

# KIC 010750903

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
010750903-01	OBS	No	1.009777	131.790069	1.1	8.311	9.1	0.2	1.67	6837	0.17	11565.72

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010750903-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_FEW_MEAS

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

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

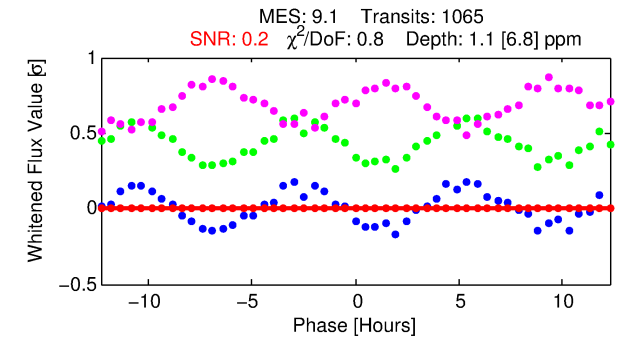
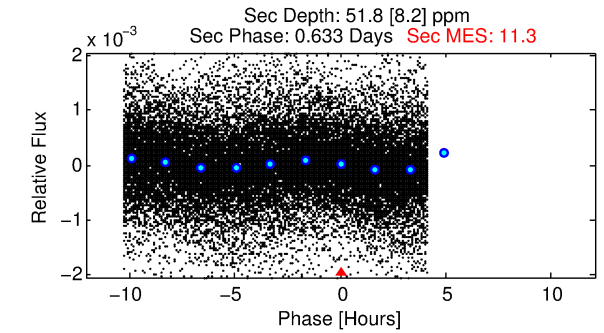
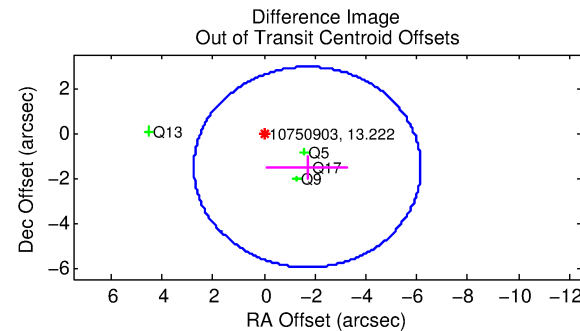
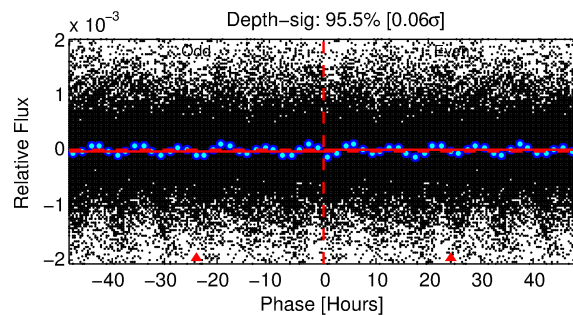
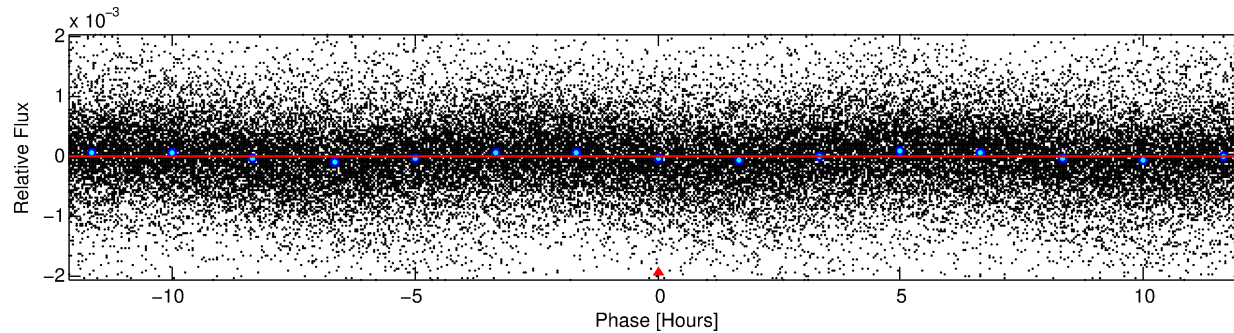
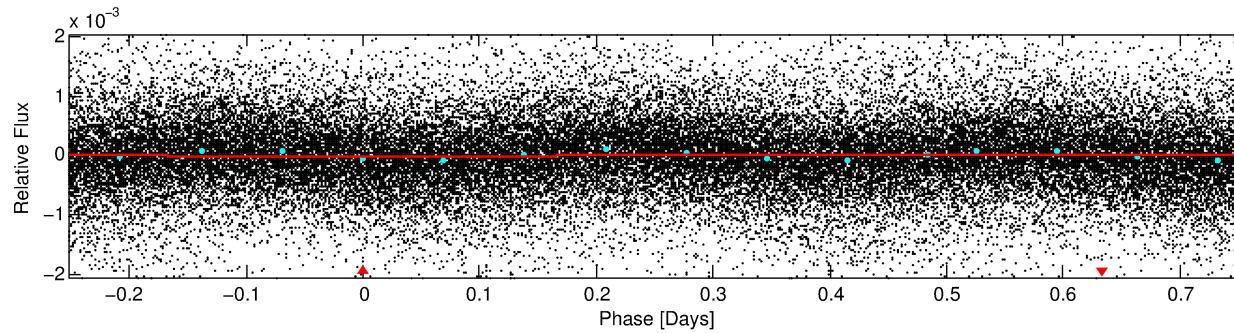
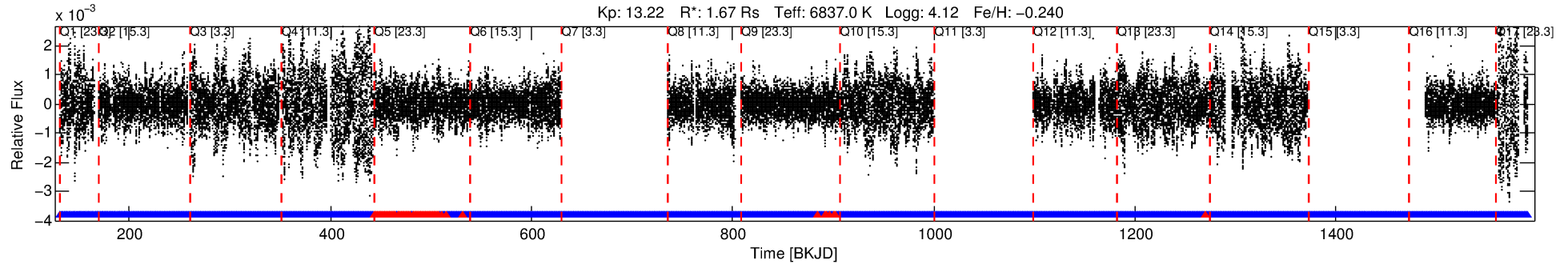
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 010750903-01

No Significant Match Found

# DV One-Page Summary

KIC: 10750903 Candidate: 1 of 1 Period: 1.010 d



## DV Fit Results:

Period = 1.00978 [0.00070] d  
Epoch = 131.7901 [0.1284] BKJD  
Rp/R\* = 0.0010 [0.0199]  
a/R\* = 1.14 [30.67]  
b = 0.10 [1193.50]  
Seff = 11565.72 [3028.08]  
Teq = 2644 [173] K  
Rp = 0.17 [3.61] Re  
a = 0.0217 [0.0035] AU  
Ag = 448.59 [18748.67] [0.02 $\sigma$ ]  
Teff = 18816 [196597] K [0.08 $\sigma$ ]

