

# KIC 005120793

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
005120793-01	OBS	No	392.704102	163.450292	111.5	22.717	7.6	8.4	1.31	6263	1.53	2.09
005120793-02	OBS	No	0.692640	132.163918	17.6	1.085	9.4	10.0	1.31	6263	0.65	9786.58
005120793-03	OBS	No	0.692649	131.692684	31.6	0.853	13.4	16.2	1.31	6263	0.89	9786.41

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005120793-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_FEW_DIFFS
005120793-02	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET—HALO_GHOST
005120793-03	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_RESOLVED_OFFSET—HALO_GHOST

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

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

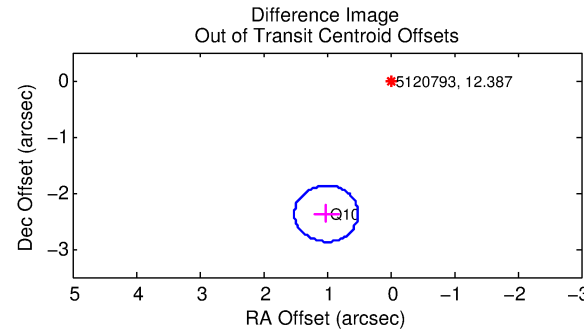
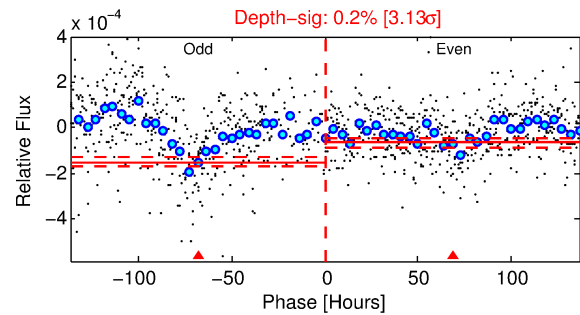
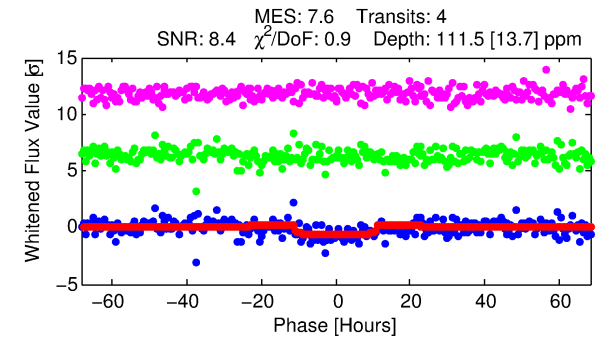
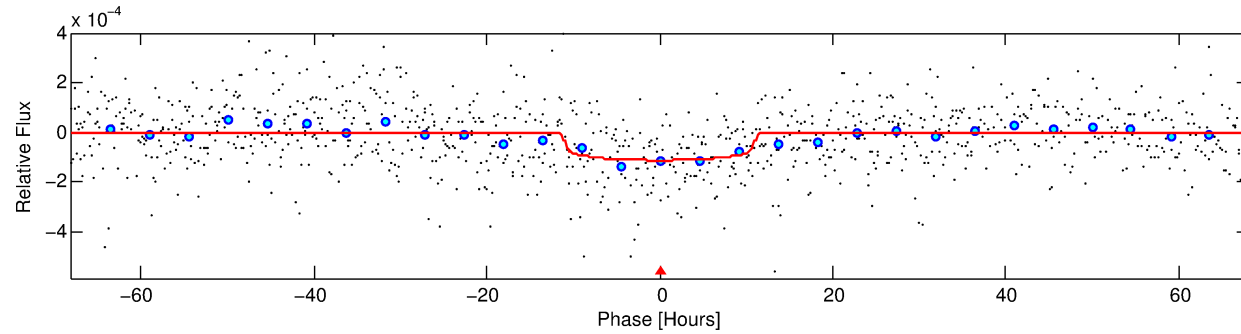
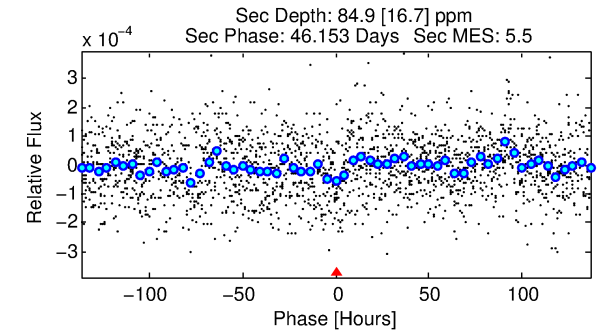
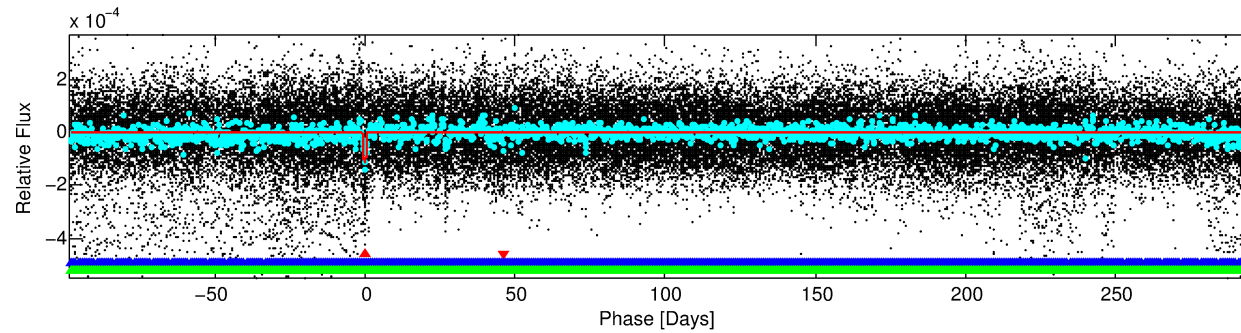
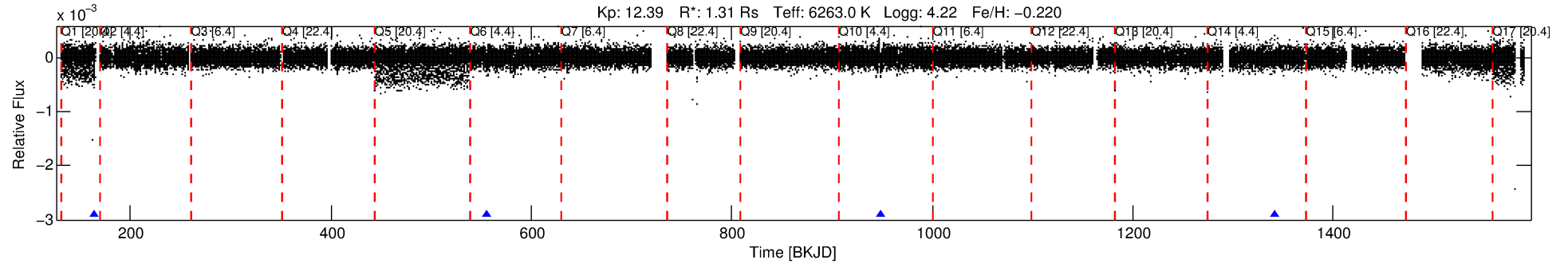
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 005120793-01

No Significant Match Found

# DV One-Page Summary

KIC: 5120793 Candidate: 1 of 3 Period: 392.704 d



## DV Fit Results:

Period = 392.70410 [0.01305] d  
Epoch = 163.4503 [0.0271] BKJD  
Rp/R\* = 0.0107 [0.0022]  
a/R\* = 81.89 [85.87]  
b = 0.80 [0.48]  
Seff = 2.09 [0.55]  
Teq = 306 [20] K  
Rp = 1.53 [0.41] Re  
a = 1.0691 [0.1727] AU  
Ag = 22714.06 [11961.07] [1.90σ]  
Teff = 5816 [674] K [8.17σ]

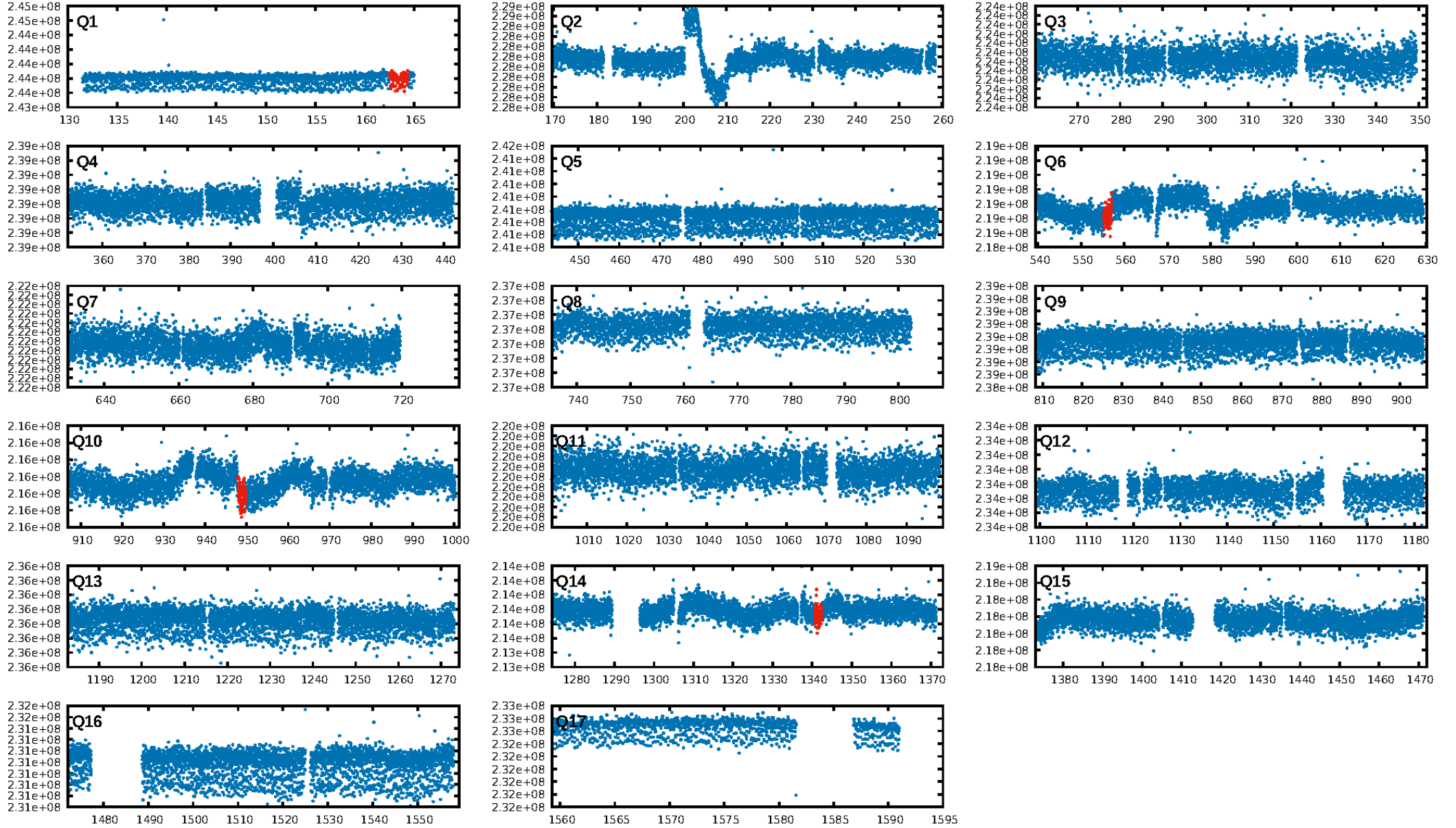
## DV Diagnostic Results:

ShortPeriod-sig: 100.0% [413.86σ]  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 5.6%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [3/3]  
GhostDiagnostic-chr: 0.2937  
Centroid-sig: N/A  
Centroid-so: N/A  
OotOffset-rm: 2.579 arcsec [15.48σ]  
KicOffset-rm: 2.461 arcsec [14.64σ]  
OotOffset-st: 1/0/0/0 [1]  
KicOffset-st: 1/0/0/0 [1]  
DiffImageQuality-fgm: 0.00 [0/1]  
DiffImageOverlap-fno: 0.00 [0/4]

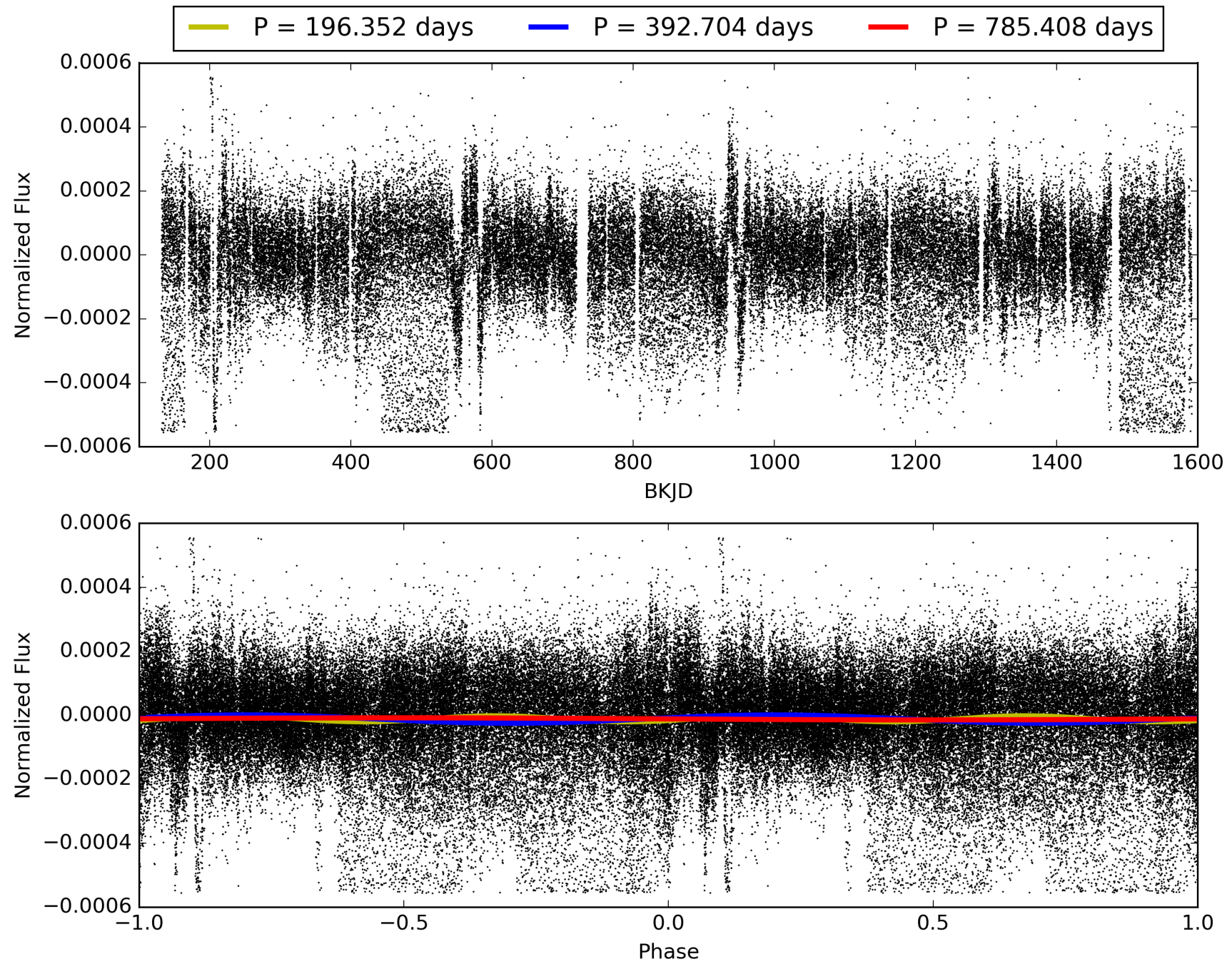
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 19:05:47 Z

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

# TCE 005120793-01, PDC Light Curves



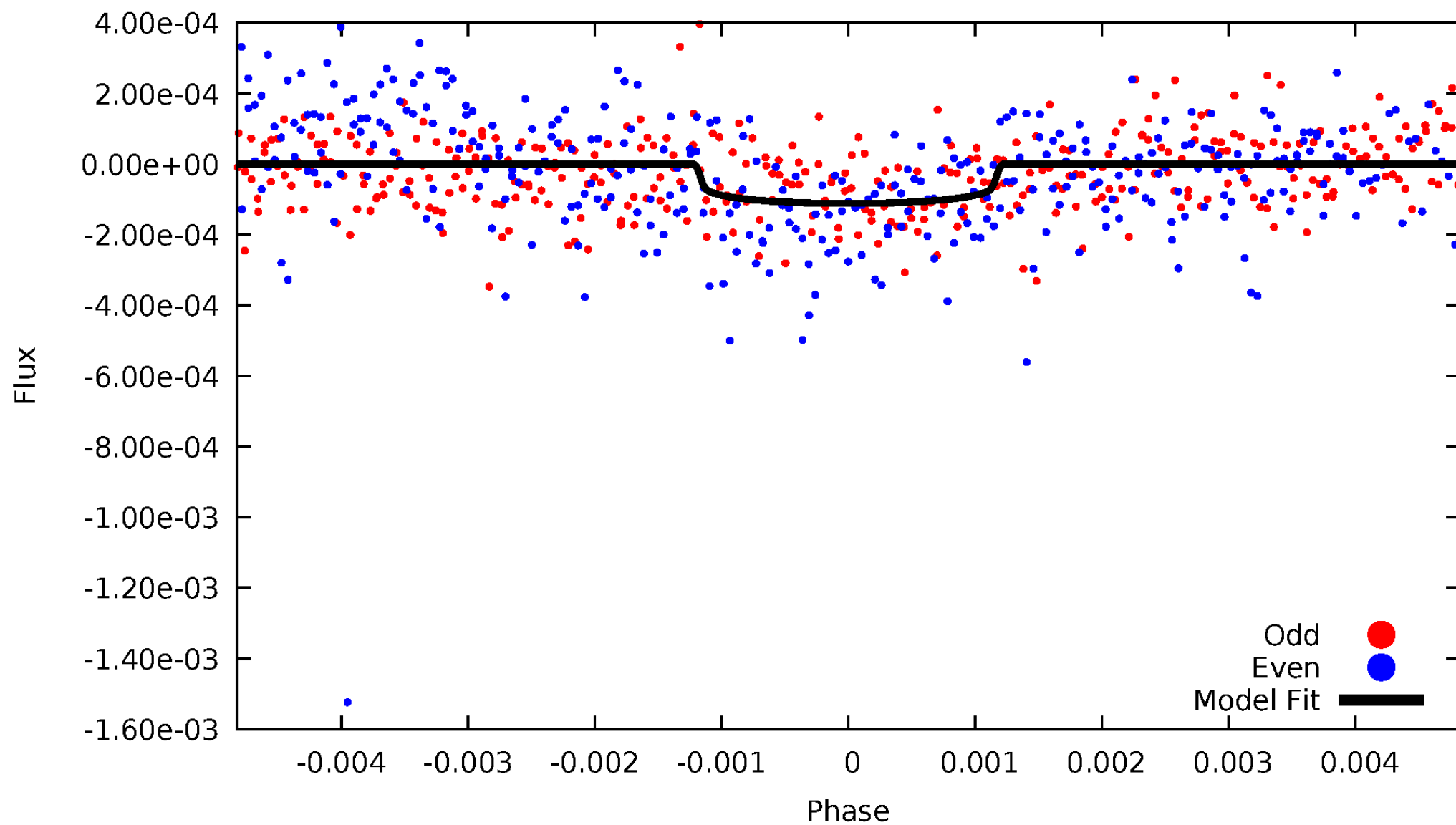
TCE 005120793-01





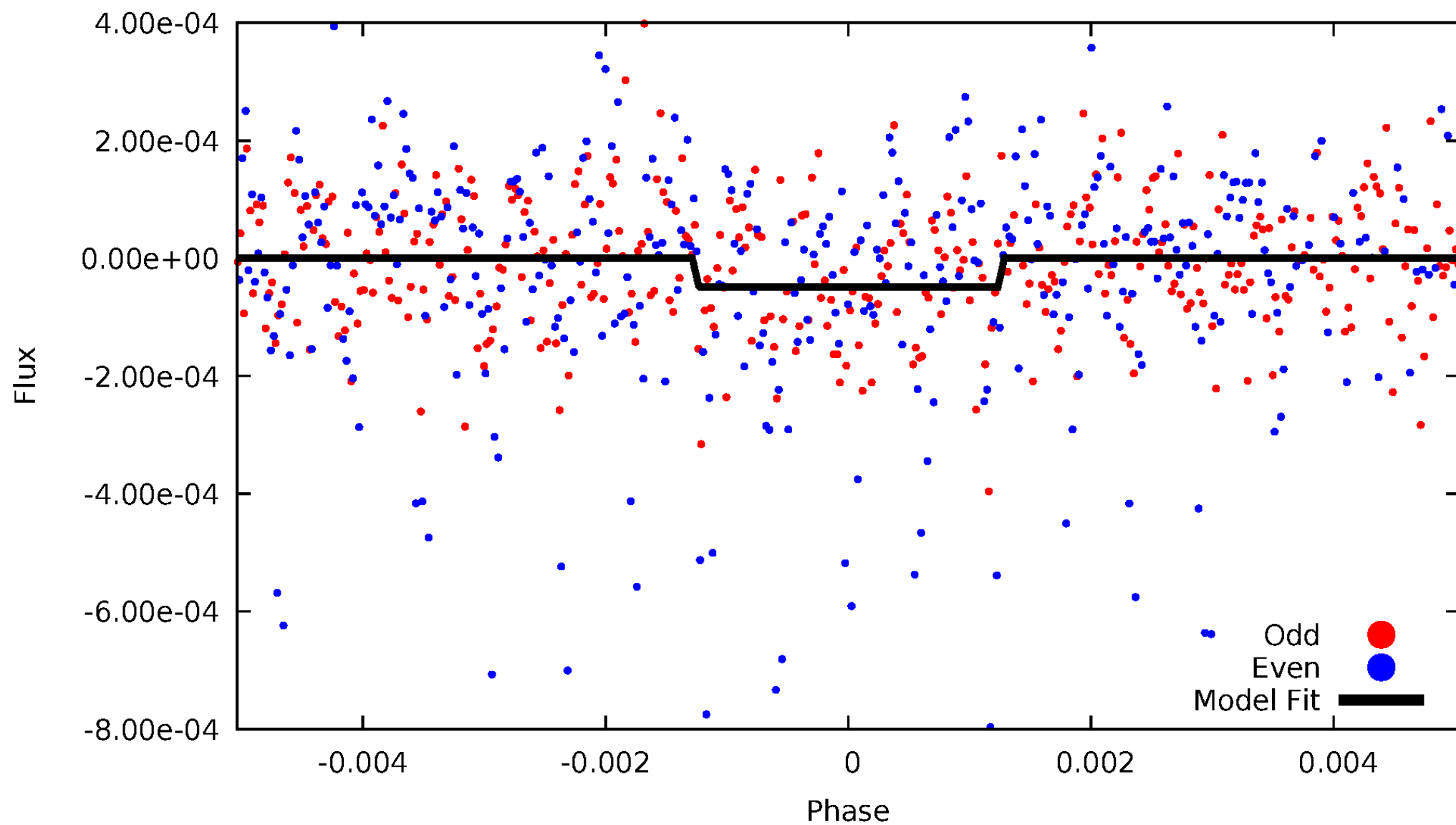
# DV Odd/Even

TCE 005120793-01

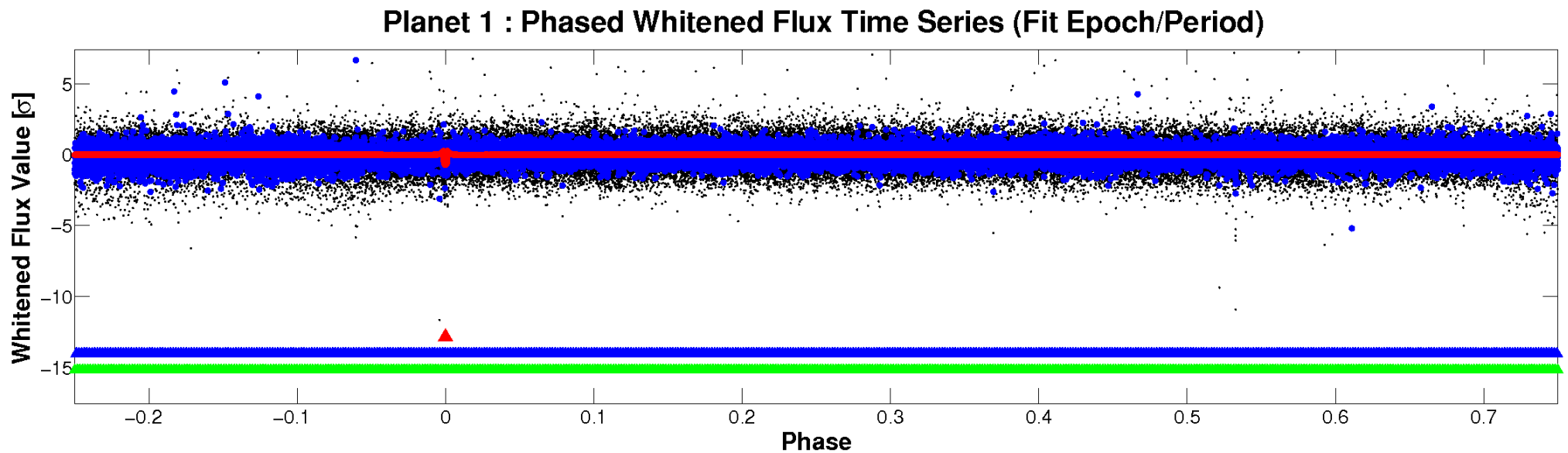
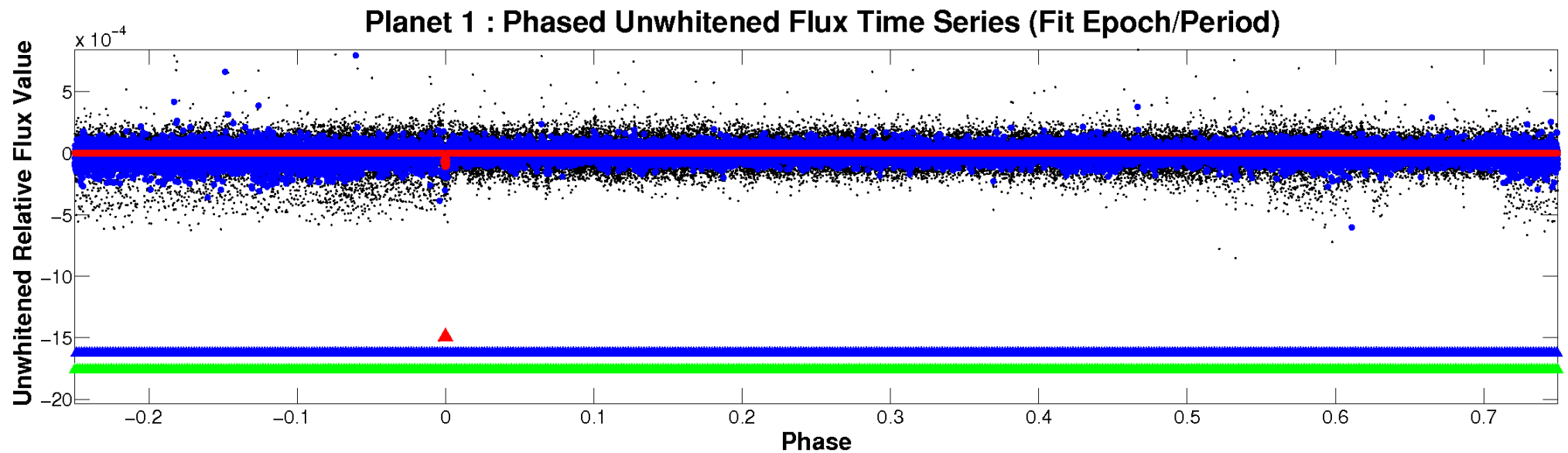


# ALT Odd/Even

TCE 005120793-01



# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

TCE 005120793-01 P=392.704102 Days  $T_0=163.450292$  (BKJD)





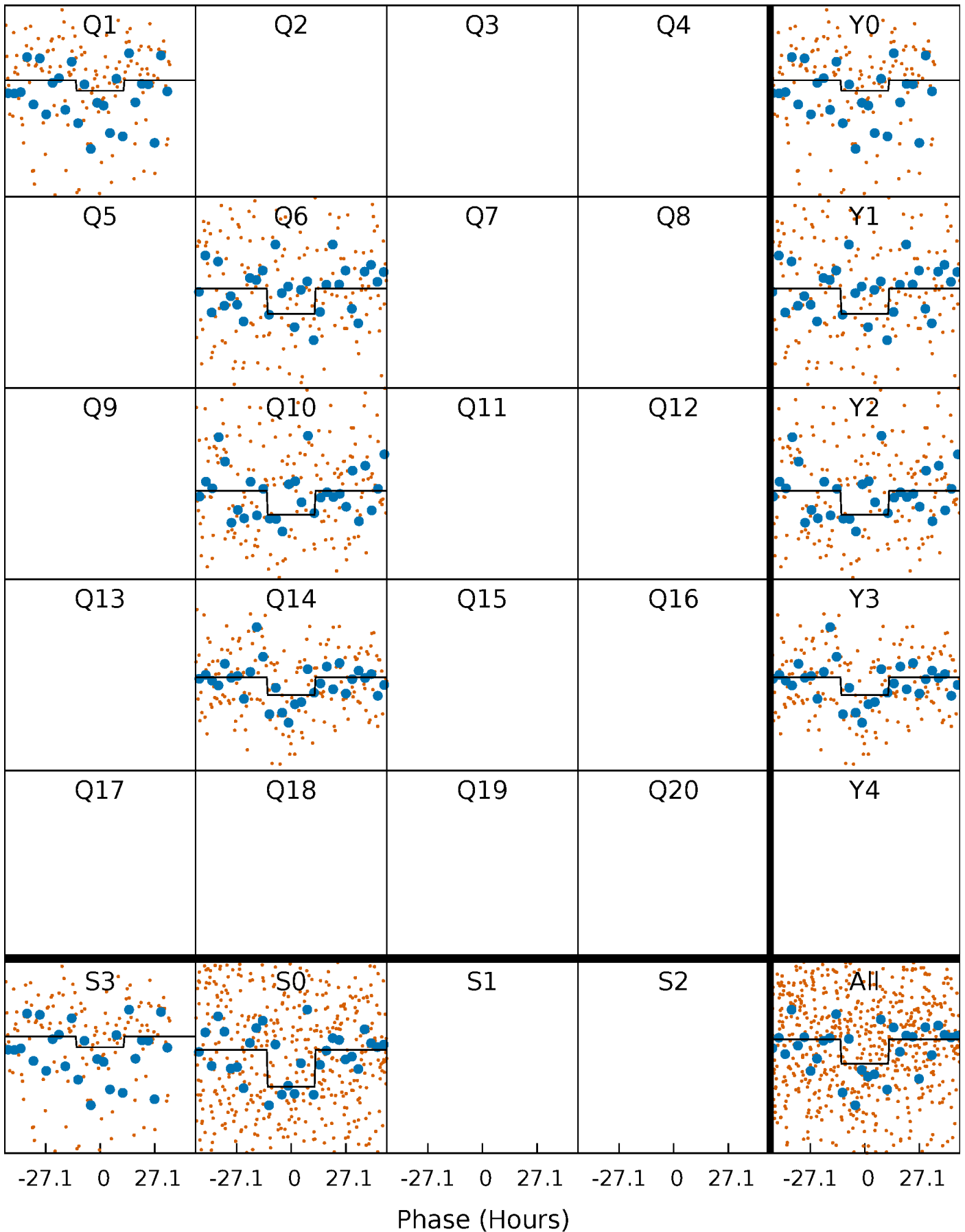
# DV Quarter-Phased Transit Curves

TCE 005120793-01     $P=392.704102$  Days     $T_0=163.450292$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

