

# KIC 010550660

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
010550660-01	OBS	No	0.884898	132.007027	10390.1	3.000	80.8	-1.0	0.84	5317	8.39	1647.87

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010550660-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_NOFITS

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

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

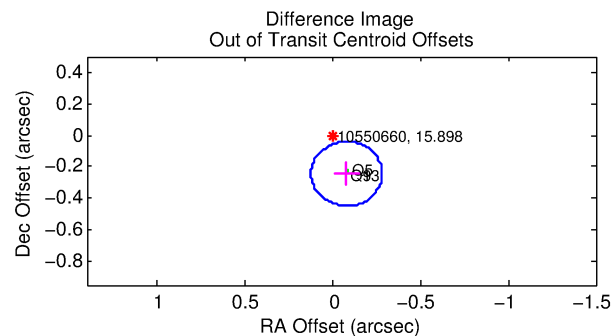
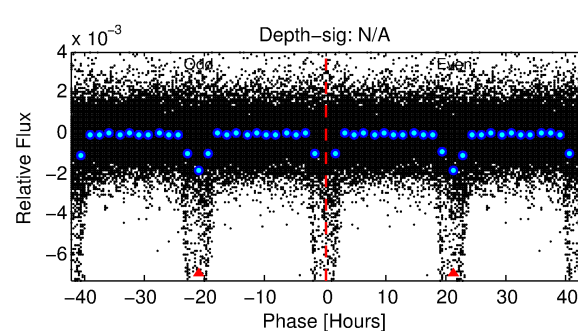
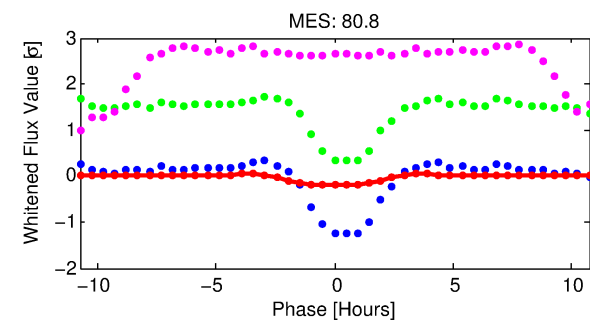
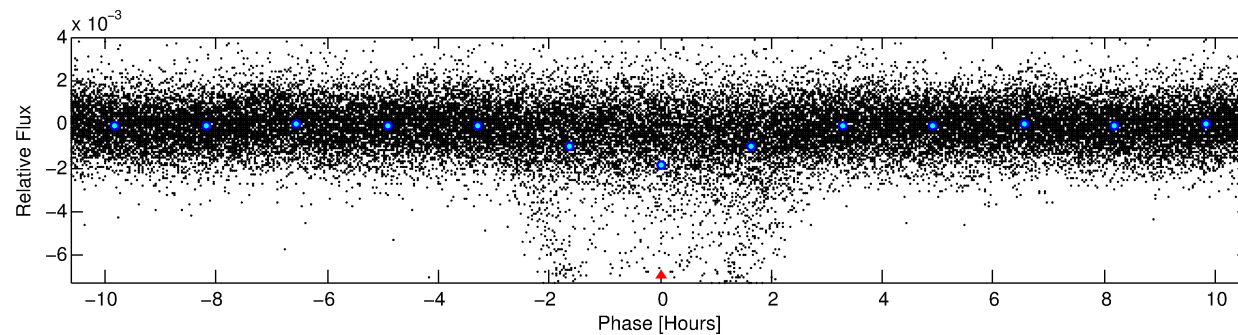
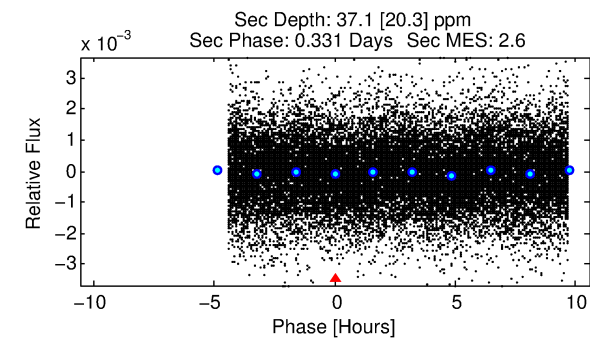
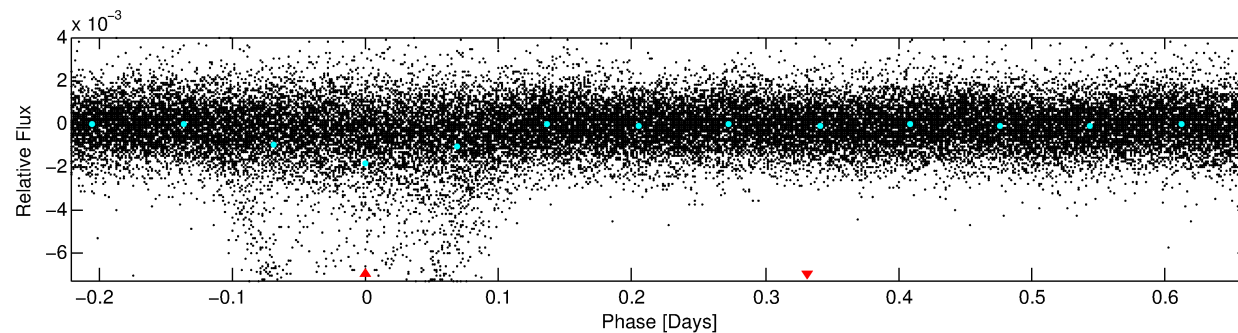
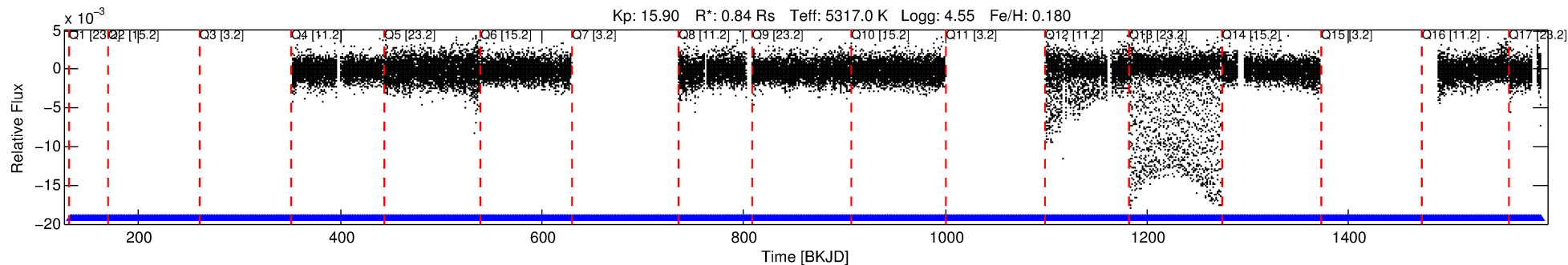
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 010550660-01

No Significant Match Found

# DV One-Page Summary

KIC: 10550660 Candidate: 1 of 1 Period: 0.885 d



## TPS TCE Results:

Period = 0.88490 d  
Epoch = 132.0070 BKJD

DV fit results are unavailable

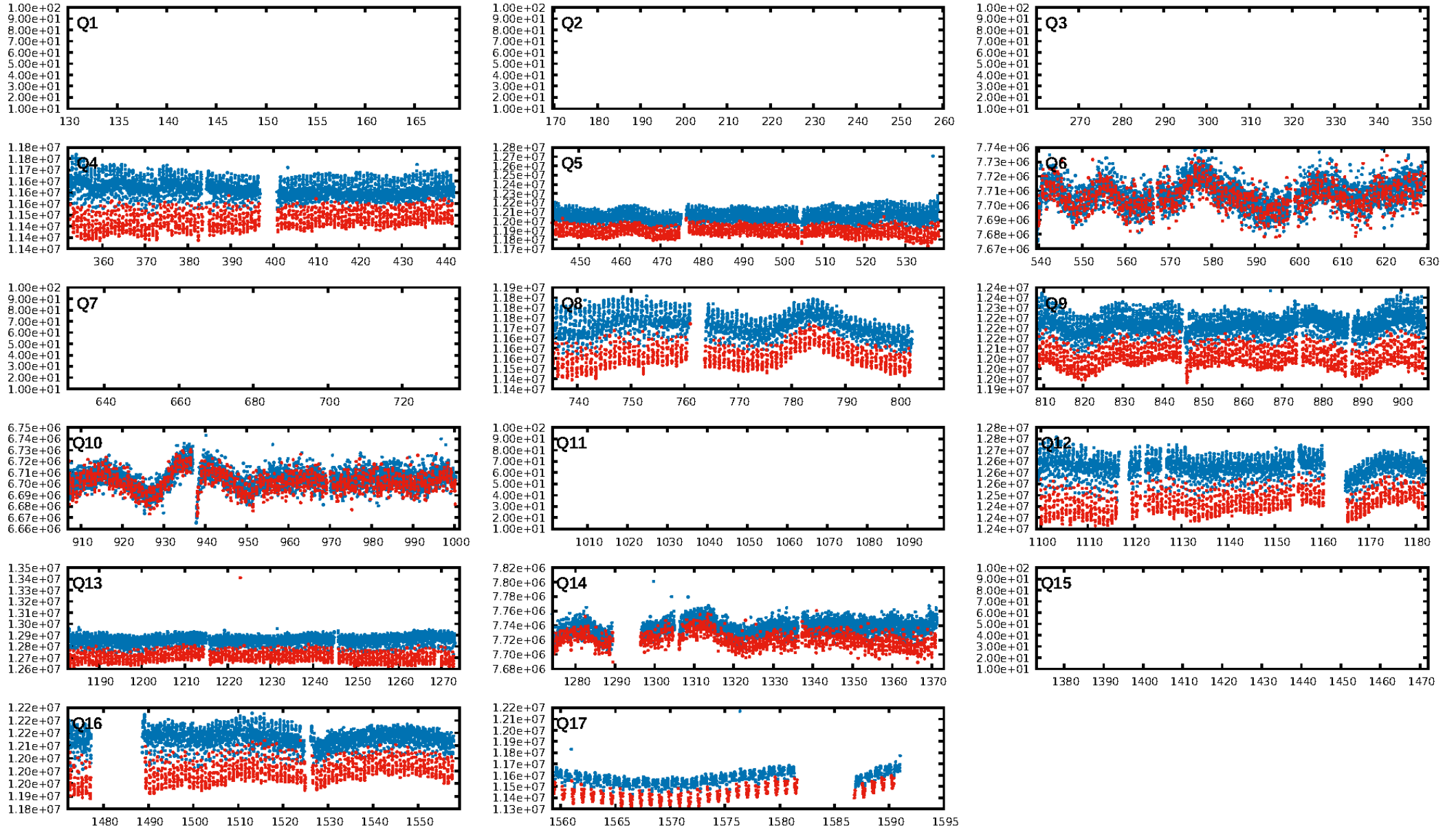
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [960/960]  
GhostDiagnostic-chr: N/A  
Centroid-sig: 0.0%  
Centroid-so: 5.029 arcsec [659.67σ]  
OotOffset-rm: 0.257 arcsec [3.78σ]  
KicOffset-rm: 7.502 arcsec [91.48σ]  
OotOffset-st: 0/0/0/3 [3]  
KicOffset-st: 0/0/0/3 [3]  
DiffImageQuality-fgm: 1.00 [3/3]  
DiffImageOverlap-fno: 1.00 [11/11]

