

# KIC 006869726

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006869726-01	OBS	No	0.719189	132.228678	0.3	7.684	10.2	0.0	3.07	5054	0.16	22066.68

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006869726-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—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.

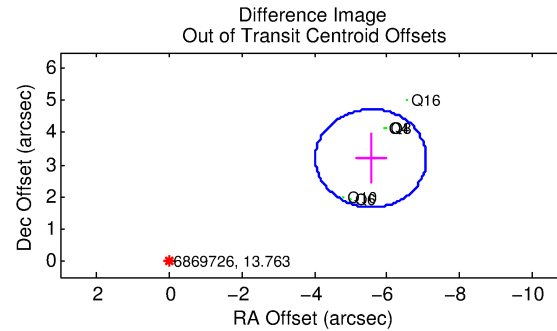
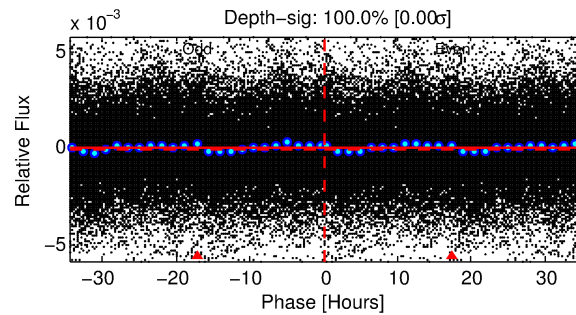
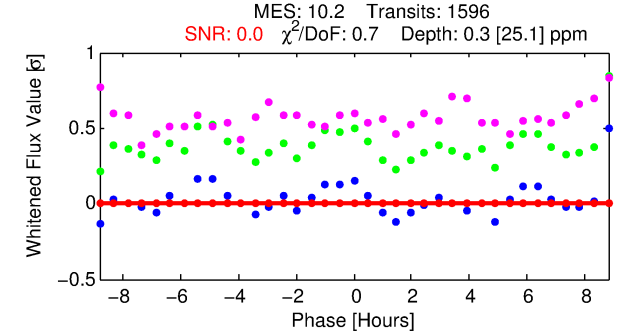
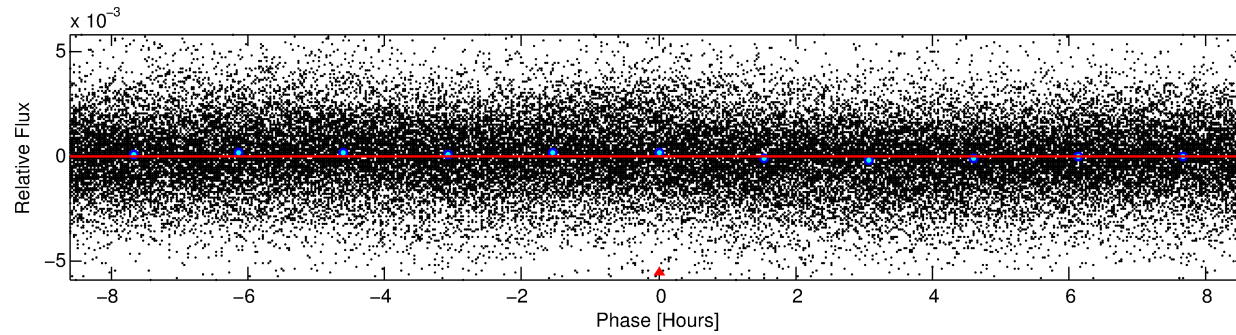
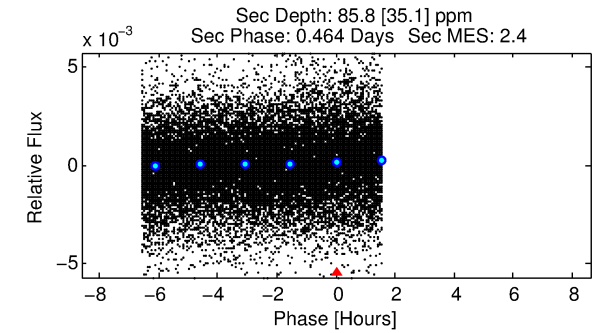
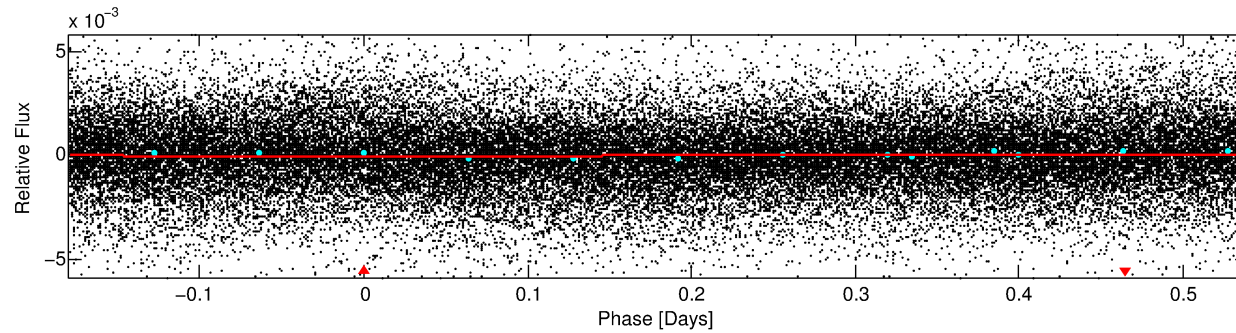
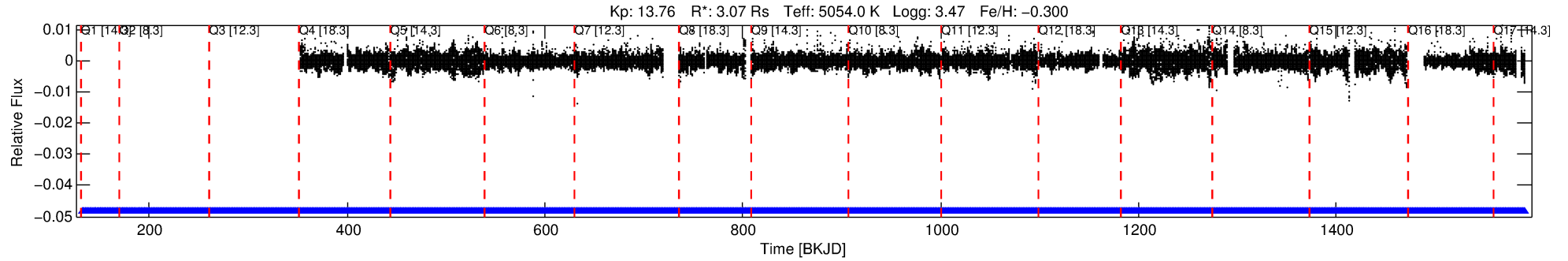
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 006869726-01

No Significant Match Found

# DV One-Page Summary

KIC: 6869726 Candidate: 1 of 1 Period: 0.719 d



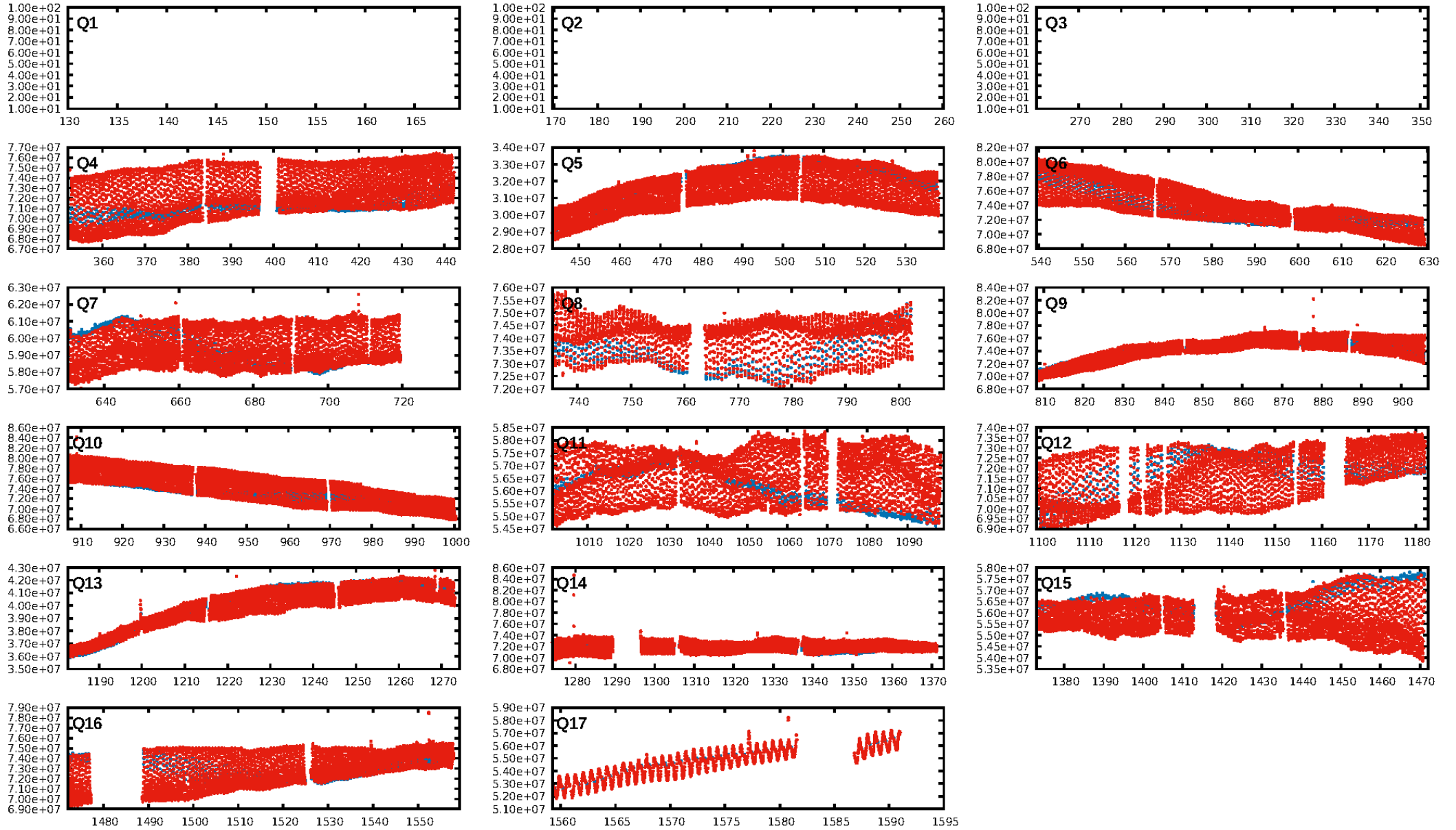
## DV Fit Results:

