

# KIC 006119788

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006119788-01	OBS	No	0.563317	131.615079	351.0	0.734	12.1	16.0	1.49	7176	2.94	25402.57
006119788-02	OBS	No	0.563310	131.958878	370.9	0.906	11.9	18.7	1.49	7176	2.94	25402.97
006119788-03	OBS	No	0.563317	131.913745	671.6	4.976	9.6	20.4	1.49	7176	4.14	25402.60

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006119788-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED
006119788-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_SATURATED
006119788-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED

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

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

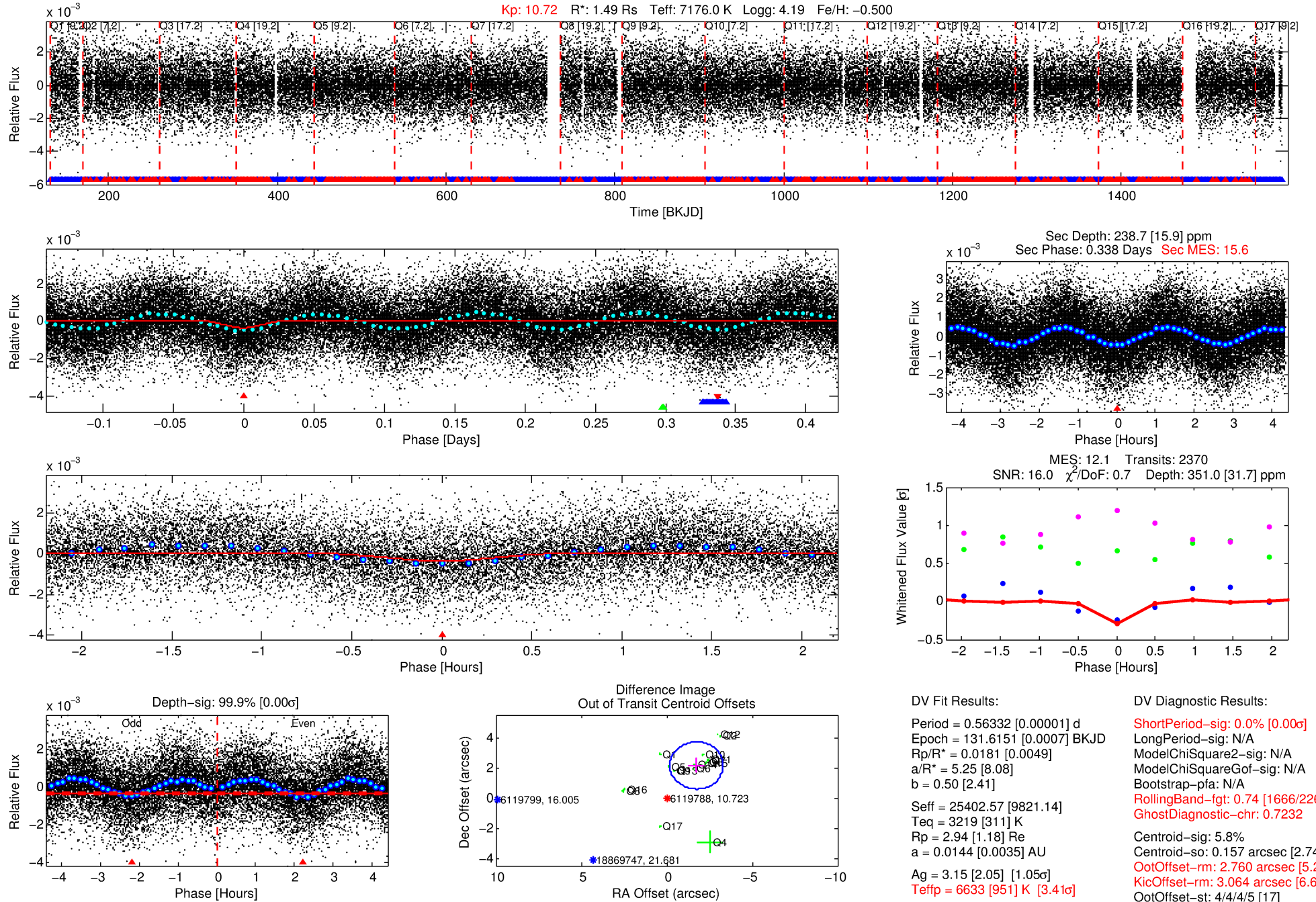
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 006119788-01

No Significant Match Found

# DV One-Page Summary

KIC: 6119788 Candidate: 1 of 3 Period: 0.563 d



## DV Fit Results:

Period = 0.56332 [0.00001] d  
Epoch = 131.6151 [0.0007] BKJD  
Rp/R\* = 0.0181 [0.0049]  
a/R\* = 5.25 [8.08]  
b = 0.50 [2.41]  
Seff = 25402.57 [9821.14]  
Teq = 3219 [311] K  
Rp = 2.94 [1.18] Re  
a = 0.0144 [0.0035] AU  
Ag = 3.15 [2.05] [1.05 $\sigma$ ]  
Teffp = 6633 [951] K [3.41 $\sigma$ ]

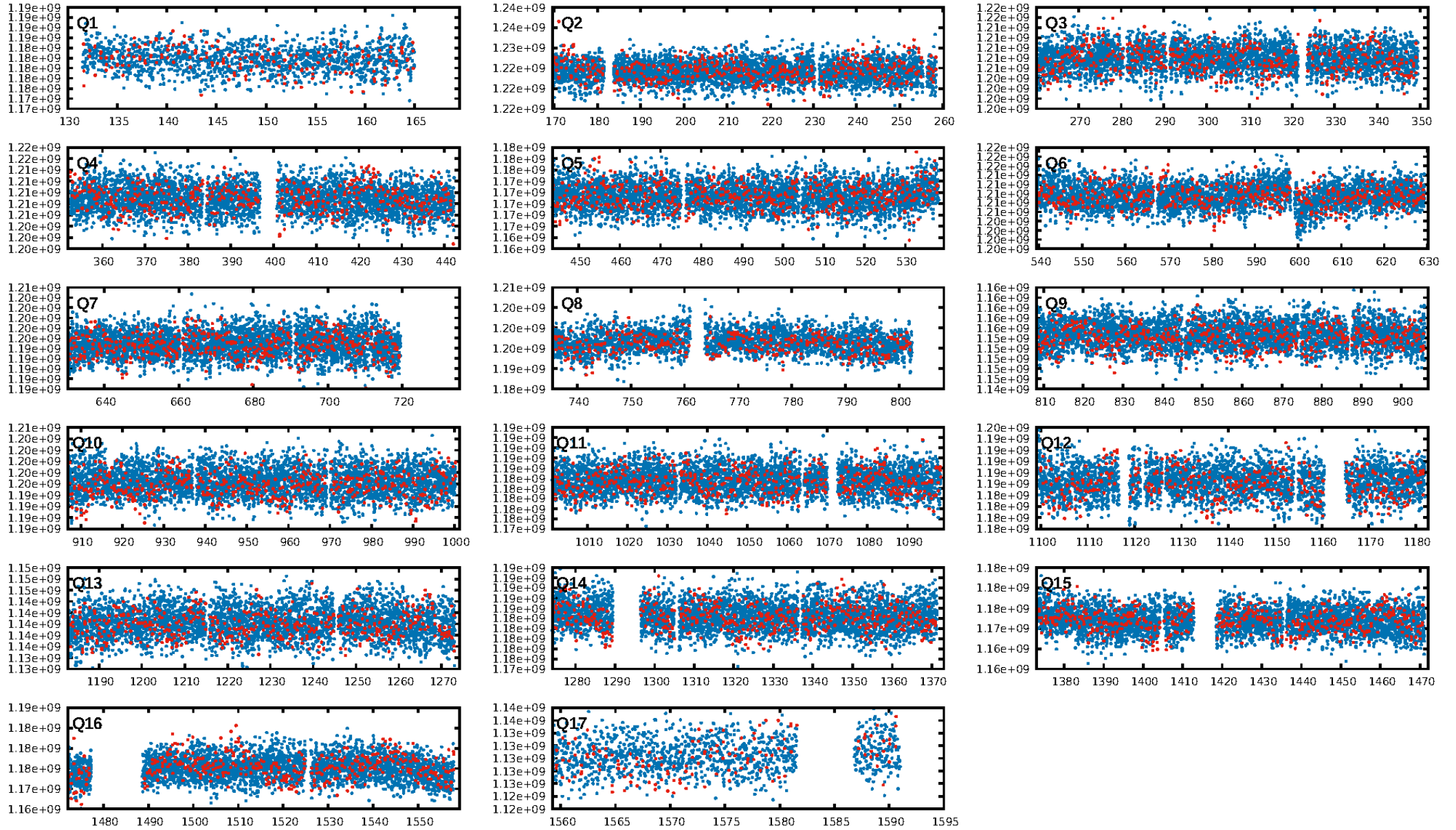
## DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 $\sigma$ ]  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 0.74 [1666/2263]  
GhostDiagnostic-chr: 0.7232  
Centroid-sig: 5.8%  
Centroid-so: 0.157 arcsec [2.74 $\sigma$ ]  
OotOffset-rm: 2.760 arcsec [5.29 $\sigma$ ]  
KicOffset-rm: 3.064 arcsec [6.64 $\sigma$ ]  
OotOffset-st: 4/4/4/5 [17]  
KicOffset-st: 4/4/4/5 [17]  
DiffImageQuality-fgm: 0.00 [0/17]  
DiffImageOverlap-fno: 0.00 [0/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 01:23:20 Z

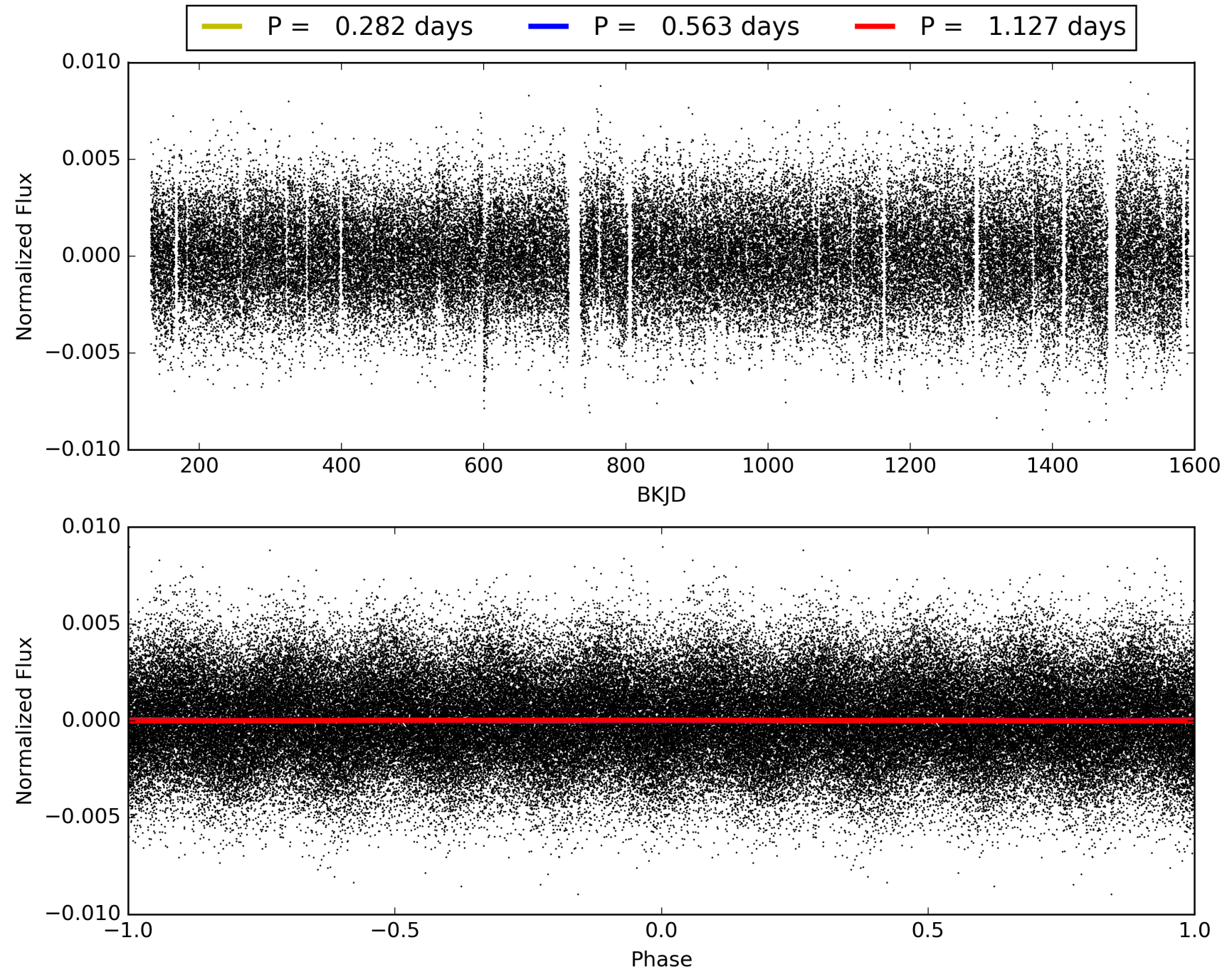
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 006119788-01, PDC Light Curves





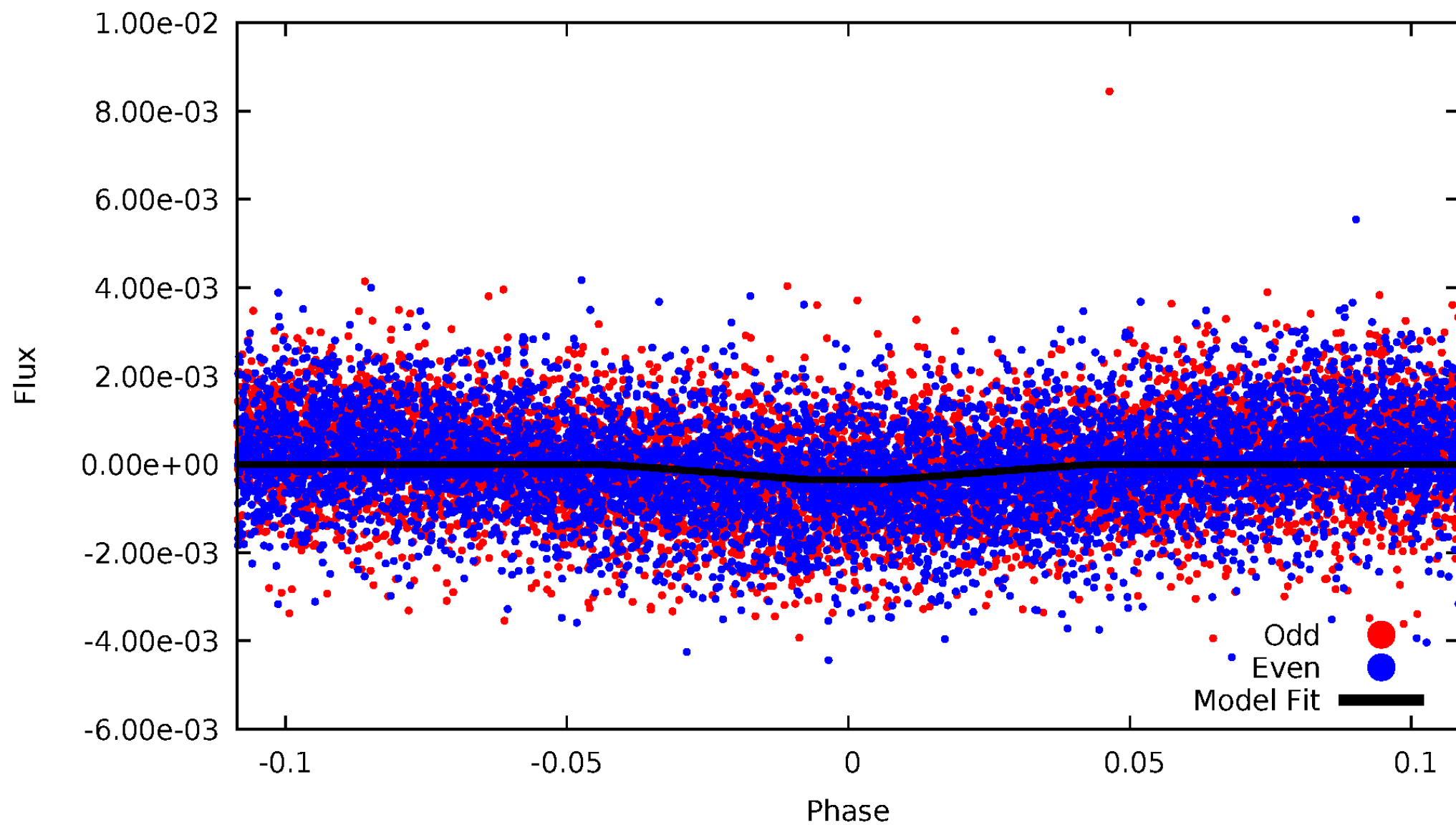
# TCE 006119788-01





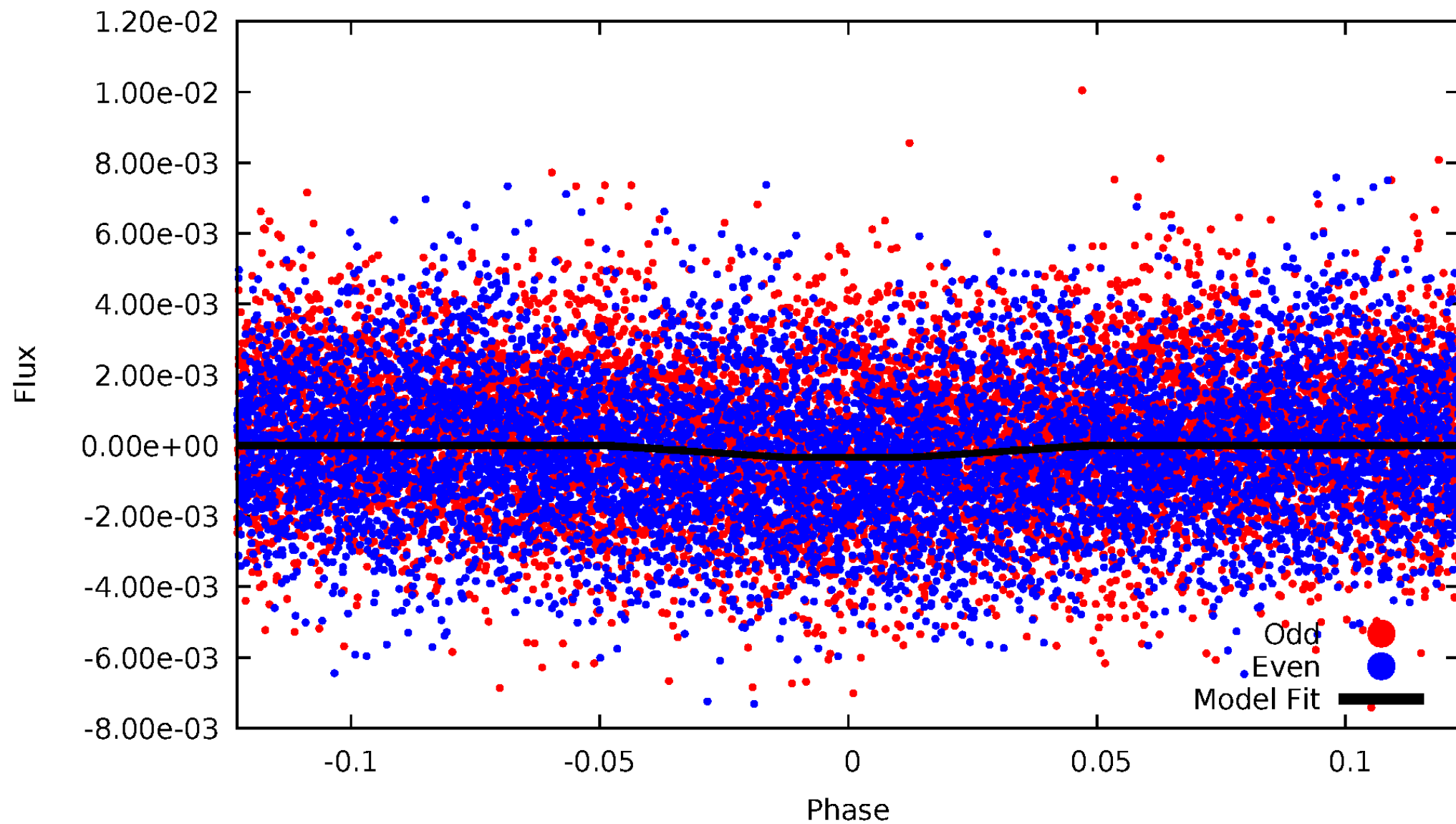
# DV Odd/Even

TCE 006119788-01

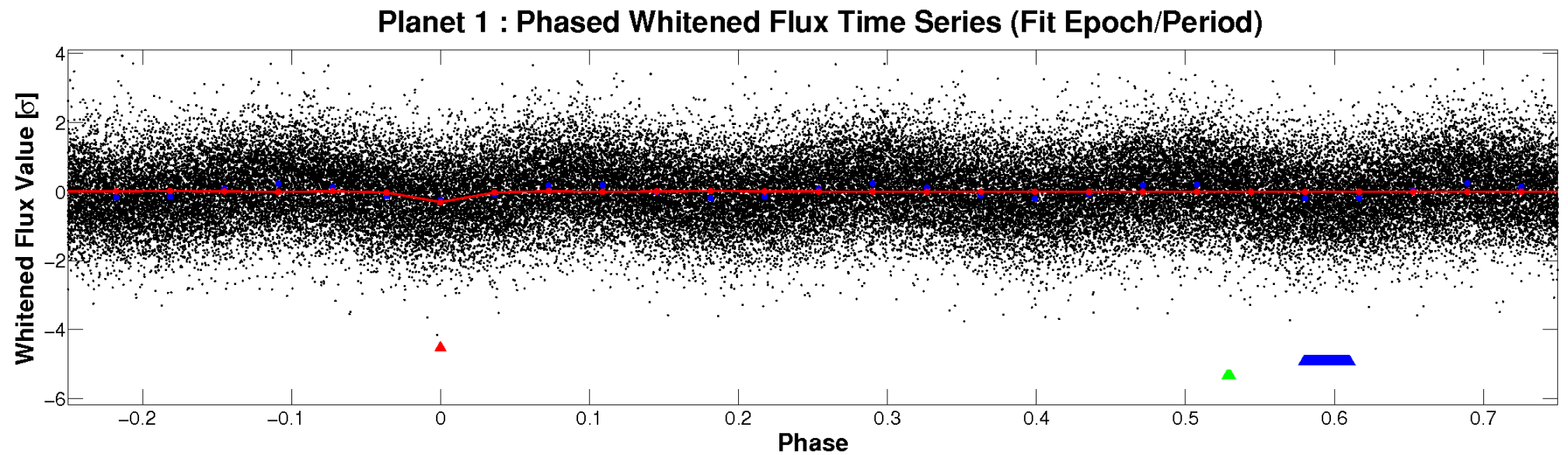
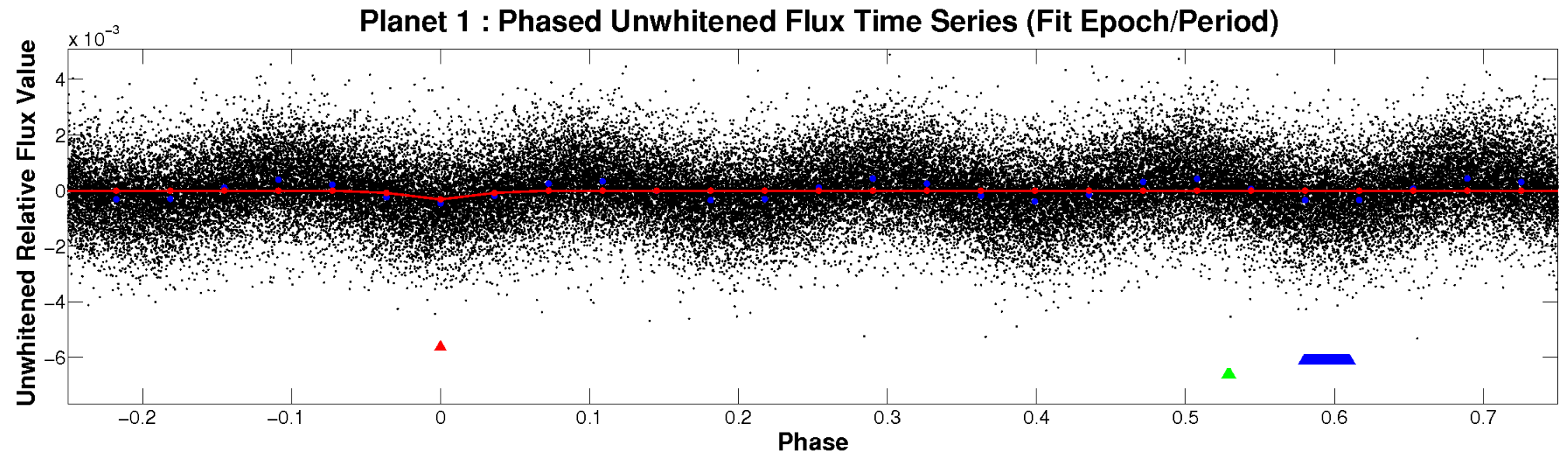


