

# KIC 006198182

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006198182-01	OBS	2636.01	3.881513	135.117948	38.2	2.992	15.5	16.0	0.98	5854	0.72	423.21

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006198182-01	OBS	PC	0.96	0	0	0	0	NO_COMMENT

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

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

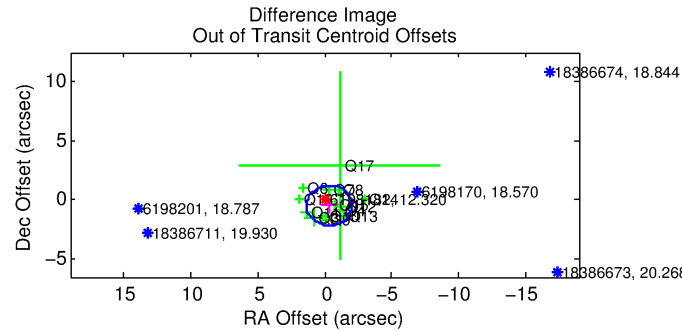
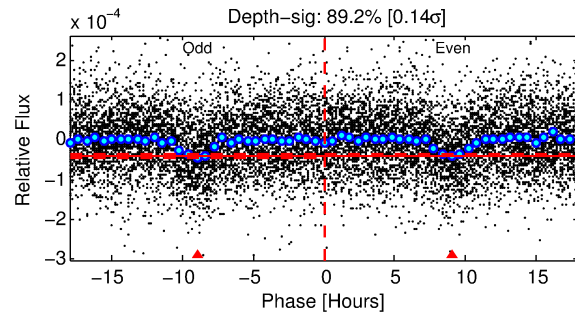
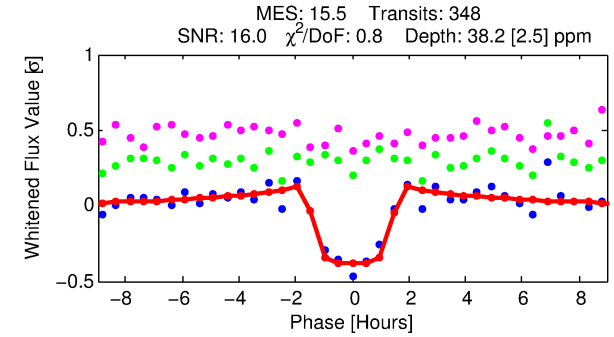
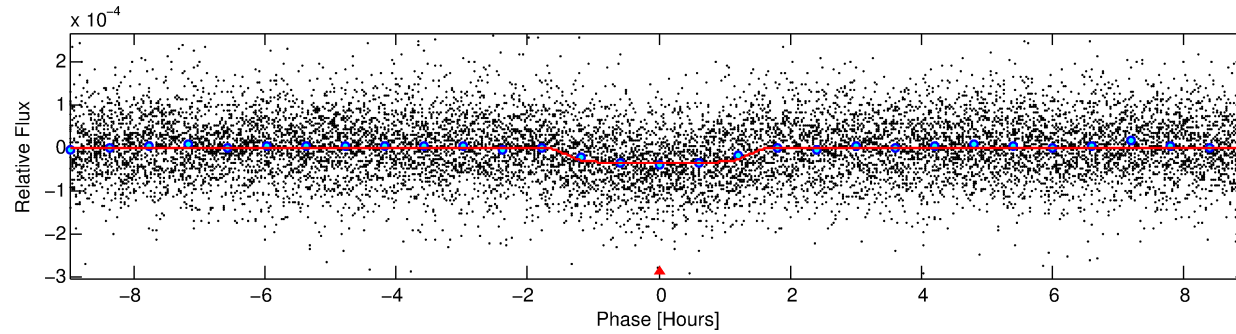
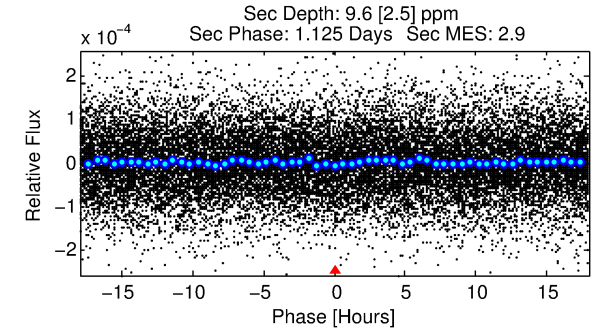
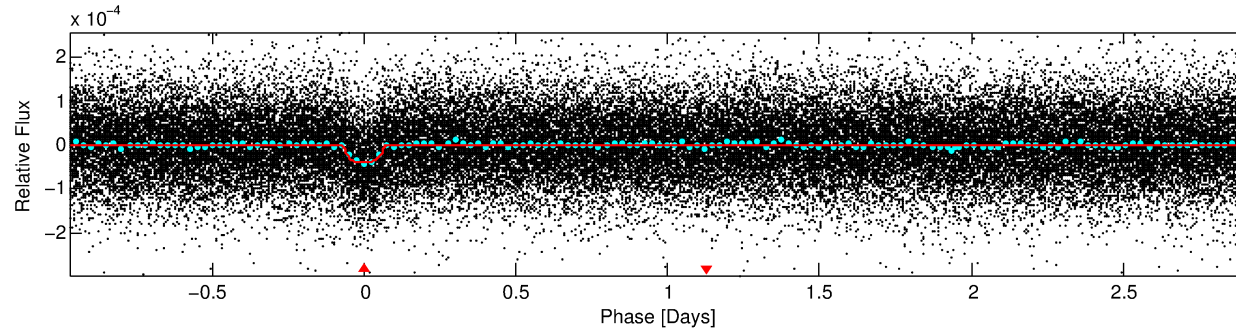
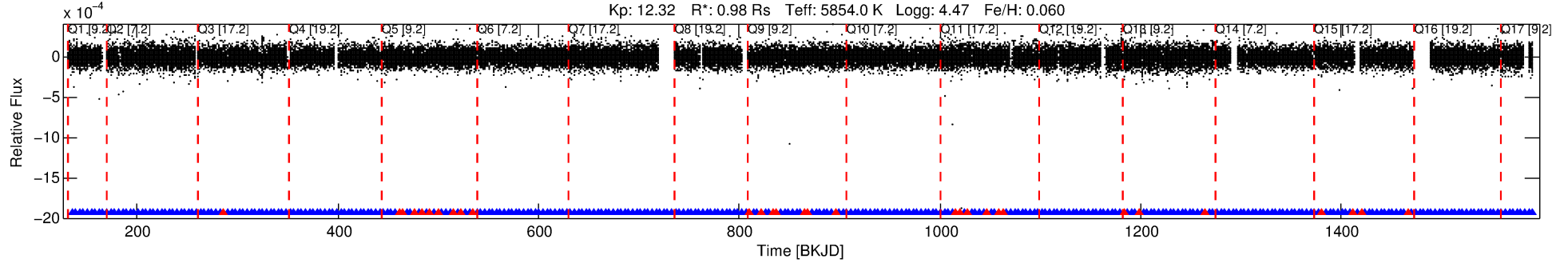
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 006198182-01