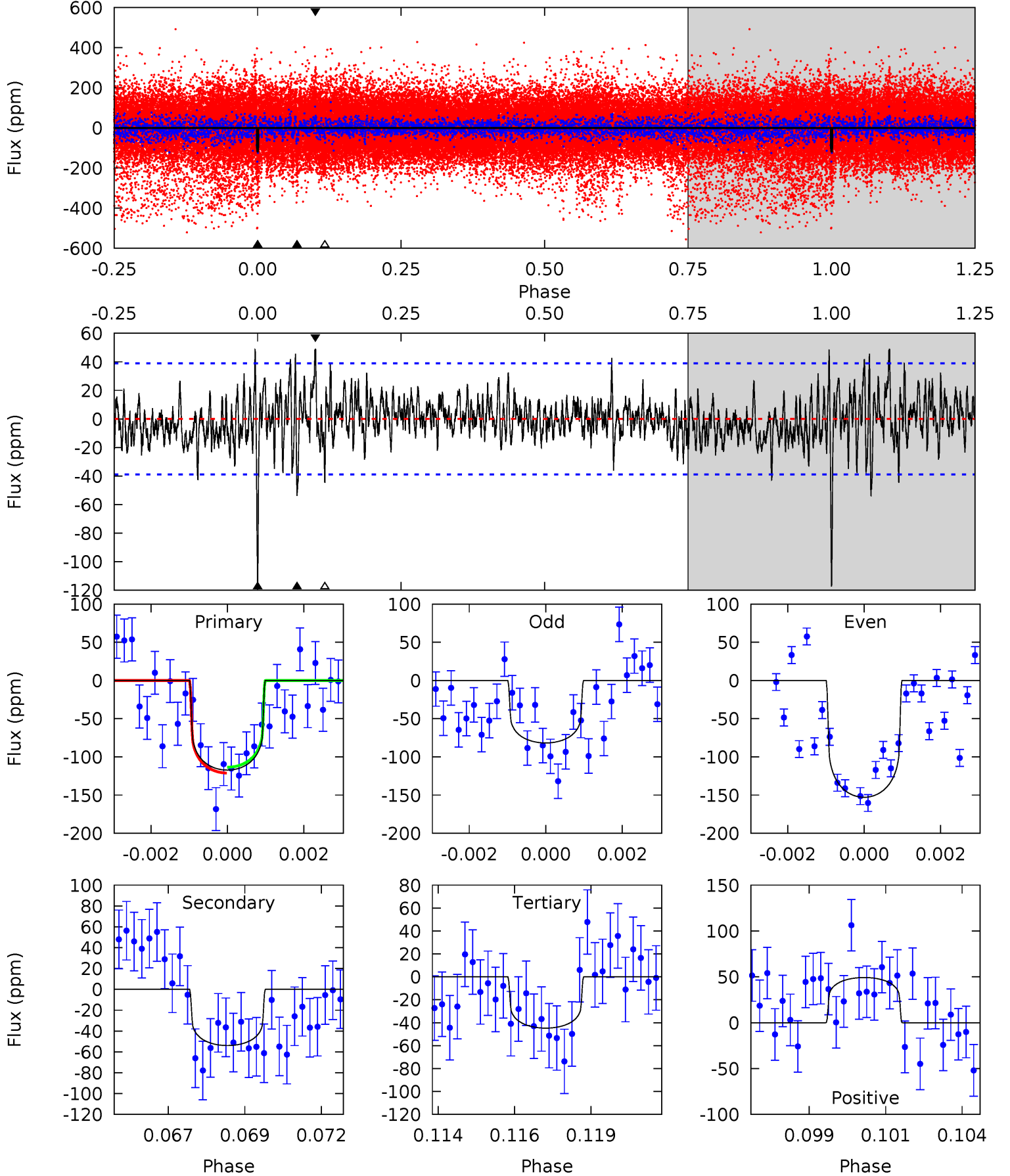
TCE 005120793-01 P=392.739834 Days  $T_0=163.542923$  (BKJD)



# DV Model-Shift Uniqueness Test

005120793-01, P = 392.704102 Days, E = 163.450292 Days

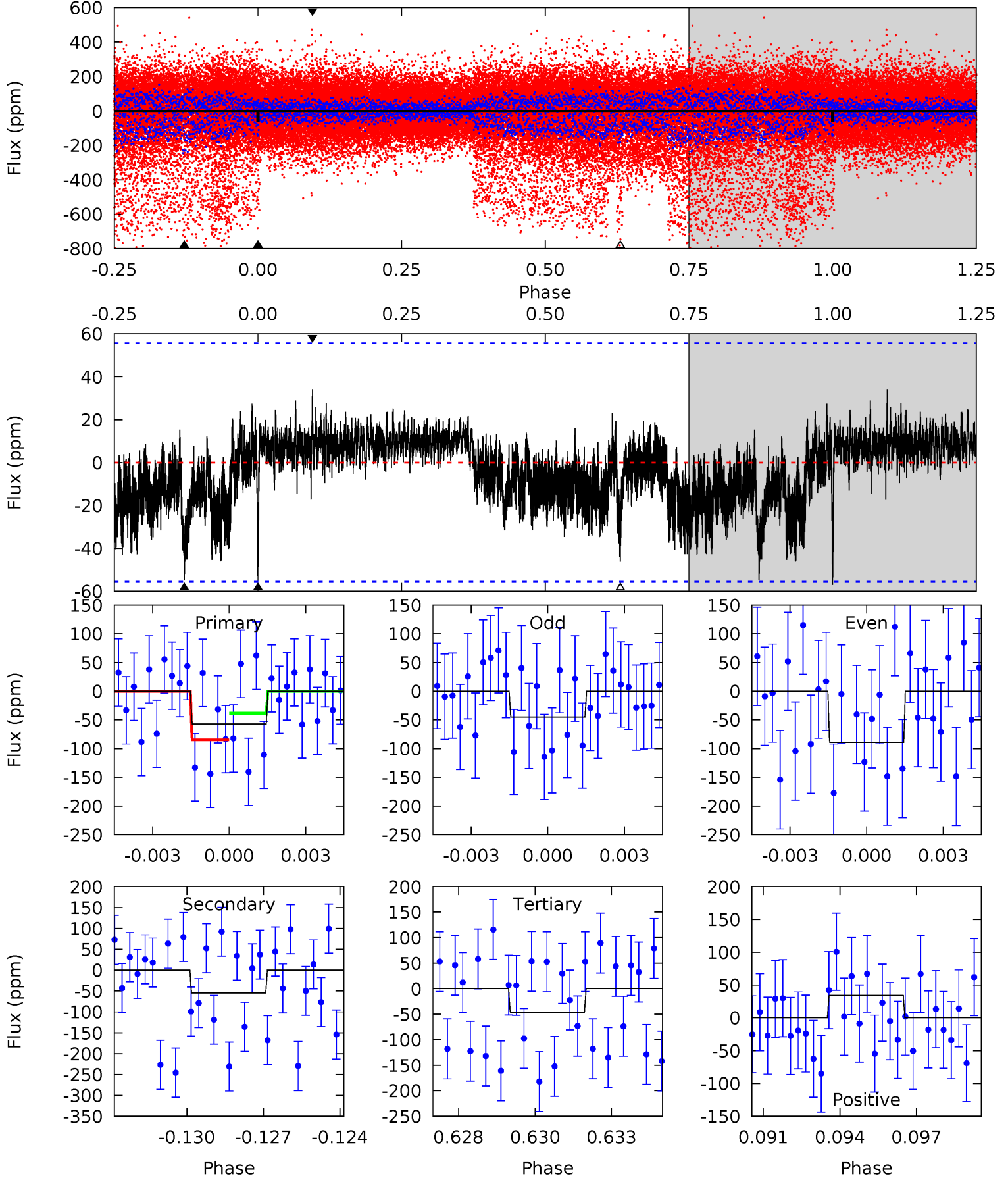
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.0	7.33	6.08	6.70	5.29	3.03	1.67	9.87	9.25	1.25	0.64	4.81	1.07	0.30	0.51



# Alt Model-Shift Uniqueness Test

005120793-01, P = 392.739834 Days, E = 163.542923 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
5.41	5.21	4.38	3.25	5.28	3.02	1.25	1.02	2.16	0.82	1.96	2.11	1.57	0.38	2.17





### Stellar Parameters For KIC 005120793

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$6263^{+88}_{-75}$	$4.224^{+0.149}_{-0.122}$	$-0.220^{+0.200}_{-0.150}$	$1.315^{+0.225}_{-0.225}$	$1.054^{+0.107}_{-0.062}$	$0.653^{+0.446}_{-0.227}$
	+1%/-1%	+4%/-3%	+91%/-68%	+17%/-17%	+10%/-6%	+68%/-35%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology  
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

### Secondary Eclipse Parameters for KIC 005120793-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$-54 \pm 7$	$1.54^{+0.35}_{-0.35}$	$429^{+20}_{-22}$	$5252^{+617}_{-452}$	$14466^{+10245}_{-5020}$
Alt.	$-55 \pm 11$	$0.99^{+0.35}_{-0.34}$	$430^{+19}_{-24}$	$6480^{+1741}_{-883}$	$35502^{+48993}_{-16602}$

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

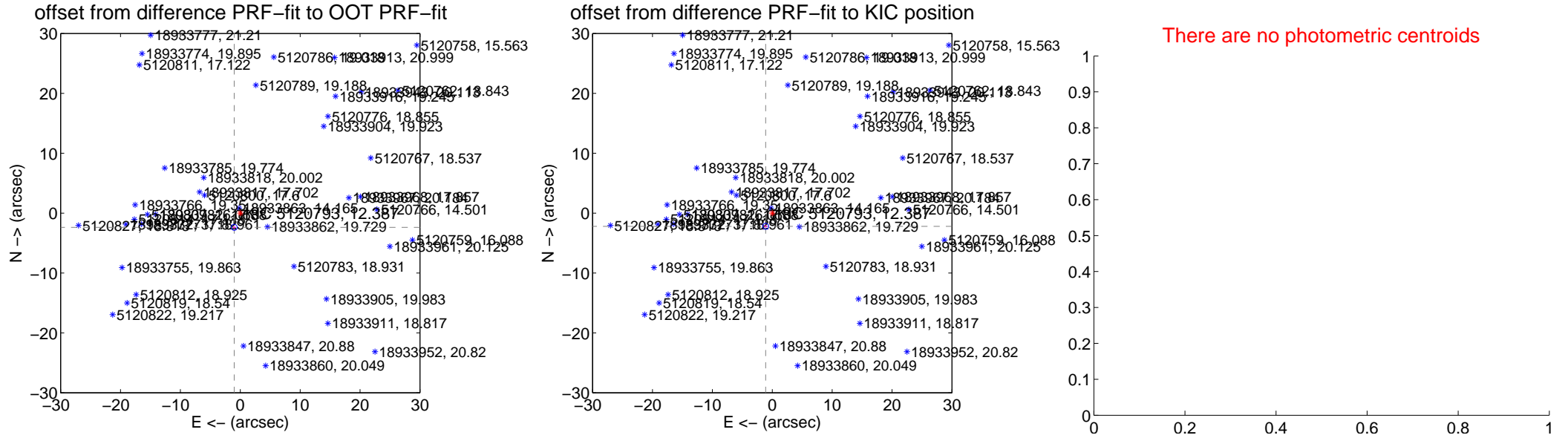
# DV Centroid Data

Supplemental centroid analysis for 005120793-01. Kepler magnitude: 12.39. Transit SNR 8.43

There are 0 quarters with good PRF difference image offsets

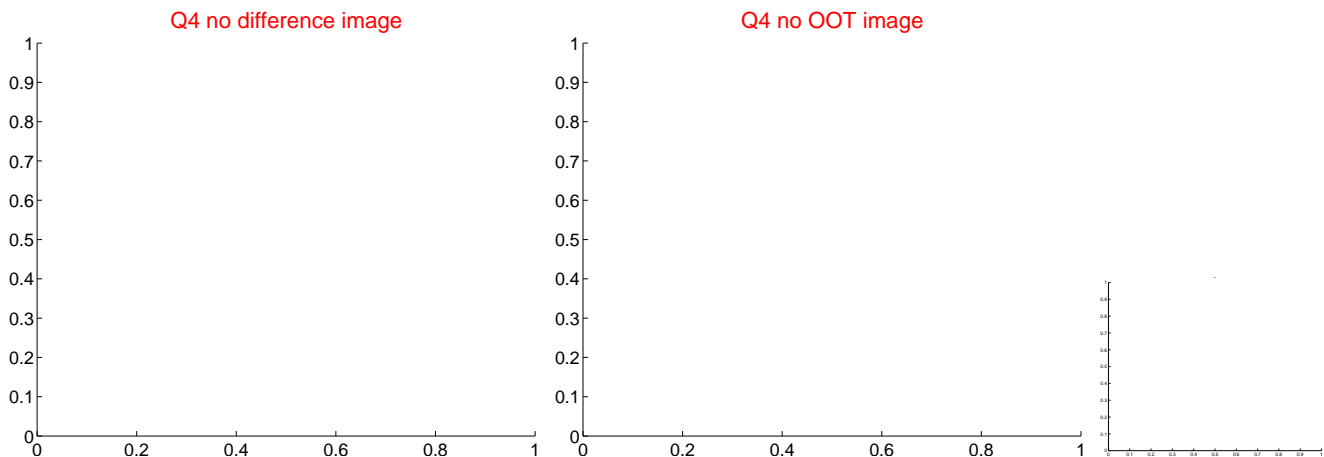
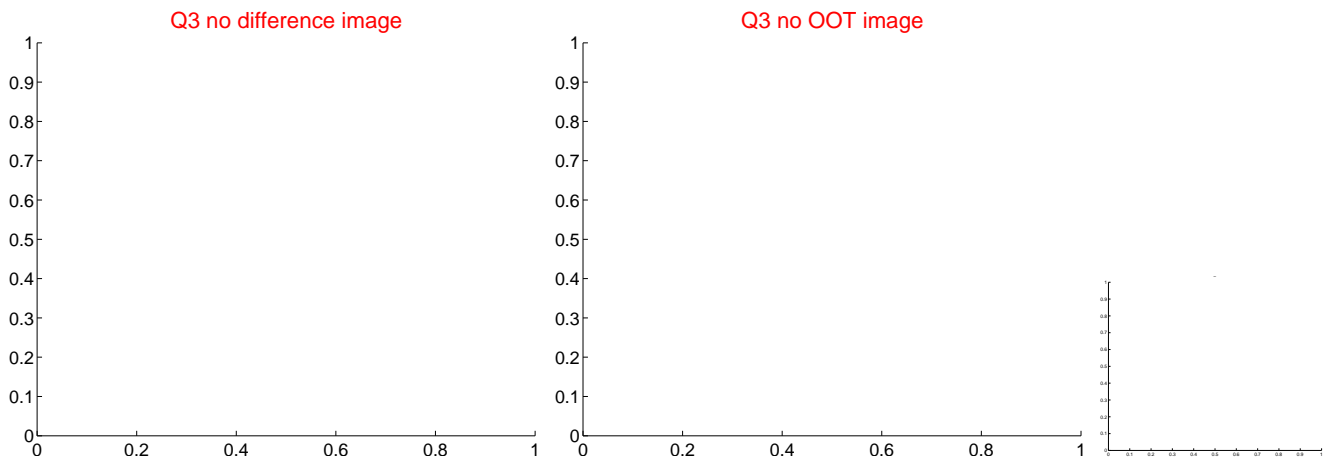
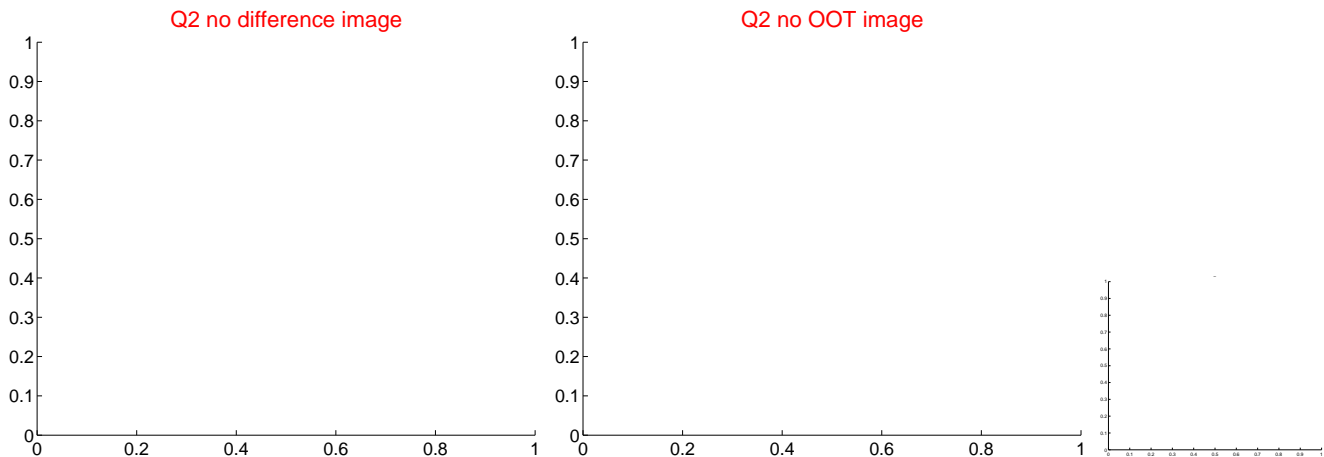
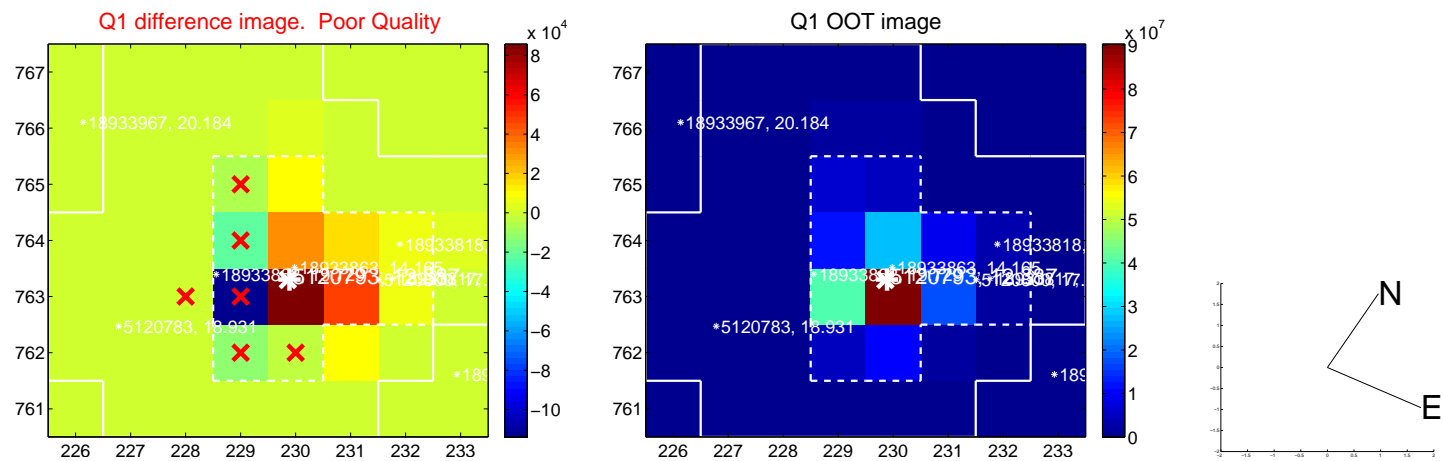
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	2.579 $\pm$ 0.167	15.48	1.011 $\pm$ 0.194	-2.372 $\pm$ 0.161
PRF-fit source offset from KIC position	2.461 $\pm$ 0.168	14.64	1.100 $\pm$ 0.194	-2.202 $\pm$ 0.161
photometric centroid source offset	—	—	—	—

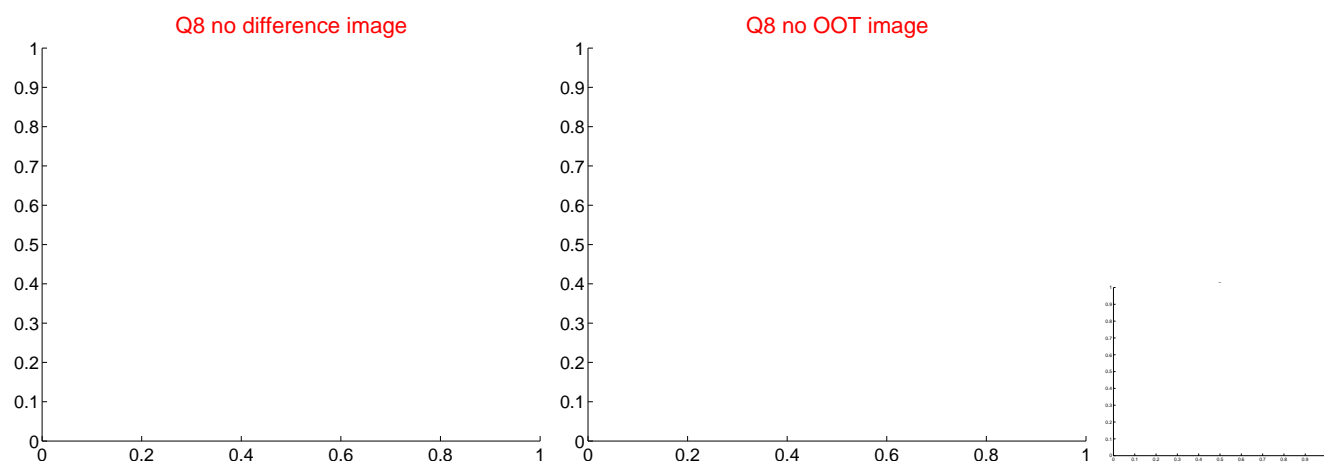
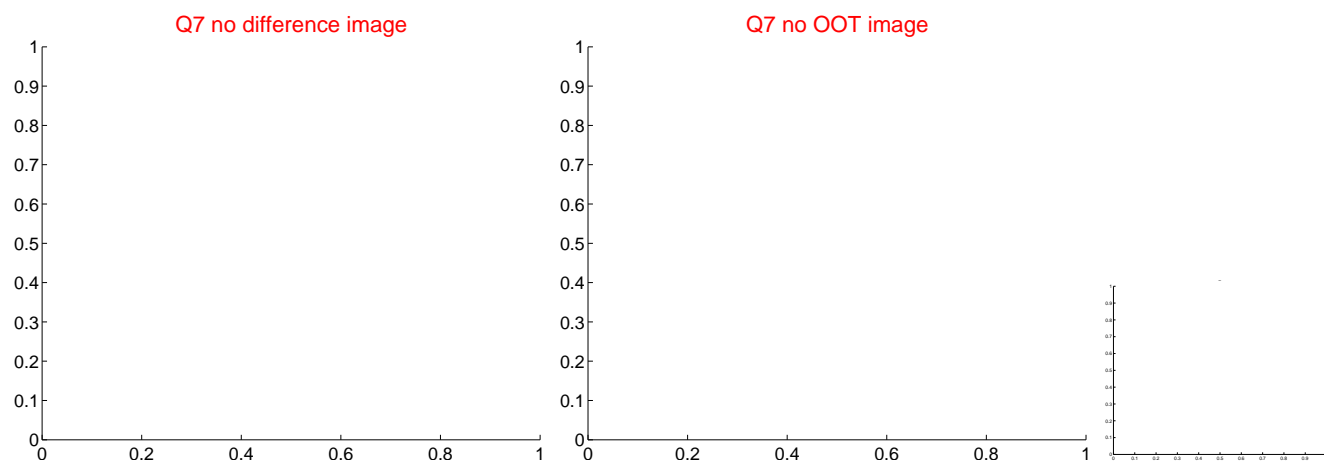
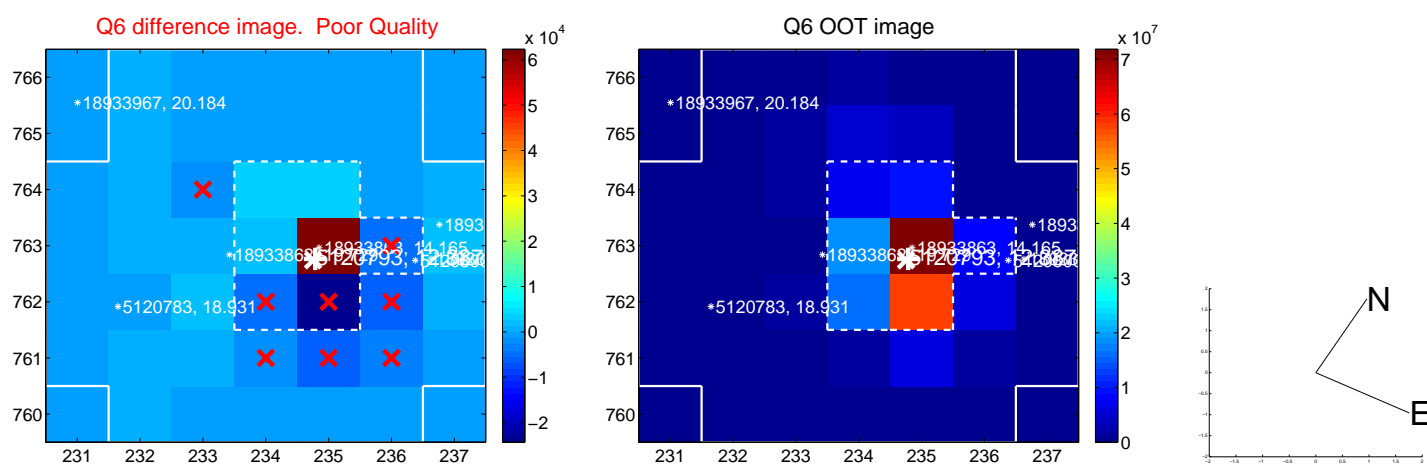
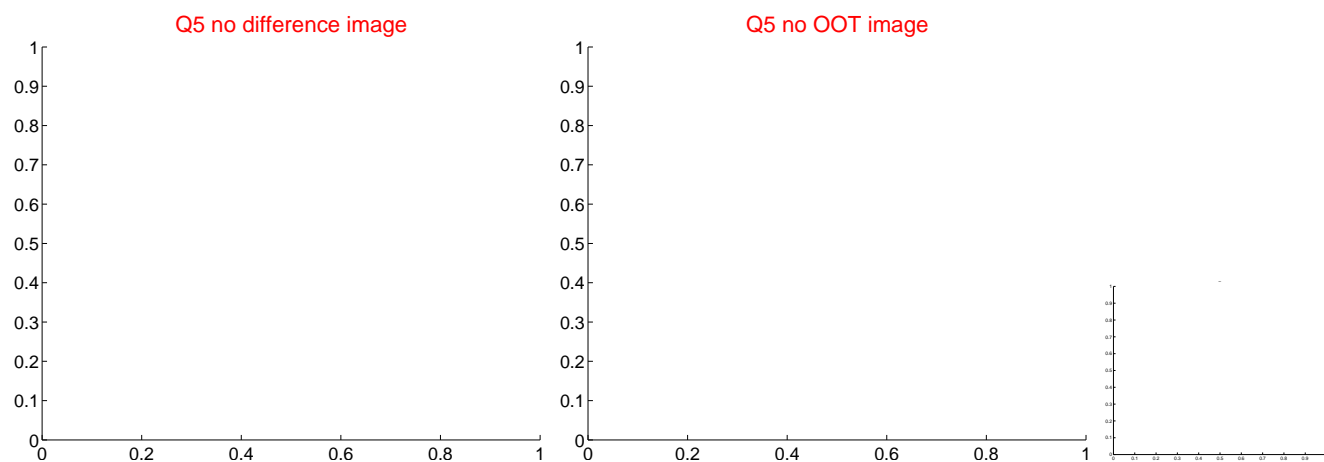


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

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

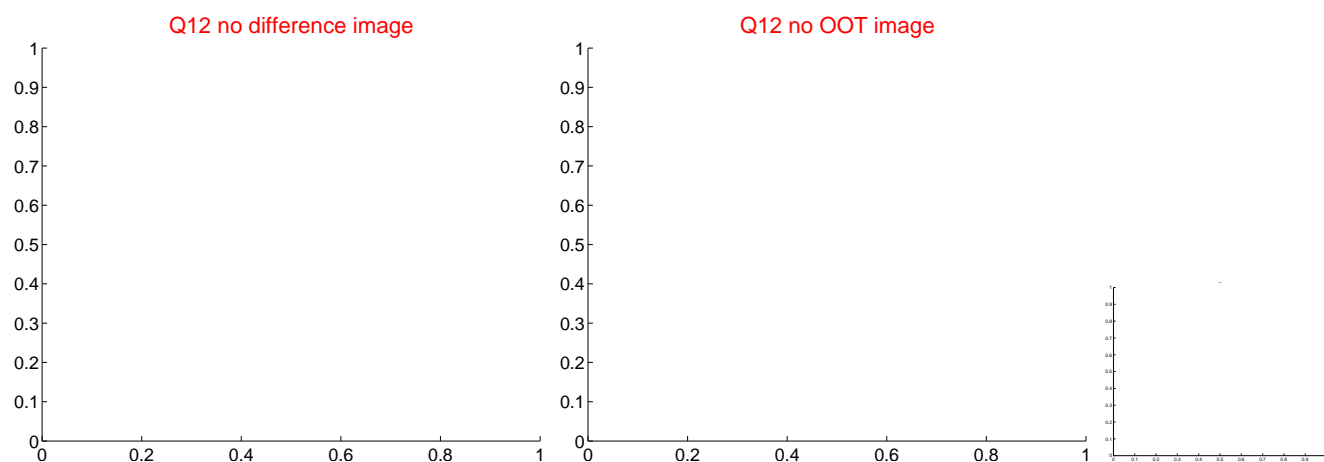
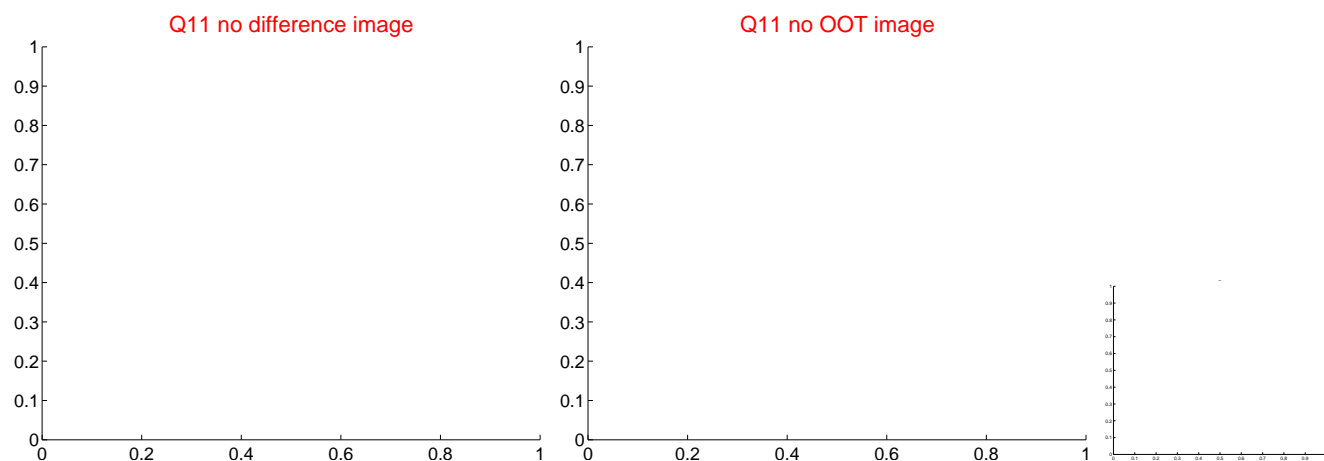
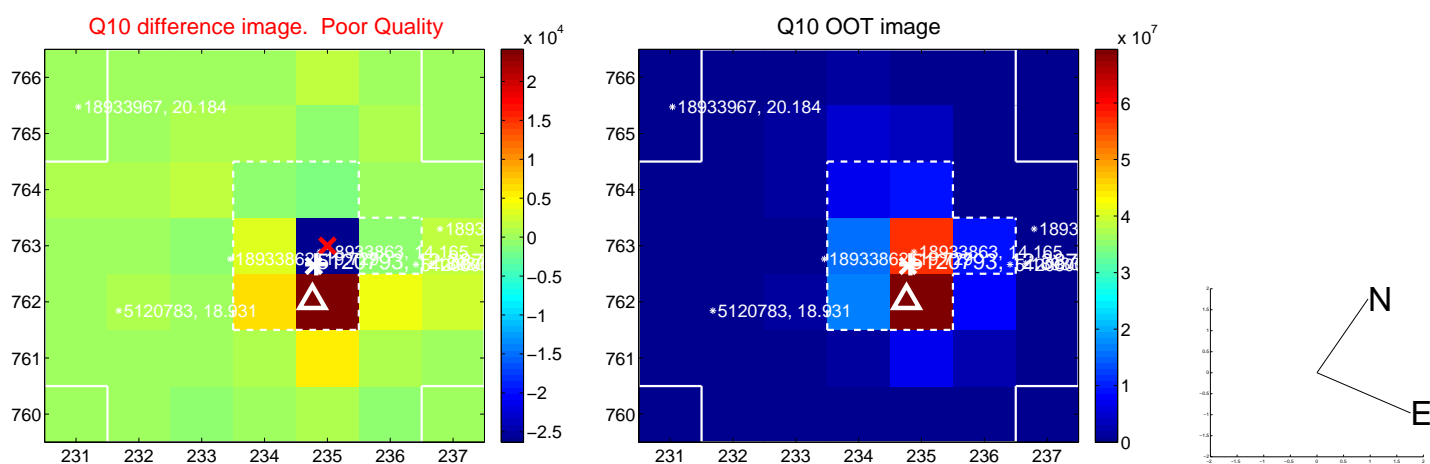
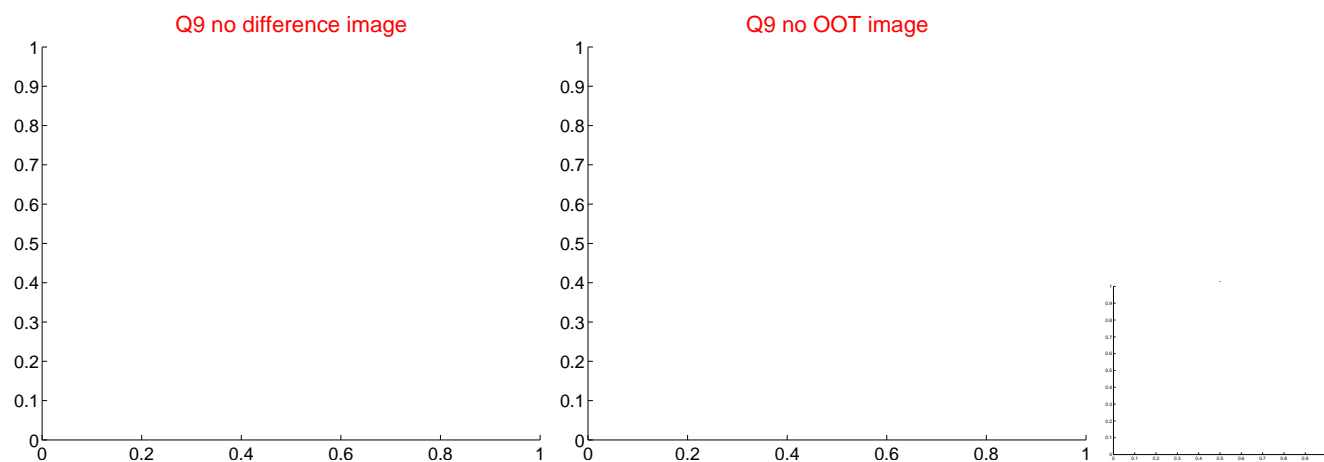


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value





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.