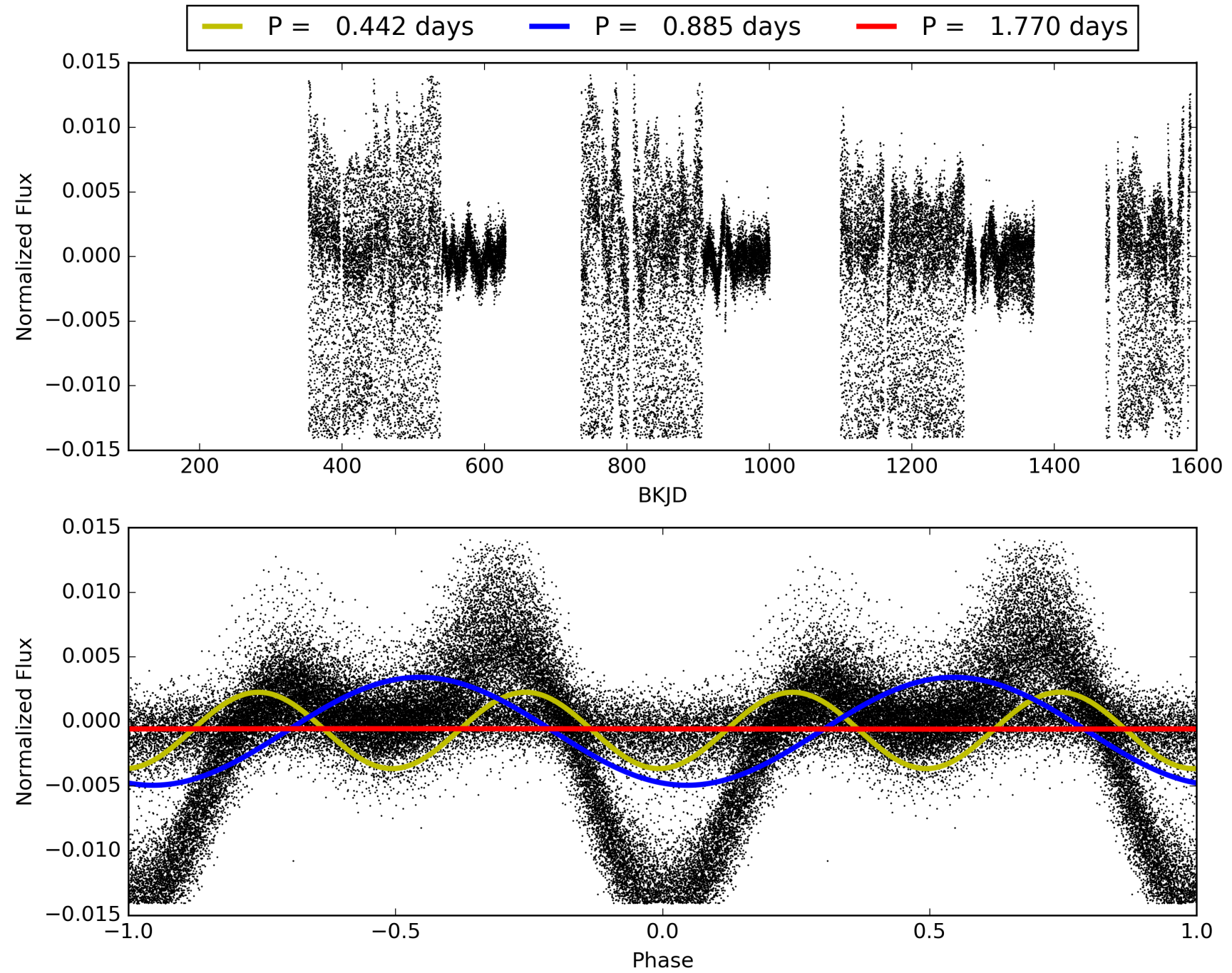
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 08:50:11 Z

