

# KIC 007200485

## Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R <sub>★</sub> (R <sub>☉</sub> )	T <sub>★</sub> (K)	R <sub>p</sub> (R <sub>⊕</sub> )	S <sub>p</sub> (S <sub>⊕</sub> )
007200485-01	OBS	7825.01	0.566794	131.803015	45.4	1.994	8.5	9.4	0.85	5858	0.63	4411.60

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007200485-01	OBS	FP	0.00	1	0	1	1	LPP_DV—CENT_UNRESOLVED_OFFSET—HALO_GHOST—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.

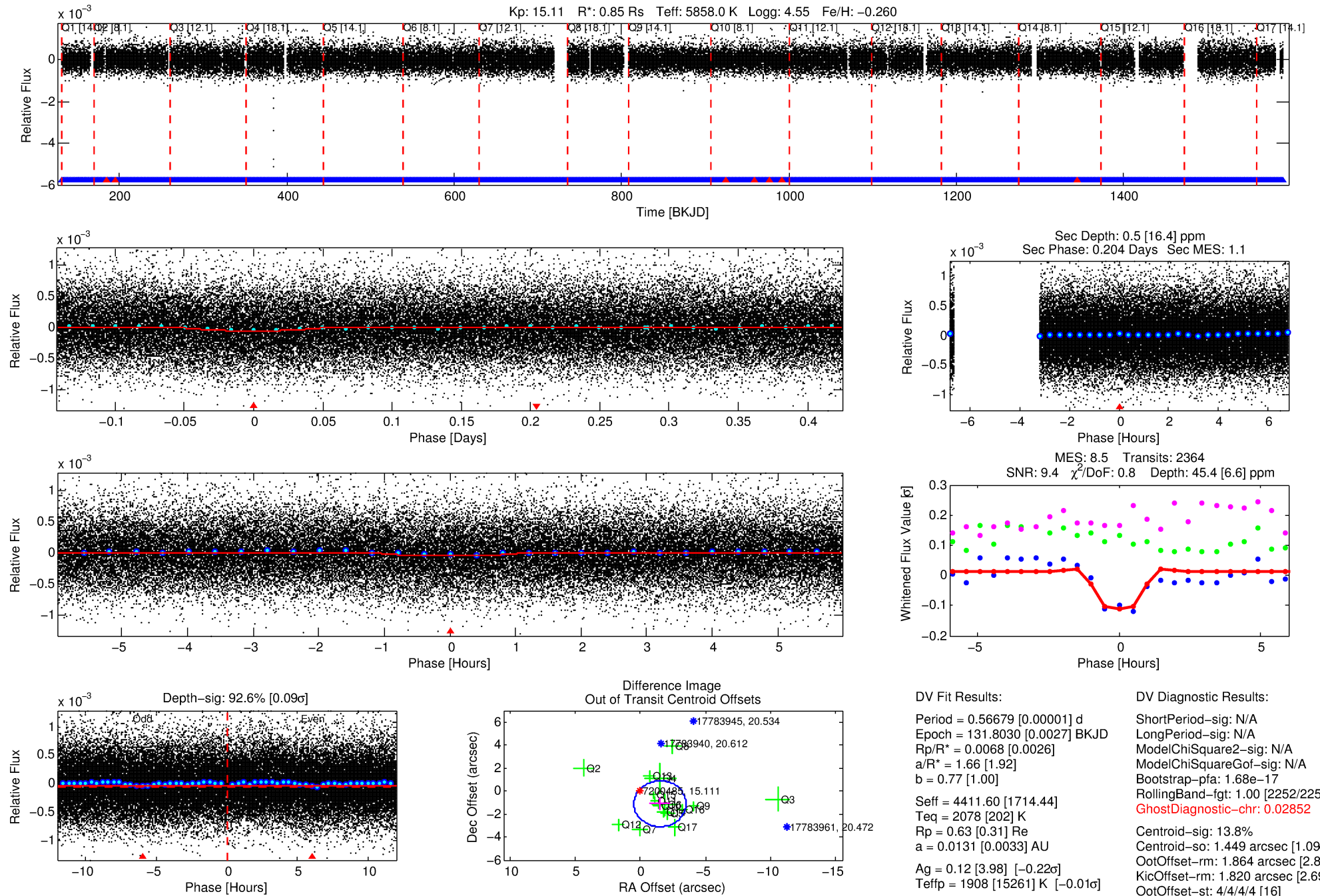
## Ephemeris Match Information For 007200485-01

TCE (1)	KIC	Parent (2)	Parent KIC	P <sub>1</sub> :P <sub>2</sub>	Dist (″)	ΔRow	ΔCol	m <sub>2</sub>	m <sub>1</sub>	D <sub>2</sub> /D <sub>1</sub>	Mechanism	Flag	σ <sub>P</sub>	σ <sub>T</sub>
007200485-01	7200485	RR-Lyr-pri	7198959	1:1	1236.2	200	237	7.86	15.11	13851.00	Direct-PRF	0	0.73	21.06

**Notes:** P<sub>1</sub>:P<sub>2</sub> is the period ratio. Dist is the distance in arcseconds. ΔRow and ΔCol 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. σ<sub>P</sub> and σ<sub>T</sub> are the significance of the match in period and epoch. For a match to be considered significant σ<sub>P</sub> < 5.0 and σ<sub>T</sub> < 5.0. Matches which have σ<sub>P</sub> and σ<sub>T</sub> very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

# DV One-Page Summary

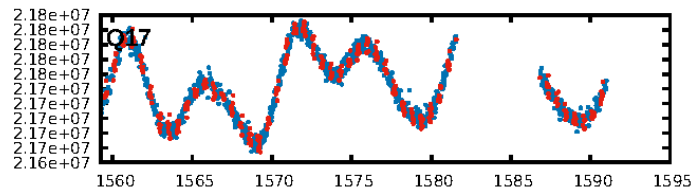
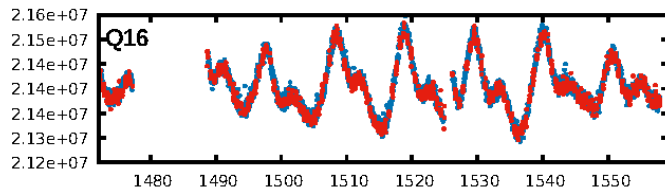
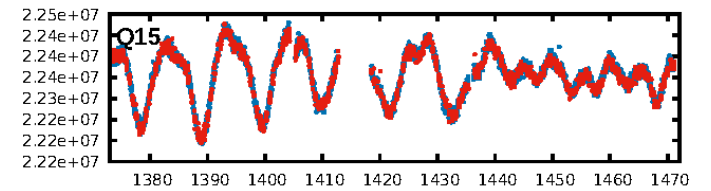
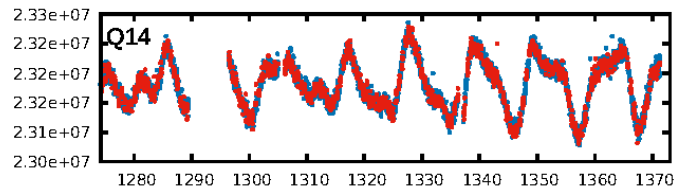
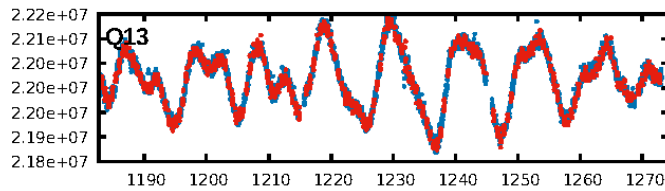
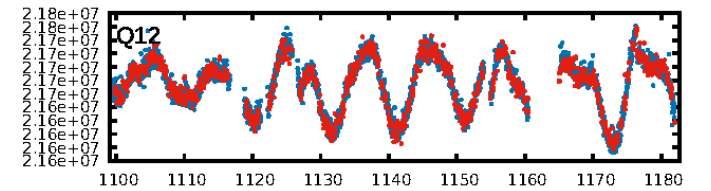
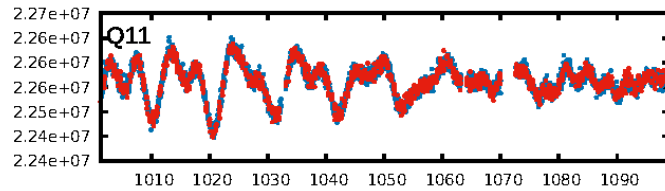
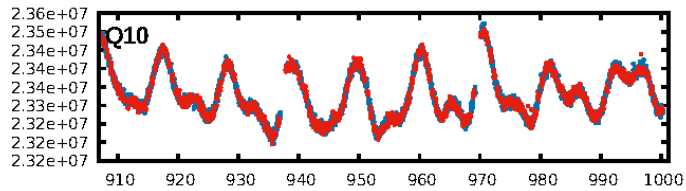
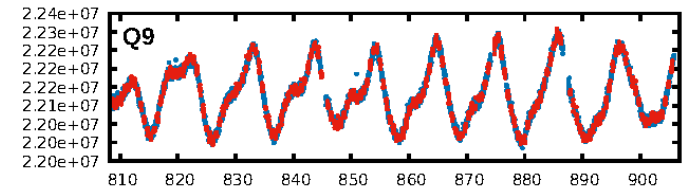
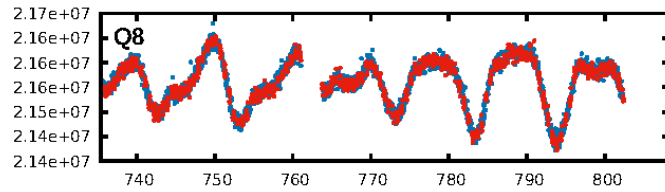
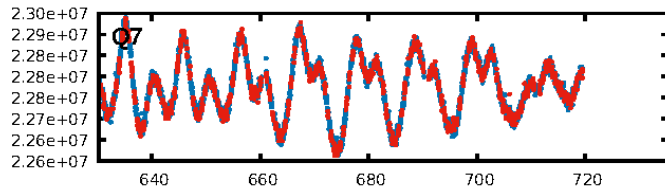
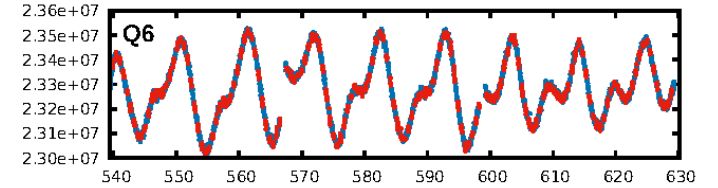
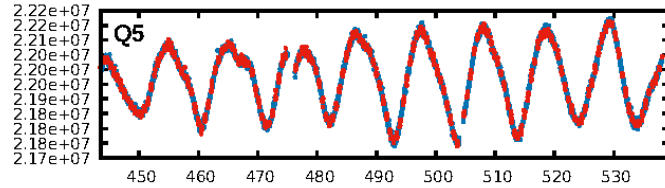
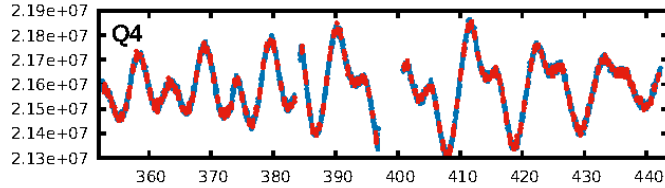
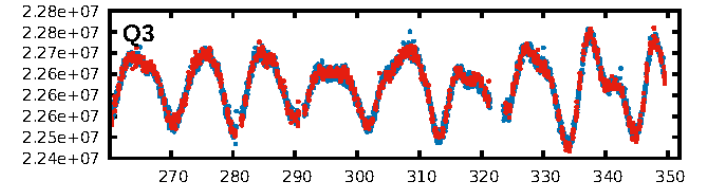
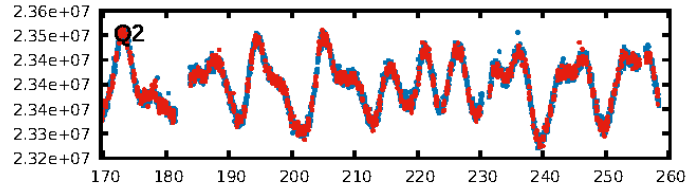
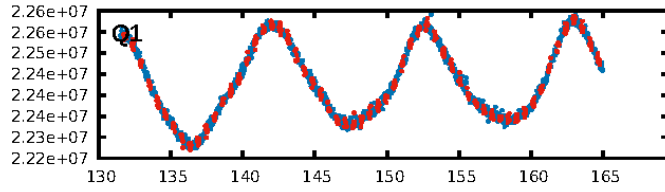
KIC: 7200485 Candidate: 1 of 1 Period: 0.567 d