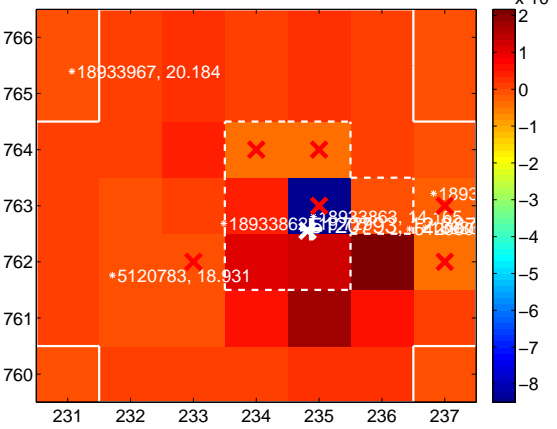
Q13 no difference image



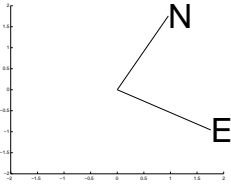
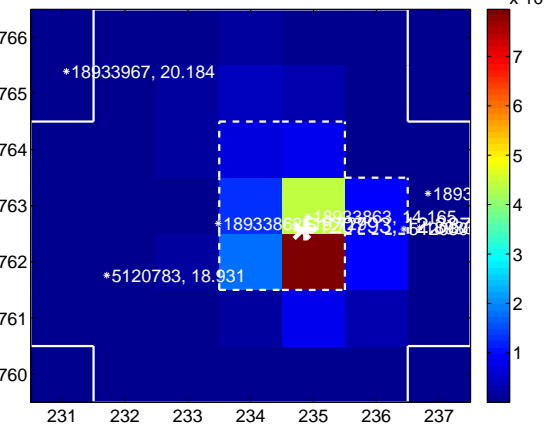
Q13 no OOT image



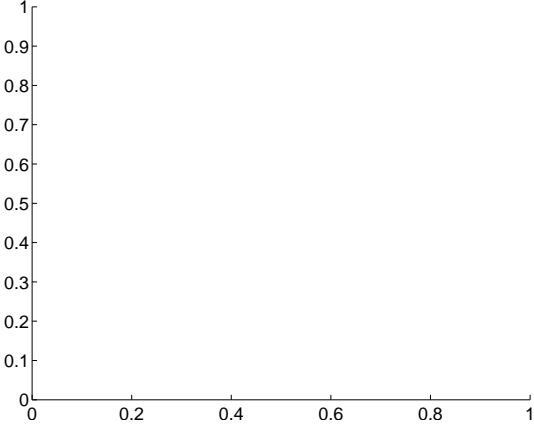
Q14 difference image. Poor Quality



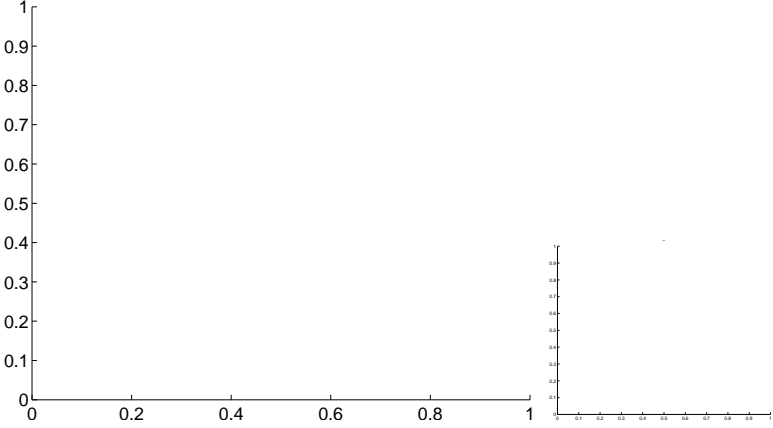
Q14 OOT image



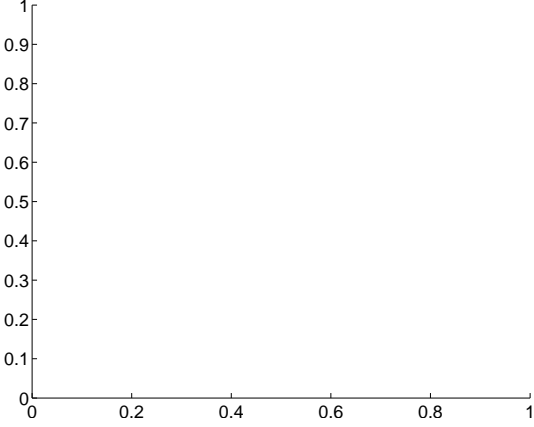
Q15 no difference image



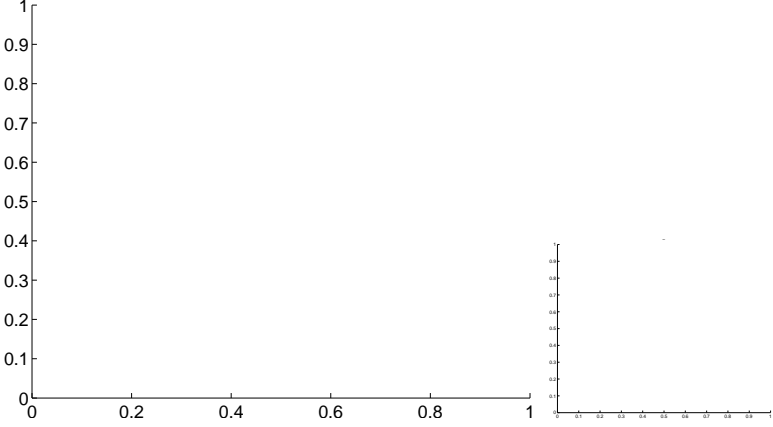
Q15 no OOT image



Q16 no difference image



Q16 no OOT image



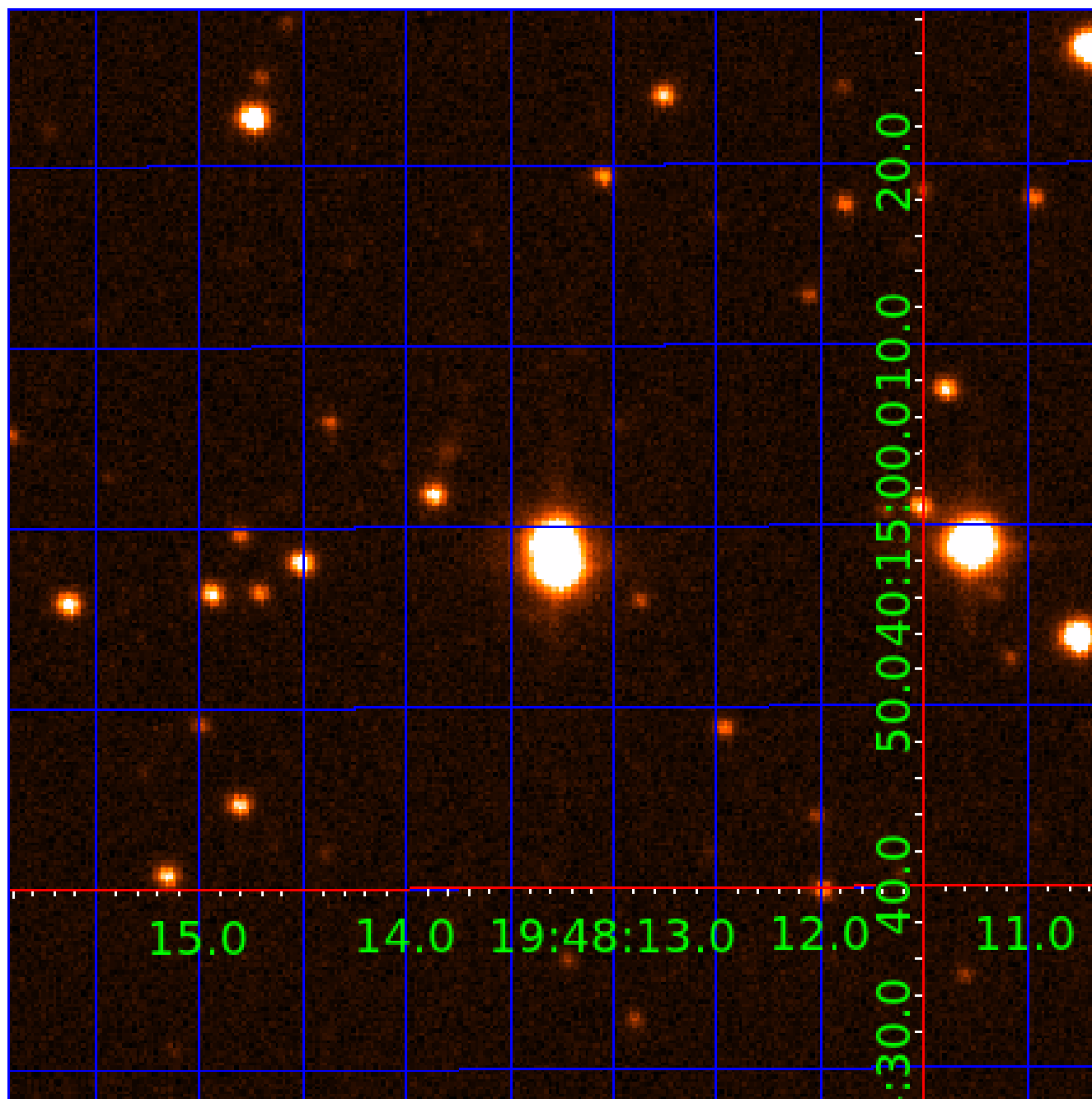
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination





# KIC 005120793

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
005120793-01	OBS	No	392.704102	163.450292	111.5	22.717	7.6	8.4	1.31	6263	1.53	2.09
005120793-02	OBS	No	0.692640	132.163918	17.6	1.085	9.4	10.0	1.31	6263	0.65	9786.58
005120793-03	OBS	No	0.692649	131.692684	31.6	0.853	13.4	16.2	1.31	6263	0.89	9786.41

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005120793-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_FEW_DIFFS
005120793-02	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET—HALO_GHOST
005120793-03	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_RESOLVED_OFFSET—HALO_GHOST

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

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

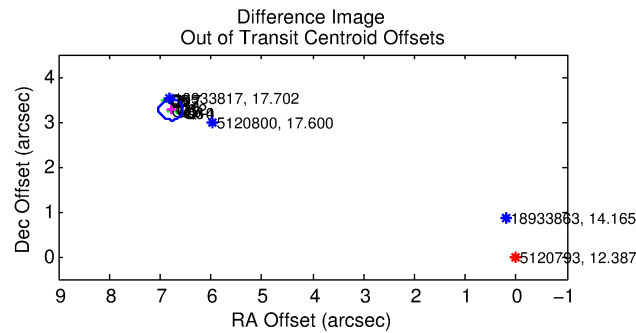
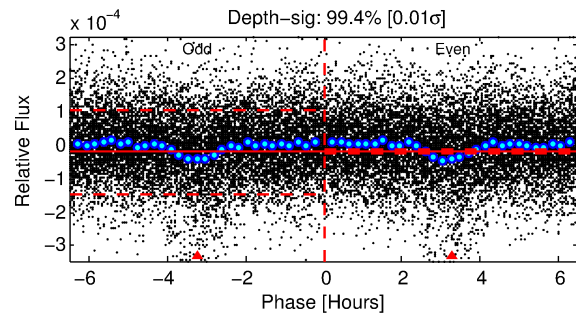
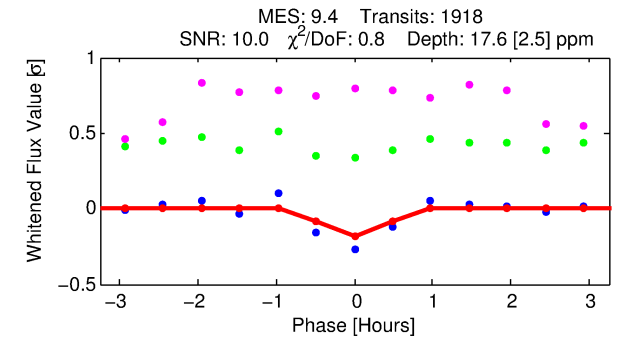
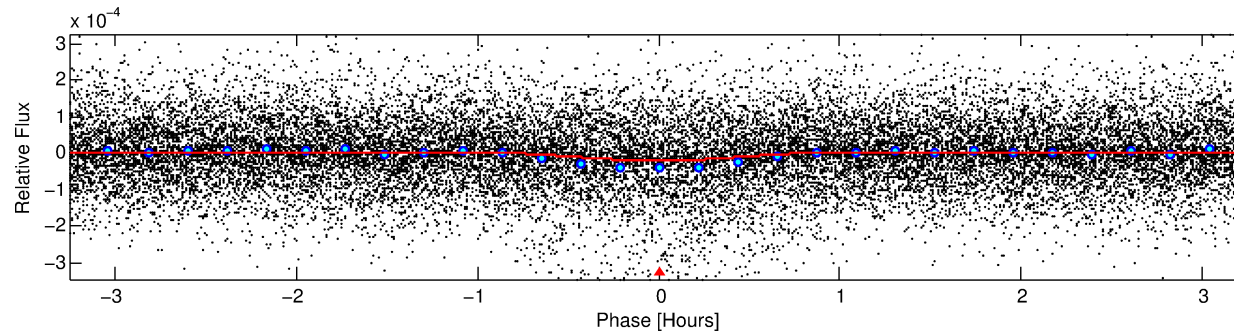
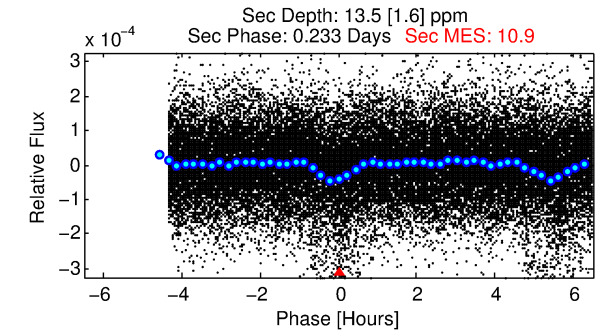
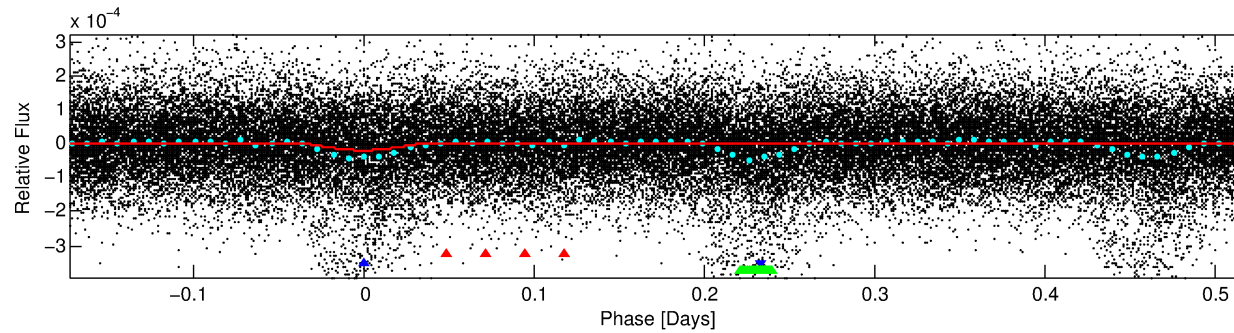
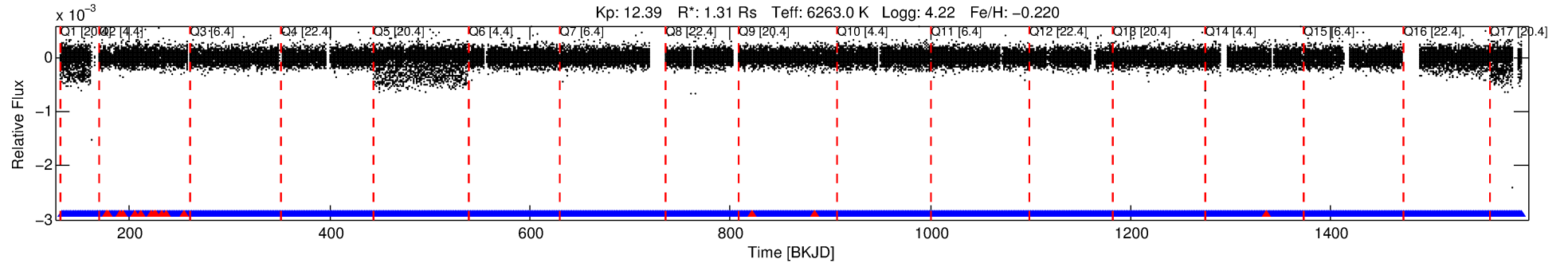
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 005120793-02

No Significant Match Found

# DV One-Page Summary

KIC: 5120793 Candidate: 2 of 3 Period: 0.693 d



## DV Fit Results:

Period = 0.69264 [0.00001] d  
Epoch = 132.1639 [0.0018] BKJD  
Rp/R\* = 0.0045 [0.0009]  
a/R\* = 2.35 [2.03]  
b = 0.90 [0.22]  
Seff = 9786.58 [2561.11]  
Teq = 2536 [166] K  
Rp = 0.65 [0.17] Re  
a = 0.0156 [0.0025] AU  
Ag = 4.27 [2.09] [1.56σ]  
Teff = 5636 [594] K [5.03σ]

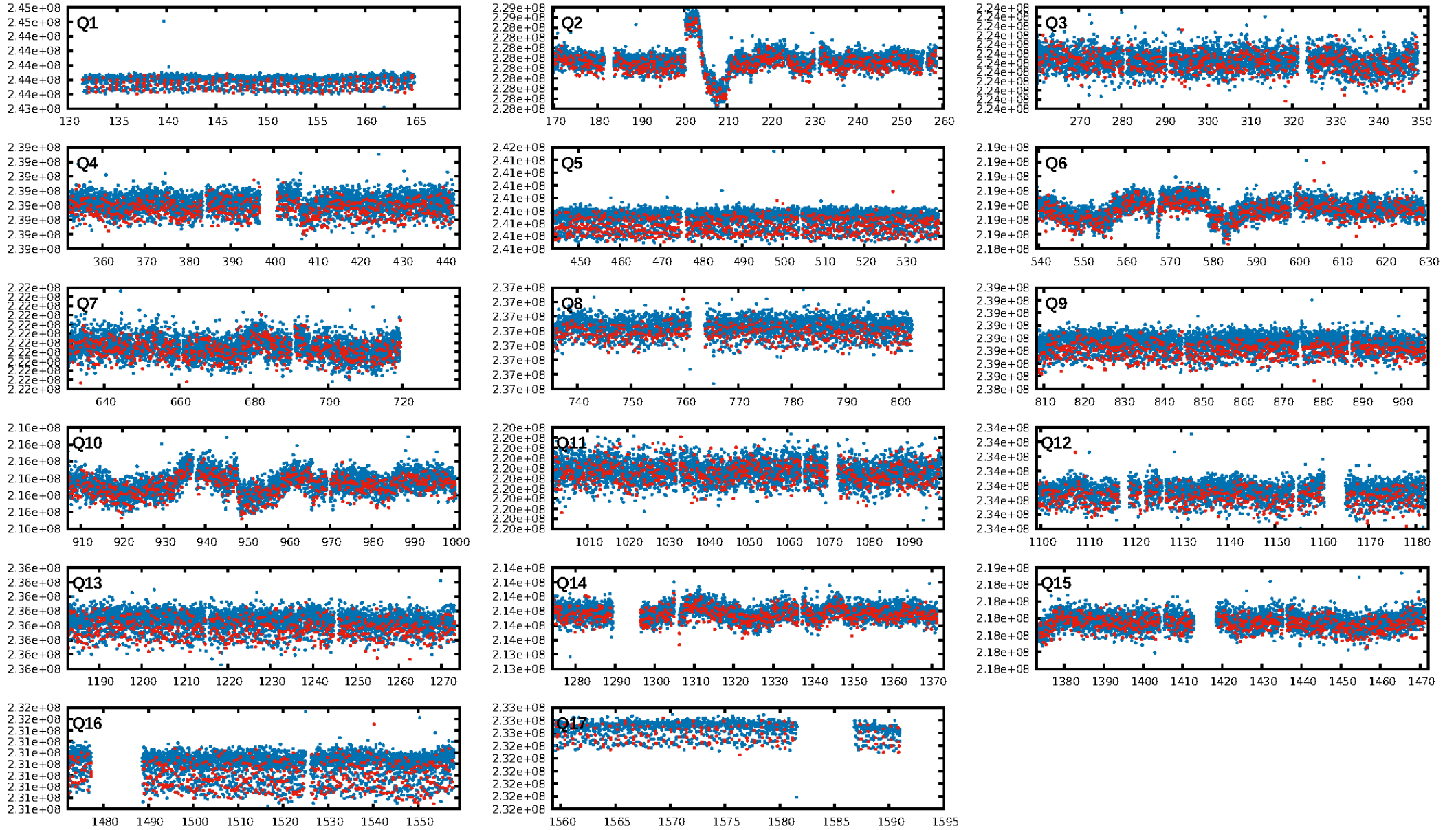
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: 0.0% [0.00σ]  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 0.99 [1819/1835]  
GhostDiagnostic-chr: -0.03141  
Centroid-sig: N/A  
Centroid-so: N/A  
OotOffset-rm: 7.535 arcsec [97.13σ]  
KicOffset-rm: 7.664 arcsec [100.01σ]  
OotOffset-st: 4/0/4/5 [13]  
KicOffset-st: 4/0/4/5 [13]  
DiffImageQuality-fgm: 1.00 [13/13]  
DiffImageOverlap-fno: 0.00 [0/17]

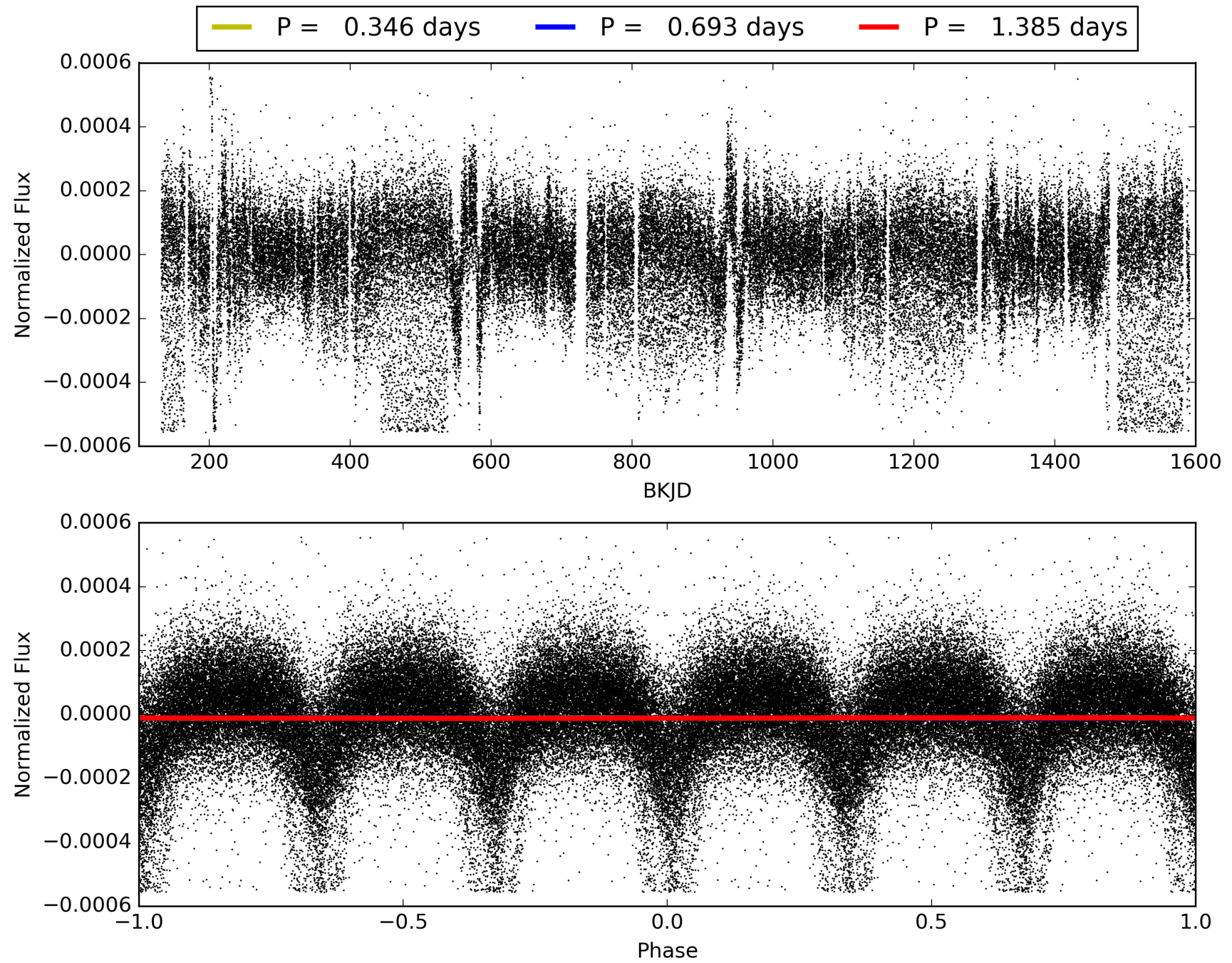
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 19:05:55 Z

