

# KIC 007199240

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007199240-01	OBS	No	0.566803	131.714119	777.8	1.500	9.2	-1.0	0.62	5188	1.73	1944.93

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007199240-01	OBS	FP	0.00	1	0	0	1	LPP_DV—LPP_ALT—CENT_NOFITS—EPHEM_MATCH

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

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

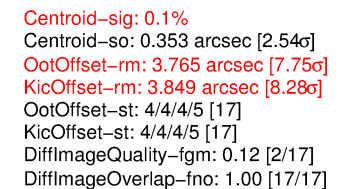
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 007199240-01

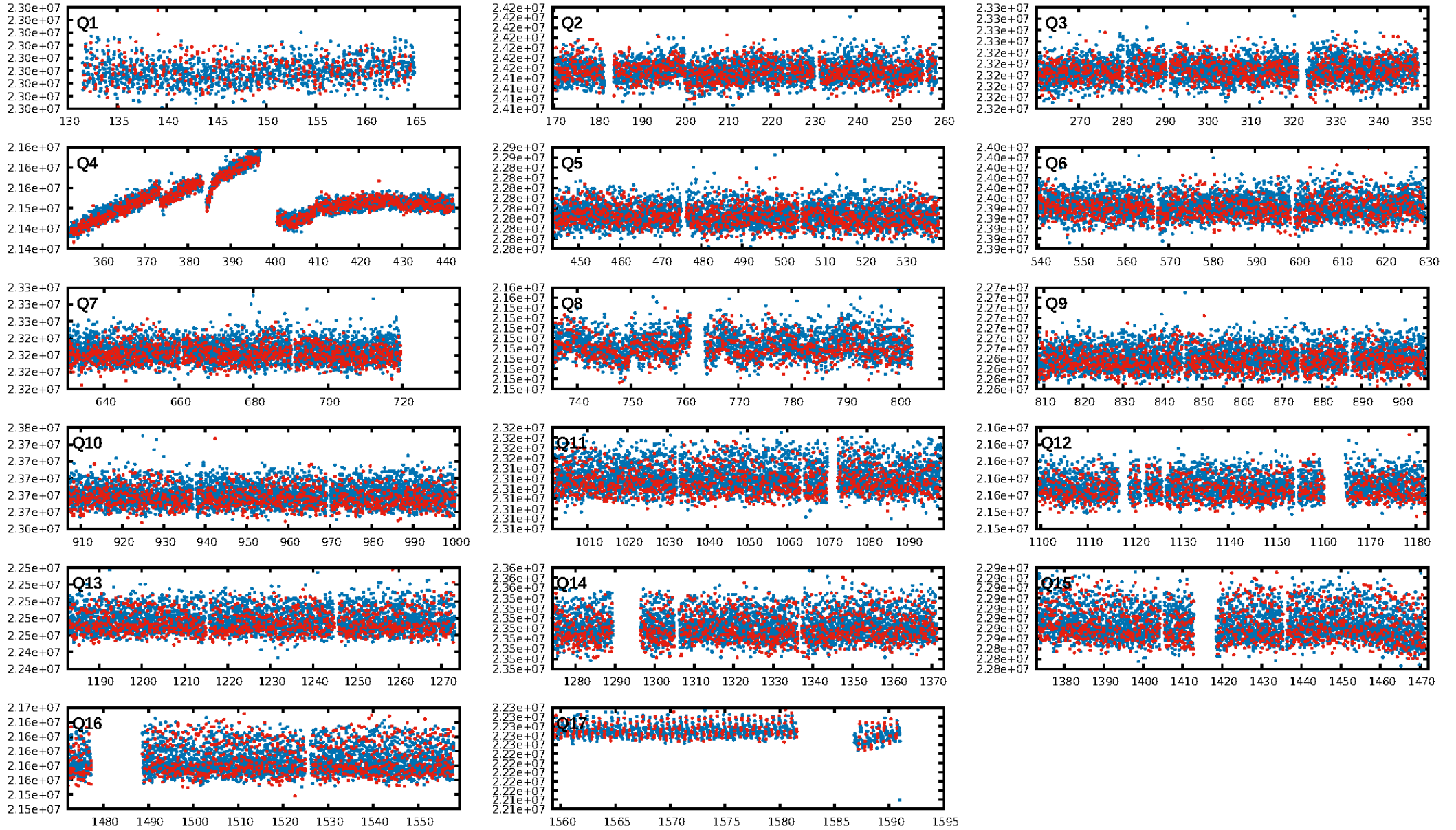
TCE (1)	KIC	Parent (2)	Parent KIC	P <sub>1</sub> :P <sub>2</sub>	Dist (″)	$\Delta$ Row	$\Delta$ Col	m <sub>2</sub>	m <sub>1</sub>	D <sub>2</sub> /D <sub>1</sub>	Mechanism	Flag	$\sigma_P$	$\sigma_T$
007199240-01	7199240	RR-Lyr-pri	7198959	1:1	259.1	58	29	7.86	15.05	801.15	Direct-PRF	0	4.96	15.64

**Notes:** P<sub>1</sub>:P<sub>2</sub> 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<sub>2</sub> and m<sub>1</sub> are the magnitudes of the parent and child. D<sub>2</sub>/D<sub>1</sub> 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.

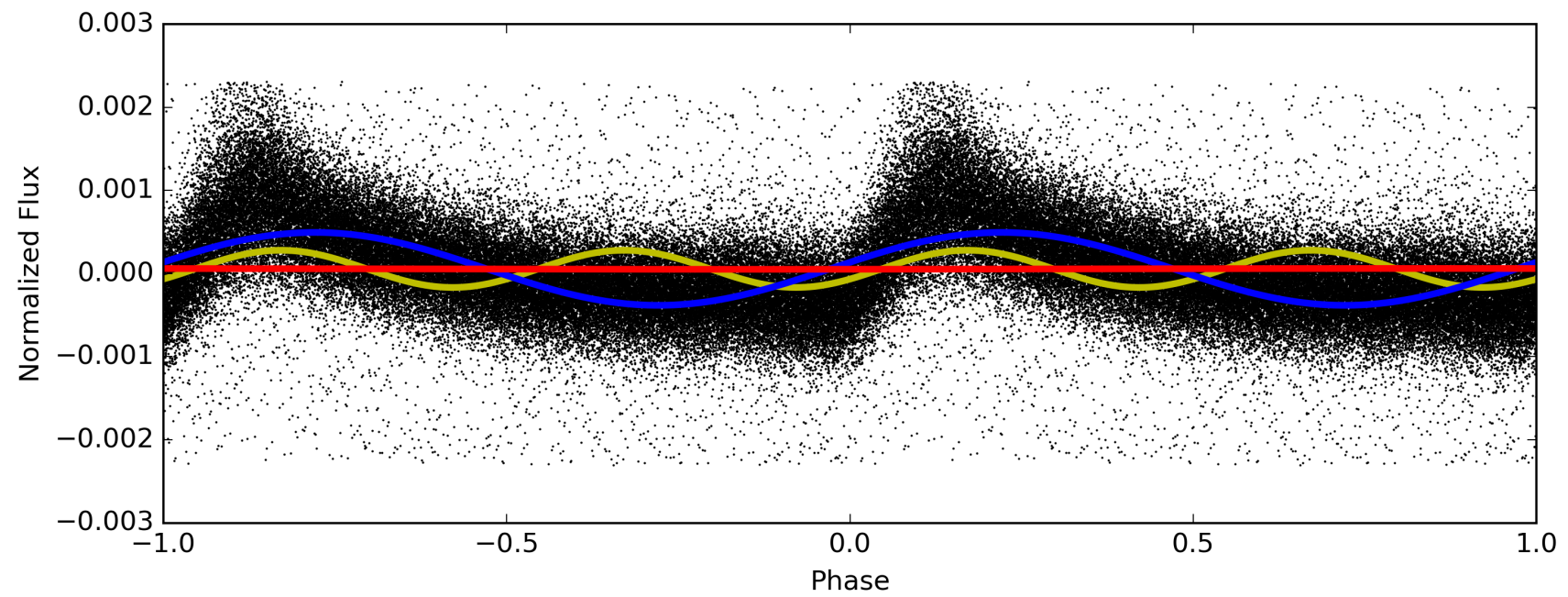
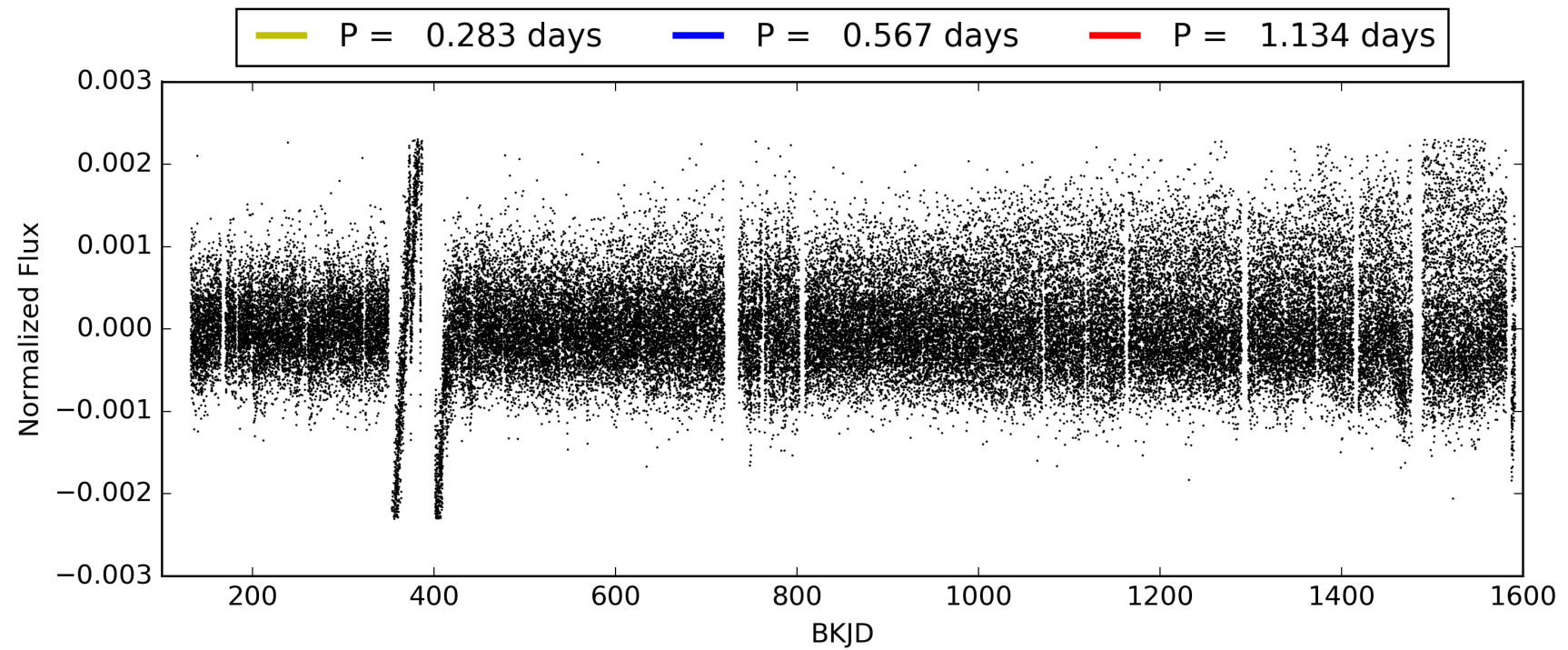
## KIC: 7199240    Candidate: 1 of 1    Period: 0.567 d



