

# KIC 005612697

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
005612697-01	OBS	3206.01	15.151338	133.934839	196.0	4.621	10.2	10.2	1.00	5780	1.73	69.61

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005612697-01	OBS	PC	0.82	0	0	0	0	CENT_KIC_POS

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

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

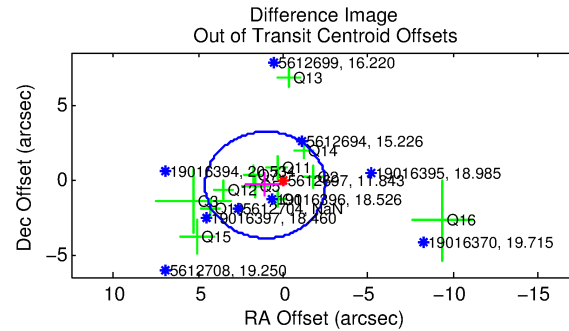
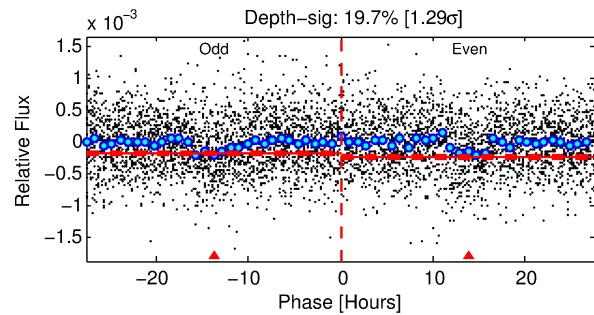
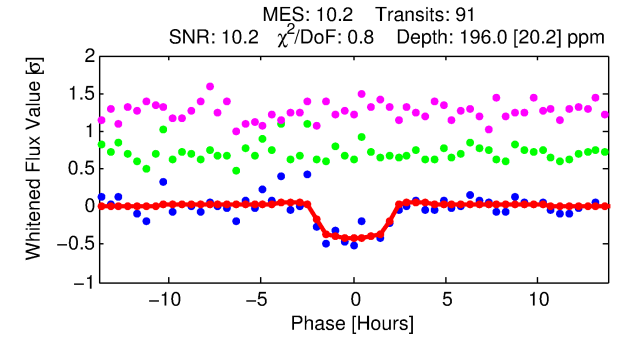
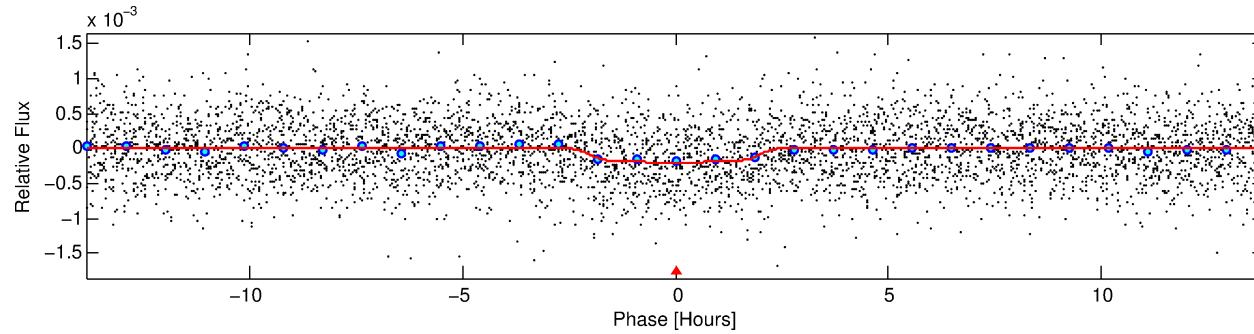
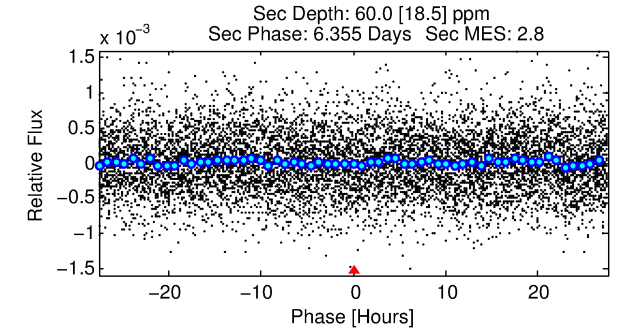
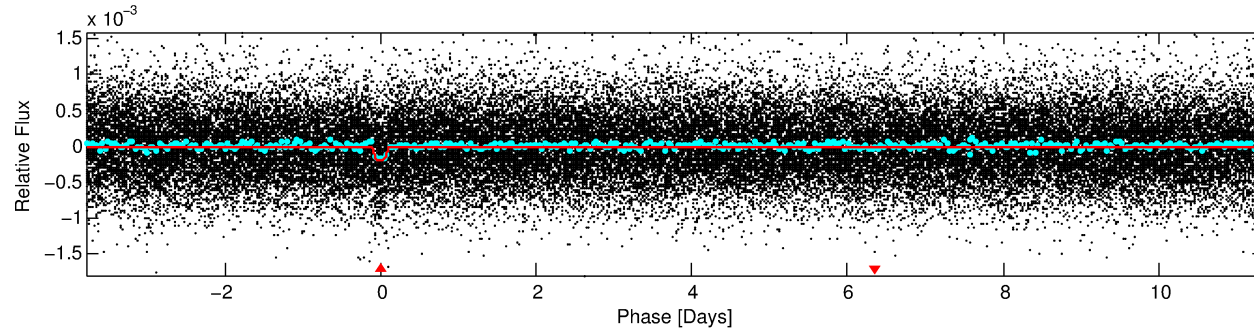
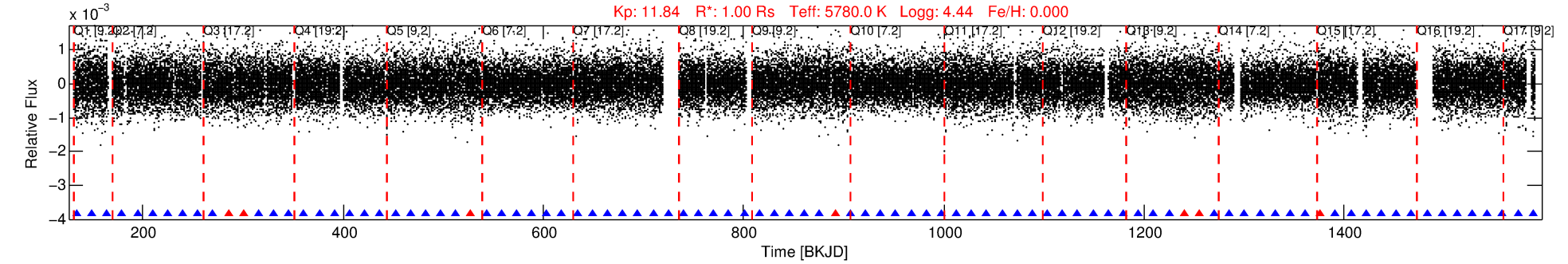
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 005612697-01

No Significant Match Found

# DV One-Page Summary

KIC: 5612697 Candidate: 1 of 1 Period: 15.151 d  
KOI: K03206.01 Corr: 0.947



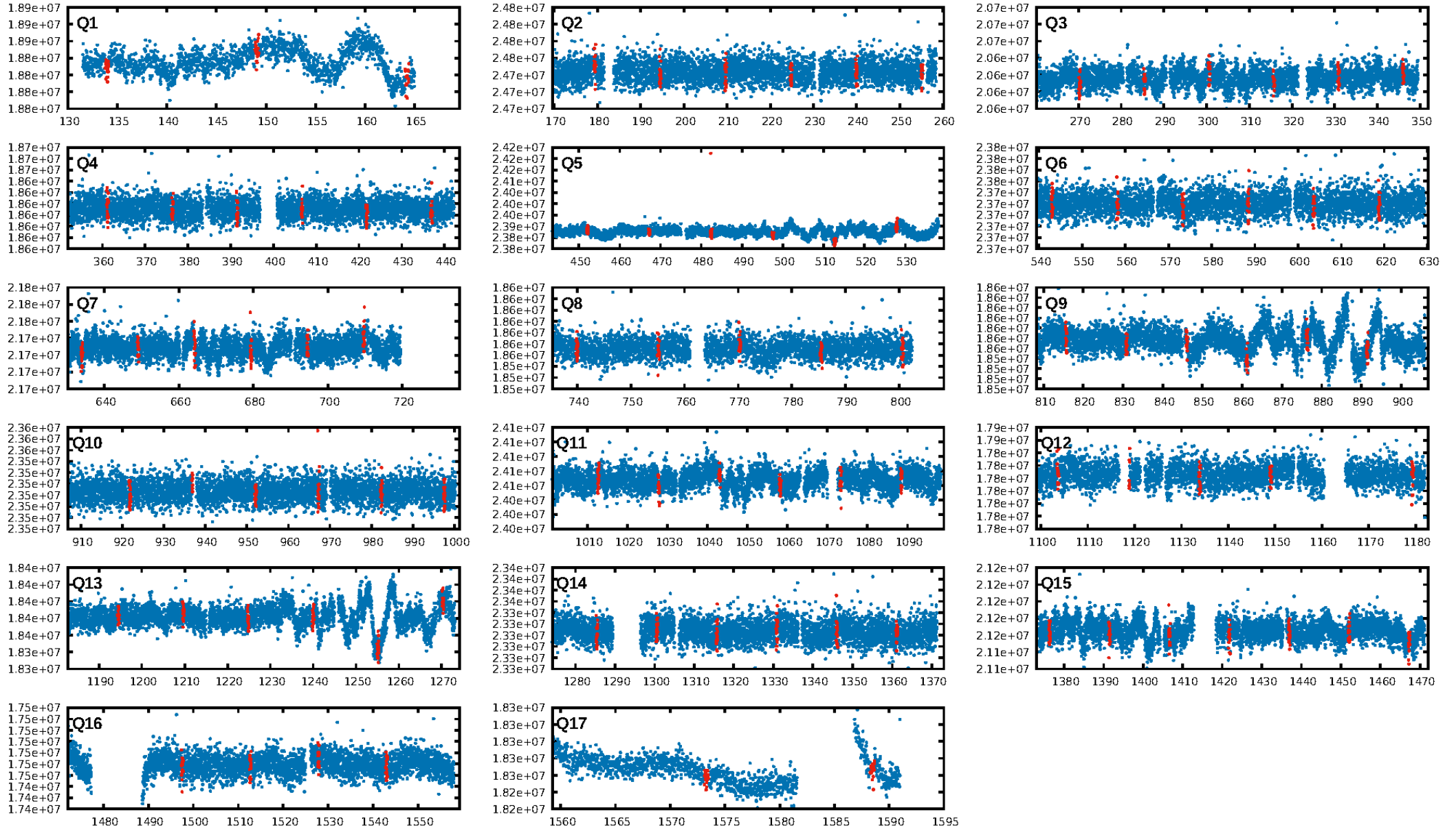
## DV Fit Results:

