

# KIC 011342883

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011342883-01	OBS	No	375.212049	209.607708	1282.1	4.623	14.5	9.3	0.45	4298	1.64	0.10
011342883-03	OBS	No	323.640940	168.282313	1238.0	2.353	15.8	9.2	0.45	4298	1.61	0.12
011342883-04	OBS	No	238.977295	302.928400	342.0	1.500	15.8	2.5	0.45	4298	0.90	0.18
011342883-05	OBS	No	333.460106	229.281070	1189.4	12.132	12.8	7.7	0.45	4298	1.65	0.12
011342883-06	OBS	No	212.100925	302.529031	564.2	2.652	13.5	4.8	0.45	4298	1.13	0.21
011342883-07	OBS	No	198.724563	229.079318	1216.3	3.428	10.9	9.6	0.45	4298	1.57	0.23
011342883-08	OBS	No	428.158005	186.739501	343.9	9.000	11.6	-1.0	0.45	4298	0.83	0.08

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011342883-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV
011342883-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
011342883-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011342883-05	OBS	FP	0.00	1	0	0	0	LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
011342883-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
011342883-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS
011342883-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS

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

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

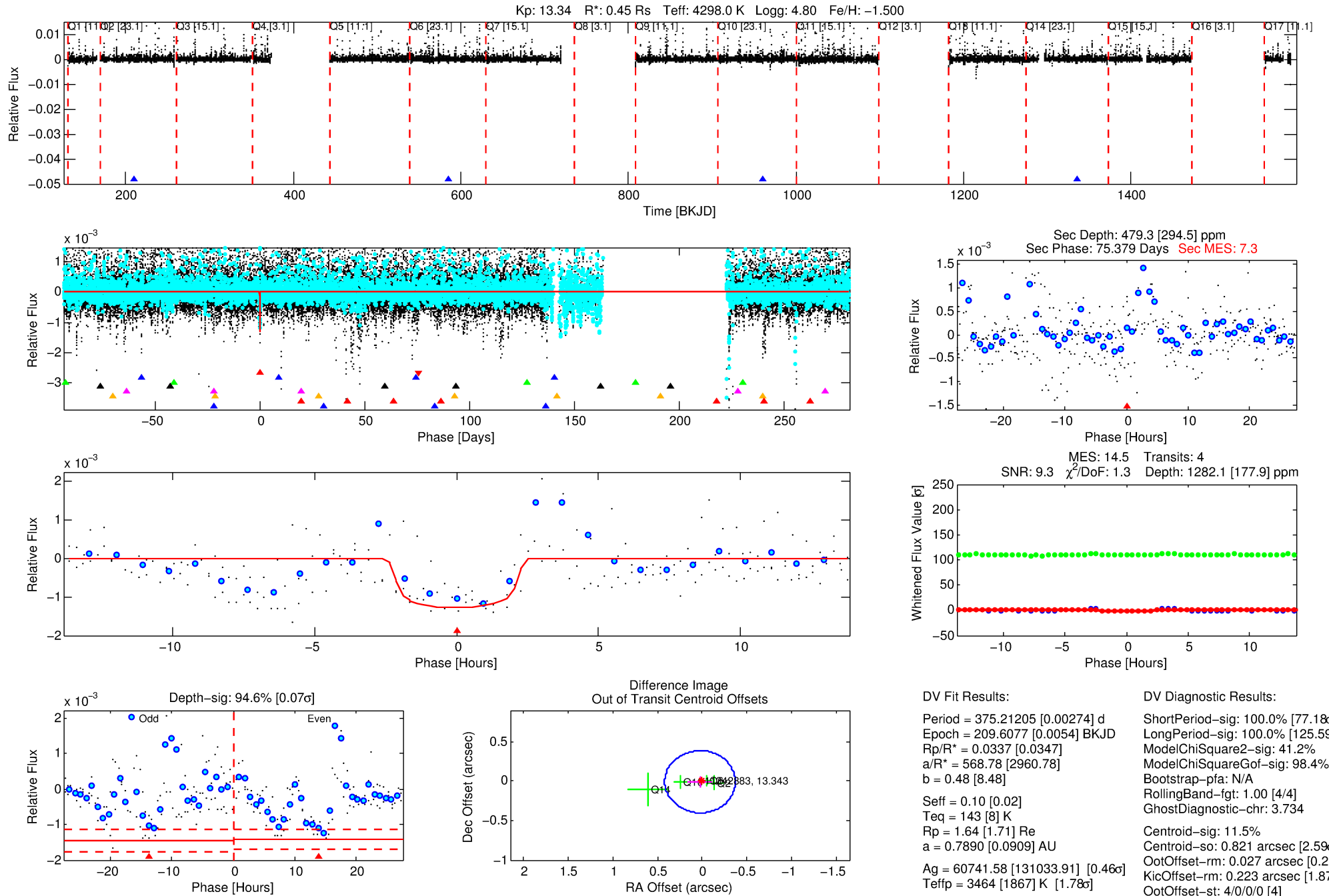
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 011342883-01

No Significant Match Found

# DV One-Page Summary

KIC: 11342883 Candidate: 1 of 8 Period: 375.212 d



## DV Fit Results:

Period = 375.21205 [0.00274] d  
Epoch = 209.6077 [0.0054] BKJD  
Rp/R\* = 0.0337 [0.0347]  
a/R\* = 568.78 [2960.78]  
b = 0.48 [8.48]  
Seff = 0.10 [0.02]  
Teq = 143 [8] K  
Rp = 1.64 [1.71] Re  
a = 0.7890 [0.0909] AU  
Ag = 60741.58 [131033.91] [0.46 $\sigma$ ]  
Teffp = 3464 [1867] K [1.78 $\sigma$ ]

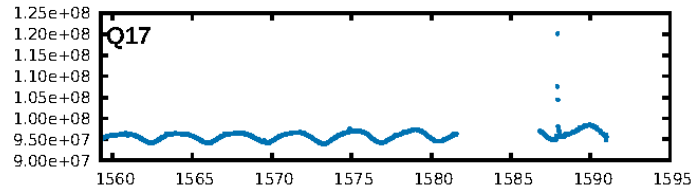
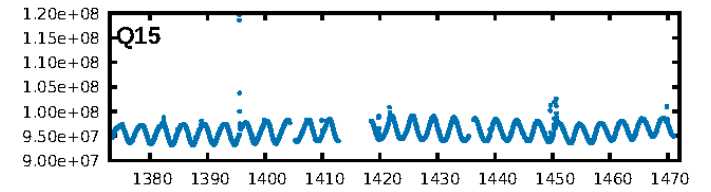
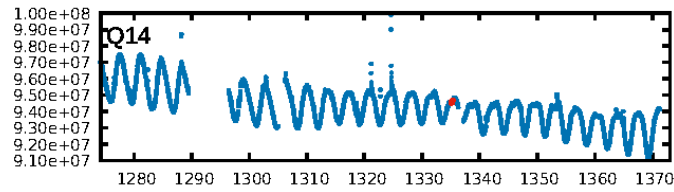
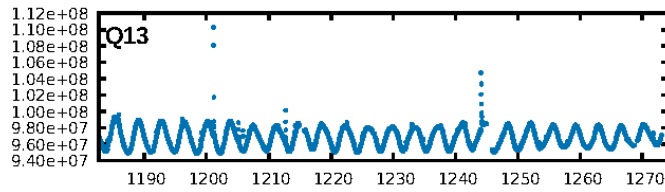
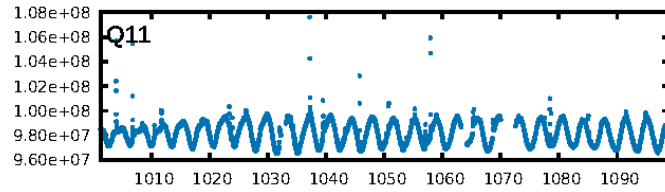
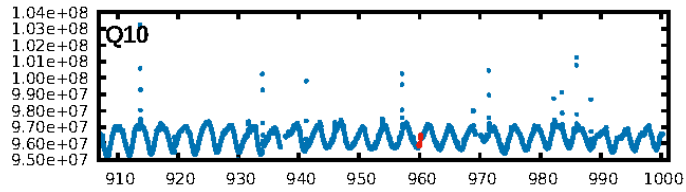
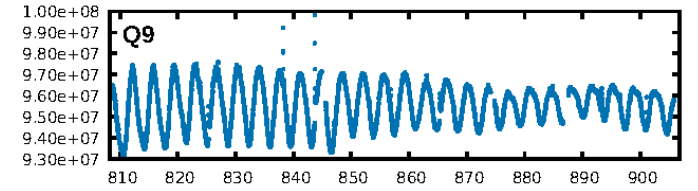
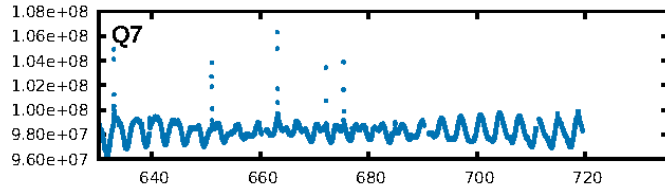
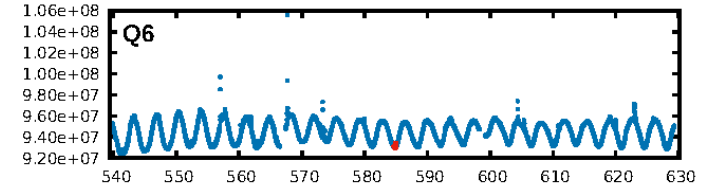
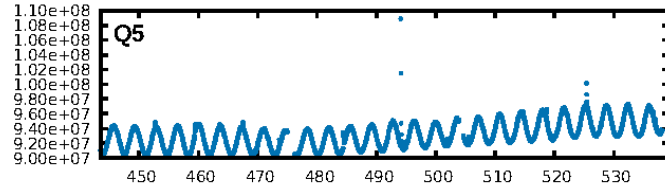
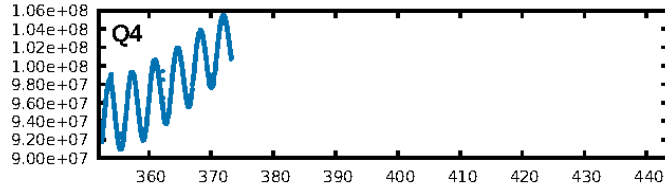
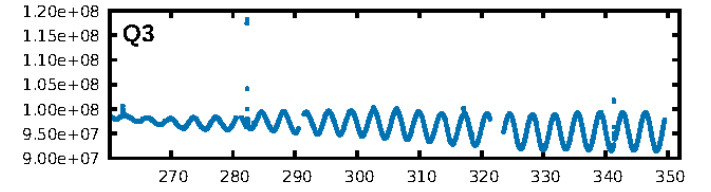
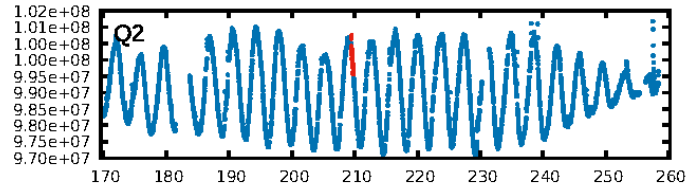
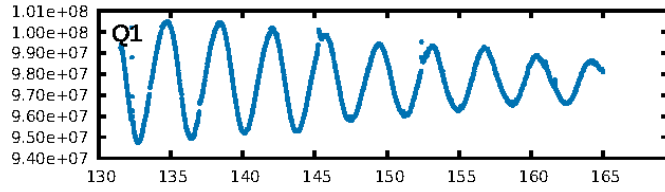
## DV Diagnostic Results:

ShortPeriod-sig: 100.0% [77.18 $\sigma$ ]  
LongPeriod-sig: 100.0% [125.59 $\sigma$ ]  
ModelChiSquare2-sig: 41.2%  
ModelChiSquareGof-sig: 98.4%  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [4/4]  
GhostDiagnostic-chr: 3.734  
Centroid-sig: 11.5%  
Centroid-so: 0.821 arcsec [2.59 $\sigma$ ]  
OotOffset-rm: 0.027 arcsec [0.20 $\sigma$ ]  
KicOffset-rm: 0.223 arcsec [1.87 $\sigma$ ]  
OotOffset-st: 4/0/0/0 [4]  
KicOffset-st: 4/0/0/0 [4]  
DiffImageQuality-fgm: 0.75 [3/4]  
DiffImageOverlap-fno: 1.00 [4/4]

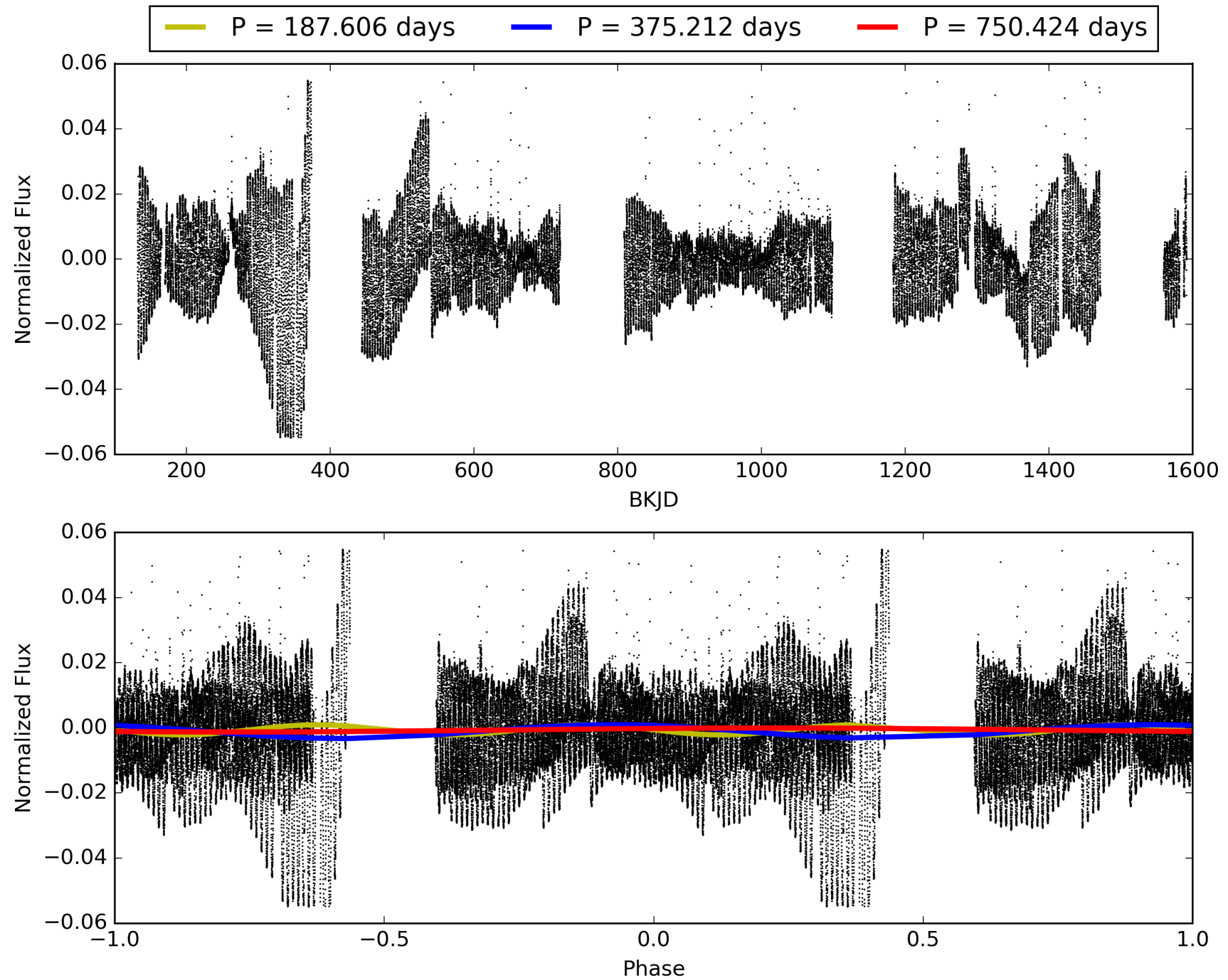
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 011342883-01, PDC Light Curves



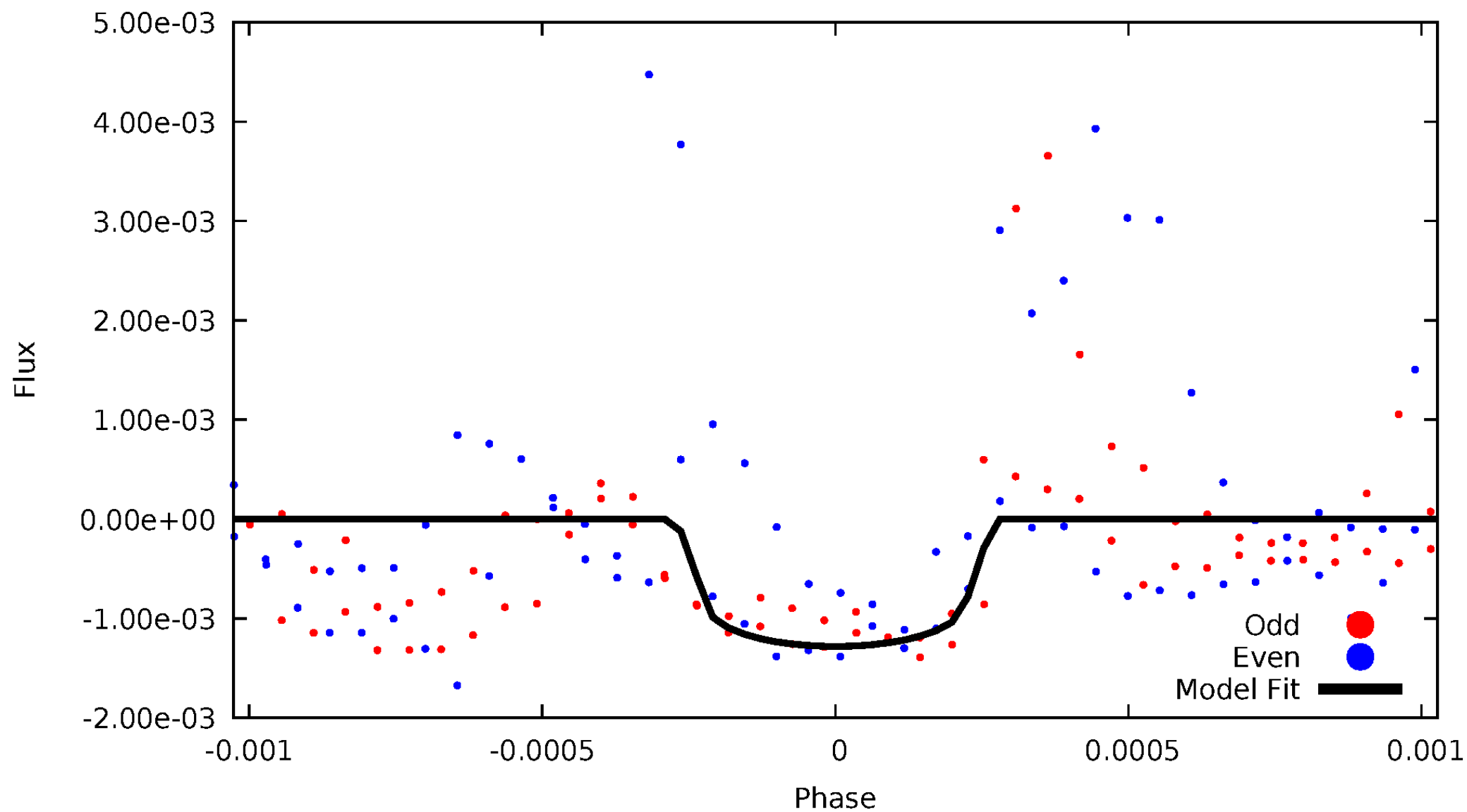
TCE 011342883-01





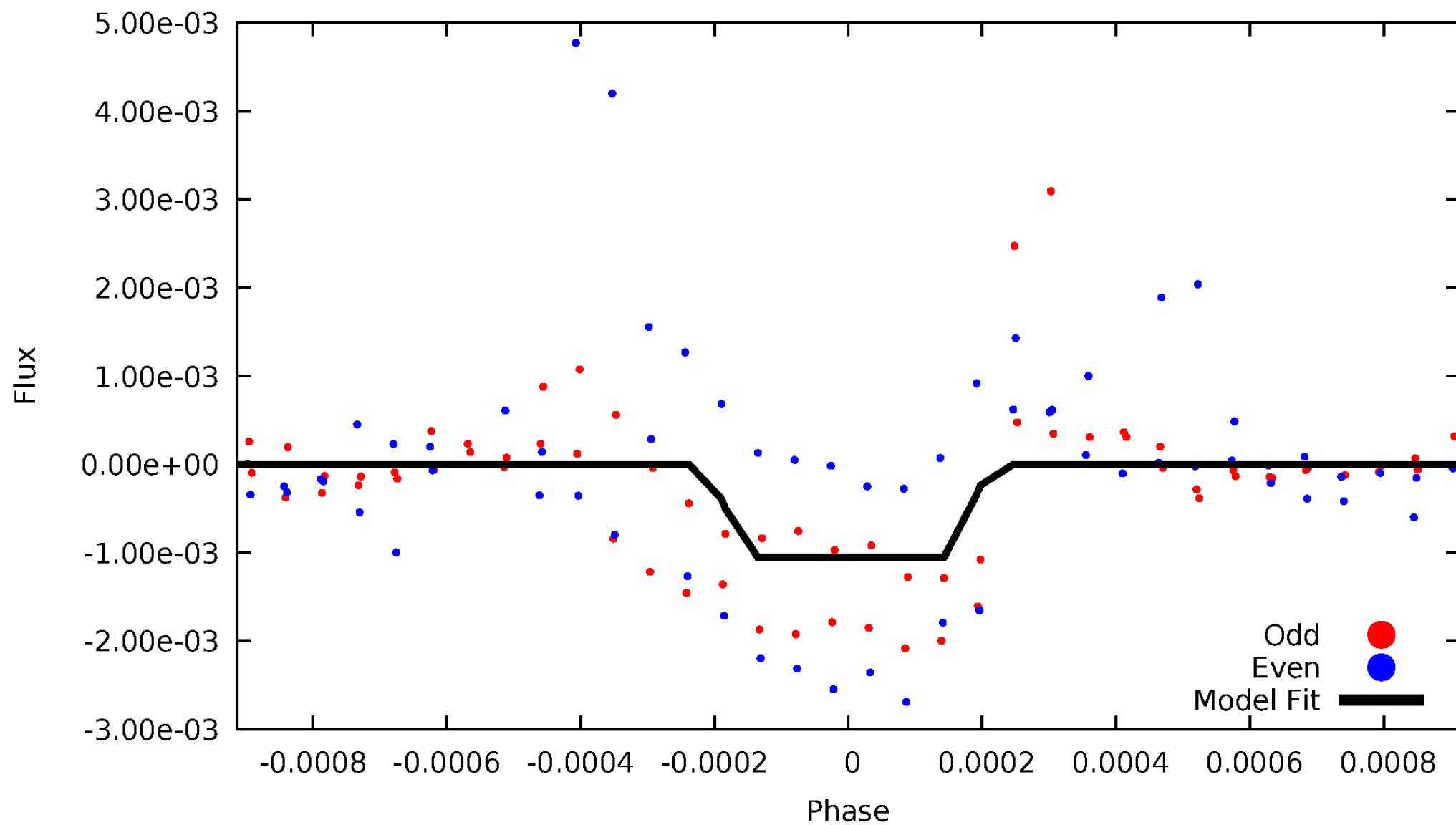
# DV Odd/Even

TCE 011342883-01



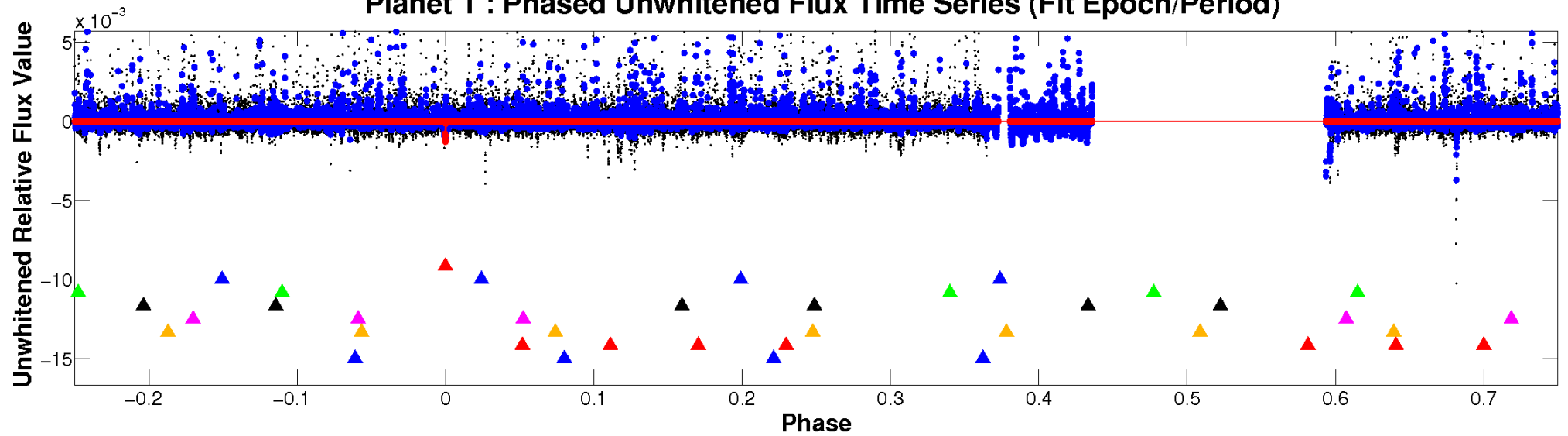
# ALT Odd/Even

TCE 011342883-01

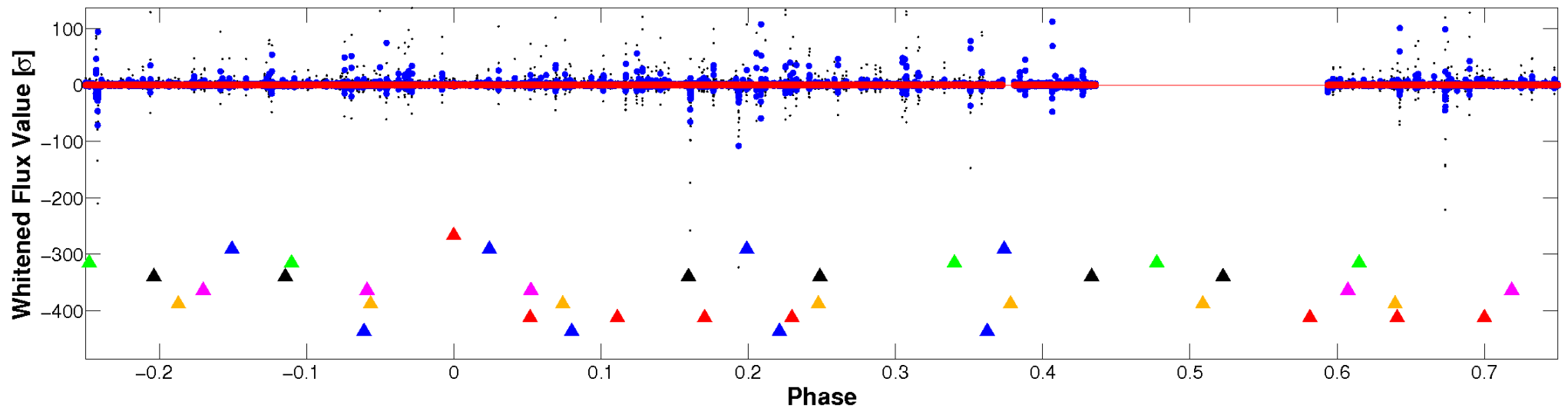


# Non-Whitened Vs. Whitened Light Curve

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

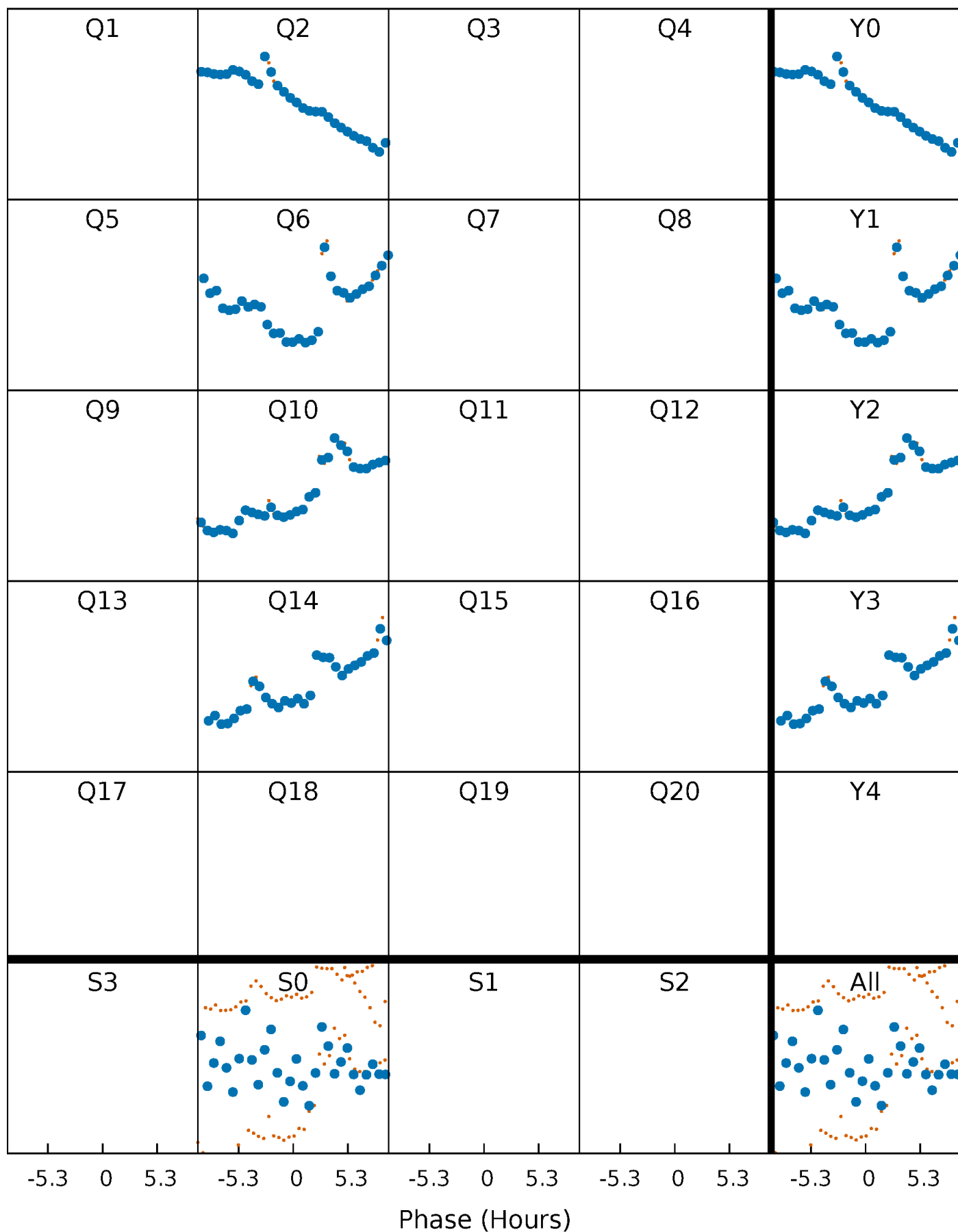


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



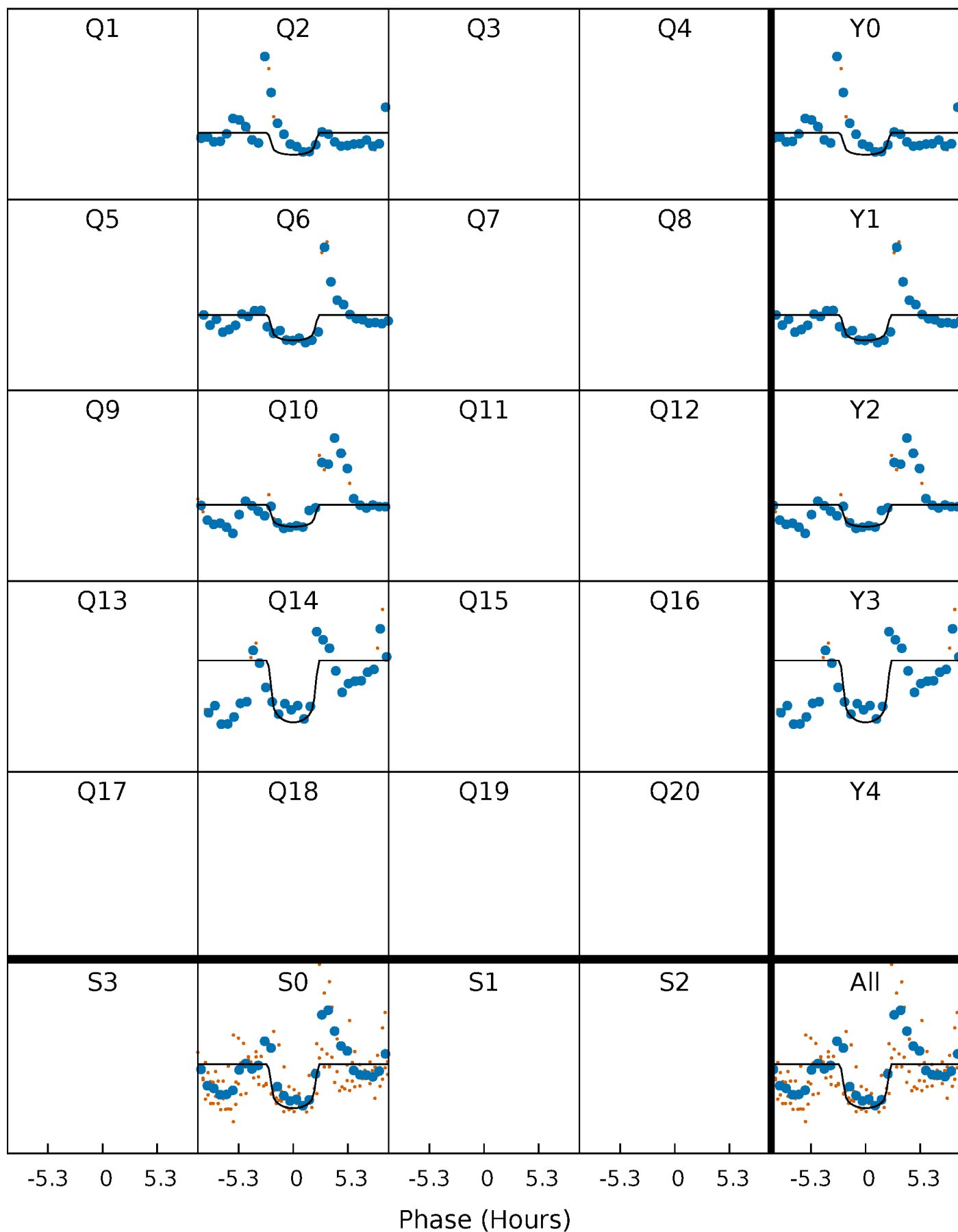
# PDC Quarter-Phased Transit Curves

TCE 011342883-01 P=375.212049 Days  $T_0=209.607708$  (BKJD)



# DV Quarter-Phased Transit Curves

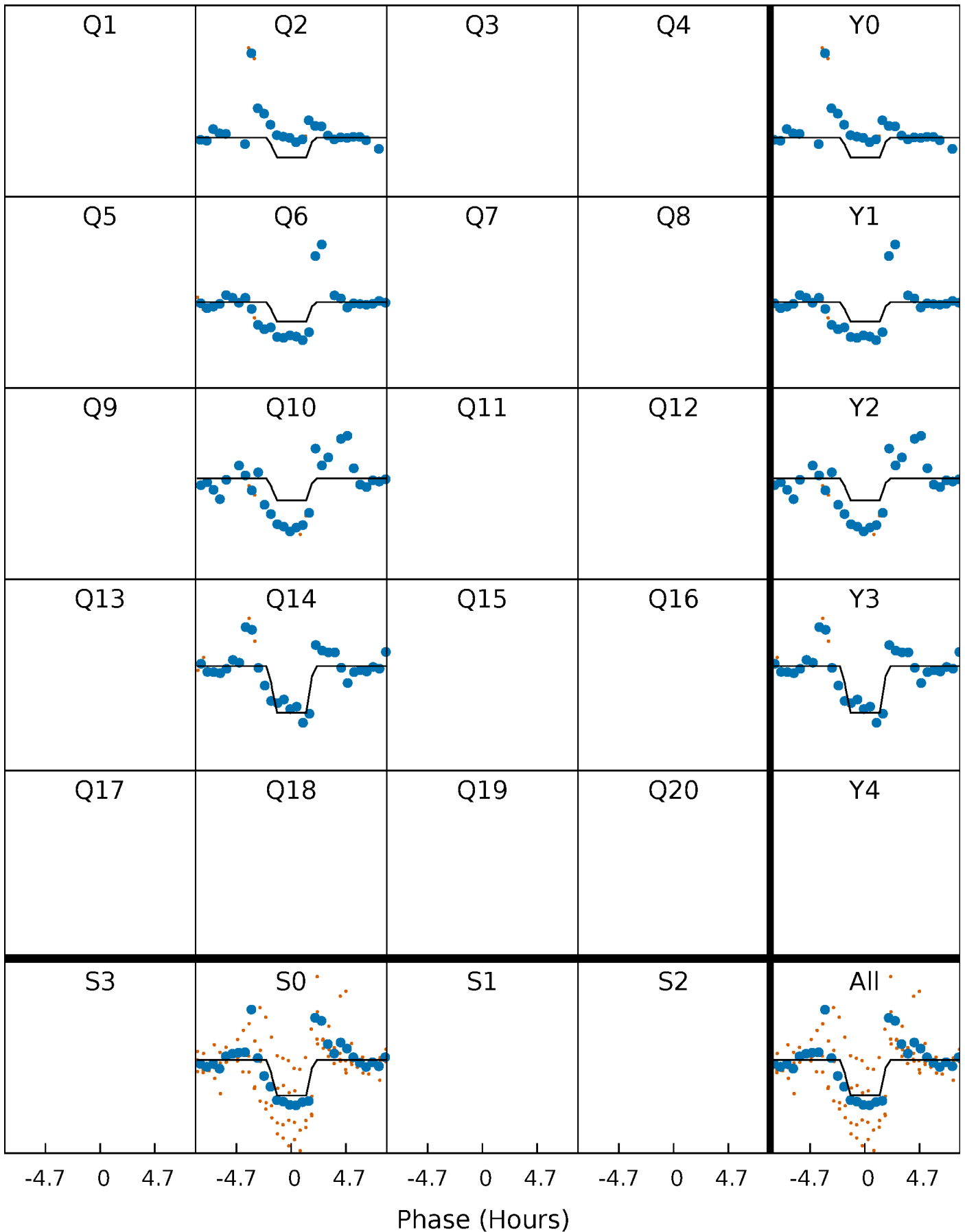
TCE 011342883-01 P=375.212049 Days  $T_0=209.607708$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

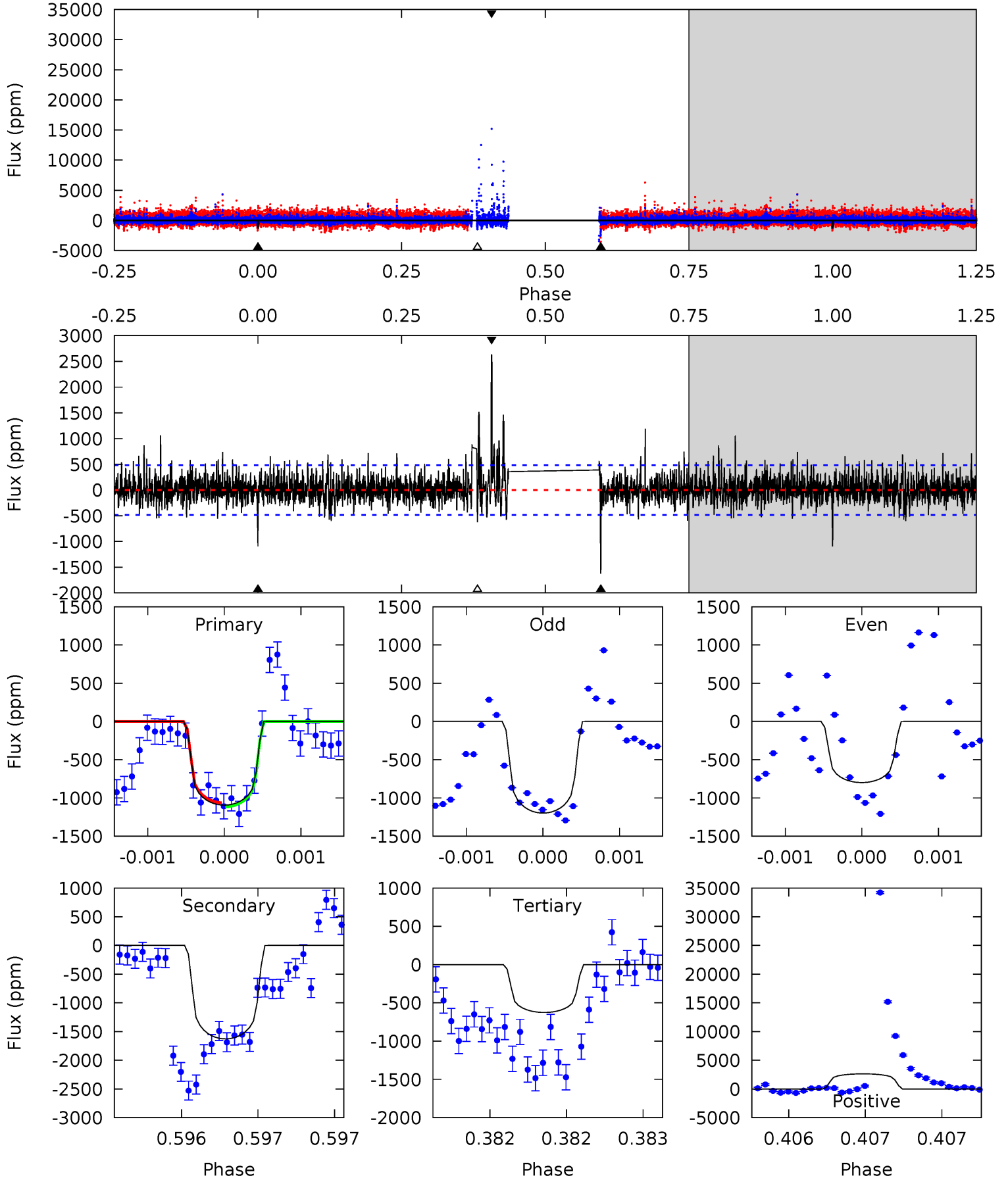
TCE 011342883-01 P=375.201029 Days  $T_0=209.641186$  (BKJD)



# DV Model-Shift Uniqueness Test

011342883-01, P = 375.212049 Days, E = 209.607708 Days

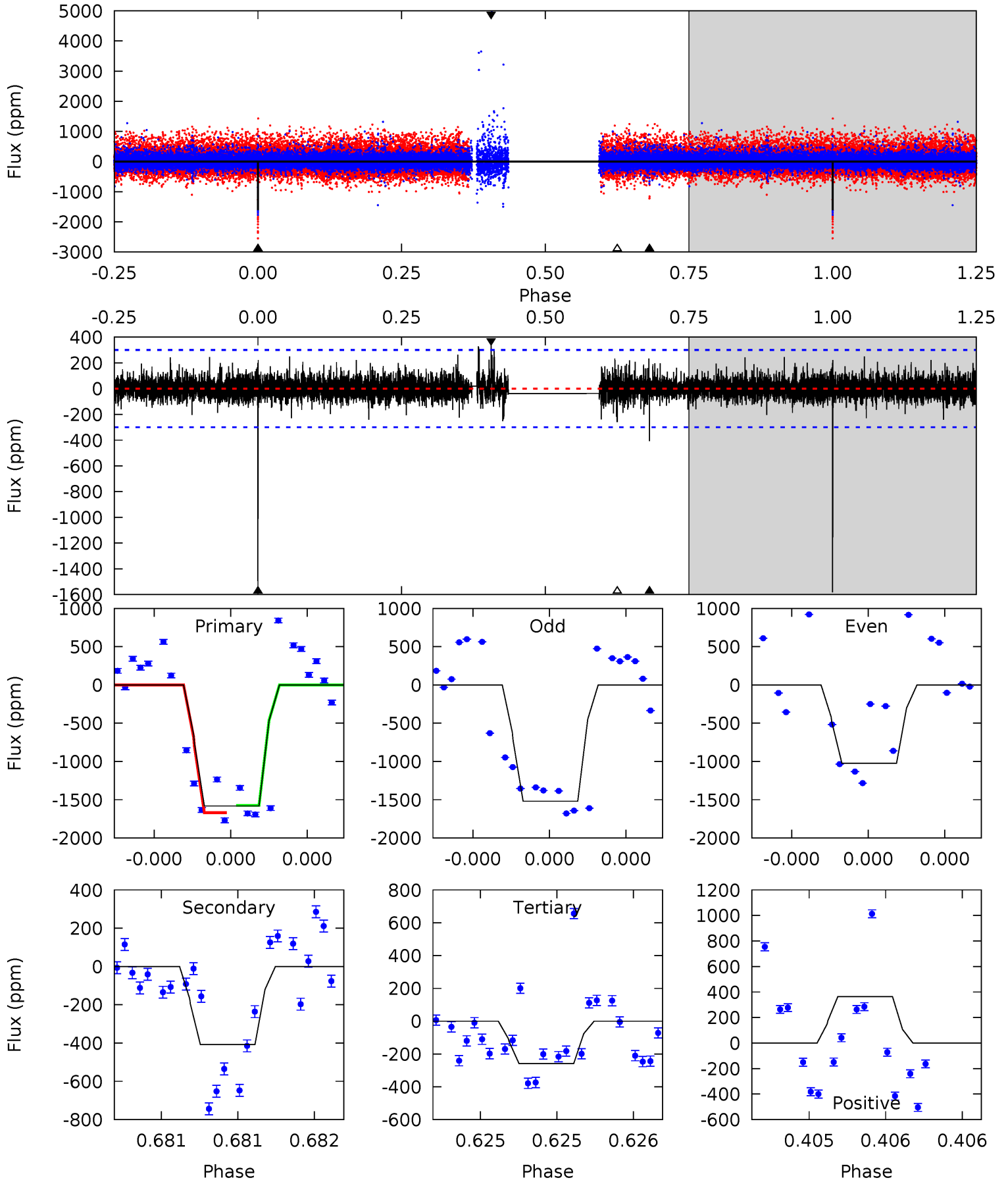
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.6	18.8	7.22	30.4	5.56	3.46	2.36	5.39	-17.8	11.6	-11.6	0.90	0.88	0.62	0.31



# Alt Model-Shift Uniqueness Test

011342883-01, P = 375.201029 Days, E = 209.641186 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
29.6	7.63	4.85	6.83	5.62	3.55	1.04	24.8	22.8	2.78	0.80	4.86	0.89	0.19	0.87



### Stellar Parameters For KIC 011342883

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$4298^{+120}_{-150}$	$4.805^{+0.084}_{-0.039}$	$-1.500^{+0.250}_{-0.300}$	$0.447^{+0.037}_{-0.064}$	$0.464^{+0.038}_{-0.052}$	$7.339^{+3.124}_{-1.192}$
	+3%/-3%	+2%/-1%	+17%/-20%	+8%/-14%	+8%/-11%	+43%/-16%
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 011342883-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$-1628 \pm 87$	$1.95^{+1.46}_{-1.14}$	$197^{+8}_{-8}$	$4299^{+1940}_{-782}$	$147409^{+690252}_{-98792}$
Alt.	$-407 \pm 53$	$1.90^{+1.53}_{-1.23}$	$197^{+8}_{-9}$	$3394^{+1503}_{-531}$	$38003^{+265482}_{-26021}$

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

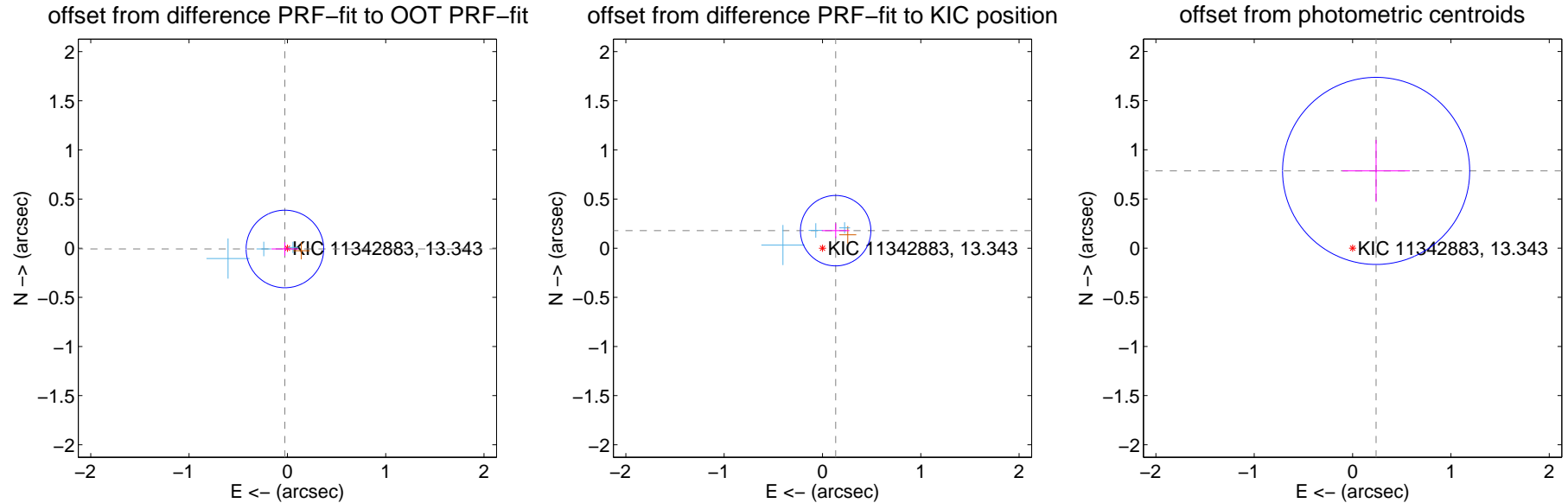
## DV Centroid Data

Supplemental centroid analysis for 011342883-01. Kepler magnitude: 13.34. Transit SNR 9.35

There are 3 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

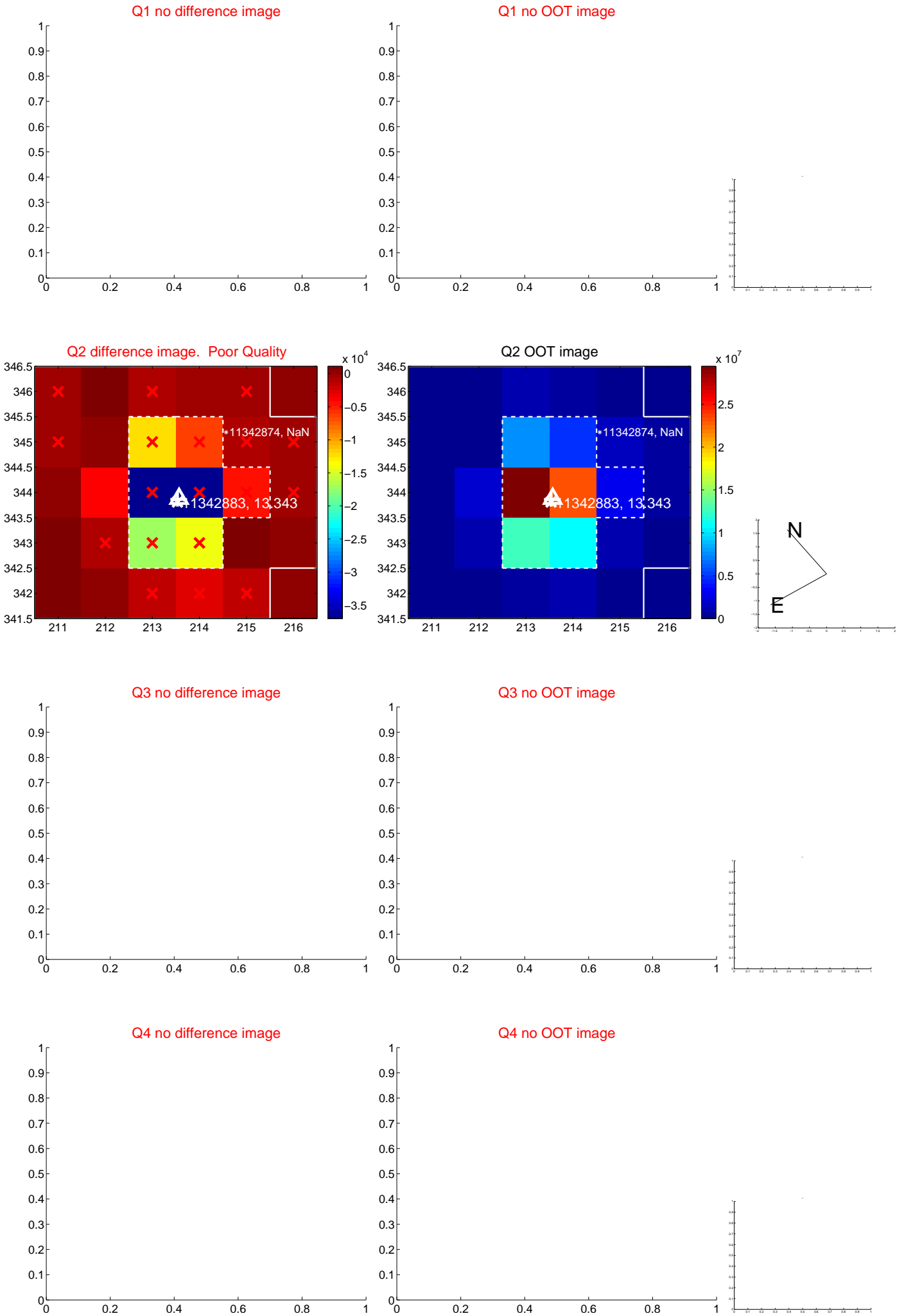
	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.027 \pm 0.132$	0.20	$0.025 \pm 0.136$	$-0.008 \pm 0.068$
PRF-fit source offset from KIC position	$0.223 \pm 0.119$	1.87	$-0.134 \pm 0.141$	$0.178 \pm 0.075$
photometric centroid source offset	$0.82 \pm 0.32$	2.59	$-0.24 \pm 0.34$	$0.79 \pm 0.31$



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.



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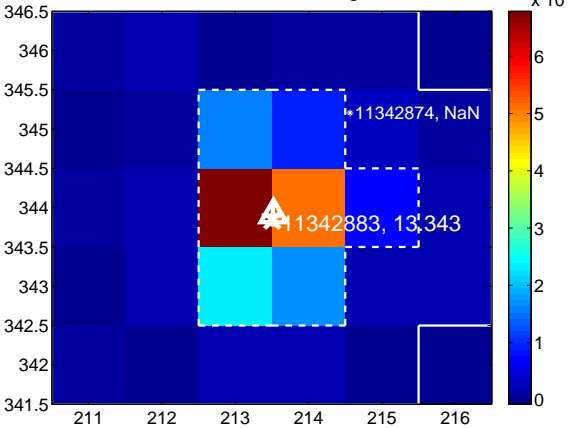
Q5 no difference image



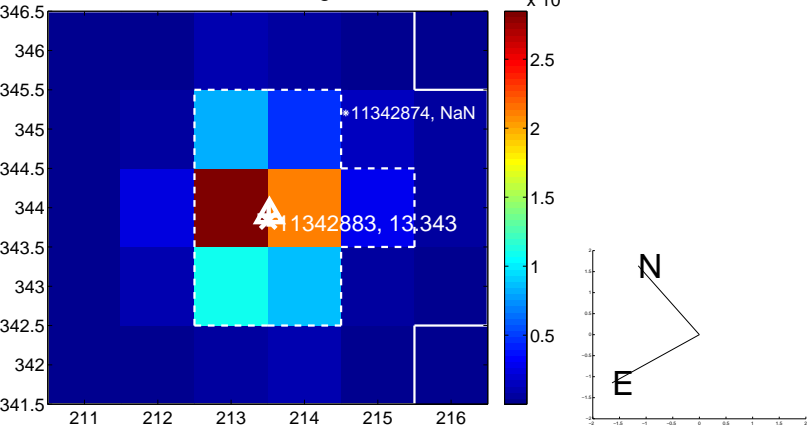
Q5 no OOT image



Q6 difference image



Q6 OOT image



Q7 no difference image



Q7 no 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.

