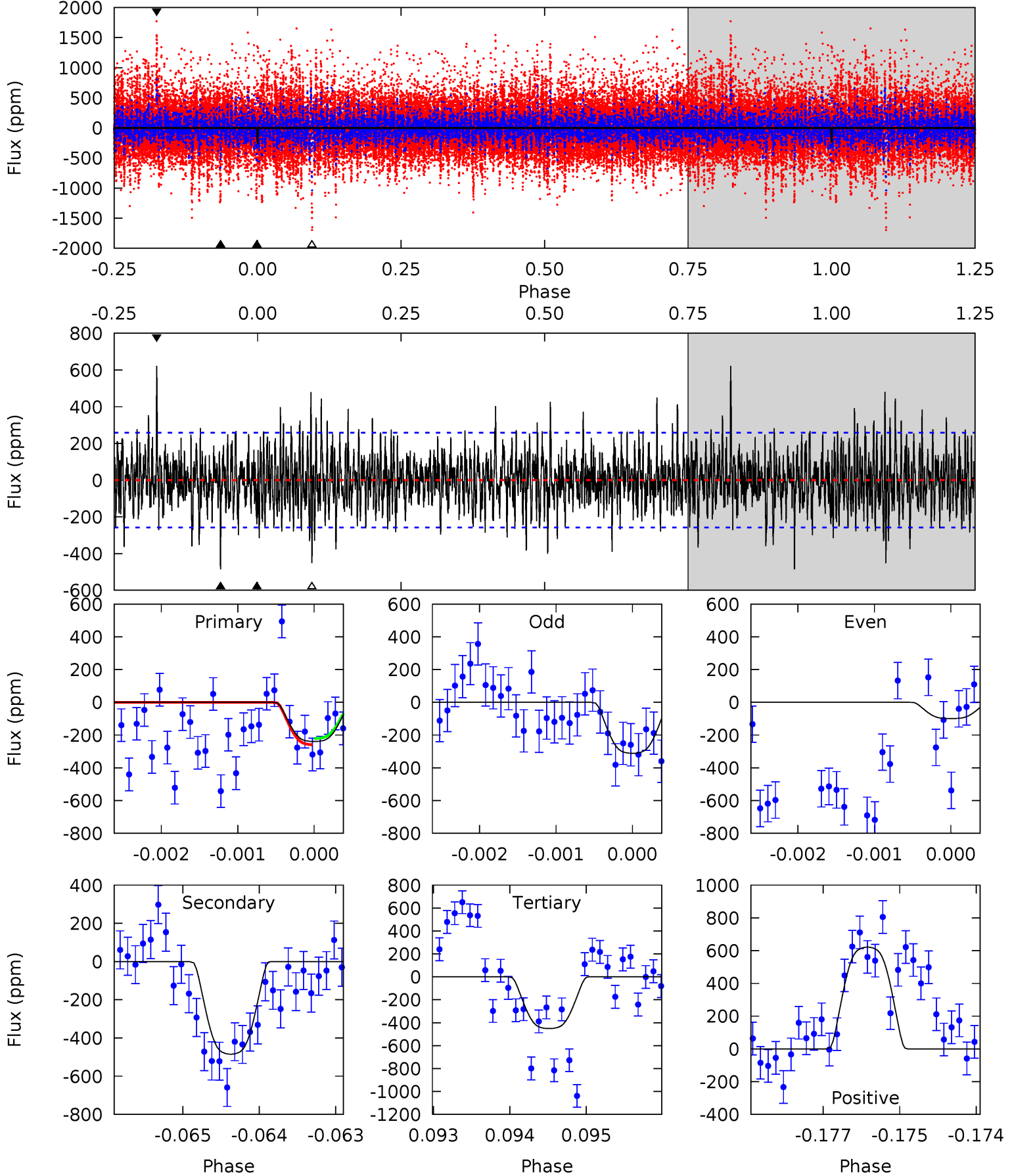
TCE 011283805-01 P=292.901460 Days  $T_0=386.626555$  (BKJD)



# DV Model-Shift Uniqueness Test

011283805-01, P = 292.926649 Days, E = 93.644847 Days

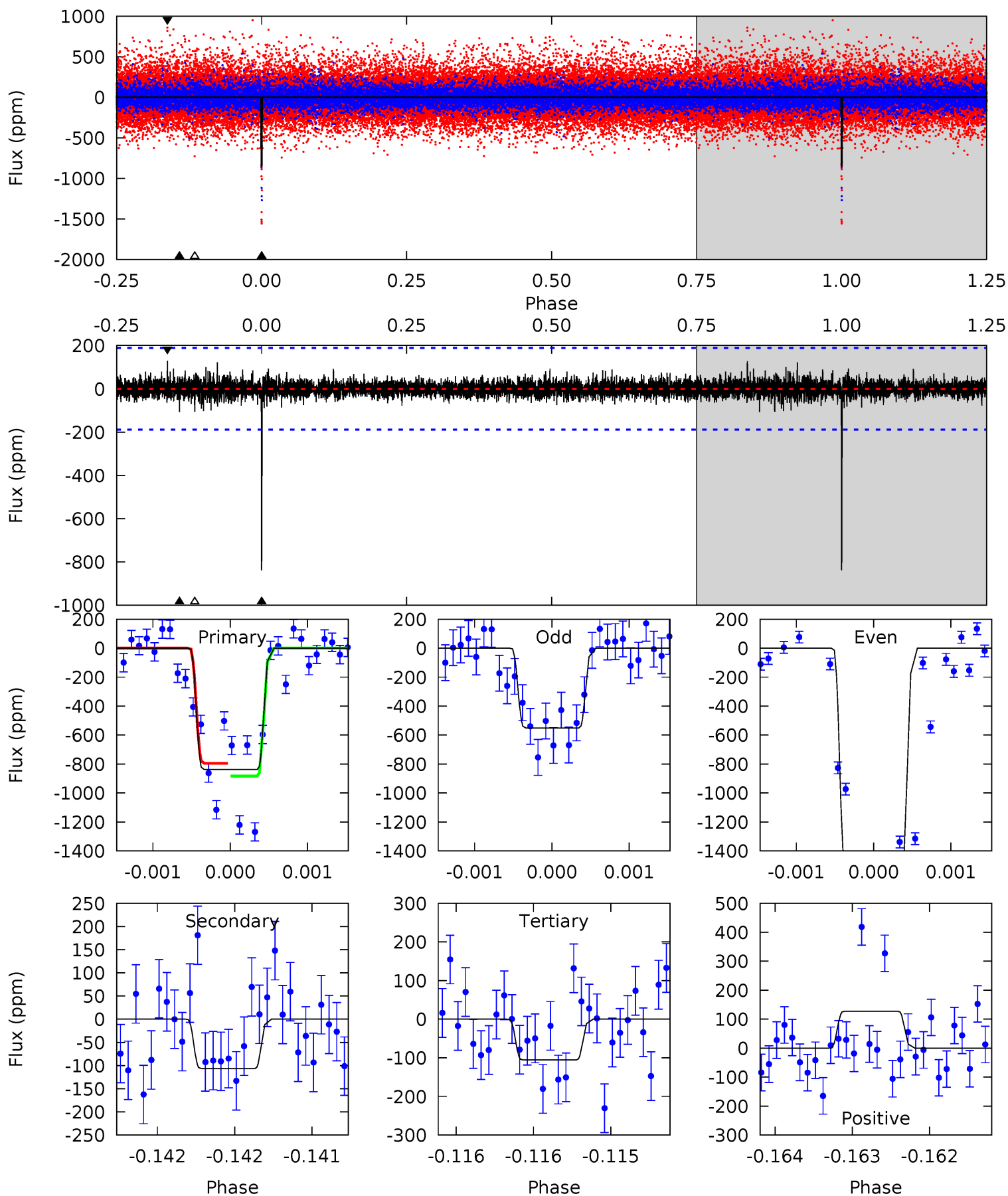
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.04	10.2	9.49	13.1	5.43	3.25	2.52	-4.45	-8.03	0.71	-2.86	1.93	1.65	0.56	0.40



# Alt Model-Shift Uniqueness Test

011283805-01, P = 292.901460 Days, E = 93.725095 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
24.4	3.10	3.07	3.71	5.49	3.35	0.67	21.3	20.7	0.03	-0.61	15.3	1.09	0.13	1.23



### Stellar Parameters For KIC 011283805

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$5425^{+179}_{-146}$	$4.079^{+0.434}_{-0.186}$	$0.020^{+0.250}_{-0.250}$	$1.440^{+0.463}_{-0.566}$	$0.908^{+0.092}_{-0.083}$	$0.428^{+1.406}_{-0.239}$
	+3%/-3%	+11%/-5%	+1250%/-1250%	+32%/-39%	+10%/-9%	+328%/-56%
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 011283805-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-485 \pm 48$	$4.36^{+1.22}_{-1.09}$	$432^{+41}_{-51}$	$4812^{+368}_{-291}$	$9832^{+7825}_{-3752}$
Alt.	$-107 \pm 34$	$4.68^{+1.16}_{-1.09}$	$429^{+44}_{-44}$	$3572^{+240}_{-248}$	$1856^{+1515}_{-764}$

$T_{max}$  = 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

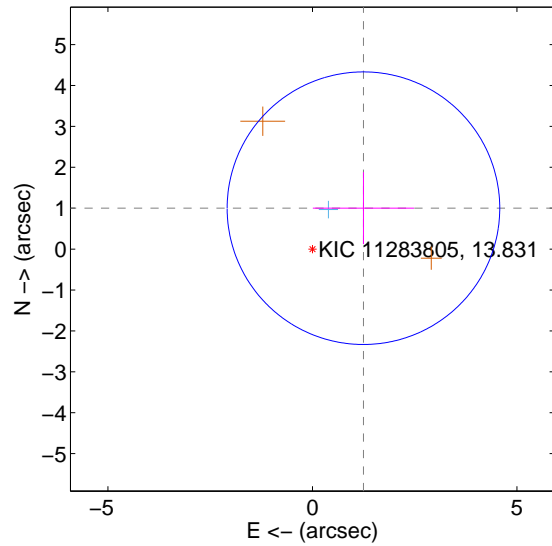
Supplemental centroid analysis for 011283805-01. Kepler magnitude: 13.83. Transit SNR 6.79

There are 1 quarters with good PRF difference image offsets

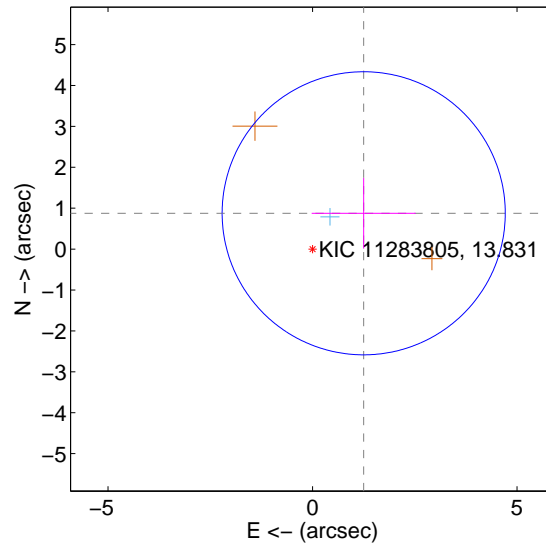
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.598 \pm 1.111$	1.44	$-1.247 \pm 1.237$	$1.000 \pm 0.879$
PRF-fit source offset from KIC position	$1.527 \pm 1.154$	1.32	$-1.251 \pm 1.272$	$0.876 \pm 0.864$
photometric centroid source offset	$0.17 \pm 1.19$	0.14	$0.08 \pm 1.19$	$0.15 \pm 1.19$

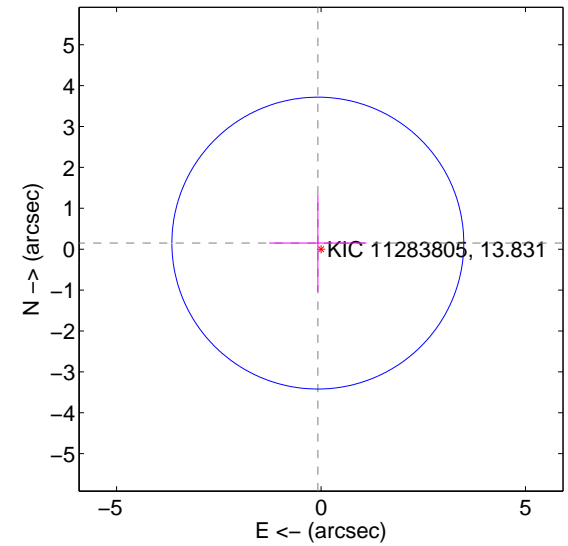
offset from difference PRF-fit to OOT PRF-fit



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.

