

# KIC 010080792

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
010080792-01	OBS	No	573.497849	179.278708	698.4	4.536	15.6	5.4	1.91	5043	5.50	1.25
010080792-02	OBS	No	562.406621	327.660683	814.7	3.453	11.6	8.0	1.91	5043	6.65	1.28
010080792-03	OBS	No	435.294242	174.247911	795.3	4.258	12.4	6.4	1.91	5043	5.49	1.81
010080792-04	OBS	No	417.576039	179.706678	803.0	2.620	12.0	7.6	1.91	5043	5.55	1.91
010080792-05	OBS	No	264.442806	263.838728	828.4	3.500	12.7	-1.0	1.91	5043	5.34	3.51

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010080792-01	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
010080792-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010080792-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010080792-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
010080792-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—ALL_TRANS_CHASES—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.

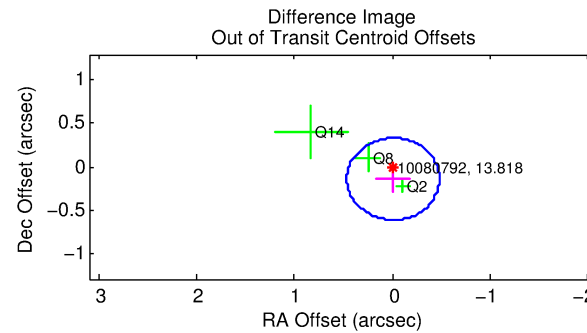
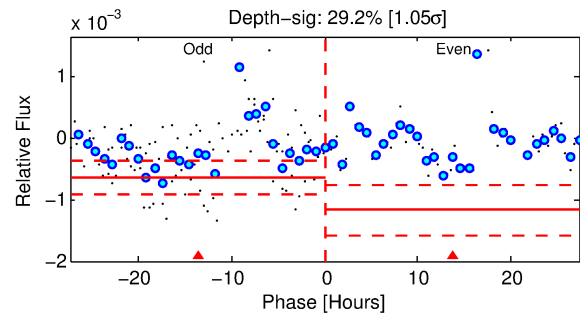
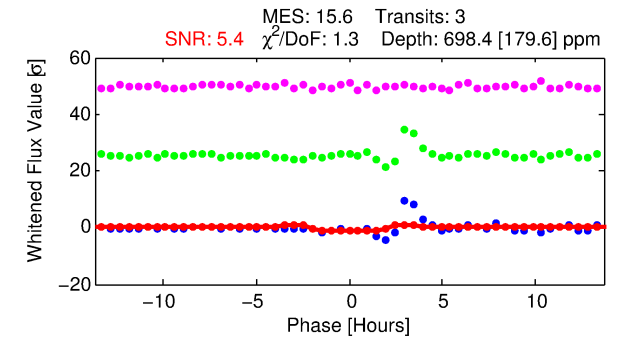
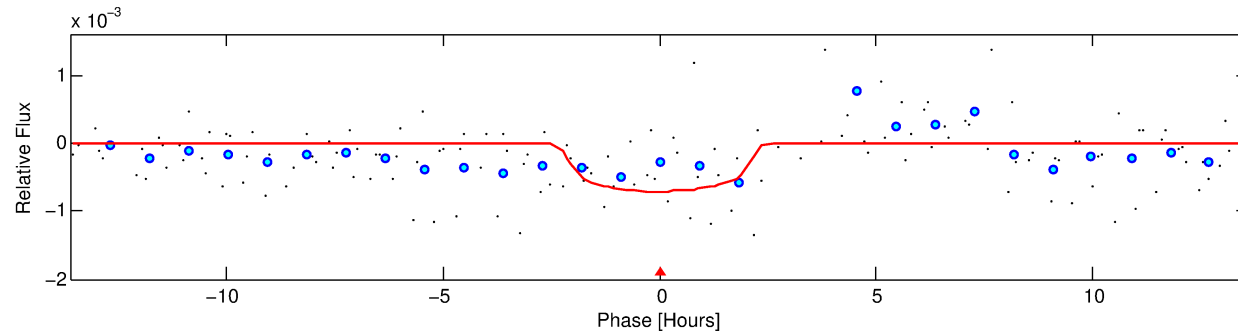
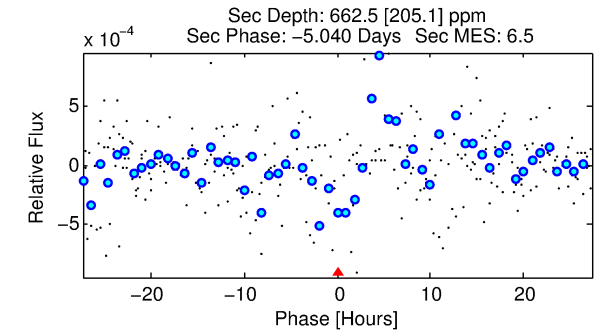
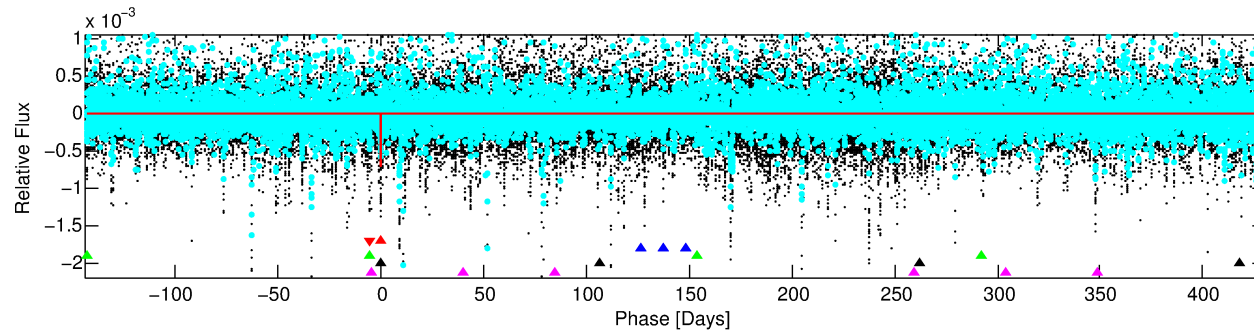
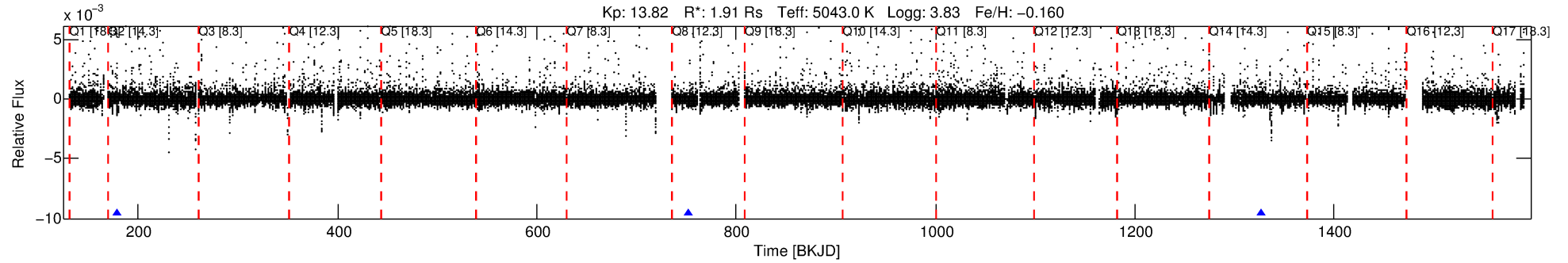
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 010080792-01

No Significant Match Found

# DV One-Page Summary

KIC: 10080792 Candidate: 1 of 5 Period: 573.498 d



## DV Fit Results:

Period = 573.49785 [0.00894] d  
Epoch = 179.2787 [0.0123] BKJD  
Rp/R\* = 0.0264 [0.0376]  
a/R\* = 675.22 [3518.03]  
b = 0.75 [3.08]  
Seff = 1.25 [1.59]  
Teq = 270 [86] K  
Rp = 5.50 [8.56] Re  
a = 1.2985 [0.9469] AU  
Ag = 20329.93 [63648.40] [0.32σ]  
Teffp = 4979 [3568] K [1.32σ]

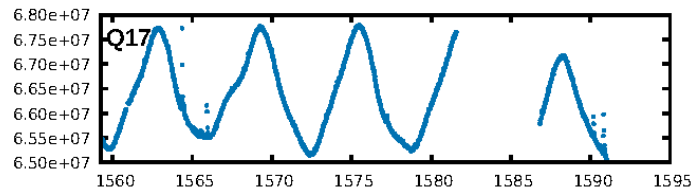
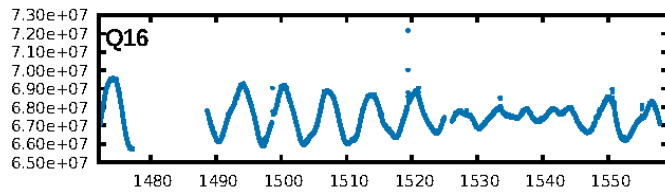
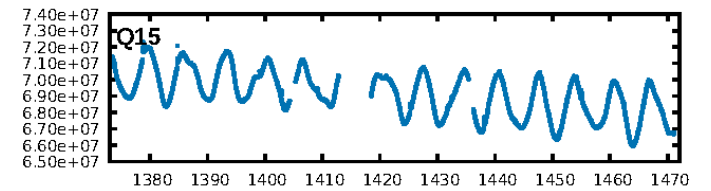
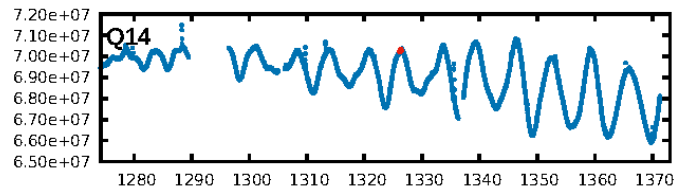
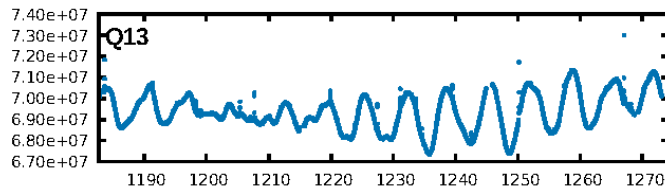
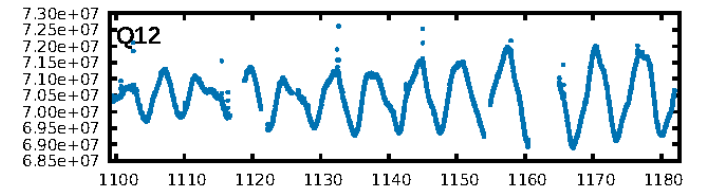
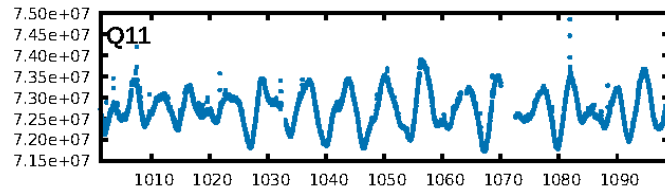
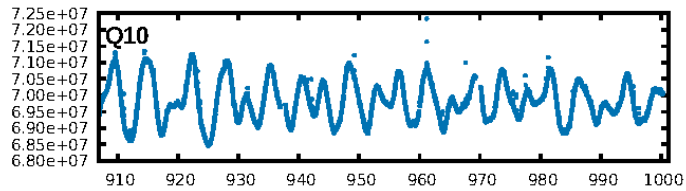
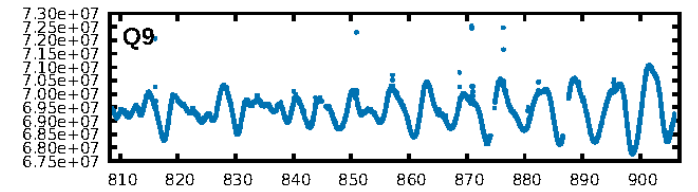
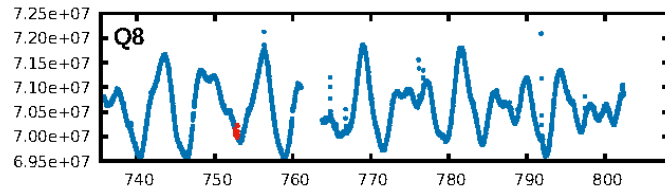
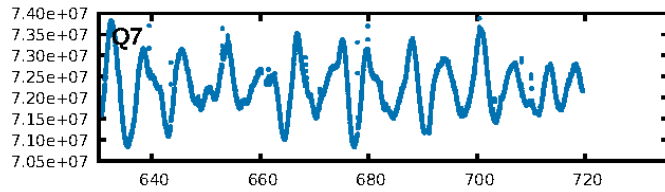
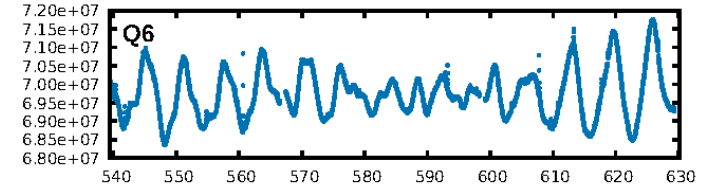
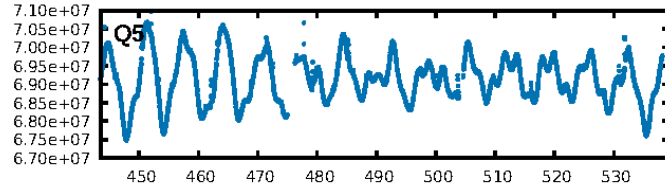
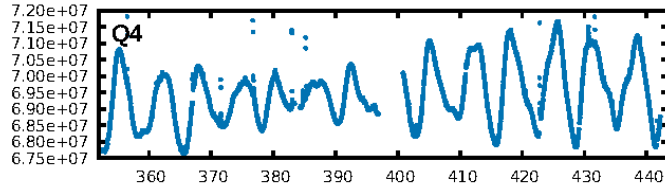
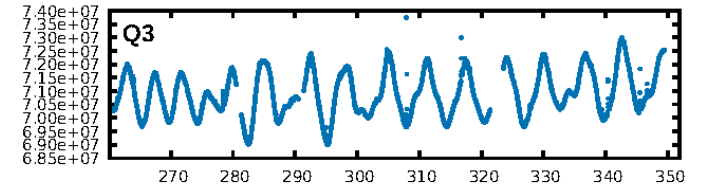
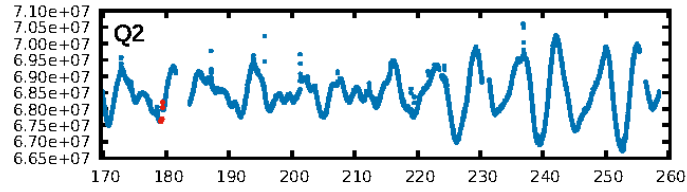
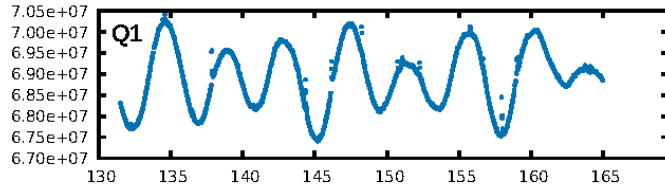
## DV Diagnostic Results:

ShortPeriod-sig: 100.0% [46.69σ]  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 10.9%  
ModelChiSquareGof-sig: 96.3%  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [3/3]  
GhostDiagnostic-chr: 9.214  
Centroid-sig: 81.0%  
Centroid-so: 0.554 arcsec [0.78σ]  
OotOffset-rm: 0.144 arcsec [0.91σ]  
OotOffset-st: 2/0/1/0 [3]  
KicOffset-rm: 0.318 arcsec [2.25σ]  
KicOffset-st: 2/0/1/0 [3]  
DiffImageQuality-fgm: 0.67 [2/3]  
DiffImageOverlap-fno: 0.67 [2/3]

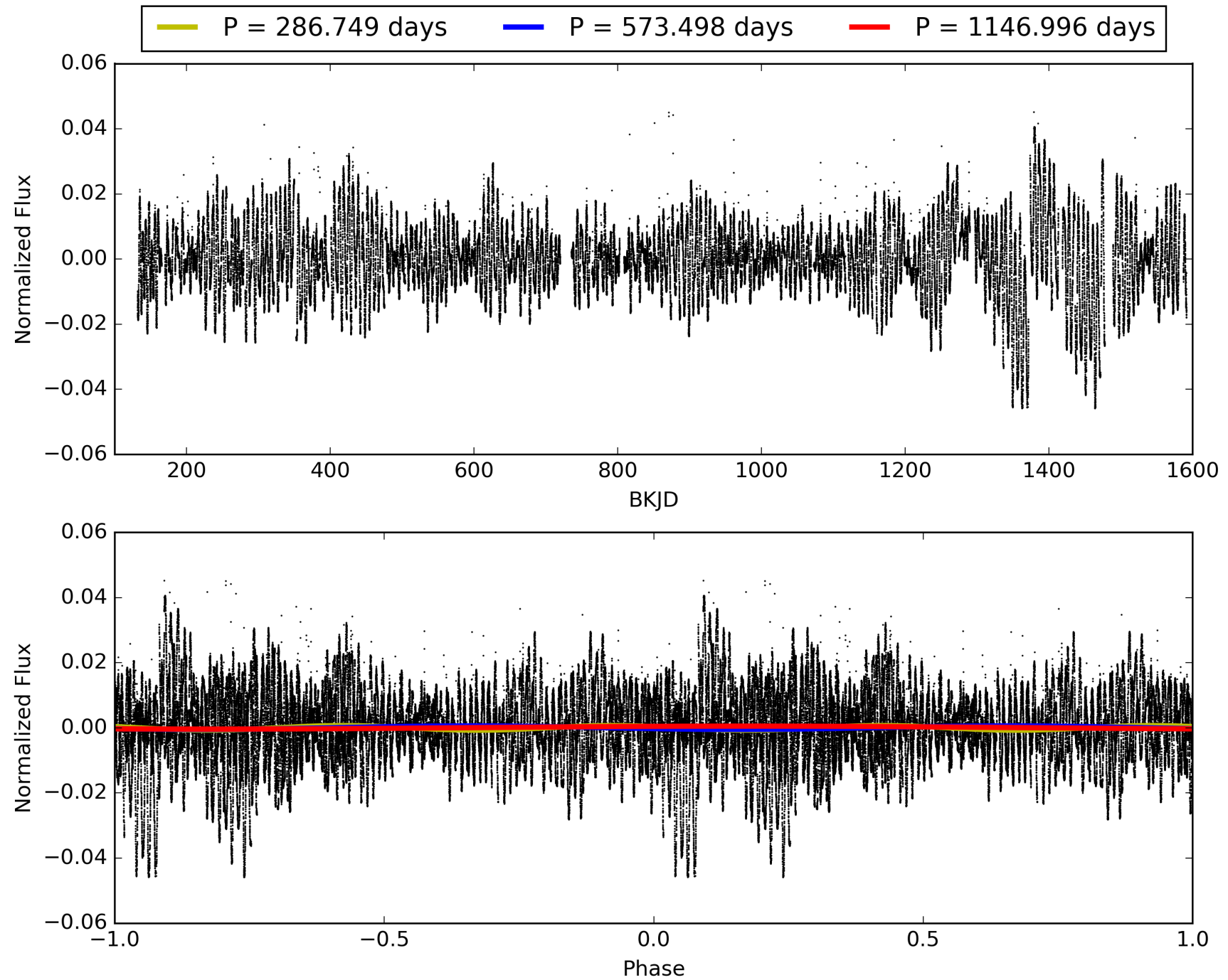
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 01:03:53 Z

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

# TCE 010080792-01, PDC Light Curves



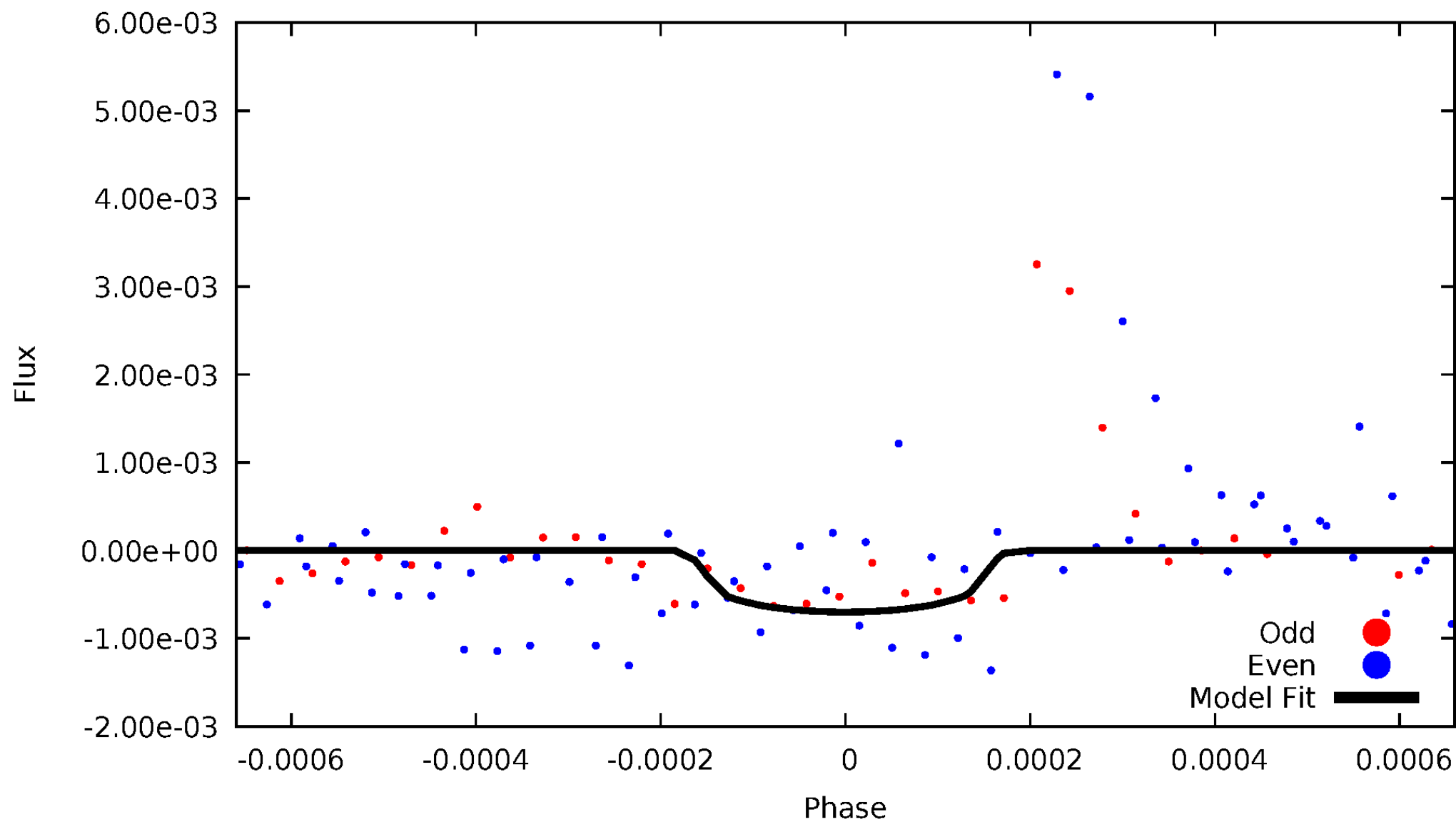
TCE 010080792-01





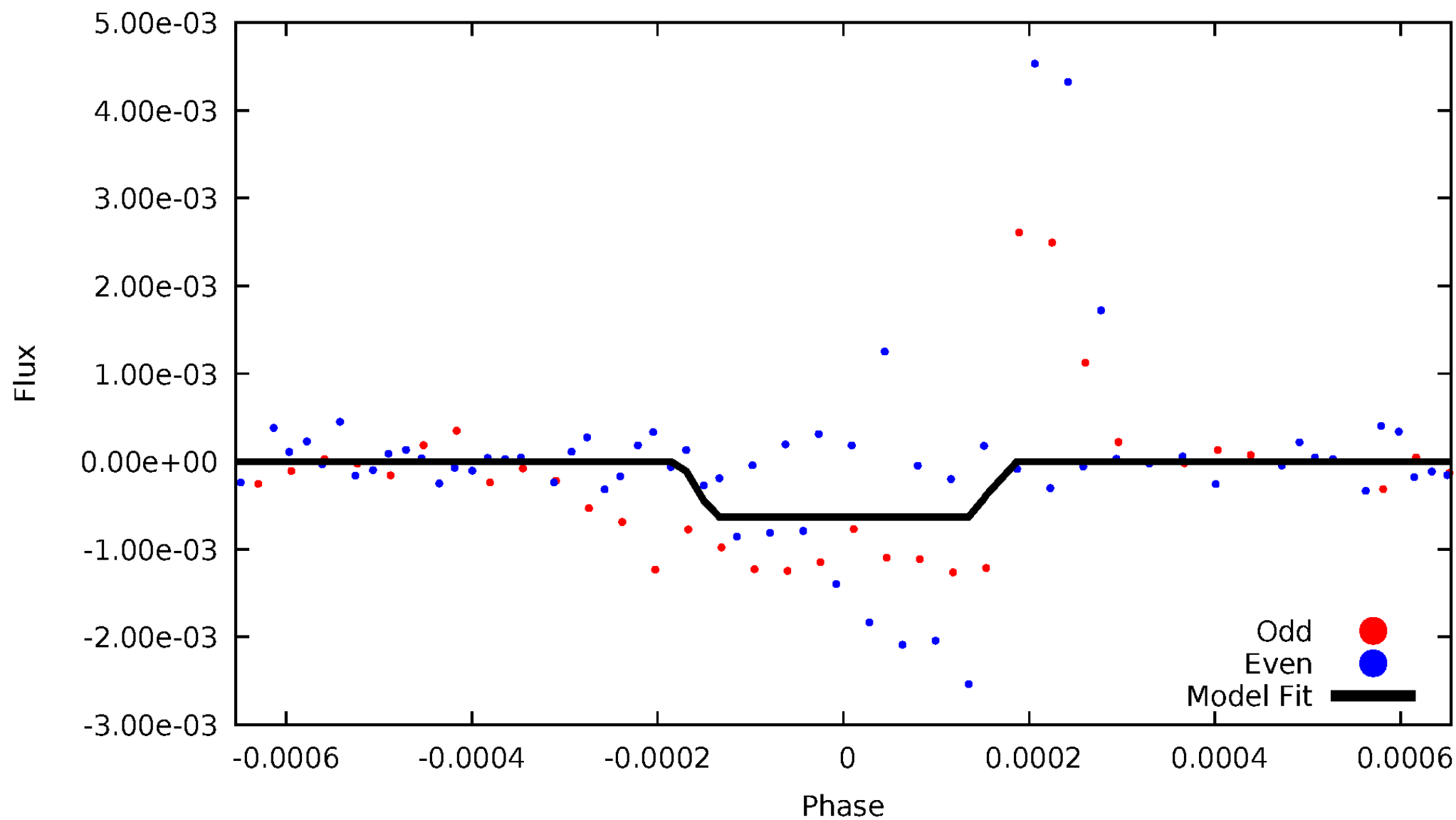
# DV Odd/Even

TCE 010080792-01



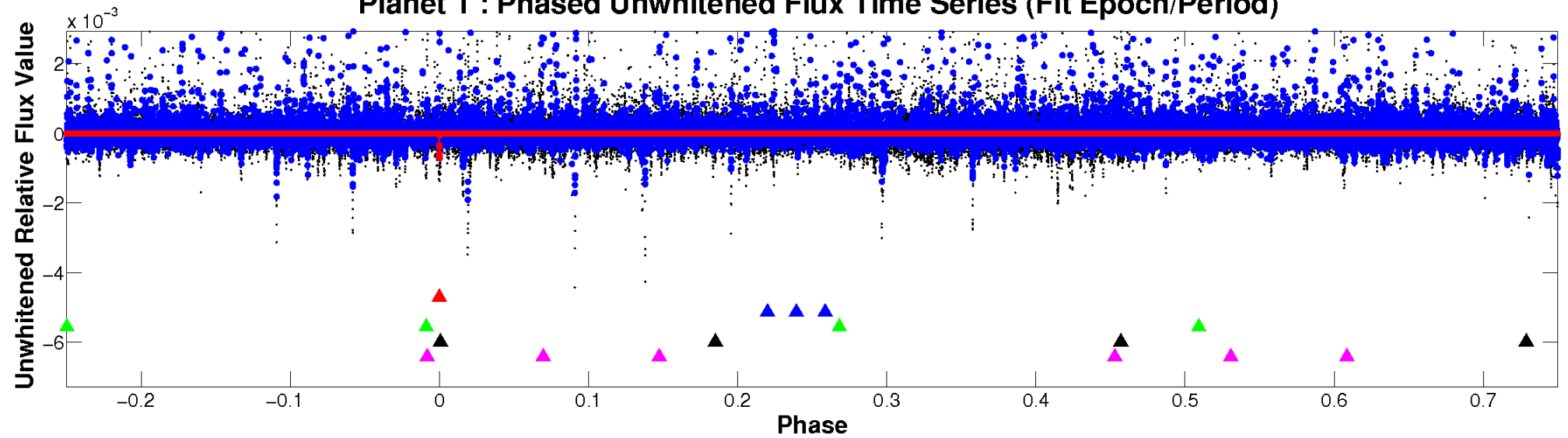
# ALT Odd/Even

TCE 010080792-01

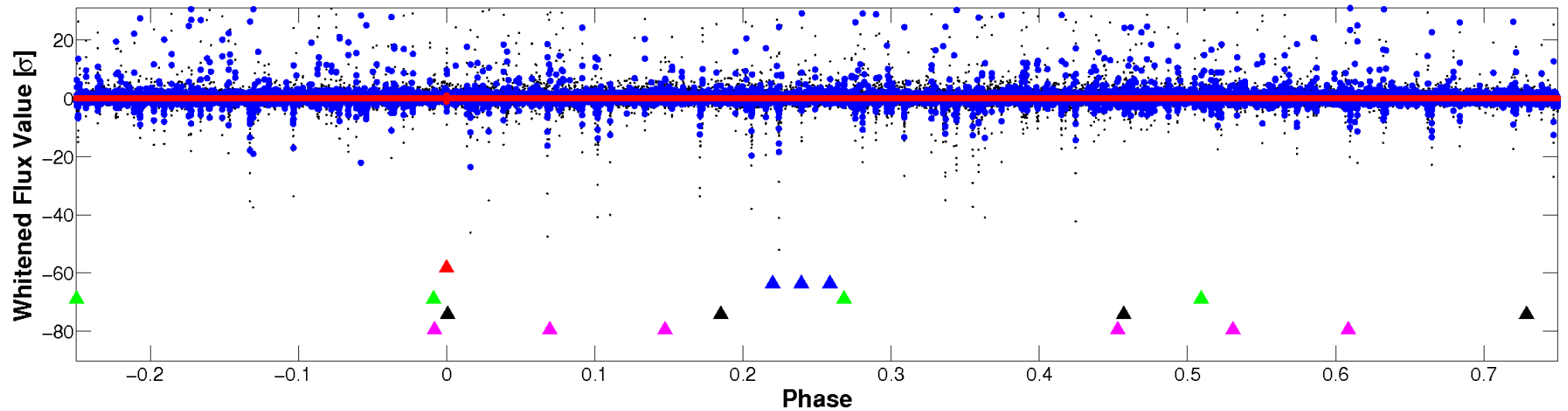


# Non-Whitened Vs. Whitened Light Curve

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

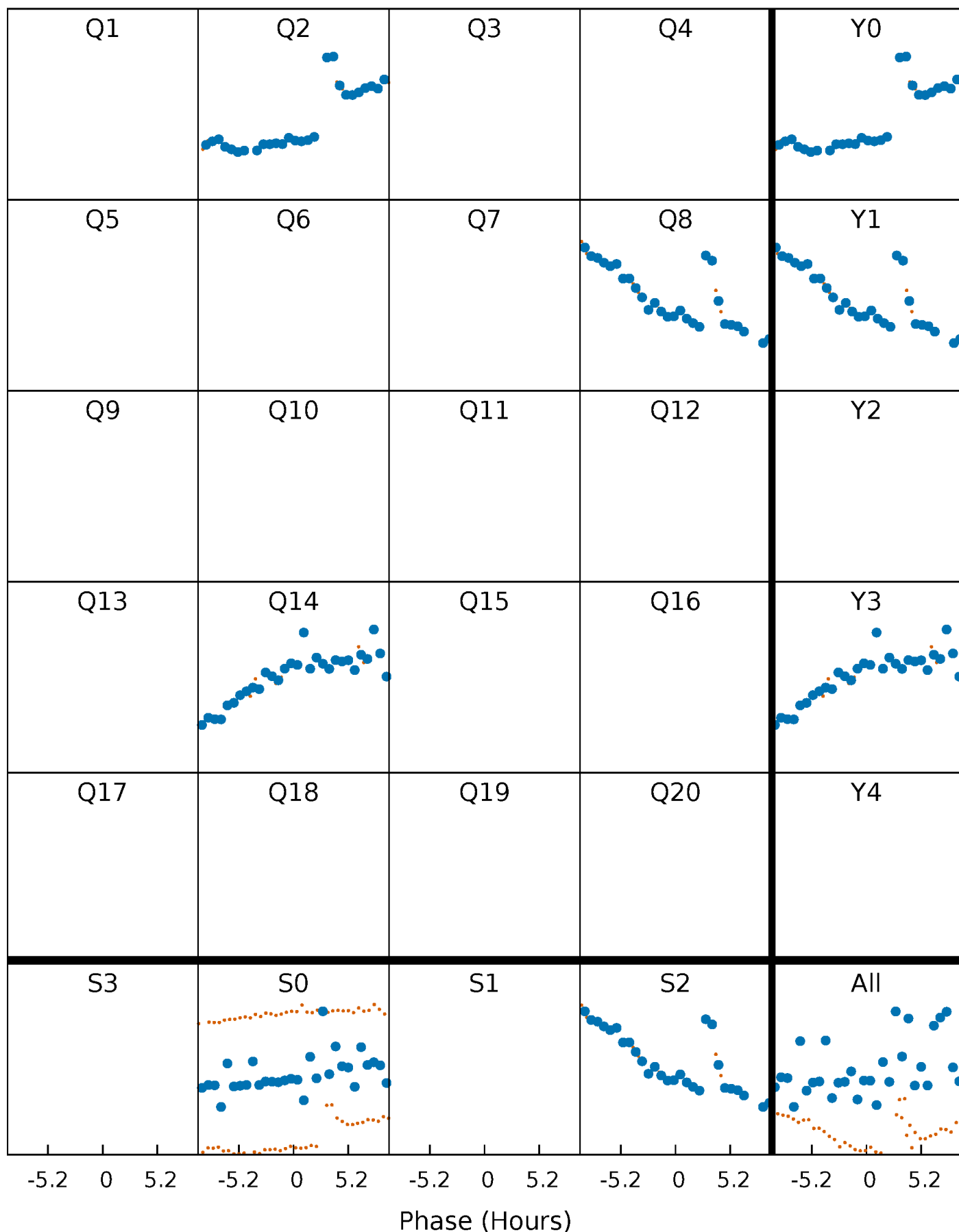


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



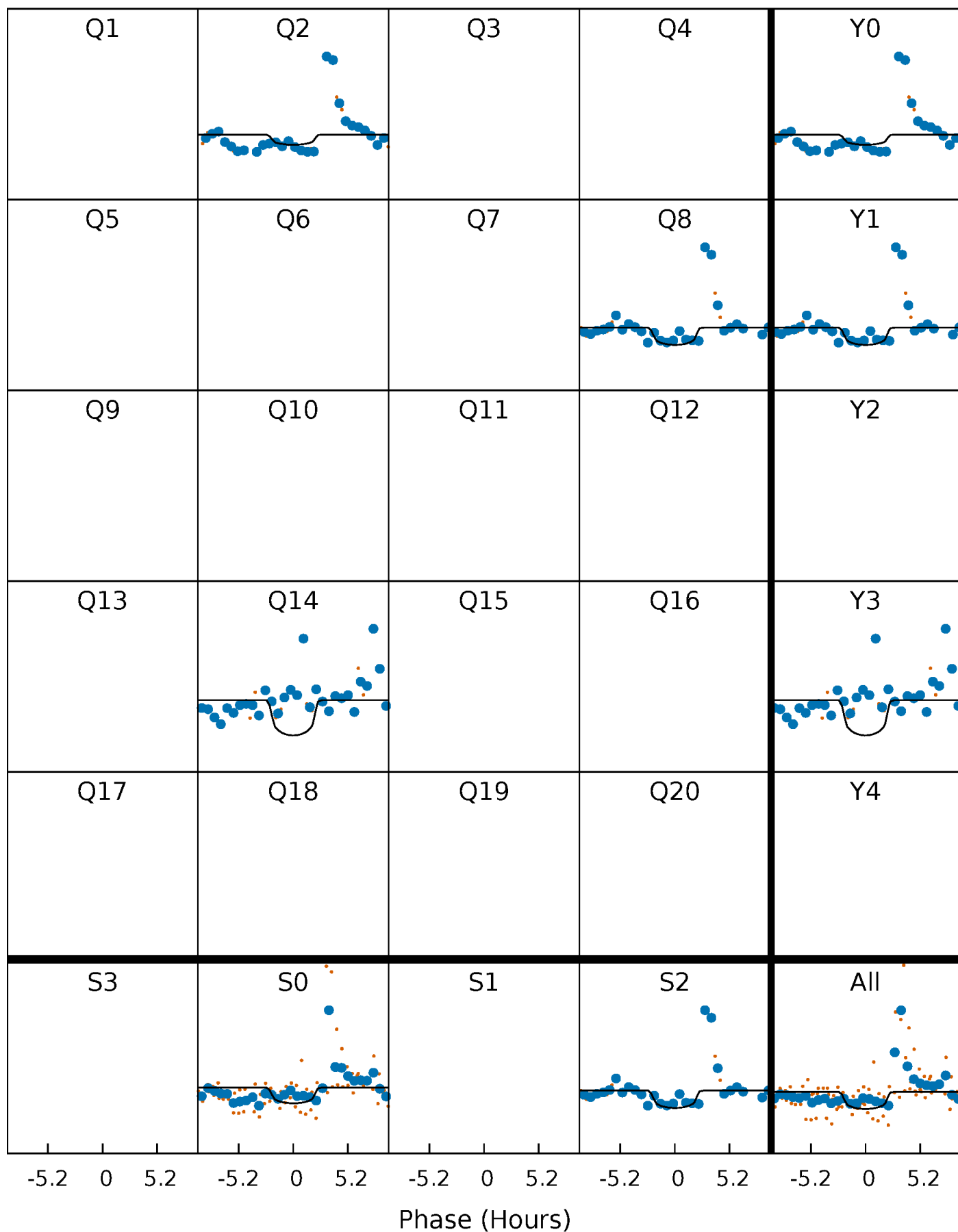
# PDC Quarter-Phased Transit Curves

TCE 010080792-01 P=573.497849 Days  $T_0=179.278708$  (BKJD)



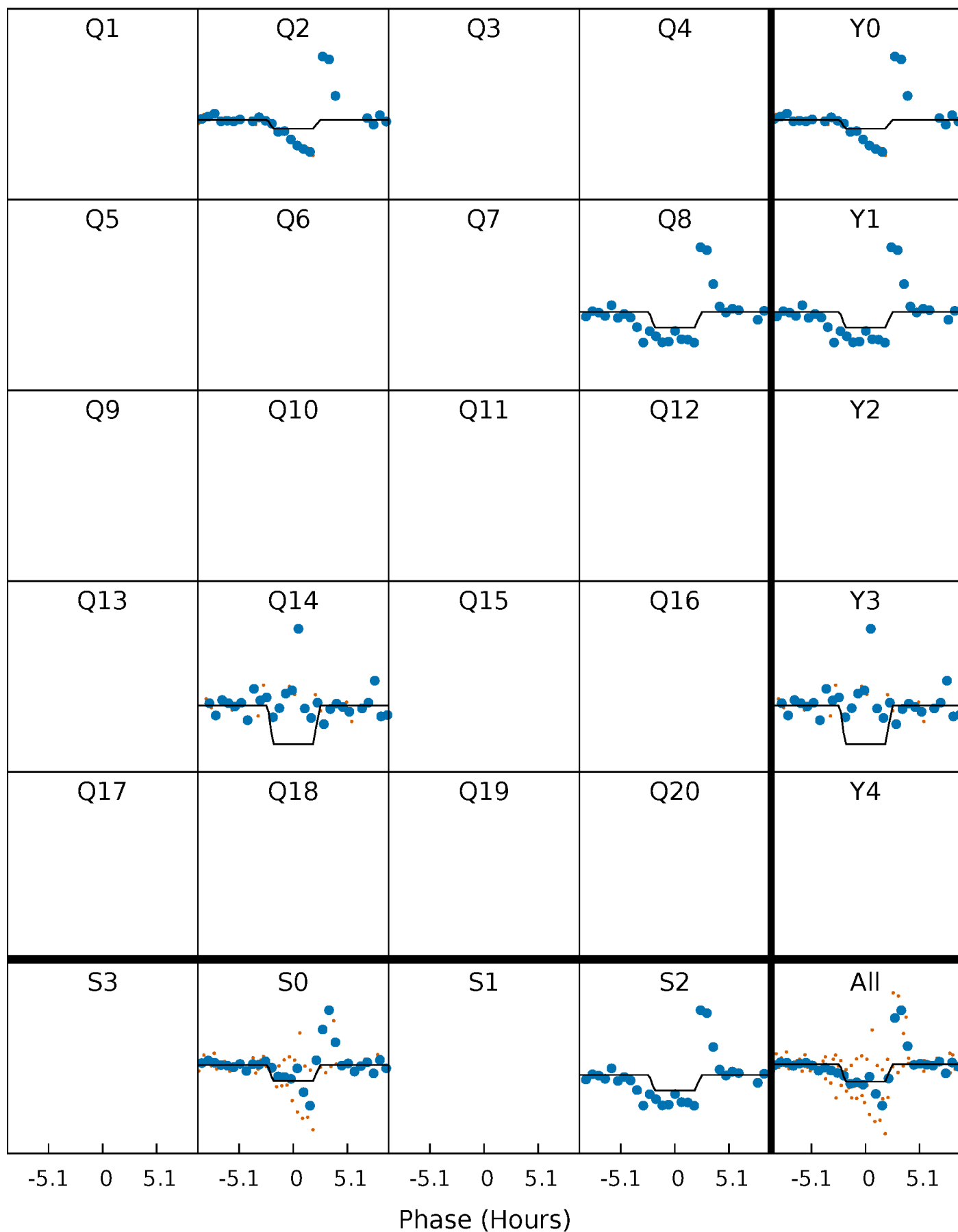
# DV Quarter-Phased Transit Curves

TCE 010080792-01 P=573.497849 Days  $T_0=179.278708$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 010080792-01 P=573.495106 Days  $T_0=179.291672$  (BKJD)