Period = 15.15134 [0.00017] d  
Epoch = 133.9348 [0.0092] BKJD  
Rp/R\* = 0.0158 [0.0032]  
a/R\* = 10.12 [9.45]  
b = 0.93 [0.13]  
Seff = 69.61 [0.00]  
Teq = 737 [0] K  
Rp = 1.73 [0.35] Re  
a = 0.1199 [0.0000] AU  
Ag = 158.51 [80.28] [1.96σ]  
Teffp = 4041 [512] K [6.46σ]

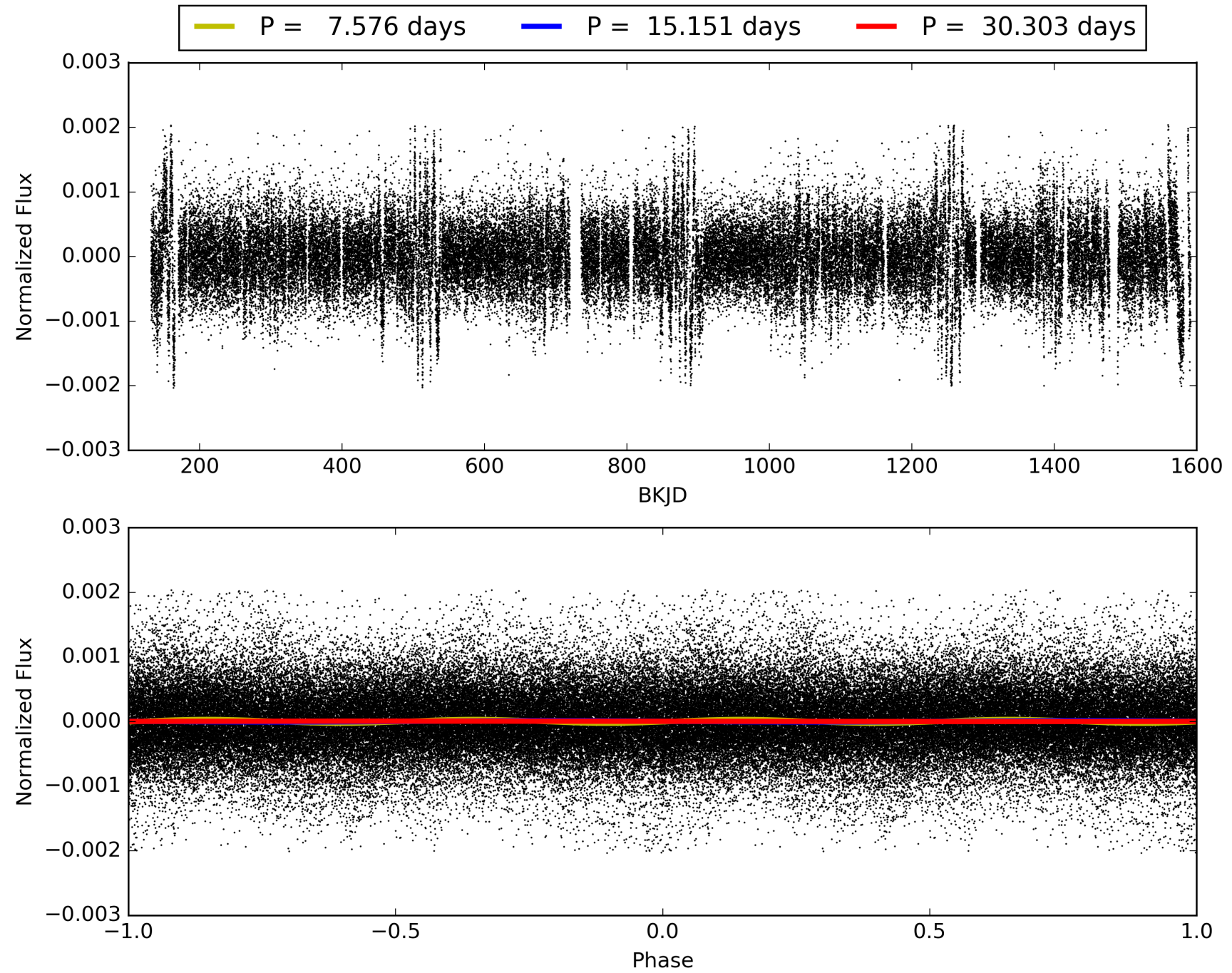
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 98.9%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: 4.70e-24  
RollingBand-fgt: 0.92 [79/86]  
GhostDiagnostic-chr: 1.772  
Centroid-sig: 0.1%  
Centroid-so: 3.661 arcsec [3.02σ]  
OotOffset-rm: 1.103 arcsec [0.93σ]  
KicOffset-rm: 1.878 arcsec [2.24σ]  
OotOffset-st: 3/4/2/3 [12]  
KicOffset-st: 3/4/2/3 [12]  
DiffImageQuality-fgm: 0.17 [2/12]  
DiffImageOverlap-fno: 1.00 [17/17]