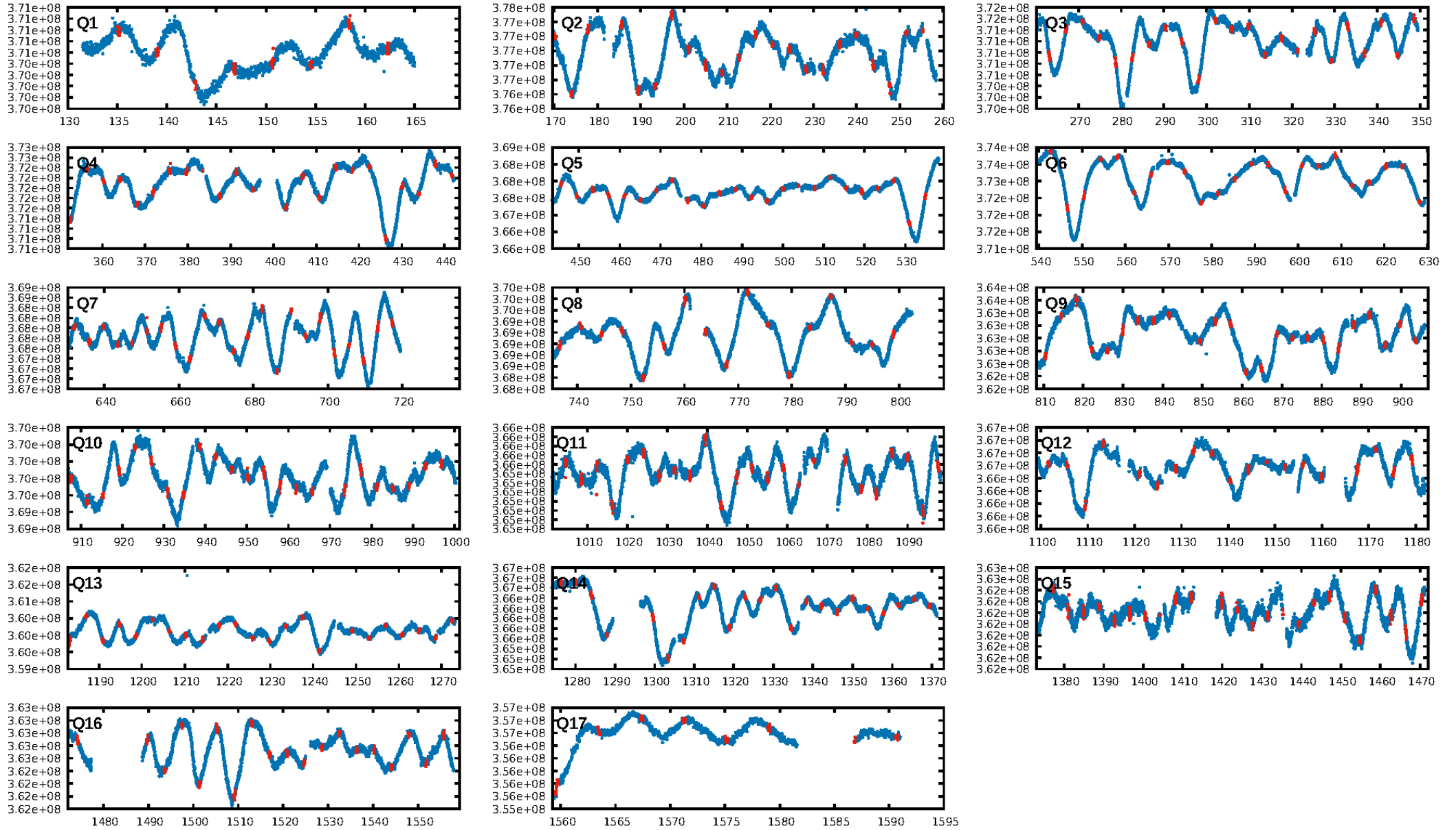
No Significant Match Found

# DV One-Page Summary

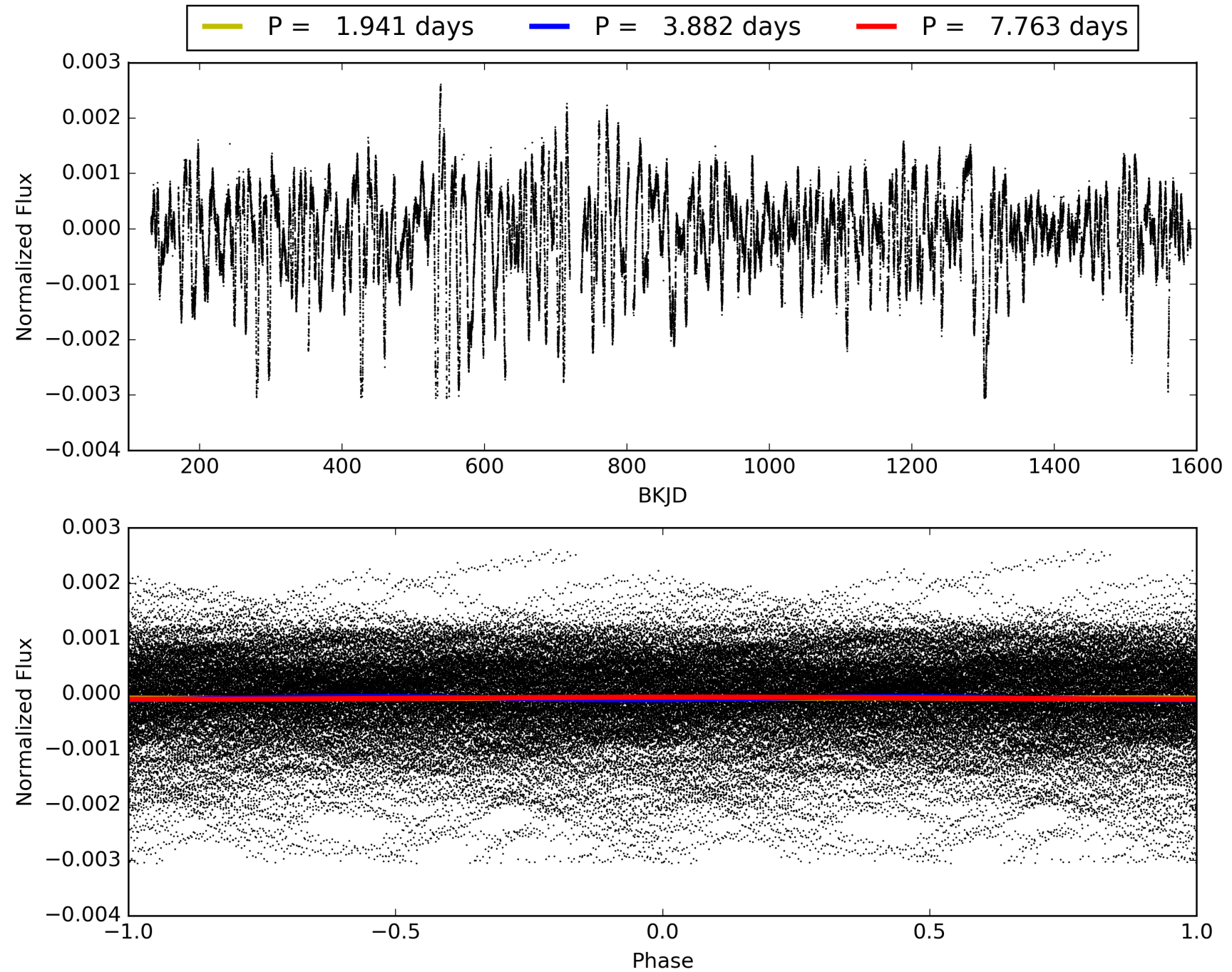
KIC: 6198182 Candidate: 1 of 1 Period: 3.882 d  
KOI: K02636.01 Corr: 0.967