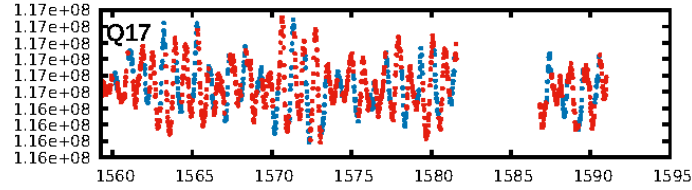
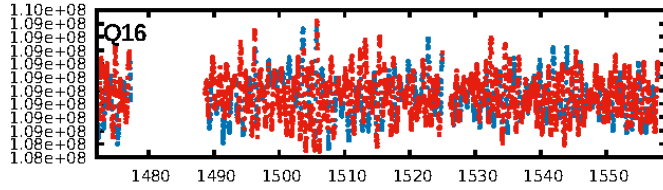
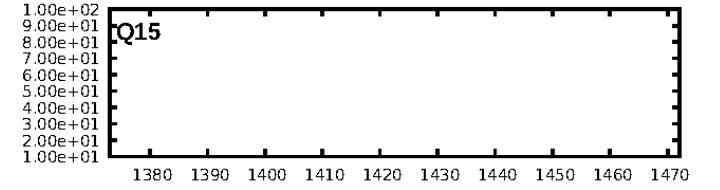
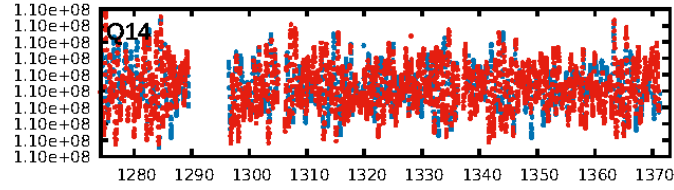
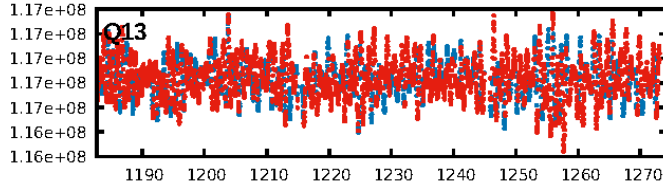
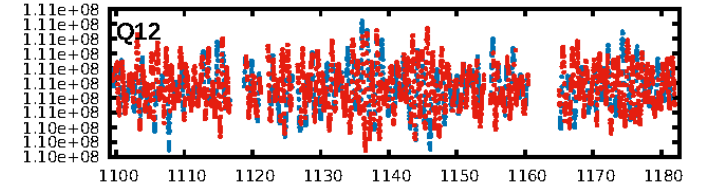
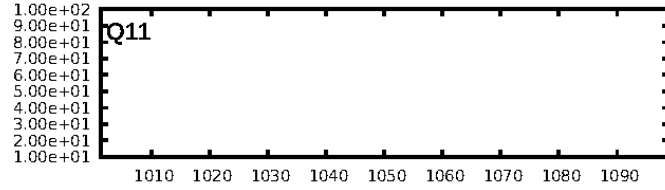
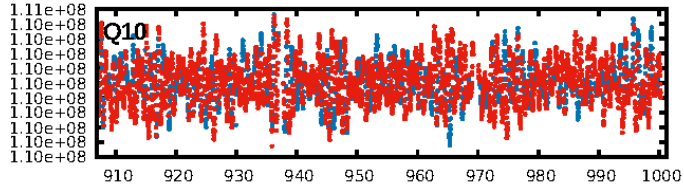
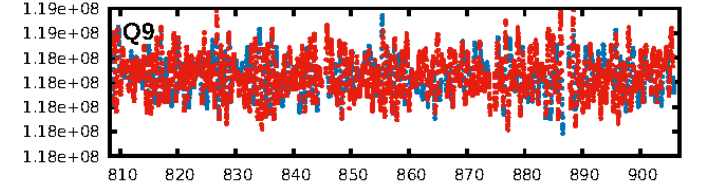
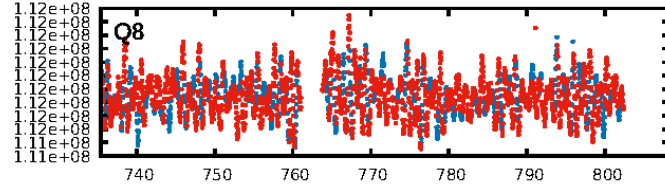
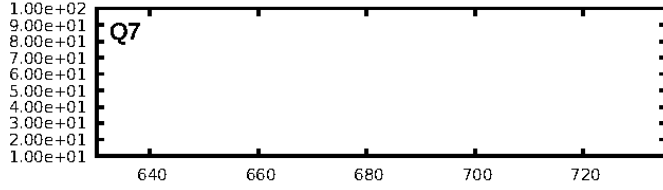
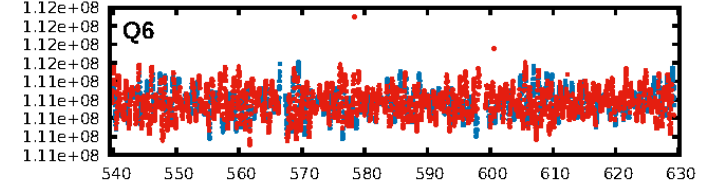
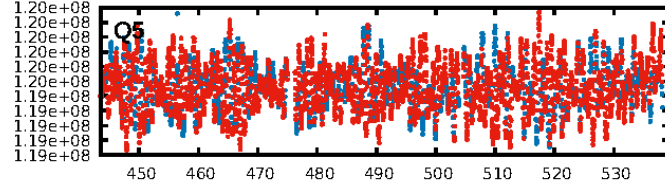
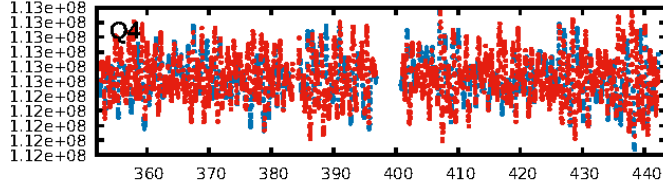
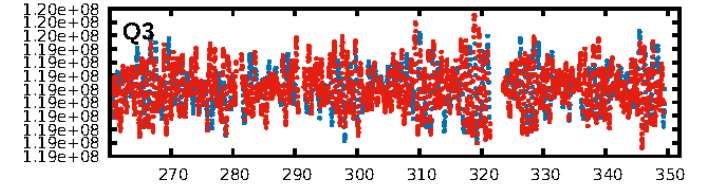
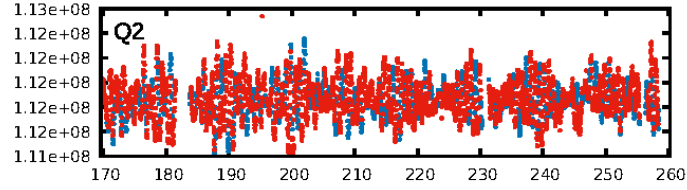
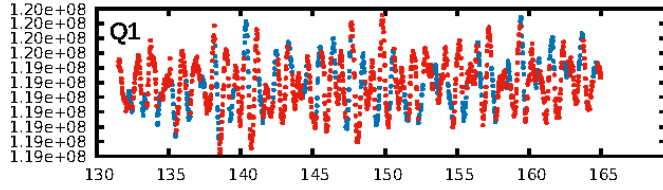
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 0.93 [933/1004]  
GhostDiagnostic-chr: N/A  
Centroid-sig: N/A  
Centroid-so: N/A  
OotOffset-rm: 2.286 arcsec [1.54 $\sigma$ ]  
KicOffset-rm: 2.472 arcsec [2.12 $\sigma$ ]  
OotOffset-st: 0/0/0/4 [4]  
KicOffset-st: 0/0/0/4 [4]  
DiffImageQuality-fgm: 0.25 [1/4]  
DiffImageOverlap-fno: 1.00 [14/14]

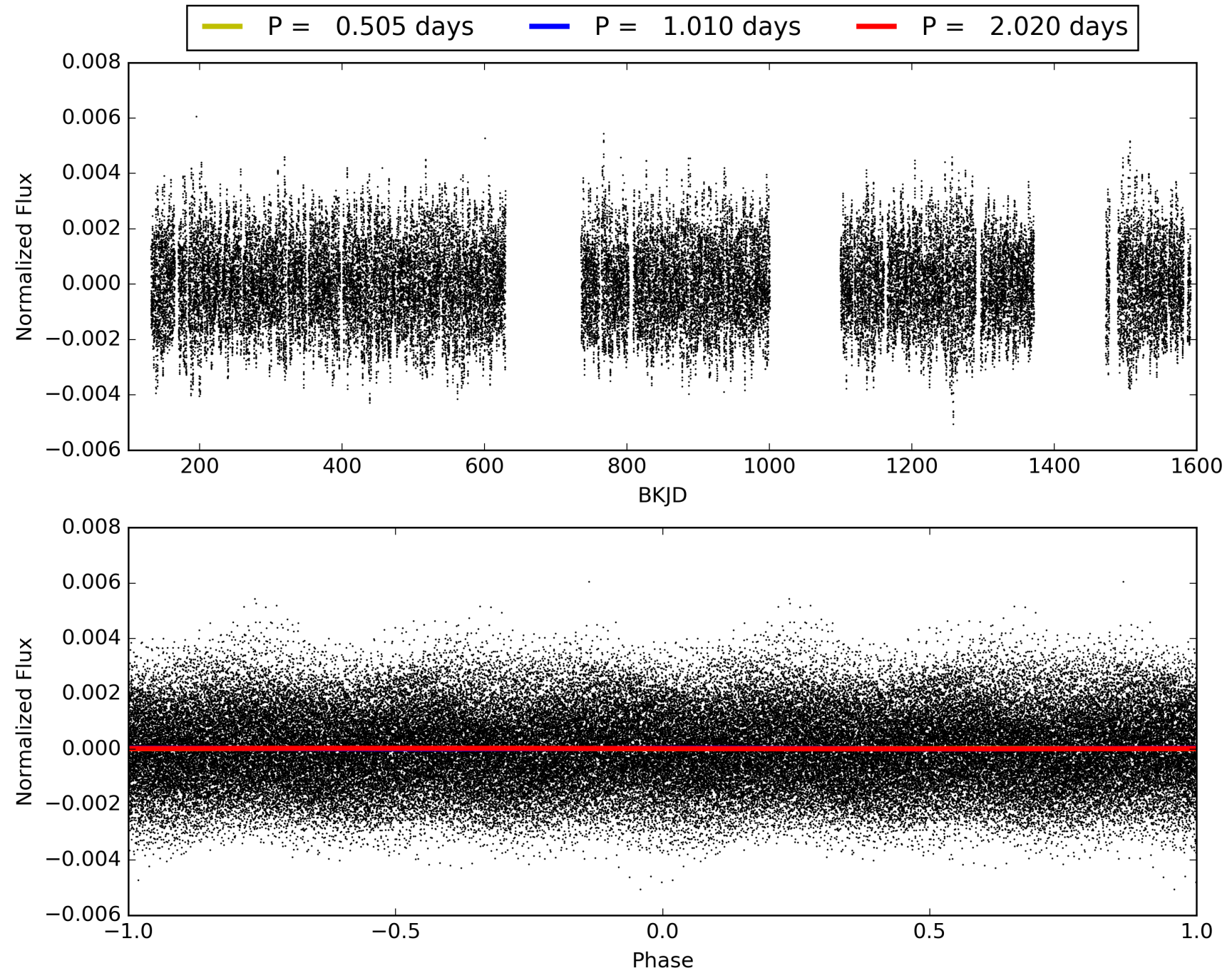
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 02:46:43 Z

