

# KIC 007266428

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007266428-01	OBS	No	553.860698	408.689190	720.7	6.928	22.4	6.0	2.58	5095	6.88	2.61
007266428-03	OBS	No	368.270929	302.072706	506.6	11.893	14.9	3.6	2.58	5095	7.79	4.50
007266428-04	OBS	No	390.652950	142.931111	462.3	3.299	15.6	5.0	2.58	5095	5.57	4.16
007266428-05	OBS	No	355.262346	255.830635	1011.6	5.286	16.8	7.7	2.58	5095	10.63	4.72
007266428-06	OBS	No	639.463803	149.450402	938.0	6.271	14.2	9.0	2.58	5095	8.28	2.15

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007266428-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007266428-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007266428-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
007266428-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007266428-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS

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

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

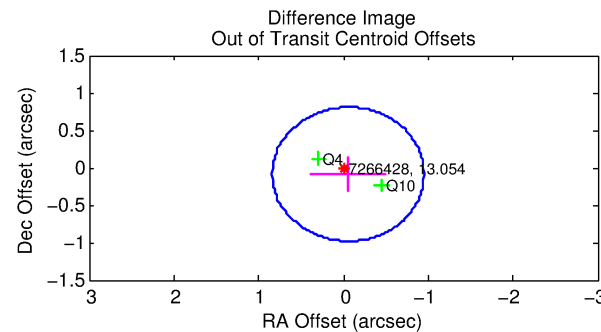
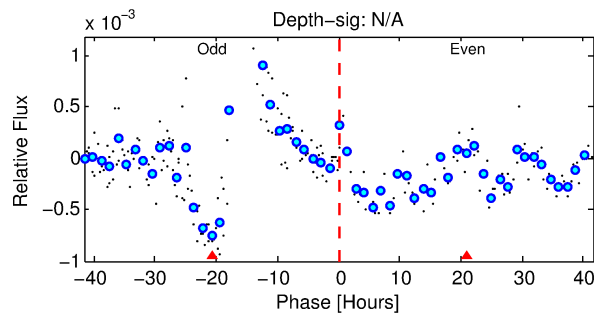
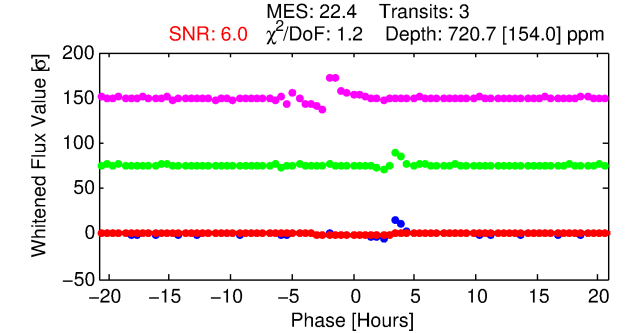
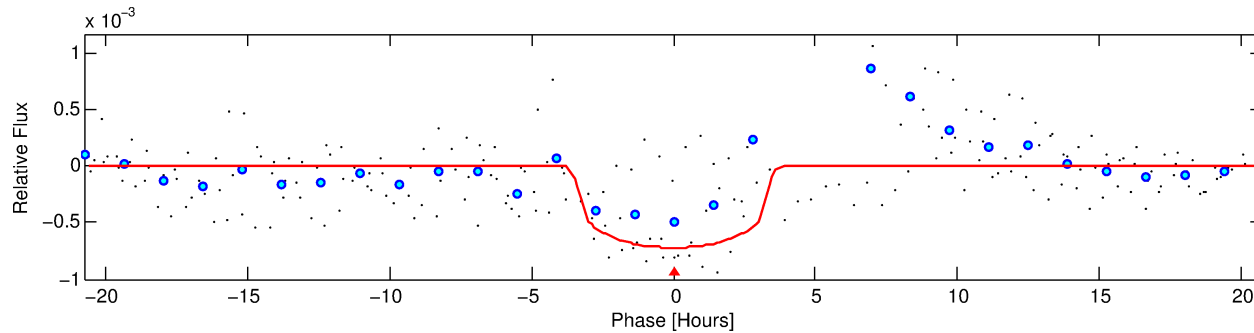
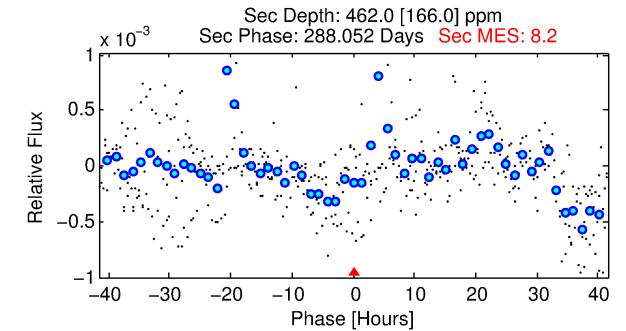
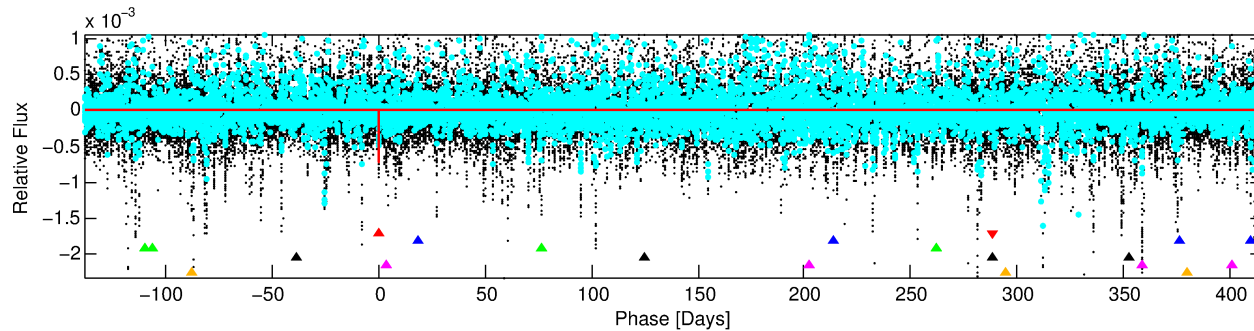
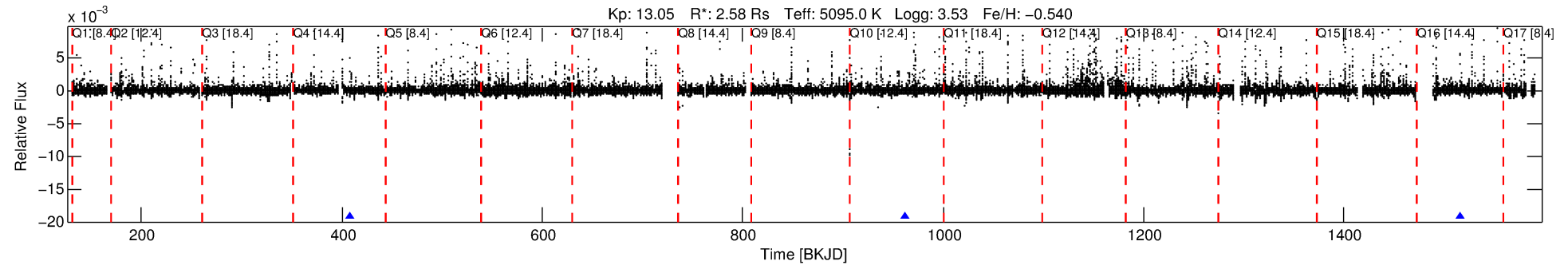
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 007266428-01

No Significant Match Found

# DV One-Page Summary

KIC: 7266428 Candidate: 1 of 6 Period: 553.861 d



## DV Fit Results:

Period = 553.86070 [0.00623] d  
Epoch = 408.6892 [0.0076] BKJD  
Rp/R\* = 0.0245 [0.0331]  
a/R\* = 588.20 [3075.12]  
b = 0.35 [13.28]  
Seff = 2.61 [4.58]  
Teq = 324 [142] K  
Rp = 6.88 [10.62] Re  
a = 1.2405 [1.2097] AU  
Ag = 8256.58 [26785.38] [0.31] $\sigma$   
Teffp = 4776 [3264] K [1.36] $\sigma$

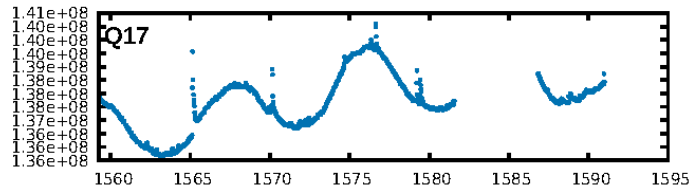
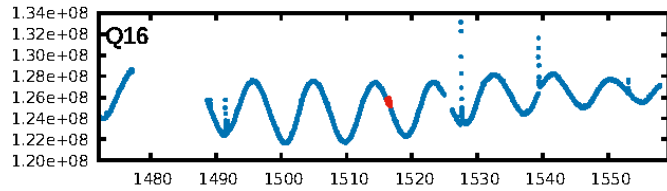
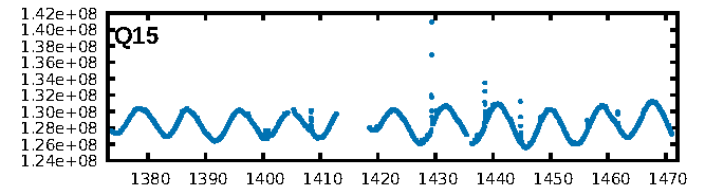
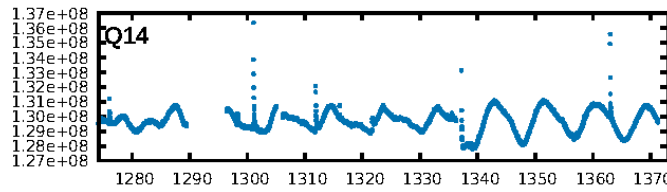
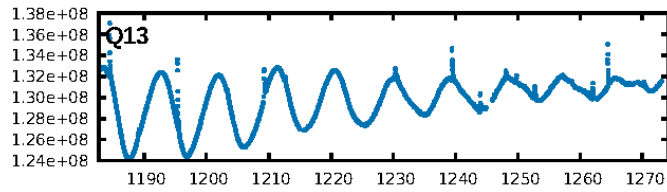
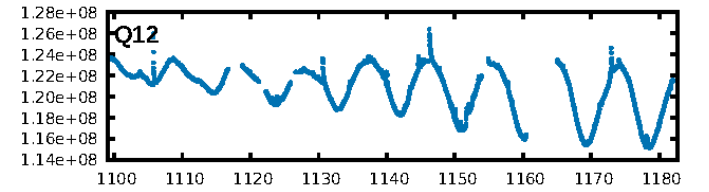
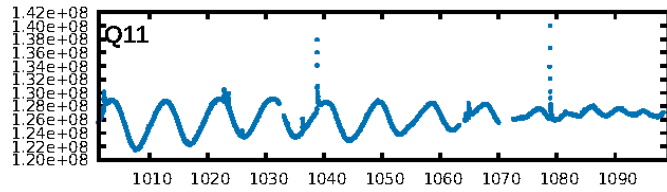
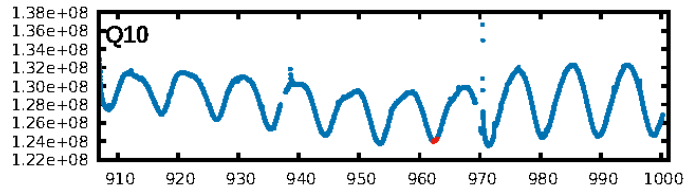
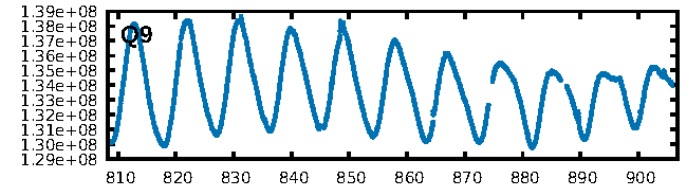
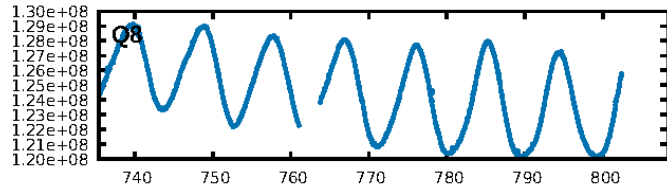
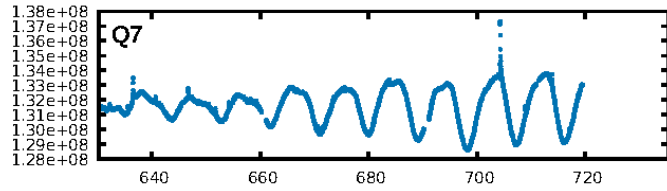
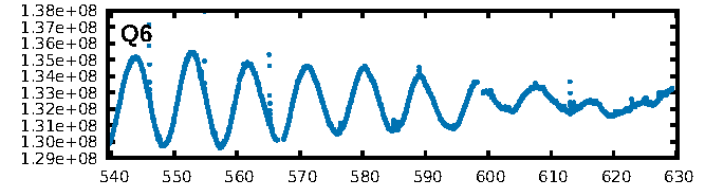
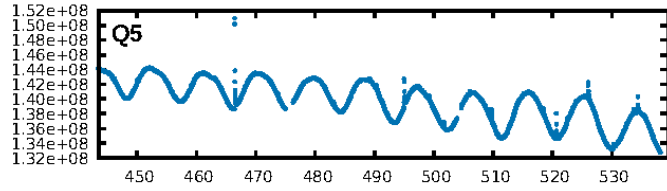
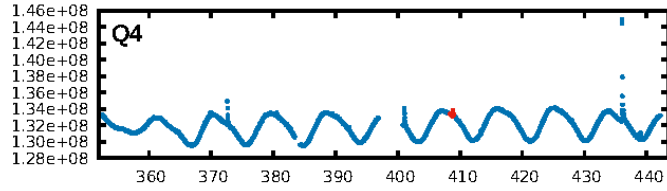
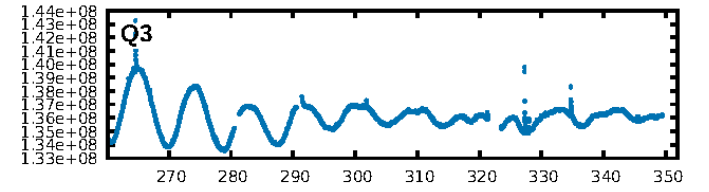
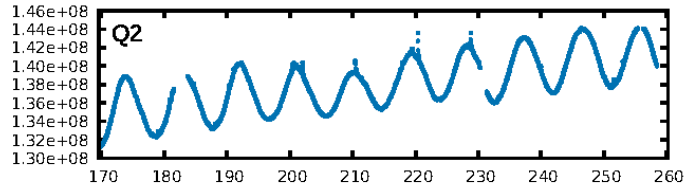
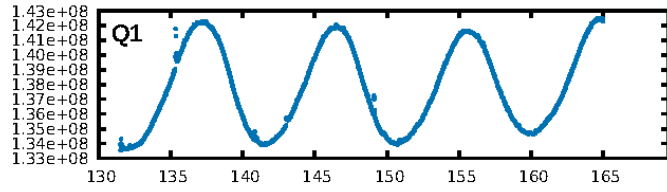
## DV Diagnostic Results:

ShortPeriod-sig: 100.0% [510.46] $\sigma$   
LongPeriod-sig: 100.0% [219.85] $\sigma$   
ModelChiSquare2-sig: 0.0%  
ModelChiSquareGof-sig: 71.1%  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [3/3]  
GhostDiagnostic-chr: 0.7929  
Centroid-sig: 73.9%  
Centroid-so: 0.227 arcsec [0.41] $\sigma$   
OotOffset-rm: 0.104 arcsec [0.35] $\sigma$   
OotOffset-st: 1/0/1/0 [2]  
KicOffset-rm: 0.135 arcsec [0.46] $\sigma$   
KicOffset-st: 1/0/1/0 [2]  
DiffImageQuality-fgm: 1.00 [2/2]  
DiffImageOverlap-fno: 1.00 [2/2]

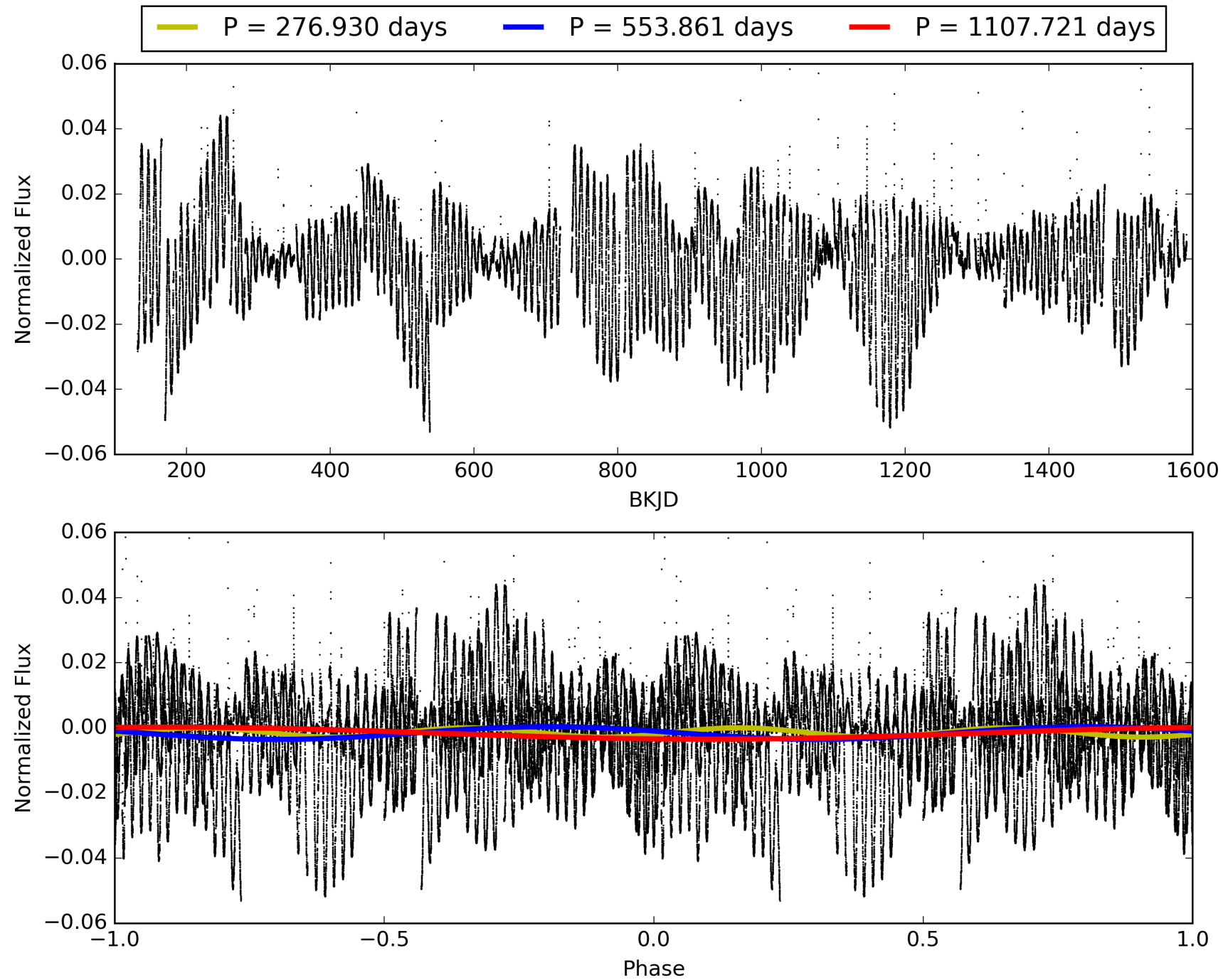
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 007266428-01, PDC Light Curves



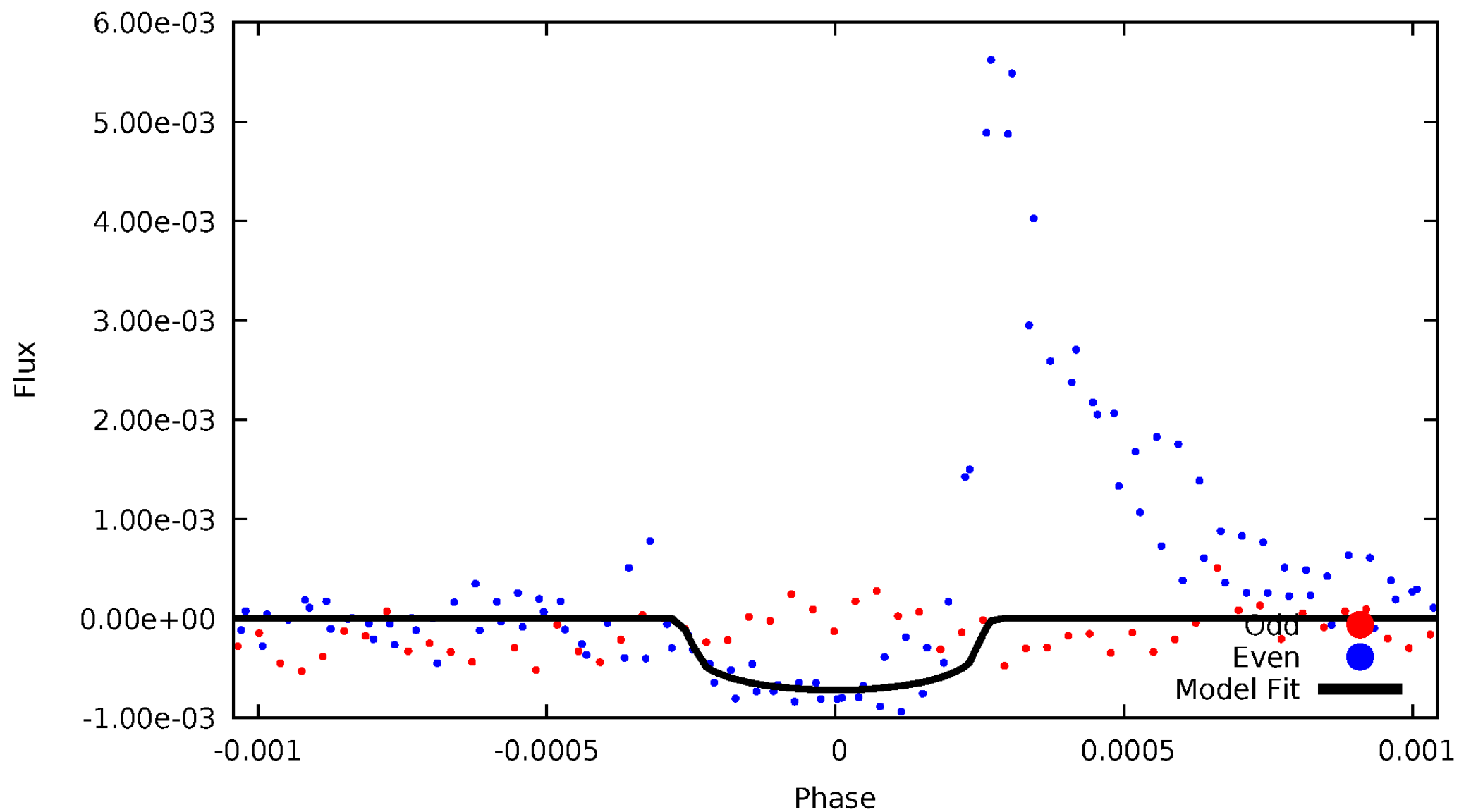
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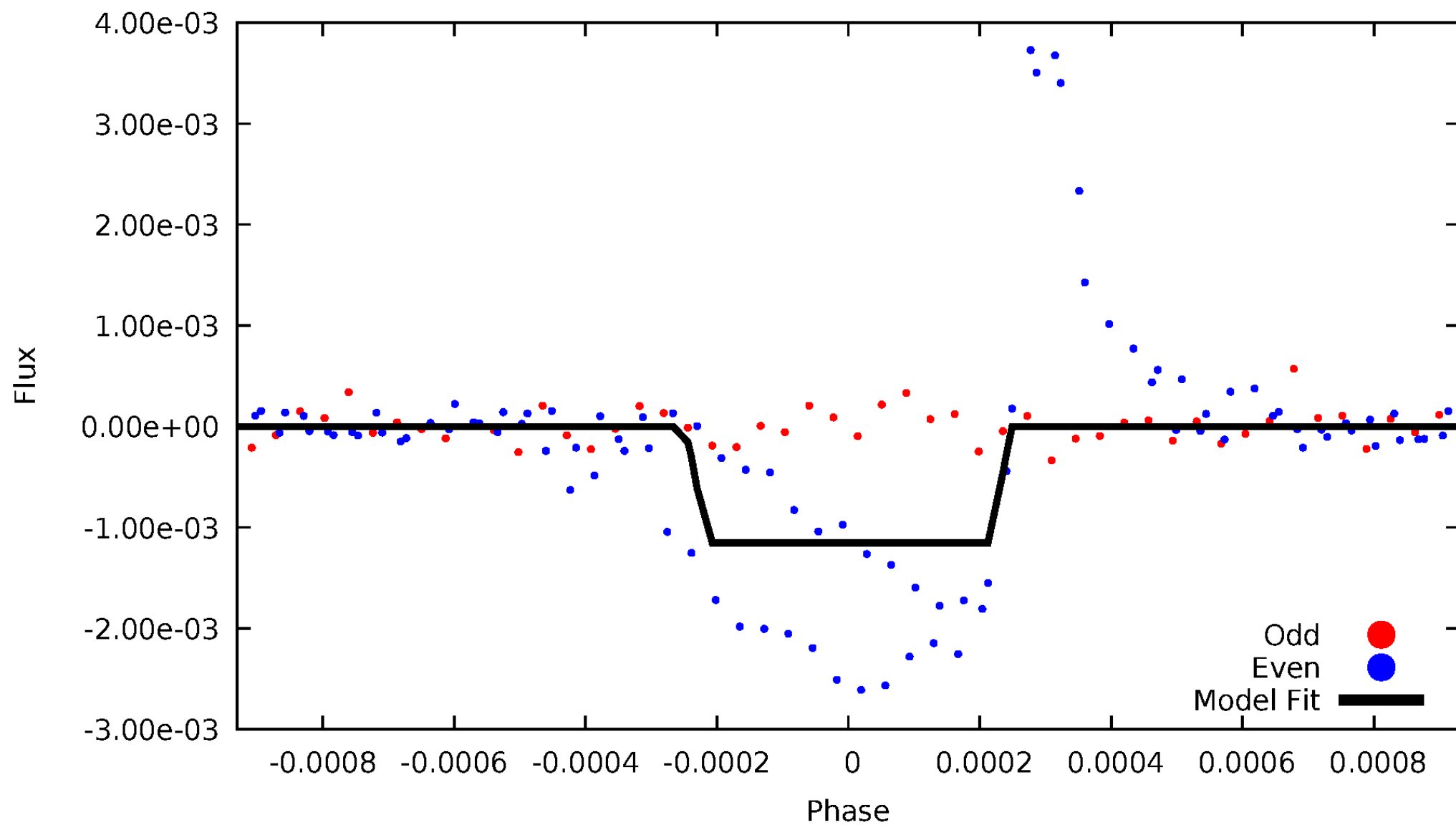
# DV Odd/Even

TCE 007266428-01



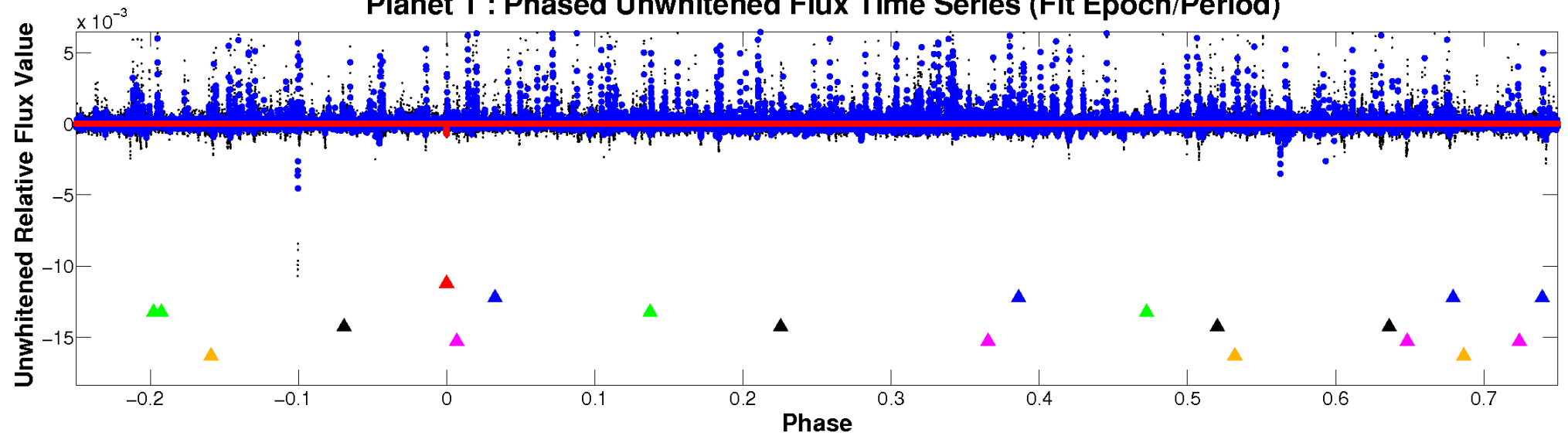
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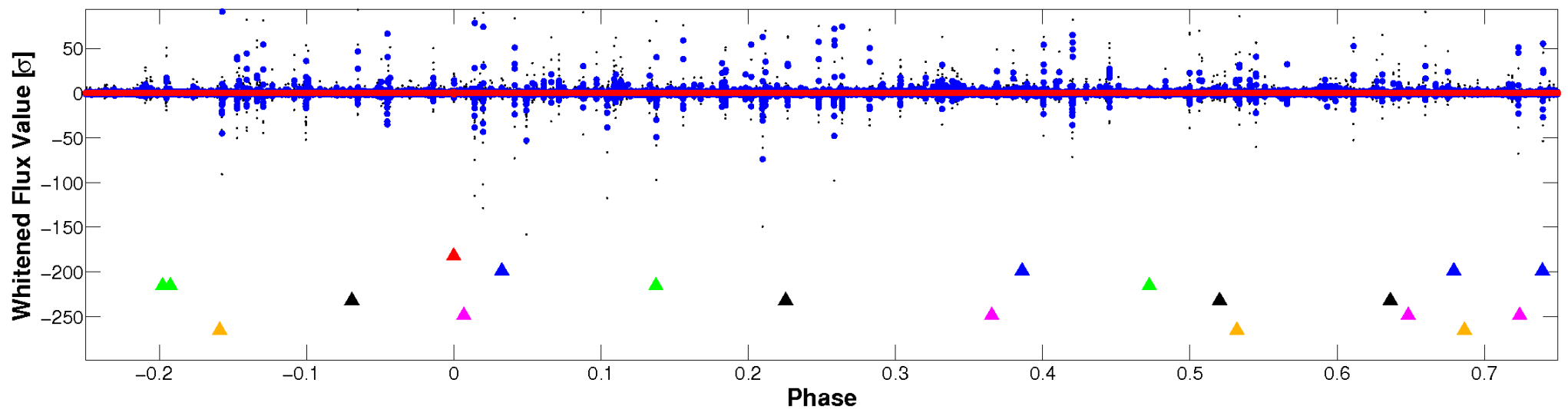


# Non-Whitened Vs. Whitened Light Curve

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

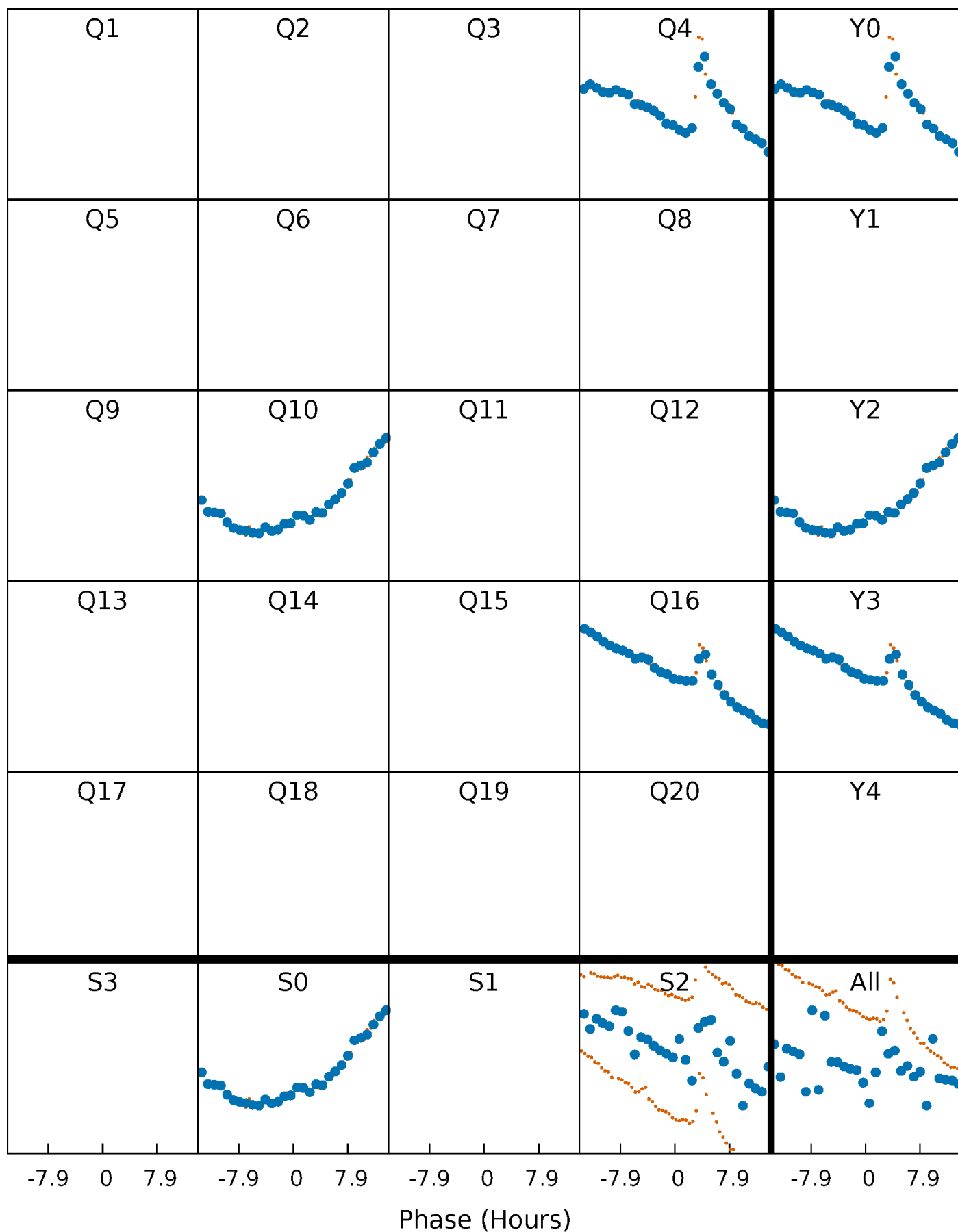


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



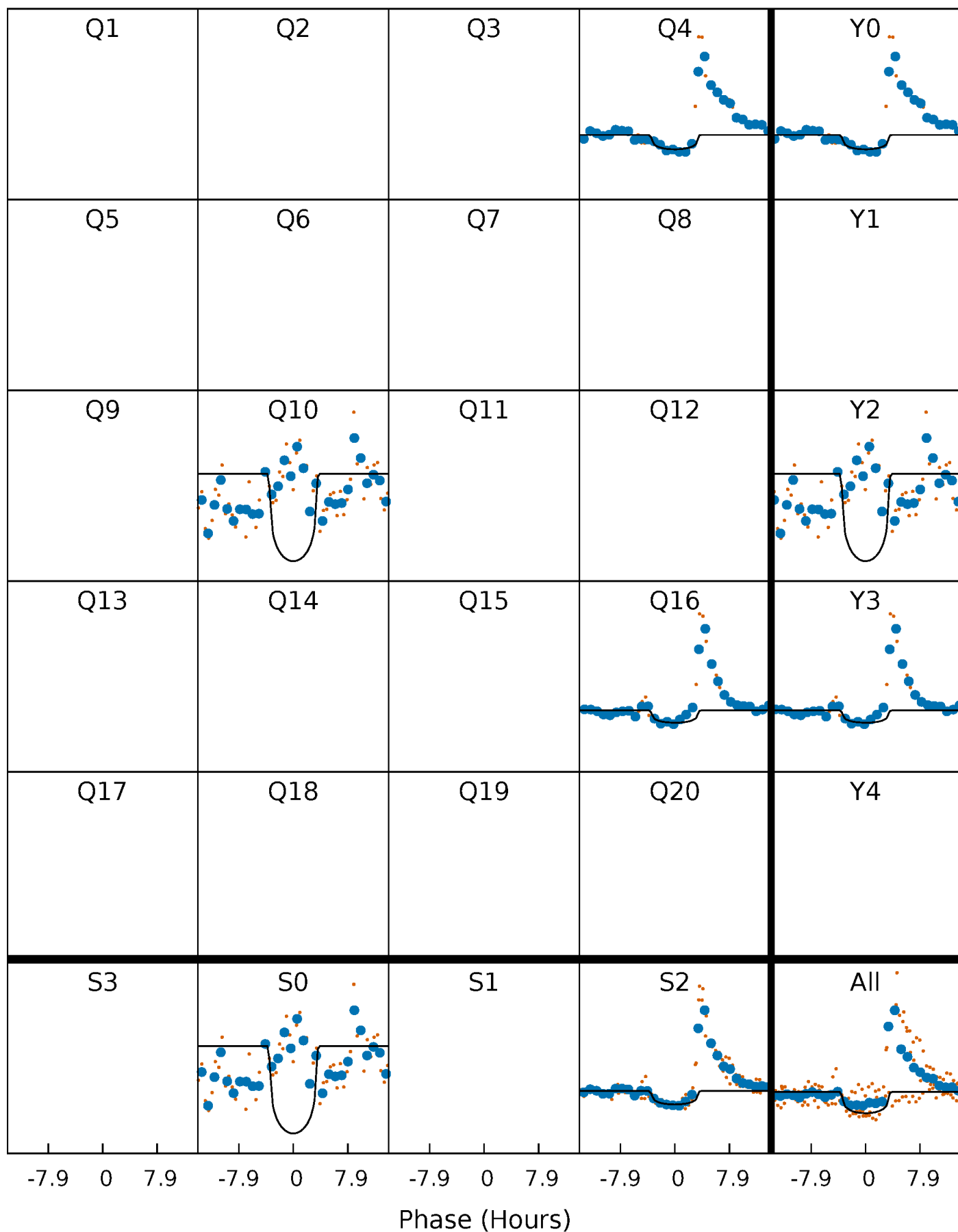
# PDC Quarter-Phased Transit Curves

TCE 007266428-01 P=553.860698 Days  $T_0=408.689189$  (BKJD)



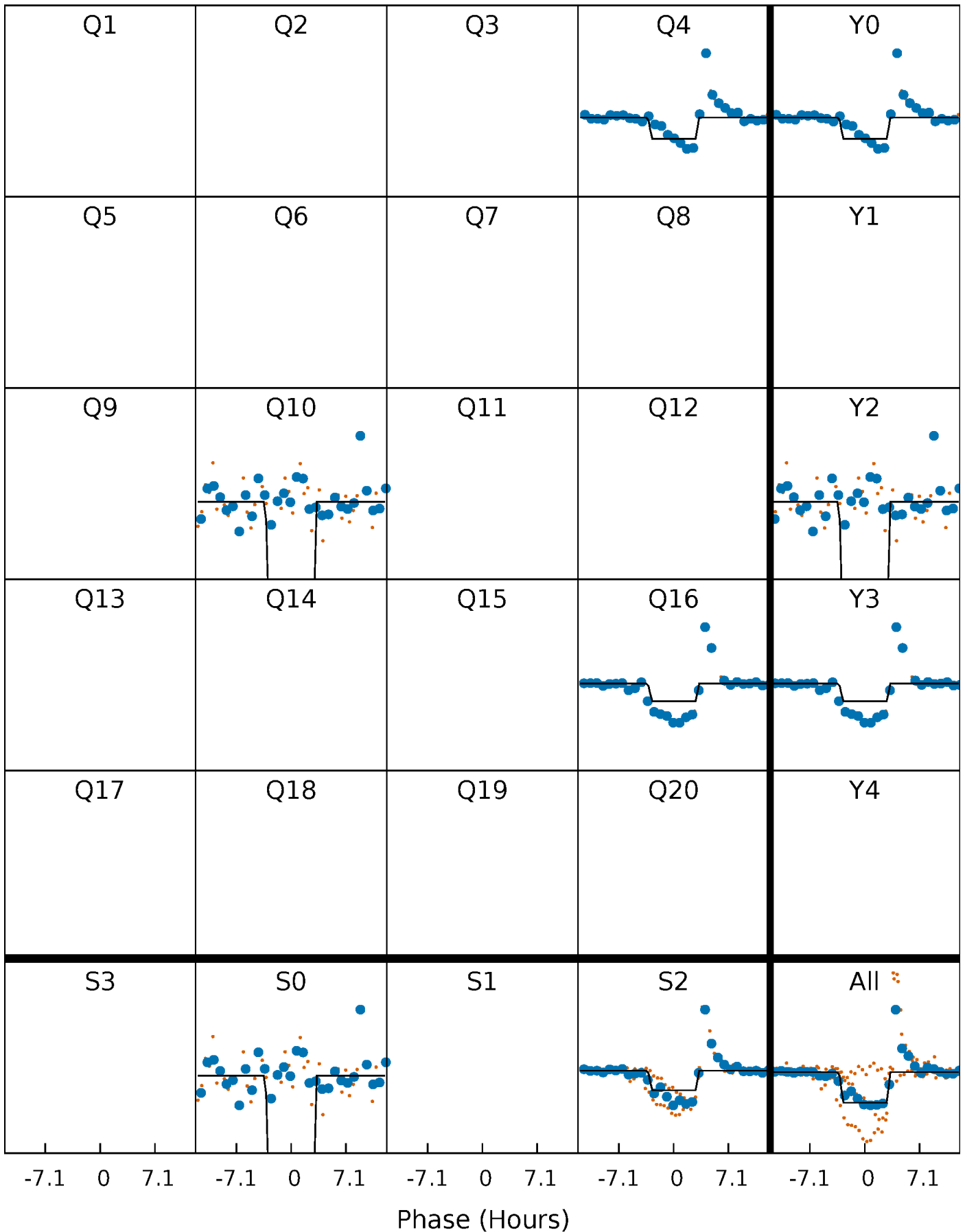
# DV Quarter-Phased Transit Curves

TCE 007266428-01 P=553.860698 Days  $T_0=408.689189$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 007266428-01 P=553.865266 Days  $T_0=408.675626$  (BKJD)

