

# KIC 003750261

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
003750261-01	OBS	No	0.760938	131.661177	28.9	1.358	8.6	9.9	1.01	6244	0.65	4975.93

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003750261-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET—HALO_GHOST

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

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

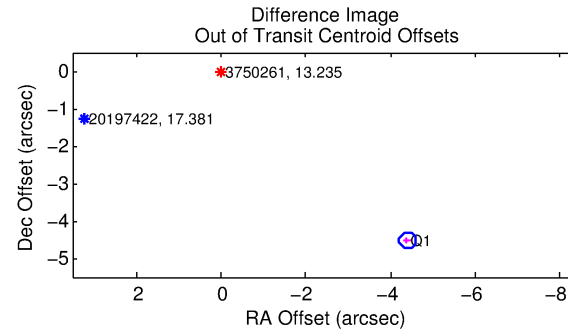
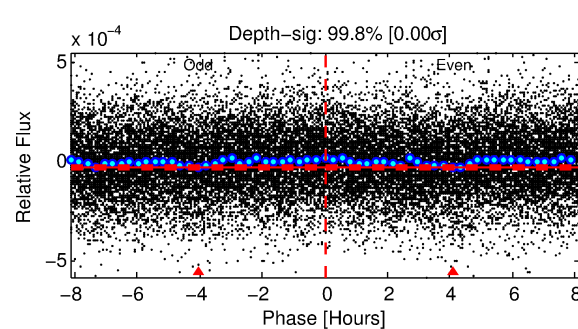
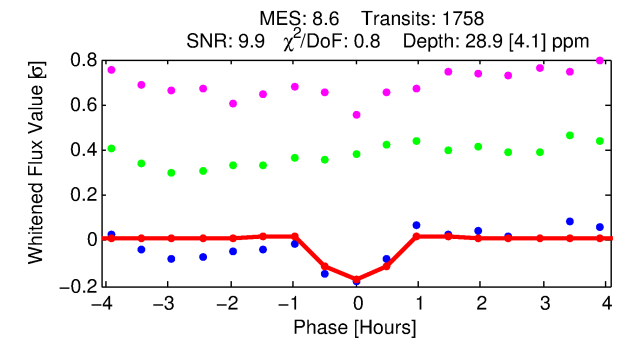
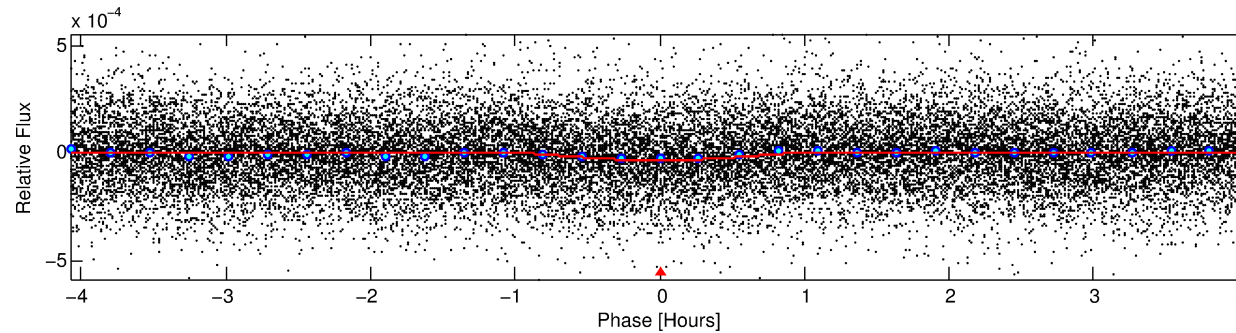
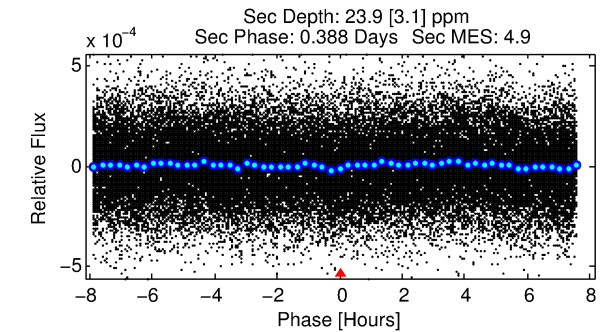
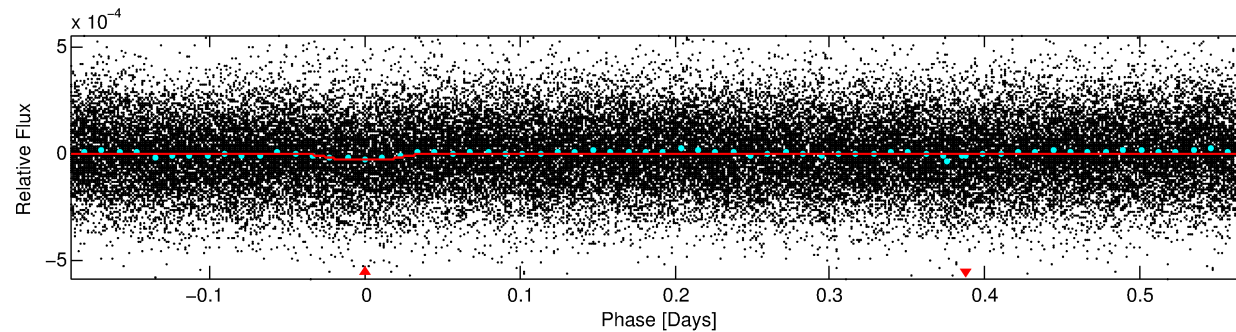
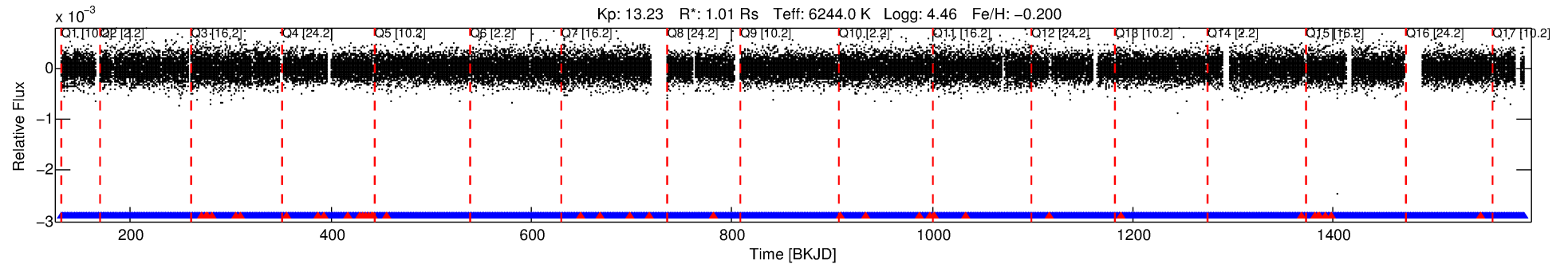
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 003750261-01

No Significant Match Found

# DV One-Page Summary

KIC: 3750261 Candidate: 1 of 1 Period: 0.761 d



## DV Fit Results:

Period = 0.76094 [0.00001] d  
Epoch = 131.6612 [0.0019] BKJD  
Rp/R\* = 0.0059 [0.0019]  
a/R\* = 2.03 [2.75]  
b = 0.91 [0.33]  
Seff = 4975.93 [2152.16]  
Teq = 2142 [232] K  
Rp = 0.65 [0.30] Re  
a = 0.0167 [0.0047] AU  
Ag = 8.74 [6.87] [1.13 $\sigma$ ]  
Teff = 5694 [964] K [3.58 $\sigma$ ]

