

# KIC 004244642

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
004244642-01	OBS	No	1.186777	131.545050	124.5	4.500	7.9	-1.0	1.69	7360	1.91	11516.58

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004244642-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_NOFITS

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

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

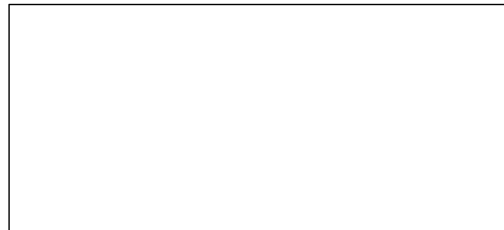
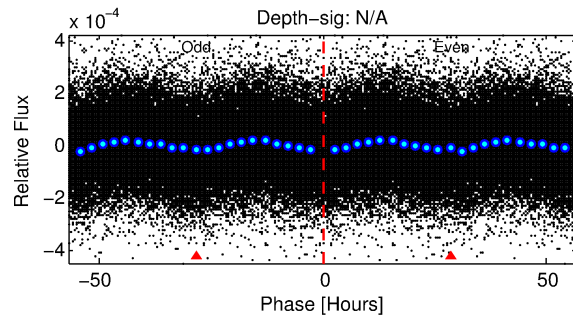
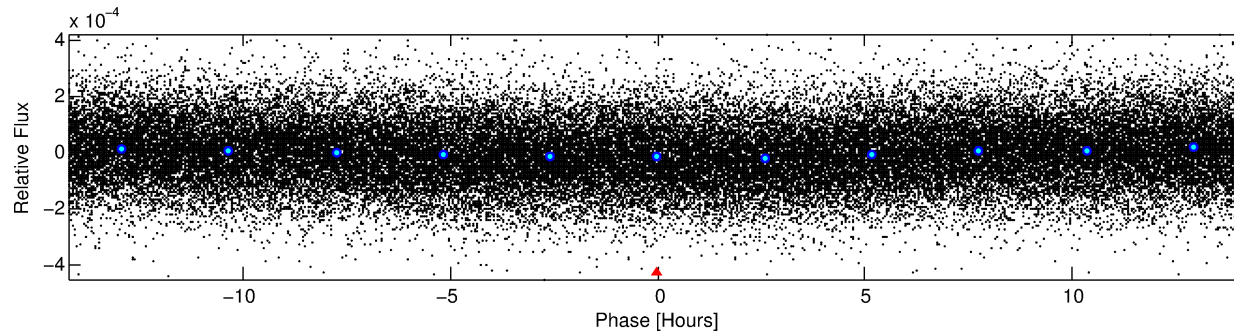
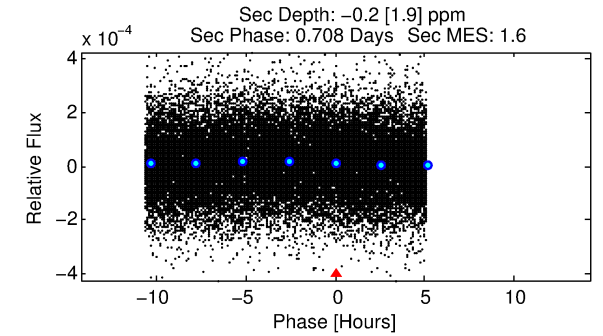
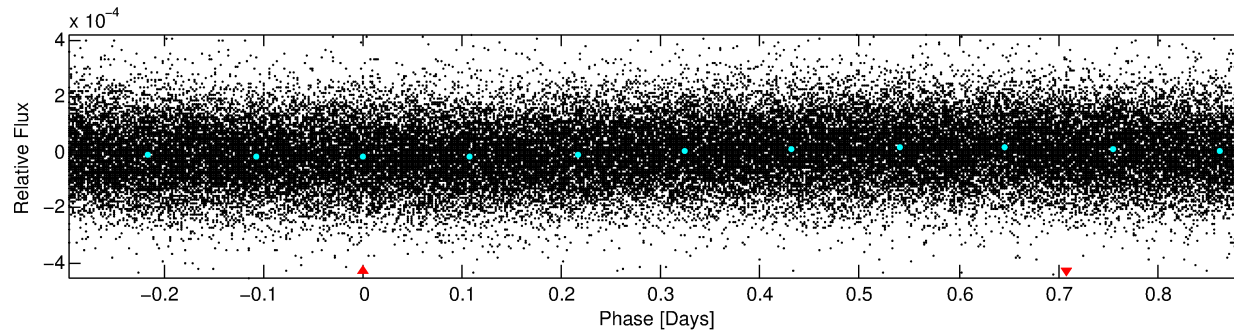
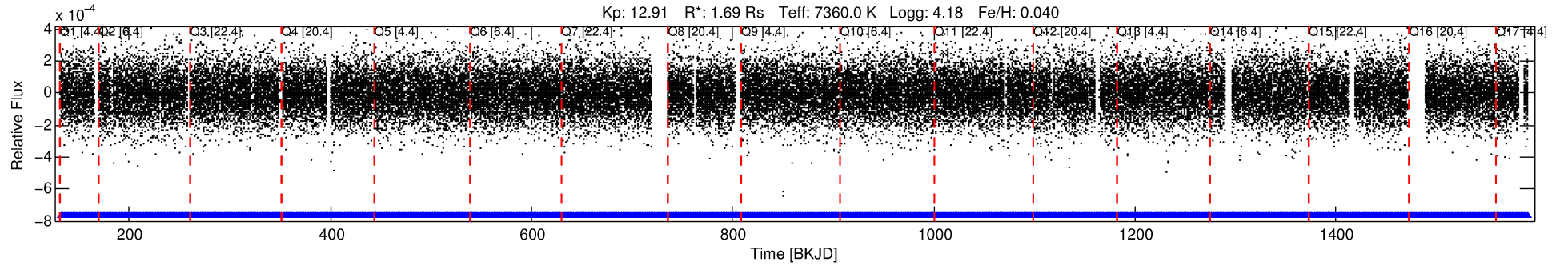
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 004244642-01

No Significant Match Found

# DV One-Page Summary

KIC: 4244642 Candidate: 1 of 1 Period: 1.187 d



## TPS TCE Results:

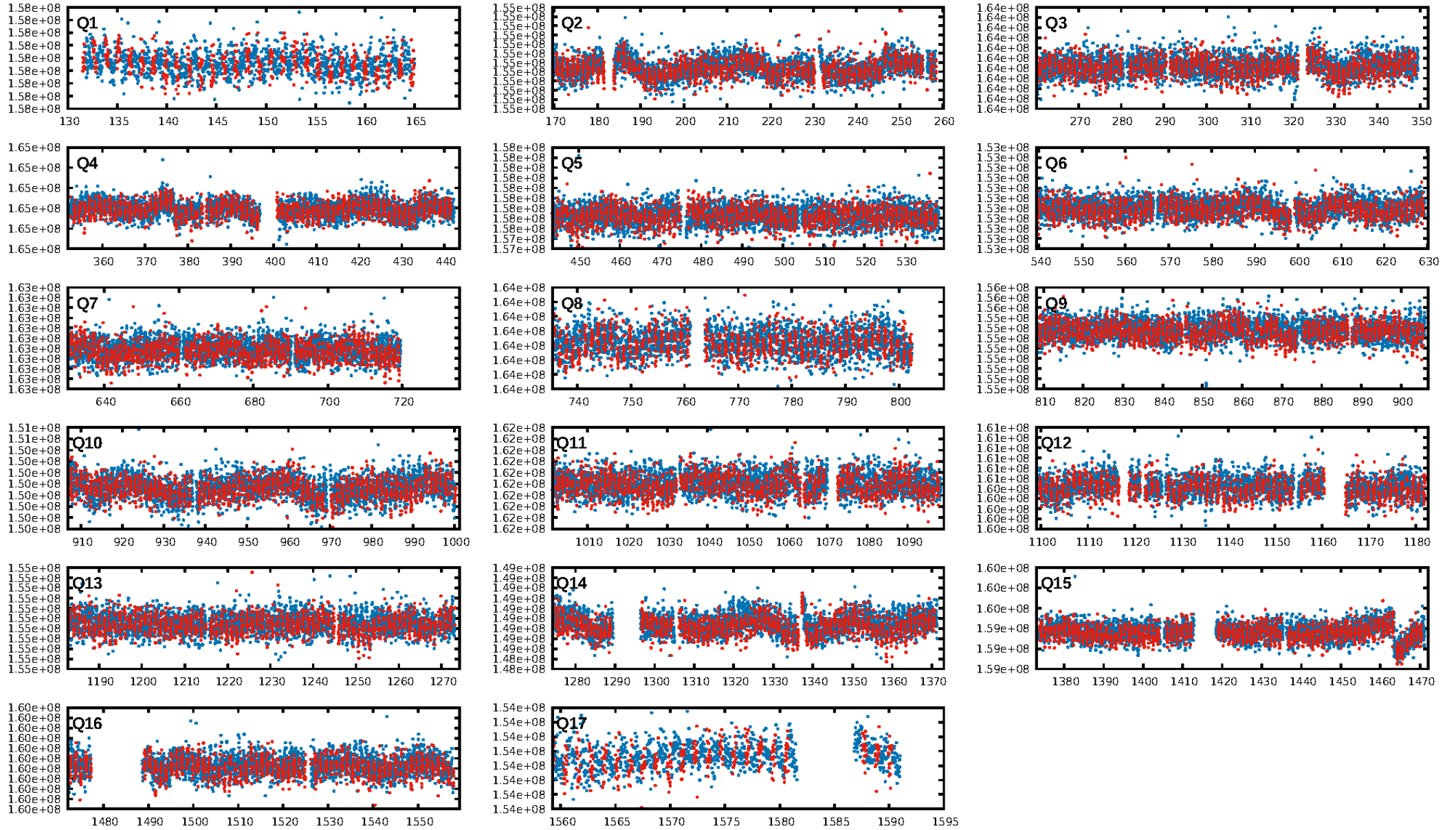
Period = 1.18678 d  
Epoch = 131.5450 BKJD

