

# KIC 009007332

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
009007332-01	OBS	No	0.924131	132.288144	5.9	5.564	9.5	4.5	1.33	6105	0.39	6314.34

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009007332-01	OBS	FP	0.00	1	0	1	0	SWEET_NTL—LPP_DV—LPP_ALT—CENT_RESOLVED_OFFSET

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

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

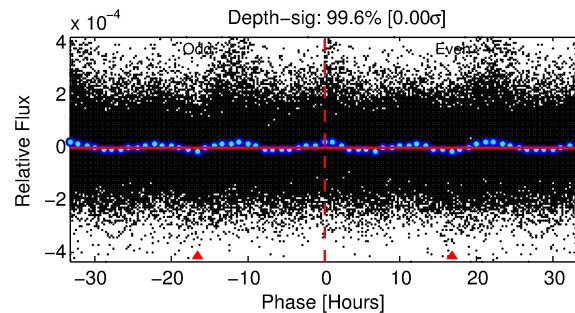
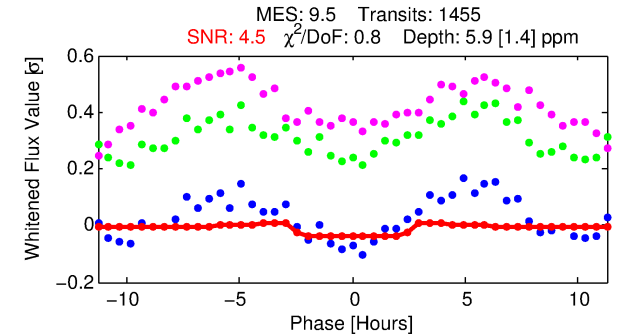
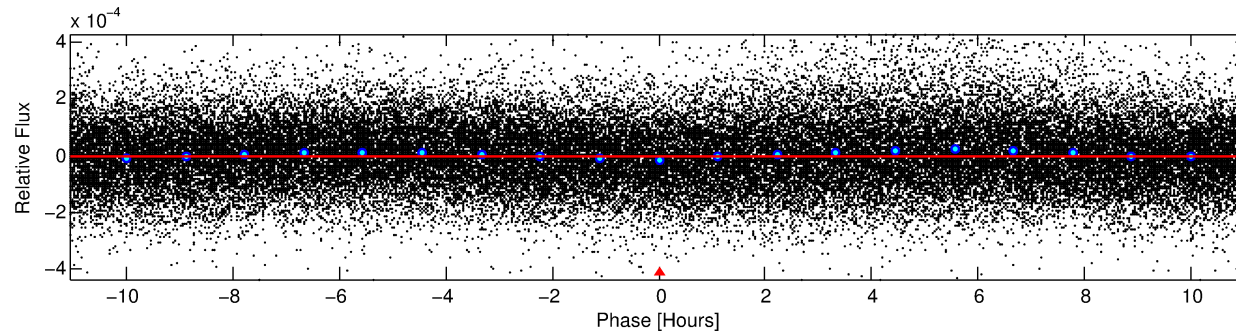
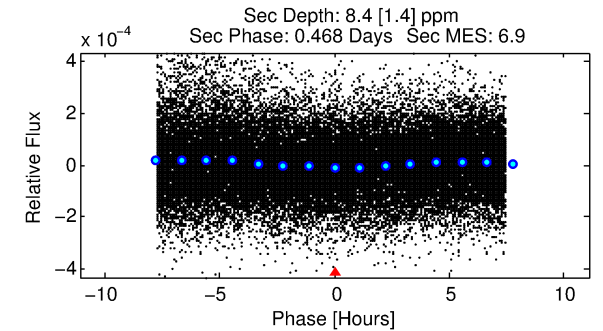
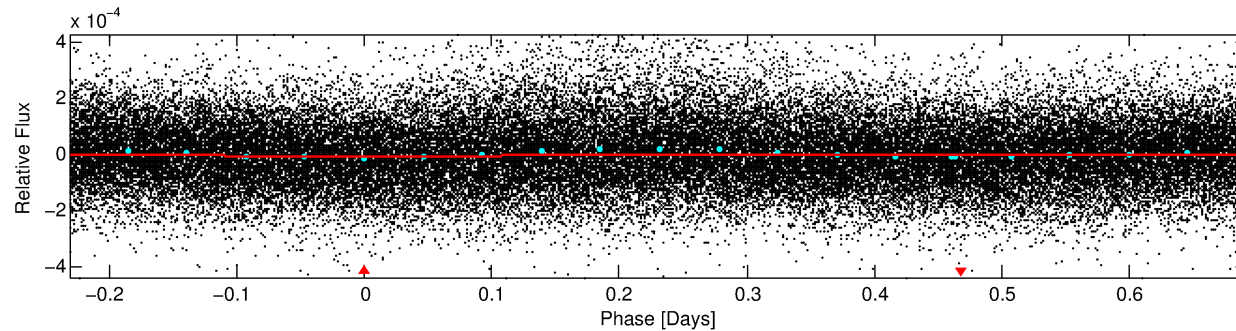
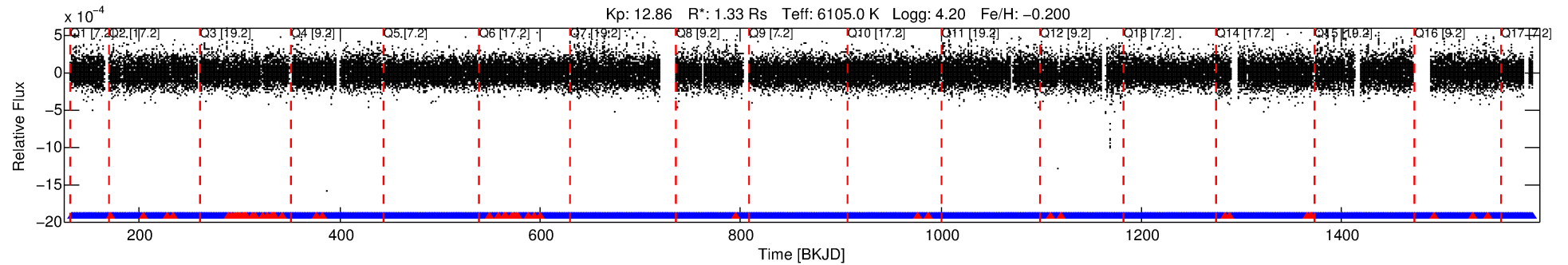
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 009007332-01

No Significant Match Found

# DV One-Page Summary

KIC: 9007332 Candidate: 1 of 1 Period: 0.924 d



## DV Fit Results:

Period = 0.92413 [0.00003] d  
Epoch = 132.2881 [0.0101] BKJD  
Rp/R\* = 0.0027 [0.0020]  
a/R\* = 1.08 [0.63]  
b = 0.92 [0.71]  
Seff = 6314.34 [2265.38]  
Teq = 2273 [204] K  
Rp = 0.39 [0.31] Re  
a = 0.0187 [0.0040] AU  
Ag = 10.77 [16.74] [0.58σ]  
Teffp = 6367 [2422] K [1.68σ]

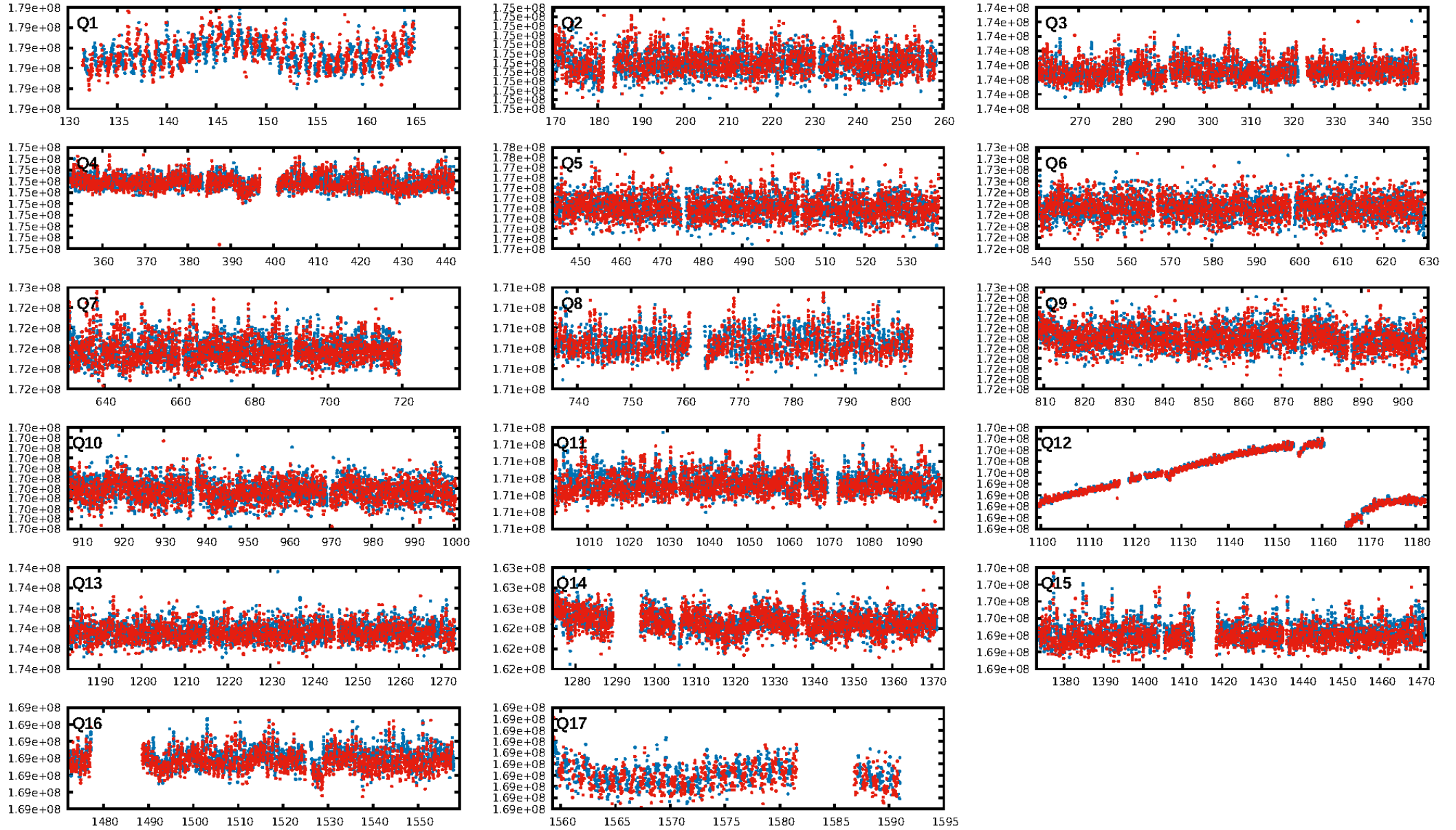
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
**Bootstrap-pfa: 1.01e-12**  
RollingBand-fgt: 0.96 [1334/1389]  
GhostDiagnostic-chr: -1.294  
**Centroid-sig: 0.0%**  
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]

