

# KIC 011721834

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011721834-01	OBS	No	1.337160	132.443423	6.6	11.011	8.0	4.9	2.52	7017	0.73	16437.83

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011721834-01	OBS	FP	0.00	1	0	0	0	<del>SWEET_NTL</del> — <del>LPP_DV</del> — <del>LPP_ALT</del>

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

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

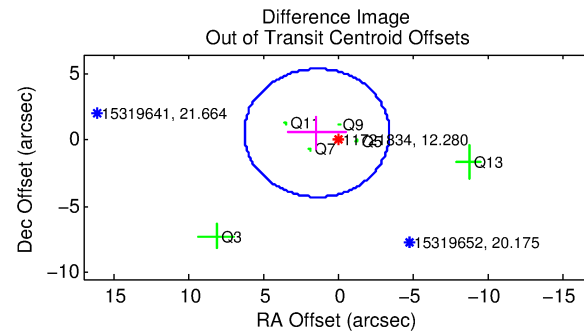
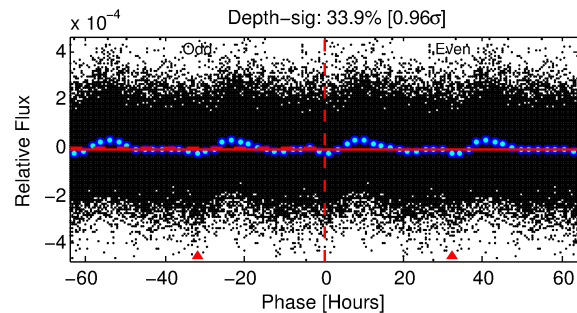
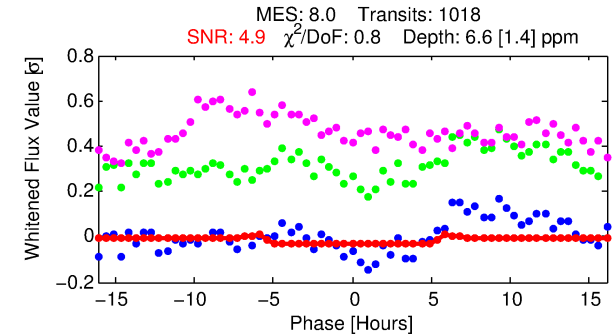
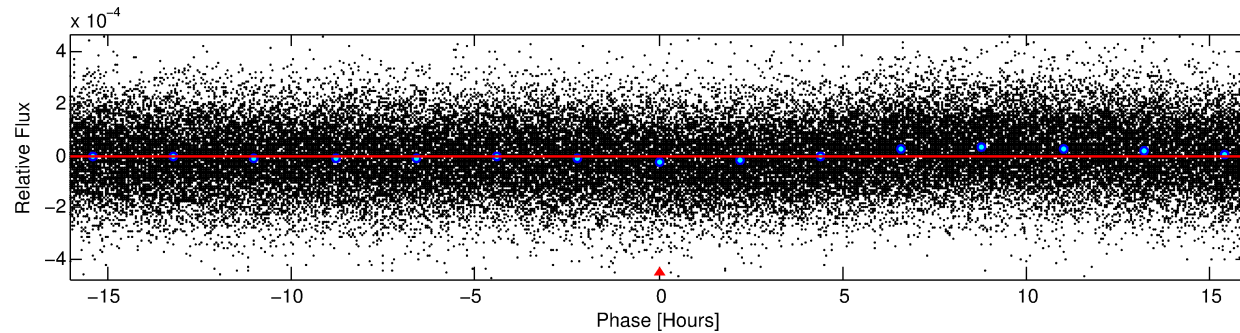
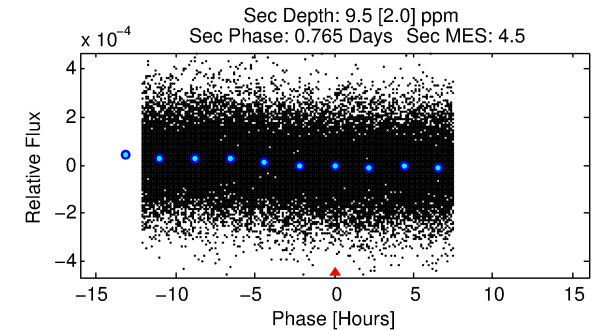
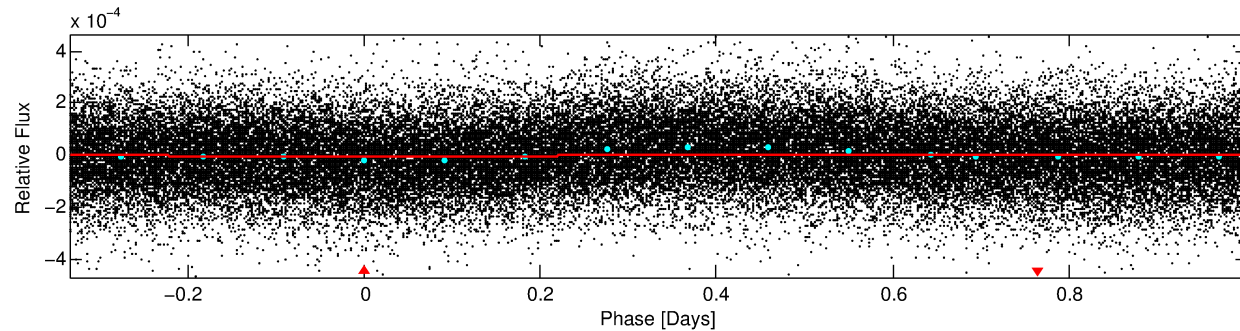
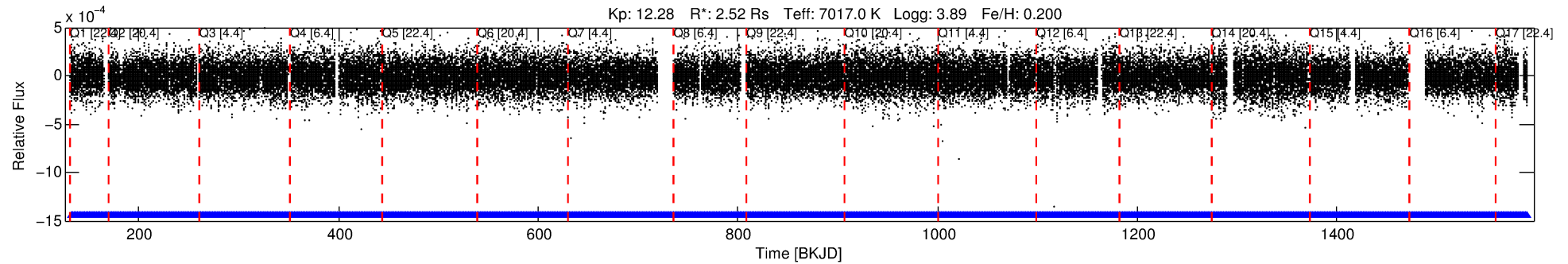
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 011721834-01

No Significant Match Found

# DV One-Page Summary

KIC: 11721834 Candidate: 1 of 1 Period: 1.337 d



## DV Fit Results:

Period = 1.33716 [0.00004] d  
Epoch = 132.4434 [0.0119] BKJD  
Rp/R\* = 0.0026 [0.0025]  
a/R\* = 1.04 [0.52]  
b = 0.84 [2.07]  
Seff = 16437.83 [6353.33]  
Teff = 2887 [279] K  
Rp = 0.73 [0.73] Re  
a = 0.0289 [0.0070] AU  
Ag = 8.29 [16.30] [0.45σ]  
Teffp = 7575 [3666] K [1.28σ]

