

# KIC 006947300

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006947300-01	OBS	No	0.566738	131.885112	0.0	2.943	9.4	0.0	1.26	6623	0.01	12717.85

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006947300-01	OBS	FP	0.00	1	0	1	1	LPP_DV—CENT_UNRESOLVED_OFFSET—EPHEM_MATCH

**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.

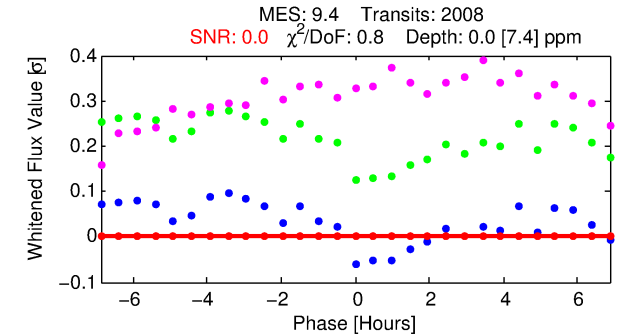
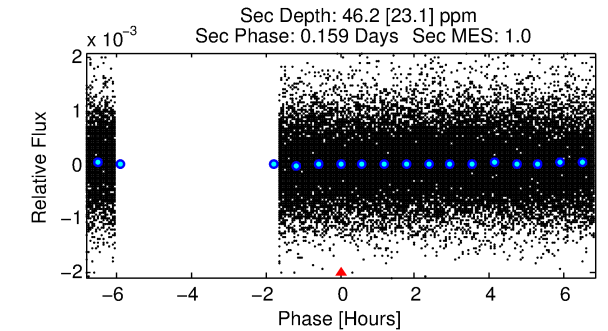
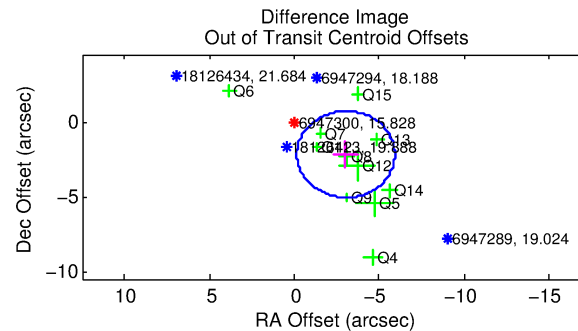
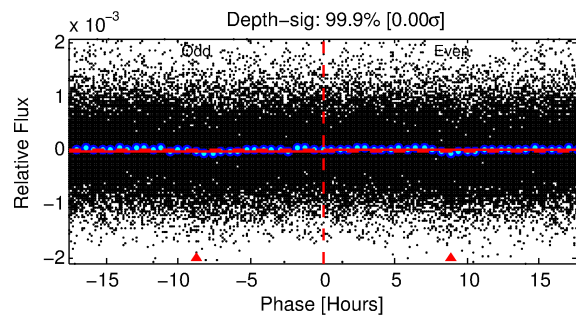
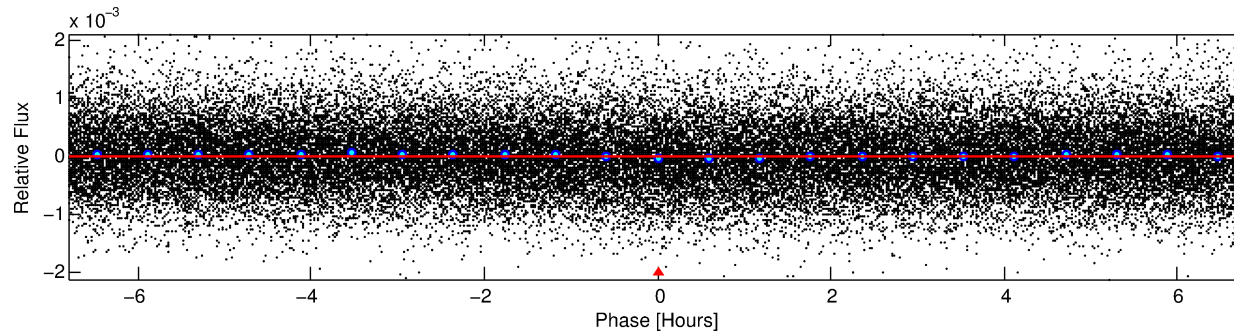
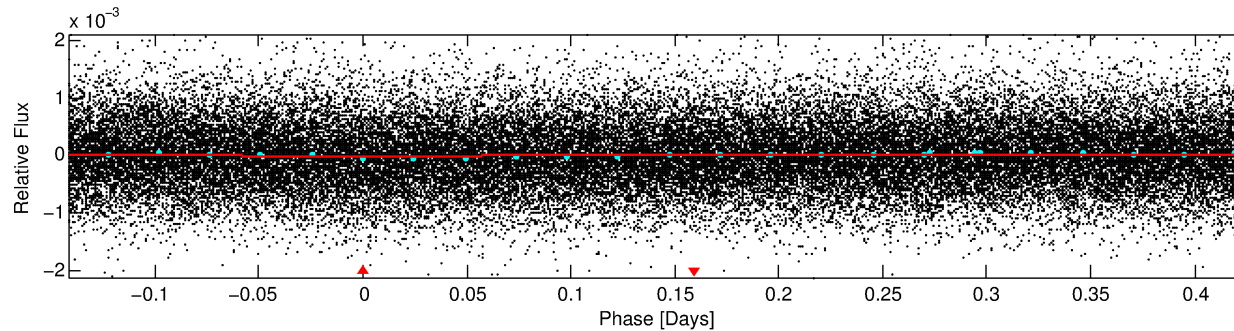
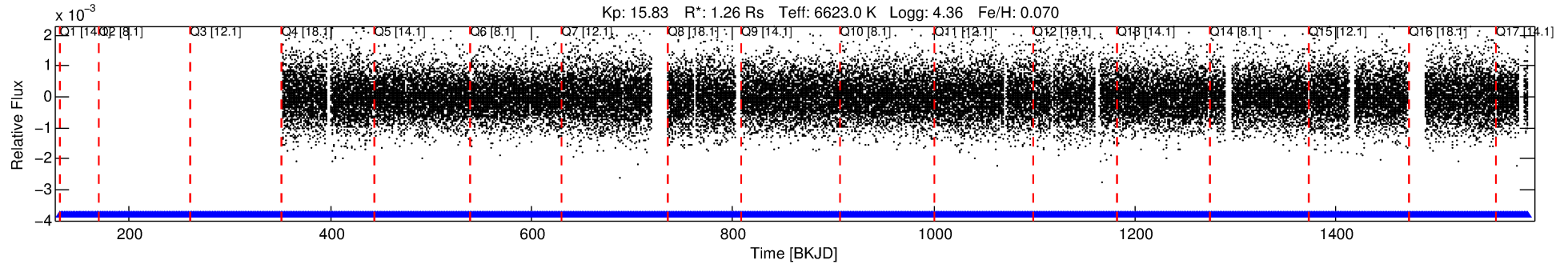
## Ephemeris Match Information For 006947300-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ( $''$ )	$\Delta$ Row	$\Delta$ Col	$m_2$	$m_1$	$D_2/D_1$	Mechanism	Flag	$\sigma_P$	$\sigma_T$
006947300-01	6947300	RR-Lyr-pri	7198959	1:1	1115.3	248	-131	7.86	15.83	623300.00	Direct-PRF	0	1.99	20.02

**Notes:**  $P_1:P_2$  is the period ratio. Dist is the distance in arcseconds.  $\Delta$ Row and  $\Delta$ Col are the number of pixels apart in row and column.  $m_2$  and  $m_1$  are the magnitudes of the parent and child.  $D_2/D_1$  is the parent's transit depth divided by the child's.  $\sigma_P$  and  $\sigma_T$  are the significance of the match in period and epoch. For a match to be considered significant  $\sigma_P < 5.0$  and  $\sigma_T < 5.0$ . Matches which have  $\sigma_P$  and  $\sigma_T$  very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