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

# TCE 005120793-02, PDC Light Curves



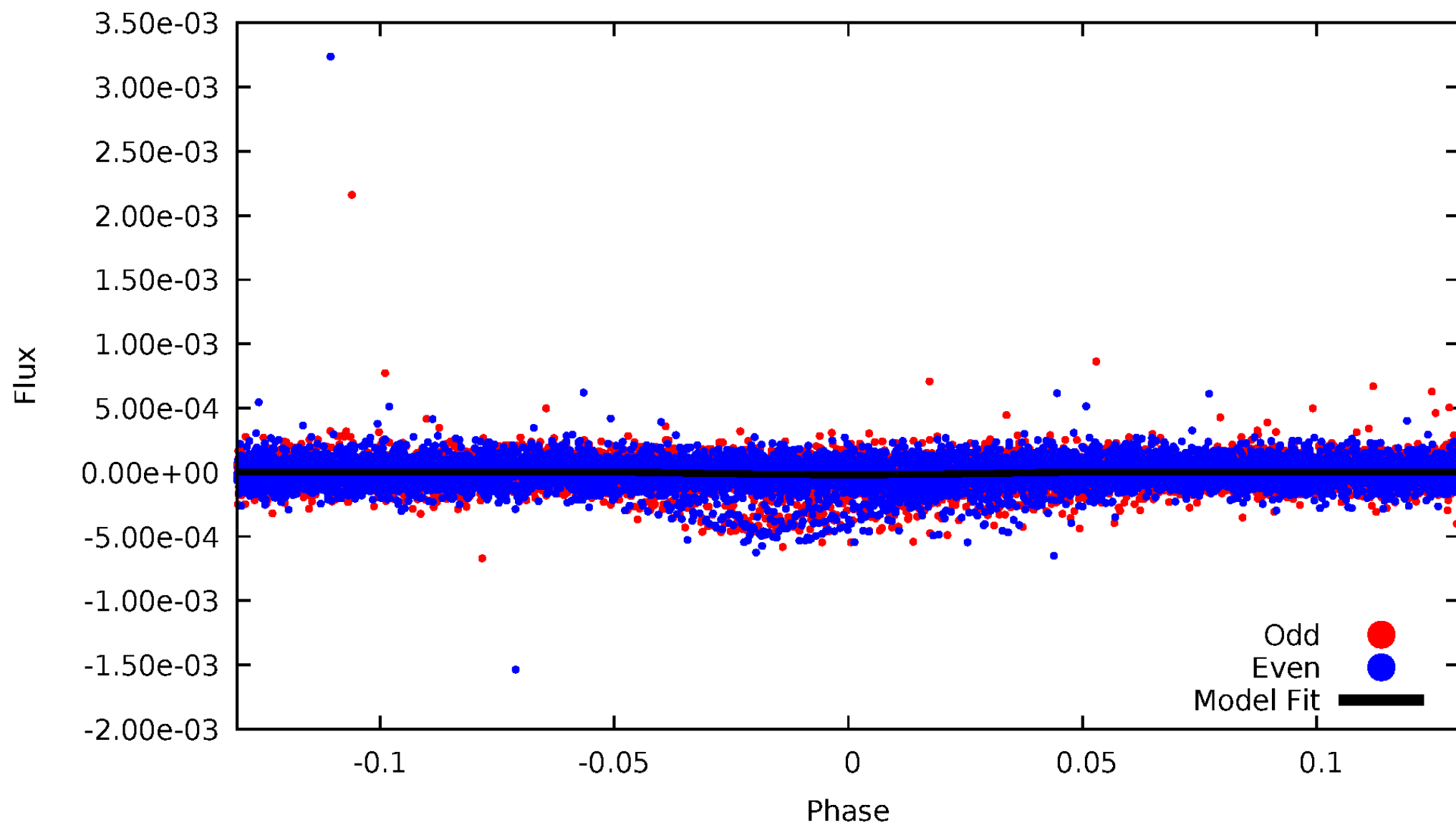
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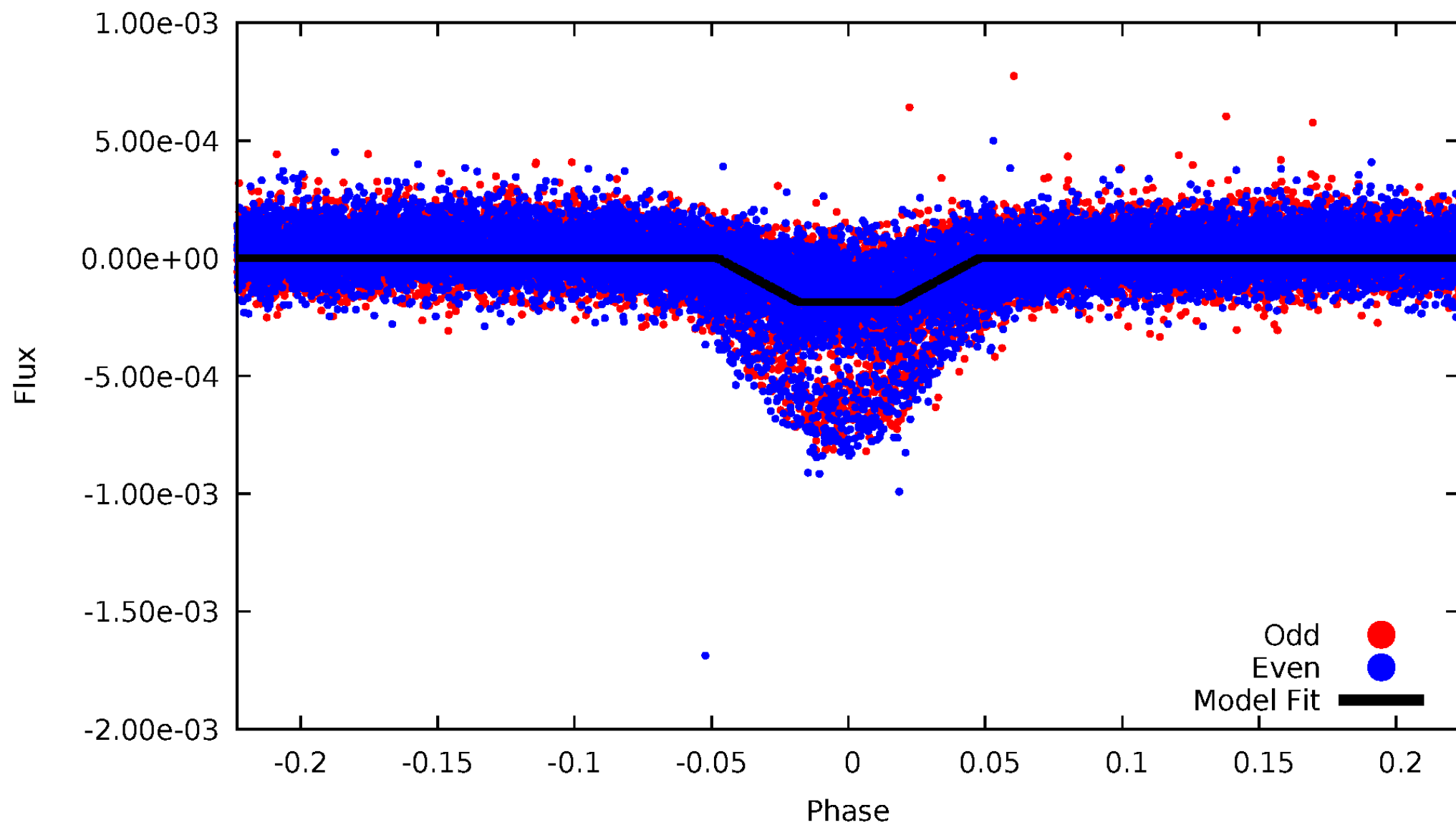
# DV Odd/Even

TCE 005120793-02



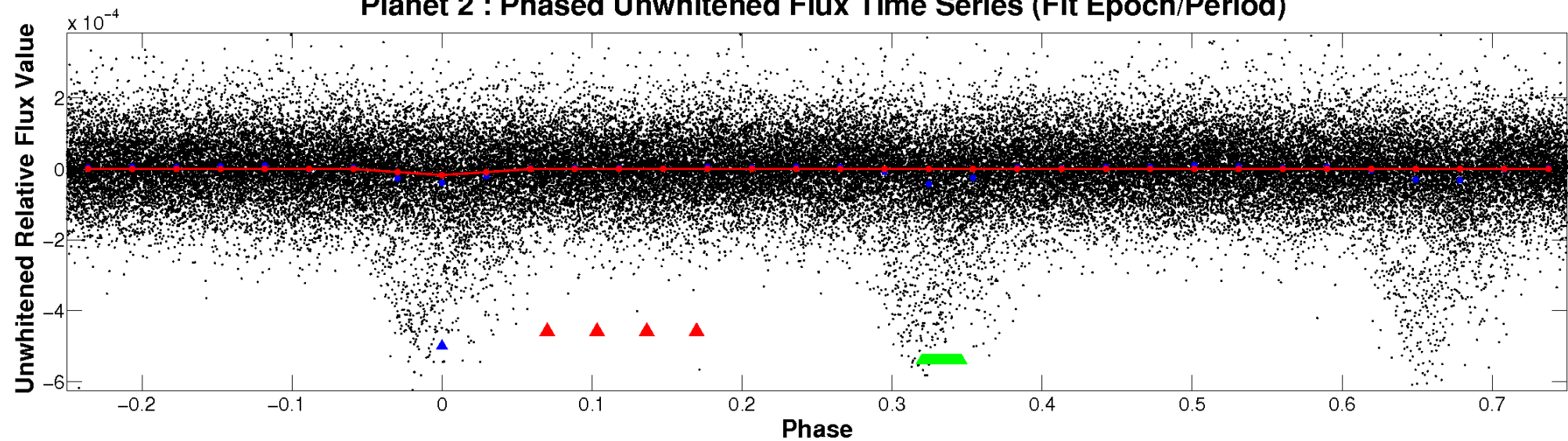
# ALT Odd/Even

TCE 005120793-02

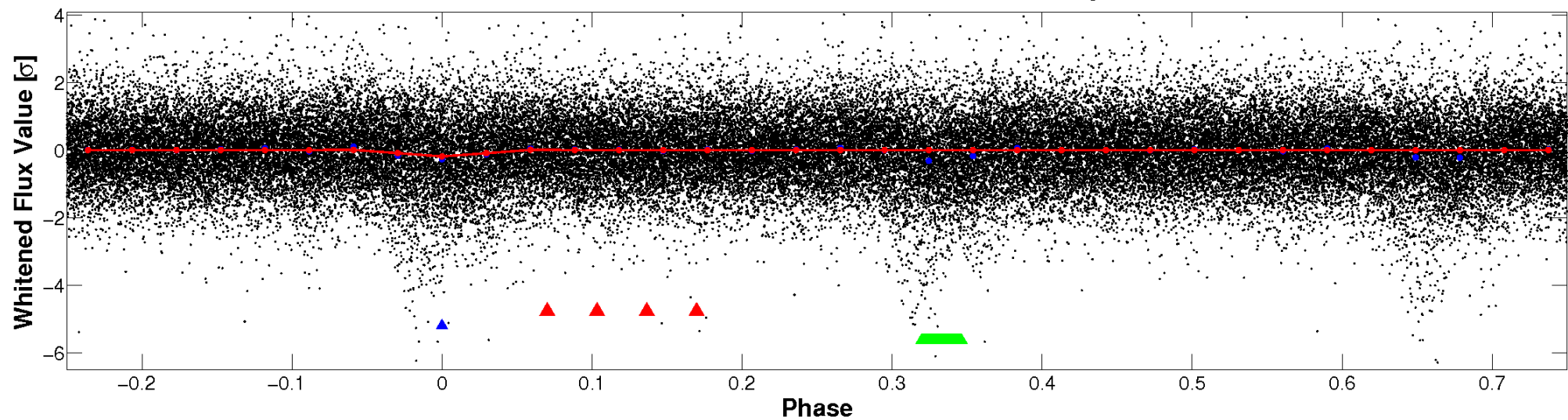


# Non-Whitened Vs. Whitened Light Curve

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

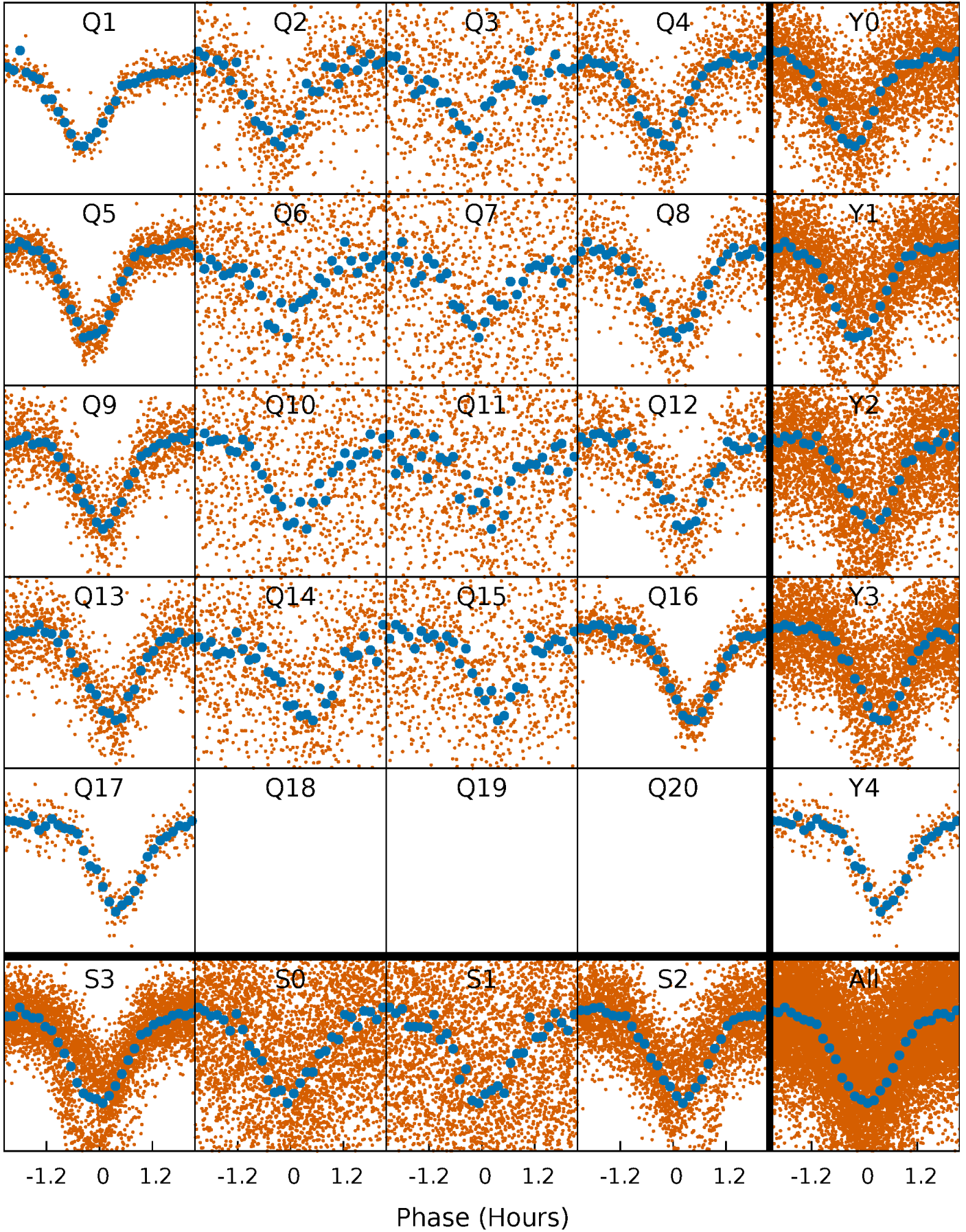


## Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



# PDC Quarter-Phased Transit Curves

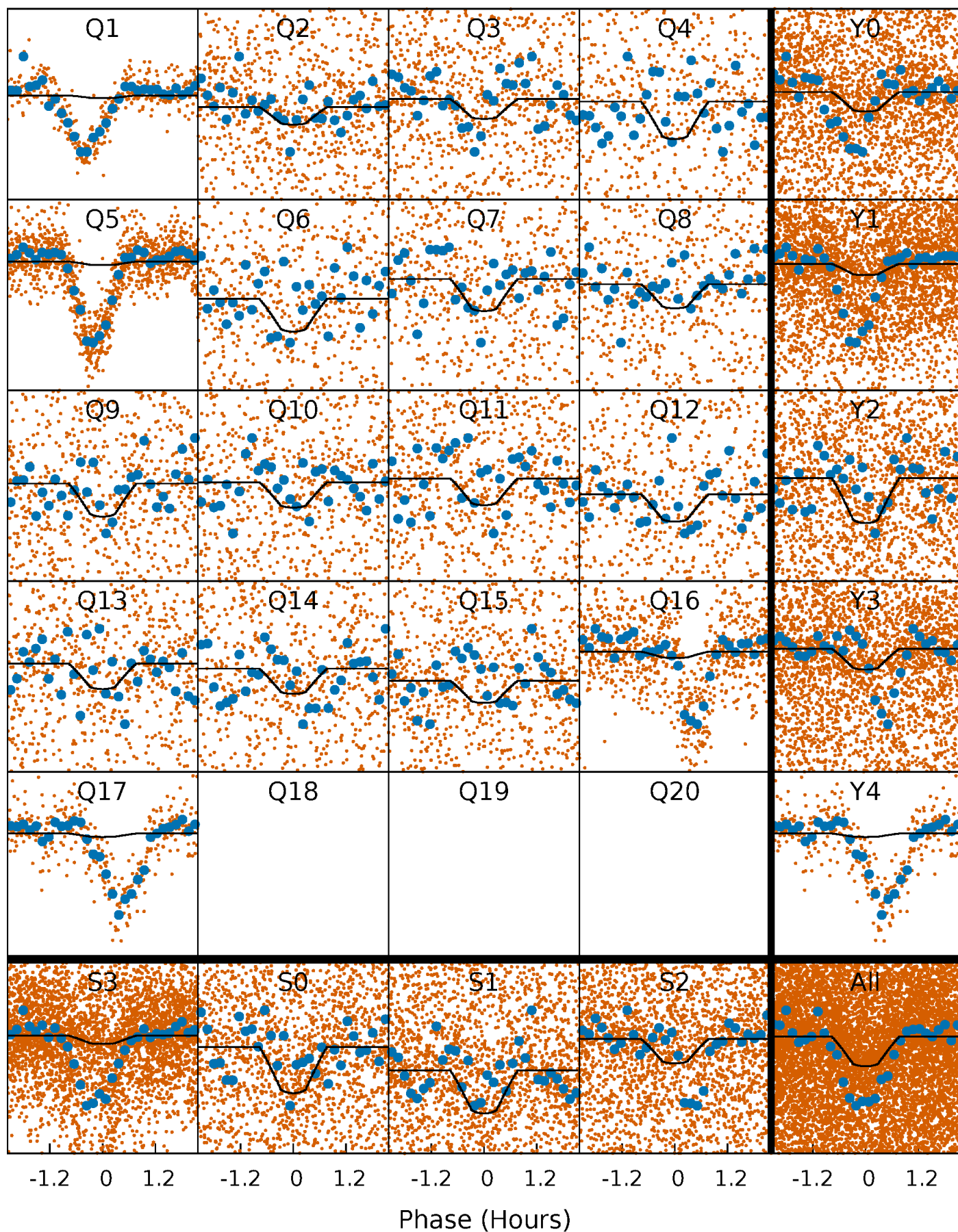
TCE 005120793-02 P= 0.692640 Days  $T_0=132.163918$  (BKJD)





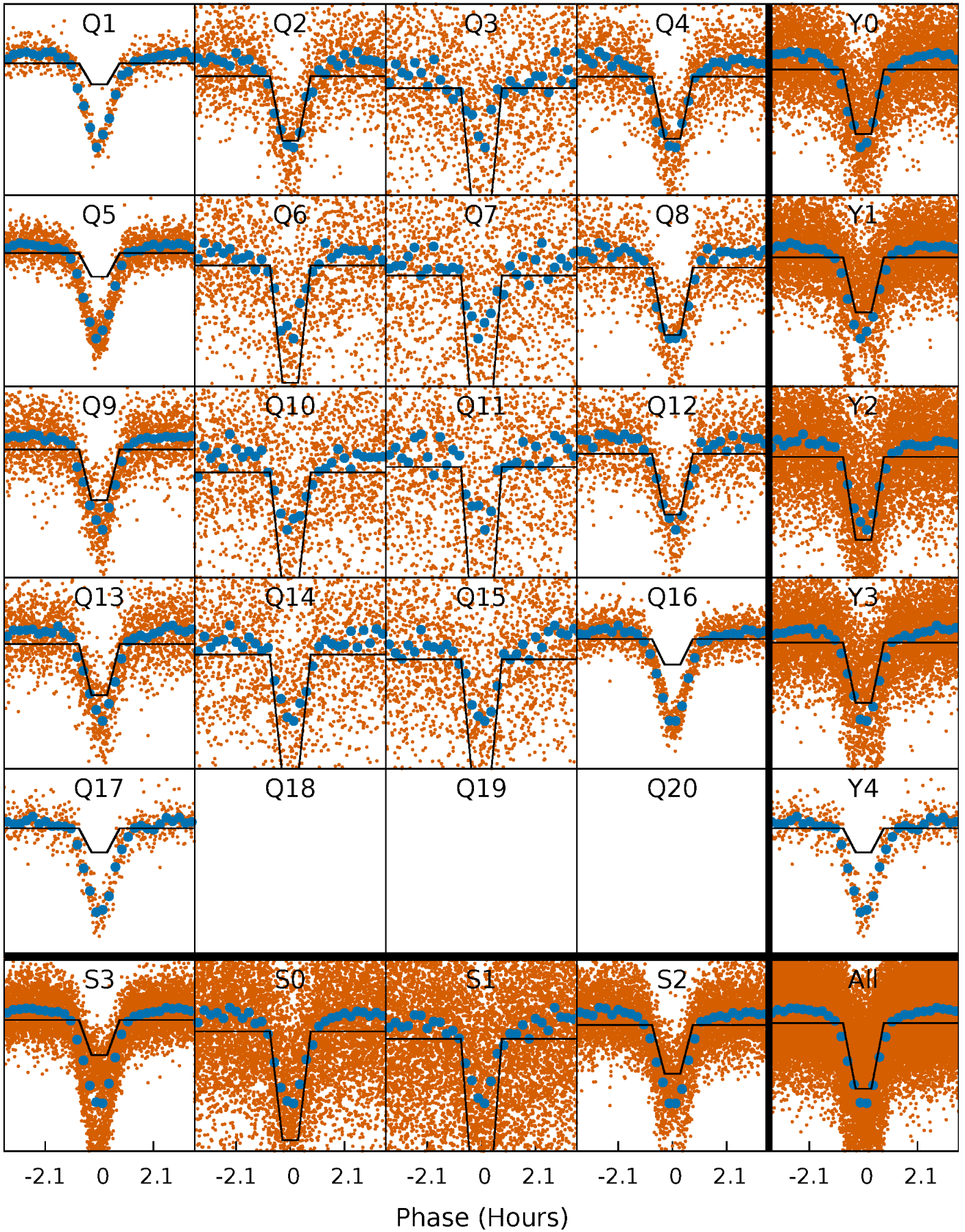
# DV Quarter-Phased Transit Curves

TCE 005120793-02   P= 0.692640 Days    $T_0=132.163918$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

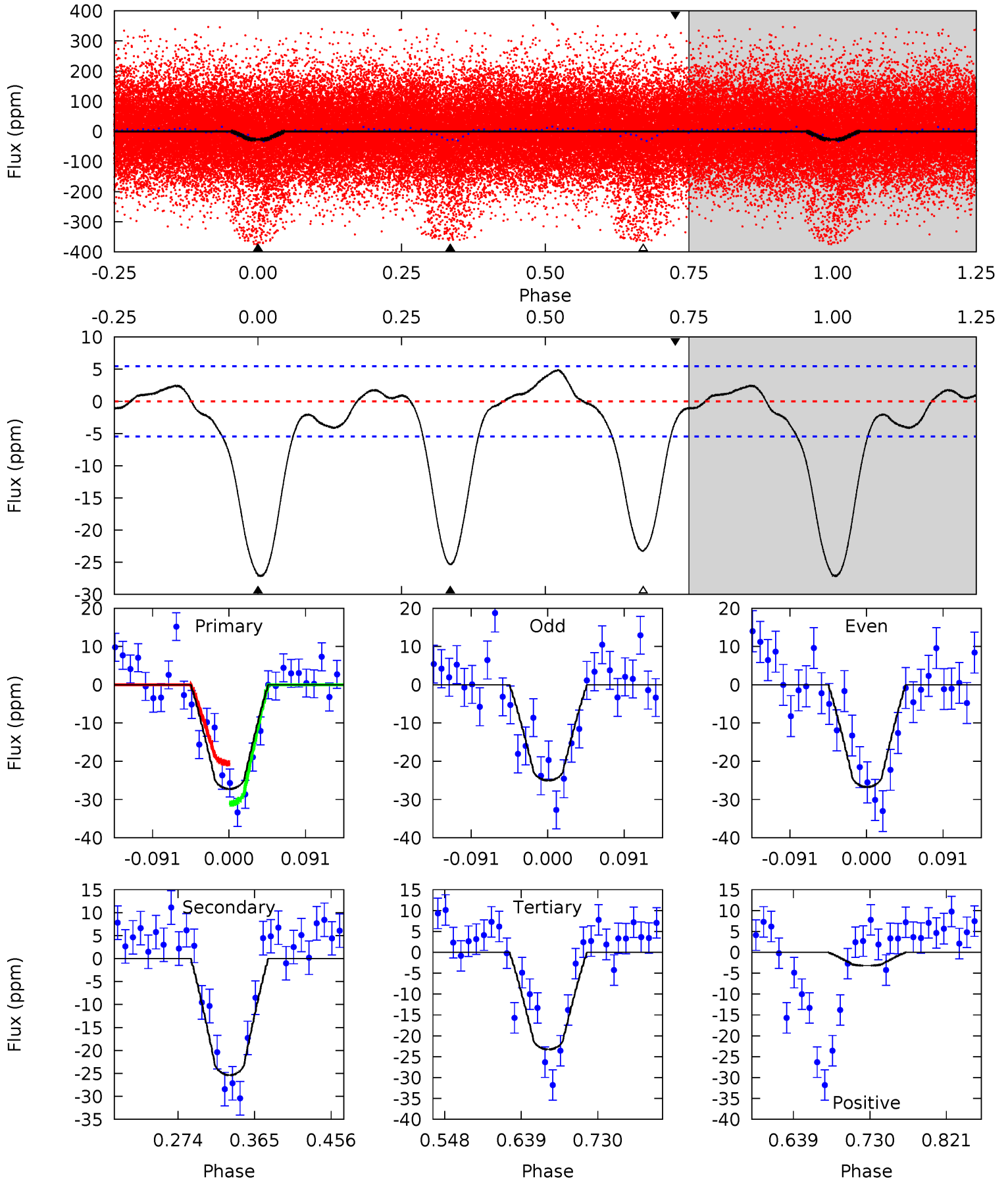
TCE 005120793-02   P= 0.692655 Days    $T_0=132.150210$  (BKJD)



# DV Model-Shift Uniqueness Test

005120793-02, P = 0.692640 Days, E = 131.471278 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	21.4	19.6	-2.68	4.58	1.69	5.56	3.34	25.6	1.78	24.0	0.72	1.71	0.15	4.57

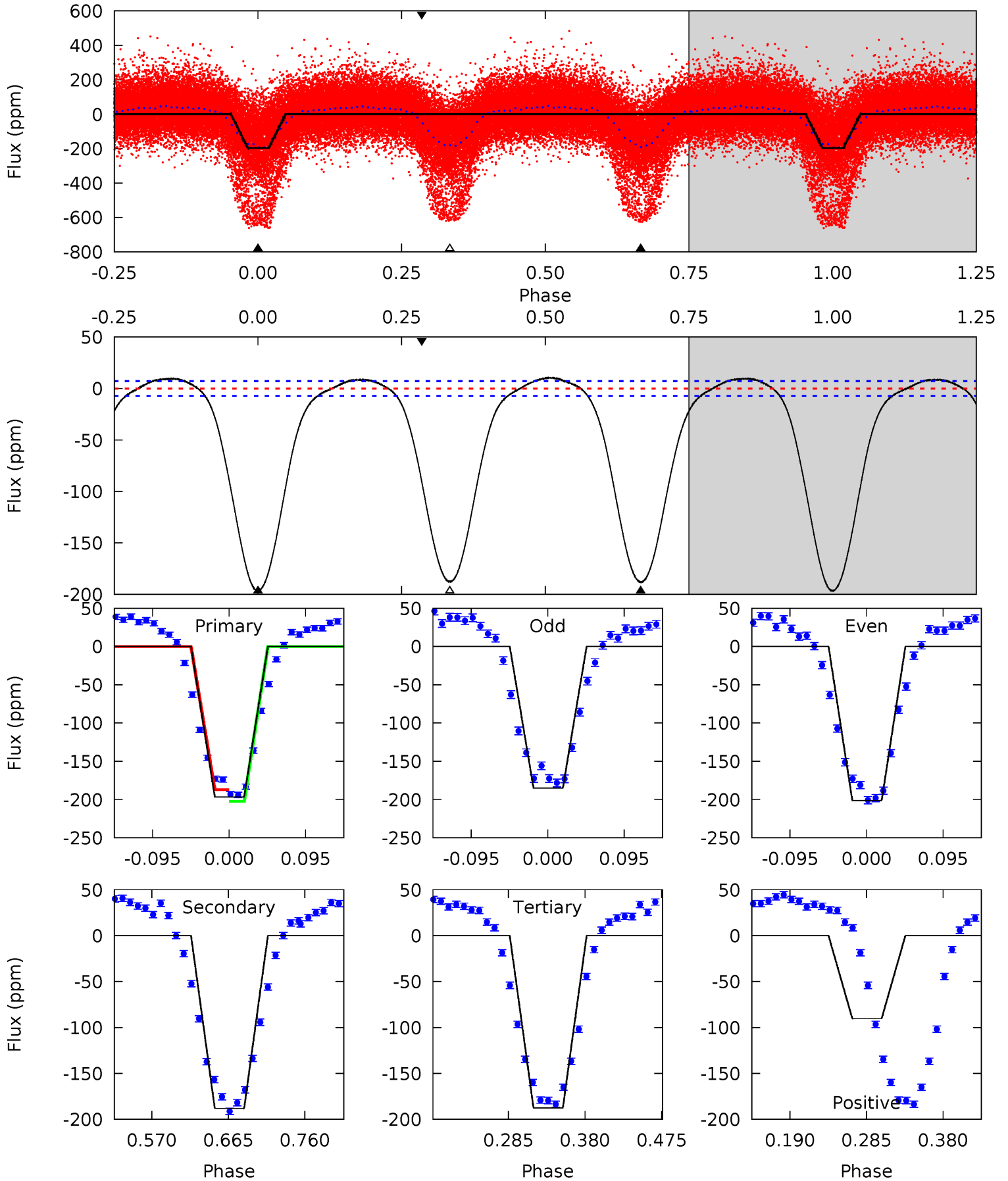




# Alt Model-Shift Uniqueness Test

005120793-02, P = 0.692655 Days, E = 131.457555 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
125.9	120.5	120.2	-57.9	4.58	1.67	36.3	5.70	183.8	0.26	178.4	5.33	1.33	0.05	5.94



### Stellar Parameters For KIC 005120793

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$6263^{+88}_{-75}$	$4.224^{+0.149}_{-0.122}$	$-0.220^{+0.200}_{-0.150}$	$1.315^{+0.225}_{-0.225}$	$1.054^{+0.107}_{-0.062}$	$0.653^{+0.446}_{-0.227}$
	+1%/-1%	+4%/-3%	+91%/-68%	+17%/-17%	+10%/-6%	+68%/-35%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology  
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

### Secondary Eclipse Parameters for KIC 005120793-02 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$-25 \pm 1$	$0.65^{+0.15}_{-0.14}$	$3547^{+158}_{-160}$	$6571^{+973}_{-641}$	$8.148^{+5.529}_{-2.692}$
Alt.	$-188 \pm 2$	$1.96^{+0.24}_{-0.22}$	$3546^{+168}_{-173}$	$6221^{+248}_{-234}$	$6.656^{+1.746}_{-1.408}$

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

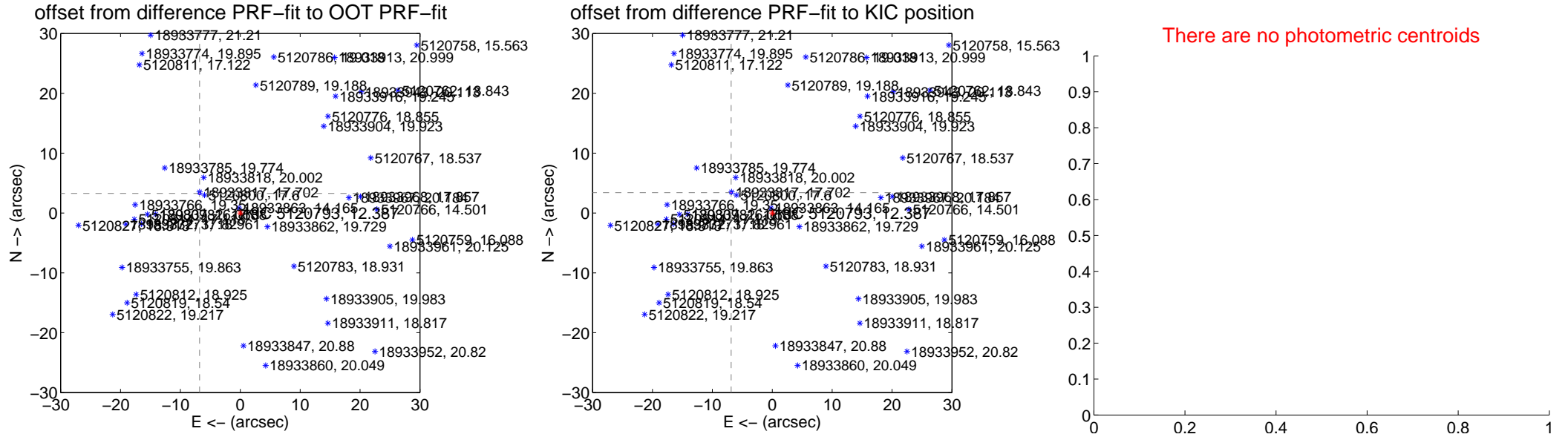
# DV Centroid Data

Supplemental centroid analysis for 005120793-02. Kepler magnitude: 12.39. Transit SNR 10.04