Period = 0.71919 [0.00780] d  
Epoch = 132.2287 [1.3598] BKJD  
Rp/R\* = 0.0005 [0.0597]  
a/R\* = 1.02 [14.72]  
b = 0.08 [5992.99]  
Seff = 22066.68 [13910.19]  
Teff = 3108 [490] K  
Rp = 0.16 [20.01] Re  
a = 0.0158 [0.0064] AU  
Ag = 470.52 [118983.96] [0.00 $\sigma$ ]  
Teffp = 22379 [1414838] K [0.01 $\sigma$ ]

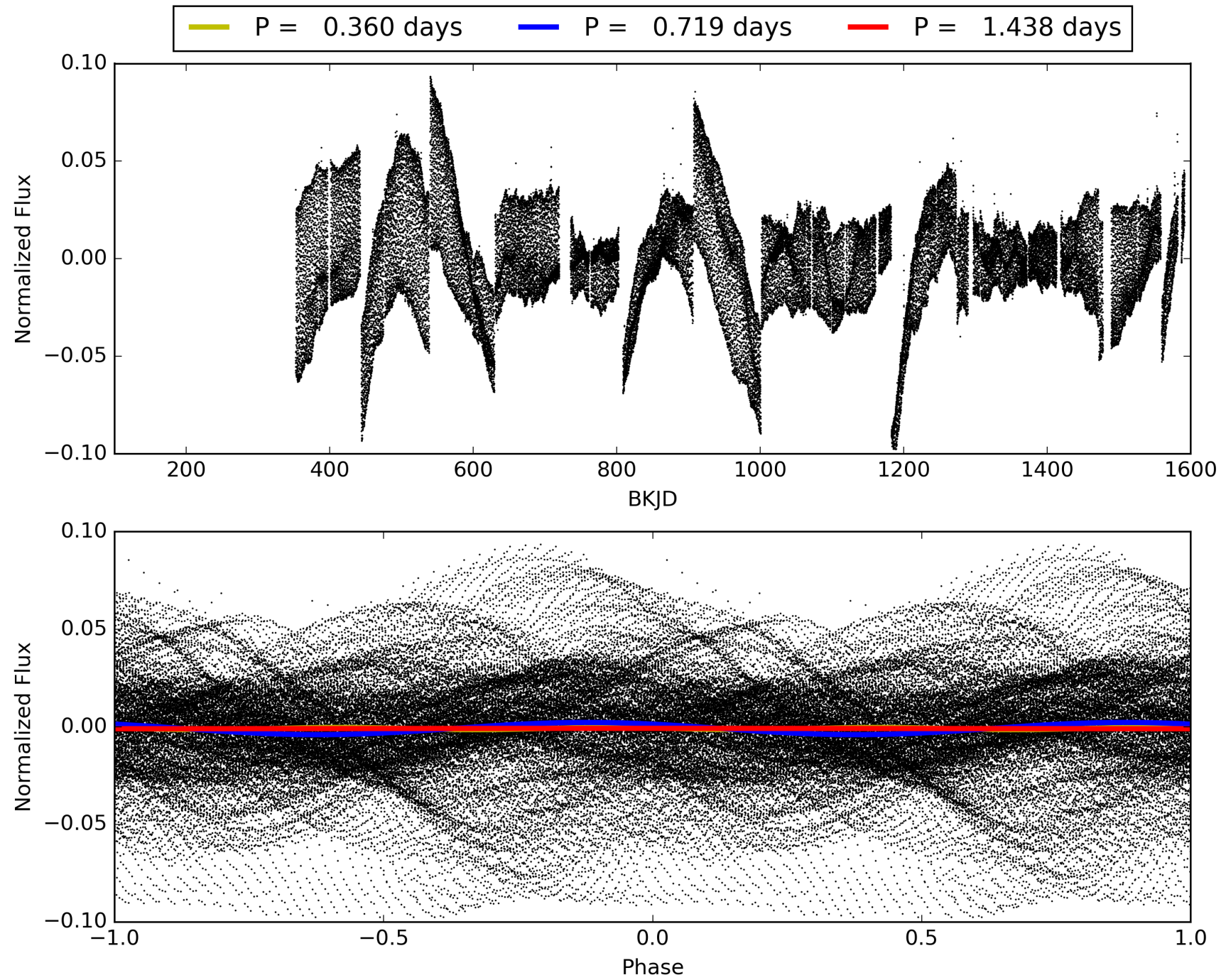
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [1558/1558]  
GhostDiagnostic-chr: N/A  
Centroid-sig: N/A  
Centroid-so: N/A  
OotOffset-rm: 6.411 arcsec [12.58 $\sigma$ ]  
KicOffset-rm: 0.197 arcsec [2.46 $\sigma$ ]  
OotOffset-st: 2/0/3/0 [5]  
KicOffset-st: 2/3/3/3 [11]  
DiffImageQuality-fgm: 0.27 [3/11]  
DiffImageOverlap-fno: 1.00 [14/14]

