

# KIC 010666592

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
010666592-01	OBS	0002.01	2.204731	132.383258	6676.5	4.044	3862.2	3564.7	1.95	6440	16.78	4165.02
010666592-02	OBS	No	2.204730	133.485816	62.5	3.919	39.7	40.7	1.95	6440	1.81	4165.02
010666592-03	OBS	No	2.205225	131.978785	20.7	14.659	14.0	12.5	1.95	6440	0.90	4163.77
010666592-04	OBS	No	35.356054	163.335903	94.5	10.421	26.4	8.6	1.95	6440	1.90	102.99
010666592-05	OBS	No	20.490420	137.639645	45.1	12.320	16.1	5.1	1.95	6440	1.32	213.15
010666592-06	OBS	No	25.975692	132.034470	133.1	2.262	11.3	10.1	1.95	6440	2.32	155.36
010666592-07	OBS	No	39.279443	164.669535	93.6	3.000	9.8	-1.0	1.95	6440	1.90	89.51

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010666592-01	OBS	PC	1.00	0	1	0	0	MOD_SEC_DV—PLANET_OCCULT_DV—MOD_SEC_ALT—PLANET_OCCULT_ALT—HAS_SEC_TCE—CENT_SATURATED
010666592-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_SATURATED
010666592-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—RESIDUAL_TCE—CENT_SATURATED
010666592-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_SATURATED
010666592-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_SATURATED
010666592-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—CENT_SATURATED
010666592-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—NO_FITS—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.

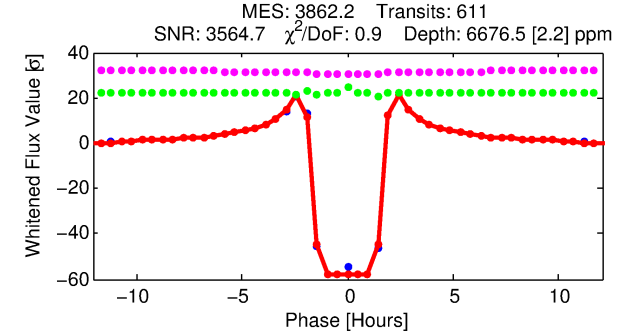
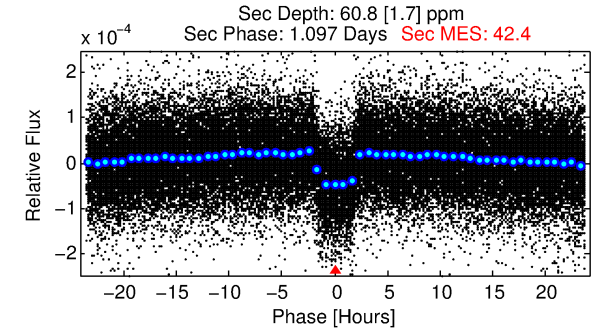
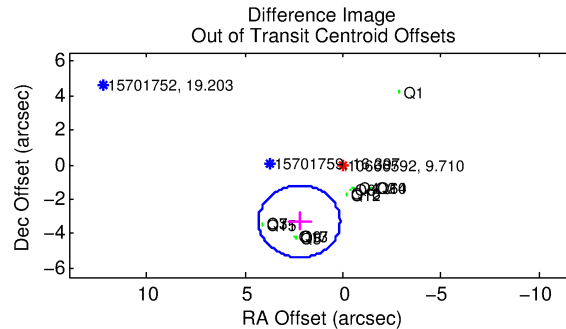
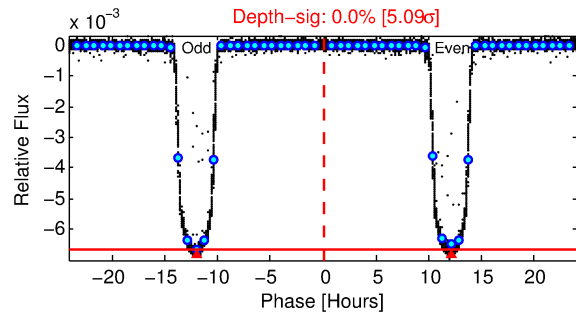
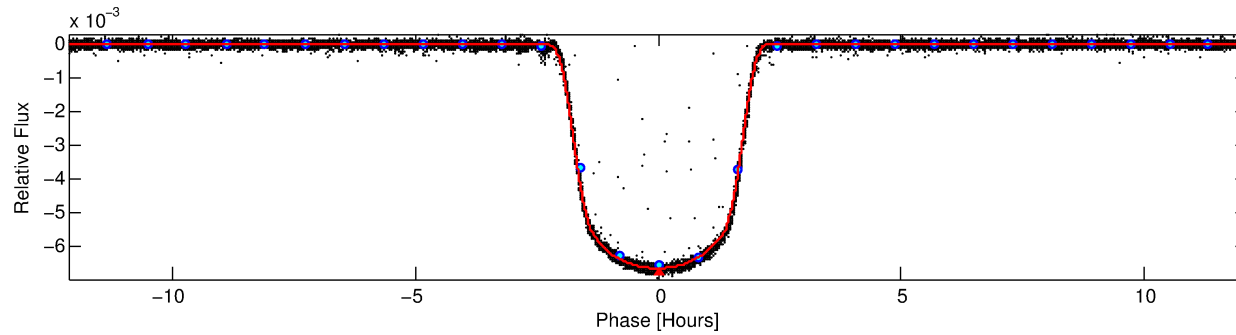
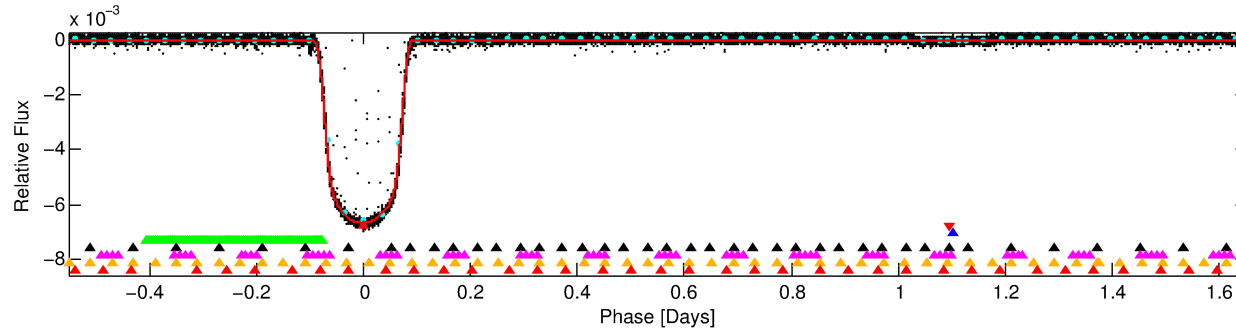
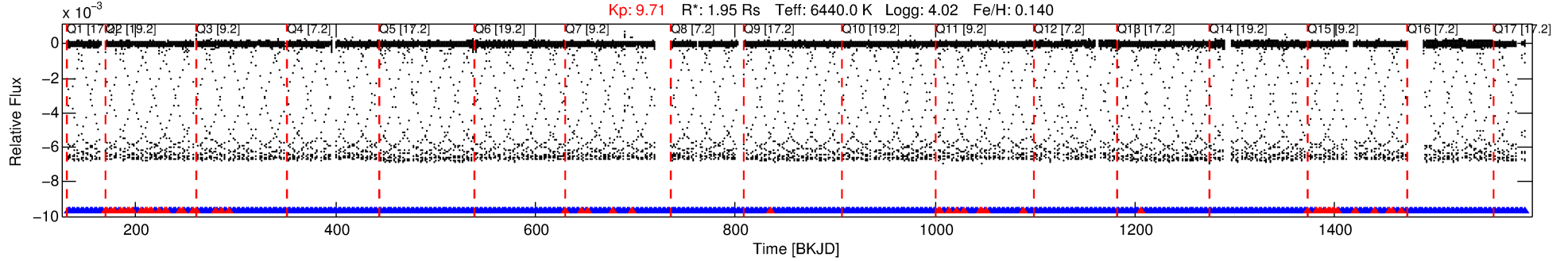
Ephemeris Match Information For 010666592-01

No Significant Match Found

# DV One-Page Summary

KIC: 10666592 Candidate: 1 of 7 Period: 2.205 d  
KOI: K00002.01 Name: Kepler-2b Corr: 0.980

Kp: 9.71 R\*: 1.95 Rs Teff: 6440.0 K Logg: 4.02 Fe/H: 0.140



## DV Fit Results:

Period = 2.20473 [0.00000] d  
Epoch = 132.3833 [0.0000] BKJD  
Rp/R\* = 0.0788 [0.0000]  
a/R\* = 3.76 [0.01]  
b = 0.62 [0.00]  
Seff = 4165.02 [349.30]  
Teq = 2048 [43] K  
Rp = 16.78 [0.95] Re  
a = 0.0375 [0.0017] AU  
Ag = 0.17 [0.01] [-72.40σ]  
Teffp = 2026 [31] K [-0.43σ]

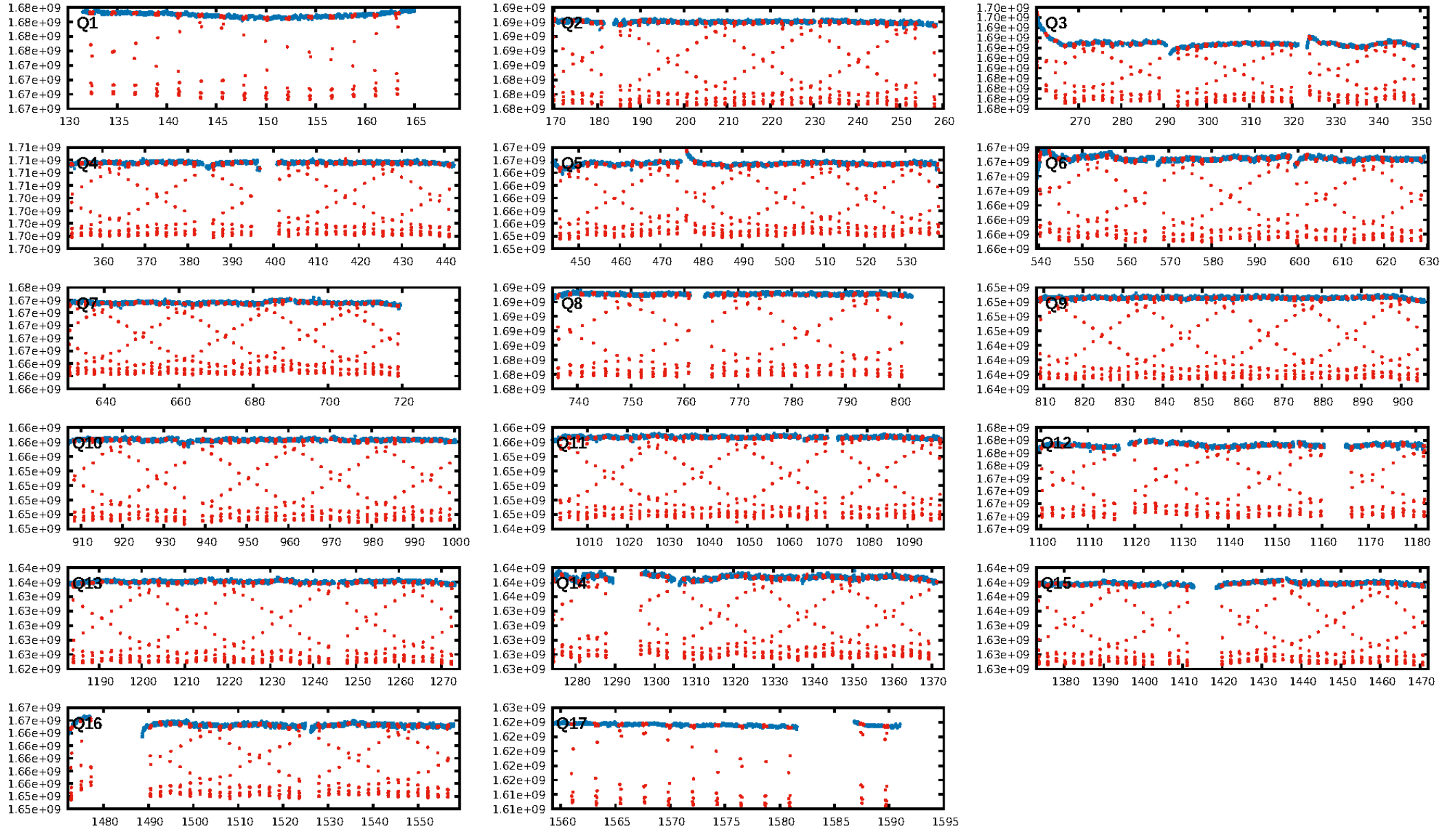
## DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]  
LongPeriod-sig: 0.1% [0.00σ]  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 0.91 [529/584]  
GhostDiagnostic-chr: N/A  
Centroid-sig: N/A  
Centroid-so: 0.857 arcsec [382.40σ]  
OotOffset-rm: 3.968 arcsec [5.70σ]  
KicOffset-rm: 4.186 arcsec [5.61σ]  
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]

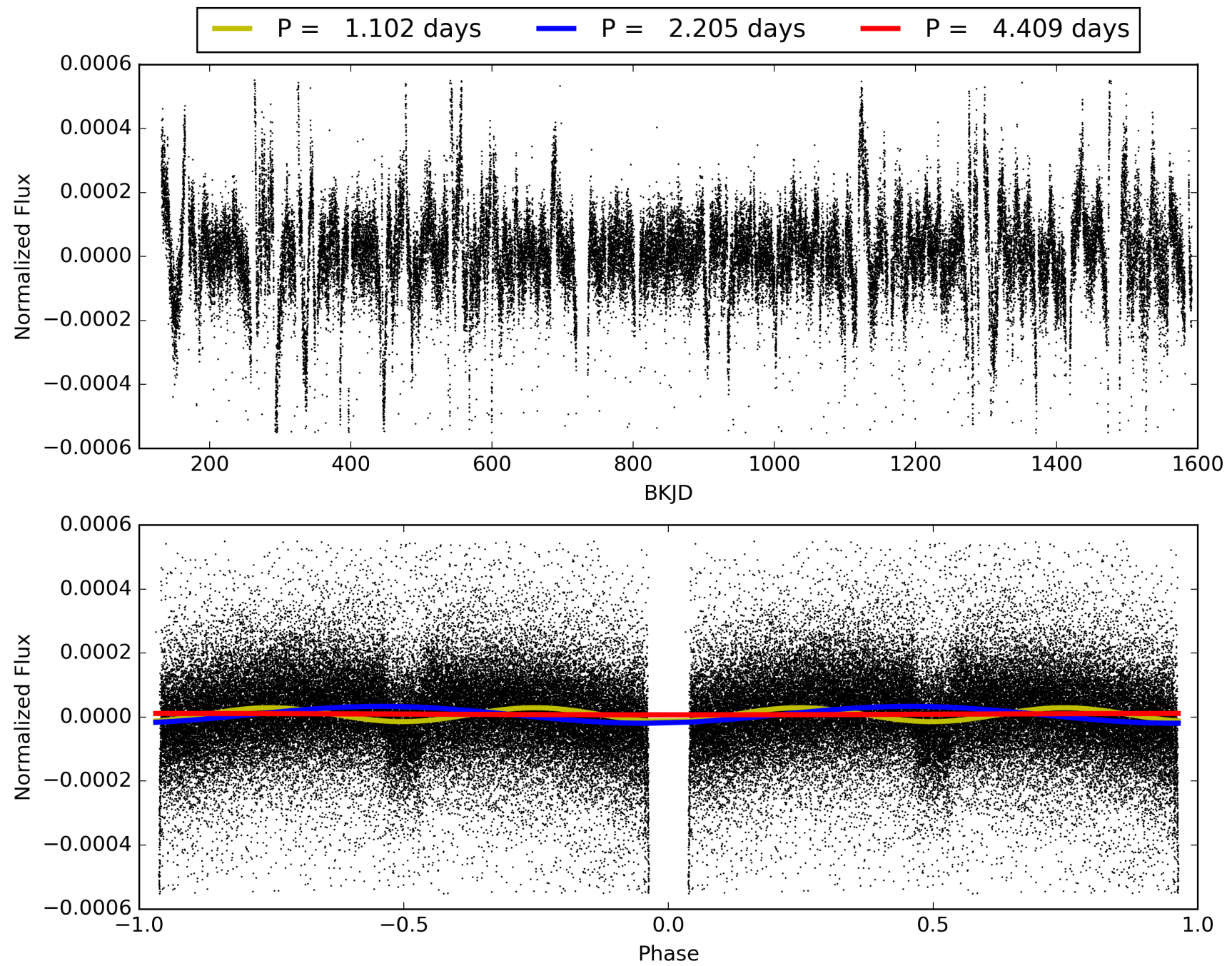
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:53:30 Z

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

# TCE 010666592-01, PDC Light Curves



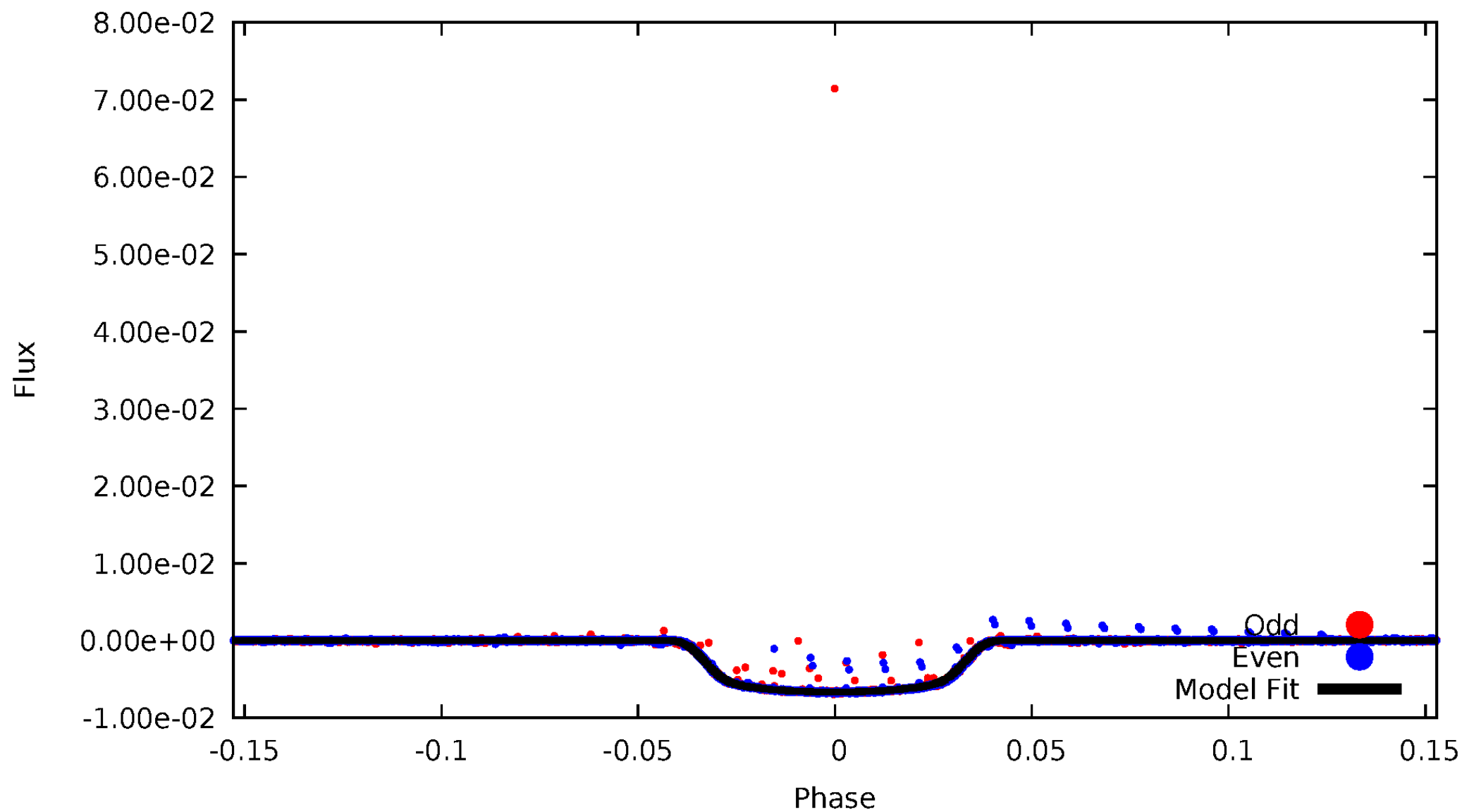
TCE 010666592-01





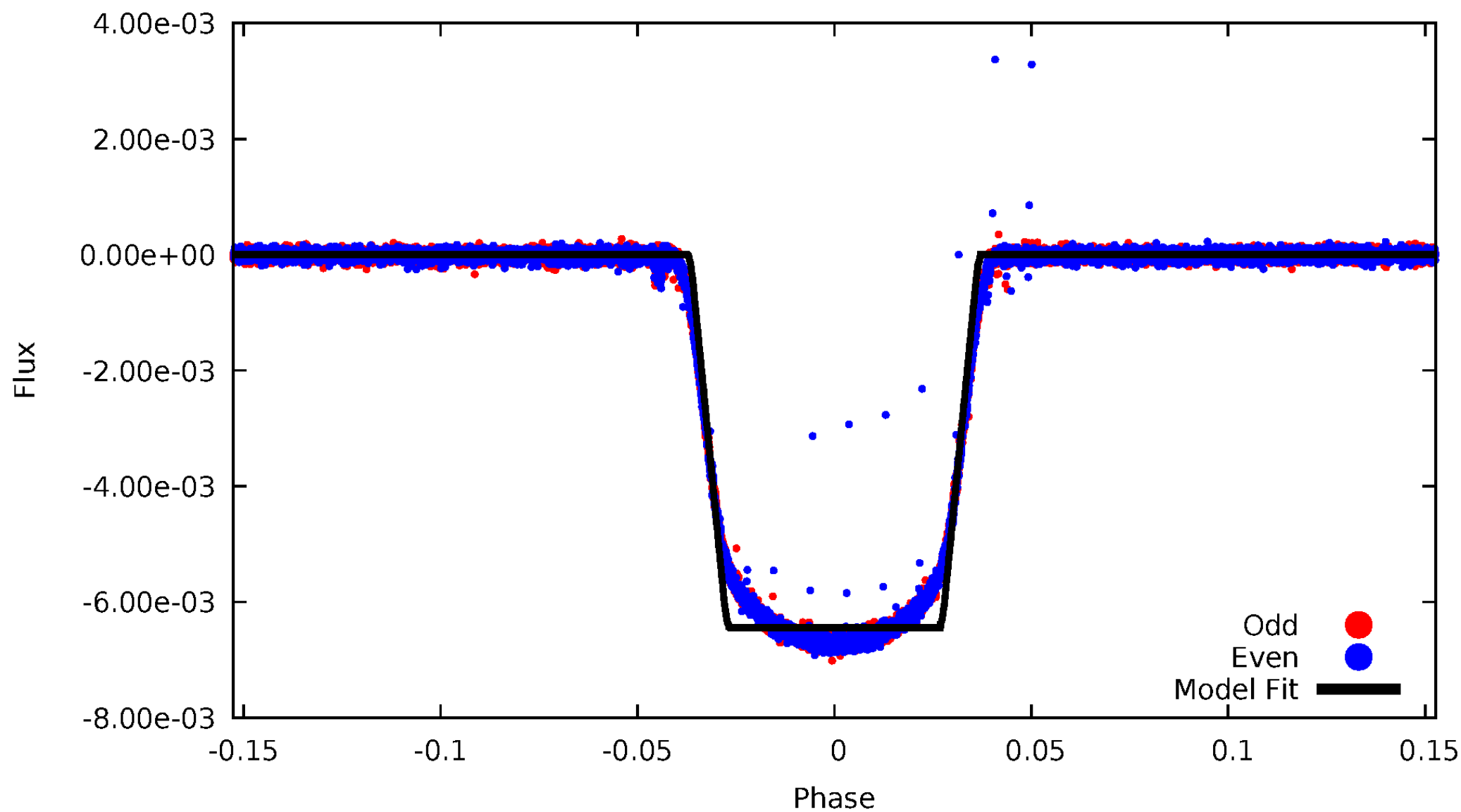
# DV Odd/Even

TCE 010666592-01



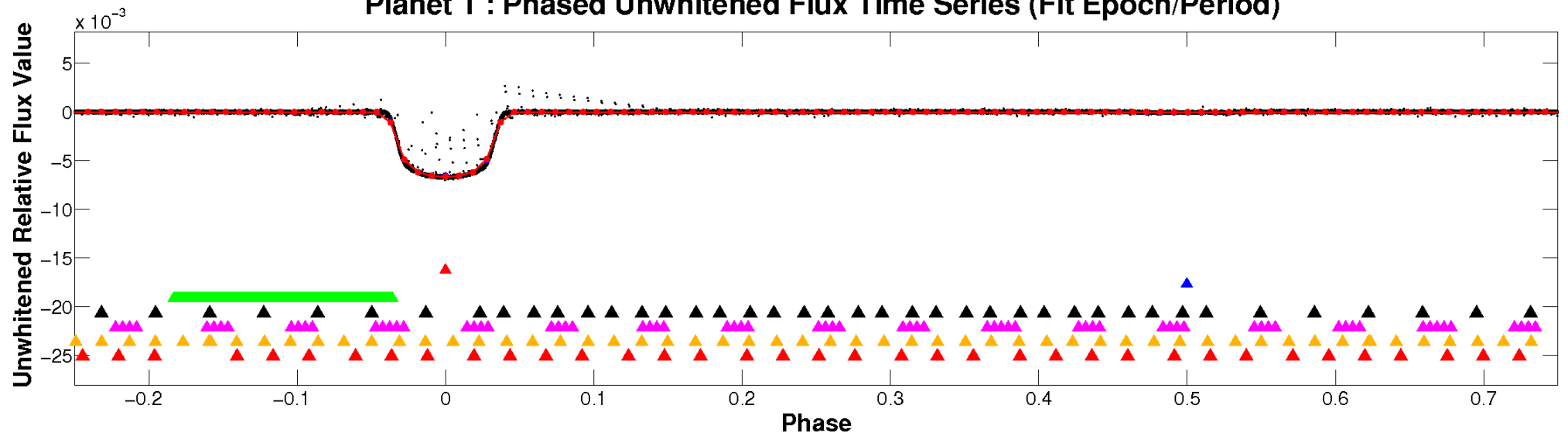
# ALT Odd/Even

TCE 010666592-01

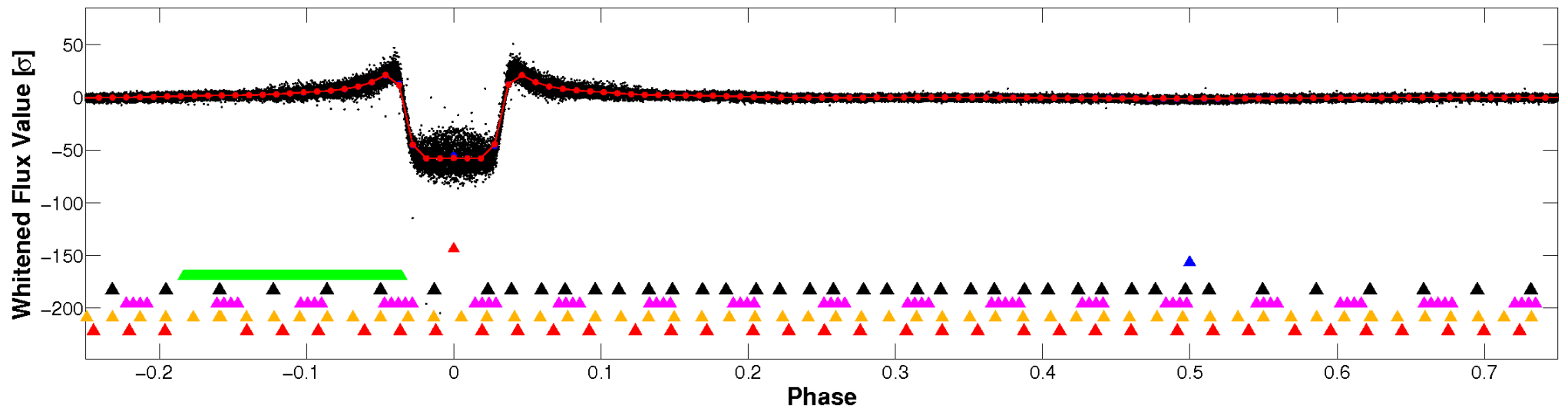


# Non-Whitened Vs. Whitened Light Curve

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

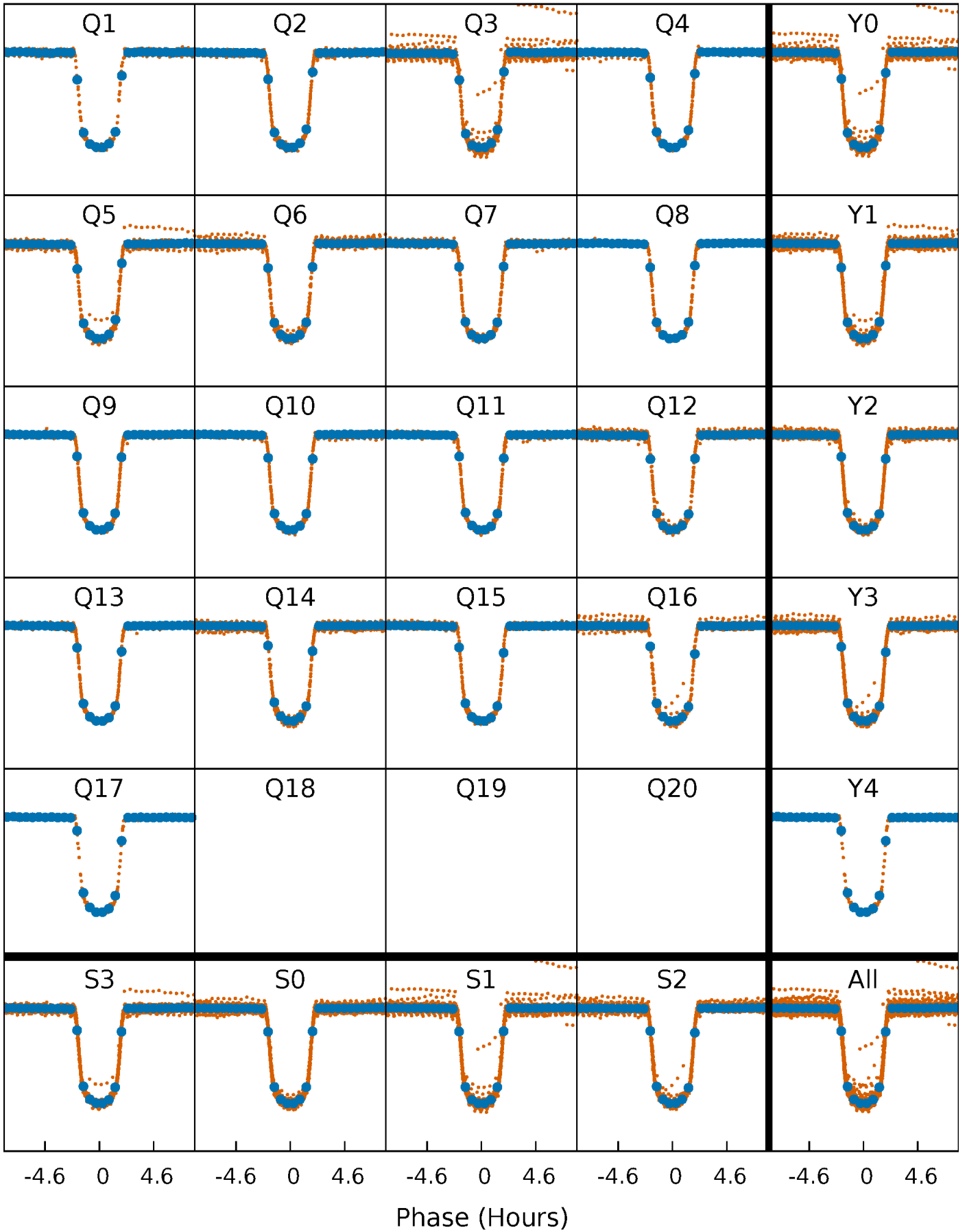


## Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



# PDC Quarter-Phased Transit Curves

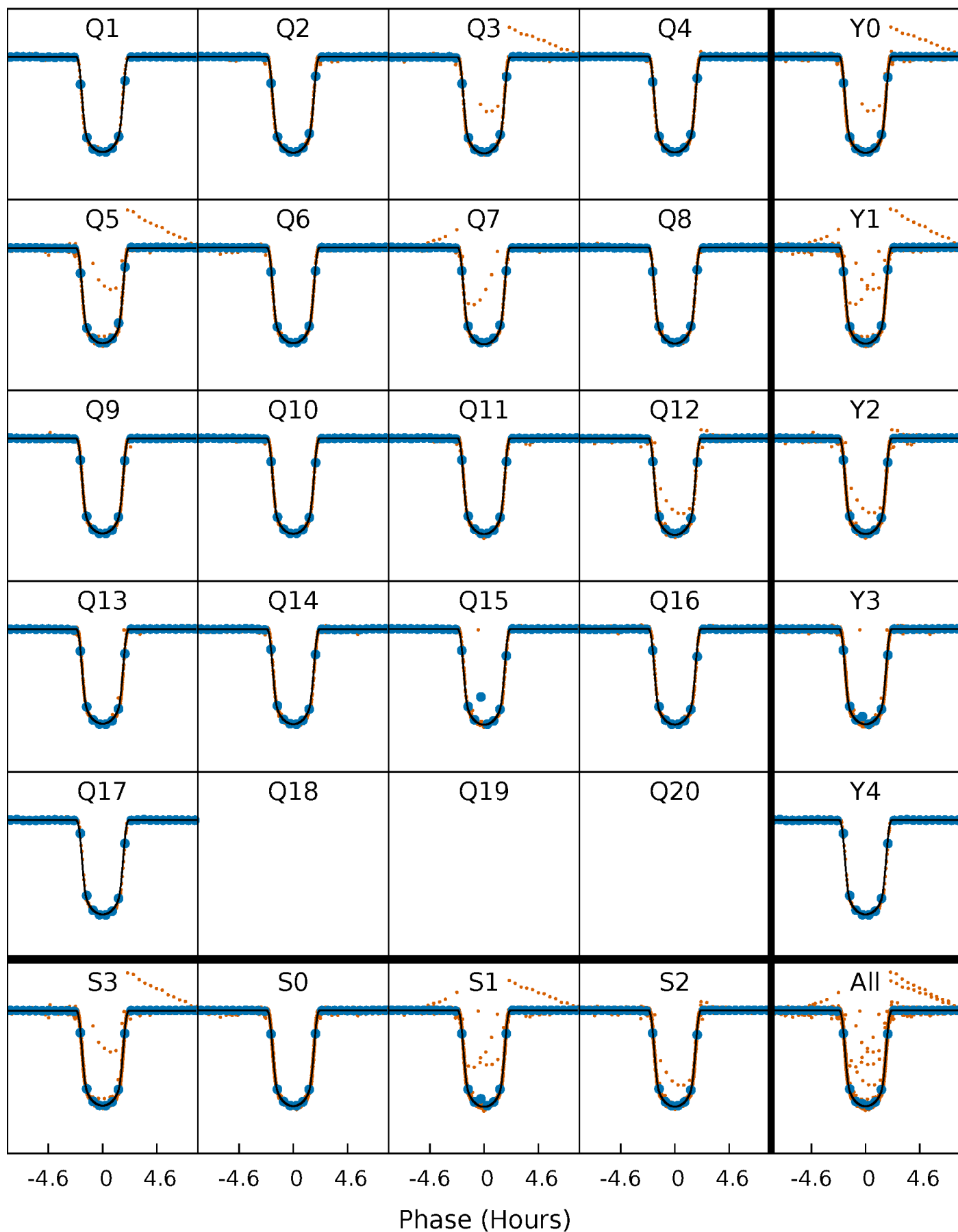
TCE 010666592-01 P= 2.204731 Days  $T_0=132.383258$  (BKJD)





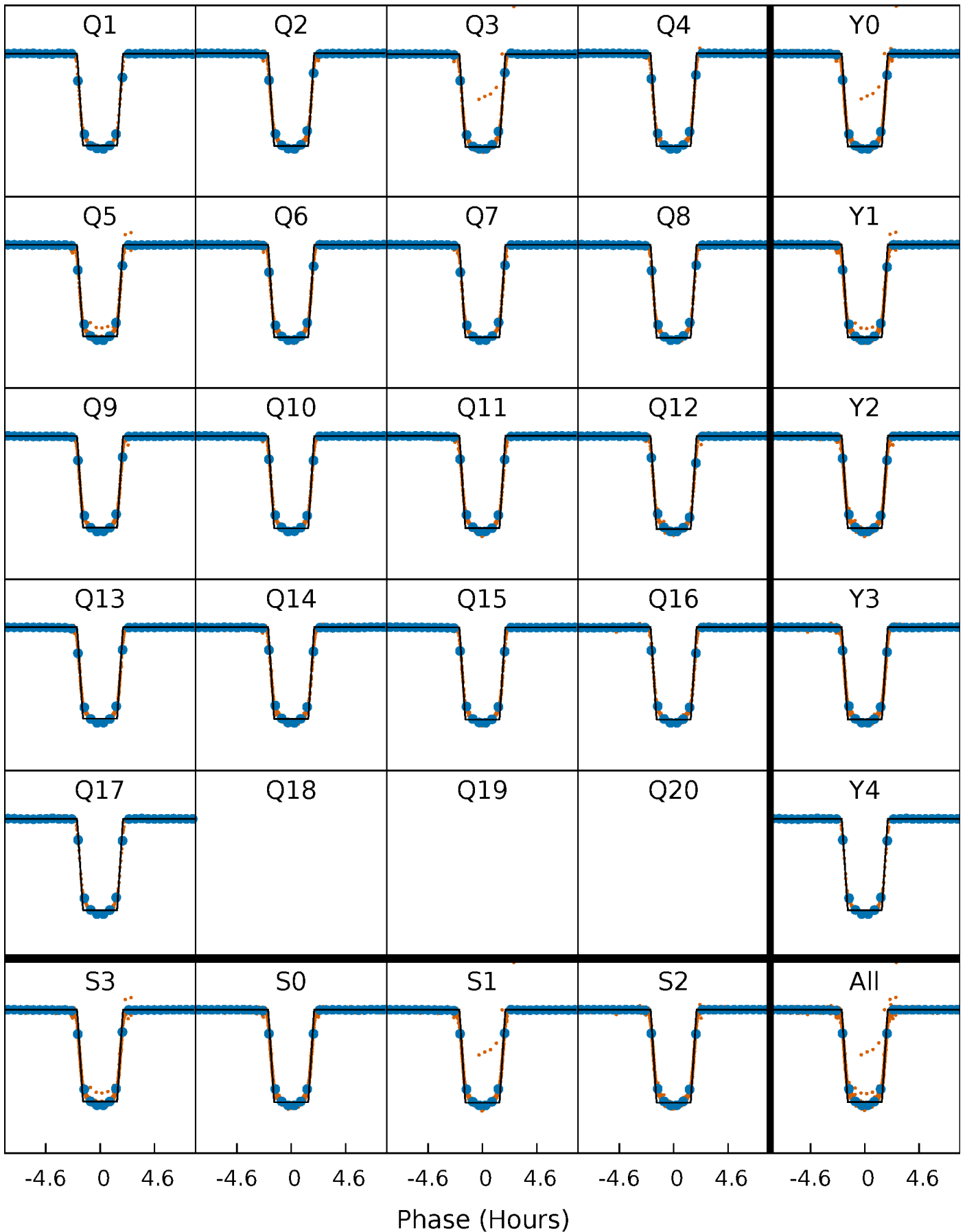
# DV Quarter-Phased Transit Curves

TCE 010666592-01   P= 2.204731 Days    $T_0=132.383258$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

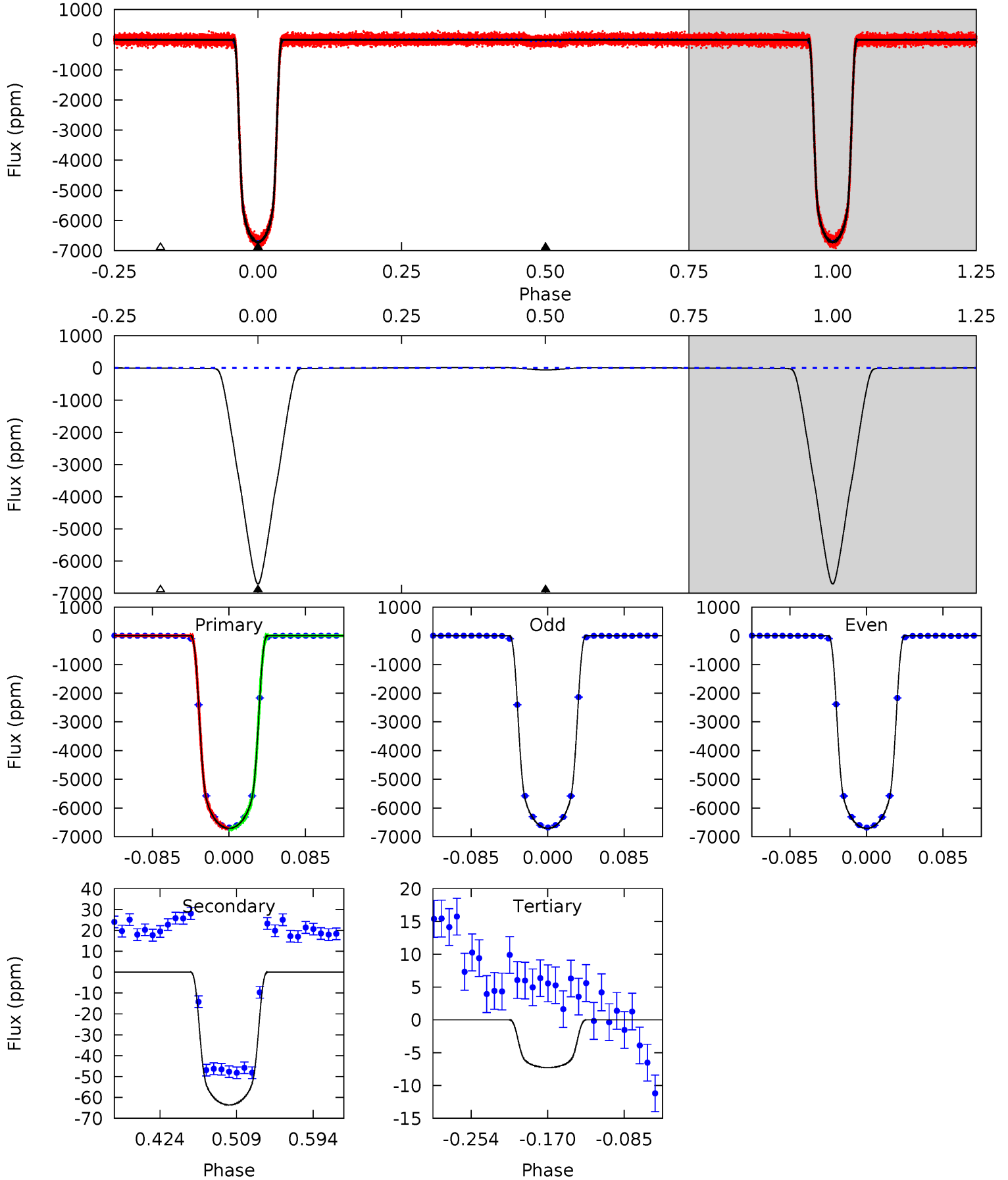
TCE 010666592-01 P= 2.204734 Days  $T_0=132.382768$  (BKJD)



# DV Model-Shift Uniqueness Test

010666592-01, P = 2.204731 Days, E = 130.178527 Days

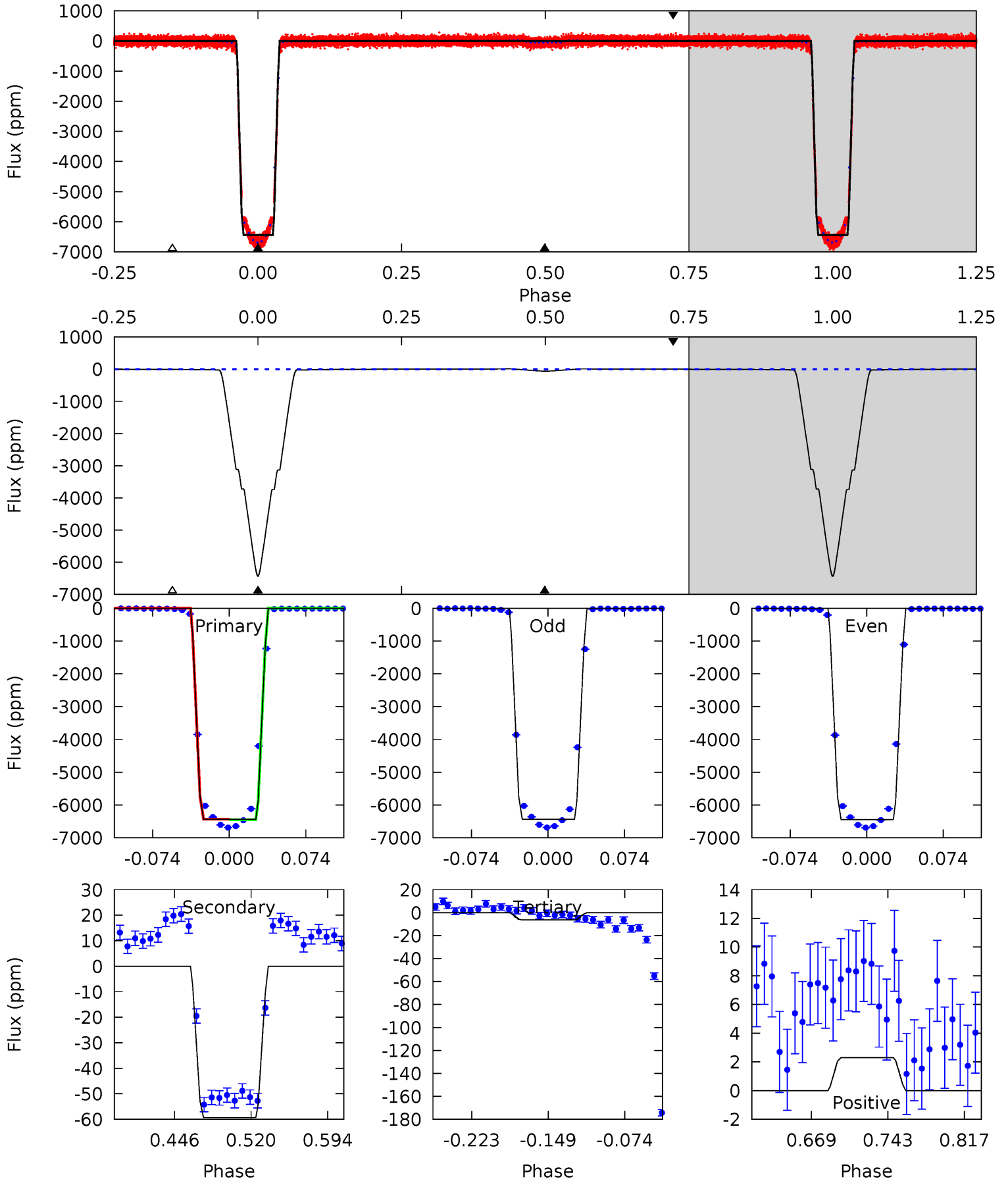
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7499	71.1	8.14	0	4.60	1.72	8.27	7491	7499	63.0	71.1	2.42	0.99	0.00	16.3



# Alt Model-Shift Uniqueness Test

010666592-01, P = 2.204734 Days, E = 130.178034 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
6526	60.1	6.46	2.33	4.63	1.78	6.52	6520	6524	53.7	57.8	2.75	1.00	0.00	7.17





### Stellar Parameters For KIC 010666592

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6440^{+76}_{-89}$	$4.019^{+0.033}_{-0.027}$	$0.140^{+0.150}_{-0.150}$	$1.952^{+0.099}_{-0.110}$	$1.449^{+0.070}_{-0.091}$	$0.274^{+0.037}_{-0.030}$
	+1%/-1%	+1%/-1%	+107%/-107%	+5%/-6%	+5%/-6%	+14%/-11%
Source	SPE72	AST69	SPE72	DSEP		

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

### Secondary Eclipse Parameters for KIC 010666592-01 / KOI 0002.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-64 \pm 1$	$16.73^{+0.50}_{-0.54}$	$2856^{+46}_{-54}$	$-2669^{+52}_{-42}$	$0.176^{+0.010}_{-0.008}$
Alt.	$-59 \pm 1$	$17.10^{+0.48}_{-0.58}$	$2858^{+49}_{-52}$	$-2720^{+44}_{-38}$	$0.158^{+0.009}_{-0.007}$

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

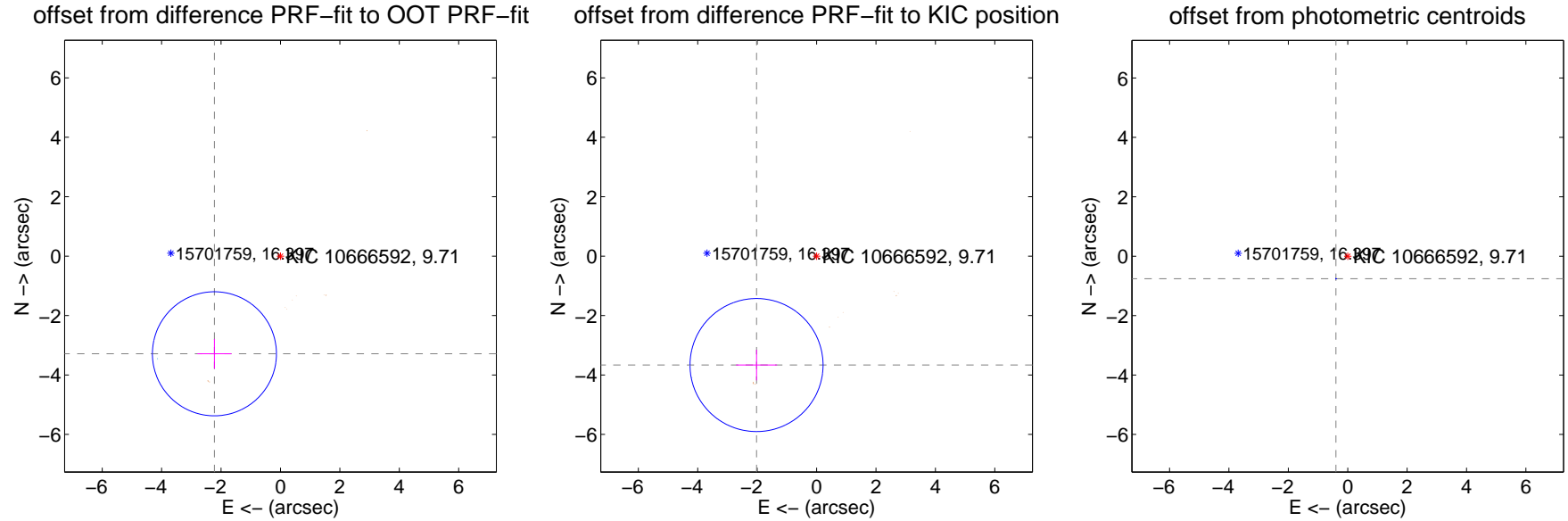
## DV Centroid Data

Supplemental centroid analysis for 010666592-01. **Kepler magnitude: 9.71.** Transit SNR 3564.72

There are 4 quarters with good PRF difference image offsets

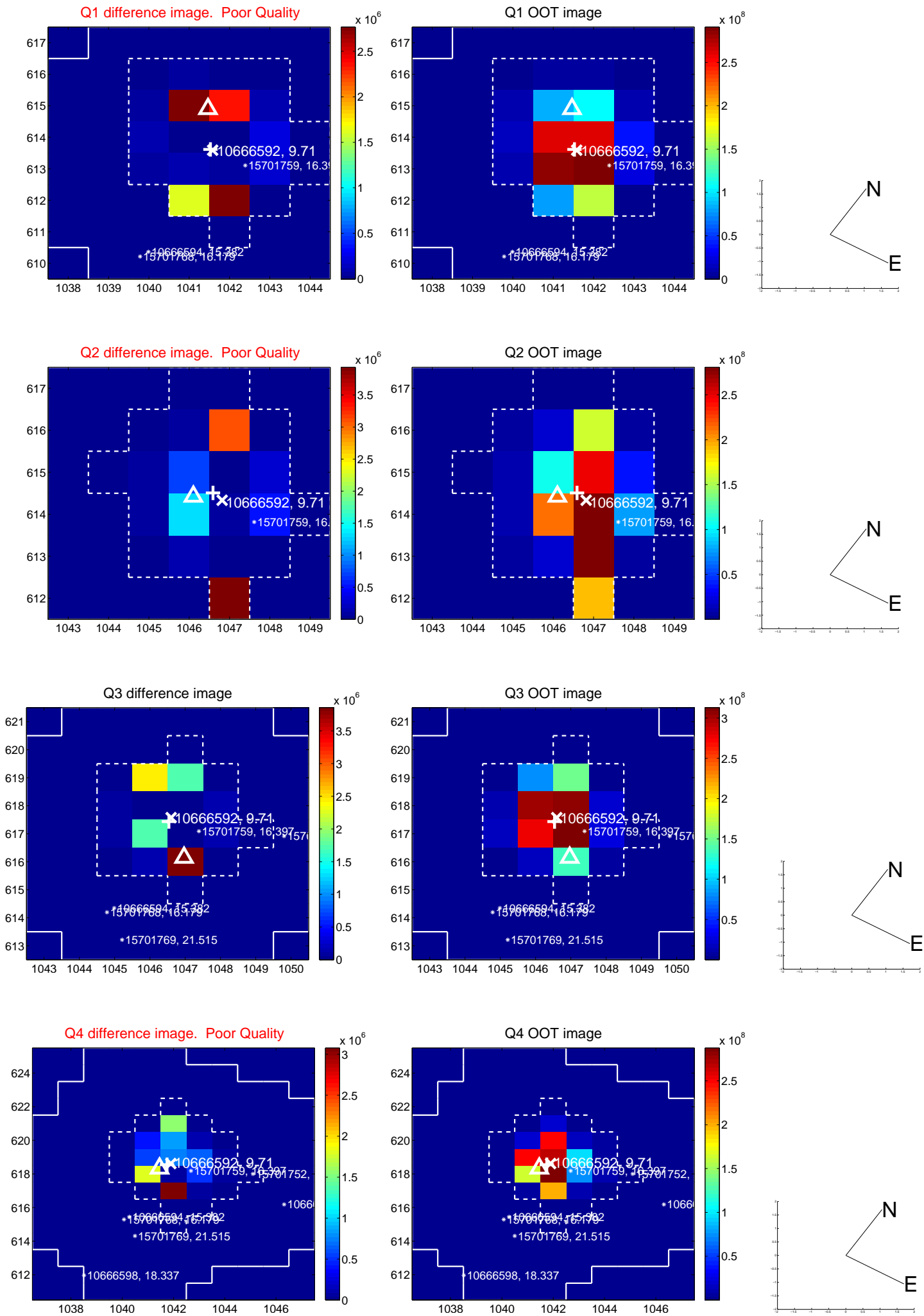
The direct PRF centroid is offset from the target star catalog position by about 0.35 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	<b>3.968 <math>\pm</math> 0.696</b>	<b>5.70</b>	2.222 $\pm$ 0.573	-3.287 $\pm$ 0.500
PRF-fit source offset from KIC position	<b>4.186 <math>\pm</math> 0.746</b>	<b>5.61</b>	2.021 $\pm$ 0.689	-3.666 $\pm$ 0.514
photometric centroid source offset	<b>0.86 <math>\pm</math> 0.00</b>	<b>382.40</b>	0.40 $\pm$ 0.00	-0.76 $\pm$ 0.00



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

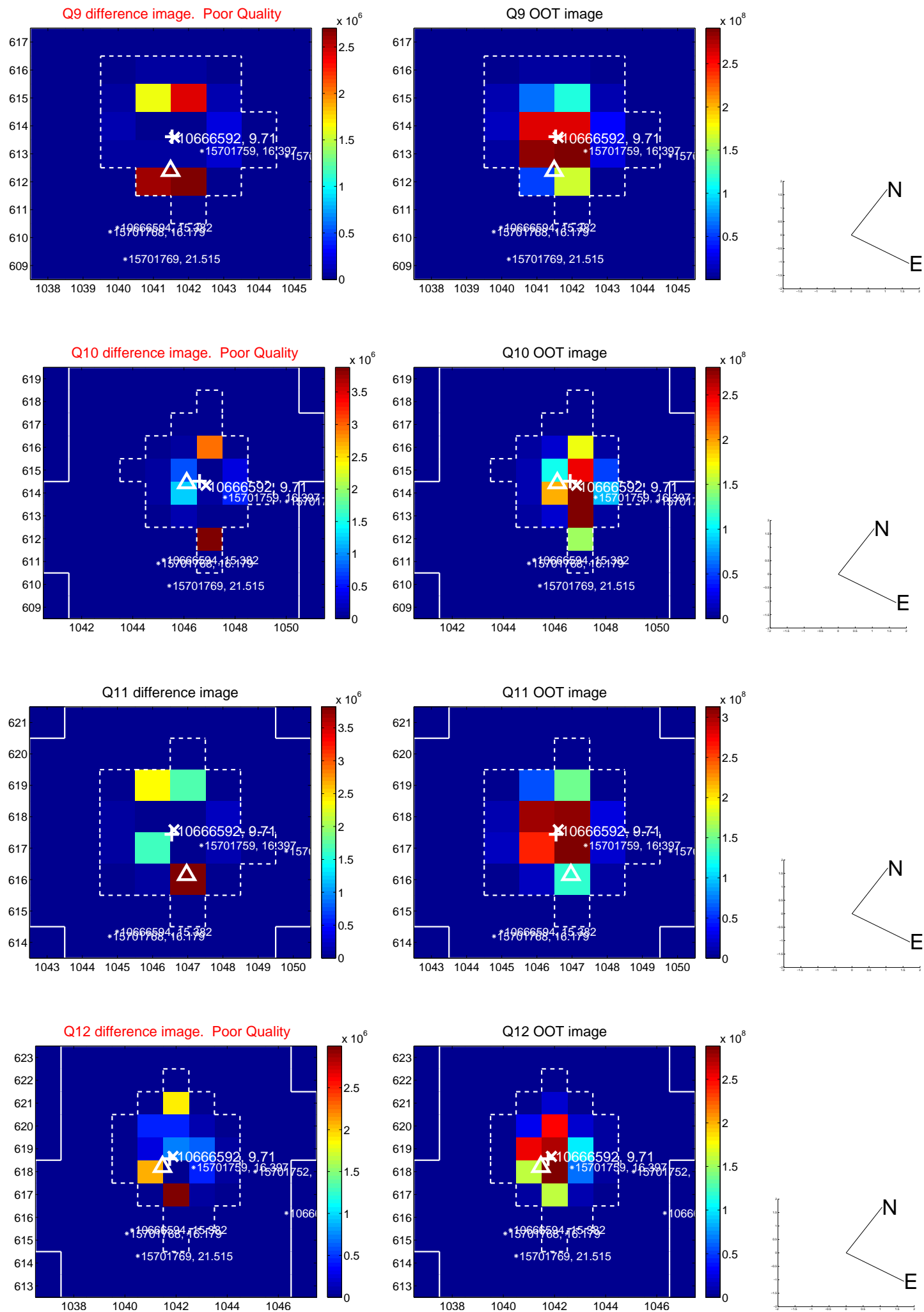
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