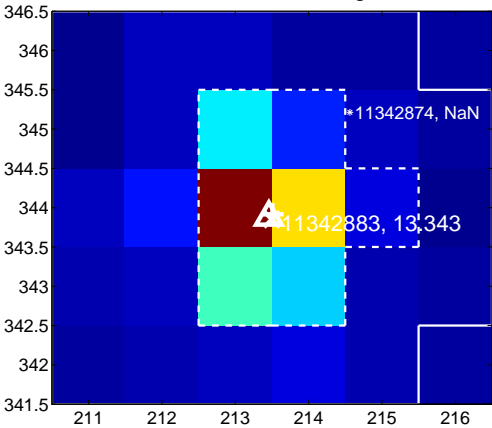
Q9 no difference image



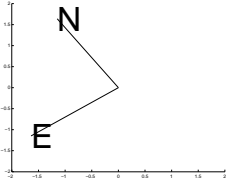
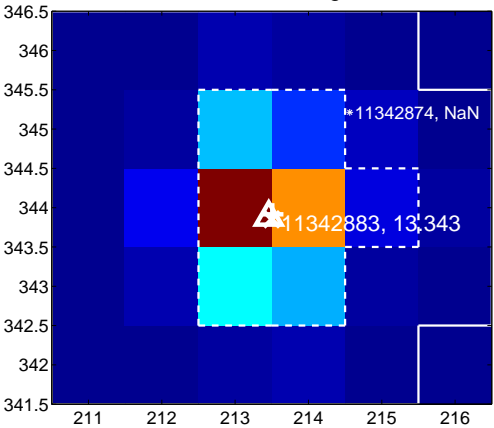
Q9 no OOT image



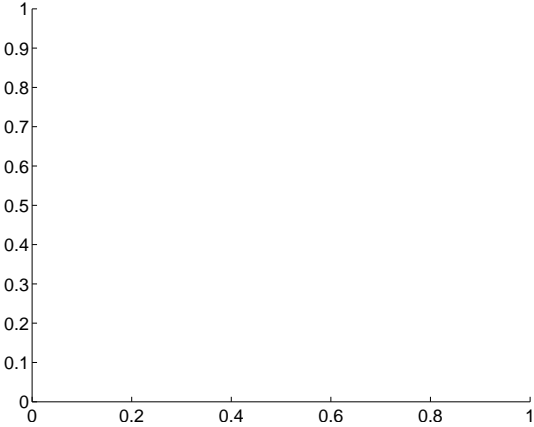
Q10 difference image



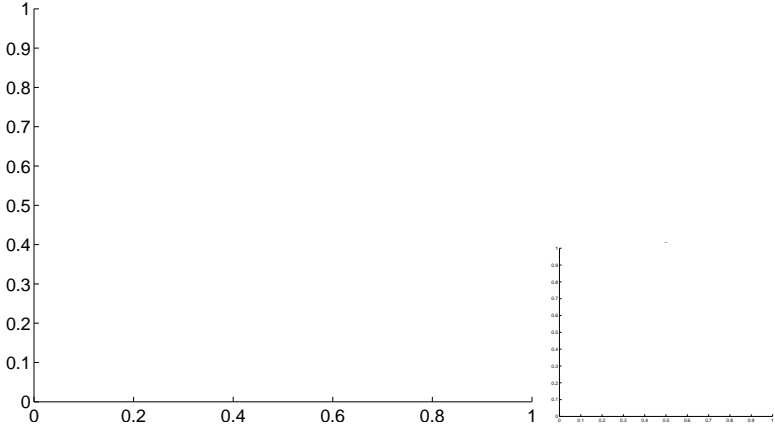
Q10 OOT image



Q11 no difference image



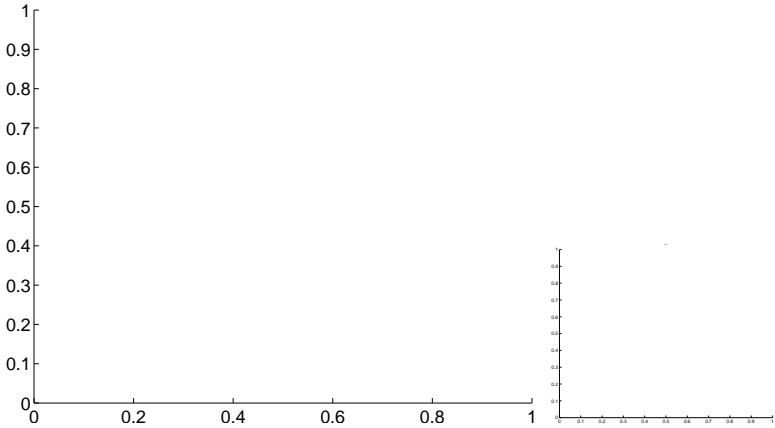
Q11 no OOT image



Q12 no difference image



Q12 no OOT image



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

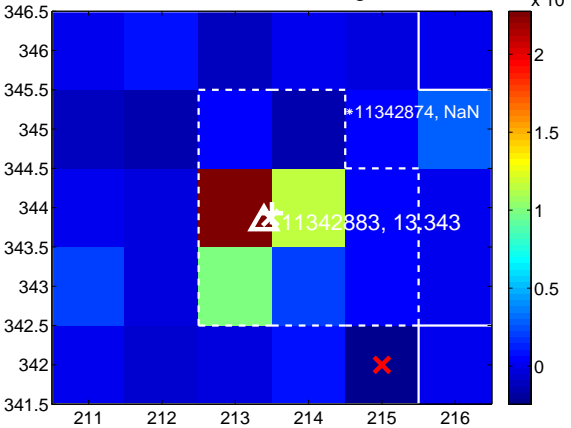
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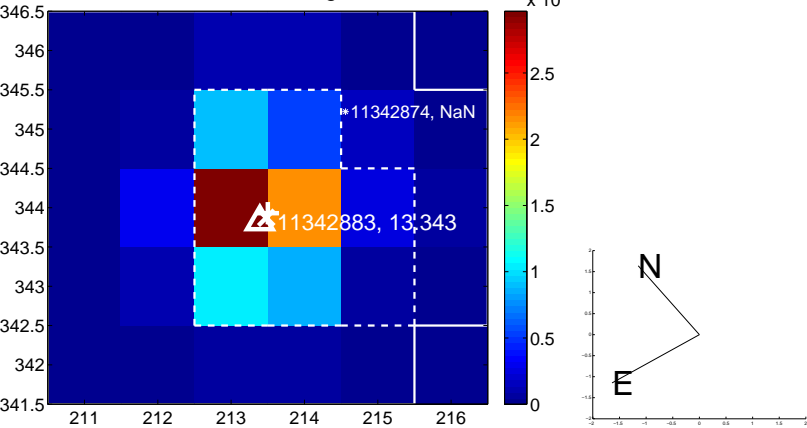
Q13 no OOT image



Q14 difference image



Q14 OOT image



Q15 no difference image



Q15 no OOT image



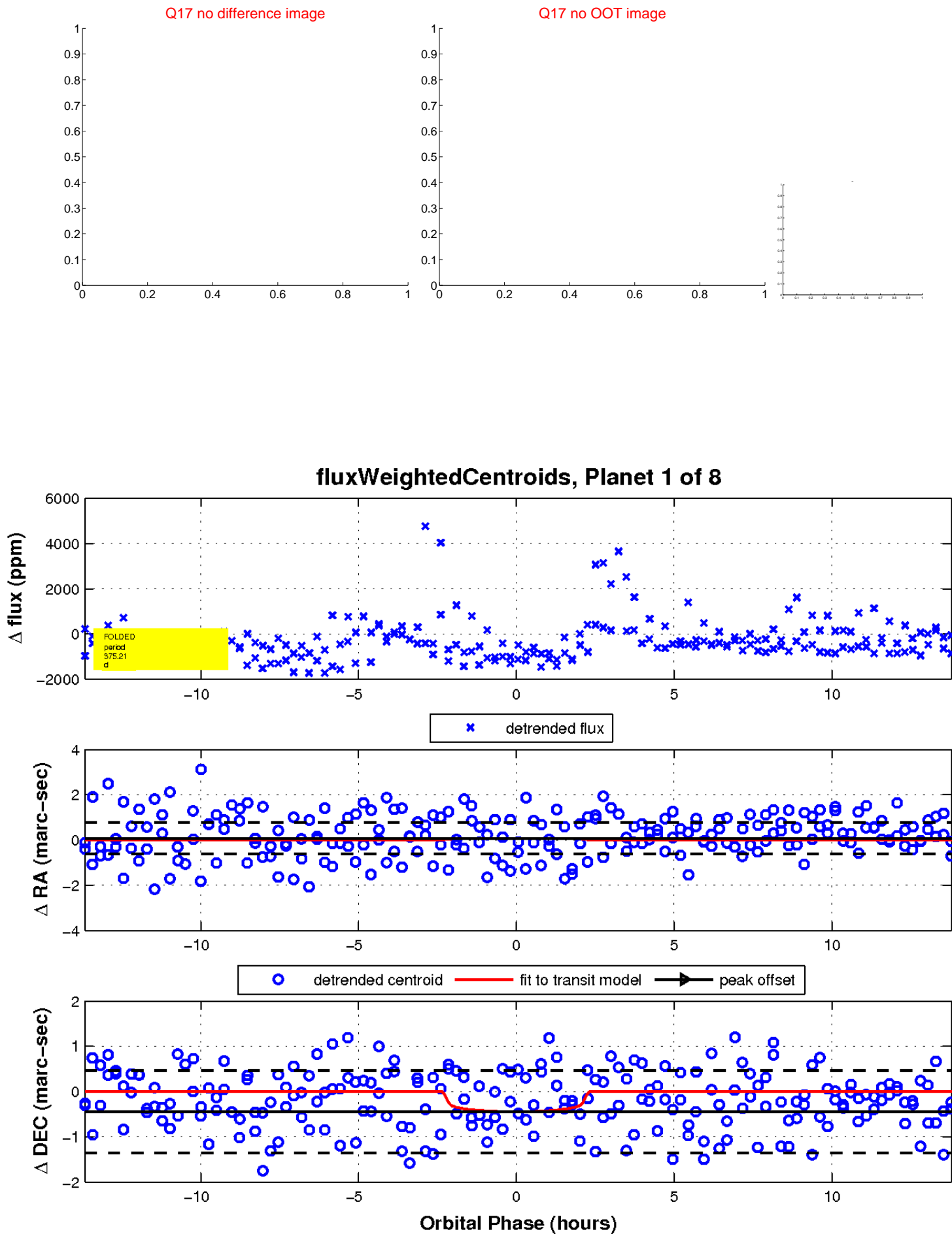
Q16 no difference image



Q16 no OOT image



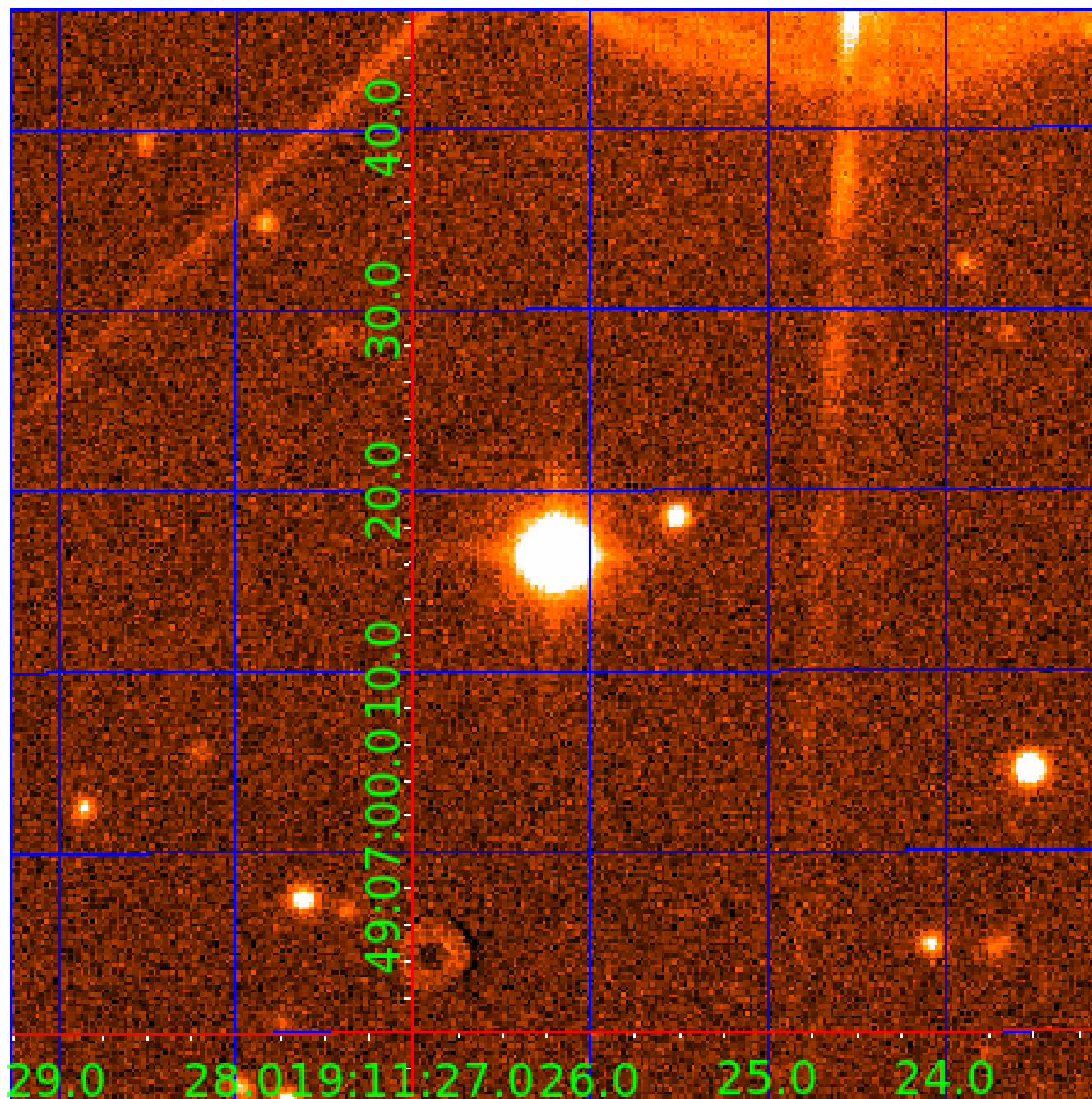
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UKIRT Image

Declination



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011342883-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011342883-05	OBS	FP	0.00	1	0	0	0	LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
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**Notes:** OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

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

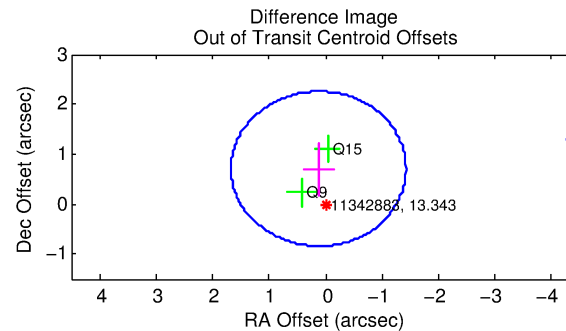
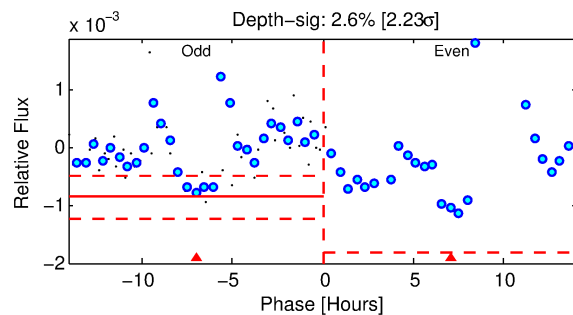
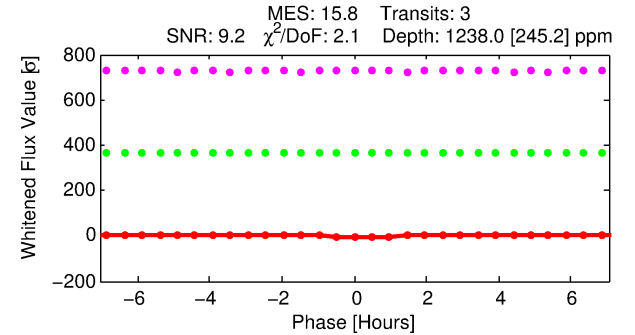
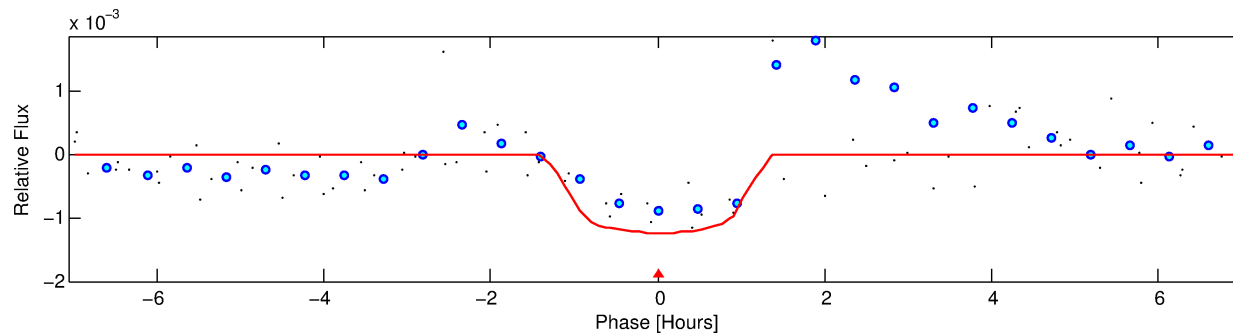
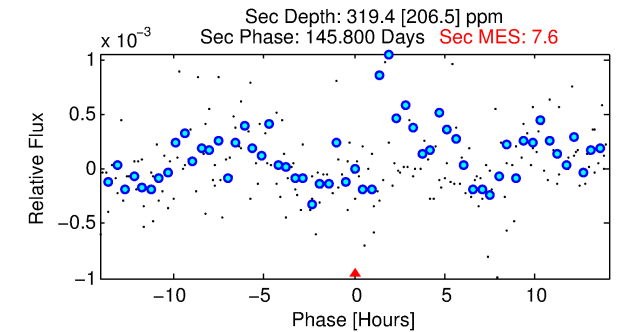
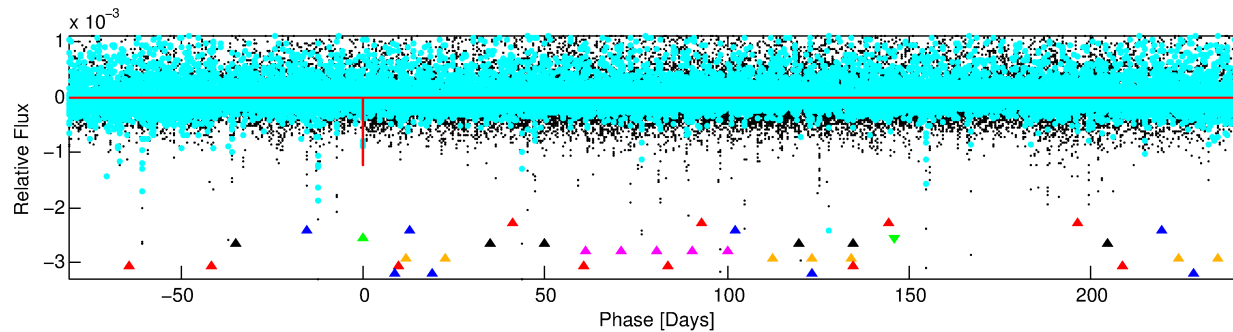
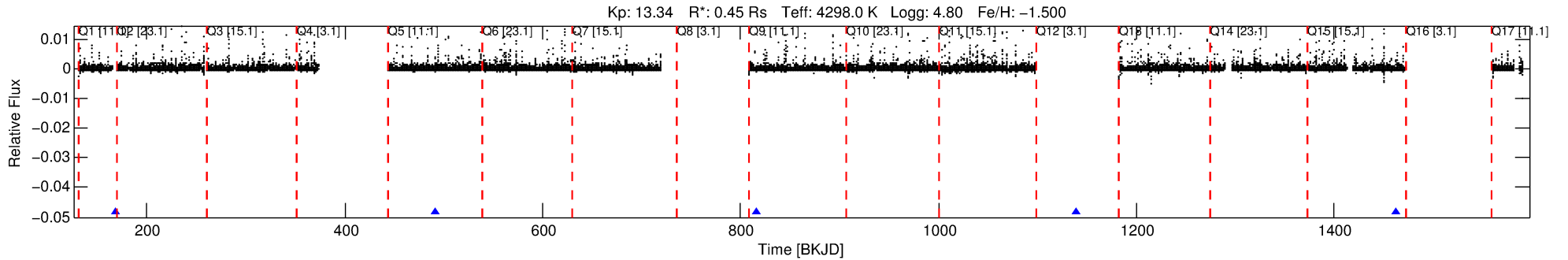
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 011342883-03

No Significant Match Found

# DV One-Page Summary

KIC: 11342883 Candidate: 3 of 8 Period: 323.641 d



## DV Fit Results:

Period = 323.64094 [0.00321] d  
Epoch = 168.2823 [0.0089] BKJD  
Rp/R\* = 0.0330 [0.0539]  
b/R\* = 985.12 [7910.24]  
b = 0.43 [15.19]  
Seff = 0.12 [0.03]  
Teq = 150 [8] K  
Rp = 1.61 [2.64] Re  
a = 0.7150 [0.0824] AU  
Ag = 34669.30 [115547.29] [0.30 $\sigma$ ]  
Teffp = 3163 [2635] K [1.14 $\sigma$ ]

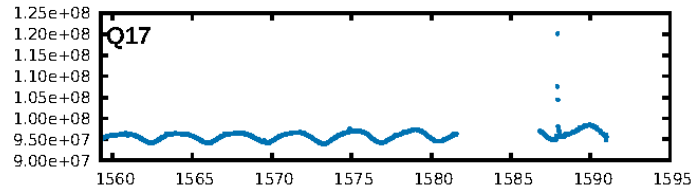
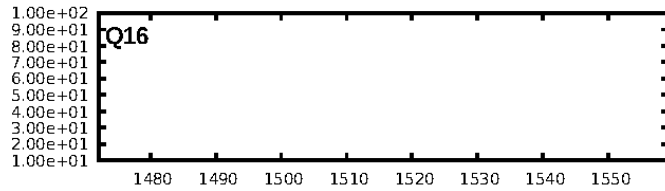
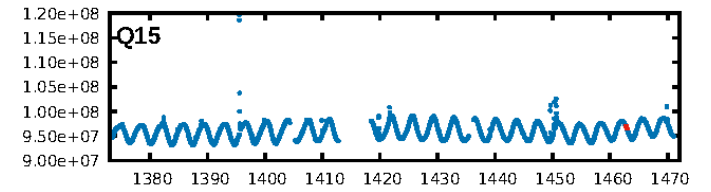
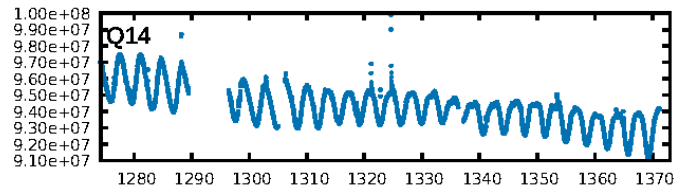
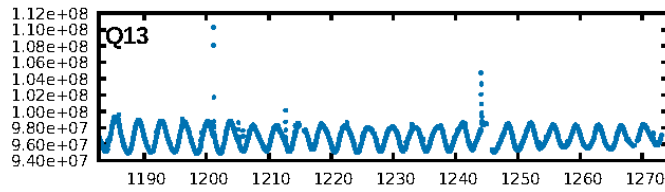
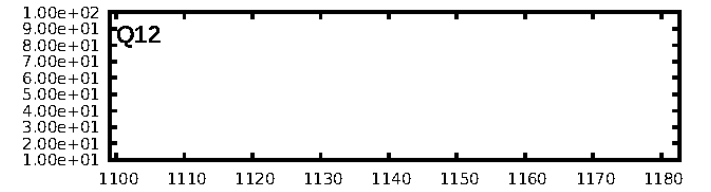
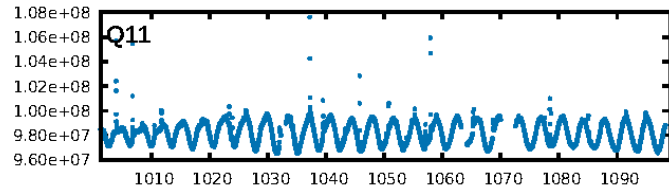
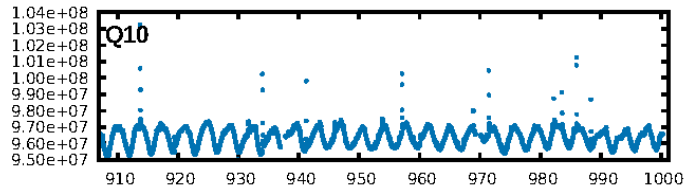
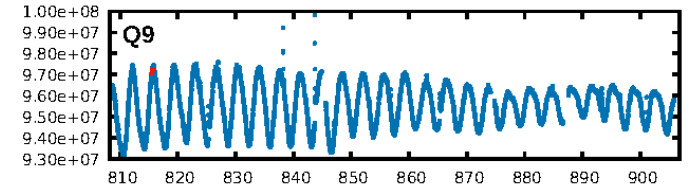
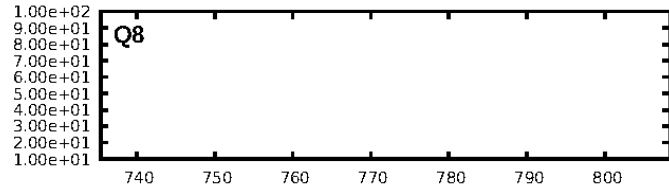
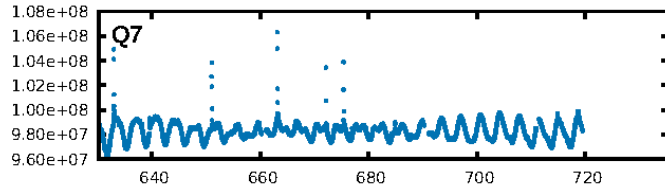
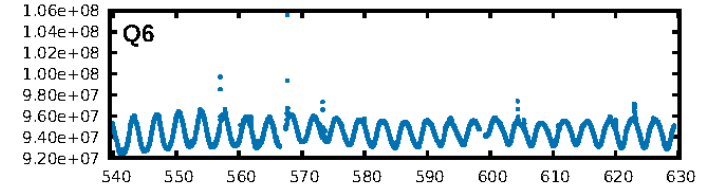
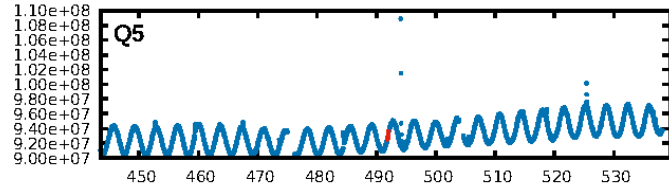
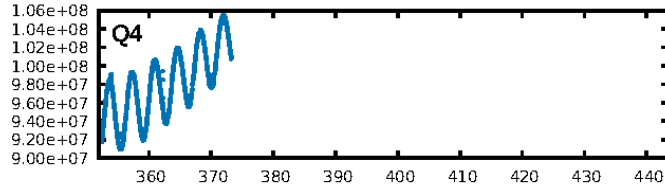
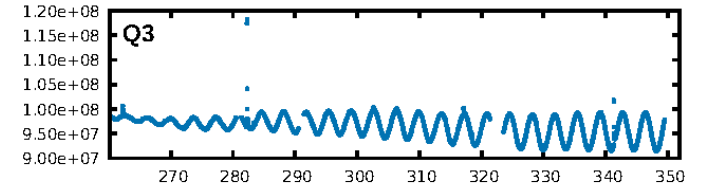
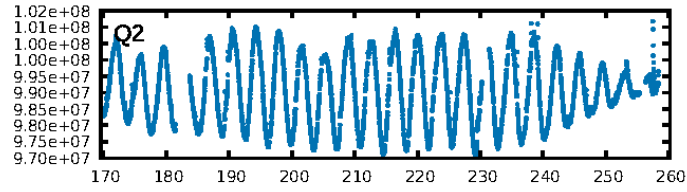
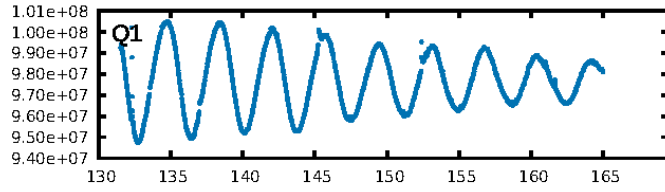
## DV Diagnostic Results:

ShortPeriod-sig: 100.0% [728.25 $\sigma$ ]  
LongPeriod-sig: 100.0% [19.07 $\sigma$ ]  
**ModelChiSquare2-sig: 0.2%**  
ModelChiSquareGof-sig: 48.8%  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [3/3]  
**GhostDiagnostic-chr: -0.1752**  
Centroid-sig: 34.7%  
Centroid-so: 0.855 arcsec [1.60 $\sigma$ ]  
OotOffset-rm: 0.718 arcsec [1.39 $\sigma$ ]  
KicOffset-rm: 1.125 arcsec [2.54 $\sigma$ ]  
OotOffset-st: 0/1/0/1 [2]  
KicOffset-st: 0/1/0/1 [2]  
DiffImageQuality-fgm: 0.50 [1/2]  
DiffImageOverlap-fno: 1.00 [3/3]

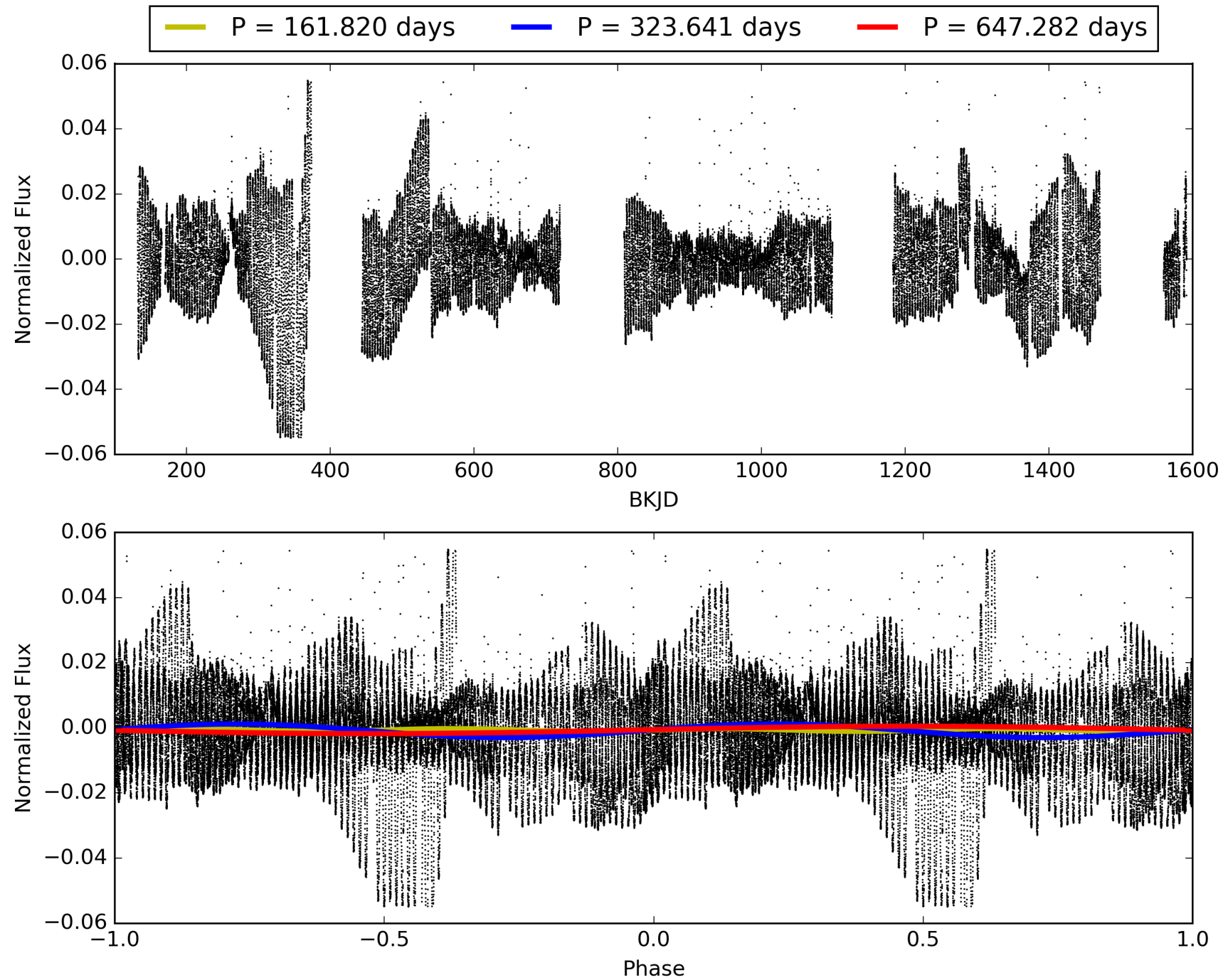
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:02:02 Z

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

# TCE 011342883-03, PDC Light Curves



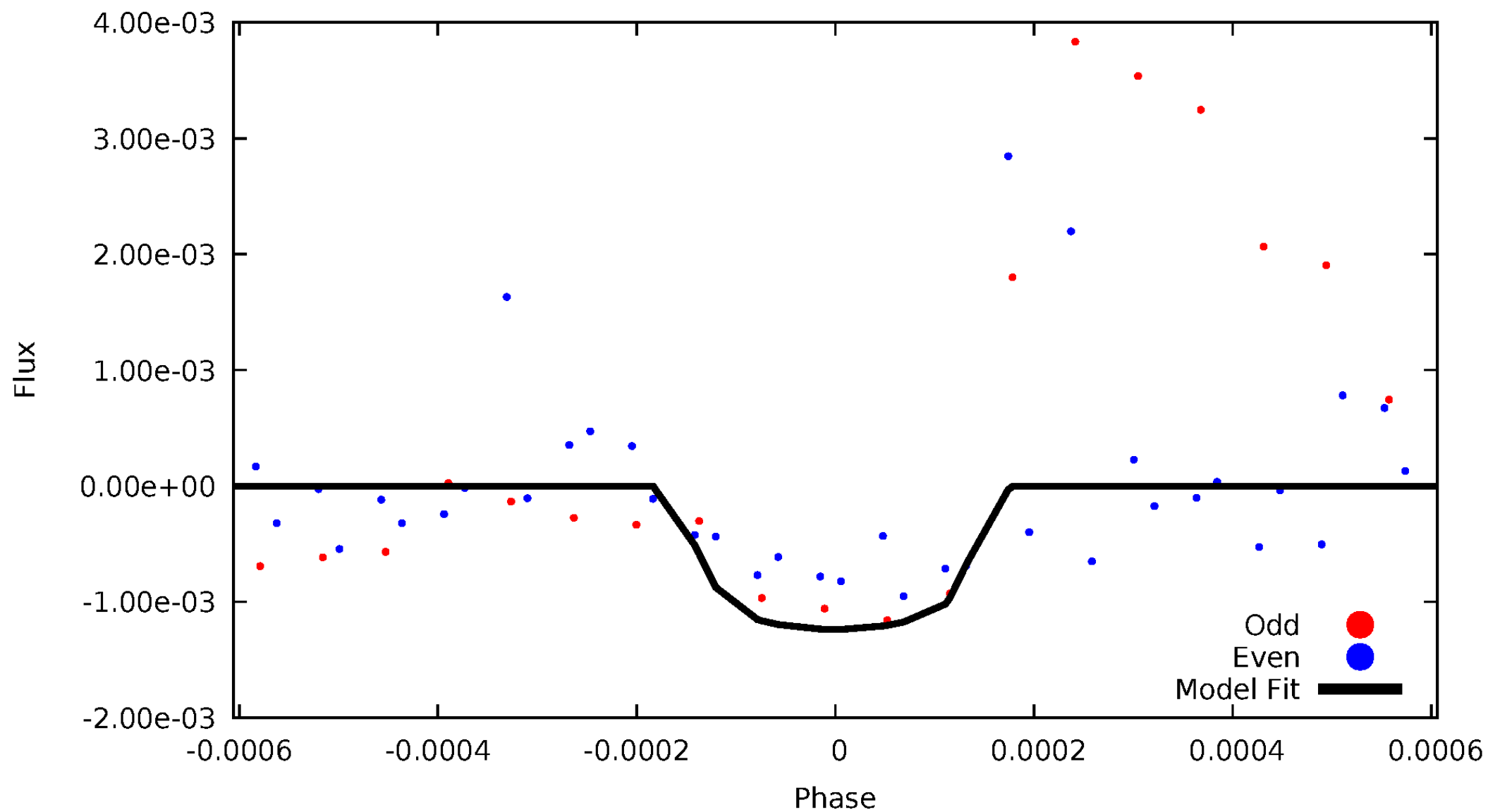
# TCE 011342883-03





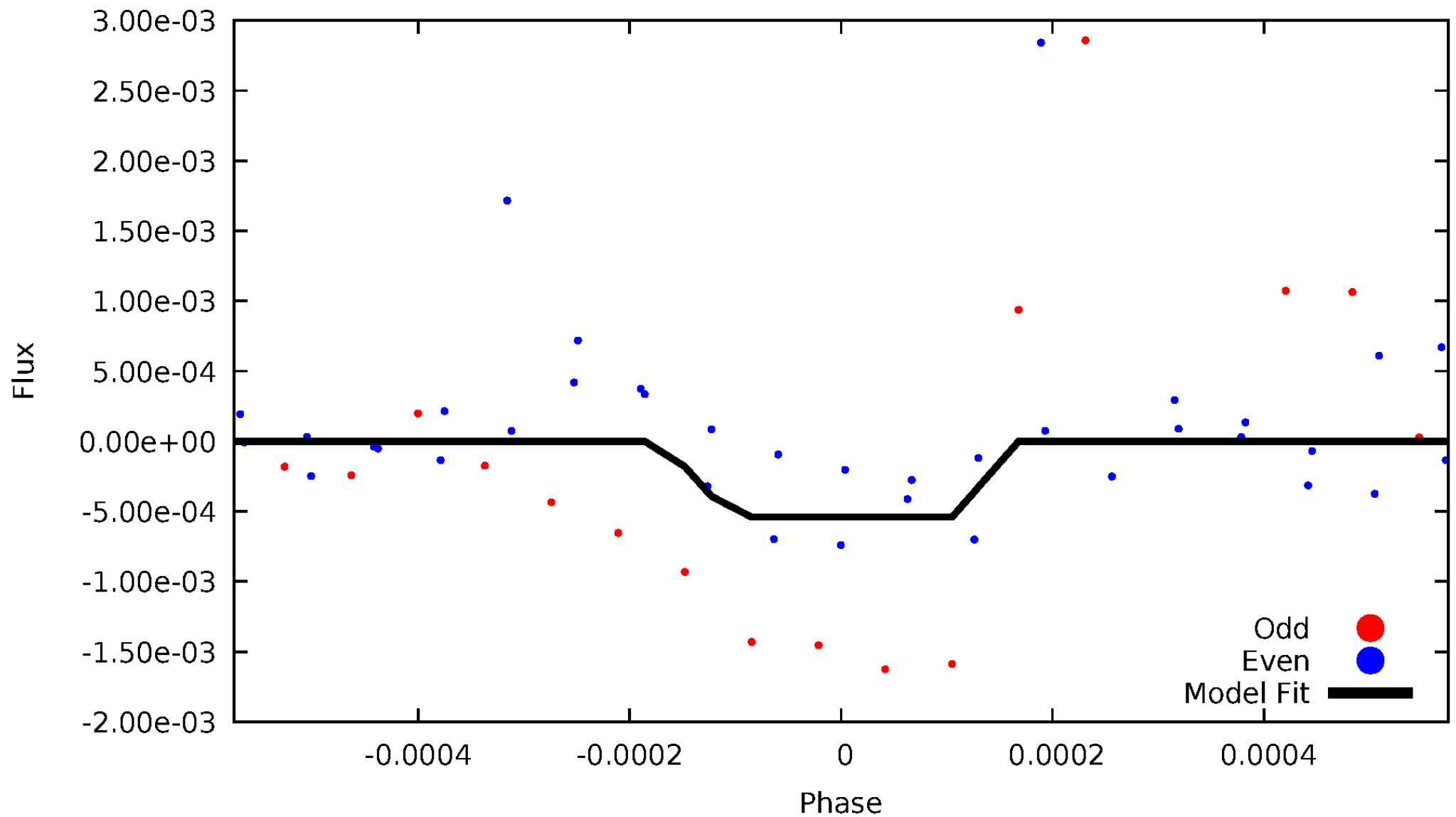
# DV Odd/Even

TCE 011342883-03



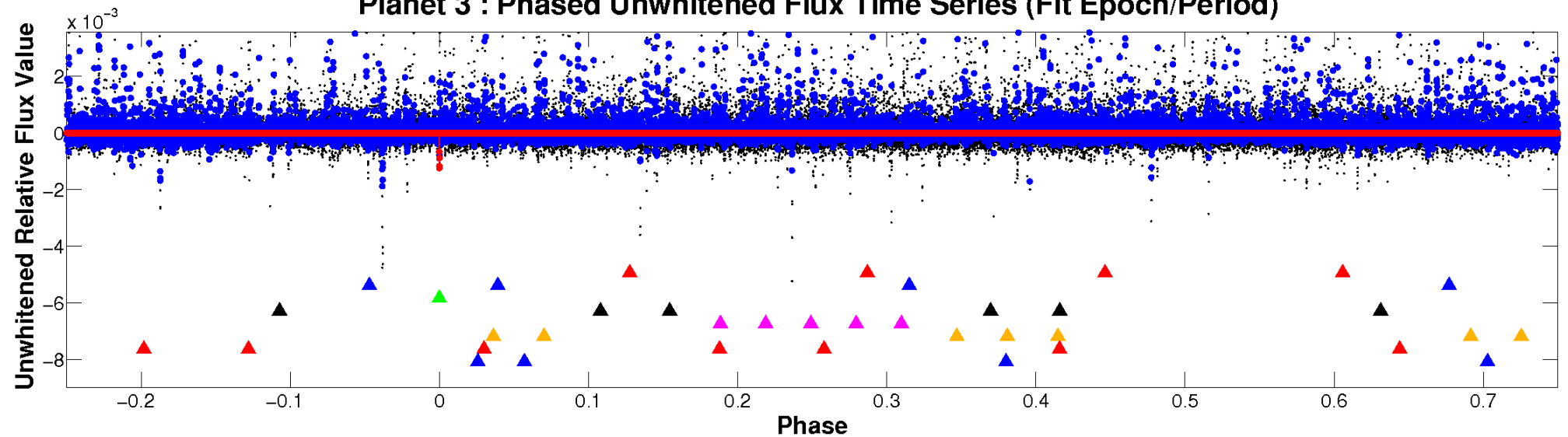
# ALT Odd/Even

TCE 011342883-03

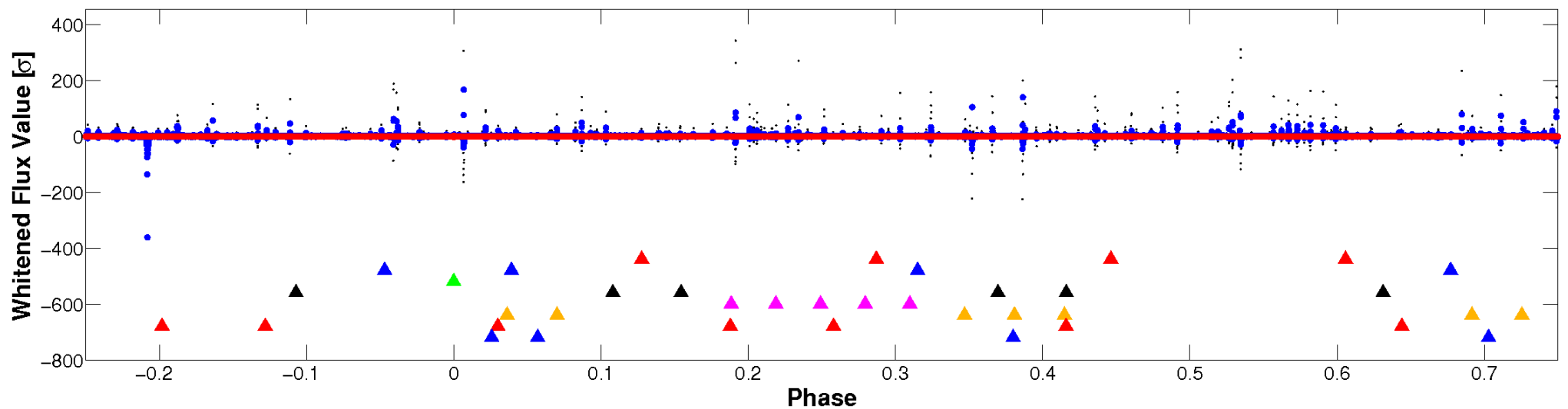


# Non-Whitened Vs. Whitened Light Curve

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

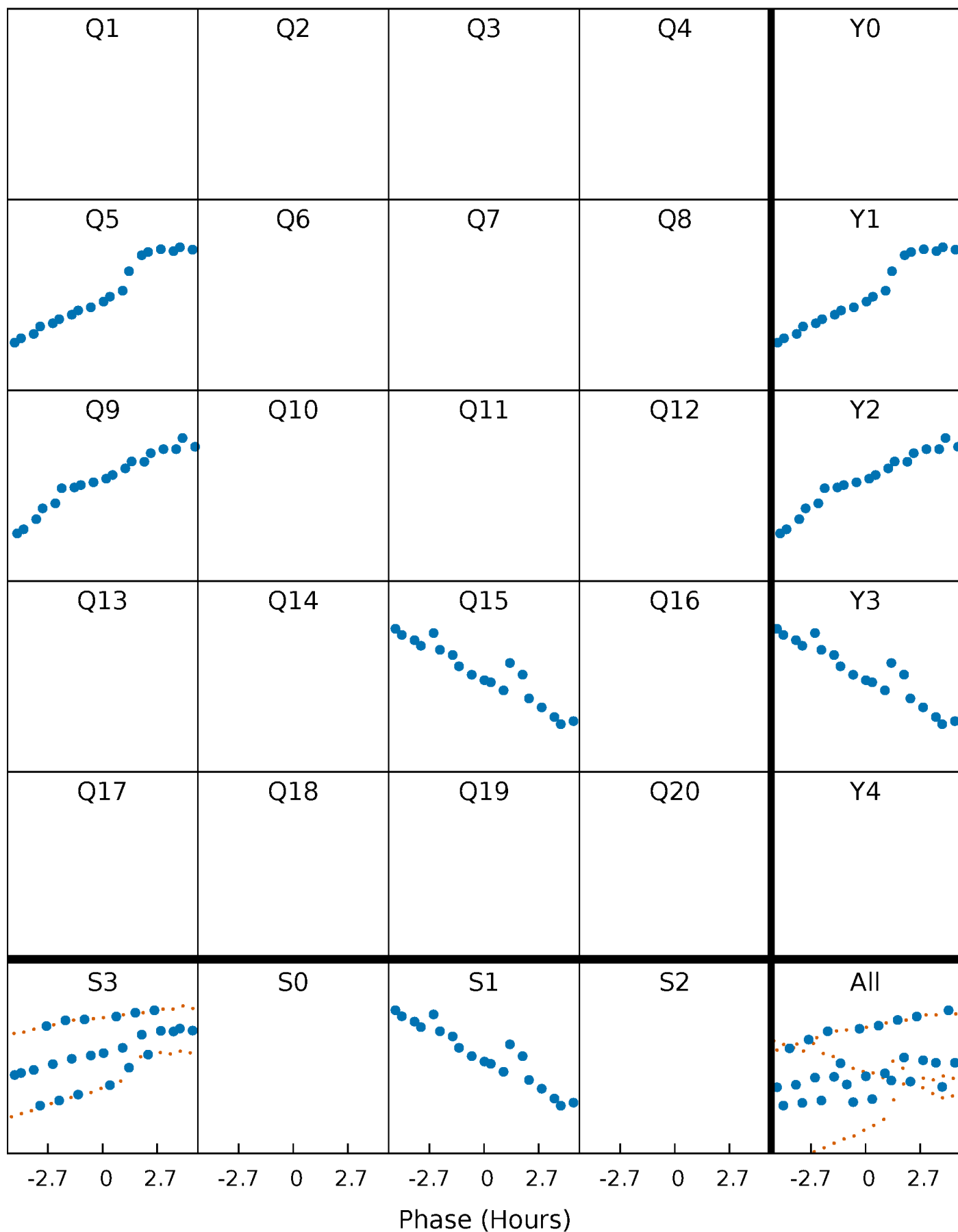


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



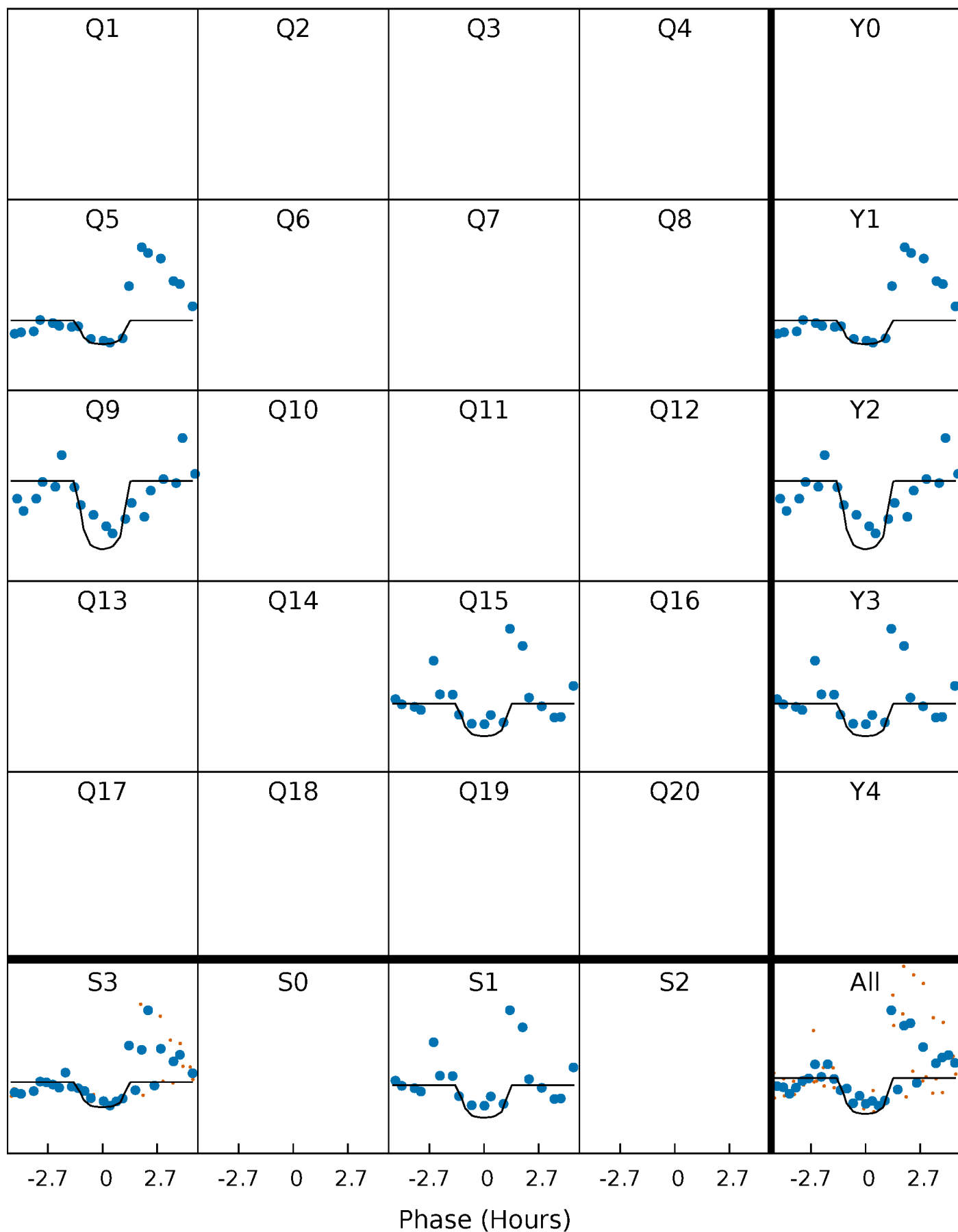
# PDC Quarter-Phased Transit Curves

TCE 011342883-03     $P=323.640940$  Days     $T_0=168.282313$  (BKJD)



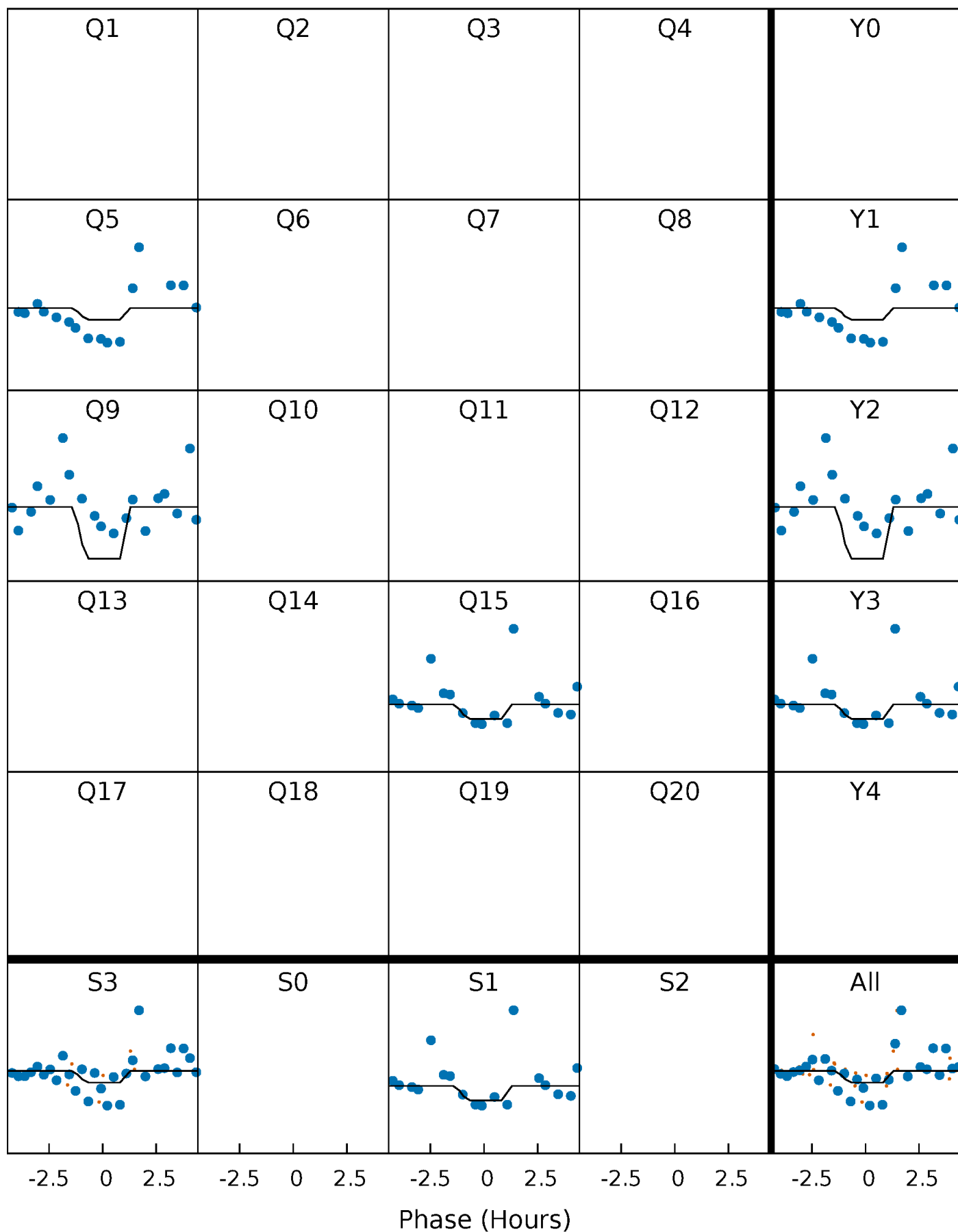
# DV Quarter-Phased Transit Curves

TCE 011342883-03     $P=323.640940$  Days     $T_0=168.282313$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

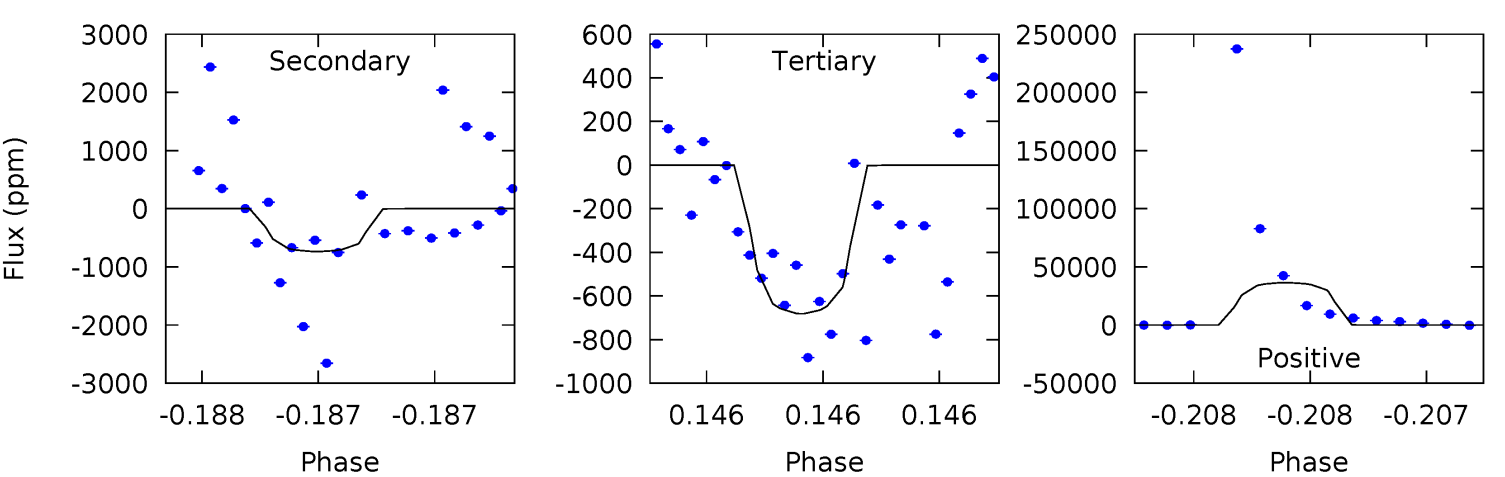
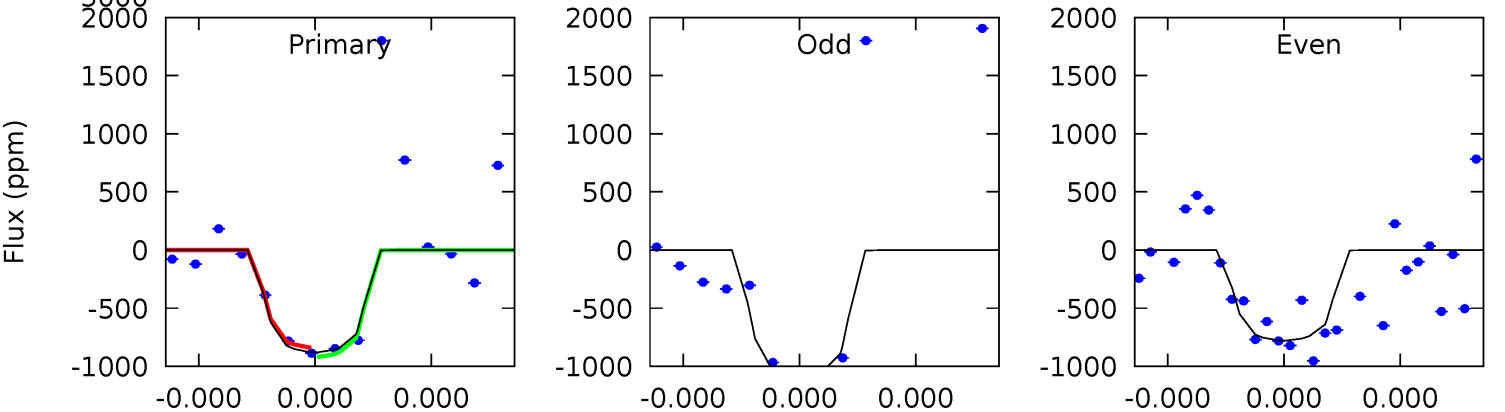
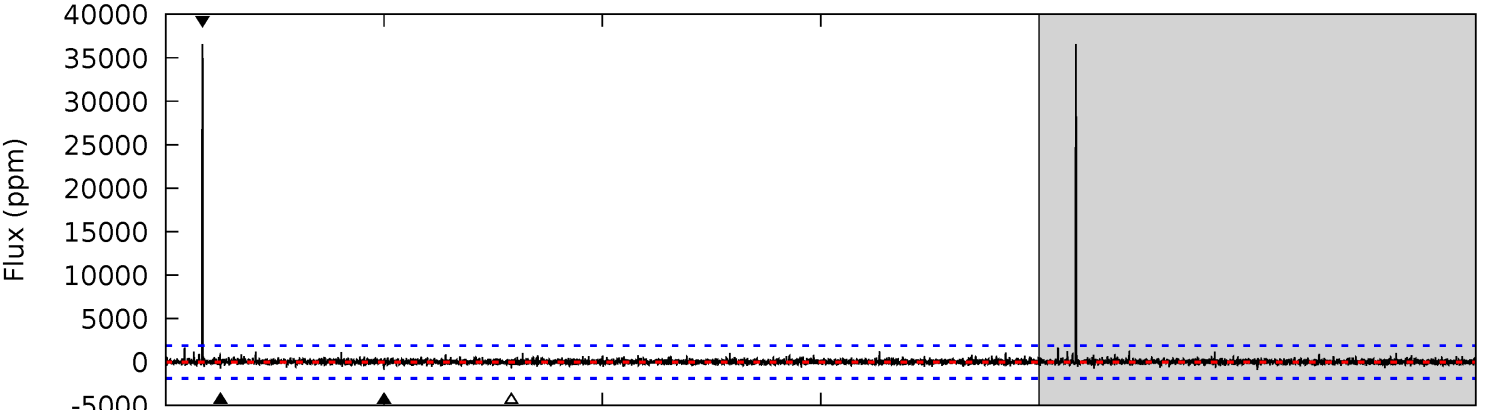
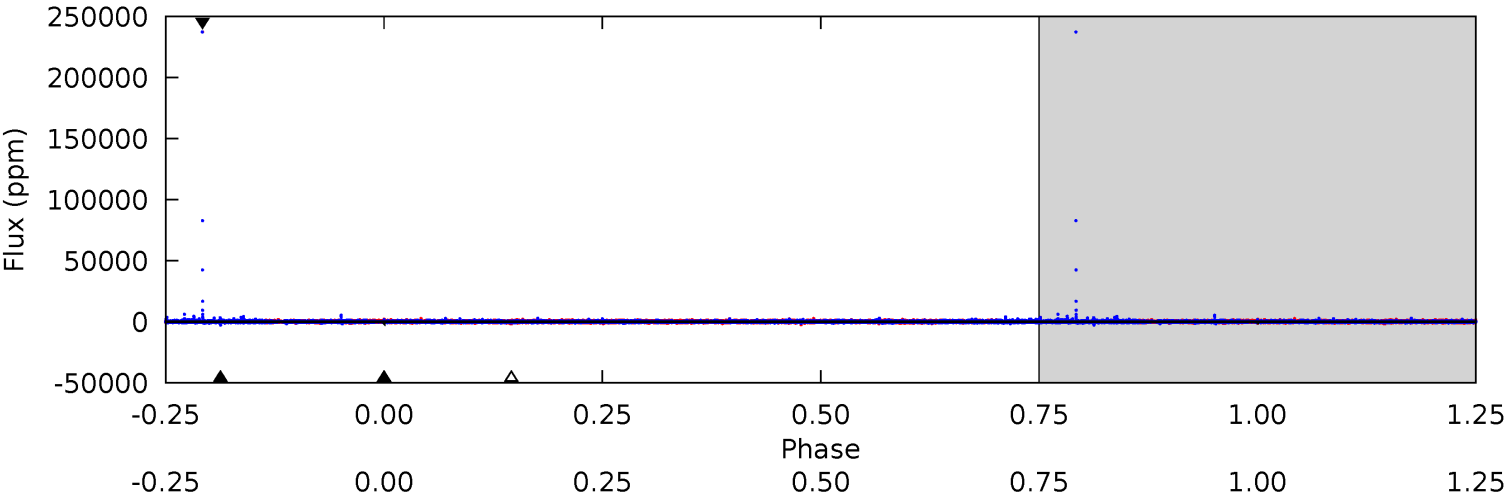
TCE 011342883-03 P=323.638177 Days  $T_0=168.288494$  (BKJD)



# DV Model-Shift Uniqueness Test

011342883-03, P = 323.640940 Days, E = 168.282313 Days

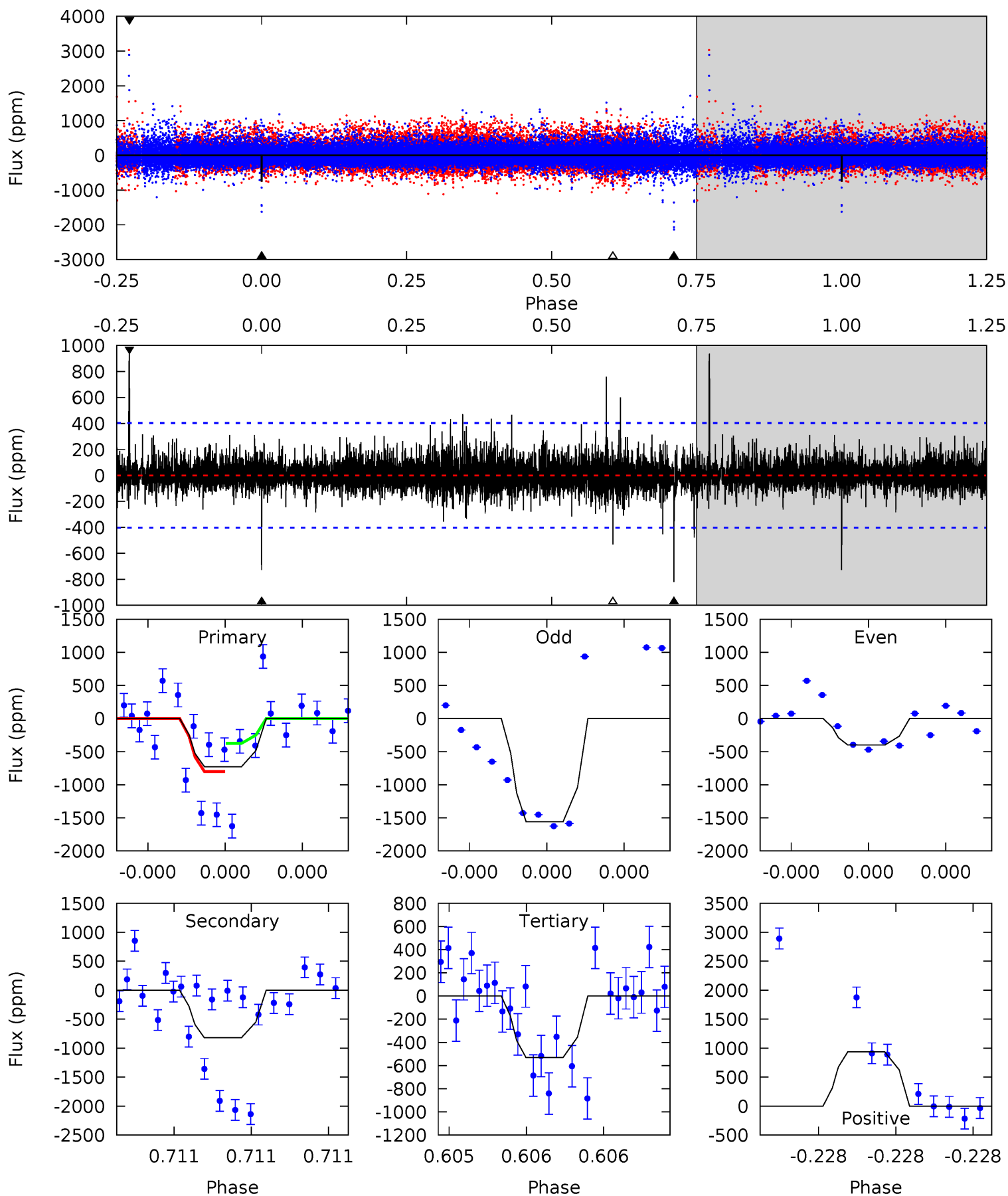
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.62	2.19	2.03	108.7	5.65	3.60	1.66	0.59	-106.1	0.16	-106.5	0.36	1.06	0.98	0.11



# Alt Model-Shift Uniqueness Test

011342883-03, P = 323.638177 Days, E = 168.288494 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
10.2	11.5	7.45	13.1	5.65	3.60	1.19	2.77	-2.91	4.07	-1.61	6.56	1.21	0.53	2.87





### Stellar Parameters For KIC 011342883

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	$4298^{+120}_{-150}$	$4.805^{+0.084}_{-0.039}$	$-1.500^{+0.250}_{-0.300}$	$0.447^{+0.037}_{-0.064}$	$0.464^{+0.038}_{-0.052}$	$7.339^{+3.124}_{-1.192}$
	+3%/-3%	+2%/-1%	+17%/-20%	+8%/-14%	+8%/-11%	+43%/-16%
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 011342883-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-736 \pm 336$	$2.47^{+2.42}_{-1.73}$	$208^{+7}_{-8}$	$3358^{+1944}_{-618}$	$29378^{+296638}_{-22469}$
Alt.	$-821 \pm 71$	$2.26^{+2.06}_{-1.55}$	$208^{+8}_{-9}$	$3627^{+2052}_{-672}$	$46416^{+433257}_{-34163}$

$T_{max}$  = 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

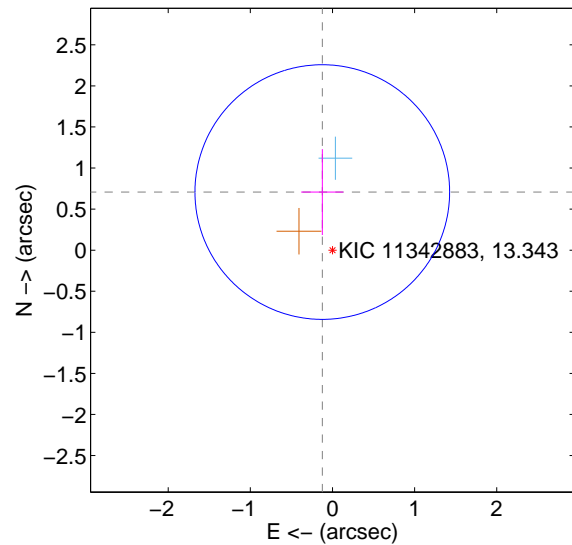
Supplemental centroid analysis for 011342883-03. Kepler magnitude: 13.34. Transit SNR 9.22