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

# TCE 010750903-01, PDC Light Curves



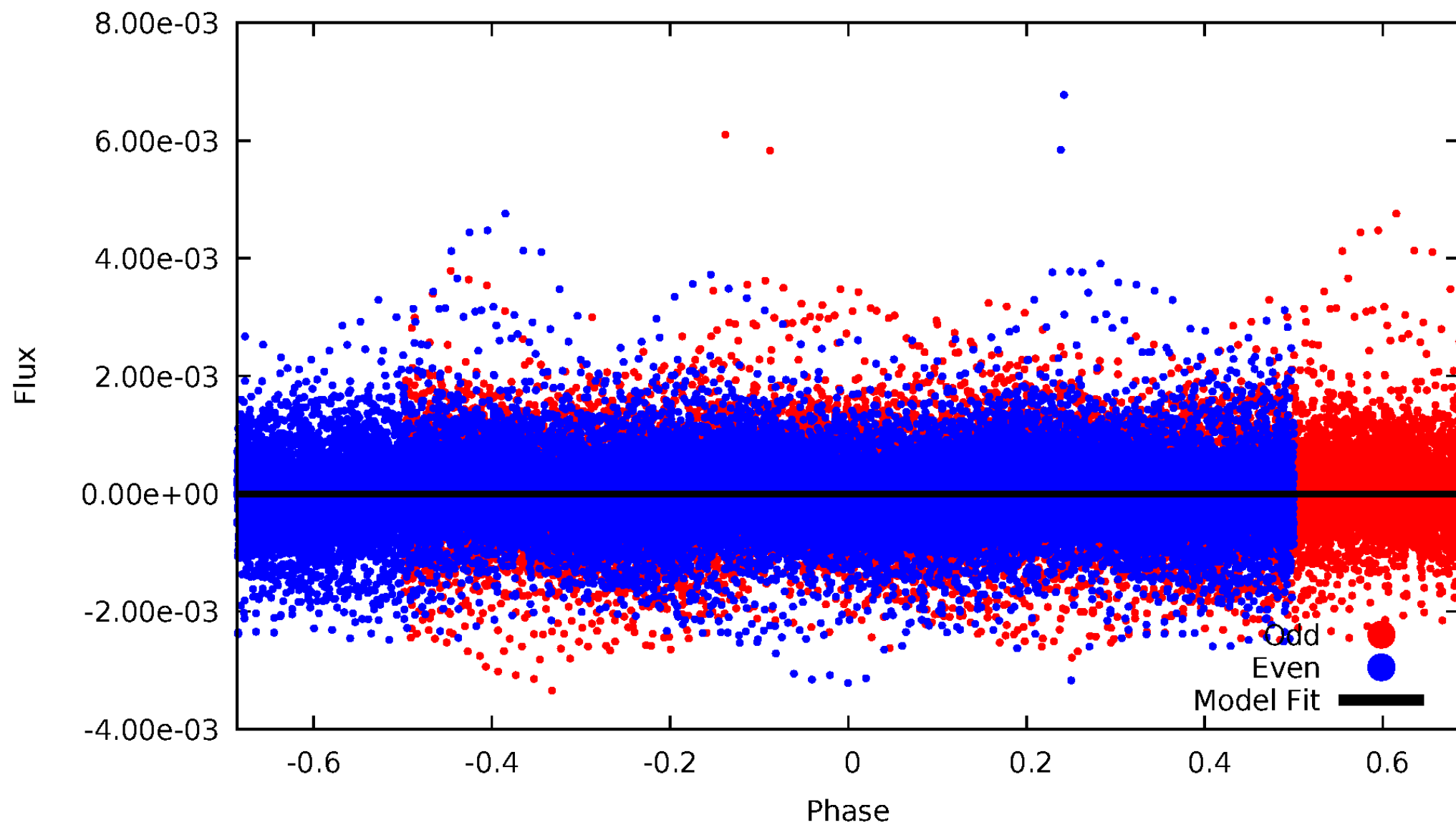
TCE 010750903-01





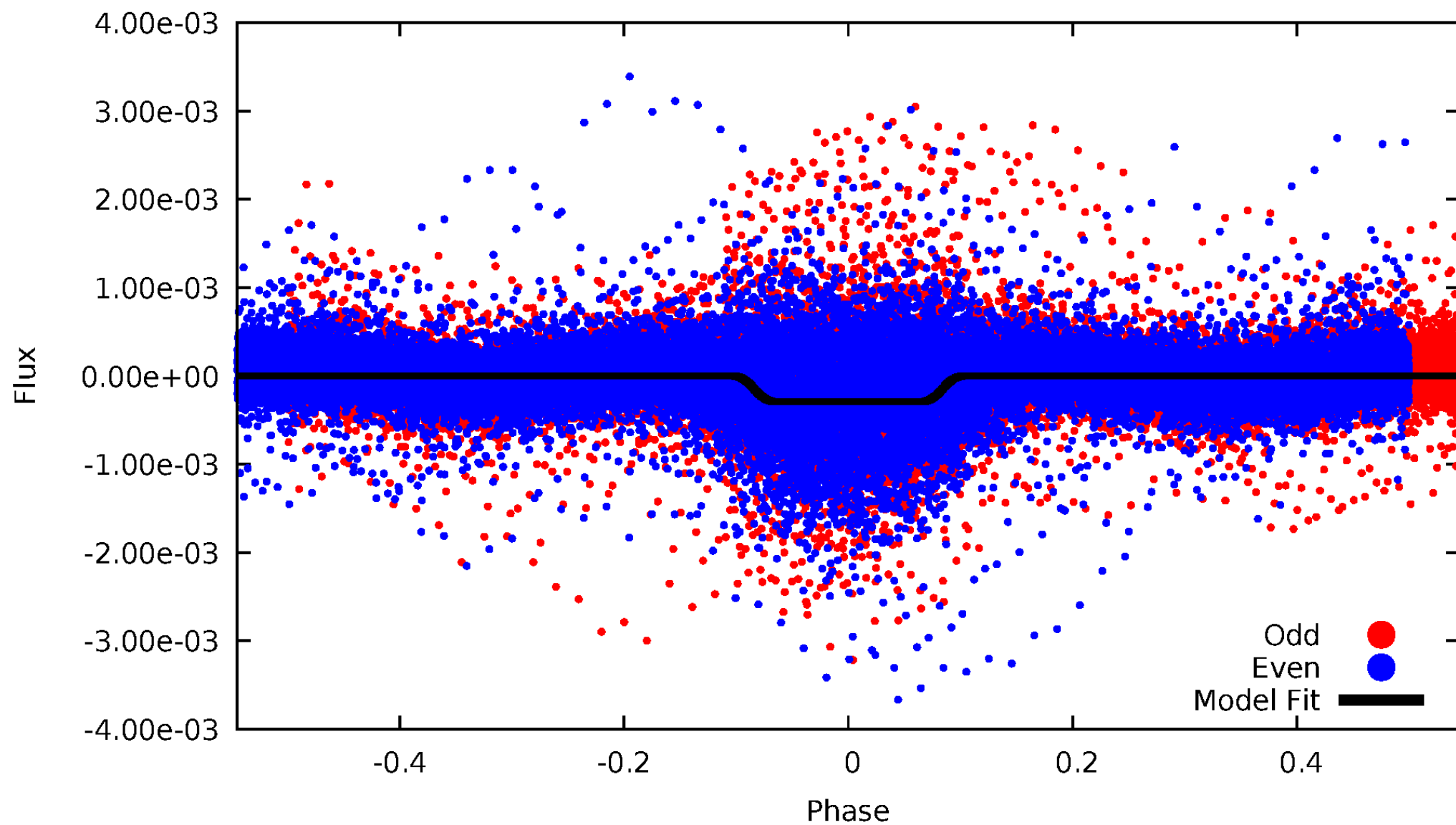
# DV Odd/Even

TCE 010750903-01



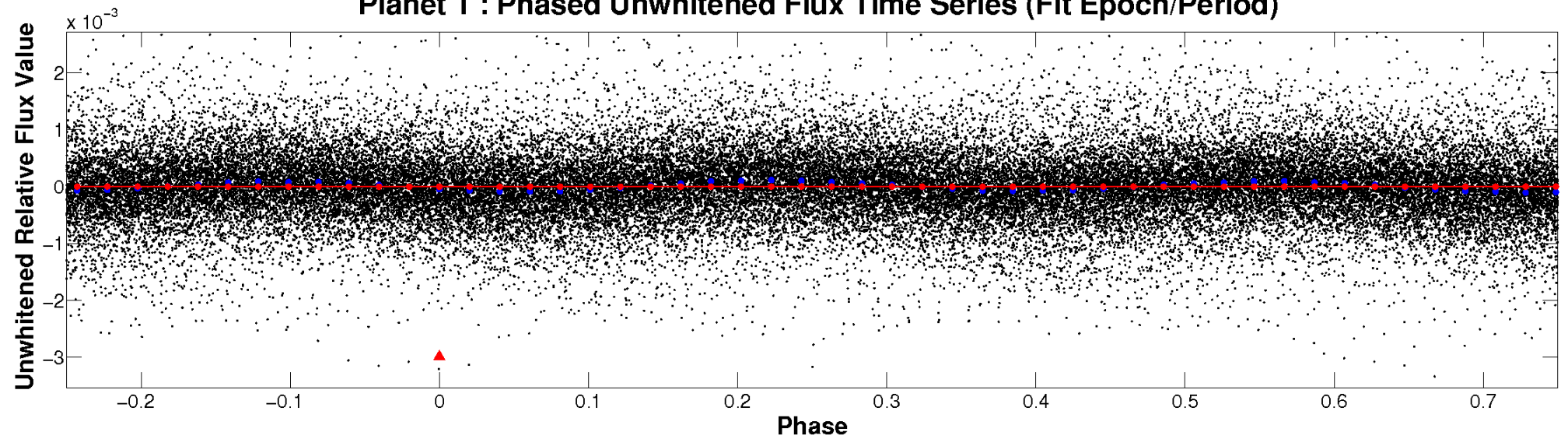
# ALT Odd/Even

TCE 010750903-01

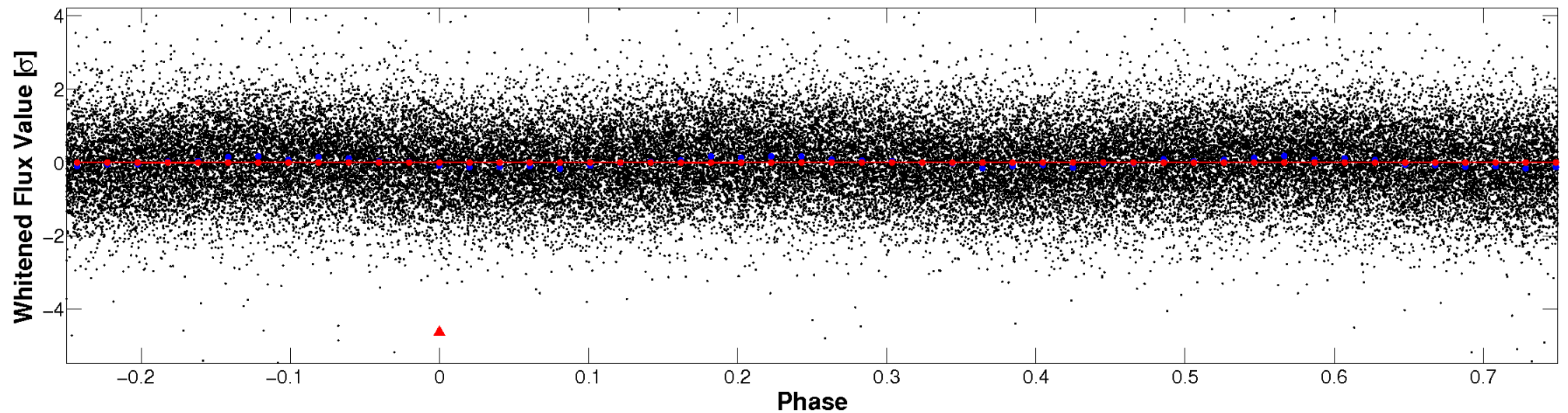


# Non-Whitened Vs. Whitened Light Curve

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