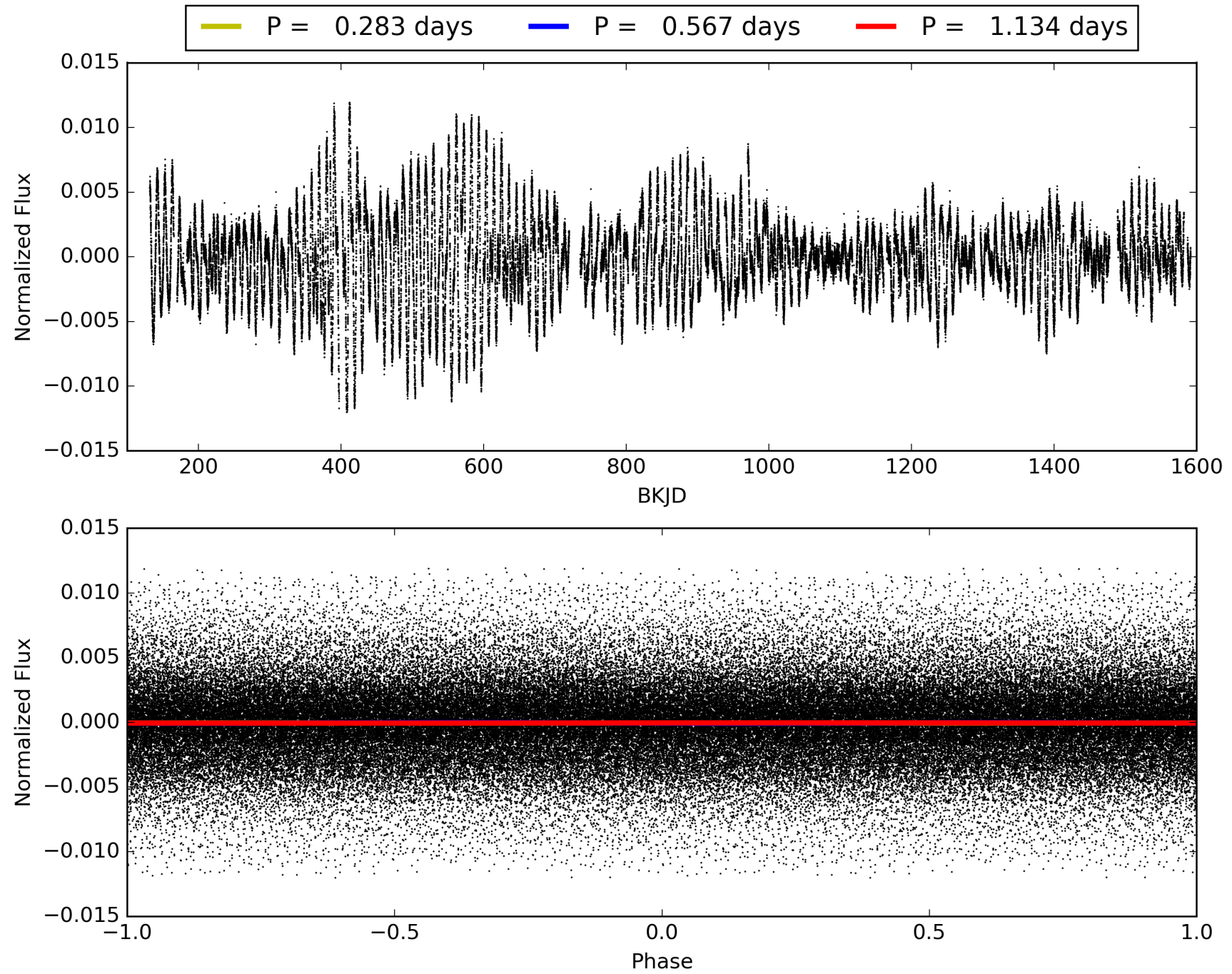
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 10:12:01 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 007200485-01, PDC Light Curves