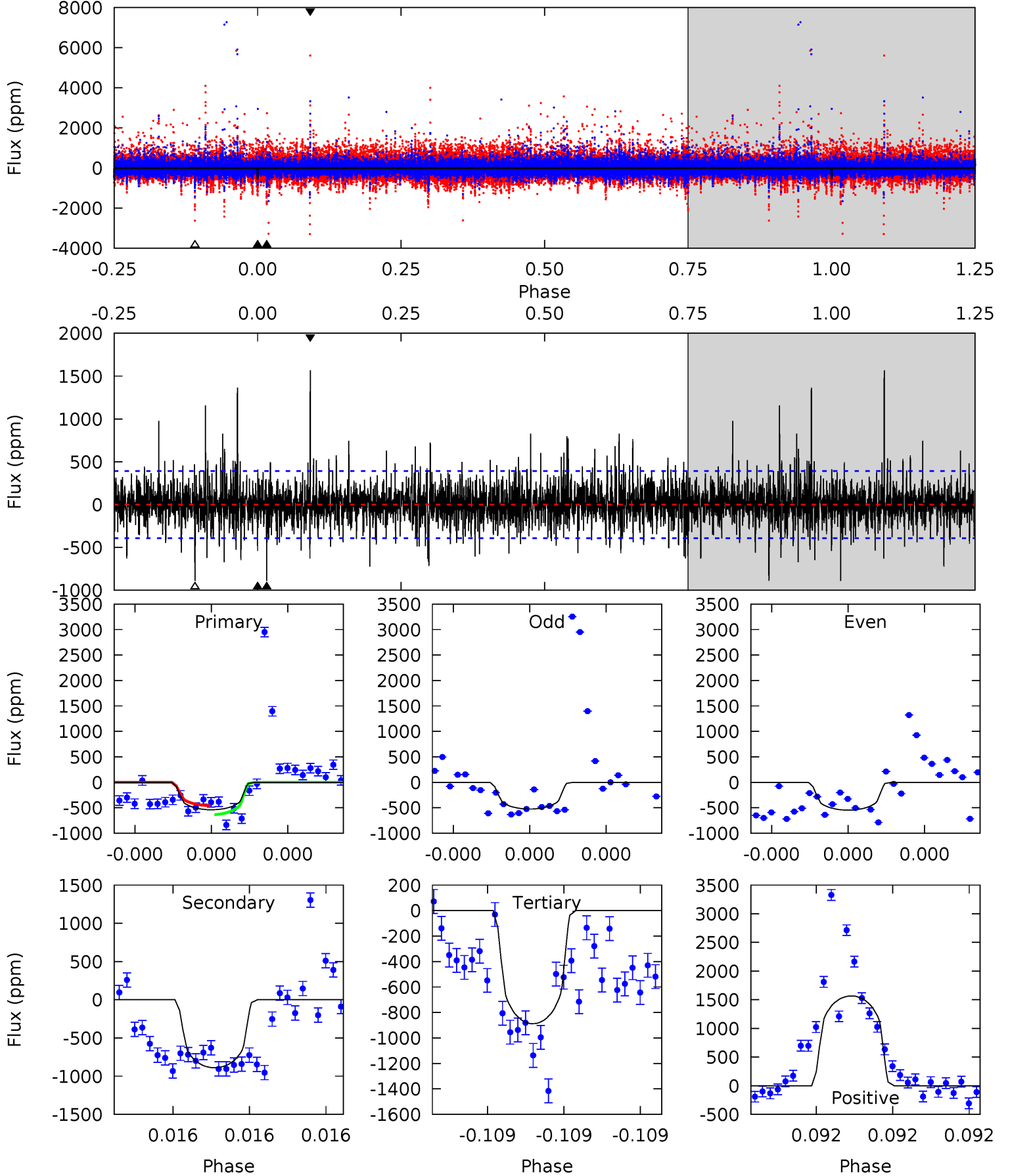




# DV Model-Shift Uniqueness Test

010080792-01, P = 573.497849 Days, E = 179.278708 Days

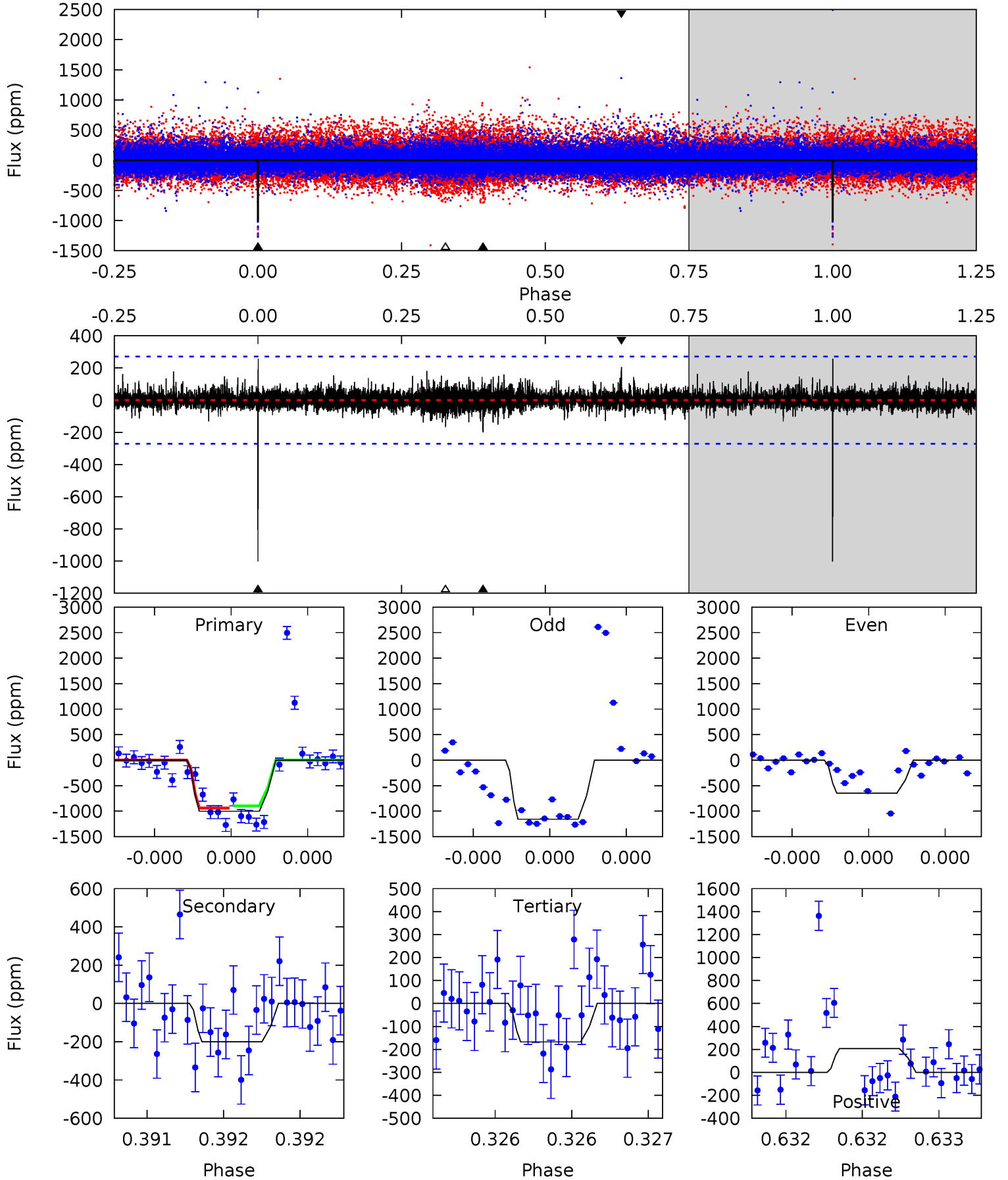
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.73	12.8	12.7	22.5	5.63	3.57	2.46	-5.02	-14.8	0.03	-9.72	0.09	0.87	0.64	1.27



# Alt Model-Shift Uniqueness Test

010080792-01, P = 573.495106 Days, E = 179.291672 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
20.9	4.16	3.49	4.30	5.65	3.60	0.67	17.4	16.6	0.67	-0.14	6.08	0.70	0.21	0.46



### Stellar Parameters For KIC 010080792

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$5043^{+151}_{-136}$	$3.825^{+0.777}_{-0.389}$	$-0.160^{+0.300}_{-0.250}$	$1.908^{+1.201}_{-1.201}$	$0.889^{+0.237}_{-0.158}$	$0.180^{+2.400}_{-0.143}$
	+3%/-3%	+20%/-10%	+188%/-156%	+63%/-63%	+27%/-18%	+1332%/-79%
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 010080792-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-890 \pm 70$	$7.27^{+8.07}_{-4.80}$	$373^{+64}_{-71}$	$4539^{+2718}_{-867}$	$15926^{+120183}_{-12319}$
Alt.	$-200 \pm 48$	$7.28^{+7.69}_{-4.95}$	$373^{+62}_{-68}$	$3500^{+1639}_{-588}$	$3491^{+30007}_{-2713}$

$T_{max}$  = 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

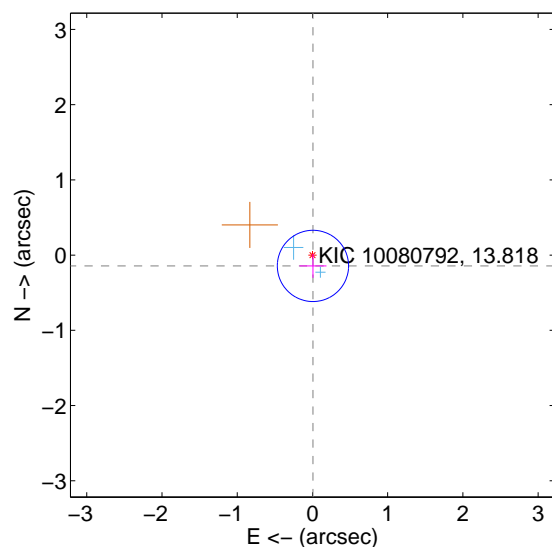
Supplemental centroid analysis for 010080792-01. Kepler magnitude: 13.82. Transit SNR 5.44

There are 2 quarters with good PRF difference image offsets

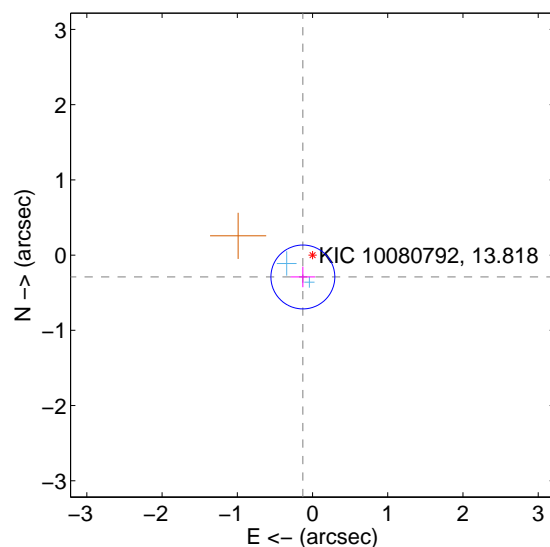
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.144 \pm 0.158$	0.91	$-0.007 \pm 0.179$	$-0.144 \pm 0.158$
PRF-fit source offset from KIC position	$0.318 \pm 0.142$	2.25	$0.128 \pm 0.163$	$-0.291 \pm 0.137$
photometric centroid source offset	$0.55 \pm 0.71$	0.78	$0.30 \pm 0.72$	$-0.47 \pm 0.71$

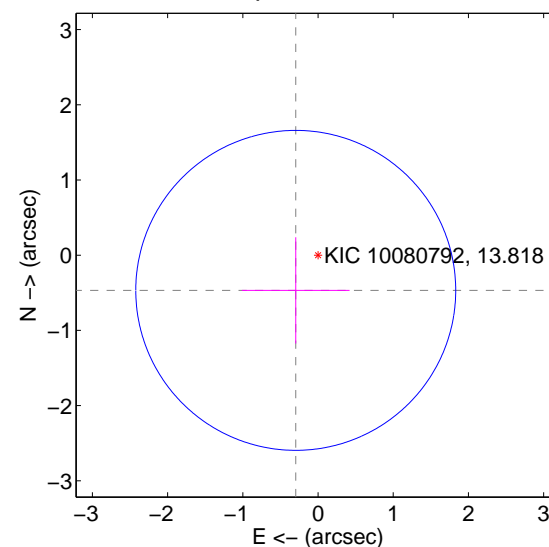
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

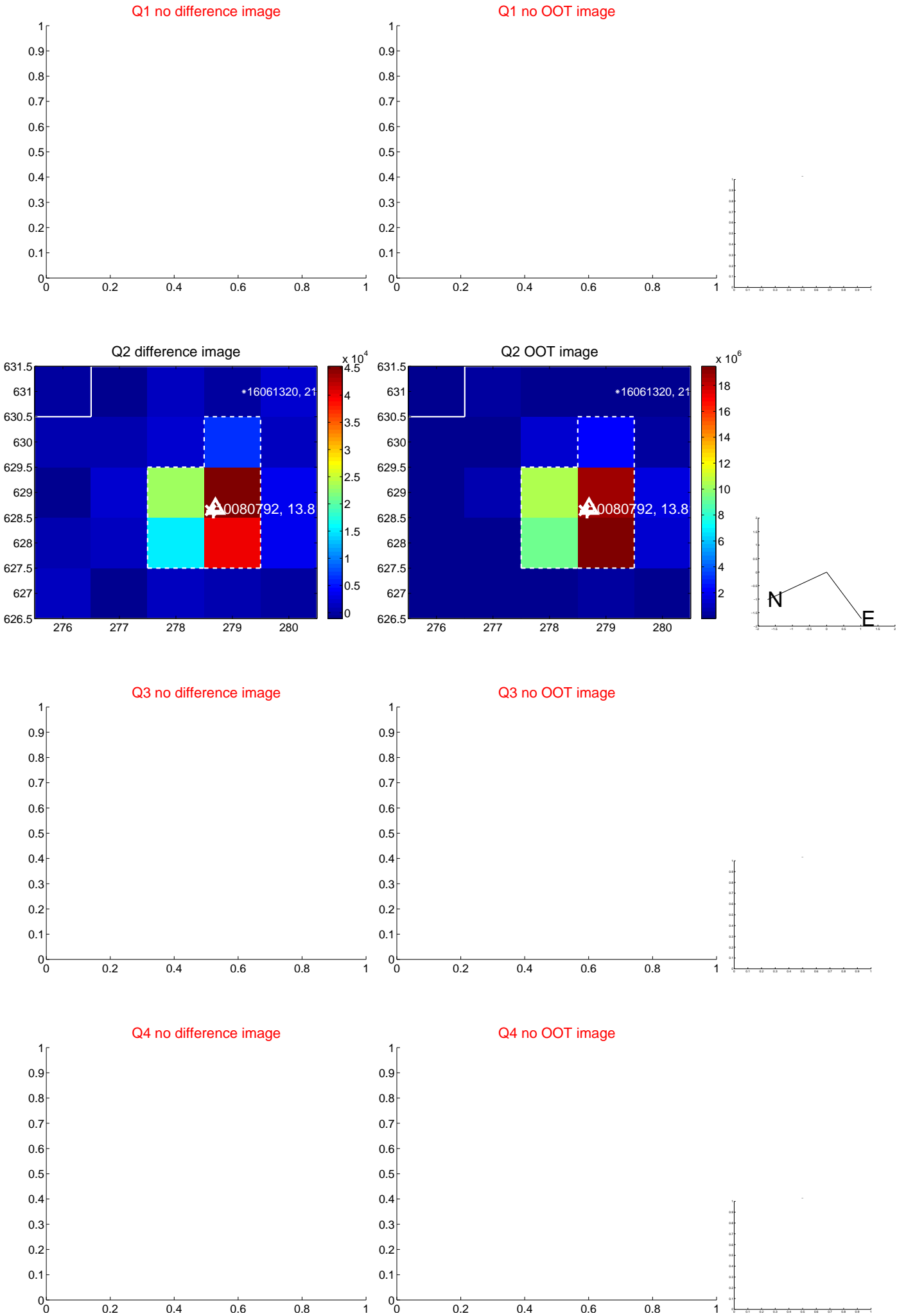


offset from photometric centroids

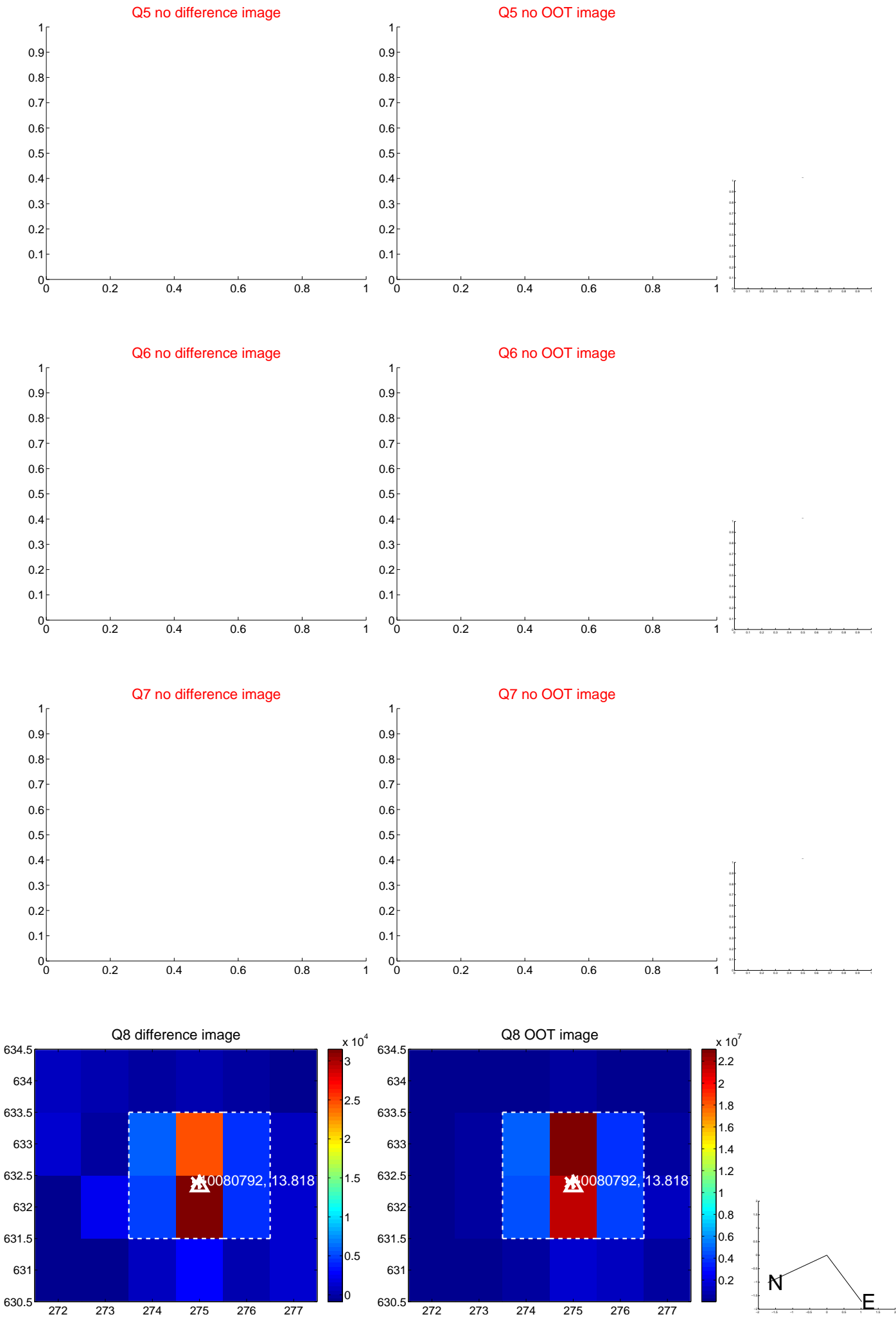


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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



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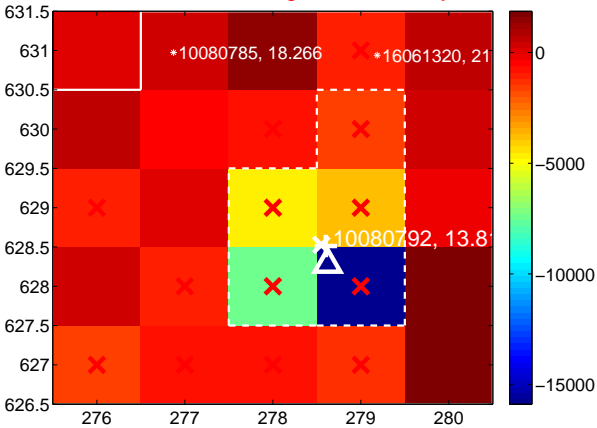
Q13 no difference image



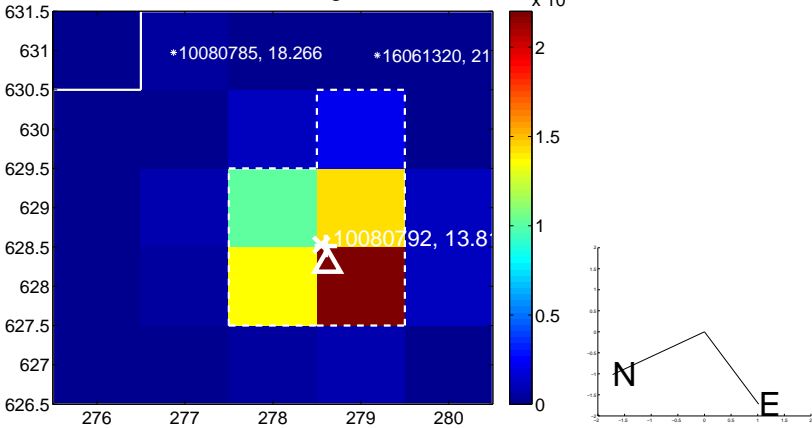
Q13 no OOT image



Q14 difference image. Poor Quality



Q14 OOT image



Q15 no difference image



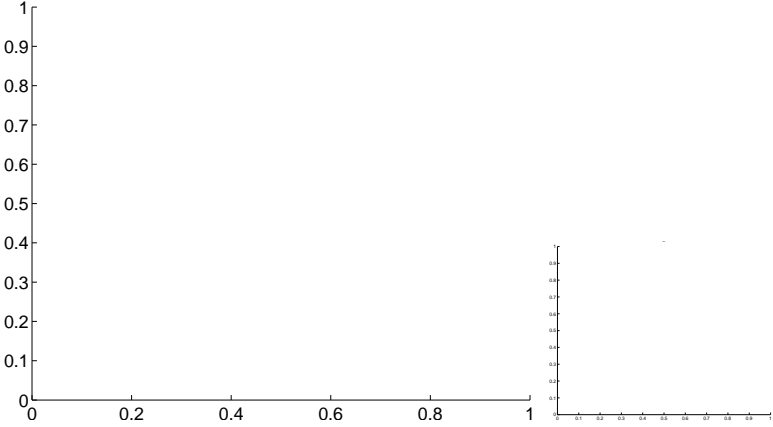
Q15 no OOT image



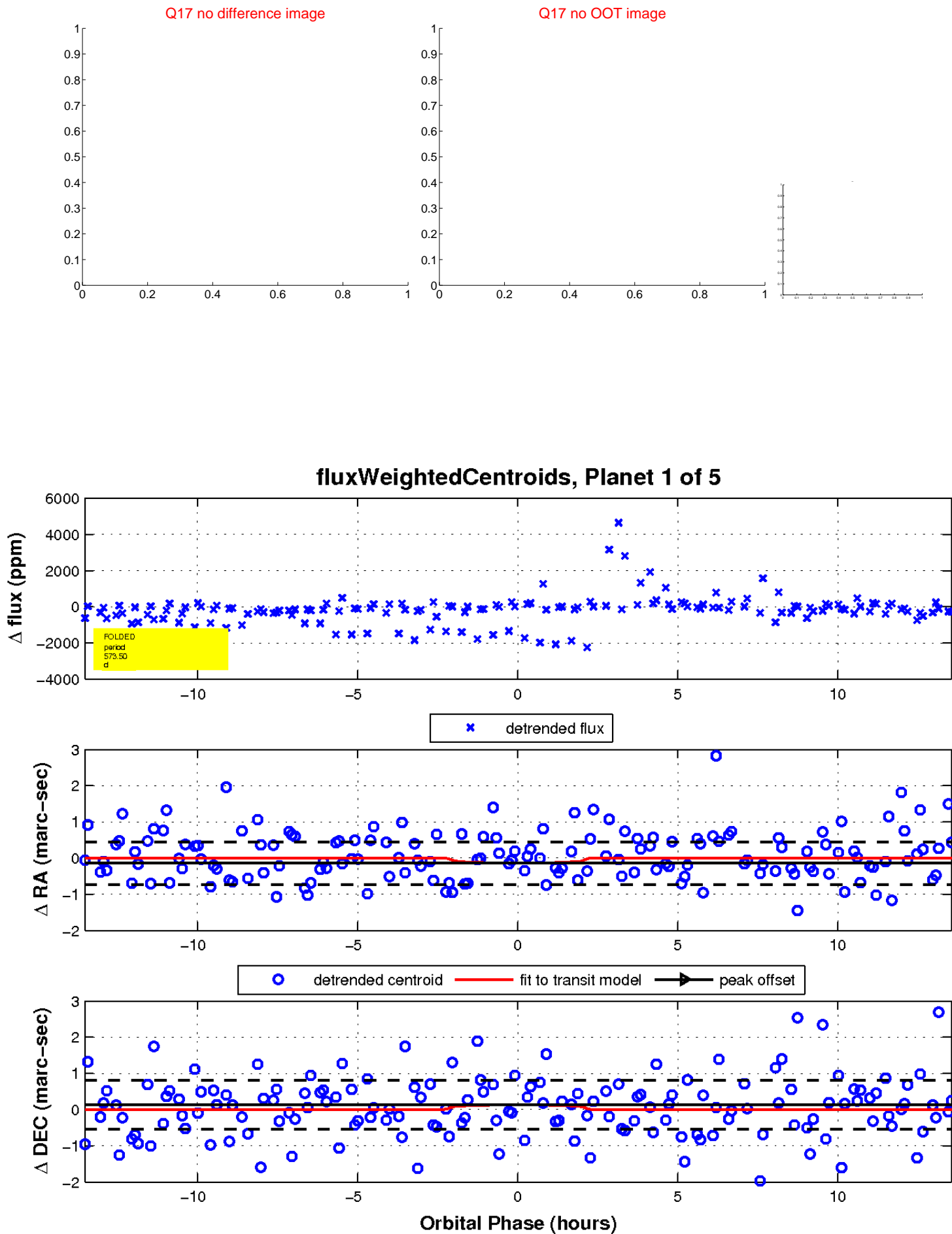
Q16 no difference image



Q16 no OOT image

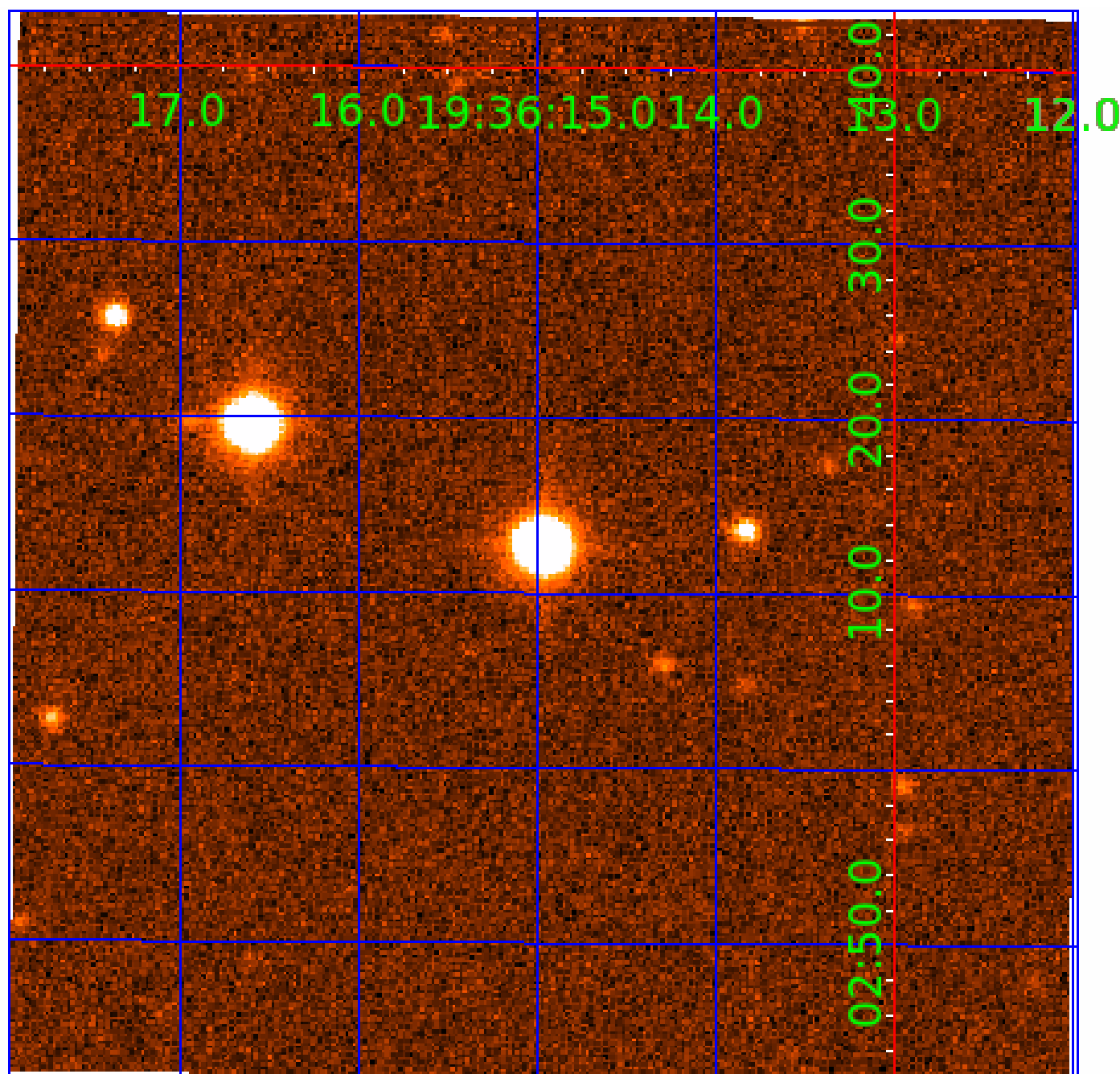


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UKIRT Image

Declination



# KIC 010080792

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010080792-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010080792-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010080792-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
010080792-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS

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

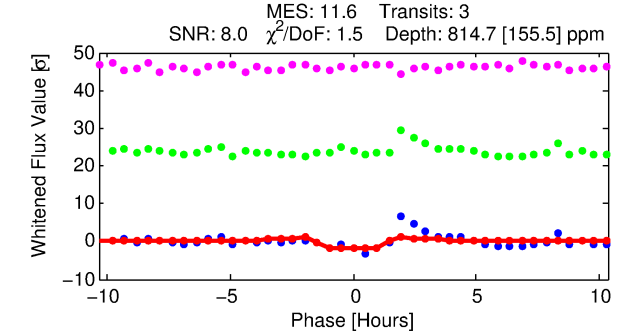
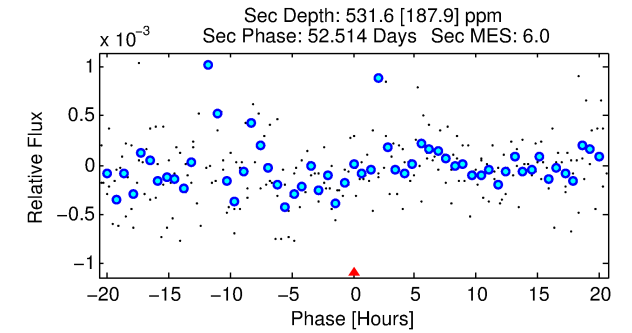
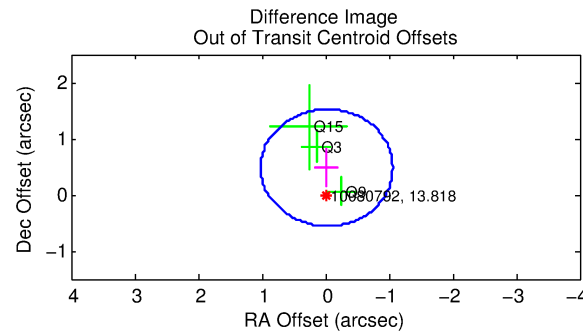
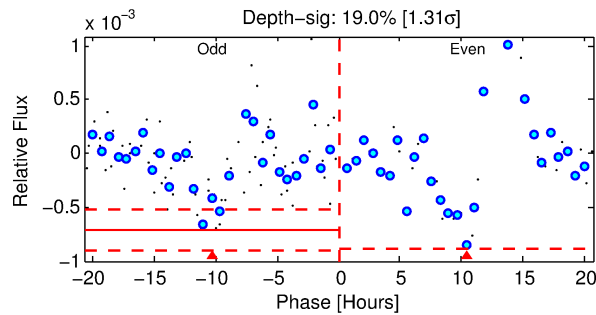
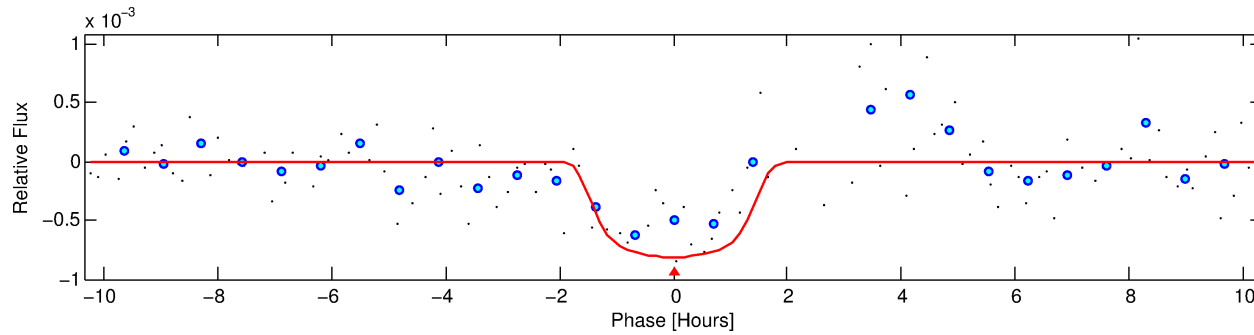
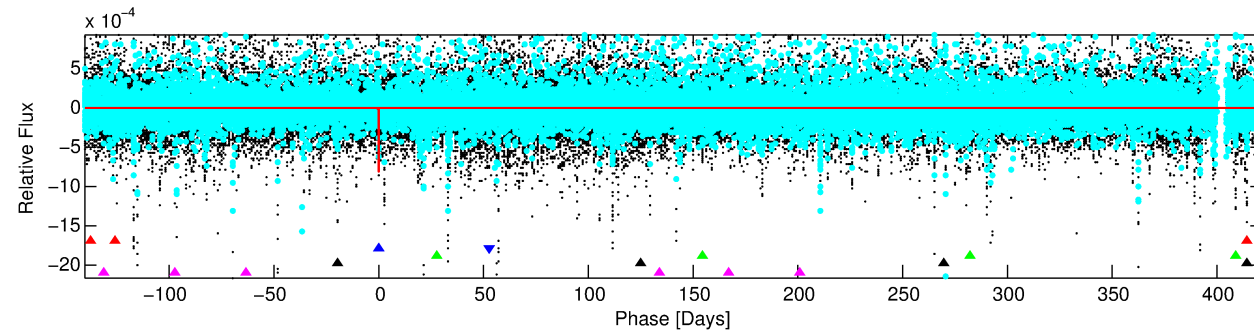
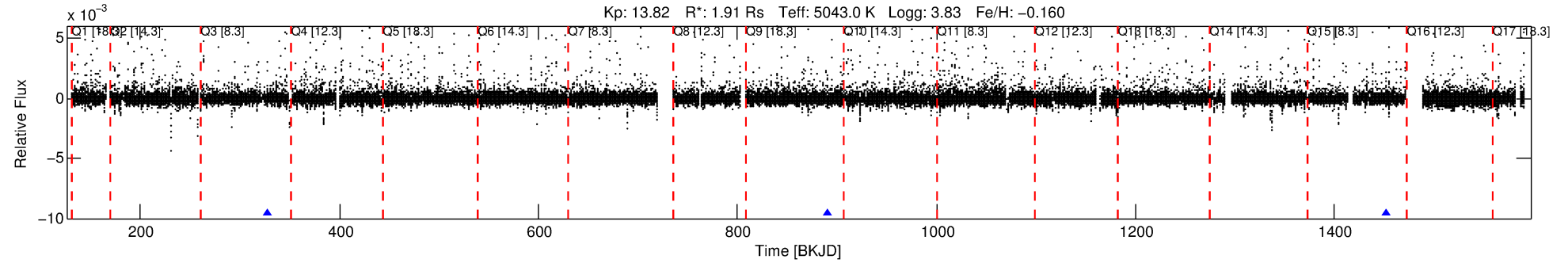
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 010080792-02

No Significant Match Found

# DV One-Page Summary

KIC: 10080792 Candidate: 2 of 5 Period: 562.407 d



## DV Fit Results:

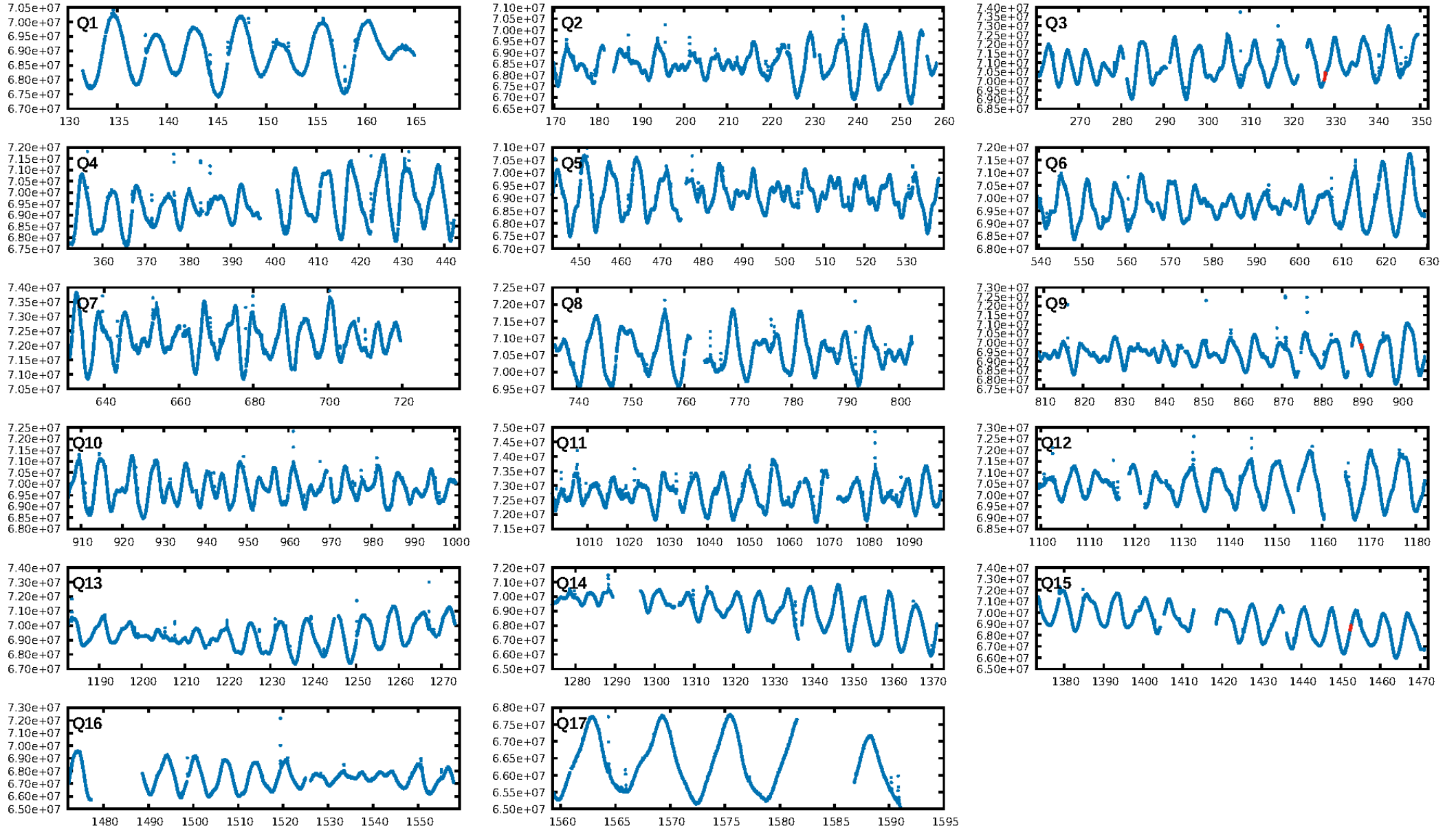
Period = 562.40662 [0.00697] d  
Epoch = 327.6607 [0.0087] BKJD  
Rp/R\* = 0.0319 [0.0081]  
a/R\* = 618.26 [523.03]  
b = 0.90 [0.17]  
Seff = 1.28 [1.63]  
Teff = 271 [86] K  
Rp = 6.65 [4.51] Re  
a = 1.2817 [0.9346] AU  
Ag = 10863.12 [15289.35] [0.71σ]  
Teffp = 4285 [675] K [5.90σ]

## DV Diagnostic Results:

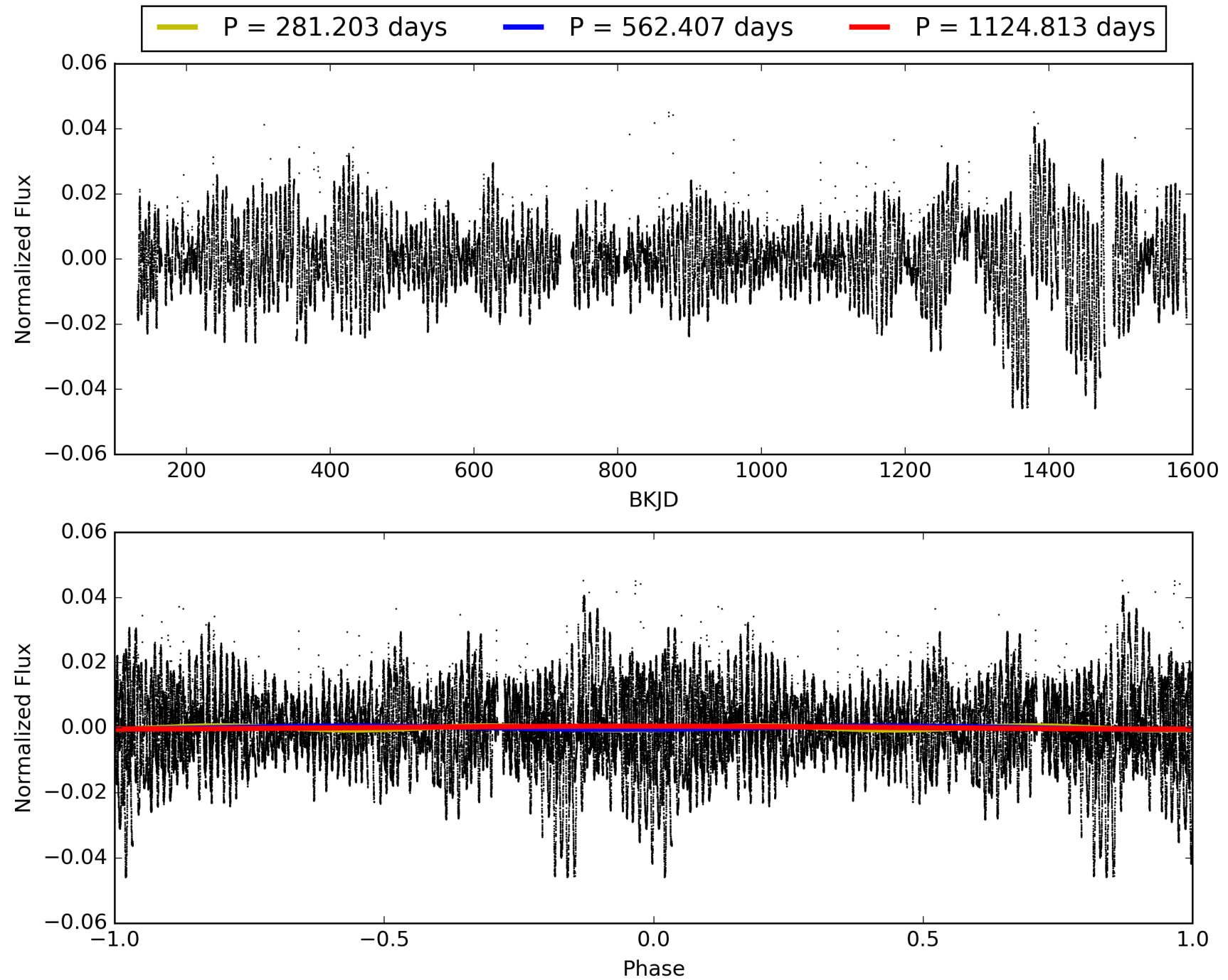
ShortPeriod-sig: 100.0% [556.52σ]  
LongPeriod-sig: 100.0% [46.69σ]  
ModelChiSquare2-sig: 2.1%  
ModelChiSquareGof-sig: 40.2%  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [3/3]  
GhostDiagnostic-chr: 1.564  
Centroid-sig: 26.4%  
Centroid-so: 1.002 arcsec [1.31σ]  
OotOffset-rm: 0.482 arcsec [1.39σ]  
KicOffset-rm: 0.334 arcsec [0.75σ]  
OotOffset-st: 0/2/0/1 [3]  
KicOffset-st: 0/2/0/1 [3]  
DiffImageQuality-fgm: 0.67 [2/3]  
DiffImageOverlap-fno: 1.00 [3/3]