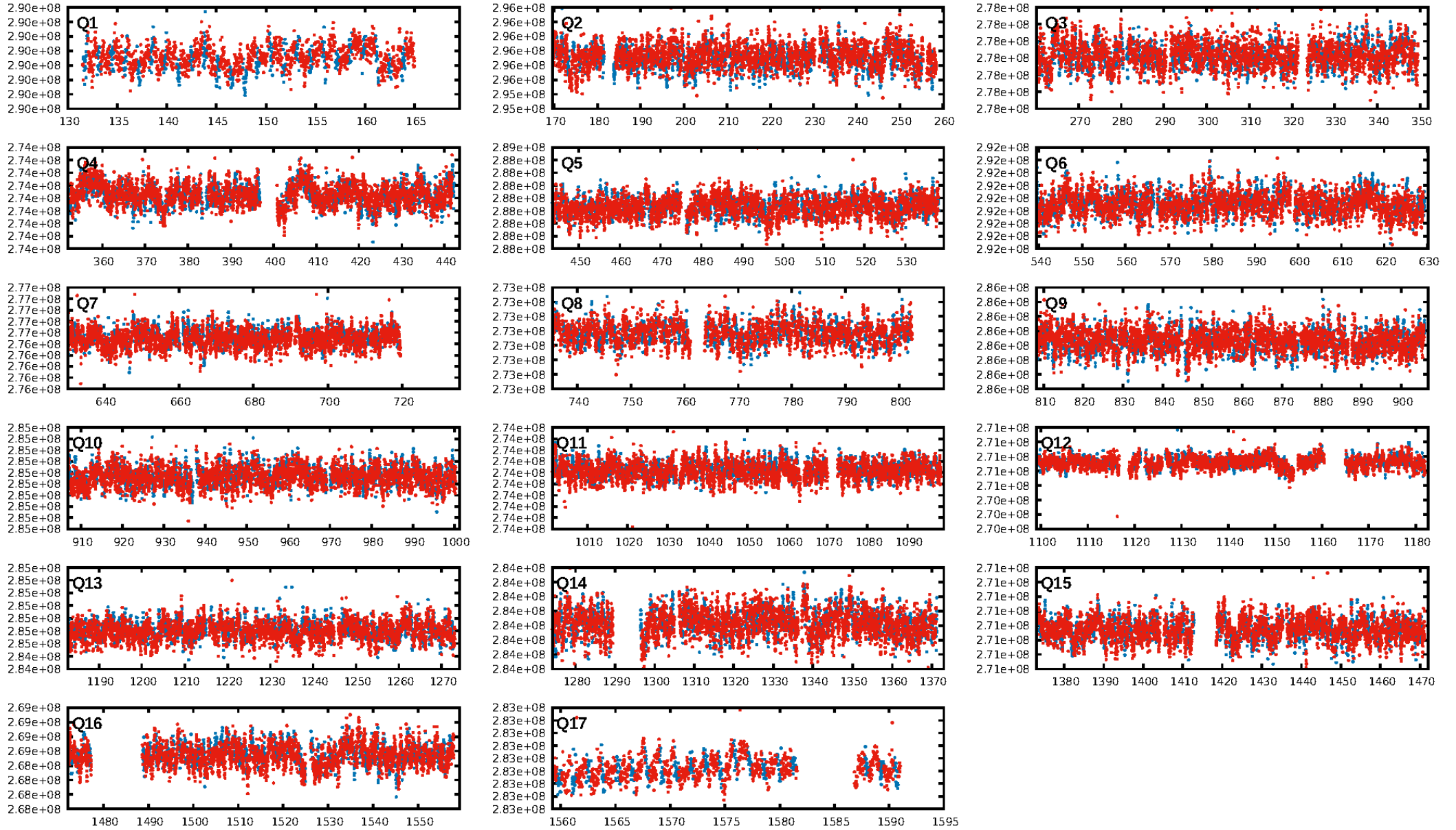
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [973/973]  
GhostDiagnostic-chr: 3.01  
Centroid-sig: 20.4%  
Centroid-so: 1.433 arcsec [1.05σ]  
OotOffset-rm: 1.497 arcsec [0.93σ]  
KicOffset-rm: 1.584 arcsec [0.73σ]  
OotOffset-st: 0/3/0/3 [6]  
KicOffset-st: 0/3/0/3 [6]  
DiffImageQuality-fgm: 0.67 [4/6]  
DiffImageOverlap-fno: 1.00 [17/17]

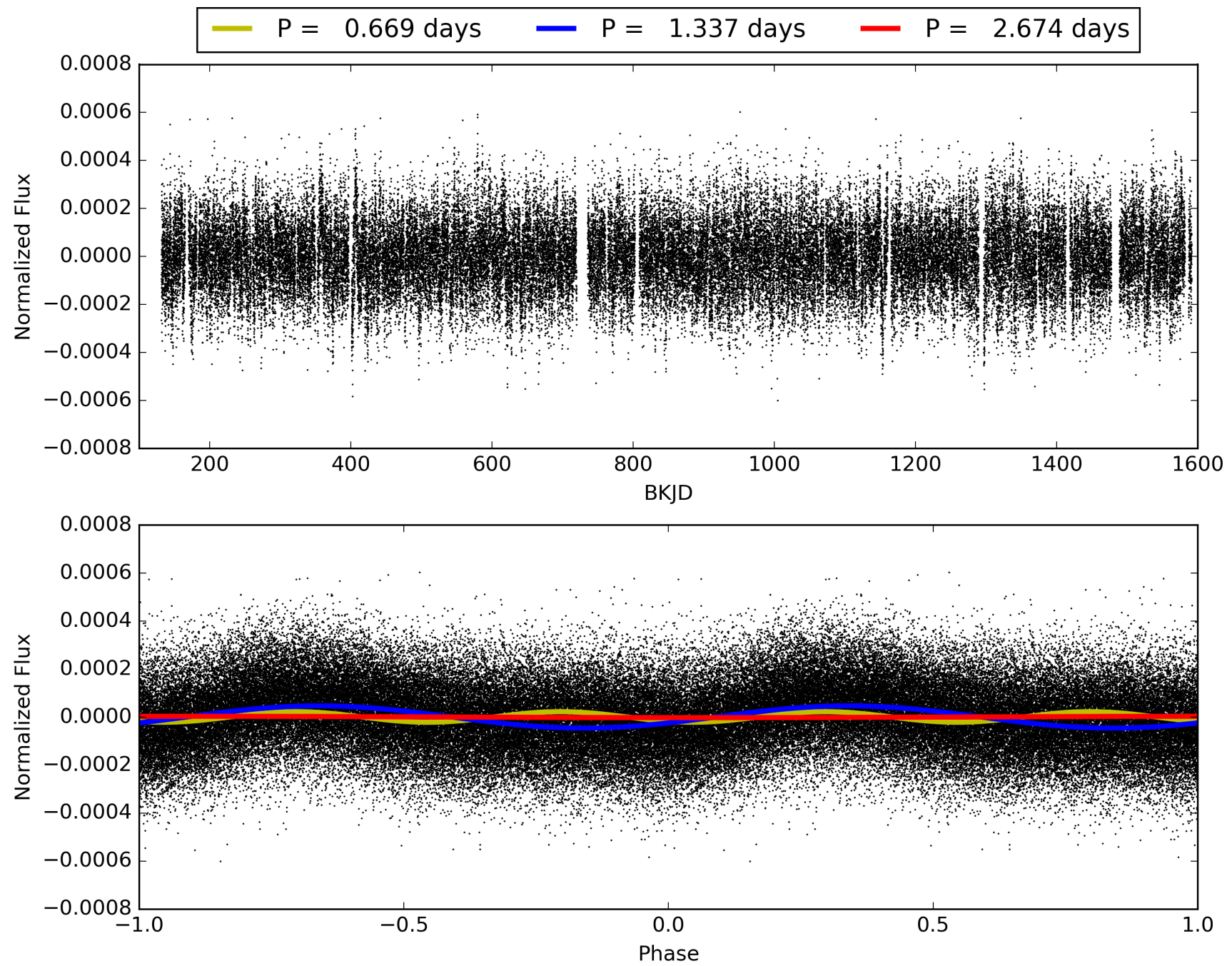
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:10:33 Z