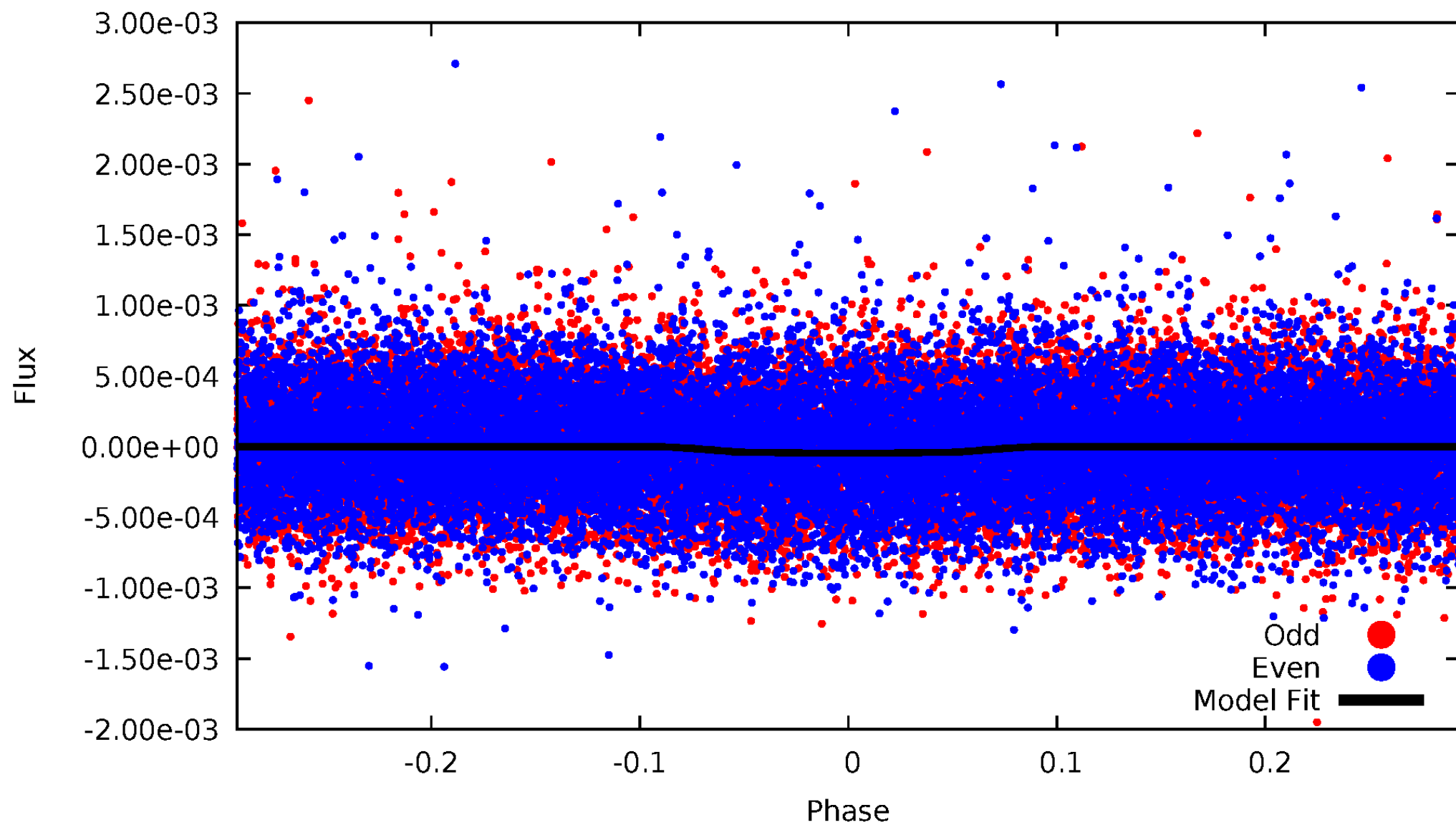


TCE 007200485-01



# DV Odd/Even

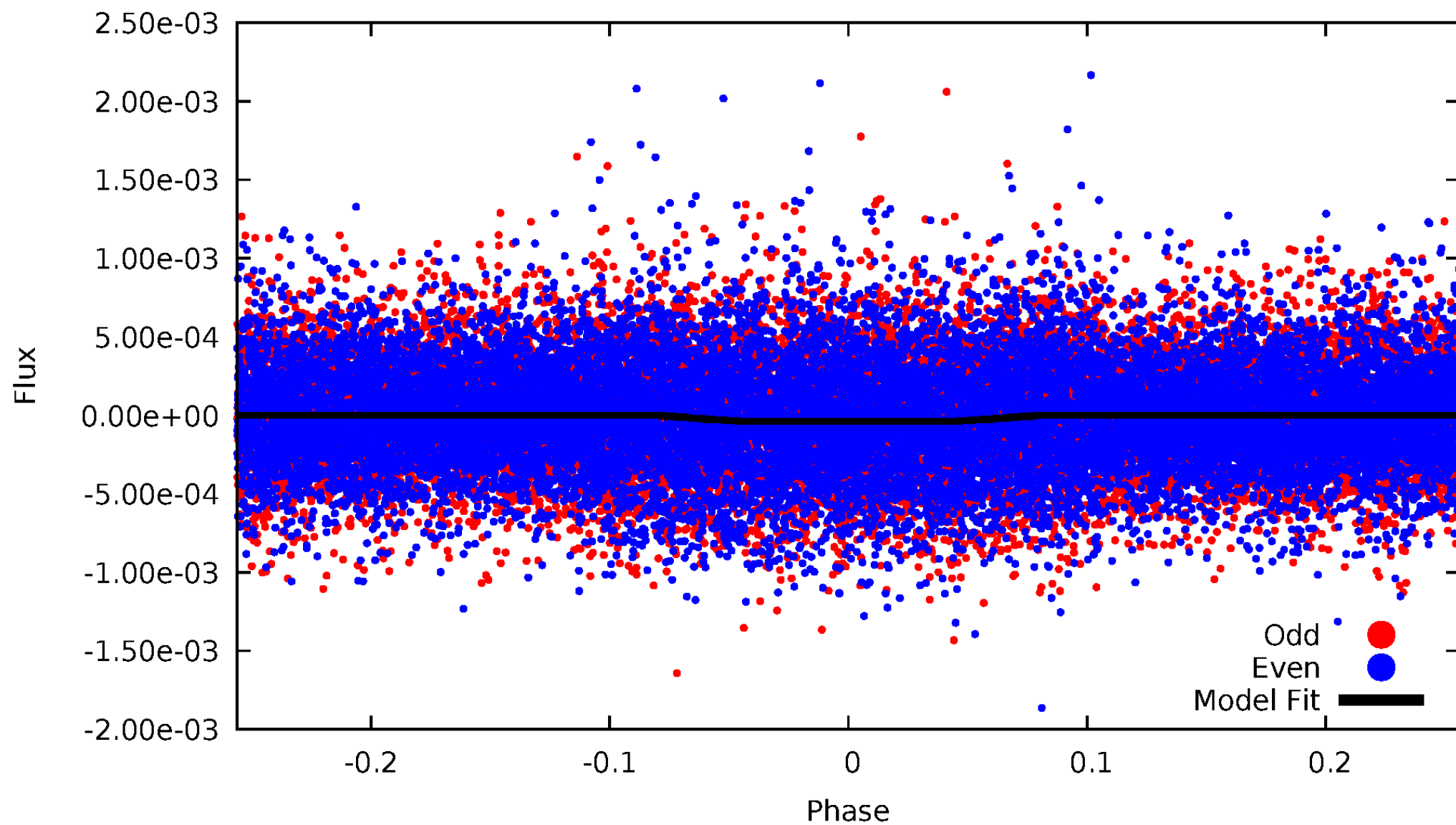
TCE 007200485-01





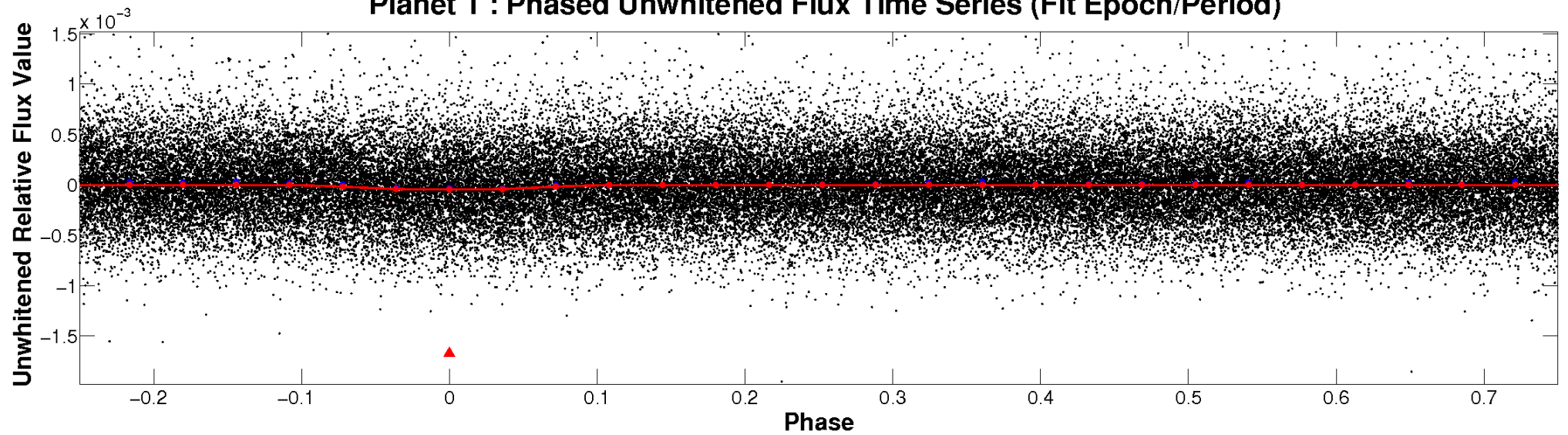
# ALT Odd/Even

TCE 007200485-01

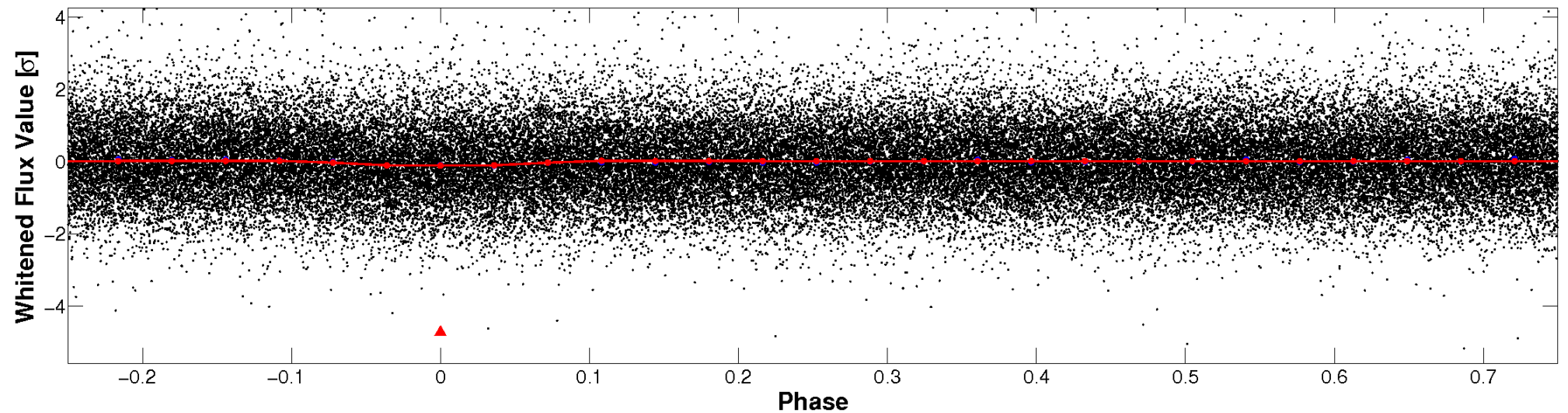


# Non-Whitened Vs. Whitened Light Curve

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

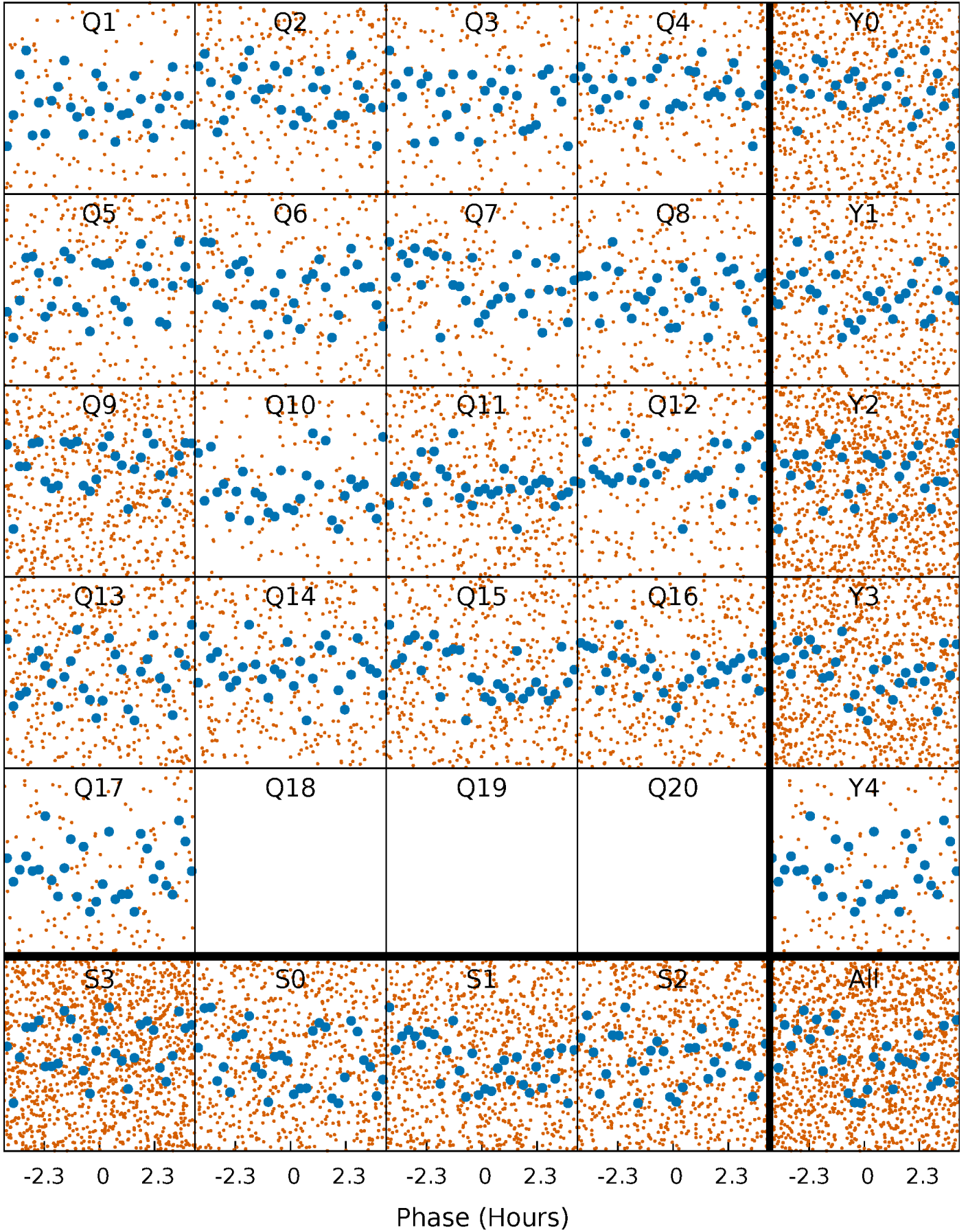


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

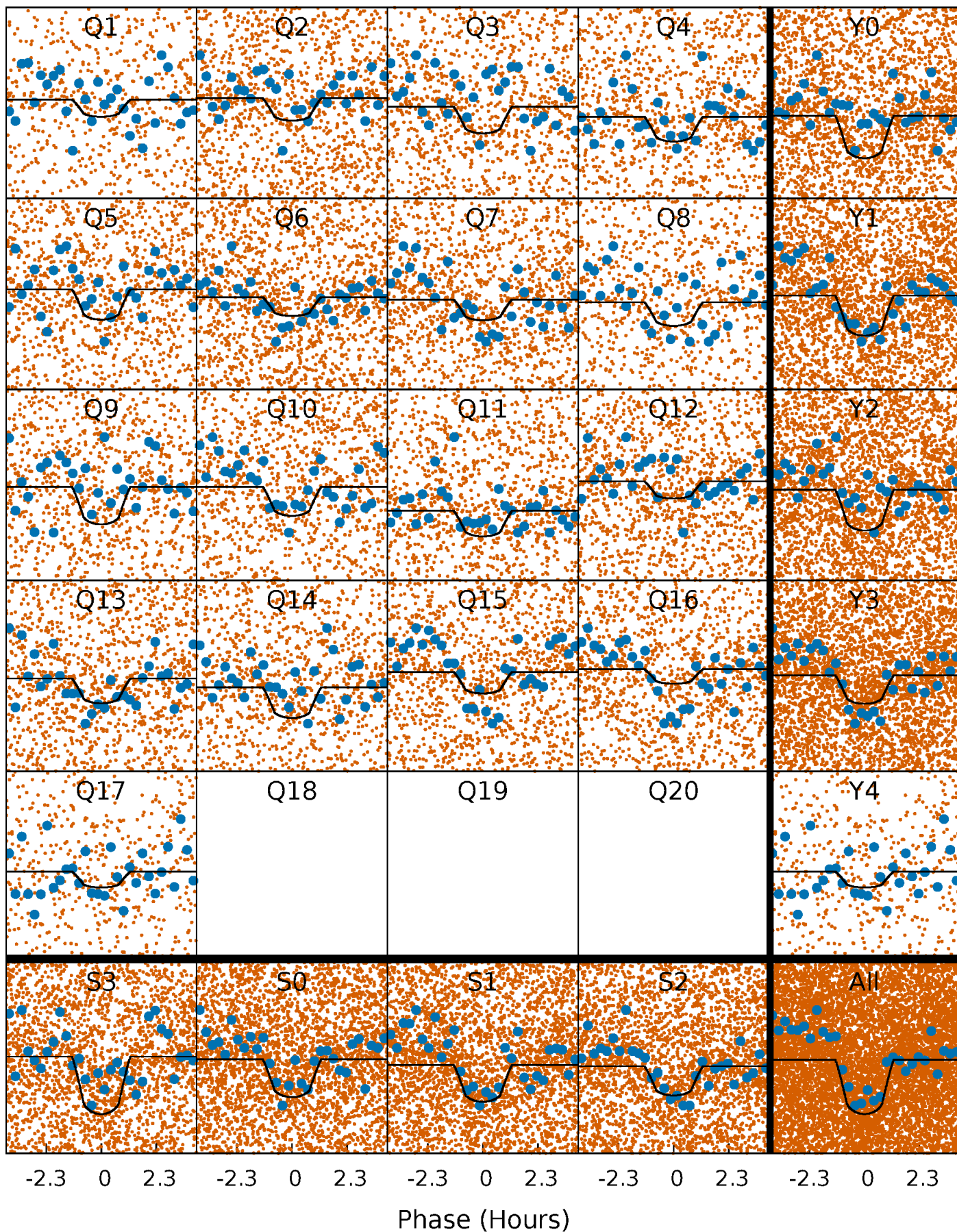
TCE 007200485-01   P= 0.566794 Days    $T_0=131.803015$  (BKJD)