# TCE 006198182-01, PDC Light Curves

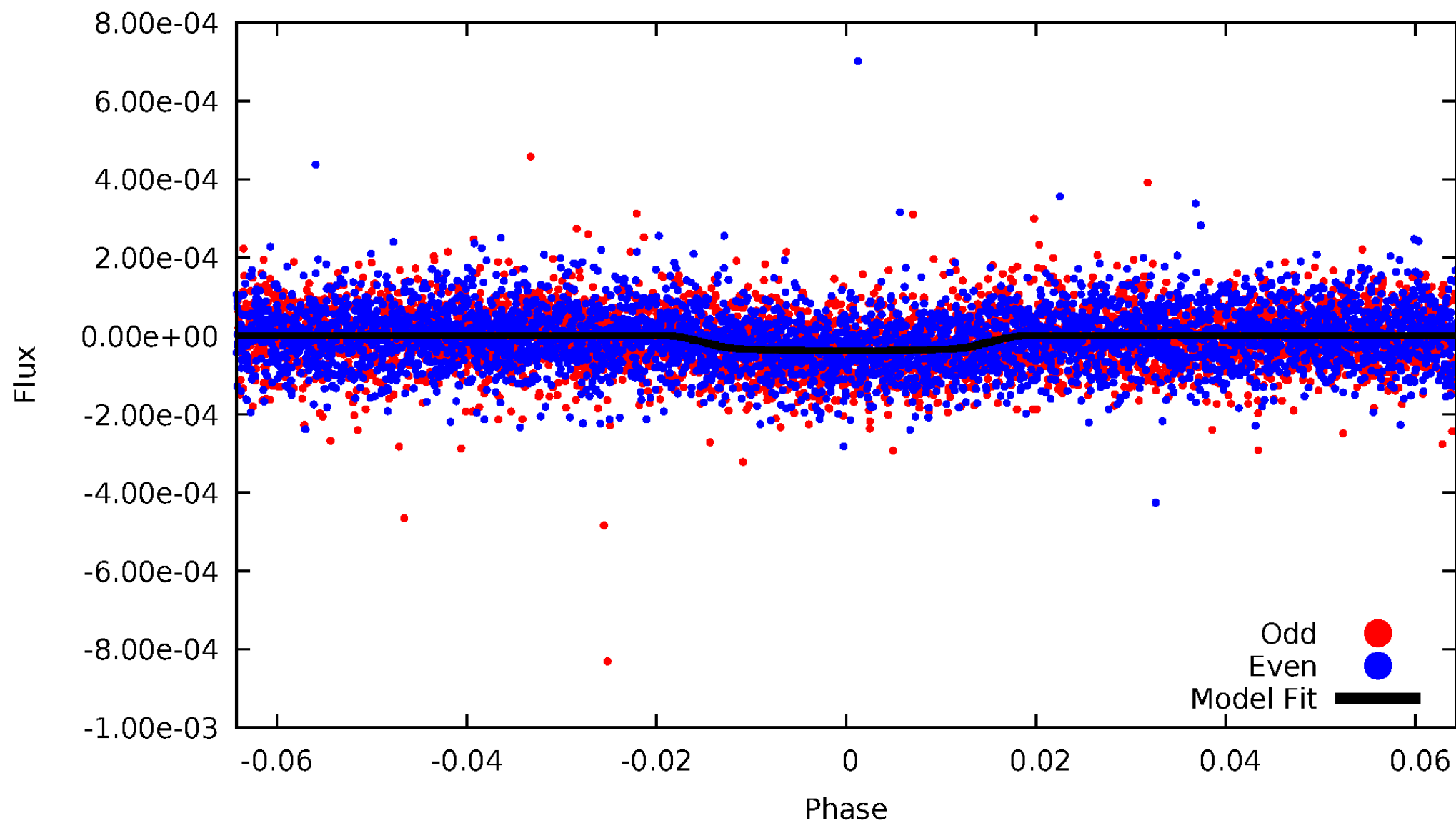


TCE 006198182-01



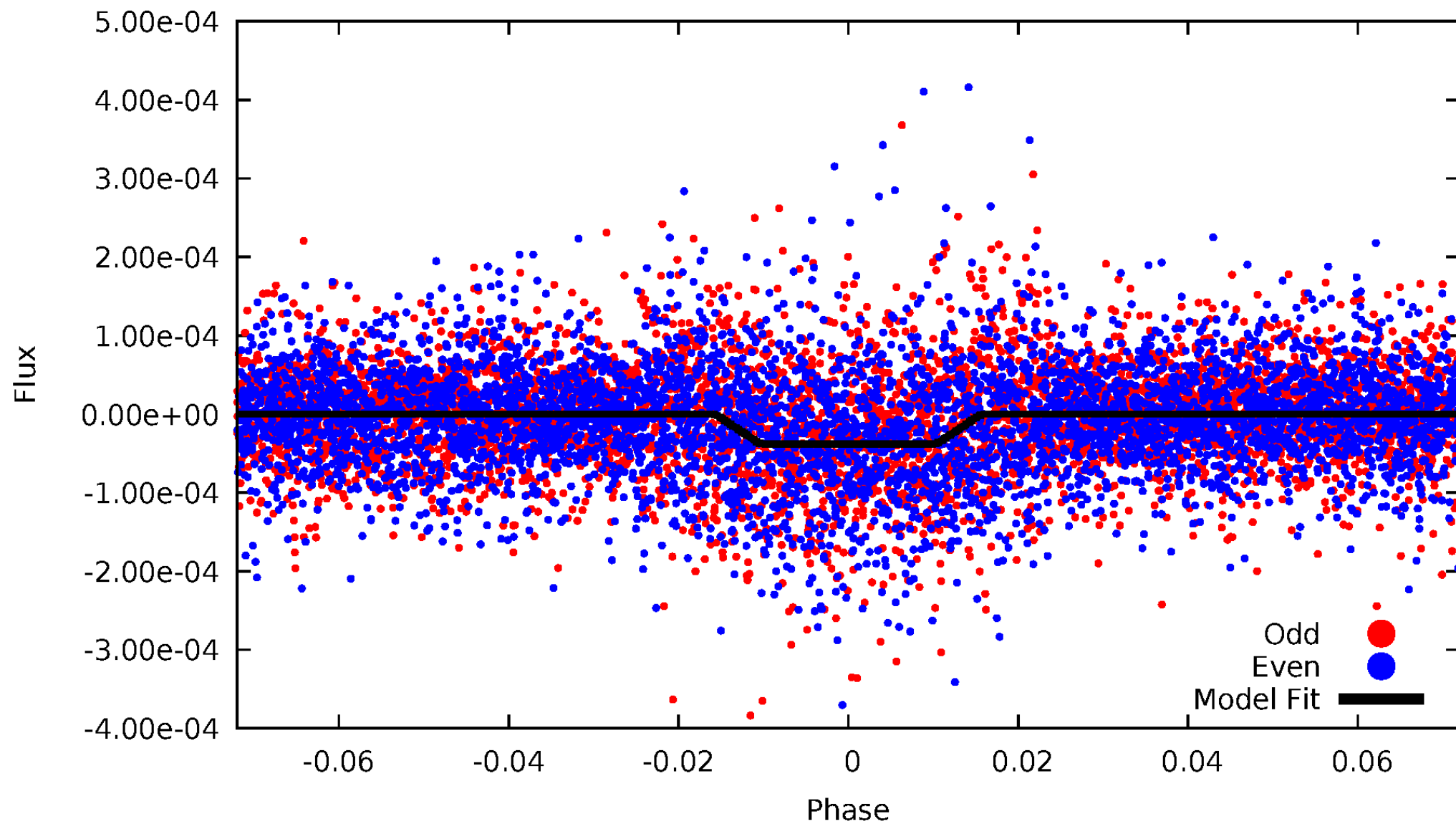
# DV Odd/Even

TCE 006198182-01



# ALT Odd/Even

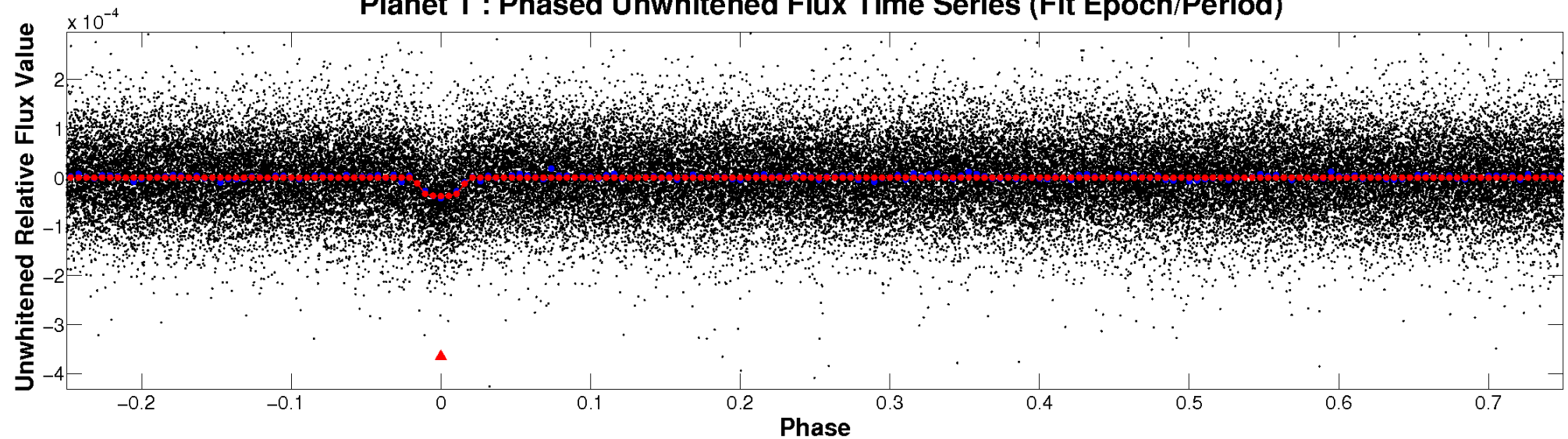
TCE 006198182-01



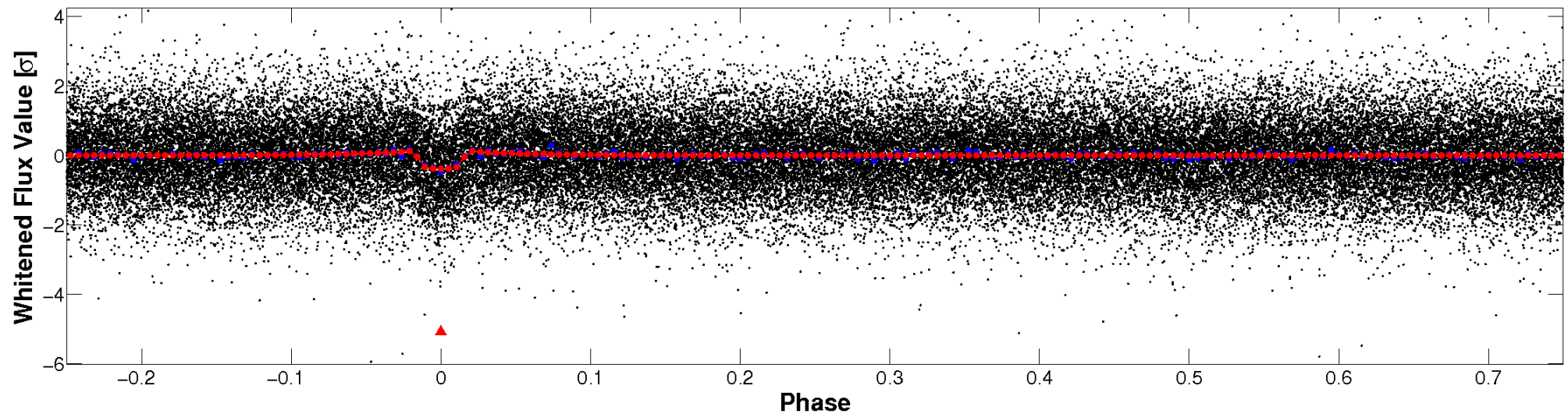


# Non-Whitened Vs. Whitened Light Curve

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

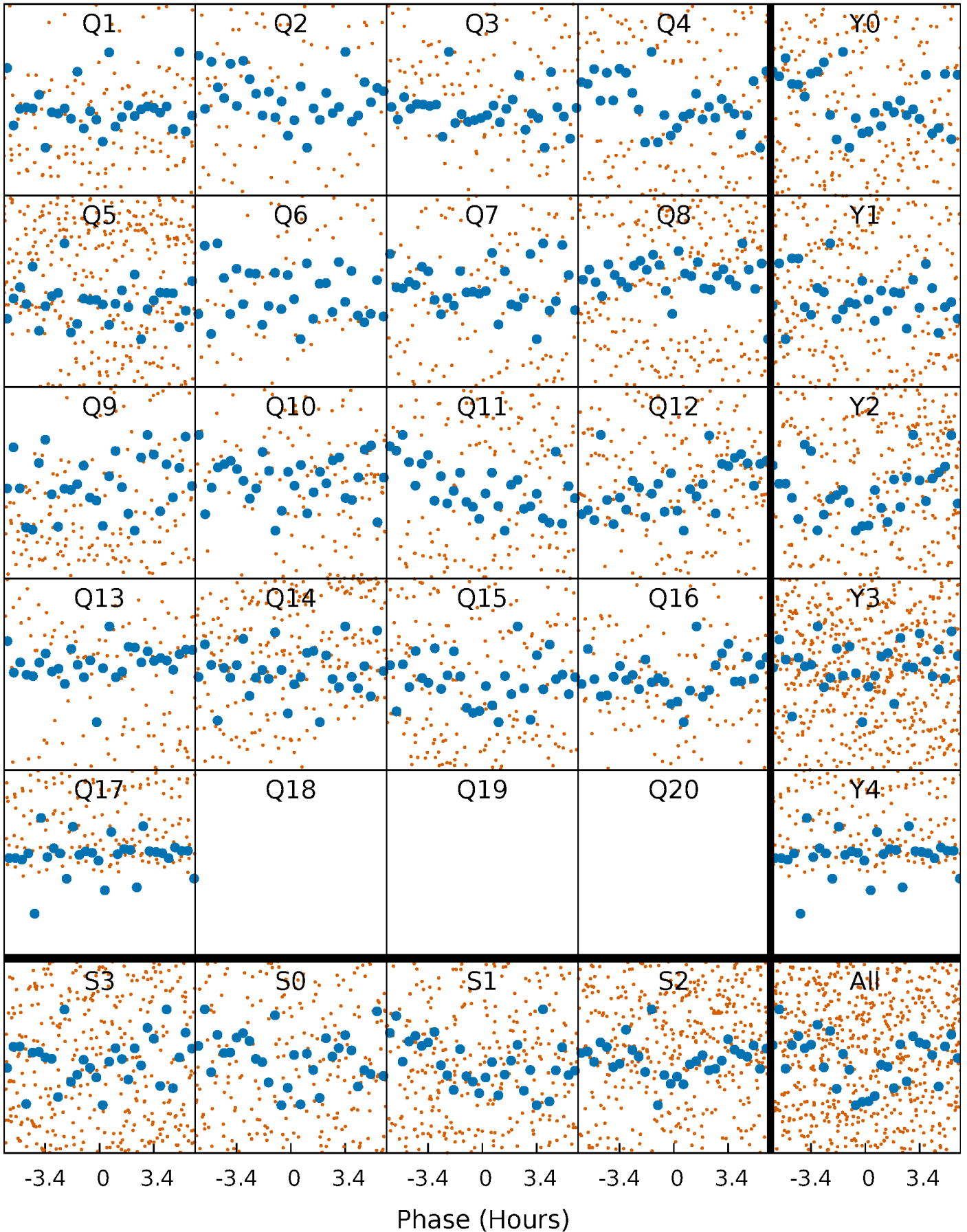