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

# TCE 011721834-01, PDC Light Curves

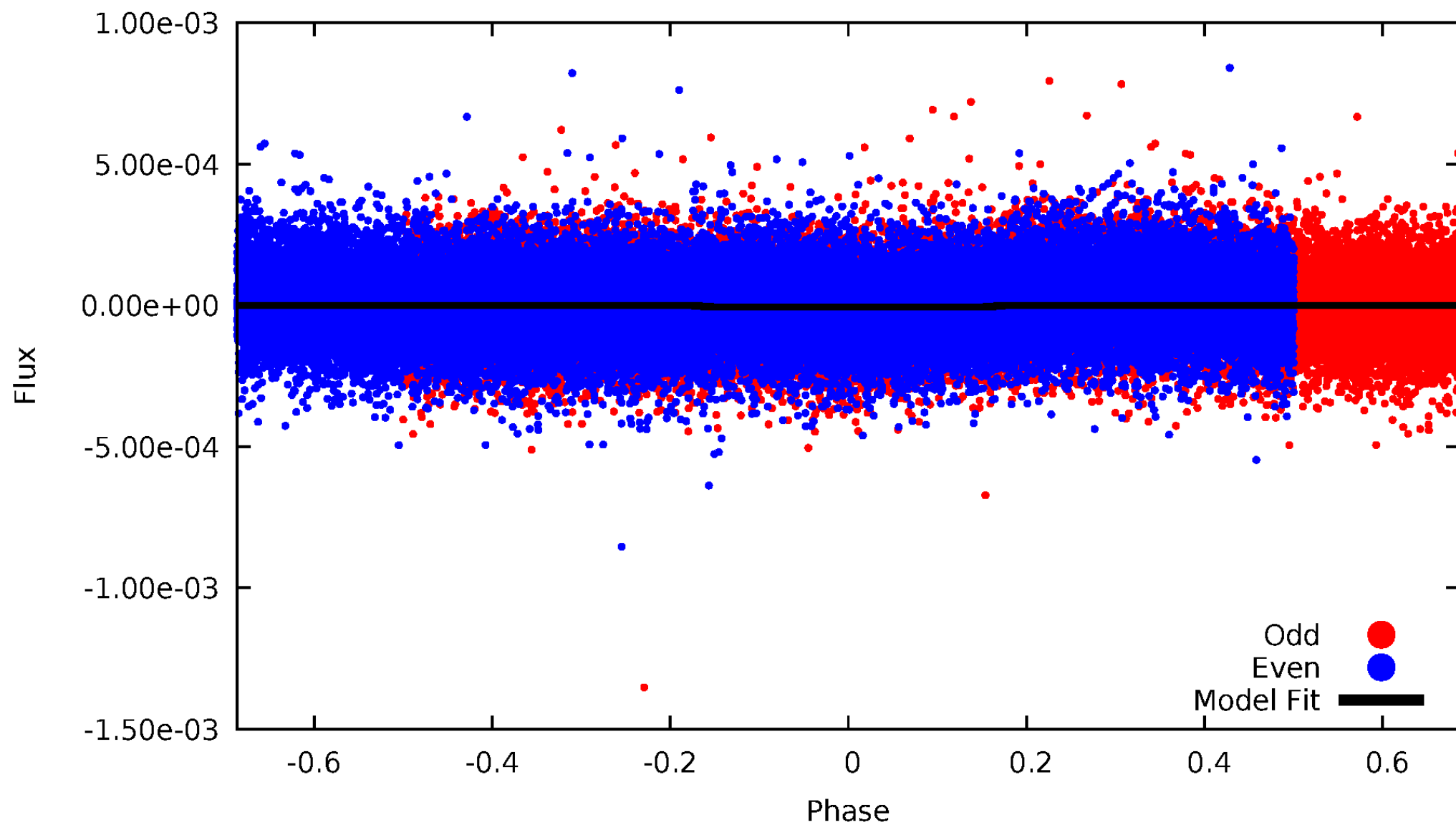


# TCE 011721834-01



# DV Odd/Even

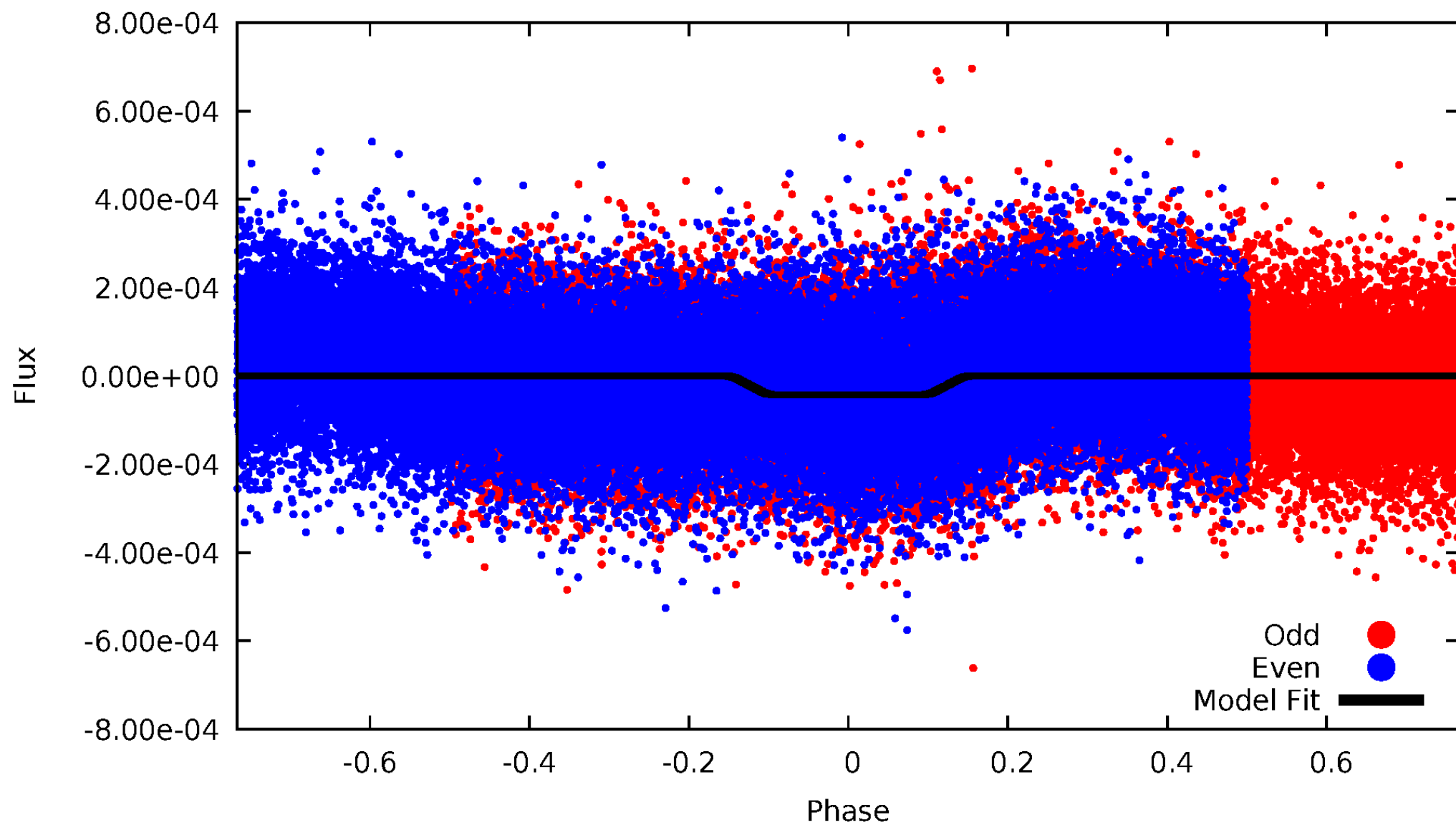
TCE 011721834-01





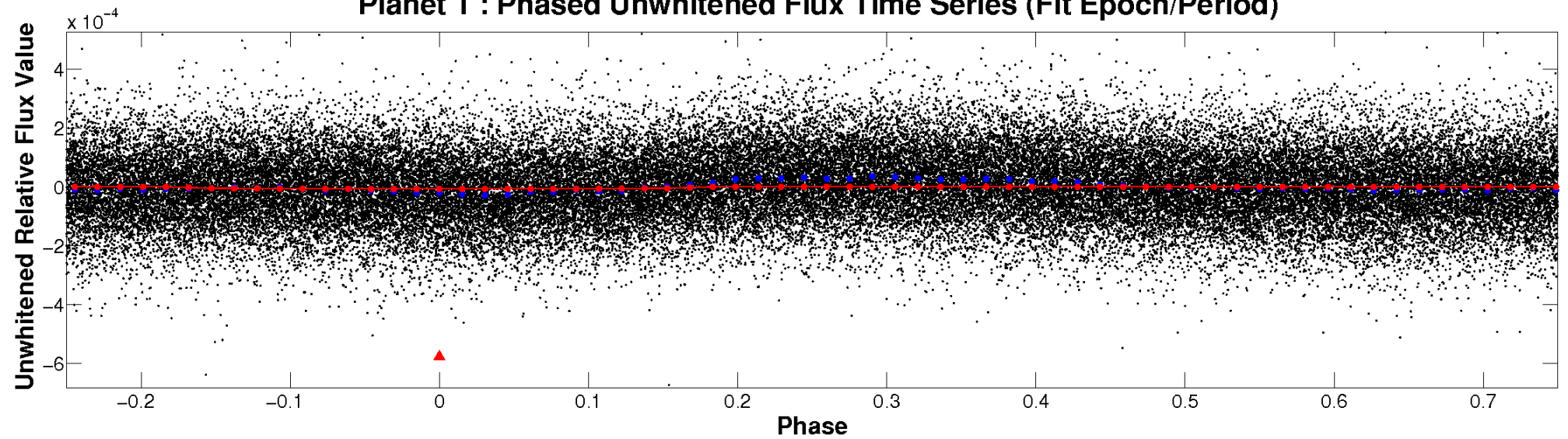
# ALT Odd/Even

TCE 011721834-01

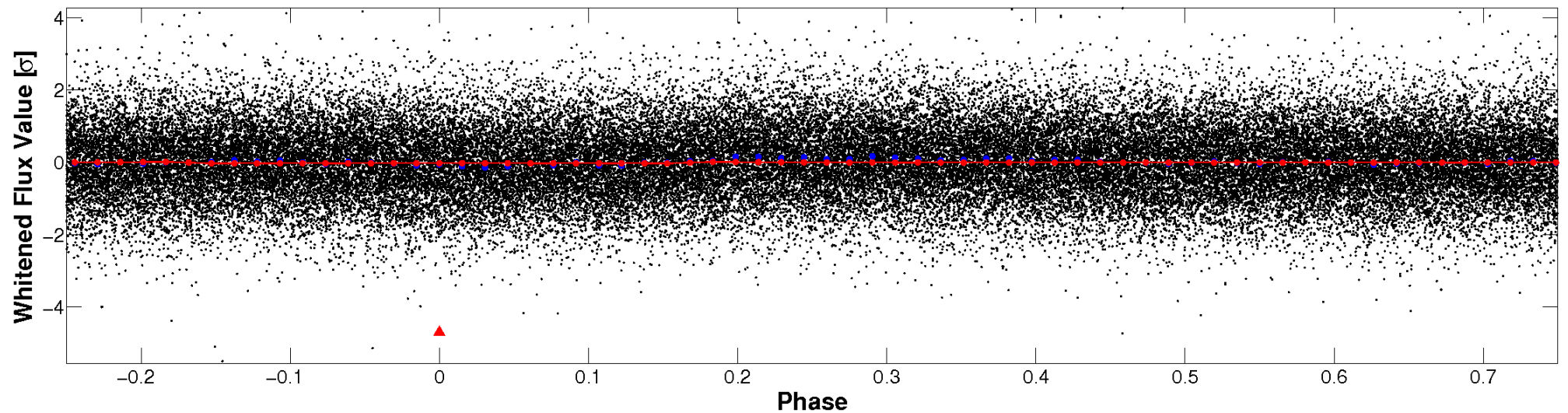


# Non-Whitened Vs. Whitened Light Curve

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

