

# KIC 007338125

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007338125-01	OBS	No	0.956691	131.854540	2.4	7.939	8.0	5.3	2.53	8104	0.40	45056.08

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007338125-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_SATURATED

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

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

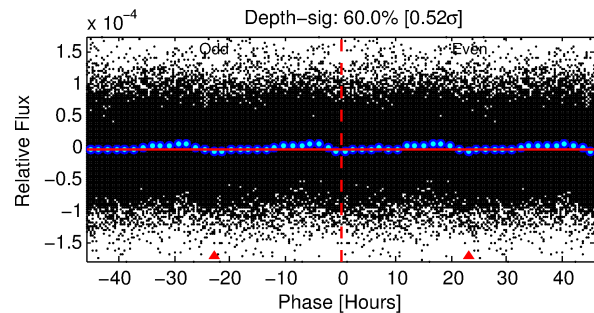
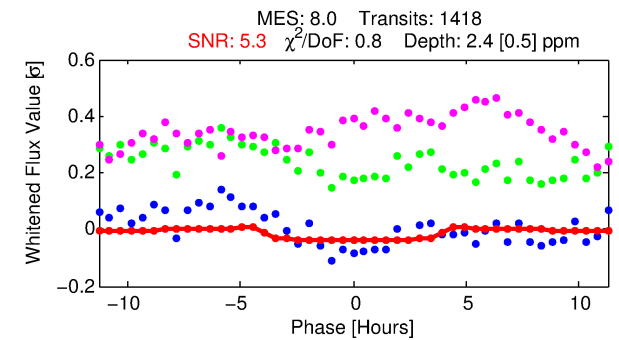
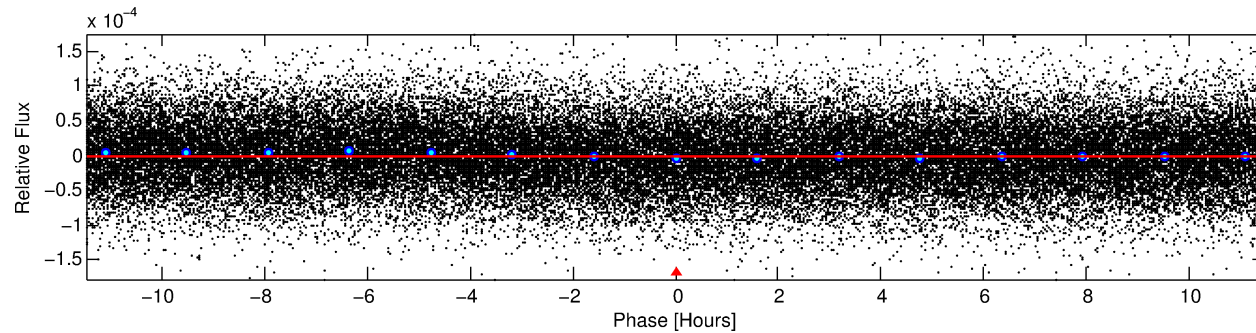
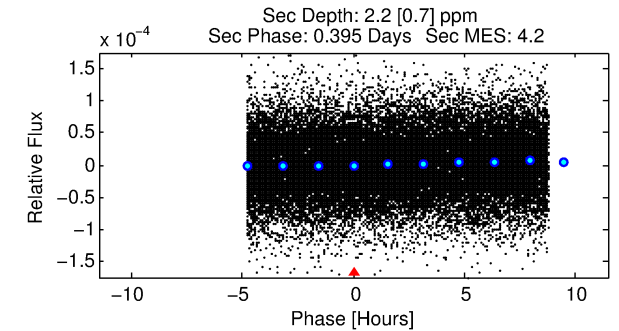
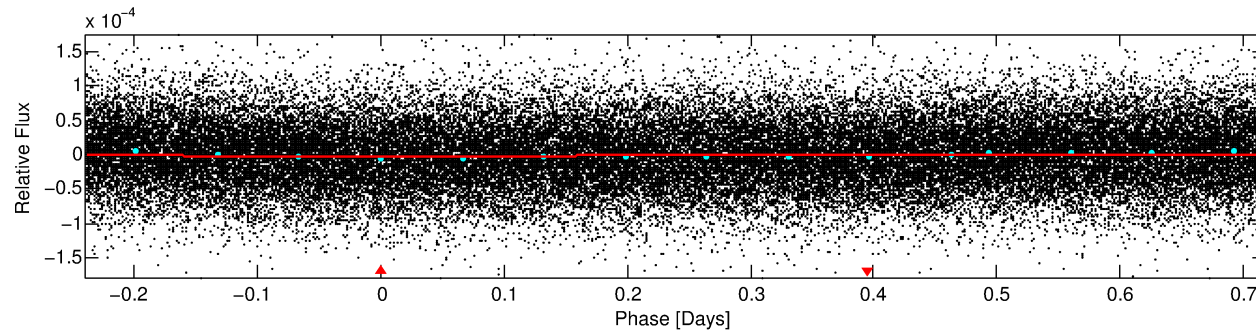
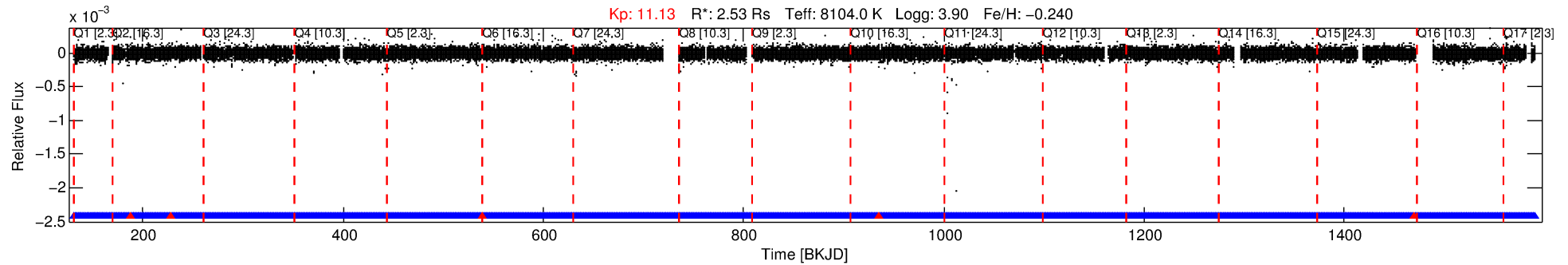
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 007338125-01

No Significant Match Found

# DV One-Page Summary

KIC: 7338125 Candidate: 1 of 1 Period: 0.957 d



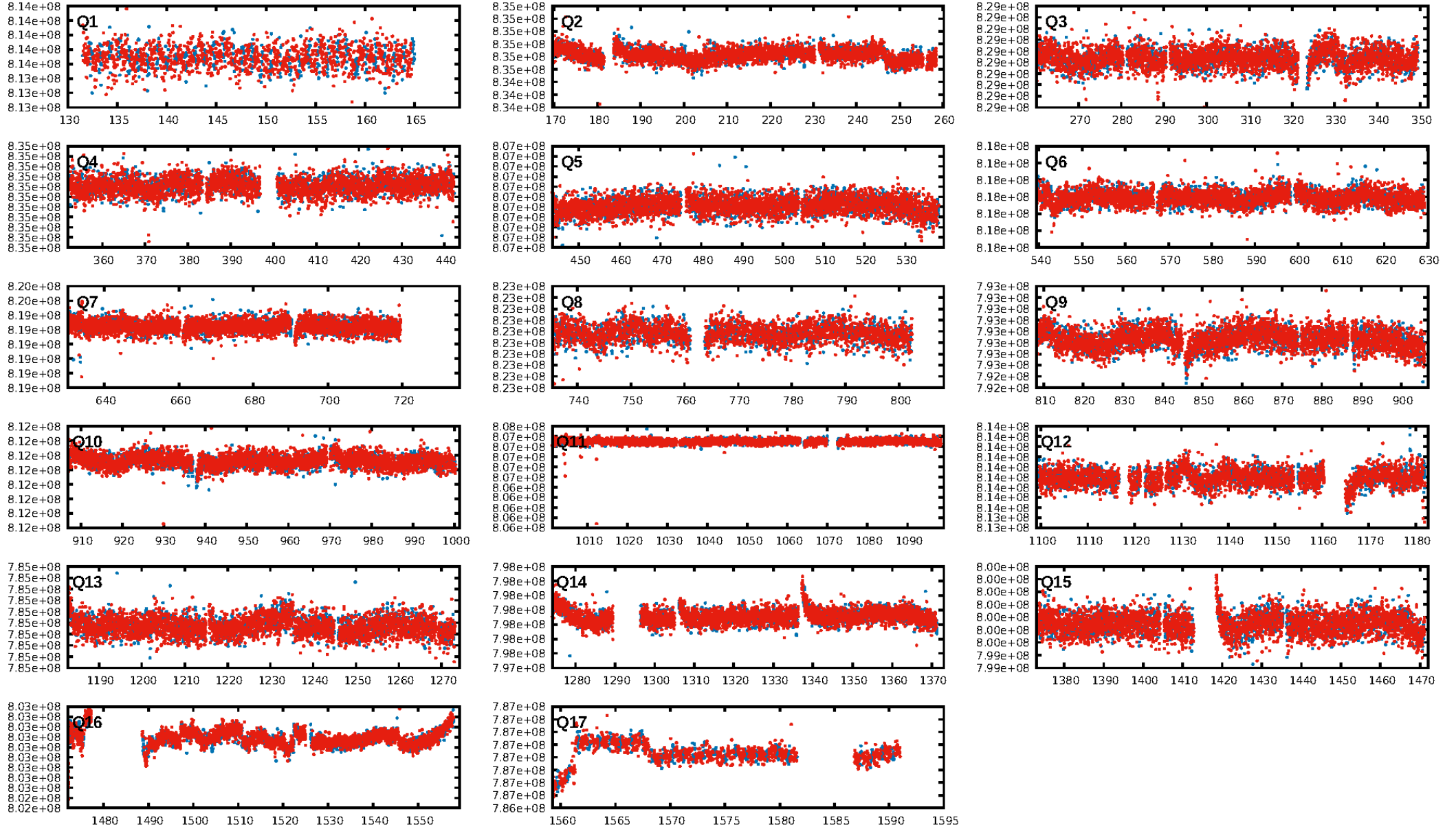
## DV Fit Results:

