

# KIC 008586745

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008586745-01	OBS	No	1.439661	132.120595	222.5	5.000	9.5	-1.0	2.40	6198	3.58	10048.93

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008586745-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_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.

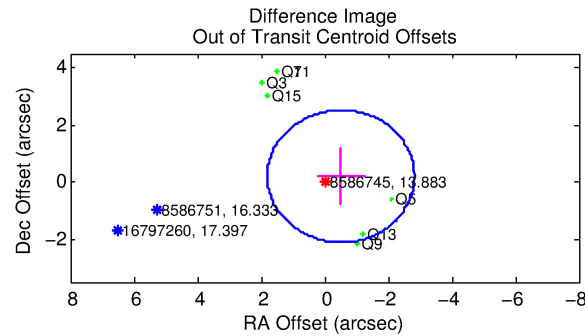
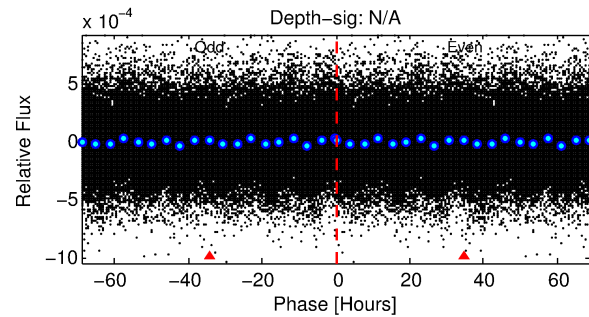
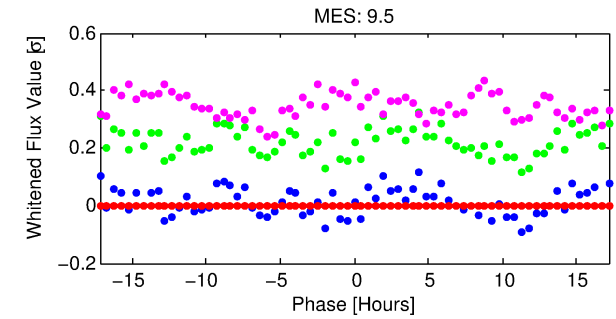
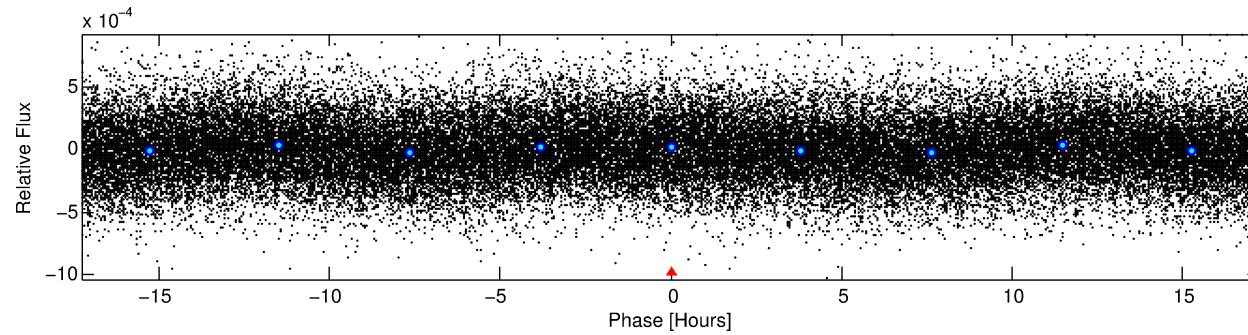
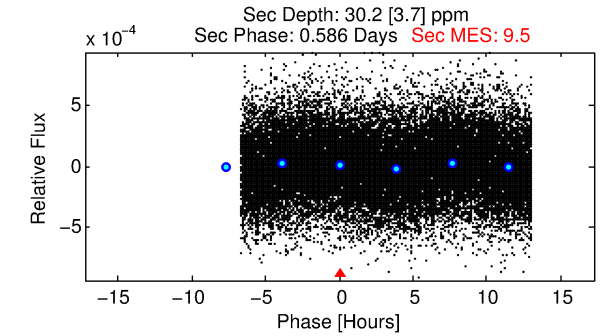
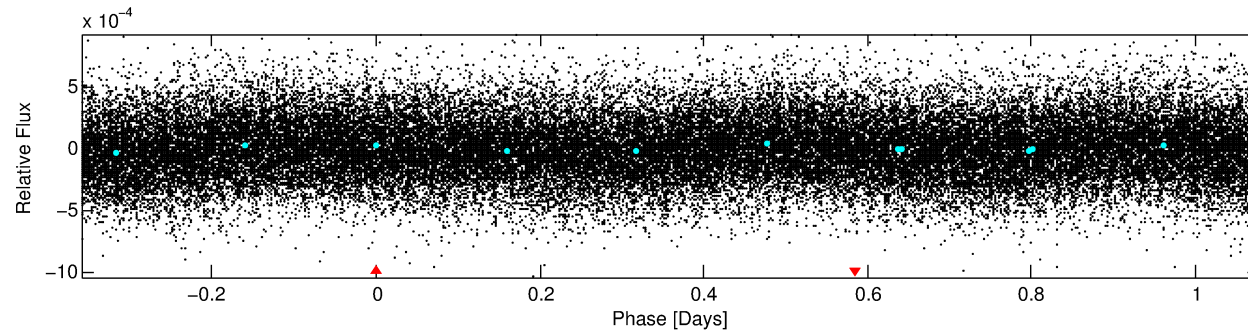
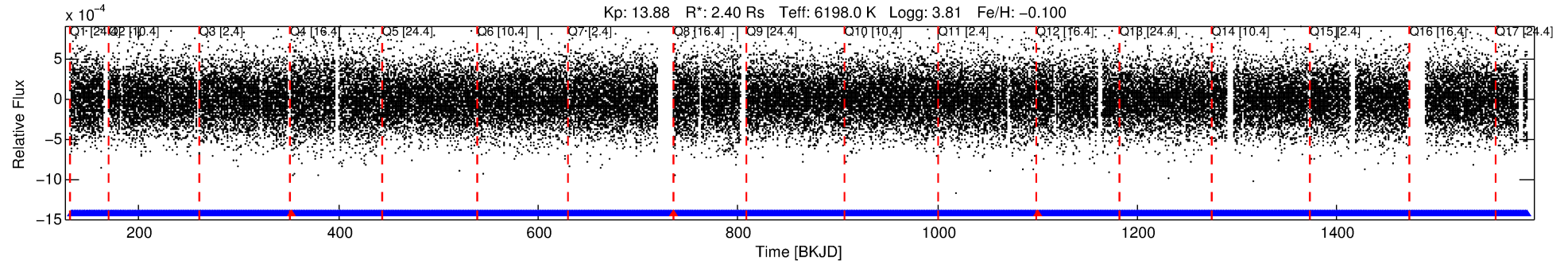
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008586745-01

No Significant Match Found

# DV One-Page Summary

KIC: 8586745 Candidate: 1 of 1 Period: 1.440 d



## TPS TCE Results:

Period = 1.43966 d  
Epoch = 132.1206 BKJD

DV fit results are unavailable

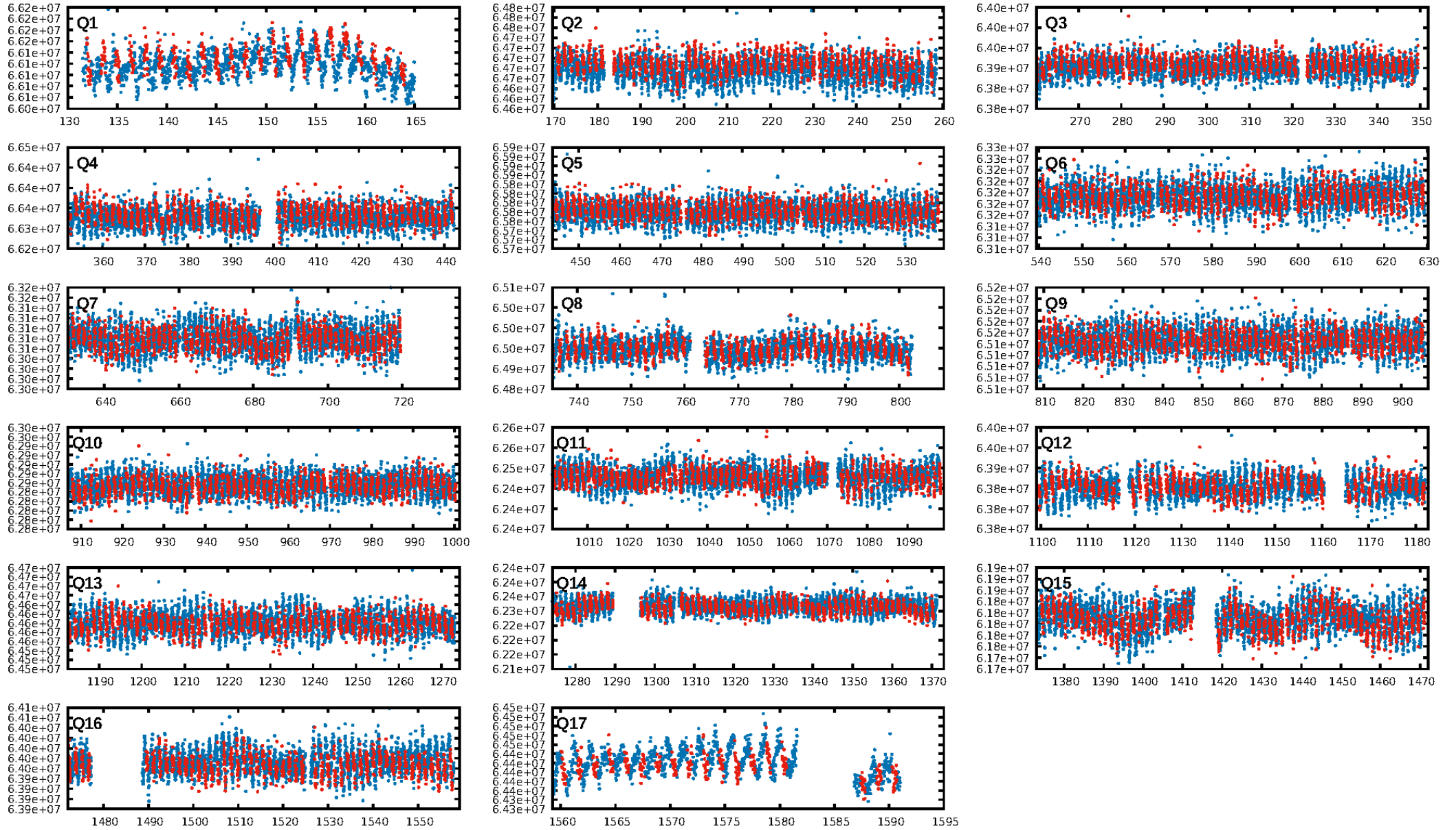
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 1.74e-18  
RollingBand-fgt: 1.00 [910/913]  
GhostDiagnostic-chr: 0.8934  
Centroid-sig: 2.0%  
Centroid-so: 0.083 arcsec [0.35σ]  
OotOffset-rm: 0.548 arcsec [0.71σ]  
KicOffset-rm: 0.638 arcsec [0.83σ]  
OotOffset-st: 0/4/0/3 [7]  
KicOffset-st: 0/4/0/3 [7]  
DiffImageQuality-fgm: 0.43 [3/7]  
DiffImageOverlap-fno: 1.00 [17/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 22:51:11 Z