# TCE 005612697-01, PDC Light Curves

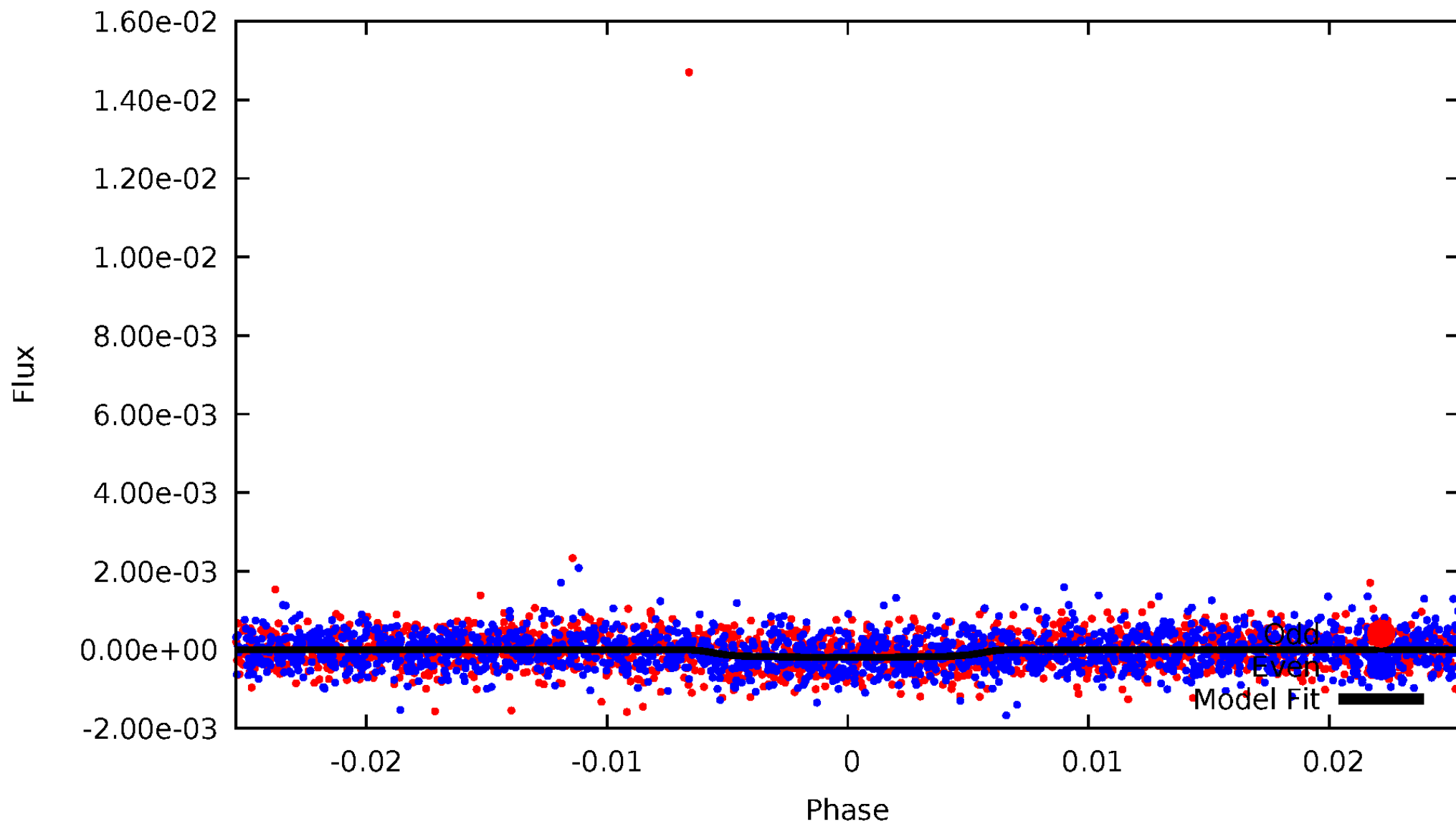


# TCE 005612697-01



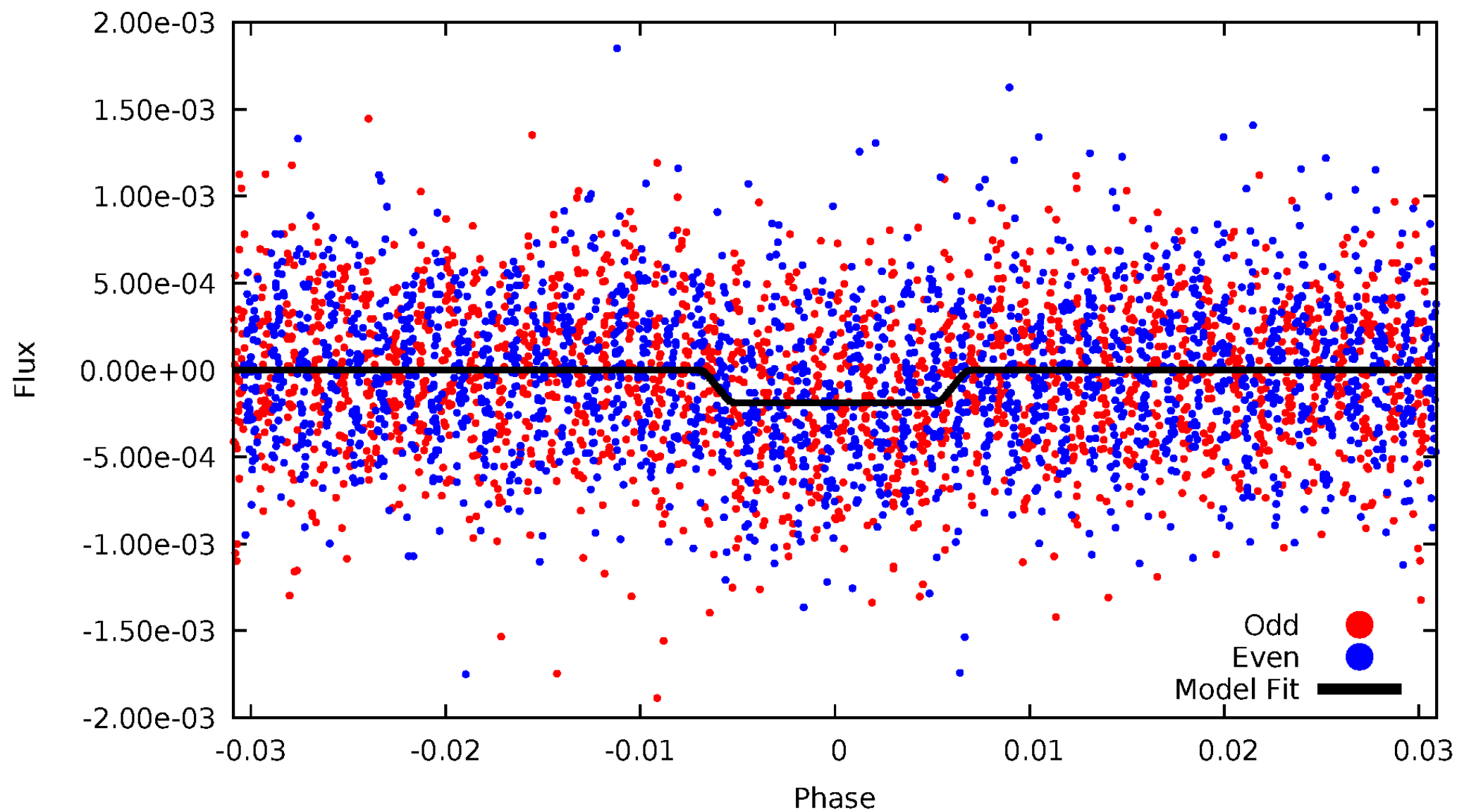
# DV Odd/Even

TCE 005612697-01



# ALT Odd/Even

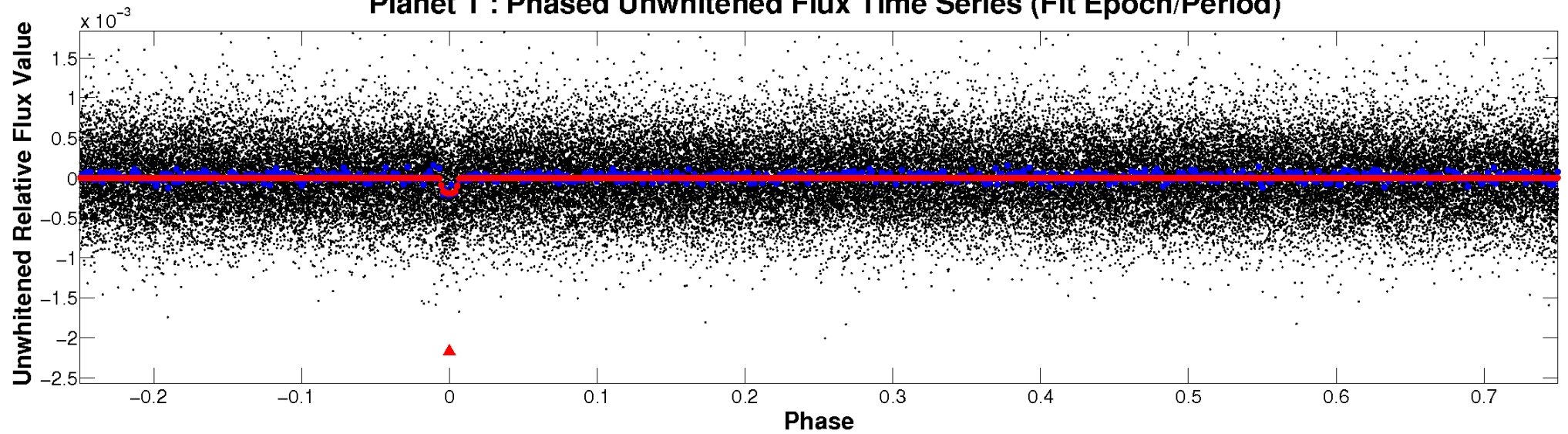
TCE 005612697-01



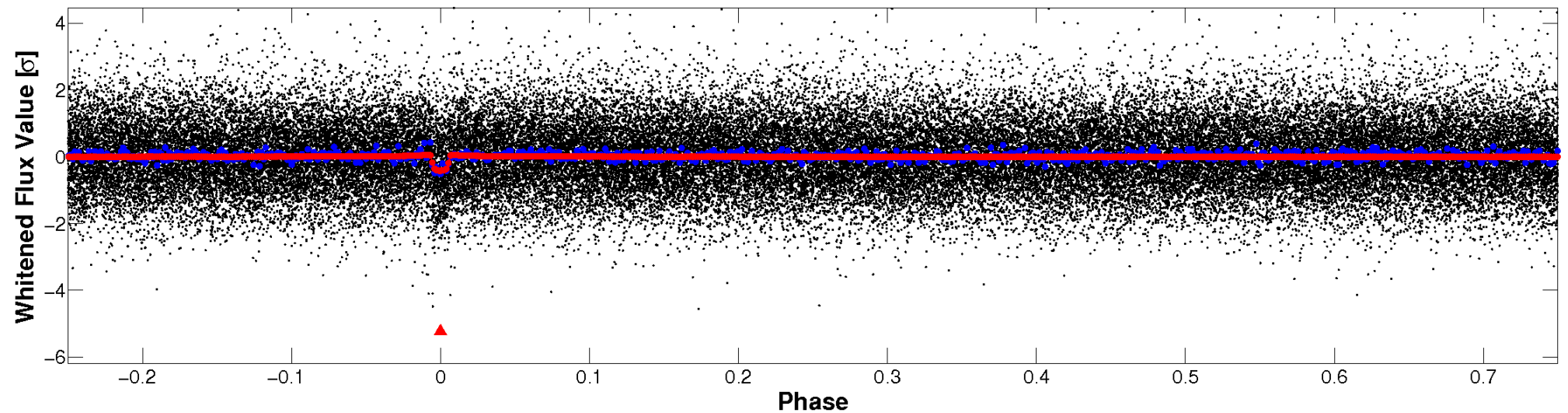


# Non-Whitened Vs. Whitened Light Curve

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