# ALT Odd/Even

TCE 006119788-01



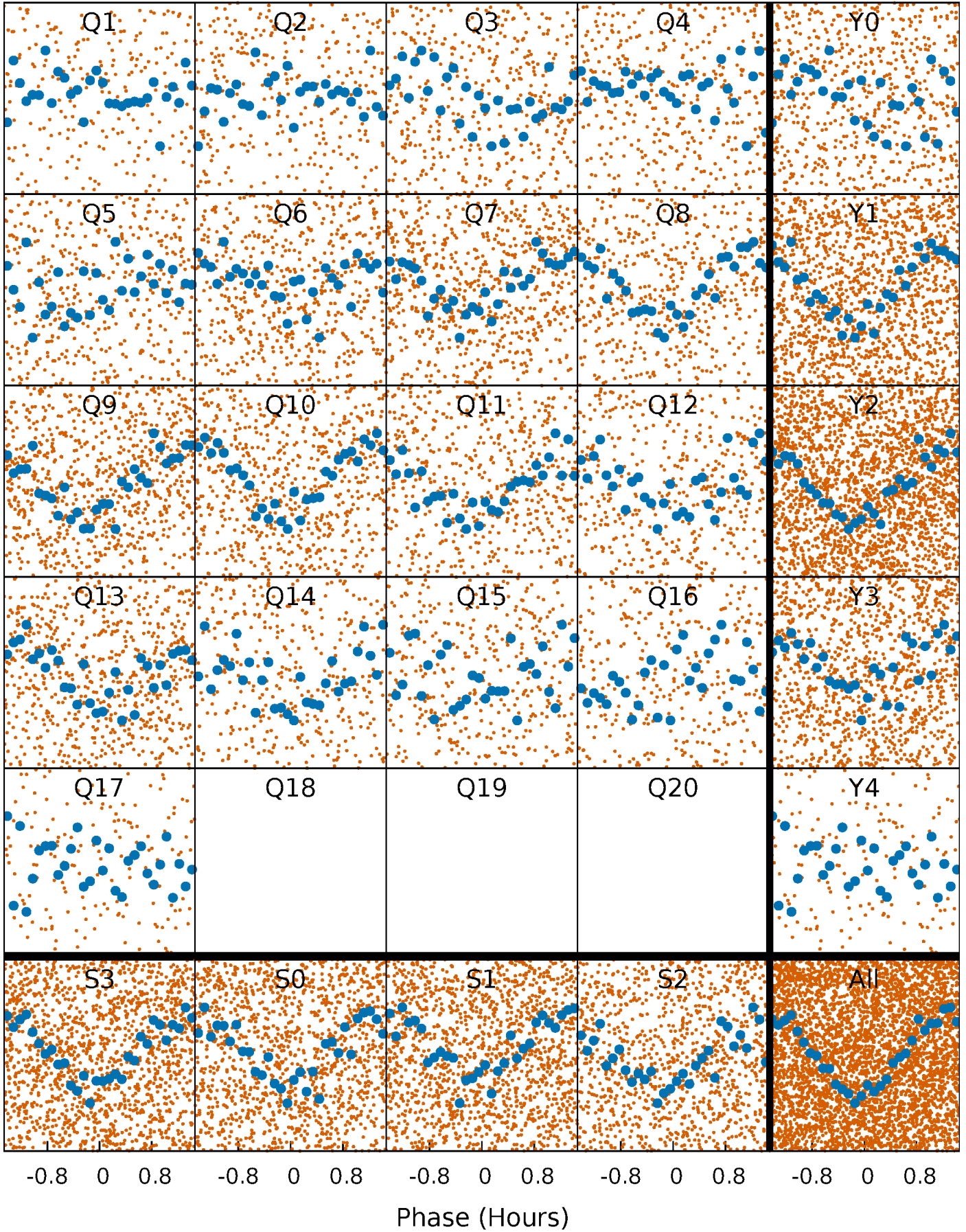
# Non-Whitened Vs. Whitened Light Curve





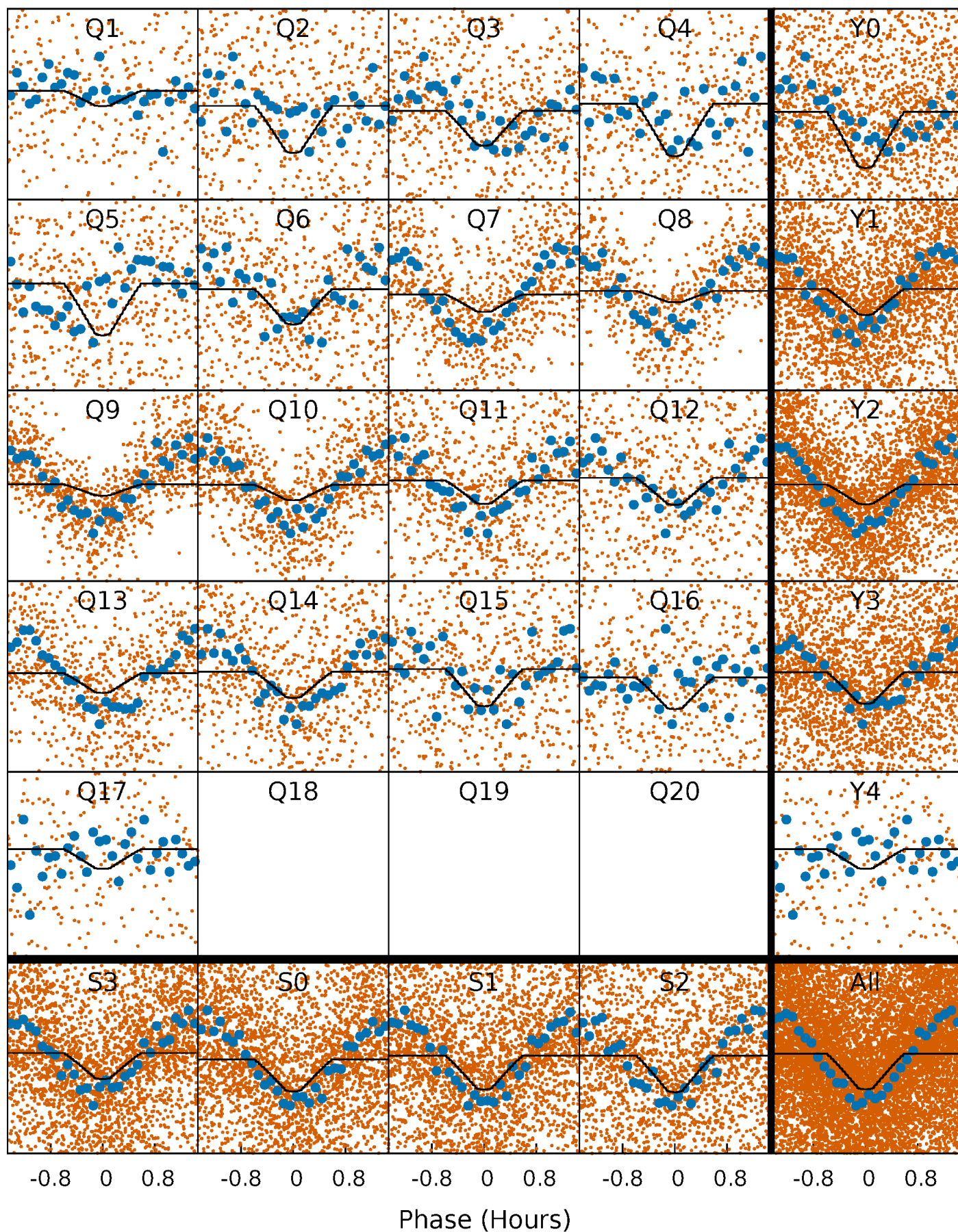
# PDC Quarter-Phased Transit Curves

TCE 006119788-01 P= 0.563317 Days  $T_0=131.615079$  (BKJD)



# DV Quarter-Phased Transit Curves

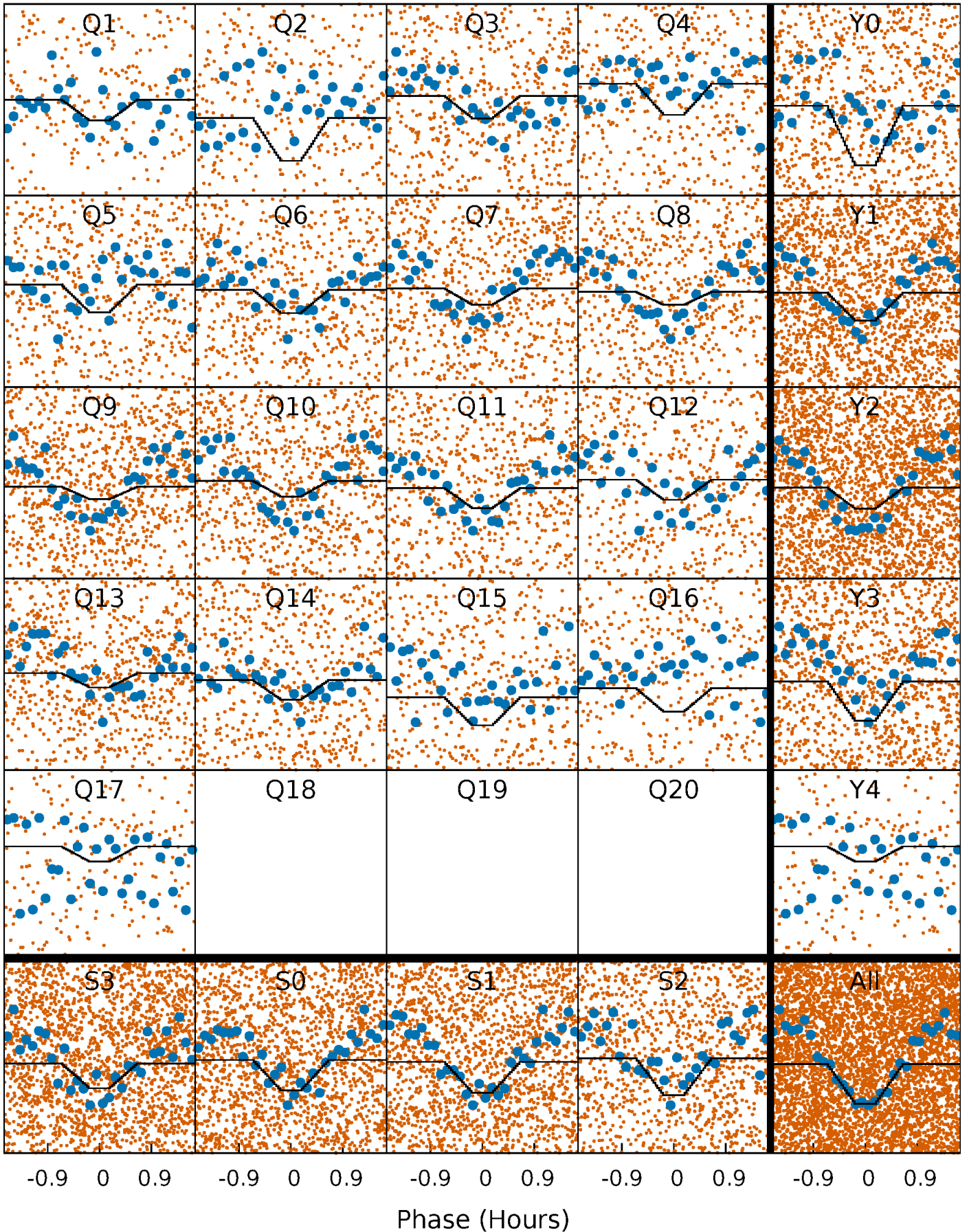
TCE 006119788-01 P= 0.563317 Days  $T_0=131.615079$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

TCE 006119788-01 P= 0.563315 Days  $T_0=131.614908$  (BKJD)

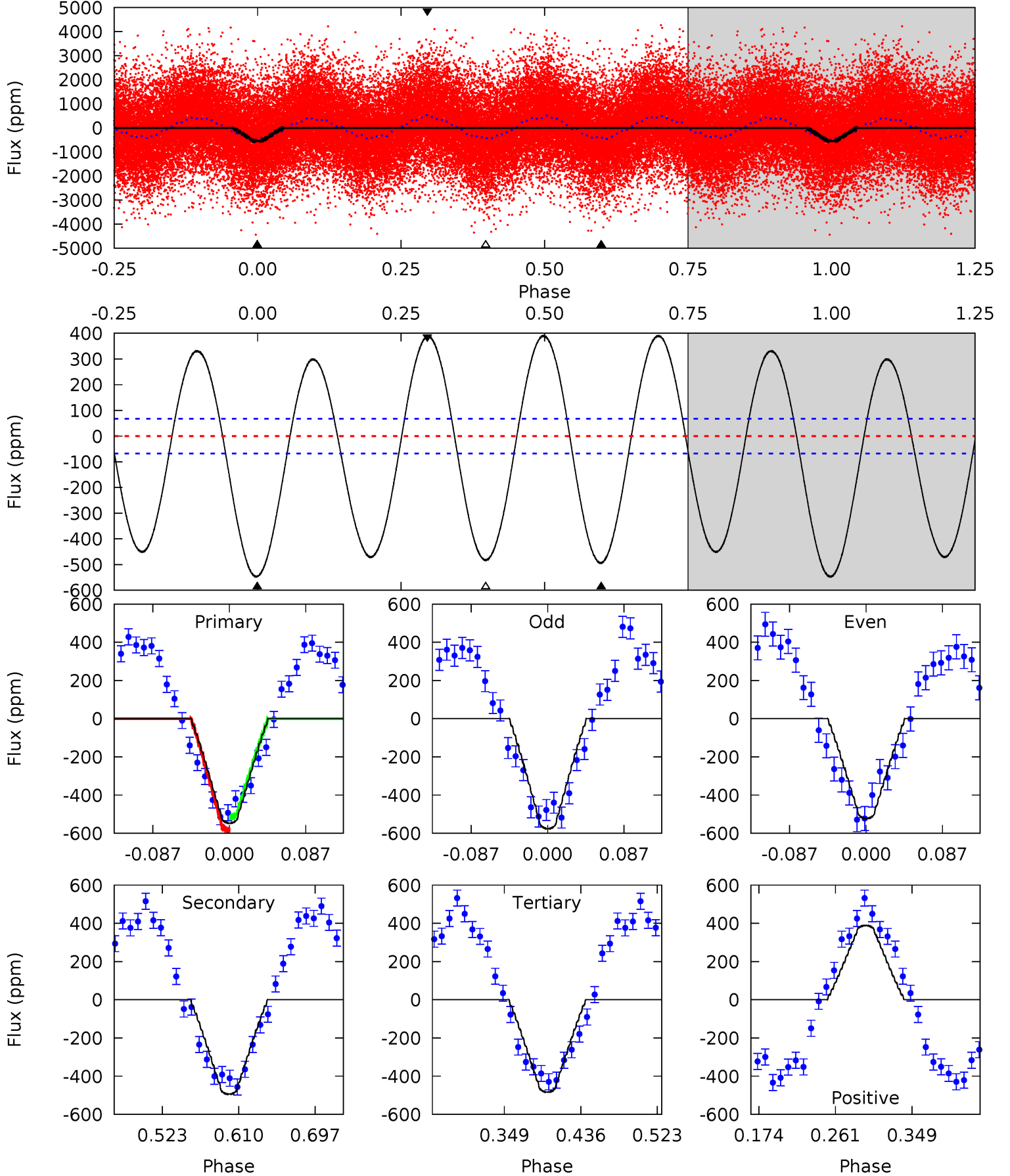




# DV Model-Shift Uniqueness Test

006119788-01, P = 0.563317 Days, E = 131.051762 Days

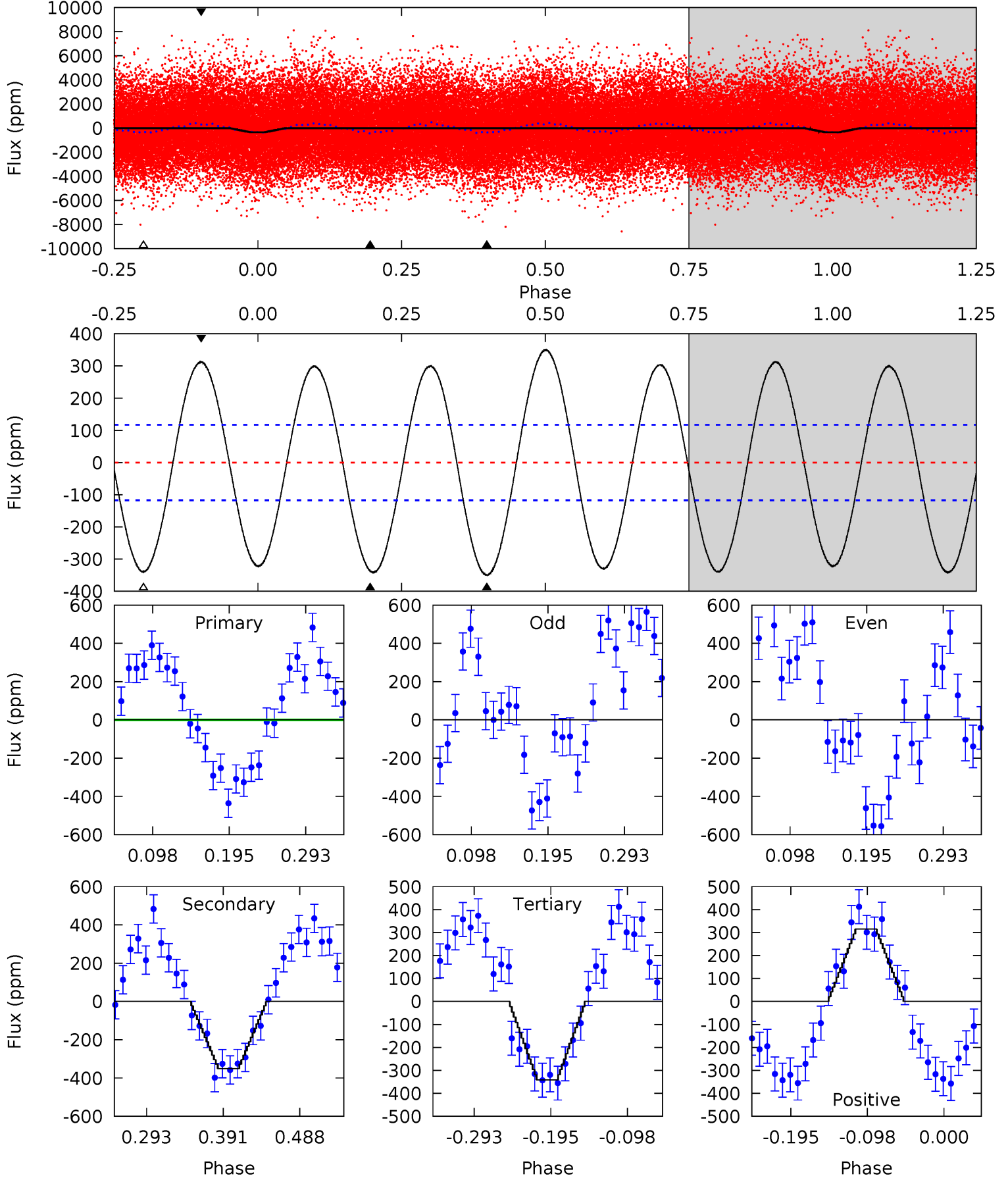
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
37.2	33.6	32.8	26.4	4.59	1.71	20.6	4.32	10.8	0.76	7.19	1.82	1.05	0.42	2.37



# Alt Model-Shift Uniqueness Test

006119788-01, P = 0.563315 Days, E = 131.051593 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
13.2	13.7	13.3	12.3	4.57	1.66	8.96	-0.11	0.93	0.37	1.41	8.02	1.02	0.50	0.37



### Stellar Parameters For KIC 006119788

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$7176^{+225}_{-300}$	$4.191^{+0.153}_{-0.187}$	$-0.500^{+0.250}_{-0.300}$	$1.490^{+0.442}_{-0.295}$	$1.258^{+0.188}_{-0.188}$	$0.535^{+0.461}_{-0.245}$
	+3%/-4%	+4%/-4%	+50%/-60%	+30%/-20%	+15%/-15%	+86%/-46%
Source	PHO54	PHO54	PHO54	DSEP		

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

### Secondary Eclipse Parameters for KIC 006119788-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-495 \pm 15$	$3.00^{+1.00}_{-0.90}$	$4528^{+365}_{-306}$	$8012^{+2004}_{-1187}$	$6.245^{+6.163}_{-2.677}$
Alt.	$-351 \pm 26$	$2.99^{+1.10}_{-0.83}$	$4523^{+336}_{-308}$	$7093^{+1516}_{-1044}$	$4.427^{+3.800}_{-1.995}$

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



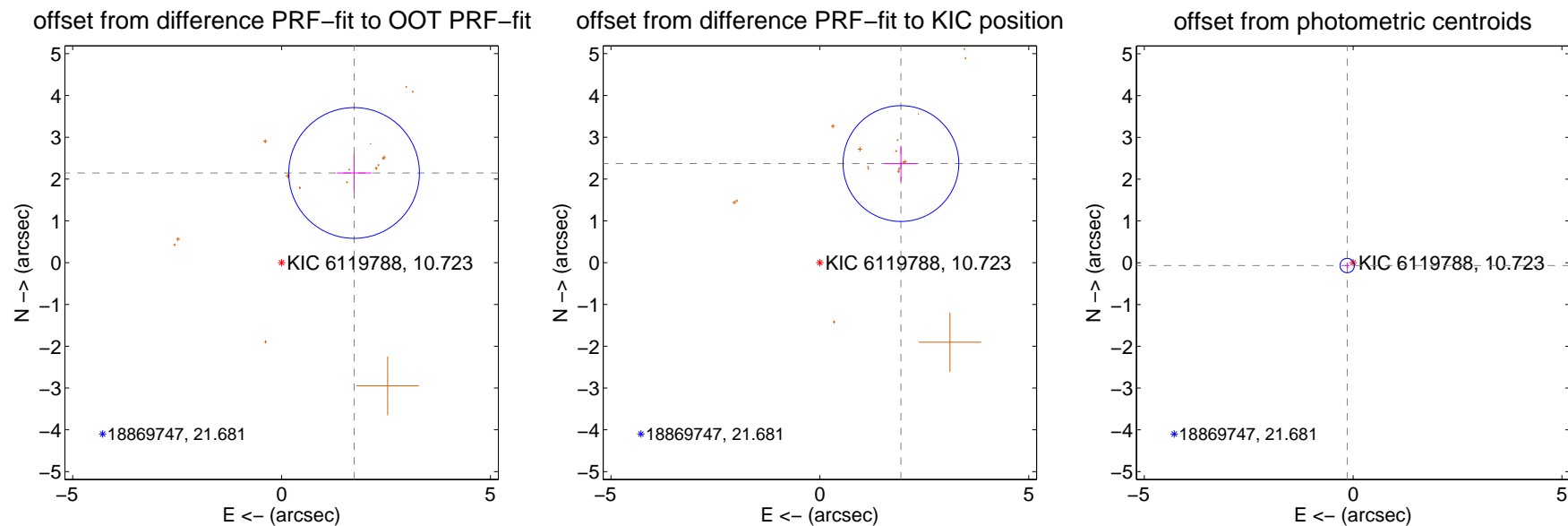
## DV Centroid Data

Supplemental centroid analysis for 006119788-01. **Kepler magnitude: 10.72.** Transit SNR 16.00

**There are 0 quarters with good PRF difference image offsets**

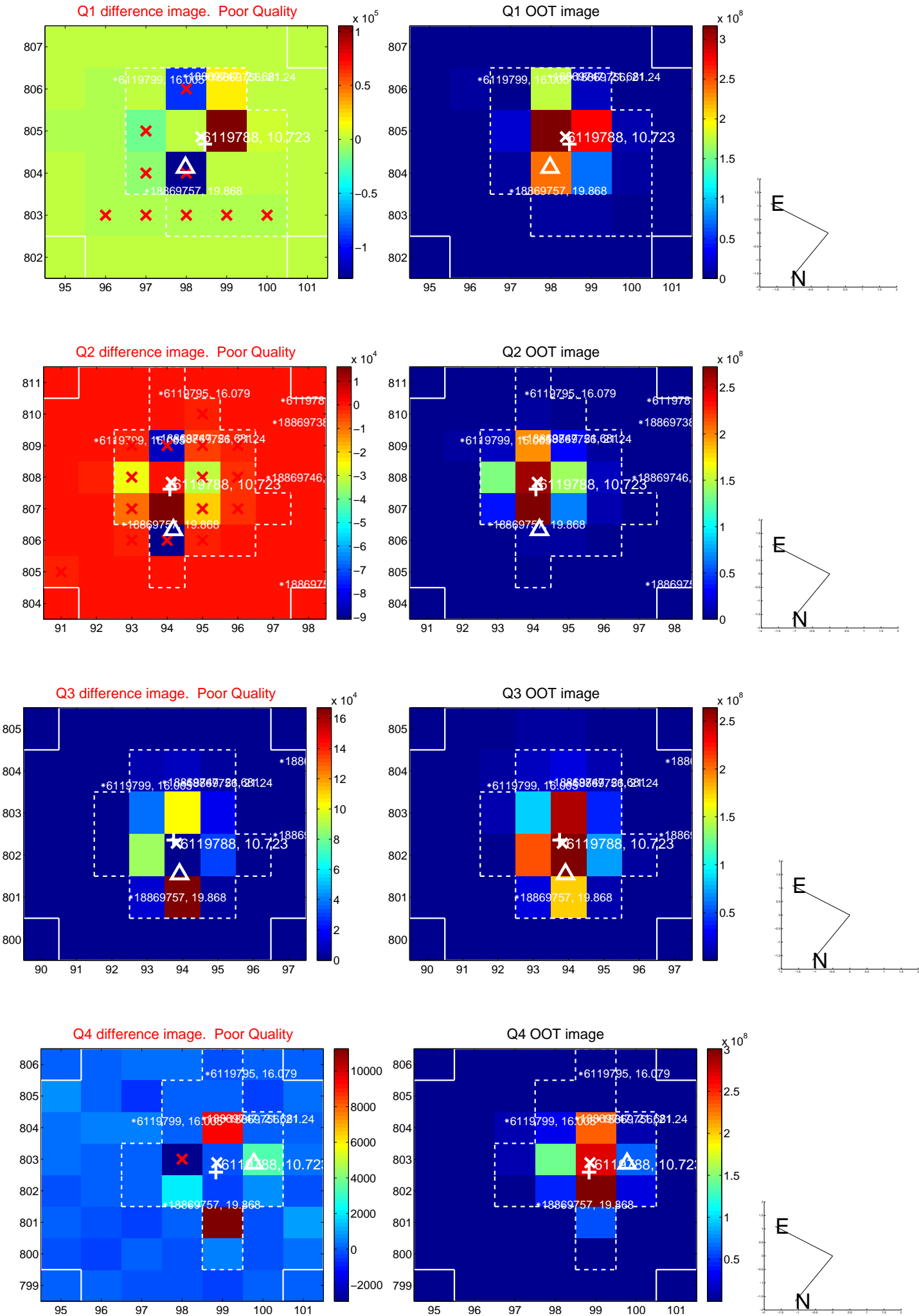
The direct PRF centroid is offset from the target star catalog position by about 0.87 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	<b><math>2.760 \pm 0.521</math></b>	<b>5.29</b>	$-1.736 \pm 0.415$	$2.145 \pm 0.452$
PRF-fit source offset from KIC position	<b><math>3.064 \pm 0.462</math></b>	<b>6.64</b>	$-1.941 \pm 0.378$	$2.371 \pm 0.426$
photometric centroid source offset	$0.16 \pm 0.06$	2.74	$0.14 \pm 0.05$	$-0.07 \pm 0.07$