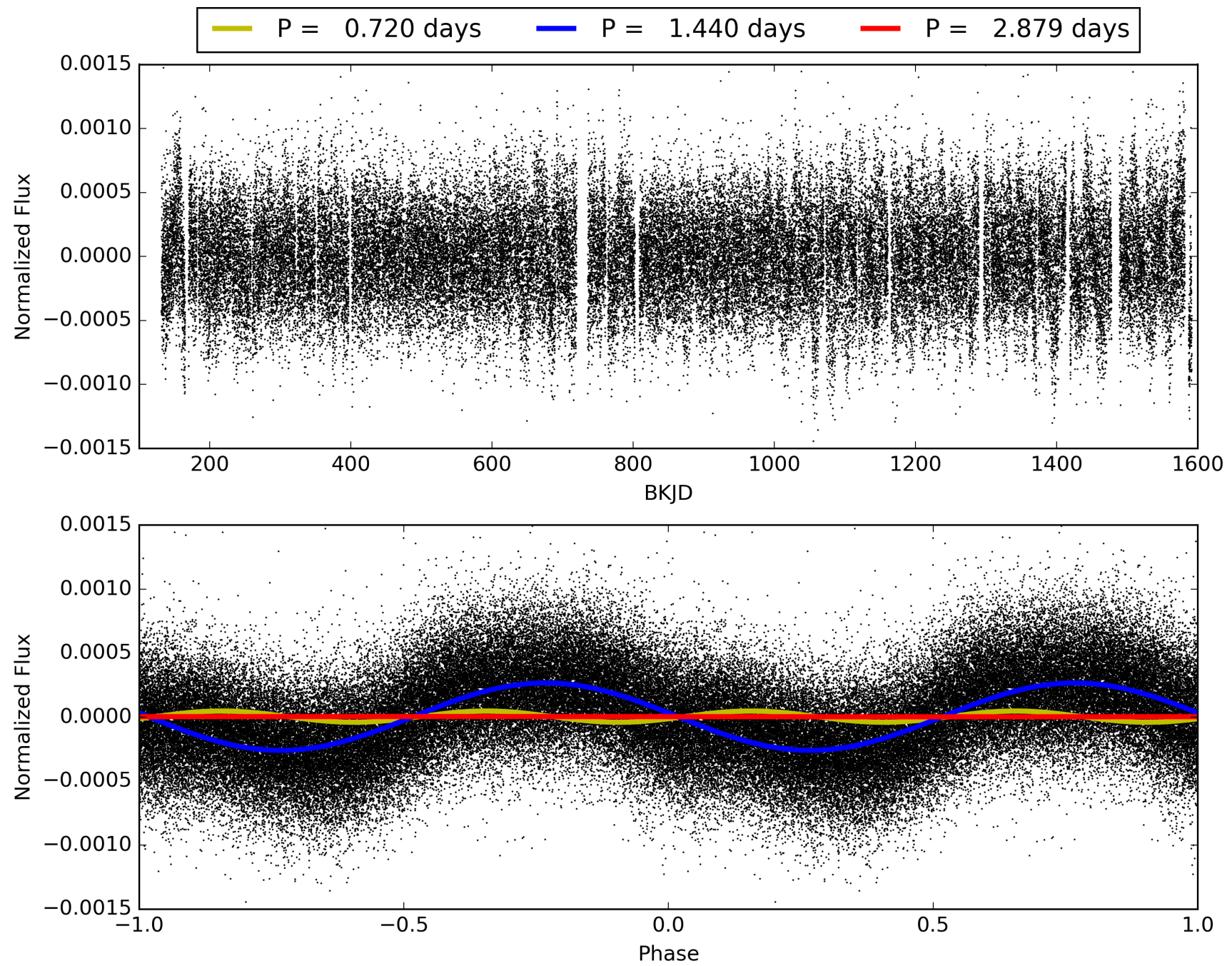
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 00586745-01, PDC Light Curves



