

# KIC 010347101

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
010347101-01	OBS	No	8.519737	132.941062	19.2	31.900	8.5	11.0	1.30	6398	0.66	350.14

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010347101-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT

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

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

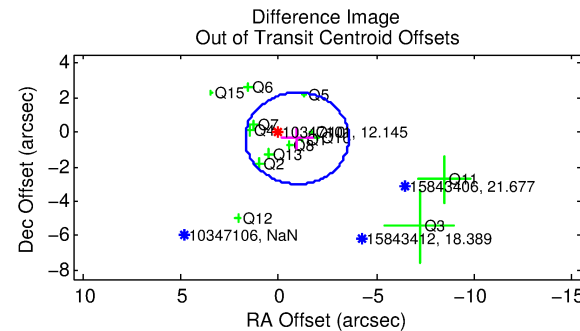
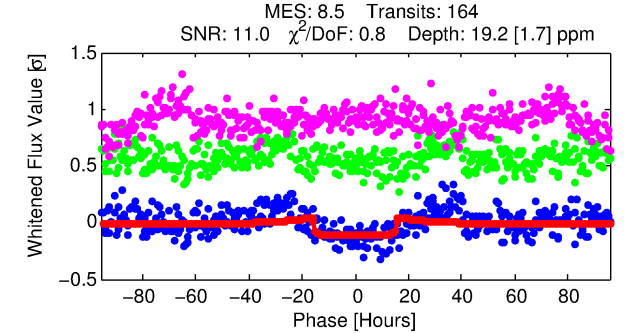
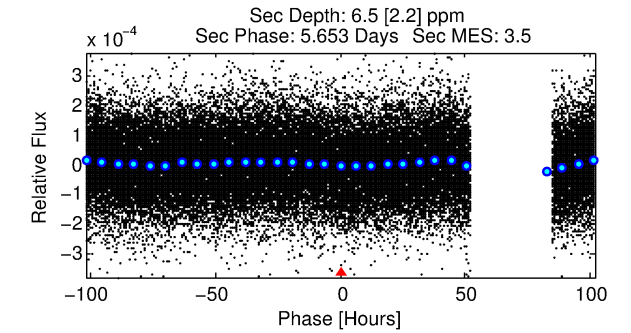
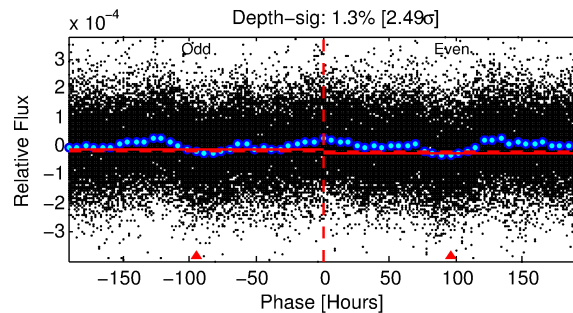
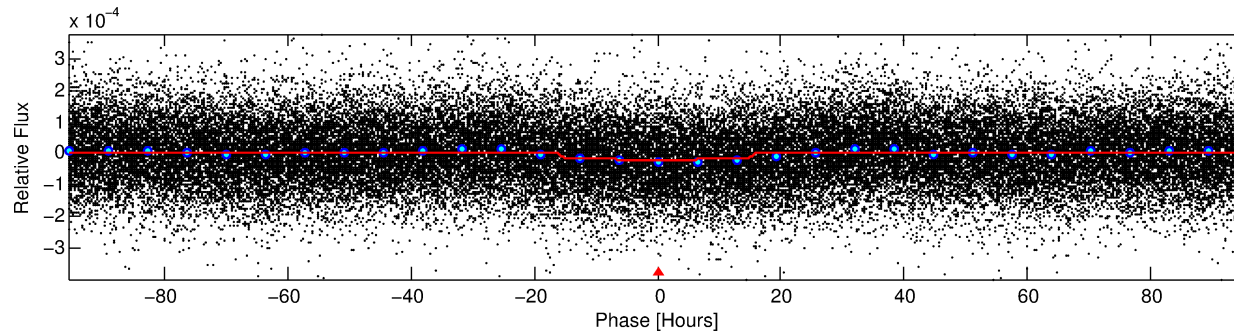
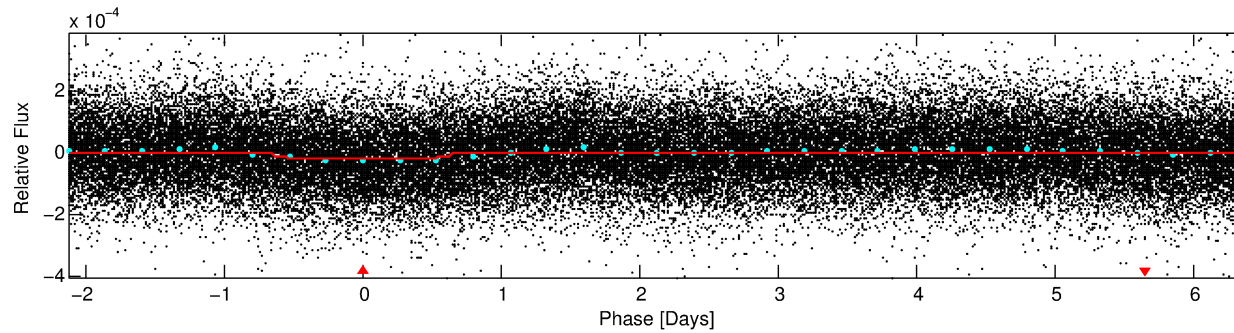
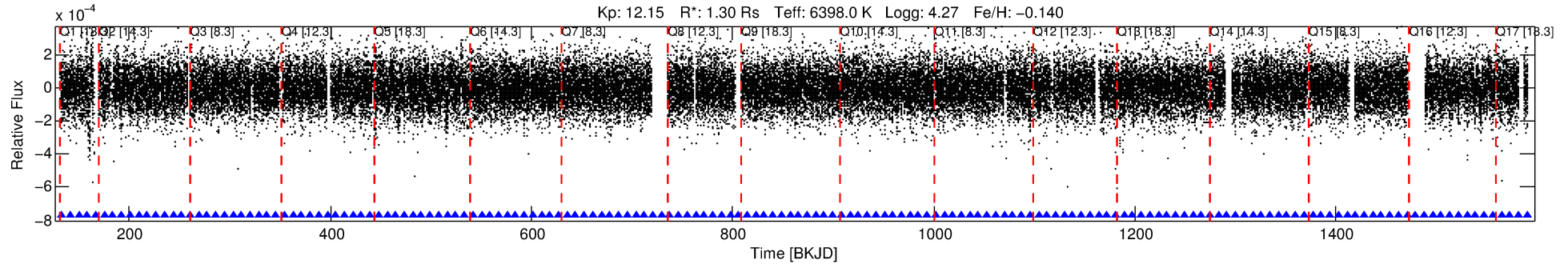
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 010347101-01