There are 13 quarters with good PRF difference image offsets

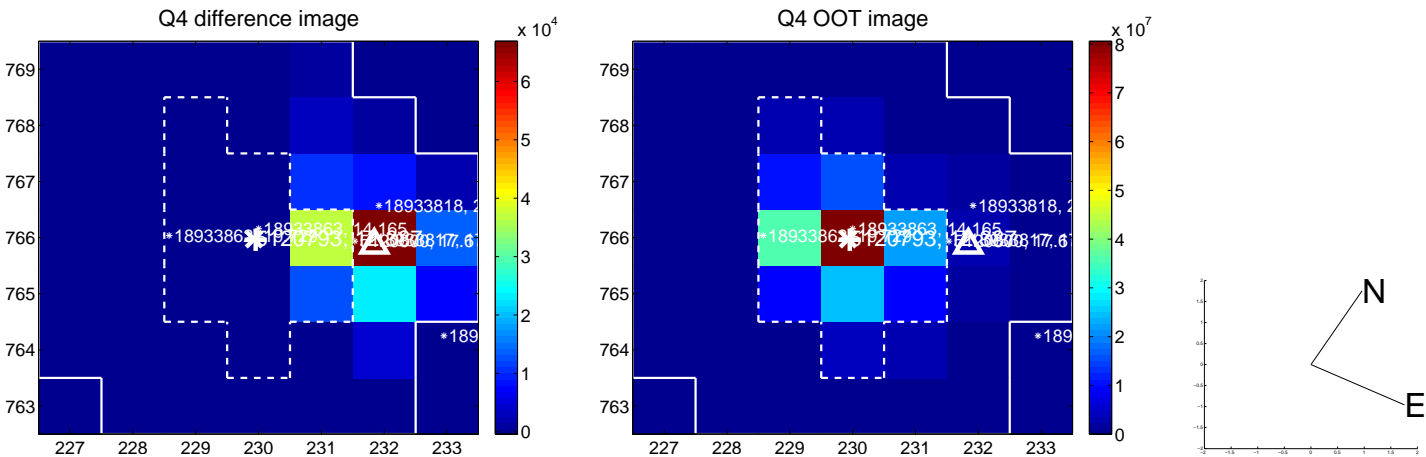
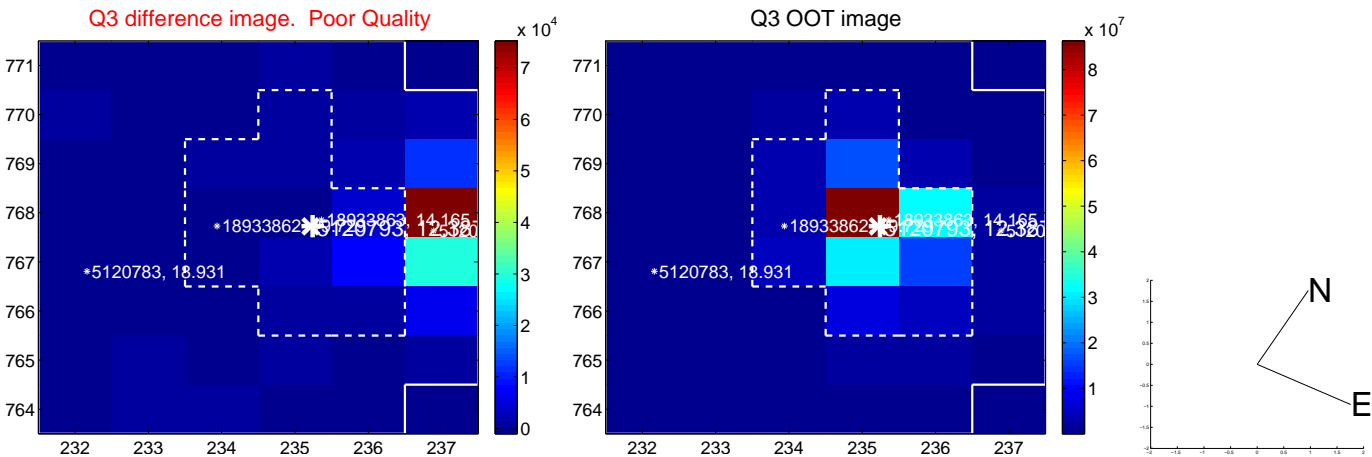
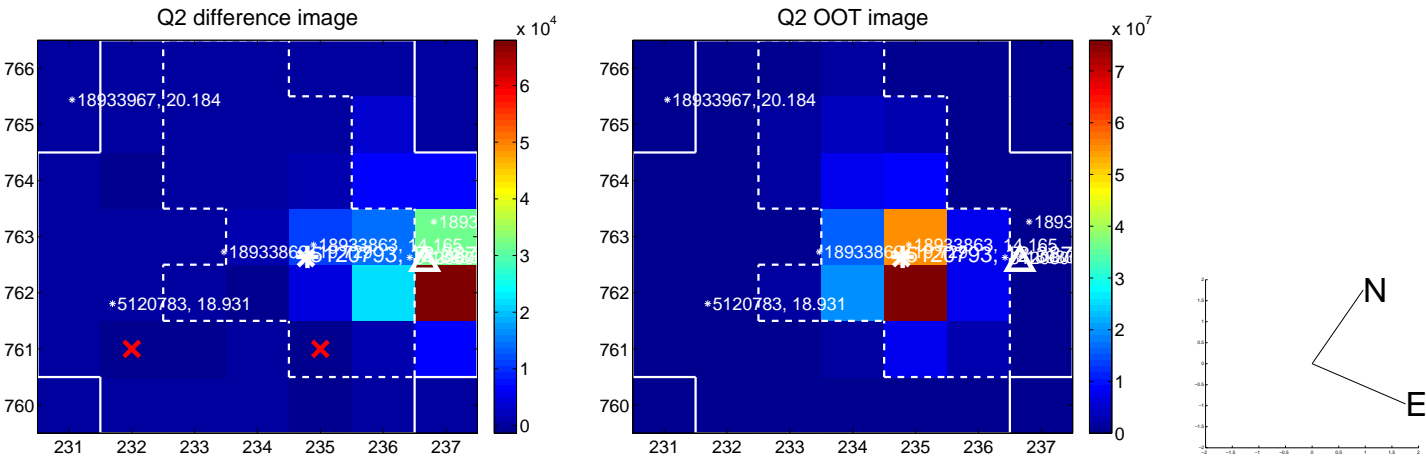
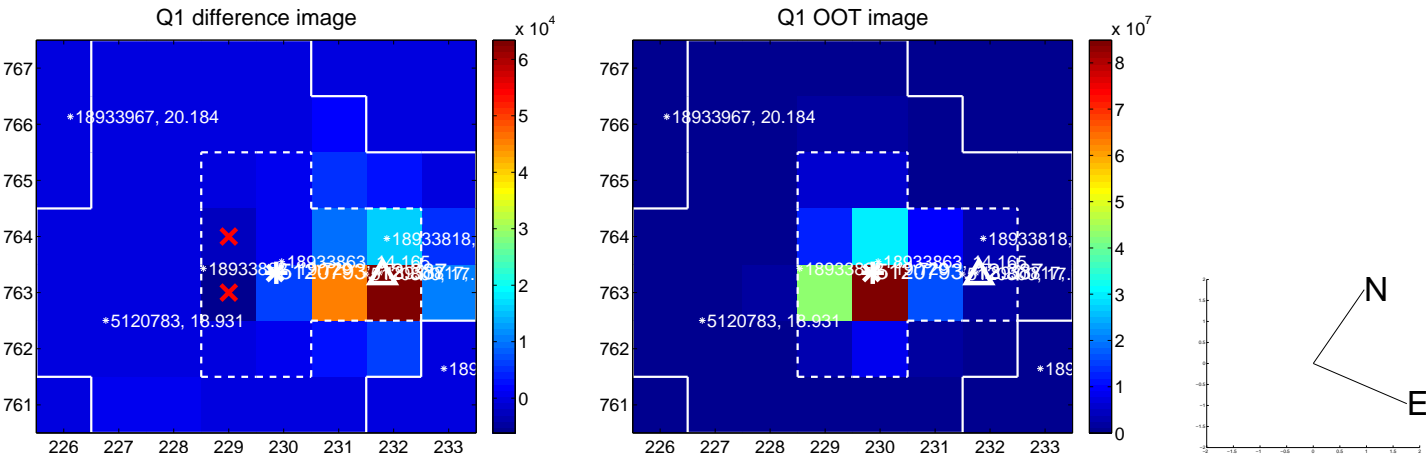
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	7.535 $\pm$ 0.078	97.13	6.788 $\pm$ 0.073	3.271 $\pm$ 0.075
PRF-fit source offset from KIC position	7.664 $\pm$ 0.077	100.01	6.868 $\pm$ 0.074	3.401 $\pm$ 0.073
photometric centroid source offset	—	—	—	—

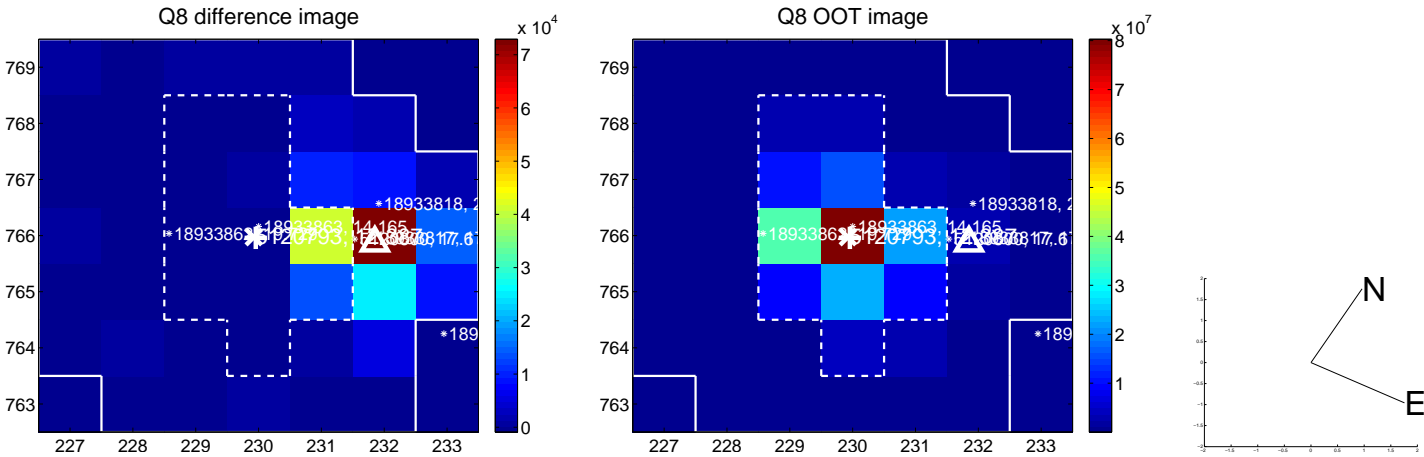
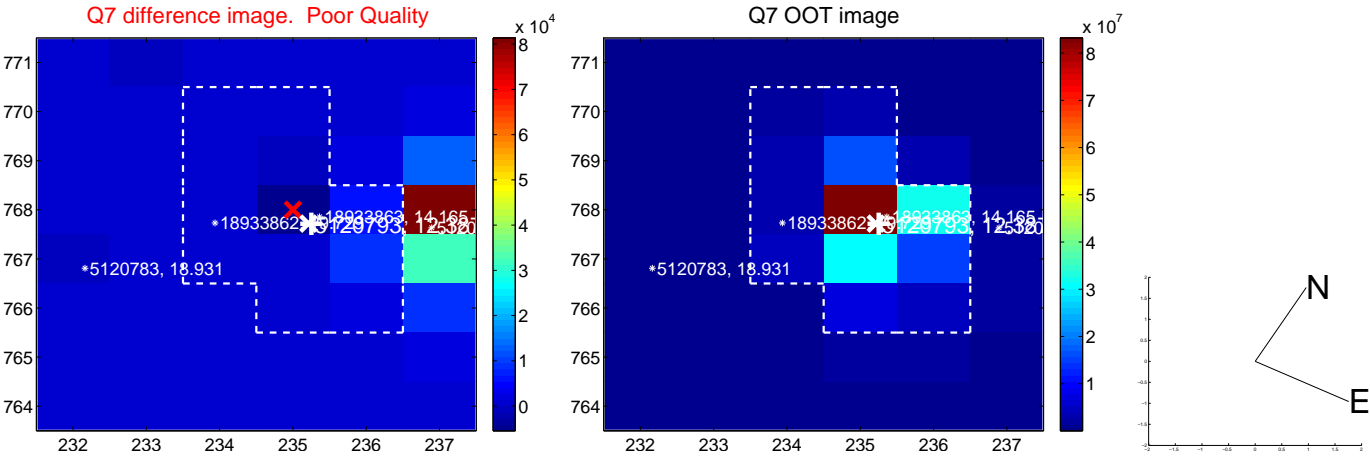
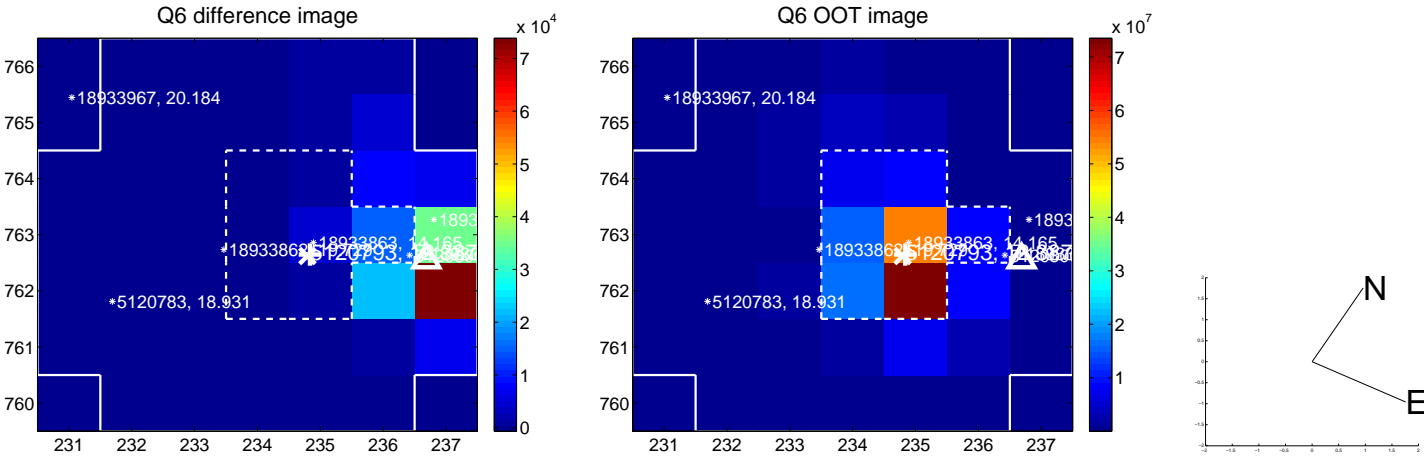
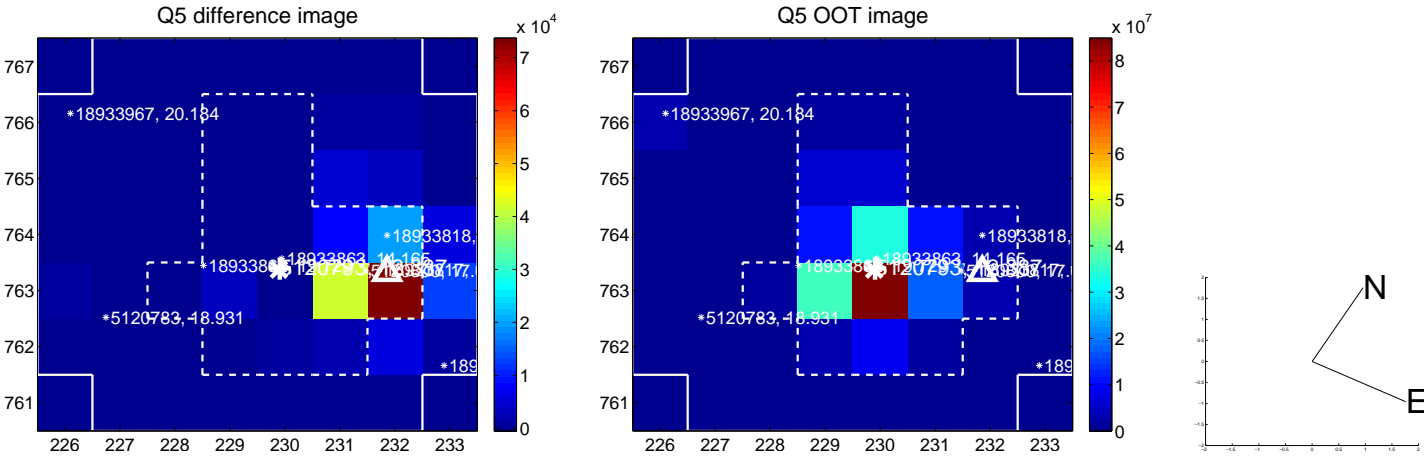


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

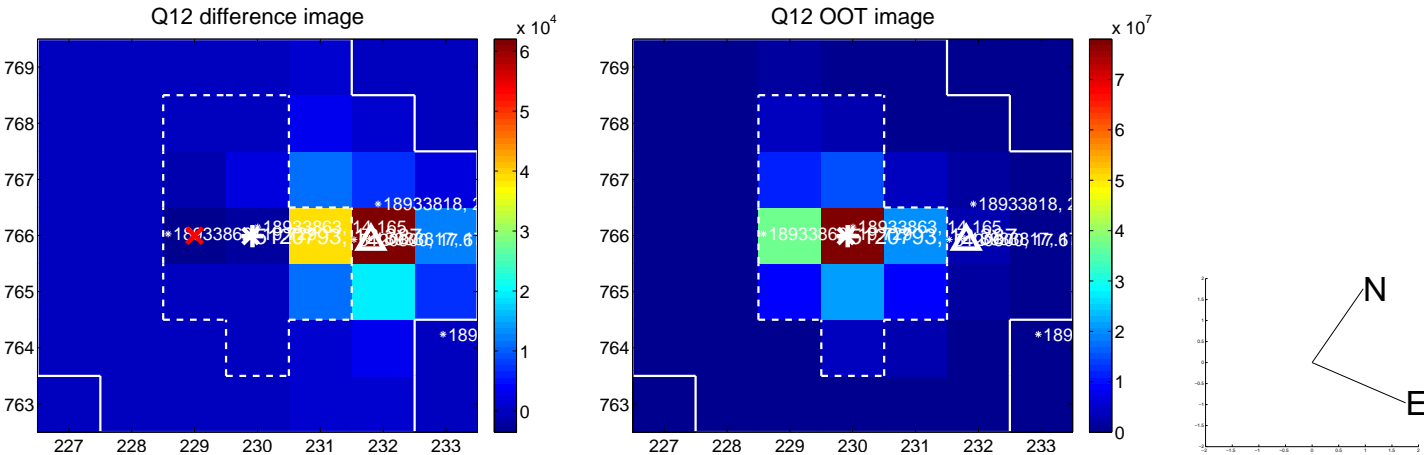
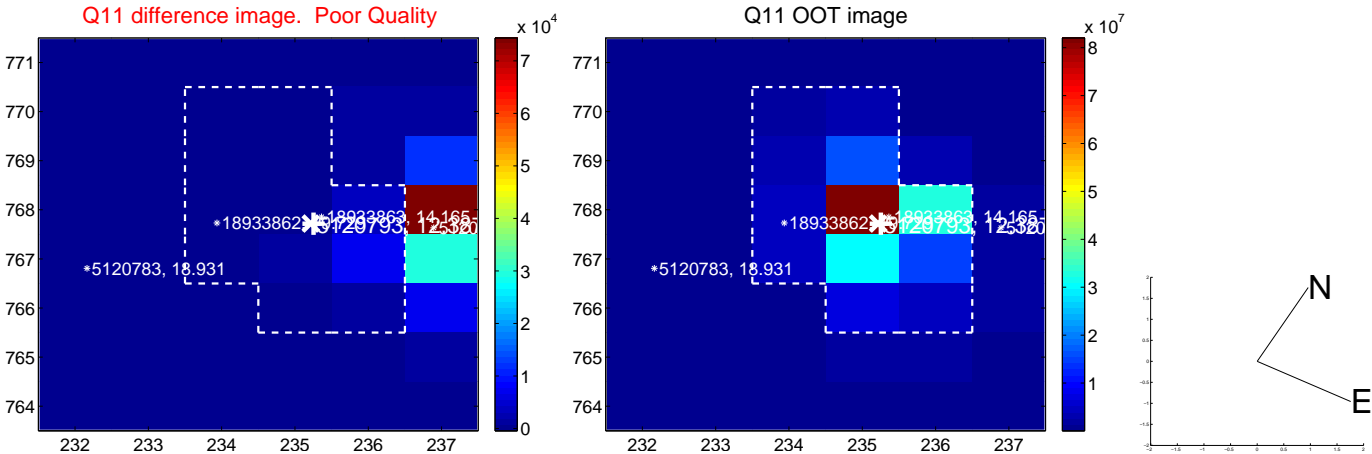
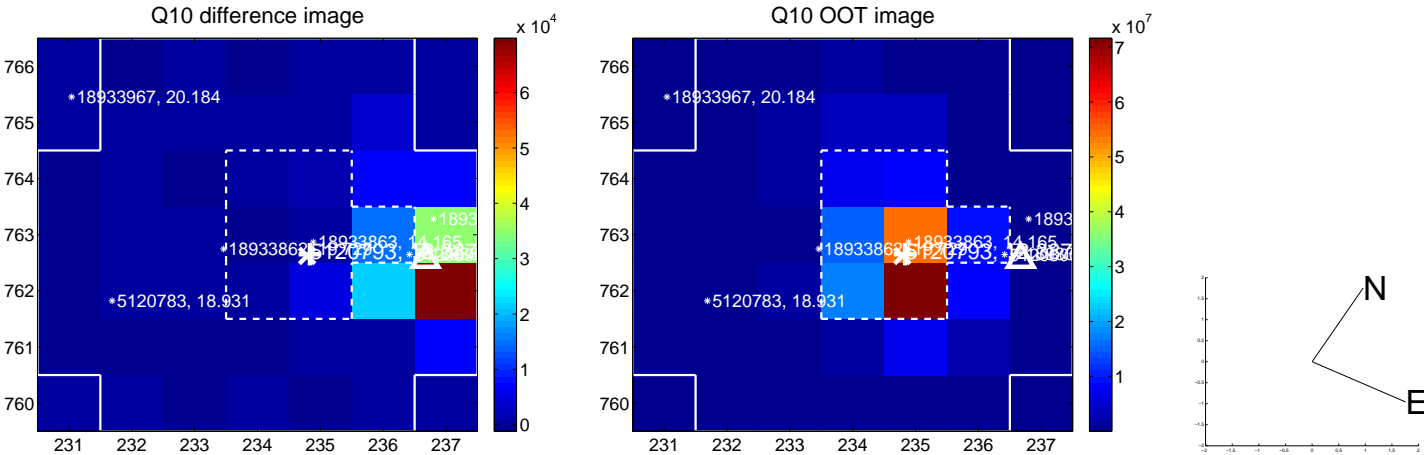
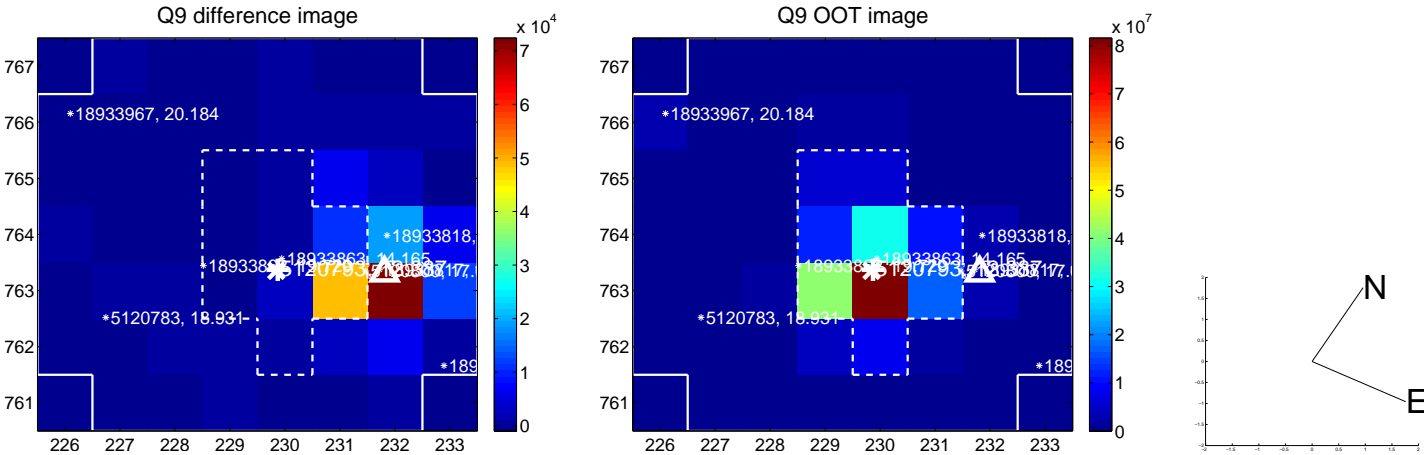


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

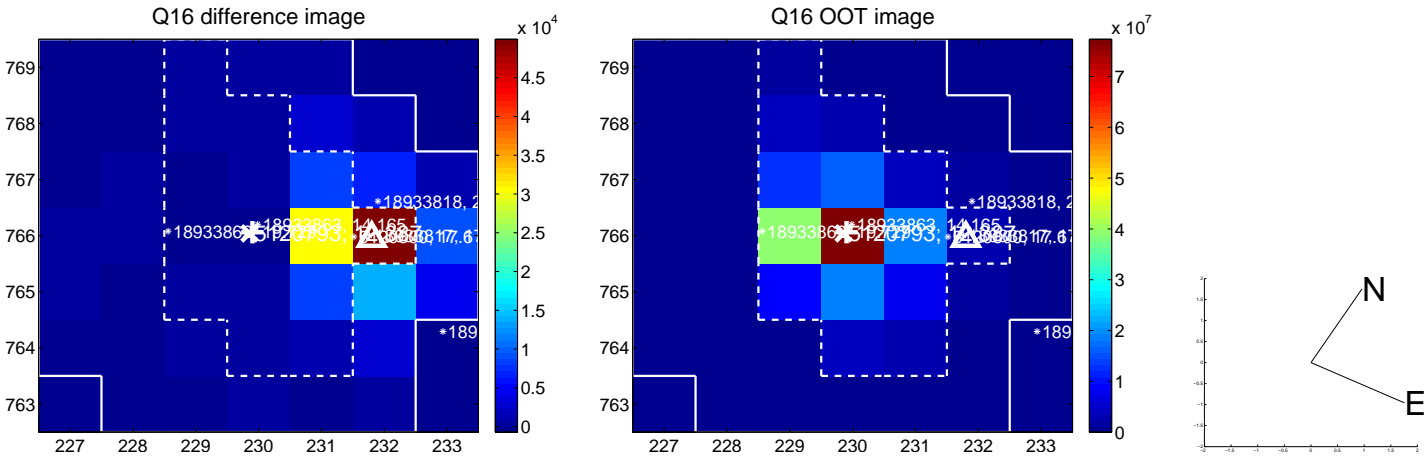
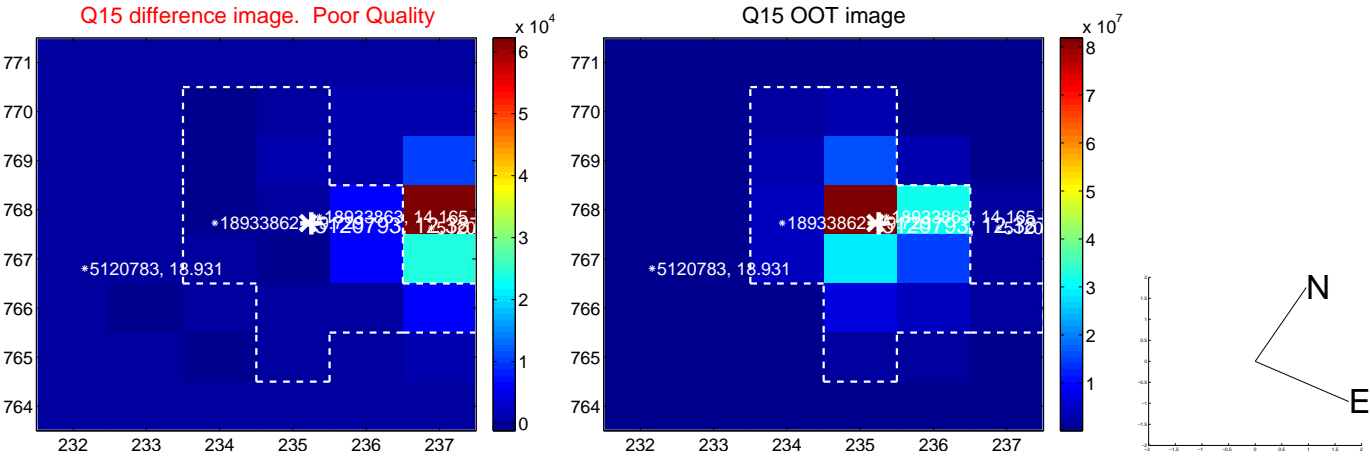
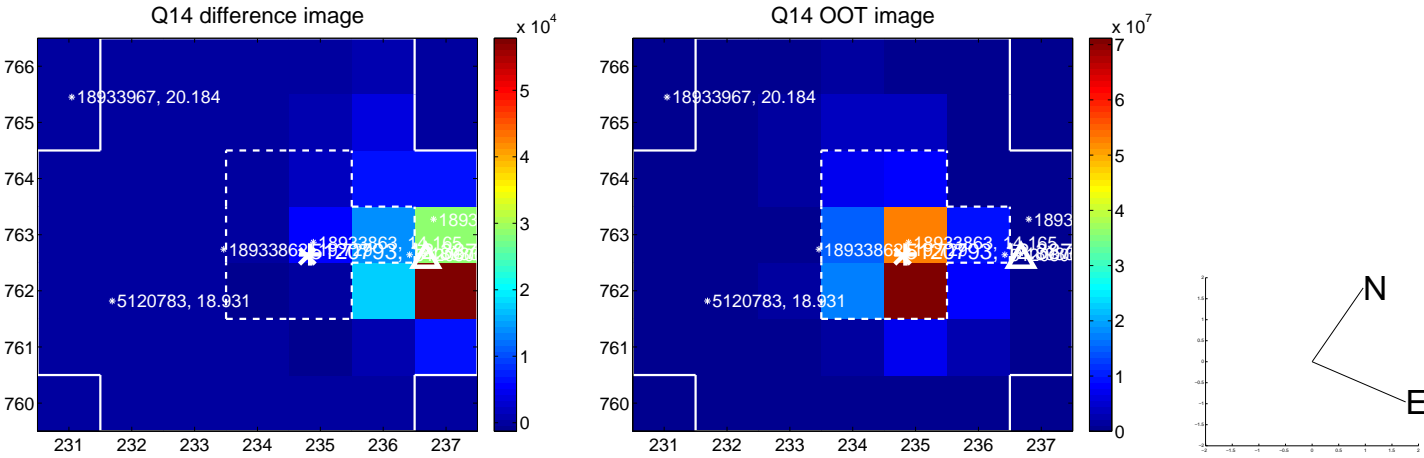
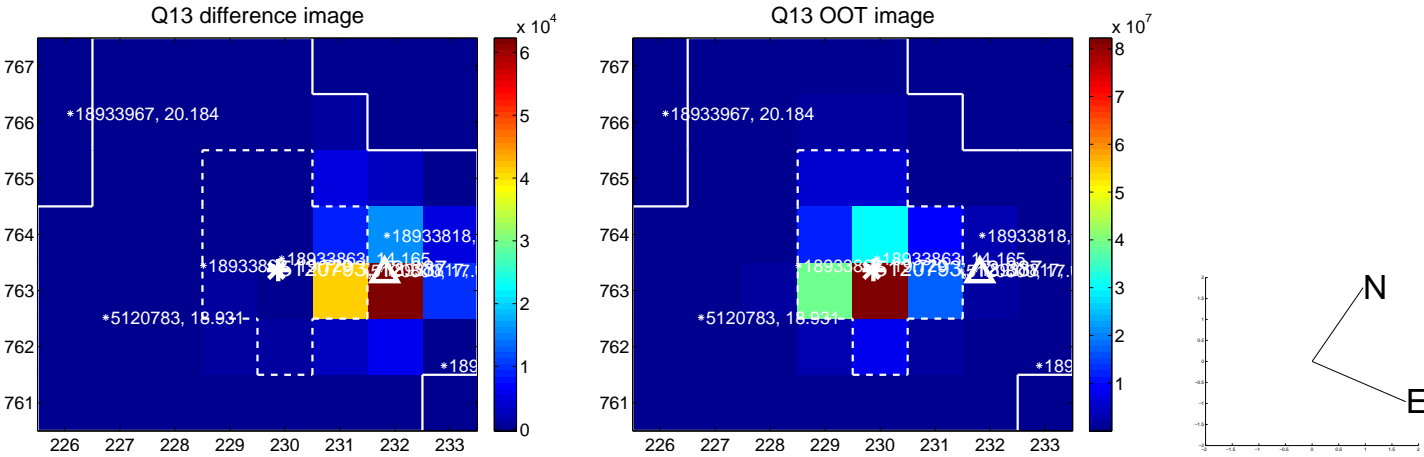