# TCE 010080792-02, PDC Light Curves

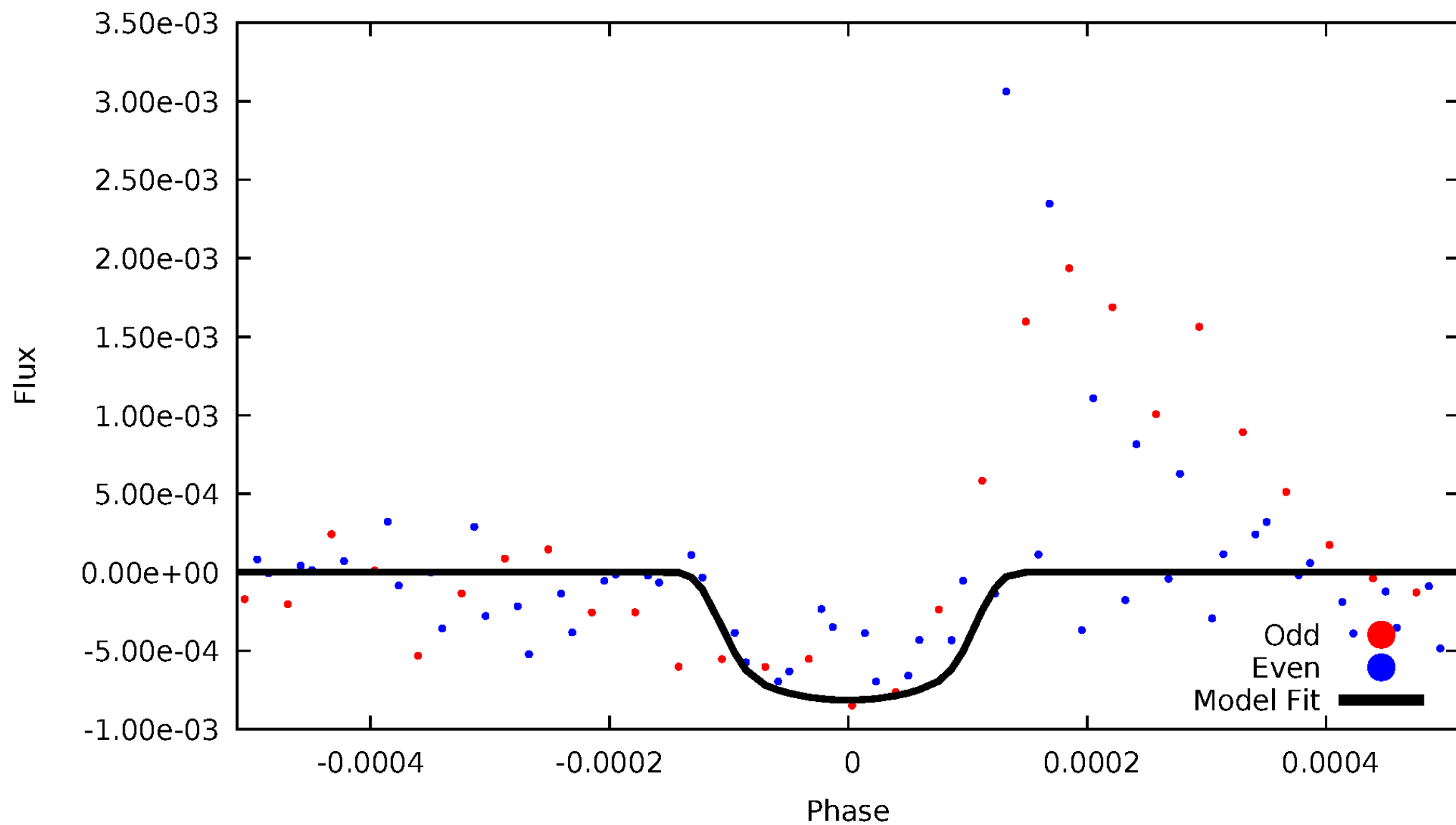


TCE 010080792-02



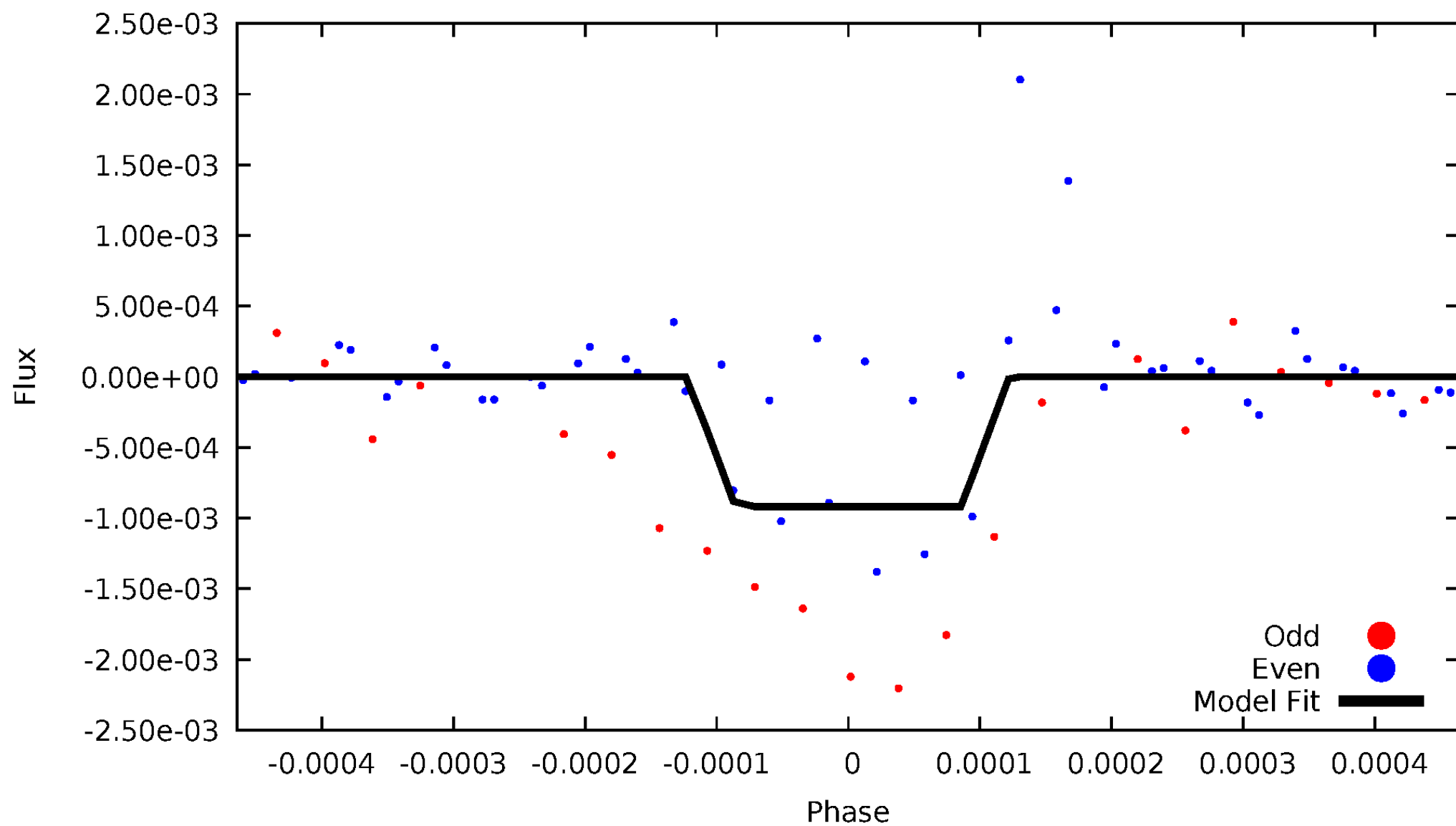
# DV Odd/Even

TCE 010080792-02



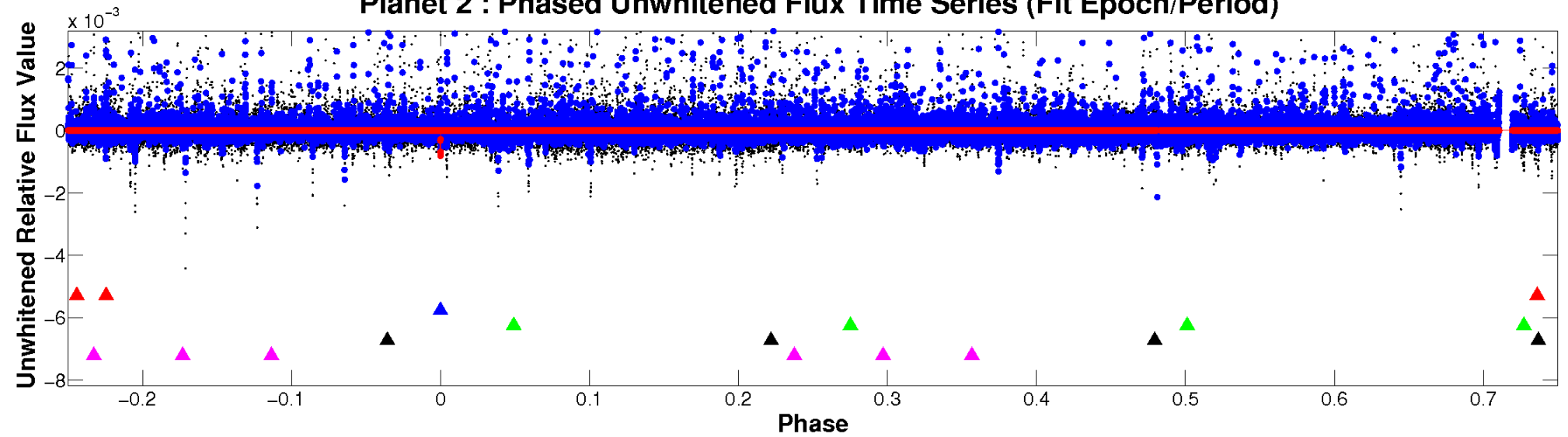
# ALT Odd/Even

TCE 010080792-02

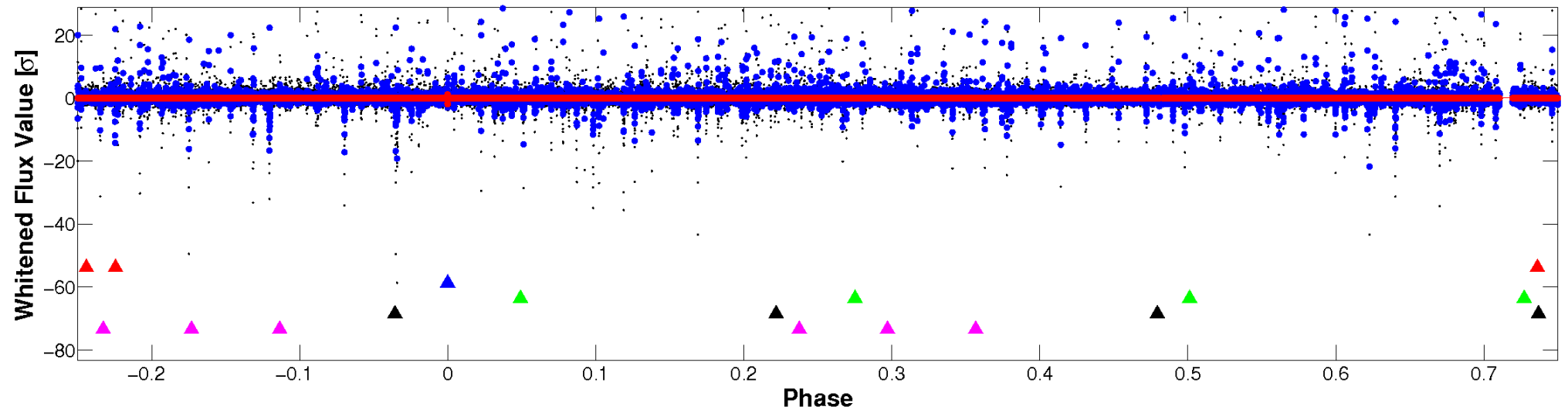


# Non-Whitened Vs. Whitened Light Curve

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

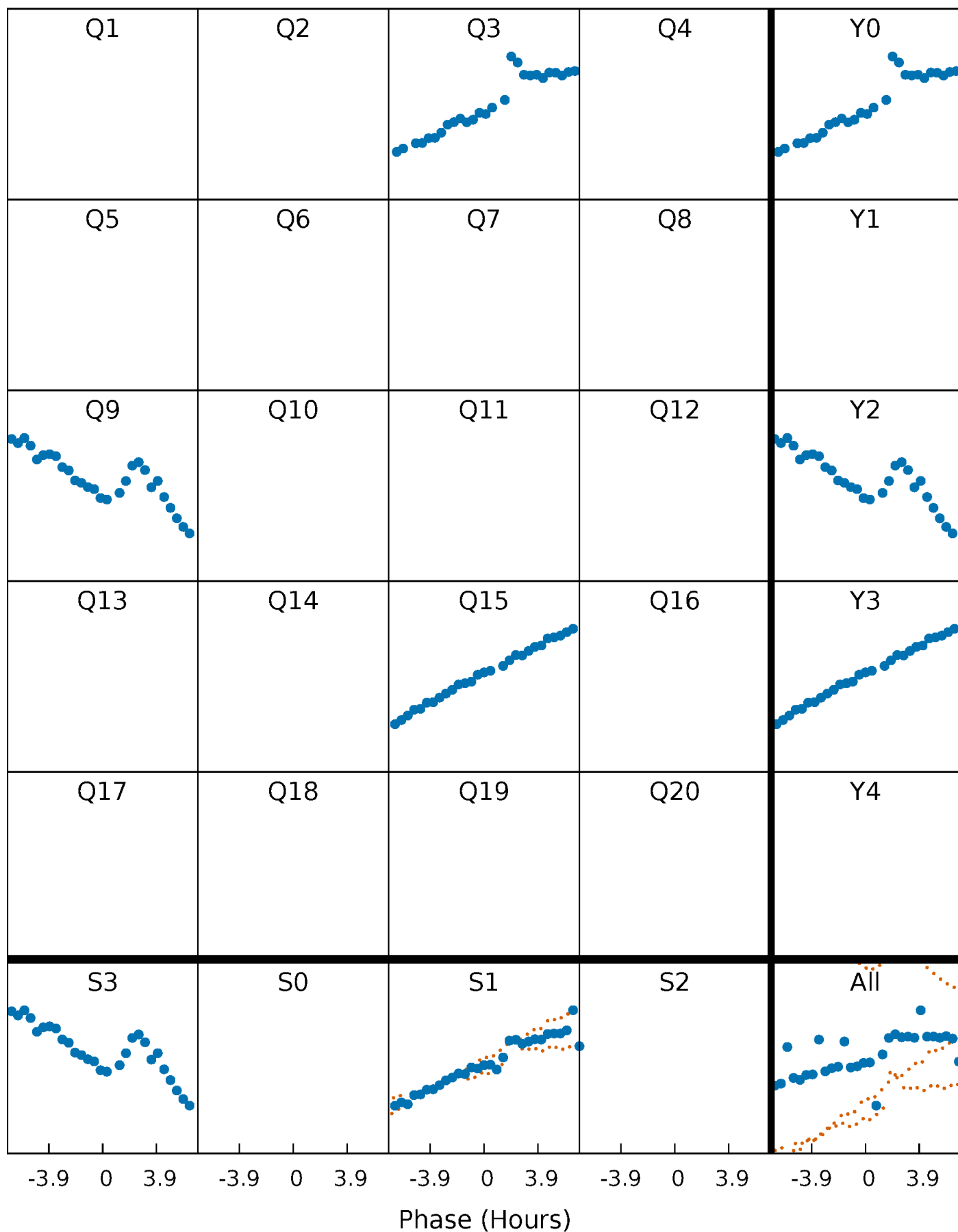


## Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



# PDC Quarter-Phased Transit Curves

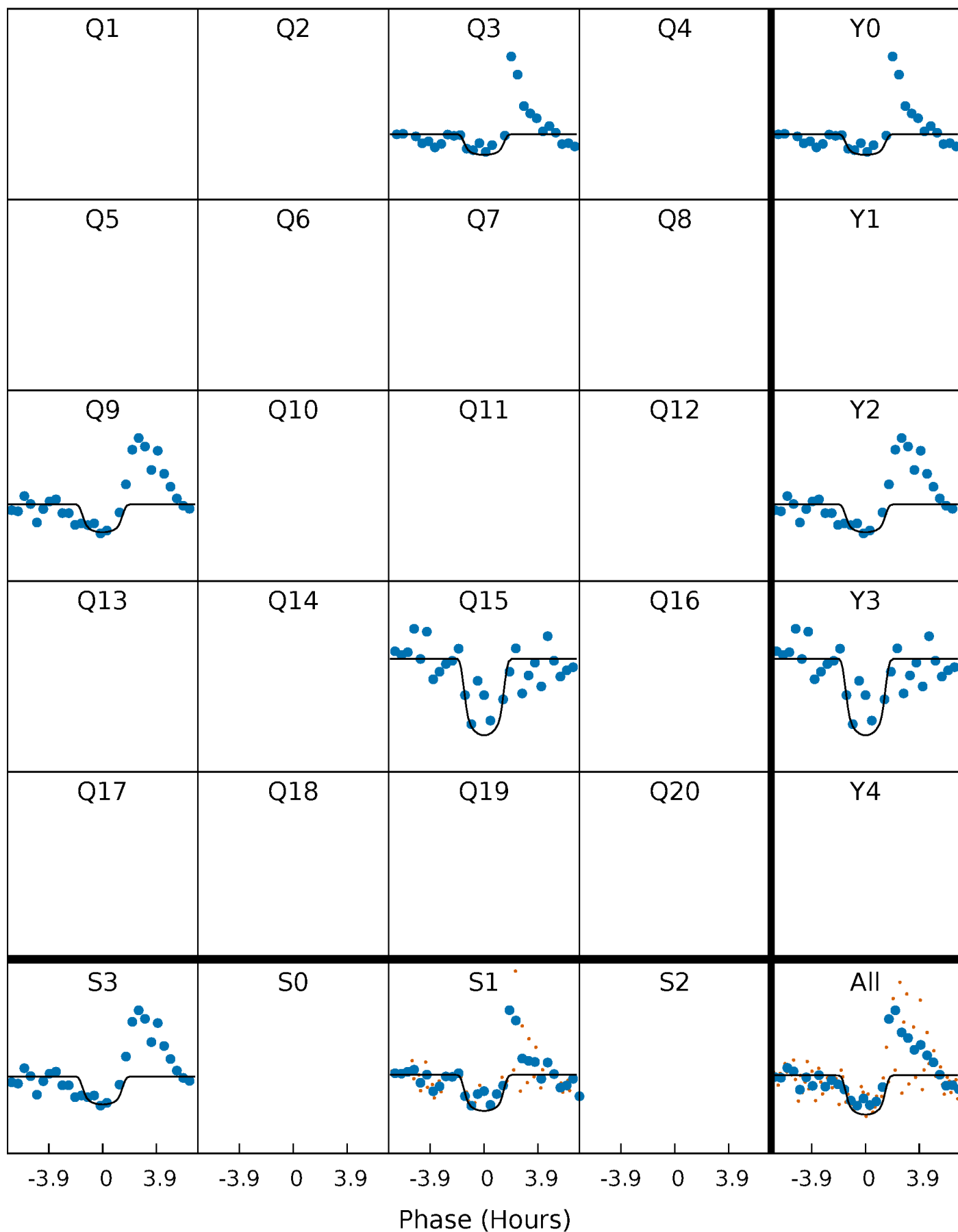
TCE 010080792-02     $P=562.406621$  Days     $T_0=327.660683$  (BKJD)





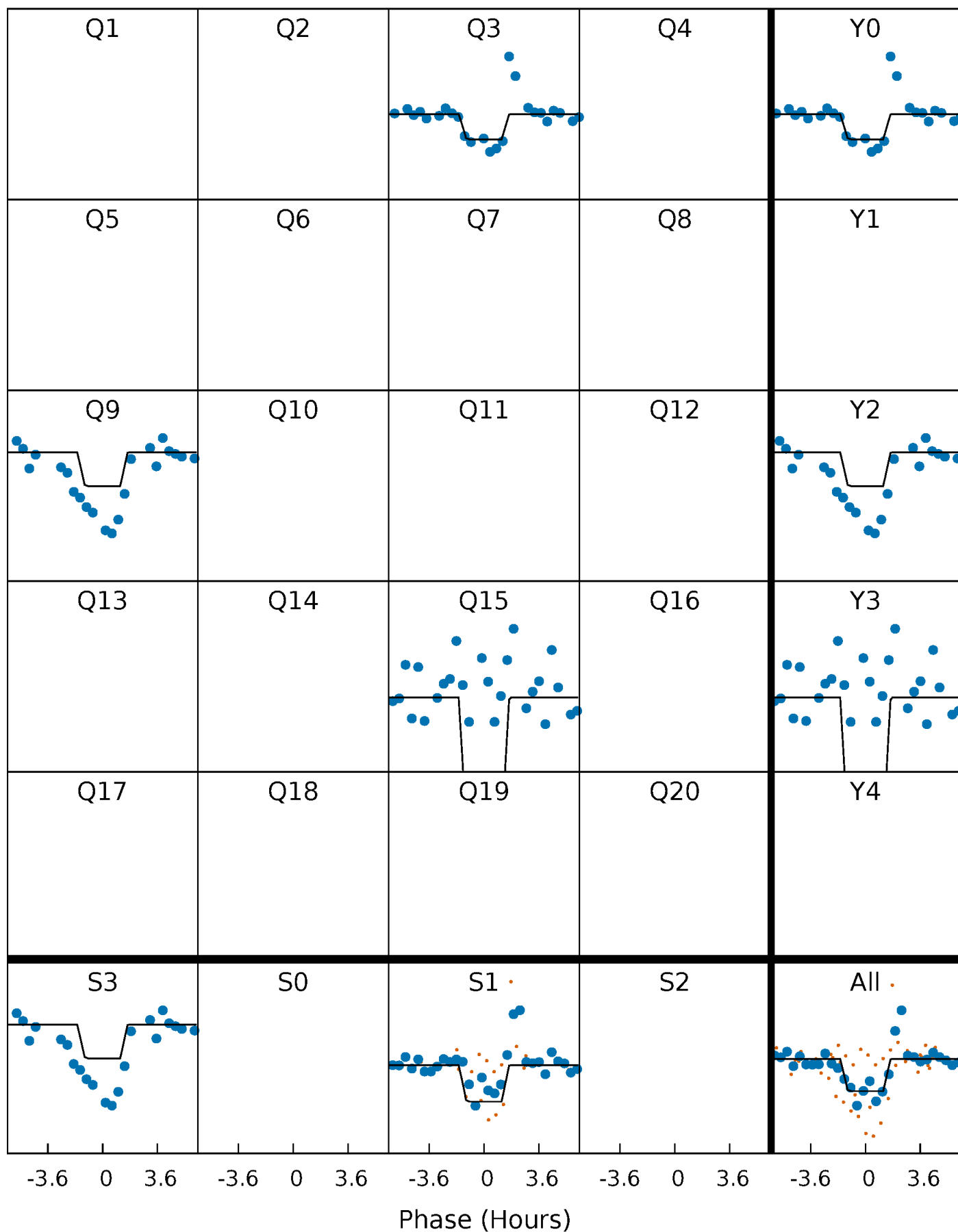
# DV Quarter-Phased Transit Curves

TCE 010080792-02     $P=562.406621$  Days     $T_0=327.660683$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

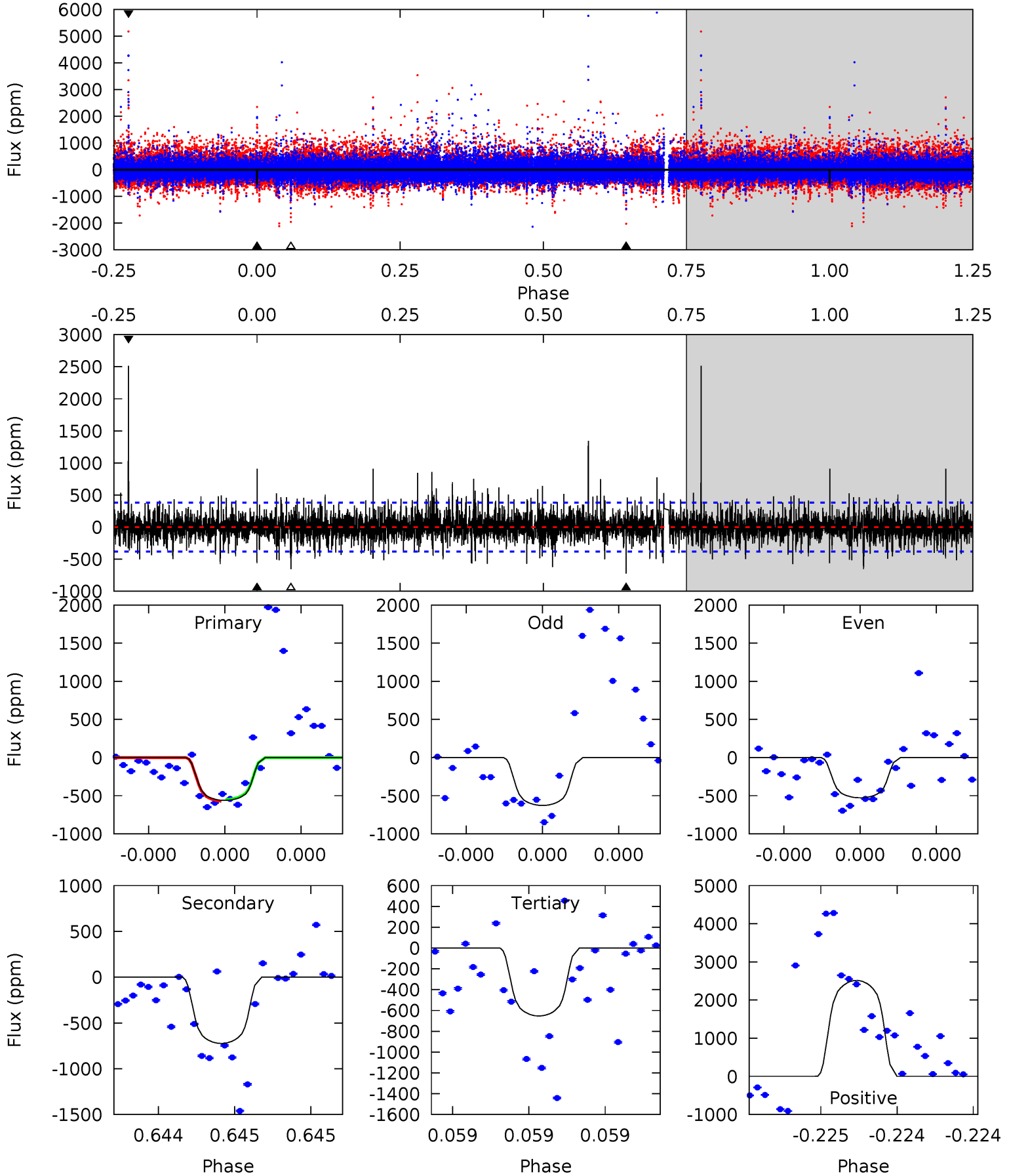
TCE 010080792-02 P=562.406494 Days  $T_0=327.661594$  (BKJD)



# DV Model-Shift Uniqueness Test

010080792-02, P = 562.406621 Days, E = 327.660683 Days

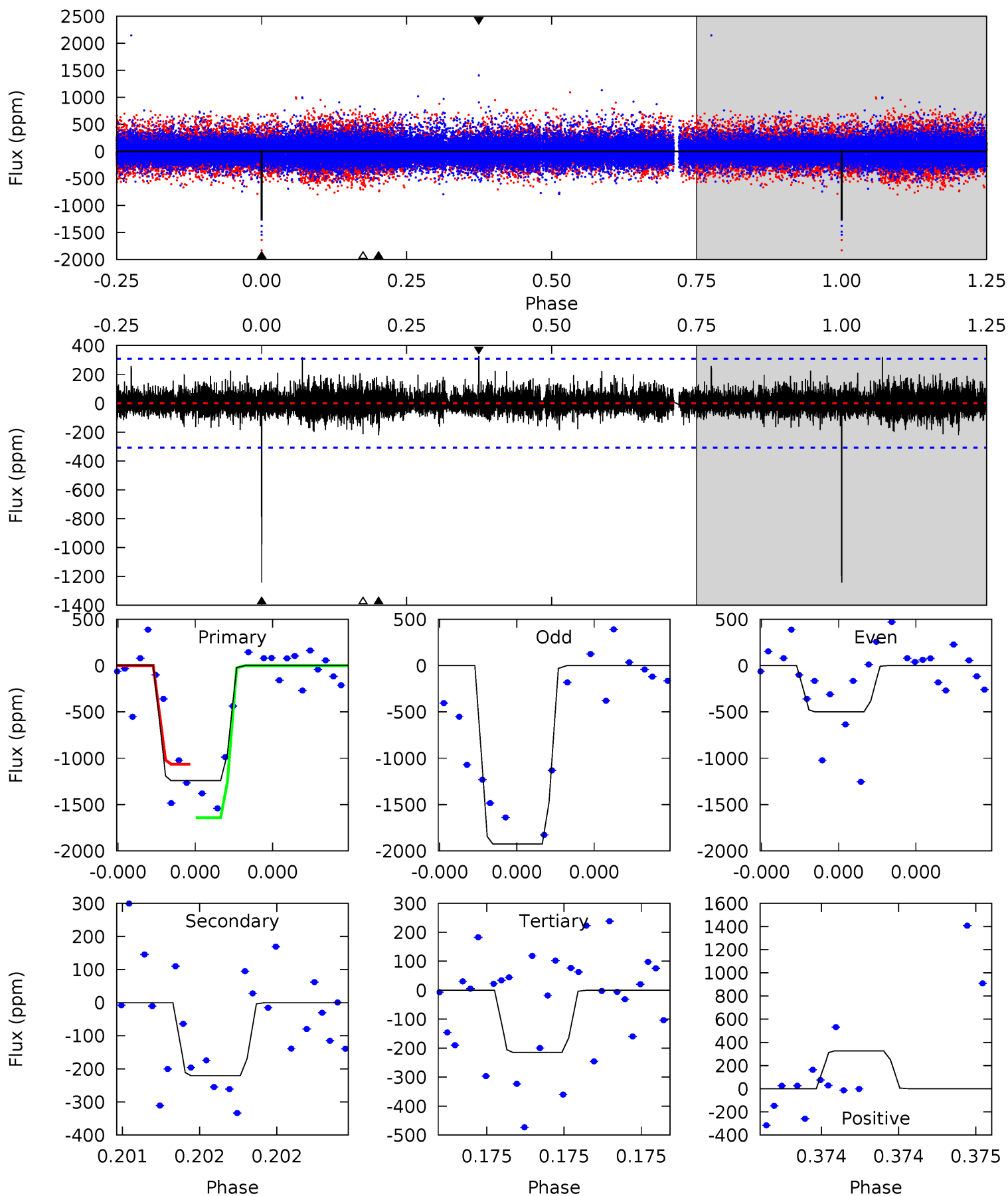
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.33	10.7	9.68	37.3	5.67	3.63	2.11	-1.35	-28.9	1.05	-26.5	0.38	1.06	0.78	0.17



# Alt Model-Shift Uniqueness Test

010080792-02, P = 562.406494 Days, E = 327.661594 Days

Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.1	4.10	3.98	6.05	5.71	3.69	0.84	19.1	17.0	0.12	-1.96	13.9	0.91	0.21	5.27



### Stellar Parameters For KIC 010080792

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$5043^{+151}_{-136}$	$3.825^{+0.777}_{-0.389}$	$-0.160^{+0.300}_{-0.250}$	$1.908^{+1.201}_{-1.201}$	$0.889^{+0.237}_{-0.158}$	$0.180^{+2.400}_{-0.143}$
	+3%/-3%	+20%/-10%	+188%/-156%	+63%/-63%	+27%/-18%	+1332%/-79%
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 010080792-02 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$-724 \pm 67$	$6.36^{+3.22}_{-2.62}$	$379^{+65}_{-73}$	$4719^{+666}_{-426}$	$17001^{+29281}_{-9621}$
Alt.	$-221 \pm 54$	$6.04^{+3.24}_{-2.36}$	$376^{+65}_{-67}$	$3811^{+495}_{-342}$	$5133^{+9648}_{-3065}$

$T_{\text{max}}$  = 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

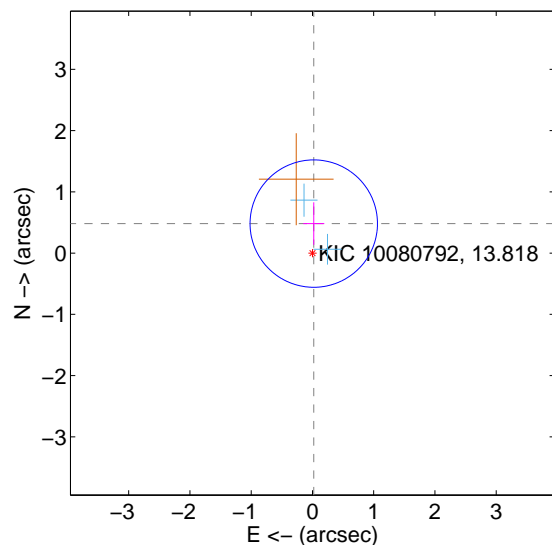
Supplemental centroid analysis for 010080792-02. Kepler magnitude: 13.82. Transit SNR 8.00

There are 2 quarters with good PRF difference image offsets

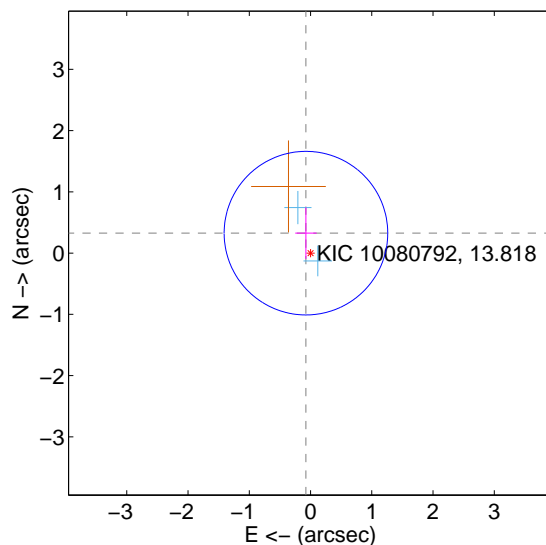
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.482 \pm 0.347$	1.39	$-0.022 \pm 0.172$	$0.482 \pm 0.347$
PRF-fit source offset from KIC position	$0.334 \pm 0.445$	0.75	$0.075 \pm 0.175$	$0.325 \pm 0.420$
photometric centroid source offset	$1.00 \pm 0.76$	1.31	$0.78 \pm 0.75$	$-0.63 \pm 0.78$

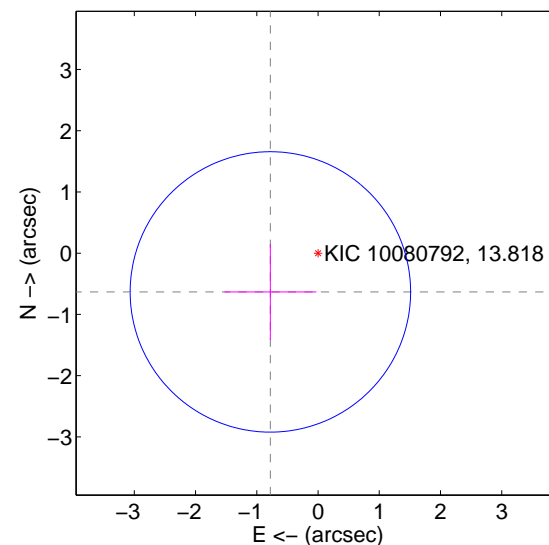
offset from difference PRF-fit to OOT PRF-fit



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.

Q1 no difference image



Q1 no OOT image



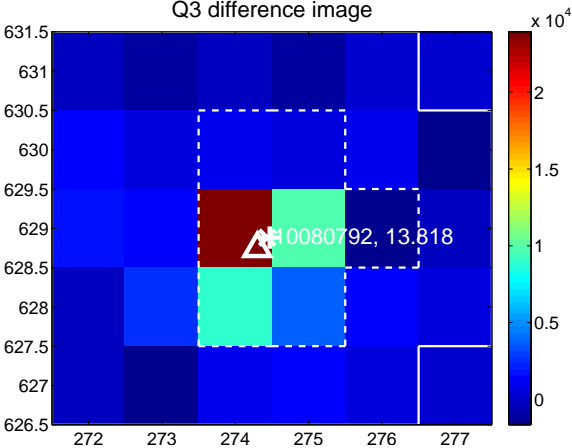
Q2 no difference image



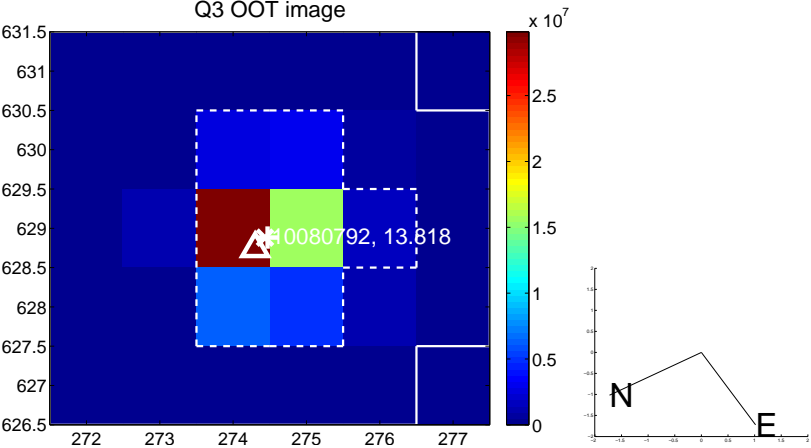
Q2 no OOT image



Q3 difference image



Q3 OOT image



Q4 no difference image



Q4 no OOT image

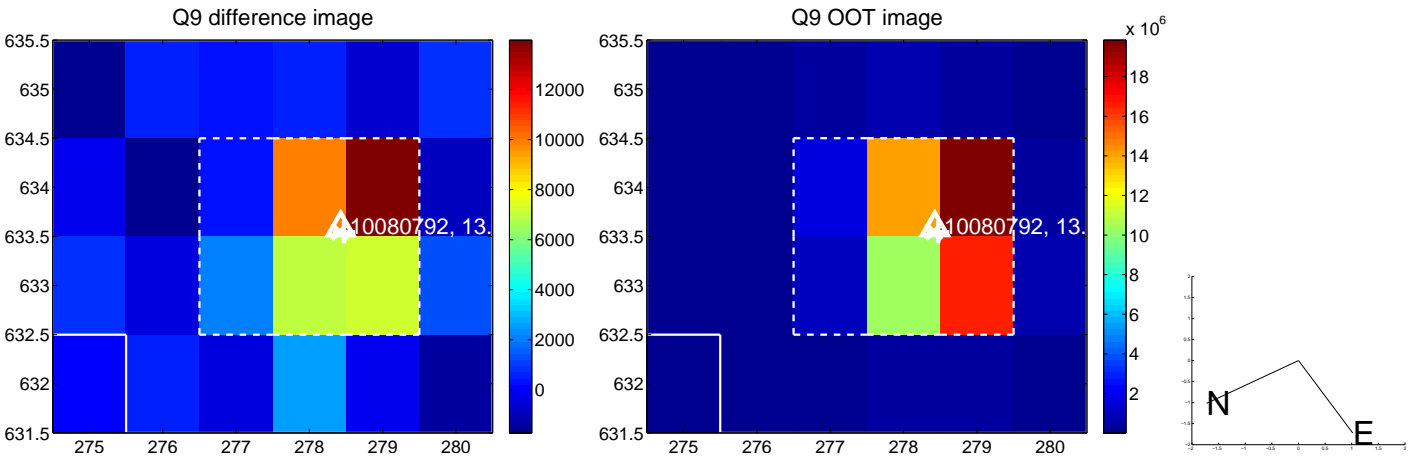


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

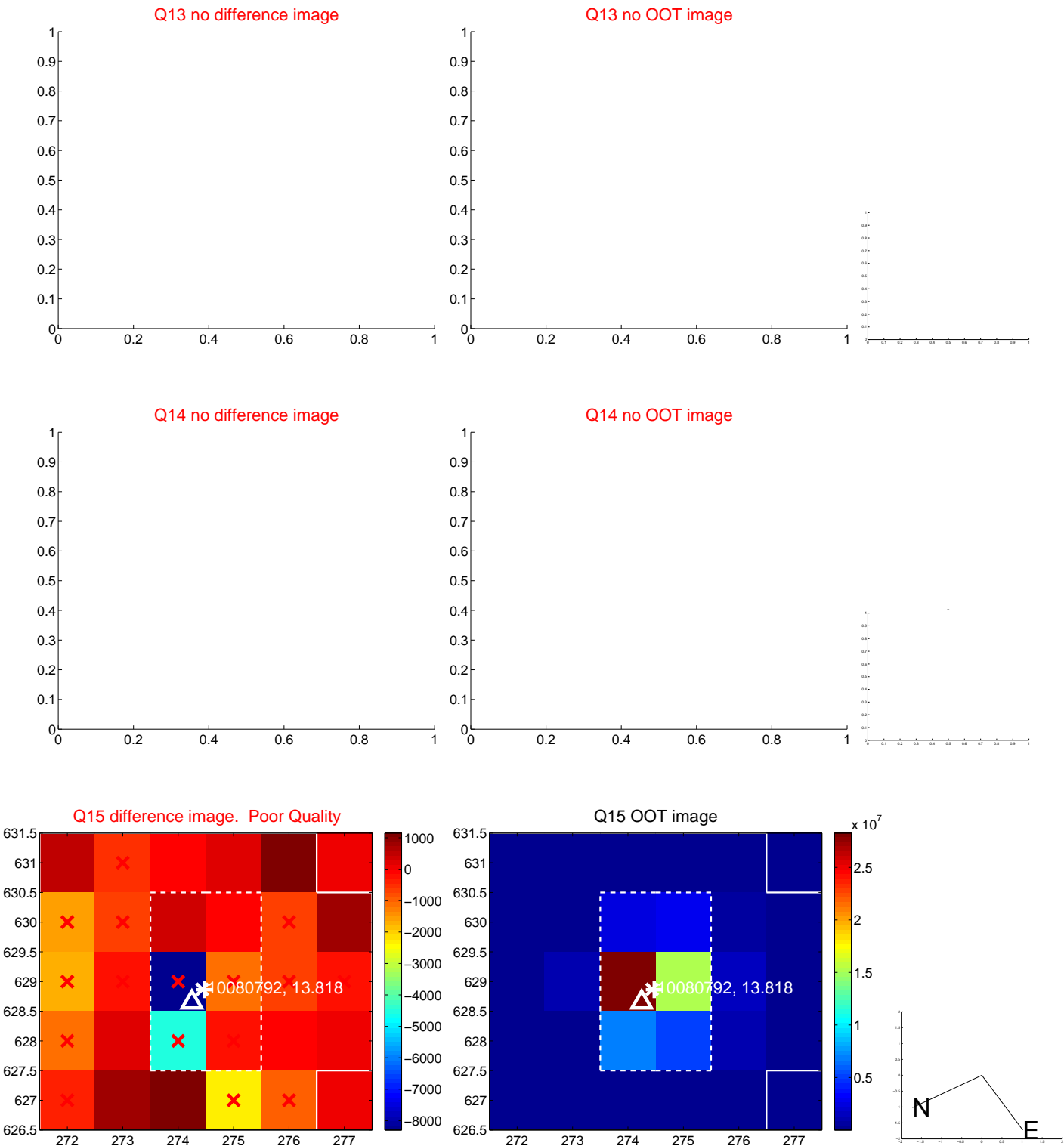




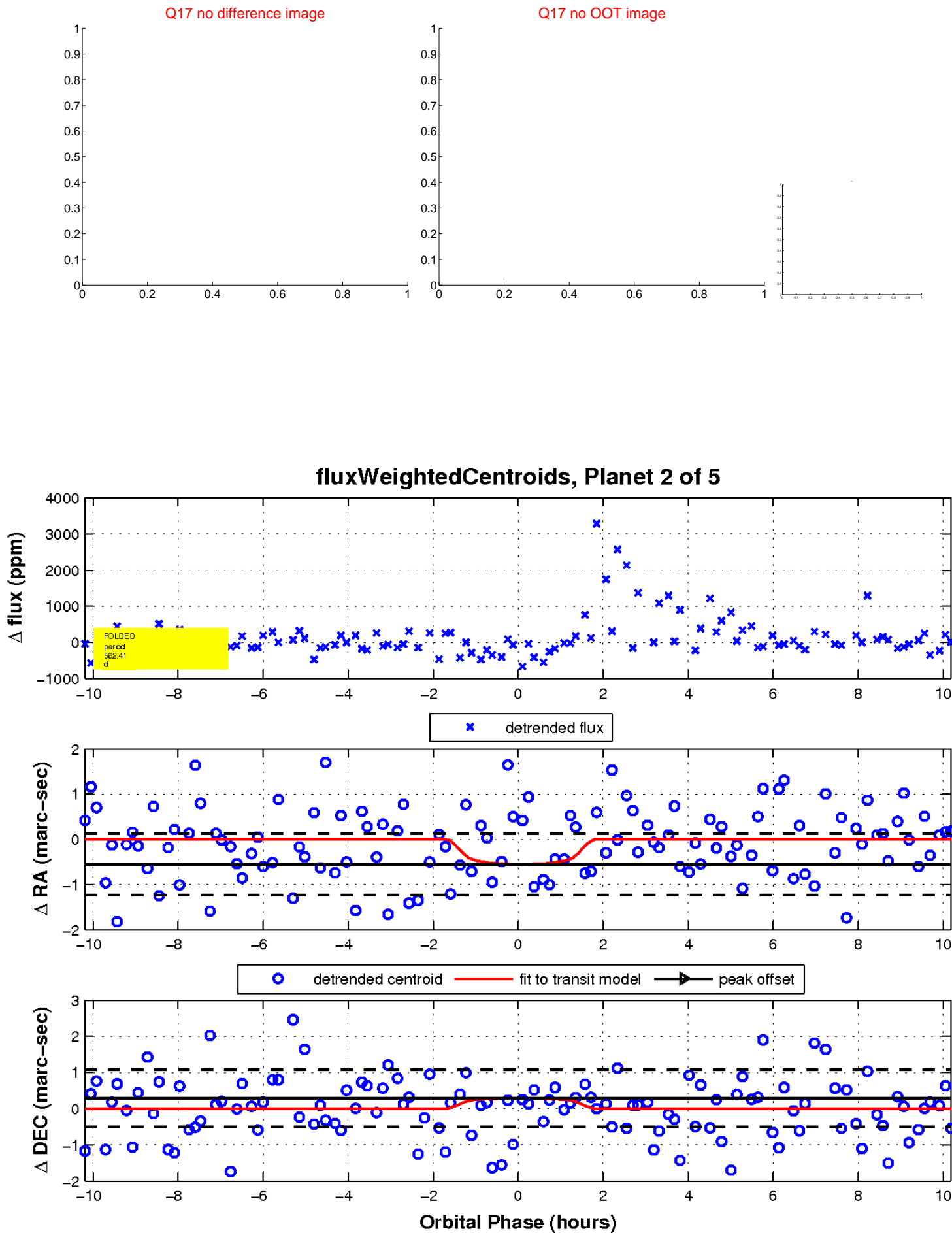
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

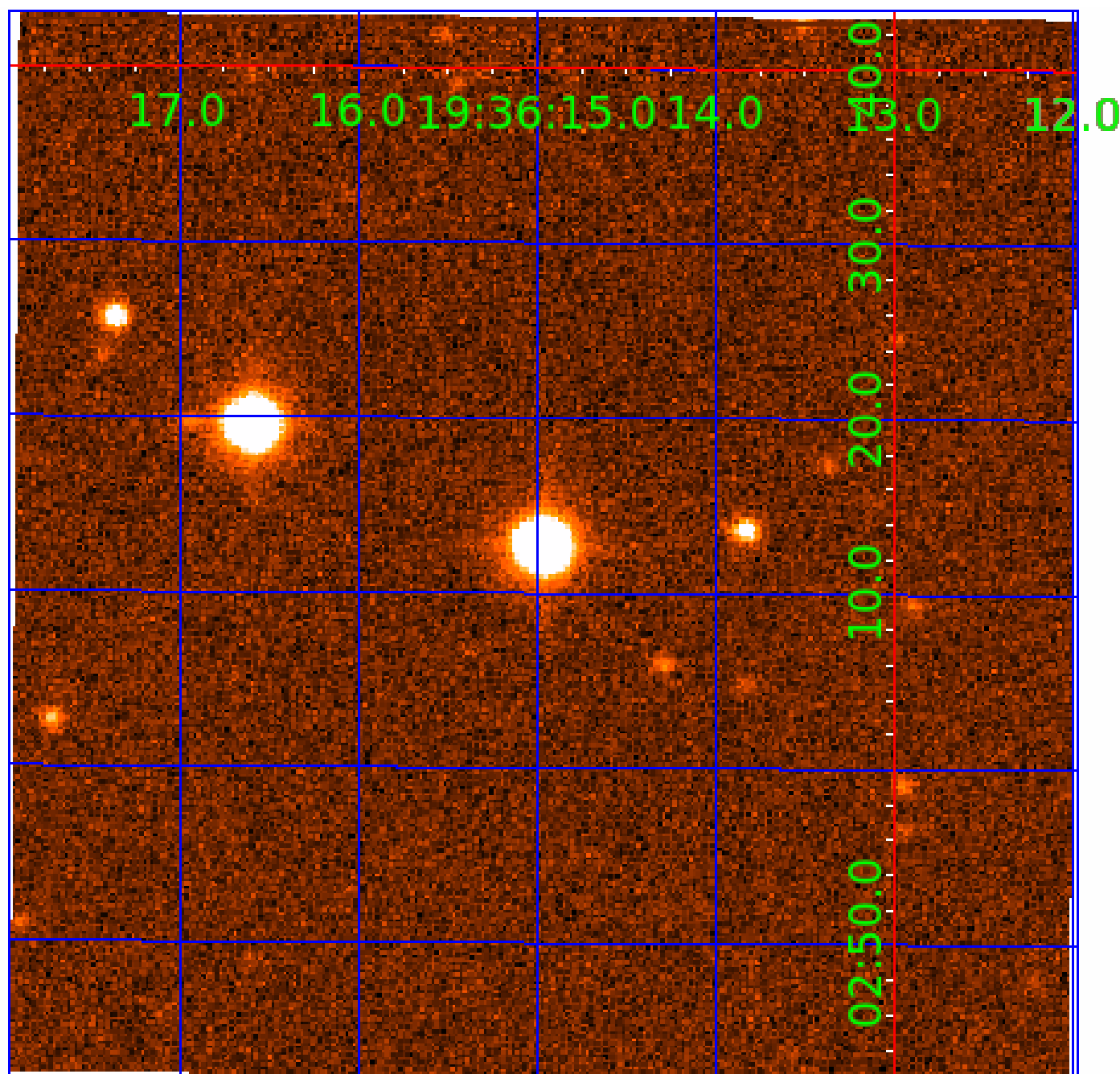


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination



# KIC 010080792

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
010080792-01	OBS	No	573.497849	179.278708	698.4	4.536	15.6	5.4	1.91	5043	5.50	1.25
010080792-02	OBS	No	562.406621	327.660683	814.7	3.453	11.6	8.0	1.91	5043	6.65	1.28
010080792-03	OBS	No	435.294242	174.247911	795.3	4.258	12.4	6.4	1.91	5043	5.49	1.81
010080792-04	OBS	No	417.576039	179.706678	803.0	2.620	12.0	7.6	1.91	5043	5.55	1.91
010080792-05	OBS	No	264.442806	263.838728	828.4	3.500	12.7	-1.0	1.91	5043	5.34	3.51

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010080792-01	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
010080792-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010080792-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010080792-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
010080792-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—ALL_TRANS_CHASES—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.