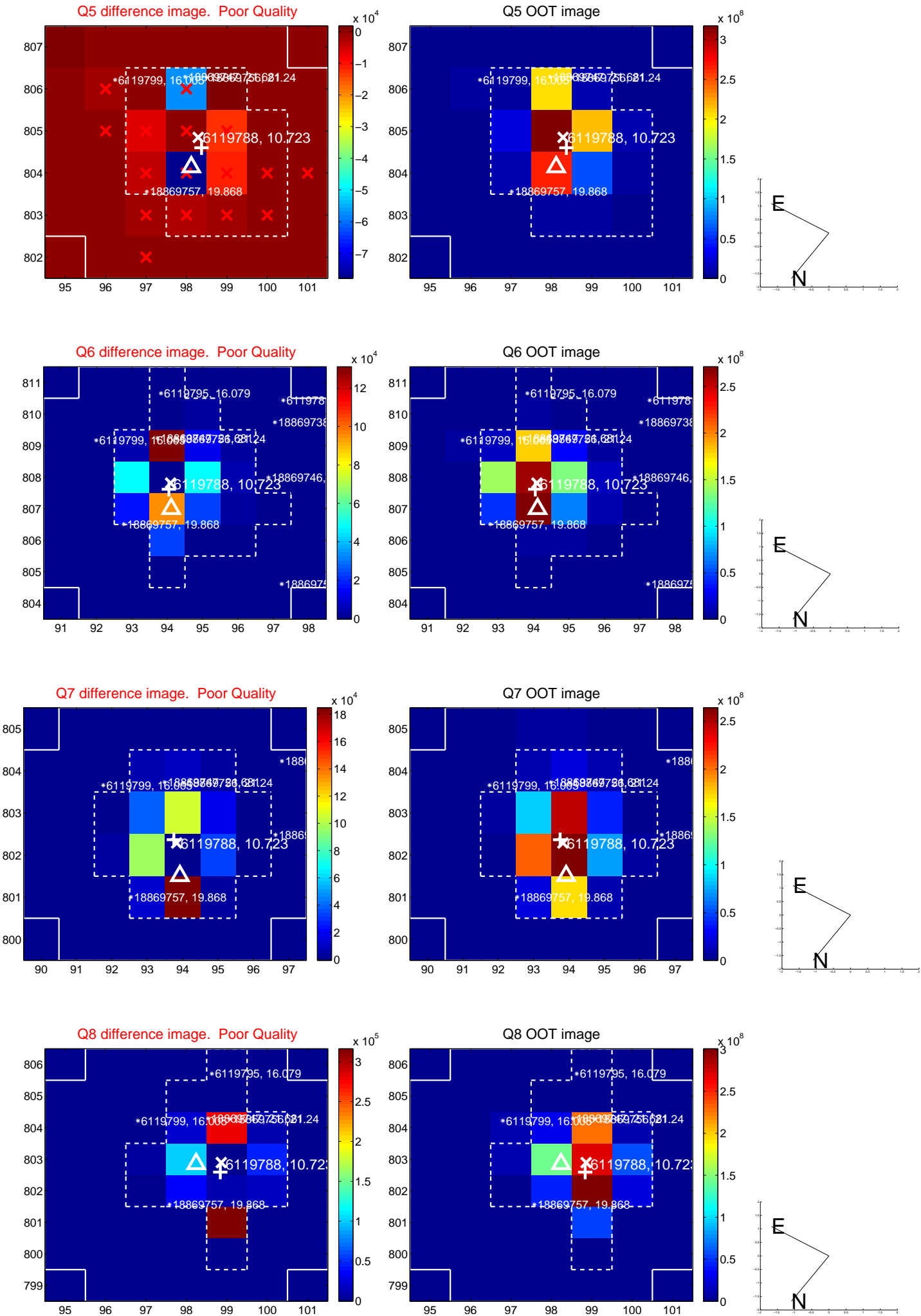


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

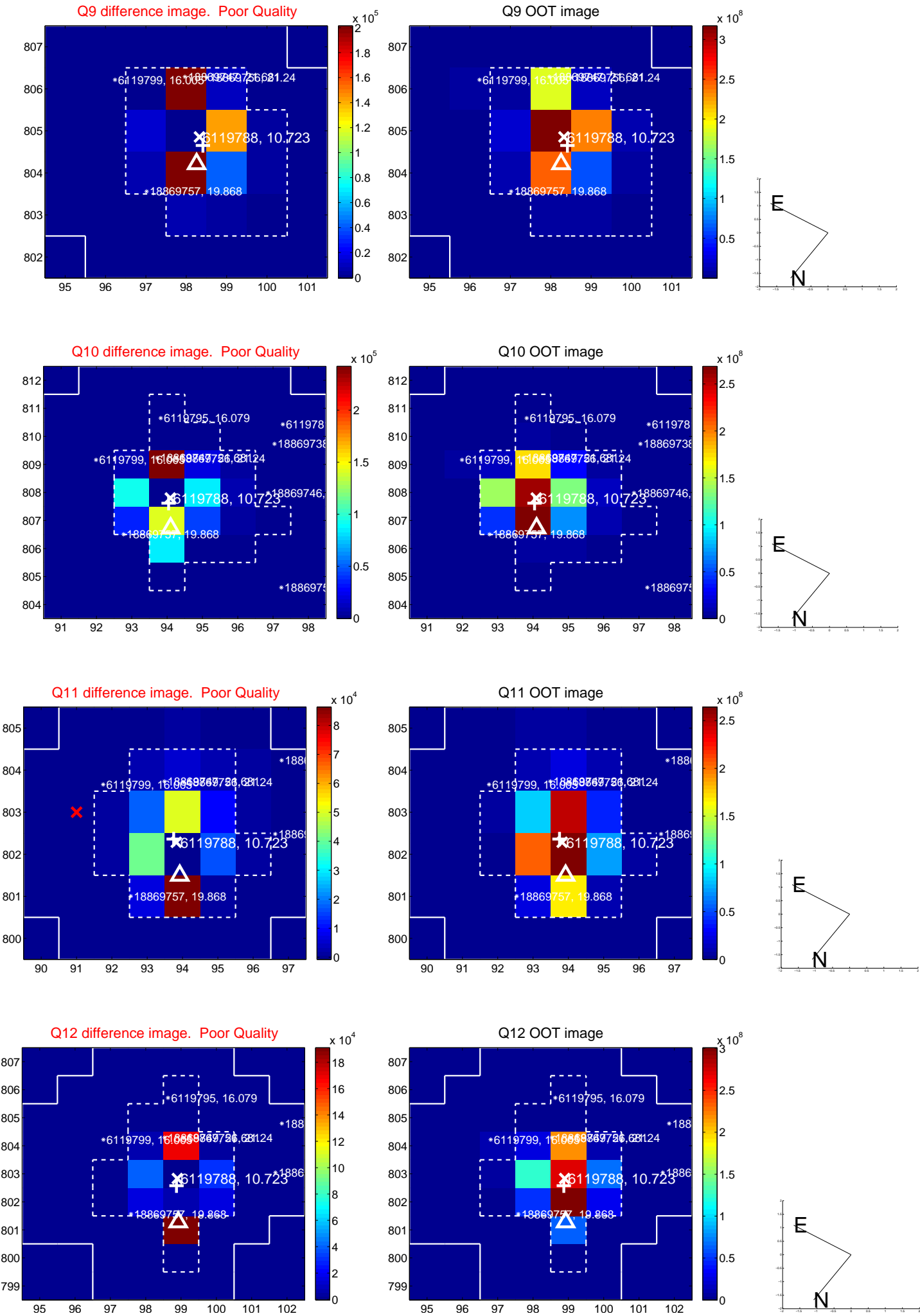


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

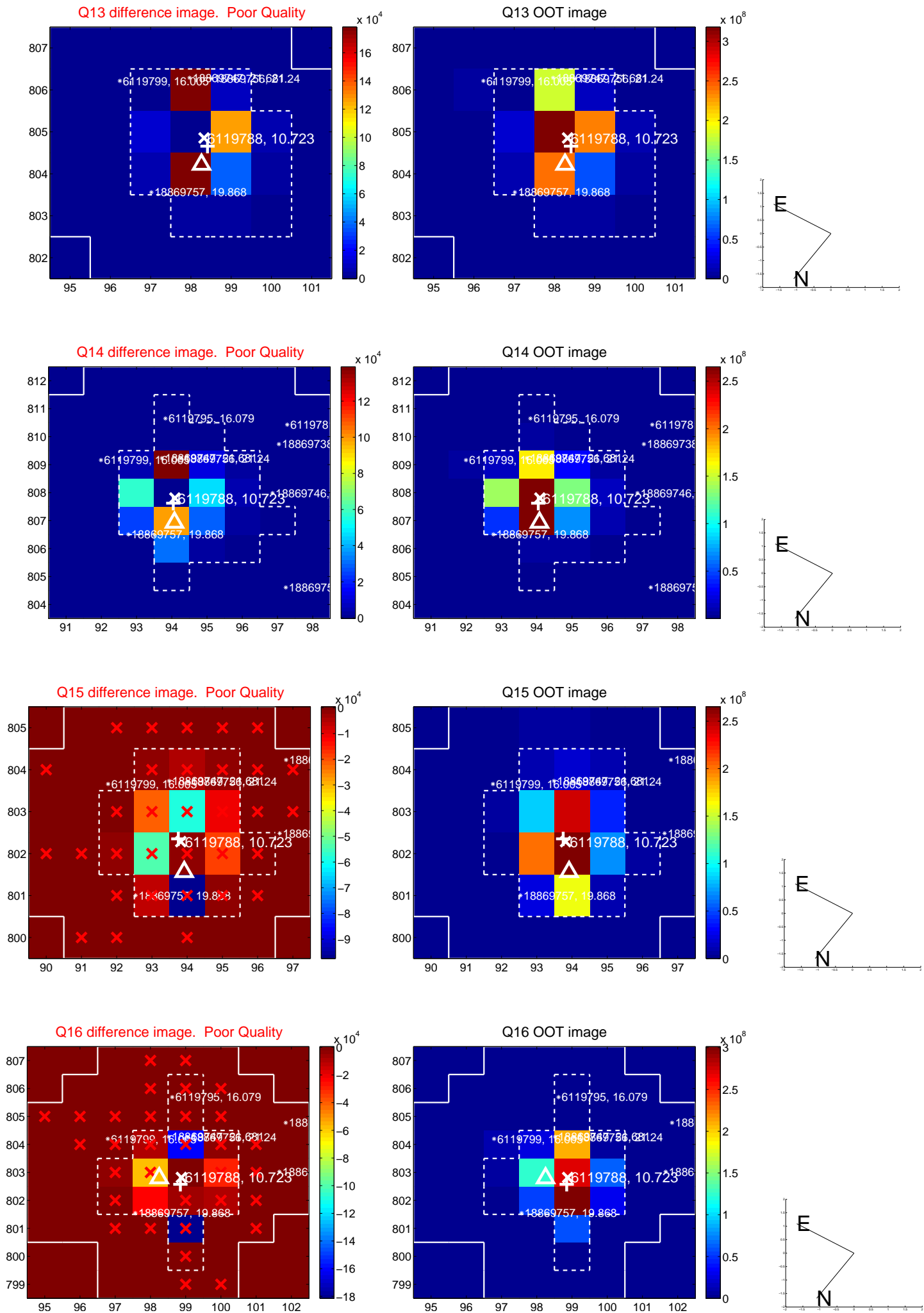




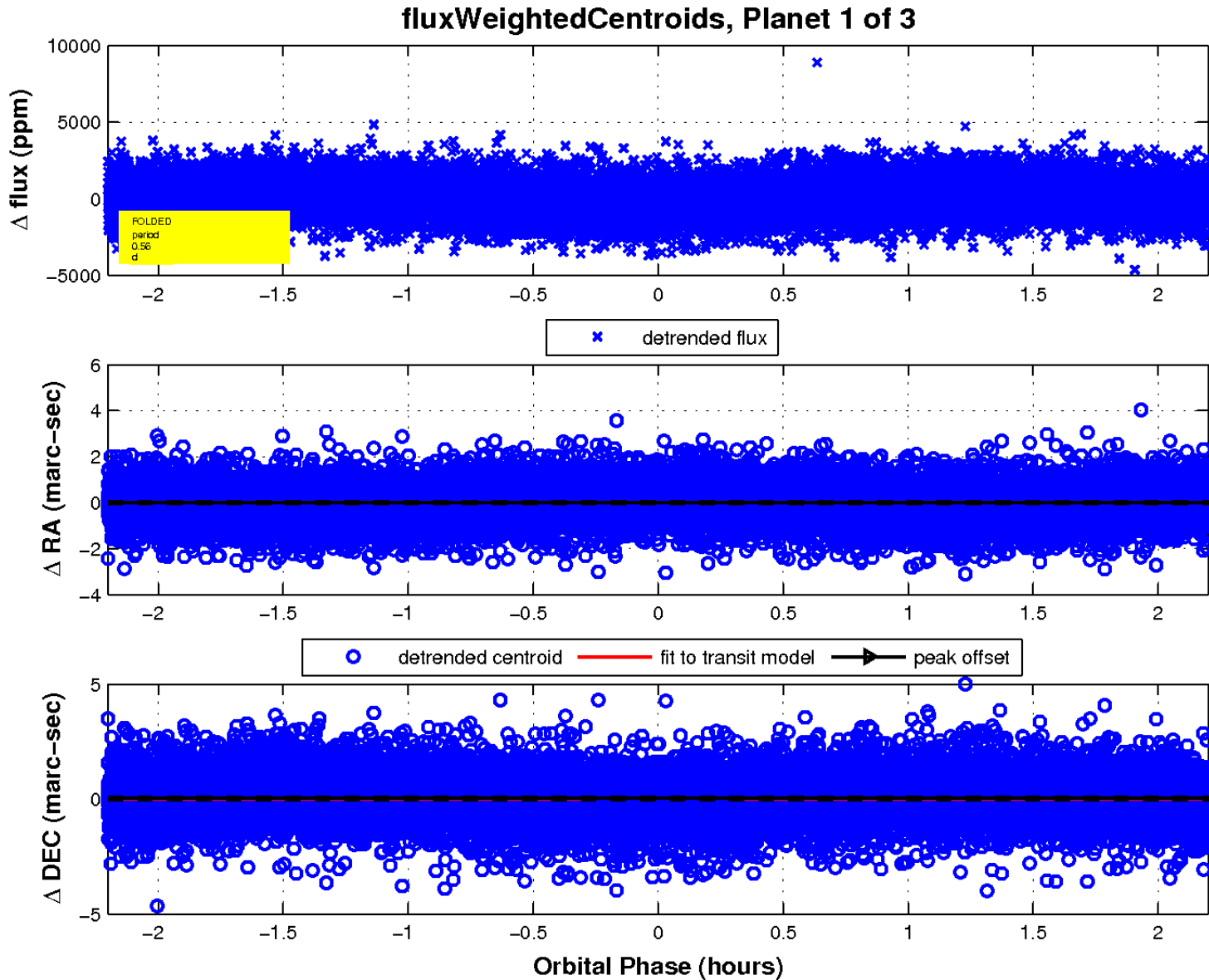
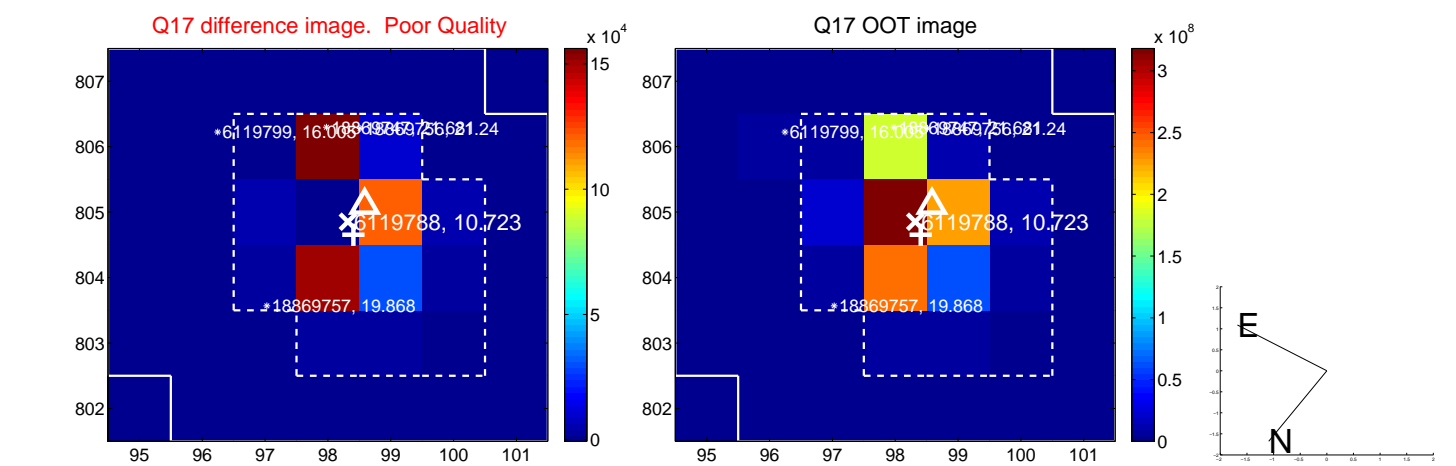
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

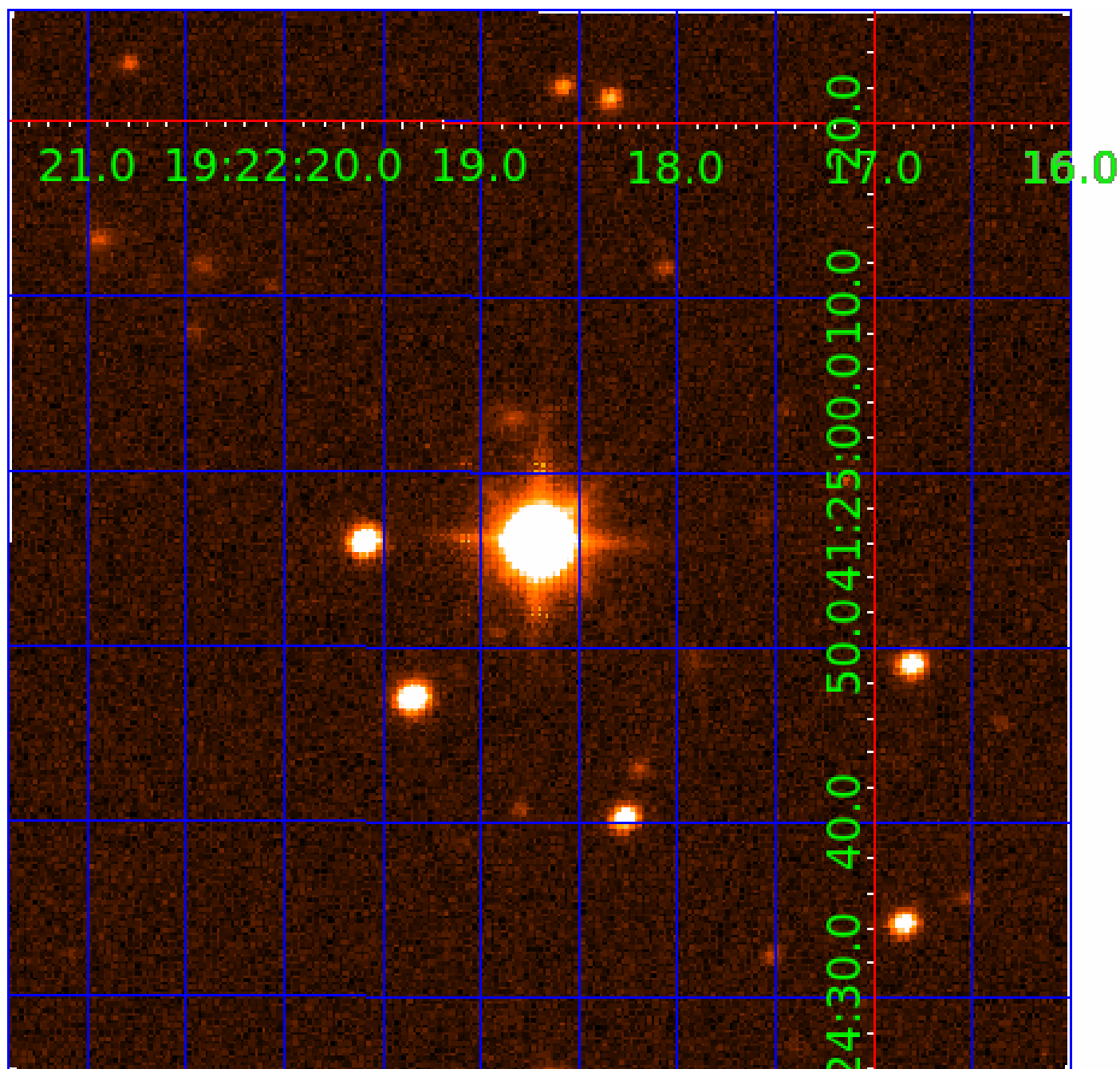


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination





# KIC 006119788

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006119788-01	OBS	No	0.563317	131.615079	351.0	0.734	12.1	16.0	1.49	7176	2.94	25402.57
006119788-02	OBS	No	0.563310	131.958878	370.9	0.906	11.9	18.7	1.49	7176	2.94	25402.97
006119788-03	OBS	No	0.563317	131.913745	671.6	4.976	9.6	20.4	1.49	7176	4.14	25402.60

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006119788-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED
006119788-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_SATURATED
006119788-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED

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

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

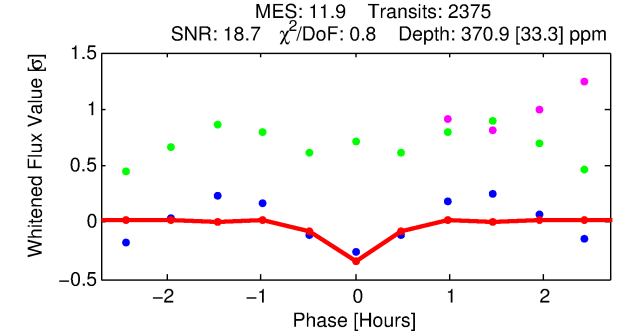
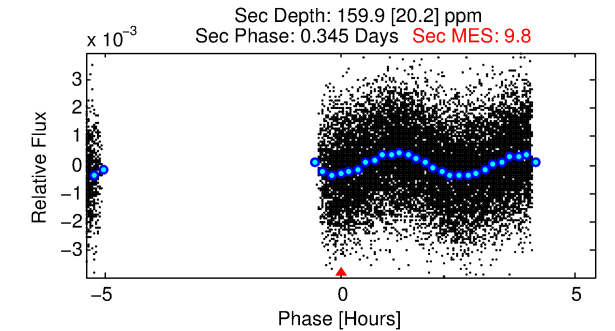
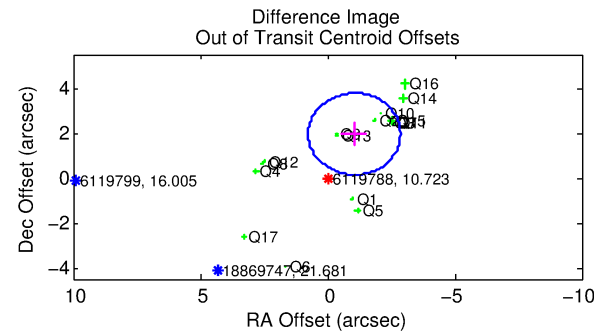
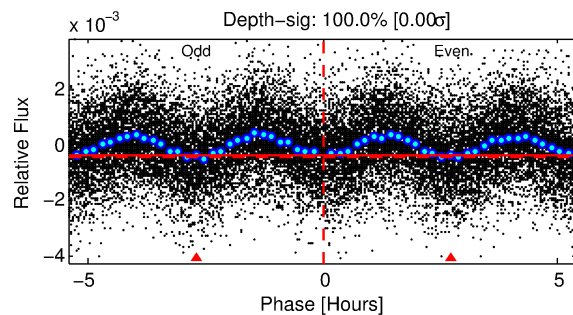
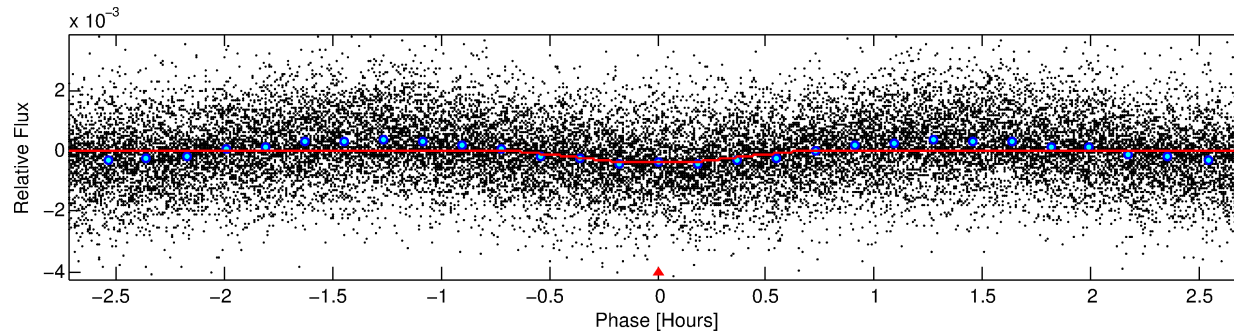
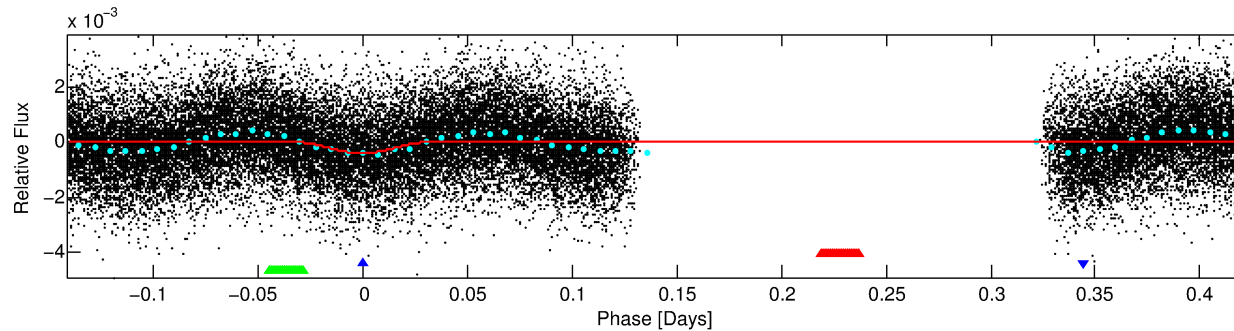
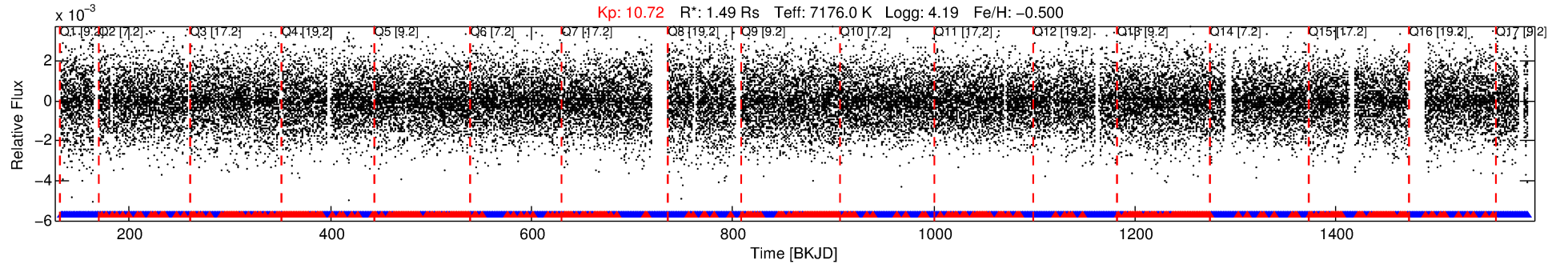
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 006119788-02

No Significant Match Found

# DV One-Page Summary

KIC: 6119788 Candidate: 2 of 3 Period: 0.563 d



## DV Fit Results:

Period = 0.56331 [0.00001] d  
Epoch = 131.9589 [0.0008] BKJD  
Rp/R\* = 0.0180 [0.0073]  
a/R\* = 4.85 [10.85]  
b = 0.10 [23.03]  
Seff = 25402.97 [9821.29]  
Teq = 3219 [311] K  
Rp = 2.93 [1.47] Re  
a = 0.0144 [0.0035] AU  
Ag = 2.12 [1.89] [0.59 $\sigma$ ]  
Teffp = 6007 [1257] K [2.15 $\sigma$ ]