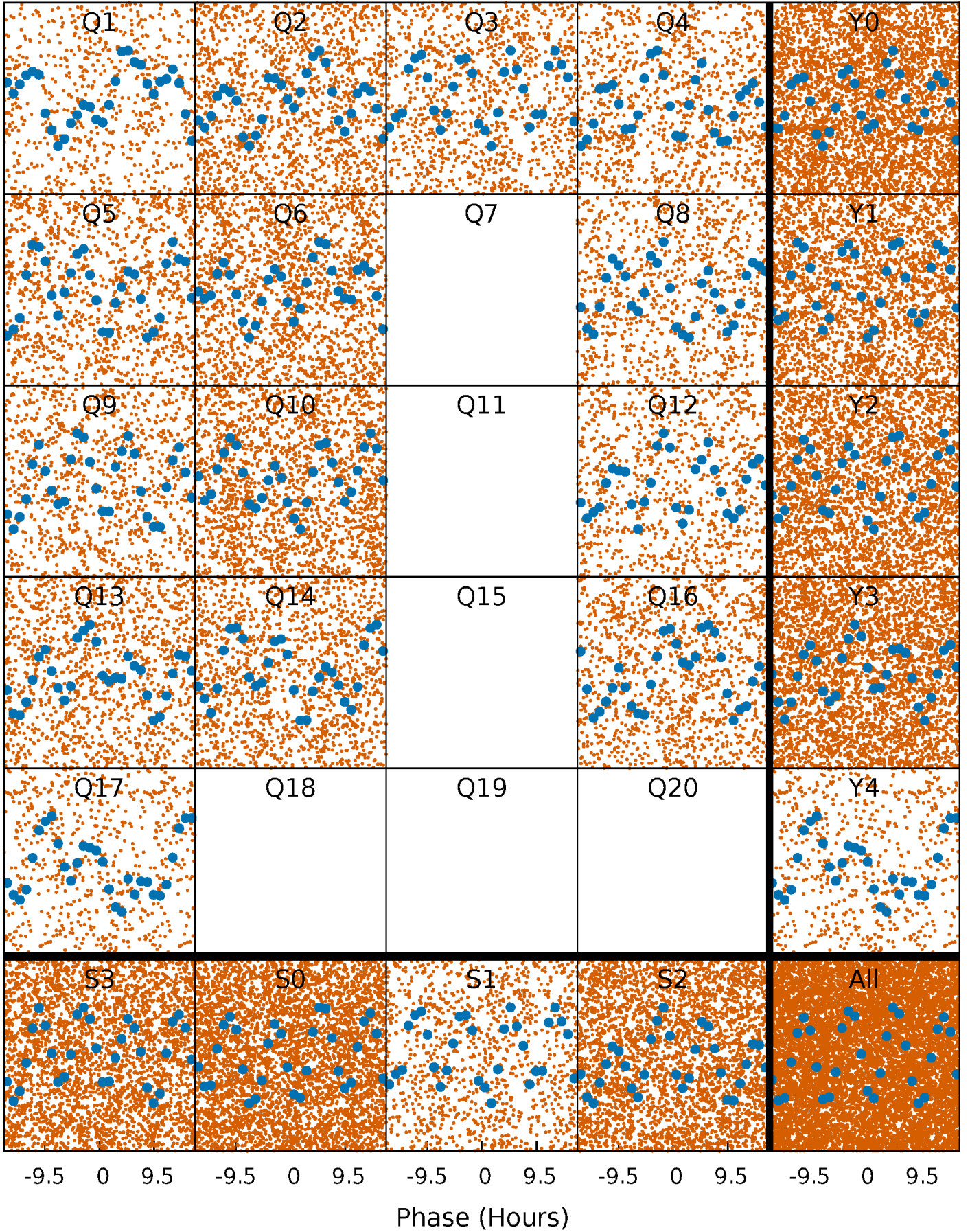


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

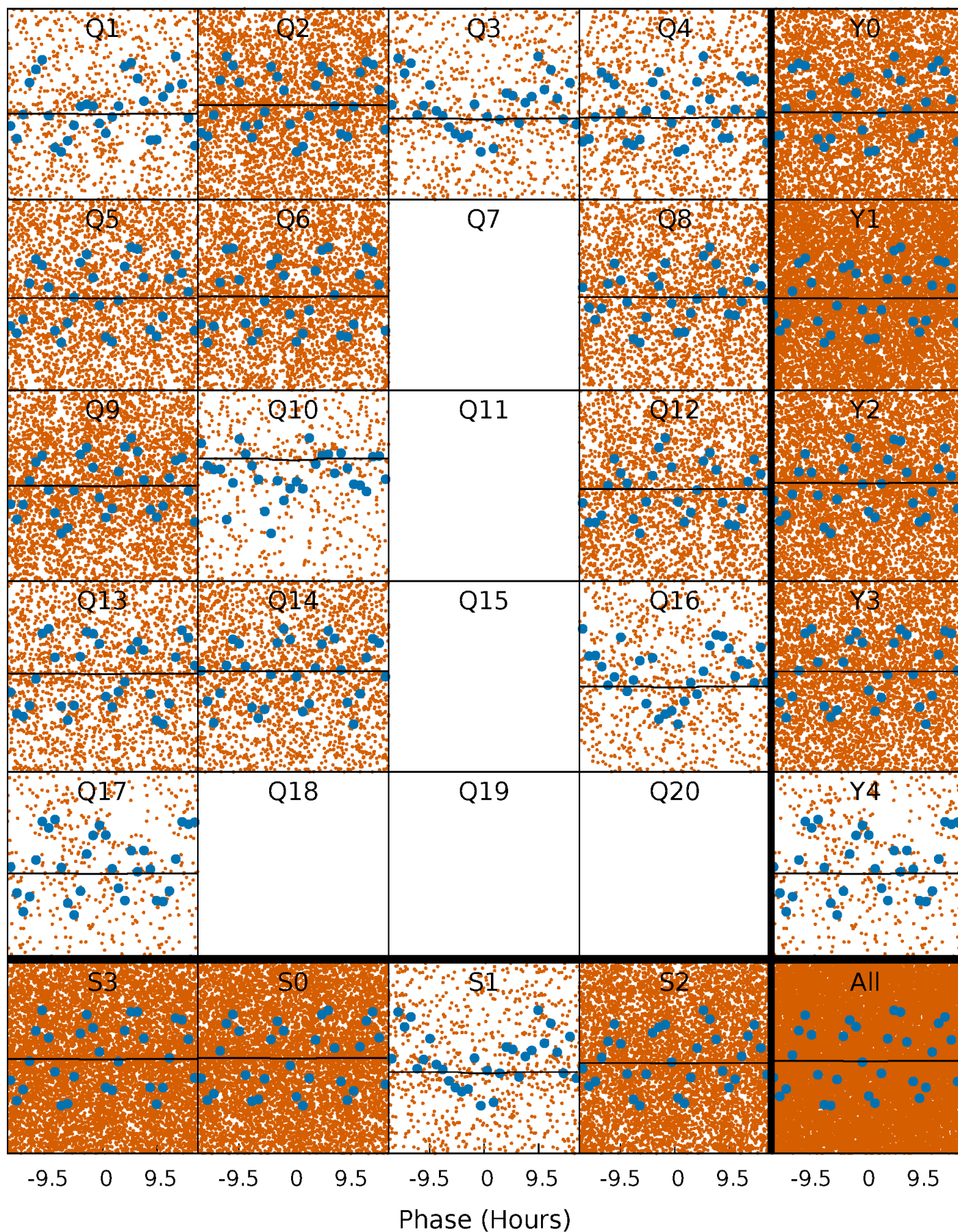
TCE 010750903-01 P= 1.009777 Days  $T_0=131.790069$  (BKJD)





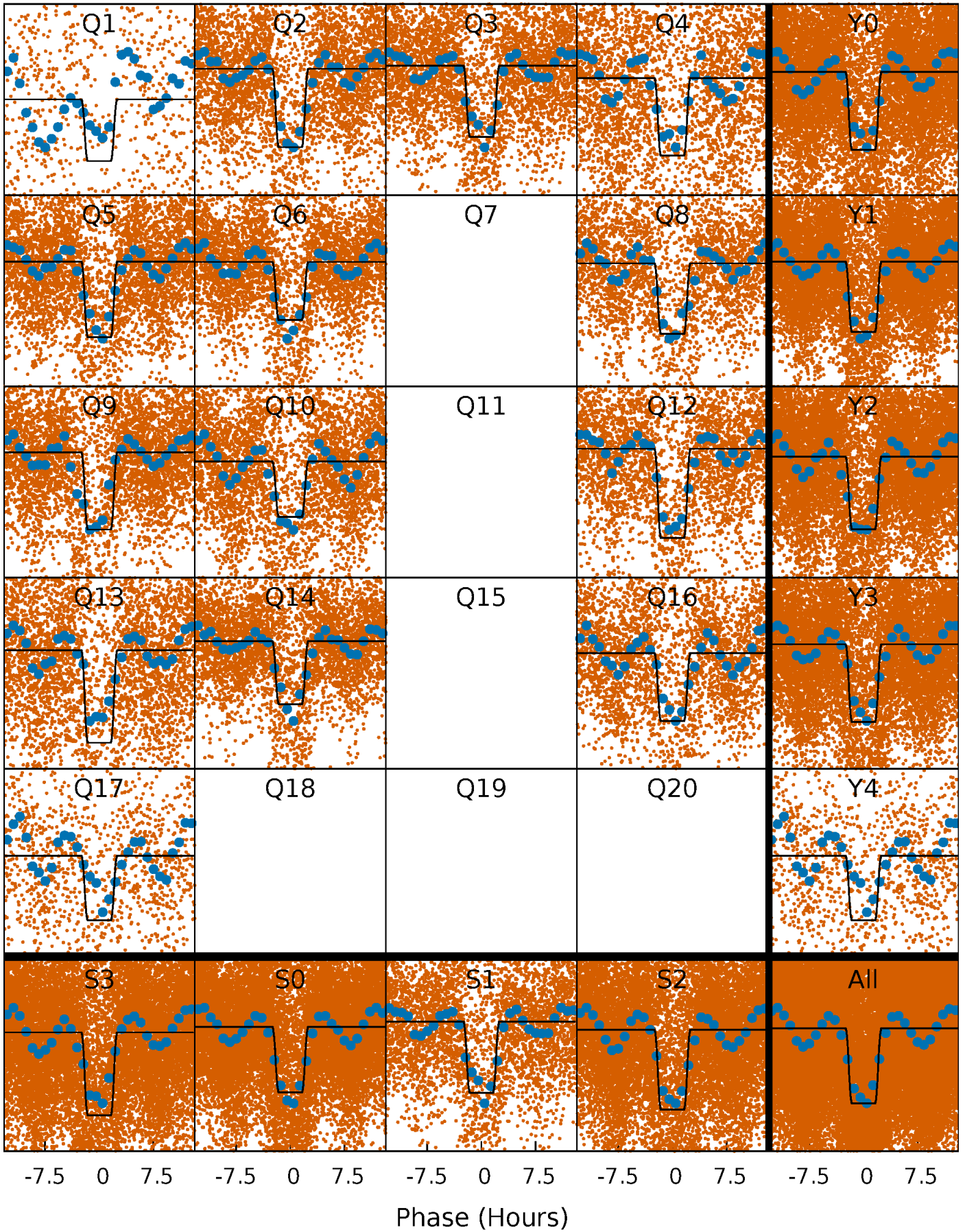
# DV Quarter-Phased Transit Curves

TCE 010750903-01 P= 1.009777 Days  $T_0=131.790069$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 010750903-01 P= 1.009821 Days  $T_0=131.820625$  (BKJD)