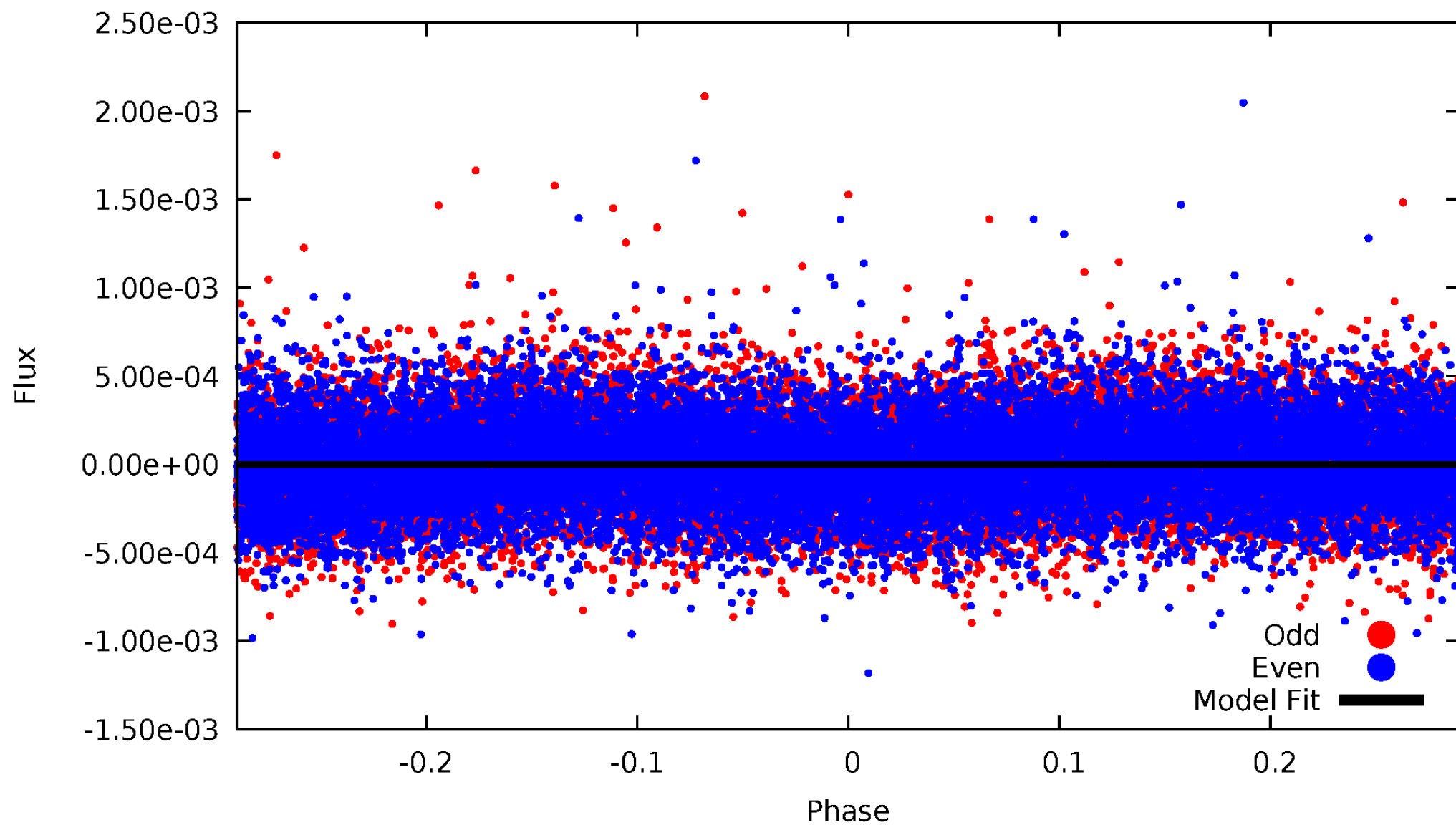


TCE 008586745-01



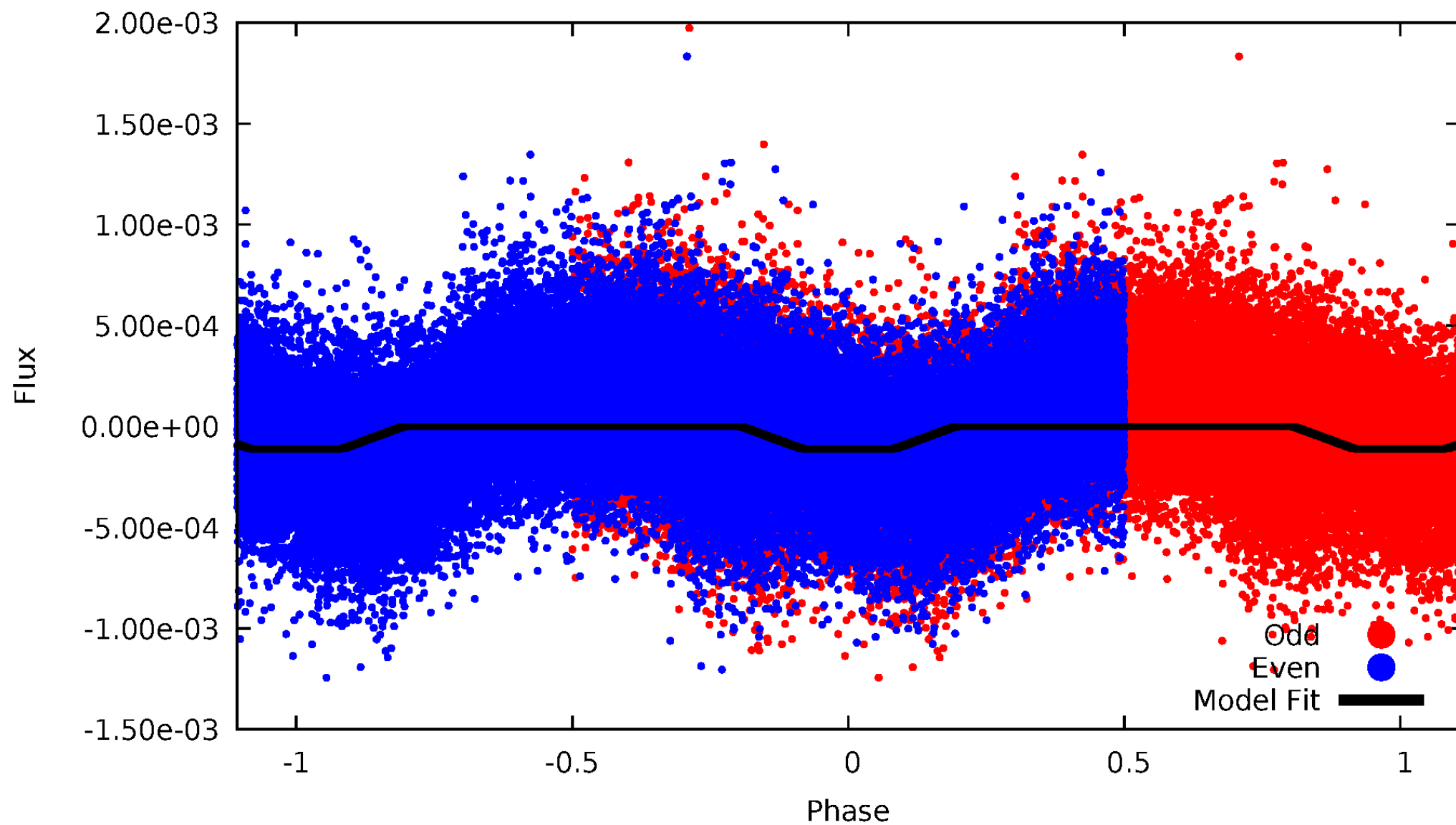
# DV Odd/Even

TCE 008586745-01

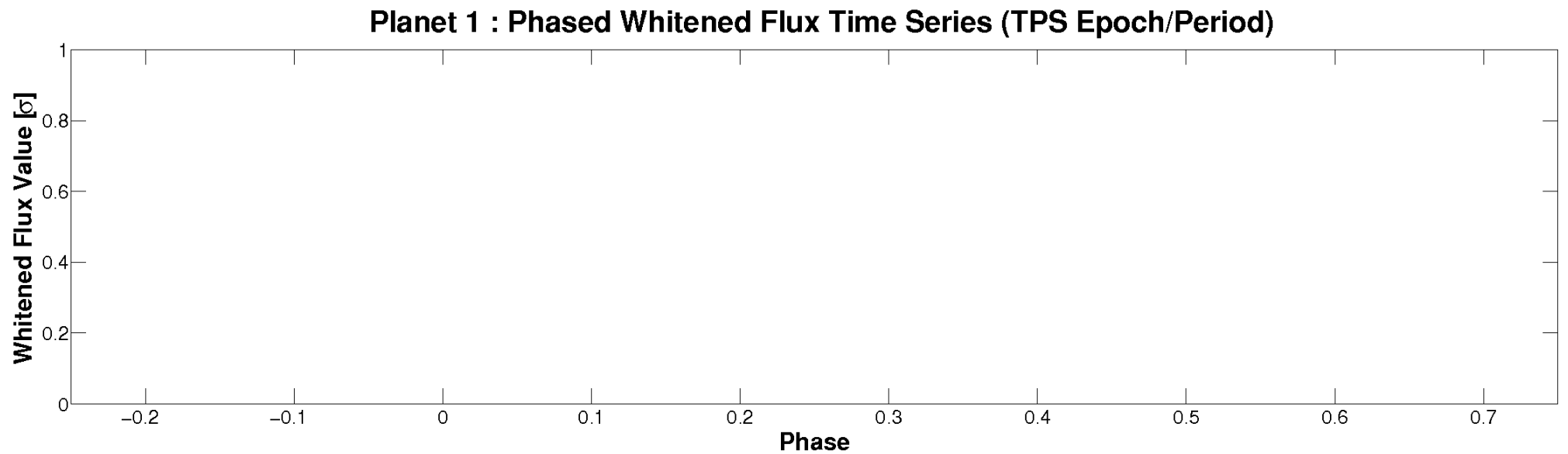
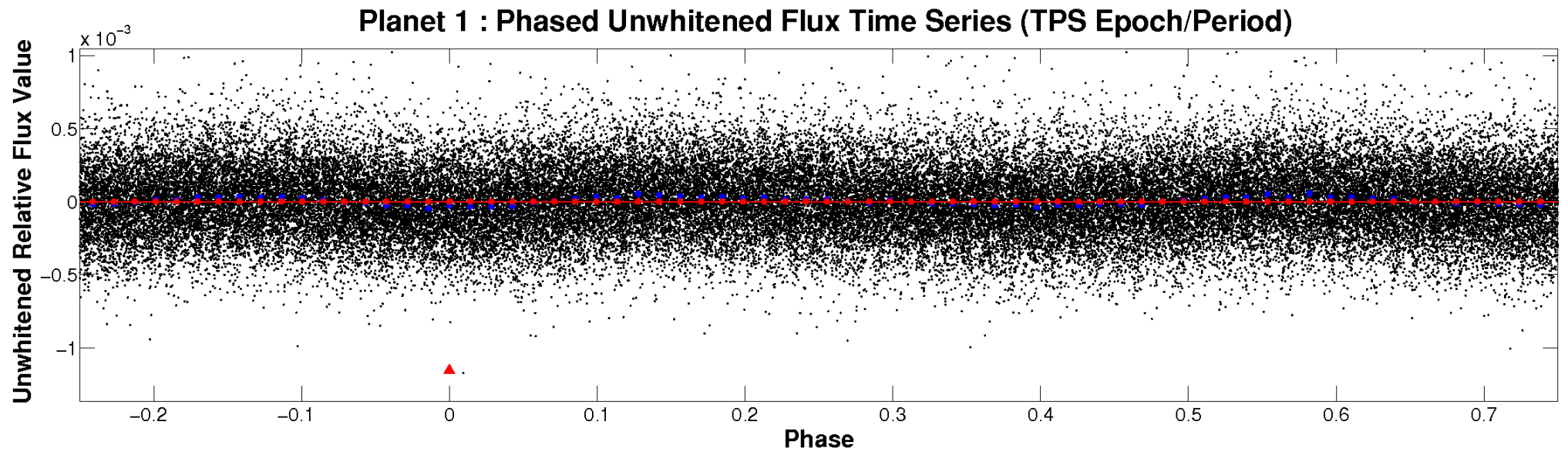


