

# KIC 008650155

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008650155-01	OBS	No	1.319875	132.742200	10.6	11.629	10.1	6.1	3.30	6458	1.11	22598.34

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008650155-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_FEW_DIFFS

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

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

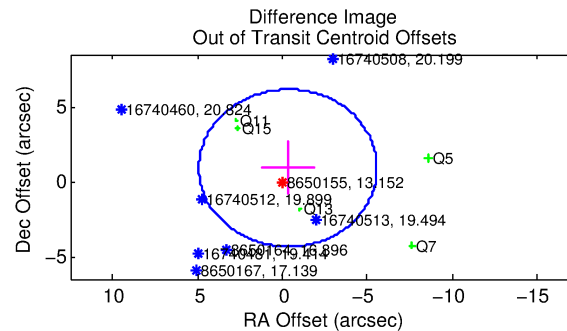
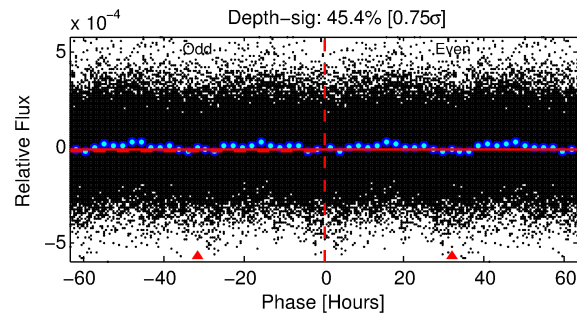
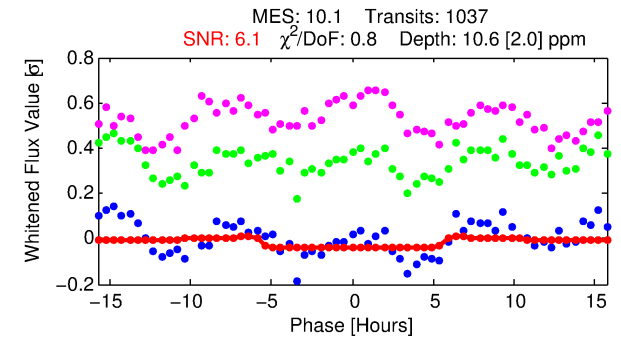
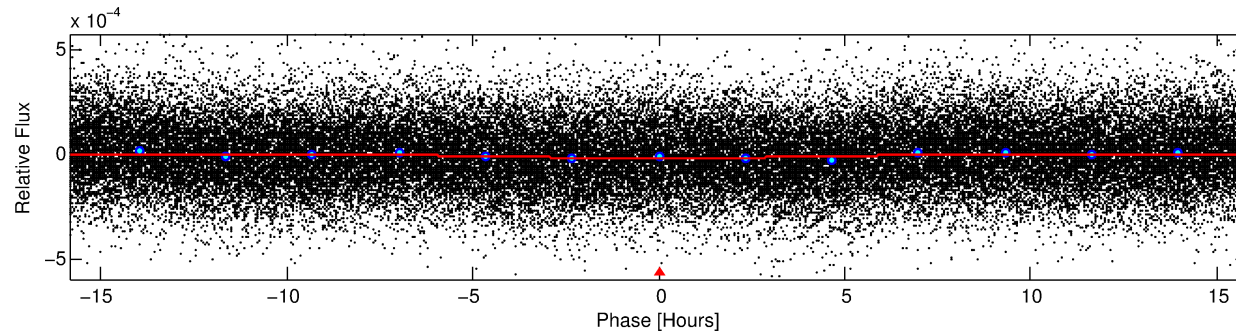
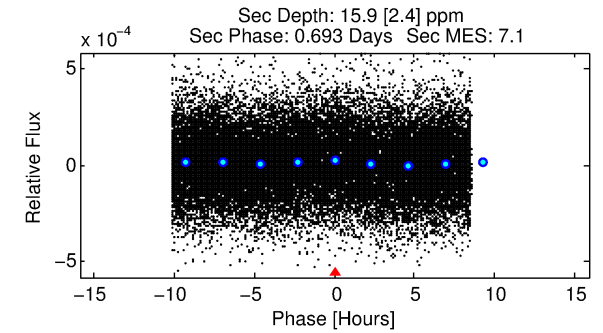
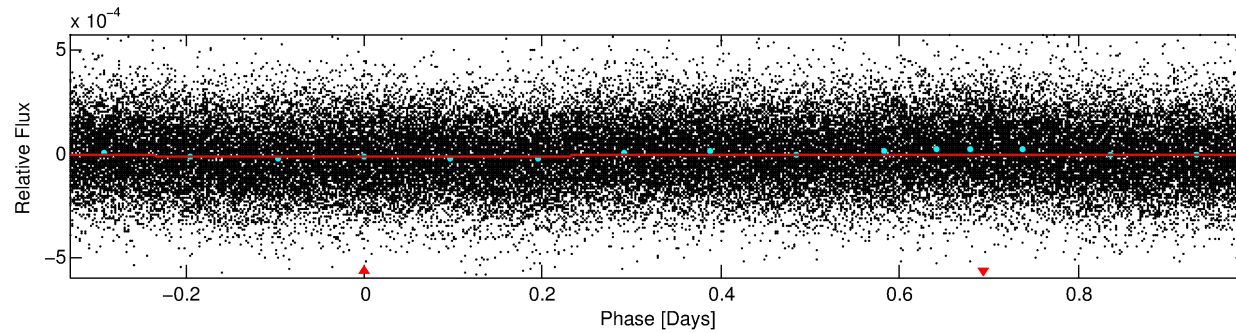
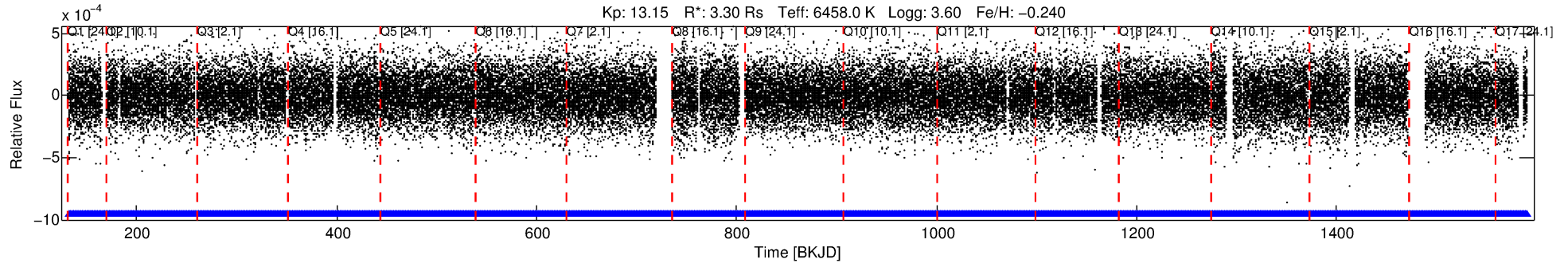
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008650155-01

No Significant Match Found

# DV One-Page Summary

KIC: 8650155 Candidate: 1 of 1 Period: 1.320 d



## DV Fit Results:

Period = 1.31988 [0.00004] d  
Epoch = 132.7422 [0.0115] BKJD  
Rp/R\* = 0.0031 [0.0038]  
a/R\* = 1.07 [0.90]  
b = 0.55 [8.65]  
Seff = 22598.34 [13610.64]  
Teq = 3126 [471] K  
Rp = 1.11 [1.43] Re  
a = 0.0274 [0.0102] AU  
Ag = 5.27 [13.30] [0.32σ]  
Teffp = 7325 [4496] K [0.93σ]