Q5 no difference image



Q5 no OOT image



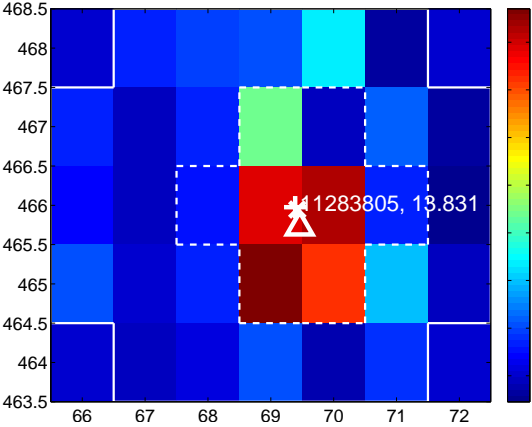
Q6 no difference image



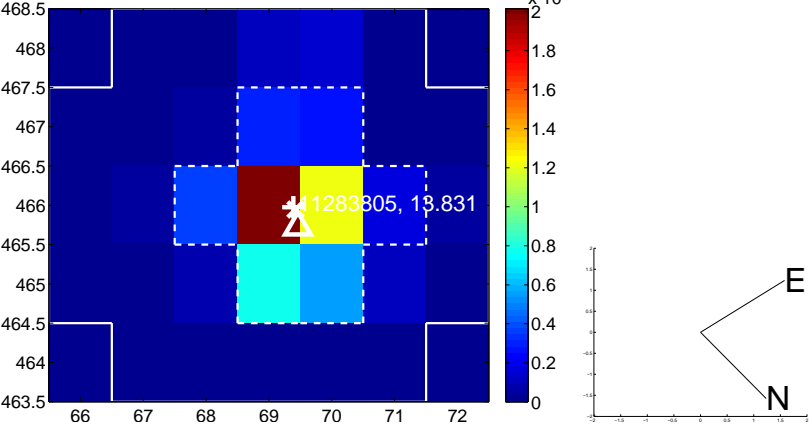
Q6 no OOT image



Q7 difference image



Q7 OOT image



Q8 no difference image

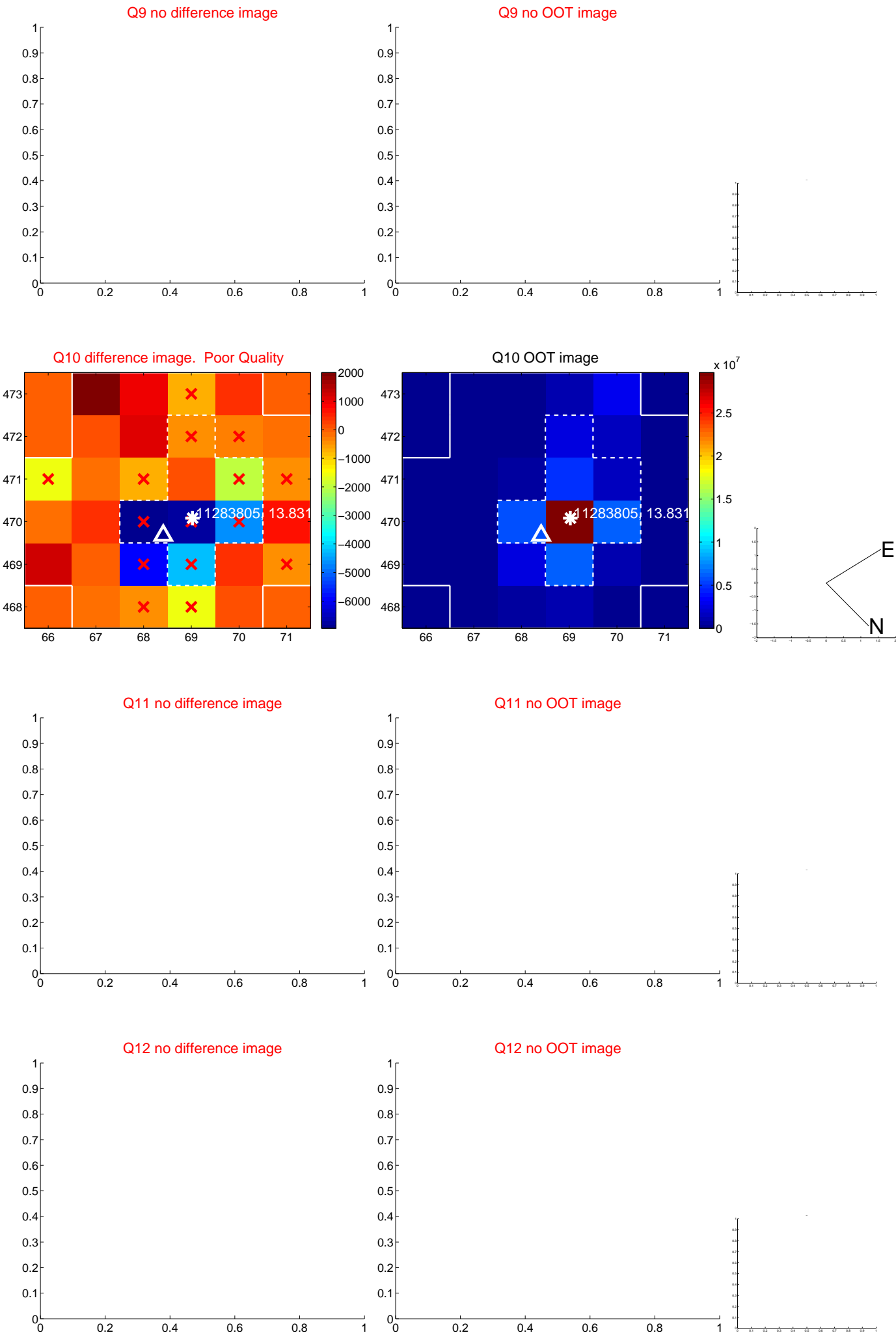


Q8 no OOT image

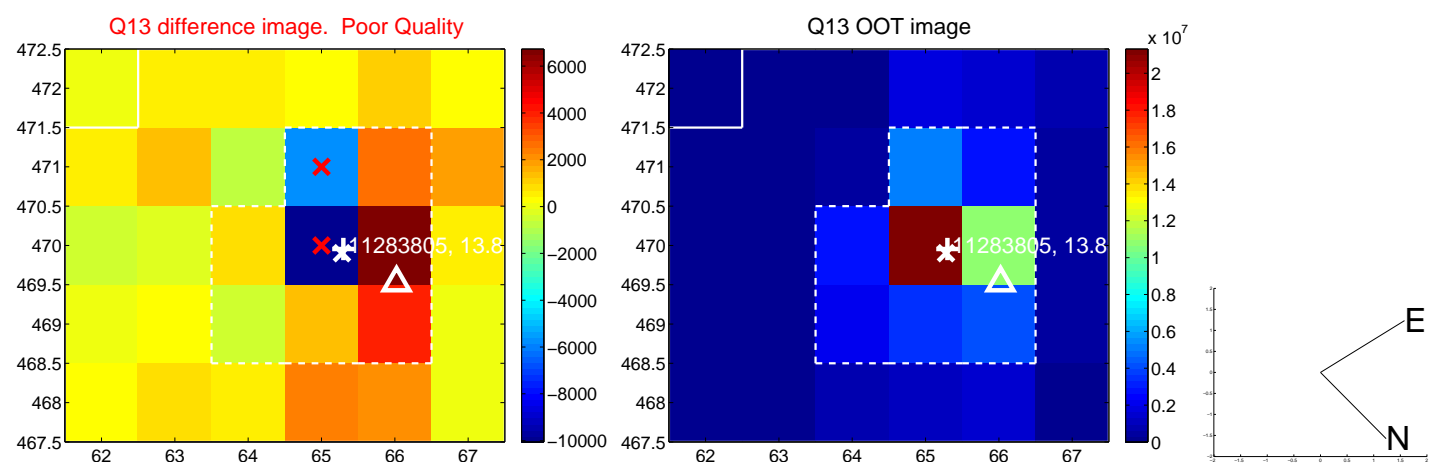




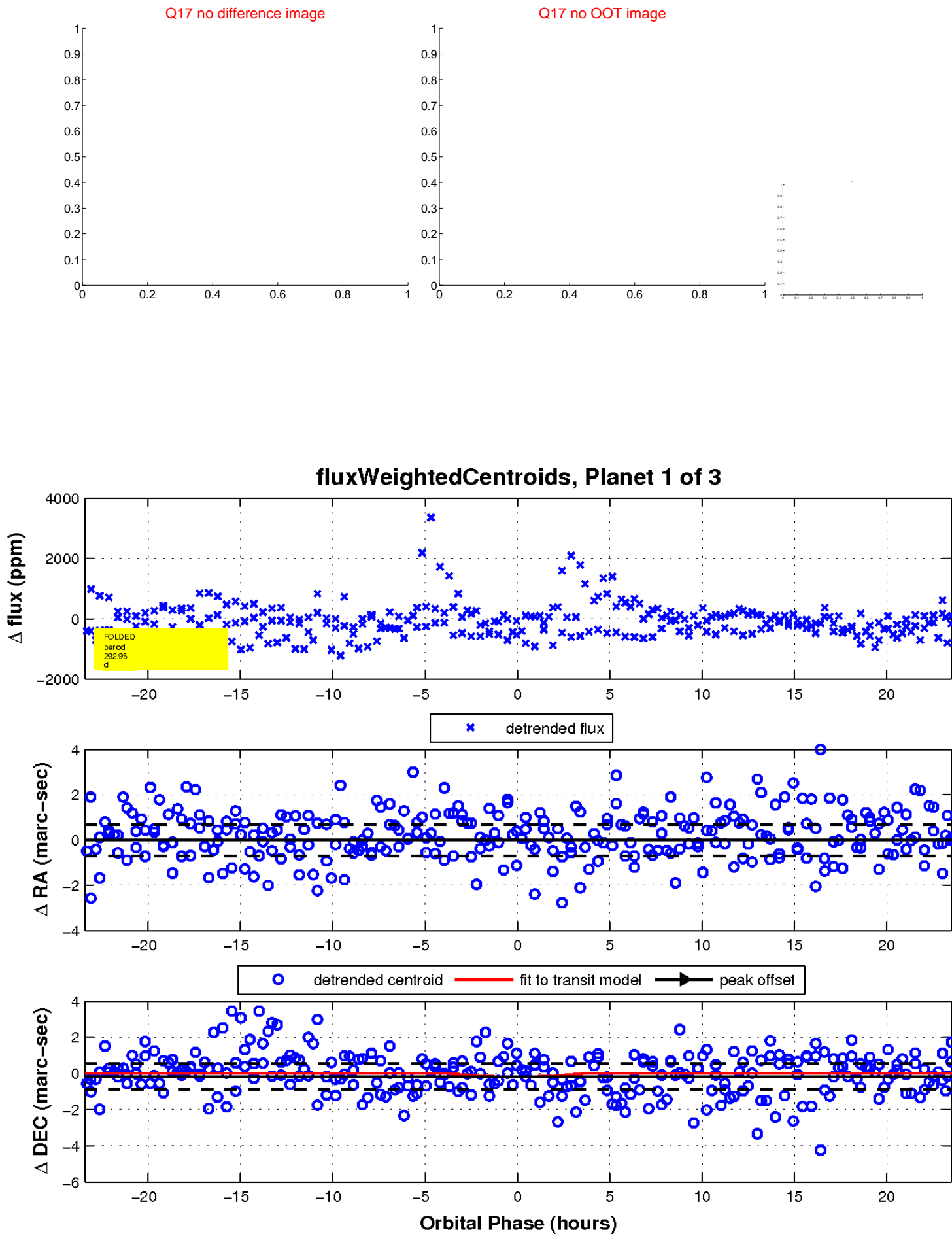
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

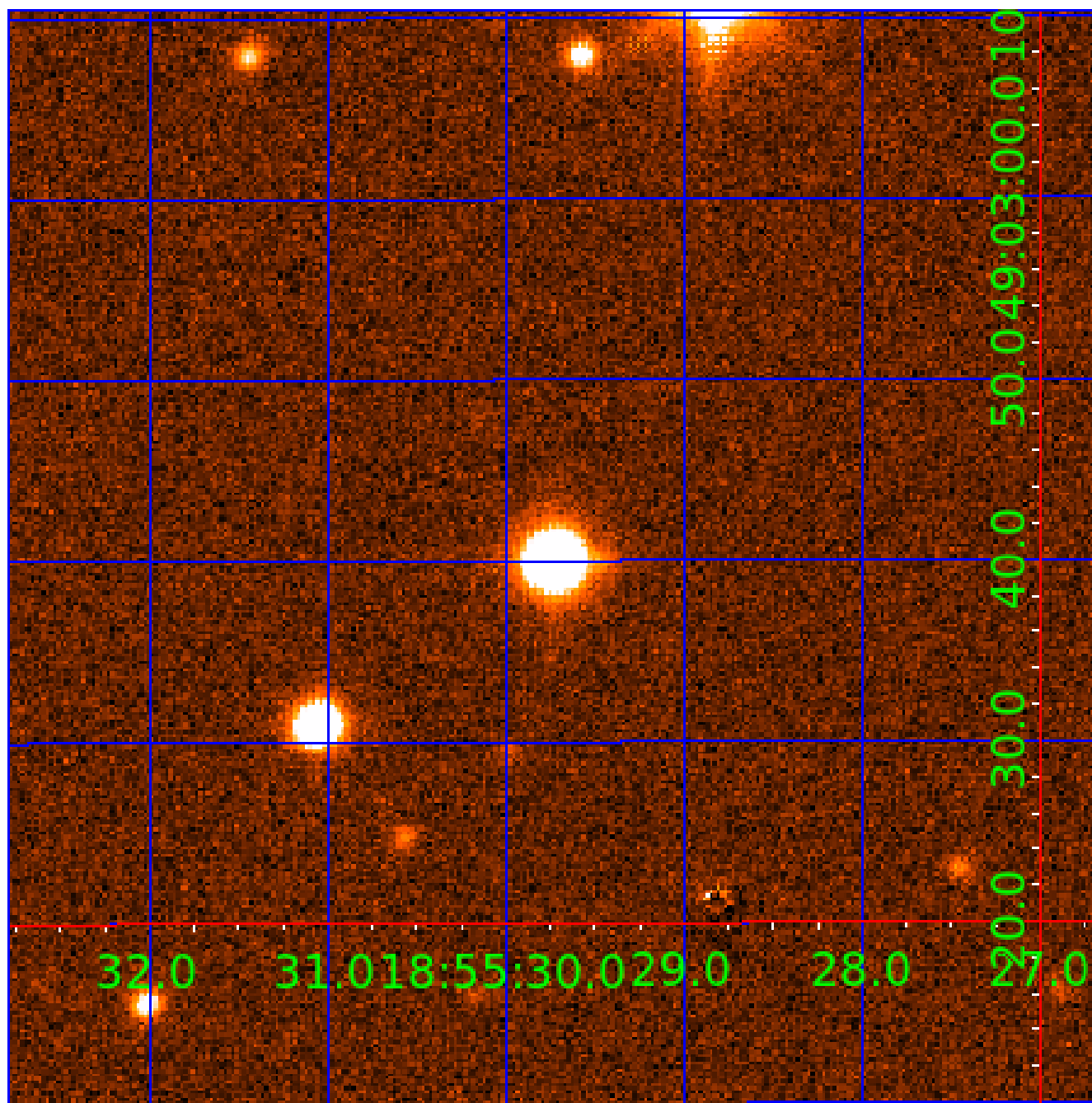


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination



# KIC 011283805

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011283805-01	OBS	No	292.926649	386.571496	567.7	7.855	9.4	6.8	1.44	5425	4.59	2.30
011283805-02	OBS	No	413.102216	145.545611	504.7	5.087	7.7	7.1	1.44	5425	3.41	1.46
011283805-03	OBS	No	490.277508	484.034527	493.7	5.796	10.3	6.2	1.44	5425	3.39	1.16

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011283805-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011283805-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—ALL_TRANS_CHASES—MOD_POS_DV
011283805-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS

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

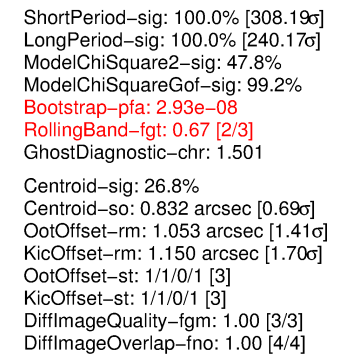
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

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.

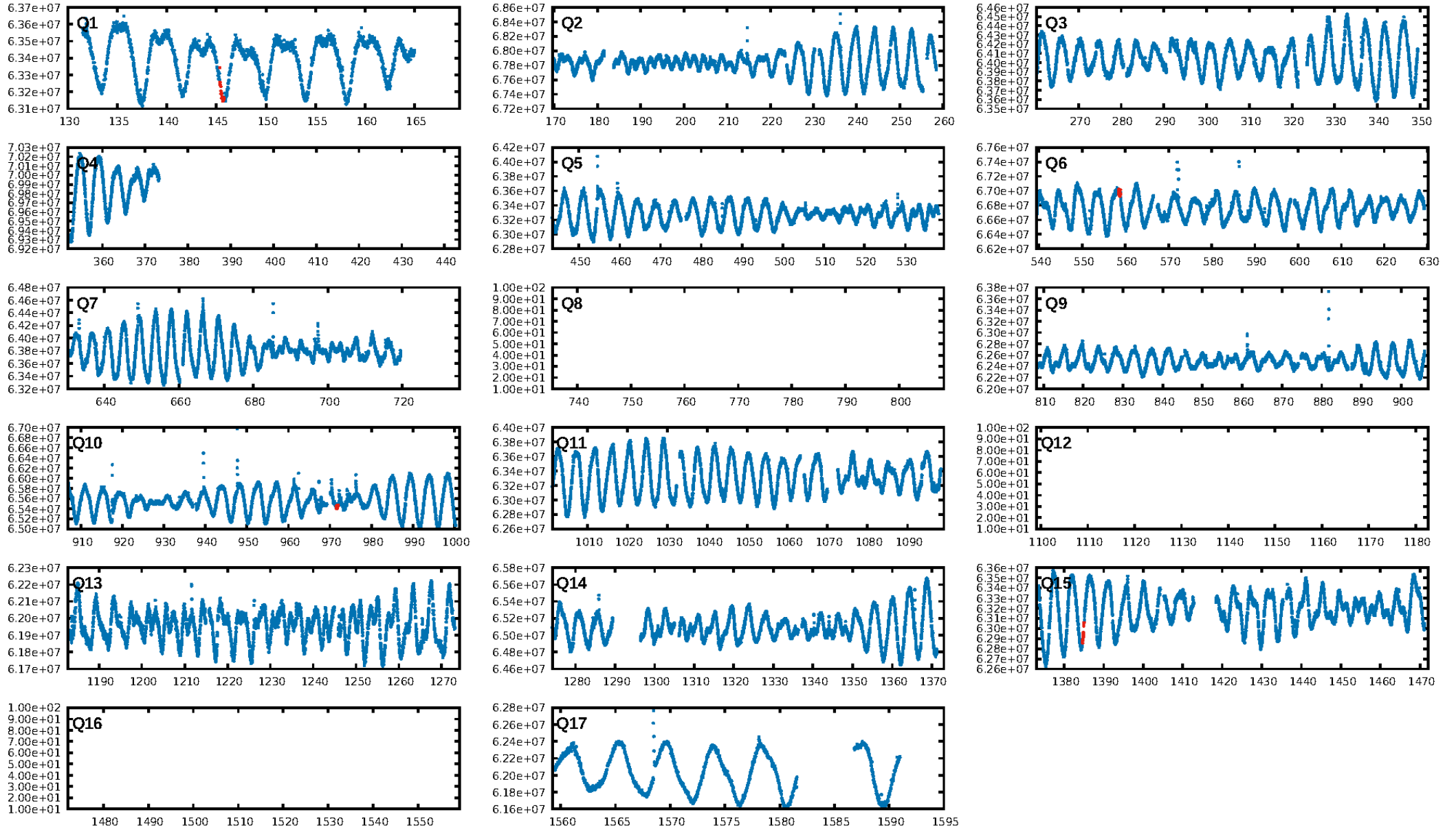
## Ephemeris Match Information For 011283805-02

No Significant Match Found

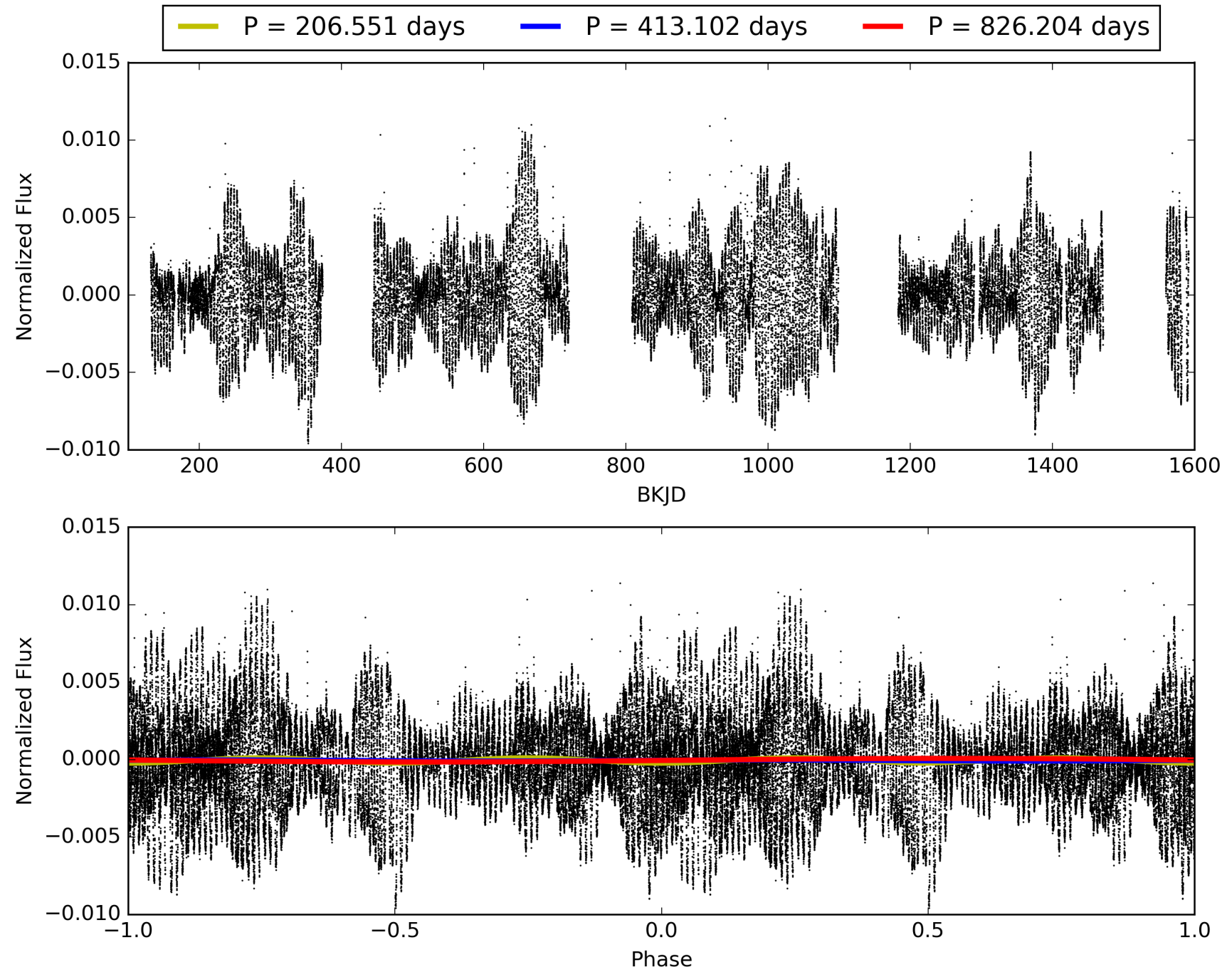
KIC: 11283805    Candidate: 2 of 3    Period: 413.102 d