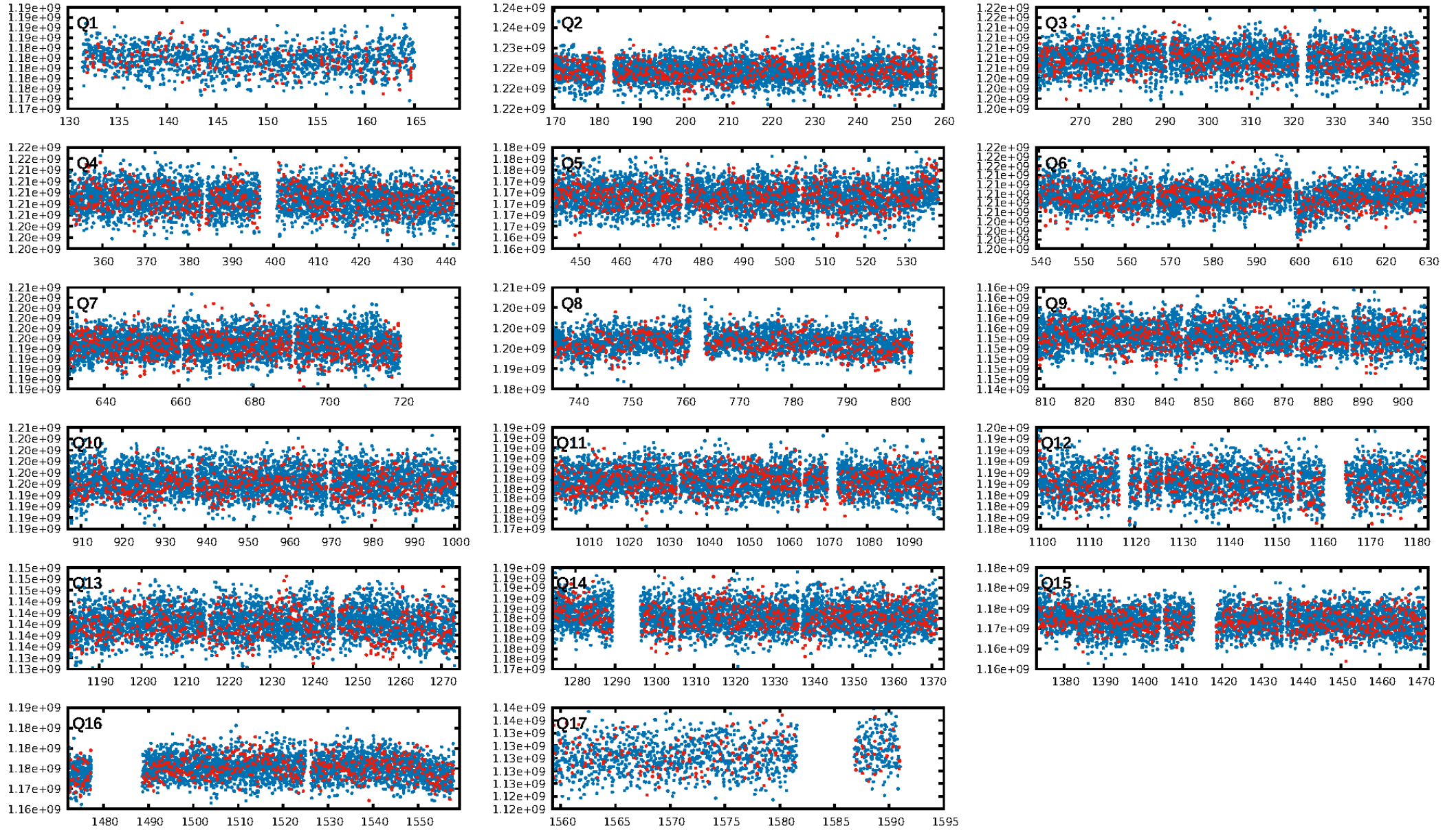
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: 0.0% [0.00 $\sigma$ ]  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 0.74 [1678/2268]  
GhostDiagnostic-chr: 7.776  
Centroid-sig: 35.4%  
Centroid-so: 0.122 arcsec [2.33 $\sigma$ ]  
OotOffset-rm: 2.220 arcsec [3.67 $\sigma$ ]  
KicOffset-rm: 2.694 arcsec [4.37 $\sigma$ ]  
OotOffset-st: 4/4/4/5 [17]  
KicOffset-st: 4/4/4/5 [17]  
DiffImageQuality-fgm: 0.24 [4/17]  
DiffImageOverlap-fno: 0.00 [0/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 01:23:30 Z

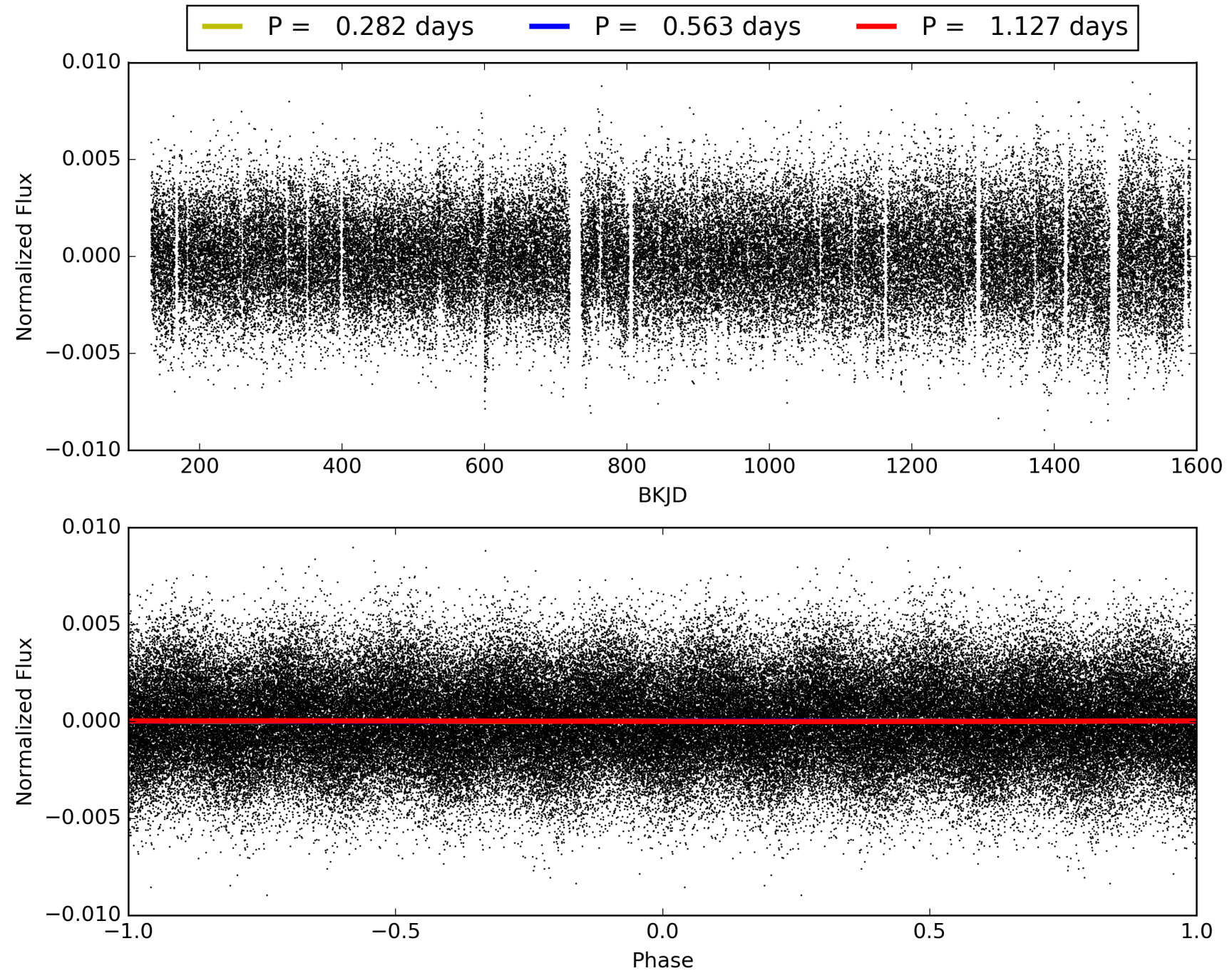
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 006119788-02, PDC Light Curves





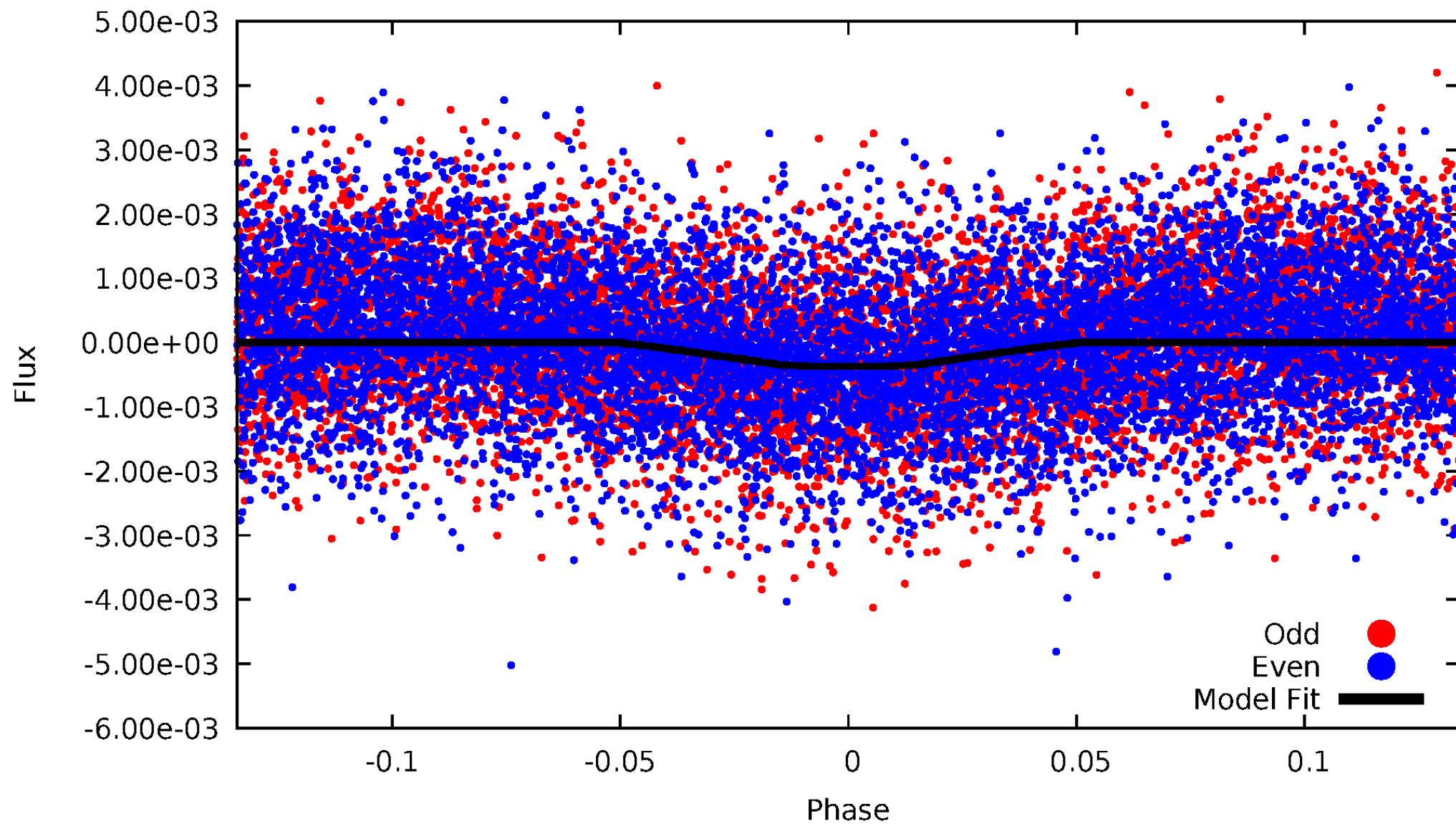
TCE 006119788-02





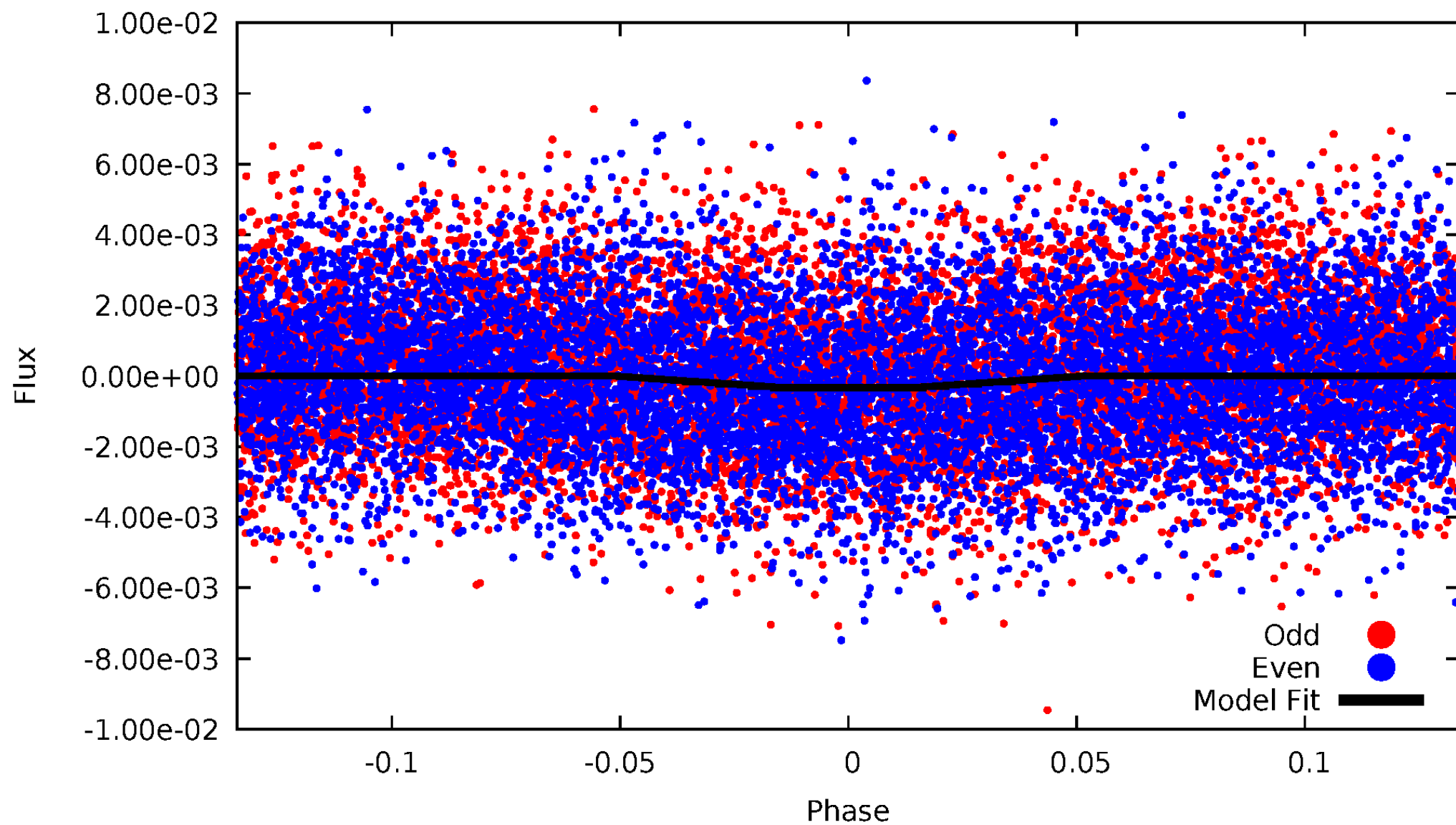
# DV Odd/Even

TCE 006119788-02



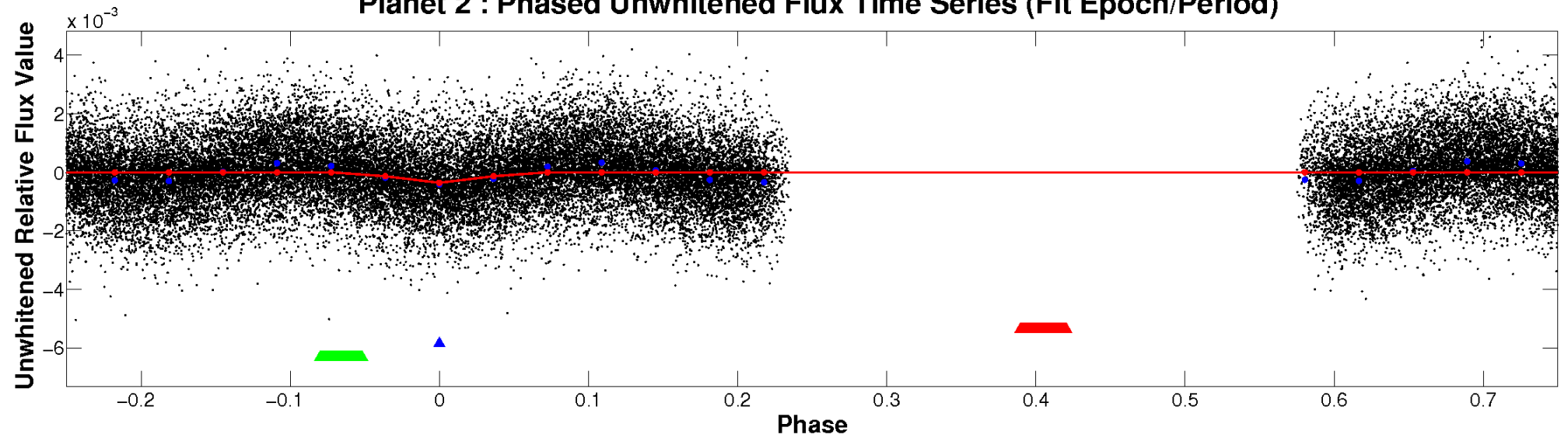
ALT Odd/Even

TCE 006119788-02

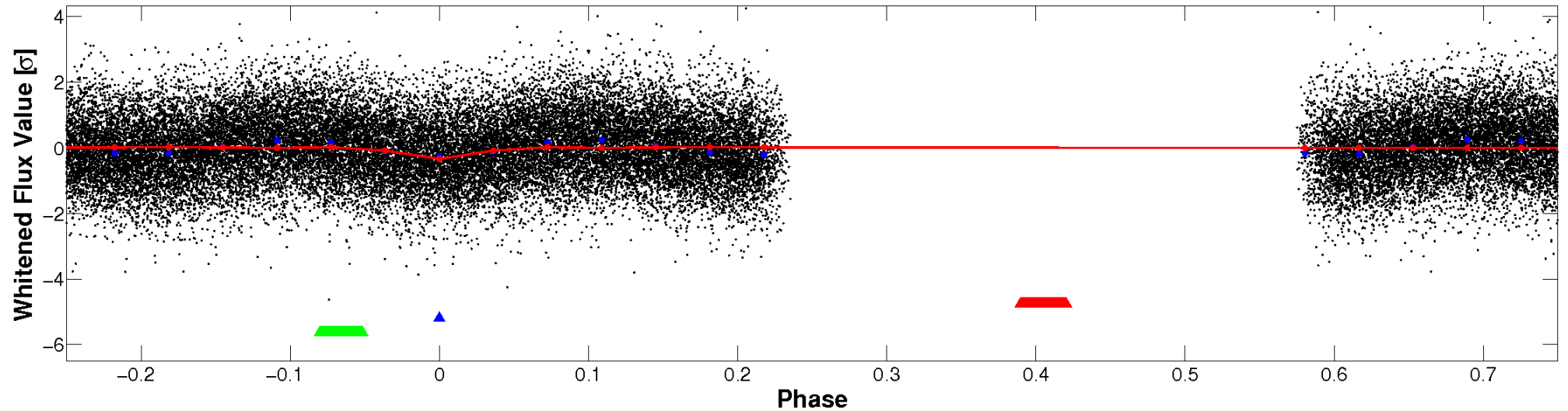


# Non-Whitened Vs. Whitened Light Curve

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

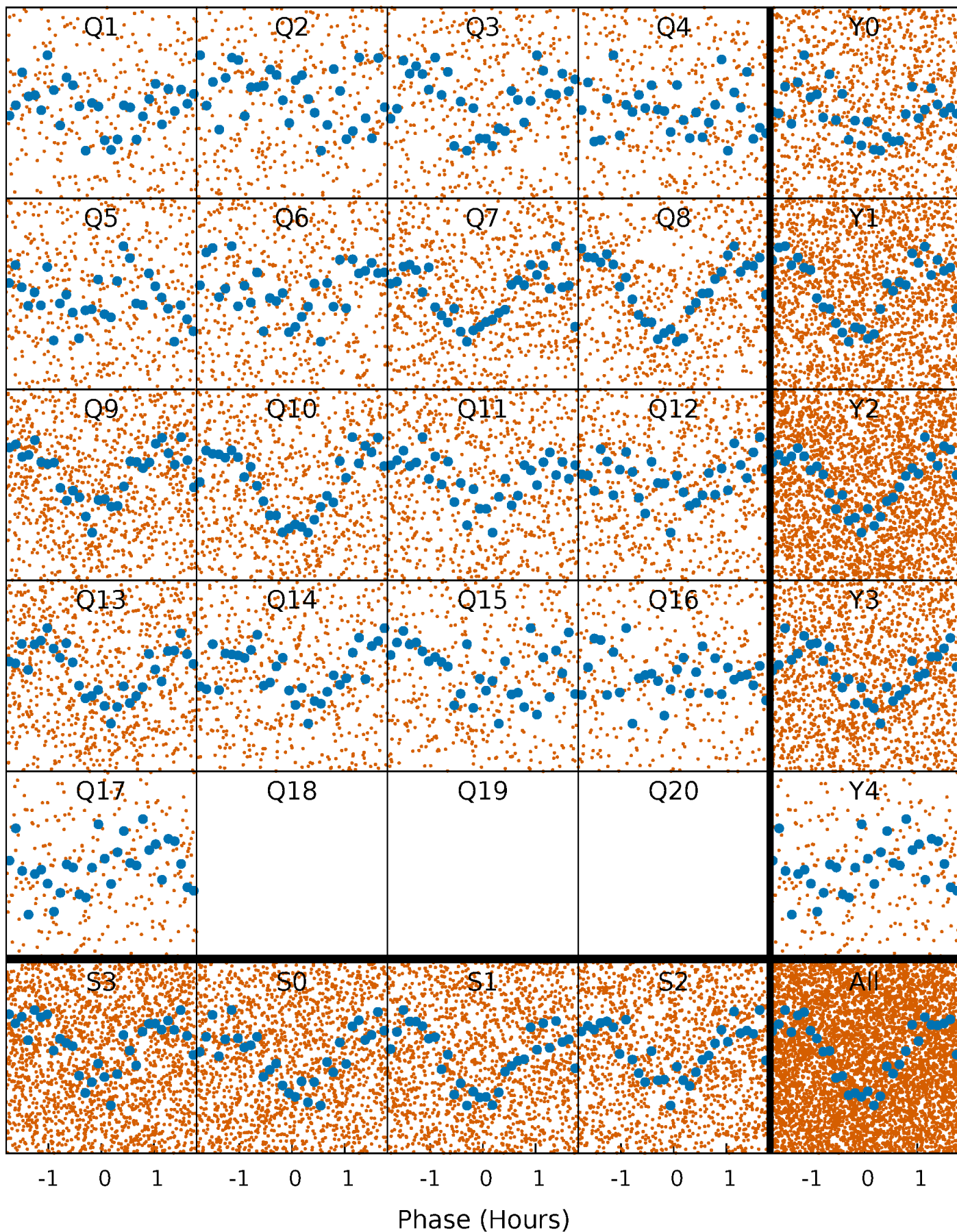


## Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



# PDC Quarter-Phased Transit Curves

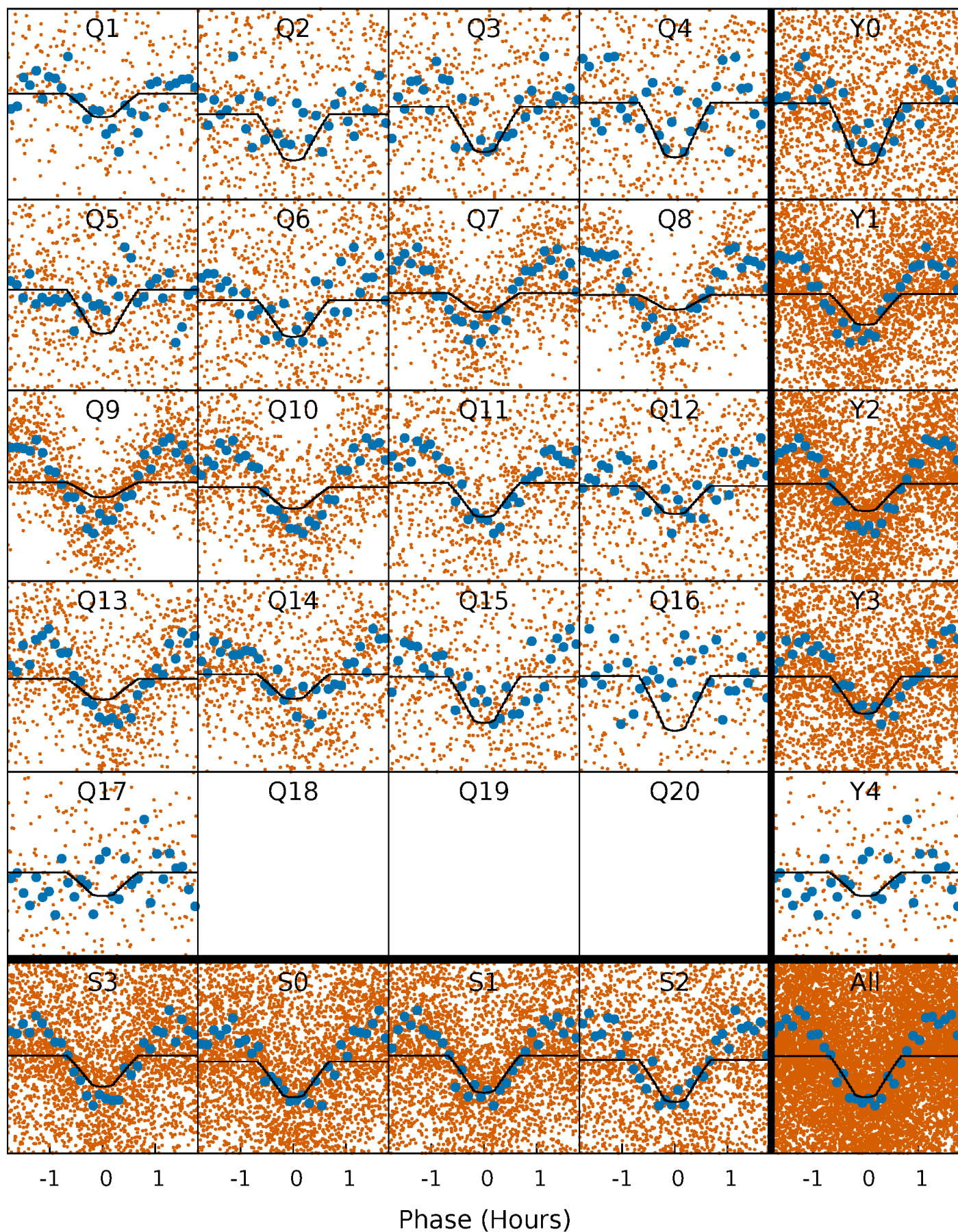
TCE 006119788-02 P= 0.563310 Days  $T_0=131.958878$  (BKJD)





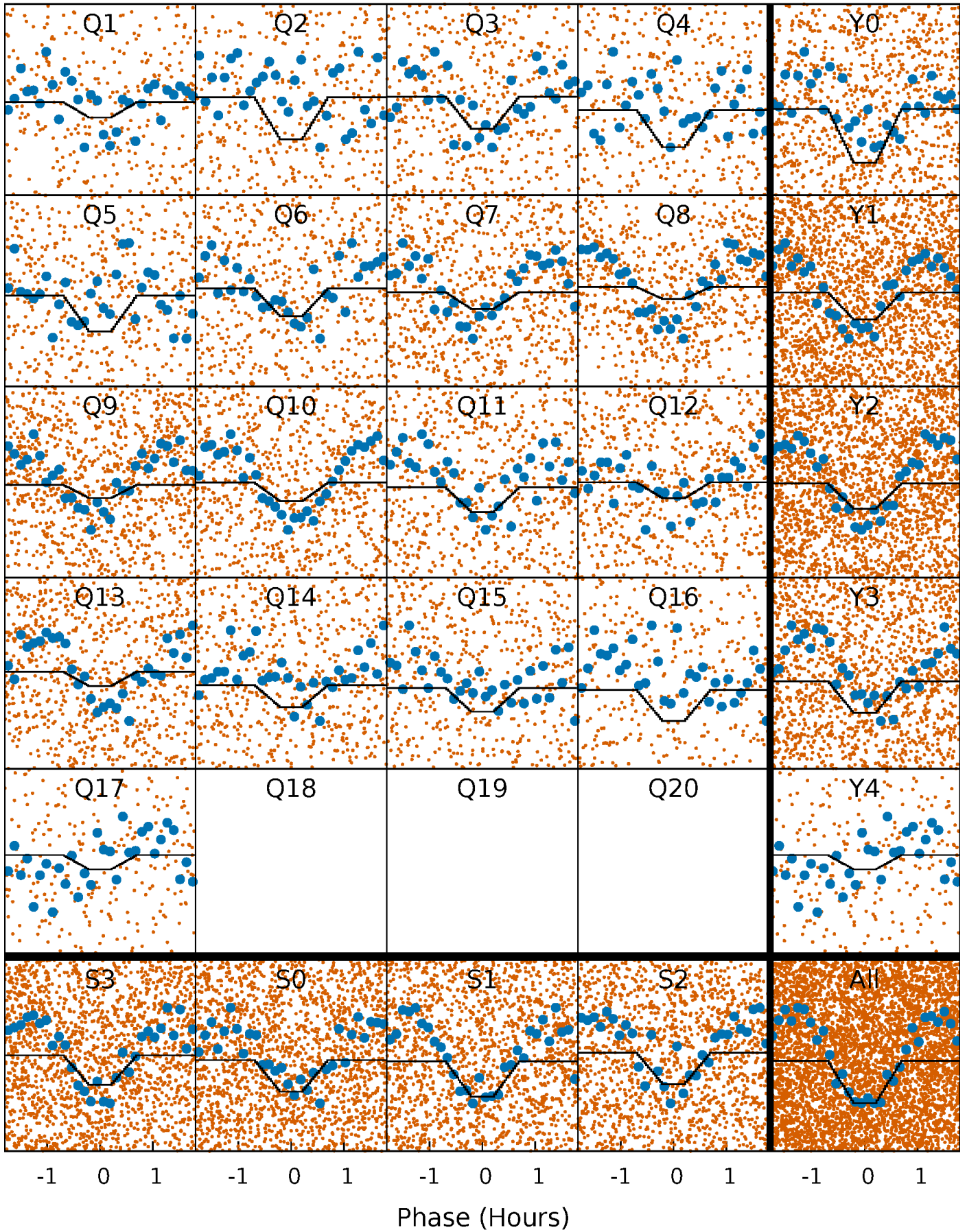
# DV Quarter-Phased Transit Curves

TCE 006119788-02   P= 0.563310 Days    $T_0=131.958878$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