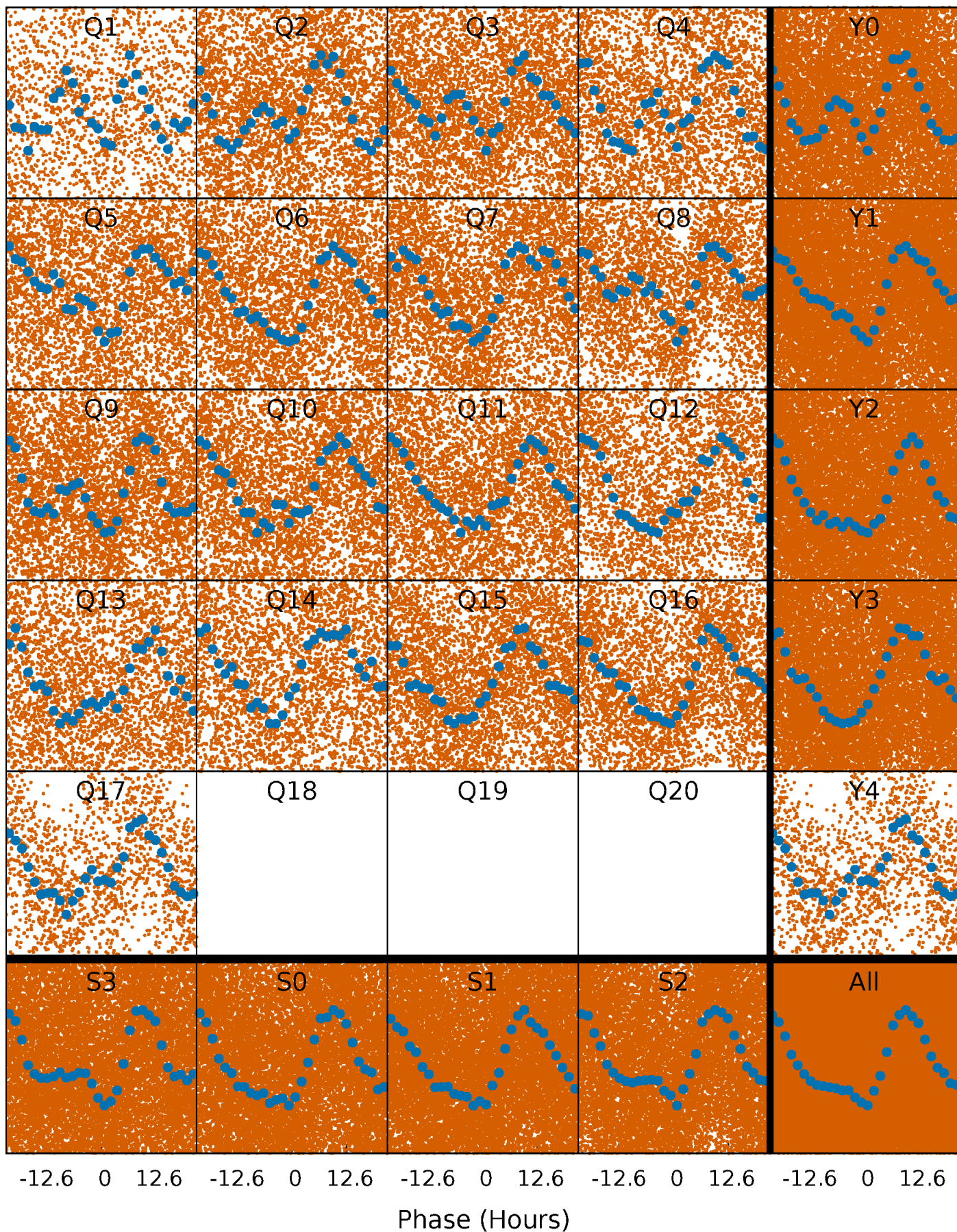


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

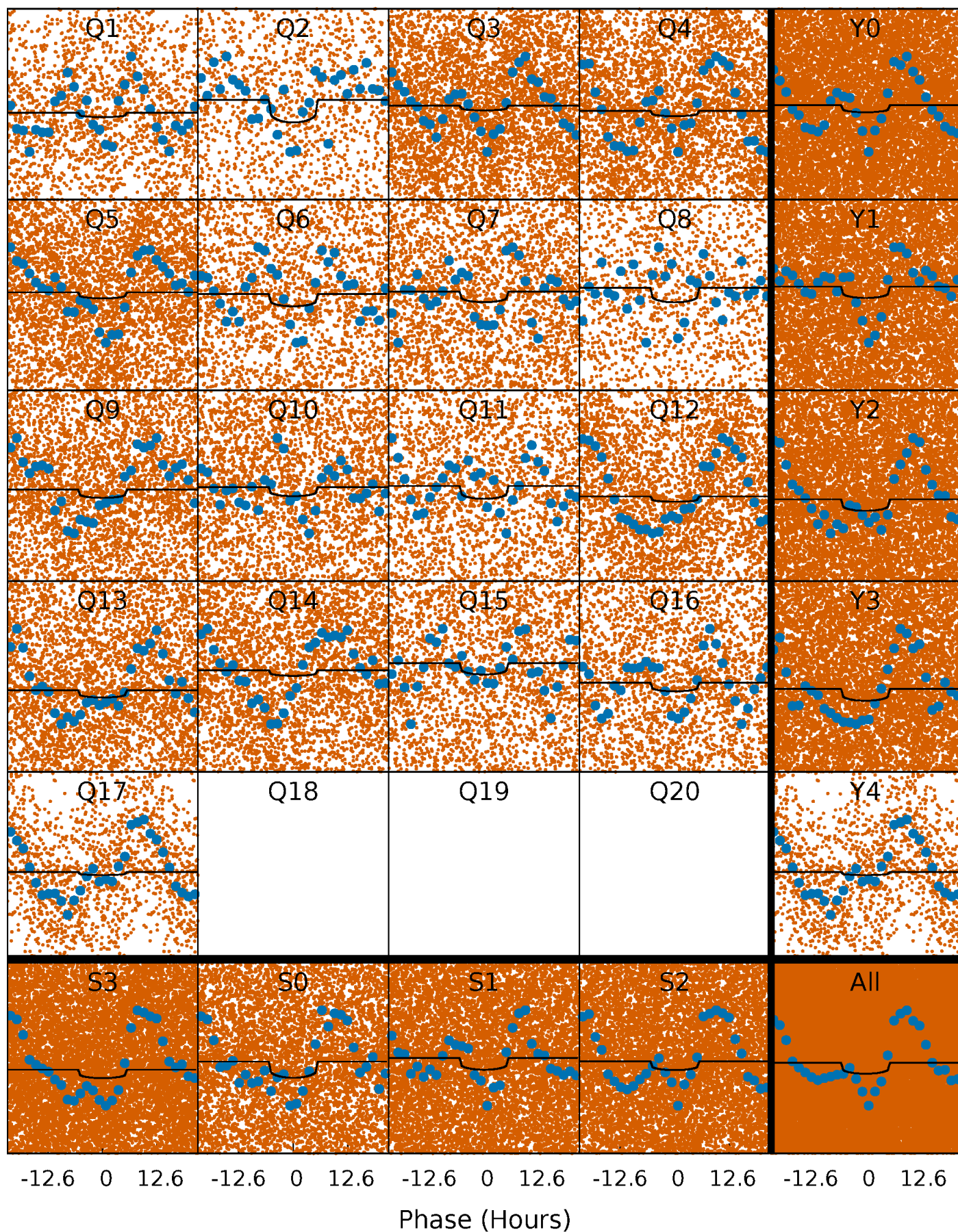
TCE 011721834-01 P= 1.337160 Days  $T_0=132.443423$  (BKJD)





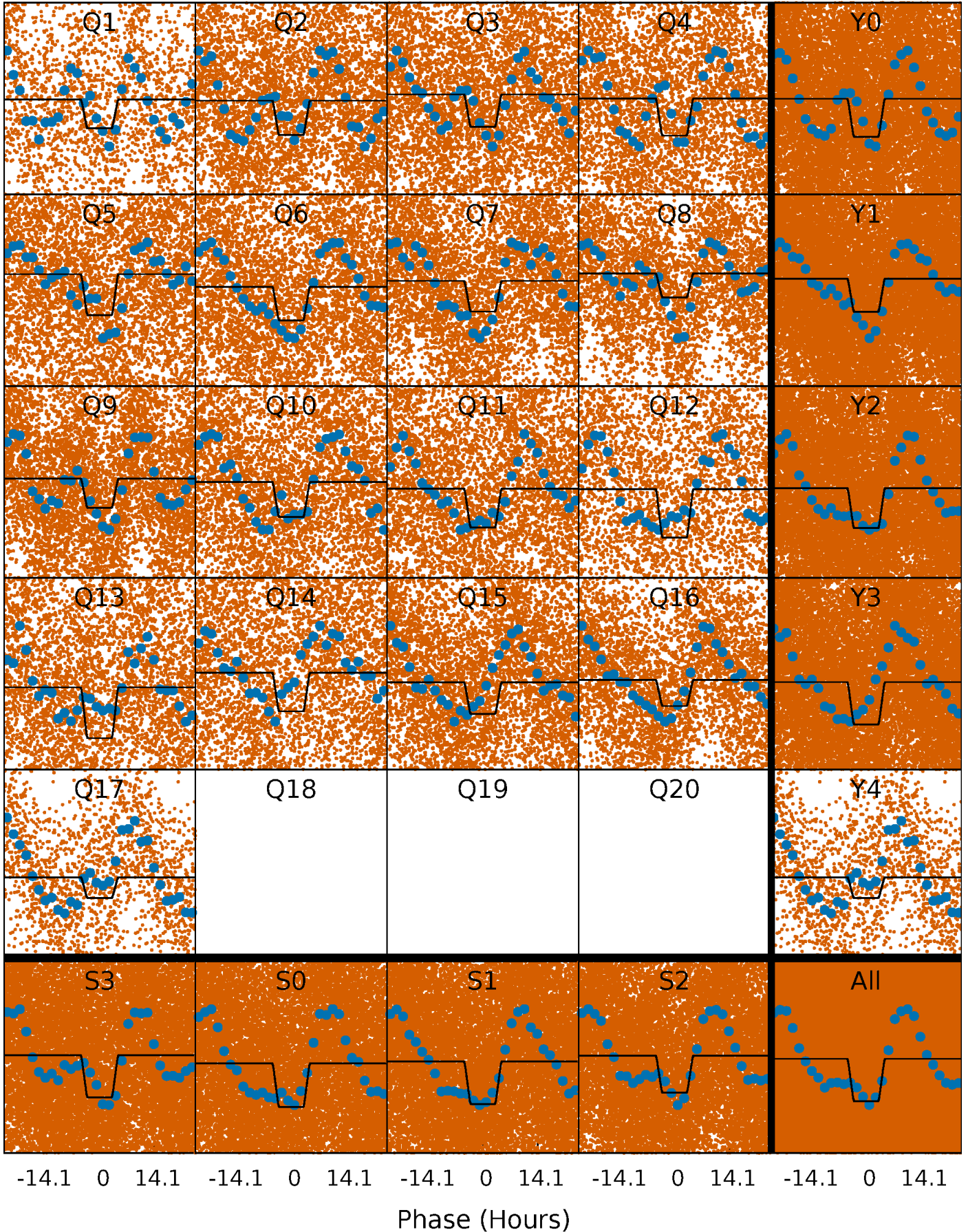
# DV Quarter-Phased Transit Curves

TCE 011721834-01 P= 1.337160 Days  $T_0=132.443423$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 011721834-01 P= 1.337245 Days  $T_0=132.384382$  (BKJD)