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

# TCE 010550660-01, PDC Light Curves

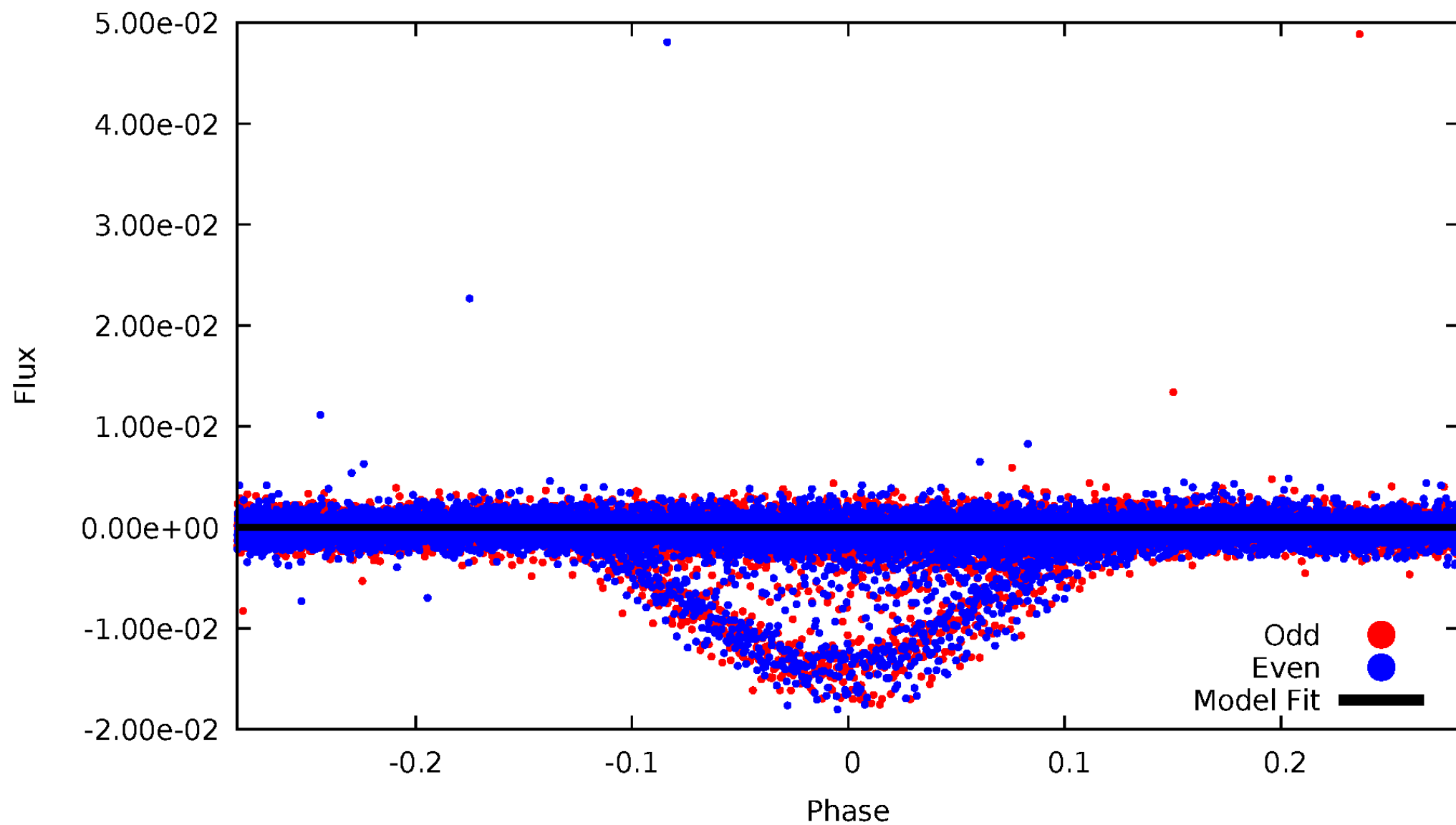


TCE 010550660-01



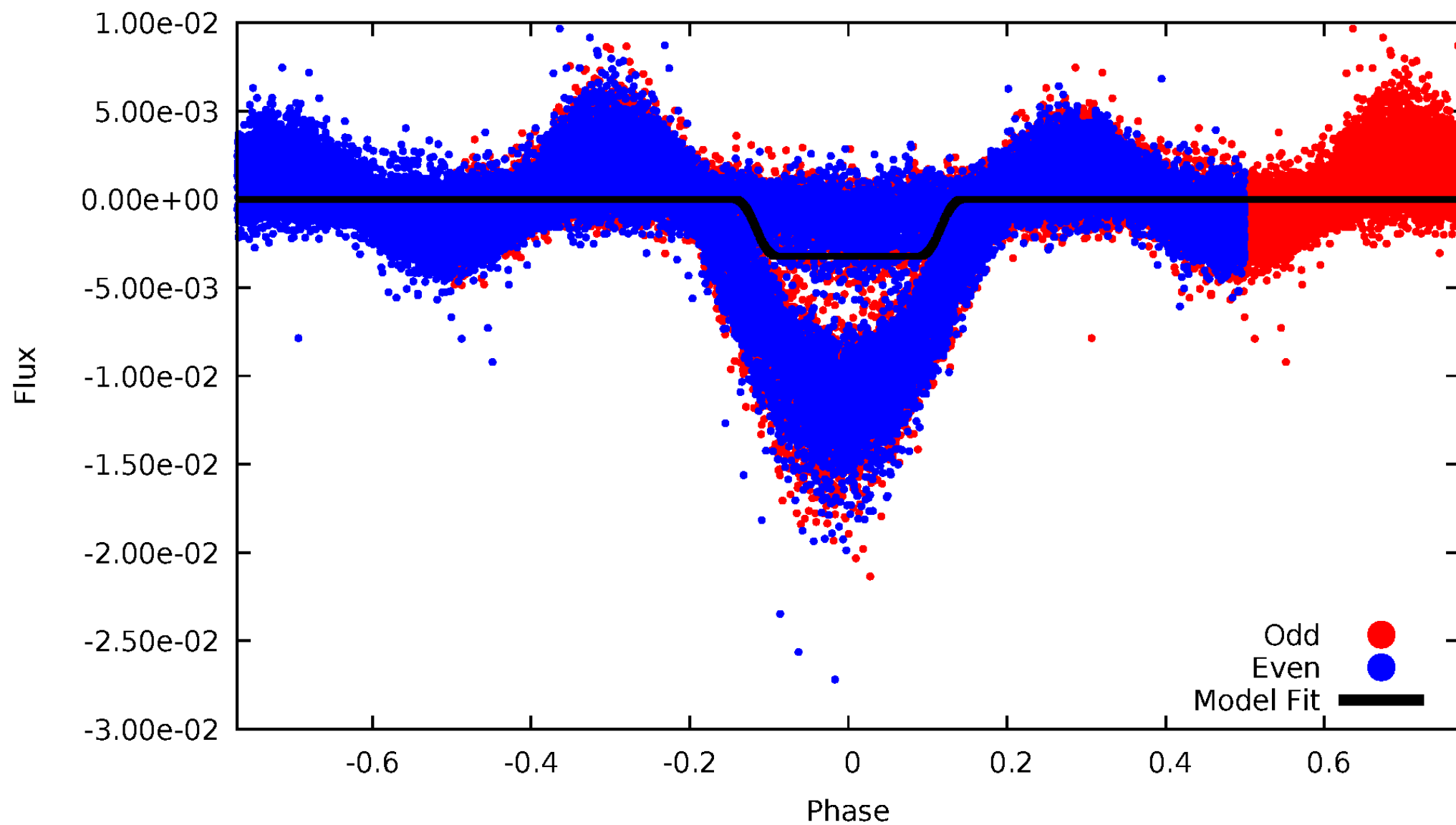
# DV Odd/Even

TCE 010550660-01



# ALT Odd/Even

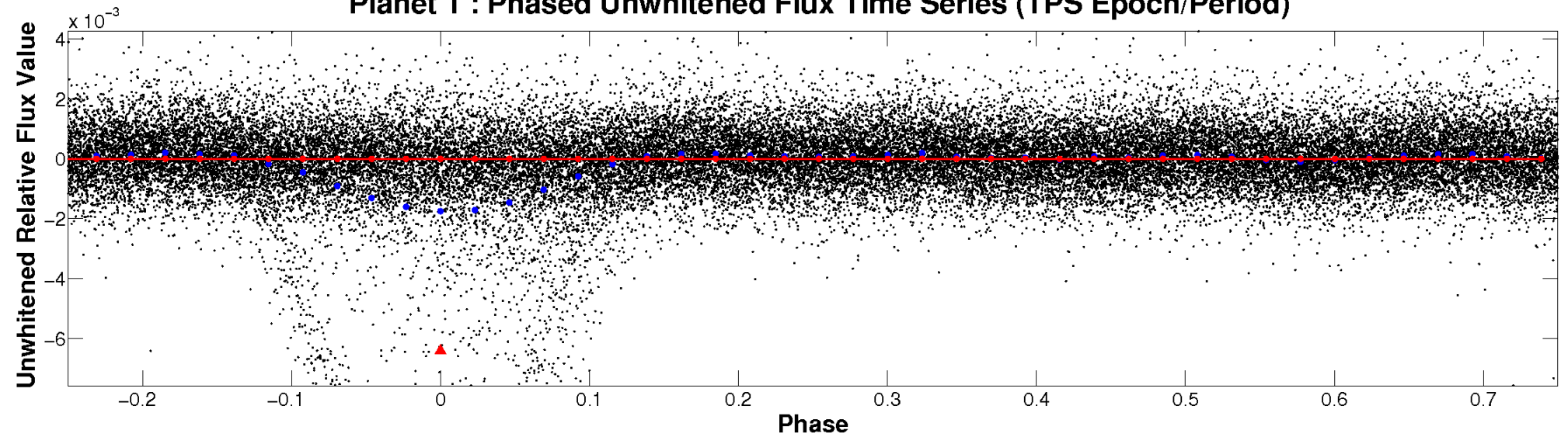
TCE 010550660-01



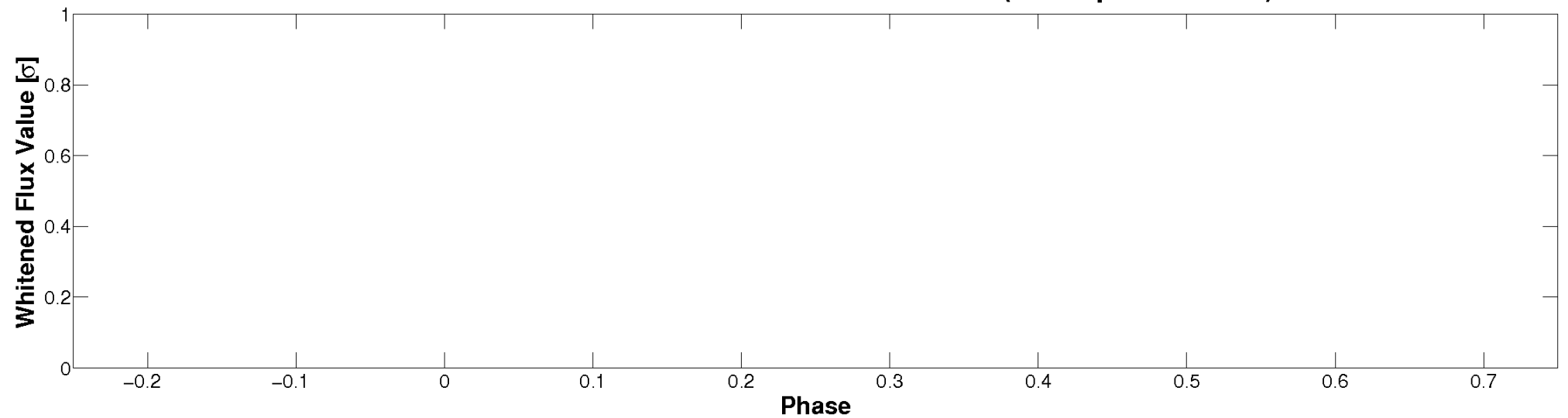


# Non-Whitened Vs. Whitened Light Curve

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

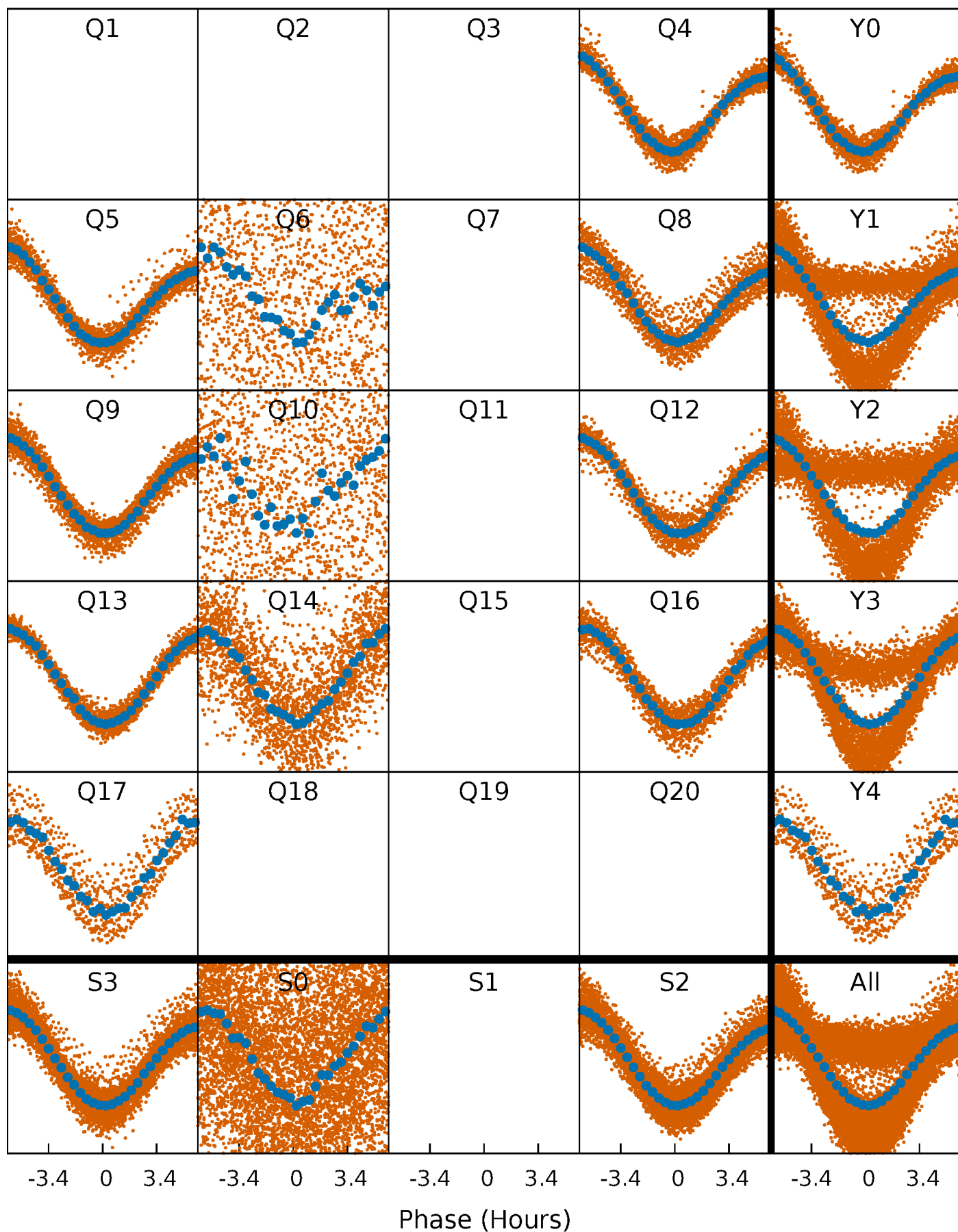


**Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)**



# PDC Quarter-Phased Transit Curves

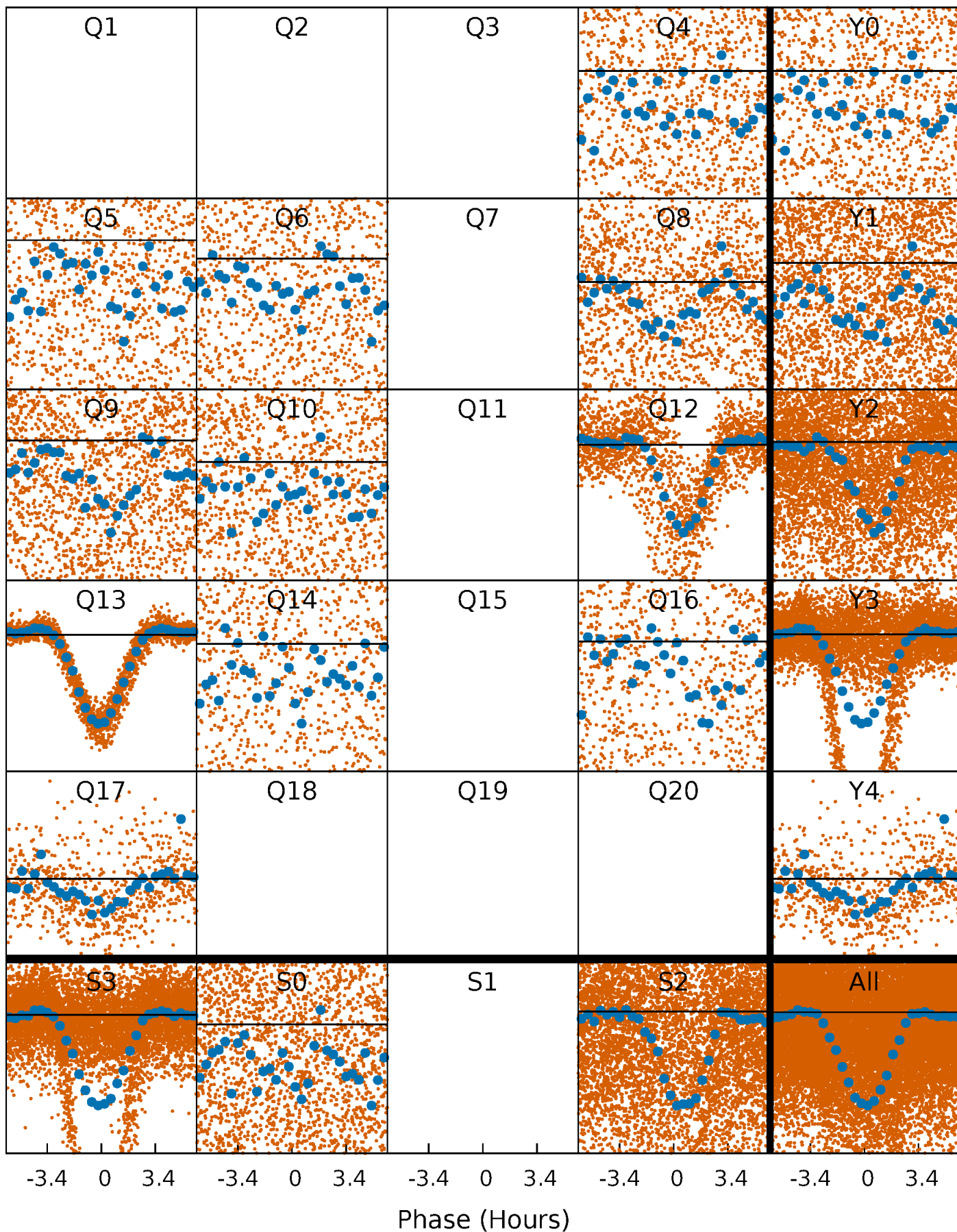
TCE 010550660-01 P= 0.884898 Days  $T_0=132.007027$  (BKJD)





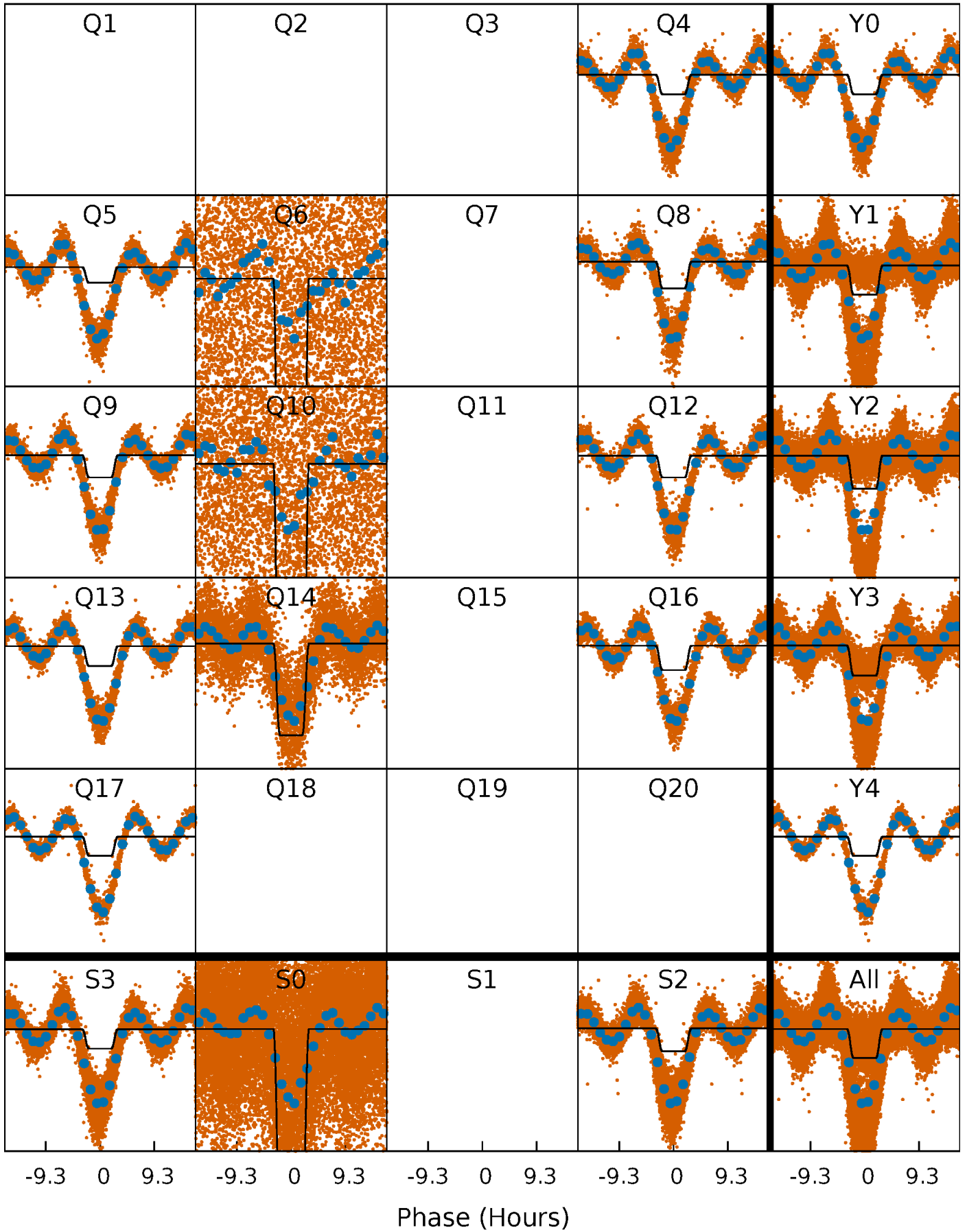
# DV Quarter-Phased Transit Curves

TCE 010550660-01 P= 0.884898 Days  $T_0=132.007027$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

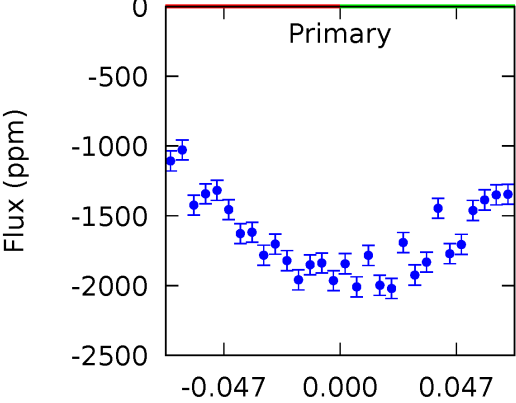
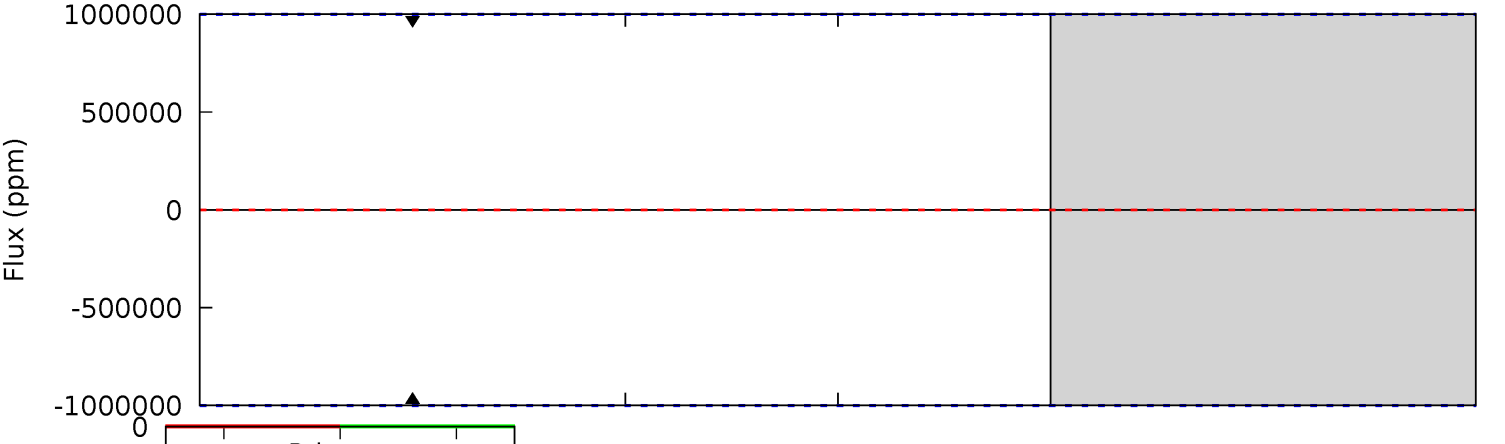
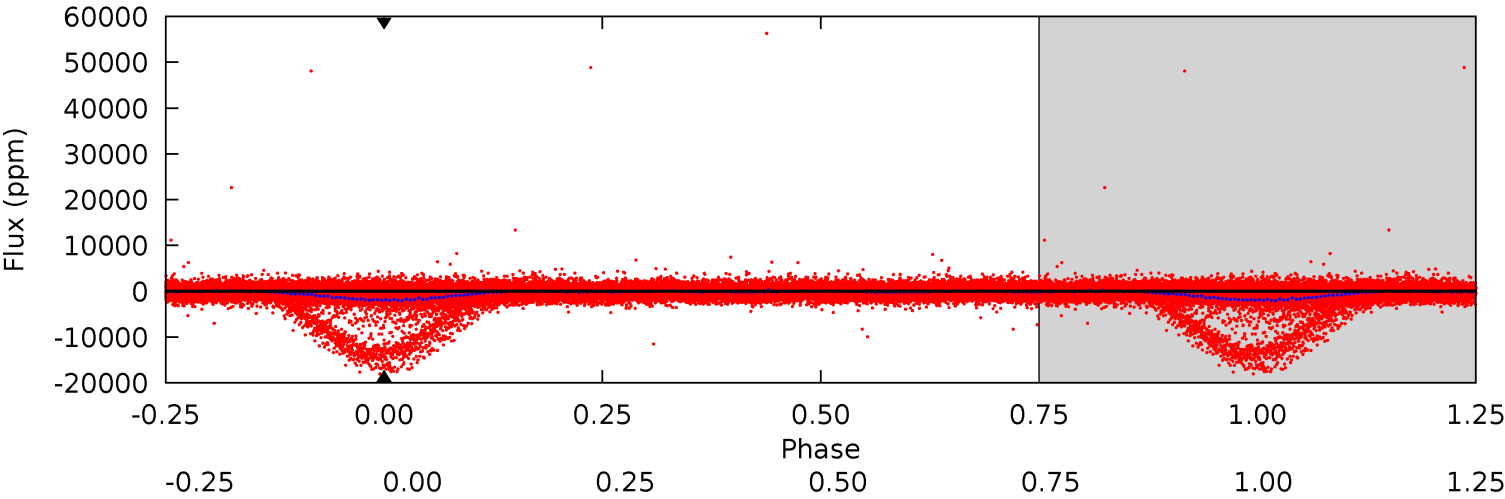
TCE 010550660-01 P= 0.884898 Days  $T_0=132.008594$  (BKJD)