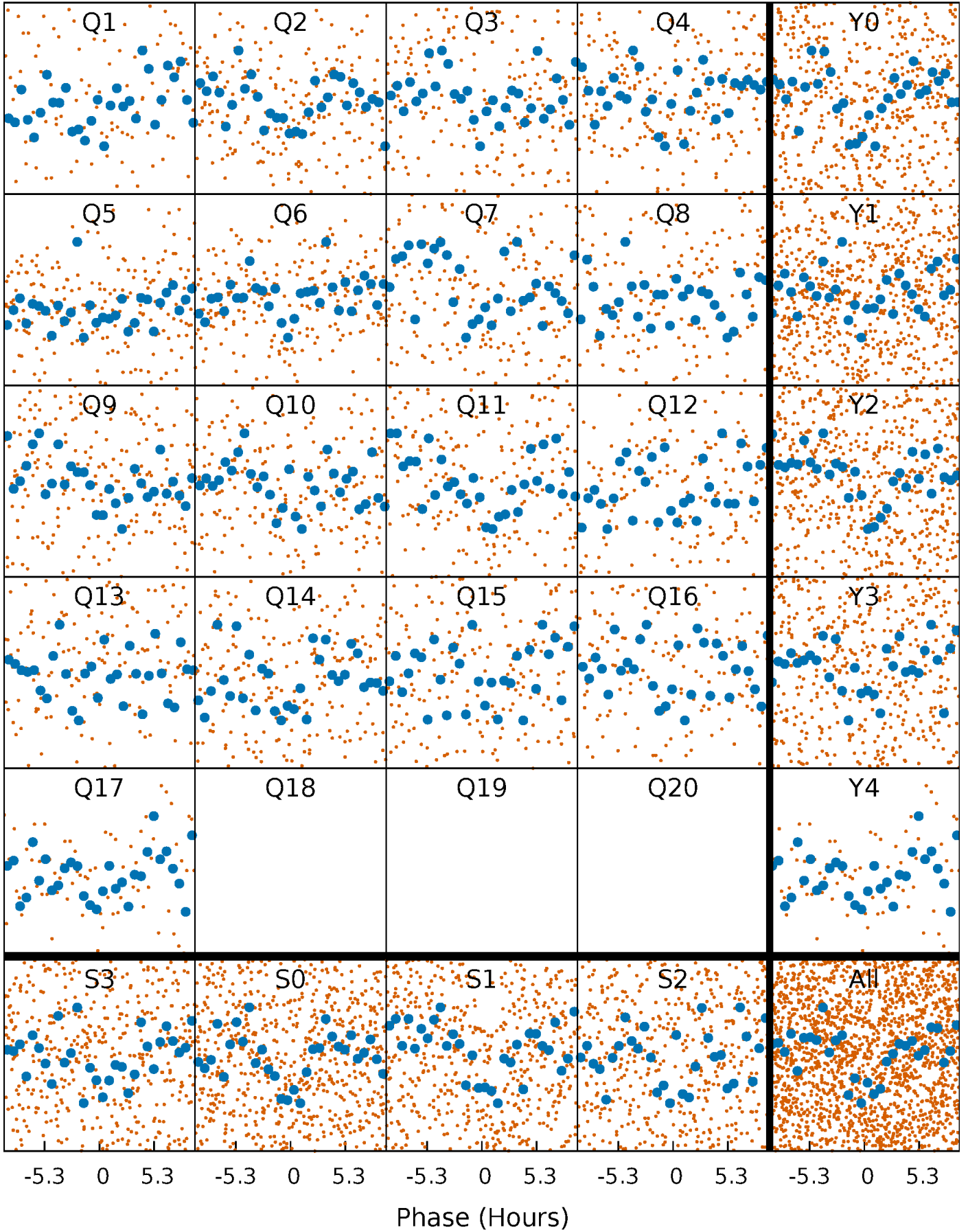


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

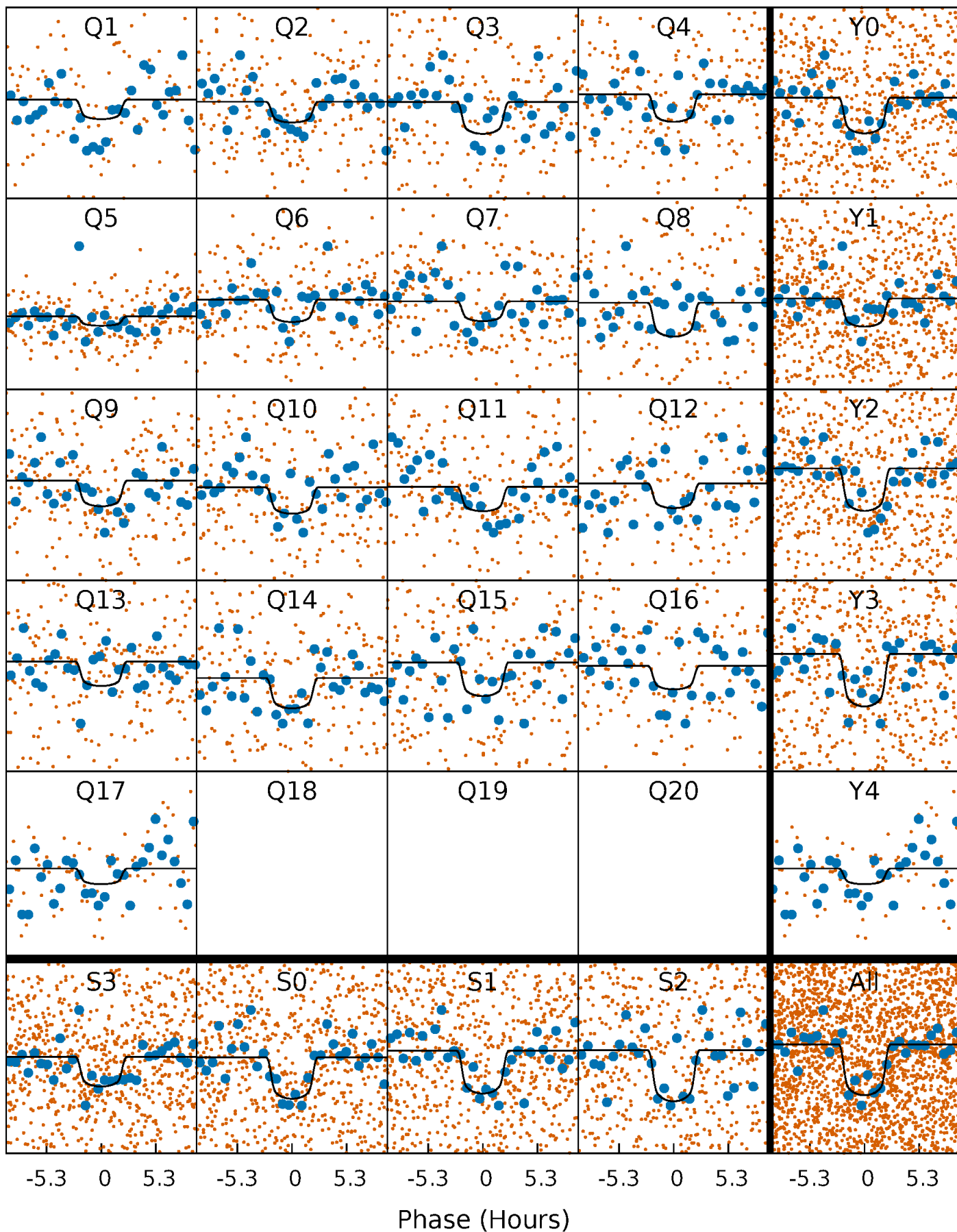
TCE 005612697-01 P= 15.151338 Days  $T_0=133.934839$  (BKJD)





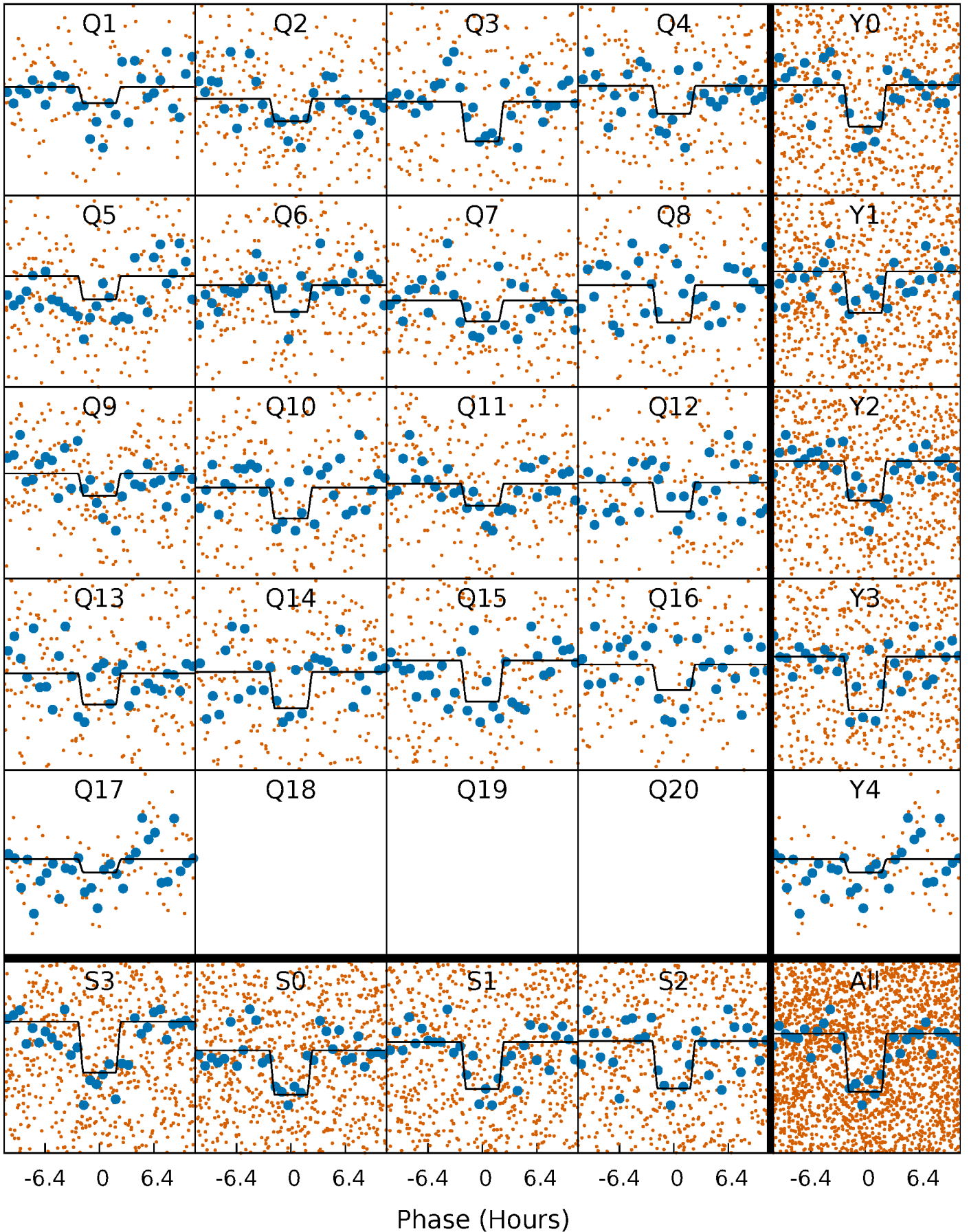
# DV Quarter-Phased Transit Curves

TCE 005612697-01 P= 15.151338 Days  $T_0=133.934839$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