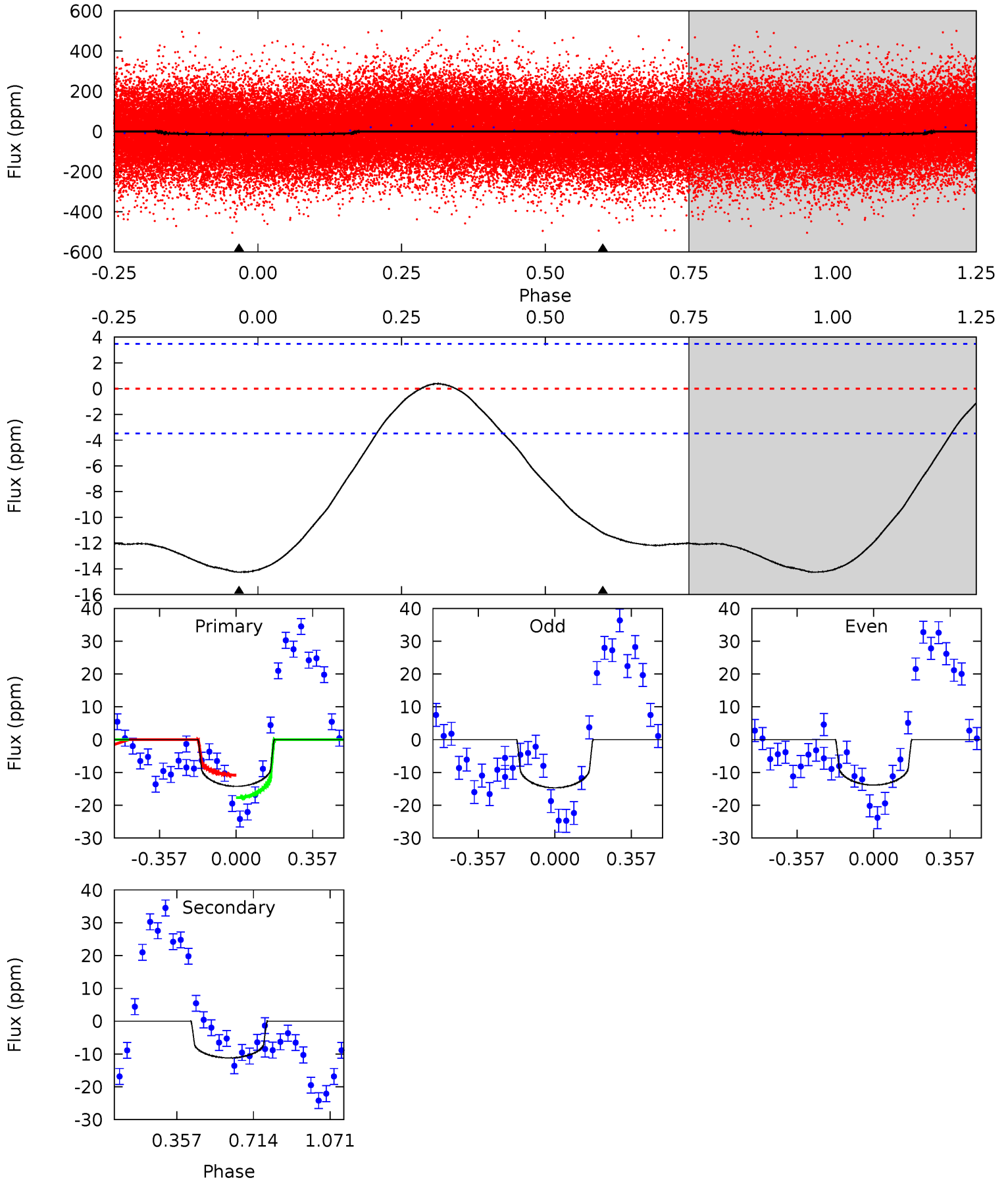




# DV Model-Shift Uniqueness Test

011721834-01, P = 1.337160 Days, E = 131.106263 Days

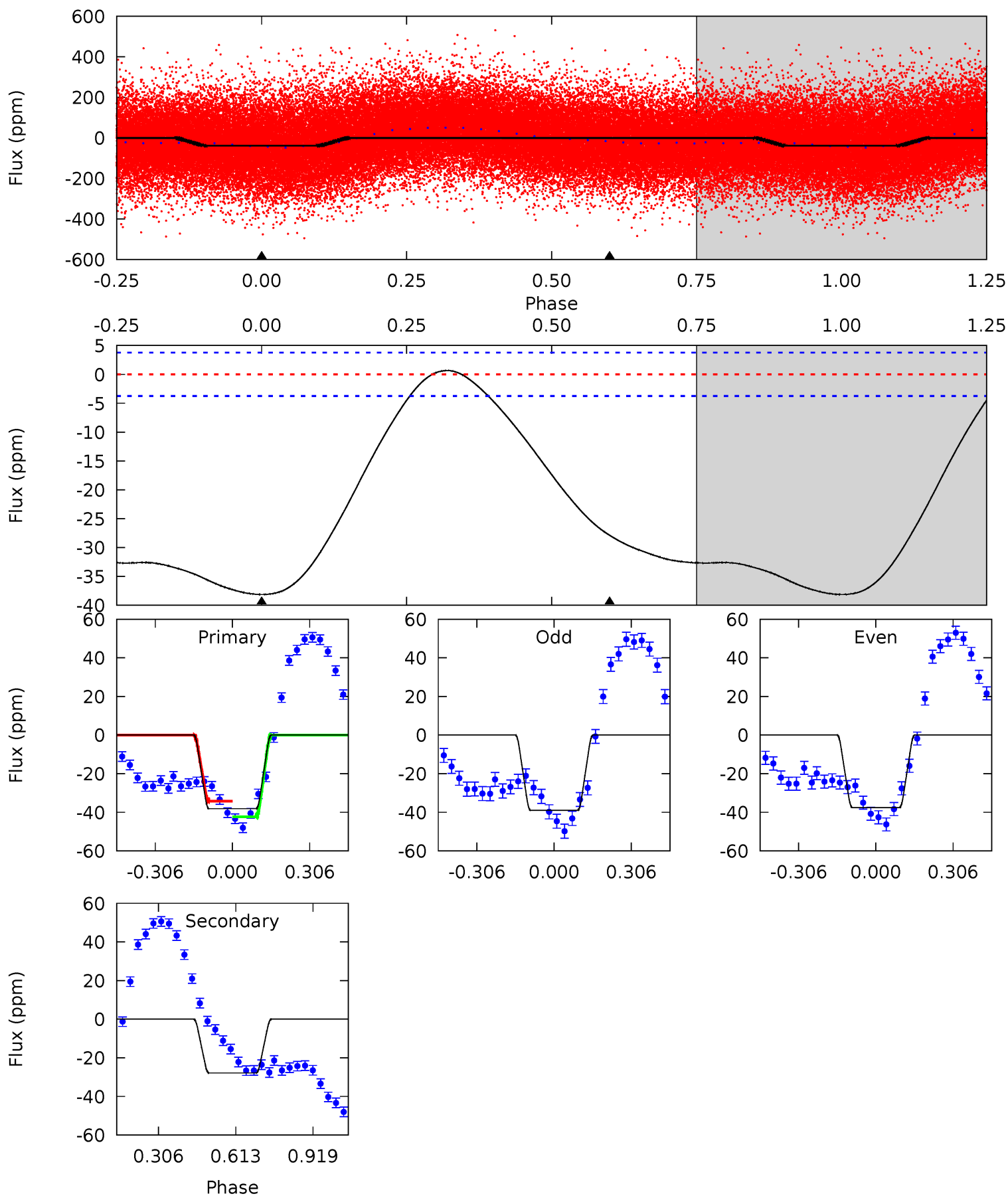
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.6	13.8	0	0	4.29	0.92	0.85	17.6	17.6	13.8	13.8	0.52	1.21	0.03	4.39



# Alt Model-Shift Uniqueness Test

011721834-01, P = 1.337245 Days, E = 131.047137 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
44.0	32.1	0	0	4.32	1.02	1.68	44.0	44.0	32.1	32.1	0.84	1.03	0.02	4.77