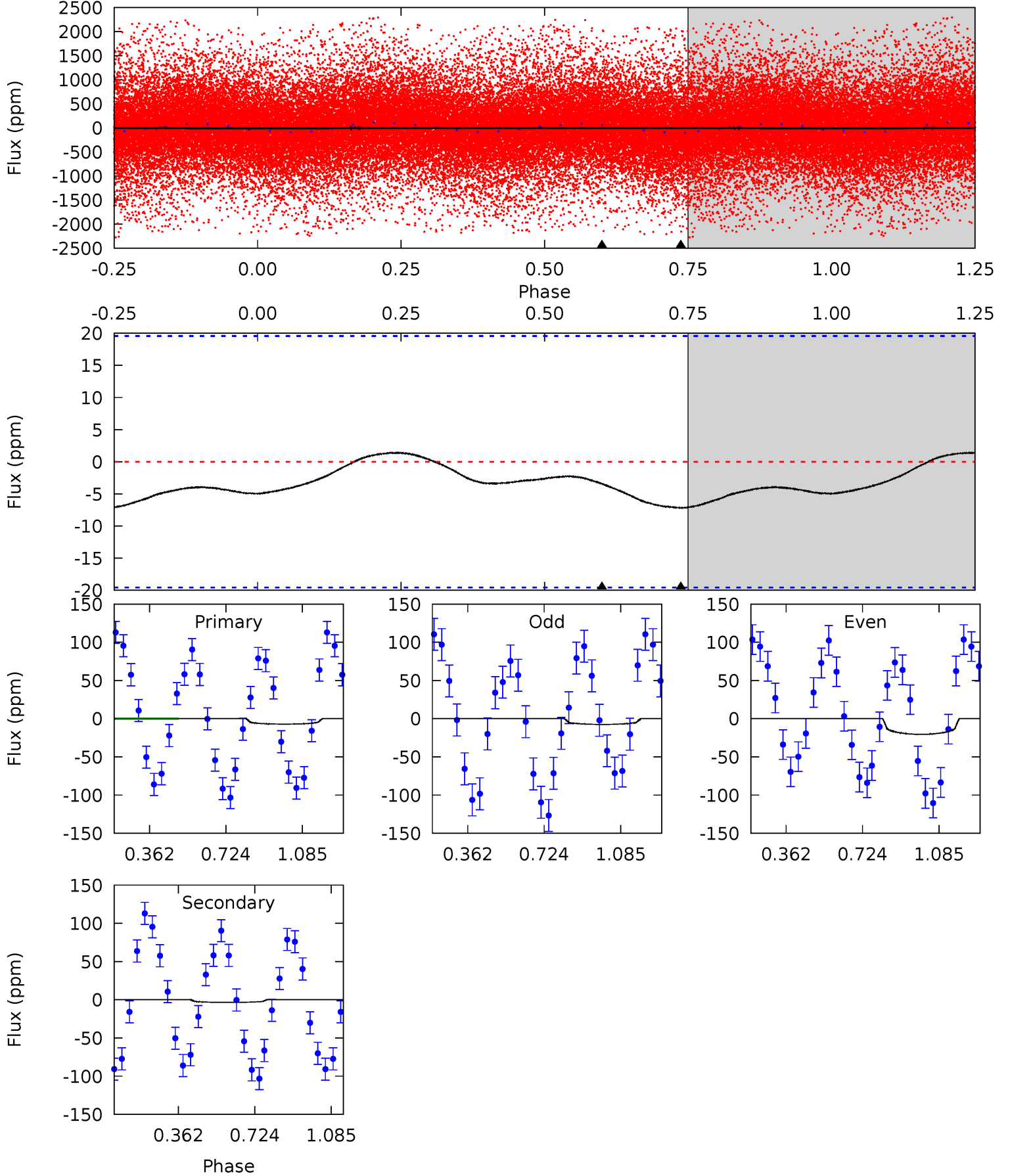




# DV Model-Shift Uniqueness Test

010750903-01, P = 1.009777 Days, E = 130.780292 Days

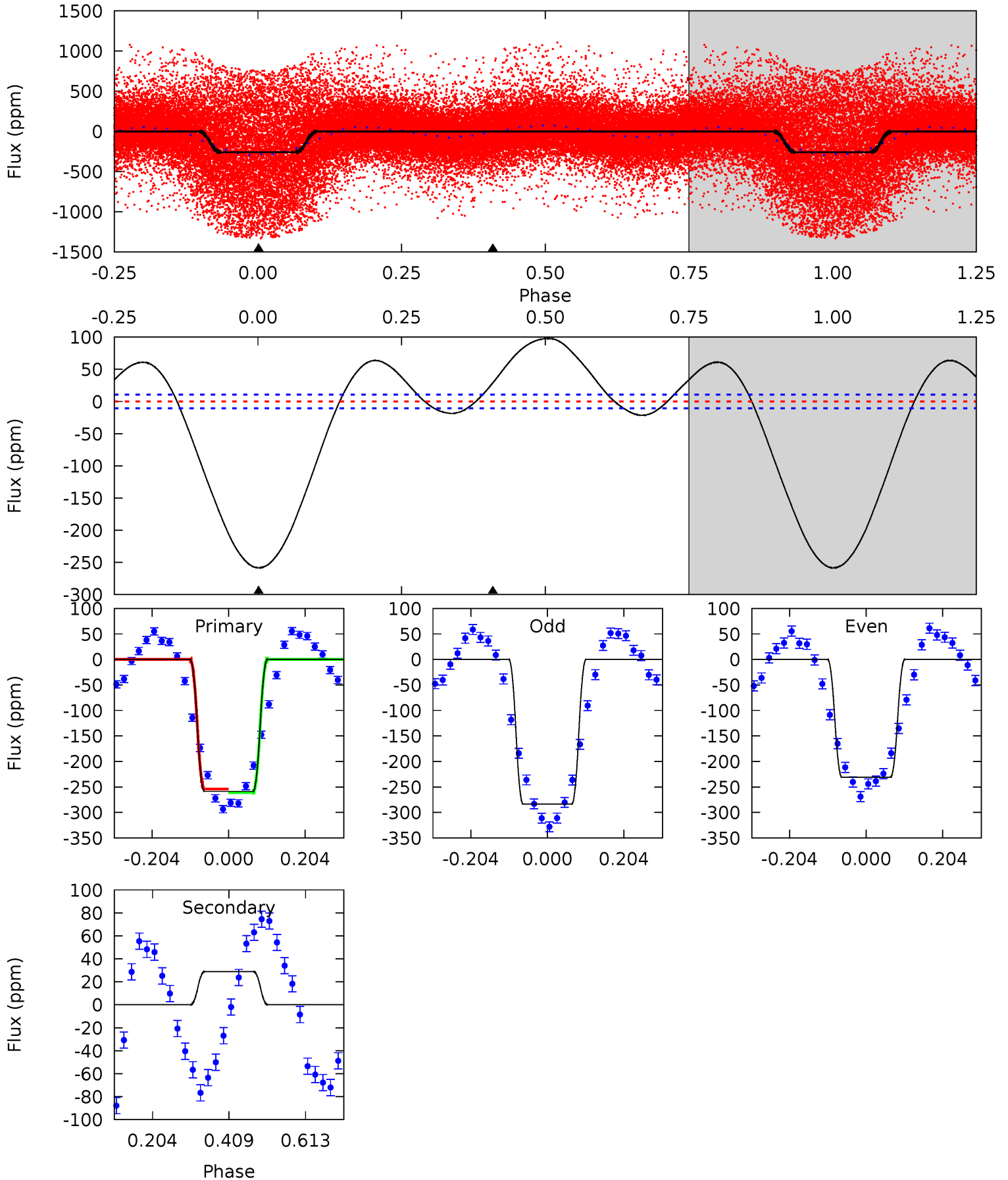
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.57	0.75	0	0	4.29	0.91	0.31	1.57	1.57	0.75	0.75	1.48	1.38	0.16	1.54



# Alt Model-Shift Uniqueness Test

010750903-01, P = 1.009821 Days, E = 130.810804 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
107.8	-12.1	0	0	4.41	1.27	11.6	107.8	107.8	-12.1	-12.1	11.0	1.00	0.27	1.44





### Stellar Parameters For KIC 010750903

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$6837^{+71}_{-81}$	$4.119^{+0.150}_{-0.113}$	$-0.240^{+0.150}_{-0.150}$	$1.666^{+0.262}_{-0.288}$	$1.338^{+0.088}_{-0.118}$	$0.407^{+0.274}_{-0.141}$
	+1%/-1%	+4%/-3%	+62%/-62%	+16%/-17%	+7%/-9%	+67%/-35%
Source	SPE68	SPE68	SPE68	DSEP		

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

### Secondary Eclipse Parameters for KIC 010750903-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-3\pm5$	$2.49^{+2.70}_{-1.83}$	$3679^{+170}_{-159}$	$-3292^{+7523}_{-297}$	$0.088^{+1.165}_{-0.120}$
Alt.	$29\pm2$	$3.96^{+3.16}_{-2.62}$	$3685^{+152}_{-177}$	$-4097^{+369}_{-1748}$	$-0.478^{+0.330}_{-3.585}$

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

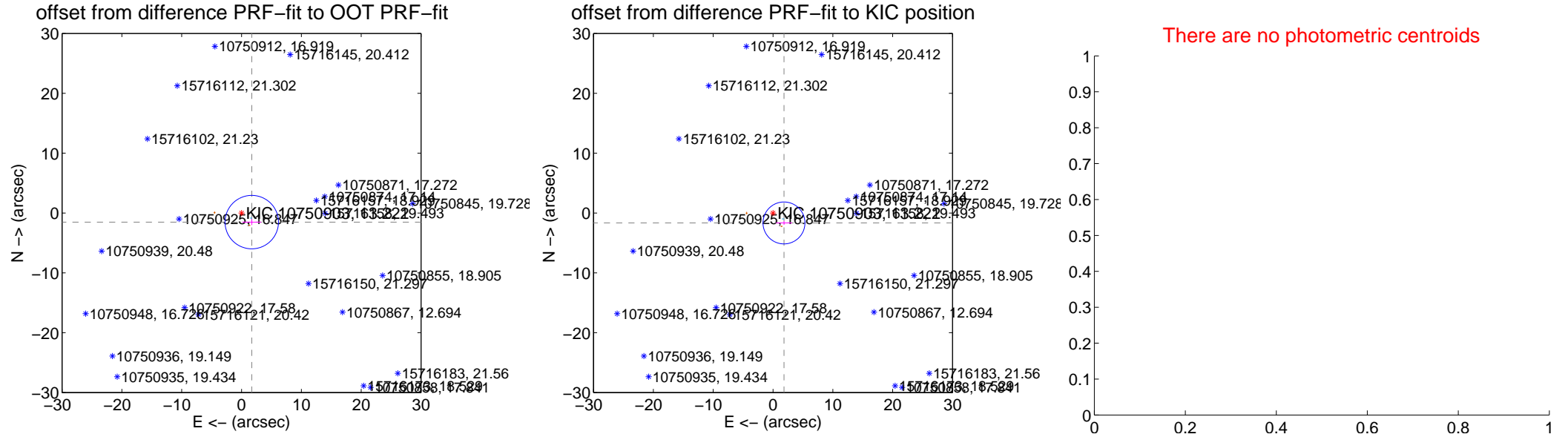
## DV Centroid Data

Supplemental centroid analysis for 010750903-01. Kepler magnitude: 13.22. Transit SNR 0.19