There are 1 quarters with good PRF difference image offsets

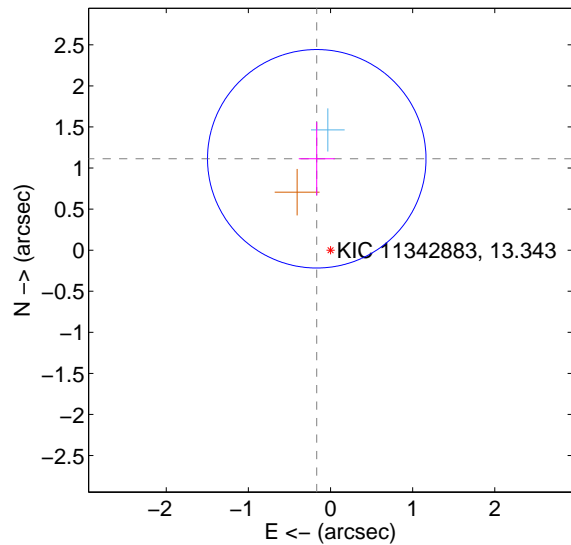
The direct PRF centroid is offset from the target star catalog position by about 0.35 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.718 \pm 0.517$	1.39	$0.124 \pm 0.257$	$0.708 \pm 0.523$
PRF-fit source offset from KIC position	$1.125 \pm 0.443$	2.54	$0.167 \pm 0.220$	$1.113 \pm 0.447$
photometric centroid source offset	$0.85 \pm 0.53$	1.60	$-0.31 \pm 0.58$	$0.80 \pm 0.53$

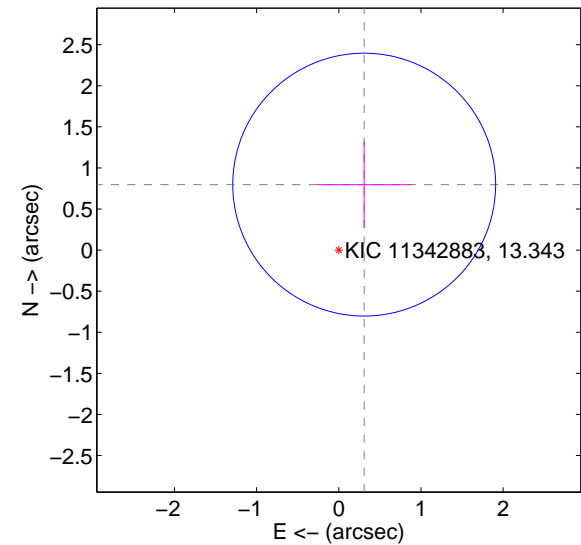
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

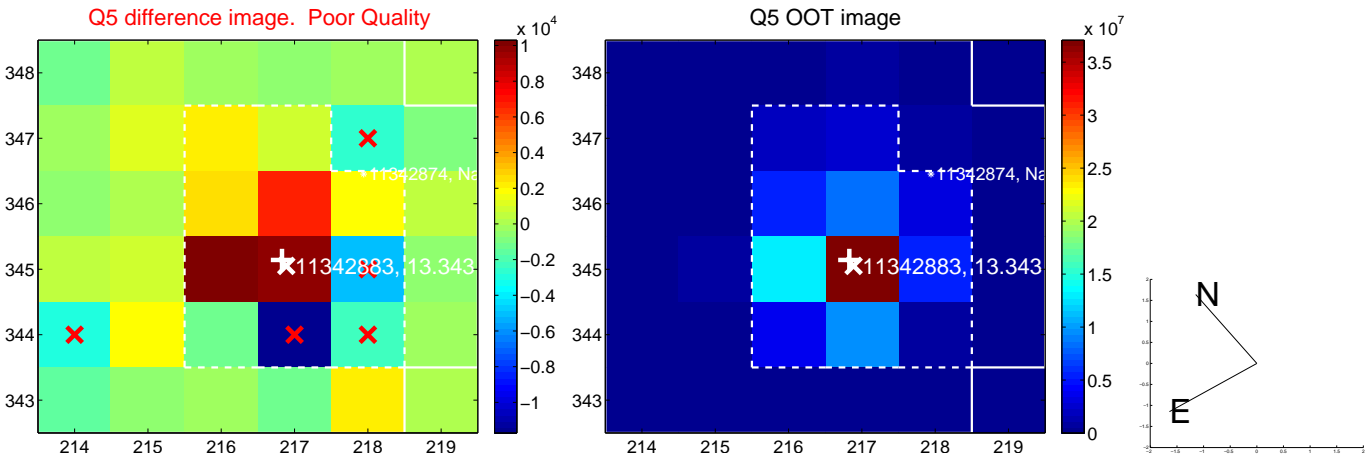


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

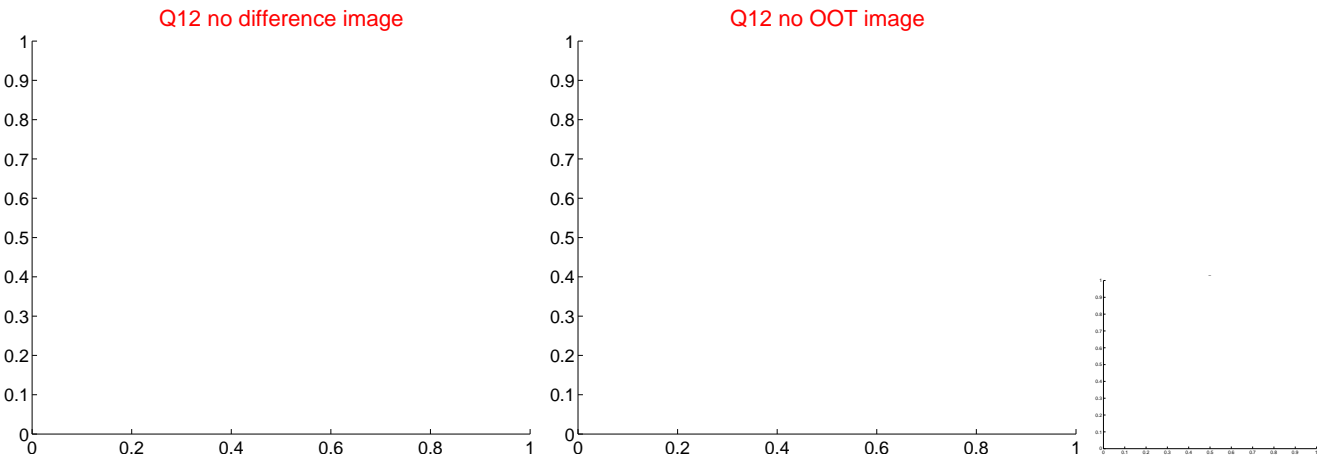
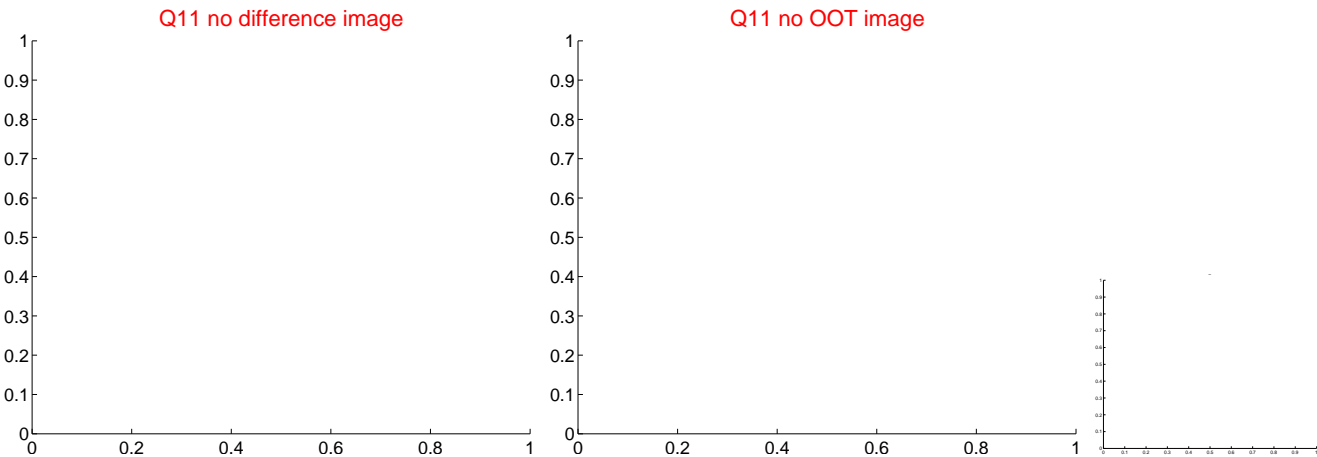
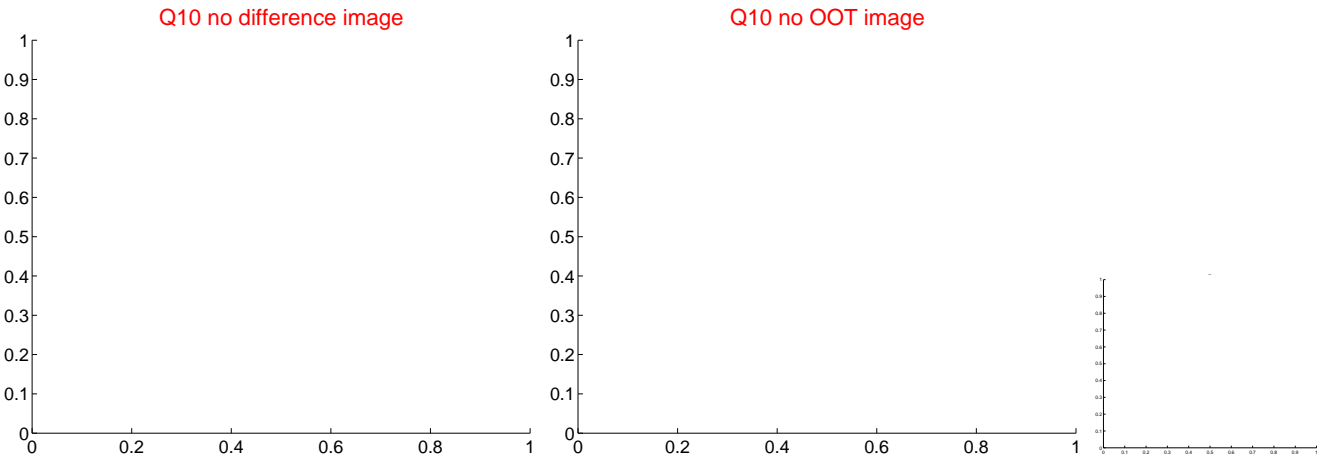
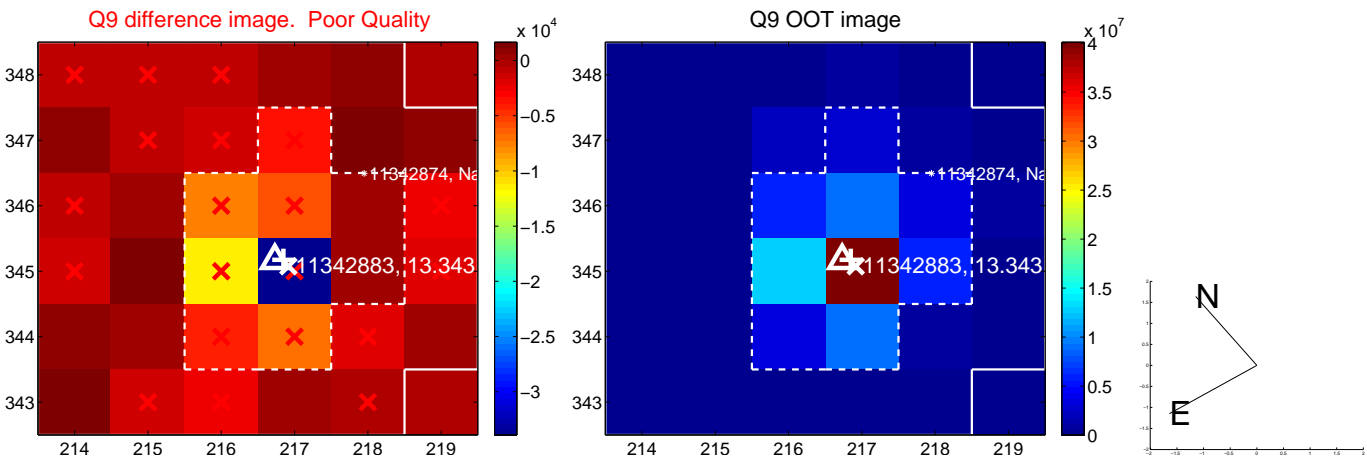
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



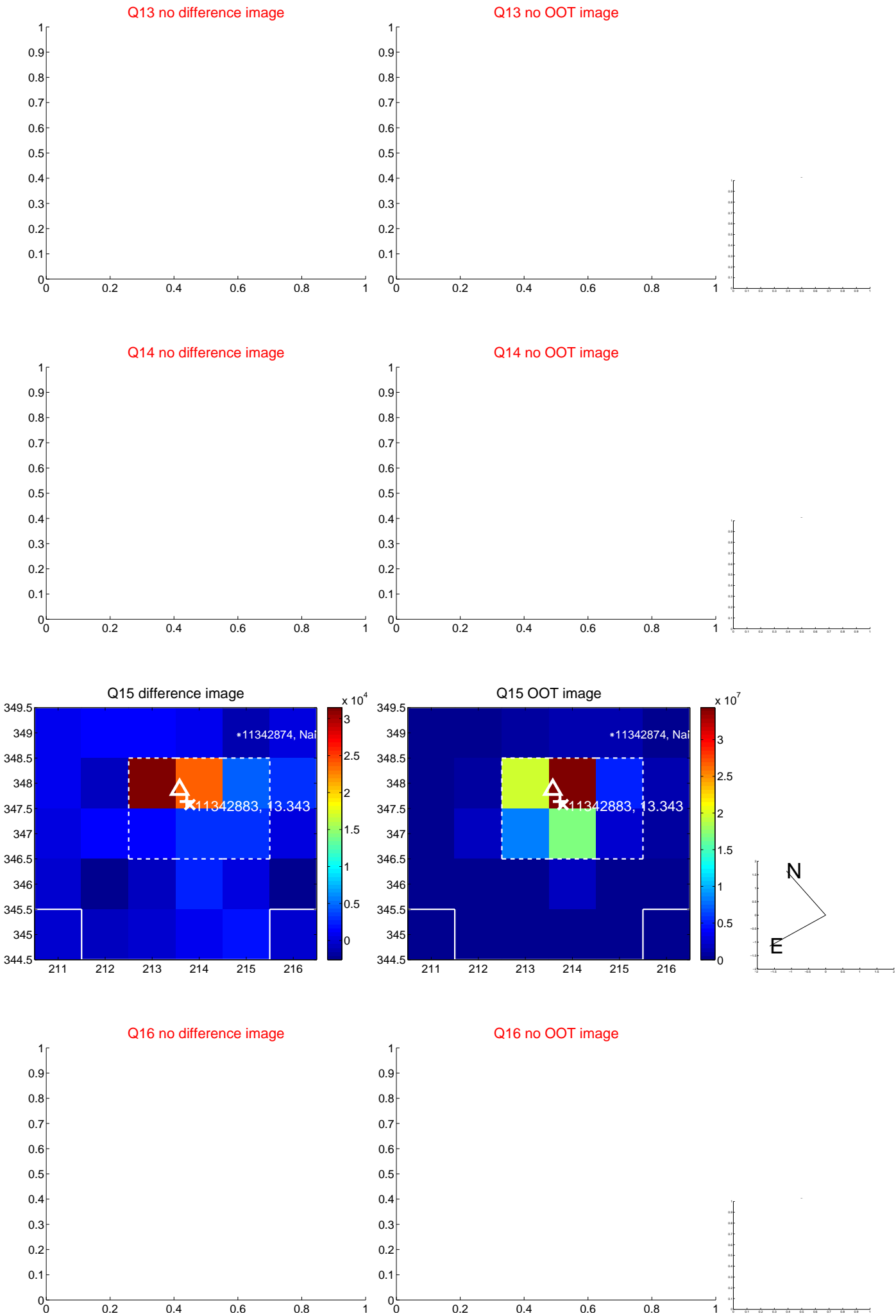
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



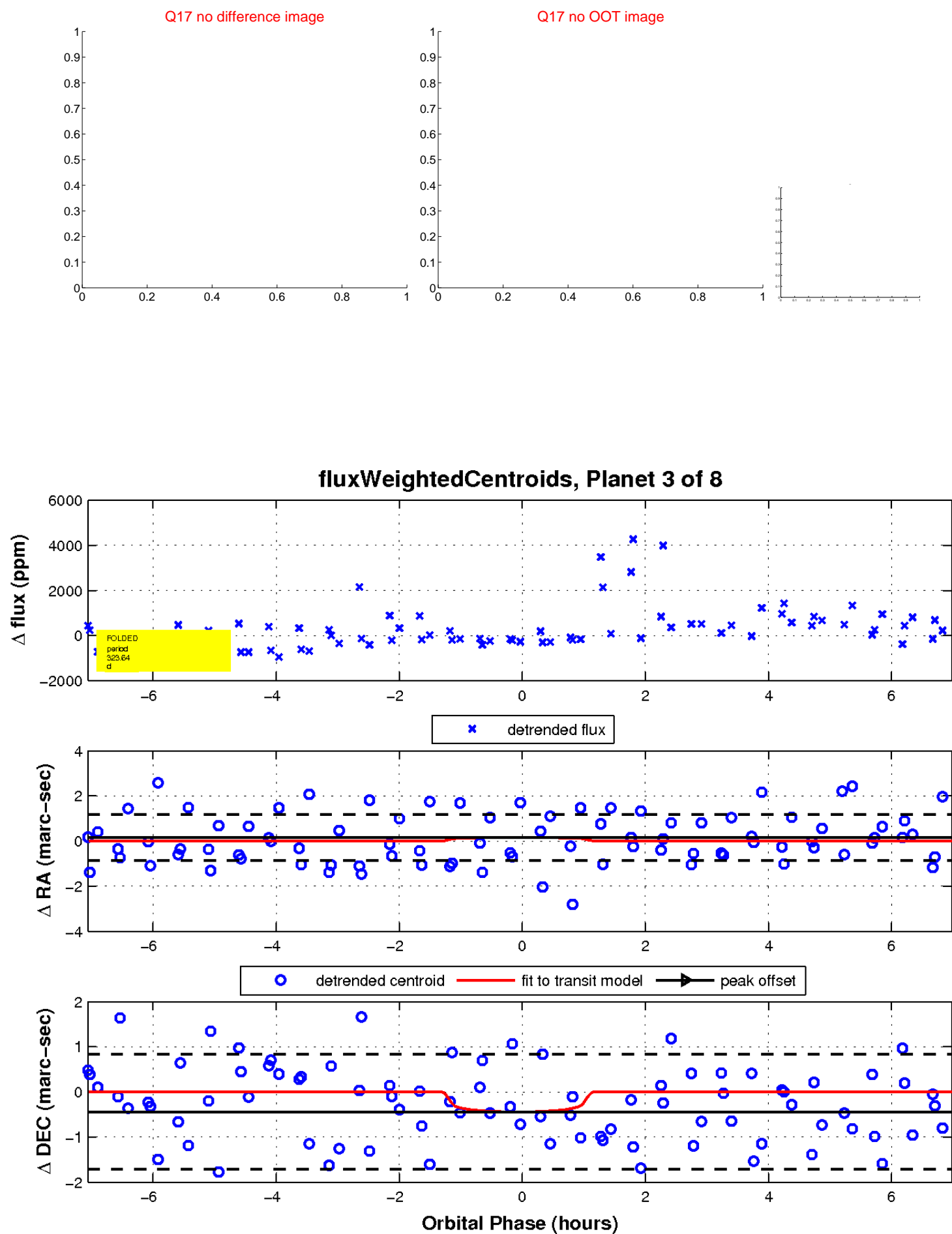
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

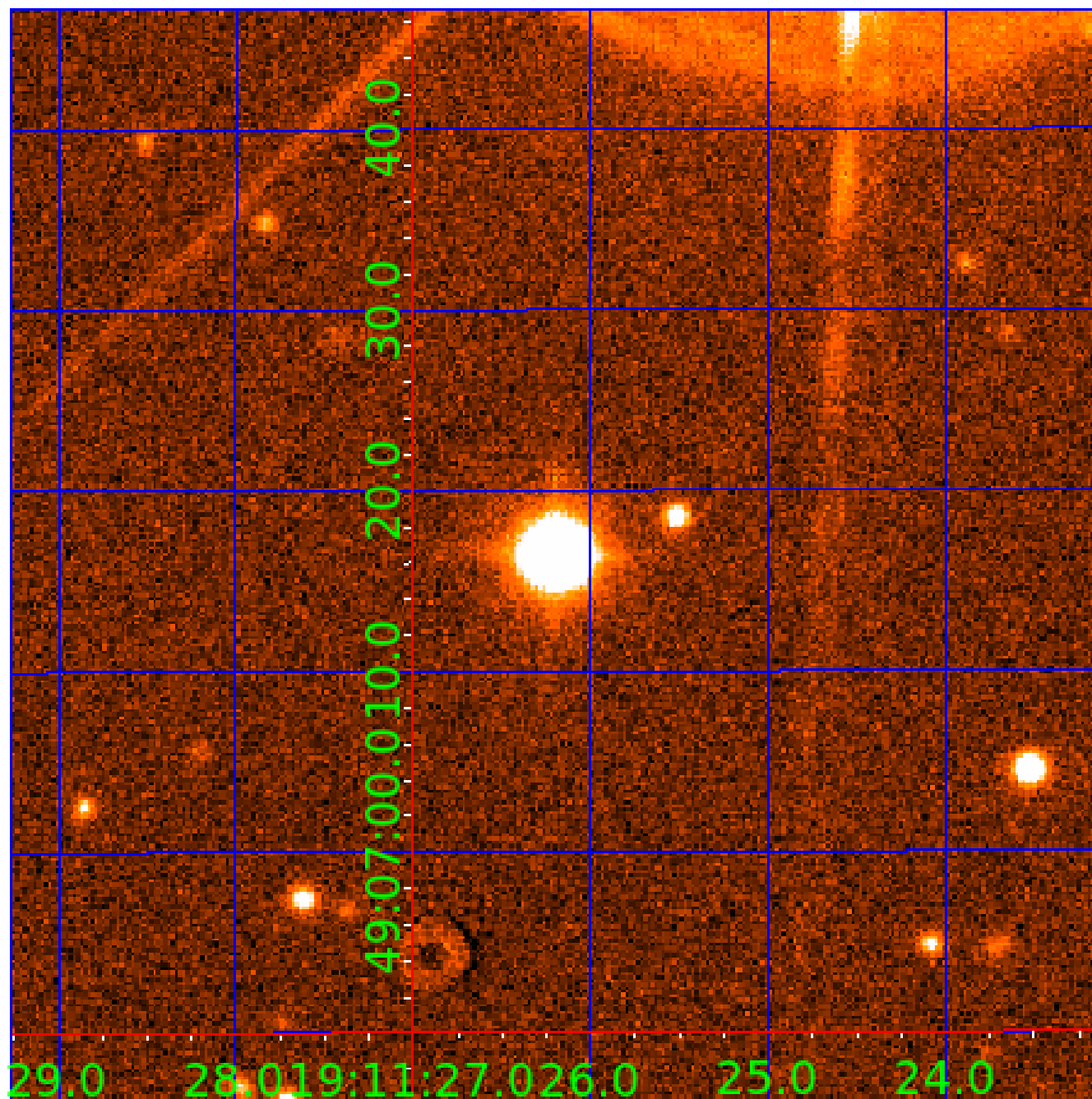


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination





# KIC 011342883

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011342883-01	OBS	No	375.212049	209.607708	1282.1	4.623	14.5	9.3	0.45	4298	1.64	0.10
011342883-03	OBS	No	323.640940	168.282313	1238.0	2.353	15.8	9.2	0.45	4298	1.61	0.12
011342883-04	OBS	No	238.977295	302.928400	342.0	1.500	15.8	2.5	0.45	4298	0.90	0.18
011342883-05	OBS	No	333.460106	229.281070	1189.4	12.132	12.8	7.7	0.45	4298	1.65	0.12
011342883-06	OBS	No	212.100925	302.529031	564.2	2.652	13.5	4.8	0.45	4298	1.13	0.21
011342883-07	OBS	No	198.724563	229.079318	1216.3	3.428	10.9	9.6	0.45	4298	1.57	0.23
011342883-08	OBS	No	428.158005	186.739501	343.9	9.000	11.6	-1.0	0.45	4298	0.83	0.08

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011342883-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV
011342883-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
011342883-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011342883-05	OBS	FP	0.00	1	0	0	0	LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
011342883-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
011342883-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS
011342883-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS

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

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

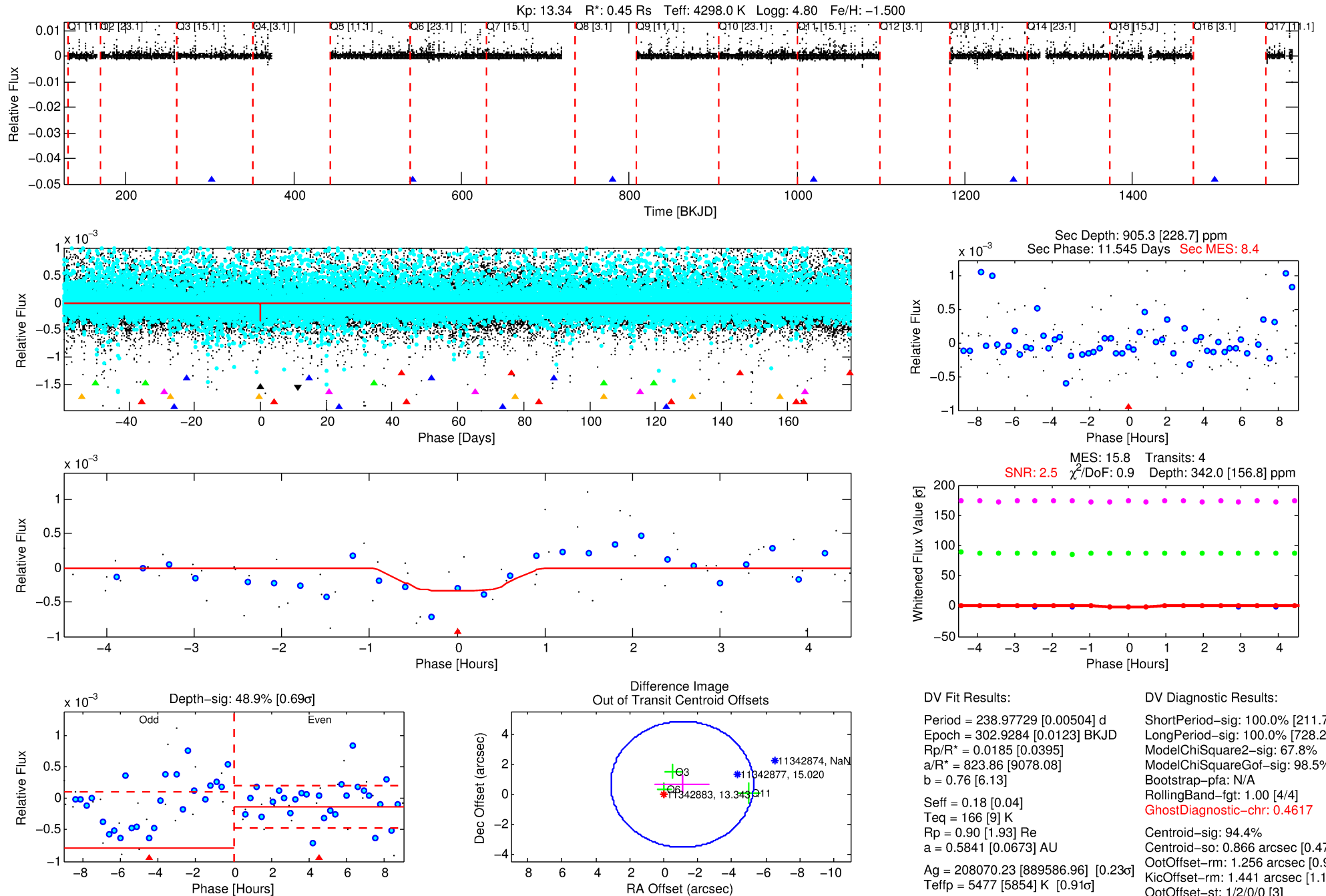
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 011342883-04

No Significant Match Found

# DV One-Page Summary

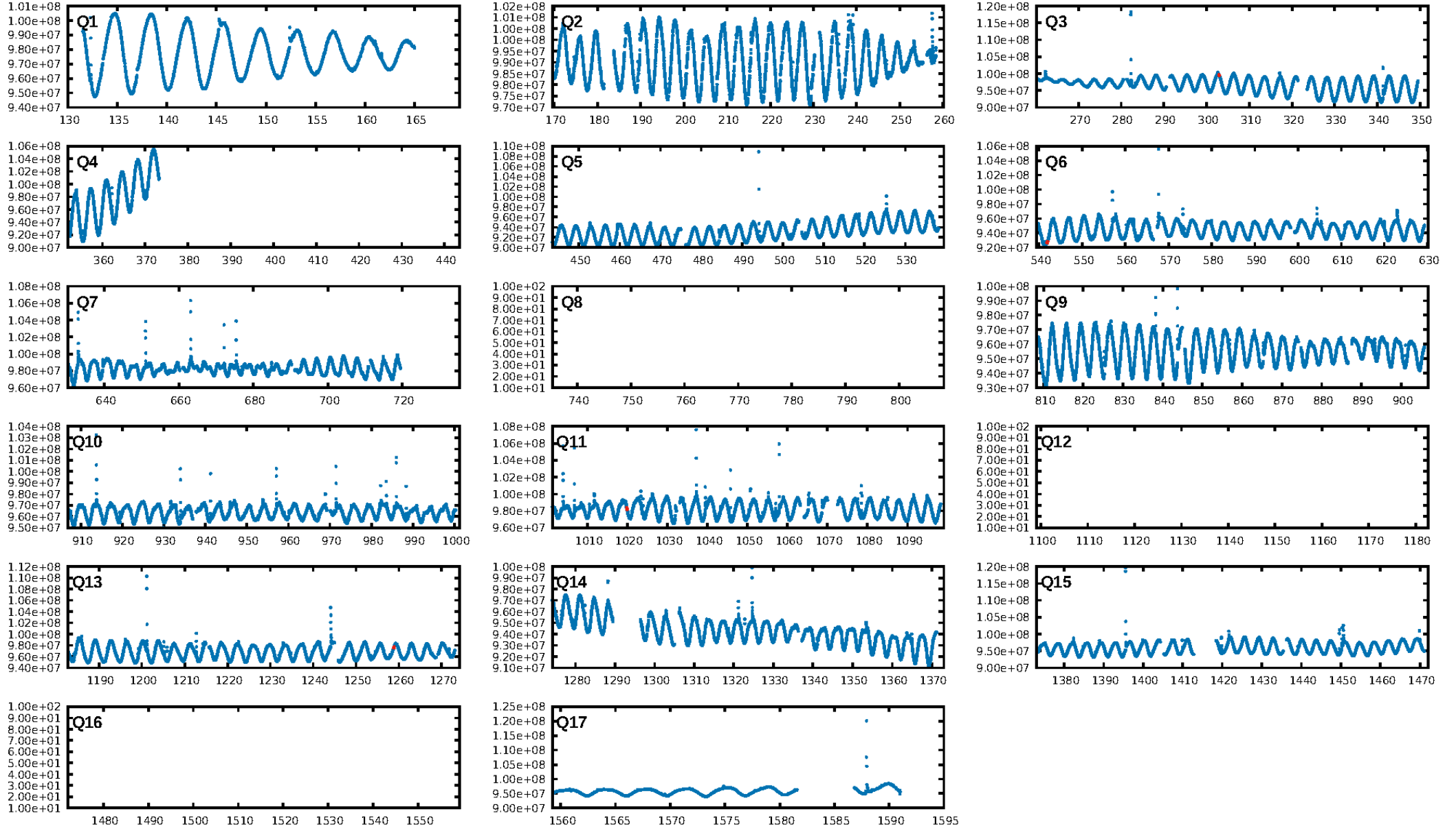
KIC: 11342883 Candidate: 4 of 8 Period: 238.977 d



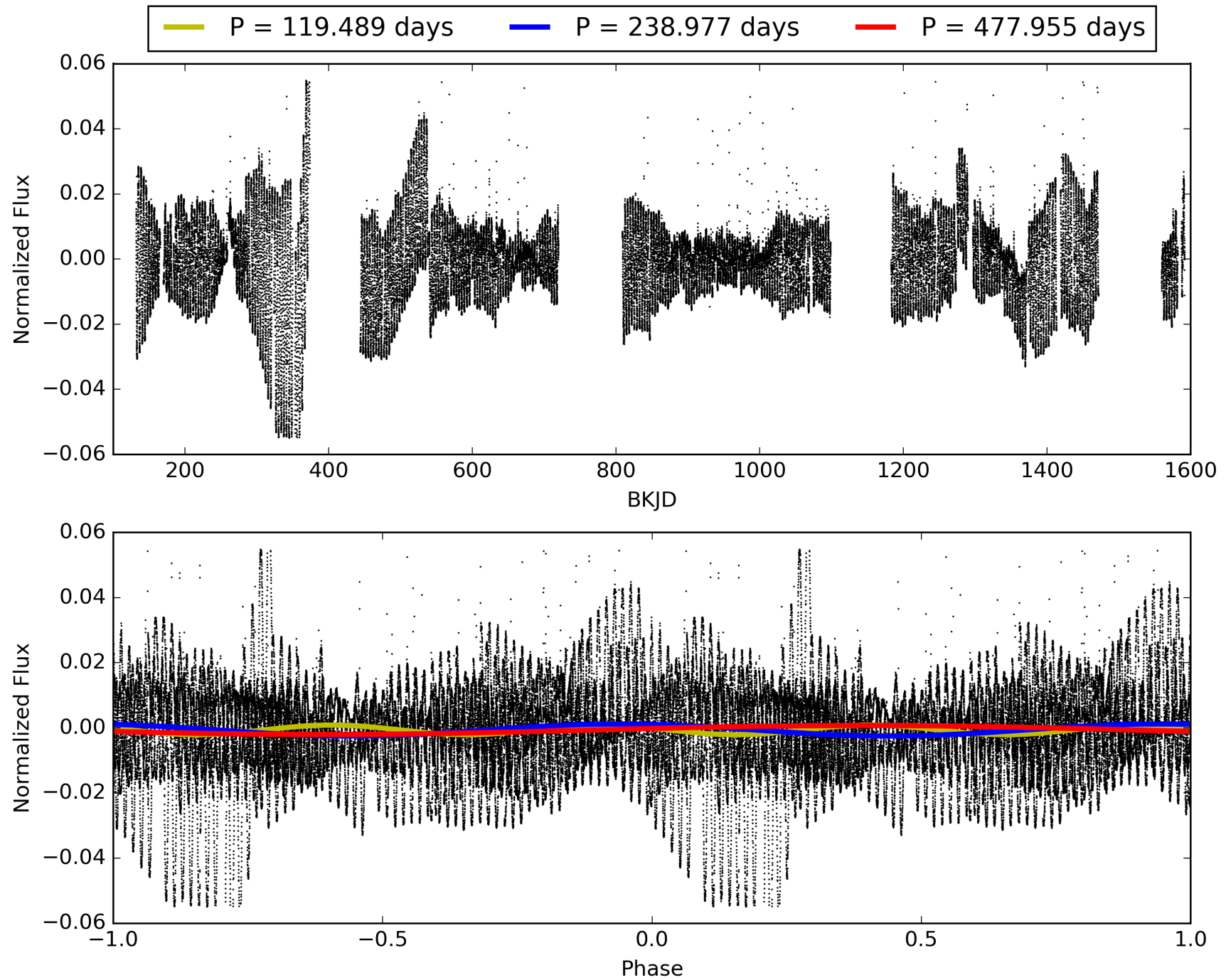
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:02:19 Z

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

# TCE 011342883-04, PDC Light Curves

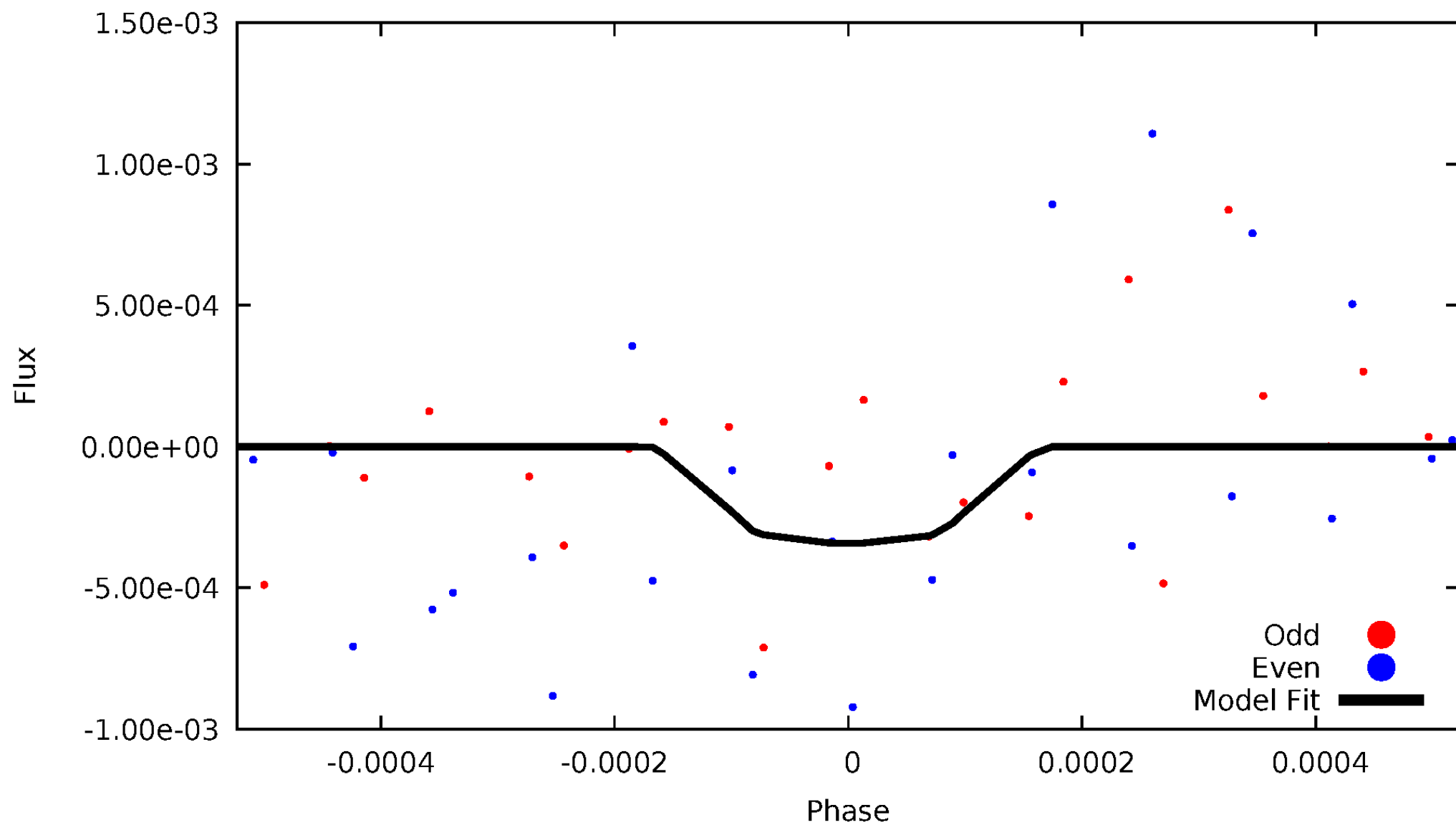


# TCE 011342883-04



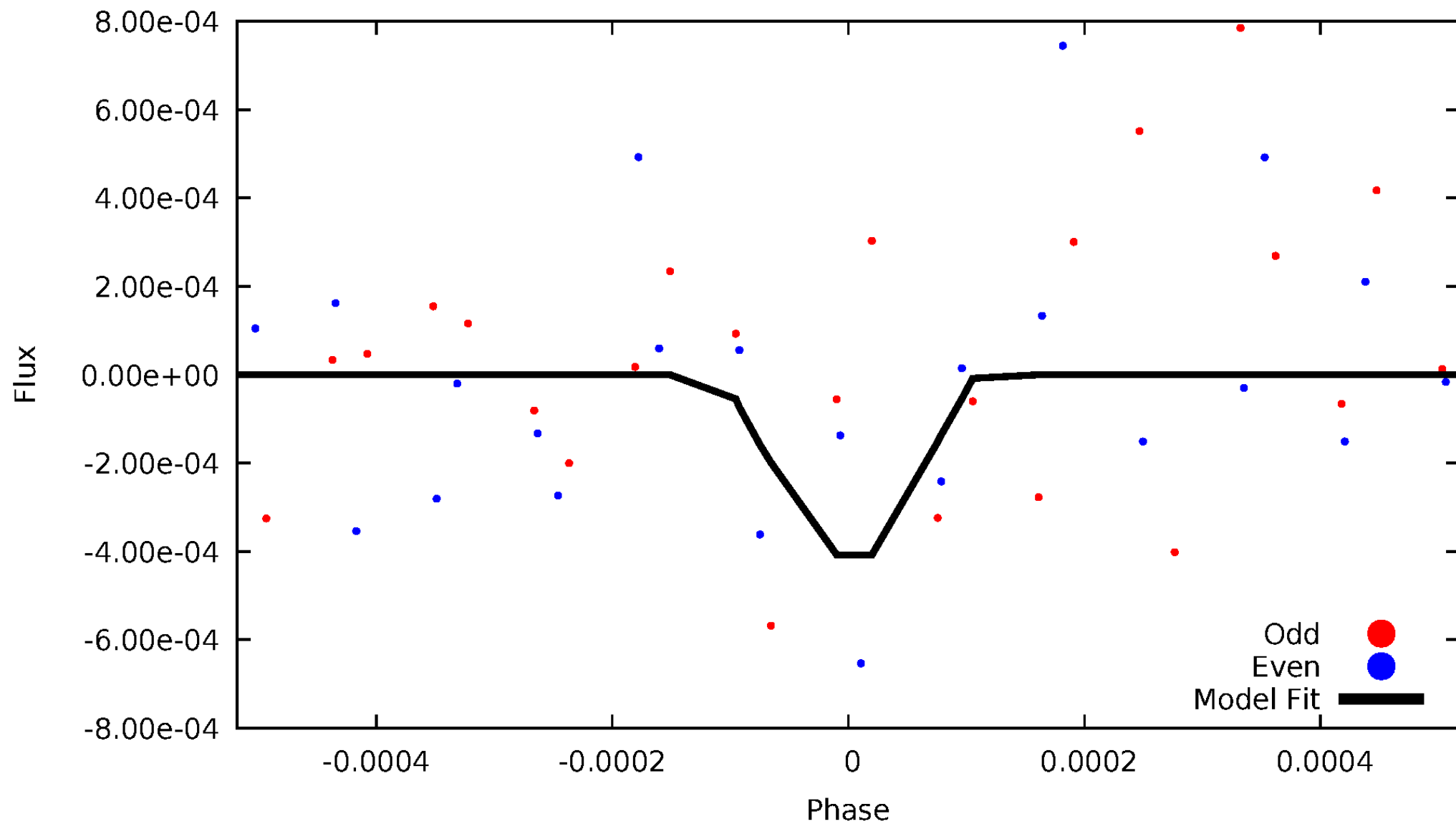
# DV Odd/Even

TCE 011342883-04



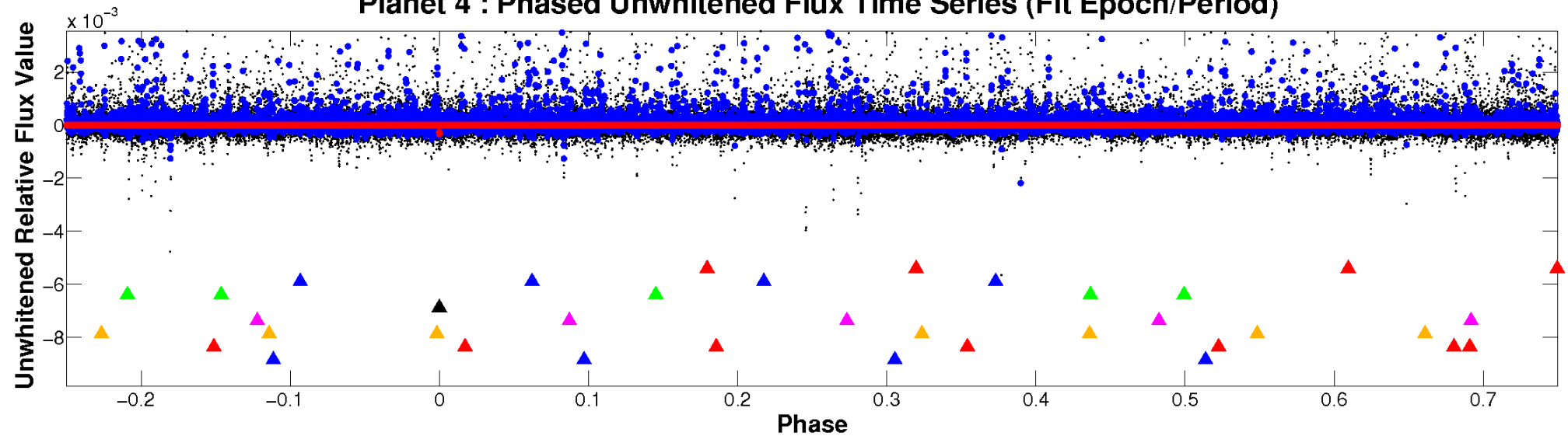
# ALT Odd/Even

TCE 011342883-04

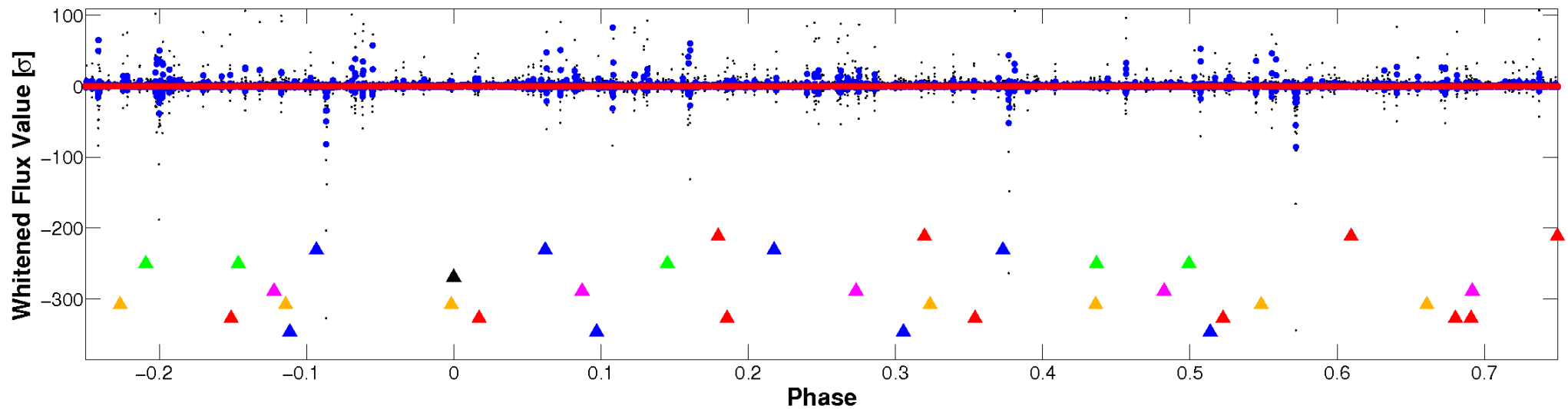


# Non-Whitened Vs. Whitened Light Curve

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

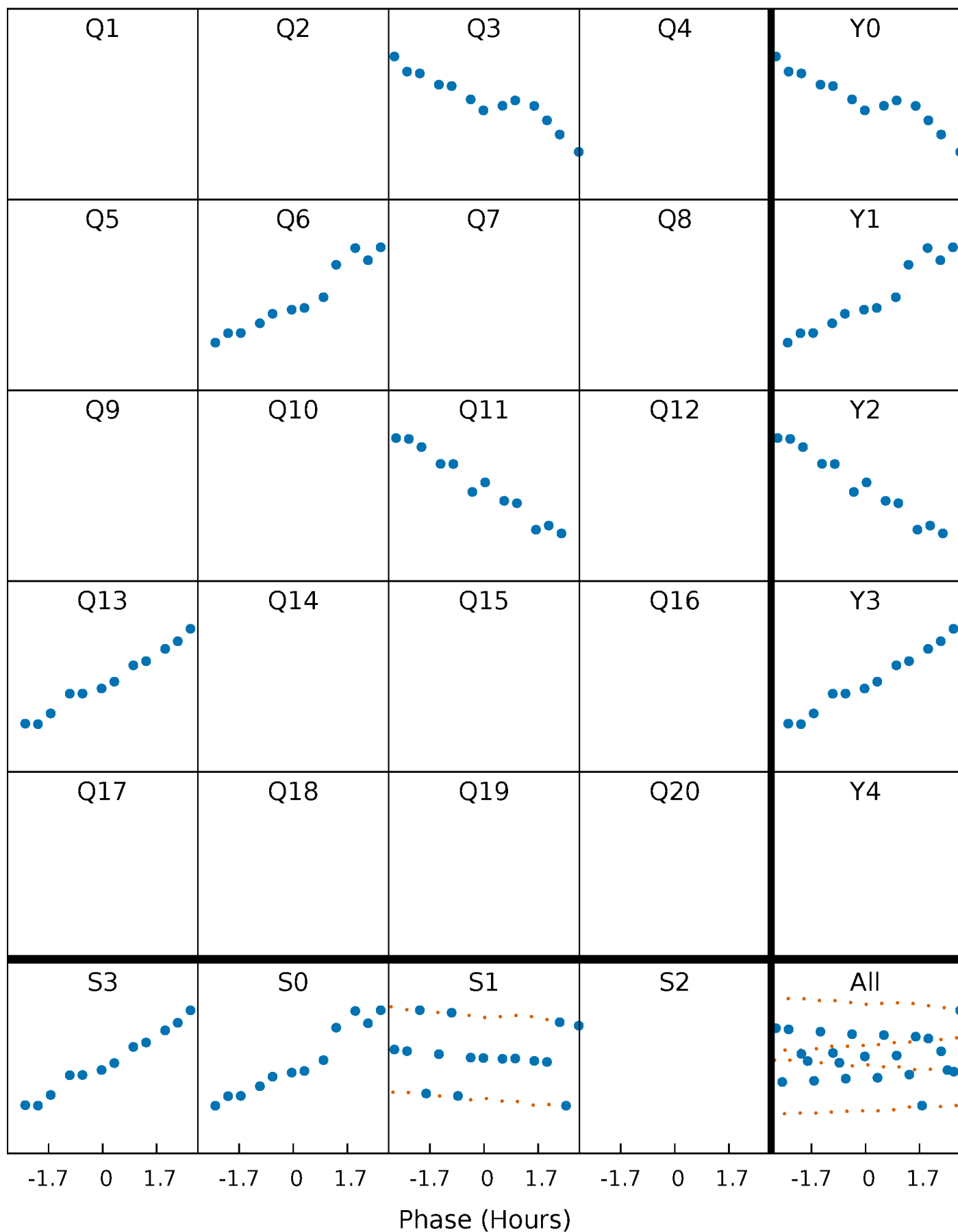


## Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



# PDC Quarter-Phased Transit Curves

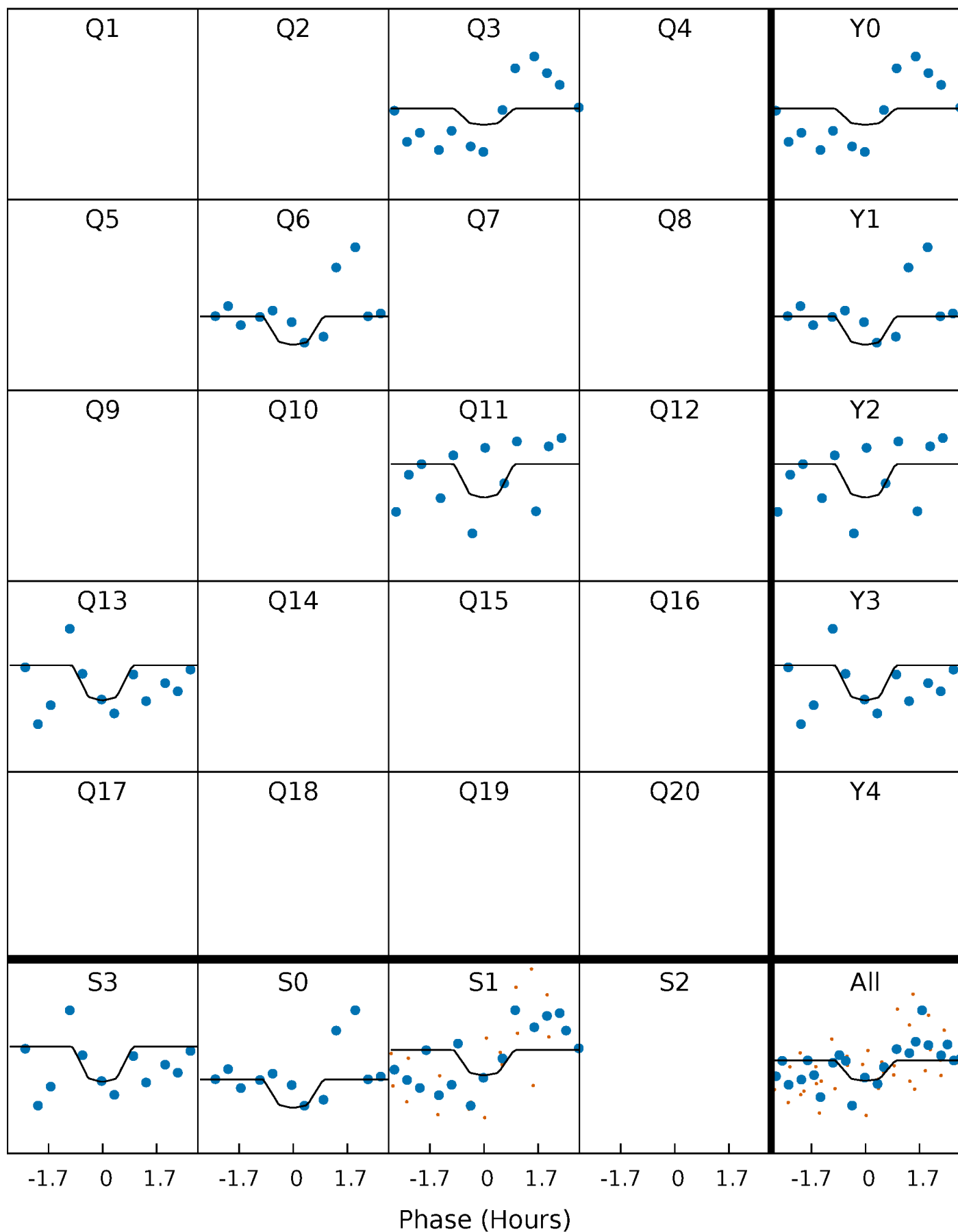
TCE 011342883-04   P=238.977295 Days    $T_0=302.928400$  (BKJD)





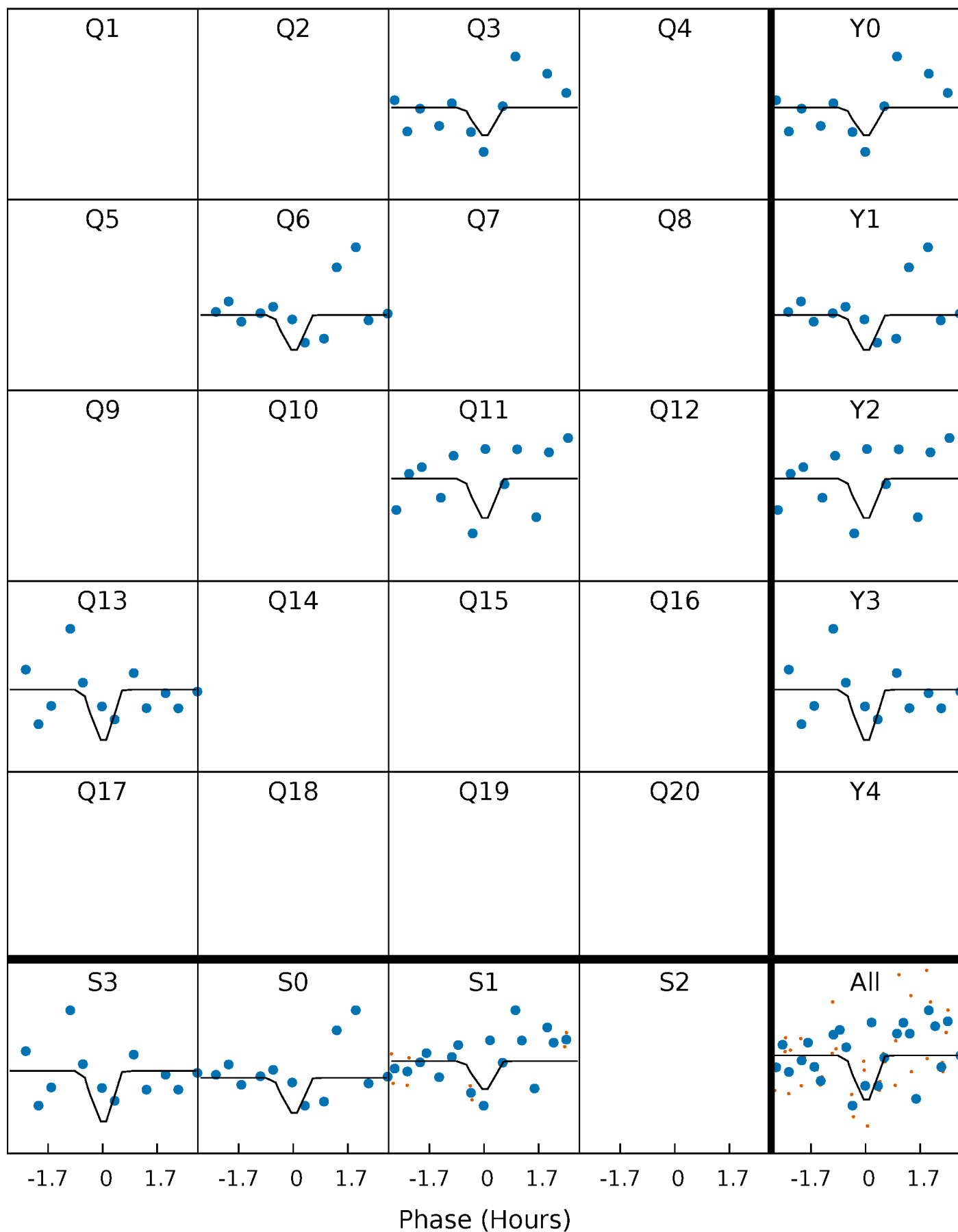
# DV Quarter-Phased Transit Curves

TCE 011342883-04 P=238.977295 Days  $T_0=302.928400$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

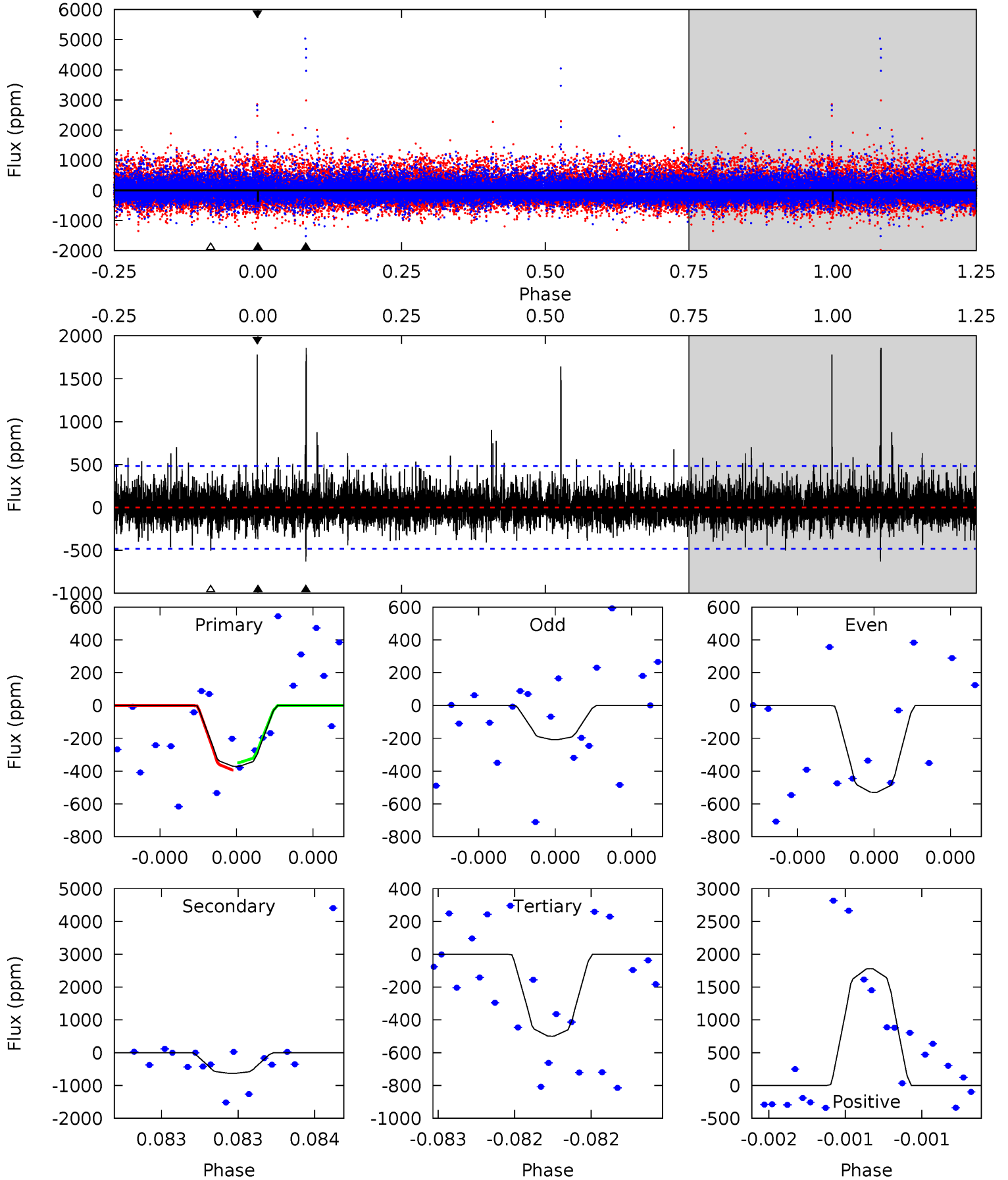
TCE 011342883-04 P=238.977295 Days  $T_0=302.926750$  (BKJD)



# DV Model-Shift Uniqueness Test

011342883-04, P = 238.977295 Days, E = 63.951105 Days

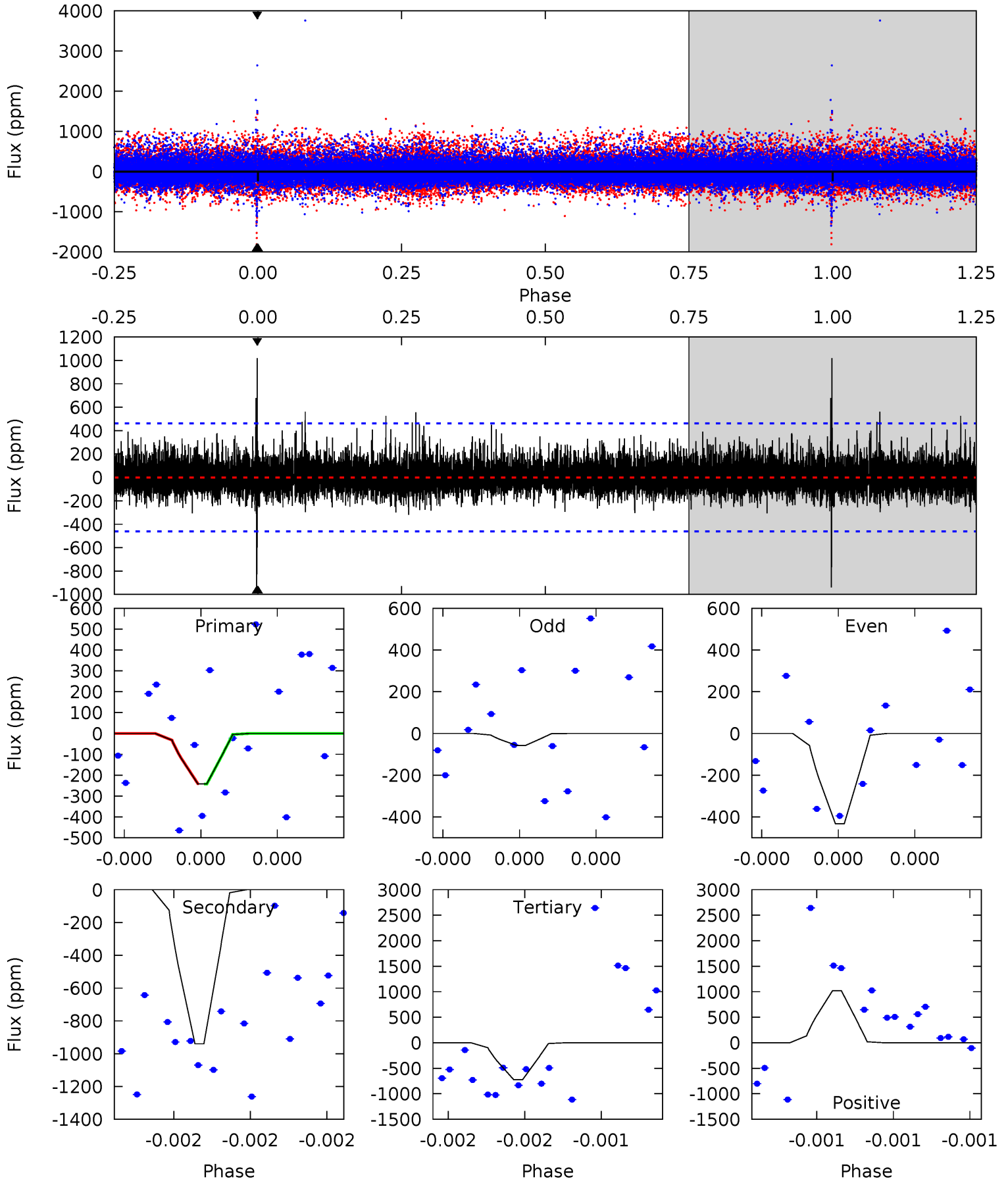
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.35	7.40	5.86	20.9	5.65	3.59	1.60	-1.51	-16.5	1.54	-13.5	1.36	1.17	0.75	0.27



# Alt Model-Shift Uniqueness Test

011342883-04, P = 238.977295 Days, E = 63.949455 Days

Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.98	11.6	8.90	12.5	5.69	3.66	1.16	-5.92	-9.57	2.69	-0.96	2.20	1.52	0.52	0.01



### Stellar Parameters For KIC 011342883

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	$4298^{+120}_{-150}$	$4.805^{+0.084}_{-0.039}$	$-1.500^{+0.250}_{-0.300}$	$0.447^{+0.037}_{-0.064}$	$0.464^{+0.038}_{-0.052}$	$7.339^{+3.124}_{-1.192}$
	+3%/-3%	+2%/-1%	+17%/-20%	+8%/-14%	+8%/-11%	+43%/-16%
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 011342883-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-631 \pm 85$	$1.73^{+1.55}_{-1.17}$	$230^{+8}_{-10}$	$3741^{+2225}_{-670}$	$40264^{+323780}_{-29534}$
Alt.	$-940 \pm 81$	$1.67^{+1.71}_{-1.11}$	$230^{+8}_{-11}$	$4054^{+2487}_{-793}$	$63481^{+480464}_{-47683}$

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

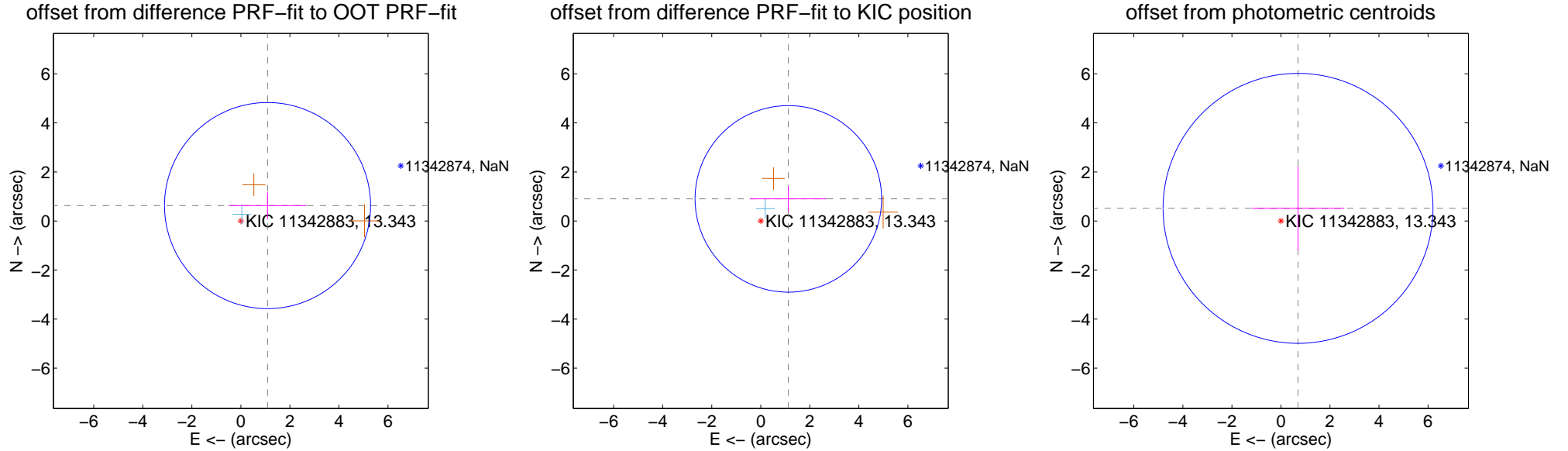
## DV Centroid Data

Supplemental centroid analysis for 011342883-04. Kepler magnitude: 13.34. Transit SNR 2.52

There are 1 quarters with good PRF difference image offsets

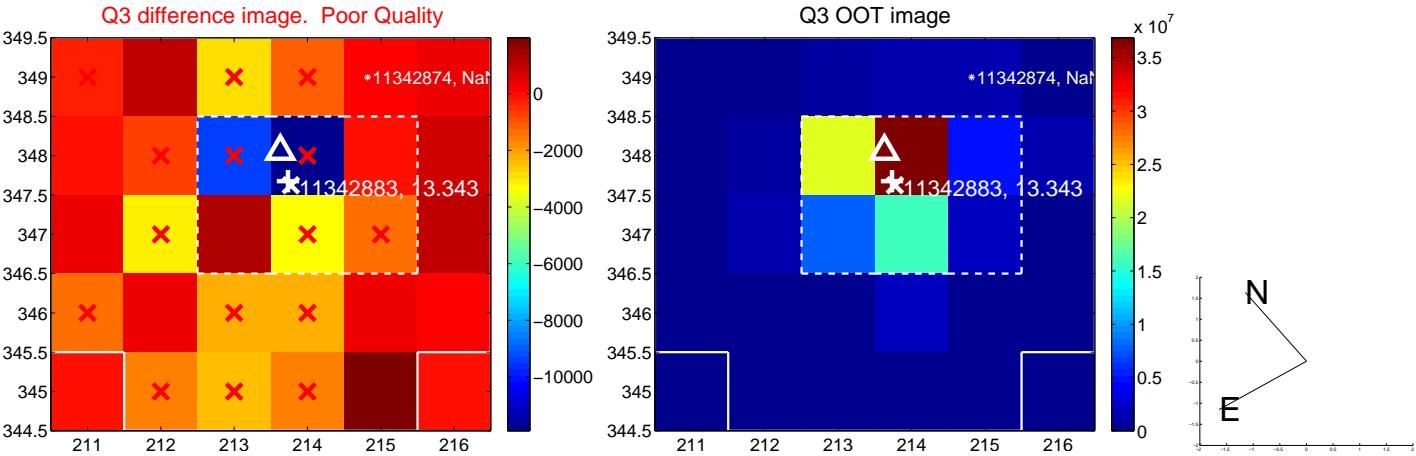
The direct PRF centroid is offset from the target star catalog position by about 0.36 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.256 \pm 1.401$	0.90	$-1.087 \pm 1.586$	$0.628 \pm 0.548$
PRF-fit source offset from KIC position	$1.441 \pm 1.268$	1.14	$-1.124 \pm 1.571$	$0.901 \pm 0.516$
photometric centroid source offset	$0.87 \pm 1.83$	0.47	$-0.70 \pm 1.89$	$0.51 \pm 1.73$



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.