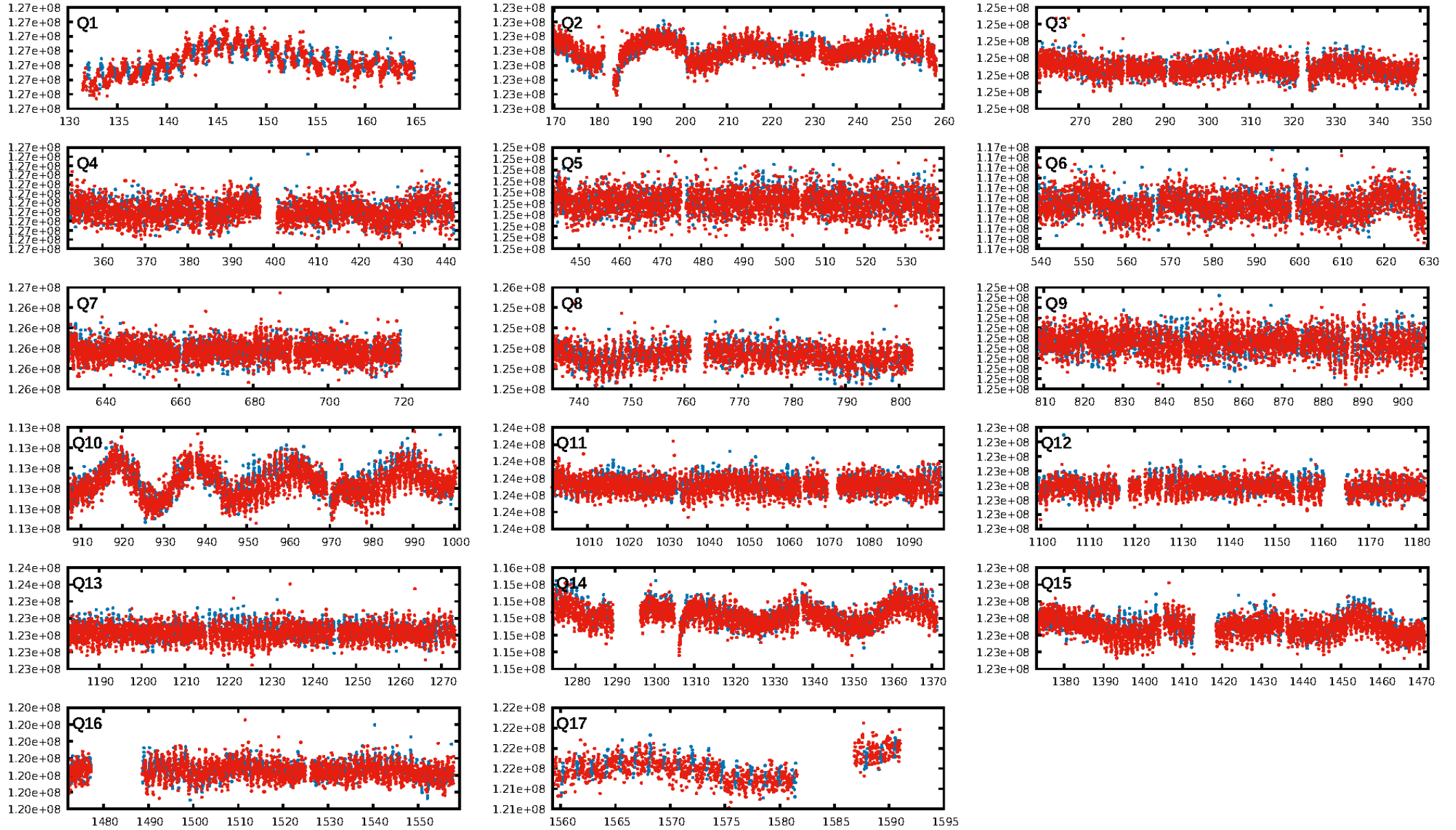
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [990/990]  
GhostDiagnostic-chr: 3.403  
Centroid-sig: 62.2%  
Centroid-so: 0.855 arcsec [0.61σ]  
OotOffset-rm: 0.963 arcsec [0.55σ]  
OotOffset-st: 0/3/0/2 [5]  
KicOffset-rm: 0.962 arcsec [0.55σ]  
KicOffset-st: 0/3/0/2 [5]  
DiffImageQuality-fgm: 0.20 [1/5]  
DiffImageOverlap-fno: 1.00 [17/17]

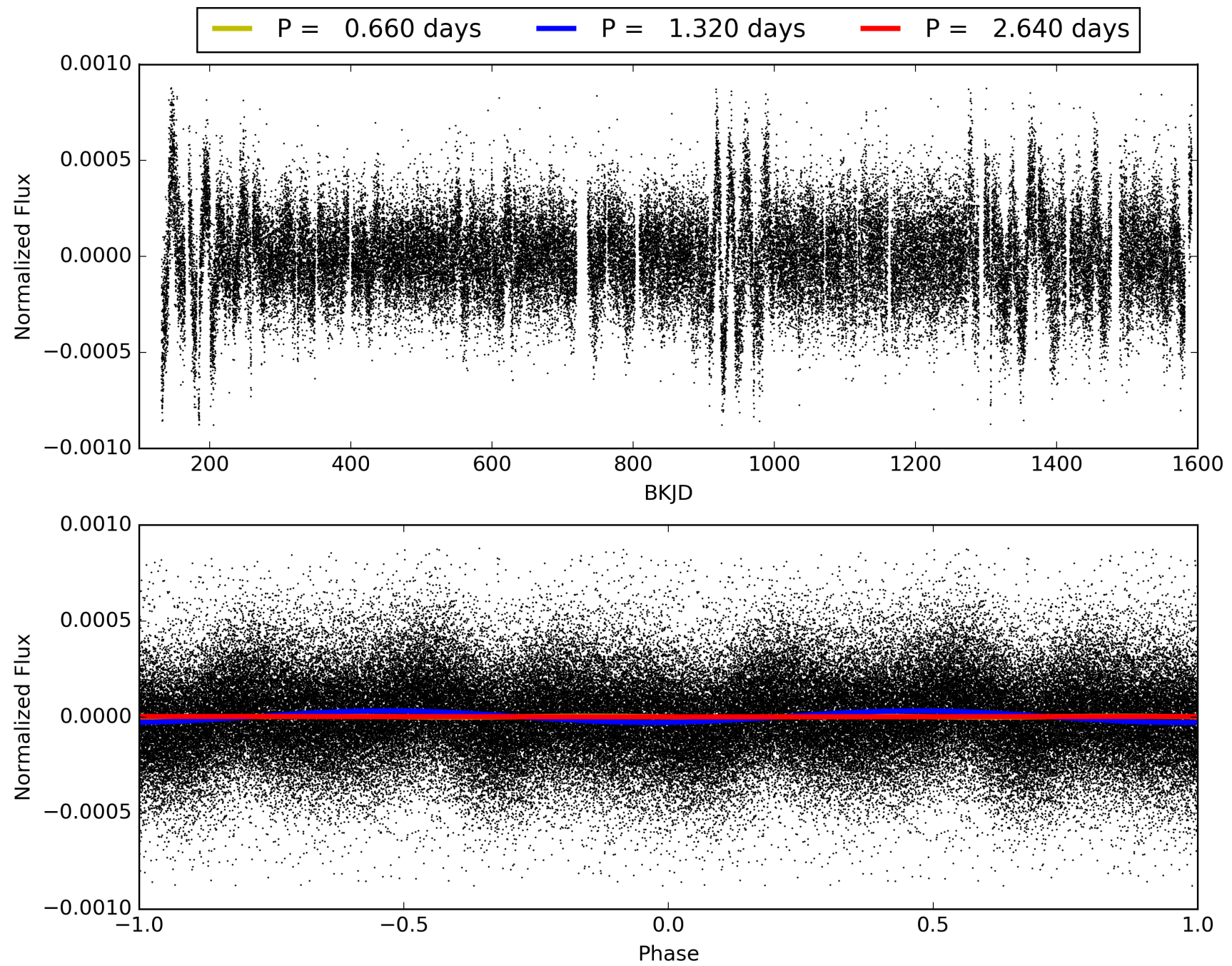
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:12:35 Z