# DV One-Page Summary

KIC: 6947300 Candidate: 1 of 1 Period: 0.567 d



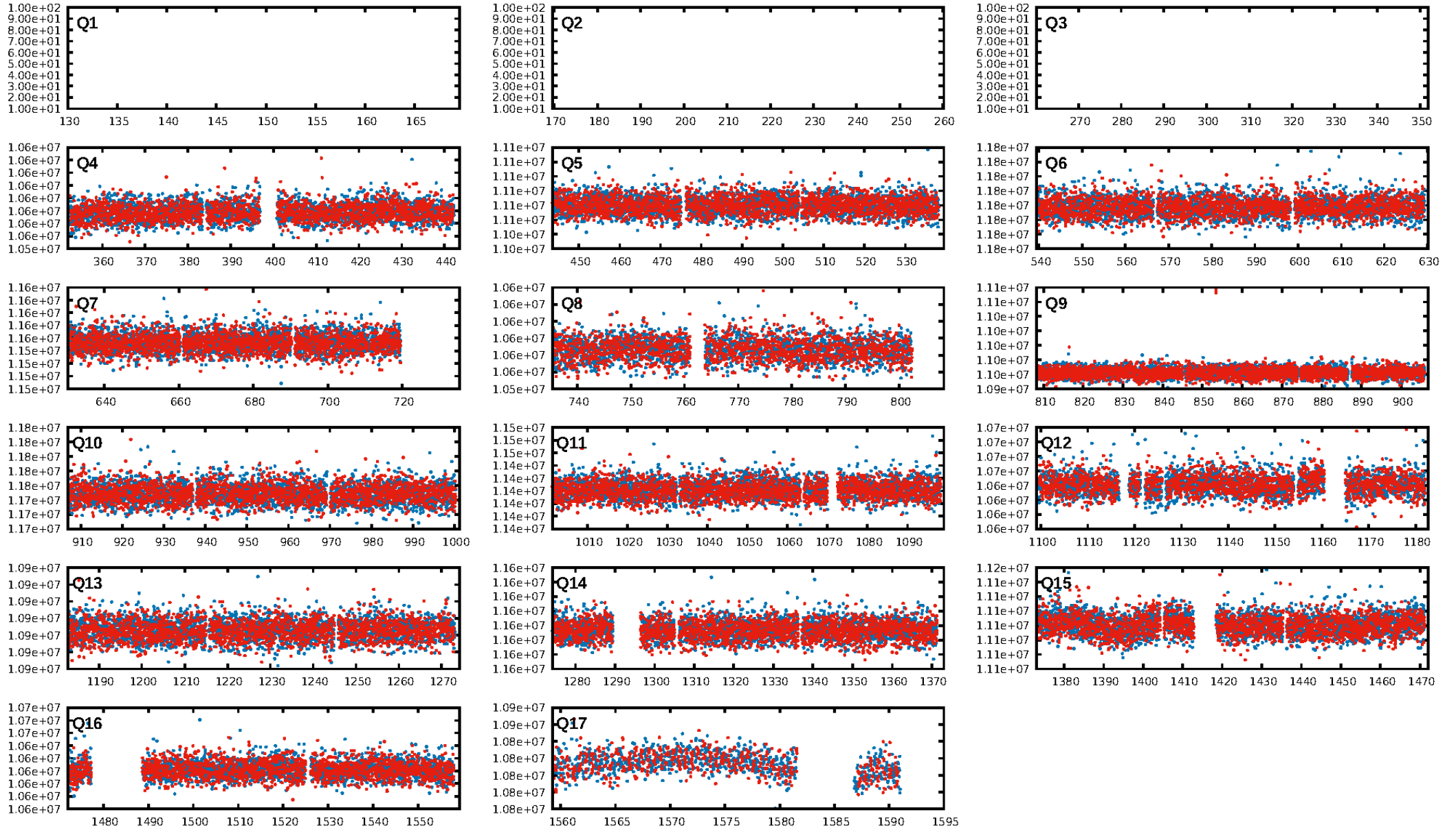
## DV Fit Results:

Period = 0.56674 [0.04437] d  
Epoch = 131.8851 [16.8926] BKJD  
Rp/R\* = 0.0001 [0.0325]  
a/R\* = 1.34 [65.62]  
b = 0.70 [96.55]  
Seff = 12717.85 [5274.92]  
Teq = 2708 [281] K  
Rp = 0.02 [4.48] Re  
a = 0.0147 [0.0038] AU  
Ag = 23500.00 [13769682.49] [0.00 $\sigma$ ]  
Teffp = 51837 [7594233] K [0.01 $\sigma$ ]

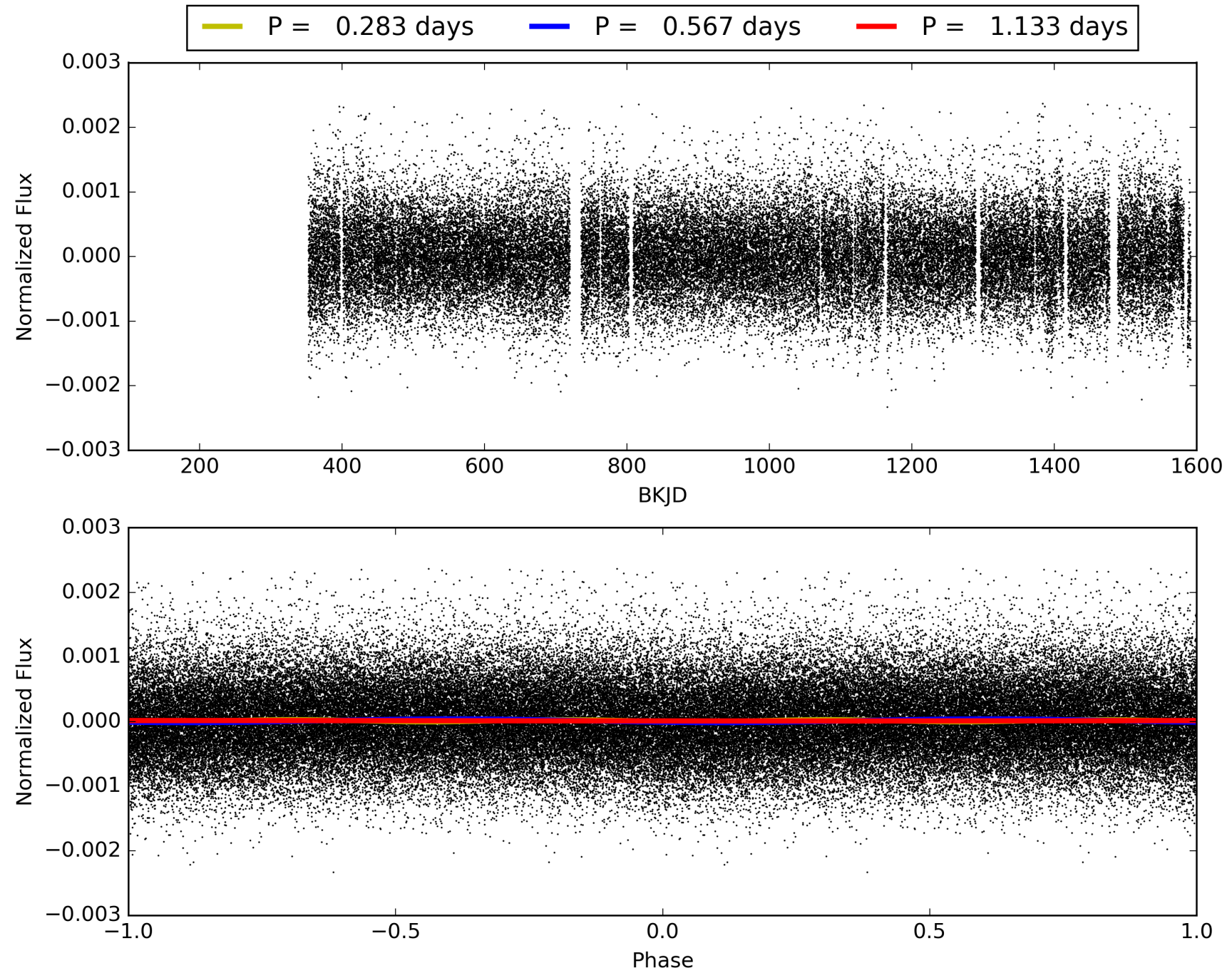
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 6.84e-20  
RollingBand-fgt: 1.00 [1961/1961]  
GhostDiagnostic-chr: N/A  
Centroid-sig: N/A  
Centroid-so: N/A  
OotOffset-rm: 3.747 arcsec [3.90 $\sigma$ ]  
KicOffset-rm: 3.555 arcsec [3.21 $\sigma$ ]  
OotOffset-st: 2/3/3/3 [11]  
KicOffset-st: 2/3/3/3 [11]  
DiffImageQuality-fgm: 0.00 [0/11]  
DiffImageOverlap-fno: 1.00 [14/14]