# TCE 007199240-01, PDC Light Curves



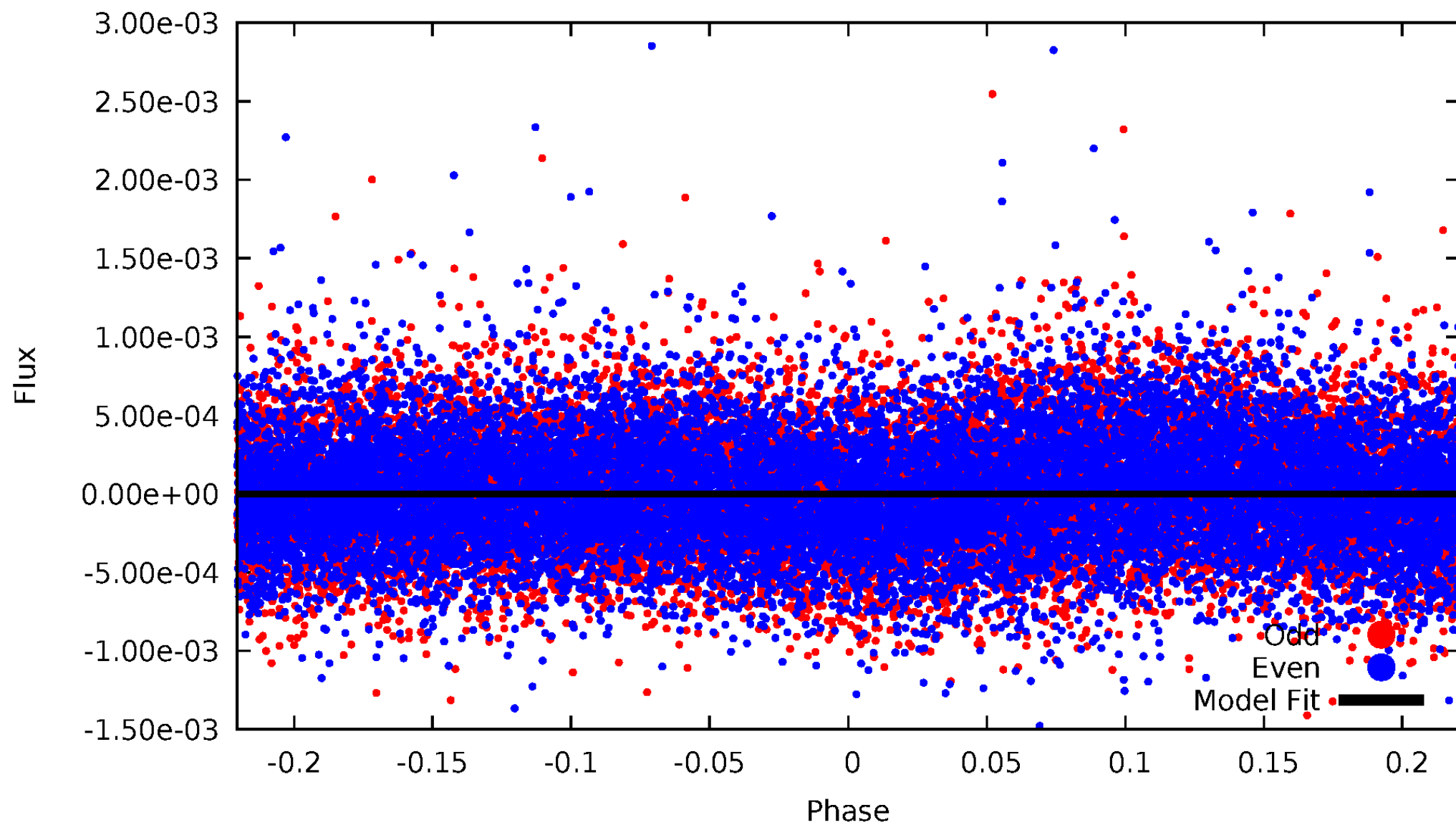
TCE 007199240-01





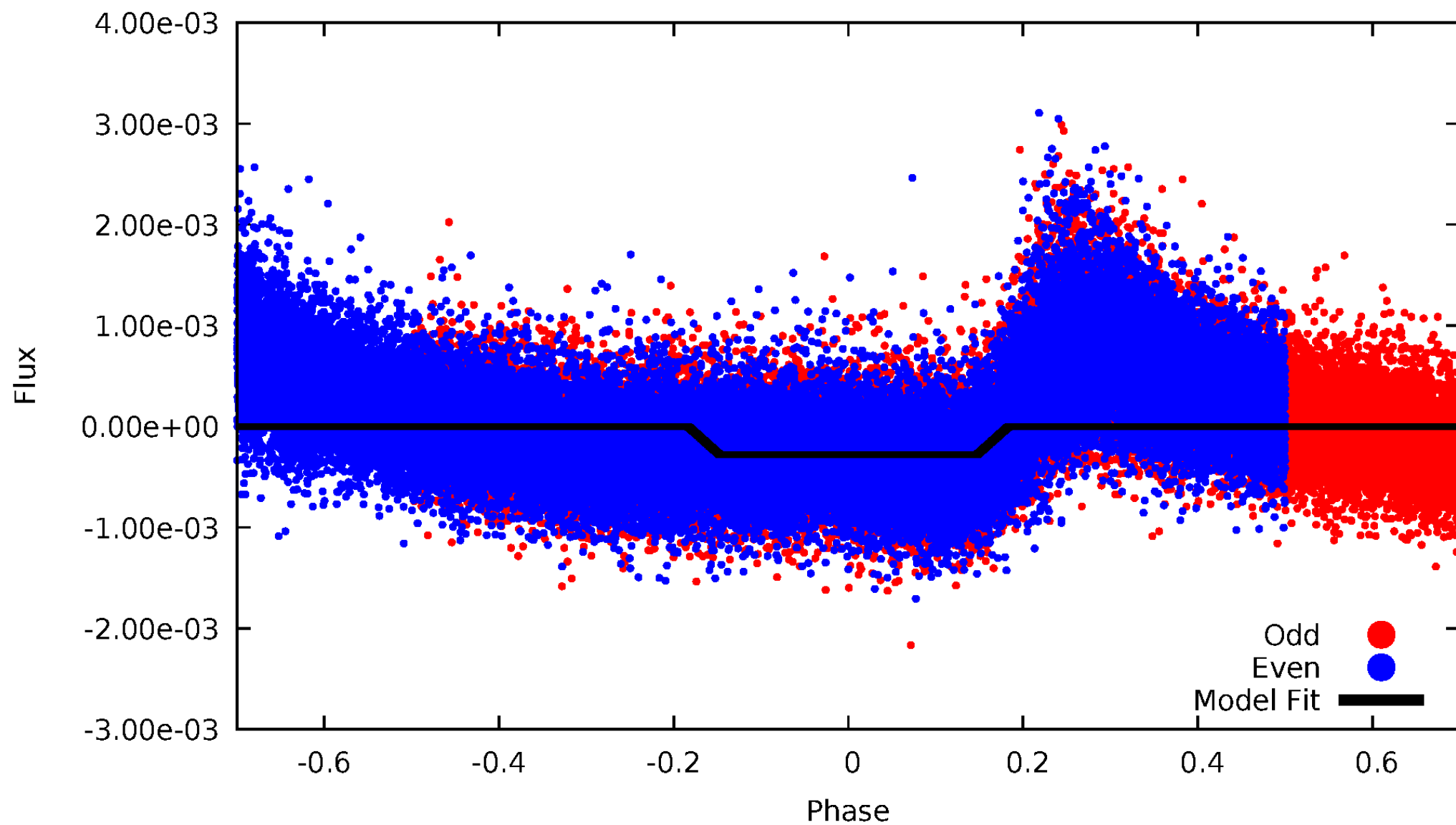
# DV Odd/Even

TCE 007199240-01

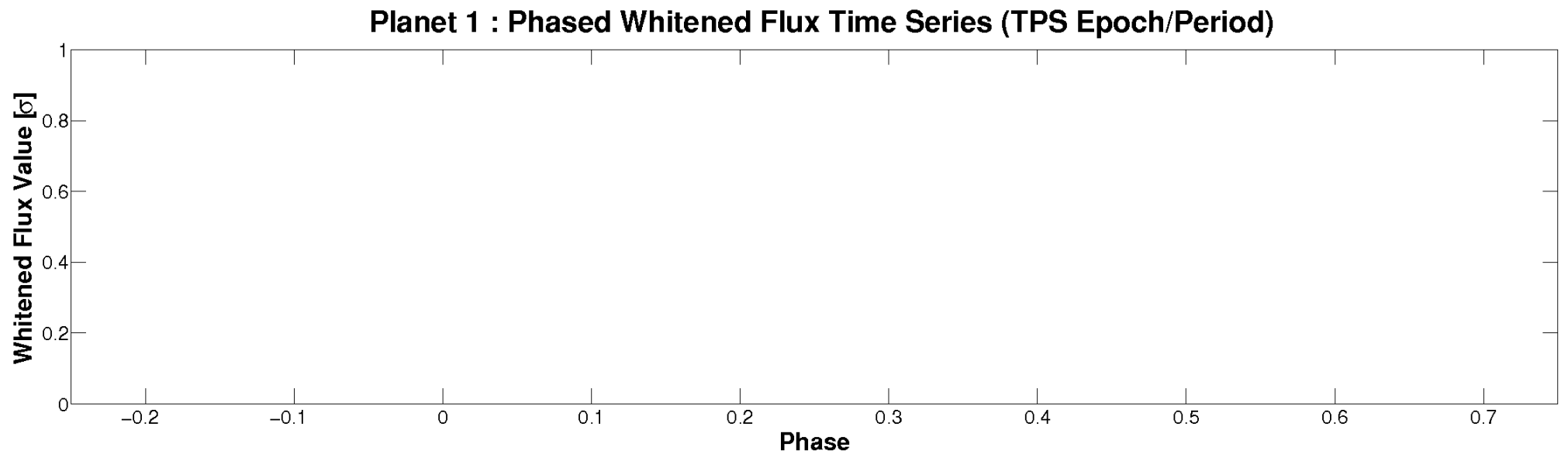
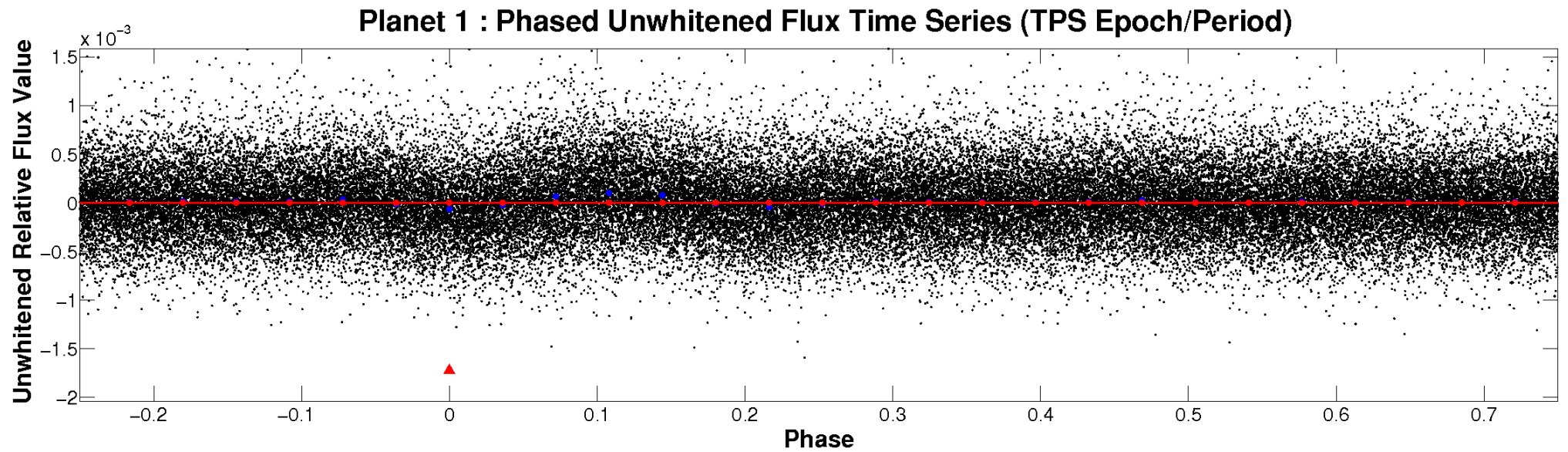