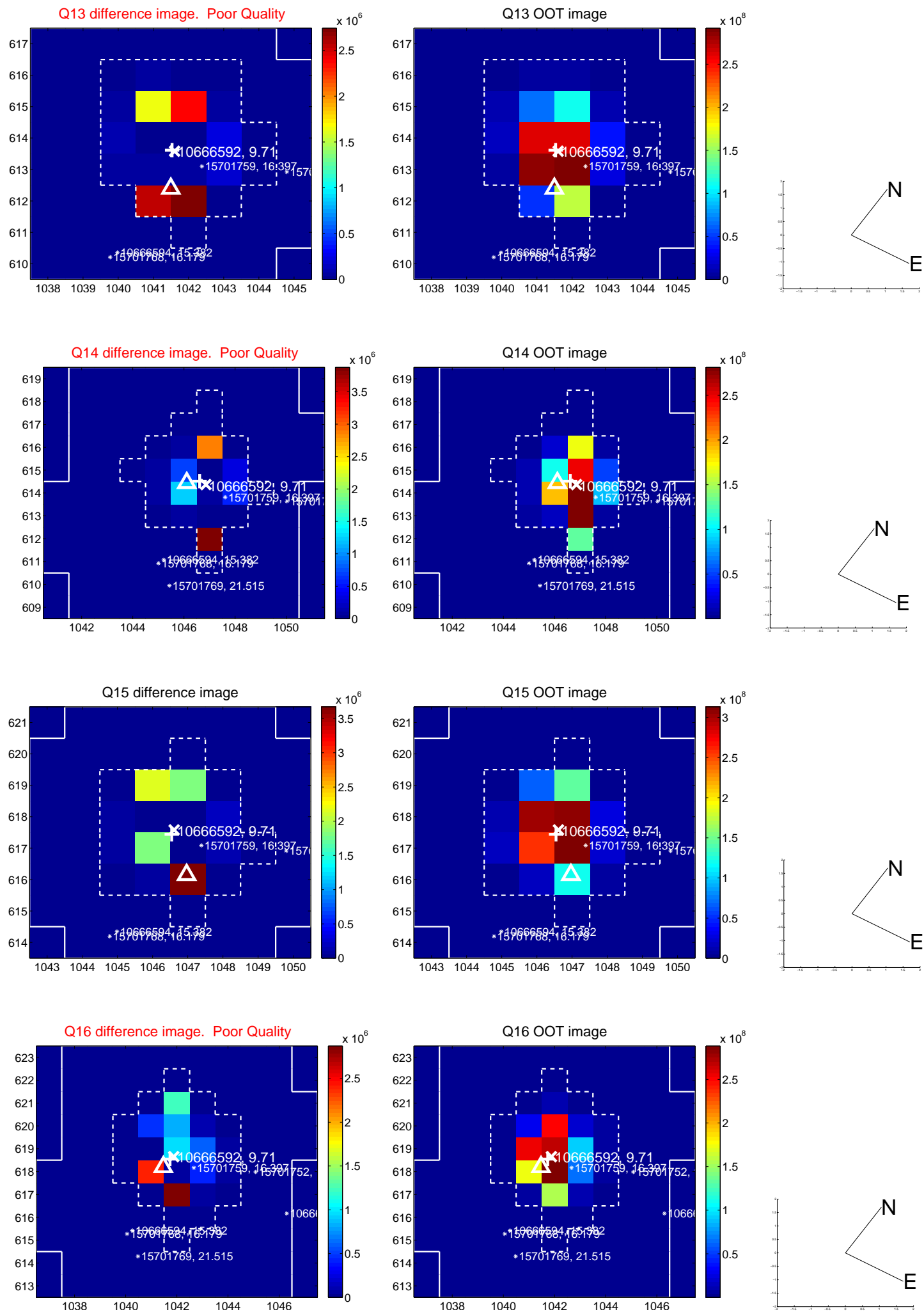




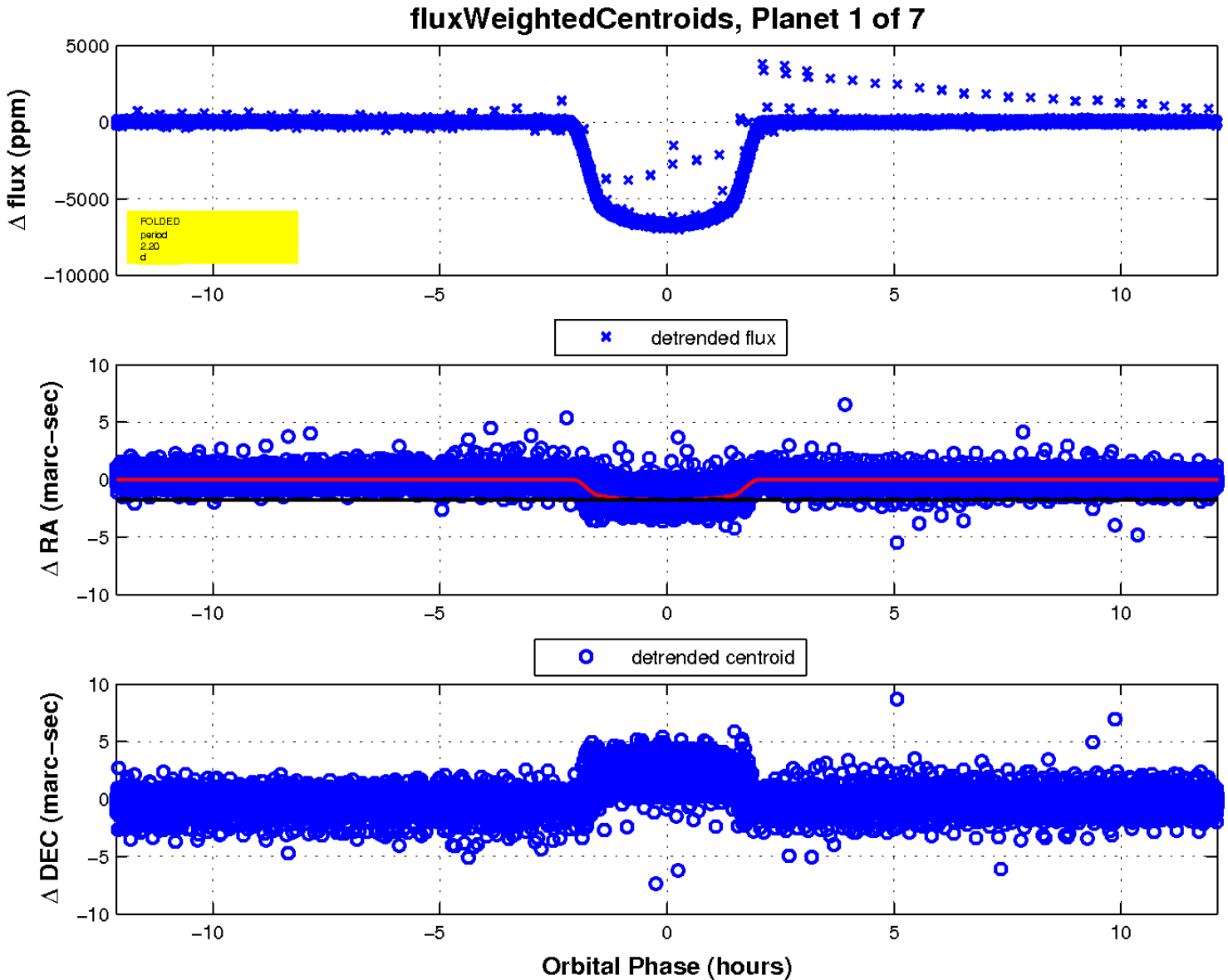
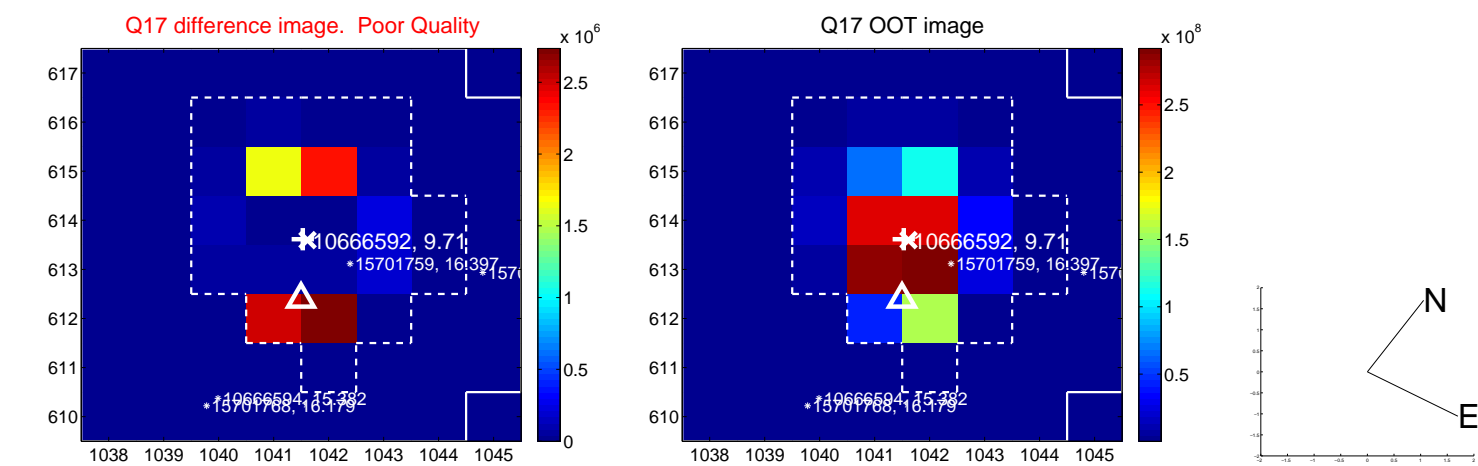
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

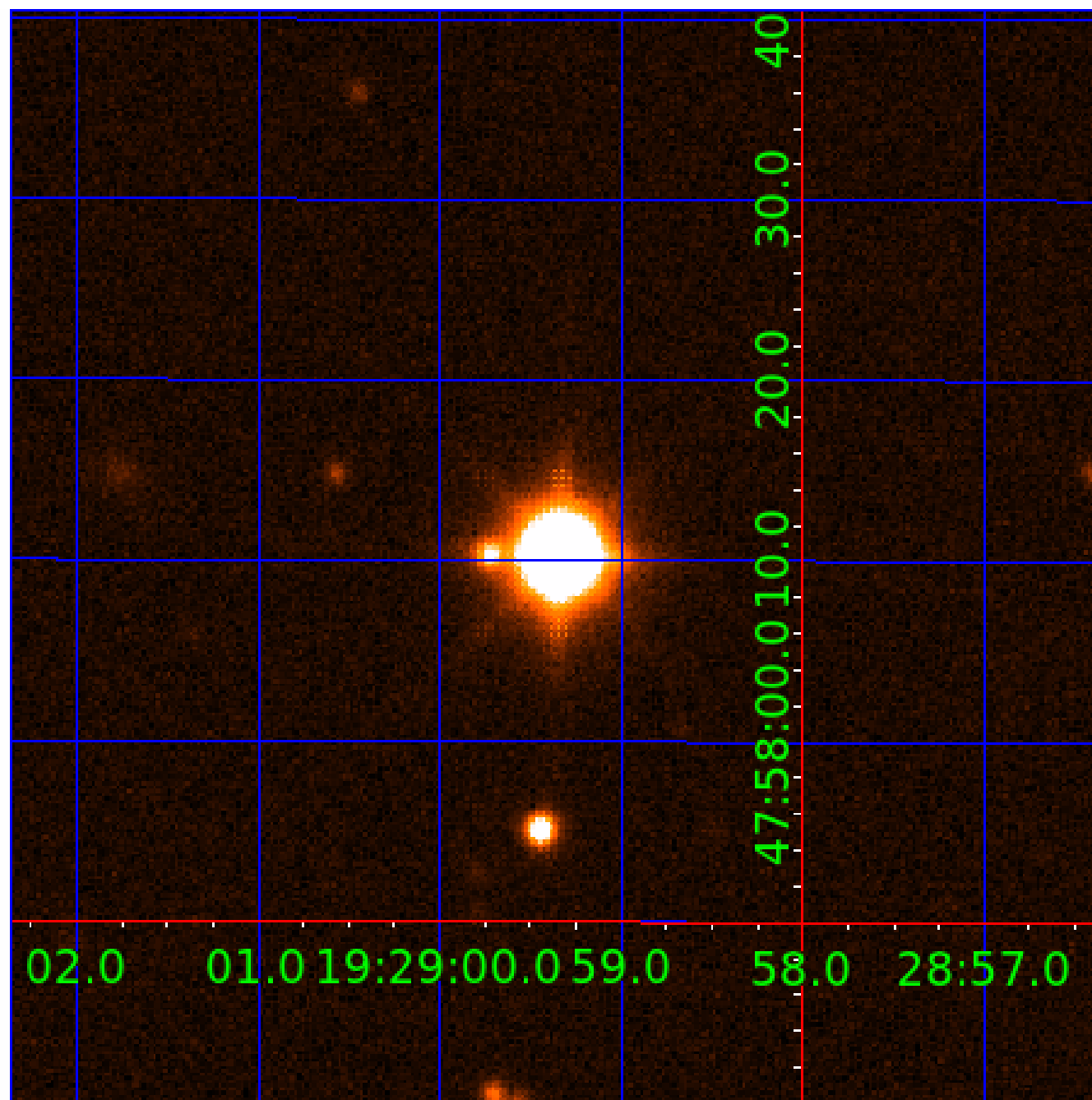


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



UKIRT Image

Declination





# KIC 010666592

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
010666592-01	OBS	0002.01	2.204731	132.383258	6676.5	4.044	3862.2	3564.7	1.95	6440	16.78	4165.02
010666592-02	OBS	No	2.204730	133.485816	62.5	3.919	39.7	40.7	1.95	6440	1.81	4165.02
010666592-03	OBS	No	2.205225	131.978785	20.7	14.659	14.0	12.5	1.95	6440	0.90	4163.77
010666592-04	OBS	No	35.356054	163.335903	94.5	10.421	26.4	8.6	1.95	6440	1.90	102.99
010666592-05	OBS	No	20.490420	137.639645	45.1	12.320	16.1	5.1	1.95	6440	1.32	213.15
010666592-06	OBS	No	25.975692	132.034470	133.1	2.262	11.3	10.1	1.95	6440	2.32	155.36
010666592-07	OBS	No	39.279443	164.669535	93.6	3.000	9.8	-1.0	1.95	6440	1.90	89.51

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010666592-01	OBS	PC	1.00	0	1	0	0	MOD_SEC_DV—PLANET_OCCULT_DV—MOD_SEC_ALT—PLANET_OCCULT_ALT—HAS_SEC_TCE—CENT_SATURATED
010666592-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_SATURATED
010666592-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—RESIDUAL_TCE—CENT_SATURATED
010666592-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_SATURATED
010666592-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_SATURATED
010666592-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—CENT_SATURATED
010666592-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—NO_FITS—CENT_SATURATED

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

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

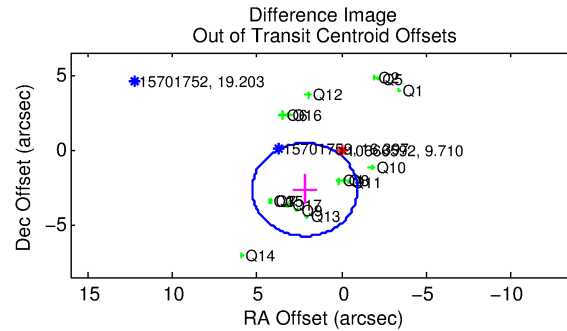
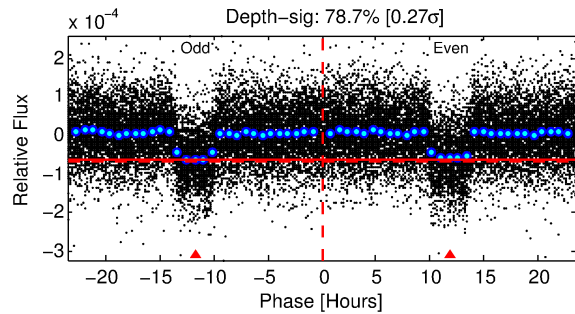
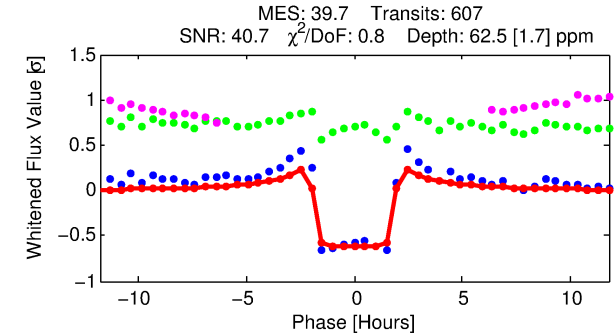
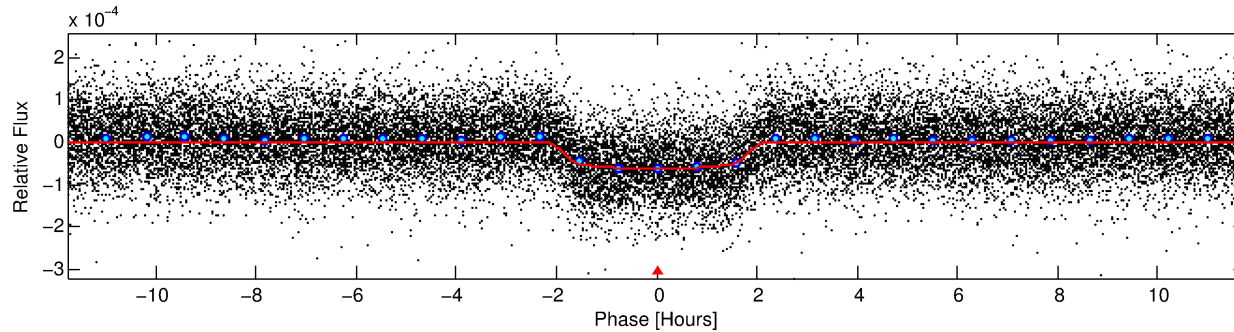
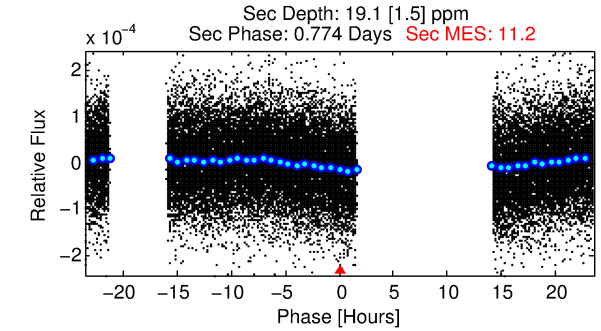
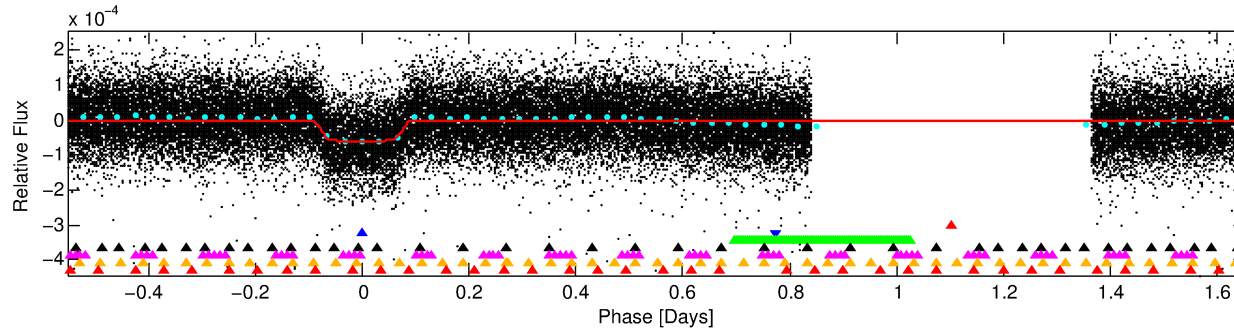
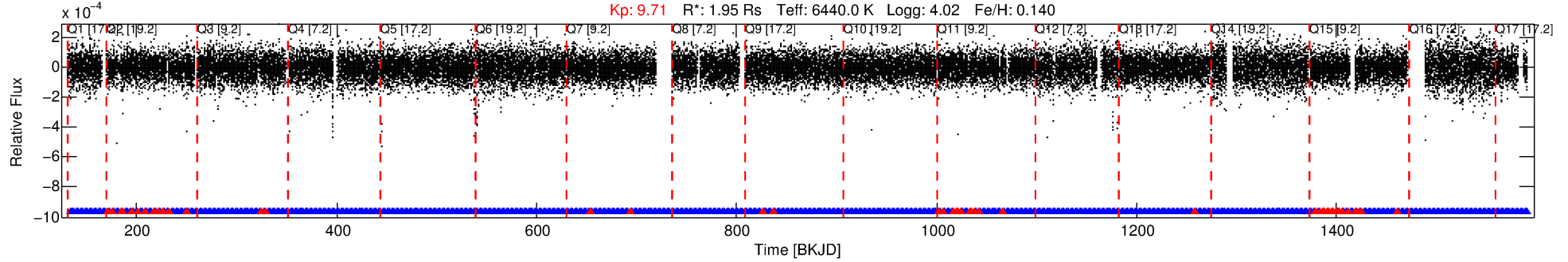
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 010666592-02

No Significant Match Found

# DV One-Page Summary

KIC: 10666592 Candidate: 2 of 7 Period: 2.205 d  
KOI: K00002 Name: Kepler-2 Corr: No Ephemeris Match



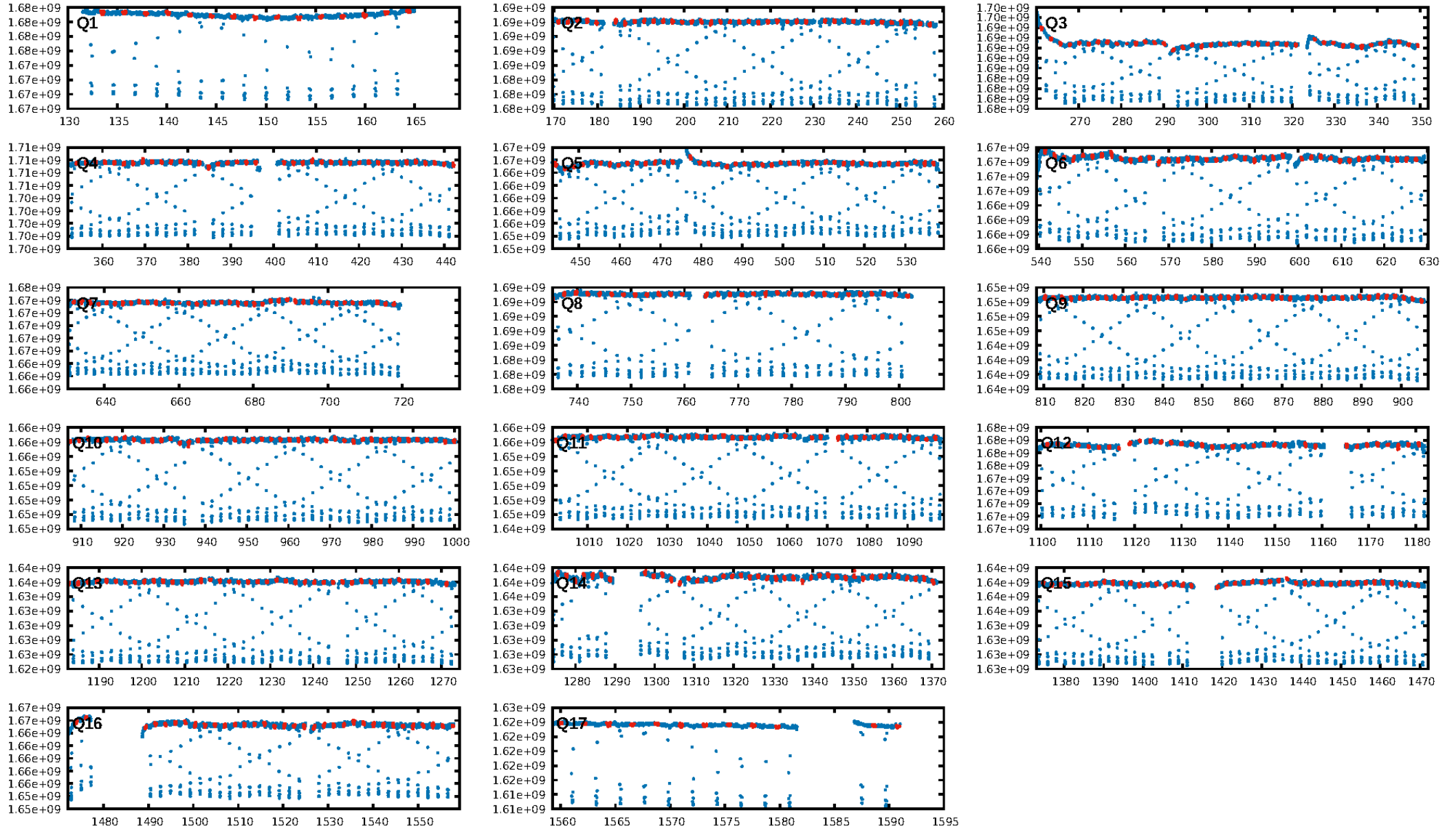
## DV Fit Results:

Period = 2.20473 [0.00000] d  
Epoch = 133.4858 [0.0008] BKJD  
Rp/R\* = 0.0085 [0.0007]  
a/R\* = 2.17 [0.73]  
b = 0.90 [0.09]  
Seff = 4165.02 [349.30]  
Teq = 2048 [43] K  
Rp = 1.81 [0.17] Re  
a = 0.0375 [0.0017] AU  
Ag = 4.53 [0.84] [4.20σ]  
Teffp = 4621 [211] K [11.93σ]

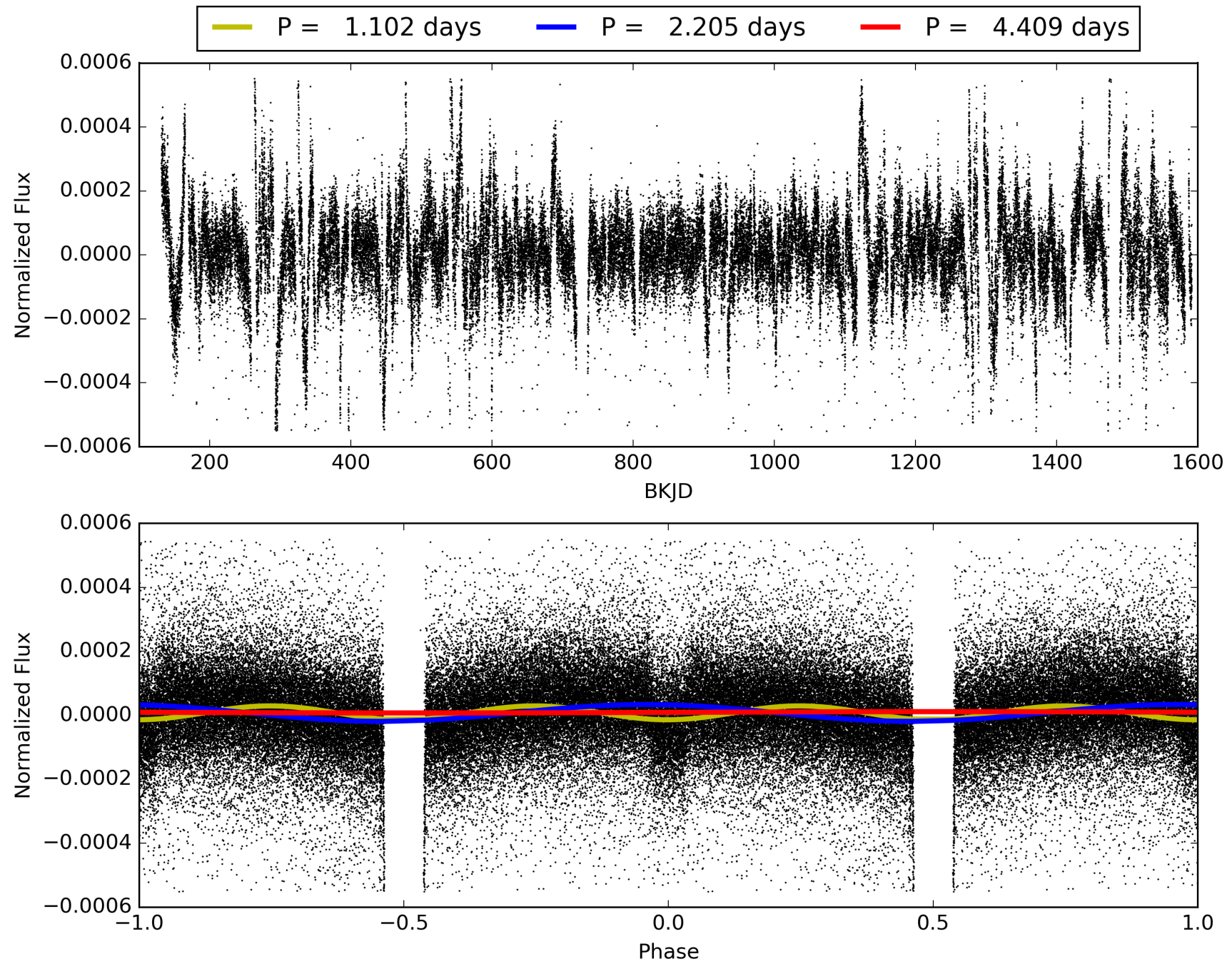
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: 0.0% [0.00σ]  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 0.92 [534/580]  
GhostDiagnostic-chr: N/A  
Centroid-sig: N/A  
Centroid-so: 0.772 arcsec [3.31σ]  
OotOffset-rm: 3.439 arcsec [3.33σ]  
KicOffset-rm: 4.056 arcsec [4.03σ]  
OotOffset-st: 4/4/4/5 [17]  
KicOffset-st: 4/4/4/5 [17]  
DiffImageQuality-fgm: 0.47 [8/17]  
DiffImageOverlap-fno: 1.00 [17/17]

# TCE 010666592-02, PDC Light Curves

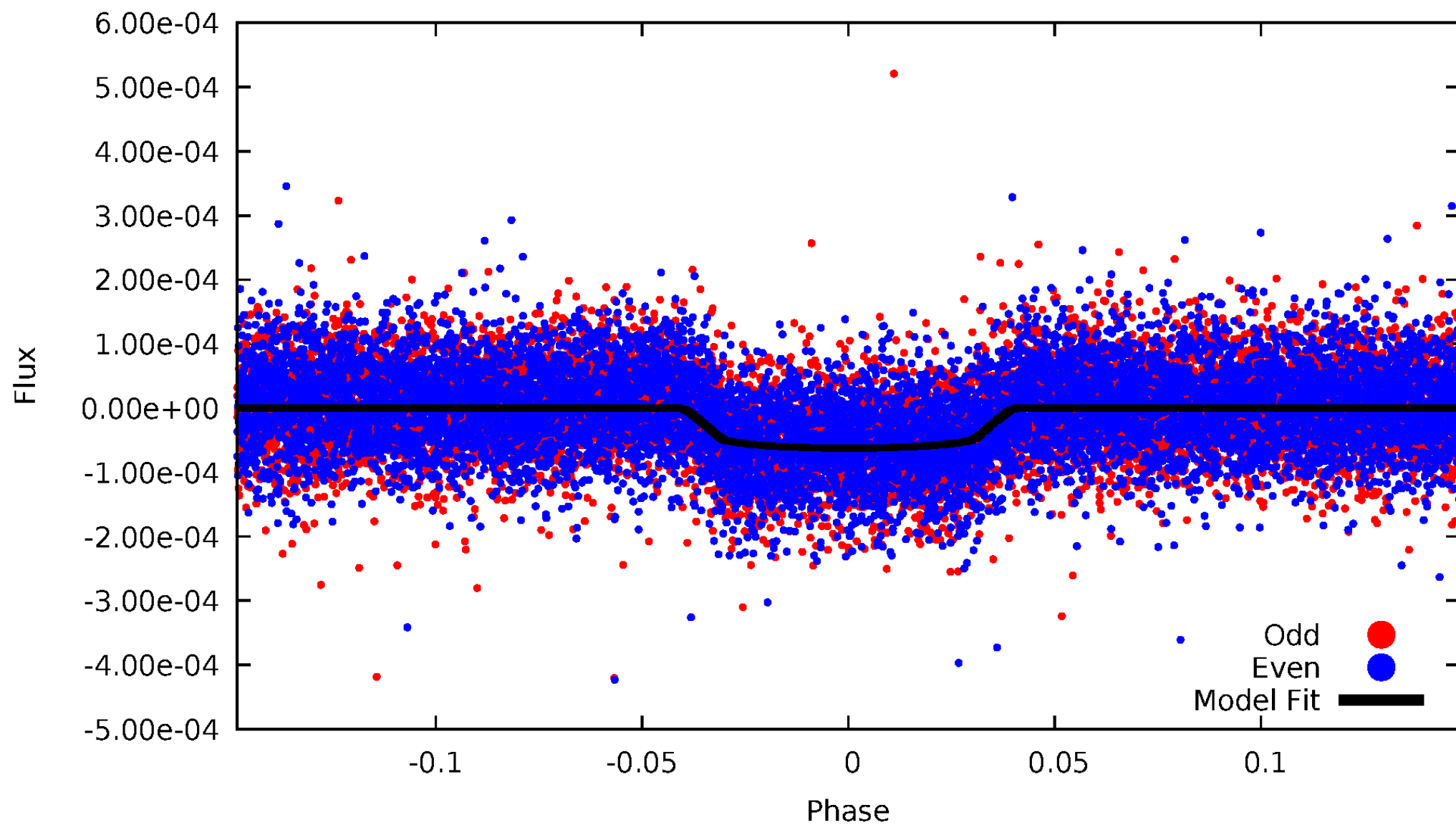


TCE 010666592-02



# DV Odd/Even

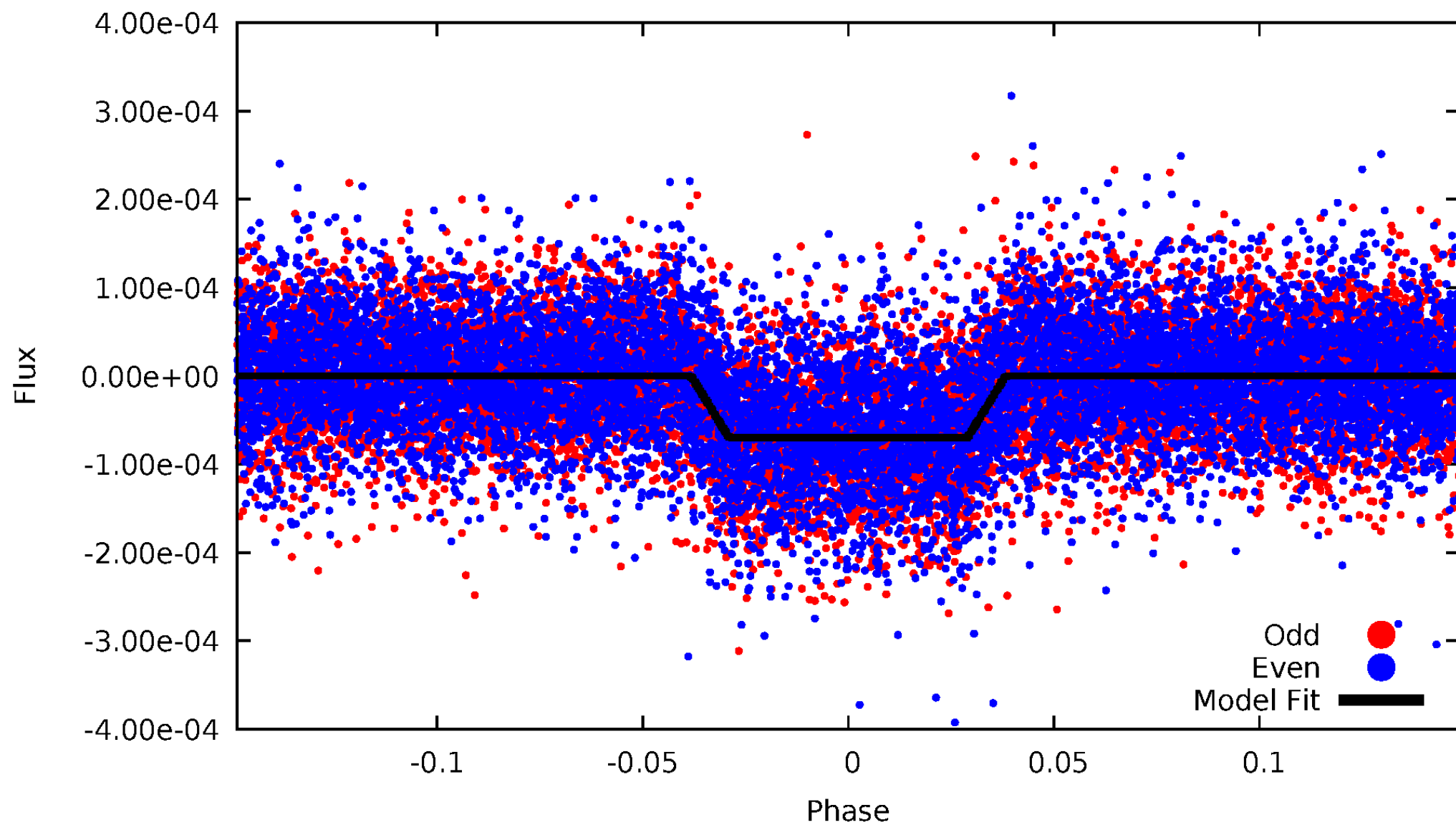
TCE 010666592-02





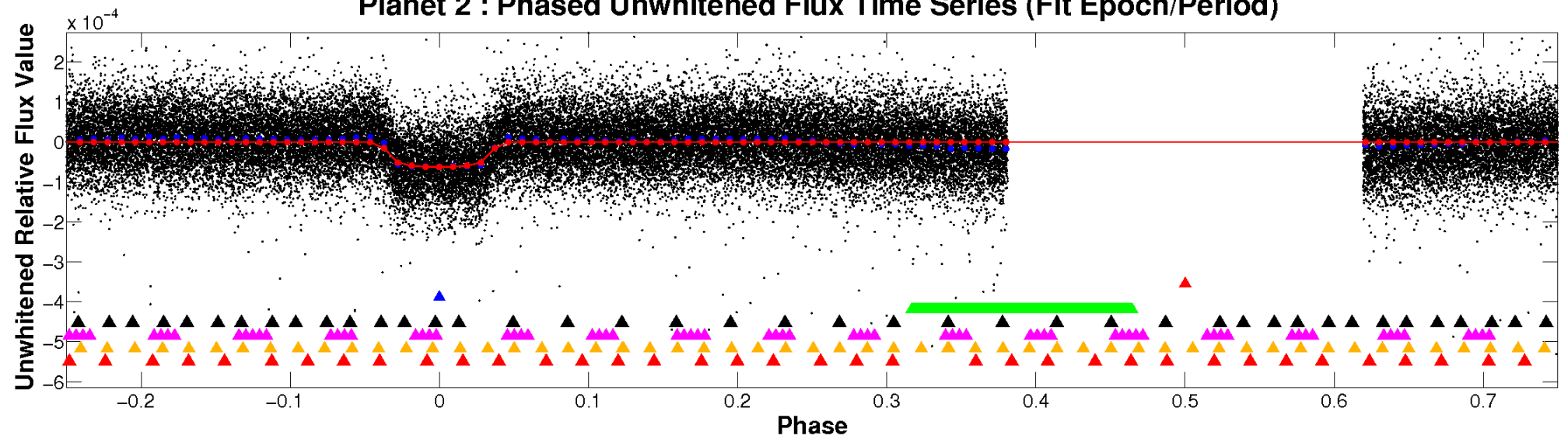
# ALT Odd/Even

TCE 010666592-02

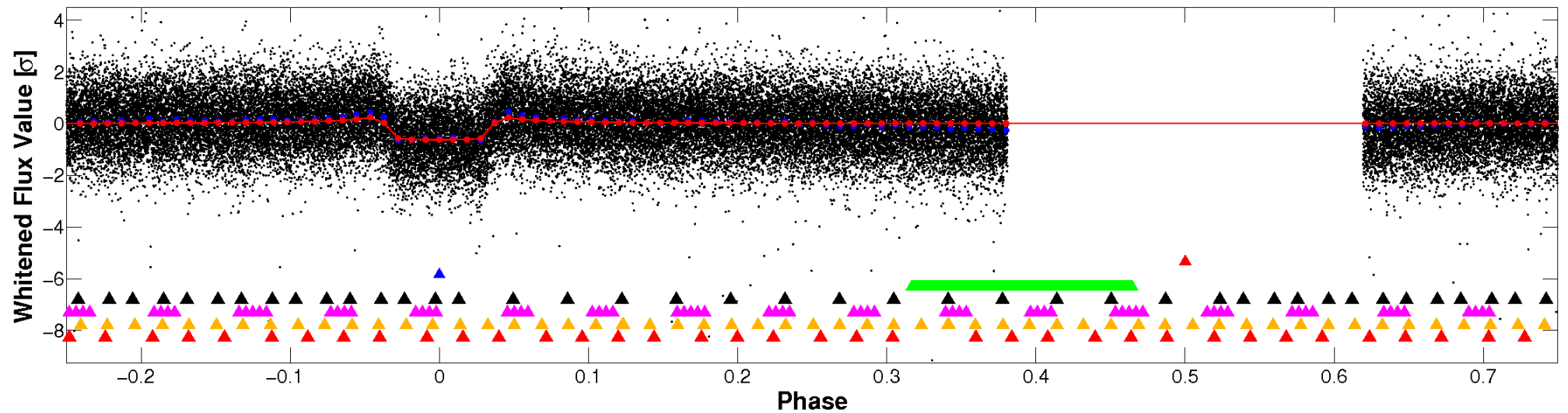


# Non-Whitened Vs. Whitened Light Curve

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

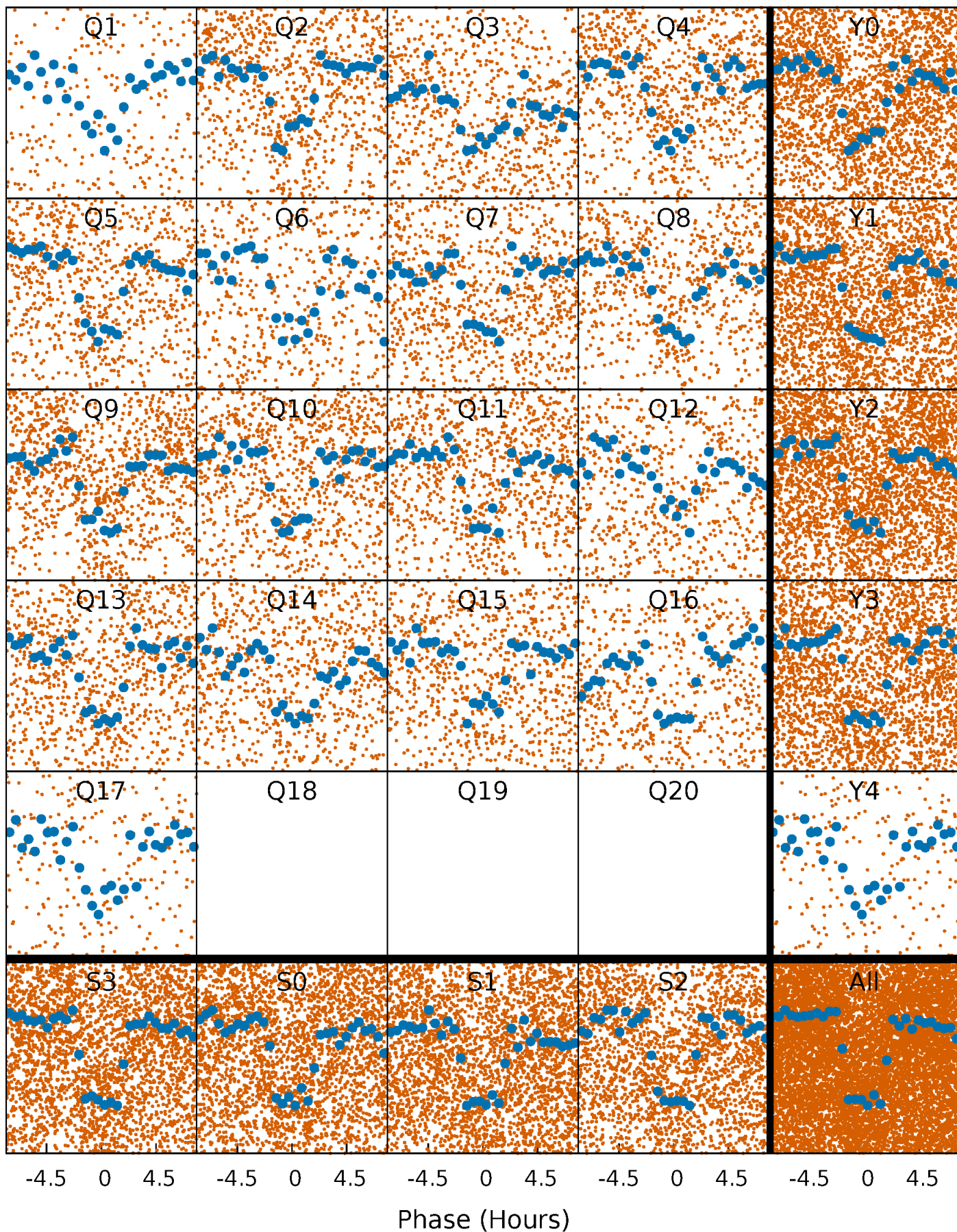


## Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



# PDC Quarter-Phased Transit Curves

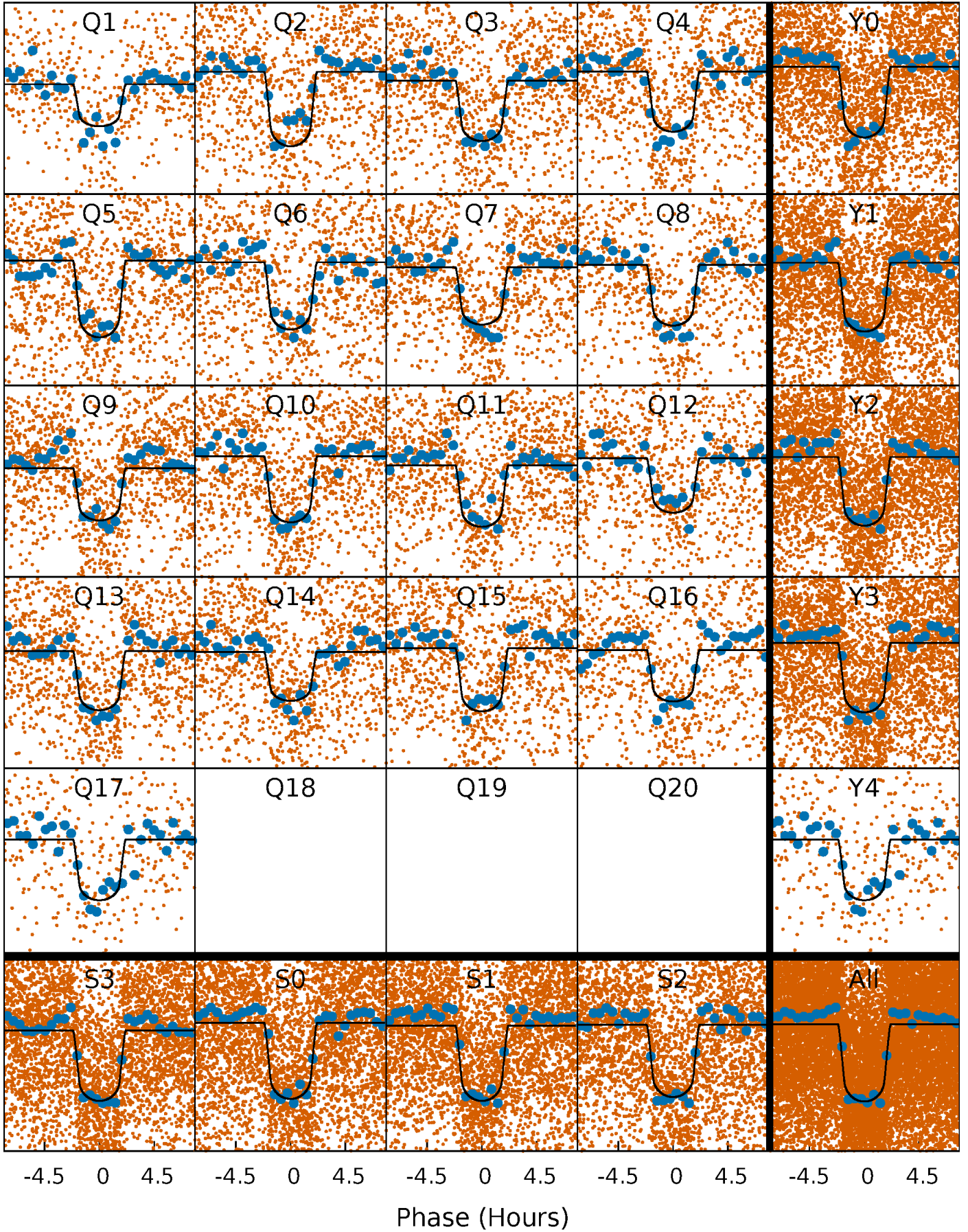
TCE 010666592-02   P= 2.204730 Days    $T_0=133.485816$  (BKJD)





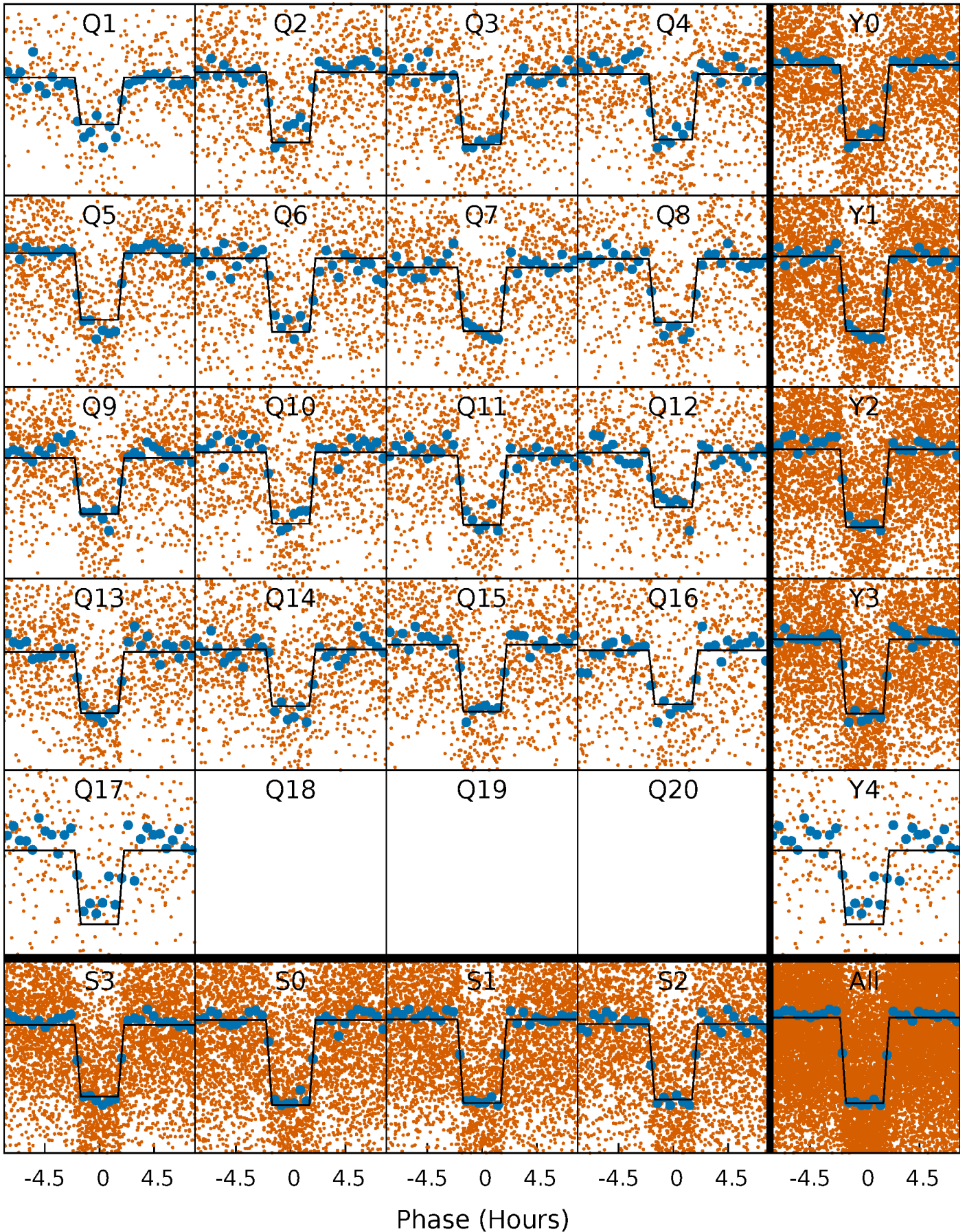
# DV Quarter-Phased Transit Curves

TCE 010666592-02 P= 2.204730 Days  $T_0=133.485816$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 010666592-02   P= 2.204734 Days    $T_0=133.485778$  (BKJD)

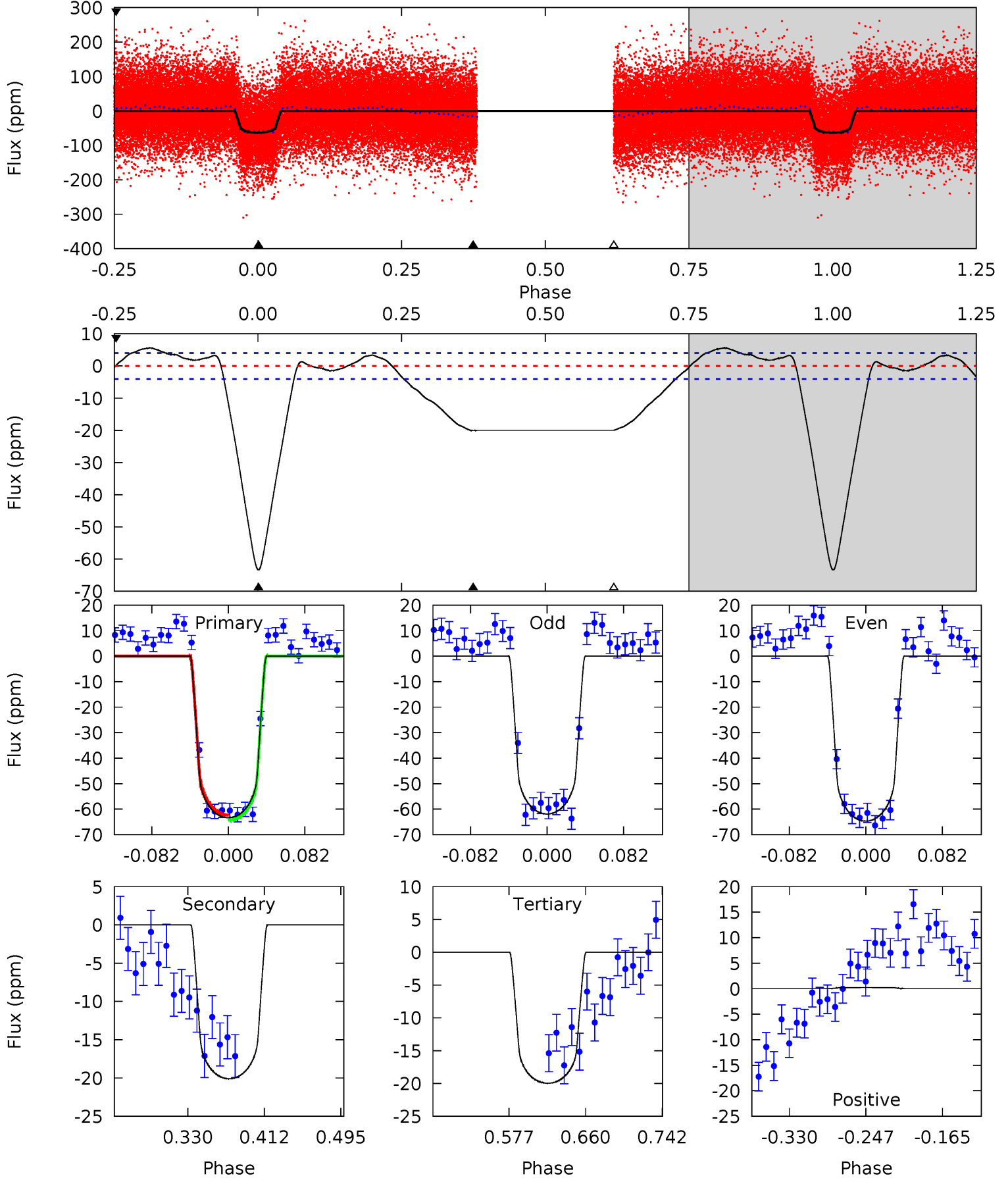




# DV Model-Shift Uniqueness Test

010666592-02, P = 2.204730 Days, E = 131.281086 Days

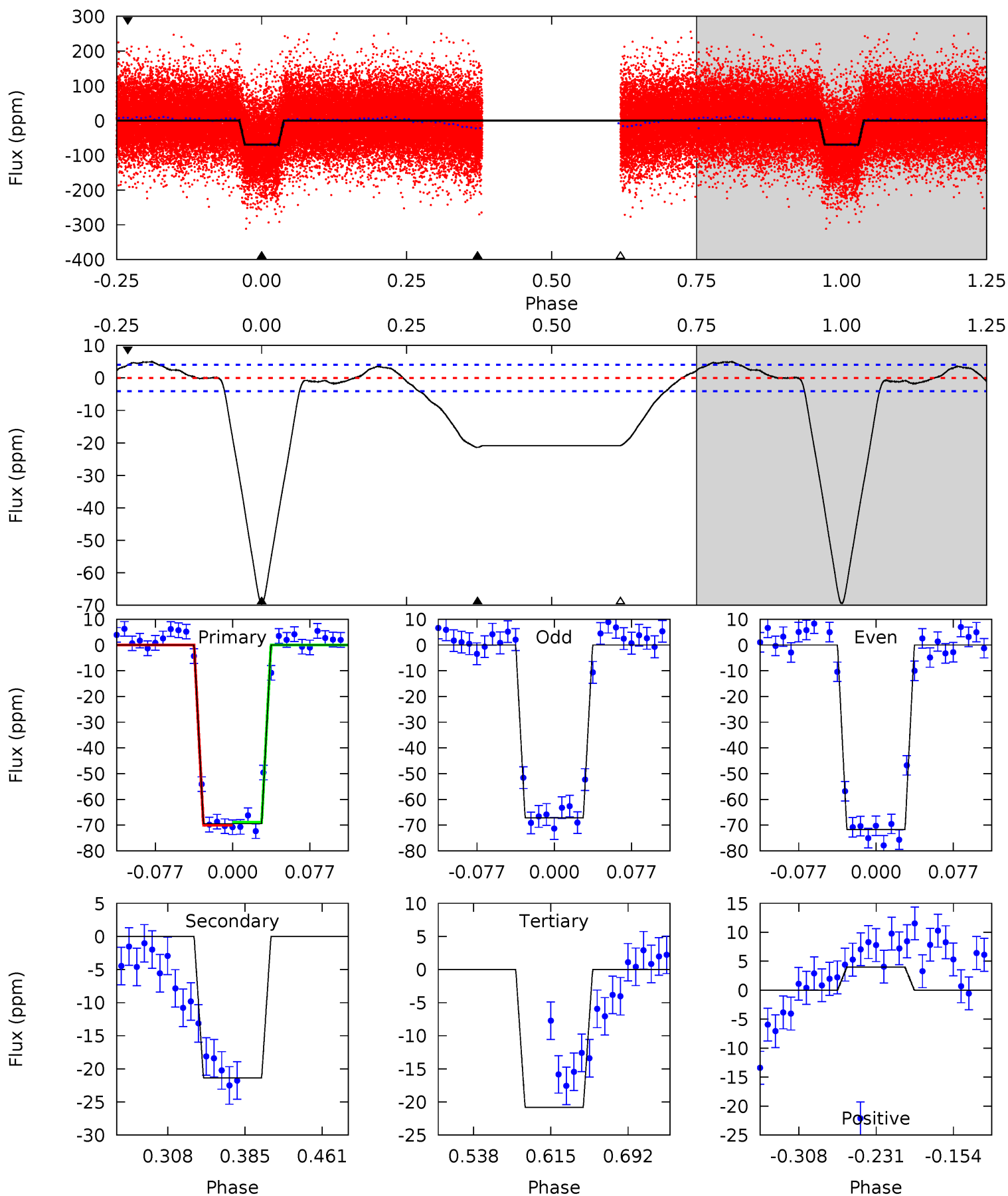
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
72.6	23.0	22.9	0.26	4.61	1.74	7.78	49.7	72.4	0.14	22.8	1.59	1.00	0.08	1.14



# Alt Model-Shift Uniqueness Test

010666592-02, P = 2.204734 Days, E = 131.281044 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
79.0	24.3	23.7	4.52	4.62	1.77	6.53	55.3	74.5	0.62	19.8	2.63	1.02	0.07	0.59



### Stellar Parameters For KIC 010666592

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6440^{+76}_{-89}$	$4.019^{+0.033}_{-0.027}$	$0.140^{+0.150}_{-0.150}$	$1.952^{+0.099}_{-0.110}$	$1.449^{+0.070}_{-0.091}$	$0.274^{+0.037}_{-0.030}$
	+1%/-1%	+1%/-1%	+107%/-107%	+5%/-6%	+5%/-6%	+14%/-11%
Source	SPE72	AST69	SPE72	DSEP		

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

### Secondary Eclipse Parameters for KIC 010666592-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-20 \pm 1$	$1.79^{+0.14}_{-0.16}$	$2858^{+50}_{-49}$	$4740^{+189}_{-158}$	$4.850^{+0.962}_{-0.750}$
Alt.	$-21 \pm 1$	$1.78^{+0.15}_{-0.16}$	$2858^{+50}_{-53}$	$4827^{+202}_{-180}$	$5.210^{+1.026}_{-0.810}$