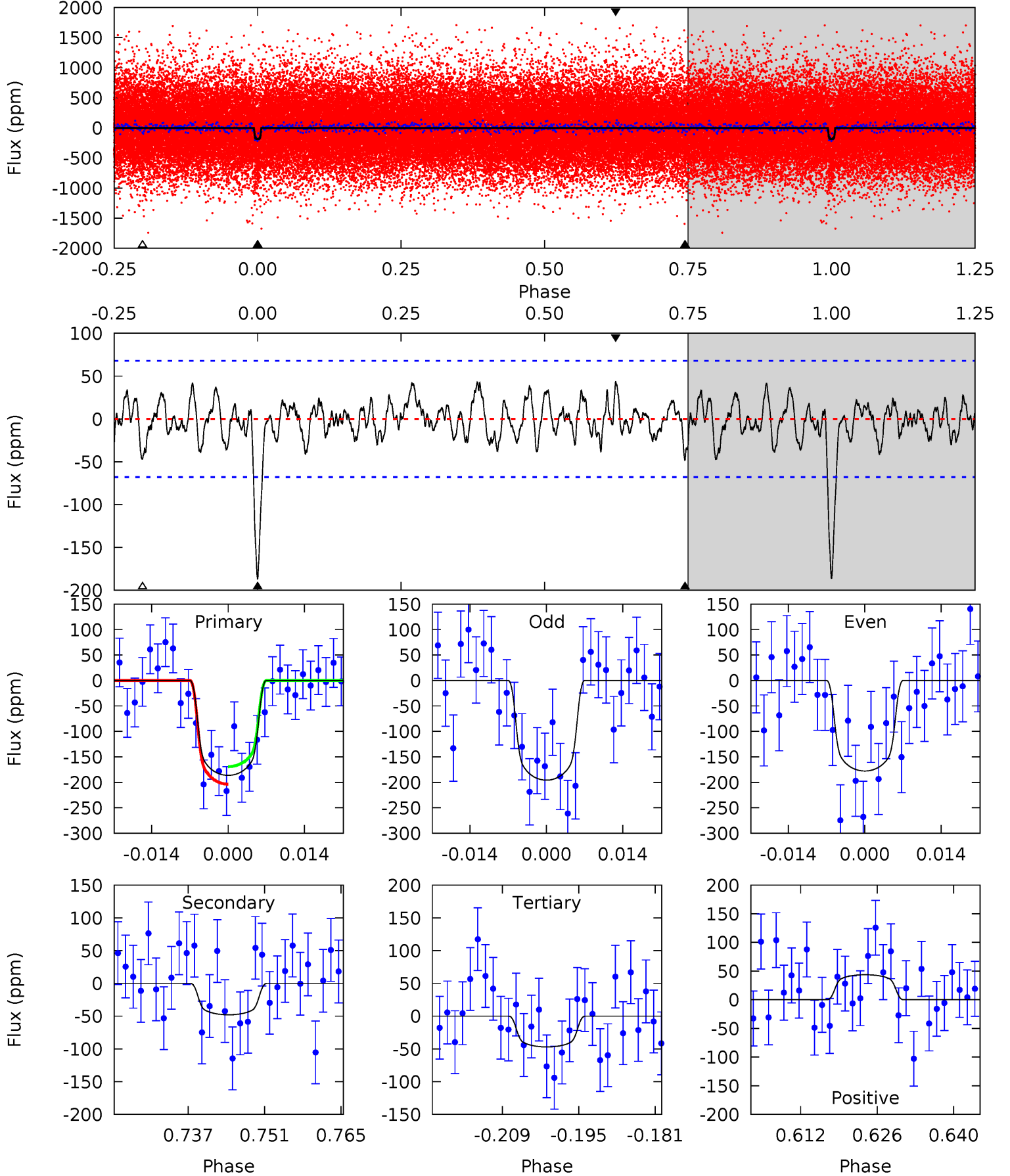
TCE 005612697-01 P= 15.151427 Days  $T_0=133.931945$  (BKJD)



# DV Model-Shift Uniqueness Test

005612697-01,  $P = 15.151338$  Days,  $E = 118.783501$  Days

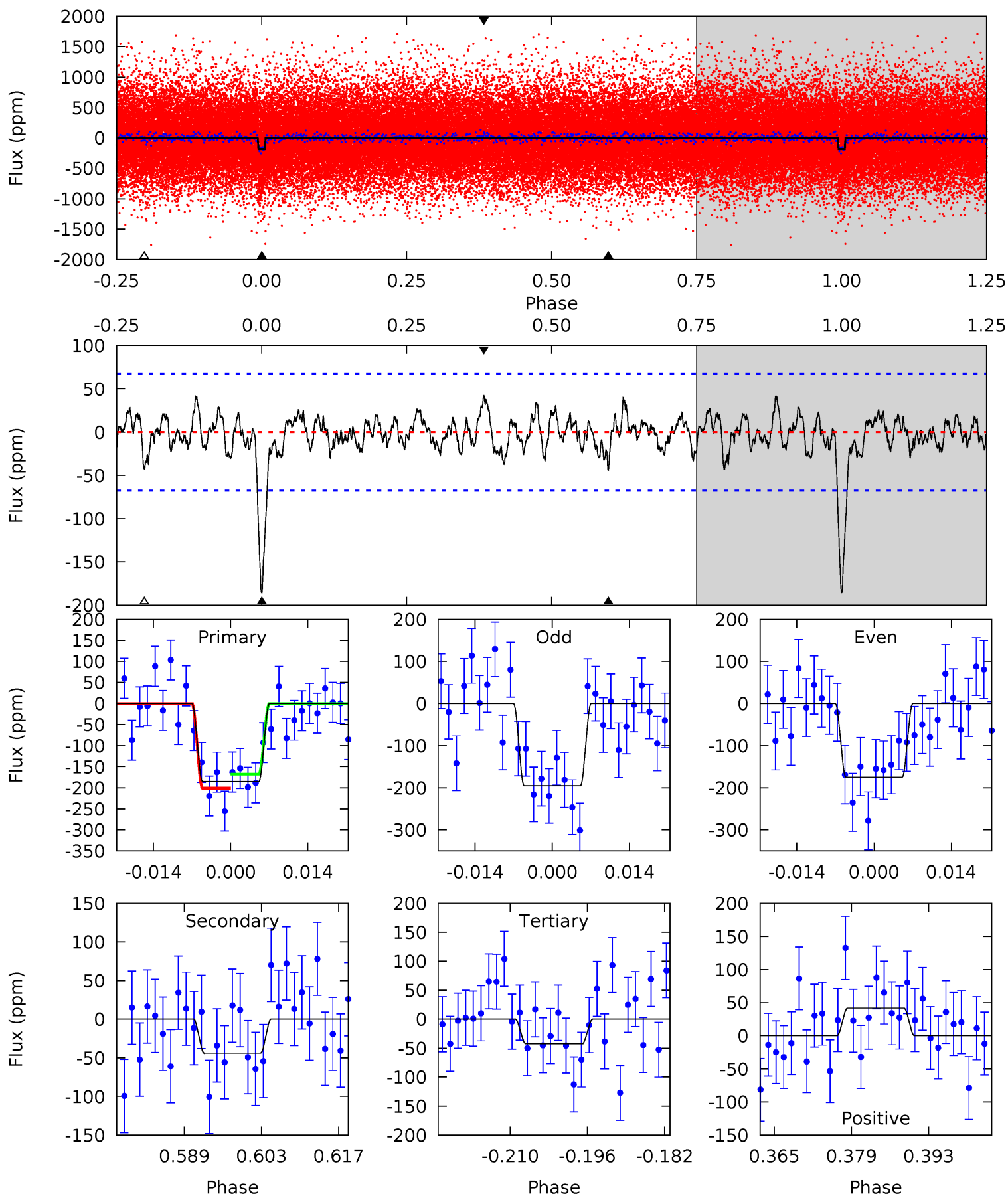
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.6	3.51	3.44	3.19	4.96	2.46	1.31	10.2	10.4	0.07	0.32	0.66	0.92	0.19	1.26



# Alt Model-Shift Uniqueness Test

005612697-01, P = 15.151427 Days, E = 118.780518 Days

Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.6	3.22	3.12	3.06	4.96	2.46	1.13	10.5	10.5	0.10	0.16	0.74	0.97	0.18	1.22



### Stellar Parameters For KIC 005612697

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5780^{+1}_{-1}$	$4.438^{+1.000}_{-1.000}$	$0.000^{+1.000}_{-1.000}$	$1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$
	+0%/-0%	+23%/-23%	+inf%/-inf%	+100%/-100%	+100%/-100%	+100%/-100%
Source	Solar	Solar	Solar	Solar		

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

### Secondary Eclipse Parameters for KIC 005612697-01 / KOI 3206.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-48 \pm 14$	$1.73^{+0.37}_{-0.36}$	$1031^{+50}_{-46}$	$4110^{+398}_{-376}$	$128^{+84}_{-53}$
Alt.	$-44 \pm 14$	$1.51^{+0.34}_{-0.37}$	$1031^{+51}_{-51}$	$4256^{+521}_{-381}$	$154^{+123}_{-63}$

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



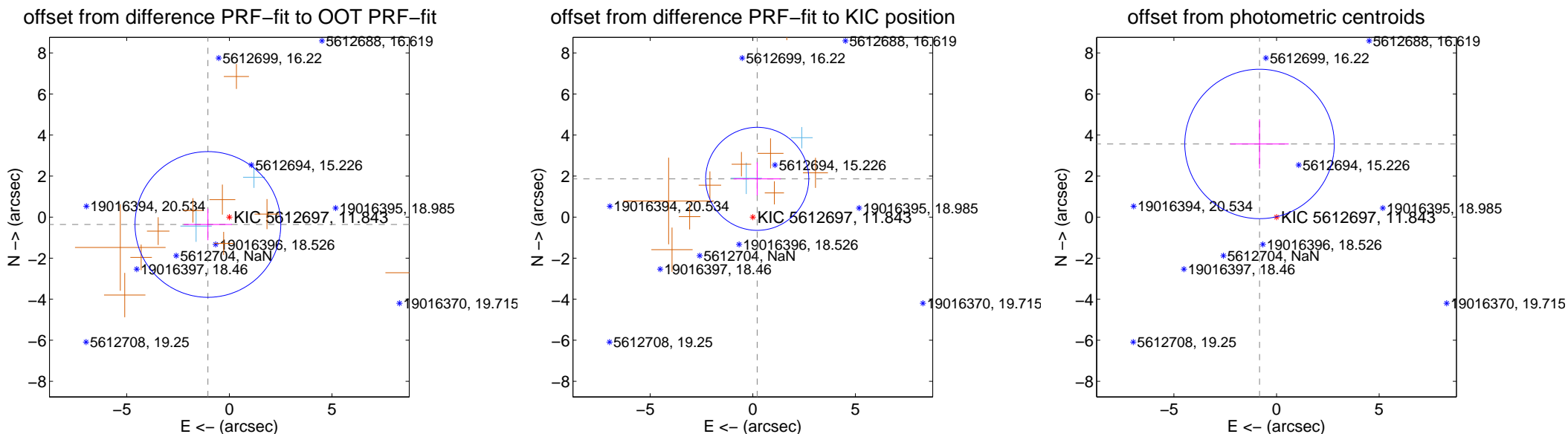
## DV Centroid Data

Supplemental centroid analysis for 005612697-01. **Kepler magnitude: 11.84.** Transit SNR 10.17