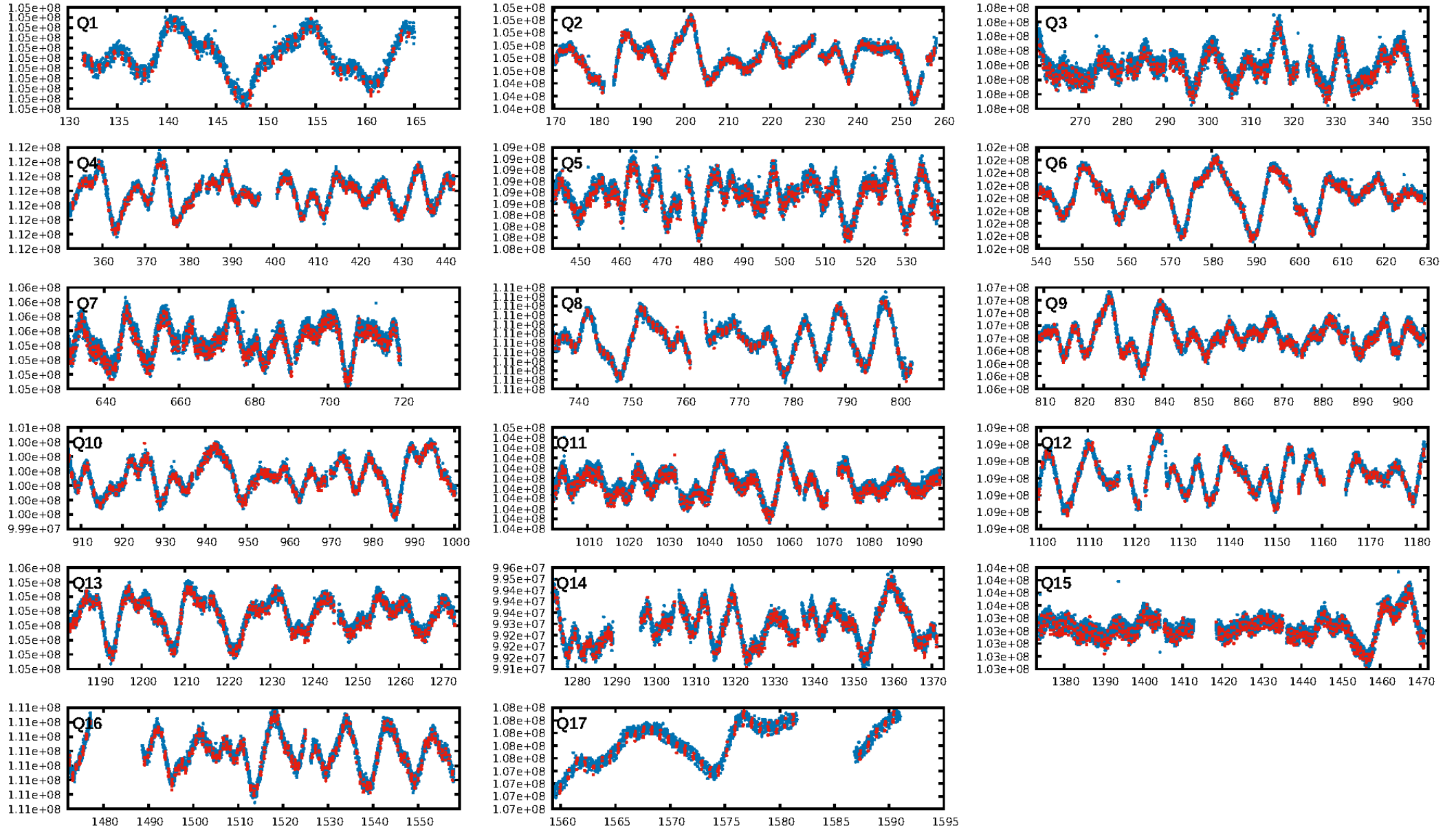
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 6.48e-18  
RollingBand-fgt: 0.98 [1642/1680]  
GhostDiagnostic-chr: -0.1046  
Centroid-sig: 0.0%  
Centroid-so: 9.215 arcsec [6.84 $\sigma$ ]  
OotOffset-rm: 6.304 arcsec [92.33 $\sigma$ ]  
KicOffset-rm: 6.095 arcsec [89.32 $\sigma$ ]  
OotOffset-st: 0/0/0/1 [1]  
KicOffset-st: 0/0/0/1 [1]  
DiffImageQuality-fgm: 1.00 [1/1]  
DiffImageOverlap-fno: 1.00 [17/17]




Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:58:27 Z

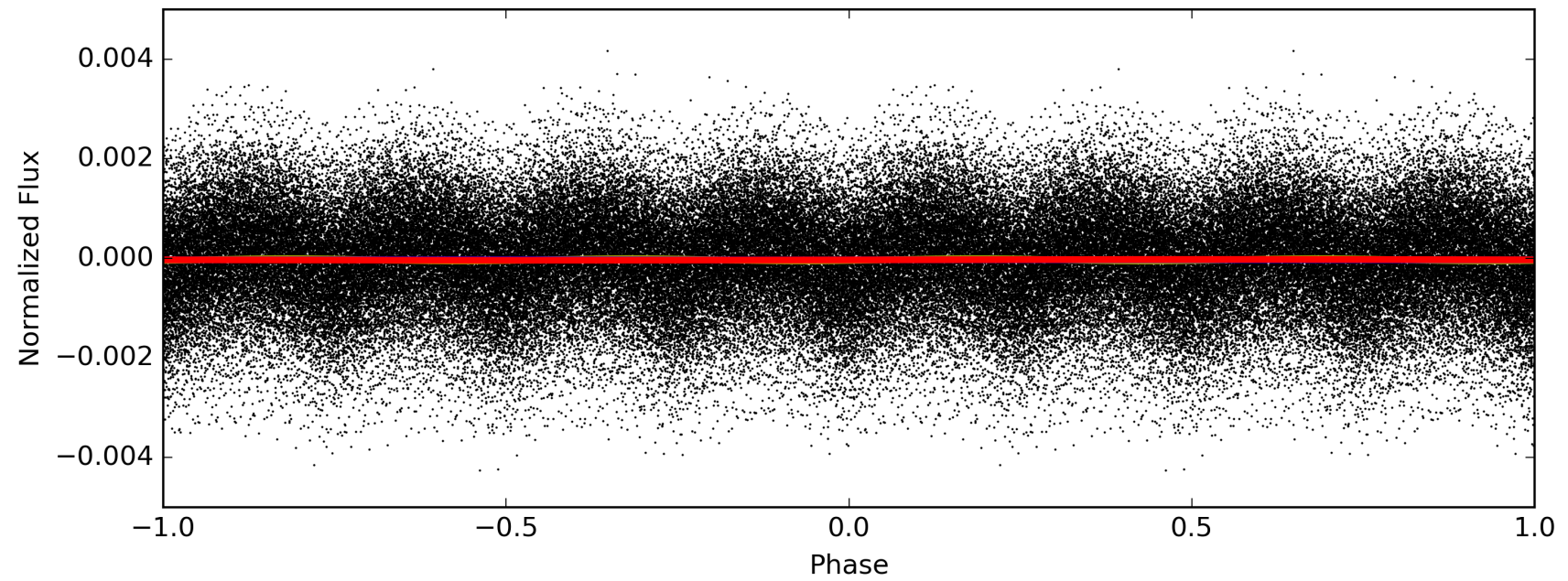
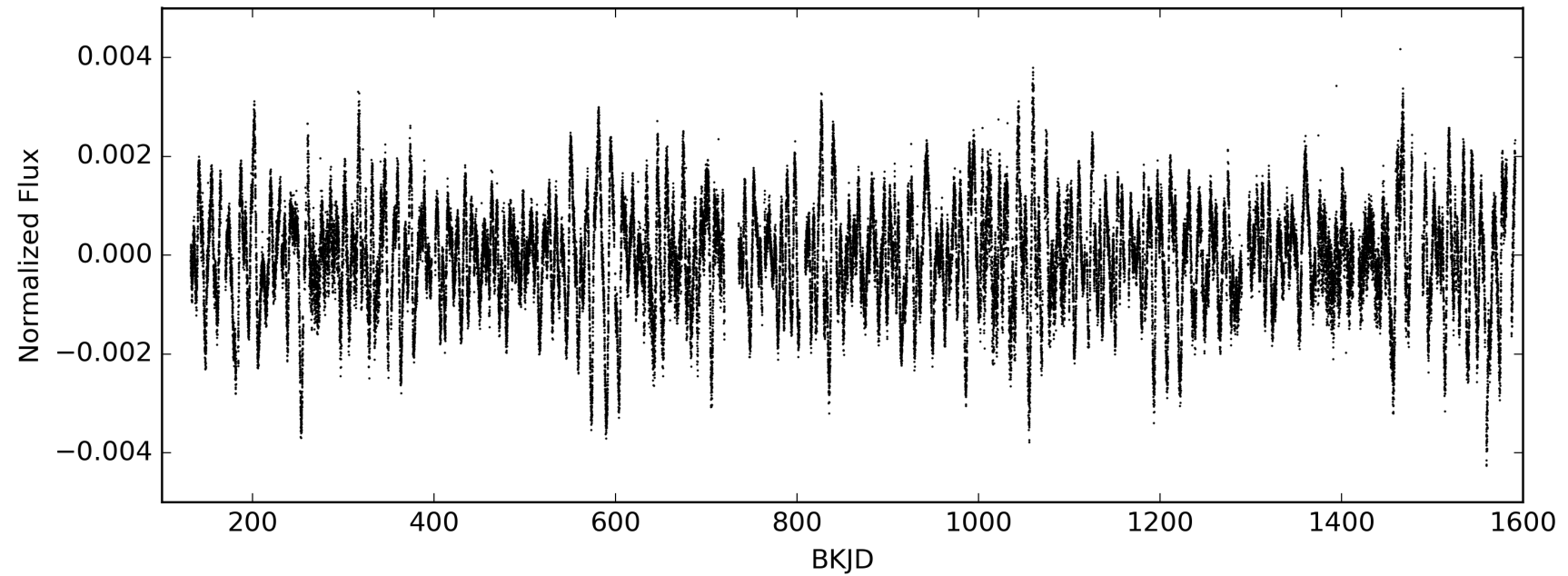
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 003750261-01, PDC Light Curves