# TCE 006869726-01, PDC Light Curves

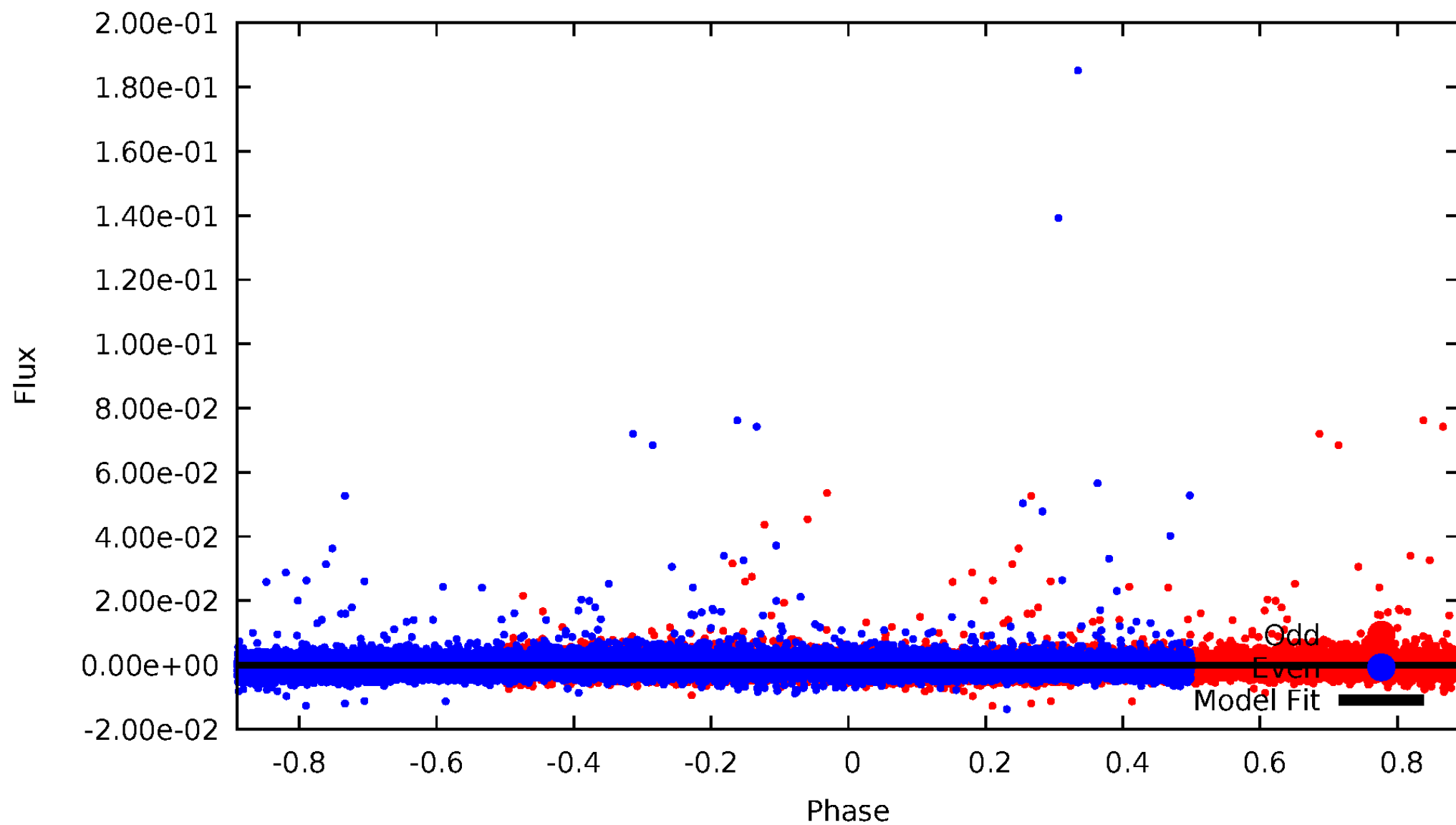


TCE 006869726-01



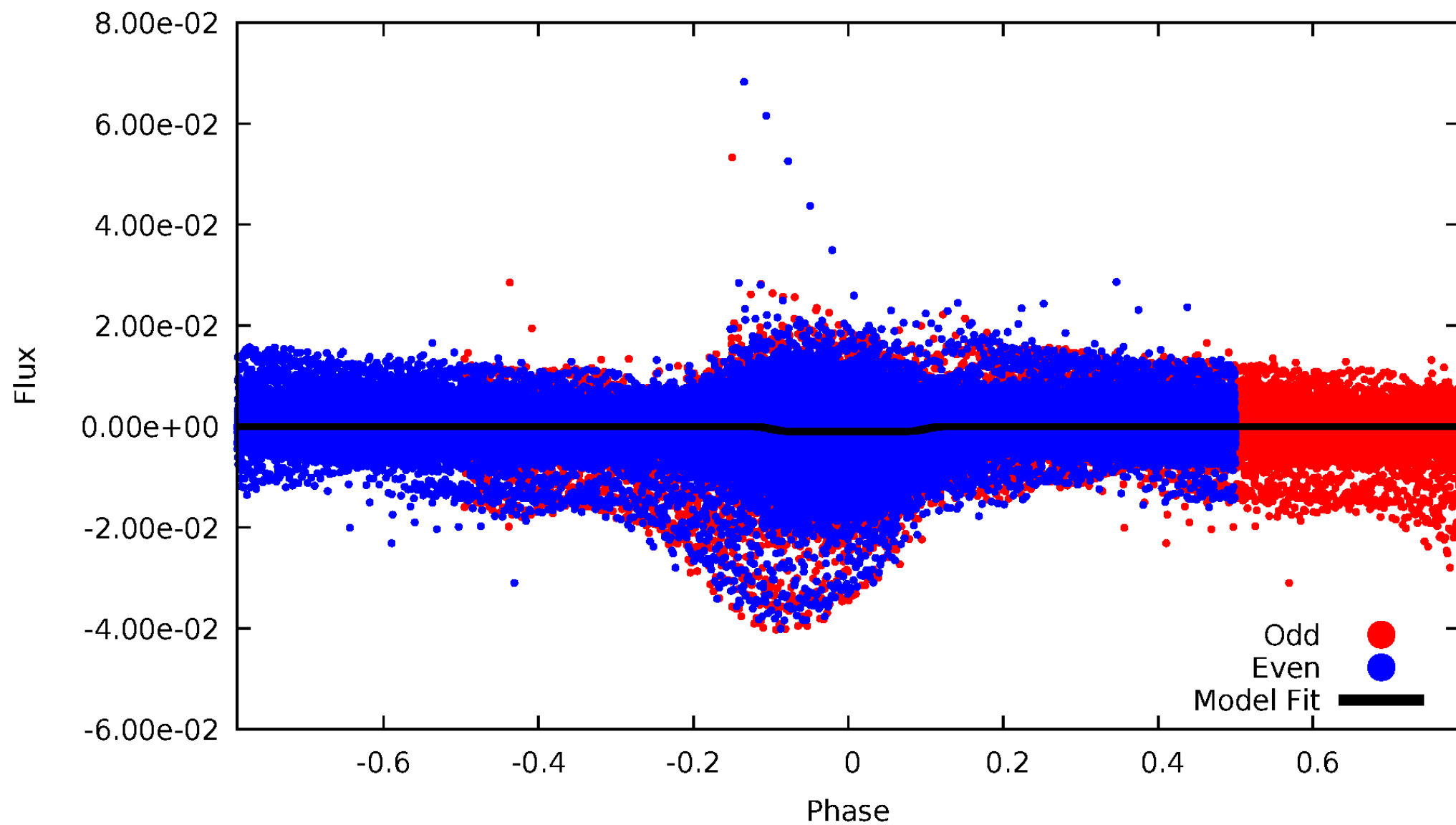
# DV Odd/Even

TCE 006869726-01



# ALT Odd/Even

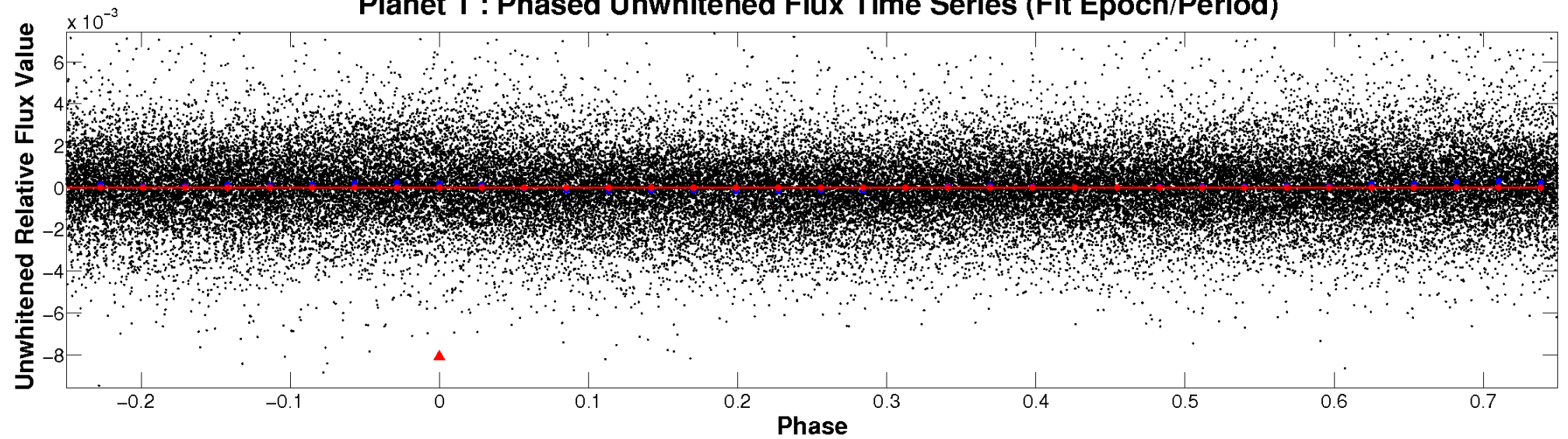
TCE 006869726-01



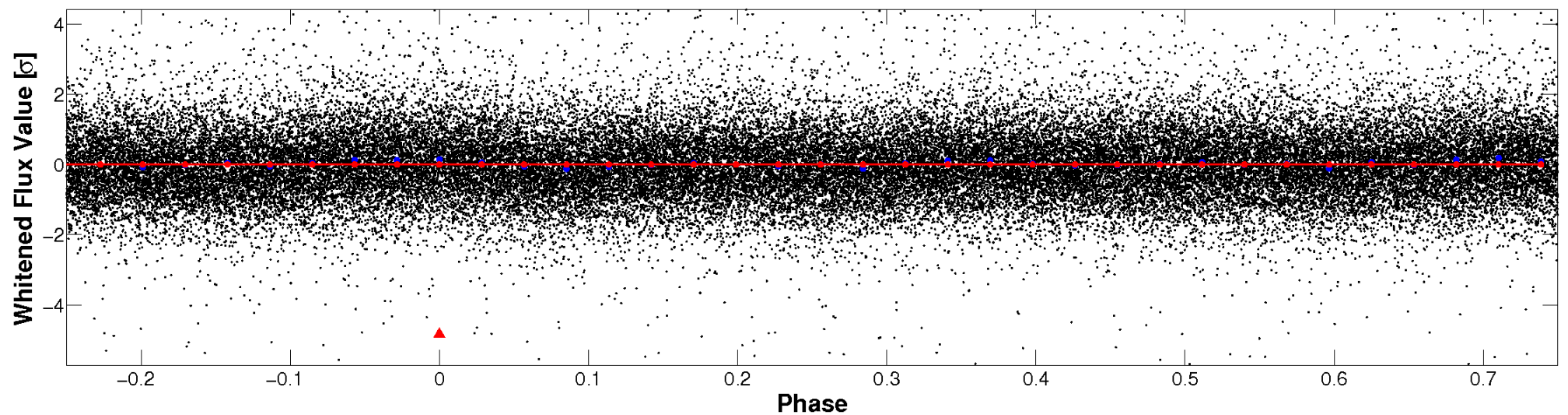


# Non-Whitened Vs. Whitened Light Curve

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