# TCE 011283805-02, PDC Light Curves



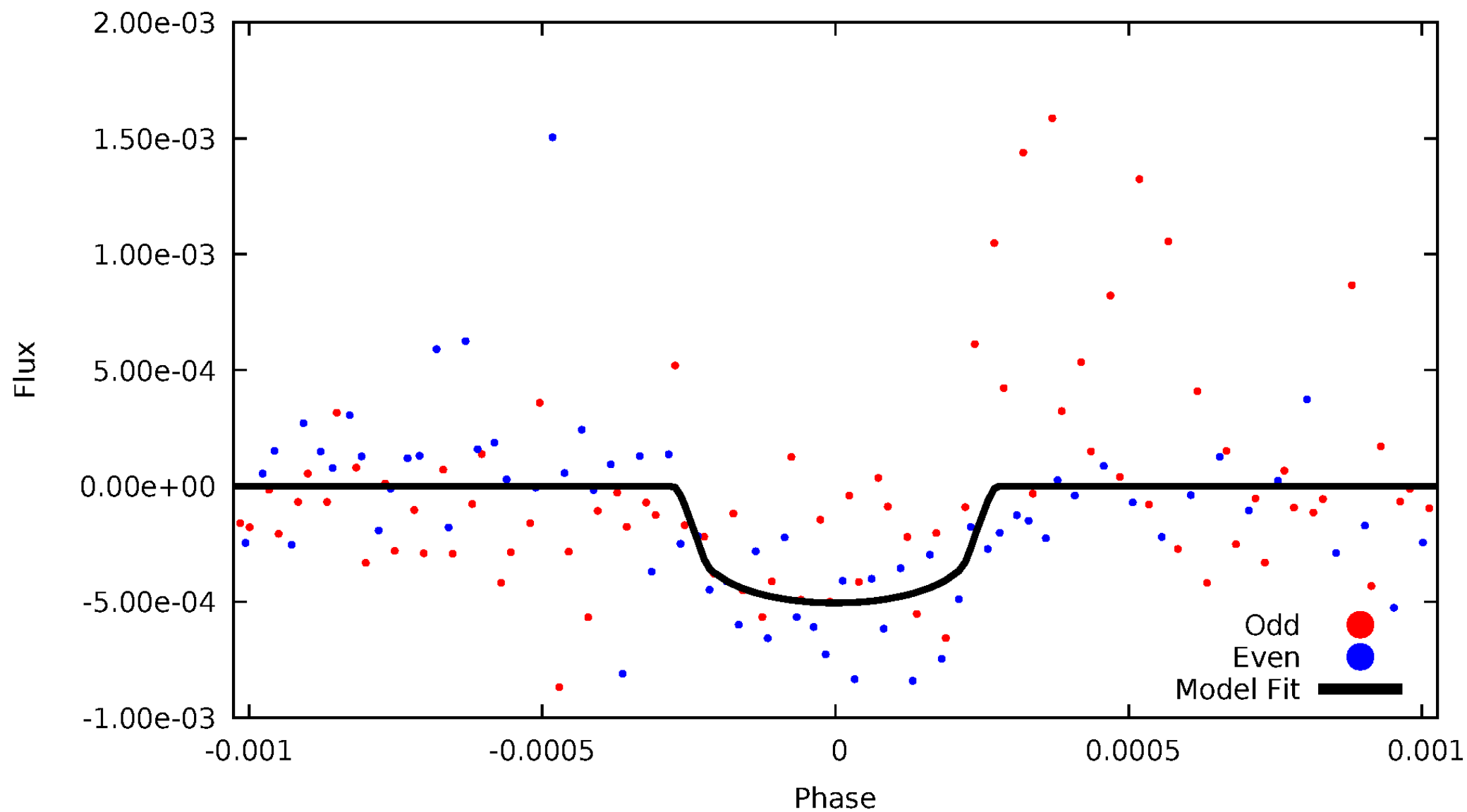
# TCE 011283805-02





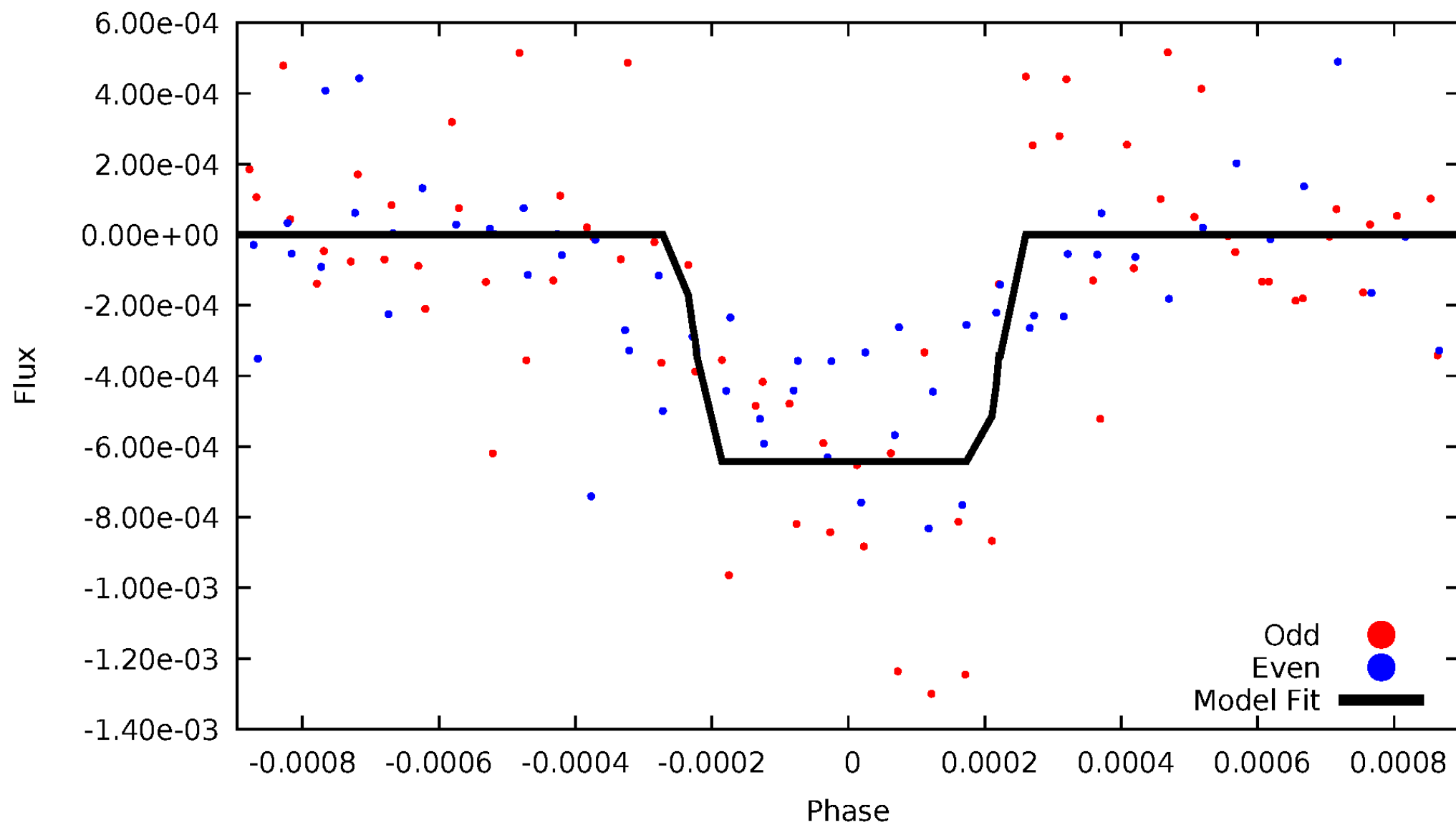
# DV Odd/Even

TCE 011283805-02



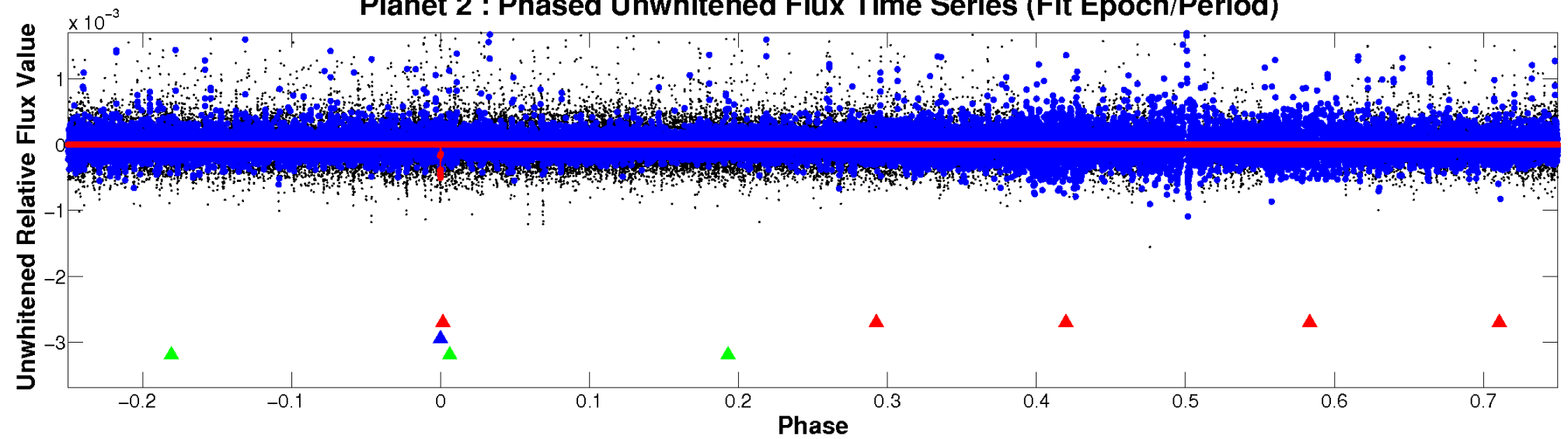
# ALT Odd/Even

TCE 011283805-02

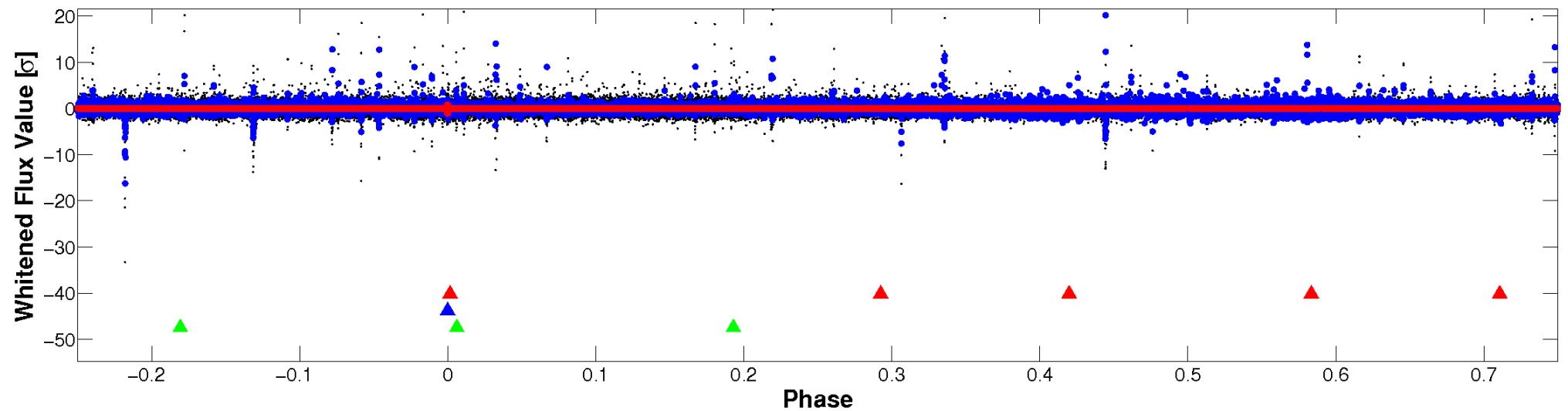


# Non-Whitened Vs. Whitened Light Curve

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

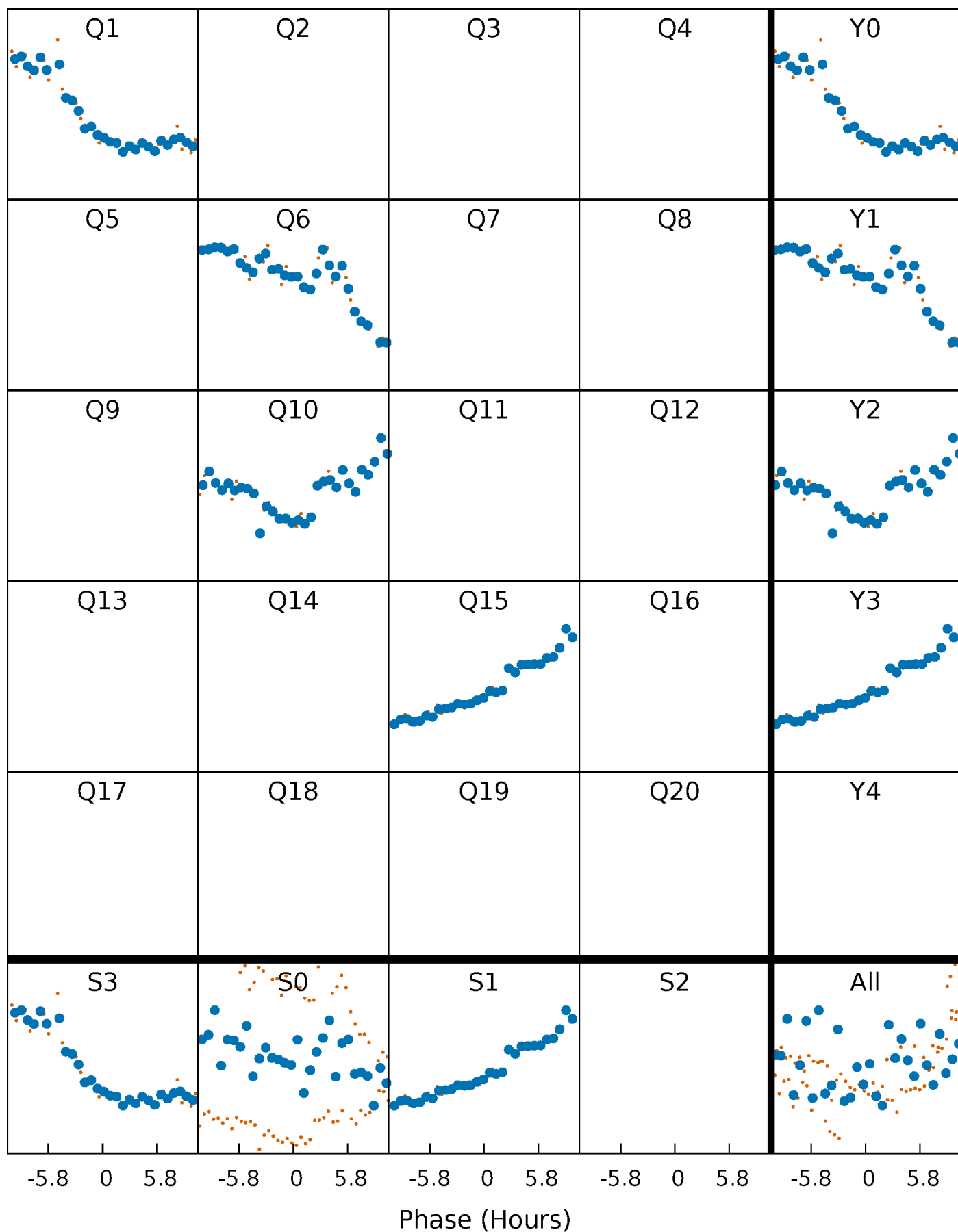


## Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



# PDC Quarter-Phased Transit Curves

TCE 011283805-02 P=413.102216 Days  $T_0=145.545611$  (BKJD)



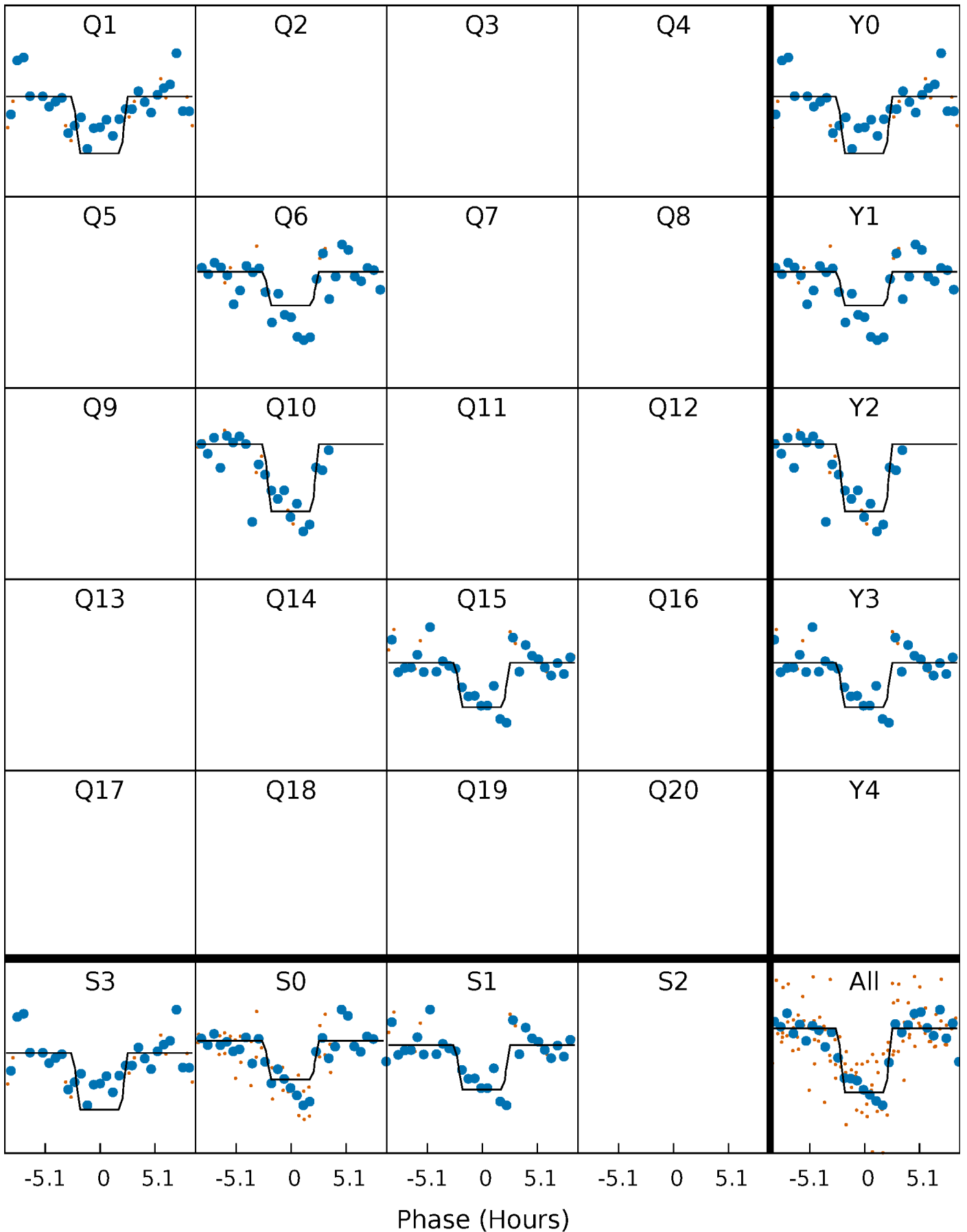
# DV Quarter-Phased Transit Curves

TCE 011283805-02     $P=413.102216$  Days     $T_0=145.545611$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

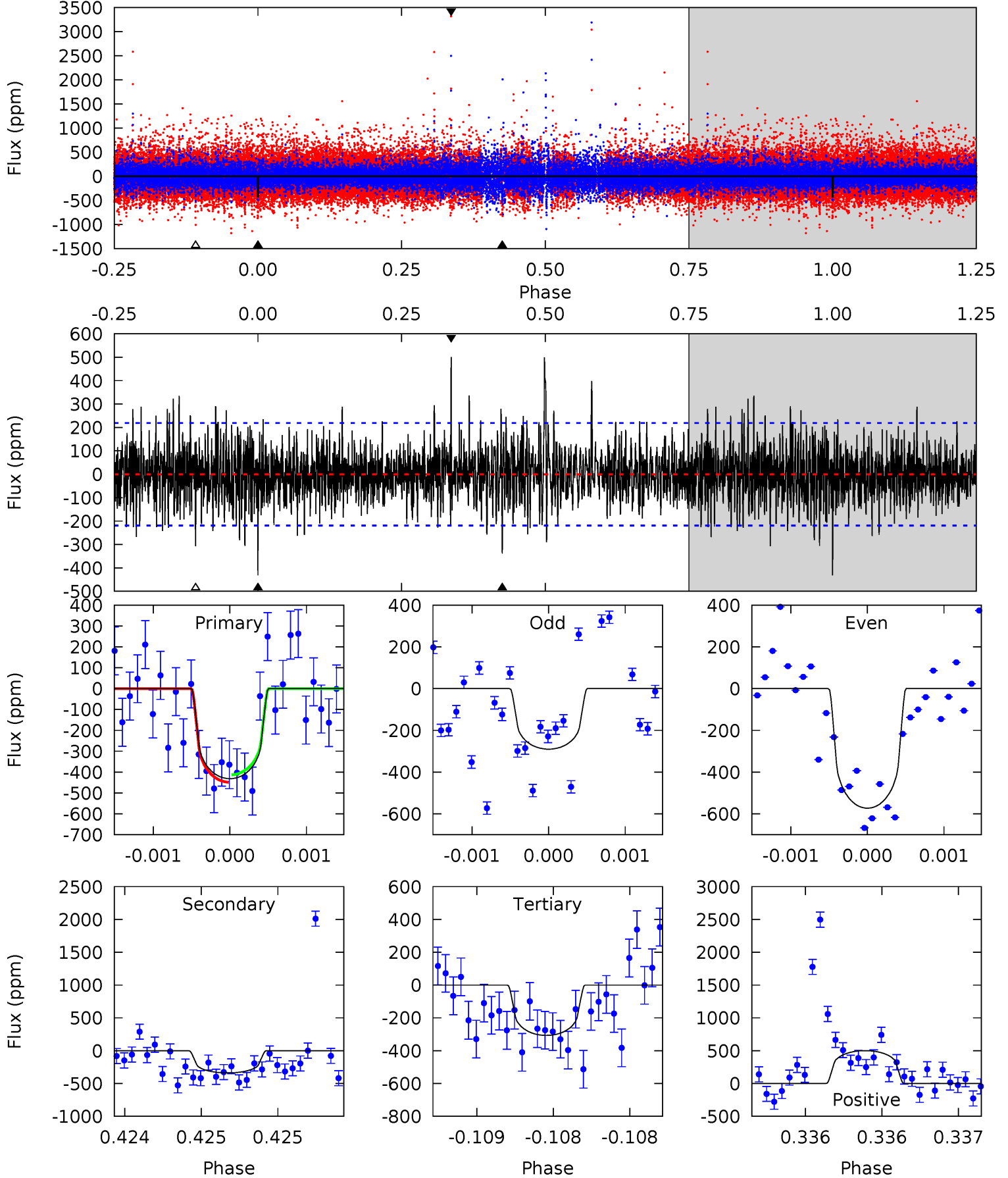
TCE 011283805-02     $P=413.087249$  Days     $T_0=145.581318$  (BKJD)