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

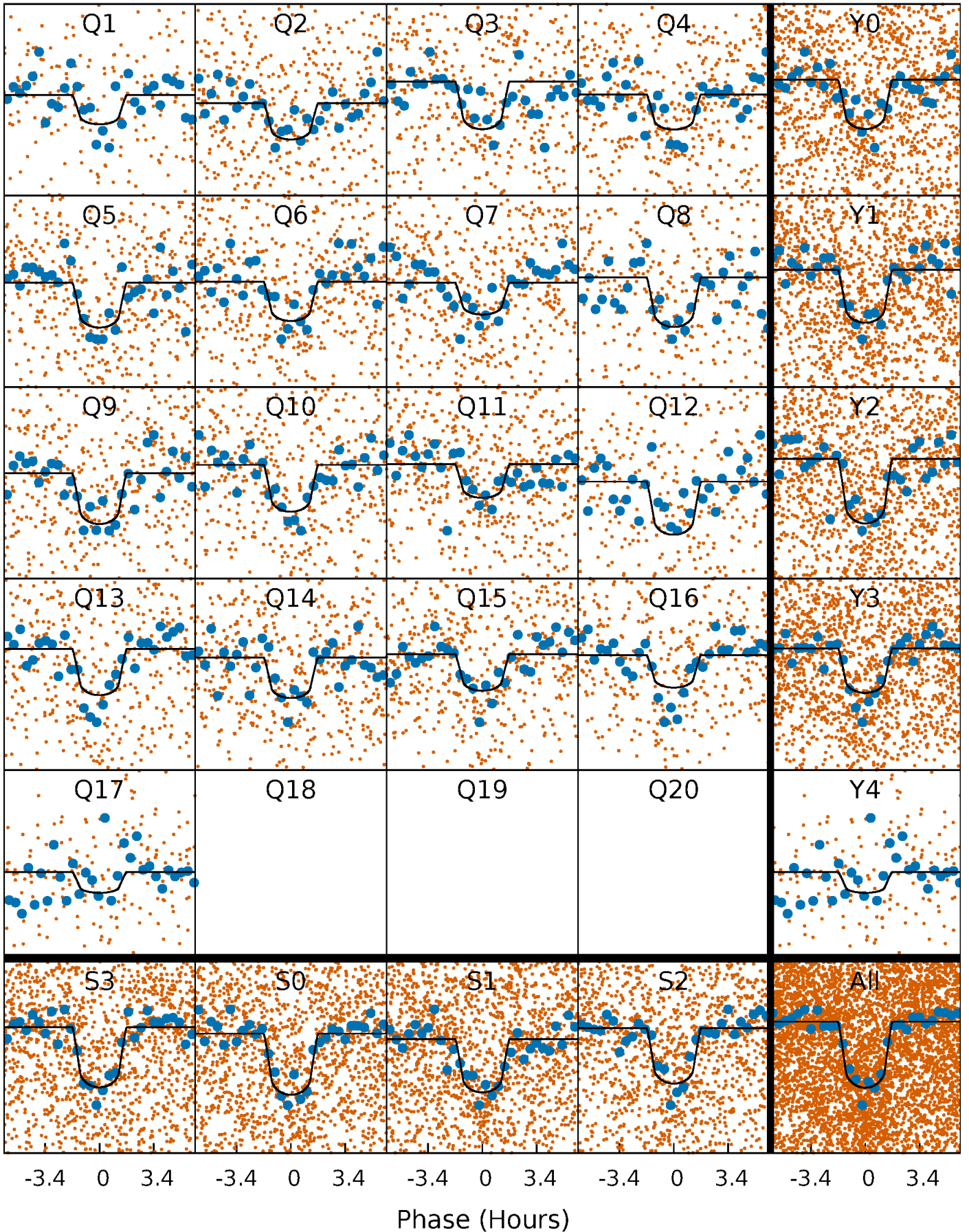
TCE 006198182-01 P= 3.881513 Days  $T_0=135.117948$  (BKJD)





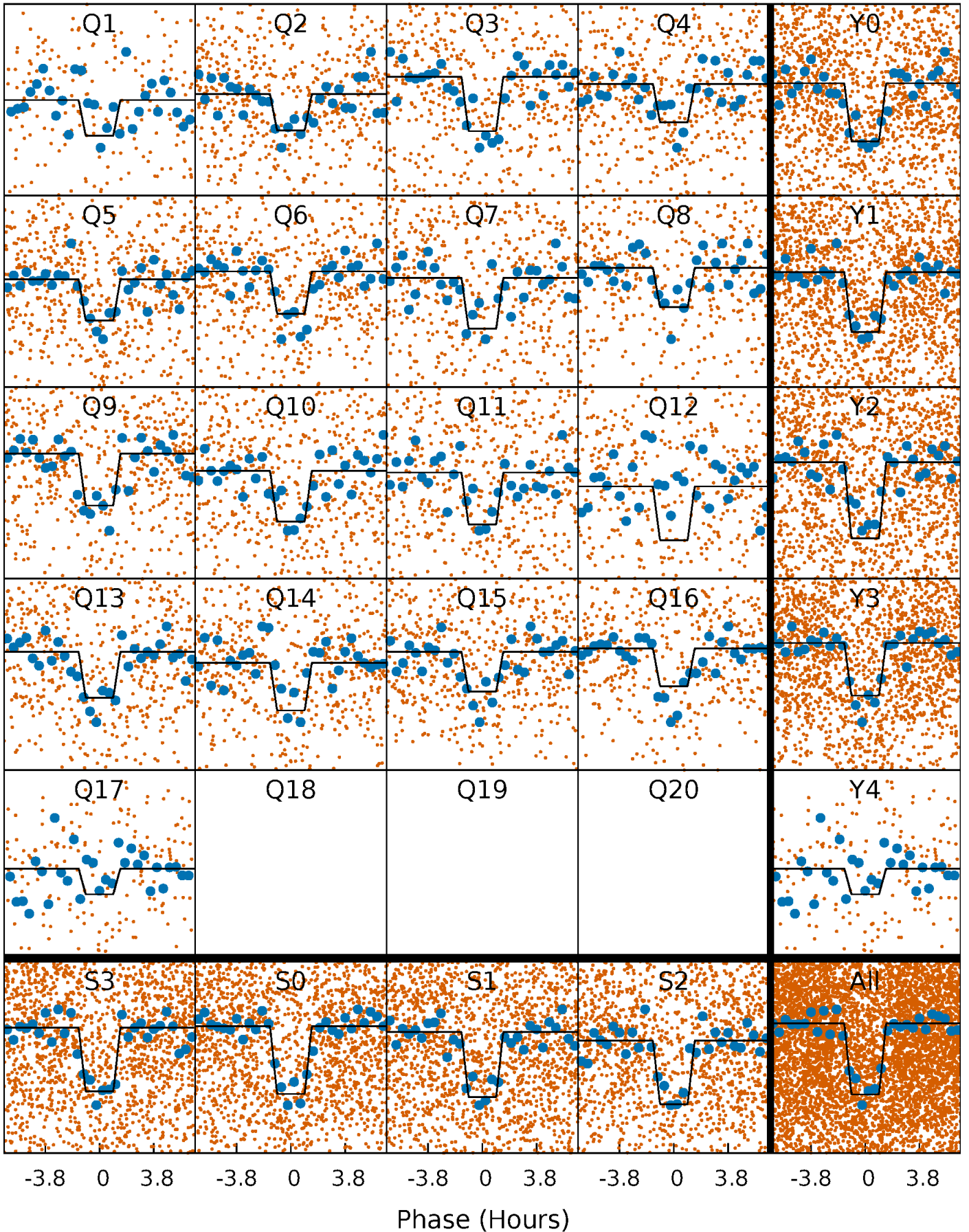
# DV Quarter-Phased Transit Curves

TCE 006198182-01 P= 3.881513 Days  $T_0=135.117948$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

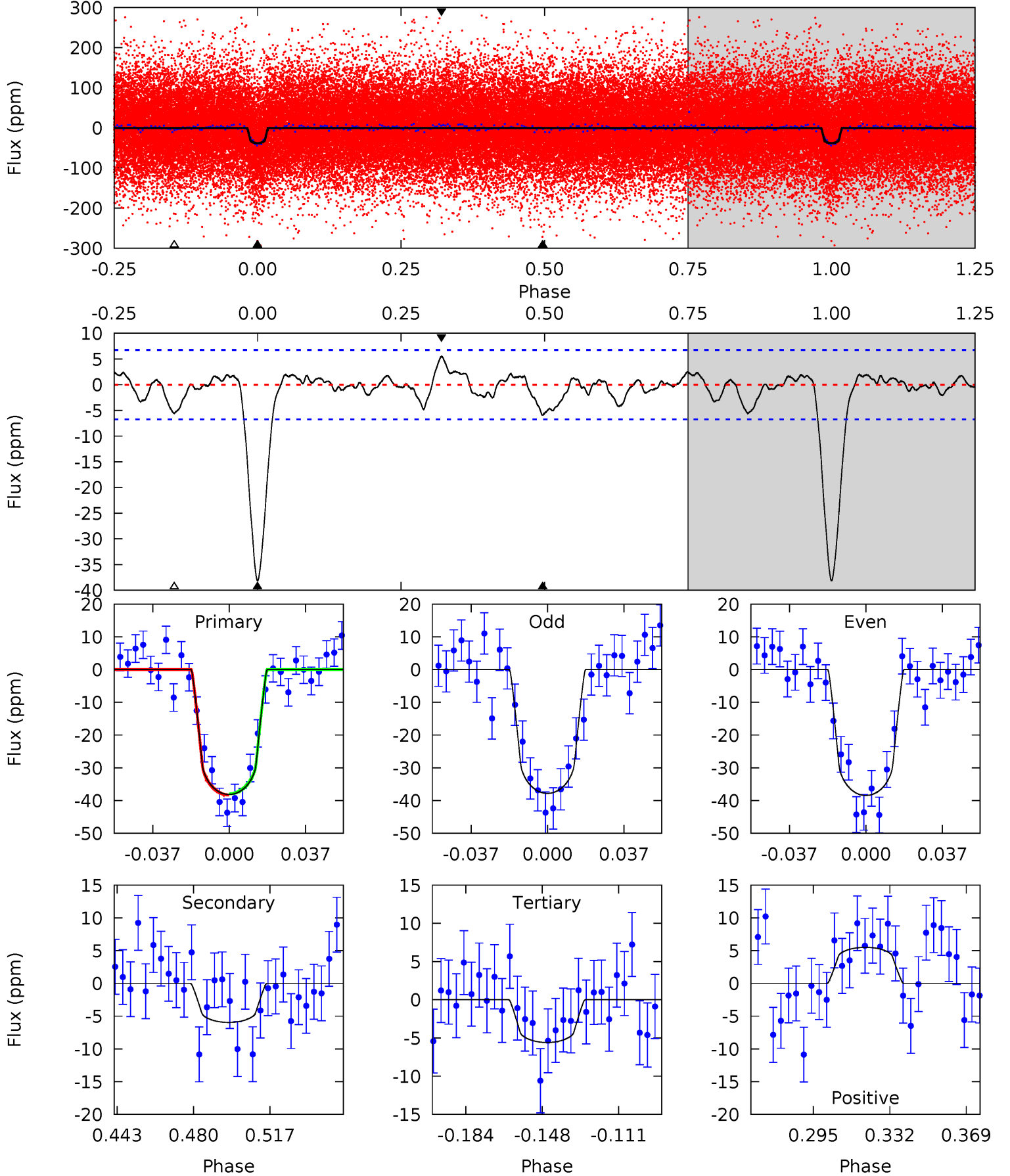
TCE 006198182-01 P= 3.881551 Days  $T_0=135.110222$  (BKJD)