DV fit results are unavailable

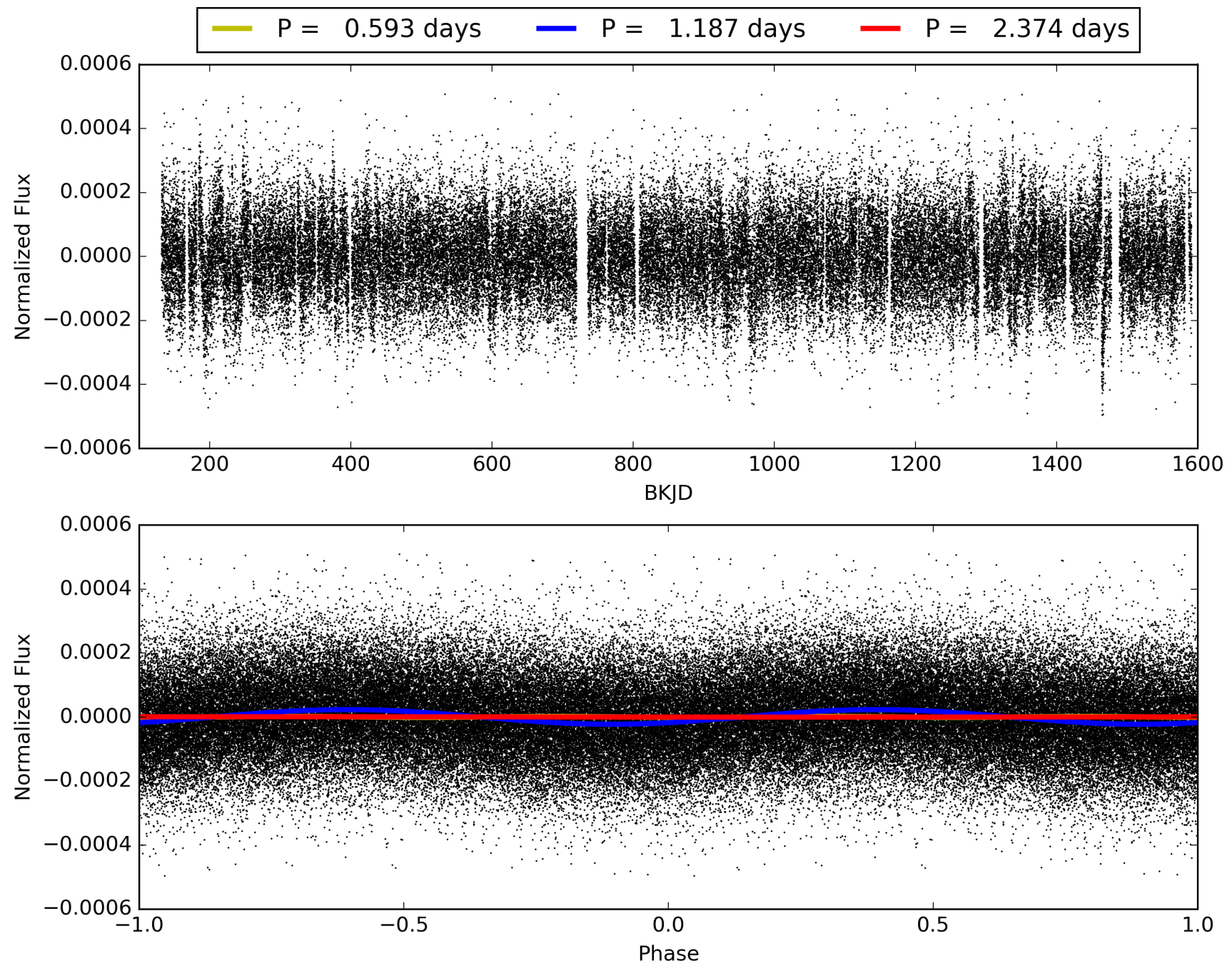
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 1.86e-15  
RollingBand-fgt: 1.00 [1098/1098]  
GhostDiagnostic-chr: 2.542  
Centroid-sig: 42.5%  
Centroid-so: 0.356 arcsec [0.83σ]  
OotOffset-rm: N/A  
KicOffset-rm: N/A  
OotOffset-st: 0/0/0/0 [0]  
KicOffset-st: 0/0/0/0 [0]  
DiffImageQuality-fgm: N/A  
DiffImageOverlap-fno: 1.00 [17/17]