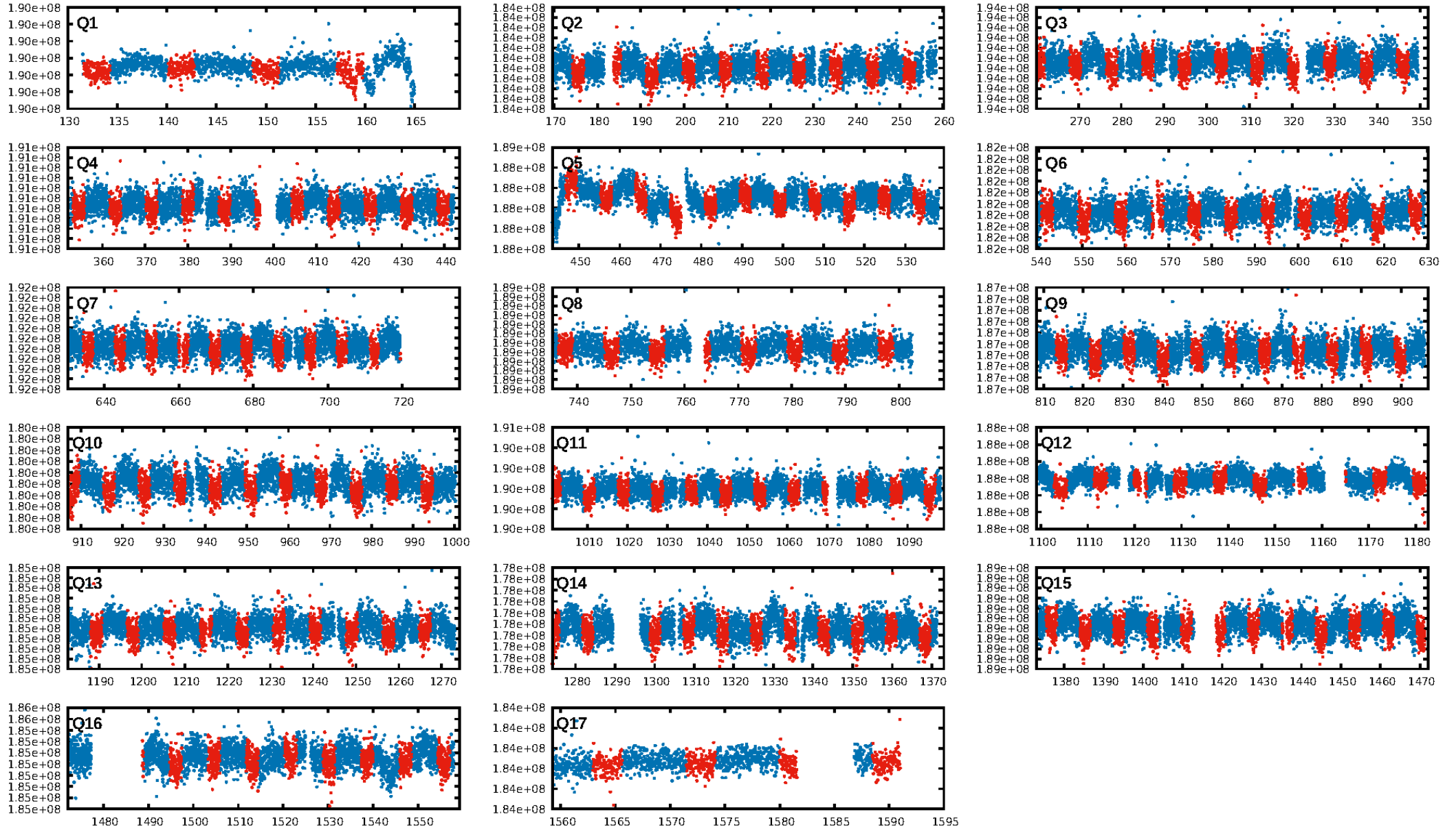
No Significant Match Found

# DV One-Page Summary

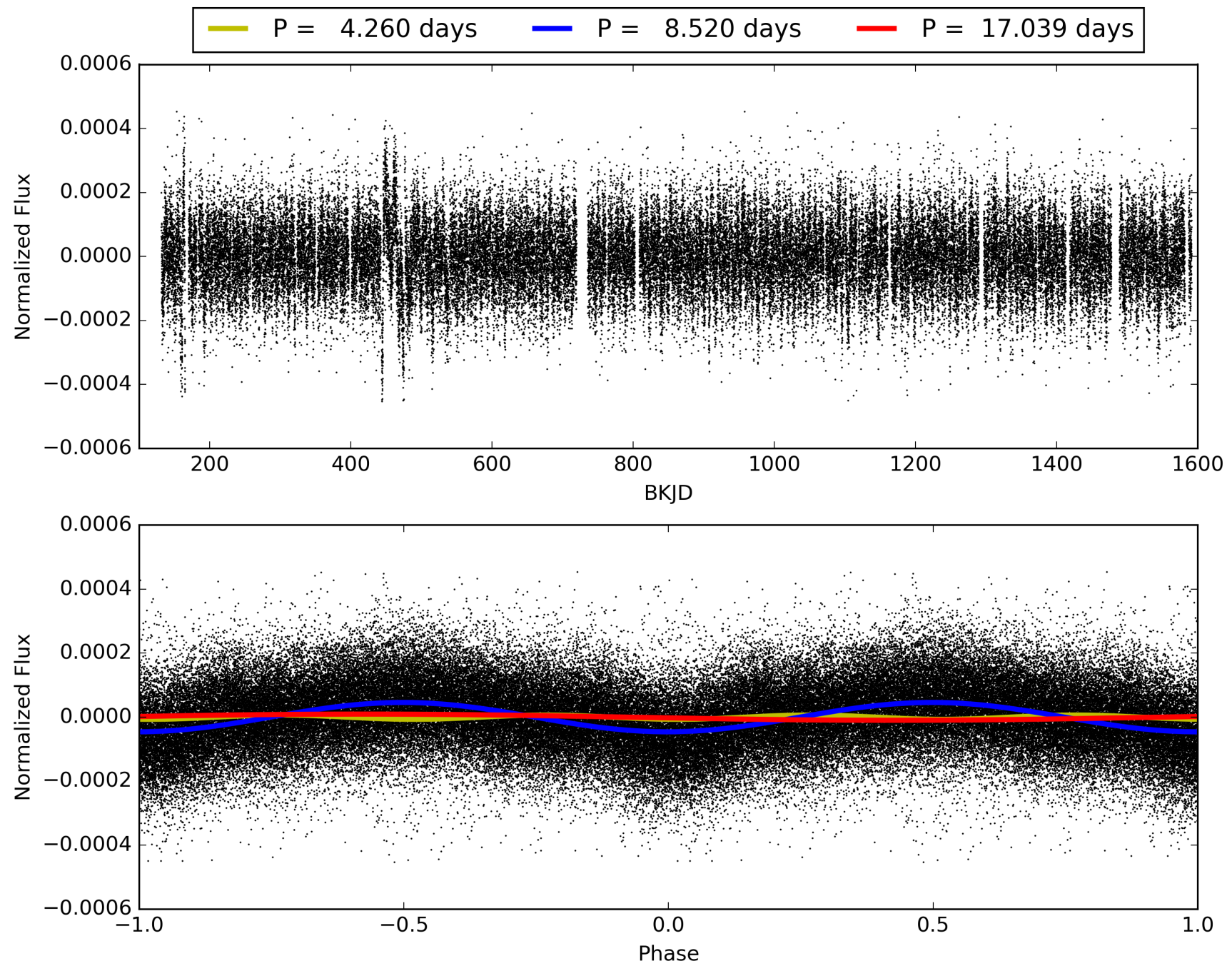
KIC: 10347101 Candidate: 1 of 1 Period: 8.520 d