$T_{\text{max}}$  = 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

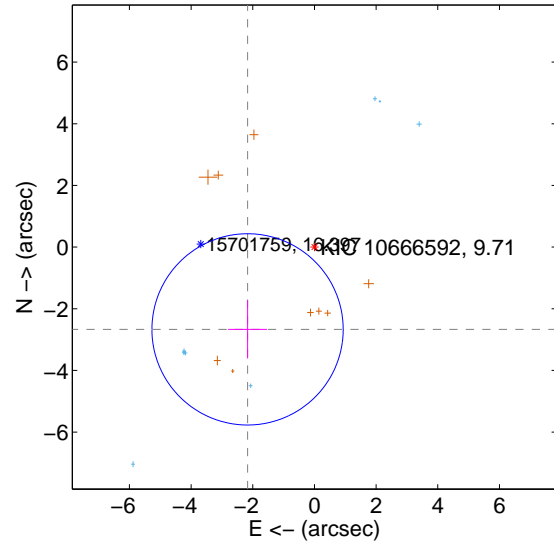
Supplemental centroid analysis for 010666592-02. **Kepler magnitude: 9.71.** Transit SNR 40.74

There are 8 quarters with good PRF difference image offsets

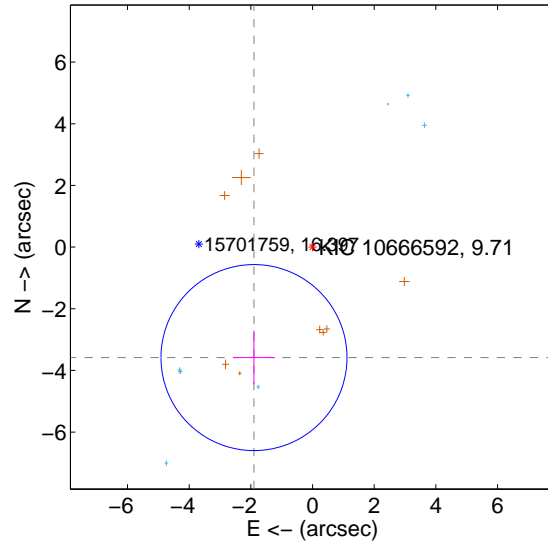
The direct PRF centroid is offset from the target star catalog position by about 0.35 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	<b><math>3.439 \pm 1.034</math></b>	<b>3.33</b>	$2.169 \pm 0.628$	$-2.669 \pm 0.944$
PRF-fit source offset from KIC position	<b><math>4.056 \pm 1.005</math></b>	<b>4.03</b>	$1.899 \pm 0.680$	$-3.584 \pm 0.874$
photometric centroid source offset	<b><math>0.77 \pm 0.23</math></b>	<b>3.31</b>	$0.42 \pm 0.22$	$-0.65 \pm 0.24$

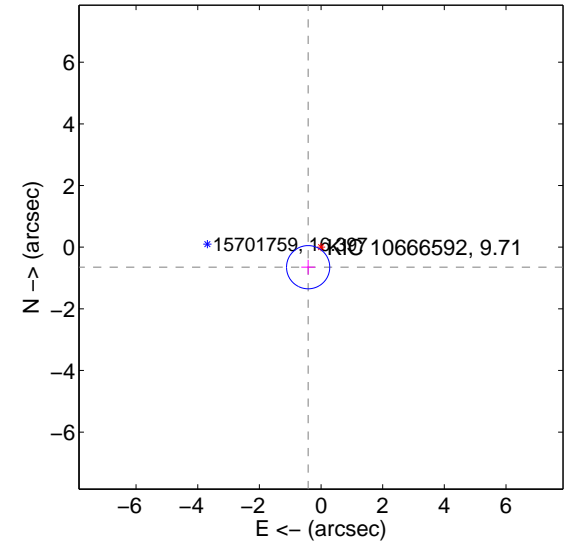
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

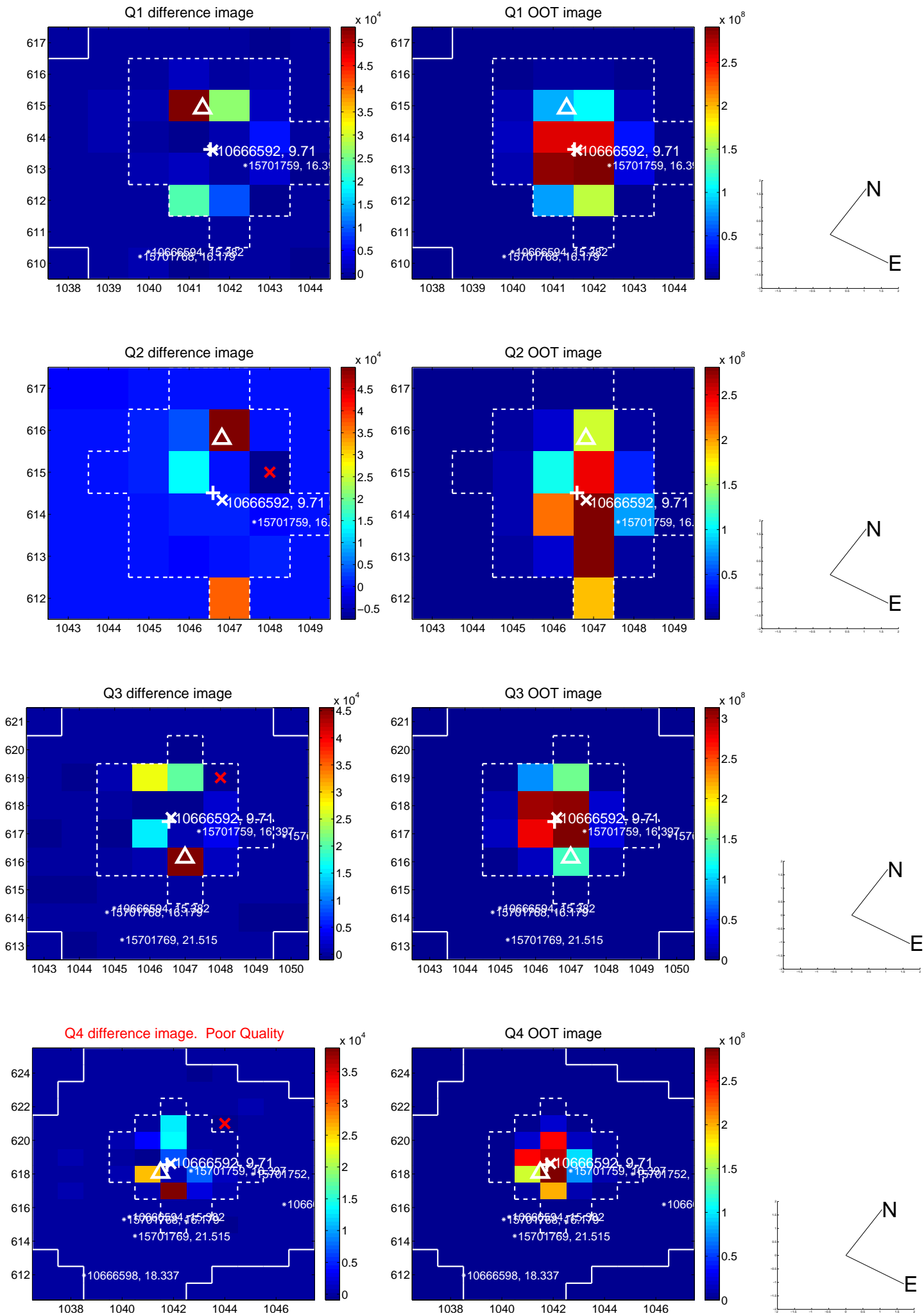


offset from photometric centroids

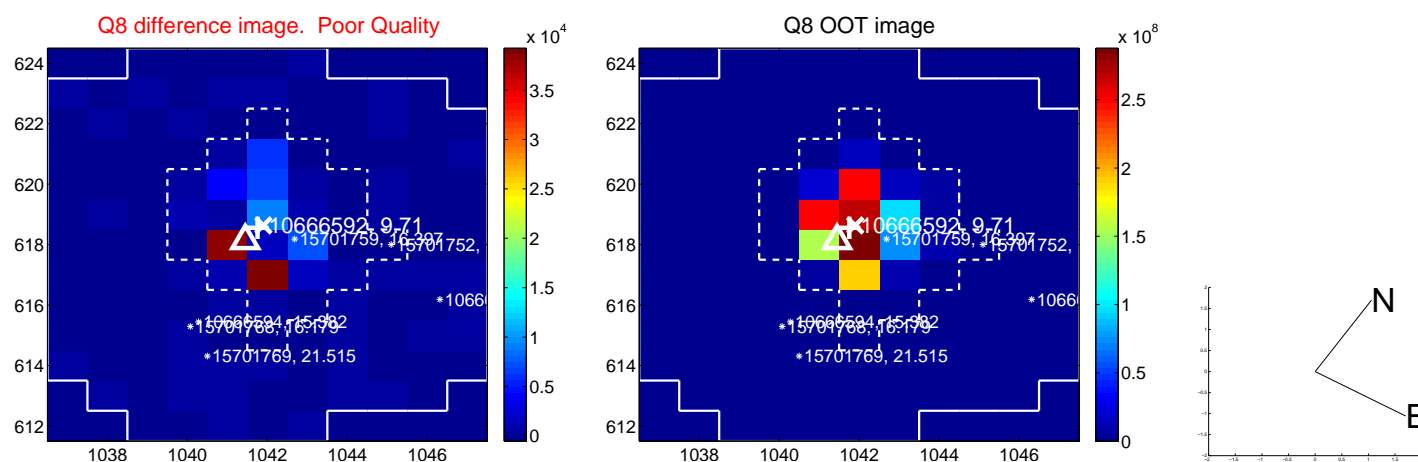
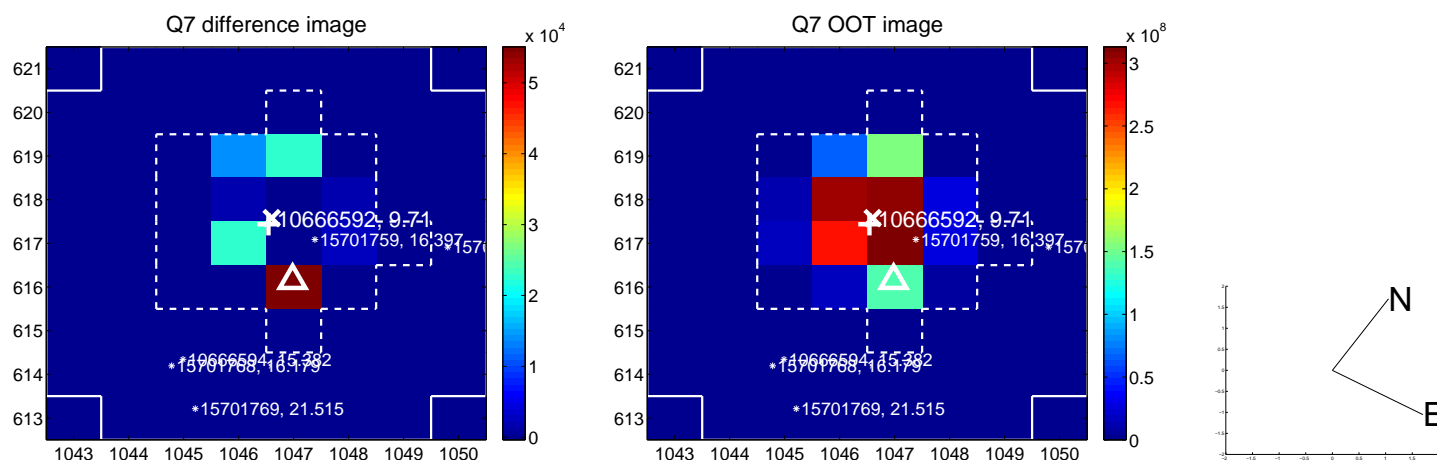
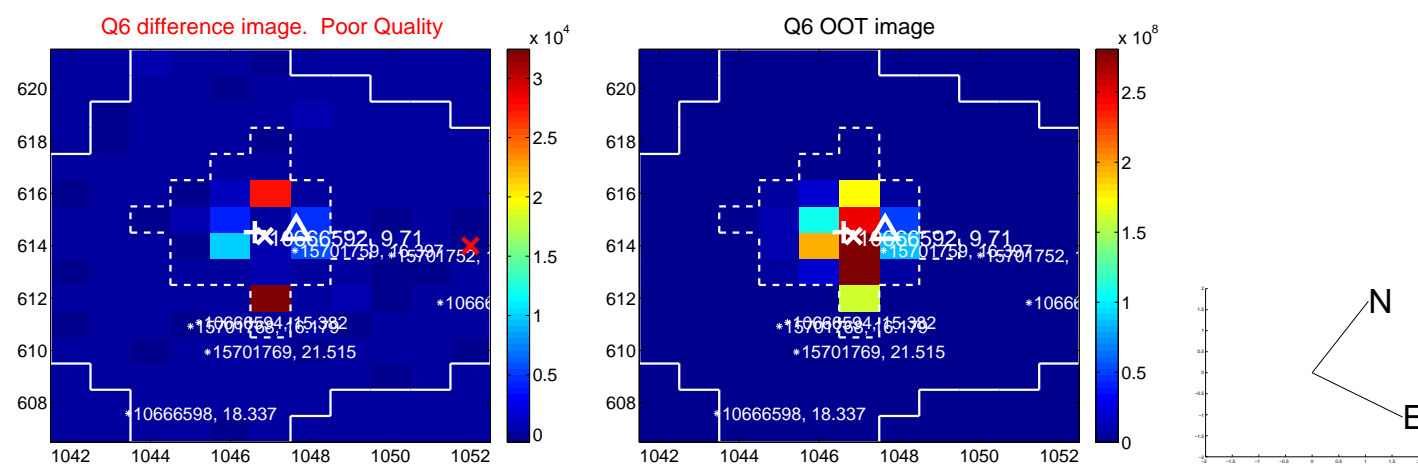
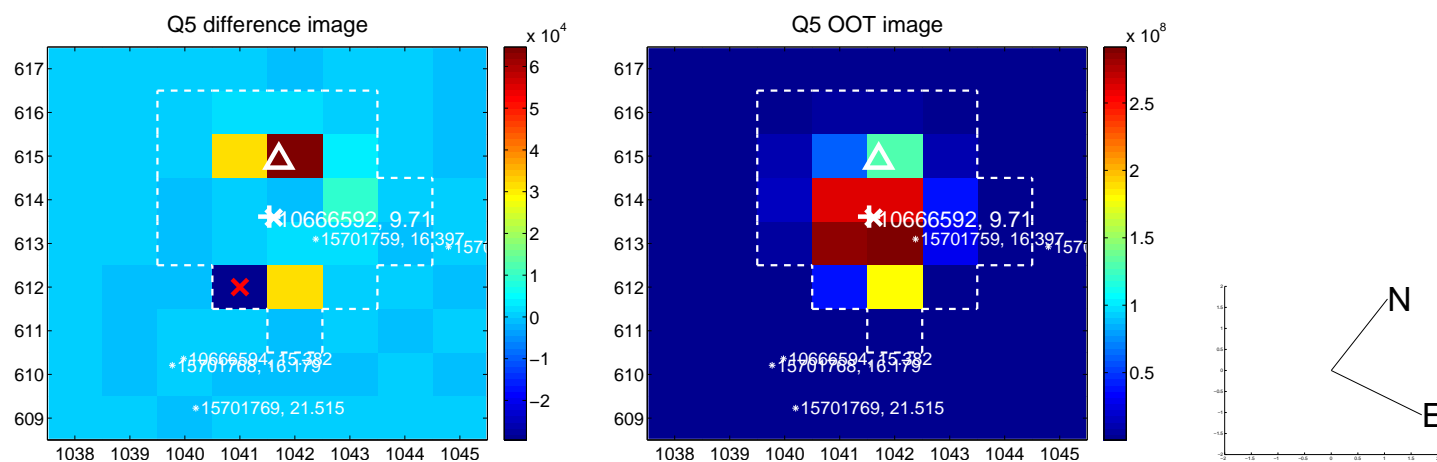


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

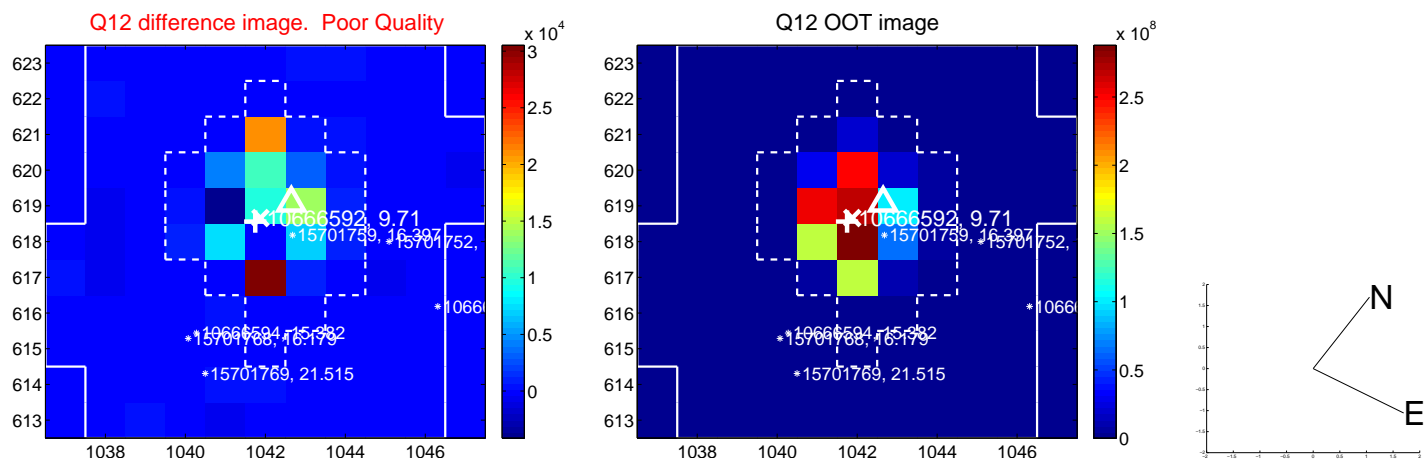
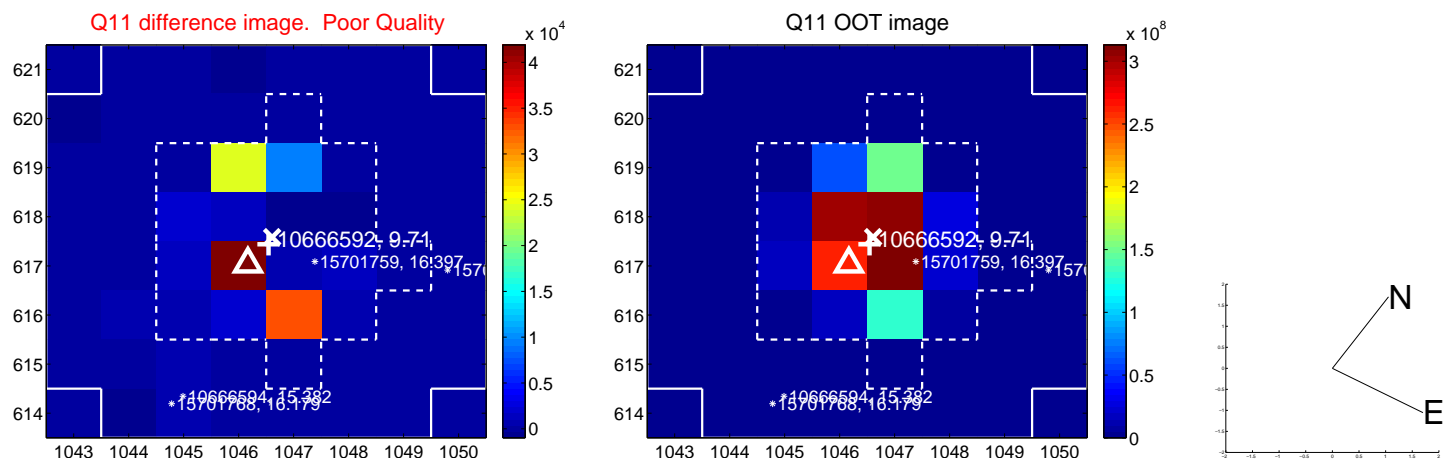
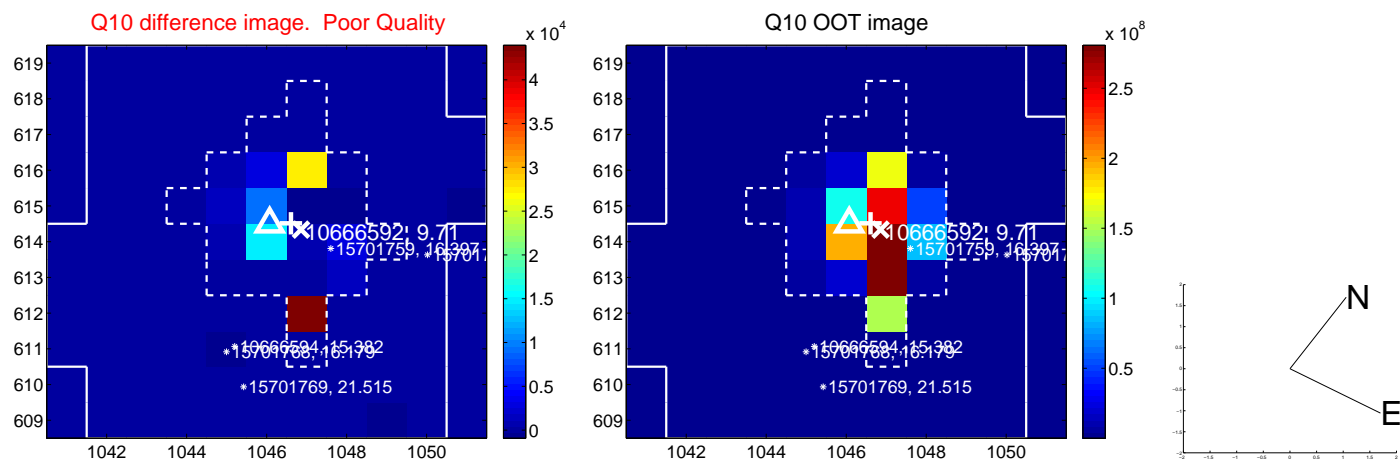
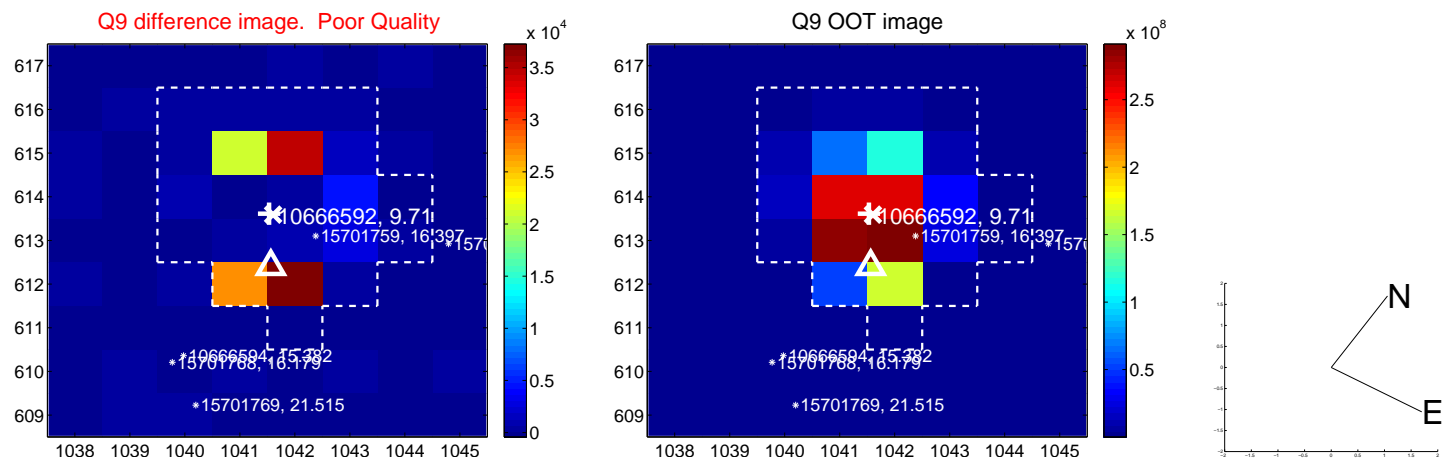


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

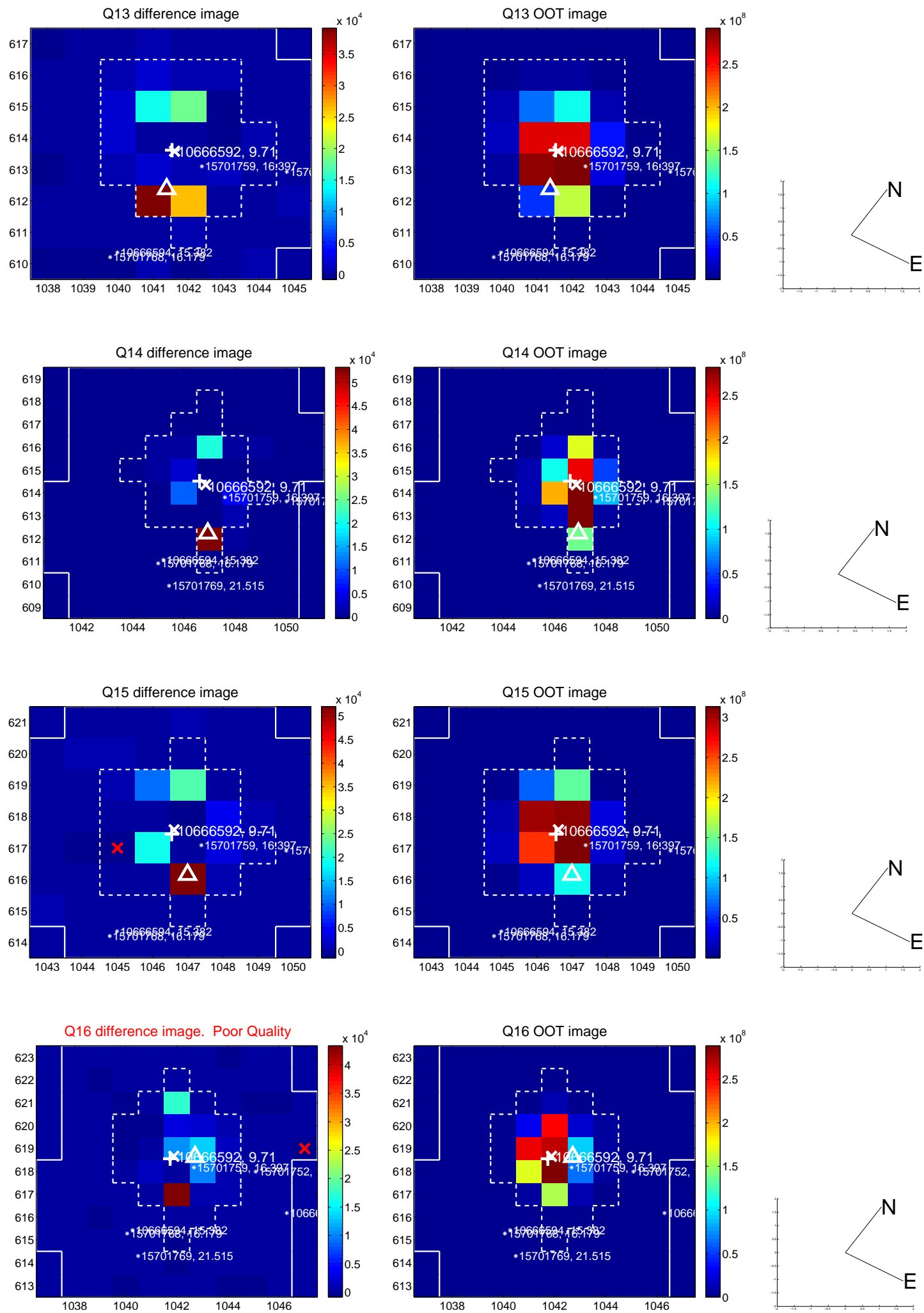




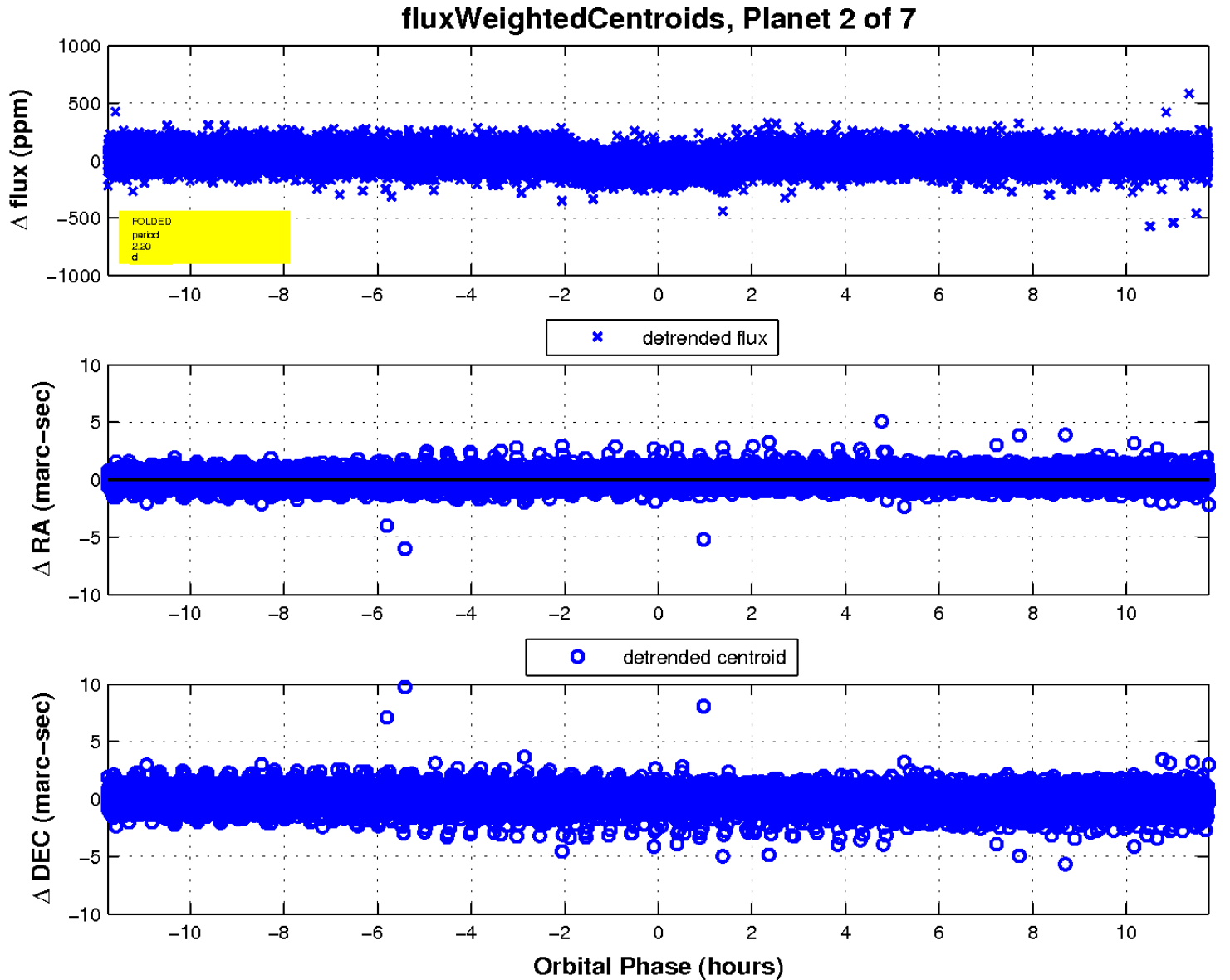
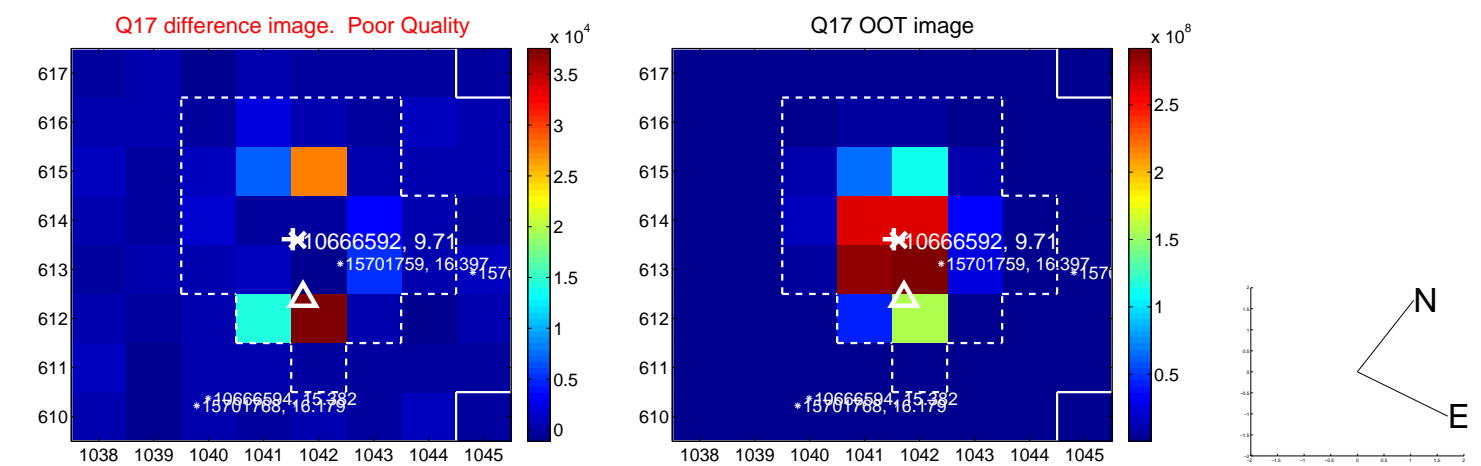
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

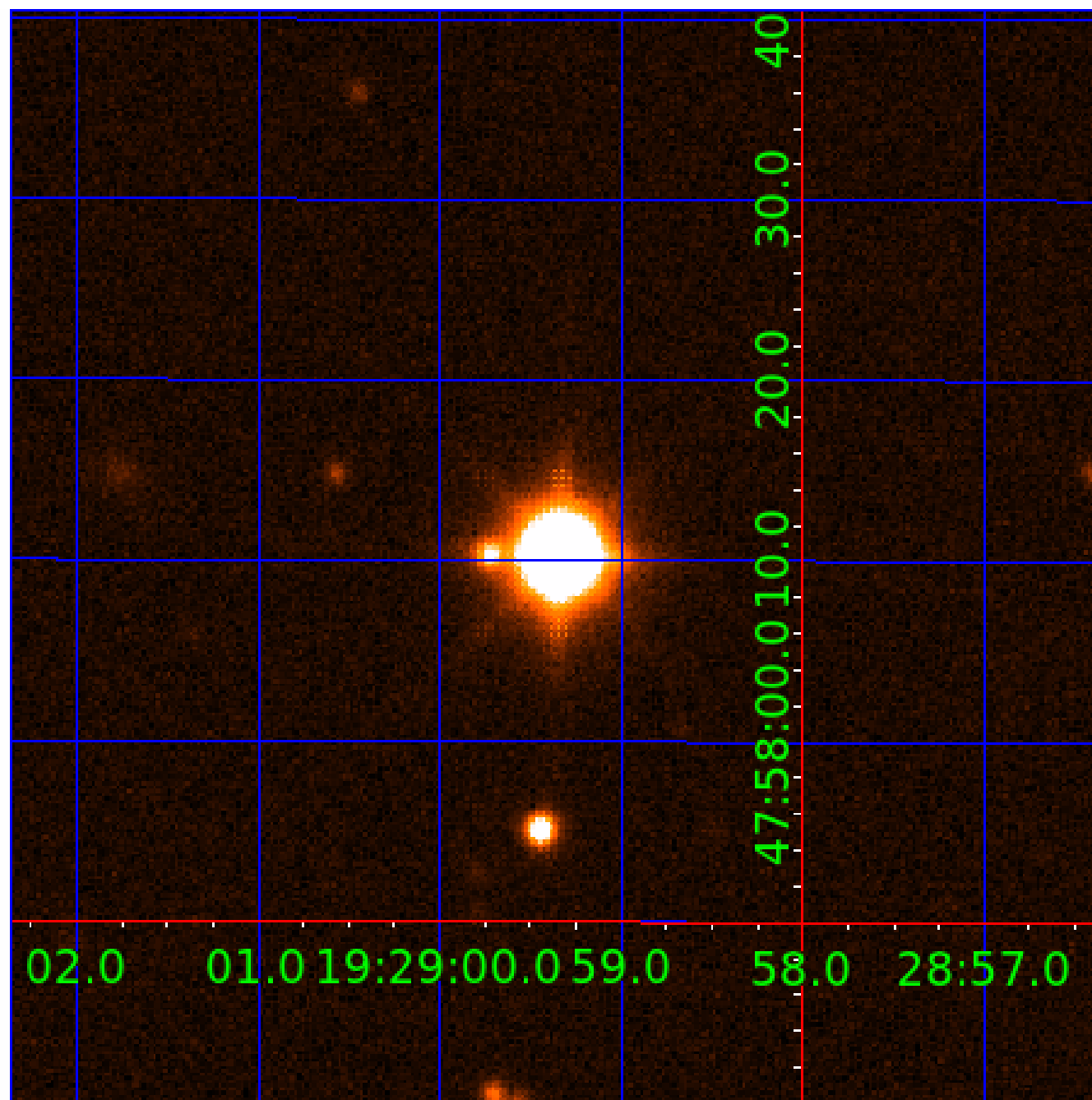


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination



# KIC 010666592

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
010666592-01	OBS	0002.01	2.204731	132.383258	6676.5	4.044	3862.2	3564.7	1.95	6440	16.78	4165.02
010666592-02	OBS	No	2.204730	133.485816	62.5	3.919	39.7	40.7	1.95	6440	1.81	4165.02
010666592-03	OBS	No	2.205225	131.978785	20.7	14.659	14.0	12.5	1.95	6440	0.90	4163.77
010666592-04	OBS	No	35.356054	163.335903	94.5	10.421	26.4	8.6	1.95	6440	1.90	102.99
010666592-05	OBS	No	20.490420	137.639645	45.1	12.320	16.1	5.1	1.95	6440	1.32	213.15
010666592-06	OBS	No	25.975692	132.034470	133.1	2.262	11.3	10.1	1.95	6440	2.32	155.36
010666592-07	OBS	No	39.279443	164.669535	93.6	3.000	9.8	-1.0	1.95	6440	1.90	89.51

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010666592-01	OBS	PC	1.00	0	1	0	0	MOD_SEC_DV—PLANET_OCCULT_DV—MOD_SEC_ALT—PLANET_OCCULT_ALT—HAS_SEC_TCE—CENT_SATURATED
010666592-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_SATURATED
010666592-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—RESIDUAL_TCE—CENT_SATURATED
010666592-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_SATURATED
010666592-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_SATURATED
010666592-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—CENT_SATURATED
010666592-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—NO_FITS—CENT_SATURATED

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

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

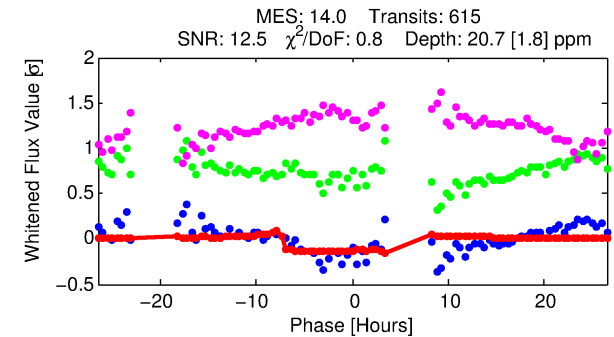
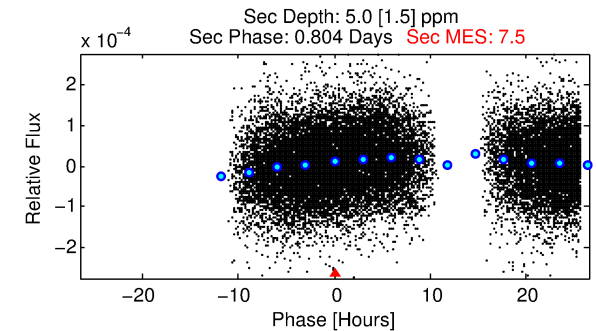
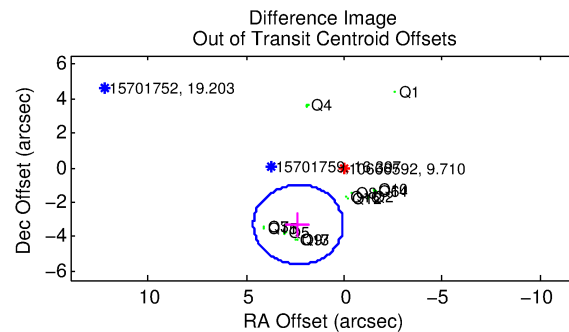
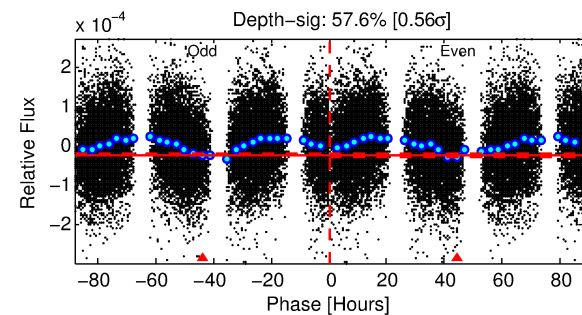
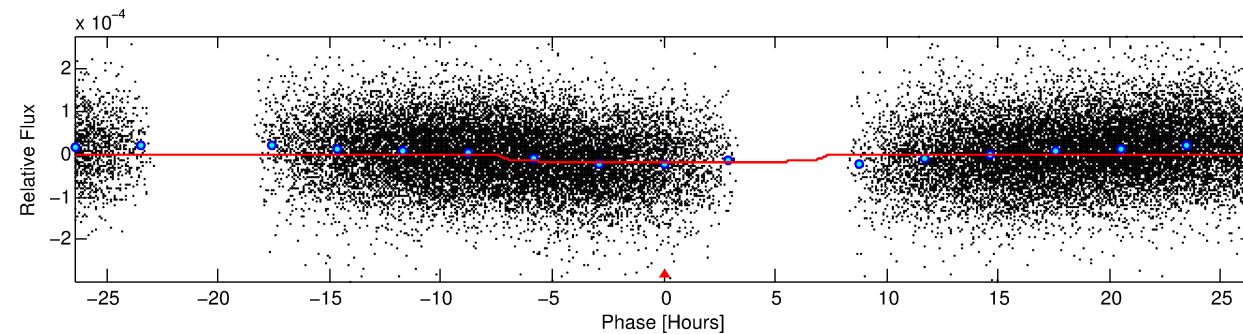
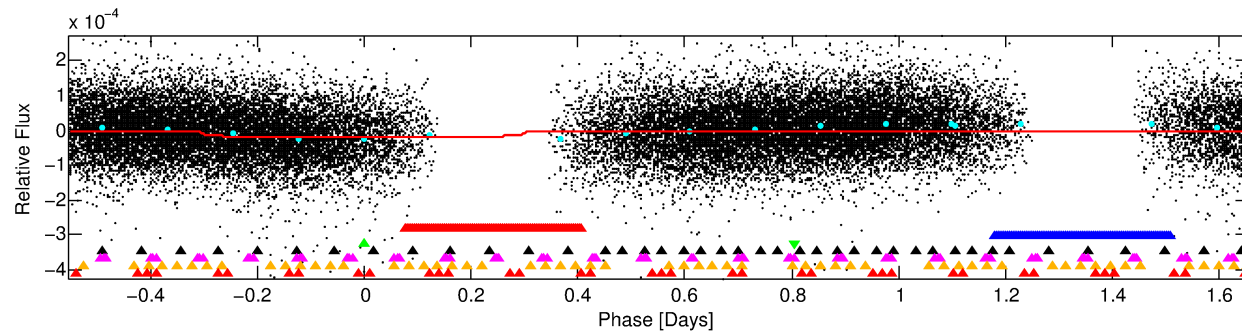
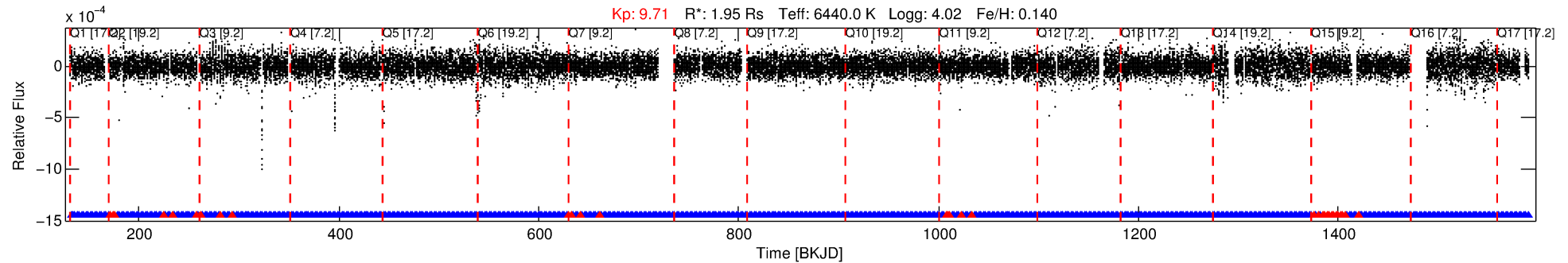
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 010666592-03

No Significant Match Found

# DV One-Page Summary

KIC: 10666592 Candidate: 3 of 7 Period: 2.205 d  
KOI: K00002 Name: Kepler-2 Corr: No Ephemeris Match



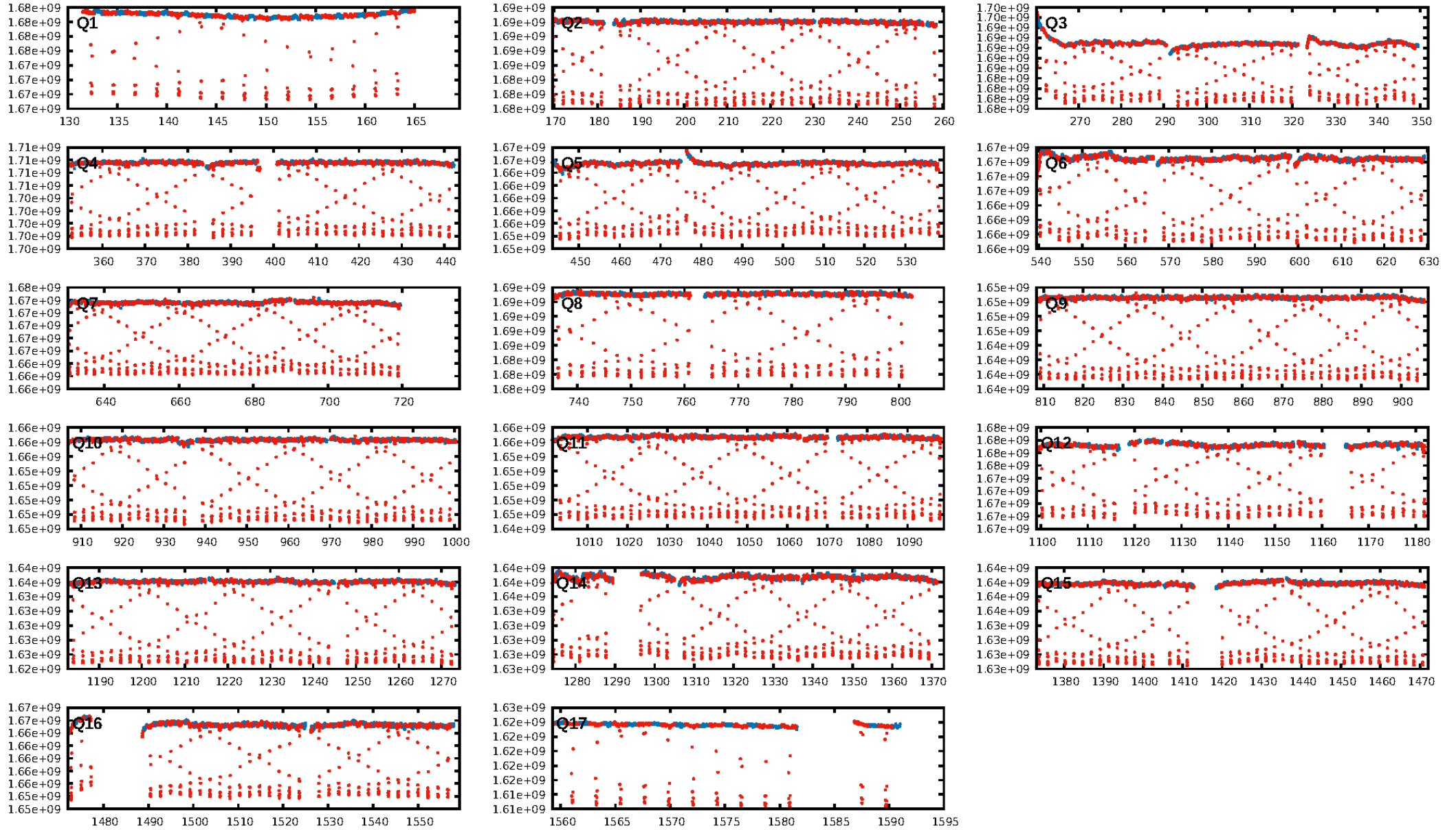
## DV Fit Results:

Period = 2.20522 [0.00003] d  
Epoch = 131.9788 [0.0161] BKJD  
Rp/R\* = 0.0042 [0.0024]  
a/R\* = 1.28 [1.49]  
b = 0.35 [7.41]  
Seff = 4163.77 [349.19]  
Teq = 2048 [43] K  
Rp = 0.90 [0.52] Re  
a = 0.0376 [0.0017] AU  
Ag = 4.82 [5.75] [0.66 $\sigma$ ]  
Teffp = 4693 [1399] K [1.89 $\sigma$ ]

## DV Diagnostic Results:

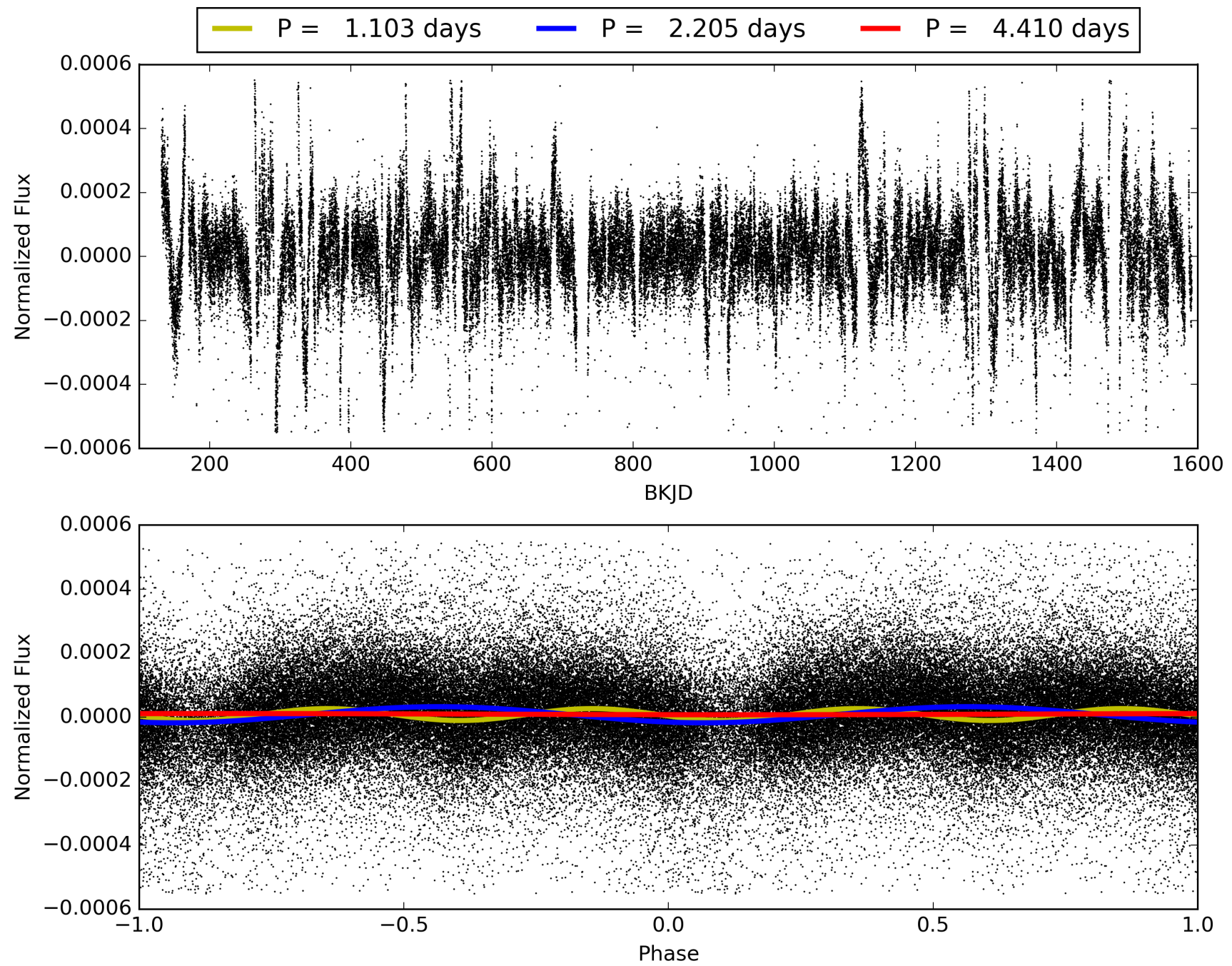
ShortPeriod-sig: 0.1% [0.00 $\sigma$ ]  
LongPeriod-sig: 100.0% [22.92 $\sigma$ ]  
ModelChiSquare2-sig: N/A  
ModelChiSquareGoF-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 0.95 [555/587]  
GhostDiagnostic-chr: N/A  
Centroid-sig: N/A  
Centroid-so: 1.901 arcsec [2.95 $\sigma$ ]  
OotOffset-rm: 4.045 arcsec [5.28 $\sigma$ ]  
KicOffset-rm: 4.240 arcsec [5.50 $\sigma$ ]  
OotOffset-st: 4/4/4/5 [17]  
KicOffset-st: 4/4/4/5 [17]  
DiffImageQuality-fgm: 0.18 [3/17]  
DiffImageOverlap-fno: 0.00 [0/17]

# TCE 010666592-03, PDC Light Curves





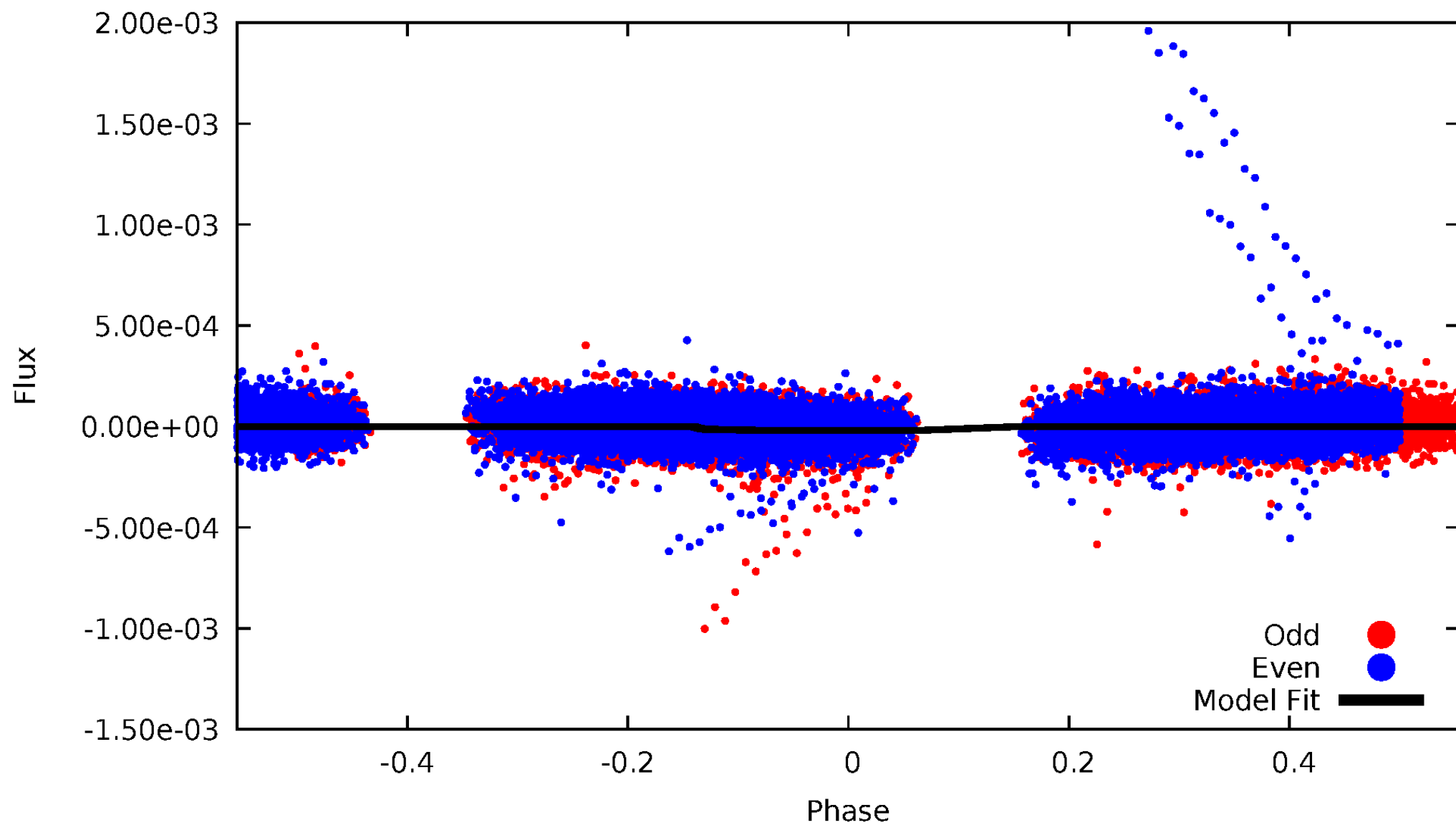
TCE 010666592-03





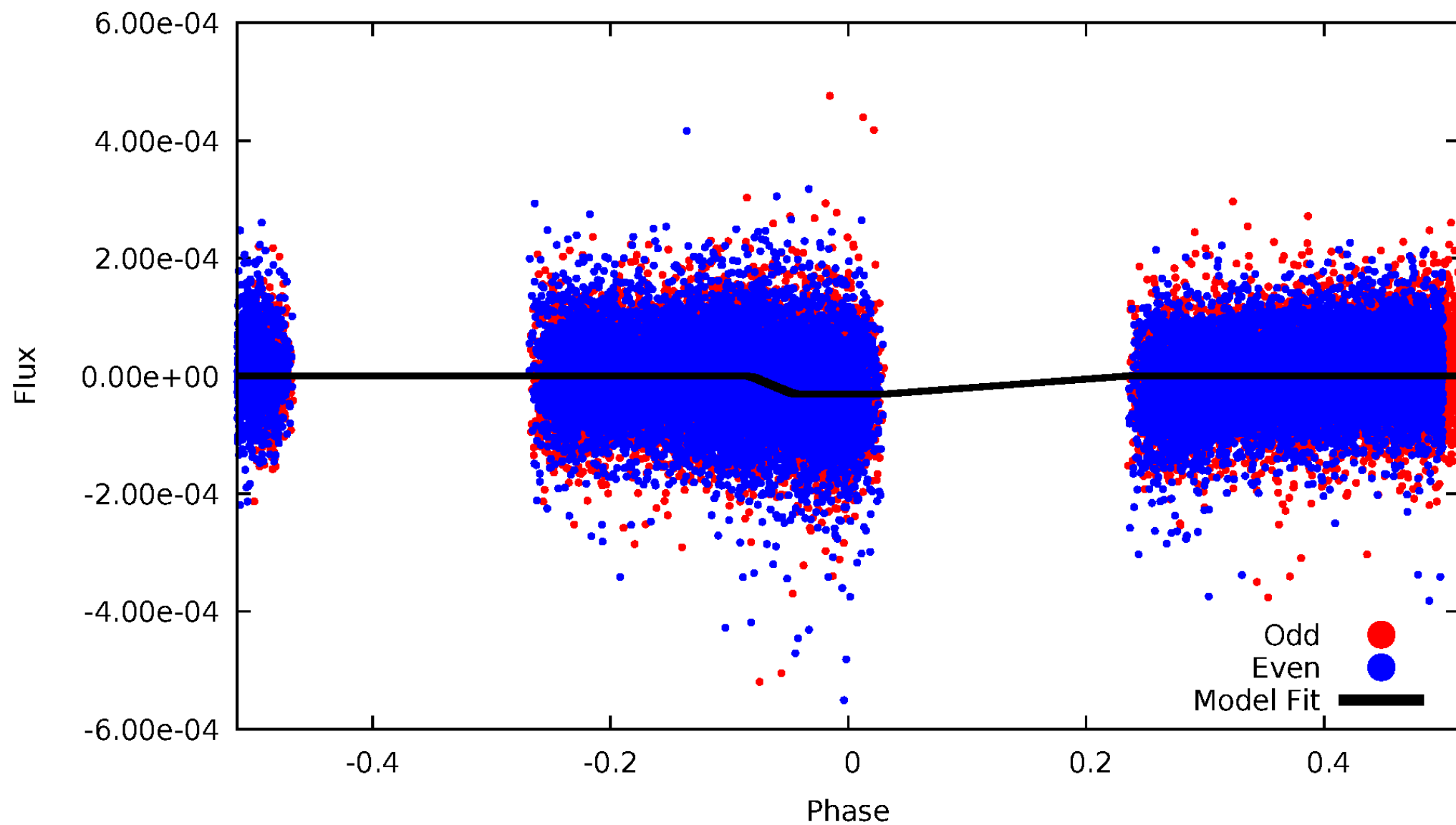
# DV Odd/Even

TCE 010666592-03

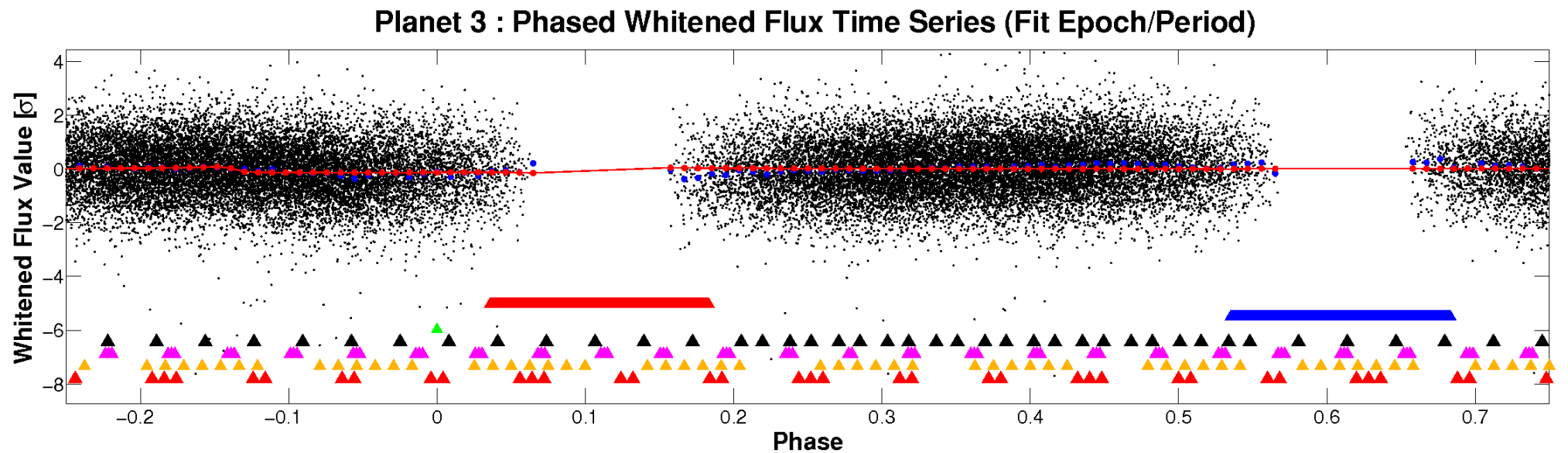
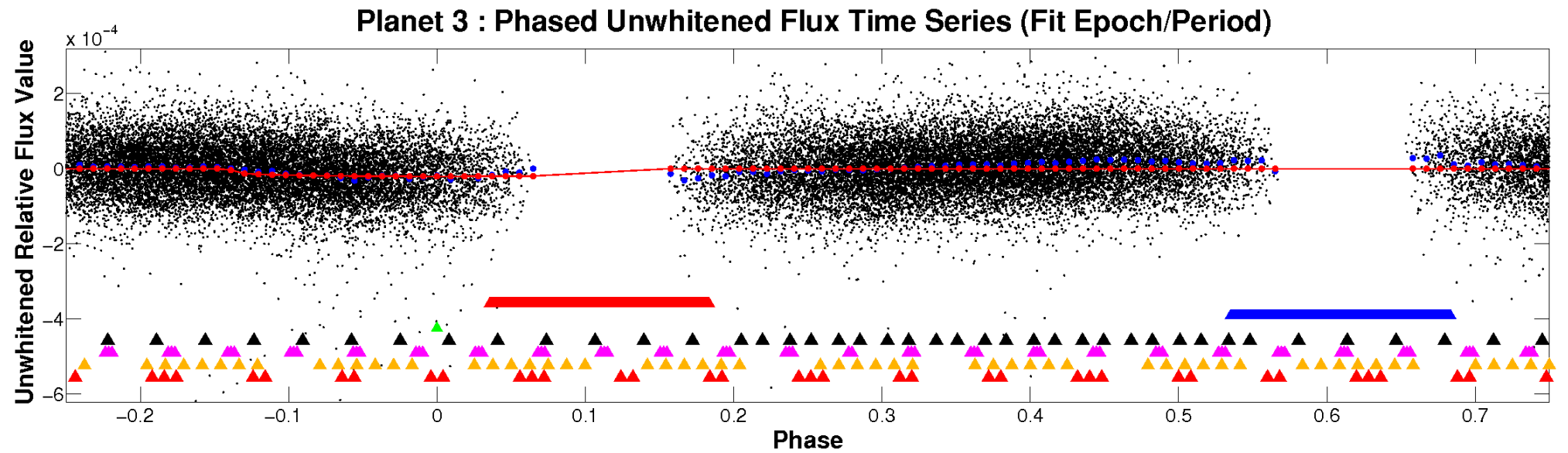