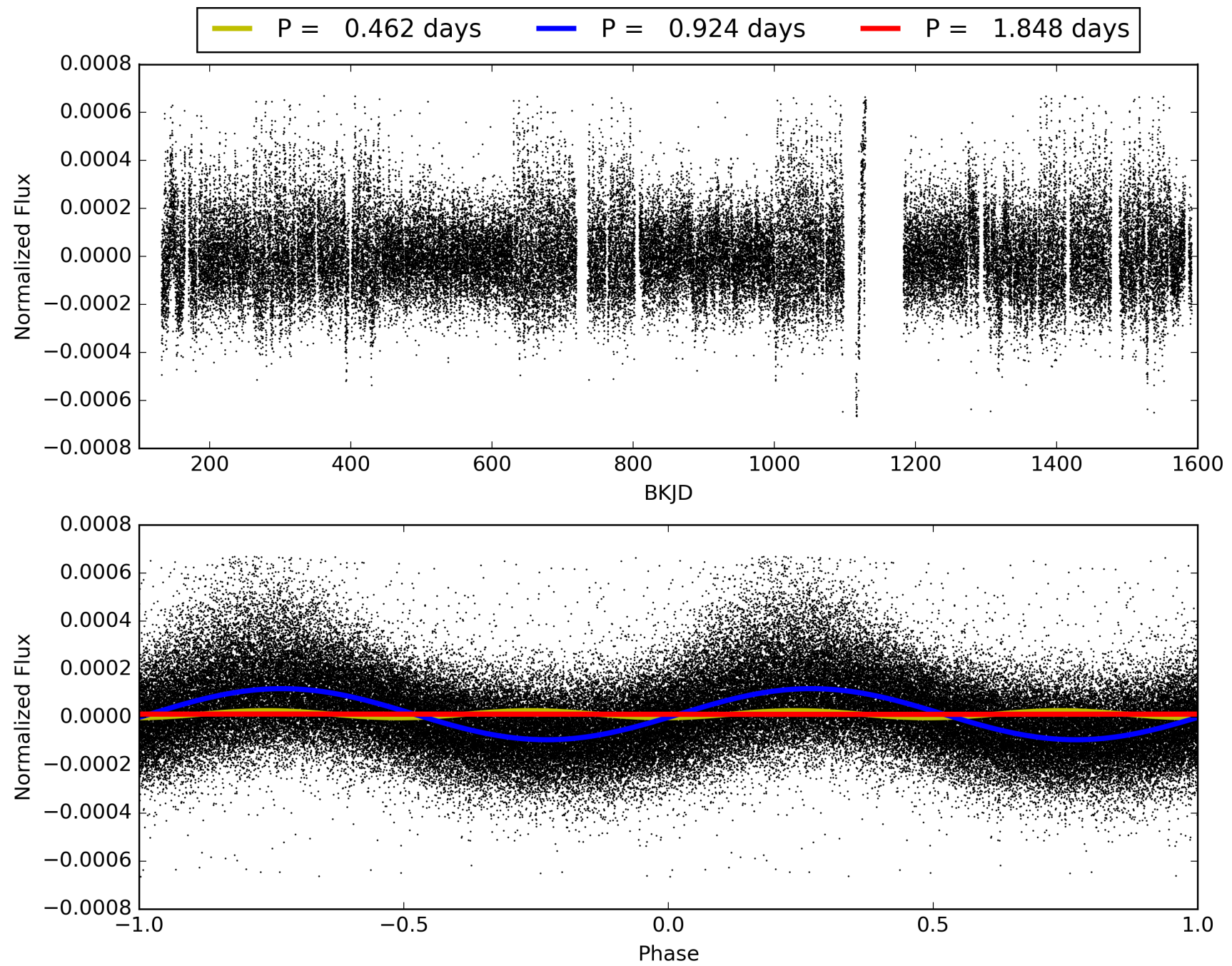
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 03:11:54 Z