There are 2 quarters with good PRF difference image offsets

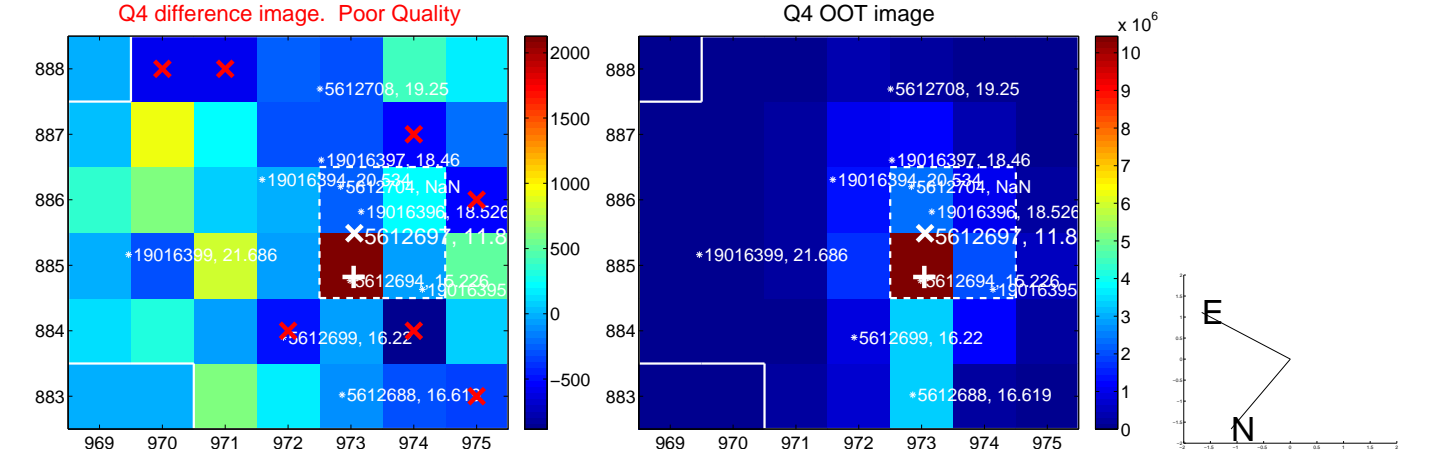
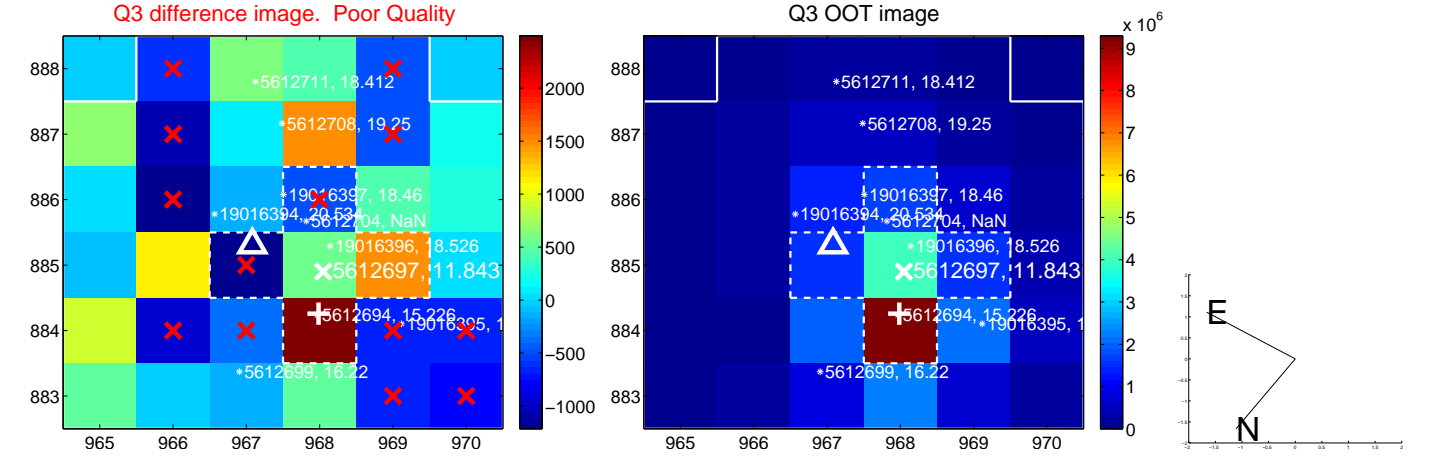
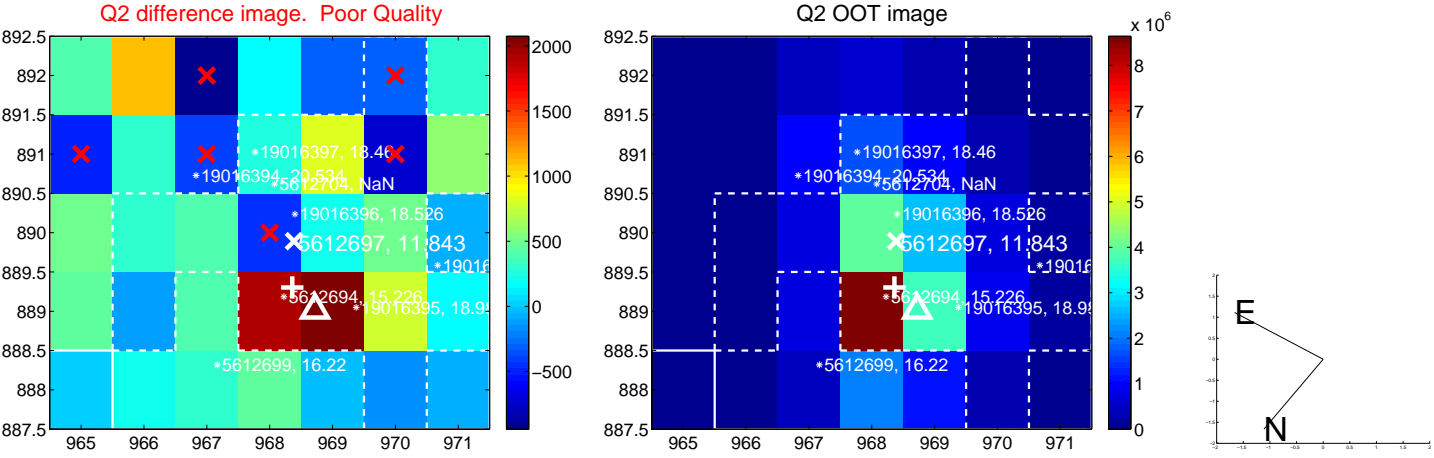
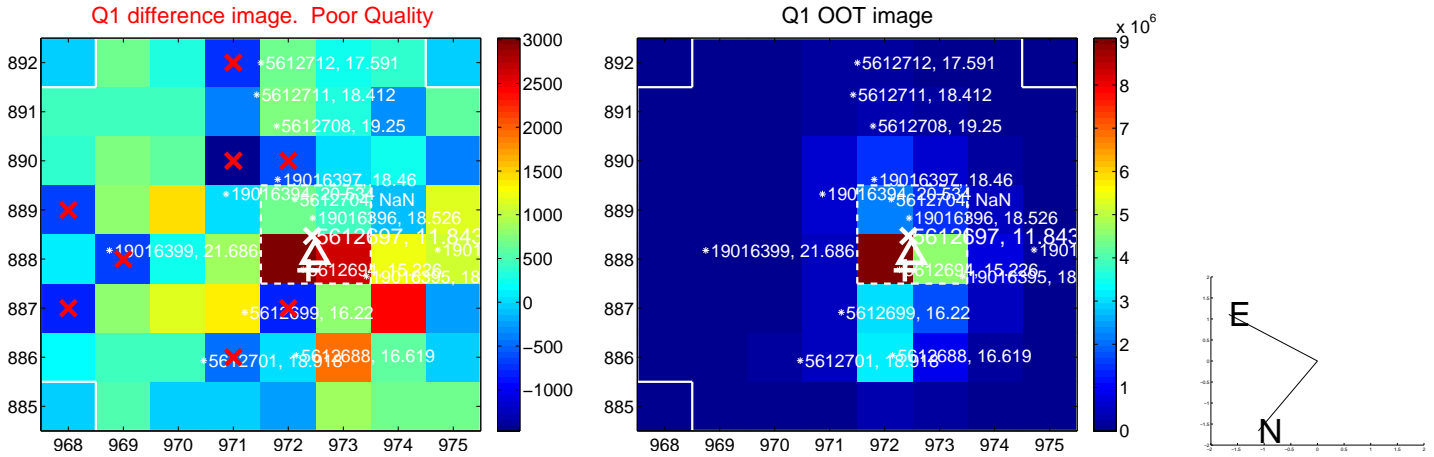
The OOT PRF centroid is offset from the target star catalog position by about 2.63 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.103 \pm 1.183$	0.93	$1.044 \pm 1.172$	$-0.357 \pm 0.768$
PRF-fit source offset from KIC position	$1.878 \pm 0.837$	2.24	$-0.215 \pm 1.147$	$1.866 \pm 0.808$
photometric centroid source offset	<b><math>3.66 \pm 1.21</math></b>	<b>3.02</b>	$0.83 \pm 1.42$	$3.57 \pm 1.20$