# TCE 004244642-01, PDC Light Curves



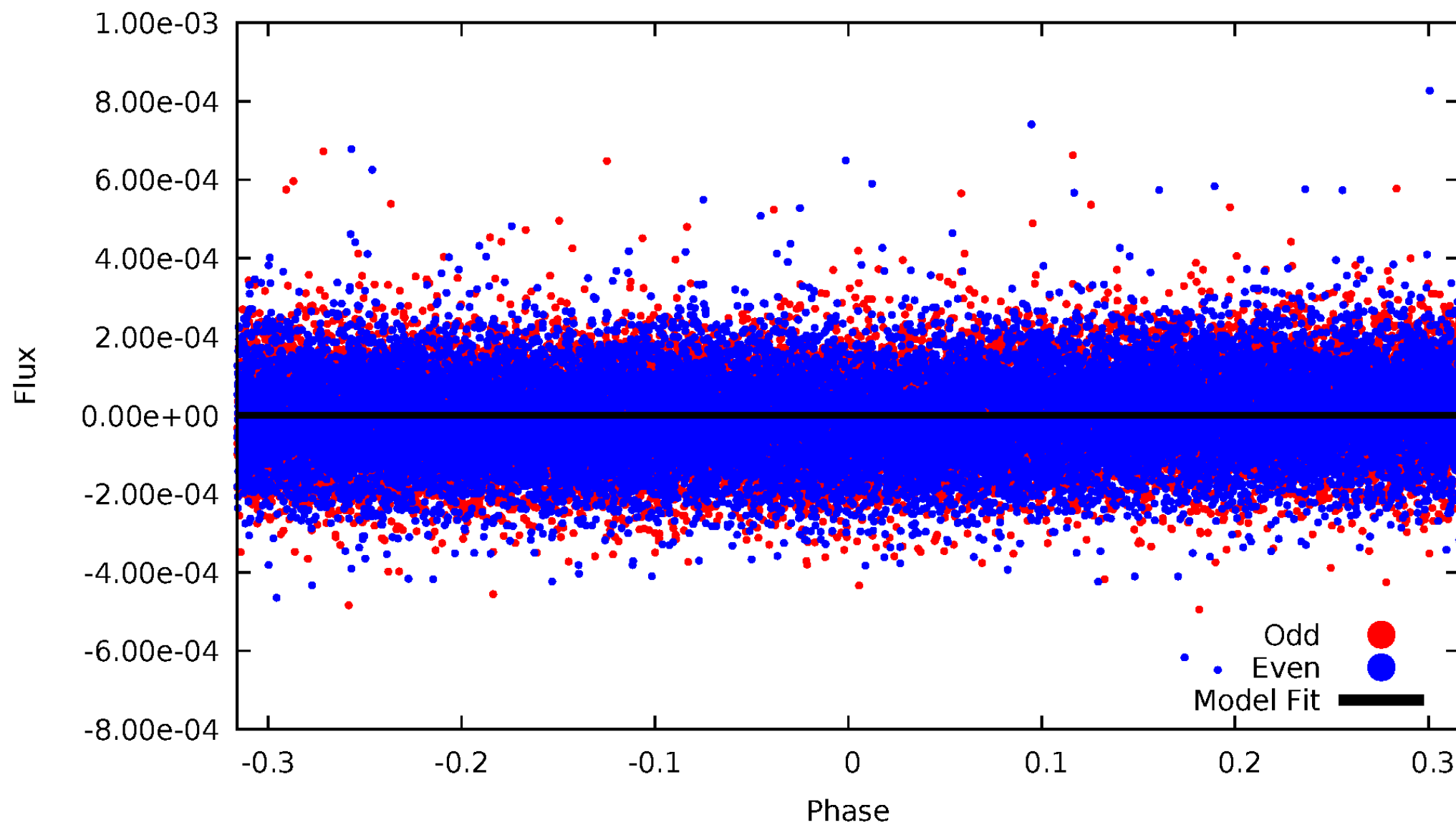
TCE 004244642-01





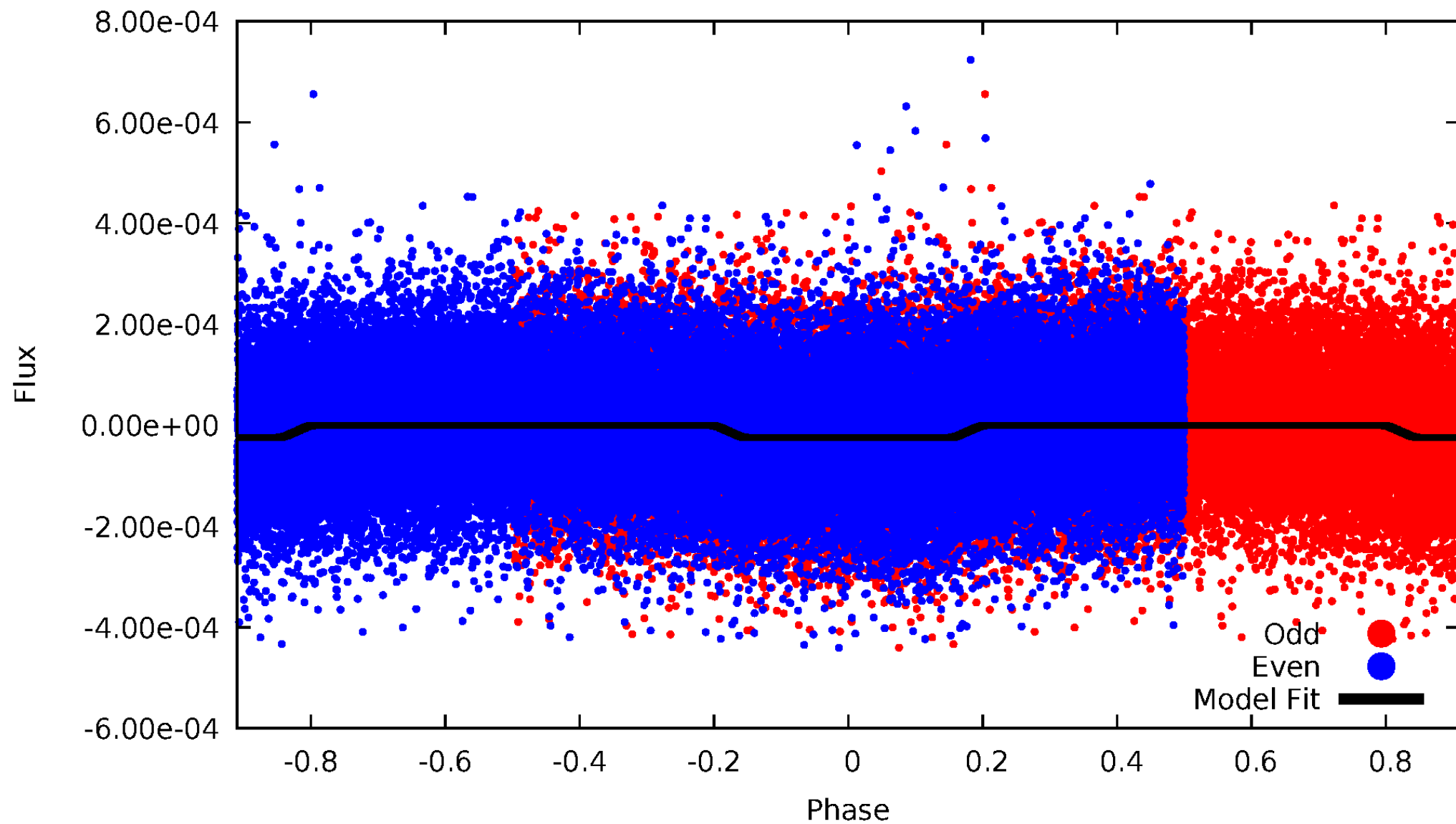
# DV Odd/Even

TCE 004244642-01

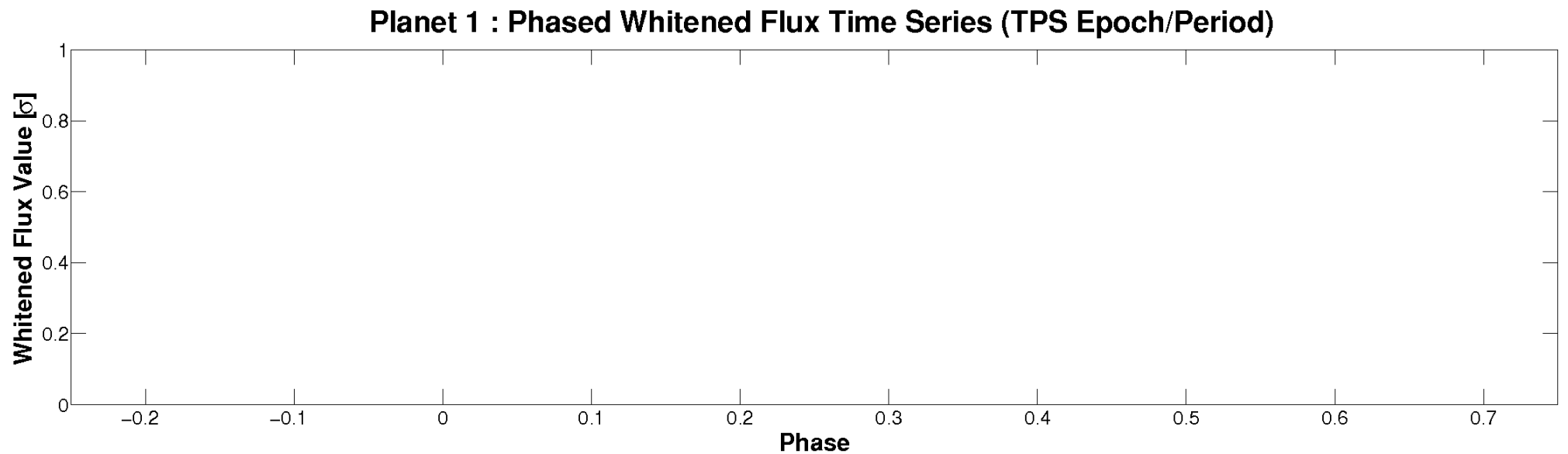
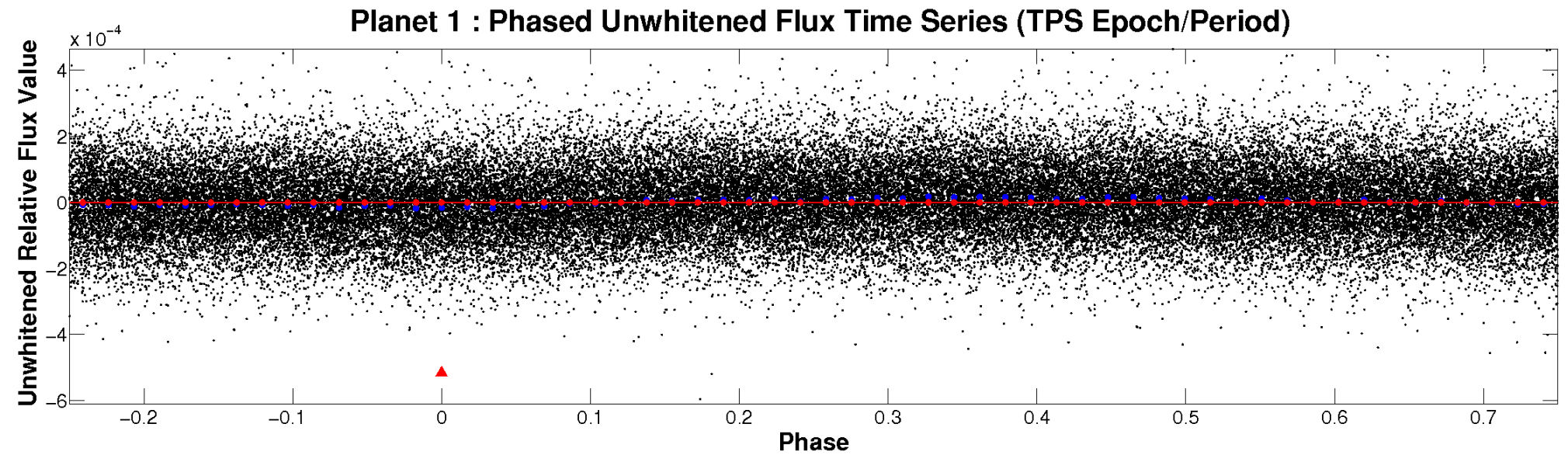