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

# TCE 009007332-01, PDC Light Curves

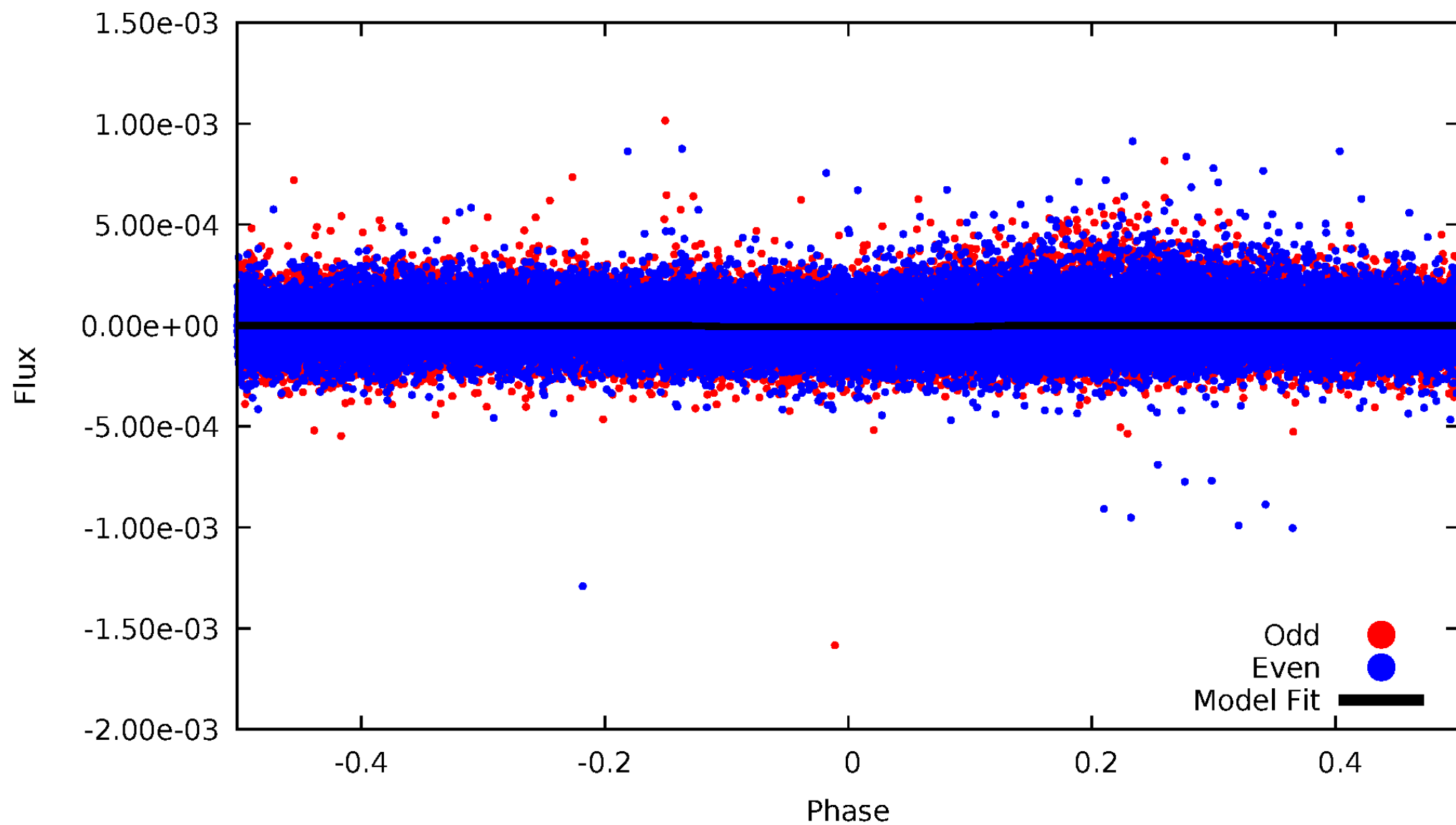


TCE 009007332-01



# DV Odd/Even

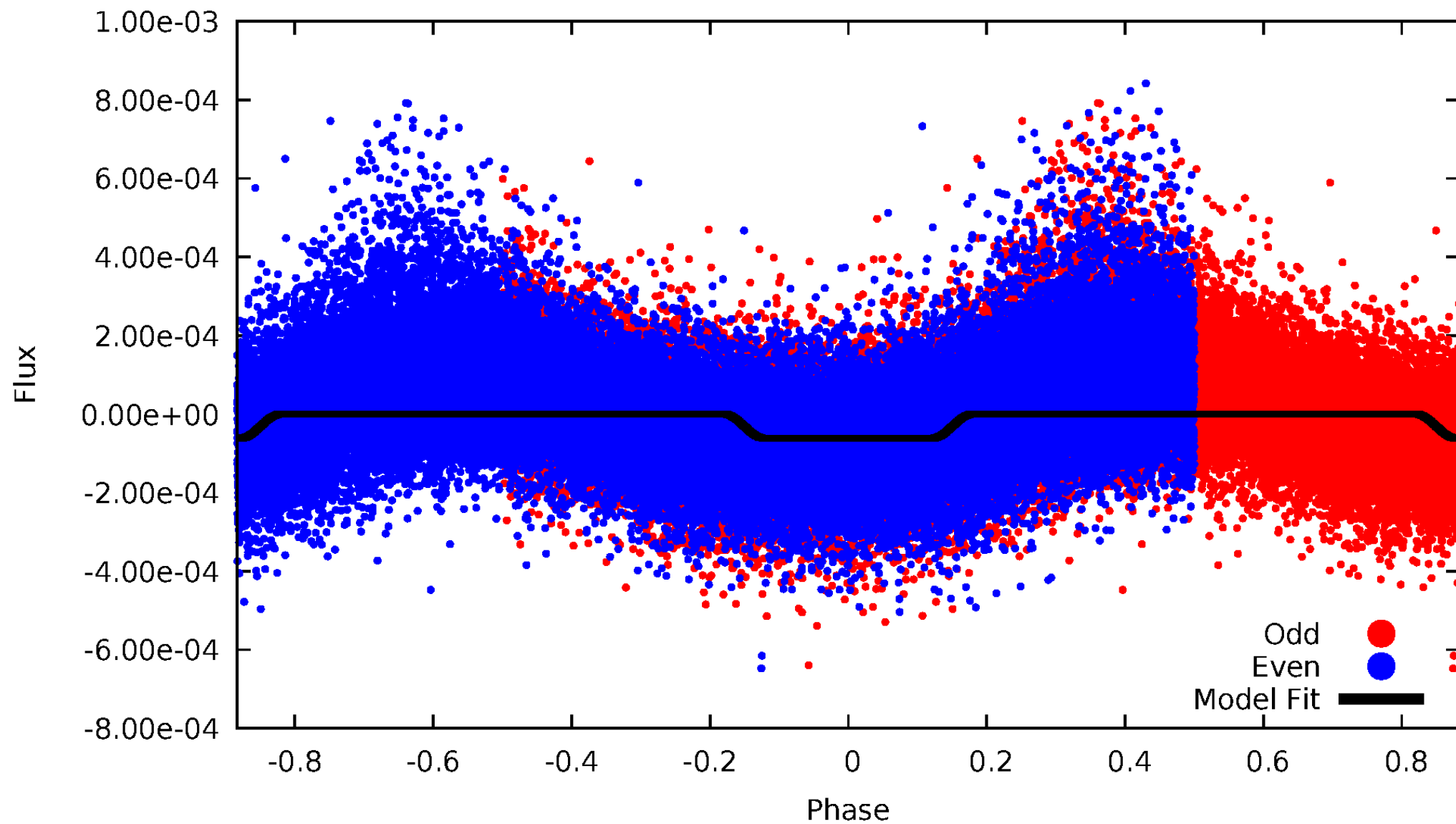
TCE 009007332-01





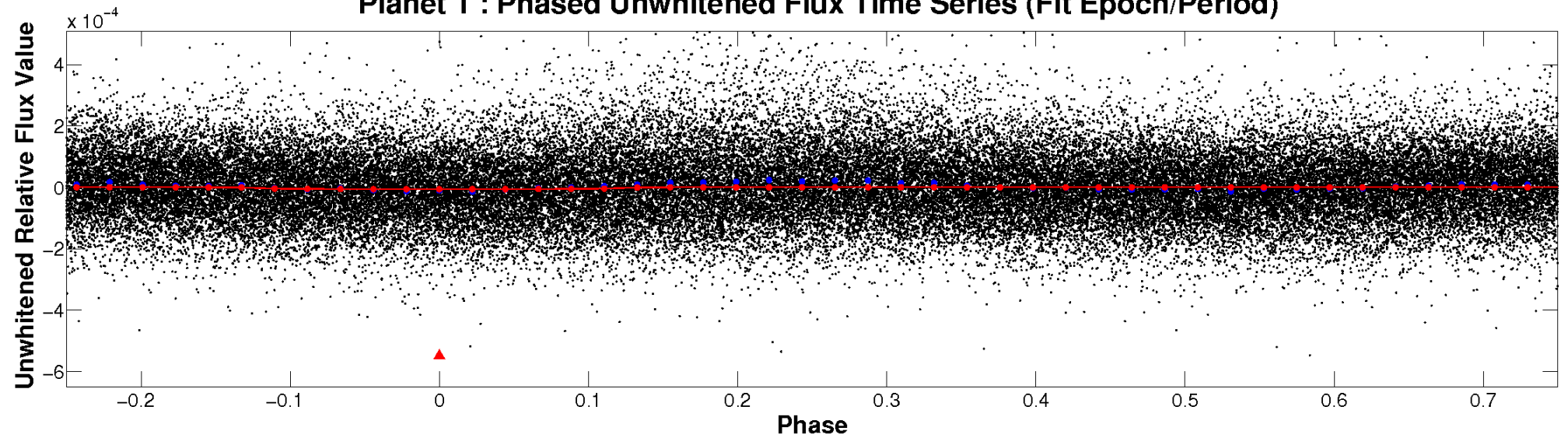
# ALT Odd/Even

TCE 009007332-01