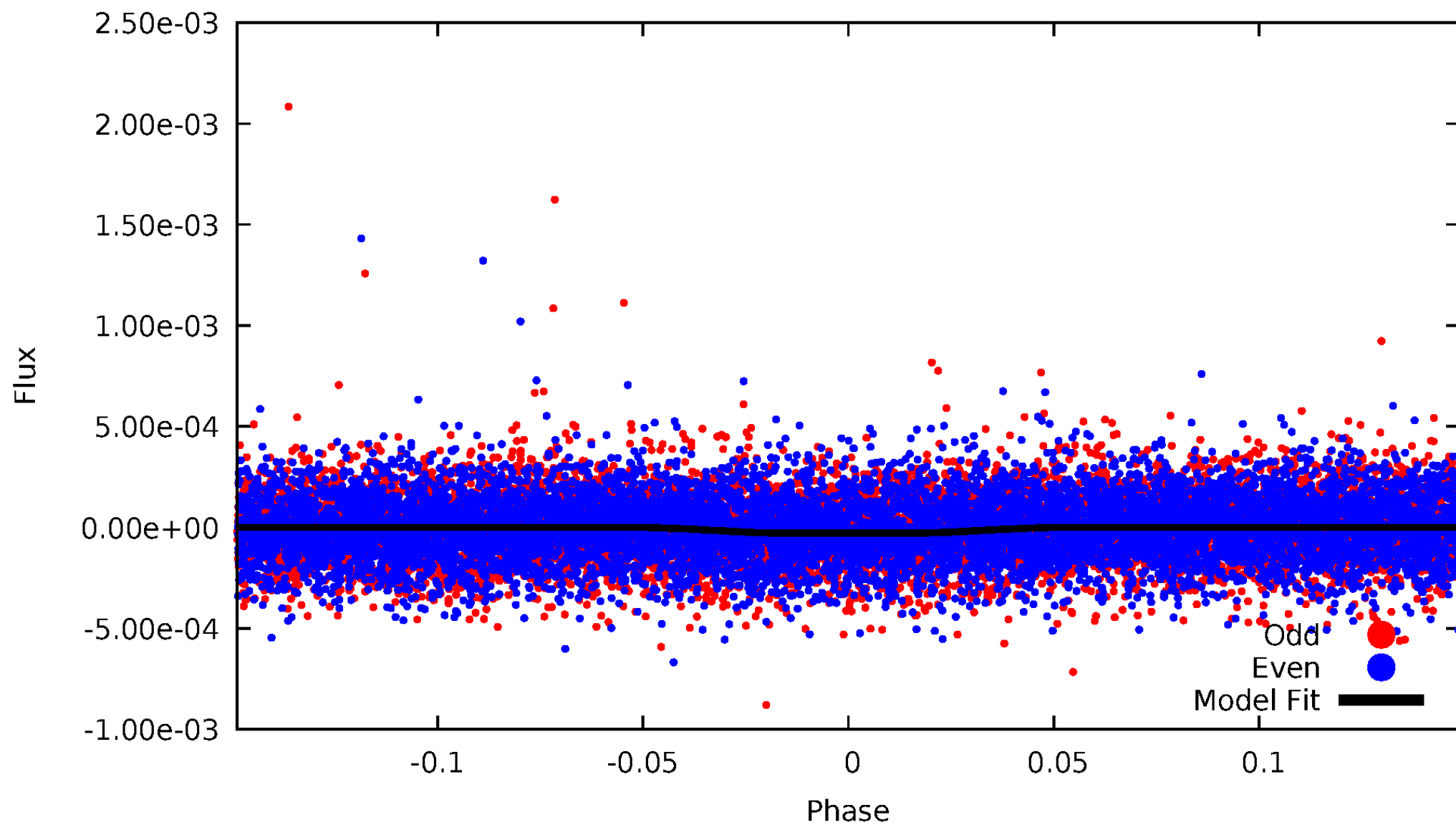
TCE 003750261-01

 P = 0.380 days     P = 0.761 days     P = 1.522 days



# DV Odd/Even

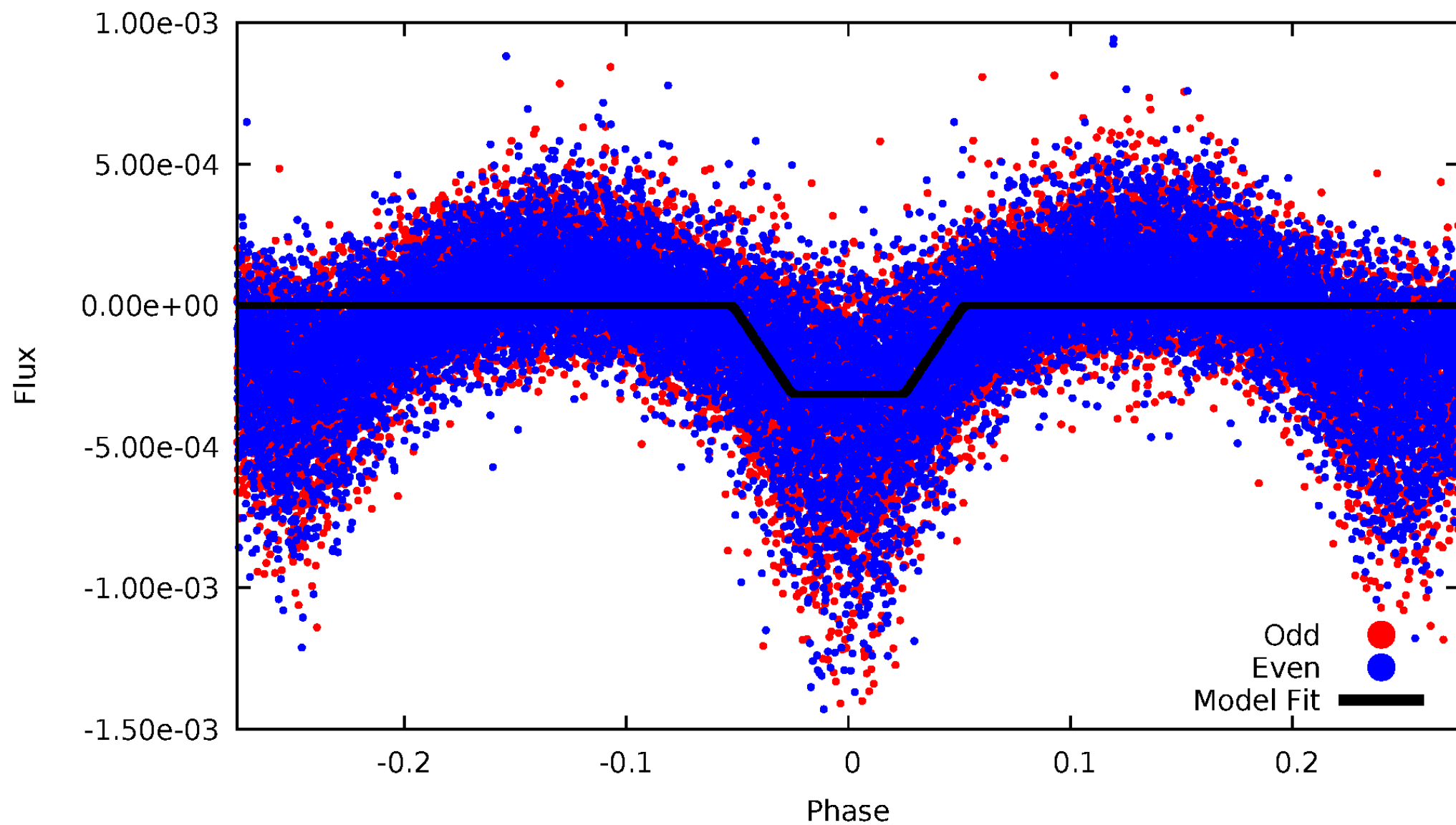
TCE 003750261-01





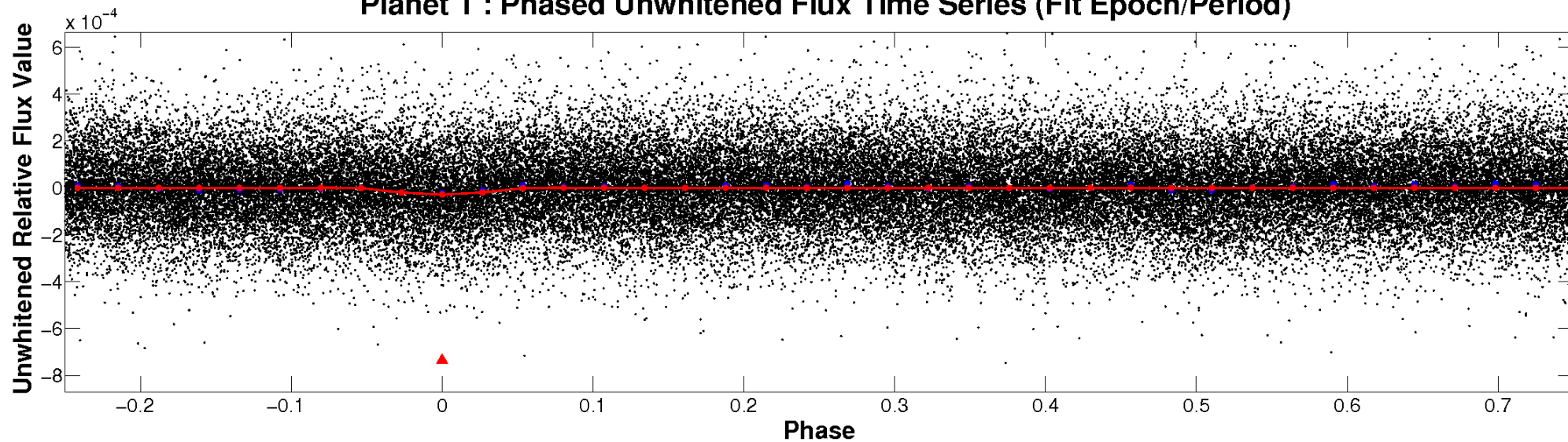
# ALT Odd/Even

TCE 003750261-01

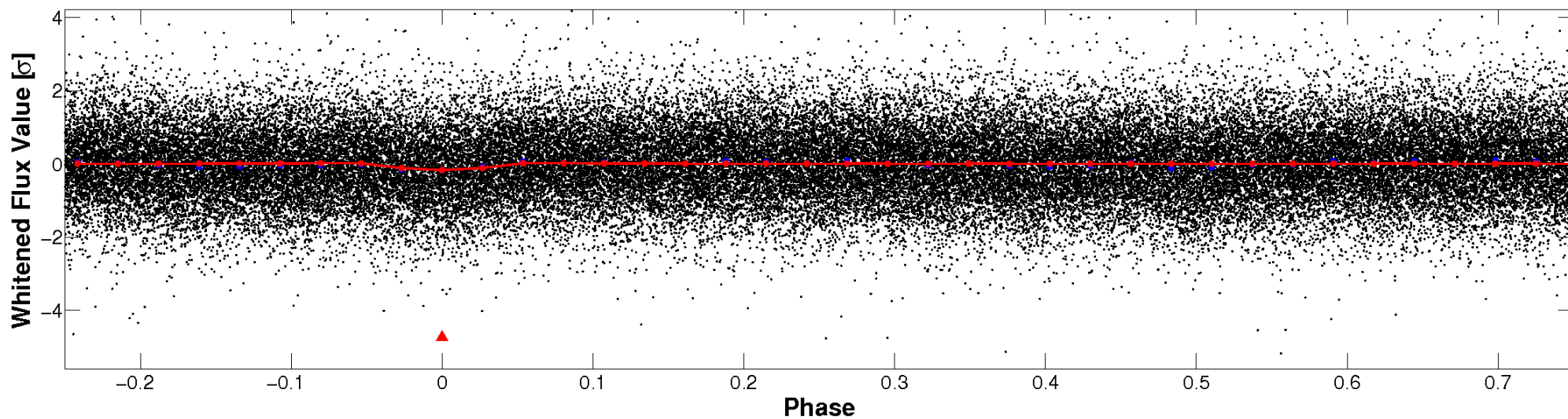