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

# TCE 008650155-01, PDC Light Curves



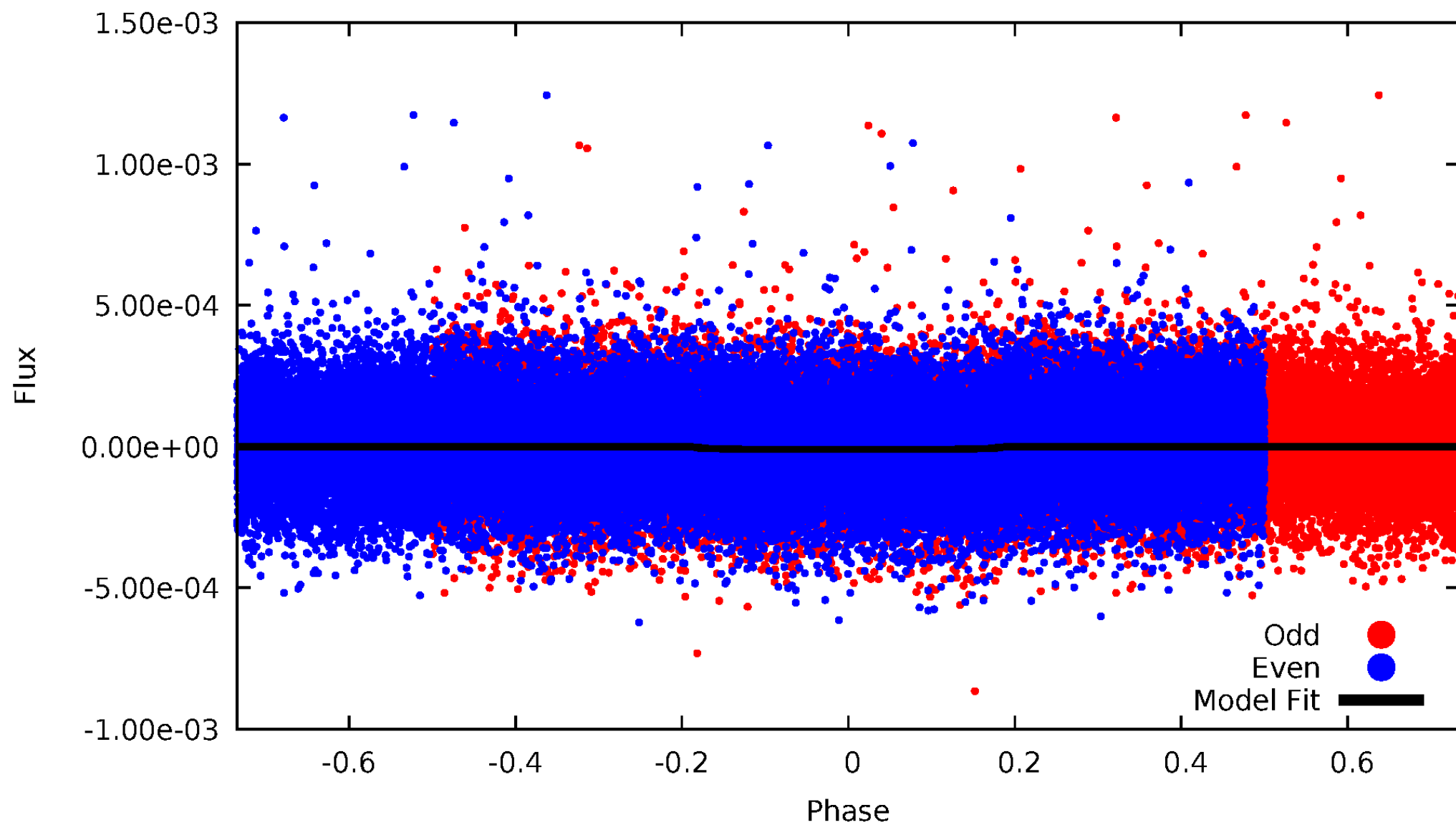
TCE 008650155-01





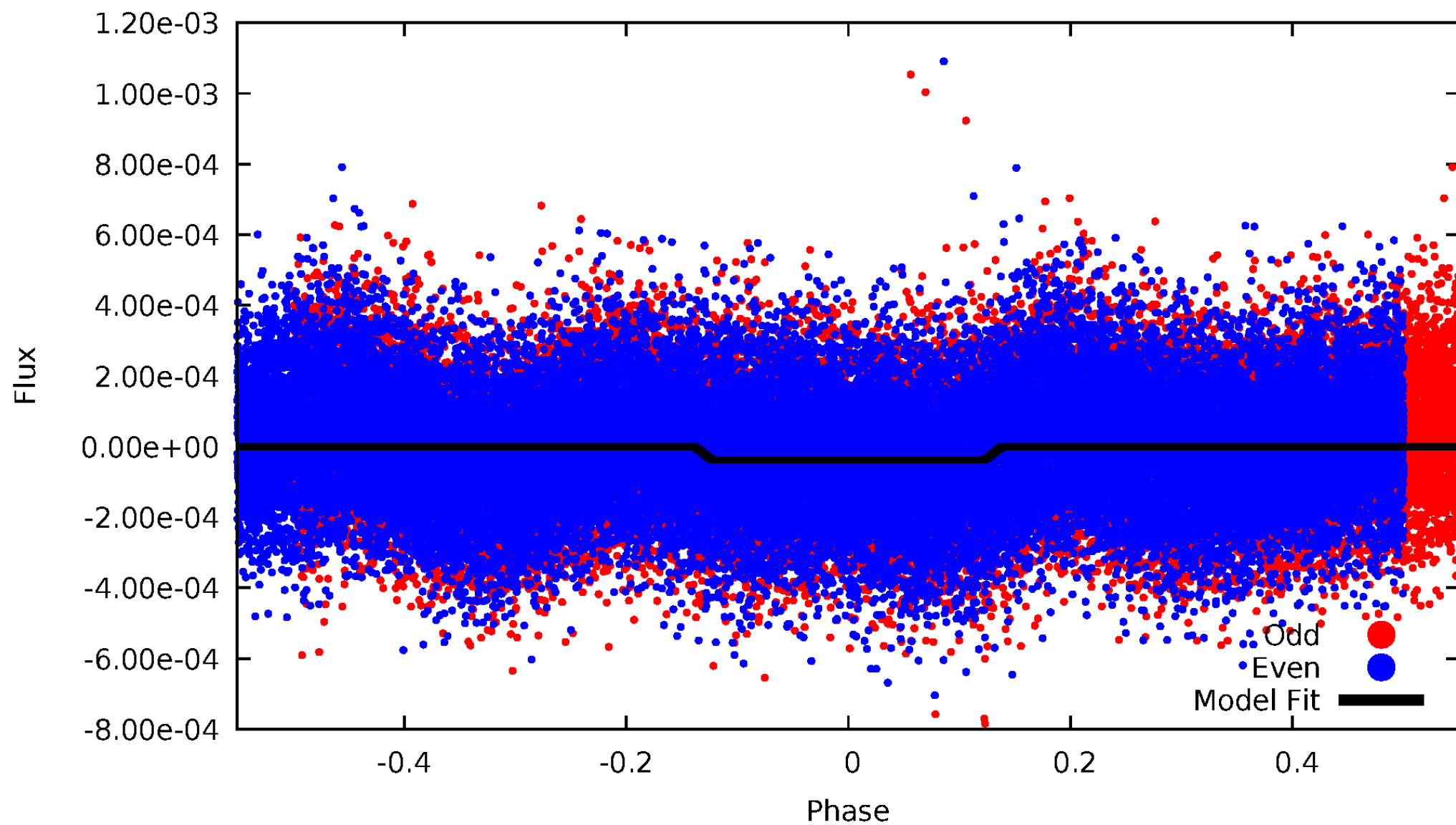
# DV Odd/Even

TCE 008650155-01



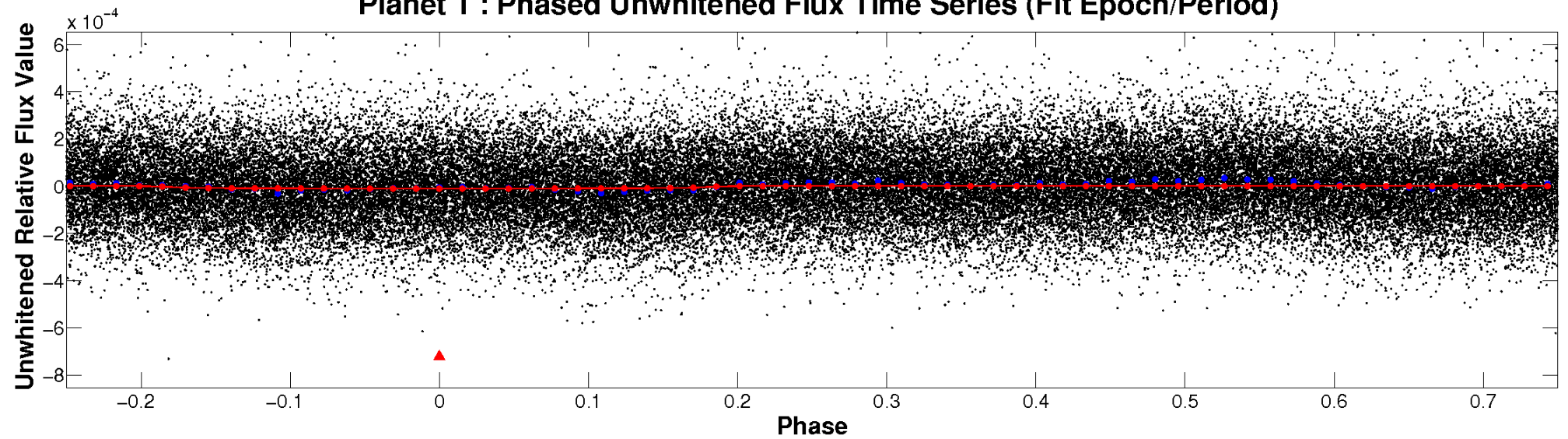
# ALT Odd/Even

TCE 008650155-01

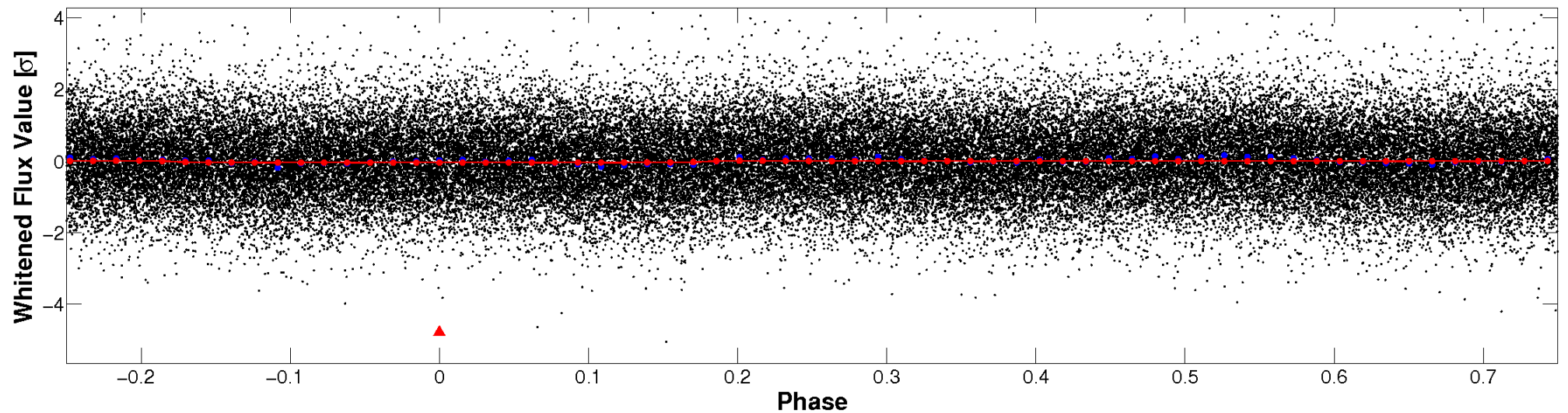


# Non-Whitened Vs. Whitened Light Curve

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