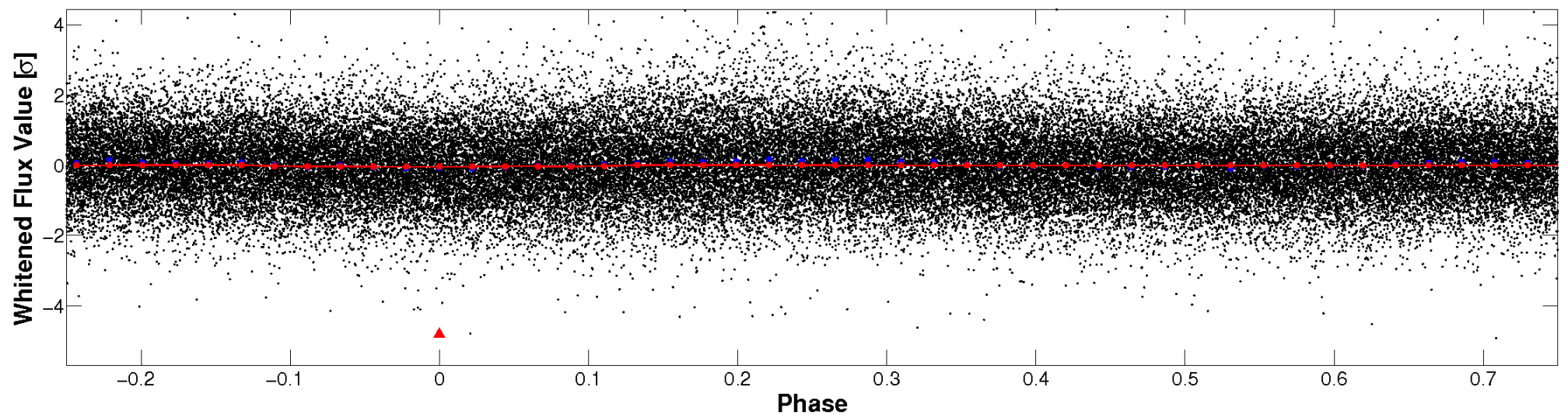


# Non-Whitened Vs. Whitened Light Curve

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

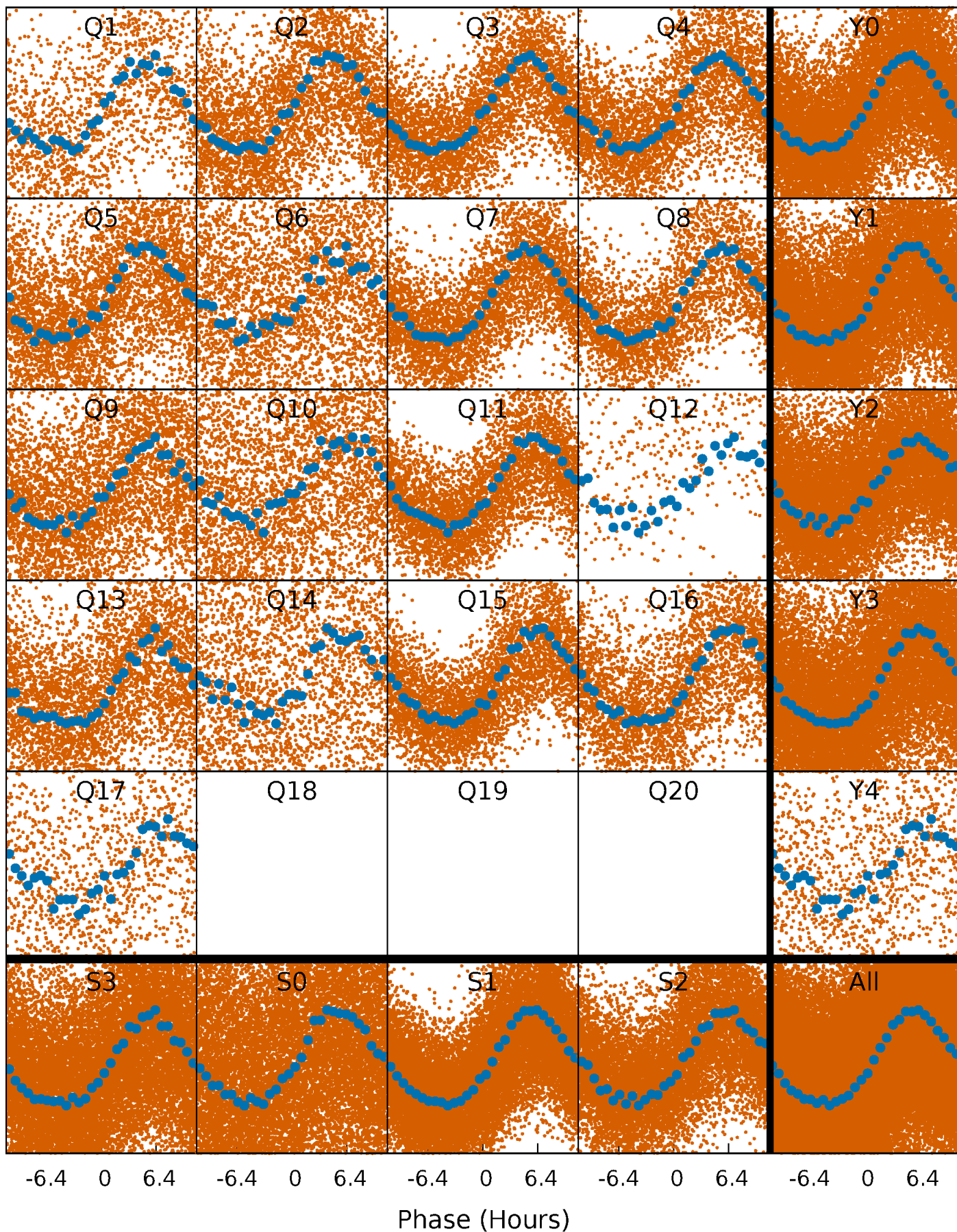


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

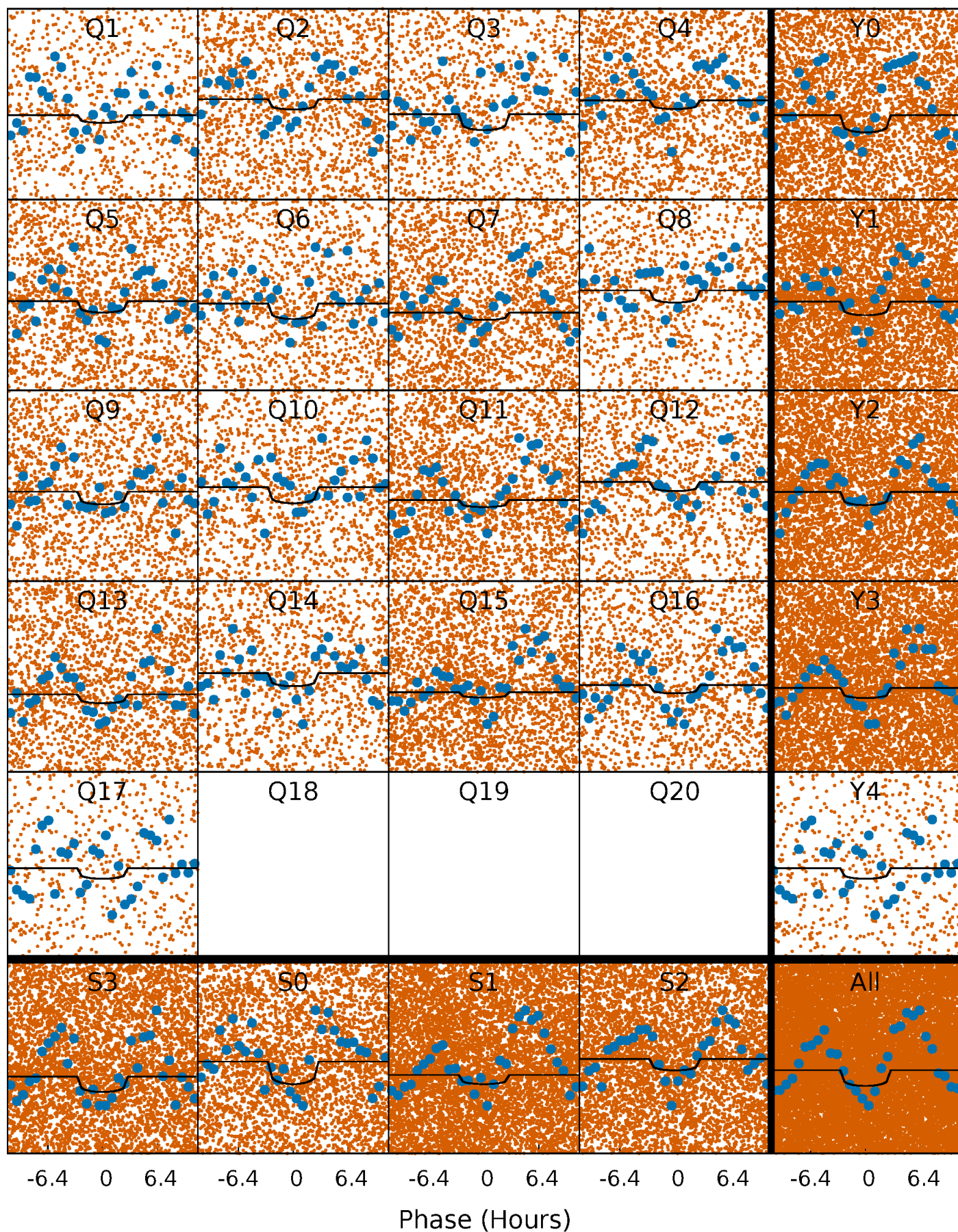
TCE 009007332-01 P= 0.924131 Days  $T_0=132.288144$  (BKJD)