# Non-Whitened Vs. Whitened Light Curve

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

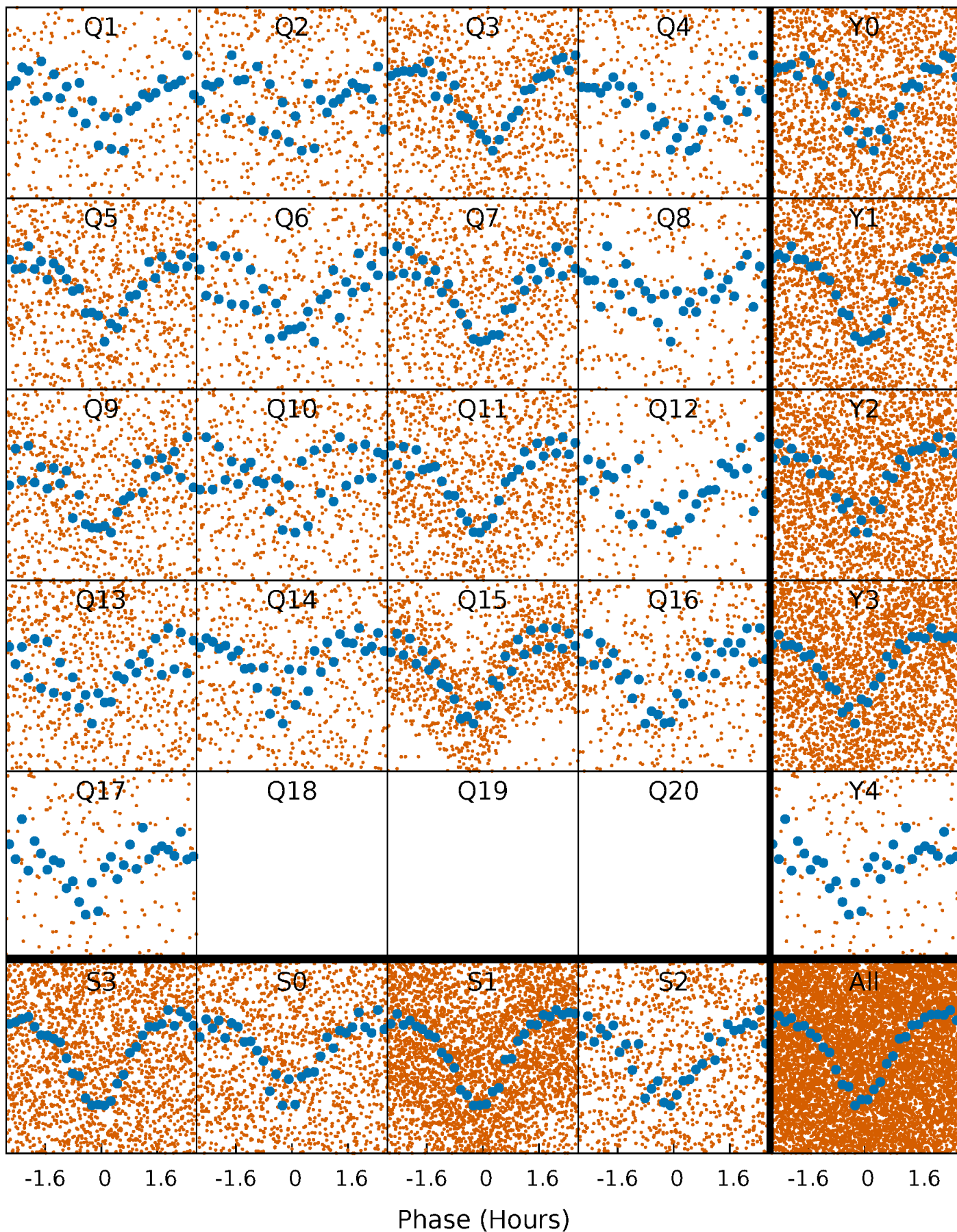


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

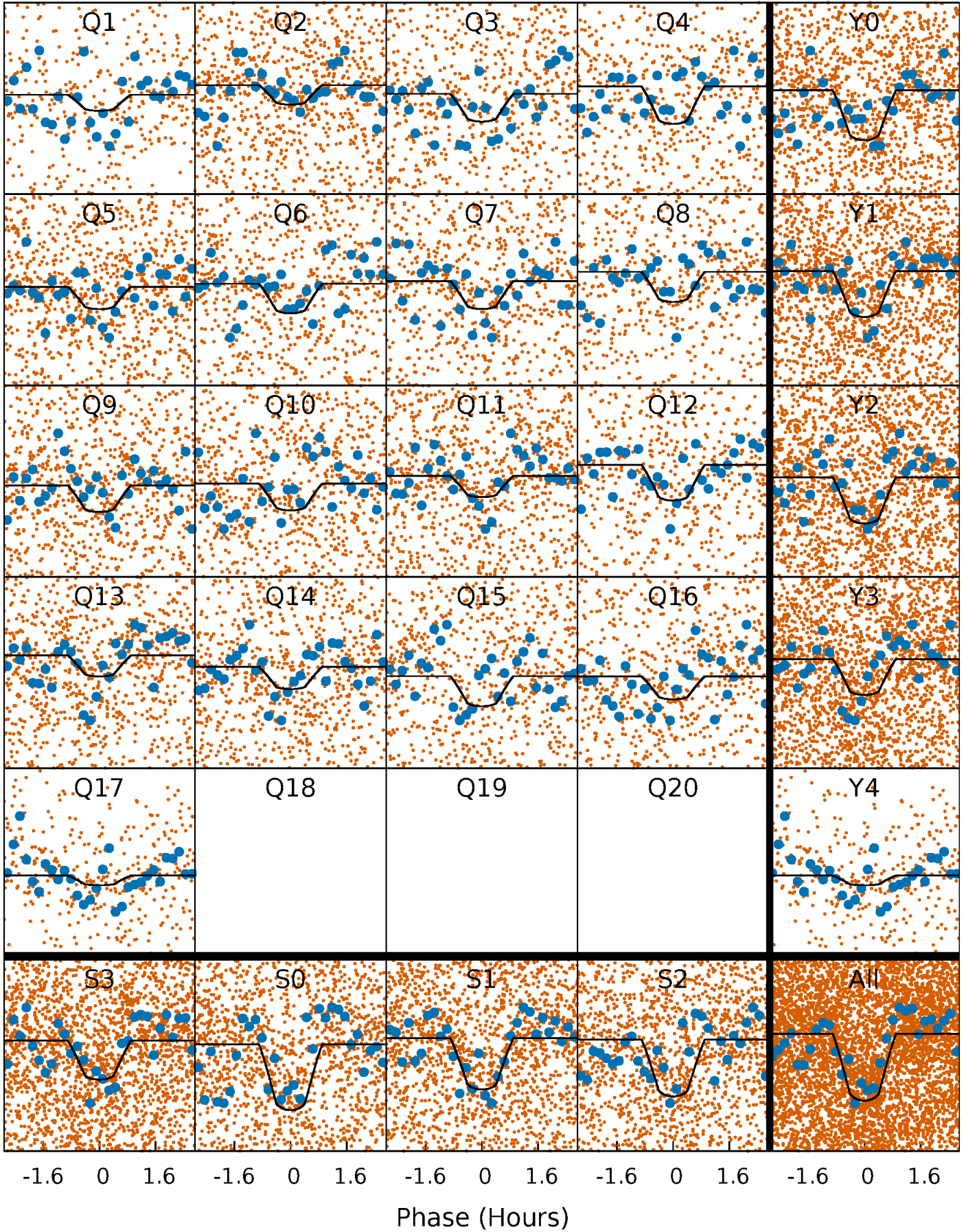
TCE 003750261-01 P= 0.760938 Days  $T_0=131.661177$  (BKJD)