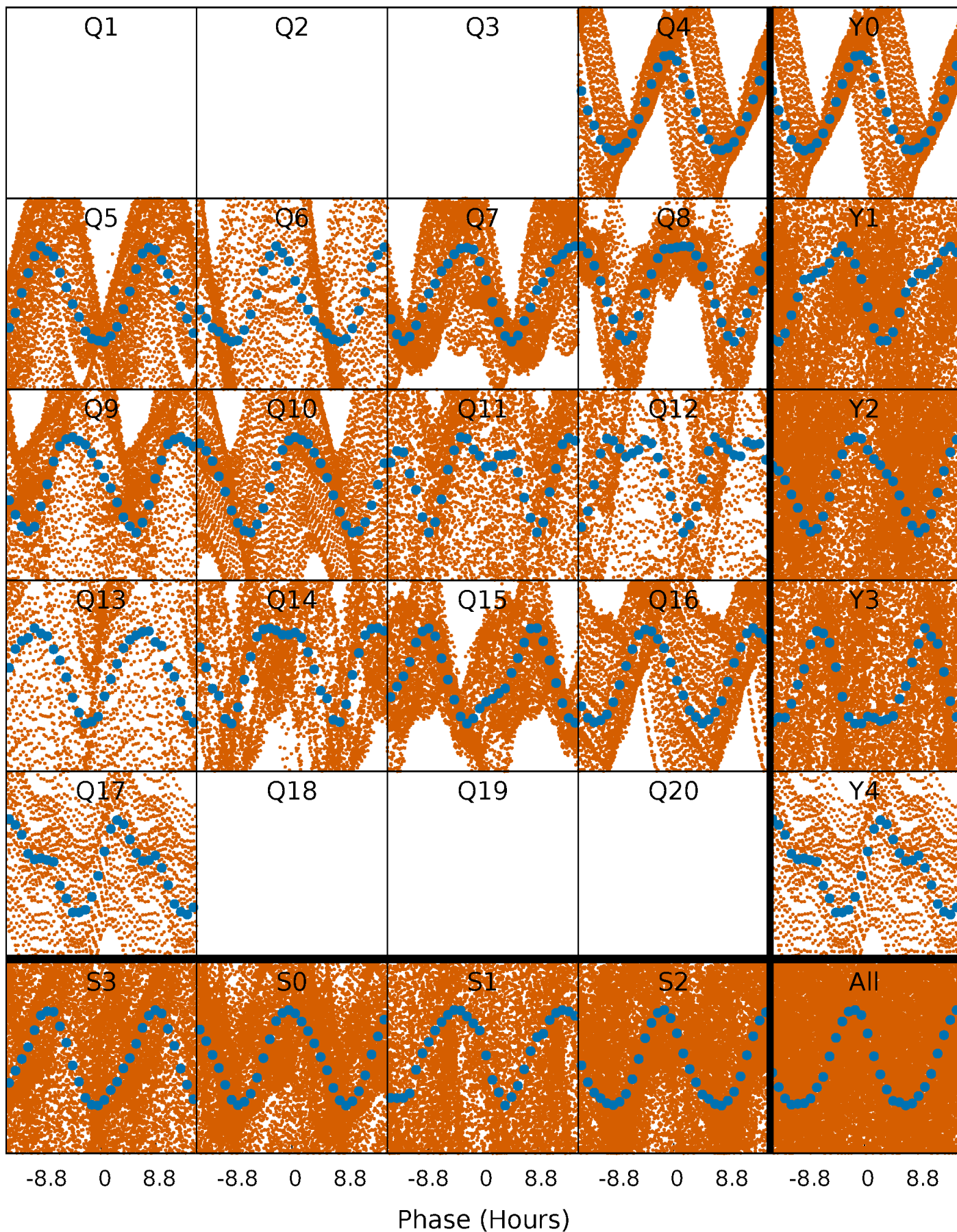


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

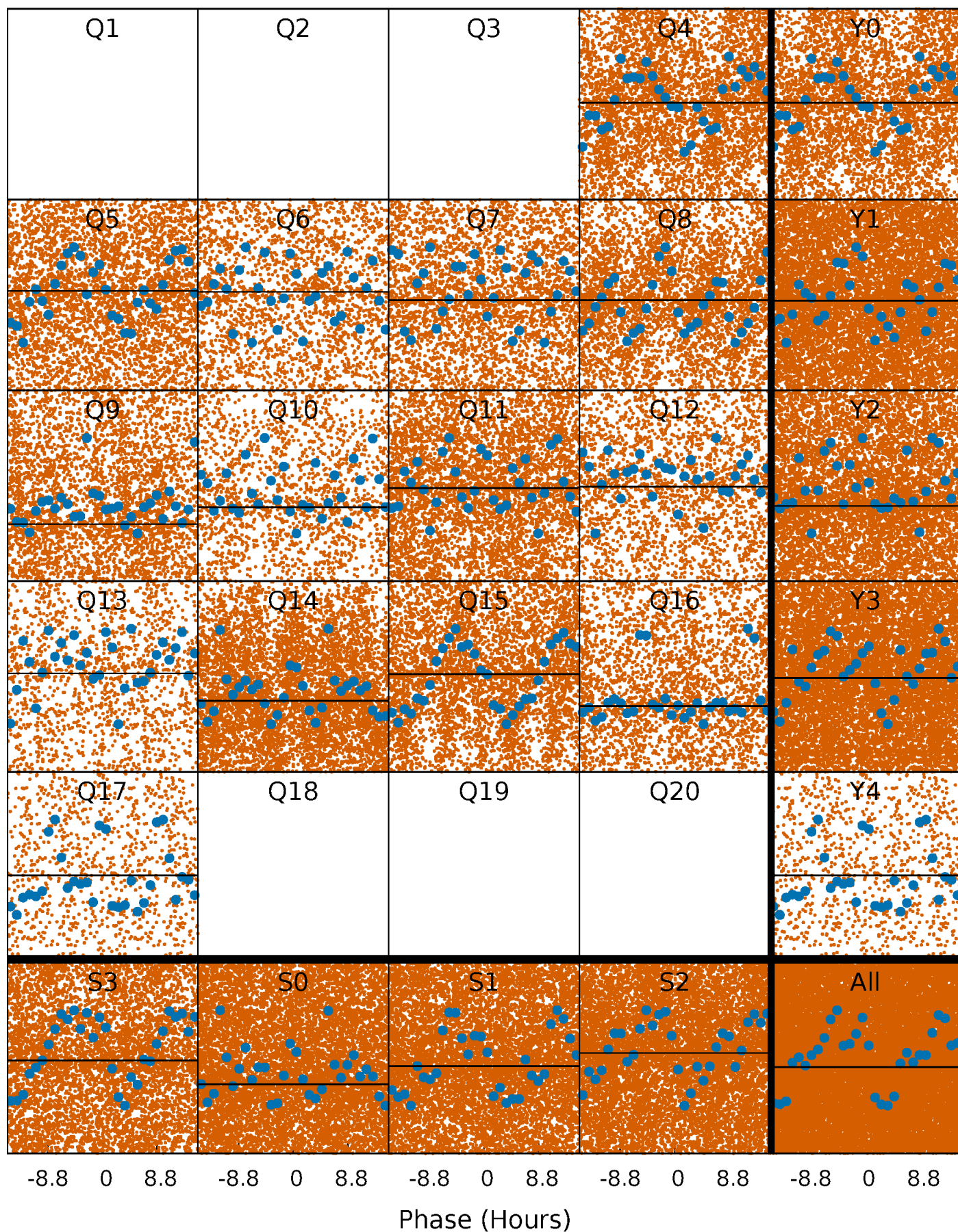
TCE 006869726-01 P= 0.719189 Days  $T_0=132.228678$  (BKJD)





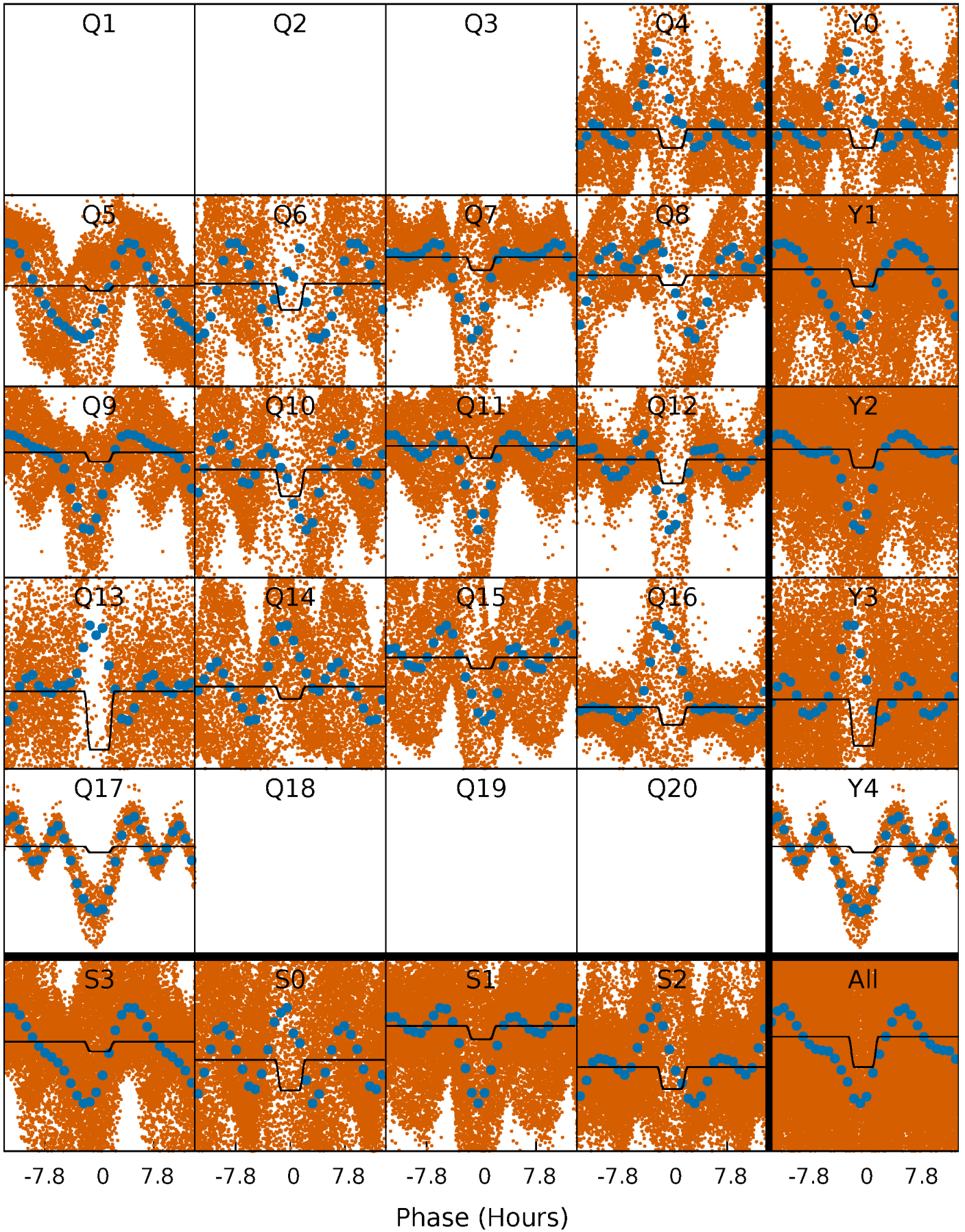
# DV Quarter-Phased Transit Curves

TCE 006869726-01 P= 0.719189 Days  $T_0=132.228678$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