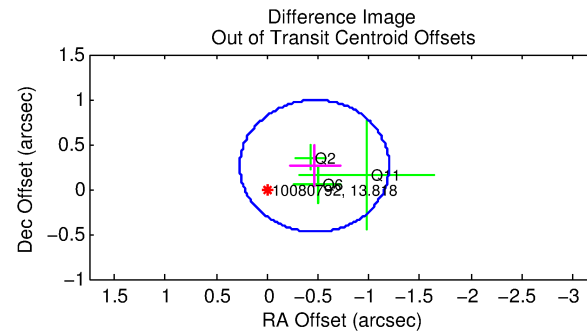
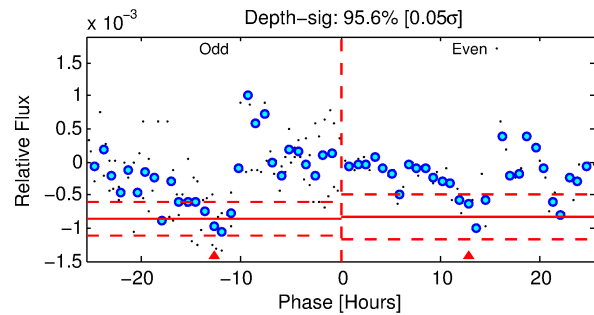
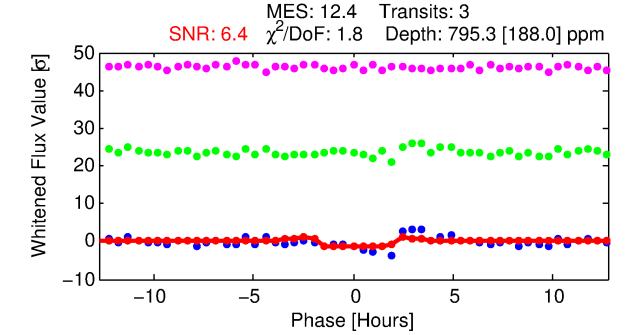
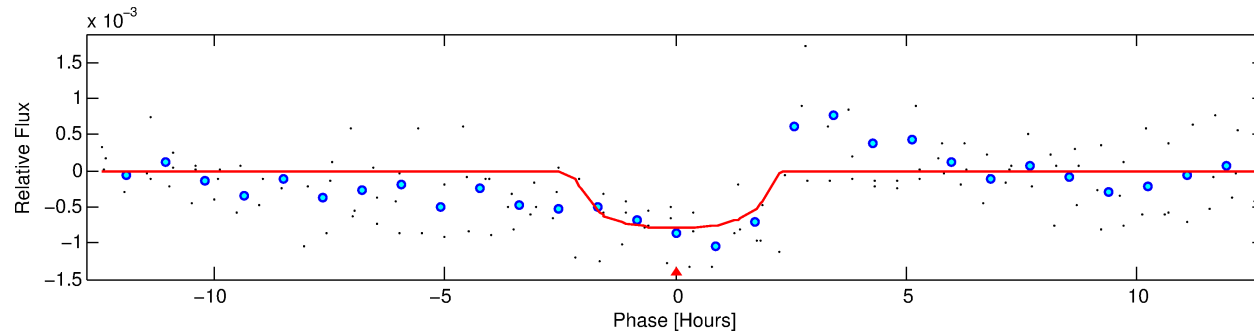
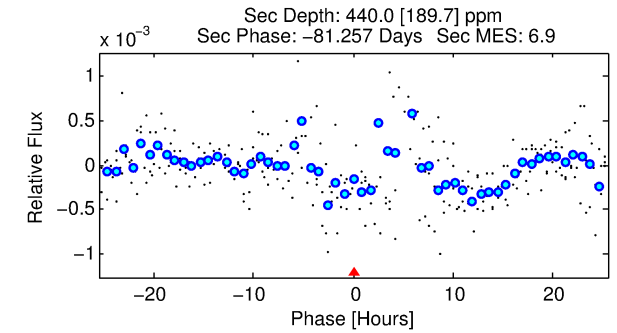
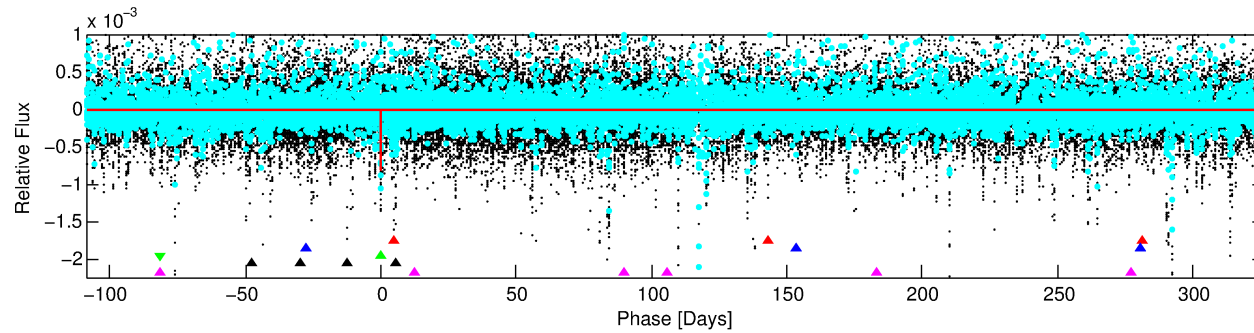
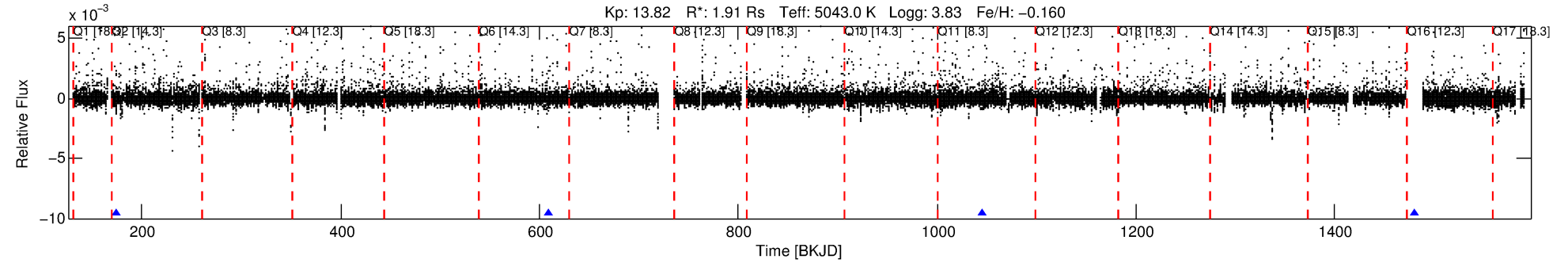
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 010080792-03

No Significant Match Found

# DV One-Page Summary

KIC: 10080792 Candidate: 3 of 5 Period: 435.294 d



## DV Fit Results:

Period = 435.29424 [0.00700] d  
Epoch = 174.2479 [0.0110] BKJD  
Rp/R\* = 0.0264 [0.0550]  
a/R\* = 679.42 [5004.38]  
b = 0.54 [9.66]  
Seff = 1.81 [2.30]  
Teq = 296 [94] K  
Rp = 5.49 [11.95] Re  
a = 1.0805 [0.7879] AU  
Ag = 9378.84 [41063.91] [0.23σ]  
Teffp = 4498 [4716] K [0.89σ]

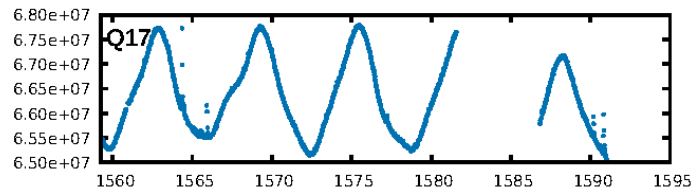
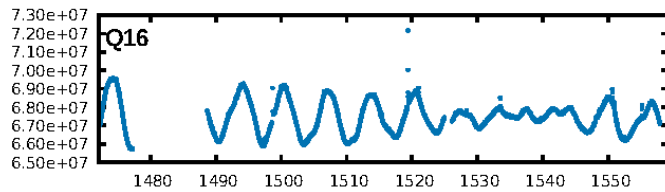
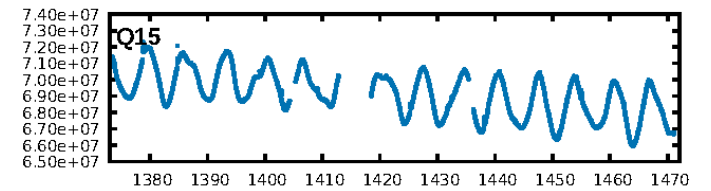
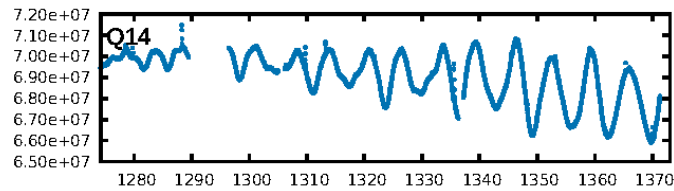
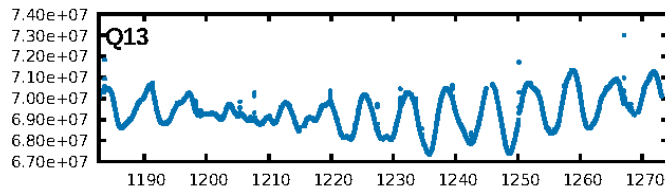
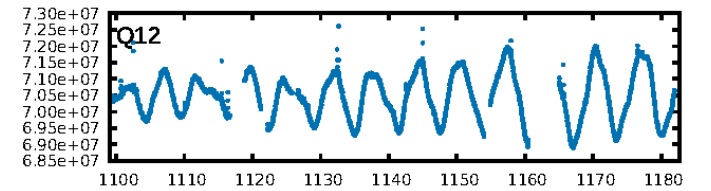
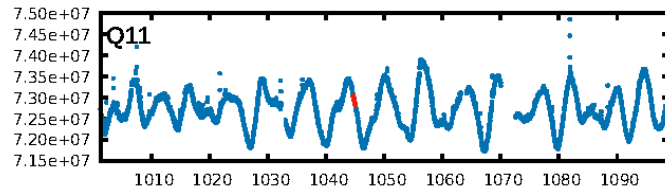
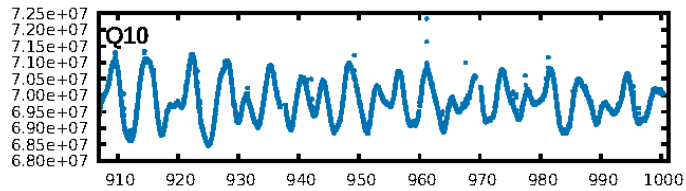
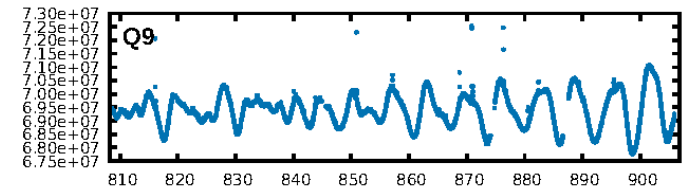
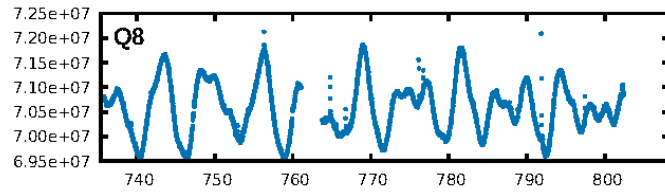
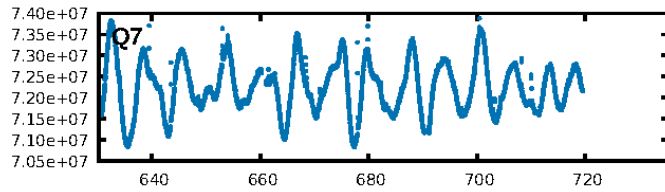
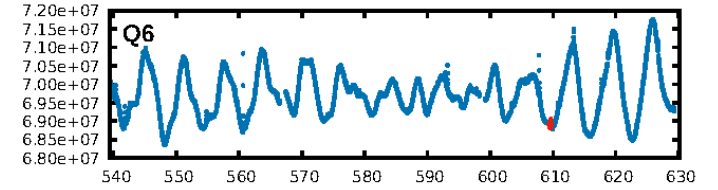
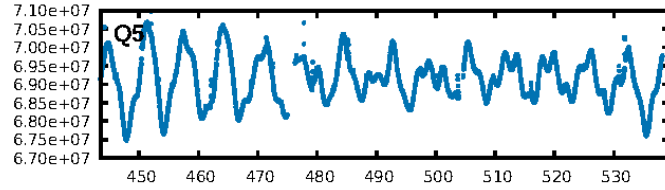
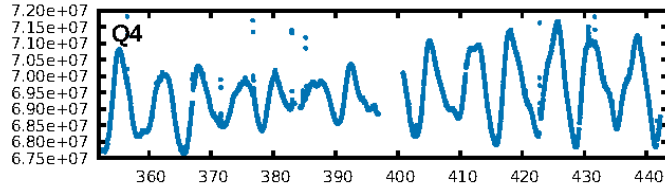
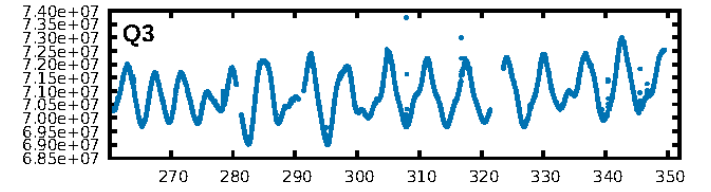
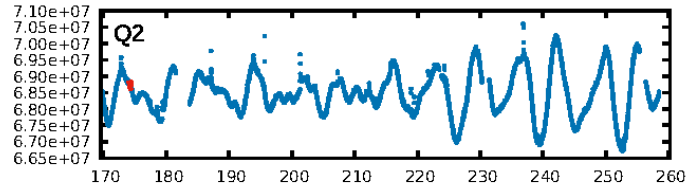
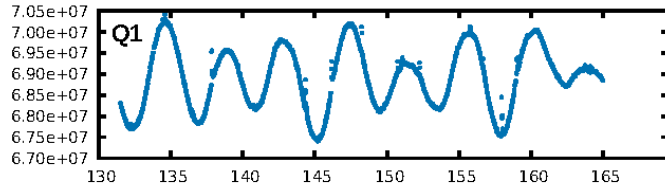
## DV Diagnostic Results:

ShortPeriod-sig: 100.0% [85.06σ]  
LongPeriod-sig: 100.0% [556.52σ]  
ModelChiSquare2-sig: 20.0%  
ModelChiSquareGof-sig: 56.9%  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [3/3]  
GhostDiagnostic-chr: 96.76  
Centroid-sig: 30.0%  
Centroid-so: 0.276 arcsec [0.44σ]  
OotOffset-rm: 0.533 arcsec [2.18σ]  
OotOffset-st: 2/1/0/0 [3]  
KicOffset-rm: 0.350 arcsec [1.41σ]  
KicOffset-st: 2/1/0/0 [3]  
DiffImageQuality-fgm: 1.00 [3/3]  
DiffImageOverlap-fno: 1.00 [3/3]

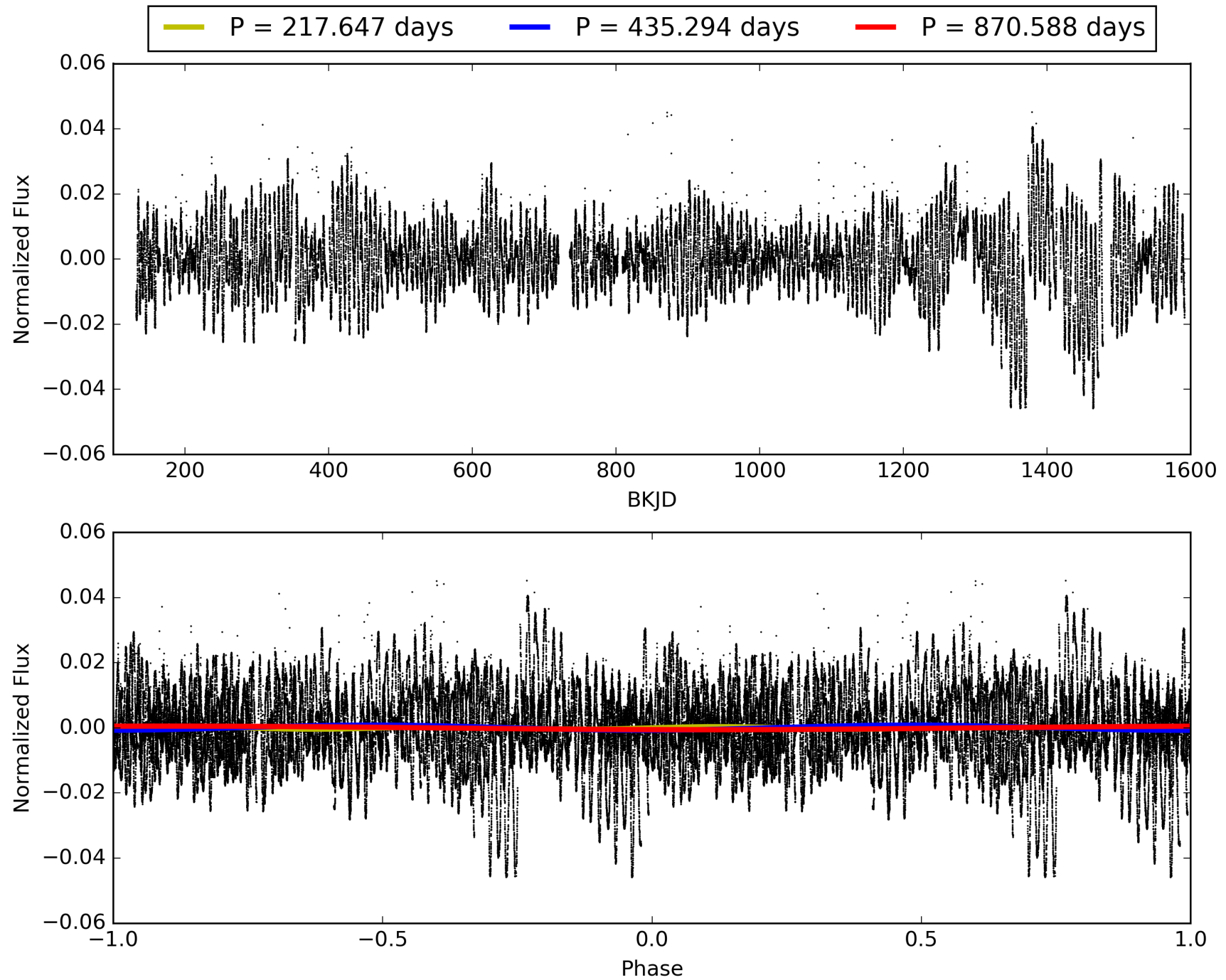
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 01:04:31 Z

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

# TCE 010080792-03, PDC Light Curves



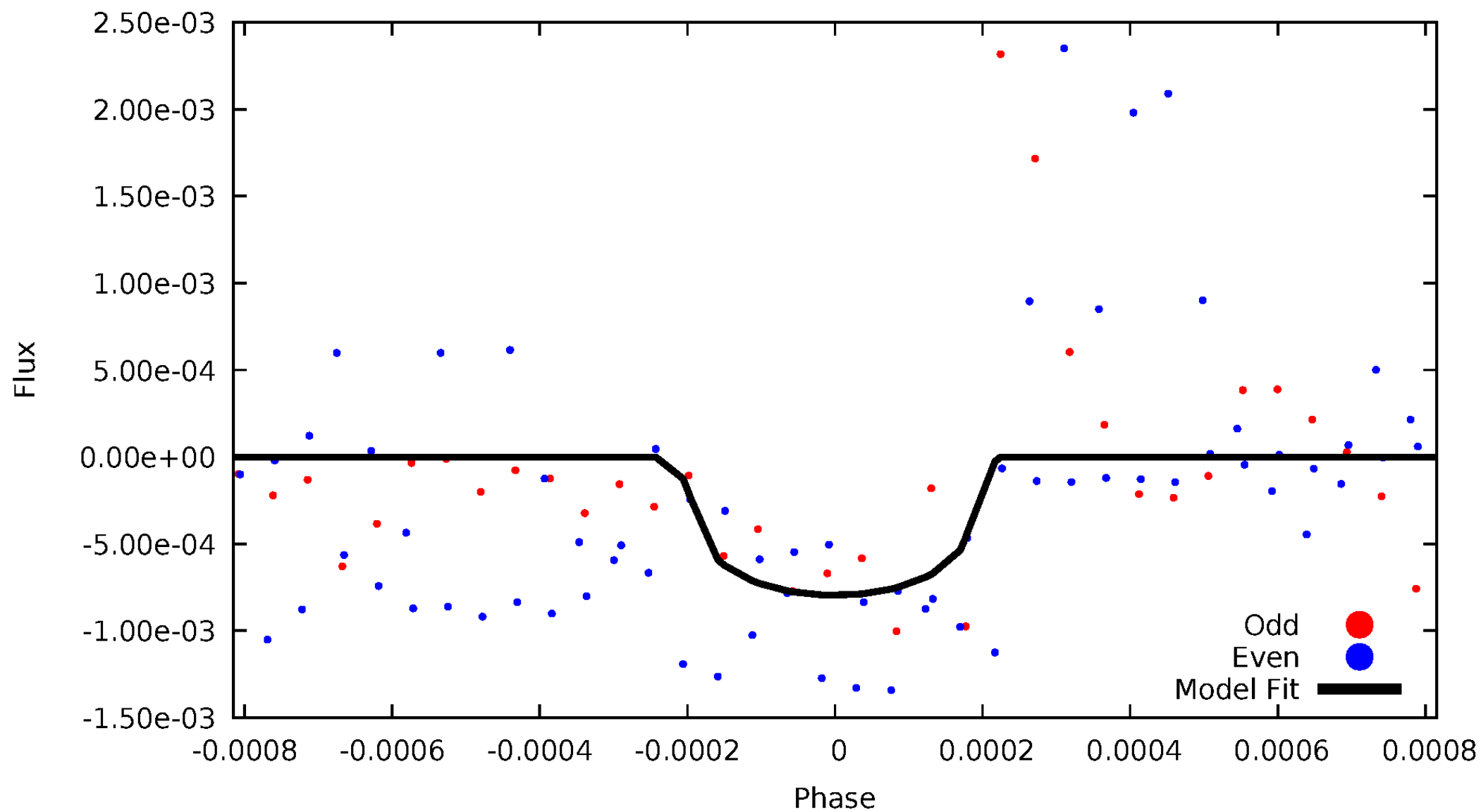
# TCE 010080792-03





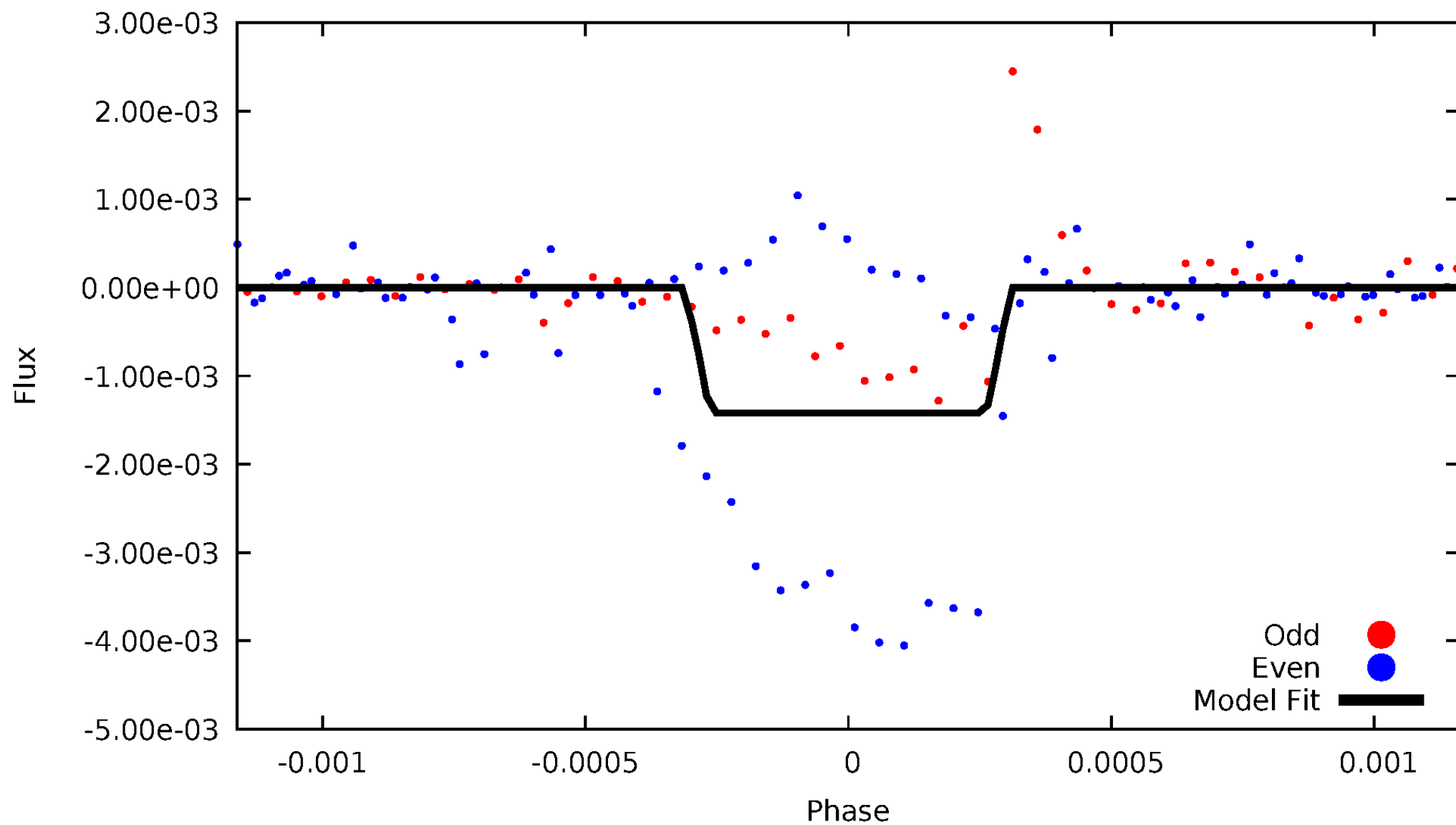
# DV Odd/Even

TCE 010080792-03



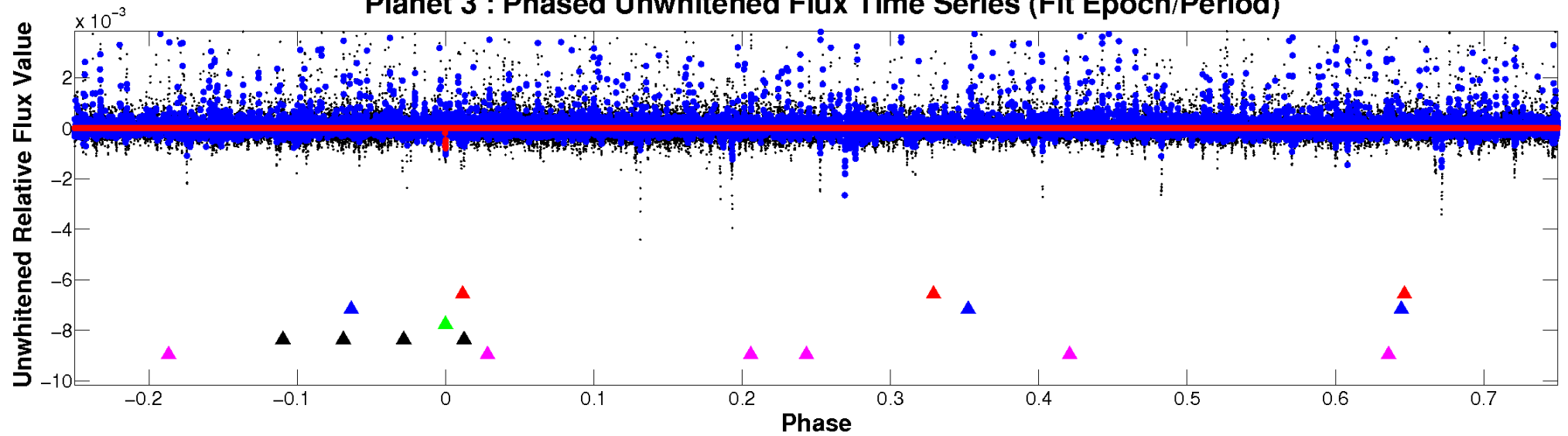
# ALT Odd/Even

TCE 010080792-03

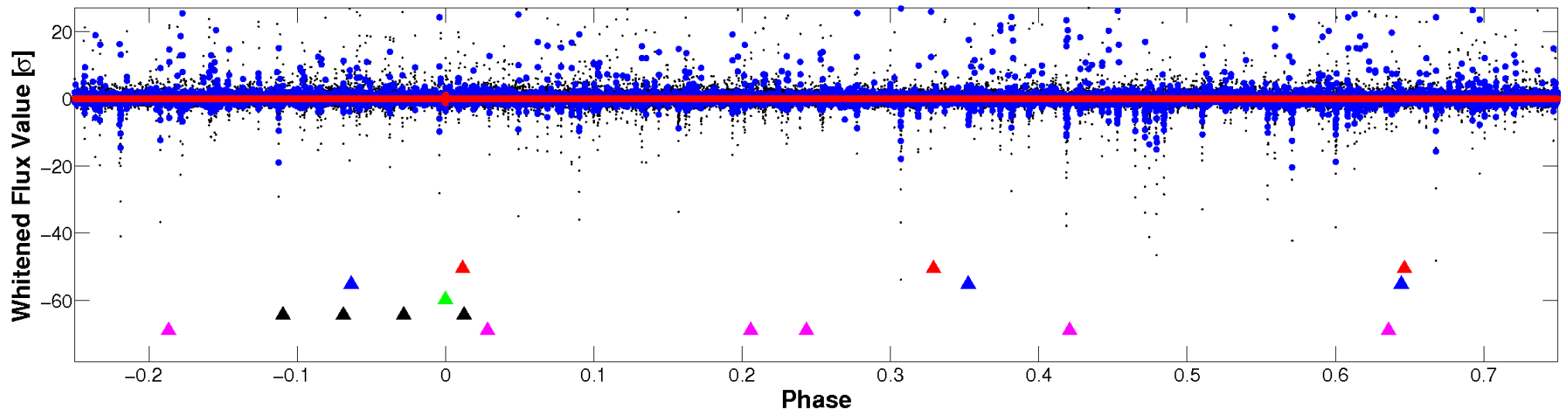


# Non-Whitened Vs. Whitened Light Curve

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

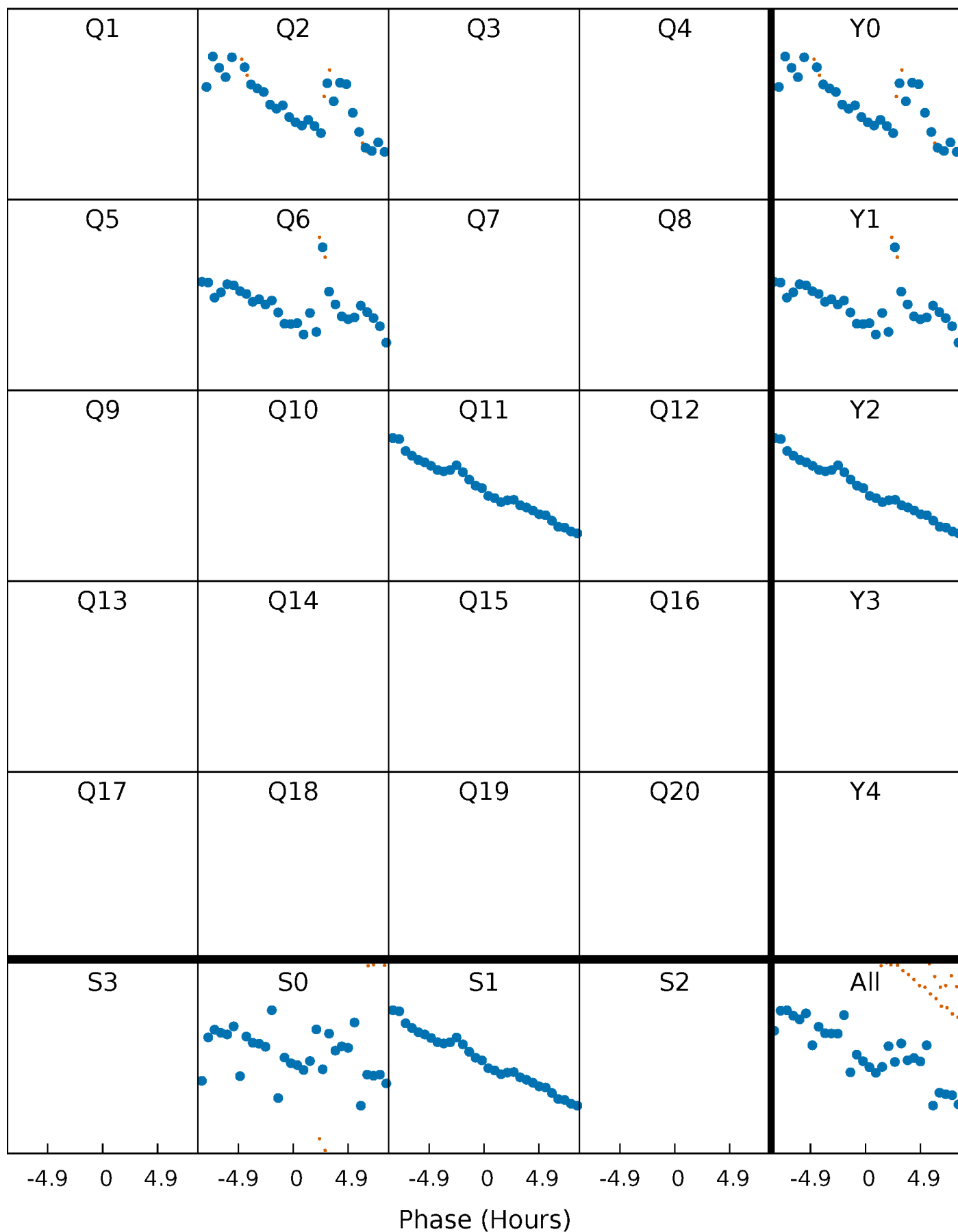


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



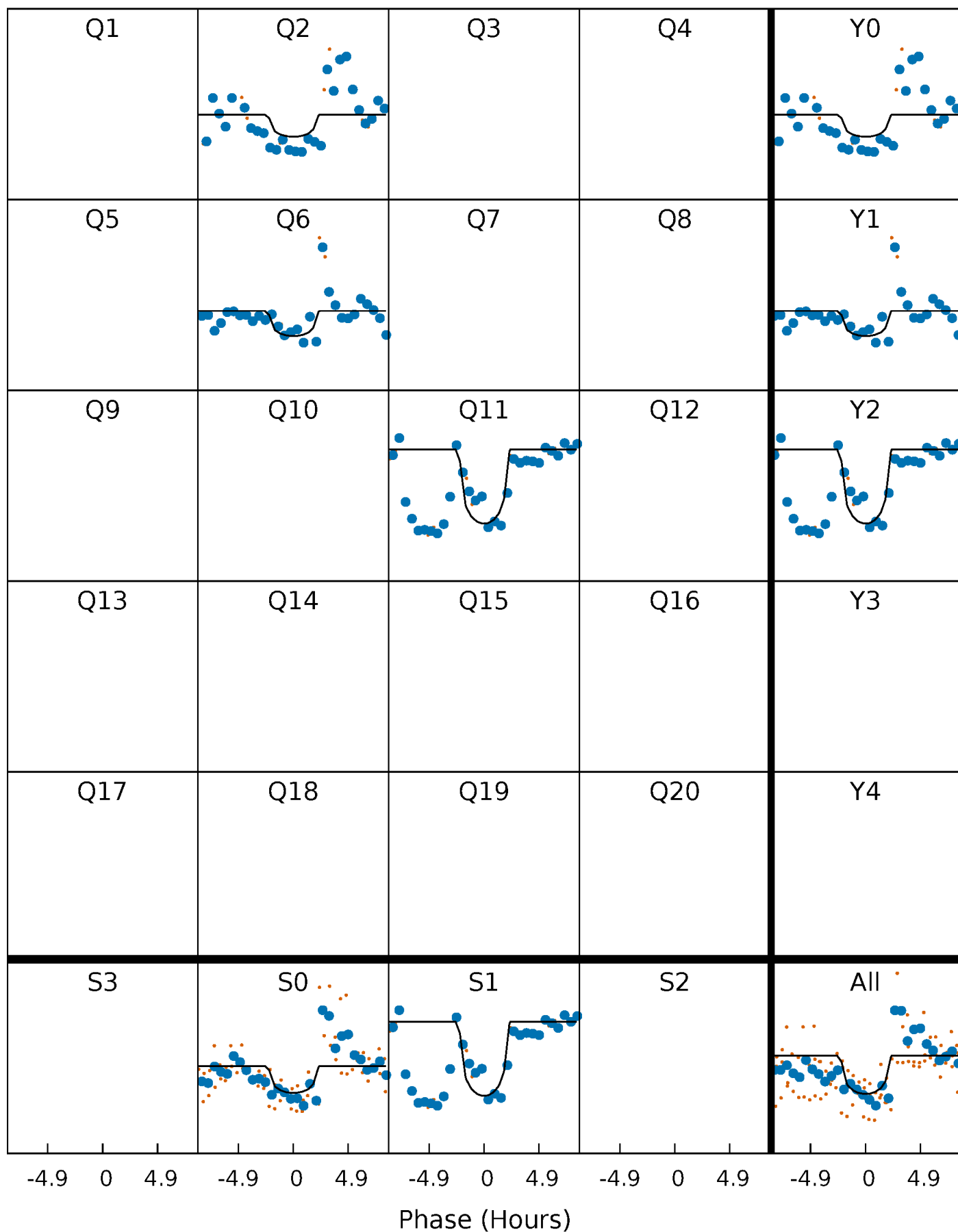
# PDC Quarter-Phased Transit Curves

TCE 010080792-03     $P=435.294242$  Days     $T_0=174.247911$  (BKJD)



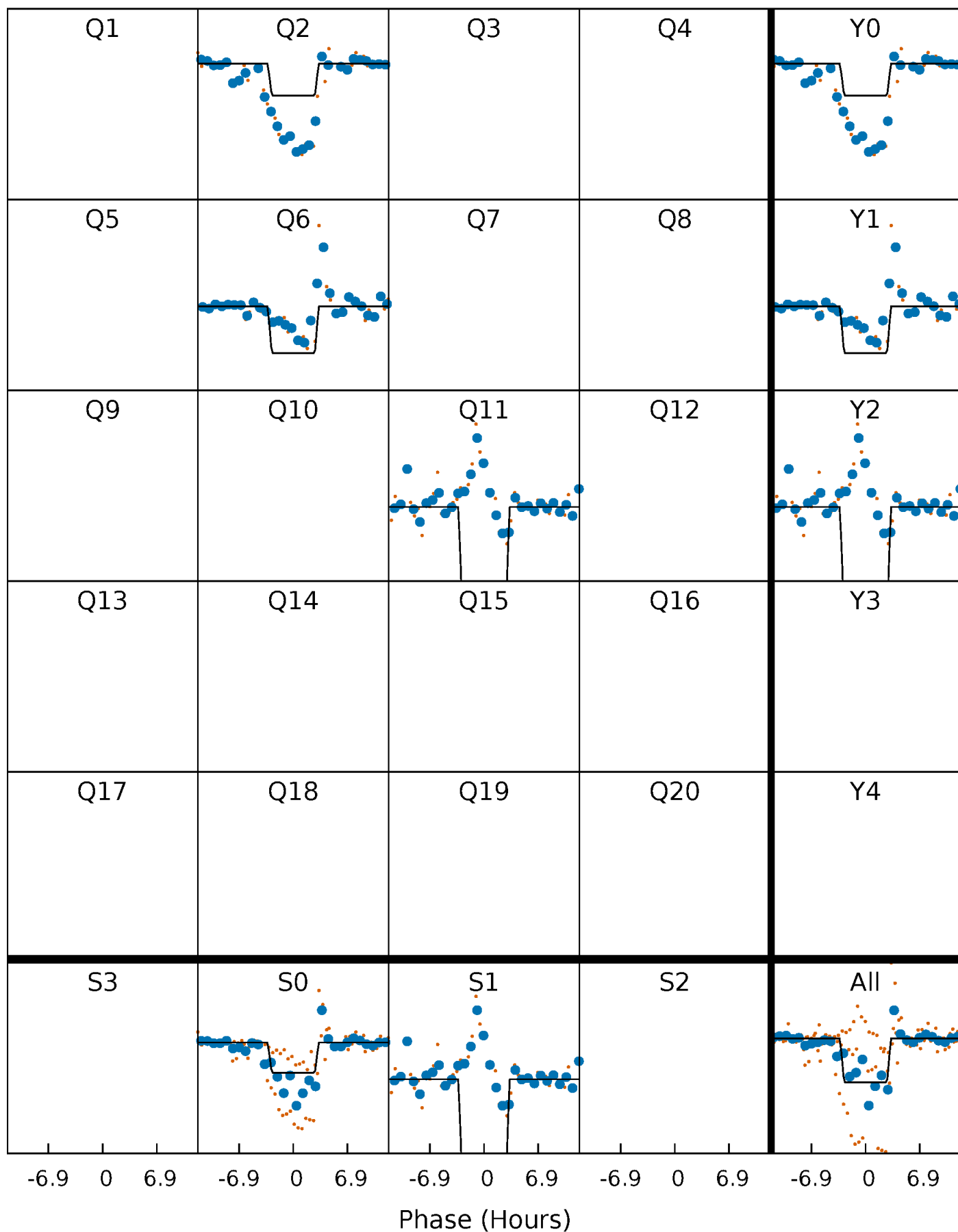
# DV Quarter-Phased Transit Curves

TCE 010080792-03     $P=435.294242$  Days     $T_0=174.247911$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