# DV Model-Shift Uniqueness Test

006198182-01, P = 3.881513 Days, E = 131.236435 Days

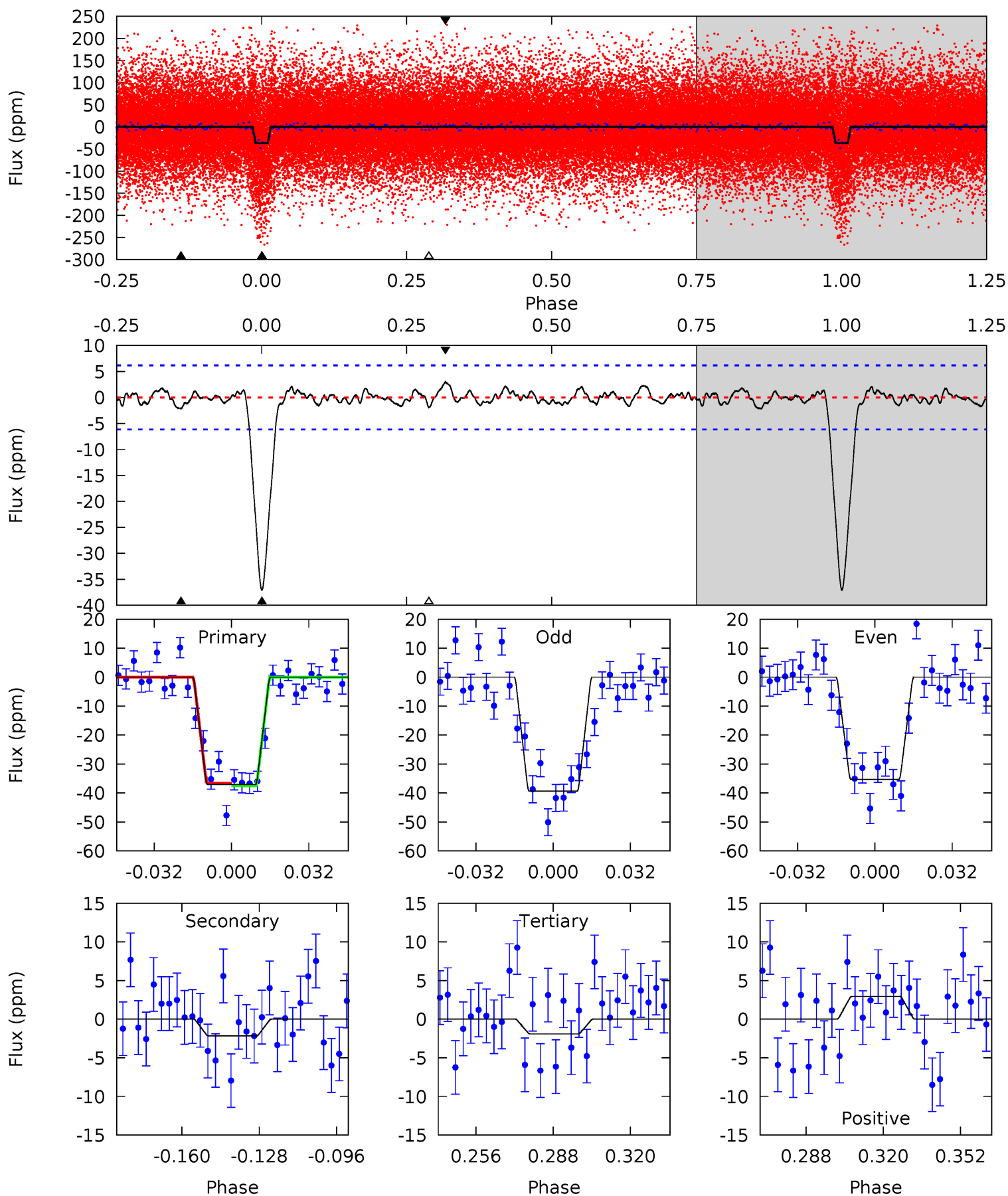
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.9	4.21	3.95	3.89	4.77	2.09	1.31	23.0	23.1	0.26	0.32	0.23	0.94	0.13	0.13



# Alt Model-Shift Uniqueness Test

006198182-01, P = 3.881551 Days, E = 131.228671 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
28.9	1.68	1.49	2.30	4.80	2.14	0.74	27.4	26.6	0.19	-0.61	1.59	1.02	0.07	0.36





### Stellar Parameters For KIC 006198182

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5854^{+105}_{-128}$	$4.469^{+0.040}_{-0.120}$	$0.060^{+0.150}_{-0.150}$	$0.979^{+0.148}_{-0.064}$	$1.030^{+0.063}_{-0.076}$	$1.545^{+0.289}_{-0.508}$
	+2%/-2%	+1%/-3%	+250%/-250%	+15%/-7%	+6%/-7%	+19%/-33%
Source	SPE59	SPE59	SPE59	DSEP		

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

### Secondary Eclipse Parameters for KIC 006198182-01 / KOI 2636.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-6 \pm 1$	$0.74^{+0.21}_{-0.20}$	$1630^{+74}_{-51}$	$3842^{+502}_{-350}$	$14^{+13}_{-6}$
Alt.	$-2 \pm 1$	$0.69^{+0.22}_{-0.21}$	$1635^{+65}_{-53}$	$3306^{+550}_{-510}$	$5.634^{+8.266}_{-3.710}$

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



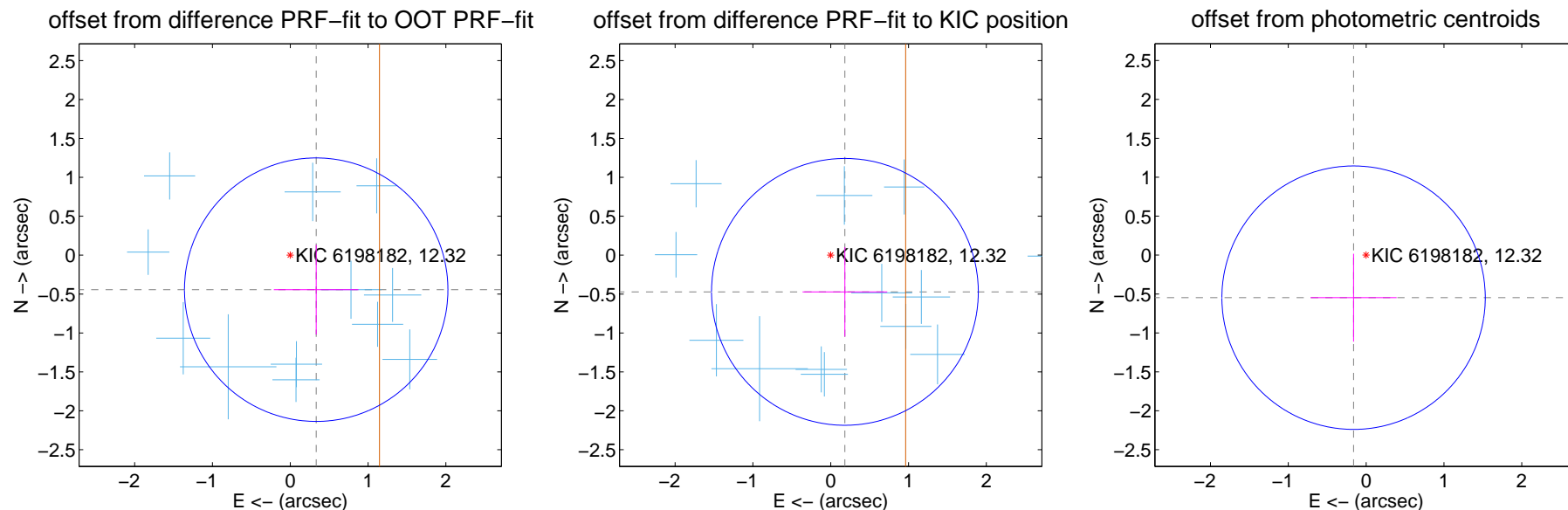
## DV Centroid Data

Supplemental centroid analysis for 006198182-01. Kepler magnitude: 12.32. Transit SNR 15.97

There are 13 quarters with good PRF difference image offsets

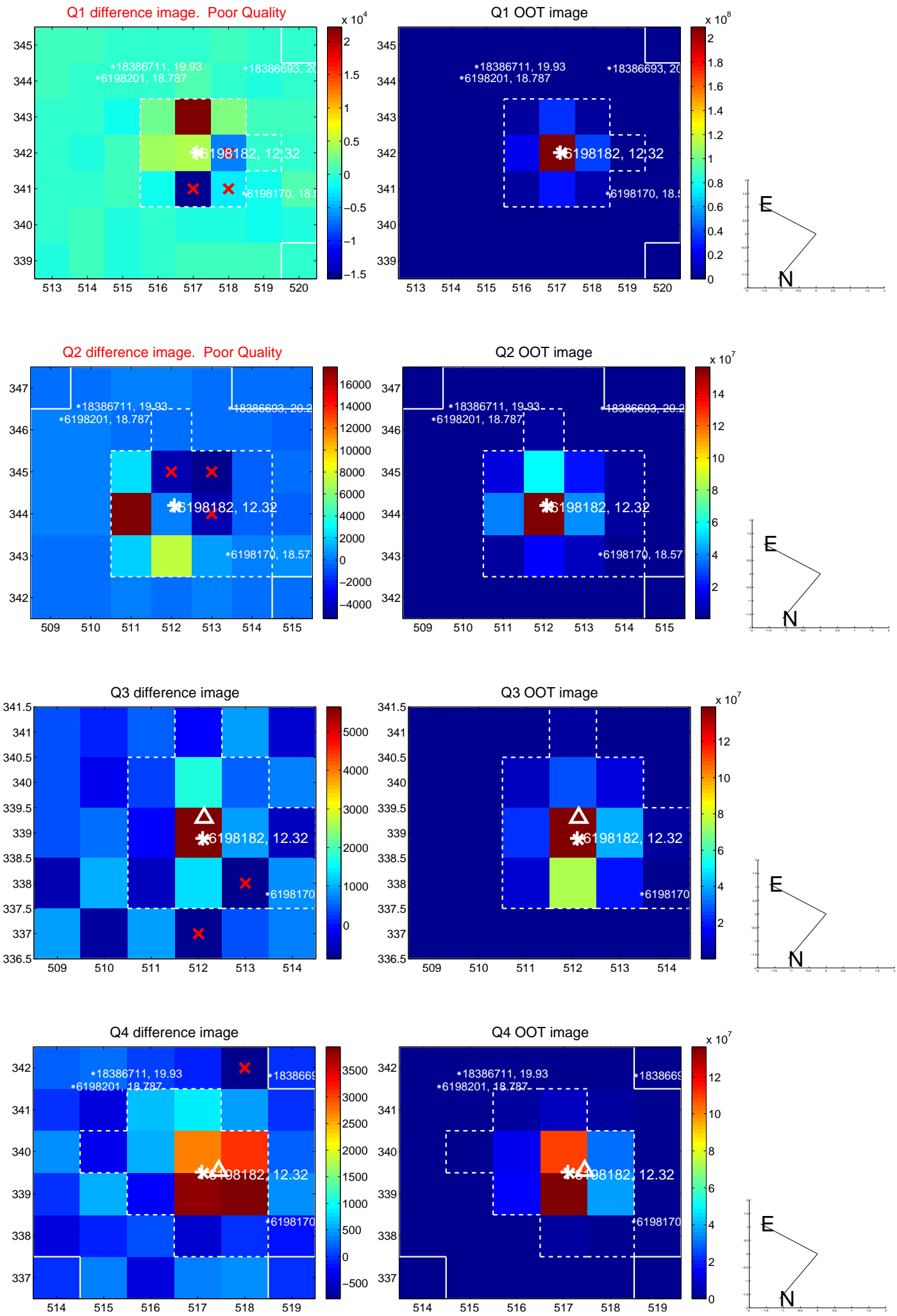
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.555 \pm 0.564$	0.98	$-0.333 \pm 0.544$	$-0.444 \pm 0.575$
PRF-fit source offset from KIC position	$0.506 \pm 0.571$	0.89	$-0.182 \pm 0.544$	$-0.472 \pm 0.575$
photometric centroid source offset	$0.57 \pm 0.56$	1.01	$0.16 \pm 0.55$	$-0.55 \pm 0.56$