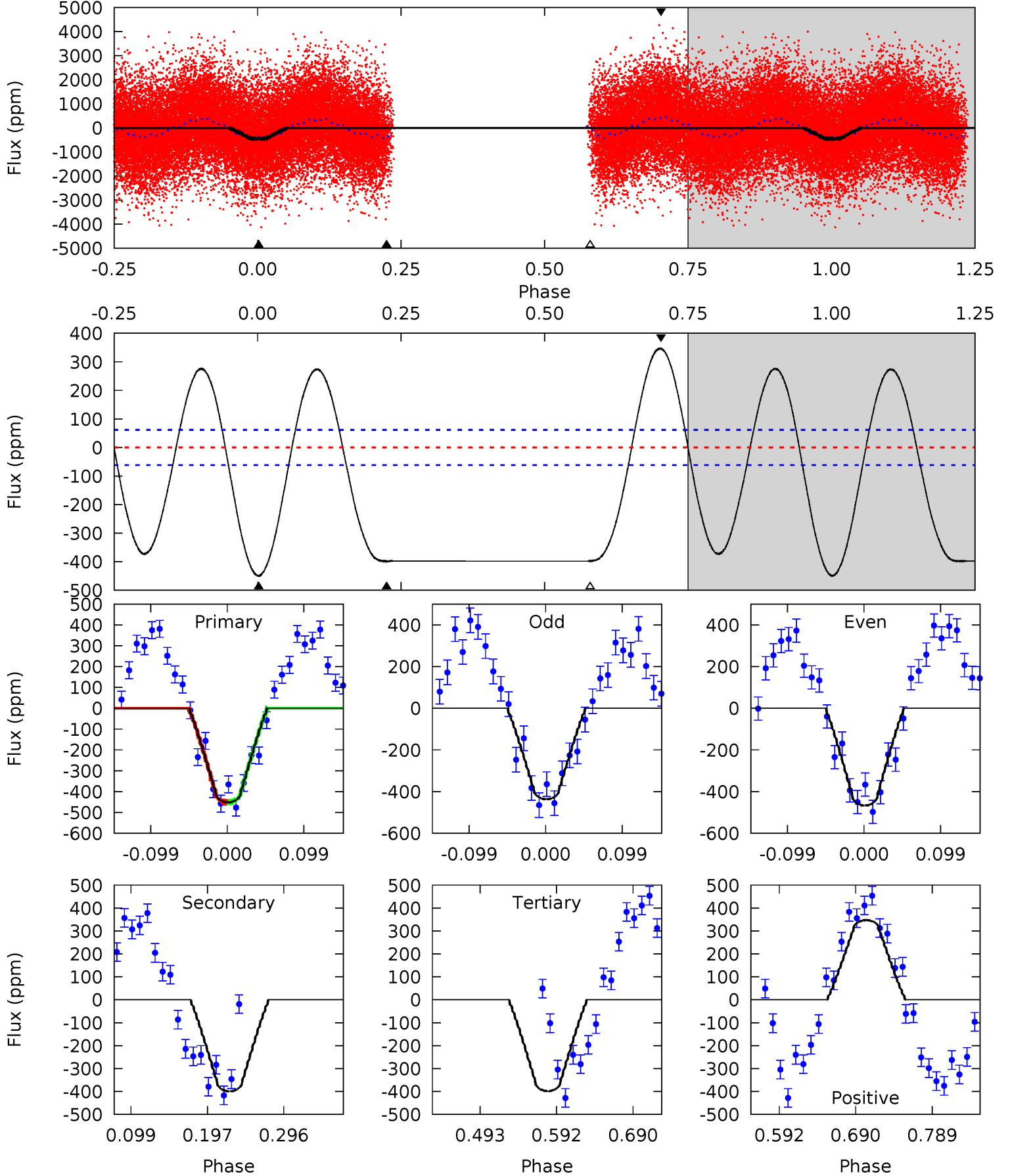
TCE 006119788-02 P= 0.563310 Days  $T_0=131.958853$  (BKJD)



# DV Model-Shift Uniqueness Test

006119788-02, P = 0.563310 Days, E = 131.395568 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
33.5	29.6	29.6	25.8	4.57	1.65	18.7	3.91	7.72	0.06	3.86	1.12	1.00	0.43	0.06

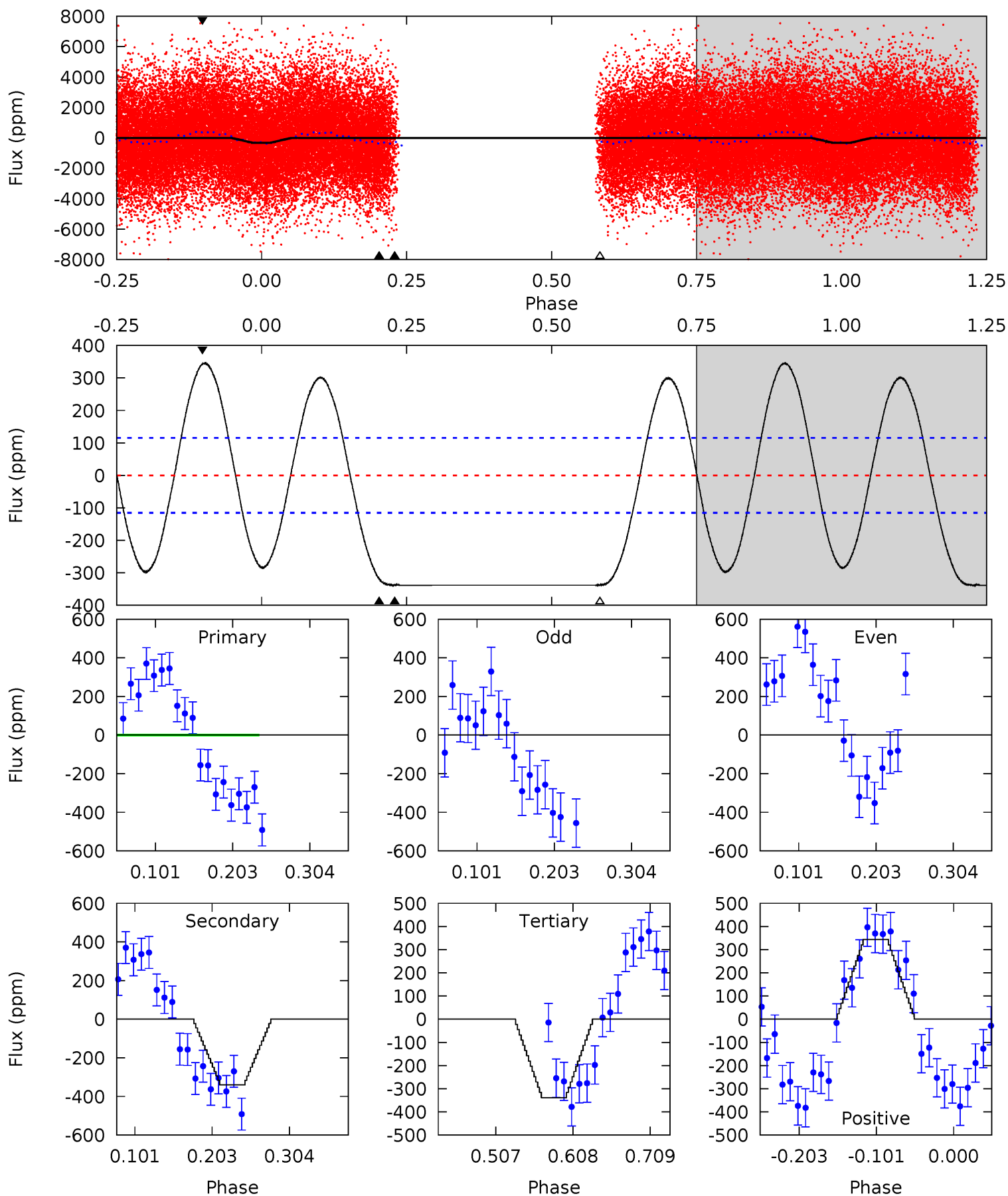




# Alt Model-Shift Uniqueness Test

006119788-02, P = 0.563310 Days, E = 131.395543 Days

Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.7	13.4	13.4	13.6	4.56	1.64	8.70	-0.75	-0.95	0.02	-0.18	6.29	1.05	0.51	0.53





### Stellar Parameters For KIC 006119788

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$7176^{+225}_{-300}$	$4.191^{+0.153}_{-0.187}$	$-0.500^{+0.250}_{-0.300}$	$1.490^{+0.442}_{-0.295}$	$1.258^{+0.188}_{-0.188}$	$0.535^{+0.461}_{-0.245}$
	+3%/-4%	+4%/-4%	+50%/-60%	+30%/-20%	+15%/-15%	+86%/-46%
Source	PHO54	PHO54	PHO54	DSEP		

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

### Secondary Eclipse Parameters for KIC 006119788-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-399 \pm 13$	$2.98^{+1.35}_{-1.20}$	$4497^{+377}_{-305}$	$7399^{+3248}_{-1401}$	$5.089^{+9.263}_{-2.624}$
Alt.	$-339 \pm 25$	$3.00^{+1.33}_{-1.11}$	$4486^{+358}_{-292}$	$6994^{+2405}_{-1216}$	$4.356^{+6.248}_{-2.240}$

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

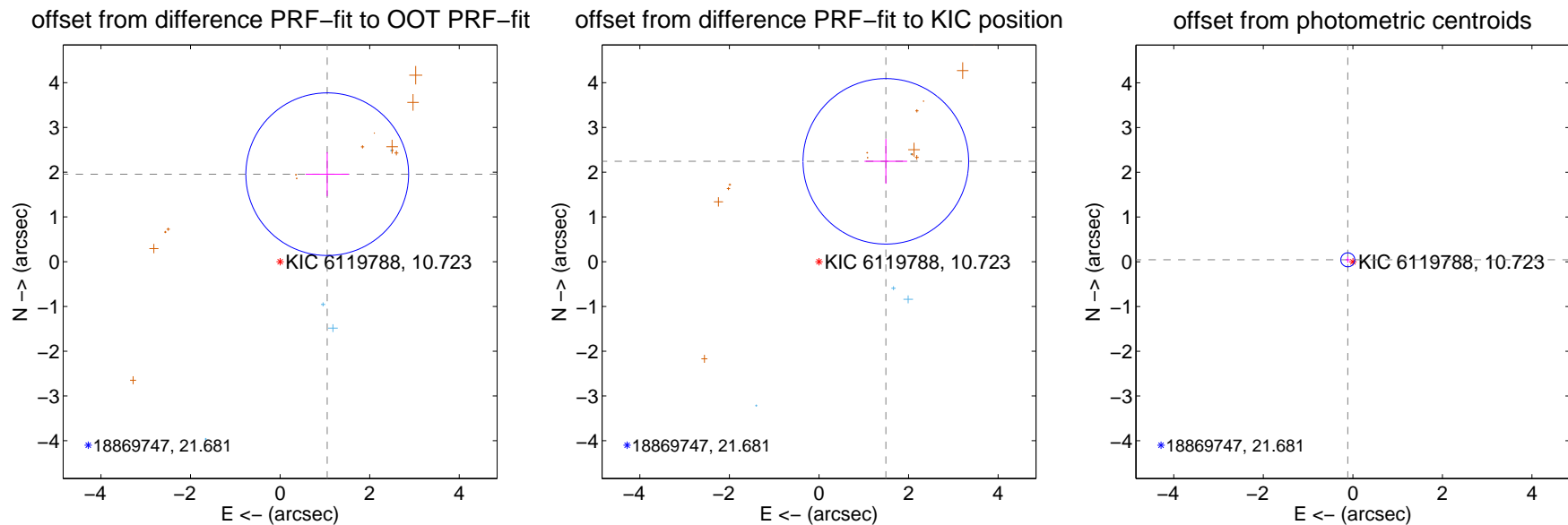
## DV Centroid Data

Supplemental centroid analysis for 006119788-02. **Kepler magnitude: 10.72**. Transit SNR 18.71

There are 4 quarters with good PRF difference image offsets

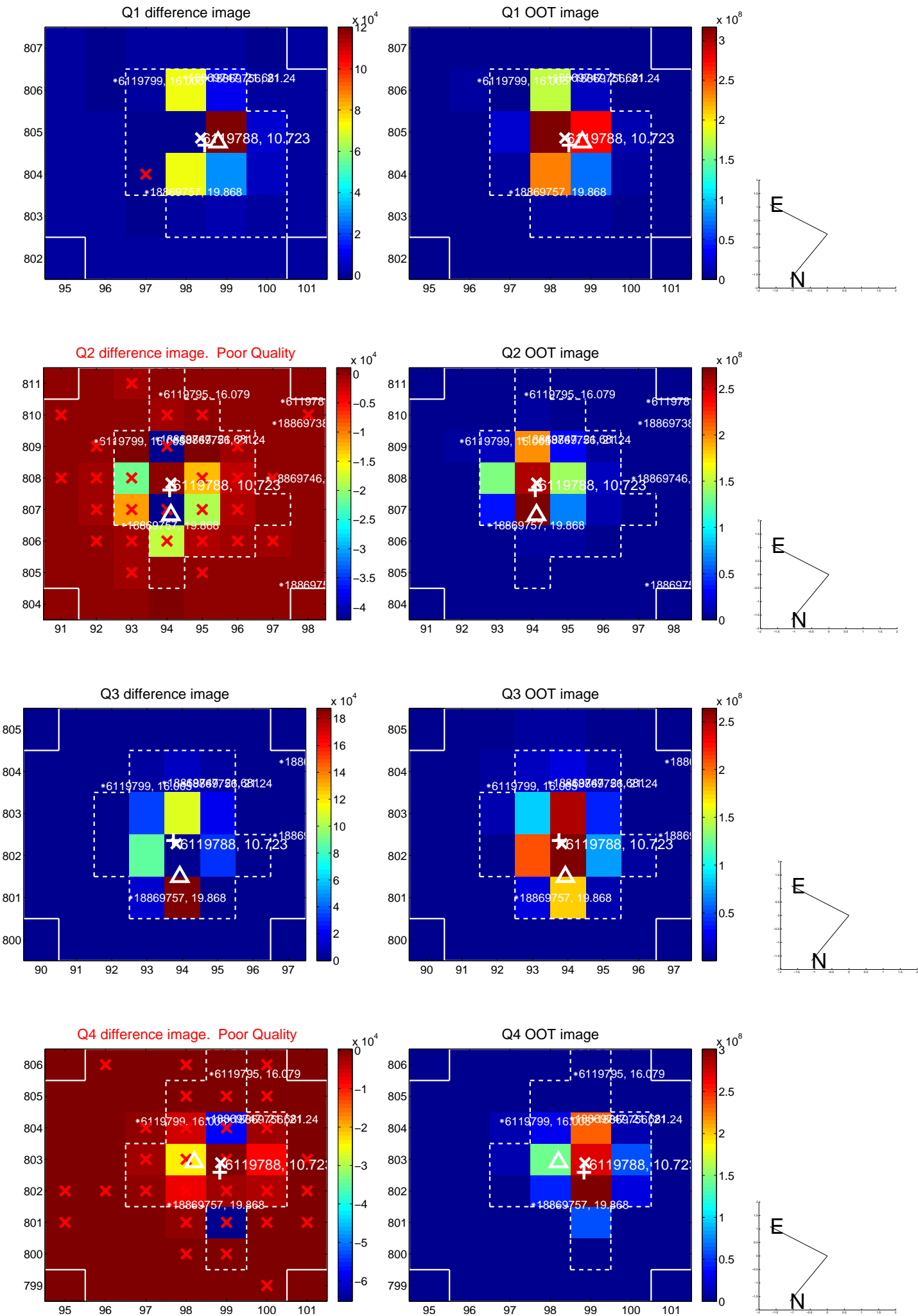
The direct PRF centroid is offset from the target star catalog position by about 0.87 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	<b><math>2.220 \pm 0.605</math></b>	<b>3.67</b>	$-1.052 \pm 0.483$	$1.955 \pm 0.492$
PRF-fit source offset from KIC position	<b><math>2.694 \pm 0.616</math></b>	<b>4.37</b>	$-1.492 \pm 0.476$	$2.242 \pm 0.501$
photometric centroid source offset	$0.12 \pm 0.05$	2.33	$0.11 \pm 0.05$	$0.04 \pm 0.07$

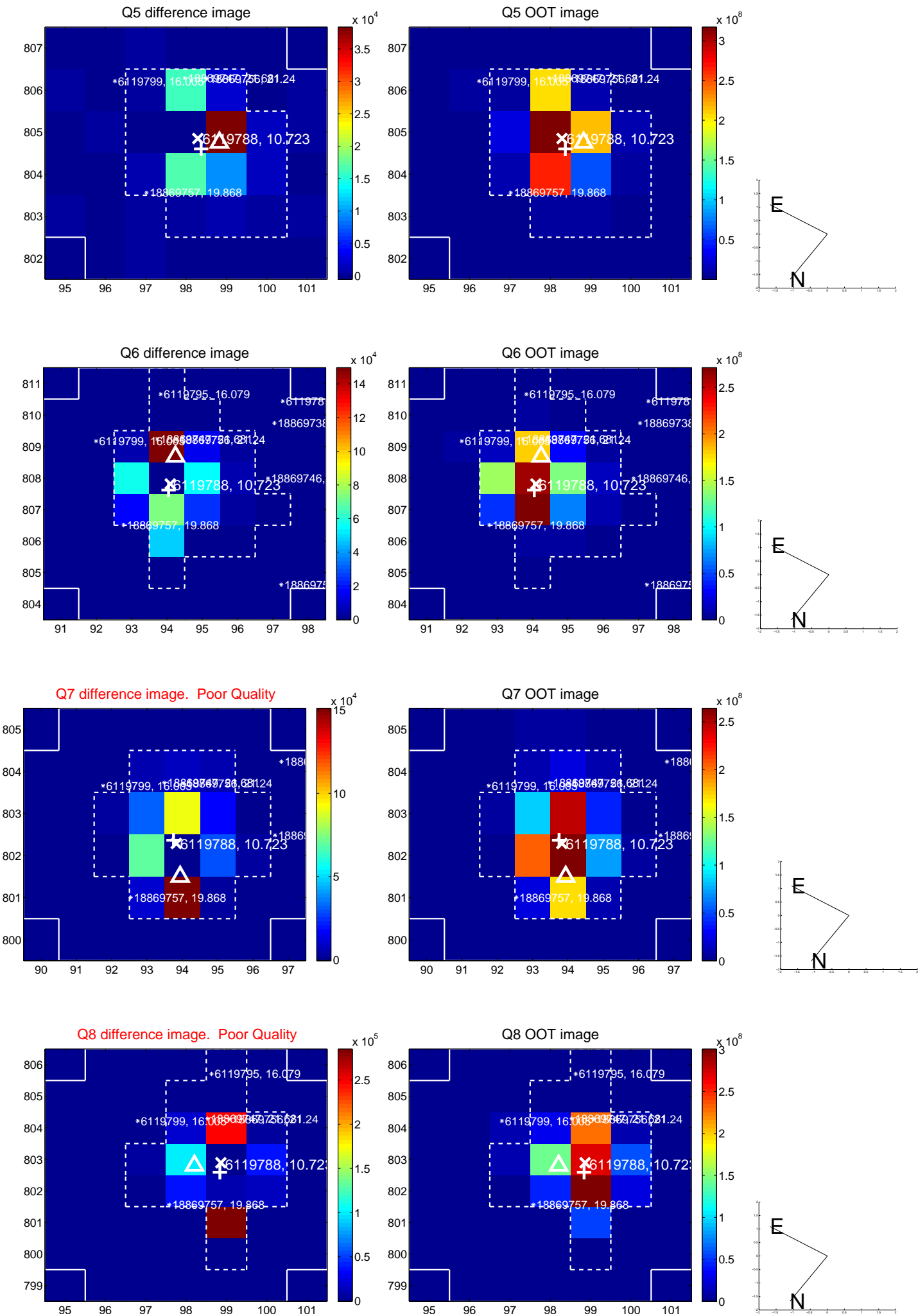


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

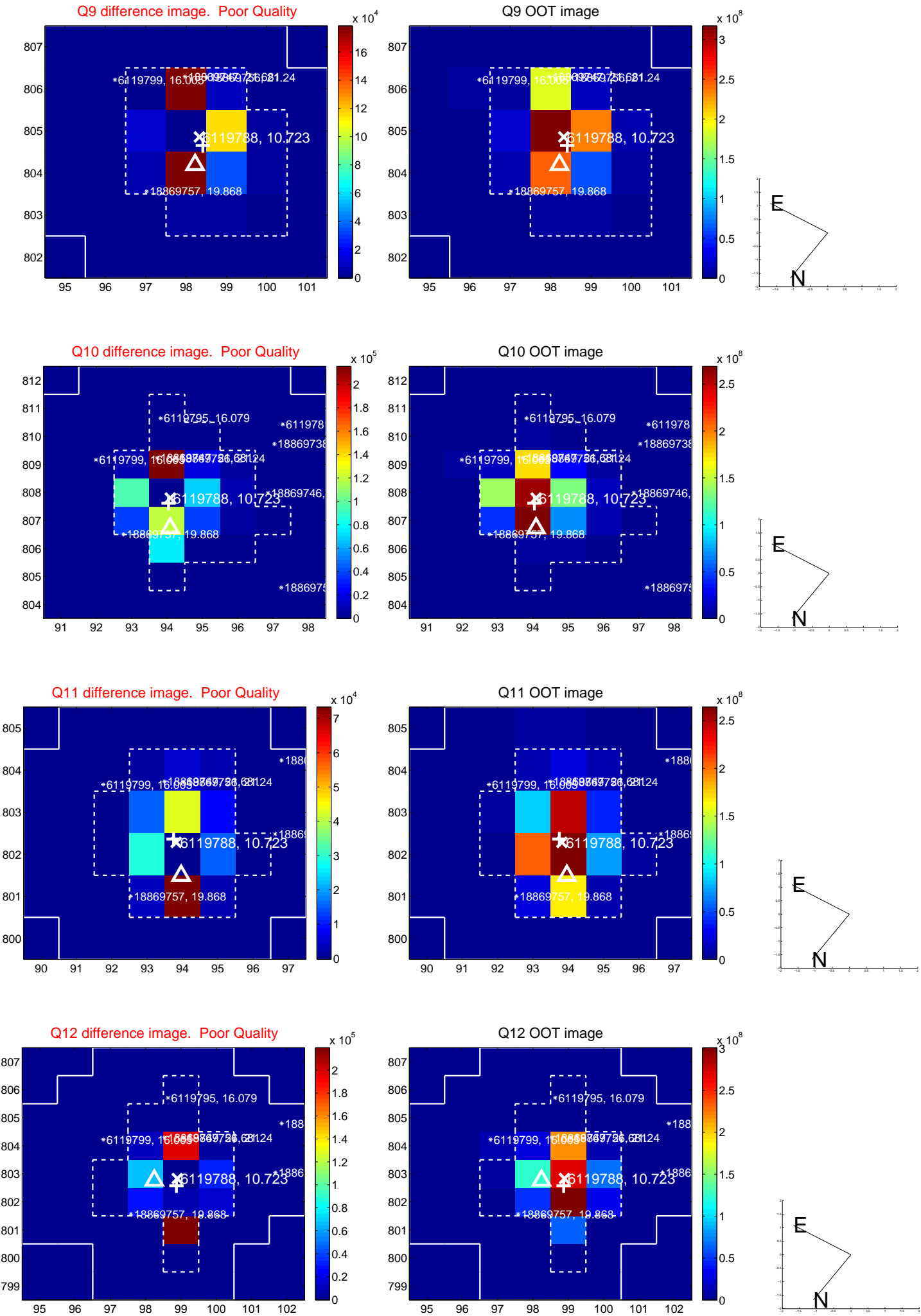
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