# DV Model-Shift Uniqueness Test

011283805-02, P = 413.102216 Days, E = 145.545611 Days

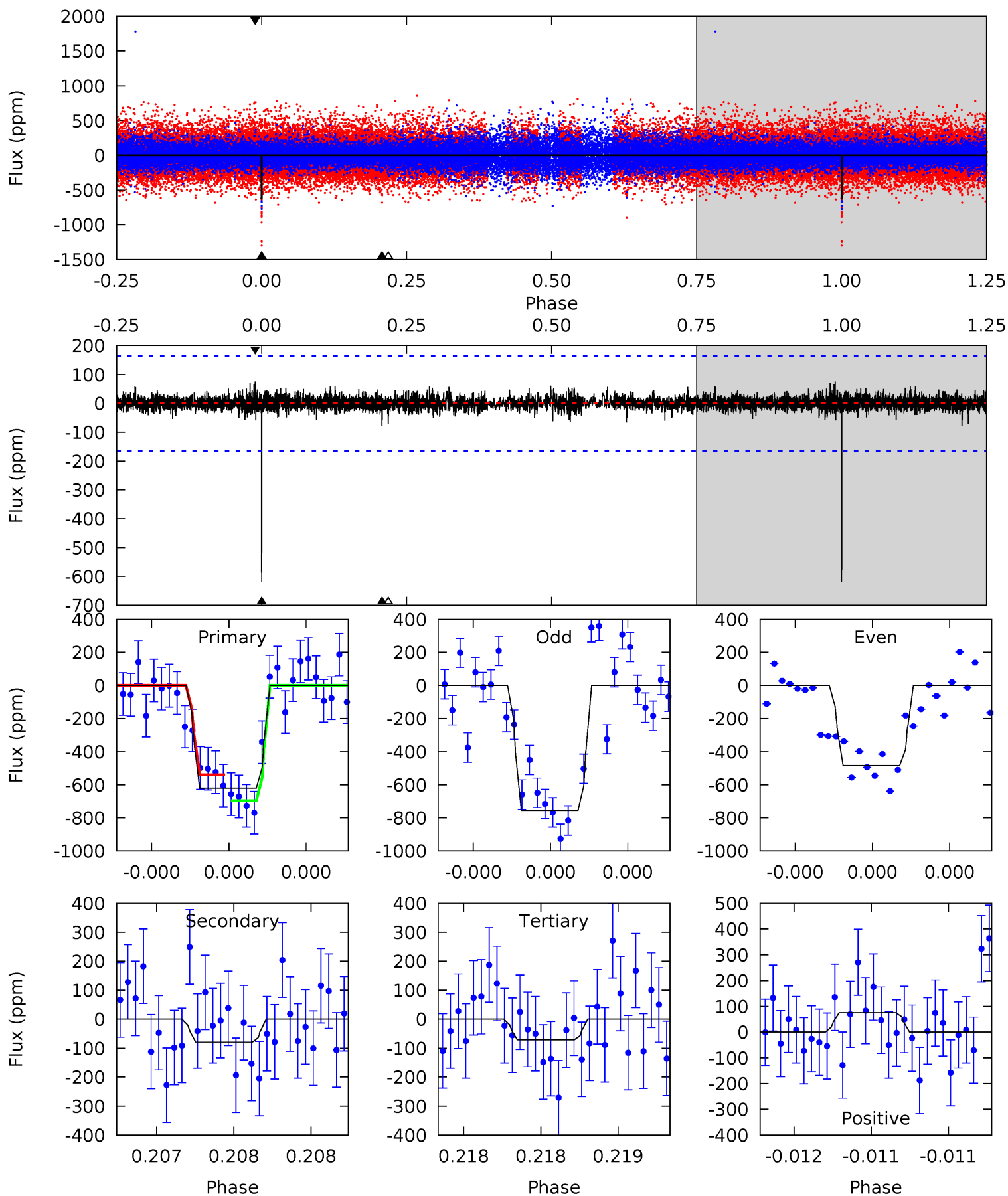
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.9	8.58	7.78	12.7	5.56	3.45	2.18	3.16	-1.74	0.81	-4.09	2.89	1.01	0.54	0.45



# Alt Model-Shift Uniqueness Test

011283805-02,  $P = 413.087249$  Days,  $E = 145.581318$  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
21.0	2.67	2.42	2.52	5.58	3.49	0.49	18.6	18.5	0.25	0.15	4.61	1.05	0.11	2.66





### Stellar Parameters For KIC 011283805

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5425^{+179}_{-146}$	$4.079^{+0.434}_{-0.186}$	$0.020^{+0.250}_{-0.250}$	$1.440^{+0.463}_{-0.566}$	$0.908^{+0.092}_{-0.083}$	$0.428^{+1.406}_{-0.239}$
	+3%/-3%	+11%/-5%	+1250%/-1250%	+32%/-39%	+10%/-9%	+328%/-56%
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 011283805-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-339 \pm 39$	$4.09^{+3.26}_{-2.62}$	$385^{+38}_{-44}$	$4539^{+2768}_{-808}$	$12721^{+85869}_{-8915}$
Alt.	$-79 \pm 30$	$4.26^{+3.54}_{-2.59}$	$387^{+36}_{-40}$	$3474^{+1451}_{-581}$	$2531^{+15323}_{-1825}$

$T_{max}$  = 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

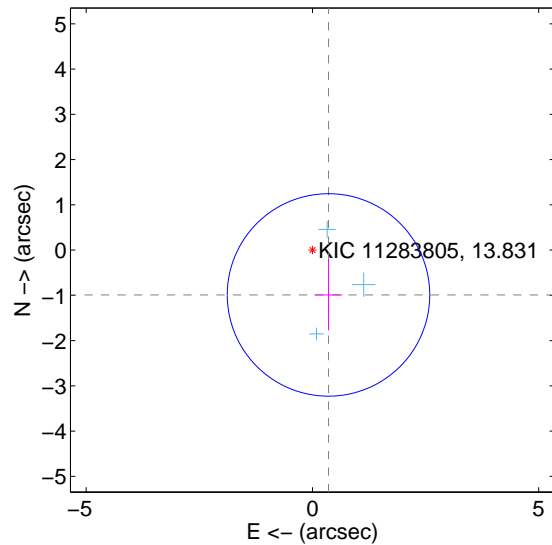
Supplemental centroid analysis for 011283805-02. Kepler magnitude: 13.83. Transit SNR 7.07

There are 3 quarters with good PRF difference image offsets

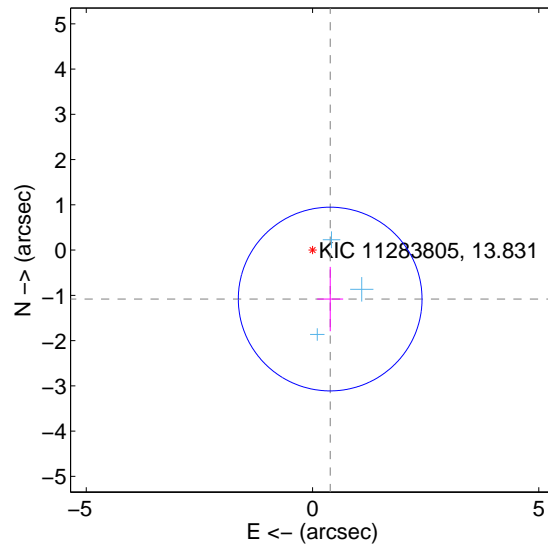
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.053 \pm 0.746$	1.41	$-0.355 \pm 0.308$	$-0.991 \pm 0.784$
PRF-fit source offset from KIC position	$1.150 \pm 0.677$	1.70	$-0.390 \pm 0.287$	$-1.082 \pm 0.712$
photometric centroid source offset	$0.83 \pm 1.21$	0.69	$0.25 \pm 1.20$	$0.79 \pm 1.21$

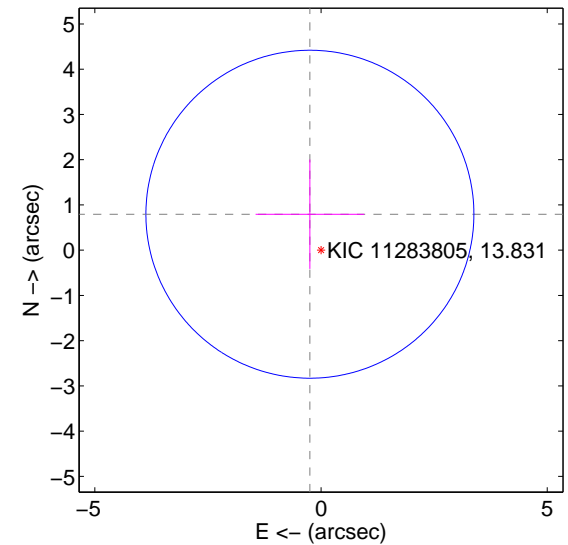
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

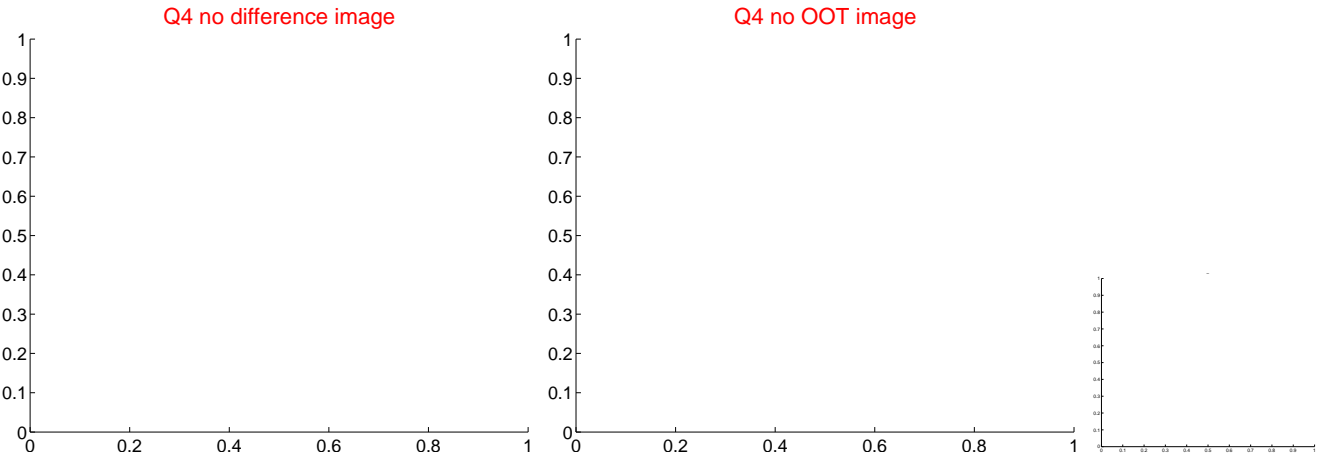
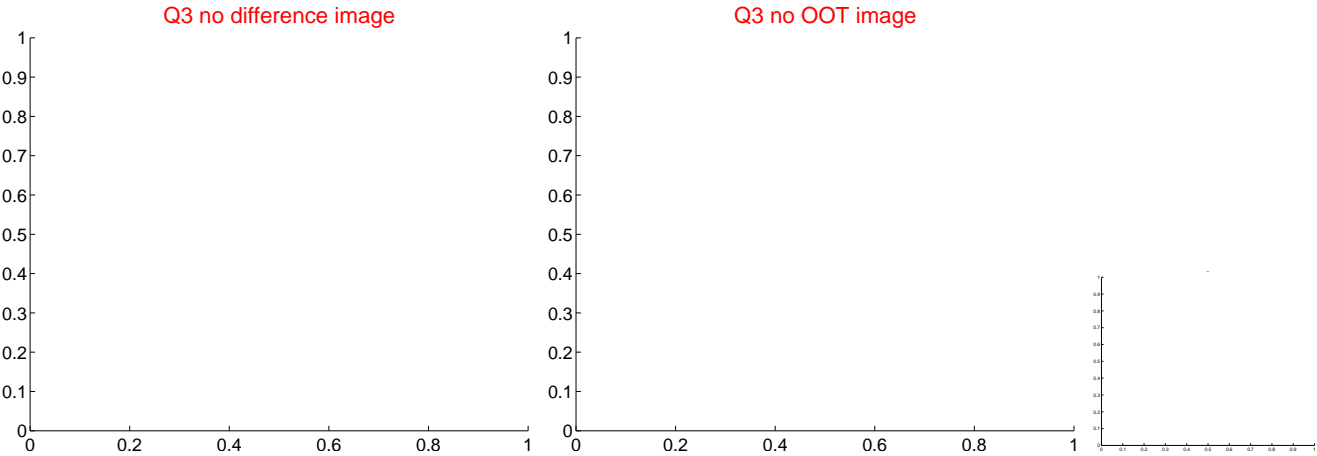
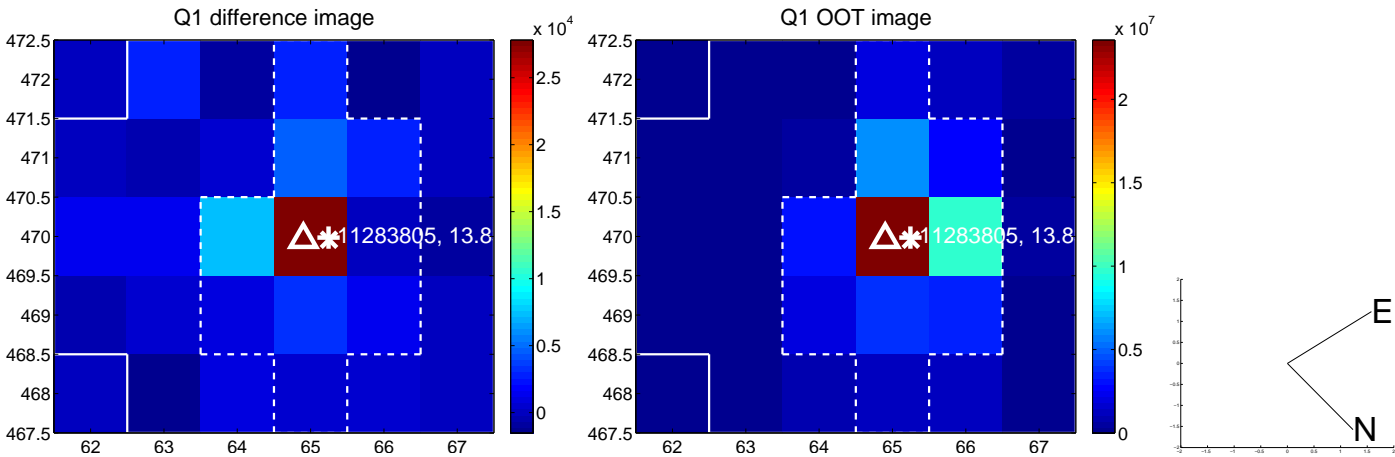


offset from photometric centroids

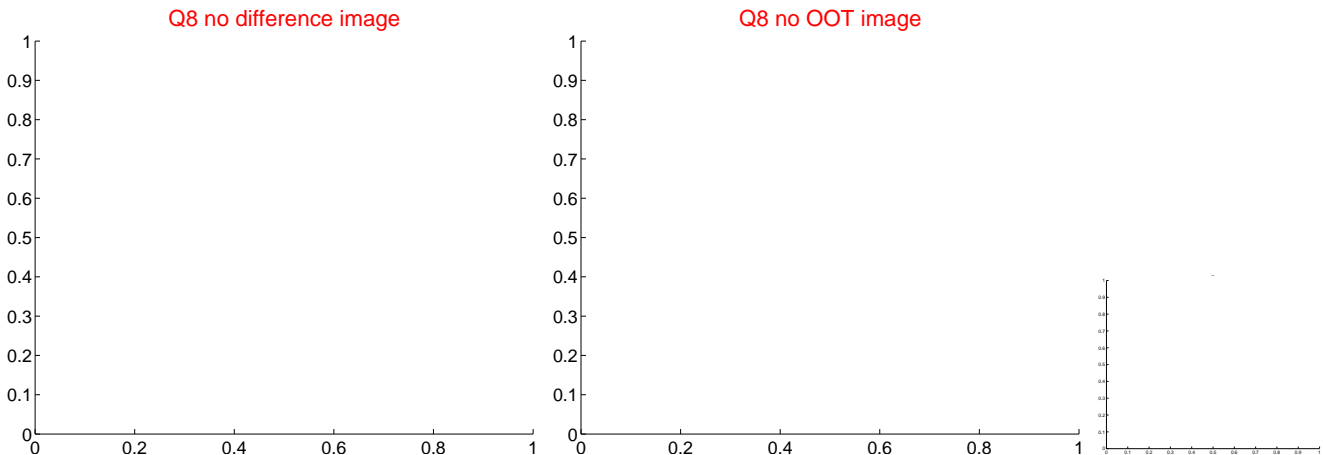
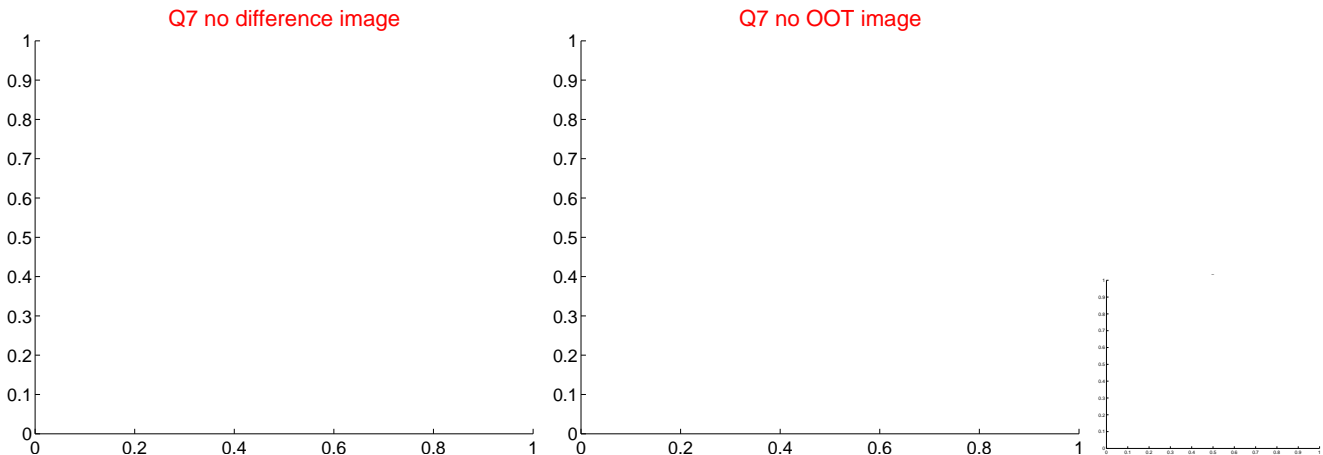
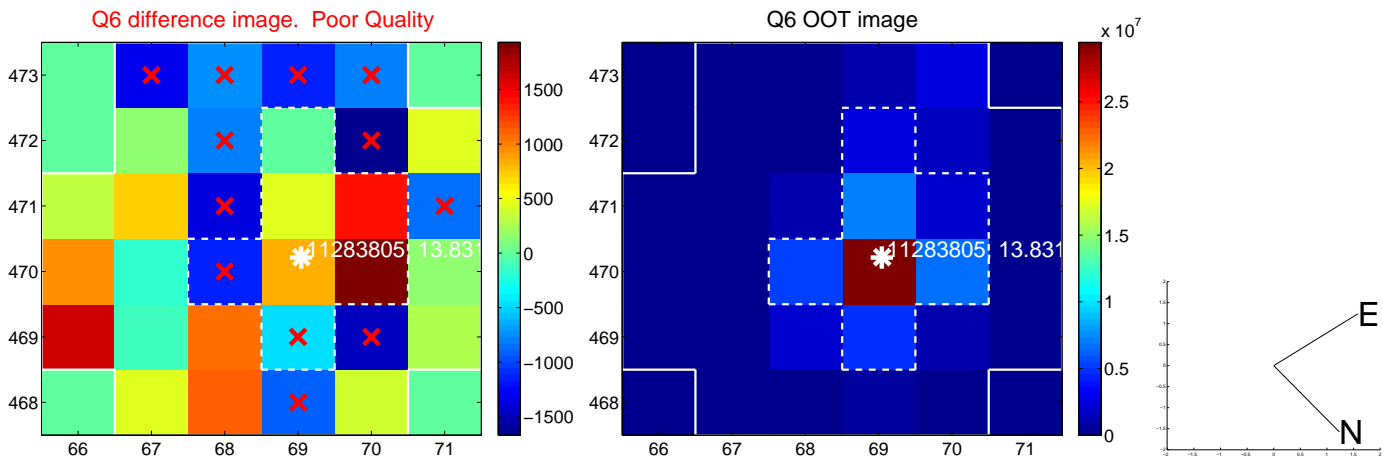
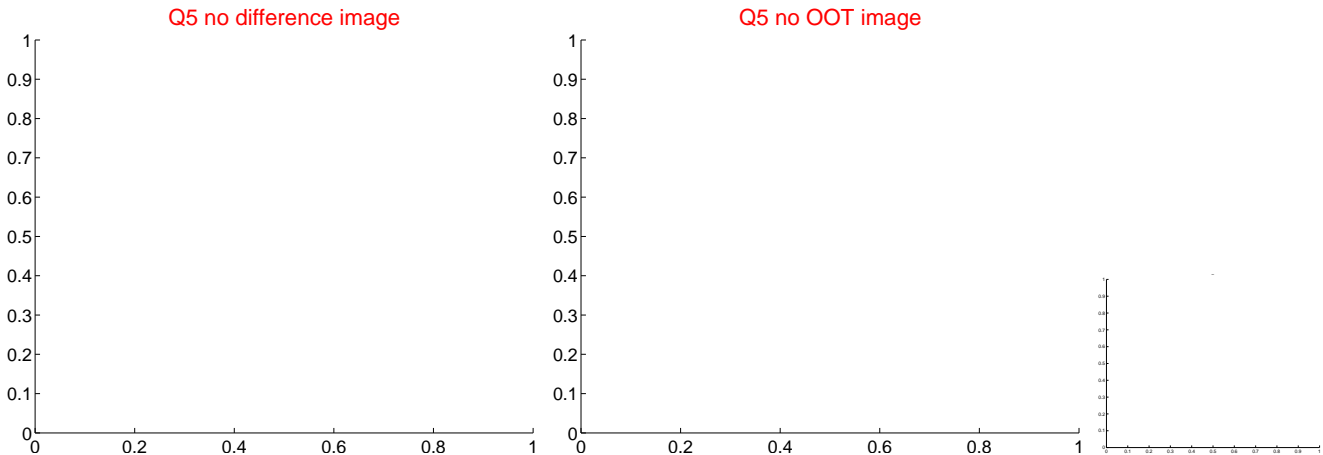