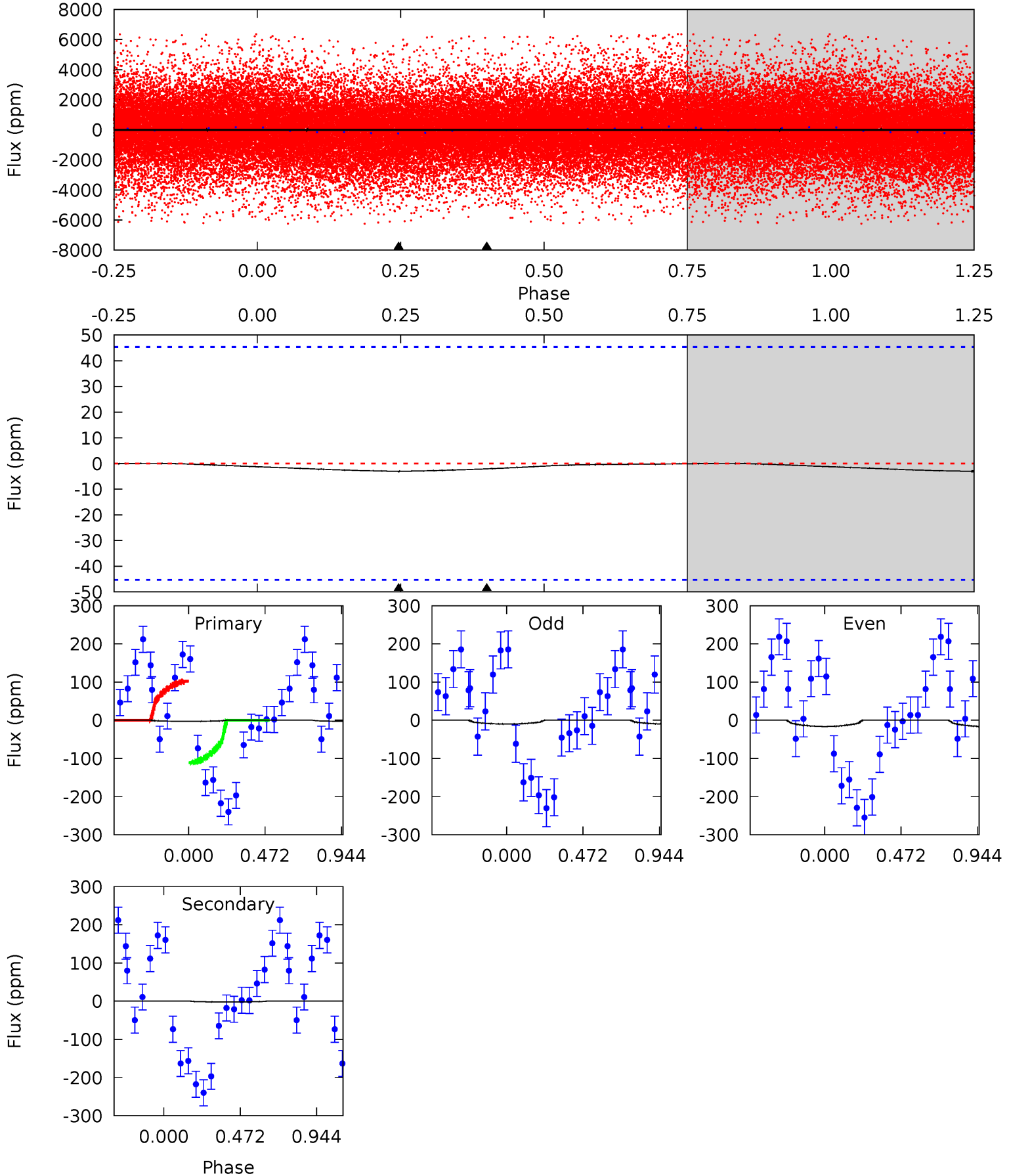
TCE 006869726-01 P= 0.719509 Days  $T_0=132.218227$  (BKJD)



# DV Model-Shift Uniqueness Test

006869726-01, P = 0.719189 Days, E = 132.228678 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
0.28	0.19	0	0	4.23	0.72	0.01	0.28	0.28	0.19	0.19	0.31	-2.75	0.01	0.41

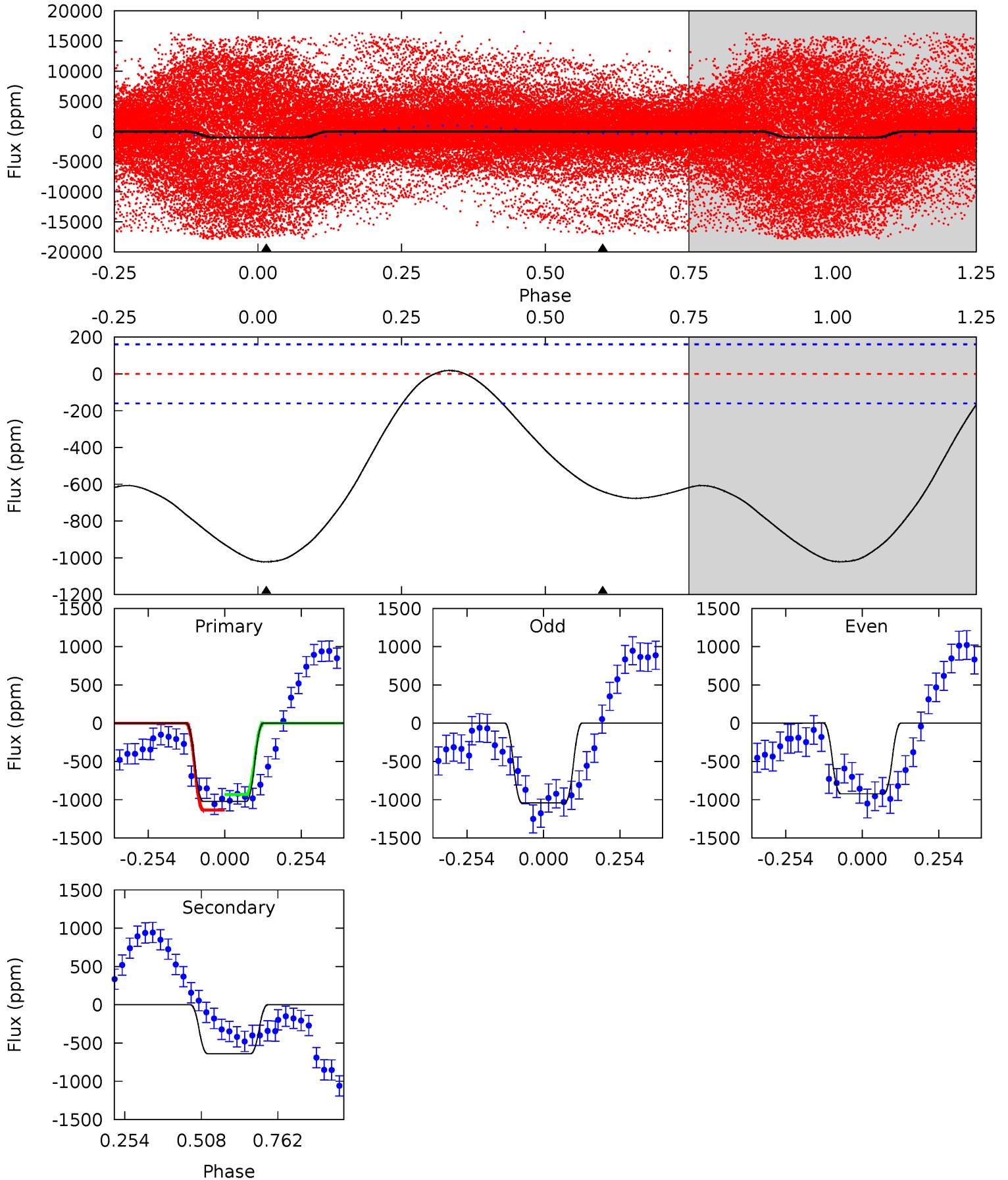




# Alt Model-Shift Uniqueness Test

006869726-01, P = 0.719509 Days, E = 132.218227 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
27.8	17.4	0	0	4.37	1.14	1.17	27.8	27.8	17.4	17.4	1.63	2.35	0.02	2.84





### Stellar Parameters For KIC 006869726

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5054^{+139}_{-123}$	$3.471^{+0.352}_{-0.288}$	$-0.300^{+0.300}_{-0.200}$	$3.070^{+1.405}_{-1.150}$	$1.017^{+0.254}_{-0.169}$	$0.050^{+0.123}_{-0.031}$
	+3%/-2%	+10%/-8%	+100%/-67%	+46%/-37%	+25%/-17%	+248%/-63%
Source	KIC0	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 006869726-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-2 \pm 11$	$14.29^{+15.62}_{-10.21}$	$4328^{+510}_{-437}$	$-3843^{+335}_{-387}$	$0.001^{+0.018}_{-0.008}$
Alt.	$-639 \pm 37$	$17.90^{+18.29}_{-11.97}$	$4369^{+475}_{-526}$	$-2660^{+8361}_{-1144}$	$0.273^{+2.425}_{-0.206}$

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

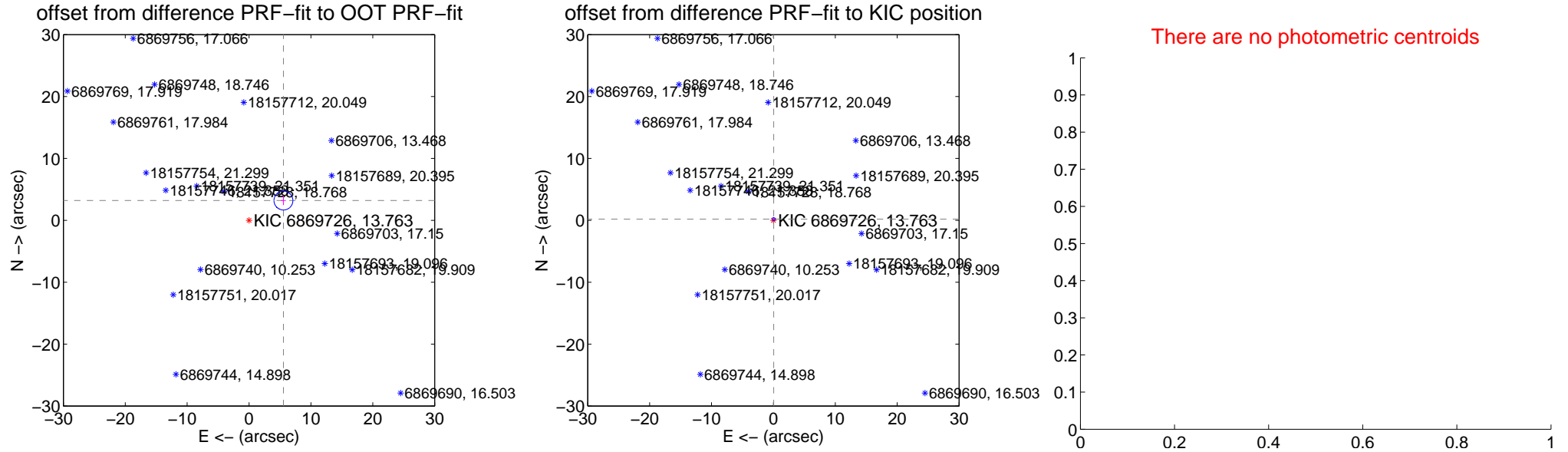
## DV Centroid Data

Supplemental centroid analysis for 006869726-01. Kepler magnitude: 13.76. Transit SNR 0.01