# ALT Odd/Even

TCE 004244642-01

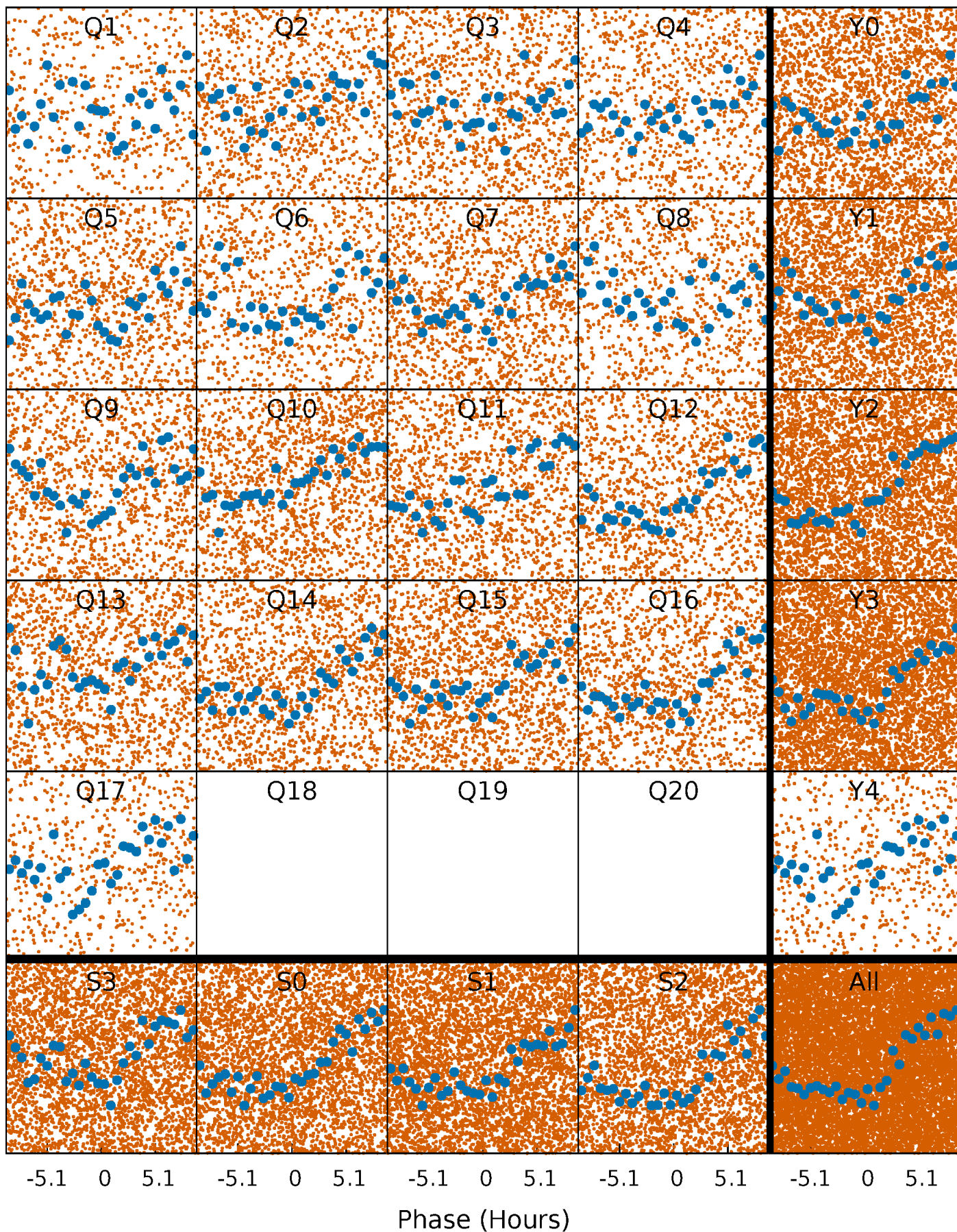


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

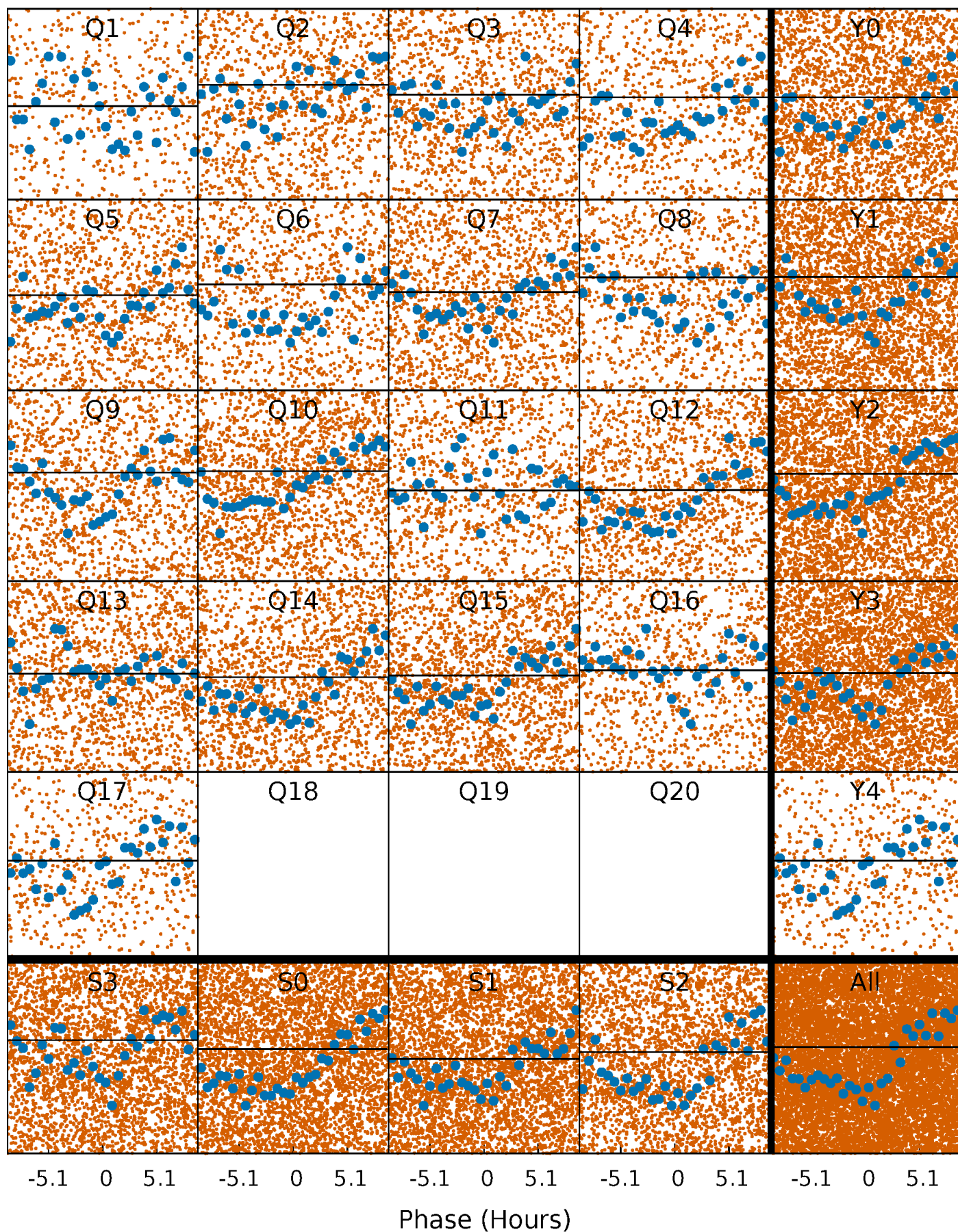
TCE 004244642-01 P= 1.186777 Days  $T_0=131.545050$  (BKJD)





# DV Quarter-Phased Transit Curves

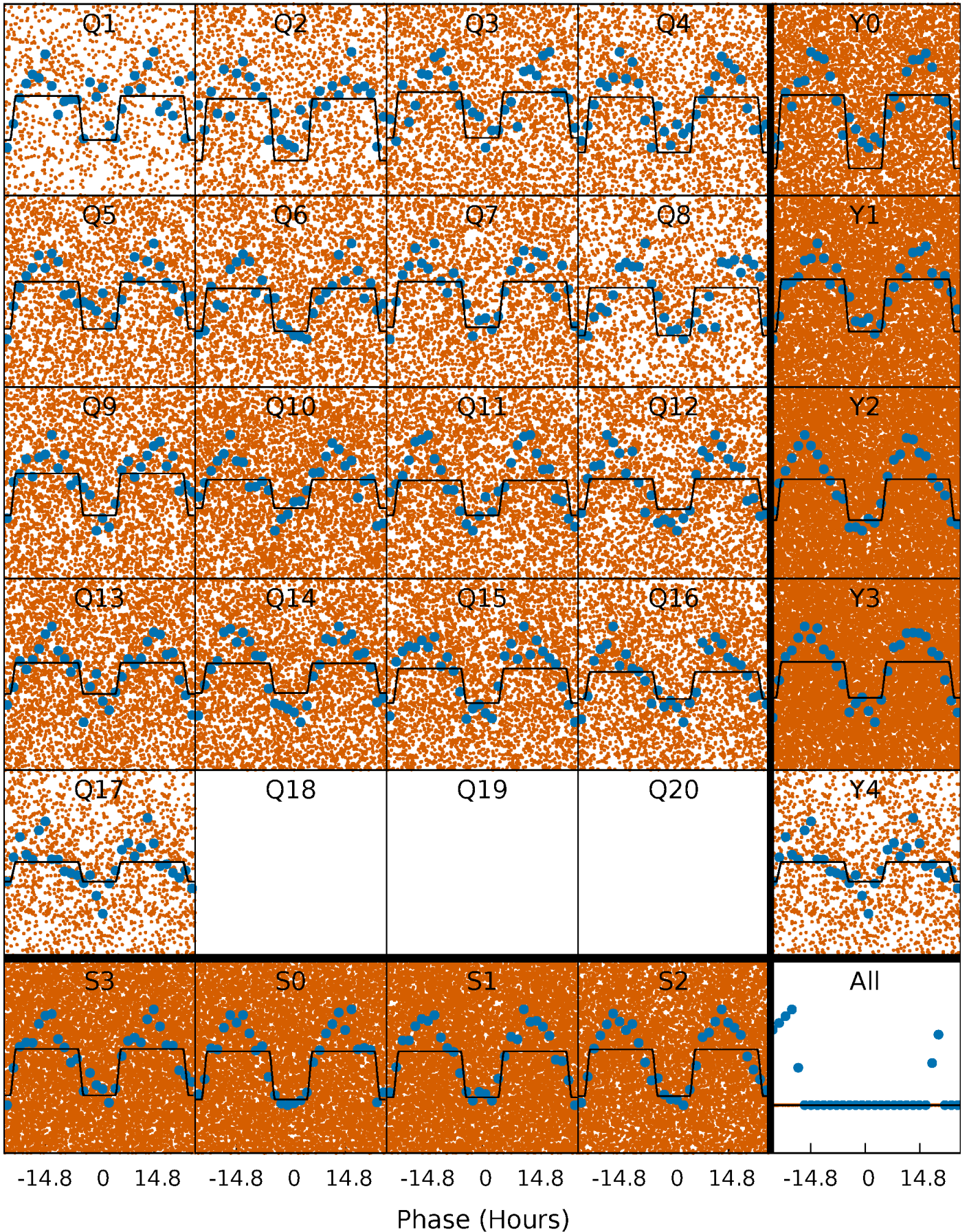
TCE 004244642-01 P= 1.186777 Days  $T_0=131.545050$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

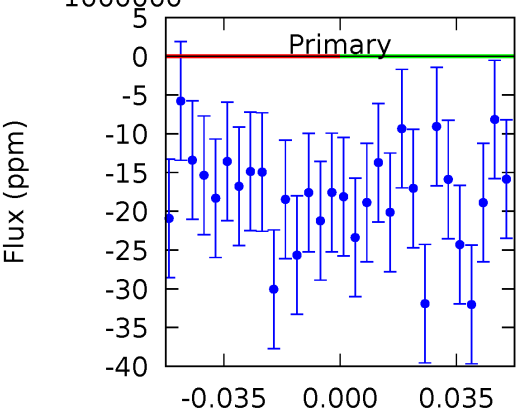
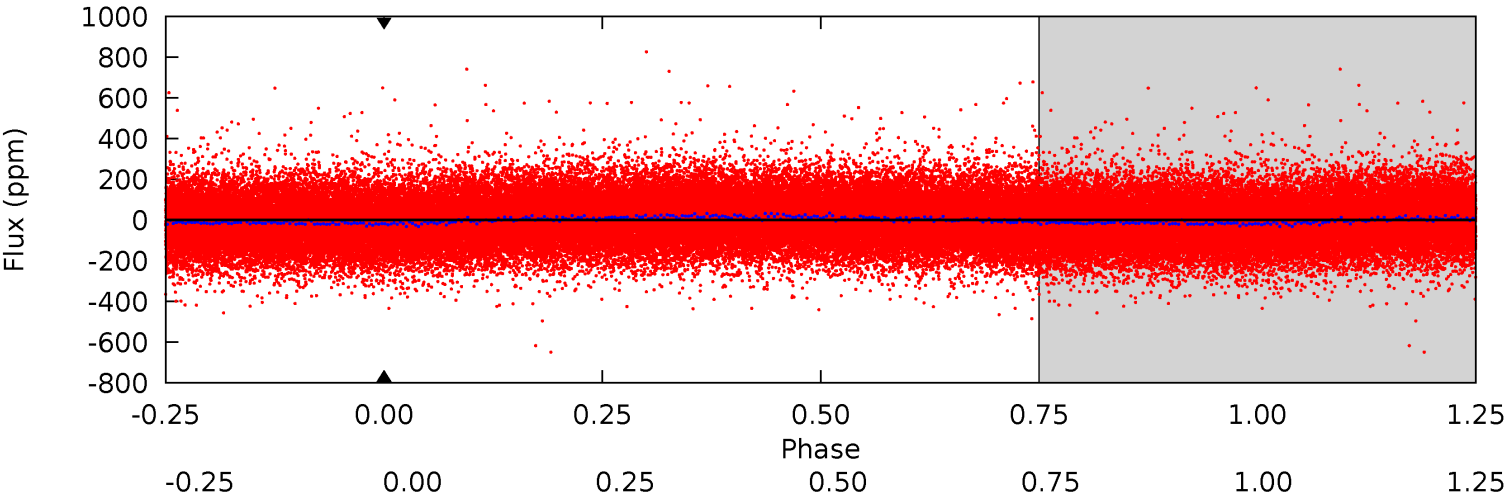
TCE 004244642-01 P= 1.186777 Days  $T_0=132.628064$  (BKJD)