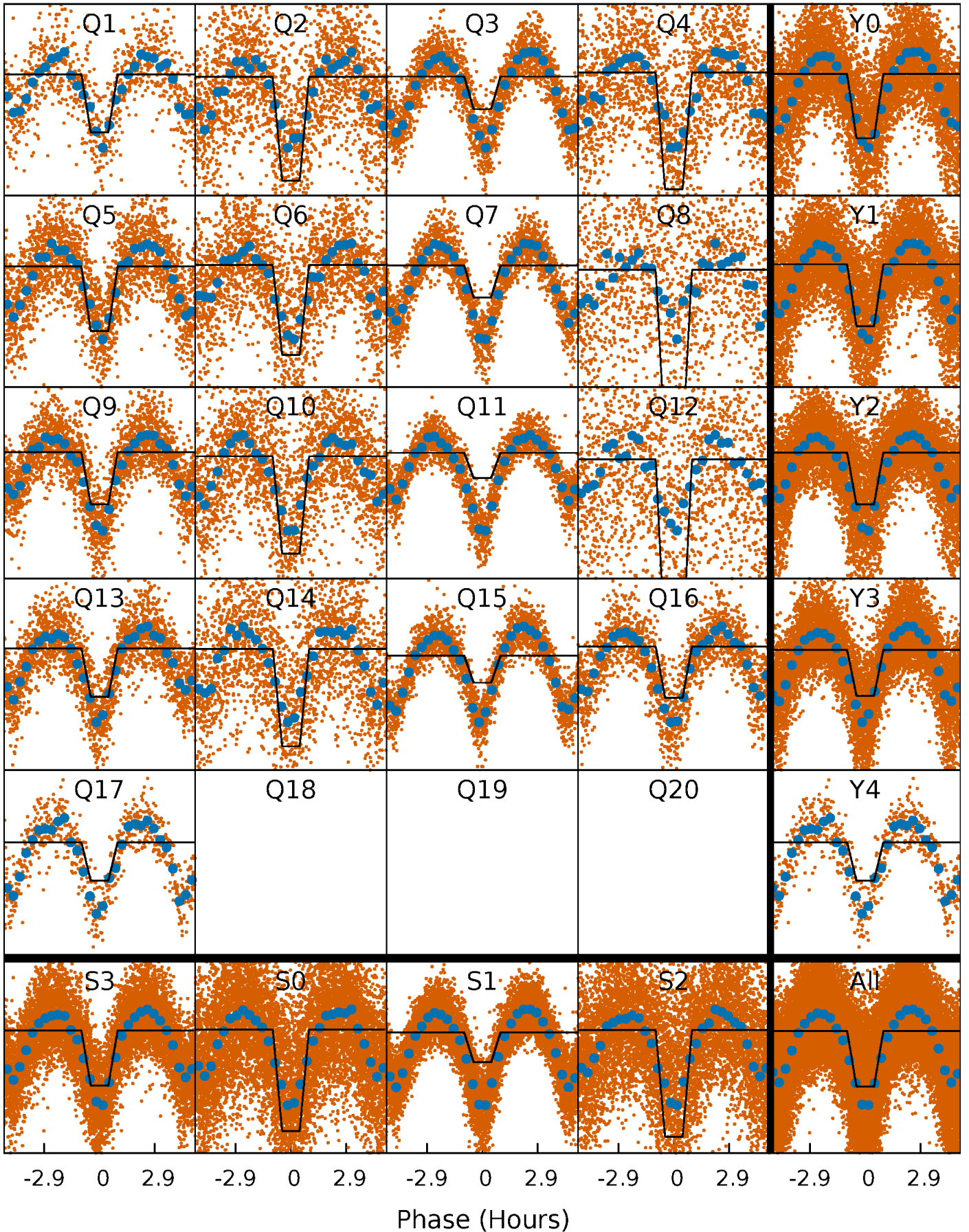
# DV Quarter-Phased Transit Curves

TCE 003750261-01 P= 0.760938 Days  $T_0=131.661177$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

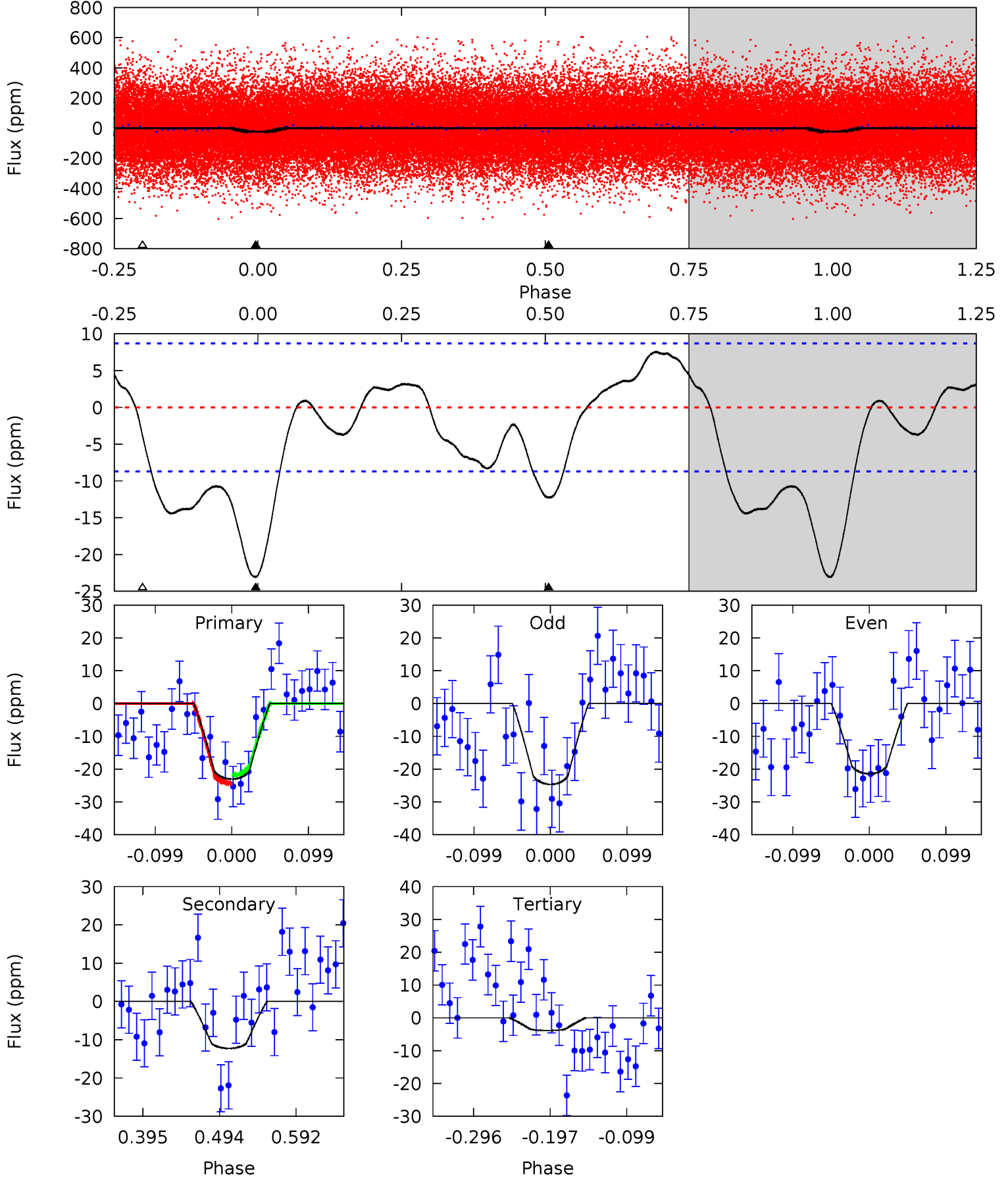
TCE 003750261-01 P= 0.760928 Days  $T_0=131.667621$  (BKJD)