Period = 0.95669 [0.00003] d  
Epoch = 131.8545 [0.0119] BKJD  
Rp/R\* = 0.0015 [0.0018]  
a/R\* = 1.12 [1.53]  
b = 0.35 [17.39]  
Seff = 45056.08 [26668.37]  
Teq = 3715 [550] K  
Rp = 0.40 [0.52] Re  
a = 0.0235 [0.0085] AU  
Ag = 4.11 [10.50] [0.30σ]  
Teffp = 8181 [5098] K [0.87σ]

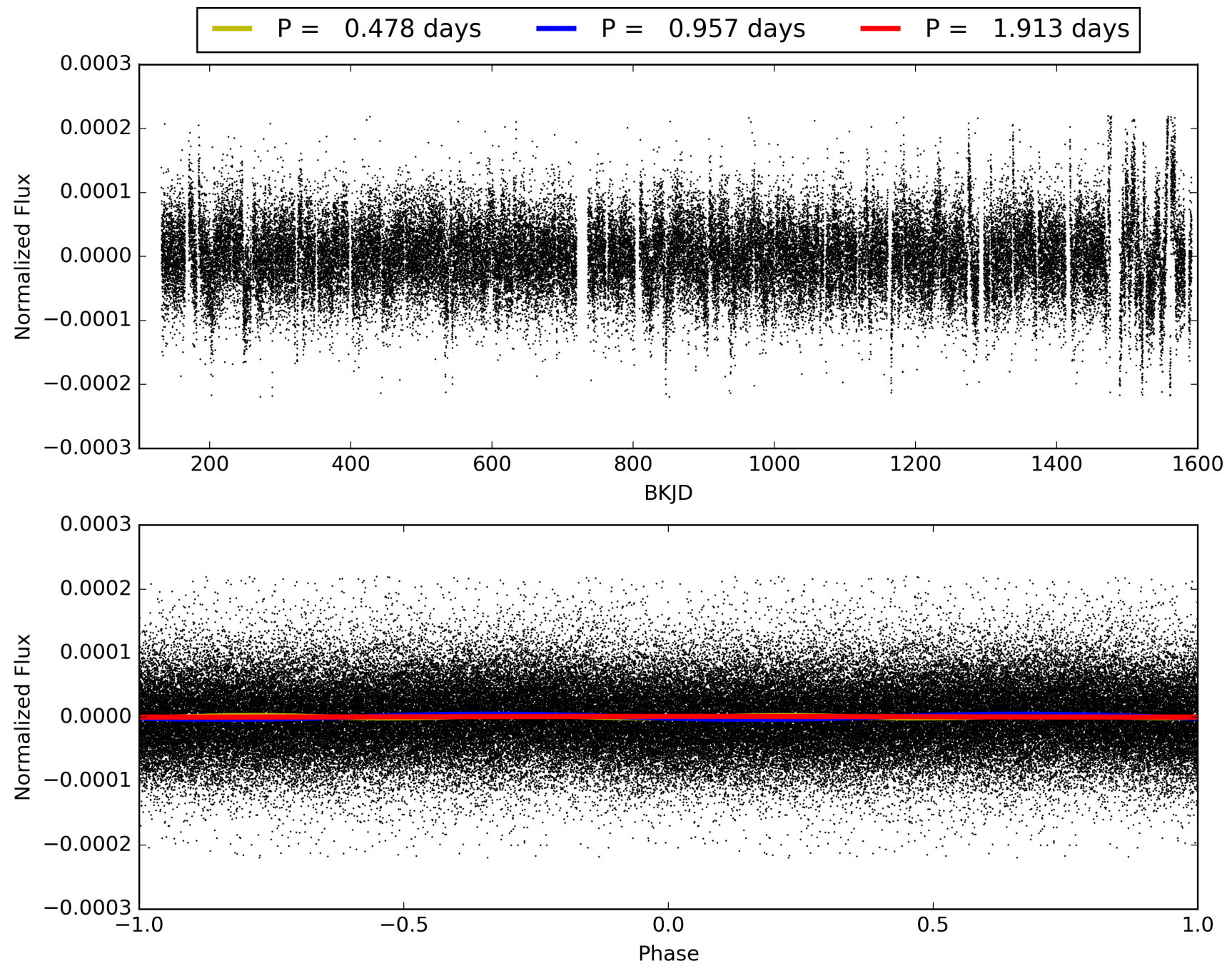
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [1349/1354]  
GhostDiagnostic-chr: N/A  
Centroid-sig: N/A  
Centroid-so: N/A  
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 007338125-01, PDC Light Curves