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

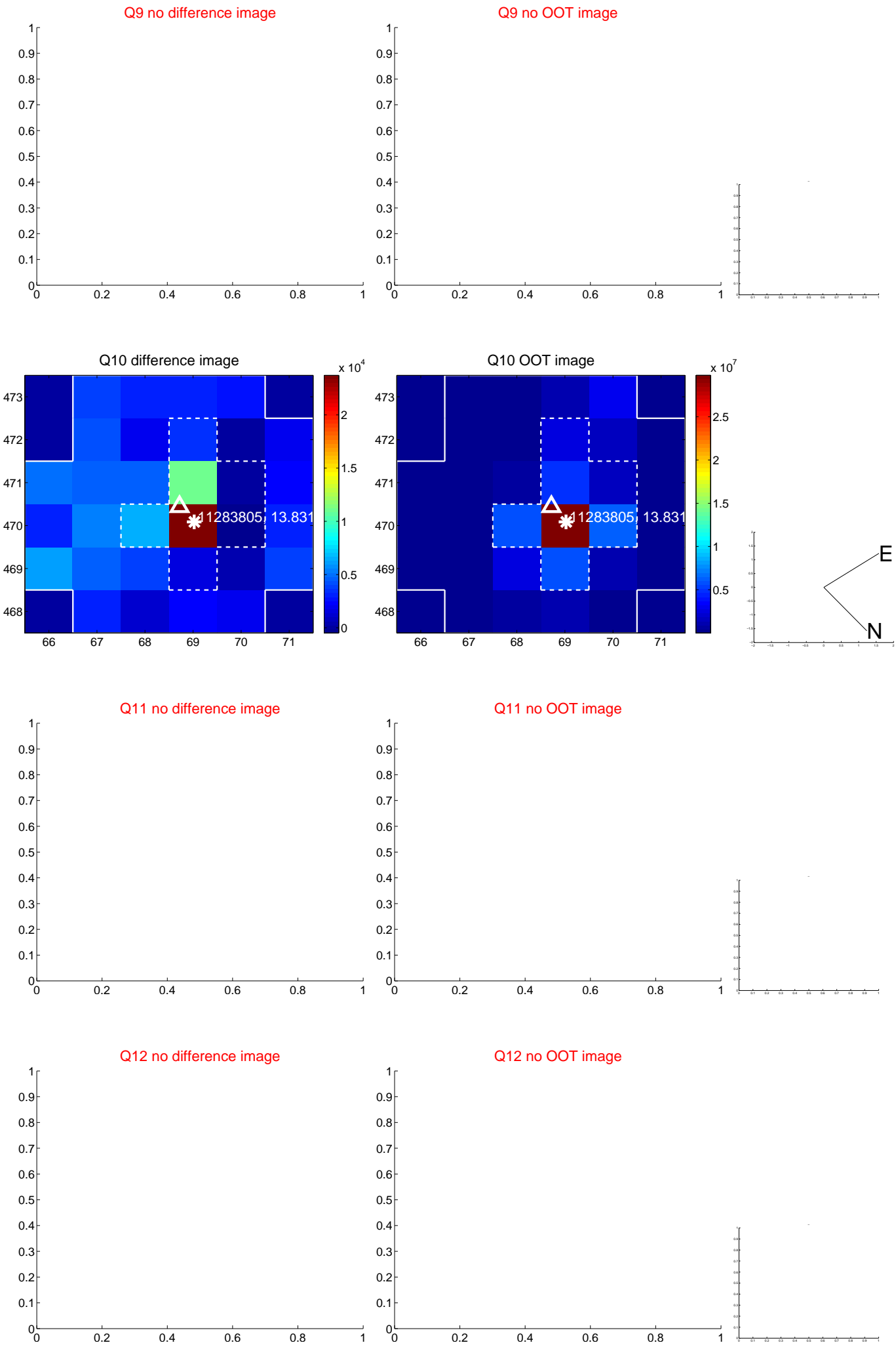
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



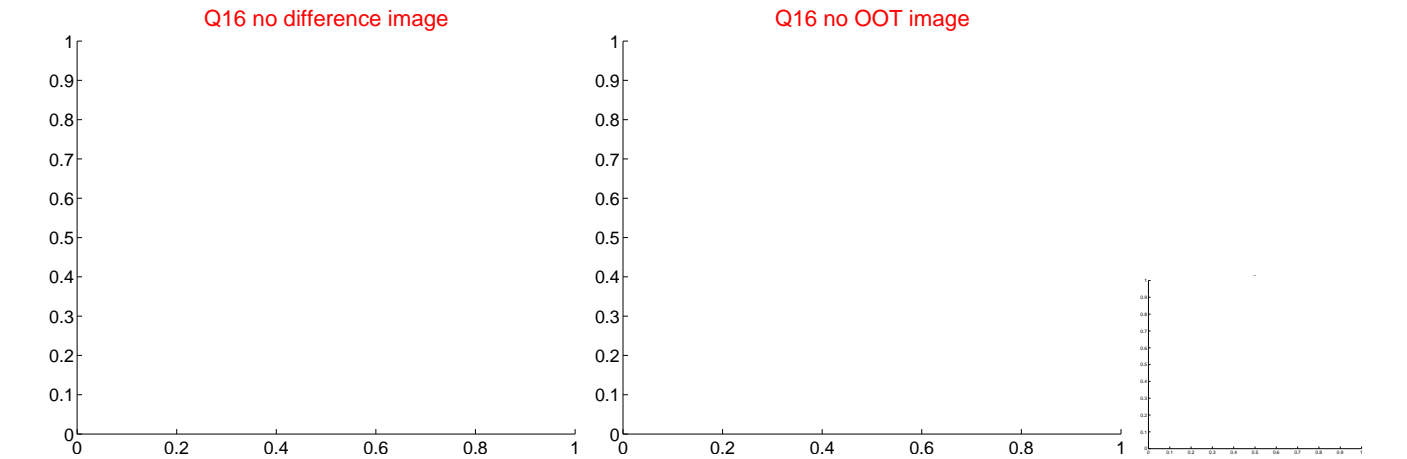
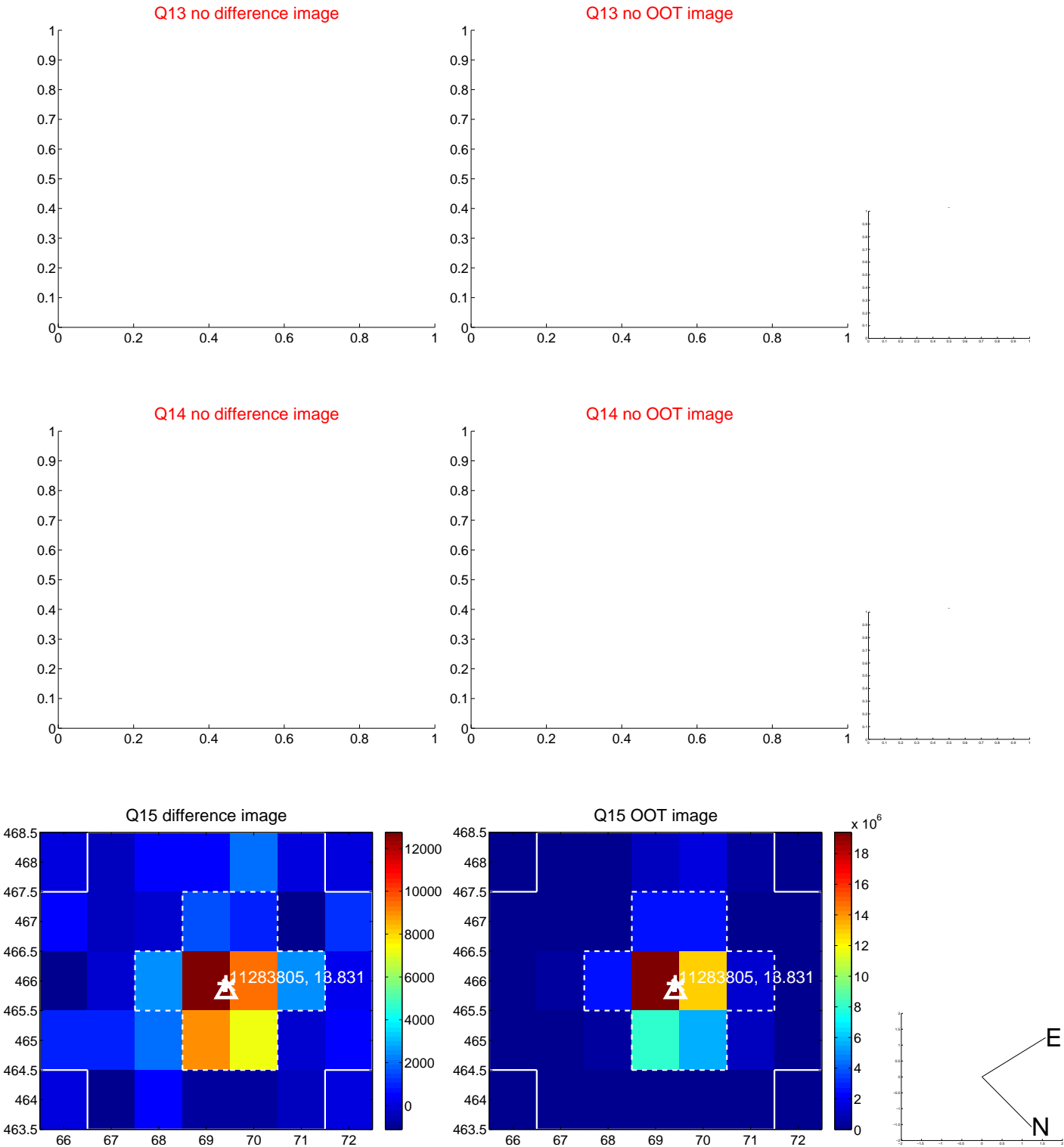
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value



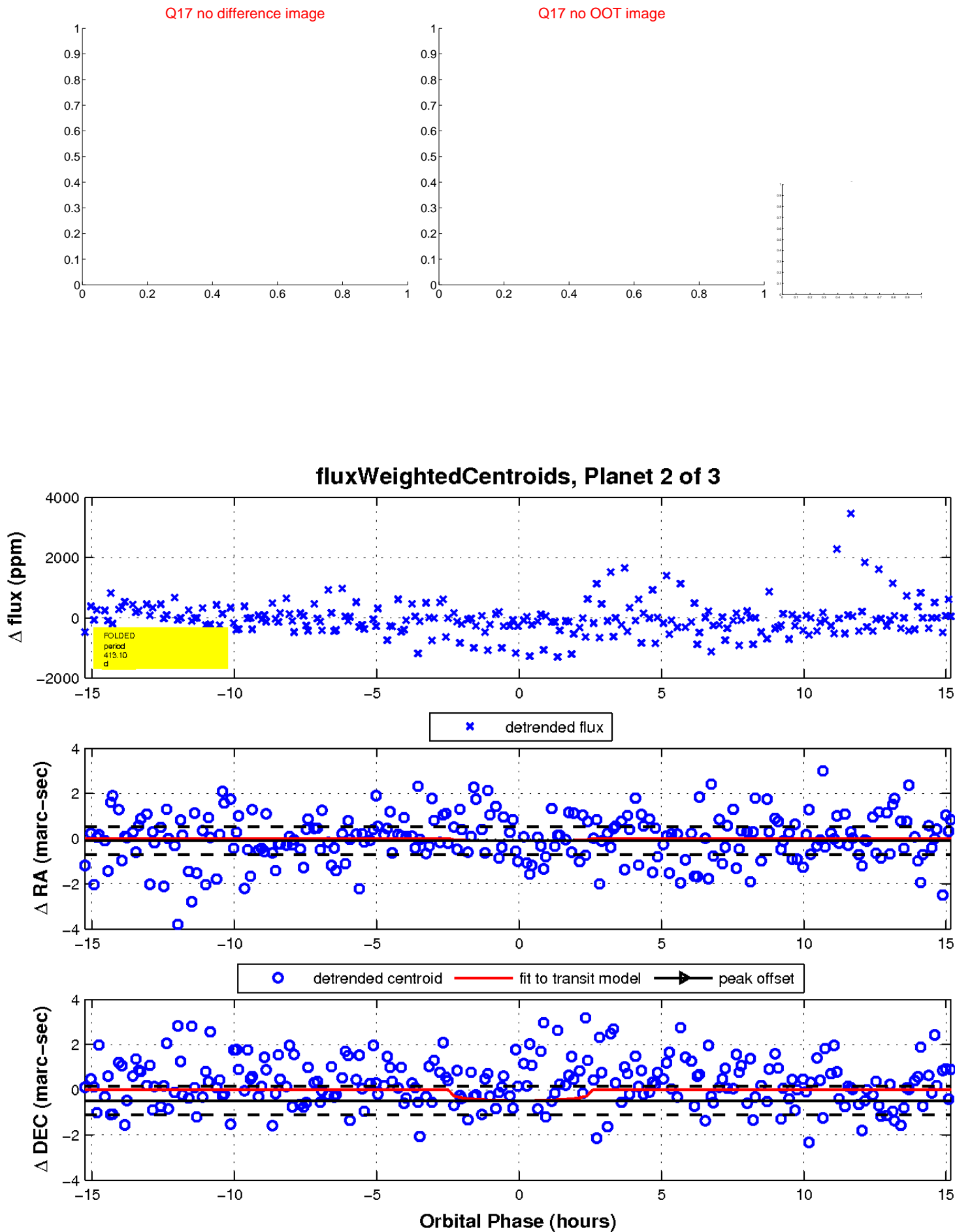
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

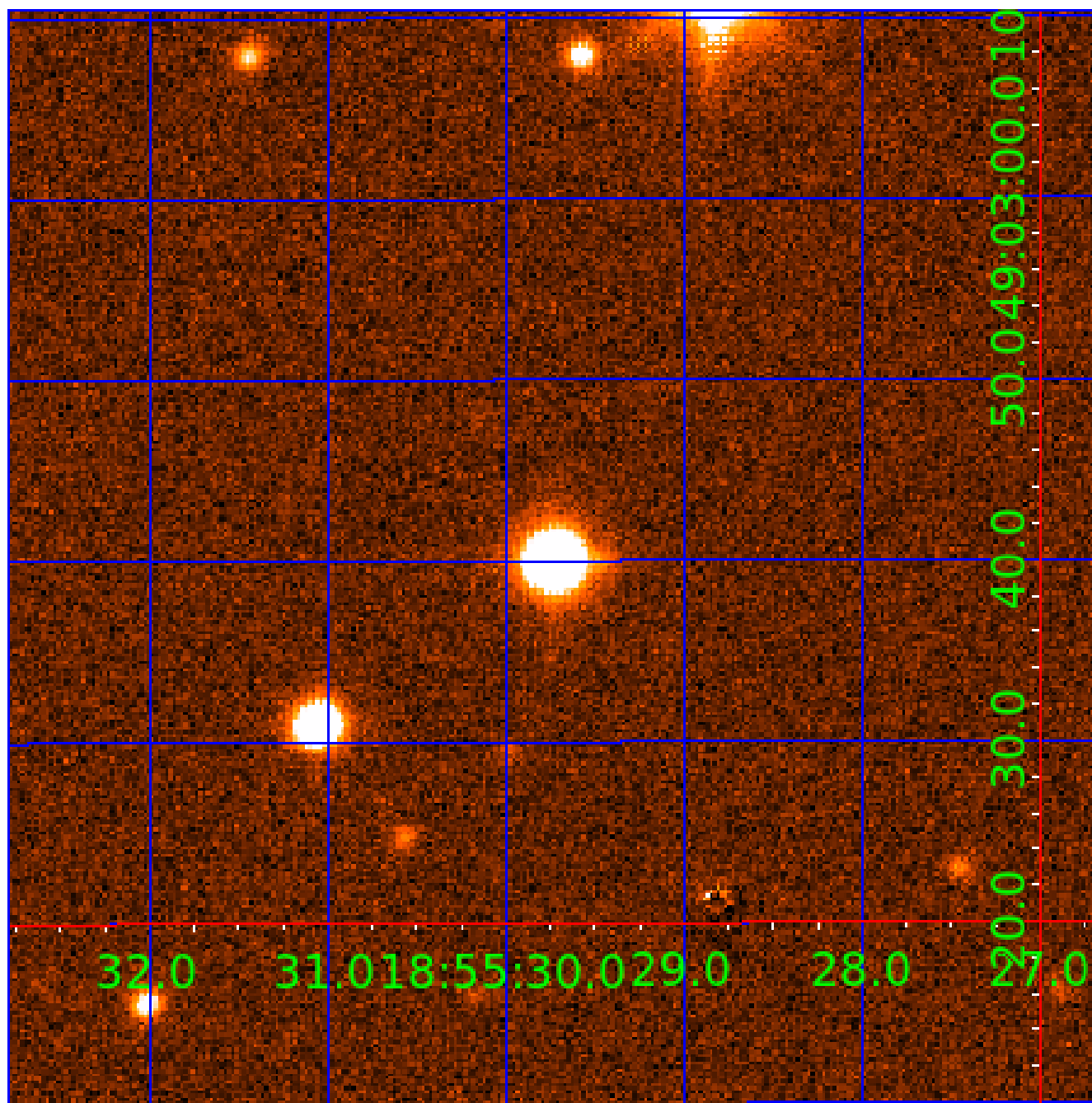


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination





# KIC 011283805

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011283805-01	OBS	No	292.926649	386.571496	567.7	7.855	9.4	6.8	1.44	5425	4.59	2.30
011283805-02	OBS	No	413.102216	145.545611	504.7	5.087	7.7	7.1	1.44	5425	3.41	1.46
011283805-03	OBS	No	490.277508	484.034527	493.7	5.796	10.3	6.2	1.44	5425	3.39	1.16