### Stellar Parameters For KIC 011721834

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$7017^{+168}_{-231}$	$3.893^{+0.204}_{-0.119}$	$0.200^{+0.150}_{-0.300}$	$2.517^{+0.522}_{-0.696}$	$1.805^{+0.169}_{-0.296}$	$0.160^{+0.208}_{-0.058}$
	+2%/-3%	+5%/-3%	+75%/-150%	+21%/-28%	+9%/-16%	+130%/-37%
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 011721834-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-11 \pm 1$	$0.83^{+0.60}_{-0.52}$	$3979^{+252}_{-262}$	$7221^{+6671}_{-1856}$	$7.472^{+40.155}_{-4.938}$
Alt.	$-28 \pm 1$	$1.73^{+0.74}_{-0.64}$	$3974^{+260}_{-276}$	$6102^{+1885}_{-938}$	$4.175^{+6.460}_{-2.046}$

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

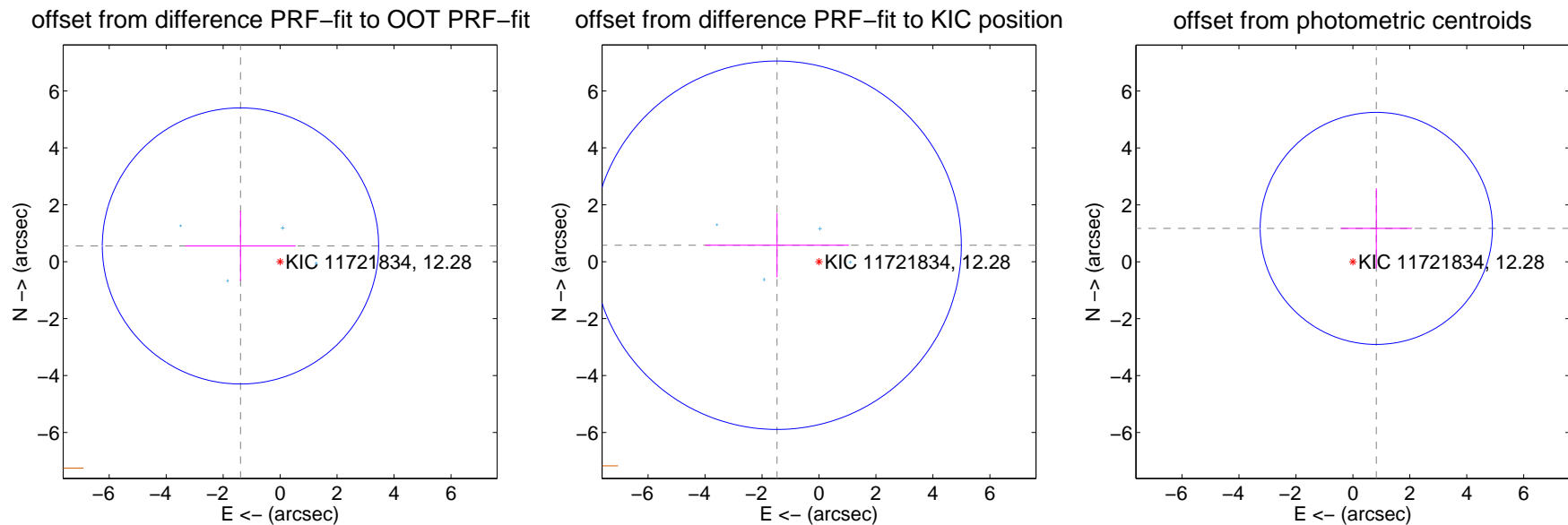
## DV Centroid Data

Supplemental centroid analysis for 011721834-01. Kepler magnitude: 12.28. Transit SNR 4.87

There are 4 quarters with good PRF difference image offsets

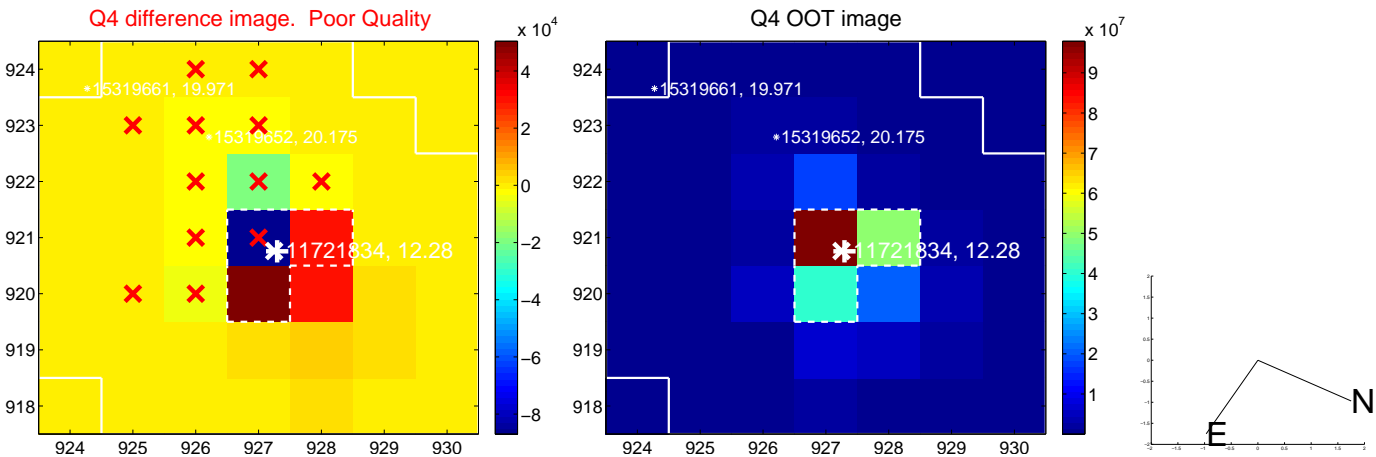
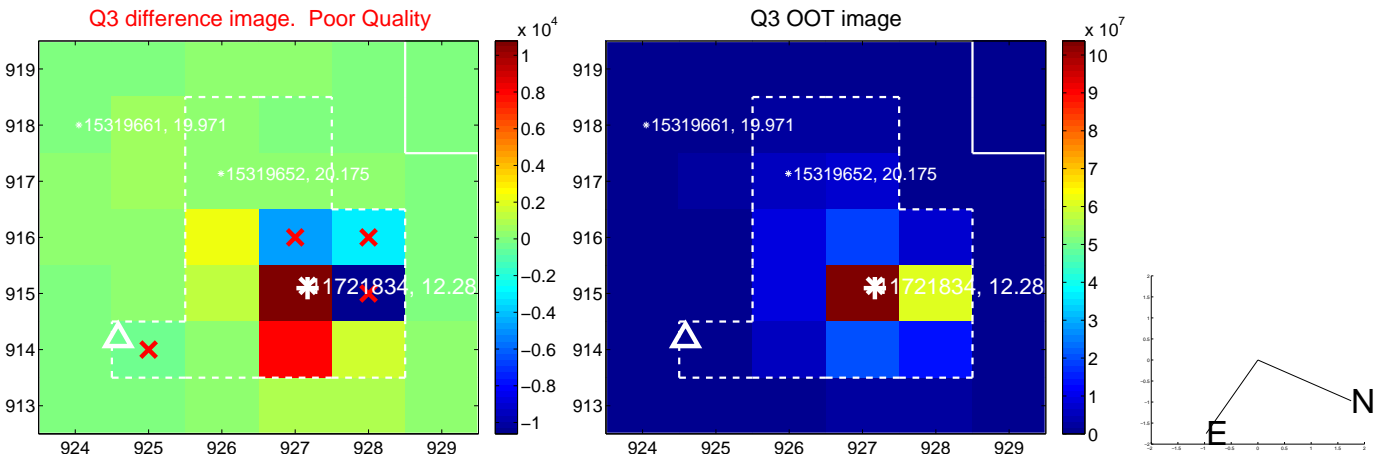
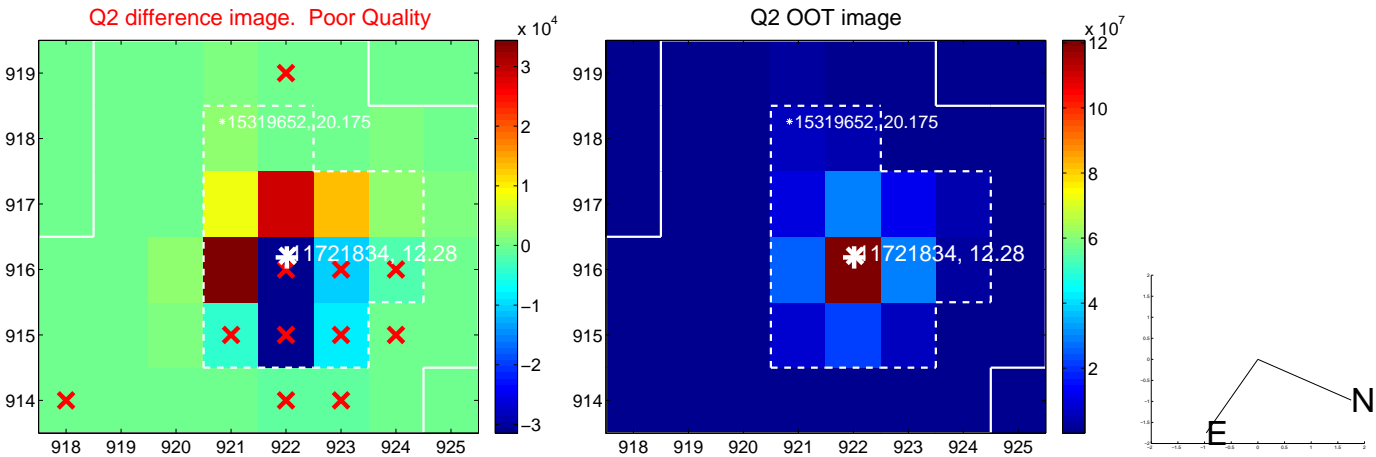
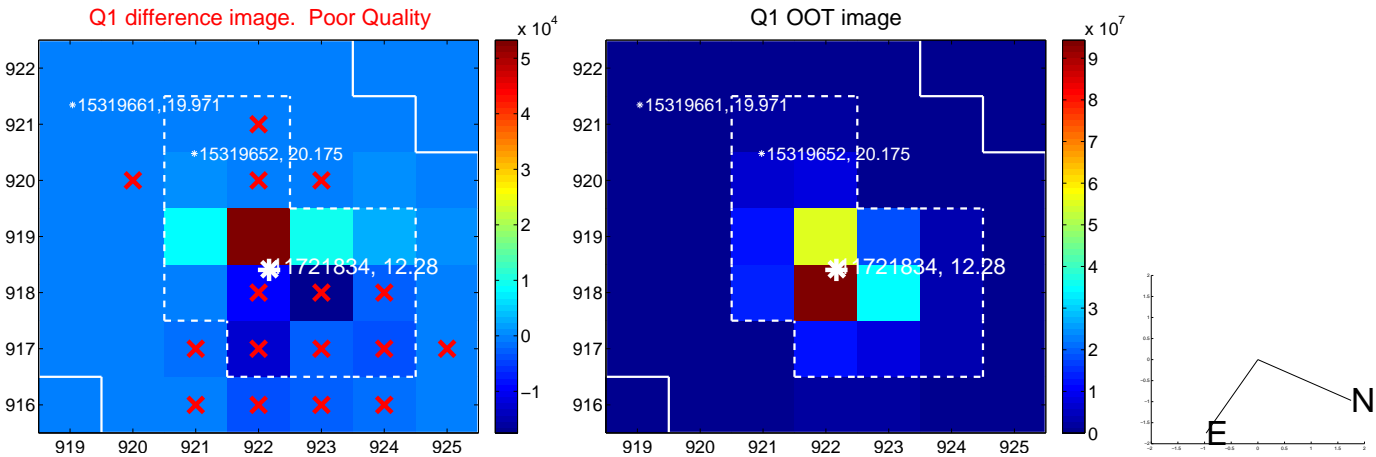
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.497 \pm 1.617$	0.93	$1.391 \pm 1.937$	$0.553 \pm 1.234$
PRF-fit source offset from KIC position	$1.584 \pm 2.157$	0.73	$1.474 \pm 2.520$	$0.578 \pm 1.128$
photometric centroid source offset	$1.43 \pm 1.36$	1.05	$-0.82 \pm 1.25$	$1.17 \pm 1.41$