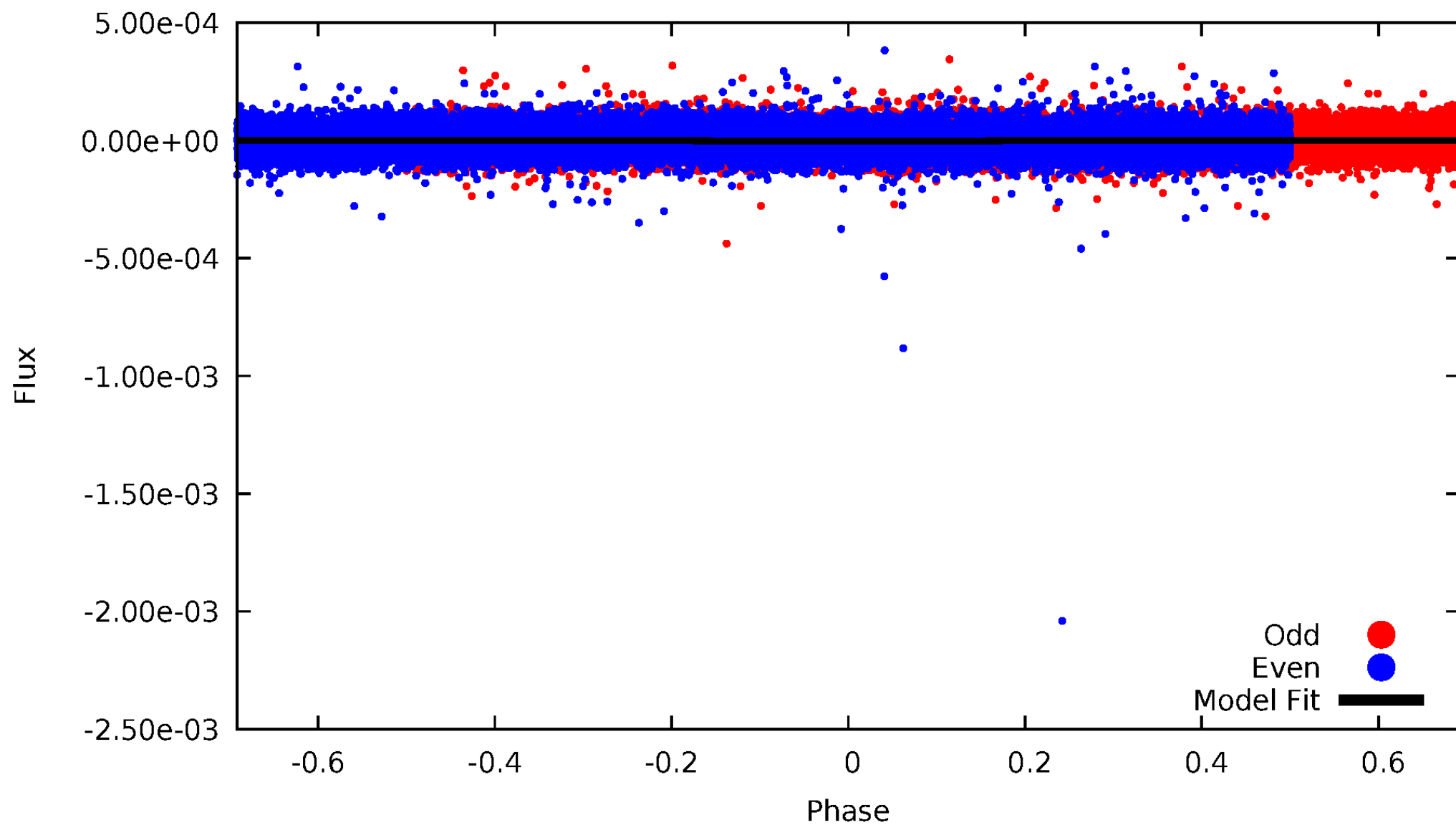


TCE 007338125-01



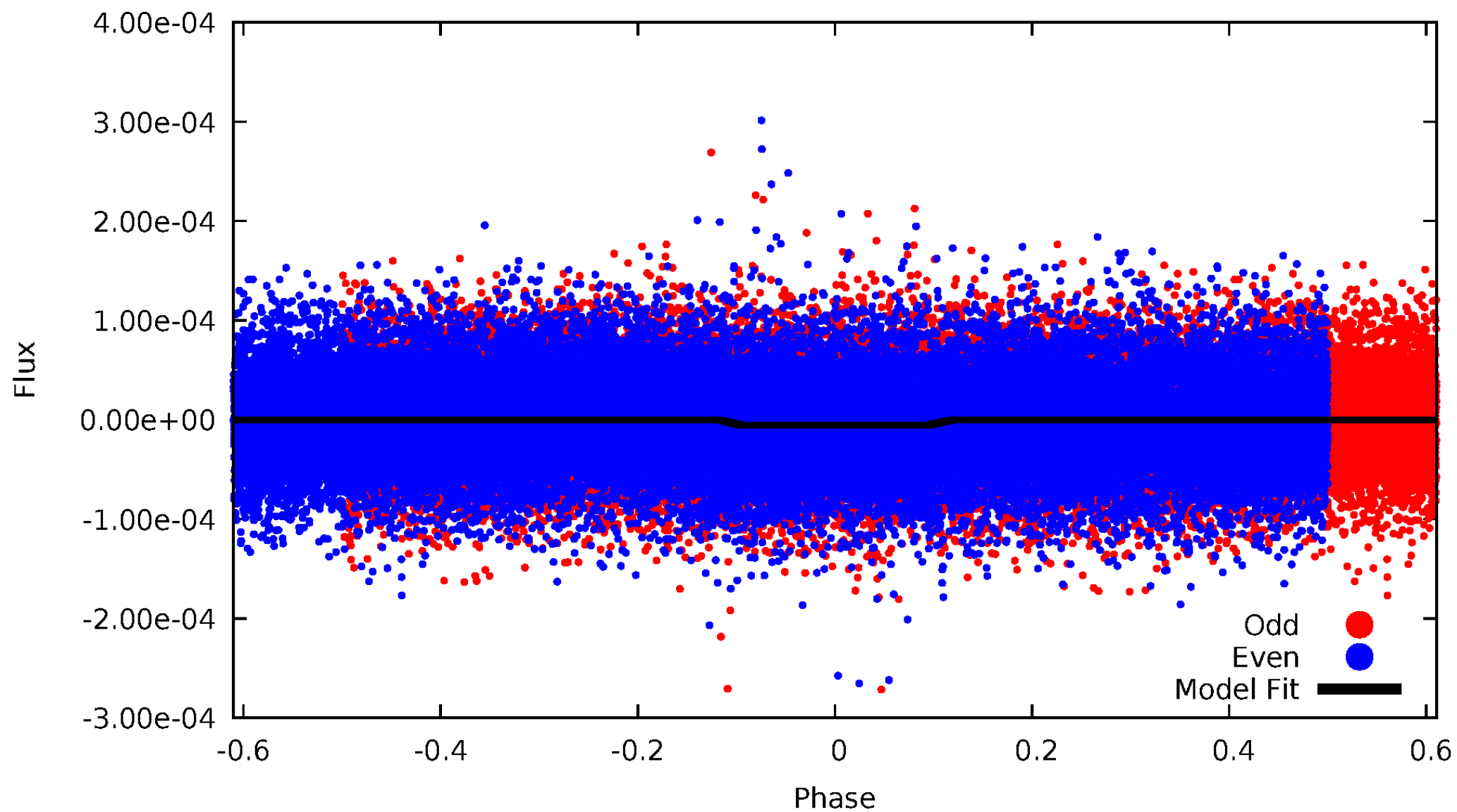
# DV Odd/Even

TCE 007338125-01



# ALT Odd/Even

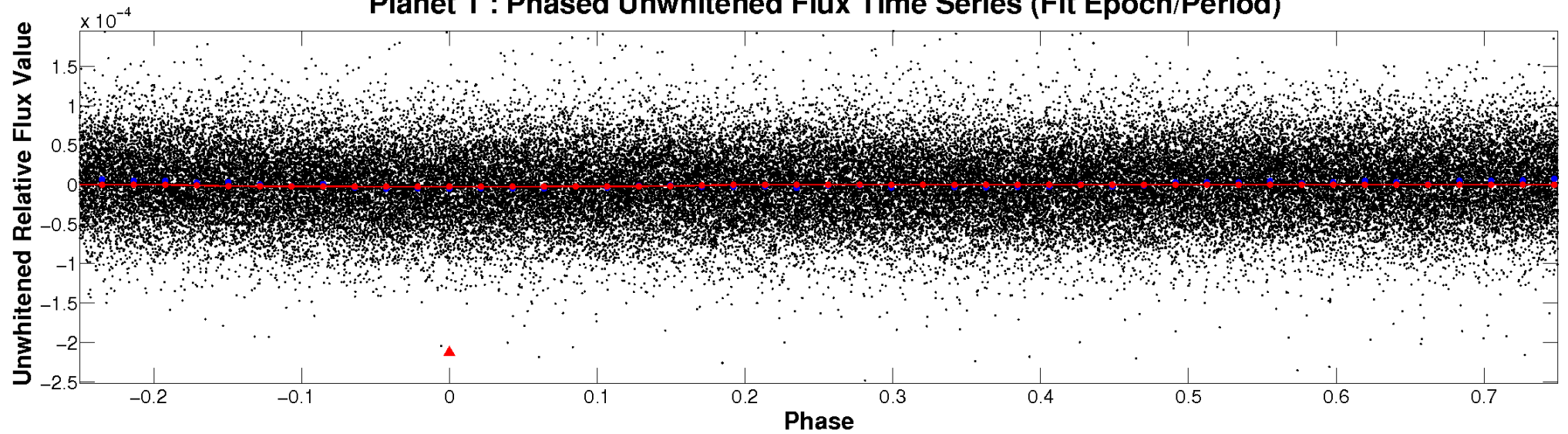
TCE 007338125-01



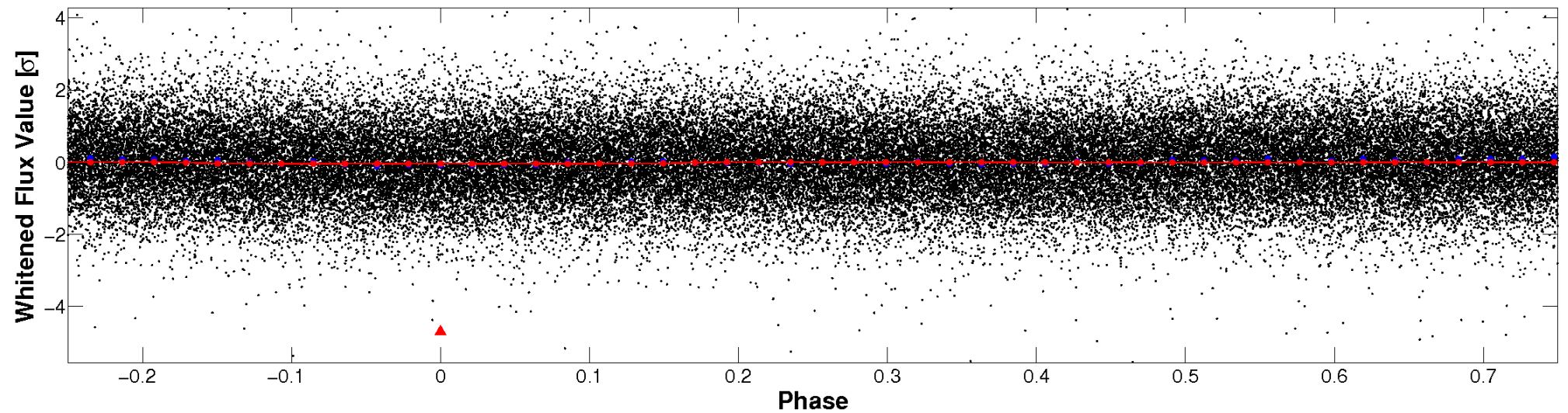


# Non-Whitened Vs. Whitened Light Curve

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