# TCE 006947300-01, PDC Light Curves



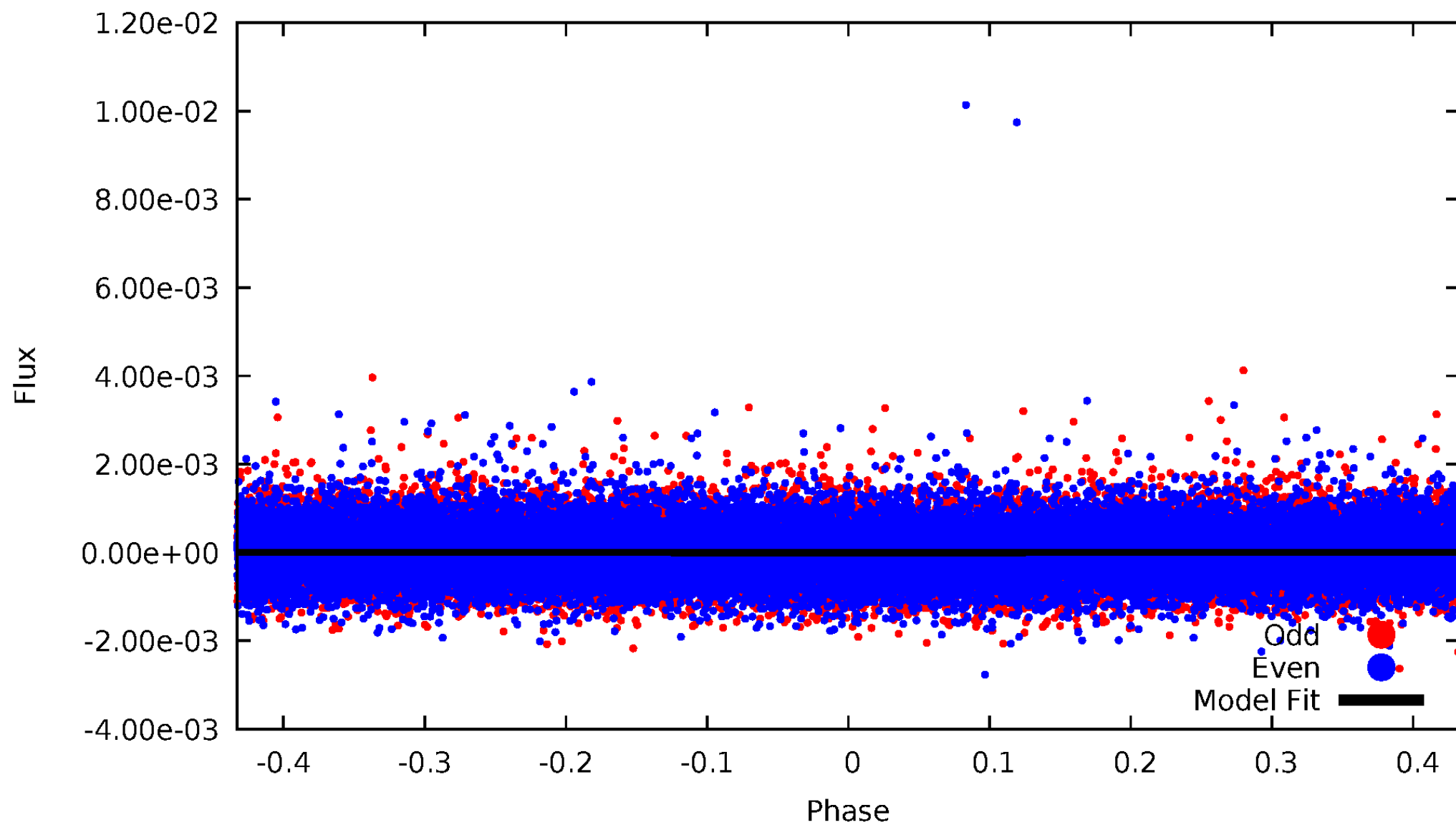
TCE 006947300-01





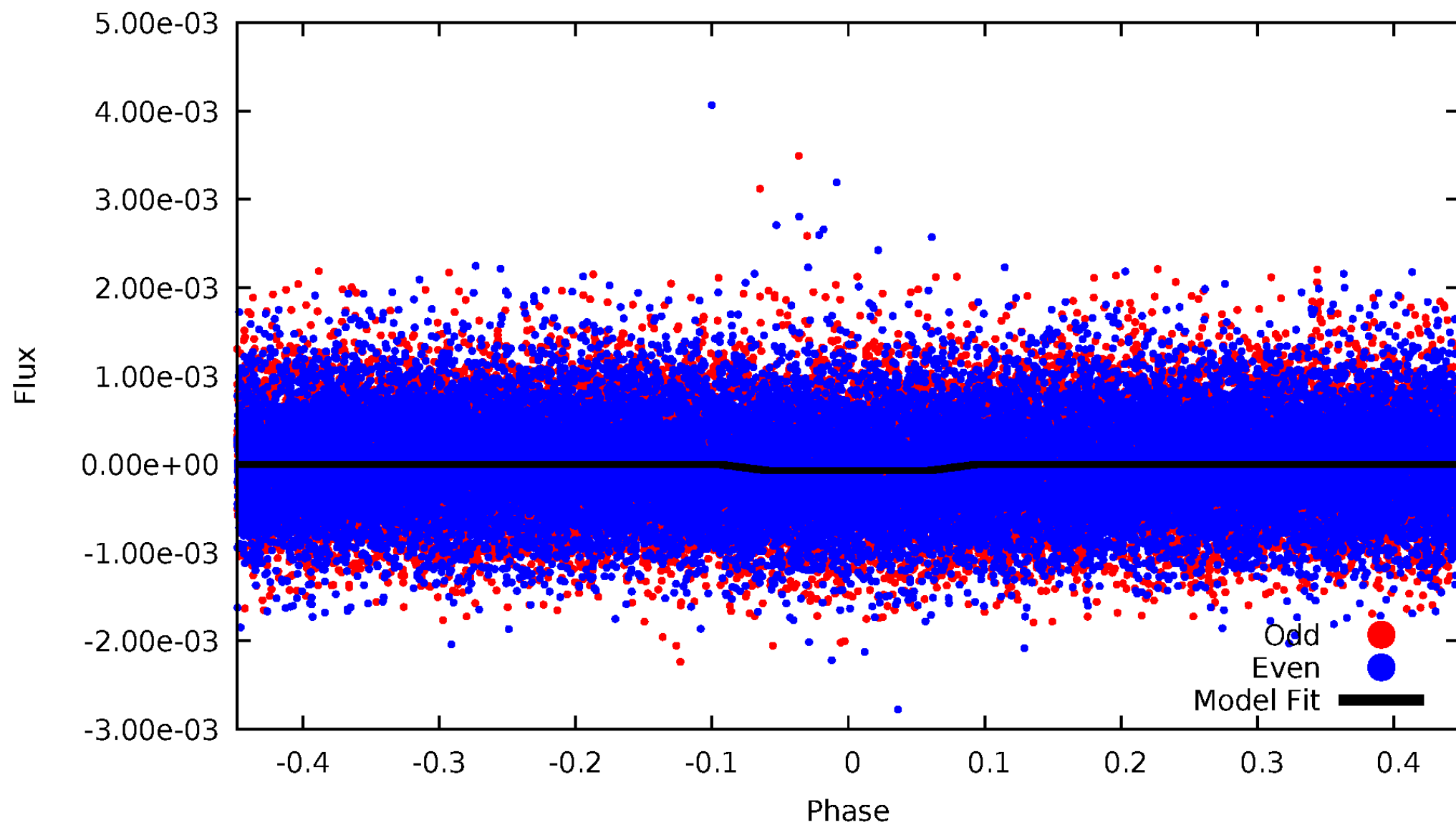
# DV Odd/Even

TCE 006947300-01

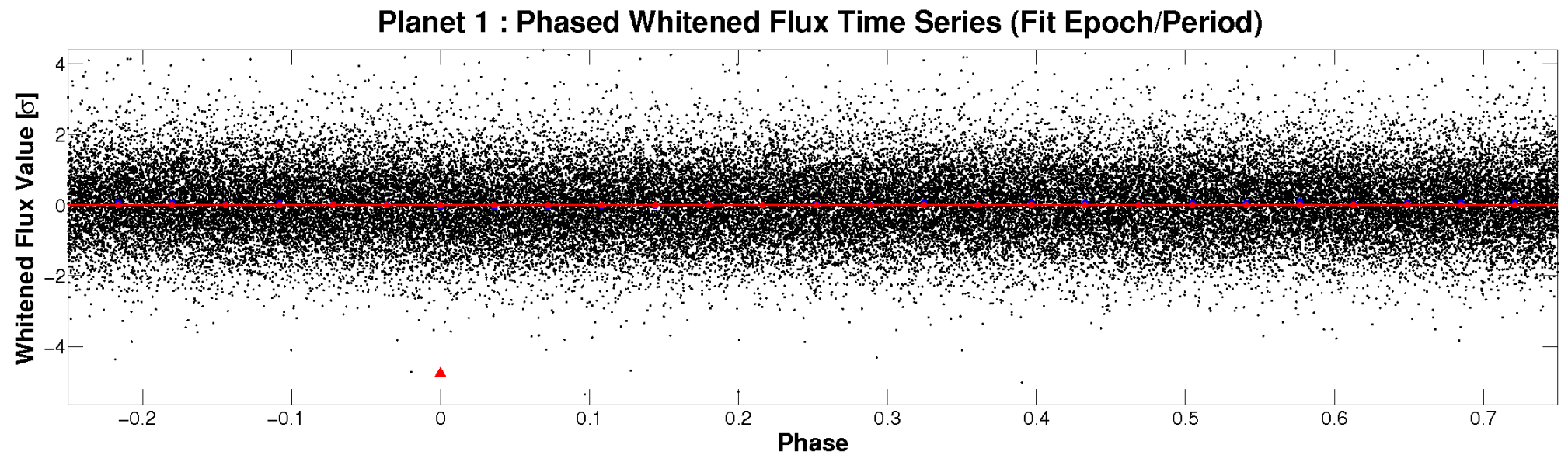
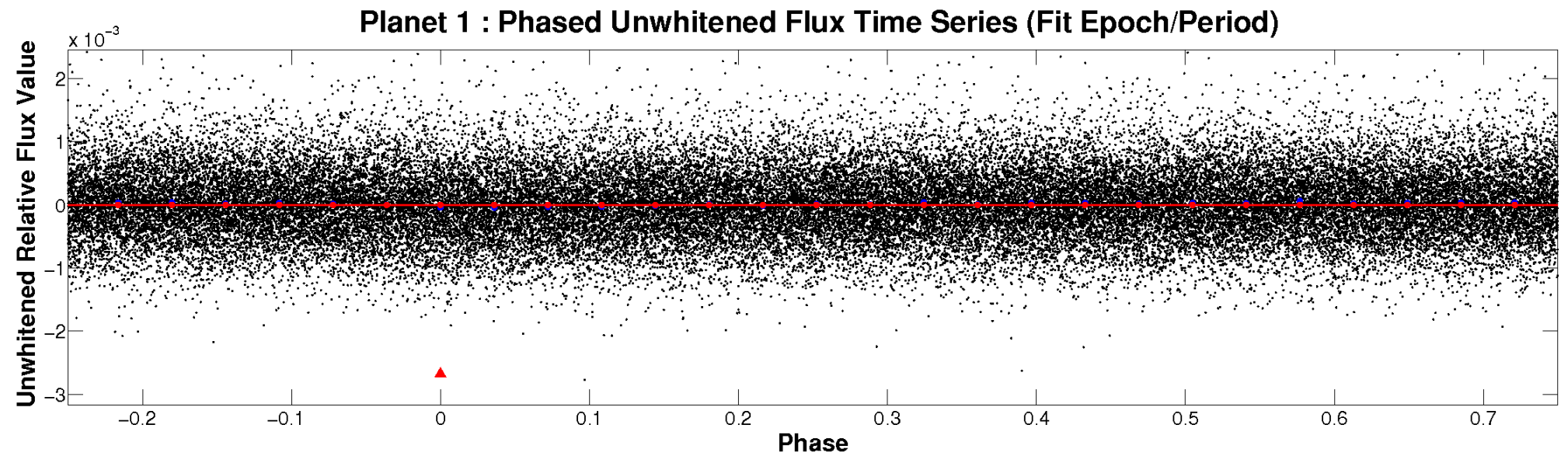