There are 1 quarters with good PRF difference image offsets

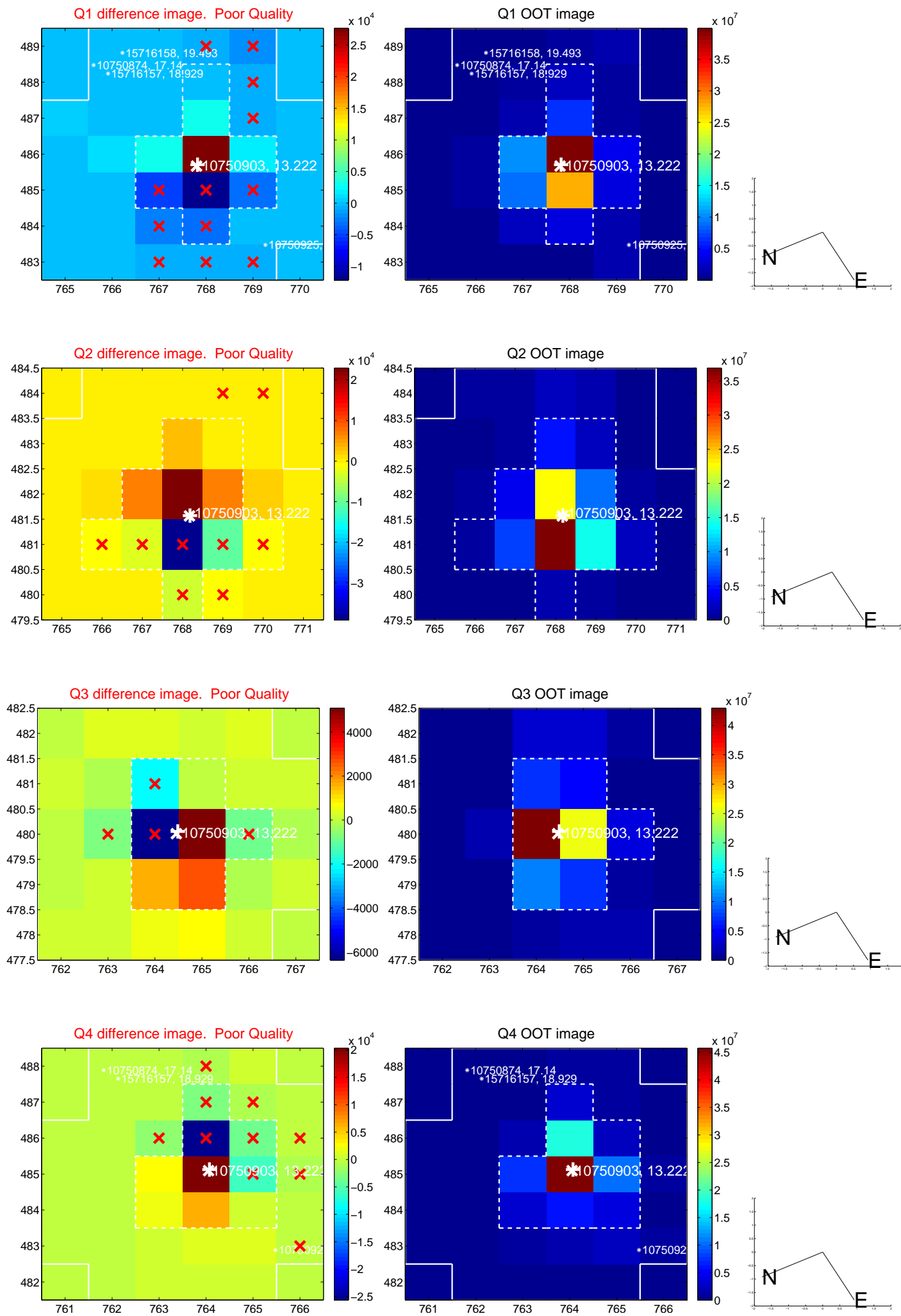
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$2.286 \pm 1.488$	1.54	$-1.707 \pm 1.582$	$-1.520 \pm 0.487$
PRF-fit source offset from KIC position	$2.472 \pm 1.168$	2.12	$-1.832 \pm 1.331$	$-1.660 \pm 0.321$
photometric centroid source offset	—	—	—	—

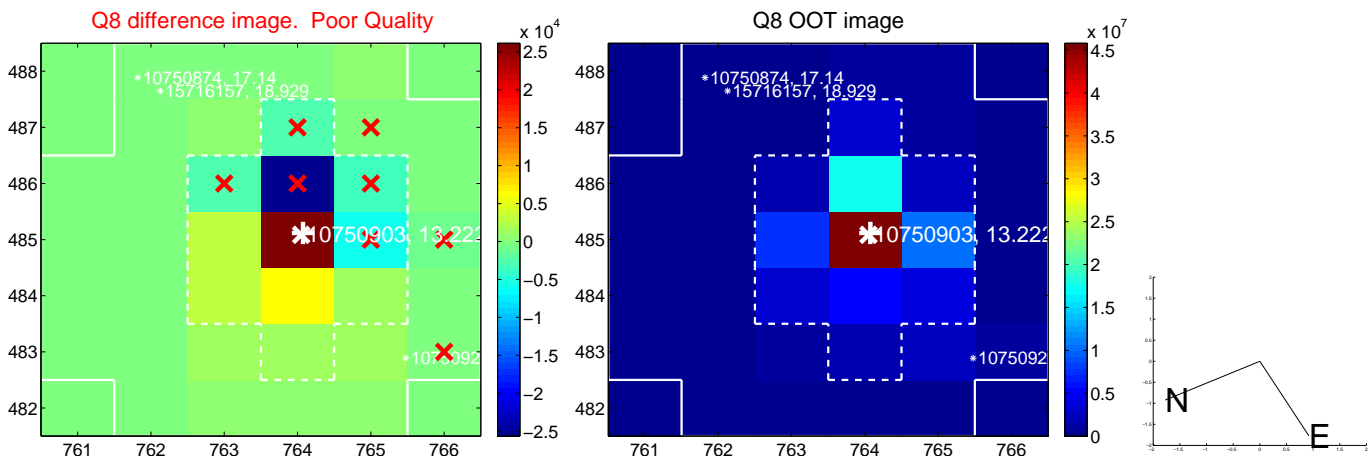
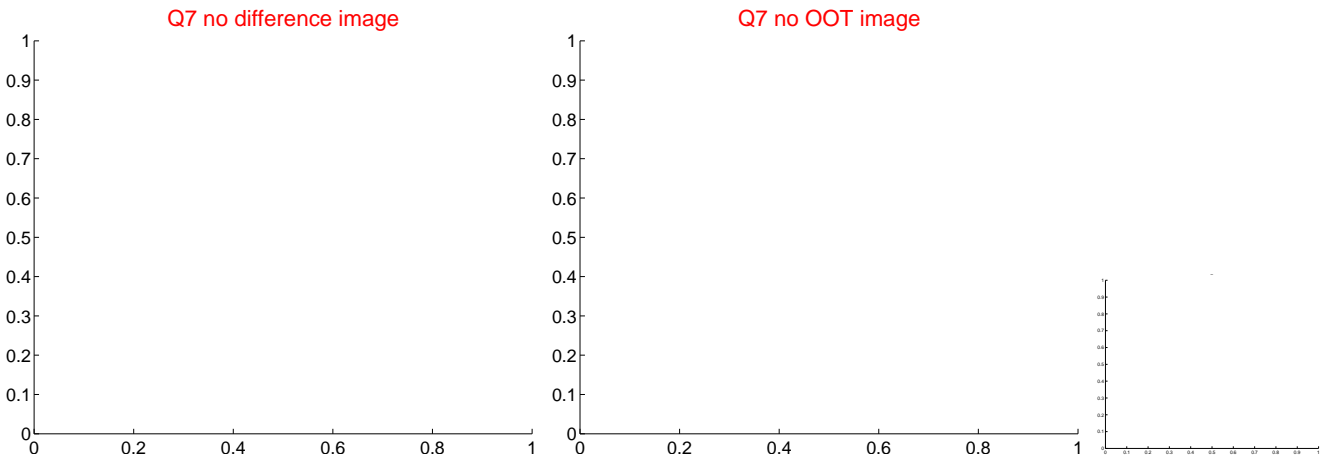
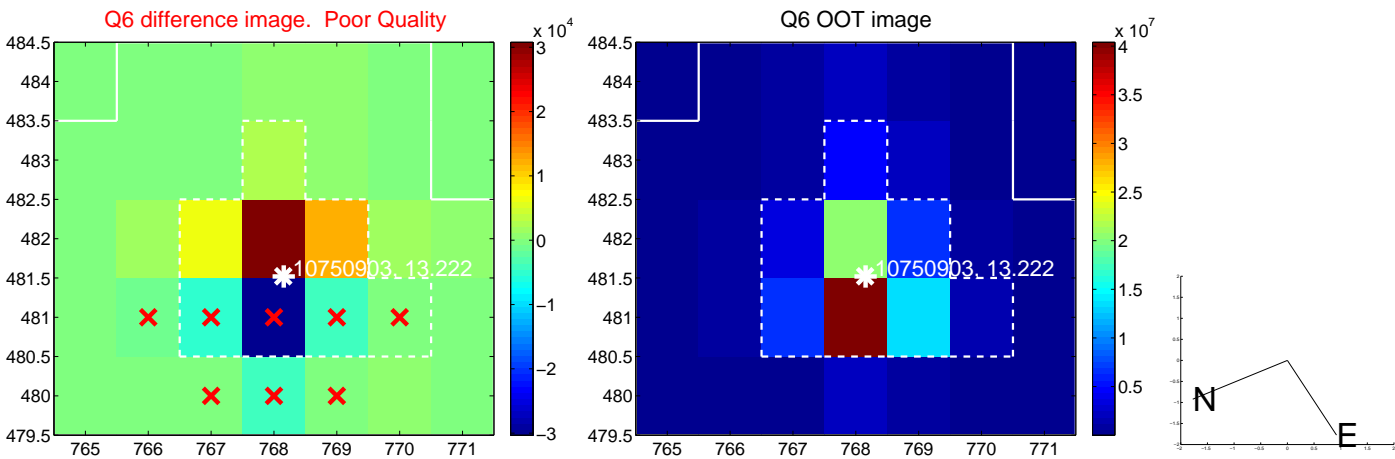
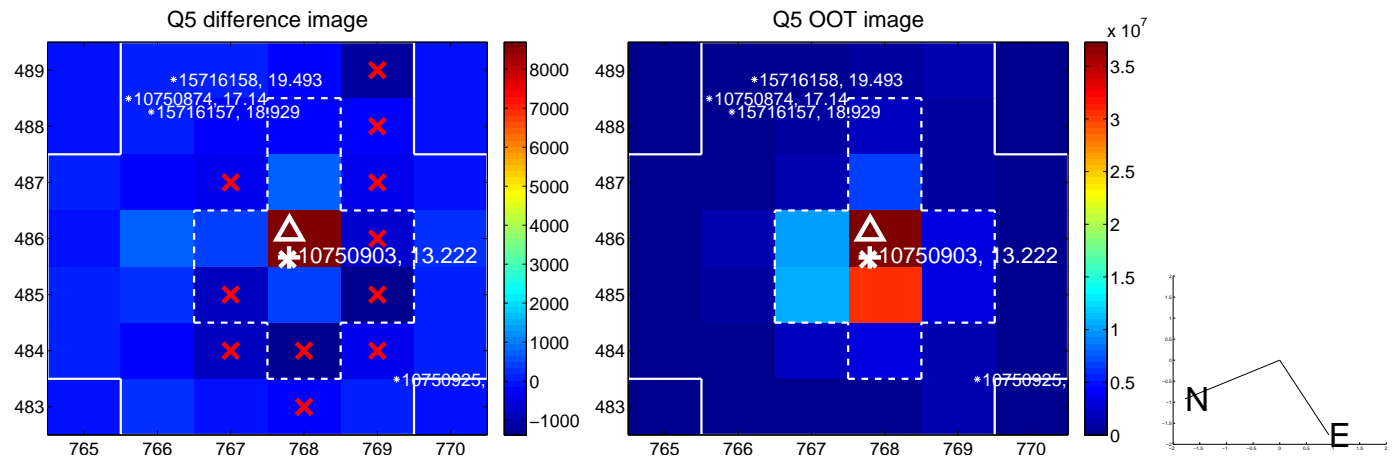