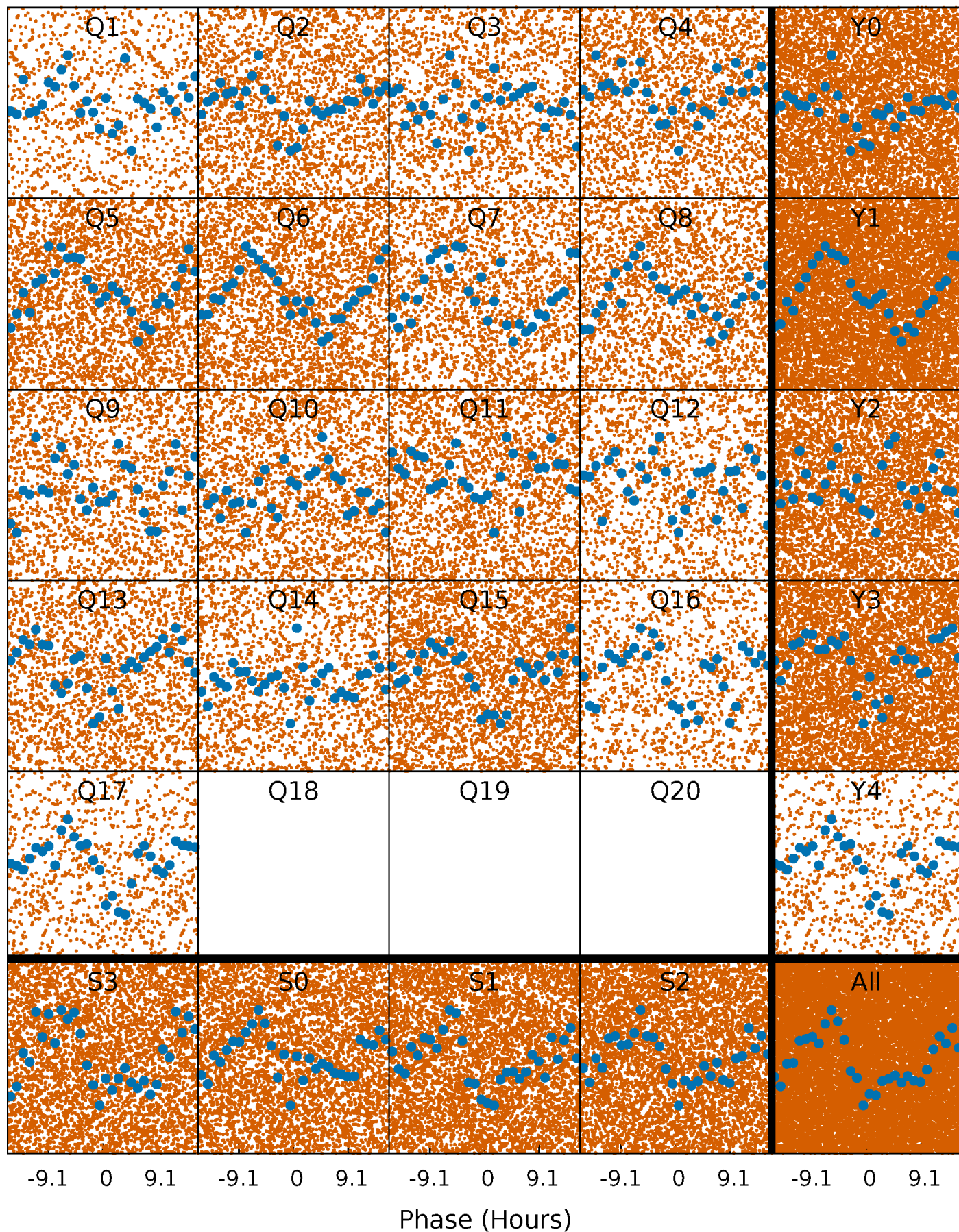


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

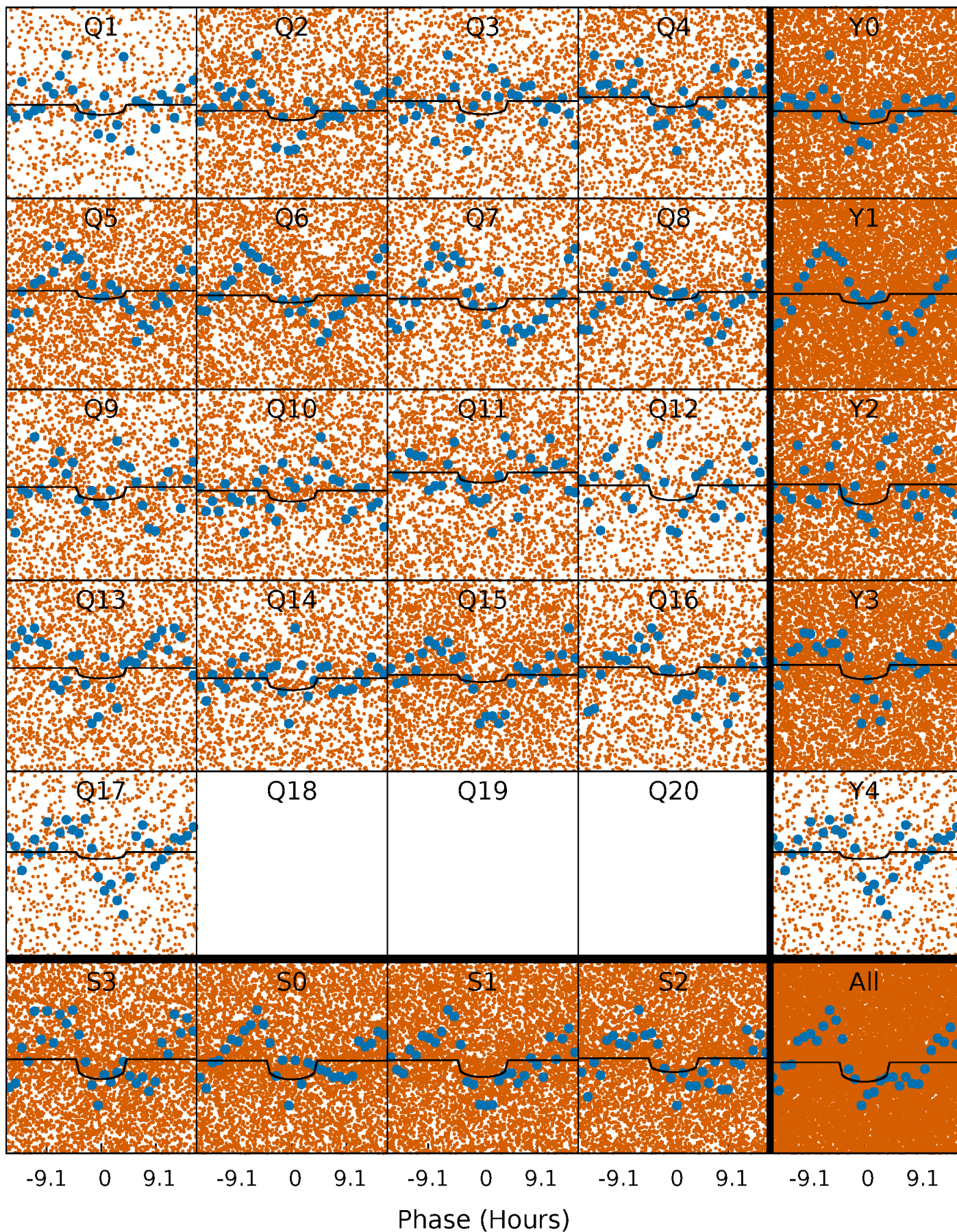
TCE 007338125-01 P= 0.956691 Days  $T_0=131.854540$  (BKJD)





# DV Quarter-Phased Transit Curves

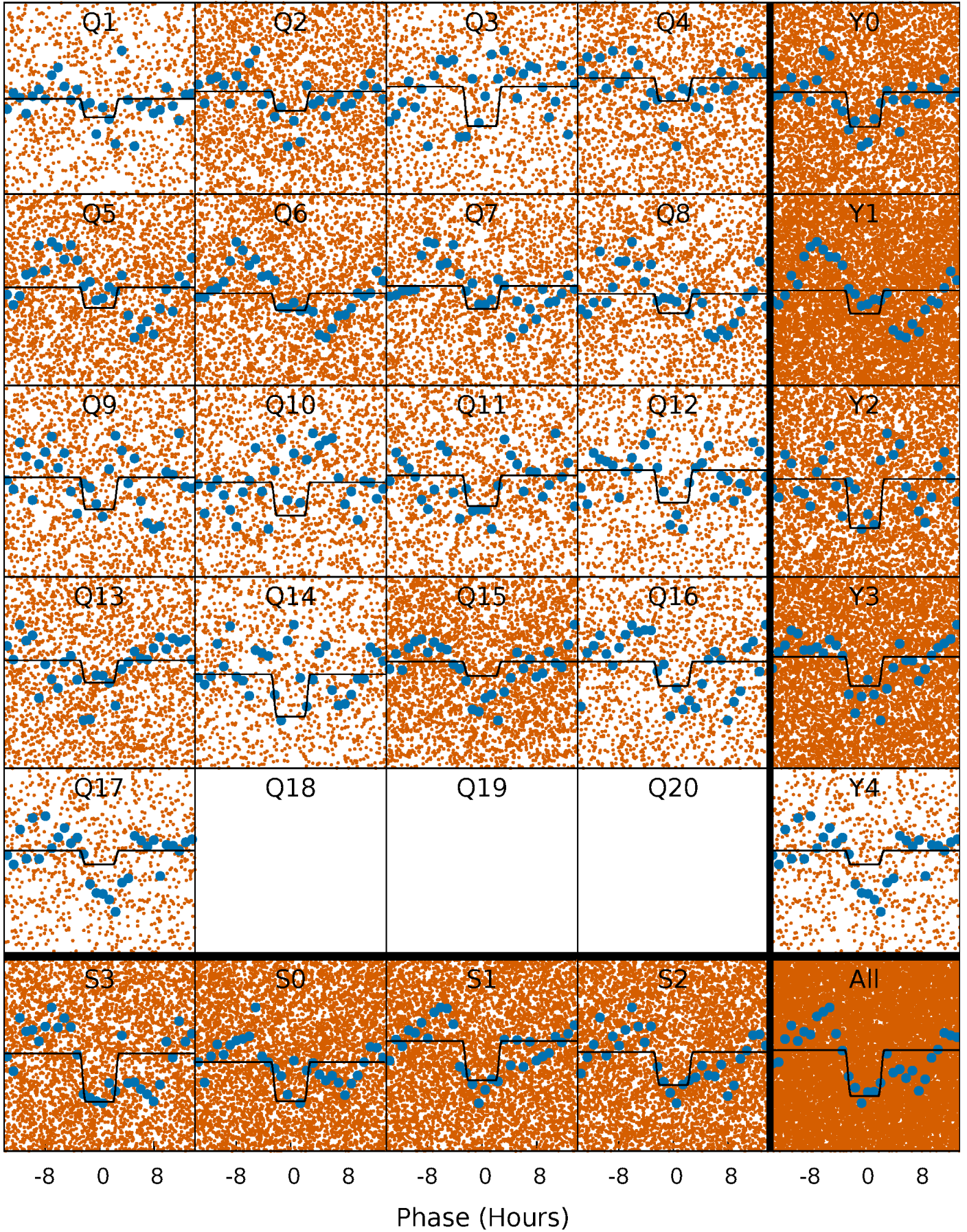
TCE 007338125-01 P= 0.956691 Days  $T_0=131.854540$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