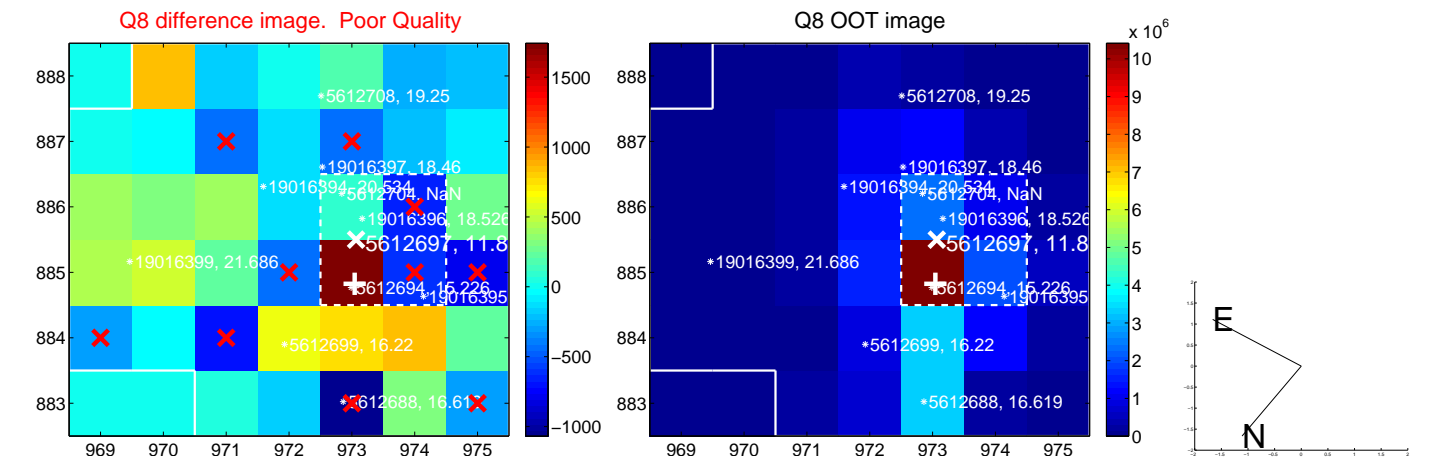
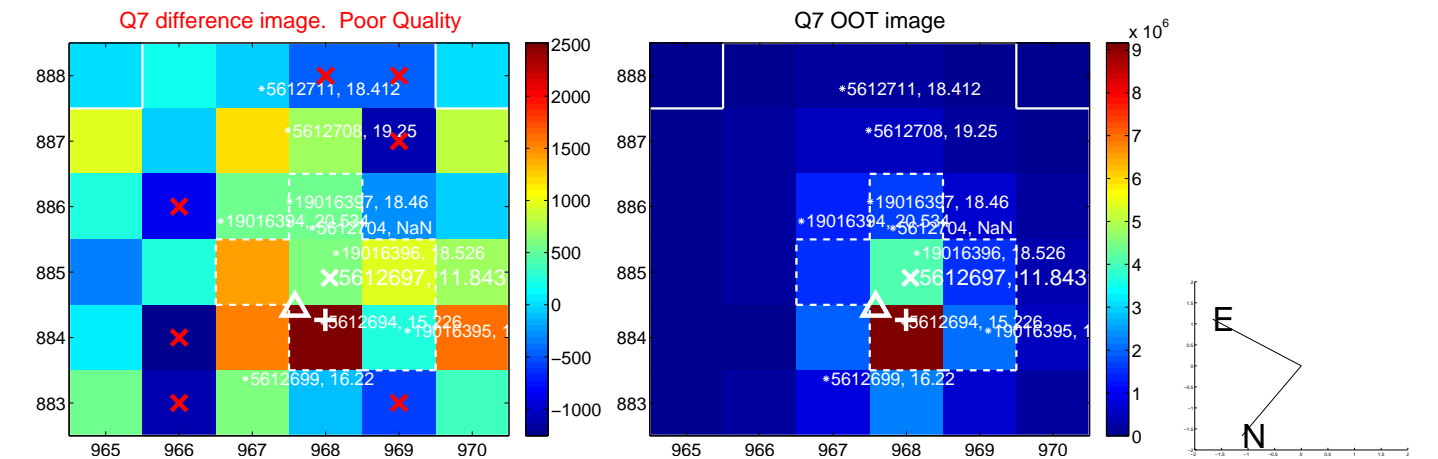
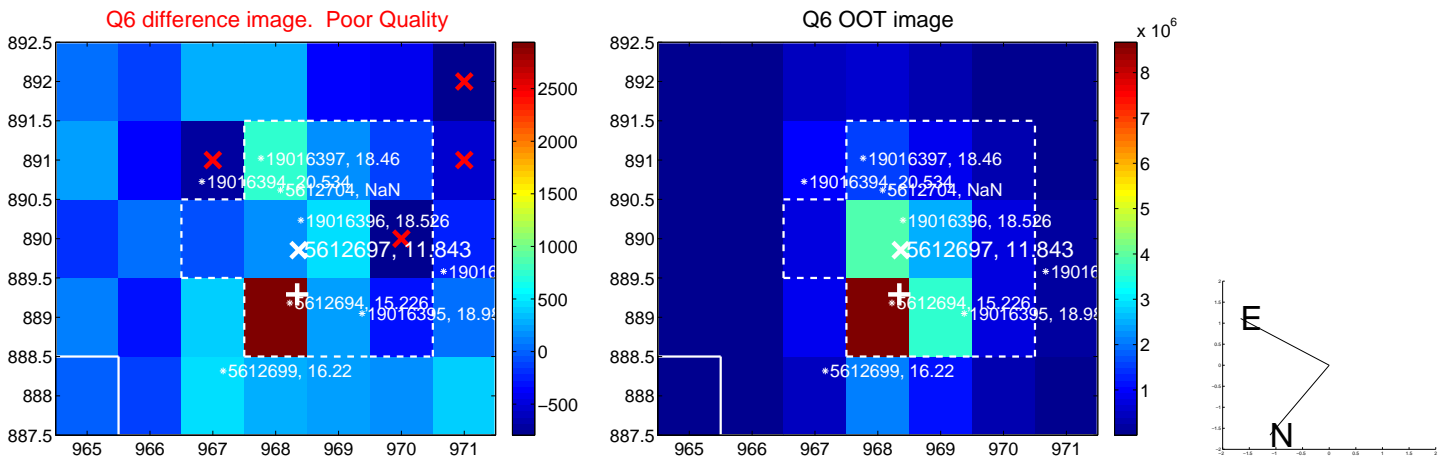
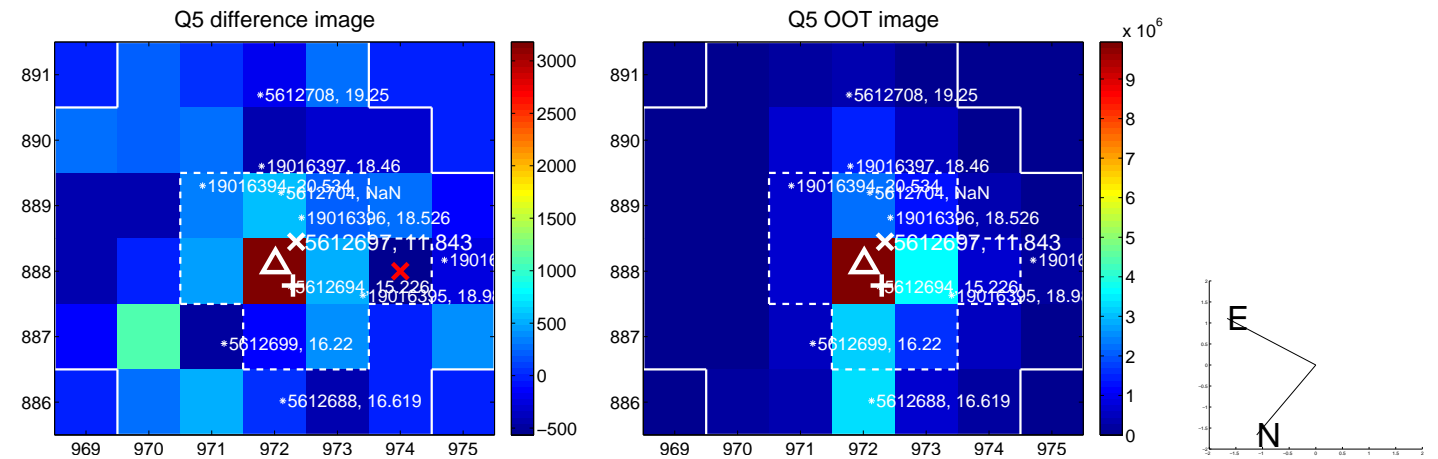


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

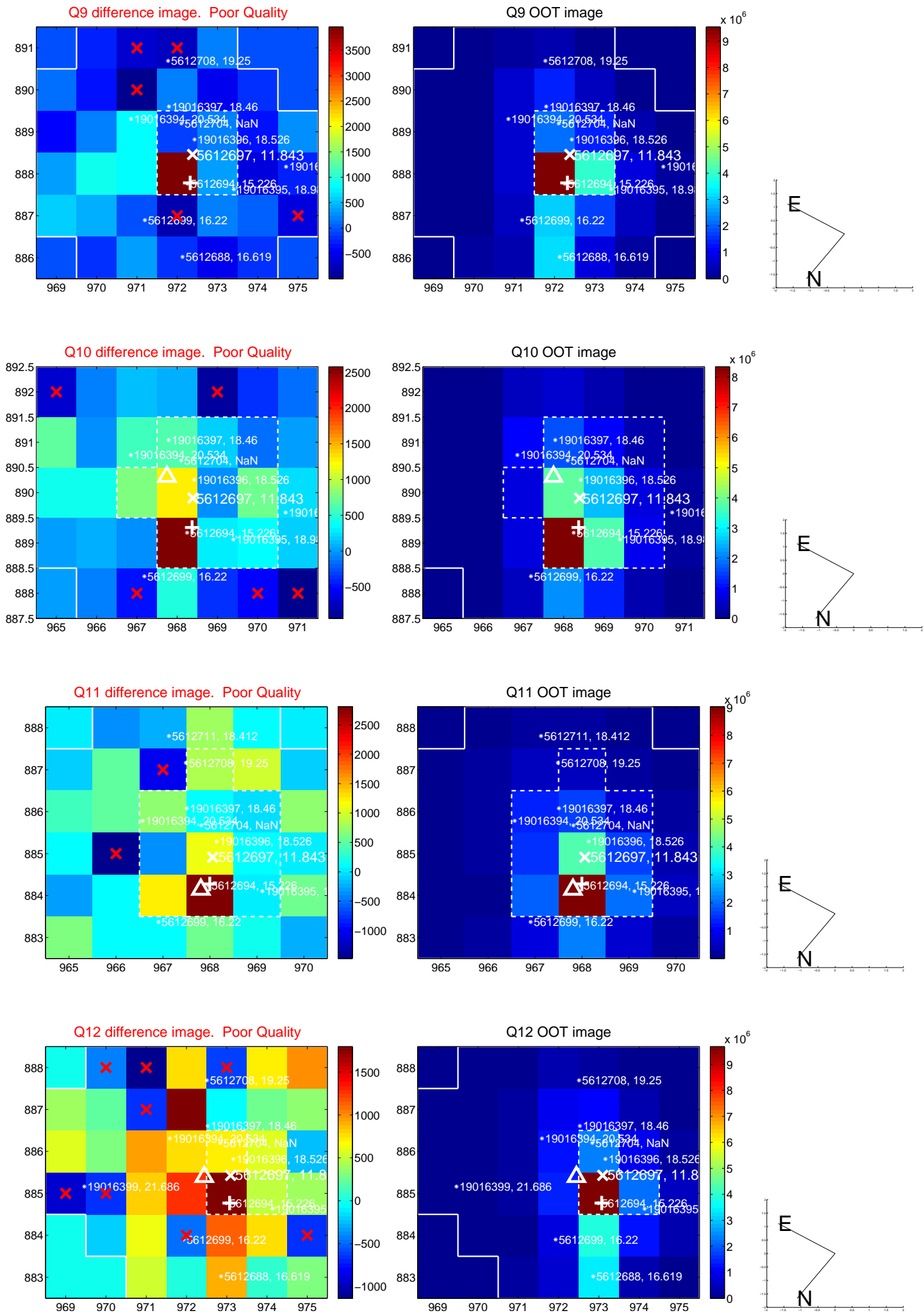
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