# DV Model-Shift Uniqueness Test

003750261-01, P = 0.760938 Days, E = 130.900239 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
12.1	6.43	2.03	0	4.57	1.65	3.31	10.1	12.1	4.41	6.43	0.85	1.01	0.25	0.66

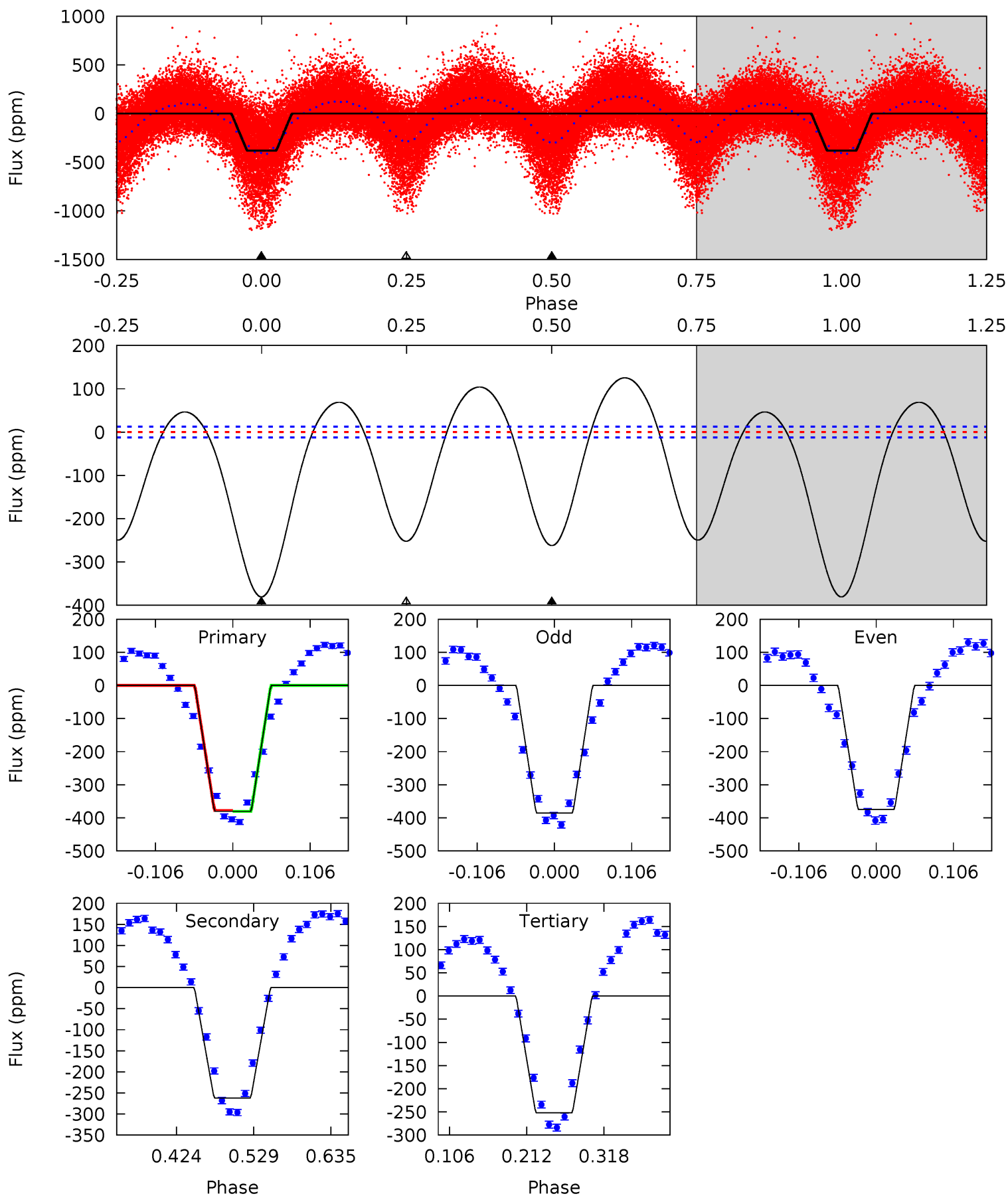




# Alt Model-Shift Uniqueness Test

003750261-01, P = 0.760928 Days, E = 130.906693 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
138.1	95.1	91.5	0	4.55	1.62	44.7	46.7	138.1	3.64	95.1	2.00	1.11	0.25	0.48





### Stellar Parameters For KIC 003750261

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6244^{+169}_{-188}$	$4.460^{+0.054}_{-0.229}$	$-0.200^{+0.250}_{-0.350}$	$1.009^{+0.335}_{-0.112}$	$1.069^{+0.144}_{-0.144}$	$1.466^{+0.434}_{-0.793}$
	+3%/-3%	+1%/-5%	+125%/-175%	+33%/-11%	+13%/-13%	+30%/-54%
Source	PHO1	KIC0	KIC0	DSEP		

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

### Secondary Eclipse Parameters for KIC 003750261-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-12 \pm 2$	$0.68^{+0.24}_{-0.26}$	$3067^{+253}_{-152}$	$4860^{+1180}_{-595}$	$3.994^{+6.094}_{-1.862}$
Alt.	$-262 \pm 3$	$2.04^{+0.43}_{-0.30}$	$3069^{+242}_{-157}$	$5919^{+400}_{-348}$	$9.449^{+3.271}_{-2.860}$

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

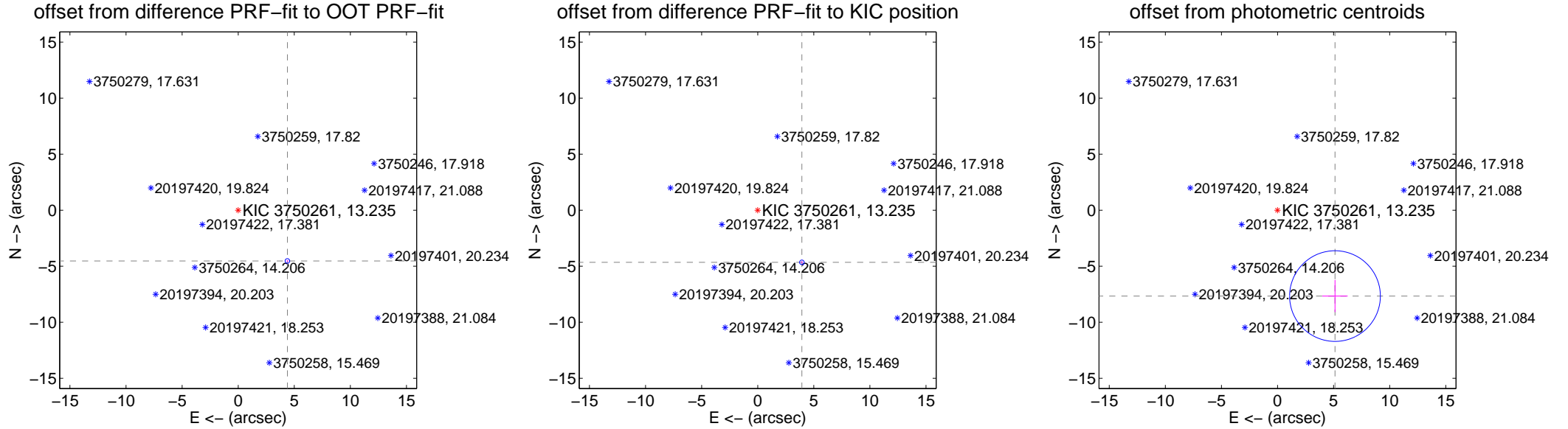
## DV Centroid Data

Supplemental centroid analysis for 003750261-01. Kepler magnitude: 13.23. Transit SNR 9.91