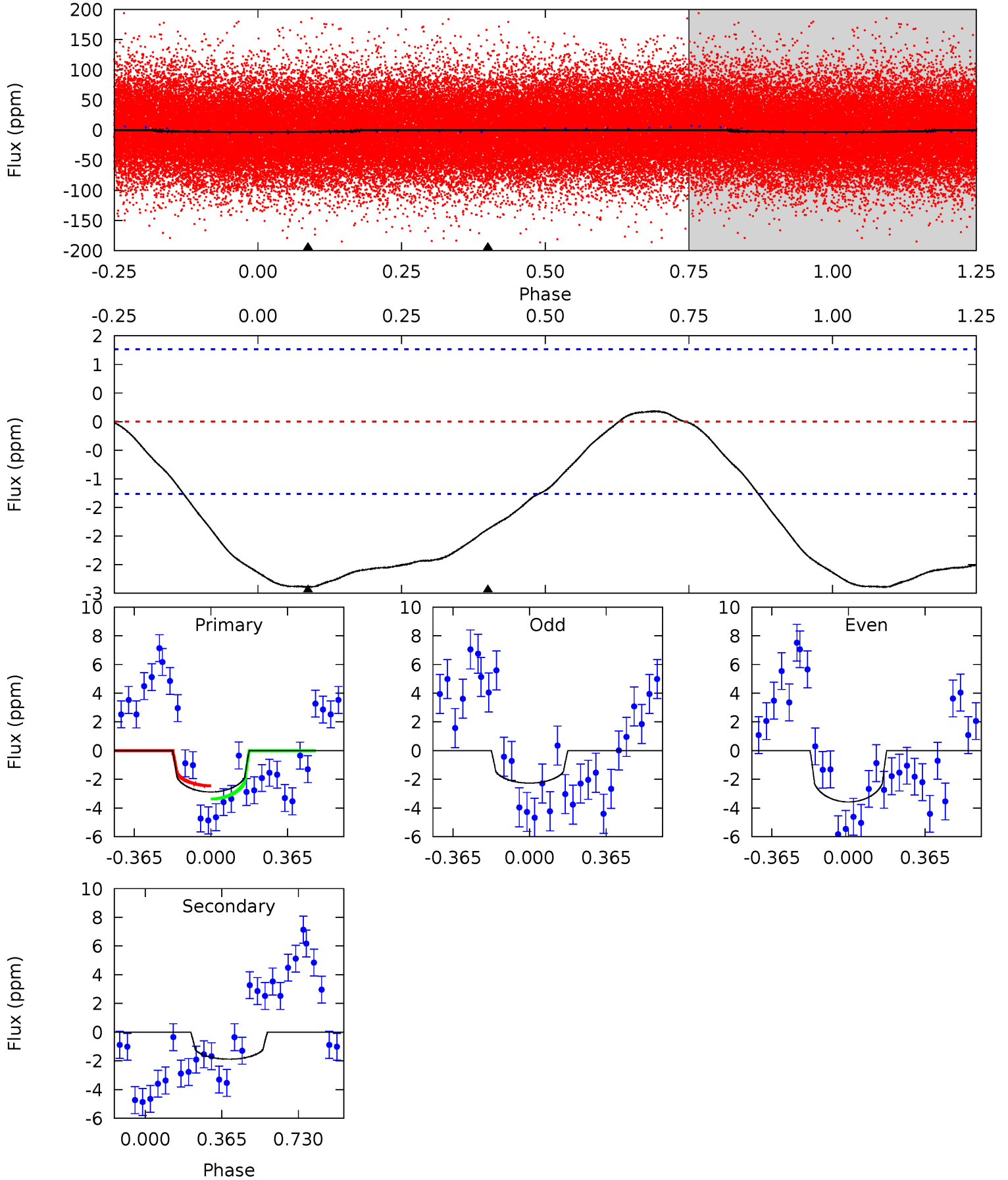
TCE 007338125-01 P= 0.956720 Days  $T_0=131.845352$  (BKJD)



# DV Model-Shift Uniqueness Test

007338125-01, P = 0.956691 Days, E = 130.897849 Days

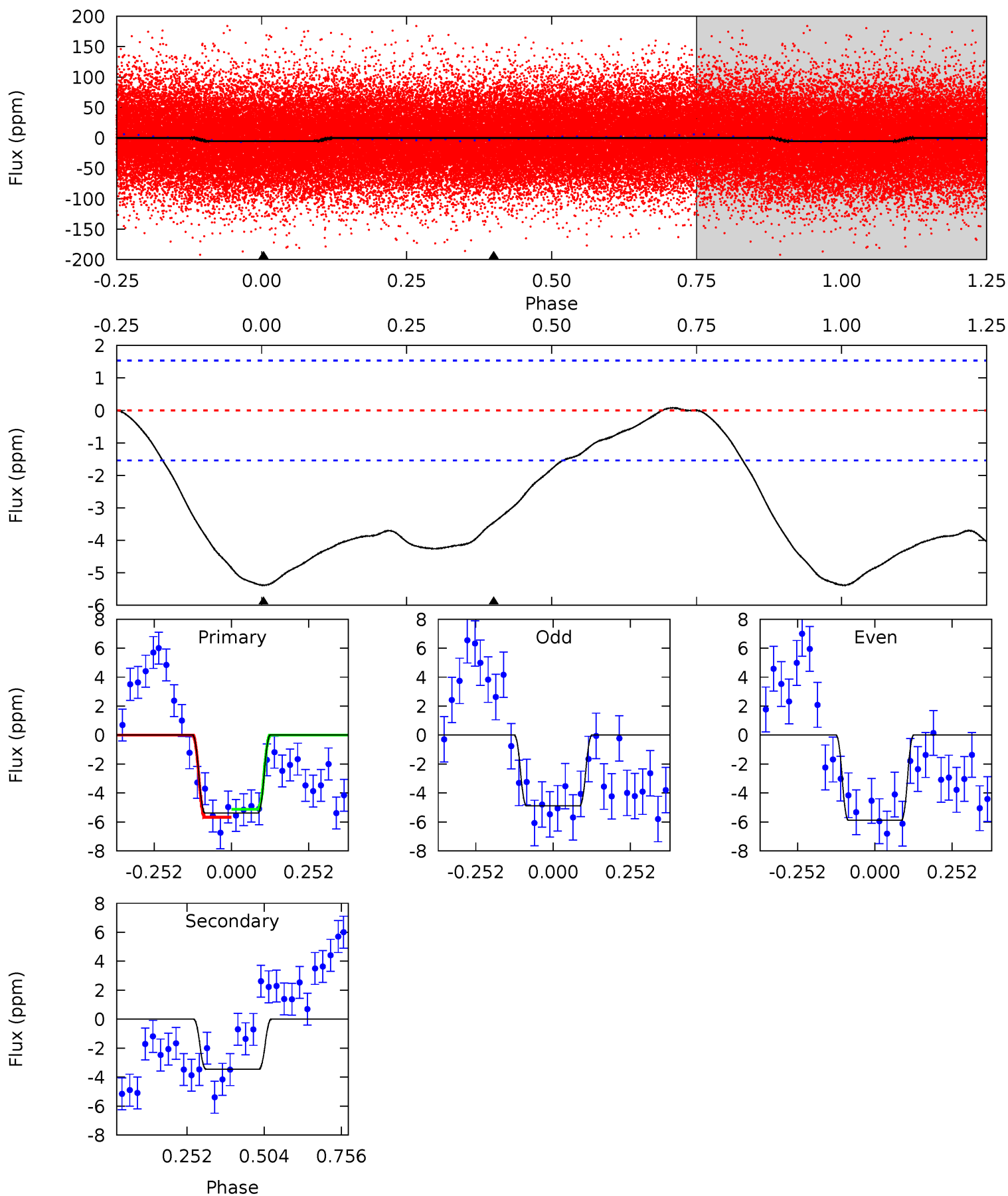
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.79	6.38	0	0	4.29	0.91	0.55	9.79	9.79	6.38	6.38	2.22	1.22	0.06	1.57