# ALT Odd/Even

TCE 010666592-03

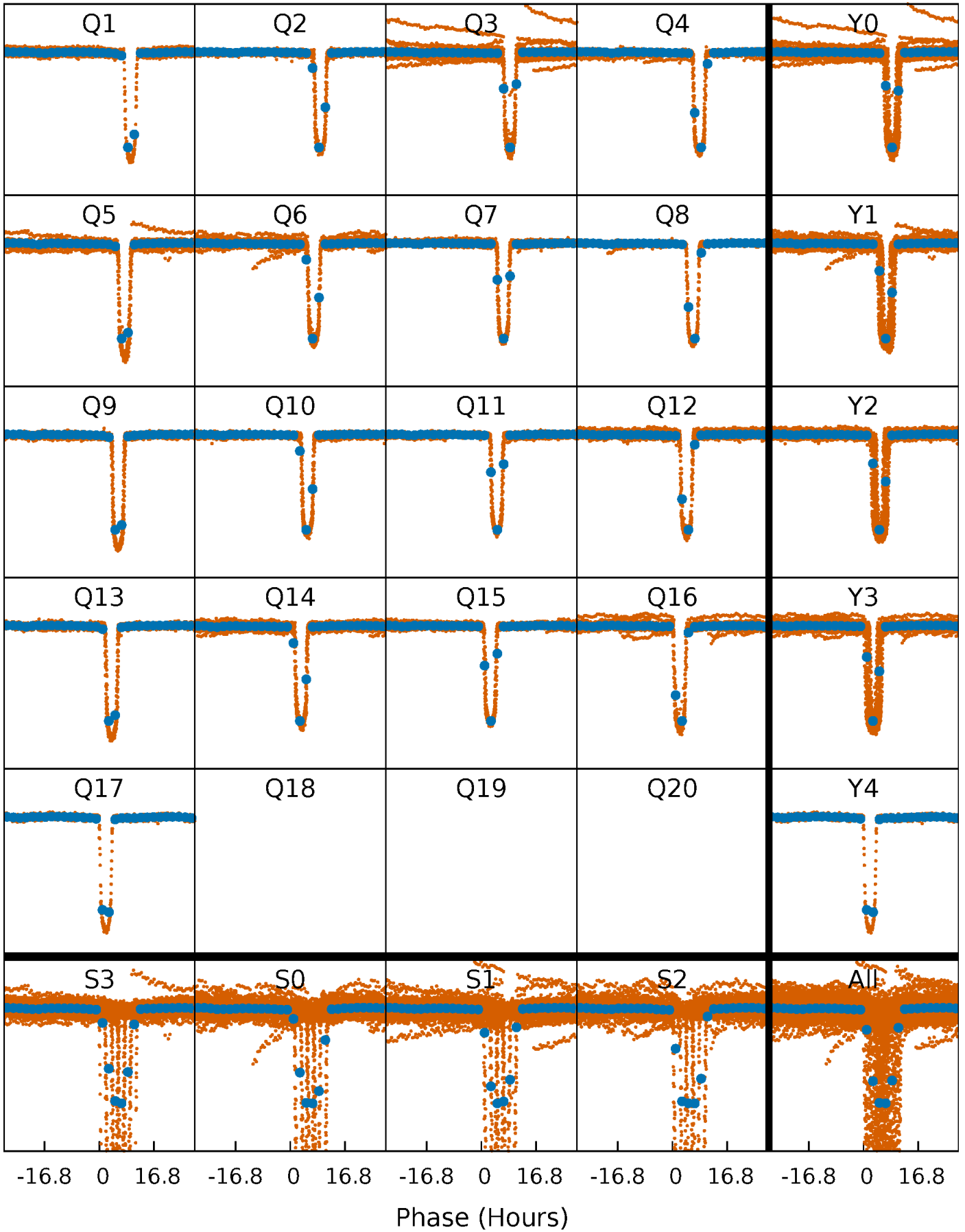


# Non-Whitened Vs. Whitened Light Curve



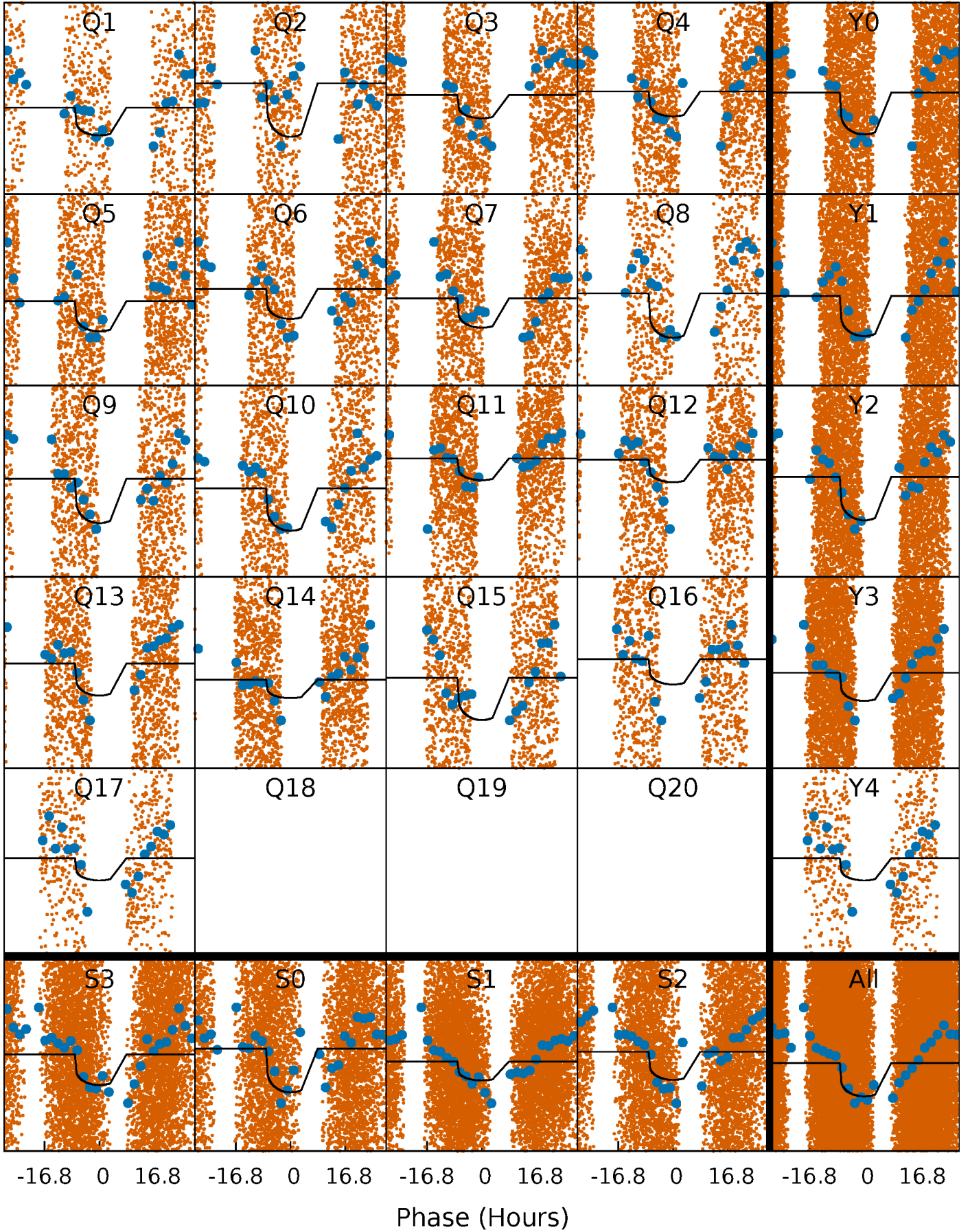
# PDC Quarter-Phased Transit Curves

TCE 010666592-03   P= 2.205225 Days    $T_0=131.978785$  (BKJD)



# DV Quarter-Phased Transit Curves

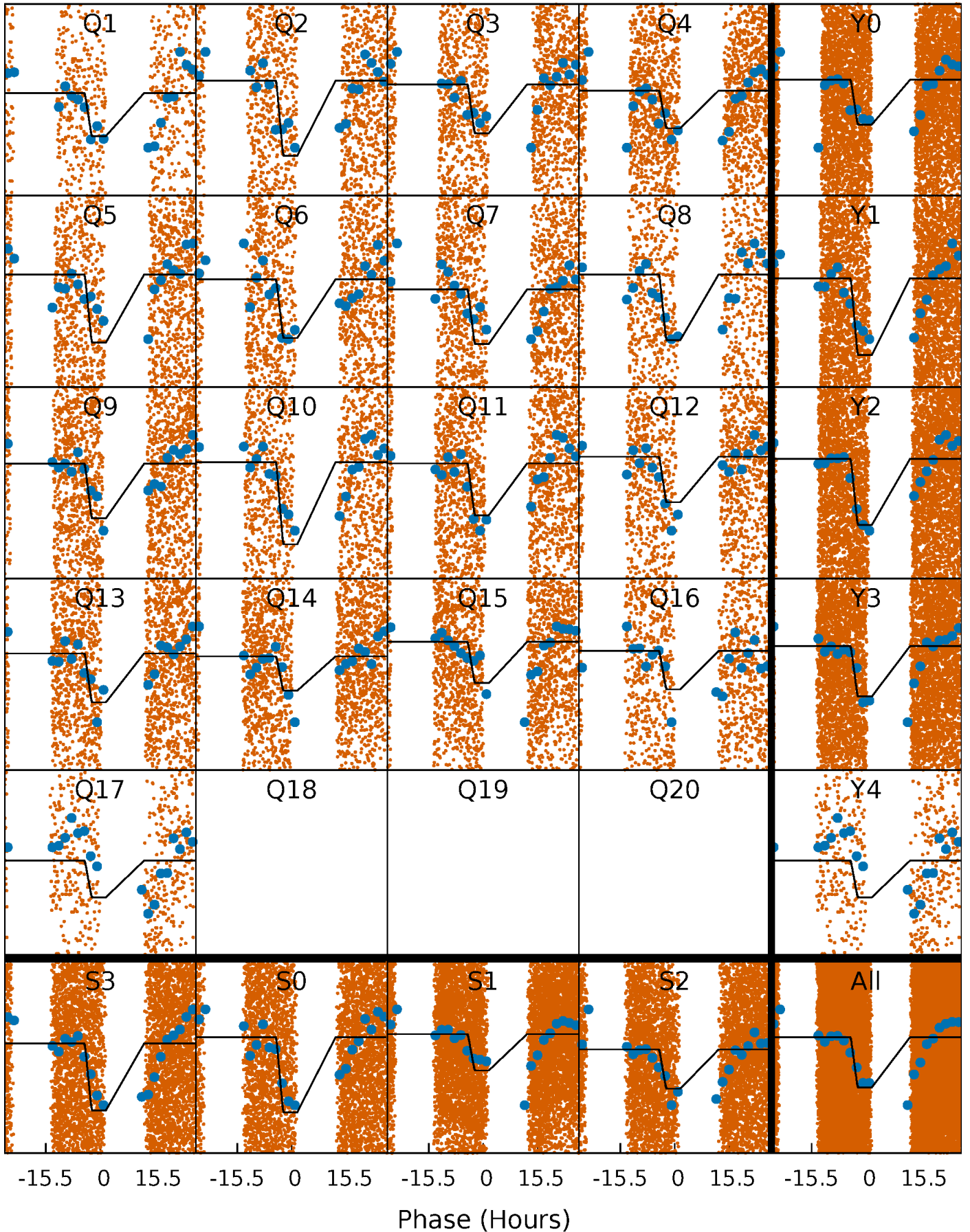
TCE 010666592-03   P= 2.205225 Days    $T_0=131.978785$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

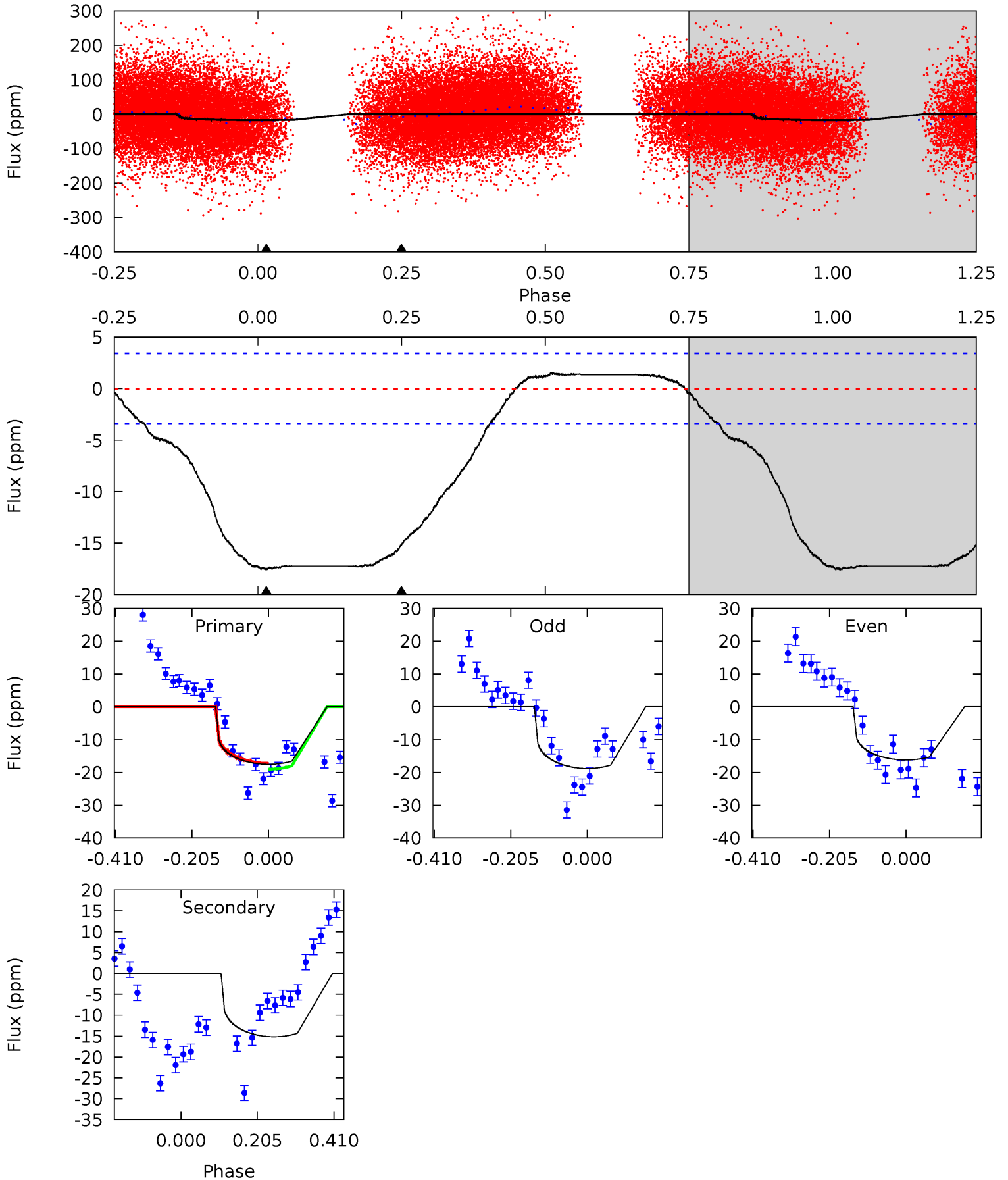
TCE 010666592-03 P= 2.204847 Days  $T_0=132.052723$  (BKJD)



# DV Model-Shift Uniqueness Test

010666592-03, P = 2.205225 Days, E = 129.773560 Days

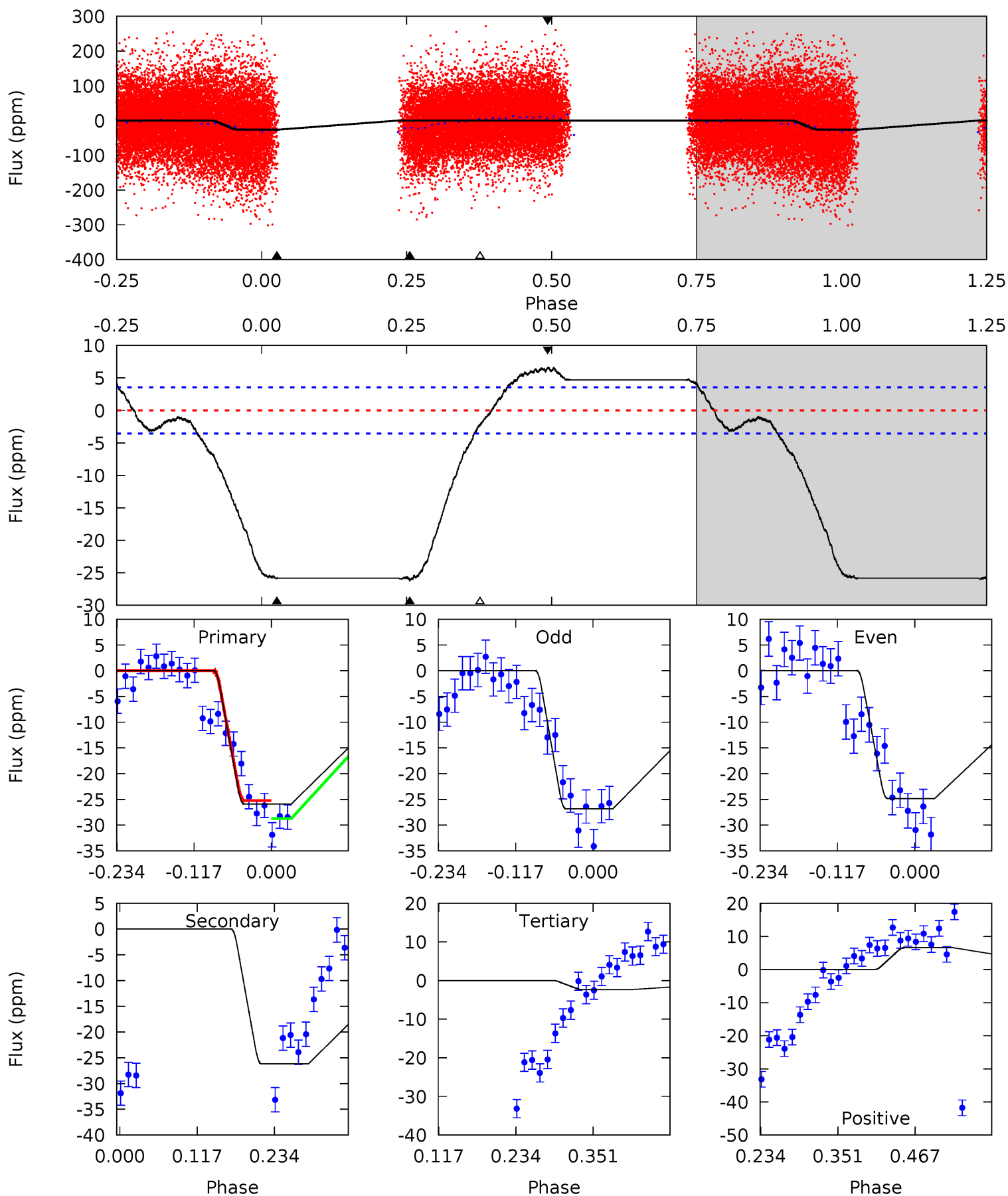
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.6	19.6	0	0	4.41	1.27	3.09	22.6	22.6	19.6	19.6	1.70	1.07	0.08	0.72



# Alt Model-Shift Uniqueness Test

010666592-03, P = 2.204847 Days, E = 129.847876 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
32.9	33.2	3.02	8.44	4.53	1.57	6.55	29.9	24.4	30.2	24.8	1.26	1.04	0.20	1.51





### Stellar Parameters For KIC 010666592

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6440^{+76}_{-89}$	$4.019^{+0.033}_{-0.027}$	$0.140^{+0.150}_{-0.150}$	$1.952^{+0.099}_{-0.110}$	$1.449^{+0.070}_{-0.091}$	$0.274^{+0.037}_{-0.030}$
	+1%/-1%	+1%/-1%	+107%/-107%	+5%/-6%	+5%/-6%	+14%/-11%
Source	SPE72	AST69	SPE72	DSEP		

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

### Secondary Eclipse Parameters for KIC 010666592-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-15 \pm 1$	$0.95^{+0.51}_{-0.45}$	$2858^{+48}_{-48}$	$5958^{+2849}_{-1089}$	$13^{+36}_{-8}$
Alt.	$-26 \pm 1$	$1.17^{+0.54}_{-0.49}$	$2857^{+49}_{-54}$	$6155^{+2138}_{-1045}$	$15^{+27}_{-8}$

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

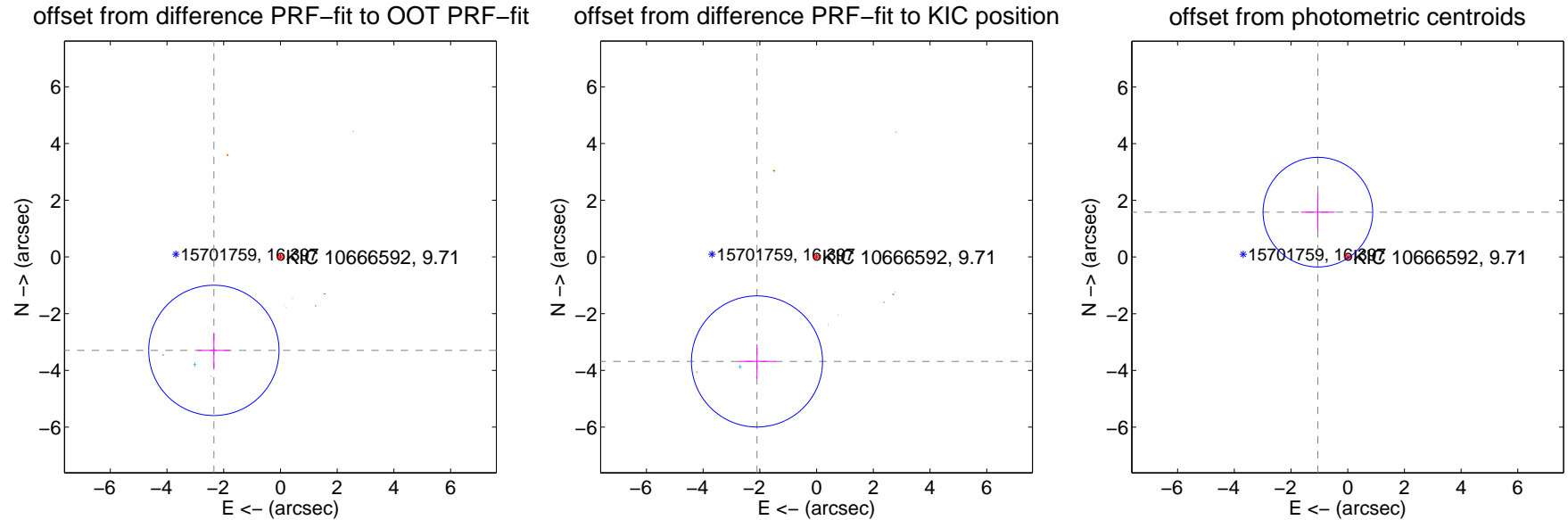
## DV Centroid Data

Supplemental centroid analysis for 010666592-03. **Kepler magnitude: 9.71.** Transit SNR 12.49

**There are 3 quarters with good PRF difference image offsets**

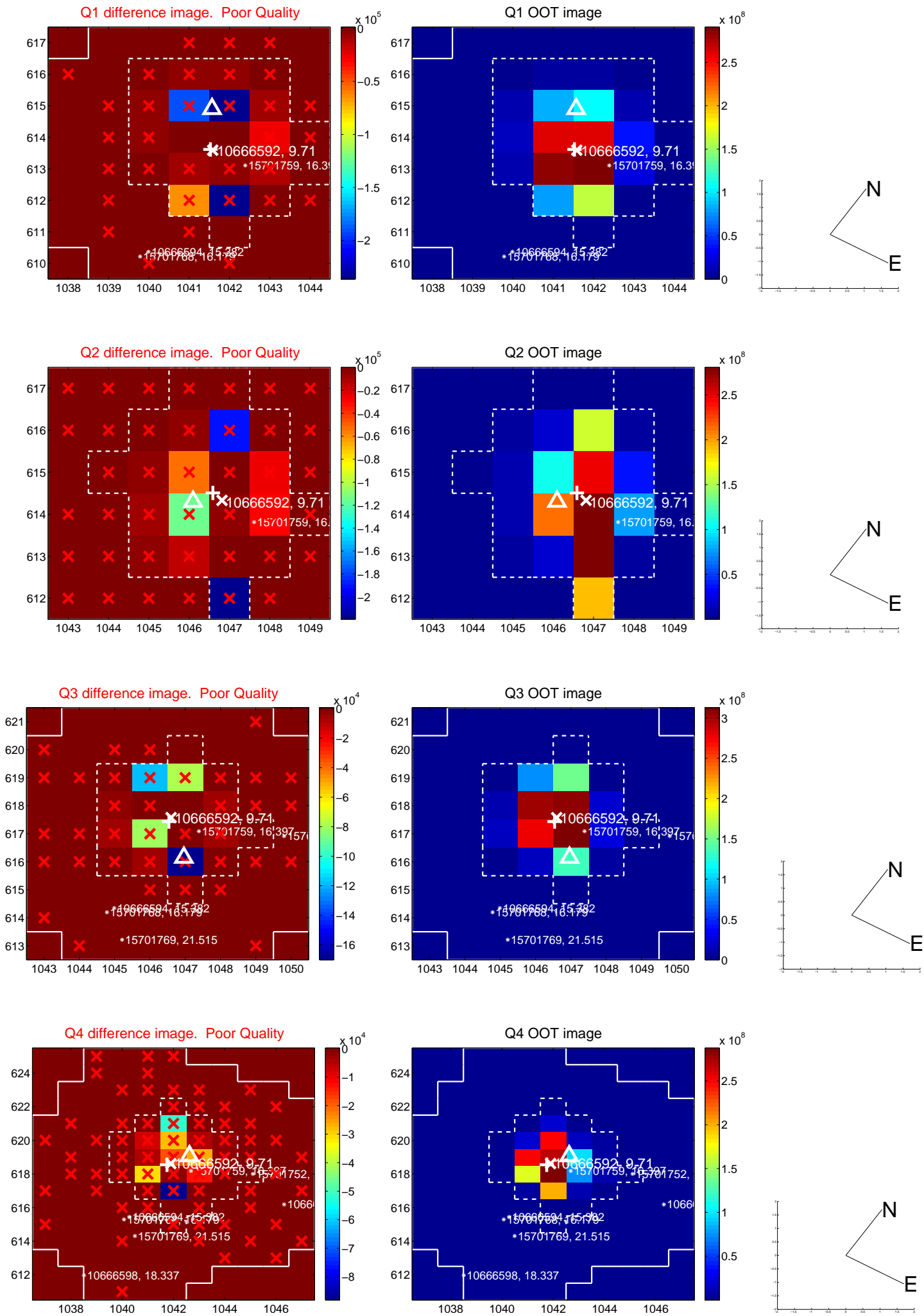
The direct PRF centroid is offset from the target star catalog position by about 0.35 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	<b>4.045 <math>\pm</math> 0.766</b>	<b>5.28</b>	2.348 $\pm$ 0.575	-3.294 $\pm$ 0.614
PRF-fit source offset from KIC position	<b>4.240 <math>\pm</math> 0.770</b>	<b>5.50</b>	2.101 $\pm$ 0.660	-3.683 $\pm$ 0.601
photometric centroid source offset	1.90 $\pm$ 0.64	2.95	1.05 $\pm$ 0.59	1.58 $\pm$ 0.67

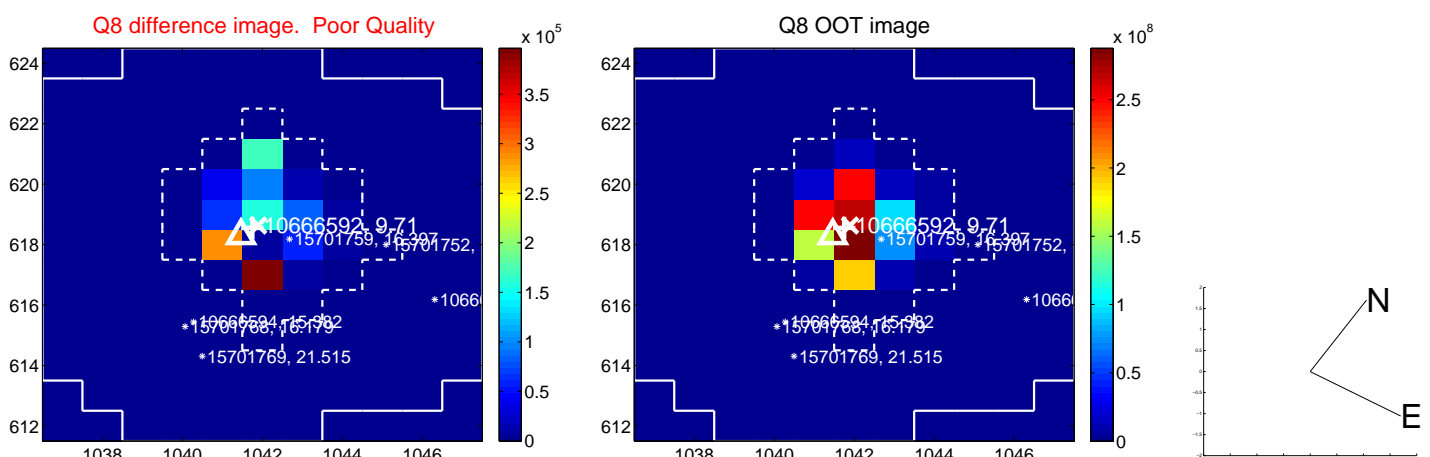
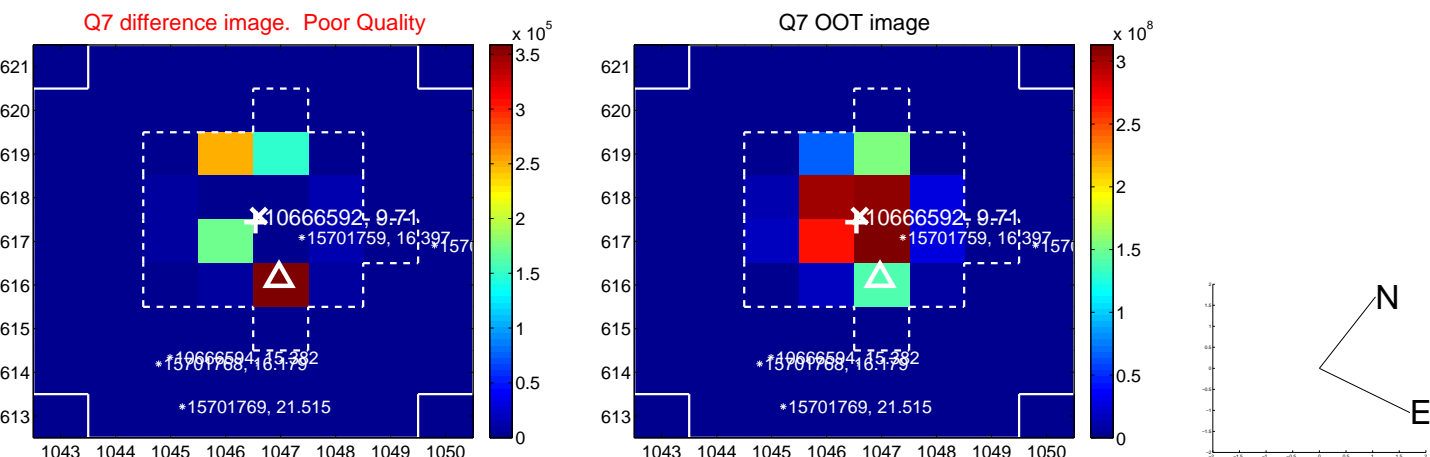
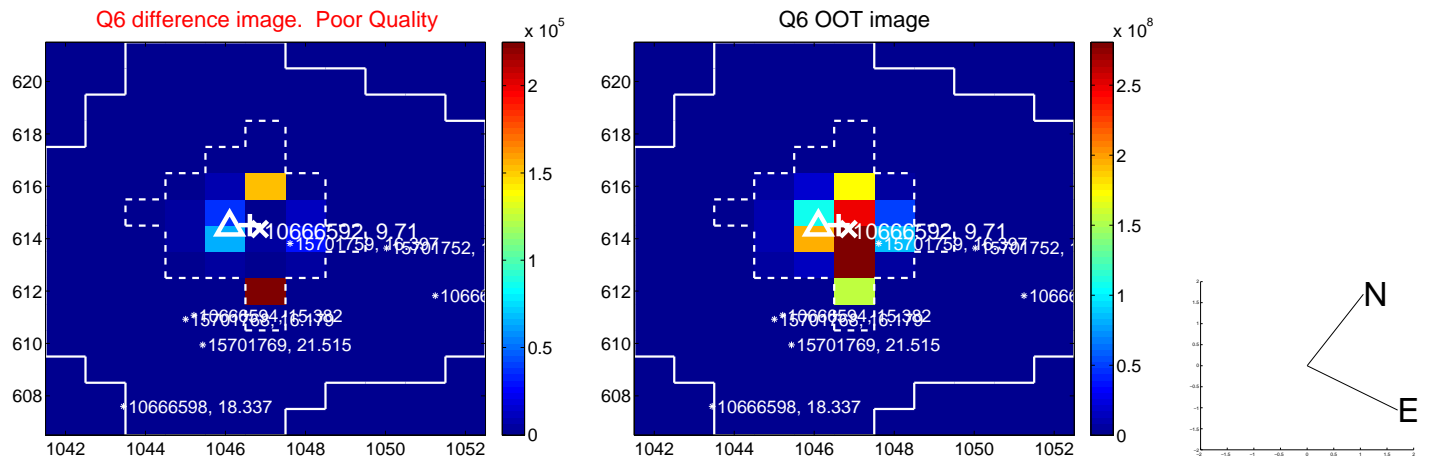
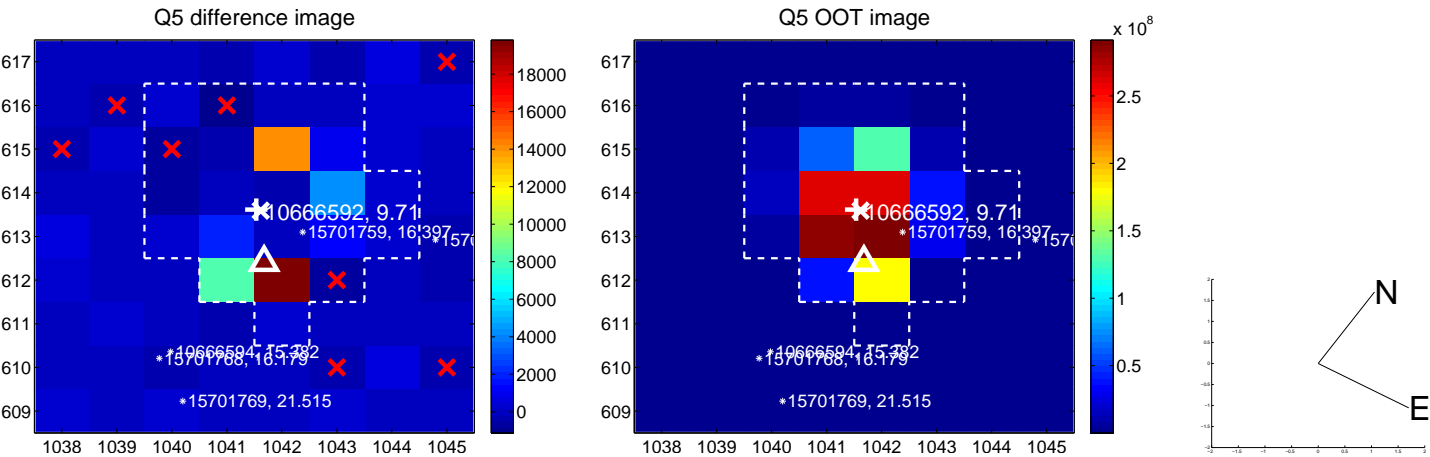


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

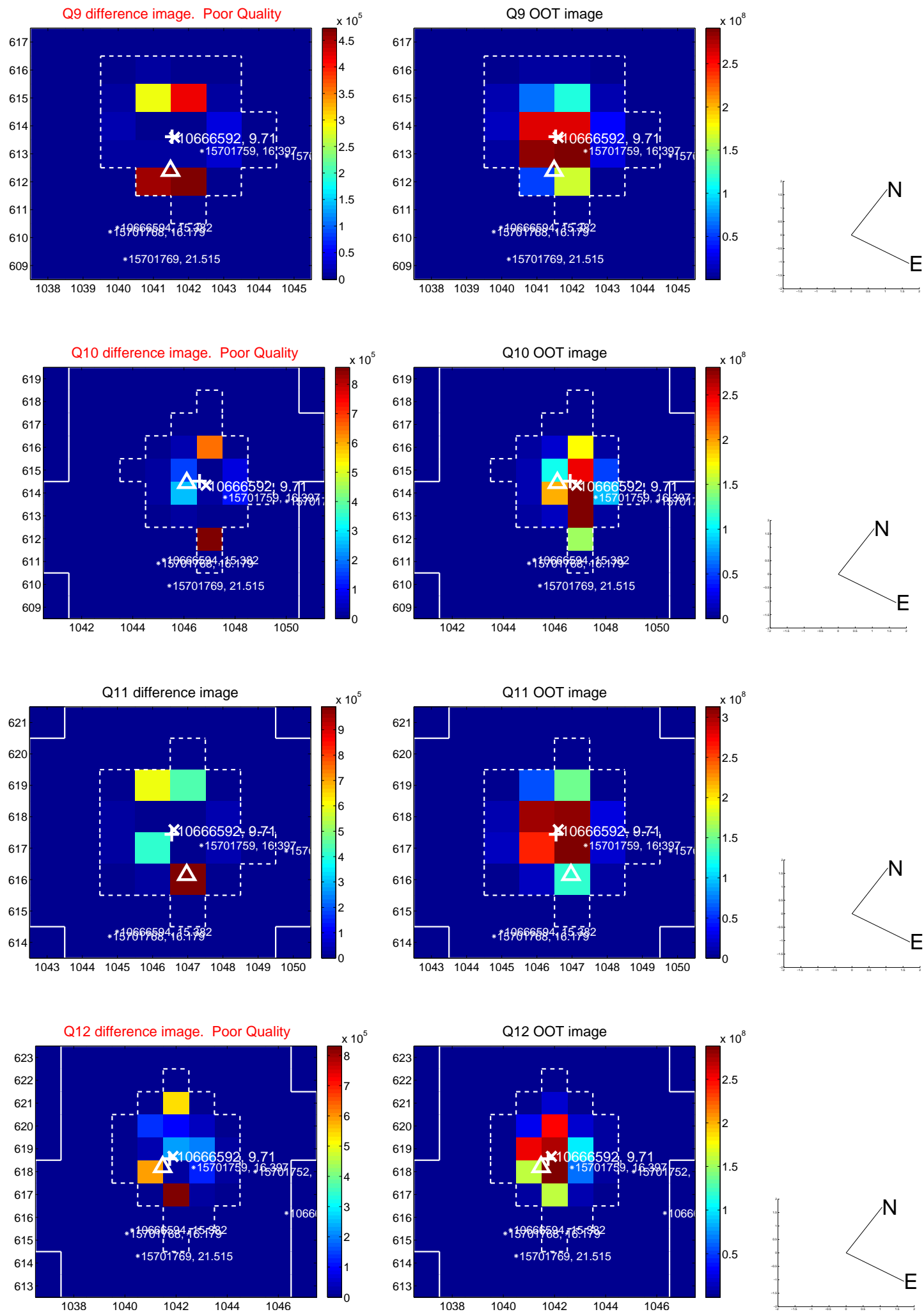
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



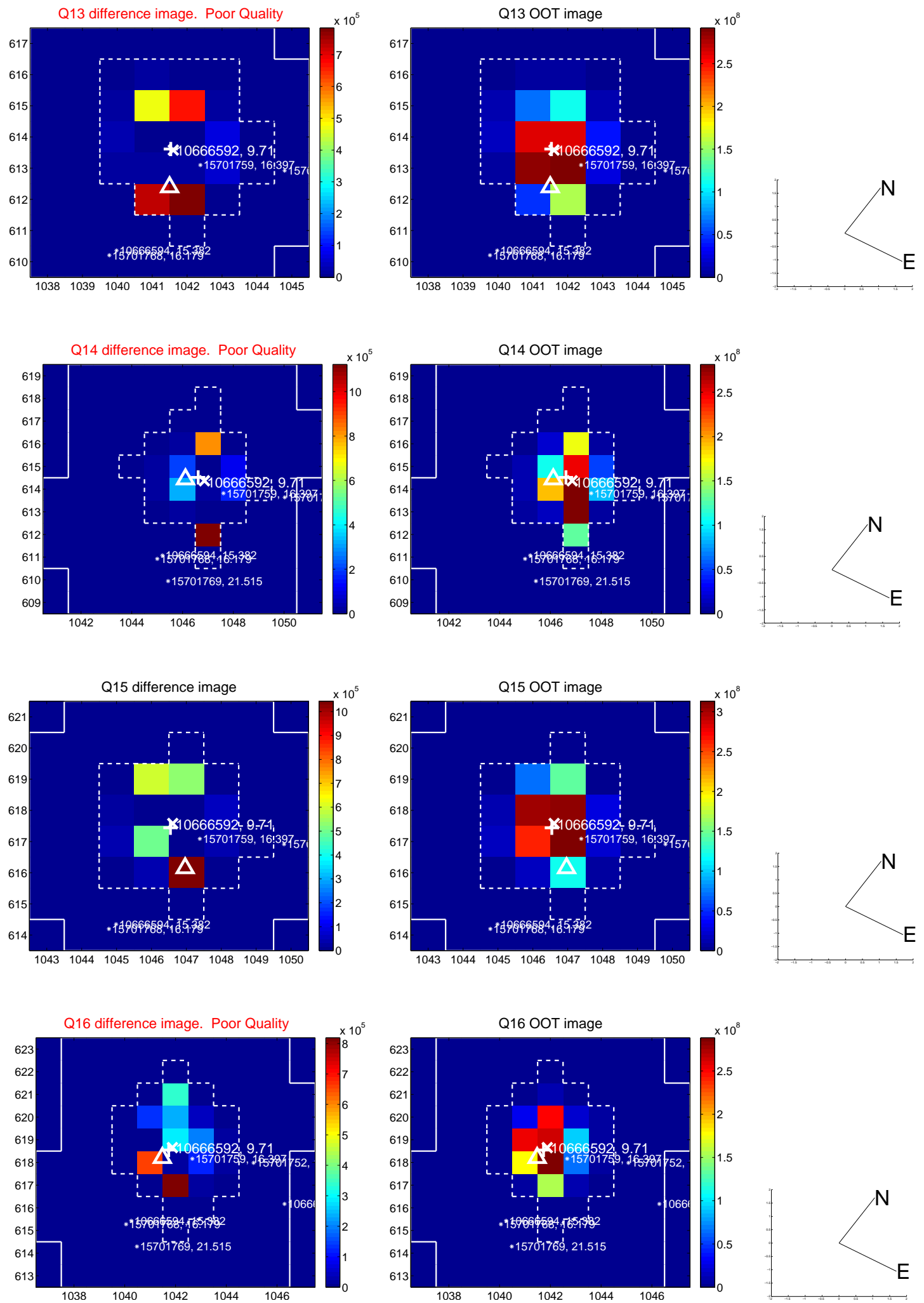
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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.

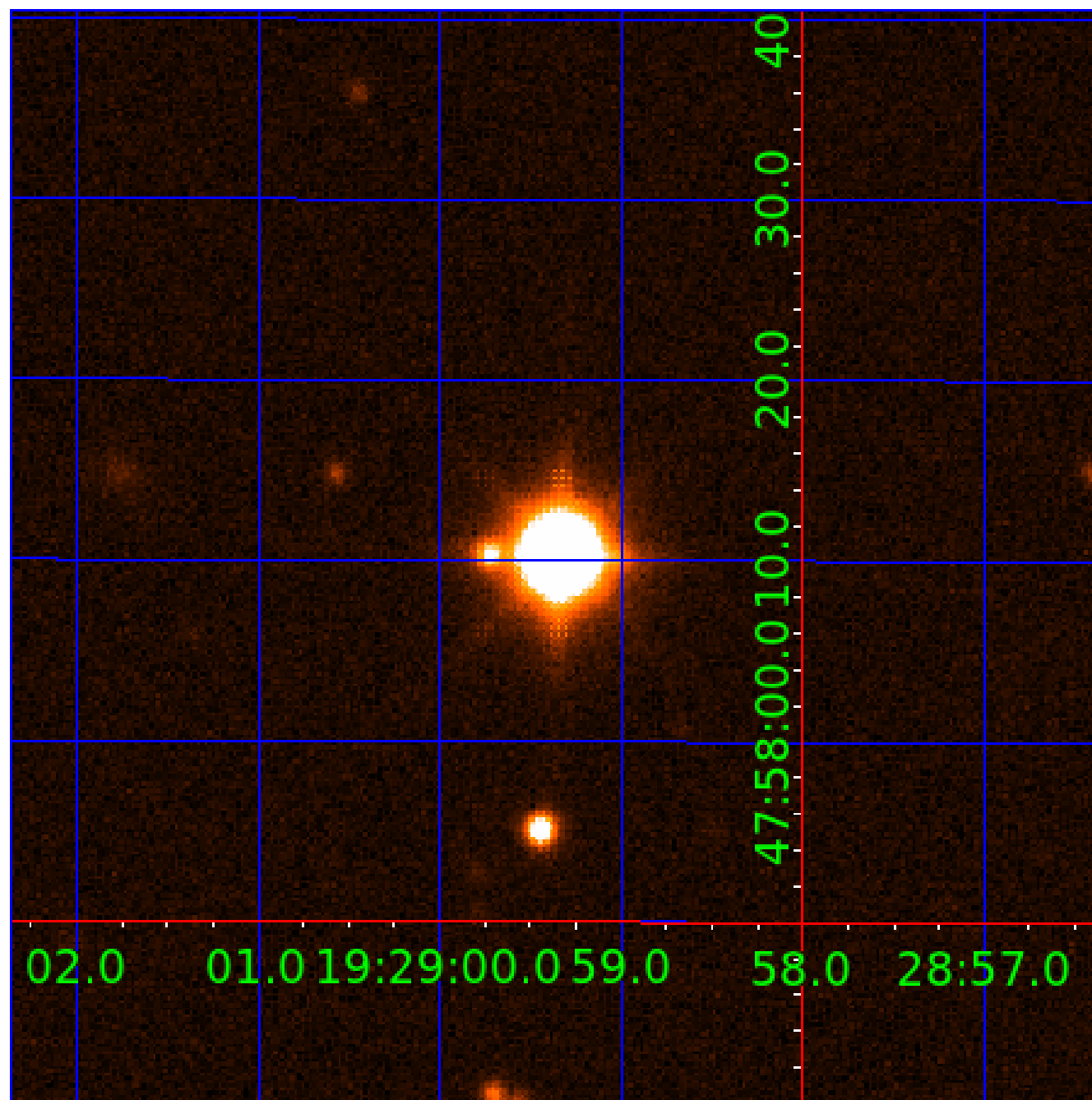






UKIRT Image

Declination



# KIC 010666592

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
010666592-01	OBS	0002.01	2.204731	132.383258	6676.5	4.044	3862.2	3564.7	1.95	6440	16.78	4165.02
010666592-02	OBS	No	2.204730	133.485816	62.5	3.919	39.7	40.7	1.95	6440	1.81	4165.02
010666592-03	OBS	No	2.205225	131.978785	20.7	14.659	14.0	12.5	1.95	6440	0.90	4163.77
010666592-04	OBS	No	35.356054	163.335903	94.5	10.421	26.4	8.6	1.95	6440	1.90	102.99
010666592-05	OBS	No	20.490420	137.639645	45.1	12.320	16.1	5.1	1.95	6440	1.32	213.15
010666592-06	OBS	No	25.975692	132.034470	133.1	2.262	11.3	10.1	1.95	6440	2.32	155.36
010666592-07	OBS	No	39.279443	164.669535	93.6	3.000	9.8	-1.0	1.95	6440	1.90	89.51

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010666592-01	OBS	PC	1.00	0	1	0	0	MOD_SEC_DV—PLANET_OCCULT_DV—MOD_SEC_ALT—PLANET_OCCULT_ALT—HAS_SEC_TCE—CENT_SATURATED
010666592-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_SATURATED
010666592-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—RESIDUAL_TCE—CENT_SATURATED
010666592-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_SATURATED
010666592-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_SATURATED
010666592-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—CENT_SATURATED
010666592-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—NO_FITS—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.