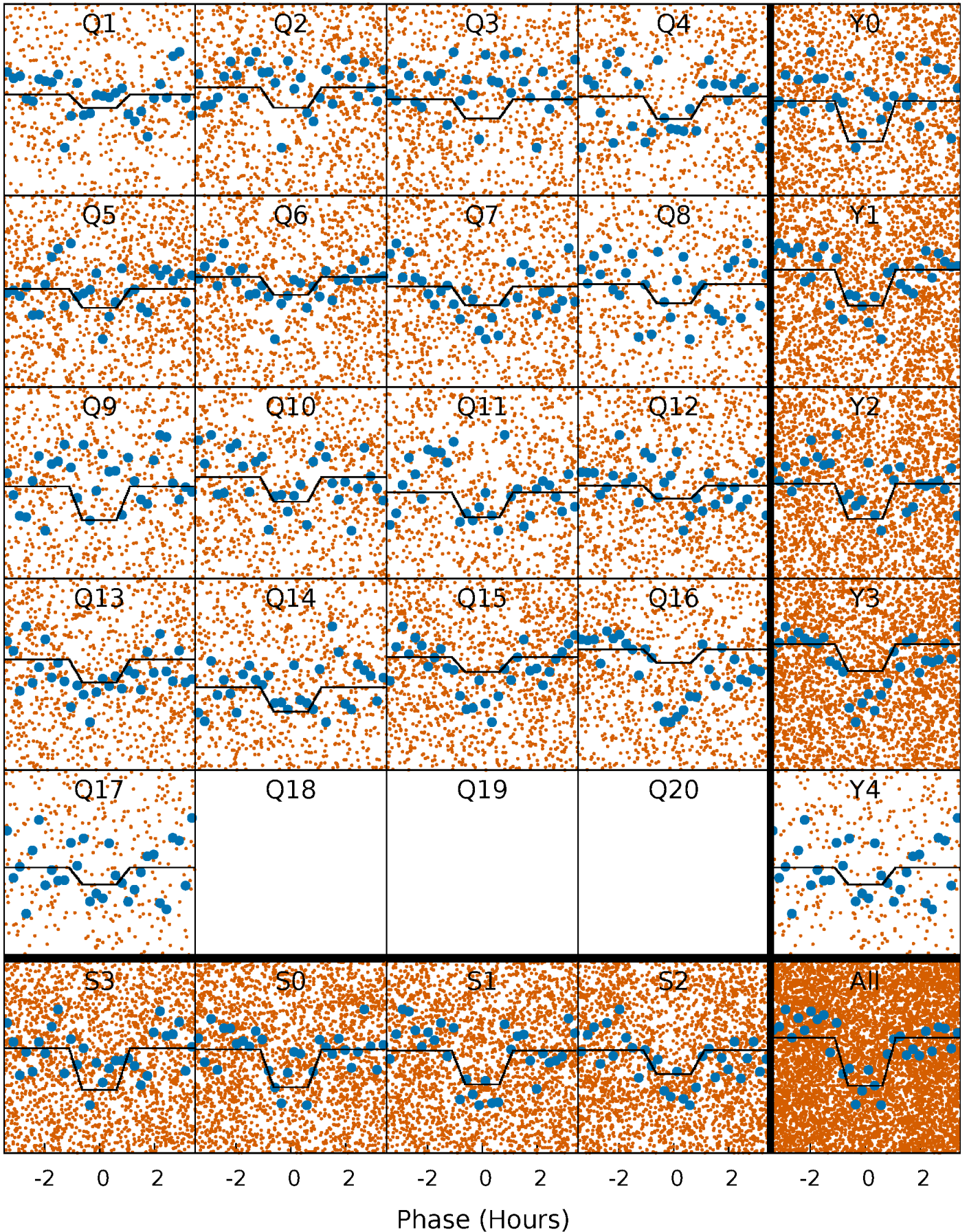
# DV Quarter-Phased Transit Curves

TCE 007200485-01 P= 0.566794 Days  $T_0=131.803015$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 007200485-01 P= 0.566795 Days  $T_0=131.800907$  (BKJD)