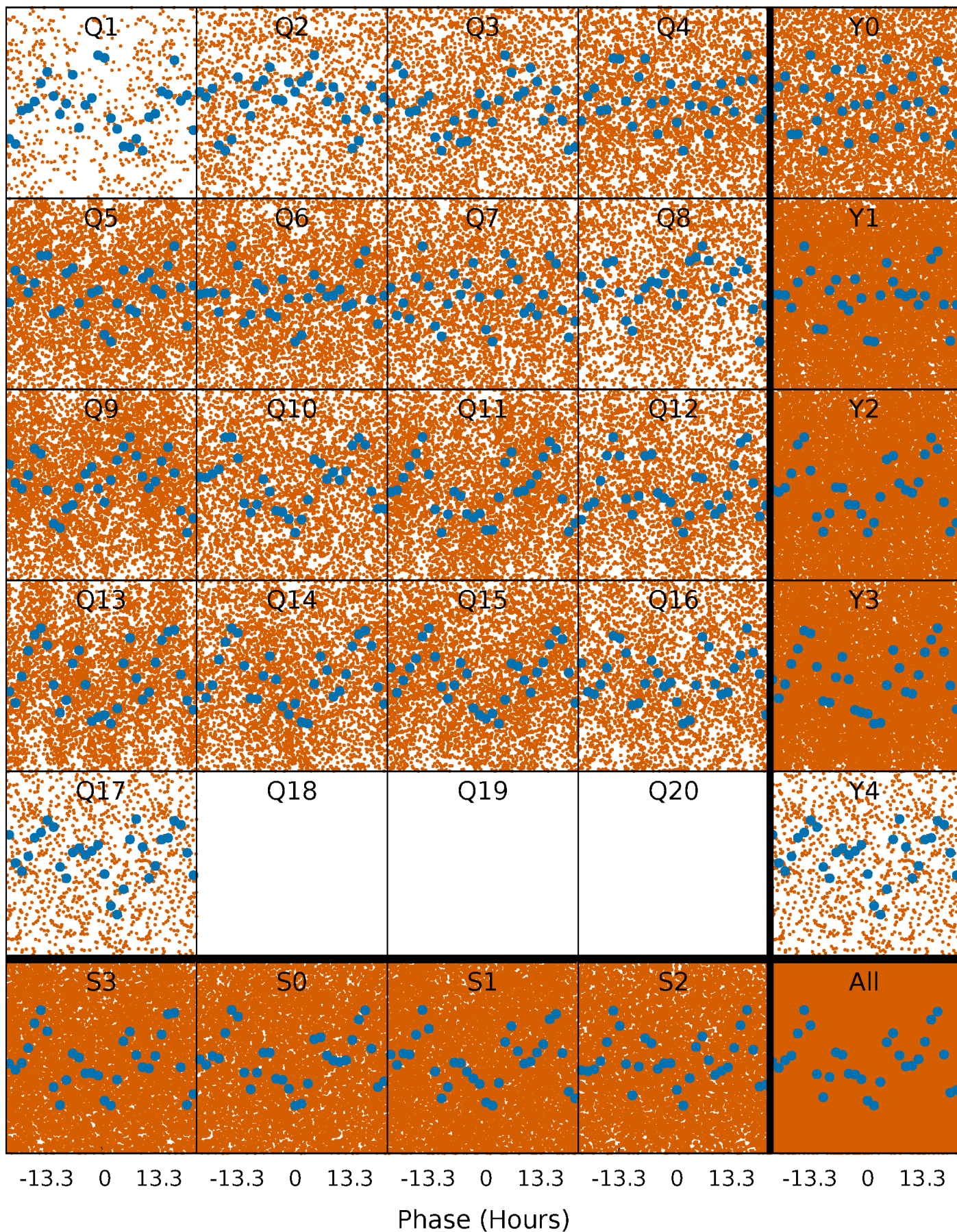


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

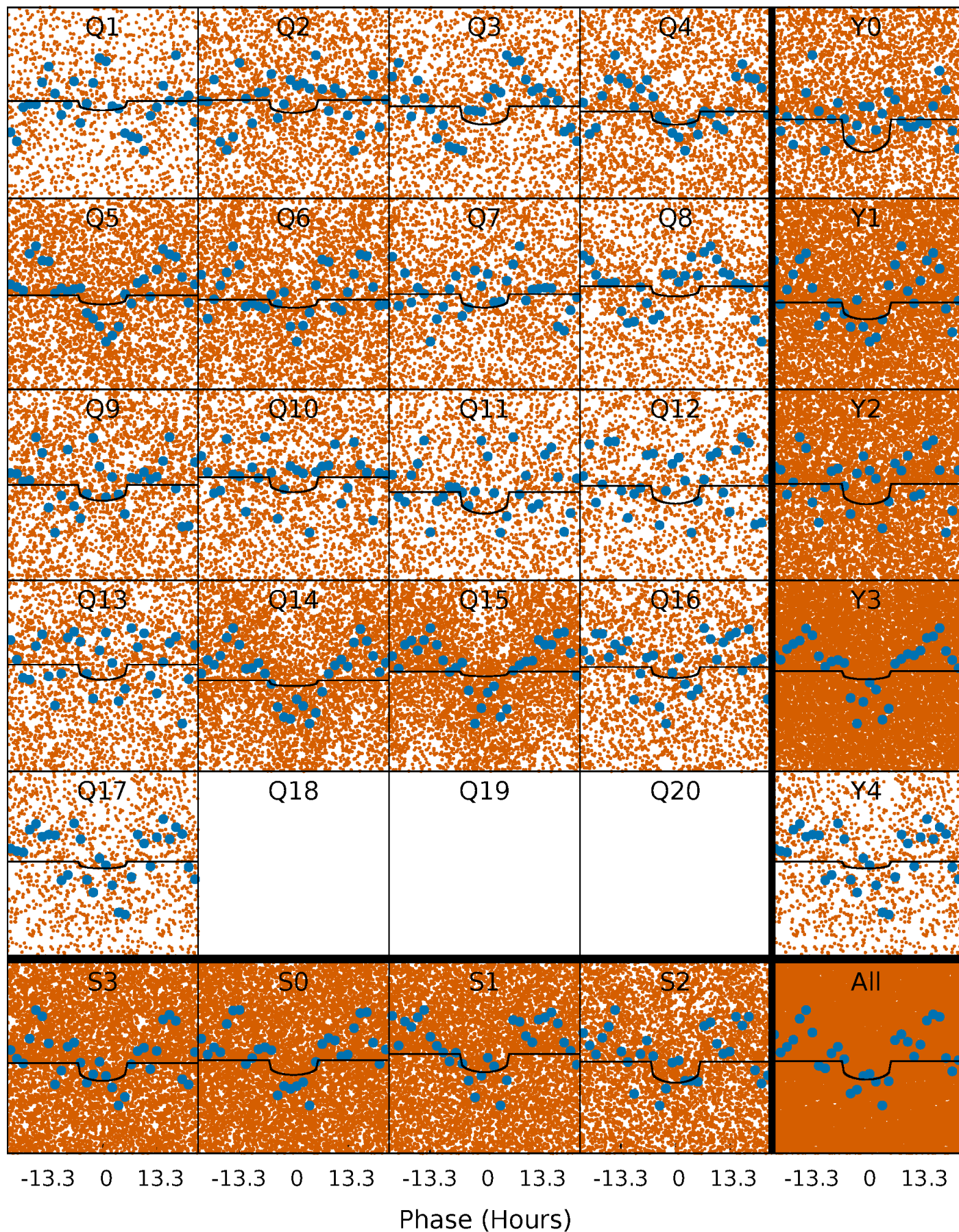
TCE 008650155-01 P= 1.319875 Days  $T_0=132.742200$  (BKJD)





# DV Quarter-Phased Transit Curves

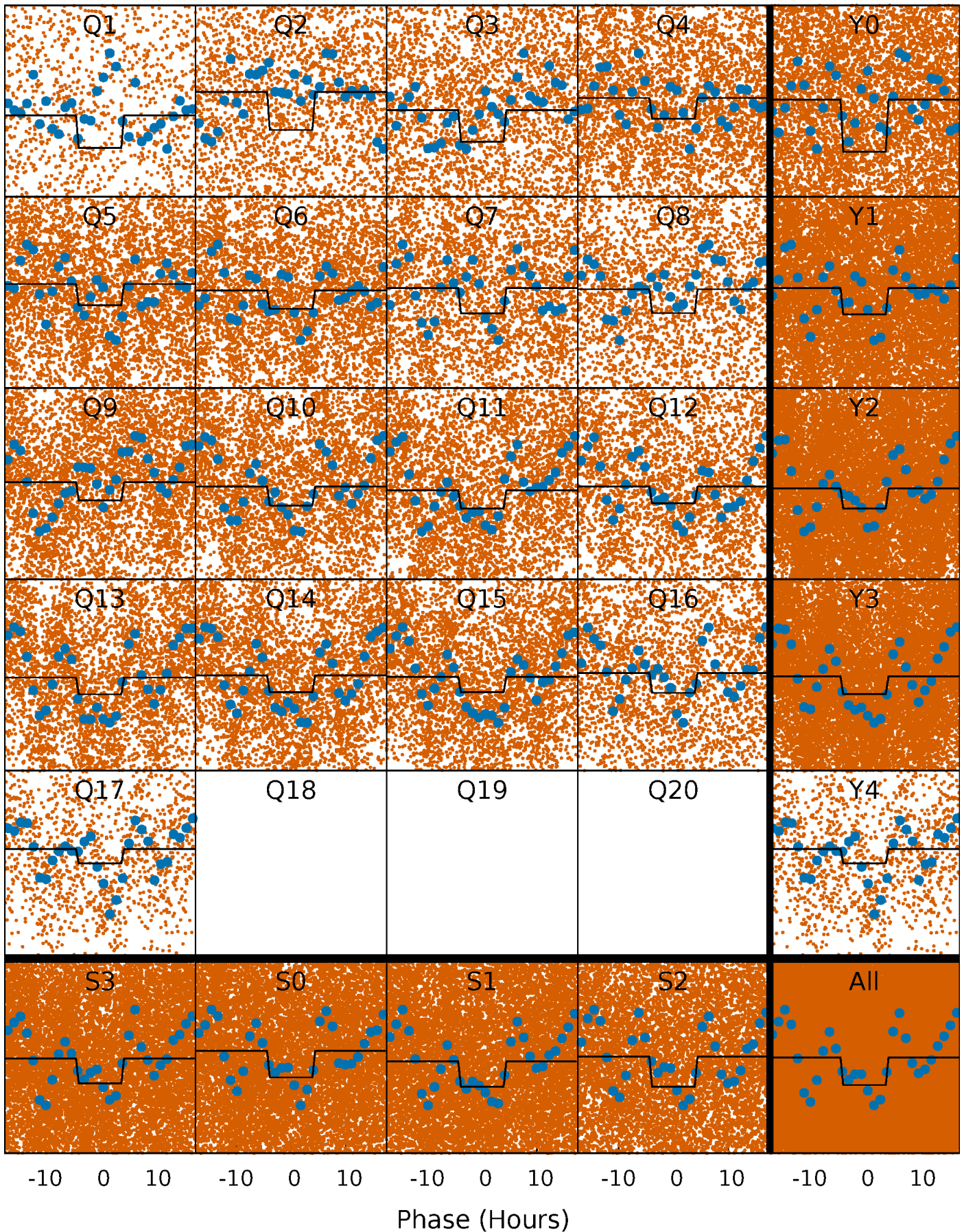
TCE 008650155-01 P= 1.319875 Days  $T_0=132.742200$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