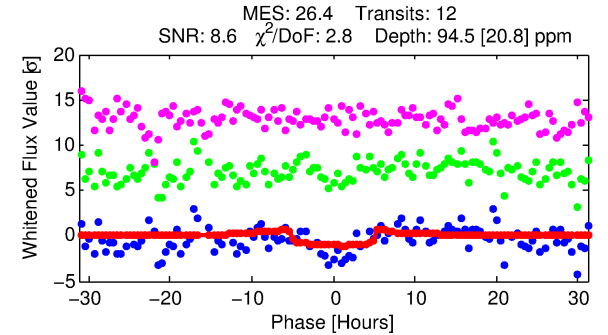
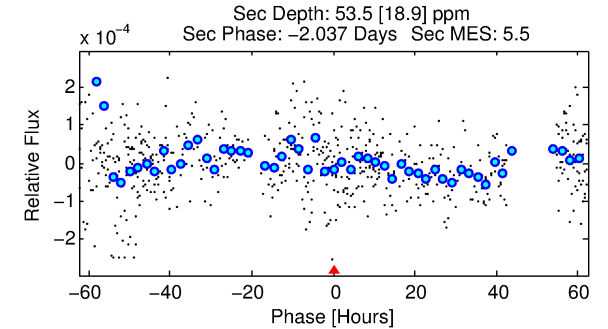
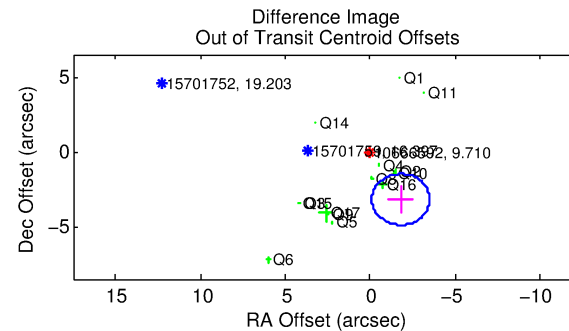
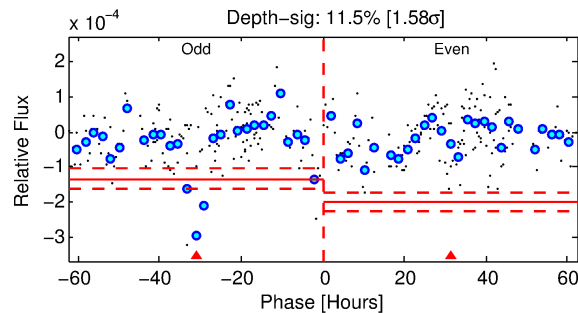
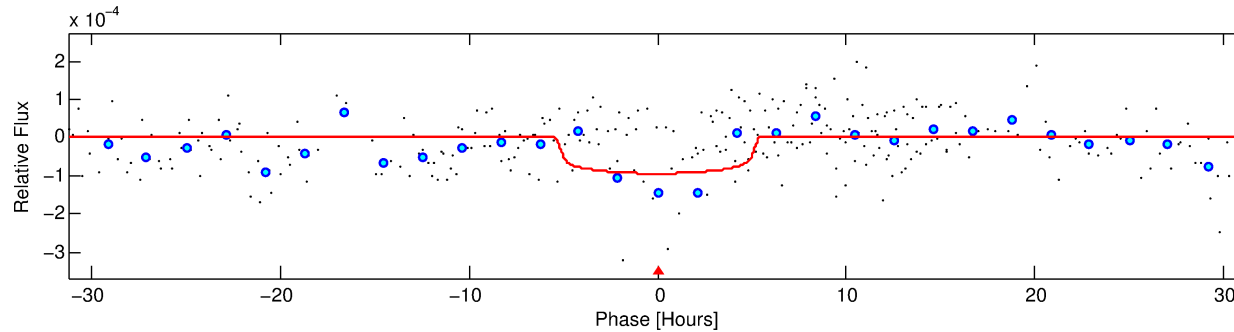
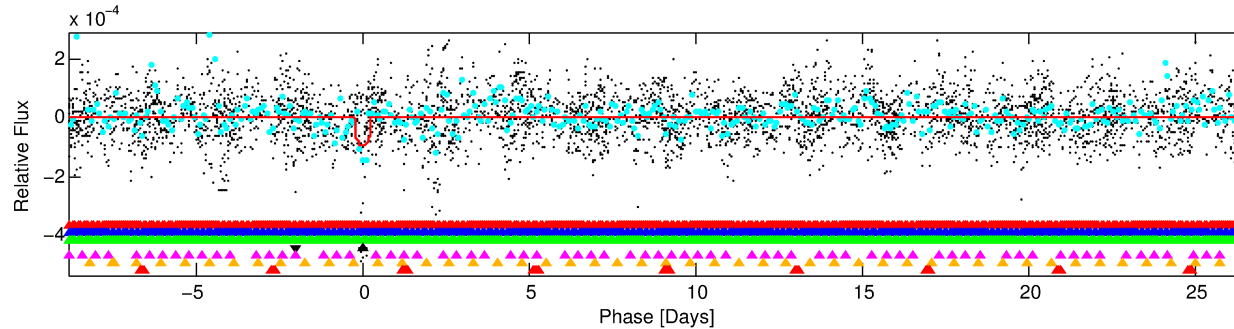
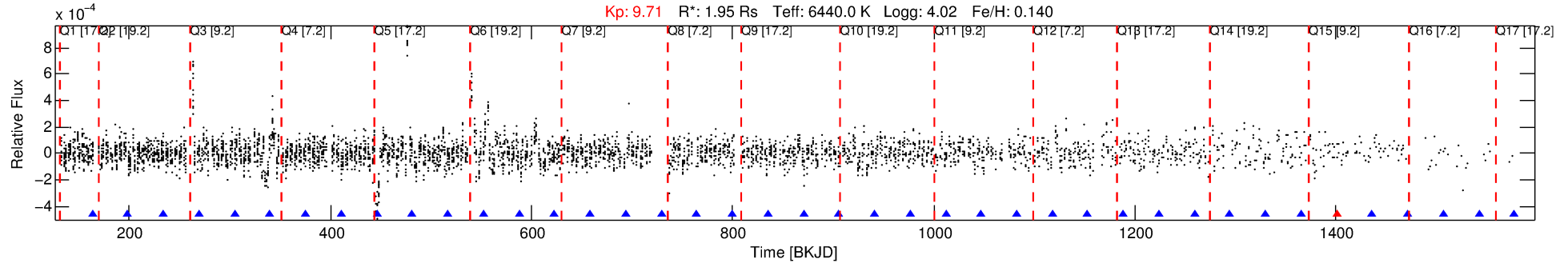
Ephemeris Match Information For 010666592-04

No Significant Match Found

# DV One-Page Summary

KIC: 10666592 Candidate: 4 of 7 Period: 35.356 d  
KOI: K00002 Name: Kepler-2 Corr: No Ephemeris Match

Kp: 9.71 R\*: 1.95 Rs Teff: 6440.0 K Logg: 4.02 Fe/H: 0.140



## DV Fit Results:

Period = 35.35605 [0.00111] d  
Epoch = 163.3359 [0.0156] BKJD  
Rp/R\* = 0.0089 [0.0168]  
a/R\* = 26.00 [251.30]  
b = 0.11 [88.25]  
Seff = 102.99 [8.64]  
Teq = 812 [17] K  
Rp = 1.90 [3.57] Re  
a = 0.2388 [0.0108] AU  
Ag = 462.90 [1744.15] [0.26σ]  
Teffp = 5826 [5487] K [0.91σ]

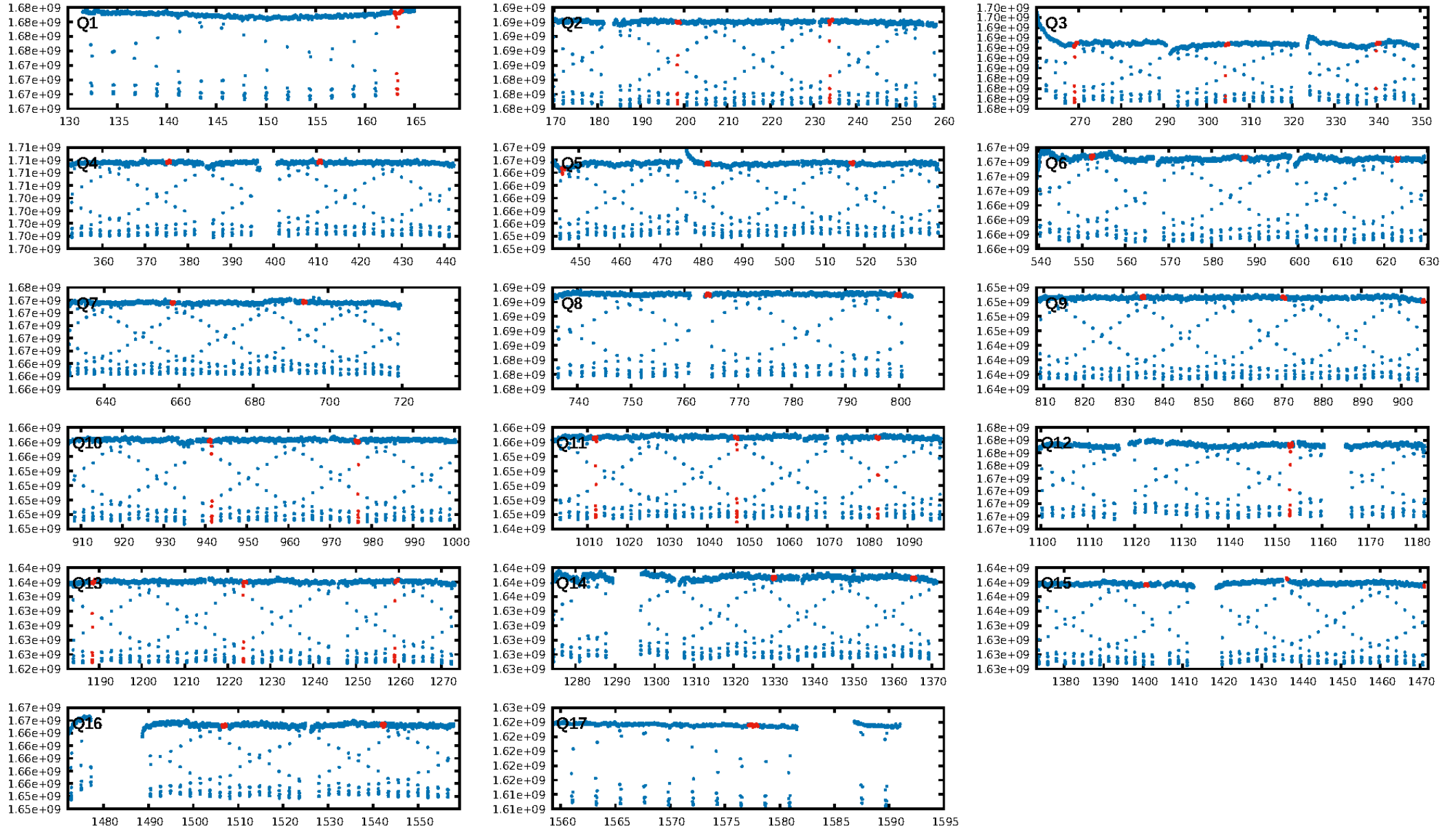
## DV Diagnostic Results:

ShortPeriod-sig: 100.0% [21.11σ]  
LongPeriod-sig: 100.0% [8.68σ]  
ModelChiSquare2-sig: 0.0%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: N/A  
RollingBand-fgt: 0.92 [11/12]  
GhostDiagnostic-chr: N/A  
Centroid-sig: N/A  
Centroid-so: 1.131 arcsec [1.87σ]  
OotOffset-rm: 3.669 arcsec [6.45σ]  
KicOffset-rm: 3.888 arcsec [7.38σ]  
OotOffset-st: 4/3/3/4 [14]  
KicOffset-st: 4/3/3/4 [14]  
DiffImageQuality-fgm: 0.07 [1/14]  
DiffImageOverlap-fno: 0.00 [0/16]

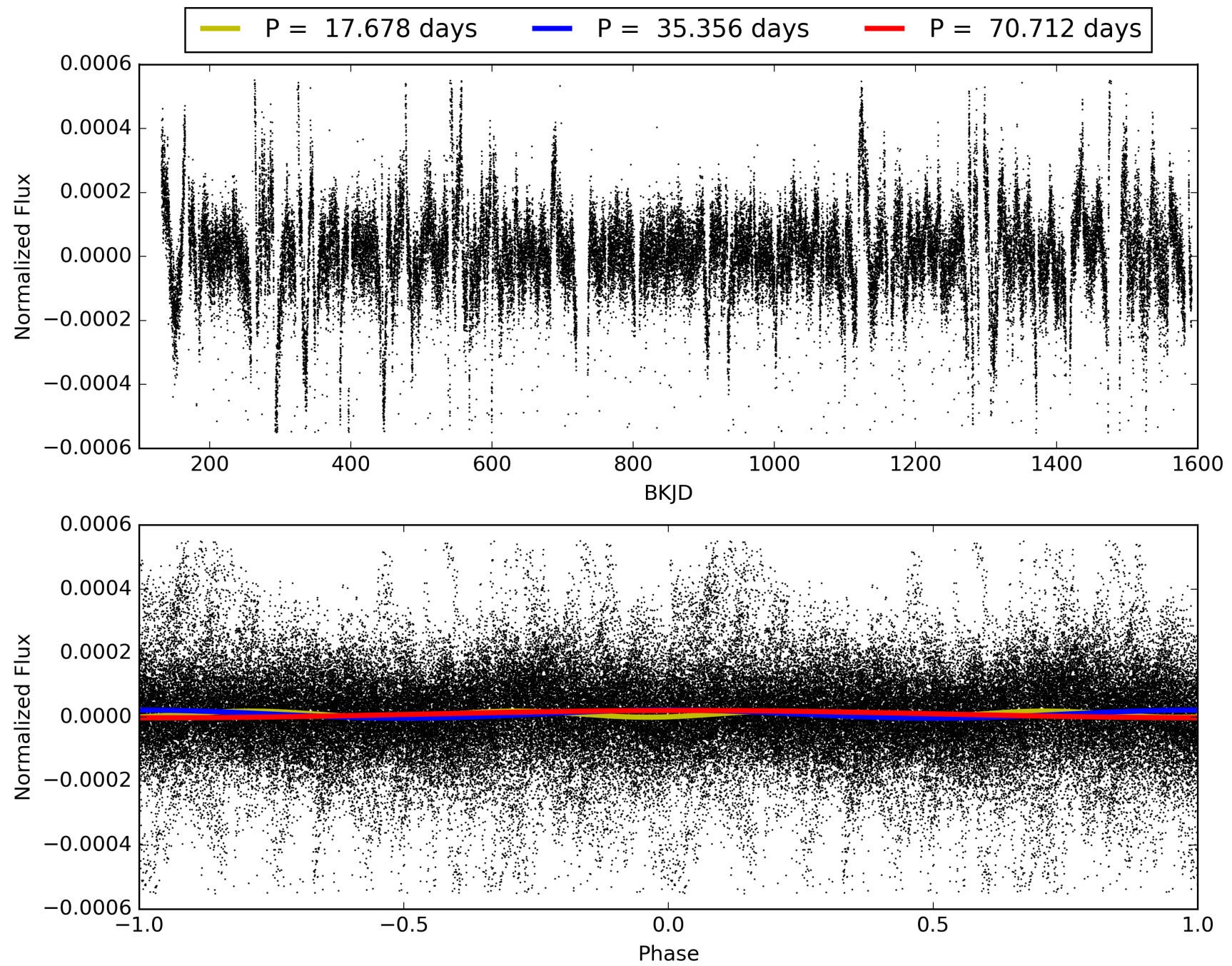
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:53:59 Z

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

# TCE 010666592-04, PDC Light Curves



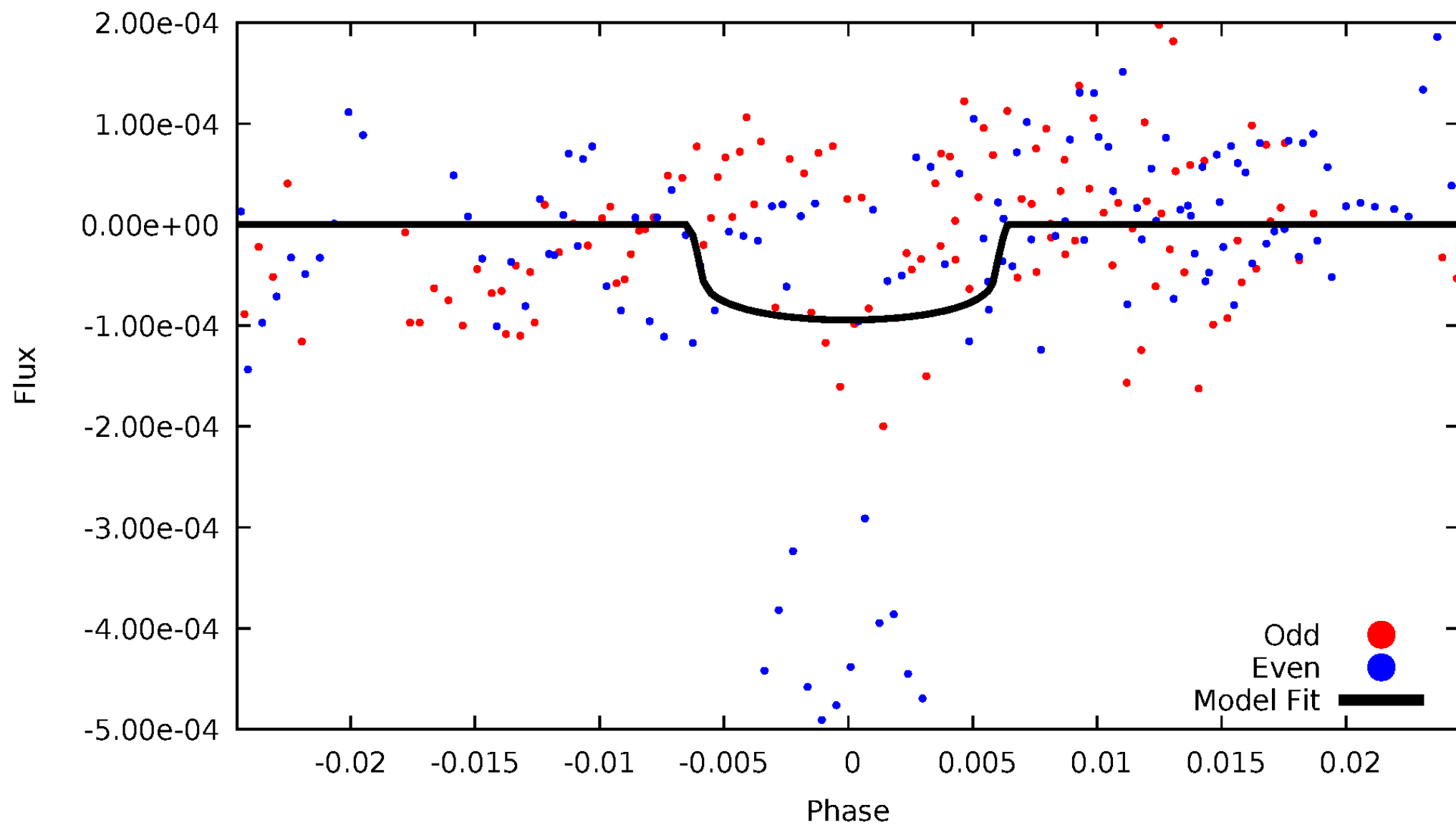
TCE 010666592-04





# DV Odd/Even

TCE 010666592-04



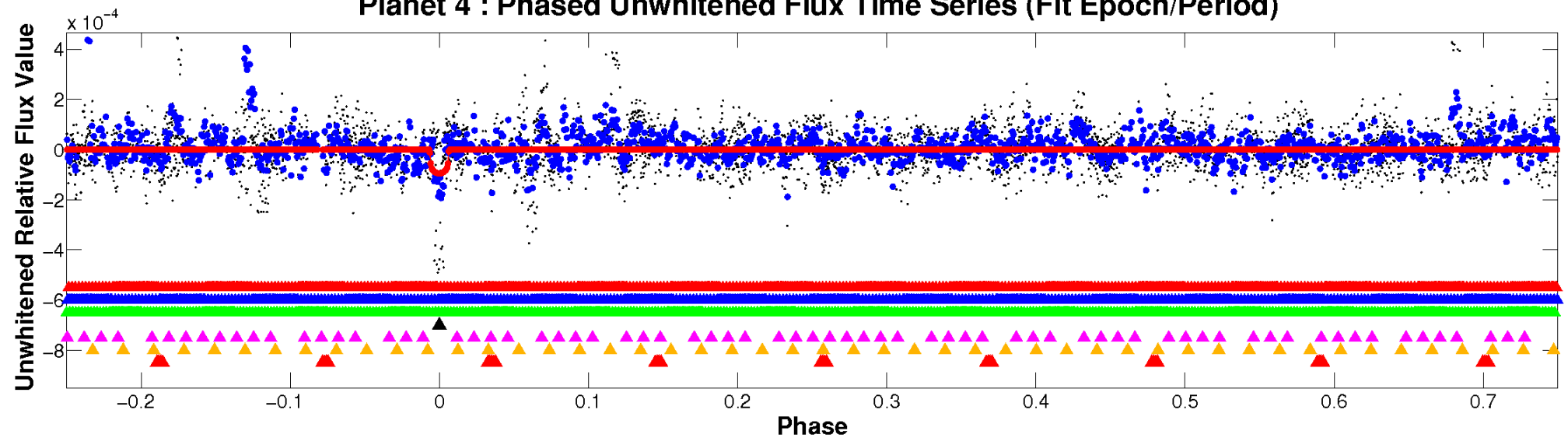


ALT Odd/Even

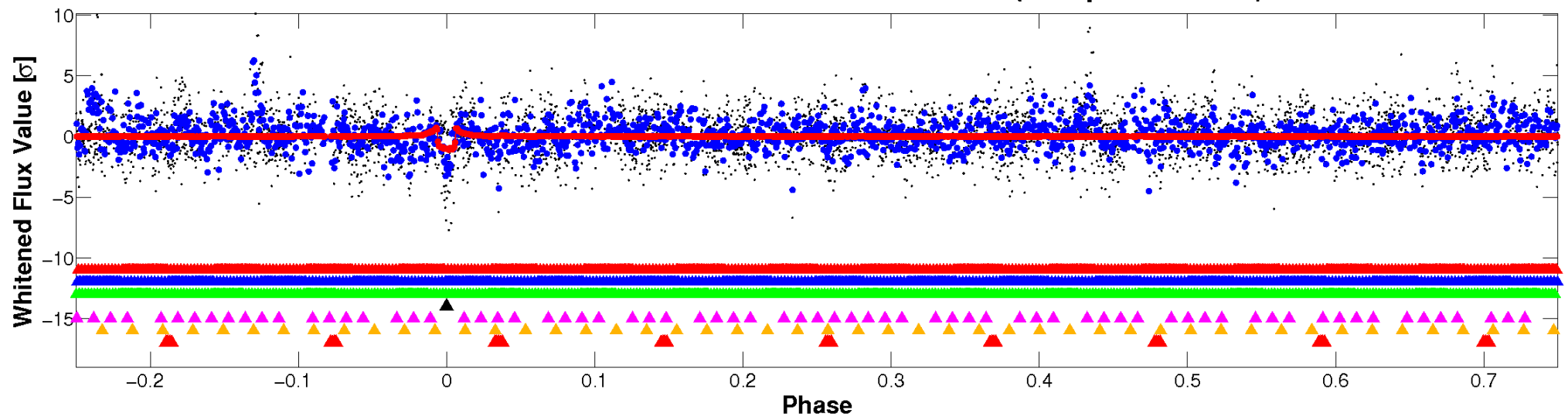
This plot does not exist for this TCE.

# Non-Whitened Vs. Whitened Light Curve

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

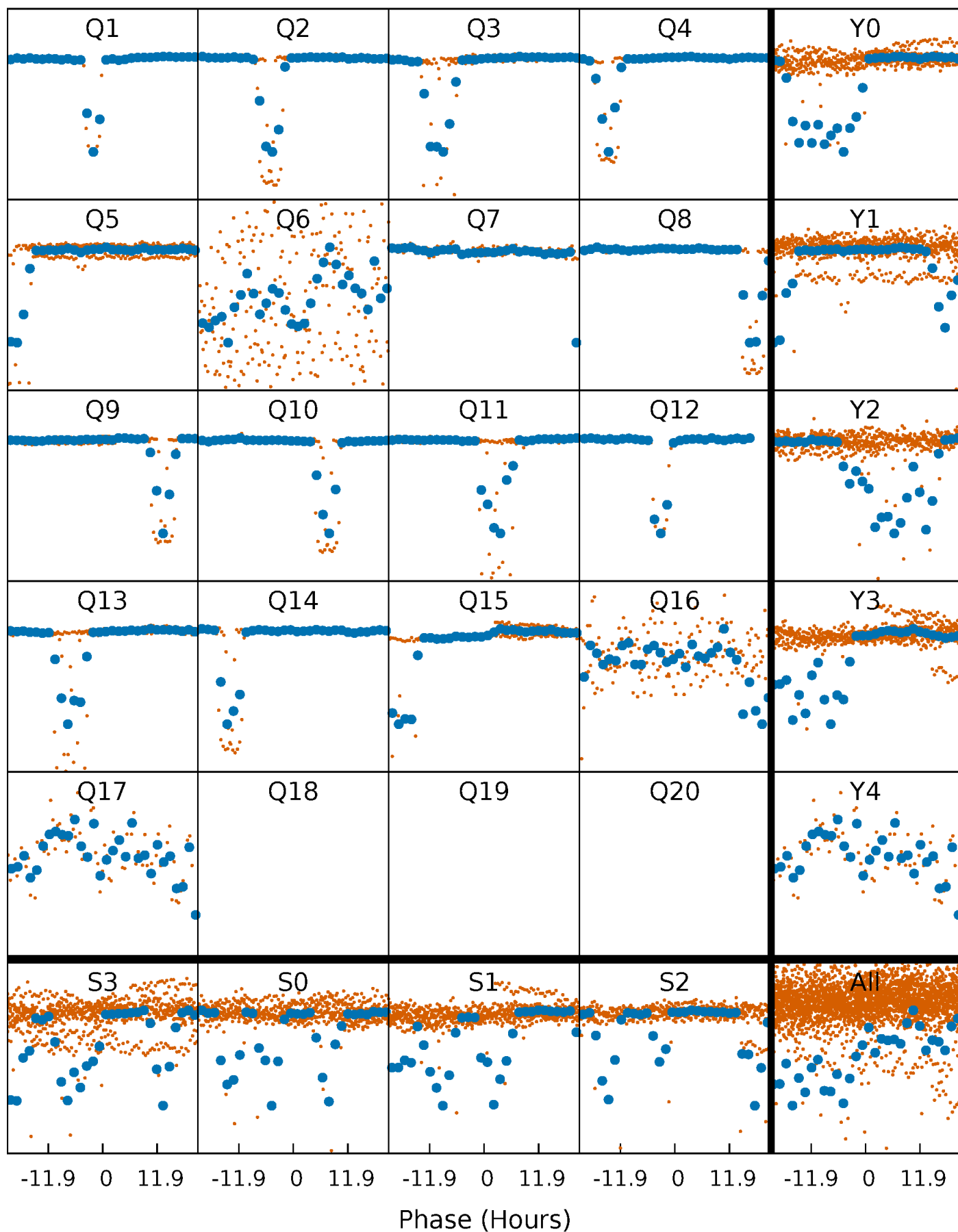


## Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



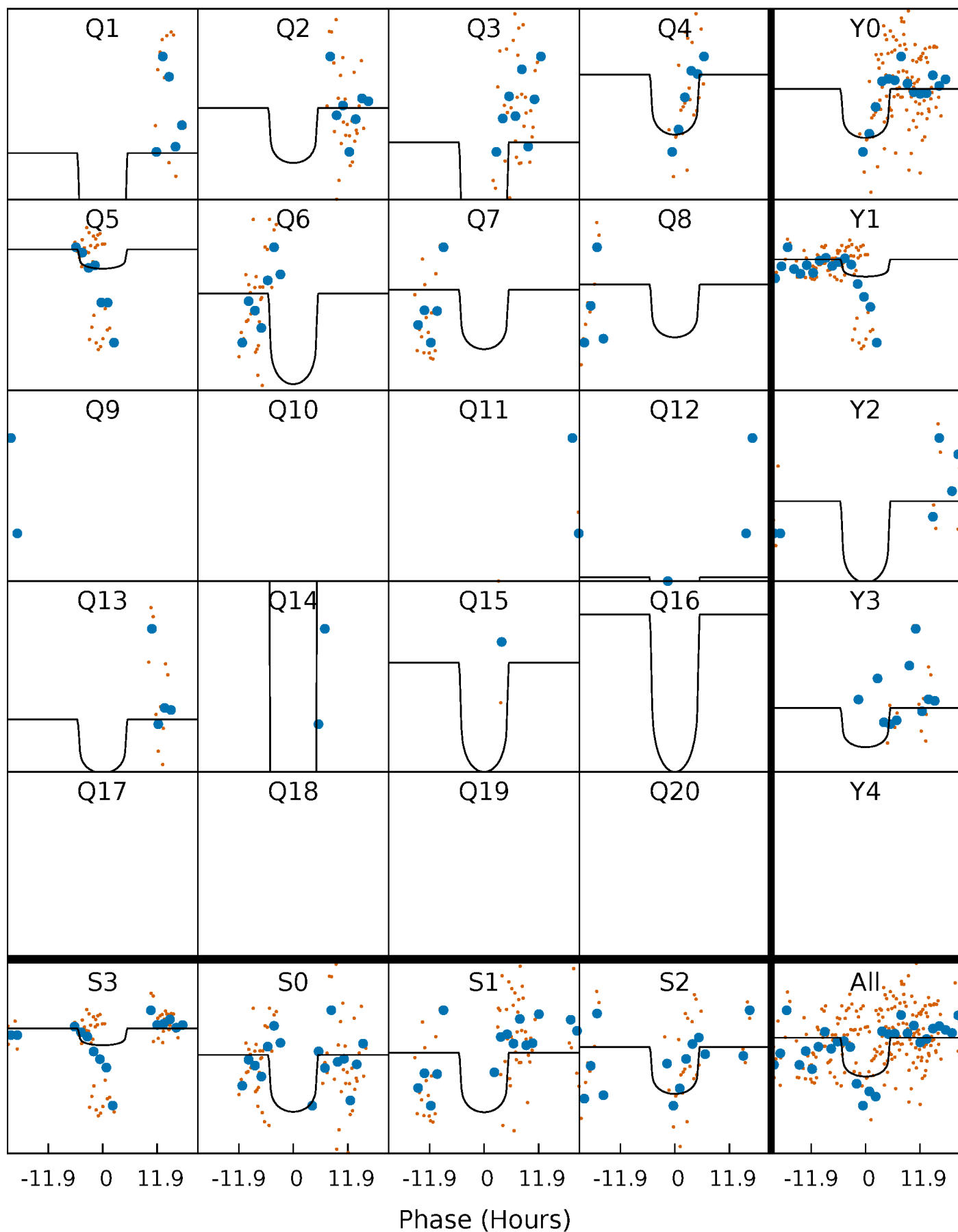
# PDC Quarter-Phased Transit Curves

TCE 010666592-04 P= 35.356054 Days  $T_0=163.335903$  (BKJD)



# DV Quarter-Phased Transit Curves

TCE 010666592-04 P= 35.356054 Days  $T_0=163.335903$  (BKJD)



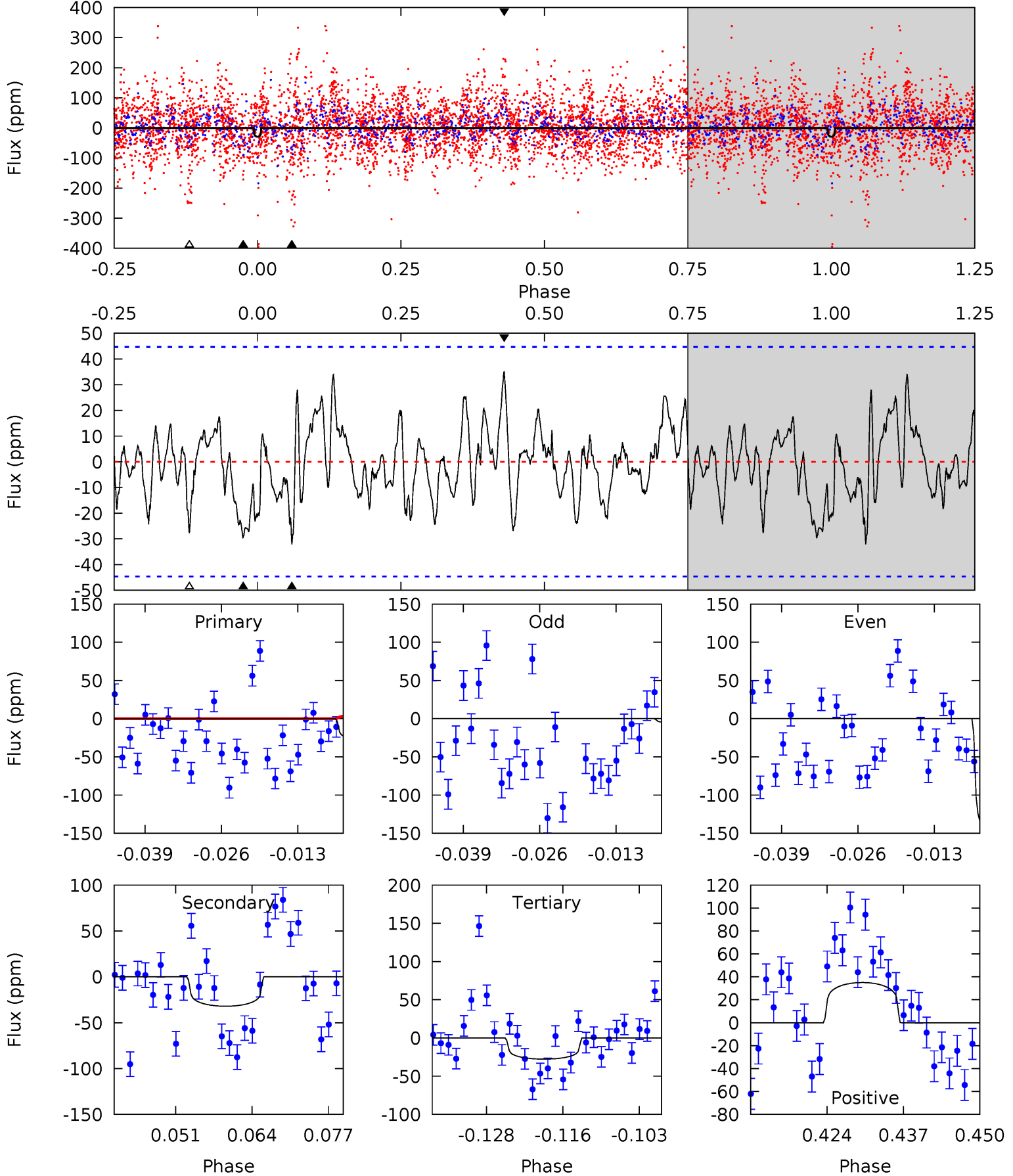


This plot does not exist for this TCE.

# DV Model-Shift Uniqueness Test

010666592-04, P = 35.356054 Days, E = 127.979849 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
3.28	3.58	3.09	3.91	4.98	2.49	1.35	0.19	-0.63	0.49	-0.33	6.83	5.42	0.52	2.86



## Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

### Stellar Parameters For KIC 010666592

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6440^{+76}_{-89}$	$4.019^{+0.033}_{-0.027}$	$0.140^{+0.150}_{-0.150}$	$1.952^{+0.099}_{-0.110}$	$1.449^{+0.070}_{-0.091}$	$0.274^{+0.037}_{-0.030}$
	+1%/-1%	+1%/-1%	+107%/-107%	+5%/-6%	+5%/-6%	+14%/-11%
Source	SPE72	AST69	SPE72	DSEP		

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

### Secondary Eclipse Parameters for KIC 010666592-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-32 \pm 9$	$3.30^{+3.07}_{-2.22}$	$1133^{+18}_{-20}$	$4155^{+2623}_{-869}$	$91^{+738}_{-69}$
Alt.	N/A	N/A	N/A	N/A	N/A

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

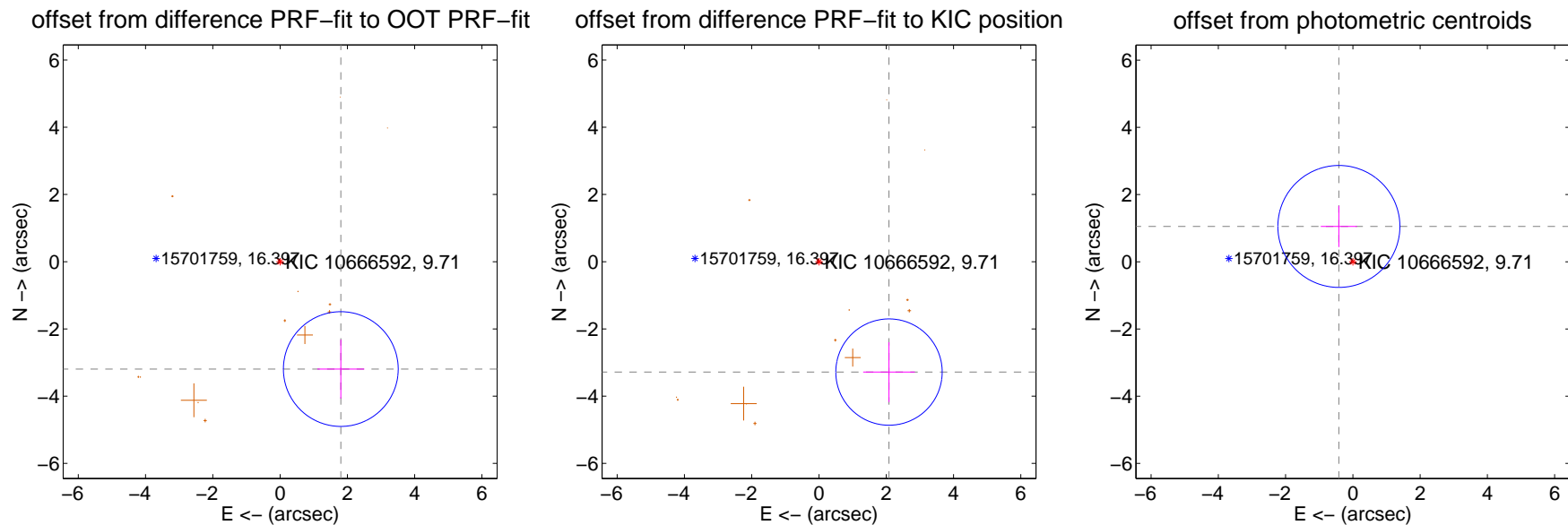
## DV Centroid Data

Supplemental centroid analysis for 010666592-04. **Kepler magnitude: 9.71.** Transit SNR 8.57

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

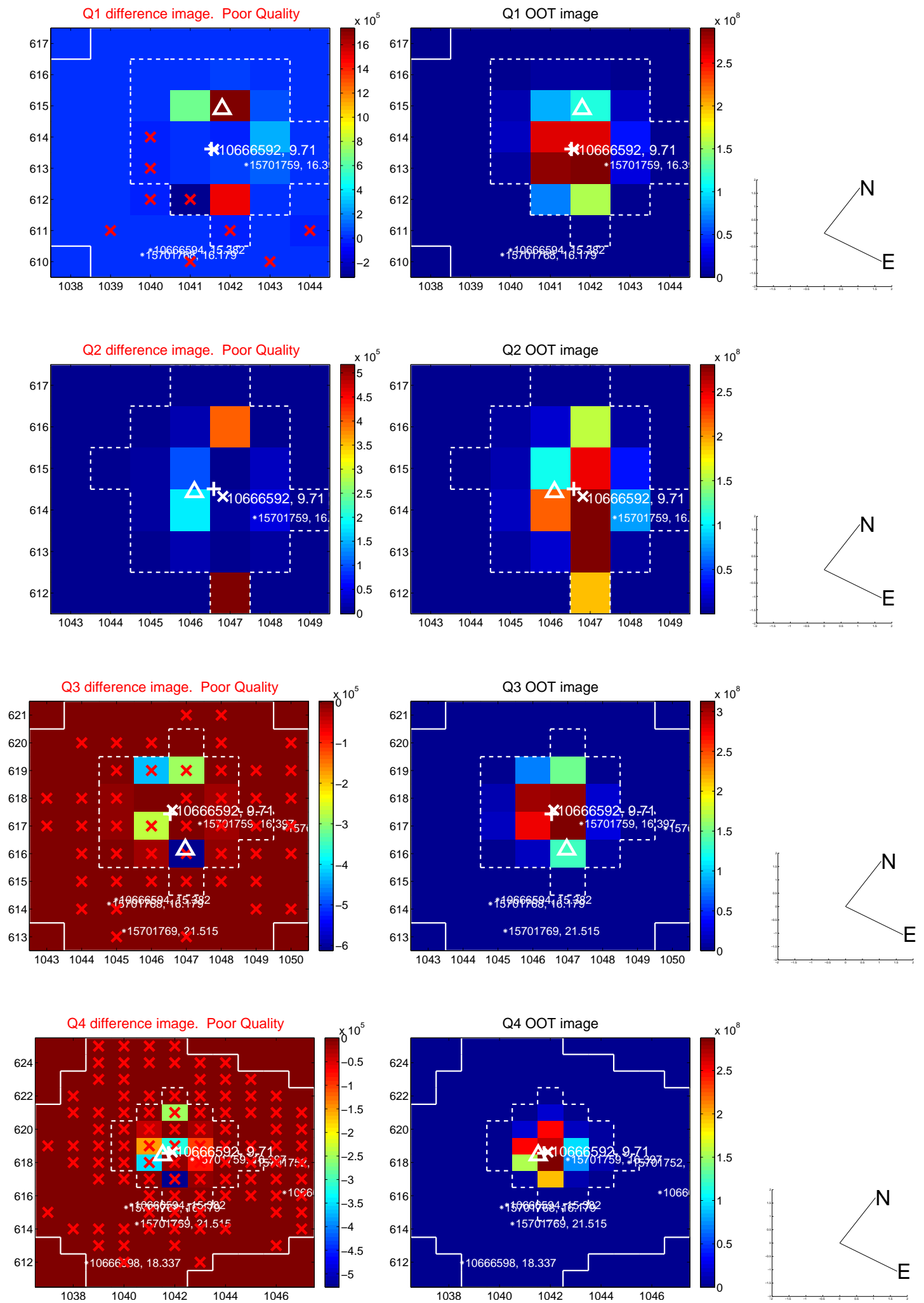
The direct PRF centroid is offset from the target star catalog position by about 0.34 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	<b><math>3.669 \pm 0.569</math></b>	<b>6.45</b>	$-1.805 \pm 0.698$	$-3.194 \pm 0.877$
PRF-fit source offset from KIC position	<b><math>3.888 \pm 0.527</math></b>	<b>7.38</b>	$-2.082 \pm 0.768$	$-3.284 \pm 0.890$
photometric centroid source offset	$1.13 \pm 0.60$	1.87	$0.42 \pm 0.54$	$1.05 \pm 0.61$



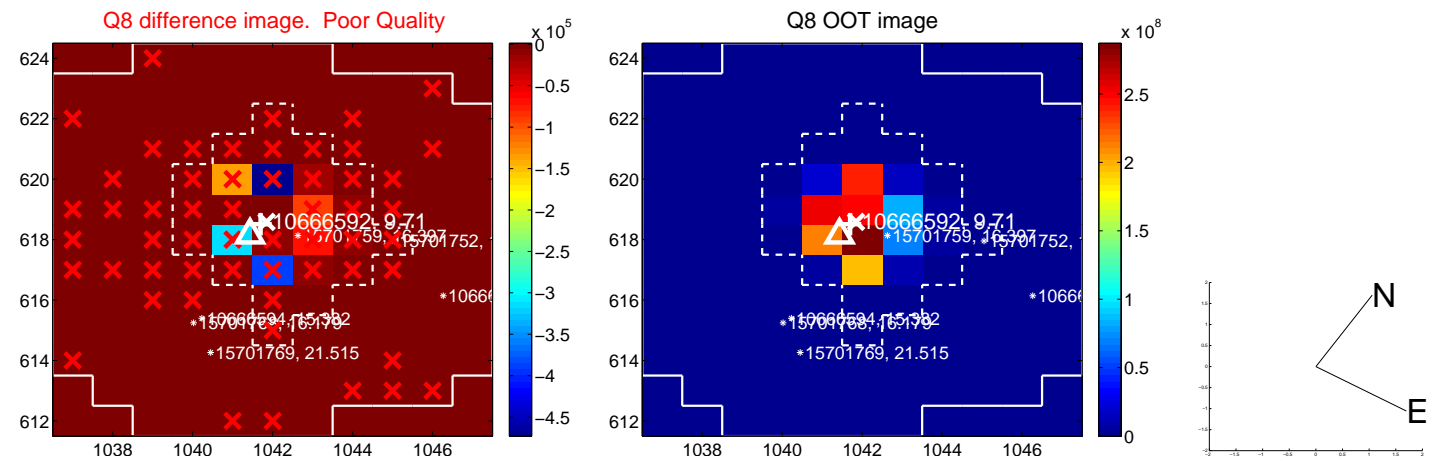
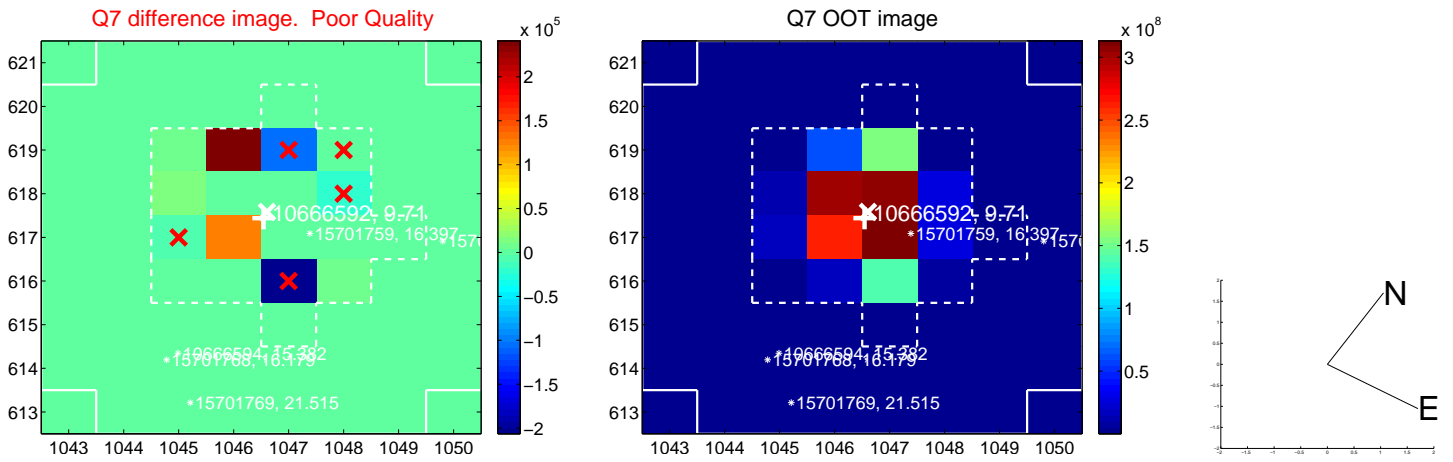
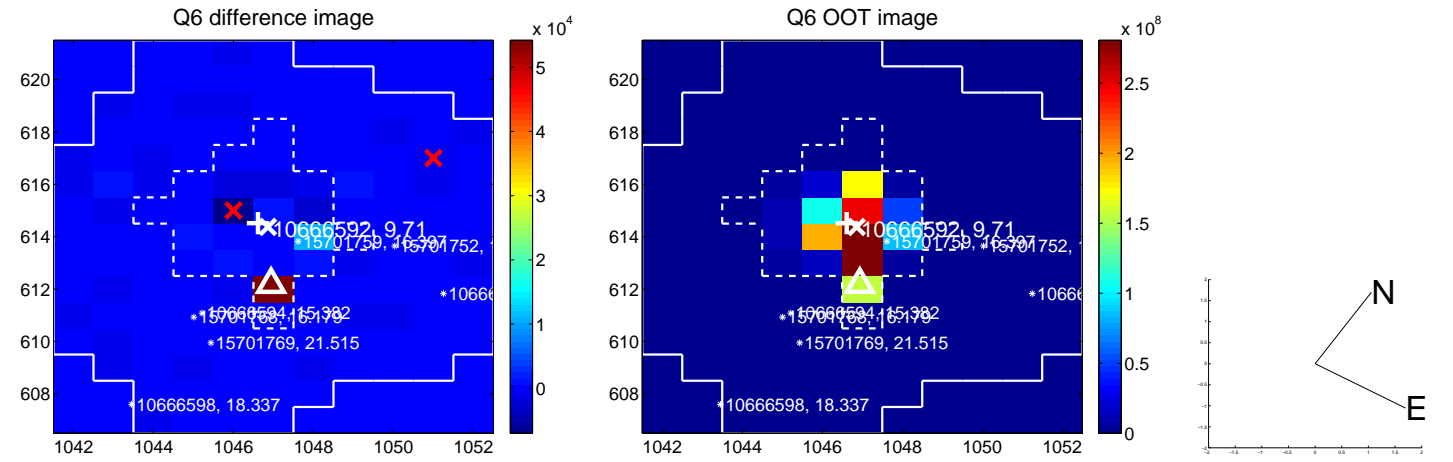
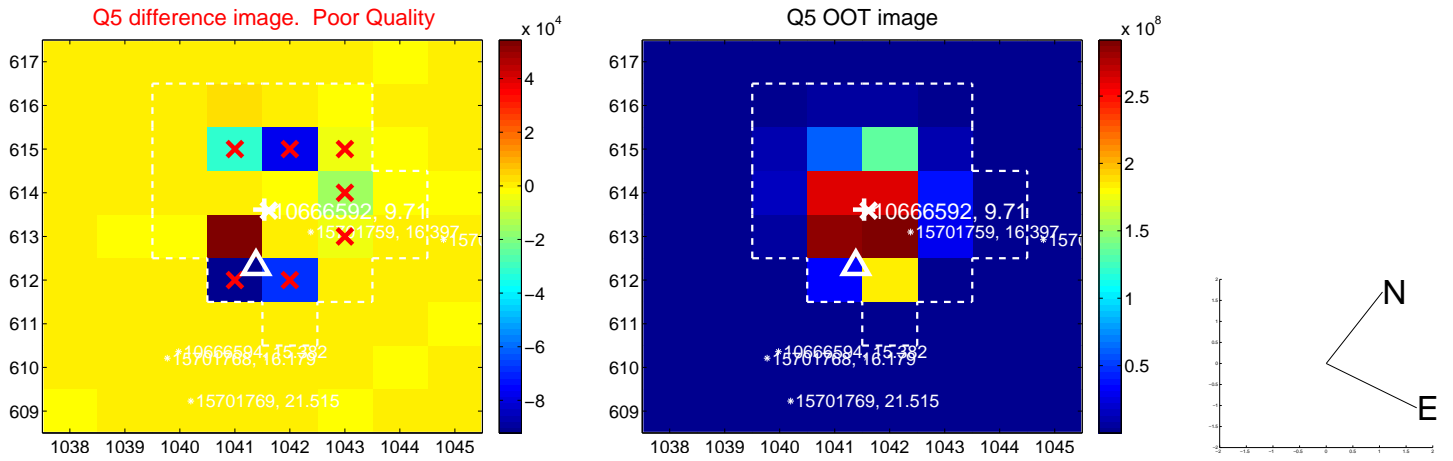
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

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

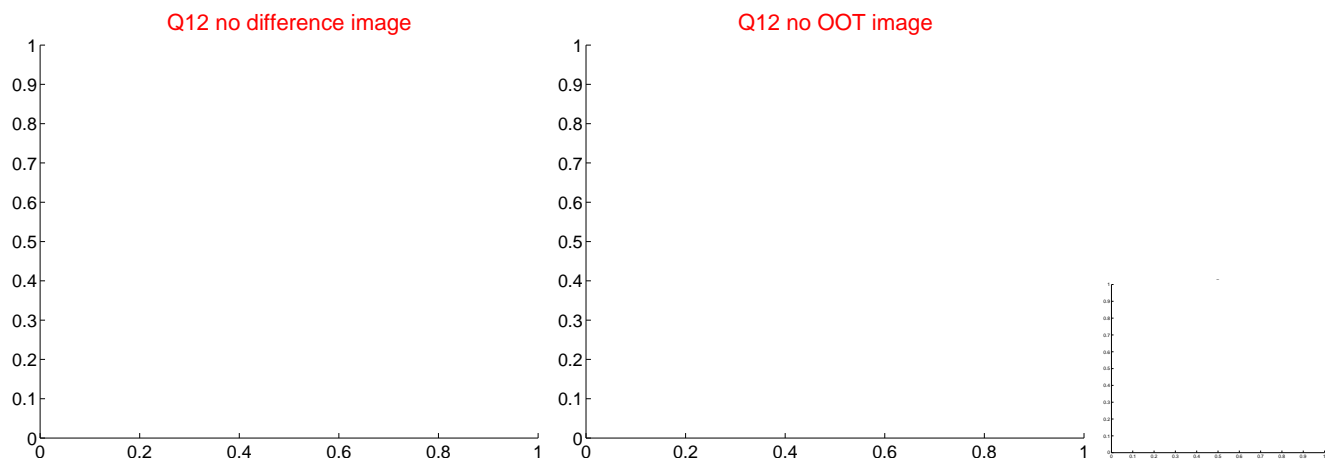
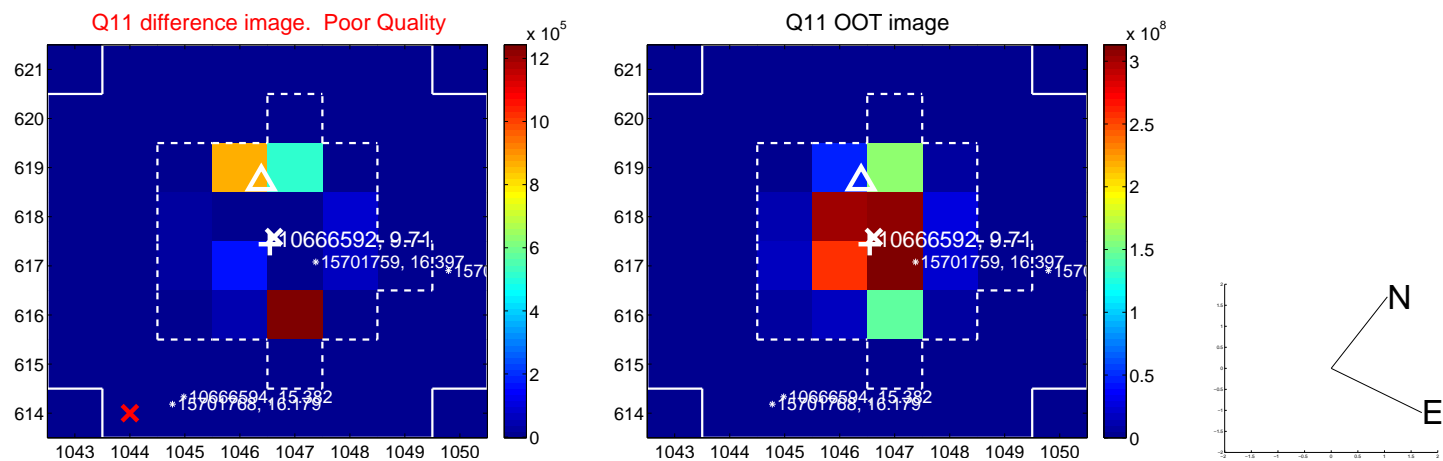
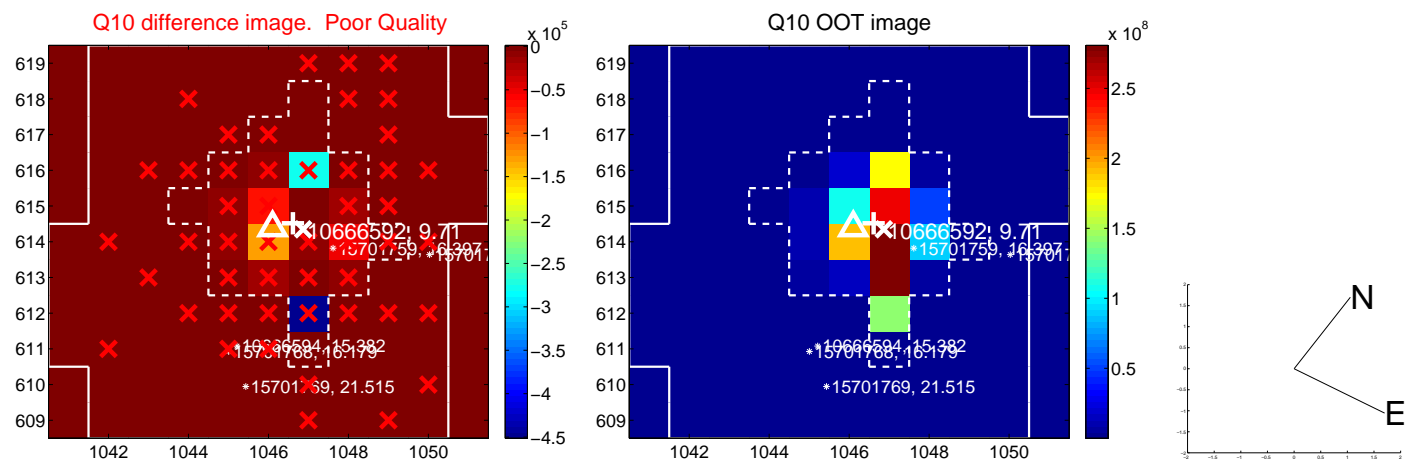
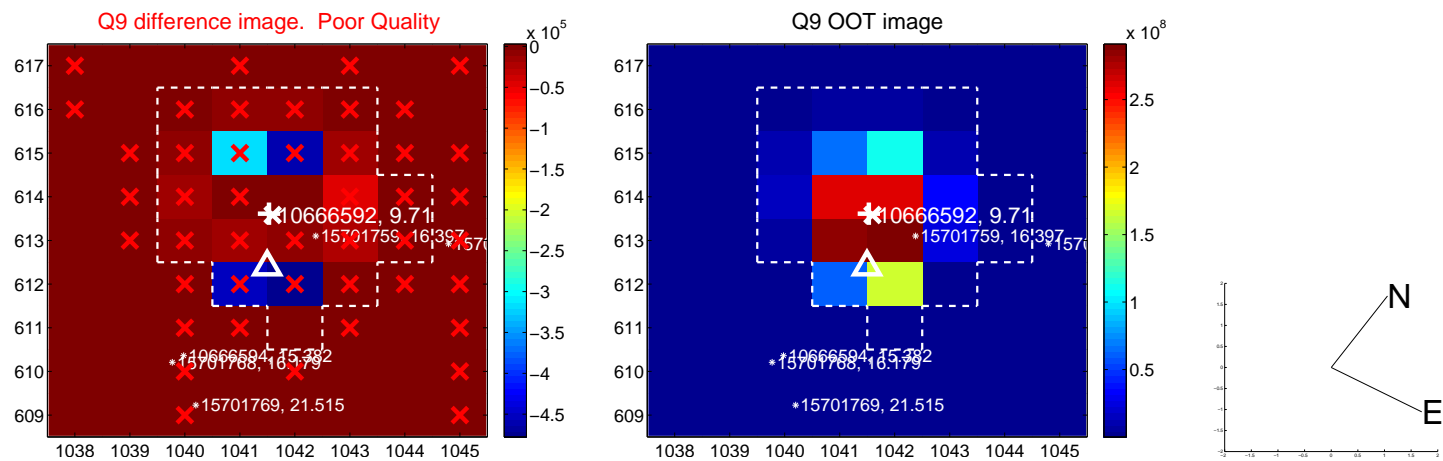




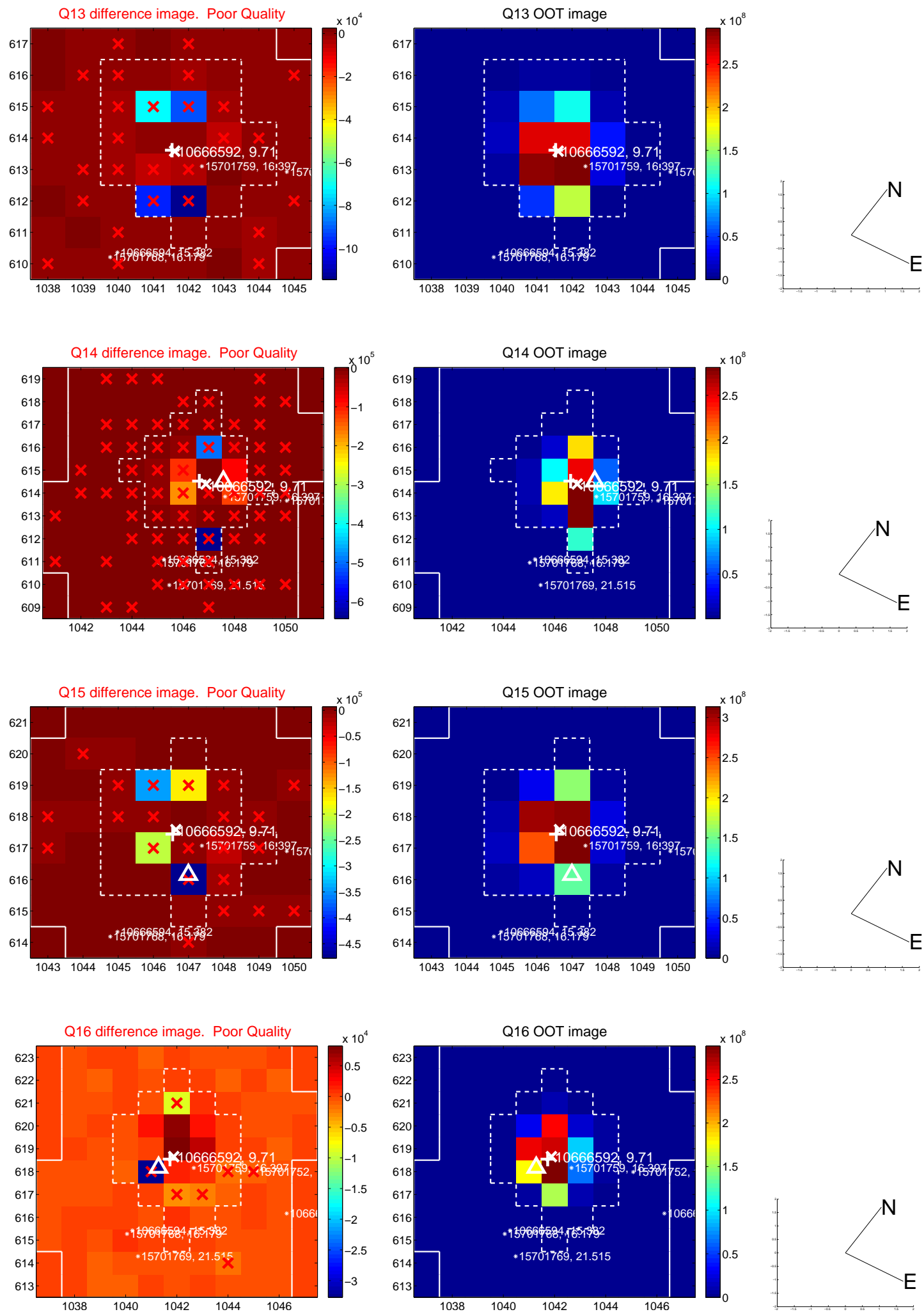
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



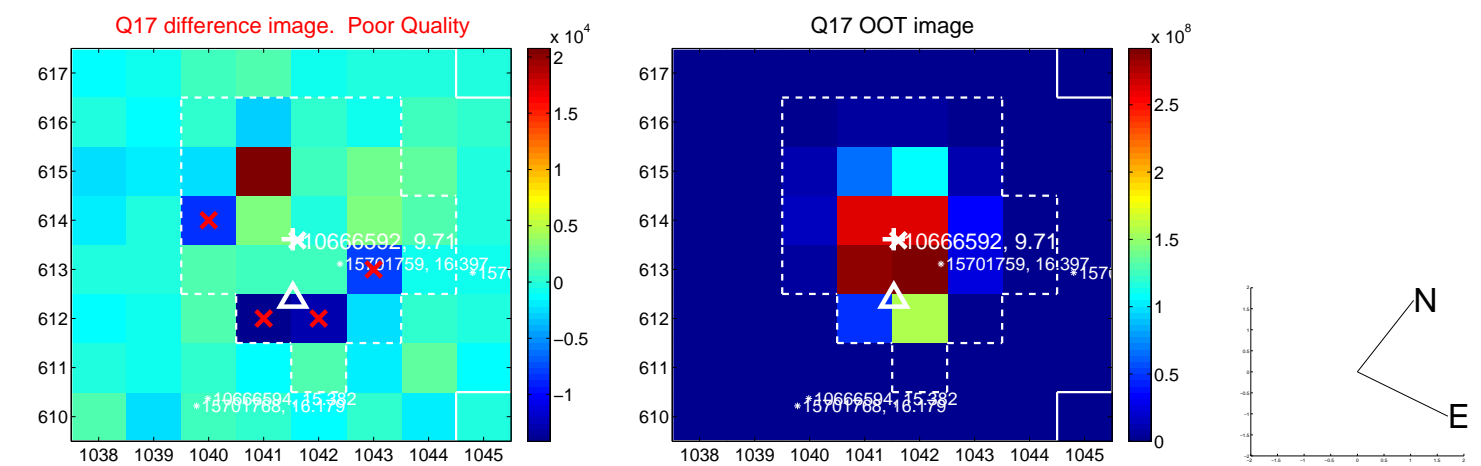
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



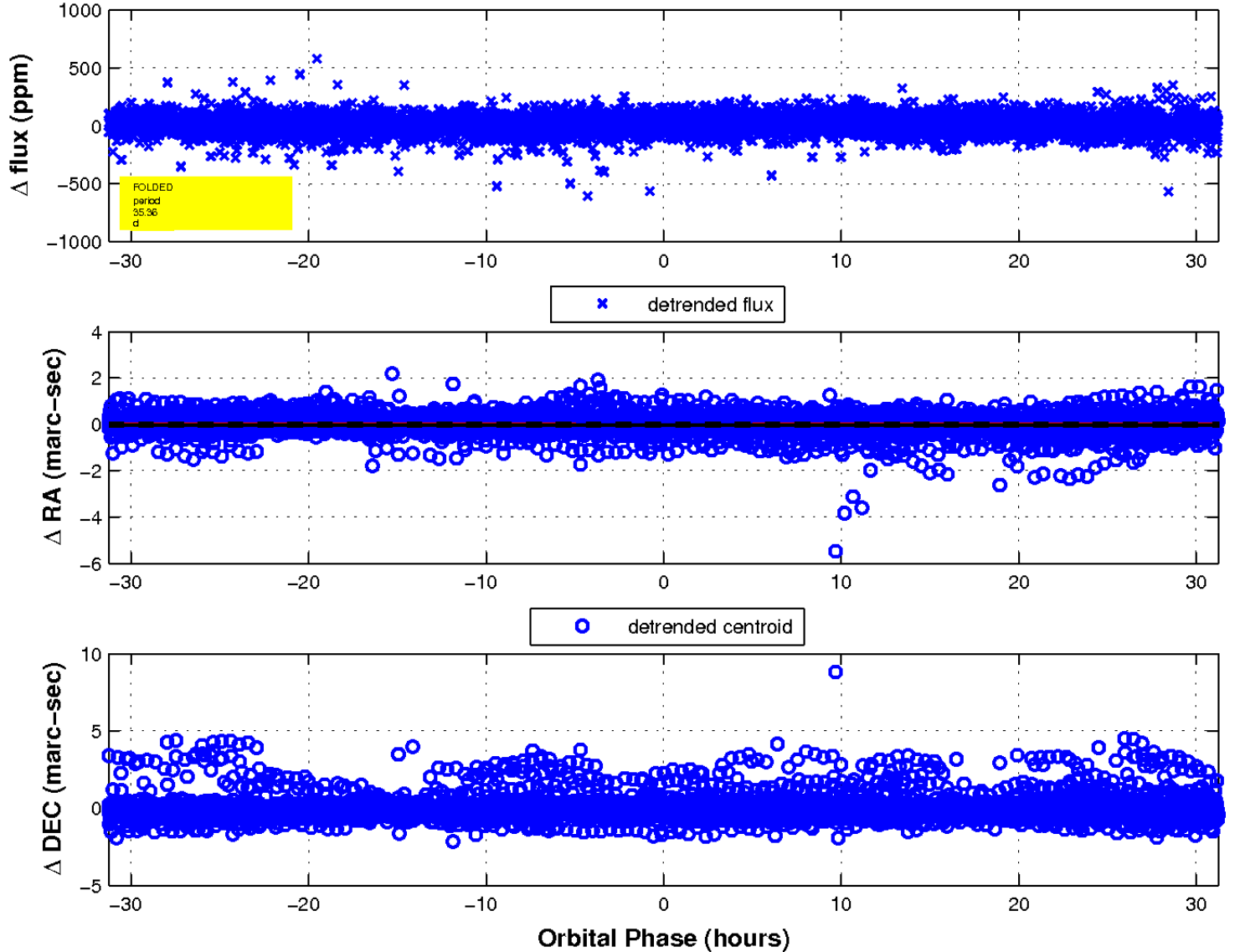
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

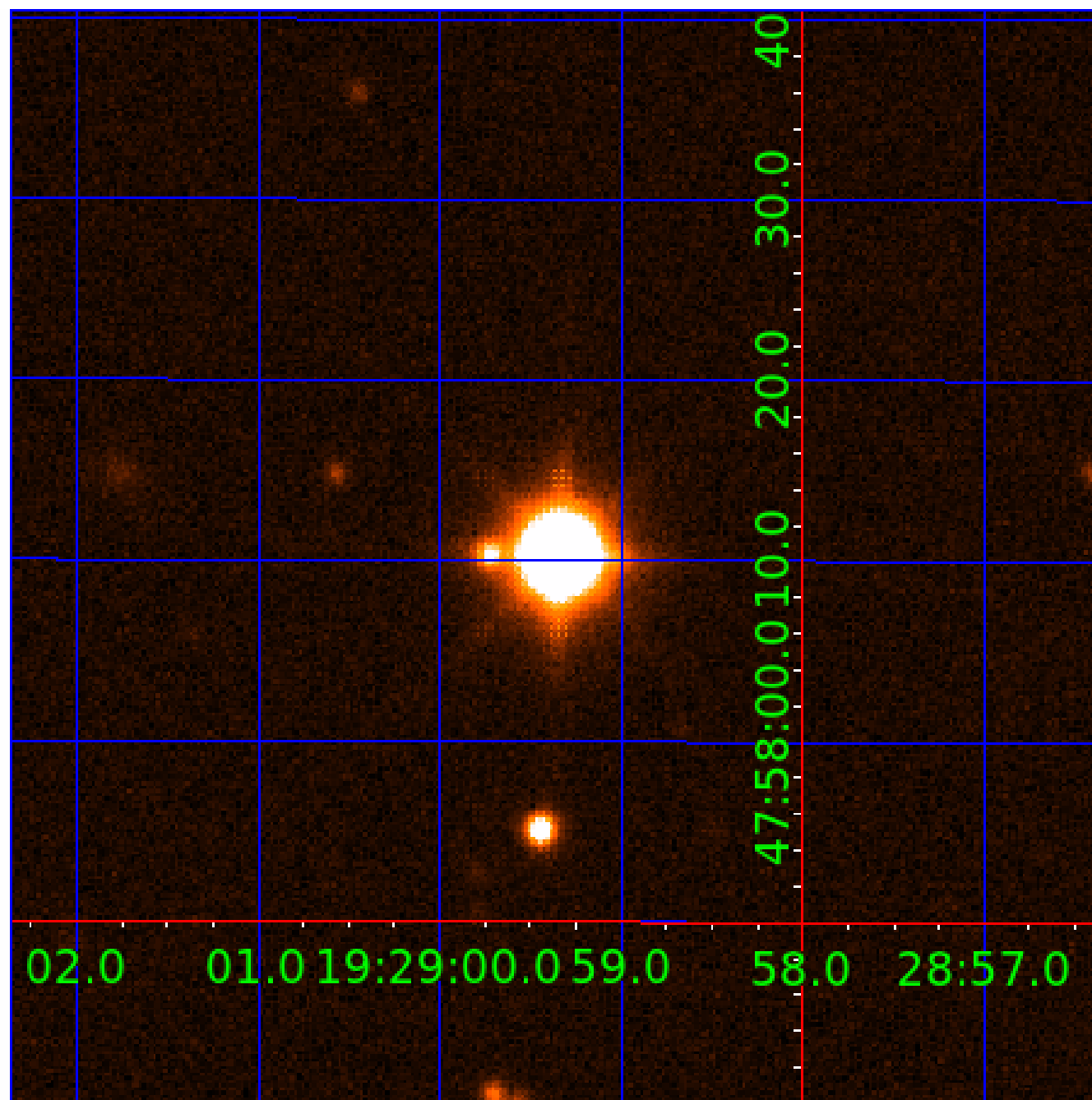


### fluxWeightedCentroids, Planet 4 of 7



UKIRT Image

Declination



# KIC 010666592

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
010666592-01	OBS	0002.01	2.204731	132.383258	6676.5	4.044	3862.2	3564.7	1.95	6440	16.78	4165.02
010666592-02	OBS	No	2.204730	133.485816	62.5	3.919	39.7	40.7	1.95	6440	1.81	4165.02
010666592-03	OBS	No	2.205225	131.978785	20.7	14.659	14.0	12.5	1.95	6440	0.90	4163.77
010666592-04	OBS	No	35.356054	163.335903	94.5	10.421	26.4	8.6	1.95	6440	1.90	102.99
010666592-05	OBS	No	20.490420	137.639645	45.1	12.320	16.1	5.1	1.95	6440	1.32	213.15
010666592-06	OBS	No	25.975692	132.034470	133.1	2.262	11.3	10.1	1.95	6440	2.32	155.36
010666592-07	OBS	No	39.279443	164.669535	93.6	3.000	9.8	-1.0	1.95	6440	1.90	89.51

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010666592-01	OBS	PC	1.00	0	1	0	0	MOD_SEC_DV—PLANET_OCCULT_DV—MOD_SEC_ALT—PLANET_OCCULT_ALT—HAS_SEC_TCE—CENT_SATURATED
010666592-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_SATURATED
010666592-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—RESIDUAL_TCE—CENT_SATURATED
010666592-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_SATURATED
010666592-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_SATURATED
010666592-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—CENT_SATURATED
010666592-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—NO_FITS—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.