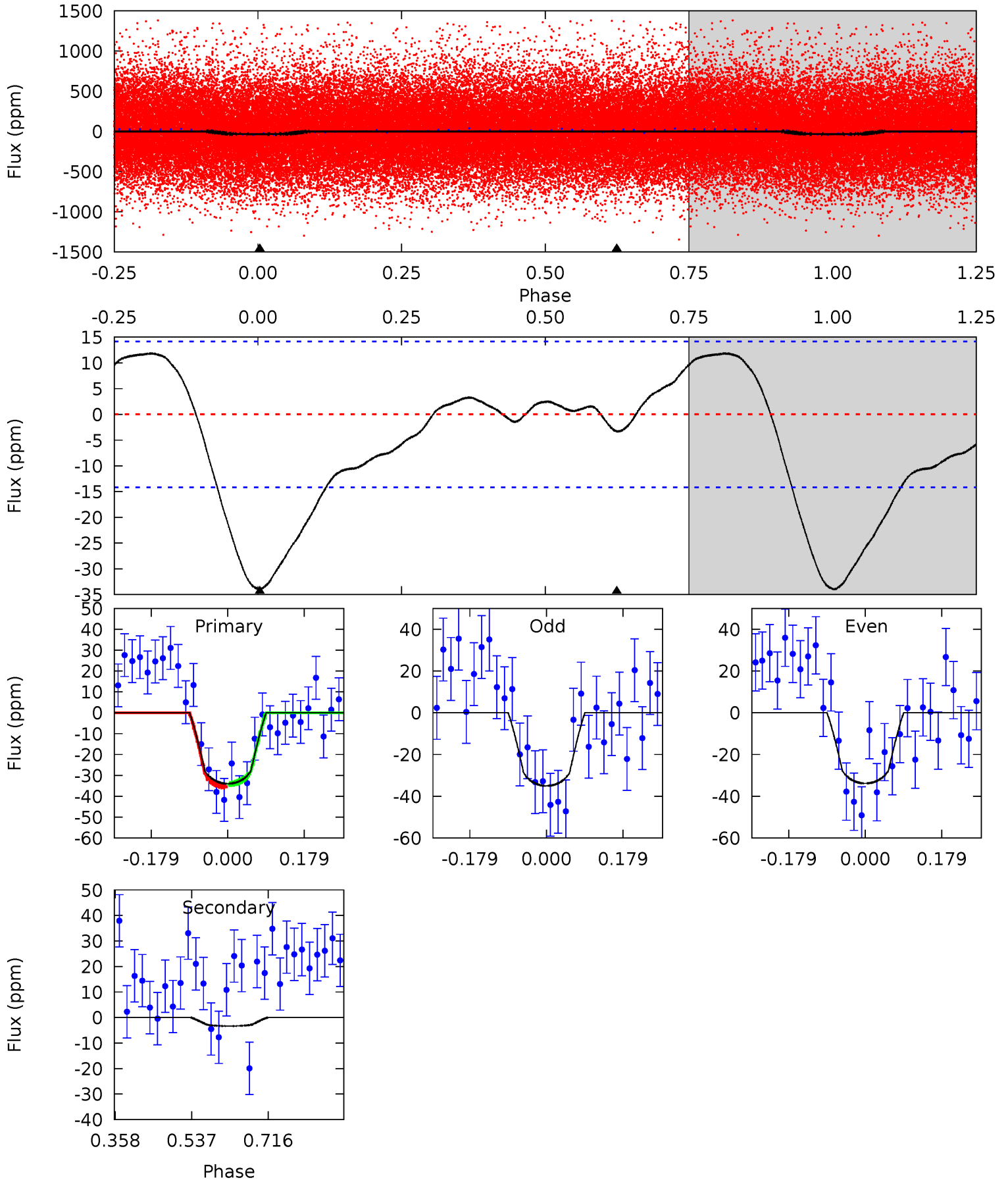




# DV Model-Shift Uniqueness Test

007200485-01, P = 0.566794 Days, E = 131.236221 Days

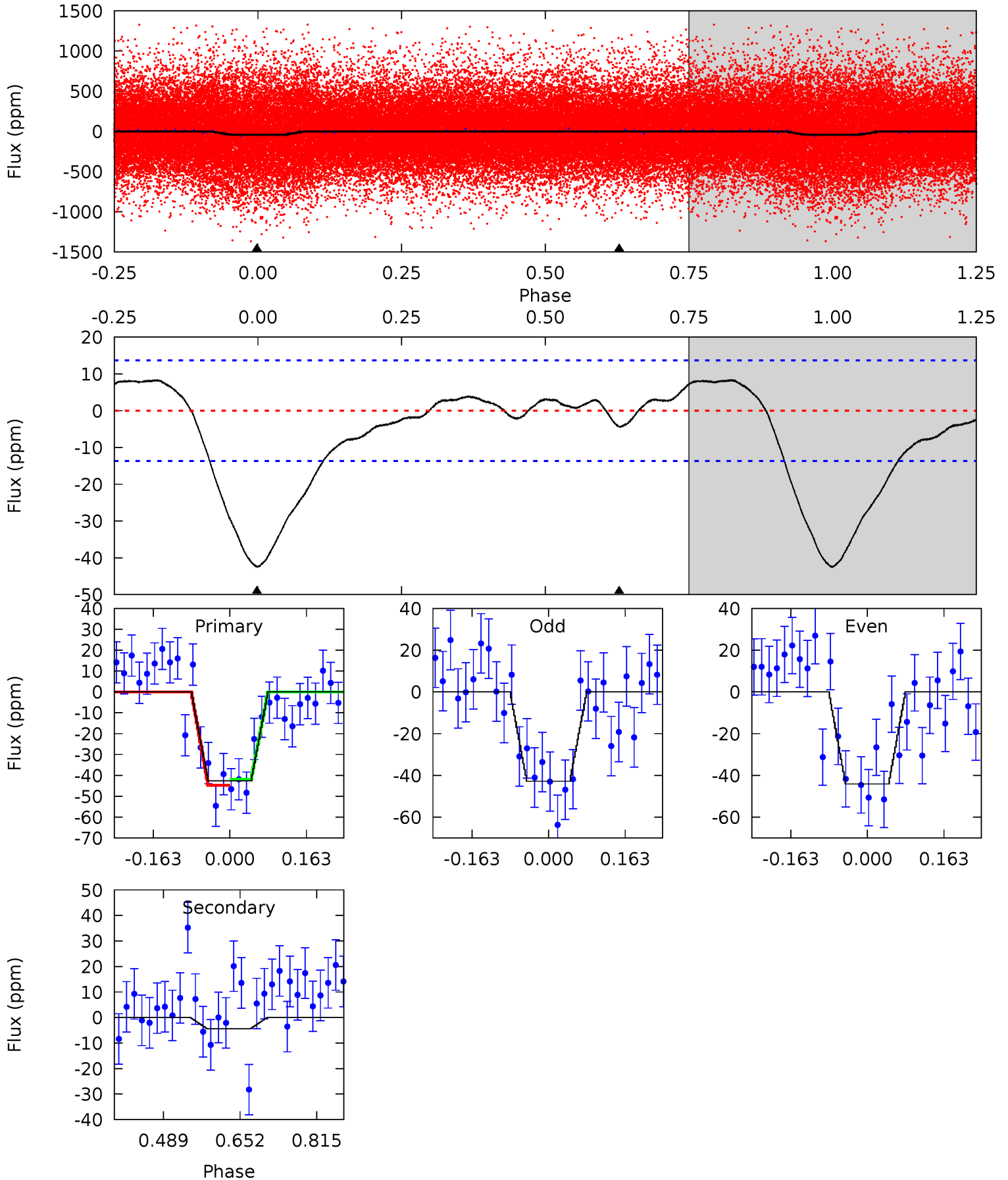
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.7	1.05	0	0	4.44	1.34	1.69	10.7	10.7	1.05	1.05	0.19	0.90	0.26	0.20



# Alt Model-Shift Uniqueness Test

007200485-01, P = 0.566795 Days, E = 131.234112 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	1.45	0	0	4.46	1.39	1.41	13.9	13.9	1.45	1.45	0.21	1.08	0.17	0.48



### Stellar Parameters For KIC 007200485

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5858^{+139}_{-174}$	$4.553^{+0.036}_{-0.204}$	$-0.260^{+0.300}_{-0.300}$	$0.849^{+0.251}_{-0.084}$	$0.940^{+0.110}_{-0.110}$	$2.167^{+0.426}_{-1.110}$
	+2%/-3%	+1%/-4%	+115%/-115%	+30%/-10%	+12%/-12%	+20%/-51%
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 007200485-01 / KOI 7825.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-3\pm3$	$0.66^{+0.29}_{-0.26}$	$2975^{+211}_{-128}$	$3179^{+998}_{-6214}$	$0.661^{+1.743}_{-0.617}$
Alt.	$-4\pm3$	$0.61^{+0.27}_{-0.27}$	$2985^{+232}_{-142}$	$3559^{+1010}_{-5690}$	$1.045^{+2.312}_{-0.761}$

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



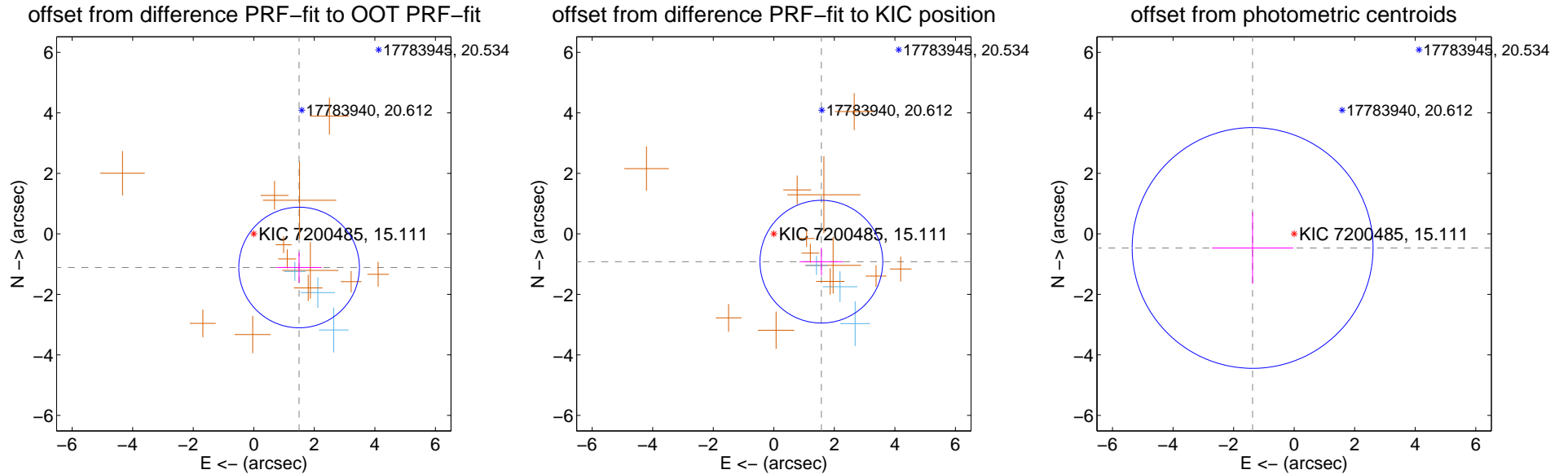
## DV Centroid Data

Supplemental centroid analysis for 007200485-01. Kepler magnitude: 15.11. Transit SNR 9.40

There are 3 quarters with good PRF difference image offsets

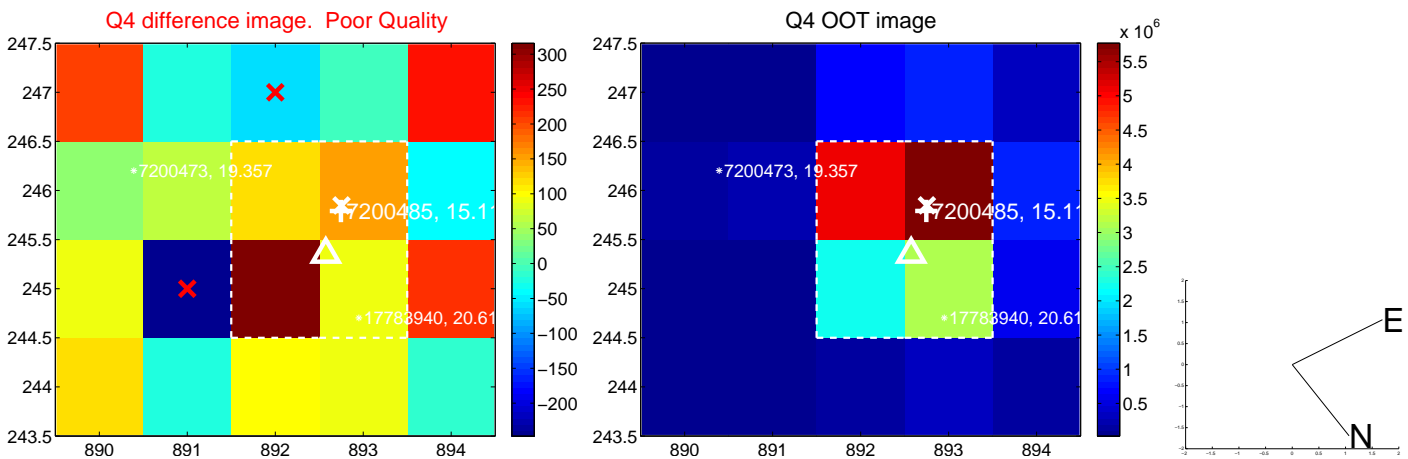
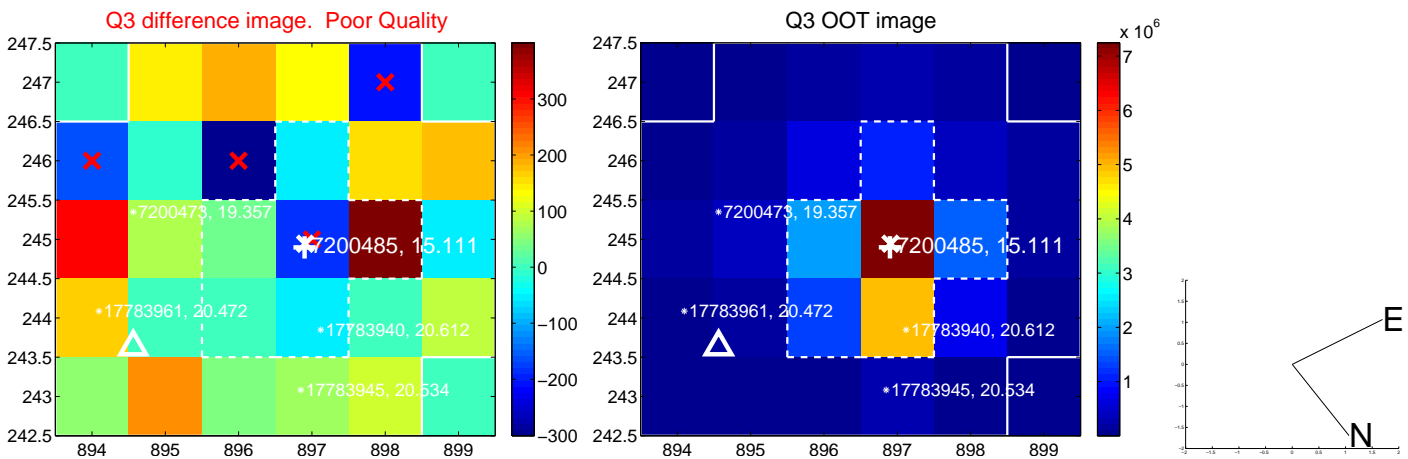
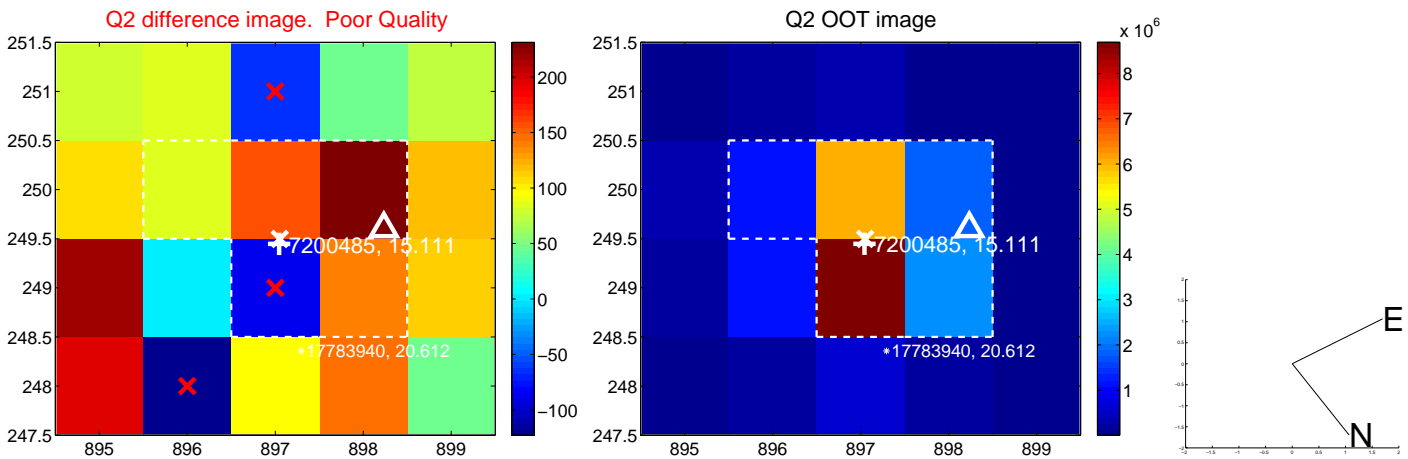
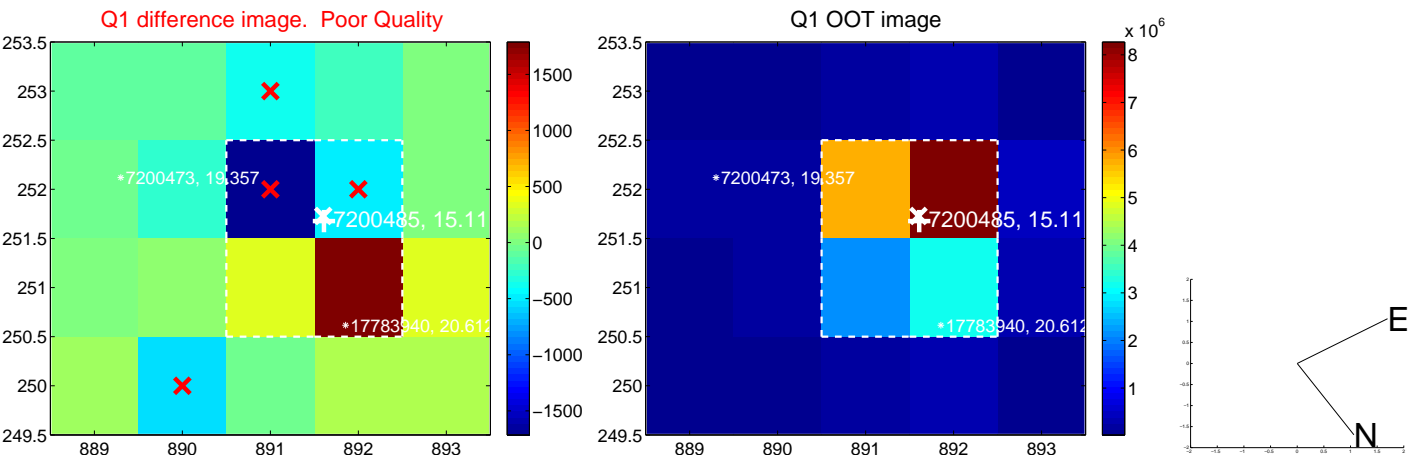
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.864 \pm 0.664$	2.81	$-1.497 \pm 0.744$	$-1.111 \pm 0.496$
PRF-fit source offset from KIC position	$1.820 \pm 0.676$	2.69	$-1.571 \pm 0.719$	$-0.919 \pm 0.461$
photometric centroid source offset	$1.45 \pm 1.33$	1.09	$1.37 \pm 1.34$	$-0.47 \pm 1.18$