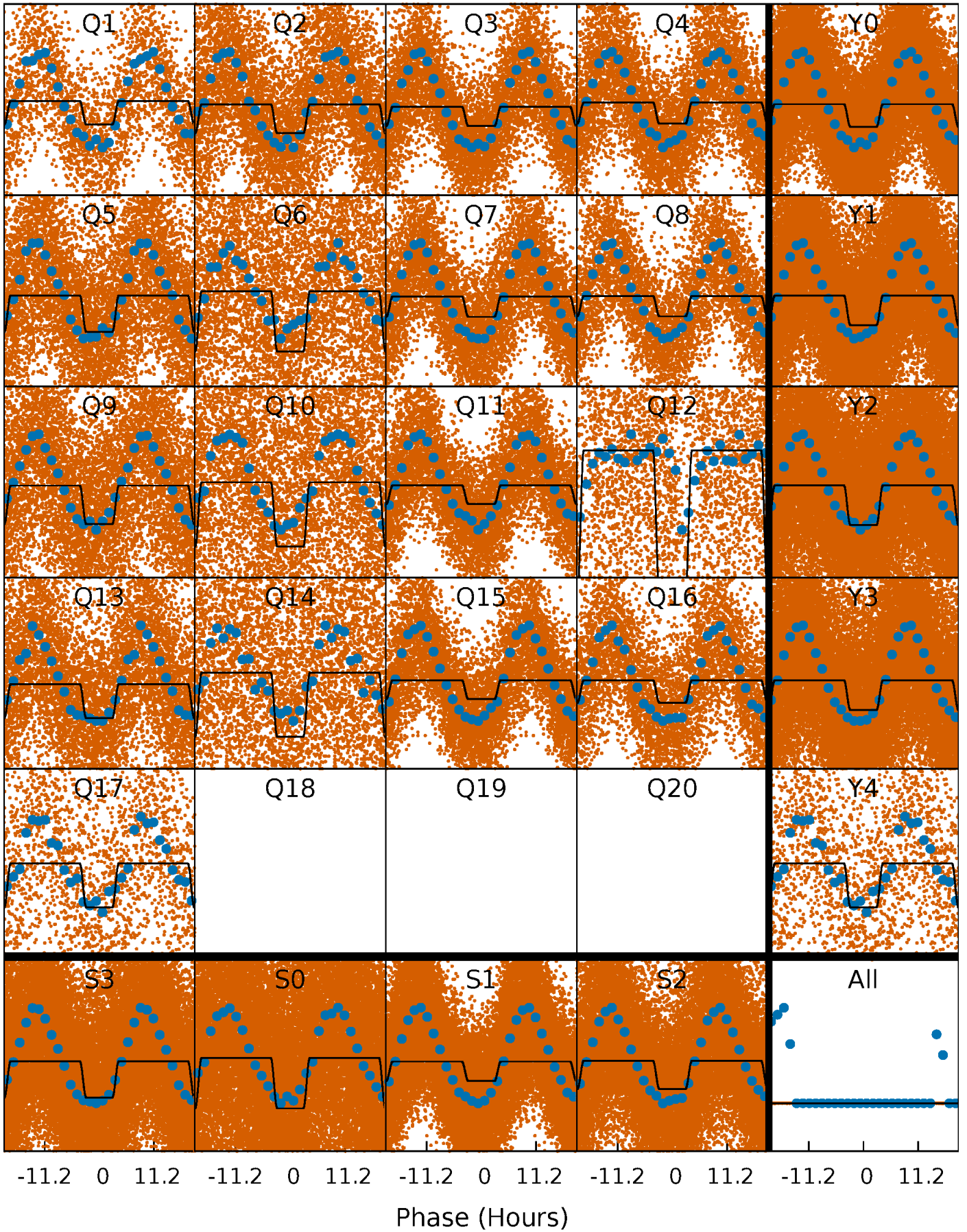
# DV Quarter-Phased Transit Curves

TCE 009007332-01 P= 0.924131 Days  $T_0=132.288144$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 009007332-01 P= 0.924183 Days  $T_0=132.101269$  (BKJD)

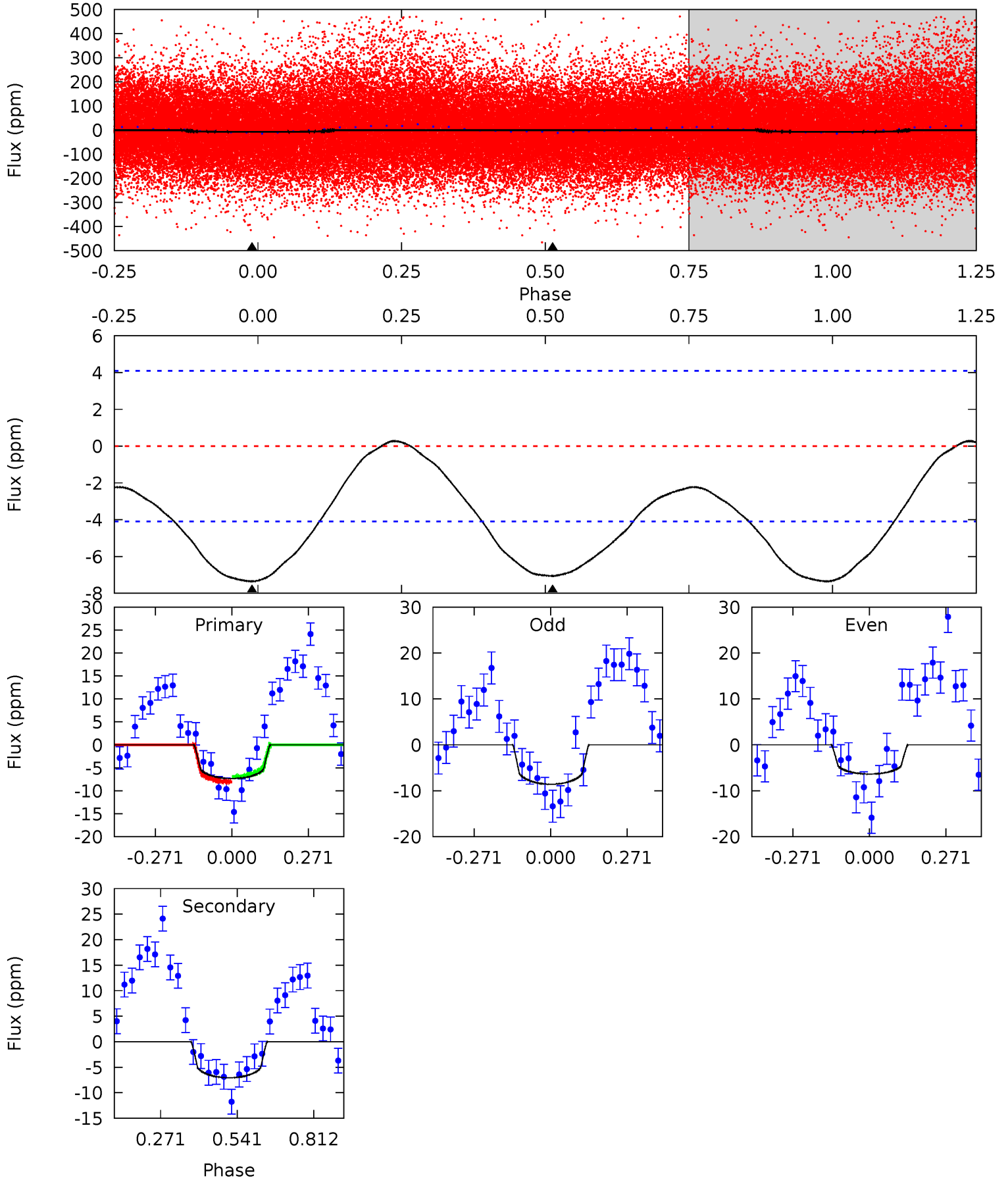




# DV Model-Shift Uniqueness Test

009007332-01, P = 0.924131 Days, E = 131.364013 Days

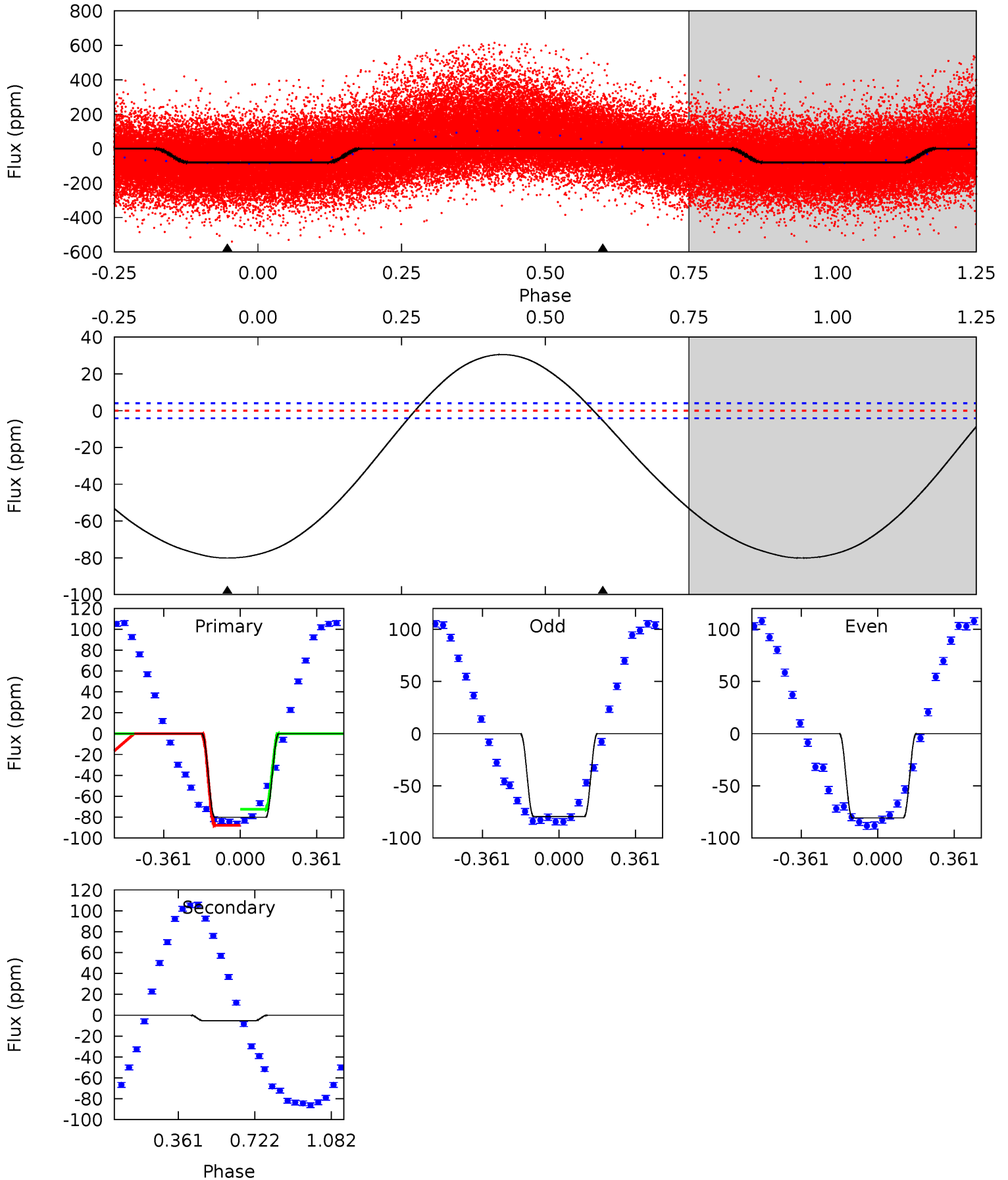
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.81	7.50	0	0	4.35	1.10	1.11	7.81	7.81	7.50	7.50	1.21	0.75	0.04	0.68