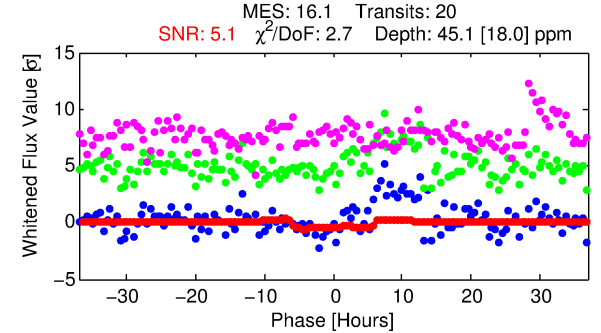
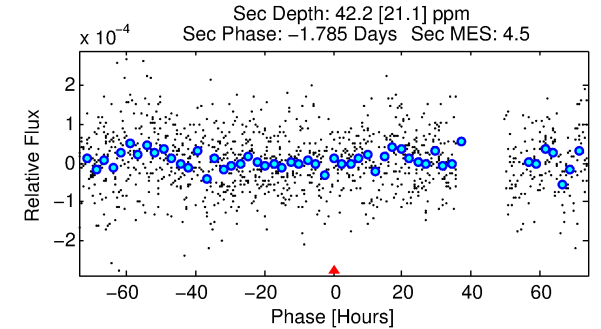
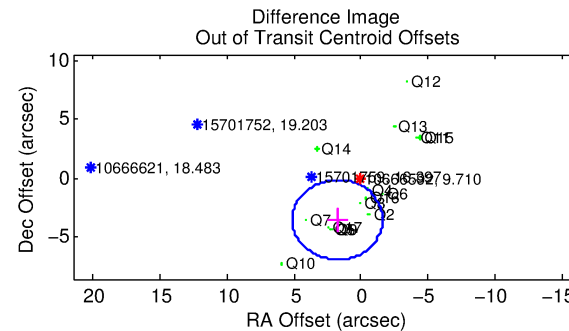
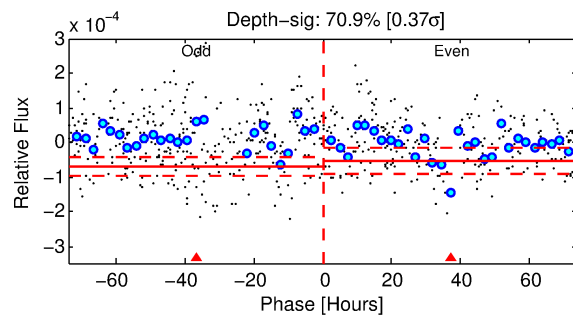
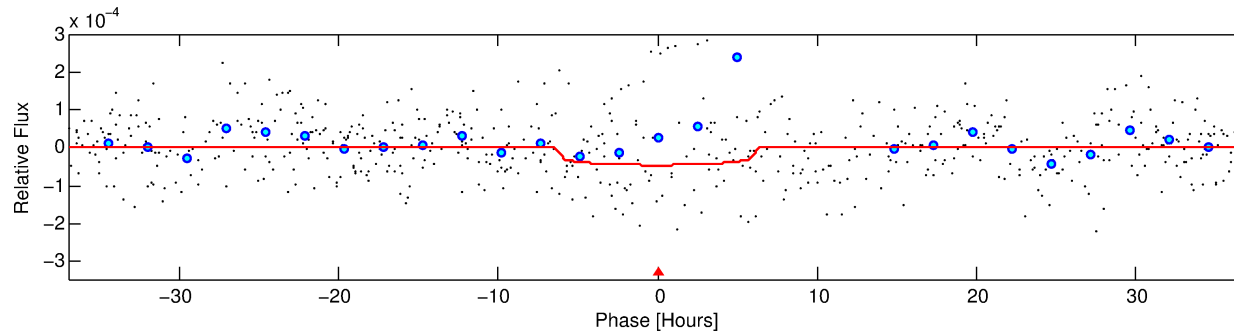
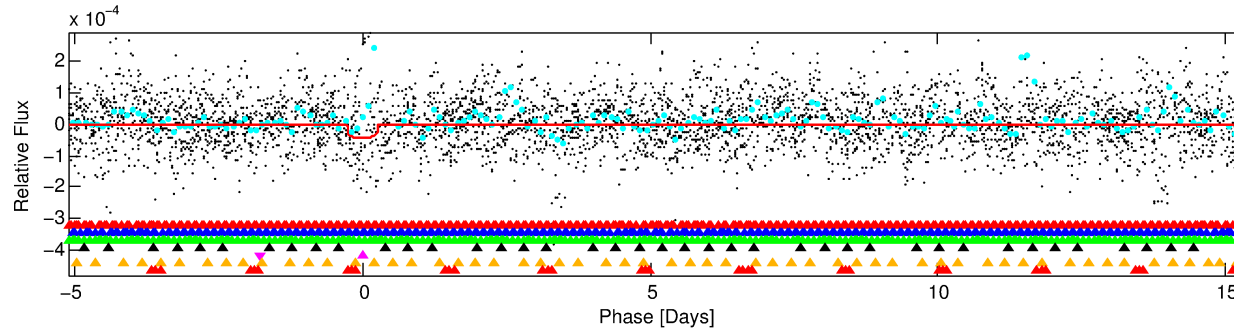
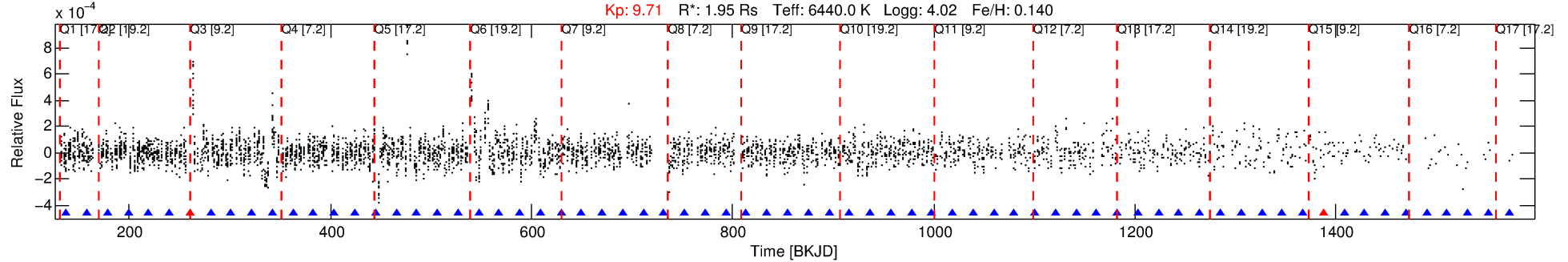
Ephemeris Match Information For 010666592-05

No Significant Match Found

# DV One-Page Summary

KIC: 10666592 Candidate: 5 of 7 Period: 20.490 d  
KOI: K00002 Name: Kepler-2 Corr: No Ephemeris Match

Kp: 9.71 R\*: 1.95 Rs Teff: 6440.0 K Logg: 4.02 Fe/H: 0.140



## DV Fit Results:

Period = 20.49042 [0.00110] d  
Epoch = 137.6396 [0.0388] BKJD  
Rp/R\* = 0.0062 [0.0191]  
a/R\* = 12.58 [200.42]  
b = 0.18 [84.24]  
Seff = 213.15 [17.88]  
Teq = 974 [20] K  
Rp = 1.32 [4.07] Re  
a = 0.1660 [0.0075] AU  
Ag = 368.17 [2281.21] [0.16σ]  
Teffp = 6599 [10221] K [0.55σ]

## DV Diagnostic Results:

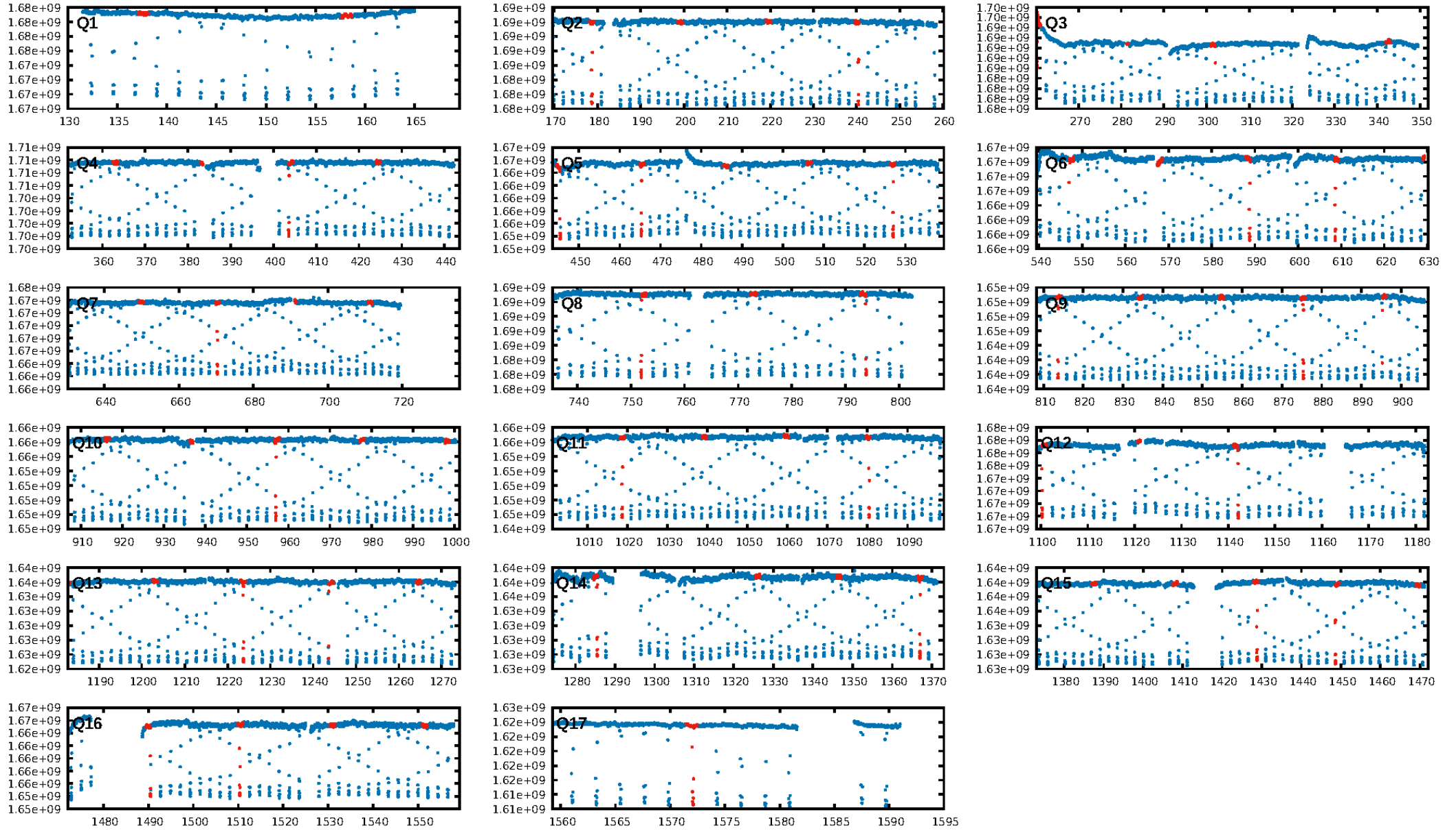
ShortPeriod-sig: 100.0% [22.92σ]  
LongPeriod-sig: 100.0% [10.51σ]  
ModelChiSquare2-sig: 0.0%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: N/A  
RollingBand-fgt: 0.89 [17/19]  
GhostDiagnostic-chr: N/A  
Centroid-sig: N/A  
Centroid-so: 1.150 arcsec [1.17σ]  
OotOffset-rm: 3.912 arcsec [3.47σ]  
KicOffset-rm: 3.961 arcsec [3.90σ]  
OotOffset-st: 4/4/4/5 [17]  
KicOffset-st: 4/4/4/5 [17]  
DiffImageQuality-fgm: 0.18 [3/17]  
DiffImageOverlap-fno: 0.00 [0/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:54:02 Z

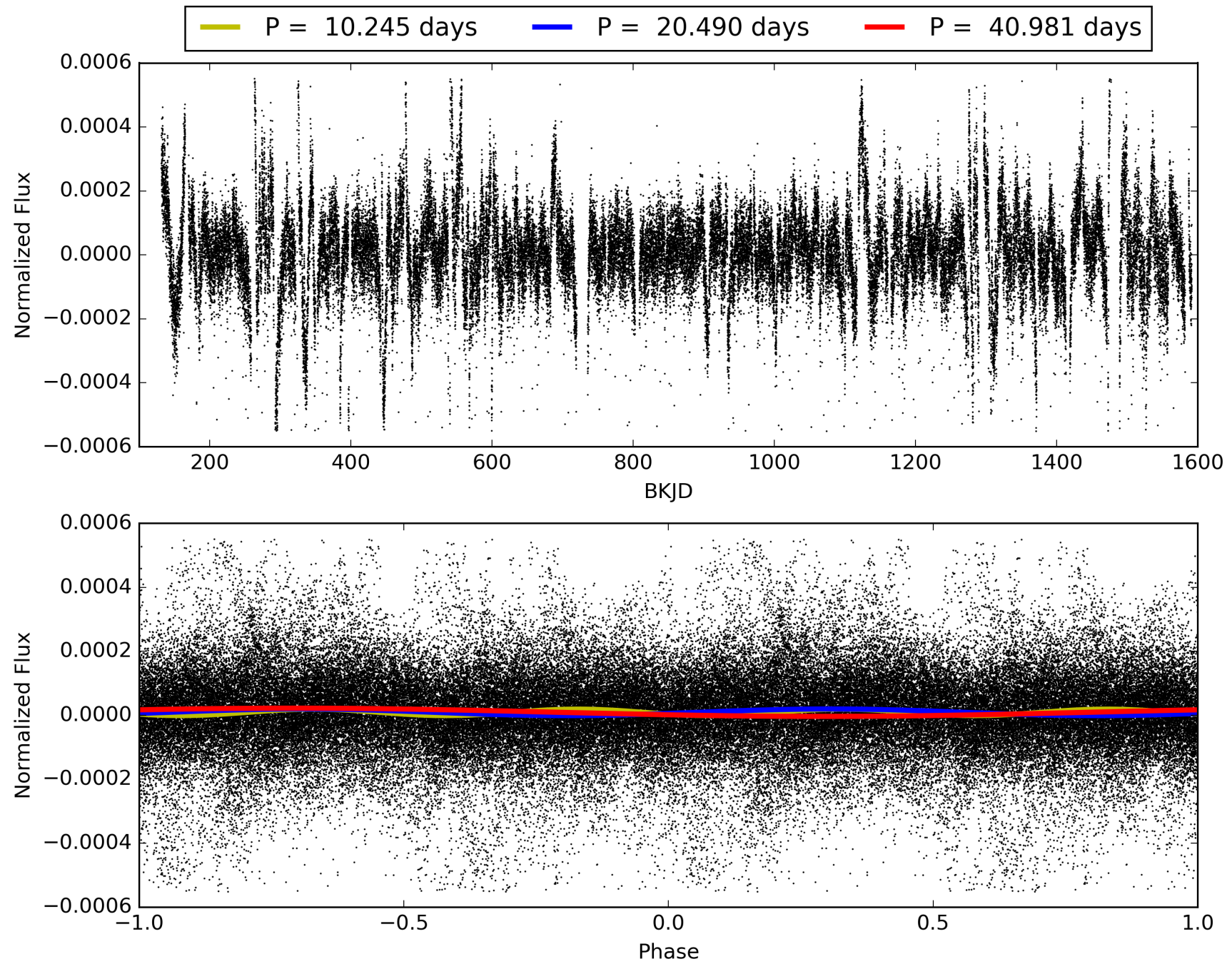
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center



# TCE 010666592-05, PDC Light Curves

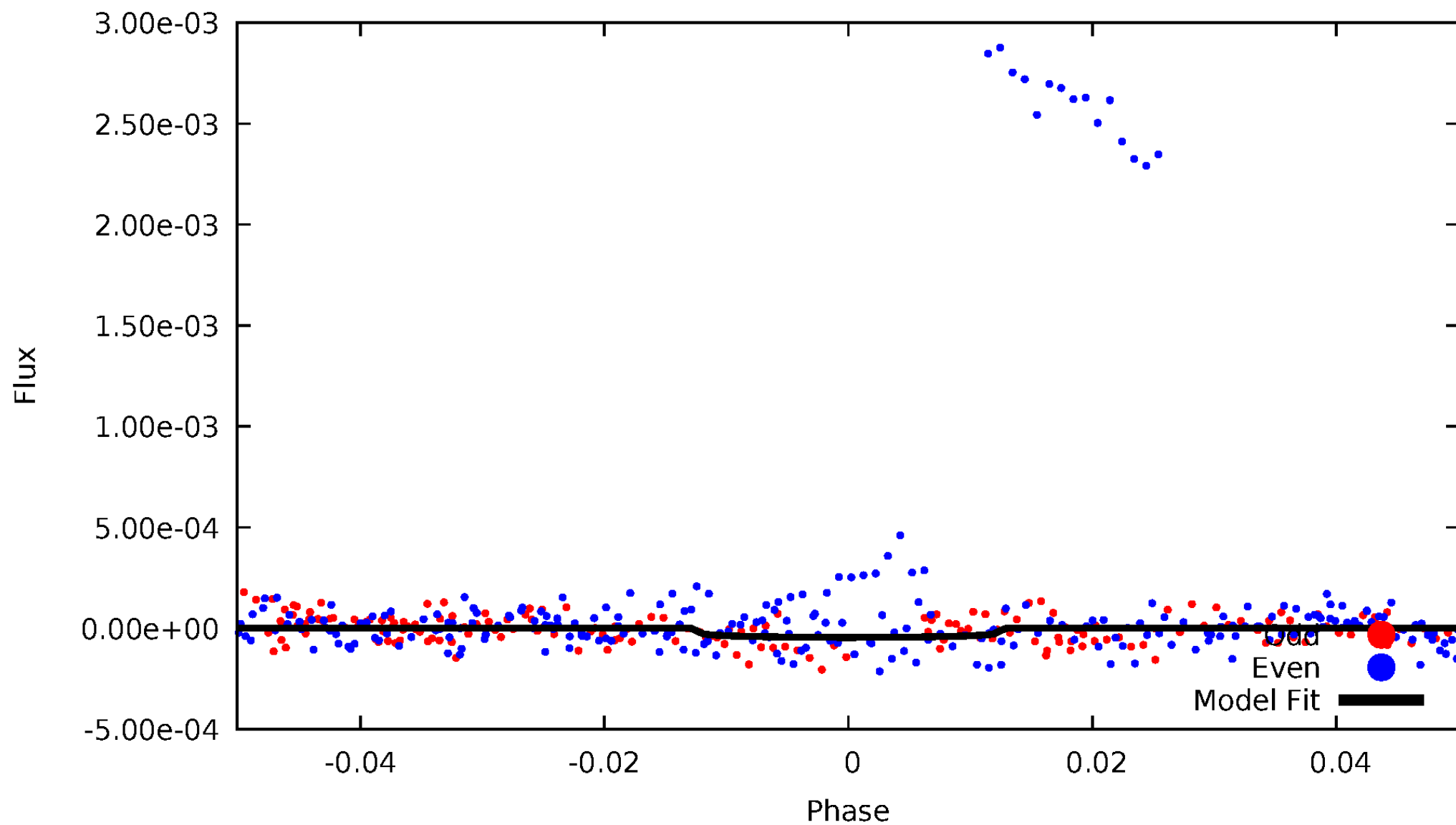


TCE 010666592-05



# DV Odd/Even

TCE 010666592-05



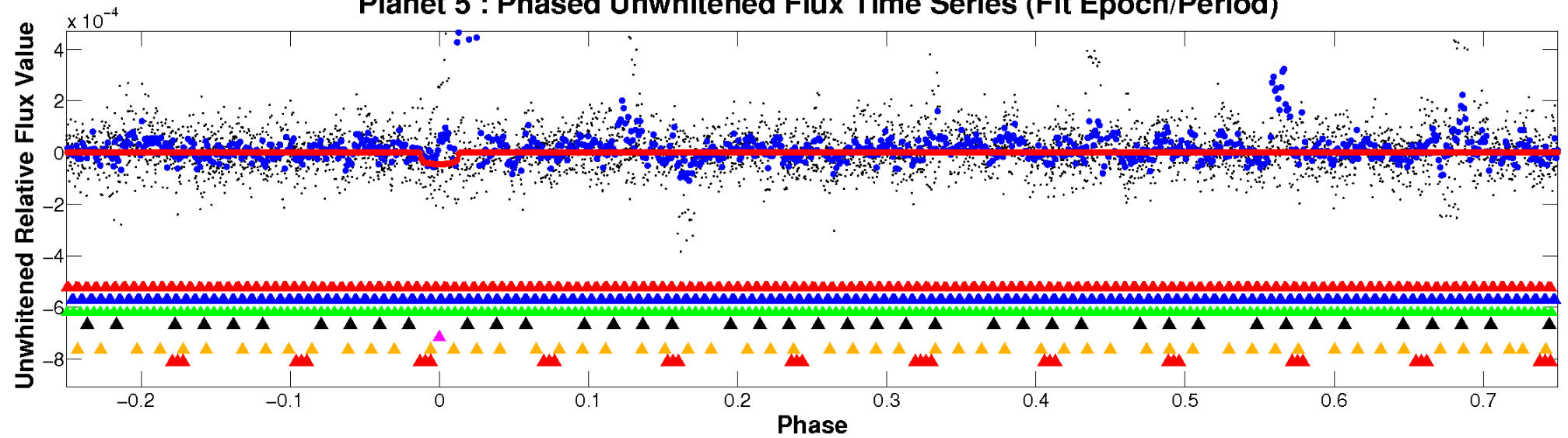


ALT Odd/Even

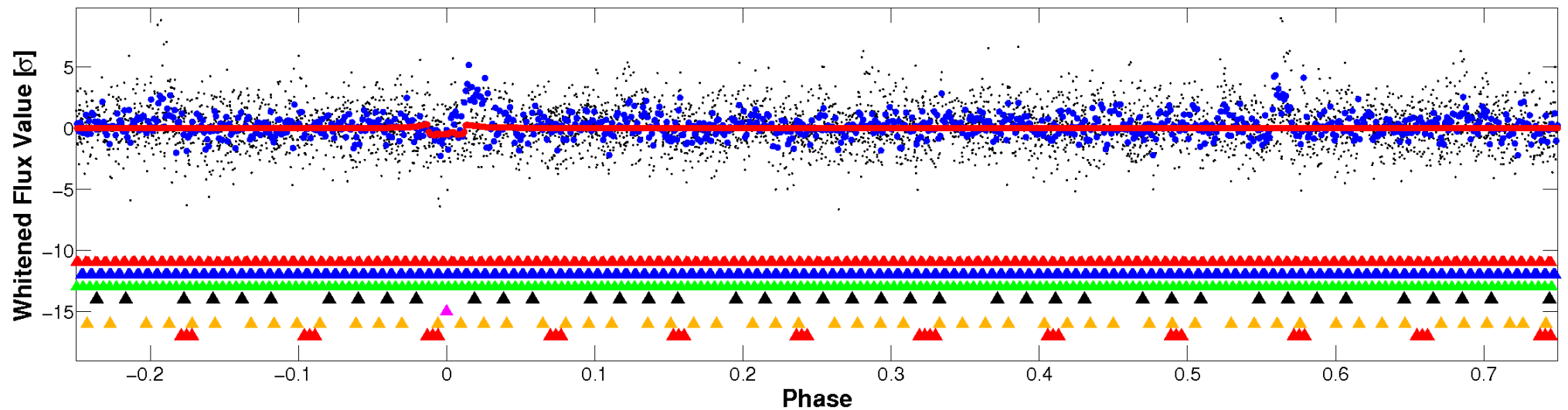
This plot does not exist for this TCE.

# Non-Whitened Vs. Whitened Light Curve

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

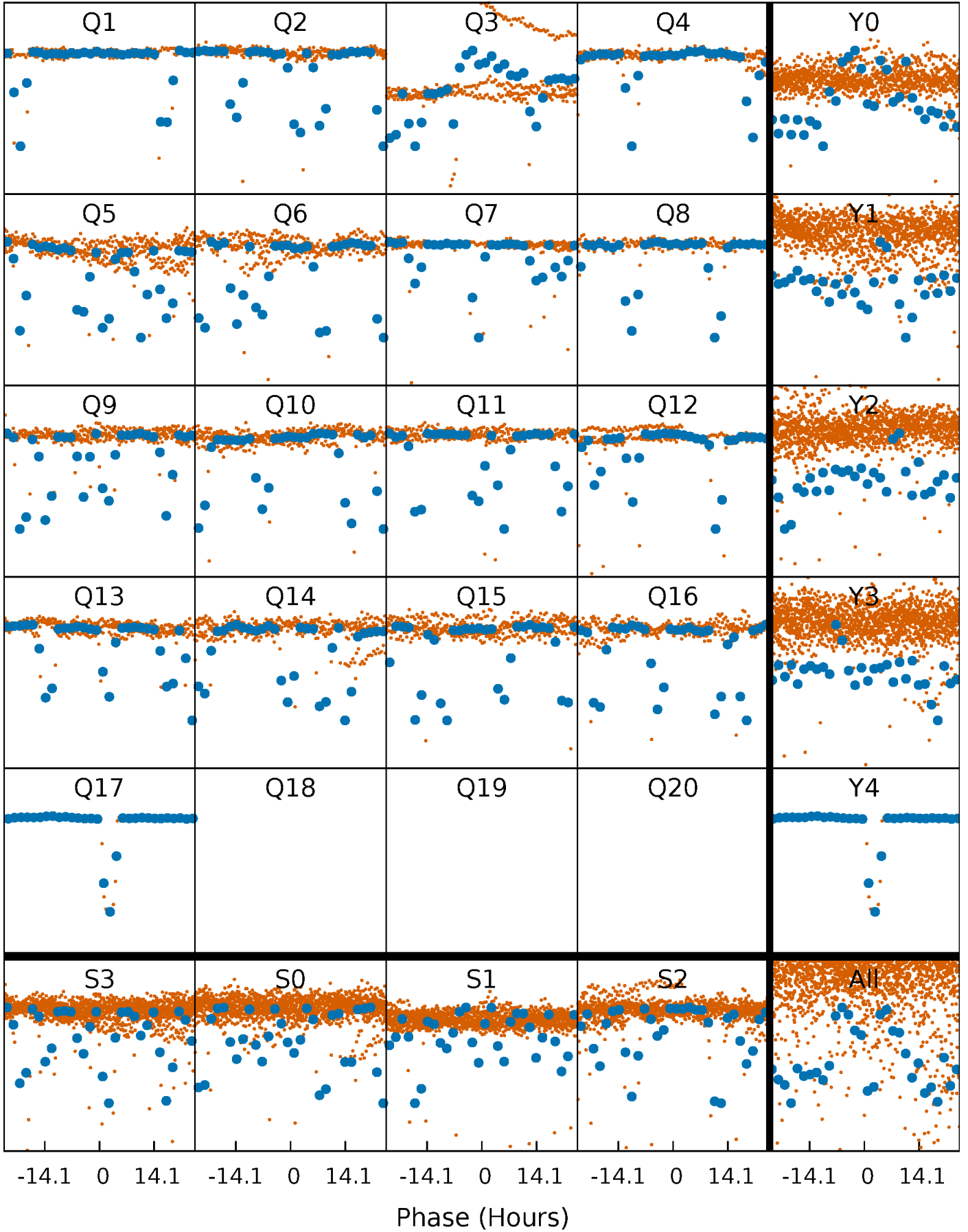


## Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



# PDC Quarter-Phased Transit Curves

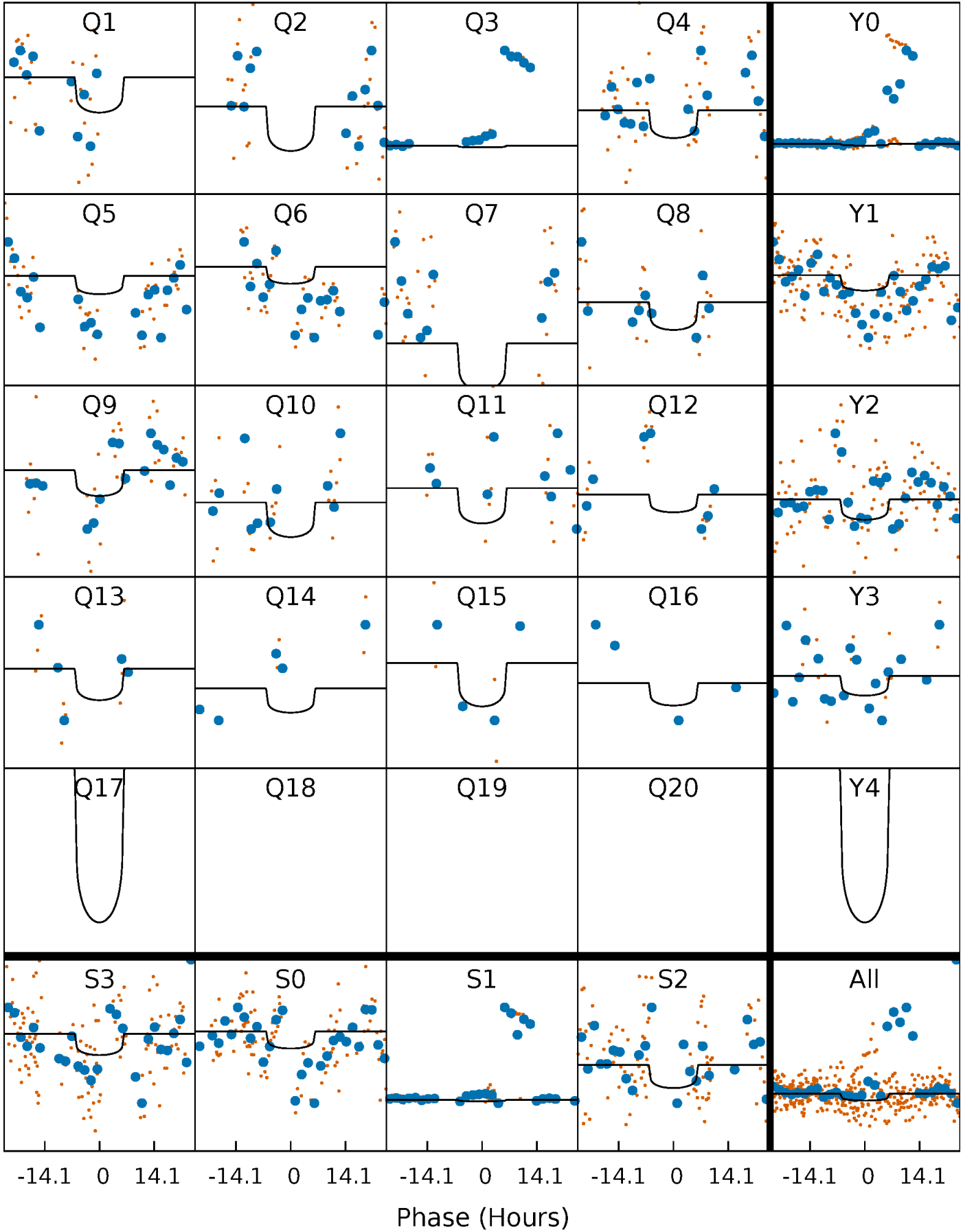
TCE 010666592-05     $P = 20.490420$  Days     $T_0 = 137.639645$  (BKJD)





# DV Quarter-Phased Transit Curves

TCE 010666592-05     $P = 20.490420$  Days     $T_0 = 137.639645$  (BKJD)

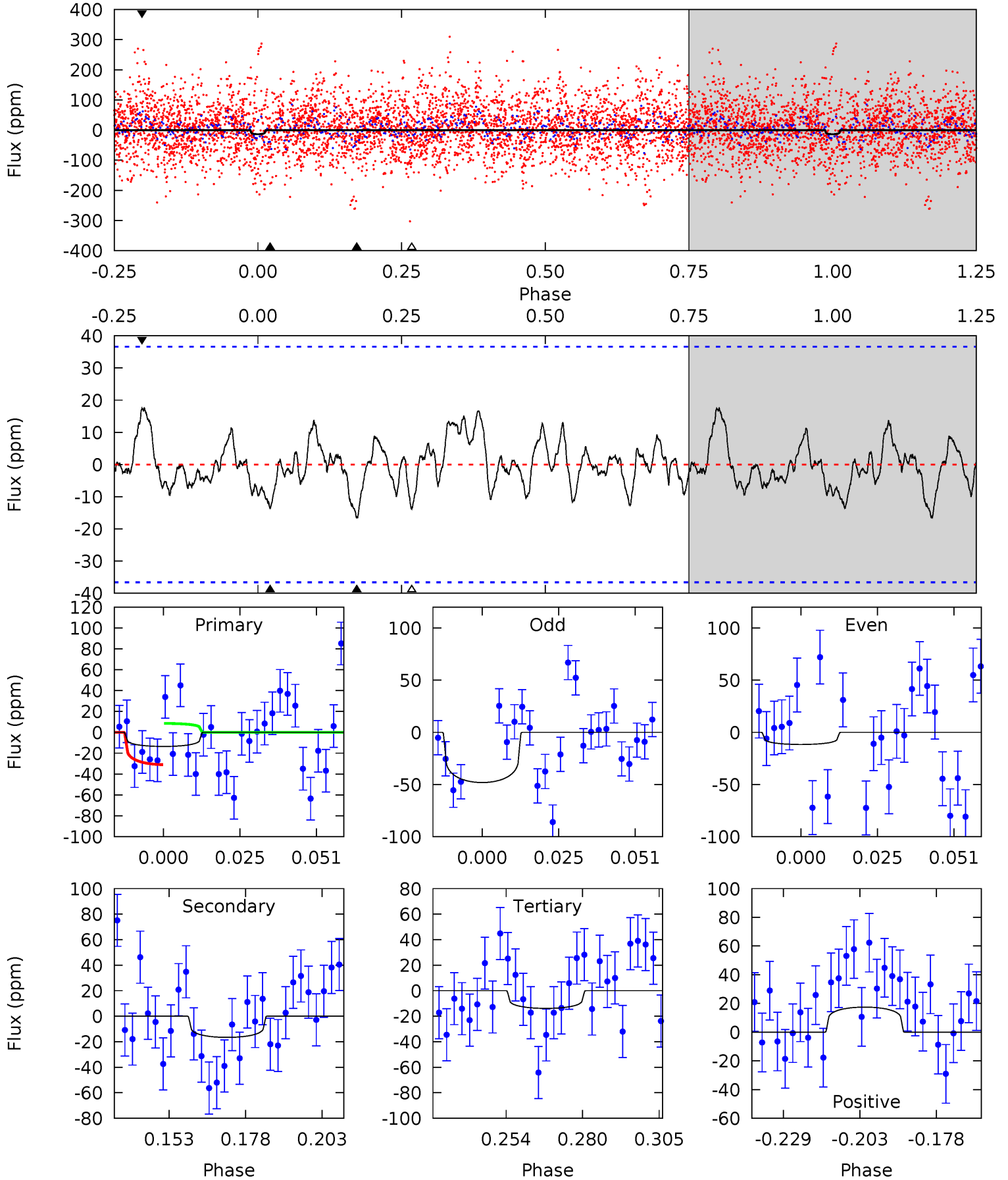


This plot does not exist for this TCE.

# DV Model-Shift Uniqueness Test

010666592-05, P = 20.490420 Days, E = 117.149225 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
1.79	2.20	1.83	2.31	4.84	2.23	0.85	-0.04	-0.52	0.36	-0.11	2.07	-47.0	0.51	1.45



## Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

### Stellar Parameters For KIC 010666592

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6440^{+76}_{-89}$	$4.019^{+0.033}_{-0.027}$	$0.140^{+0.150}_{-0.150}$	$1.952^{+0.099}_{-0.110}$	$1.449^{+0.070}_{-0.091}$	$0.274^{+0.037}_{-0.030}$
	+1%/-1%	+1%/-1%	+107%/-107%	+5%/-6%	+5%/-6%	+14%/-11%
Source	SPE72	AST69	SPE72	DSEP		

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

### Secondary Eclipse Parameters for KIC 010666592-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-17 \pm 8$	$3.30^{+3.10}_{-2.33}$	$1360^{+22}_{-26}$	$3691^{+2325}_{-795}$	$23^{+231}_{-18}$
Alt.	N/A	N/A	N/A	N/A	N/A

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

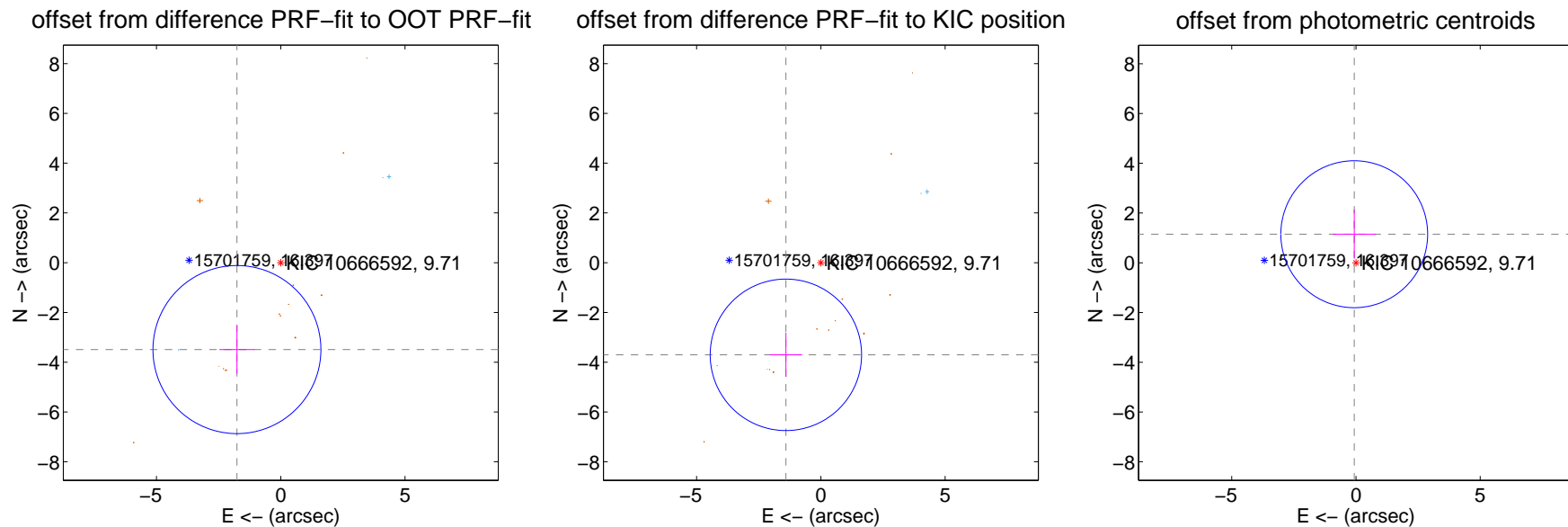
## DV Centroid Data

Supplemental centroid analysis for 010666592-05. **Kepler magnitude: 9.71.** Transit SNR 5.13

**There are 3 quarters with good PRF difference image offsets**

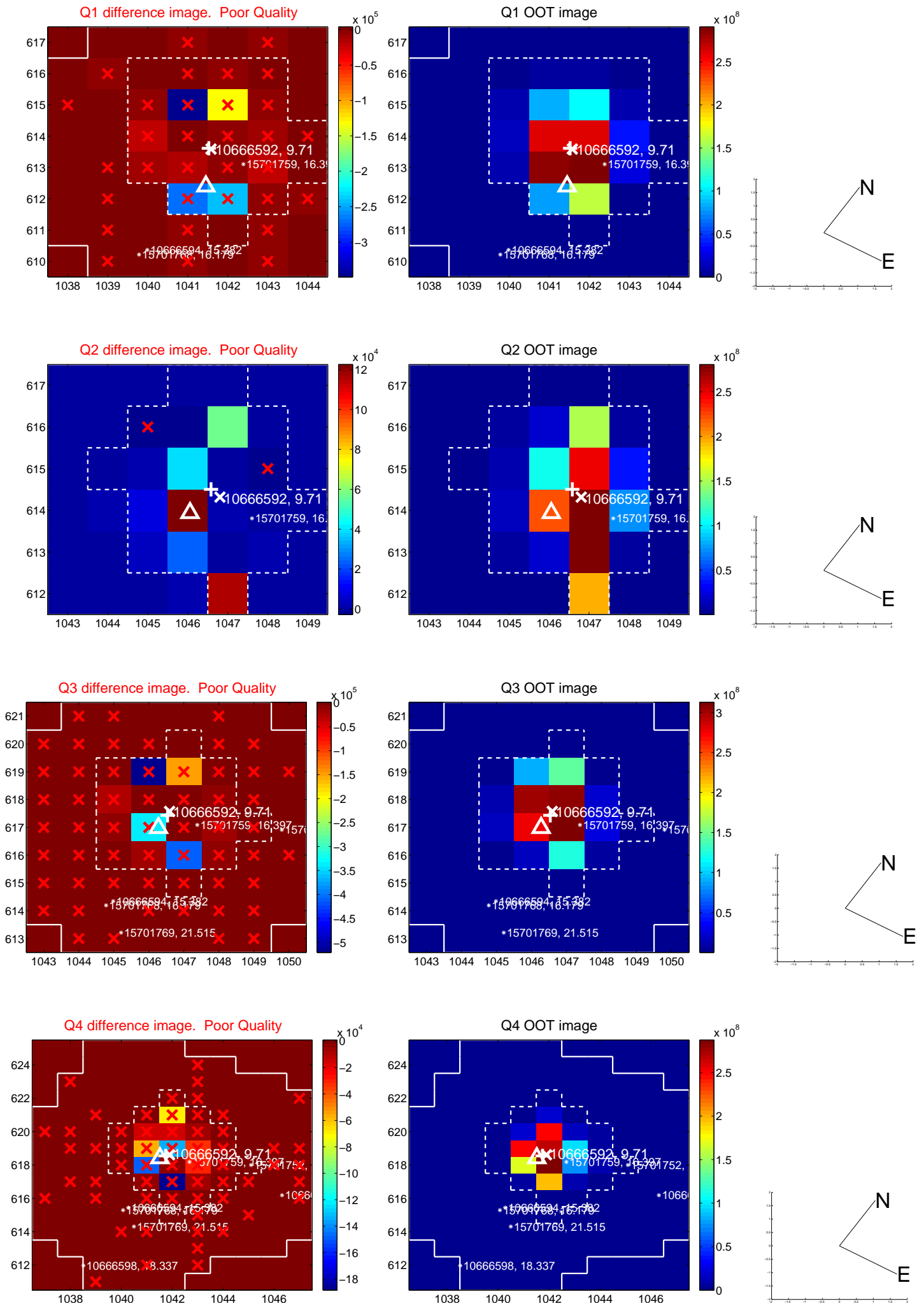
The direct PRF centroid is offset from the target star catalog position by about 0.35 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	<b><math>3.912 \pm 1.126</math></b>	<b>3.47</b>	$1.762 \pm 0.707$	$-3.492 \pm 0.964$
PRF-fit source offset from KIC position	<b><math>3.961 \pm 1.015</math></b>	<b>3.90</b>	$1.407 \pm 0.653$	$-3.703 \pm 0.885$
photometric centroid source offset	$1.15 \pm 0.98$	1.17	$0.07 \pm 0.86$	$1.15 \pm 0.98$



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.

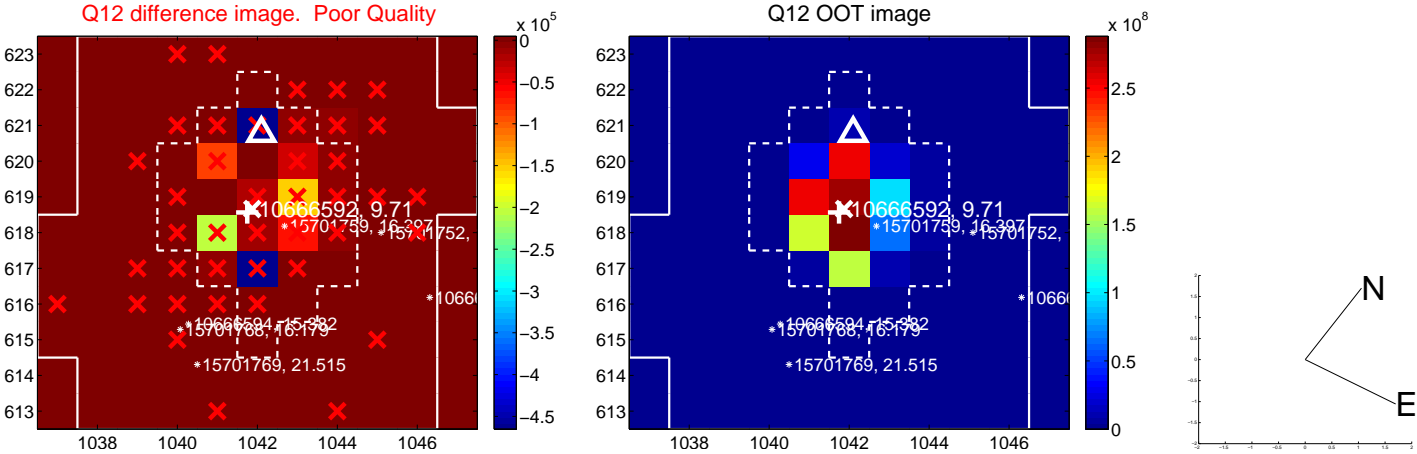
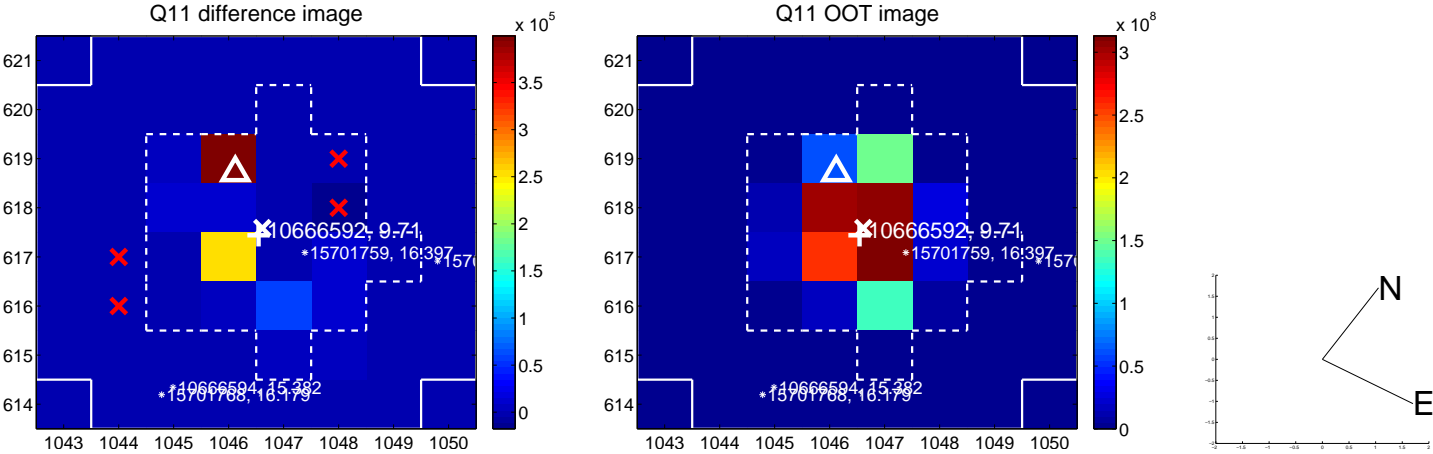
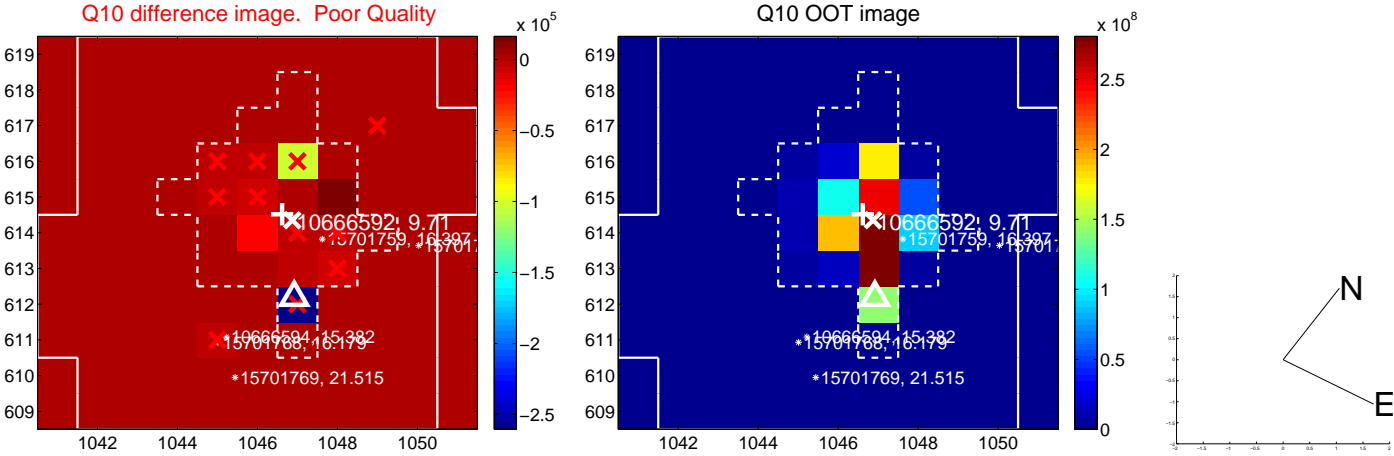
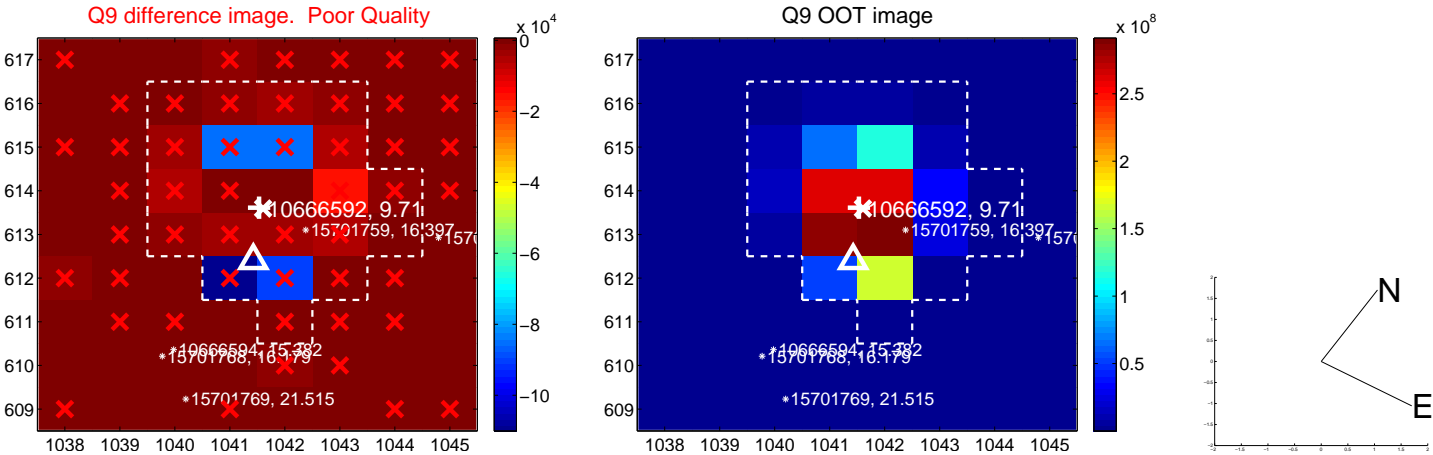
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