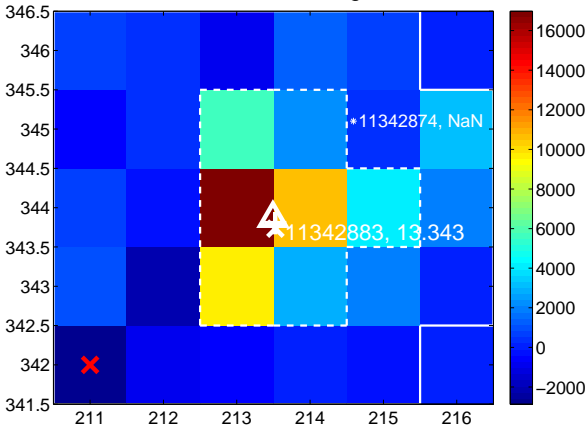
Q5 no difference image



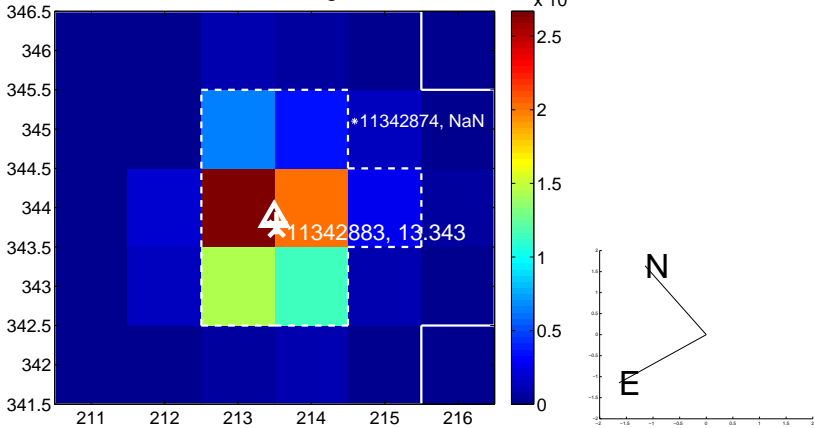
Q5 no OOT image



Q6 difference image



Q6 OOT image



Q7 no difference image



Q7 no OOT image



Q8 no difference image

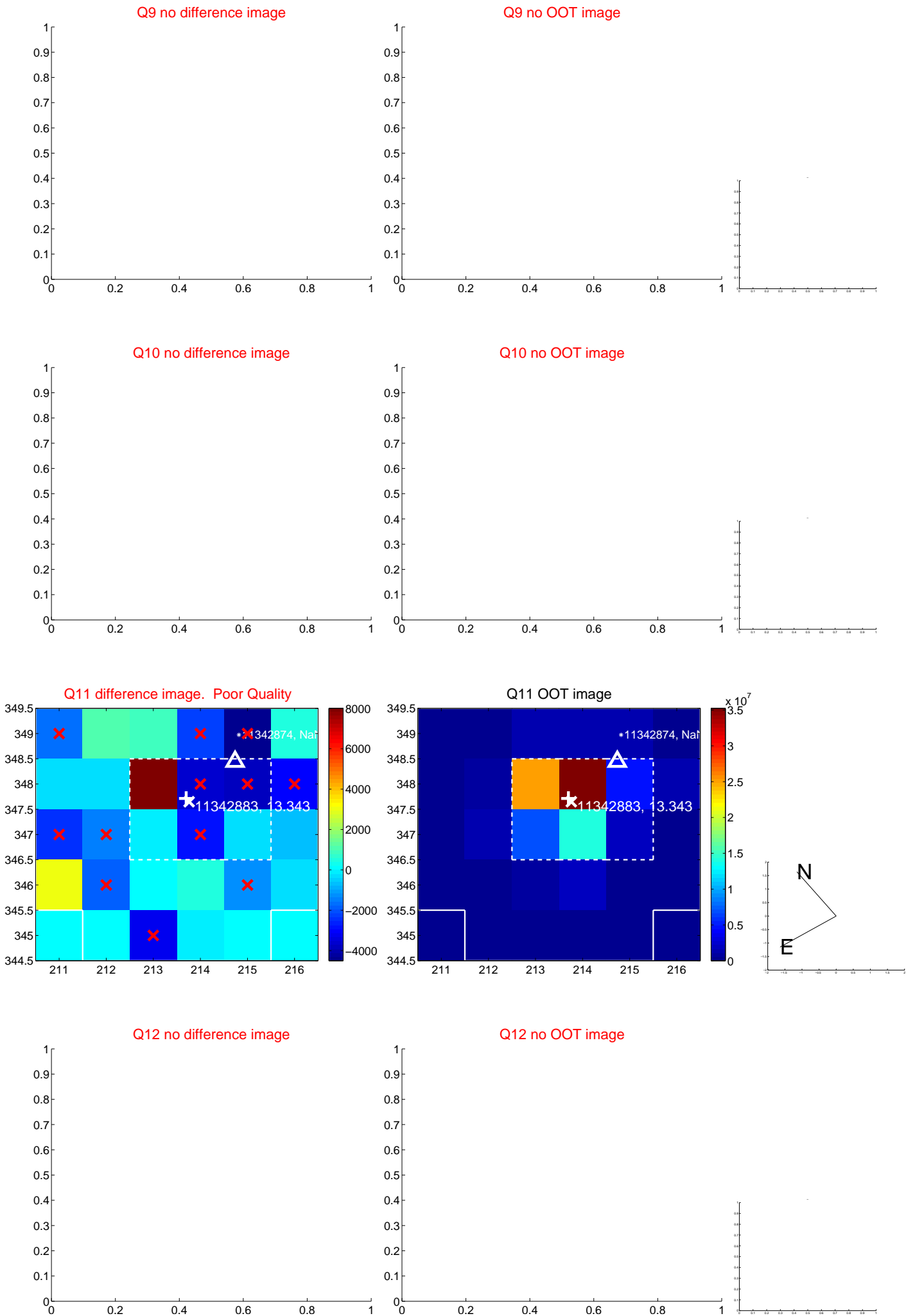


Q8 no OOT image

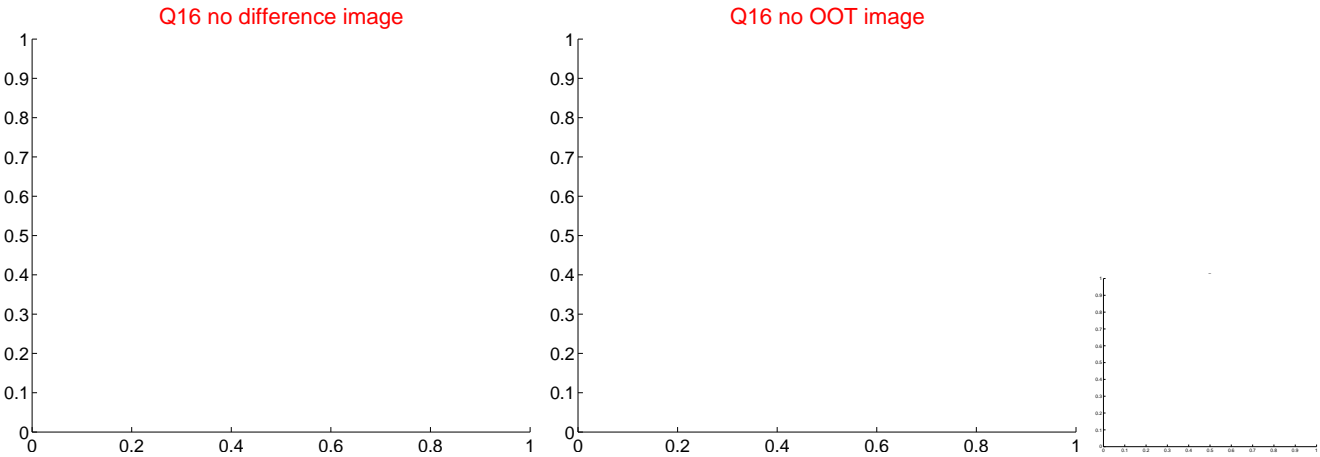
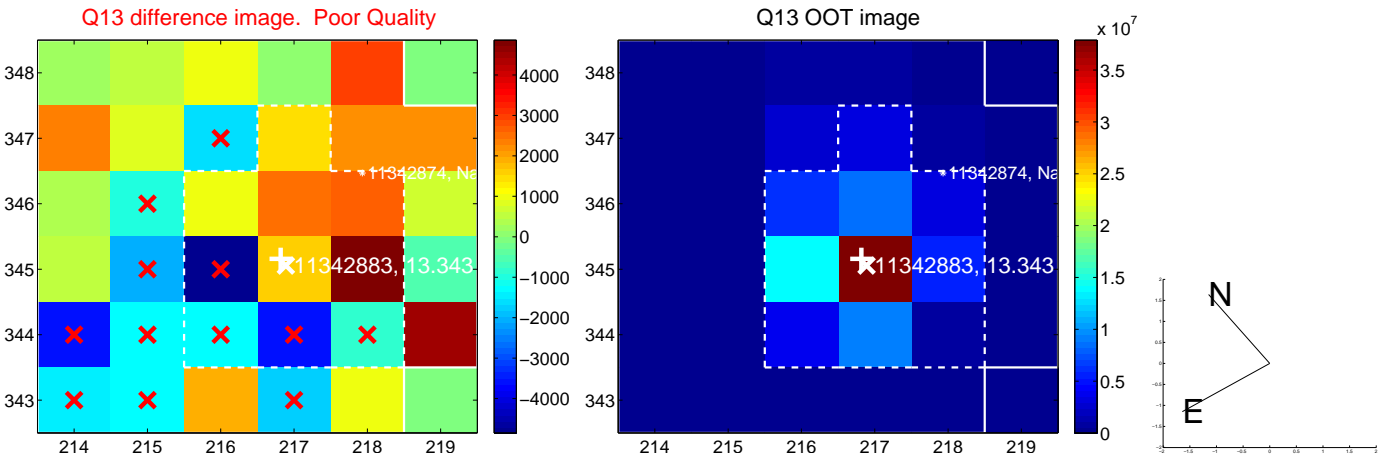




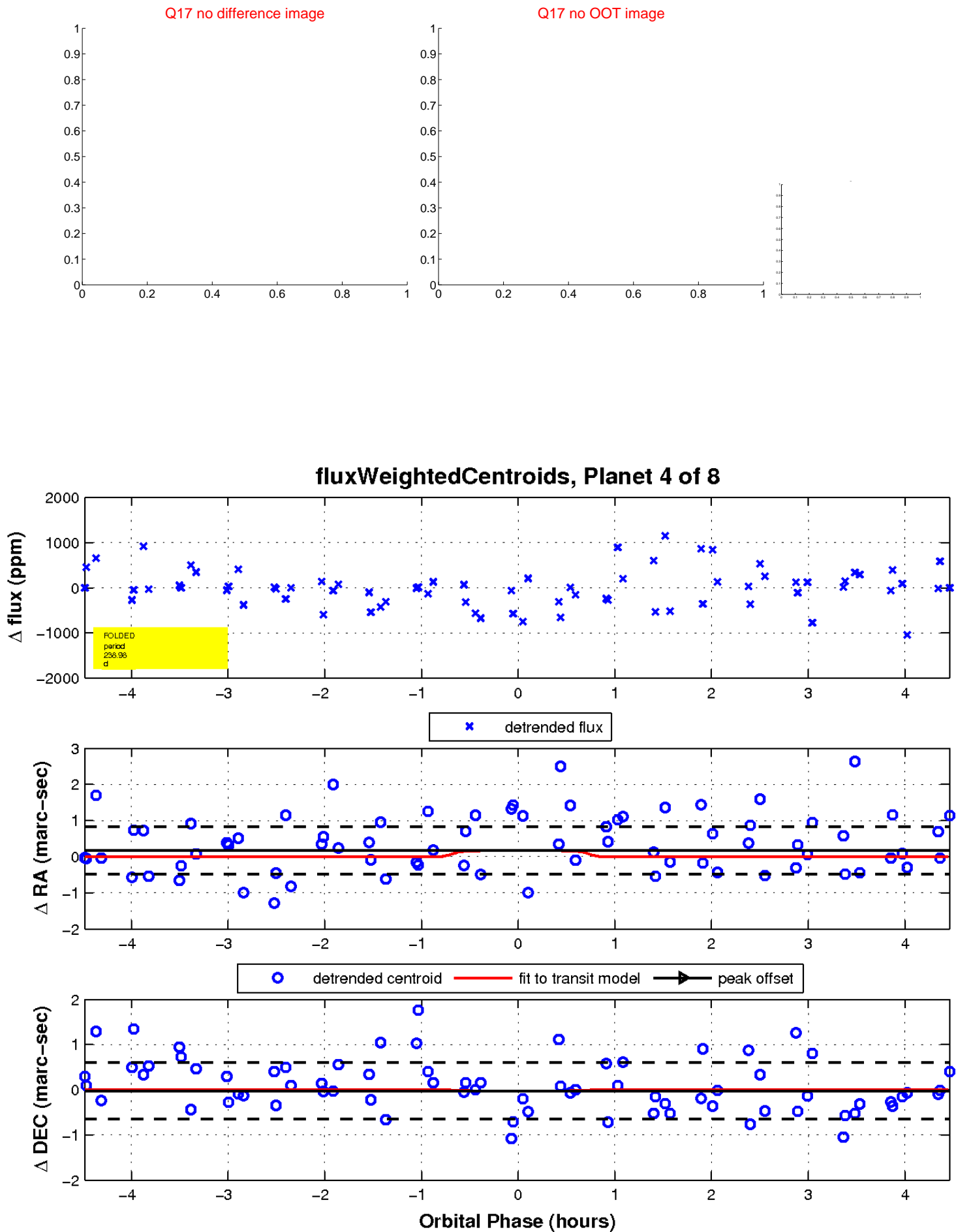
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

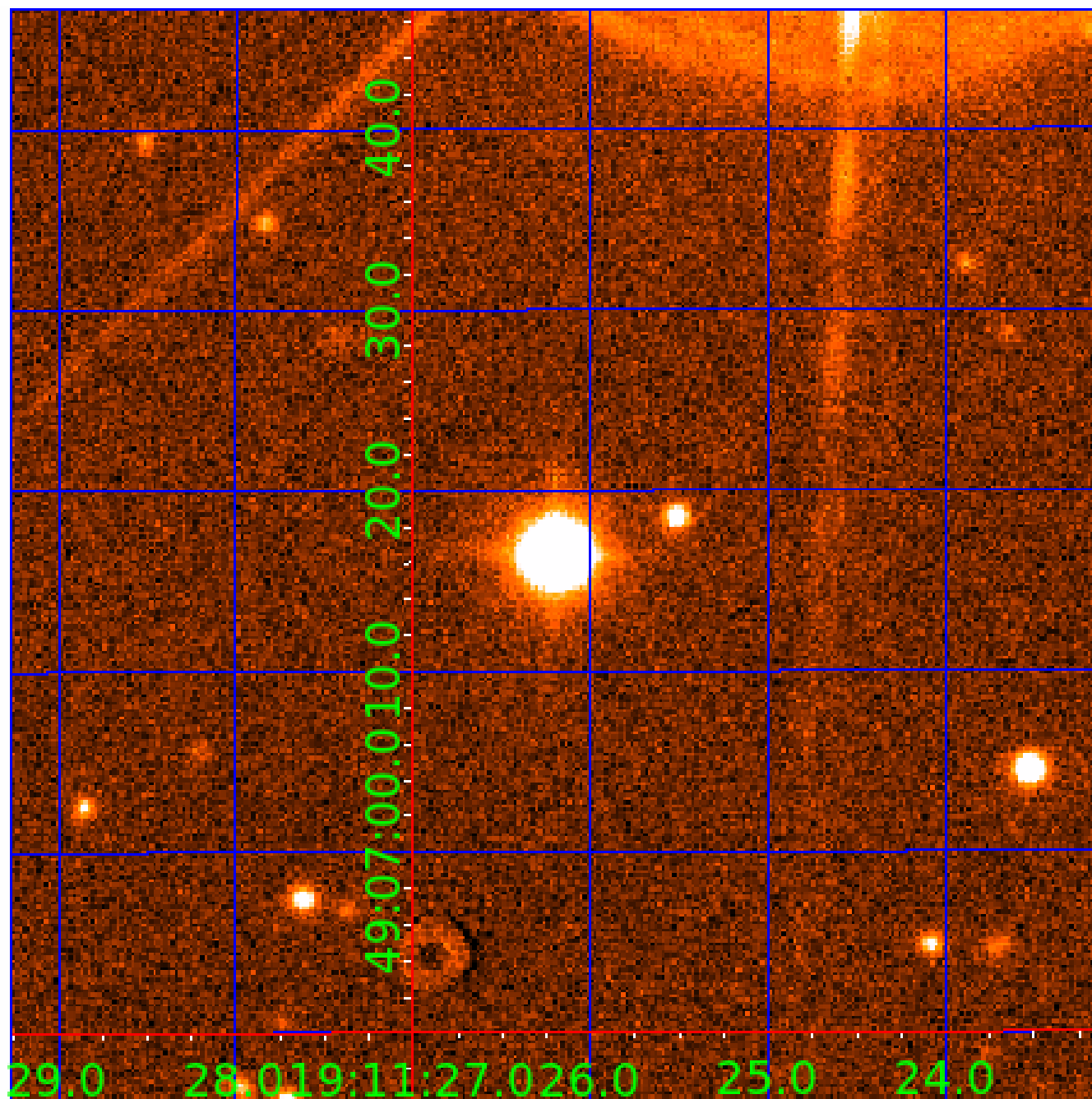


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination



# KIC 011342883

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011342883-01	OBS	No	375.212049	209.607708	1282.1	4.623	14.5	9.3	0.45	4298	1.64	0.10
011342883-03	OBS	No	323.640940	168.282313	1238.0	2.353	15.8	9.2	0.45	4298	1.61	0.12
011342883-04	OBS	No	238.977295	302.928400	342.0	1.500	15.8	2.5	0.45	4298	0.90	0.18
011342883-05	OBS	No	333.460106	229.281070	1189.4	12.132	12.8	7.7	0.45	4298	1.65	0.12
011342883-06	OBS	No	212.100925	302.529031	564.2	2.652	13.5	4.8	0.45	4298	1.13	0.21
011342883-07	OBS	No	198.724563	229.079318	1216.3	3.428	10.9	9.6	0.45	4298	1.57	0.23
011342883-08	OBS	No	428.158005	186.739501	343.9	9.000	11.6	-1.0	0.45	4298	0.83	0.08

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011342883-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV
011342883-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
011342883-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011342883-05	OBS	FP	0.00	1	0	0	0	LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
011342883-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
011342883-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS
011342883-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS

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

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

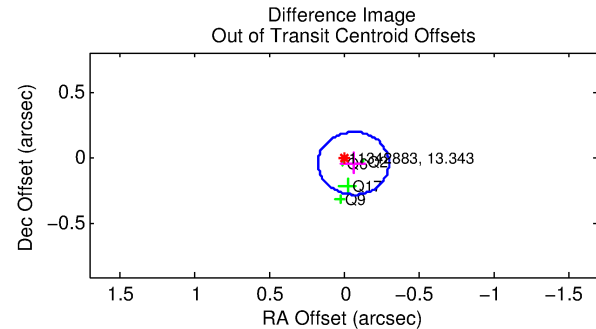
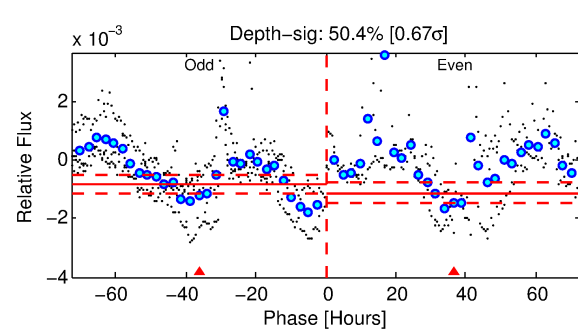
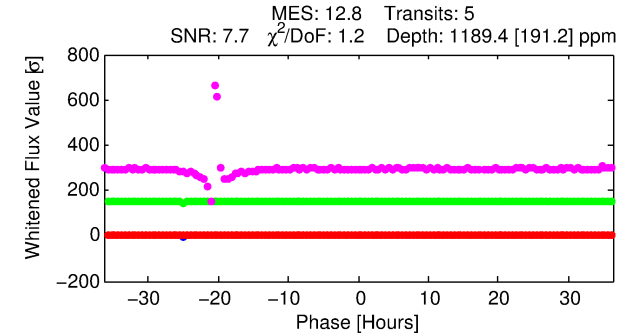
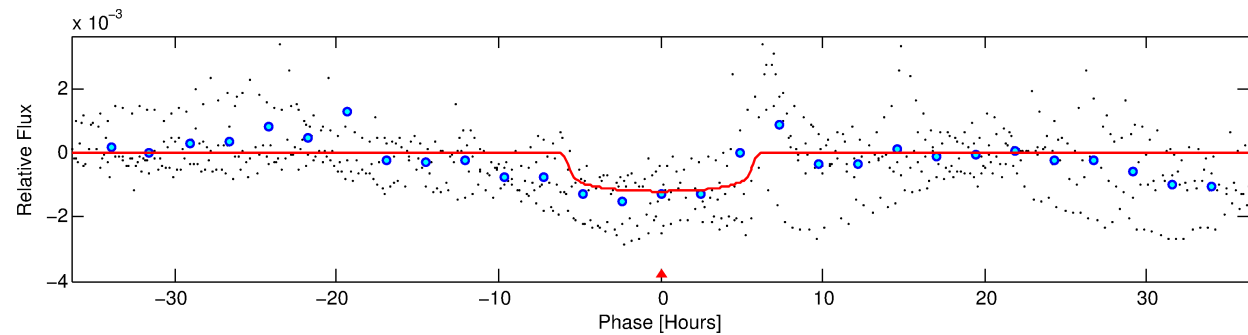
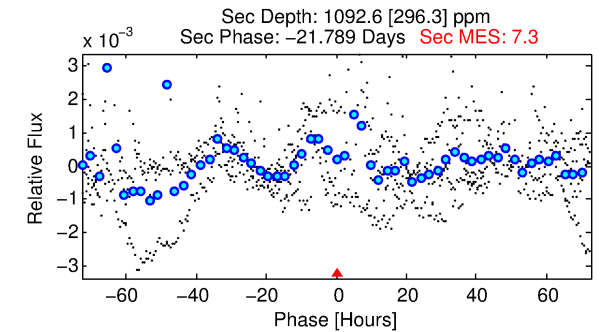
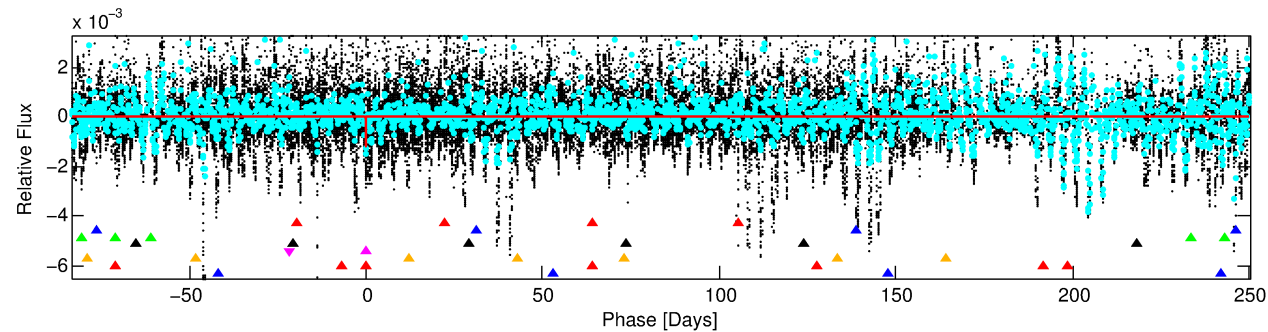
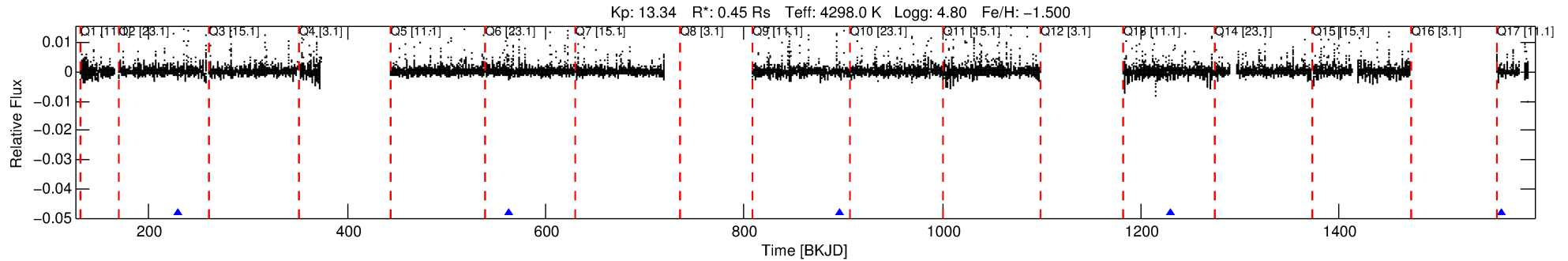
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 011342883-05

No Significant Match Found

# DV One-Page Summary

KIC: 11342883 Candidate: 5 of 8 Period: 333.460 d



## DV Fit Results:

Period = 333.46011 [0.00300] d  
Epoch = 229.2811 [0.0076] BKJD  
Rp/R\* = 0.0339 [0.0037]  
a/R\* = 157.46 [47.11]  
b = 0.71 [0.21]  
Seff = 0.11 [0.02]  
Teff = 148 [8] K  
Rp = 1.65 [0.30] Re  
a = 0.7293 [0.0840] AU  
Ag = 116932.96 [44856.97] [2.61 $\sigma$ ]  
**Teffp = 4244 [398] K [10.28 $\sigma$ ]**

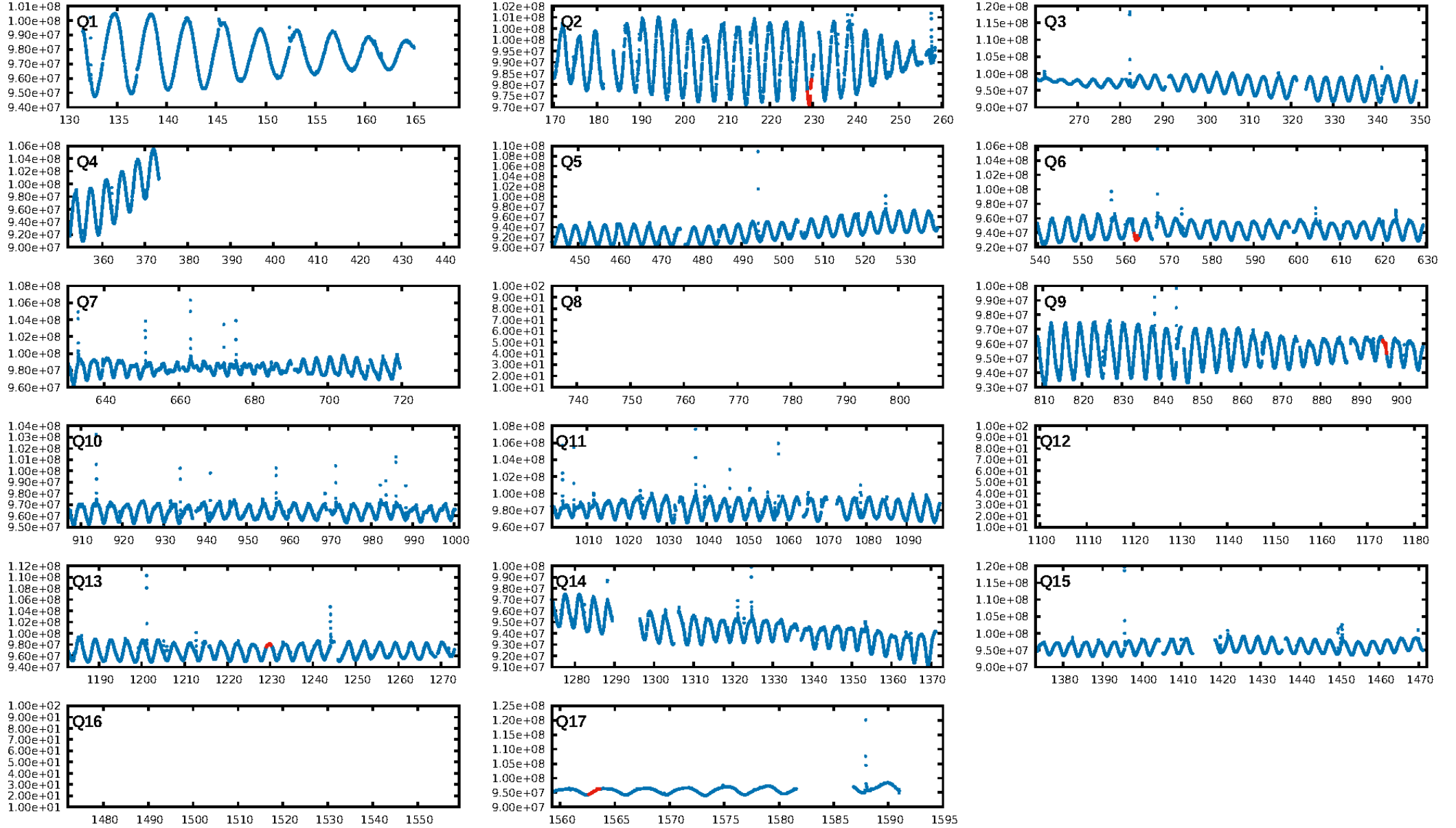
## DV Diagnostic Results:

ShortPeriod-sig: 100.0% [19.07 $\sigma$ ]  
LongPeriod-sig: 100.0% [77.18 $\sigma$ ]  
ModelChiSquare2-sig: 1.4%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [4/4]  
**GhostDiagnostic-chr: 0.3361**  
**Centroid-sig: 0.1%**  
Centroid-so: 0.468 arcsec [1.32 $\sigma$ ]  
OotOffset-rm: 0.078 arcsec [0.98 $\sigma$ ]  
**KicOffset-rm: 0.247 arcsec [3.03 $\sigma$ ]**  
OotOffset-st: 2/0/0/2 [4]  
KicOffset-st: 2/0/0/2 [4]  
DiffImageQuality-fgm: 0.50 [2/4]  
DiffImageOverlap-fno: 0.75 [3/4]

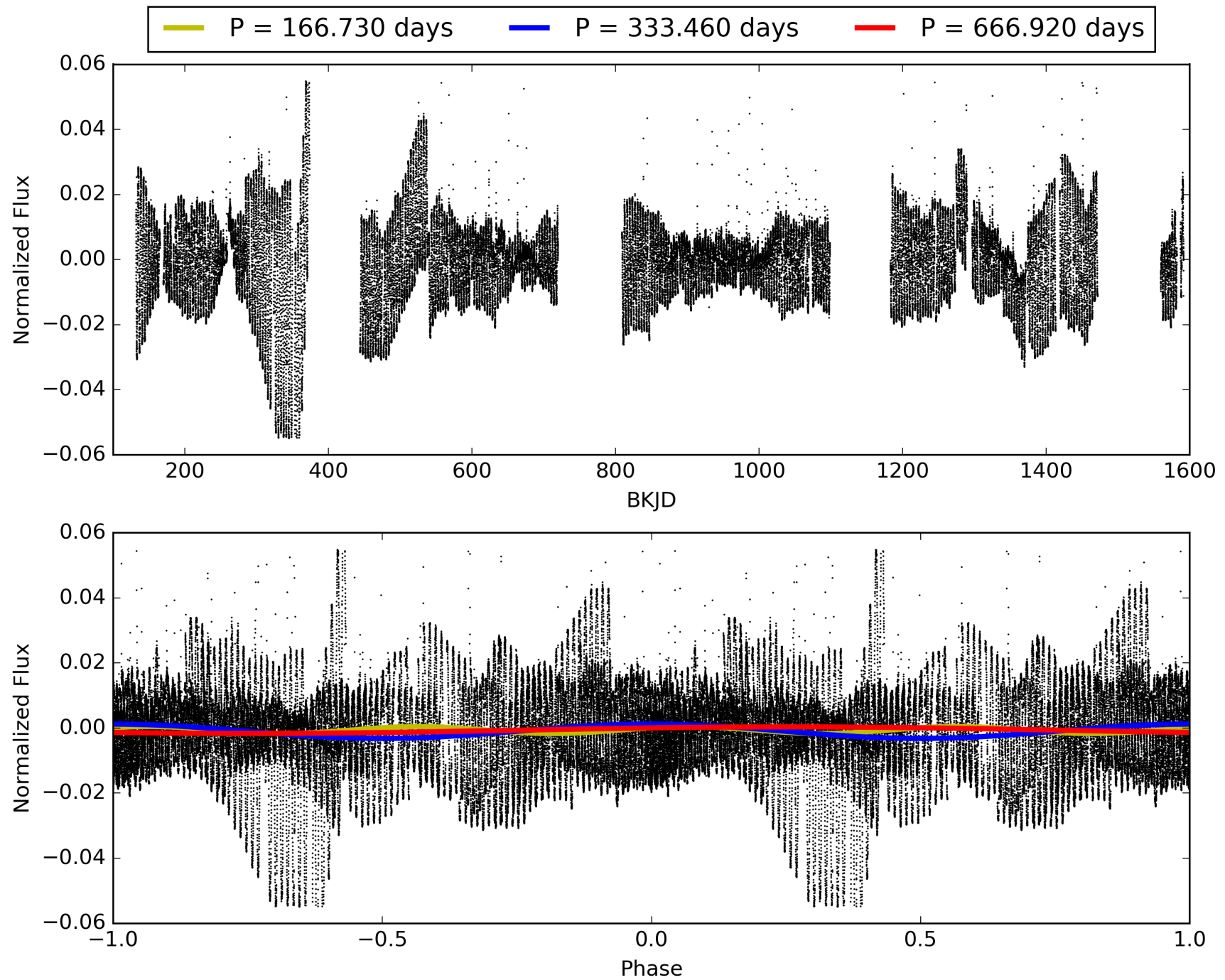
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:02:27 Z

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

# TCE 011342883-05, PDC Light Curves



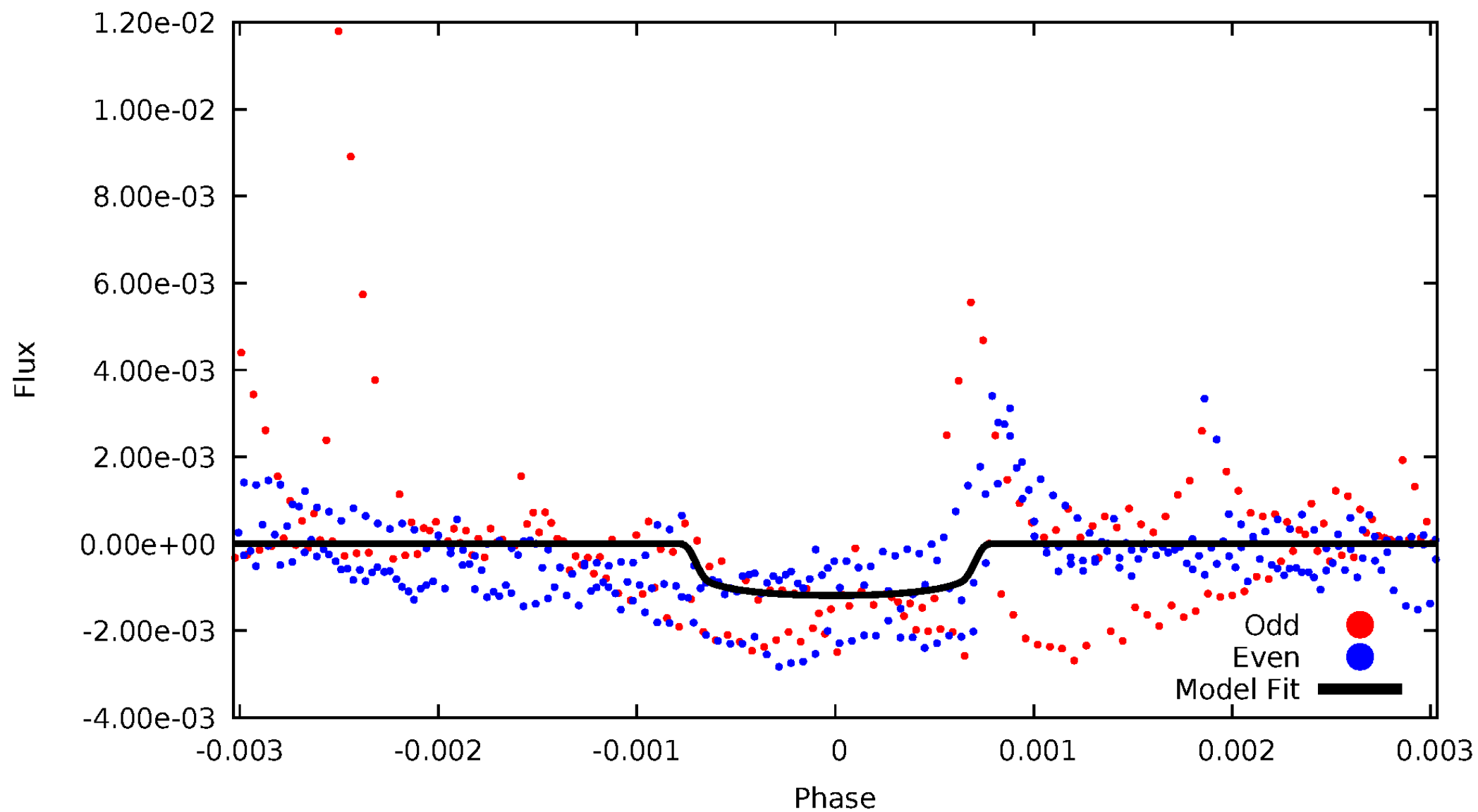
TCE 011342883-05





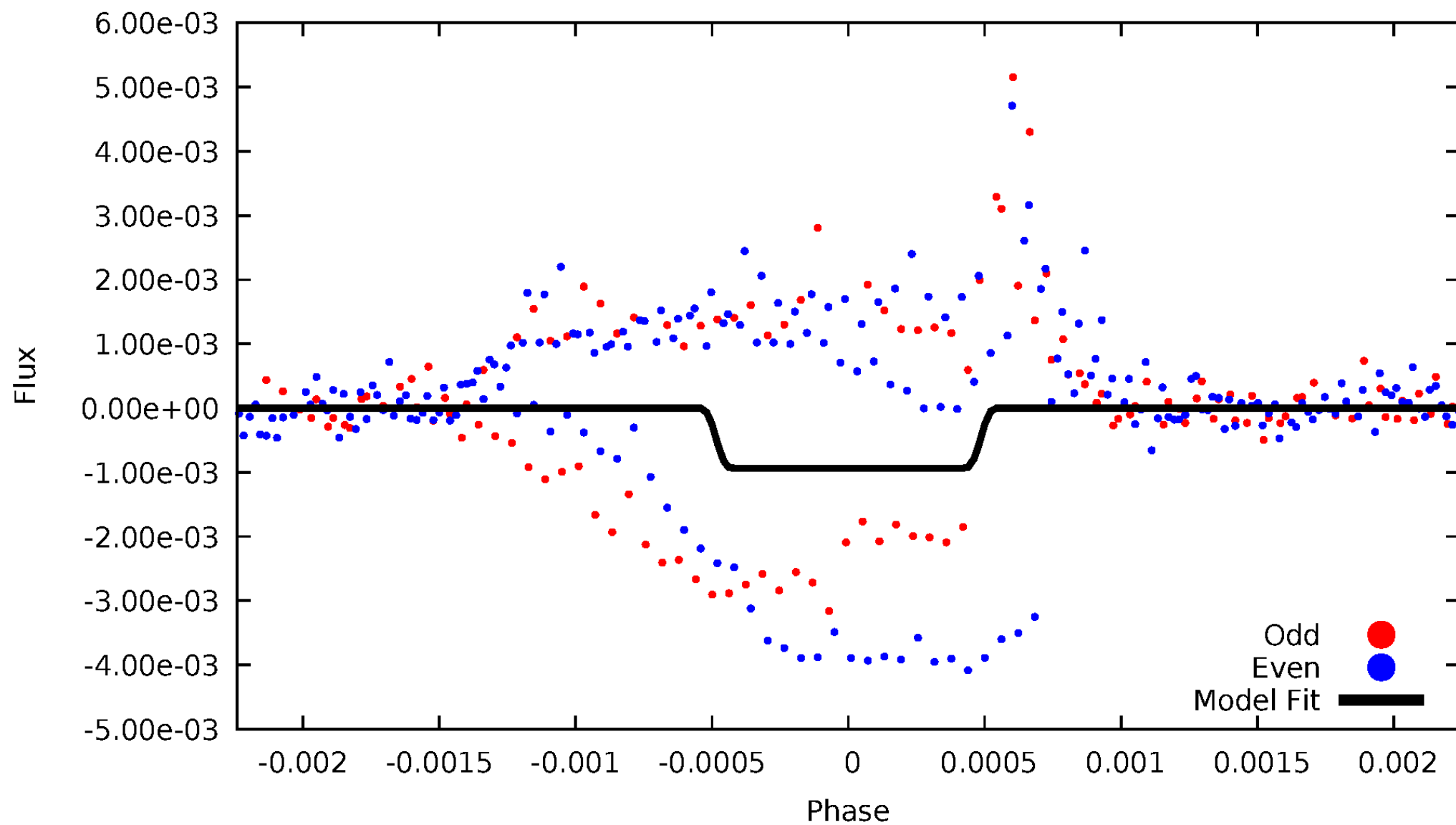
# DV Odd/Even

TCE 011342883-05



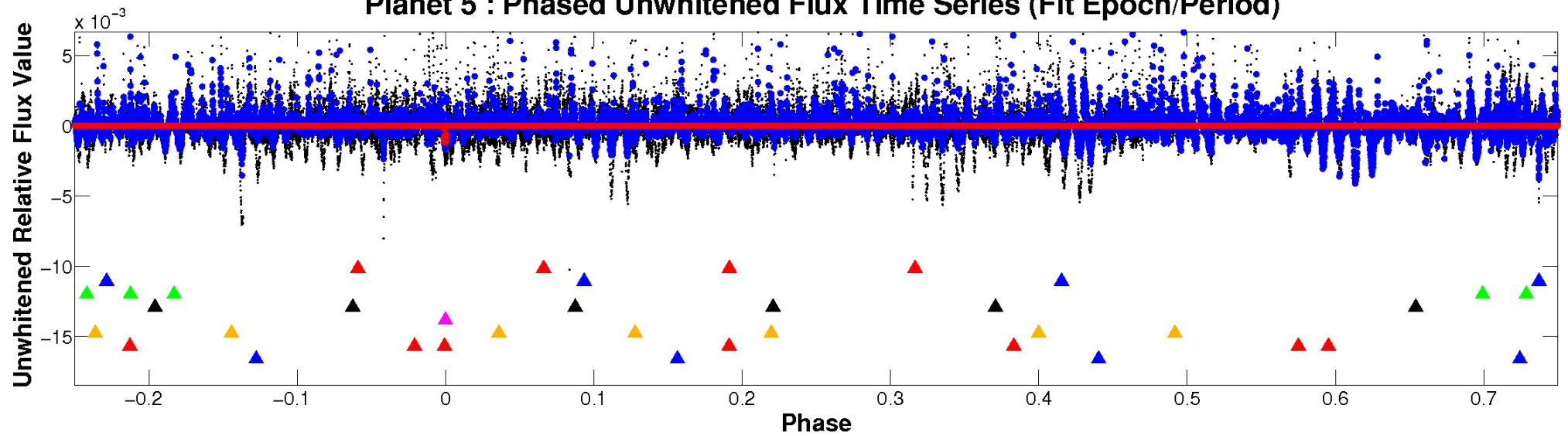
# ALT Odd/Even

TCE 011342883-05

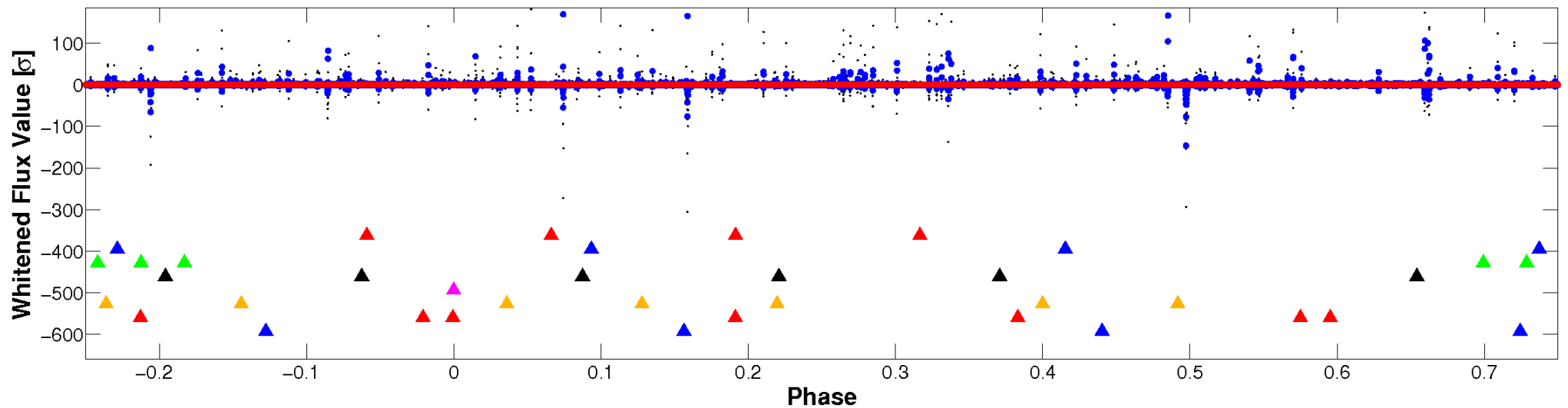


# Non-Whitened Vs. Whitened Light Curve

## Planet 5 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

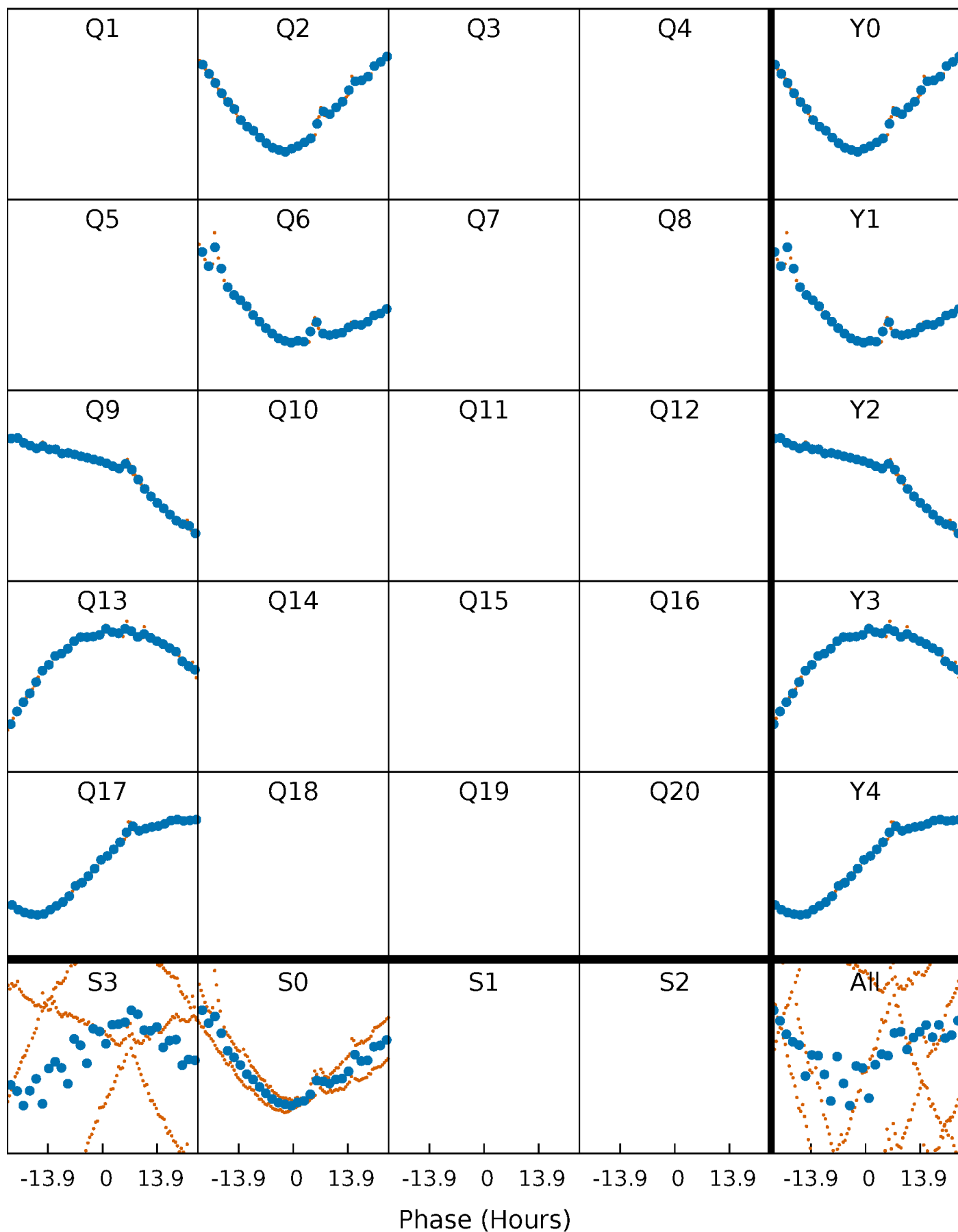


## Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



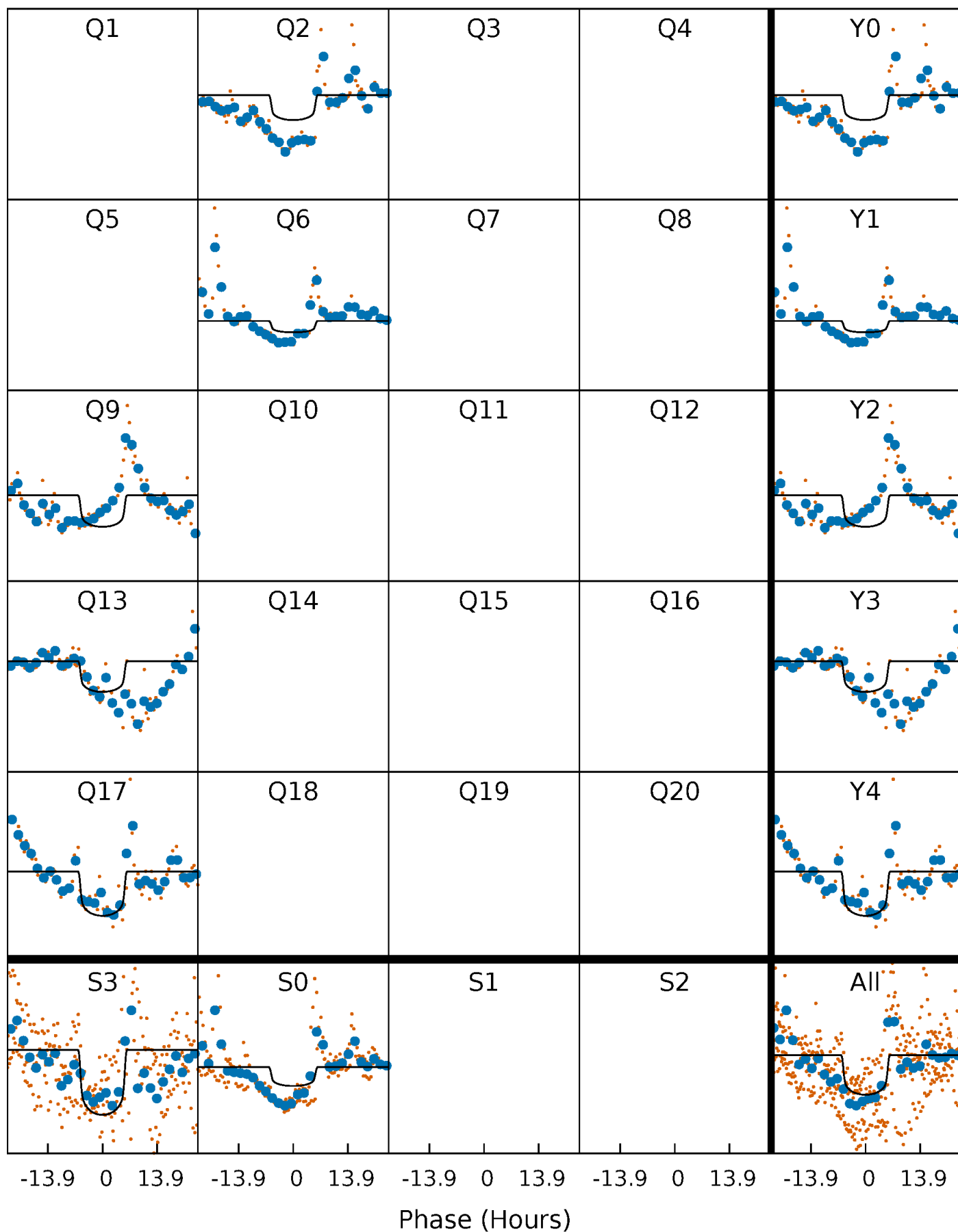
# PDC Quarter-Phased Transit Curves

TCE 011342883-05 P=333.460106 Days  $T_0=229.281070$  (BKJD)



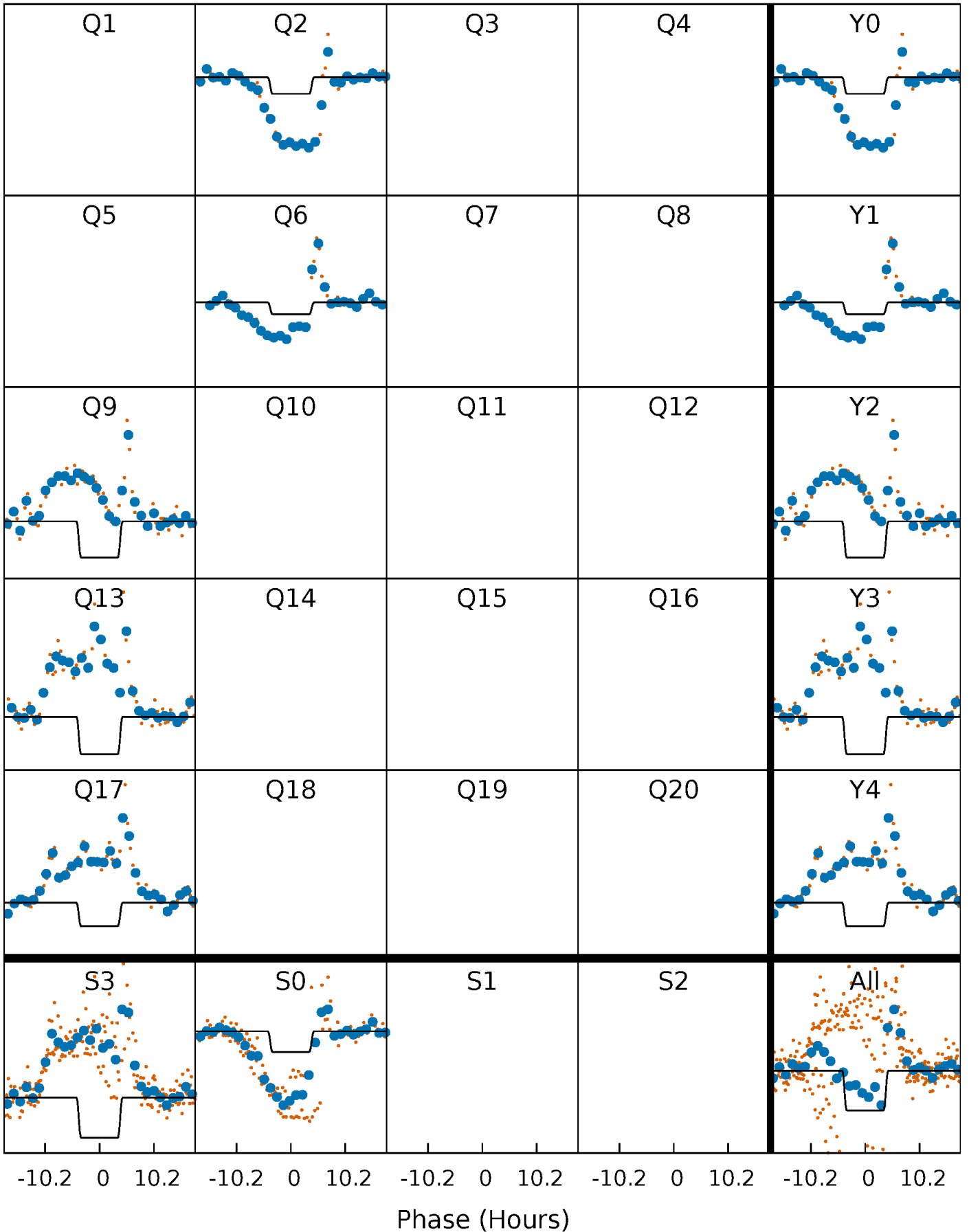
# DV Quarter-Phased Transit Curves

TCE 011342883-05     $P=333.460106$  Days     $T_0=229.281070$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