# ALT Odd/Even

TCE 007199240-01

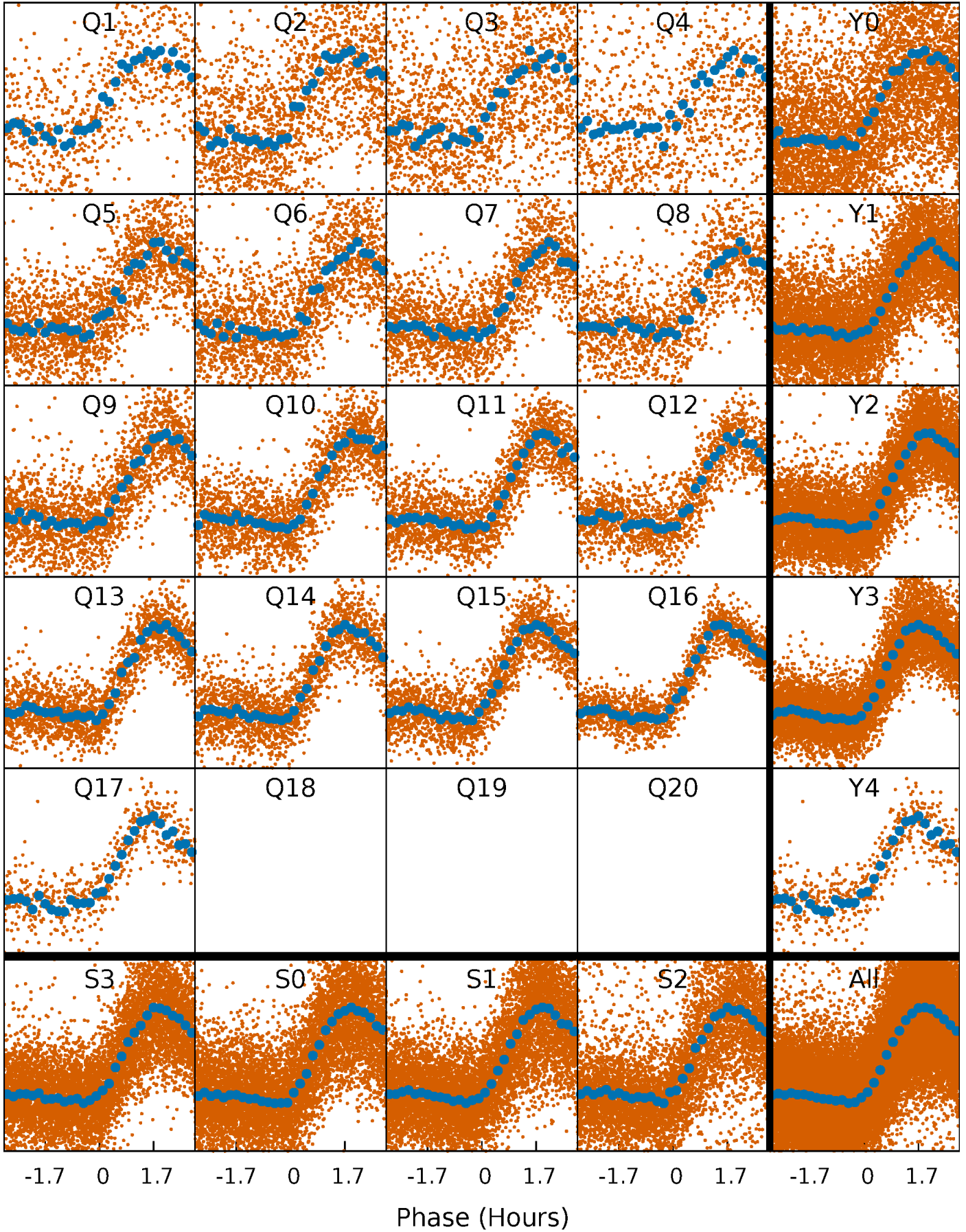


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

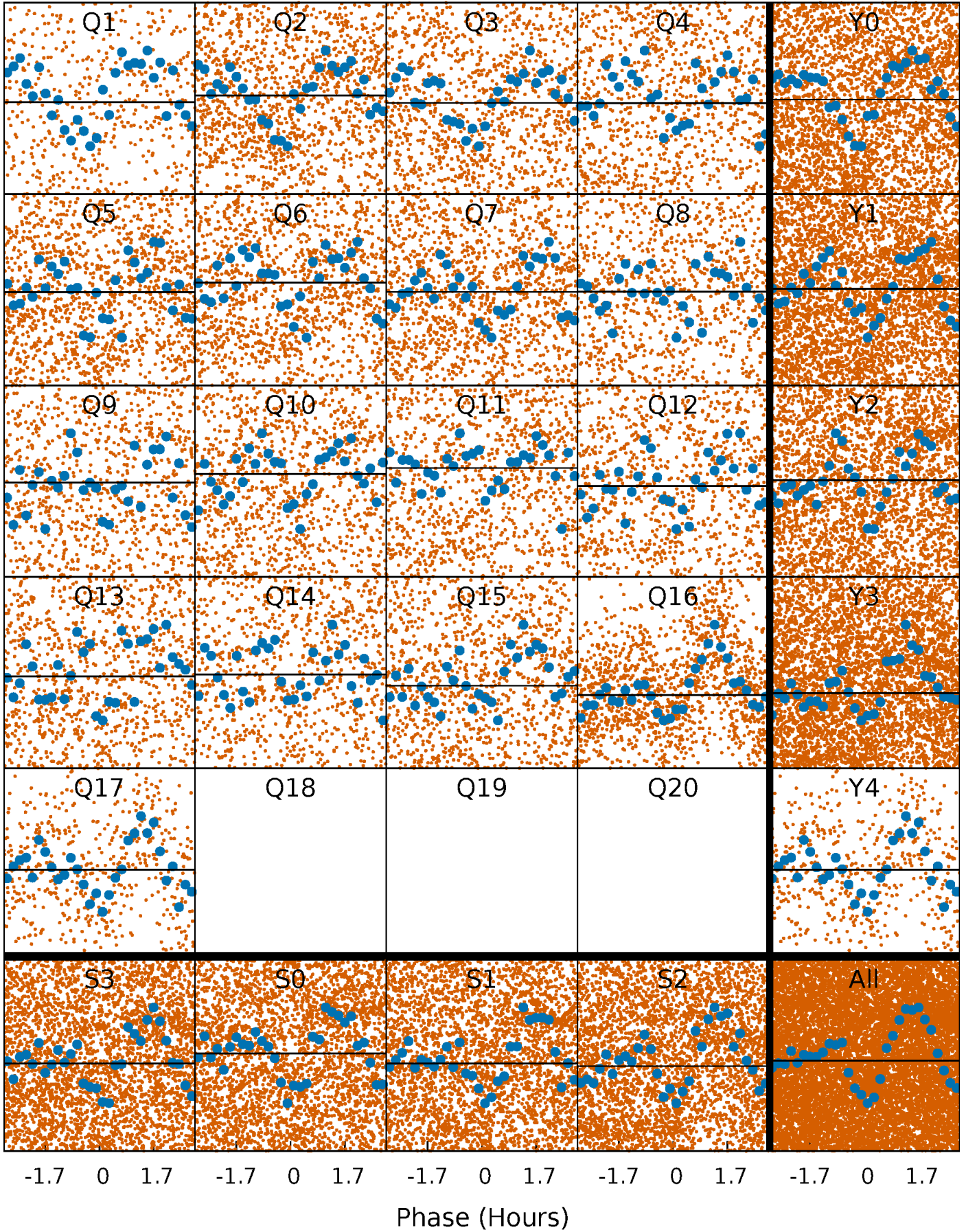
TCE 007199240-01 P= 0.566803 Days  $T_0=131.714119$  (BKJD)





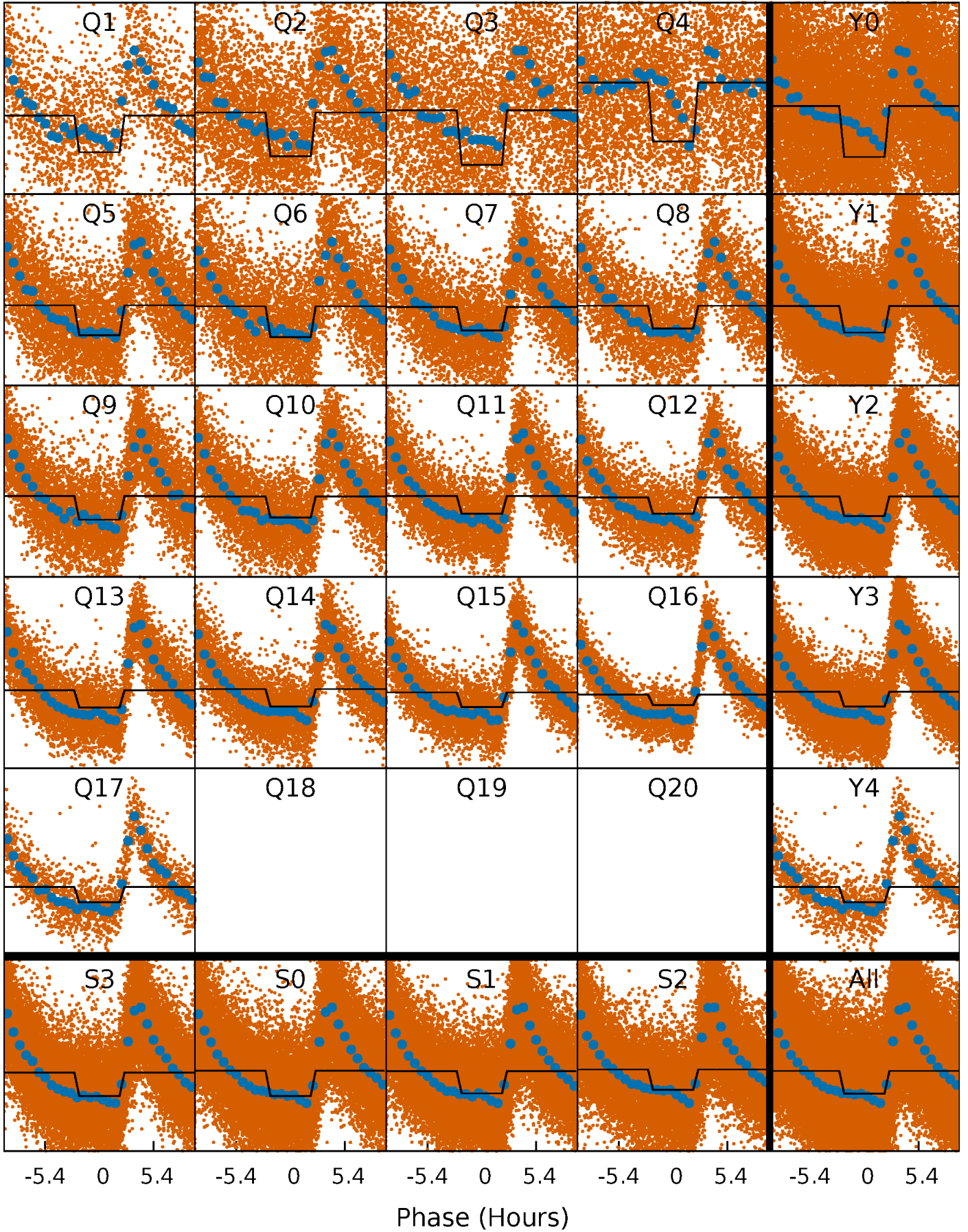