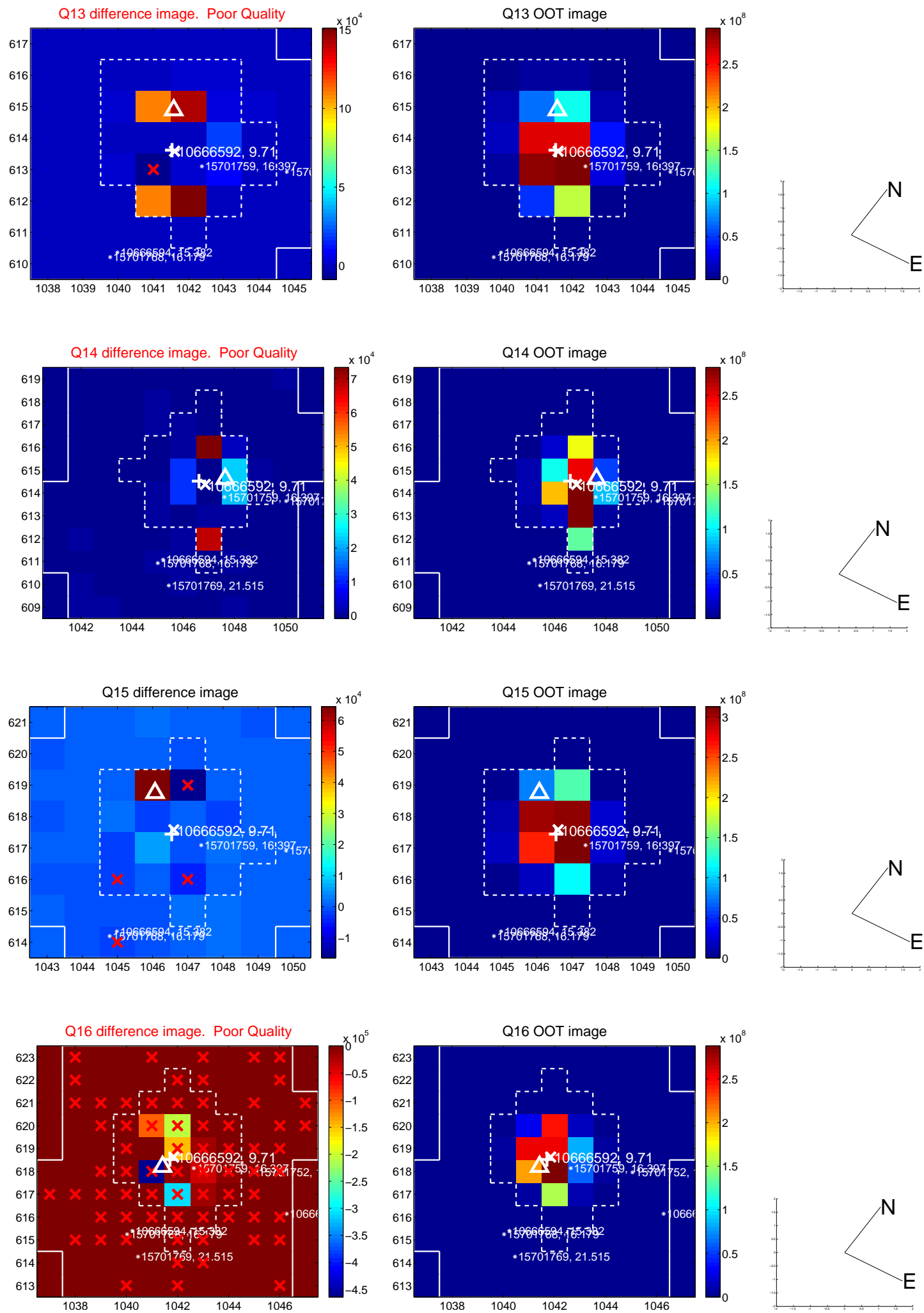




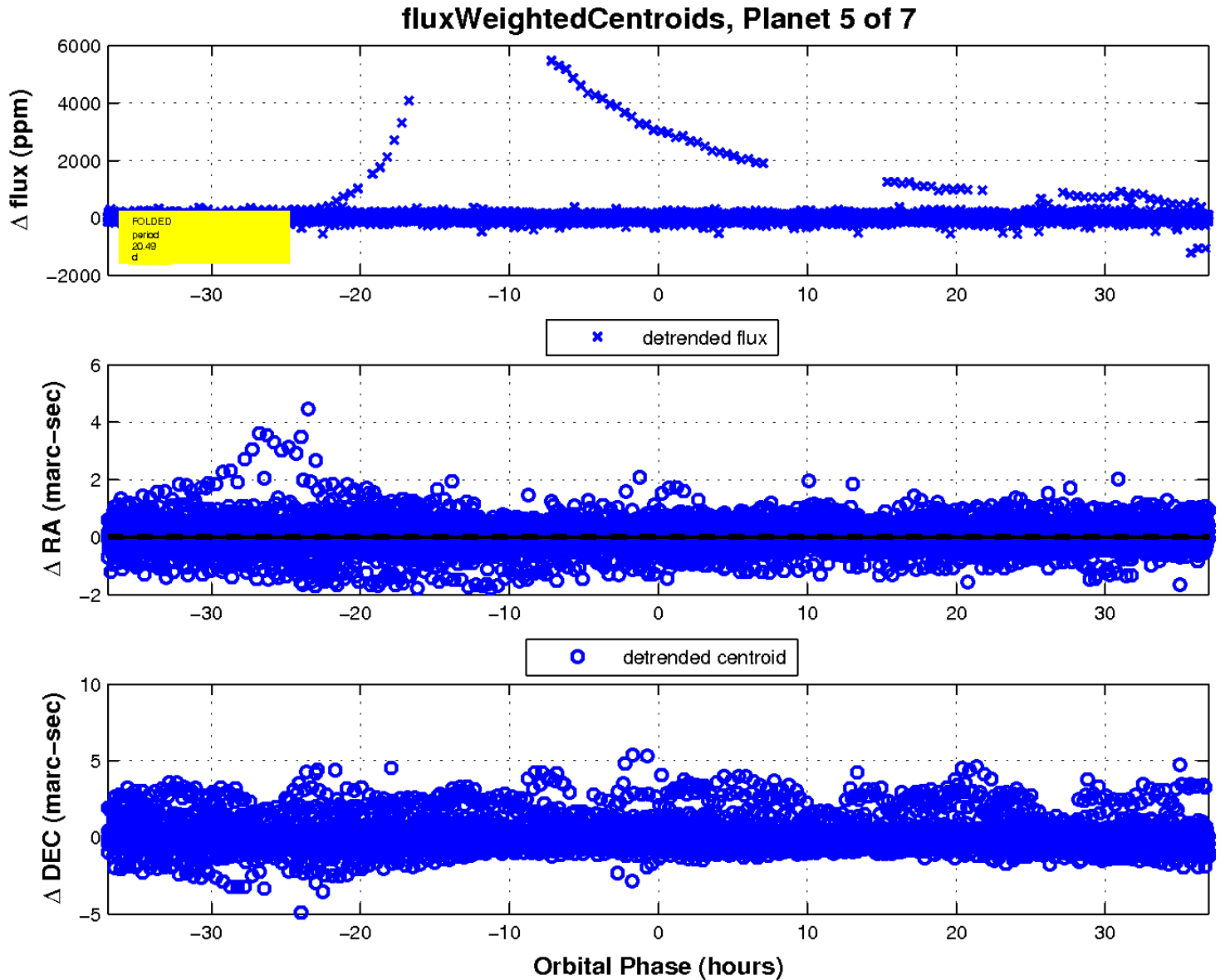
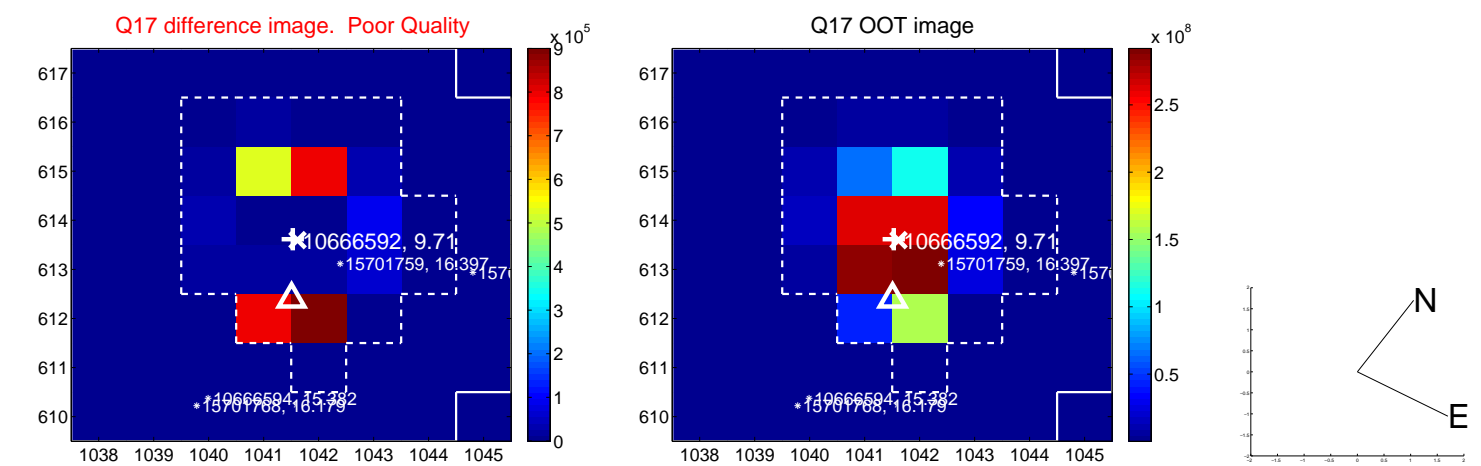
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

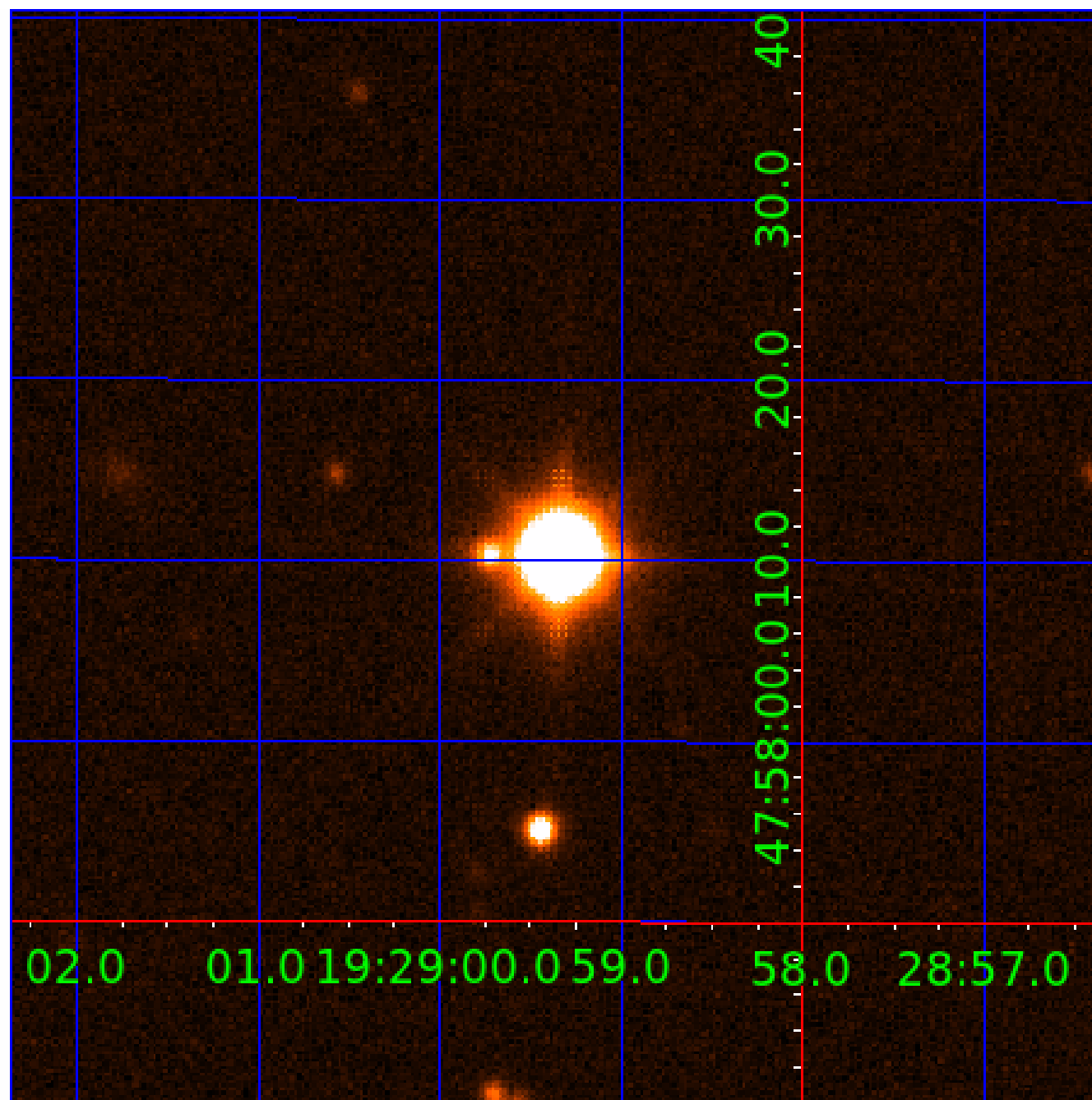


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination



# KIC 010666592

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
010666592-01	OBS	0002.01	2.204731	132.383258	6676.5	4.044	3862.2	3564.7	1.95	6440	16.78	4165.02
010666592-02	OBS	No	2.204730	133.485816	62.5	3.919	39.7	40.7	1.95	6440	1.81	4165.02
010666592-03	OBS	No	2.205225	131.978785	20.7	14.659	14.0	12.5	1.95	6440	0.90	4163.77
010666592-04	OBS	No	35.356054	163.335903	94.5	10.421	26.4	8.6	1.95	6440	1.90	102.99
010666592-05	OBS	No	20.490420	137.639645	45.1	12.320	16.1	5.1	1.95	6440	1.32	213.15
010666592-06	OBS	No	25.975692	132.034470	133.1	2.262	11.3	10.1	1.95	6440	2.32	155.36
010666592-07	OBS	No	39.279443	164.669535	93.6	3.000	9.8	-1.0	1.95	6440	1.90	89.51

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010666592-01	OBS	PC	1.00	0	1	0	0	MOD_SEC_DV—PLANET_OCCULT_DV—MOD_SEC_ALT—PLANET_OCCULT_ALT—HAS_SEC_TCE—CENT_SATURATED
010666592-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_SATURATED
010666592-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—RESIDUAL_TCE—CENT_SATURATED
010666592-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_SATURATED
010666592-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_SATURATED
010666592-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—CENT_SATURATED
010666592-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—NO_FITS—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.

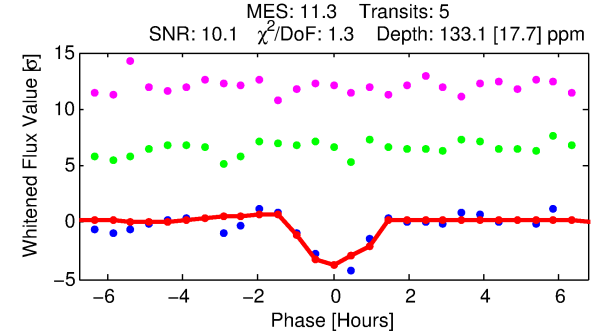
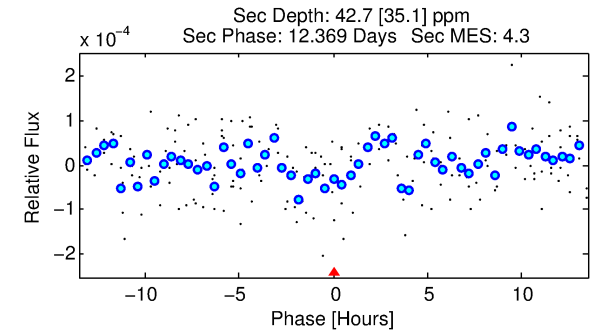
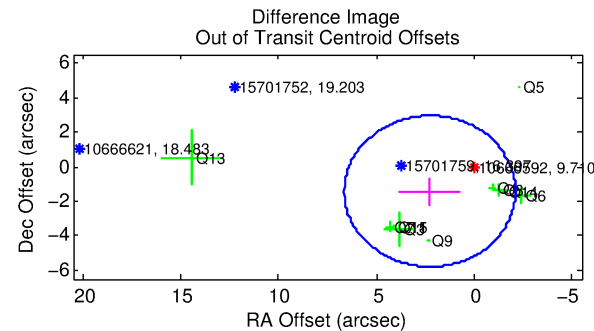
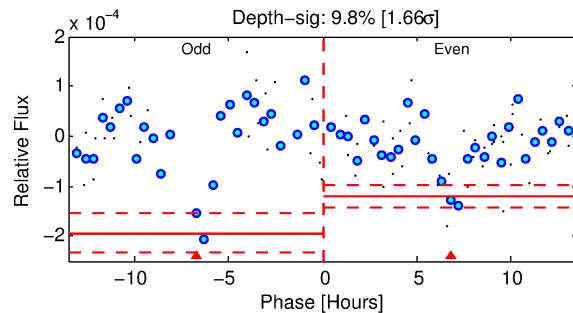
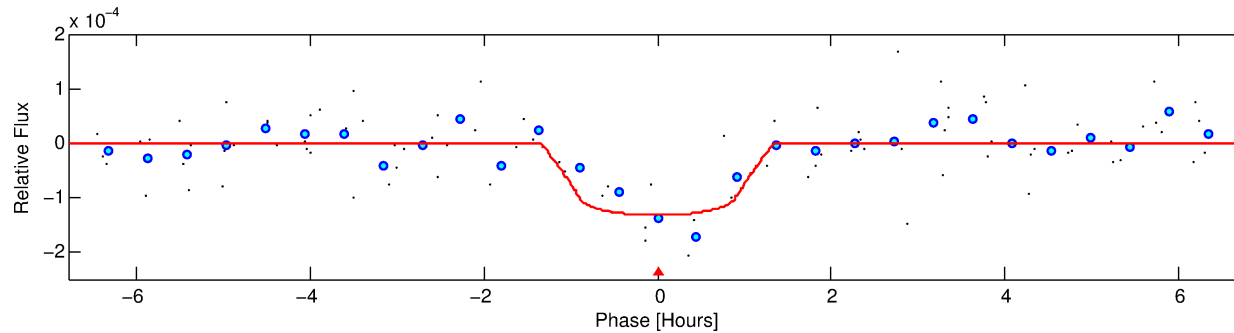
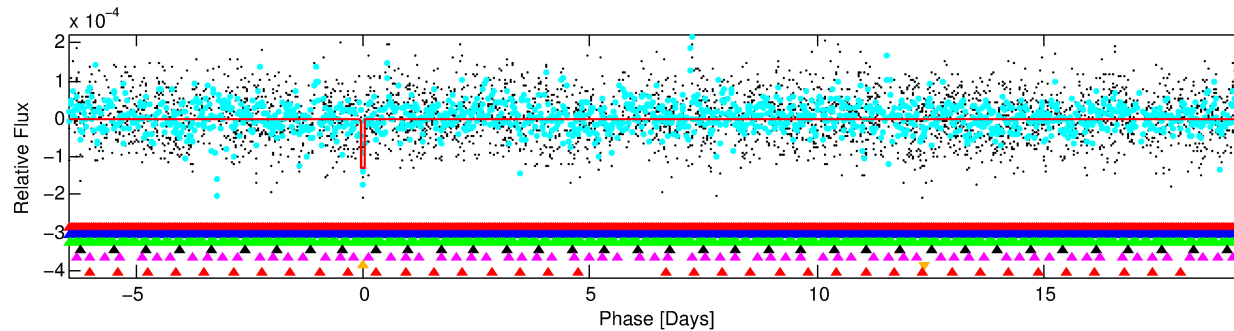
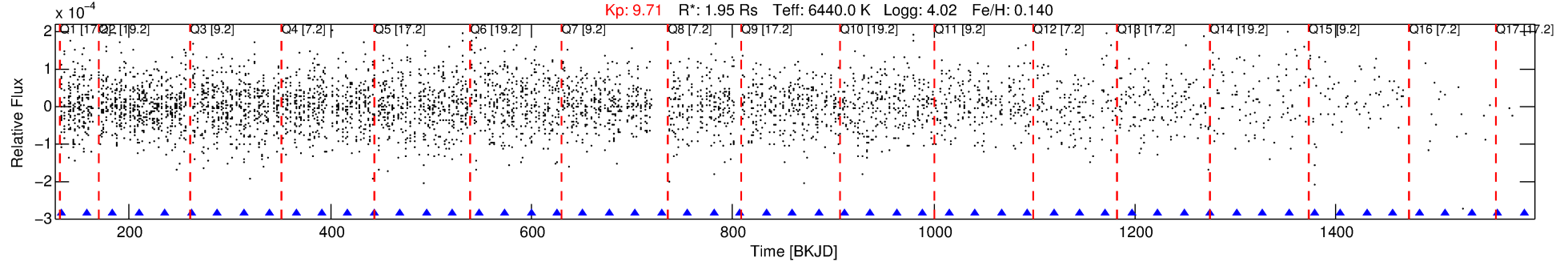
Ephemeris Match Information For 010666592-06

No Significant Match Found

# DV One-Page Summary

KIC: 10666592 Candidate: 6 of 7 Period: 25.976 d  
KOI: K00002 Name: Kepler-2 Corr: No Ephemeris Match

Kp: 9.71 R\*: 1.95 Rs Teff: 6440.0 K Logg: 4.02 Fe/H: 0.140



## DV Fit Results:

Period = 25.97569 [0.00047] d  
Epoch = 132.0345 [0.0122] BKJD  
Rp/R\* = 0.0109 [0.0092]  
a/R\* = 78.36 [340.25]  
b = 0.47 [7.30]  
Seff = 155.36 [13.03]  
Teq = 900 [19] K  
Rp = 2.32 [1.96] Re  
a = 0.1944 [0.0088] AU  
Ag = 165.50 [311.48] [0.53σ]  
Teffp = 4992 [2349] K [1.74σ]

## DV Diagnostic Results:

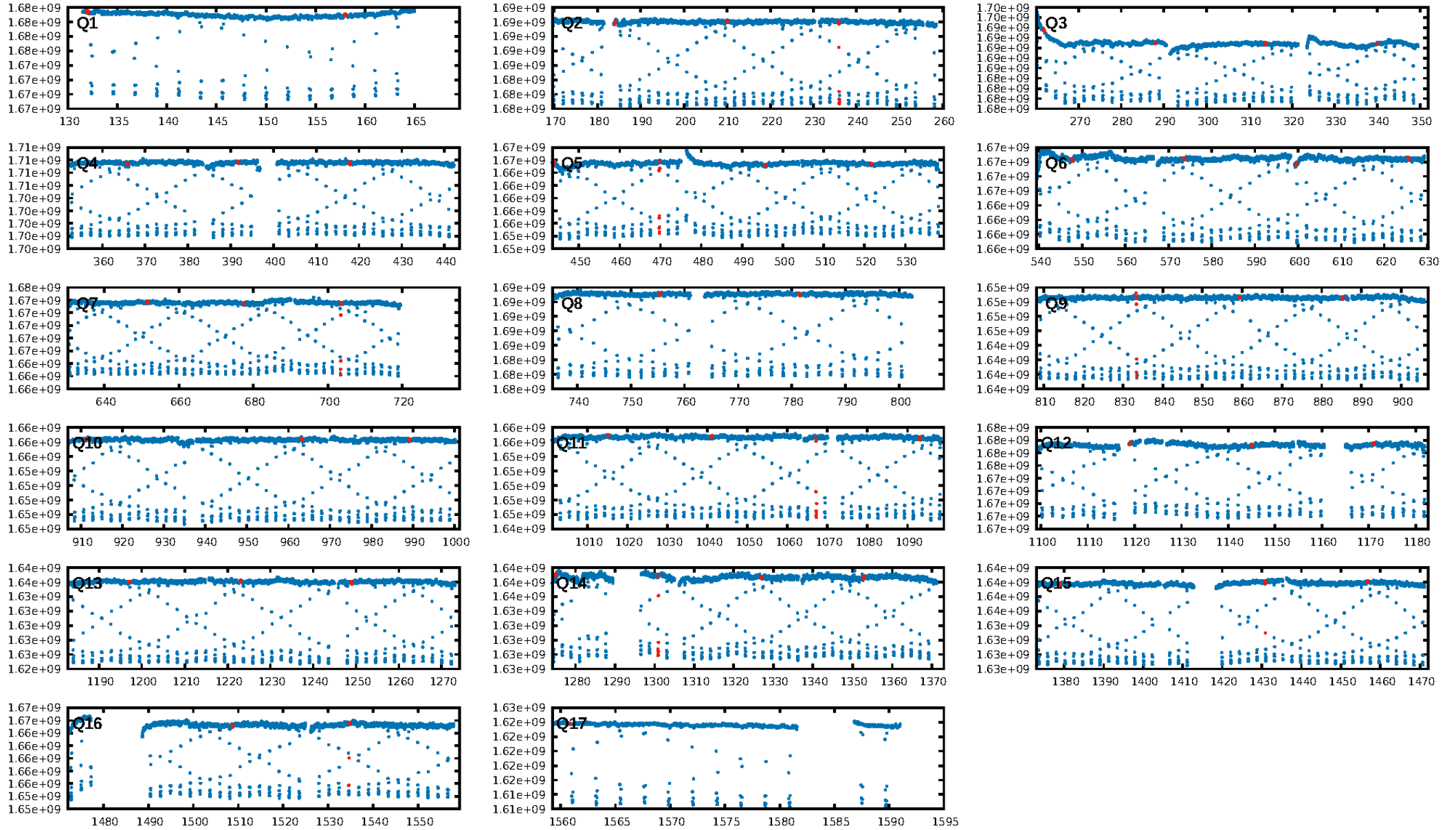
ShortPeriod-sig: 100.0% [10.51σ]  
LongPeriod-sig: 100.0% [21.11σ]  
ModelChiSquare2-sig: 19.1%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [5/5]  
GhostDiagnostic-chr: N/A  
Centroid-sig: N/A  
Centroid-so: 0.445 arcsec [1.05σ]  
OotOffset-rm: 2.685 arcsec [1.84σ]  
OotOffset-st: 2/4/2/3 [11]  
KicOffset-rm: 2.460 arcsec [1.86σ]  
KicOffset-st: 2/4/2/3 [11]  
DiffImageQuality-fgm: 0.27 [3/11]  
DiffImageOverlap-fno: 0.38 [6/16]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:54:05 Z

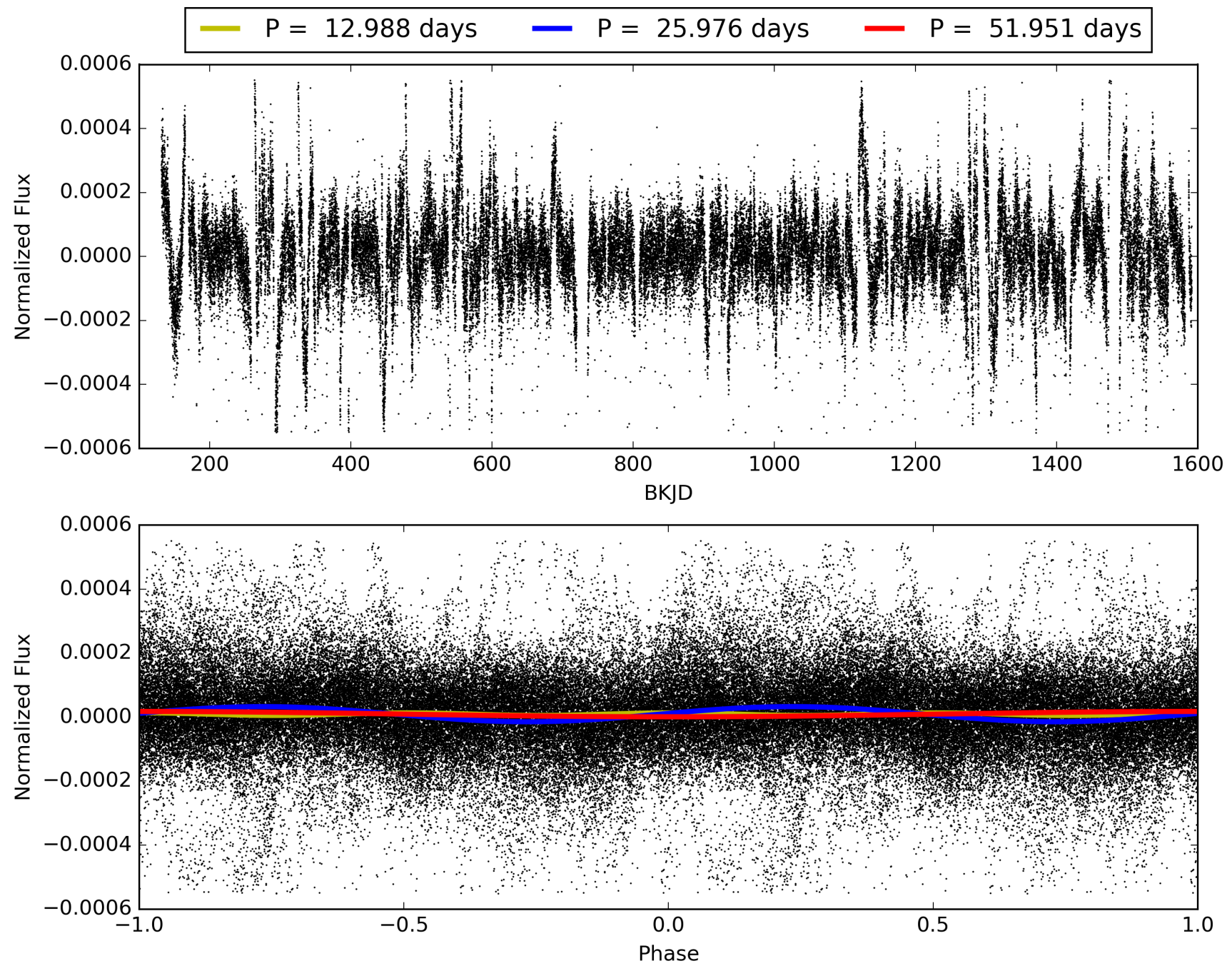
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center



# TCE 010666592-06, PDC Light Curves

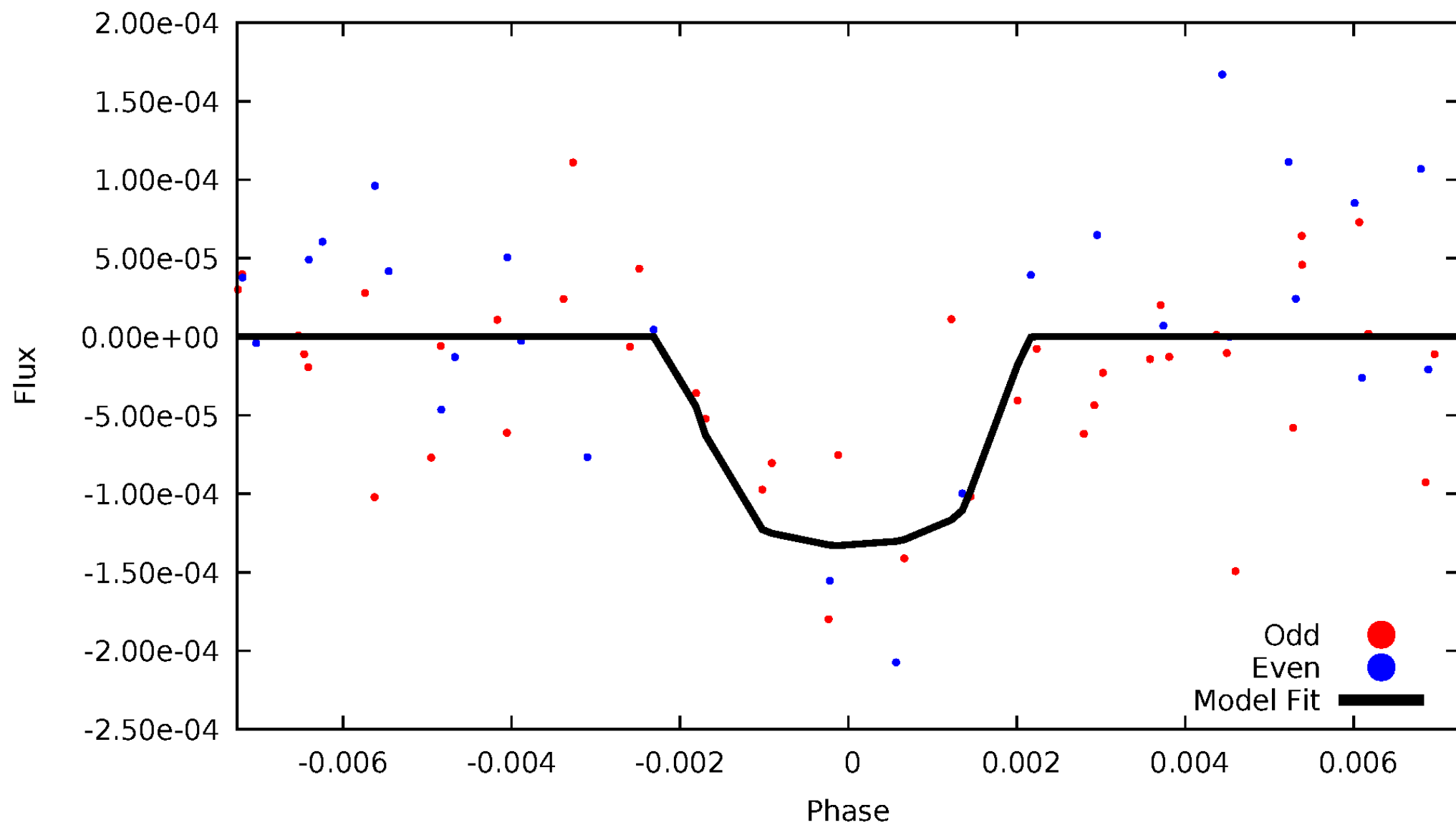


TCE 010666592-06



# DV Odd/Even

TCE 010666592-06



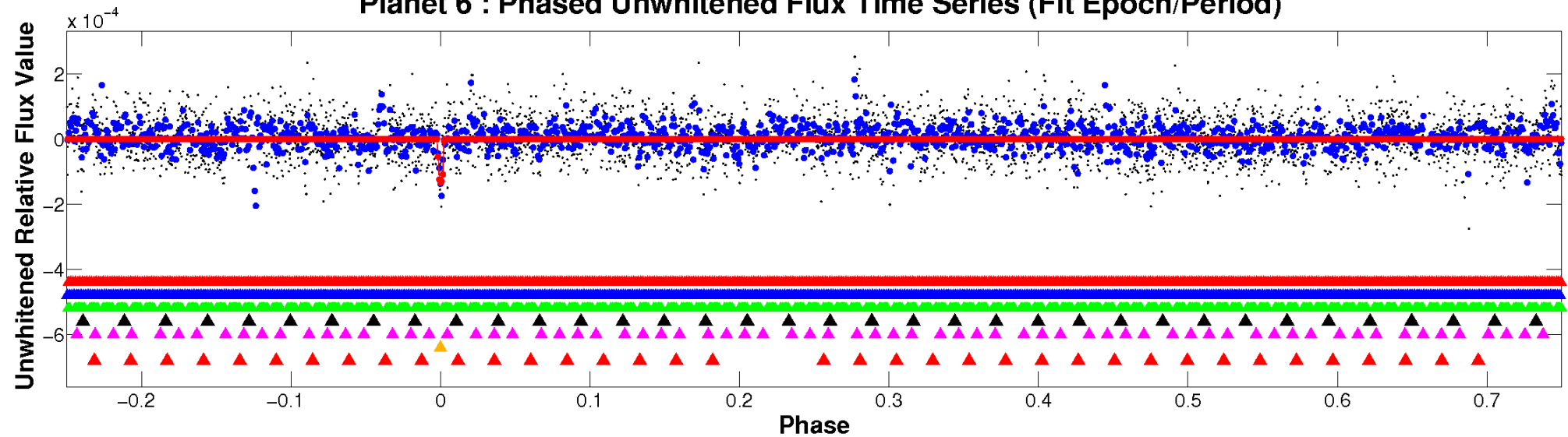


ALT Odd/Even

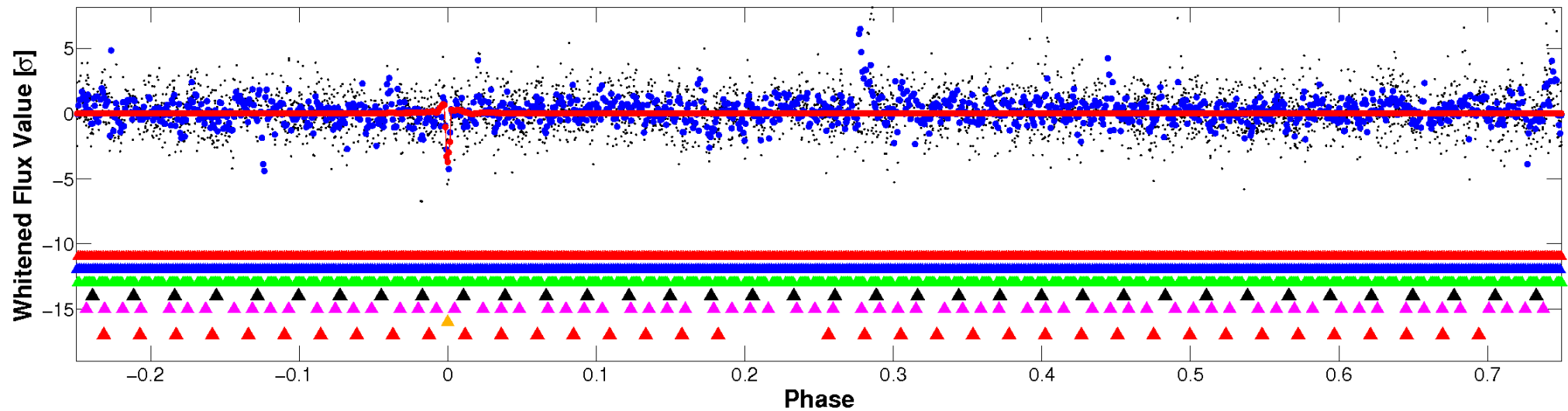
This plot does not exist for this TCE.

# Non-Whitened Vs. Whitened Light Curve

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

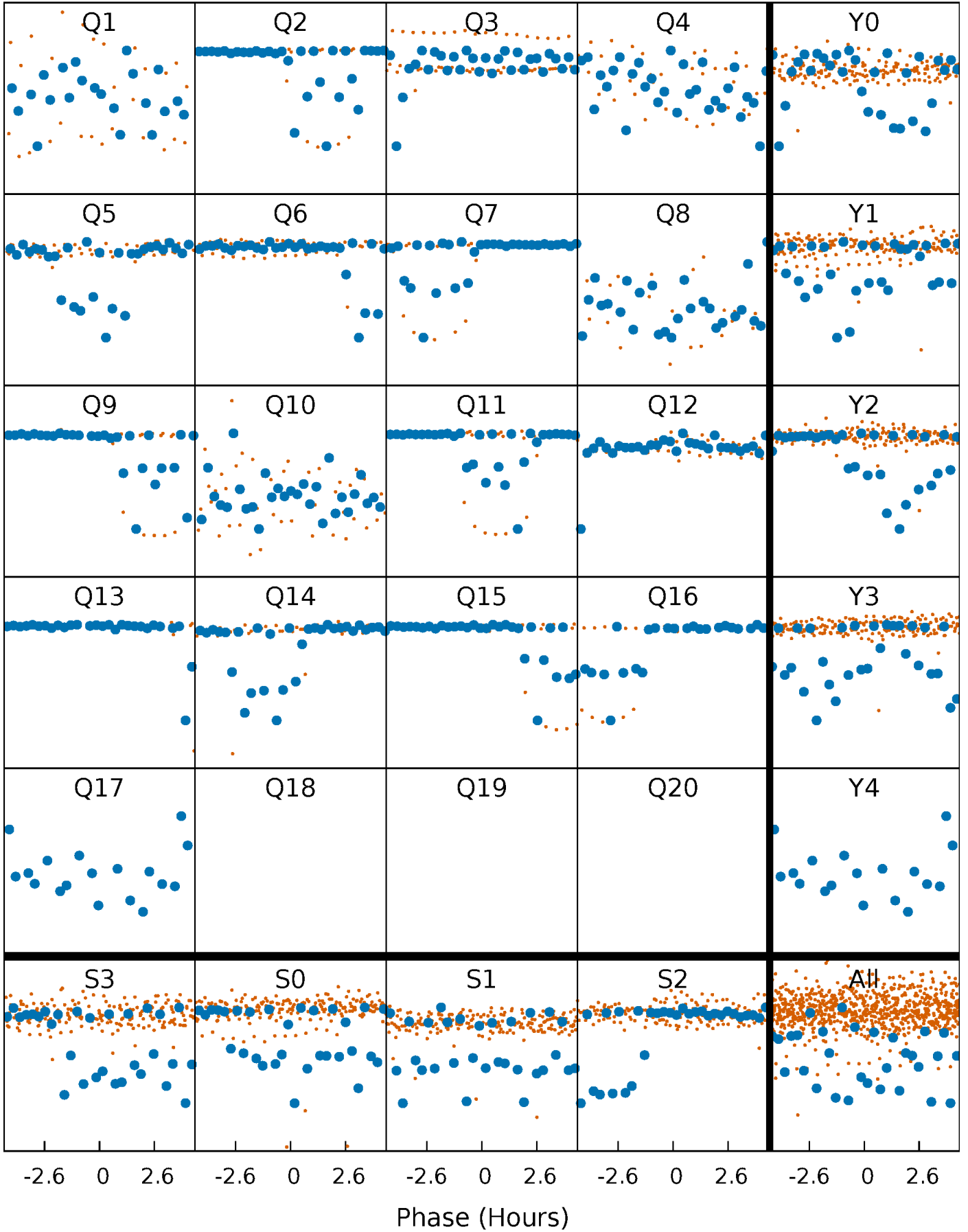


## Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



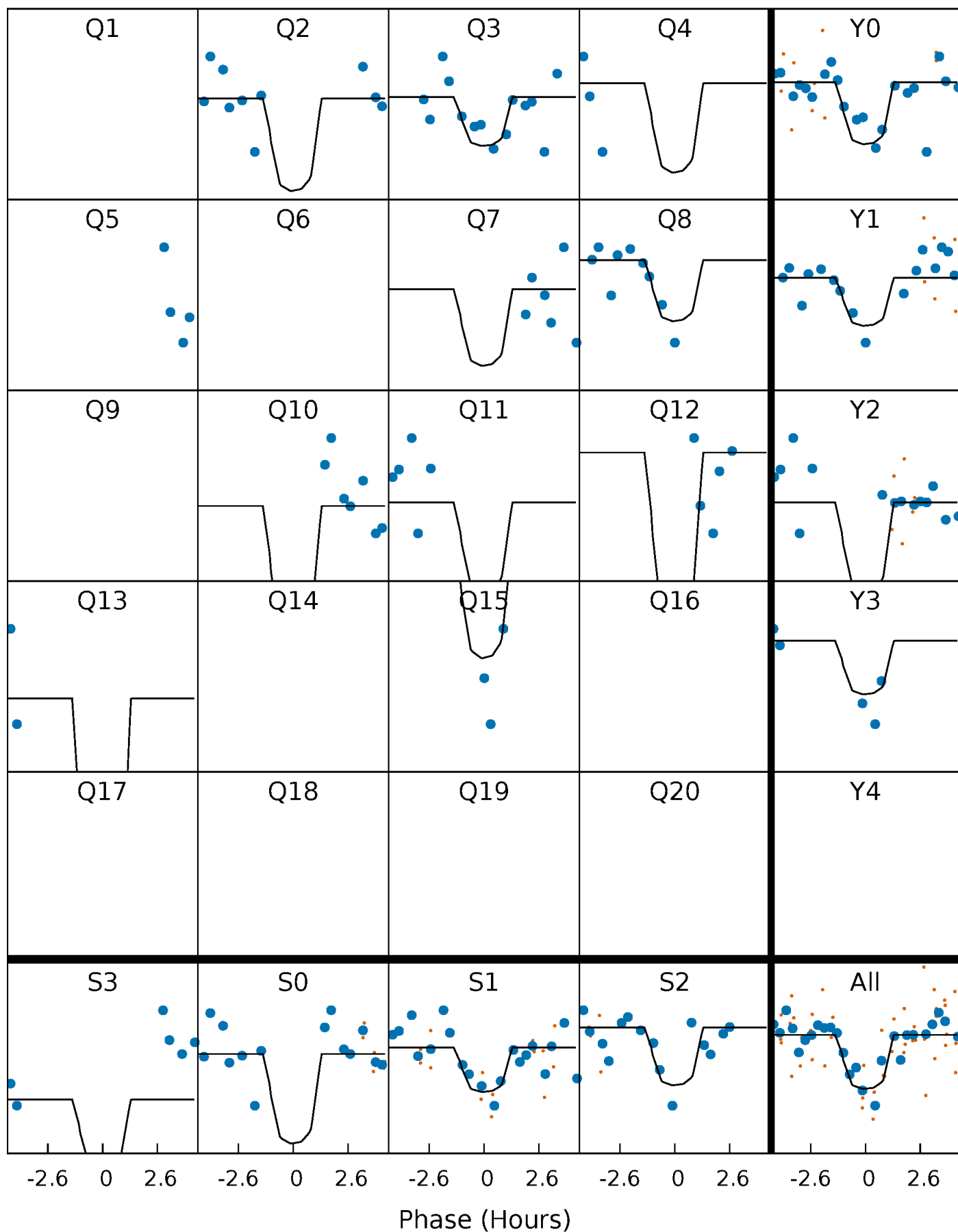
# PDC Quarter-Phased Transit Curves

TCE 010666592-06 P= 25.975692 Days  $T_0=132.034470$  (BKJD)



# DV Quarter-Phased Transit Curves

TCE 010666592-06   P= 25.975692 Days    $T_0=132.034470$  (BKJD)



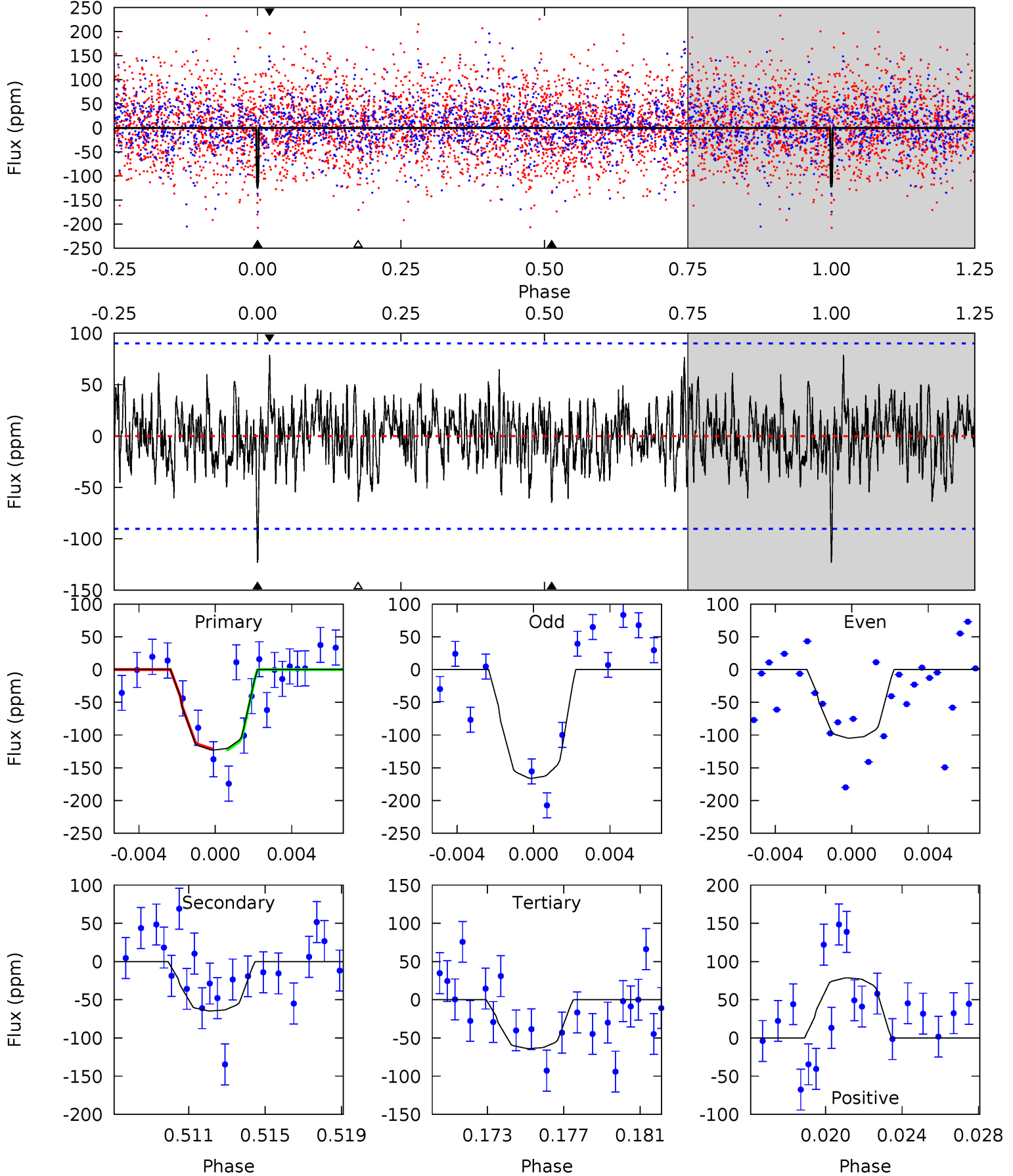


This plot does not exist for this TCE.

# DV Model-Shift Uniqueness Test

010666592-06, P = 25.975692 Days, E = 132.034470 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
7.10	3.73	3.68	4.54	5.20	2.88	1.29	3.41	2.56	0.05	-0.81	1.68	0.82	0.39	0.07



## Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

### Stellar Parameters For KIC 010666592

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6440^{+76}_{-89}$	$4.019^{+0.033}_{-0.027}$	$0.140^{+0.150}_{-0.150}$	$1.952^{+0.099}_{-0.110}$	$1.449^{+0.070}_{-0.091}$	$0.274^{+0.037}_{-0.030}$
	+1%/-1%	+1%/-1%	+107%/-107%	+5%/-6%	+5%/-6%	+14%/-11%
Source	SPE72	AST69	SPE72	DSEP		

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

### Secondary Eclipse Parameters for KIC 010666592-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-65 \pm 17$	$2.65^{+1.86}_{-1.53}$	$1255^{+23}_{-21}$	$5154^{+3009}_{-975}$	$182^{+920}_{-120}$
Alt.	N/A	N/A	N/A	N/A	N/A

$T_{max}$  = 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

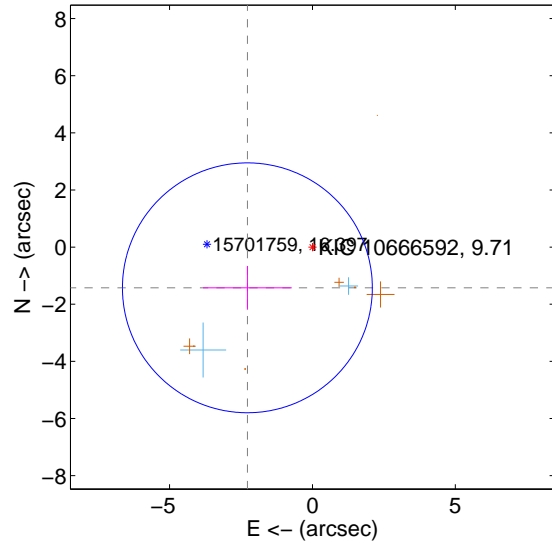
Supplemental centroid analysis for 010666592-06. **Kepler magnitude: 9.71.** Transit SNR 10.12

**There are 3 quarters with good PRF difference image offsets**

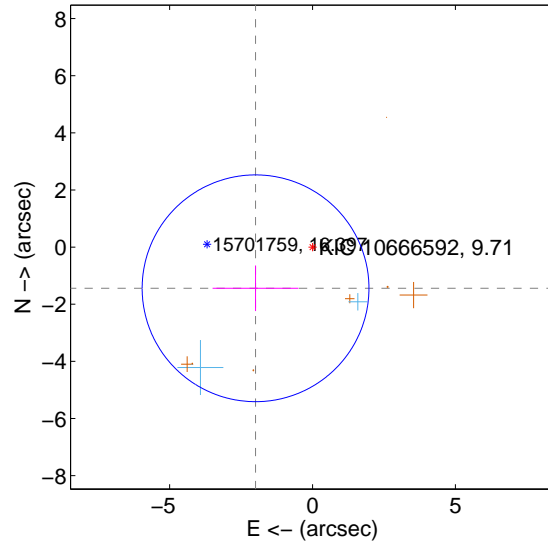
The direct PRF centroid is offset from the target star catalog position by about 0.61 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$2.685 \pm 1.457$	1.84	$2.276 \pm 1.552$	$-1.425 \pm 0.767$
PRF-fit source offset from KIC position	$2.460 \pm 1.323$	1.86	$1.994 \pm 1.502$	$-1.442 \pm 0.799$
photometric centroid source offset	$0.44 \pm 0.42$	1.05	$0.24 \pm 0.41$	$-0.37 \pm 0.43$

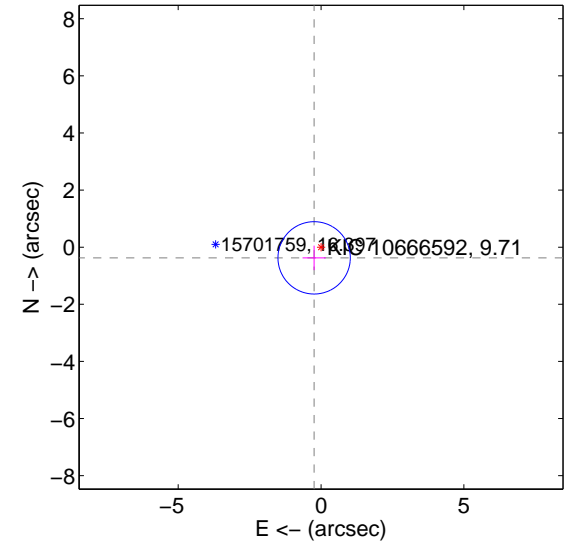
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

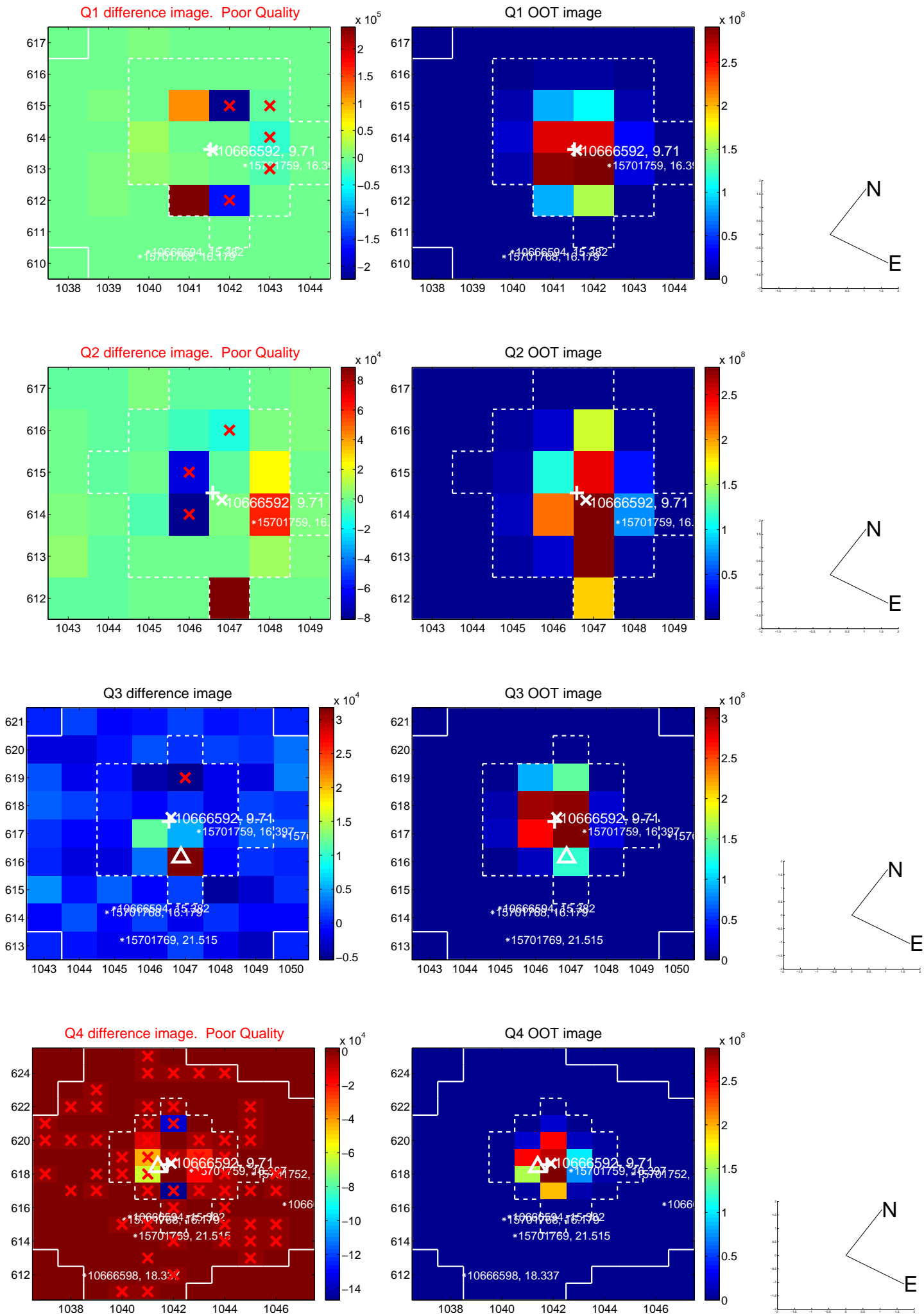


offset from photometric centroids

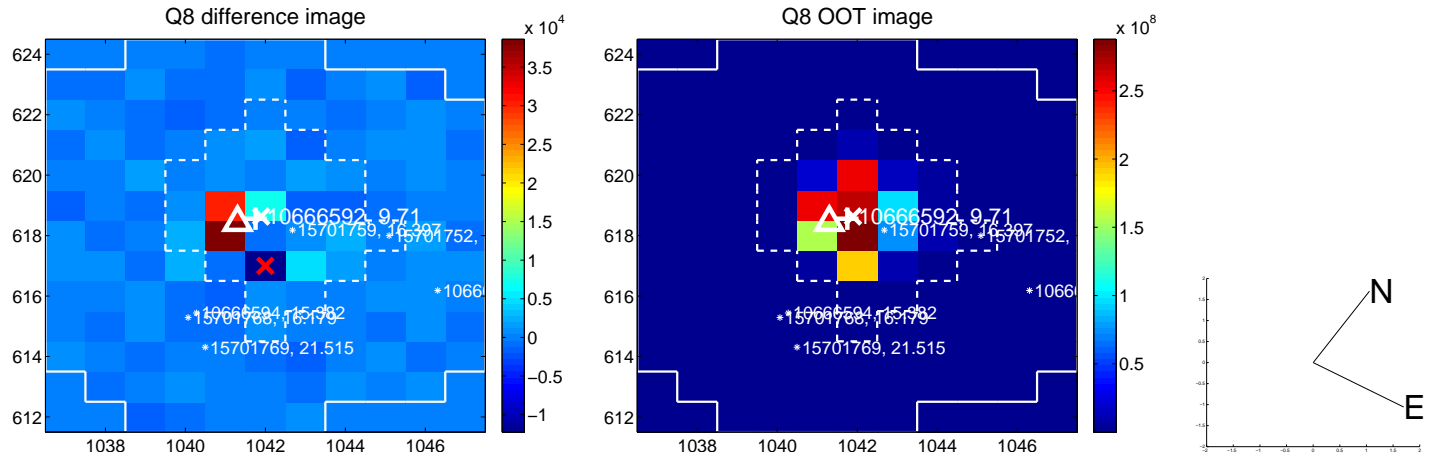
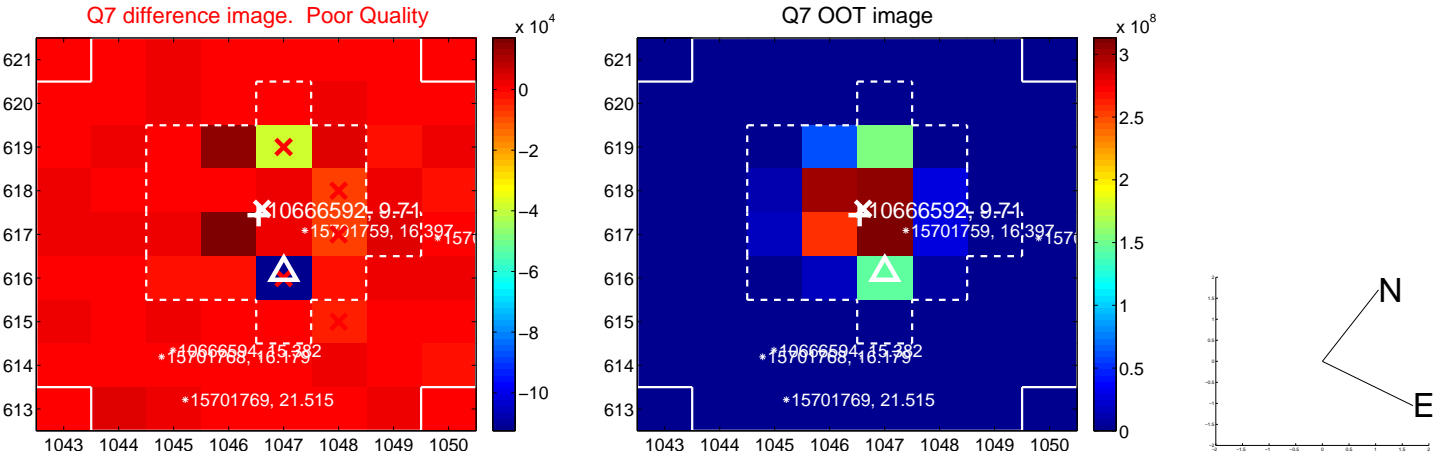
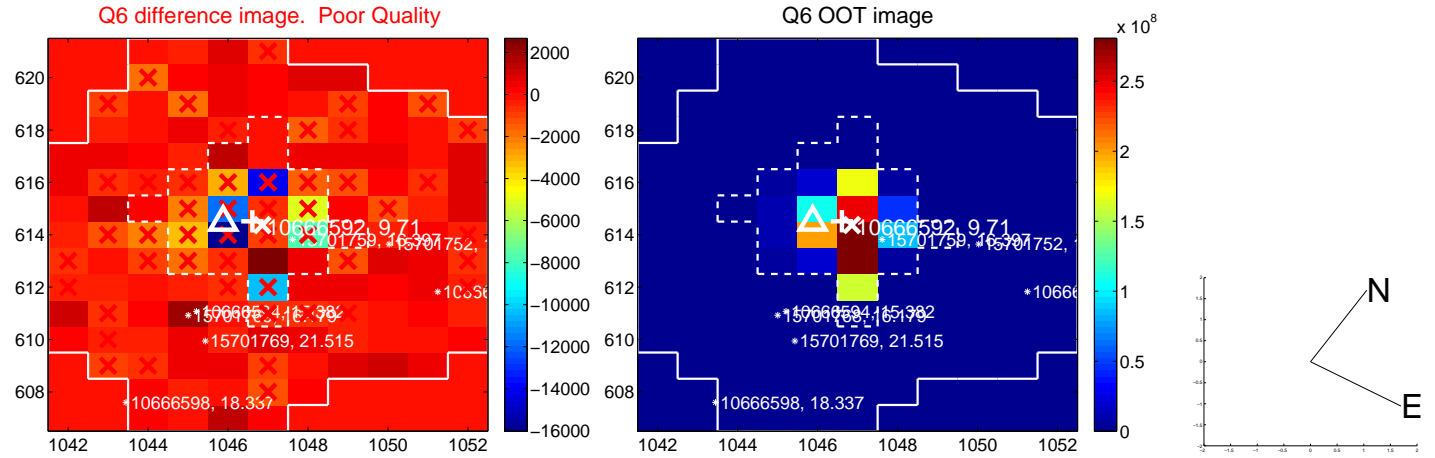
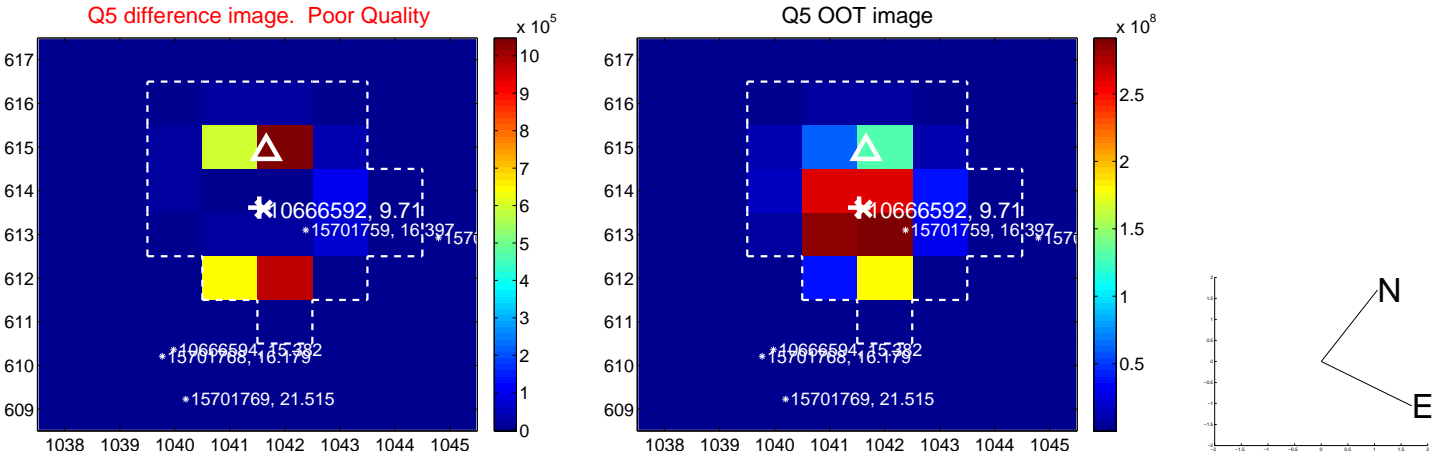