# Alt Model-Shift Uniqueness Test

009007332-01, P = 0.924183 Days, E = 131.177086 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
83.8	5.60	0	0	4.29	0.91	10.8	83.8	83.8	5.60	5.60	0.64	1.10	0.28	8.95





### Stellar Parameters For KIC 009007332

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6105^{+165}_{-184}$	$4.198^{+0.198}_{-0.132}$	$-0.200^{+0.300}_{-0.300}$	$1.332^{+0.295}_{-0.295}$	$1.020^{+0.153}_{-0.125}$	$0.609^{+0.595}_{-0.240}$
	+3%/-3%	+5%/-3%	+150%/-150%	+22%/-22%	+15%/-12%	+98%/-40%
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 009007332-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-7 \pm 1$	$0.39^{+0.30}_{-0.24}$	$3148^{+196}_{-212}$	$5941^{+4575}_{-1397}$	$8.931^{+53.103}_{-6.182}$
Alt.	$-5 \pm 1$	$1.09^{+0.36}_{-0.30}$	$3150^{+194}_{-202}$	$3478^{+585}_{-507}$	$0.872^{+0.840}_{-0.392}$

$T_{\text{max}}$  = 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 009007332-01. Kepler magnitude: 12.86. Transit SNR 4.48

There are 0 quarters with good PRF difference image offsets

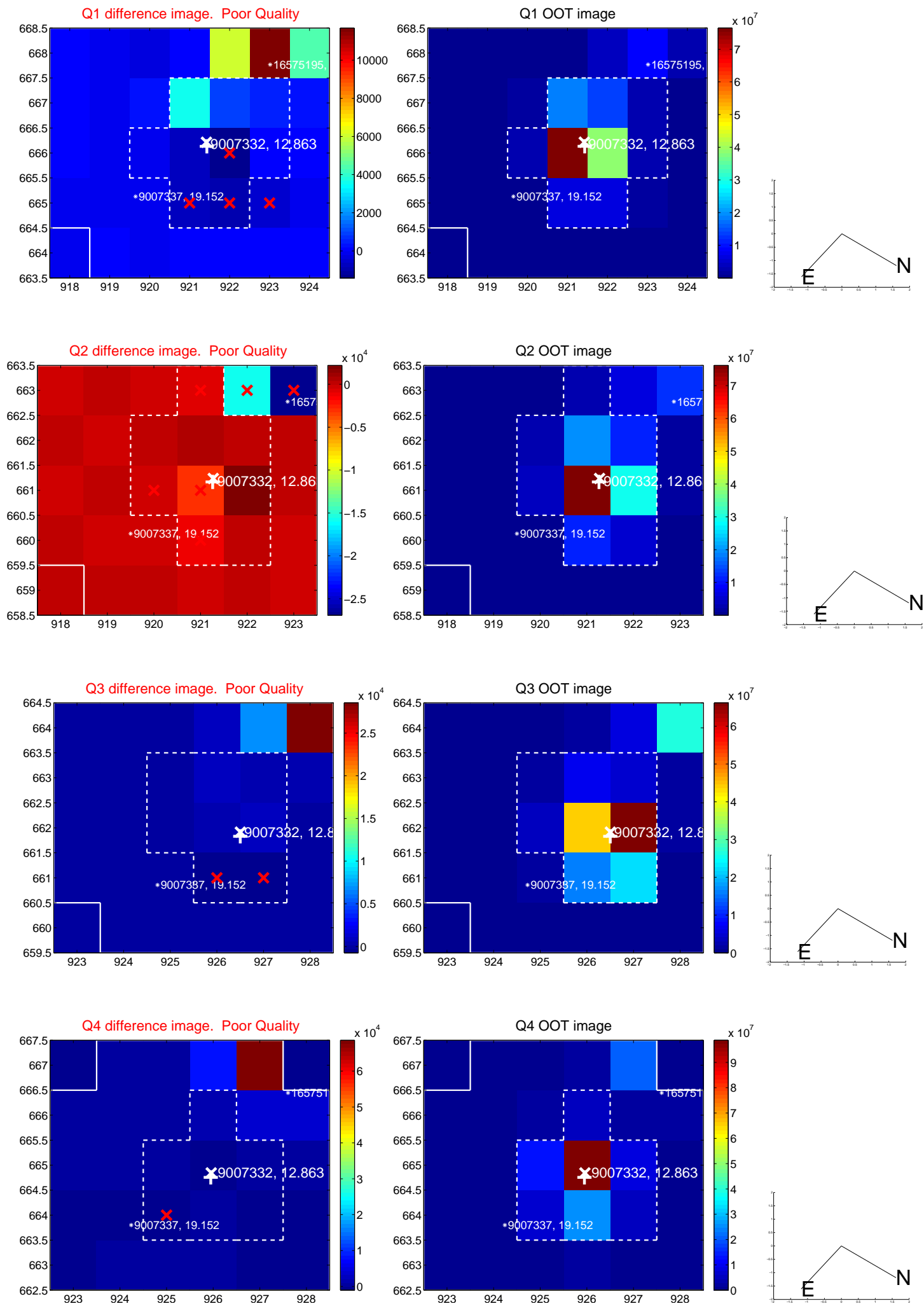
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	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	—	—	—	—