# ALT Odd/Even

TCE 008586745-01



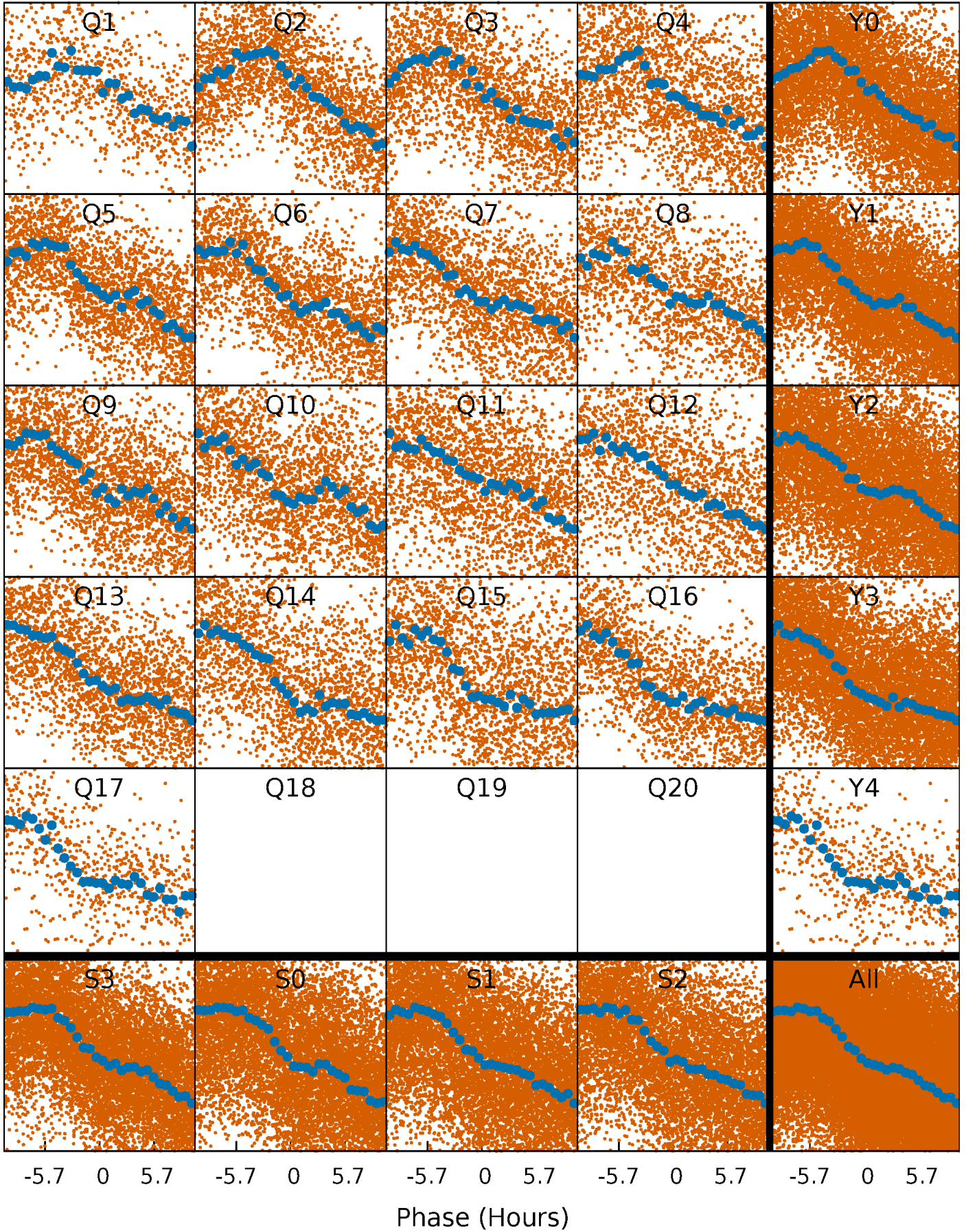
# Non-Whitened Vs. Whitened Light Curve





# PDC Quarter-Phased Transit Curves

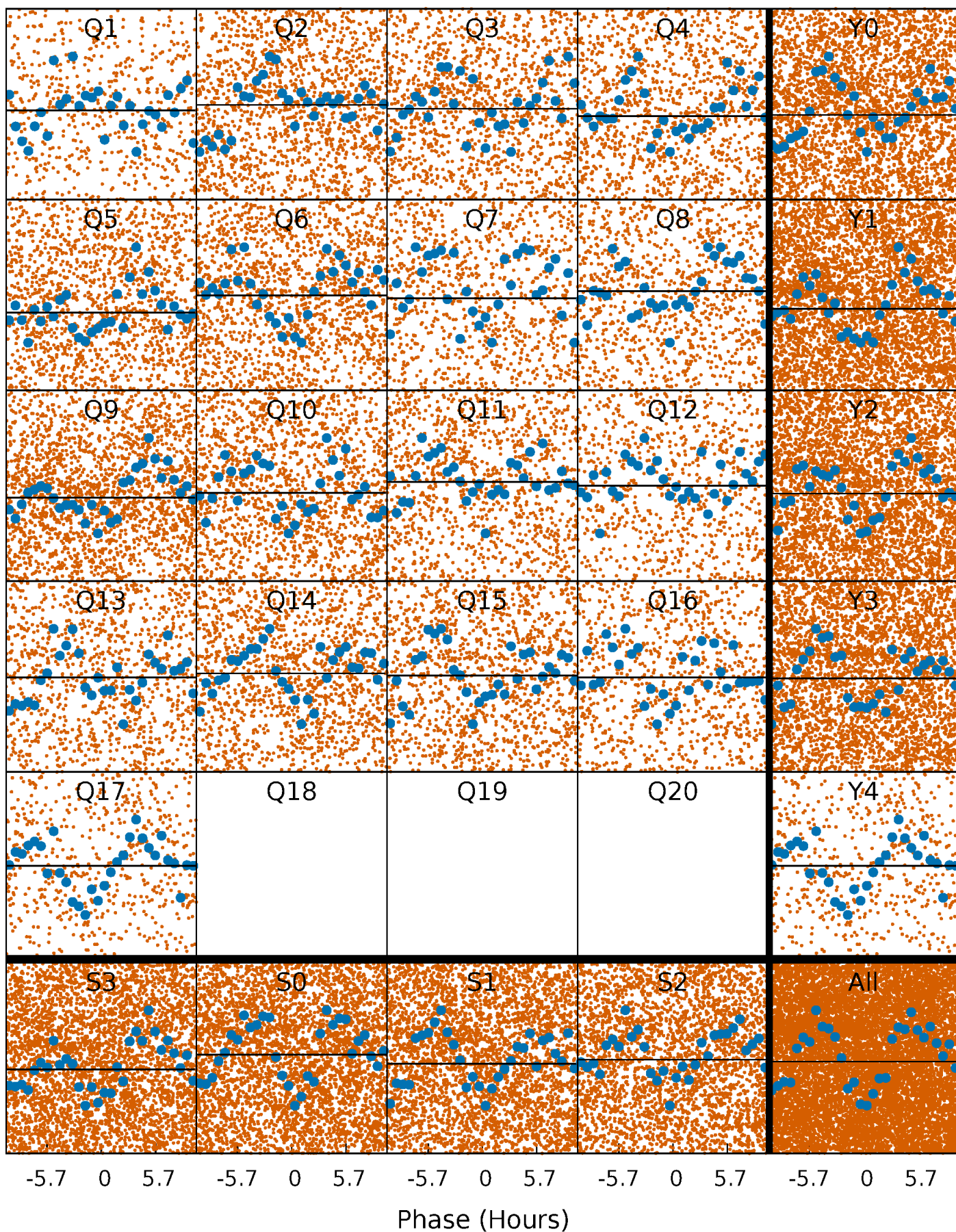
TCE 008586745-01 P= 1.439661 Days  $T_0=132.120595$  (BKJD)





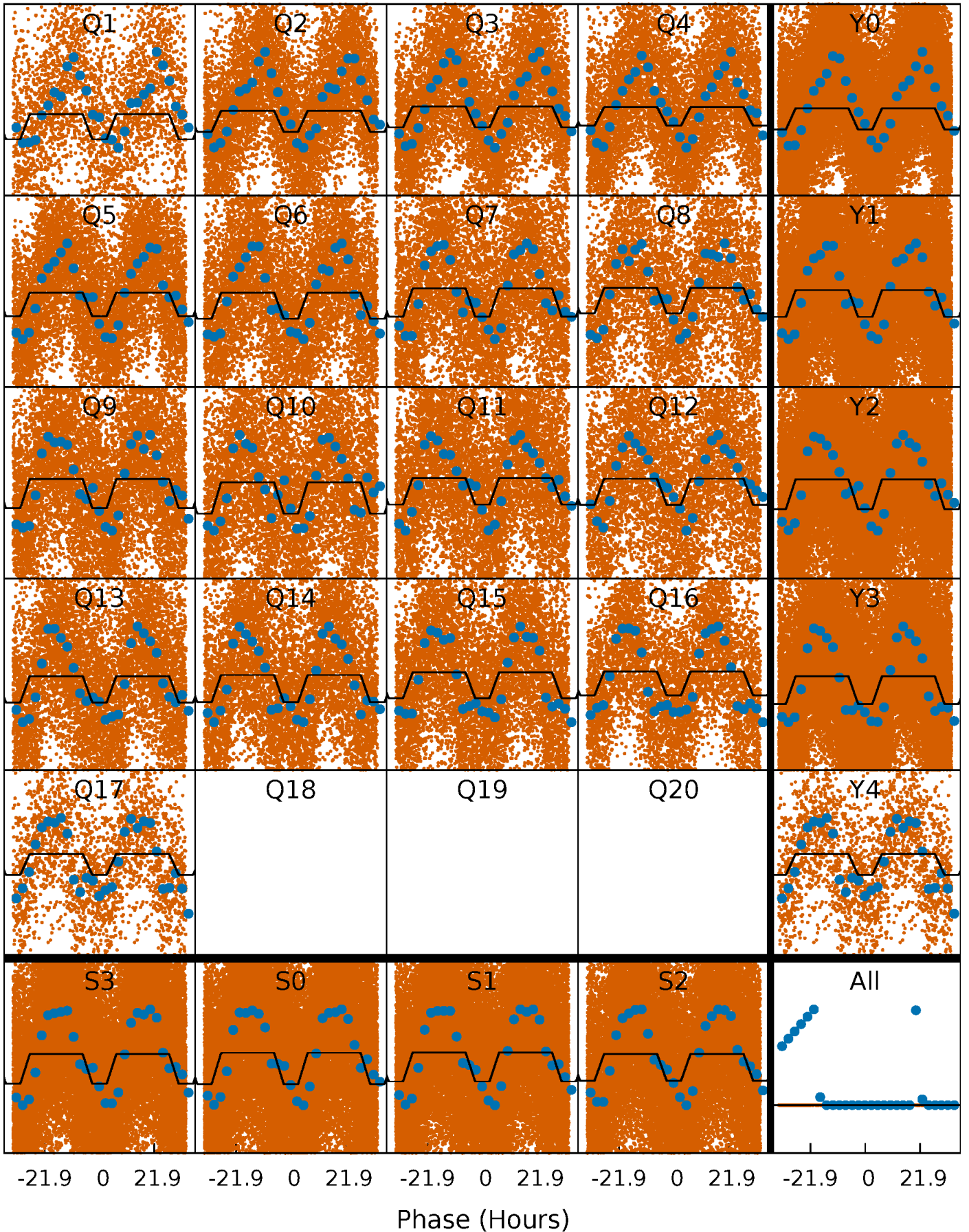
# DV Quarter-Phased Transit Curves

TCE 008586745-01 P= 1.439661 Days  $T_0=132.120595$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