# ALT Odd/Even

TCE 006947300-01

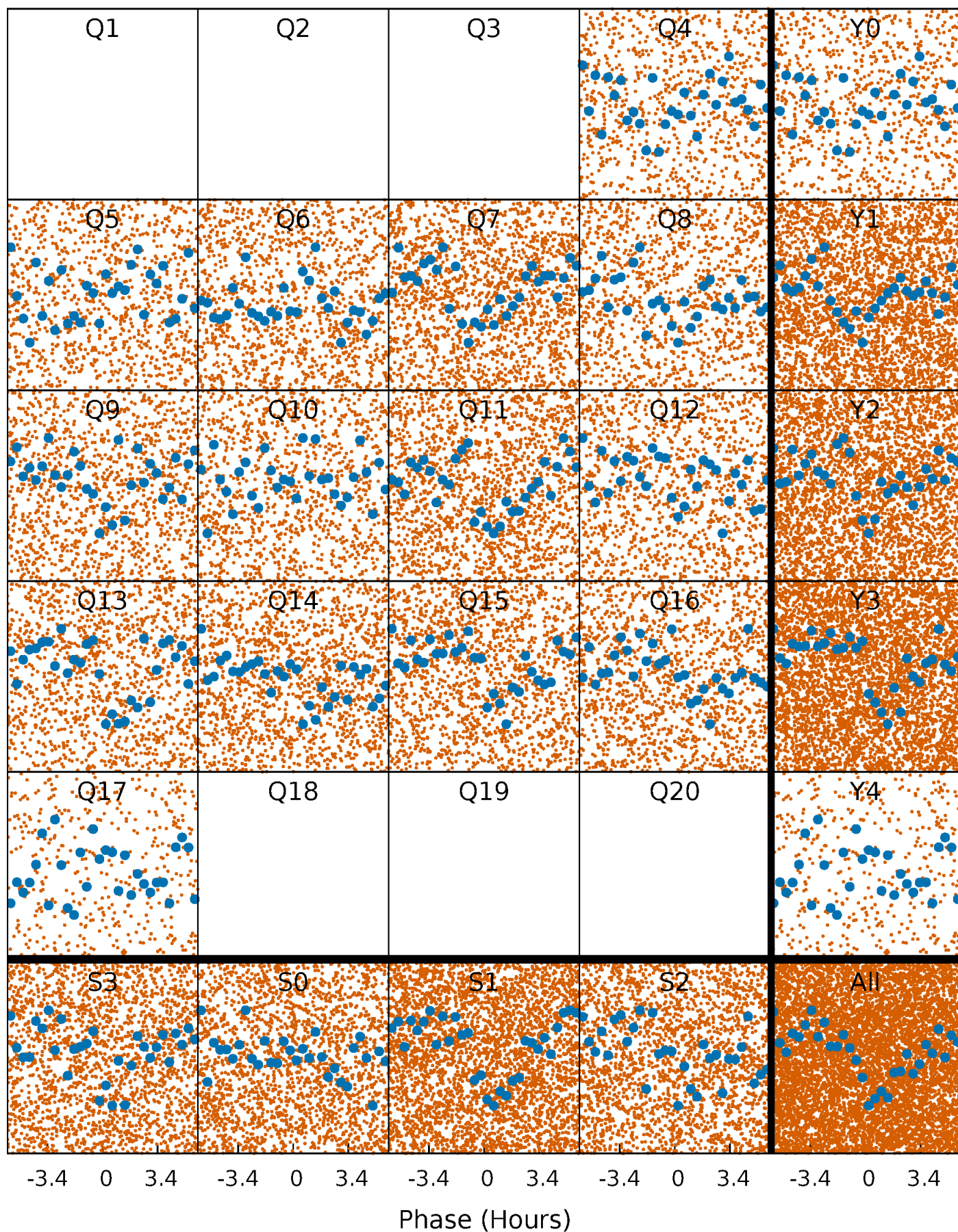


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

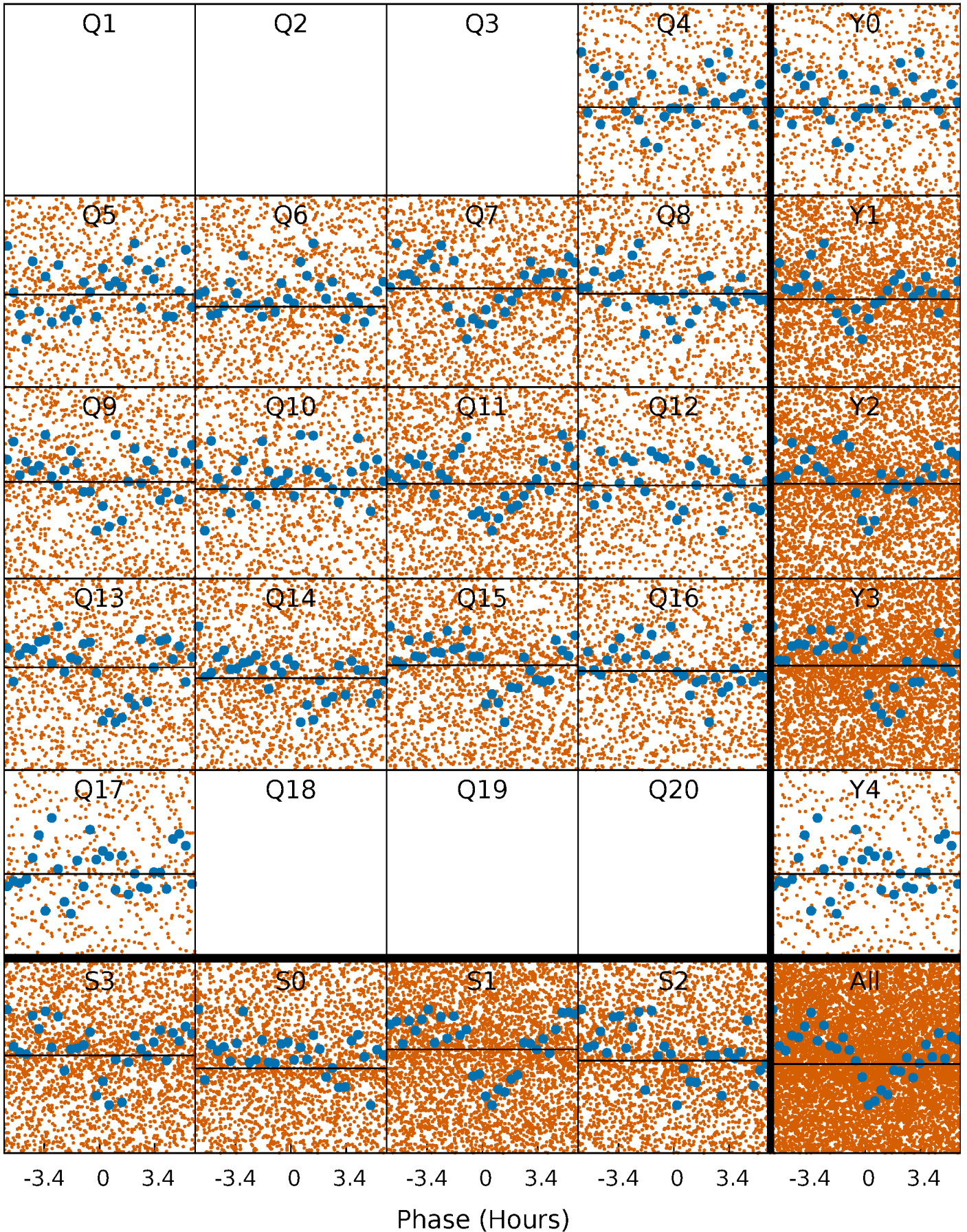
TCE 006947300-01 P= 0.566738 Days  $T_0=131.885112$  (BKJD)





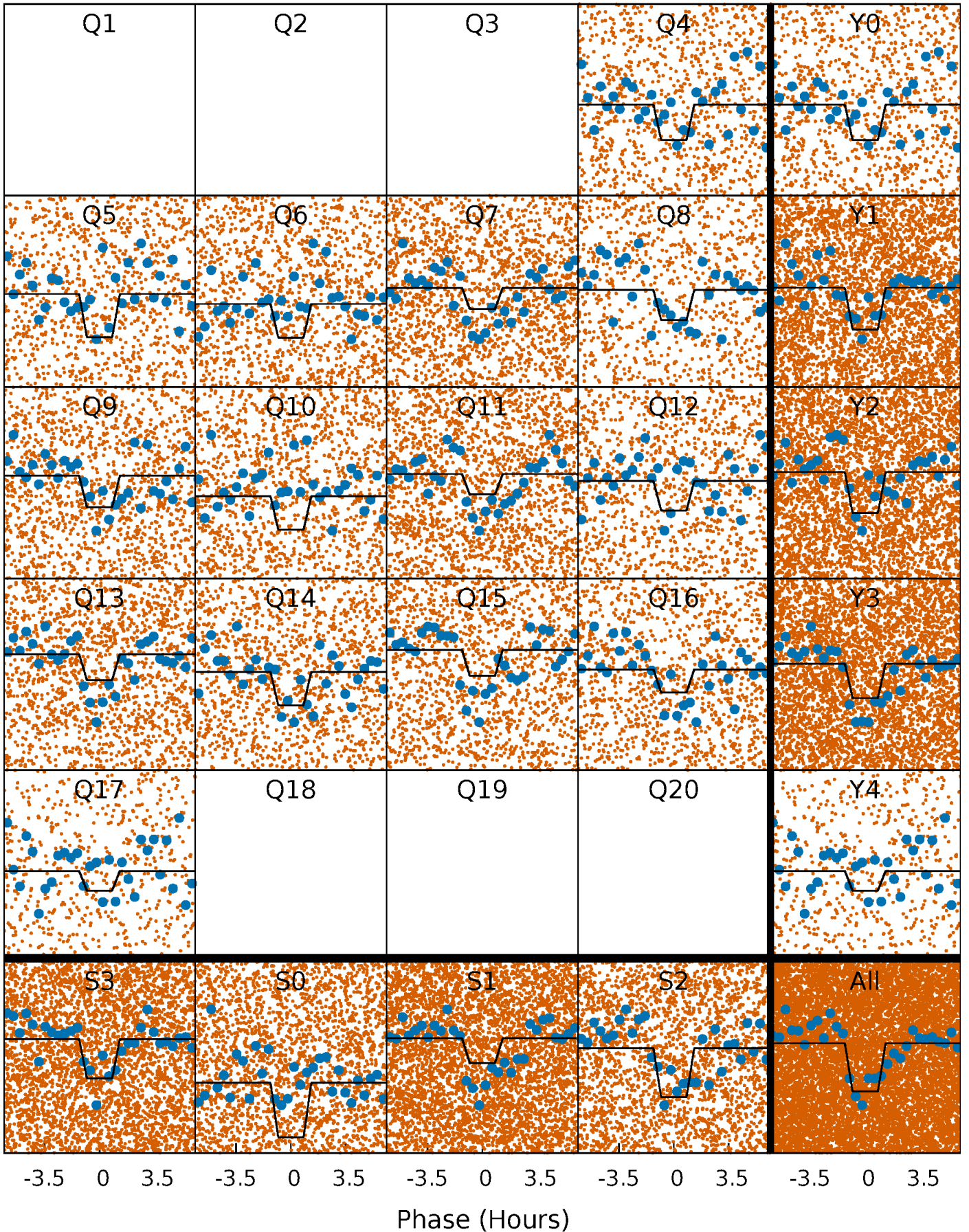
# DV Quarter-Phased Transit Curves

TCE 006947300-01 P= 0.566738 Days  $T_0=131.885112$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 006947300-01 P= 0.566798 Days  $T_0=131.808968$  (BKJD)