# DV Quarter-Phased Transit Curves

TCE 007199240-01 P= 0.566803 Days  $T_0=131.714119$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

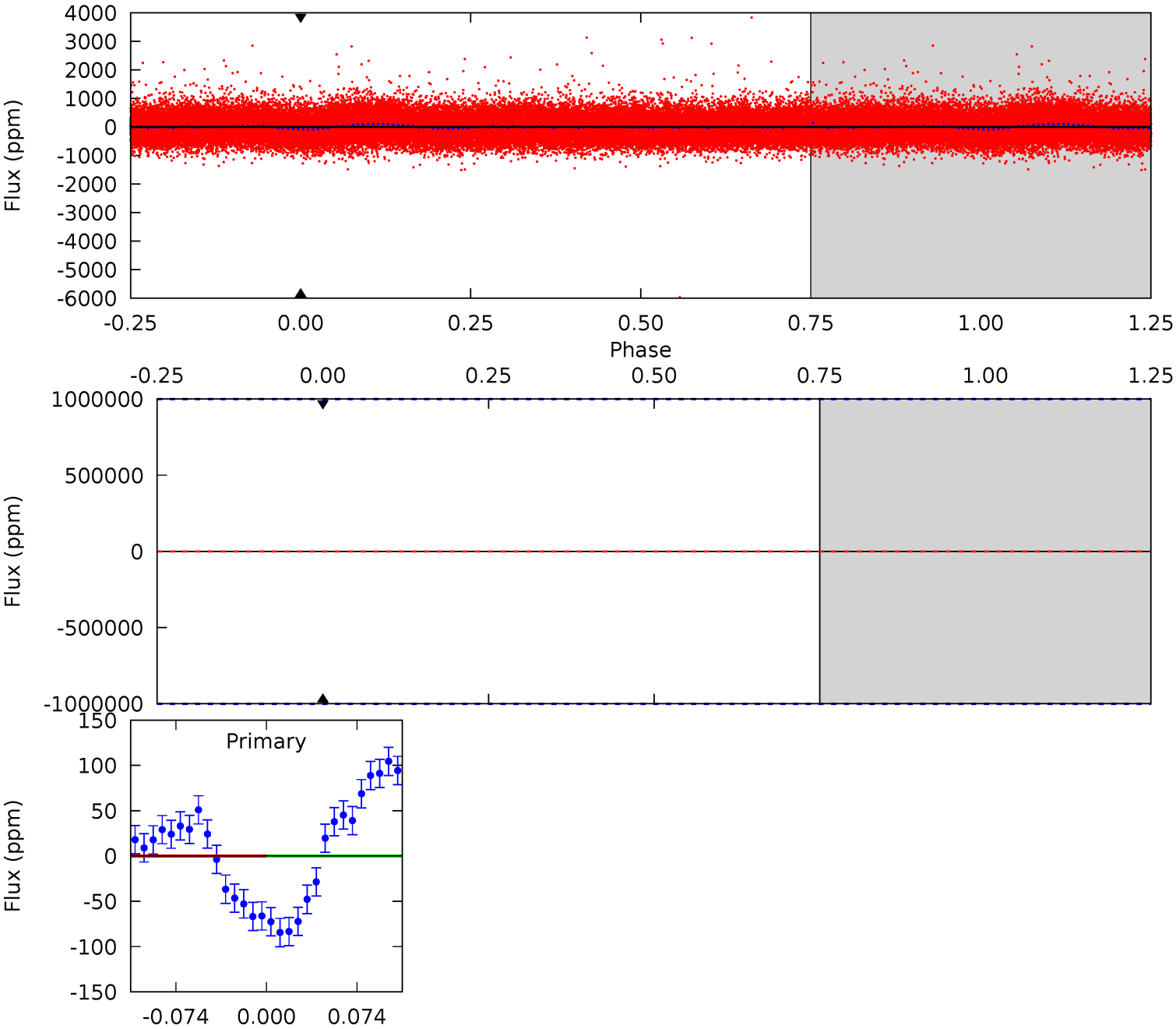
TCE 007199240-01 P= 0.566803 Days  $T_0=131.632318$  (BKJD)