There are 1 quarters with good PRF difference image offsets

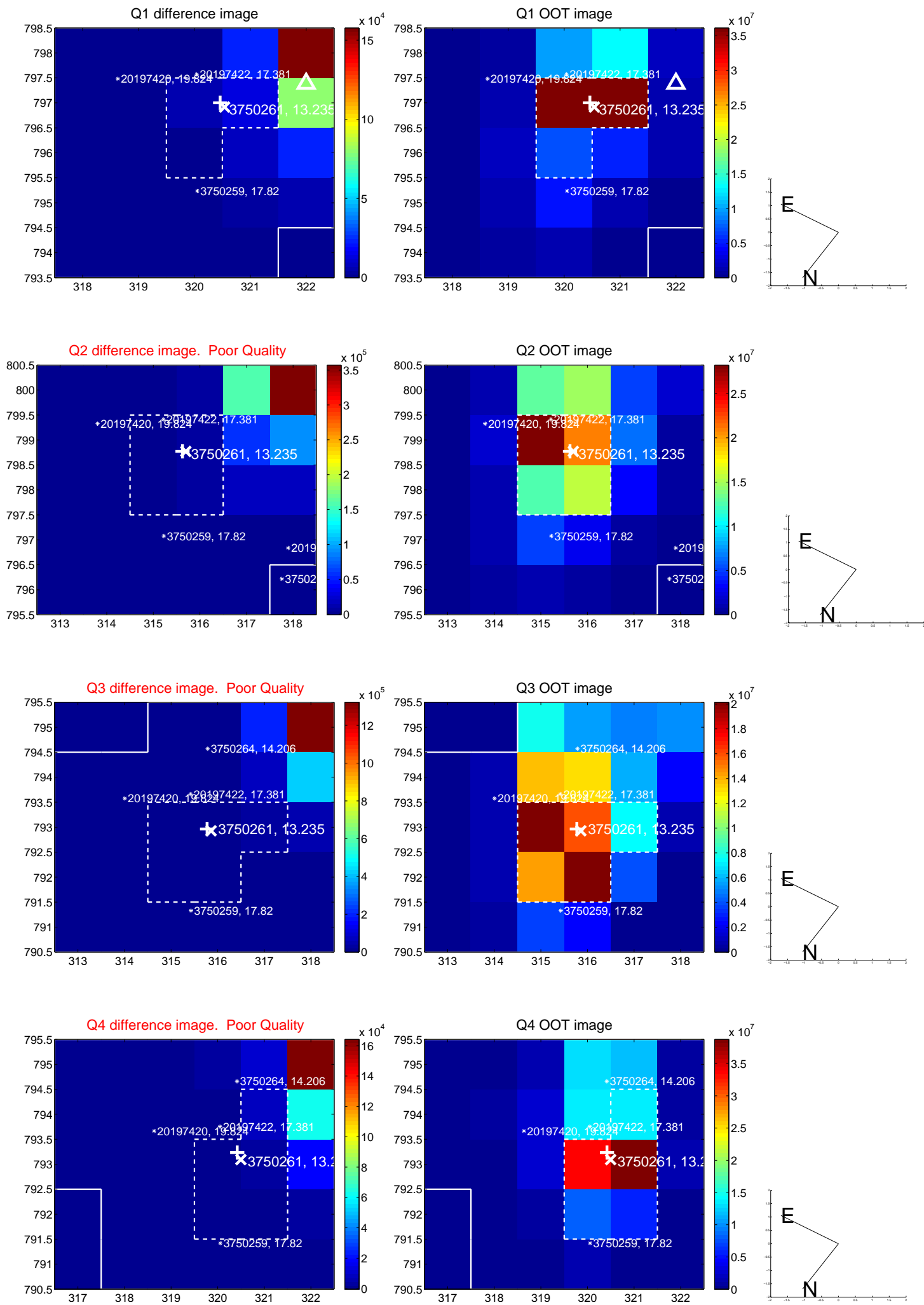
The direct PRF centroid is offset from the target star catalog position by about 0.47 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$6.304 \pm 0.068$	92.33	$-4.386 \pm 0.069$	$-4.528 \pm 0.068$
PRF-fit source offset from KIC position	$6.095 \pm 0.068$	89.32	$-3.937 \pm 0.069$	$-4.652 \pm 0.068$
photometric centroid source offset	$9.22 \pm 1.35$	6.84	$-5.12 \pm 1.13$	$-7.66 \pm 1.43$