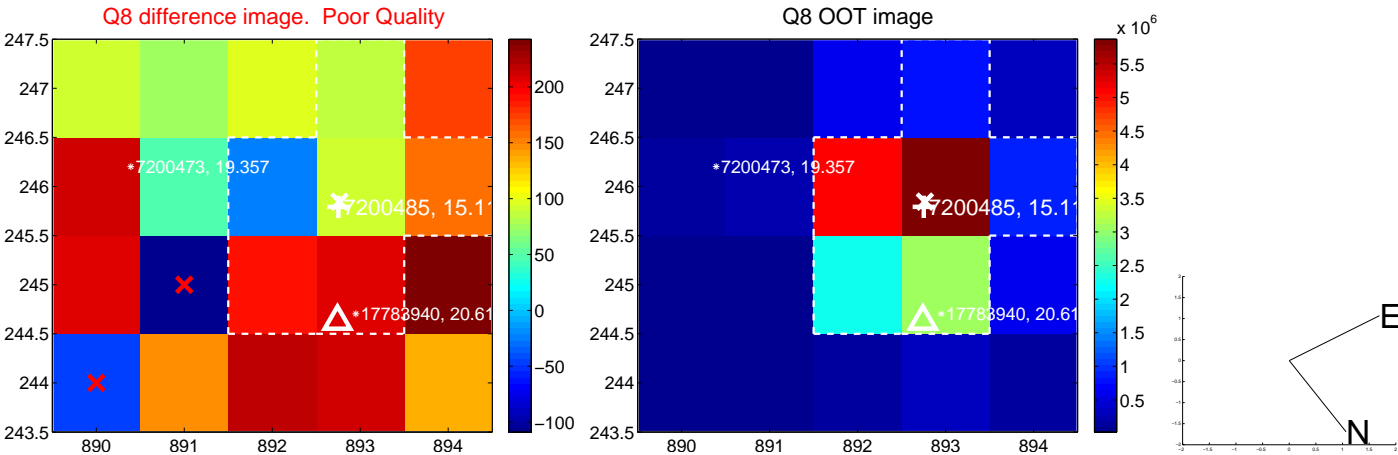
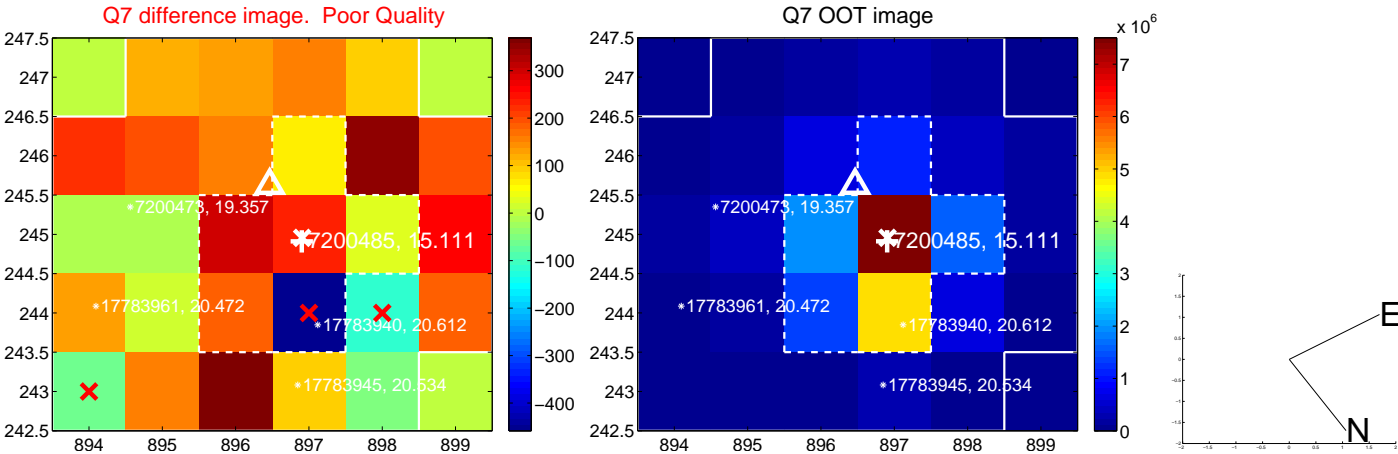
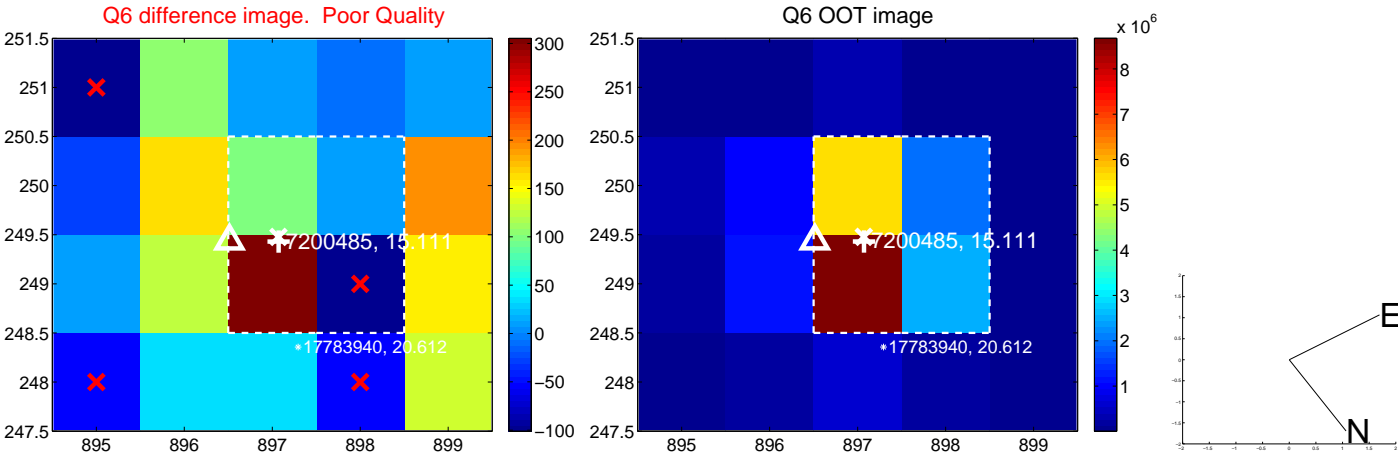
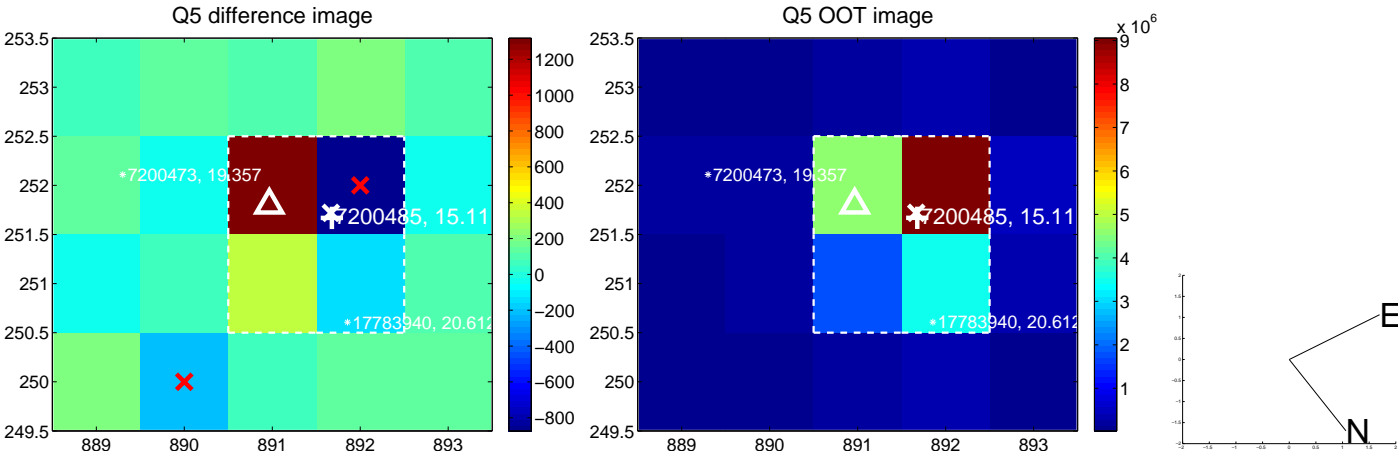