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011283805-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011283805-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—ALL_TRANS_CHASES—MOD_POS_DV
011283805-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS

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

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

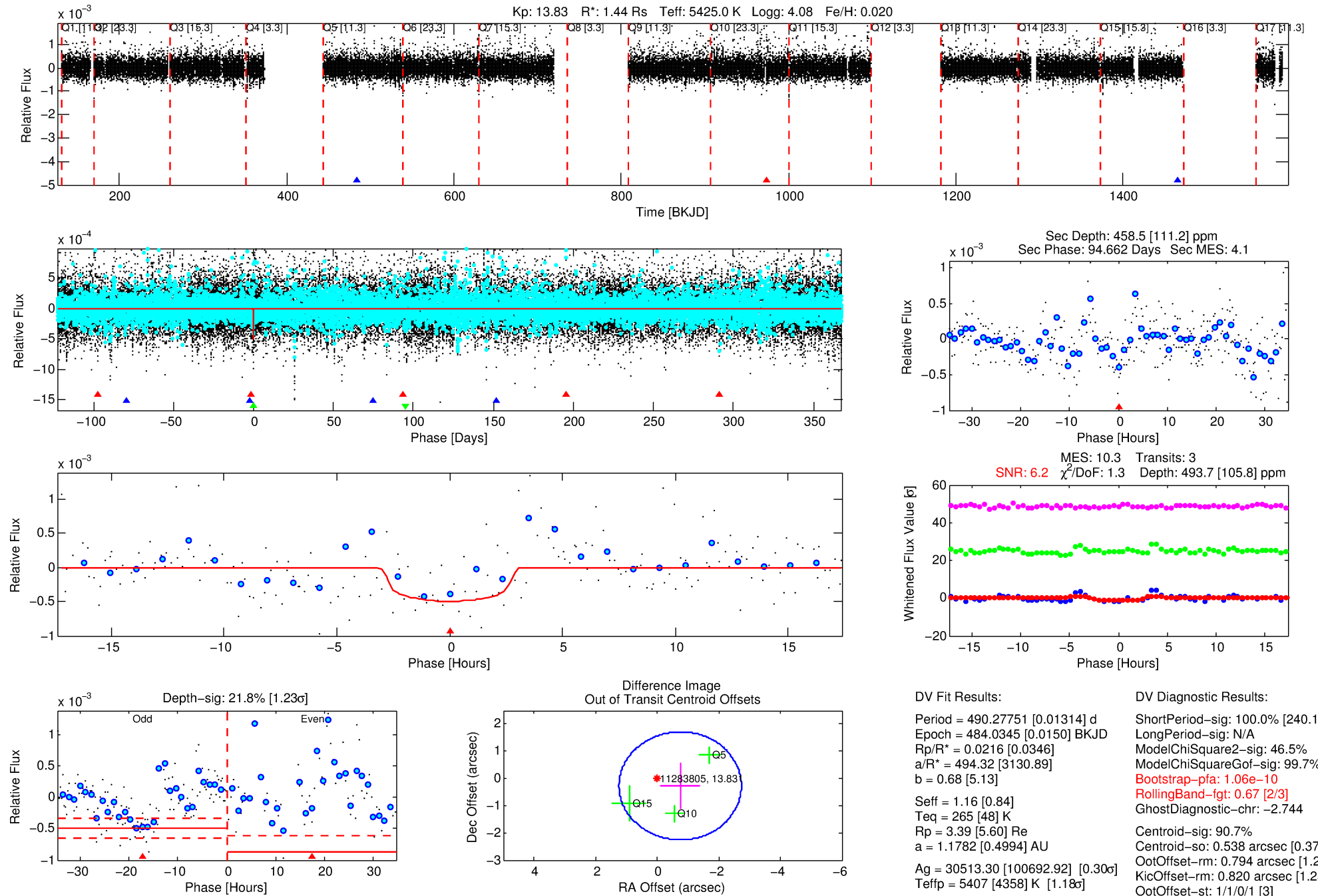
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 011283805-03

No Significant Match Found

# DV One-Page Summary

KIC: 11283805 Candidate: 3 of 3 Period: 490.278 d



## DV Fit Results:

Period = 490.27751 [0.01314] d  
 Epoch = 484.0345 [0.0150] BKJD  
 Rp/R\* = 0.0216 [0.0346]  
 a/R\* = 494.32 [3130.89]  
 b = 0.68 [5.13]  
 Seff = 1.16 [0.84]  
 Teq = 265 [48] K  
 Rp = 3.39 [5.60] Re  
 a = 1.1782 [0.4994] AU  
 Ag = 30513.30 [100692.92] [0.30 $\sigma$ ]  
 Tefp = 5407 [4358] K [1.18 $\sigma$ ]

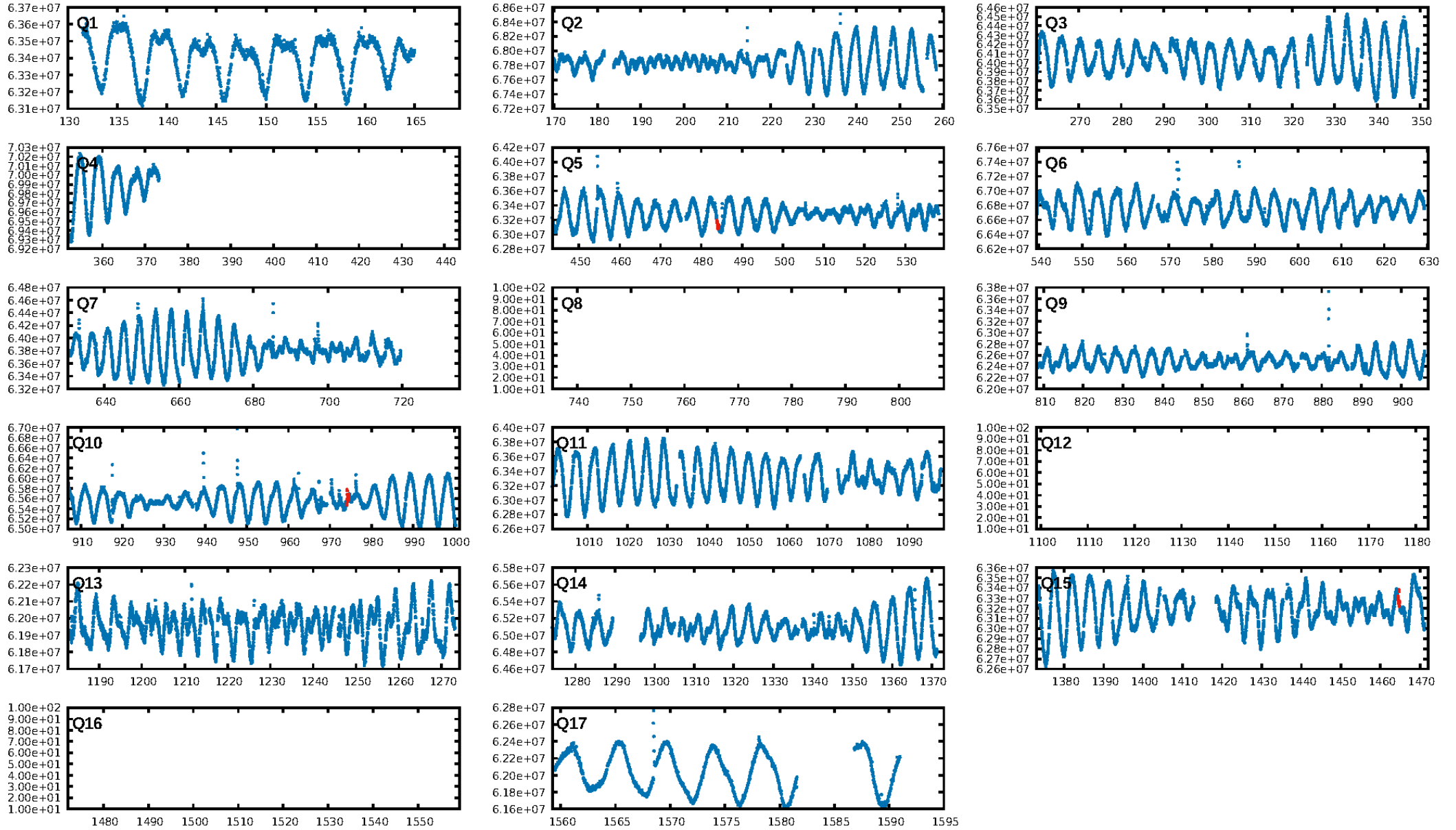
## DV Diagnostic Results:

ShortPeriod-sig: 100.0% [240.17 $\sigma$ ]  
 LongPeriod-sig: N/A  
 ModelChiSquare2-sig: 46.5%  
 ModelChiSquareGof-sig: 99.7%  
 Bootstrap-pfa: 1.06e-10  
 RollingBand-fgt: 0.67 [2/3]  
 GhostDiagnostic-chr: -2.744  
 Centroid-sig: 90.7%  
 Centroid-so: 0.538 arcsec [0.37 $\sigma$ ]  
 OotOffset-rm: 0.794 arcsec [1.20 $\sigma$ ]  
 KicOffset-rm: 0.820 arcsec [1.25 $\sigma$ ]  
 OotOffset-st: 1/1/0/1 [3]  
 KicOffset-st: 1/1/0/1 [3]  
 DiffImageQuality-fgm: 0.67 [2/3]  
 DiffImageOverlap-fno: 1.00 [3/3]

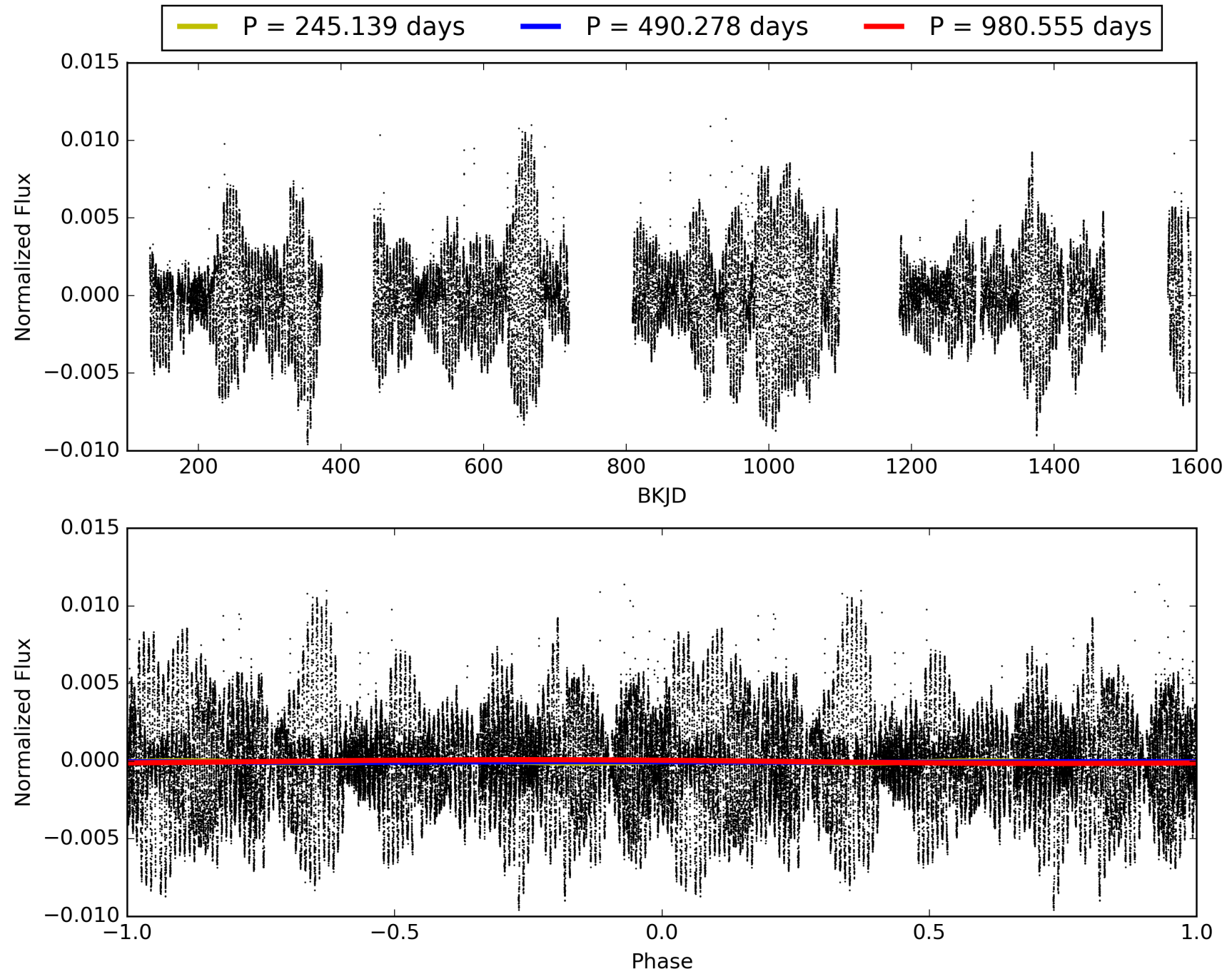
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 08:47:22 Z