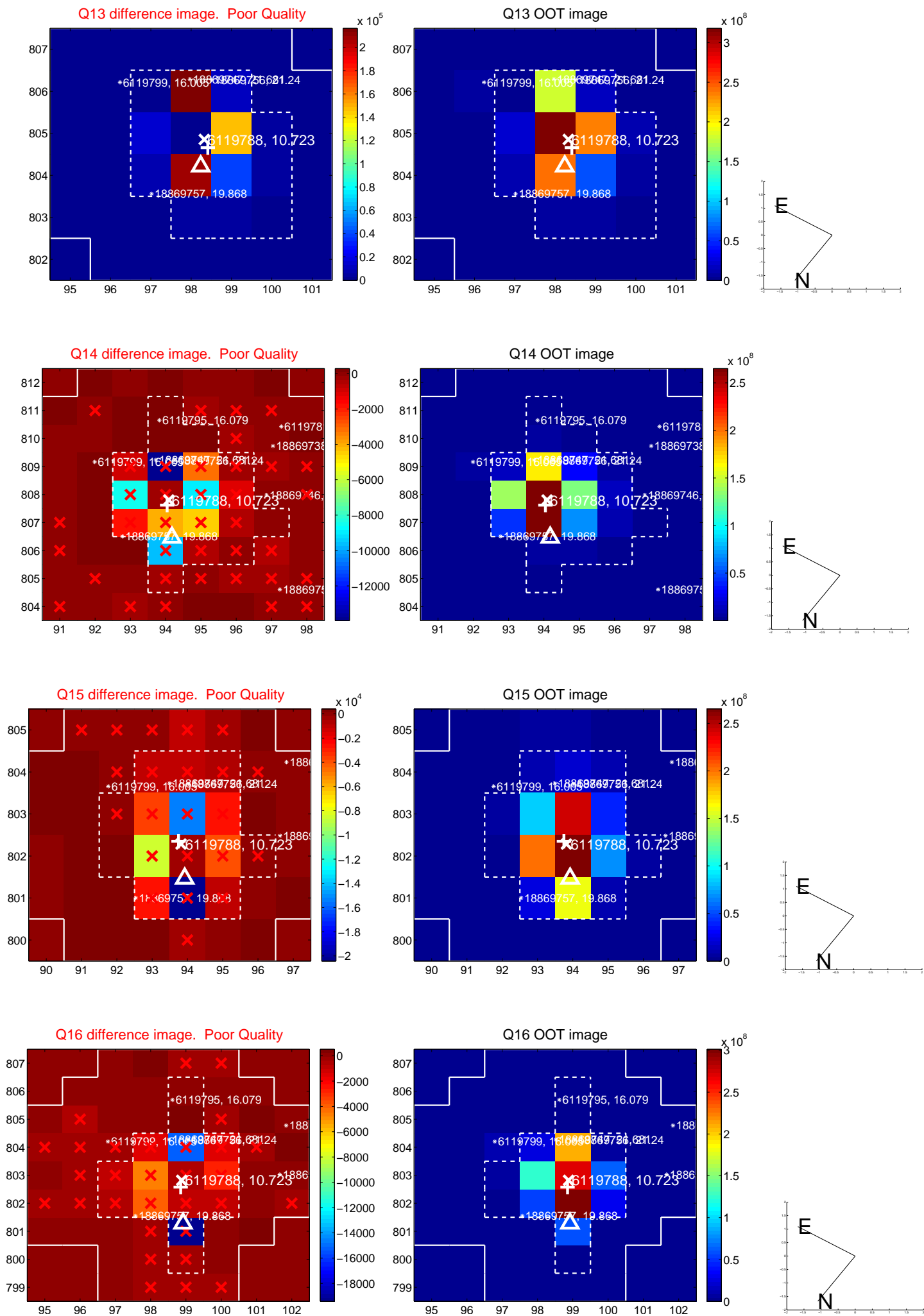


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

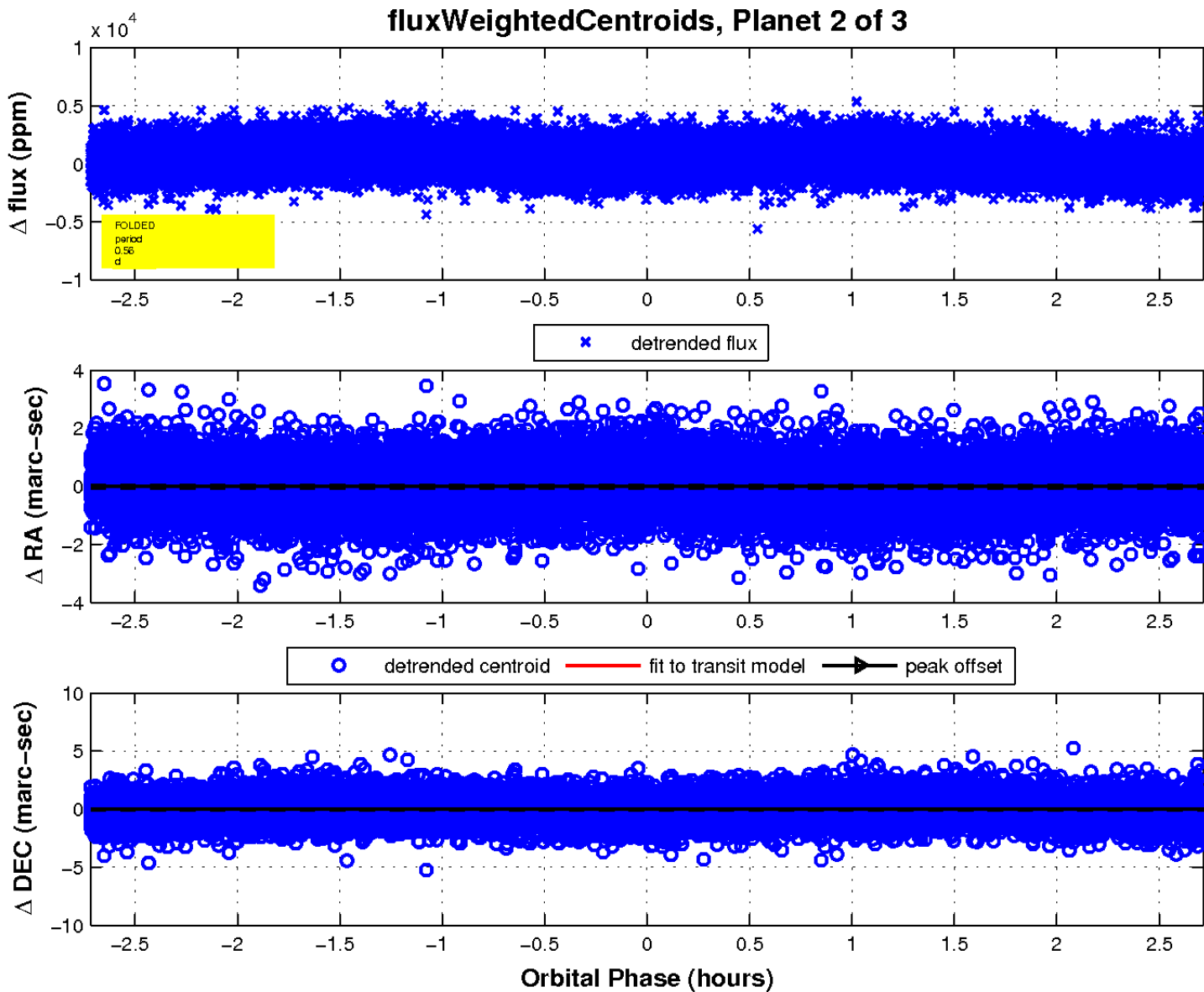
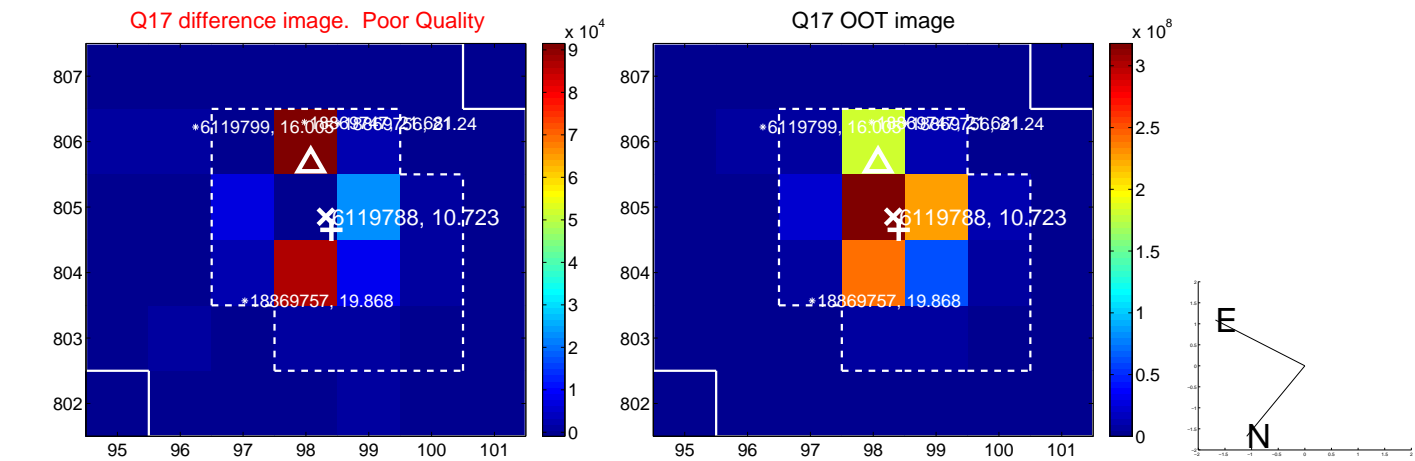




white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

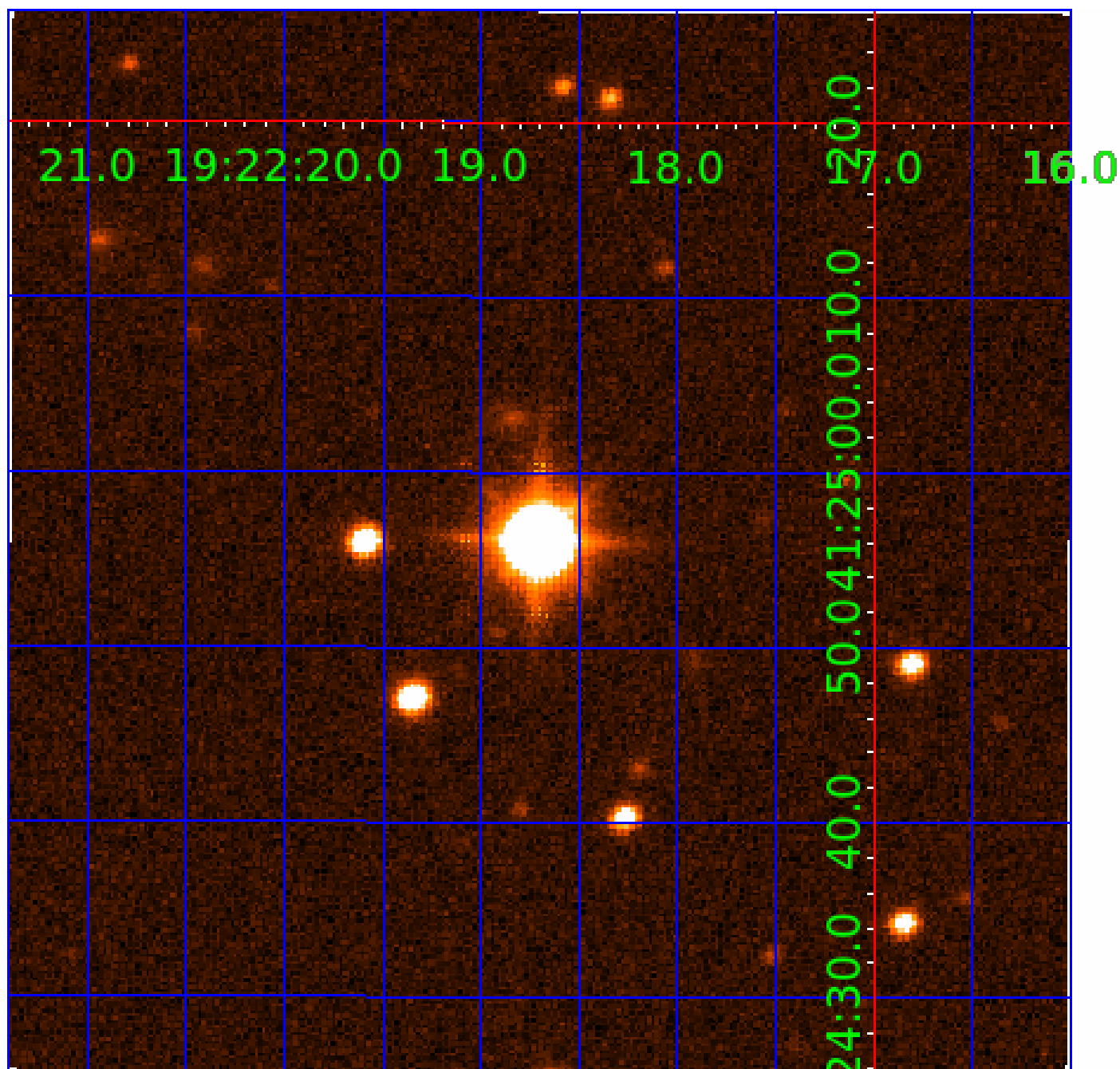


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination



# KIC 006119788

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006119788-01	OBS	No	0.563317	131.615079	351.0	0.734	12.1	16.0	1.49	7176	2.94	25402.57
006119788-02	OBS	No	0.563310	131.958878	370.9	0.906	11.9	18.7	1.49	7176	2.94	25402.97
006119788-03	OBS	No	0.563317	131.913745	671.6	4.976	9.6	20.4	1.49	7176	4.14	25402.60

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006119788-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED
006119788-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_SATURATED
006119788-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED

**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.

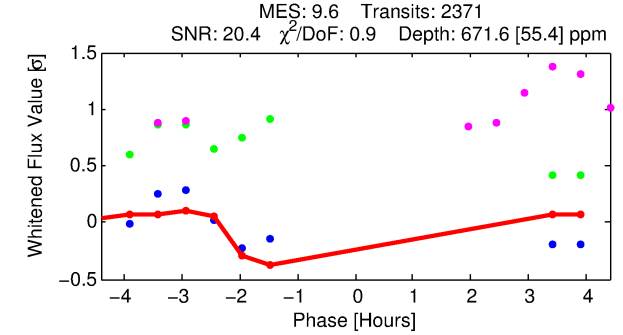
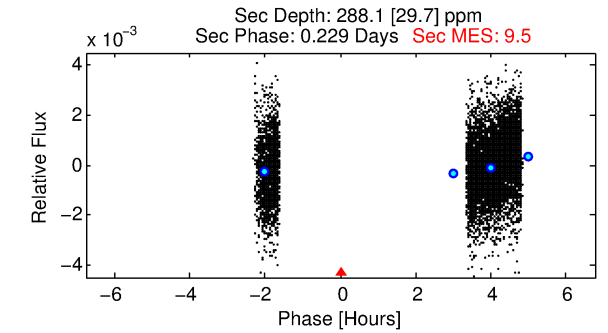
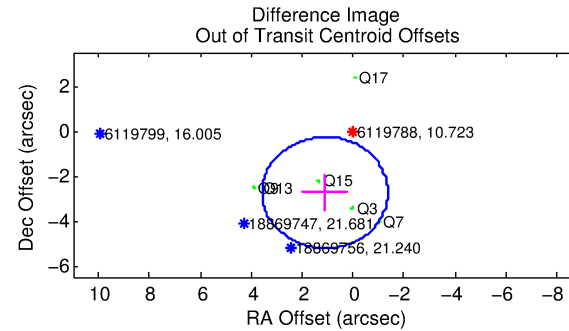
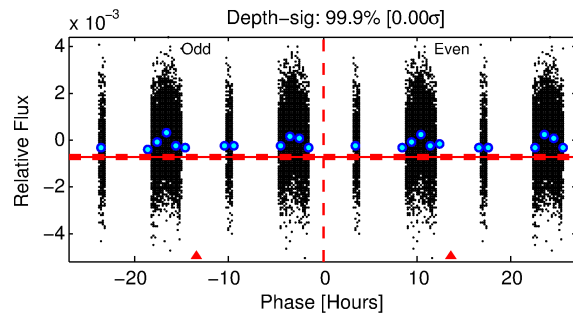
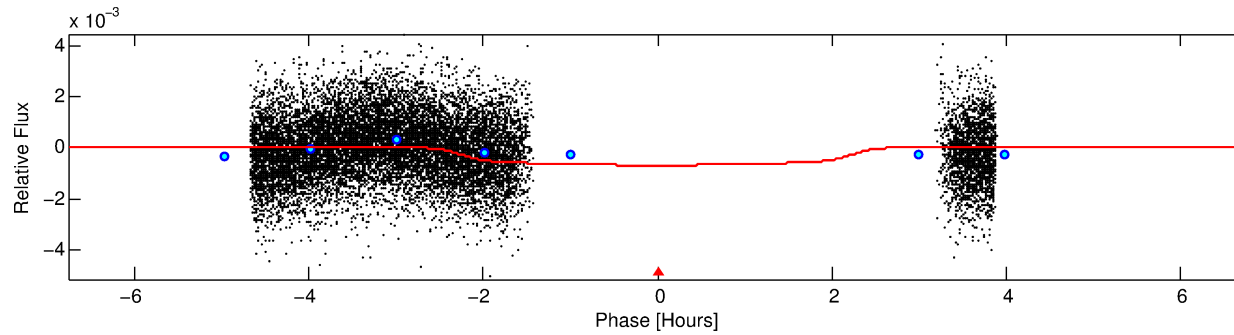
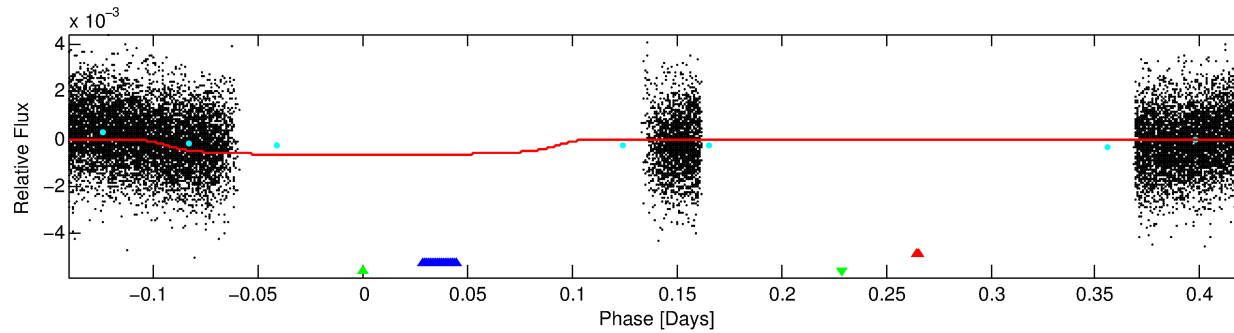
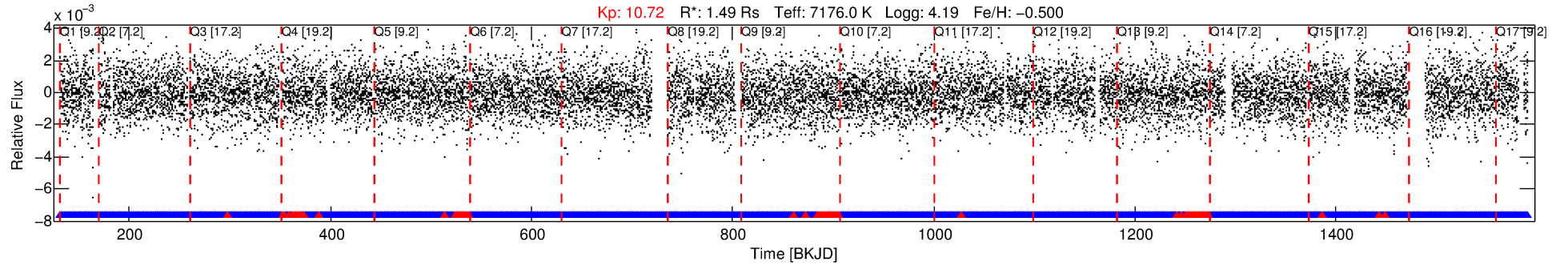
Ephemeris Match Information For 006119788-03

No Significant Match Found



# DV One-Page Summary

KIC: 6119788 Candidate: 3 of 3 Period: 0.563 d



## DV Fit Results:

Period = 0.56332 [0.00001] d  
Epoch = 131.9137 [0.0057] BKJD  
Rp/R\* = 0.0255 [0.0023]  
a/R\* = 1.08 [0.06]  
b = 0.70 [0.36]  
Seff = 25402.60 [9821.15]  
Teq = 3219 [311] K  
Rp = 4.14 [1.28] Re  
a = 0.0144 [0.0035] AU  
Ag = 1.92 [0.78] [1.19 $\sigma$ ]  
Teffp = 5860 [388] K [5.31 $\sigma$ ]

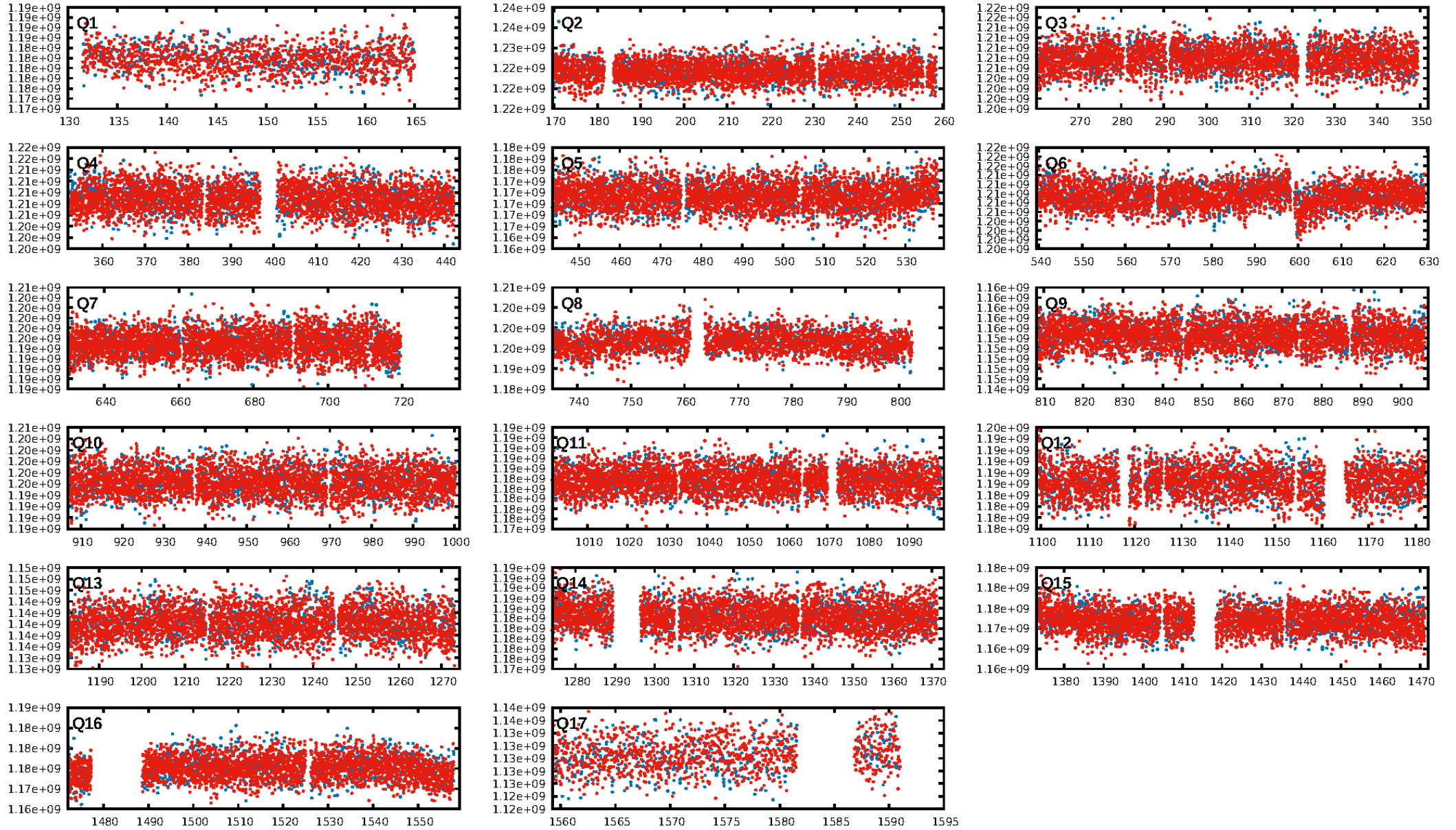
## DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 $\sigma$ ]  
LongPeriod-sig: 0.0% [0.00 $\sigma$ ]  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgm: 0.95 [2141/2264]  
GhostDiagnostic-chr: -29.56  
Centroid-sig: 0.0%  
Centroid-so: 0.112 arcsec [6.79 $\sigma$ ]  
OotOffset-rm: 2.957 arcsec [3.58 $\sigma$ ]  
KicOffset-rm: 3.413 arcsec [4.17 $\sigma$ ]  
OotOffset-st: 0/3/0/3 [6]  
KicOffset-st: 0/3/0/3 [6]  
DiffImageQuality-fgm: 0.17 [1/6]  
DiffImageOverlap-fno: 0.00 [0/17]

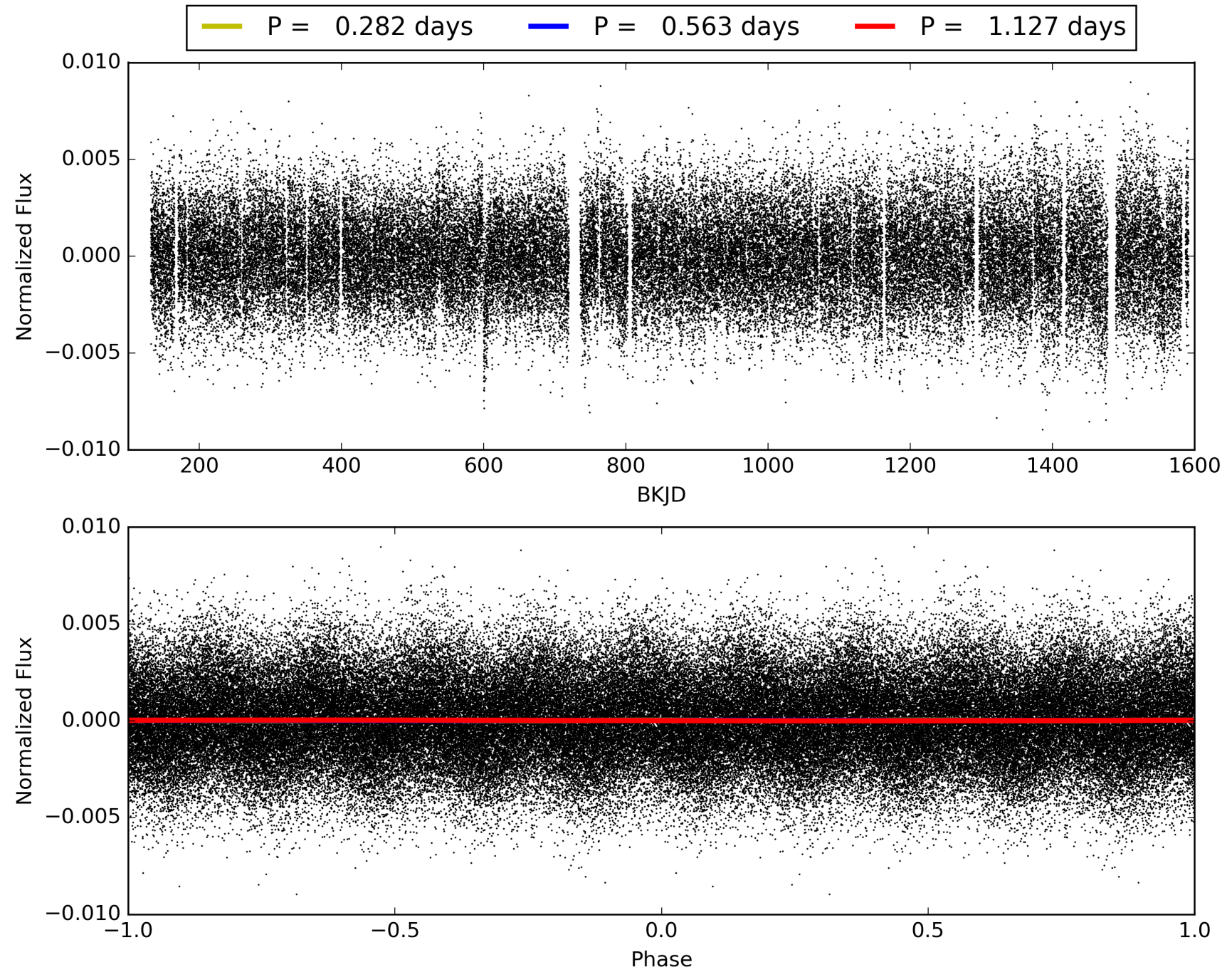
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 01:23:42 Z