# DV Model-Shift Uniqueness Test

007199240-01, P = 0.566803 Days, E = 131.147316 Days

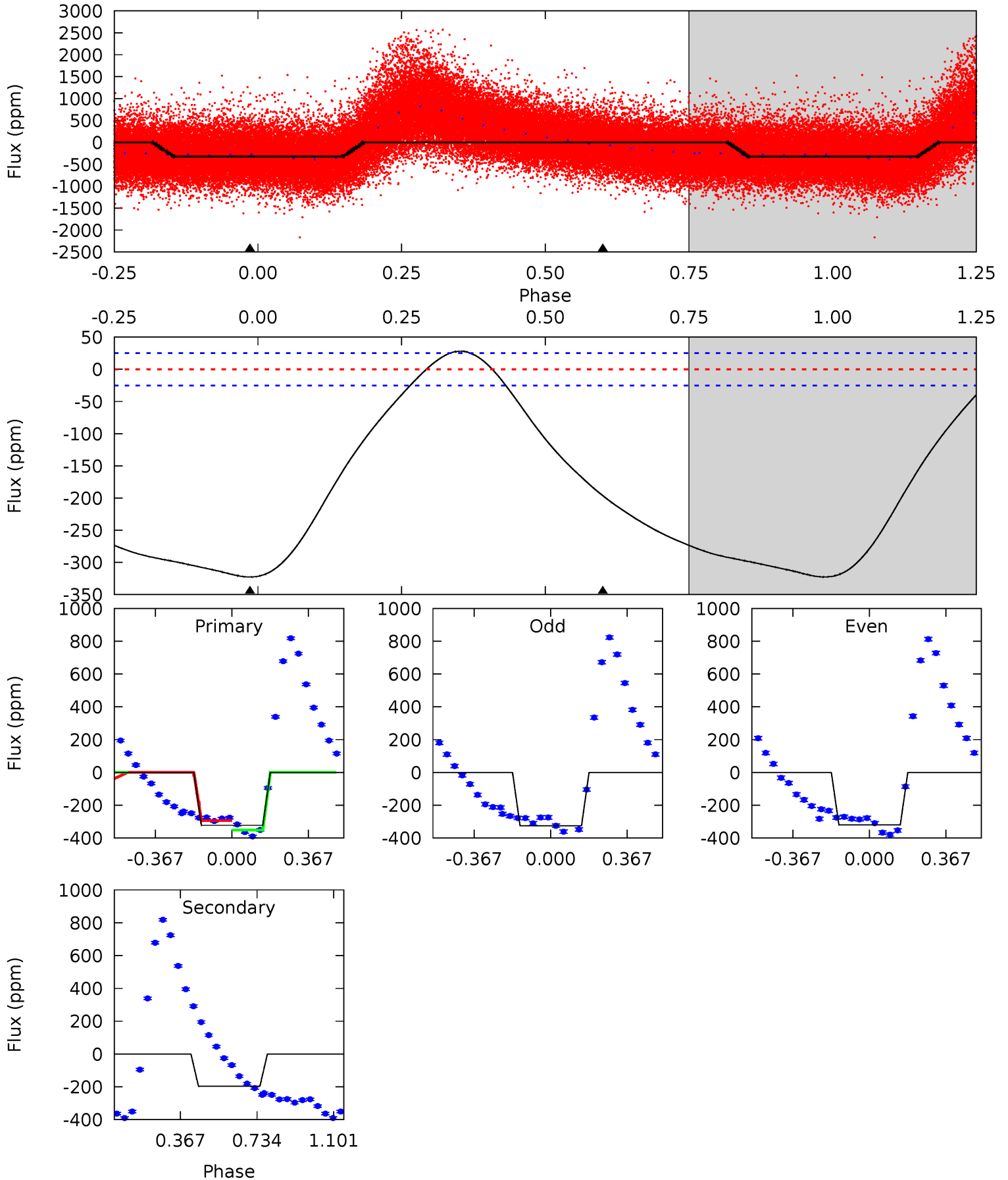
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



# Alt Model-Shift Uniqueness Test

007199240-01, P = 0.566803 Days, E = 131.065515 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
54.7	33.3	0	0	4.28	0.90	3.91	54.7	54.7	33.3	33.3	0.58	0.98	0.08	6.36





### Stellar Parameters For KIC 007199240

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5188^{+157}_{-157}$	$4.637^{+0.065}_{-0.045}$	$-1.000^{+0.300}_{-0.300}$	$0.625^{+0.053}_{-0.044}$	$0.618^{+0.060}_{-0.023}$	$3.561^{+0.862}_{-0.580}$
	+3%/-3%	+1%/-1%	+30%/-30%	+8%/-7%	+10%/-4%	+24%/-16%
Source	PHO1	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 007199240-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$0 \pm 1000000$	$5.20^{+5.18}_{-3.47}$	$2360^{+85}_{-89}$	$3267^{+13999}_{-17223}$	$1.408^{+576.265}_{-355.148}$
Alt.	$-196 \pm 6$	$5.03^{+5.27}_{-3.43}$	$2364^{+85}_{-88}$	$2643^{+1505}_{-5143}$	$0.564^{+5.054}_{-0.430}$

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

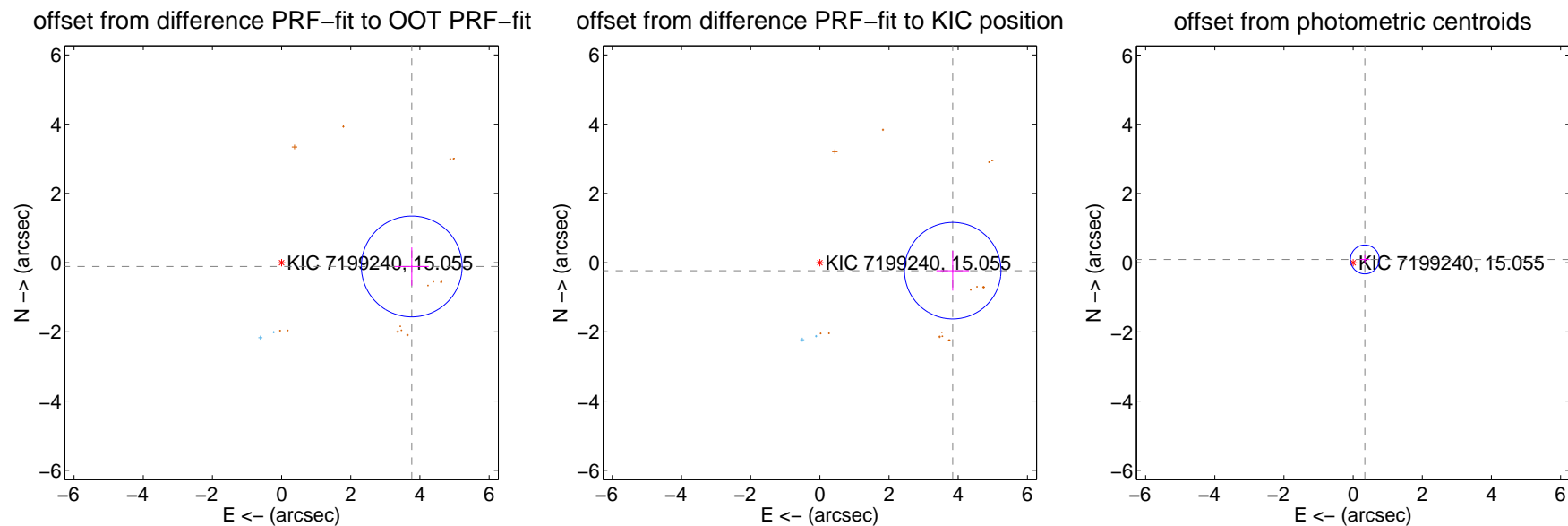
## DV Centroid Data

Supplemental centroid analysis for 007199240-01. Kepler magnitude: 15.05. Transit SNR -1.00