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

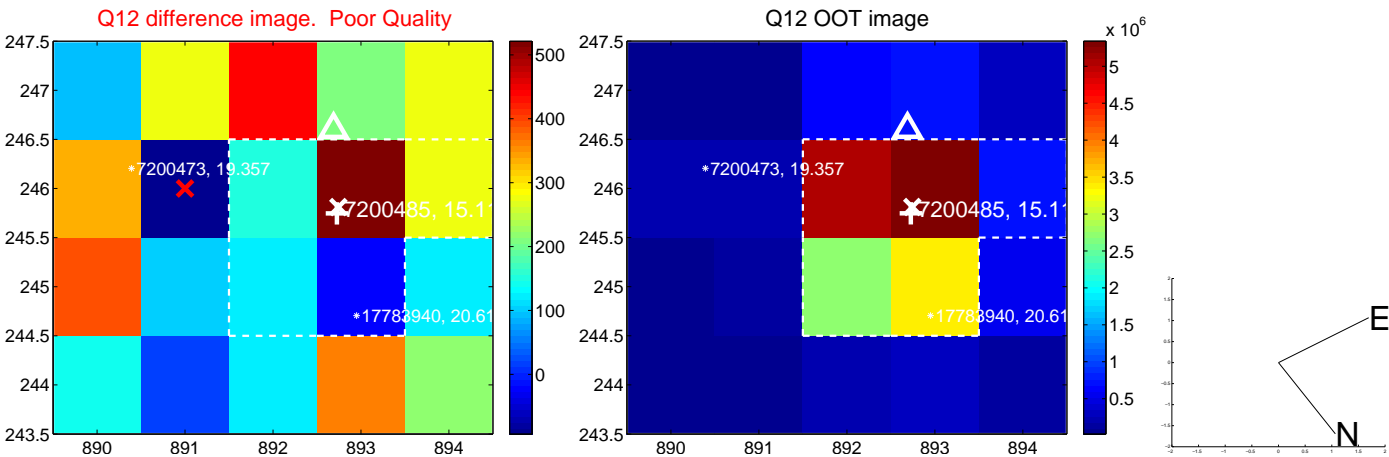
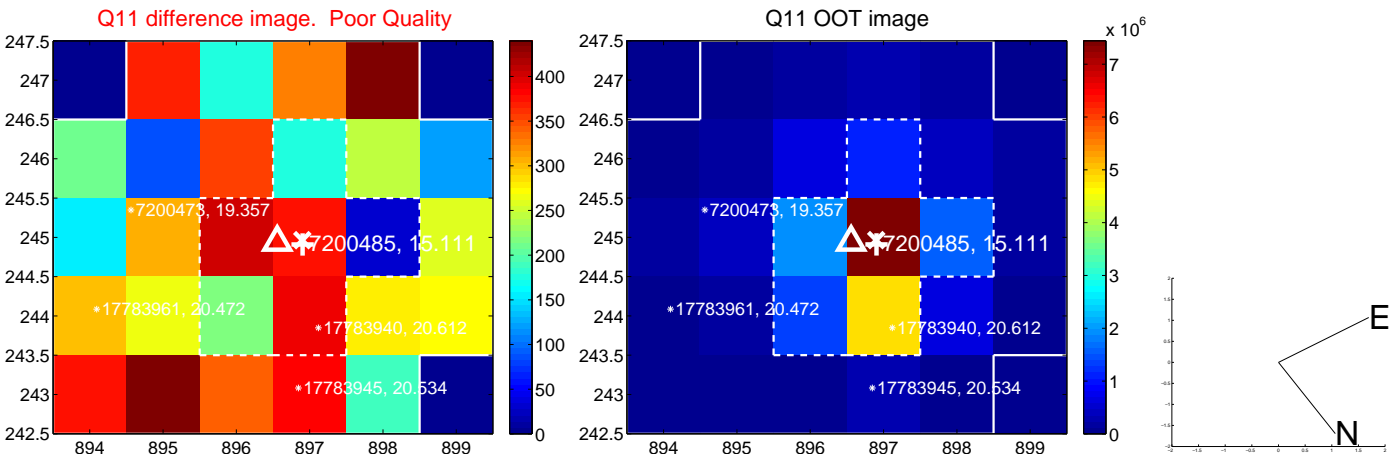
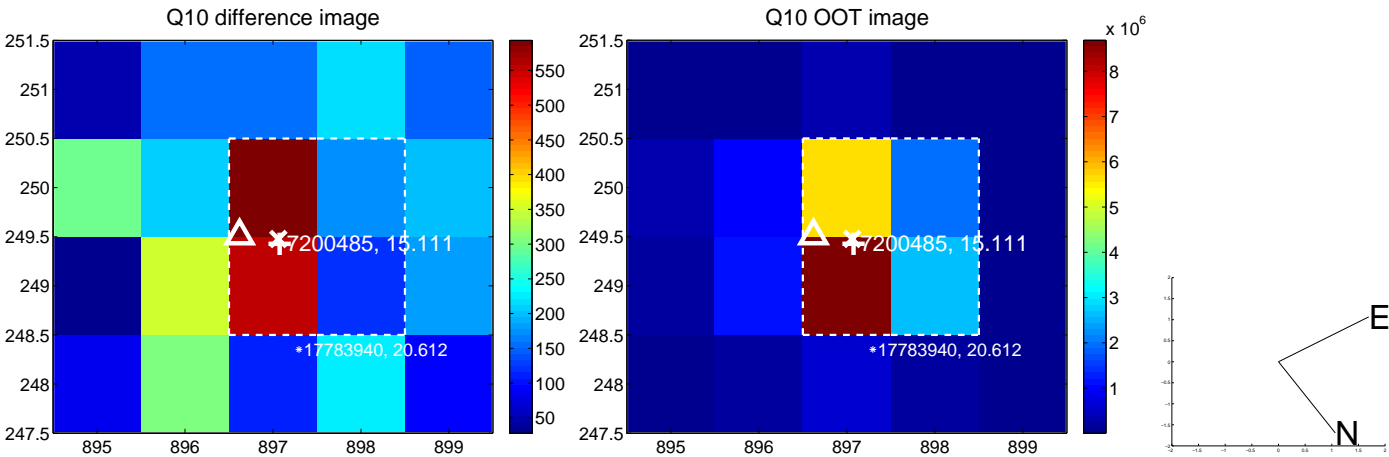
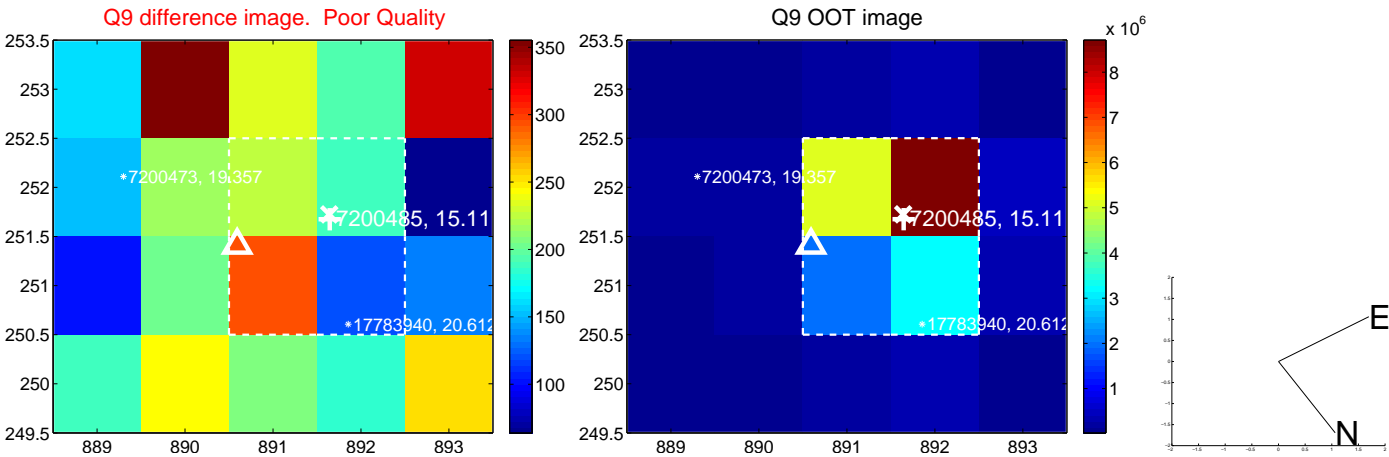
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