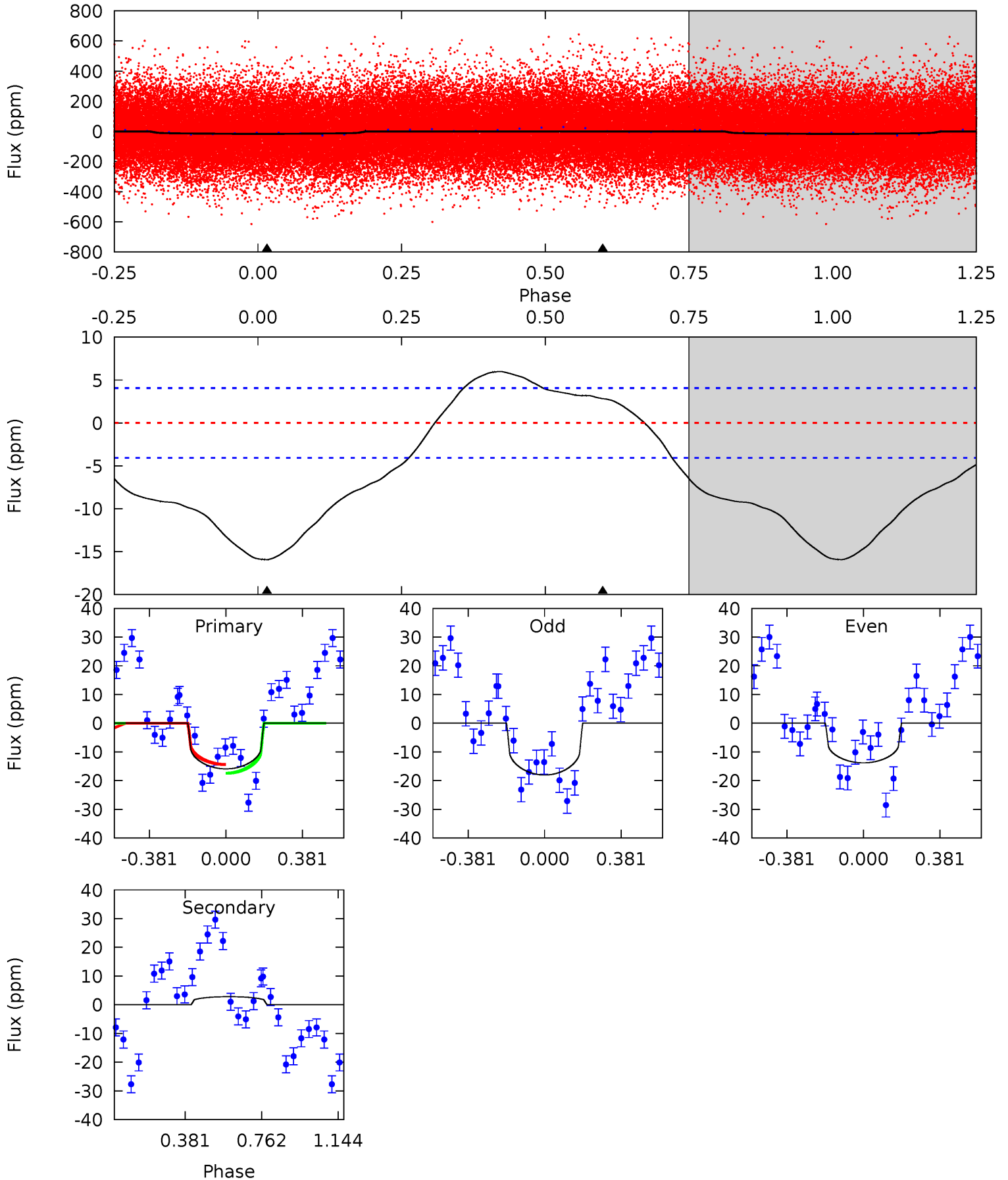
TCE 008650155-01 P= 1.319996 Days  $T_0=132.669998$  (BKJD)



# DV Model-Shift Uniqueness Test

008650155-01, P = 1.319875 Days, E = 131.422325 Days

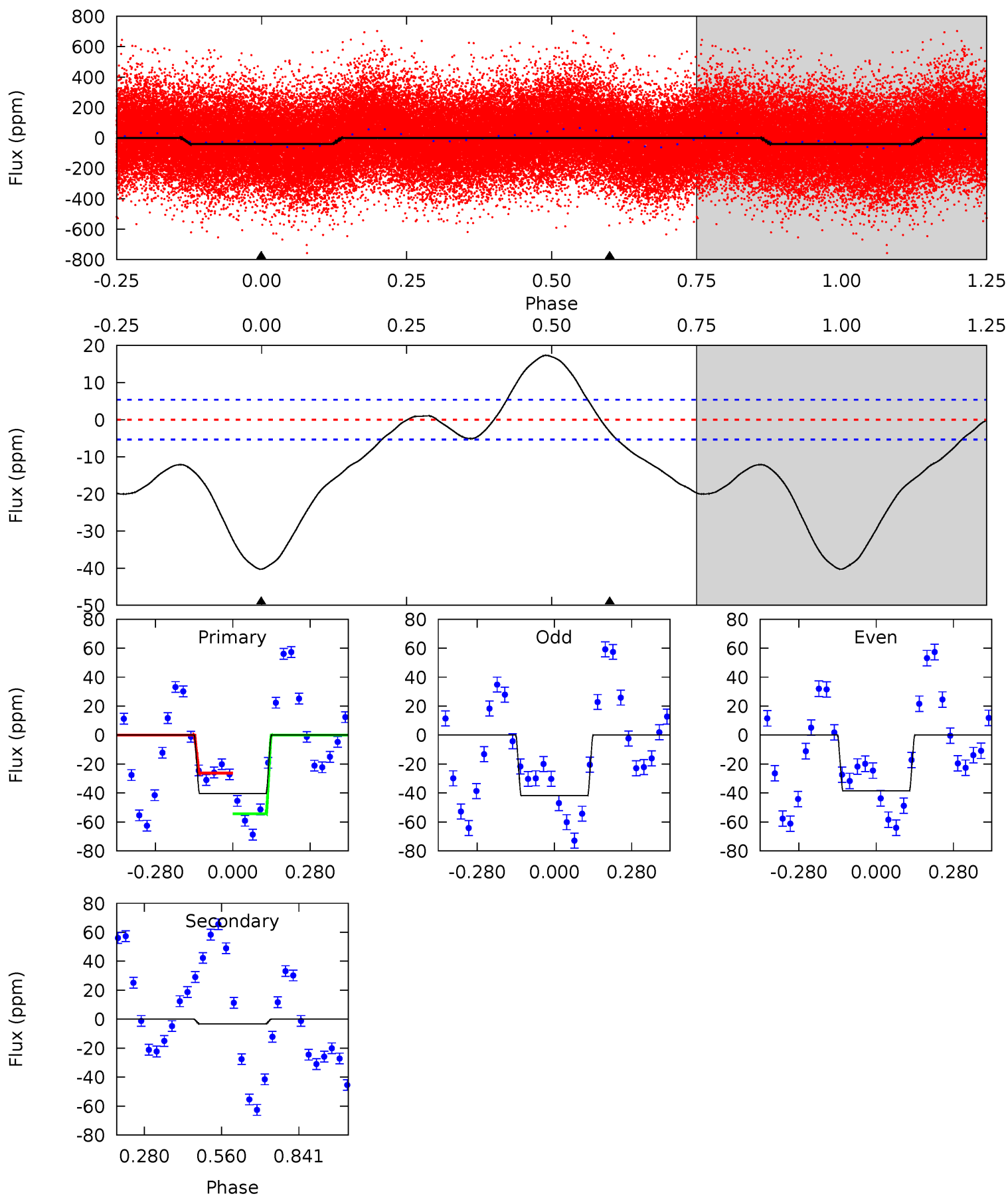
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.7	-2.97	0	0	4.28	0.88	2.74	16.7	16.7	-2.97	-2.97	2.23	1.15	0.27	1.60



# Alt Model-Shift Uniqueness Test

008650155-01, P = 1.319996 Days, E = 131.350002 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
32.6	2.62	0	0	4.34	1.08	1.57	32.6	32.6	2.62	2.62	1.33	1.10	0.30	11.1





### Stellar Parameters For KIC 008650155

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$6458^{+196}_{-176}$	$3.598^{+0.344}_{-0.086}$	$-0.240^{+0.350}_{-0.250}$	$3.298^{+0.434}_{-1.301}$	$1.573^{+0.211}_{-0.391}$	$0.062^{+0.172}_{-0.016}$
	+3%/-3%	+10%/-2%	+146%/-104%	+13%/-39%	+13%/-25%	+279%/-27%
Source	PHO1	FLK73	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 008650155-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$3\pm 1$	$1.32^{+1.18}_{-0.88}$	$4294^{+248}_{-407}$	$-4720^{+569}_{-2737}$	$-0.633^{+0.473}_{-5.257}$
Alt.	$-3\pm 1$	$2.17^{+1.28}_{-1.15}$	$4290^{+251}_{-404}$	$-2661^{+7326}_{-1004}$	$0.275^{+1.049}_{-0.178}$