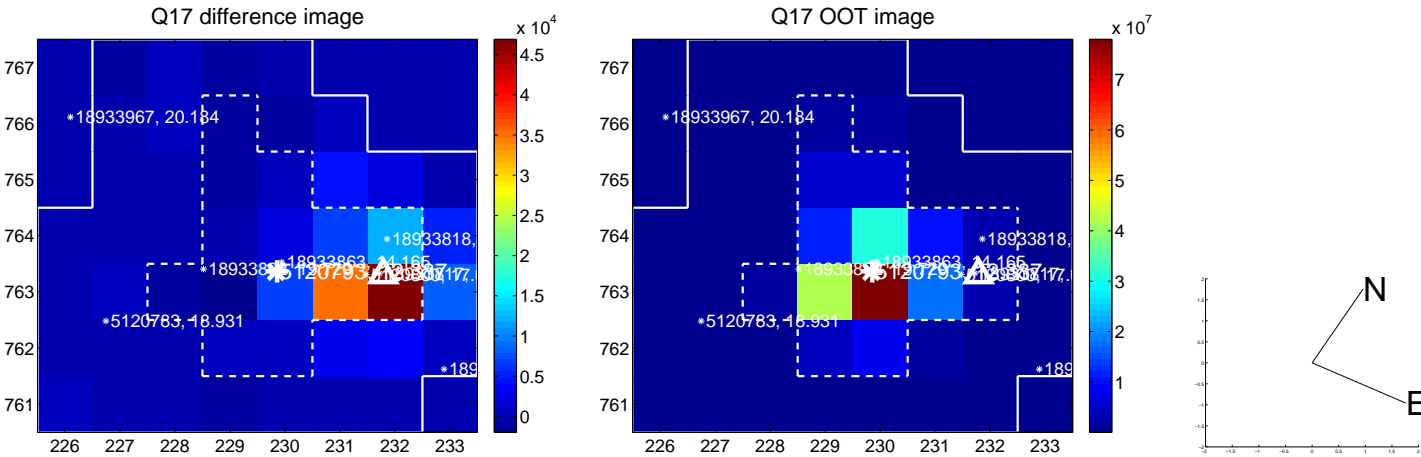
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



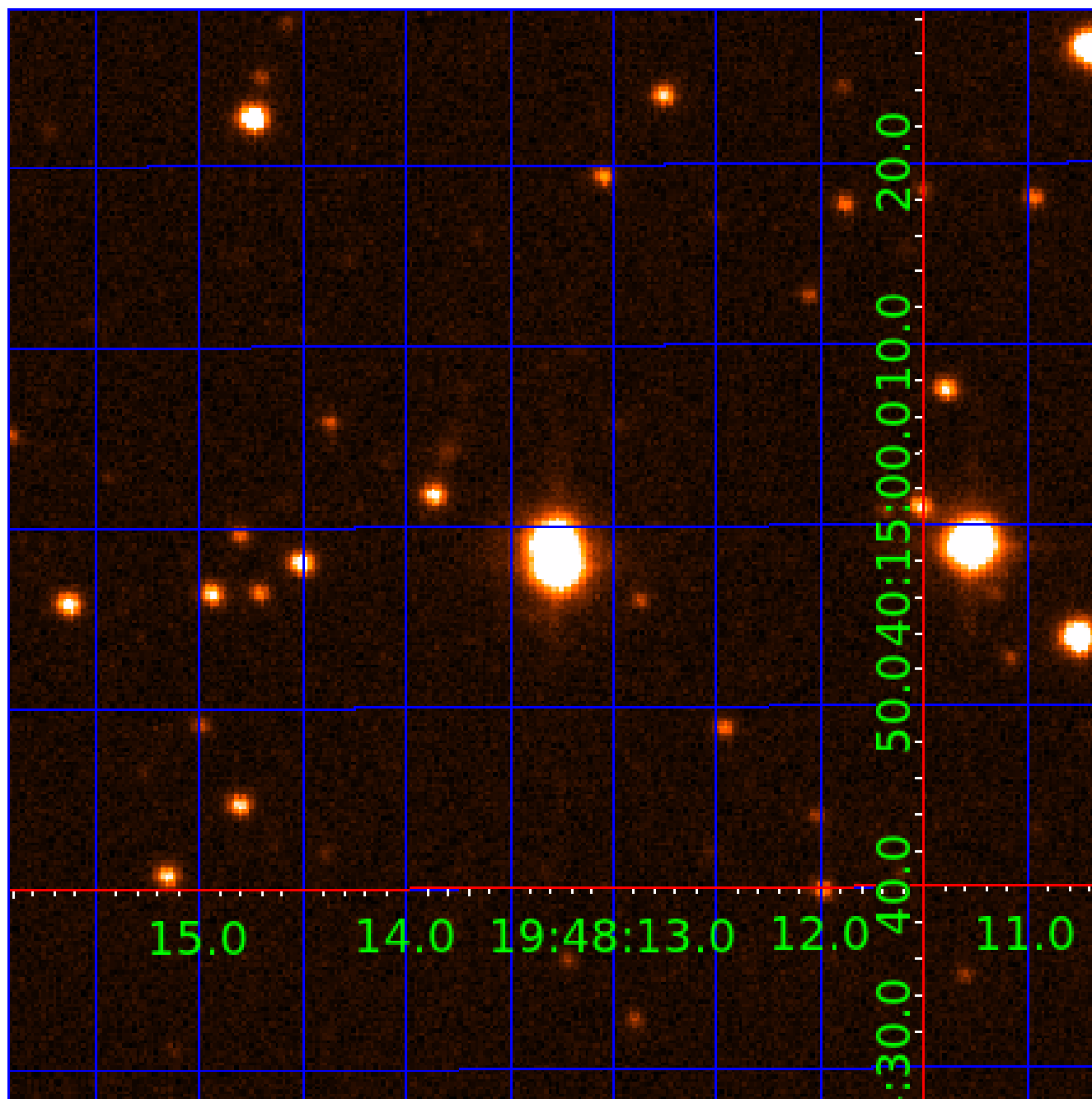
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



# KIC 005120793

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
005120793-01	OBS	No	392.704102	163.450292	111.5	22.717	7.6	8.4	1.31	6263	1.53	2.09
005120793-02	OBS	No	0.692640	132.163918	17.6	1.085	9.4	10.0	1.31	6263	0.65	9786.58
005120793-03	OBS	No	0.692649	131.692684	31.6	0.853	13.4	16.2	1.31	6263	0.89	9786.41

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005120793-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_FEW_DIFFS
005120793-02	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET—HALO_GHOST
005120793-03	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_RESOLVED_OFFSET—HALO_GHOST

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

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

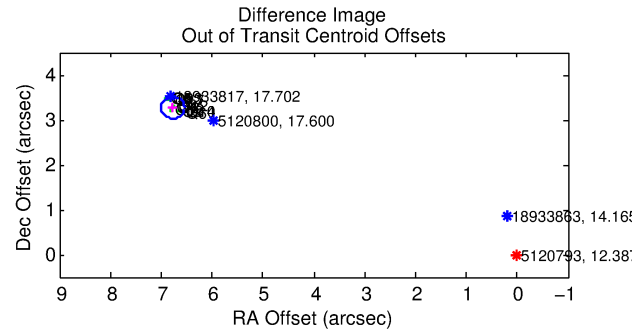
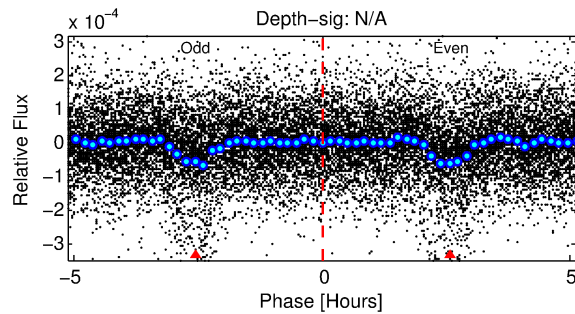
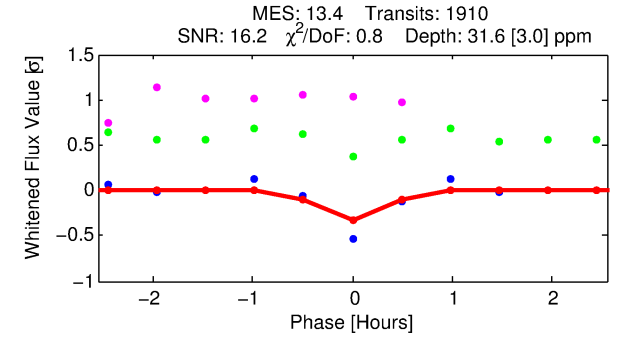
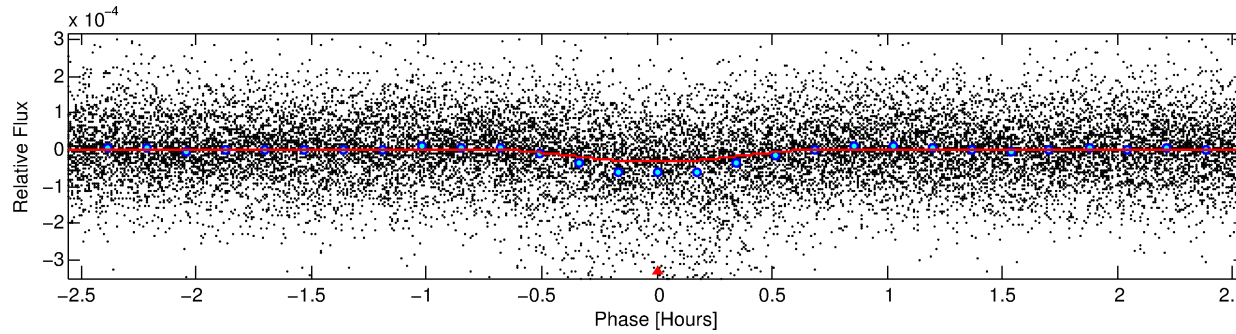
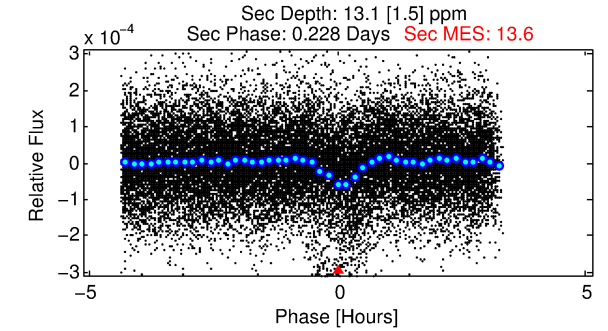
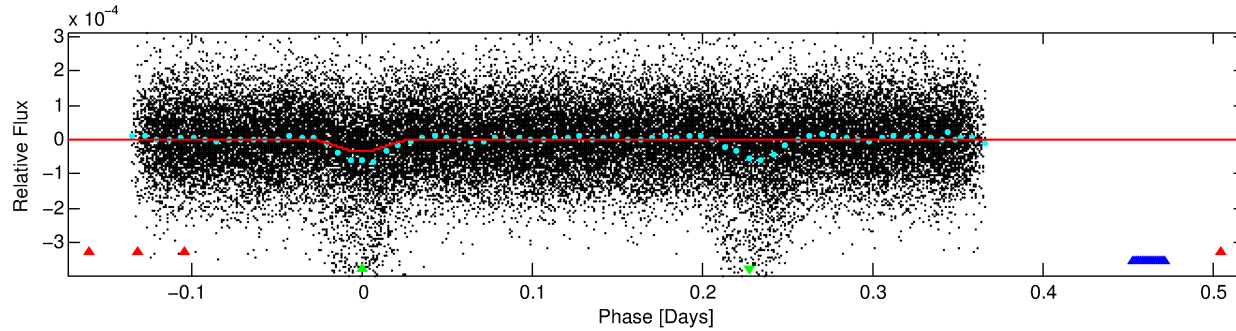
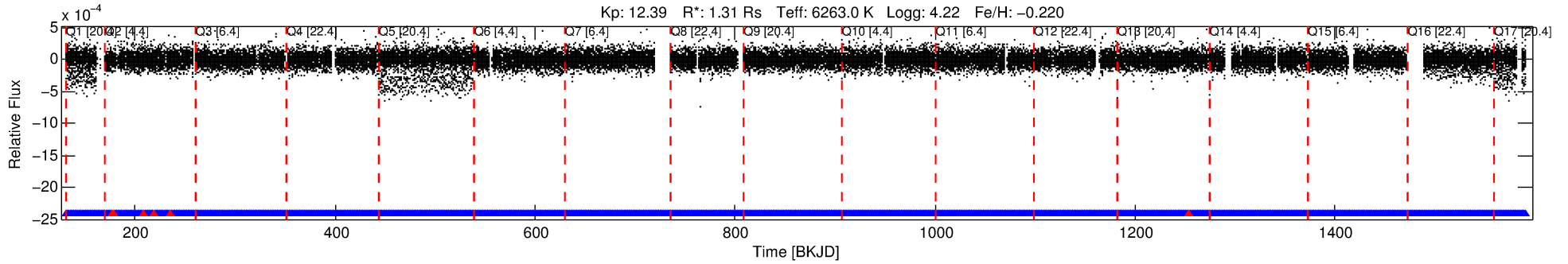
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 005120793-03

No Significant Match Found

# DV One-Page Summary

KIC: 5120793 Candidate: 3 of 3 Period: 0.693 d



## DV Fit Results:

Period = 0.69265 [0.00001] d  
Epoch = 131.6927 [0.0010] BKJD  
Rp/R\* = 0.0062 [0.0010]  
a/R\* = 2.75 [2.11]  
b = 0.92 [0.16]  
Seff = 9786.41 [2561.06]  
Teq = 2536 [166] K  
Rp = 0.89 [0.21] Re  
a = 0.0156 [0.0025] AU  
Ag = 2.22 [0.96] [1.28σ]  
Teff = 4789 [419] K [5.00σ]

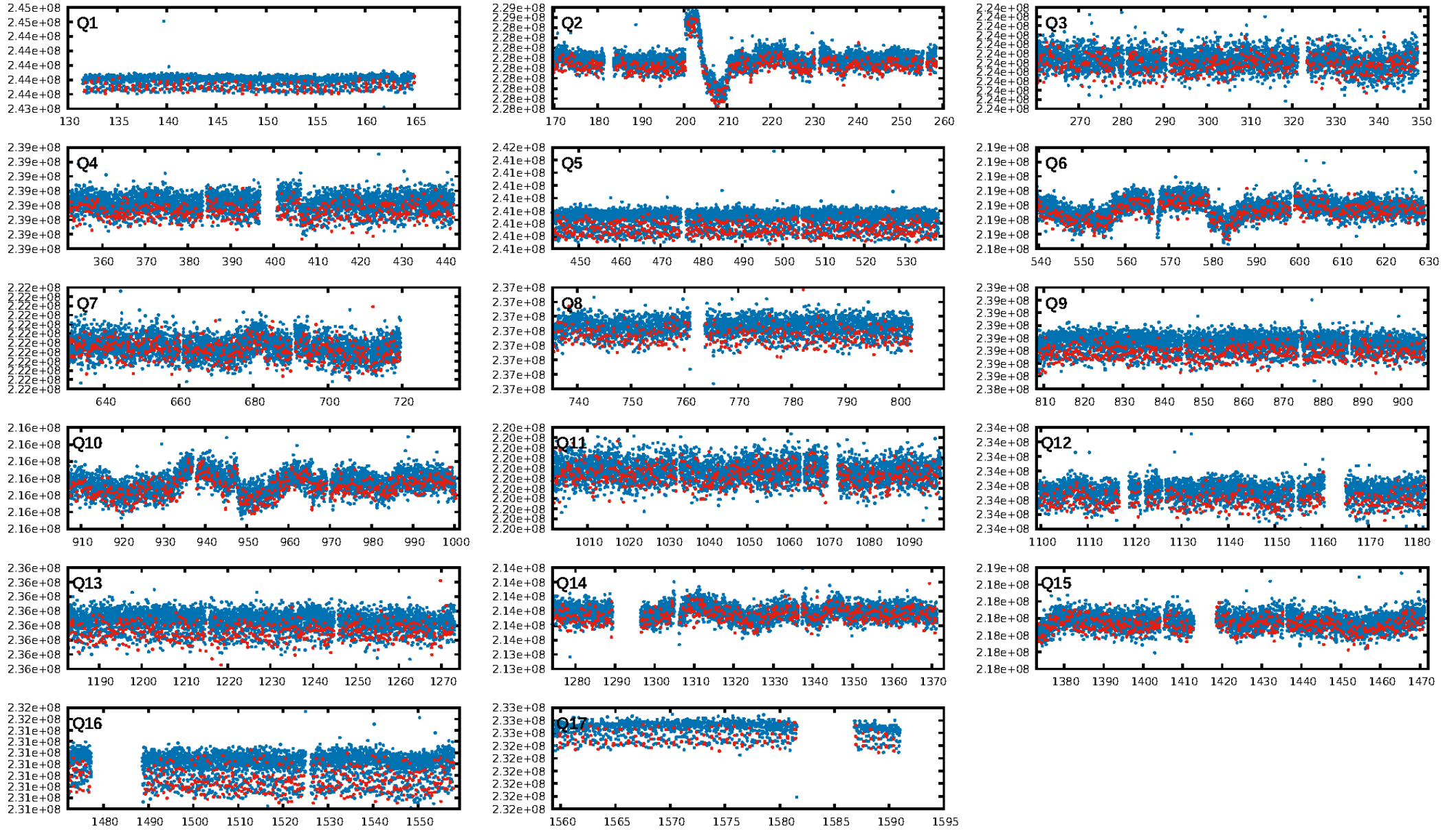
## DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]  
LongPeriod-sig: 100.0% [413.86σ]  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [1820/1826]  
GhostDiagnostic-chr: -0.003912  
Centroid-sig: N/A  
Centroid-so: N/A  
OotOffset-rm: 7.519 arcsec [94.76σ]  
KicOffset-rm: 7.648 arcsec [101.45σ]  
OotOffset-st: 4/0/4/5 [13]  
KicOffset-st: 4/0/4/5 [13]  
DiffImageQuality-fgm: 1.00 [13/13]  
DiffImageOverlap-fno: 0.00 [0/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 19:06:04 Z

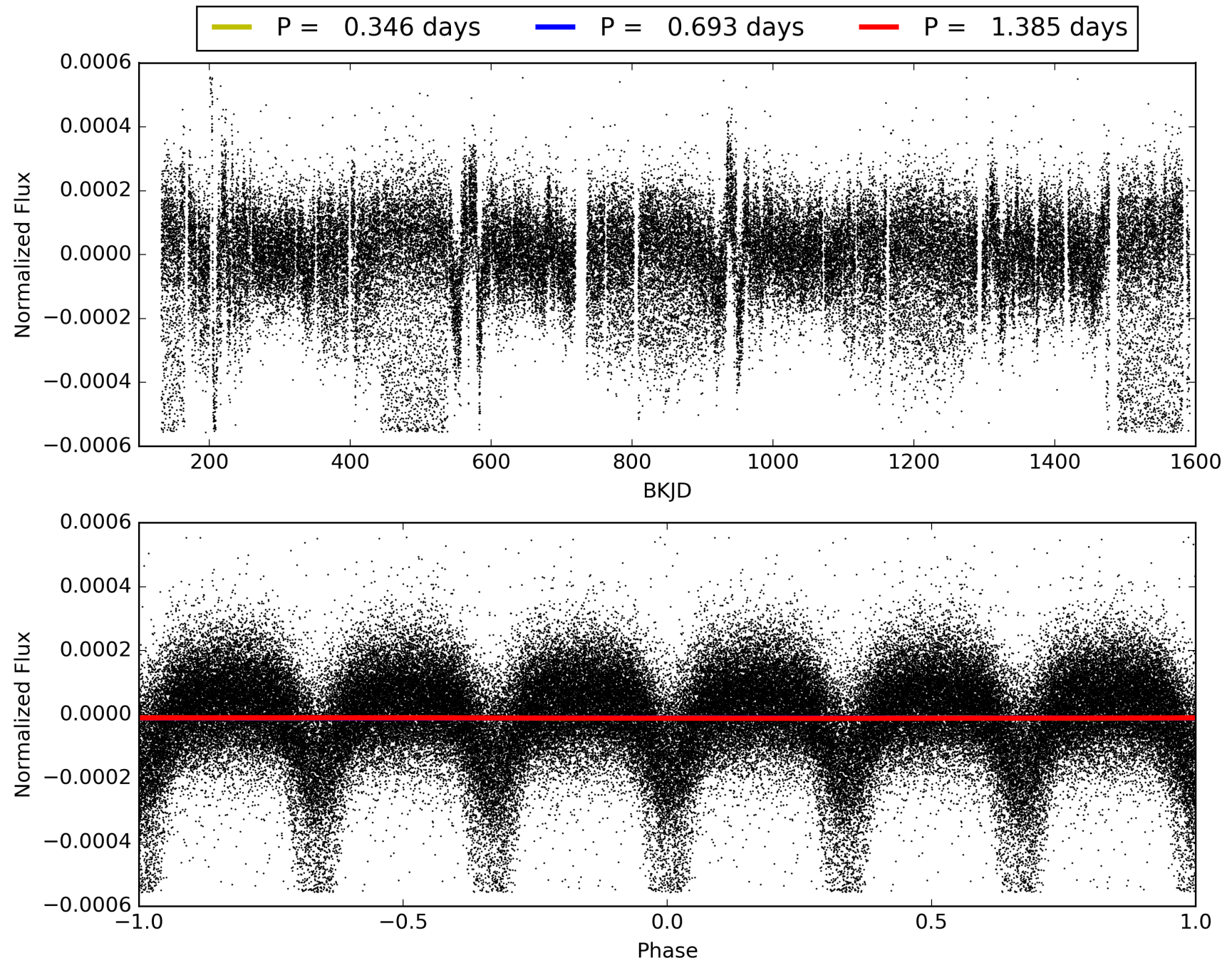
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 005120793-03, PDC Light Curves