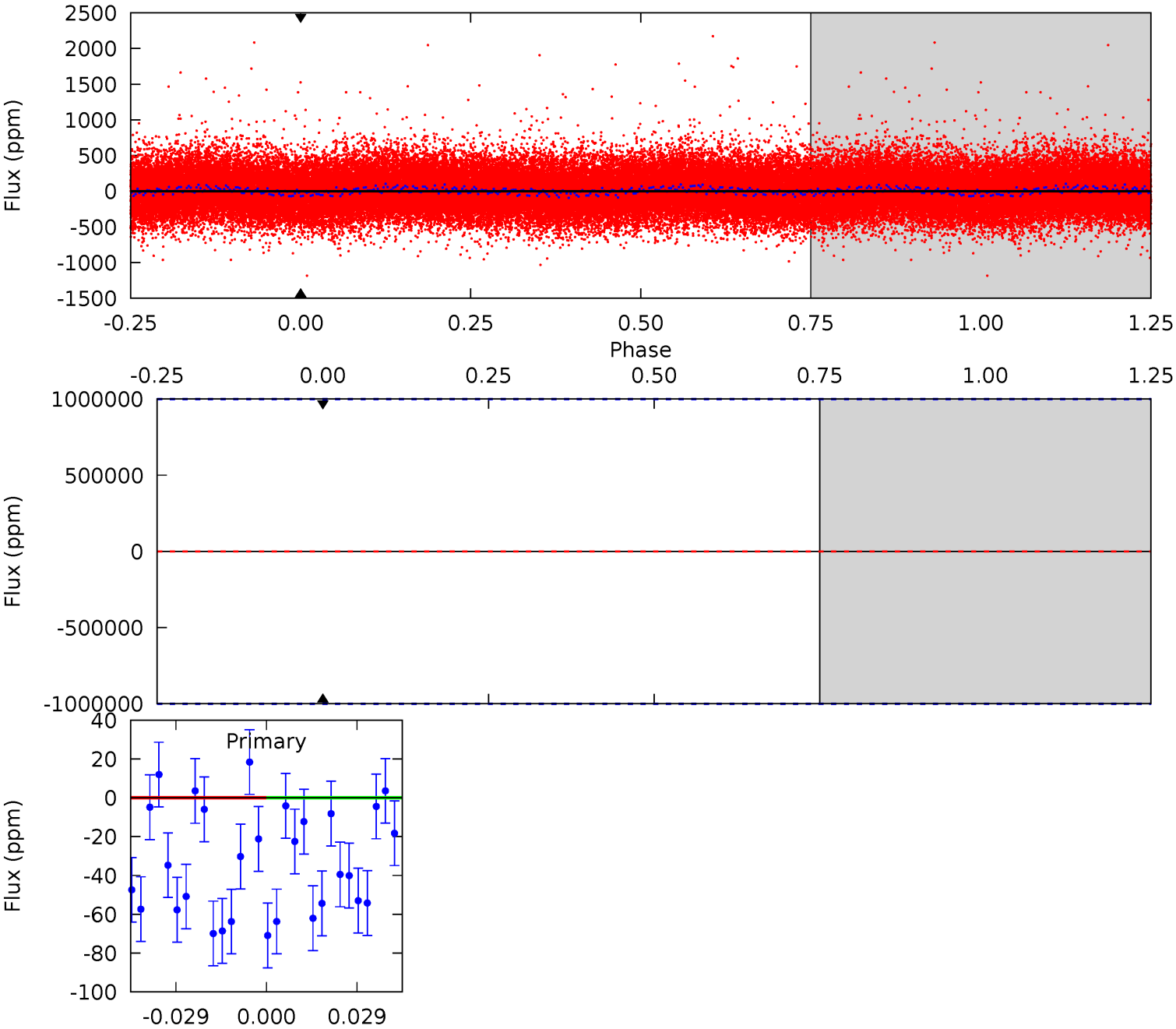
TCE 008586745-01 P= 1.439661 Days  $T_0=132.437252$  (BKJD)



# DV Model-Shift Uniqueness Test

008586745-01, P = 1.439661 Days, E = 130.680934 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

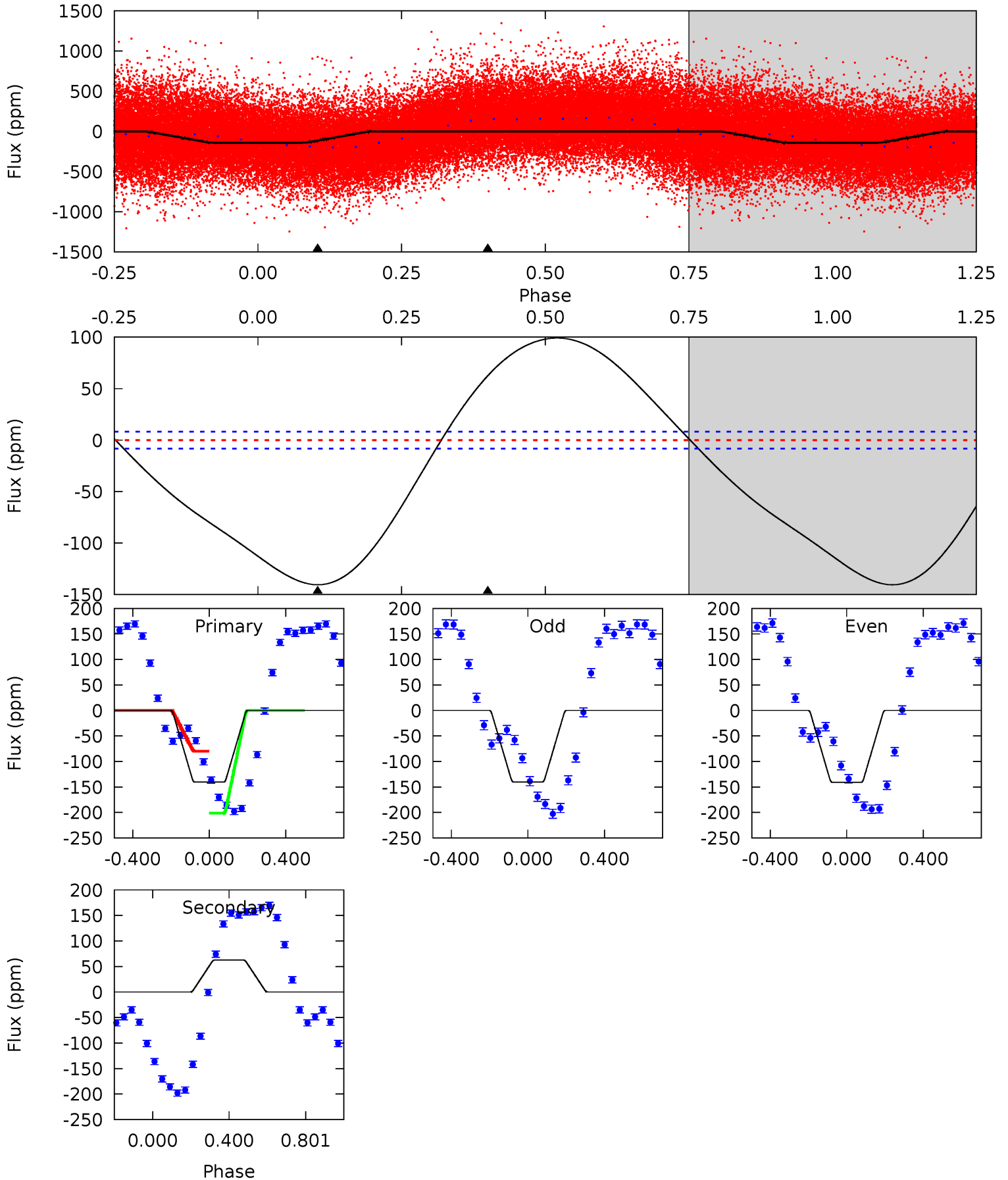




# Alt Model-Shift Uniqueness Test

008586745-01, P = 1.439661 Days, E = 130.997591 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
72.4	-32.2	0	0	4.26	0.84	8.90	72.4	72.4	-32.2	-32.2	0.21	1.16	0.41	34.4





### Stellar Parameters For KIC 008586745

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$6198^{+217}_{-217}$	$3.805^{+0.488}_{-0.122}$	$-0.100^{+0.300}_{-0.300}$	$2.398^{+0.514}_{-1.198}$	$1.338^{+0.212}_{-0.317}$	$0.137^{+0.710}_{-0.051}$
	+4%/-4%	+13%/-3%	+300%/-300%	+21%/-50%	+16%/-24%	+520%/-37%
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 008586745-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$0 \pm 1000000$	$17.26^{+19.33}_{-12.58}$	$3476^{+297}_{-443}$	$4344^{+25346}_{-27620}$	$1.381^{+323.335}_{-223.175}$
Alt.	$63 \pm 2$	$16.44^{+18.81}_{-11.29}$	$3480^{+268}_{-422}$	$-3579^{+265}_{-647}$	$-0.095^{+0.073}_{-0.849}$

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

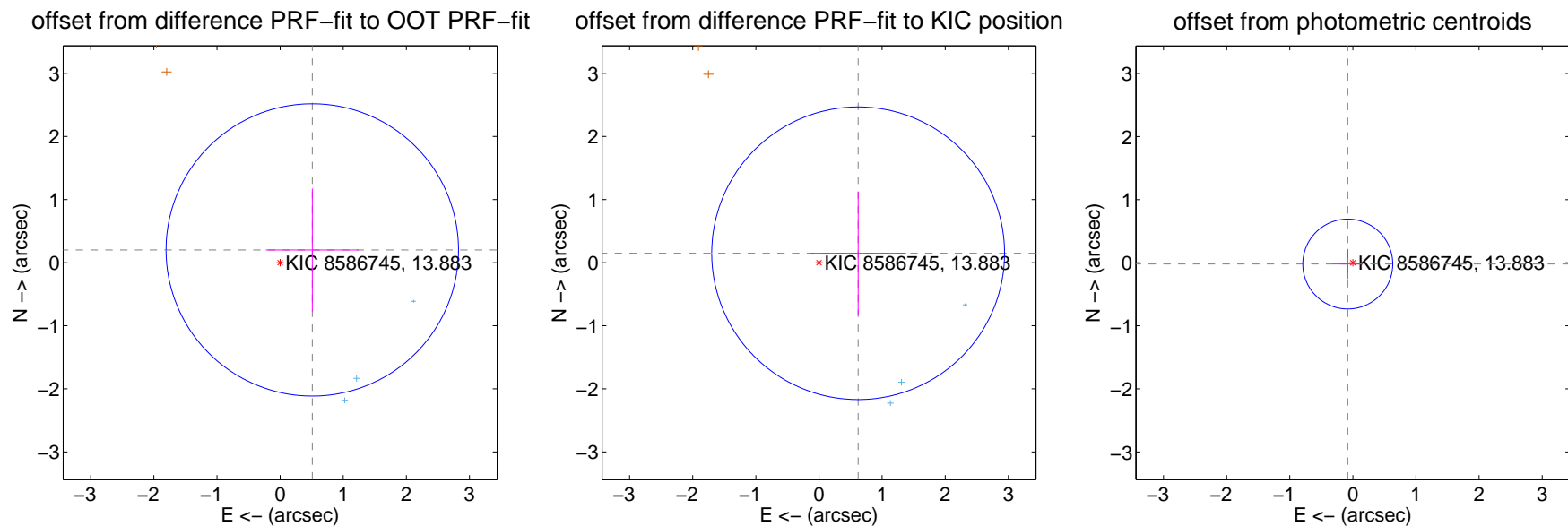
## DV Centroid Data

Supplemental centroid analysis for 008586745-01. Kepler magnitude: 13.88. Transit SNR -1.00