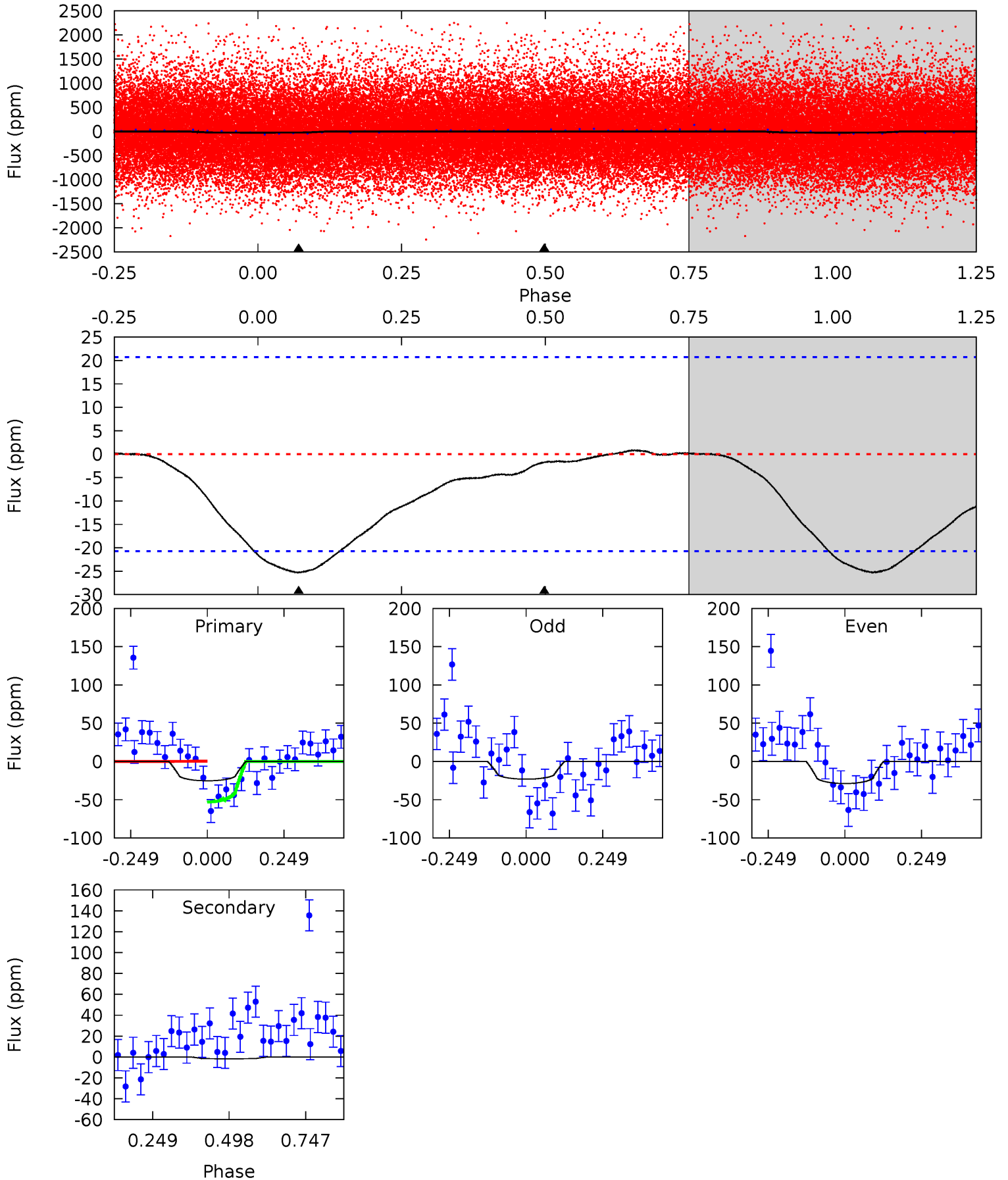




# DV Model-Shift Uniqueness Test

006947300-01, P = 0.566738 Days, E = 131.885112 Days

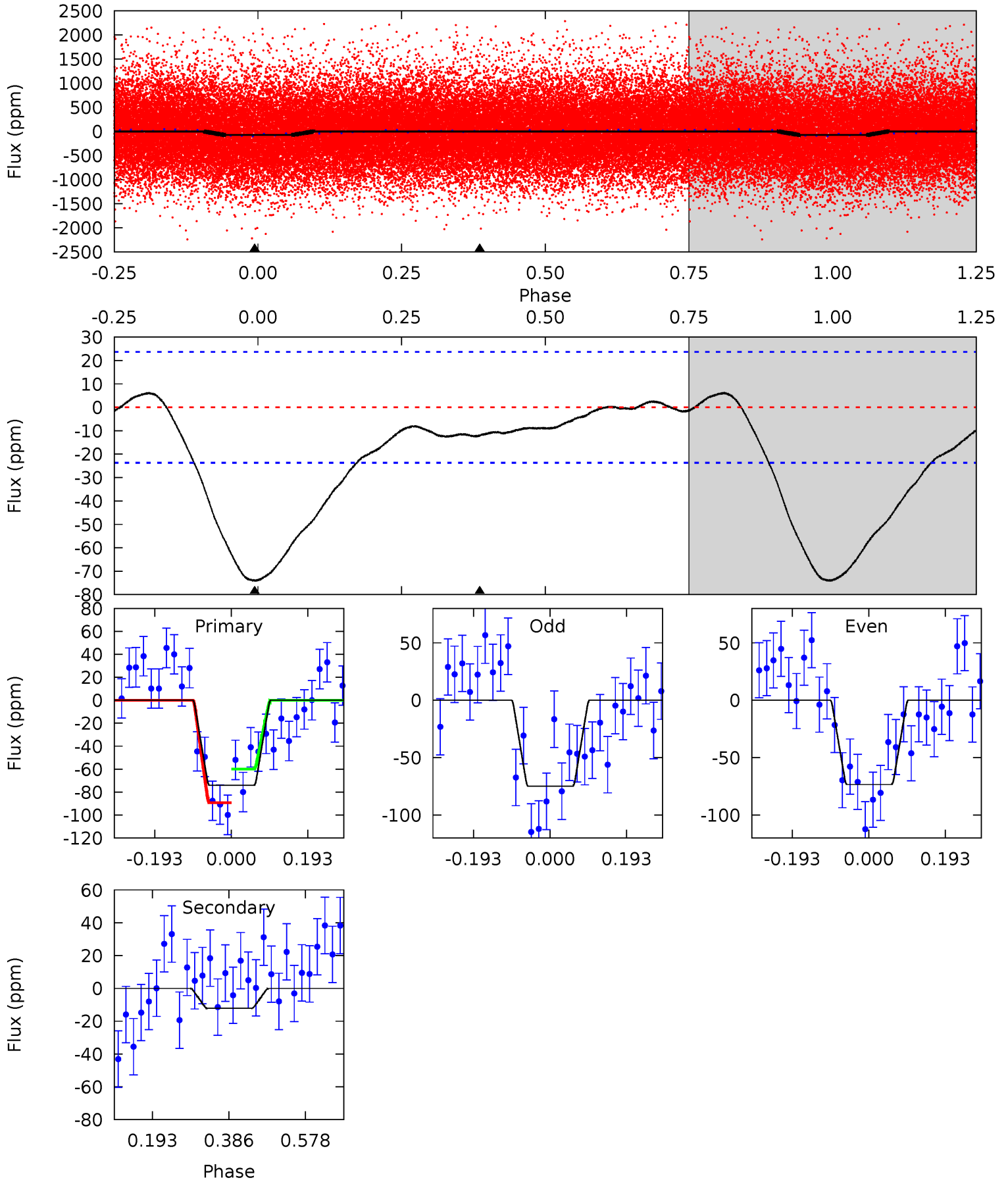
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.34	0.37	0	0	4.37	1.15	0.09	5.34	5.34	0.37	0.37	0.60	0.69	0.03	5.50



# Alt Model-Shift Uniqueness Test

006947300-01, P = 0.566798 Days, E = 131.808968 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
13.9	2.27	0	0	4.43	1.30	0.71	13.9	13.9	2.27	2.27	0.13	1.03	0.08	2.73





### Stellar Parameters For KIC 006947300

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6623^{+164}_{-281}$	$4.355^{+0.065}_{-0.195}$	$0.070^{+0.250}_{-0.350}$	$1.261^{+0.391}_{-0.168}$	$1.317^{+0.168}_{-0.206}$	$0.924^{+0.263}_{-0.491}$
	+2%/-4%	+1%/-4%	+357%/-500%	+31%/-13%	+13%/-16%	+28%/-53%
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 006947300-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-2 \pm 5$	$3.07^{+3.57}_{-2.10}$	$3854^{+306}_{-239}$	$-3544^{+529}_{-286}$	$0.012^{+0.183}_{-0.049}$
Alt.	$-12 \pm 5$	$3.57^{+3.70}_{-2.49}$	$3842^{+272}_{-231}$	$-3308^{+7427}_{-299}$	$0.102^{+0.954}_{-0.078}$

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

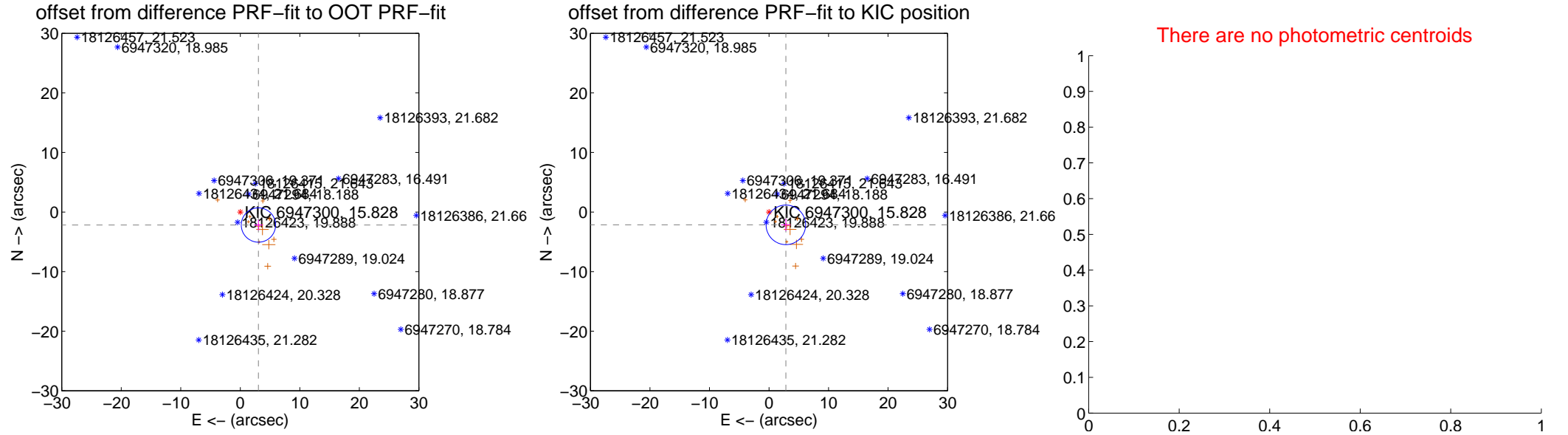
## DV Centroid Data

Supplemental centroid analysis for 006947300-01. Kepler magnitude: 15.83. Transit SNR 0.00