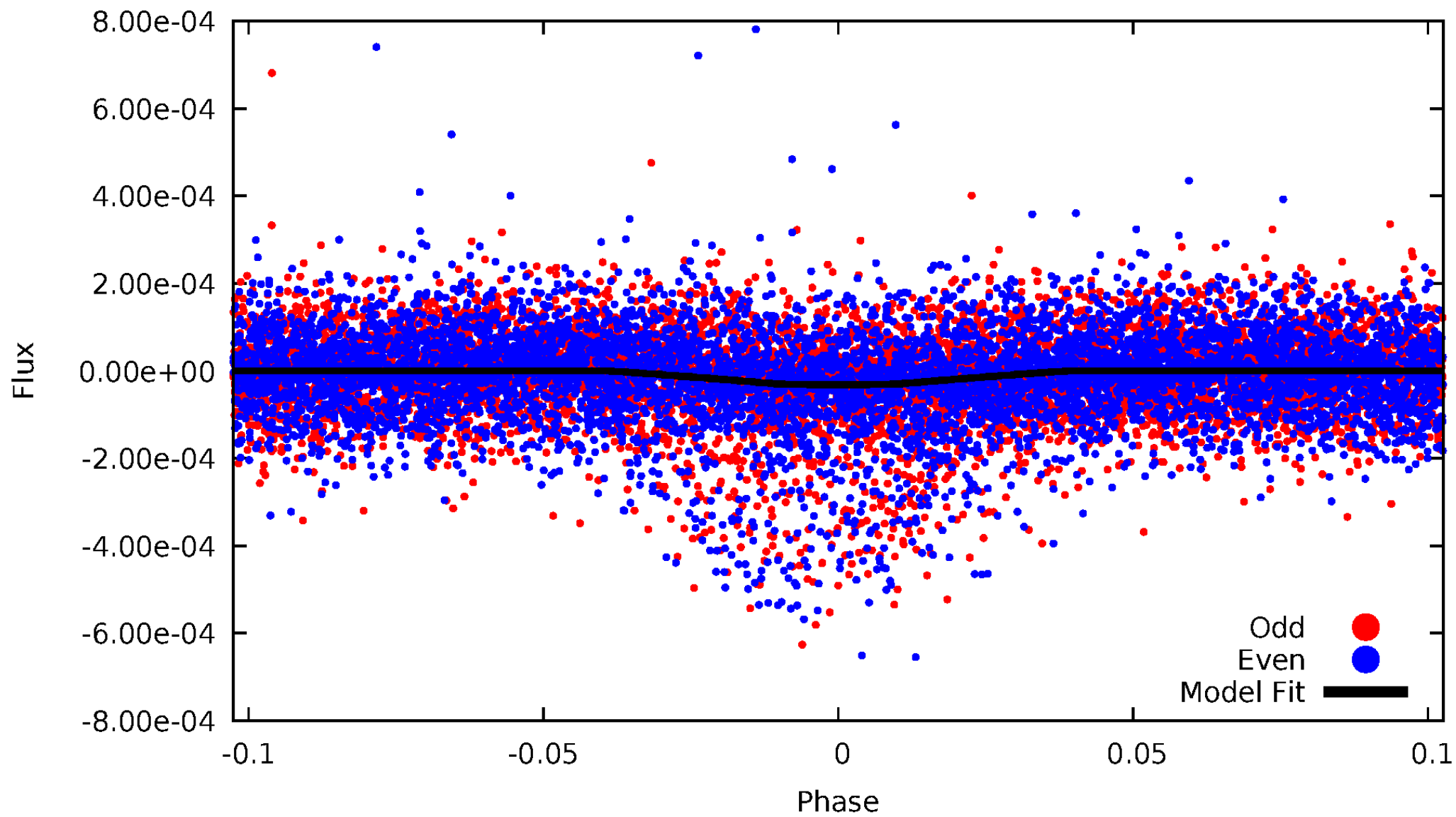
TCE 005120793-03





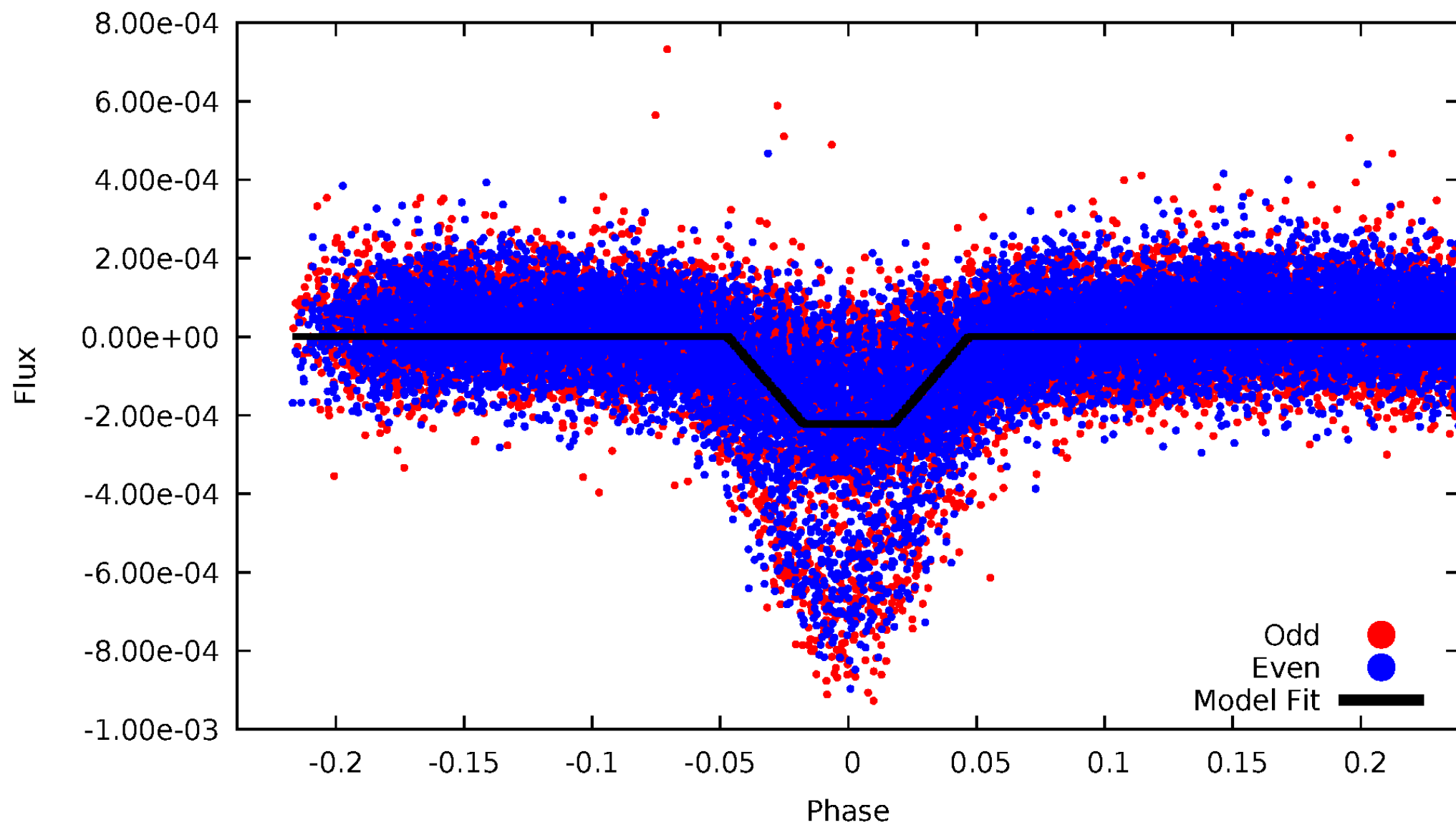
DV Odd/Even

TCE 005120793-03



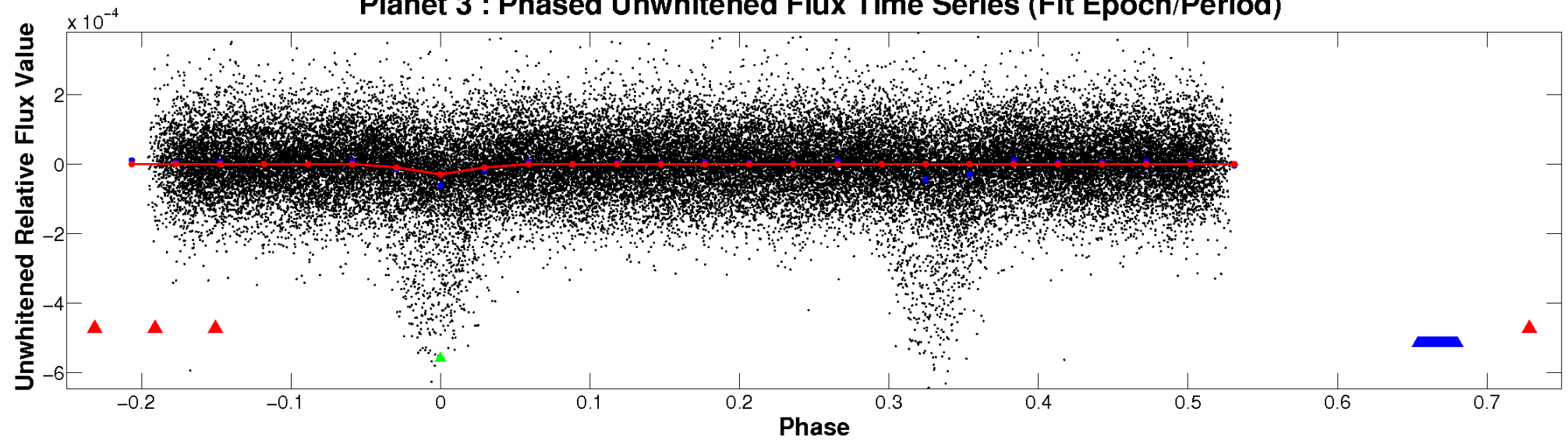
# ALT Odd/Even

TCE 005120793-03

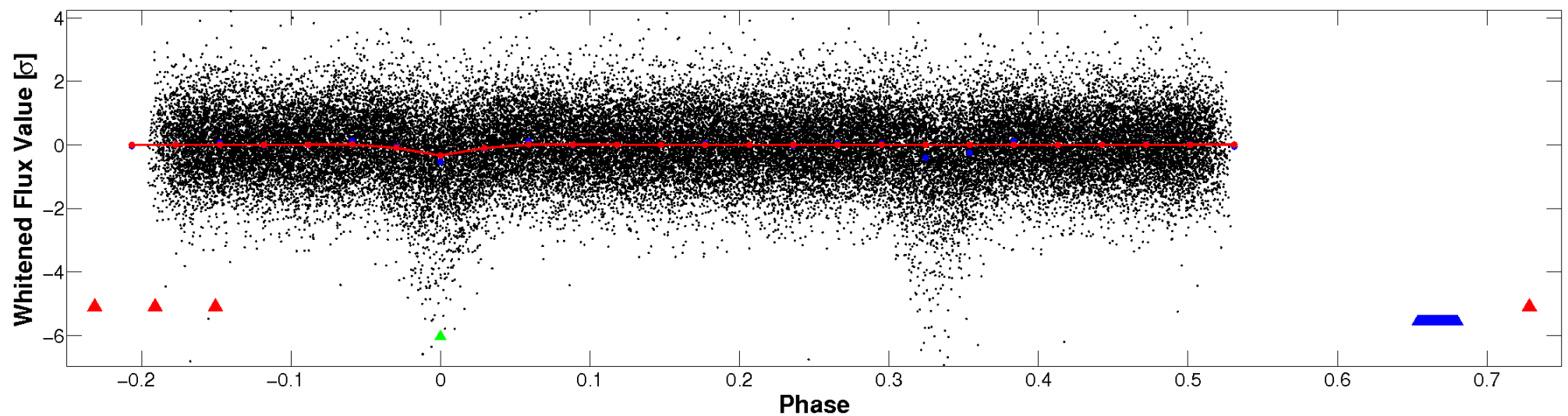


# Non-Whitened Vs. Whitened Light Curve

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

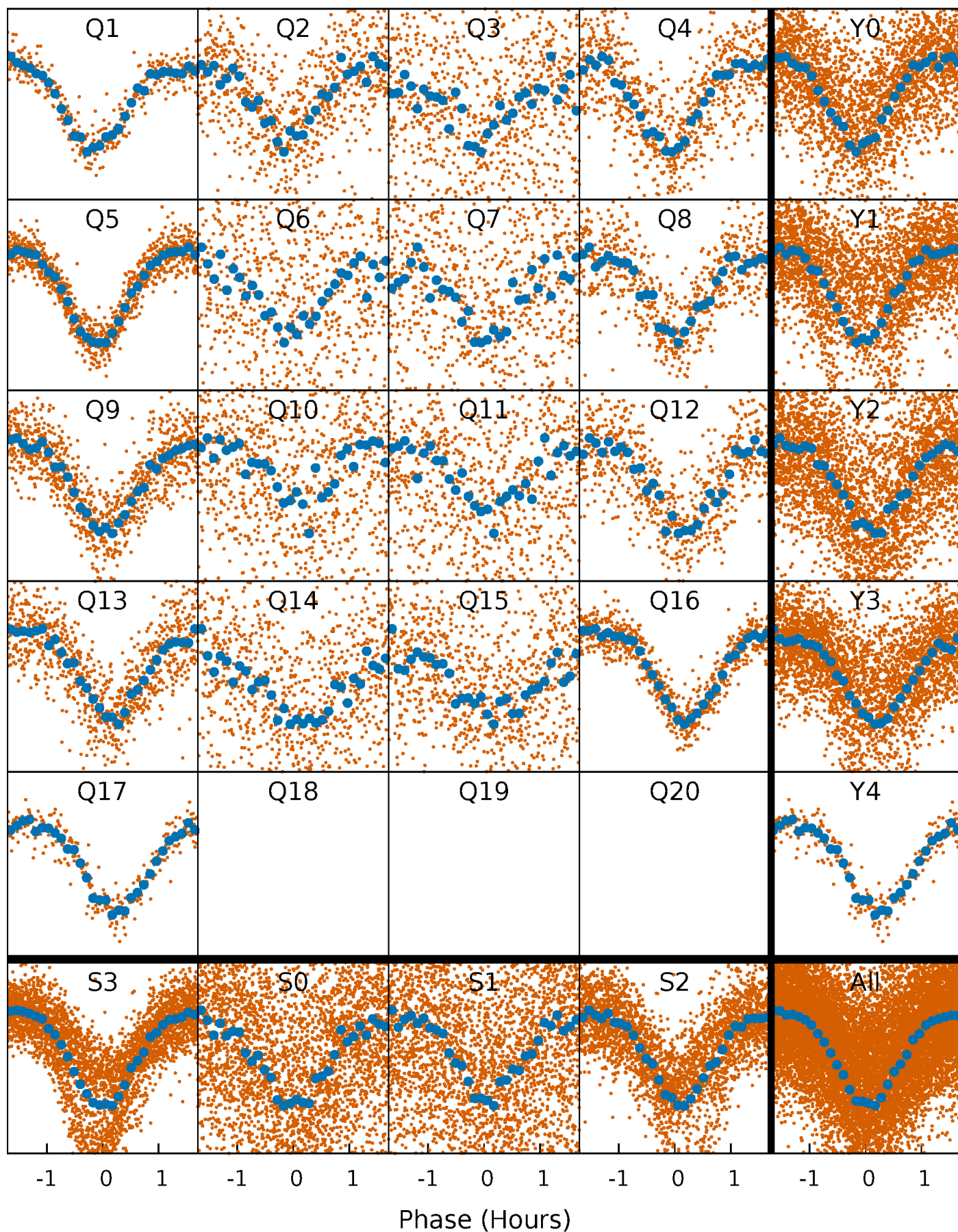


## Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



# PDC Quarter-Phased Transit Curves

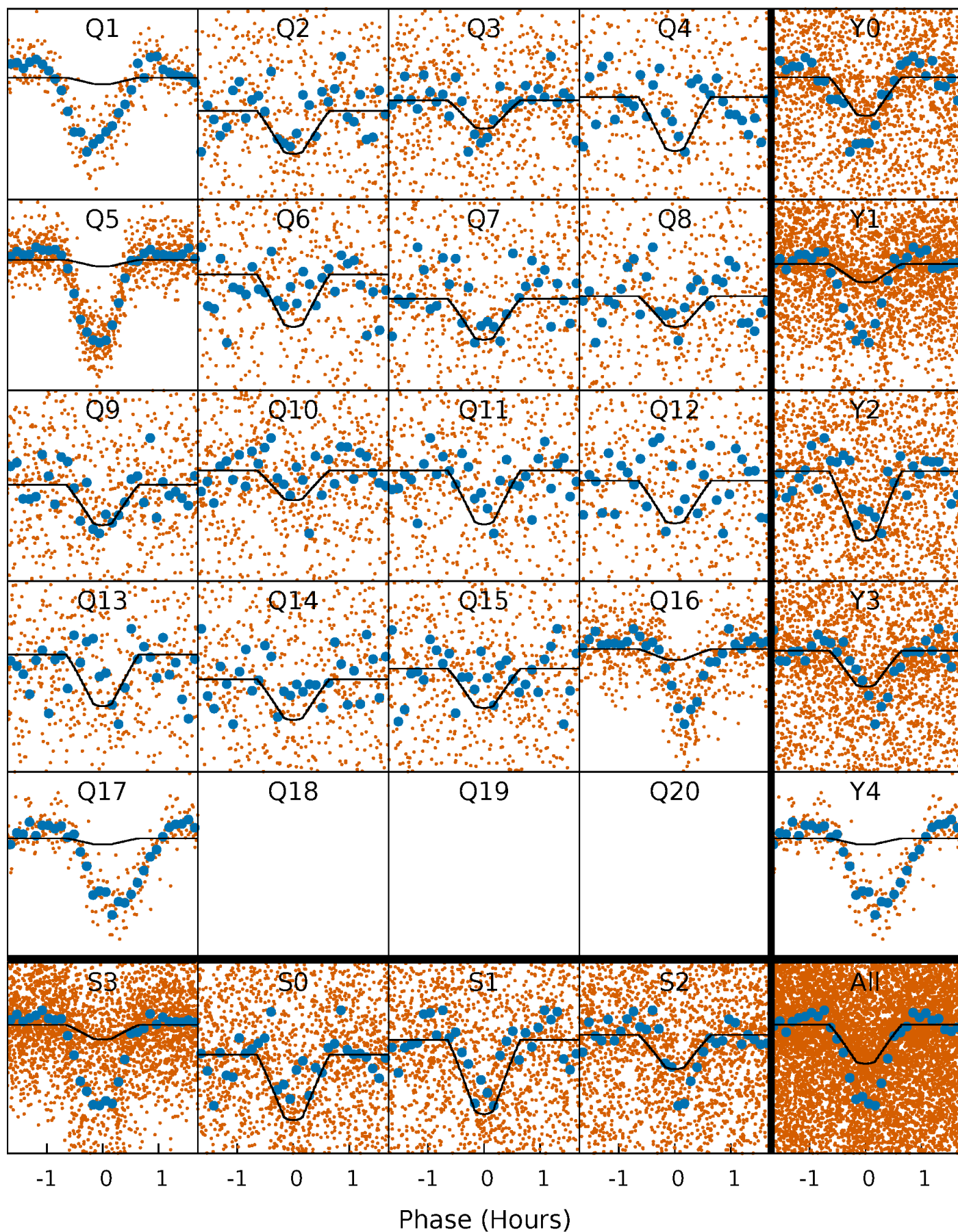
TCE 005120793-03 P= 0.692649 Days  $T_0=131.692684$  (BKJD)





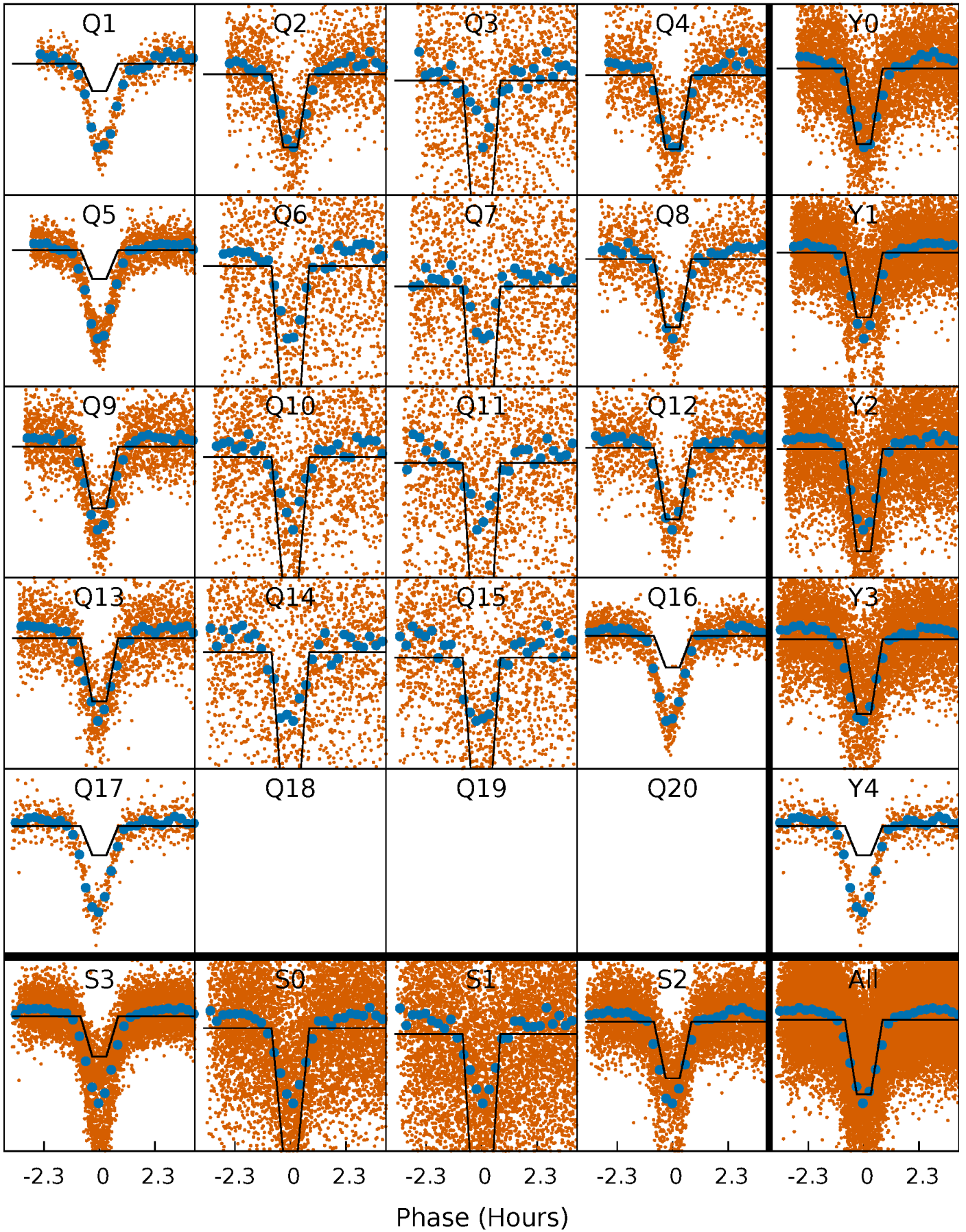
# DV Quarter-Phased Transit Curves

TCE 005120793-03 P= 0.692649 Days  $T_0=131.692684$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

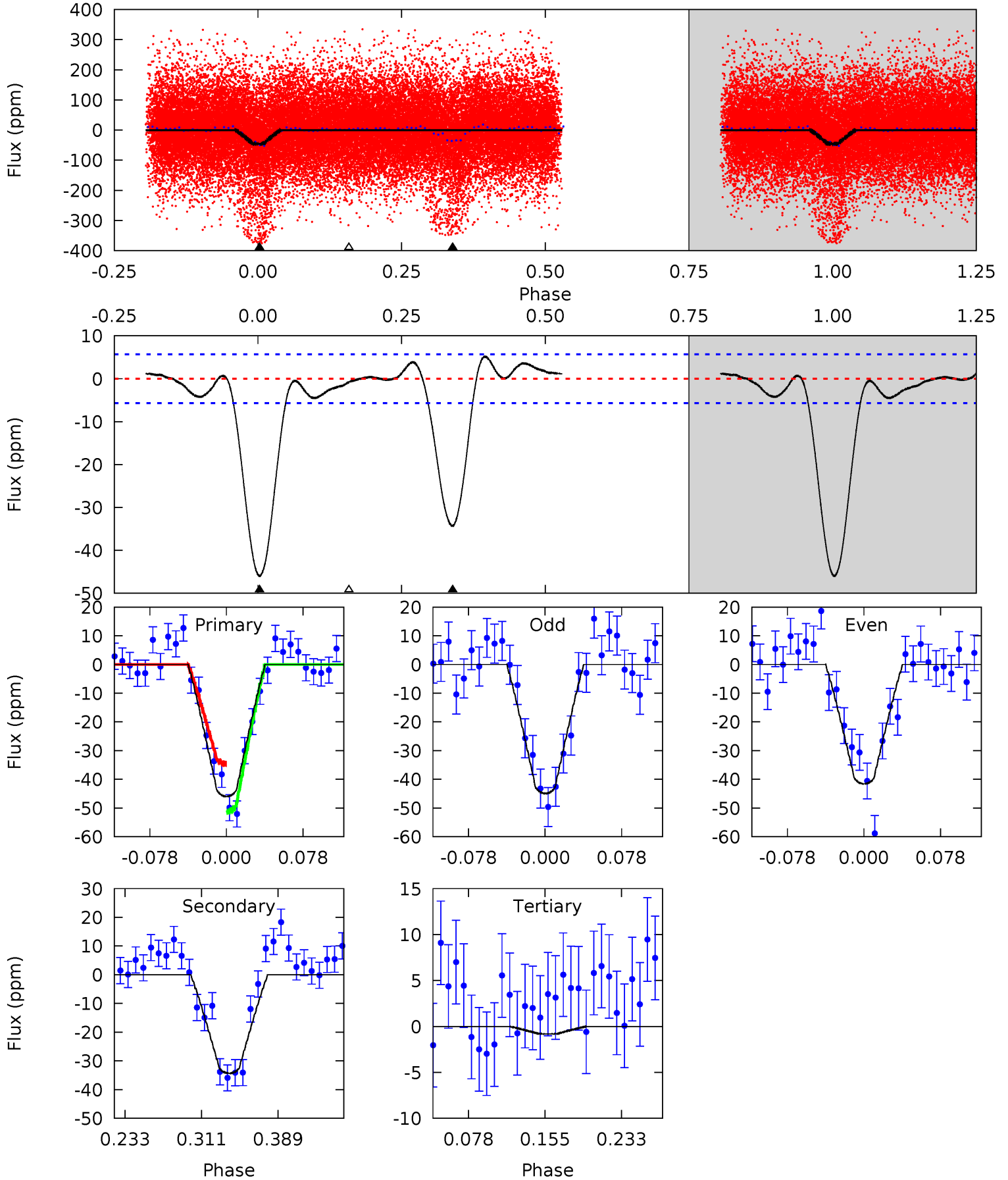
TCE 005120793-03 P= 0.692661 Days  $T_0=131.682251$  (BKJD)



# DV Model-Shift Uniqueness Test

005120793-03, P = 0.692649 Days, E = 131.000035 Days

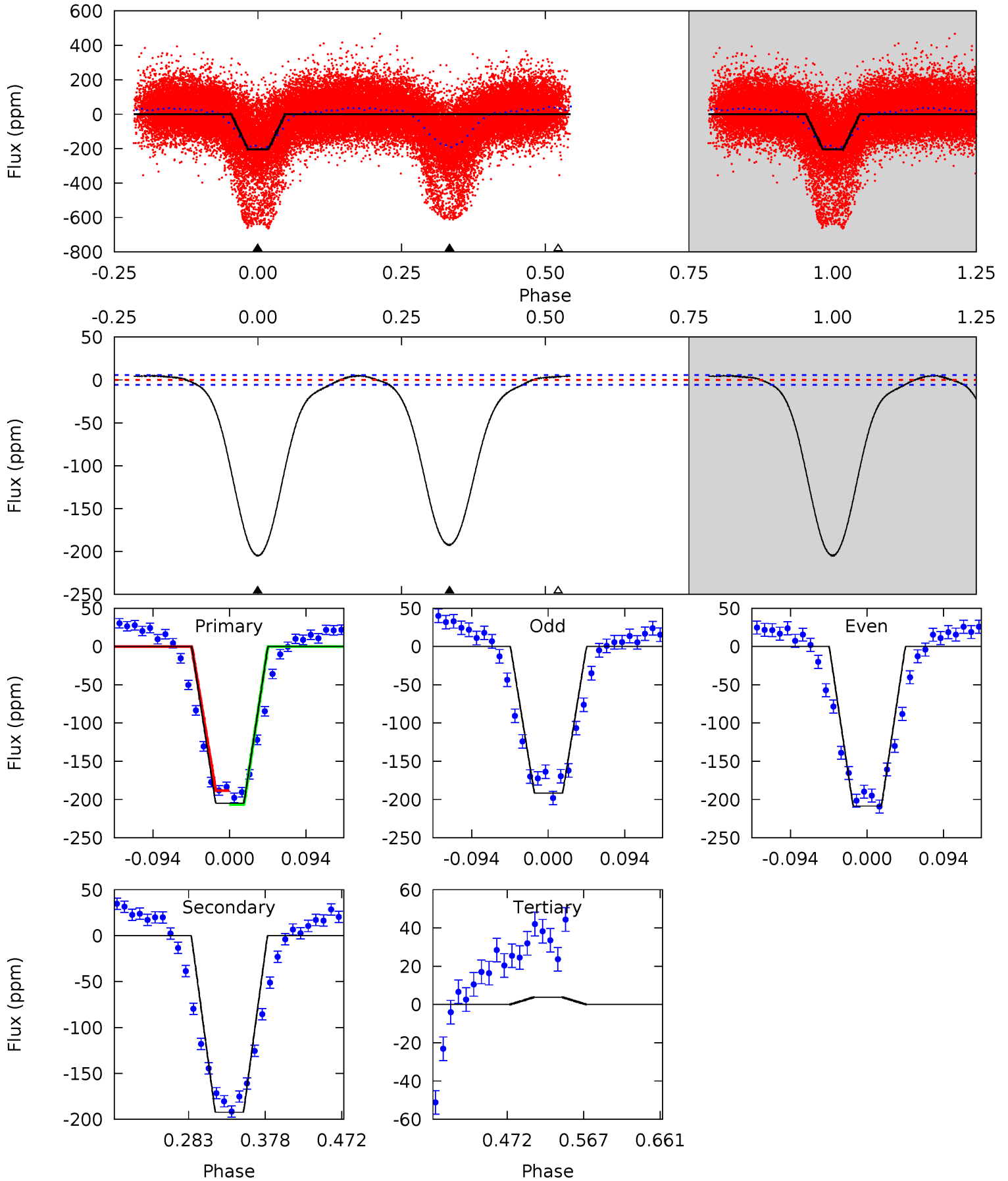
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
37.3	27.8	0.67	0	4.62	1.76	1.77	36.6	37.3	27.2	27.8	1.36	1.89	0.10	6.62



# Alt Model-Shift Uniqueness Test

005120793-03, P = 0.692661 Days, E = 130.989590 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
165.4	155.4	-3.08	0	4.58	1.67	4.89	168.5	165.4	158.5	155.4	6.78	1.29	0.02	7.38





### Stellar Parameters For KIC 005120793

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$6263^{+88}_{-75}$	$4.224^{+0.149}_{-0.122}$	$-0.220^{+0.200}_{-0.150}$	$1.315^{+0.225}_{-0.225}$	$1.054^{+0.107}_{-0.062}$	$0.653^{+0.446}_{-0.227}$
	+1%/-1%	+4%/-3%	+91%/-68%	+17%/-17%	+10%/-6%	+68%/-35%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology  
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

### Secondary Eclipse Parameters for KIC 005120793-03 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$-34 \pm 1$	$0.89^{+0.18}_{-0.17}$	$3538^{+176}_{-182}$	$6004^{+564}_{-449}$	$5.829^{+3.108}_{-1.747}$
Alt.	$-192 \pm 1$	$2.14^{+0.27}_{-0.26}$	$3547^{+172}_{-180}$	$5974^{+218}_{-210}$	$5.698^{+1.611}_{-1.099}$

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

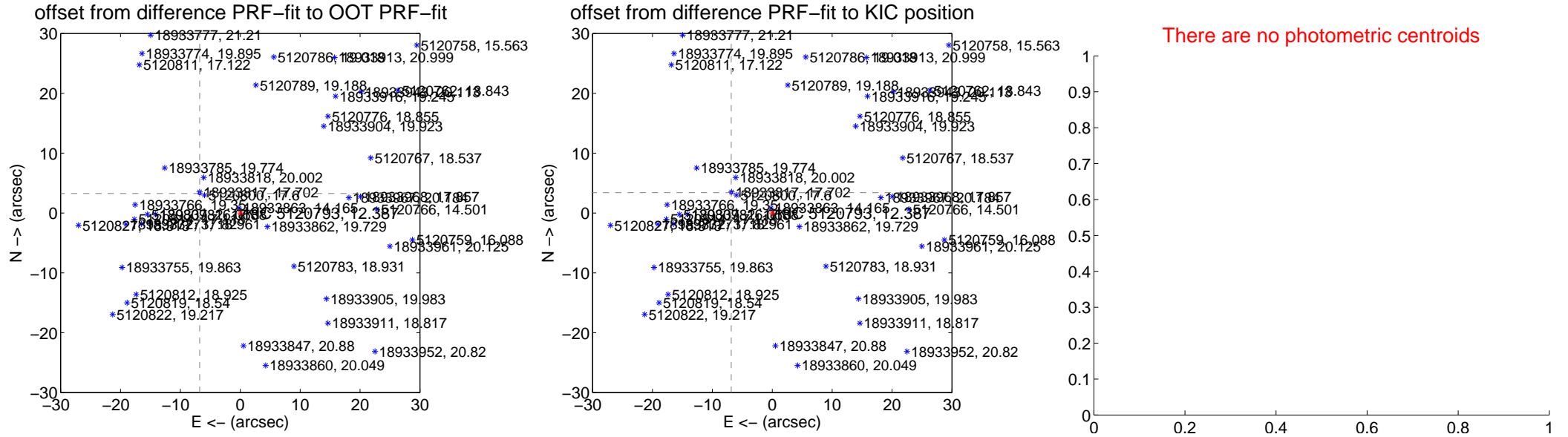
# DV Centroid Data

Supplemental centroid analysis for 005120793-03. Kepler magnitude: 12.39. Transit SNR 16.20