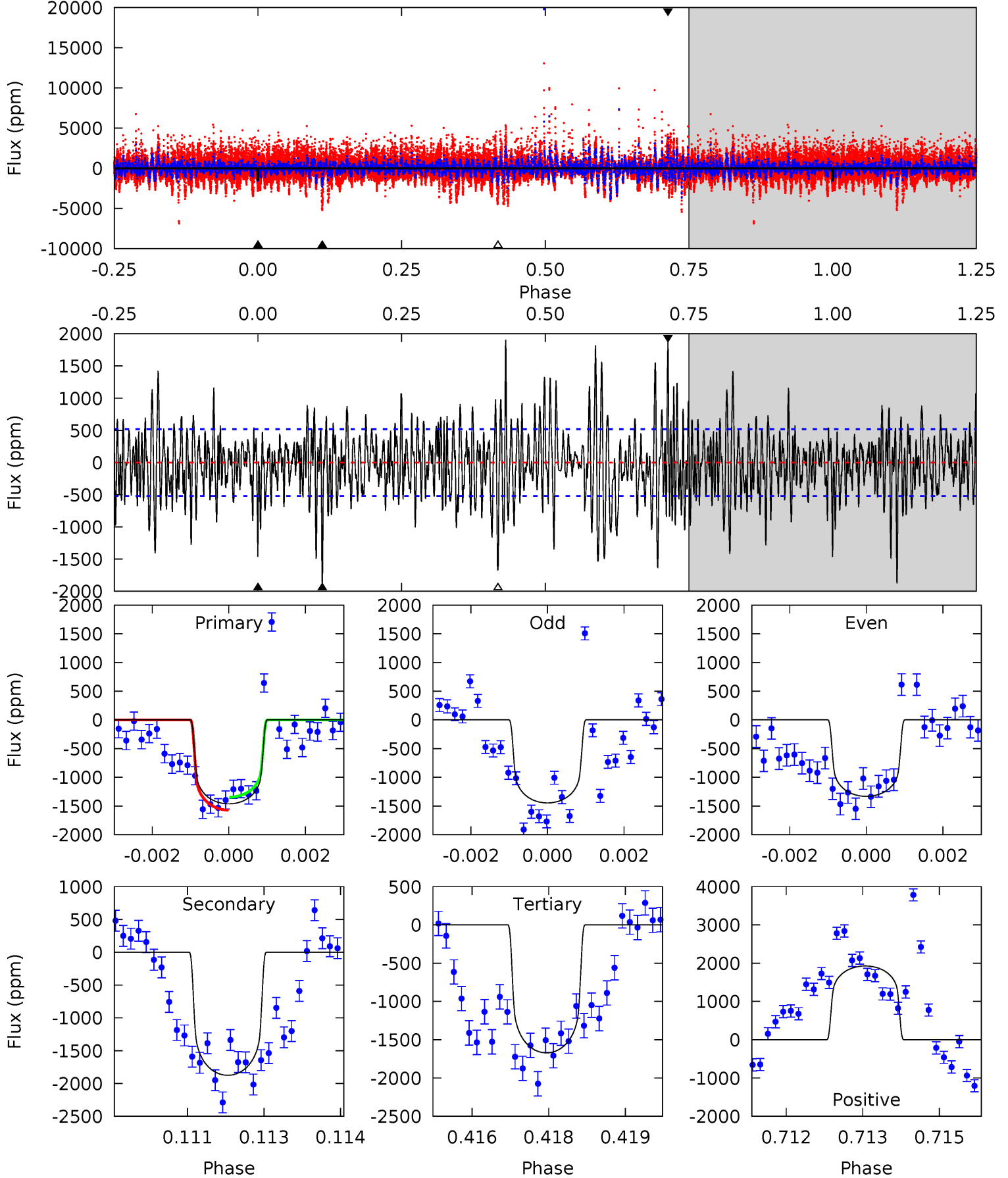
TCE 011342883-05     $P=333.482510$  Days     $T_0=229.285094$  (BKJD)



# DV Model-Shift Uniqueness Test

011342883-05, P = 333.460106 Days, E = 229.281070 Days

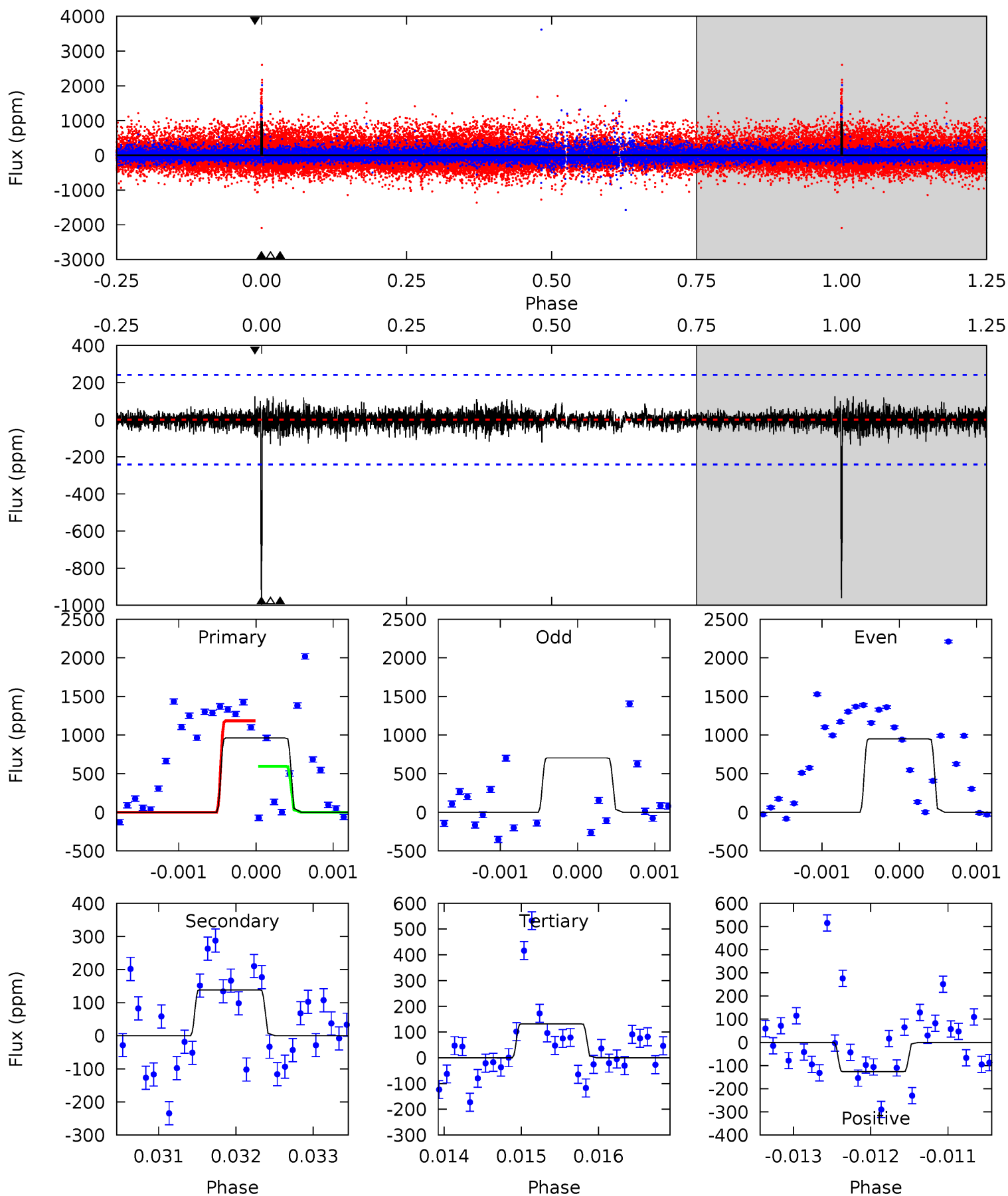
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.1	19.4	17.3	19.9	5.37	3.16	4.88	-2.16	-4.80	2.10	-0.54	0.30	0.98	0.51	1.17



# Alt Model-Shift Uniqueness Test

011342883-05, P = 333.482510 Days, E = 229.285094 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
21.6	3.12	2.96	2.85	5.44	3.27	0.68	18.7	18.8	0.16	0.27	3.24	-0.58	0.12	6.44





### Stellar Parameters For KIC 011342883

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M$ ( $M_{\odot}$ )	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$4298^{+120}_{-150}$	$4.805^{+0.084}_{-0.039}$	$-1.500^{+0.250}_{-0.300}$	$0.447^{+0.037}_{-0.064}$	$0.464^{+0.038}_{-0.052}$	$7.339^{+3.124}_{-1.192}$
	+3%/-3%	+2%/-1%	+17%/-20%	+8%/-14%	+8%/-11%	+43%/-16%
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 011342883-05 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-1875 \pm 97$	$1.63^{+0.20}_{-0.20}$	$206^{+8}_{-8}$	$4729^{+286}_{-264}$	$208822^{+57872}_{-44833}$
Alt.	$-139 \pm 44$	$1.47^{+0.19}_{-0.18}$	$206^{+8}_{-8}$	$3111^{+220}_{-204}$	$18256^{+9225}_{-6849}$

$T_{max}$  = 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

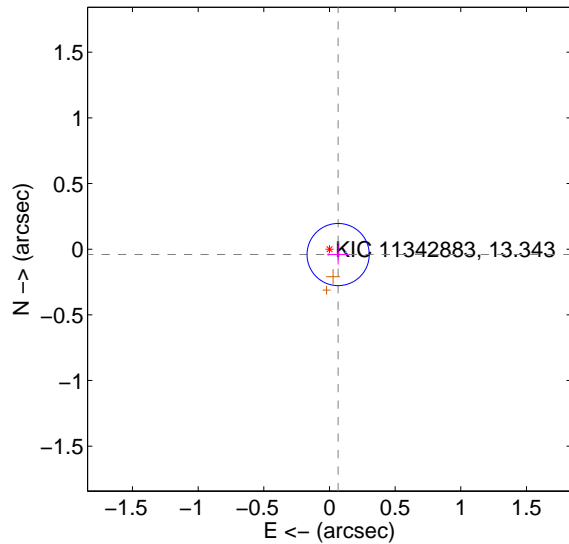
Supplemental centroid analysis for 011342883-05. Kepler magnitude: 13.34. Transit SNR 7.70

There are 2 quarters with good PRF difference image offsets

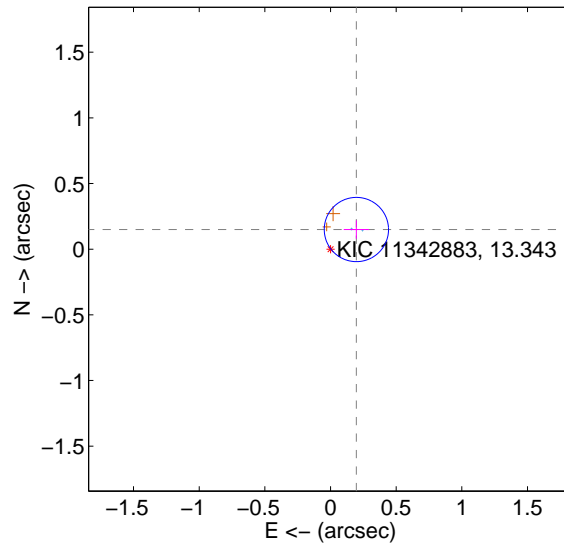
The direct PRF centroid is offset from the target star catalog position by about 0.48 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.078 \pm 0.079$	0.98	$-0.066 \pm 0.080$	$-0.041 \pm 0.076$
PRF-fit source offset from KIC position	$0.247 \pm 0.082$	3.03	$-0.197 \pm 0.097$	$0.150 \pm 0.070$
photometric centroid source offset	$0.47 \pm 0.36$	1.32	$0.46 \pm 0.36$	$-0.10 \pm 0.33$

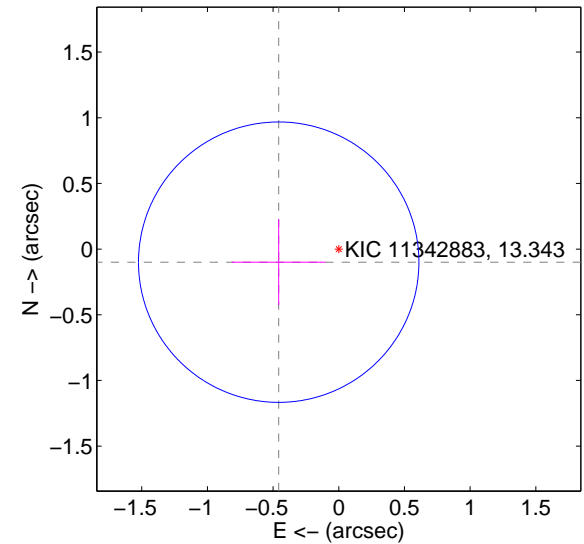
offset from difference PRF-fit to OOT PRF-fit



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.

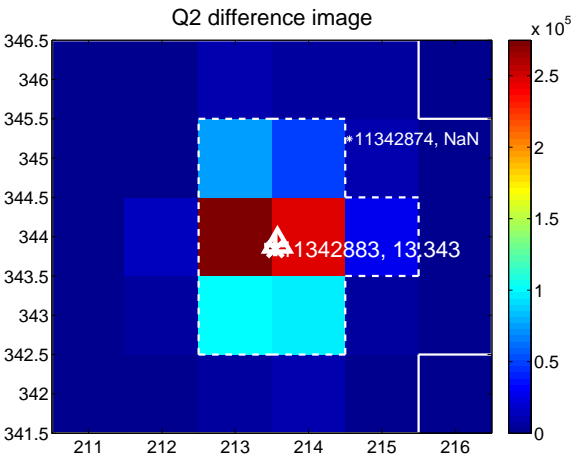
Q1 no difference image



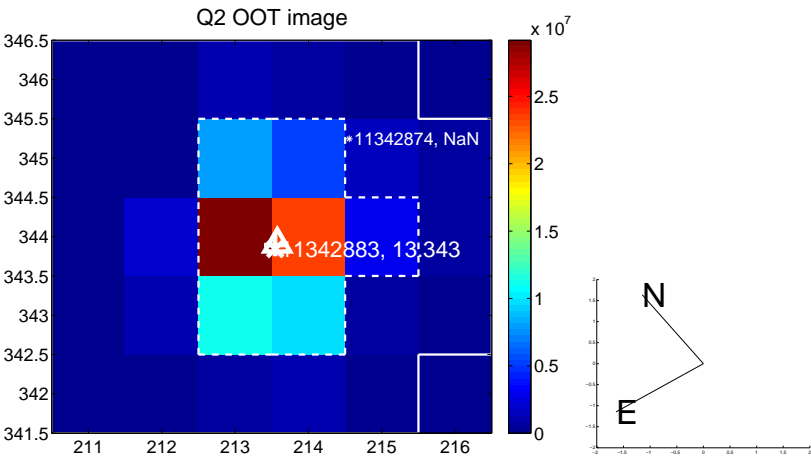
Q1 no OOT image



Q2 difference image



Q2 OOT image



Q3 no difference image



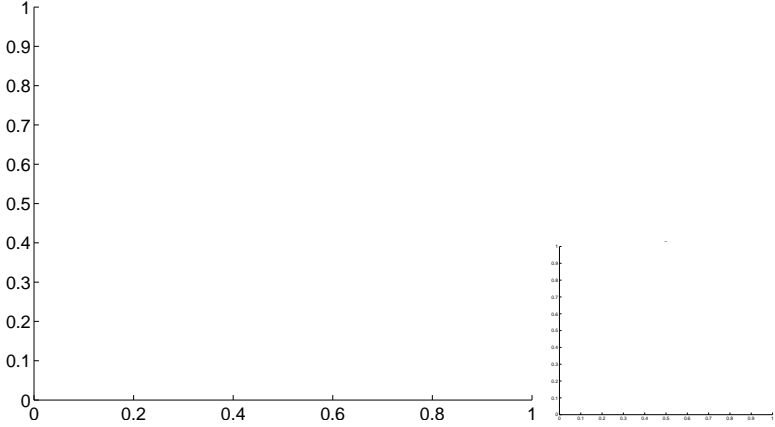
Q3 no OOT image



Q4 no difference image



Q4 no OOT image



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

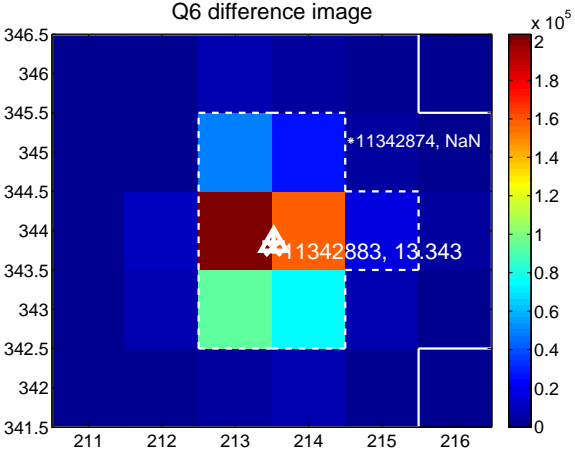
Q5 no difference image



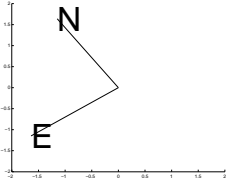
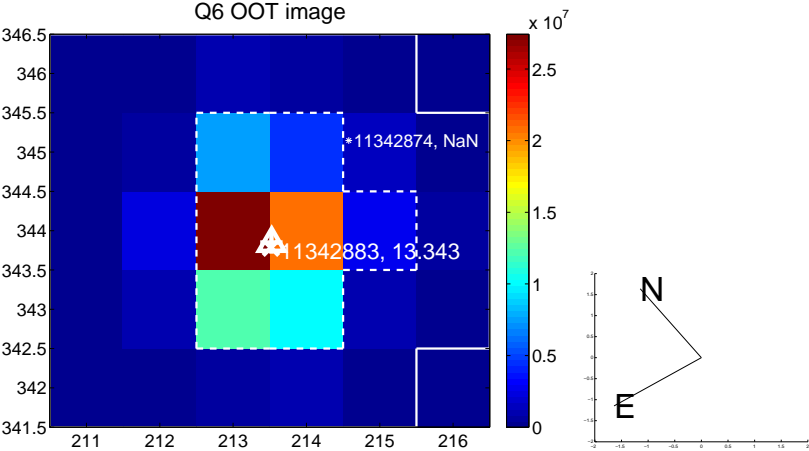
Q5 no OOT image



Q6 difference image



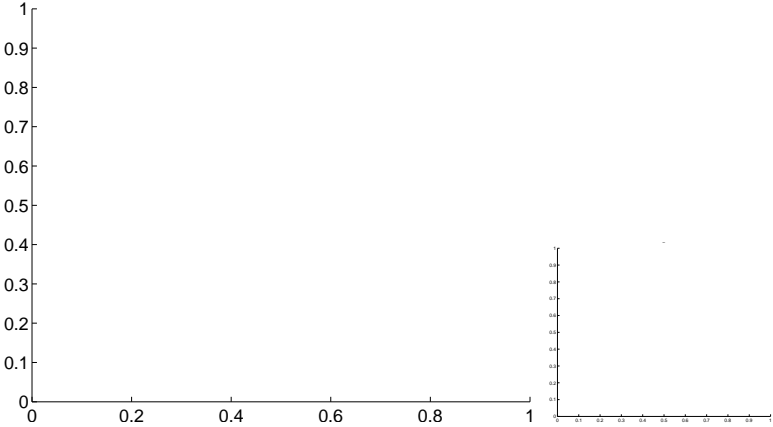
Q6 OOT image



Q7 no difference image



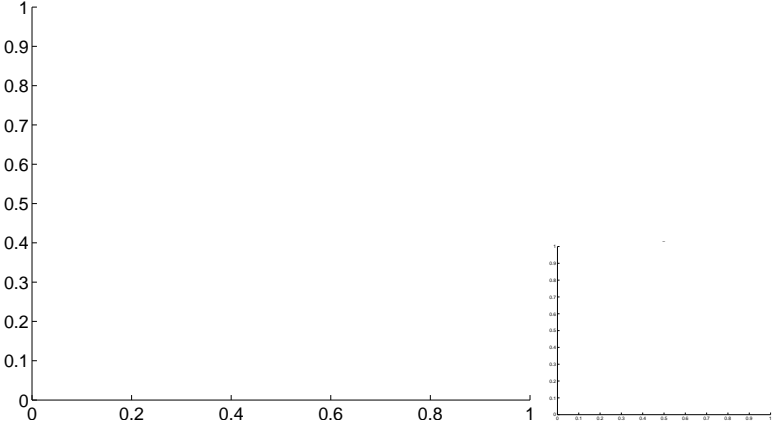
Q7 no OOT image



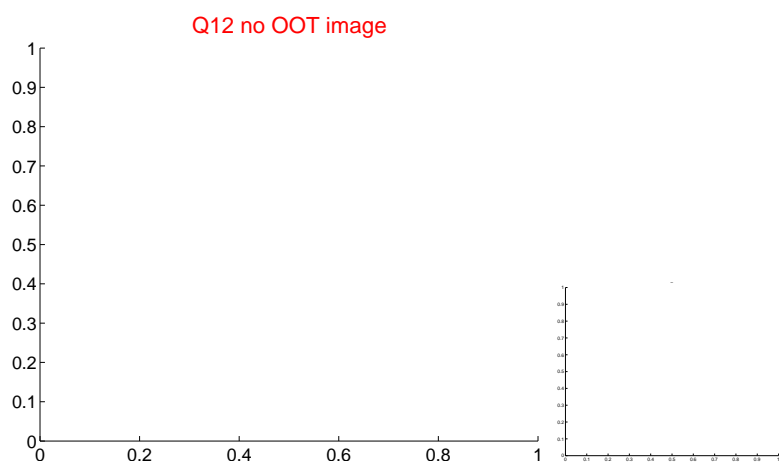
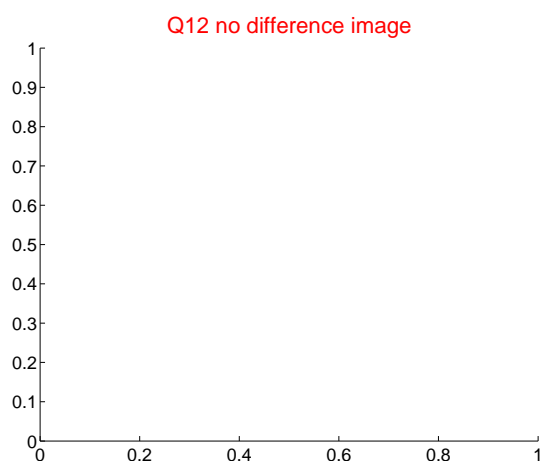
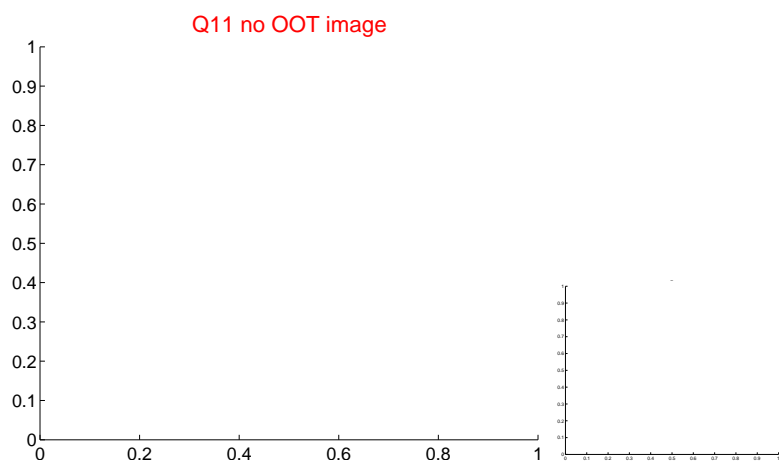
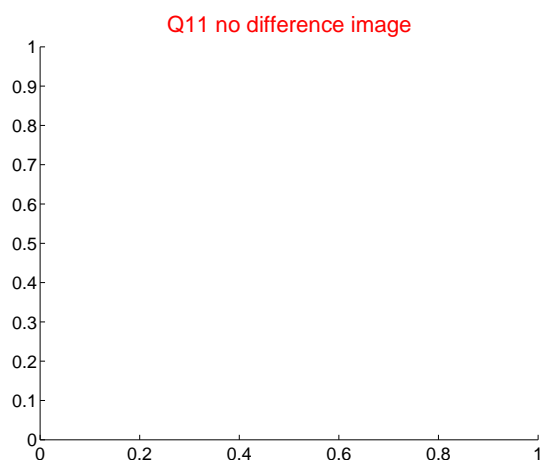
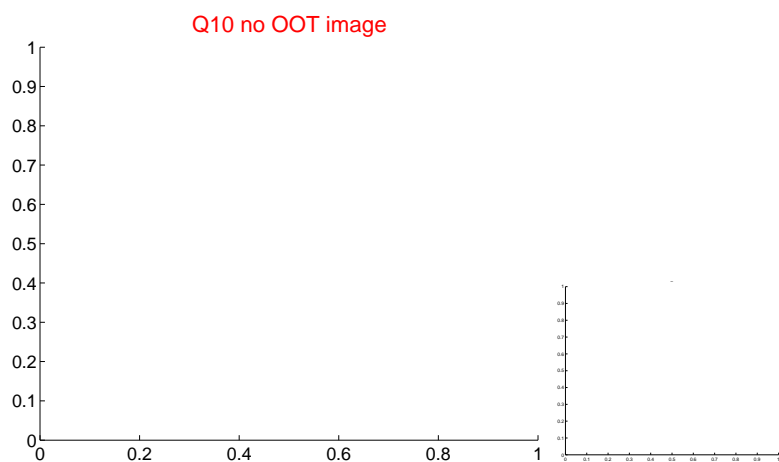
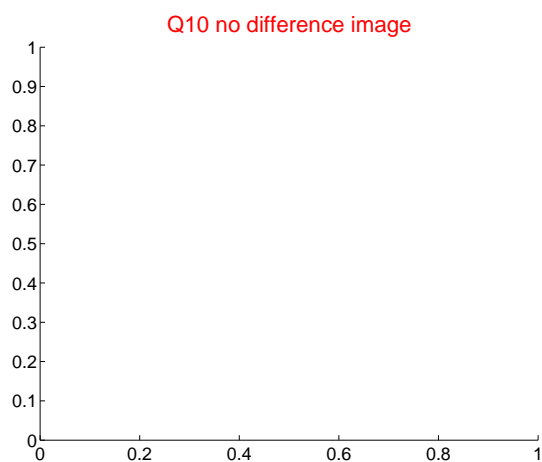
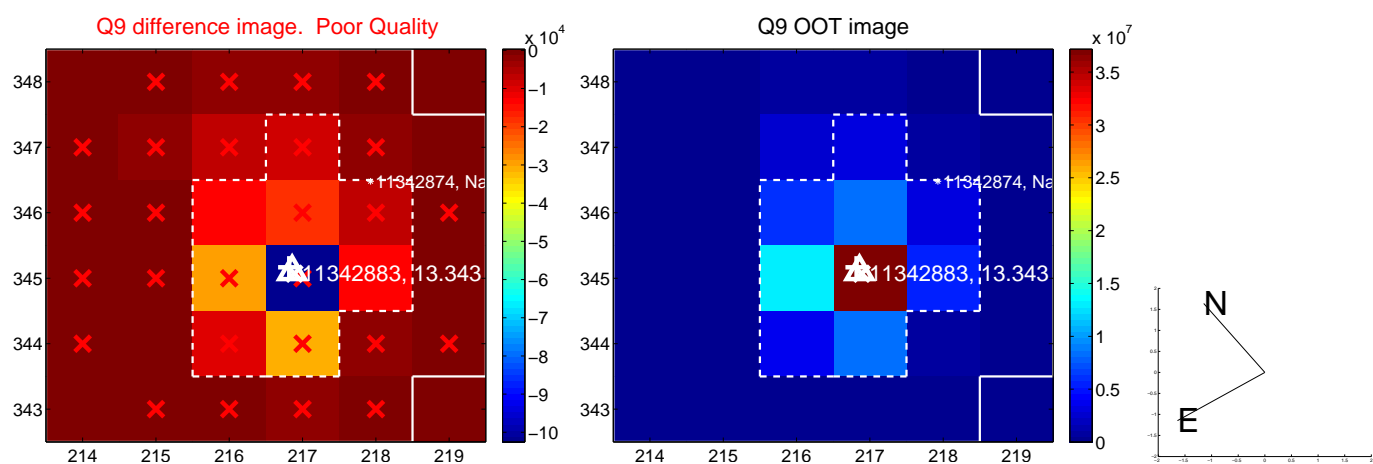
Q8 no difference image



Q8 no OOT image



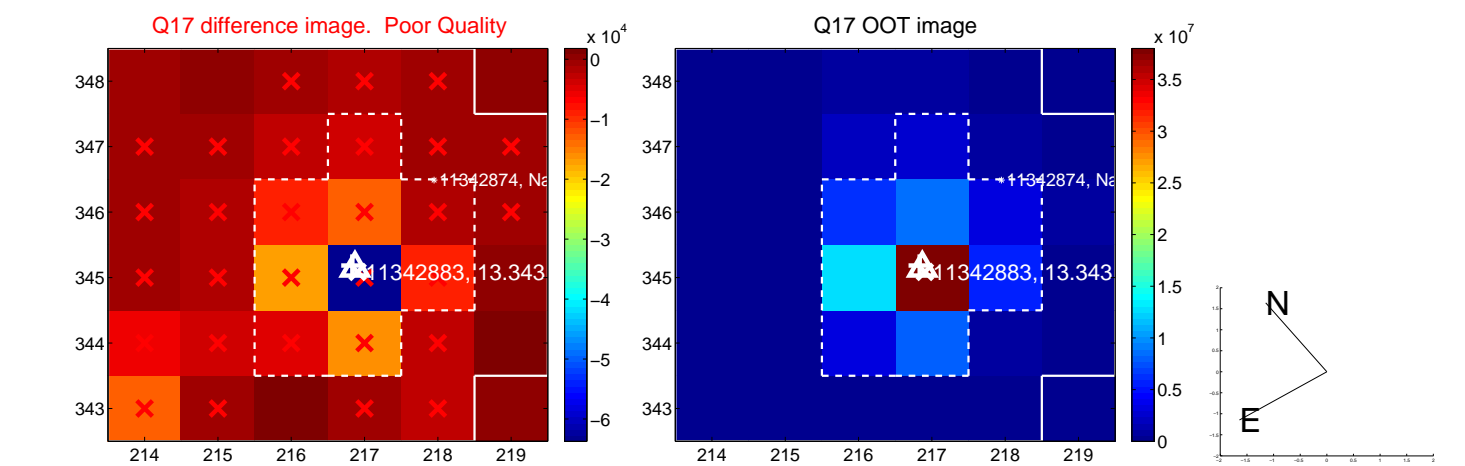
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value



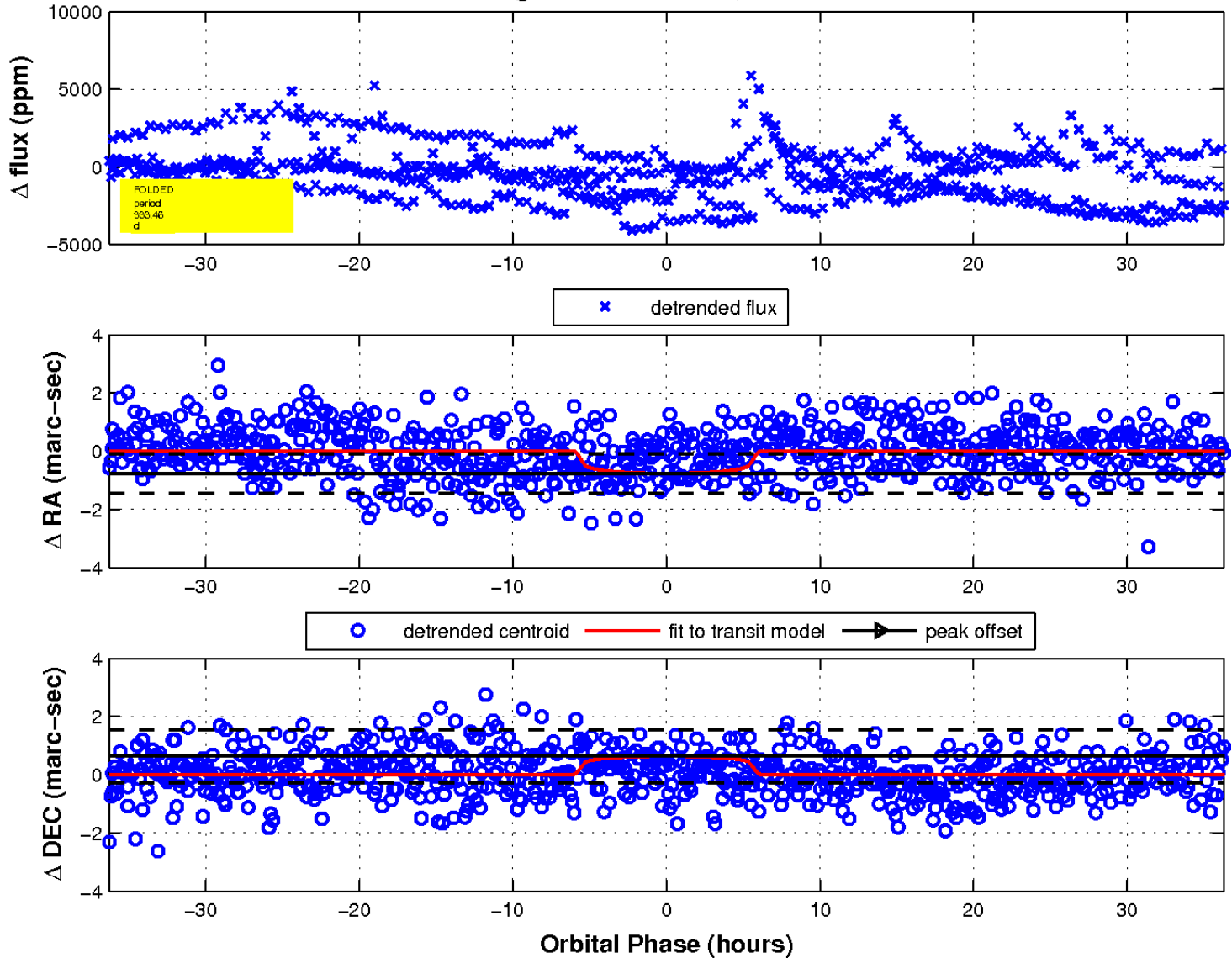
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

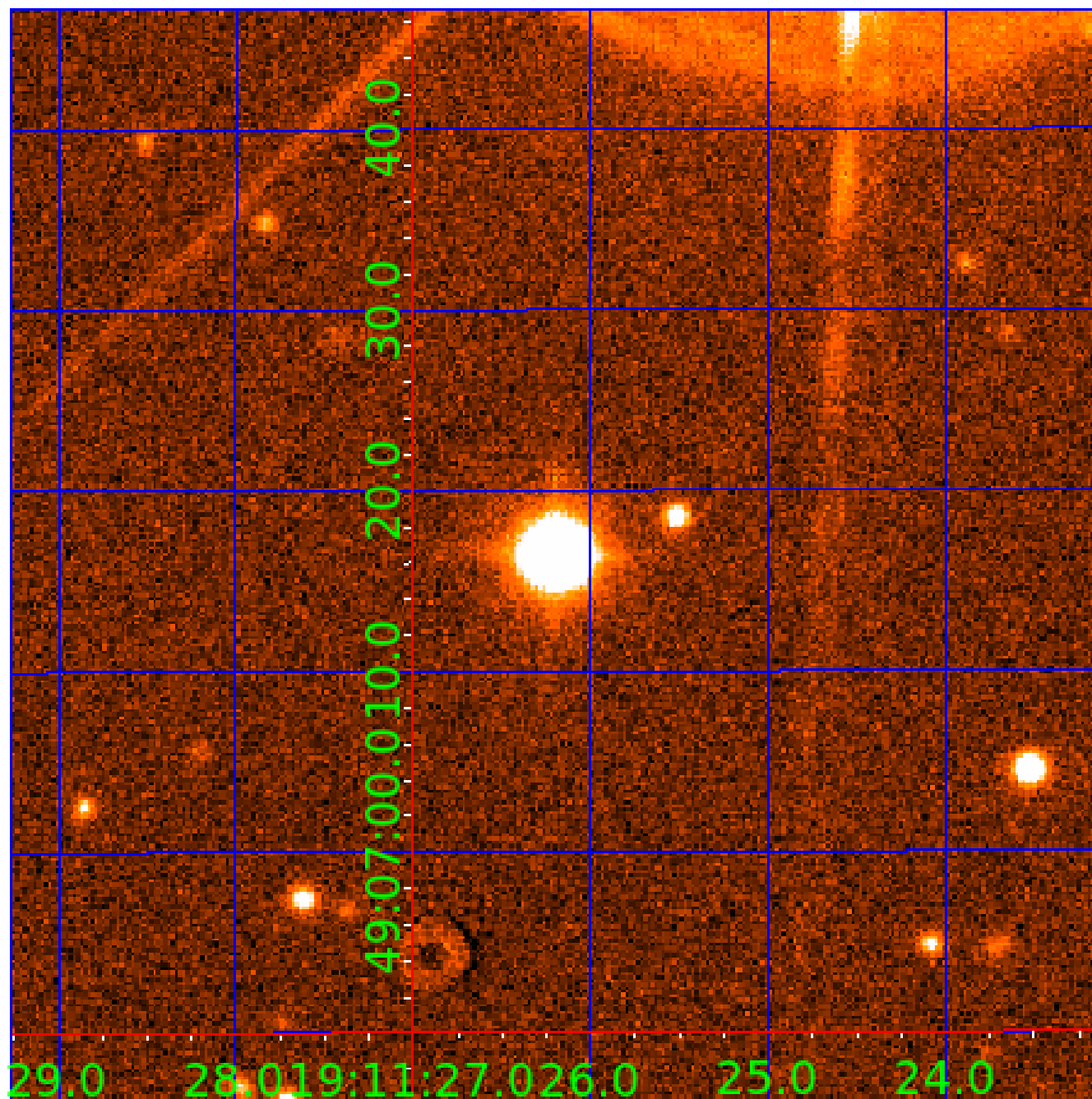


fluxWeightedCentroids, Planet 5 of 8



UKIRT Image

Declination





# KIC 011342883

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011342883-01	OBS	No	375.212049	209.607708	1282.1	4.623	14.5	9.3	0.45	4298	1.64	0.10
011342883-03	OBS	No	323.640940	168.282313	1238.0	2.353	15.8	9.2	0.45	4298	1.61	0.12
011342883-04	OBS	No	238.977295	302.928400	342.0	1.500	15.8	2.5	0.45	4298	0.90	0.18
011342883-05	OBS	No	333.460106	229.281070	1189.4	12.132	12.8	7.7	0.45	4298	1.65	0.12
011342883-06	OBS	No	212.100925	302.529031	564.2	2.652	13.5	4.8	0.45	4298	1.13	0.21
011342883-07	OBS	No	198.724563	229.079318	1216.3	3.428	10.9	9.6	0.45	4298	1.57	0.23
011342883-08	OBS	No	428.158005	186.739501	343.9	9.000	11.6	-1.0	0.45	4298	0.83	0.08

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011342883-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV
011342883-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
011342883-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011342883-05	OBS	FP	0.00	1	0	0	0	LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
011342883-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
011342883-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS
011342883-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS

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

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

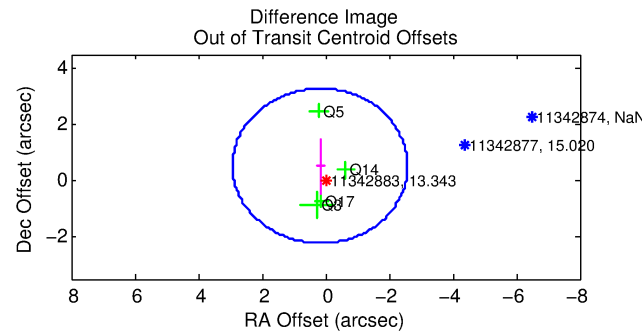
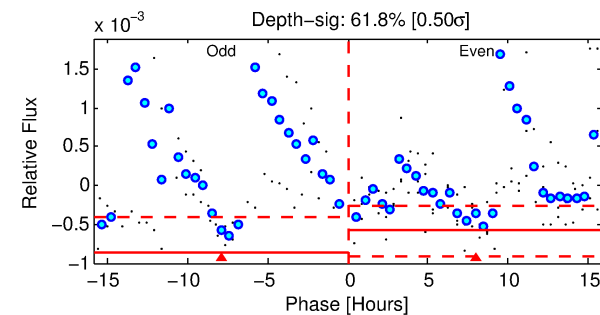
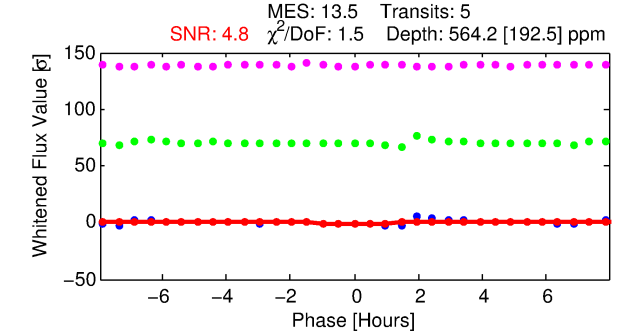
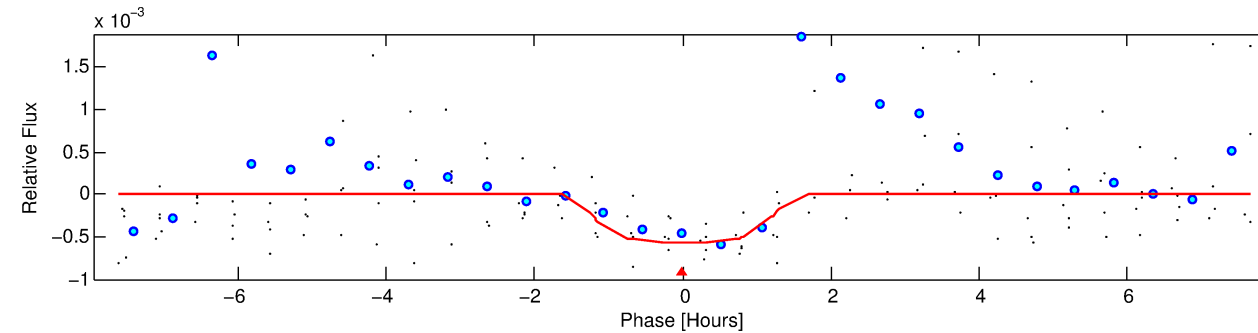
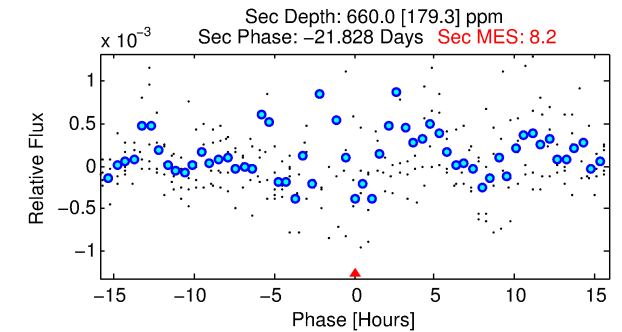
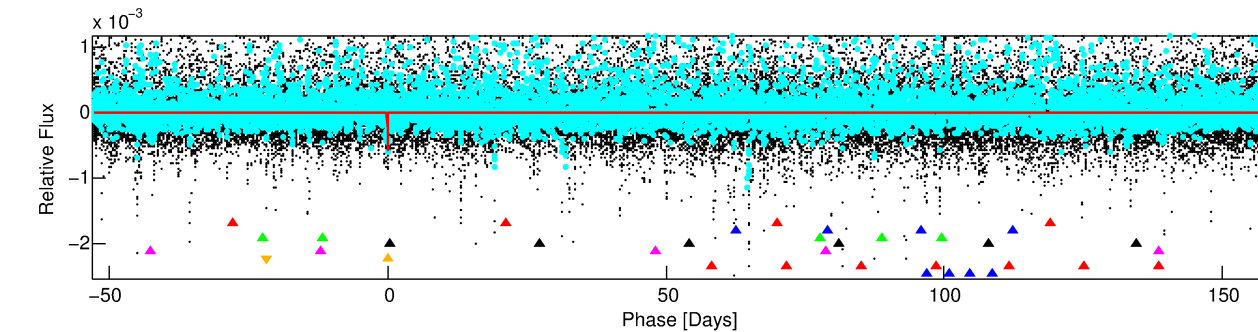
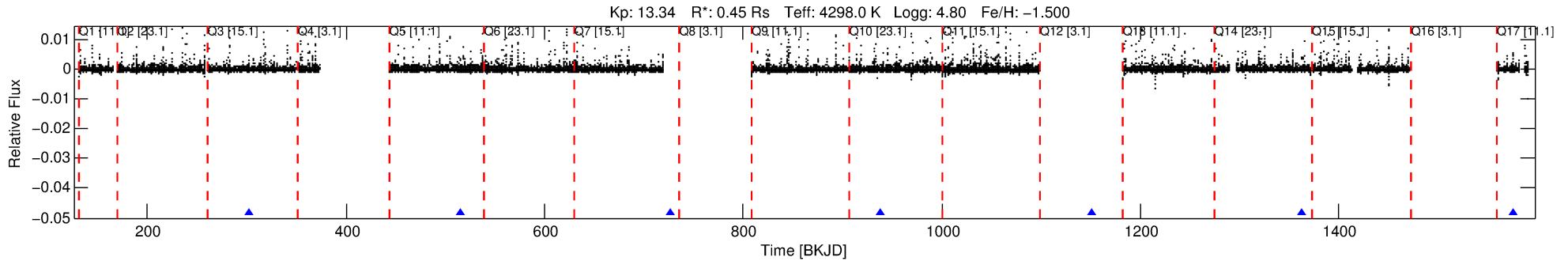
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 011342883-06

No Significant Match Found

# DV One-Page Summary

KIC: 11342883 Candidate: 6 of 8 Period: 212.101 d



## DV Fit Results:

Period = 212.10093 [0.00255] d  
Epoch = 302.5290 [0.0096] BKJD  
Rp/R\* = 0.0232 [0.0932]  
a/R\* = 467.52 [9799.22]  
b = 0.68 [16.75]  
Seff = 0.21 [0.04]  
Teq = 173 [9] K  
Rp = 1.13 [4.55] Re  
a = 0.5394 [0.0621] AU  
Ag = 82385.85 [661699.39] [0.12 $\sigma$ ]  
Teffp = 4521 [9078] K [0.48 $\sigma$ ]

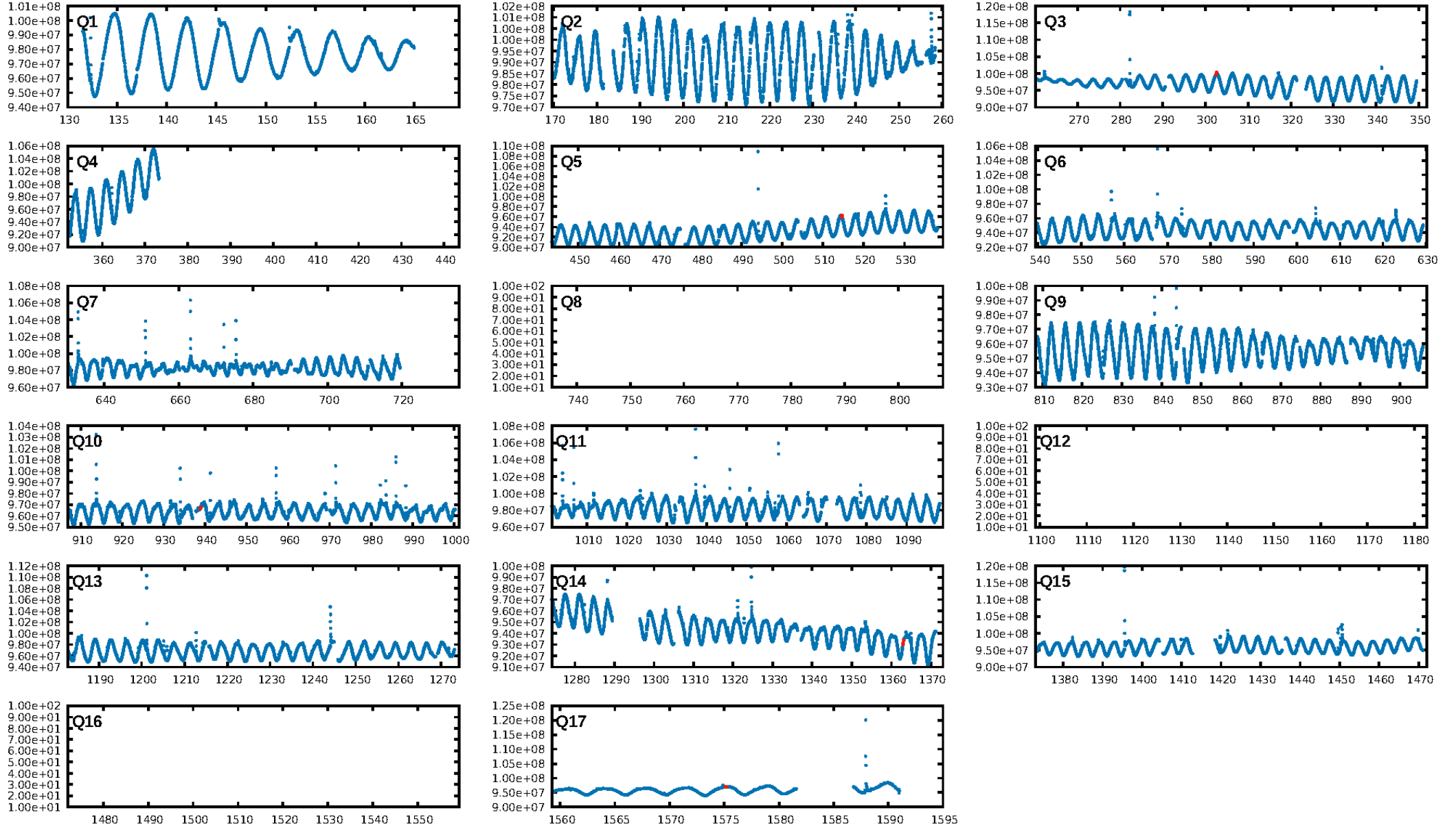
## DV Diagnostic Results:

ShortPeriod-sig: 100.0% [74.07 $\sigma$ ]  
LongPeriod-sig: 100.0% [211.70 $\sigma$ ]  
ModelChiSquare2-sig: 8.1%  
ModelChiSquareGof-sig: 96.5%  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [4/4]  
GhostDiagnostic-chr: -0.1267  
Centroid-sig: 74.8%  
Centroid-so: 0.832 arcsec [0.98 $\sigma$ ]  
OotOffset-rm: 0.553 arcsec [0.60 $\sigma$ ]  
KicOffset-rm: 0.891 arcsec [0.92 $\sigma$ ]  
OotOffset-st: 1/1/0/2 [4]  
KicOffset-st: 1/1/0/2 [4]  
DiffImageQuality-fgm: 0.25 [1/4]  
DiffImageOverlap-fno: 1.00 [4/4]

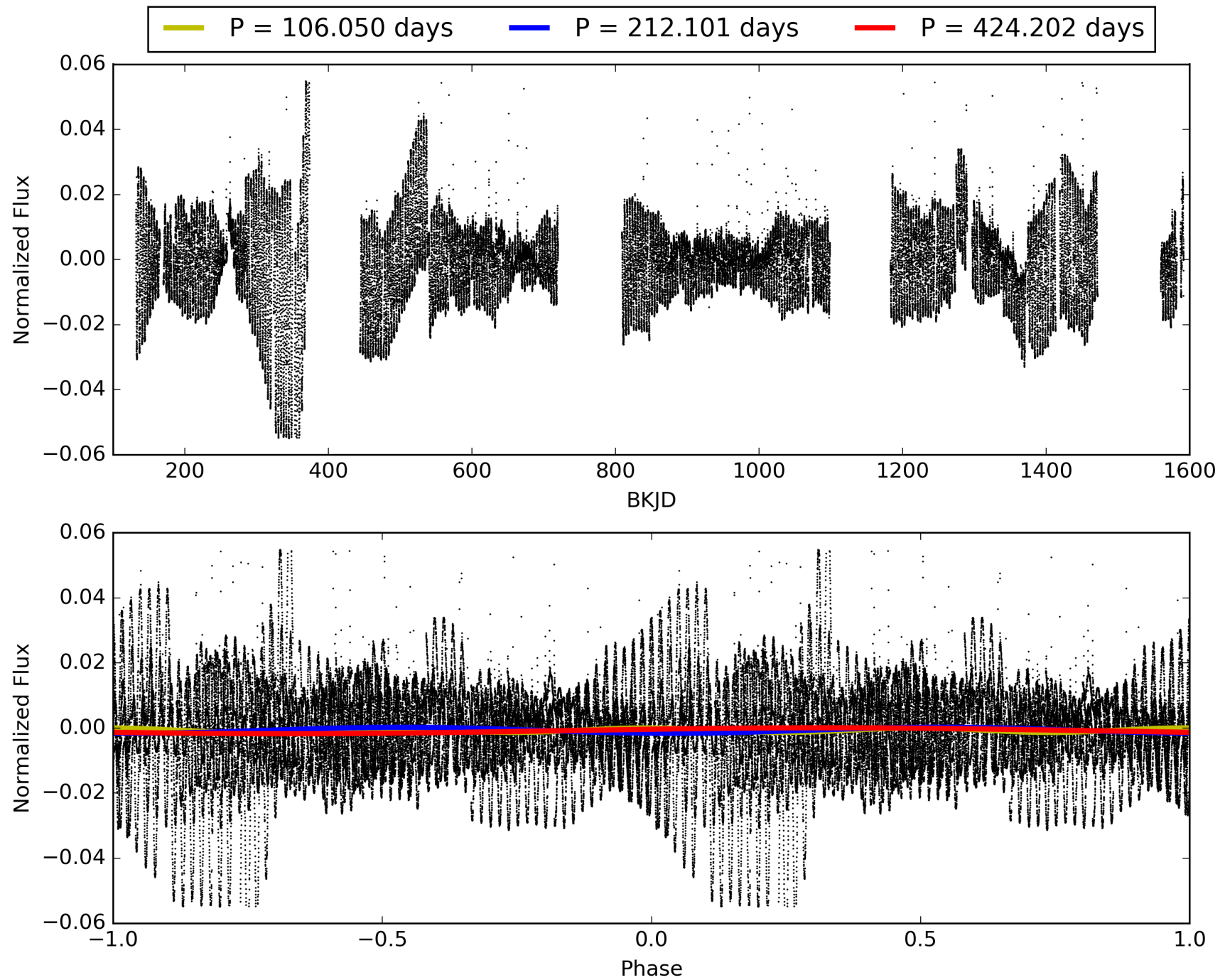
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:02:38 Z