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

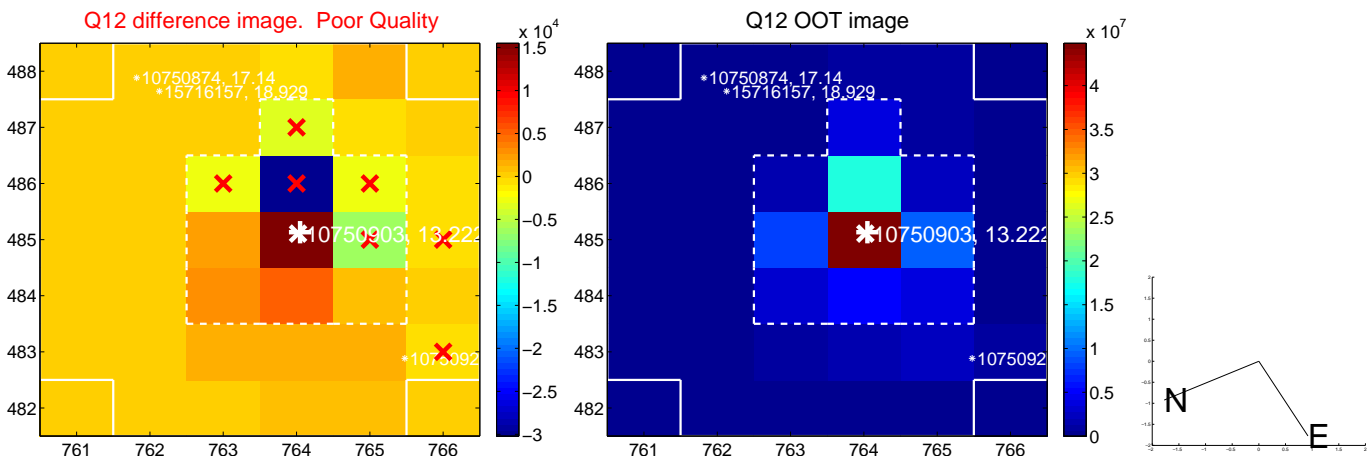
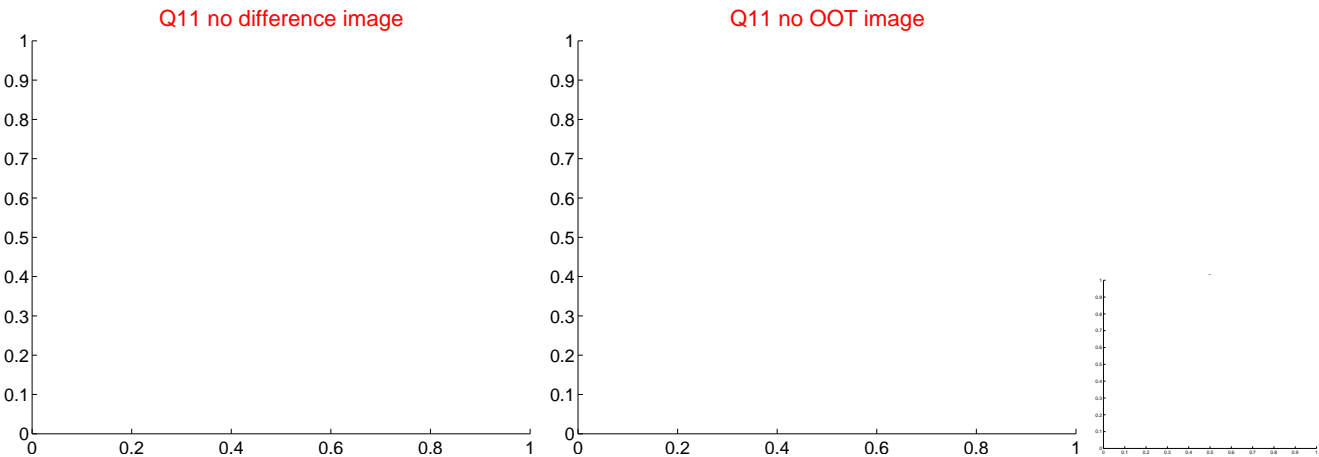
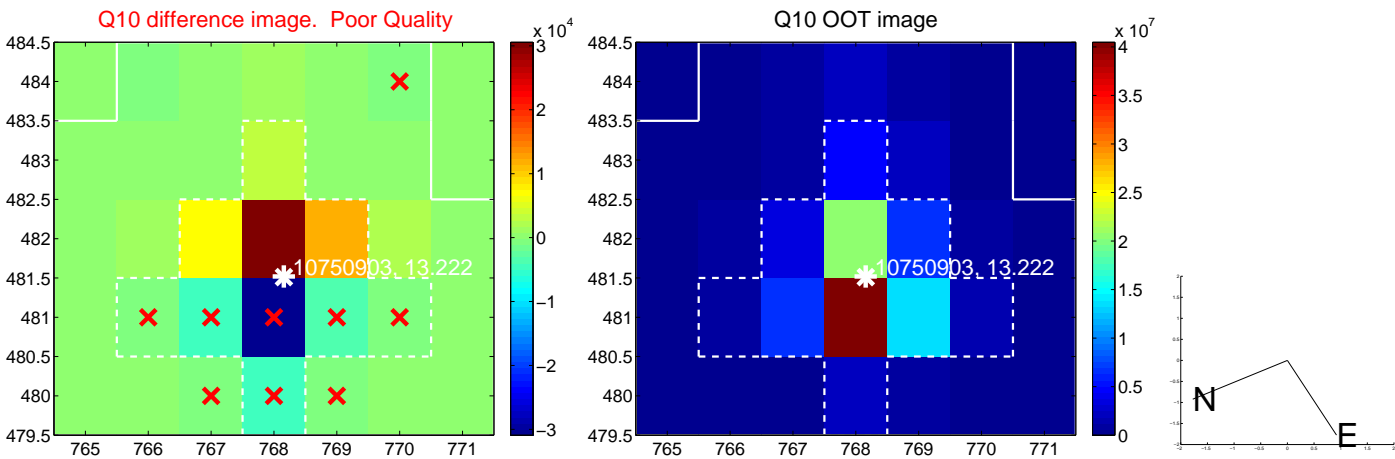
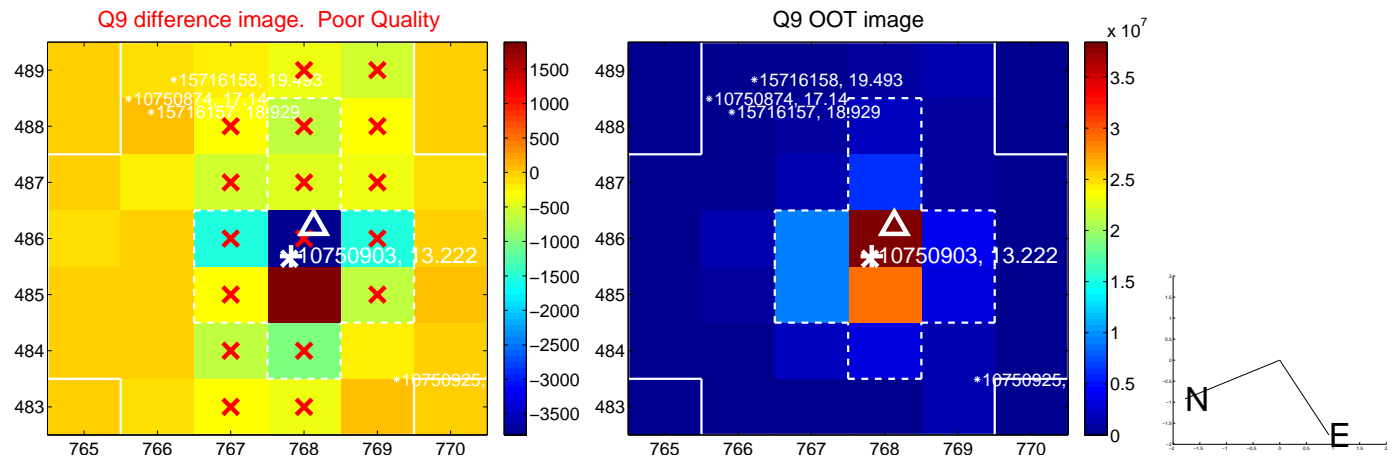