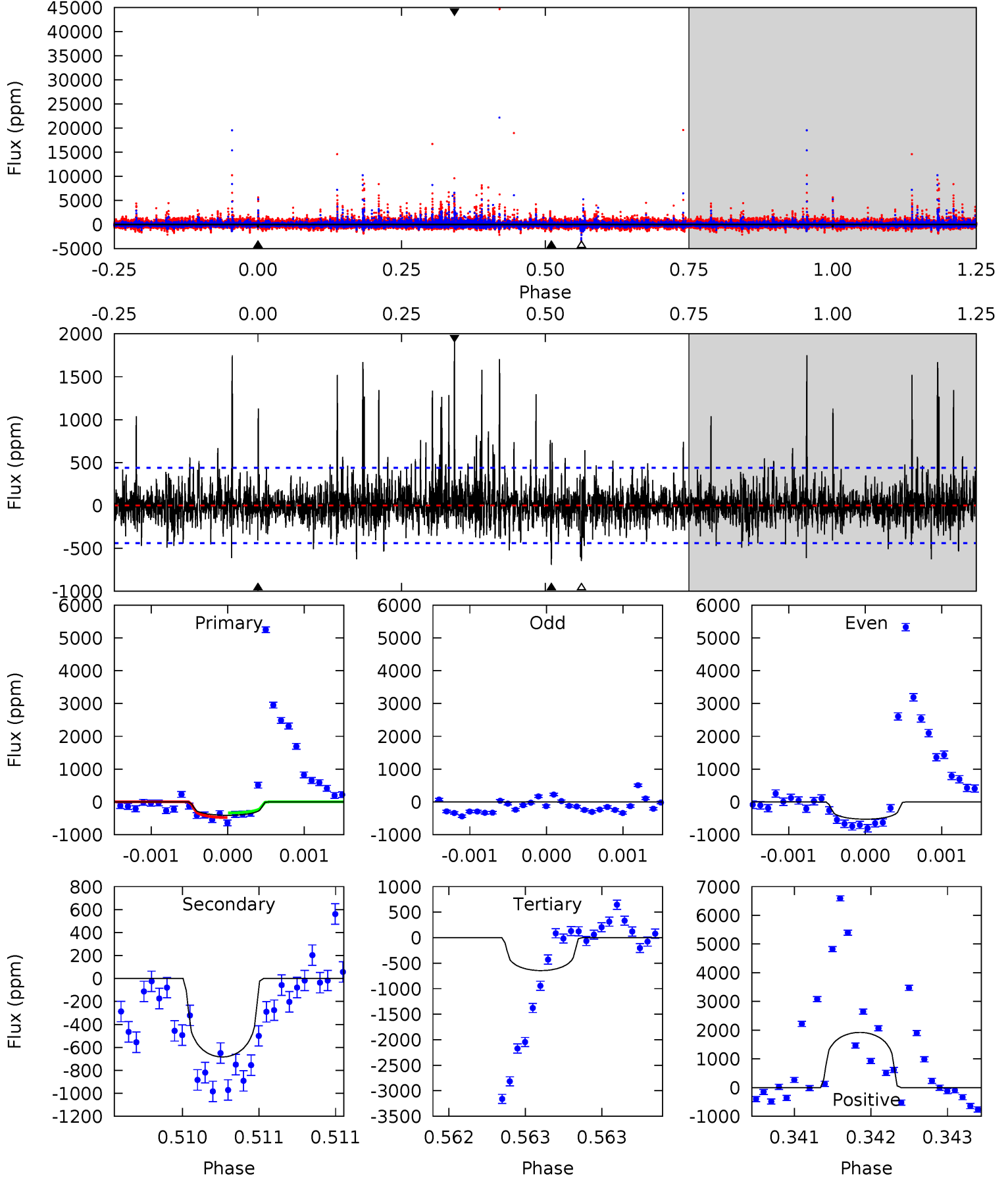




# DV Model-Shift Uniqueness Test

007266428-01, P = 553.860698 Days, E = 408.689189 Days

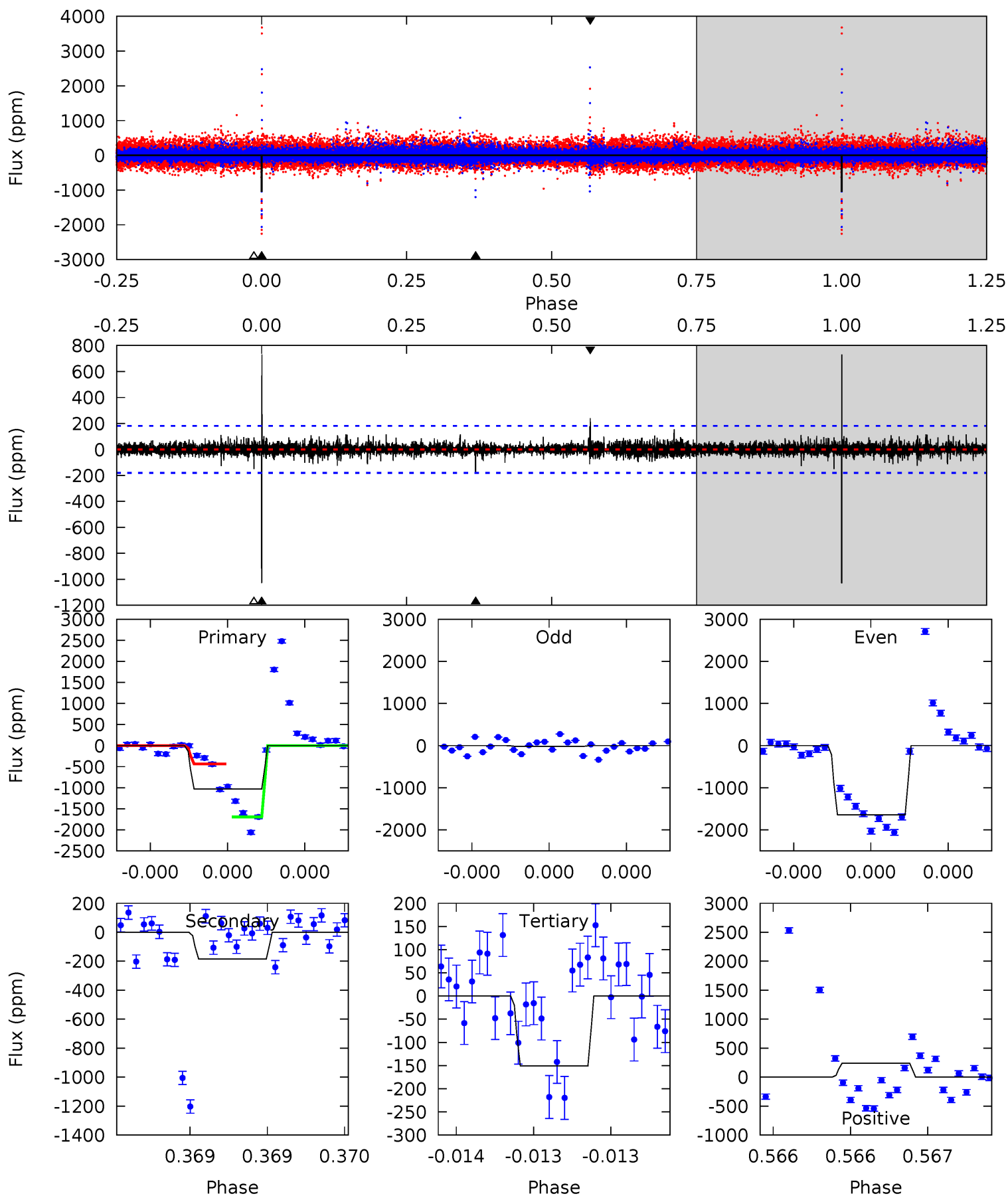
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.18	8.67	8.18	24.4	5.56	3.45	2.44	-3.01	-19.2	0.48	-15.7	1.12	0.74	0.74	0.89



# Alt Model-Shift Uniqueness Test

007266428-01, P = 553.865266 Days, E = 408.675626 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
31.8	5.72	4.66	7.41	5.58	3.49	0.74	27.1	24.4	1.06	-1.69	21.8	1.00	0.41	19.4



### Stellar Parameters For KIC 007266428

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M$ ( $M_{\odot}$ )	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$5095^{+124}_{-162}$	$3.534^{+1.095}_{-0.365}$	$-0.540^{+0.250}_{-0.350}$	$2.579^{+1.565}_{-1.913}$	$0.828^{+0.239}_{-0.196}$	$0.068^{+3.568}_{-0.052}$
	+2%/-3%	+31%/-10%	+46%/-65%	+61%/-74%	+29%/-24%	+5244%/-76%
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 007266428-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-683 \pm 79$	$8.32^{+10.07}_{-5.52}$	$445^{+78}_{-99}$	$4541^{+2658}_{-890}$	$8230^{+65044}_{-6524}$
Alt.	$-185 \pm 32$	$10.19^{+10.66}_{-6.90}$	$449^{+80}_{-100}$	$3445^{+1388}_{-559}$	$1502^{+12267}_{-1132}$

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

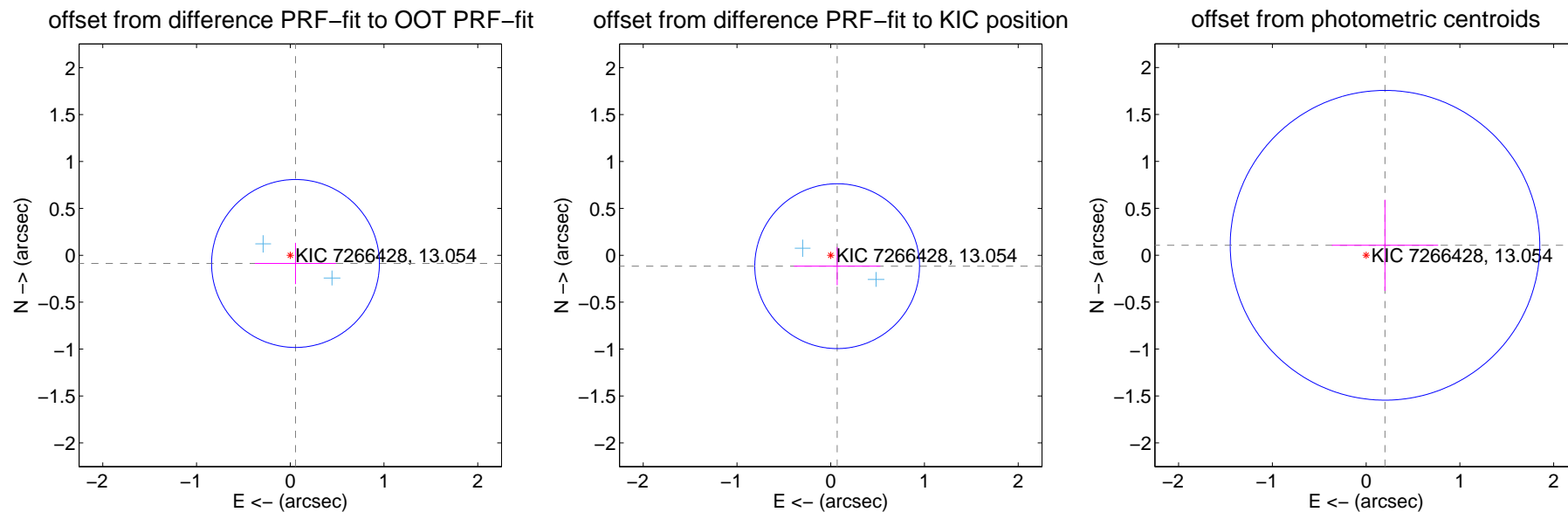
## DV Centroid Data

Supplemental centroid analysis for 007266428-01. Kepler magnitude: 13.05. Transit SNR 5.95

There are 2 quarters with good PRF difference image offsets

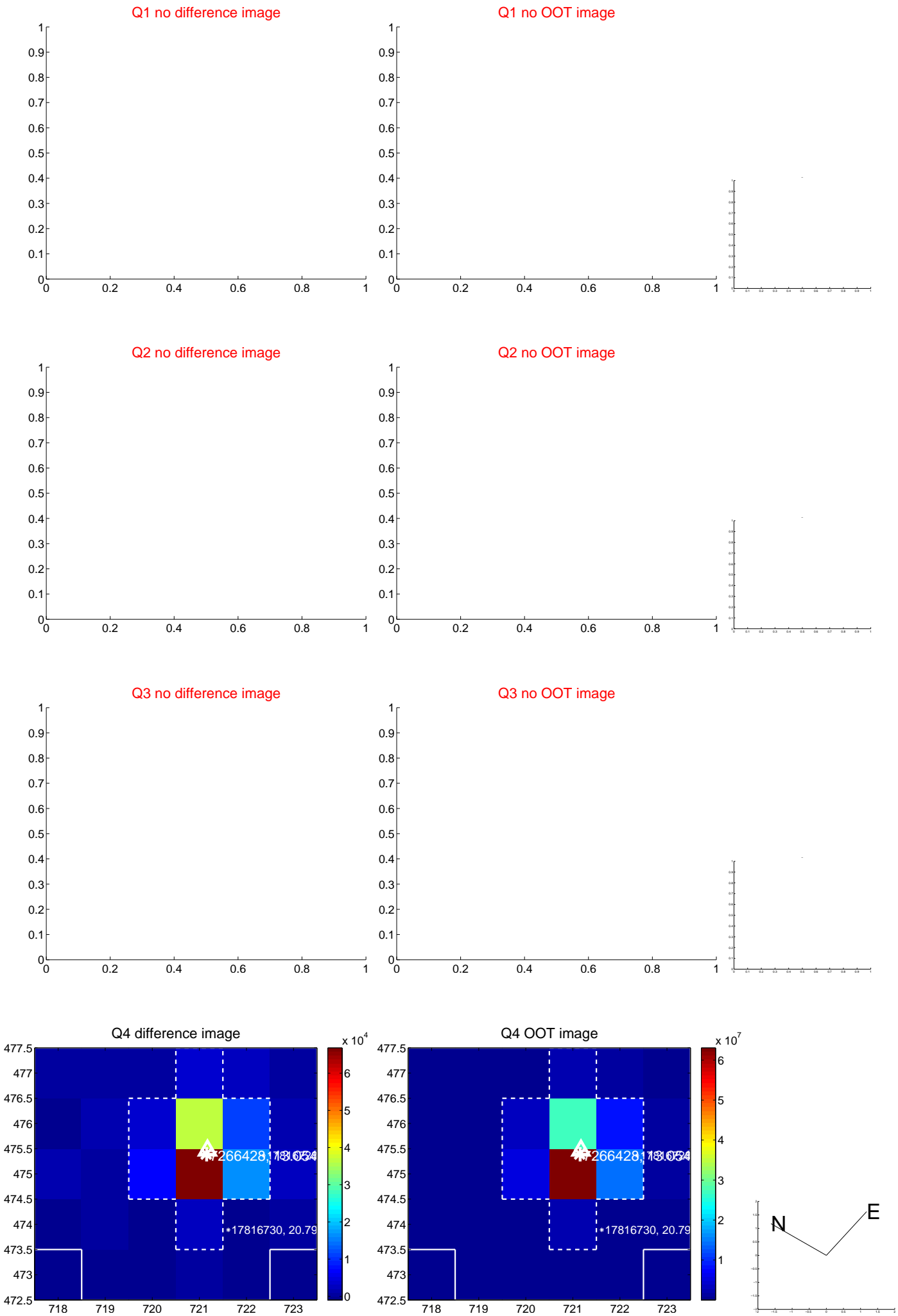
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.104 \pm 0.298$	0.35	$-0.056 \pm 0.434$	$-0.087 \pm 0.221$
PRF-fit source offset from KIC position	$0.135 \pm 0.293$	0.46	$-0.069 \pm 0.461$	$-0.116 \pm 0.204$
photometric centroid source offset	$0.23 \pm 0.55$	0.41	$-0.20 \pm 0.57$	$0.11 \pm 0.49$

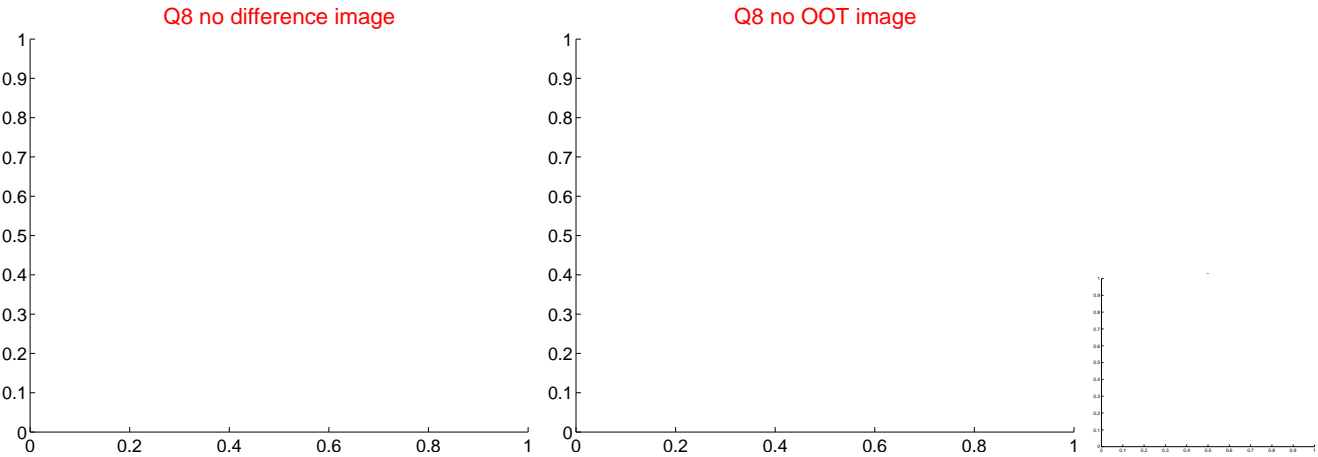
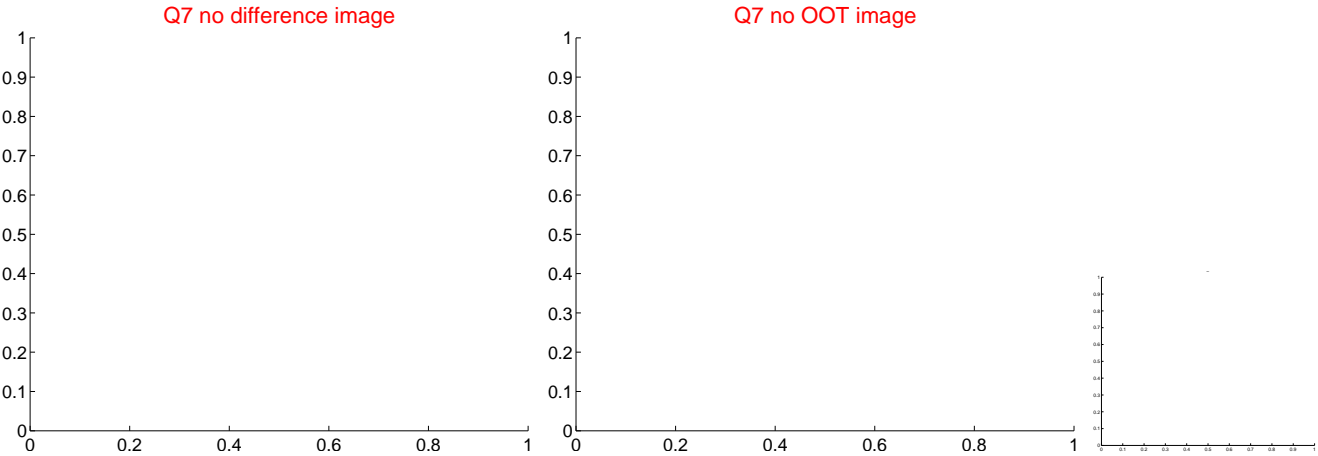
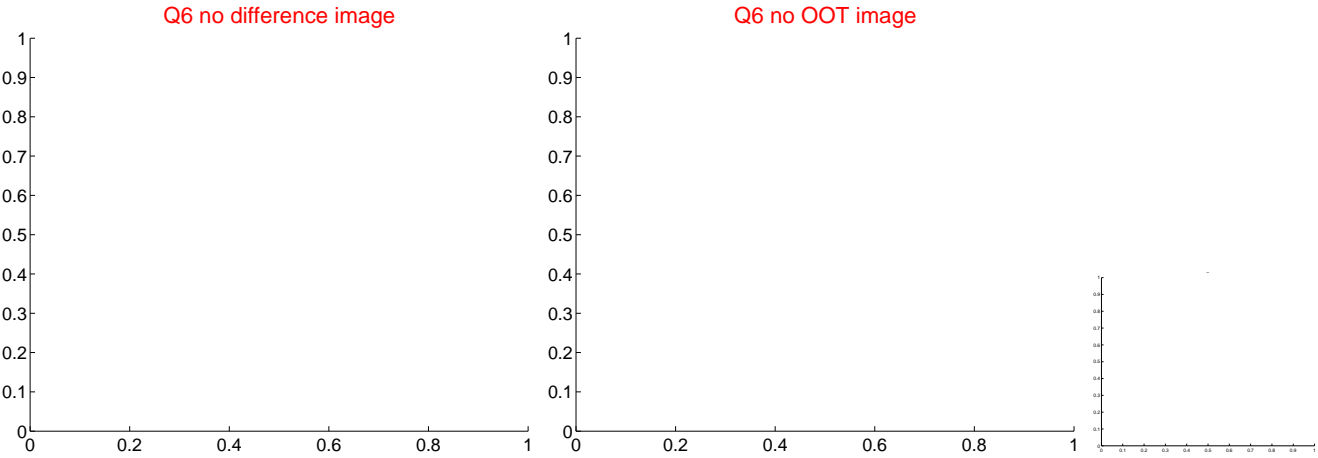
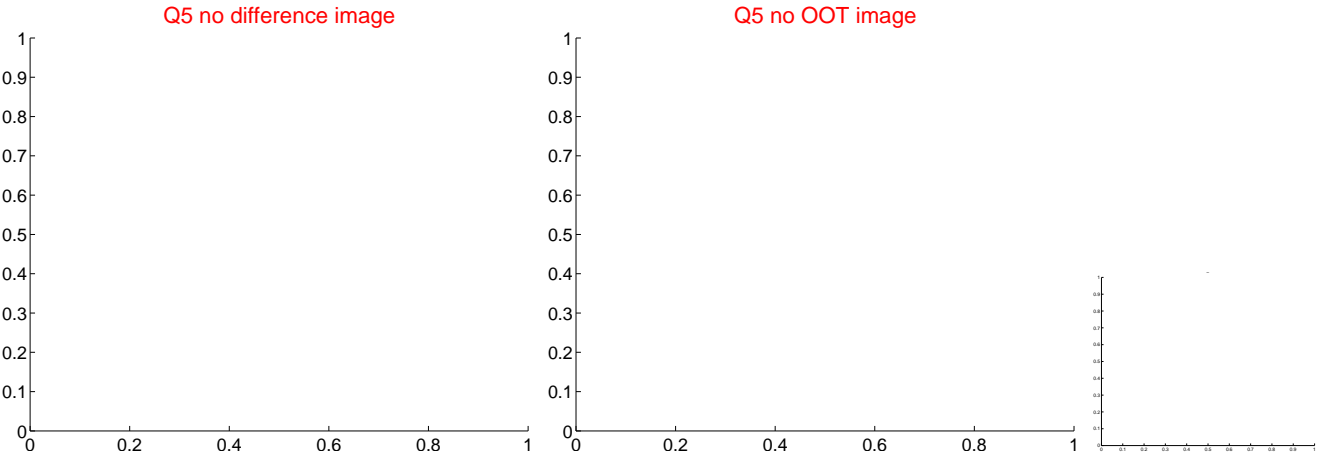


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

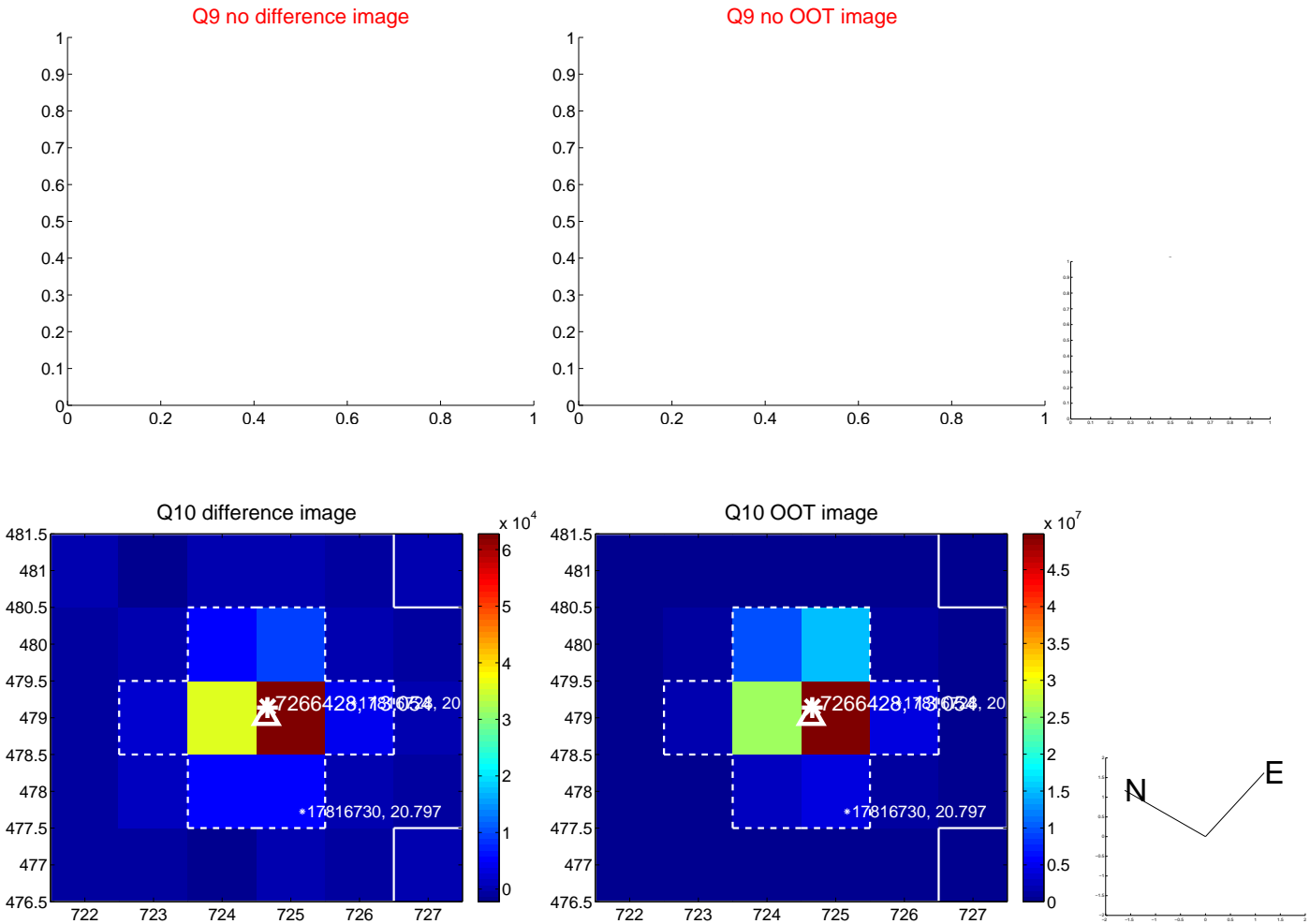


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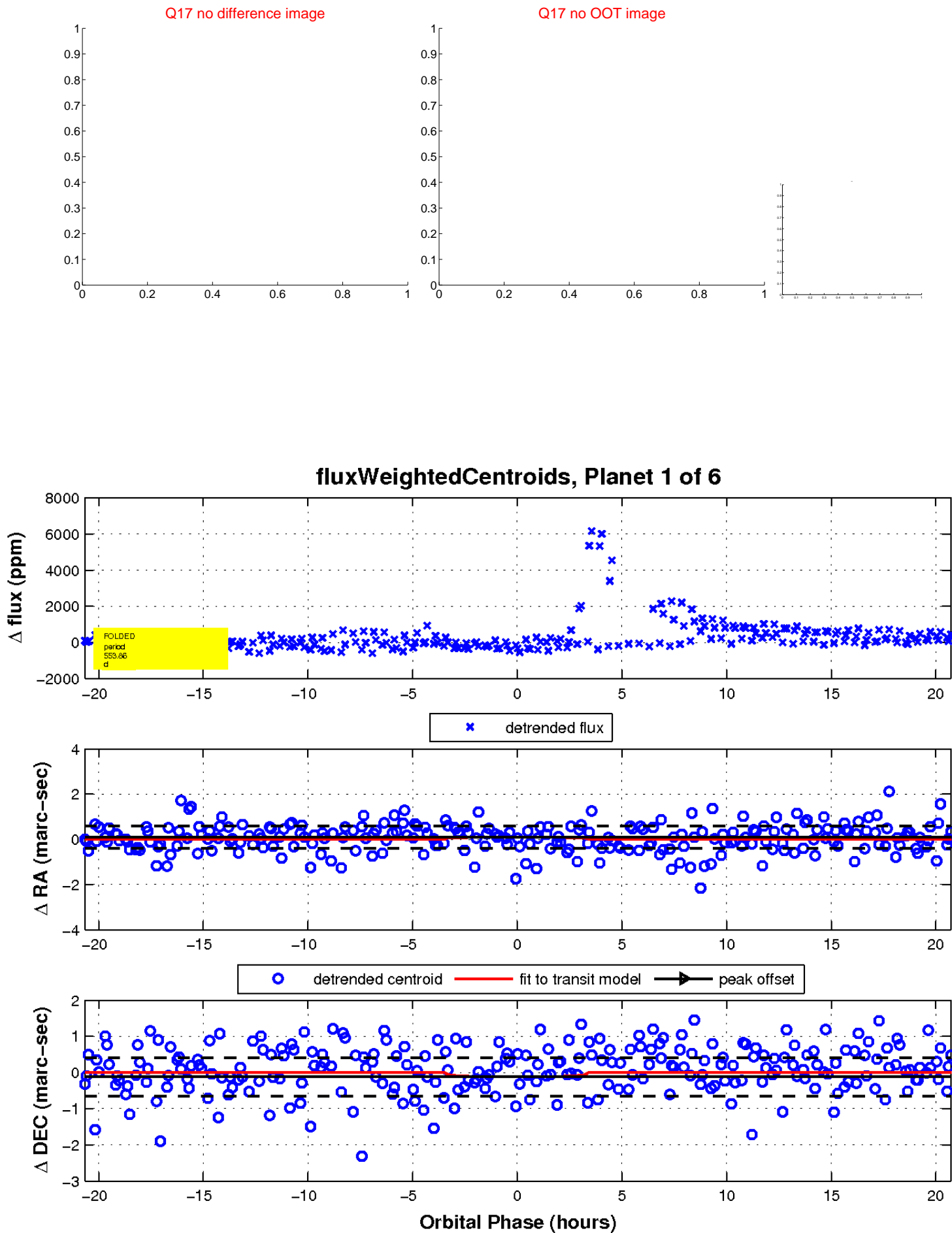
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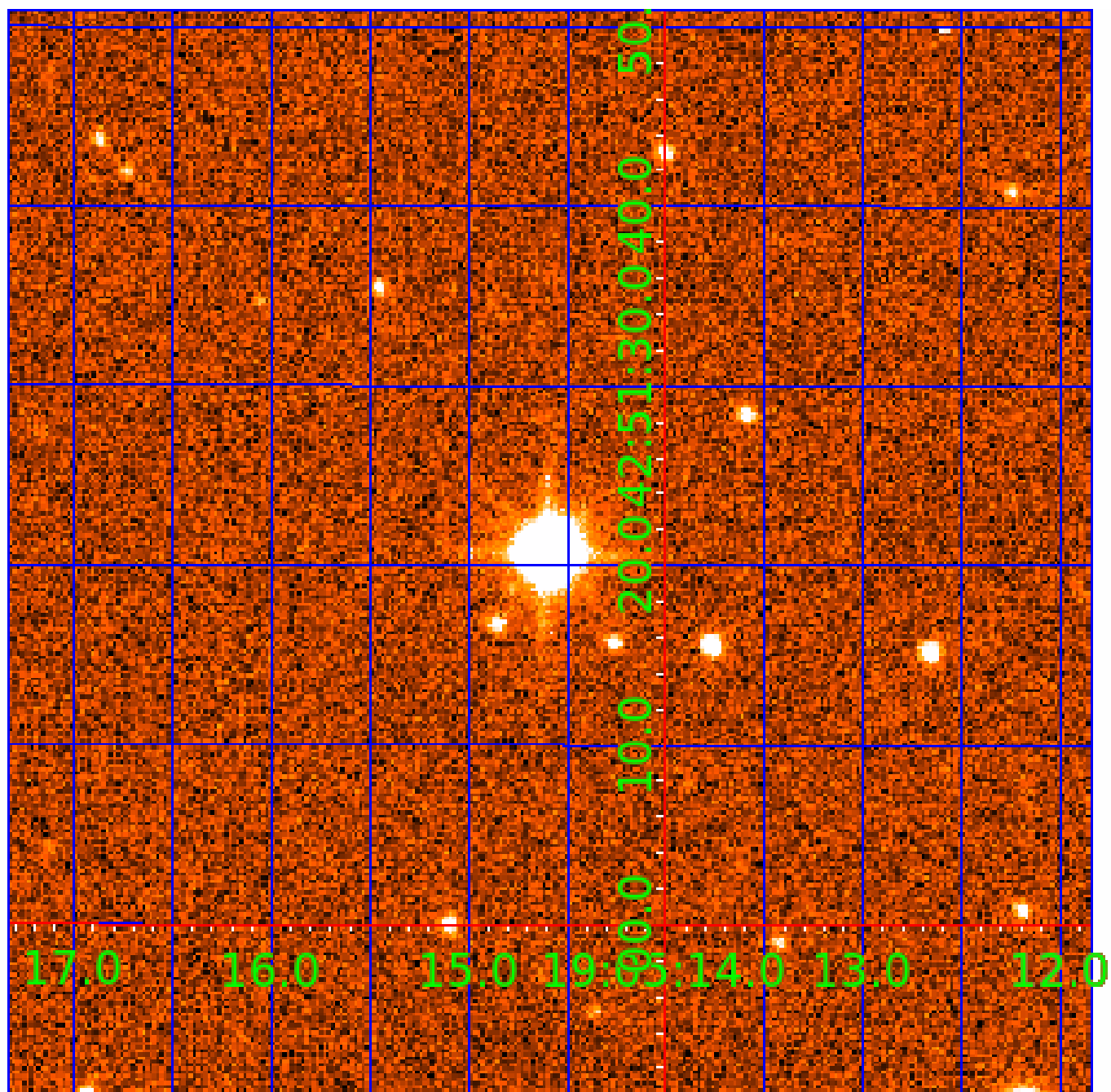


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UKIRT Image

Declination



# KIC 007266428

## Q1-17 DR25 TCE Parameters

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## Robovetter Results

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007266428-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
007266428-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007266428-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS

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

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

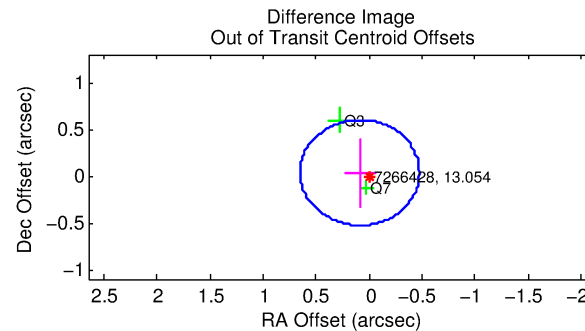
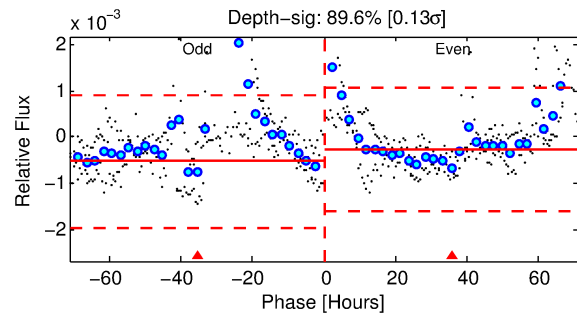
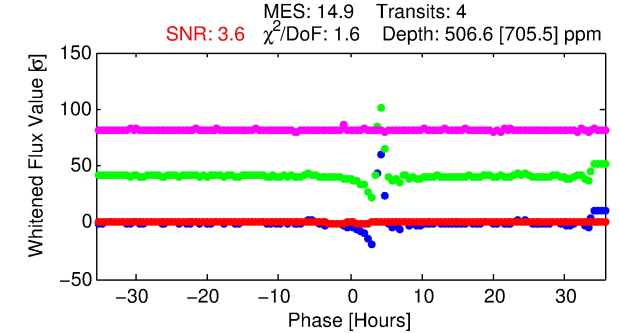
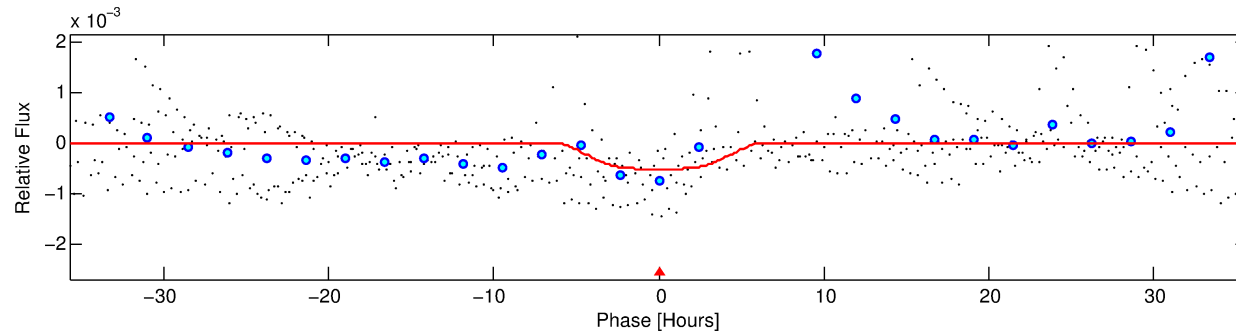
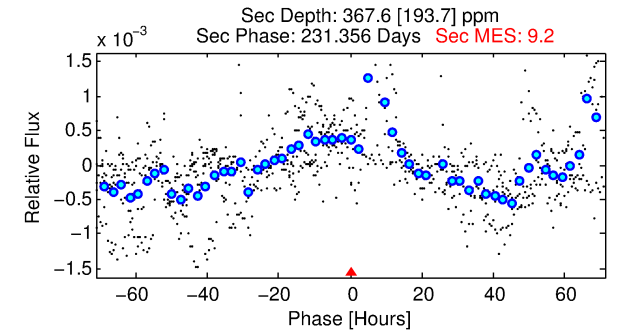
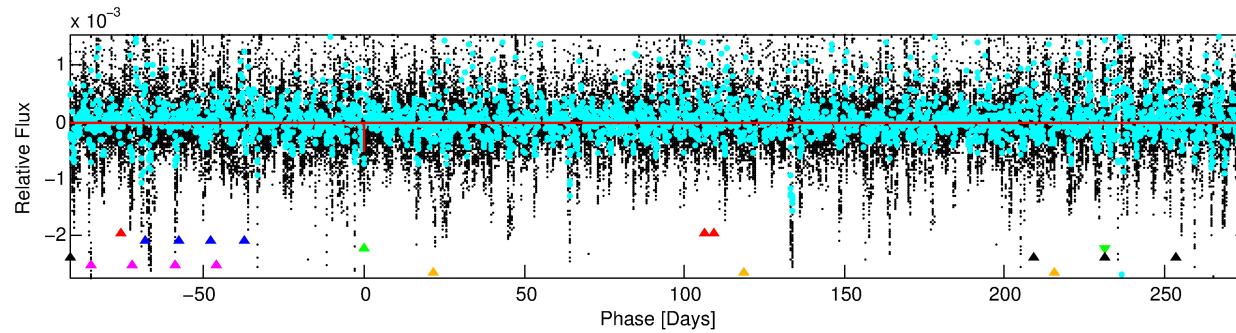
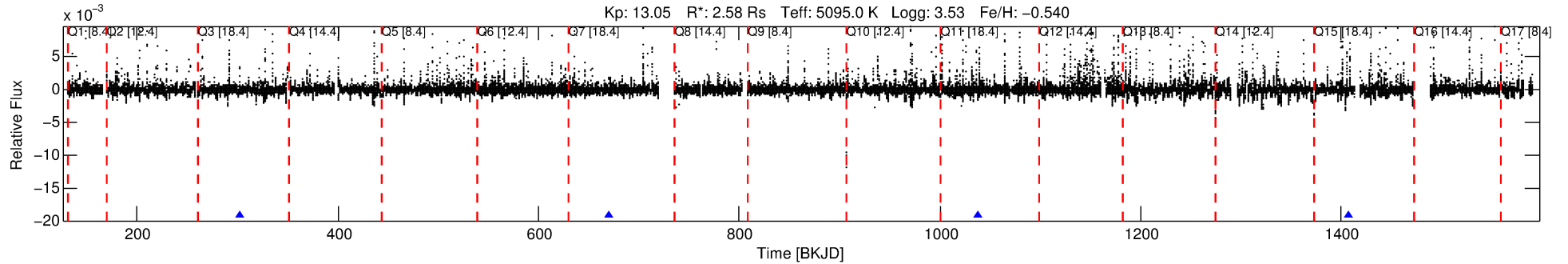
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 007266428-03

No Significant Match Found

# DV One-Page Summary

KIC: 7266428 Candidate: 3 of 6 Period: 368.271 d



## DV Fit Results:

Period = 368.27093 [0.07371] d  
Epoch = 302.0727 [0.1407] BKJD  
Rp/R\* = 0.0277 [0.0212]  
a/R\* = 84.17 [71.56]  
b = 0.96 [0.07]  
Seff = 4.50 [7.90]  
Teq = 371 [163] K  
Rp = 7.79 [8.31] Re  
a = 0.9450 [0.9215] AU  
Ag = 2975.14 [7100.06] [0.42 $\sigma$ ]  
Teffp = 4240 [1723] K [2.24 $\sigma$ ]