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

# TCE 011342883-06, PDC Light Curves

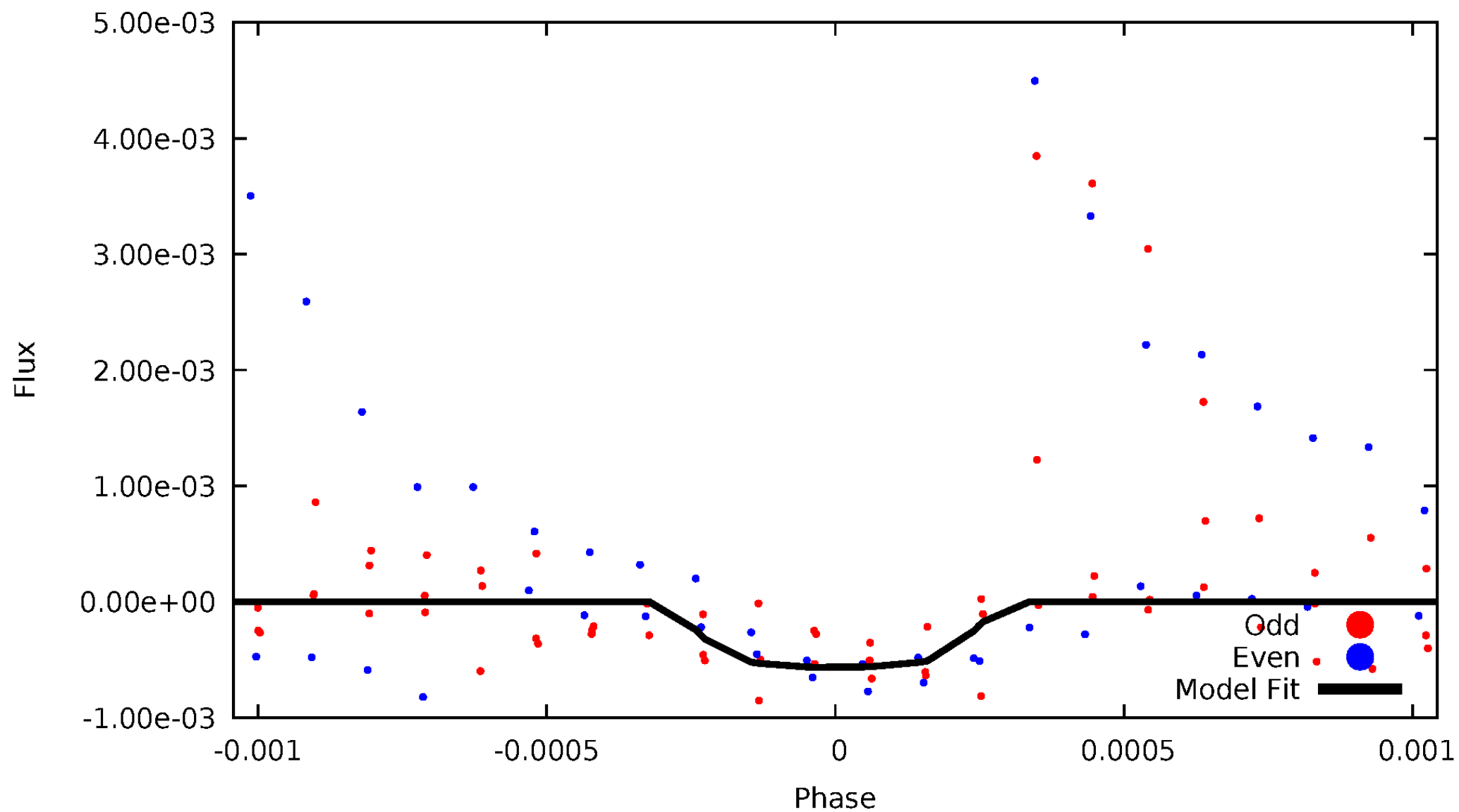


TCE 011342883-06



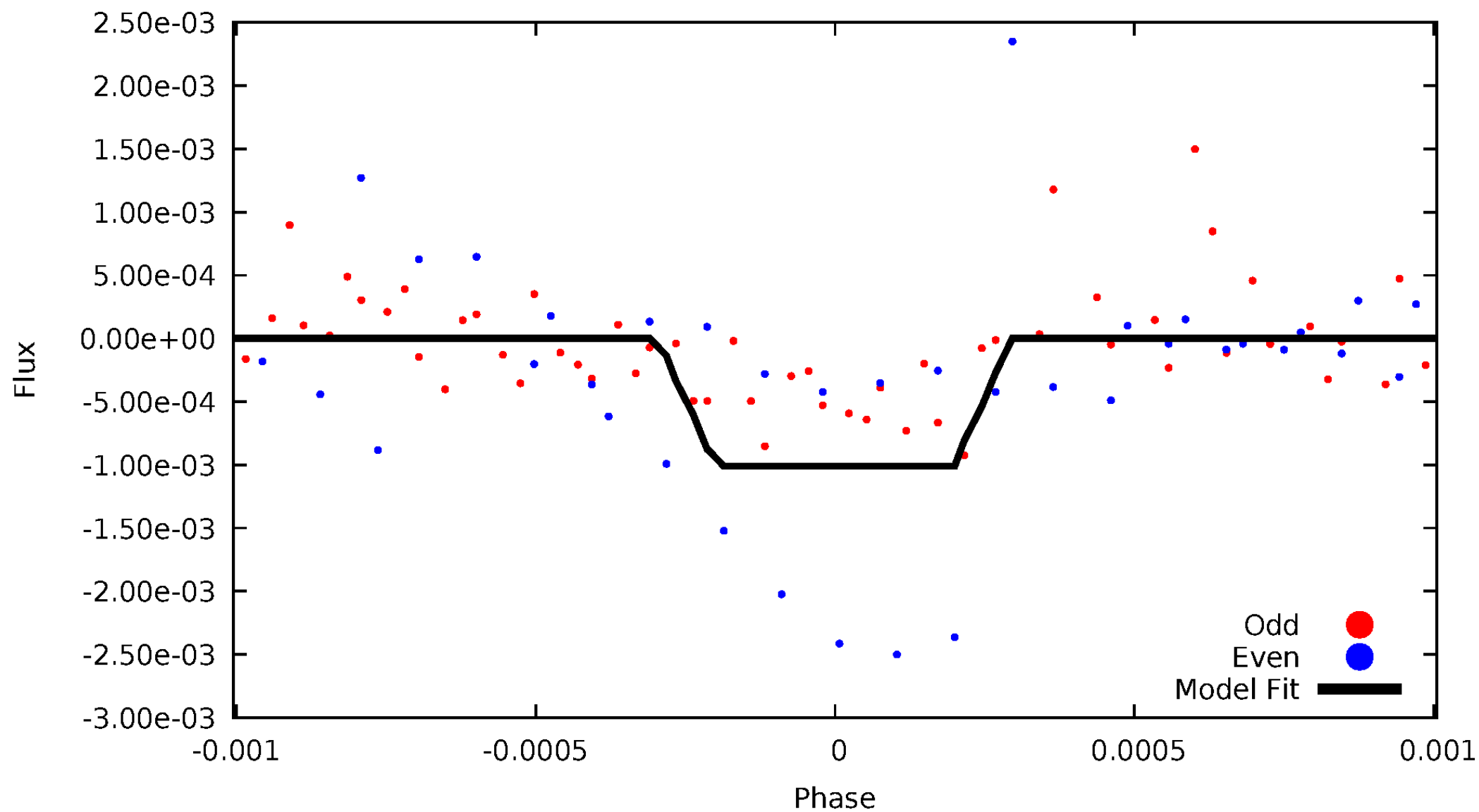
# DV Odd/Even

TCE 011342883-06



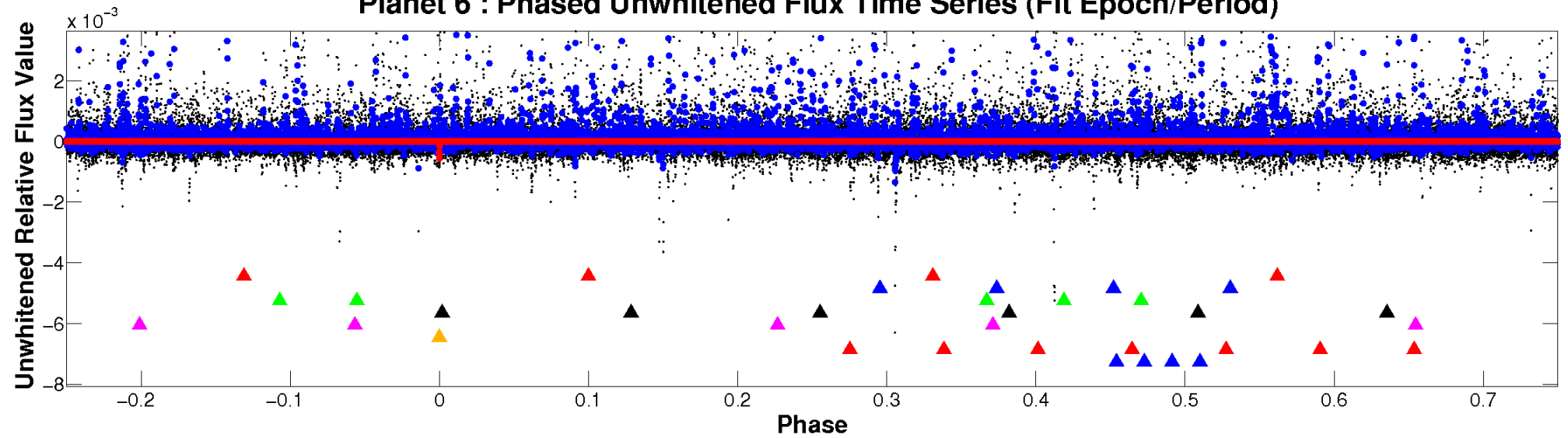
# ALT Odd/Even

TCE 011342883-06

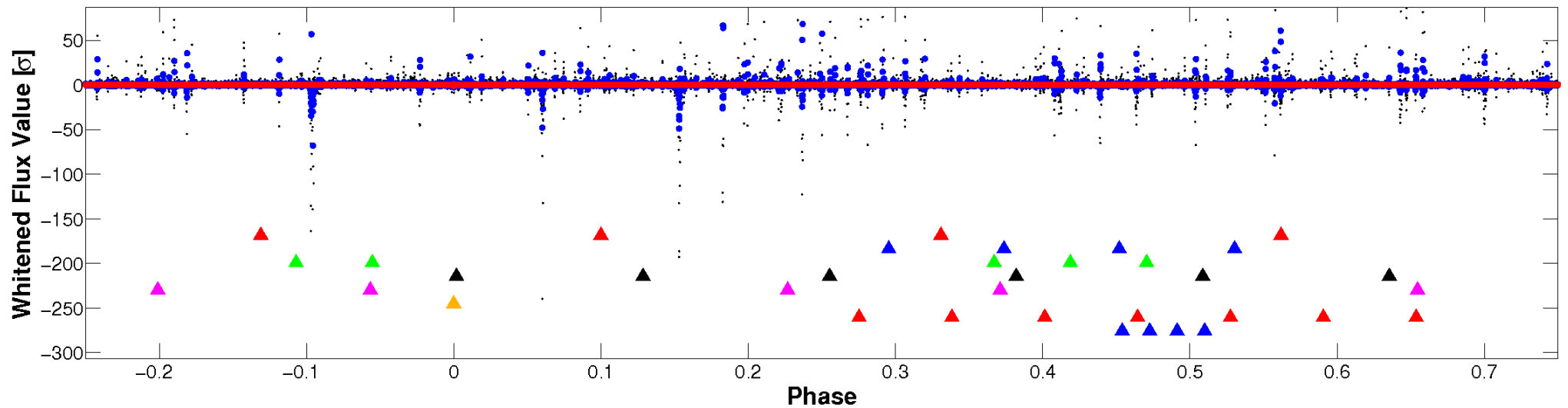


# Non-Whitened Vs. Whitened Light Curve

## Planet 6 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

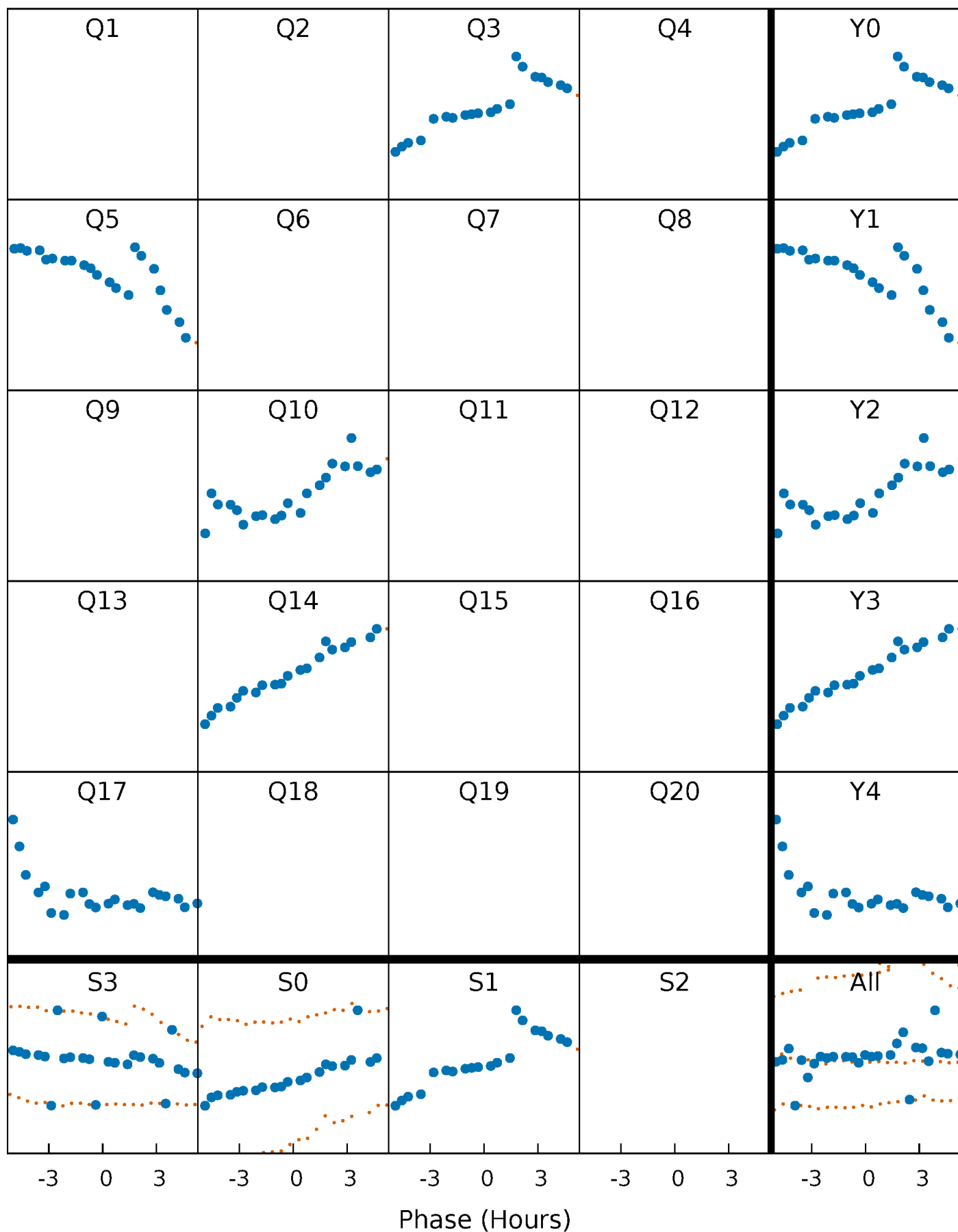


## Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



# PDC Quarter-Phased Transit Curves

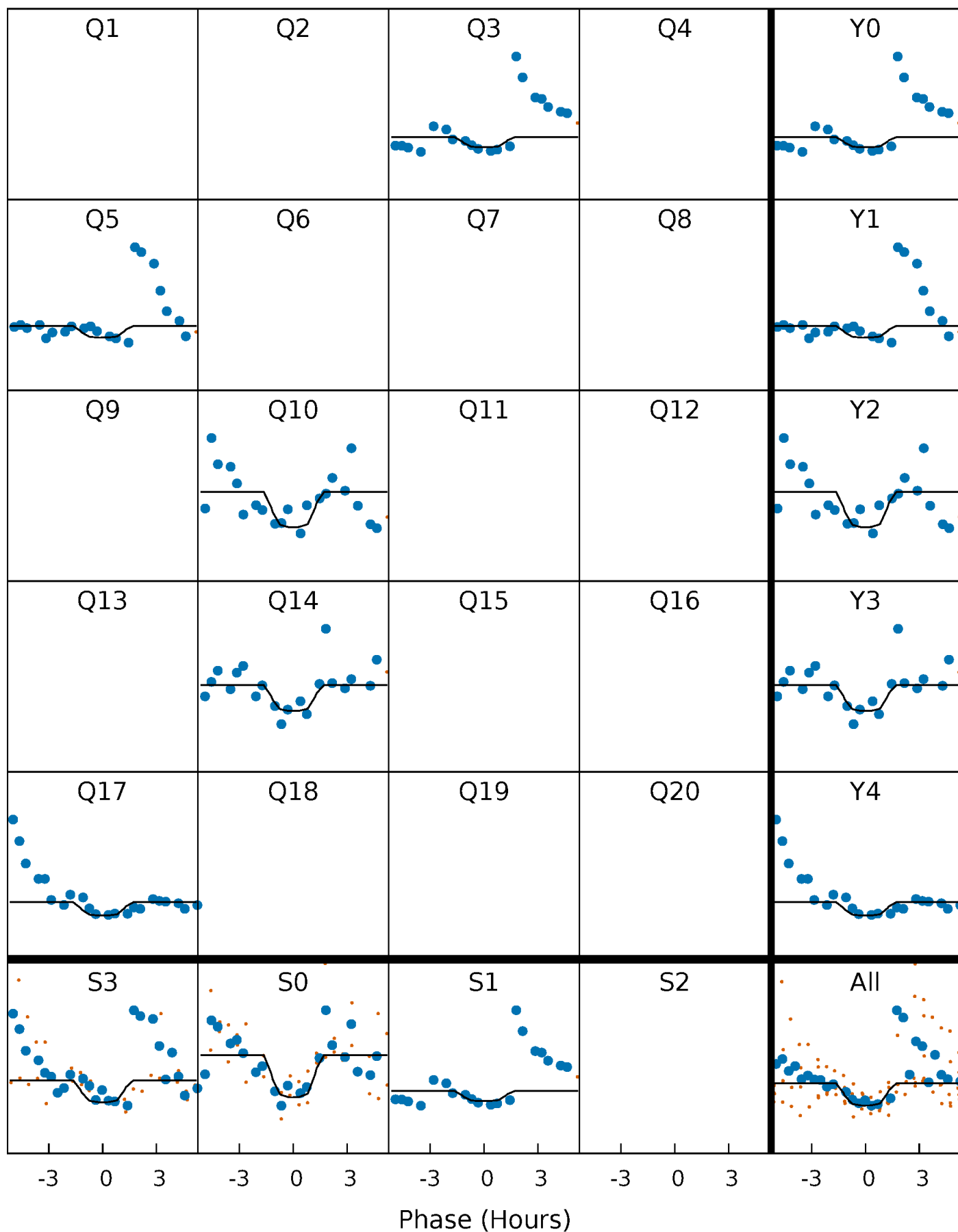
TCE 011342883-06 P=212.100925 Days  $T_0=302.529031$  (BKJD)





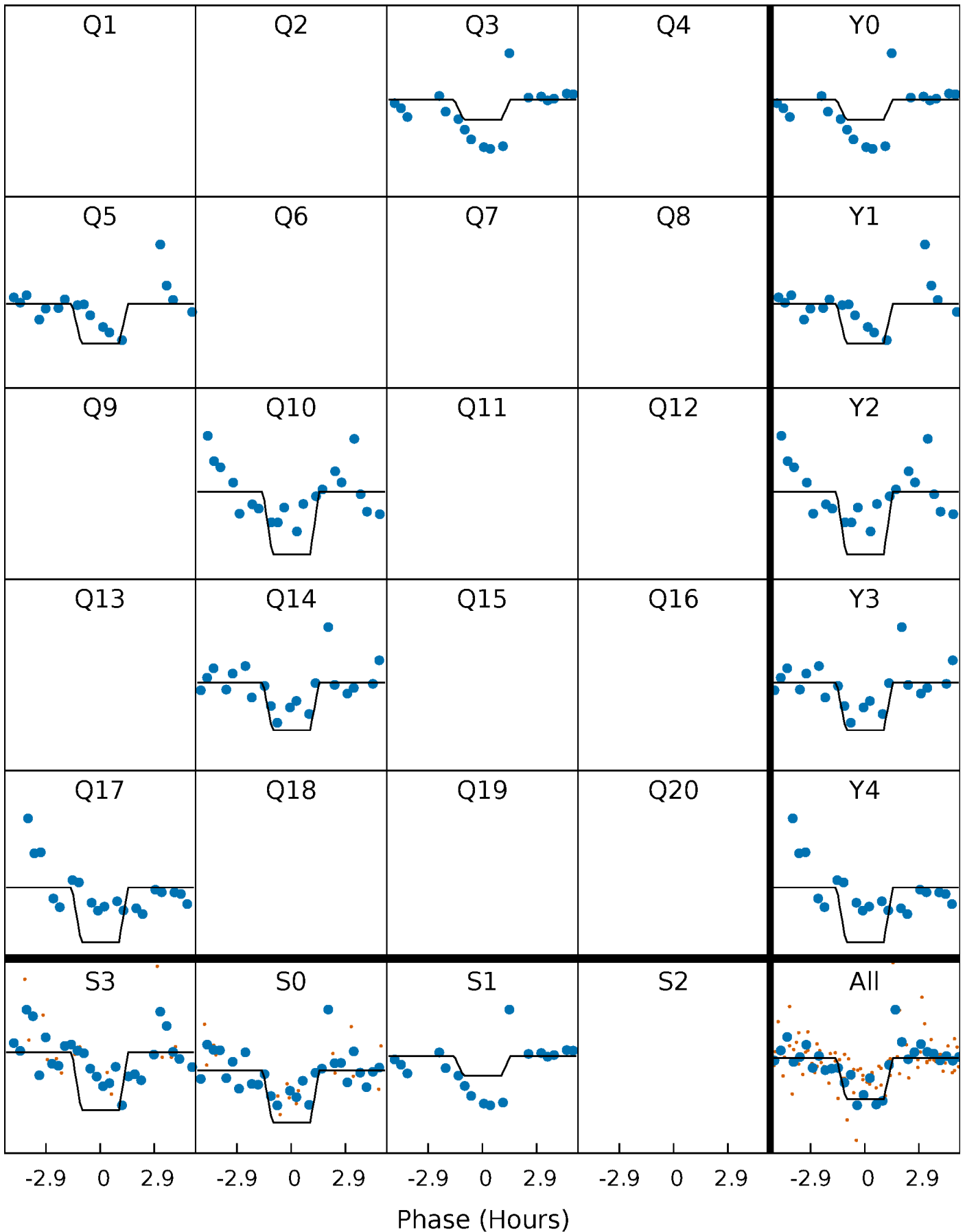
# DV Quarter-Phased Transit Curves

TCE 011342883-06 P=212.100925 Days  $T_0=302.529031$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

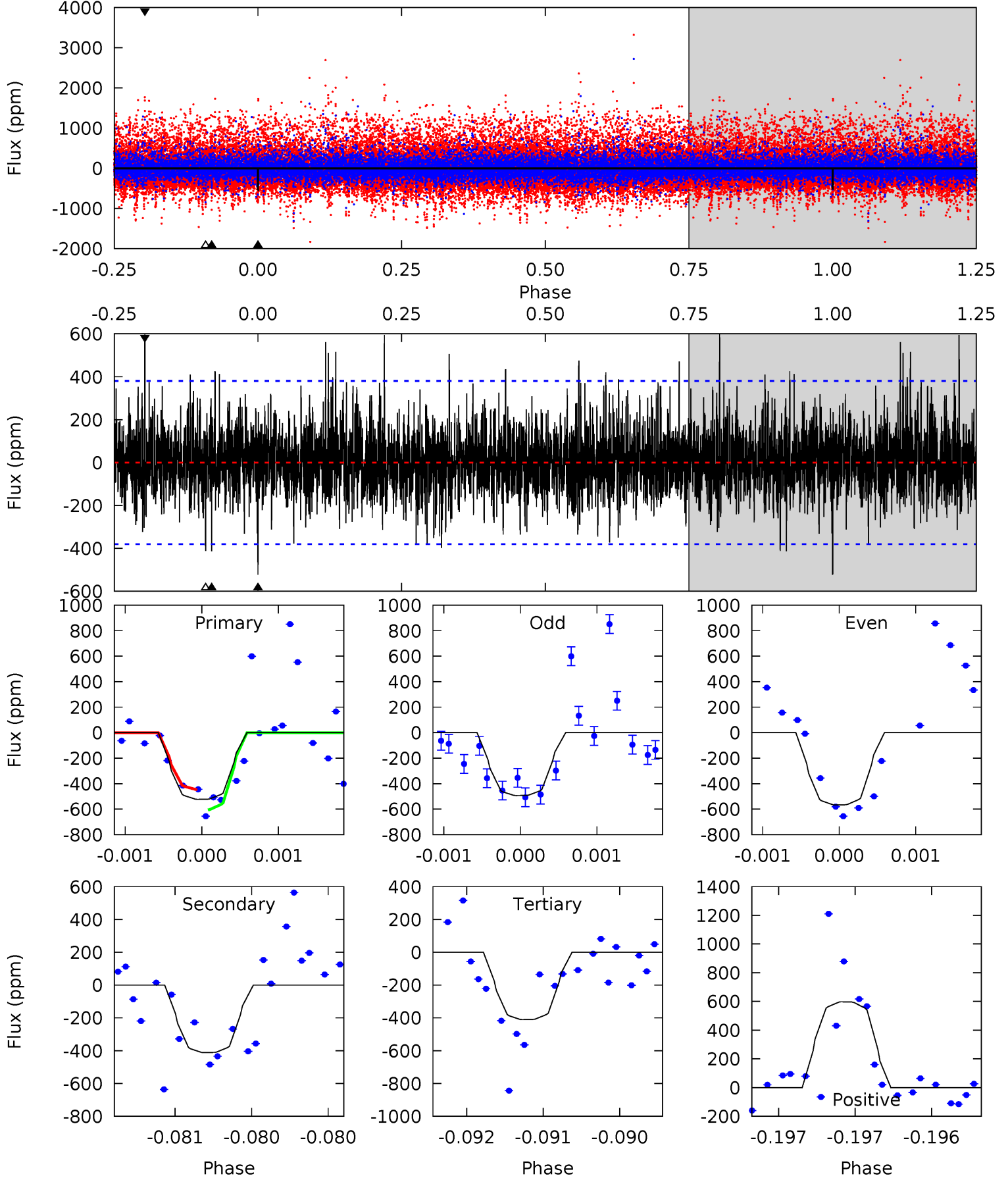
TCE 011342883-06 P=212.098170 Days  $T_0=302.539563$  (BKJD)



# DV Model-Shift Uniqueness Test

011342883-06, P = 212.100925 Days, E = 90.428106 Days

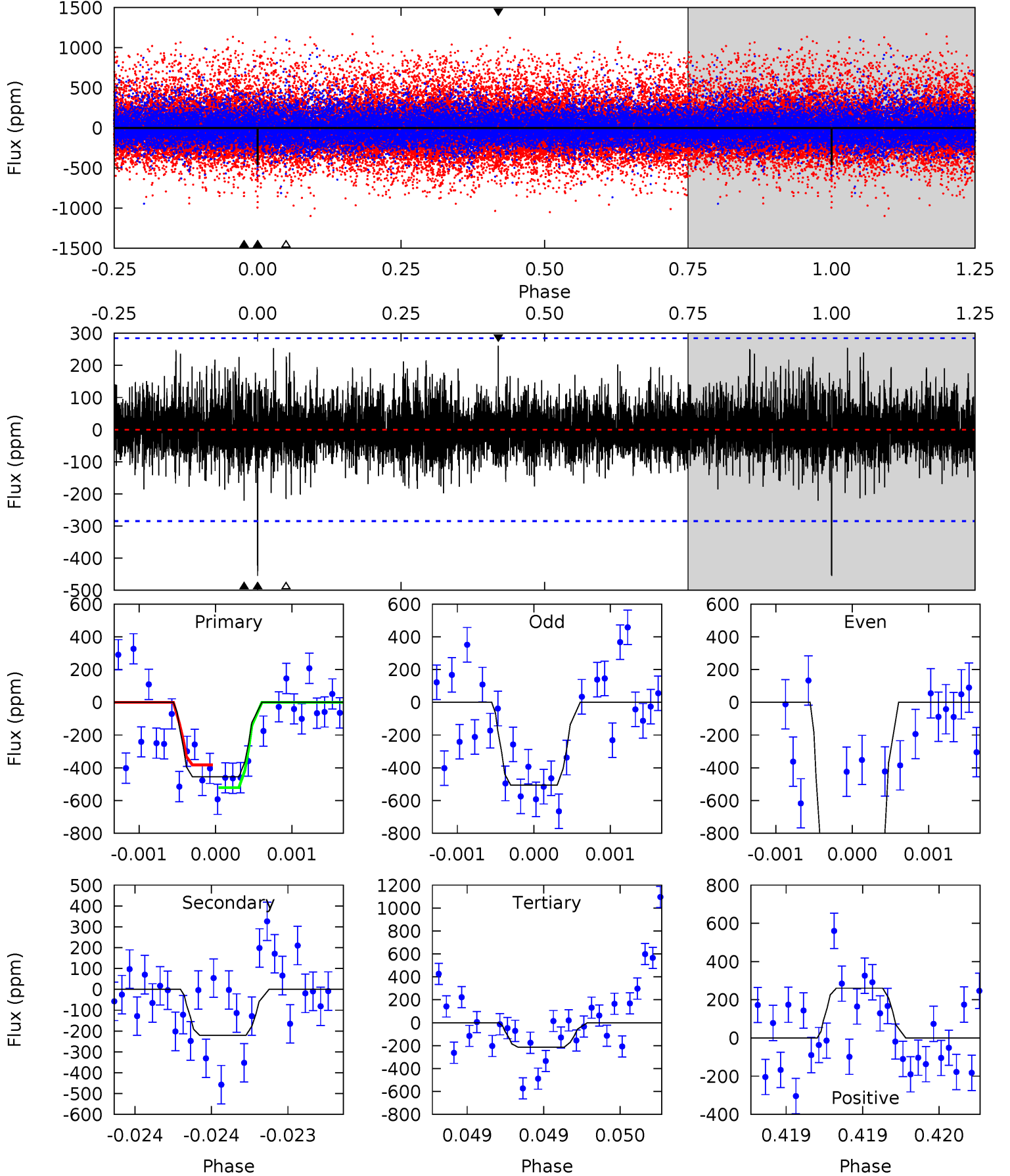
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.63	6.01	6.00	8.73	5.55	3.45	1.74	1.64	-1.09	0.02	-2.71	0.30	1.12	0.53	1.18



# Alt Model-Shift Uniqueness Test

011342883-06, P = 212.098170 Days, E = 90.441393 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
8.88	4.30	4.16	5.09	5.55	3.45	1.15	4.72	3.79	0.14	-0.78	7.65	1.58	0.36	1.36



### Stellar Parameters For KIC 011342883

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$4298^{+120}_{-150}$	$4.805^{+0.084}_{-0.039}$	$-1.500^{+0.250}_{-0.300}$	$0.447^{+0.037}_{-0.064}$	$0.464^{+0.038}_{-0.052}$	$7.339^{+3.124}_{-1.192}$
	+3%/-3%	+2%/-1%	+17%/-20%	+8%/-14%	+8%/-11%	+43%/-16%
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 011342883-06 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-412 \pm 69$	$3.39^{+3.79}_{-2.35}$	$238^{+9}_{-9}$	$2862^{+1310}_{-485}$	$5597^{+53879}_{-4319}$
Alt.	$-220 \pm 51$	$3.76^{+3.59}_{-2.57}$	$239^{+9}_{-10}$	$2570^{+1002}_{-373}$	$2416^{+21691}_{-1781}$

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

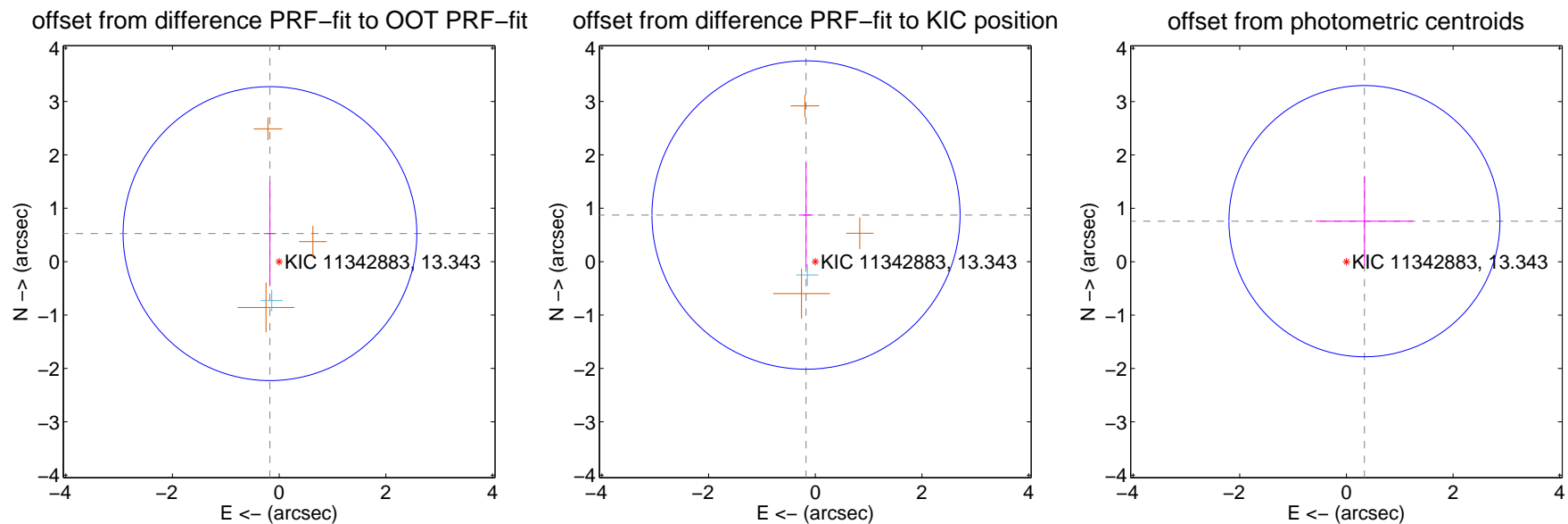
## DV Centroid Data

Supplemental centroid analysis for 011342883-06. Kepler magnitude: 13.34. Transit SNR 4.76

There are 1 quarters with good PRF difference image offsets

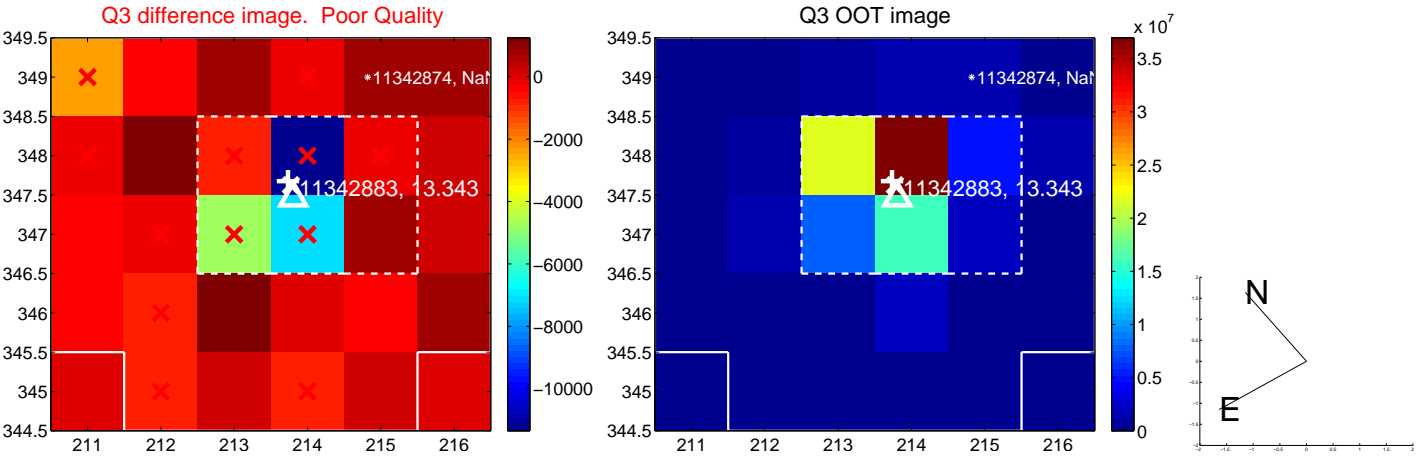
The direct PRF centroid is offset from the target star catalog position by about 0.48 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.553 \pm 0.918$	0.60	$0.172 \pm 0.118$	$0.525 \pm 0.965$
PRF-fit source offset from KIC position	$0.891 \pm 0.963$	0.92	$0.174 \pm 0.136$	$0.873 \pm 0.981$
photometric centroid source offset	$0.83 \pm 0.85$	0.98	$-0.34 \pm 0.91$	$0.76 \pm 0.83$

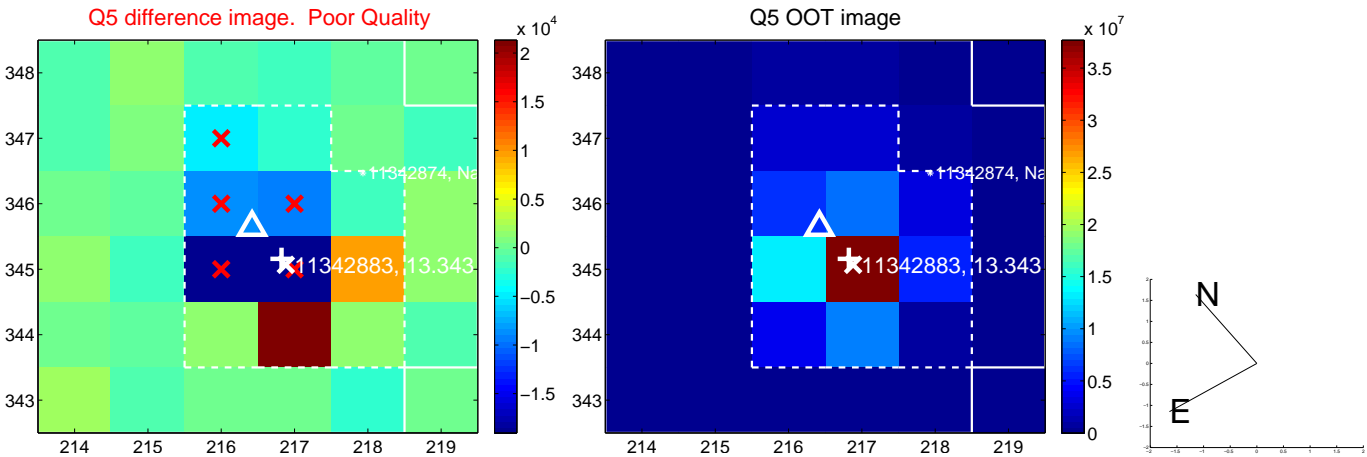


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

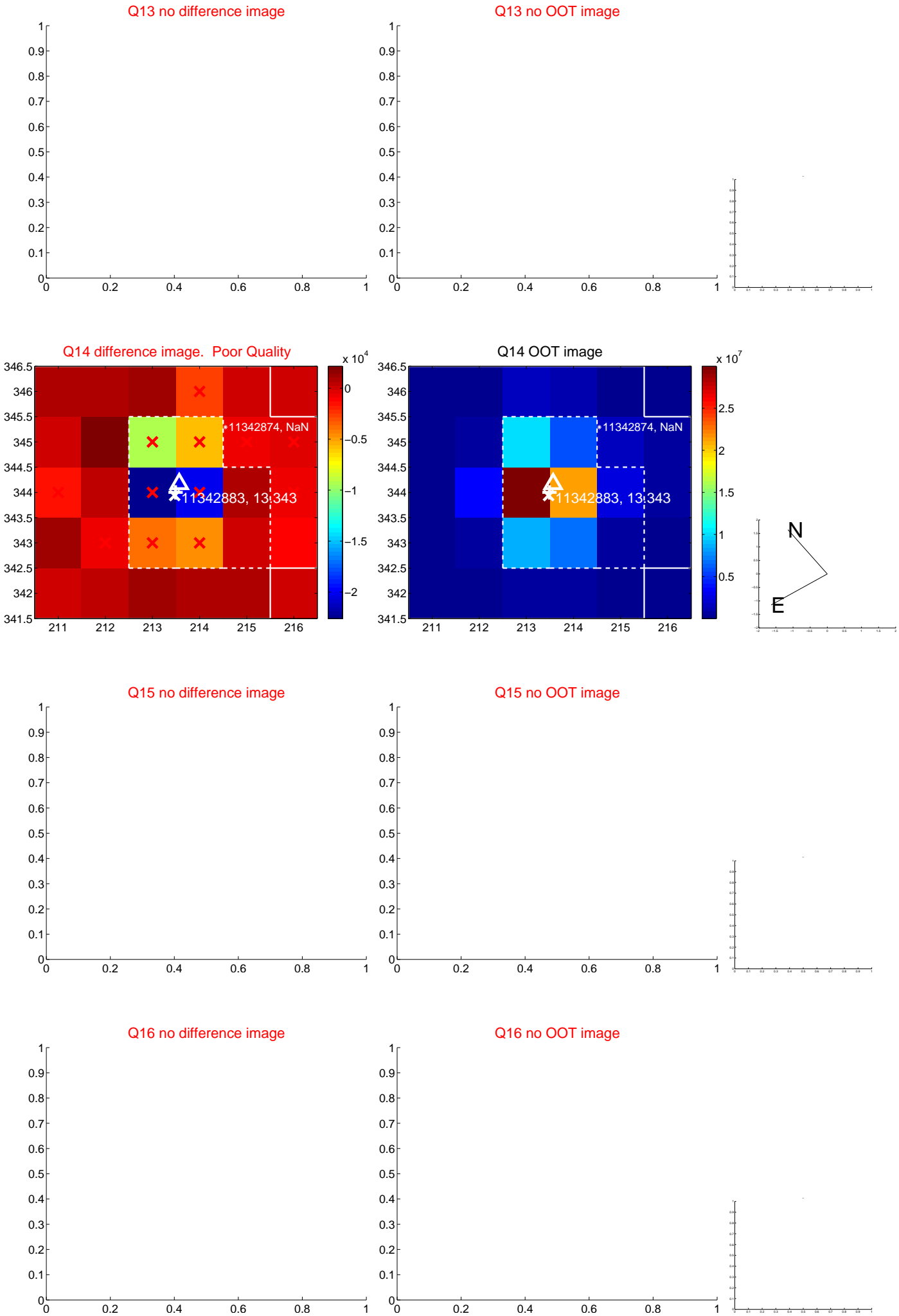




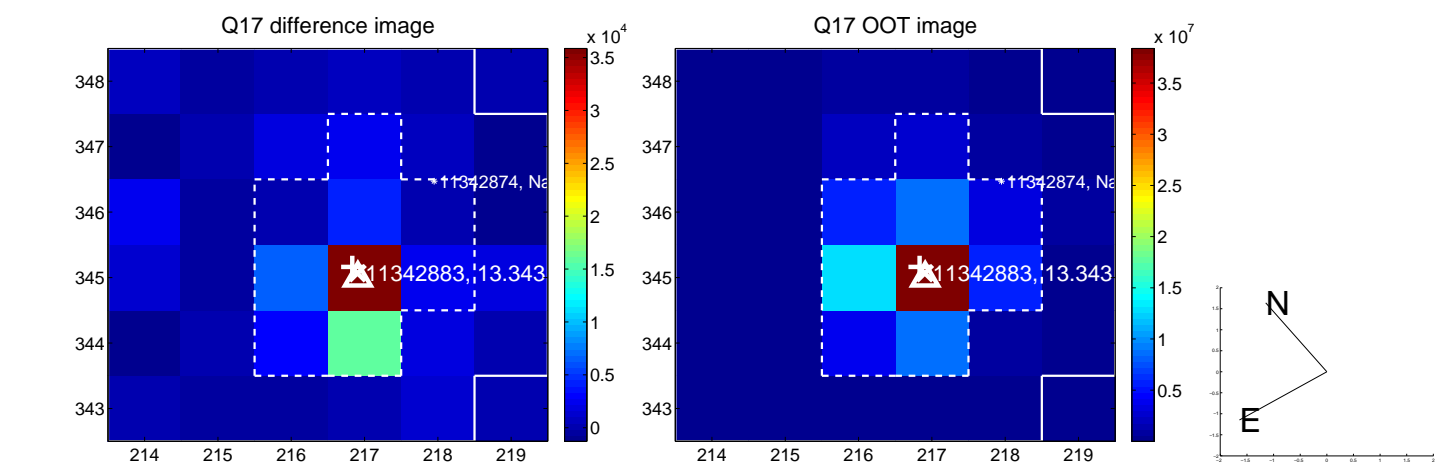
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



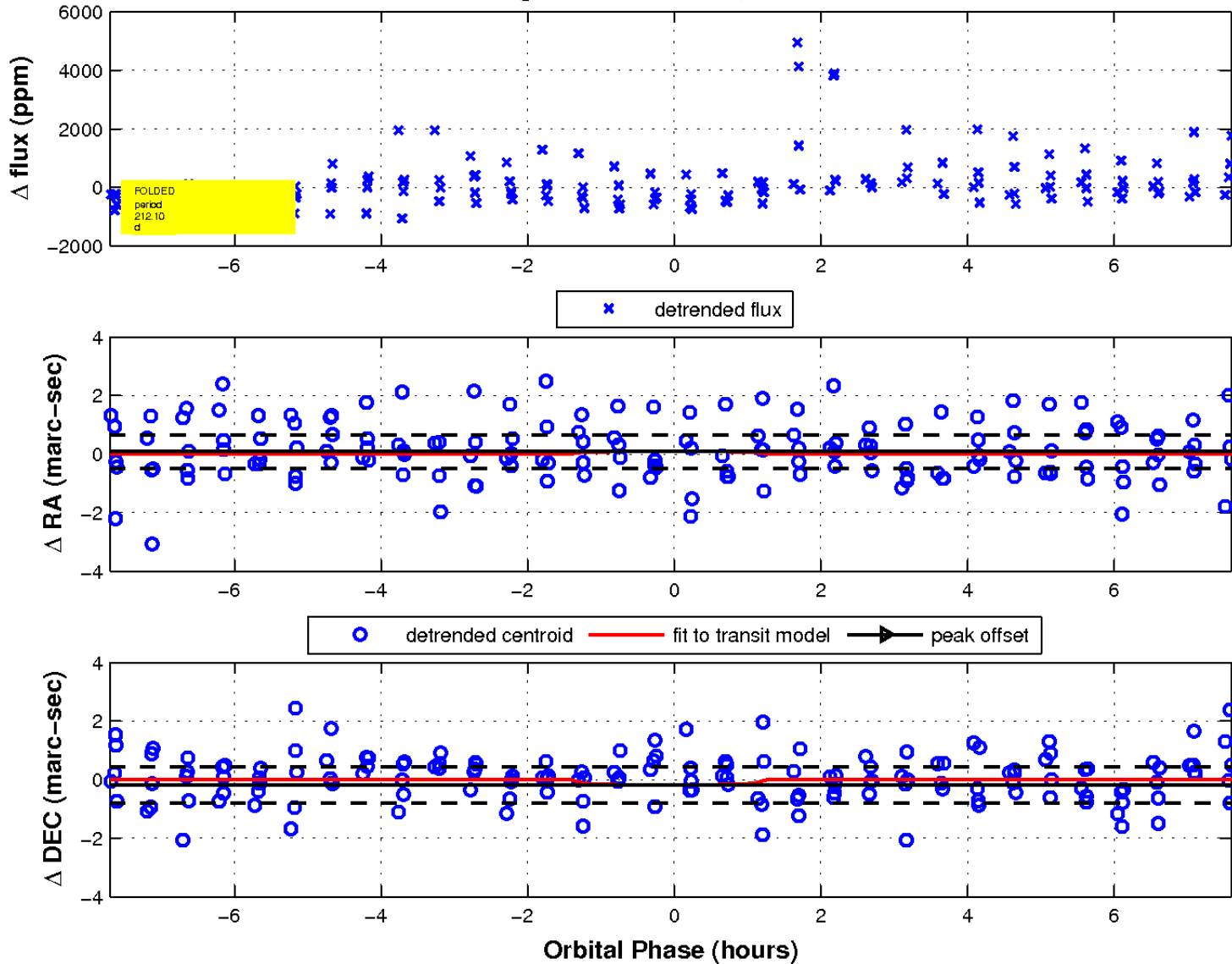
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

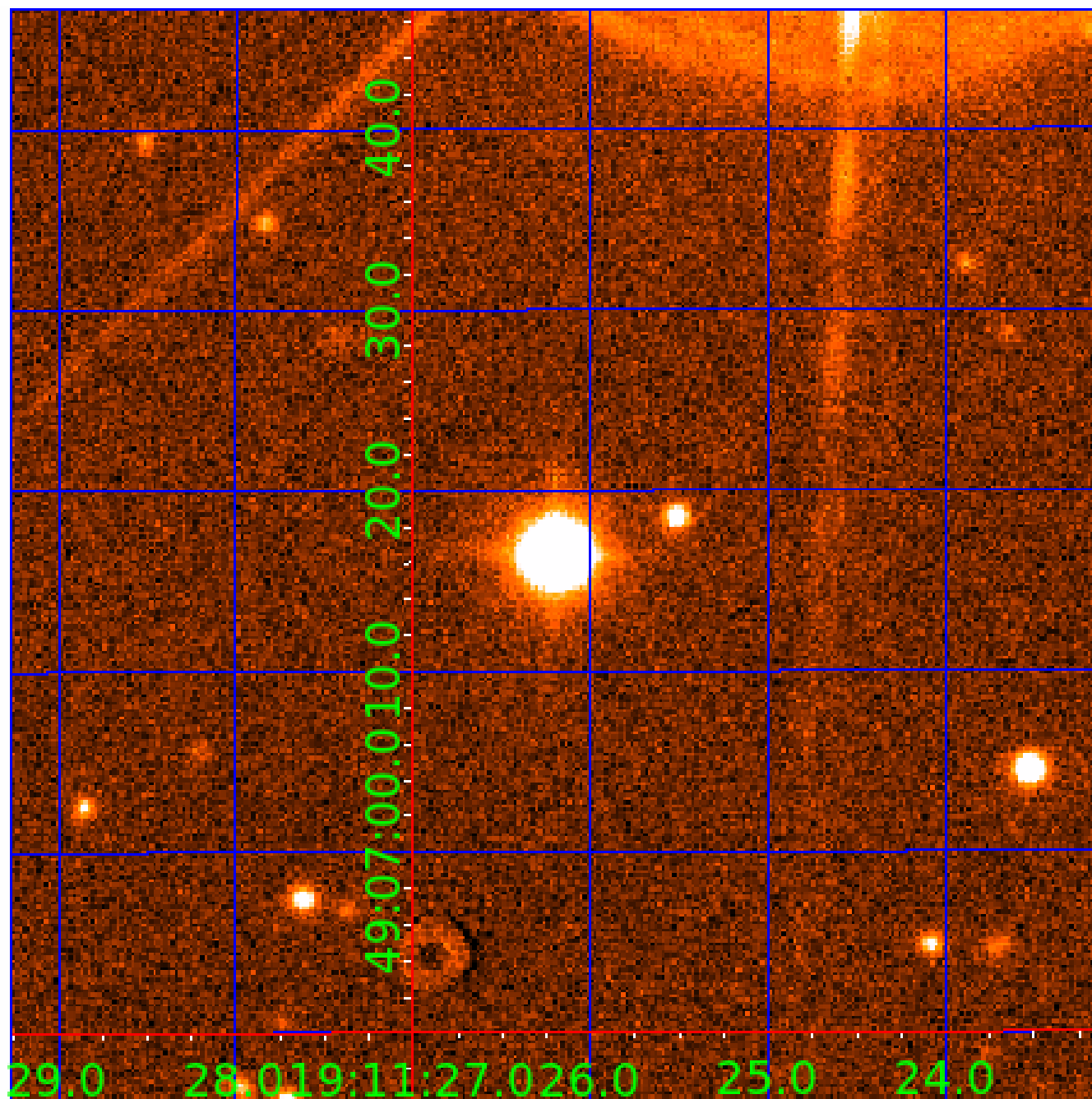


fluxWeightedCentroids, Planet 6 of 8



UKIRT Image

Declination



# KIC 011342883

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011342883-01	OBS	No	375.212049	209.607708	1282.1	4.623	14.5	9.3	0.45	4298	1.64	0.10
011342883-03	OBS	No	323.640940	168.282313	1238.0	2.353	15.8	9.2	0.45	4298	1.61	0.12
011342883-04	OBS	No	238.977295	302.928400	342.0	1.500	15.8	2.5	0.45	4298	0.90	0.18
011342883-05	OBS	No	333.460106	229.281070	1189.4	12.132	12.8	7.7	0.45	4298	1.65	0.12
011342883-06	OBS	No	212.100925	302.529031	564.2	2.652	13.5	4.8	0.45	4298	1.13	0.21
011342883-07	OBS	No	198.724563	229.079318	1216.3	3.428	10.9	9.6	0.45	4298	1.57	0.23
011342883-08	OBS	No	428.158005	186.739501	343.9	9.000	11.6	-1.0	0.45	4298	0.83	0.08

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011342883-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV
011342883-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
011342883-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011342883-05	OBS	FP	0.00	1	0	0	0	LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
011342883-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
011342883-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS
011342883-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS

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

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

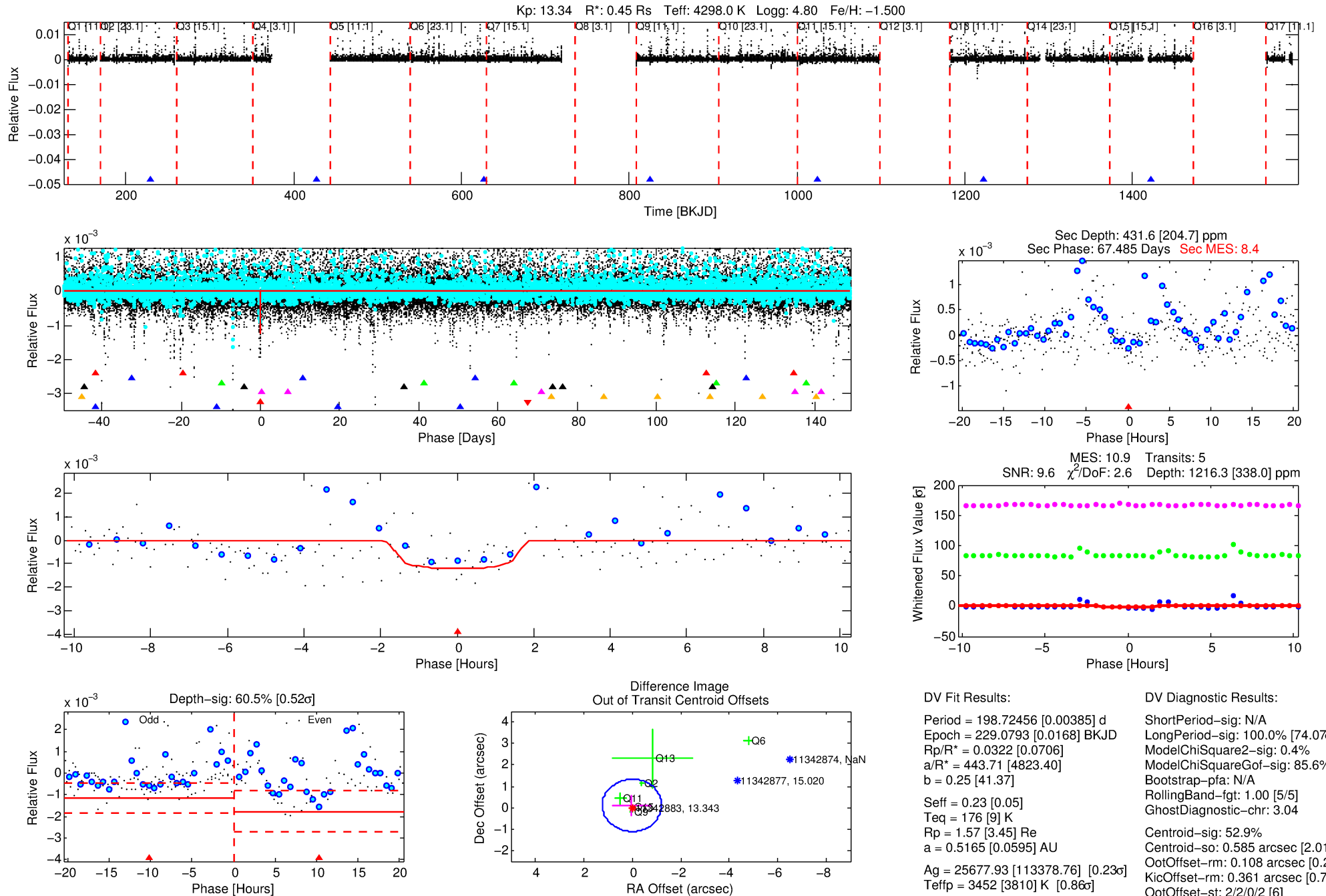
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 011342883-07

No Significant Match Found

# DV One-Page Summary

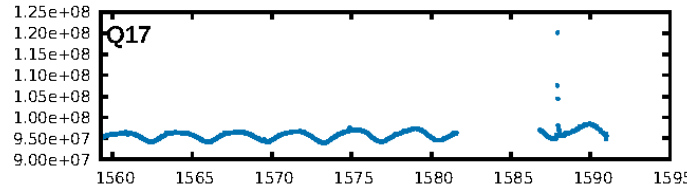
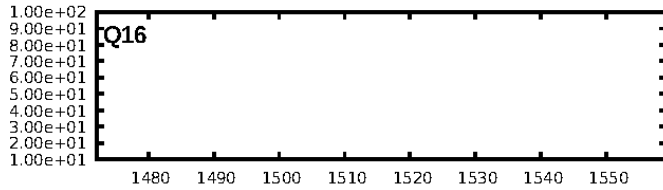
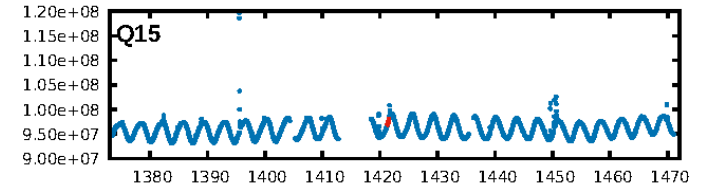
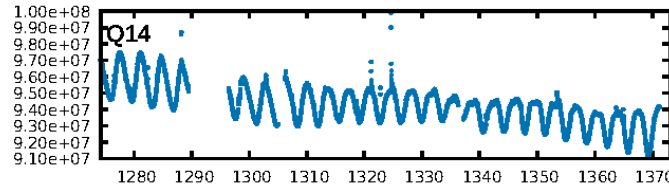
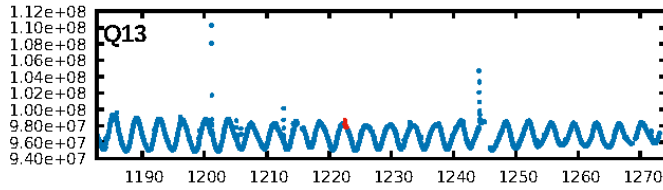
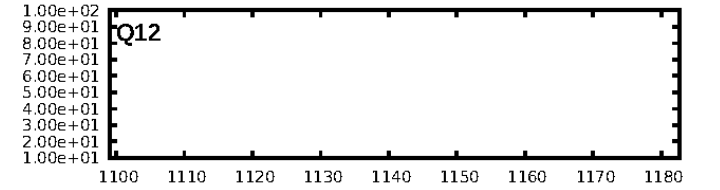
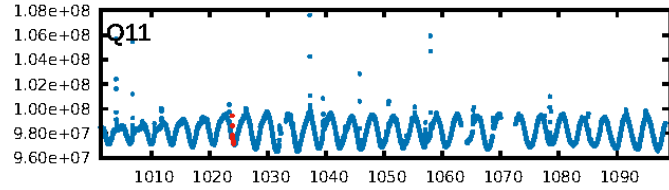
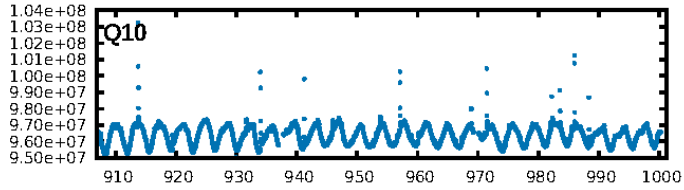
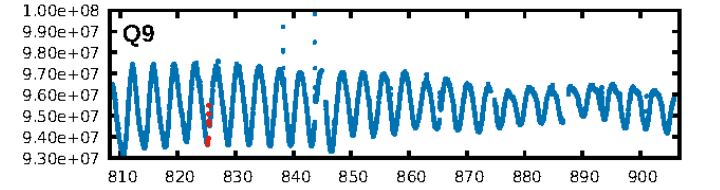
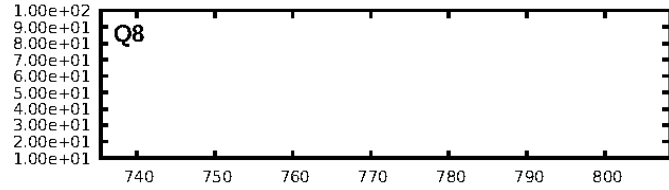
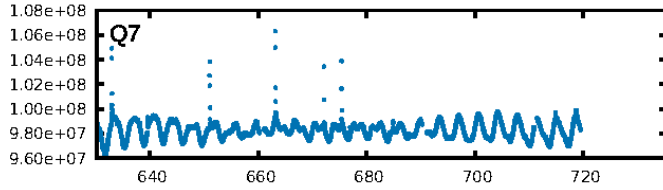
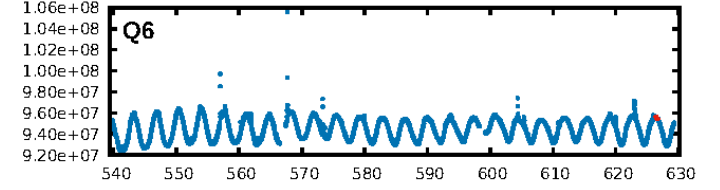
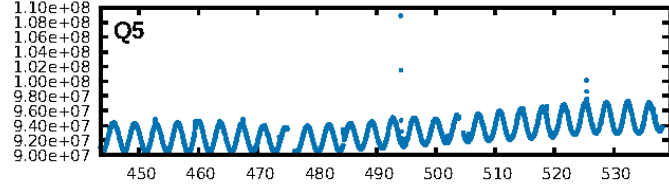
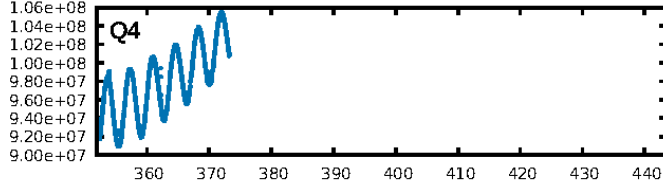
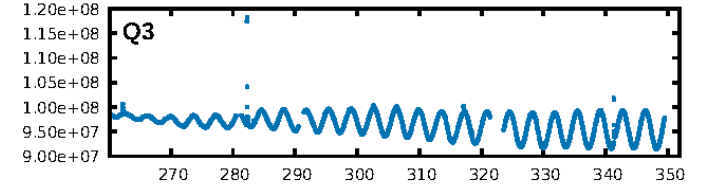
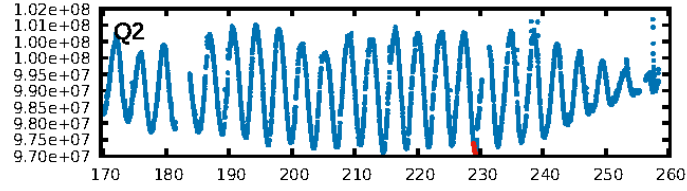
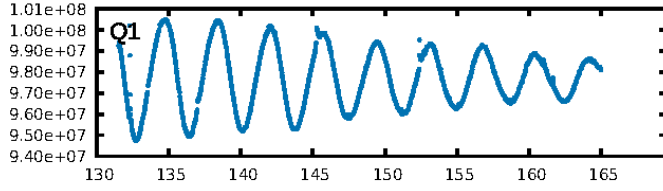
KIC: 11342883 Candidate: 7 of 8 Period: 198.725 d



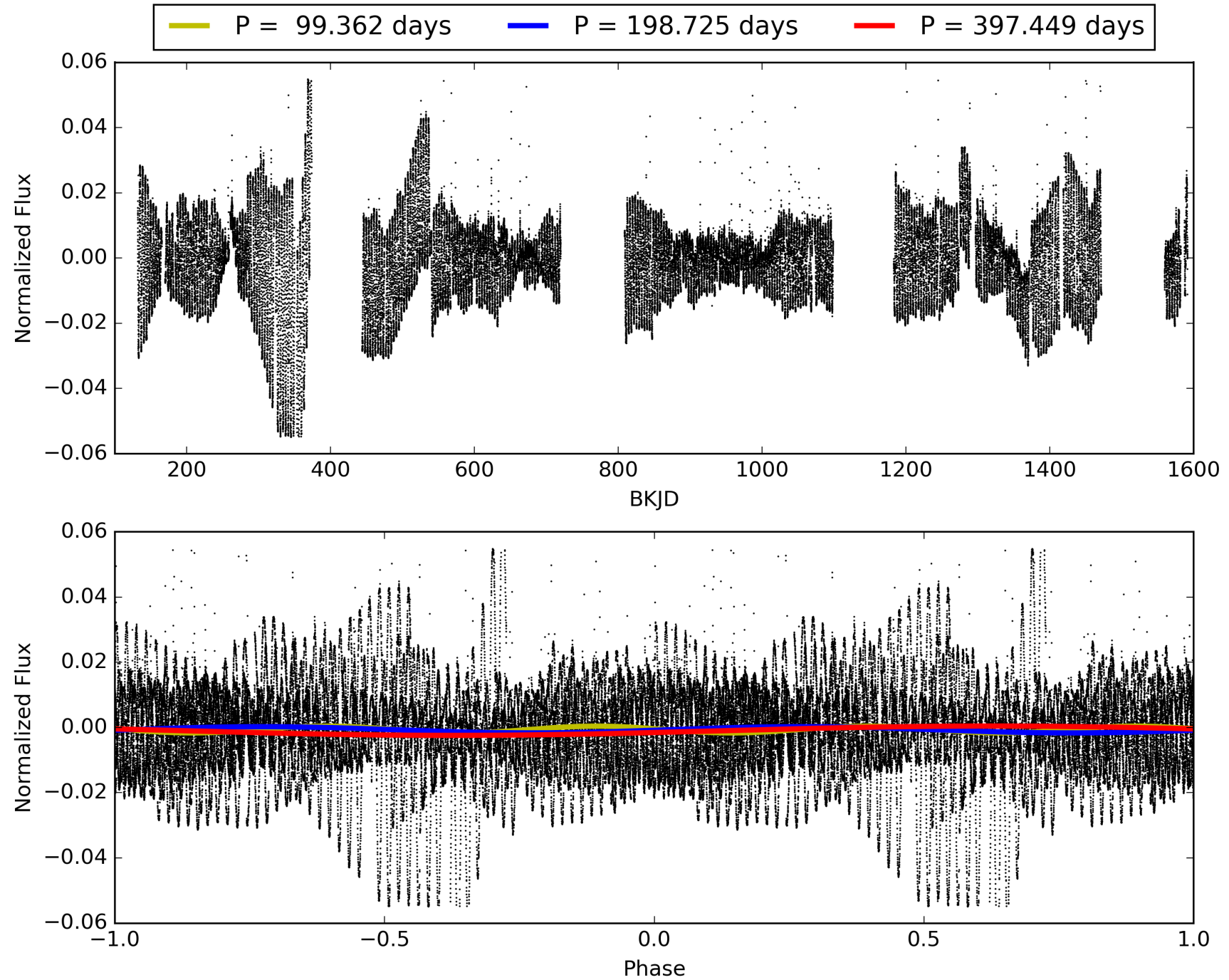
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 011342883-07, PDC Light Curves



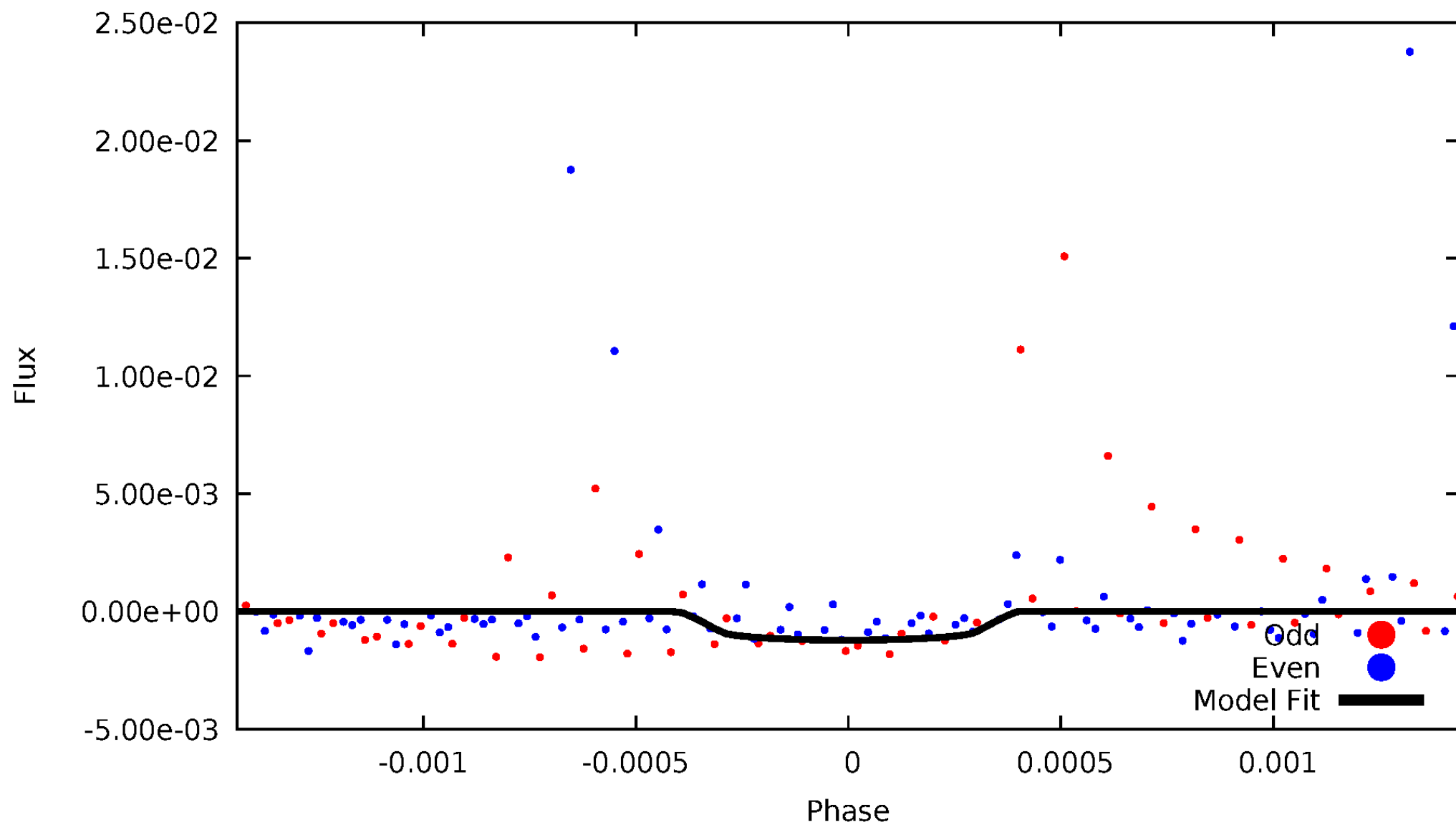
TCE 011342883-07





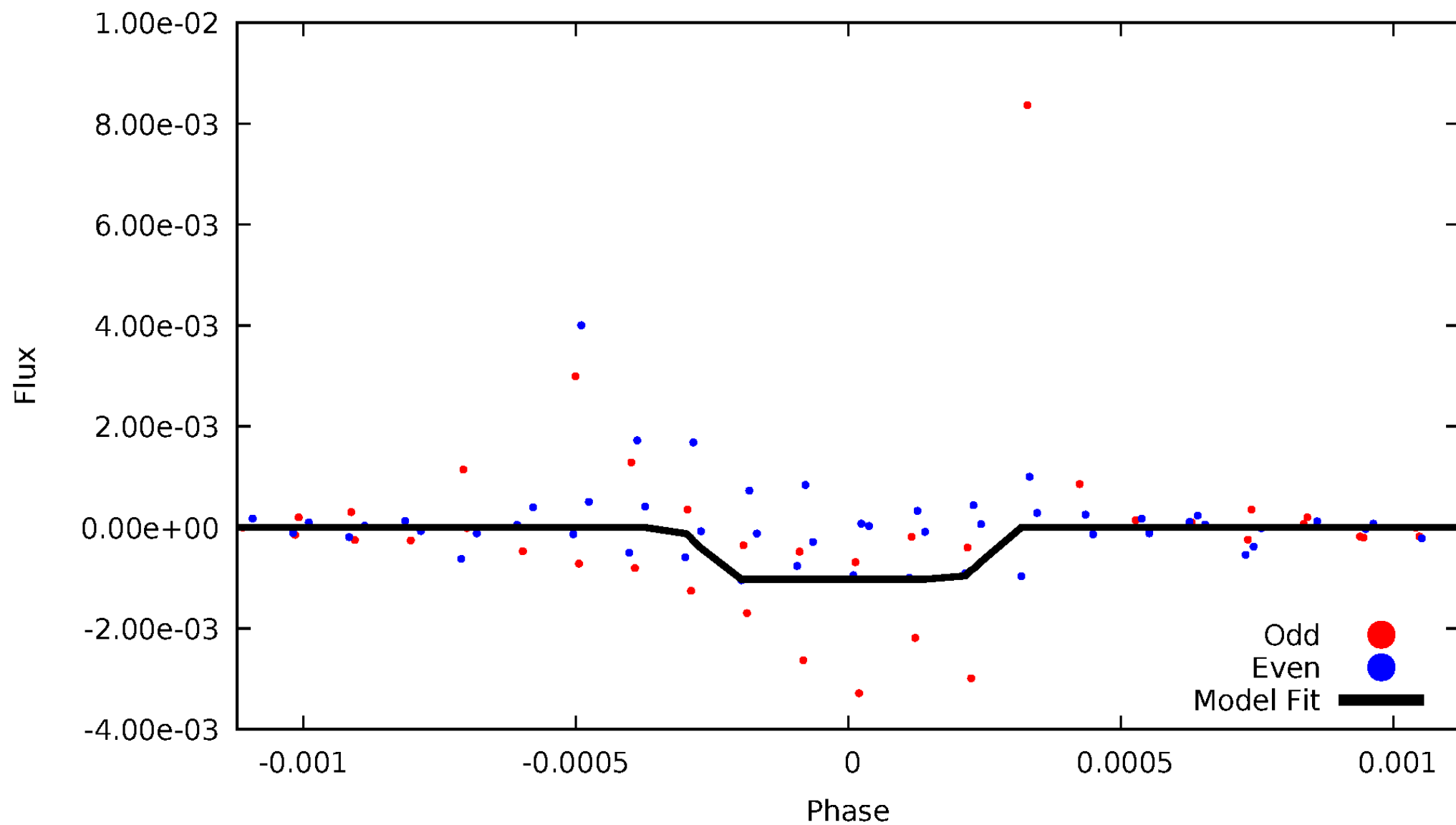
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TCE 011342883-07