There are 2 quarters with good PRF difference image offsets

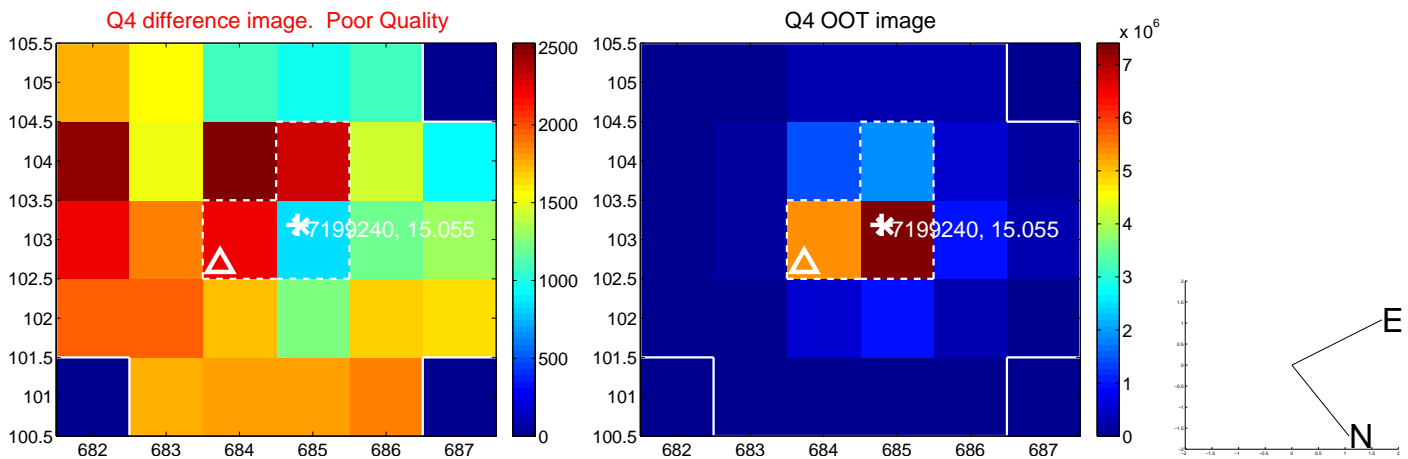
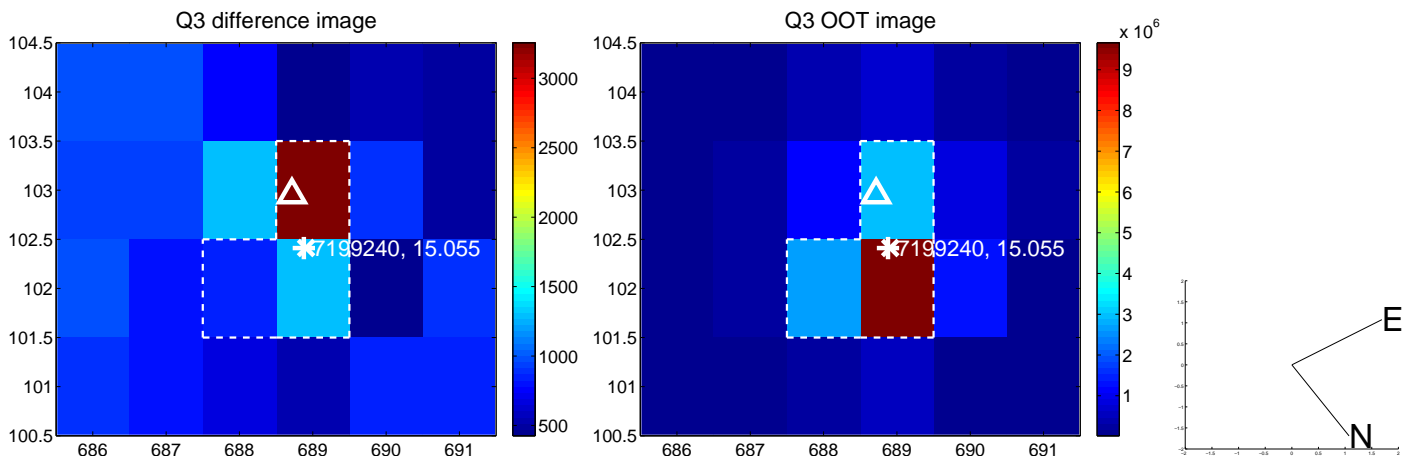
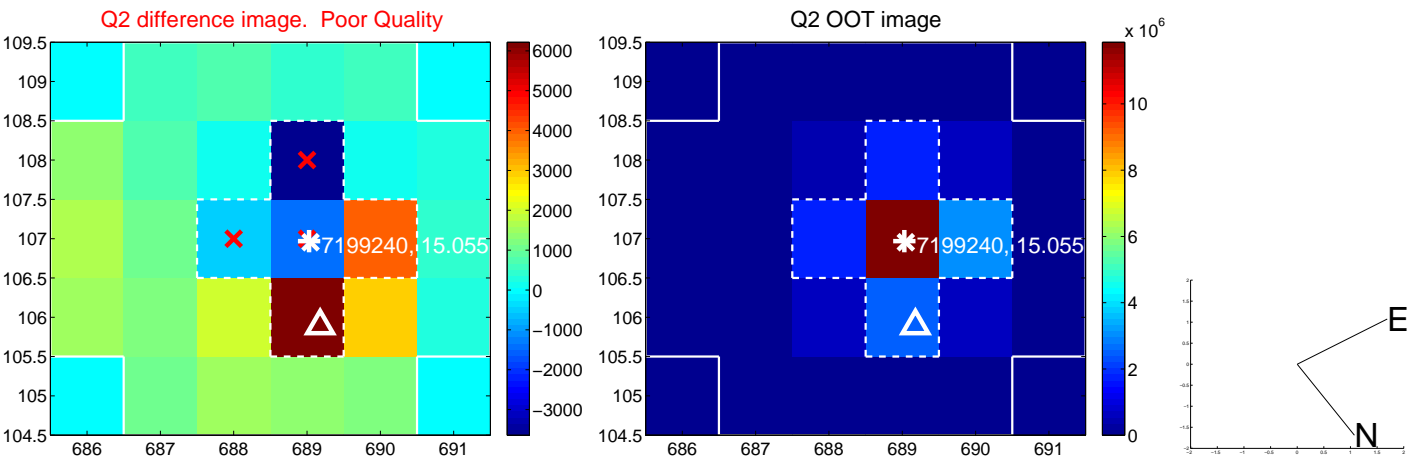
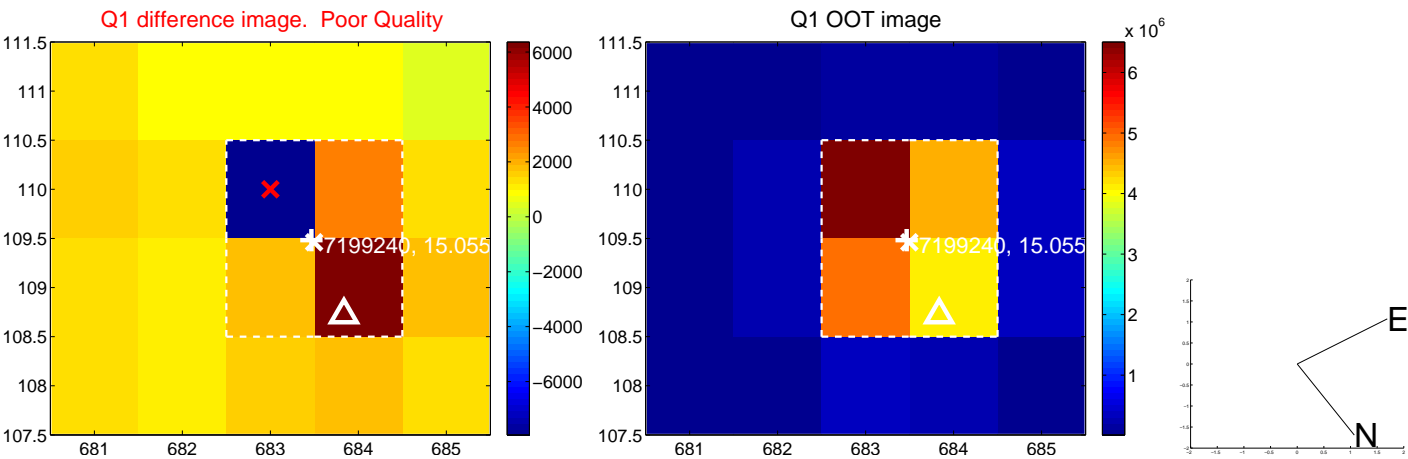
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$3.765 \pm 0.485$	7.75	$-3.763 \pm 0.491$	$-0.111 \pm 0.552$
PRF-fit source offset from KIC position	$3.849 \pm 0.465$	8.28	$-3.842 \pm 0.471$	$-0.231 \pm 0.576$
photometric centroid source offset	$0.35 \pm 0.14$	2.54	$-0.34 \pm 0.14$	$0.09 \pm 0.12$