There are 3 quarters with good PRF difference image offsets

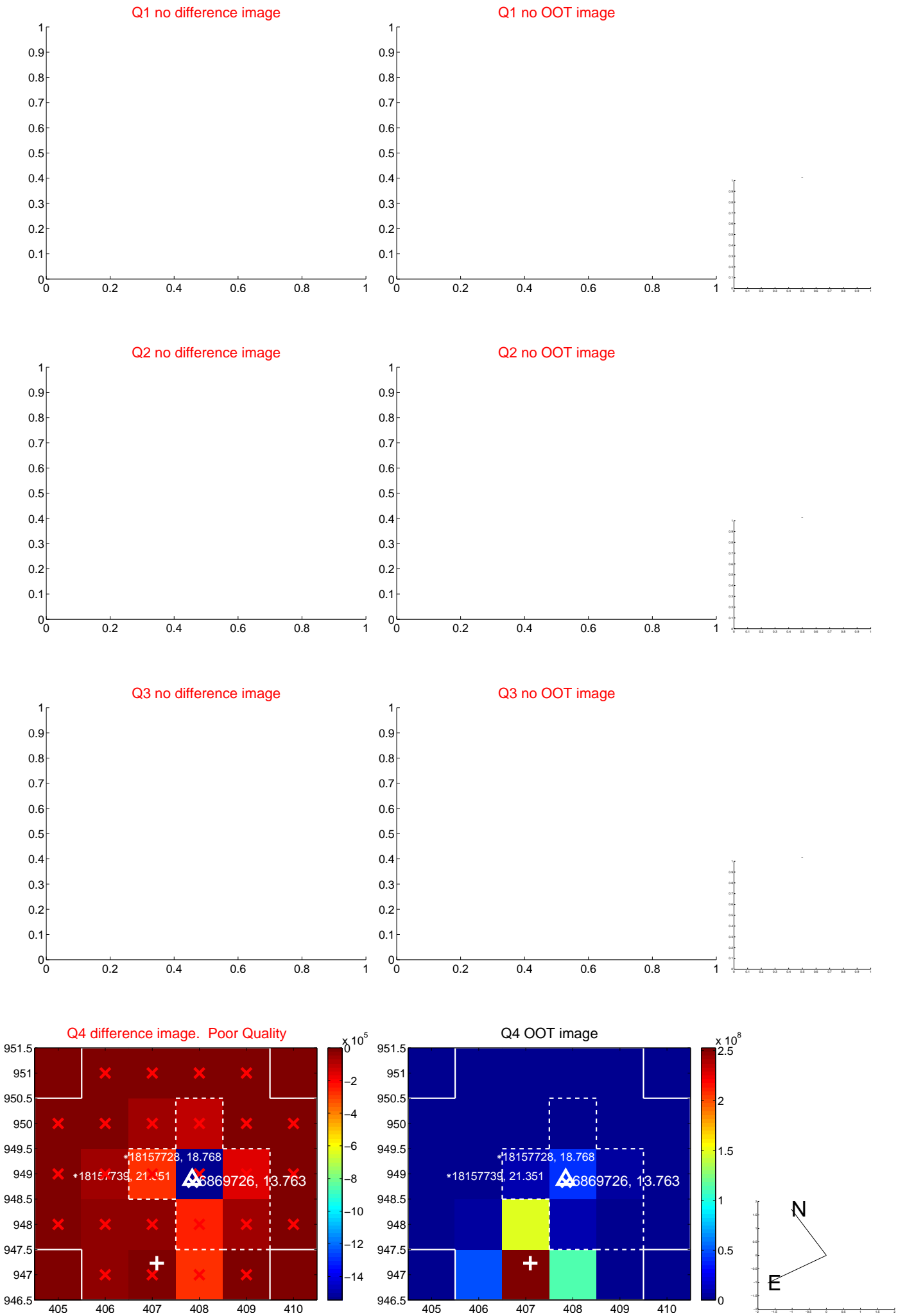
The OOT PRF centroid is offset from the target star catalog position by about 7.71 arcsec so the offset from difference PRF-fit to OOT-PRF-fit may be invalid.

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$6.411 \pm 0.509$	12.58	$-5.558 \pm 0.399$	$3.195 \pm 0.750$
PRF-fit source offset from KIC position	$0.197 \pm 0.080$	2.46	$-0.044 \pm 0.086$	$0.192 \pm 0.079$
photometric centroid source offset	—	—	—	—

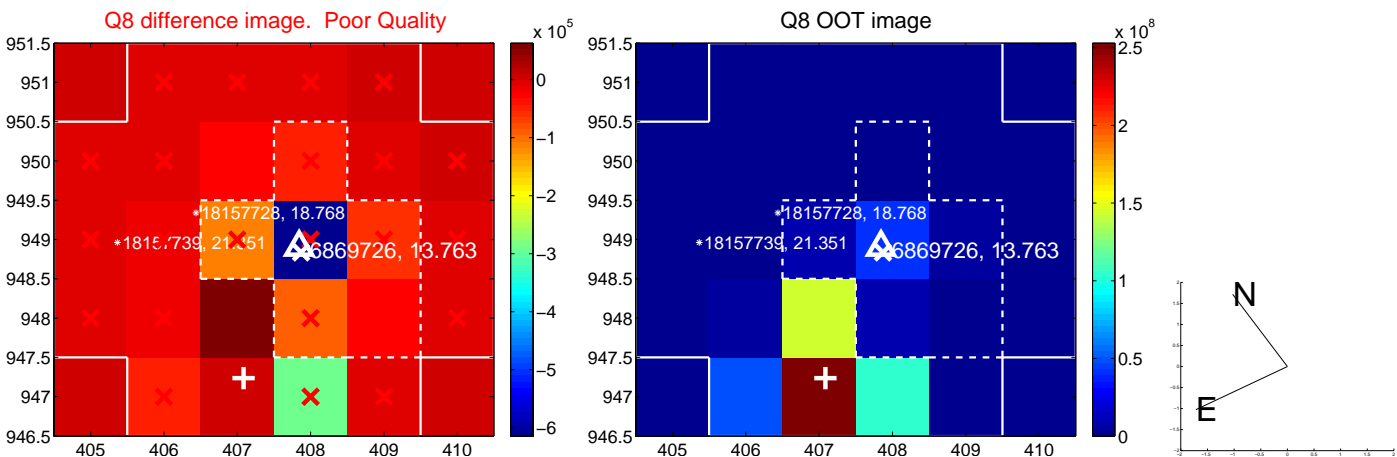
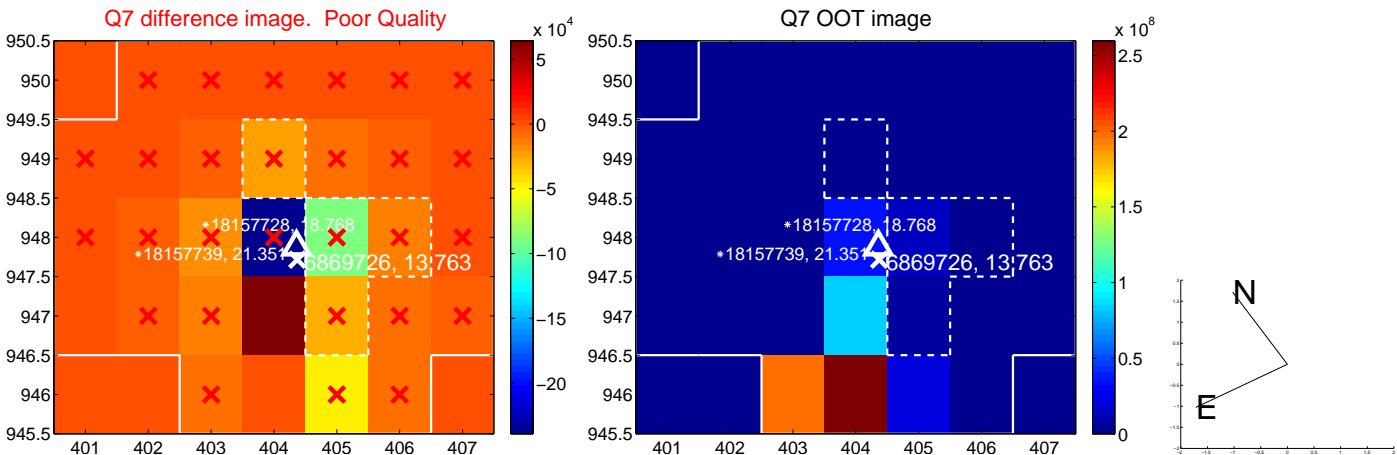
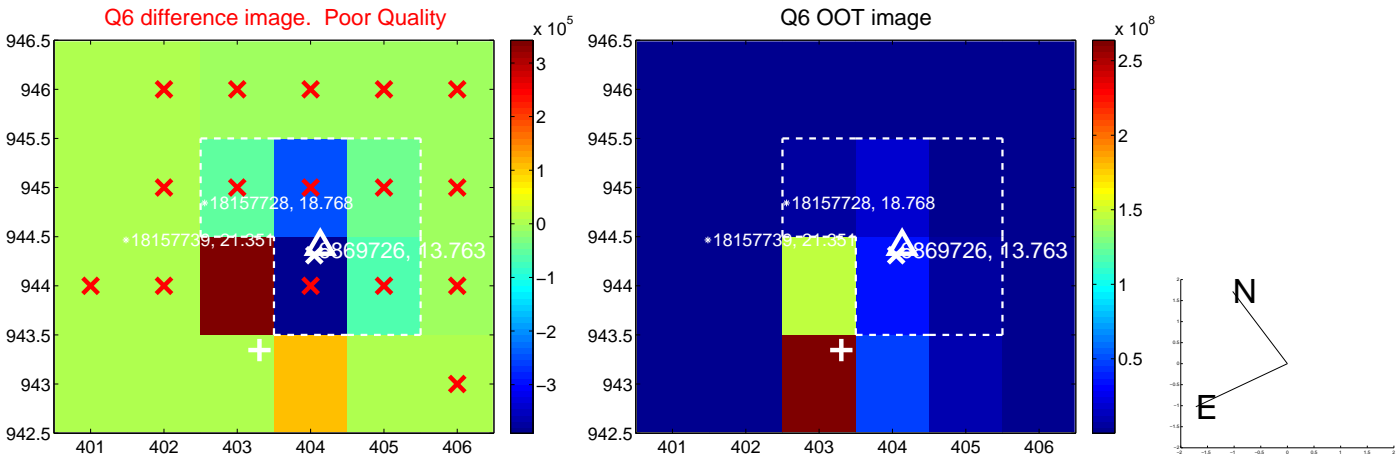
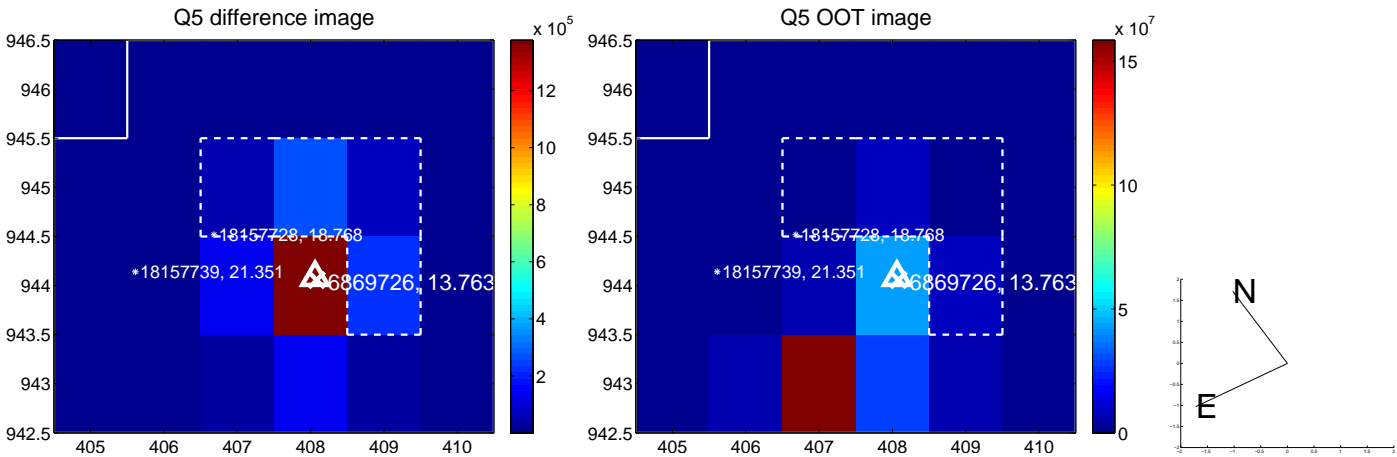