# TCE 010347101-01, PDC Light Curves

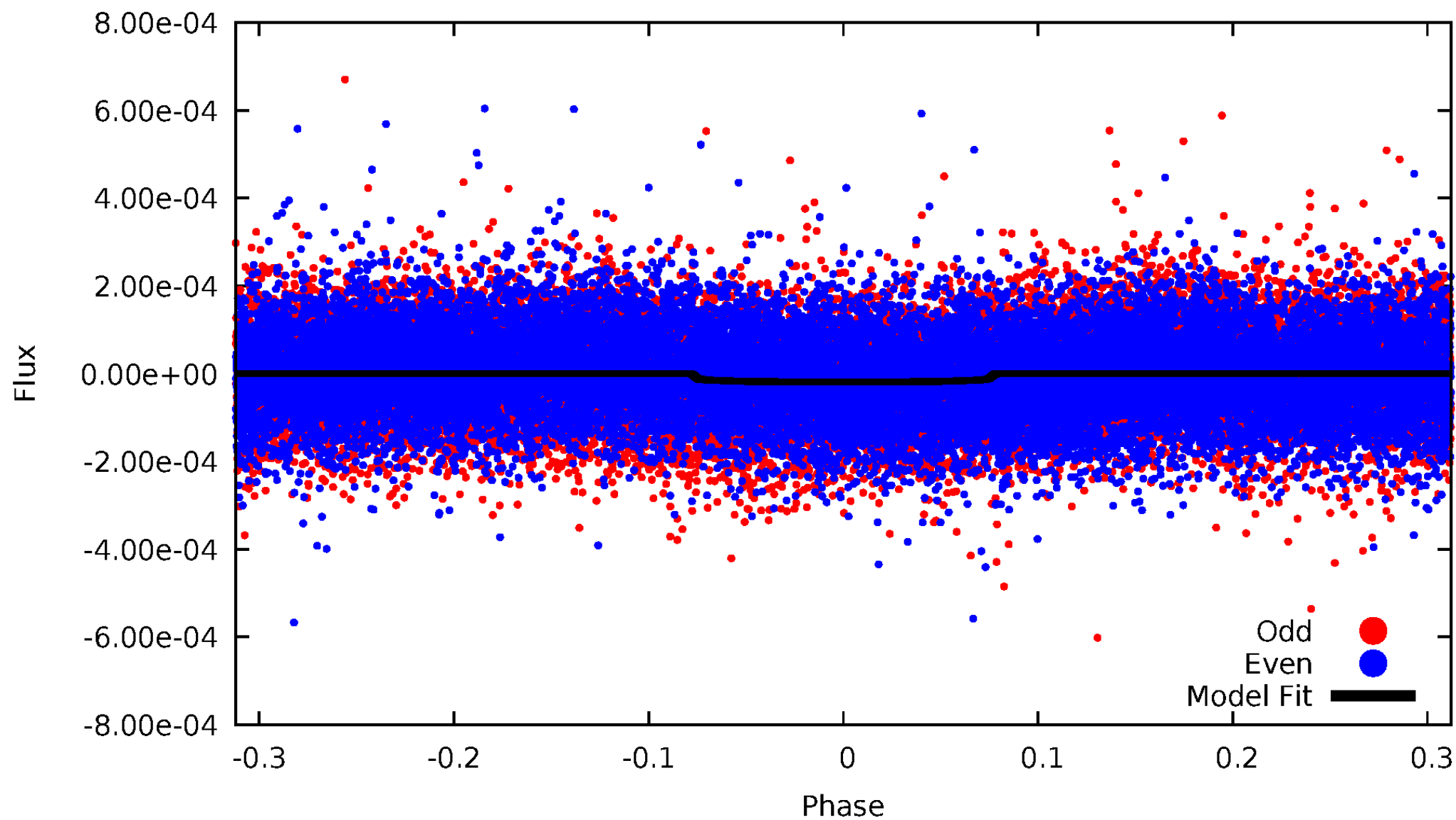


TCE 010347101-01



# DV Odd/Even

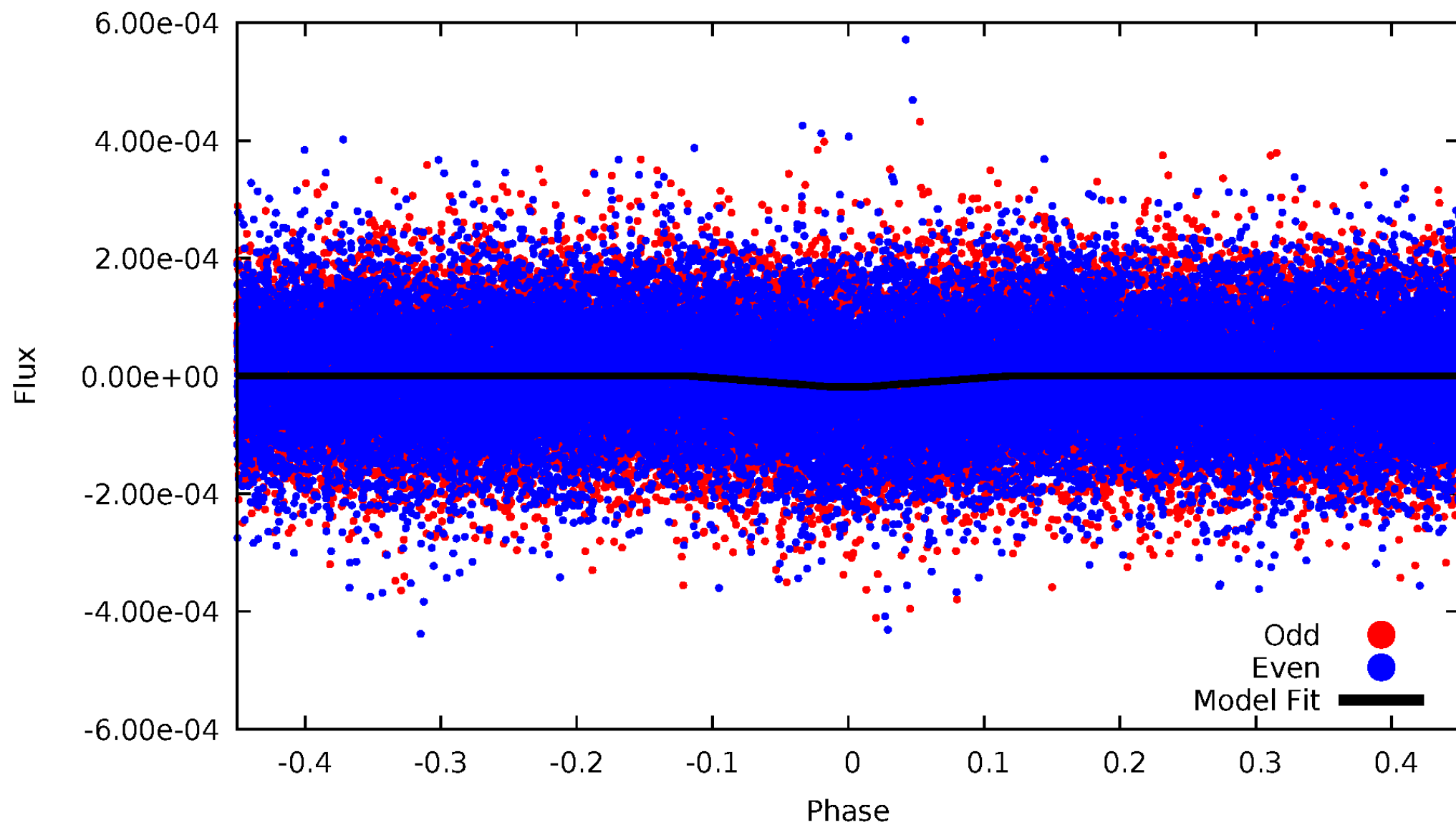
TCE 010347101-01



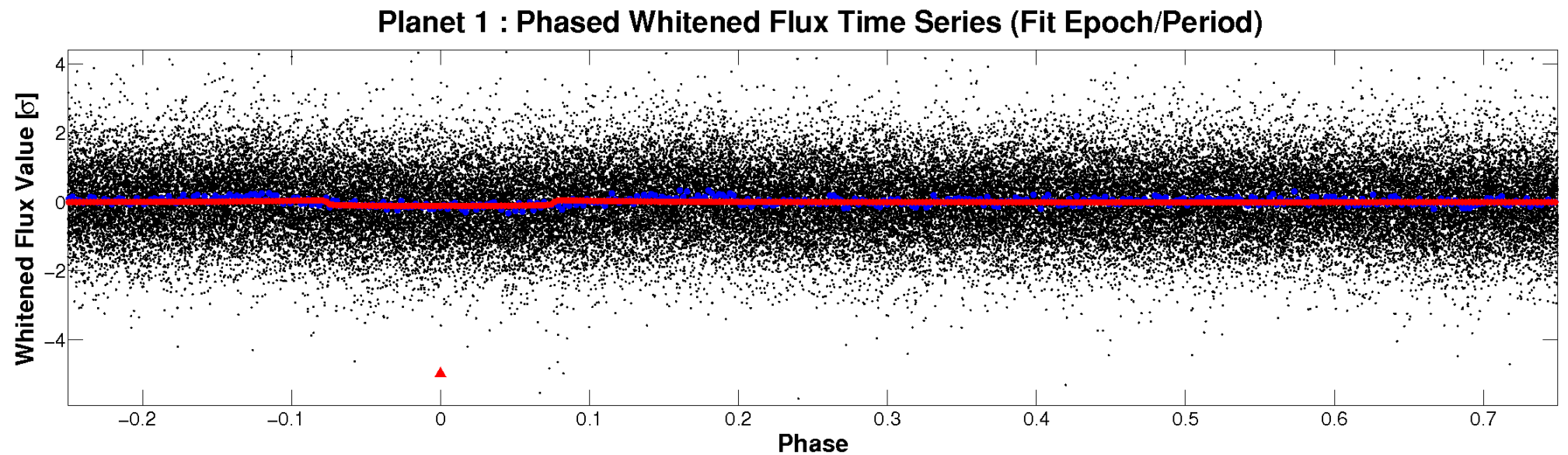
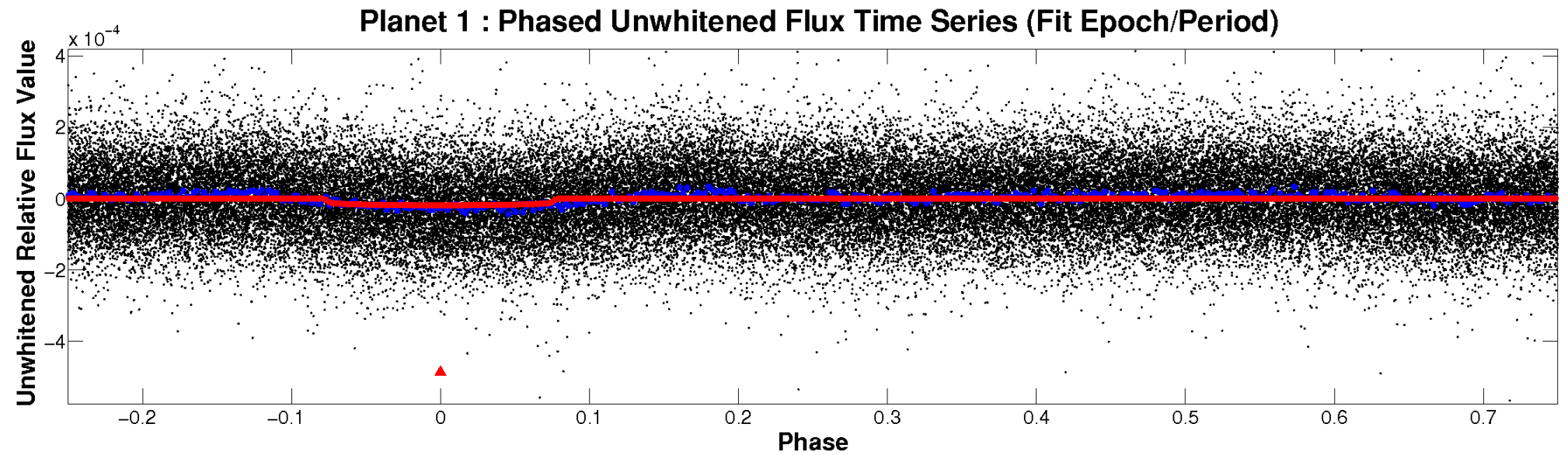