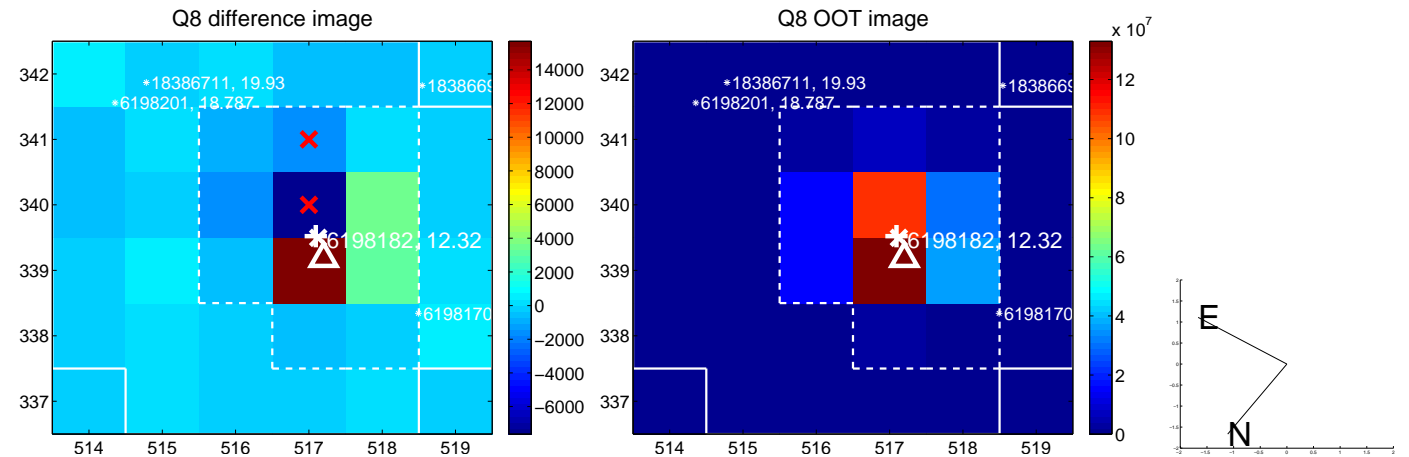
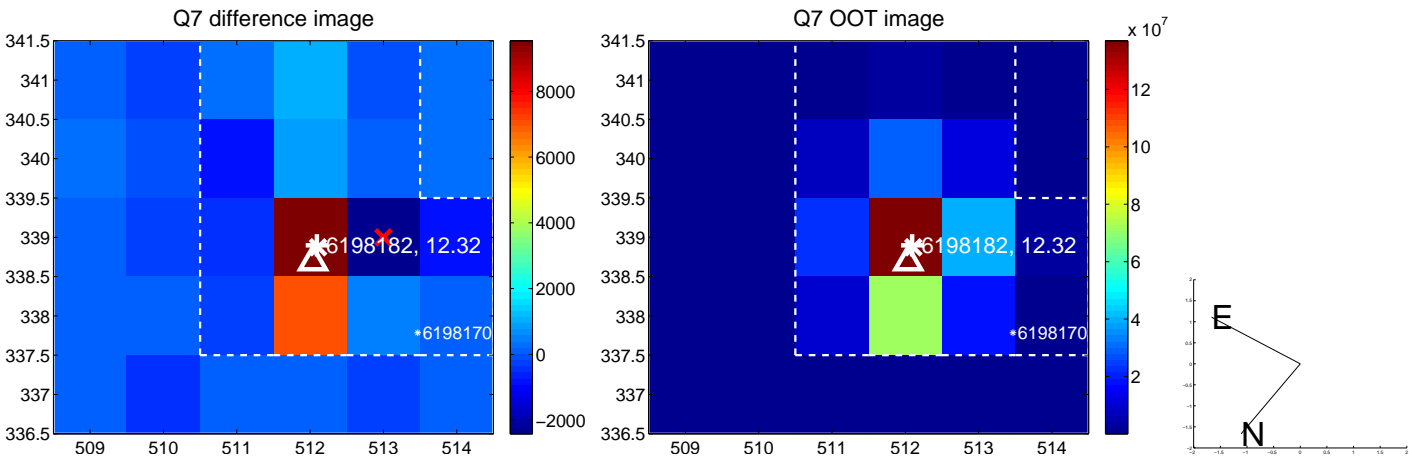
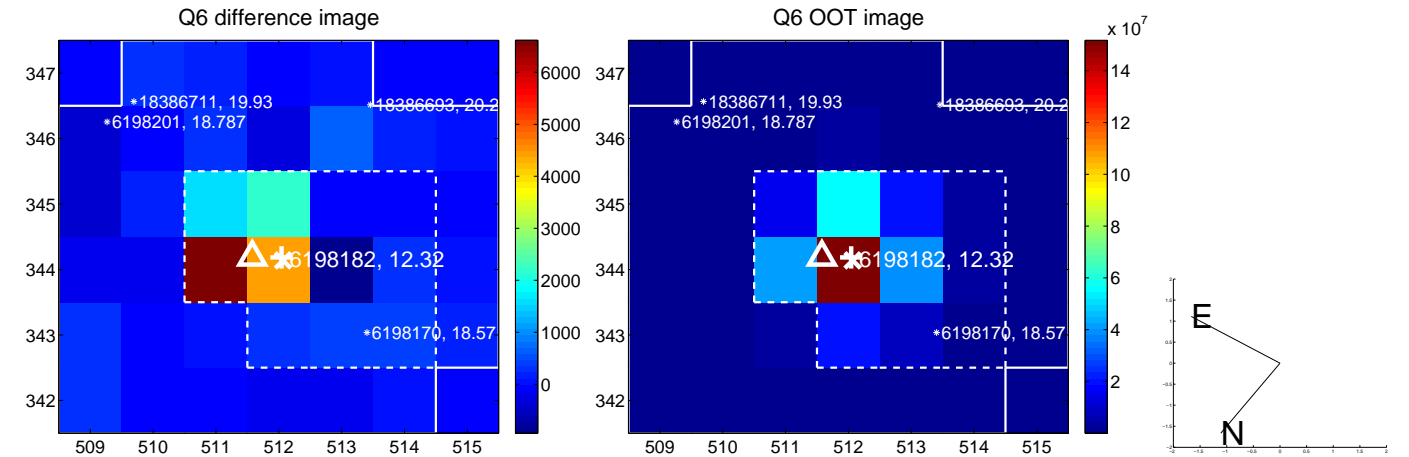
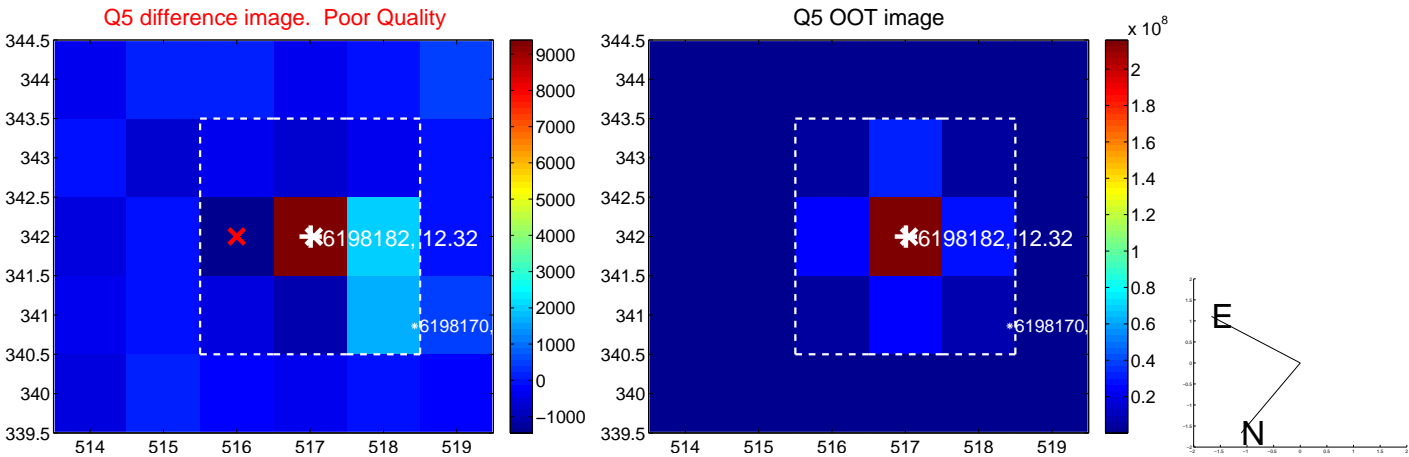