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

# TCE 006119788-03, PDC Light Curves

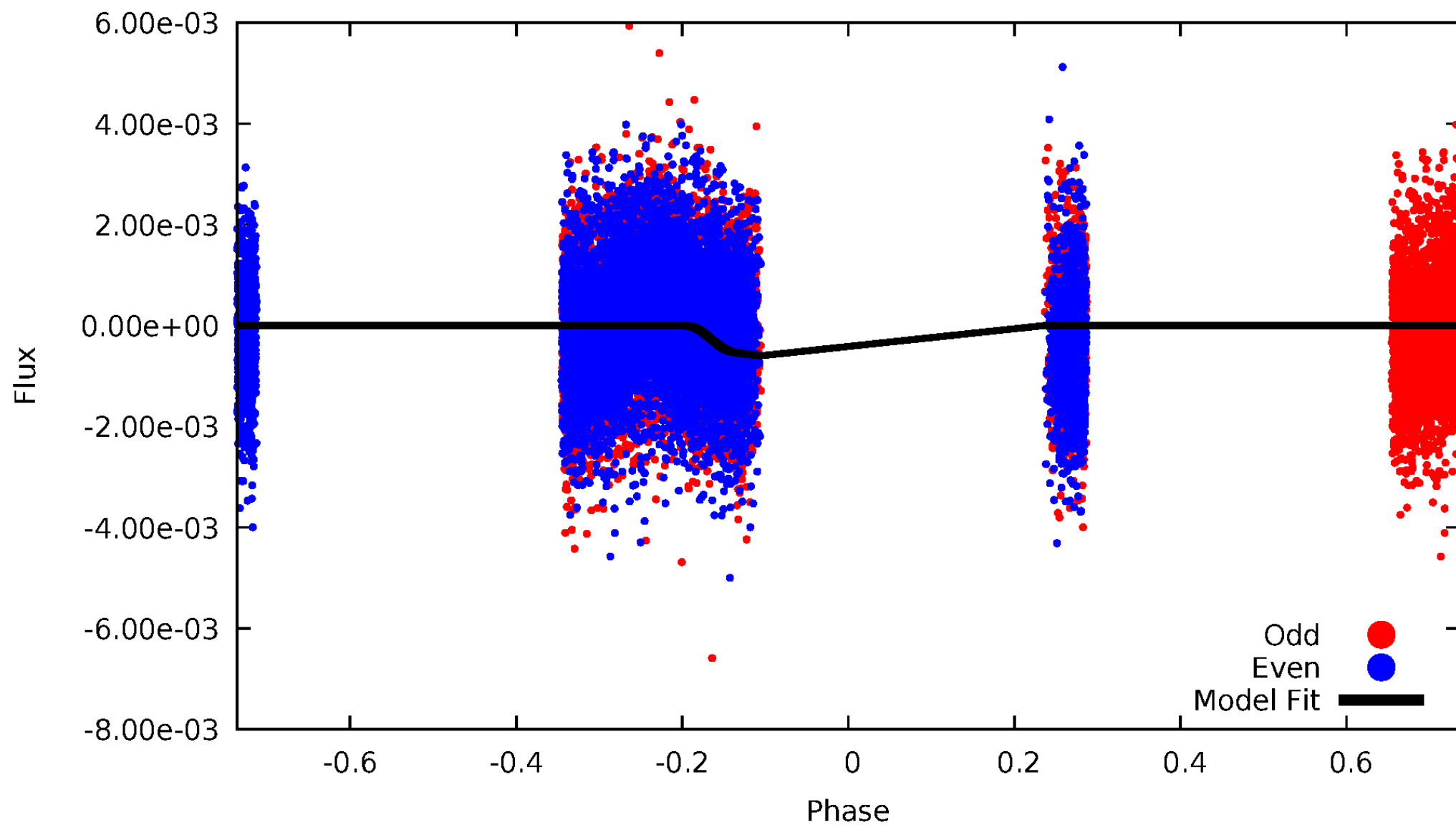


# TCE 006119788-03



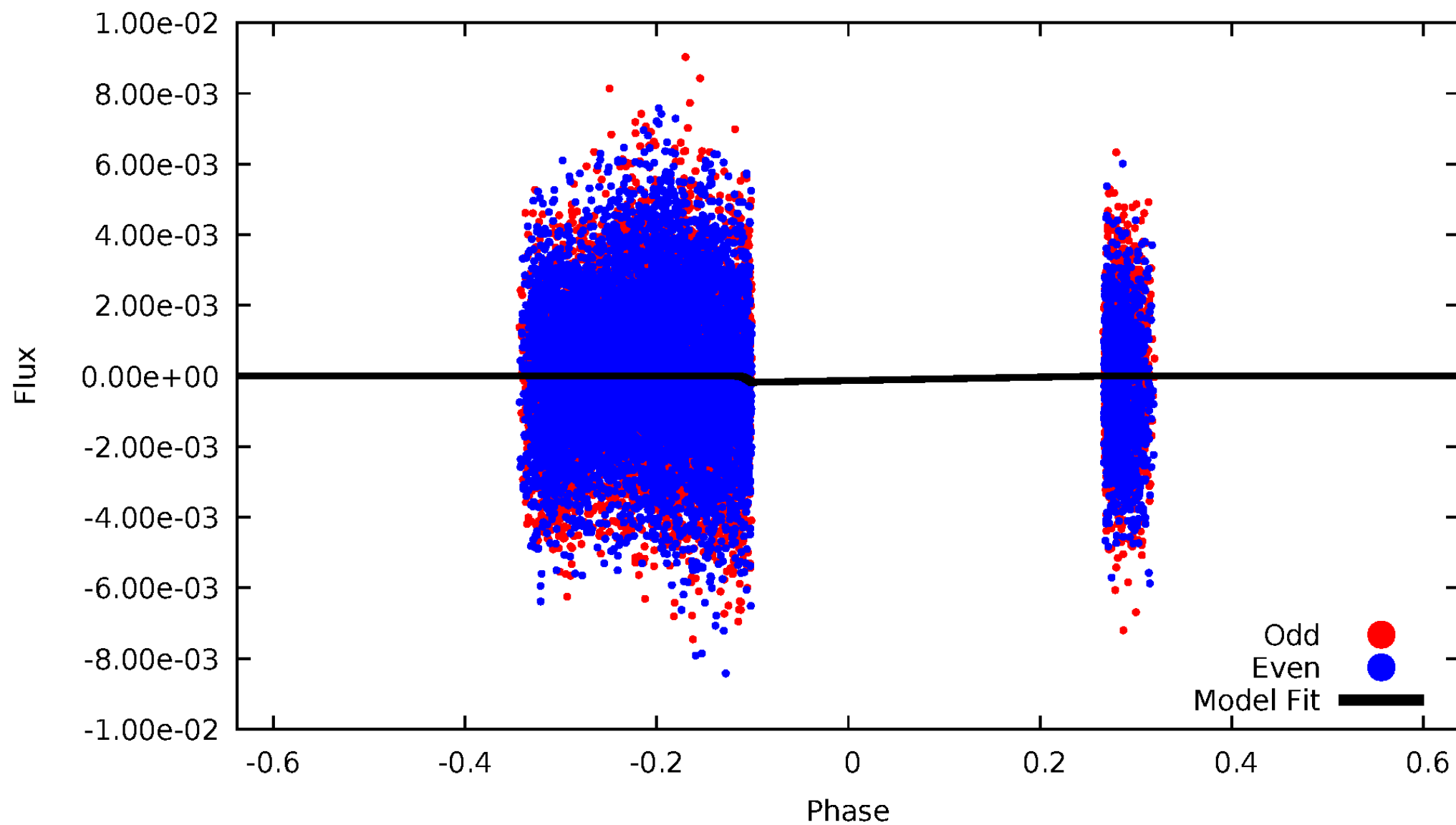
# DV Odd/Even

TCE 006119788-03



# ALT Odd/Even

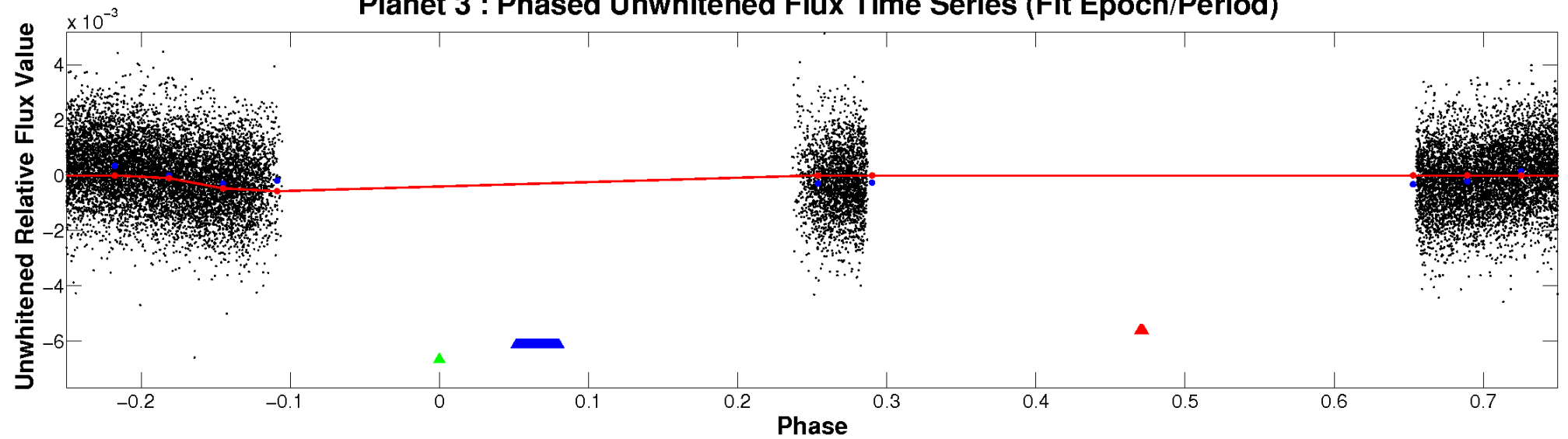
TCE 006119788-03



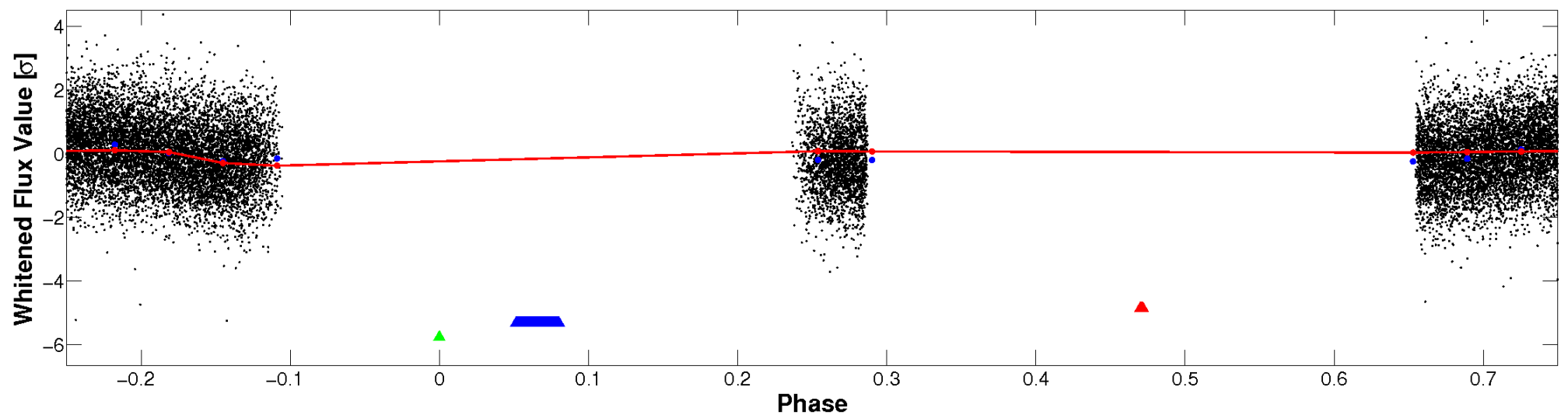


# Non-Whitened Vs. Whitened Light Curve

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

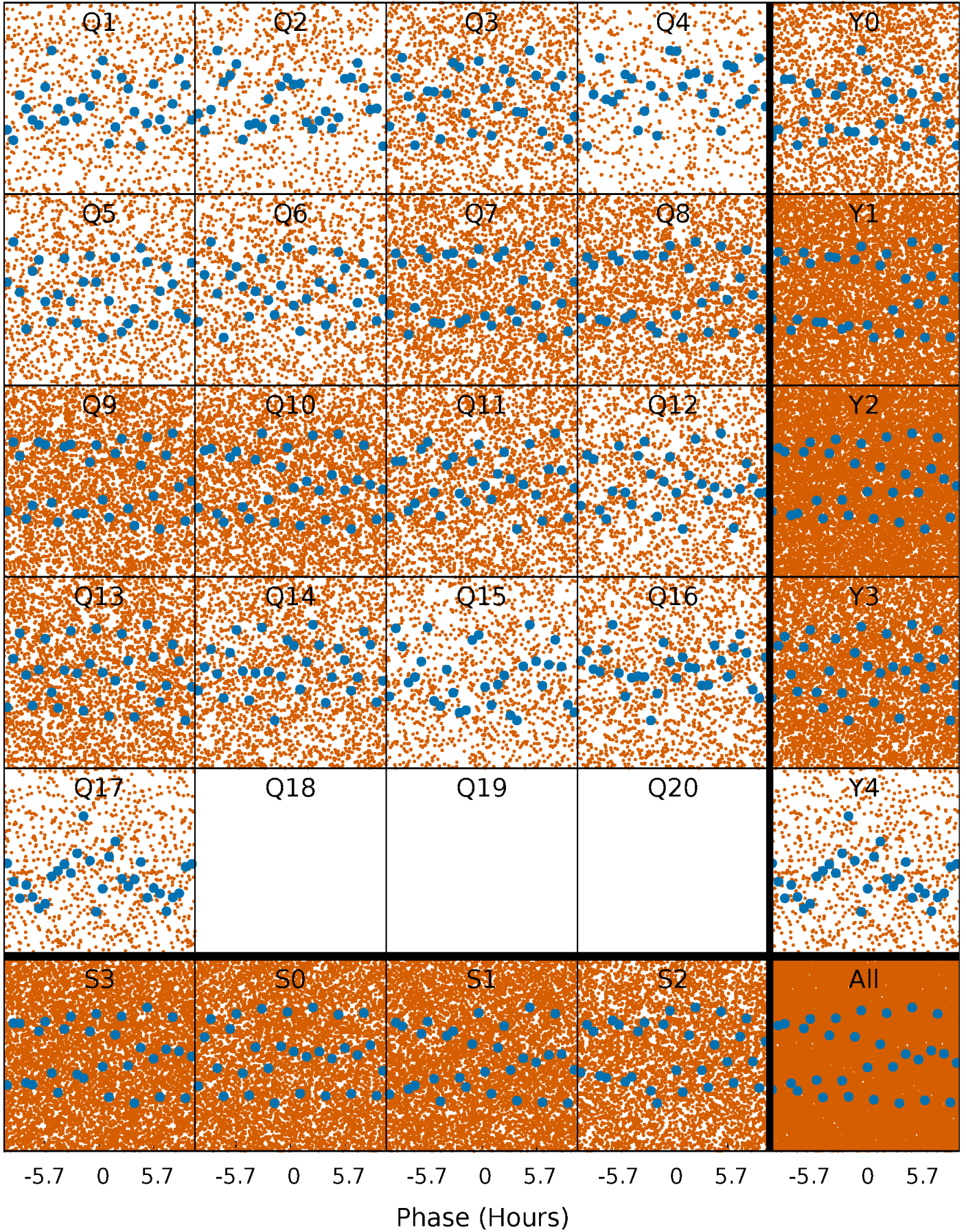


**Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



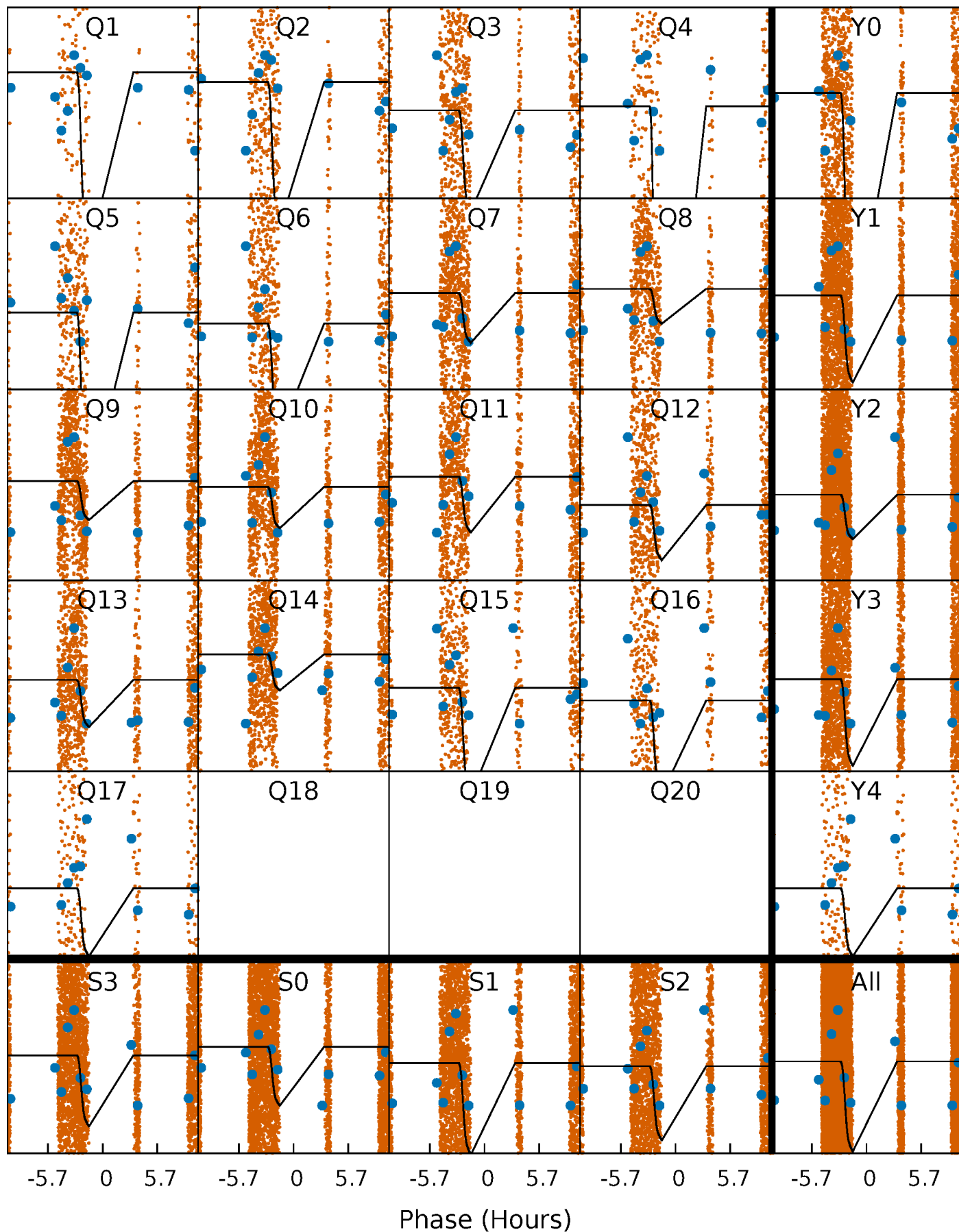
# PDC Quarter-Phased Transit Curves

TCE 006119788-03   P= 0.563317 Days    $T_0=131.913745$  (BKJD)



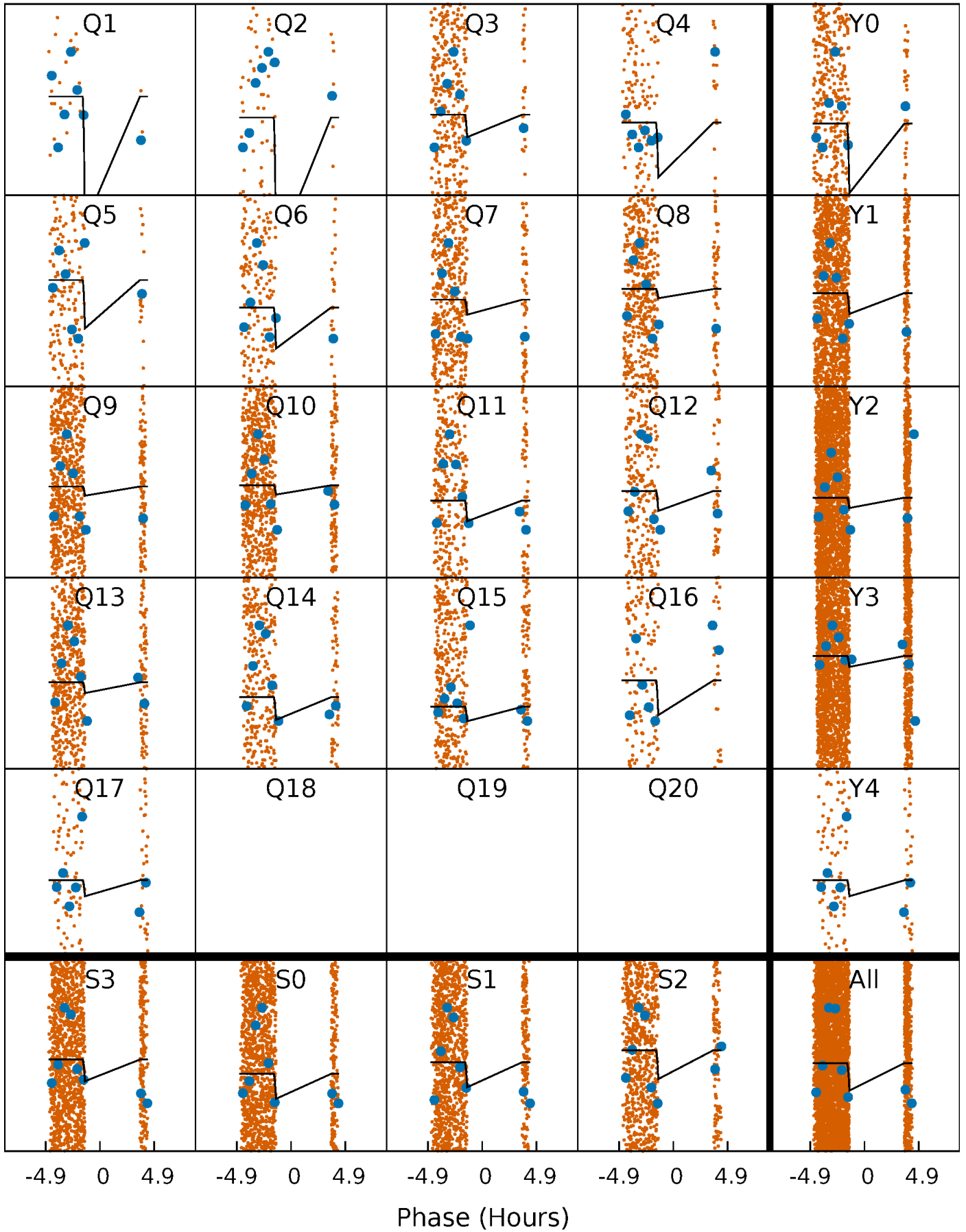
# DV Quarter-Phased Transit Curves

TCE 006119788-03 P= 0.563317 Days  $T_0=131.913745$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 006119788-03   P= 0.563310 Days    $T_0=131.912922$  (BKJD)

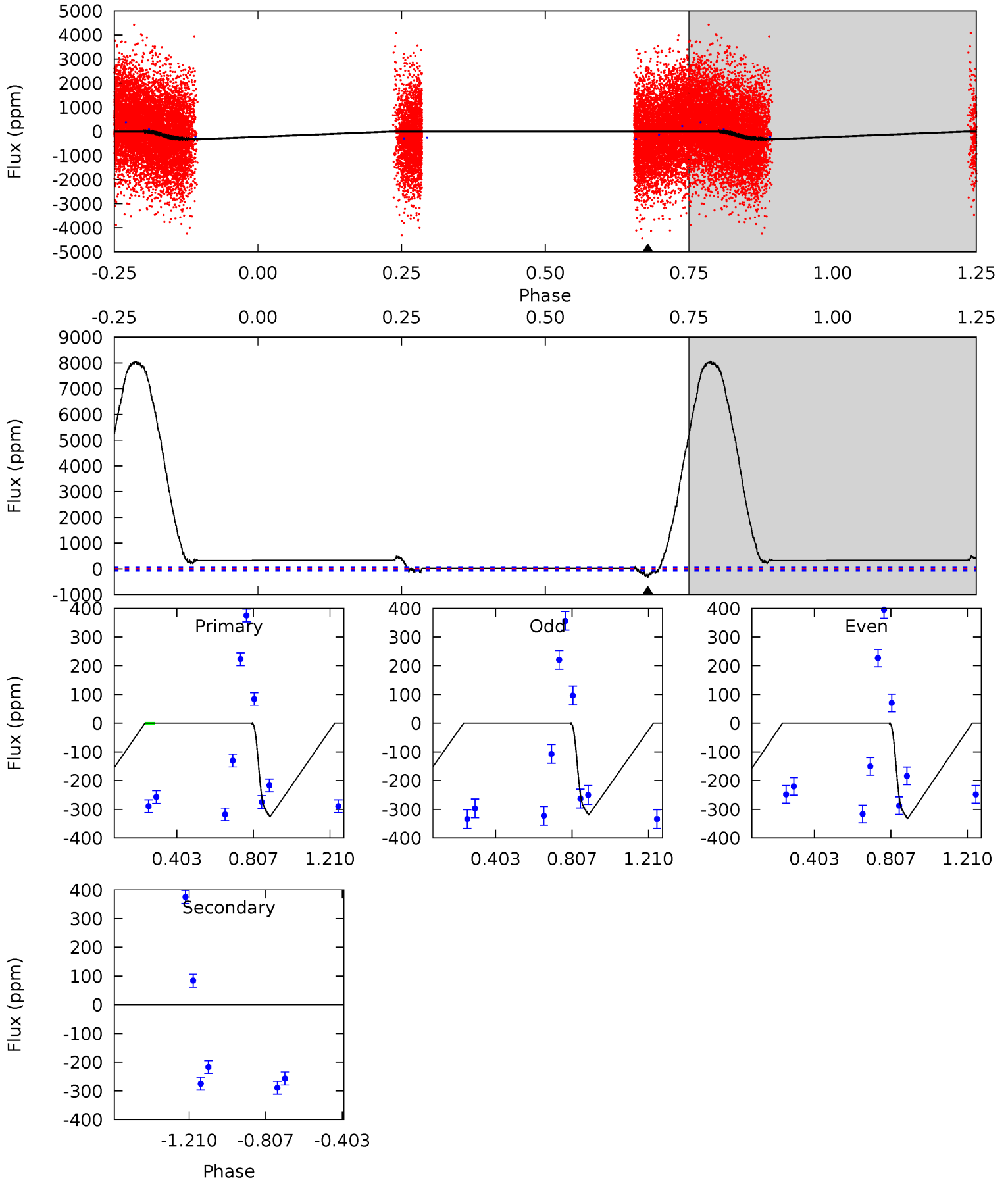




# DV Model-Shift Uniqueness Test

006119788-03, P = 0.563317 Days, E = 131.350428 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
20.0	0	0	0	4.26	0.84	10.9	20.0	20.0	0	0	0.41	0	0.96	0