# Alt Model-Shift Uniqueness Test

007338125-01, P = 0.956720 Days, E = 130.888632 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
15.3	9.79	0	0	4.37	1.15	0.41	15.3	15.3	9.79	9.79	1.40	1.05	0.01	0.77





### Stellar Parameters For KIC 007338125

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$8104^{+225}_{-338}$	$3.905^{+0.328}_{-0.103}$	$-0.240^{+0.200}_{-0.350}$	$2.533^{+0.333}_{-0.998}$	$1.881^{+0.077}_{-0.434}$	$0.163^{+0.359}_{-0.053}$
	+3%/-4%	+8%/-3%	+83%/-146%	+13%/-39%	+4%/-23%	+220%/-32%
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 007338125-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-2\pm0$	$0.45^{+0.44}_{-0.28}$	$5061^{+349}_{-469}$	$6733^{+7368}_{-2253}$	$2.798^{+18.918}_{-2.100}$
Alt.	$-3\pm0$	$0.67^{+0.50}_{-0.40}$	$5105^{+325}_{-519}$	$6301^{+5213}_{-1709}$	$2.203^{+11.350}_{-1.481}$

$T_{max}$  = 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 007338125-01. **Kepler magnitude: 11.13.** Transit SNR 5.28

**There are 0 quarters with good PRF difference image offsets**

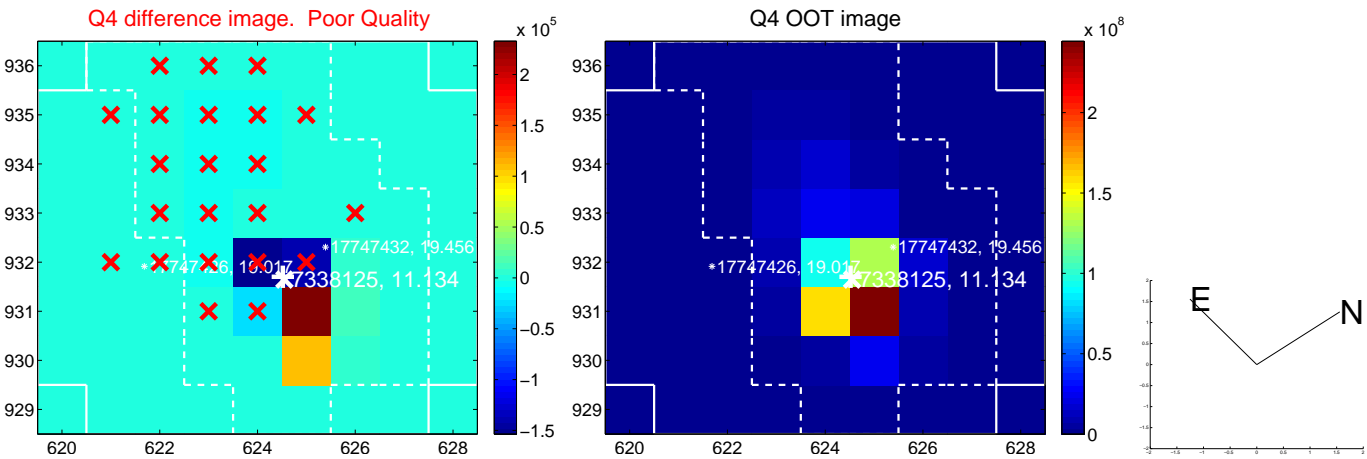
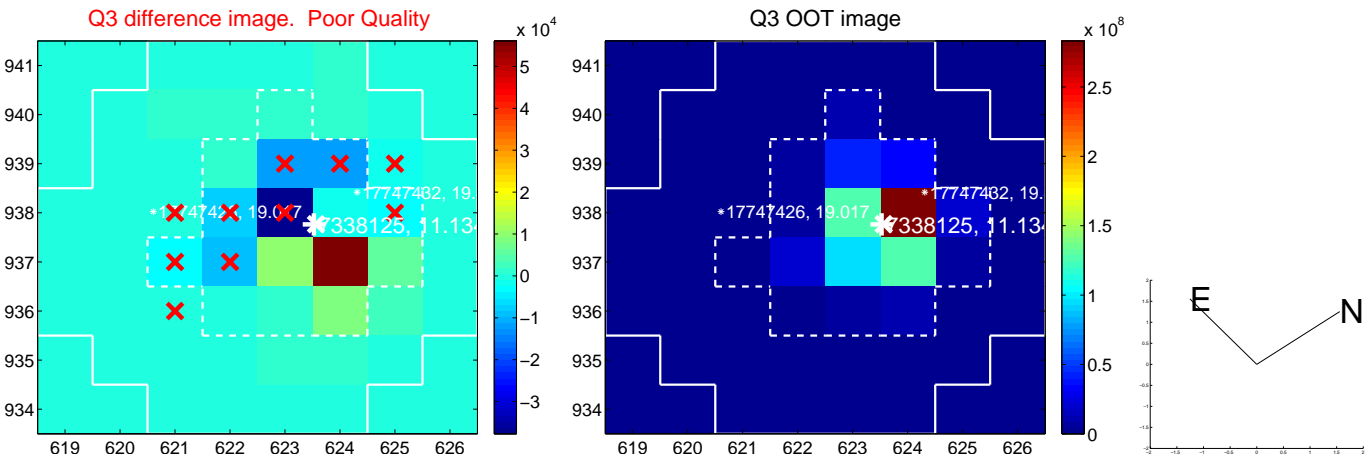
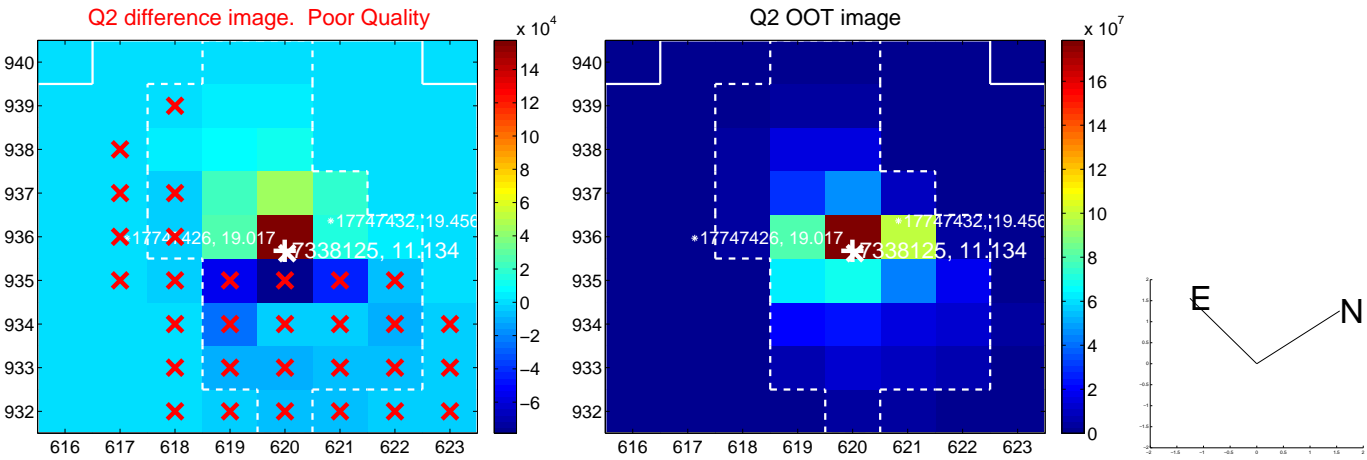
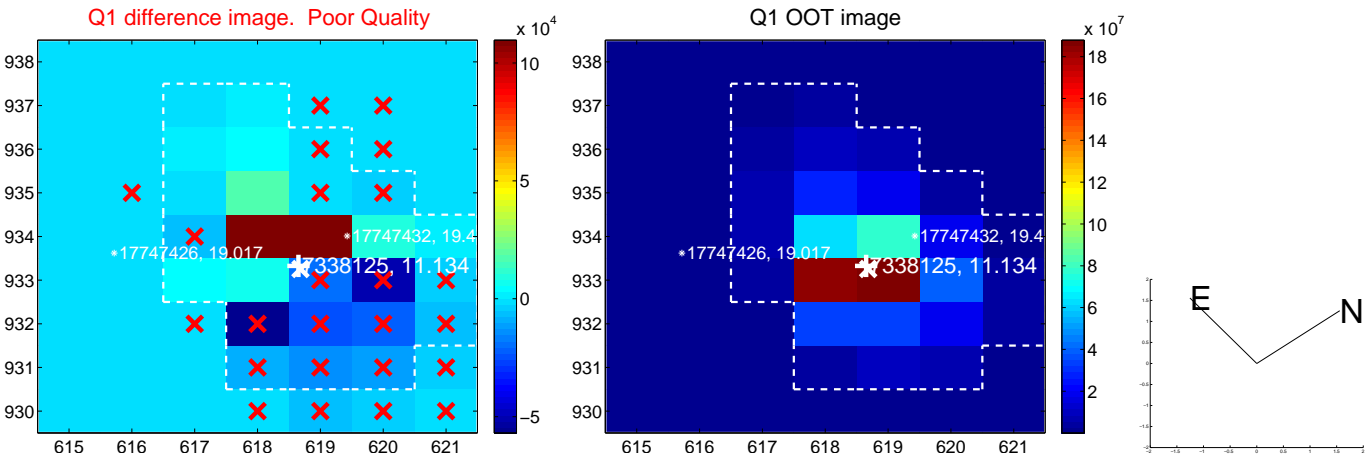
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	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	—	—	—	—



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.