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

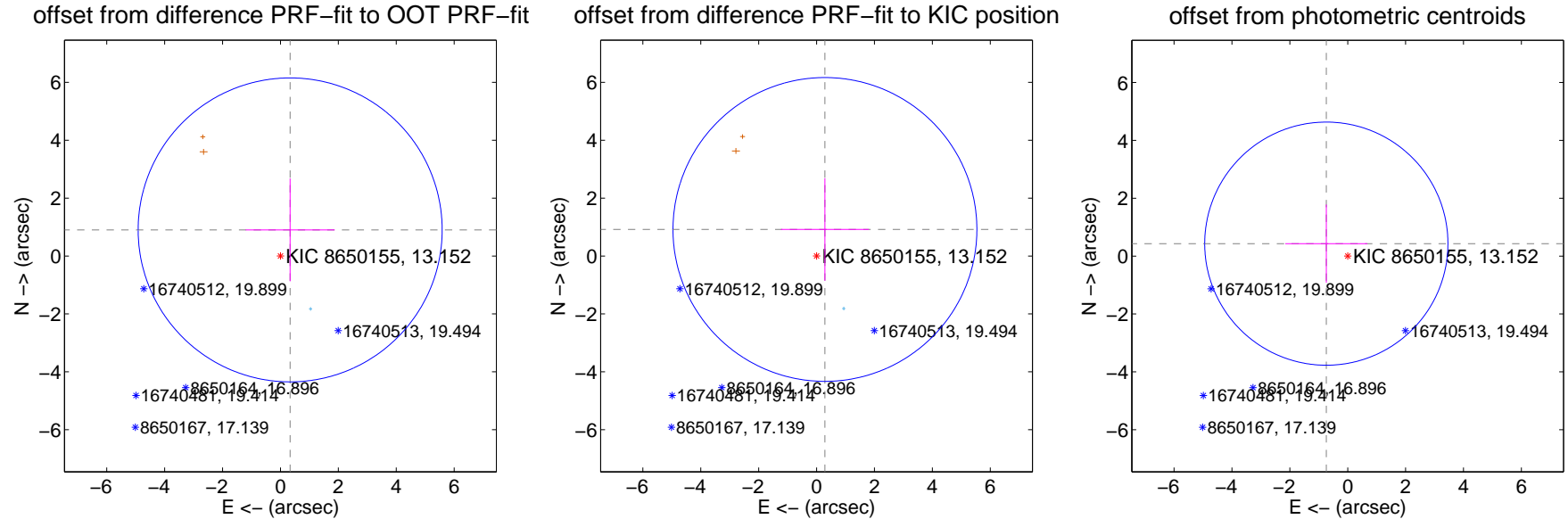
## DV Centroid Data

Supplemental centroid analysis for 008650155-01. Kepler magnitude: 13.15. Transit SNR 6.11

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

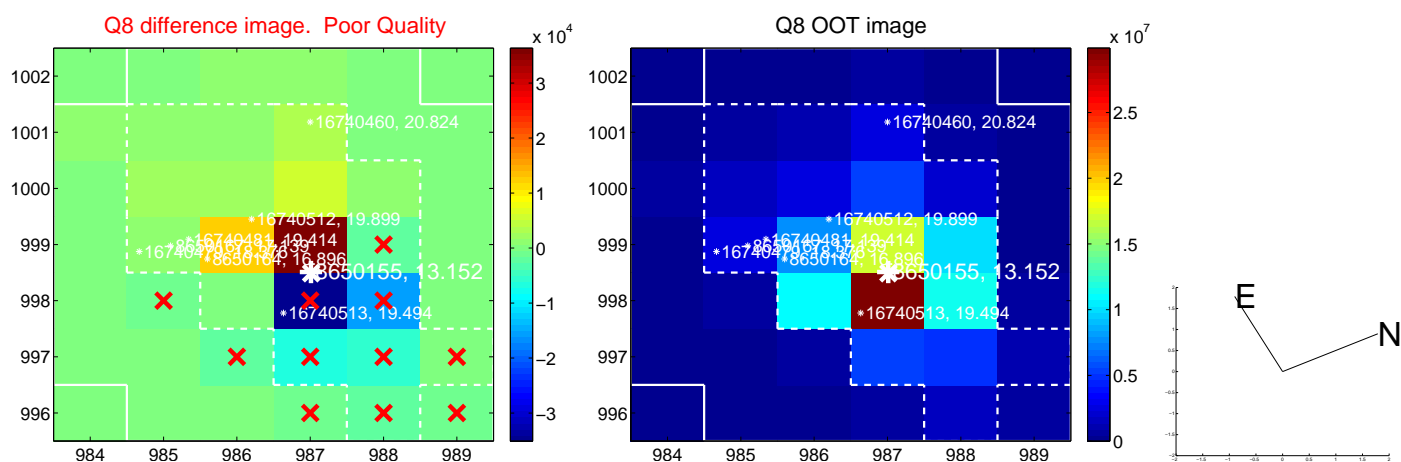
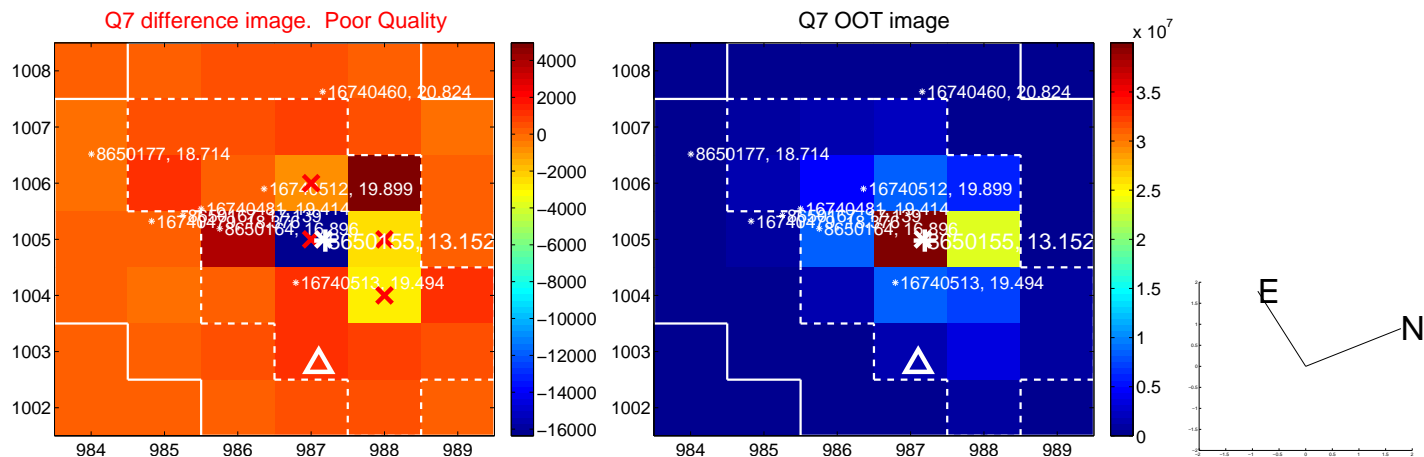
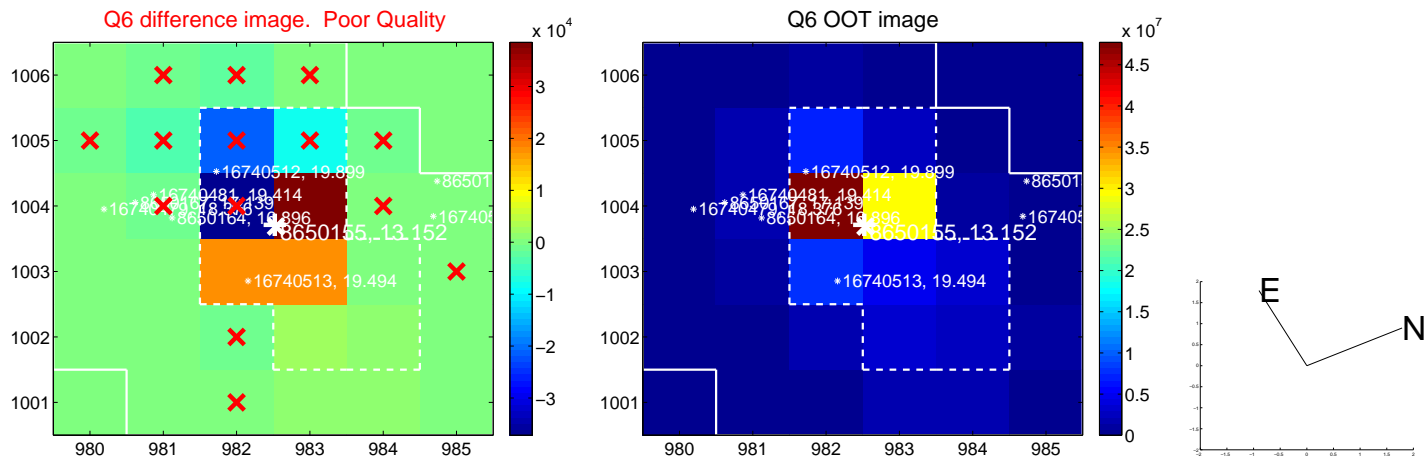
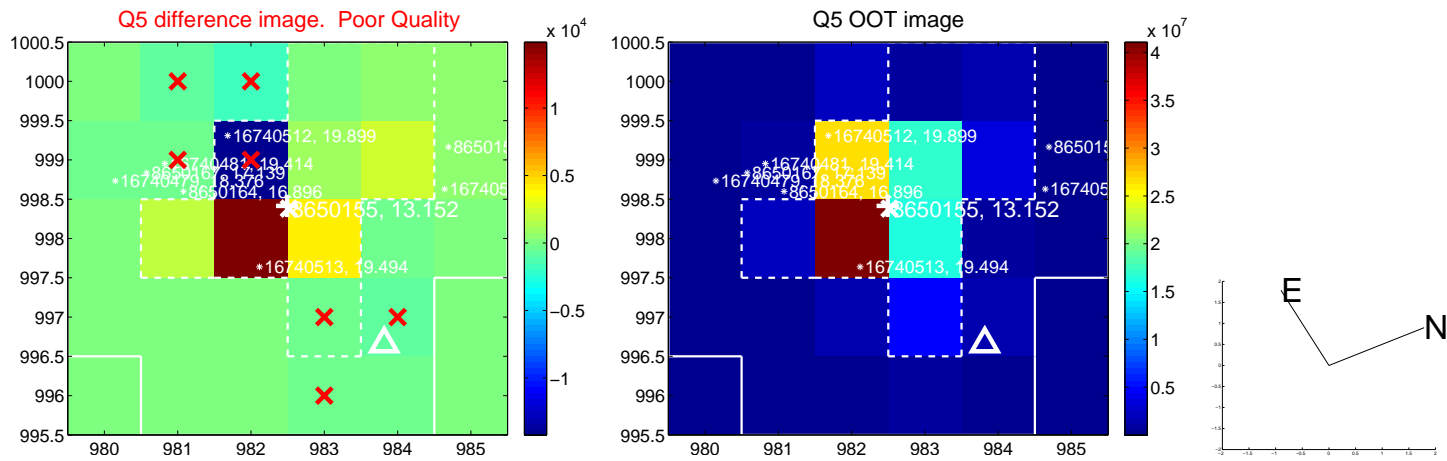
	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.963 \pm 1.750$	0.55	$-0.335 \pm 1.538$	$0.903 \pm 1.778$
PRF-fit source offset from KIC position	$0.962 \pm 1.750$	0.55	$-0.289 \pm 1.518$	$0.918 \pm 1.771$
photometric centroid source offset	$0.86 \pm 1.40$	0.61	$0.74 \pm 1.42$	$0.43 \pm 1.35$