# ALT Odd/Even

TCE 010347101-01

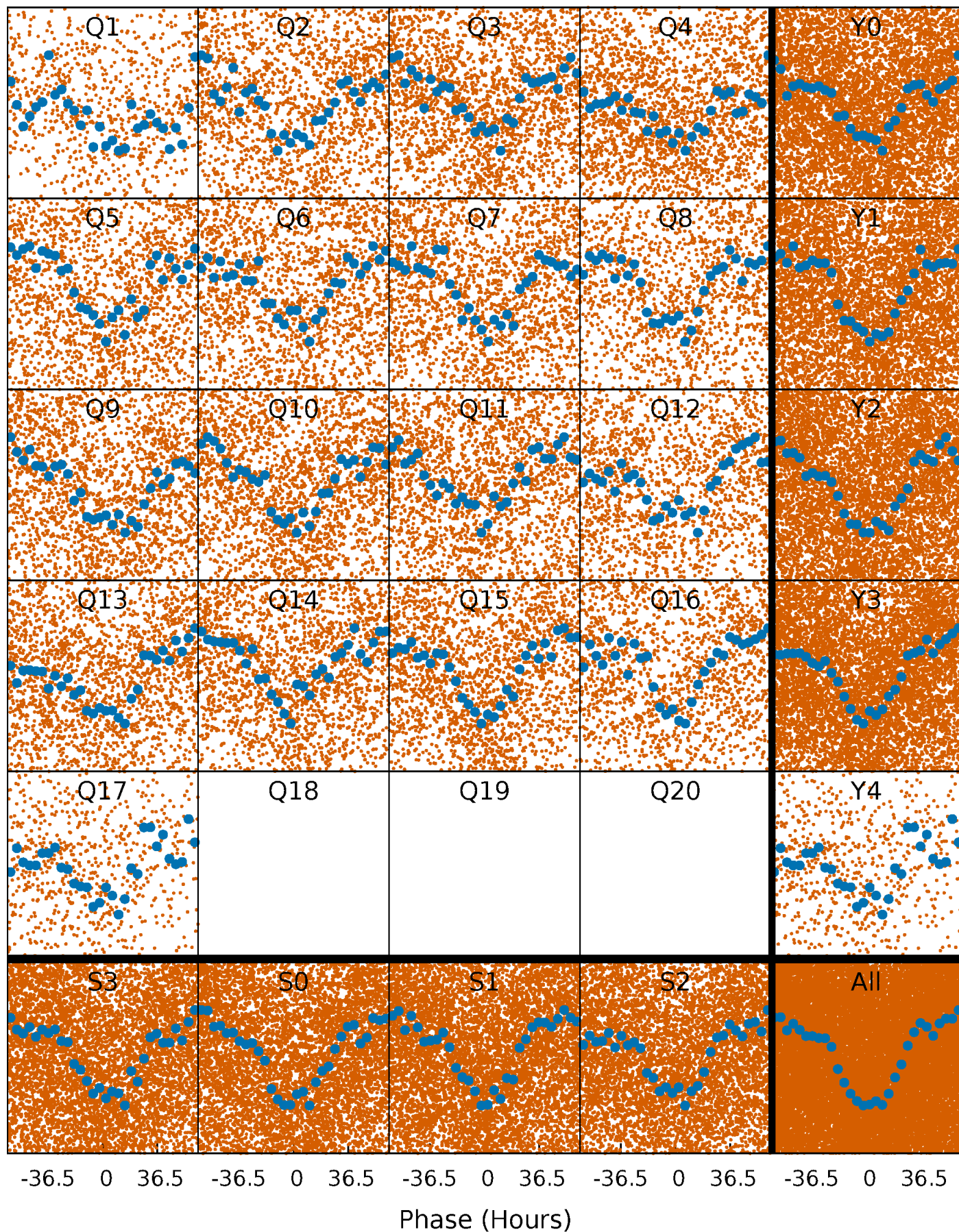


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

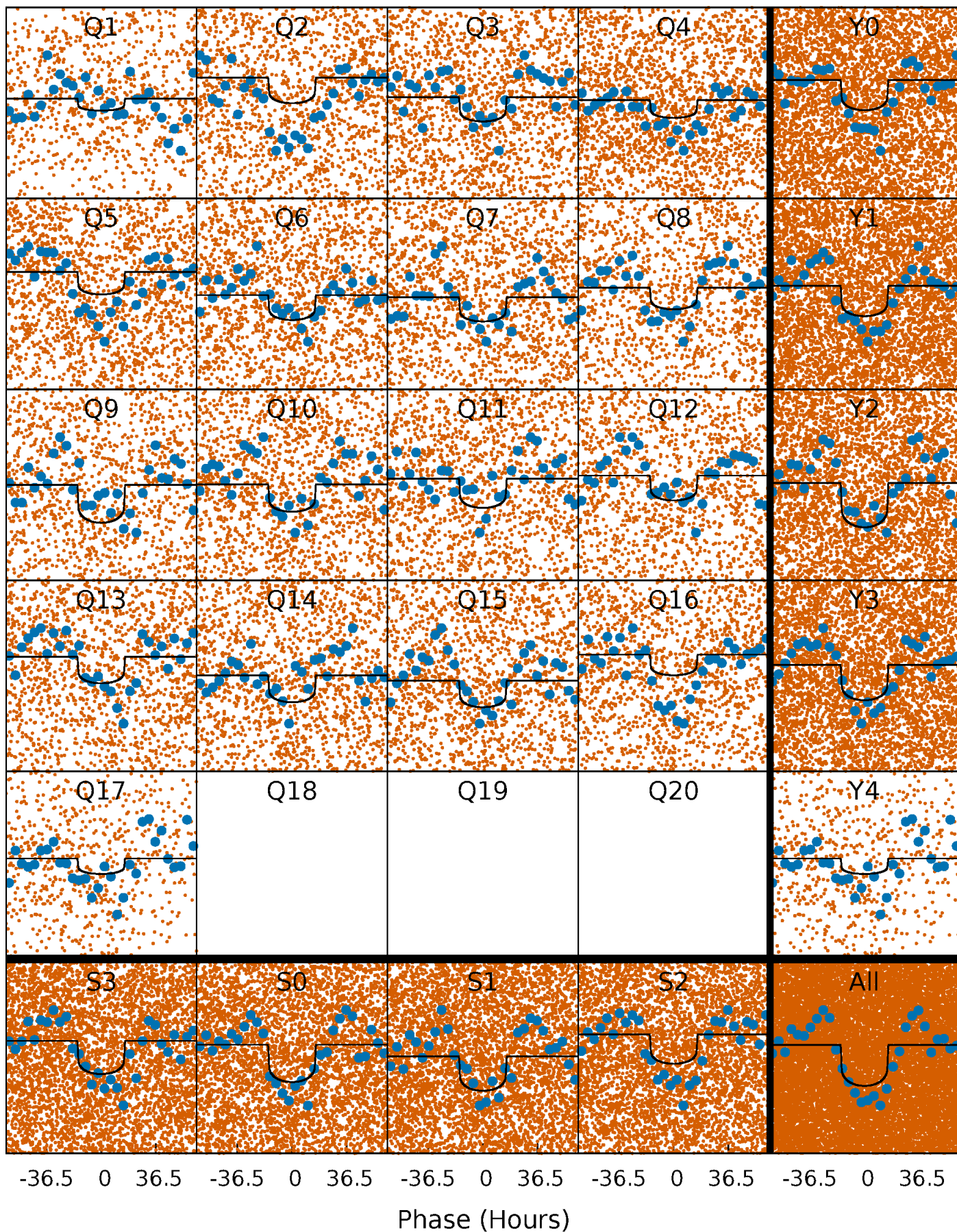
TCE 010347101-01 P= 8.519737 Days  $T_0=132.941062$  (BKJD)





# DV Quarter-Phased Transit Curves

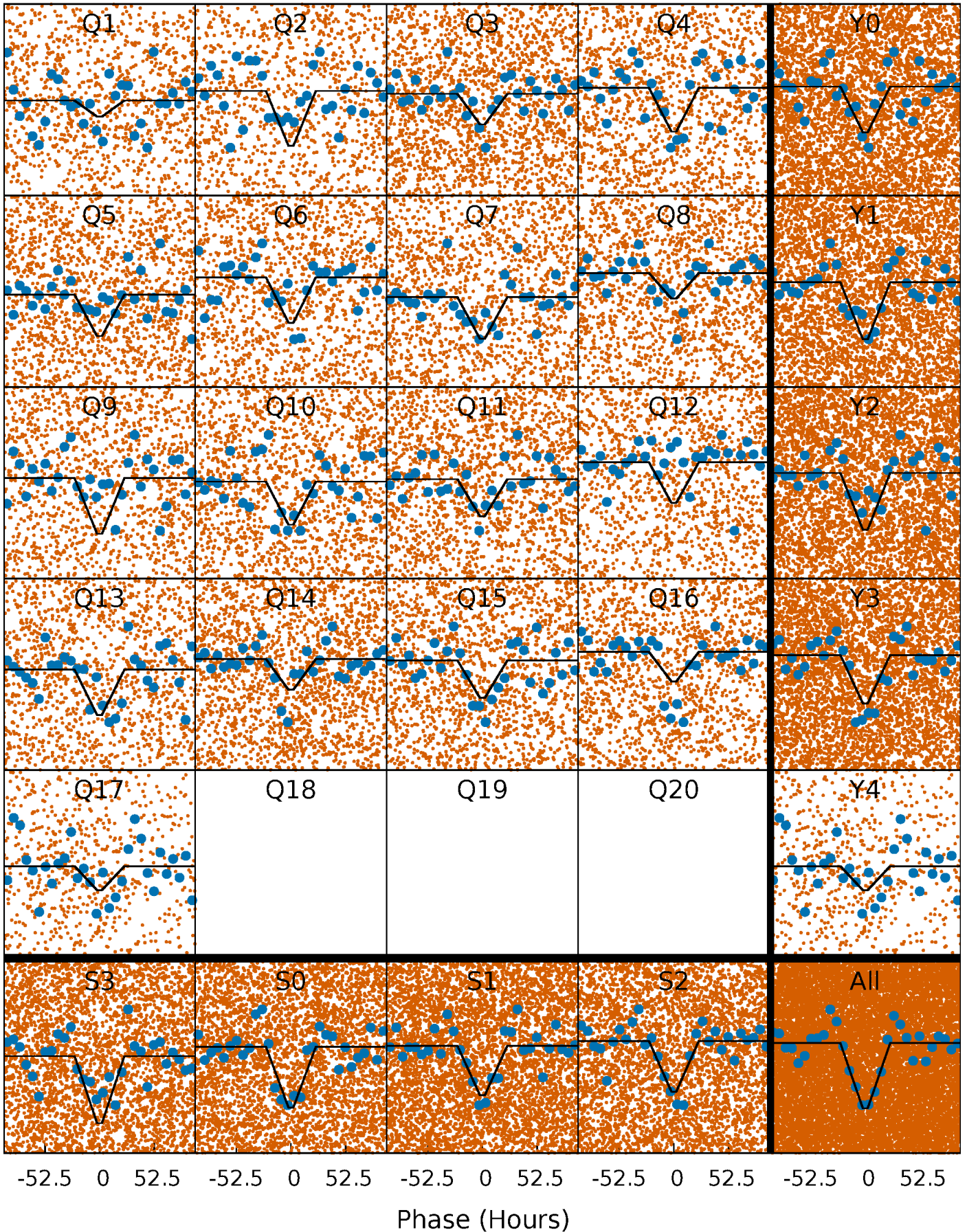
TCE 010347101-01 P= 8.519737 Days  $T_0=132.941062$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