## DV Diagnostic Results:

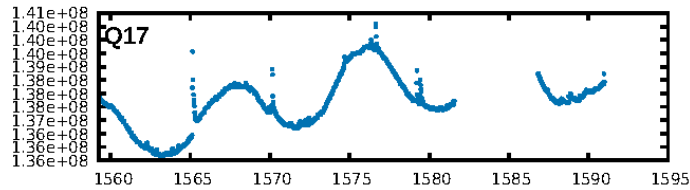
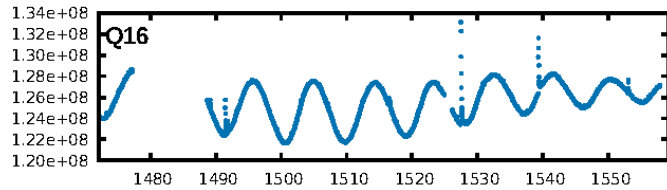
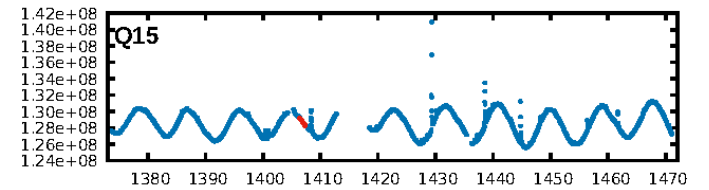
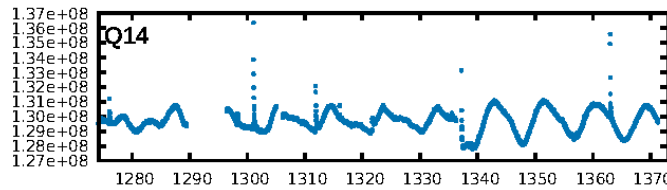
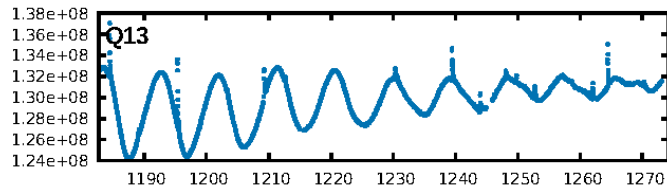
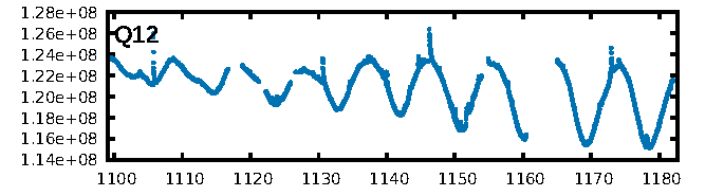
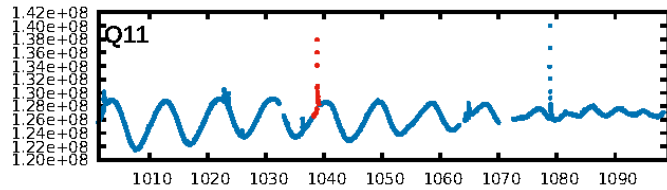
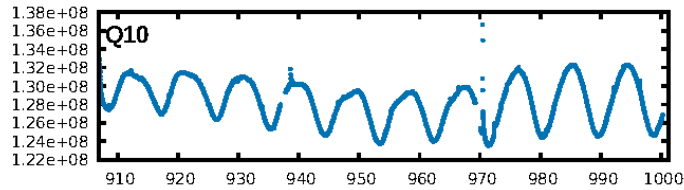
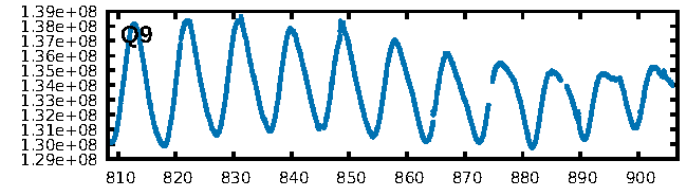
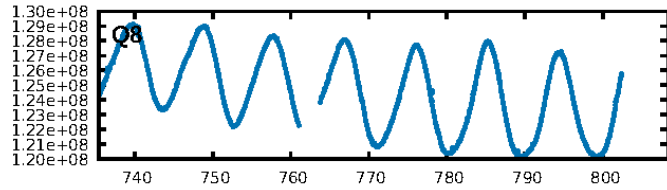
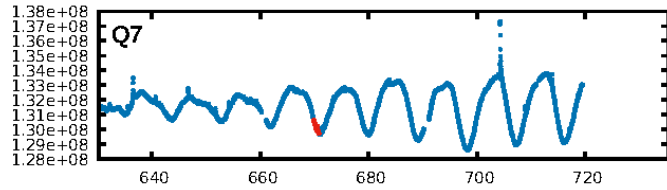
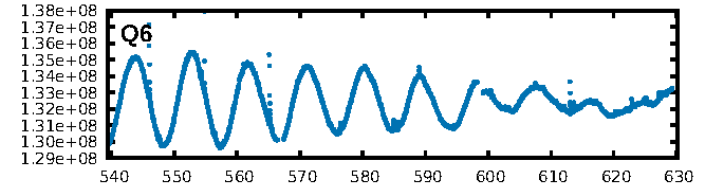
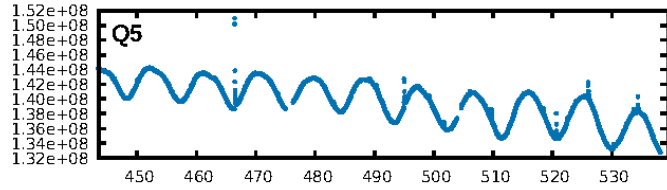
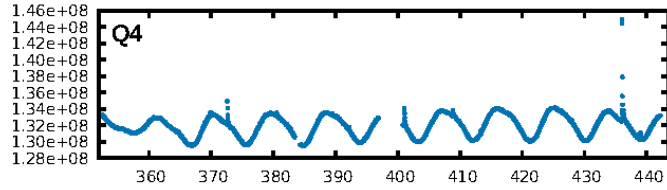
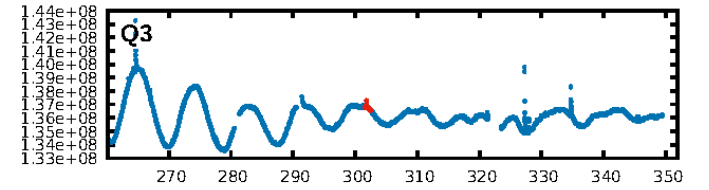
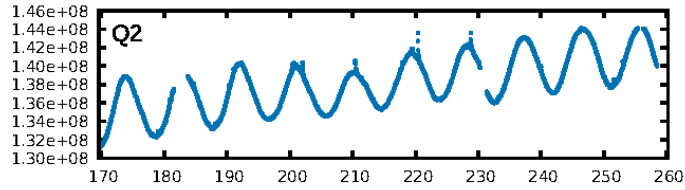
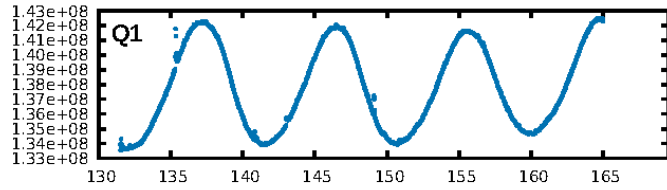
ShortPeriod-sig: 100.0% [20.07 $\sigma$ ]  
LongPeriod-sig: 100.0% [43.52 $\sigma$ ]  
ModelChiSquare2-sig: 0.0%  
ModelChiSquareGof-sig: 96.2%  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [4/4]  
GhostDiagnostic-chr: 1.356  
Centroid-sig: 30.3%  
Centroid-so: 0.555 arcsec [0.94 $\sigma$ ]  
OotOffset-rm: 0.096 arcsec [0.51 $\sigma$ ]  
OotOffset-st: 0/2/0/0 [2]  
KicOffset-rm: 0.072 arcsec [0.27 $\sigma$ ]  
KicOffset-st: 0/2/0/0 [2]  
DiffImageQuality-fgm: 0.50 [1/2]  
DiffImageOverlap-fno: 1.00 [2/2]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 07:34:27 Z

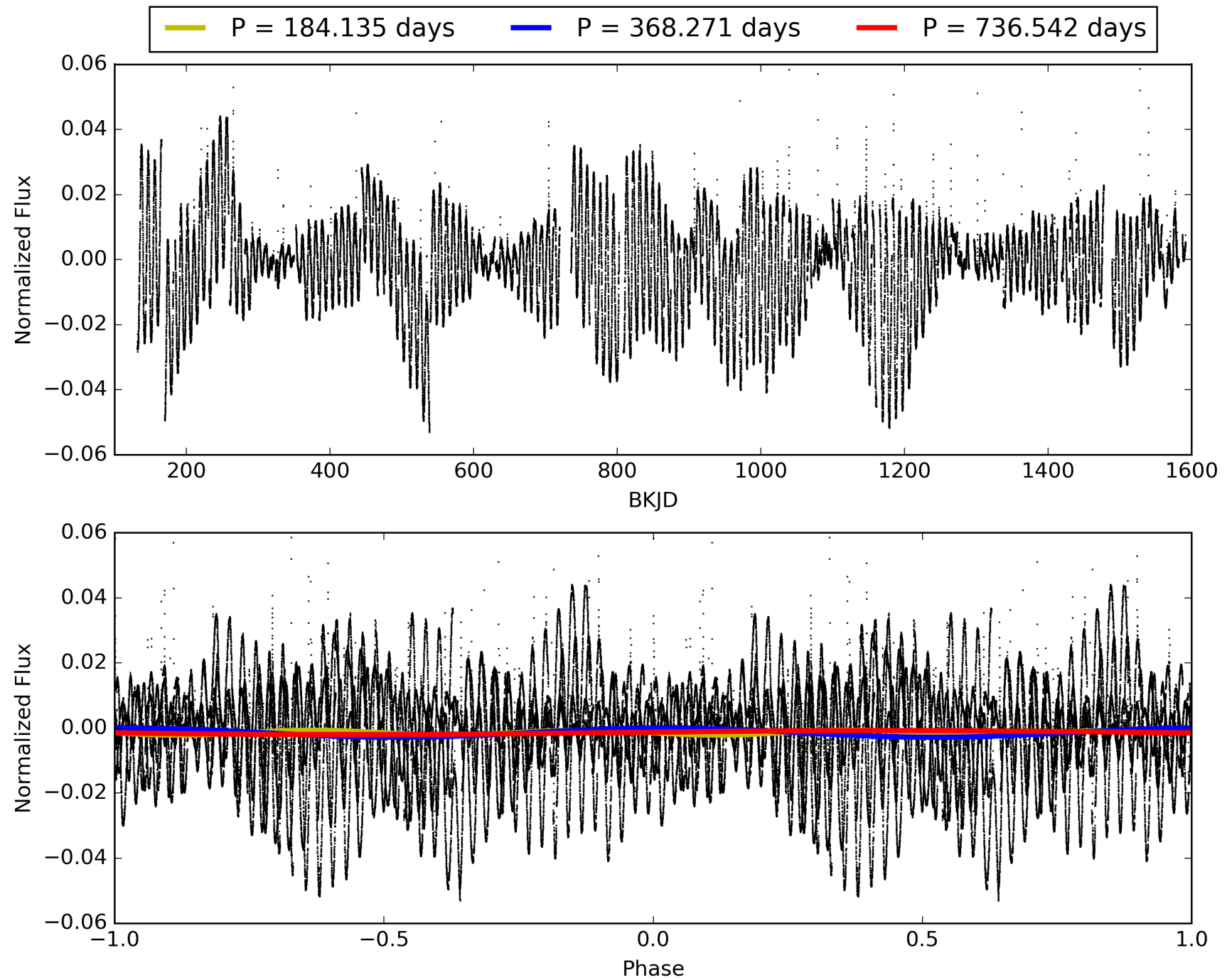
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center



# TCE 007266428-03, PDC Light Curves

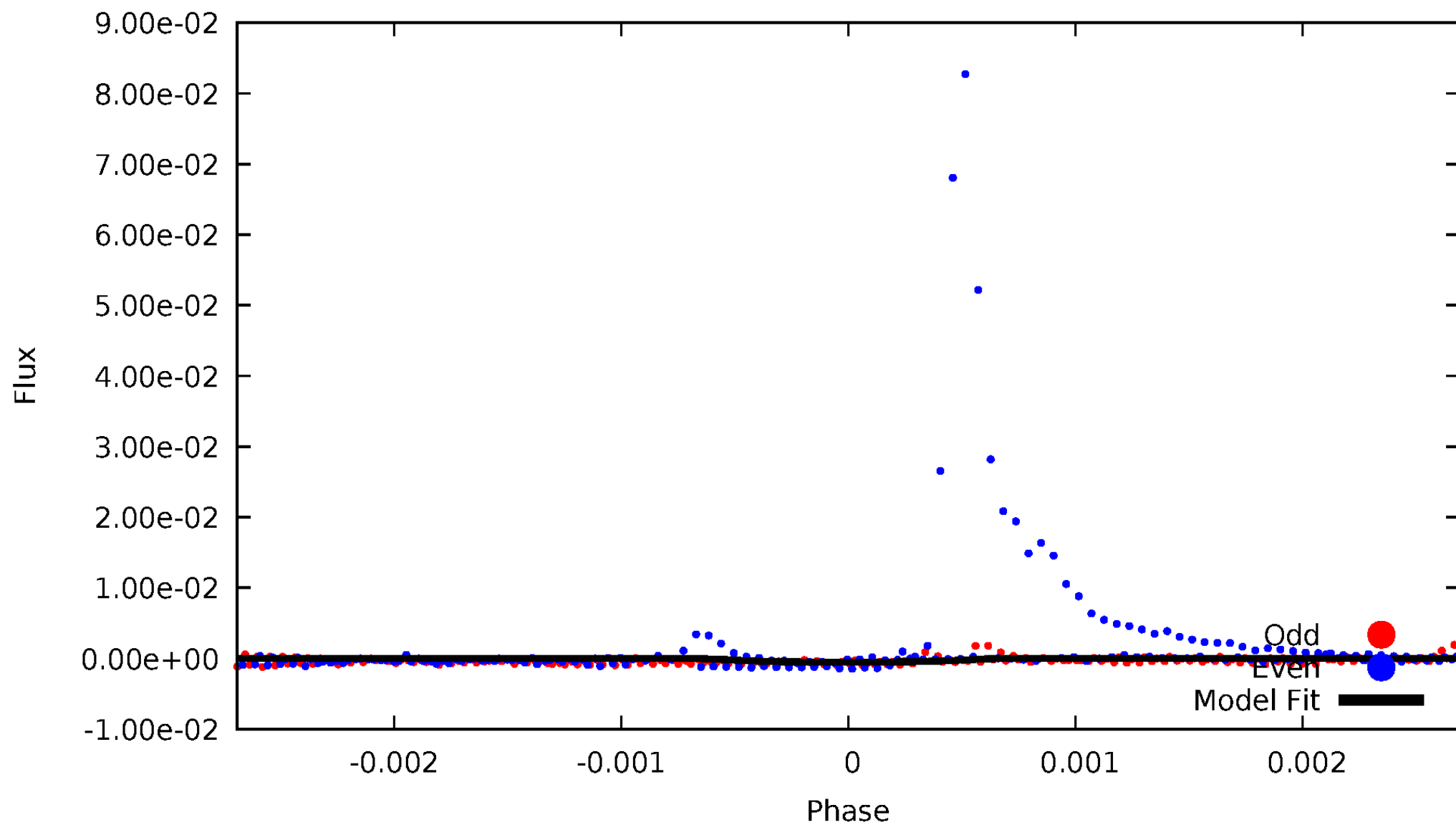


TCE 007266428-03



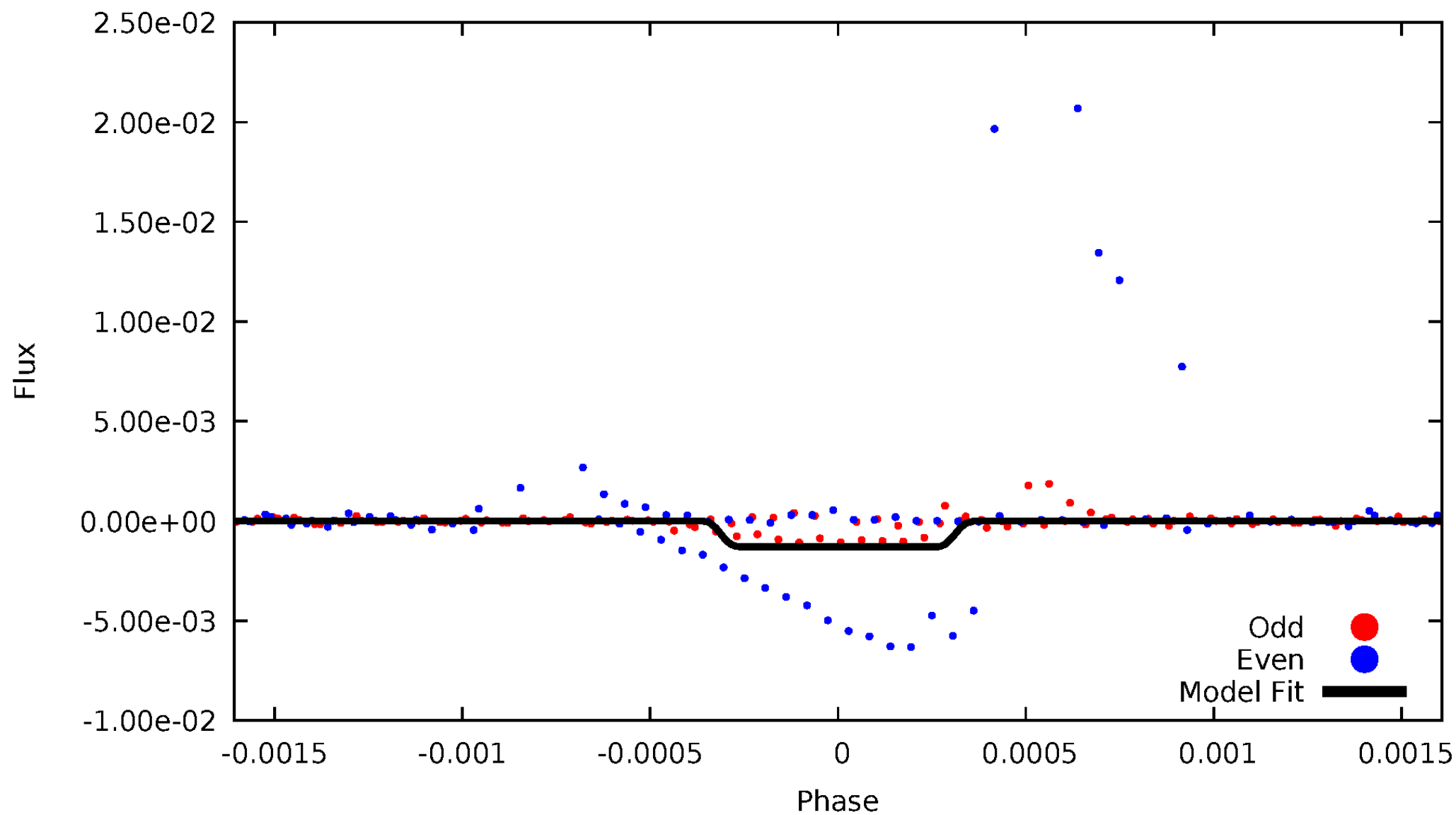
# DV Odd/Even

TCE 007266428-03



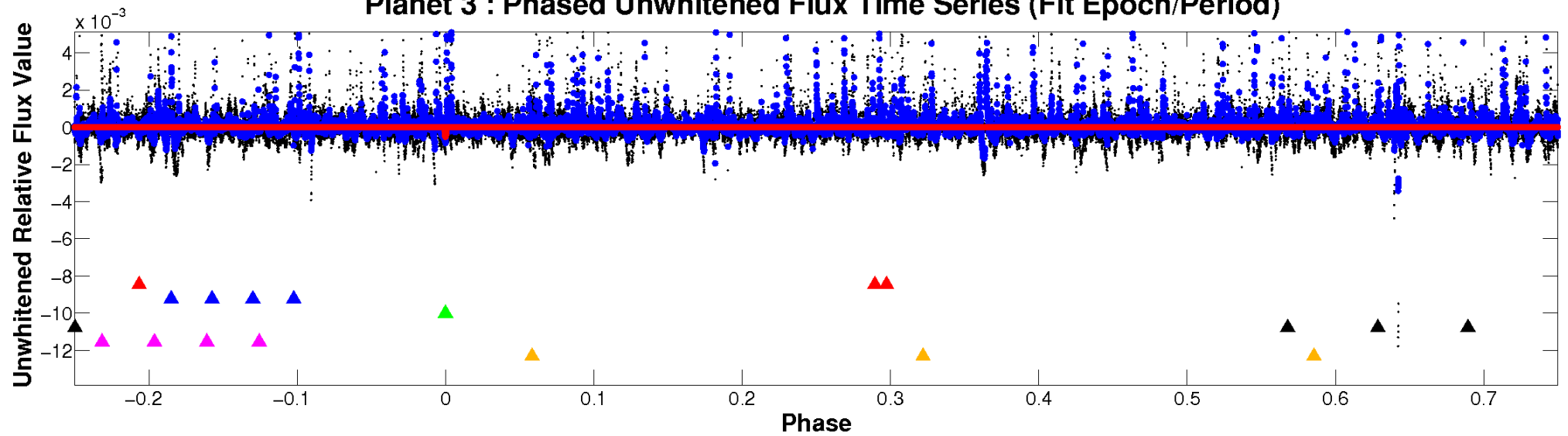
# ALT Odd/Even

TCE 007266428-03

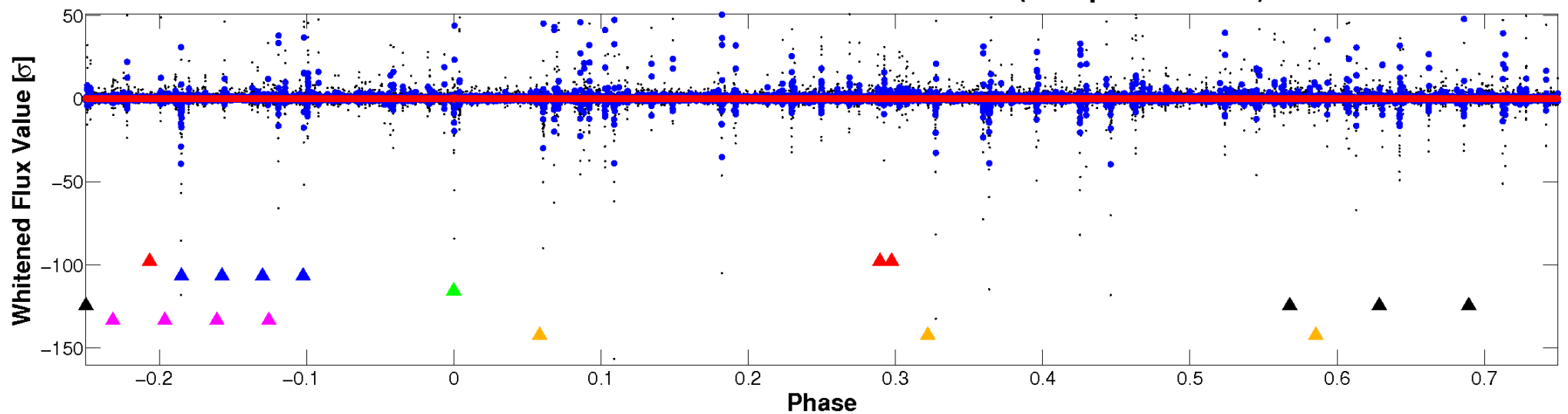


# Non-Whitened Vs. Whitened Light Curve

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

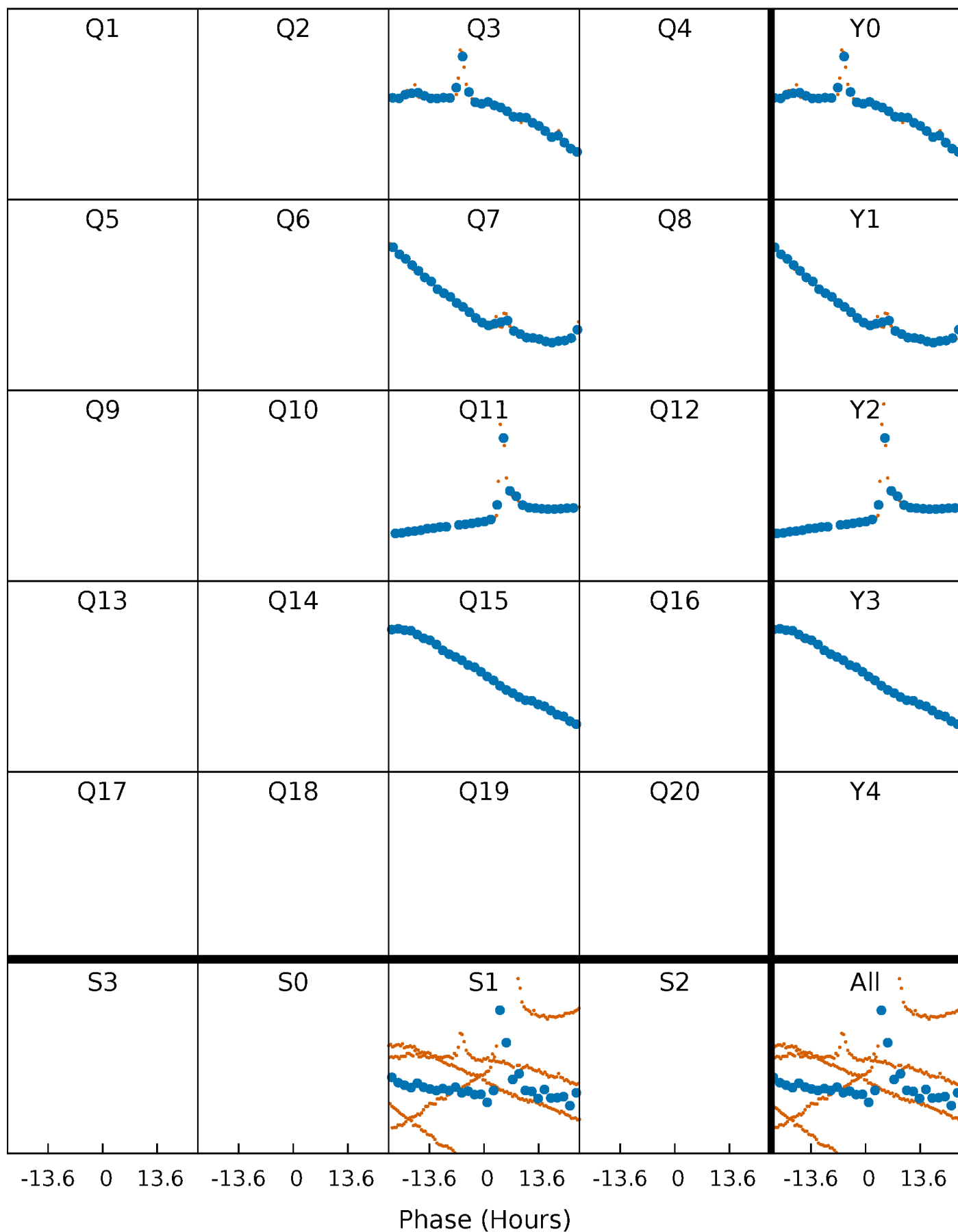


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



# PDC Quarter-Phased Transit Curves

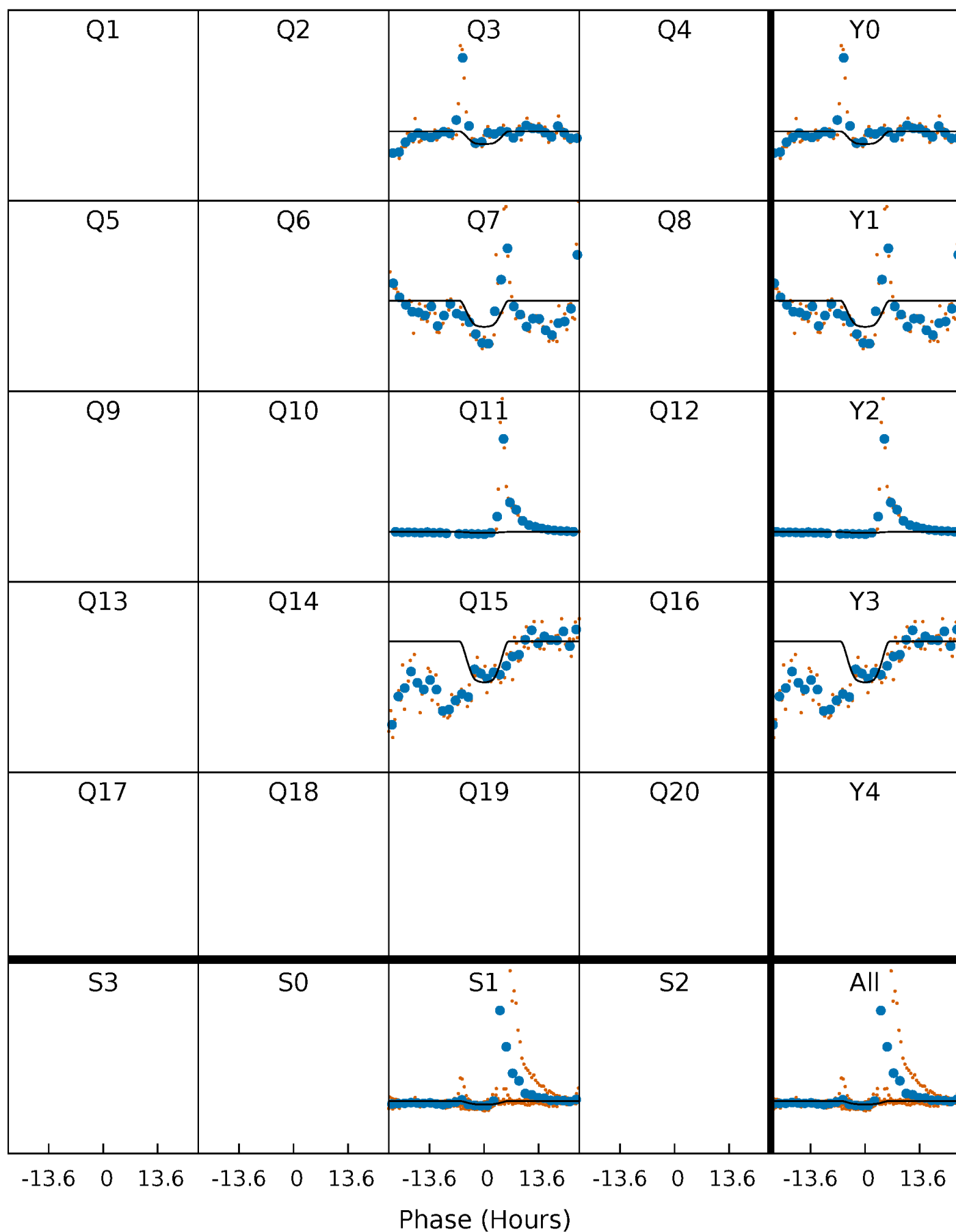
TCE 007266428-03 P=368.270929 Days  $T_0=302.072706$  (BKJD)





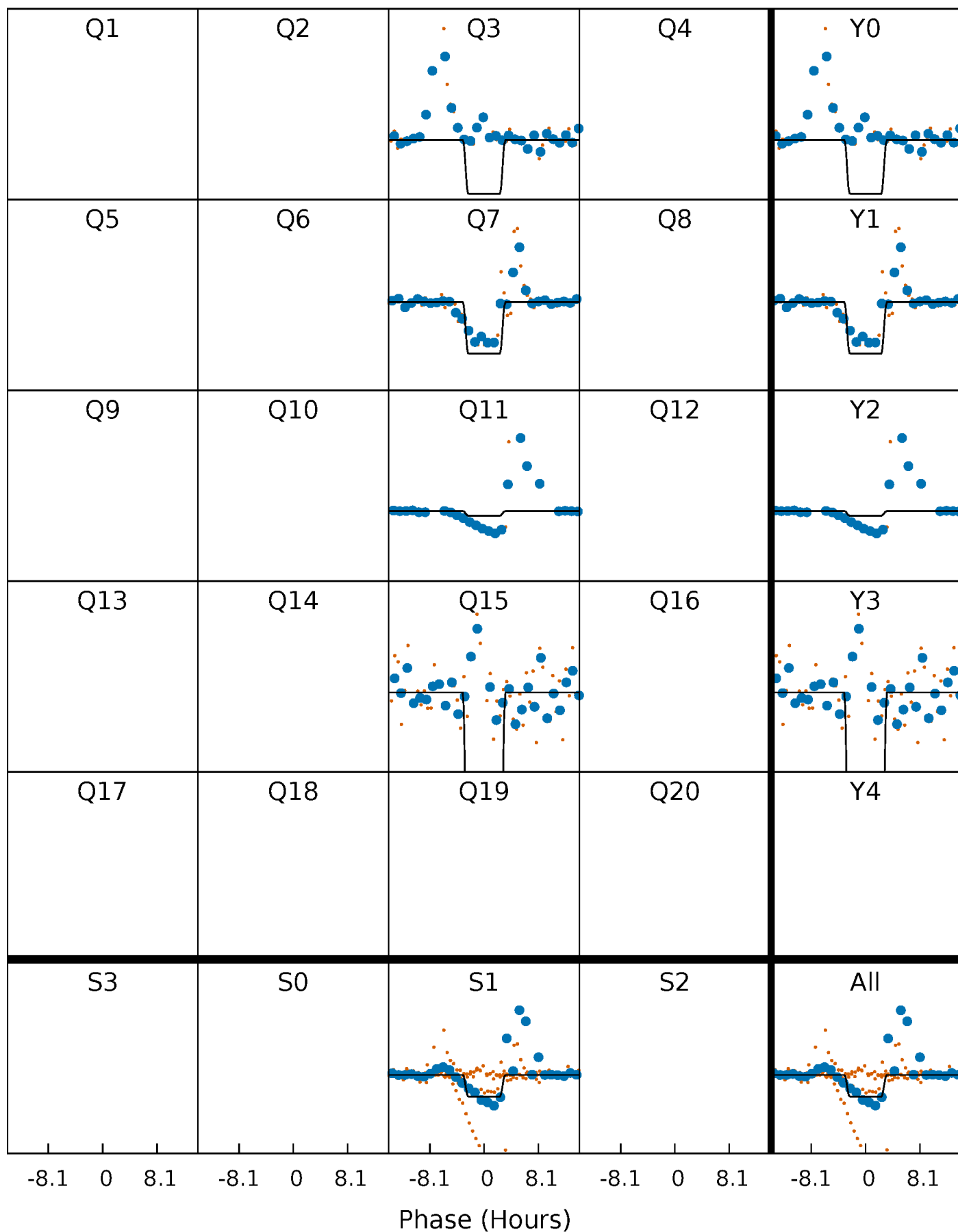
## DV Quarter-Phased Transit Curves

TCE 007266428-03 P=368.270929 Days  $T_0=302.072706$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

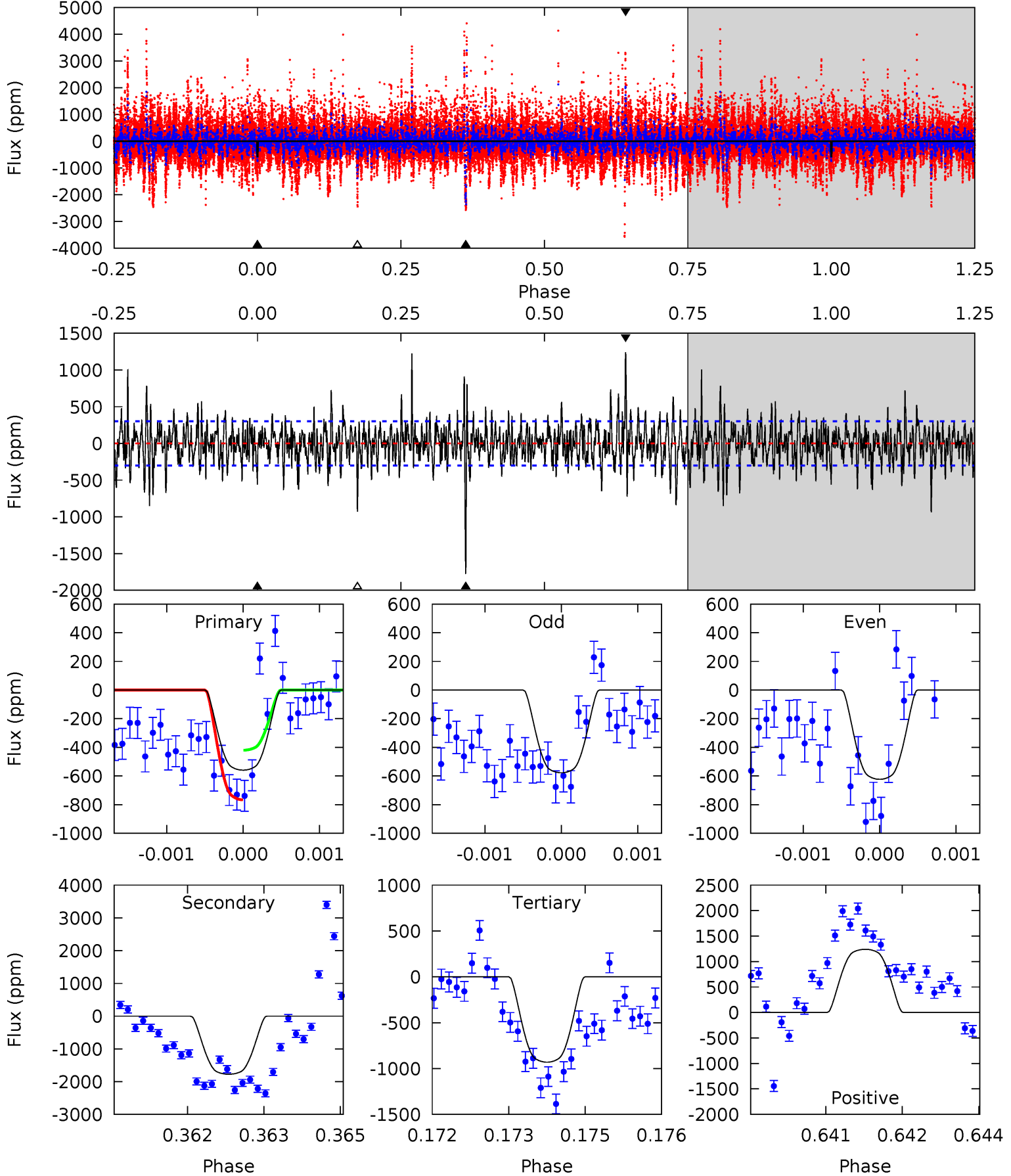
TCE 007266428-03 P=368.246807 Days  $T_0=302.116630$  (BKJD)



# DV Model-Shift Uniqueness Test

007266428-03, P = 368.270929 Days, E = 302.072706 Days

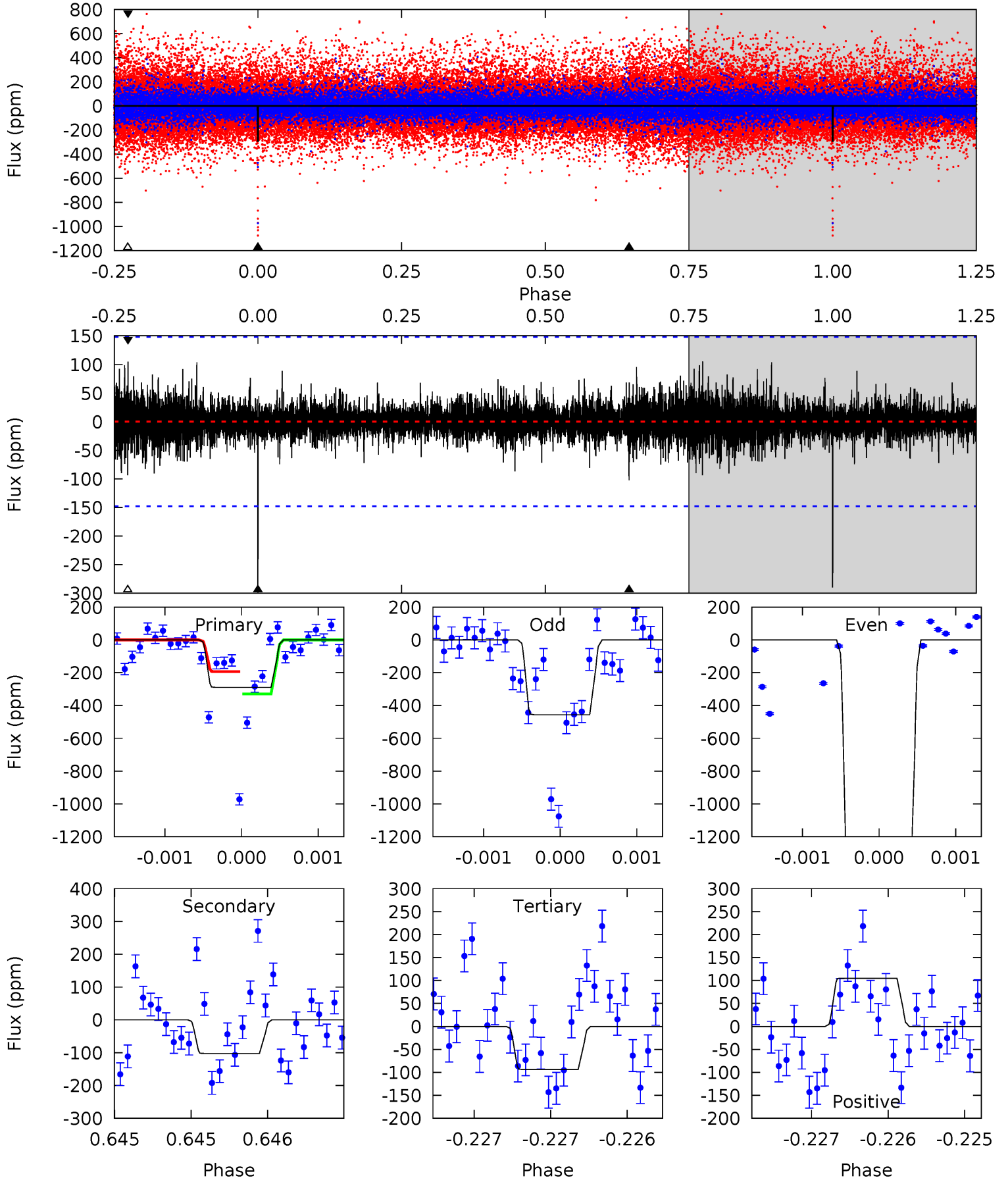
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.0	31.8	16.7	22.2	5.39	3.20	4.07	-6.65	-12.2	15.1	9.57	0.26	-3.58	0.41	3.13



# Alt Model-Shift Uniqueness Test

007266428-03, P = 368.246807 Days, E = 302.116630 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
10.8	3.82	3.50	3.92	5.52	3.39	0.74	7.30	6.88	0.32	-0.10	28.0	3.74	0.27	2.60



### Stellar Parameters For KIC 007266428

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M$ ( $M_{\odot}$ )	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$5095^{+124}_{-162}$	$3.534^{+1.095}_{-0.365}$	$-0.540^{+0.250}_{-0.350}$	$2.579^{+1.565}_{-1.913}$	$0.828^{+0.239}_{-0.196}$	$0.068^{+3.568}_{-0.052}$
	+2%/-3%	+31%/-10%	+46%/-65%	+61%/-74%	+29%/-24%	+5244%/-76%
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 007266428-03 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$-1775 \pm 56$	$7.51^{+6.79}_{-4.92}$	$503^{+81}_{-97}$	$5895^{+4706}_{-1181}$	$15679^{+116821}_{-11389}$
Alt.	$-102 \pm 27$	$9.43^{+7.47}_{-5.41}$	$507^{+86}_{-108}$	$3166^{+803}_{-362}$	$557^{+2526}_{-383}$

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

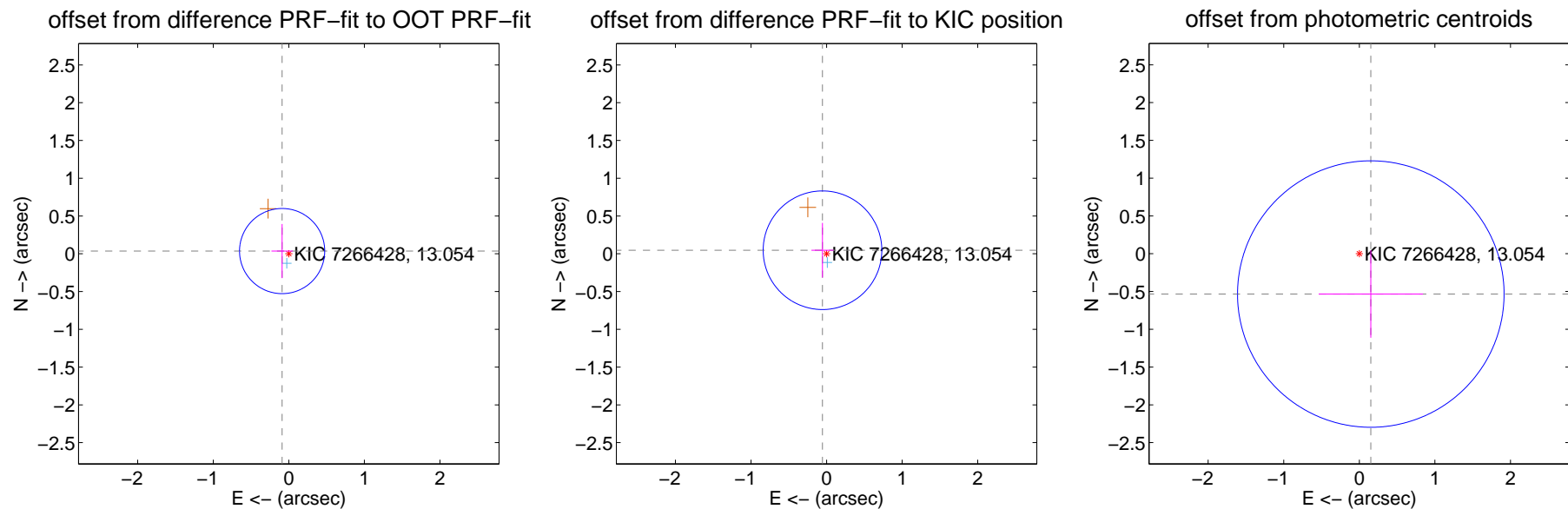
## DV Centroid Data

Supplemental centroid analysis for 007266428-03. Kepler magnitude: 13.05. Transit SNR 3.63