There are 0 quarters with good PRF difference image offsets

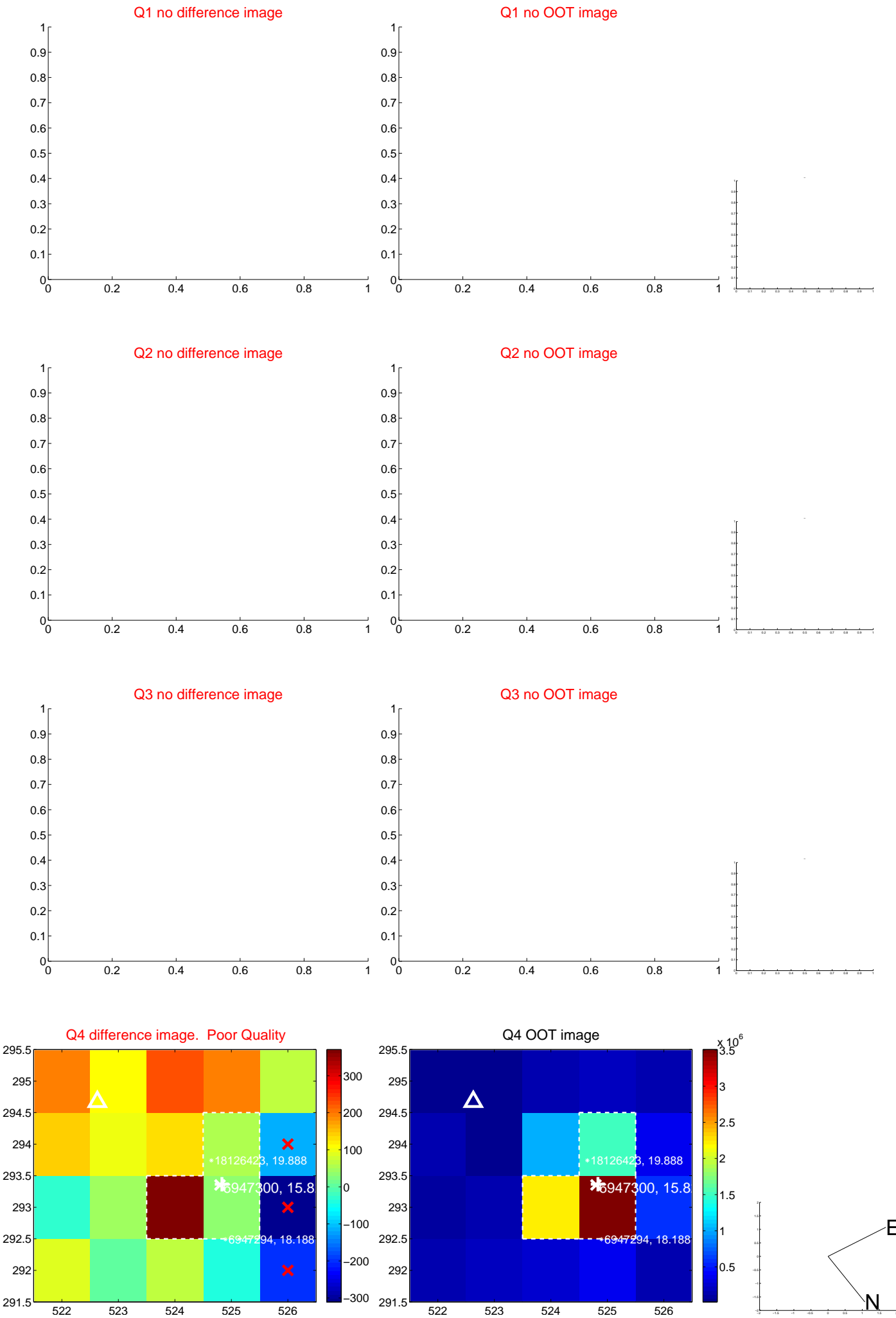
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$3.747 \pm 0.961$	3.90	$-3.049 \pm 0.743$	$-2.179 \pm 0.868$
PRF-fit source offset from KIC position	$3.555 \pm 1.107$	3.21	$-2.830 \pm 0.778$	$-2.151 \pm 1.014$
photometric centroid source offset	—	—	—	—