DV Model-Shift Uniqueness Test

004244642-01, P = 1.186777 Days, E = 130.358273 Days

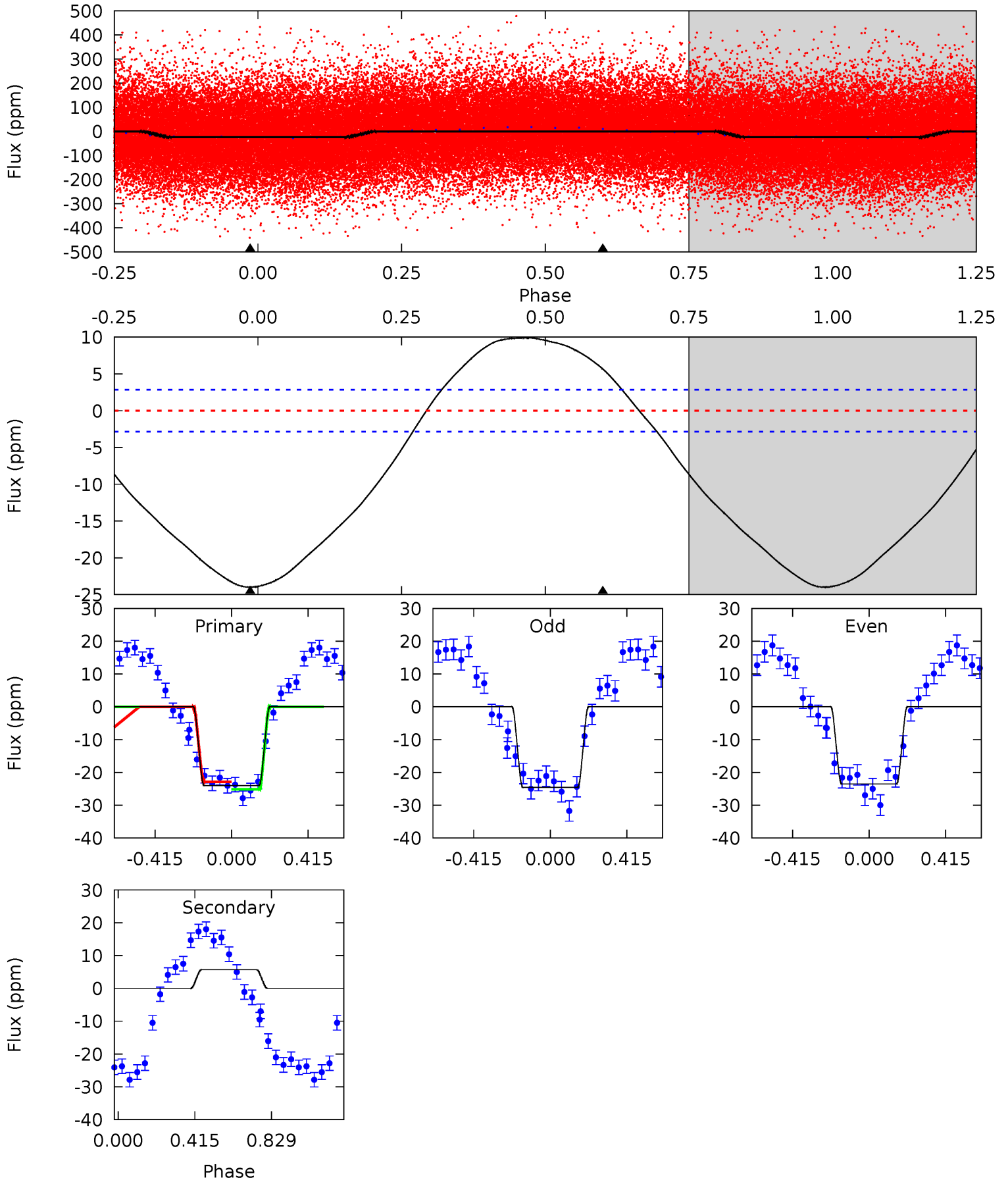
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



# Alt Model-Shift Uniqueness Test

004244642-01, P = 1.186777 Days, E = 131.441287 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
35.9	-8.49	0	0	4.26	0.82	5.00	35.9	35.9	-8.49	-8.49	0.77	1.02	0.29	1.71





### Stellar Parameters For KIC 004244642

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$7360^{+203}_{-348}$	$4.179^{+0.087}_{-0.203}$	$0.040^{+0.200}_{-0.350}$	$1.687^{+0.540}_{-0.291}$	$1.569^{+0.211}_{-0.211}$	$0.460^{+0.230}_{-0.245}$
	+3%/-5%	+2%/-5%	+500%/-875%	+32%/-17%	+13%/-13%	+50%/-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 004244642-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$0 \pm 1000000$	$13.47^{+15.08}_{-9.67}$	$3733^{+286}_{-238}$	$6464^{+35153}_{-37030}$	$6.030^{+357.485}_{-249.837}$
Alt.	$6 \pm 1$	$13.10^{+15.45}_{-9.04}$	$3728^{+288}_{-213}$	$-3578^{+155}_{-284}$	$-0.012^{+0.009}_{-0.106}$

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

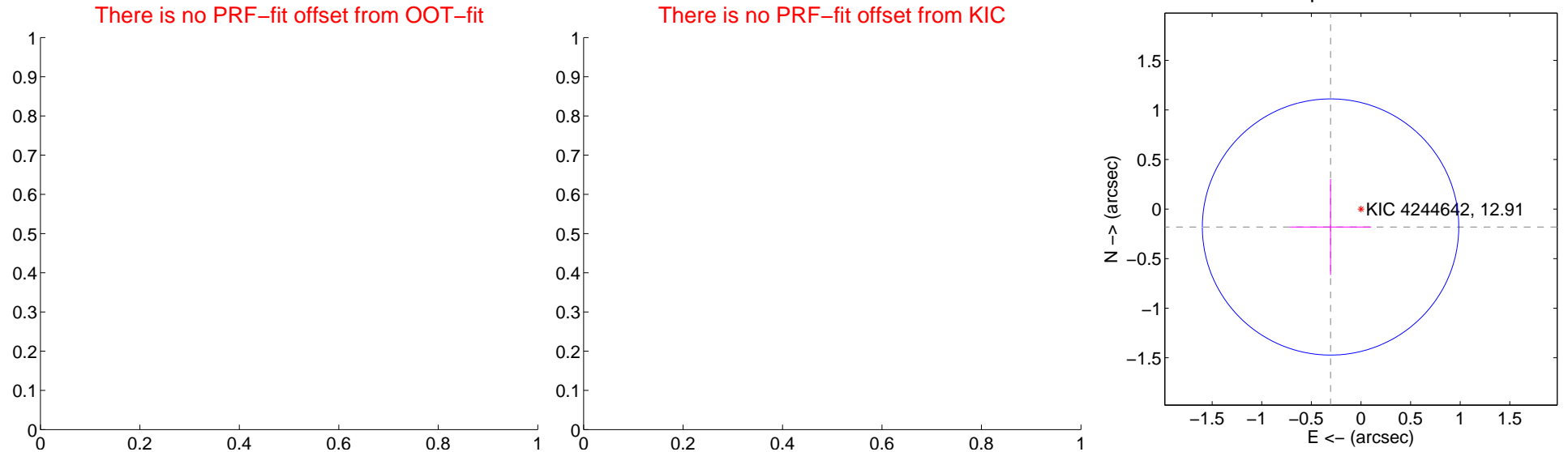
## DV Centroid Data

Supplemental centroid analysis for 004244642-01. Kepler magnitude: 12.91. Transit SNR -1.00