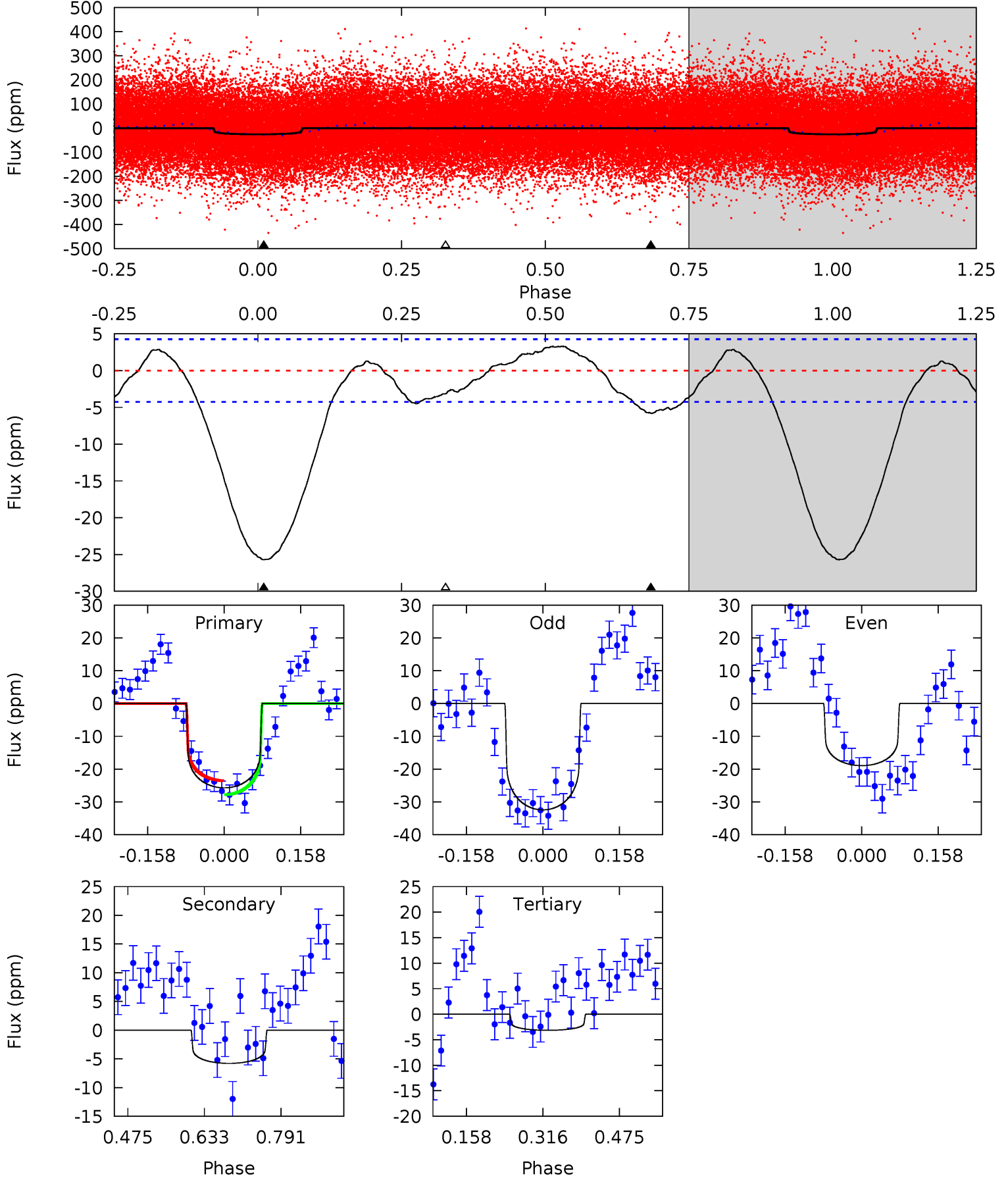
TCE 010347101-01 P= 8.516897 Days  $T_0=133.332323$  (BKJD)



# DV Model-Shift Uniqueness Test

010347101-01, P = 8.519737 Days, E = 124.421325 Days

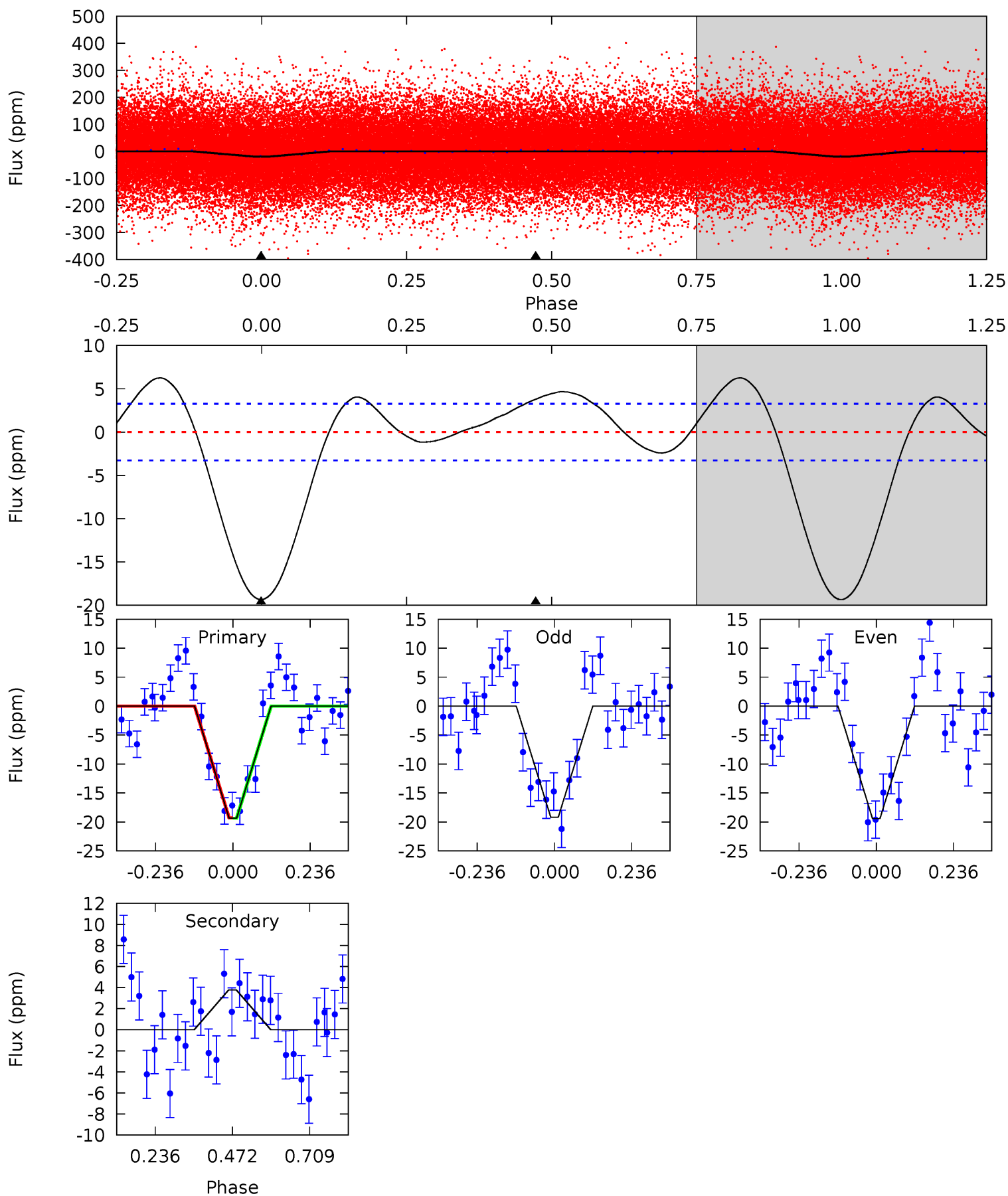
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.9	6.07	3.30	0	4.47	1.41	2.49	23.6	26.9	2.76	6.07	7.11	1.02	0.11	2.25



# Alt Model-Shift Uniqueness Test

010347101-01, P = 8.516897 Days, E = 124.815426 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
25.9	-5.07	0	0	4.38	1.18	2.05	25.9	25.9	-5.07	-5.07	0.15	0.96	0.24	0.05





### Stellar Parameters For KIC 010347101

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6398^{+159}_{-250}$	$4.266^{+0.149}_{-0.198}$	$-0.140^{+0.250}_{-0.300}$	$1.305^{+0.395}_{-0.230}$	$1.145^{+0.192}_{-0.157}$	$0.725^{+0.540}_{-0.357}$
	+2%/-4%	+3%/-5%	+179%/-214%	+30%/-18%	+17%/-14%	+75%/-49%
Source	PHO54	PHO54	PHO54	DSEP		

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

### Secondary Eclipse Parameters for KIC 010347101-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-6 \pm 1$	$0.66^{+0.13}_{-0.09}$	$1542^{+112}_{-100}$	$4702^{+283}_{-254}$	$52^{+20}_{-16}$
Alt.	$4 \pm 1$	$0.63^{+0.13}_{-0.09}$	$1544^{+116}_{-98}$	$-4473^{+291}_{-257}$	$-38.042^{+12.708}_{-17.598}$