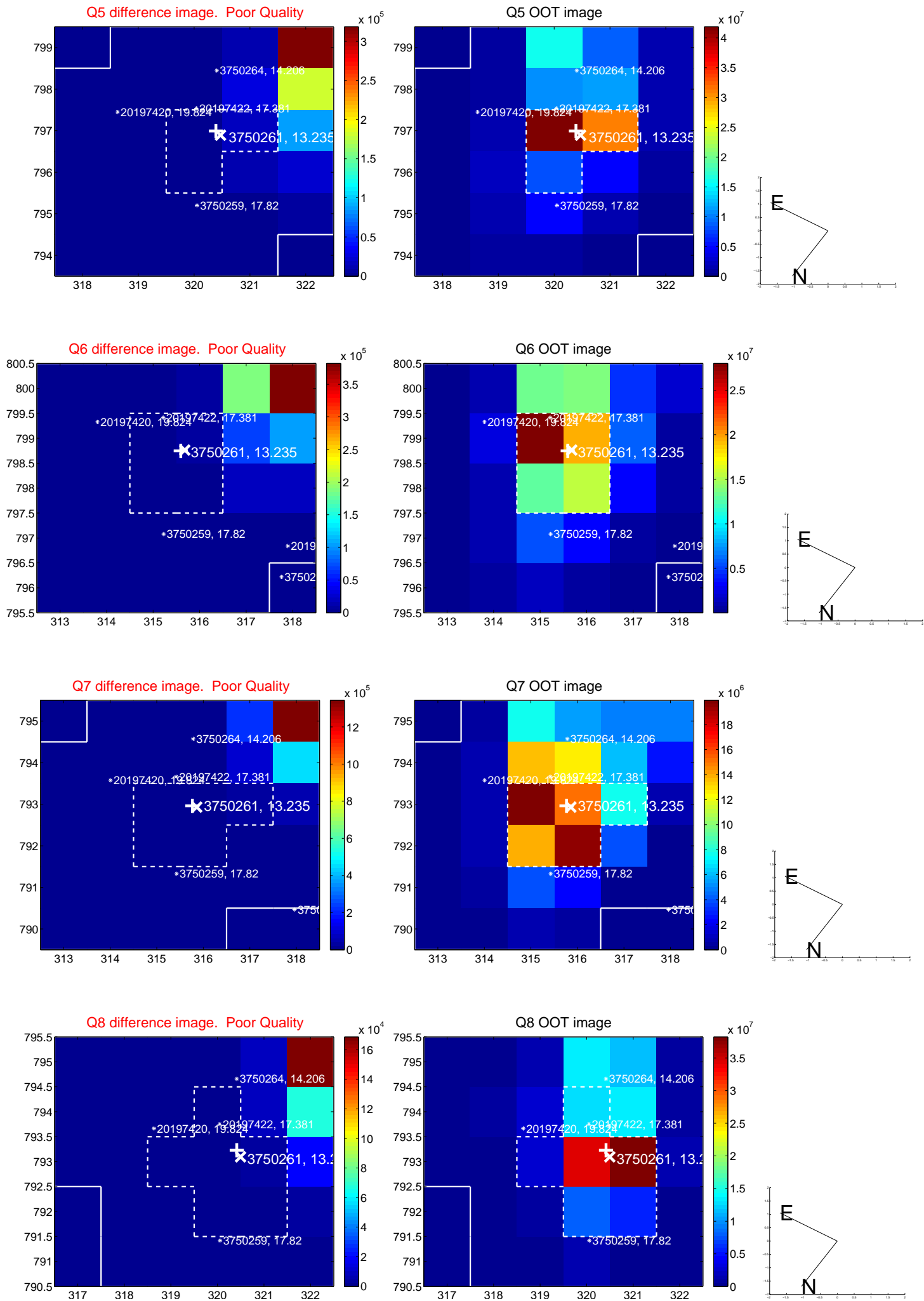


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

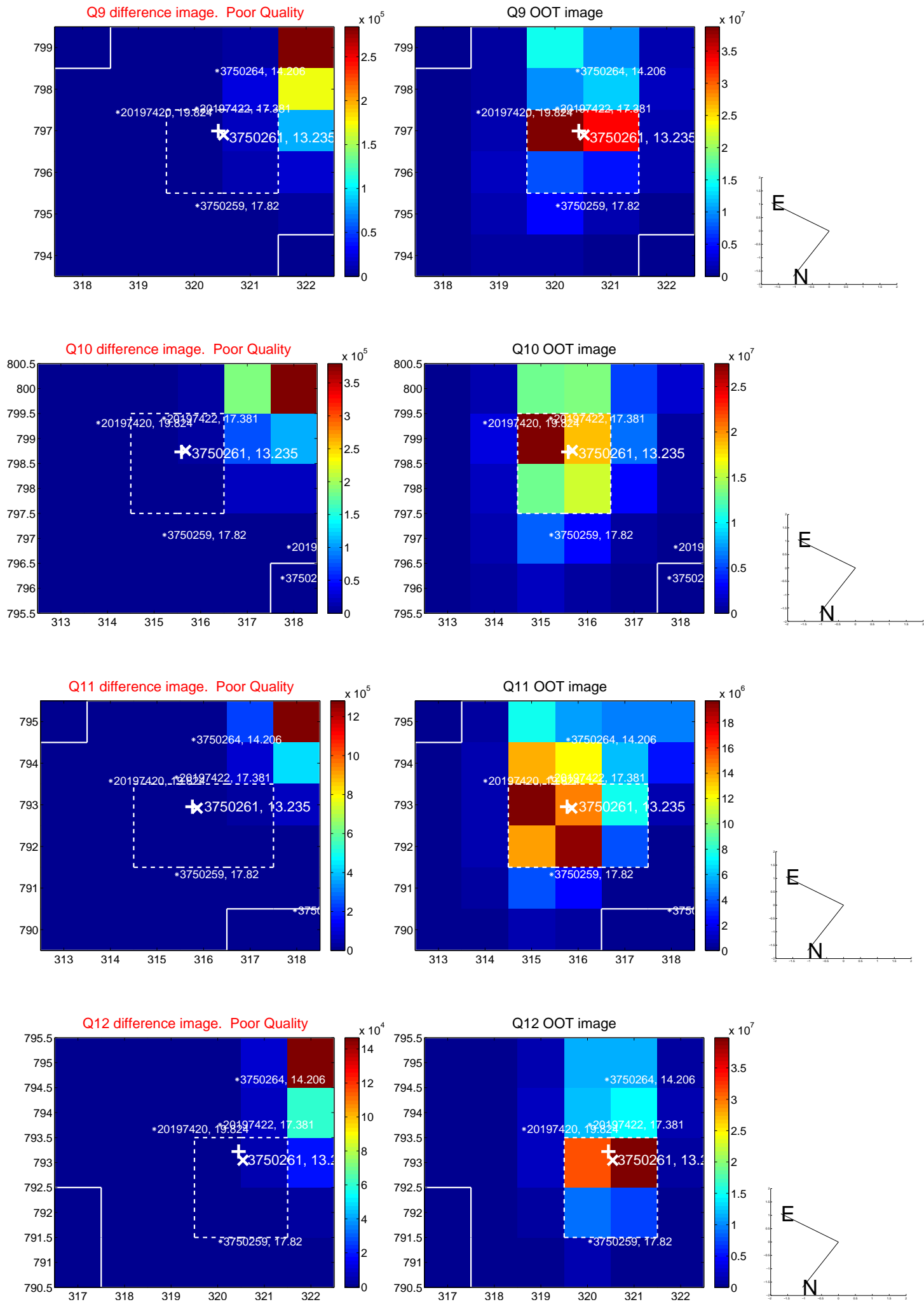


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

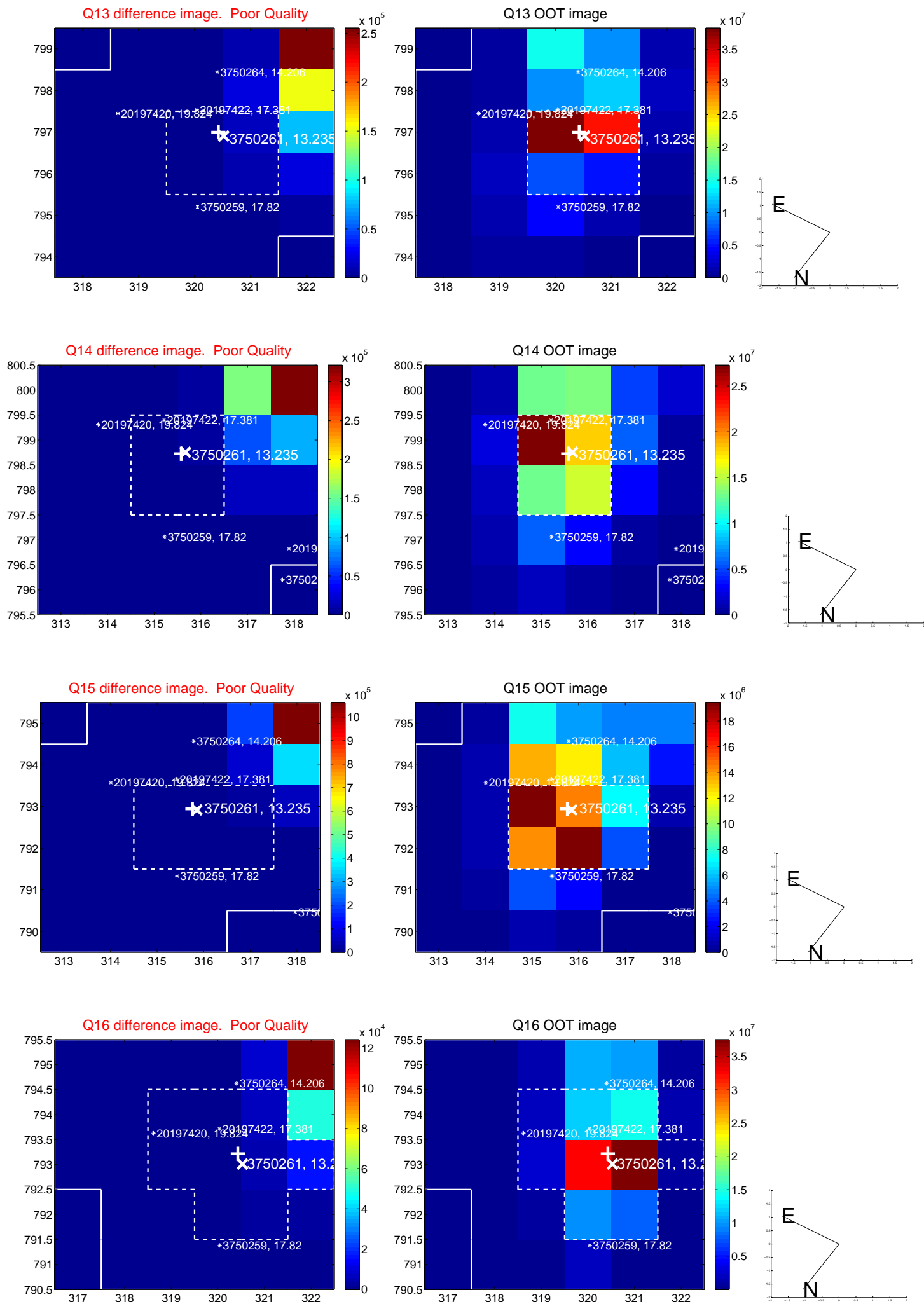




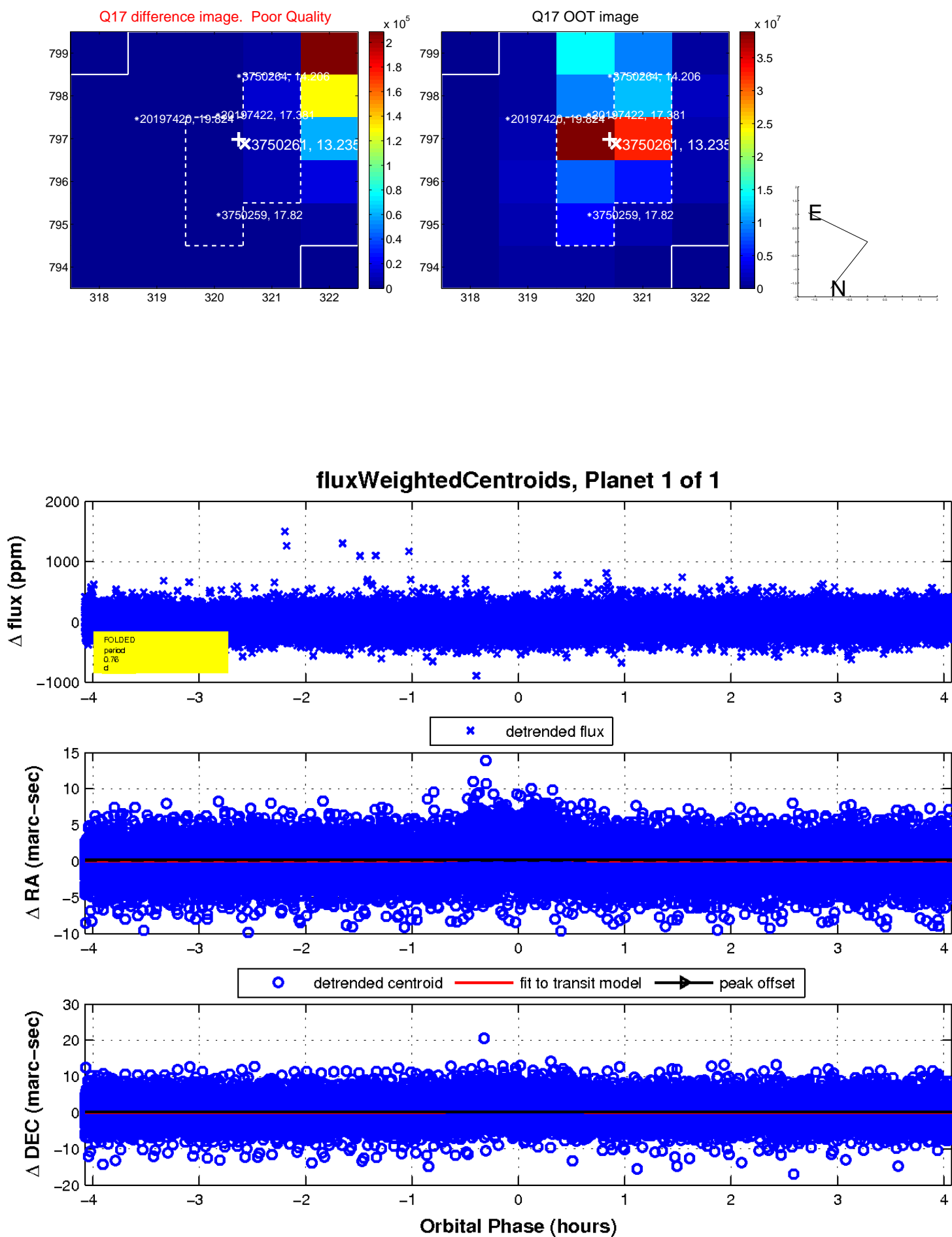
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