There are 3 quarters with good PRF difference image offsets

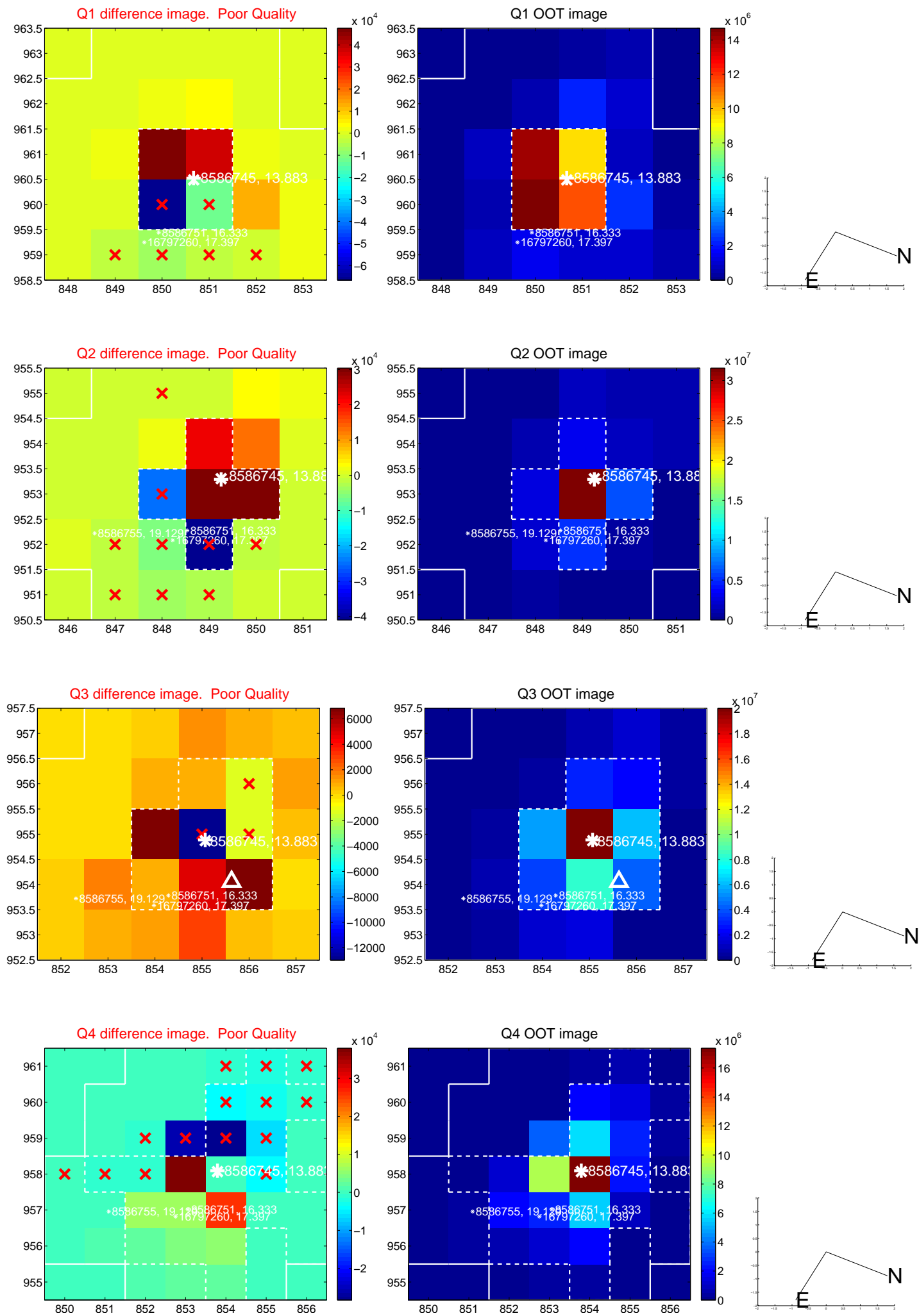
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.548 \pm 0.772$	0.71	$-0.510 \pm 0.735$	$0.202 \pm 0.973$
PRF-fit source offset from KIC position	$0.638 \pm 0.773$	0.83	$-0.620 \pm 0.760$	$0.149 \pm 0.974$
photometric centroid source offset	$0.08 \pm 0.24$	0.35	$0.08 \pm 0.24$	$-0.02 \pm 0.24$

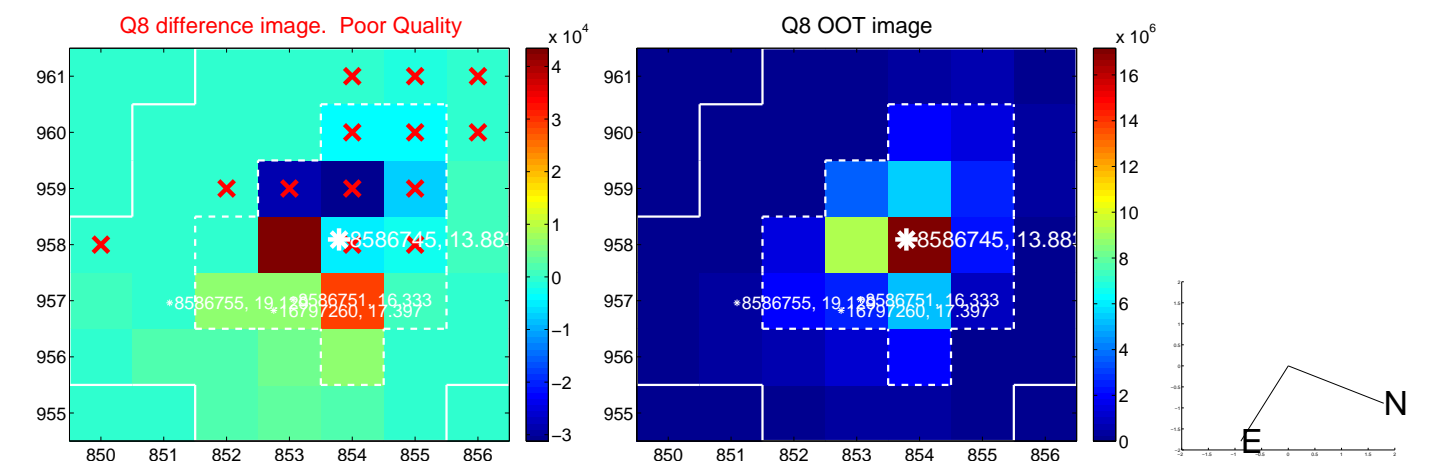
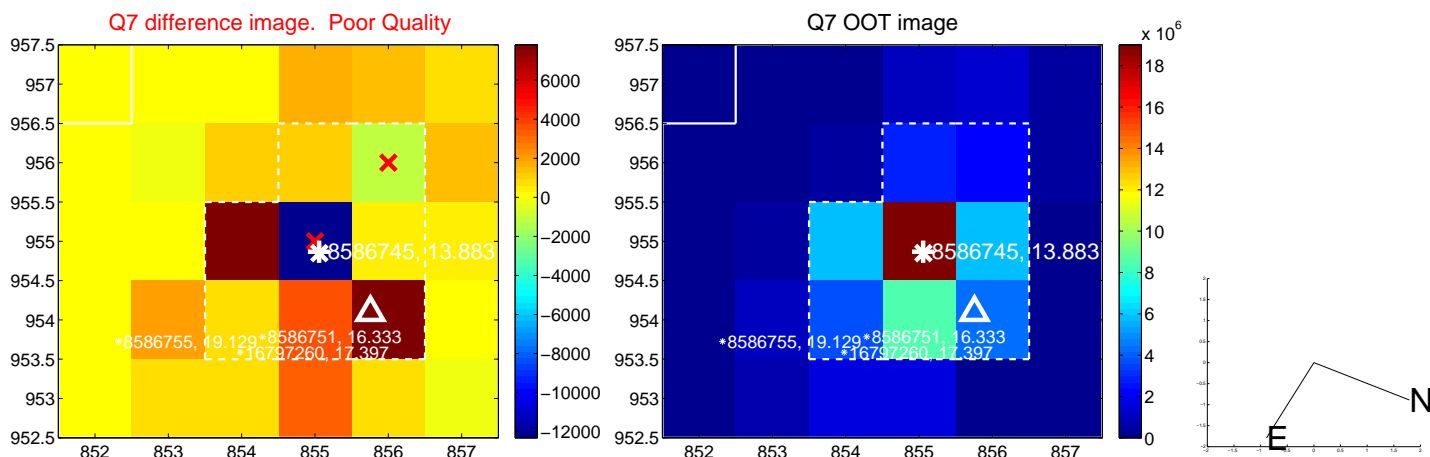
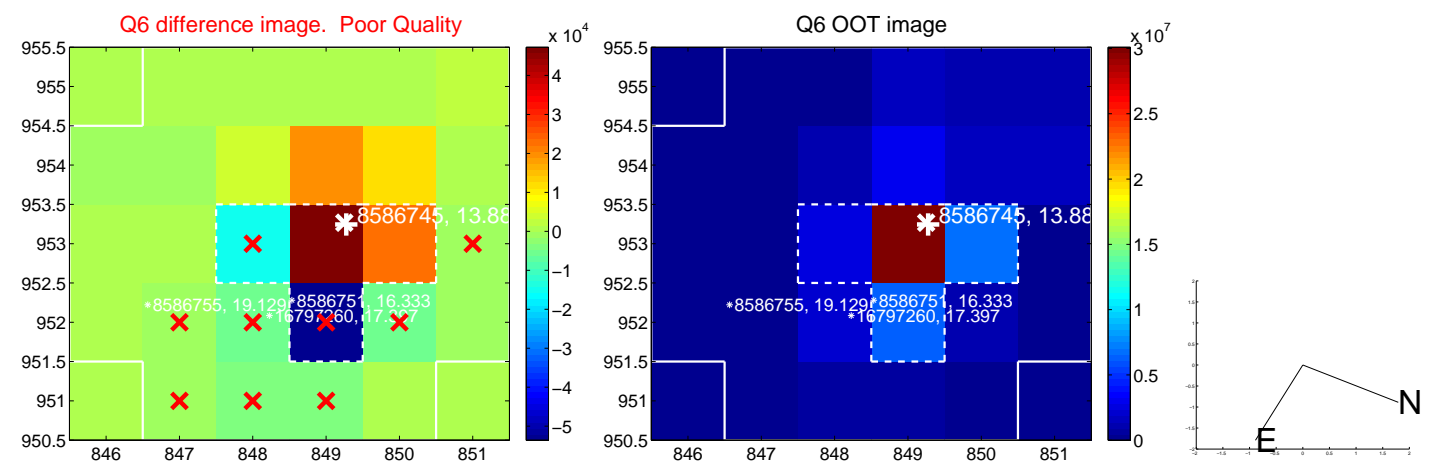
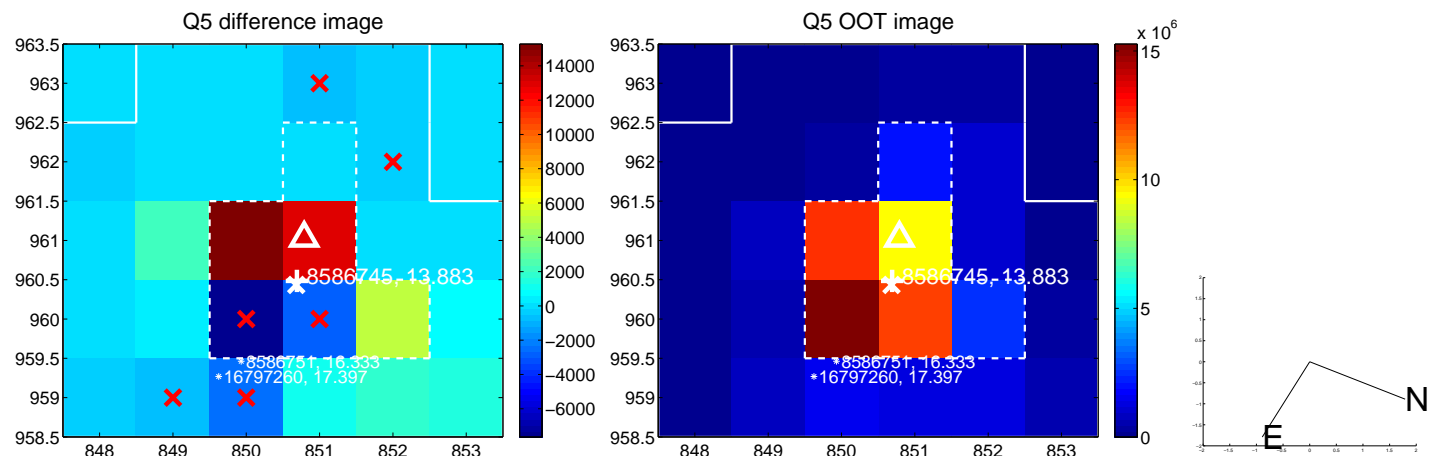