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

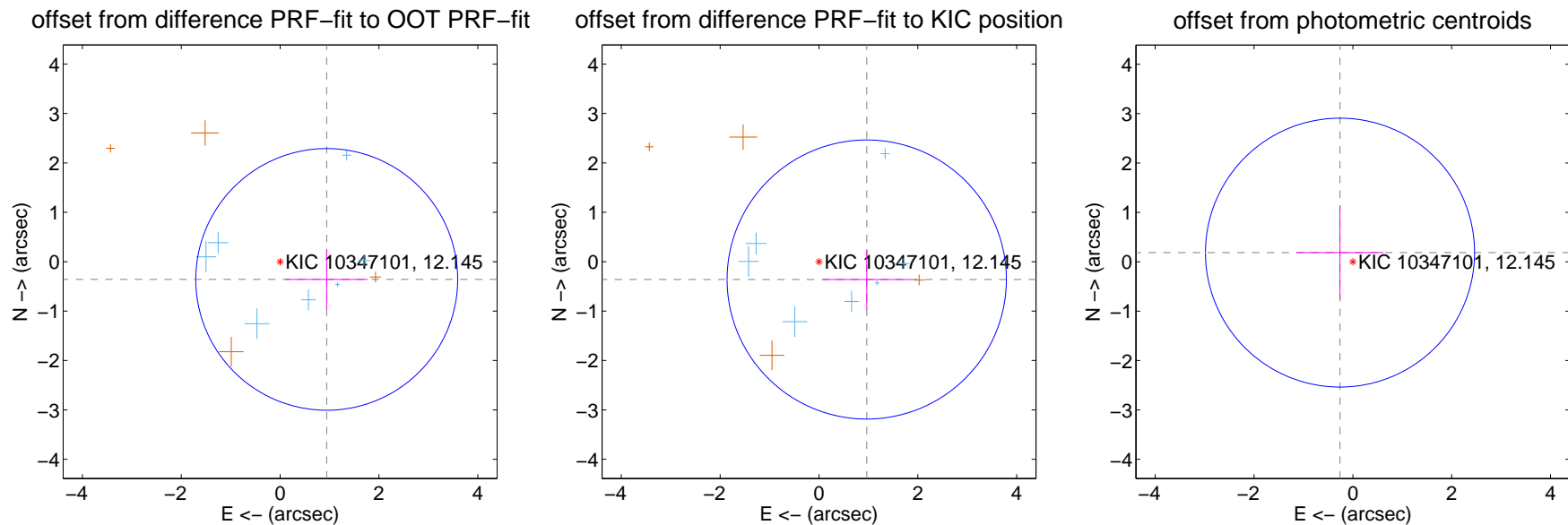
## DV Centroid Data

Supplemental centroid analysis for 010347101-01. Kepler magnitude: 12.14. Transit SNR 11.03

There are 7 quarters with good PRF difference image offsets

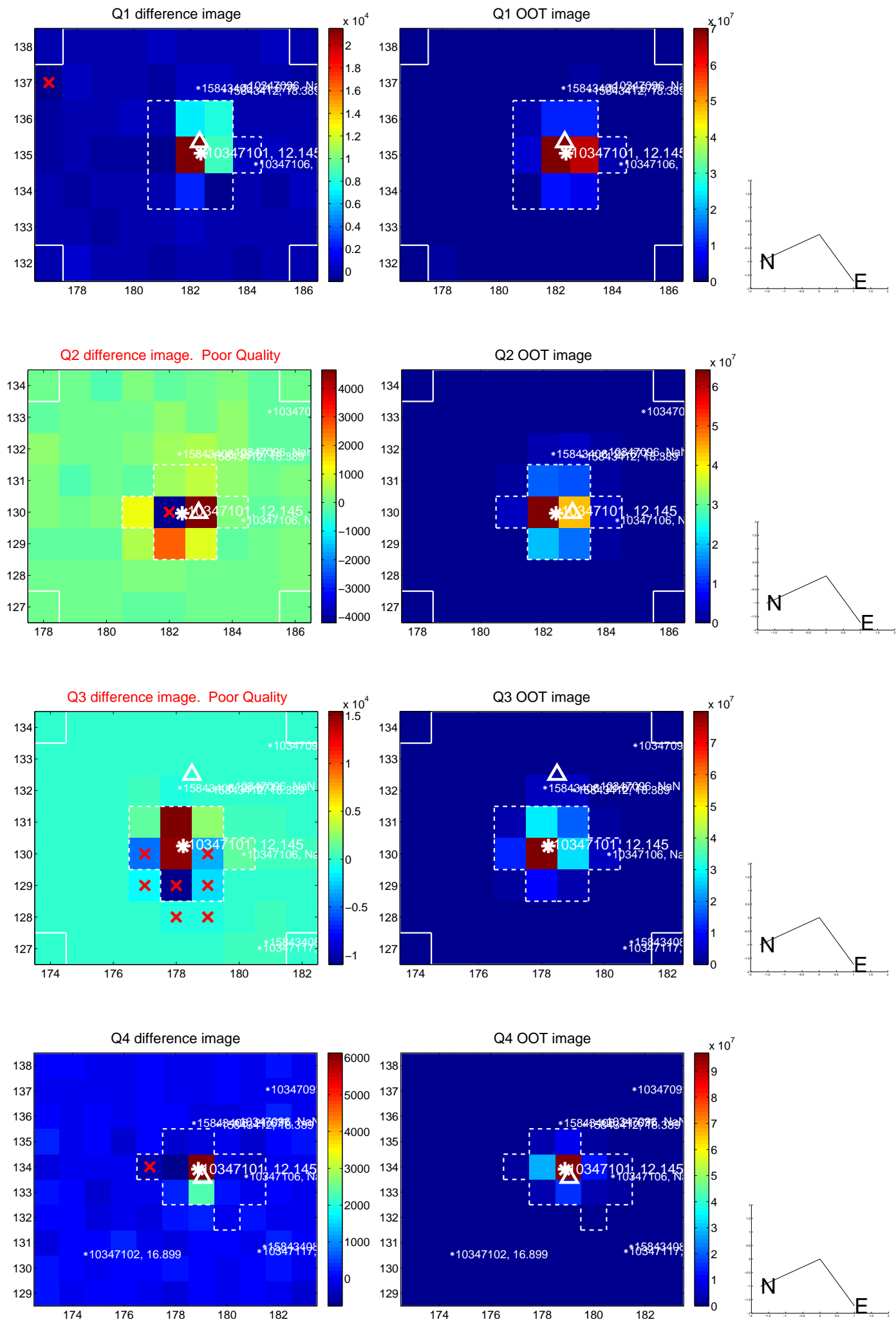
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.009 \pm 0.883$	1.14	$-0.943 \pm 0.830$	$-0.359 \pm 0.613$
PRF-fit source offset from KIC position	$1.031 \pm 0.942$	1.10	$-0.966 \pm 0.885$	$-0.360 \pm 0.607$
photometric centroid source offset	$0.32 \pm 0.91$	0.35	$0.26 \pm 0.88$	$0.19 \pm 0.95$