There are 13 quarters with good PRF difference image offsets

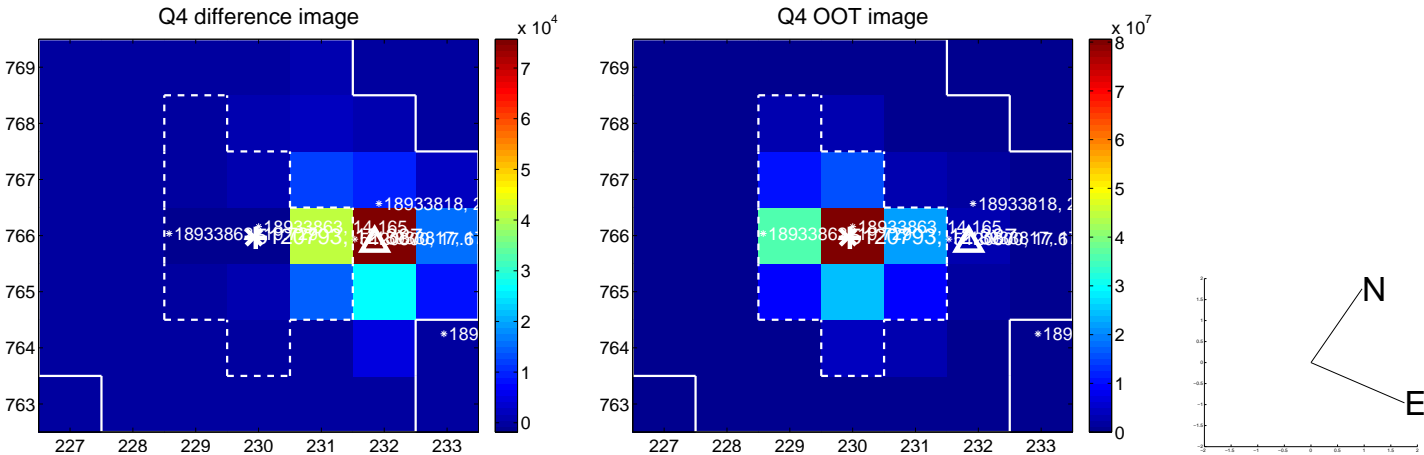
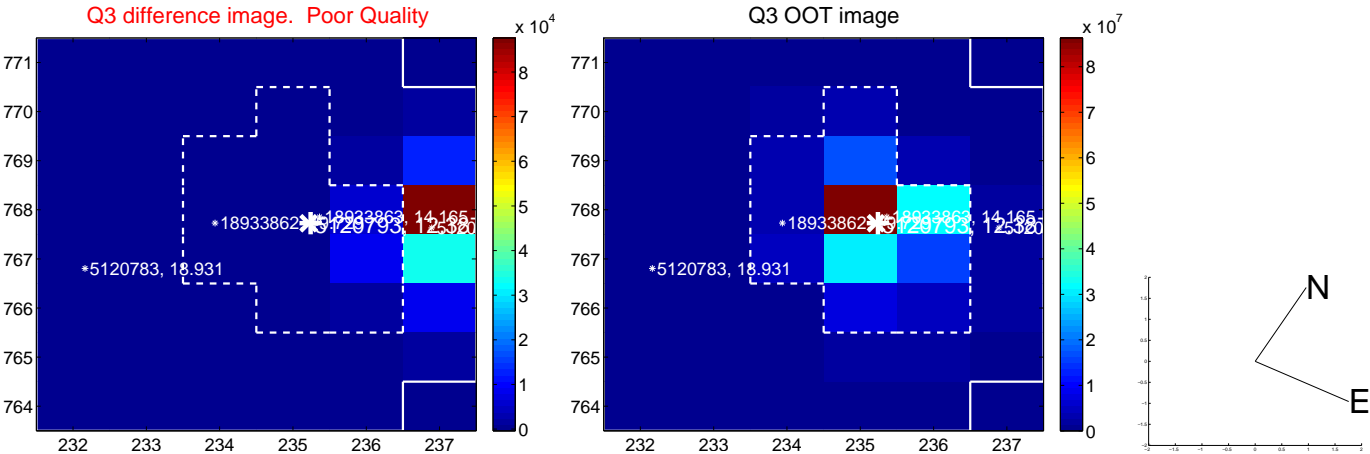
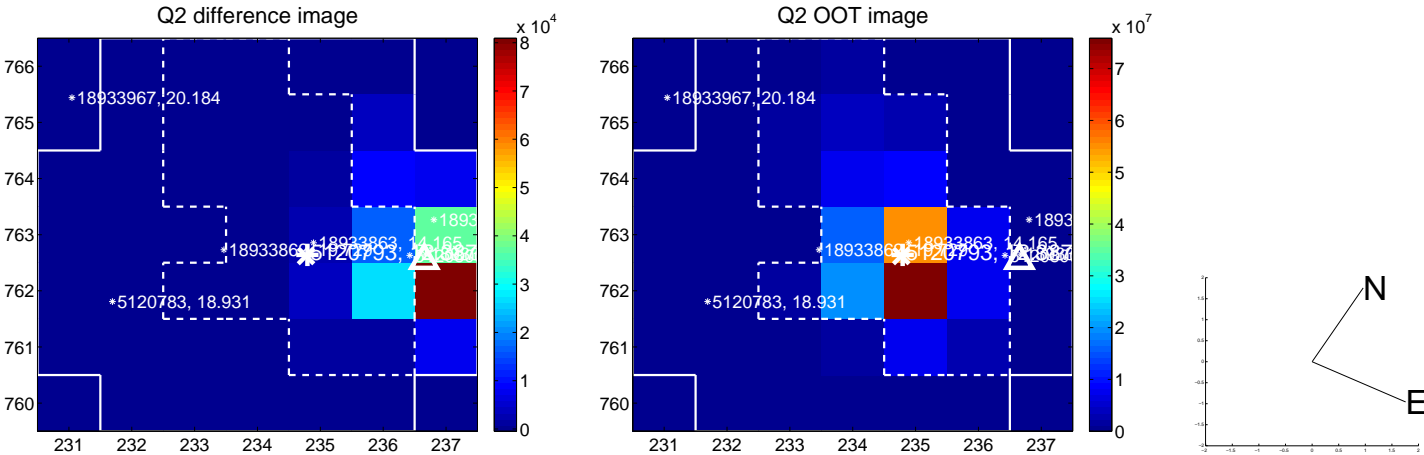
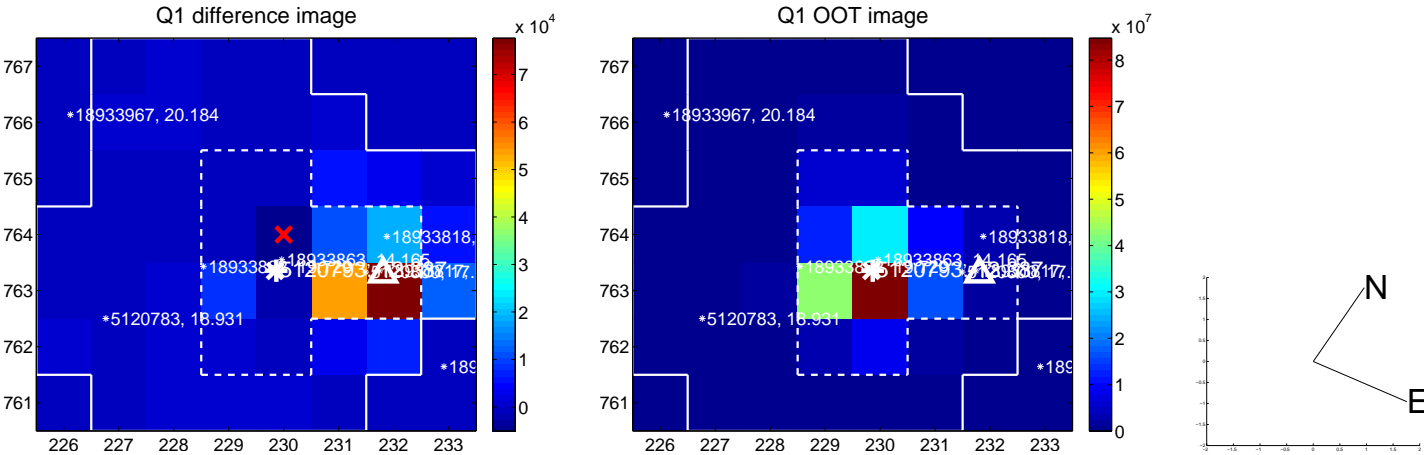
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	7.519 $\pm$ 0.079	94.76	6.774 $\pm$ 0.074	3.265 $\pm$ 0.076
PRF-fit source offset from KIC position	7.648 $\pm$ 0.075	101.45	6.851 $\pm$ 0.073	3.398 $\pm$ 0.073
photometric centroid source offset	—	—	—	—

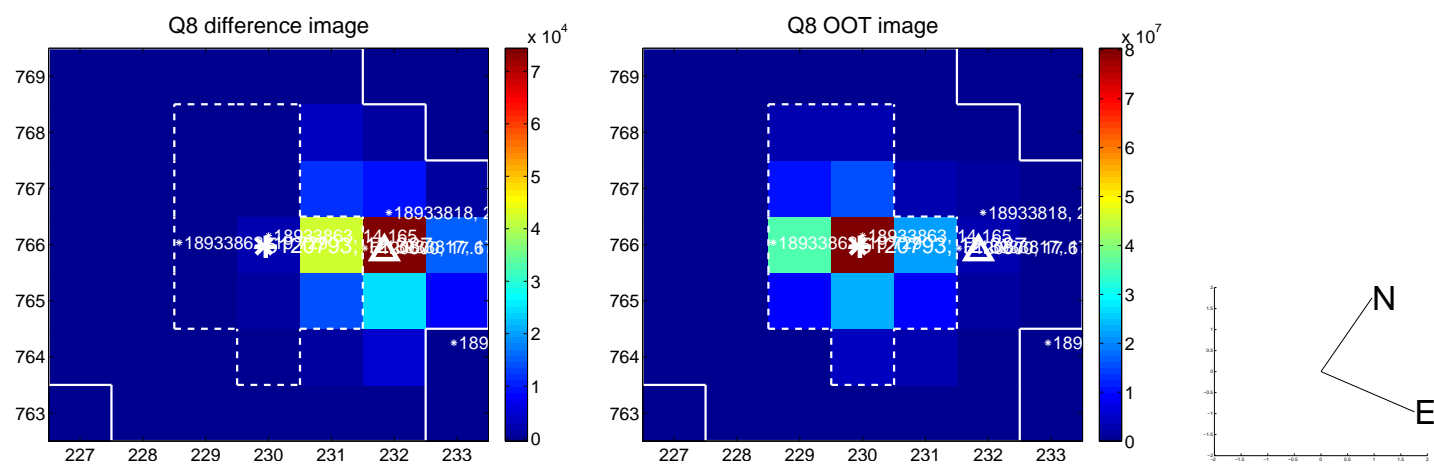
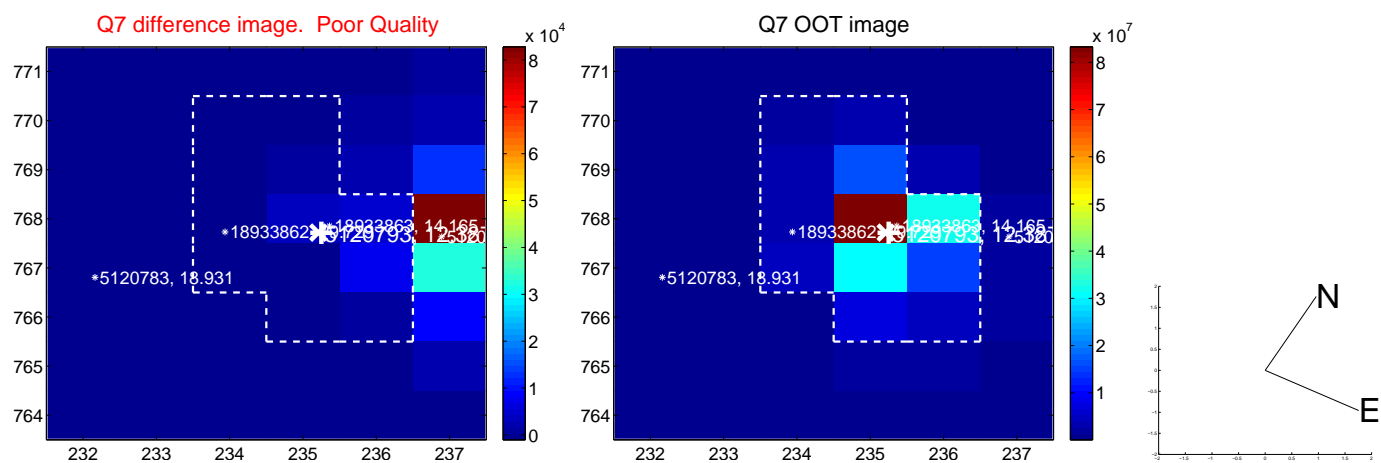
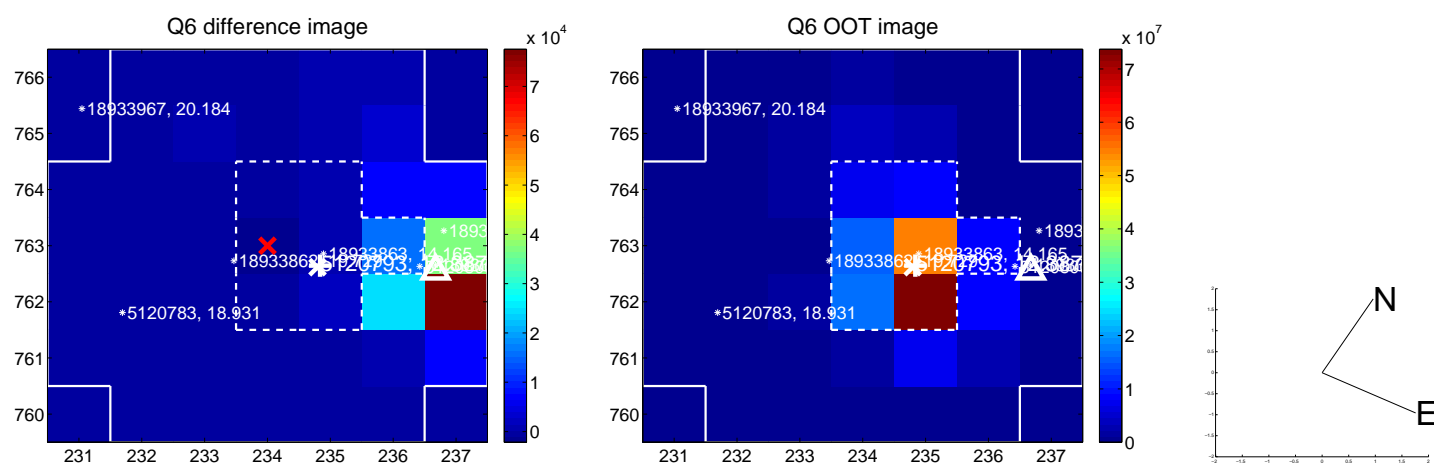
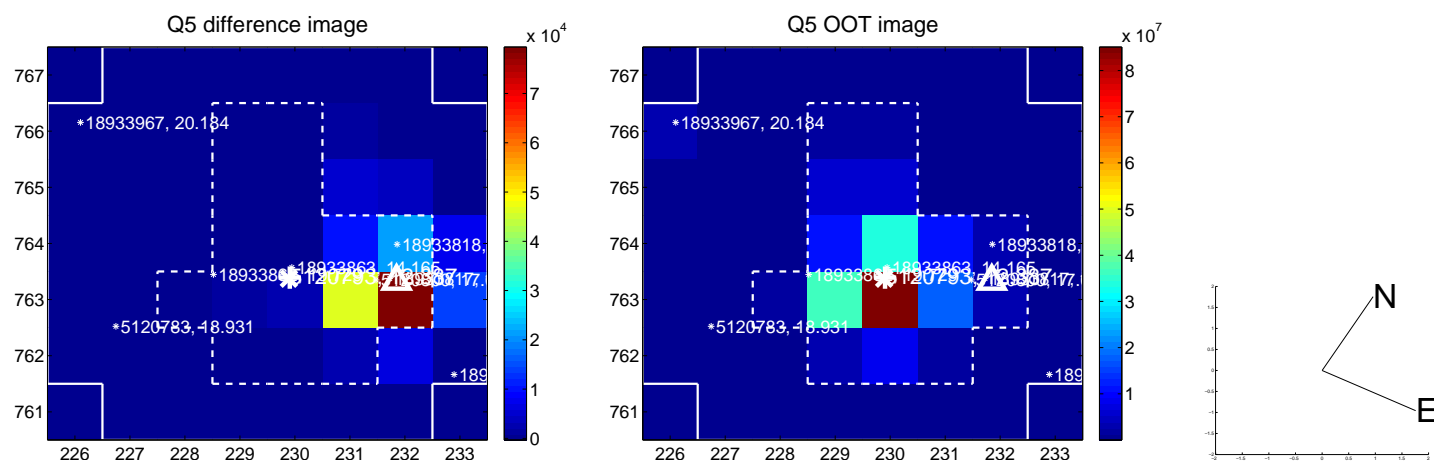


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

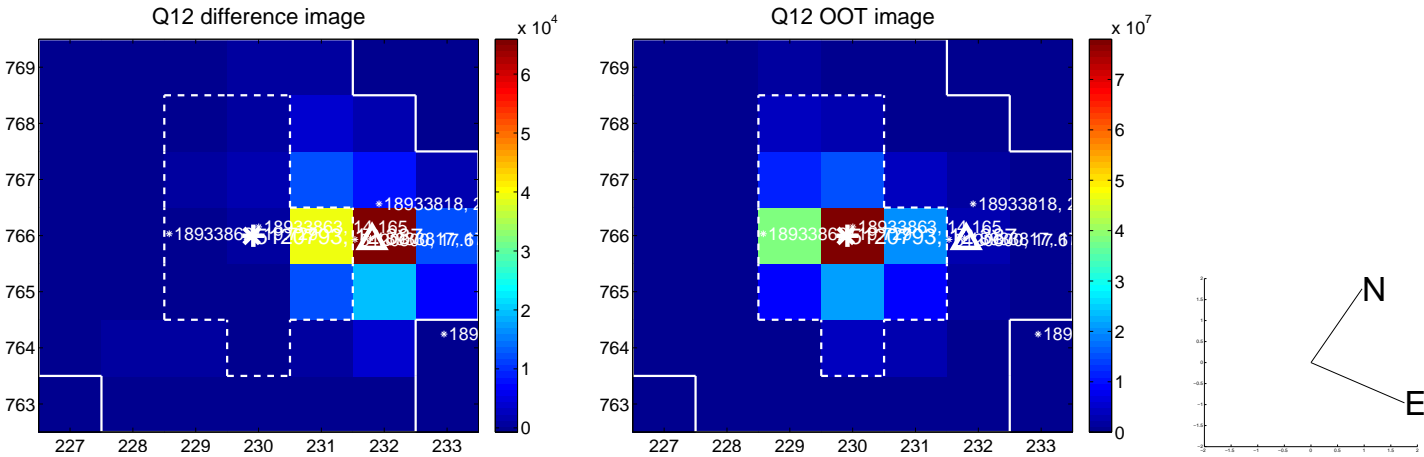
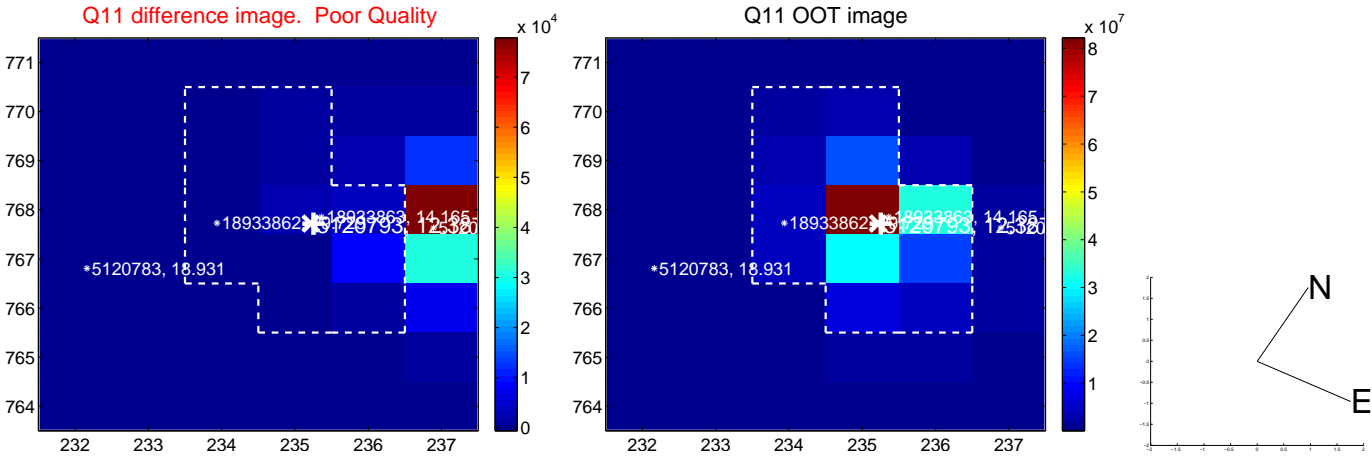
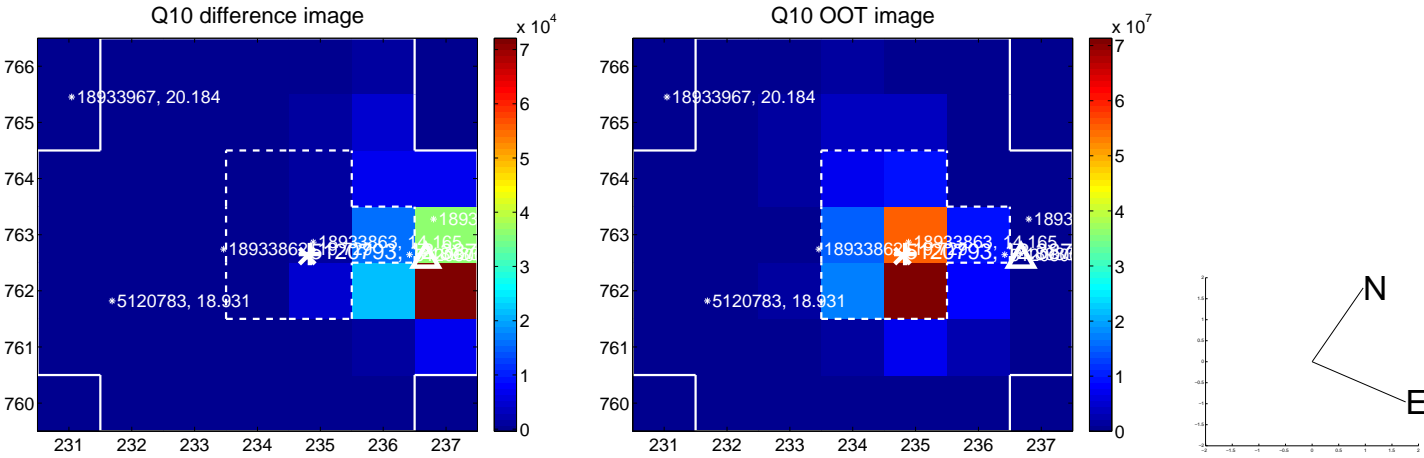
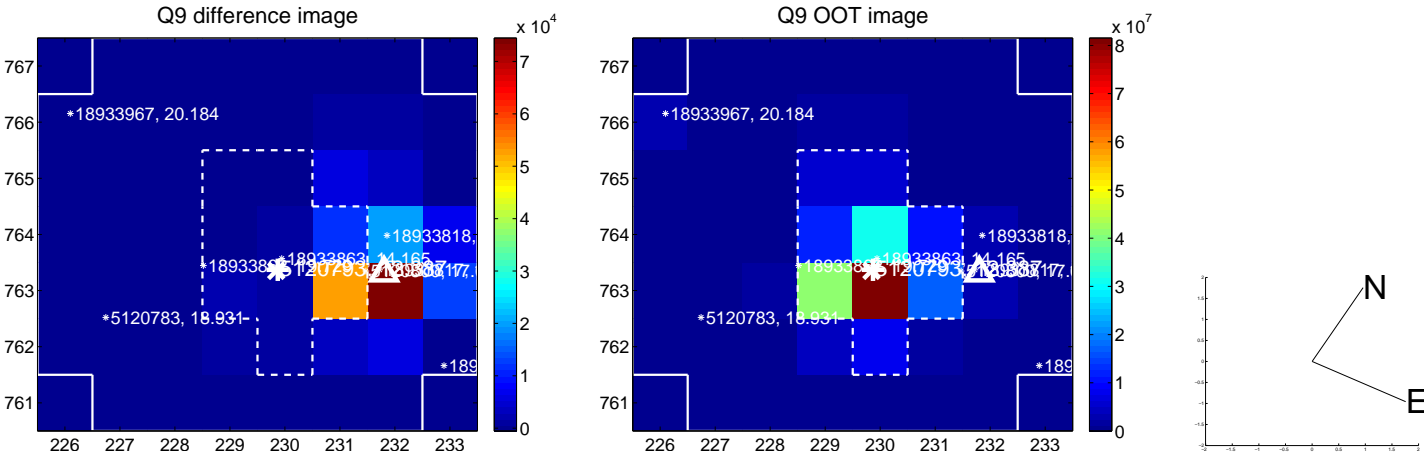
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



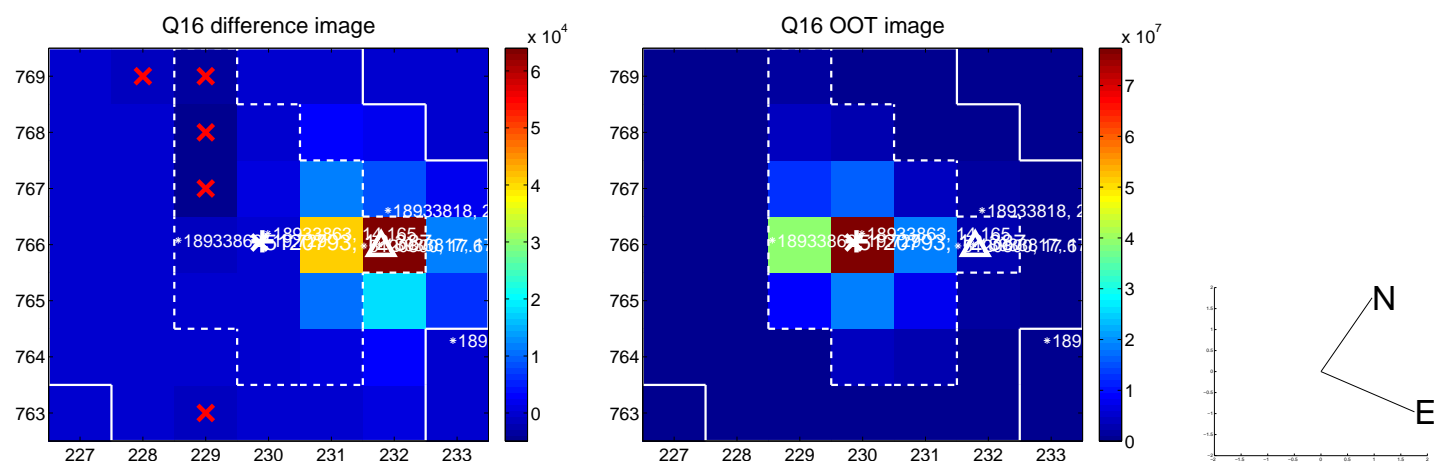
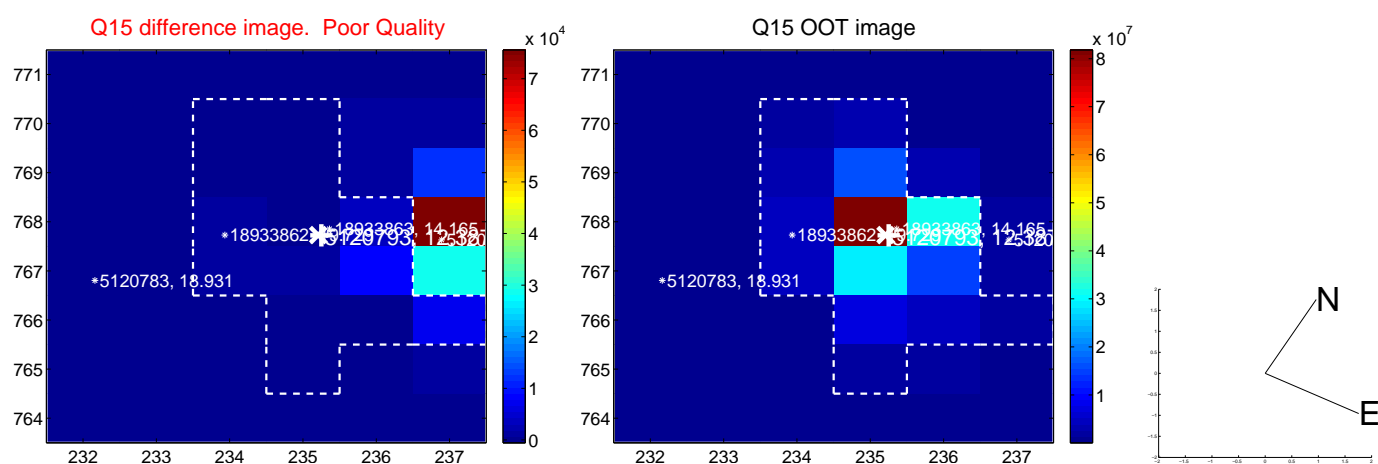
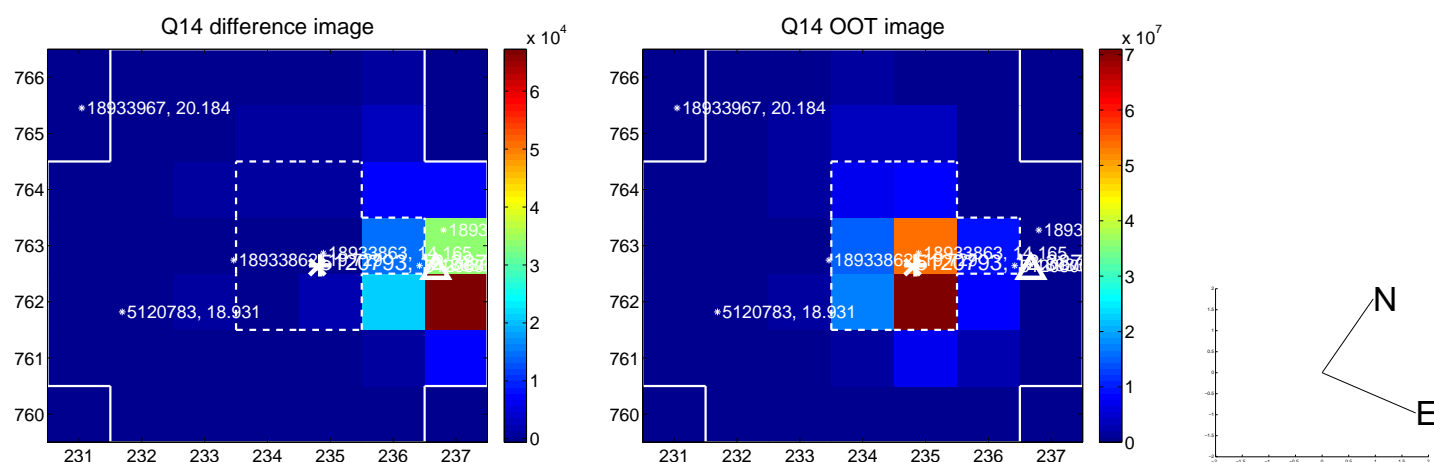
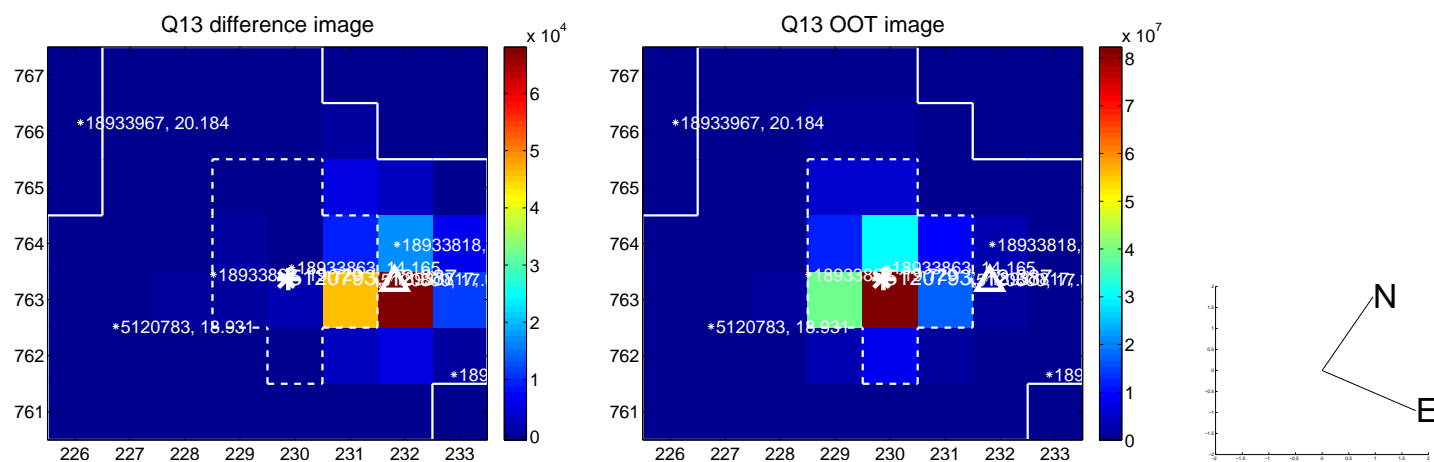
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

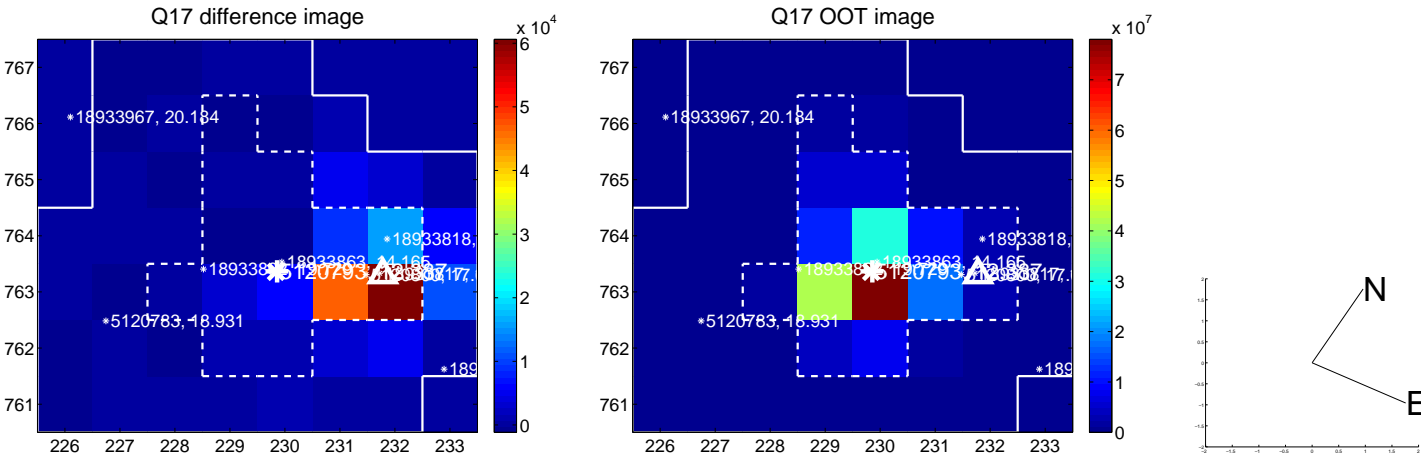


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.





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



folded centroid time series figure for this object.

UKIRT Image

Declination