There are 1 quarters with good PRF difference image offsets

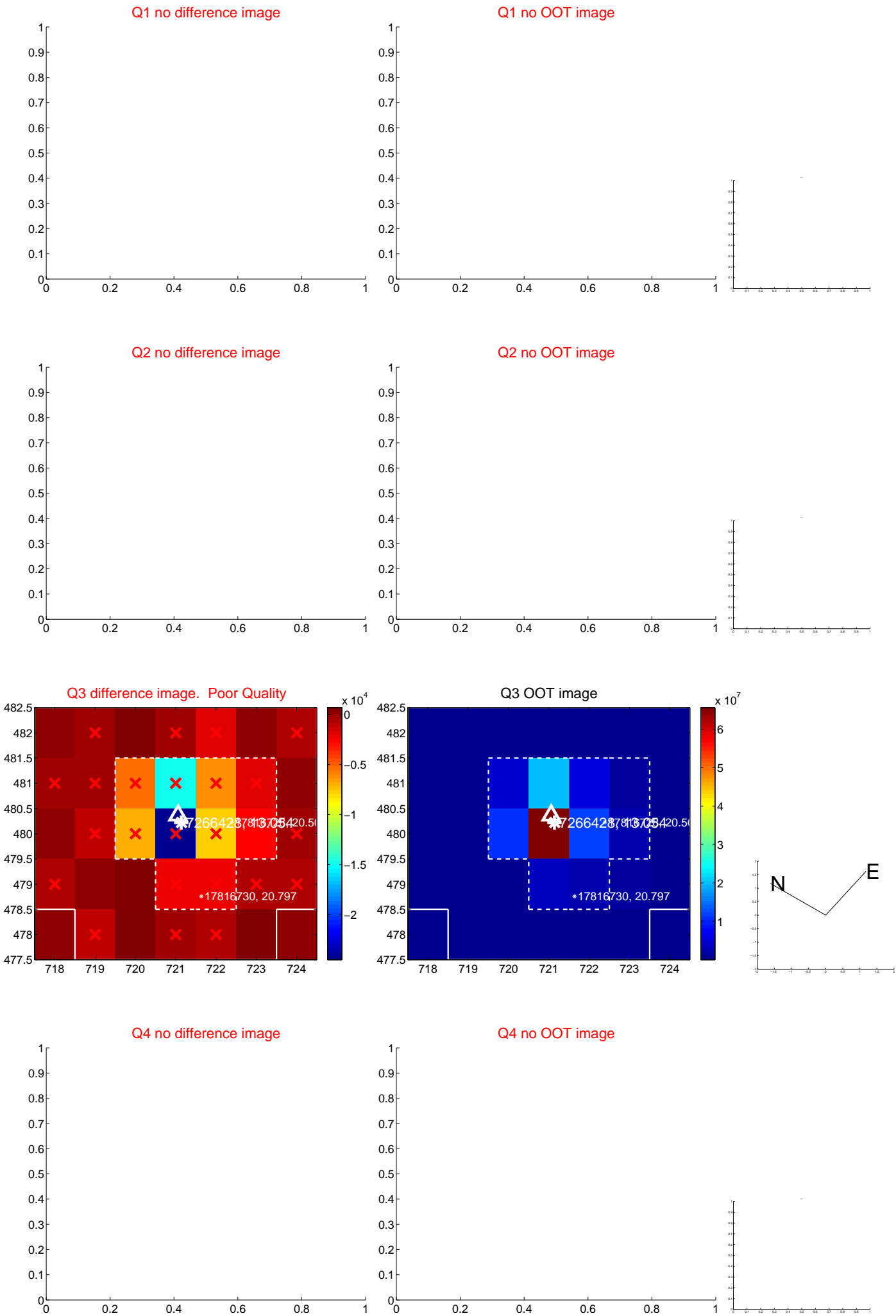
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.096 \pm 0.188$	0.51	$0.089 \pm 0.141$	$0.036 \pm 0.358$
PRF-fit source offset from KIC position	$0.072 \pm 0.262$	0.27	$0.054 \pm 0.147$	$0.047 \pm 0.361$
photometric centroid source offset	$0.55 \pm 0.59$	0.94	$-0.15 \pm 0.69$	$-0.53 \pm 0.58$



Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three- $\sigma$ . Red \*: target star. Blue \*: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

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



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

Q5 no difference image



Q5 no OOT image



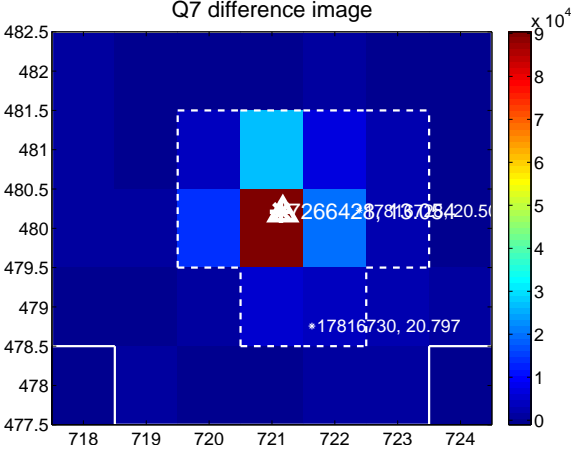
Q6 no difference image



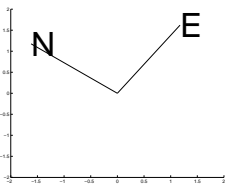
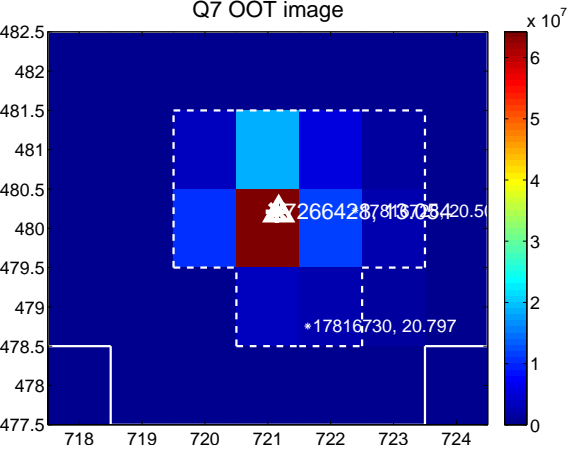
Q6 no OOT image



Q7 difference image



Q7 OOT image



Q8 no difference image



Q8 no OOT image





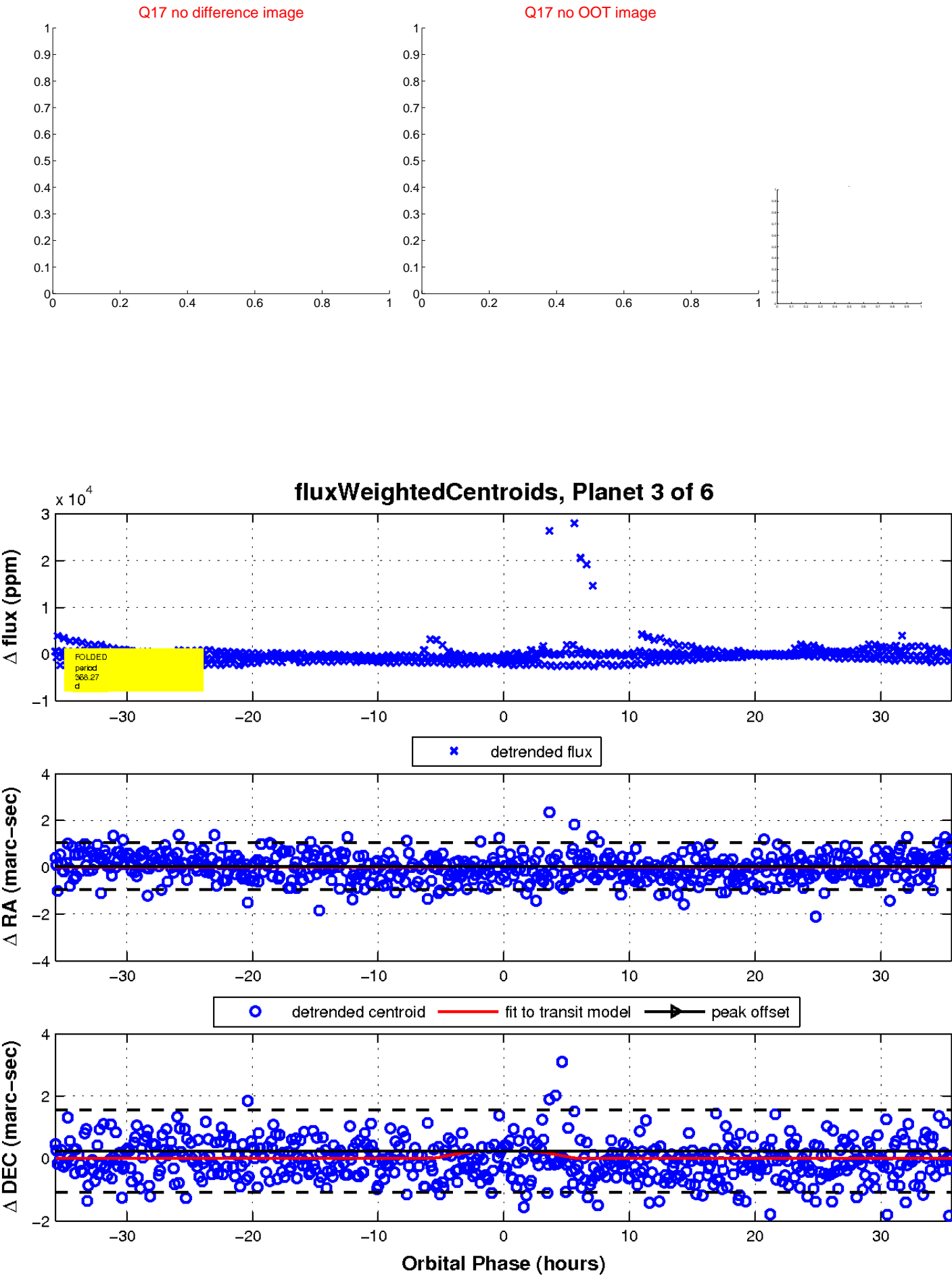
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

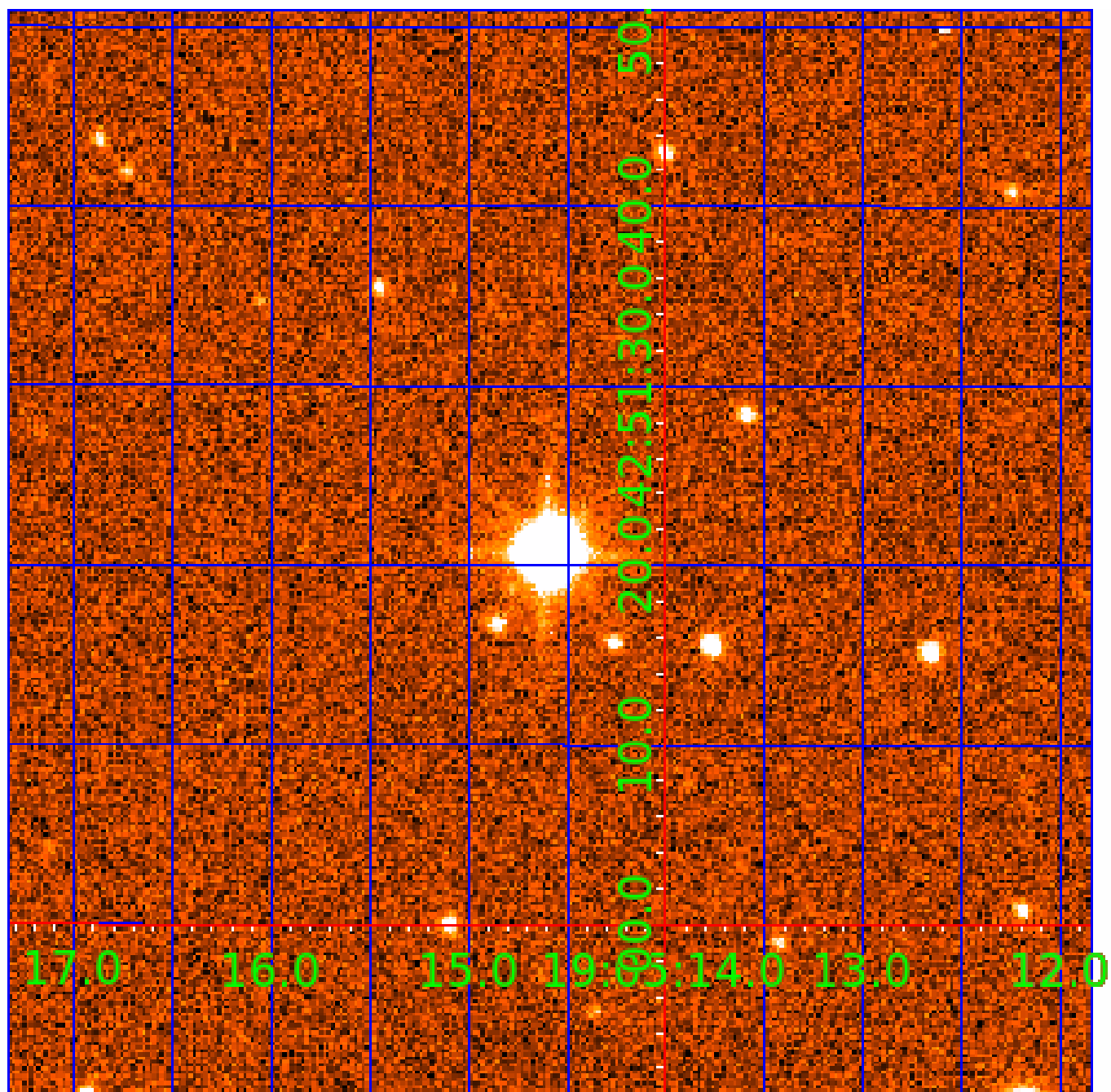


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination



# KIC 007266428

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007266428-01	OBS	No	553.860698	408.689190	720.7	6.928	22.4	6.0	2.58	5095	6.88	2.61
007266428-03	OBS	No	368.270929	302.072706	506.6	11.893	14.9	3.6	2.58	5095	7.79	4.50
007266428-04	OBS	No	390.652950	142.931111	462.3	3.299	15.6	5.0	2.58	5095	5.57	4.16
007266428-05	OBS	No	355.262346	255.830635	1011.6	5.286	16.8	7.7	2.58	5095	10.63	4.72
007266428-06	OBS	No	639.463803	149.450402	938.0	6.271	14.2	9.0	2.58	5095	8.28	2.15

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007266428-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007266428-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007266428-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
007266428-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007266428-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS

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

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

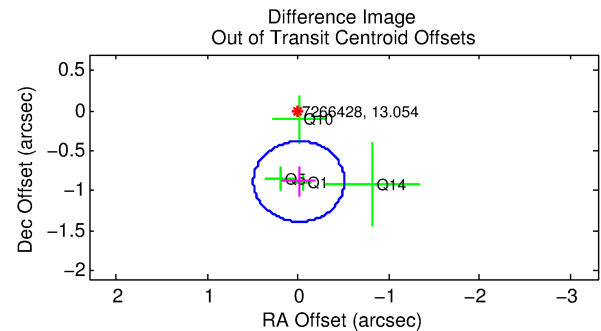
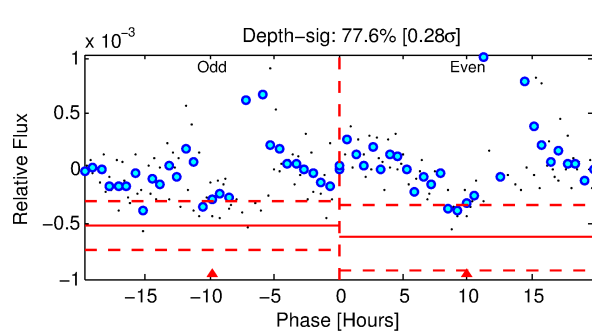
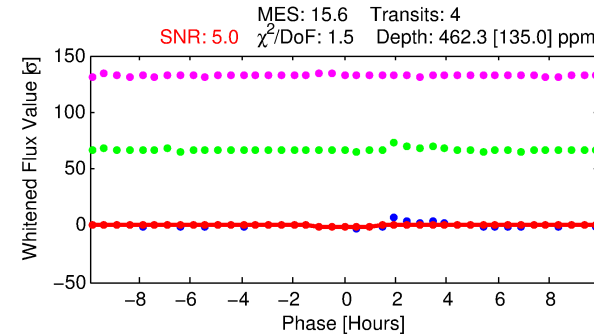
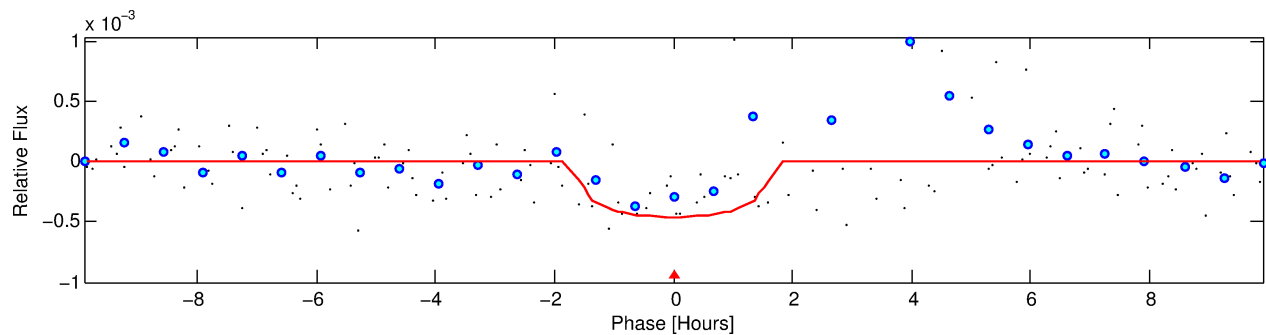
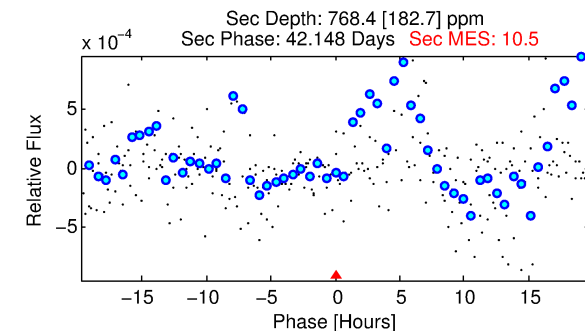
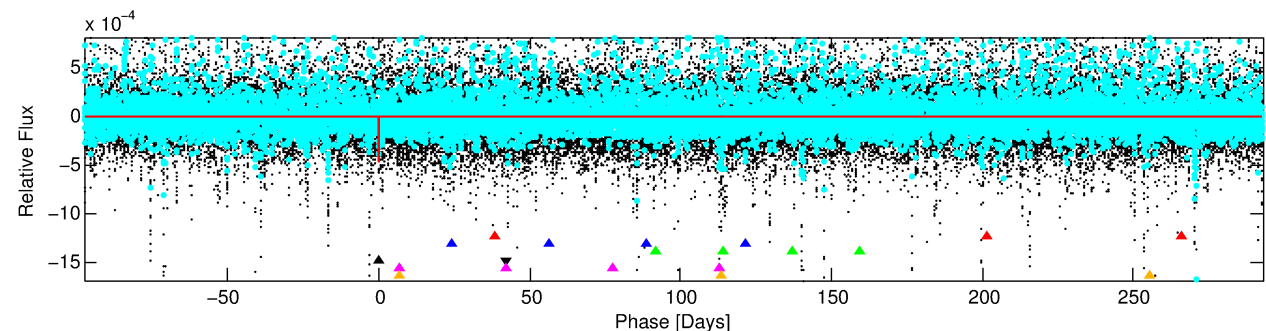
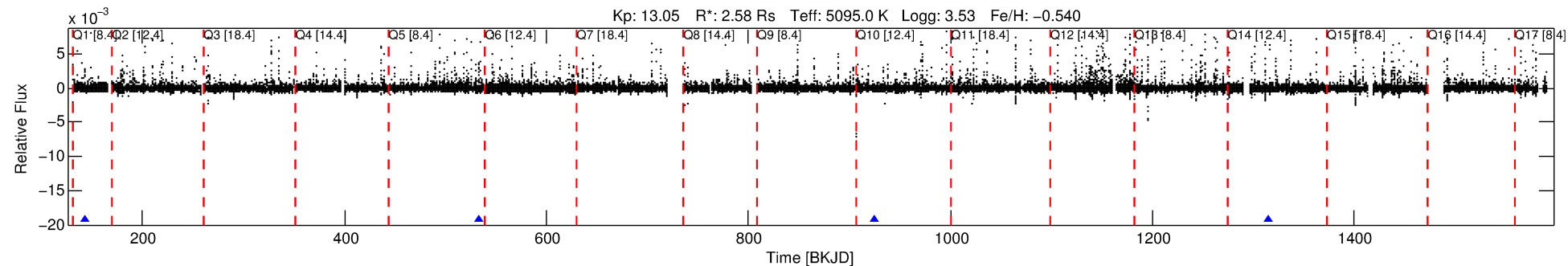
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 007266428-04

No Significant Match Found

# DV One-Page Summary

KIC: 7266428 Candidate: 4 of 6 Period: 390.653 d



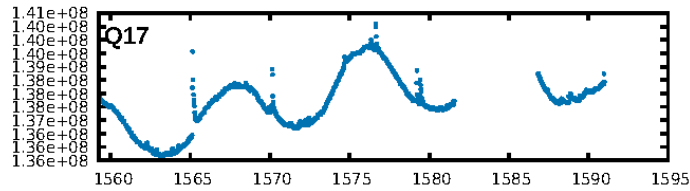
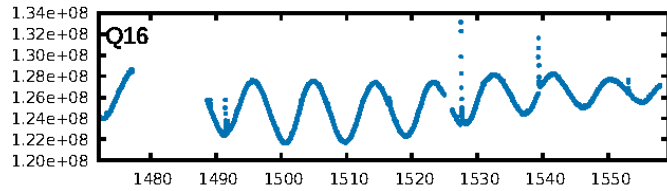
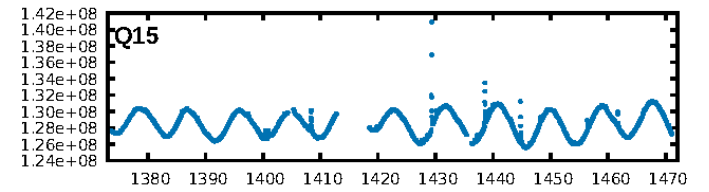
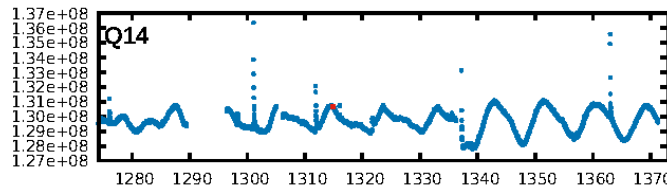
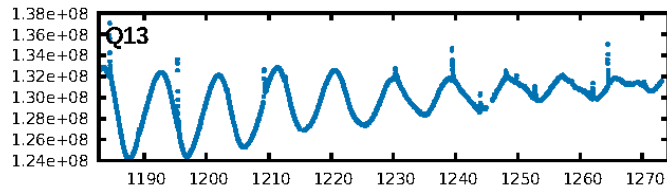
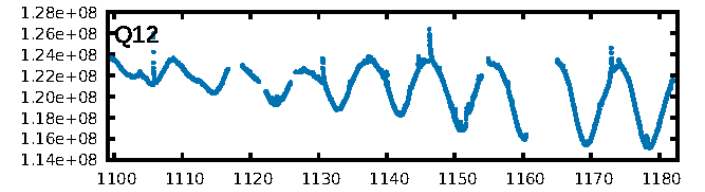
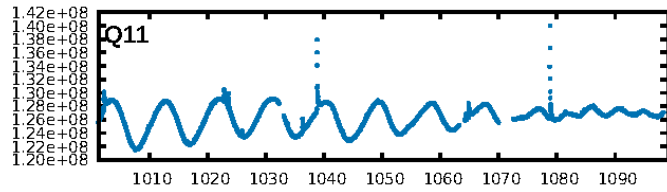
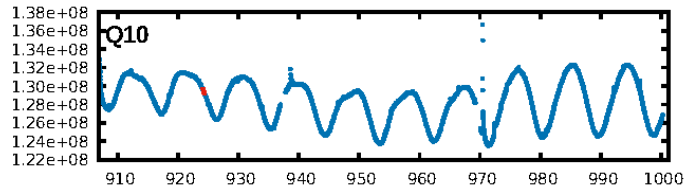
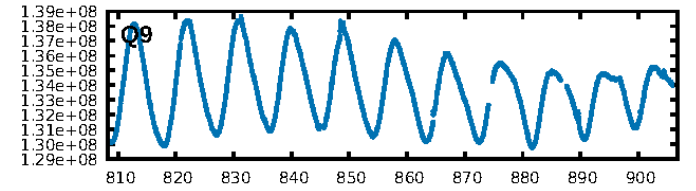
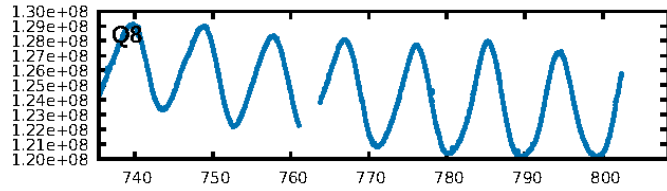
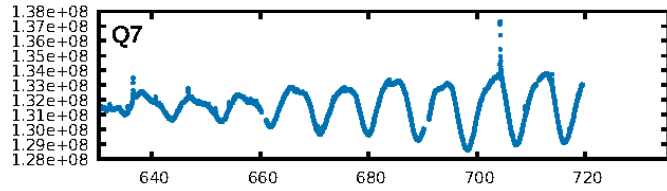
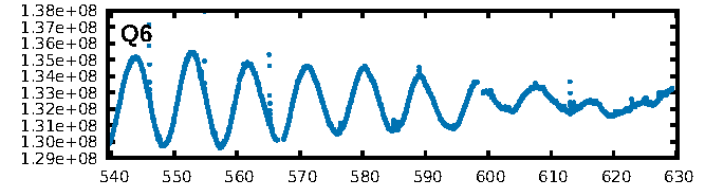
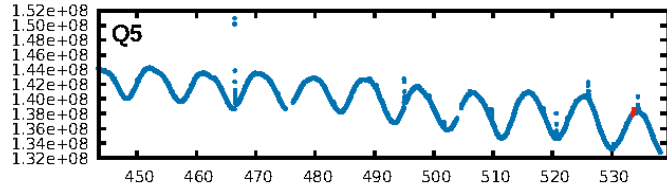
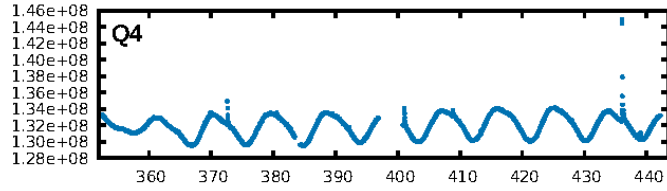
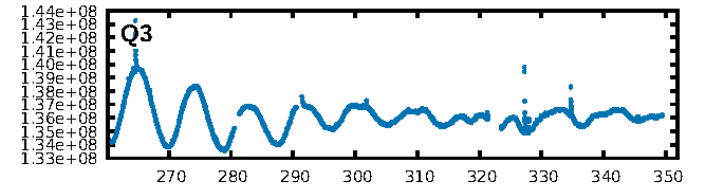
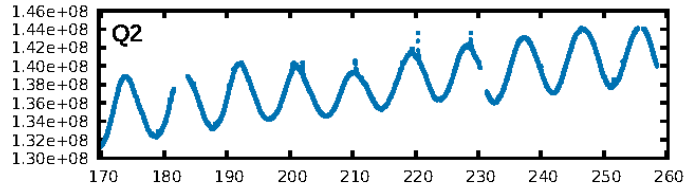
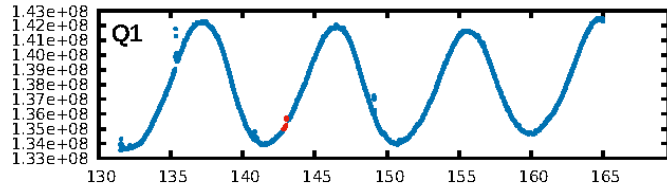
## DV Fit Results:

Period = 390.65295 [0.00479] d  
Epoch = 142.9311 [0.0080] BKJD  
Rp/R\* = 0.0198 [0.0558]  
a/R\* = 834.96 [8902.29]  
b = 0.43 [20.22]  
Seff = 4.16 [7.30]  
Teq = 364 [160] K  
Rp = 5.57 [16.24] Re  
a = 0.9829 [0.9585] AU  
Ag = 13150.76 [77663.15] [0.17σ]  
Teffp = 6028 [8501] K [0.67σ]

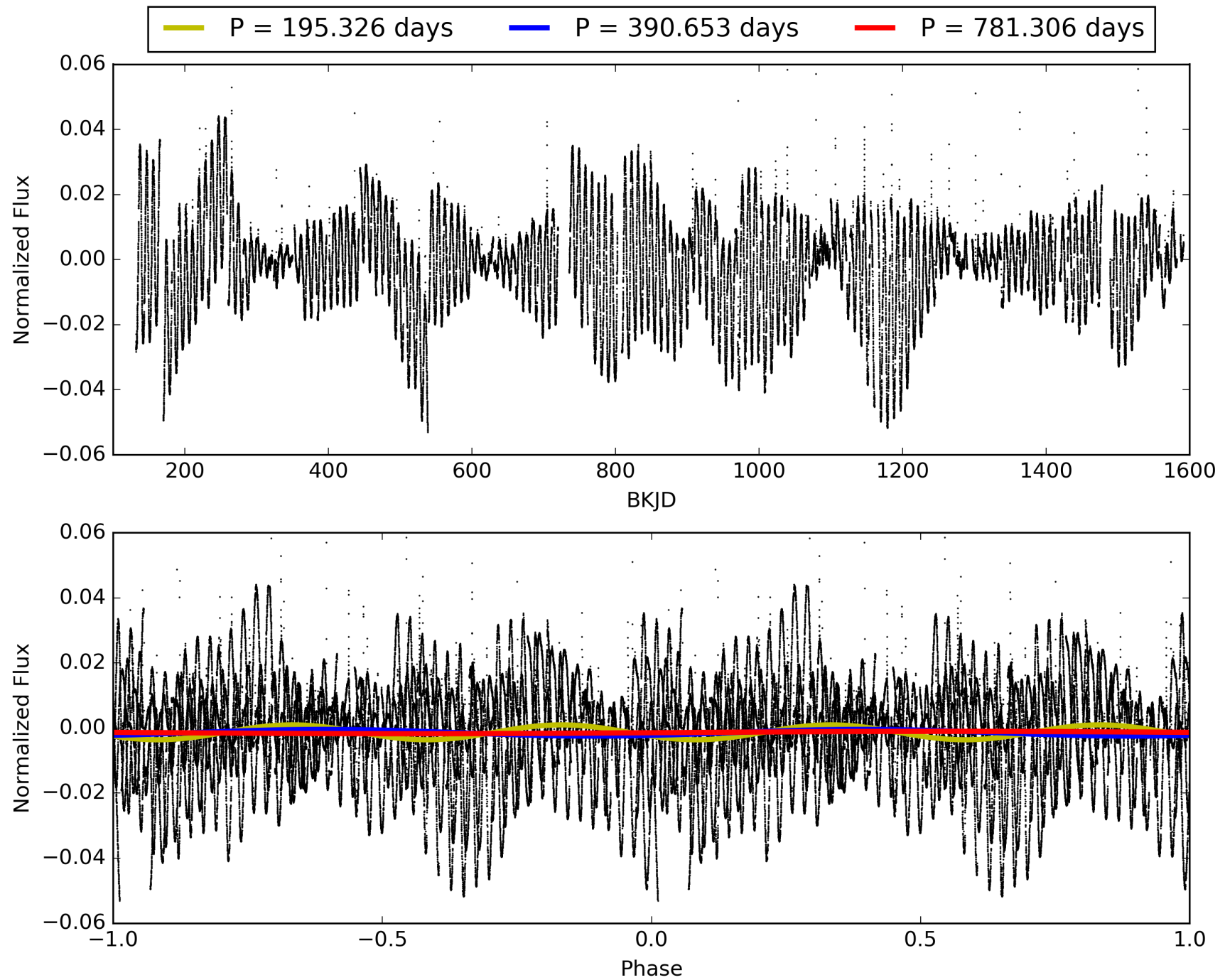
## DV Diagnostic Results:

ShortPeriod-sig: 100.0% [43.52σ]  
LongPeriod-sig: 100.0% [510.46σ]  
ModelChiSquare2-sig: 1.2%  
ModelChiSquareGof-sig: 38.3%  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [3/3]  
GhostDiagnostic-chr: -1.353  
Centroid-sig: 26.6%  
Centroid-so: 1.003 arcsec [1.23σ]  
**OotOffset-rm: 0.884 arcsec [5.30σ]**  
**KicOffset-rm: 0.965 arcsec [4.62σ]**  
OotOffset-st: 2/0/0/2 [4]  
KicOffset-st: 2/0/0/2 [4]  
DiffImageQuality-fgm: 0.50 [2/4]  
DiffImageOverlap-fno: 1.00 [4/4]

# TCE 007266428-04, PDC Light Curves



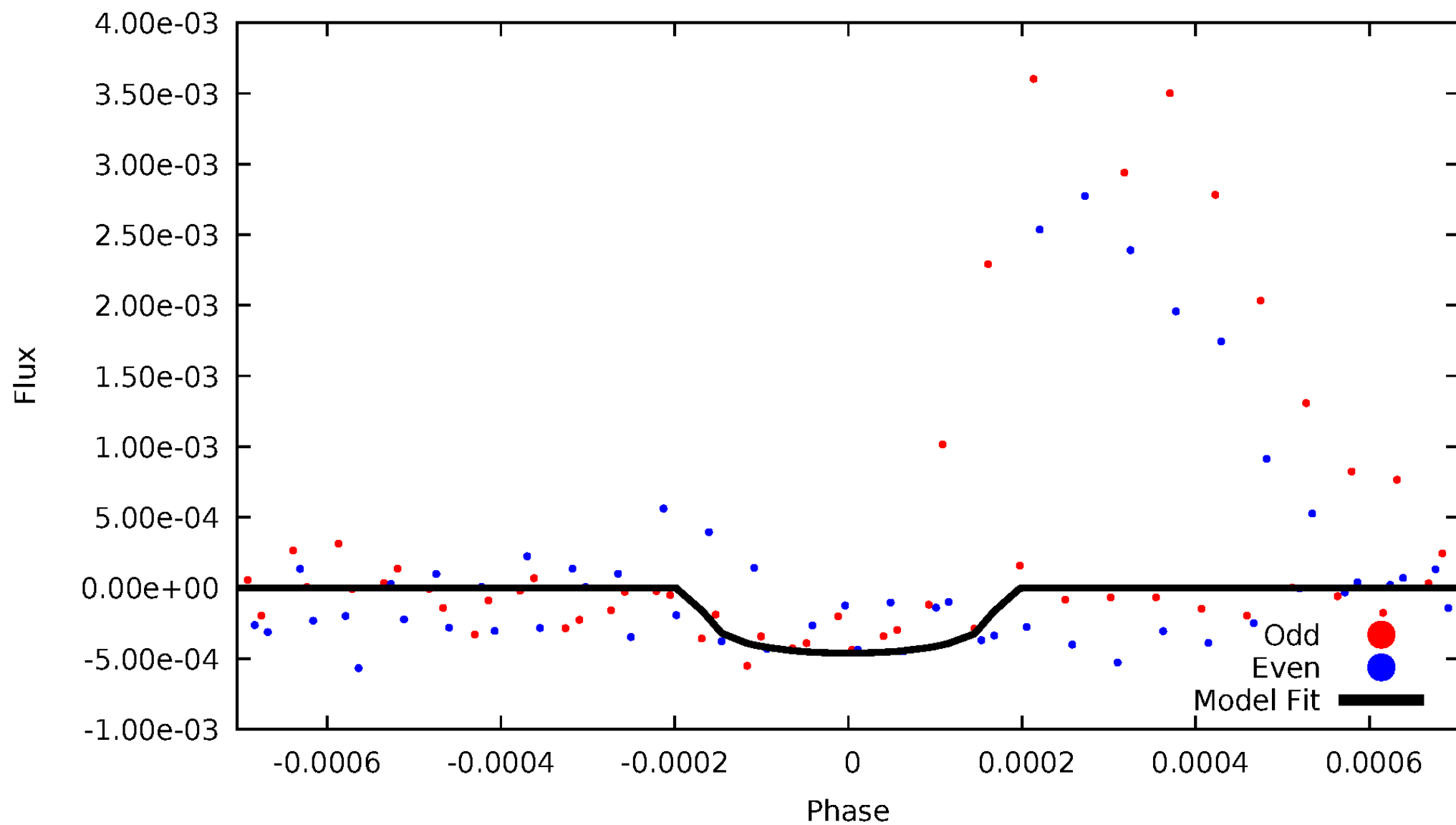
TCE 007266428-04





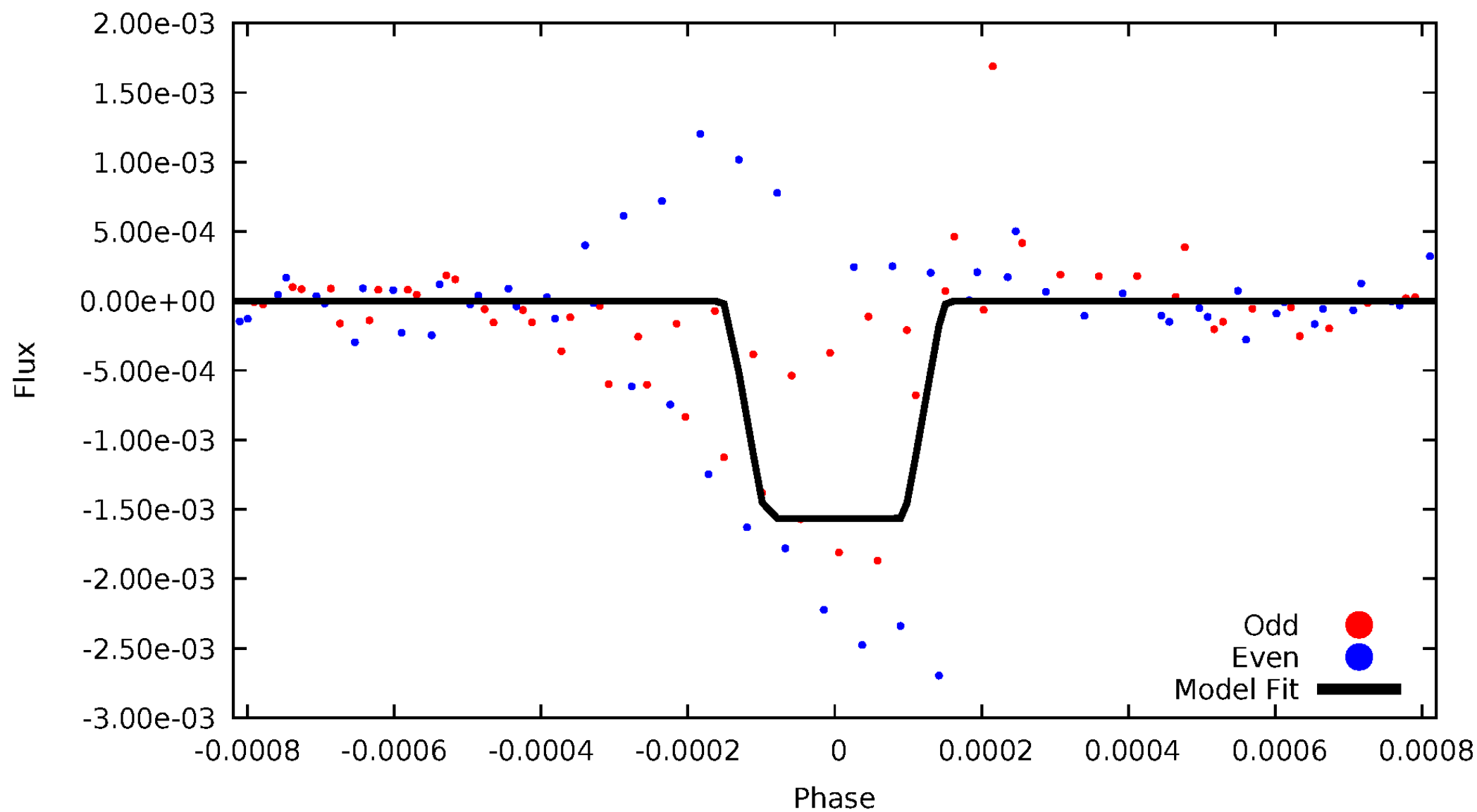
# DV Odd/Even

TCE 007266428-04



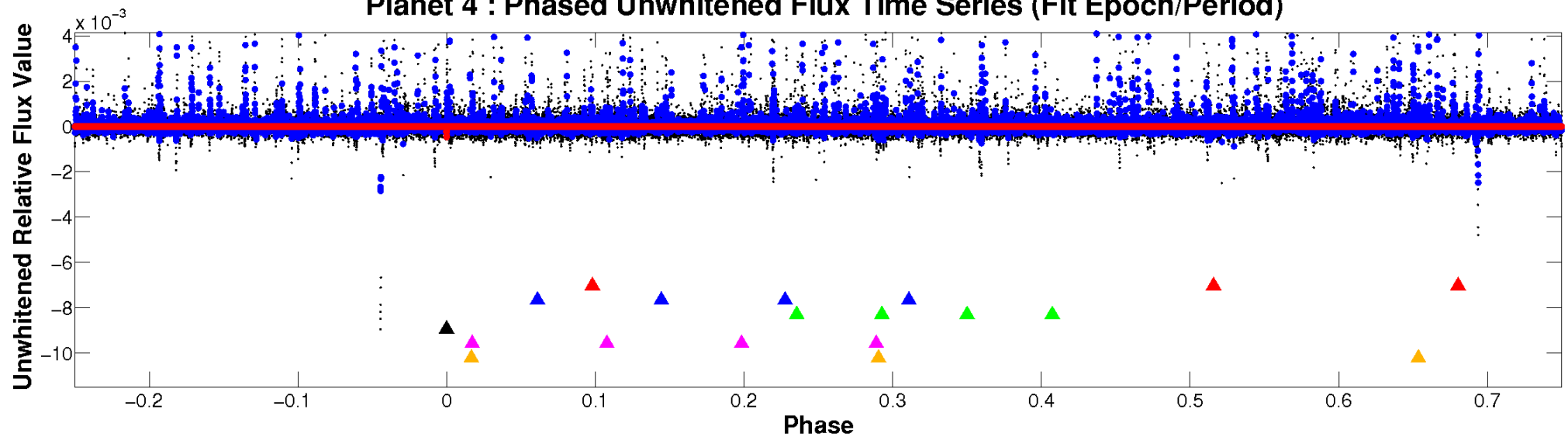
# ALT Odd/Even

TCE 007266428-04

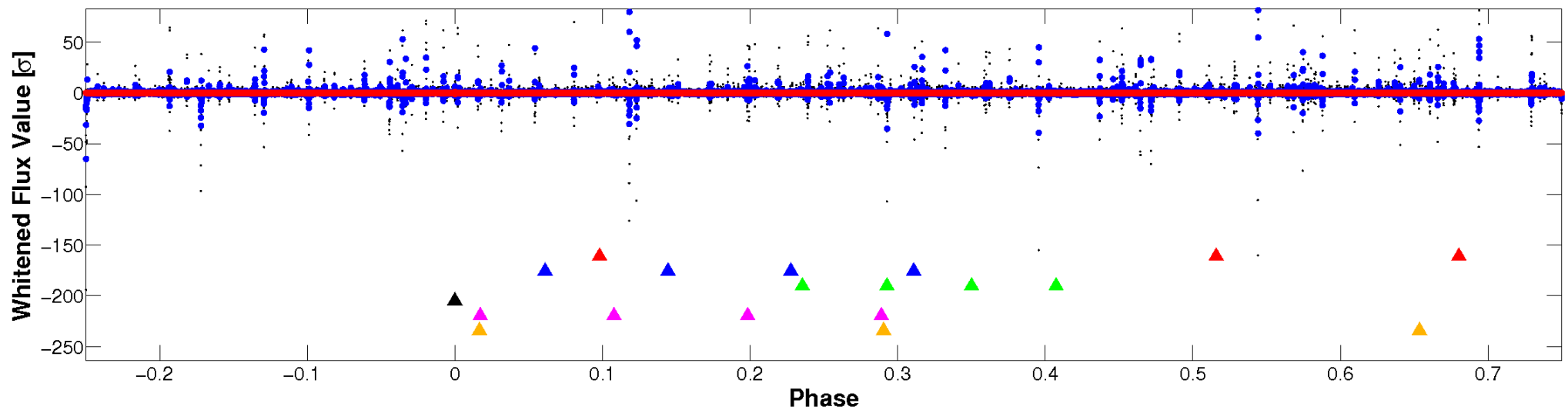


# Non-Whitened Vs. Whitened Light Curve

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

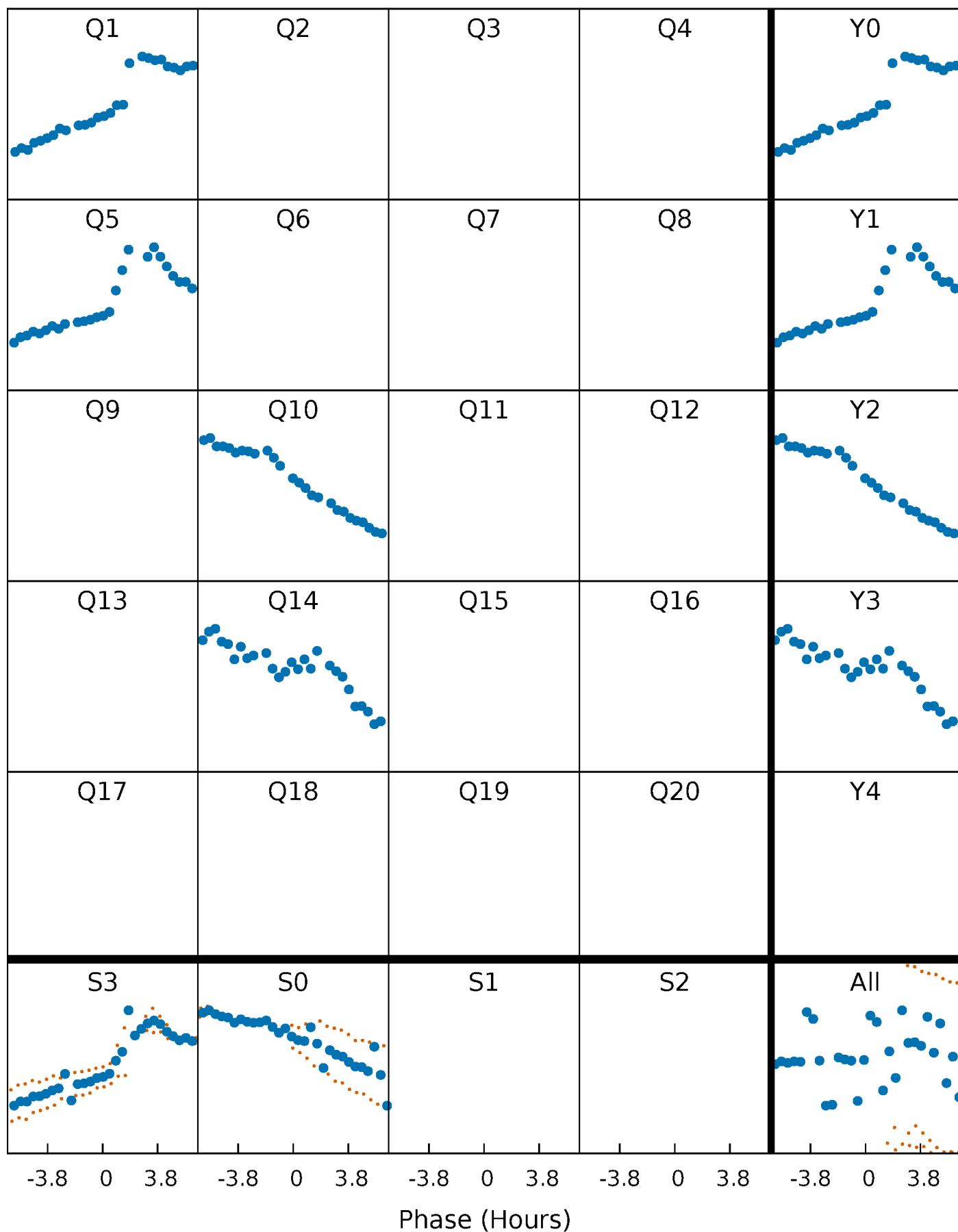


## Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



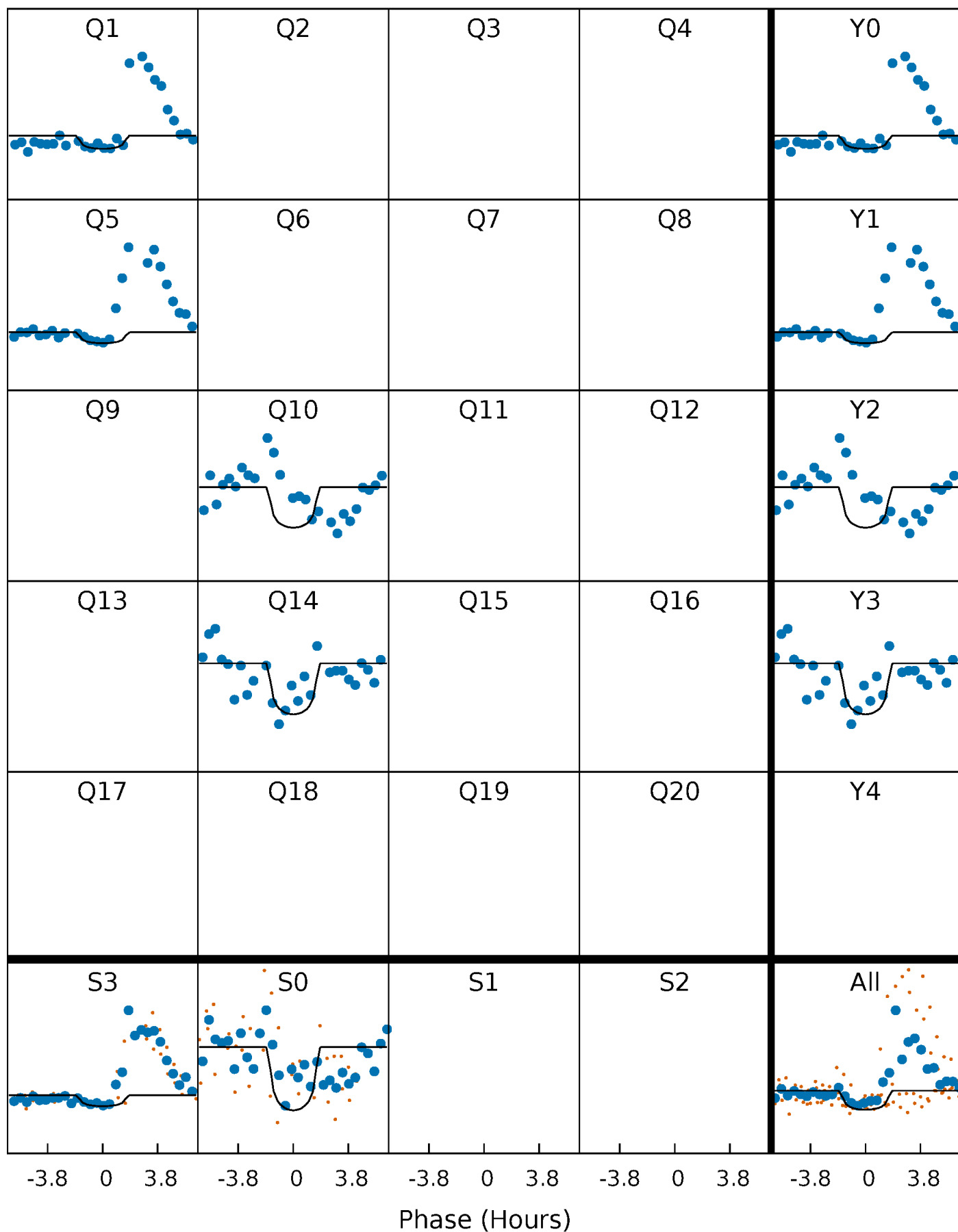
# PDC Quarter-Phased Transit Curves

TCE 007266428-04     $P=390.652950$  Days     $T_0=142.931111$  (BKJD)