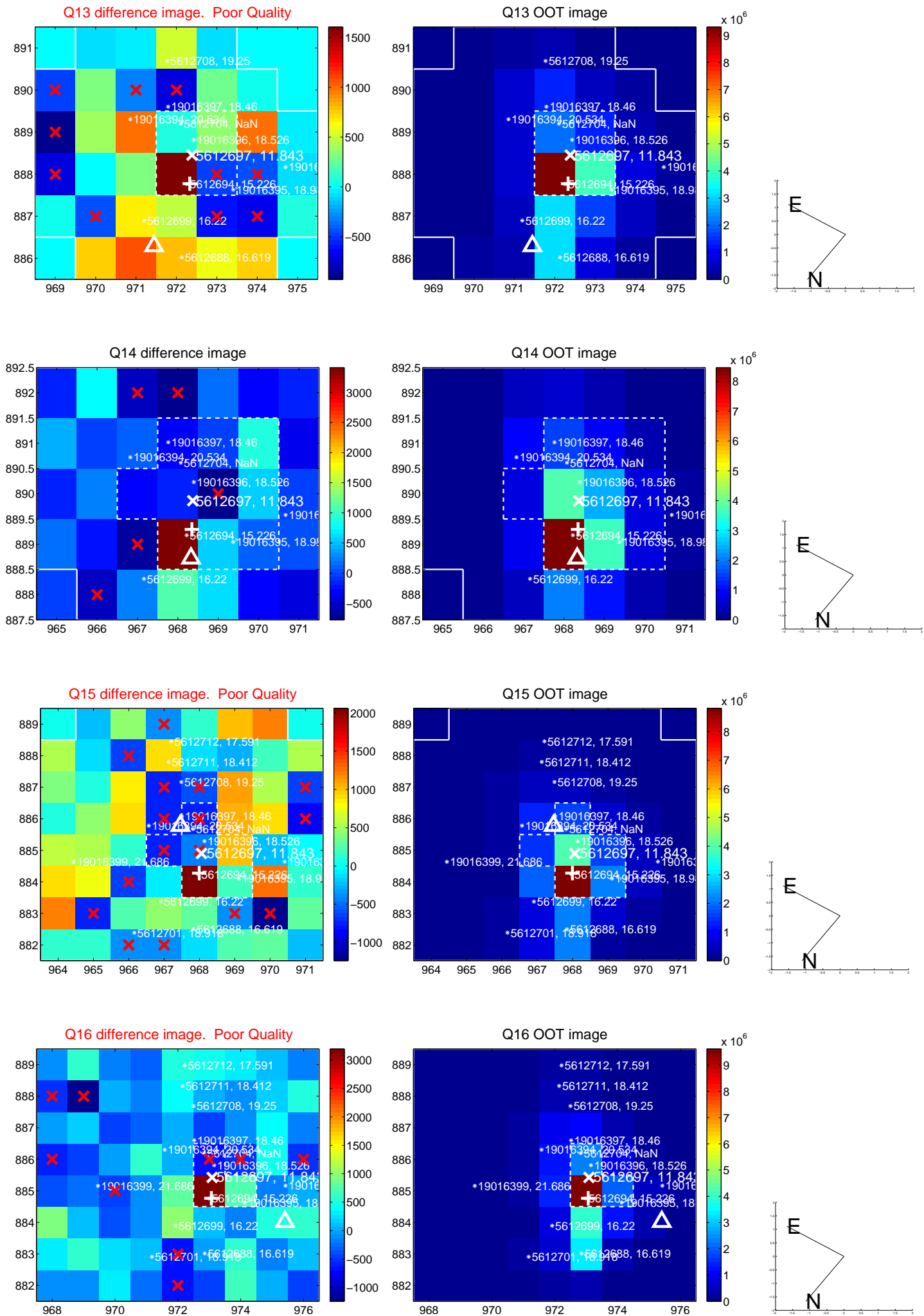
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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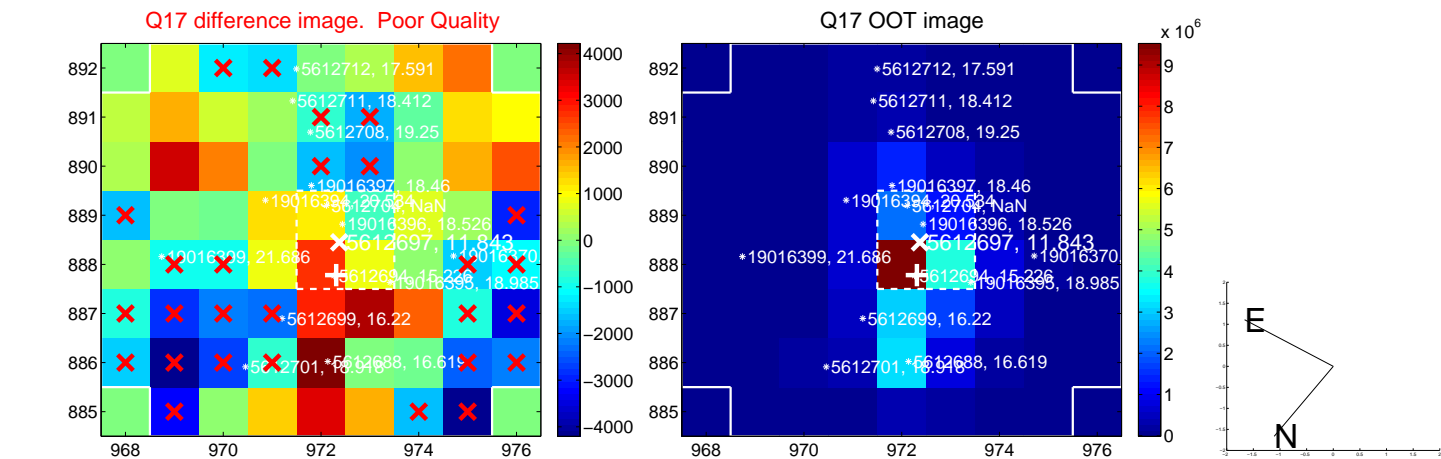


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

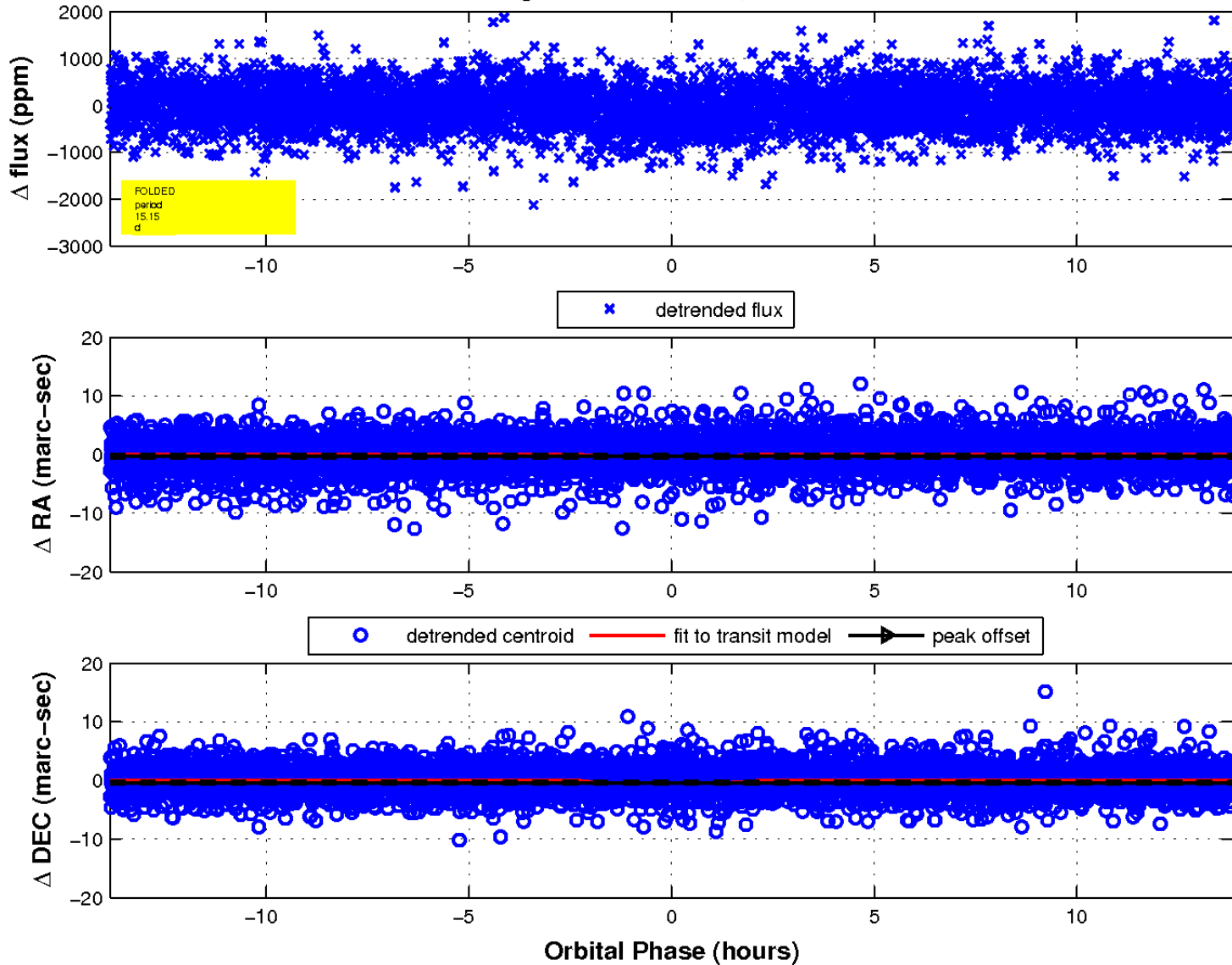




white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