DV Model-Shift Uniqueness Test

010550660-01, P = 0.884898 Days, E = 132.007027 Days

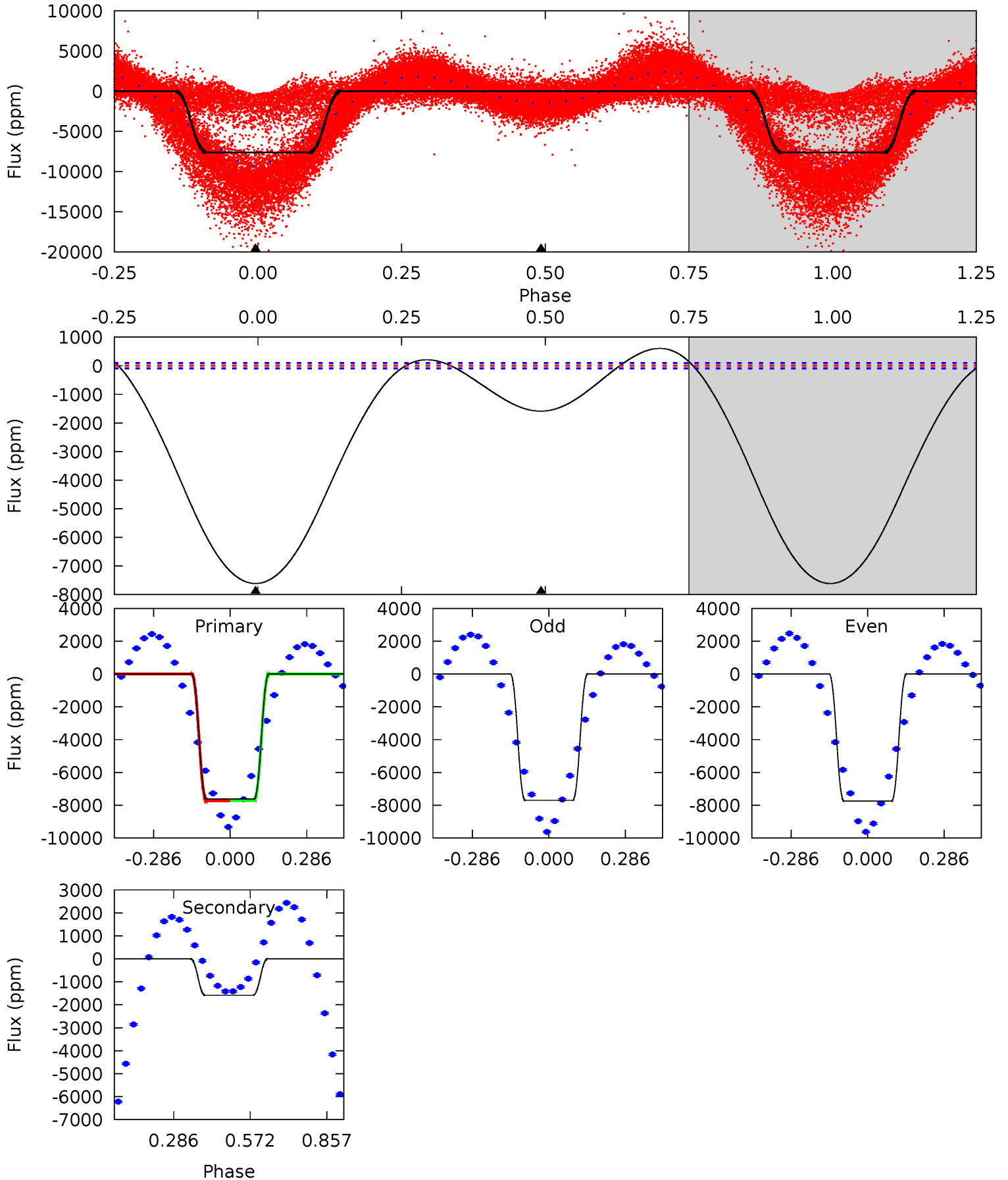
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



# Alt Model-Shift Uniqueness Test

010550660-01, P = 0.884898 Days, E = 132.008594 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
347.0	72.3	0	0	4.34	1.07	14.5	347.0	347.0	72.3	72.3	1.13	0.83	0.07	0



### Stellar Parameters For KIC 010550660

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5317^{+186}_{-186}$	$4.552^{+0.032}_{-0.136}$	$0.180^{+0.200}_{-0.300}$	$0.843^{+0.161}_{-0.069}$	$0.924^{+0.069}_{-0.089}$	$2.173^{+0.385}_{-0.844}$
	+3%/-3%	+1%/-3%	+111%/-167%	+19%/-8%	+7%/-10%	+18%/-39%
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 010550660-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$0 \pm 1000000$	$11.09^{+8.57}_{-7.20}$	$2313^{+129}_{-106}$	$2929^{+8007}_{-13918}$	$1.123^{+212.548}_{-214.568}$
Alt.	$-1587 \pm 22$	$9.10^{+8.40}_{-6.15}$	$2318^{+126}_{-105}$	$3729^{+2149}_{-813}$	$3.177^{+26.419}_{-2.295}$

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

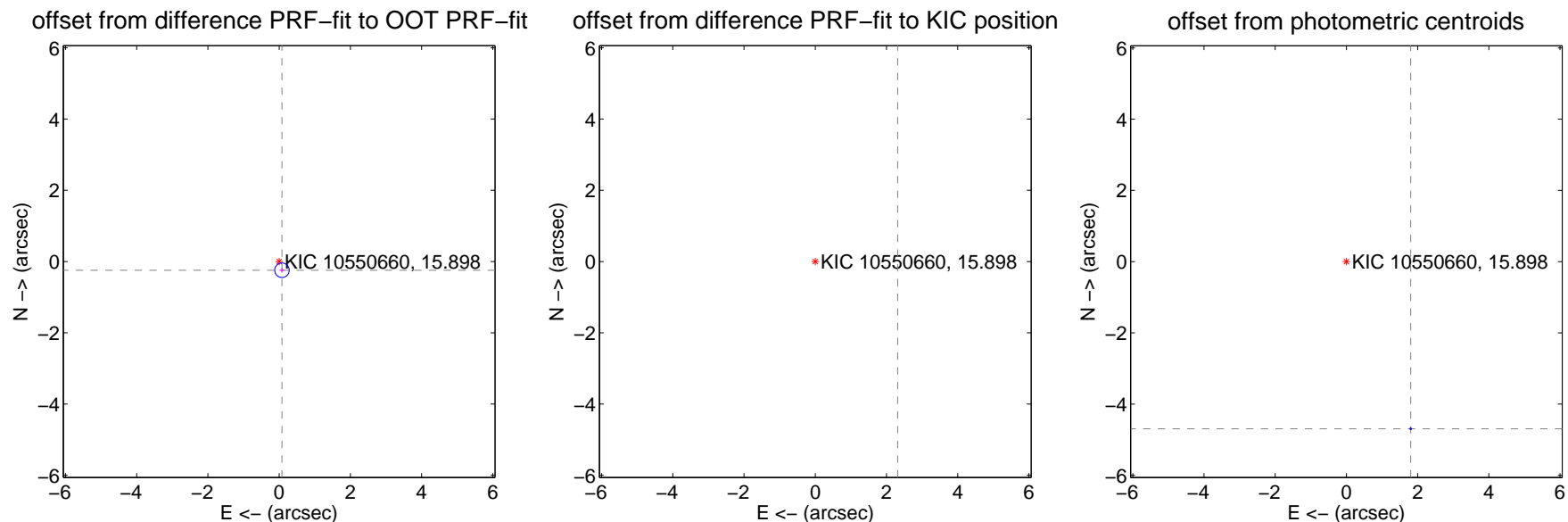
## DV Centroid Data

Supplemental centroid analysis for 010550660-01. Kepler magnitude: 15.90. Transit SNR -1.00

There are 3 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 7.12 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

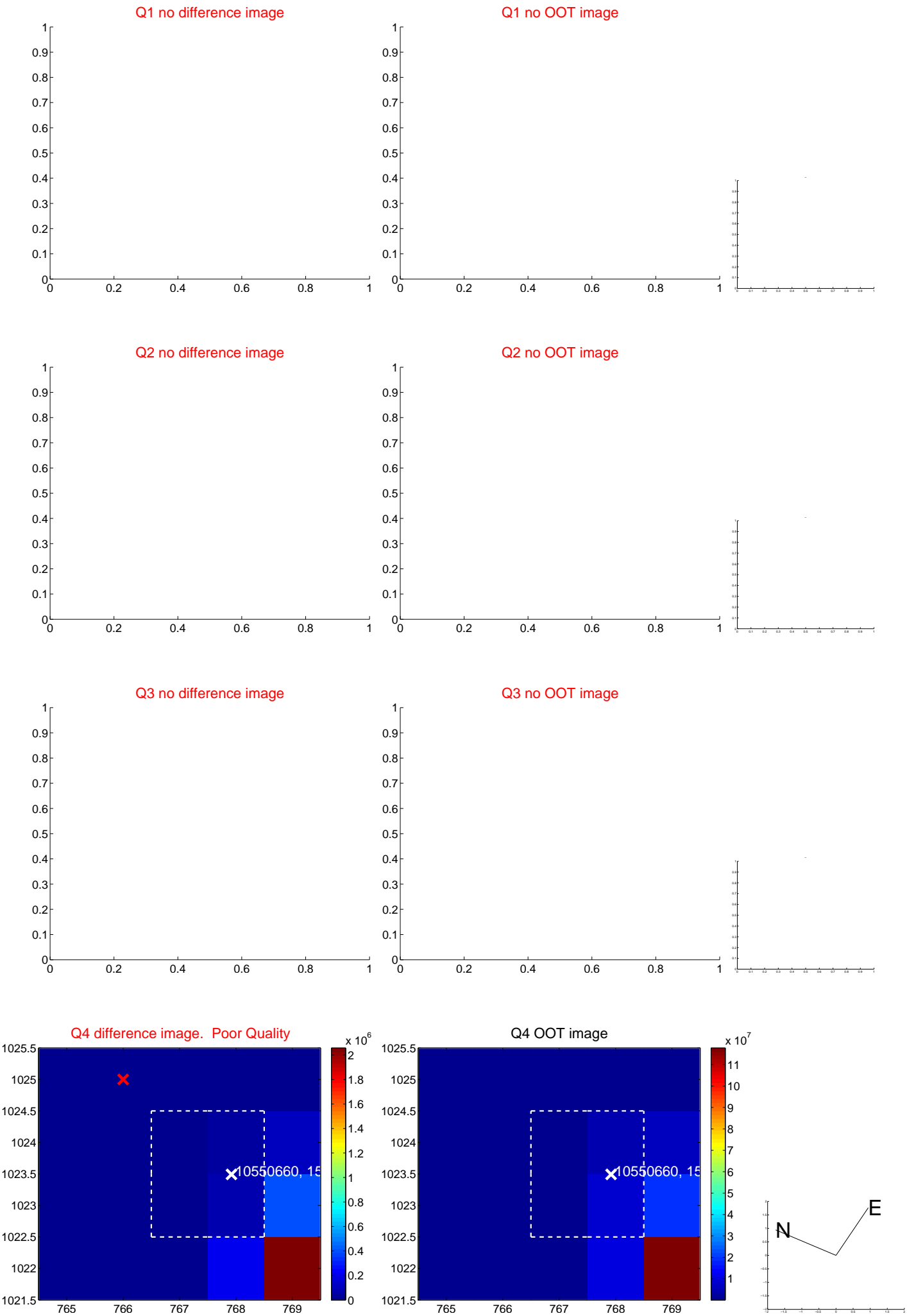
	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.257 \pm 0.068$	3.78	$-0.079 \pm 0.067$	$-0.244 \pm 0.068$
PRF-fit source offset from KIC position	$7.502 \pm 0.082$	91.48	$-2.313 \pm 0.070$	$-7.136 \pm 0.083$
photometric centroid source offset	$5.03 \pm 0.01$	659.67	$-1.80 \pm 0.00$	$-4.69 \pm 0.01$