There are 0 quarters with good PRF difference image offsets

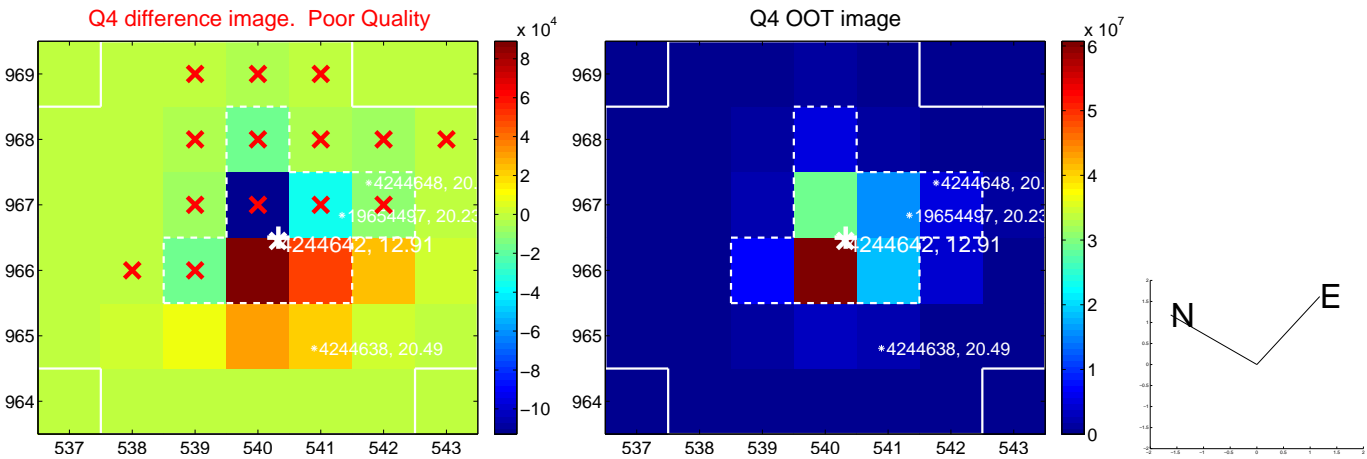
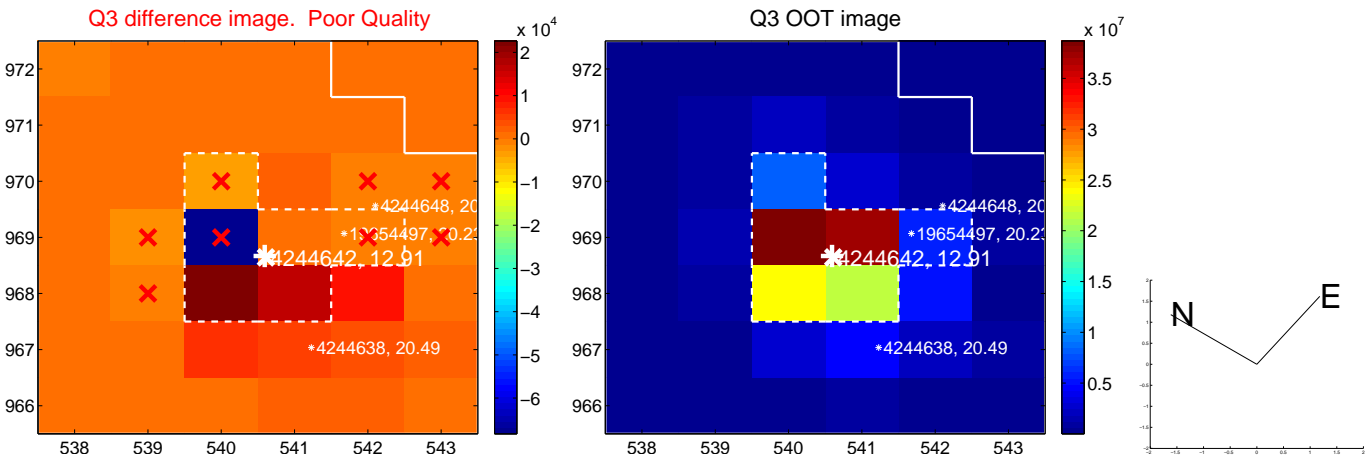
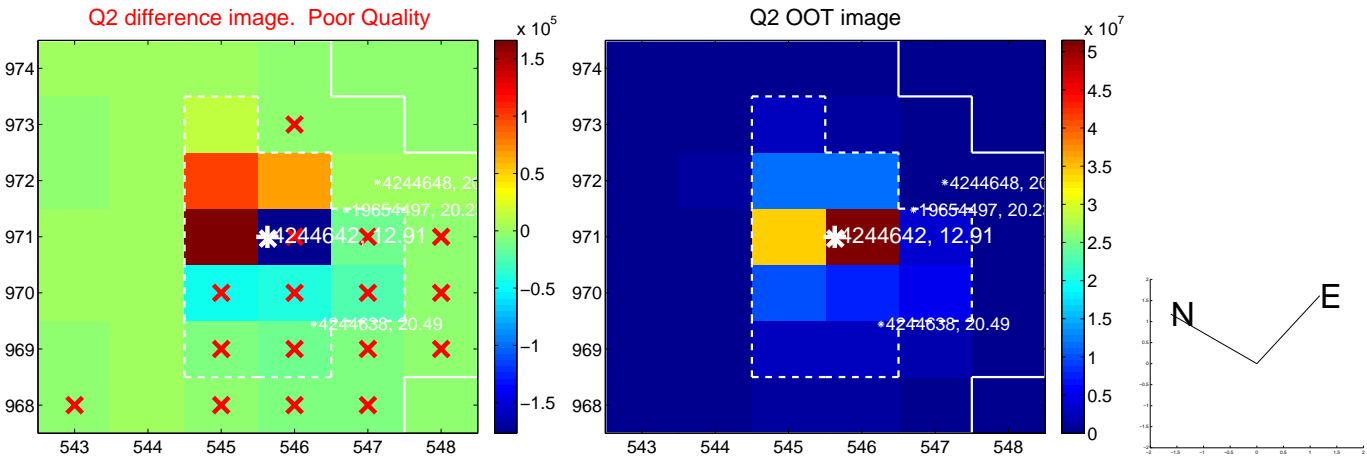
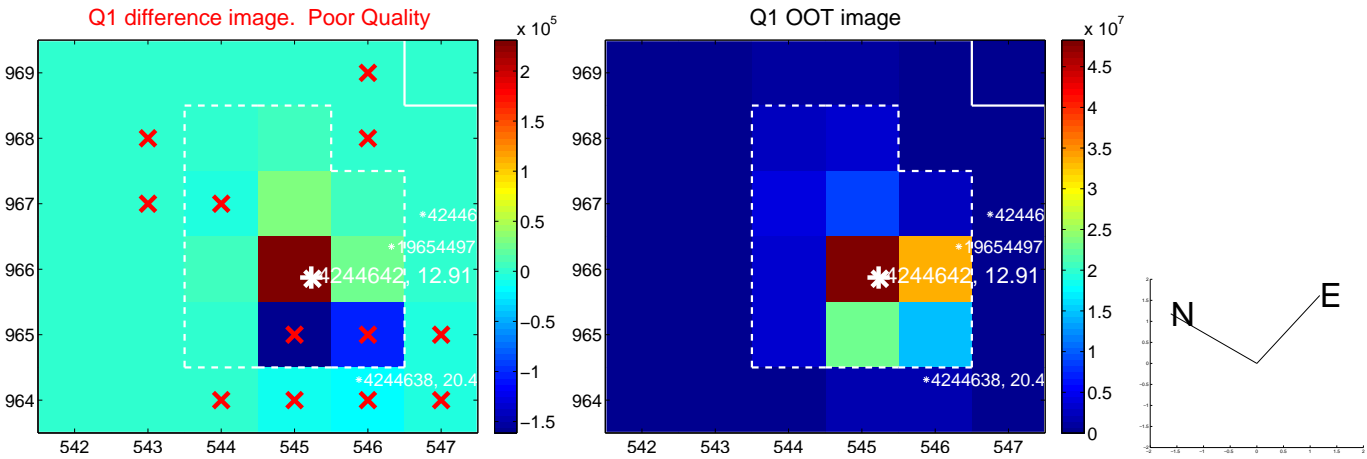
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	$0.36 \pm 0.43$	0.83	$0.31 \pm 0.41$	$-0.18 \pm 0.48$