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

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

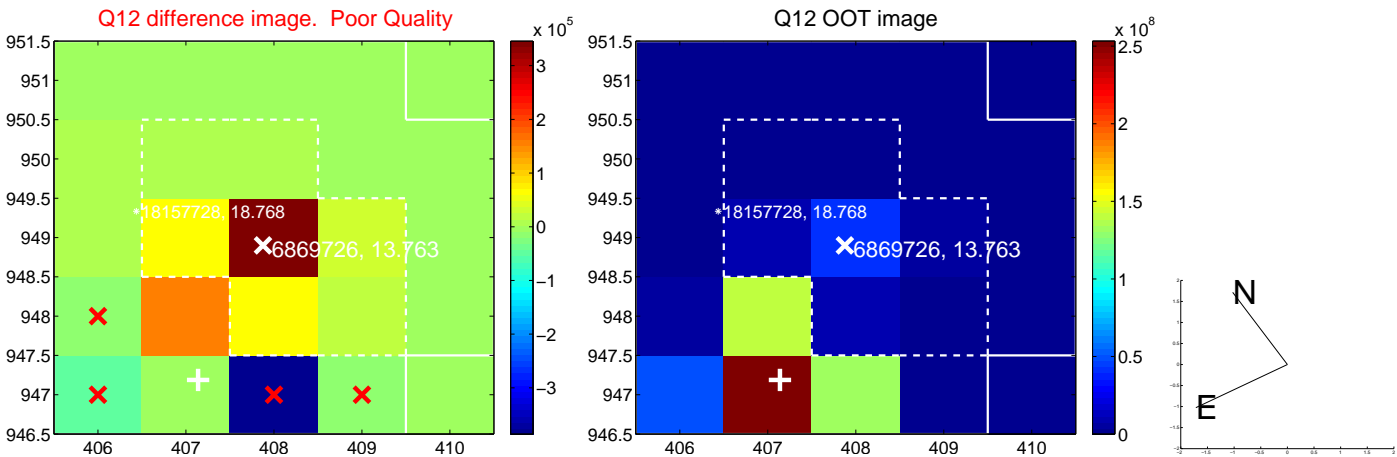
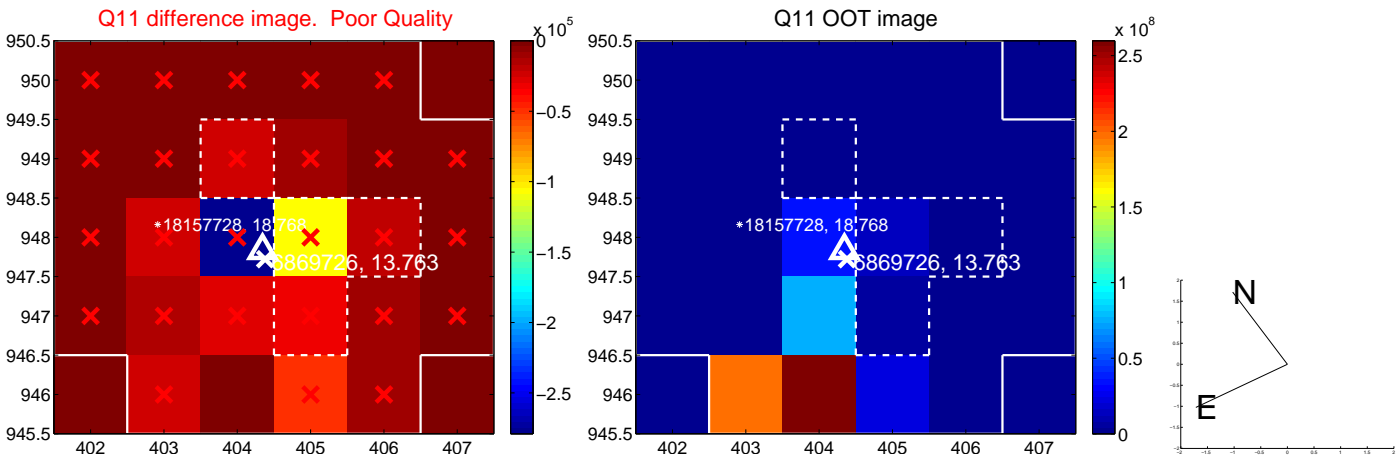
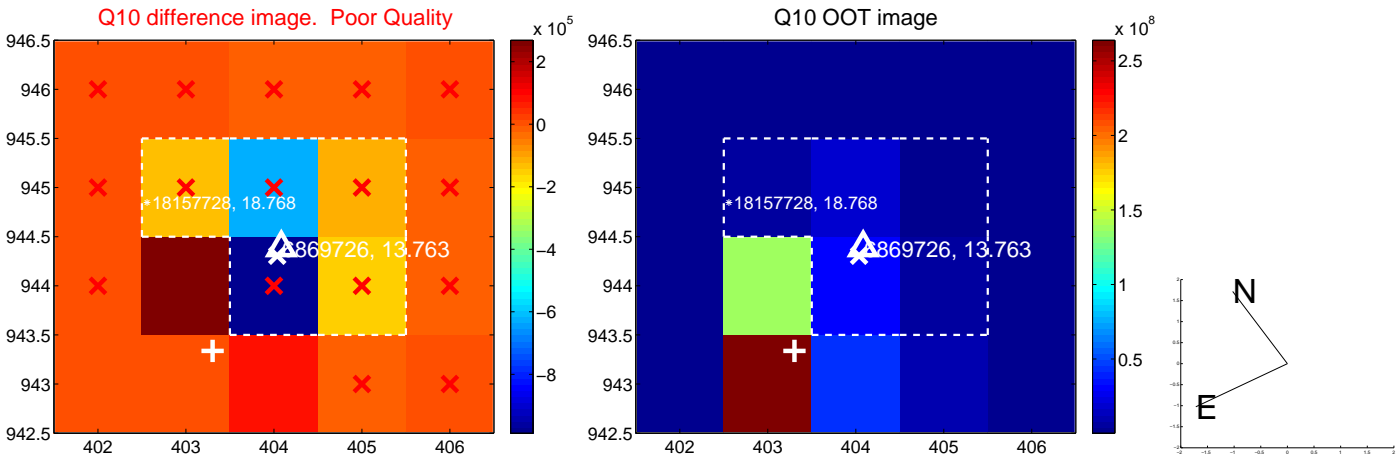
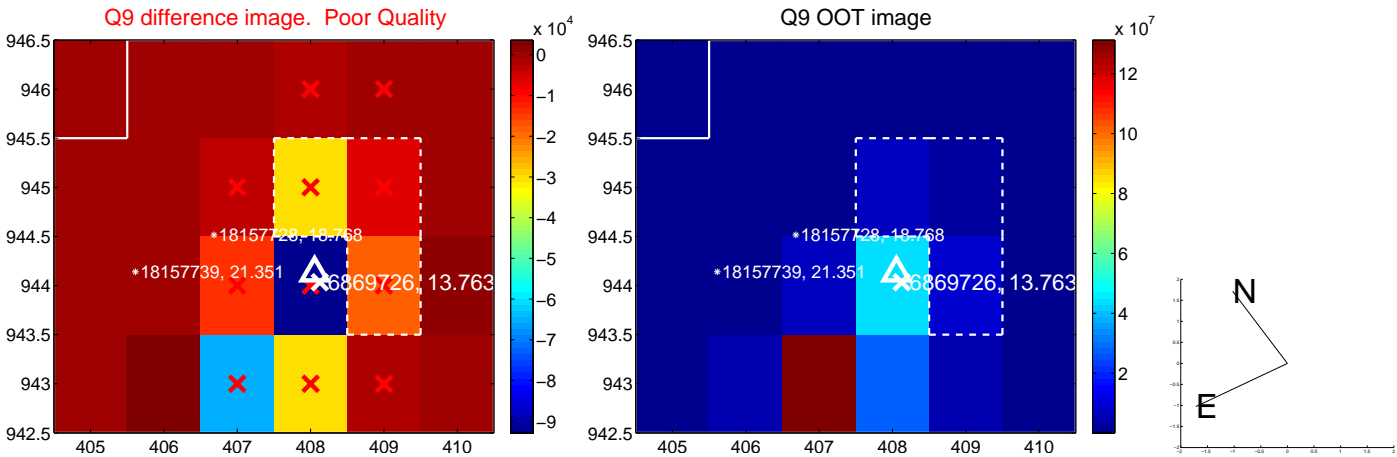