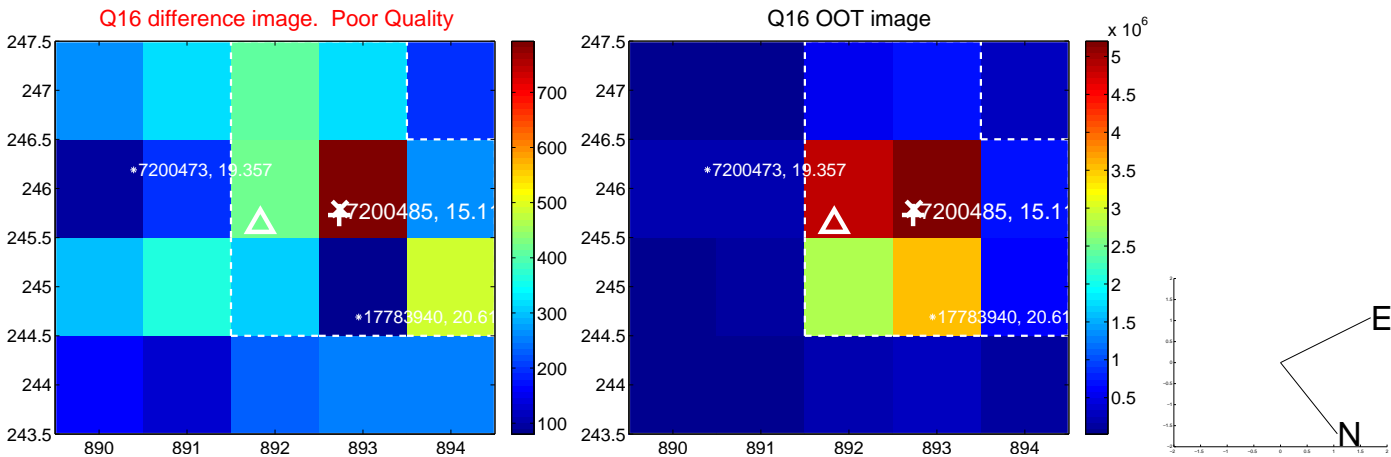
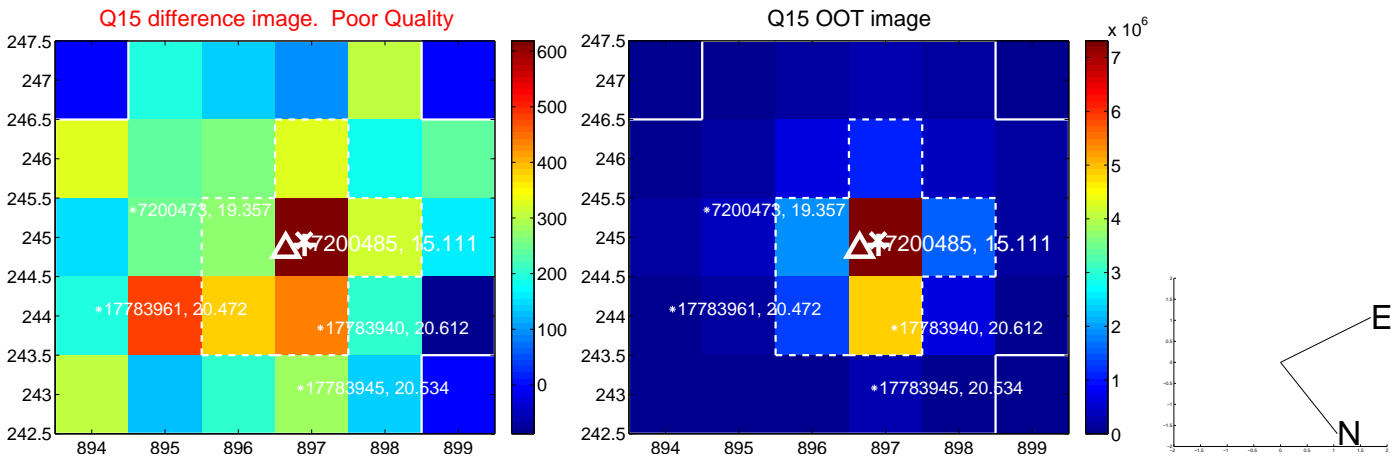
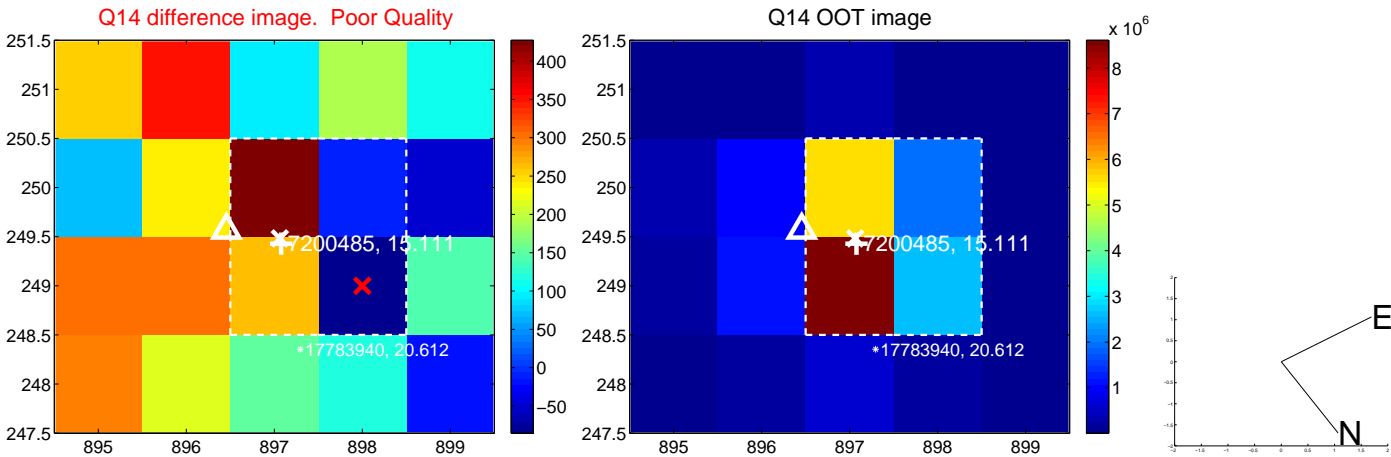
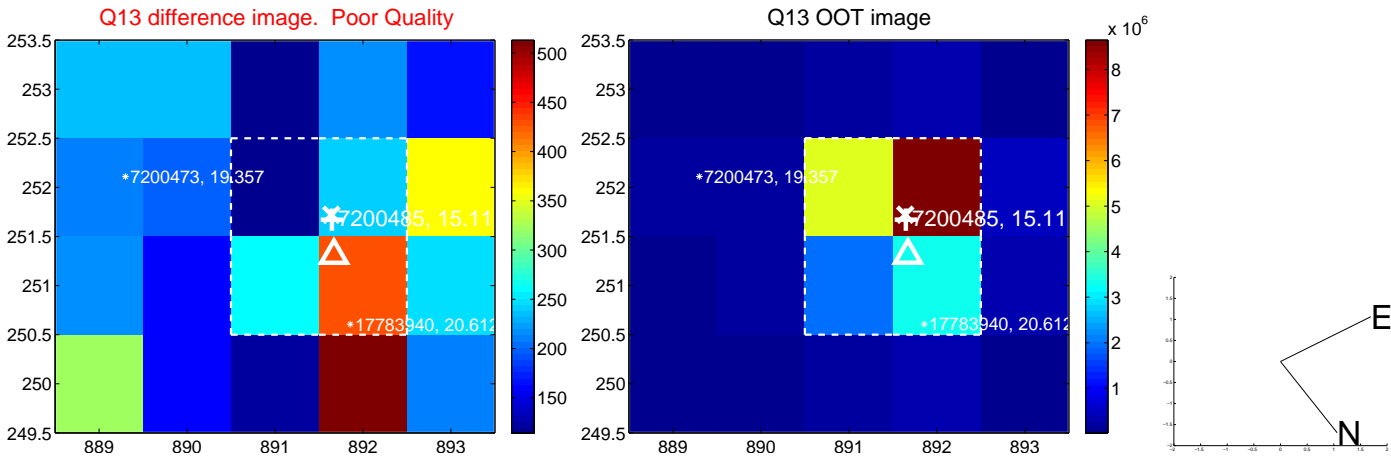
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

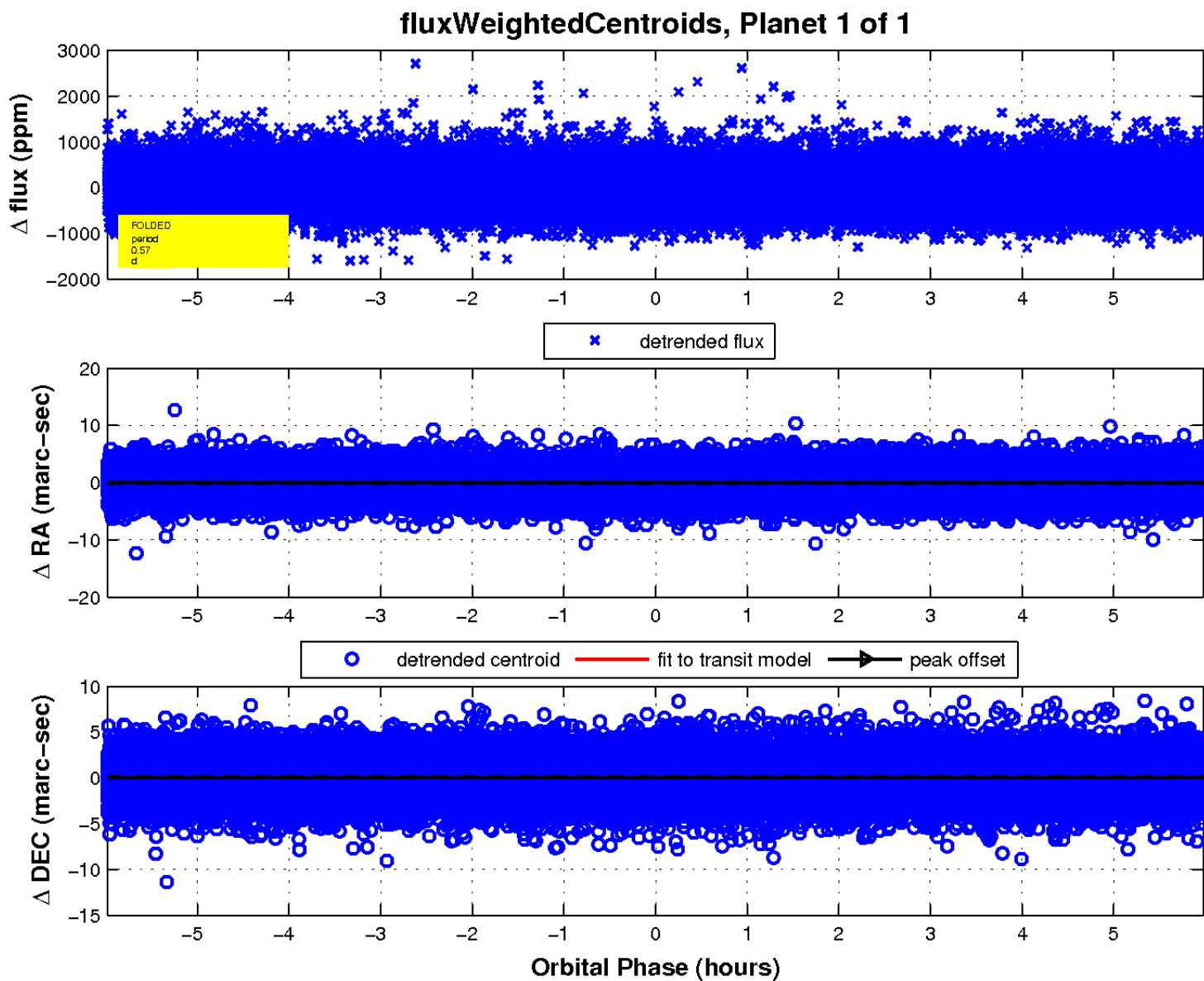
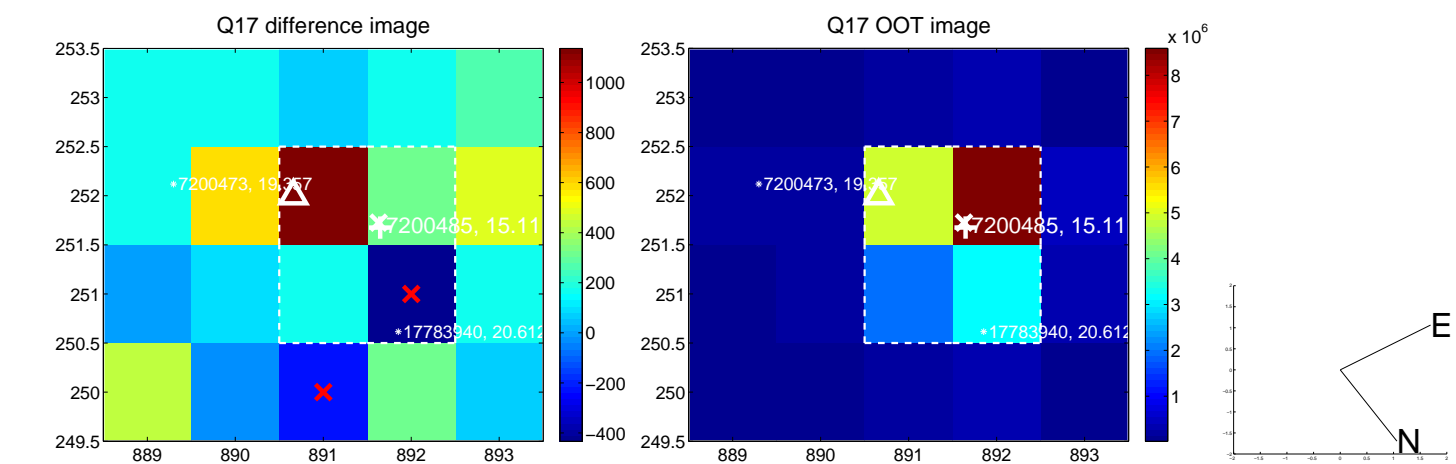


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.





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



UKIRT Image

Declination