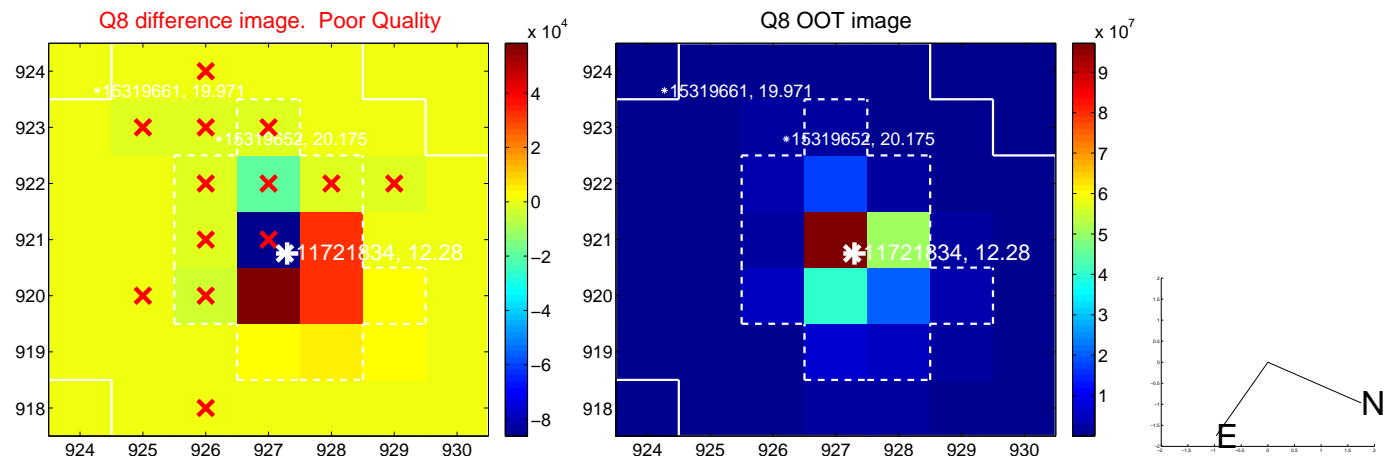
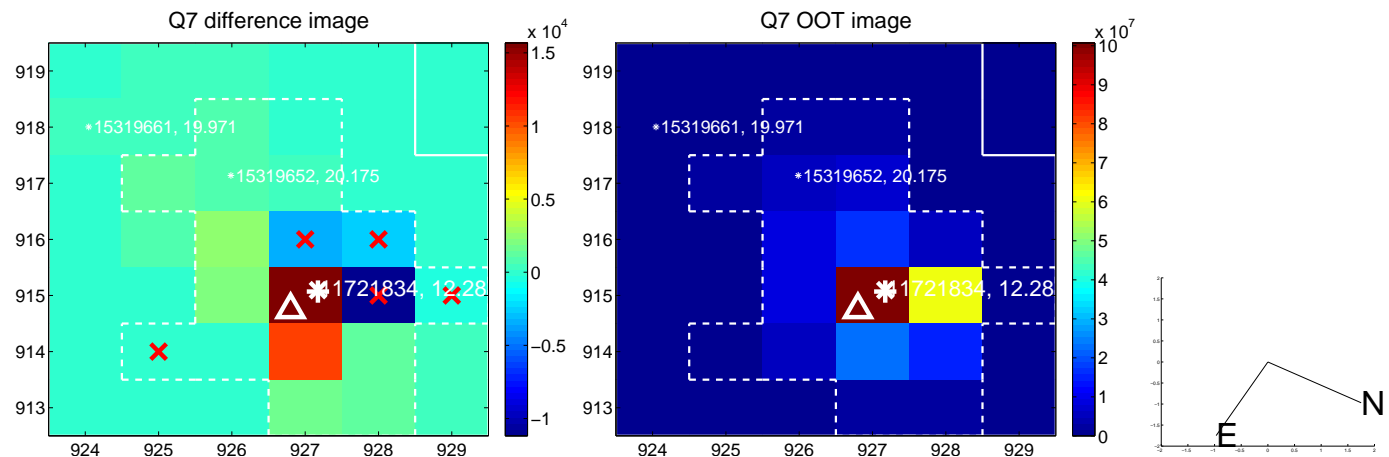
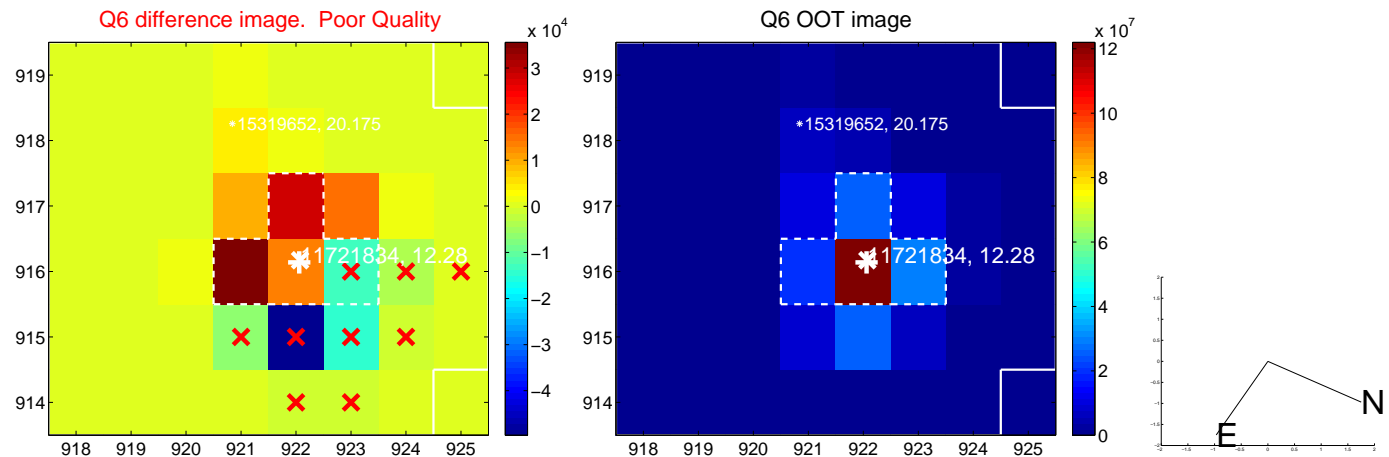
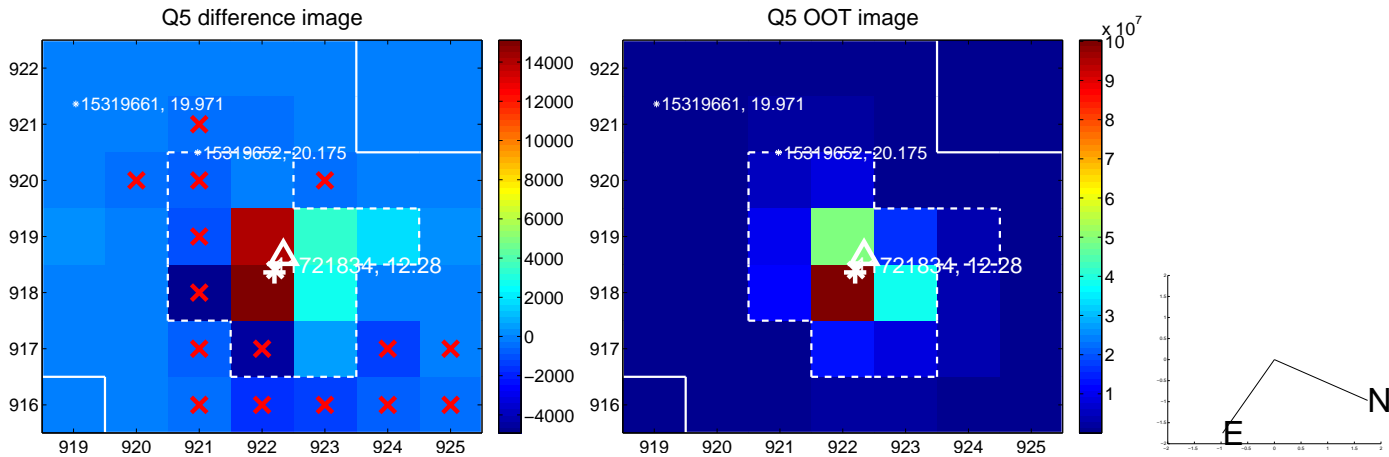