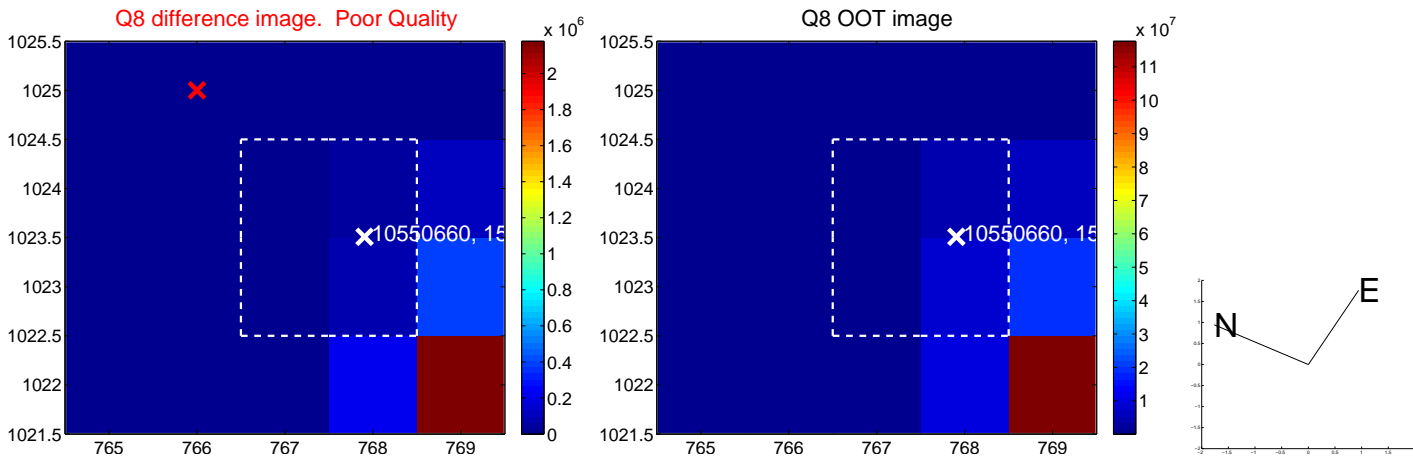
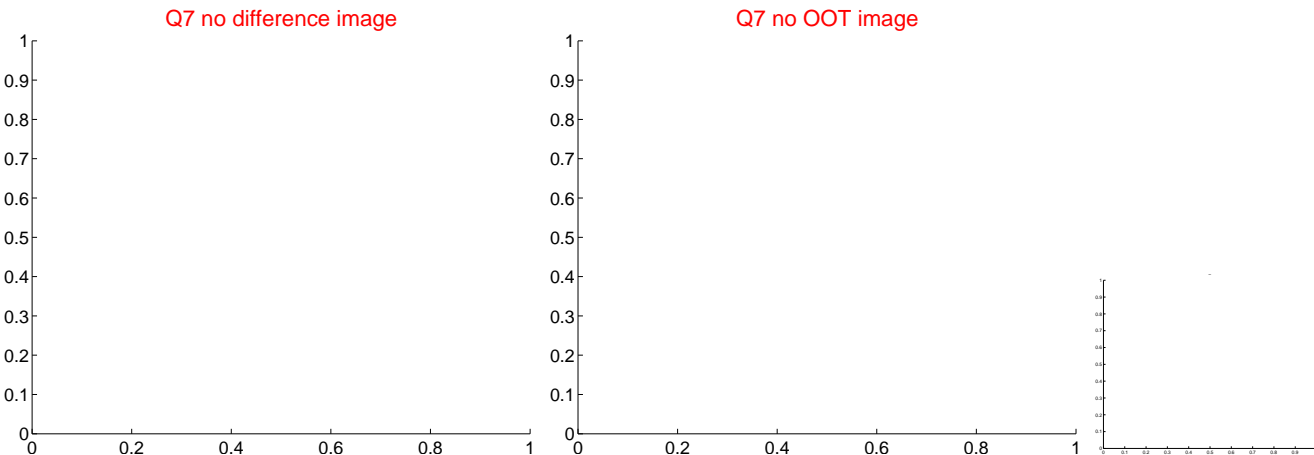
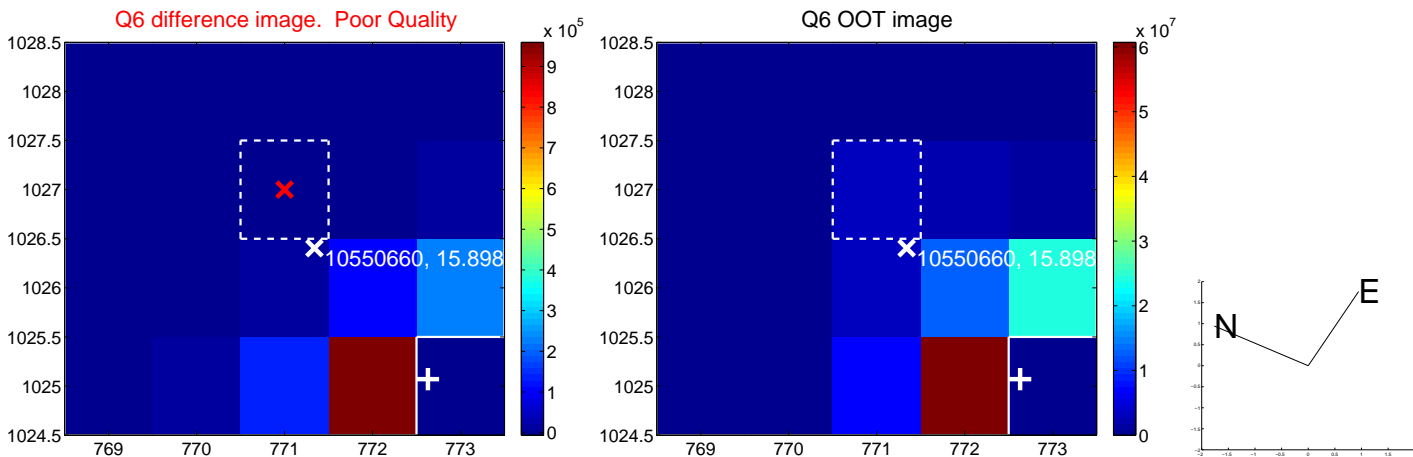
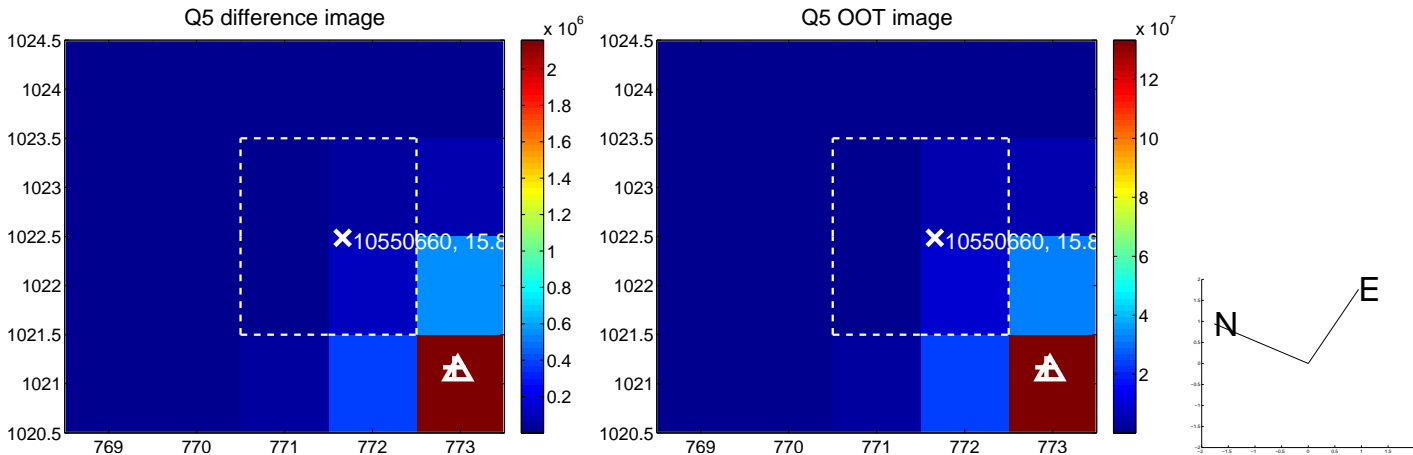
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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