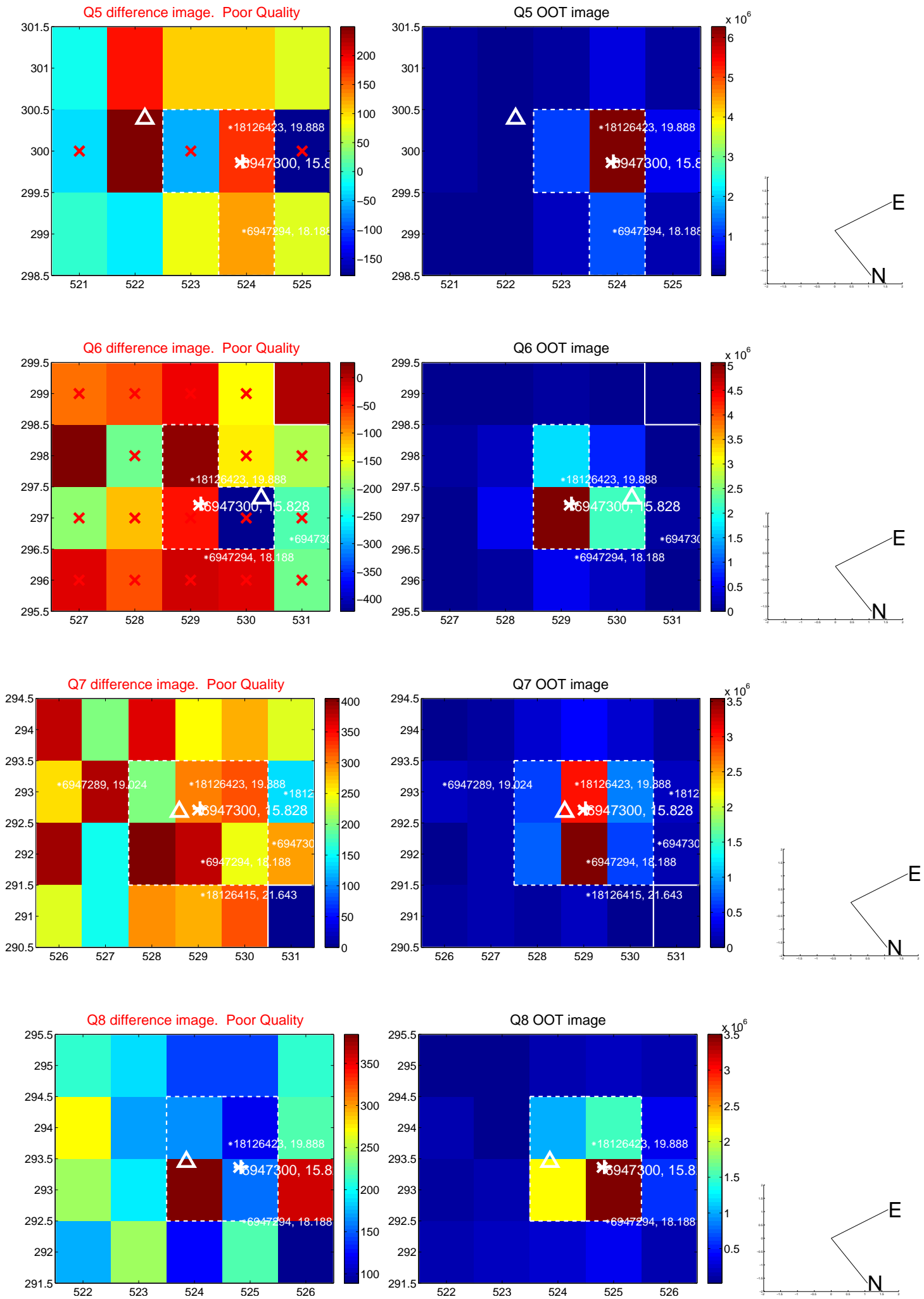


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

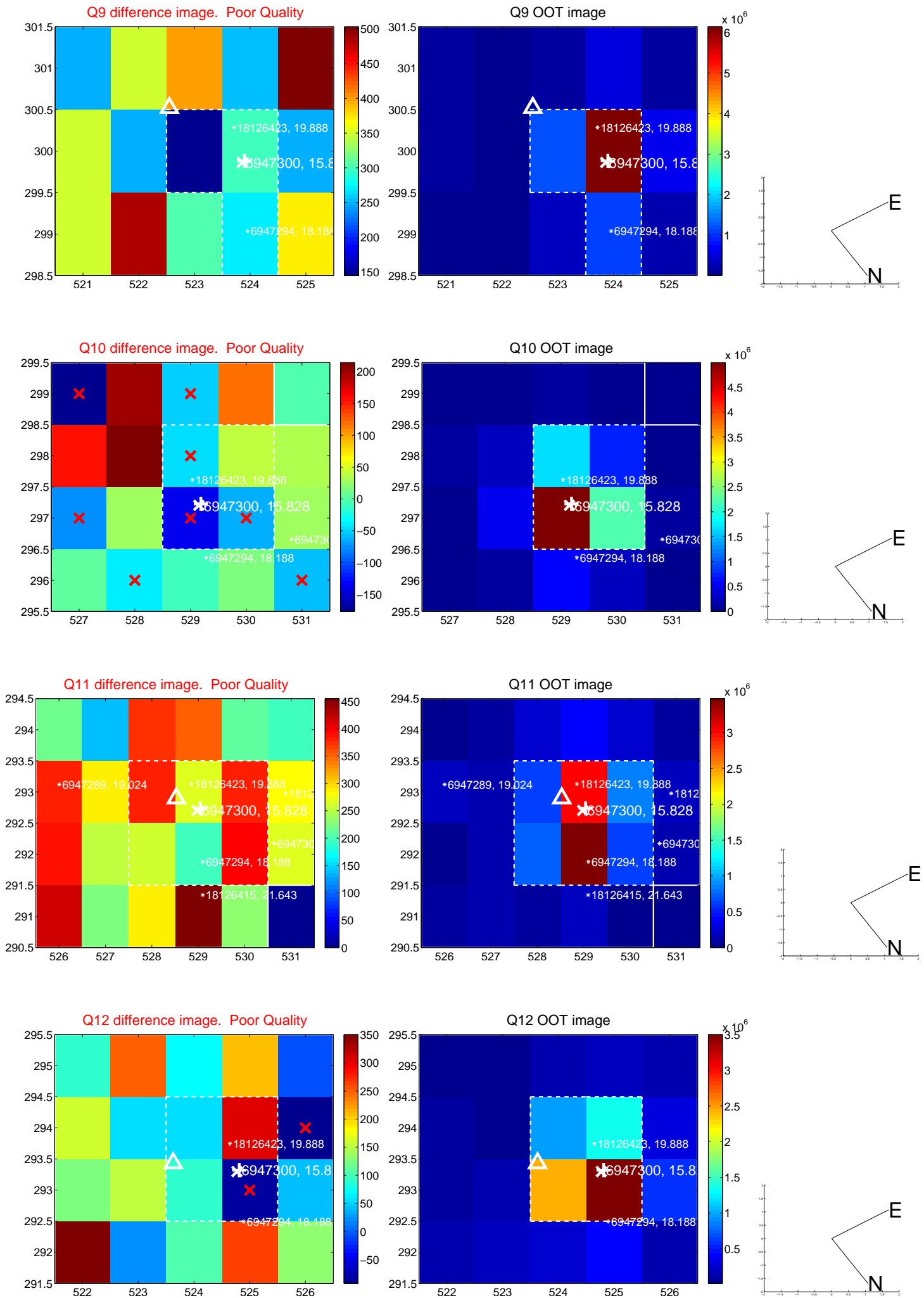


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

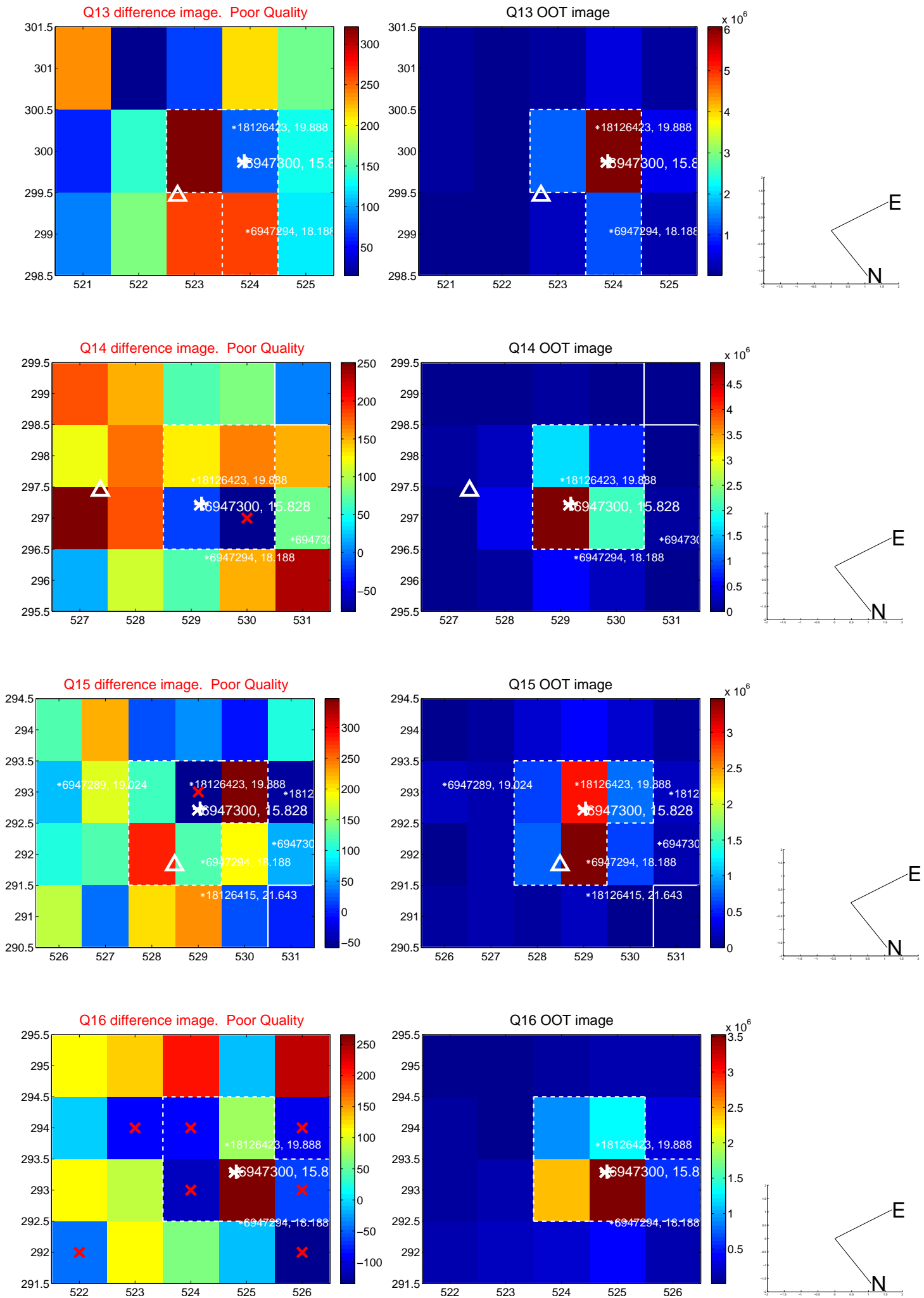