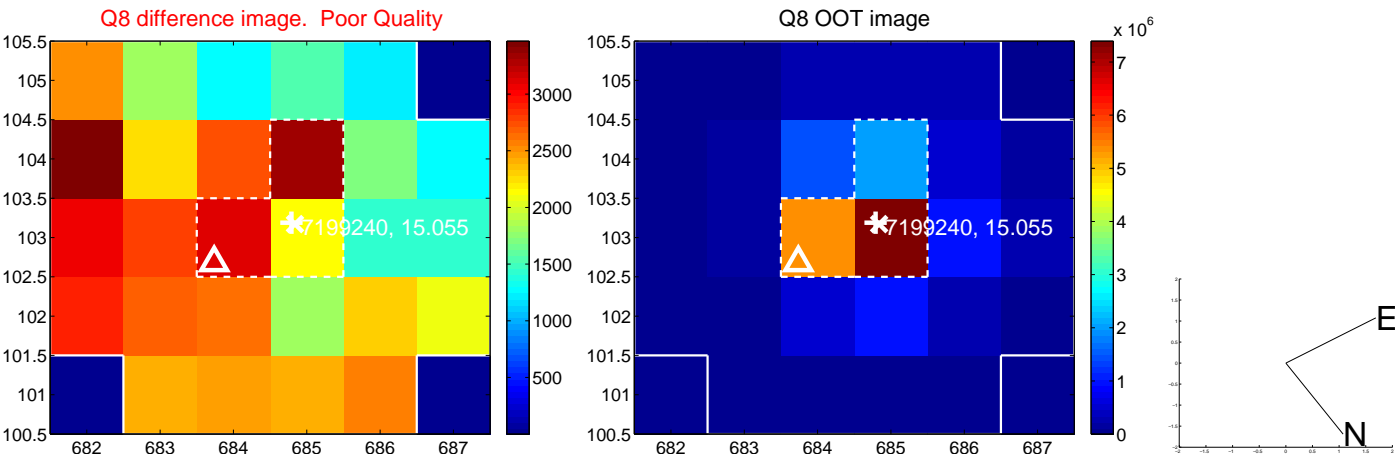
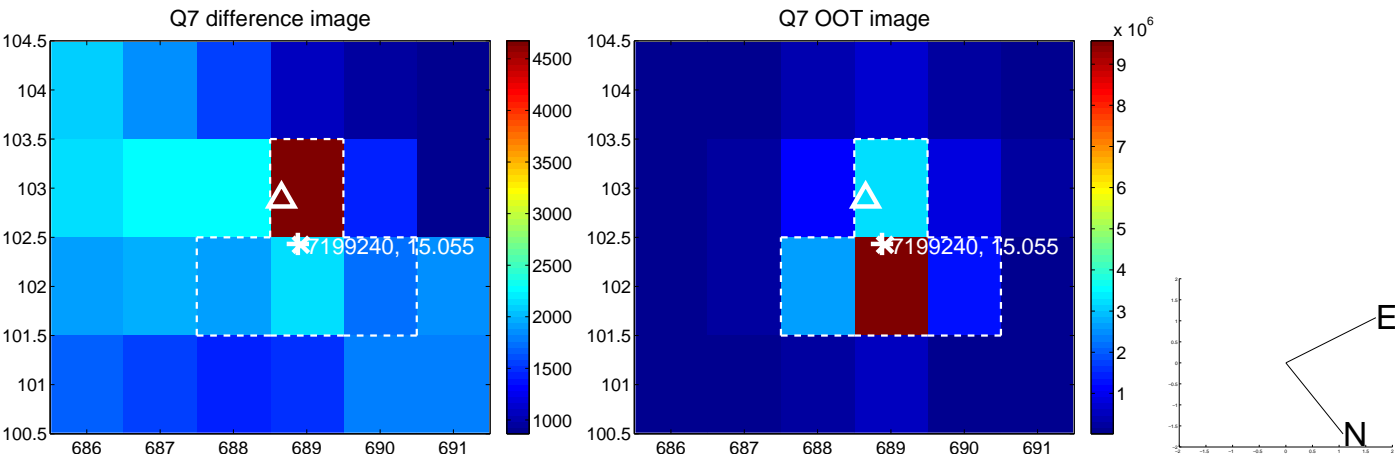
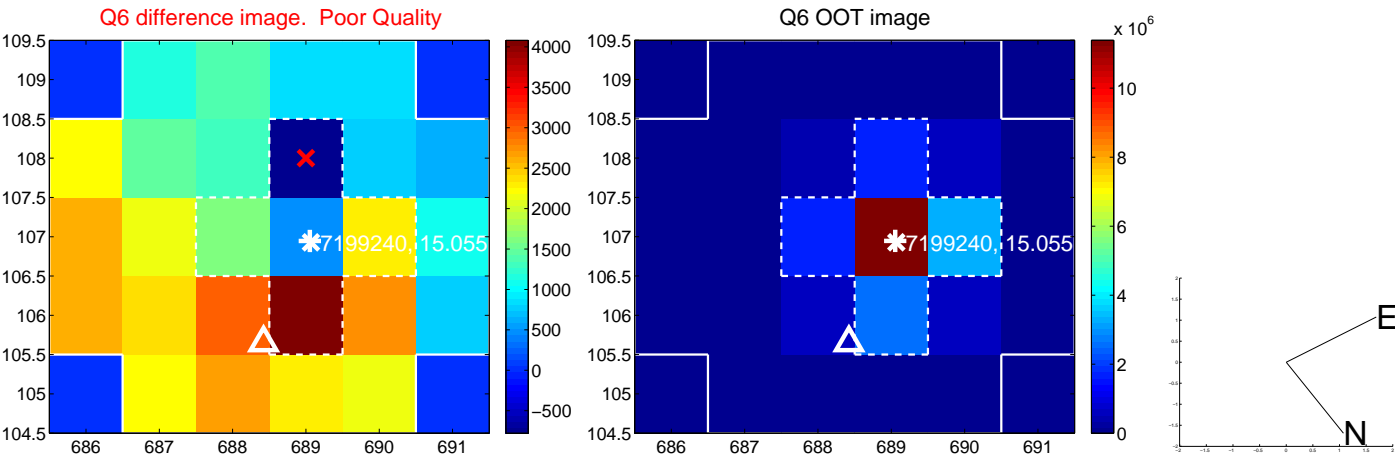
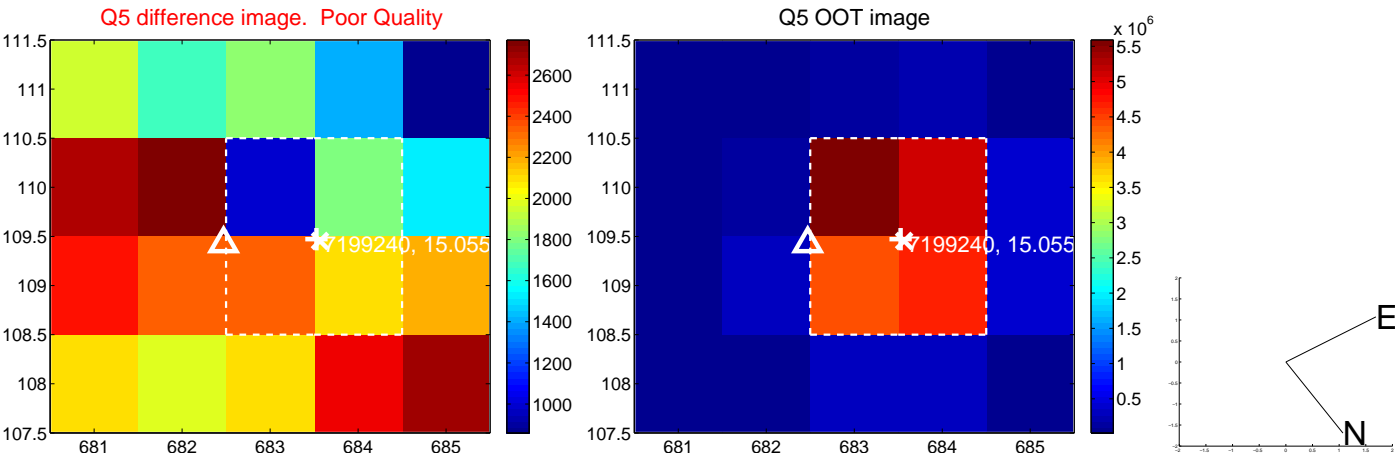


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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