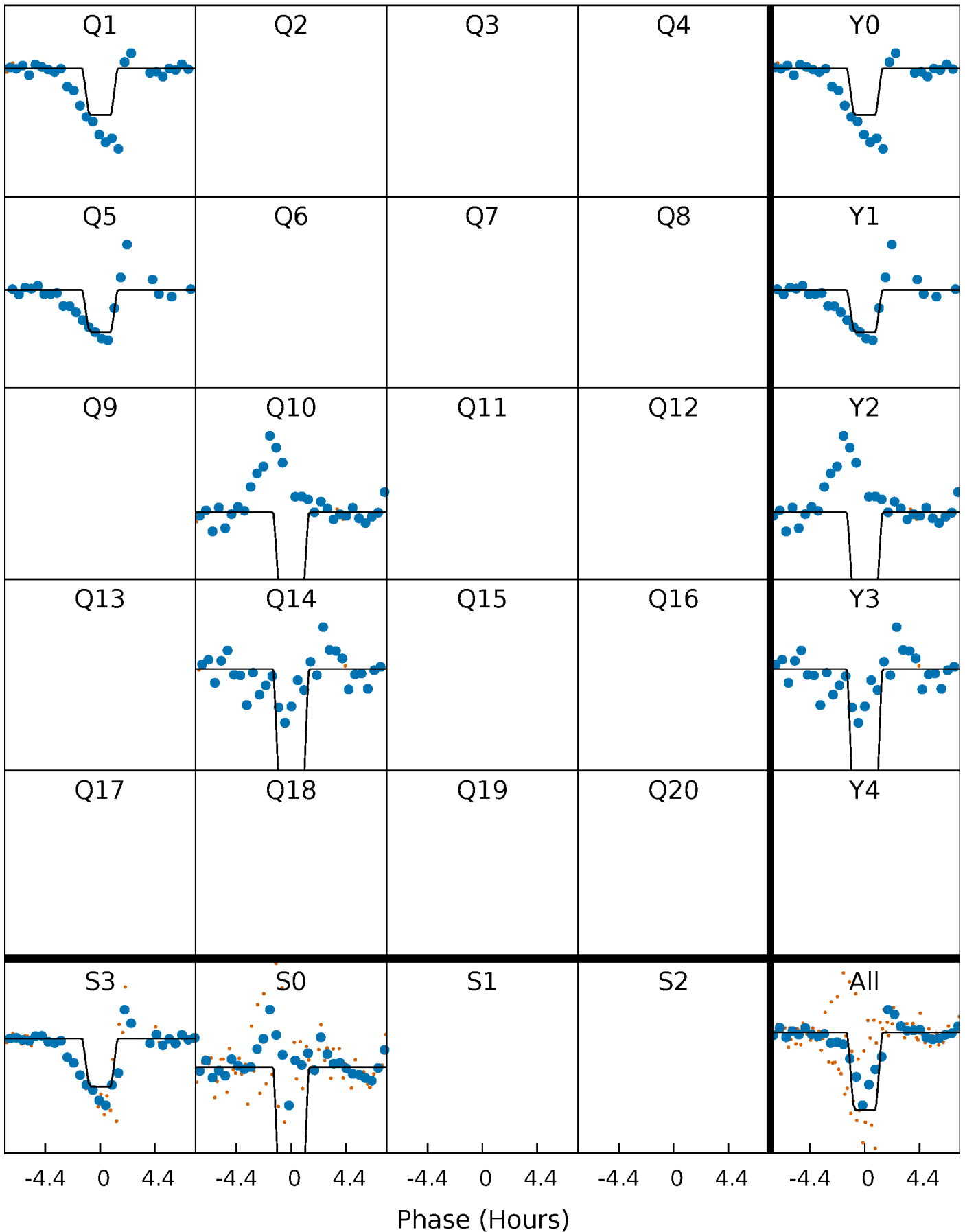
# DV Quarter-Phased Transit Curves

TCE 007266428-04 P=390.652950 Days  $T_0=142.931111$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

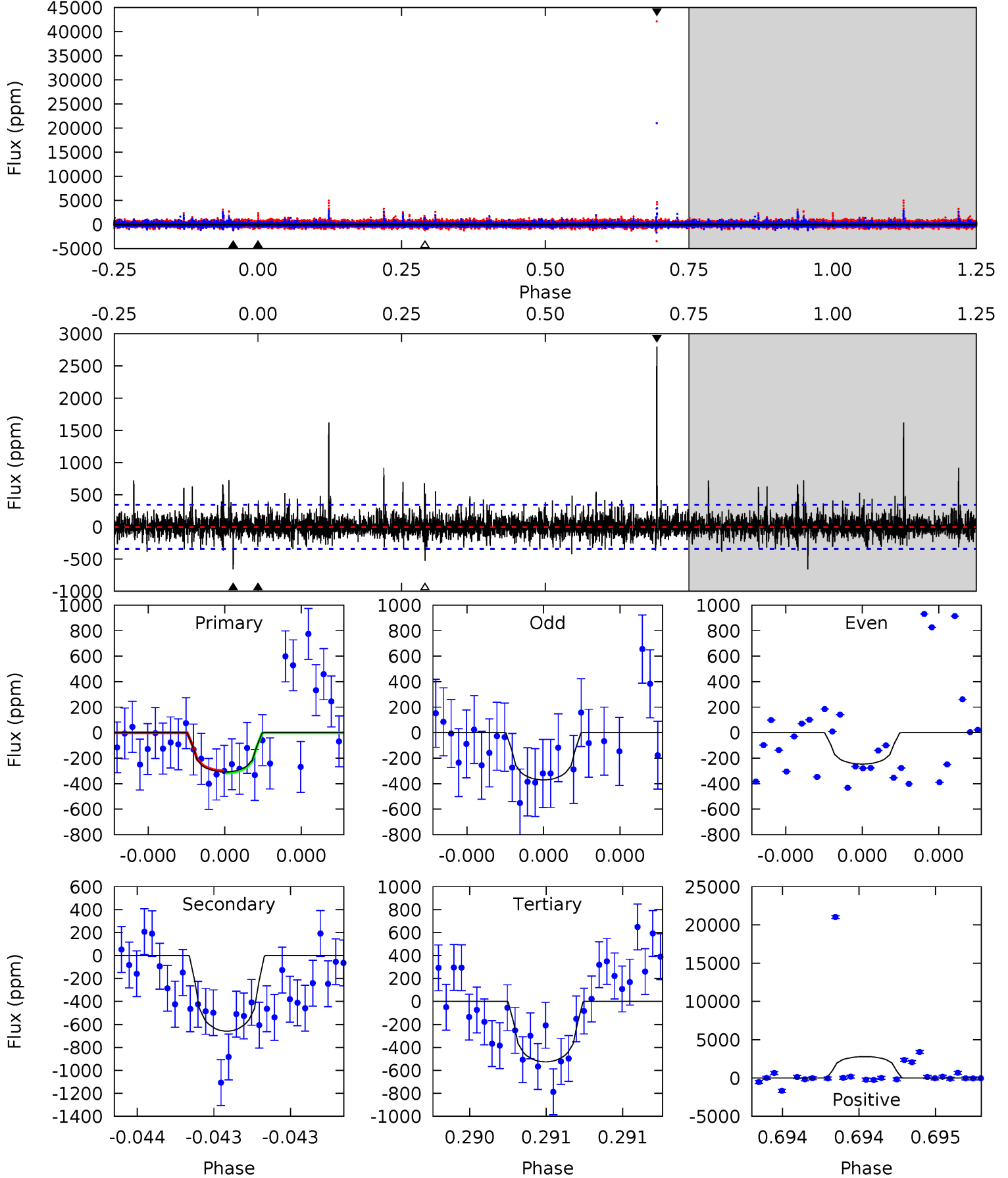
TCE 007266428-04 P=390.641989 Days  $T_0=142.941335$  (BKJD)



# DV Model-Shift Uniqueness Test

007266428-04, P = 390.652950 Days, E = 142.931111 Days

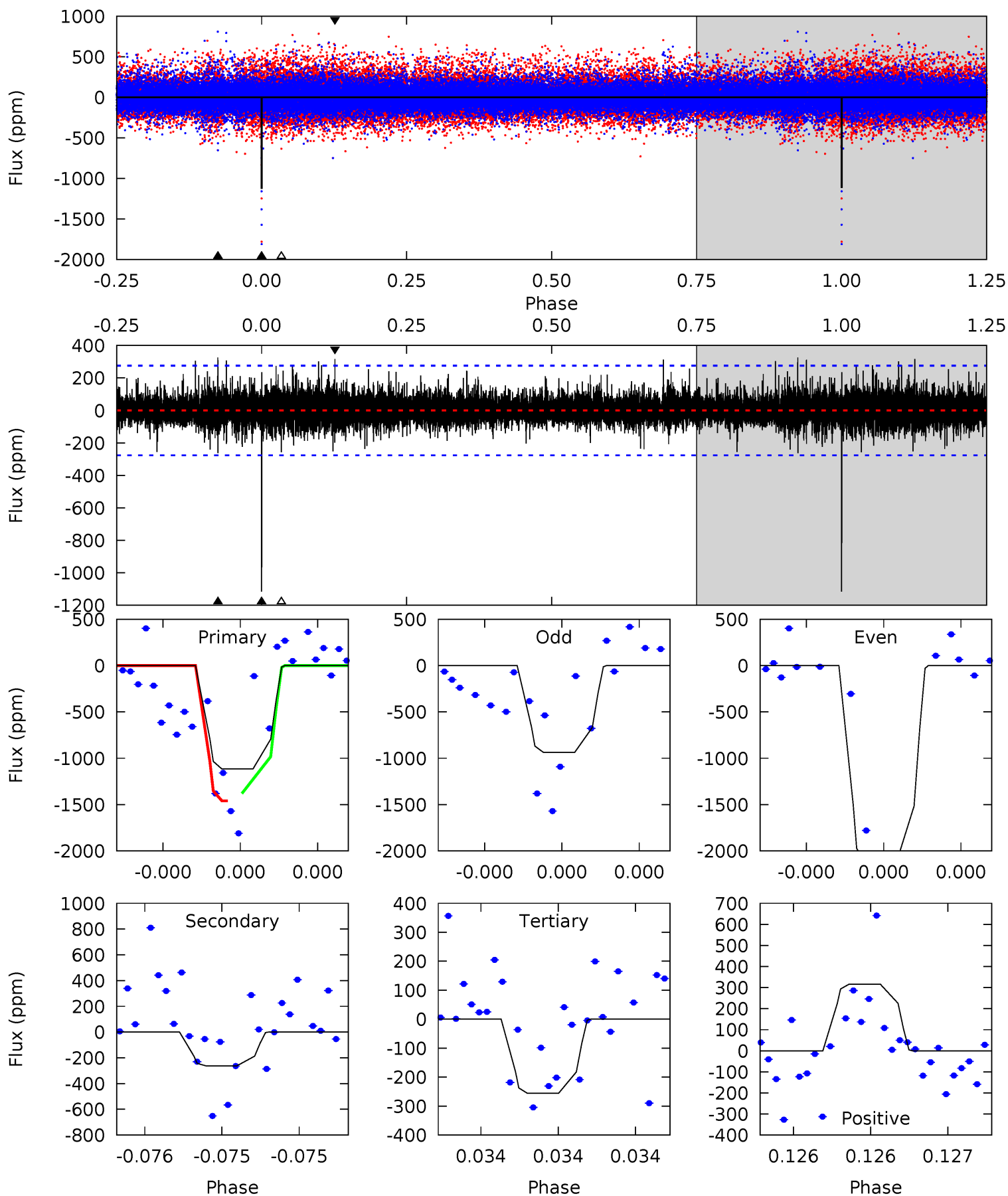
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.03	10.8	8.58	45.7	5.61	3.54	2.00	-3.55	-40.6	2.17	-34.9	0.68	0.86	0.81	0.14



# Alt Model-Shift Uniqueness Test

007266428-04, P = 390.641989 Days, E = 142.941335 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
22.9	5.39	5.26	6.50	5.67	3.63	1.13	17.7	16.4	0.13	-1.11	14.7	0.96	0.23	0





### Stellar Parameters For KIC 007266428

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M$ ( $M_{\odot}$ )	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$5095^{+124}_{-162}$	$3.534^{+1.095}_{-0.365}$	$-0.540^{+0.250}_{-0.350}$	$2.579^{+1.565}_{-1.913}$	$0.828^{+0.239}_{-0.196}$	$0.068^{+3.568}_{-0.052}$
	+2%/-3%	+31%/-10%	+46%/-65%	+61%/-74%	+29%/-24%	+5244%/-76%
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 007266428-04 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-659 \pm 61$	$11.05^{+14.23}_{-7.80}$	$493^{+82}_{-111}$	$4028^{+2560}_{-806}$	$2881^{+27765}_{-2338}$
Alt.	$-262 \pm 49$	$14.30^{+15.47}_{-10.02}$	$493^{+93}_{-108}$	$3240^{+1479}_{-507}$	$716^{+7033}_{-559}$

$T_{max}$  = 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

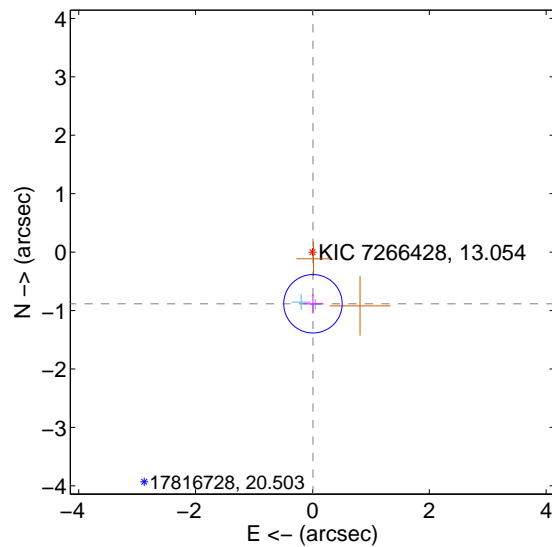
Supplemental centroid analysis for 007266428-04. Kepler magnitude: 13.05. Transit SNR 4.95

There are 2 quarters with good PRF difference image offsets

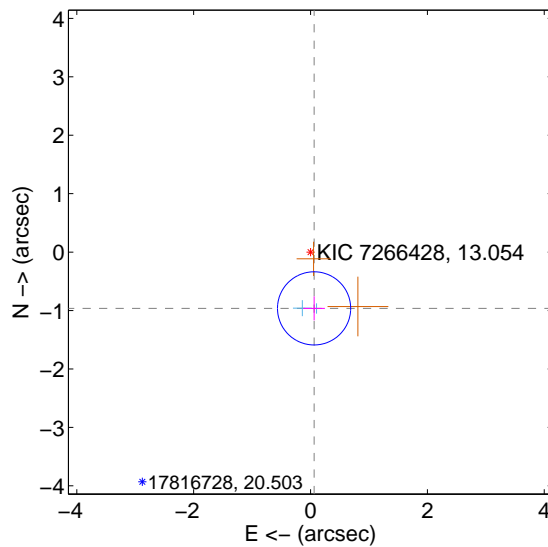
The direct PRF centroid is offset from the target star catalog position by about 0.01 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.884 \pm 0.167$	5.30	$-0.009 \pm 0.170$	$-0.884 \pm 0.167$
PRF-fit source offset from KIC position	$0.965 \pm 0.209$	4.62	$-0.061 \pm 0.185$	$-0.963 \pm 0.206$
photometric centroid source offset	$1.00 \pm 0.82$	1.23	$-1.00 \pm 0.82$	$-0.08 \pm 0.78$

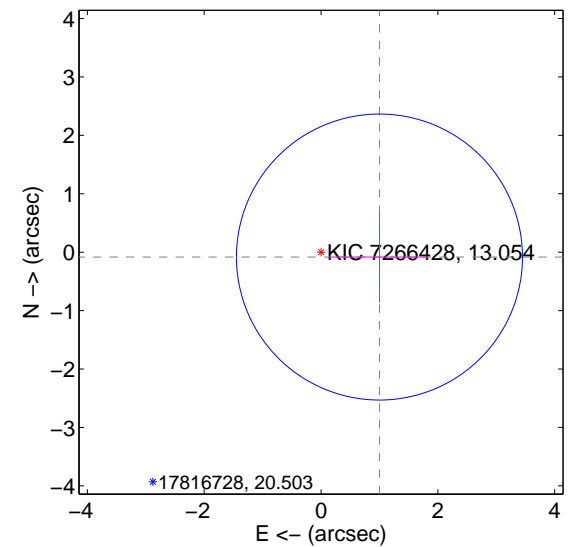
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

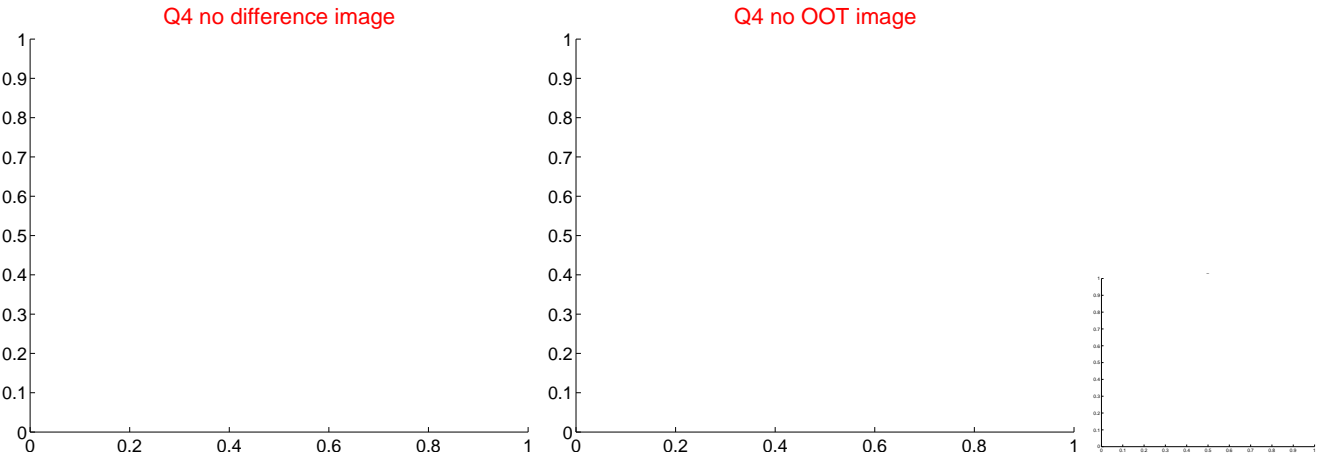
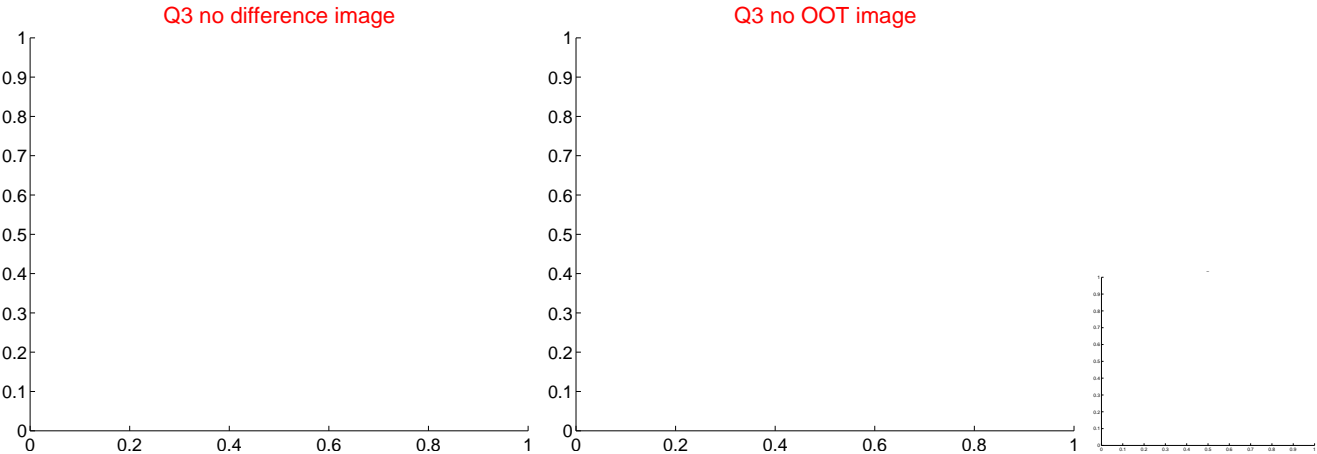
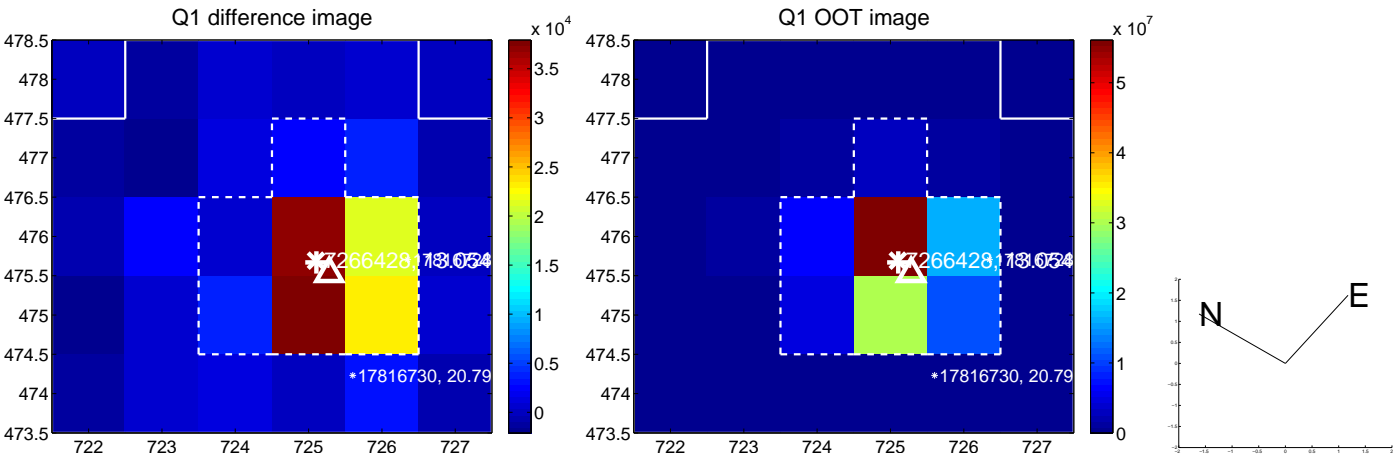


offset from photometric centroids

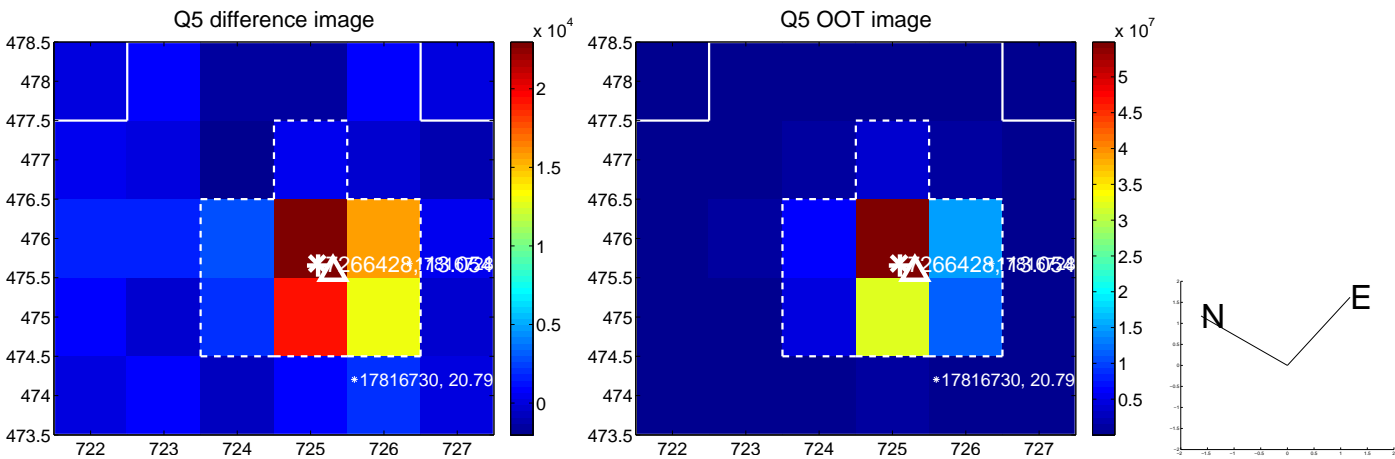


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

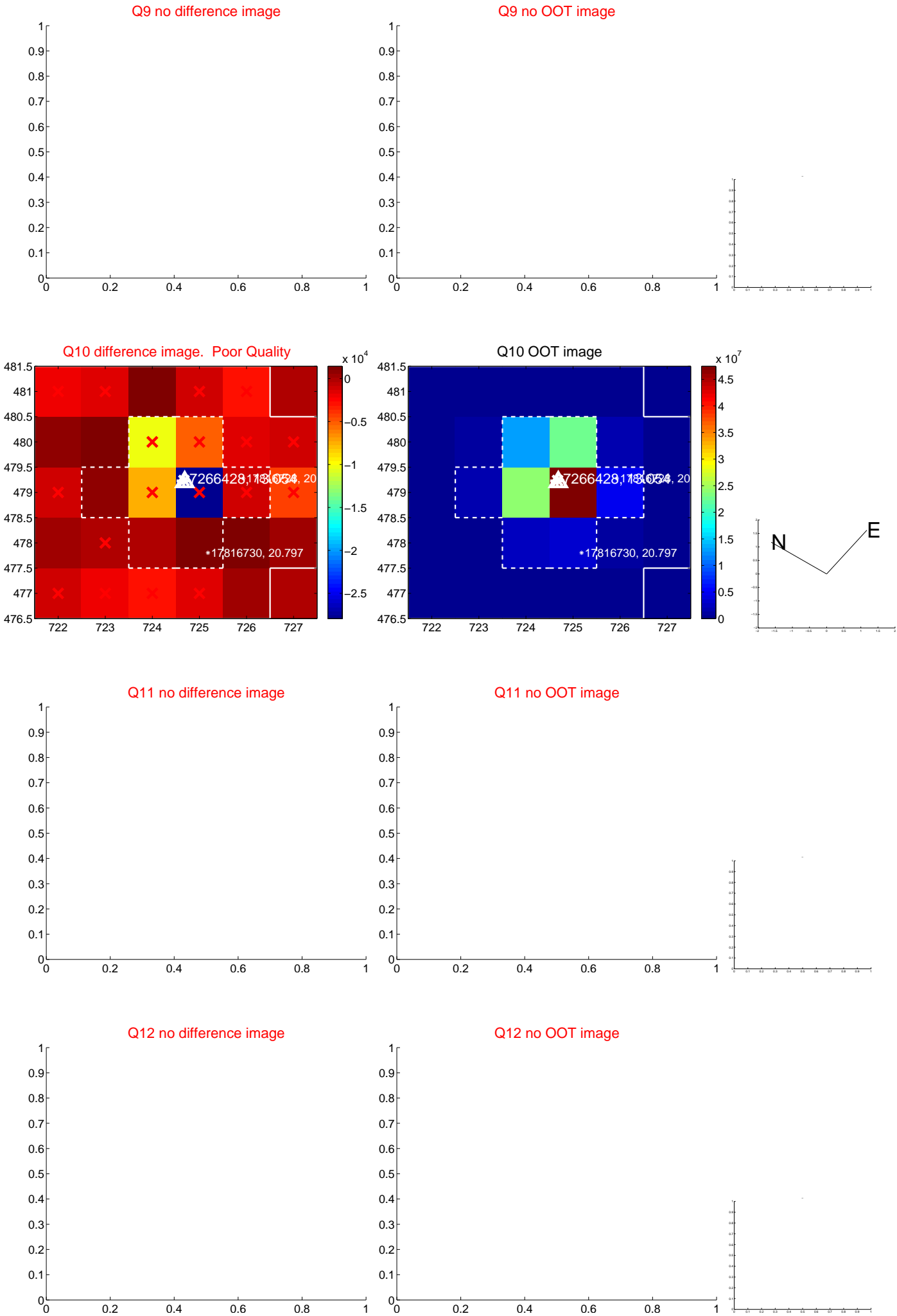
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



white ×: 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.

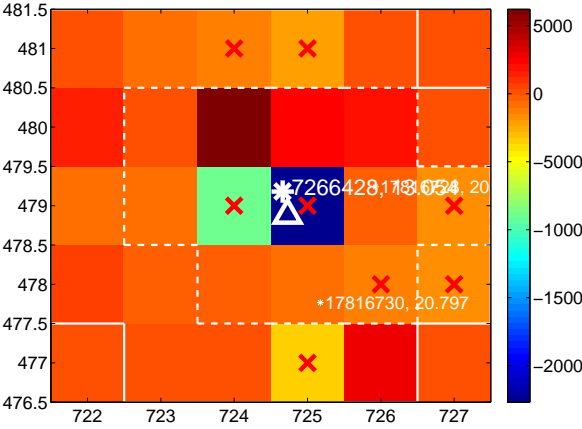
Q13 no difference image



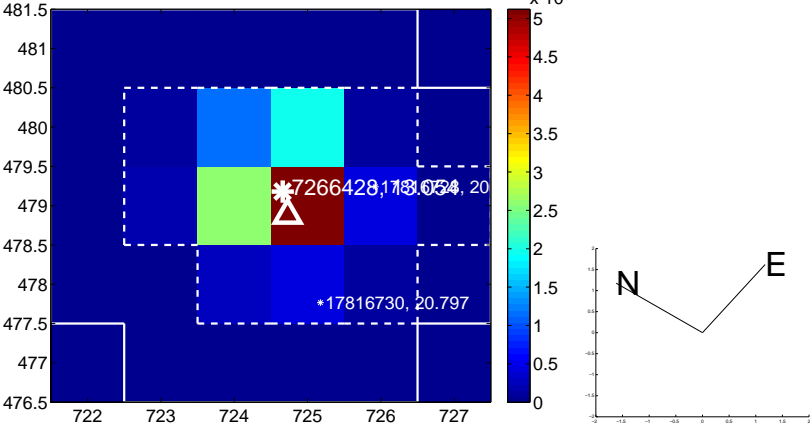
Q13 no OOT image



Q14 difference image. Poor Quality



Q14 OOT image



Q15 no difference image



Q15 no OOT image



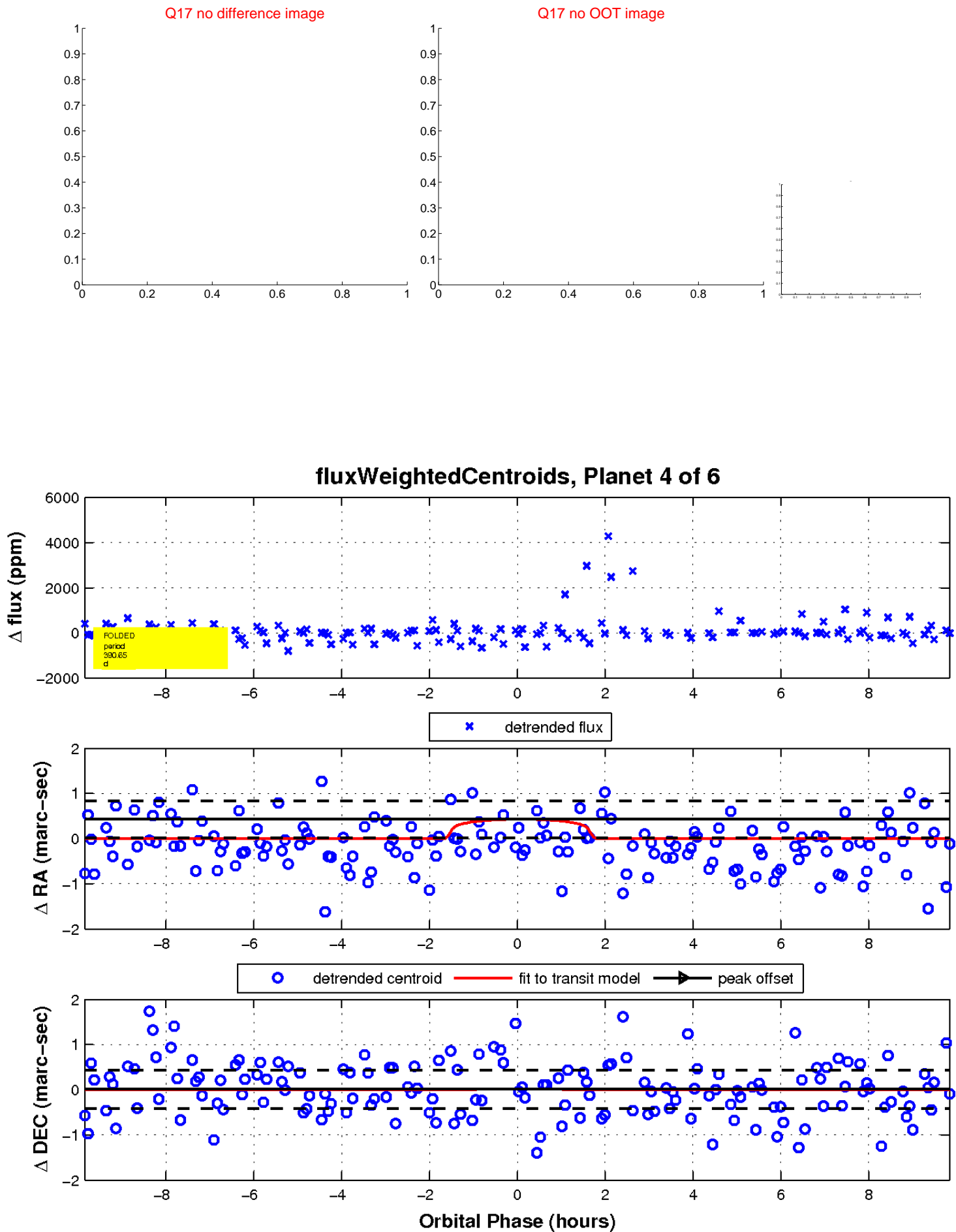
Q16 no difference image



Q16 no OOT image

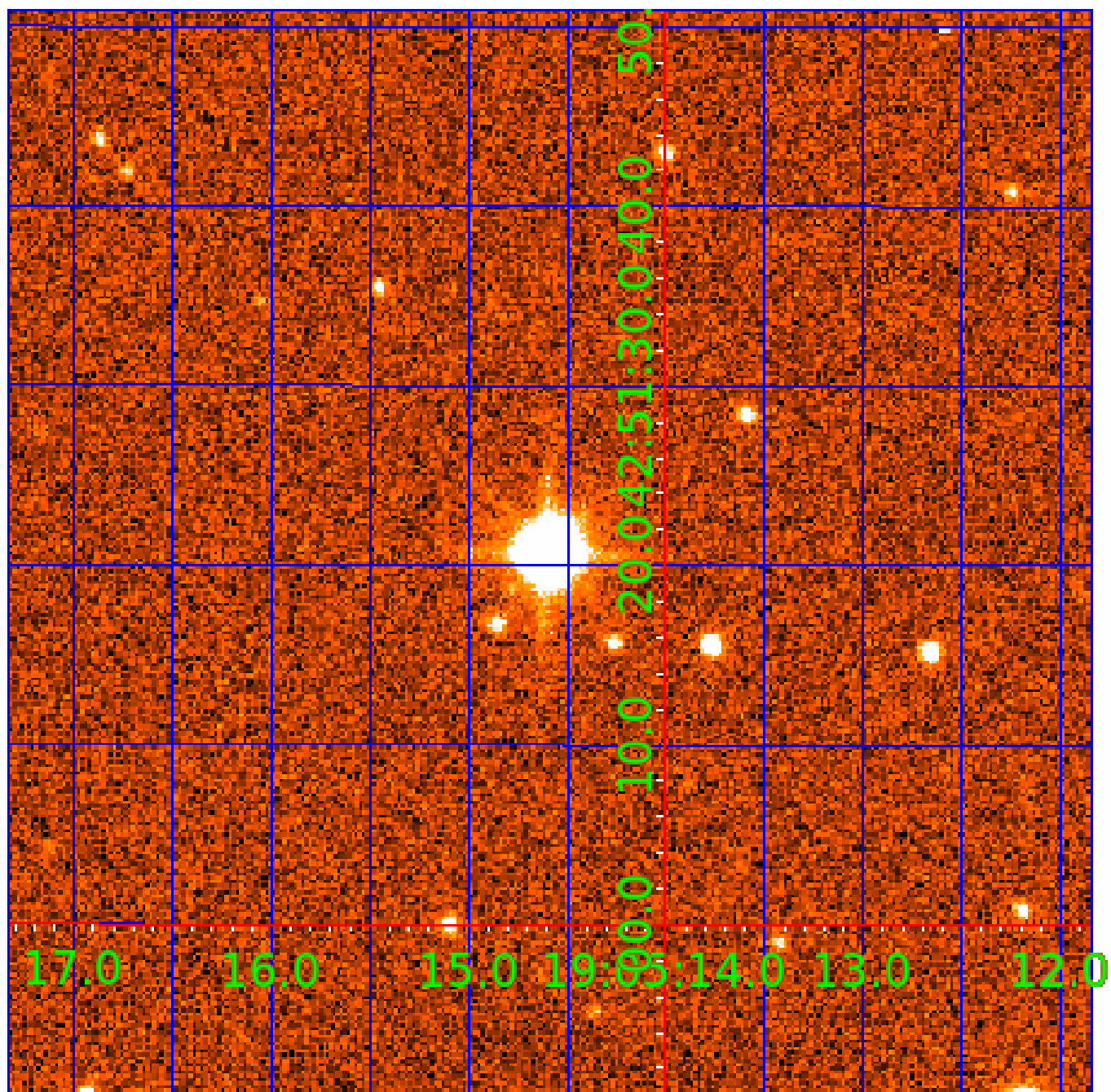


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination





# KIC 007266428

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007266428-01	OBS	No	553.860698	408.689190	720.7	6.928	22.4	6.0	2.58	5095	6.88	2.61
007266428-03	OBS	No	368.270929	302.072706	506.6	11.893	14.9	3.6	2.58	5095	7.79	4.50
007266428-04	OBS	No	390.652950	142.931111	462.3	3.299	15.6	5.0	2.58	5095	5.57	4.16
007266428-05	OBS	No	355.262346	255.830635	1011.6	5.286	16.8	7.7	2.58	5095	10.63	4.72
007266428-06	OBS	No	639.463803	149.450402	938.0	6.271	14.2	9.0	2.58	5095	8.28	2.15