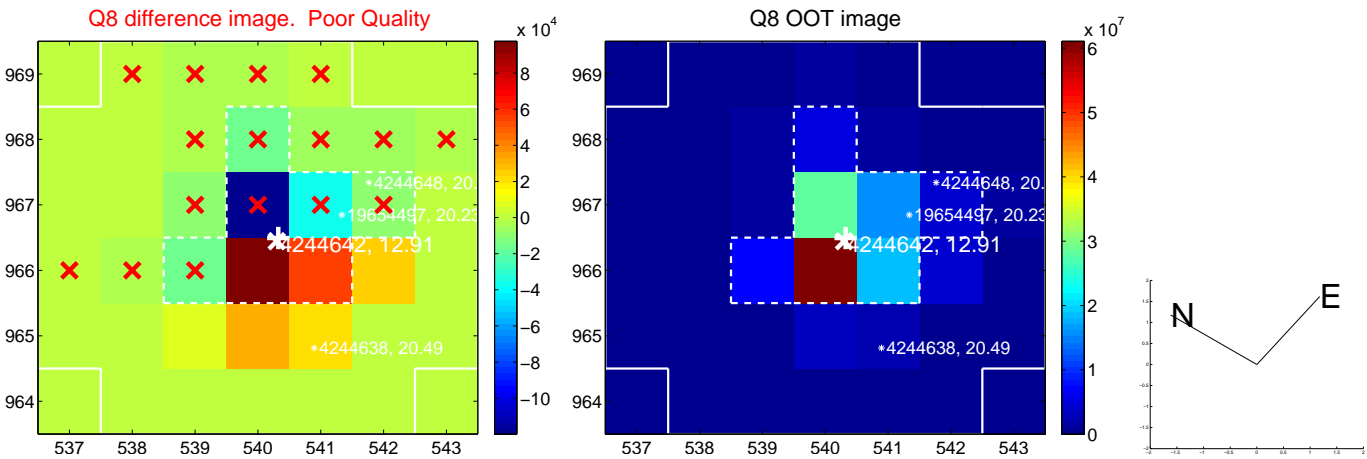
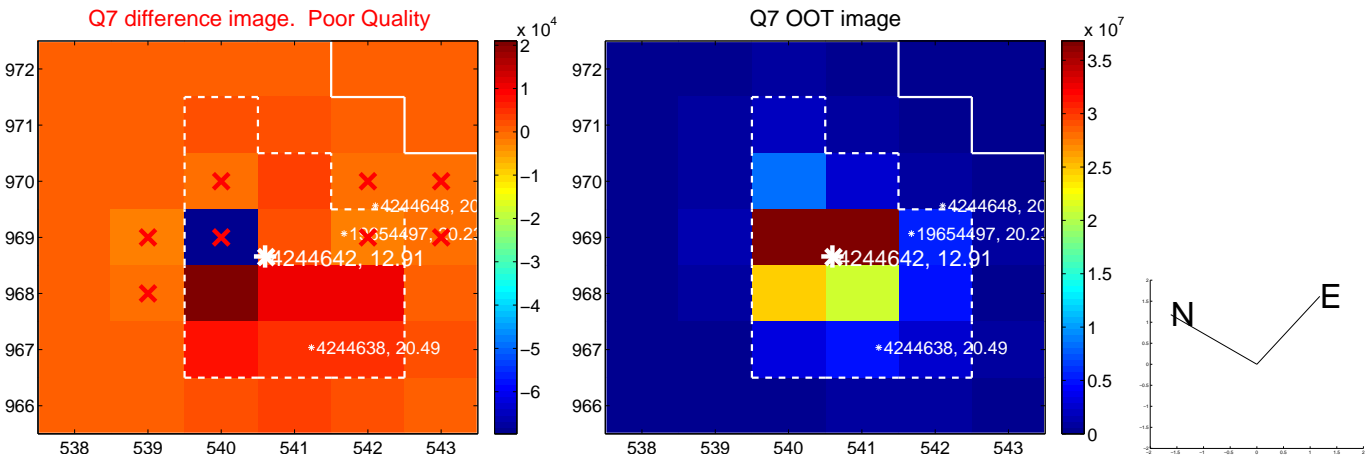
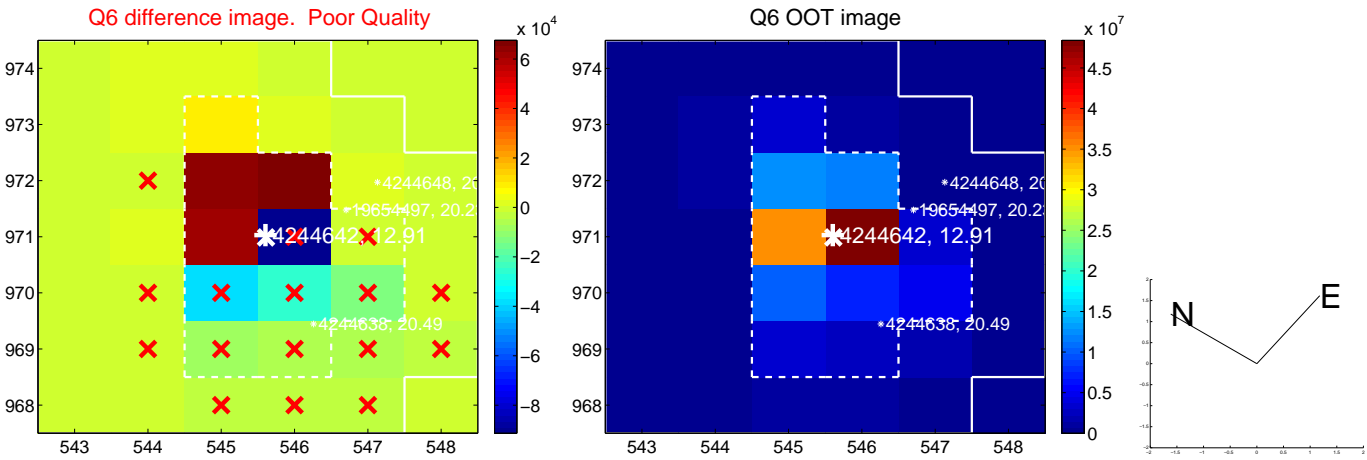
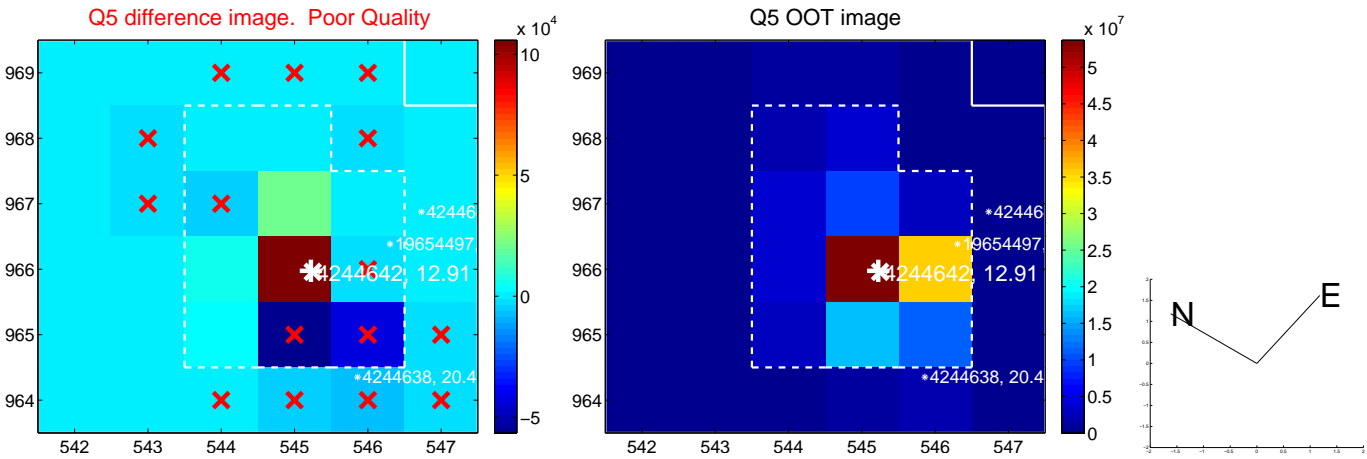


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

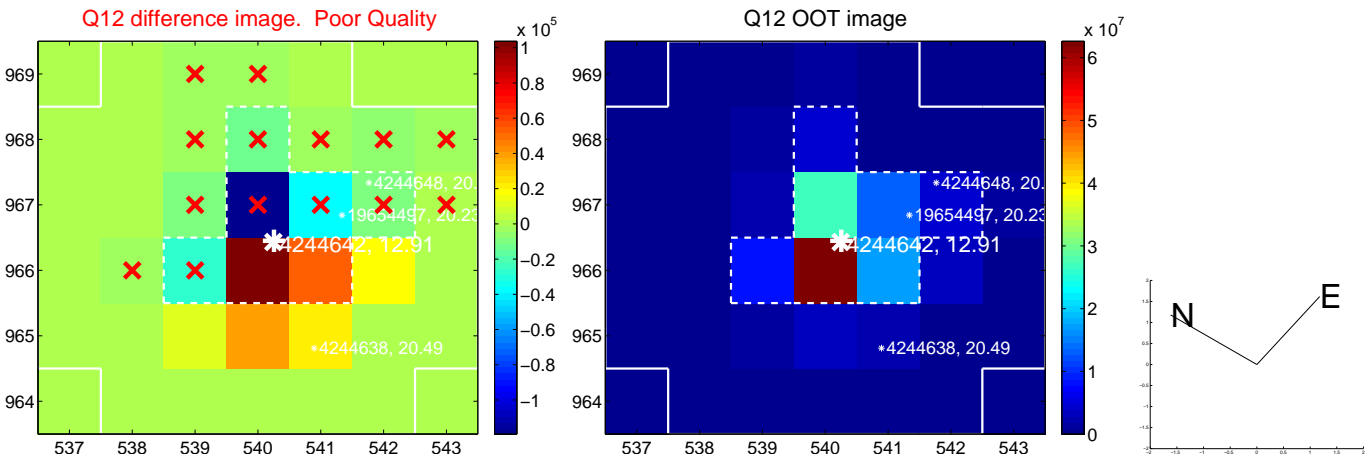
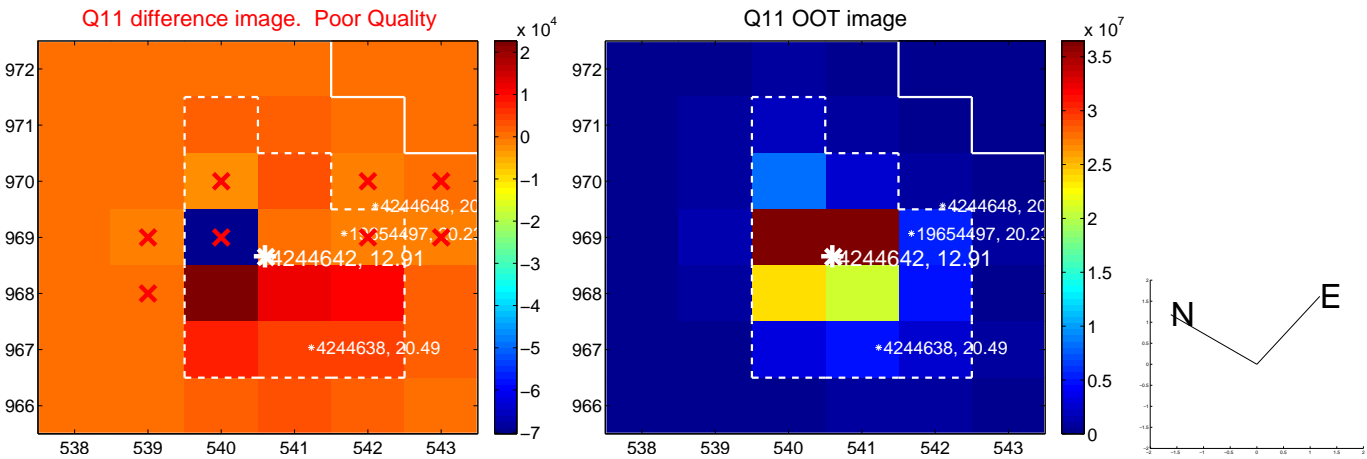
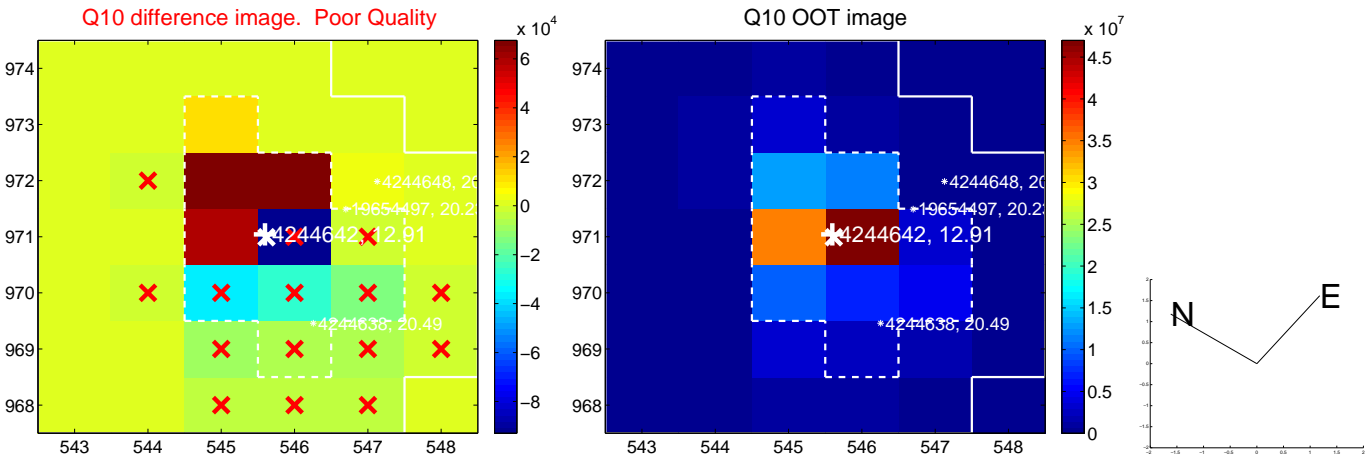
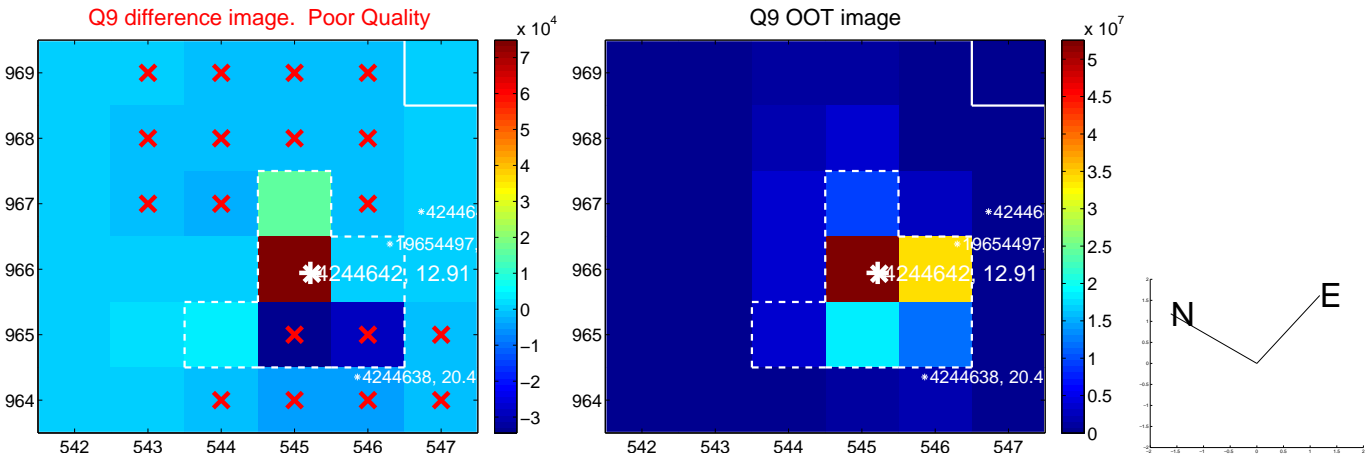