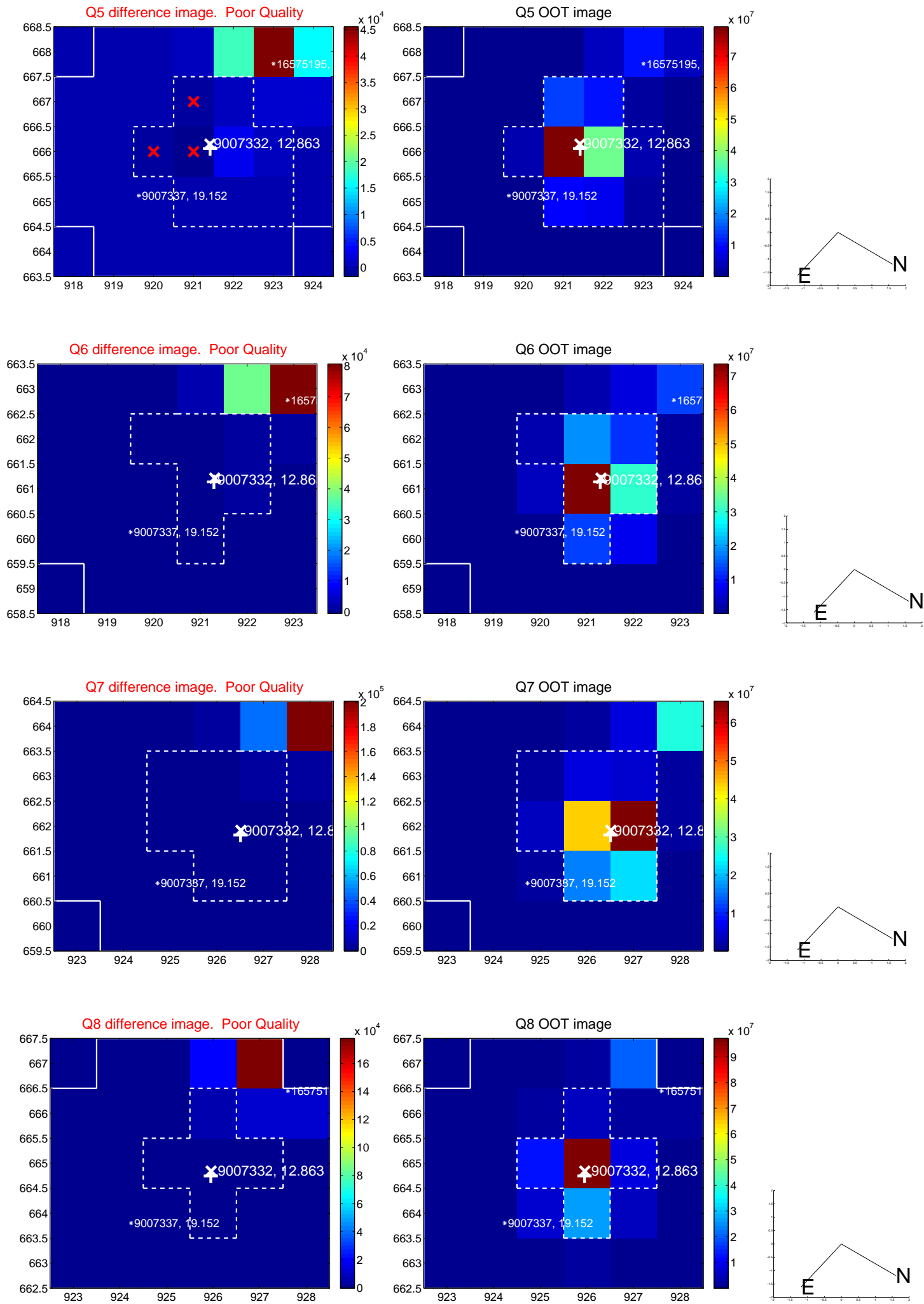


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

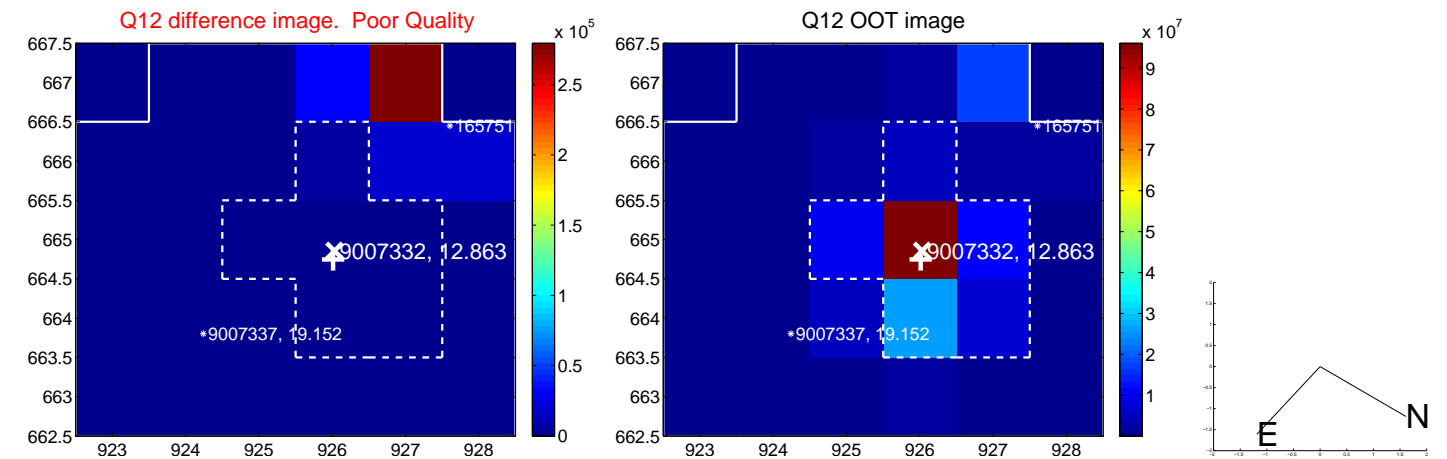
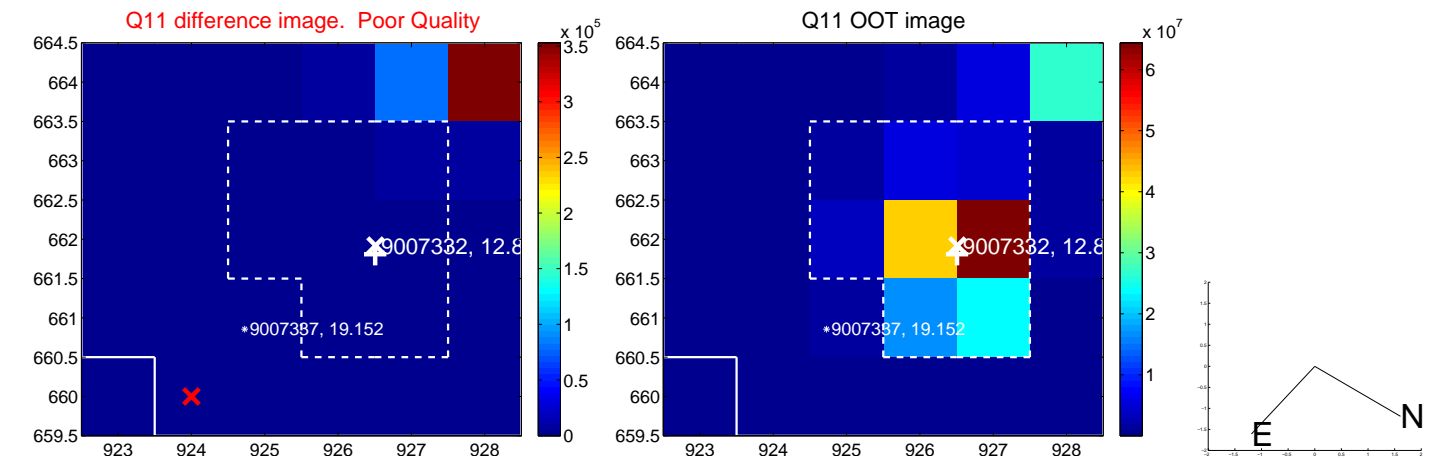
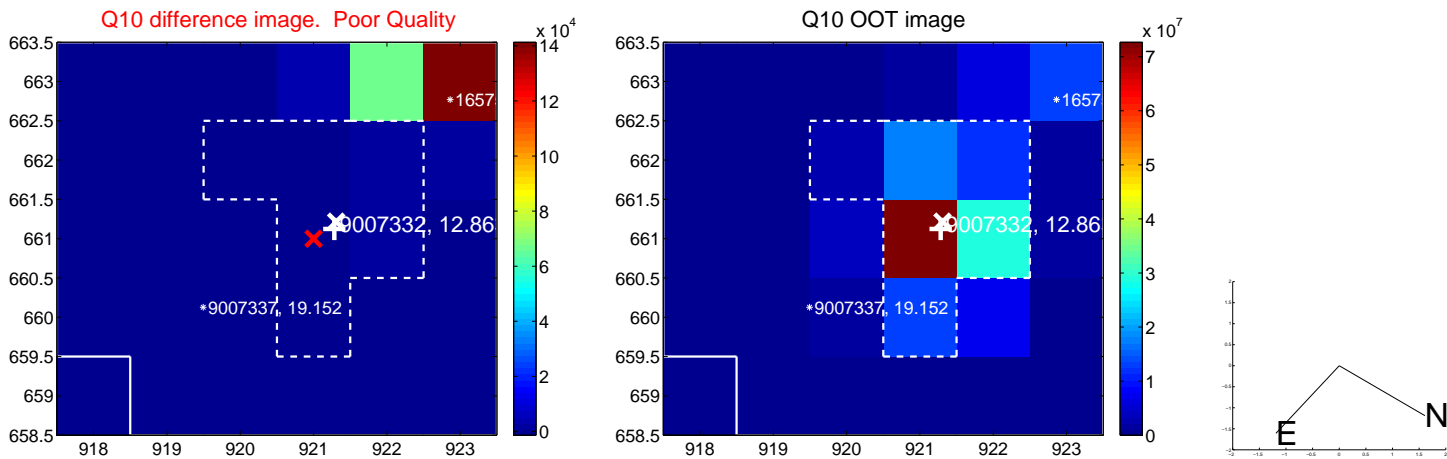
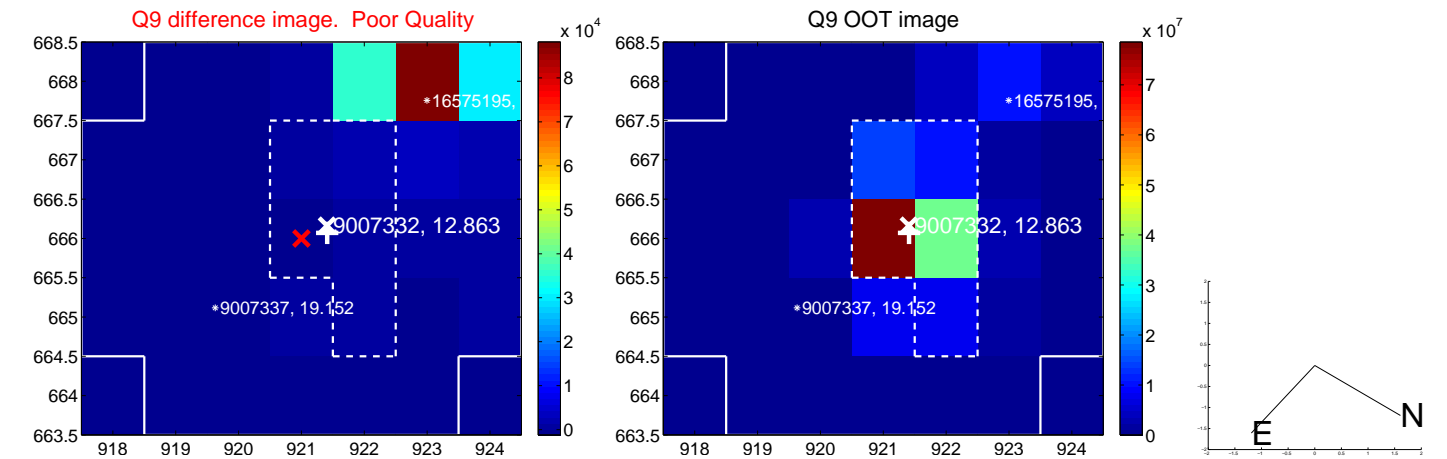