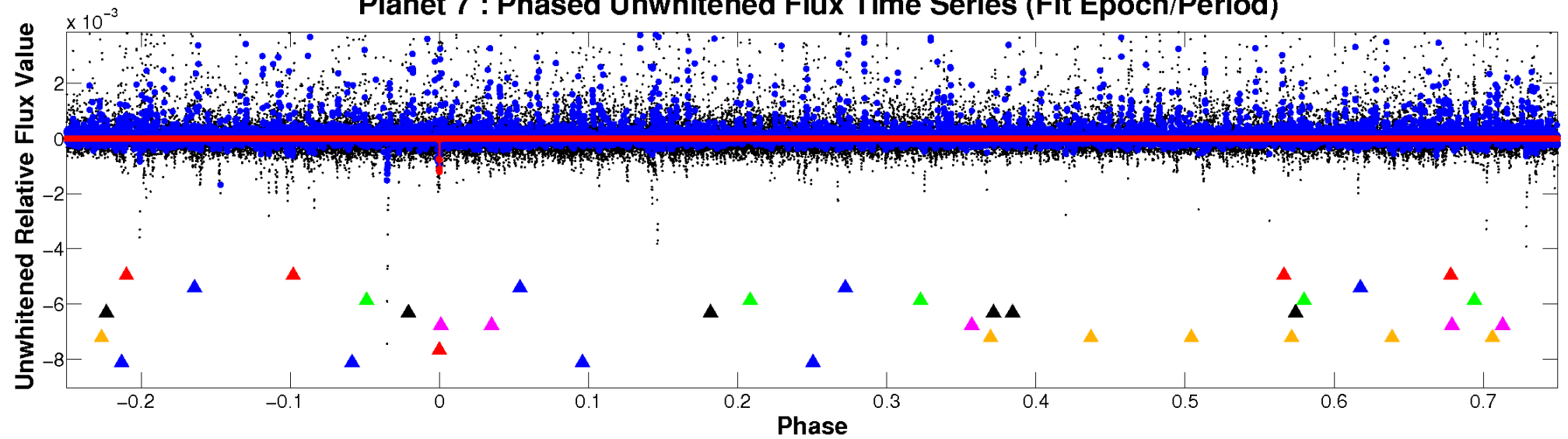
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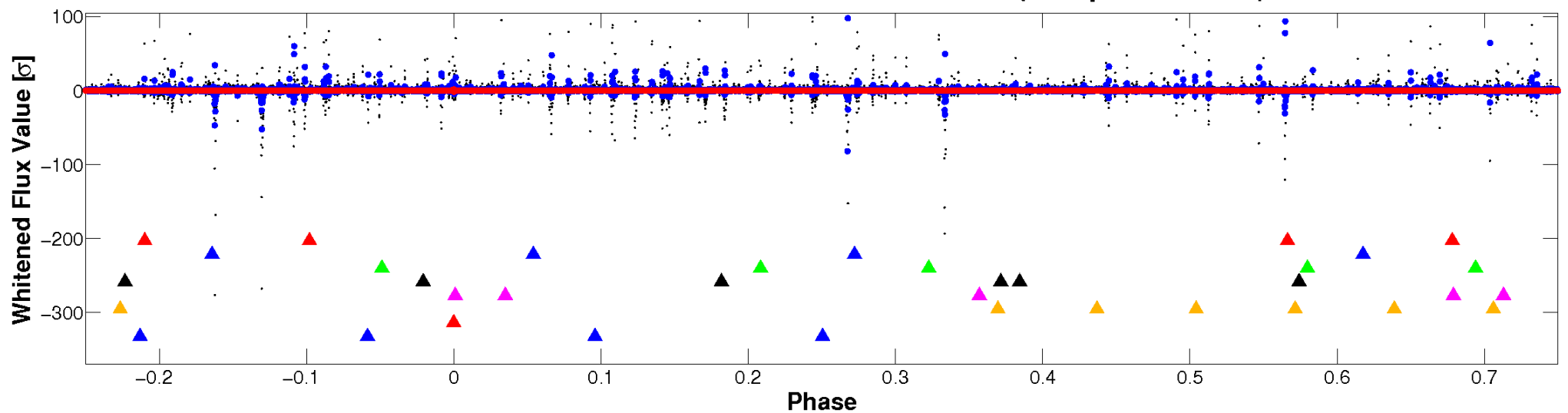


# Non-Whitened Vs. Whitened Light Curve

**Planet 7 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)**

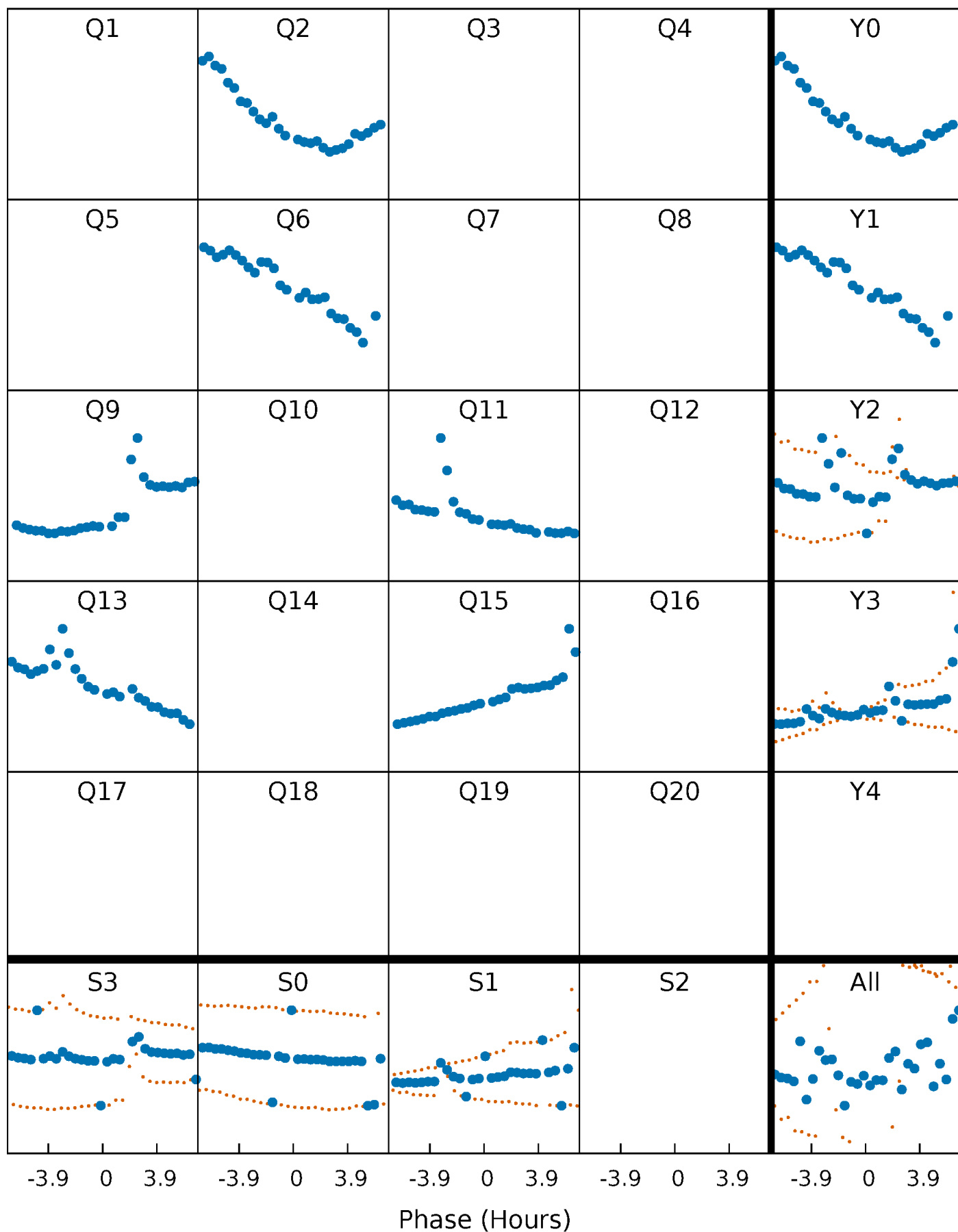


**Planet 7 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



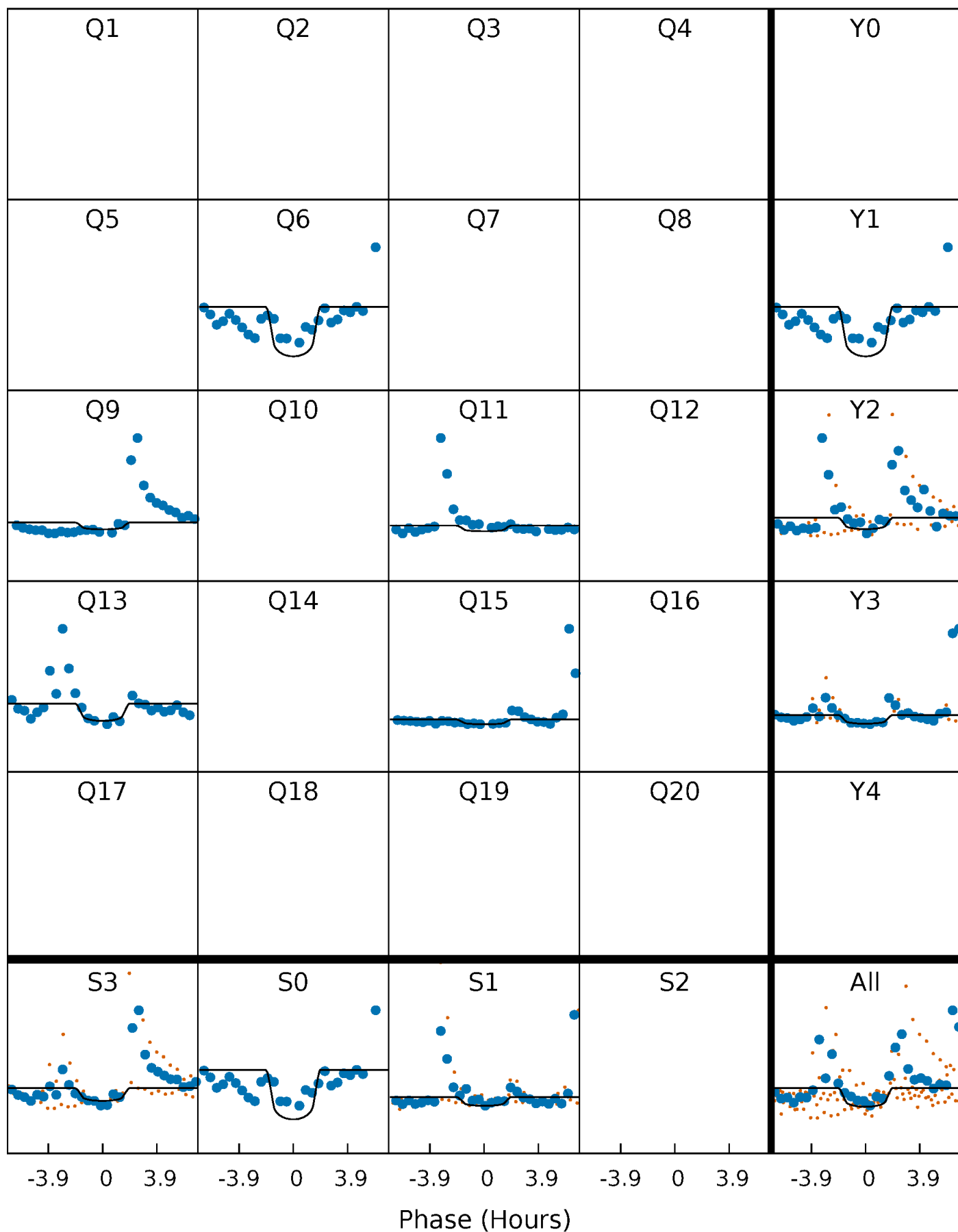
# PDC Quarter-Phased Transit Curves

TCE 011342883-07 P=198.724563 Days  $T_0=229.079318$  (BKJD)



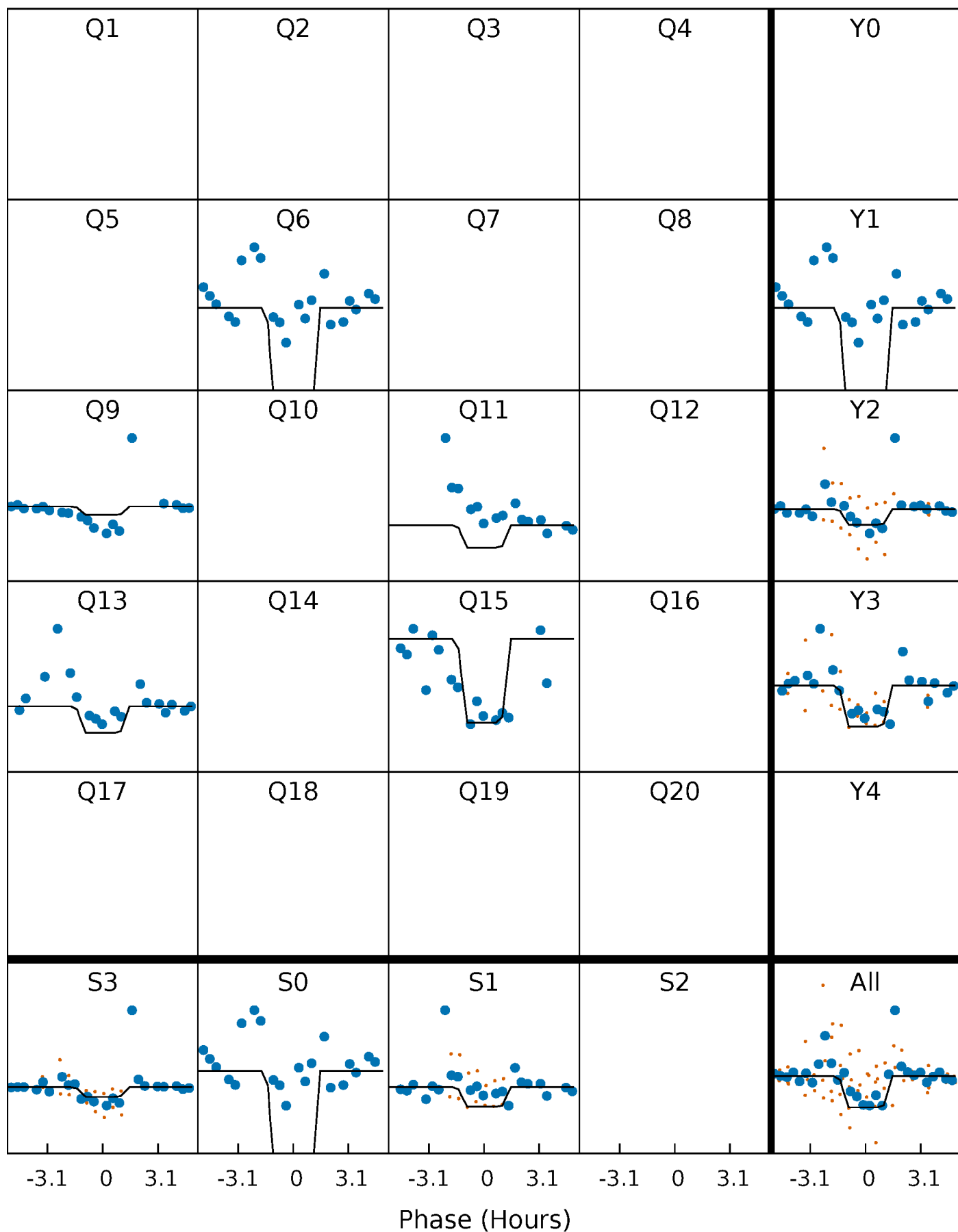
# DV Quarter-Phased Transit Curves

TCE 011342883-07 P=198.724563 Days  $T_0=229.079318$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

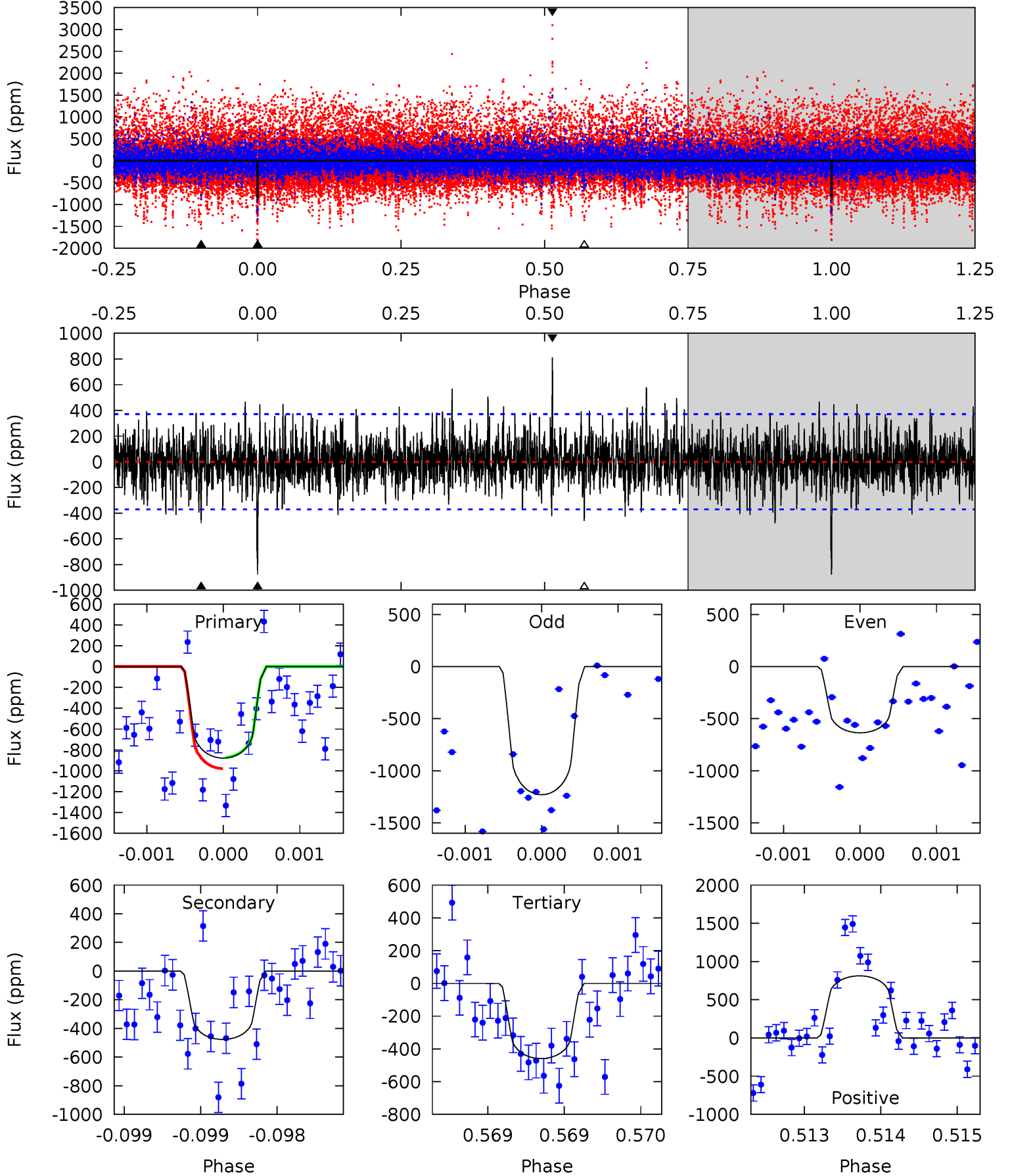
TCE 011342883-07 P=198.717791 Days  $T_0=229.114942$  (BKJD)



# DV Model-Shift Uniqueness Test

011342883-07,  $P = 198.724563$  Days,  $E = 30.354755$  Days

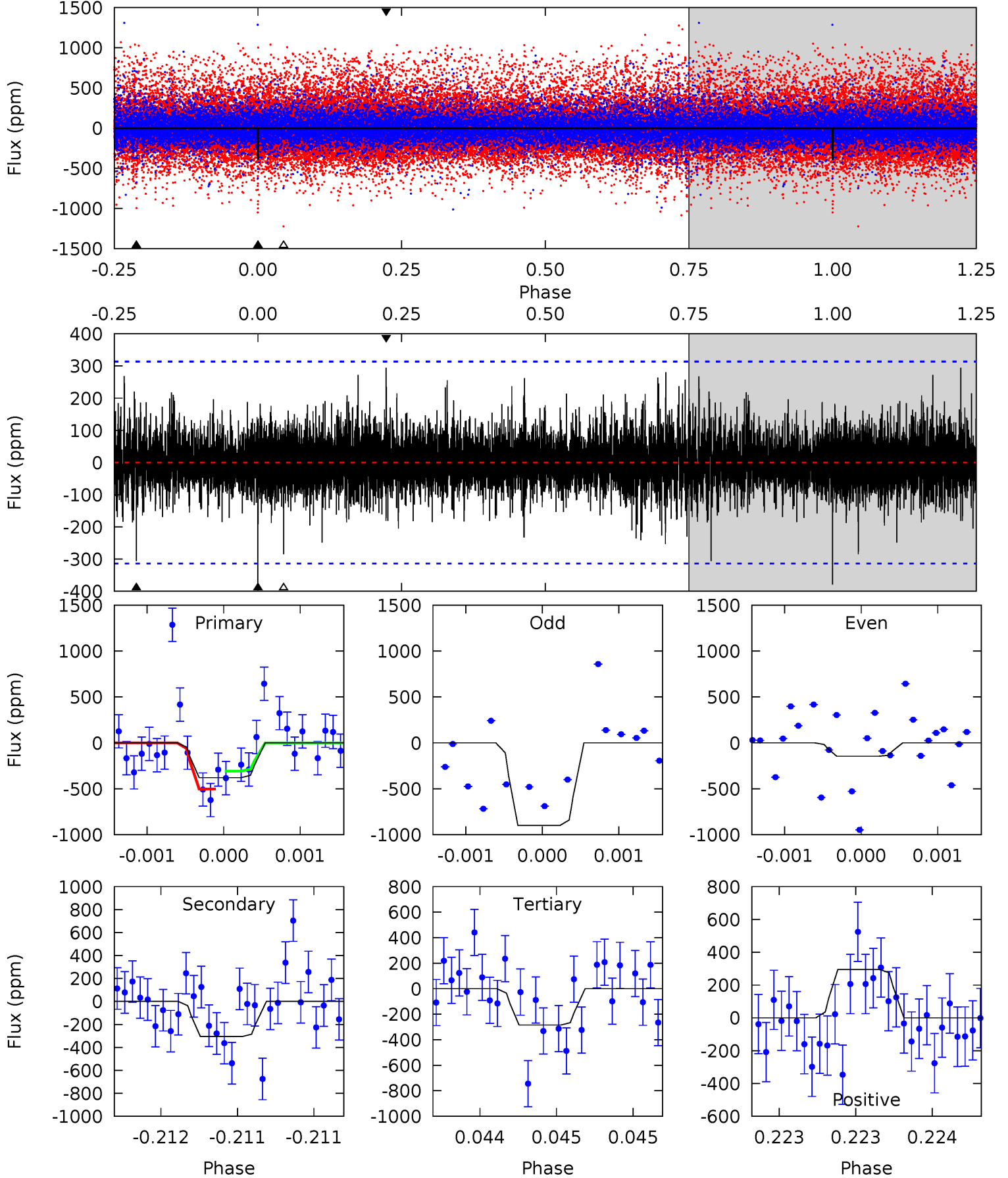
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.0	7.08	6.82	12.1	5.50	3.36	1.97	6.22	0.98	0.26	-4.98	1.52	0.73	0.48	0.79



# Alt Model-Shift Uniqueness Test

011342883-07,  $P = 198.717791$  Days,  $E = 30.397151$  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
6.68	5.39	5.02	5.20	5.54	3.43	1.11	1.66	1.48	0.37	0.19	5.42	1.69	0.44	1.68





### Stellar Parameters For KIC 011342883

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M$ ( $M_{\odot}$ )	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$4298^{+120}_{-150}$	$4.805^{+0.084}_{-0.039}$	$-1.500^{+0.250}_{-0.300}$	$0.447^{+0.037}_{-0.064}$	$0.464^{+0.038}_{-0.052}$	$7.339^{+3.124}_{-1.192}$
	+3%/-3%	+2%/-1%	+17%/-20%	+8%/-14%	+8%/-11%	+43%/-16%
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 011342883-07 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-477 \pm 67$	$2.96^{+3.02}_{-2.03}$	$245^{+9}_{-9}$	$3076^{+1364}_{-541}$	$7841^{+71765}_{-5869}$
Alt.	$-305 \pm 57$	$3.07^{+2.71}_{-2.06}$	$244^{+9}_{-10}$	$2856^{+1165}_{-440}$	$4963^{+41855}_{-3664}$

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

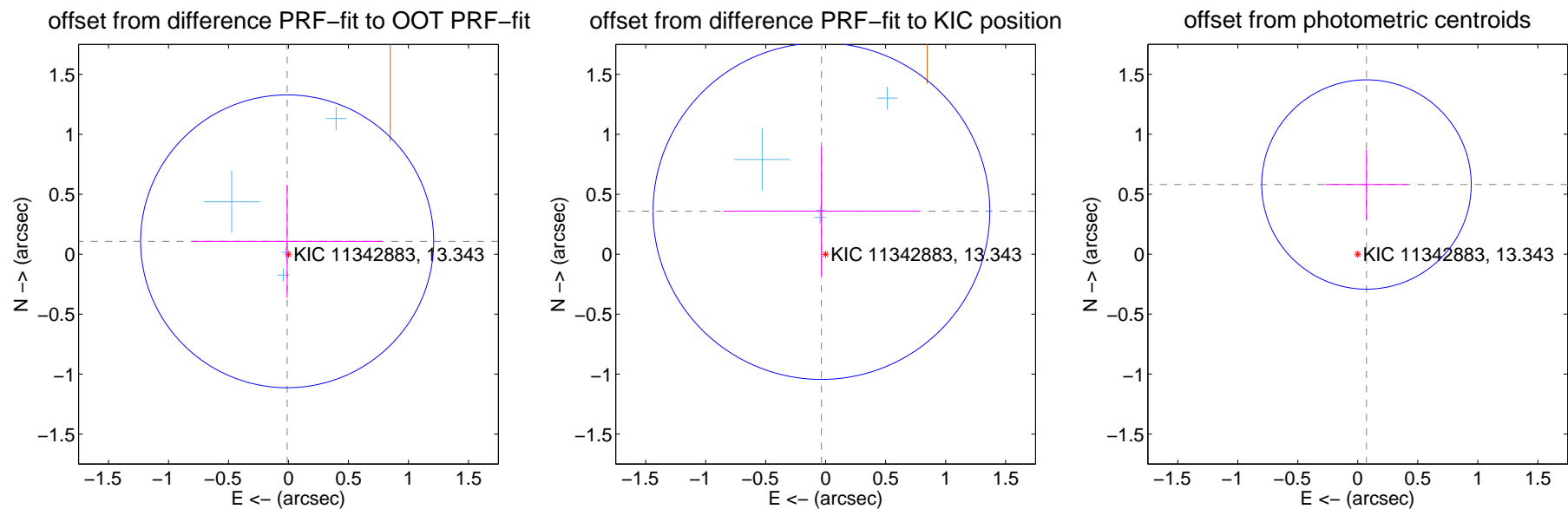
## DV Centroid Data

Supplemental centroid analysis for 011342883-07. Kepler magnitude: 13.34. Transit SNR 9.58

There are 5 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.35 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.108 \pm 0.407$	0.27	$0.011 \pm 0.793$	$0.108 \pm 0.469$
PRF-fit source offset from KIC position	$0.361 \pm 0.468$	0.77	$0.035 \pm 0.816$	$0.359 \pm 0.538$
photometric centroid source offset	$0.59 \pm 0.29$	2.01	$-0.07 \pm 0.34$	$0.58 \pm 0.29$



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.

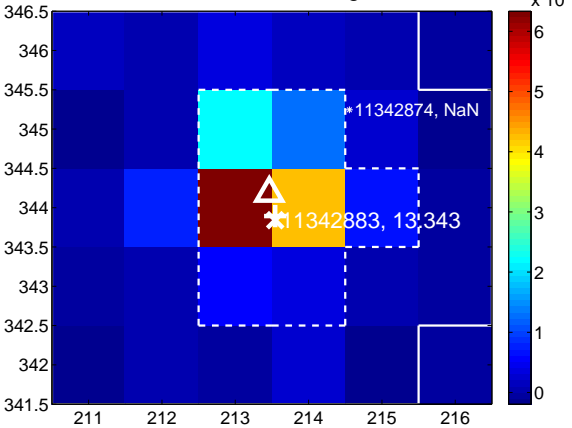
Q1 no difference image



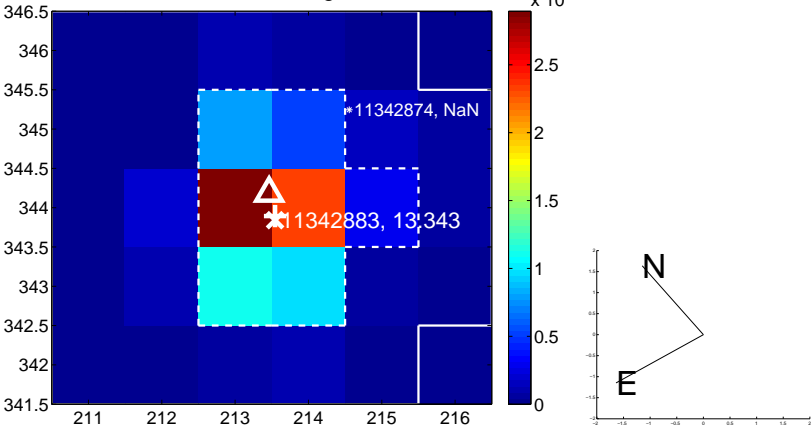
Q1 no OOT image



Q2 difference image



Q2 OOT image



Q3 no difference image



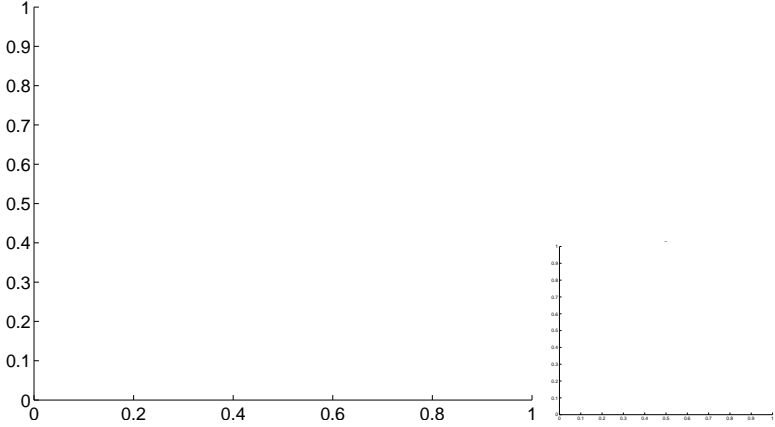
Q3 no OOT image



Q4 no difference image



Q4 no OOT image



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

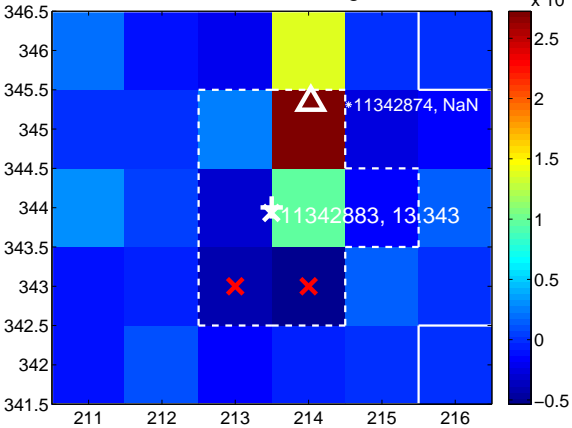
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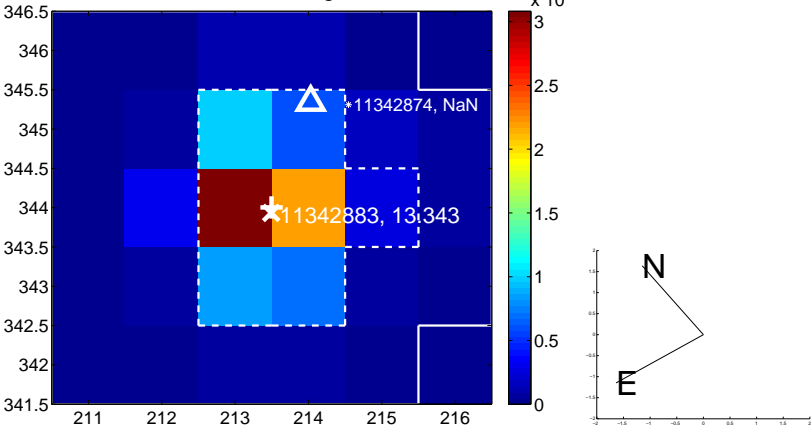
Q5 no OOT image



Q6 difference image



Q6 OOT image



Q7 no difference image



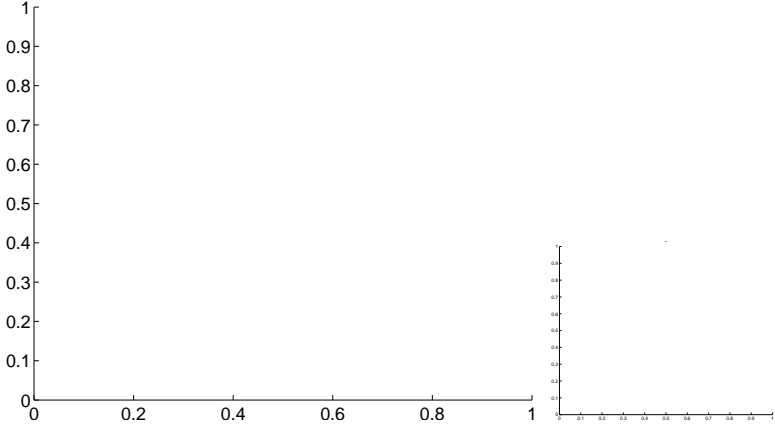
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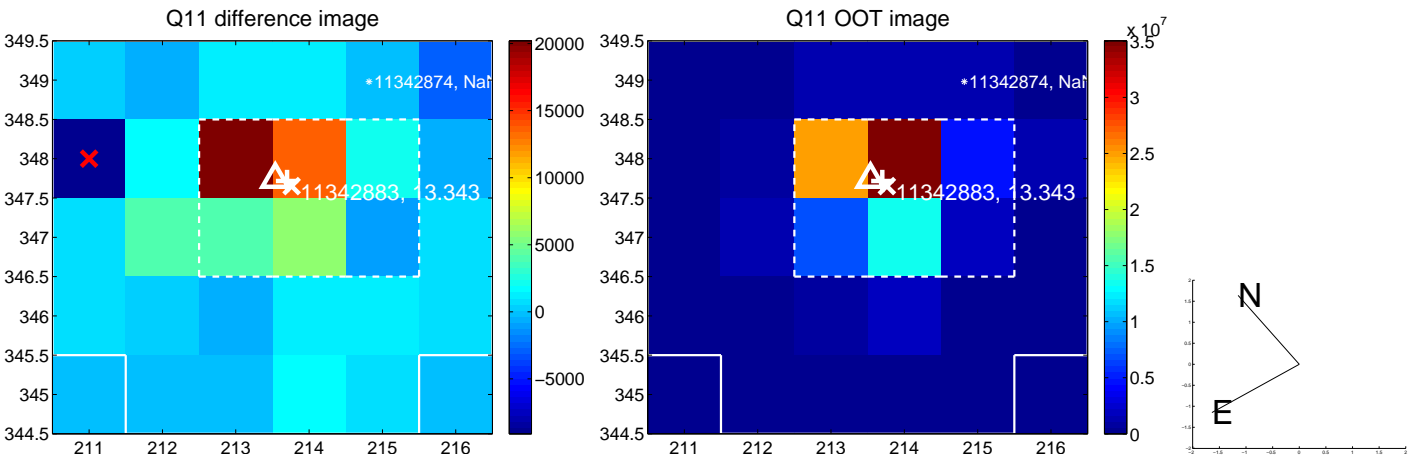
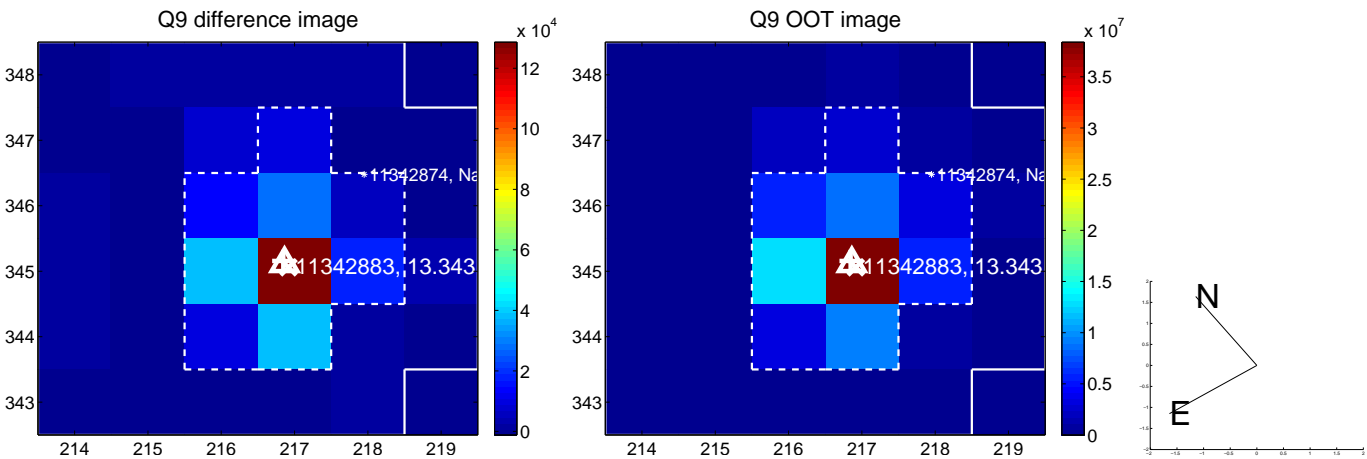
Q8 no difference image



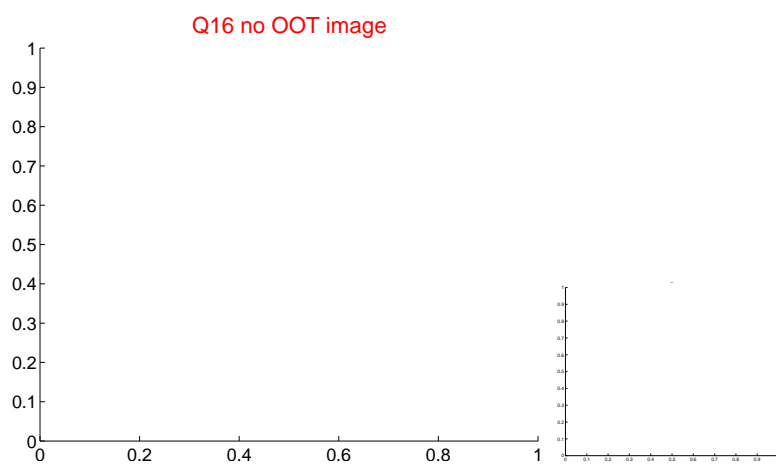
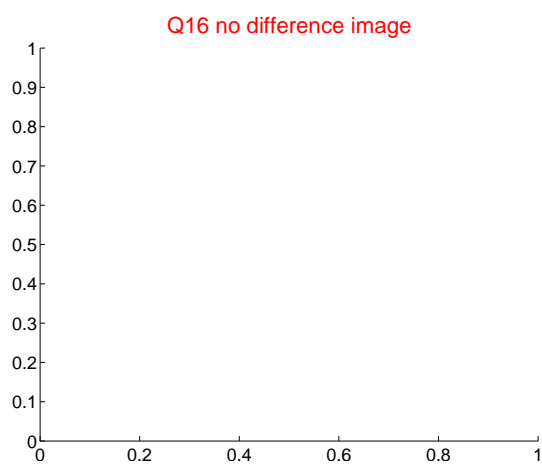
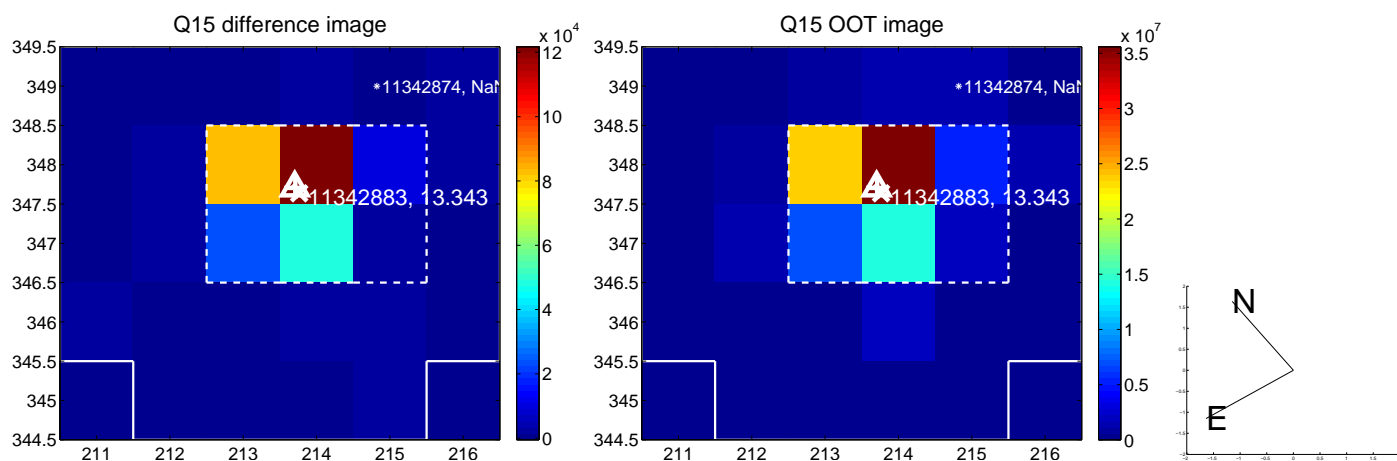
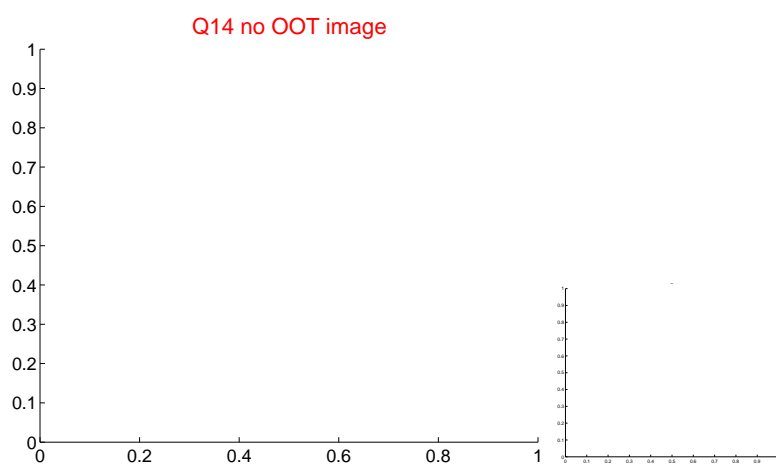
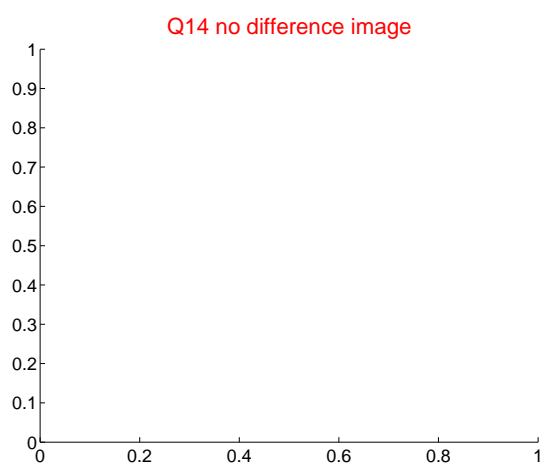
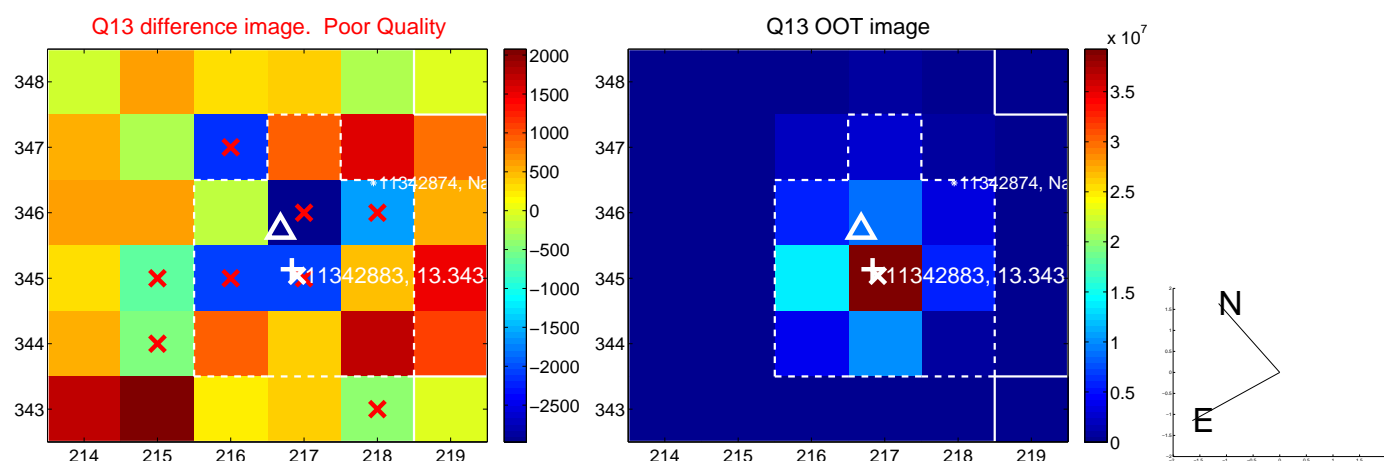
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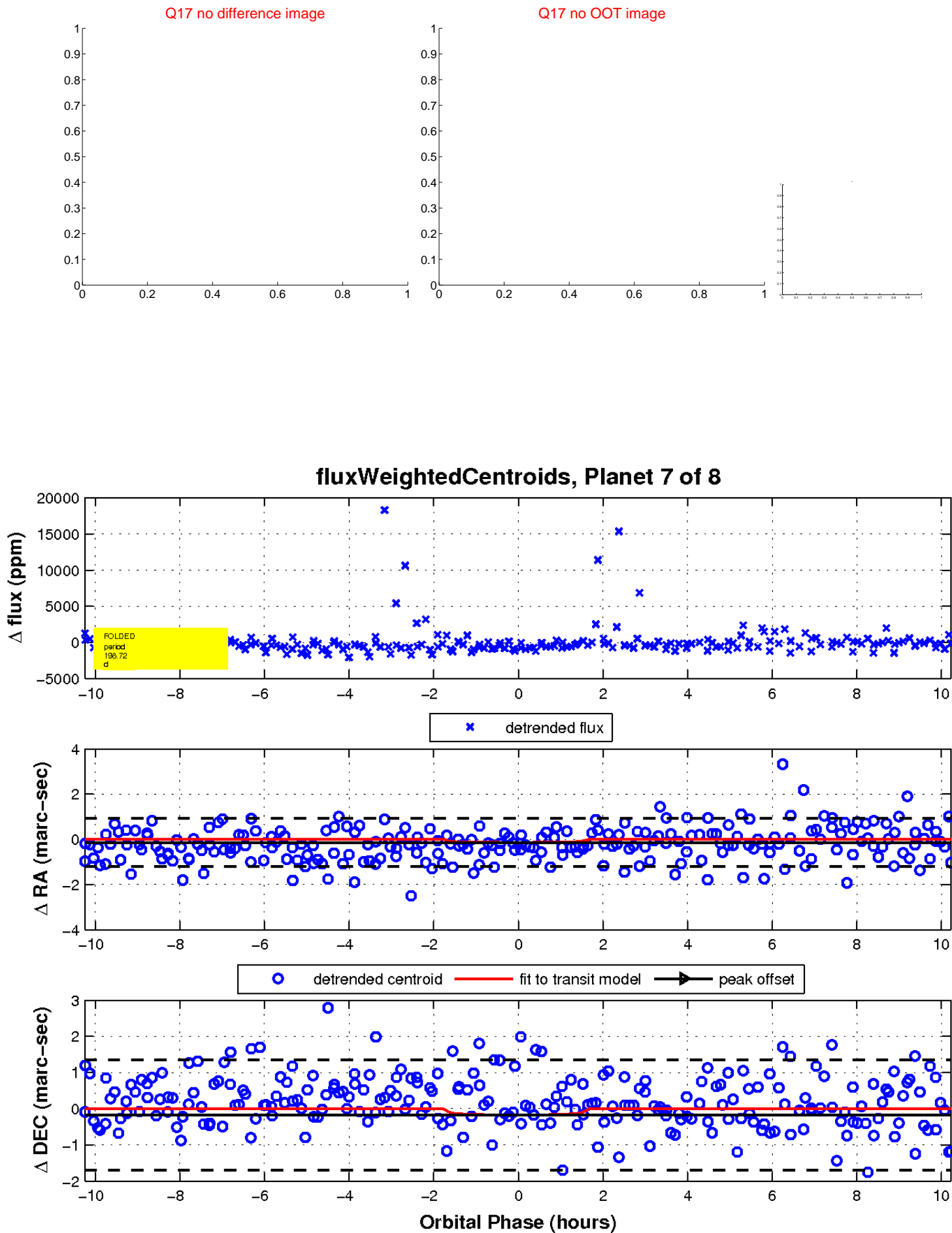
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

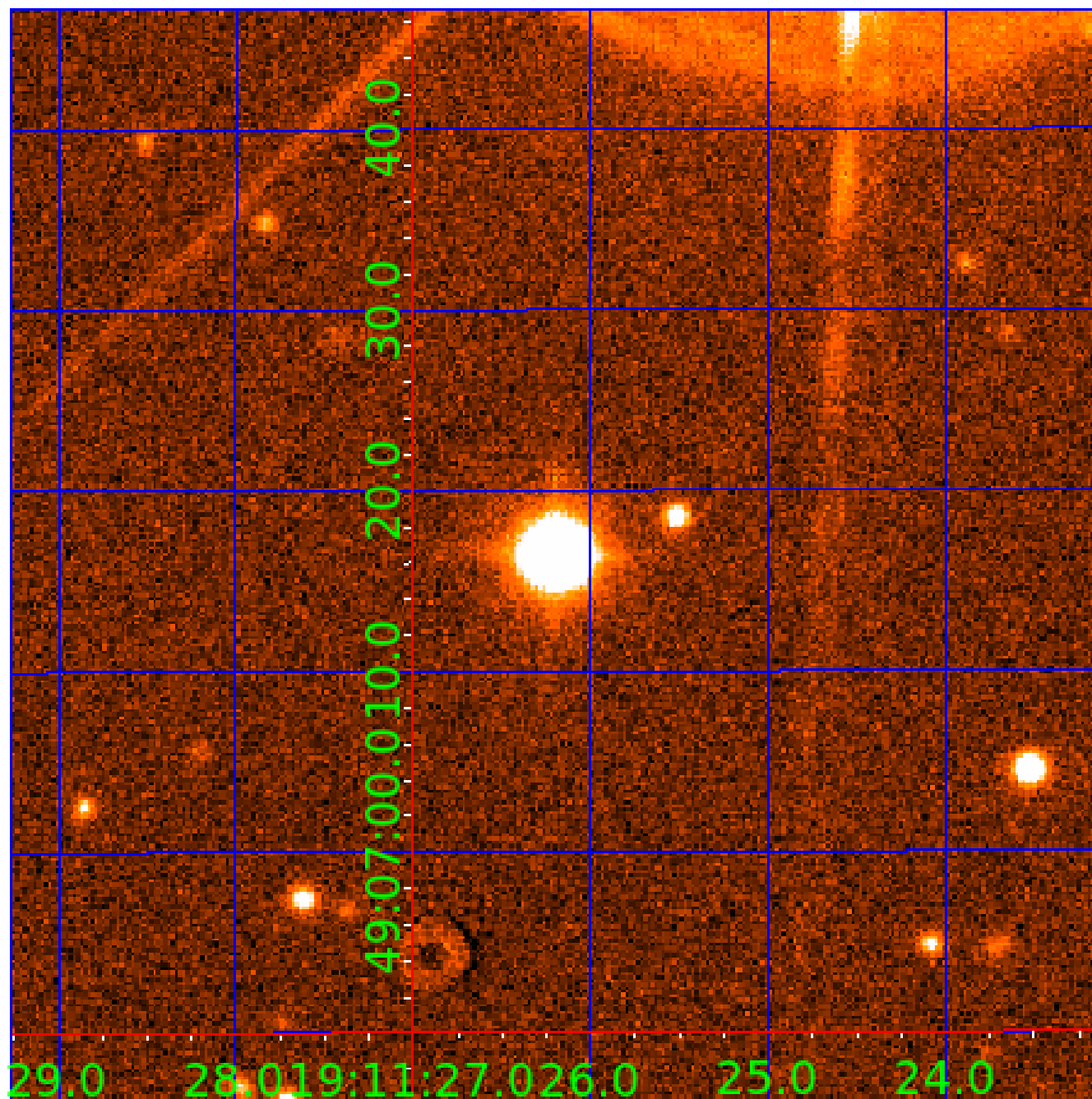


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination





# KIC 011342883

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011342883-01	OBS	No	375.212049	209.607708	1282.1	4.623	14.5	9.3	0.45	4298	1.64	0.10
011342883-03	OBS	No	323.640940	168.282313	1238.0	2.353	15.8	9.2	0.45	4298	1.61	0.12
011342883-04	OBS	No	238.977295	302.928400	342.0	1.500	15.8	2.5	0.45	4298	0.90	0.18
011342883-05	OBS	No	333.460106	229.281070	1189.4	12.132	12.8	7.7	0.45	4298	1.65	0.12
011342883-06	OBS	No	212.100925	302.529031	564.2	2.652	13.5	4.8	0.45	4298	1.13	0.21
011342883-07	OBS	No	198.724563	229.079318	1216.3	3.428	10.9	9.6	0.45	4298	1.57	0.23
011342883-08	OBS	No	428.158005	186.739501	343.9	9.000	11.6	-1.0	0.45	4298	0.83	0.08

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011342883-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV
011342883-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
011342883-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011342883-05	OBS	FP	0.00	1	0	0	0	LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
011342883-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
011342883-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS
011342883-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS

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

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

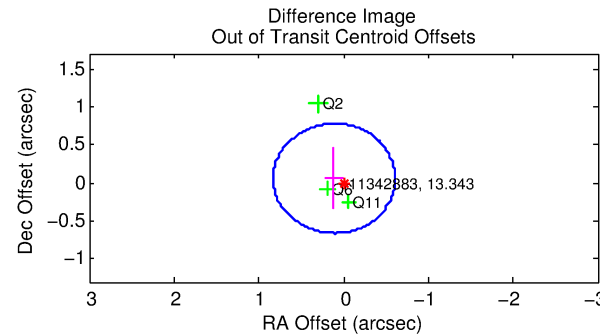
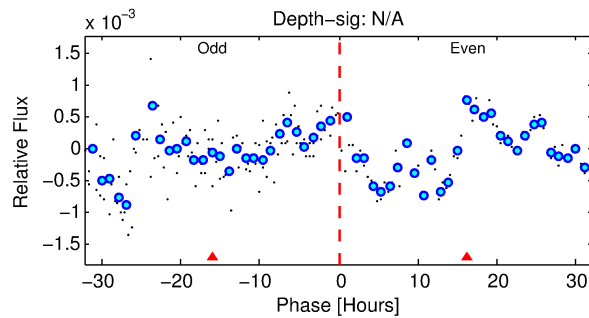
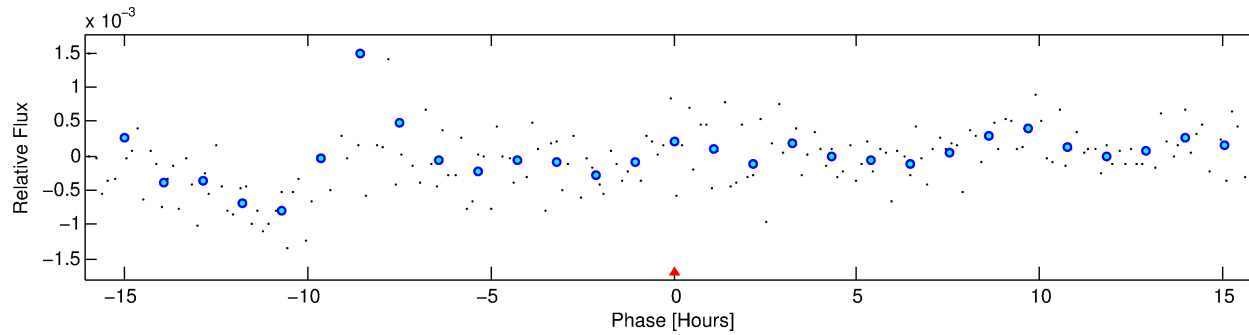
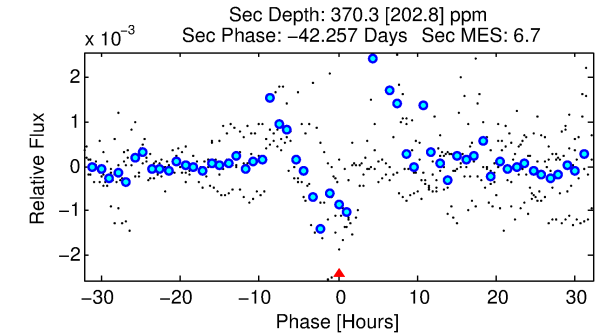
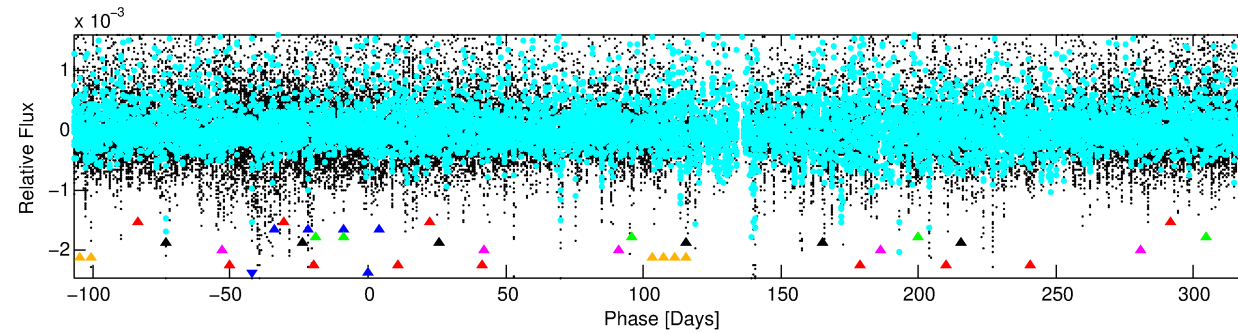
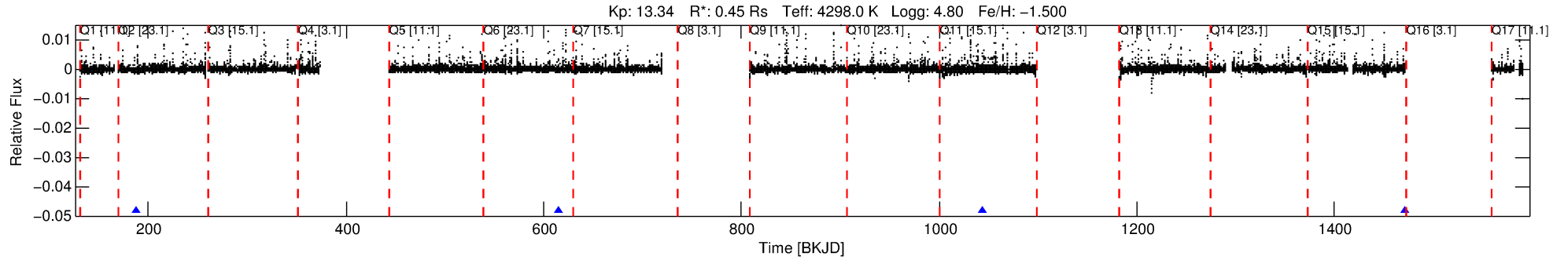
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 011342883-08