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007266428-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007266428-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007266428-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
007266428-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007266428-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS

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

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

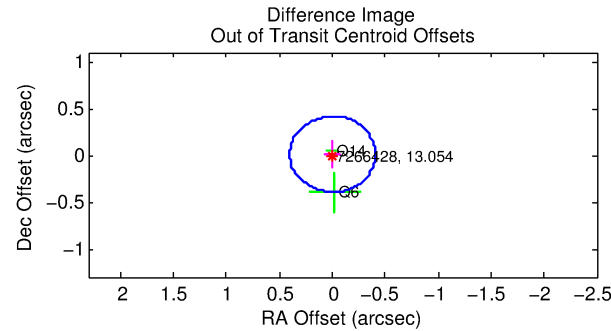
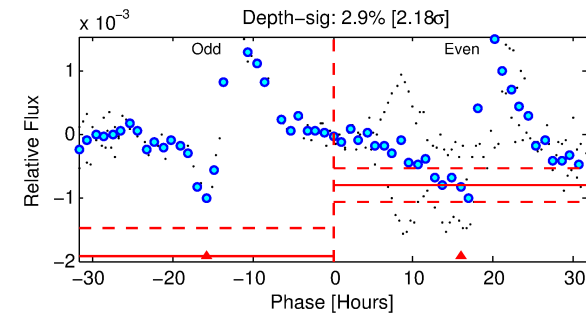
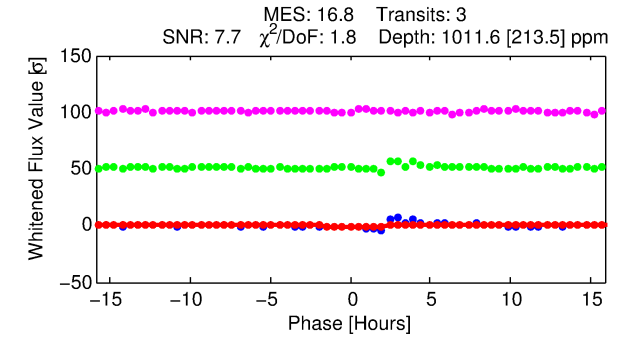
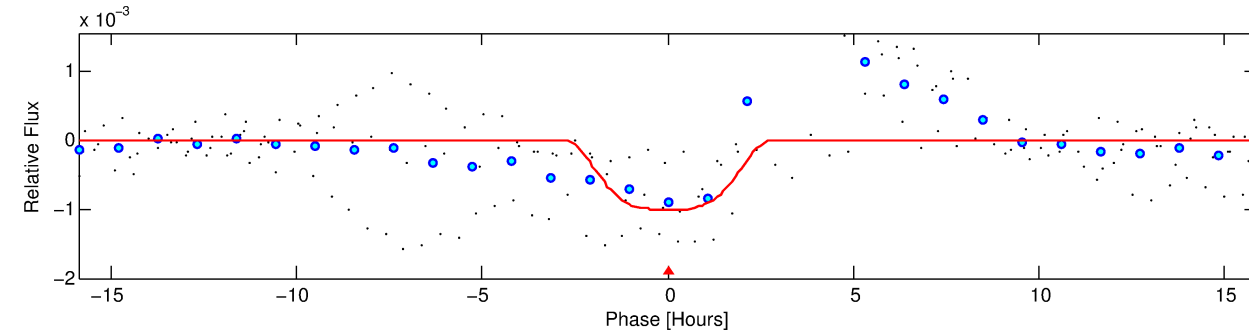
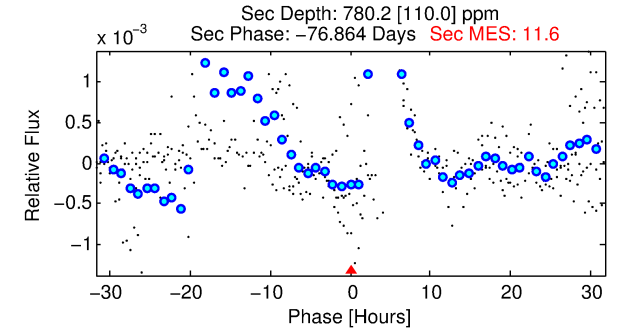
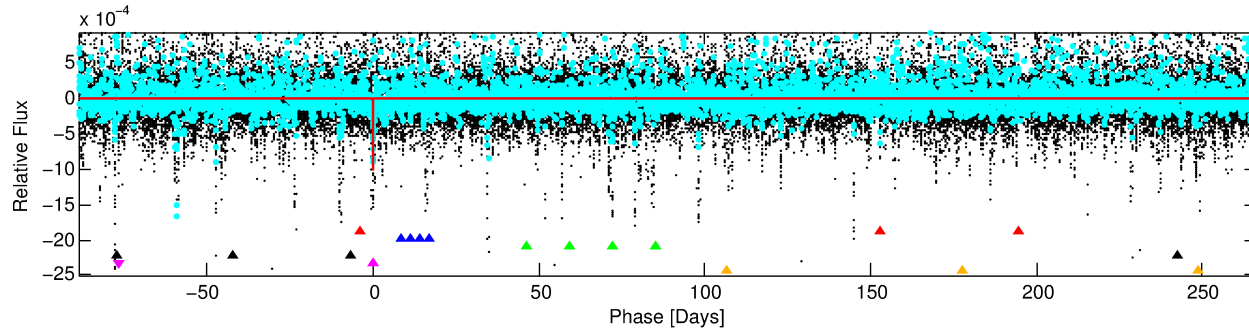
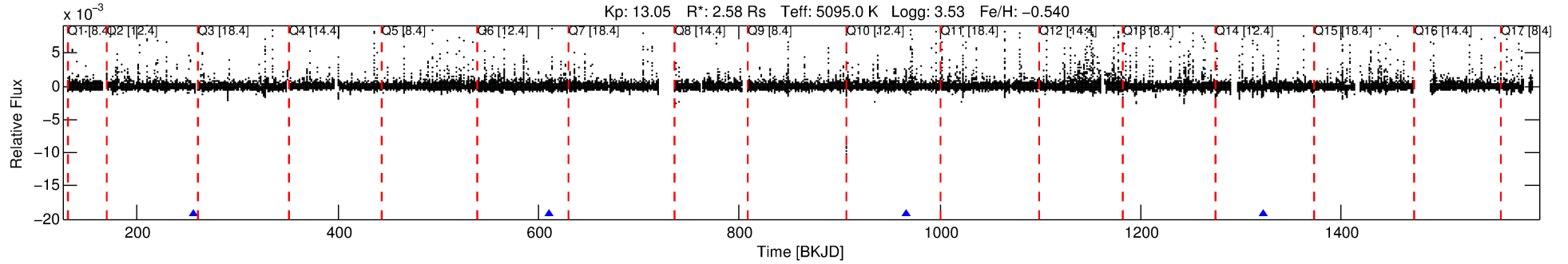
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 007266428-05

No Significant Match Found

# DV One-Page Summary

KIC: 7266428 Candidate: 5 of 6 Period: 355.262 d



## DV Fit Results:

Period = 355.26235 [0.00930] d  
Epoch = 255.8306 [0.0195] BKJD  
Rp/R\* = 0.0378 [0.0048]  
a/R\* = 216.66 [43.64]  
b = 0.95 [0.02]  
Seff = 4.72 [8.29]  
Teq = 376 [165] K  
Rp = 10.63 [8.00] Re  
a = 0.9226 [0.8997] AU  
Ag = 3235.67 [5747.00] [0.56 $\sigma$ ]  
Teffp = 4382 [348] K [10.40 $\sigma$ ]

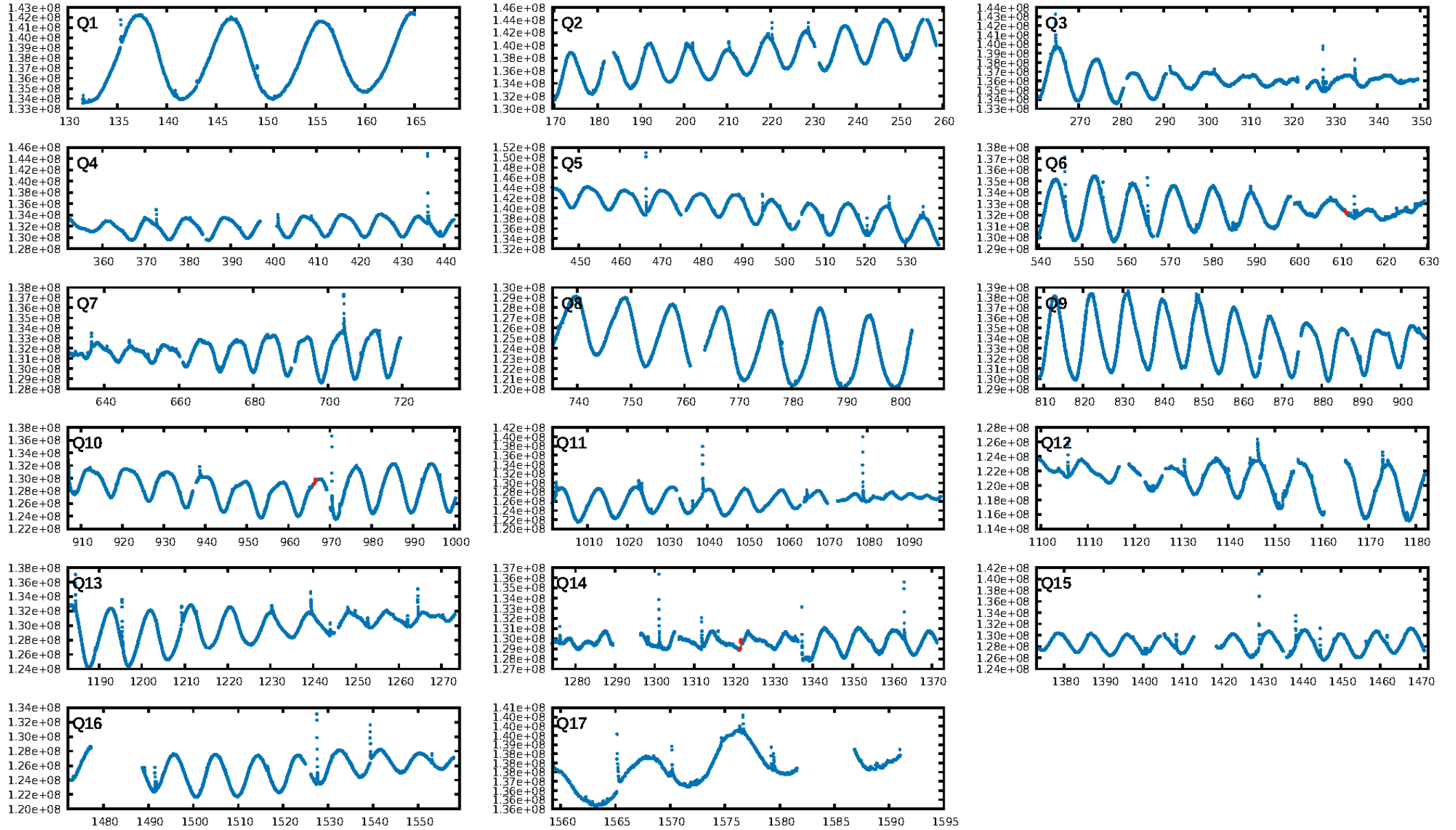
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: 100.0% [11.86 $\sigma$ ]  
ModelChiSquare2-sig: 0.0%  
ModelChiSquareGof-sig: 9.1%  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [3/3]  
GhostDiagnostic-chr: 8  
Centroid-sig: 86.1%  
Centroid-so: 0.268 arcsec [0.52 $\sigma$ ]  
OotOffset-rm: 0.013 arcsec [0.10 $\sigma$ ]  
OotOffset-st: 2/0/0/0 [2]  
KicOffset-rm: 0.004 arcsec [0.03 $\sigma$ ]  
KicOffset-st: 2/0/0/0 [2]  
DiffImageQuality-fgm: 1.00 [2/2]  
DiffImageOverlap-fno: 1.00 [2/2]

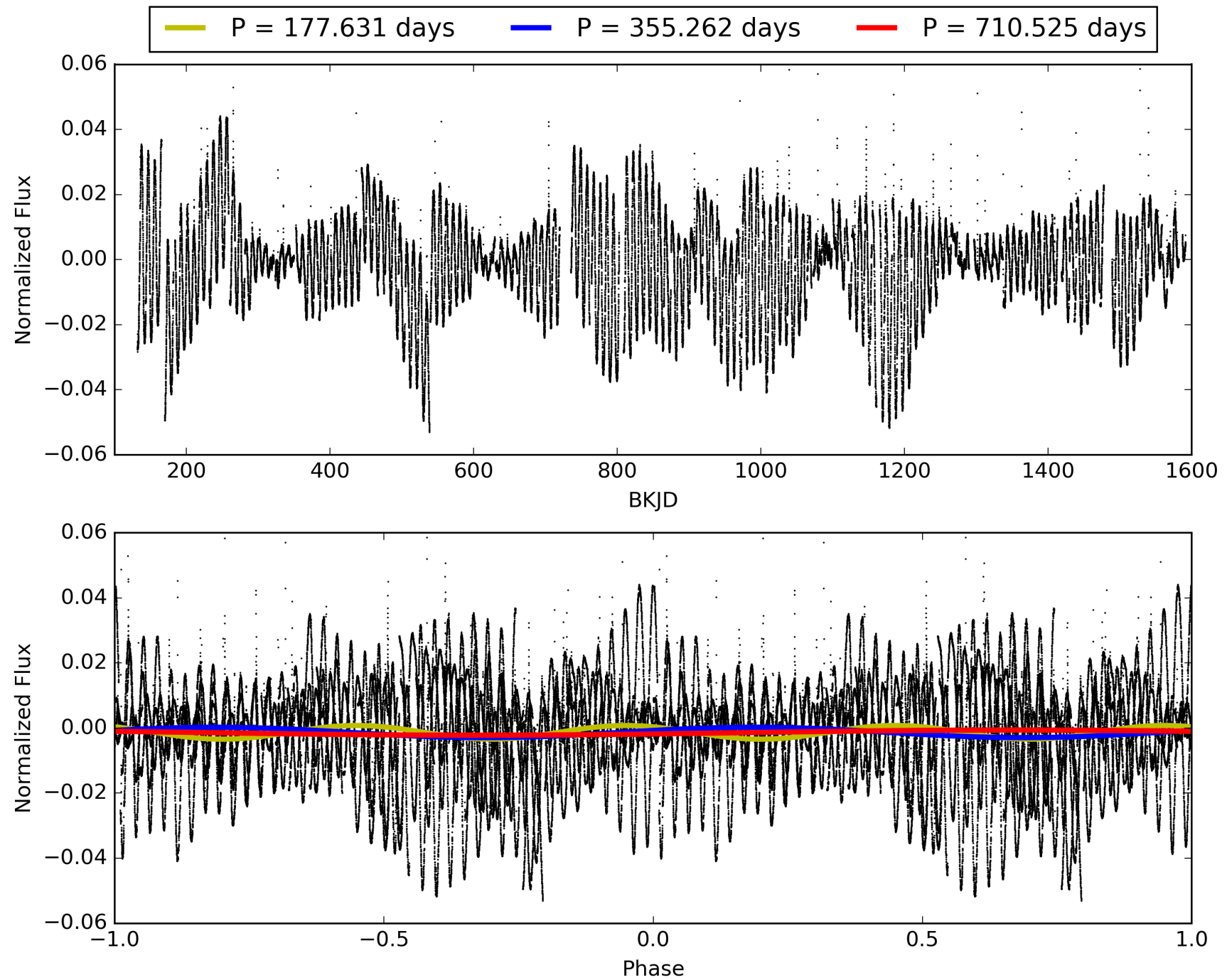
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 07:34:56 Z

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

# TCE 007266428-05, PDC Light Curves

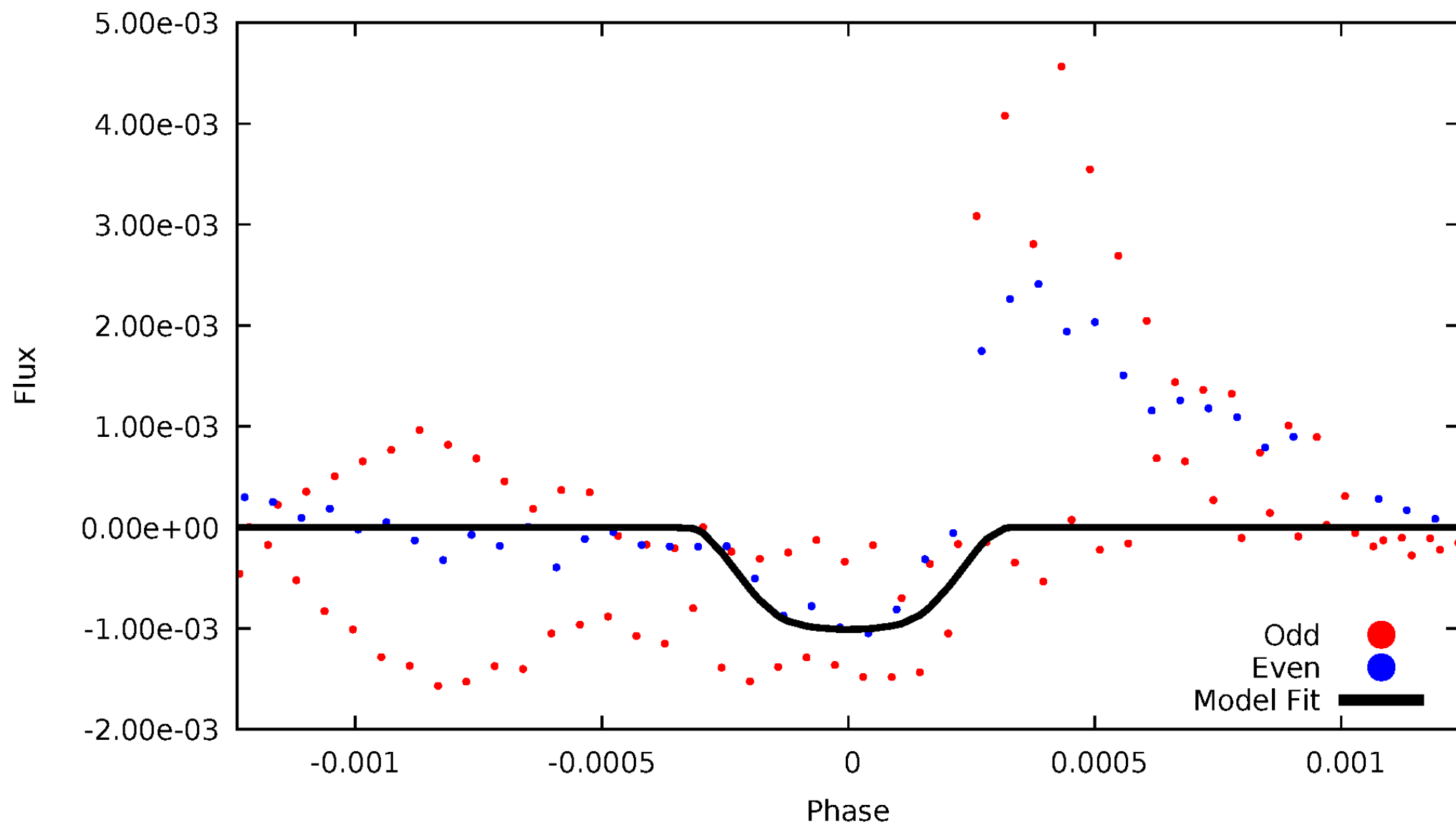


TCE 007266428-05



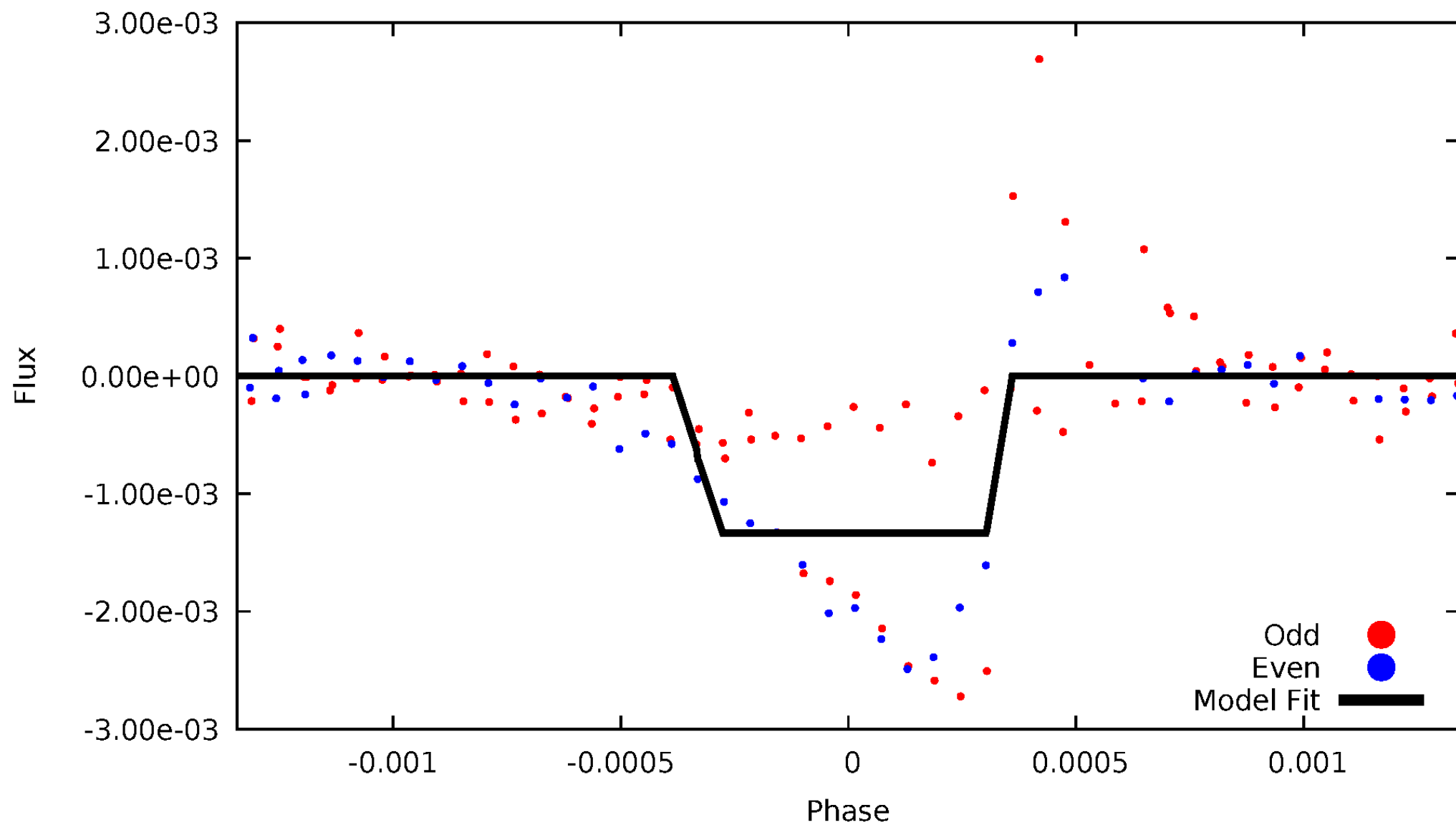
# DV Odd/Even

TCE 007266428-05



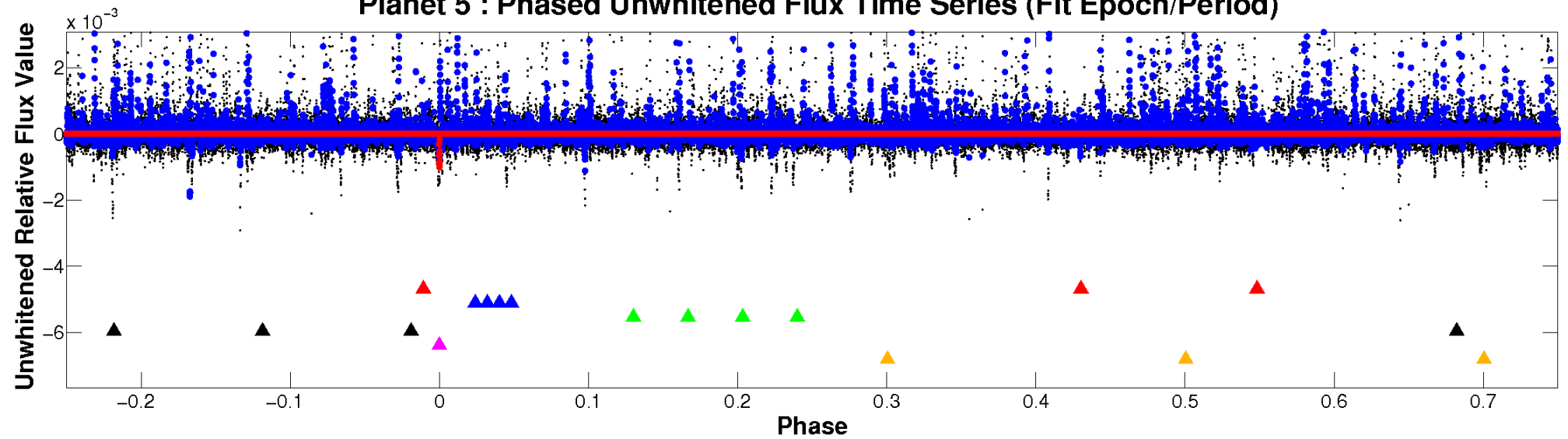
# ALT Odd/Even

TCE 007266428-05

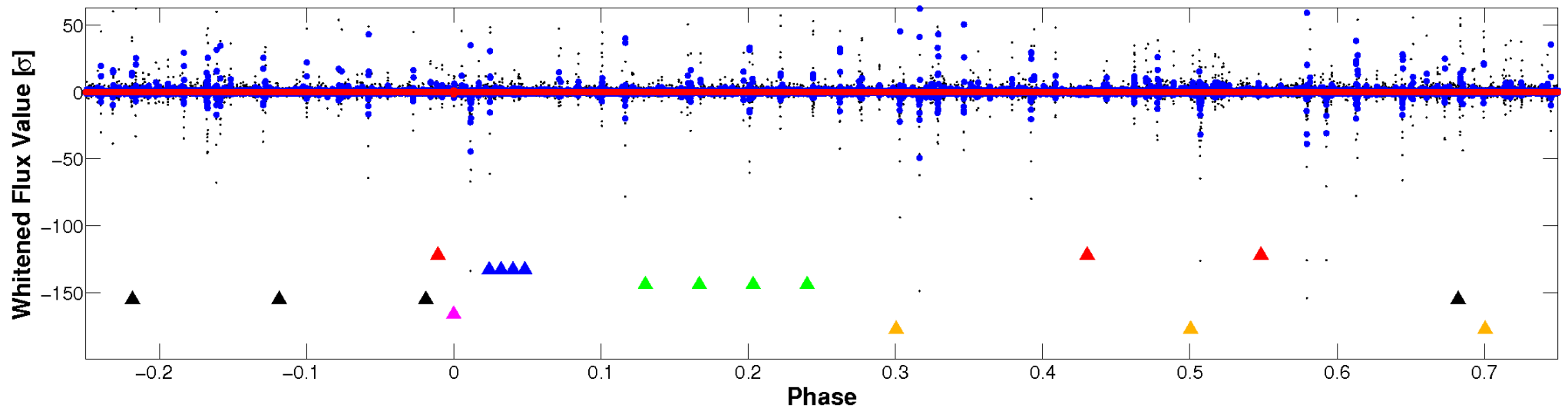


# Non-Whitened Vs. Whitened Light Curve

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

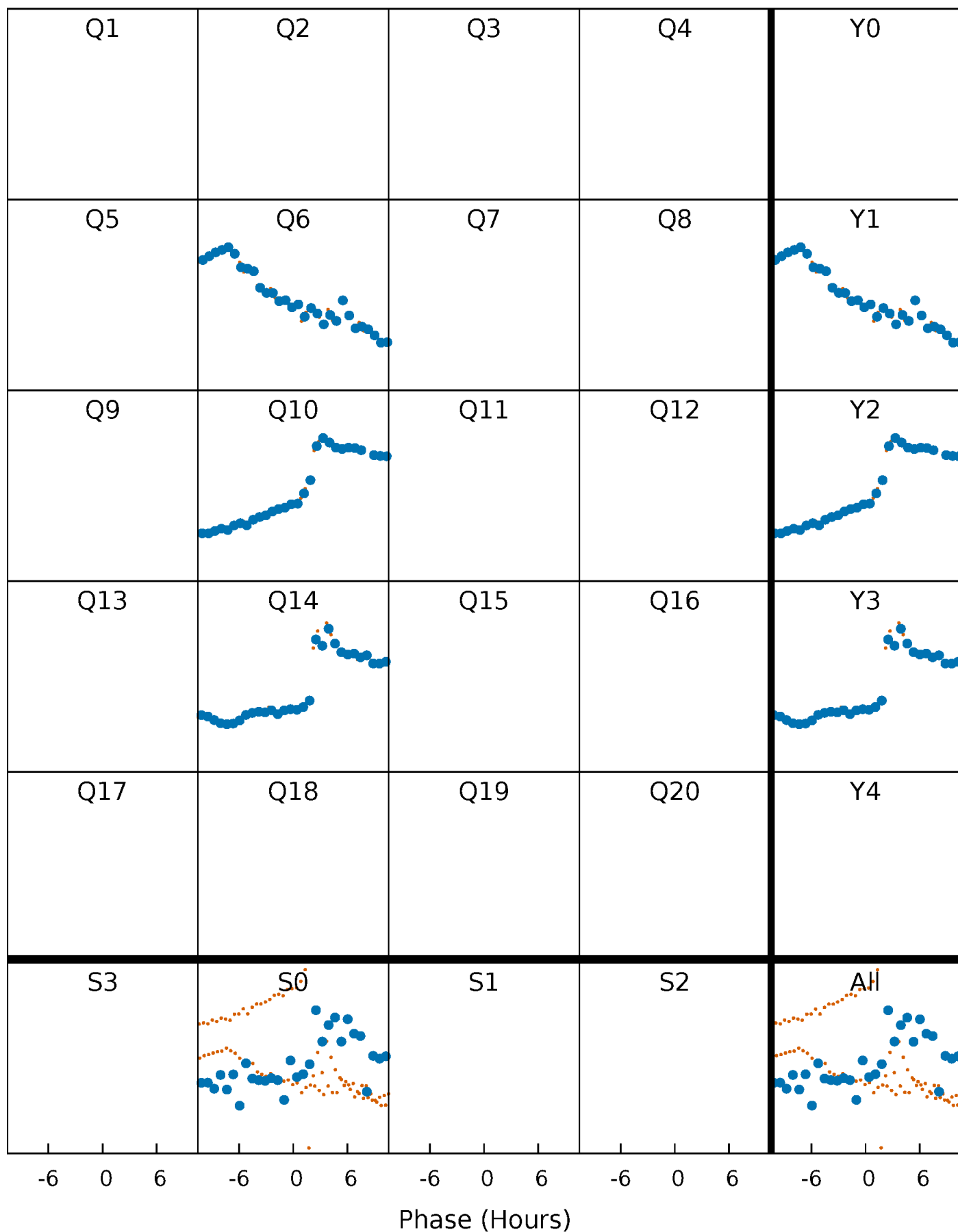


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



# PDC Quarter-Phased Transit Curves

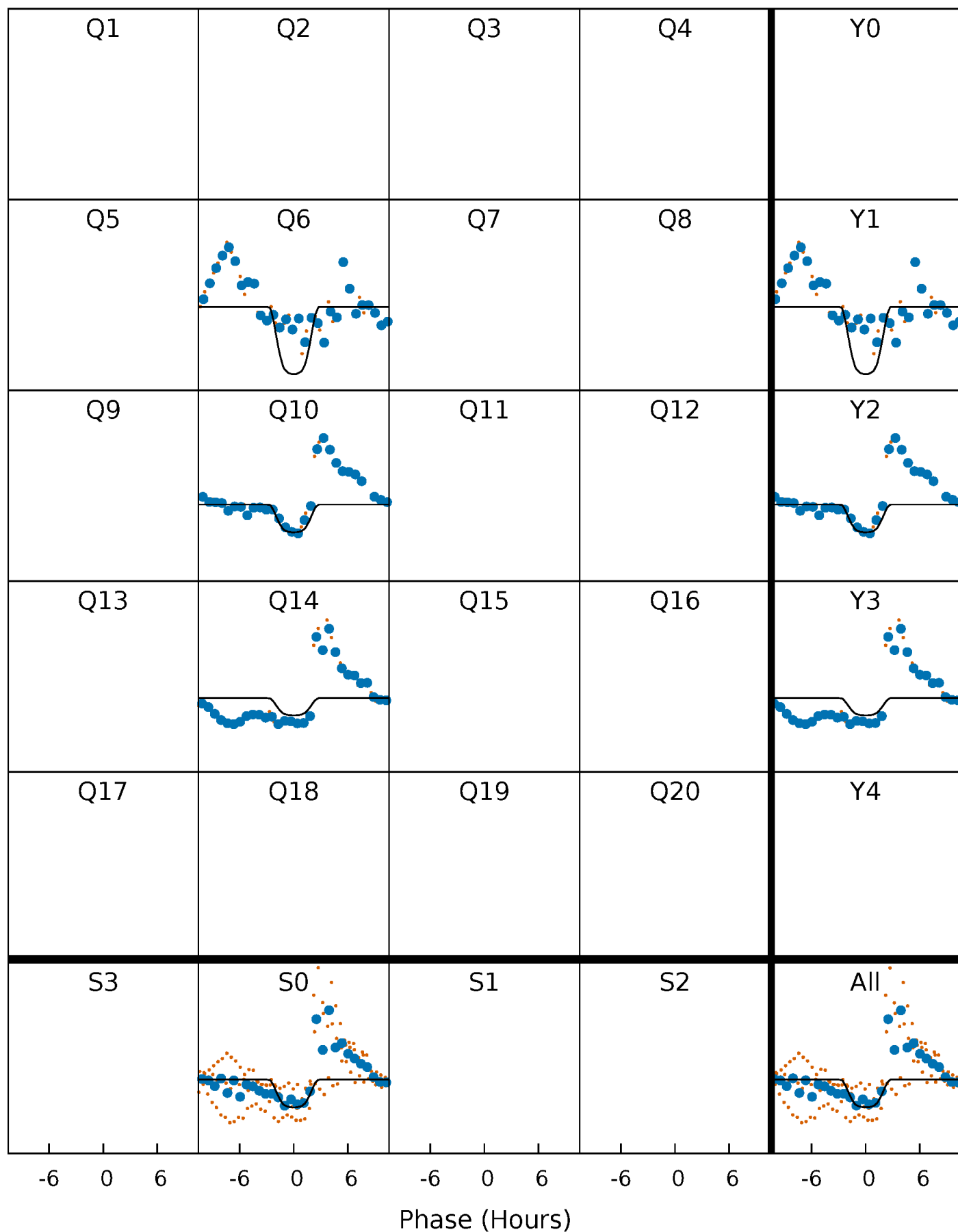
TCE 007266428-05     $P=355.262346$  Days     $T_0=255.830635$  (BKJD)





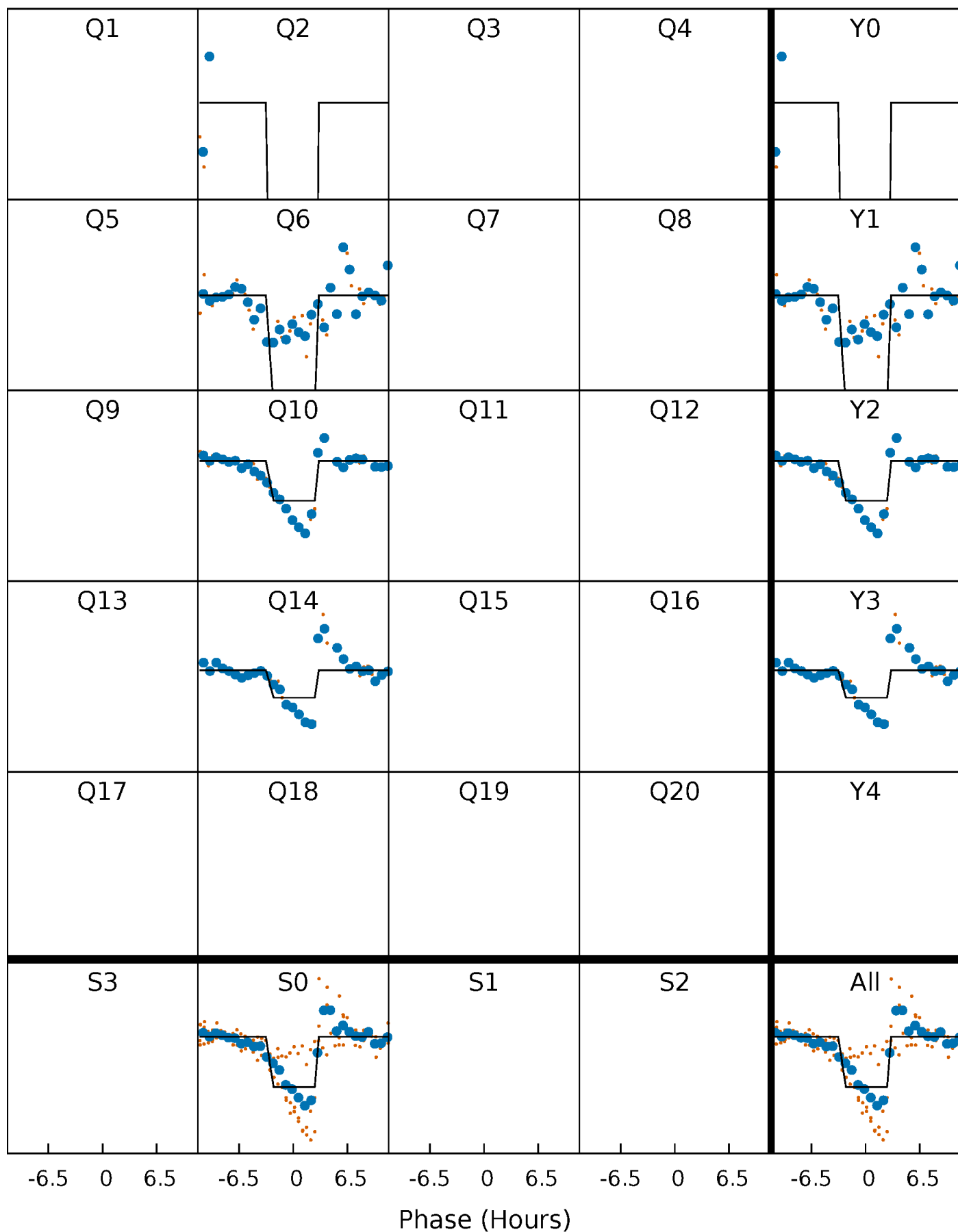
# DV Quarter-Phased Transit Curves

TCE 007266428-05     $P=355.262346$  Days     $T_0=255.830635$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

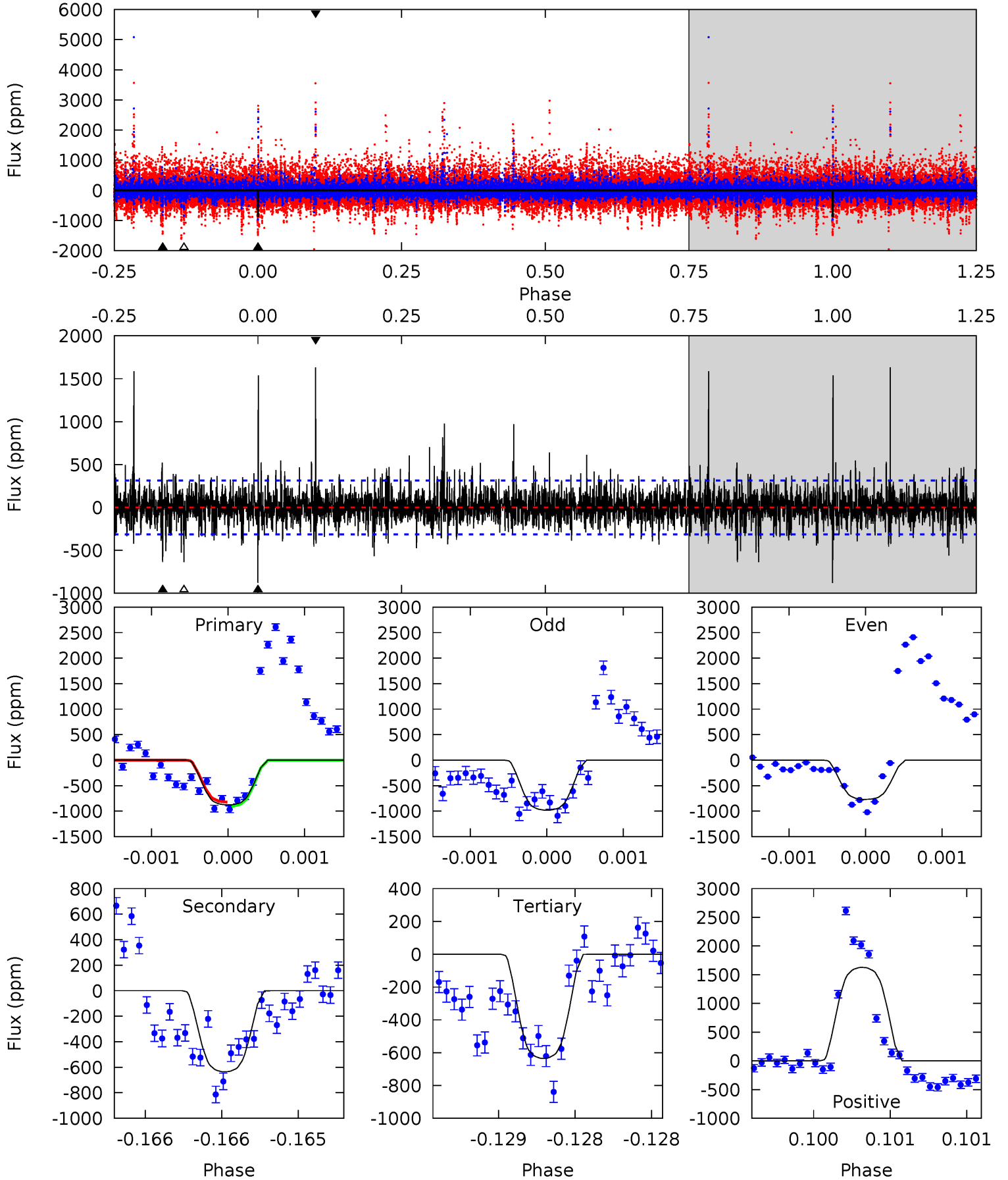
TCE 007266428-05     $P=355.257874$  Days     $T_0=255.807950$  (BKJD)