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

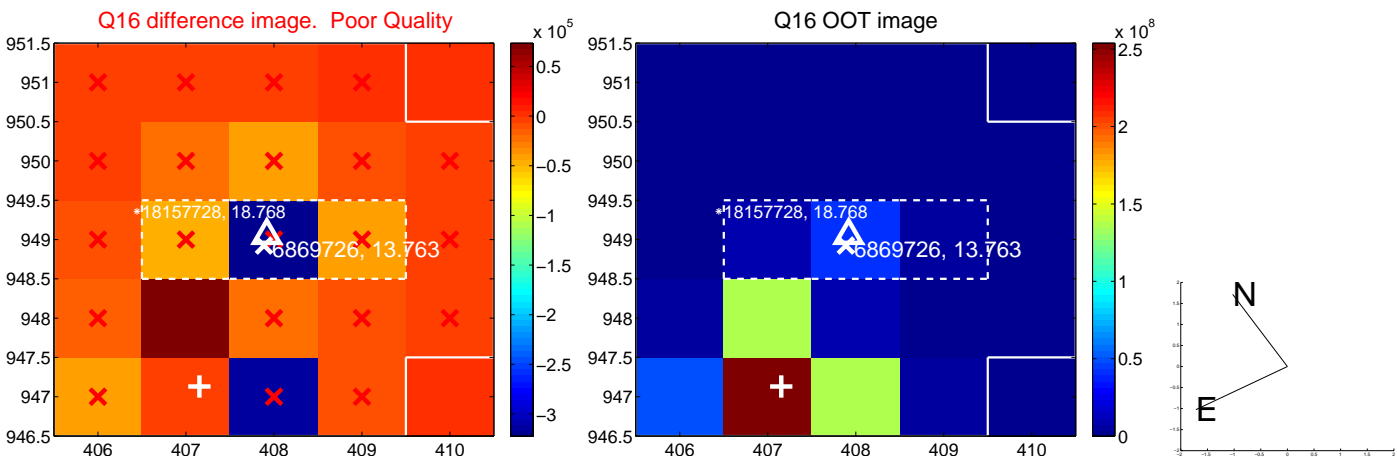
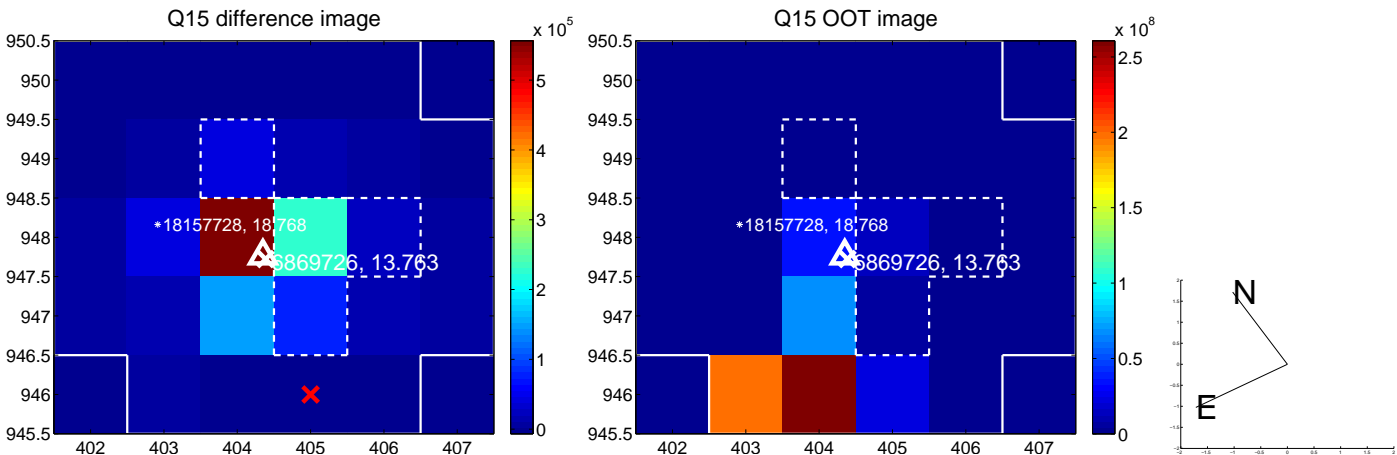
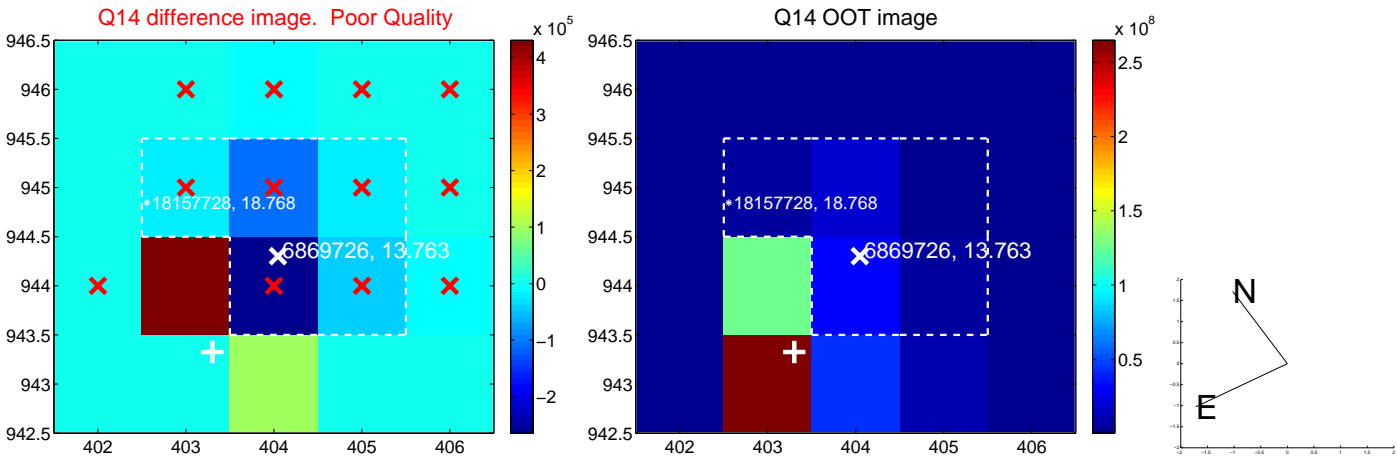
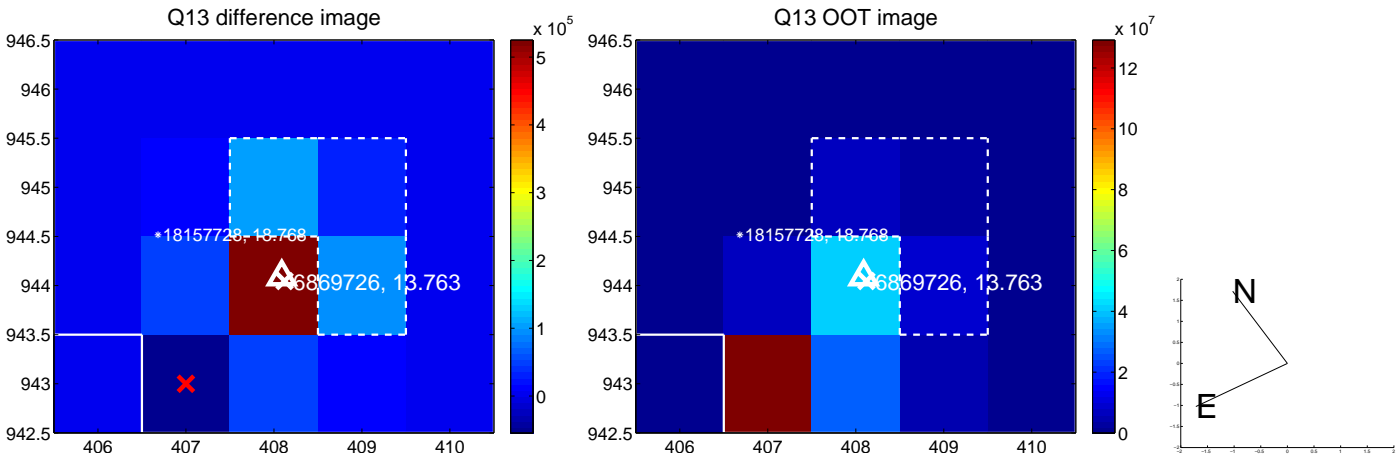




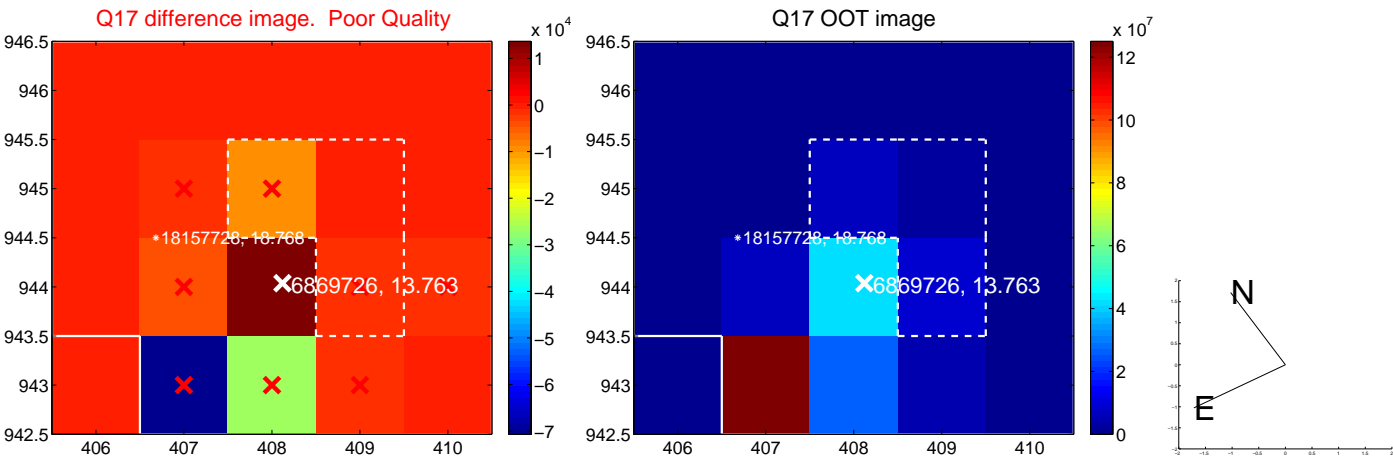
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



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



folded centroid time series figure for this object.

UKIRT Image