No Significant Match Found

# DV One-Page Summary

KIC: 11342883 Candidate: 8 of 8 Period: 428.158 d



## TPS TCE Results:

Period = 428.15801 d  
Epoch = 186.7395 BKJD

DV fit results are unavailable

## DV Diagnostic Results:

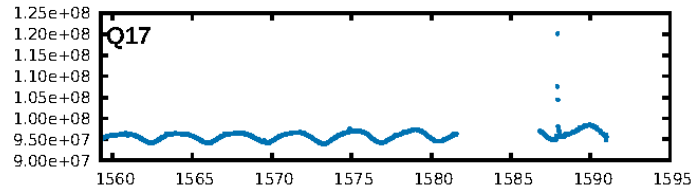
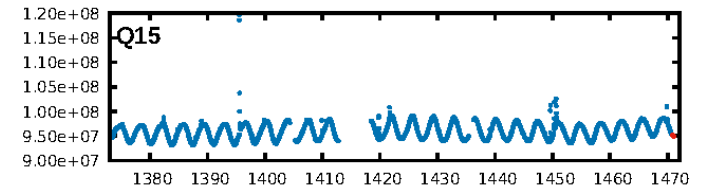
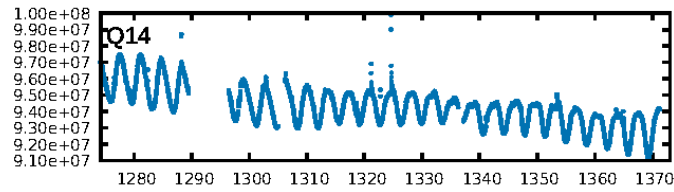
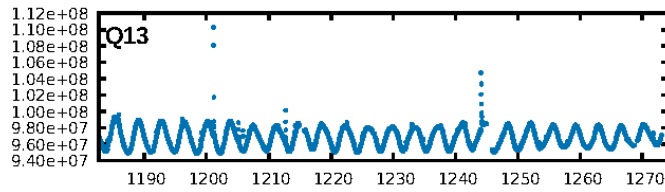
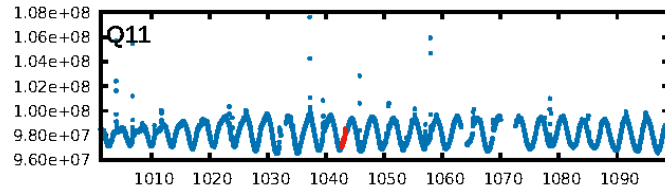
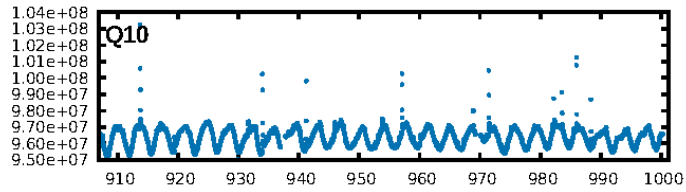
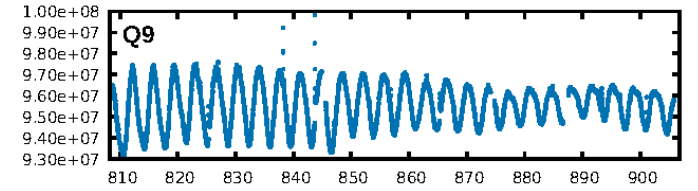
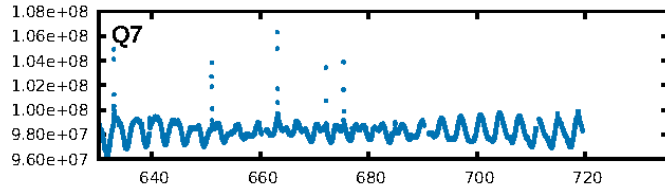
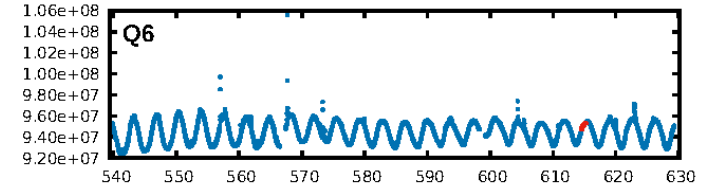
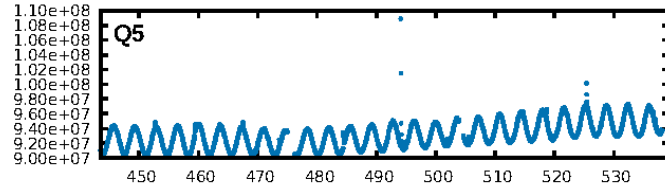
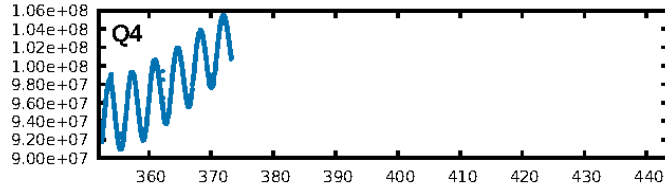
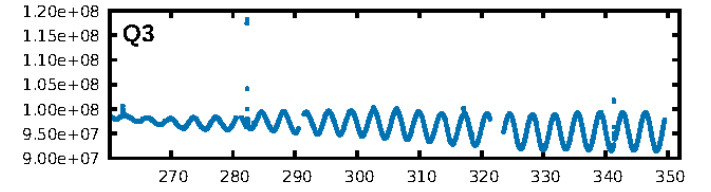
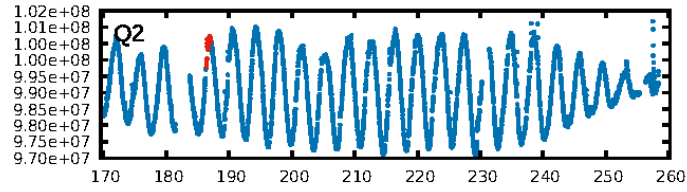
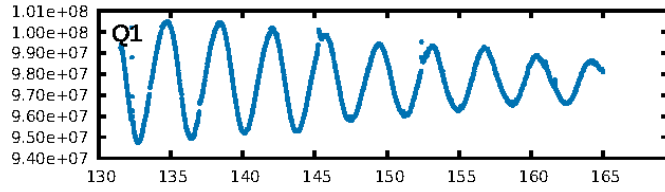
ShortPeriod-sig: 100.0% [125.59σ]  
LongPeriod-sig: 100.0% [32.20σ]  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [3/3]  
GhostDiagnostic-chr: -0.5404

Centroid-sig: 16.9%  
Centroid-so: 27.837 arcsec [0.98σ]  
OotOffset-rm: 0.126 arcsec [0.52σ]  
KicOffset-rm: 0.114 arcsec [0.34σ]  
OotOffset-st: 2/1/0/0 [3]  
KicOffset-st: 2/1/0/0 [3]  
DiffImageQuality-fgm: 0.33 [1/3]  
DiffImageOverlap-fno: 1.00 [3/3]

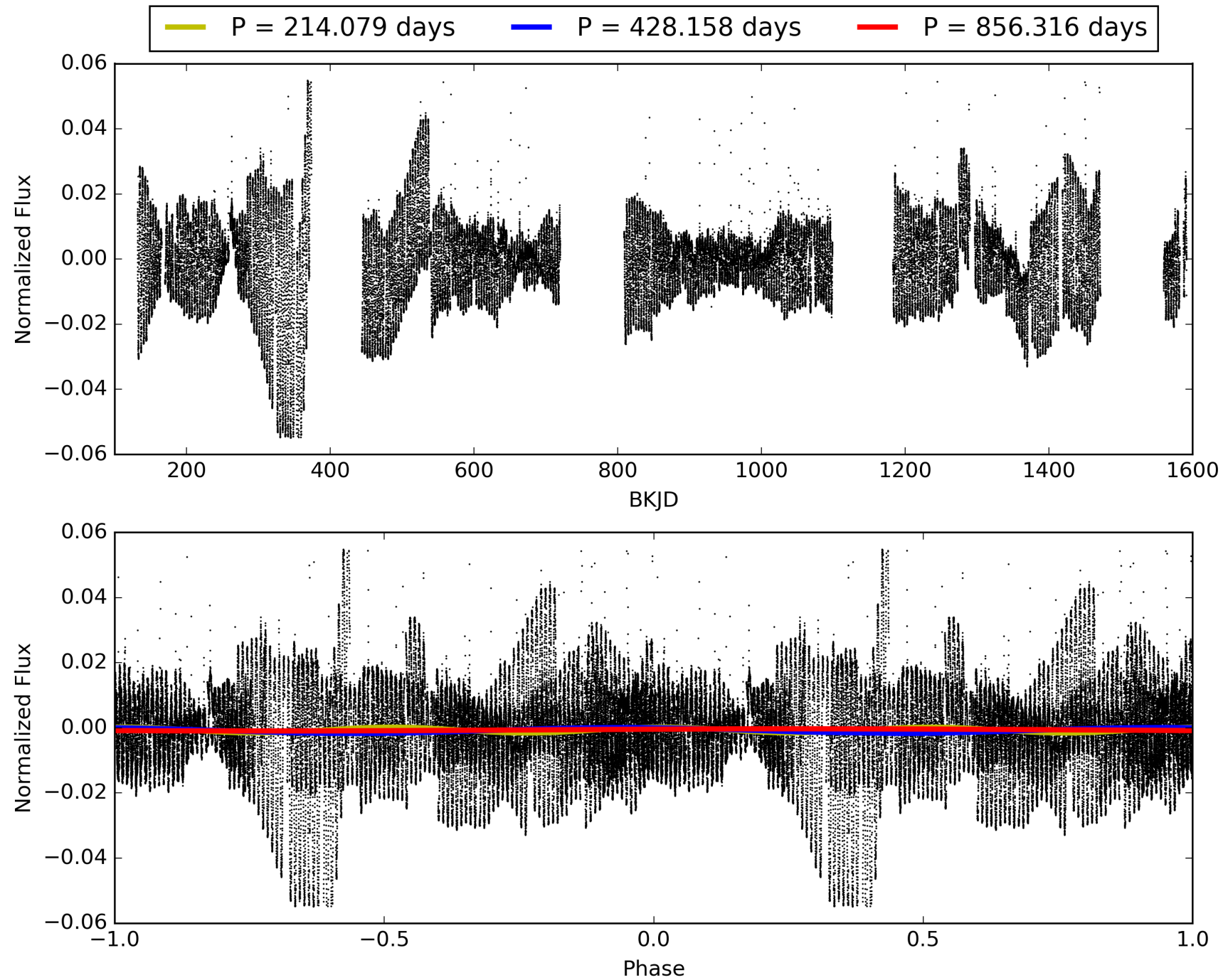
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:02:58 Z

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

# TCE 011342883-08, PDC Light Curves

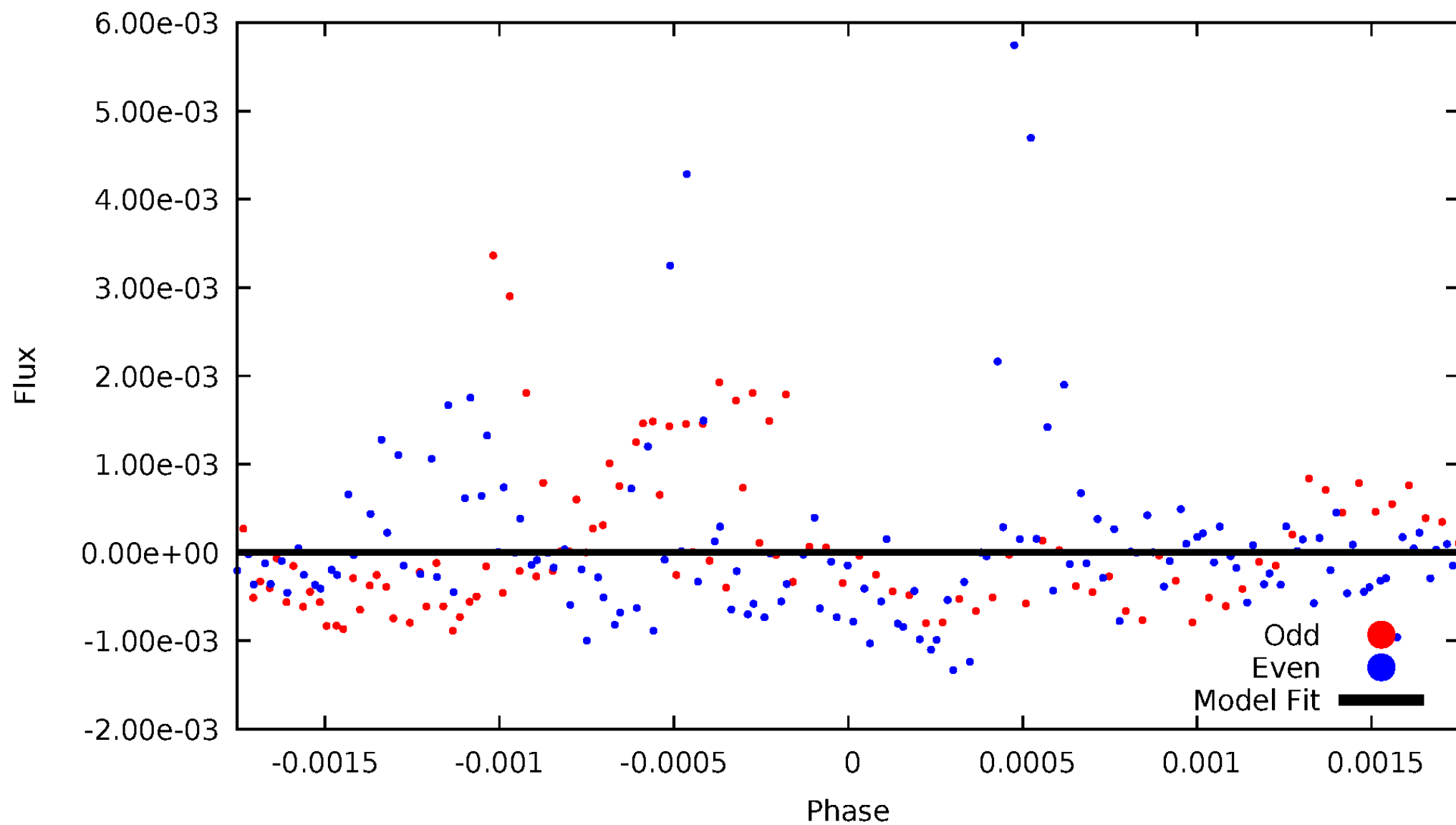


TCE 011342883-08



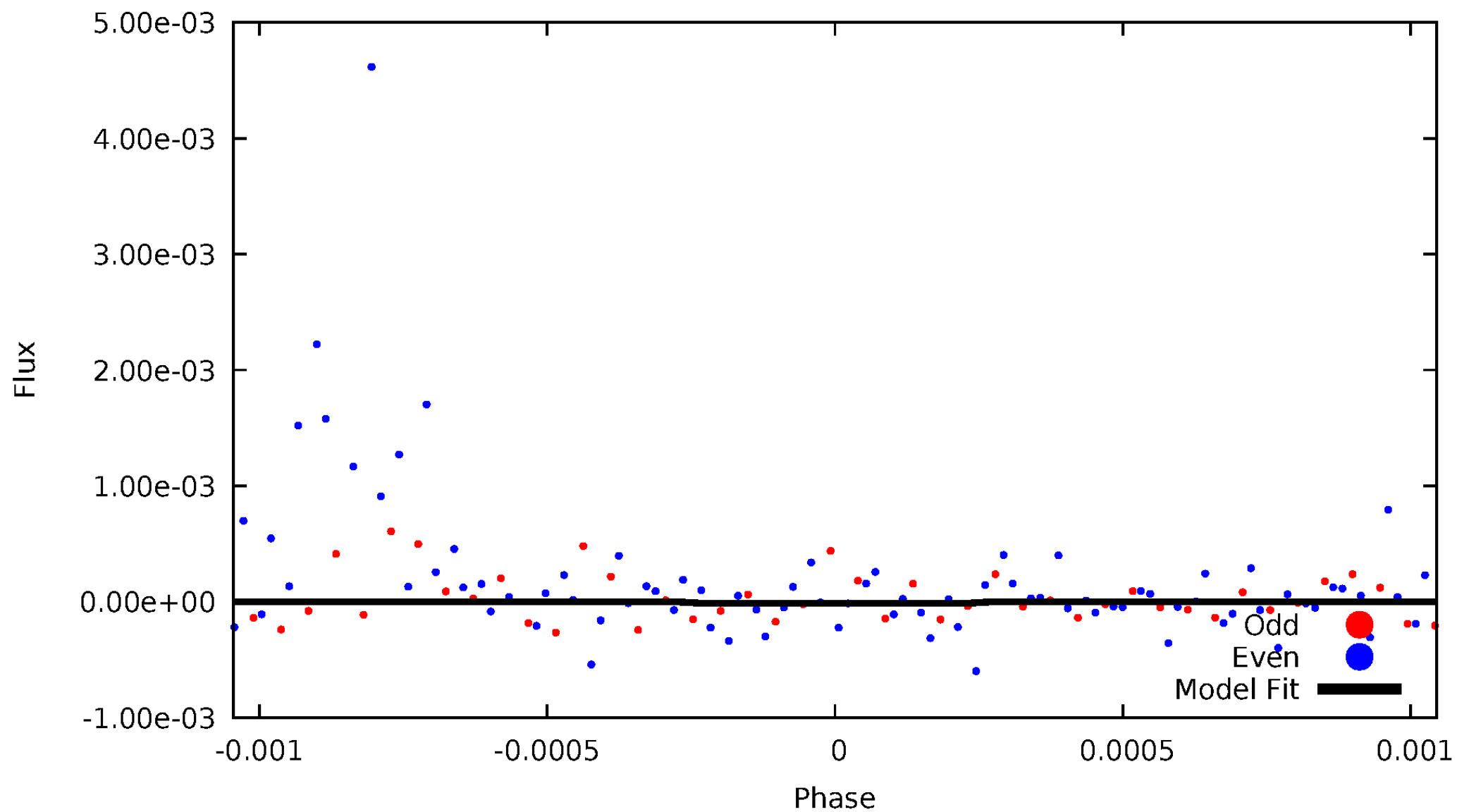
# DV Odd/Even

TCE 011342883-08



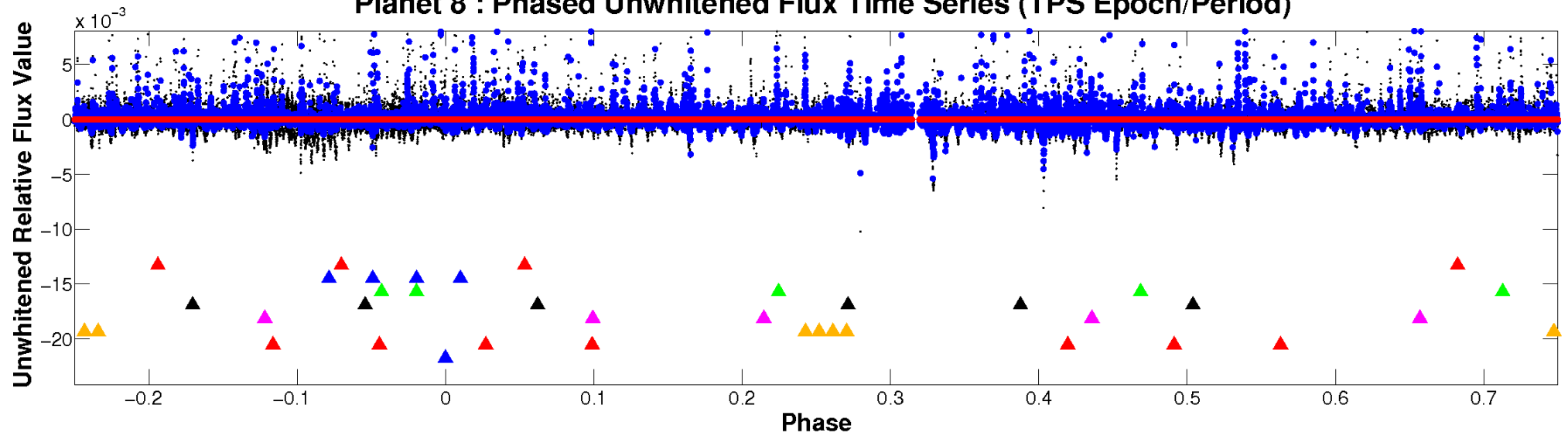
# ALT Odd/Even

TCE 011342883-08

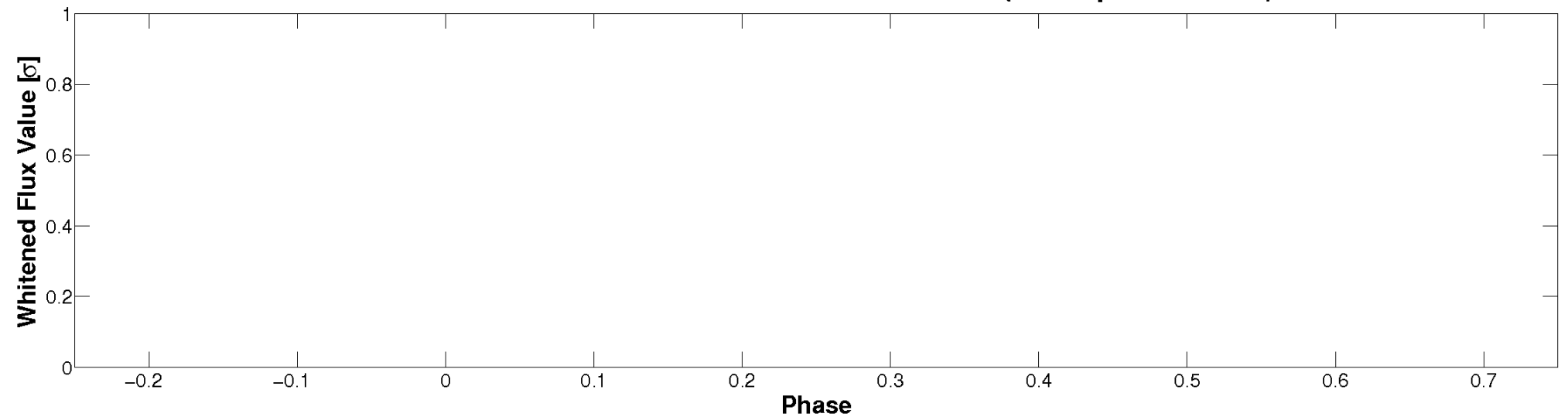


# Non-Whitened Vs. Whitened Light Curve

**Planet 8 : Phased Unwhitened Flux Time Series (TPS Epoch/Period)**

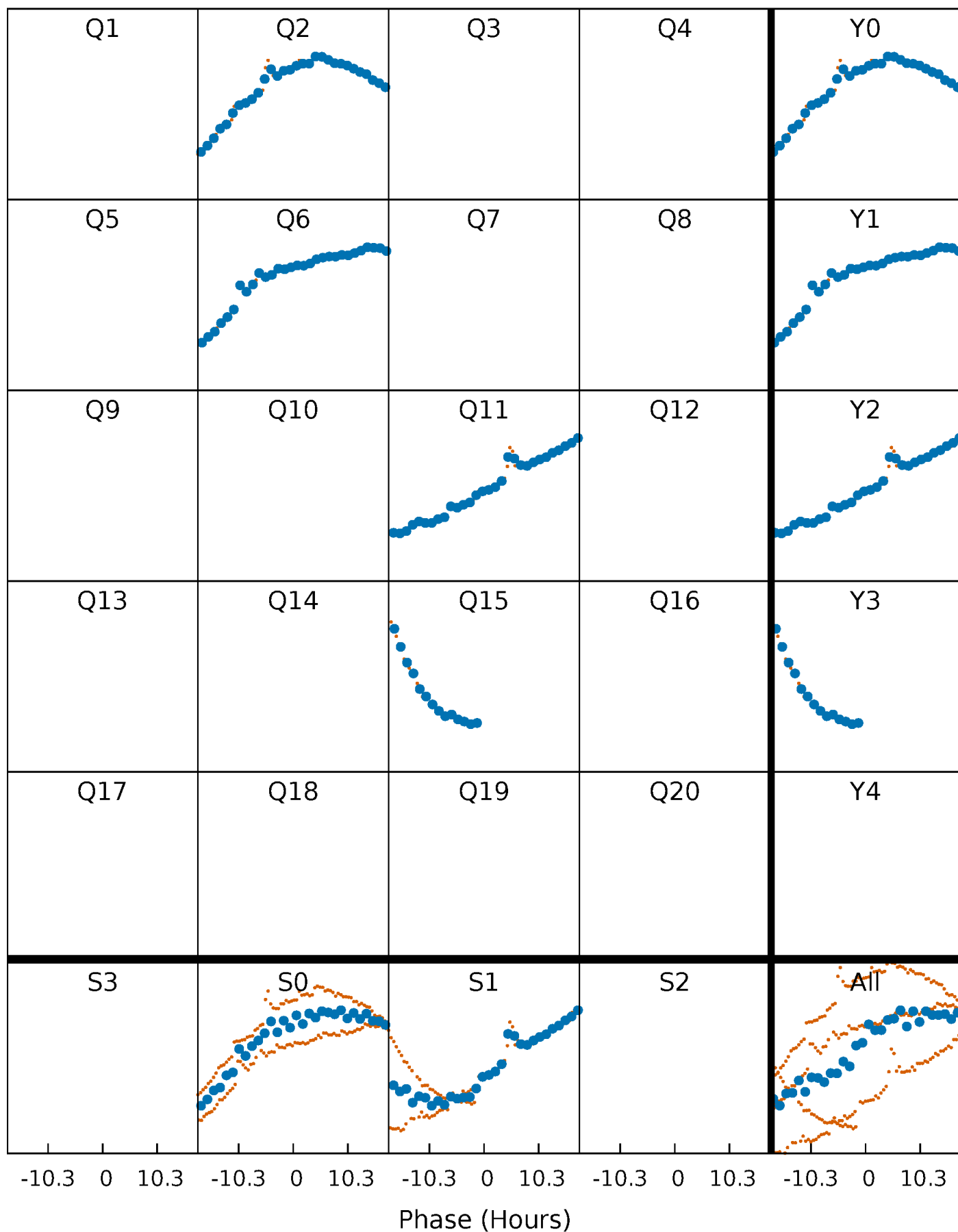


**Planet 8 : Phased Whitened Flux Time Series (TPS Epoch/Period)**



# PDC Quarter-Phased Transit Curves

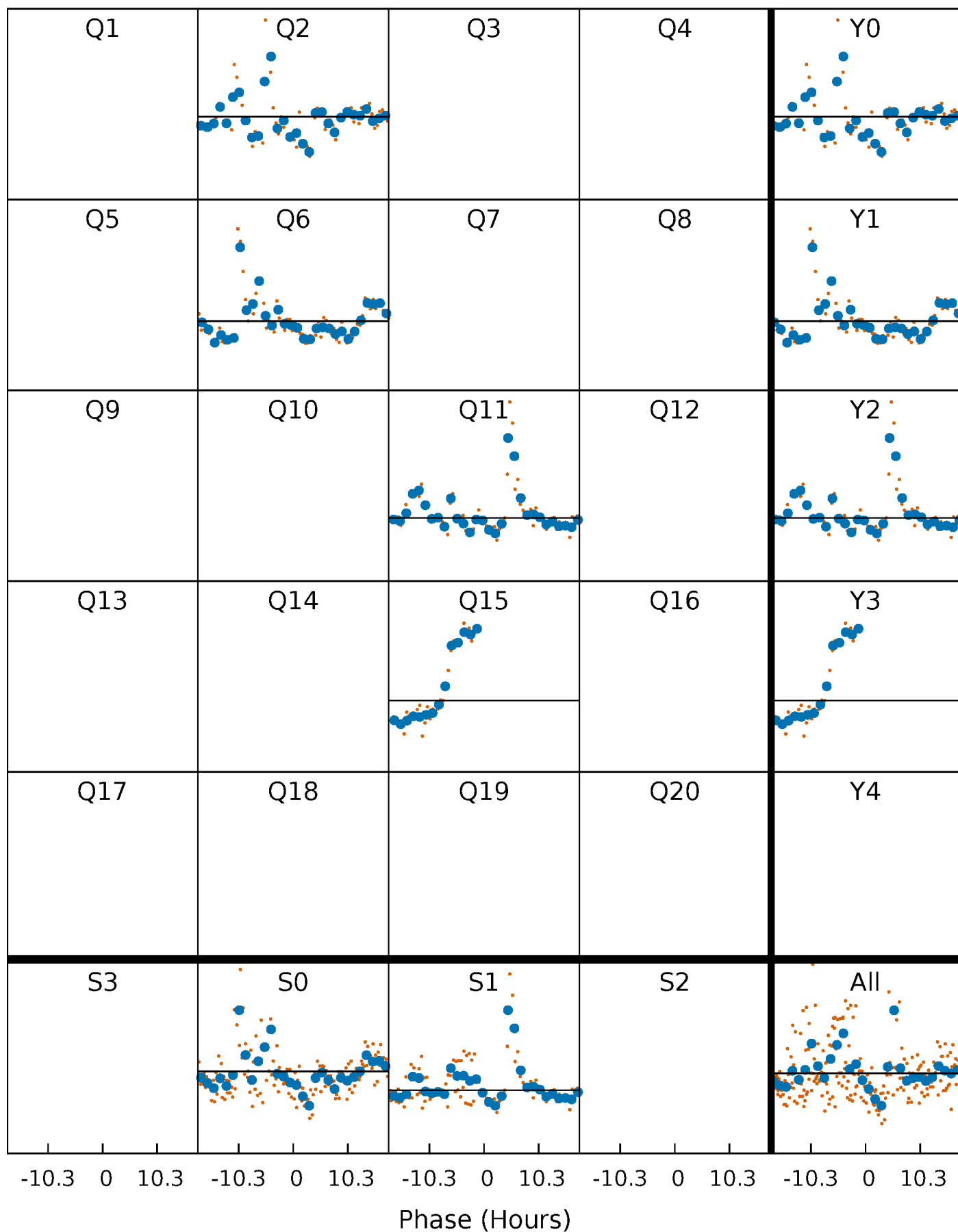
TCE 011342883-08     $P=428.158005$  Days     $T_0=186.739501$  (BKJD)





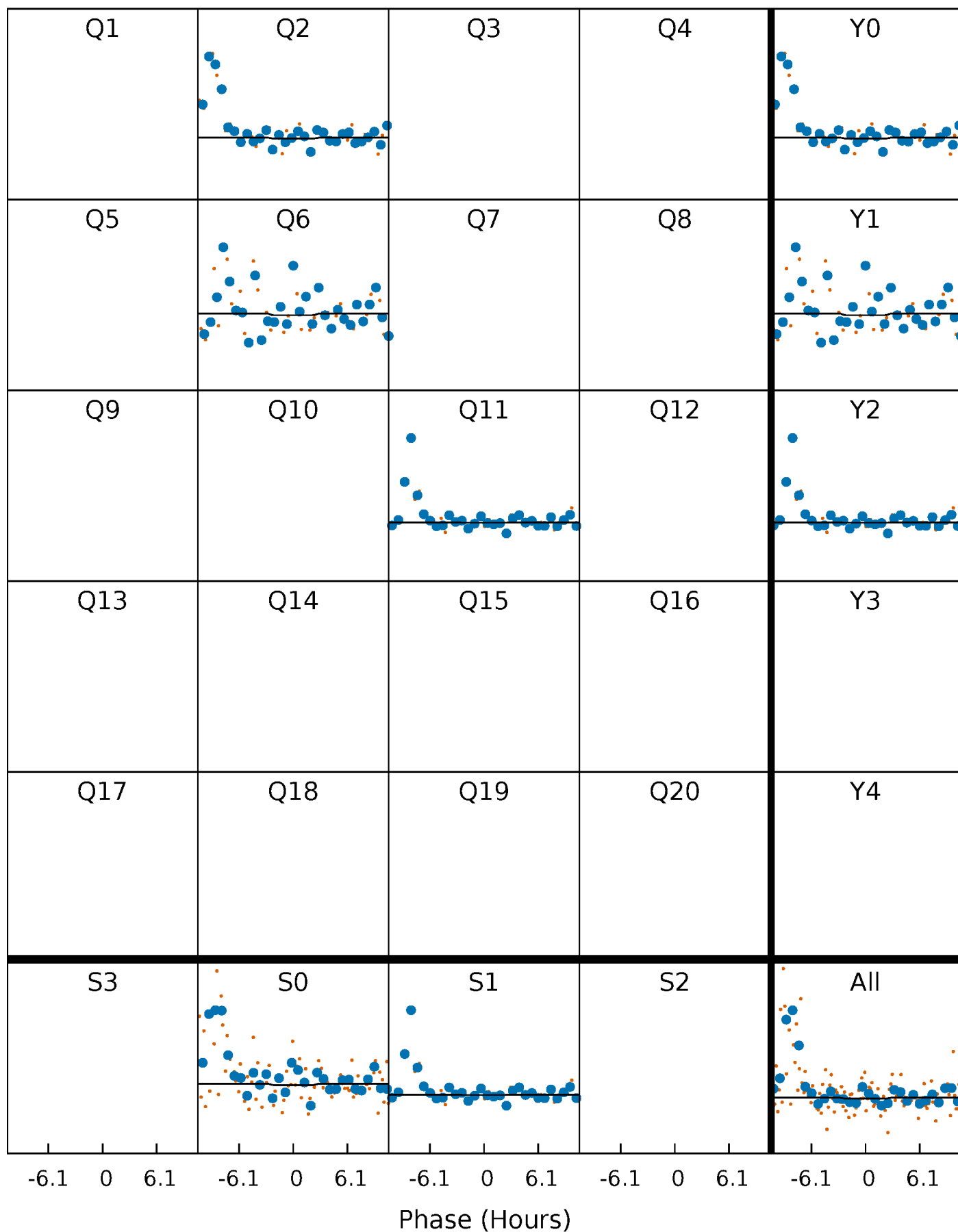
# DV Quarter-Phased Transit Curves

TCE 011342883-08     $P=428.158005$  Days     $T_0=186.739501$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

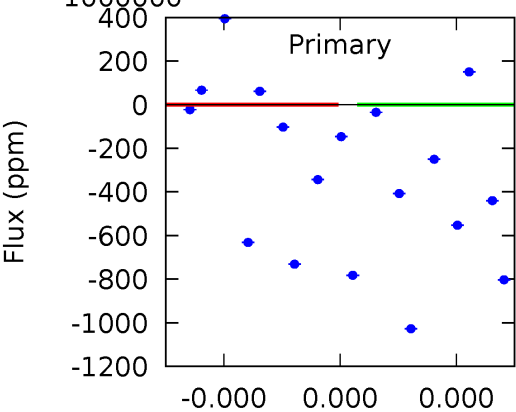
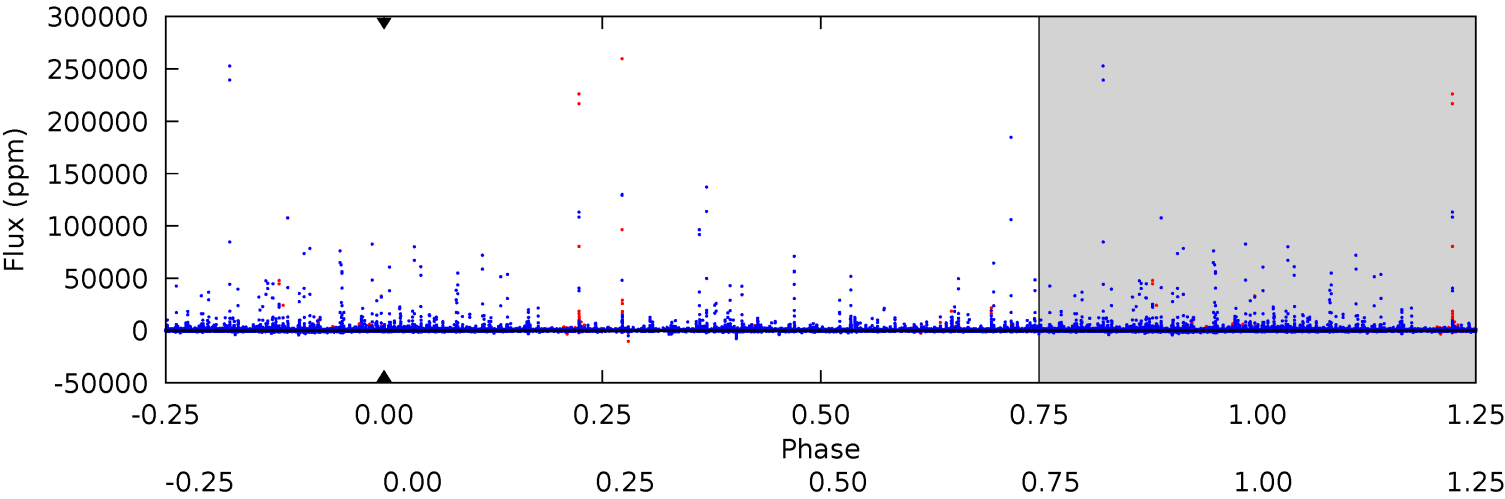
TCE 011342883-08     $P=428.158005$  Days     $T_0=187.308112$  (BKJD)



# DV Model-Shift Uniqueness Test

011342883-08, P = 428.158005 Days, E = 186.739501 Days

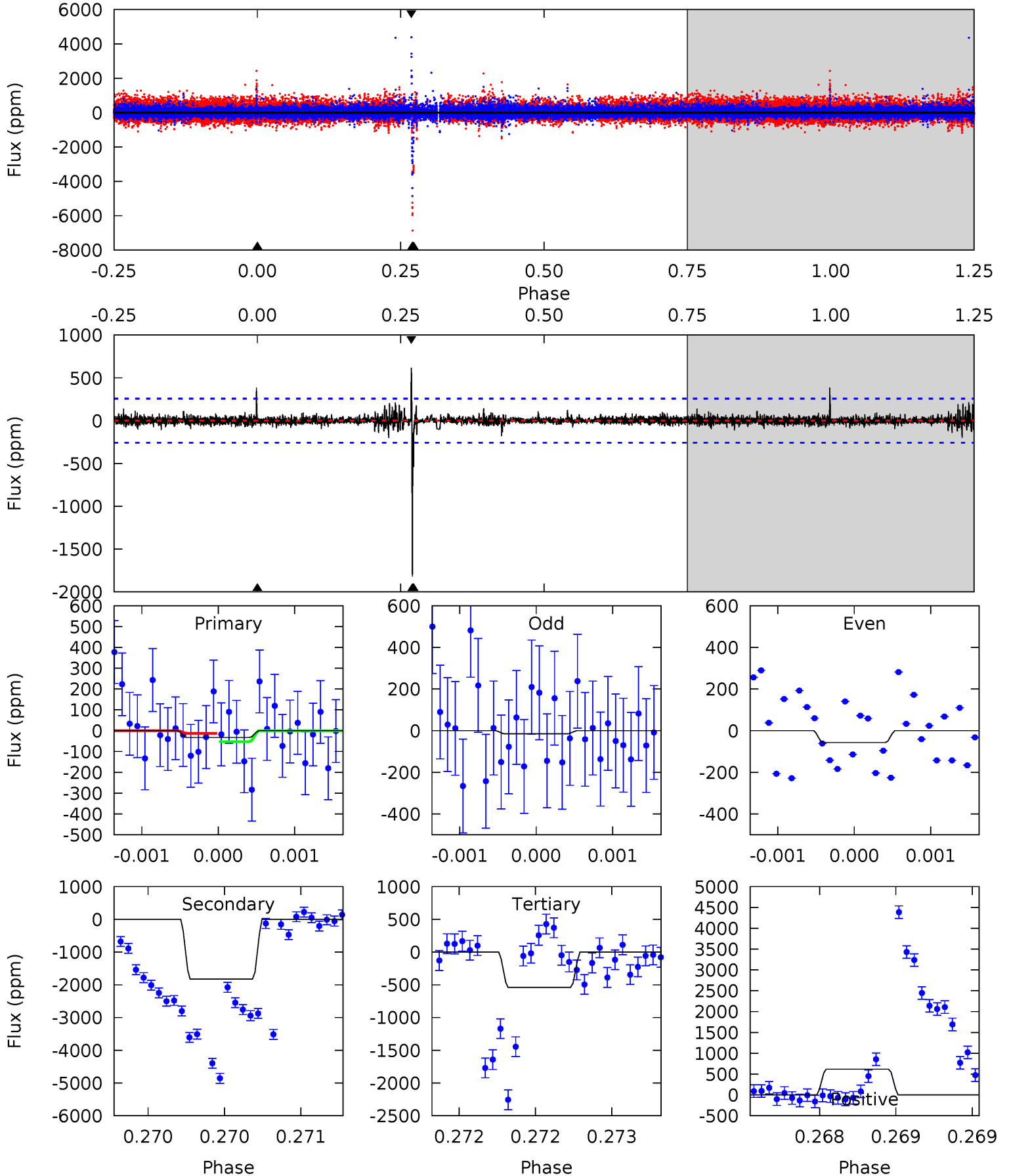
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



# Alt Model-Shift Uniqueness Test

011342883-08, P = 428.158005 Days, E = 187.308112 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
0.71	39.4	11.7	13.4	5.56	3.47	0.83	-11.0	-12.6	27.8	26.1	0.35	0.62	0.25	0.42



### Stellar Parameters For KIC 011342883

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	$4298^{+120}_{-150}$	$4.805^{+0.084}_{-0.039}$	$-1.500^{+0.250}_{-0.300}$	$0.447^{+0.037}_{-0.064}$	$0.464^{+0.038}_{-0.052}$	$7.339^{+3.124}_{-1.192}$
	+3%/-3%	+2%/-1%	+17%/-20%	+8%/-14%	+8%/-11%	+43%/-16%
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 011342883-08 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$0 \pm 1000000$	$3.60^{+3.37}_{-2.59}$	$189^{+7}_{-9}$	$-2621^{+14385}_{-7219}$	$-8370.375^{+7354331.239}_{-4573296.051}$
Alt.	$-1822 \pm 46$	$3.33^{+3.71}_{-2.35}$	$189^{+7}_{-8}$	$3618^{+2300}_{-736}$	$67842^{+733504}_{-53113}$

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

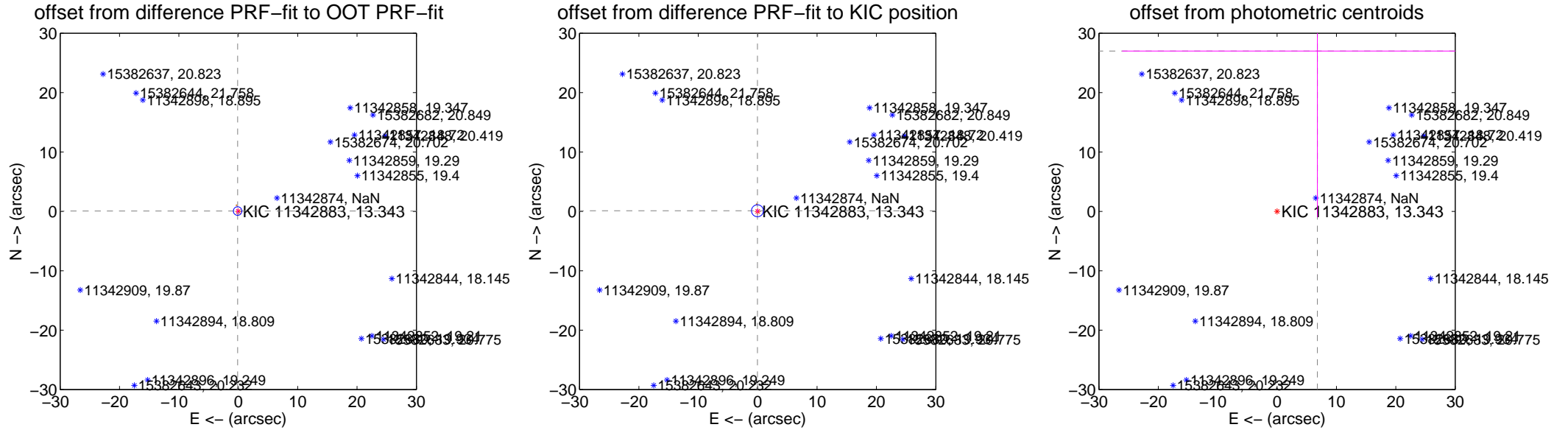
## DV Centroid Data

Supplemental centroid analysis for 011342883-08. Kepler magnitude: 13.34. Transit SNR -1.00

There are 1 quarters with good PRF difference image offsets

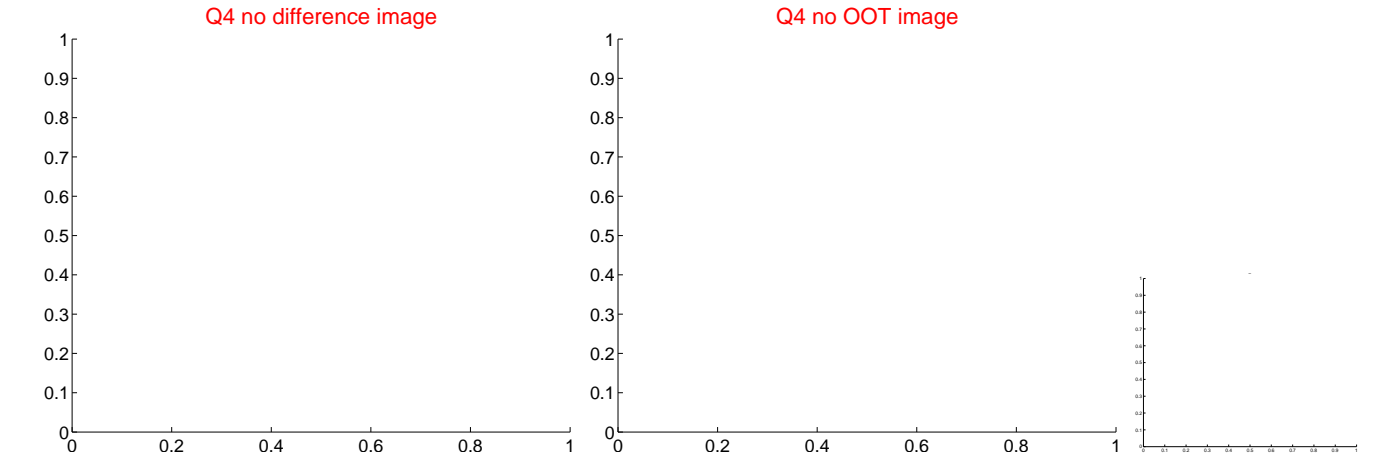
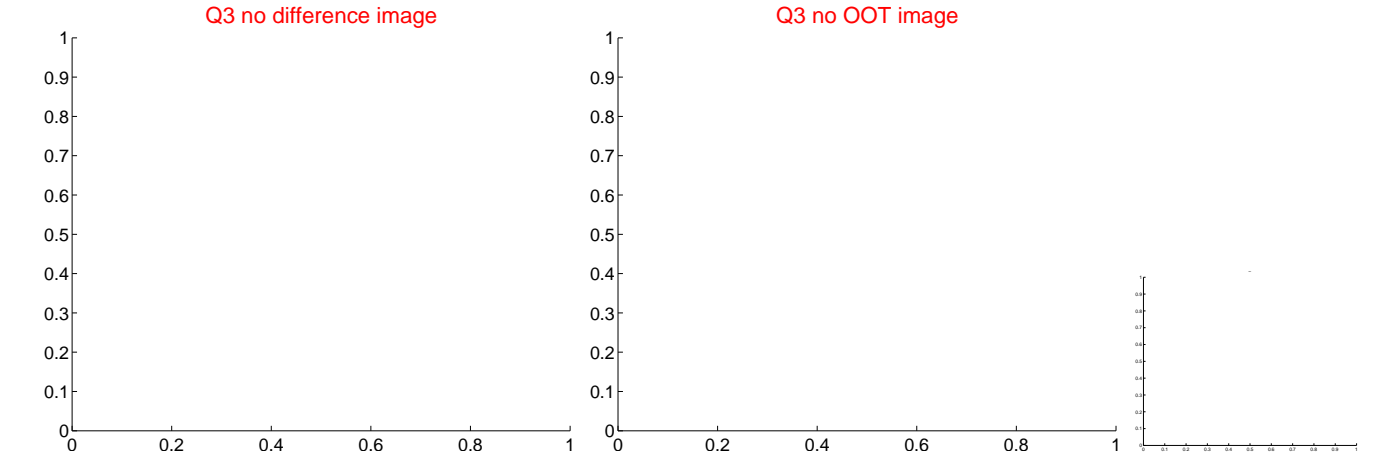
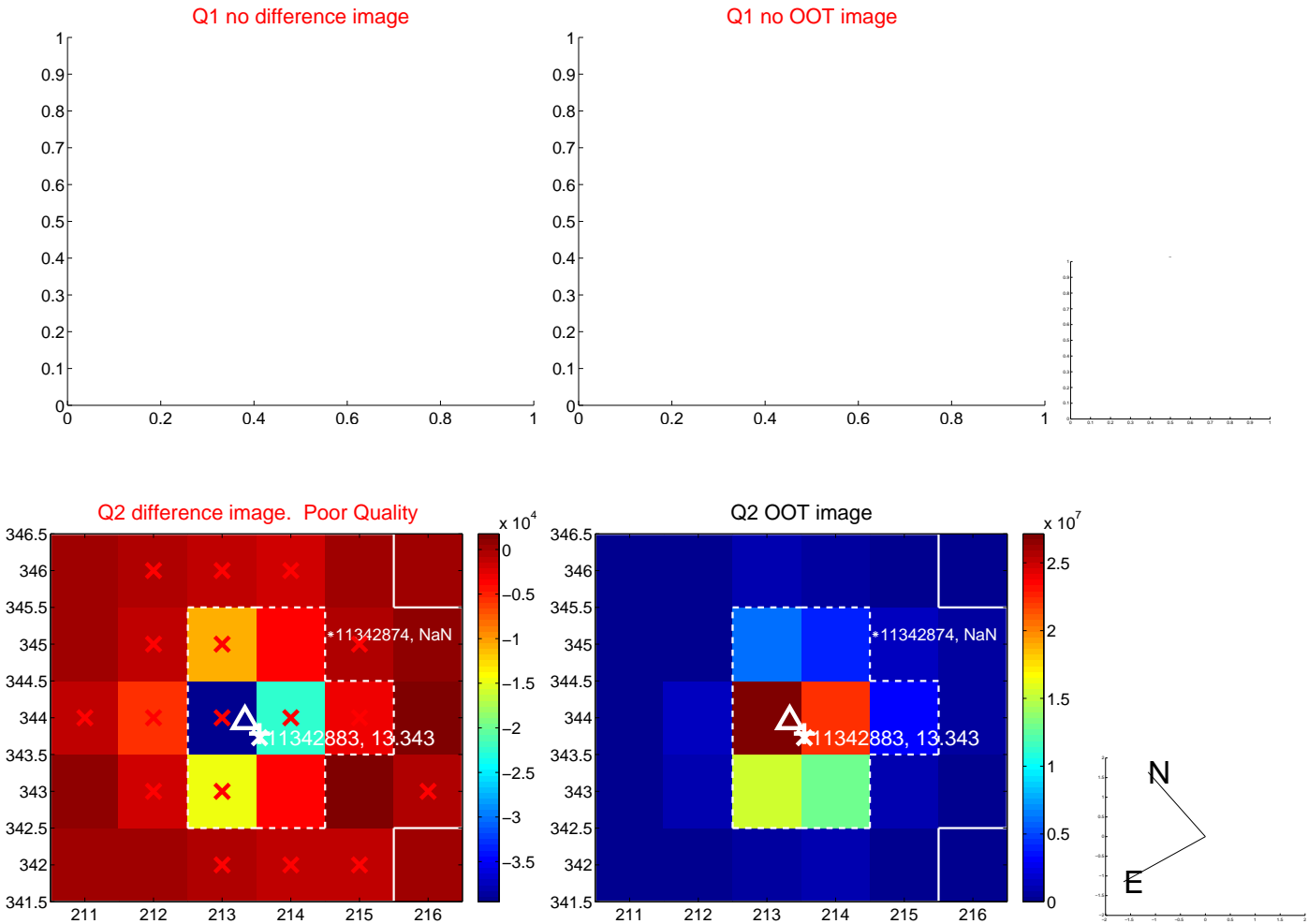
The direct PRF centroid is offset from the target star catalog position by about 0.35 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.126 \pm 0.240$	0.52	$0.111 \pm 0.092$	$0.059 \pm 0.387$
PRF-fit source offset from KIC position	$0.114 \pm 0.335$	0.34	$0.037 \pm 0.085$	$0.108 \pm 0.335$
photometric centroid source offset	$27.84 \pm 28.32$	0.98	$-6.79 \pm 32.90$	$27.00 \pm 28.00$



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 ×: 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.

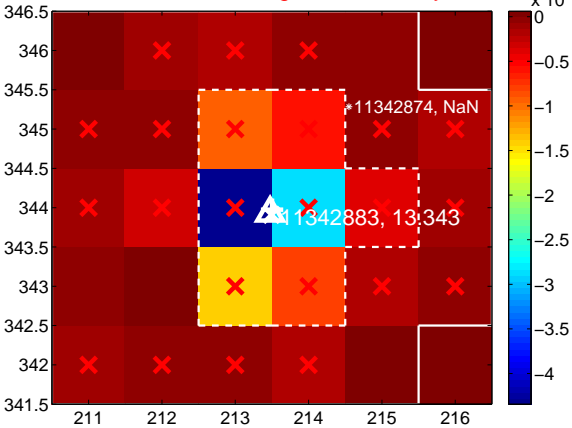
Q5 no difference image



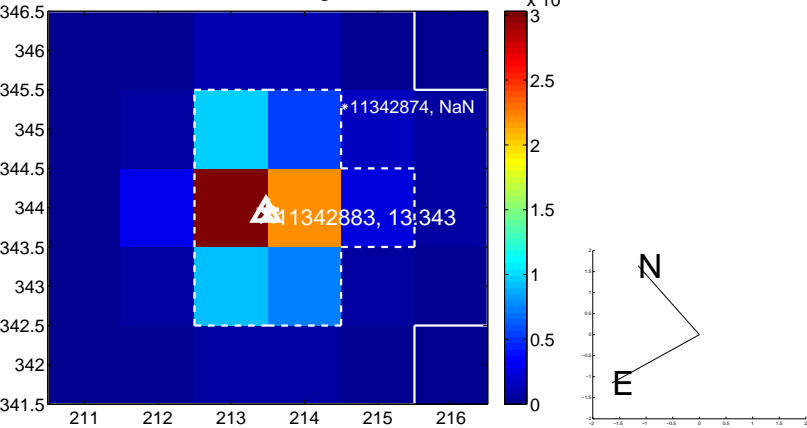
Q5 no OOT image



Q6 difference image. Poor Quality



Q6 OOT image



Q7 no difference image



Q7 no OOT image



Q8 no difference image



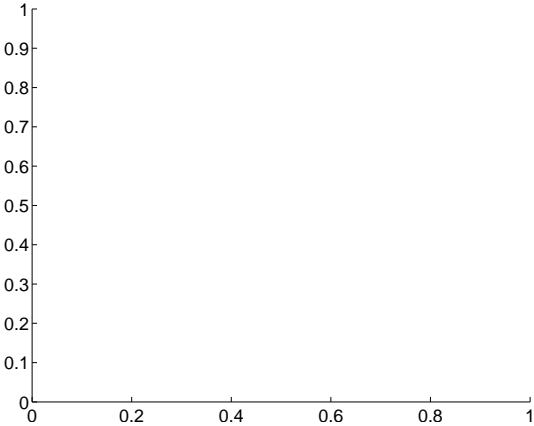
Q8 no OOT image



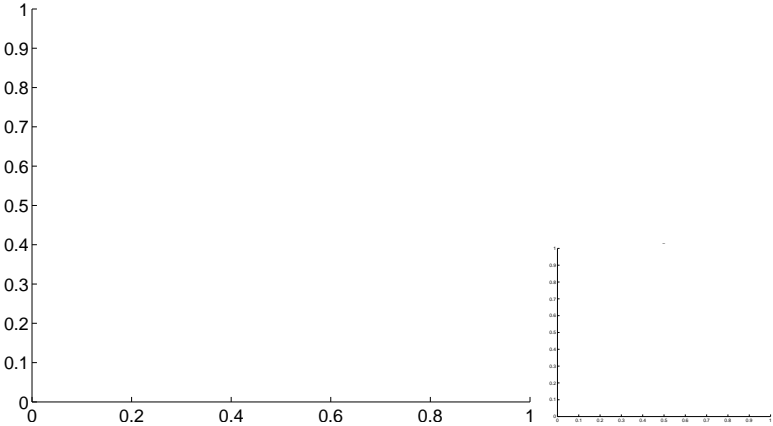


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

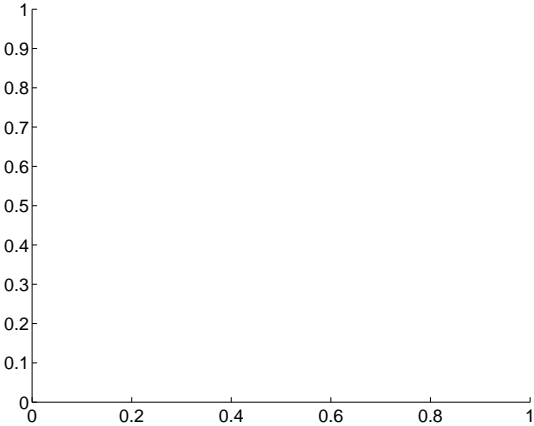
Q9 no difference image



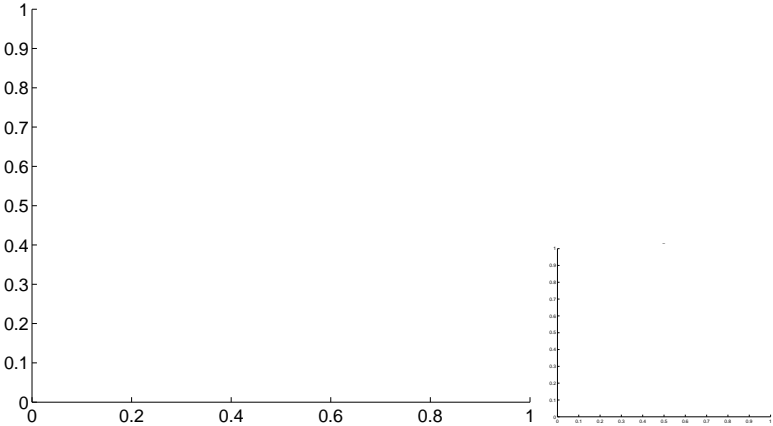
Q9 no OOT image



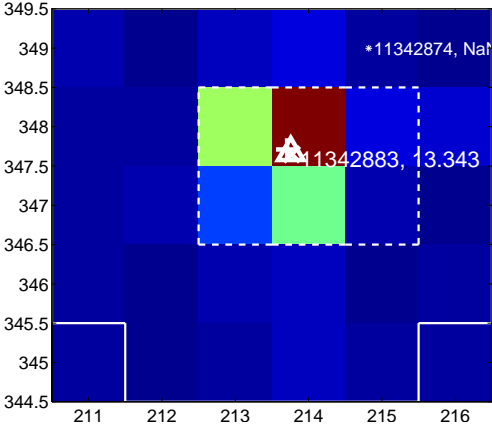
Q10 no difference image



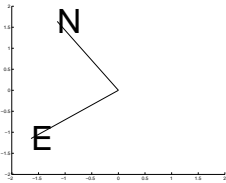
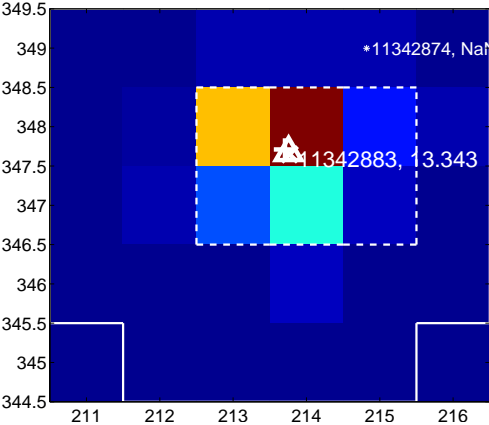
Q10 no OOT image



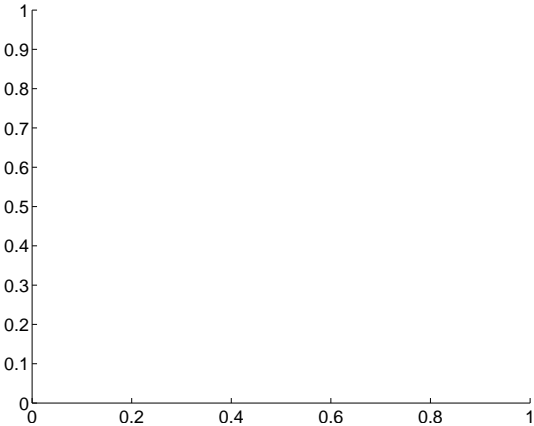
Q11 difference image



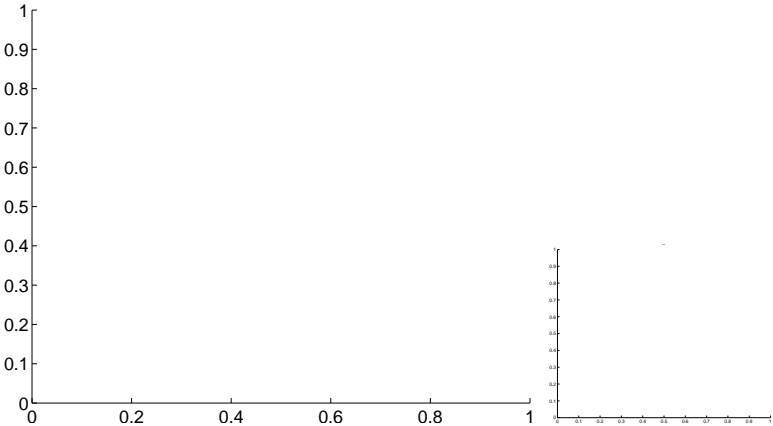
Q11 OOT image



Q12 no difference image



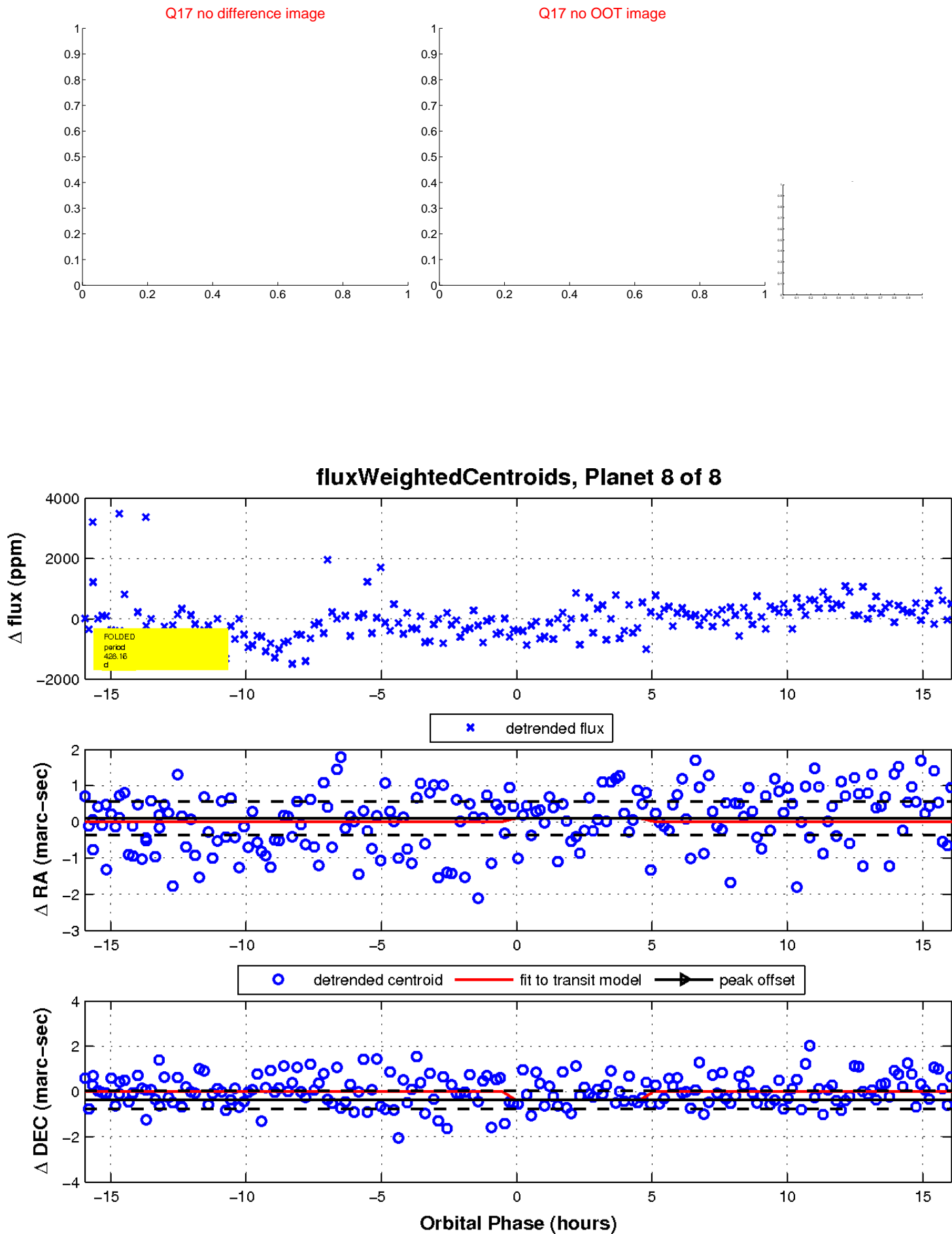
Q12 no OOT image



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