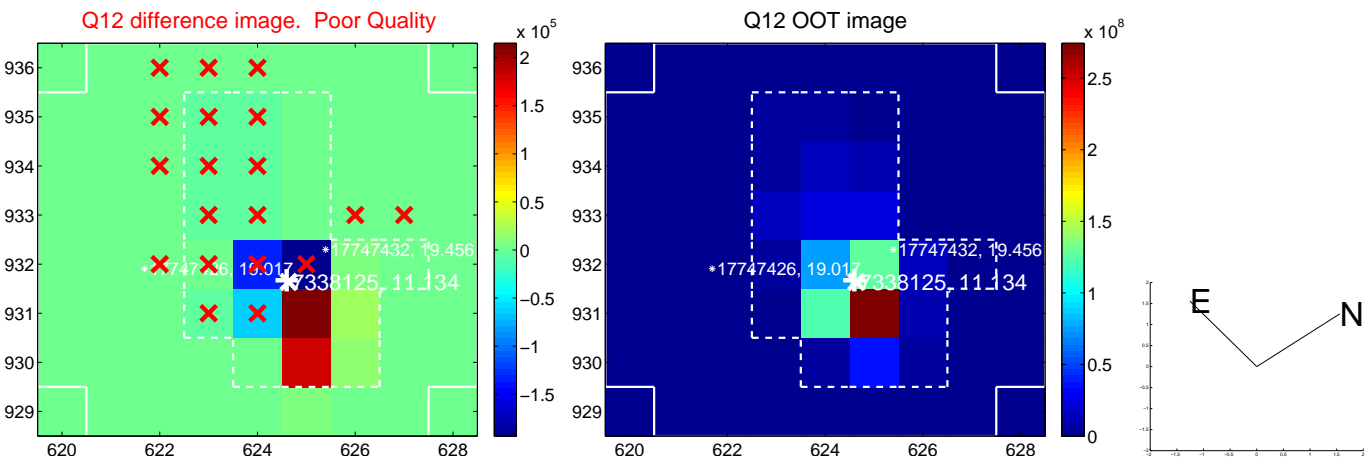
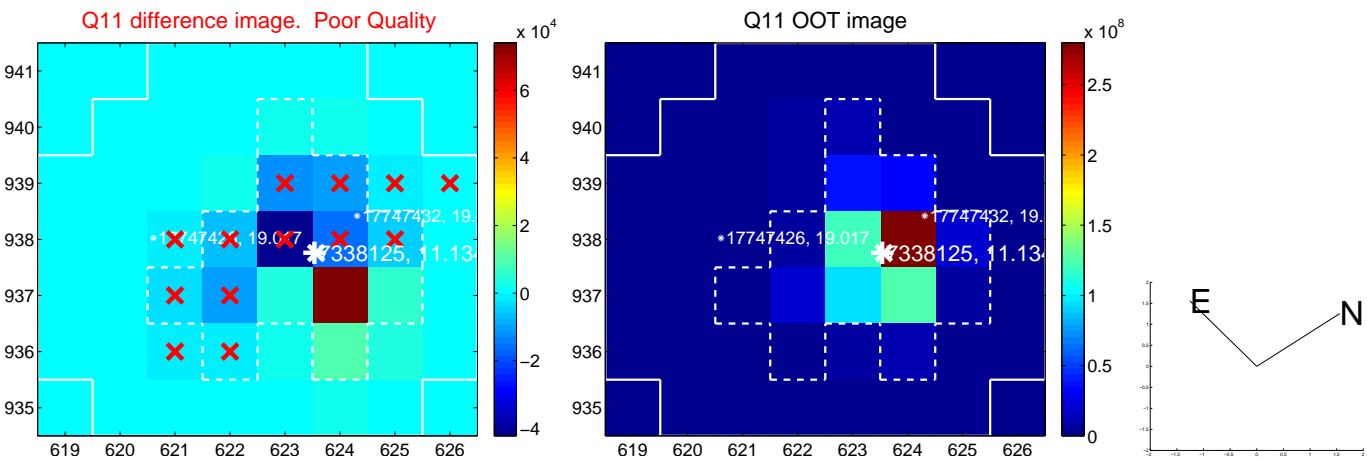
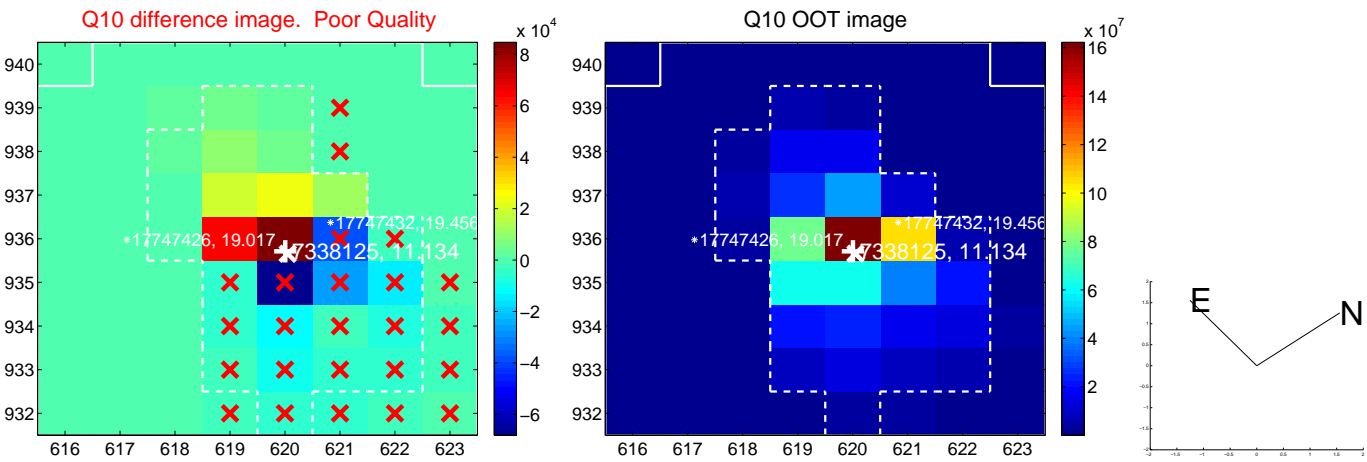
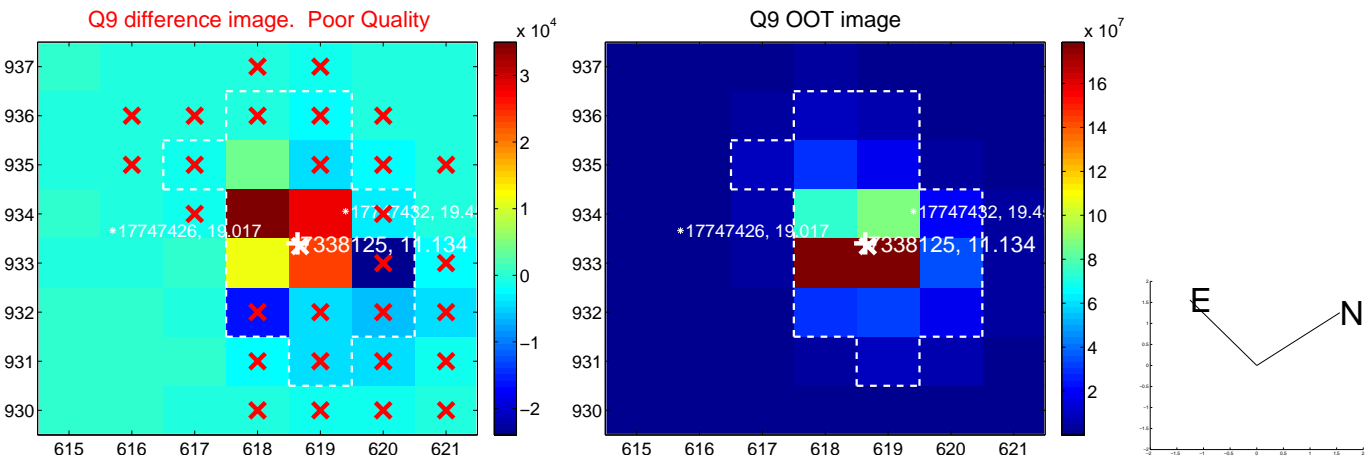
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