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

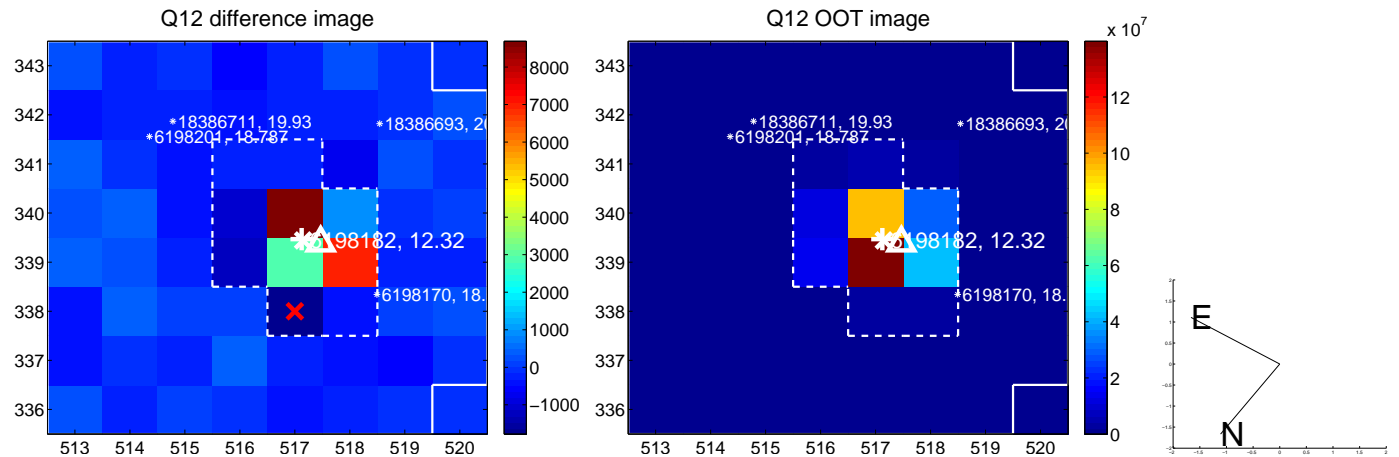
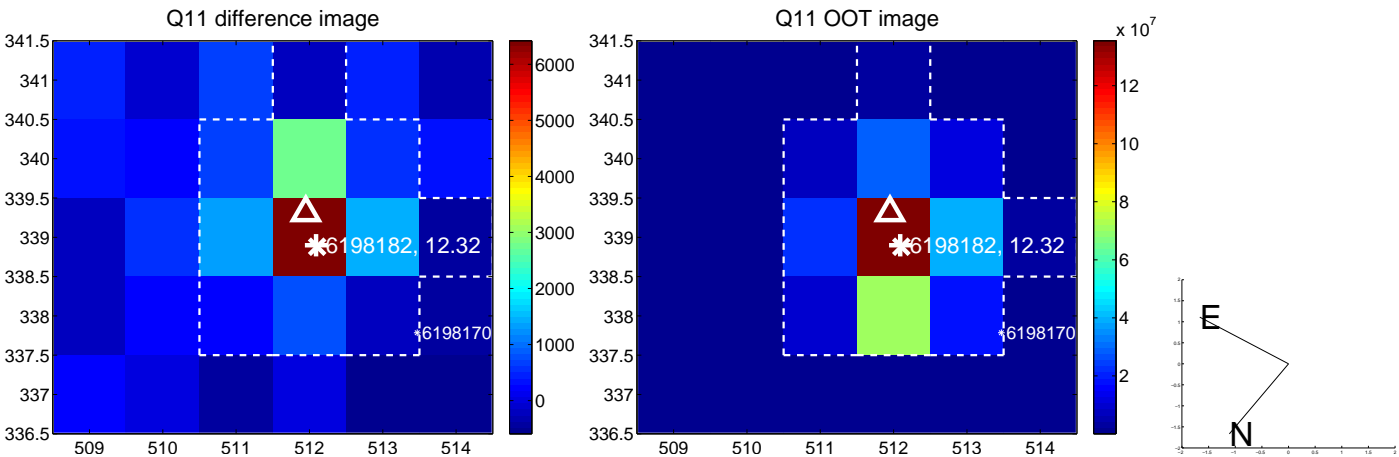
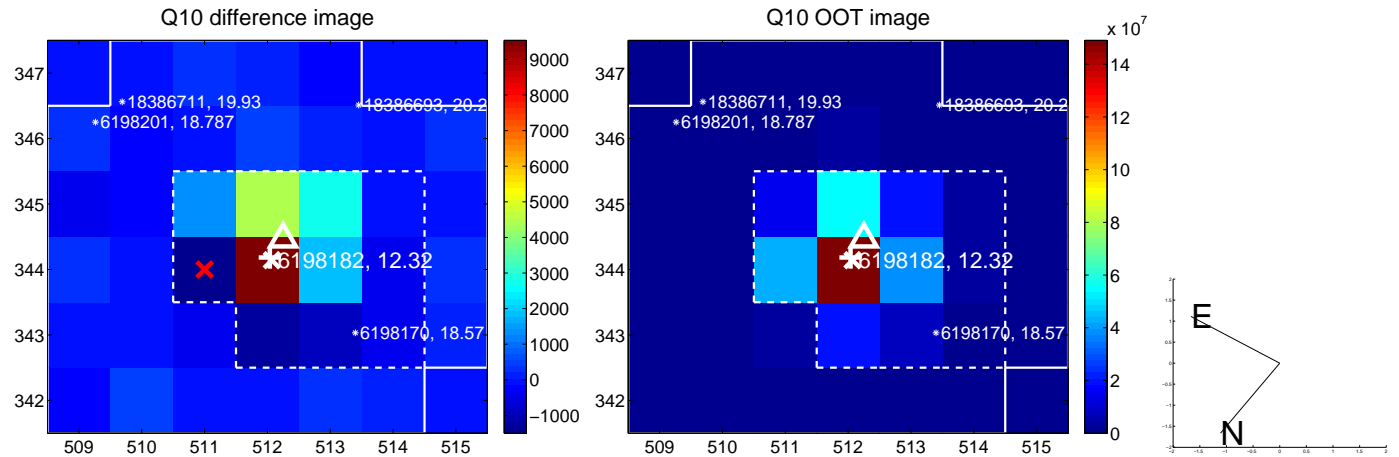
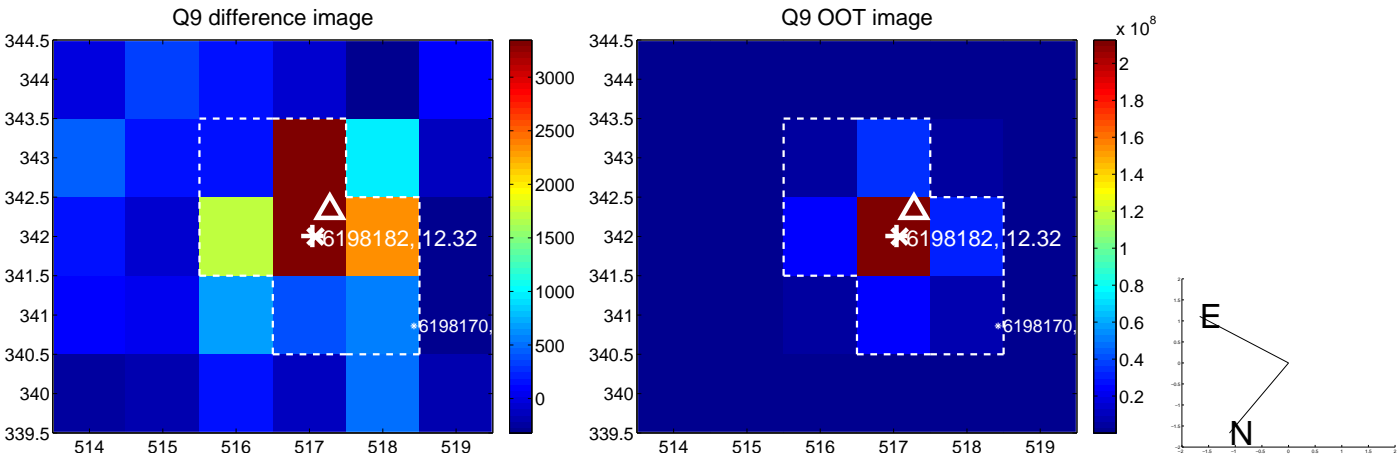
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