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

# TCE 011283805-03, PDC Light Curves

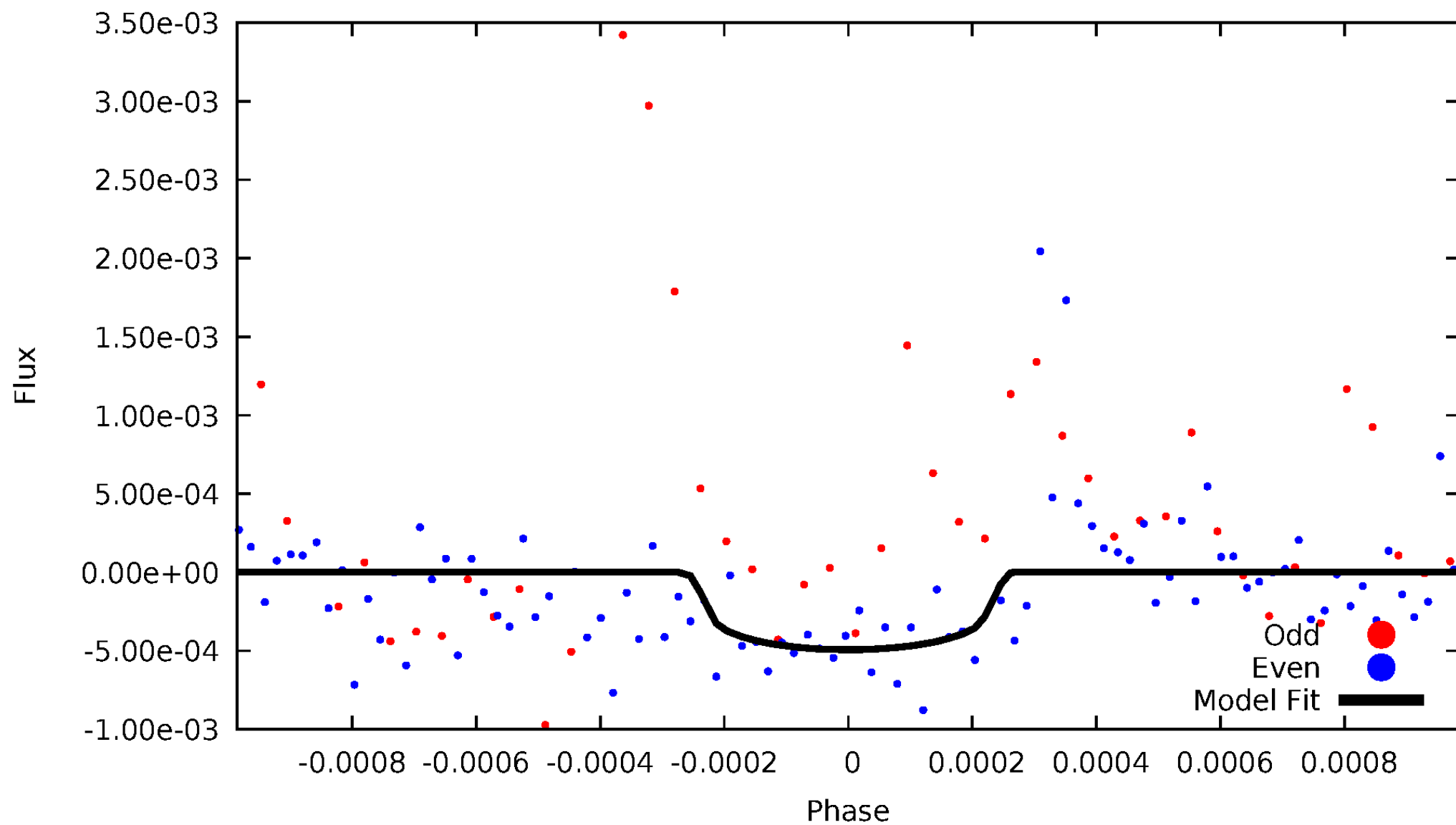


TCE 011283805-03



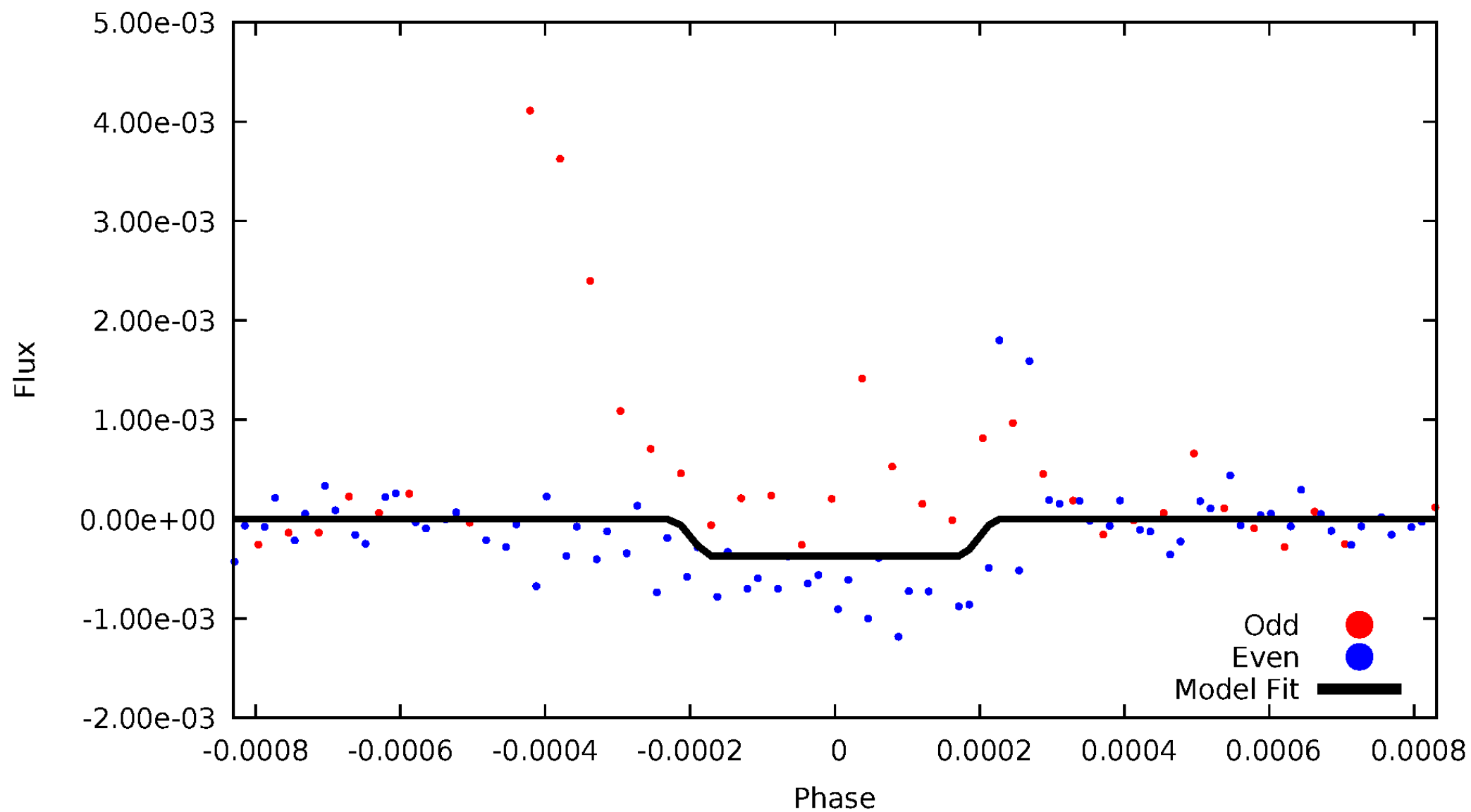
# DV Odd/Even

TCE 011283805-03



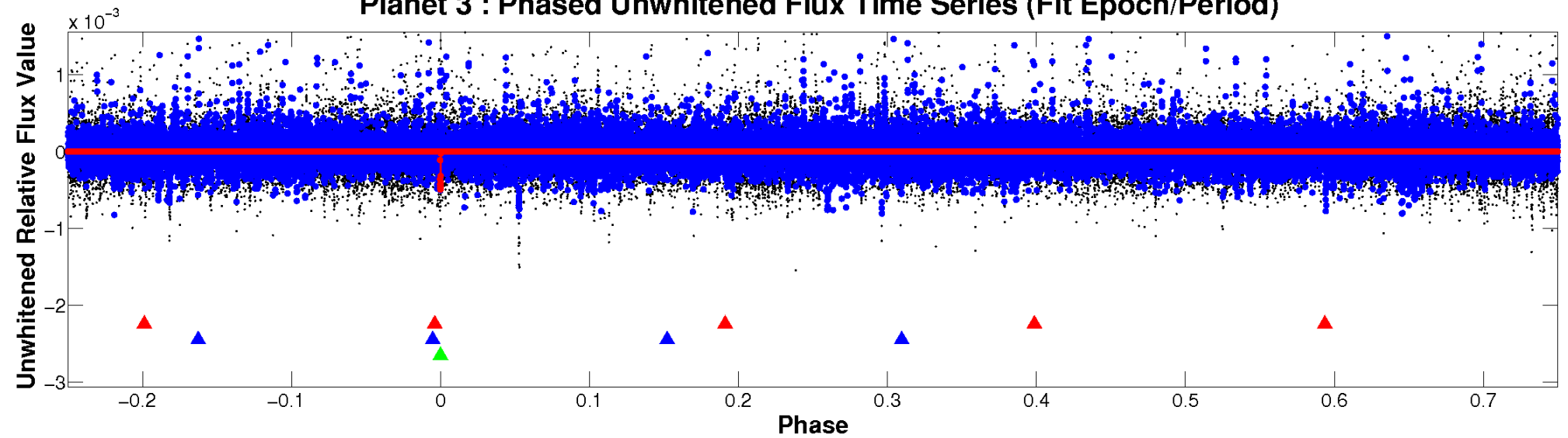
# ALT Odd/Even

TCE 011283805-03

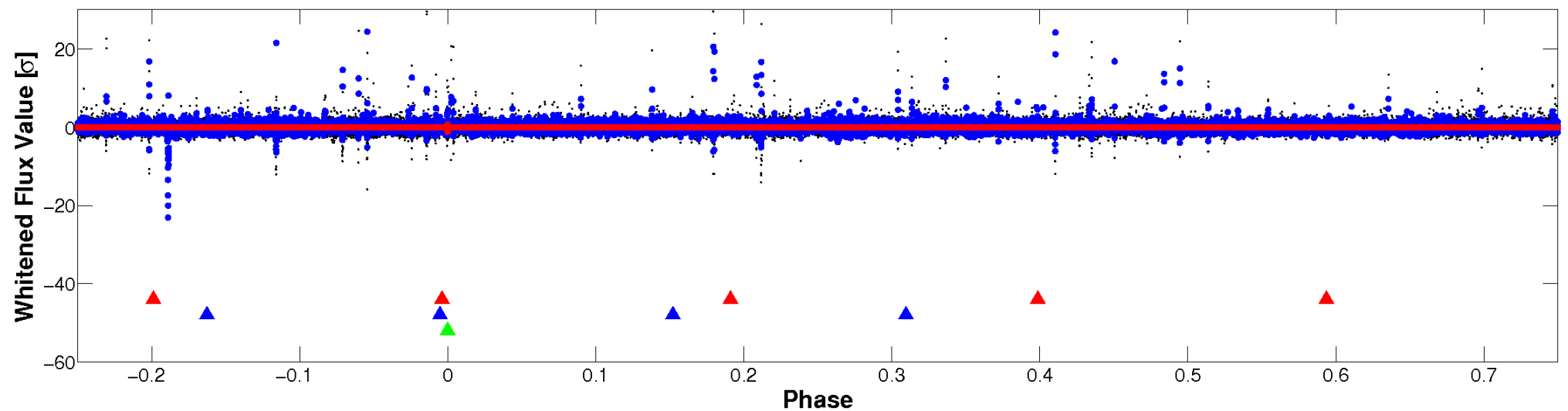


# Non-Whitened Vs. Whitened Light Curve

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

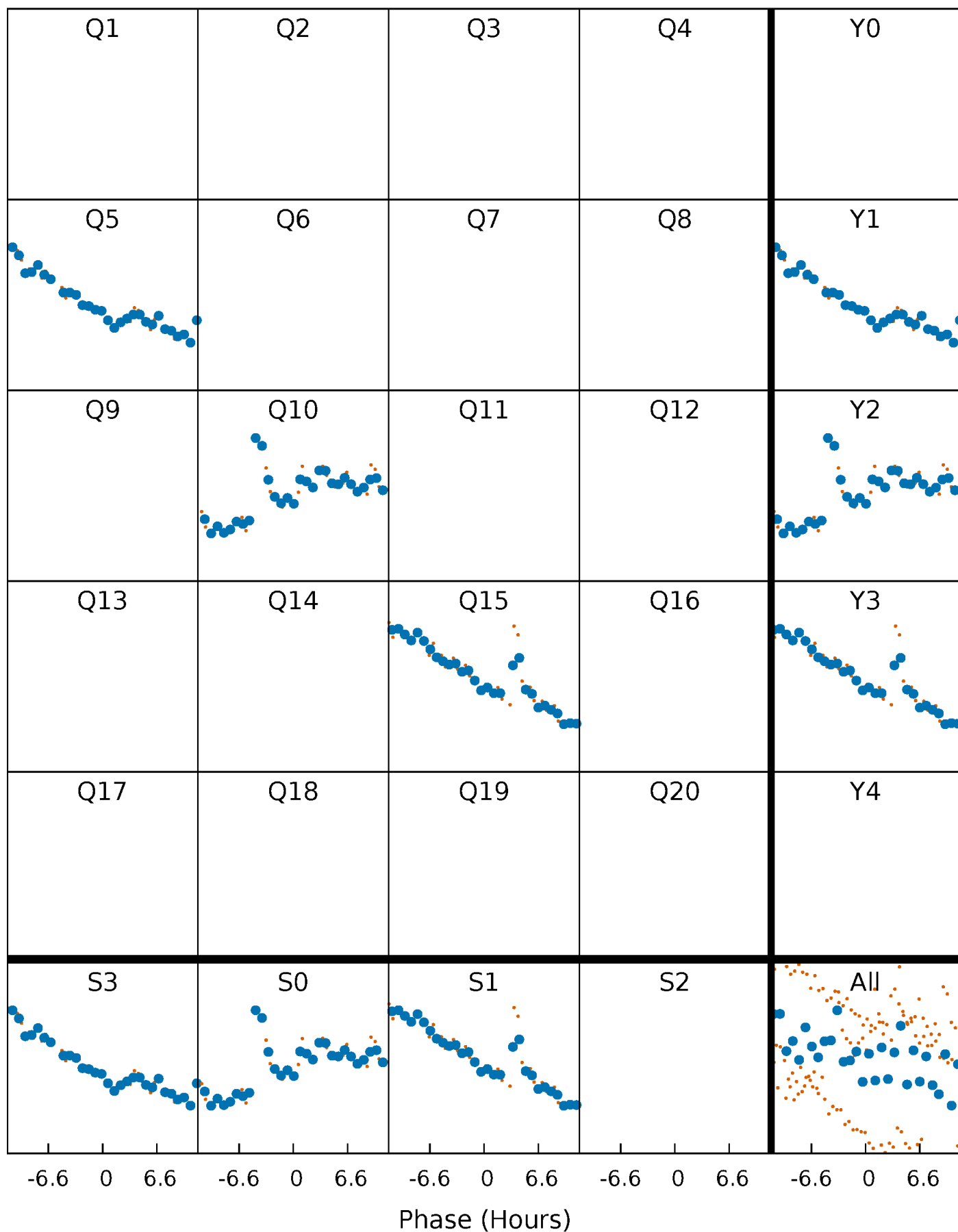


**Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

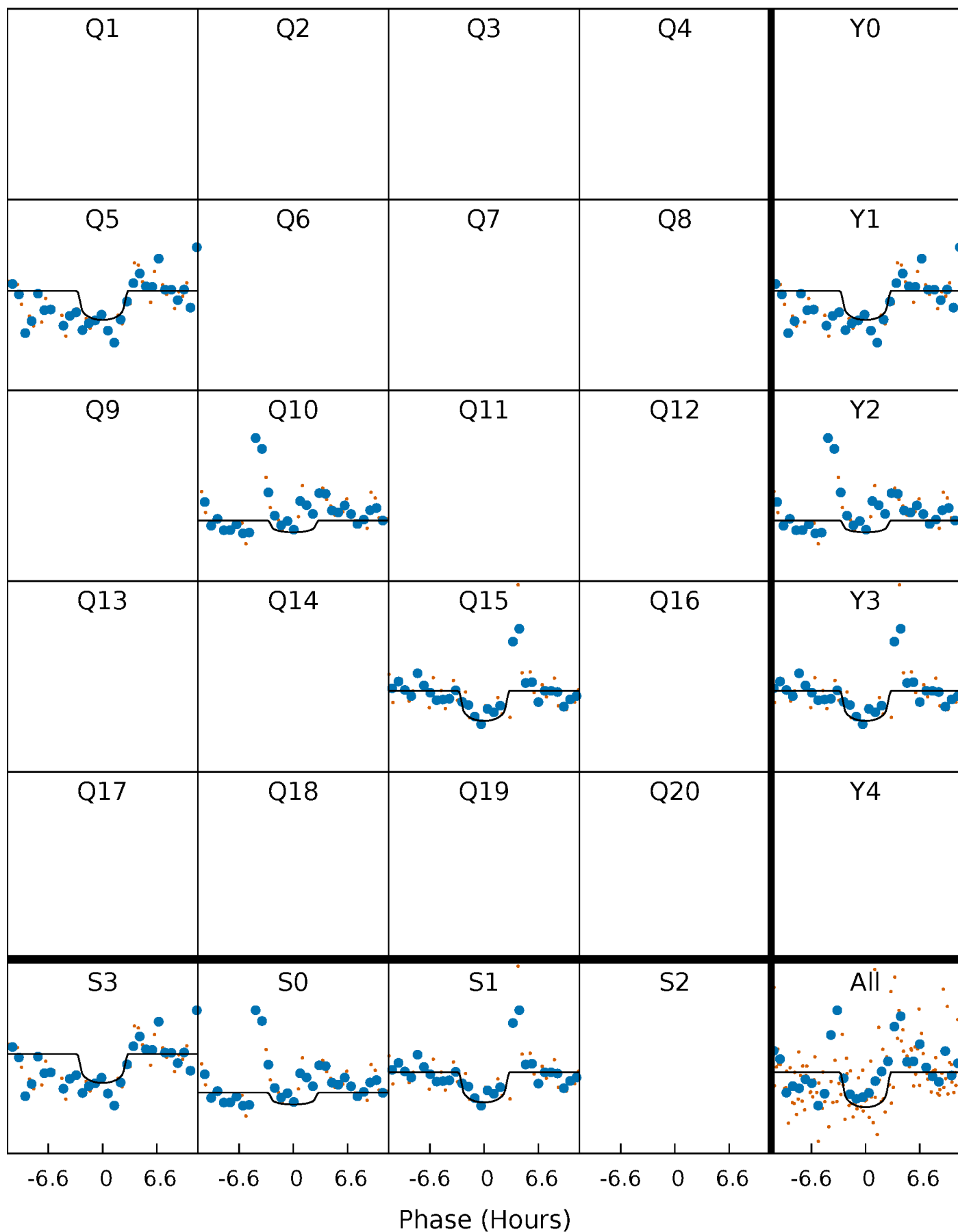
TCE 011283805-03     $P=490.277508$  Days     $T_0=484.034527$  (BKJD)





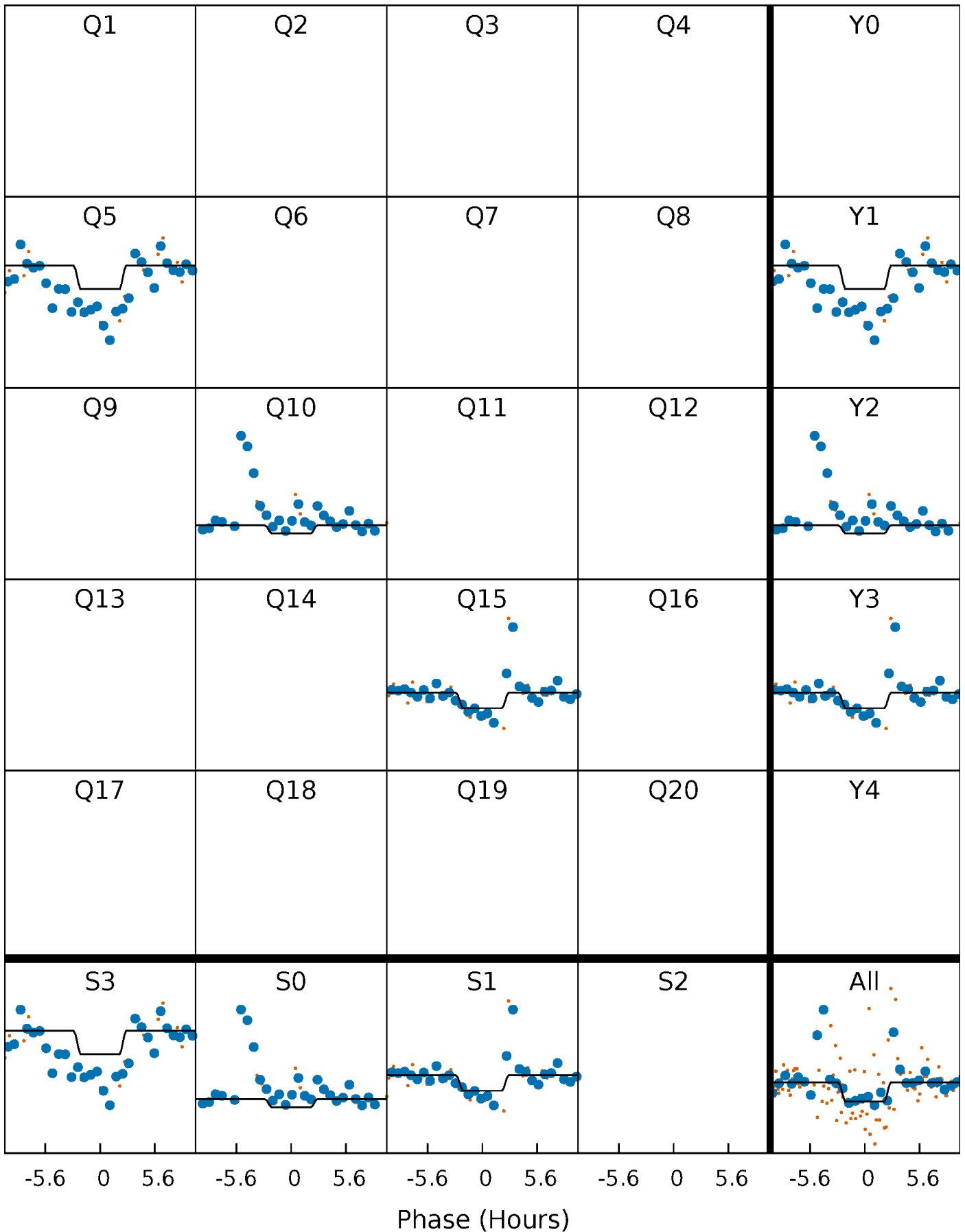
# DV Quarter-Phased Transit Curves

TCE 011283805-03     $P=490.277508$  Days     $T_0=484.034527$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

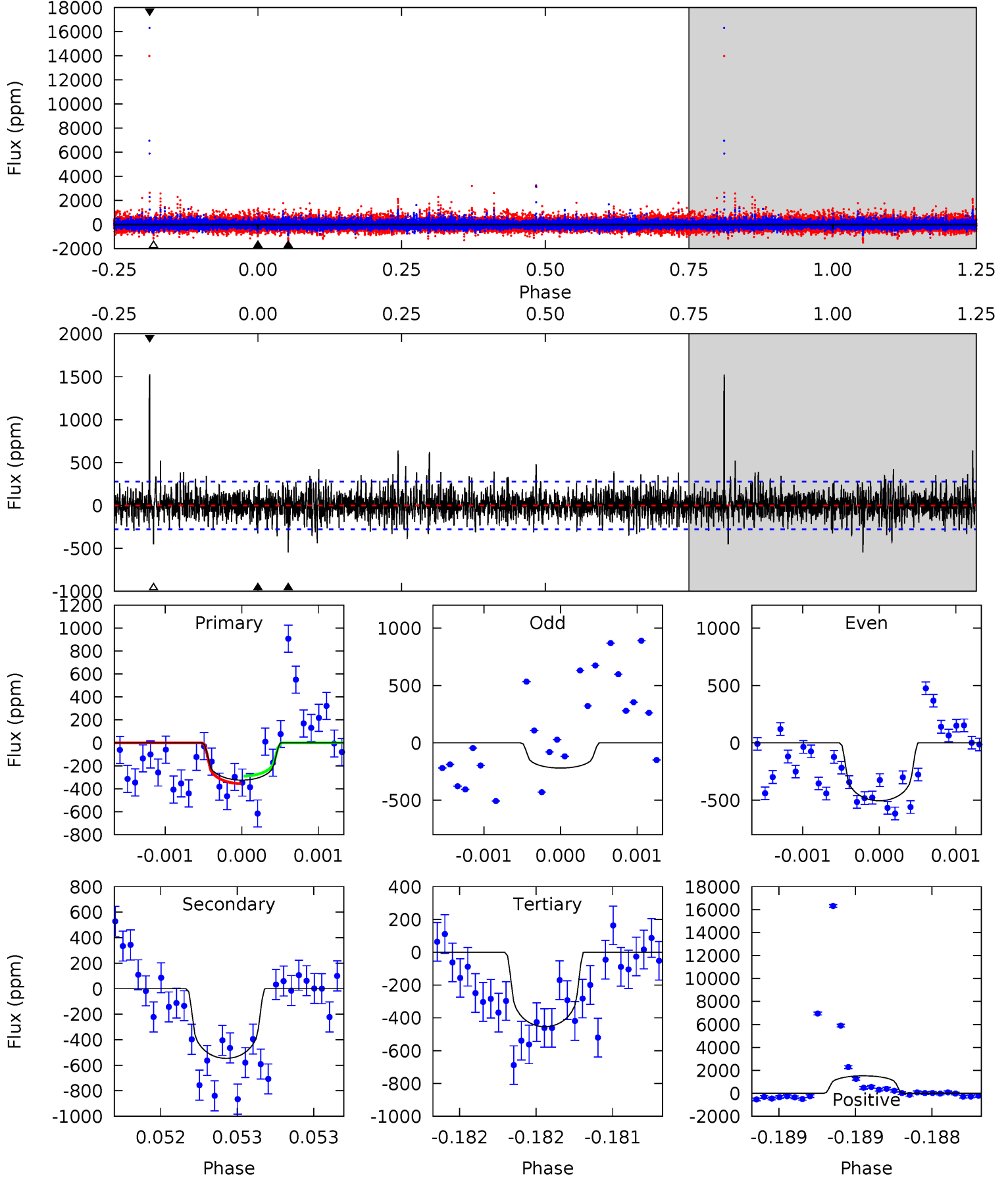
TCE 011283805-03     $P=490.289650$  Days     $T_0=484.050655$  (BKJD)