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

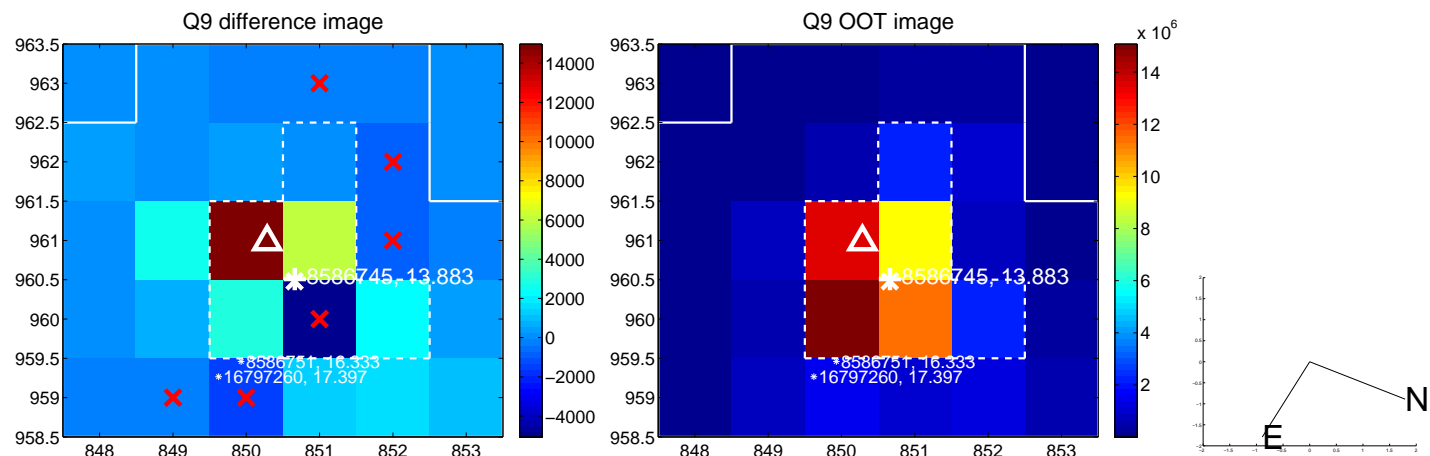


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

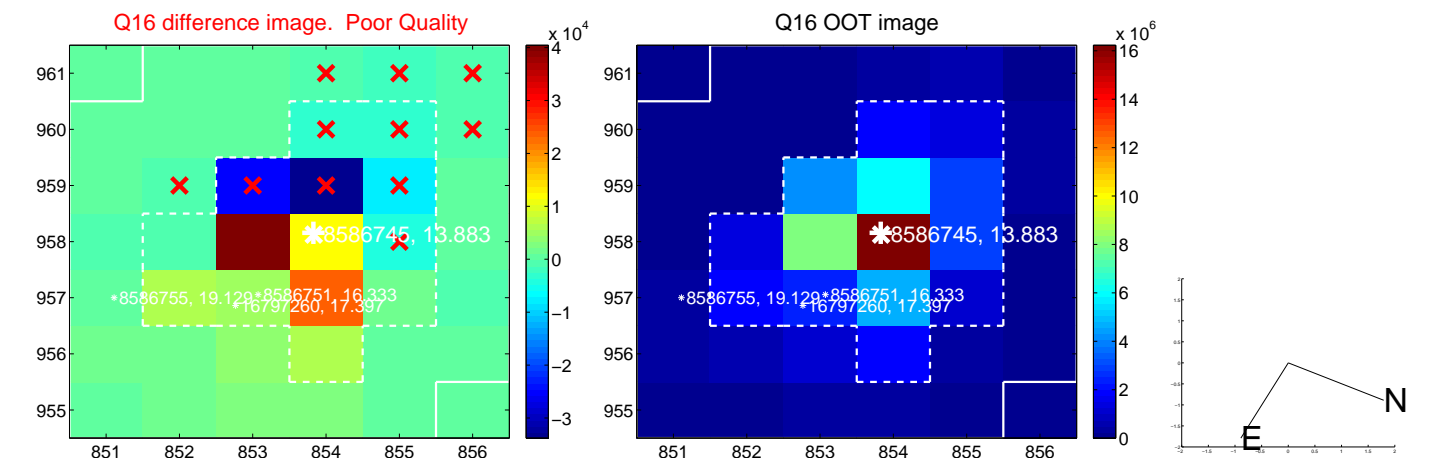
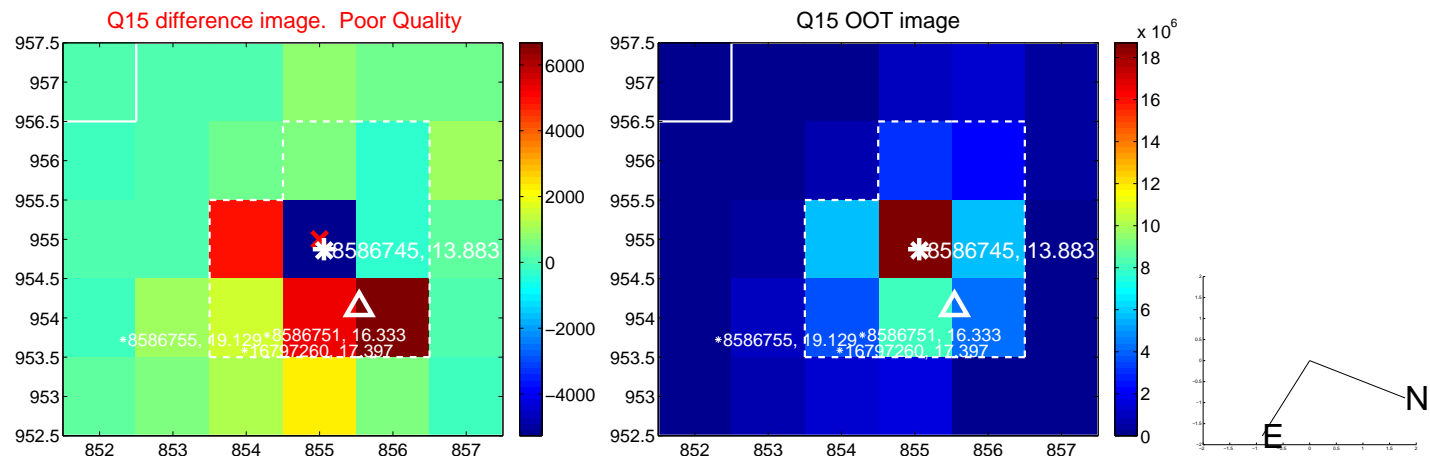
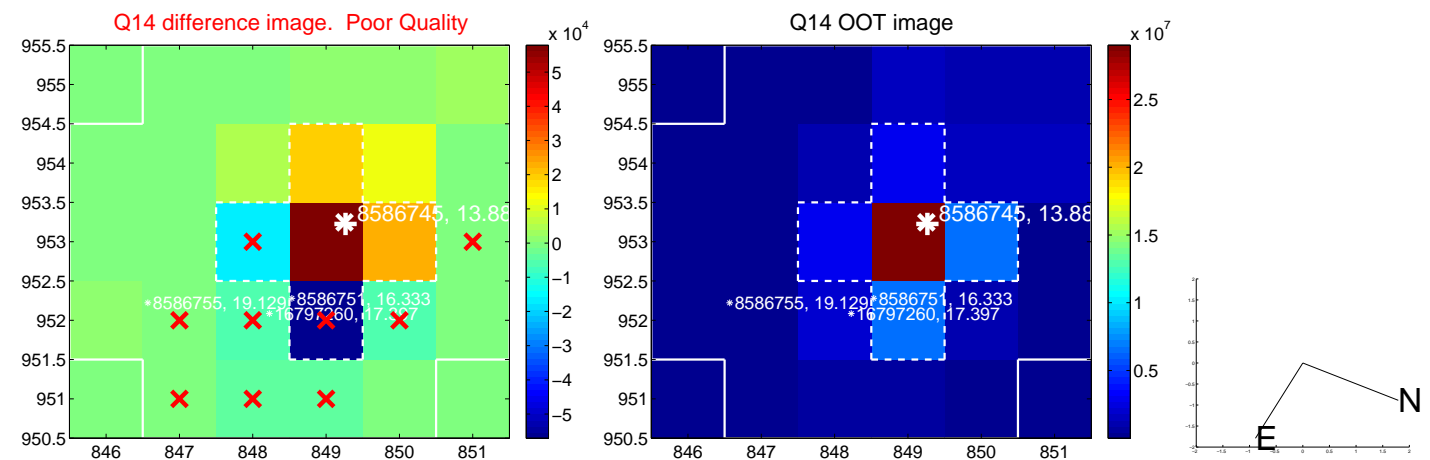
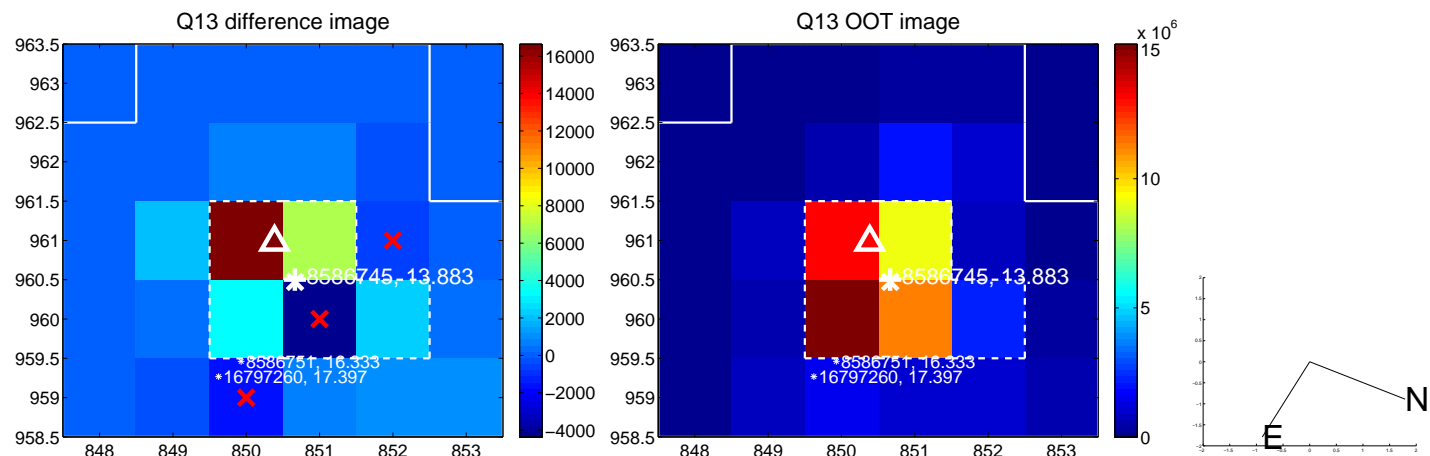