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

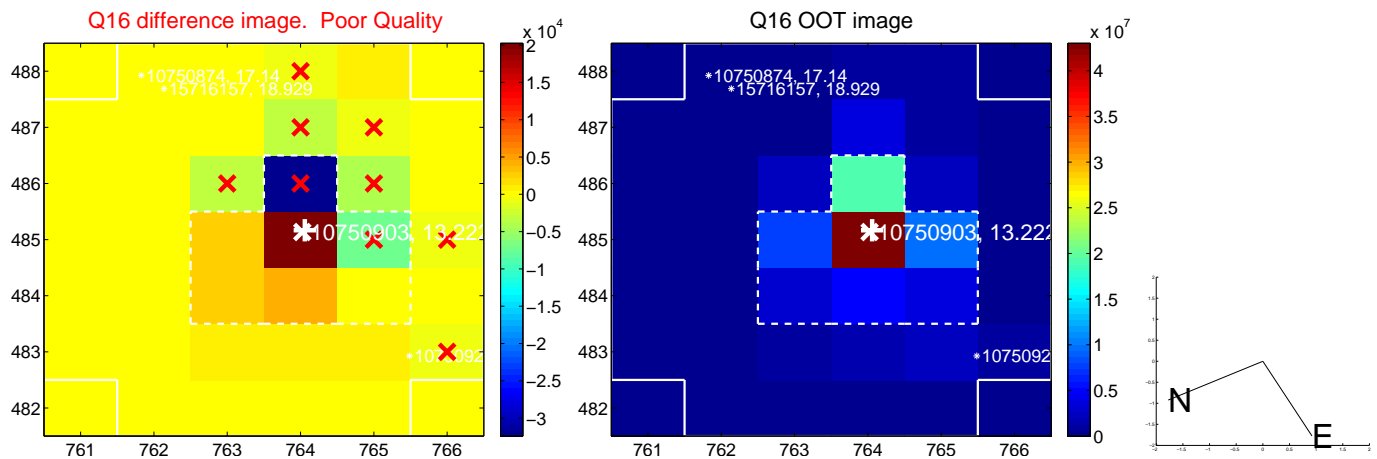
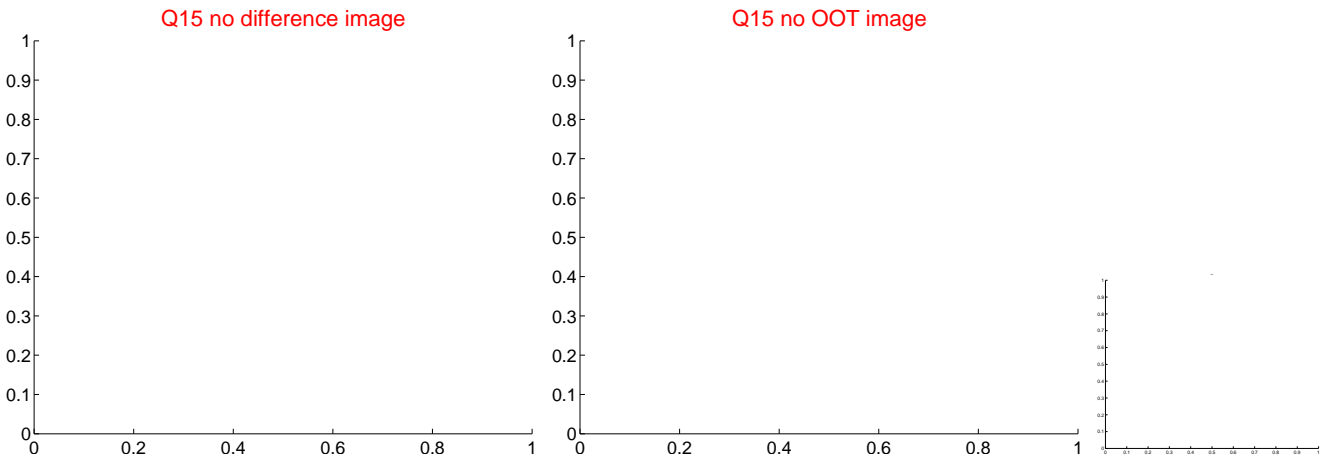
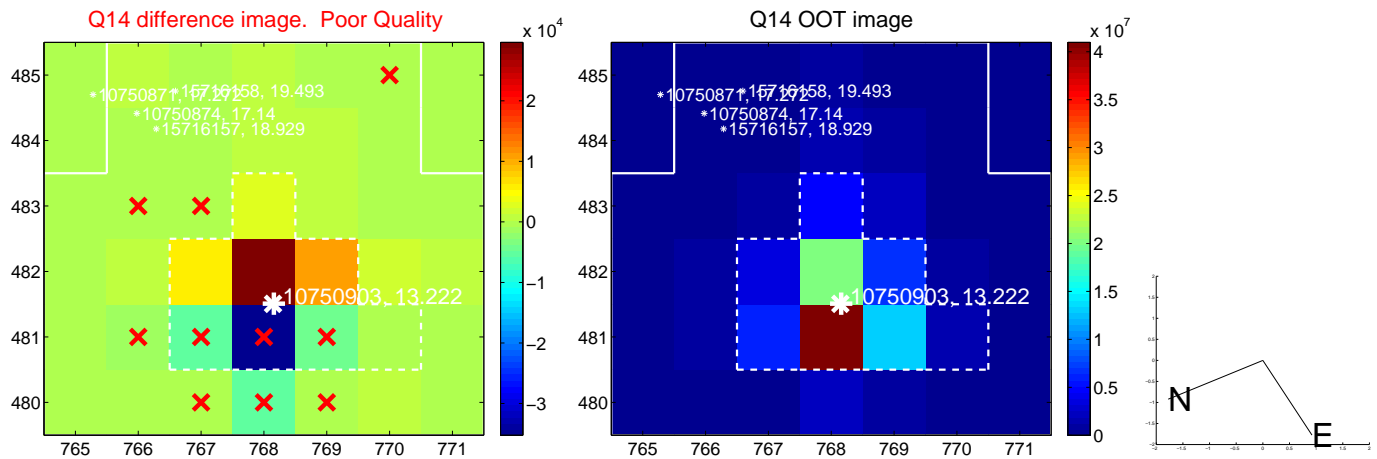
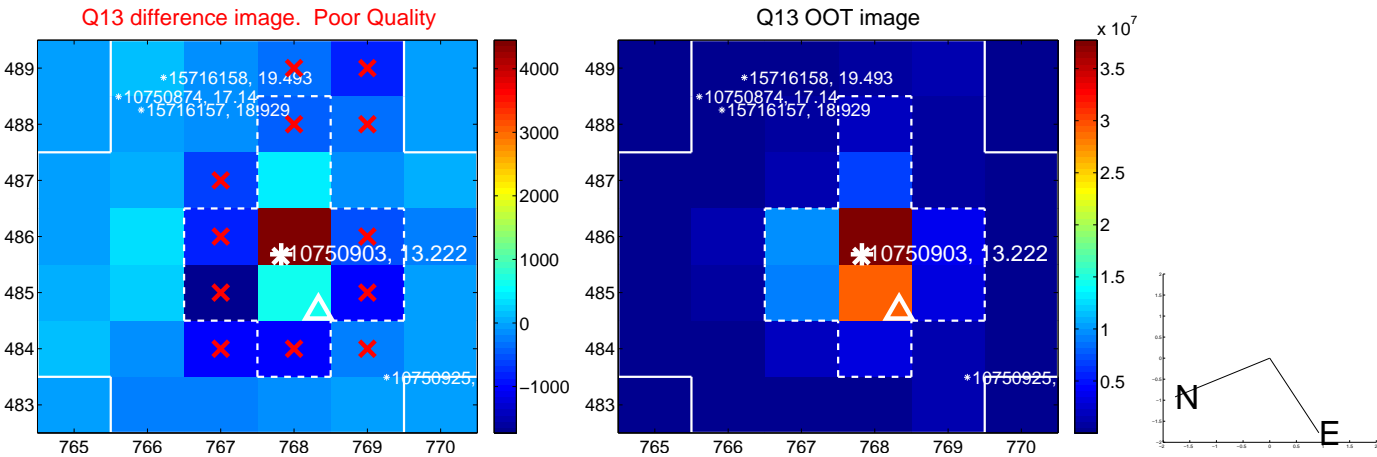




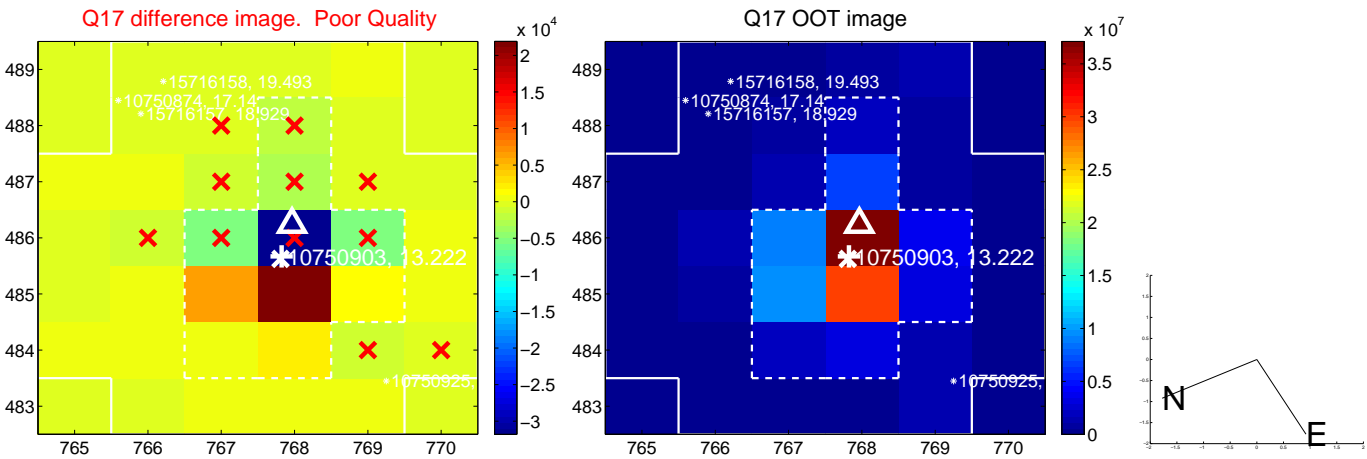
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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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