# DV Model-Shift Uniqueness Test

007266428-05, P = 355.262346 Days, E = 255.830635 Days

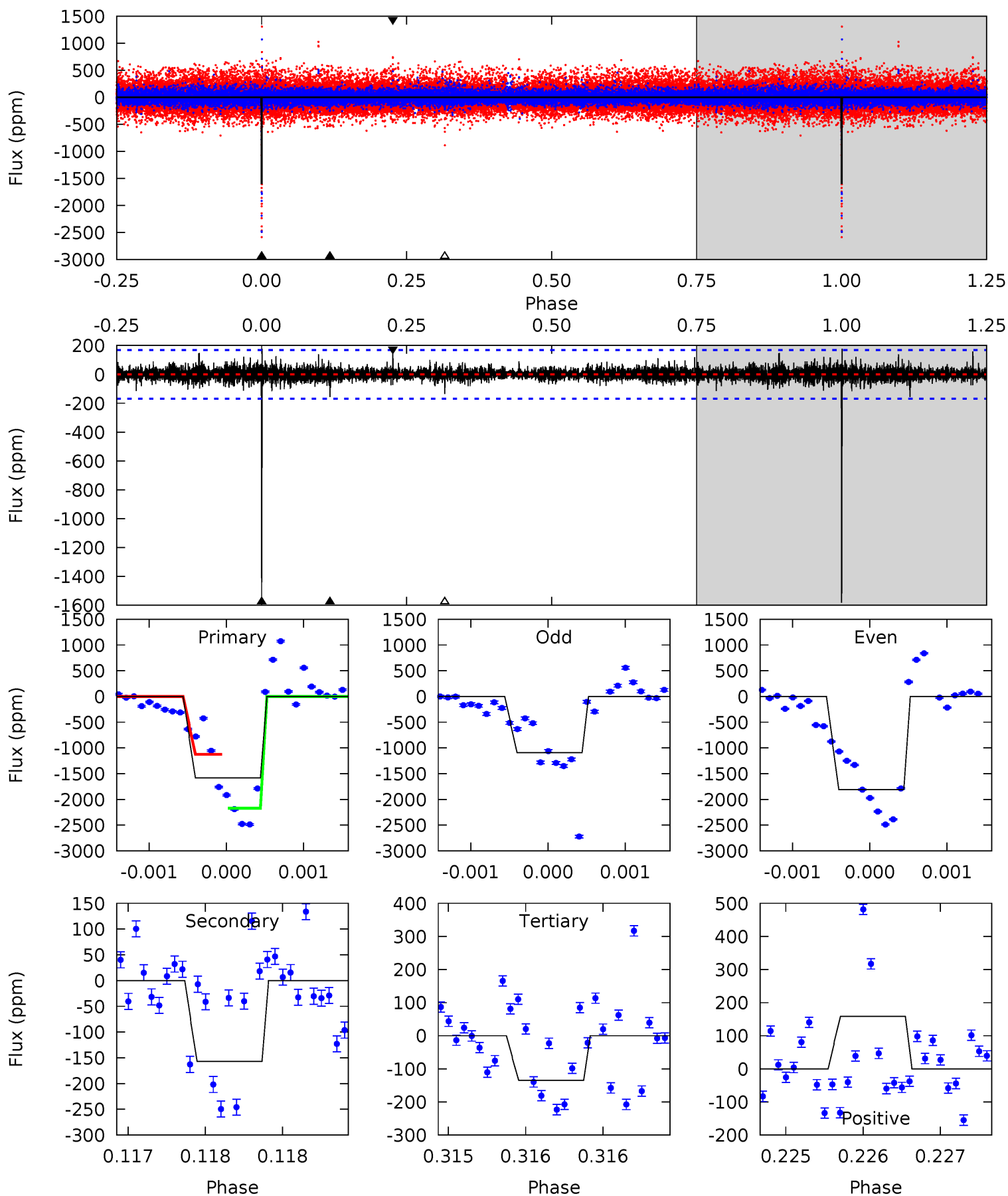
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.5	11.2	11.2	28.7	5.53	3.42	2.52	4.27	-13.3	0.01	-17.5	0.78	1.13	0.65	0.70



# Alt Model-Shift Uniqueness Test

007266428-05, P = 355.257874 Days, E = 255.807950 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
51.7	5.12	4.41	5.18	5.52	3.39	0.83	47.3	46.6	0.71	-0.05	12.7	0.75	0.10	17.1



### Stellar Parameters For KIC 007266428

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$5095^{+124}_{-162}$	$3.534^{+1.095}_{-0.365}$	$-0.540^{+0.250}_{-0.350}$	$2.579^{+1.565}_{-1.913}$	$0.828^{+0.239}_{-0.196}$	$0.068^{+3.568}_{-0.052}$
	+2%/-3%	+31%/-10%	+46%/-65%	+61%/-74%	+29%/-24%	+5244%/-76%
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 007266428-05 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$-636 \pm 57$	$10.07^{+4.31}_{-3.92}$	$508^{+92}_{-107}$	$4317^{+262}_{-228}$	$2997^{+5099}_{-1507}$
Alt.	$-157 \pm 31$	$9.81^{+4.15}_{-4.00}$	$514^{+86}_{-114}$	$3436^{+196}_{-175}$	$773^{+1425}_{-404}$

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

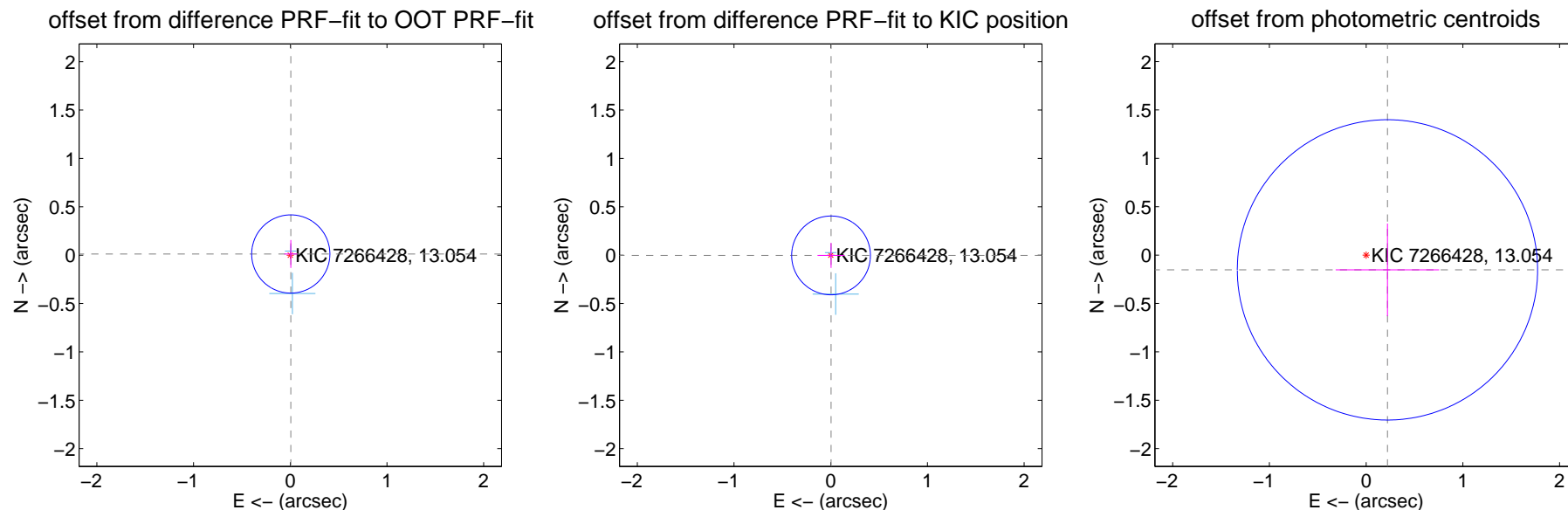
## DV Centroid Data

Supplemental centroid analysis for 007266428-05. Kepler magnitude: 13.05. Transit SNR 7.71

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.013 \pm 0.135$	0.10	$-0.005 \pm 0.067$	$0.012 \pm 0.144$
PRF-fit source offset from KIC position	$0.004 \pm 0.136$	0.03	$-0.003 \pm 0.140$	$-0.003 \pm 0.129$
photometric centroid source offset	$0.27 \pm 0.52$	0.52	$-0.22 \pm 0.53$	$-0.15 \pm 0.48$

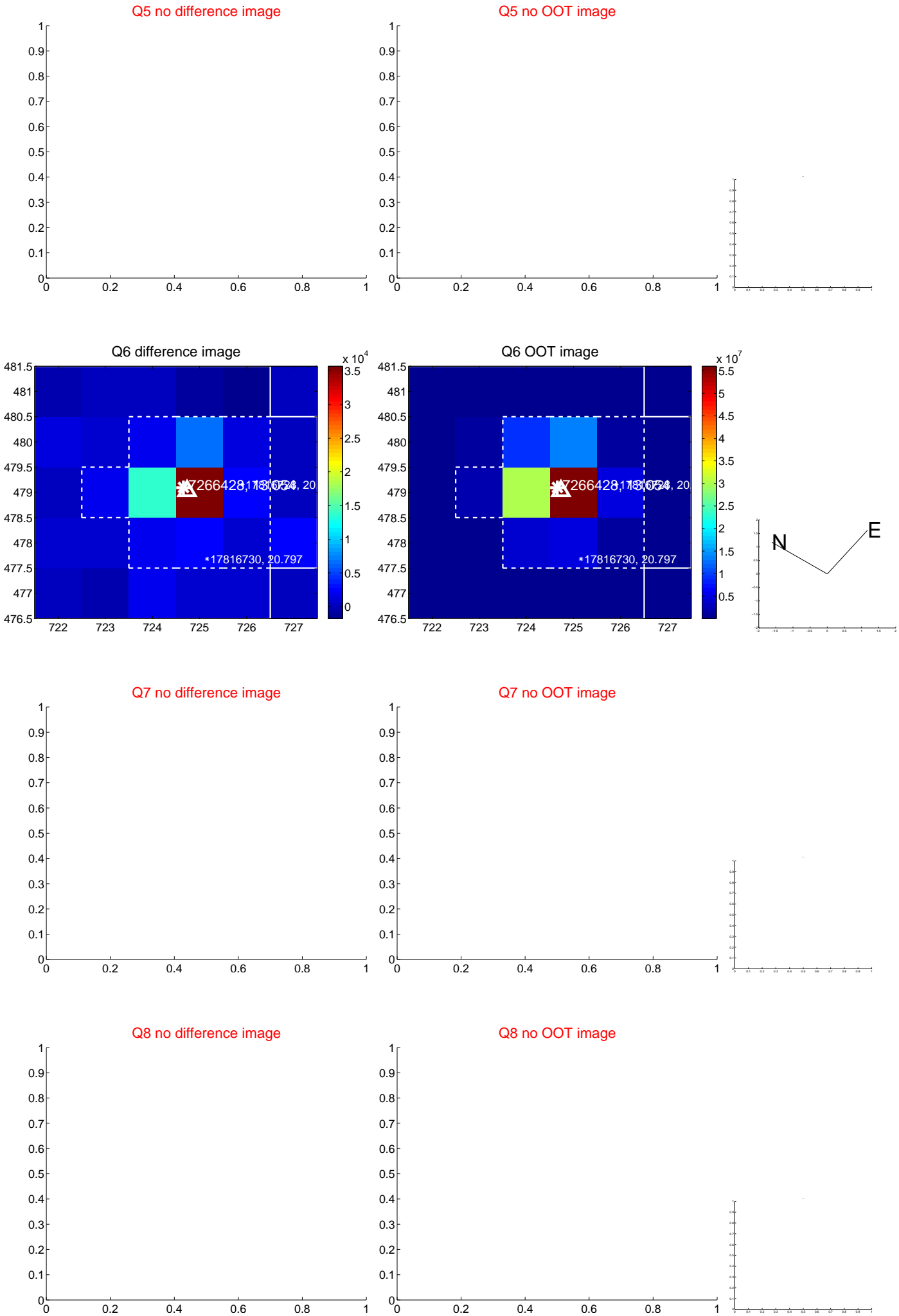


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three- $\sigma$ . Red \*: target star. Blue \*: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

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



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





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



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

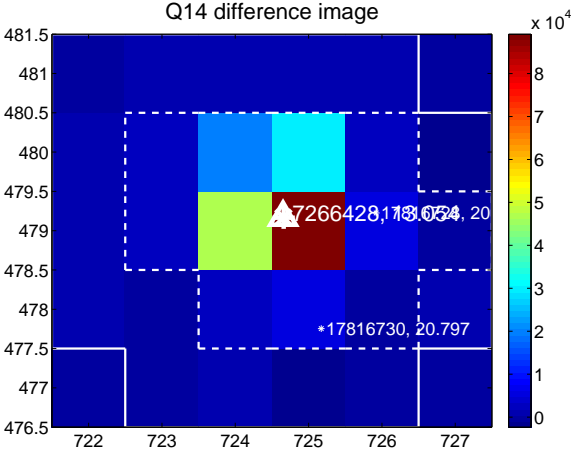
Q13 no difference image



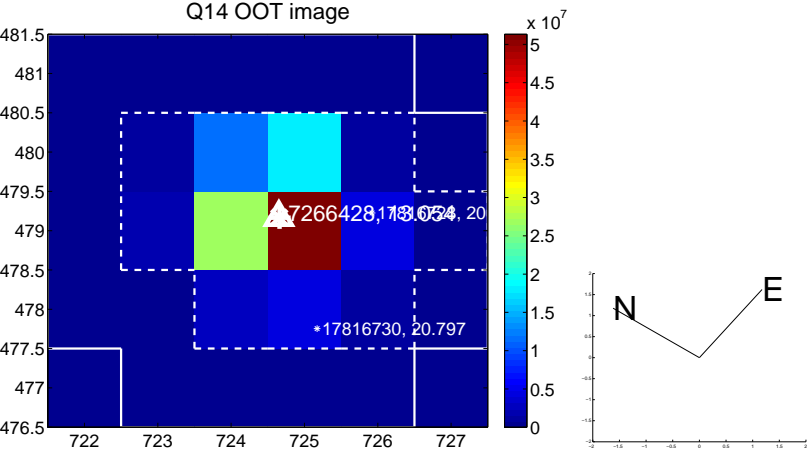
Q13 no OOT image



Q14 difference image



Q14 OOT image



Q15 no difference image



Q15 no OOT image



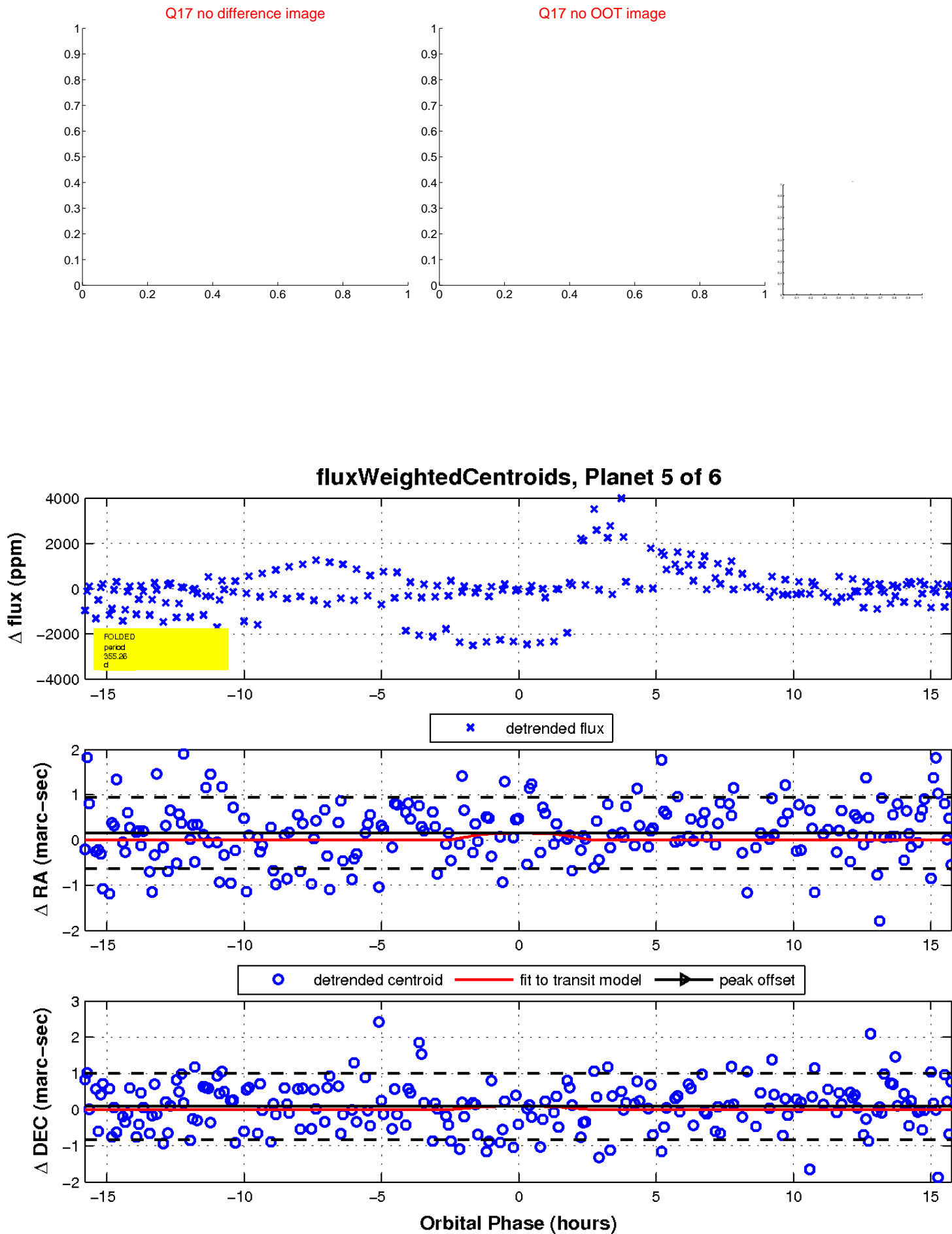
Q16 no difference image



Q16 no OOT image

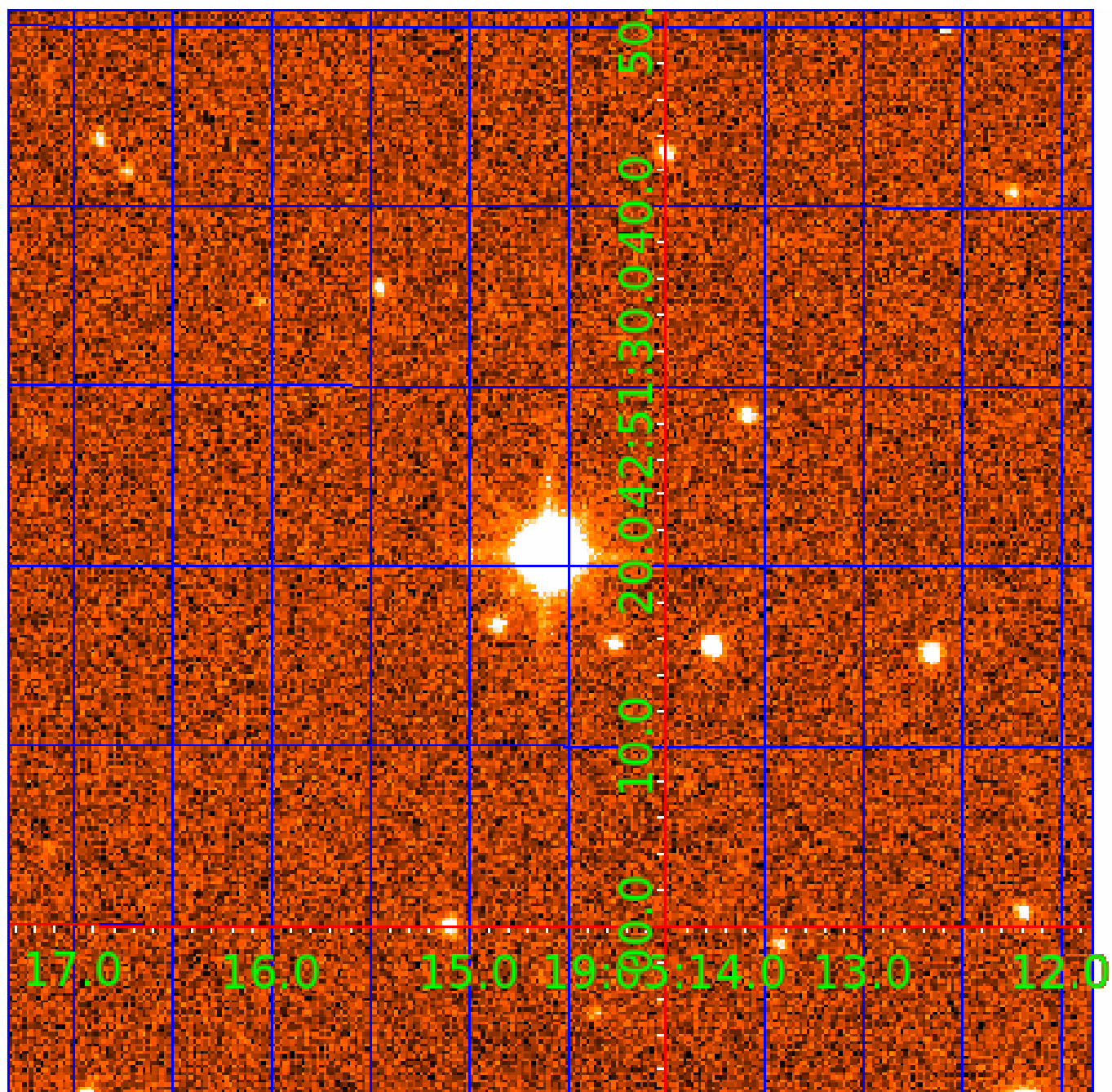


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination



# KIC 007266428

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007266428-01	OBS	No	553.860698	408.689190	720.7	6.928	22.4	6.0	2.58	5095	6.88	2.61
007266428-03	OBS	No	368.270929	302.072706	506.6	11.893	14.9	3.6	2.58	5095	7.79	4.50
007266428-04	OBS	No	390.652950	142.931111	462.3	3.299	15.6	5.0	2.58	5095	5.57	4.16
007266428-05	OBS	No	355.262346	255.830635	1011.6	5.286	16.8	7.7	2.58	5095	10.63	4.72
007266428-06	OBS	No	639.463803	149.450402	938.0	6.271	14.2	9.0	2.58	5095	8.28	2.15

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007266428-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007266428-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007266428-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
007266428-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007266428-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS

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

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

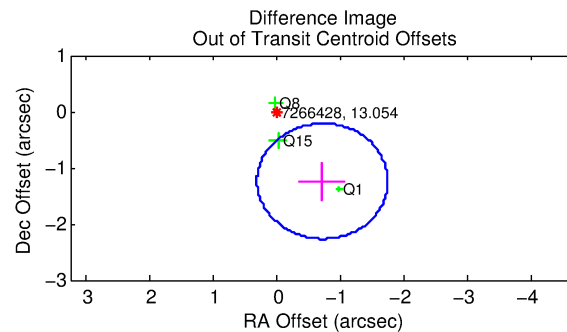
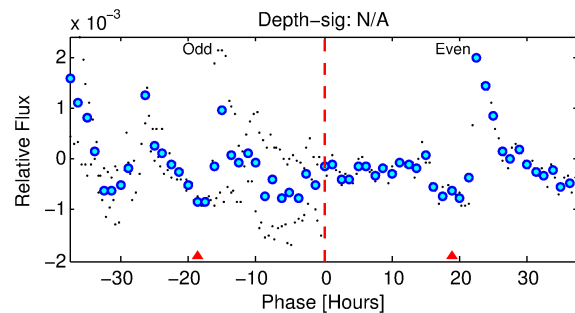
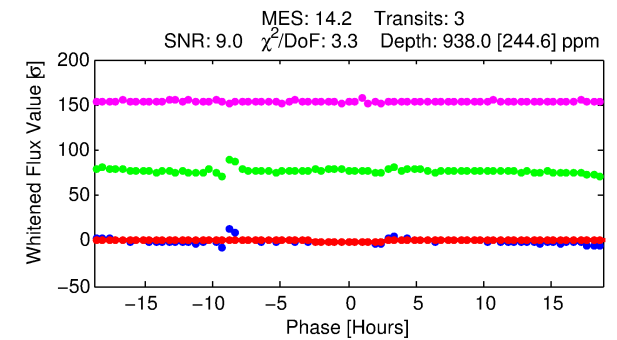
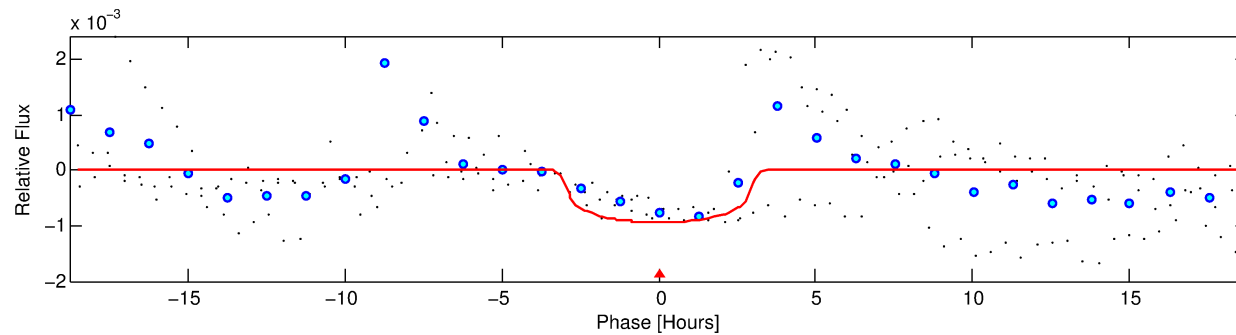
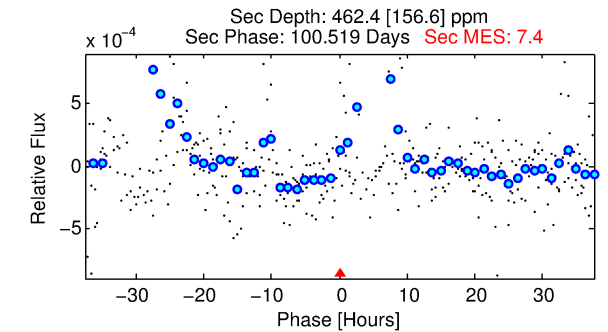
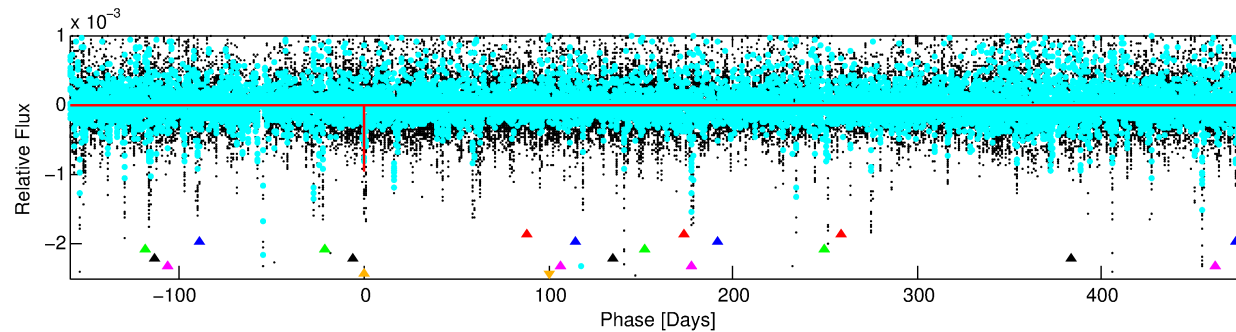
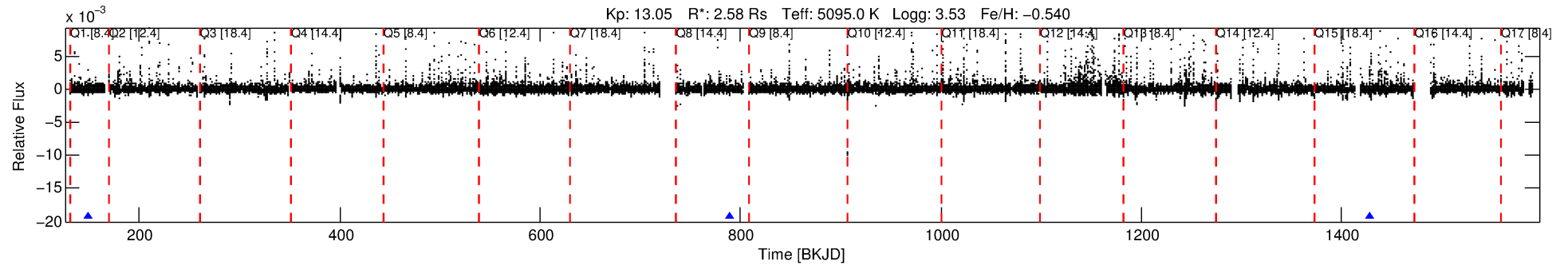
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 007266428-06

No Significant Match Found

# DV One-Page Summary

KIC: 7266428 Candidate: 6 of 6 Period: 639.464 d



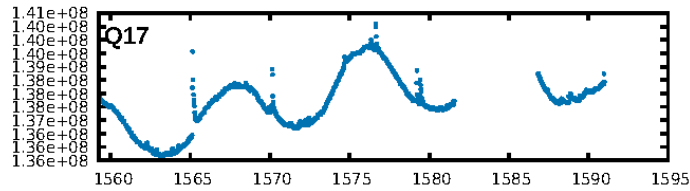
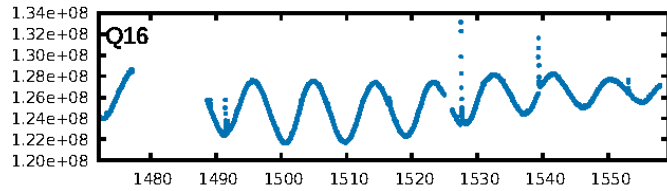
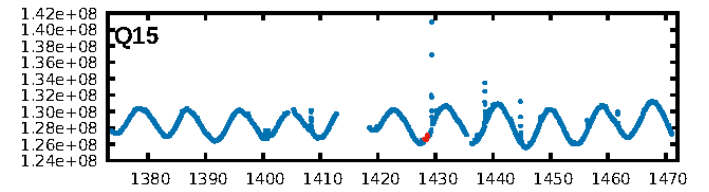
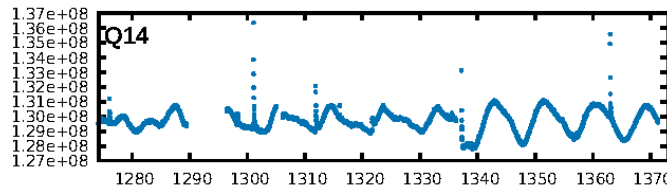
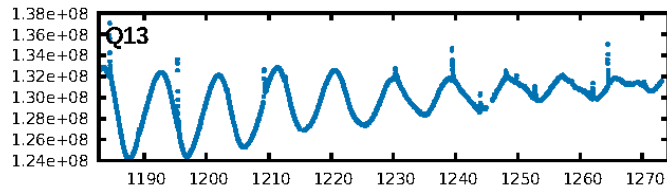
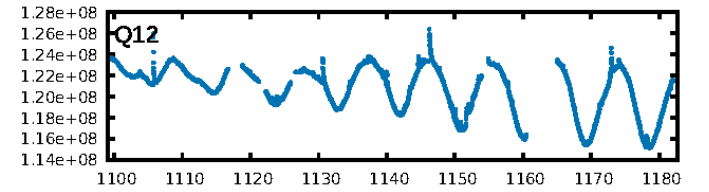
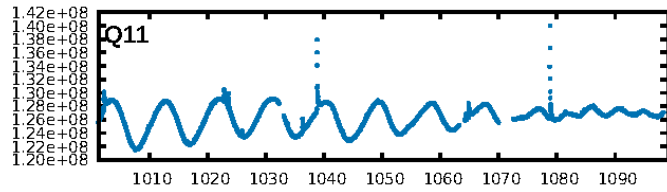
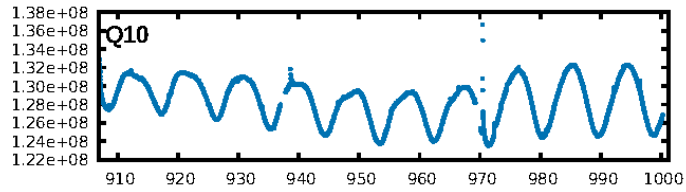
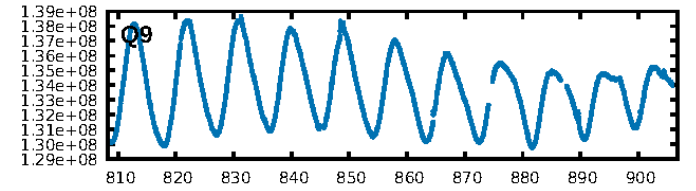
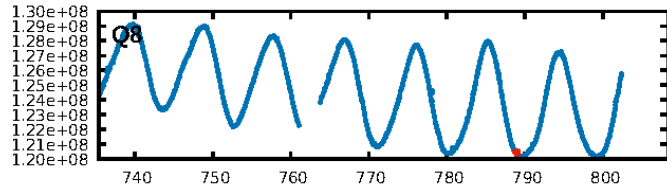
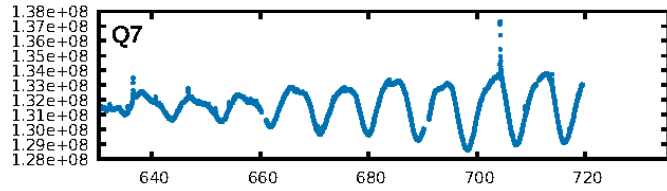
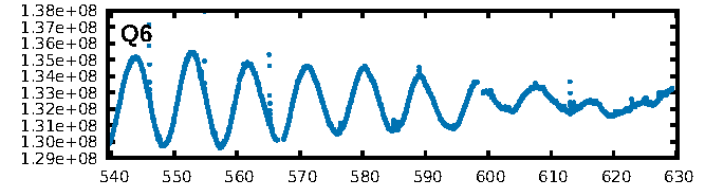
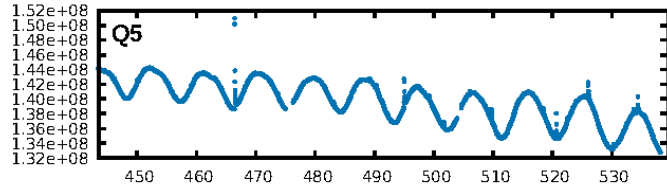
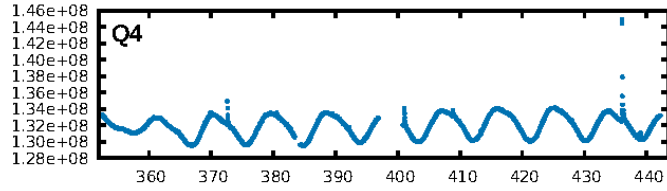
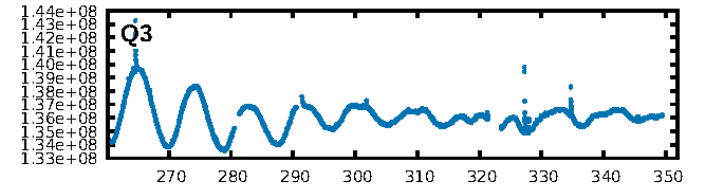
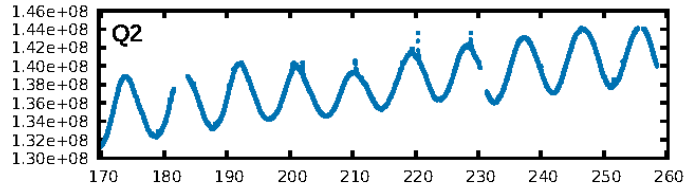
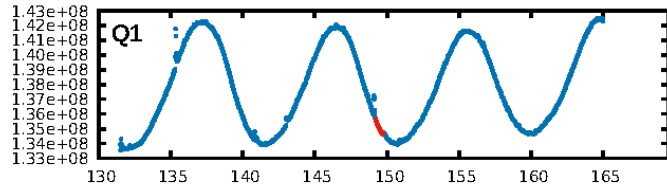
## DV Fit Results:

Period = 639.46380 [0.01007] d  
Epoch = 149.4504 [0.0103] BKJD  
Rp/R\* = 0.0294 [0.0291]  
a/R\* = 624.20 [2328.66]  
b = 0.65 [3.39]  
Seff = 2.15 [3.78]  
Teq = 309 [136] K  
Rp = 8.28 [10.23] Re  
a = 1.3652 [1.3313] AU  
Ag = 6913.41 [18403.09] [0.38] $\sigma$   
Teffp = 4355 [2186] K [1.85] $\sigma$

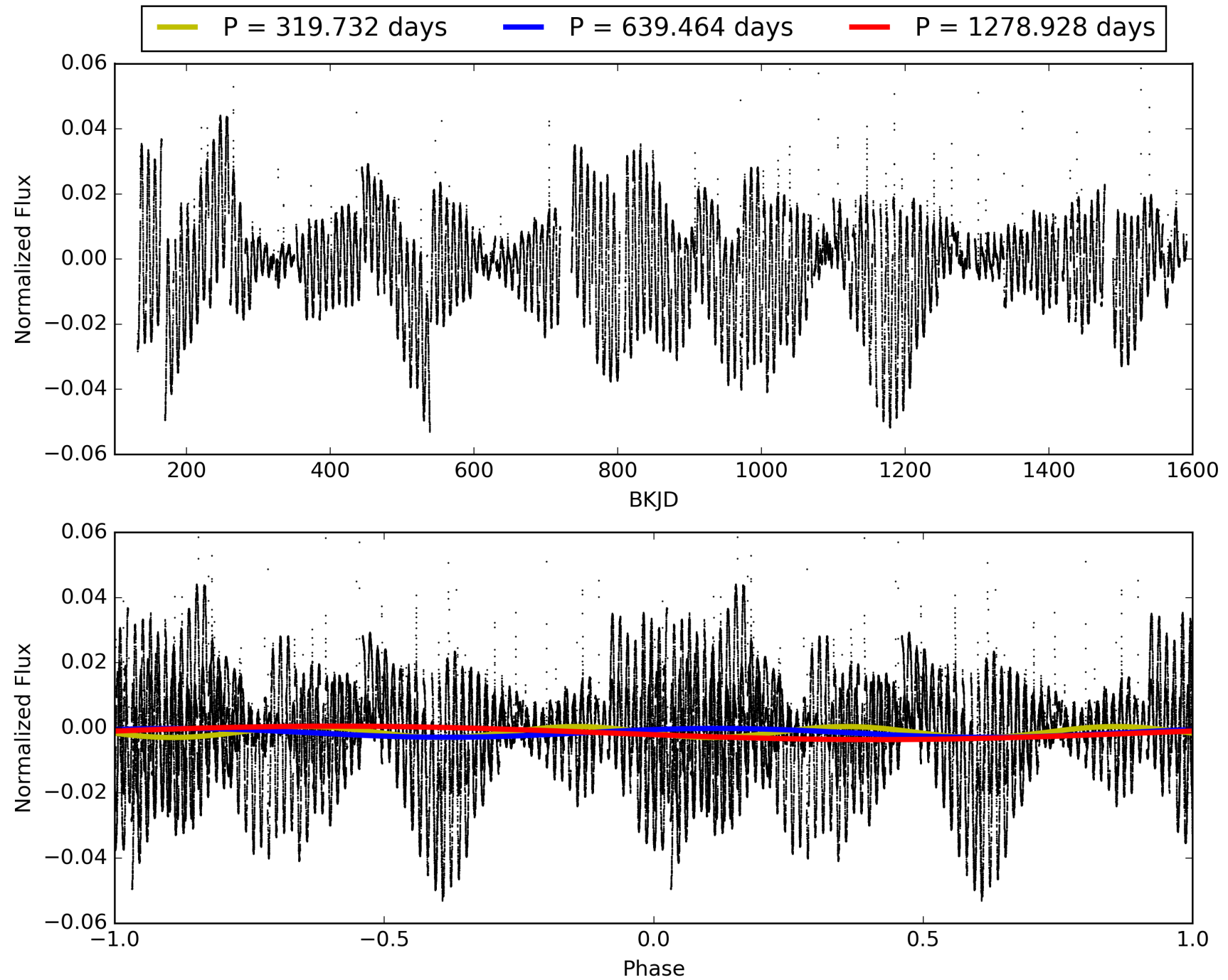
## DV Diagnostic Results:

ShortPeriod-sig: 100.0% [219.85] $\sigma$   
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 16.4%  
ModelChiSquareGof-sig: 16.1%  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [2/2]  
GhostDiagnostic-chr: 14.9  
Centroid-sig: 14.4%  
Centroid-so: 0.399 arcsec [1.16] $\sigma$   
**OotOffset-rm: 1.433 arcsec [4.19] $\sigma$**   
**KicOffset-rm: 1.515 arcsec [3.09] $\sigma$**   
OotOffset-st: 0/1/1/1 [3]  
KicOffset-st: 0/1/1/1 [3]  
DiffImageQuality-fgm: 1.00 [3/3]  
DiffImageOverlap-fno: 1.00 [3/3]