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

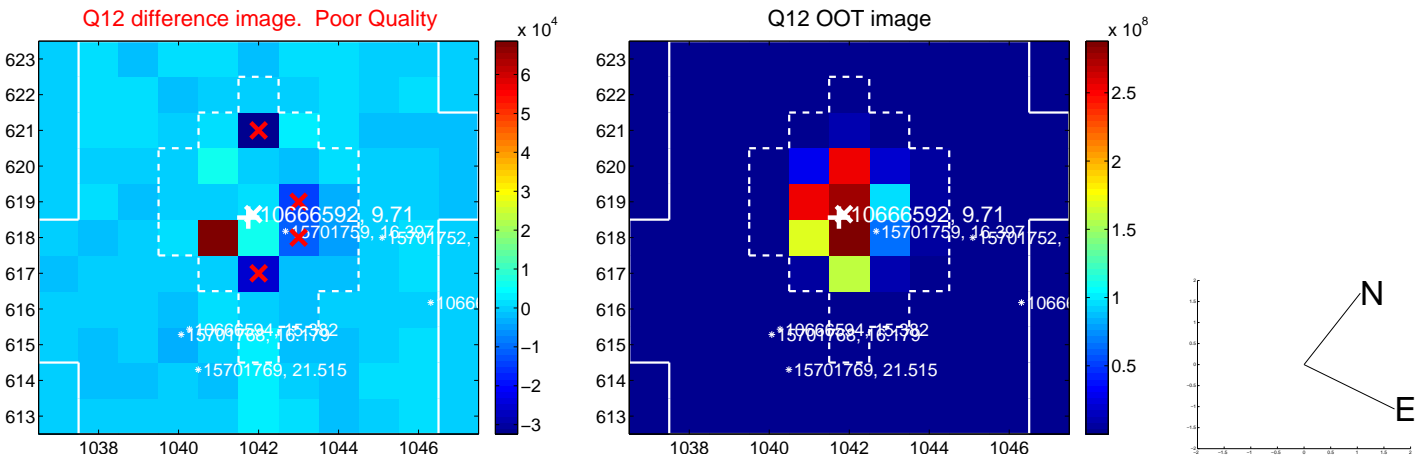
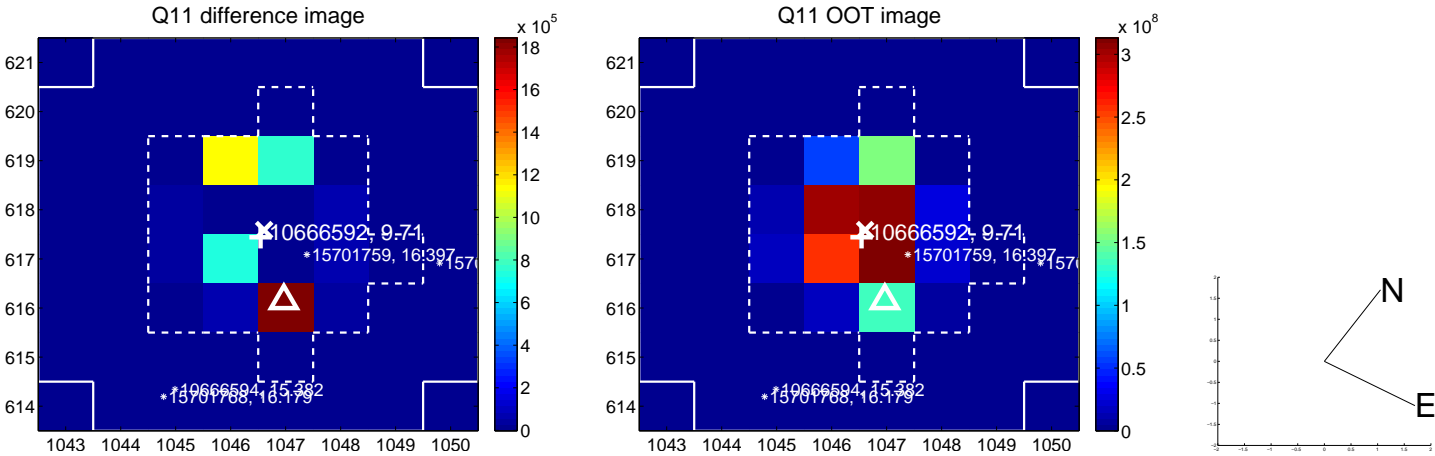
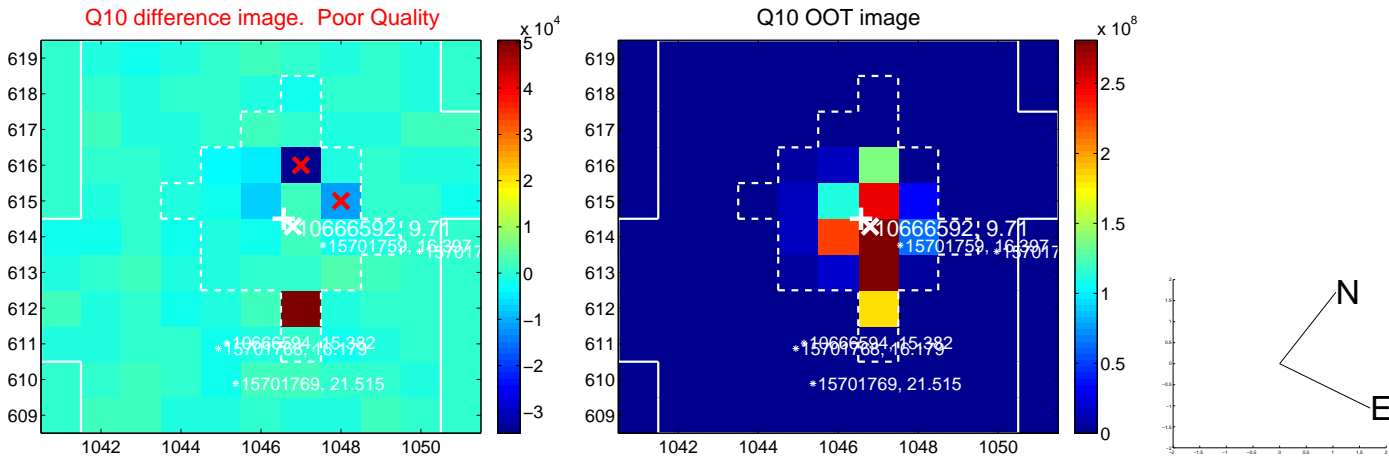
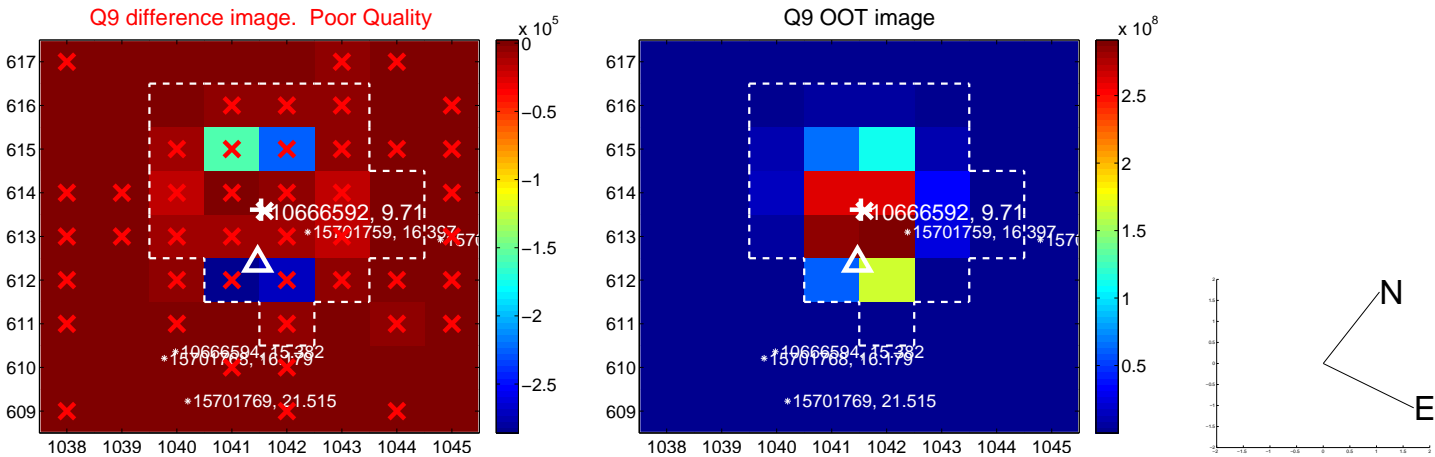
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

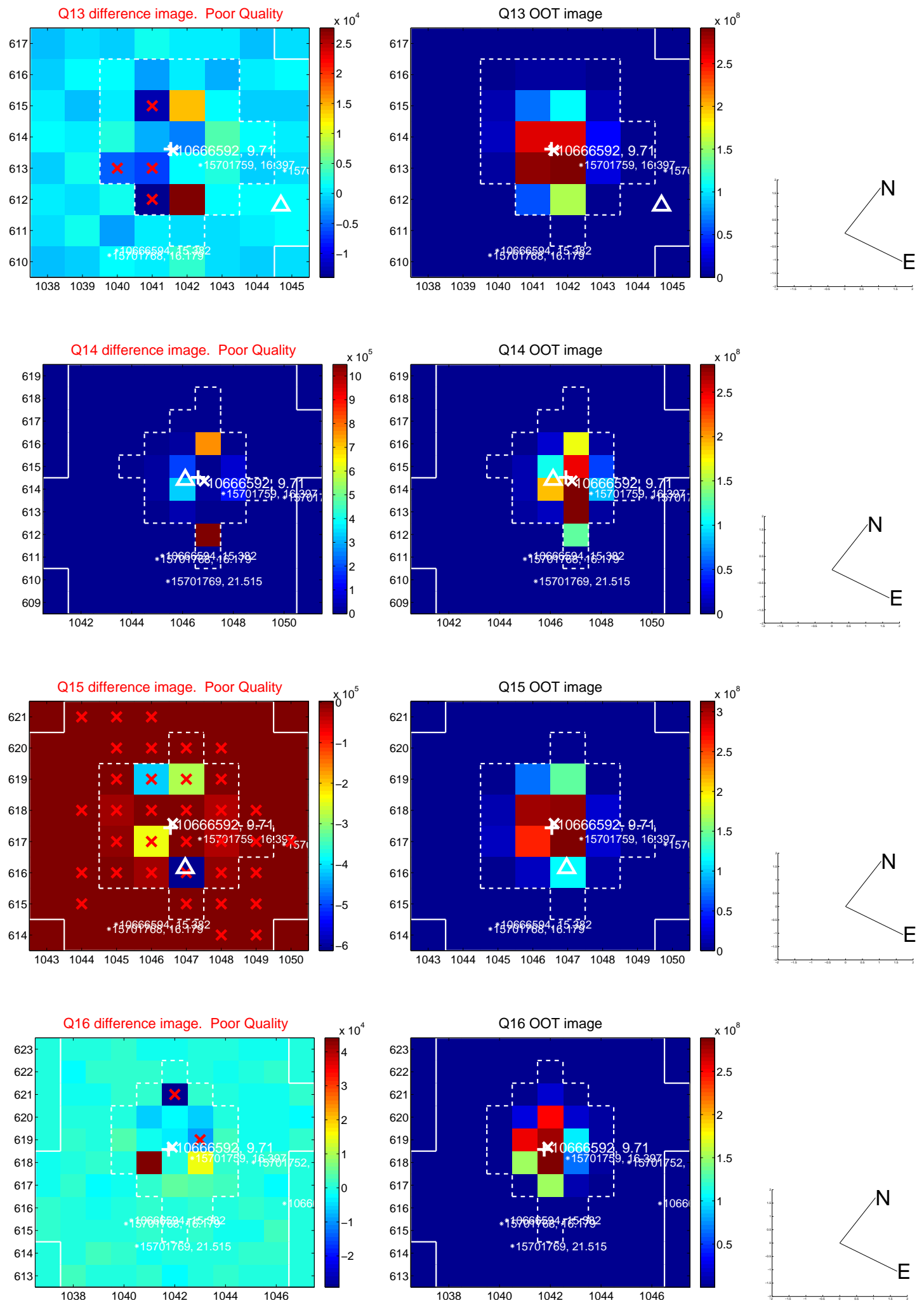


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

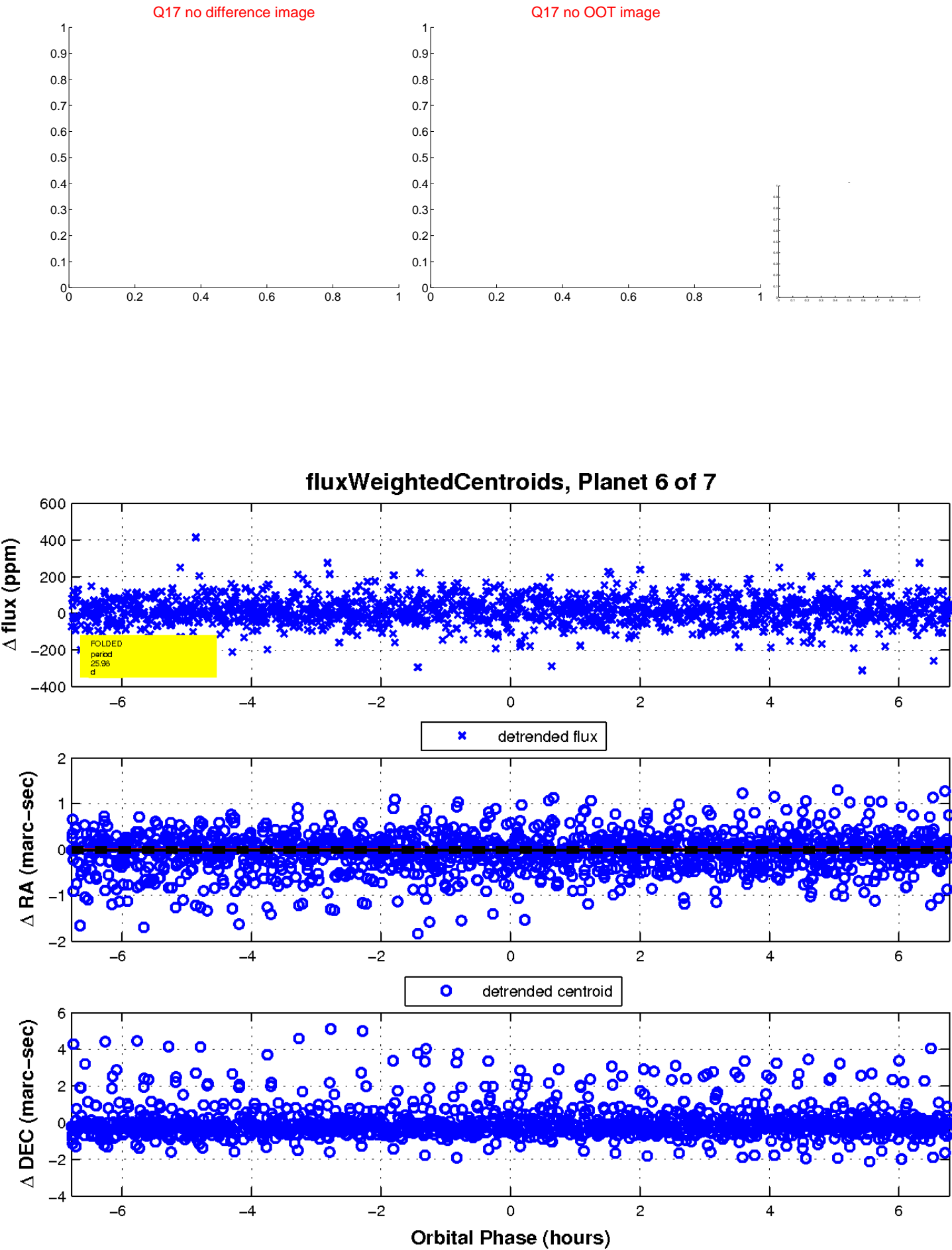




white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

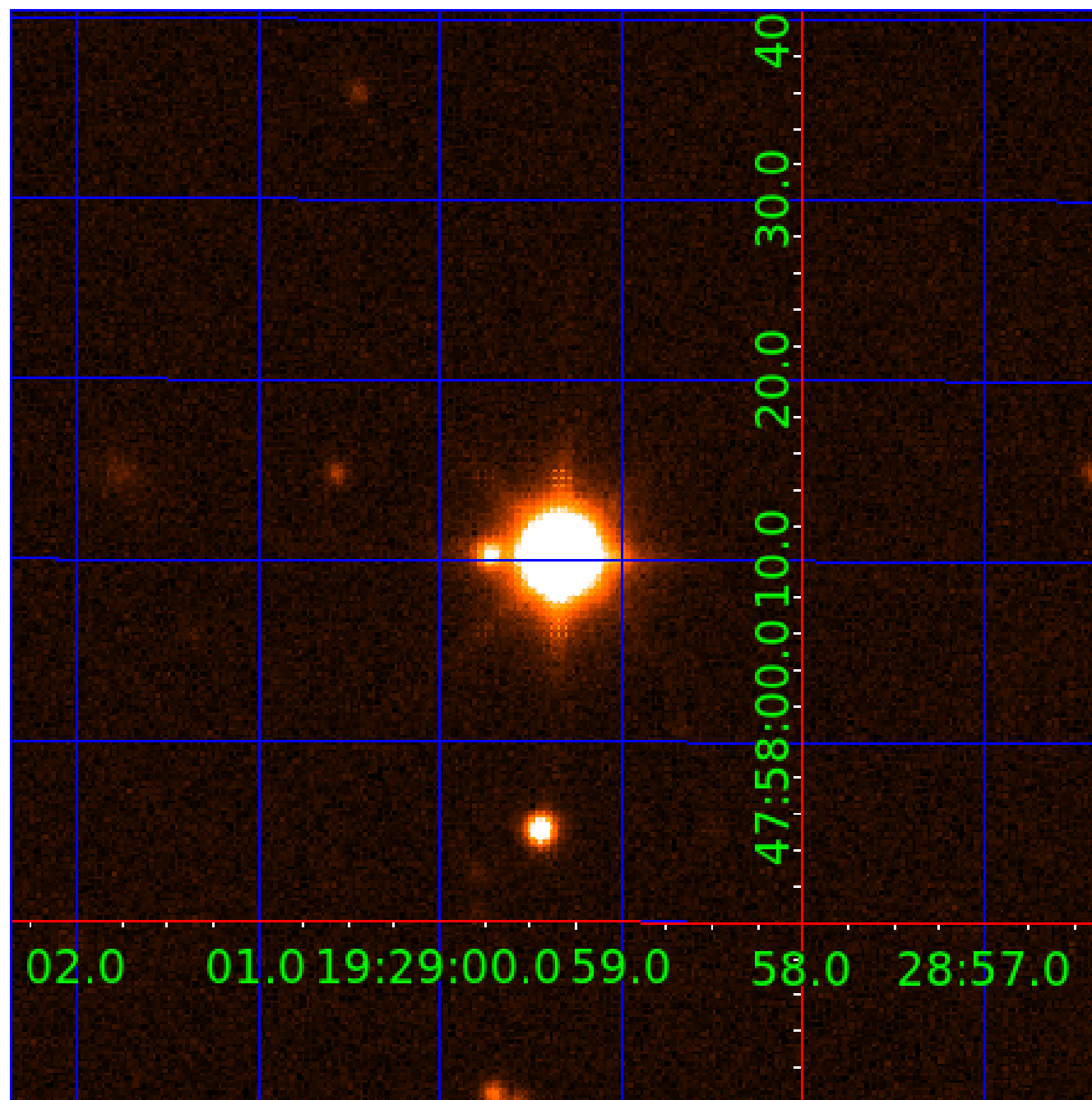


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination



# KIC 010666592

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
010666592-01	OBS	0002.01	2.204731	132.383258	6676.5	4.044	3862.2	3564.7	1.95	6440	16.78	4165.02
010666592-02	OBS	No	2.204730	133.485816	62.5	3.919	39.7	40.7	1.95	6440	1.81	4165.02
010666592-03	OBS	No	2.205225	131.978785	20.7	14.659	14.0	12.5	1.95	6440	0.90	4163.77
010666592-04	OBS	No	35.356054	163.335903	94.5	10.421	26.4	8.6	1.95	6440	1.90	102.99
010666592-05	OBS	No	20.490420	137.639645	45.1	12.320	16.1	5.1	1.95	6440	1.32	213.15
010666592-06	OBS	No	25.975692	132.034470	133.1	2.262	11.3	10.1	1.95	6440	2.32	155.36
010666592-07	OBS	No	39.279443	164.669535	93.6	3.000	9.8	-1.0	1.95	6440	1.90	89.51

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010666592-01	OBS	PC	1.00	0	1	0	0	MOD_SEC_DV—PLANET_OCCULT_DV—MOD_SEC_ALT—PLANET_OCCULT_ALT—HAS_SEC_TCE—CENT_SATURATED
010666592-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_SATURATED
010666592-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—RESIDUAL_TCE—CENT_SATURATED
010666592-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_SATURATED
010666592-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_SATURATED
010666592-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—CENT_SATURATED
010666592-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—NO_FITS—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.

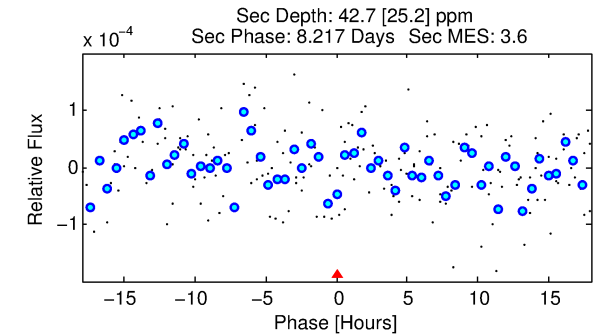
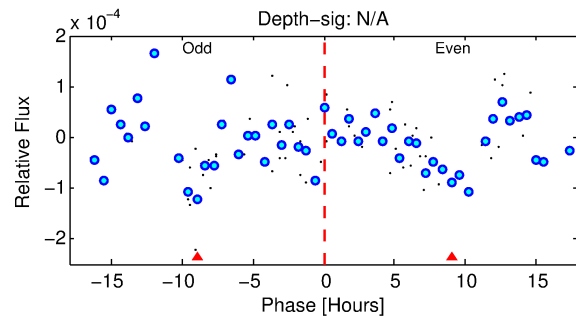
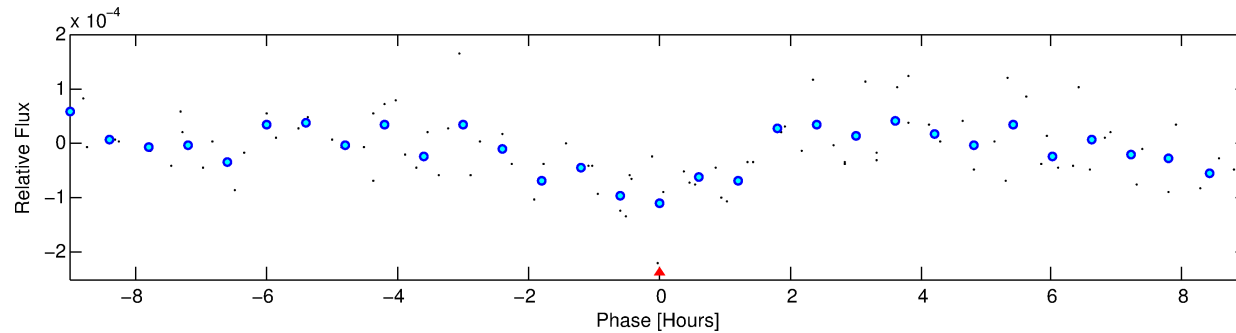
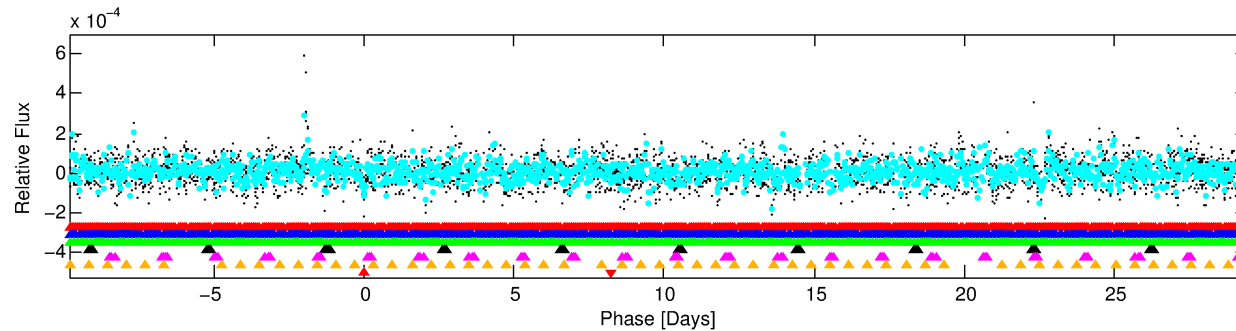
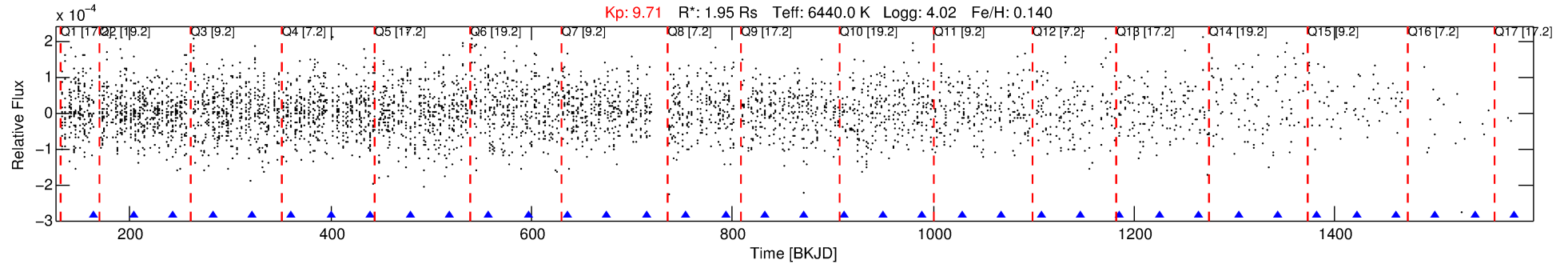
## Ephemeris Match Information For 010666592-07

No Significant Match Found

# DV One-Page Summary

KIC: 10666592 Candidate: 7 of 7 Period: 39.279 d  
 KOI: K00002 Name: Kepler-2 Corr: No Ephemeris Match

Kp: 9.71 R\*: 1.95 Rs Teff: 6440.0 K Logg: 4.02 Fe/H: 0.140



## TPS TCE Results:

Period = 39.27944 d  
 Epoch = 164.6695 BKJD

DV fit results are unavailable

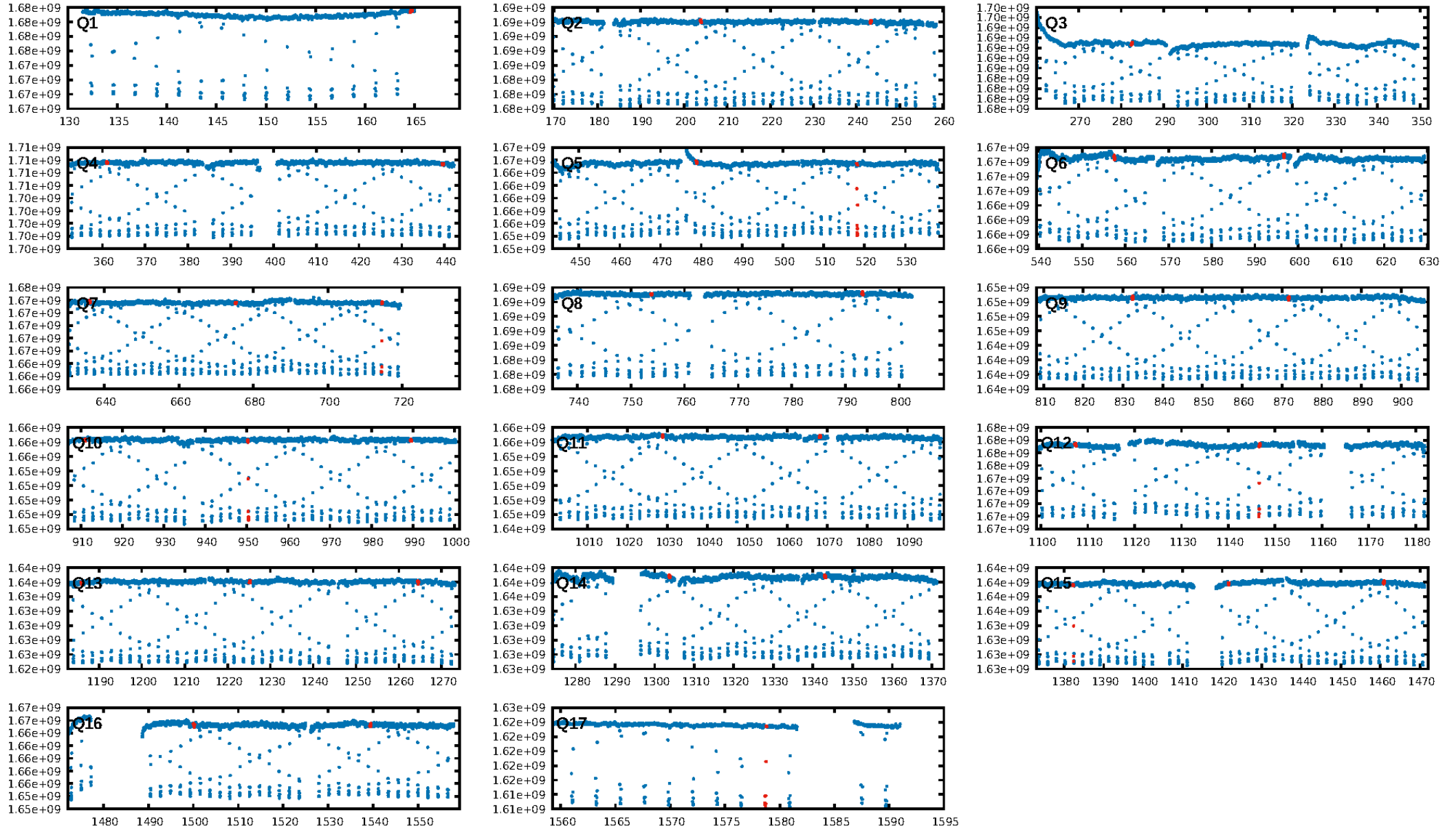
## DV Diagnostic Results:

ShortPeriod-sig: 100.0% [8.68σ]  
 LongPeriod-sig: N/A  
 ModelChiSquare2-sig: N/A  
 ModelChiSquareGof-sig: N/A  
 Bootstrap-pfa: N/A  
 RollingBand-fgt: N/A  
 GhostDiagnostic-chr: N/A  
 Centroid-sig: N/A  
 Centroid-so: N/A  
 OotOffset-rm: N/A  
 KicOffset-rm: N/A  
 OotOffset-st: 0/0/0/0 [0]  
 KicOffset-st: 0/0/0/0 [0]  
 DiffImageQuality-fgm: N/A  
 DiffImageOverlap-fno: N/A

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:54:08 Z

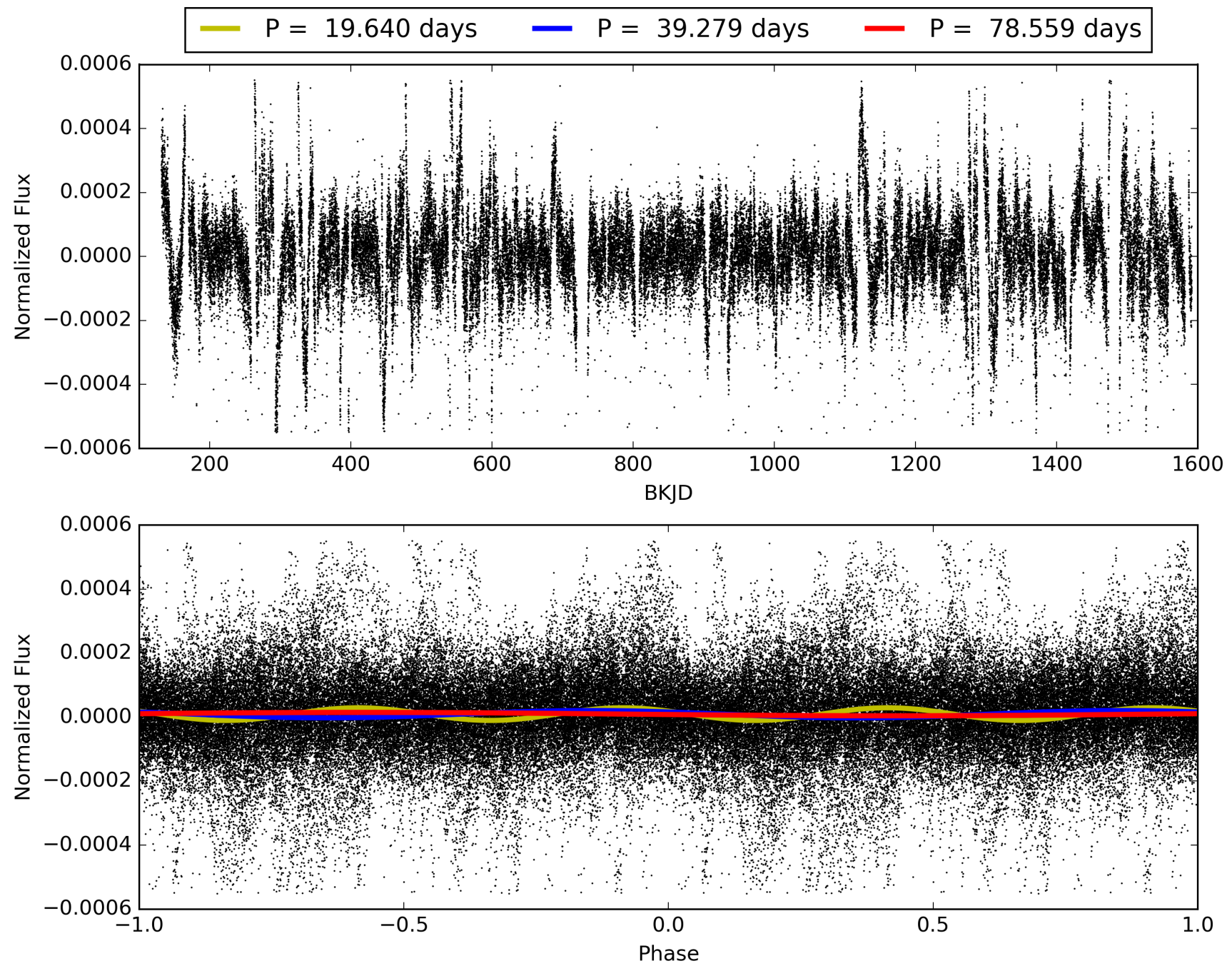
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 010666592-07, PDC Light Curves



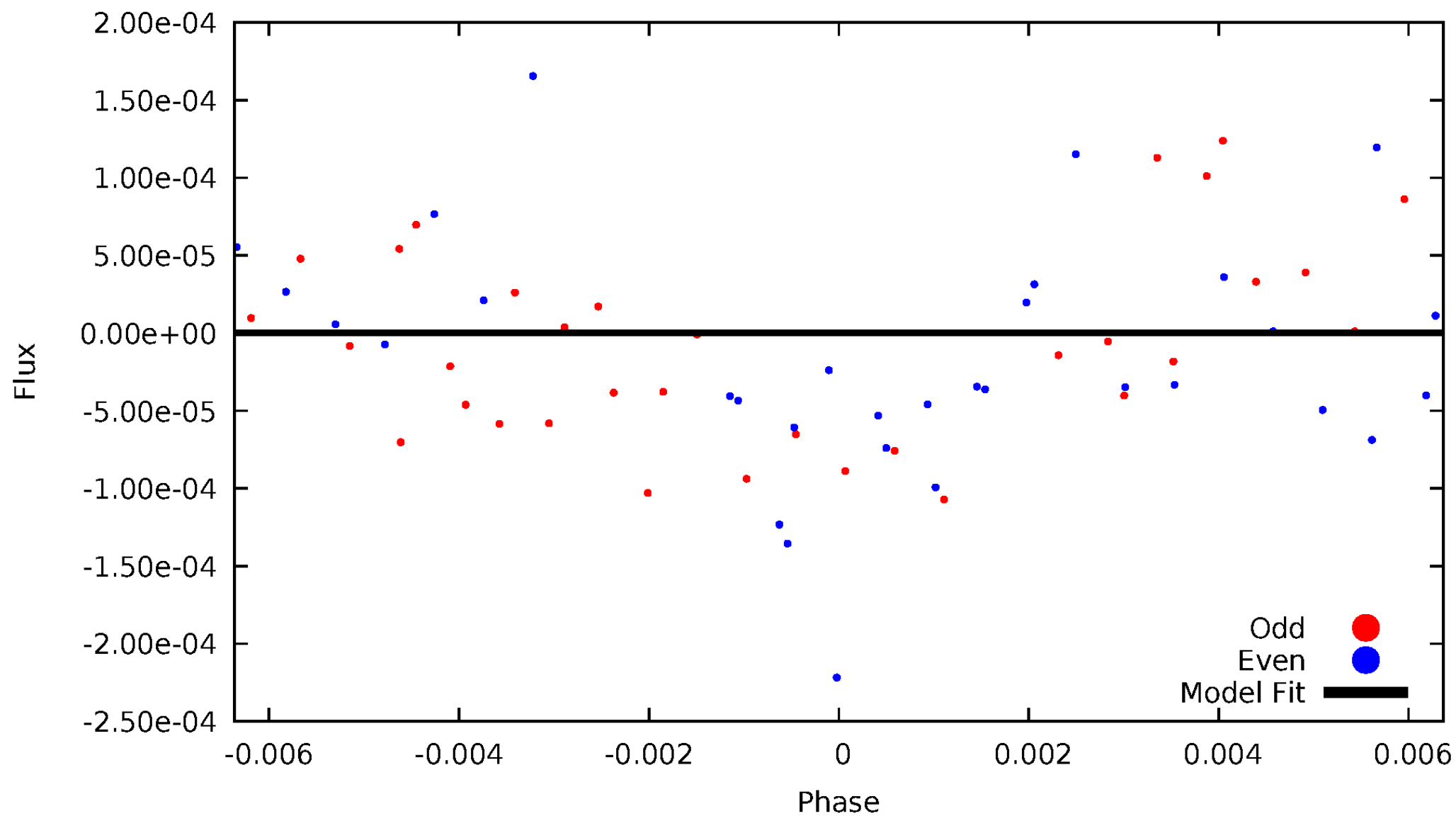


TCE 010666592-07



# DV Odd/Even

TCE 010666592-07



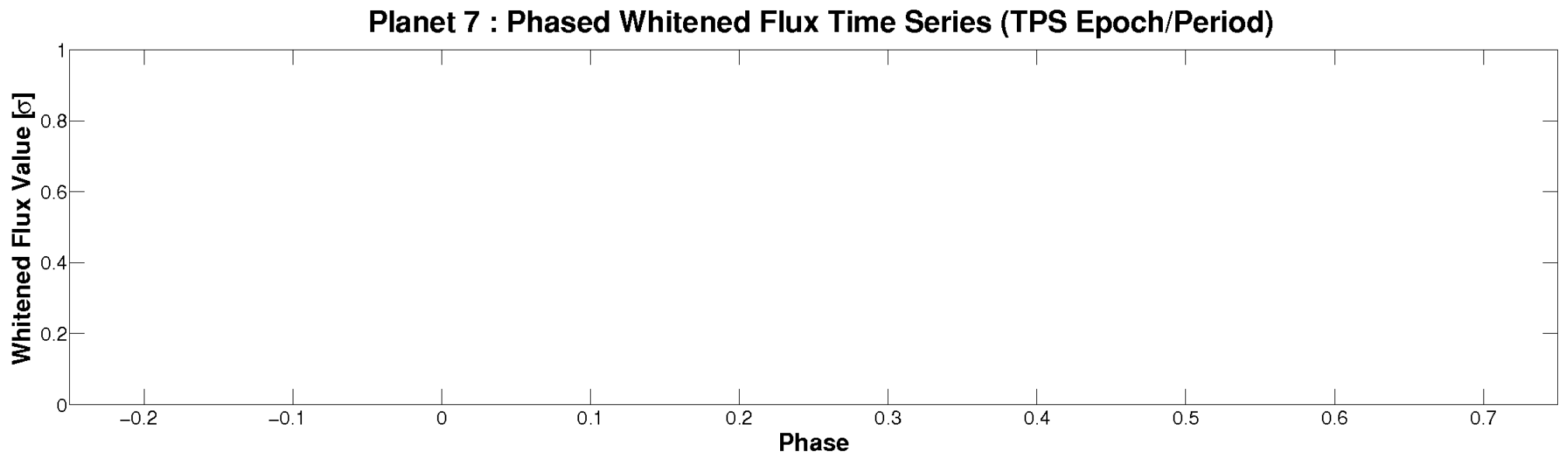
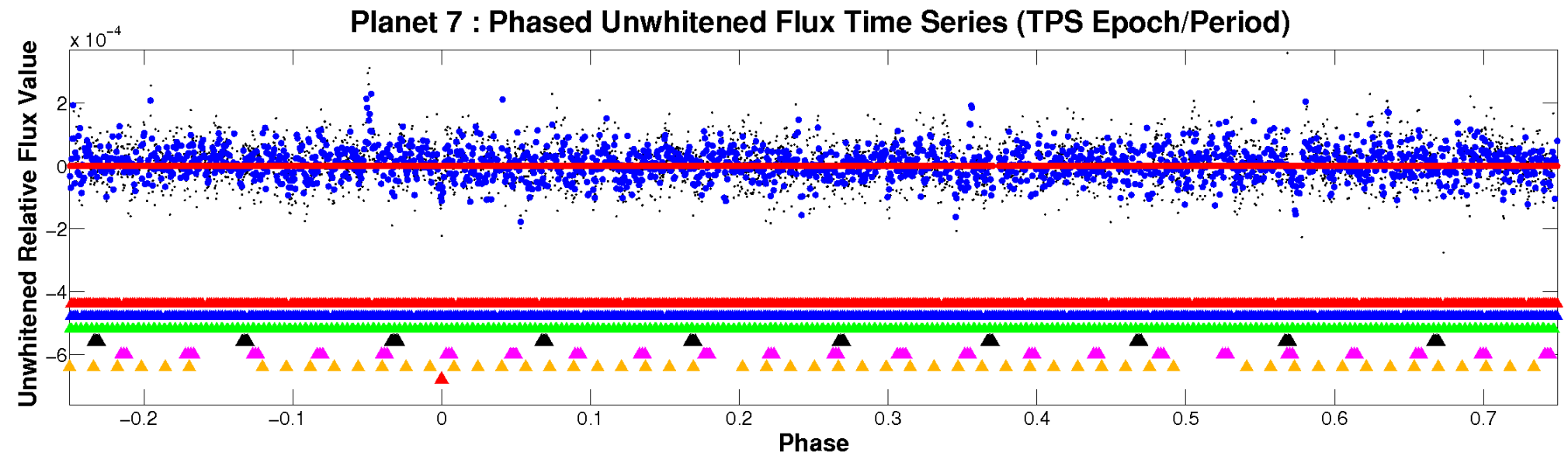




ALT Odd/Even

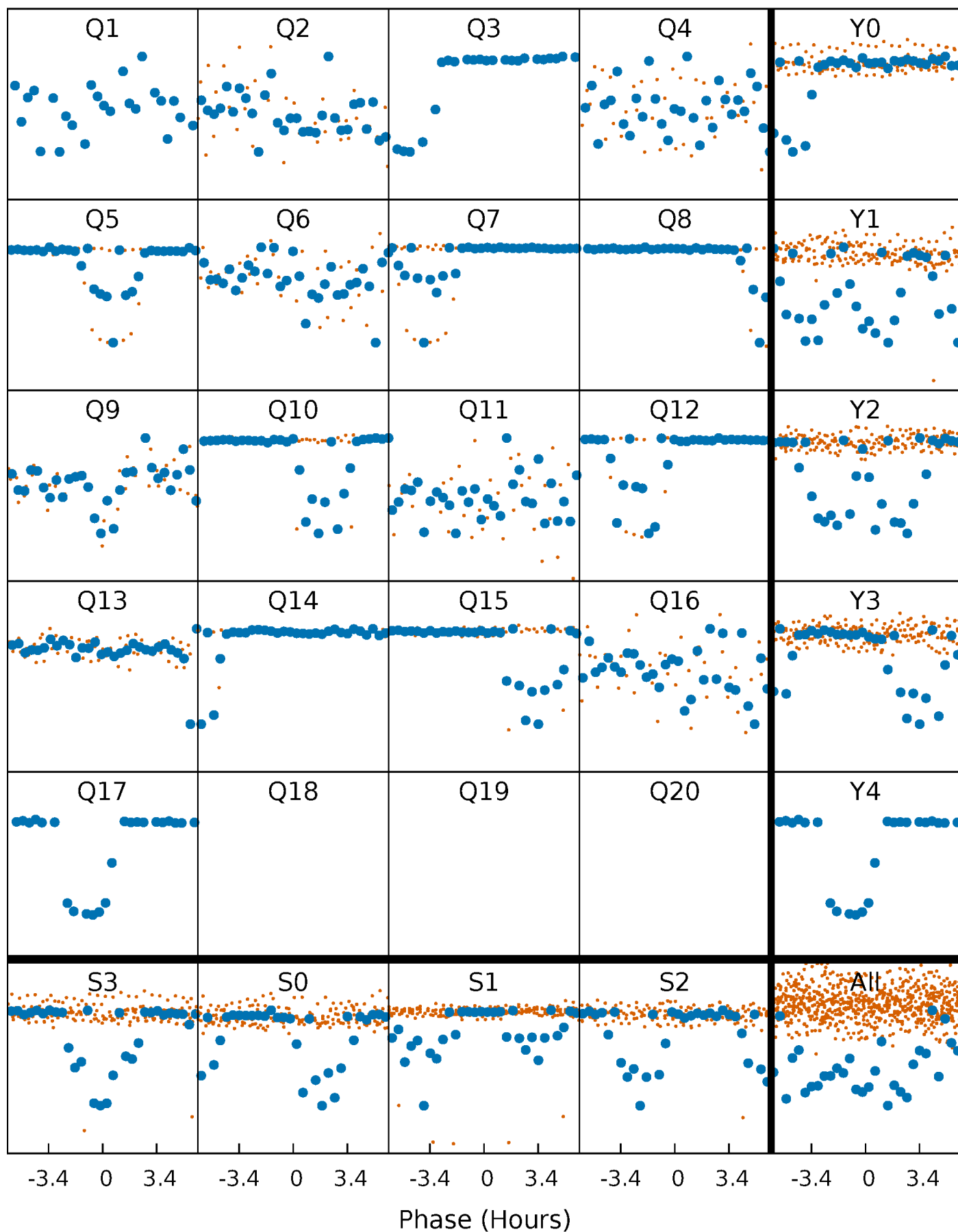
This plot does not exist for this TCE.

# Non-Whitened Vs. Whitened Light Curve



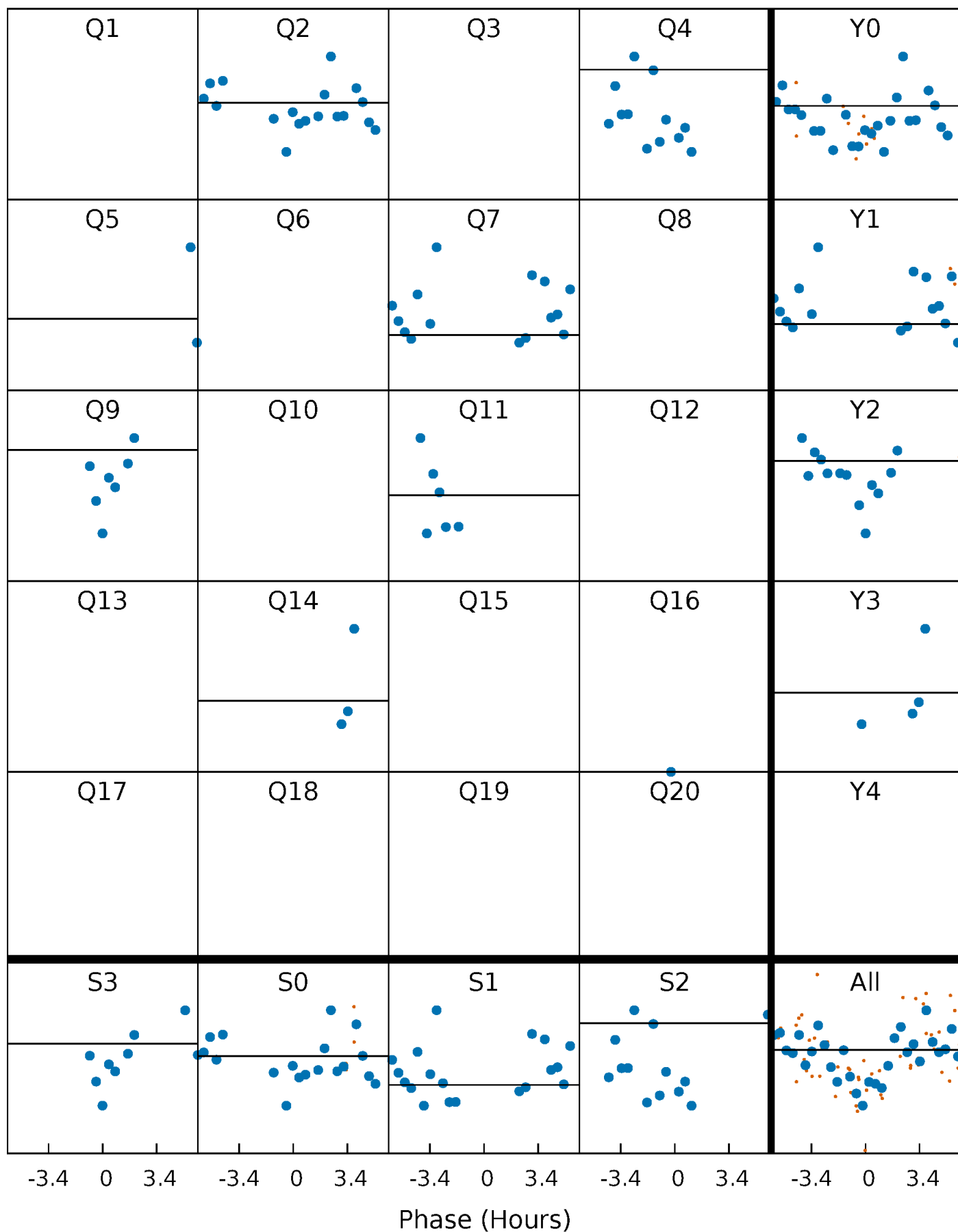
# PDC Quarter-Phased Transit Curves

TCE 010666592-07     $P = 39.279443$  Days     $T_0 = 164.669535$  (BKJD)



# DV Quarter-Phased Transit Curves

TCE 010666592-07     $P = 39.279443$  Days     $T_0 = 164.669535$  (BKJD)

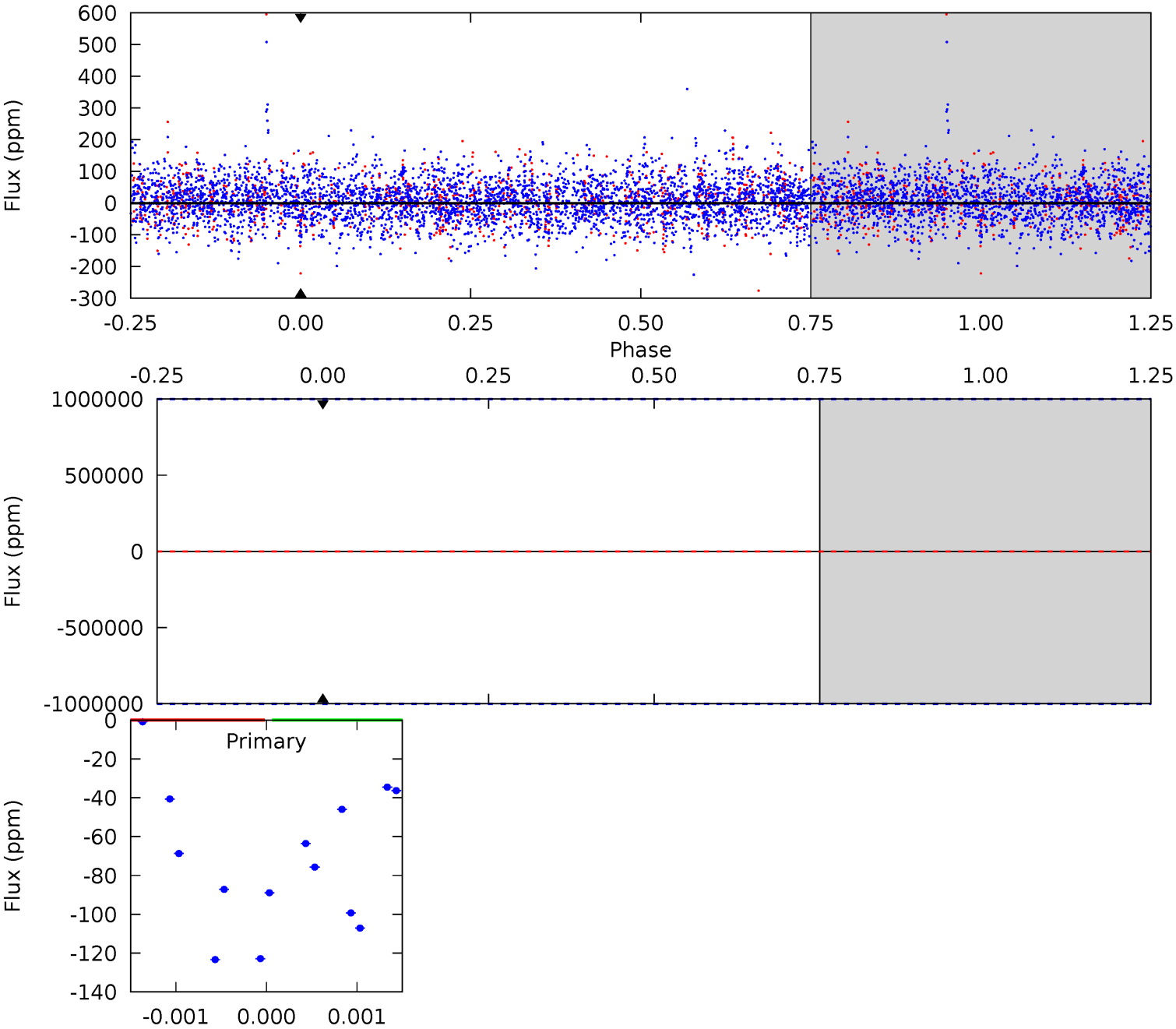


This plot does not exist for this TCE.

# DV Model-Shift Uniqueness Test

010666592-07, P = 39.279443 Days, E = 125.390092 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

This plot does not exist for this TCE.



### Stellar Parameters For KIC 010666592

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6440^{+76}_{-89}$	$4.019^{+0.033}_{-0.027}$	$0.140^{+0.150}_{-0.150}$	$1.952^{+0.099}_{-0.110}$	$1.449^{+0.070}_{-0.091}$	$0.274^{+0.037}_{-0.030}$
	+1%/-1%	+1%/-1%	+107%/-107%	+5%/-6%	+5%/-6%	+14%/-11%
Source	SPE72	AST69	SPE72	DSEP		

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

### Secondary Eclipse Parameters for KIC 010666592-07 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$0 \pm 1000000$	$15.11^{+15.75}_{-10.76}$	$1095^{+18}_{-20}$	$-3154^{+34621}_{-24439}$	$-18.559^{+32316.702}_{-24804.666}$
Alt.	N/A	N/A	N/A	N/A	N/A

$T_{max}$  = 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 010666592-07. **Kepler magnitude: 9.71.** Transit SNR -1.00

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

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

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
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.

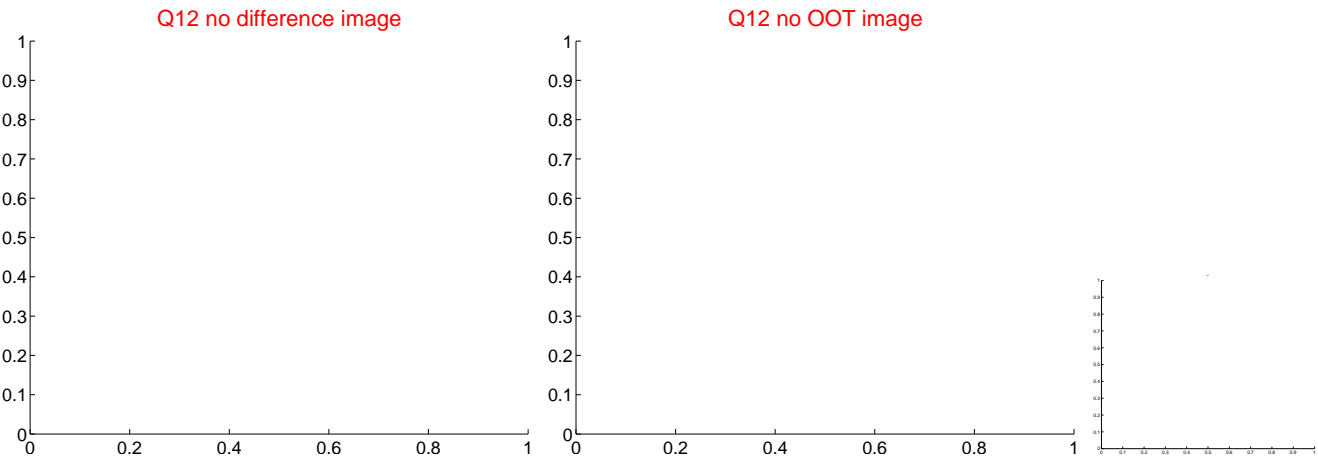
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