# DV Model-Shift Uniqueness Test

011283805-03, P = 490.277508 Days, E = 484.034527 Days

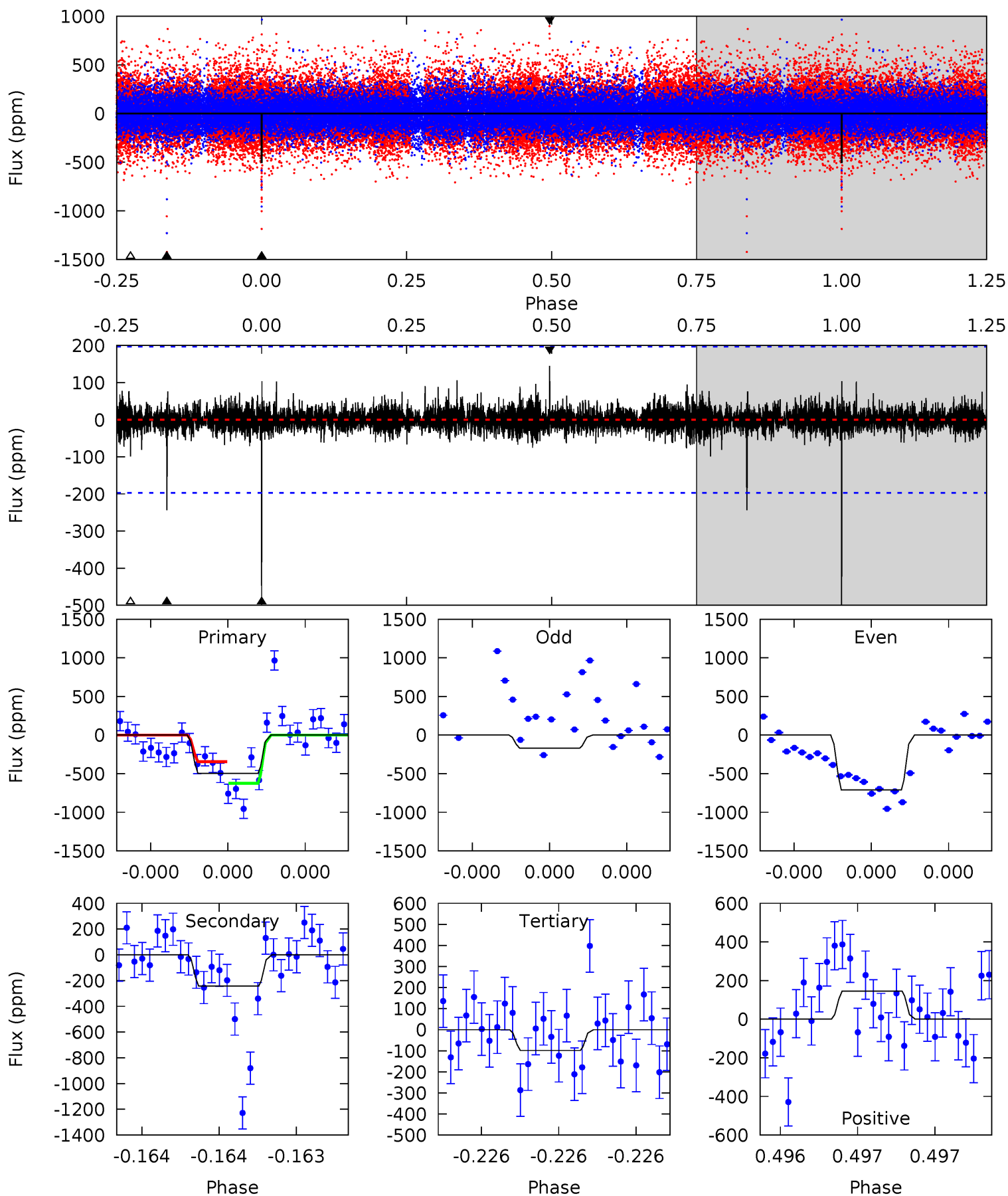
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.51	10.9	9.10	30.6	5.57	3.47	2.33	-2.59	-24.1	1.85	-19.6	2.47	0.72	0.74	0.65



# Alt Model-Shift Uniqueness Test

011283805-03, P = 490.289650 Days, E = 484.050655 Days

Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.1	6.92	2.80	4.12	5.60	3.51	0.56	11.3	10.0	4.12	2.80	7.27	0.67	0.23	4.05



### Stellar Parameters For KIC 011283805

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5425^{+179}_{-146}$	$4.079^{+0.434}_{-0.186}$	$0.020^{+0.250}_{-0.250}$	$1.440^{+0.463}_{-0.566}$	$0.908^{+0.092}_{-0.083}$	$0.428^{+1.406}_{-0.239}$
	+3%/-3%	+11%/-5%	+1250%/-1250%	+32%/-39%	+10%/-9%	+328%/-56%
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 011283805-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-546 \pm 50$	$4.83^{+4.47}_{-3.36}$	$366^{+31}_{-41}$	$4680^{+3514}_{-955}$	$17656^{+172612}_{-12755}$
Alt.	$-244 \pm 35$	$4.47^{+5.16}_{-3.13}$	$365^{+33}_{-44}$	$4158^{+2975}_{-916}$	$9558^{+93462}_{-7570}$

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

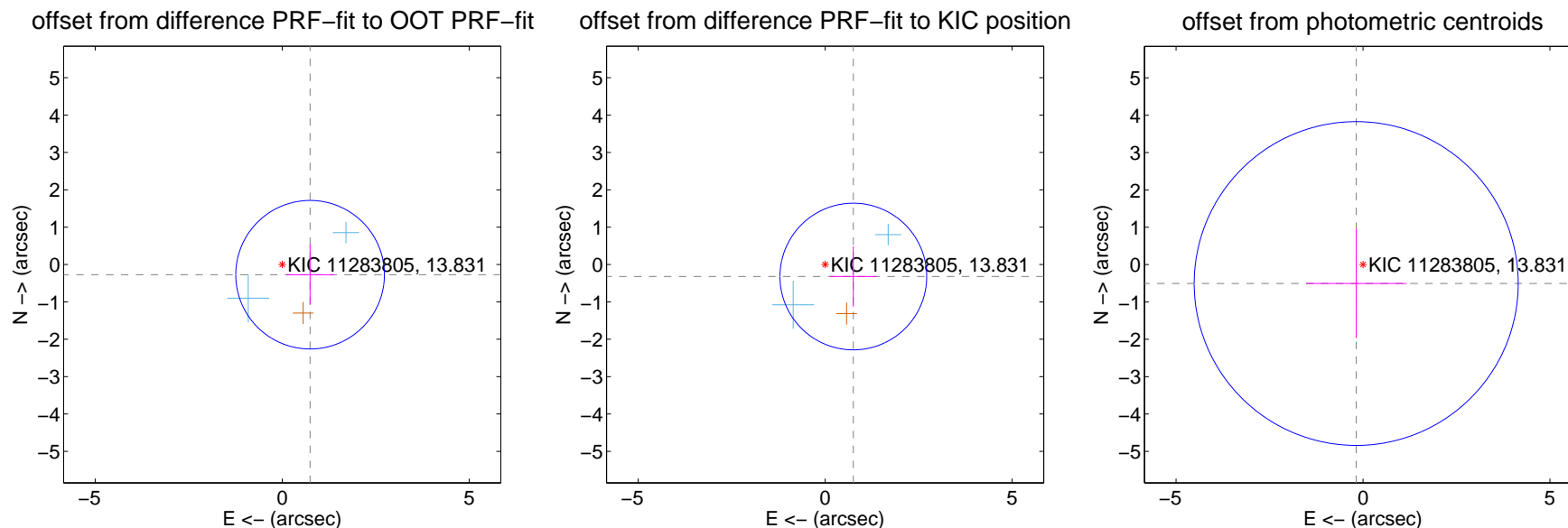
## DV Centroid Data

Supplemental centroid analysis for 011283805-03. Kepler magnitude: 13.83. Transit SNR 6.22

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.794 \pm 0.663$	1.20	$-0.746 \pm 0.641$	$-0.272 \pm 0.809$
PRF-fit source offset from KIC position	$0.820 \pm 0.654$	1.25	$-0.754 \pm 0.622$	$-0.321 \pm 0.807$
photometric centroid source offset	$0.54 \pm 1.44$	0.37	$0.18 \pm 1.34$	$-0.51 \pm 1.46$

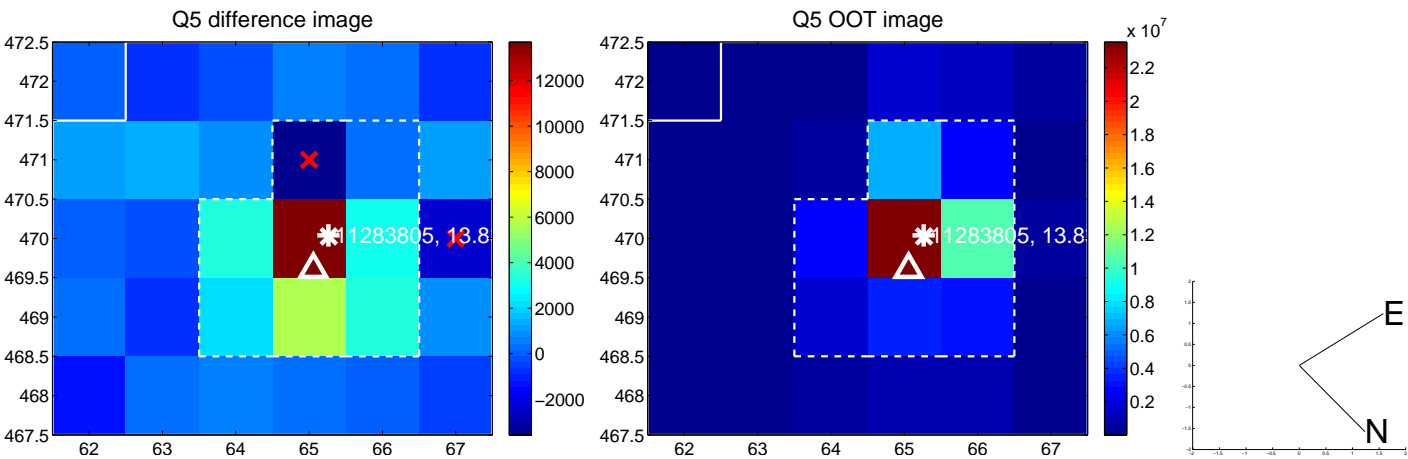


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

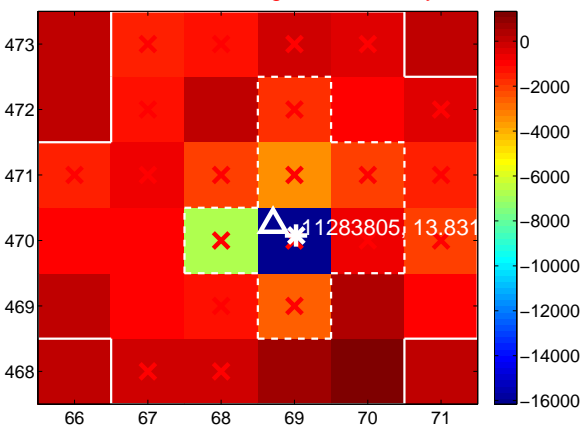
Q9 no difference image



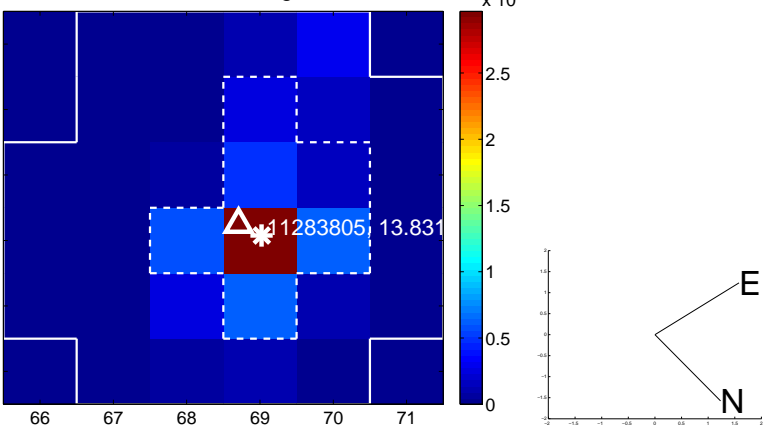
Q9 no OOT image



Q10 difference image. Poor Quality



Q10 OOT image



Q11 no difference image



Q11 no OOT image



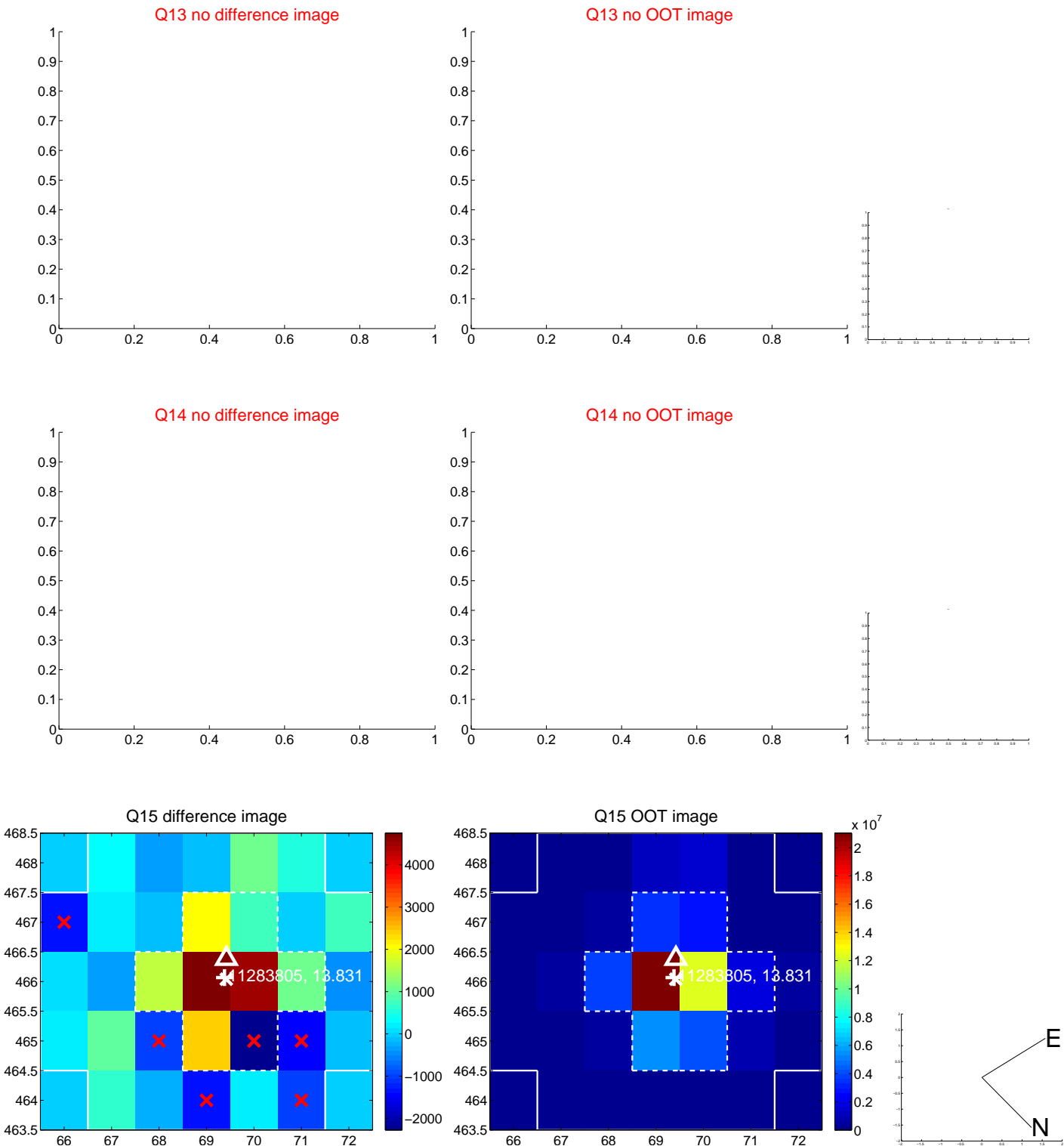
Q12 no difference image



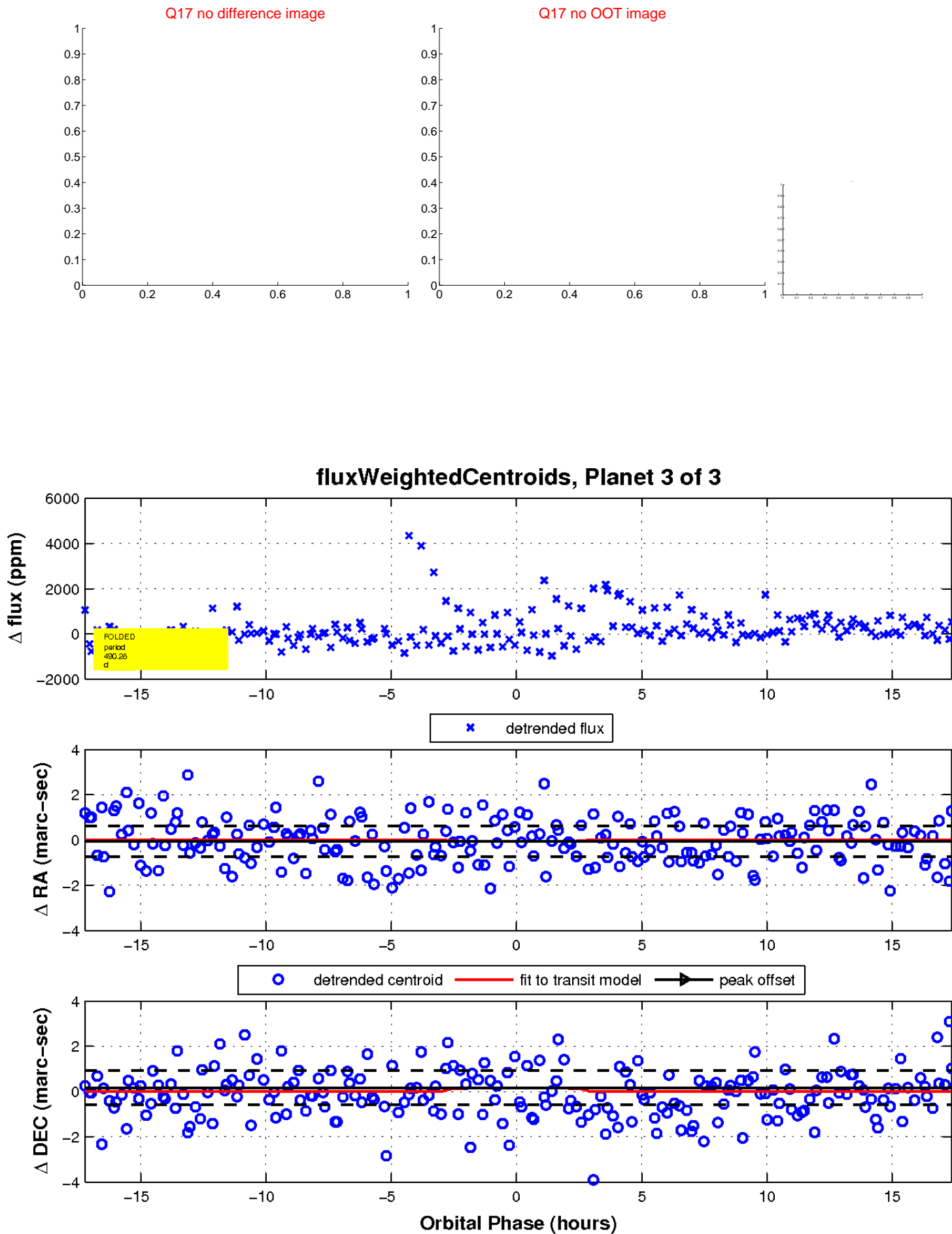
Q12 no OOT image



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

Declination