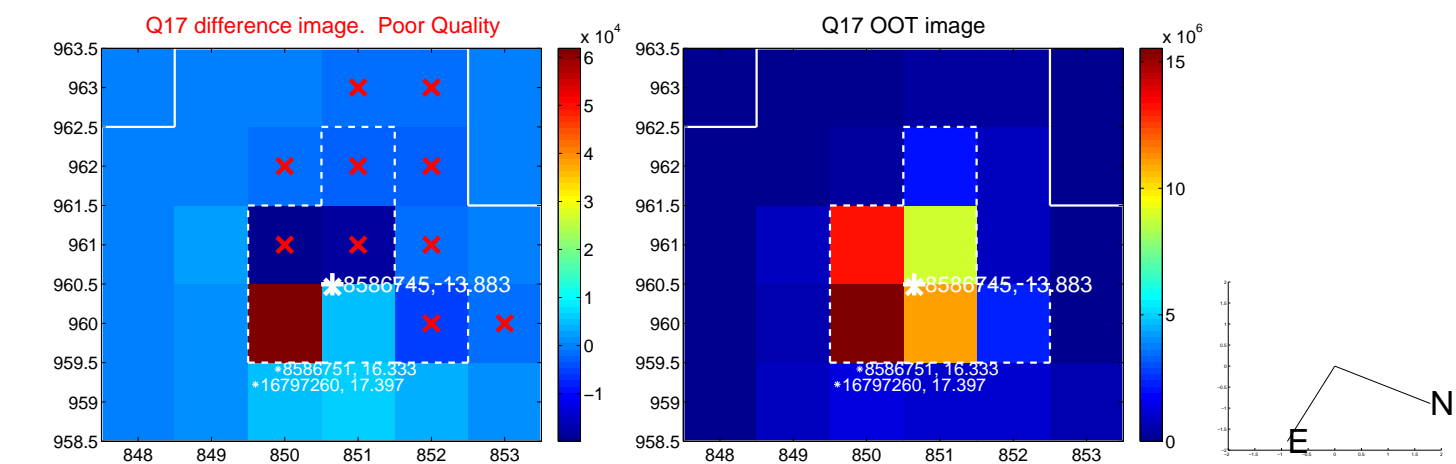
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



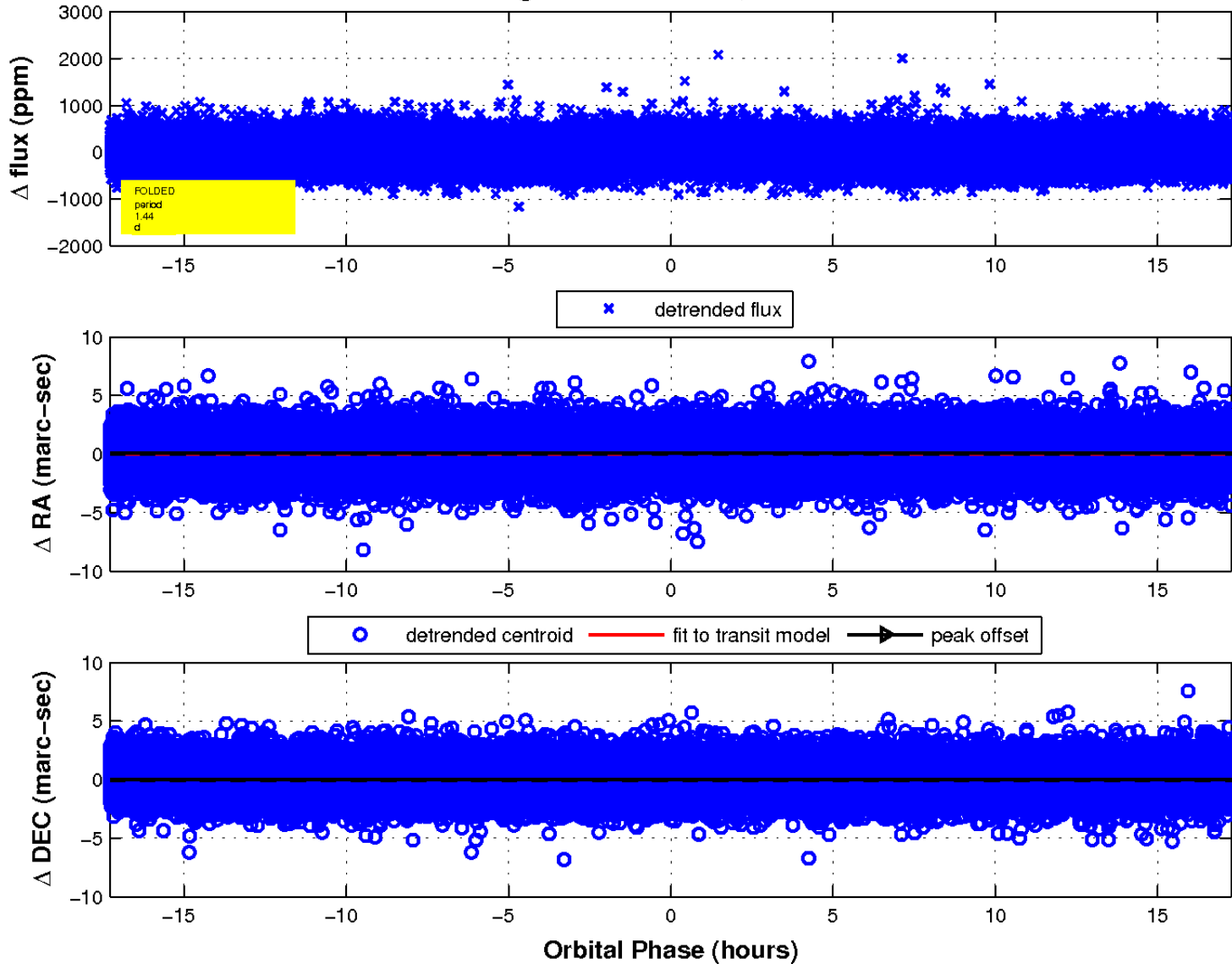
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