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.

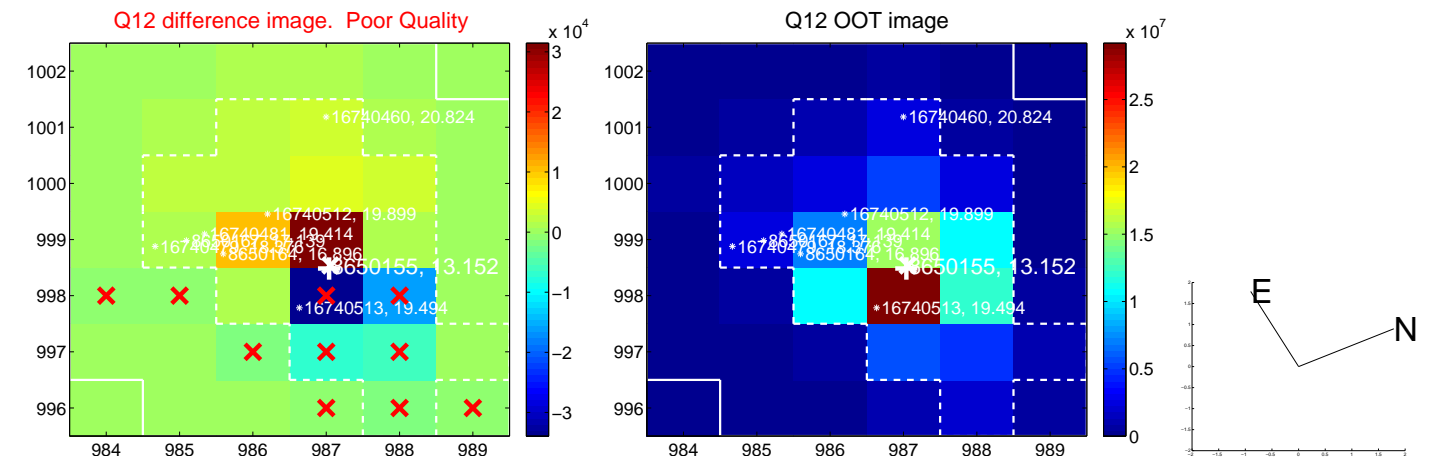
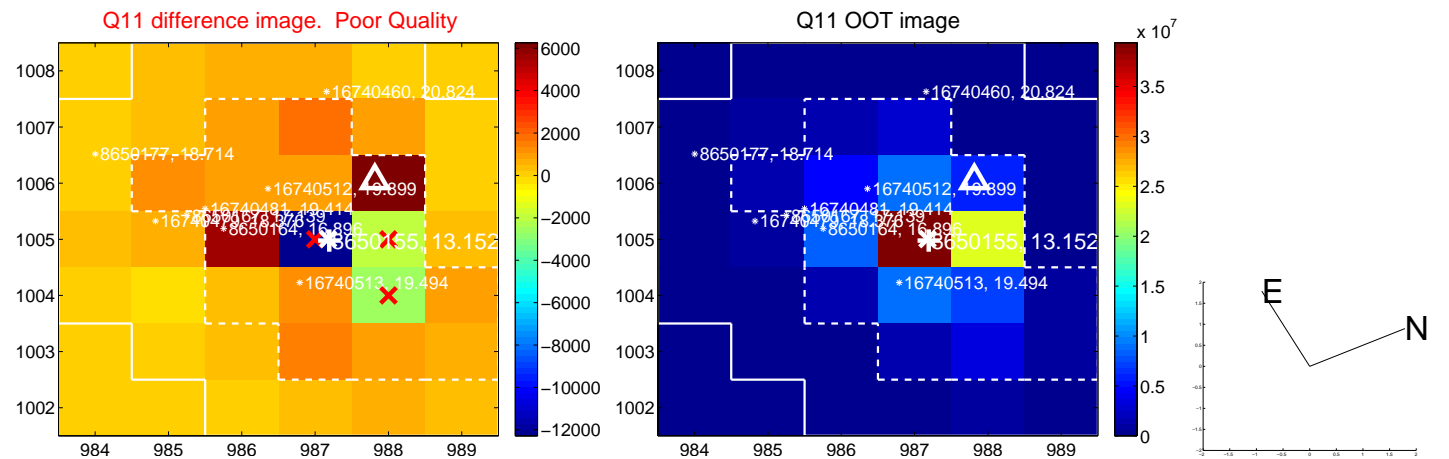
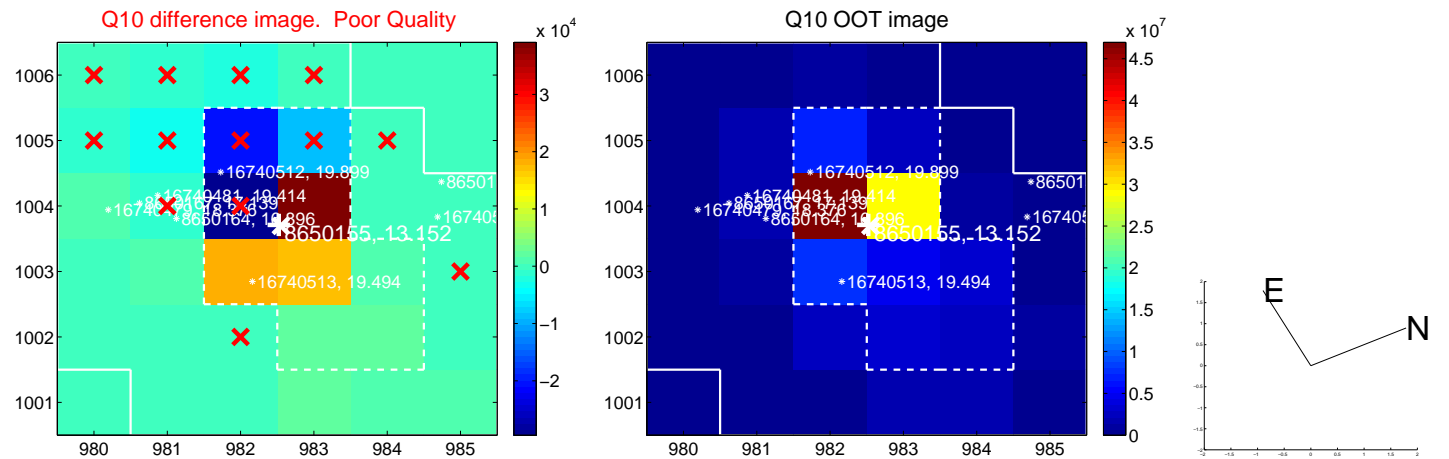
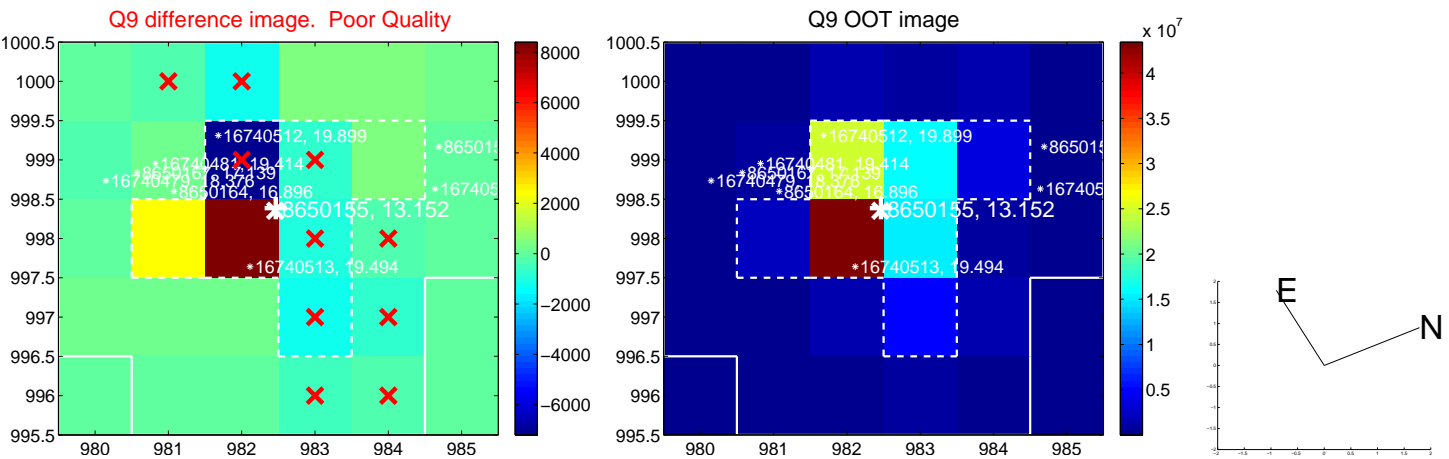