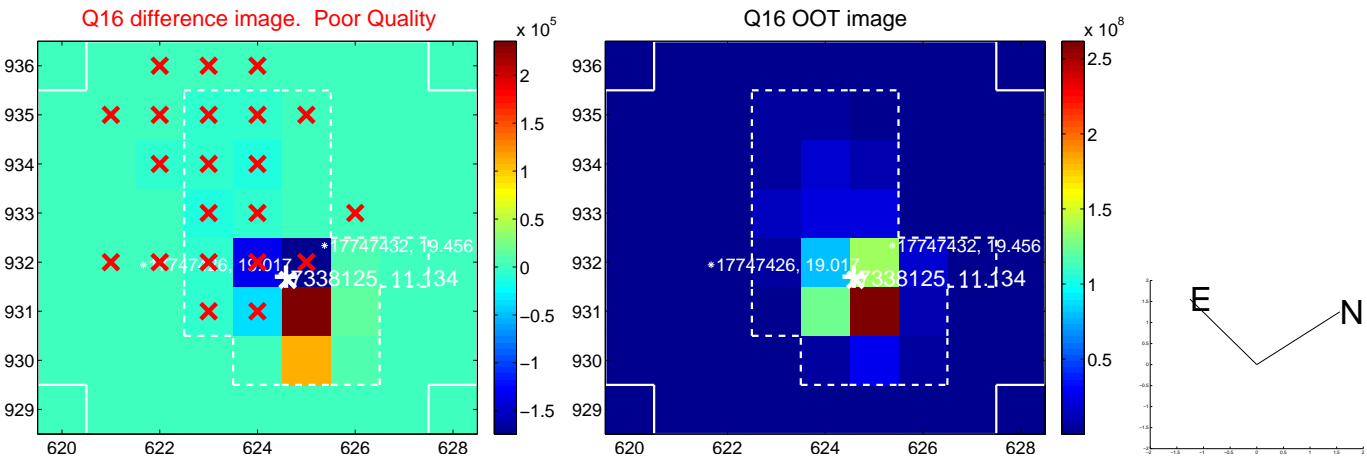
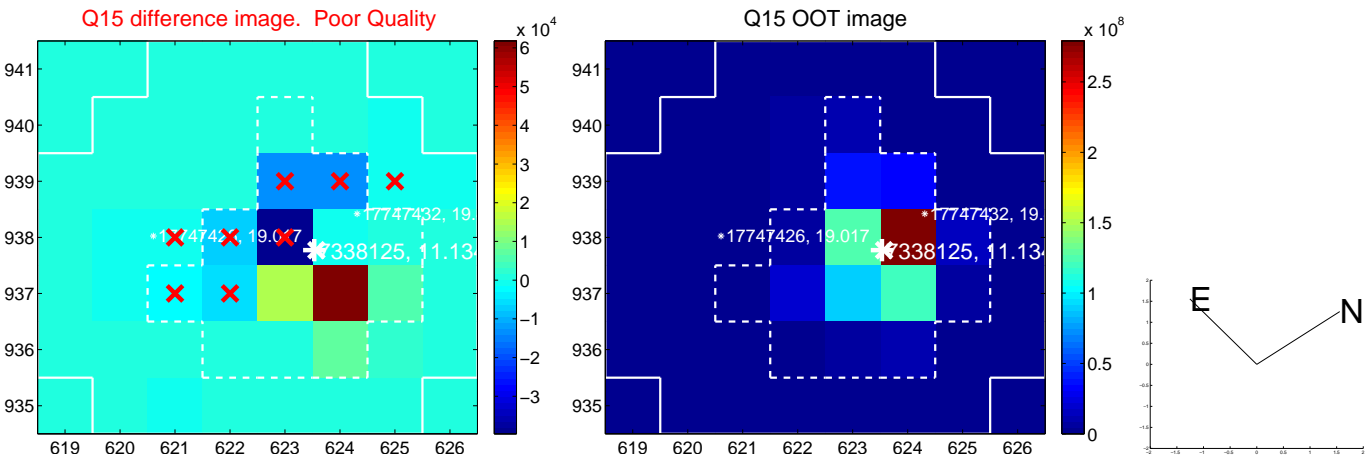
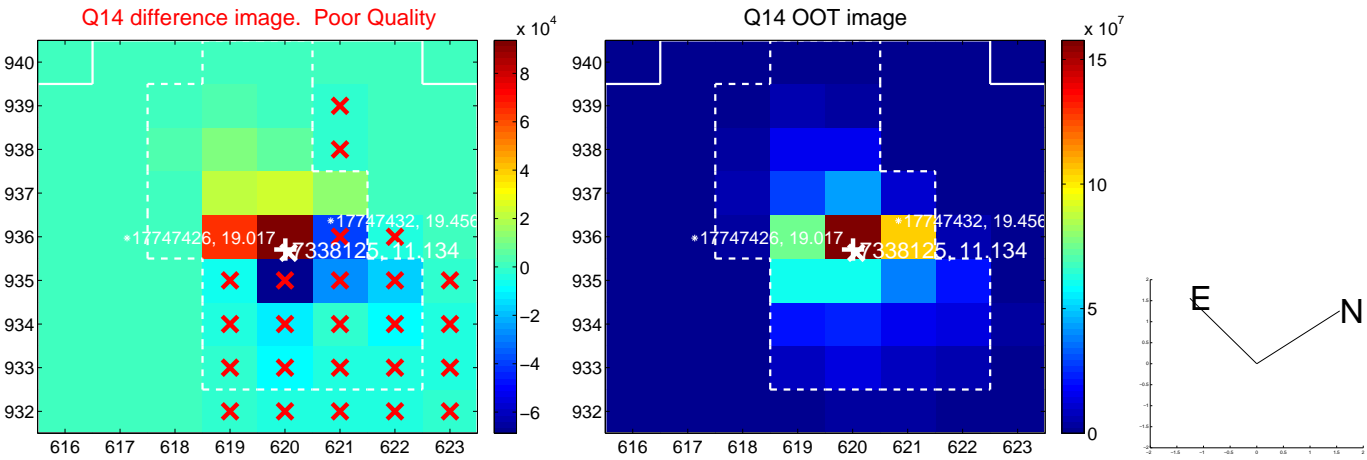
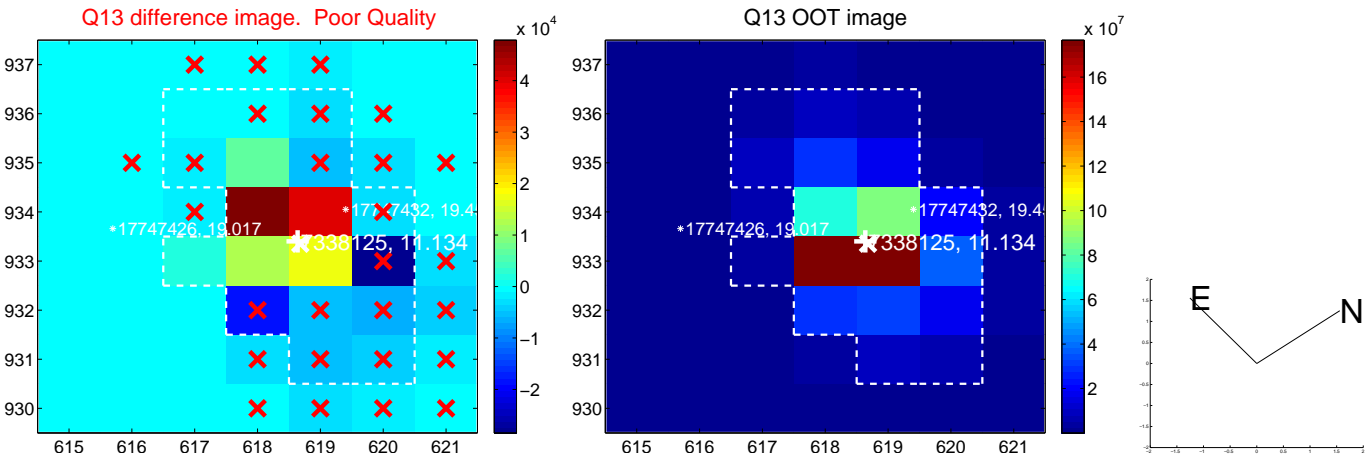




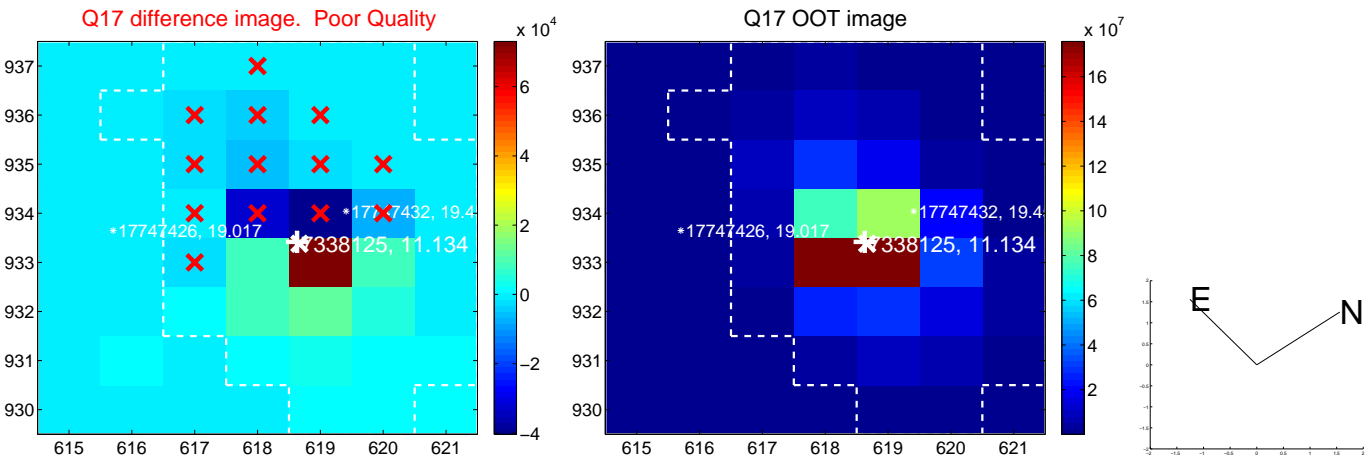
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



folded centroid time series figure for this object.

UKIRT Image