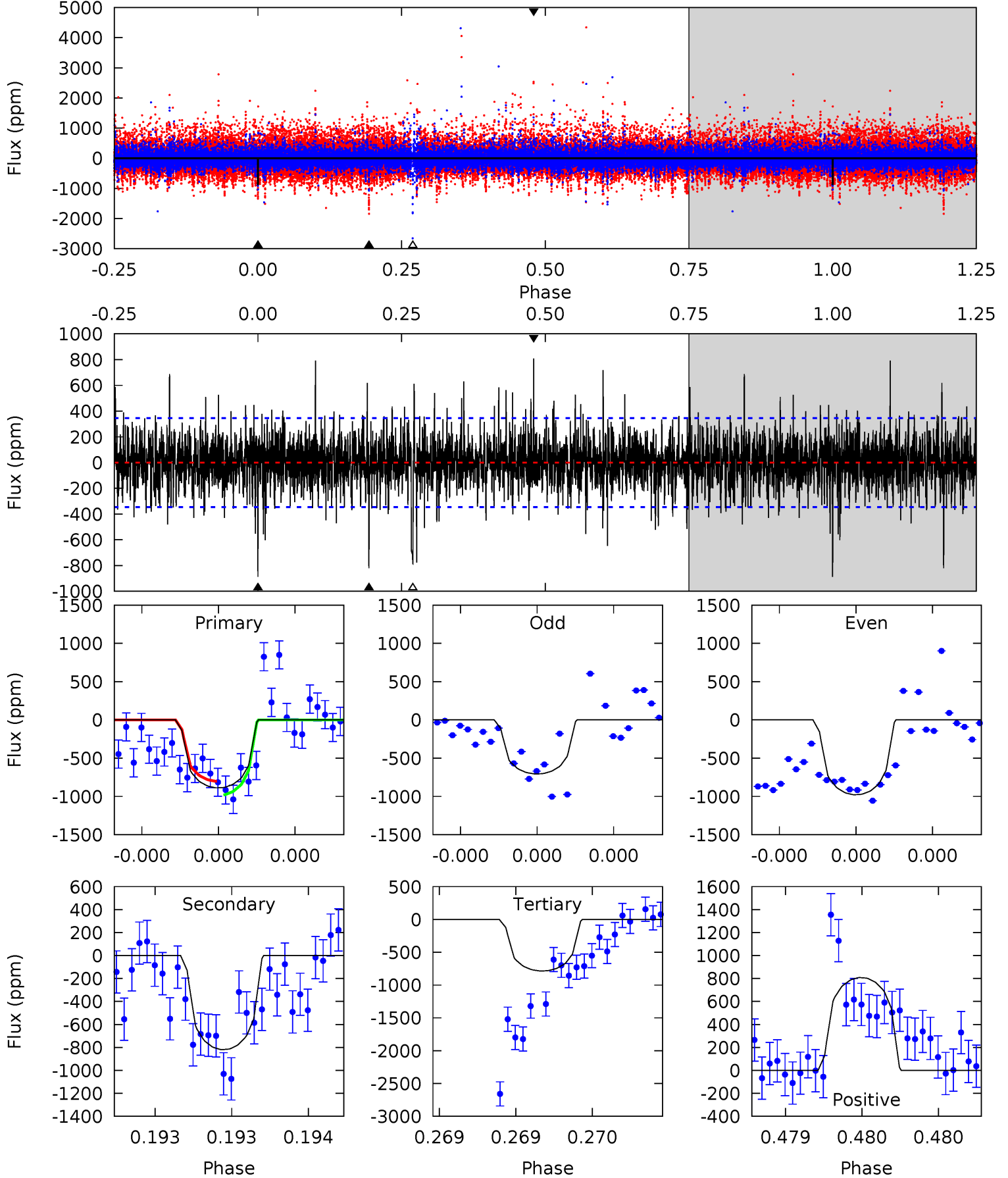
TCE 010080792-03 P=435.268884 Days  $T_0=174.234864$  (BKJD)



# DV Model-Shift Uniqueness Test

010080792-03, P = 435.294242 Days, E = 174.247911 Days

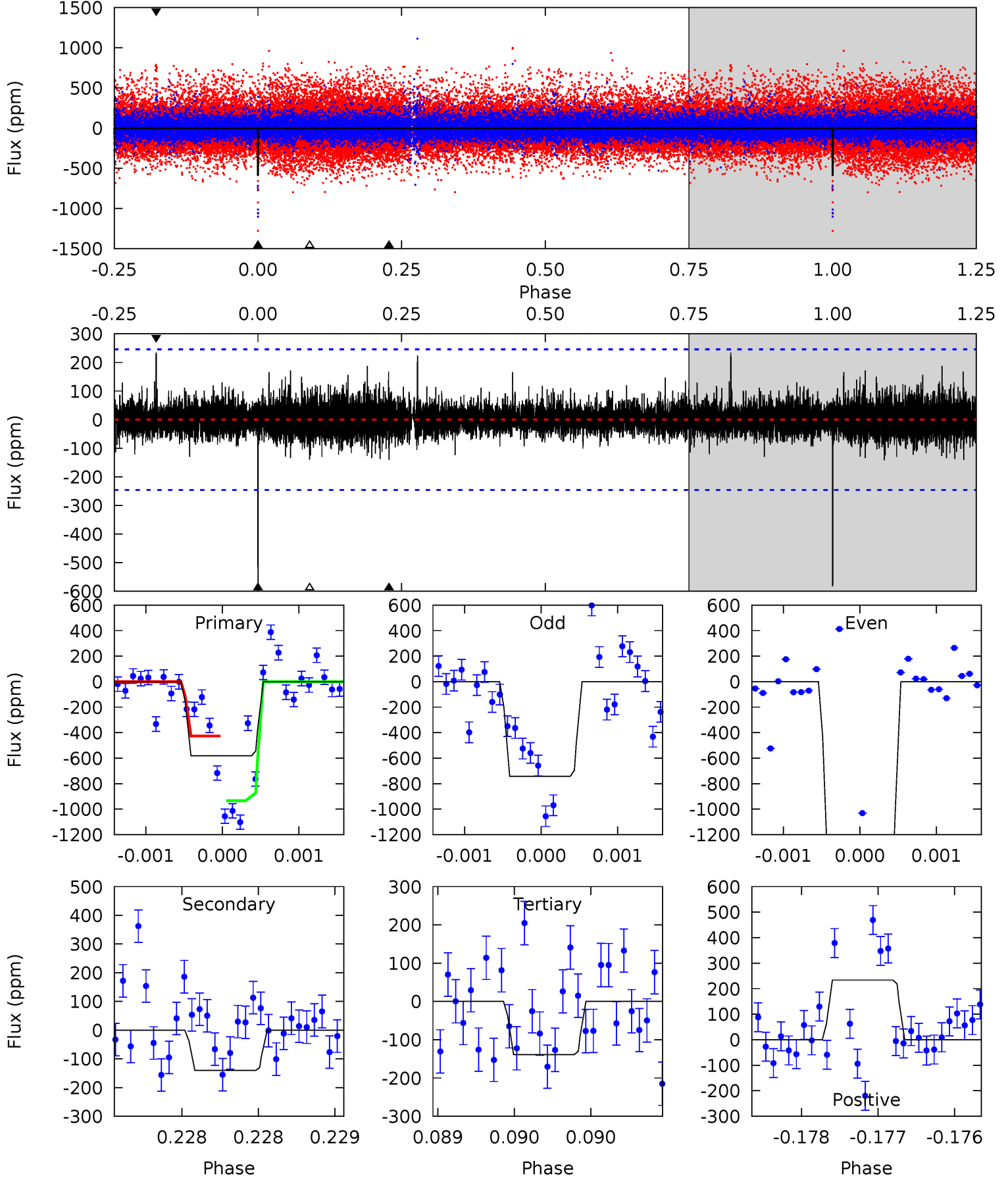
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.4	13.3	12.7	13.1	5.60	3.52	2.29	1.65	1.29	0.55	0.19	1.52	1.25	0.48	1.45



# Alt Model-Shift Uniqueness Test

010080792-03, P = 435.268884 Days, E = 174.234864 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
13.1	3.16	3.14	5.27	5.54	3.43	0.74	9.99	7.85	0.03	-2.11	11.8	1.76	0.29	0





### Stellar Parameters For KIC 010080792

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$5043^{+151}_{-136}$	$3.825^{+0.777}_{-0.389}$	$-0.160^{+0.300}_{-0.250}$	$1.908^{+1.201}_{-1.201}$	$0.889^{+0.237}_{-0.158}$	$0.180^{+2.400}_{-0.143}$
	+3%/-3%	+20%/-10%	+188%/-156%	+63%/-63%	+27%/-18%	+1332%/-79%
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 010080792-03 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-820 \pm 62$	$9.61^{+10.47}_{-6.63}$	$412^{+71}_{-69}$	$4136^{+2549}_{-784}$	$5881^{+55058}_{-4510}$
Alt.	$-140 \pm 44$	$10.27^{+11.80}_{-7.12}$	$411^{+67}_{-85}$	$2956^{+1274}_{-454}$	$861^{+7186}_{-680}$

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

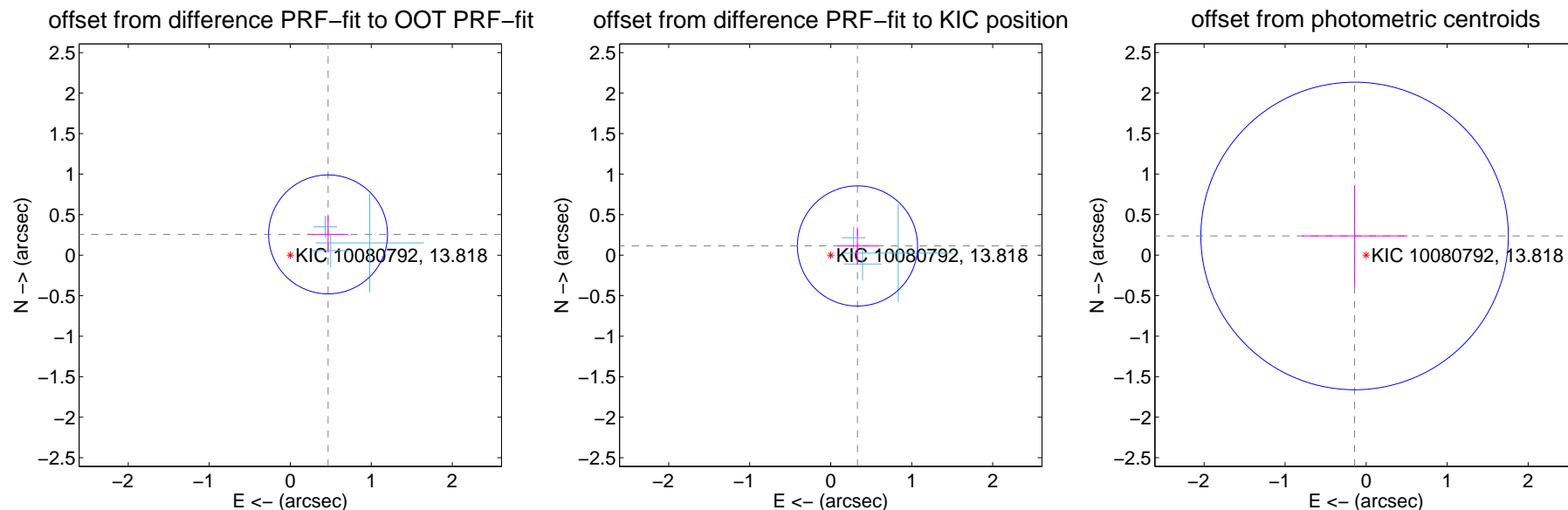
## DV Centroid Data

Supplemental centroid analysis for 010080792-03. Kepler magnitude: 13.82. Transit SNR 6.39

There are 3 quarters with good PRF difference image offsets

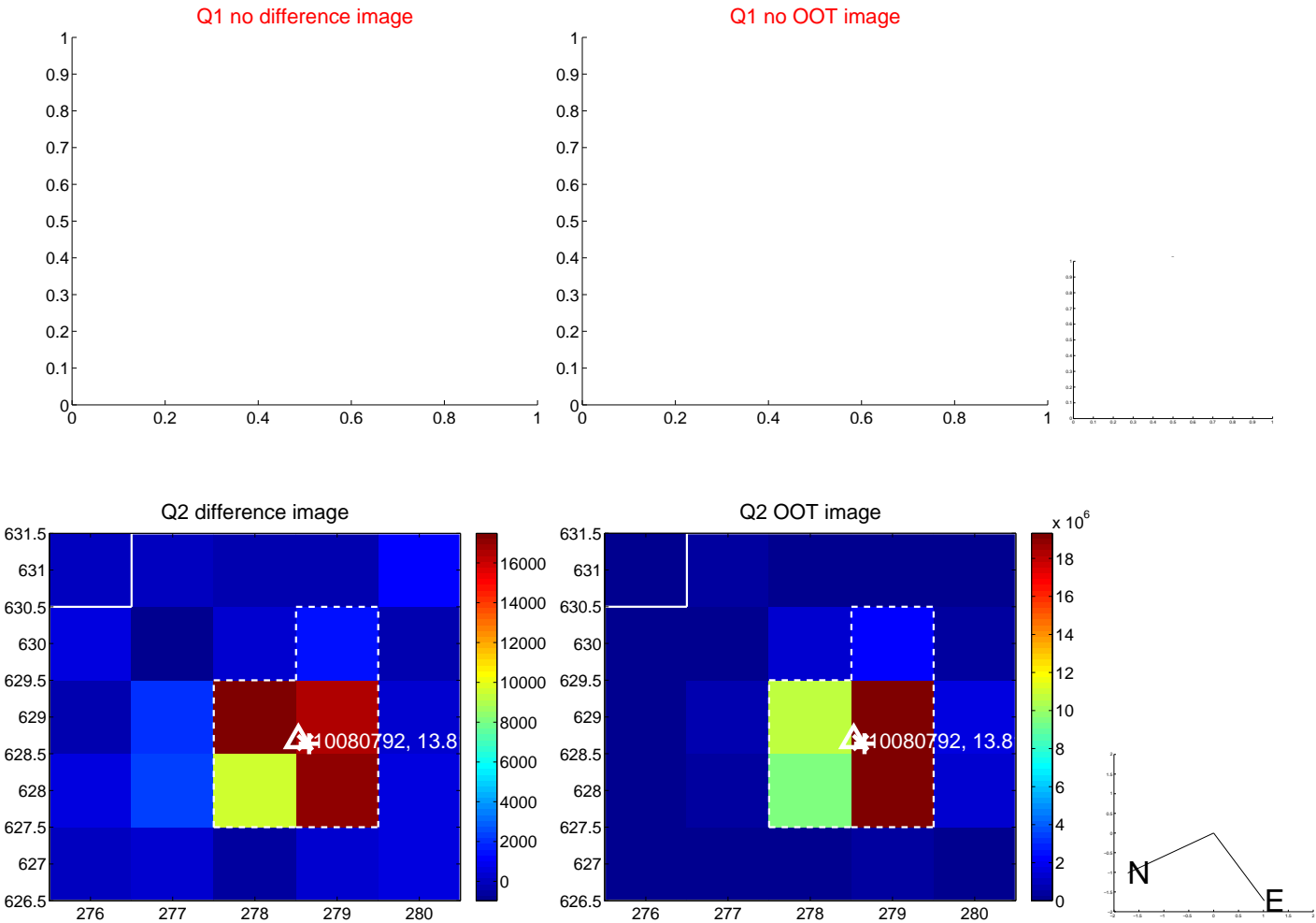
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.533 \pm 0.245$	2.18	$-0.467 \pm 0.249$	$0.256 \pm 0.228$
PRF-fit source offset from KIC position	$0.350 \pm 0.247$	1.41	$-0.331 \pm 0.249$	$0.114 \pm 0.228$
photometric centroid source offset	$0.28 \pm 0.63$	0.44	$0.14 \pm 0.65$	$0.24 \pm 0.63$

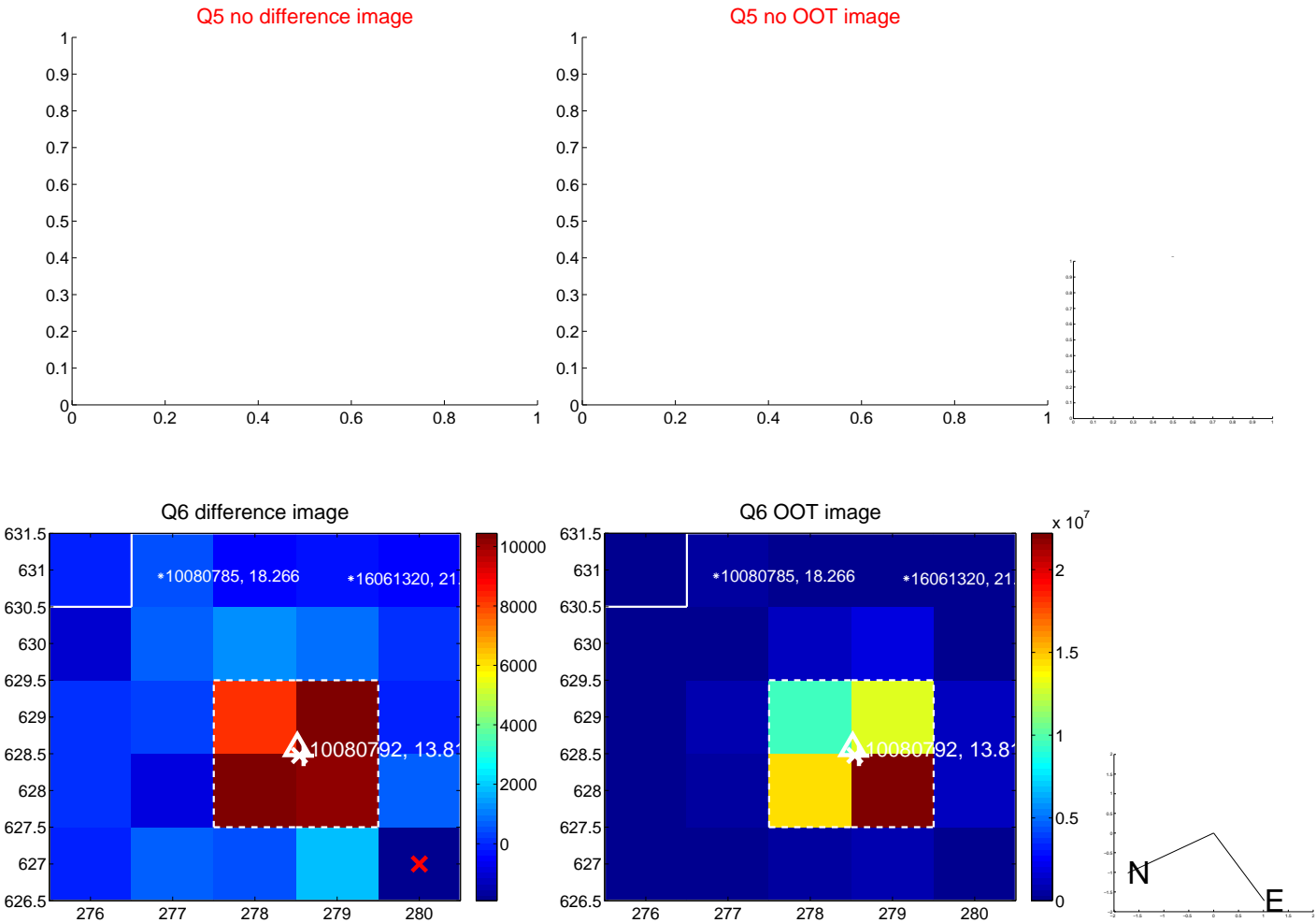


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

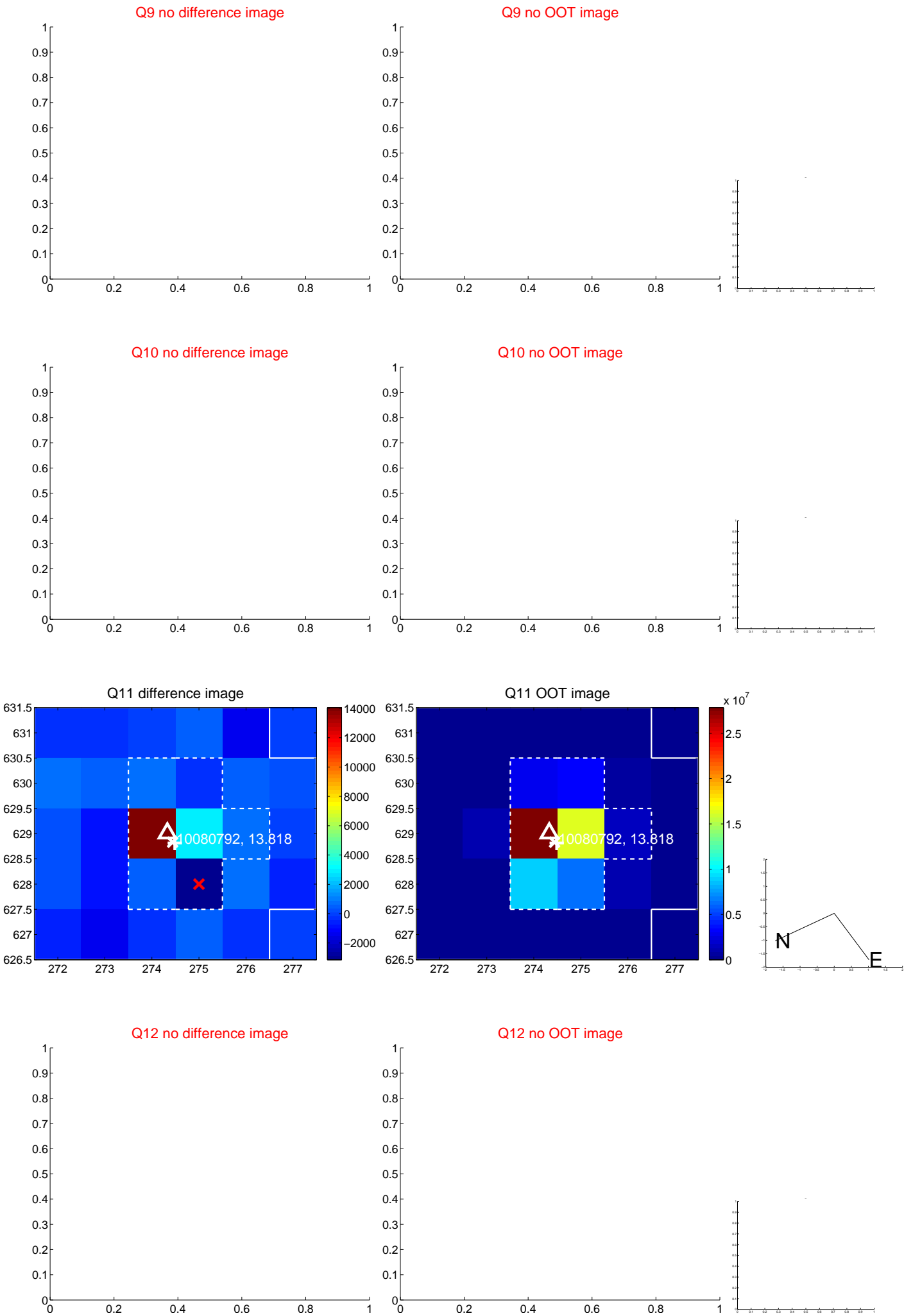
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



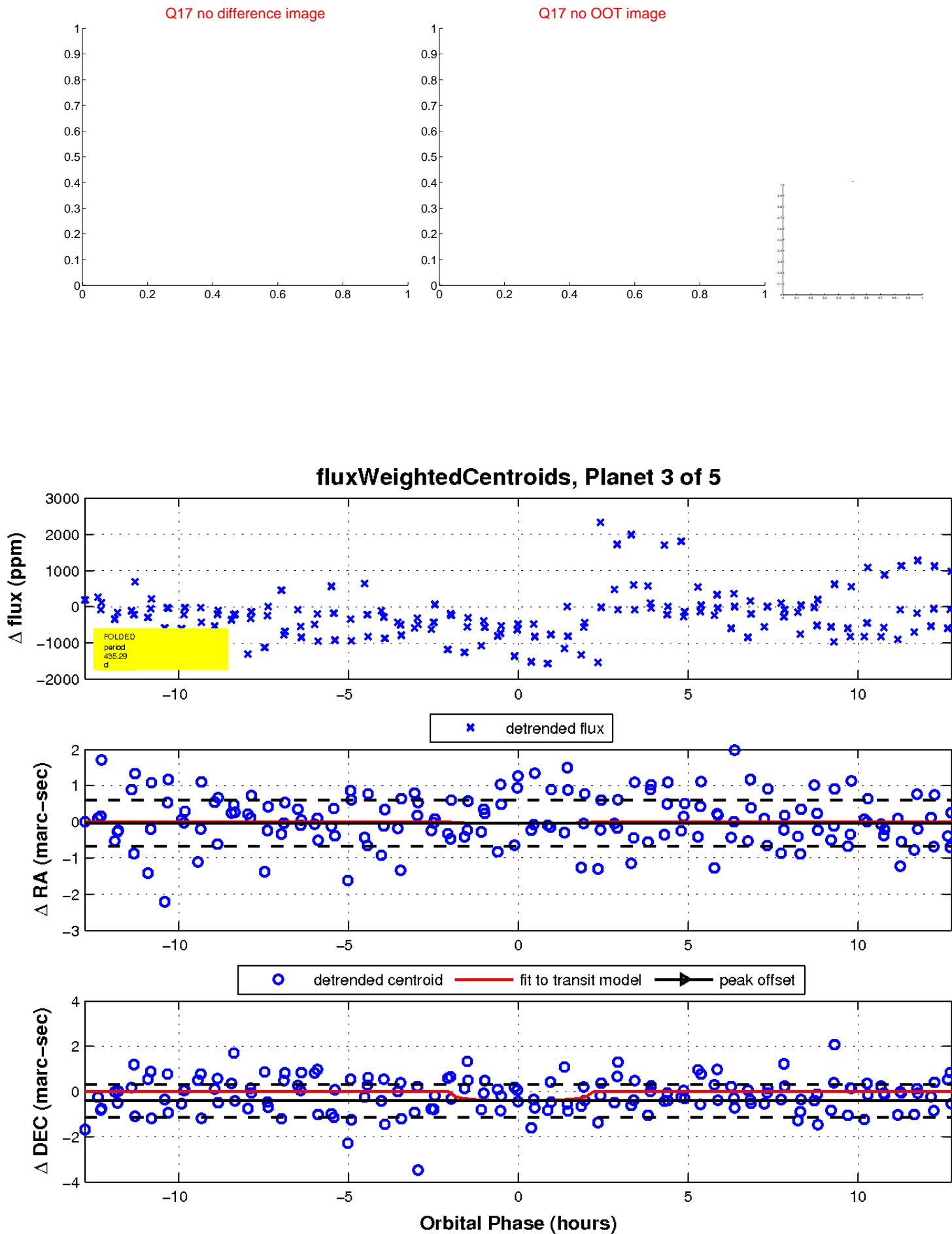
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

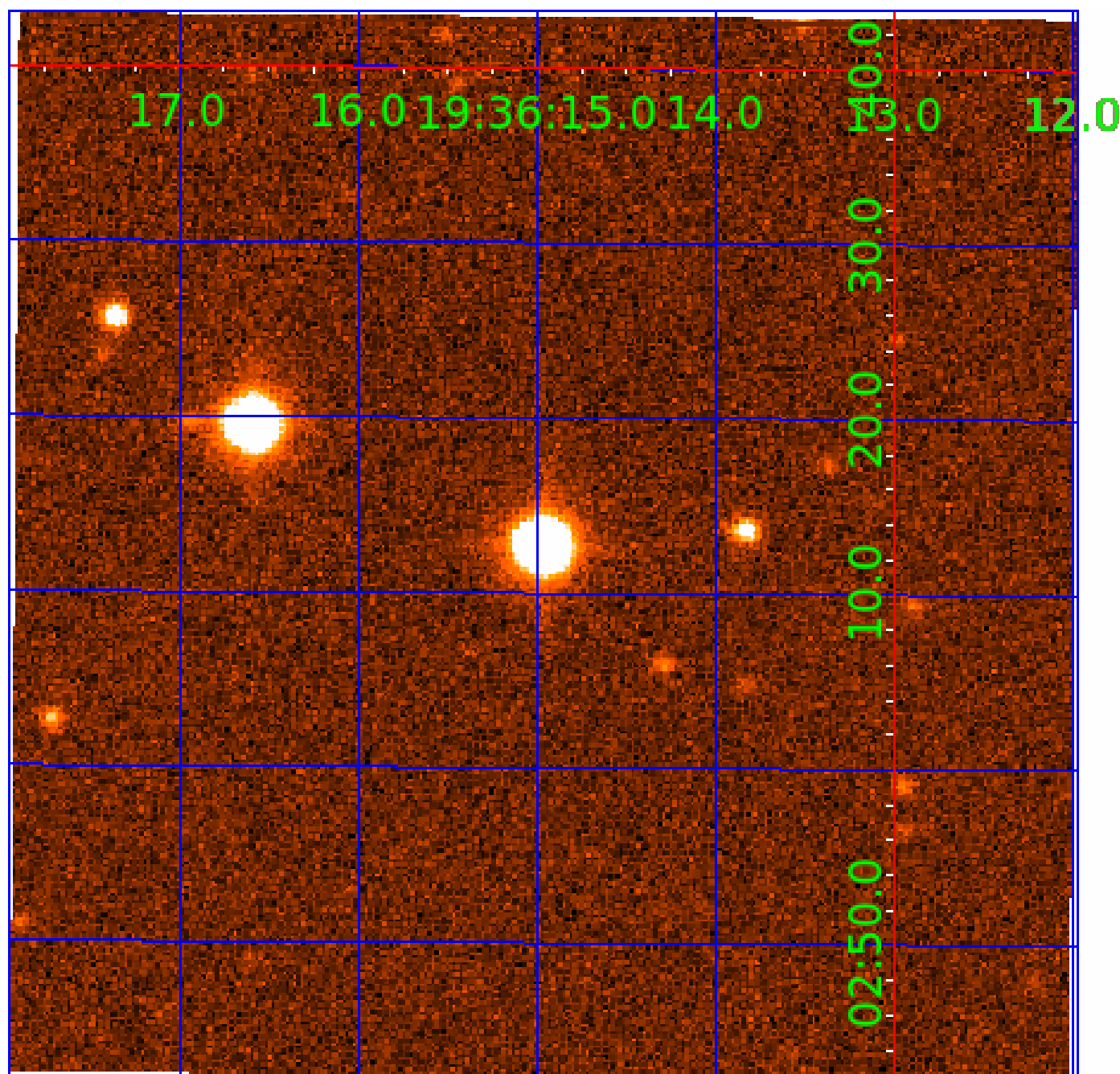


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination





# KIC 010080792

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
010080792-01	OBS	No	573.497849	179.278708	698.4	4.536	15.6	5.4	1.91	5043	5.50	1.25
010080792-02	OBS	No	562.406621	327.660683	814.7	3.453	11.6	8.0	1.91	5043	6.65	1.28
010080792-03	OBS	No	435.294242	174.247911	795.3	4.258	12.4	6.4	1.91	5043	5.49	1.81
010080792-04	OBS	No	417.576039	179.706678	803.0	2.620	12.0	7.6	1.91	5043	5.55	1.91
010080792-05	OBS	No	264.442806	263.838728	828.4	3.500	12.7	-1.0	1.91	5043	5.34	3.51

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010080792-01	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
010080792-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010080792-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010080792-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
010080792-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—ALL_TRANS_CHASES—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.

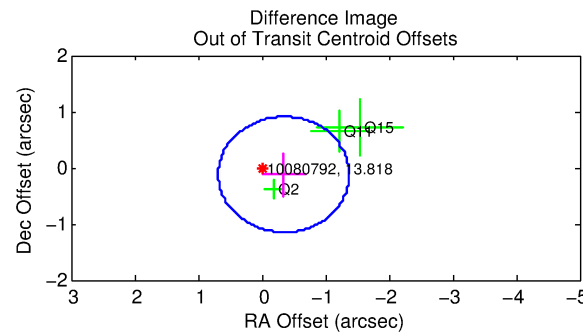
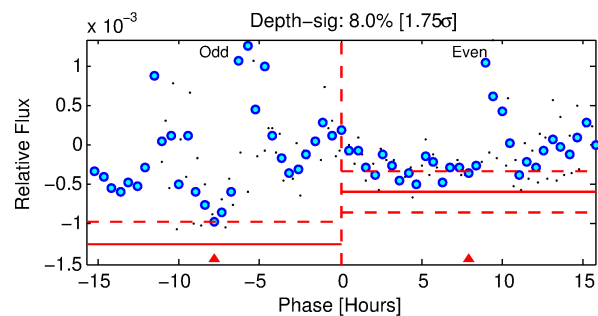
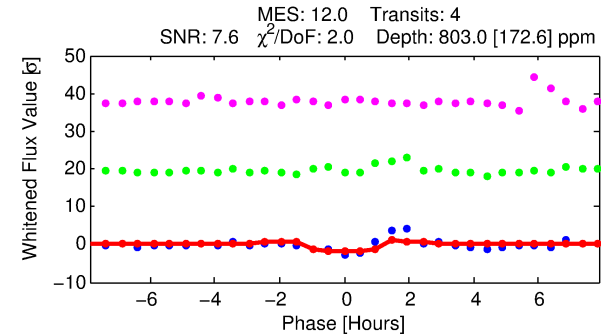
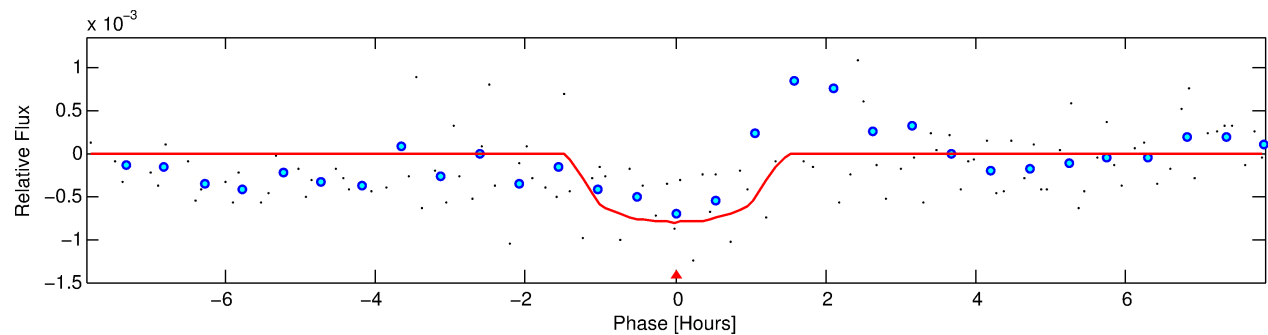
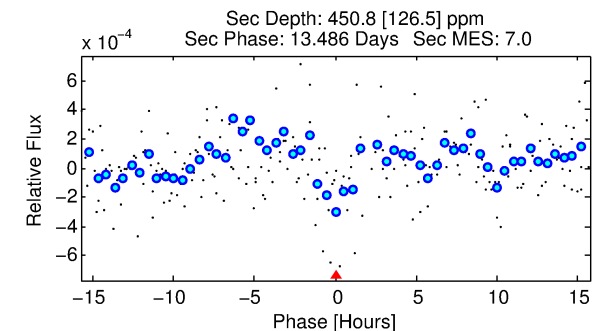
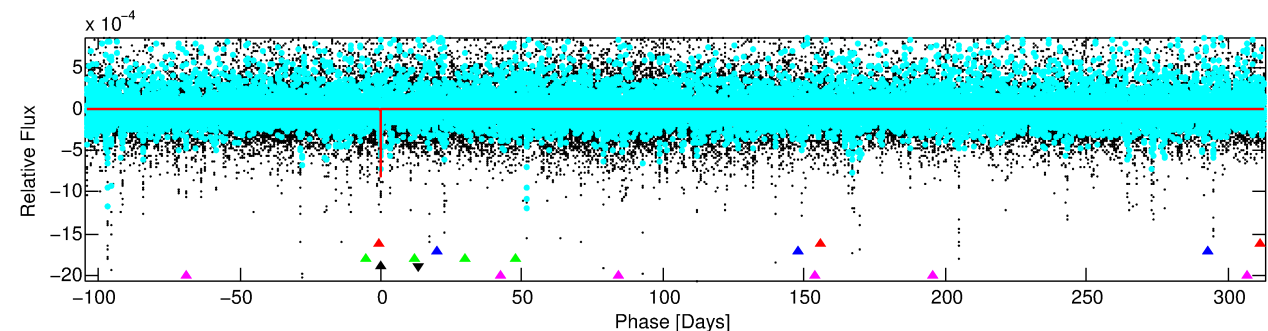
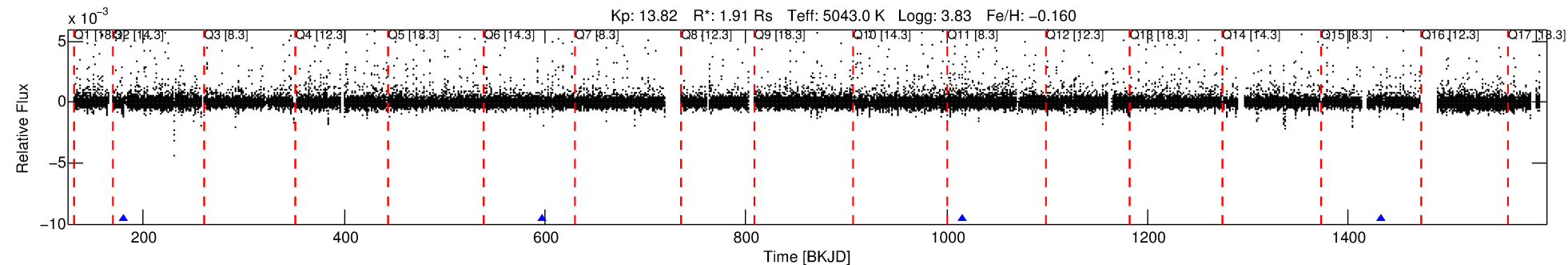
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 010080792-04

No Significant Match Found

# DV One-Page Summary

KIC: 10080792 Candidate: 4 of 5 Period: 417.576 d



## DV Fit Results:

Period = 417.57604 [0.00392] d  
Epoch = 179.7067 [0.0071] BKJD  
Rp/R\* = 0.0266 [0.0555]  
a/R\* = 1043.06 [7680.29]  
b = 0.57 [9.00]  
Seff = 1.91 [2.43]  
Teq = 300 [95] K  
Rp = 5.55 [12.07] Re  
a = 1.0509 [0.7664] AU  
Ag = 8901.72 [38820.37] [0.23σ]  
Teffp = 4502 [4699] K [0.89σ]

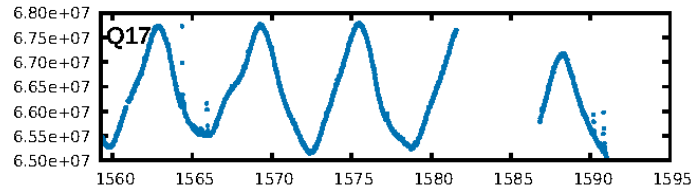
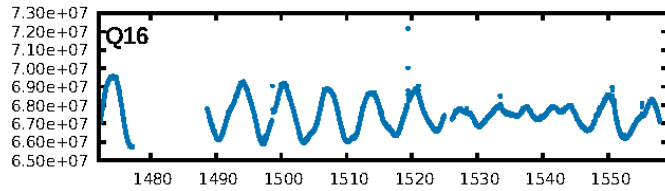
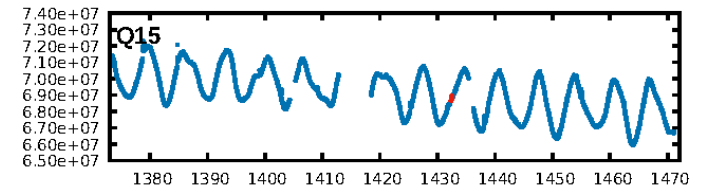
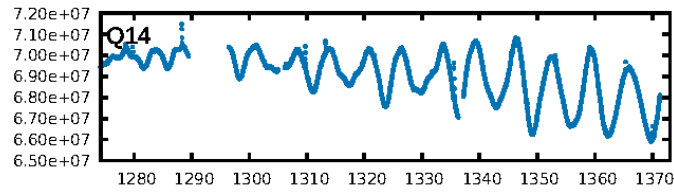
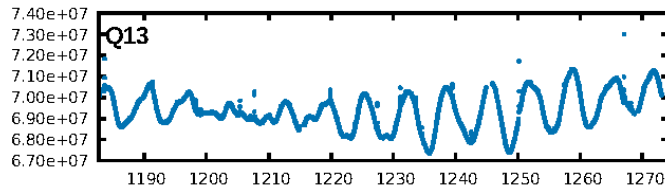
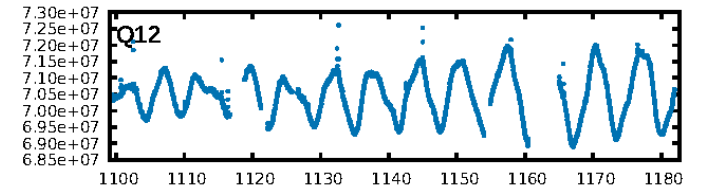
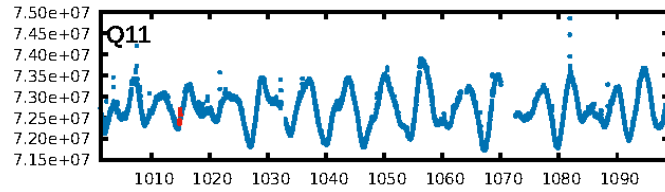
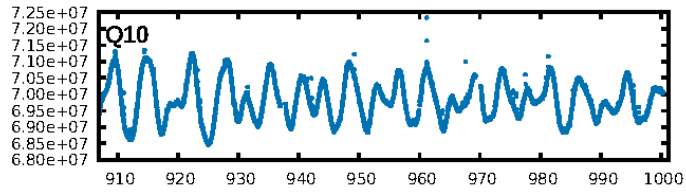
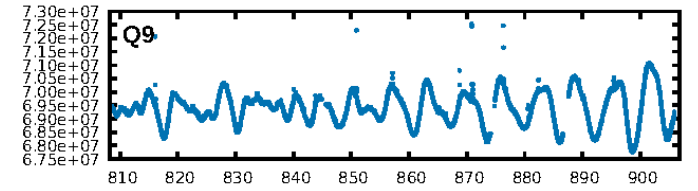
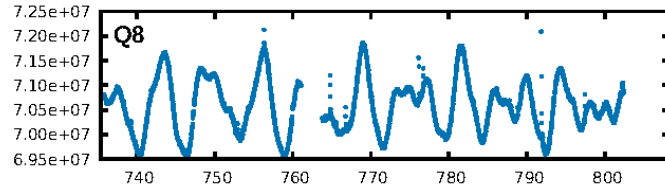
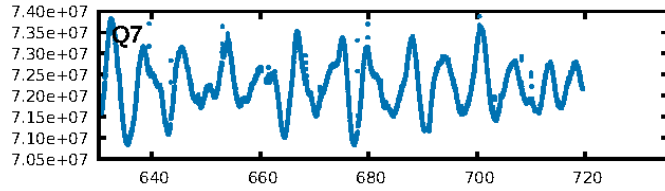
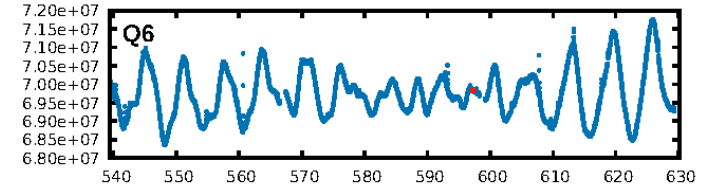
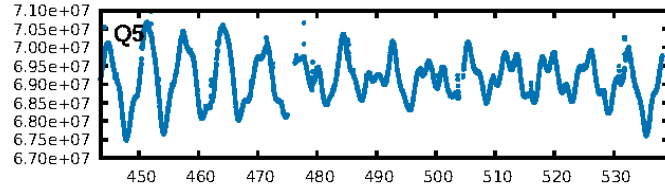
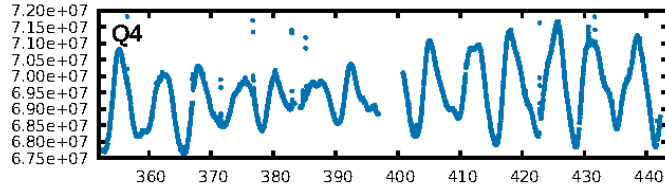
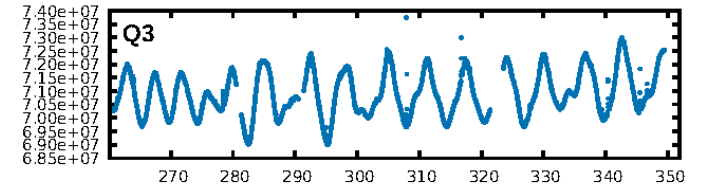
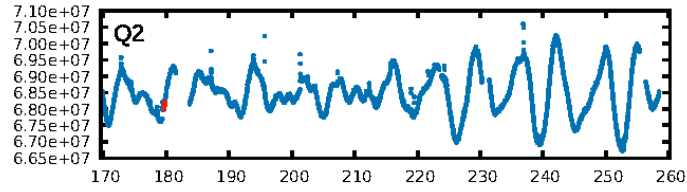
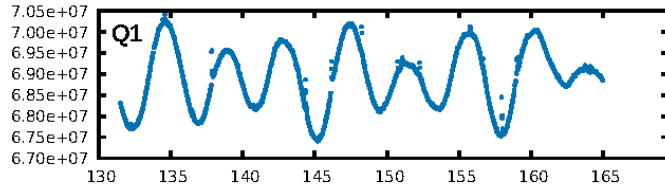
## DV Diagnostic Results:

ShortPeriod-sig: 100.0% [840.59σ]  
LongPeriod-sig: 100.0% [85.06σ]  
ModelChiSquare2-sig: 0.0%  
ModelChiSquareGof-sig: 7.4%  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [4/4]  
GhostDiagnostic-chr: 1.472  
Centroid-sig: 5.3%  
Centroid-so: 0.840 arcsec [1.28σ]  
OotOffset-rm: 0.365 arcsec [1.06σ]  
OotOffset-st: 1/2/0/0 [3]  
KicOffset-rm: 0.319 arcsec [0.86σ]  
KicOffset-st: 1/2/0/0 [3]  
DiffImageQuality-fgm: 1.00 [3/3]  
DiffImageOverlap-fno: 1.00 [4/4]