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

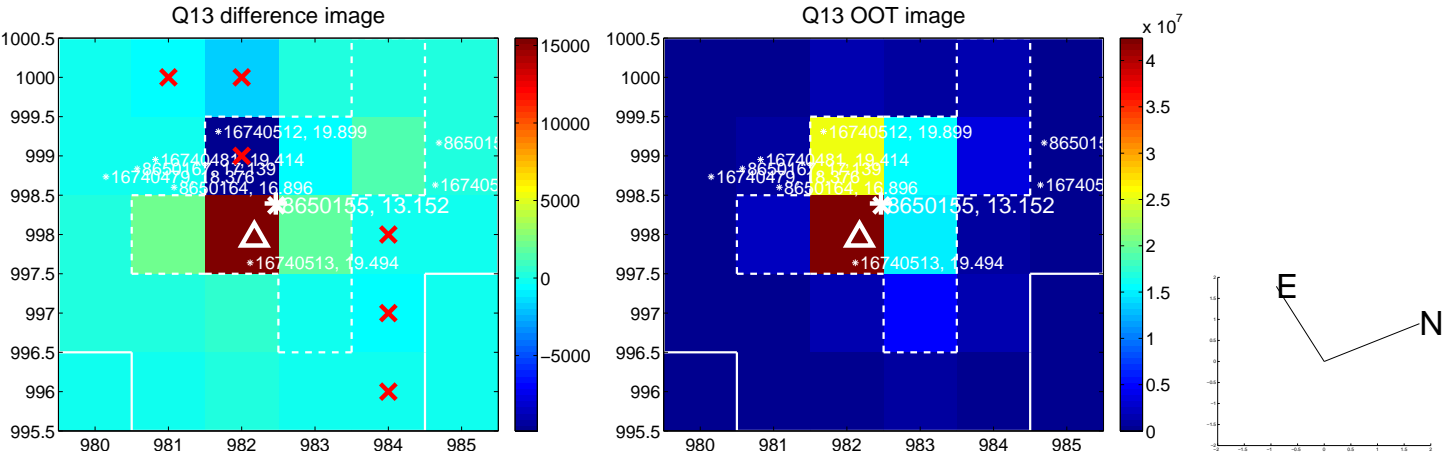




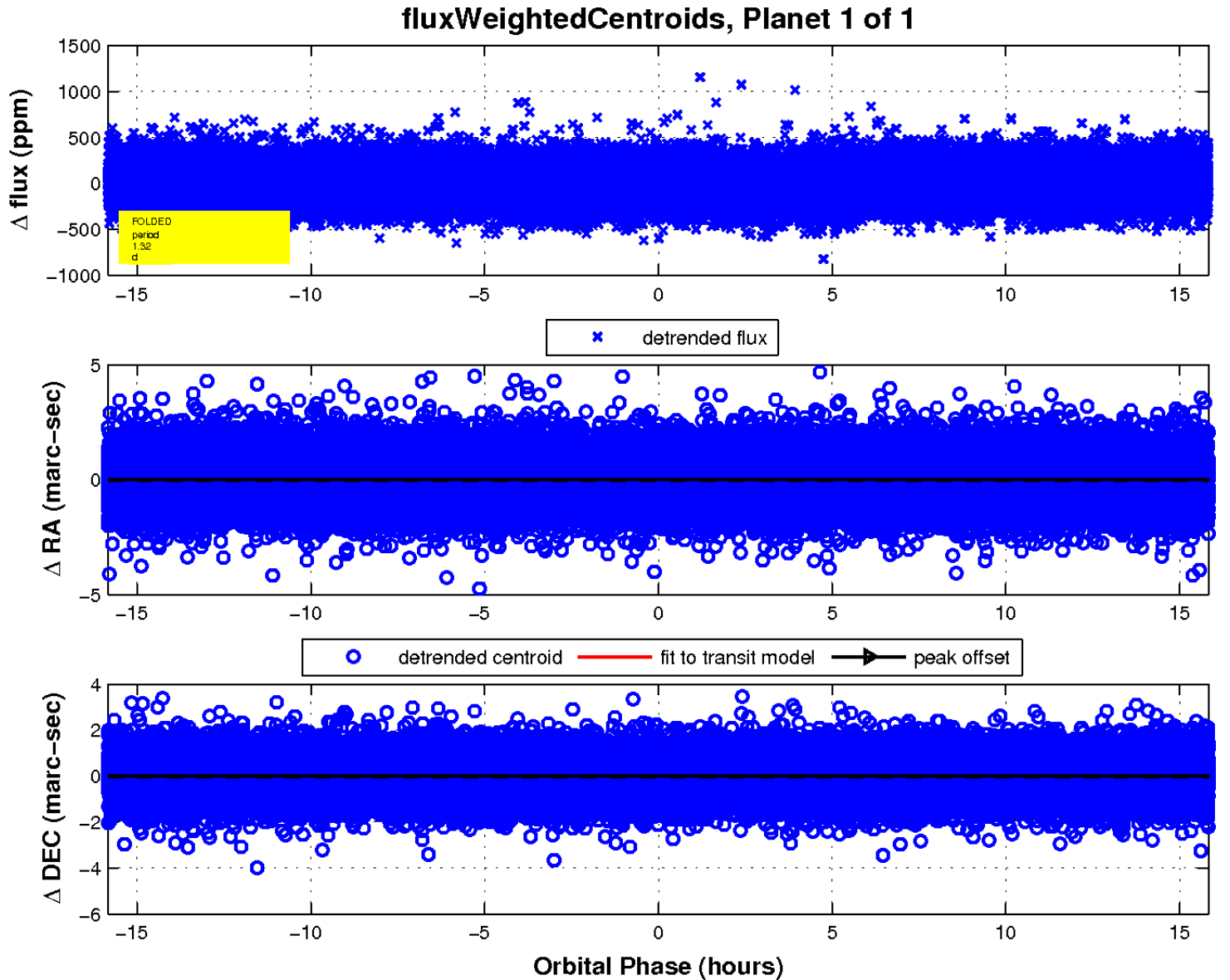
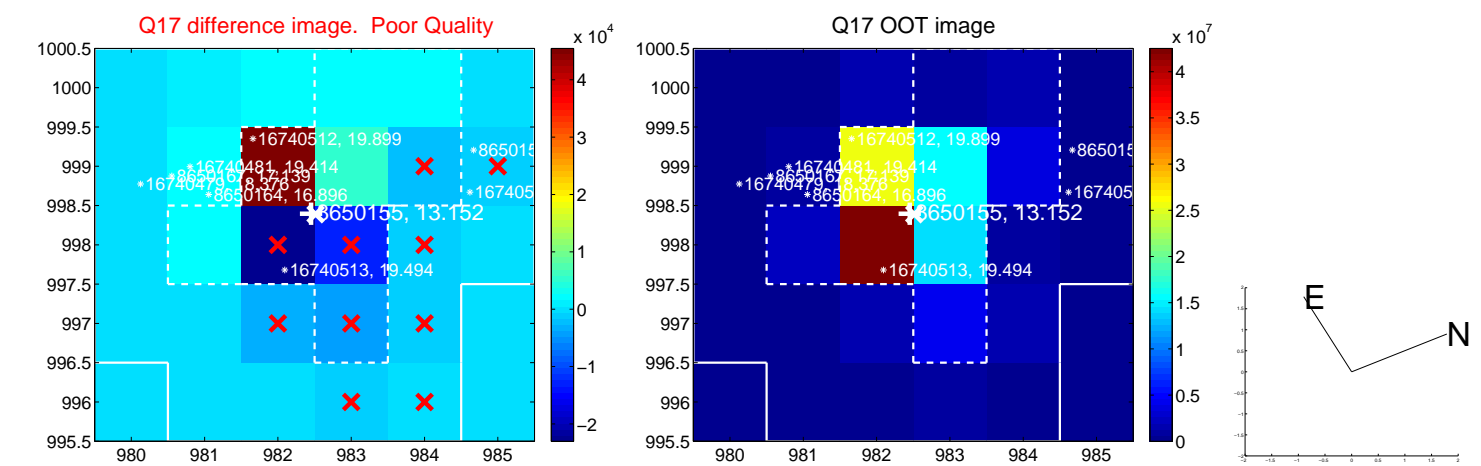
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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.



UKIRT Image