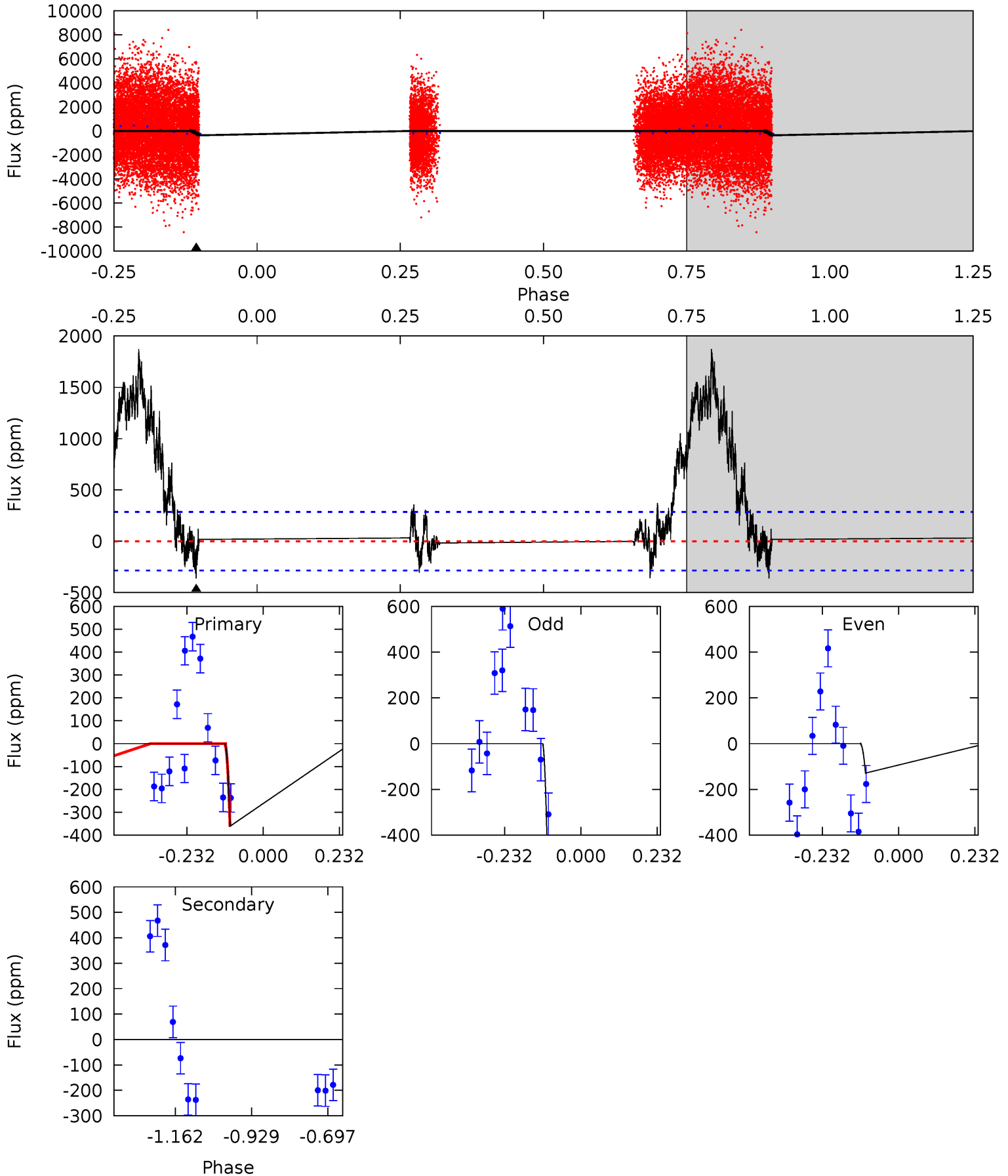




# Alt Model-Shift Uniqueness Test

006119788-03, P = 0.563310 Days, E = 131.349612 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
5.55	0	0	0	4.38	1.19	2.30	5.55	5.55	0	0	3.19	0	0.84	0



### Stellar Parameters For KIC 006119788

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$7176^{+225}_{-300}$	$4.191^{+0.153}_{-0.187}$	$-0.500^{+0.250}_{-0.300}$	$1.490^{+0.442}_{-0.295}$	$1.258^{+0.188}_{-0.188}$	$0.535^{+0.461}_{-0.245}$
	+3%/-4%	+4%/-4%	+50%/-60%	+30%/-20%	+15%/-15%	+86%/-46%
Source	PHO54	PHO54	PHO54	DSEP		

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

### Secondary Eclipse Parameters for KIC 006119788-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$0 \pm 16$	$4.17^{+0.71}_{-0.64}$	$4496^{+373}_{-337}$	$-3997^{+369}_{-315}$	$-0.003^{+0.109}_{-0.104}$
Alt.	$0 \pm 65$	$4.27^{+0.80}_{-0.54}$	$4508^{+340}_{-312}$	$-4021^{+7242}_{-713}$	$-0.023^{+0.409}_{-0.408}$

$T_{\text{max}}$  = 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

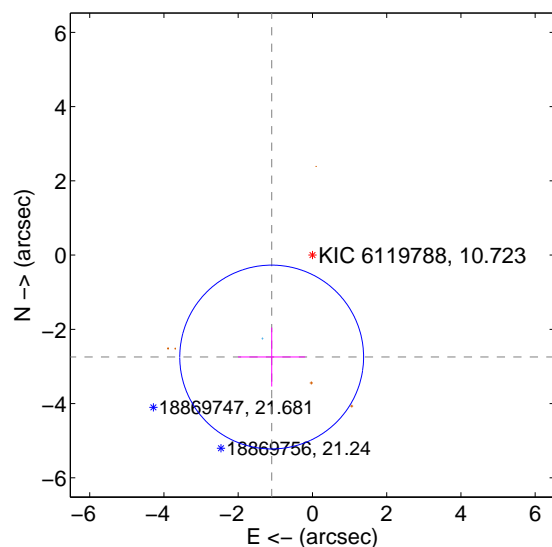
Supplemental centroid analysis for 006119788-03. **Kepler magnitude: 10.72.** Transit SNR 20.35

**There are 1 quarters with good PRF difference image offsets**

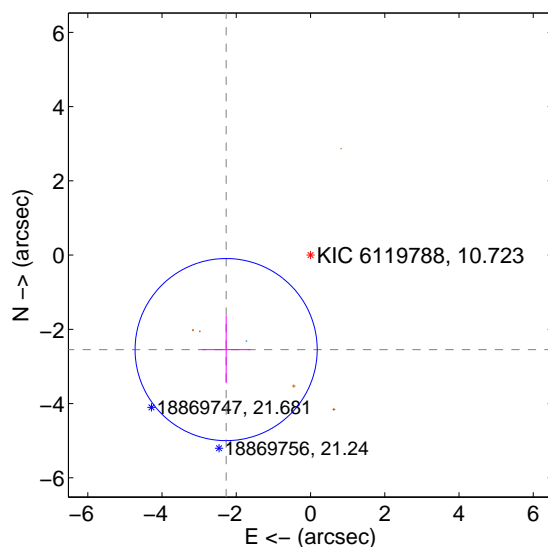
The direct PRF centroid is offset from the target star catalog position by about 0.87 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	<b><math>2.957 \pm 0.825</math></b>	<b>3.58</b>	$1.098 \pm 0.906$	$-2.746 \pm 0.794$
PRF-fit source offset from KIC position	<b><math>3.413 \pm 0.818</math></b>	<b>4.17</b>	$2.273 \pm 0.657$	$-2.545 \pm 0.905$
photometric centroid source offset	<b><math>0.11 \pm 0.02</math></b>	<b>6.79</b>	$0.10 \pm 0.02$	$-0.04 \pm 0.02$

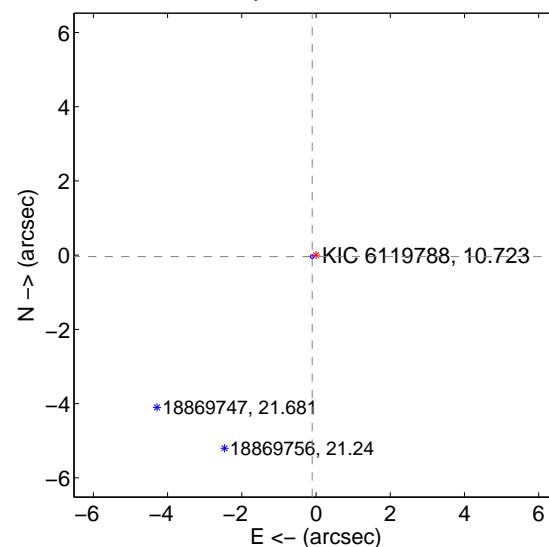
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

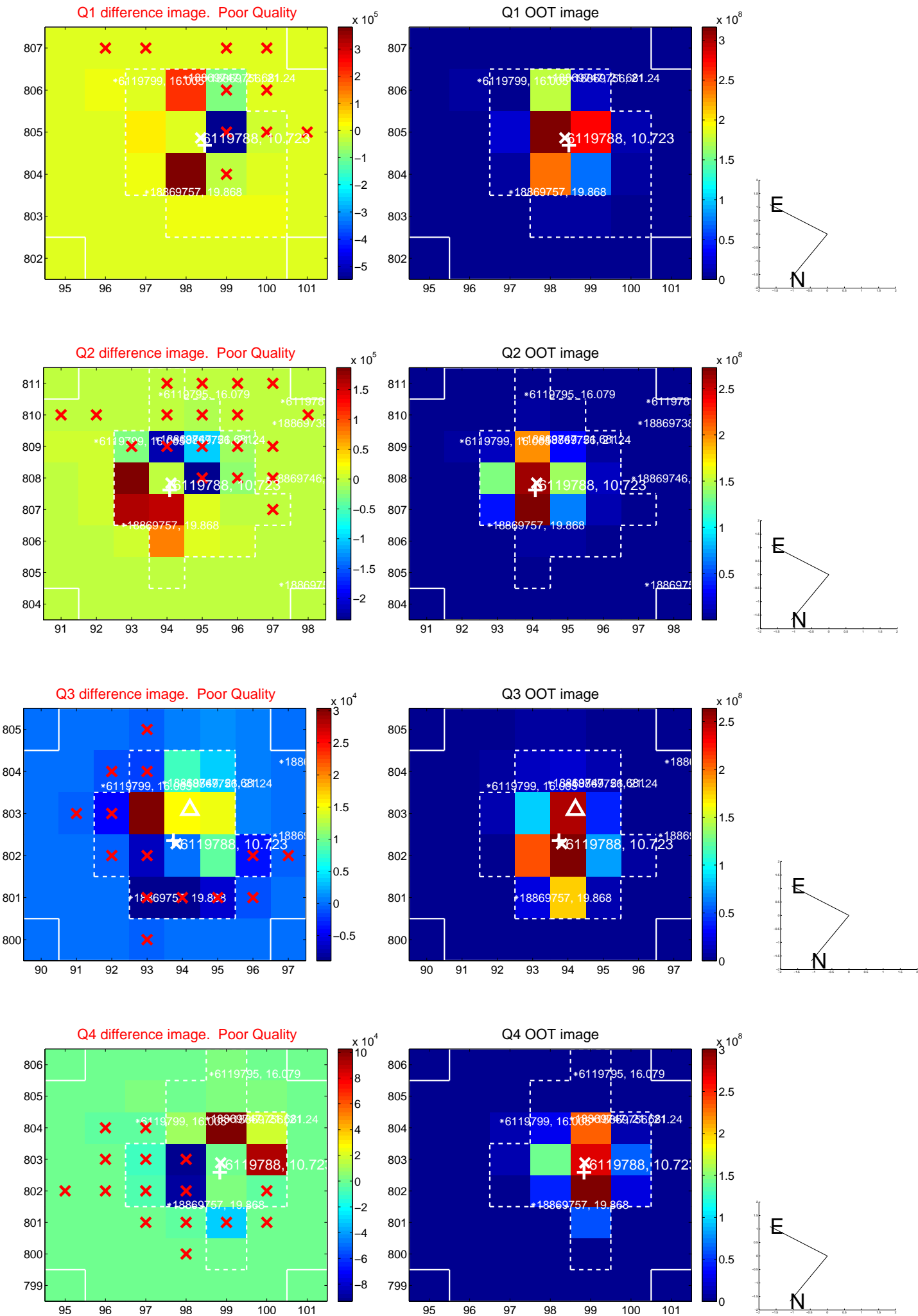


offset from photometric centroids

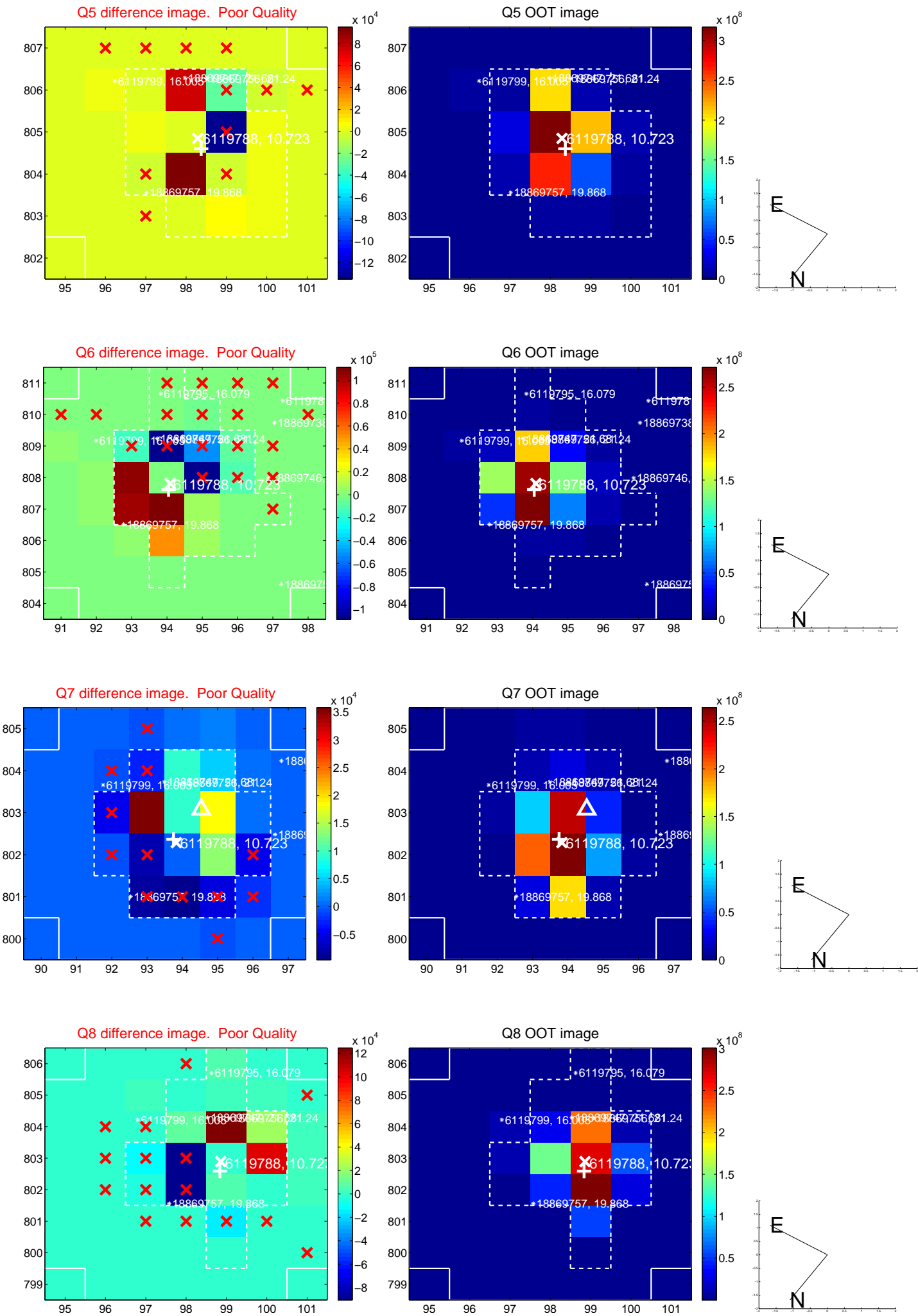


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

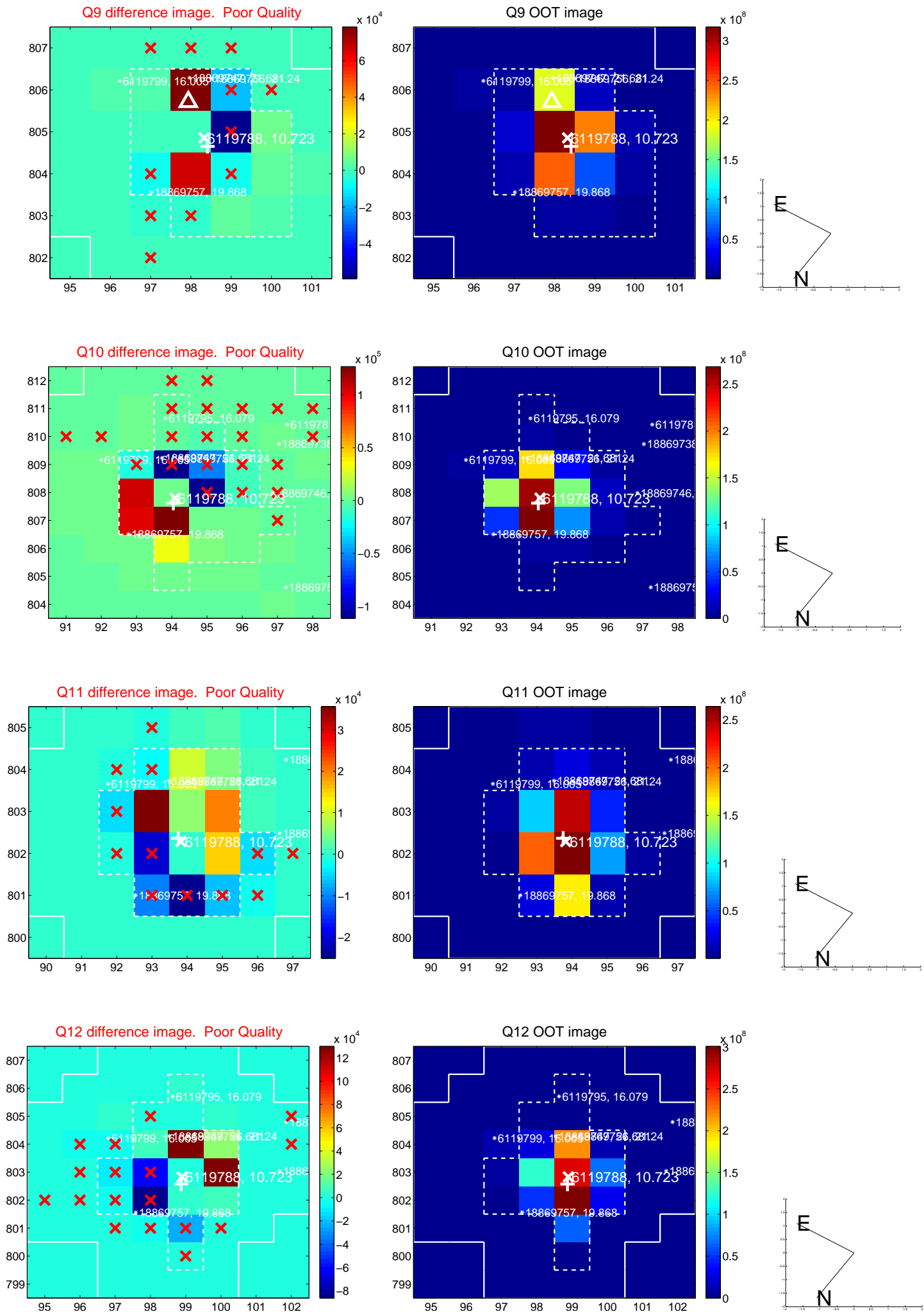


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

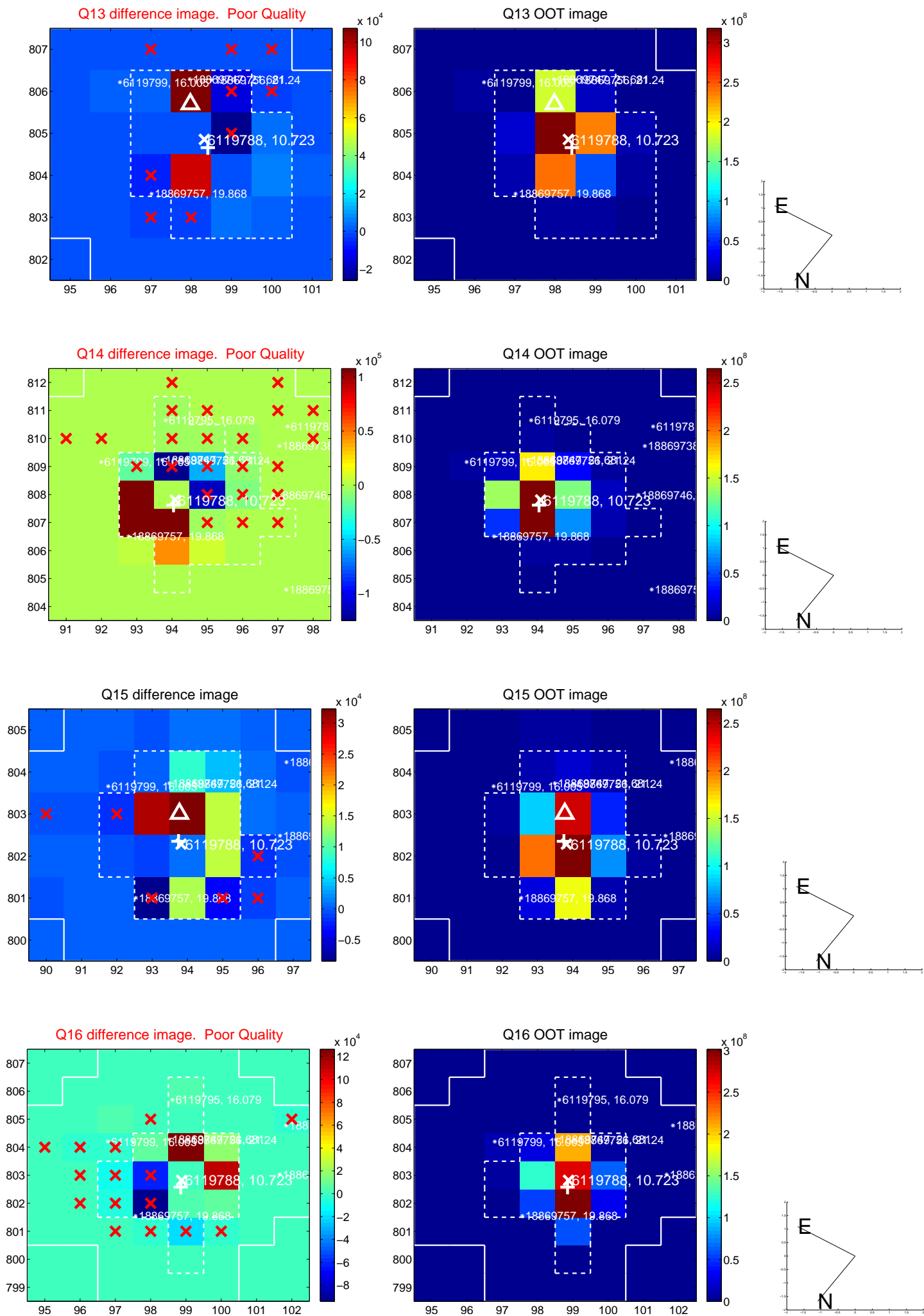




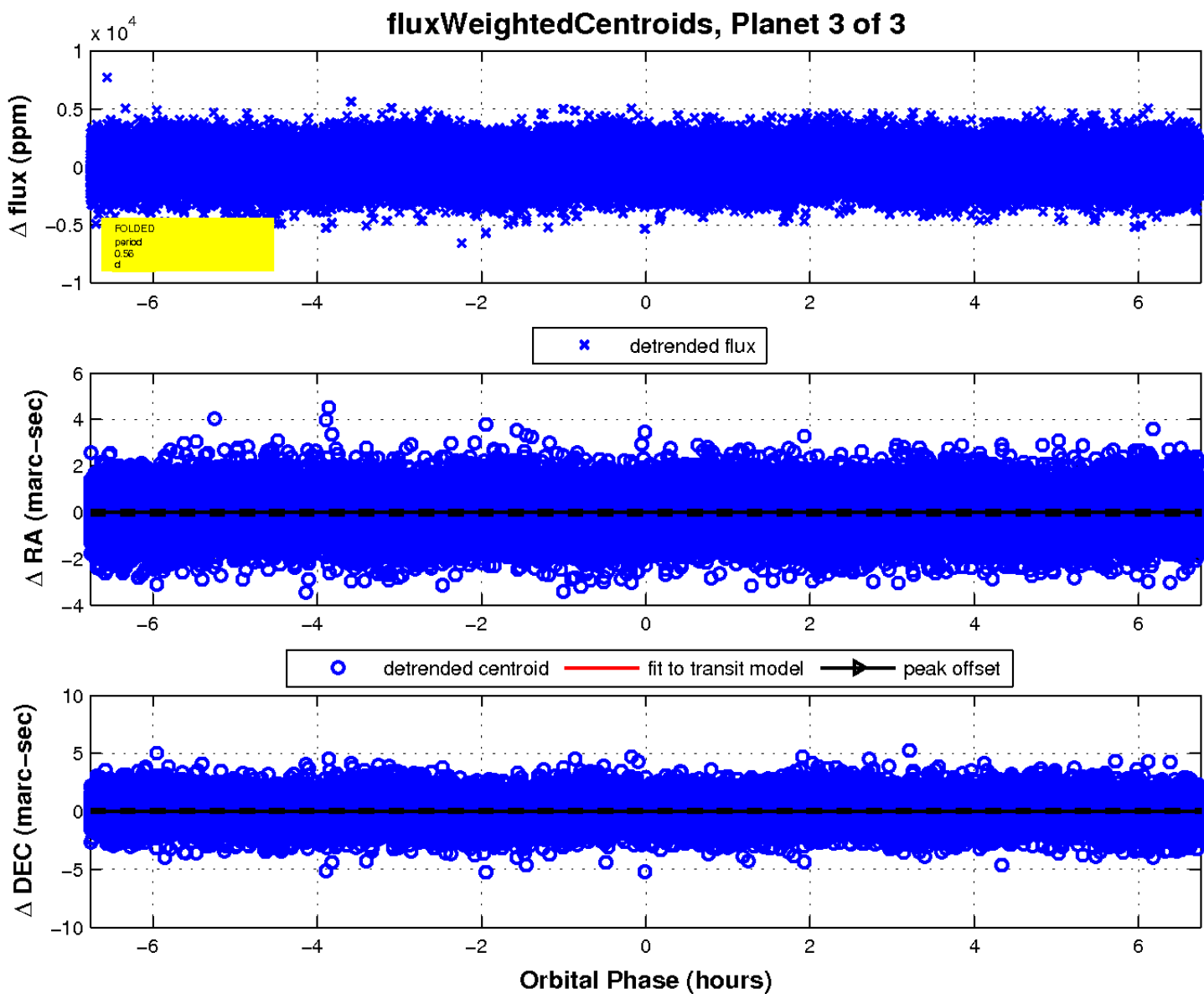
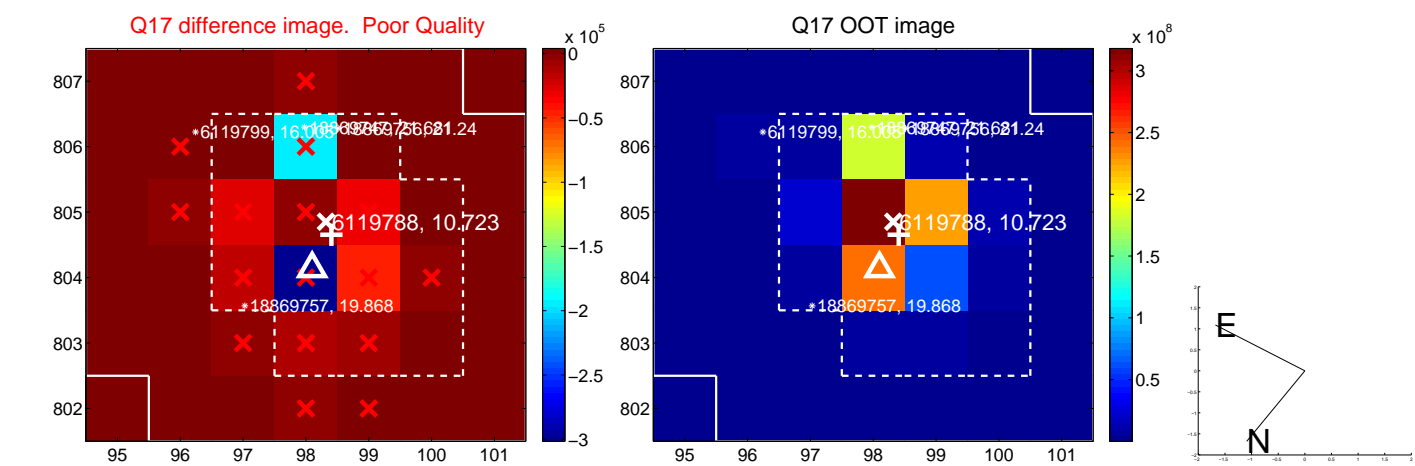
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