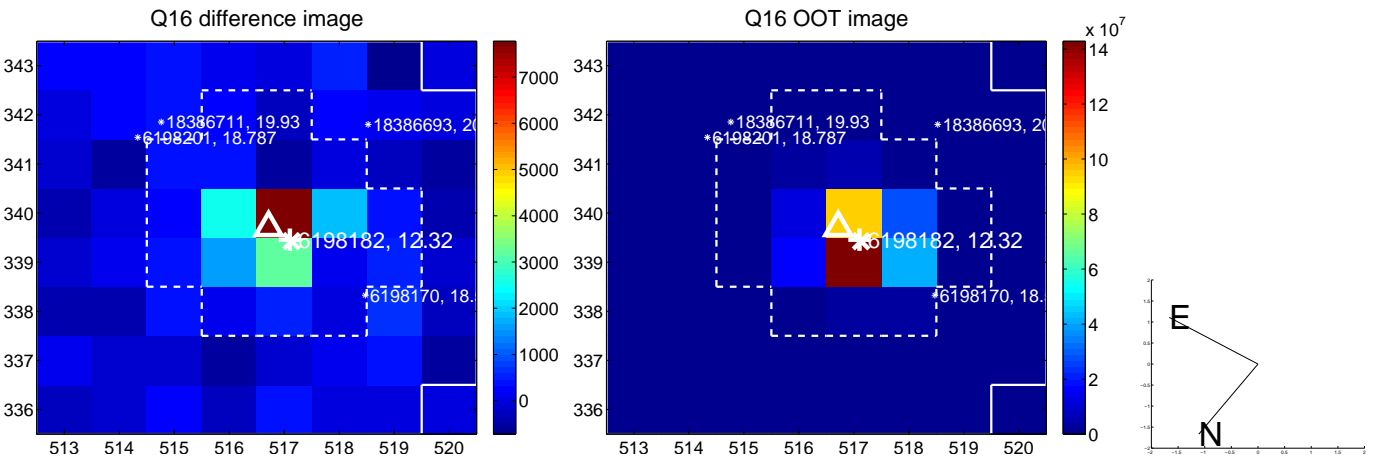
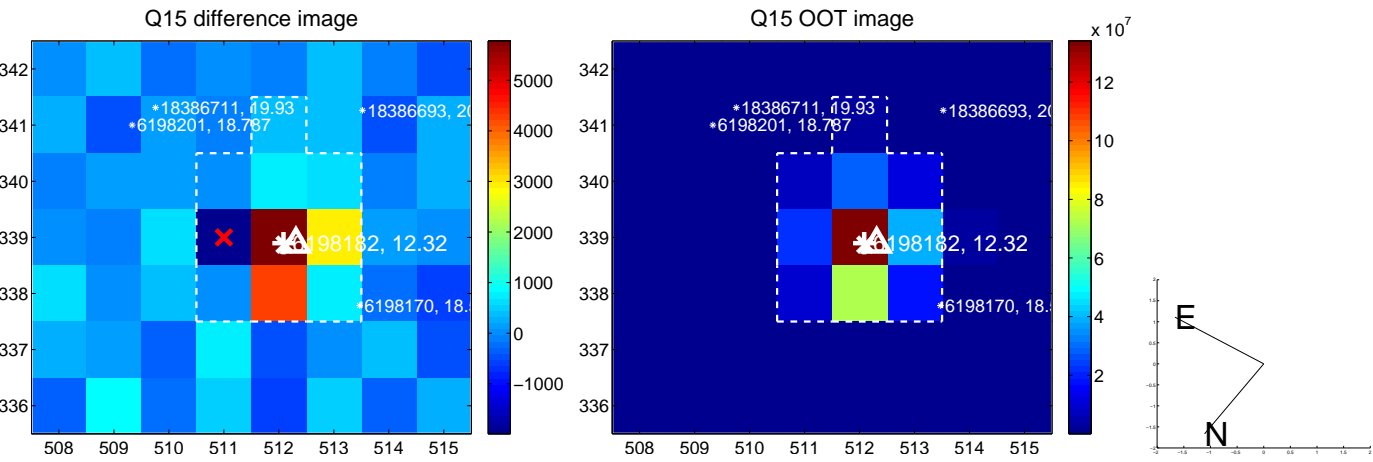
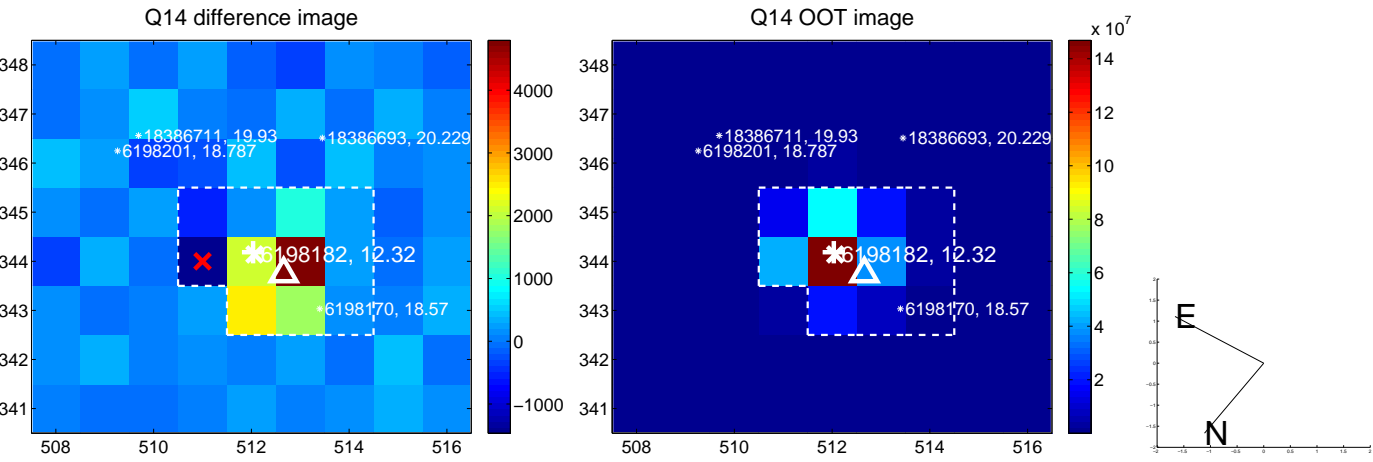
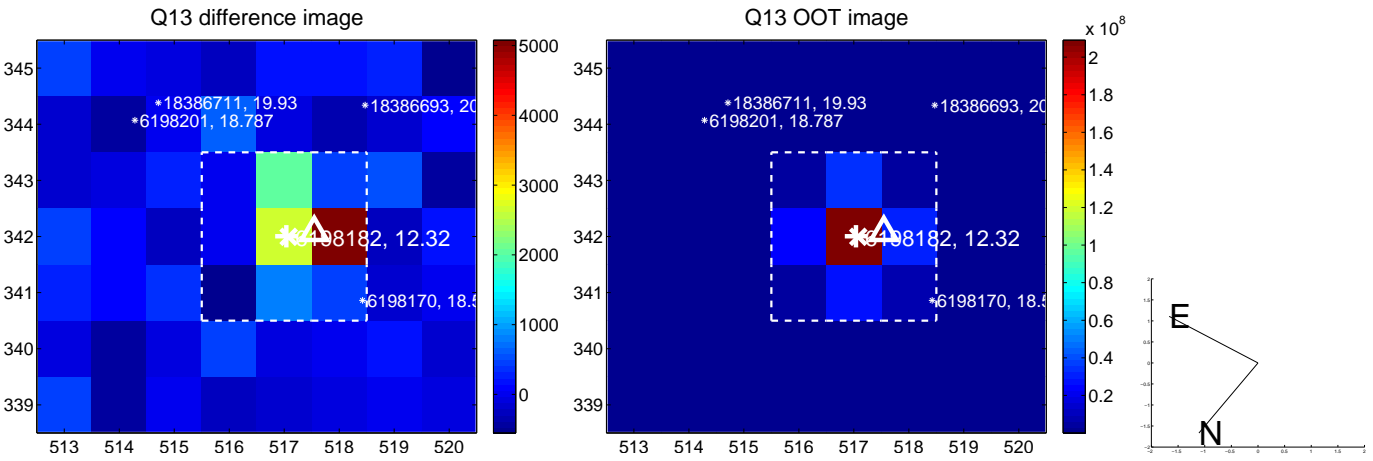
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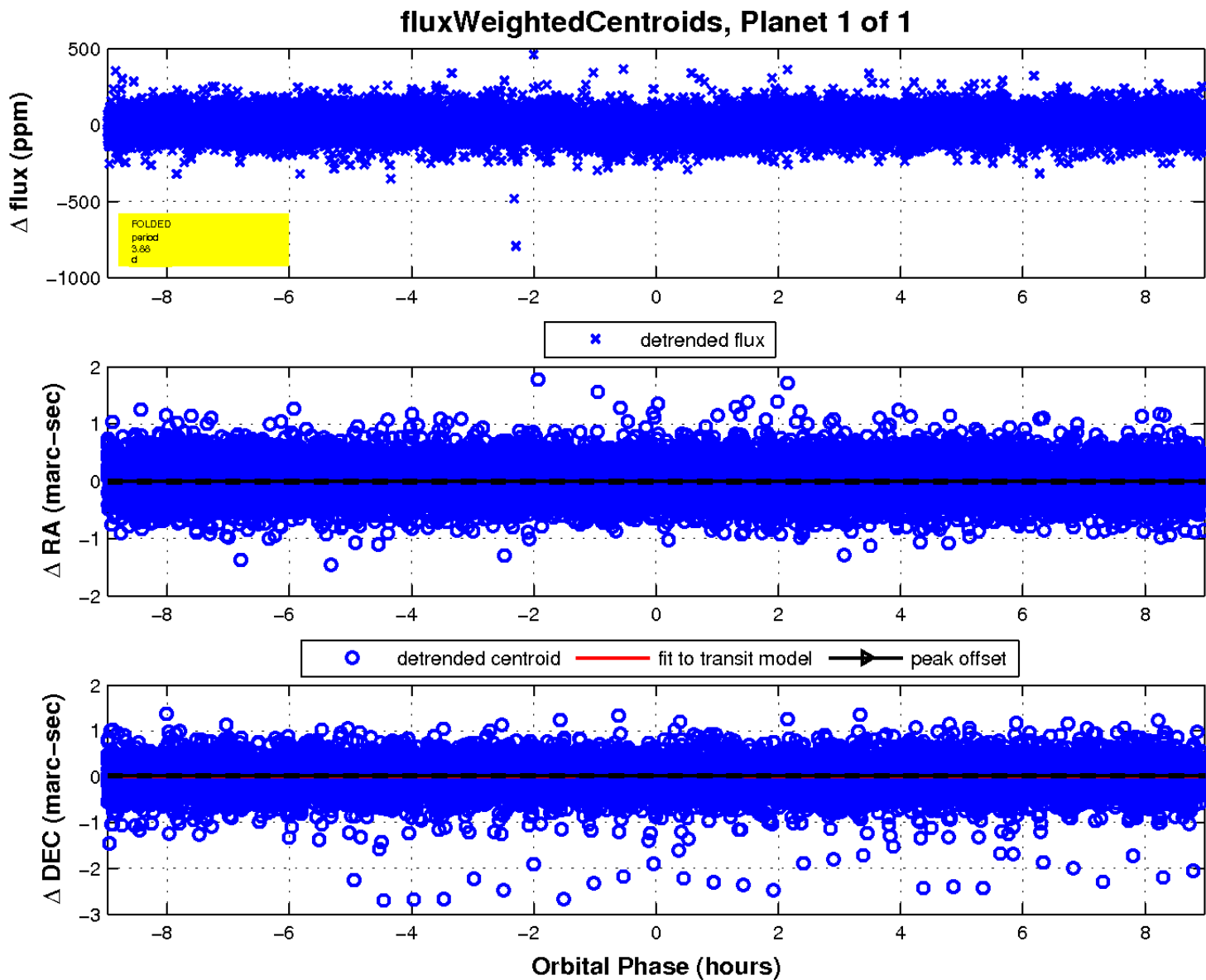
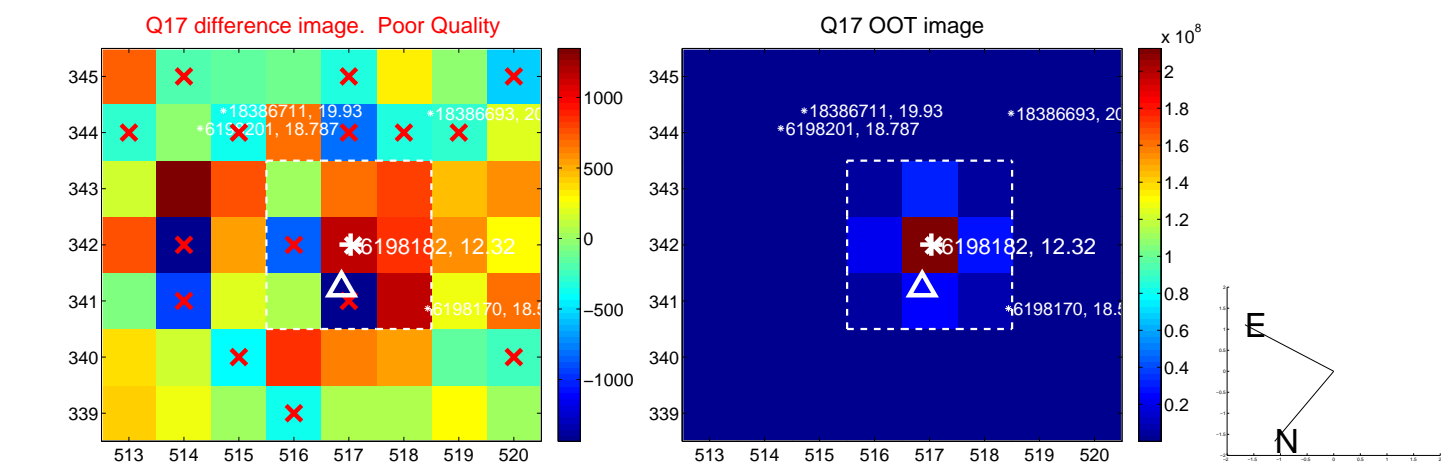


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UKIRT Image

Declination