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

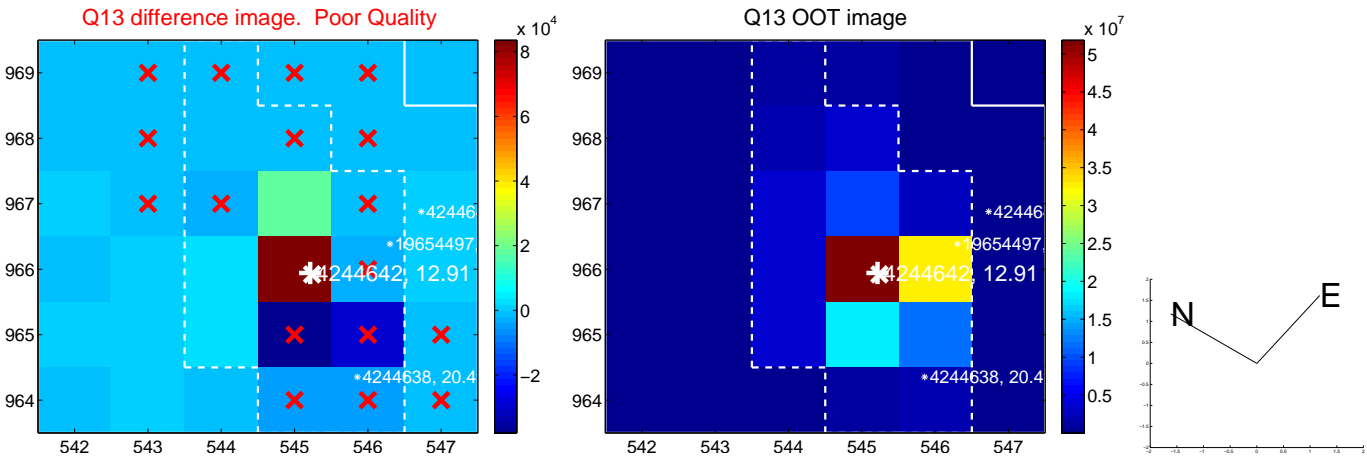




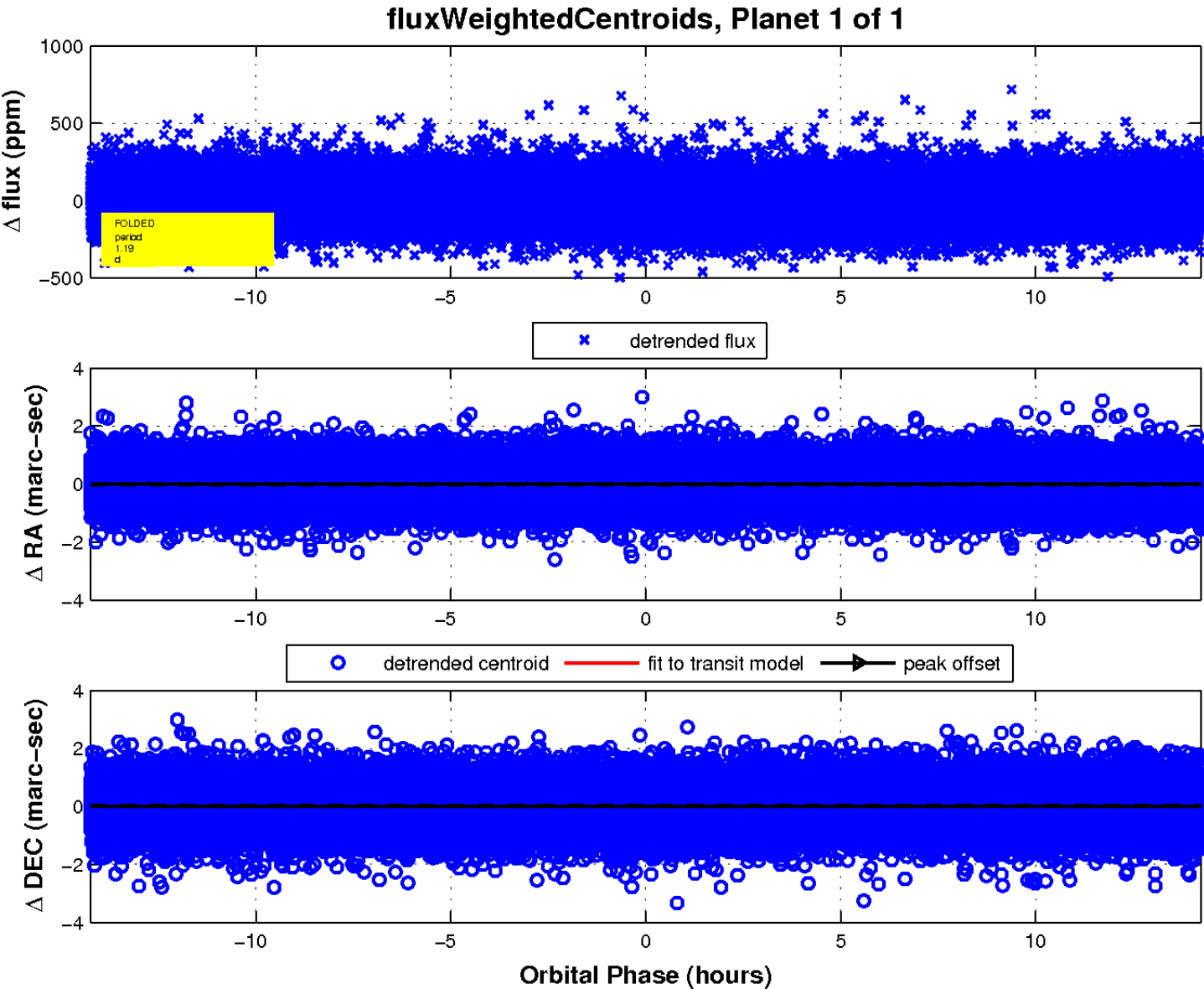
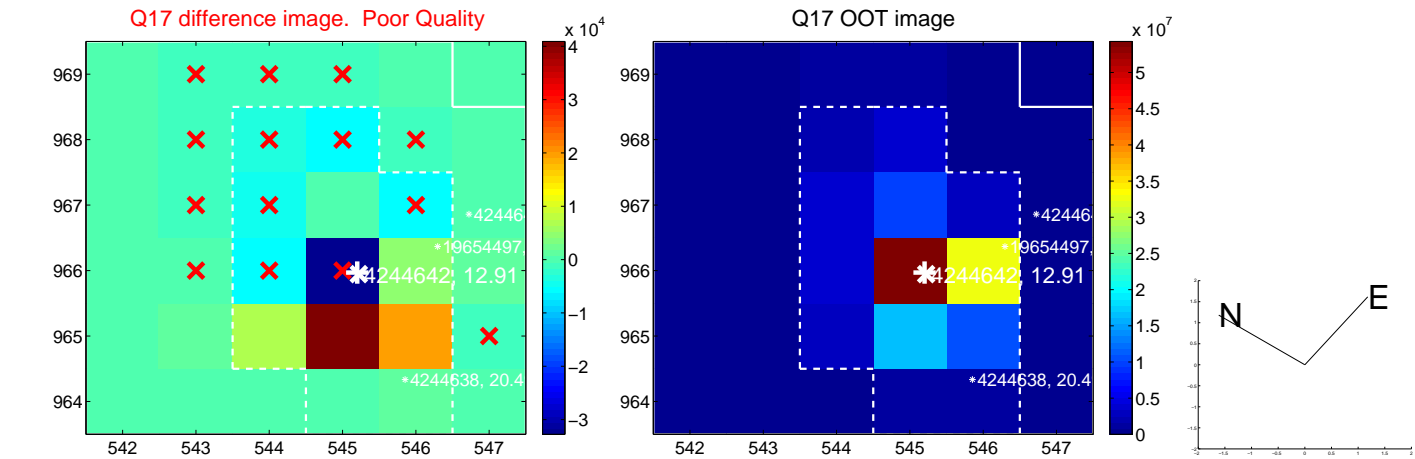
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UKIRT Image

Declination