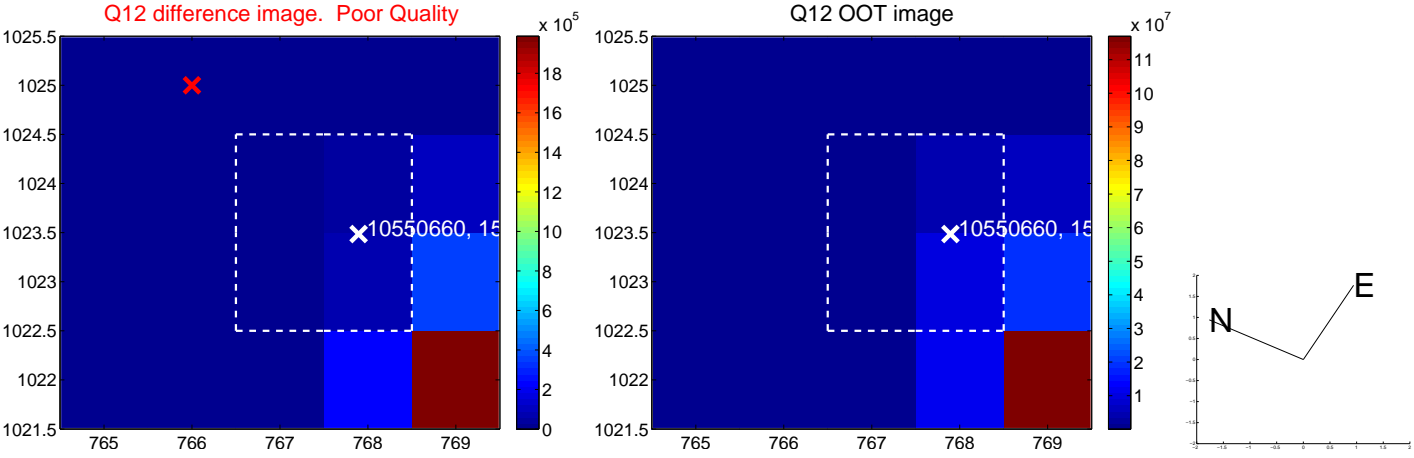
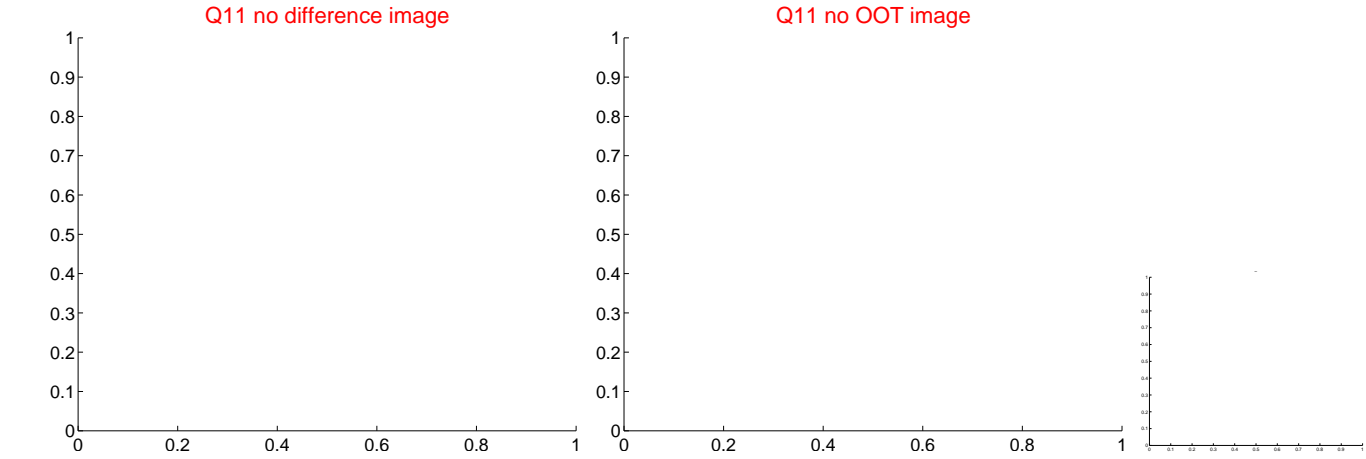
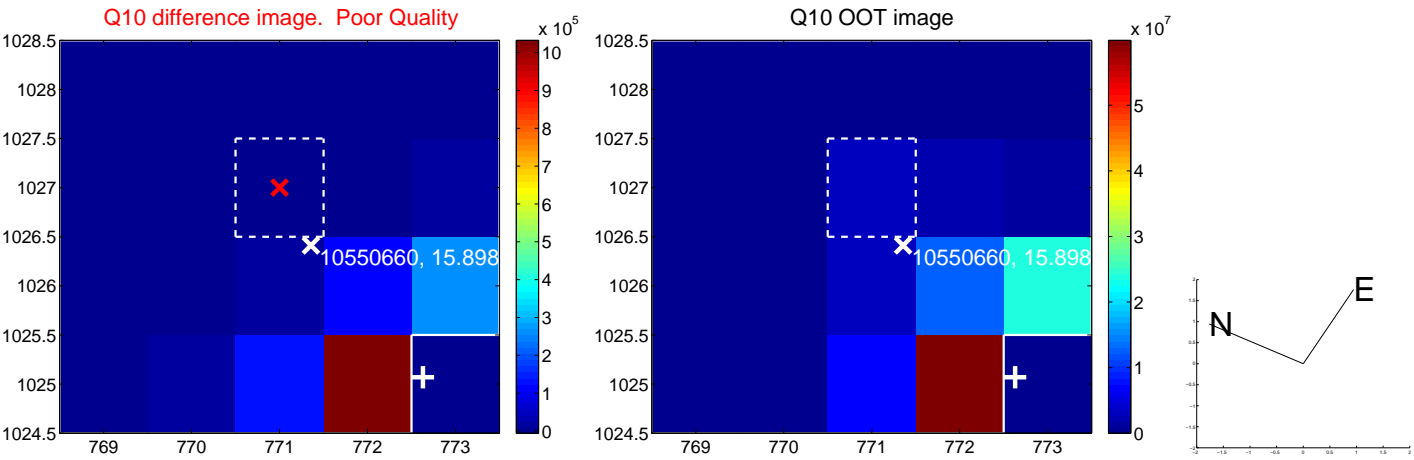
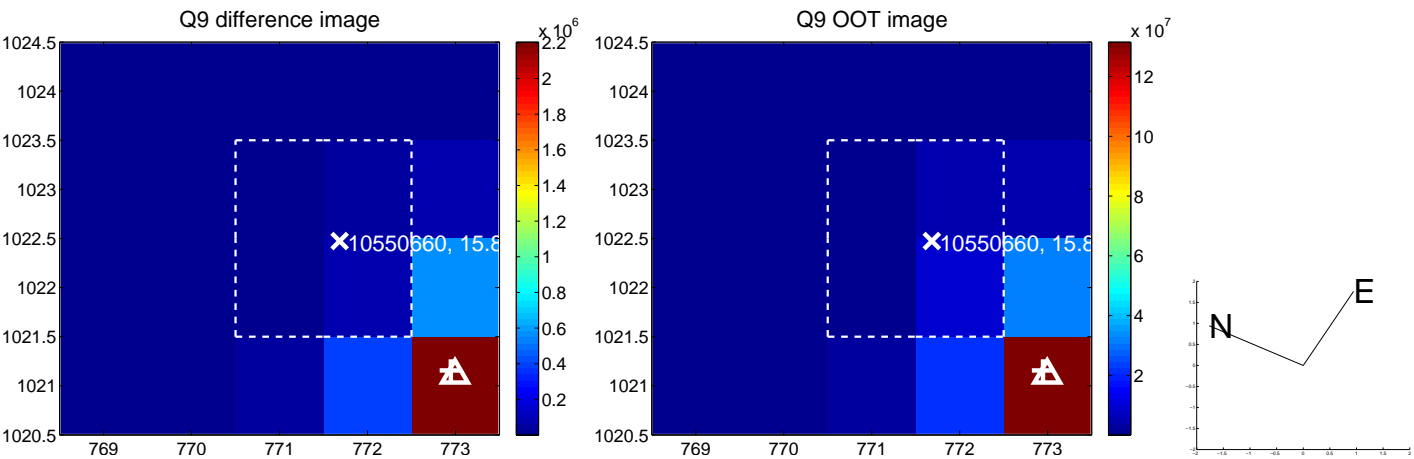
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