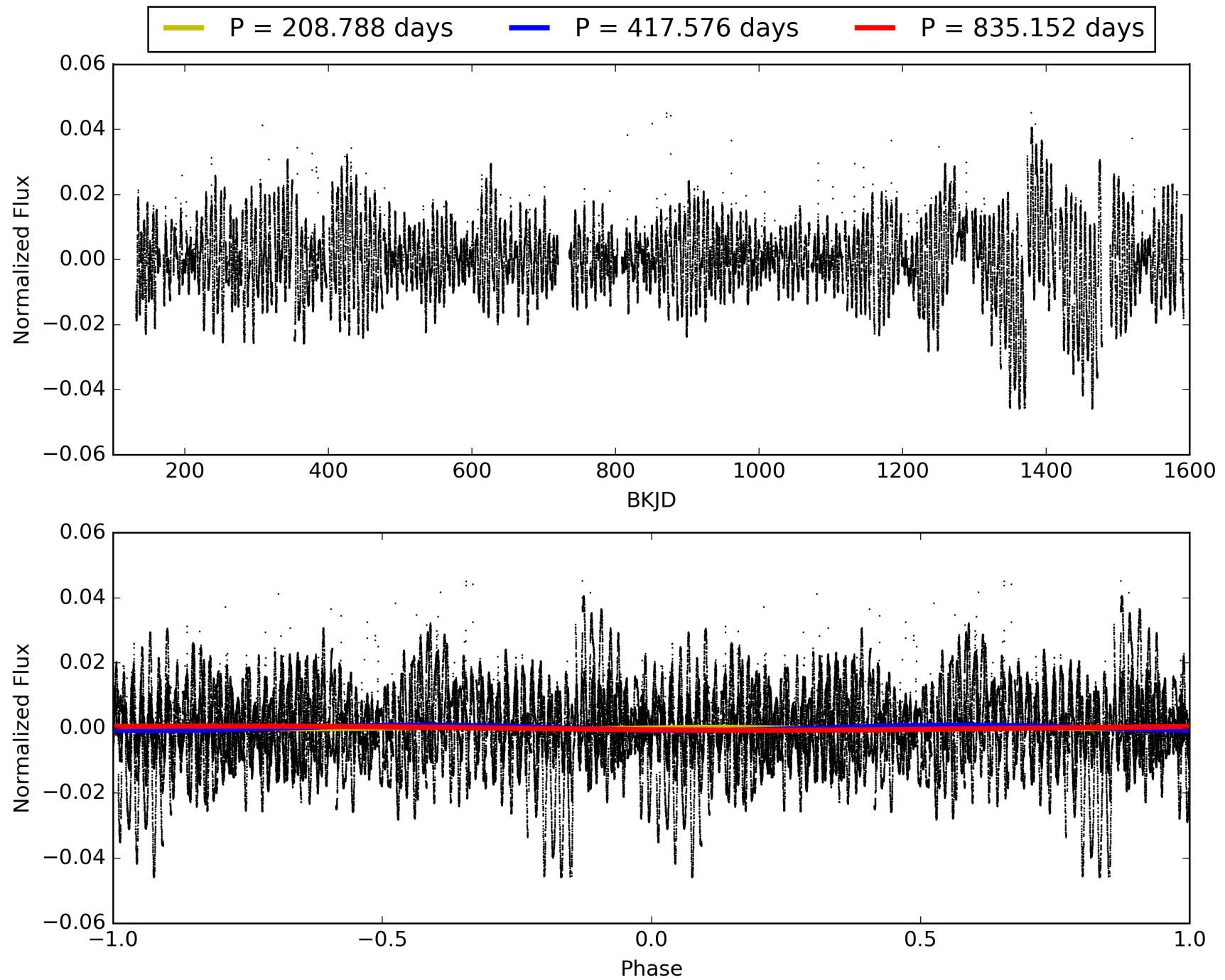
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 01:04:53 Z

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

# TCE 010080792-04, PDC Light Curves

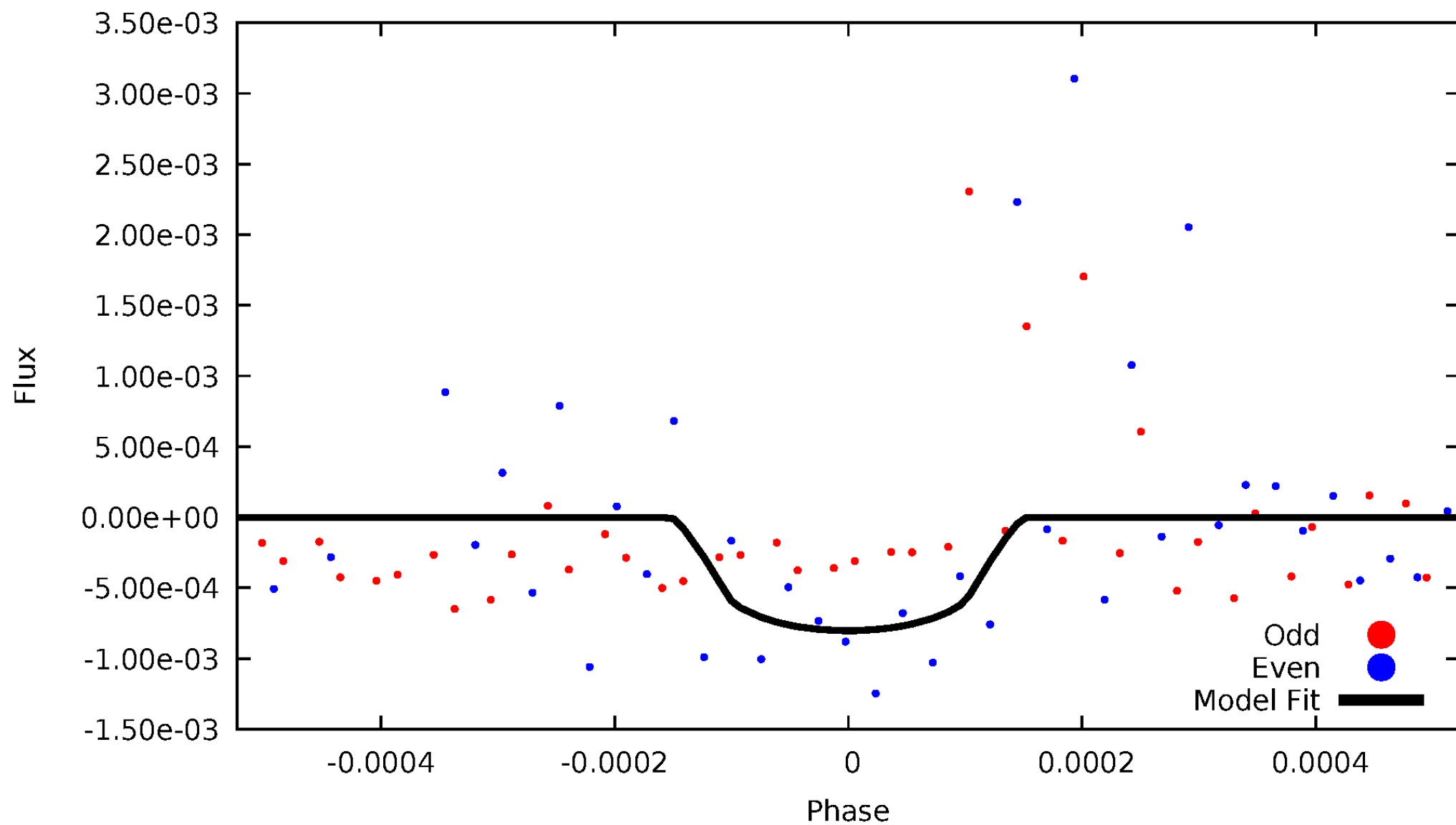


TCE 010080792-04



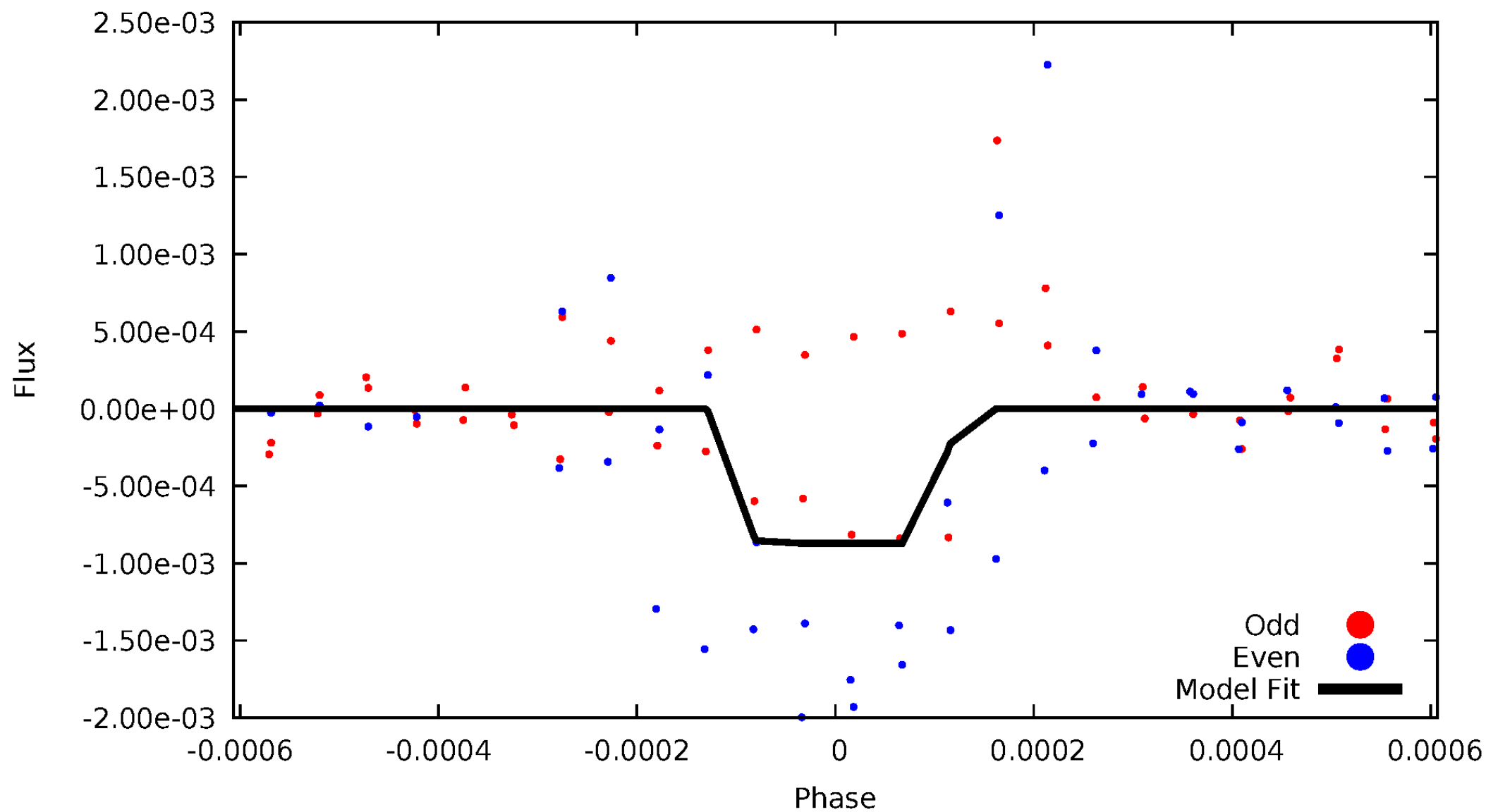
# DV Odd/Even

TCE 010080792-04



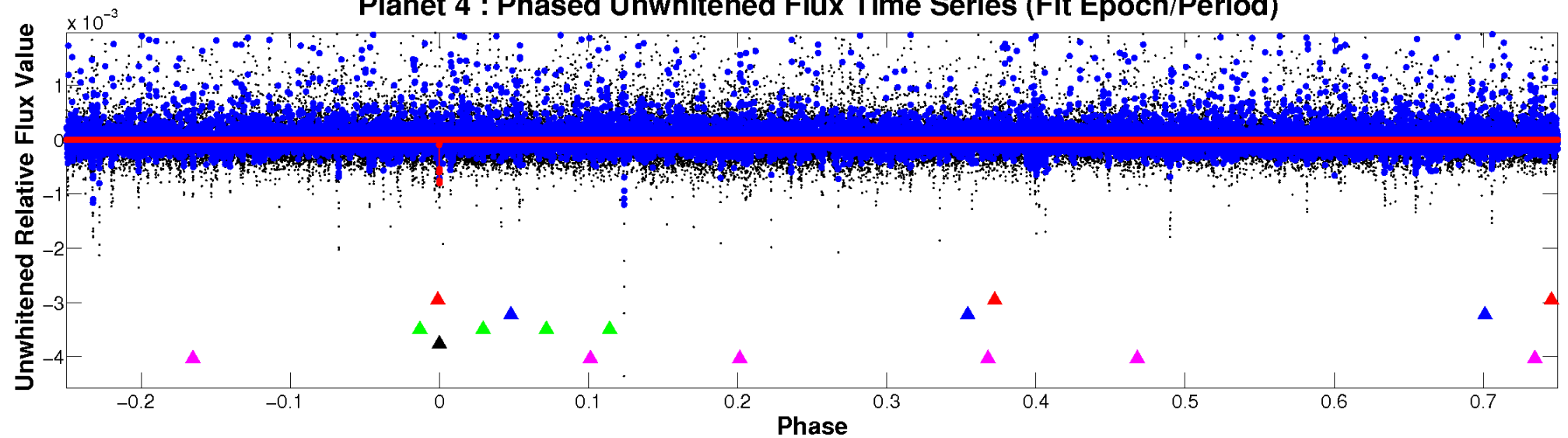
# ALT Odd/Even

TCE 010080792-04

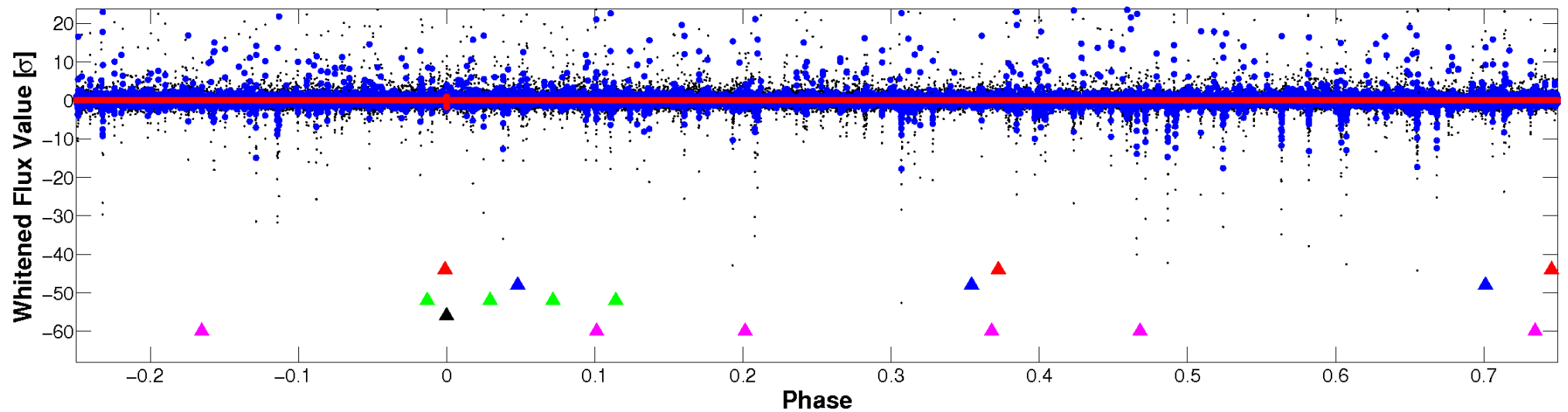


# Non-Whitened Vs. Whitened Light Curve

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

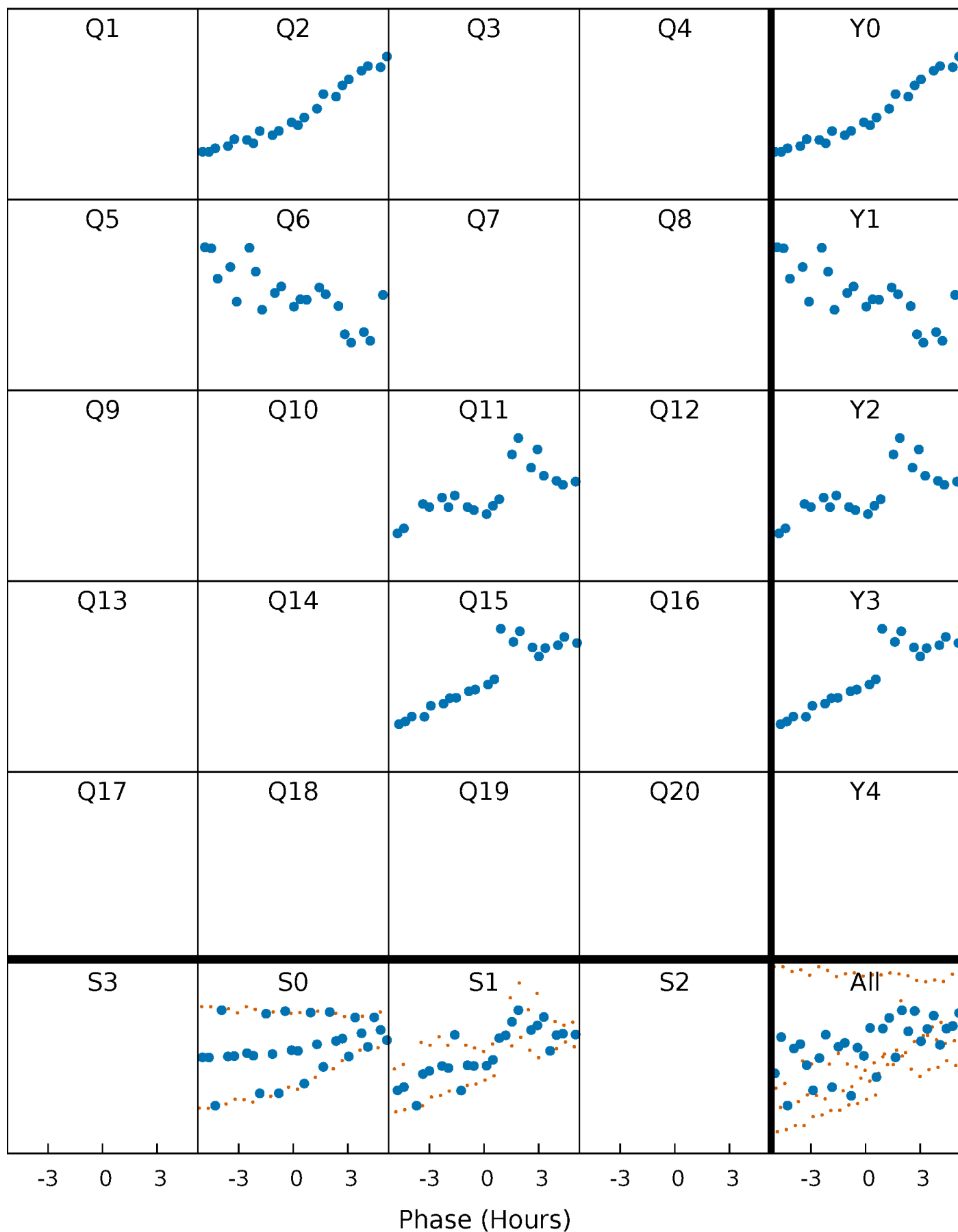


## Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



# PDC Quarter-Phased Transit Curves

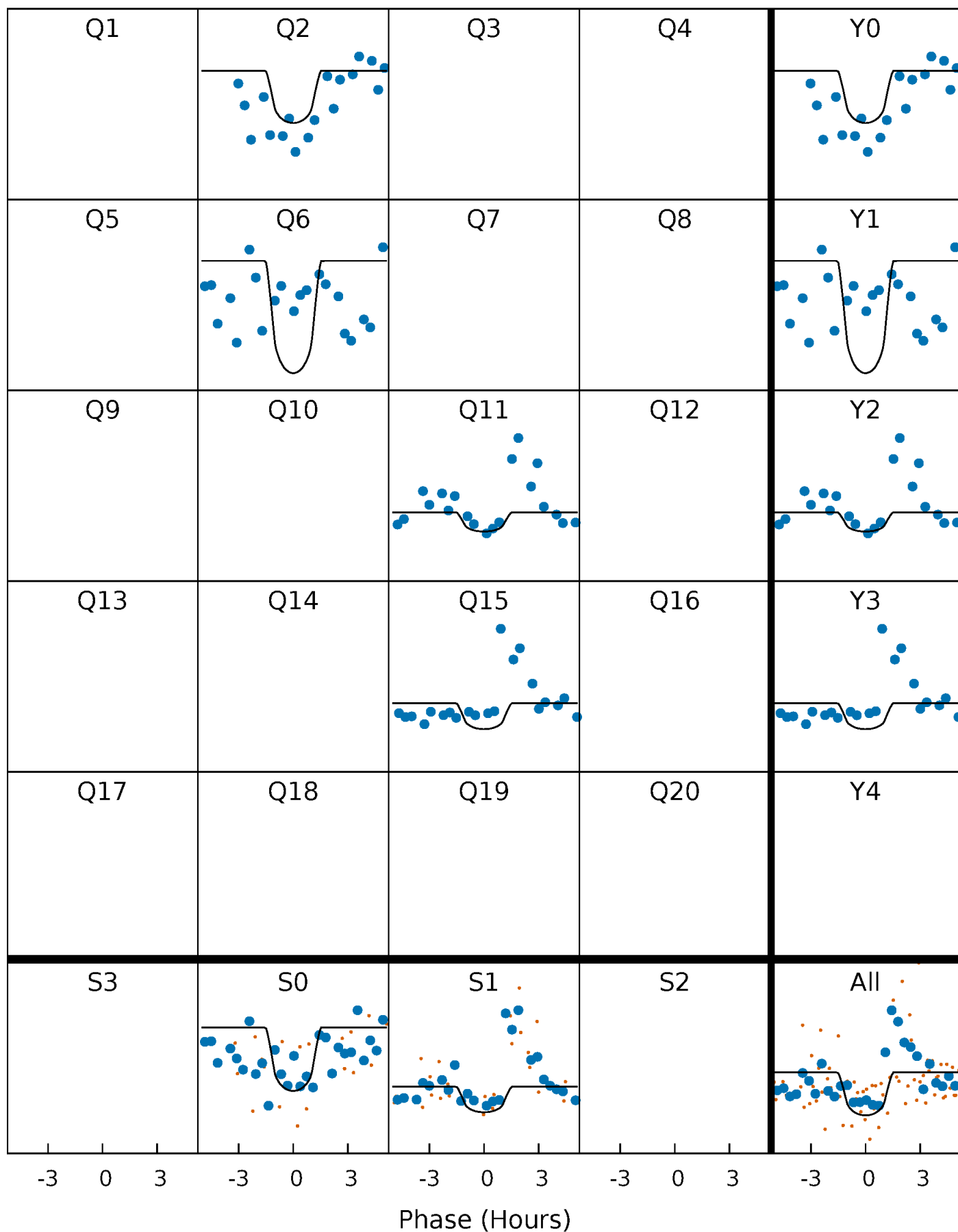
TCE 010080792-04     $P=417.576039$  Days     $T_0=179.706678$  (BKJD)





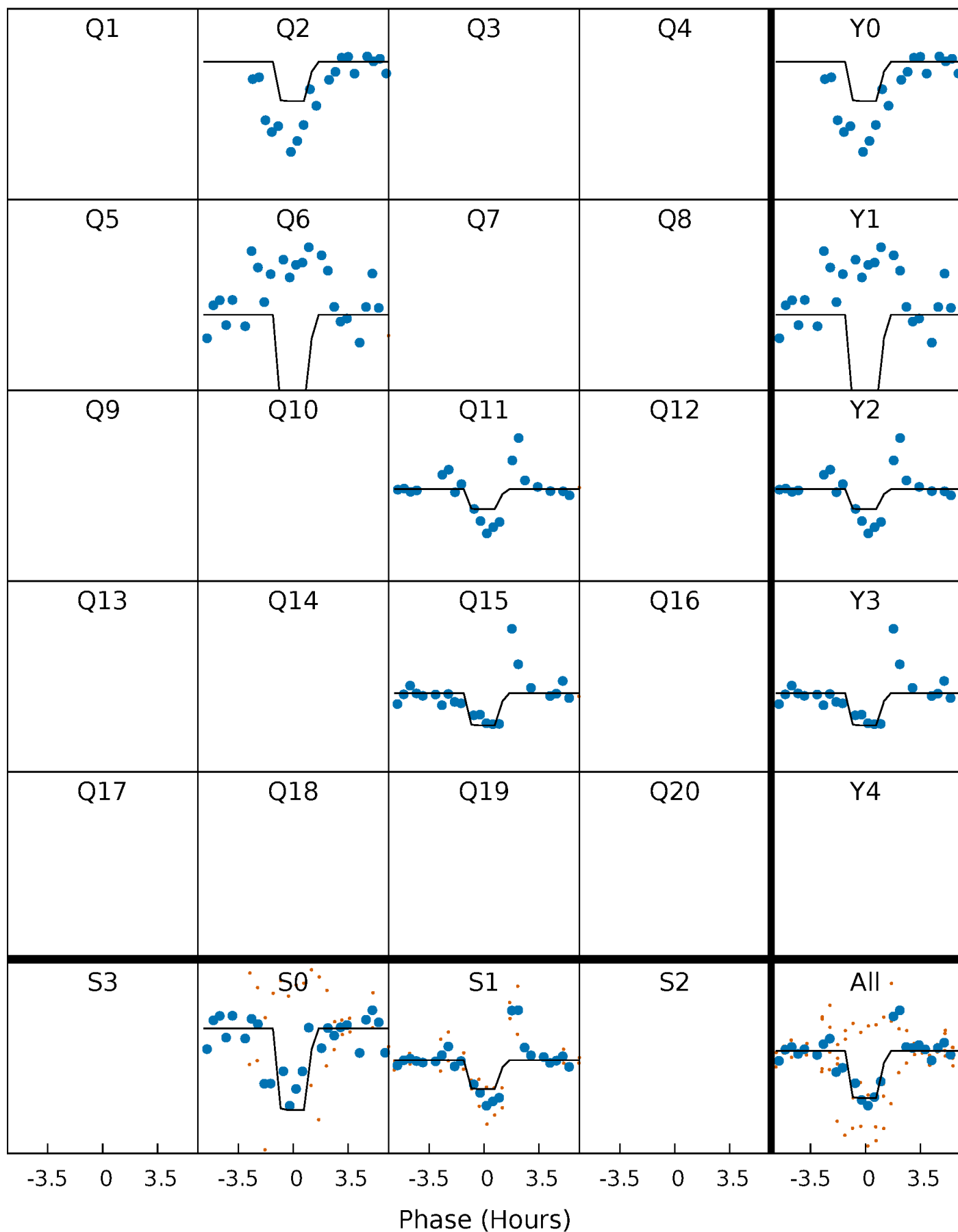
# DV Quarter-Phased Transit Curves

TCE 010080792-04 P=417.576039 Days  $T_0=179.706678$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

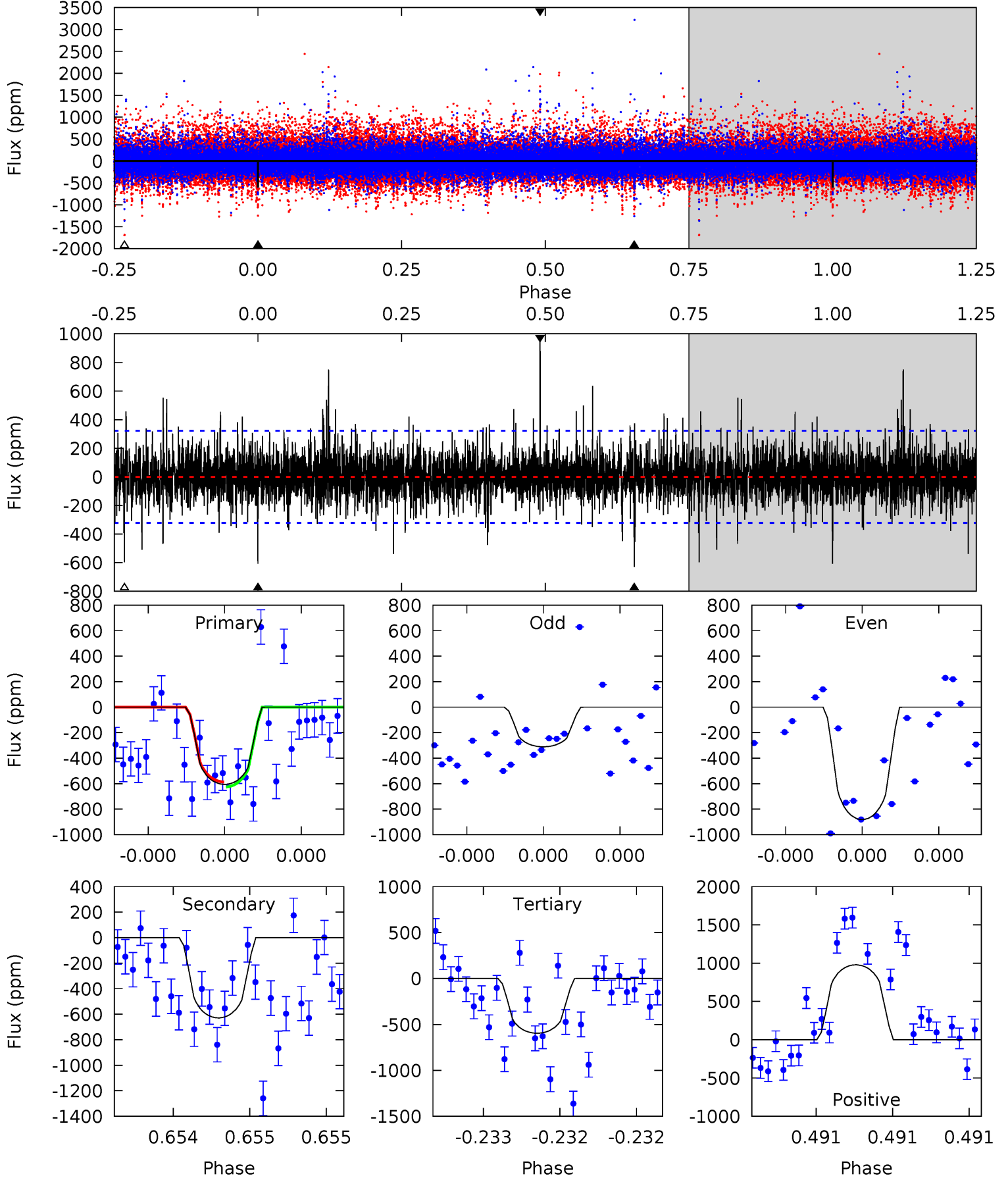
TCE 010080792-04 P=417.559799 Days  $T_0=179.730536$  (BKJD)



# DV Model-Shift Uniqueness Test

010080792-04, P = 417.576039 Days, E = 179.706678 Days

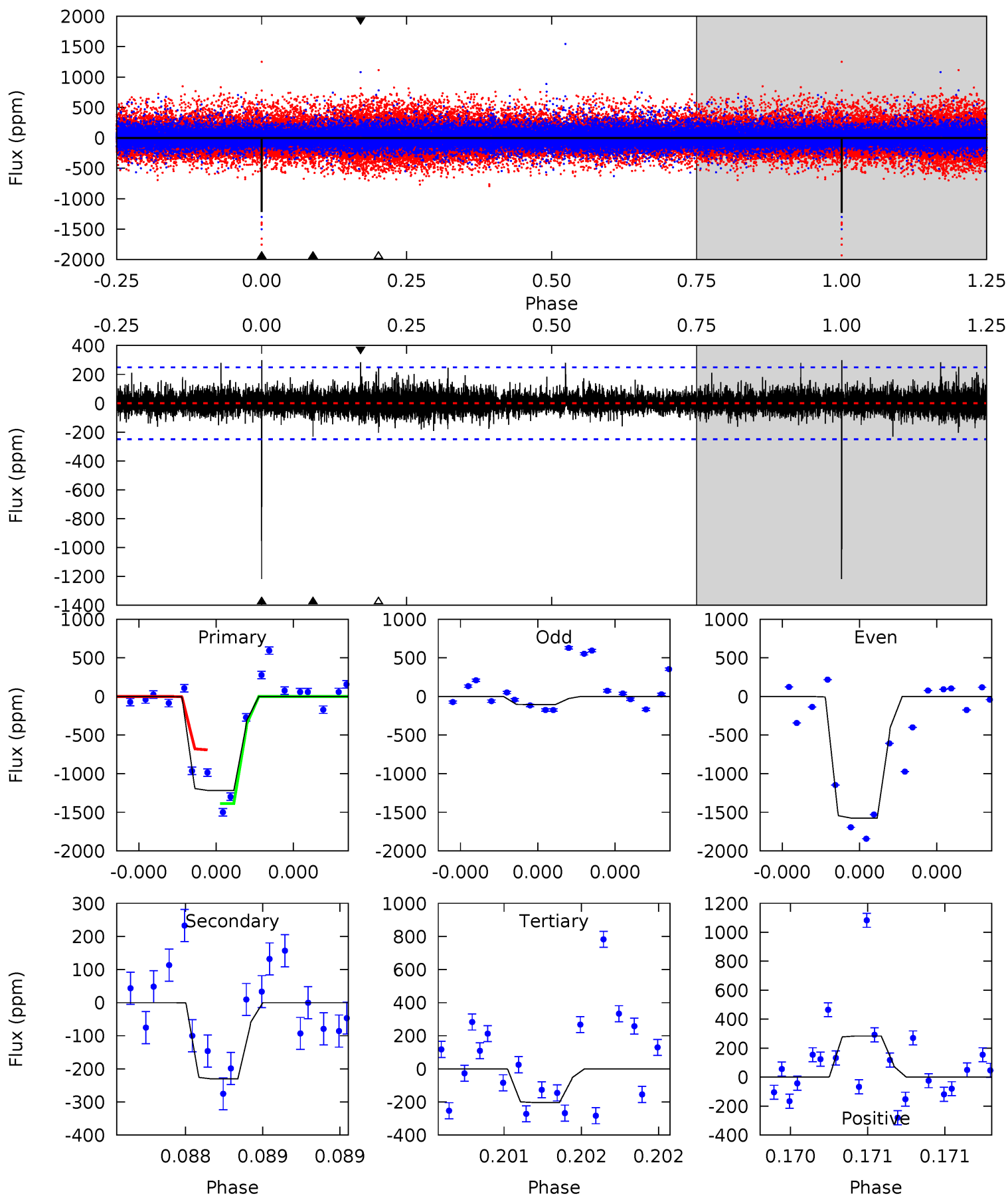
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.6	11.0	10.5	17.2	5.66	3.61	1.88	0.16	-6.55	0.57	-6.14	3.23	1.10	0.61	0.35



# Alt Model-Shift Uniqueness Test

010080792-04, P = 417.559799 Days, E = 179.730536 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
27.7	5.24	4.63	6.44	5.67	3.62	0.98	23.0	21.2	0.61	-1.21	18.6	0.76	0.20	0



### Stellar Parameters For KIC 010080792

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$5043^{+151}_{-136}$	$3.825^{+0.777}_{-0.389}$	$-0.160^{+0.300}_{-0.250}$	$1.908^{+1.201}_{-1.201}$	$0.889^{+0.237}_{-0.158}$	$0.180^{+2.400}_{-0.143}$
	+3%/-3%	+20%/-10%	+188%/-156%	+63%/-63%	+27%/-18%	+1332%/-79%
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 010080792-04 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-629 \pm 57$	$9.76^{+10.88}_{-6.89}$	$415^{+69}_{-75}$	$3909^{+2231}_{-755}$	$4229^{+42503}_{-3304}$
Alt.	$-230 \pm 44$	$10.04^{+10.85}_{-6.81}$	$416^{+76}_{-72}$	$3282^{+1478}_{-552}$	$1390^{+13090}_{-1084}$

$T_{max}$  = 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

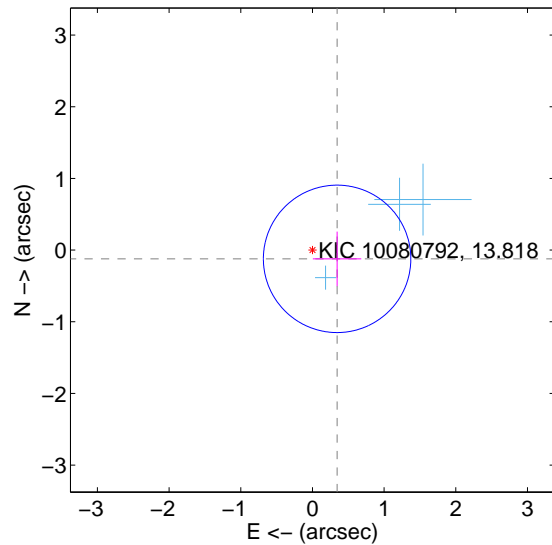
Supplemental centroid analysis for 010080792-04. Kepler magnitude: 13.82. Transit SNR 7.60

There are 3 quarters with good PRF difference image offsets

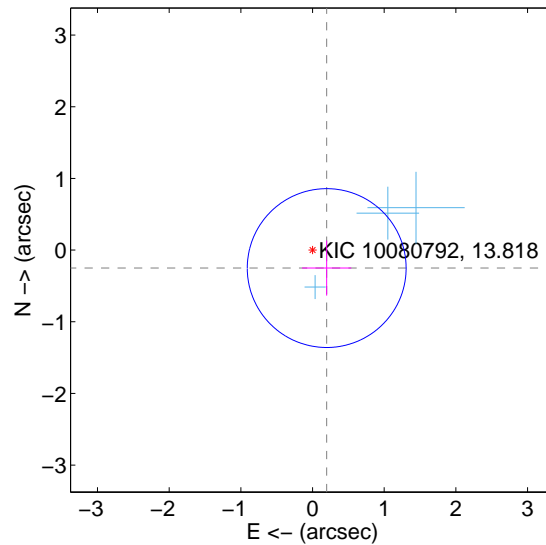
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.365 \pm 0.343$	1.06	$-0.344 \pm 0.338$	$-0.122 \pm 0.380$
PRF-fit source offset from KIC position	$0.319 \pm 0.369$	0.86	$-0.198 \pm 0.344$	$-0.251 \pm 0.385$
photometric centroid source offset	$0.84 \pm 0.66$	1.28	$0.74 \pm 0.66$	$0.40 \pm 0.64$

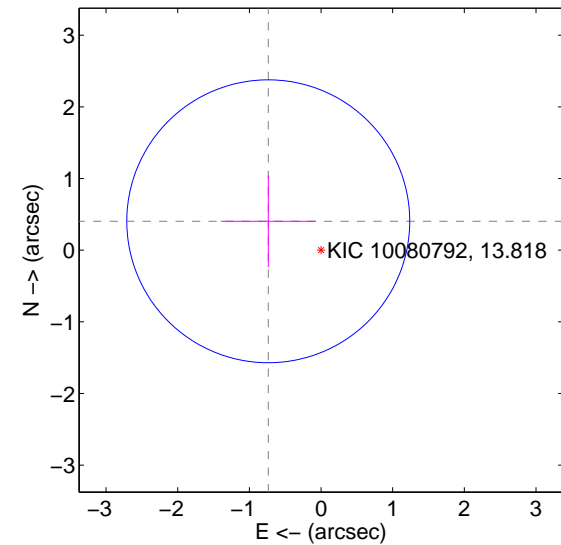
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