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

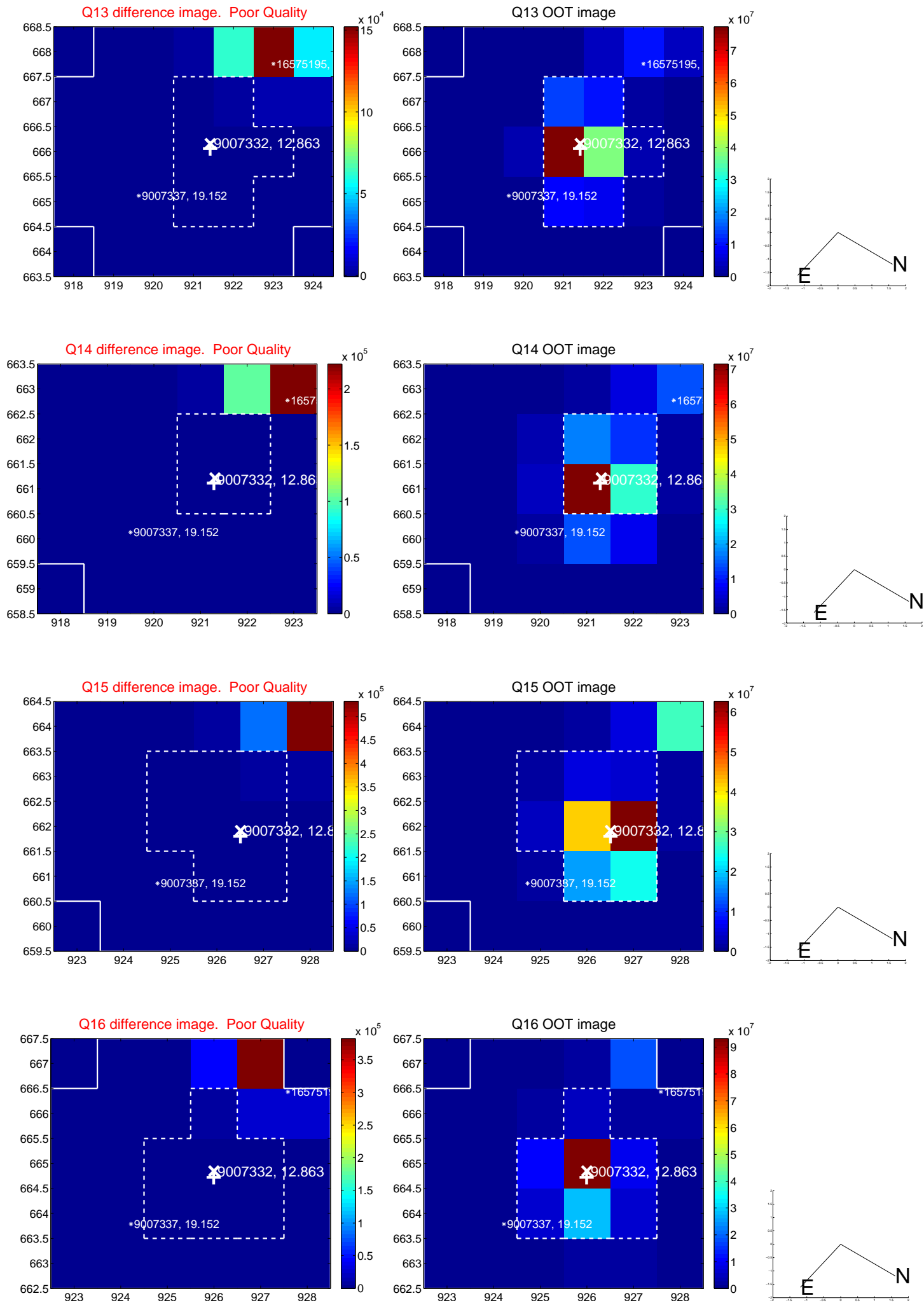




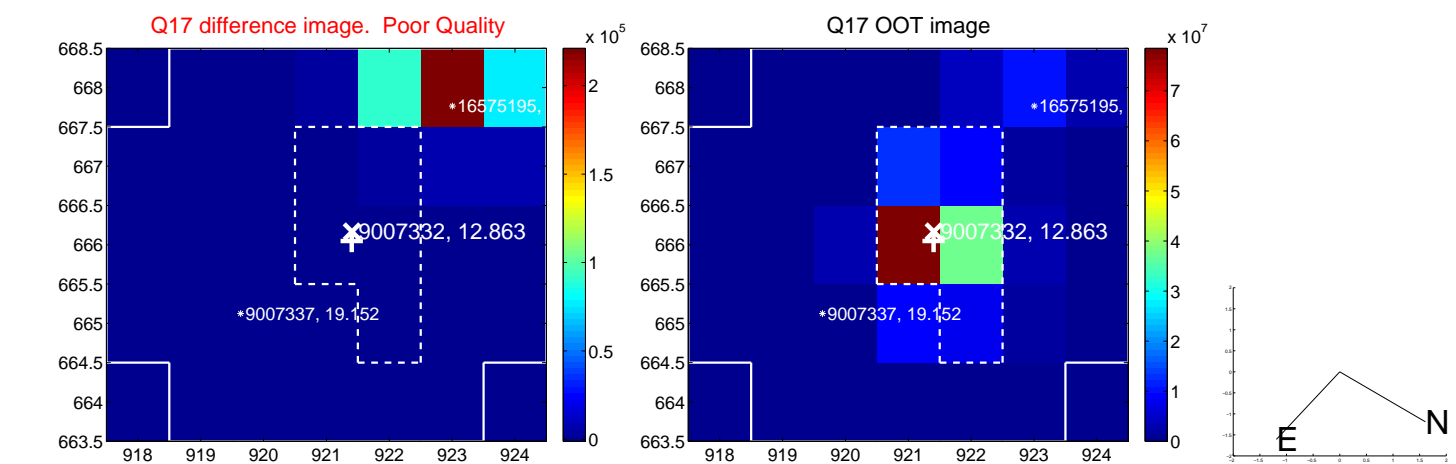
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



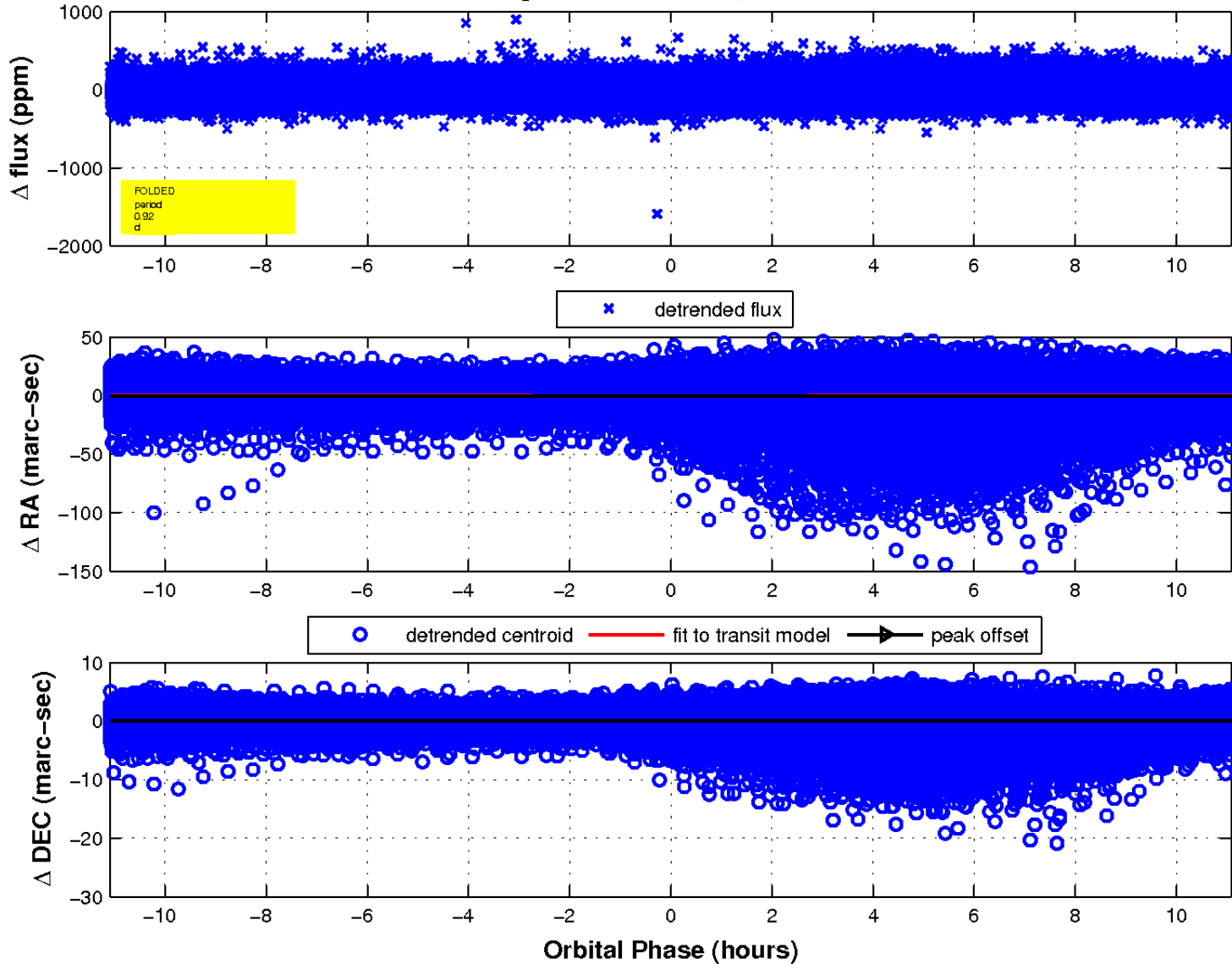
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