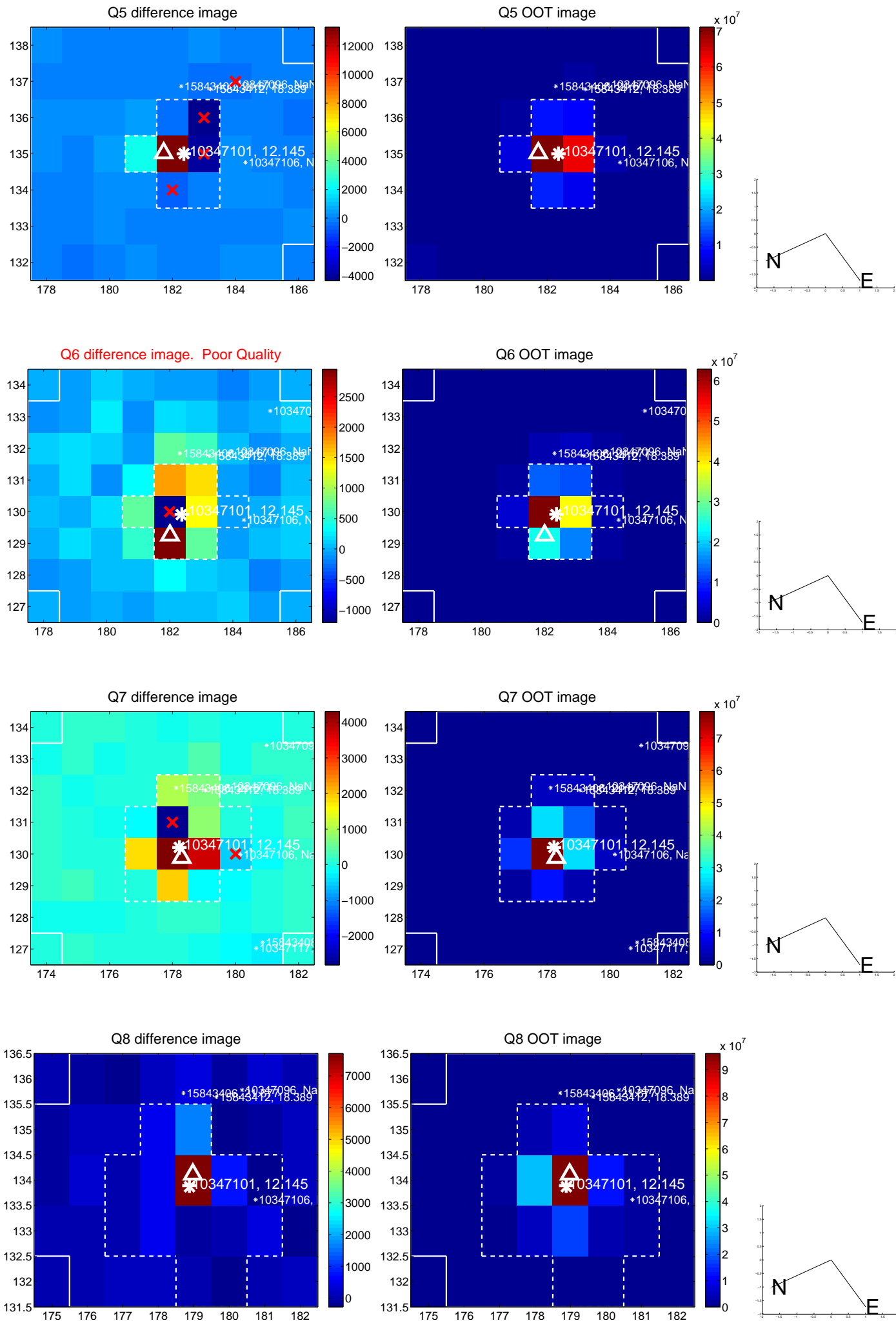


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

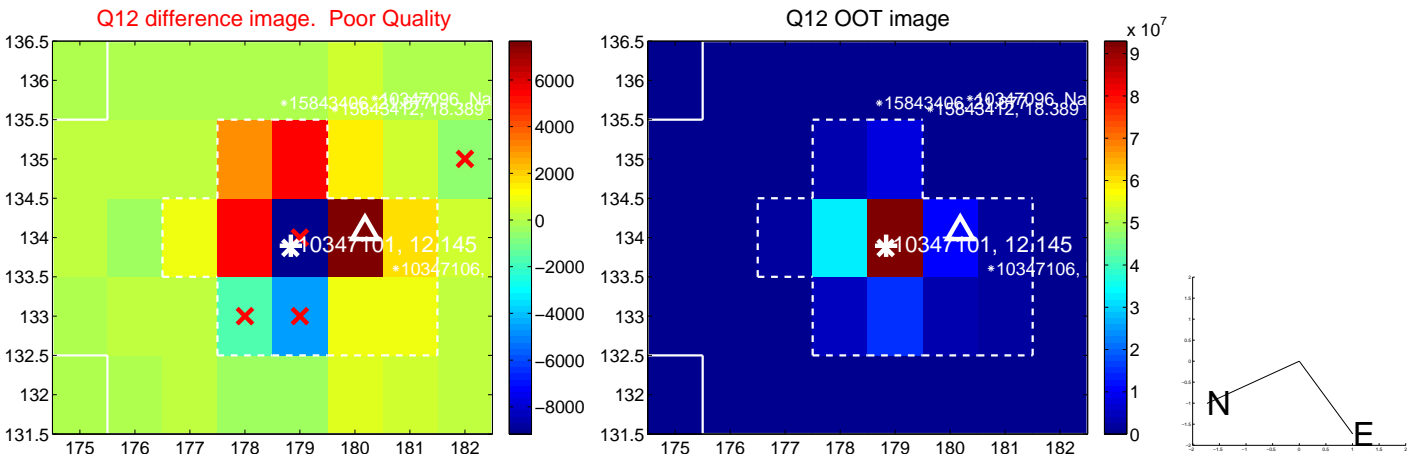
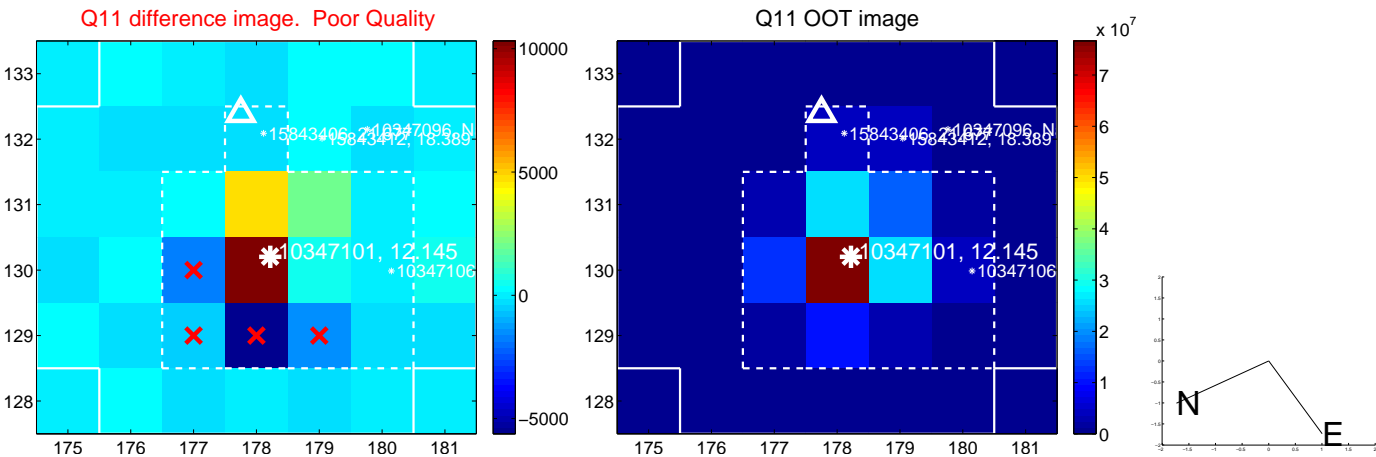
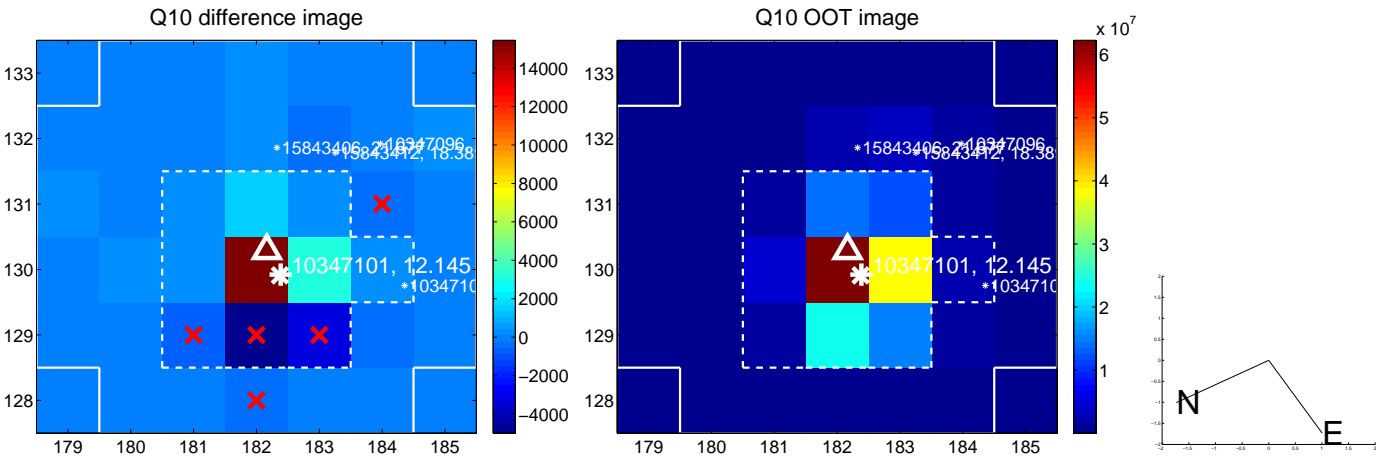
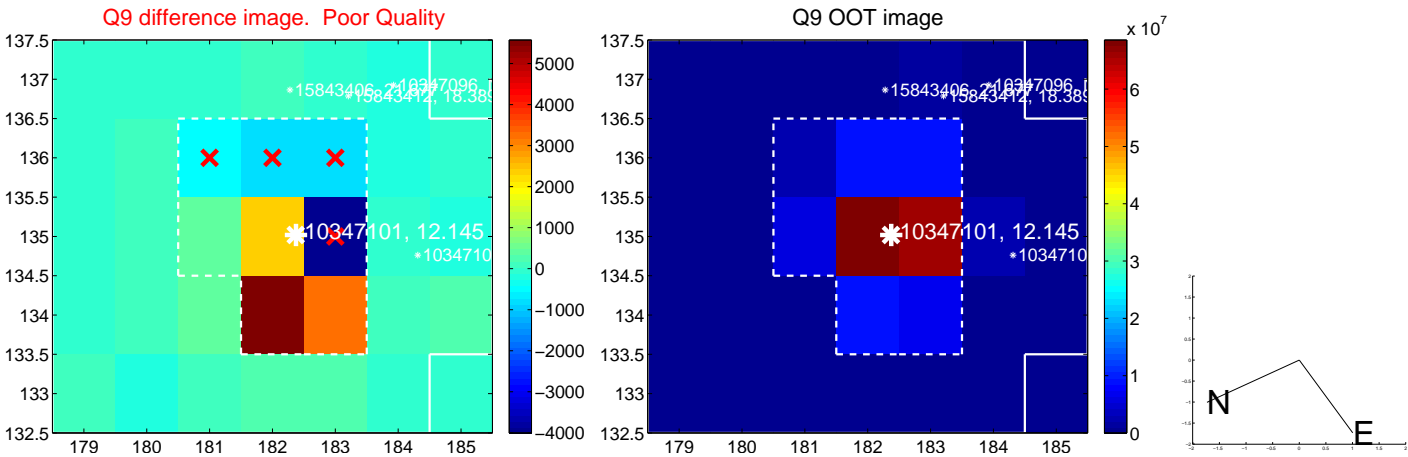