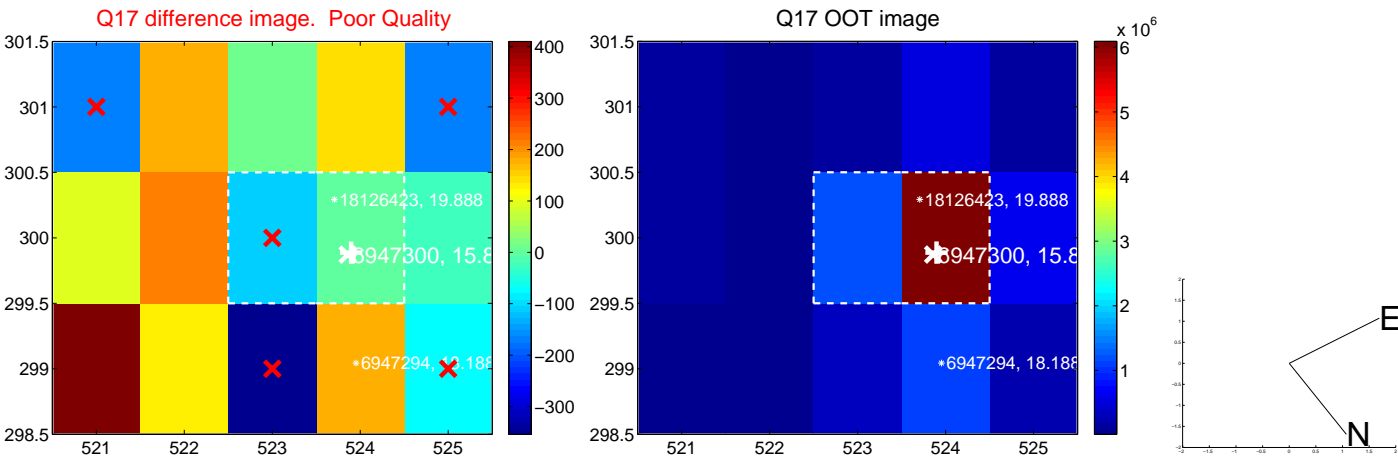
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



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



folded centroid time series figure for this object.

# UKIRT Image

Declination