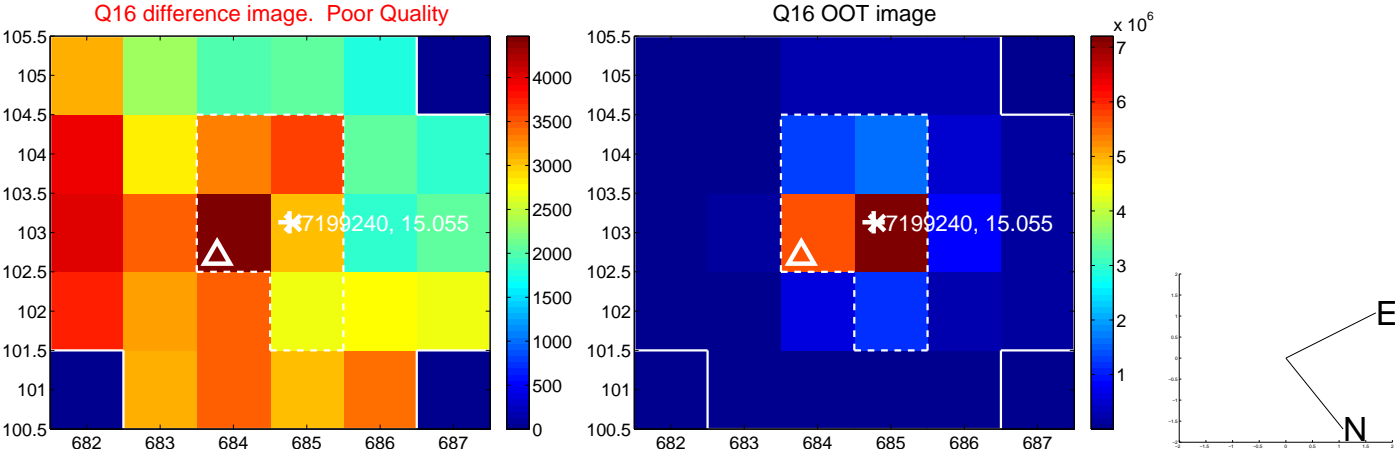
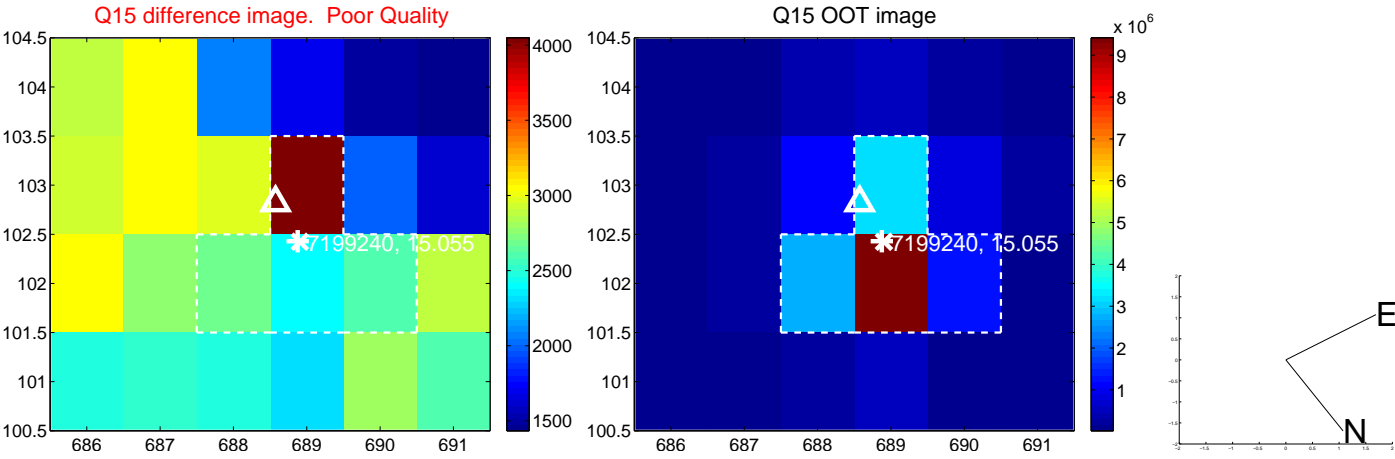
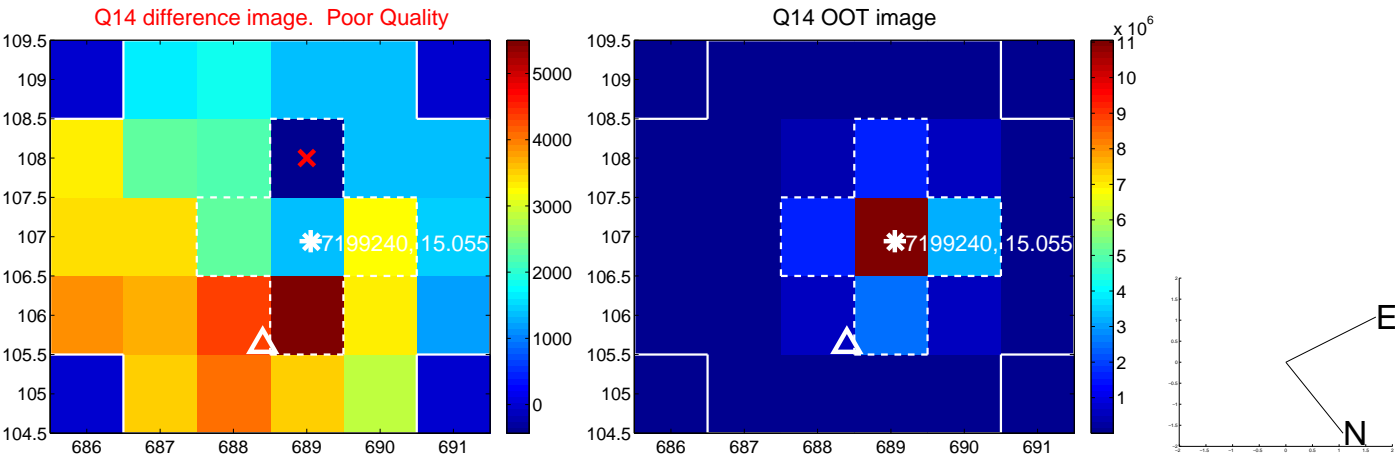
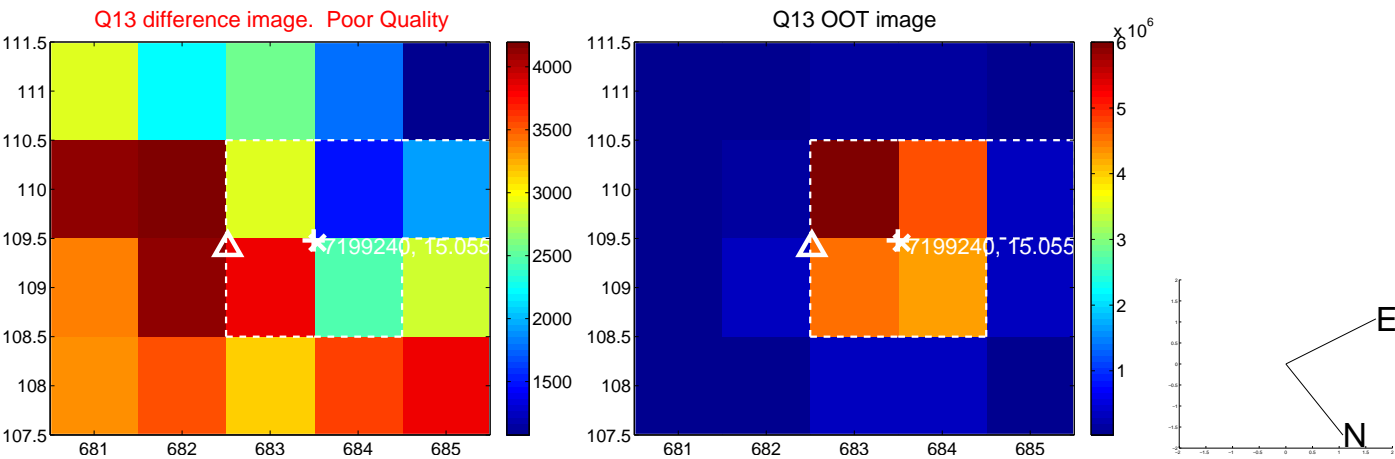
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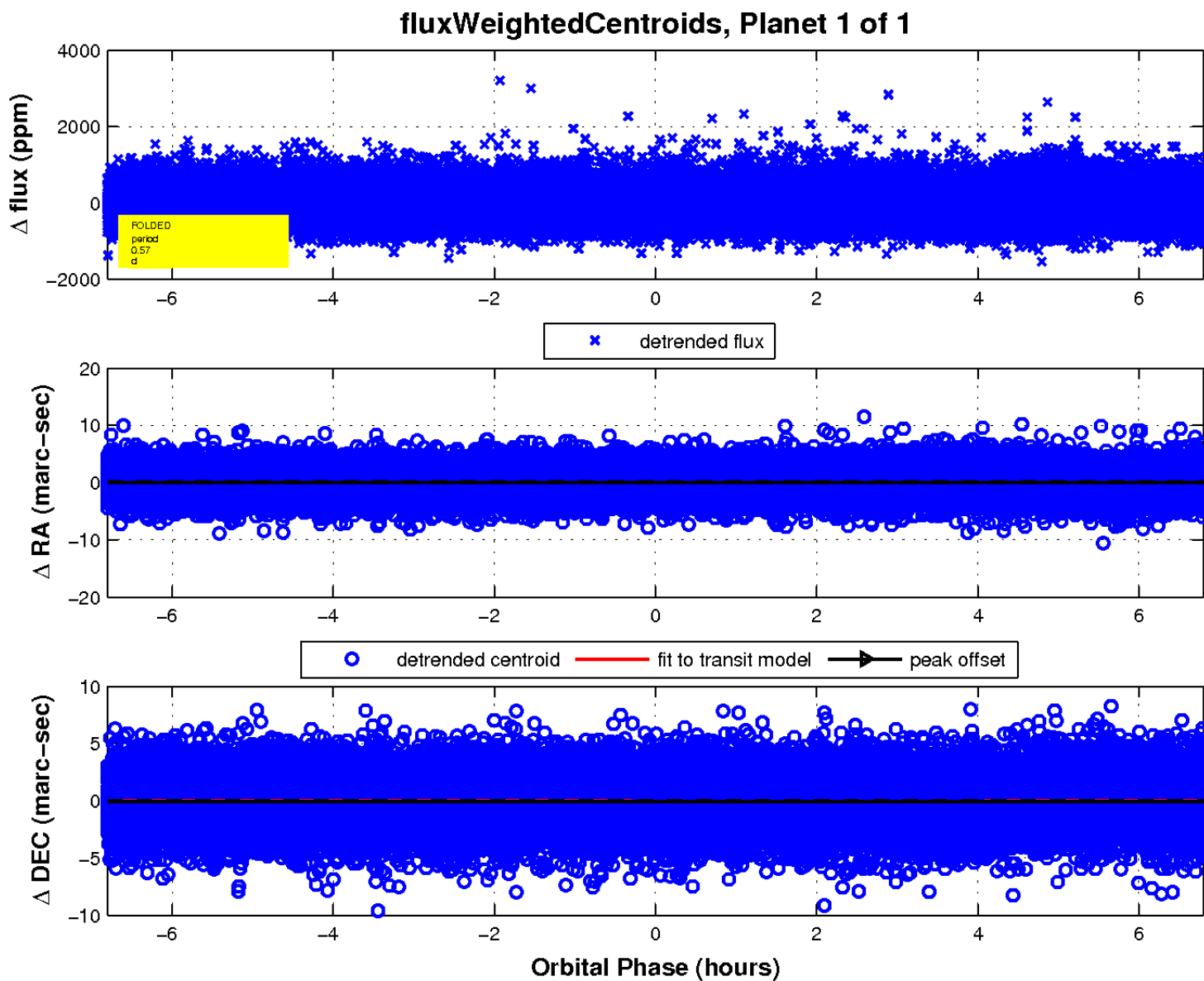
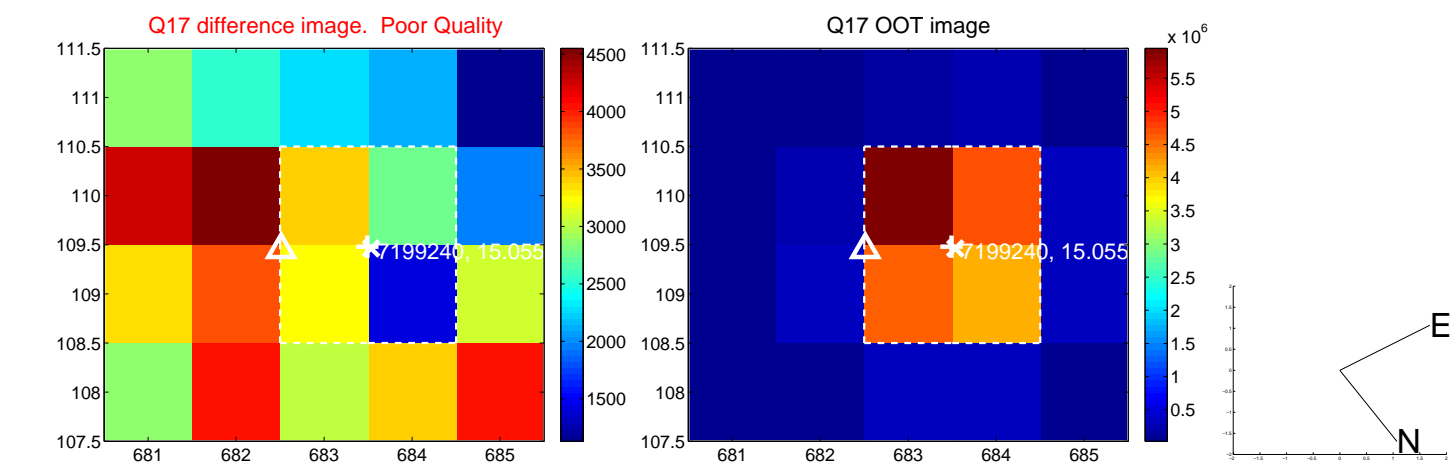




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UKIRT Image

Declination