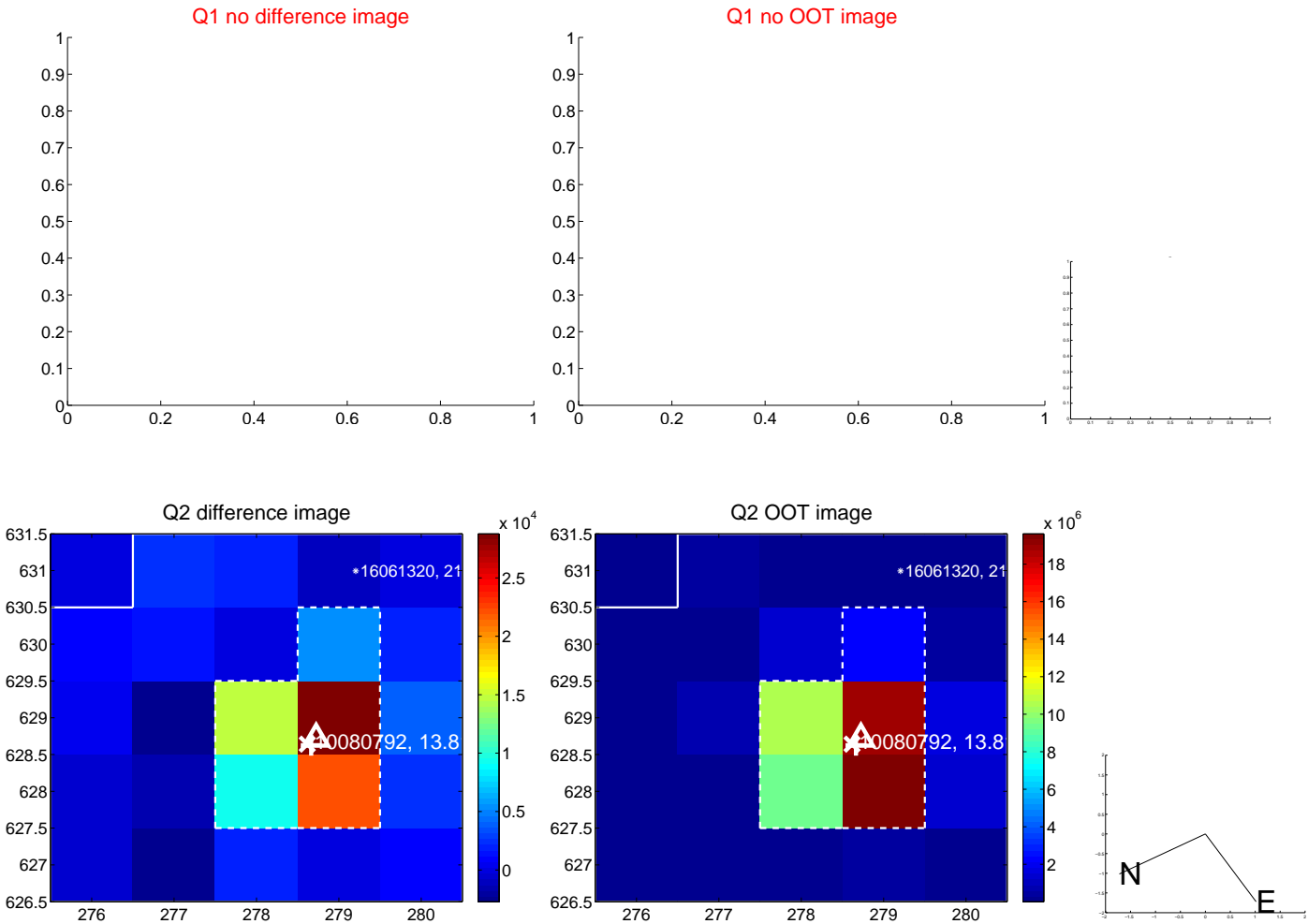


offset from photometric centroids

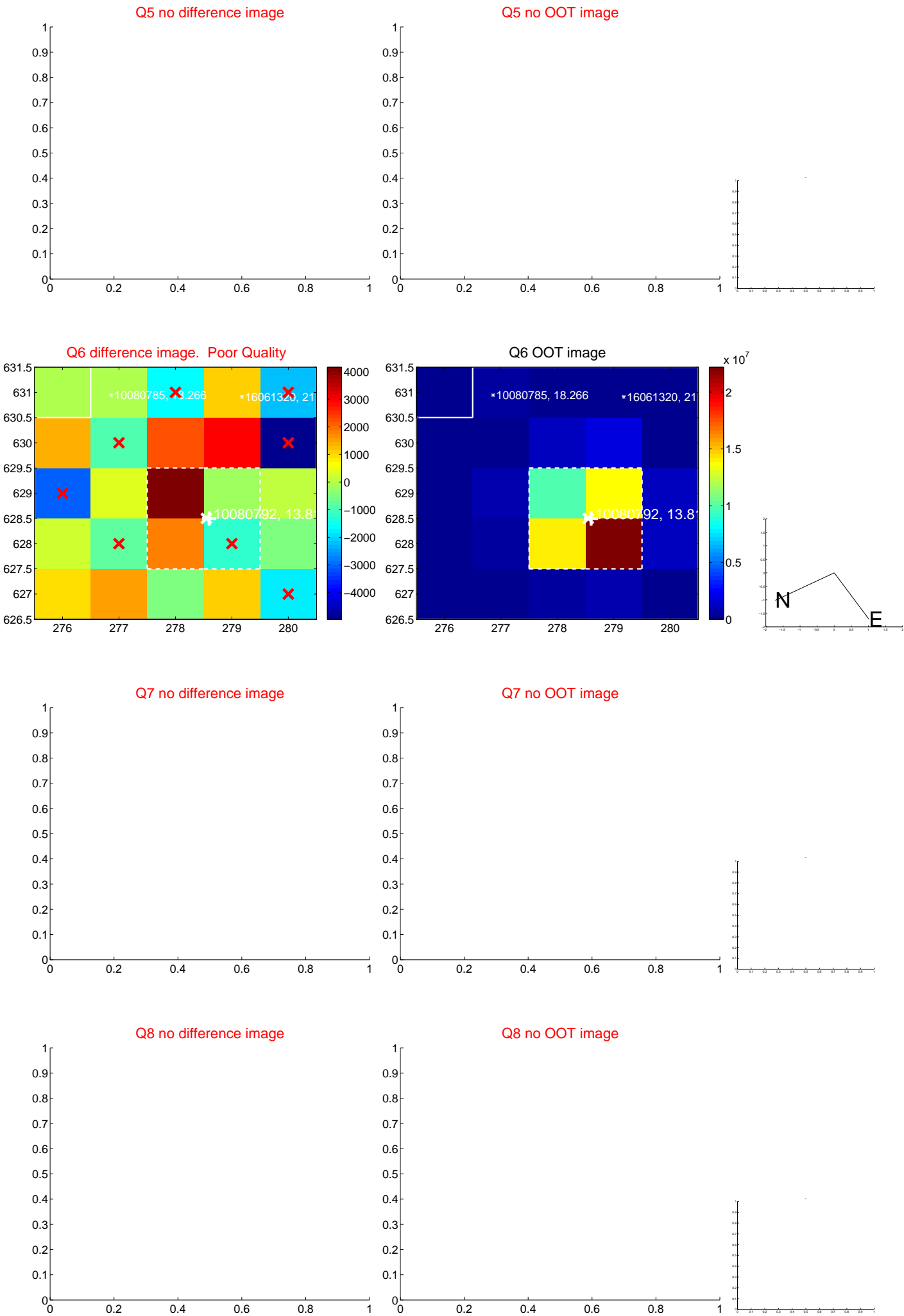


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

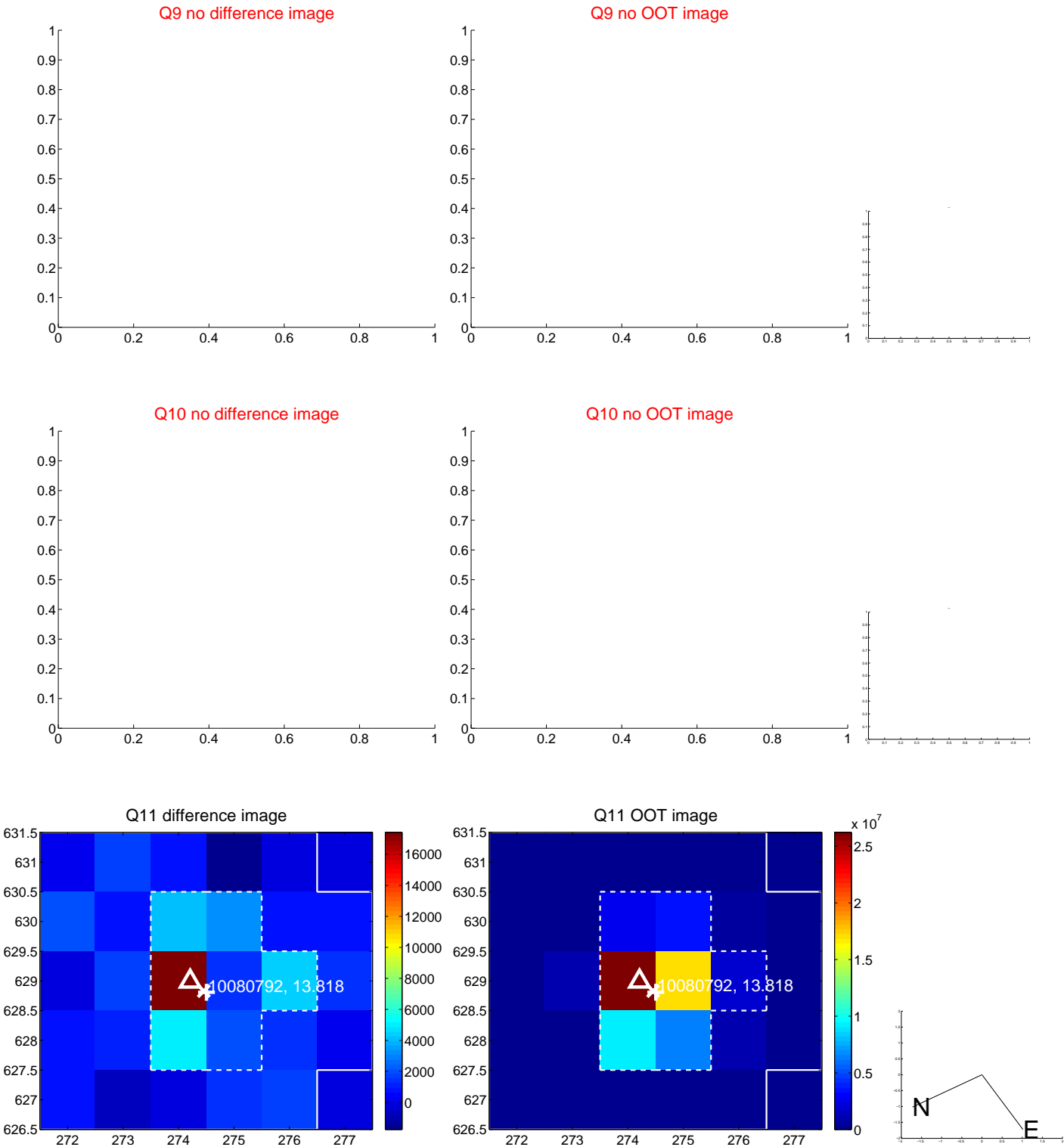


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

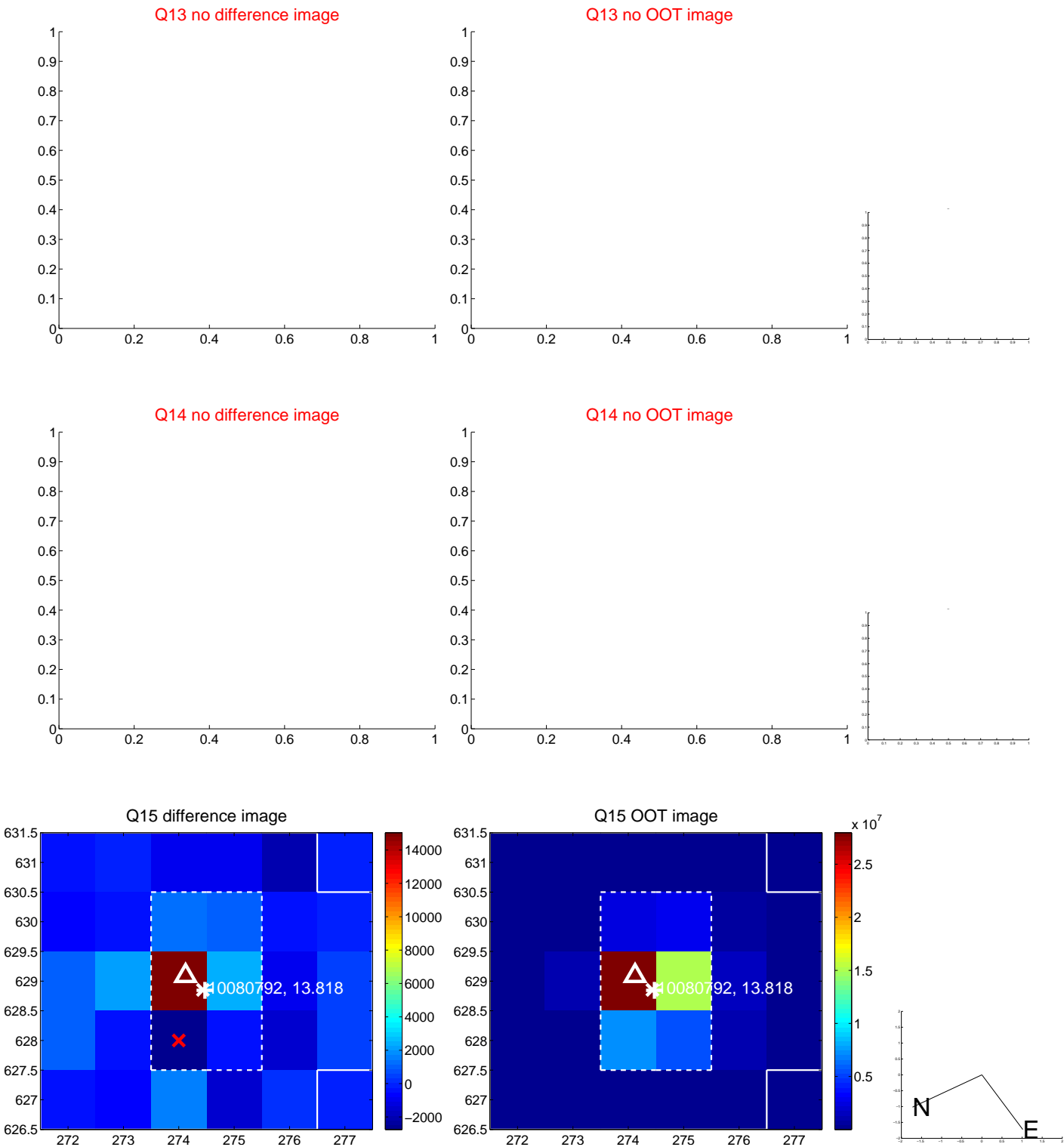




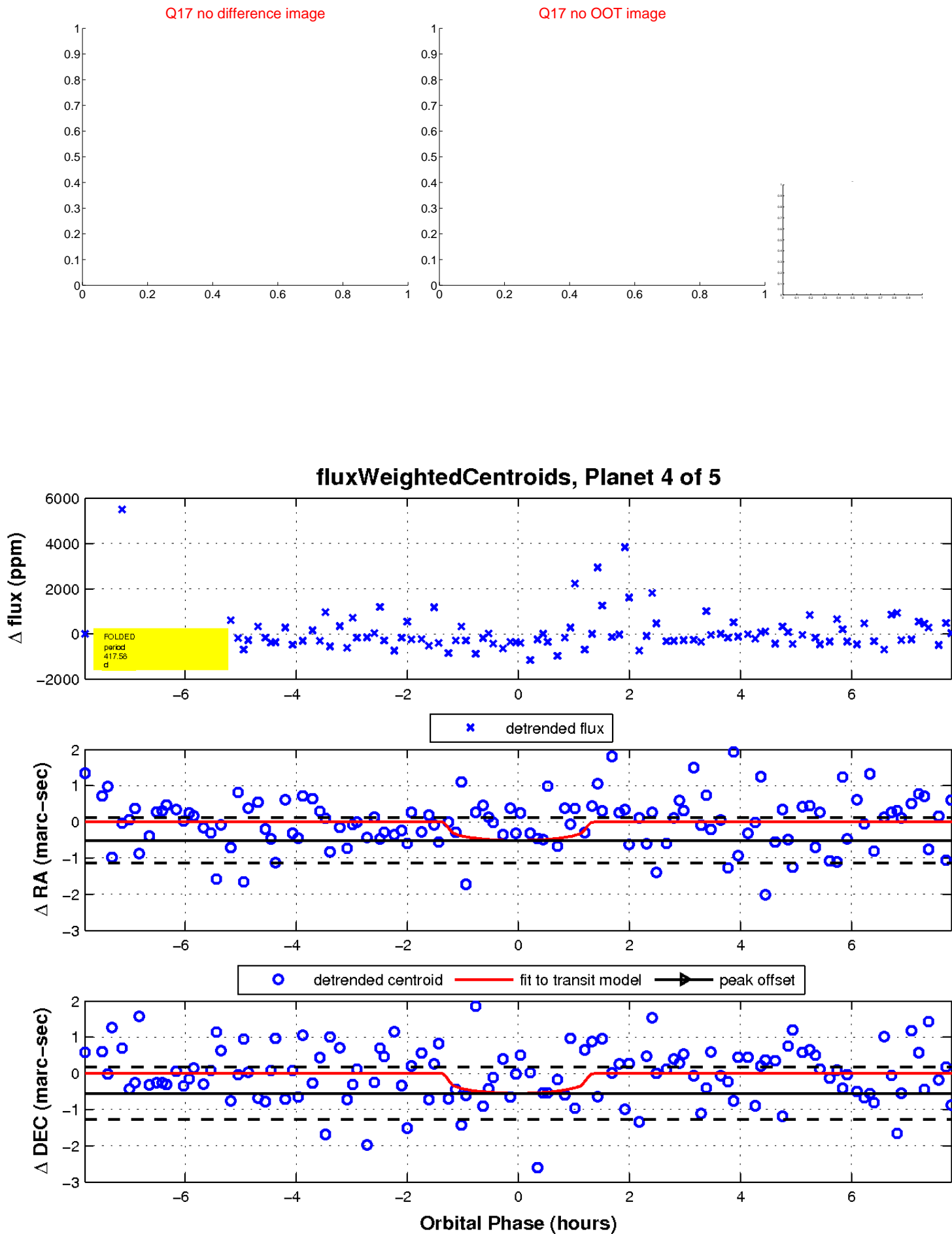
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

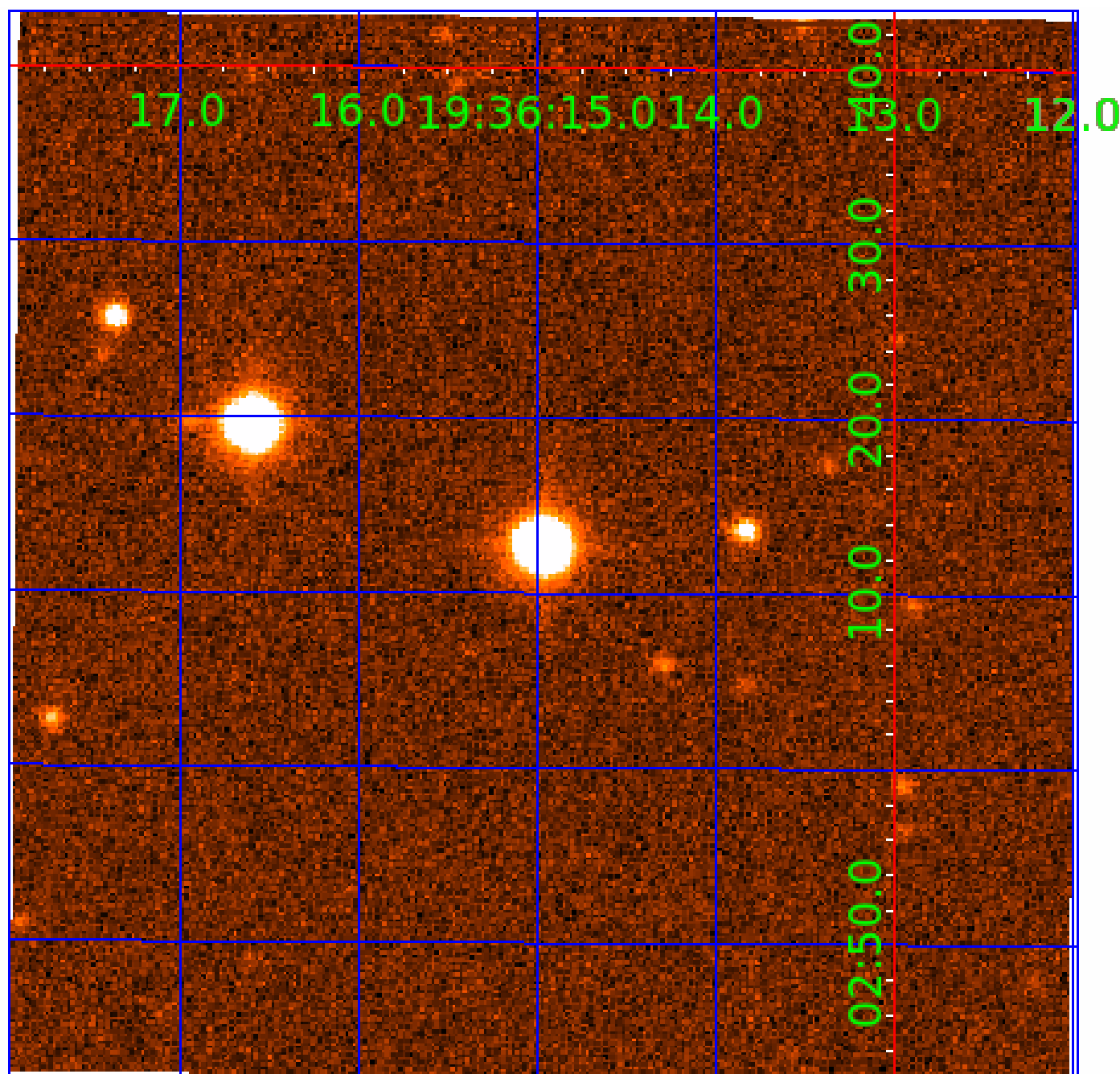


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination



# KIC 010080792

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
010080792-01	OBS	No	573.497849	179.278708	698.4	4.536	15.6	5.4	1.91	5043	5.50	1.25
010080792-02	OBS	No	562.406621	327.660683	814.7	3.453	11.6	8.0	1.91	5043	6.65	1.28
010080792-03	OBS	No	435.294242	174.247911	795.3	4.258	12.4	6.4	1.91	5043	5.49	1.81
010080792-04	OBS	No	417.576039	179.706678	803.0	2.620	12.0	7.6	1.91	5043	5.55	1.91
010080792-05	OBS	No	264.442806	263.838728	828.4	3.500	12.7	-1.0	1.91	5043	5.34	3.51

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010080792-01	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
010080792-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010080792-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010080792-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
010080792-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—ALL_TRANS_CHASES—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.

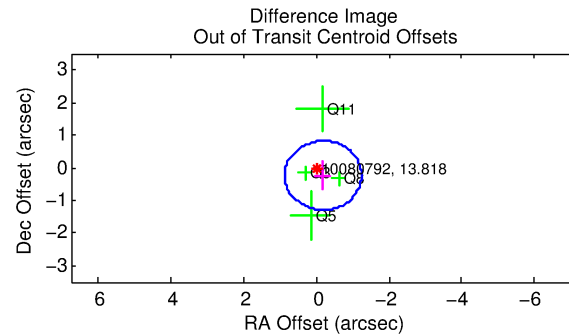
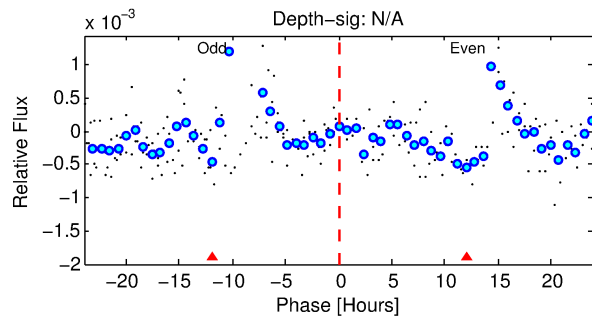
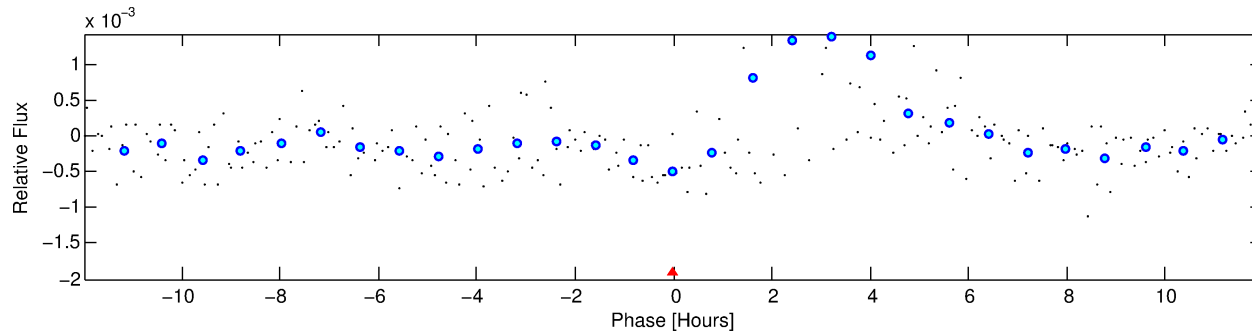
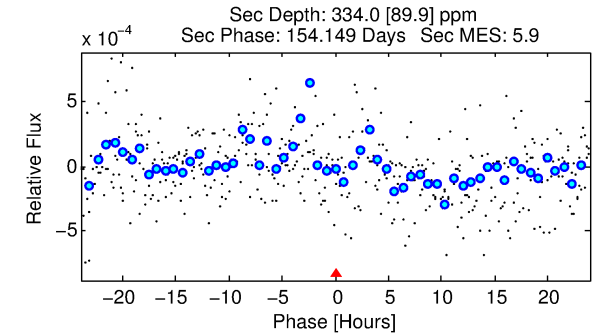
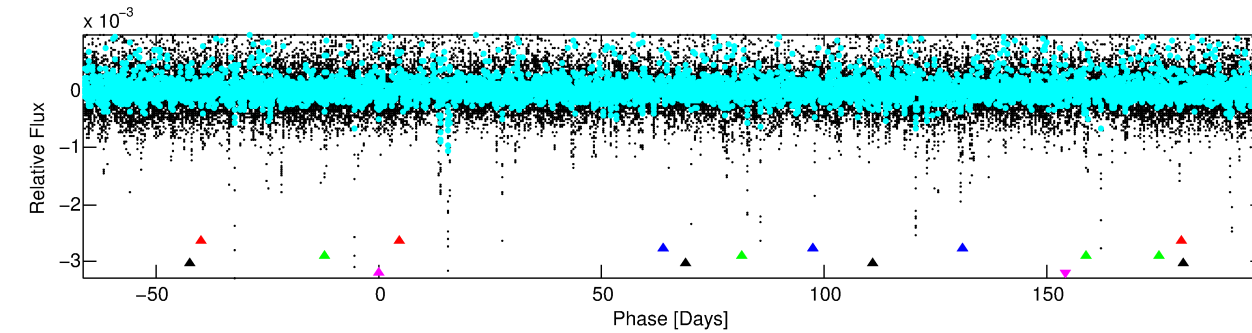
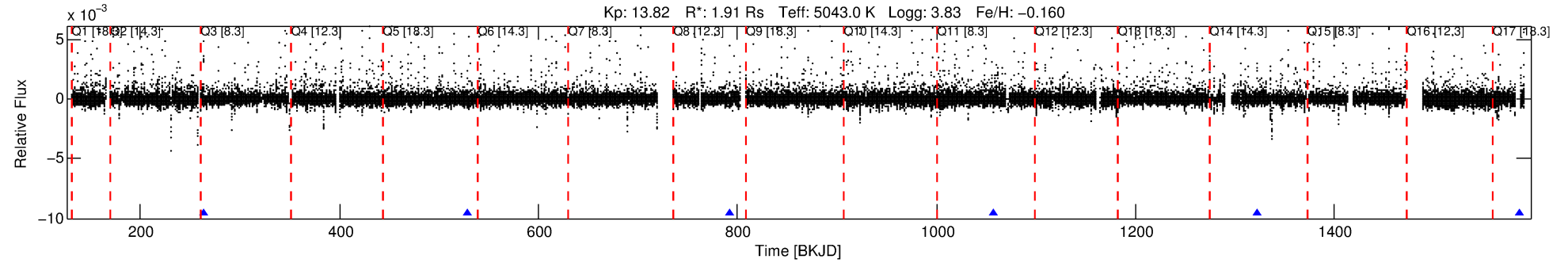
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 010080792-05

No Significant Match Found

# DV One-Page Summary

KIC: 10080792 Candidate: 5 of 5 Period: 264.443 d



## TPS TCE Results:

Period = 264.44281 d  
Epoch = 263.8387 BKJD

DV fit results are unavailable

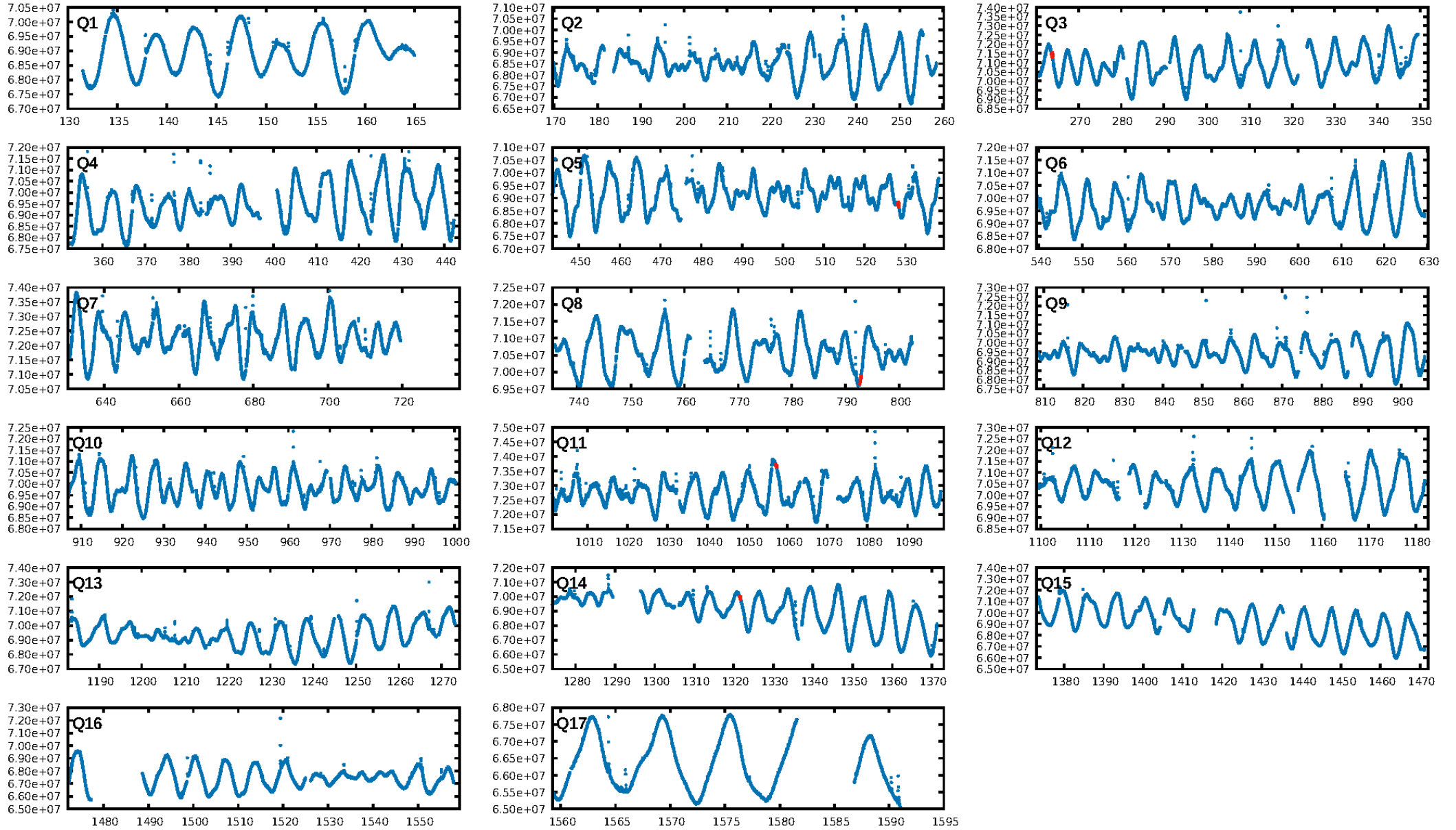
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: 100.0% [840.59 $\sigma$ ]  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [5/5]  
GhostDiagnostic-chr: 0.4597  
Centroid-sig: 51.0%  
Centroid-so: 0.149 arcsec [0.58 $\sigma$ ]  
OotOffset-rm: 0.298 arcsec [0.84 $\sigma$ ]  
KicOffset-rm: 0.440 arcsec [0.66 $\sigma$ ]  
OotOffset-st: 0/2/1/1 [4]  
KicOffset-st: 0/2/1/1 [4]  
DiffImageQuality-fgm: 0.75 [3/4]  
DiffImageOverlap-fno: 1.00 [5/5]

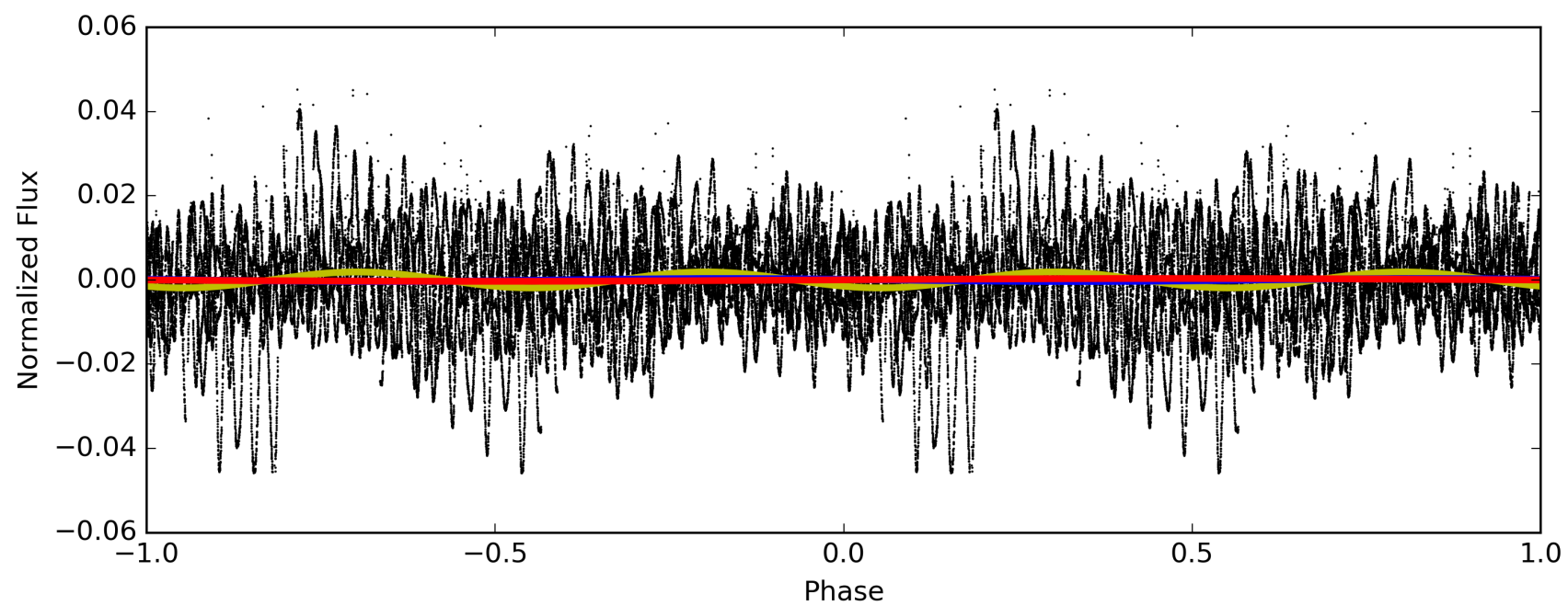
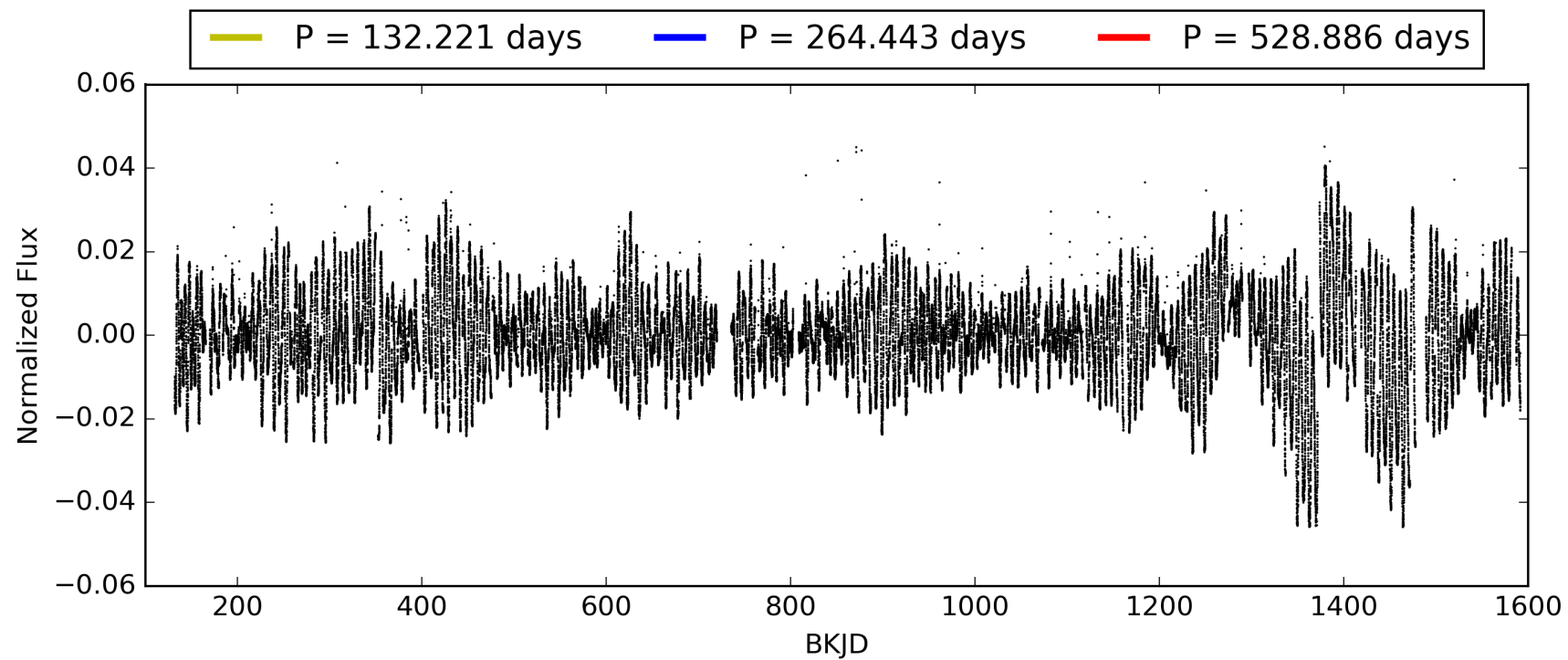
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 01:05:05 Z

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

# TCE 010080792-05, PDC Light Curves



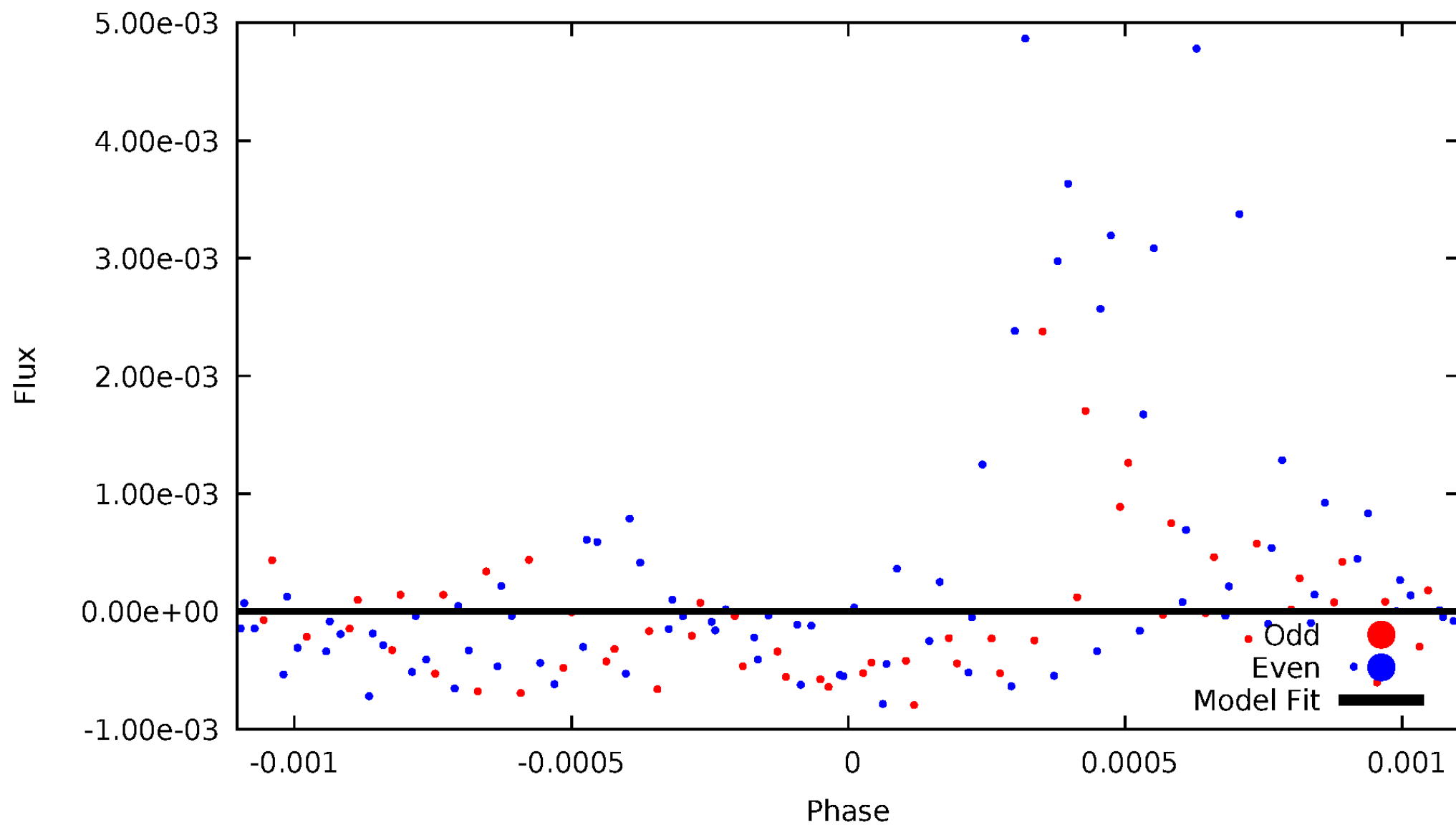
TCE 010080792-05





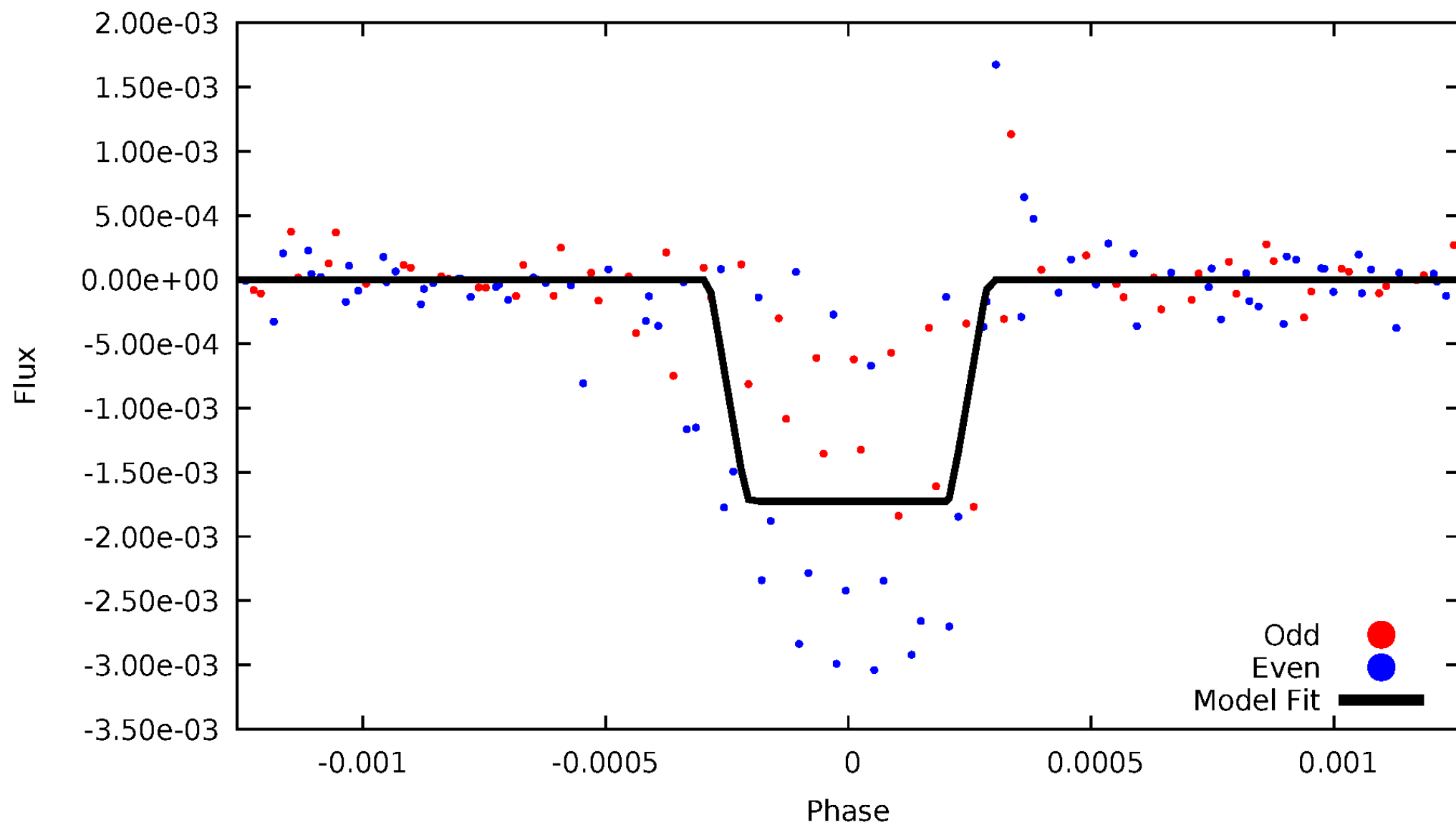
# DV Odd/Even

TCE 010080792-05

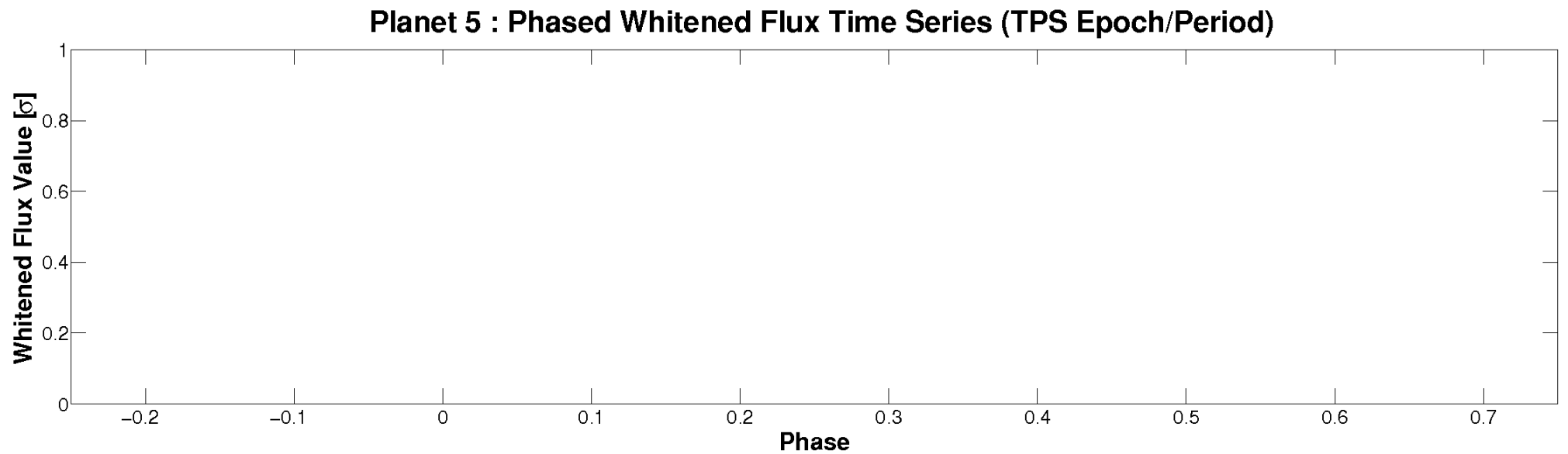
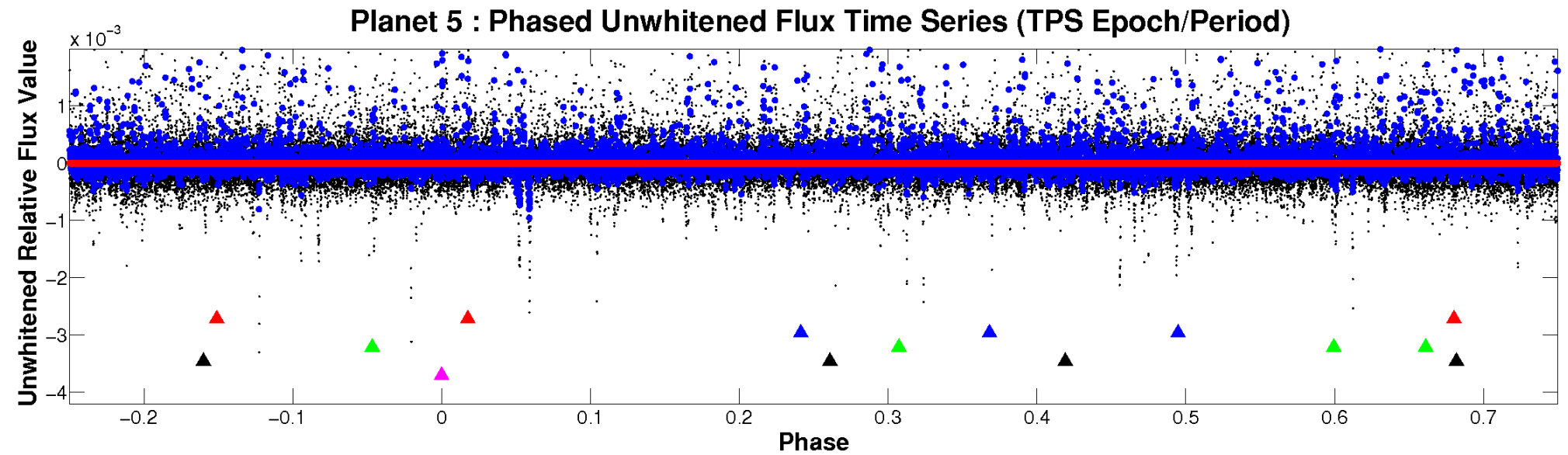