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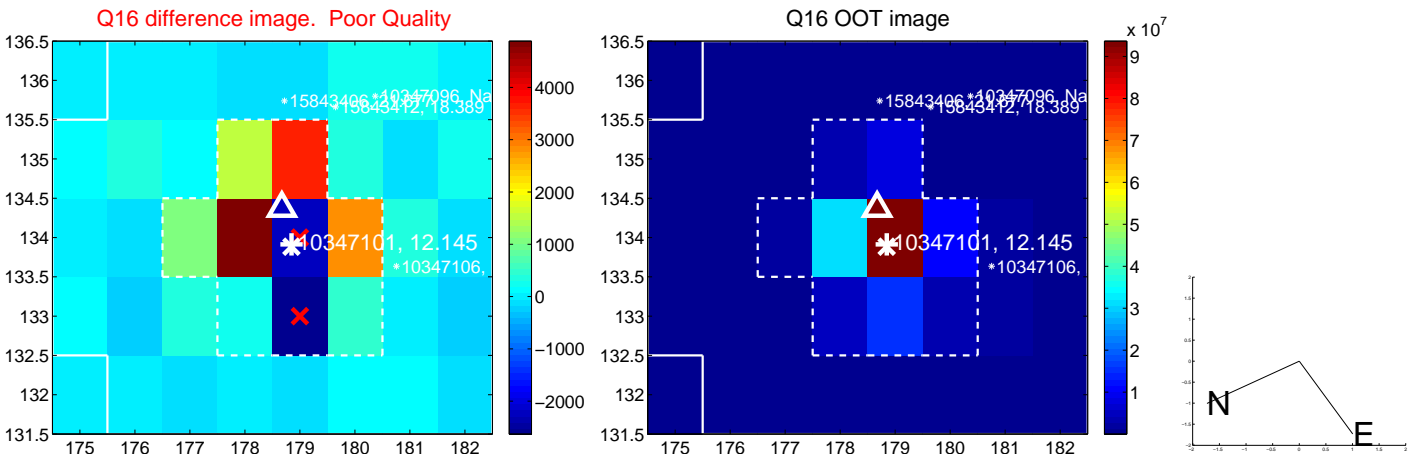
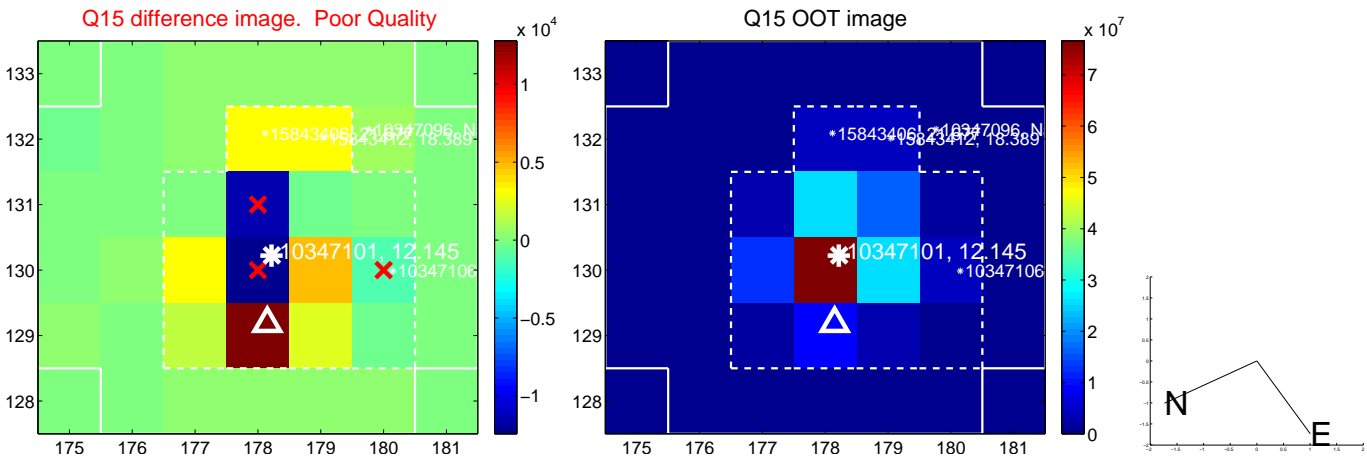
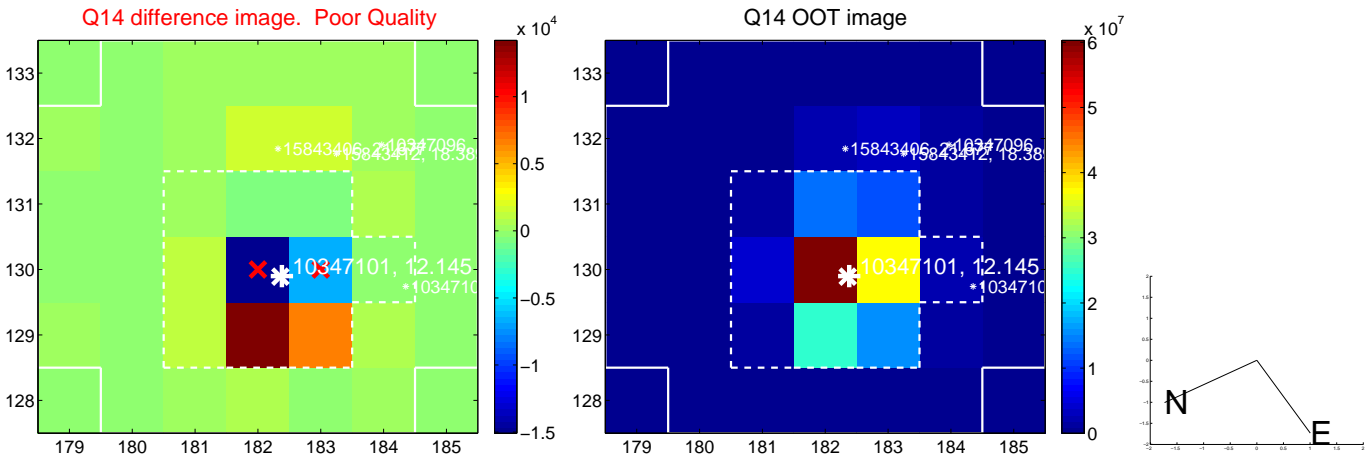
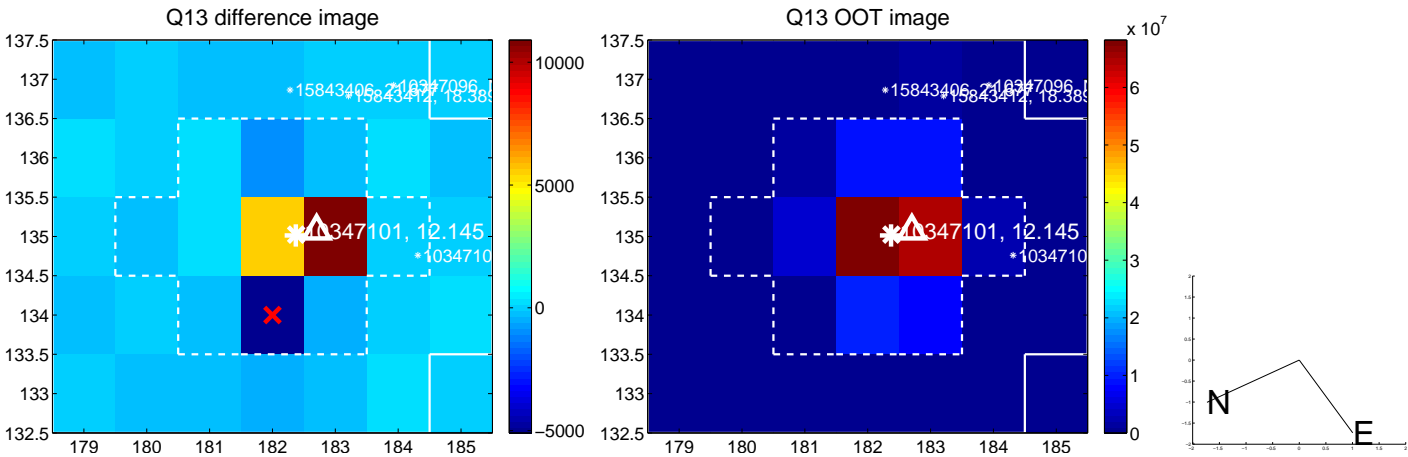




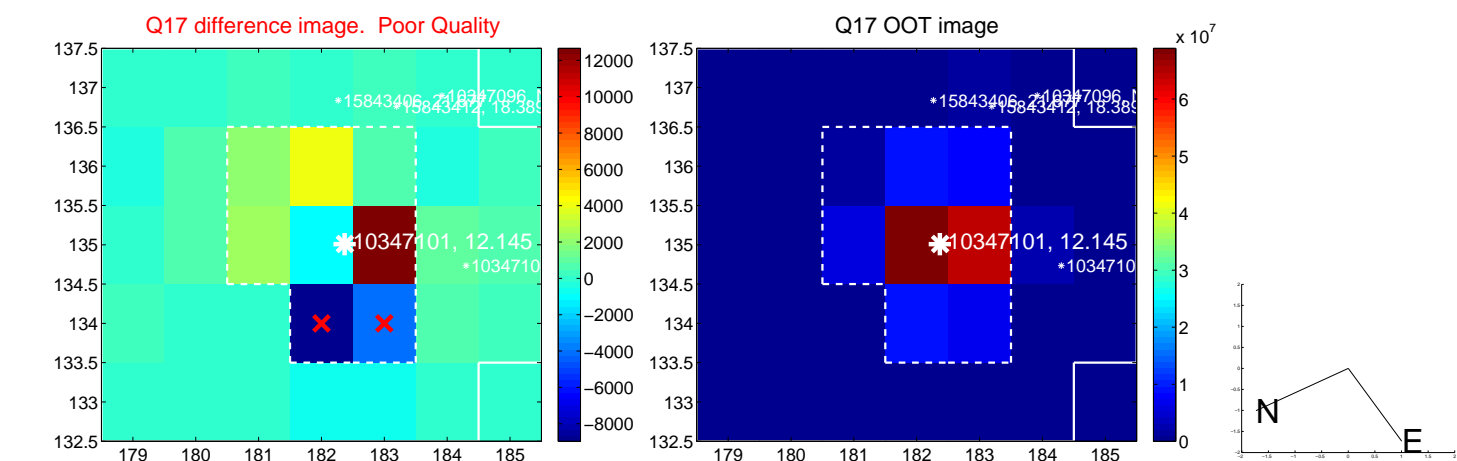
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UKIRT Image

Declination