# TCE 007266428-06, PDC Light Curves



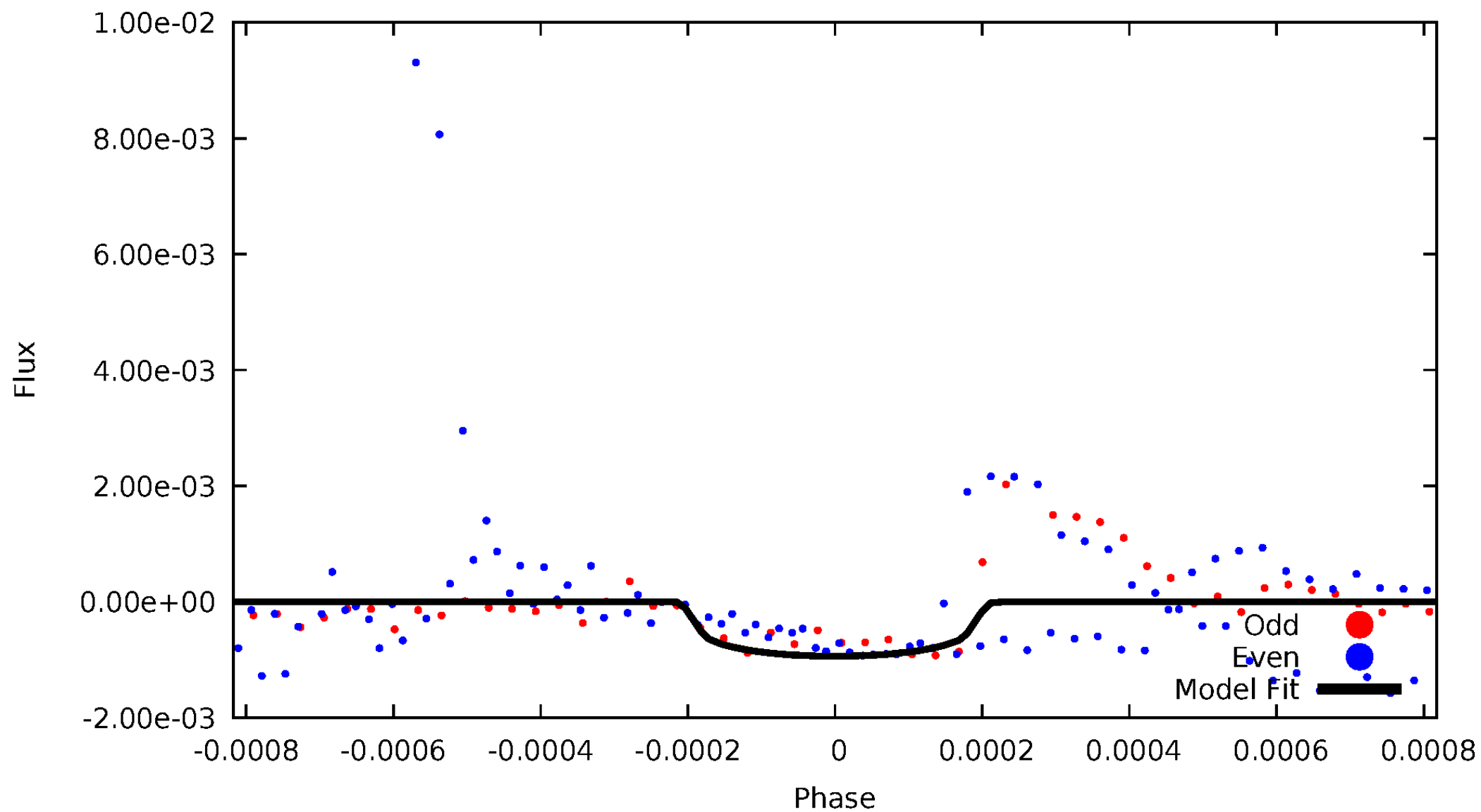
TCE 007266428-06





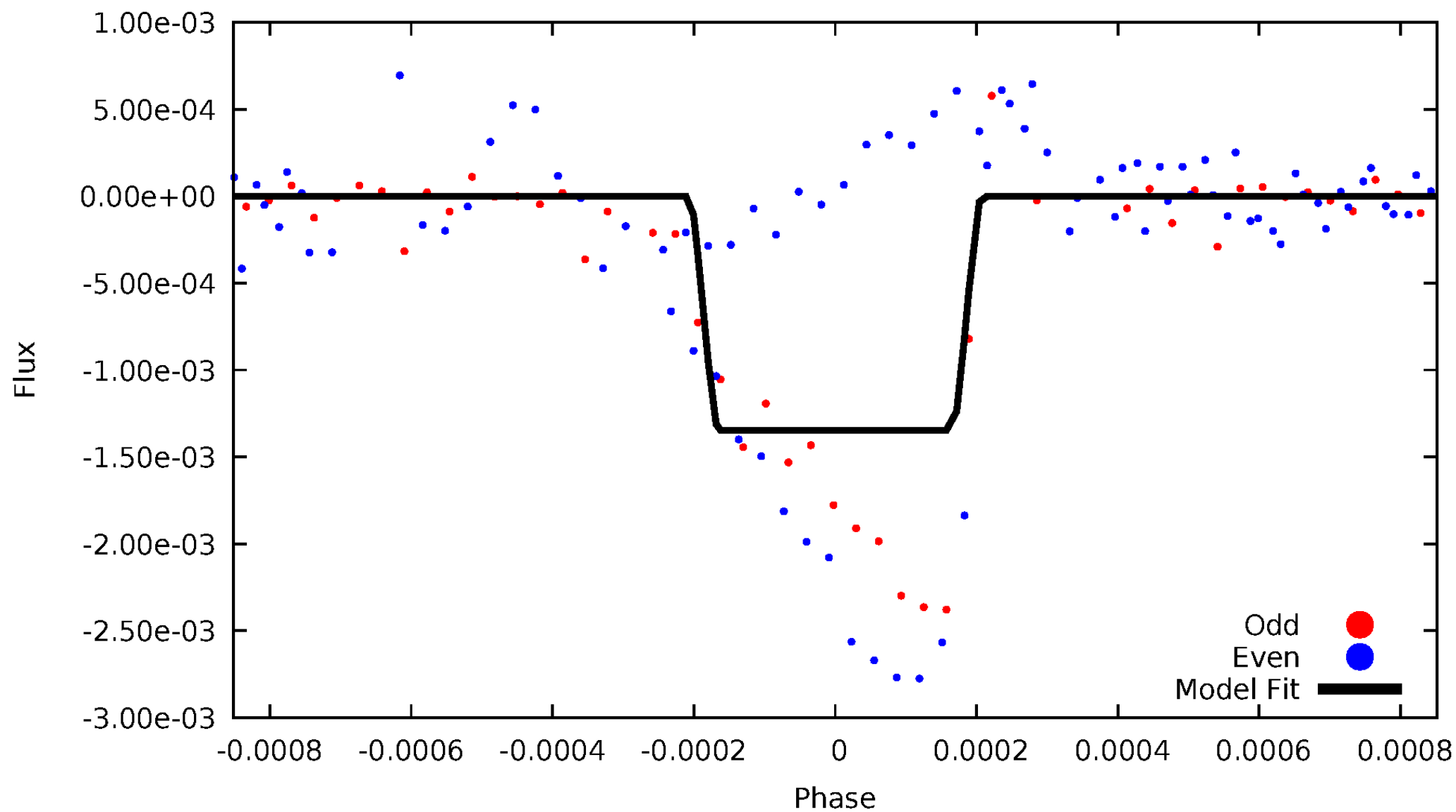
# DV Odd/Even

TCE 007266428-06



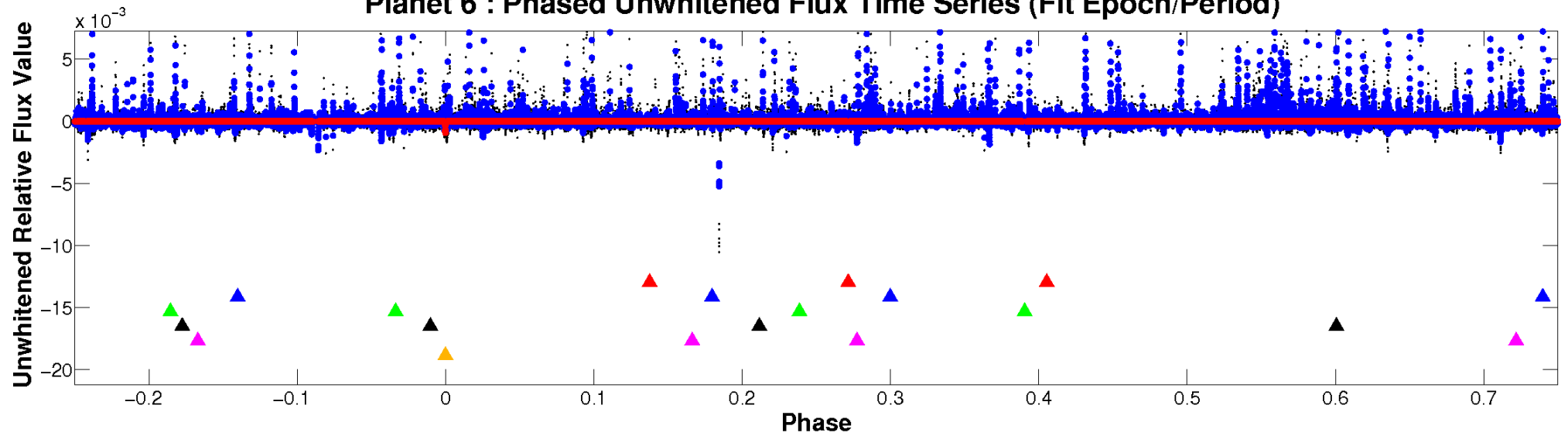
# ALT Odd/Even

TCE 007266428-06

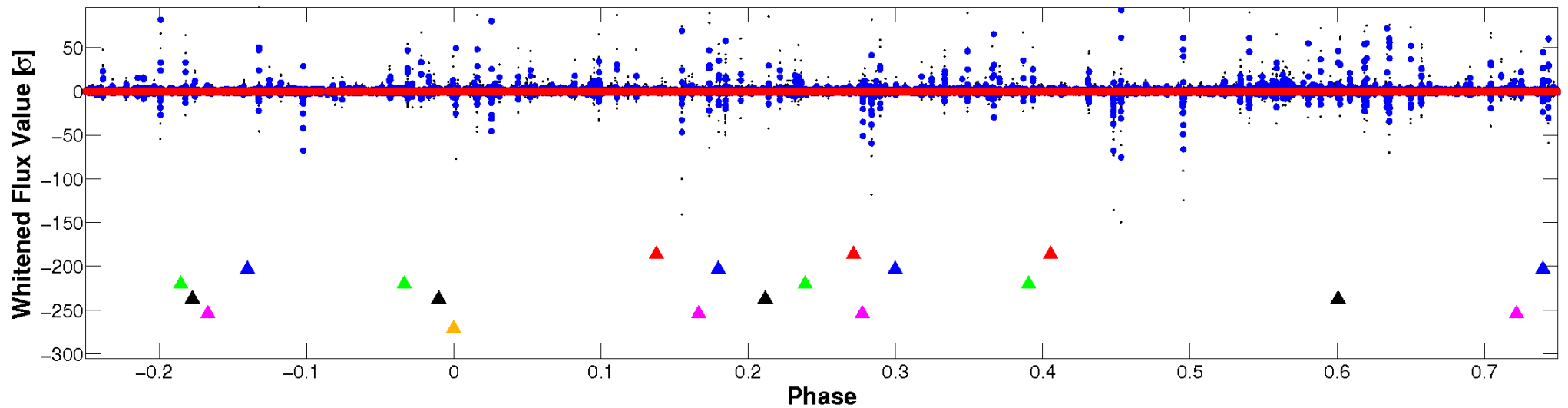


# Non-Whitened Vs. Whitened Light Curve

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

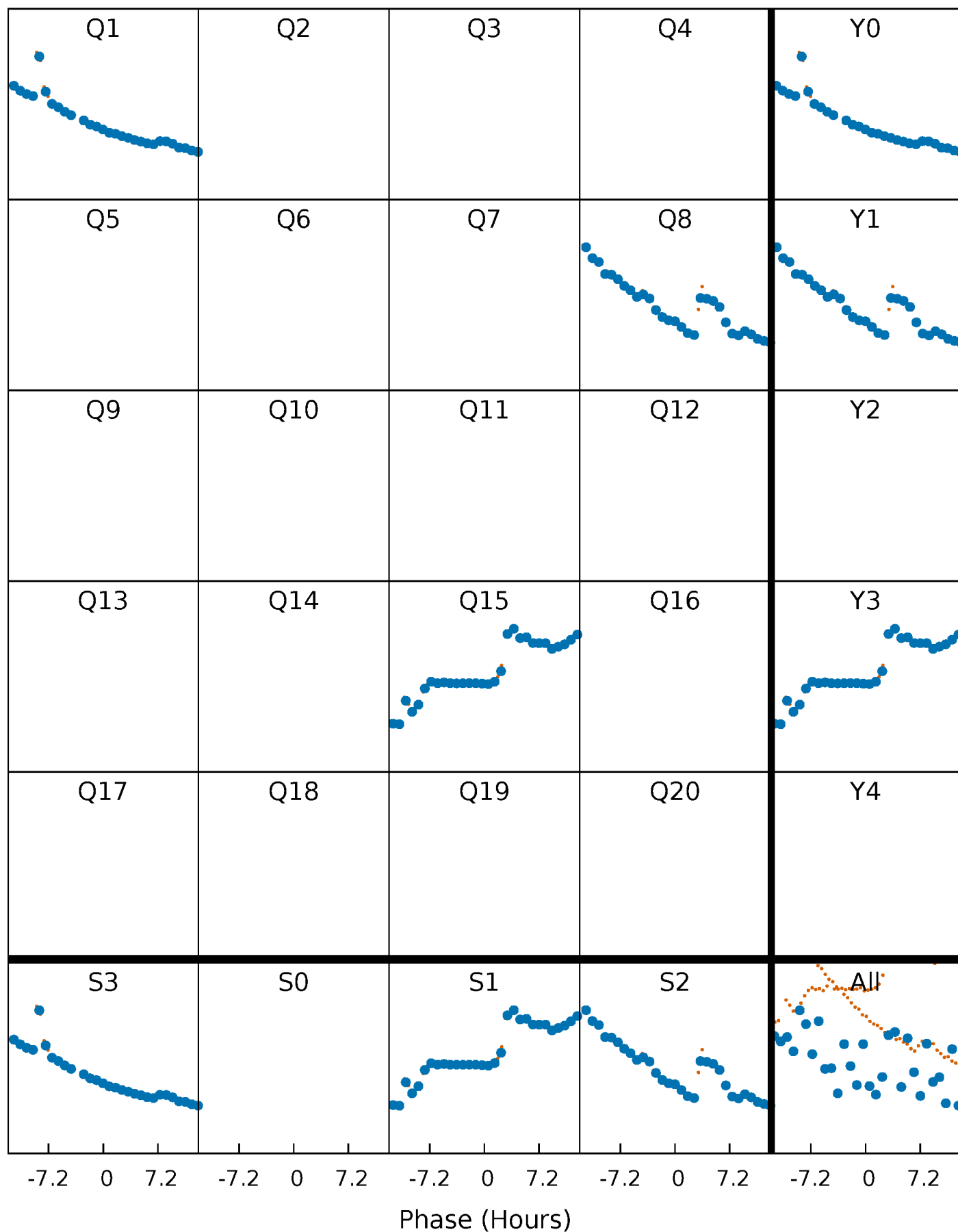


## Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



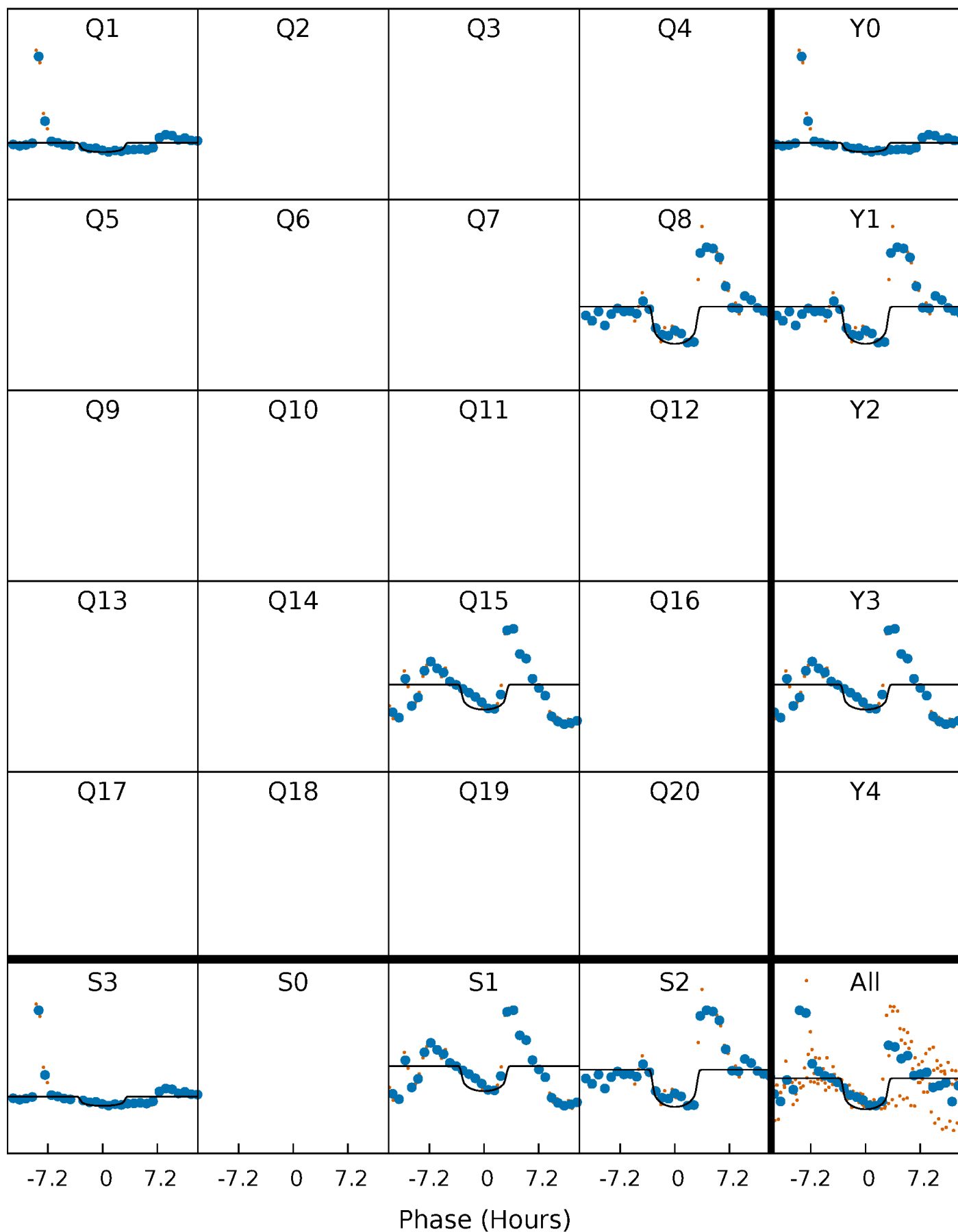
# PDC Quarter-Phased Transit Curves

TCE 007266428-06     $P=639.463803$  Days     $T_0=149.450402$  (BKJD)



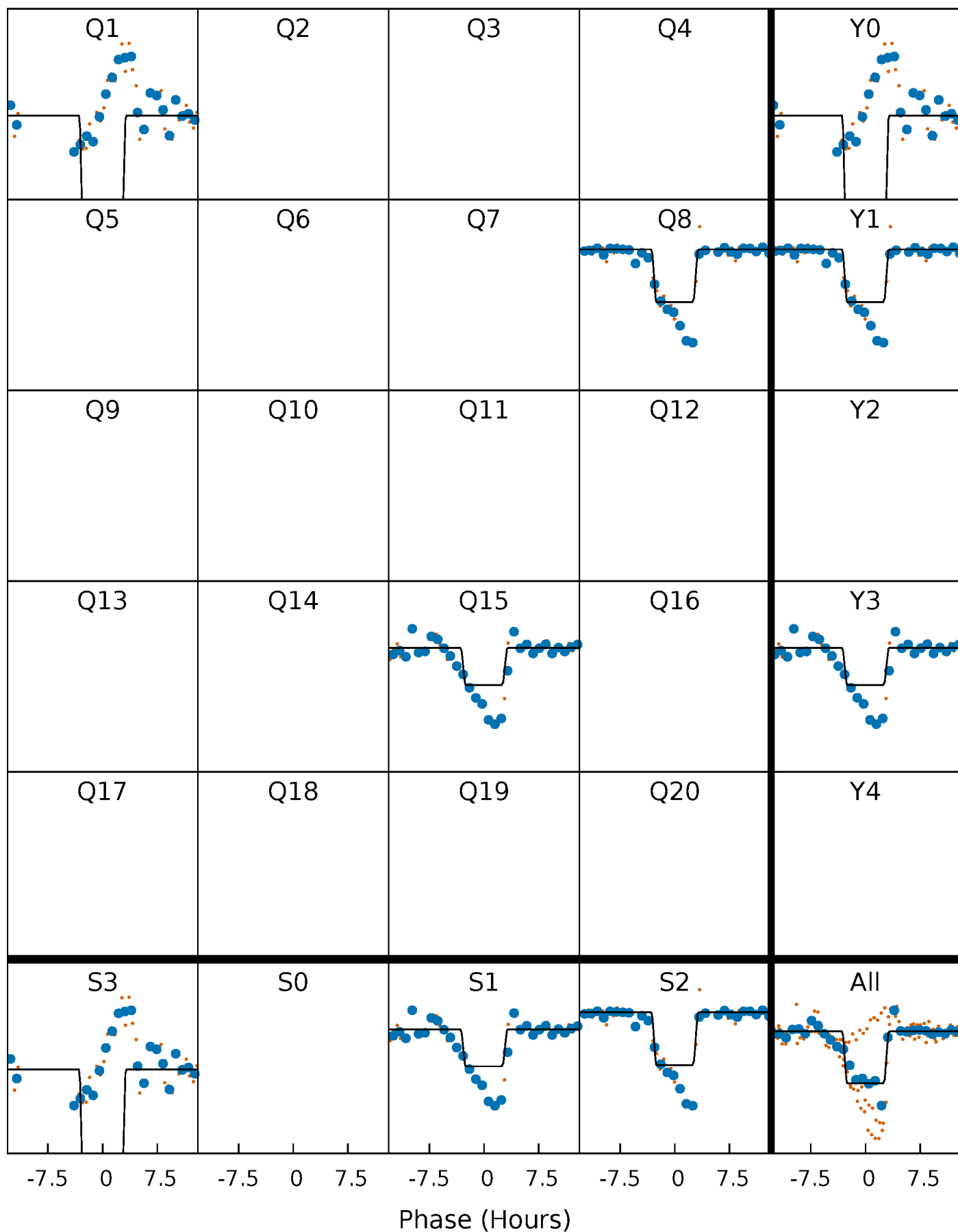
# DV Quarter-Phased Transit Curves

TCE 007266428-06     $P=639.463803$  Days     $T_0=149.450402$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

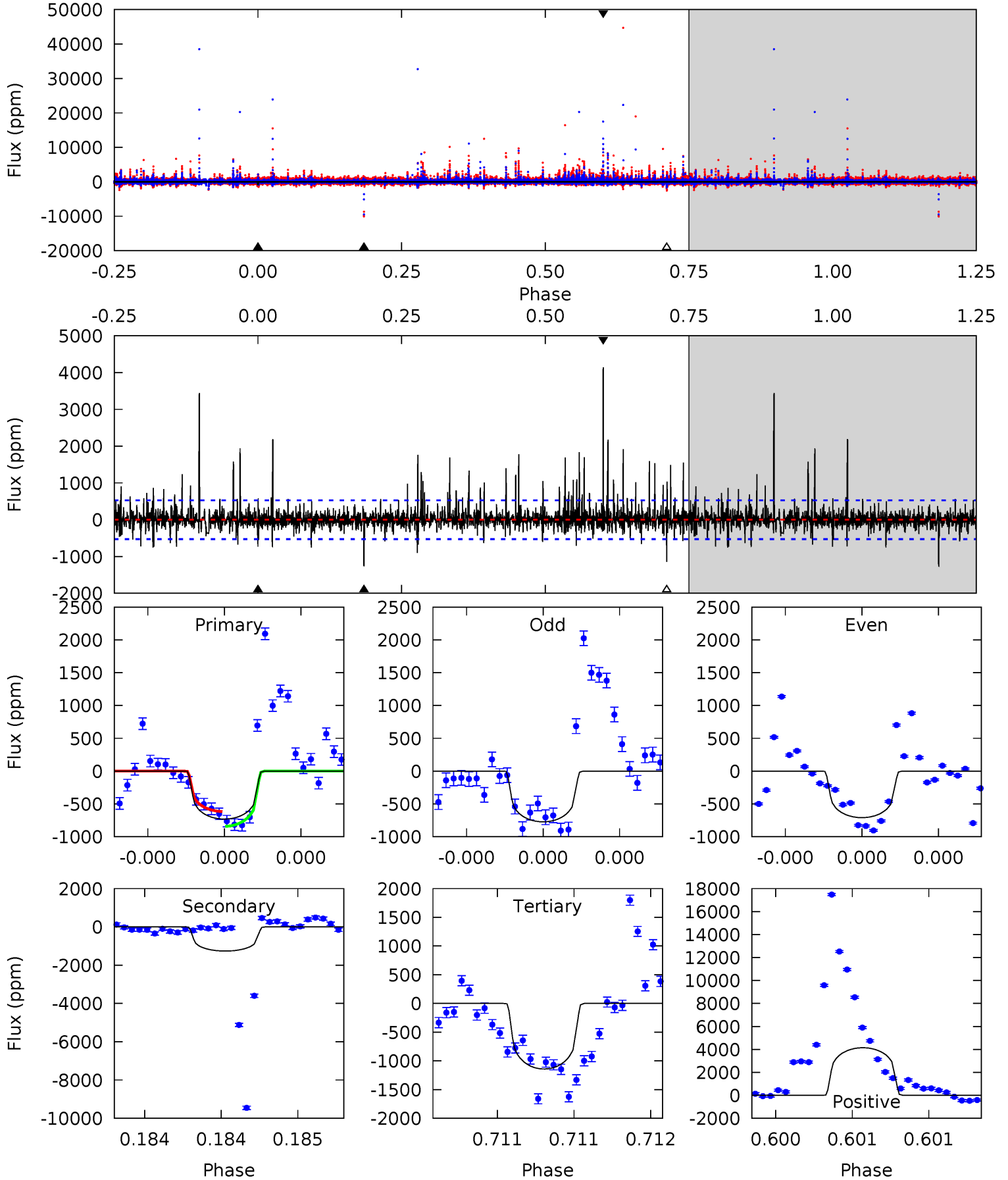
TCE 007266428-06 P=639.434204 Days  $T_0=149.487097$  (BKJD)



# DV Model-Shift Uniqueness Test

007266428-06, P = 639.463803 Days, E = 149.450402 Days

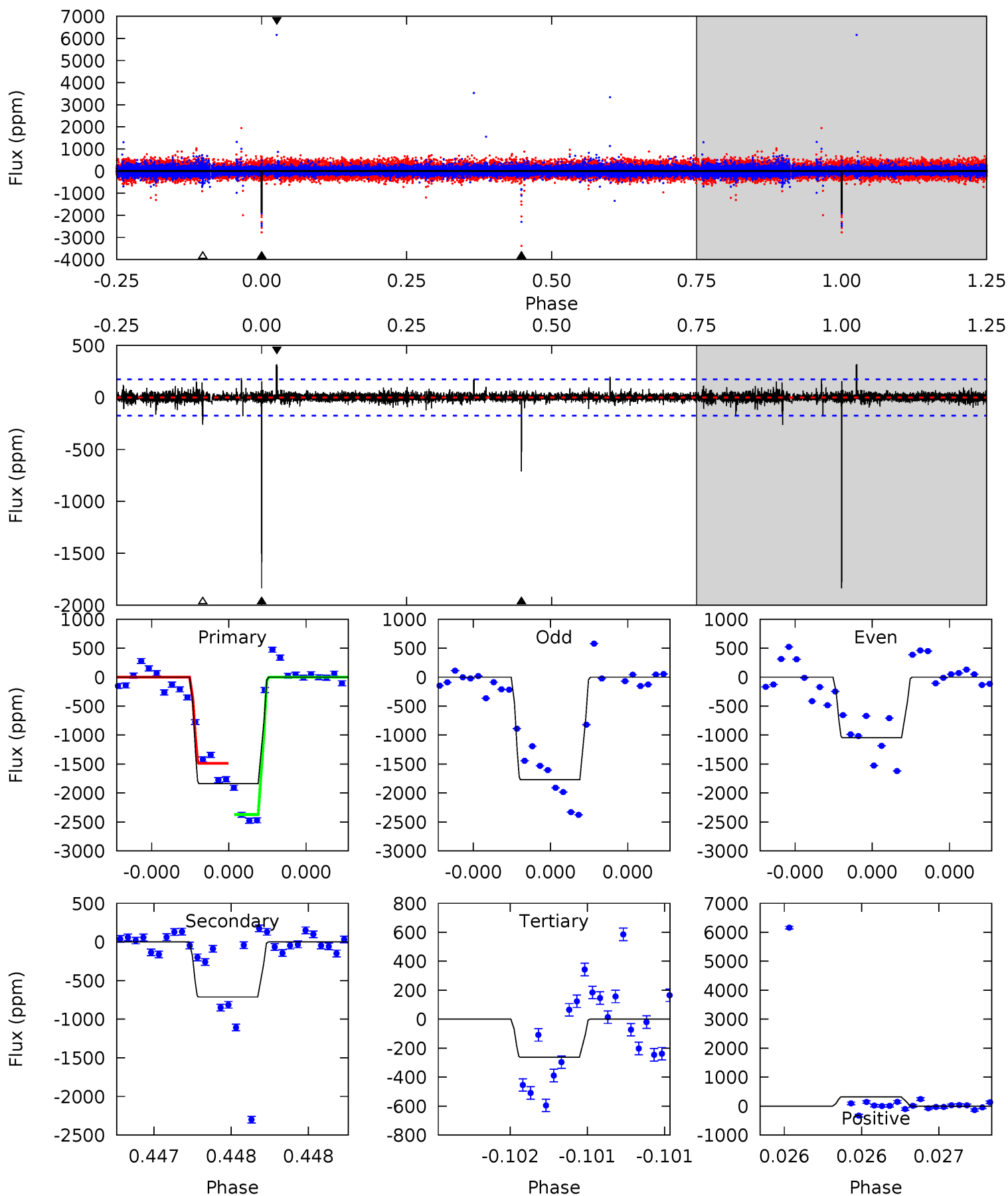
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.75	13.4	12.1	43.9	5.59	3.51	2.70	-4.34	-36.1	1.28	-30.5	0.15	0.88	0.77	1.17



# Alt Model-Shift Uniqueness Test

007266428-06, P = 639.434204 Days, E = 149.487097 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
58.8	22.8	8.43	10.2	5.61	3.53	0.74	50.4	48.6	14.4	12.6	9.80	0.72	0.15	13.9





### Stellar Parameters For KIC 007266428

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M$ ( $M_{\odot}$ )	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$5095^{+124}_{-162}$	$3.534^{+1.095}_{-0.365}$	$-0.540^{+0.250}_{-0.350}$	$2.579^{+1.565}_{-1.913}$	$0.828^{+0.239}_{-0.196}$	$0.068^{+3.568}_{-0.052}$
	+2%/-3%	+31%/-10%	+46%/-65%	+61%/-74%	+29%/-24%	+5244%/-76%
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 007266428-06 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$-1263 \pm 94$	$8.45^{+8.53}_{-5.59}$	$422^{+73}_{-90}$	$5179^{+3399}_{-1073}$	$18428^{+132484}_{-13750}$
Alt.	$-712 \pm 31$	$9.29^{+9.46}_{-5.91}$	$415^{+74}_{-90}$	$4362^{+2103}_{-749}$	$8577^{+54414}_{-6446}$

$T_{\text{max}}$  = 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

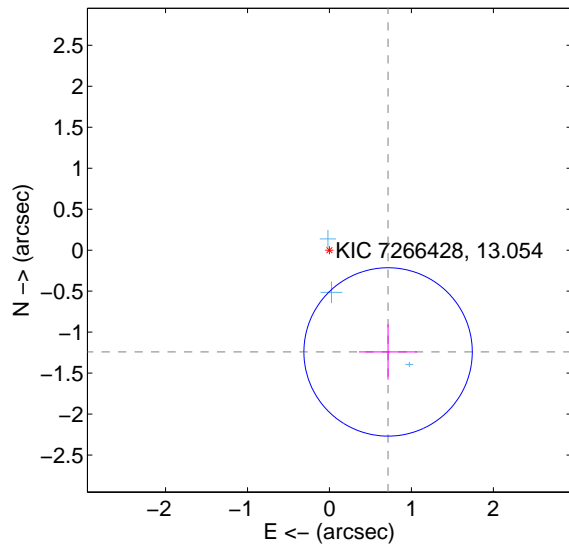
Supplemental centroid analysis for 007266428-06. Kepler magnitude: 13.05. Transit SNR 8.96

There are 3 quarters with good PRF difference image offsets

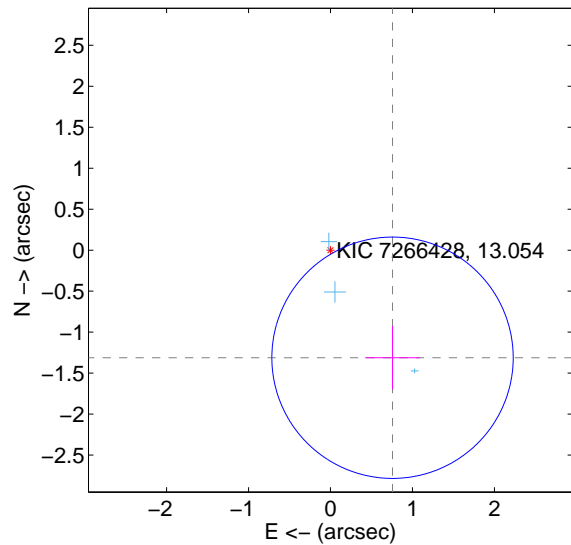
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.433 \pm 0.342$	4.19	$-0.715 \pm 0.356$	$-1.241 \pm 0.338$
PRF-fit source offset from KIC position	$1.515 \pm 0.491$	3.09	$-0.757 \pm 0.335$	$-1.312 \pm 0.387$
photometric centroid source offset	$0.40 \pm 0.34$	1.16	$0.15 \pm 0.38$	$-0.37 \pm 0.34$

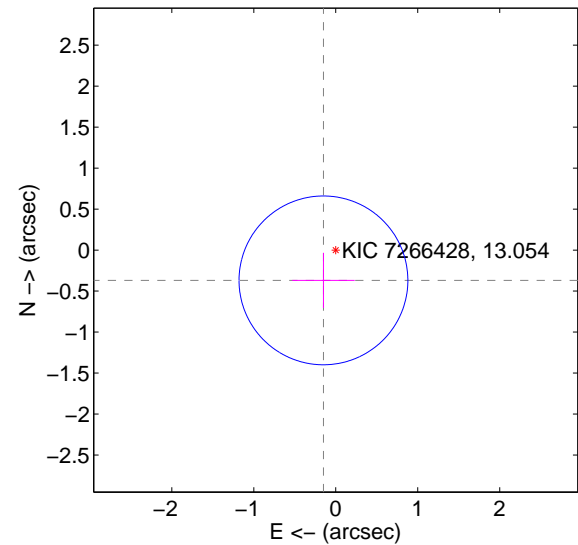
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

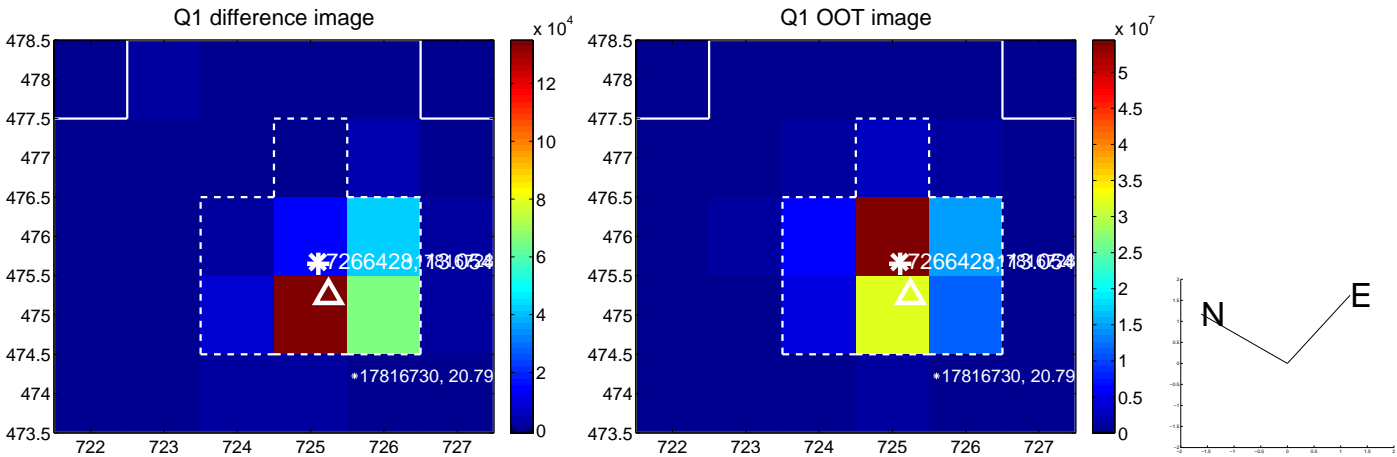


offset from photometric centroids

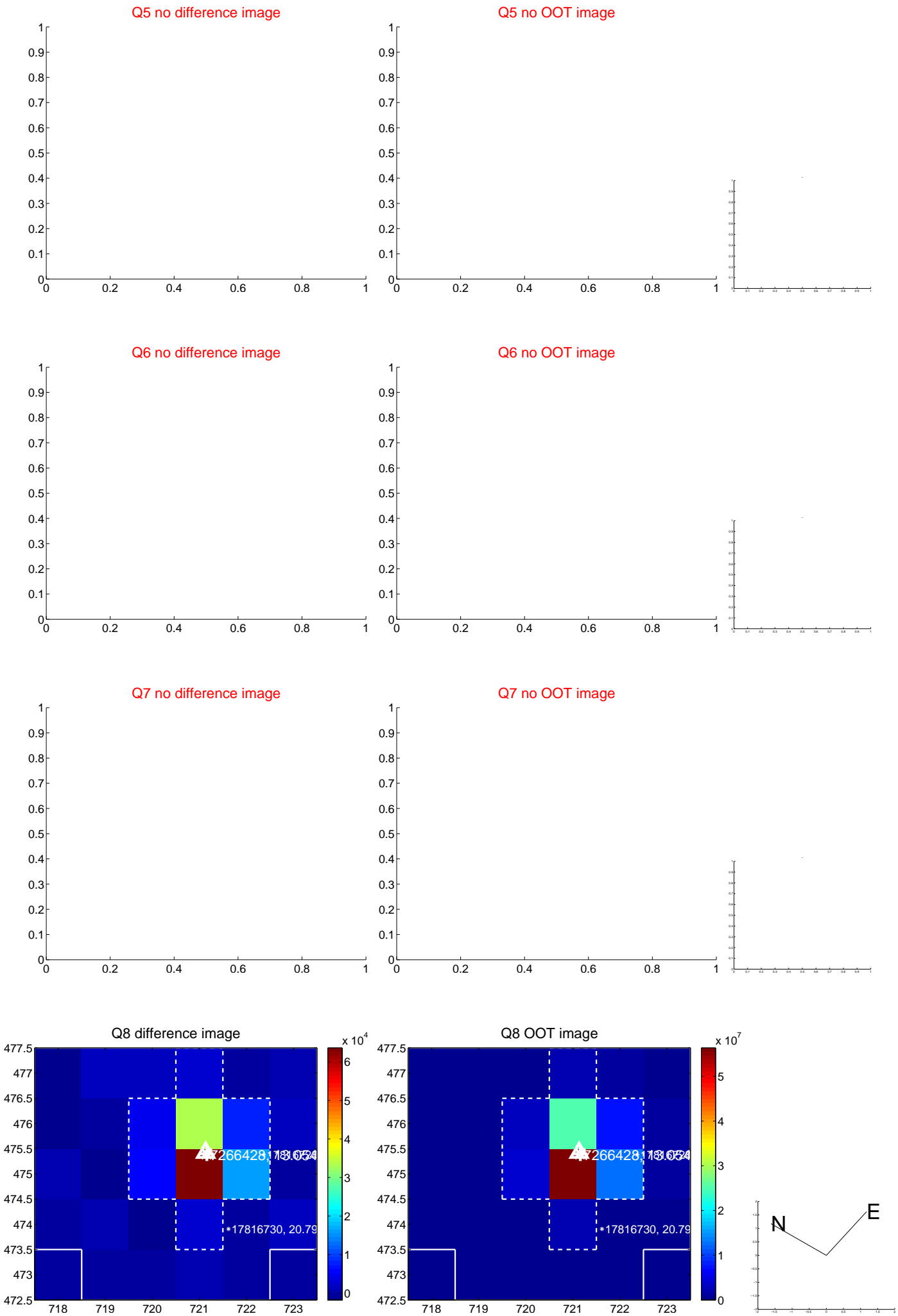


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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



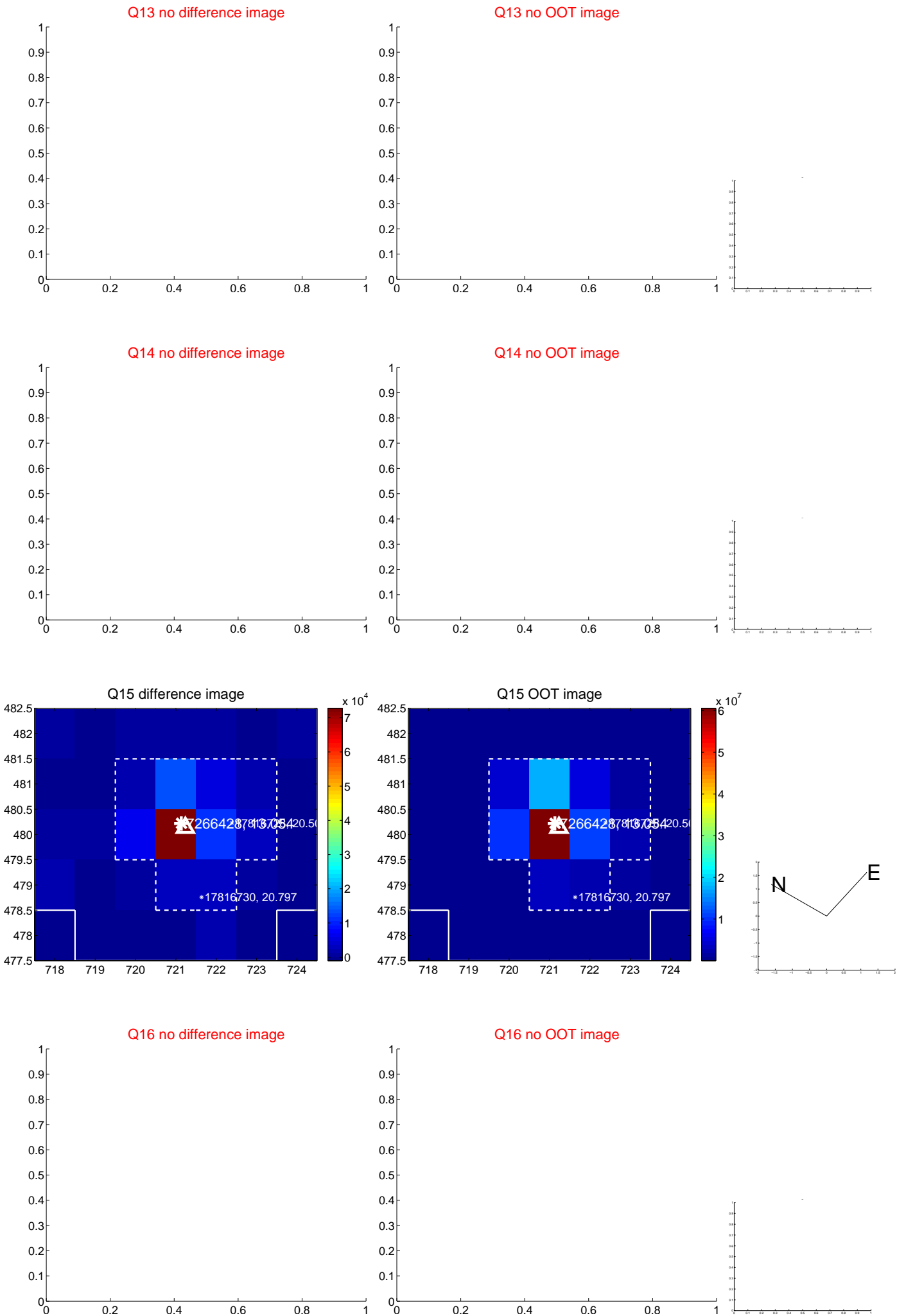
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



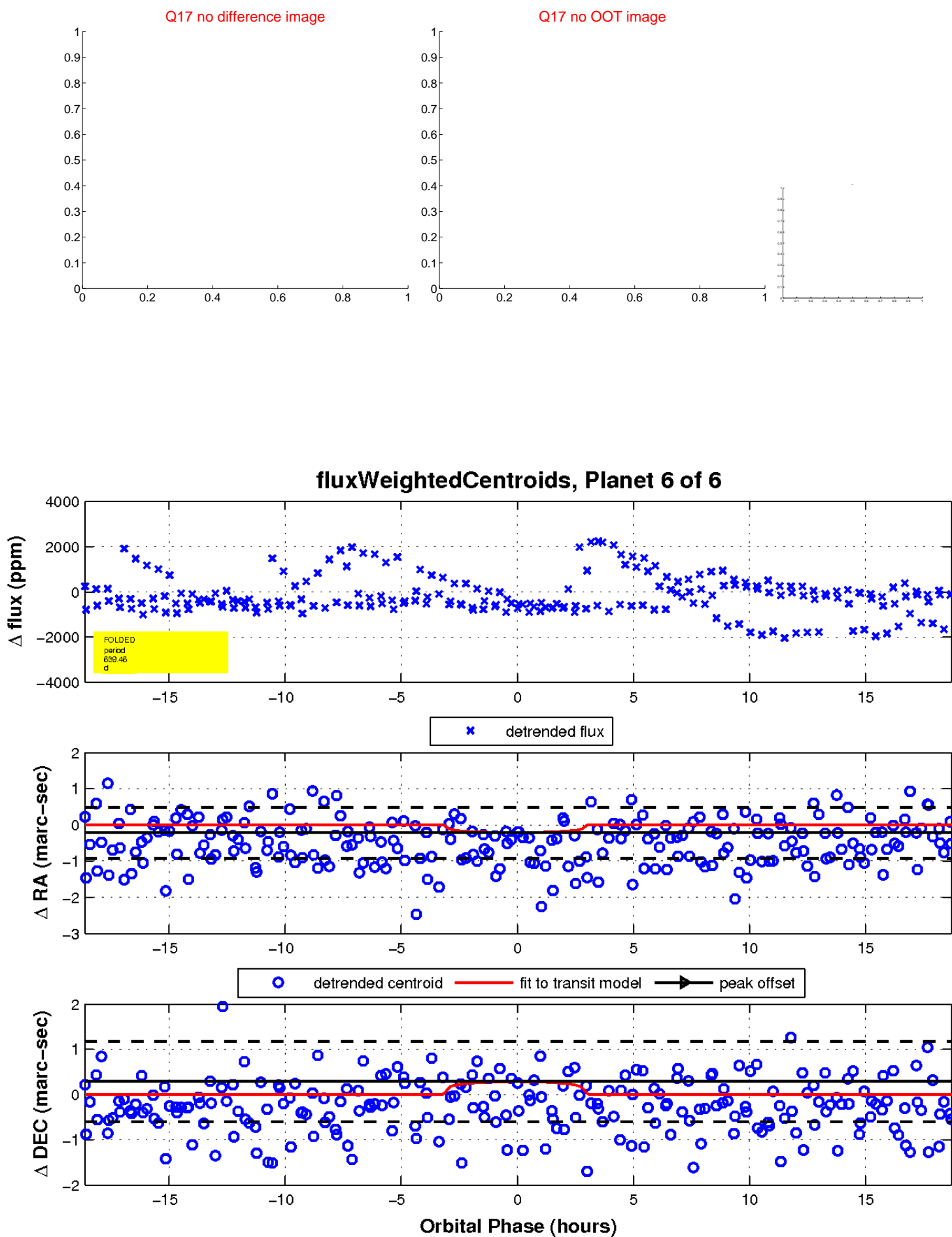
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