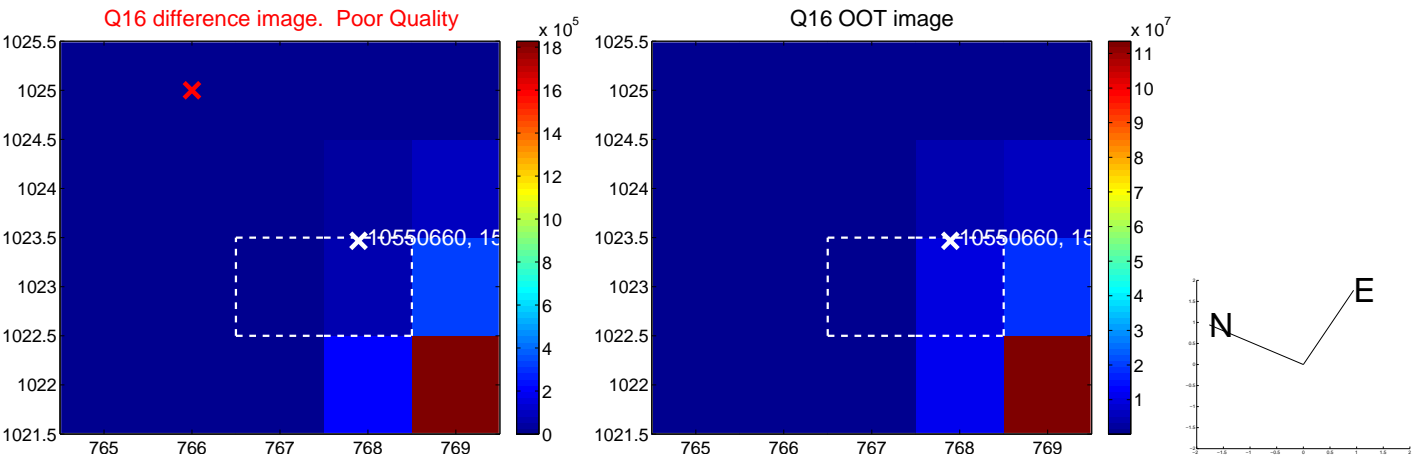
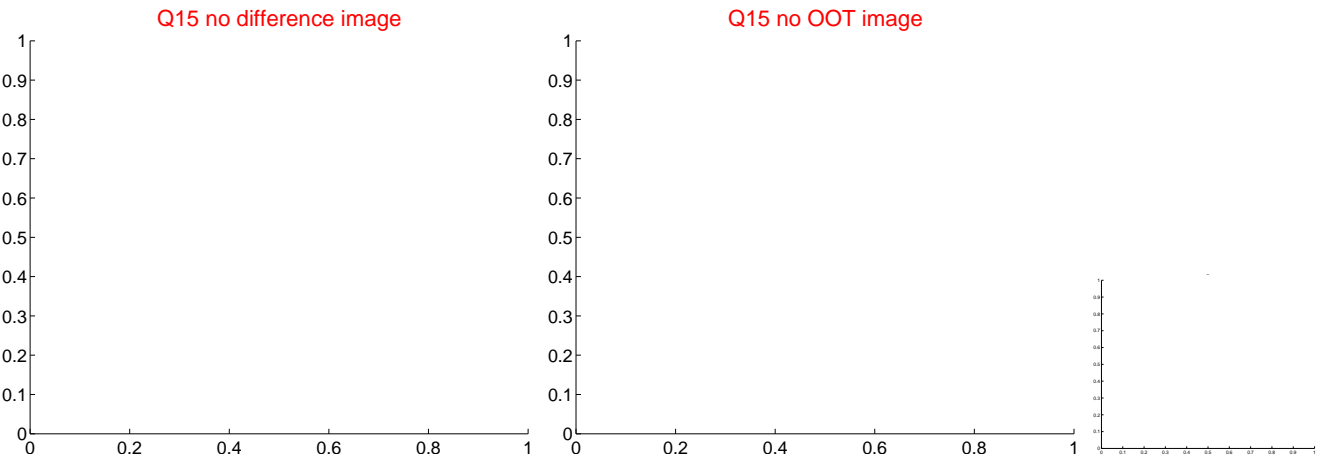
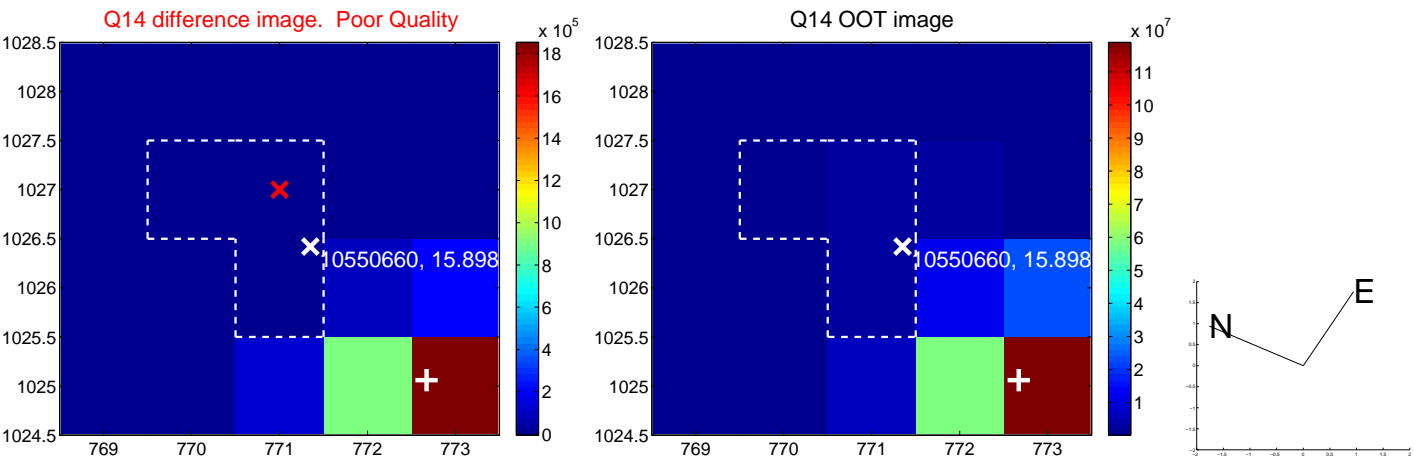
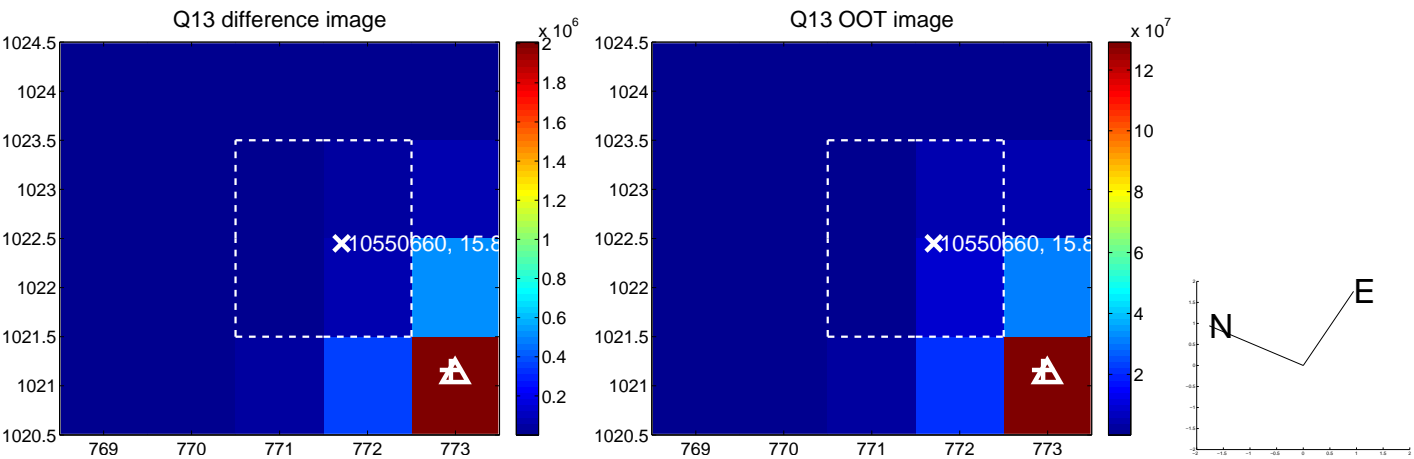
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value



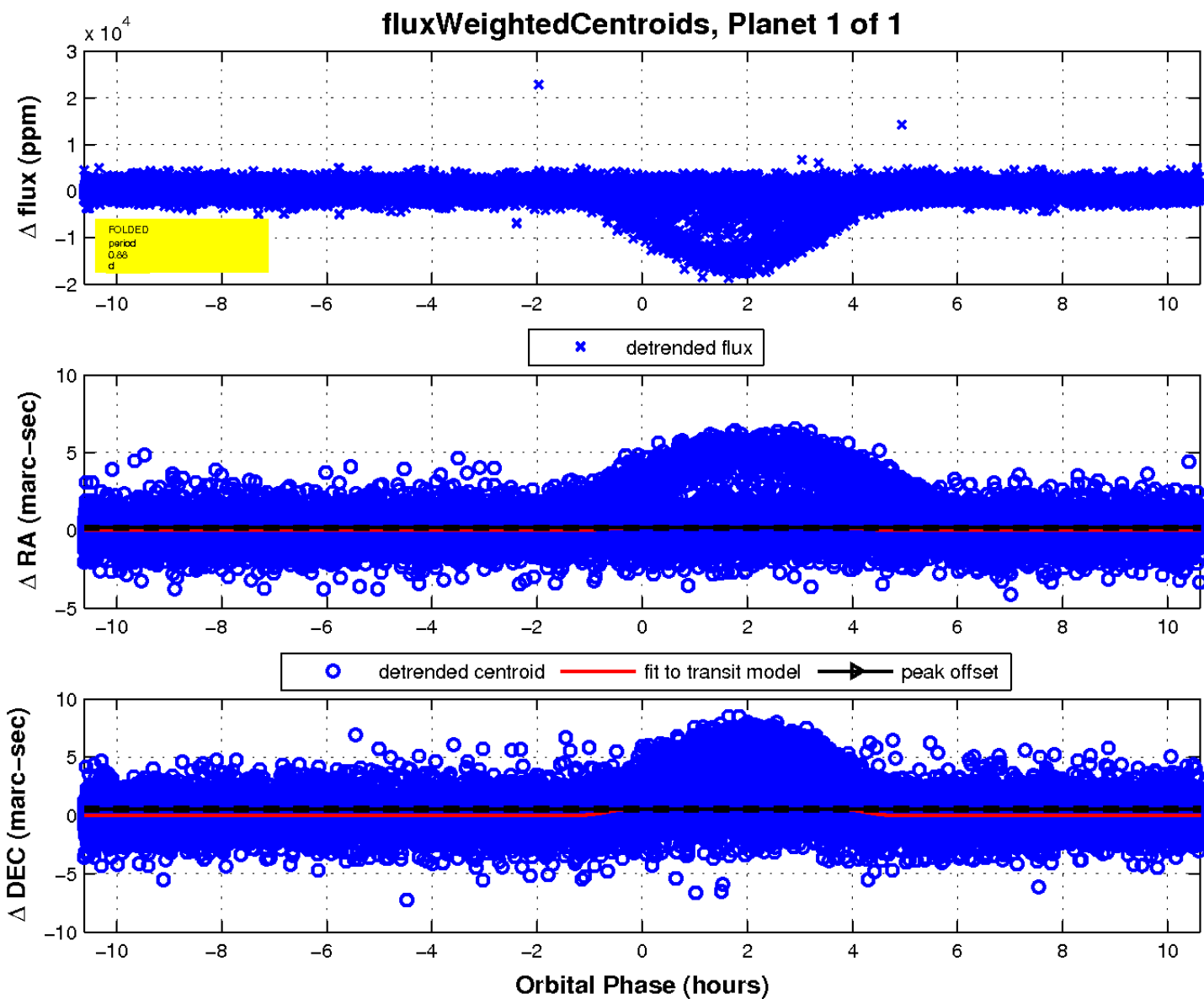
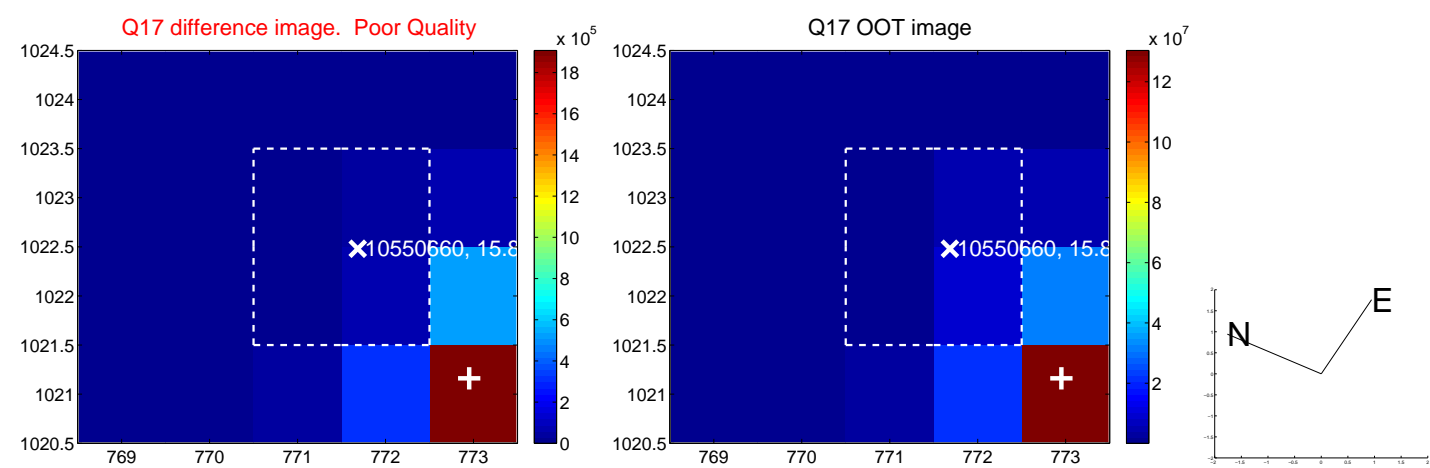
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