# ALT Odd/Even

TCE 010080792-05

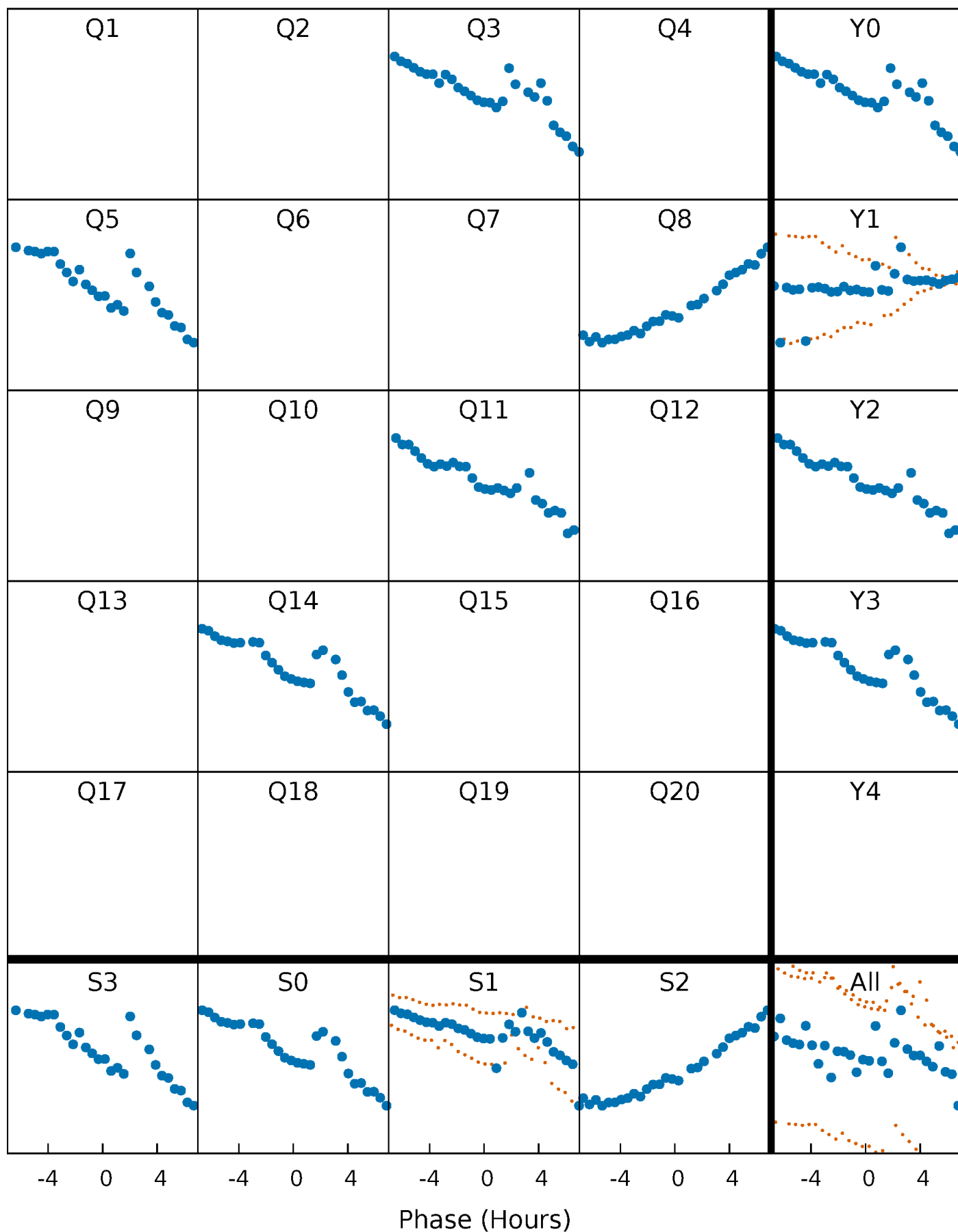


# Non-Whitened Vs. Whitened Light Curve



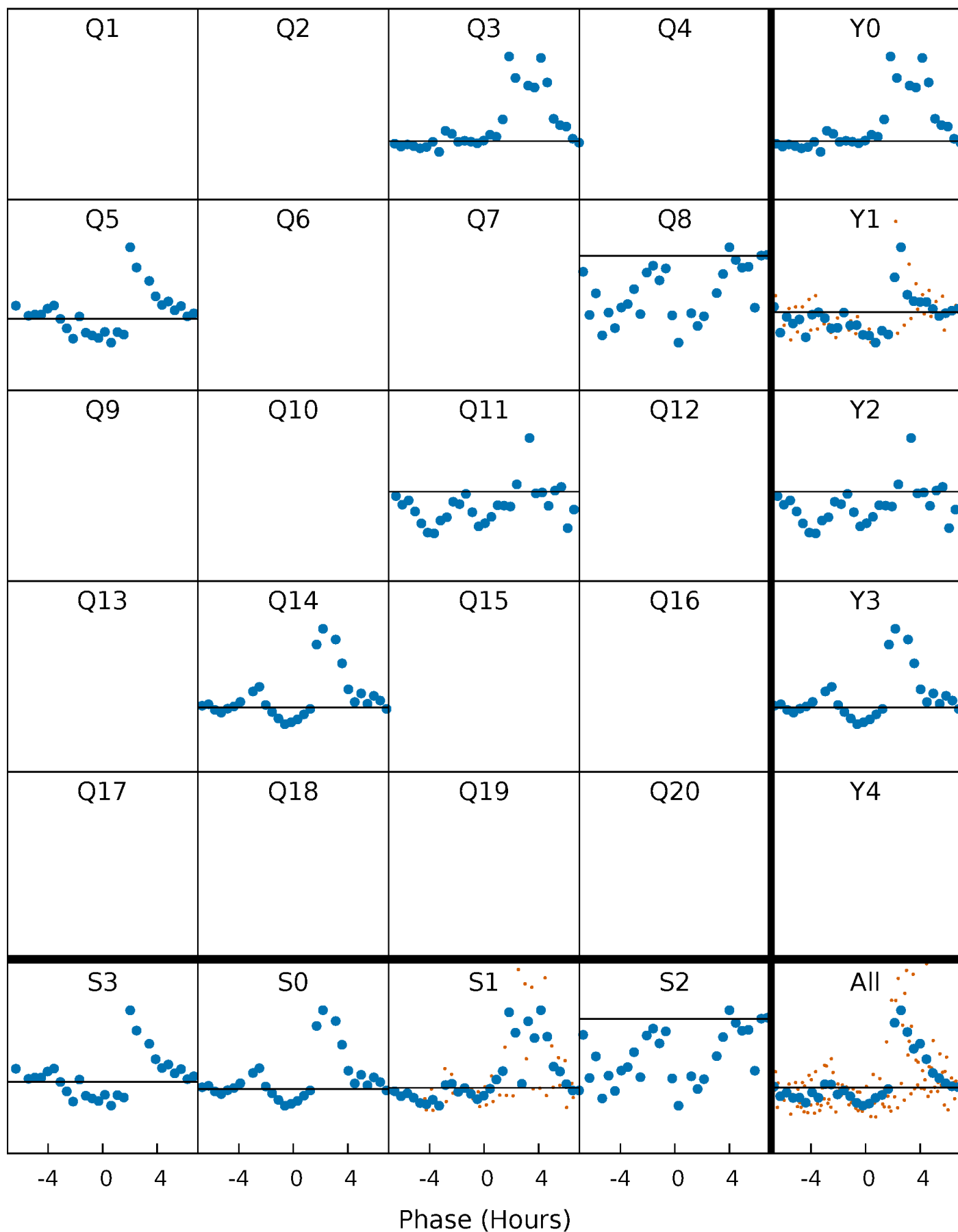
# PDC Quarter-Phased Transit Curves

TCE 010080792-05     $P=264.442806$  Days     $T_0=263.838728$  (BKJD)



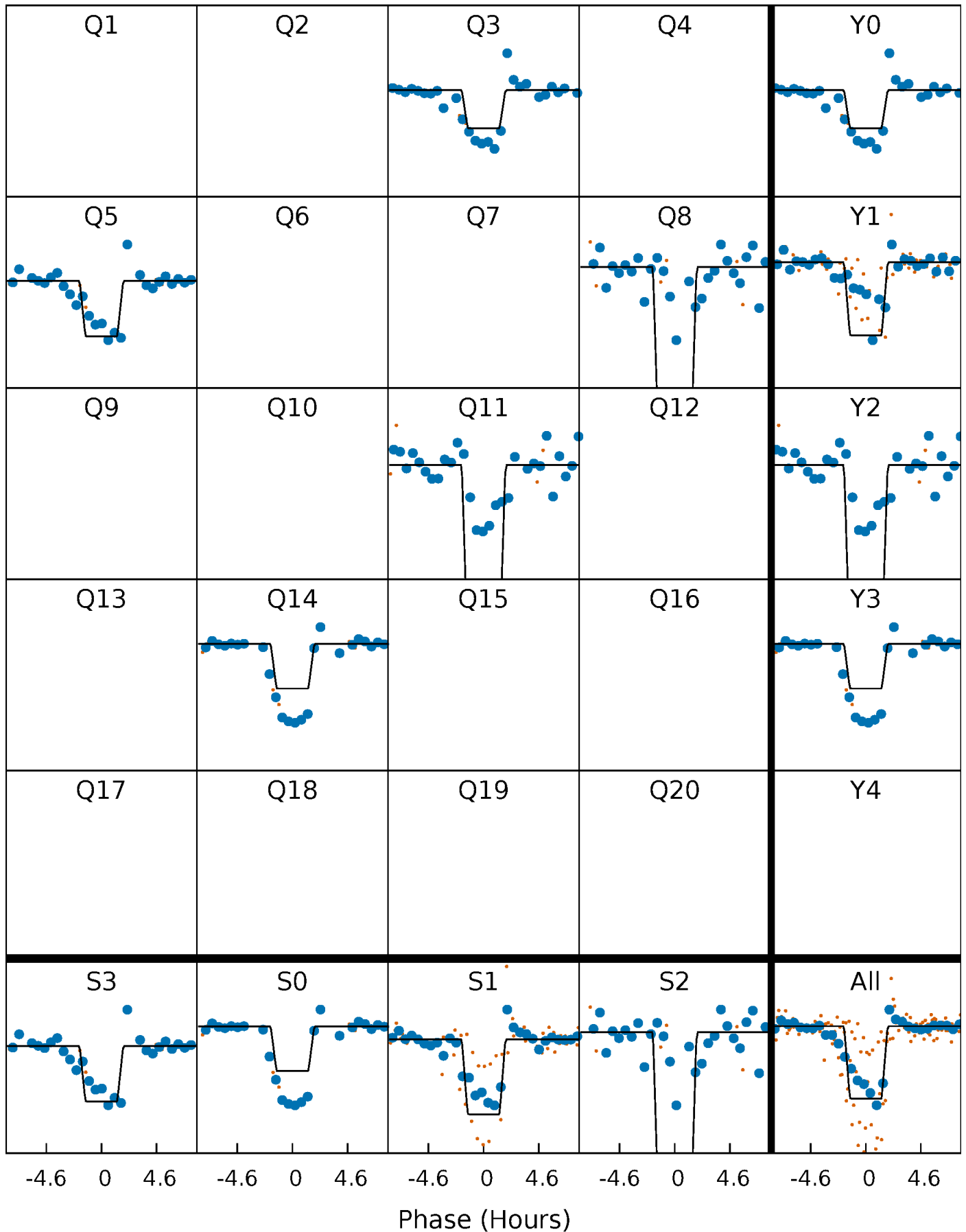
# DV Quarter-Phased Transit Curves

TCE 010080792-05     $P=264.442806$  Days     $T_0=263.838728$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

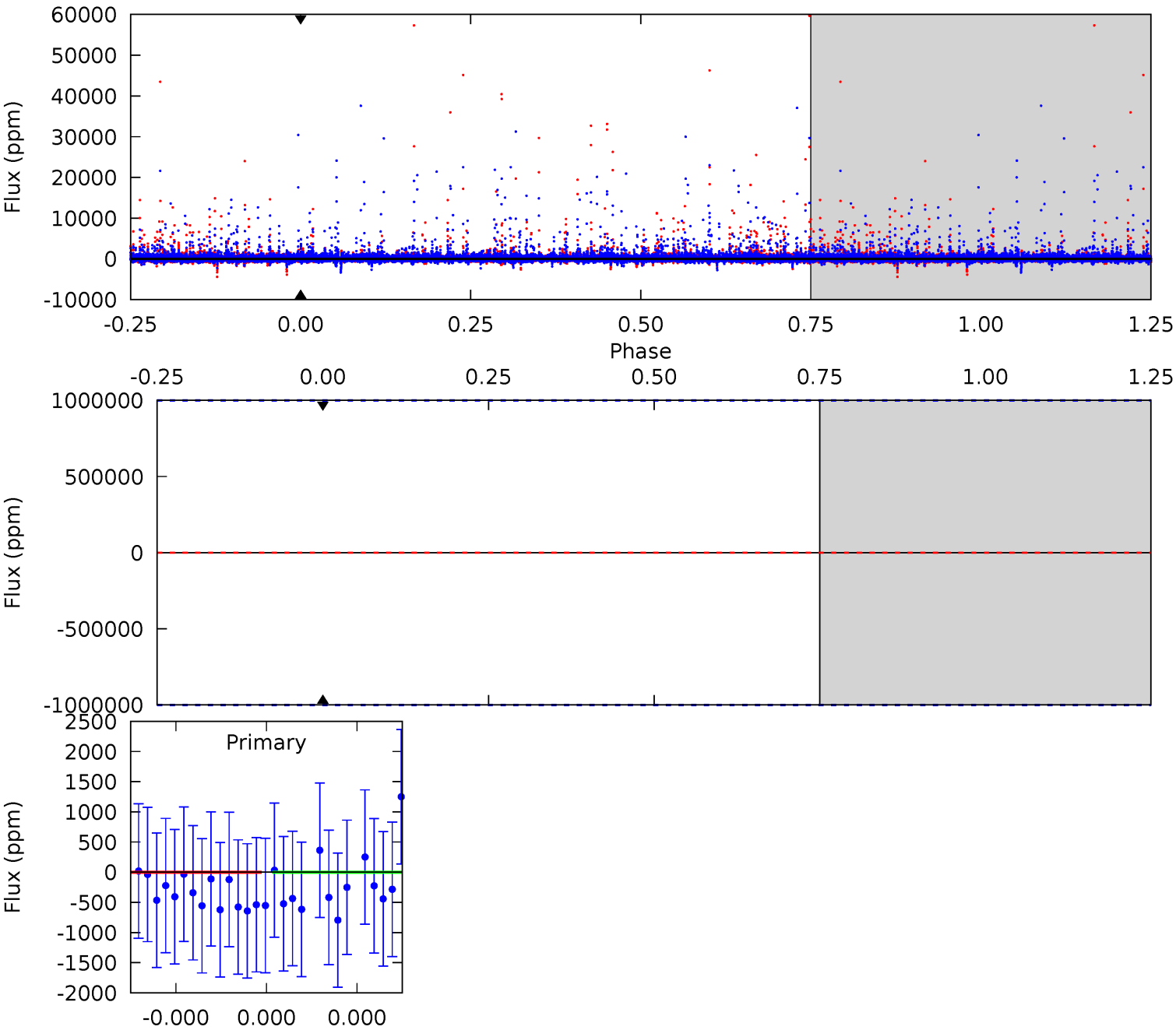
TCE 010080792-05     $P=264.442806$  Days     $T_0=263.842836$  (BKJD)



# DV Model-Shift Uniqueness Test

010080792-05, P = 264.442806 Days, E = 263.838728 Days

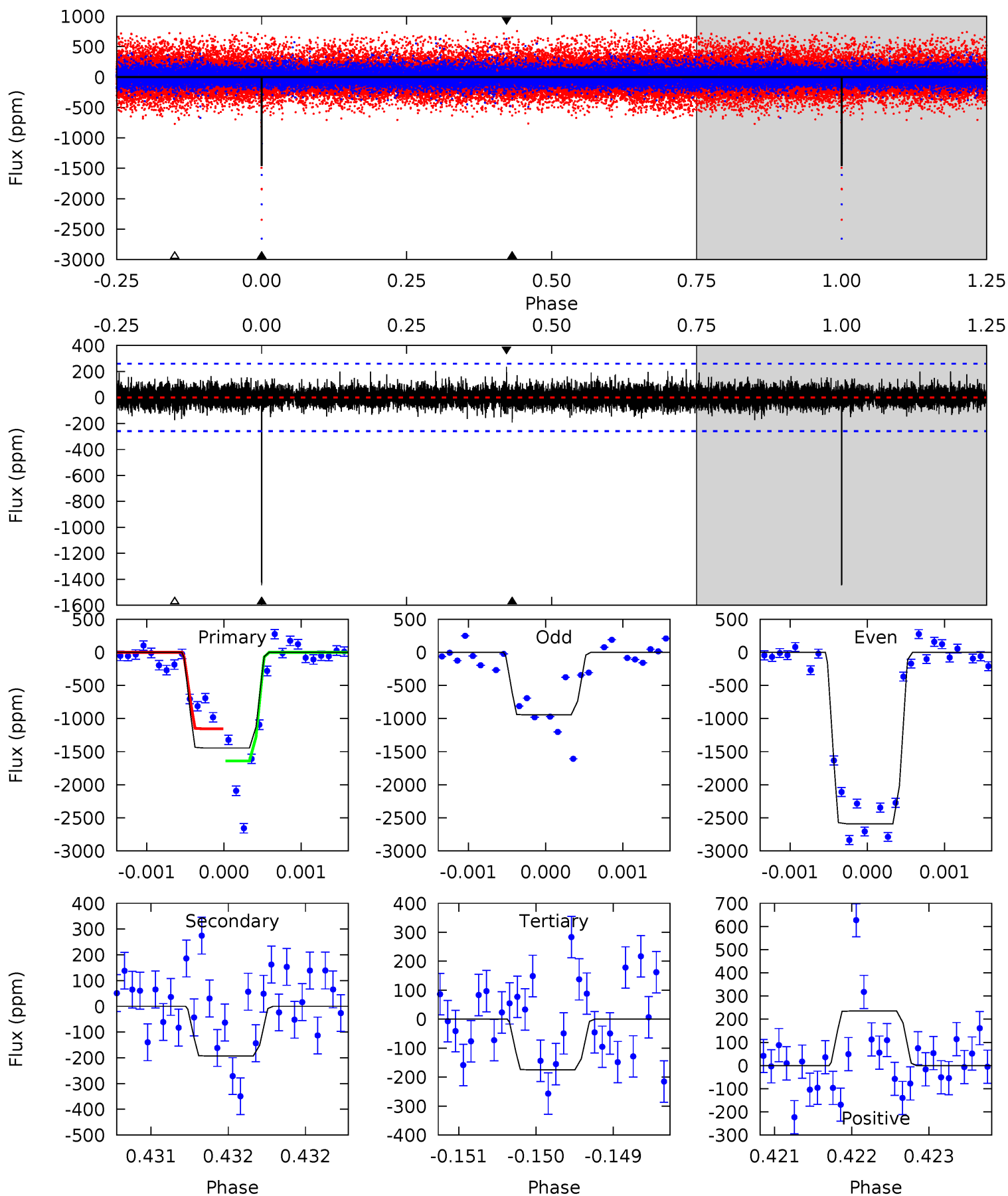
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



# Alt Model-Shift Uniqueness Test

010080792-05, P = 264.442806 Days, E = 263.842836 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
31.0	4.14	3.75	5.04	5.56	3.46	0.97	27.2	25.9	0.39	-0.91	23.7	1.02	0.14	5.22





### Stellar Parameters For KIC 010080792

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$5043^{+151}_{-136}$	$3.825^{+0.777}_{-0.389}$	$-0.160^{+0.300}_{-0.250}$	$1.908^{+1.201}_{-1.201}$	$0.889^{+0.237}_{-0.158}$	$0.180^{+2.400}_{-0.143}$
	+3%/-3%	+20%/-10%	+188%/-156%	+63%/-63%	+27%/-18%	+1332%/-79%
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 010080792-05 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$0 \pm 1000000$	$14.23^{+20.70}_{-10.21}$	$485^{+87}_{-89}$	$3760^{+12027}_{-17511}$	$1982^{+313283}_{-297885}$
Alt.	$-193 \pm 47$	$15.58^{+21.37}_{-10.43}$	$486^{+84}_{-90}$	$2770^{+1121}_{-444}$	$256^{+2381}_{-211}$

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

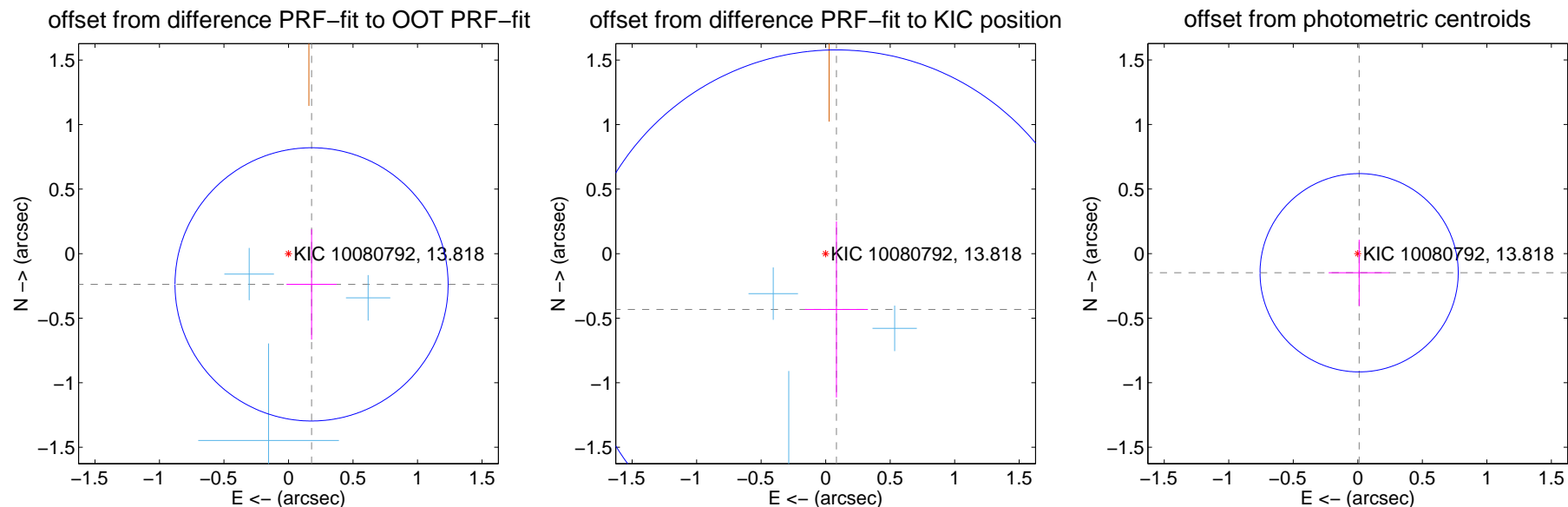
## DV Centroid Data

Supplemental centroid analysis for 010080792-05. Kepler magnitude: 13.82. Transit SNR -1.00

There are 3 quarters with good PRF difference image offsets

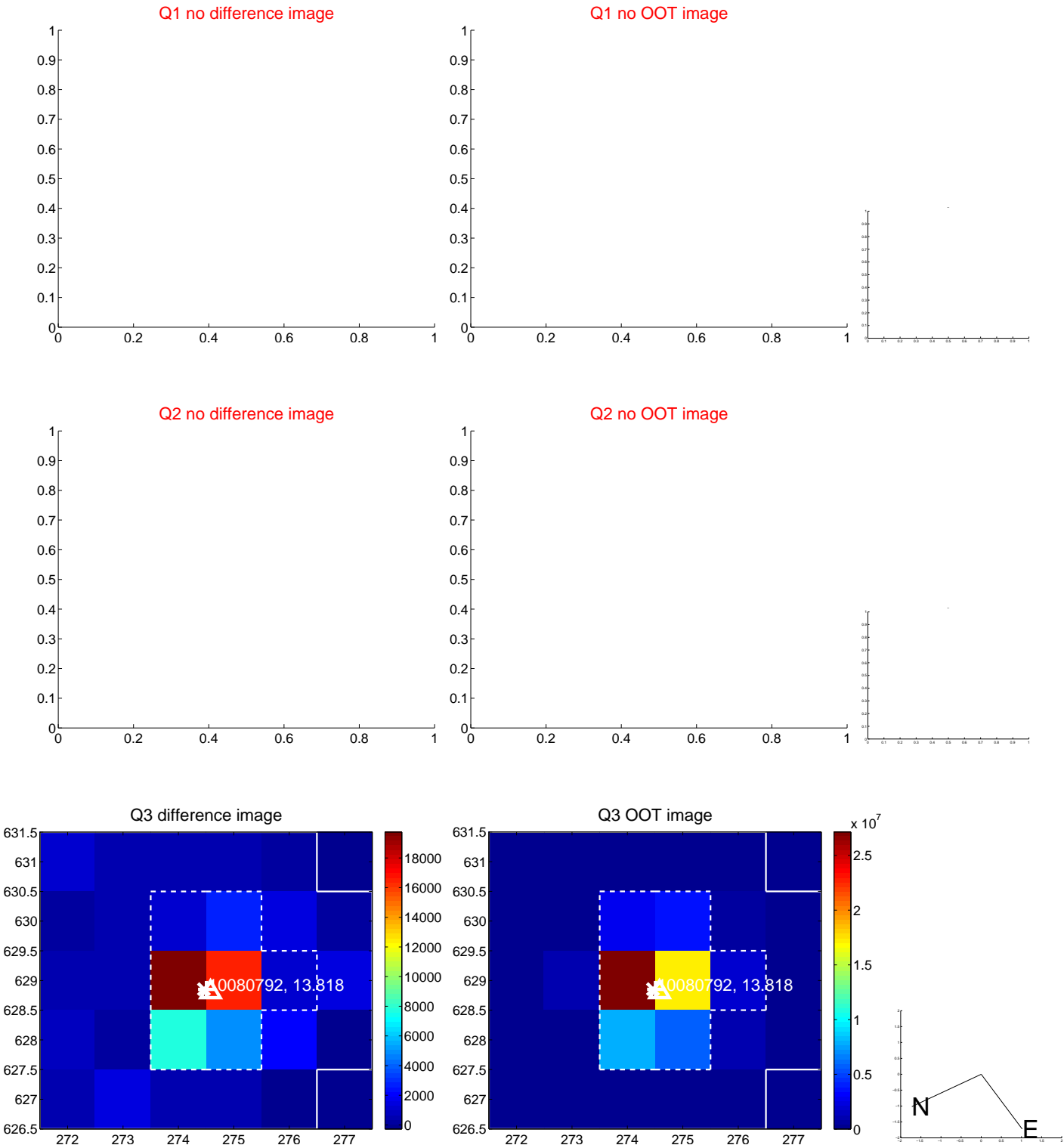
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.298 \pm 0.353$	0.84	$-0.179 \pm 0.195$	$-0.238 \pm 0.428$
PRF-fit source offset from KIC position	$0.440 \pm 0.670$	0.66	$-0.083 \pm 0.244$	$-0.433 \pm 0.682$
photometric centroid source offset	$0.15 \pm 0.26$	0.58	$-0.01 \pm 0.24$	$-0.15 \pm 0.26$

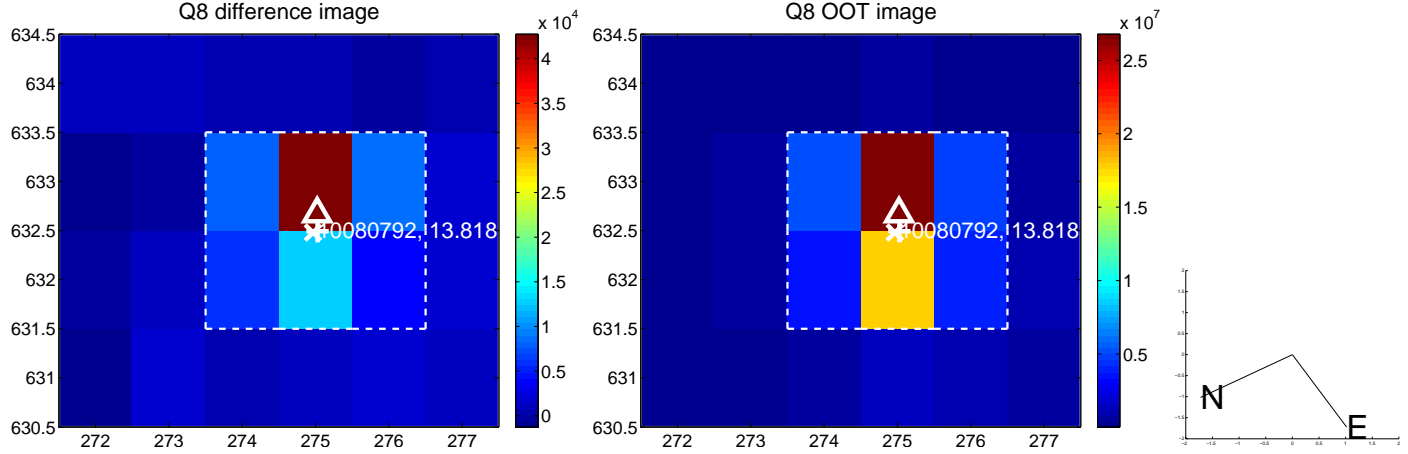
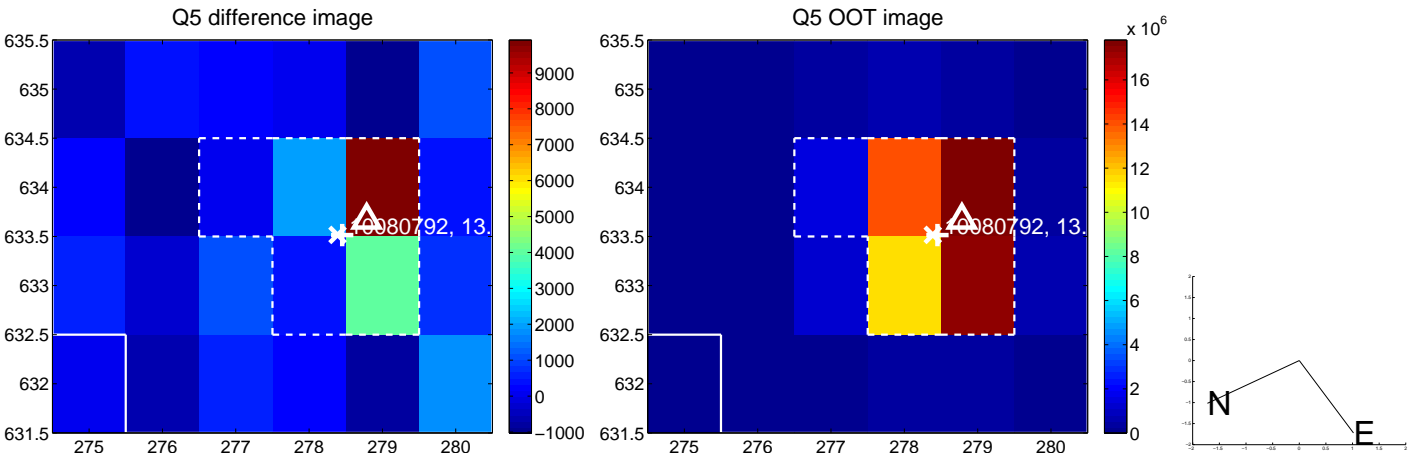


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

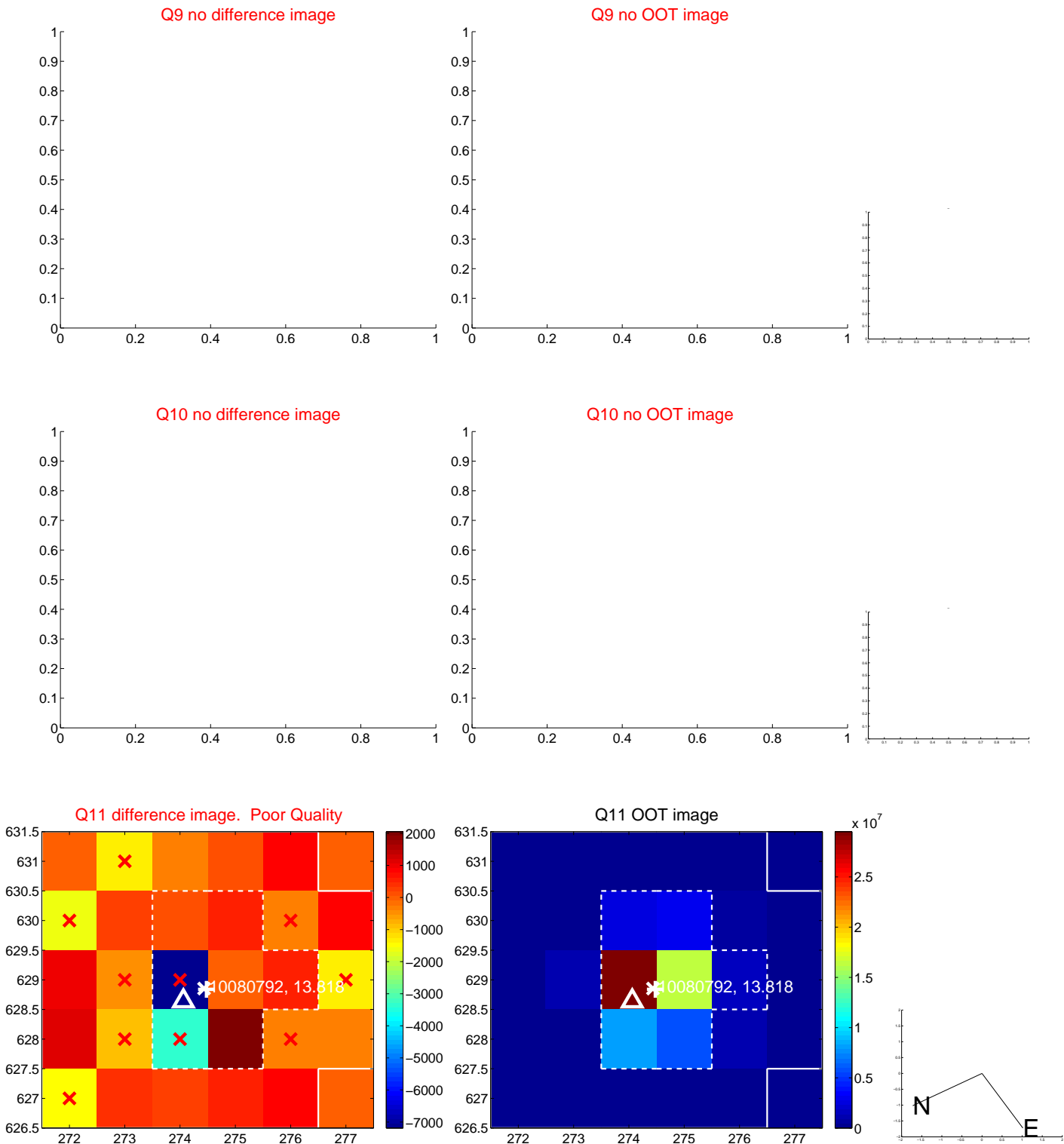
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



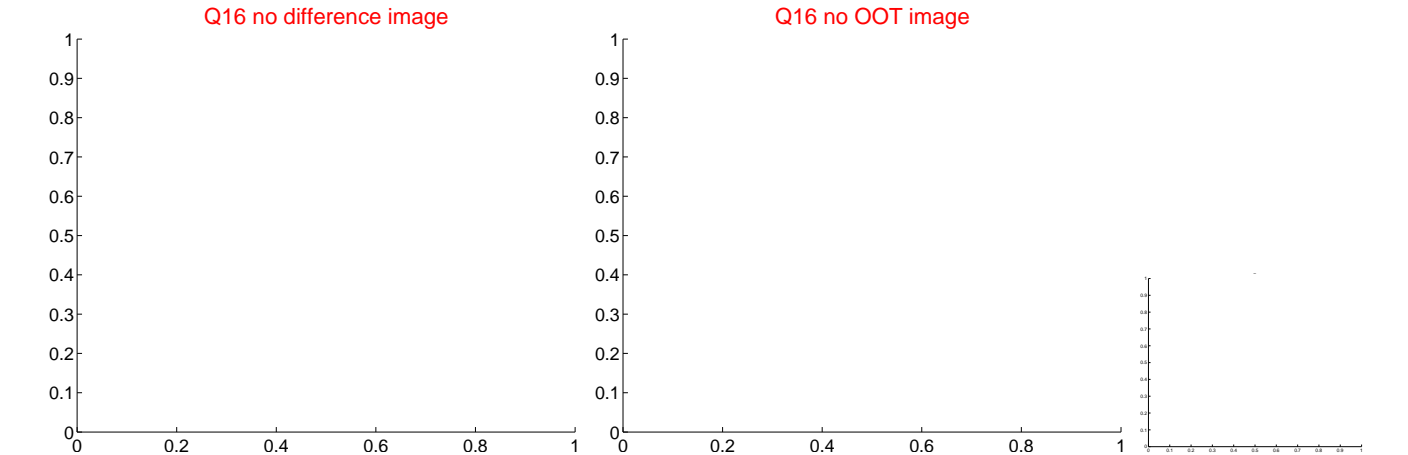
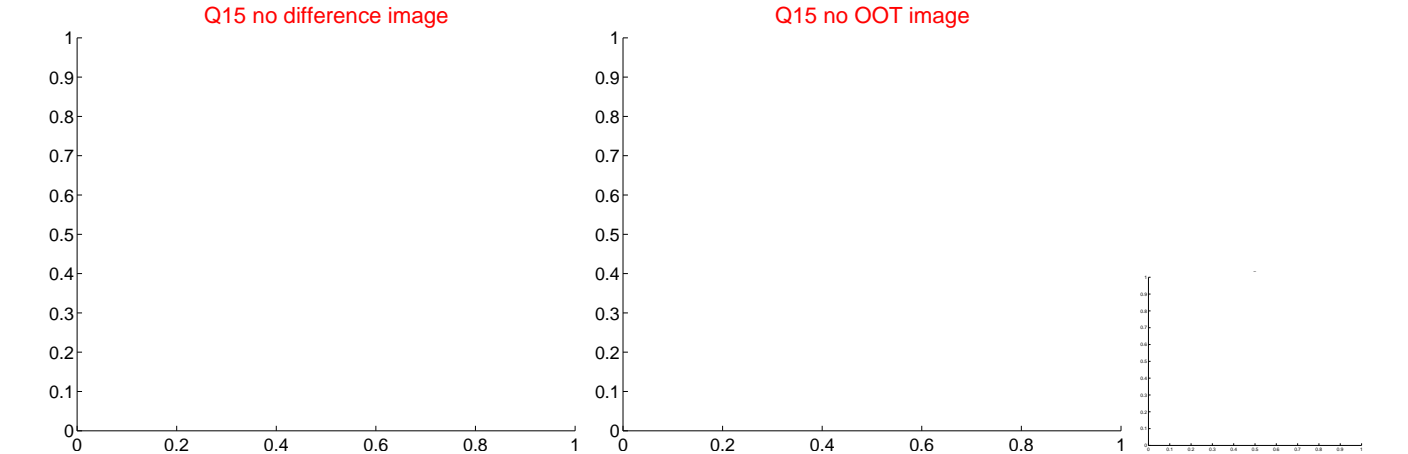
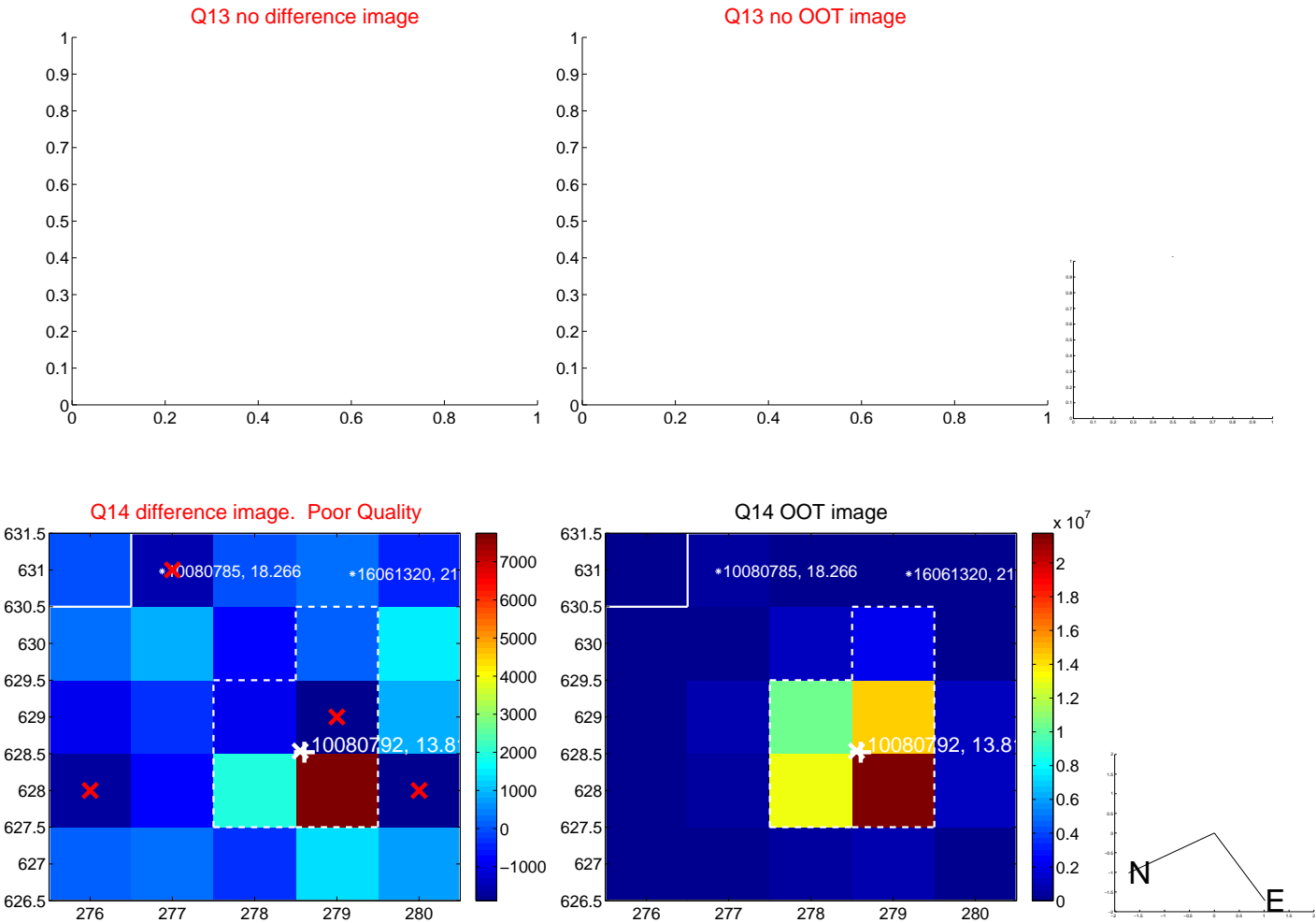
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



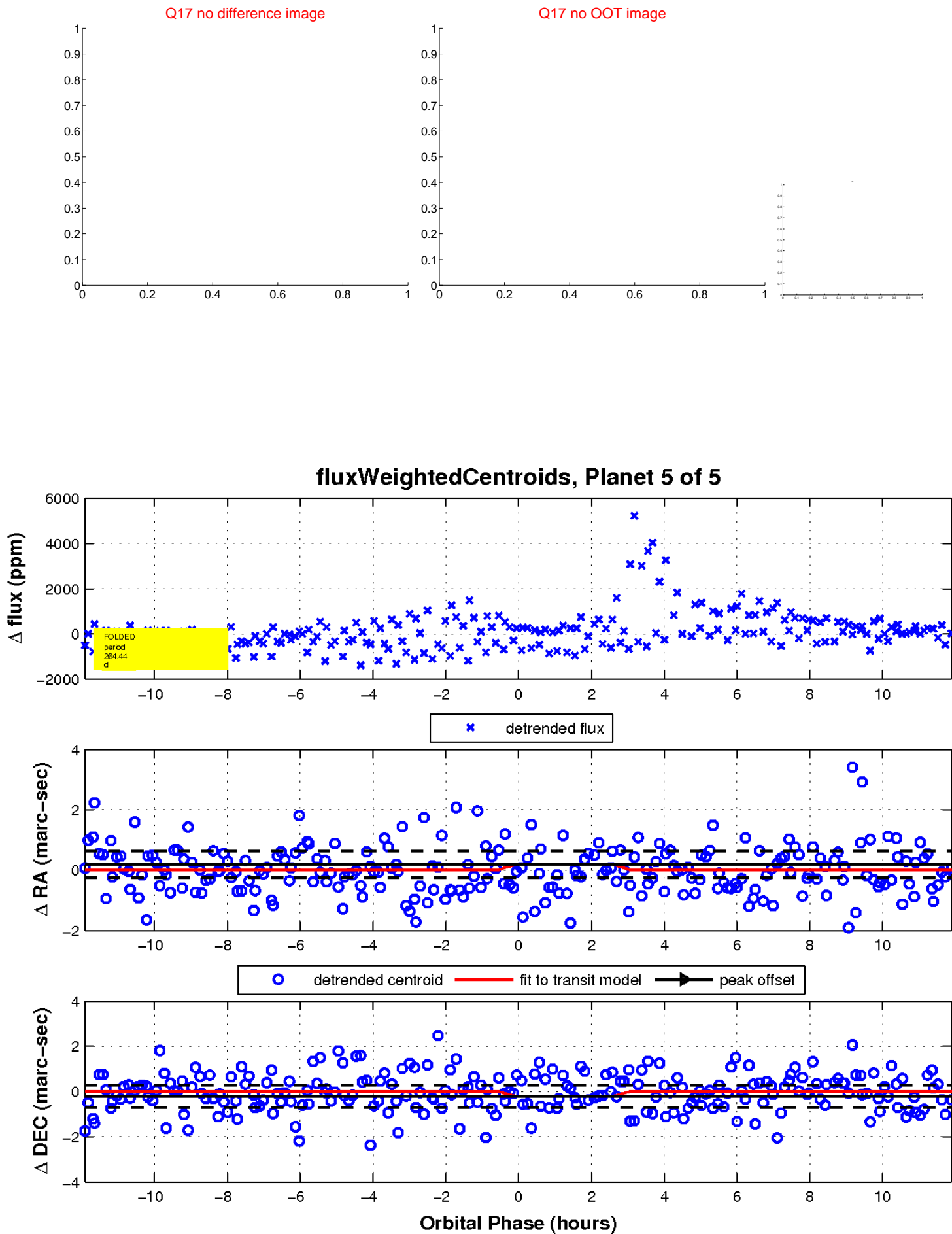
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



white ×: 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