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

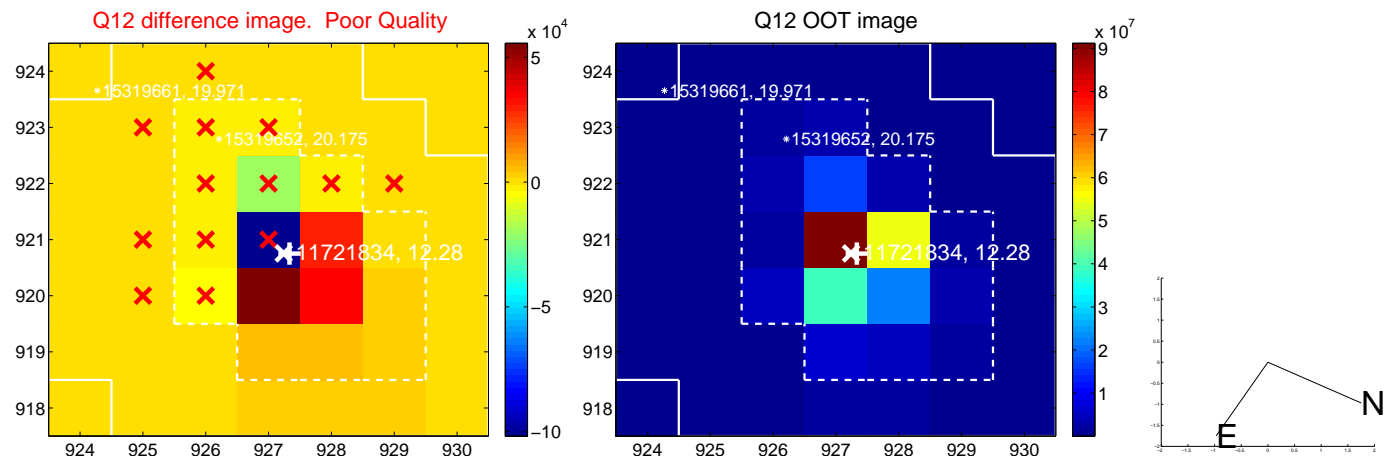
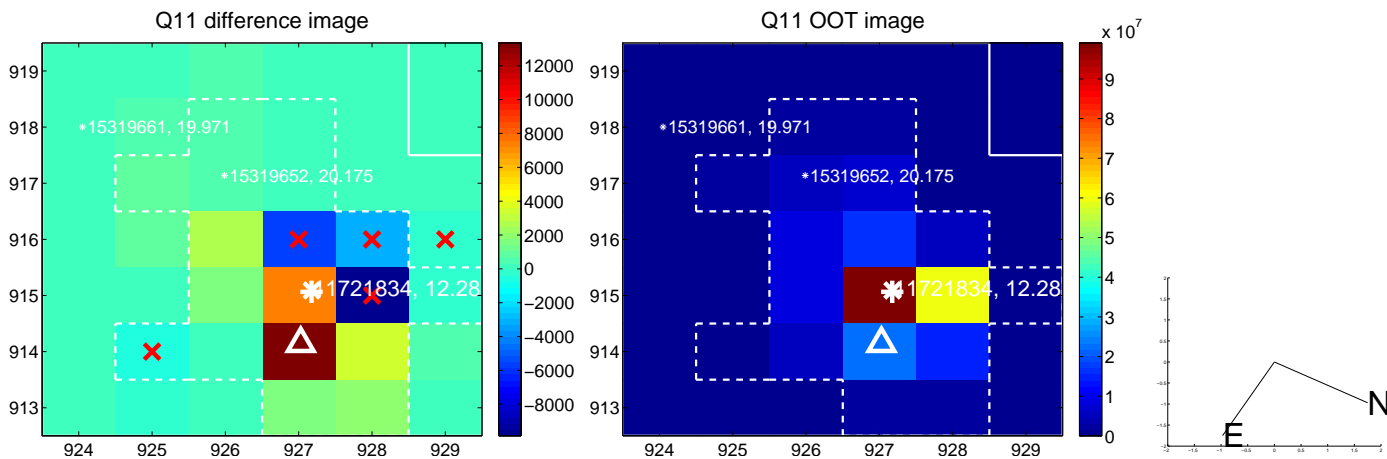
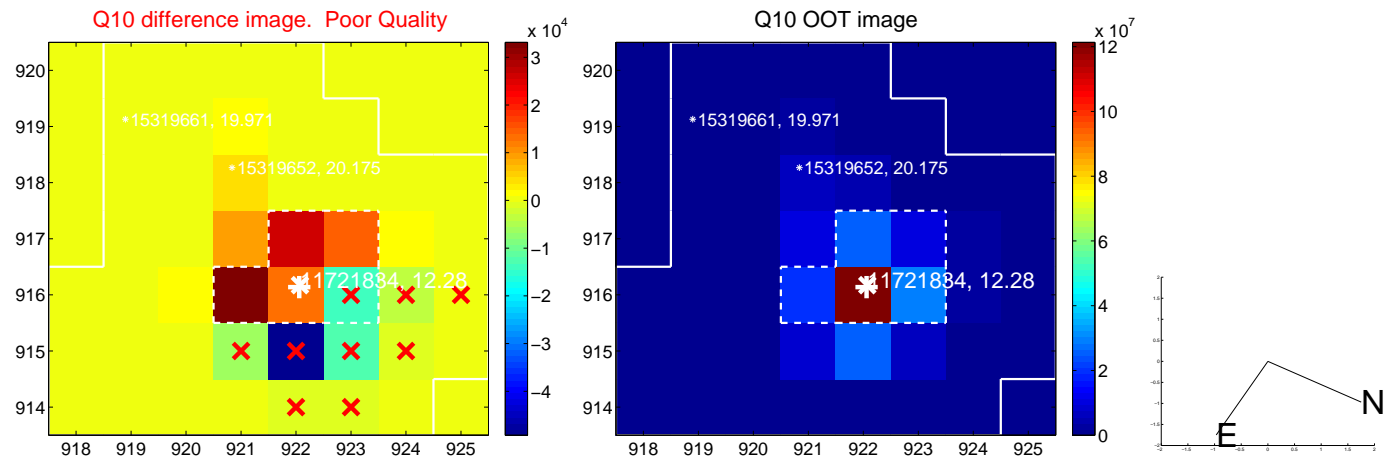
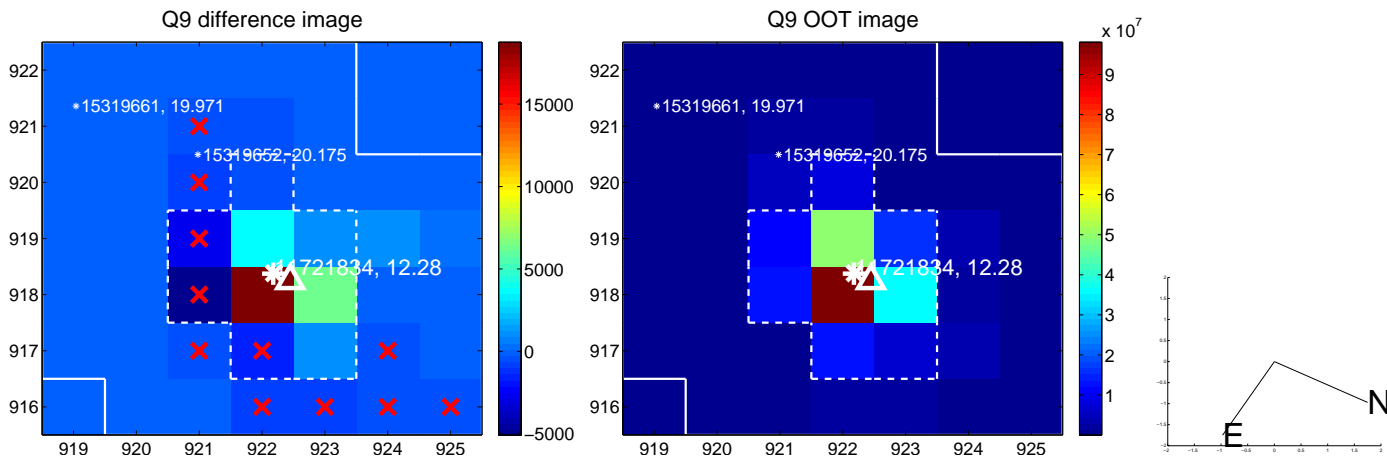


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

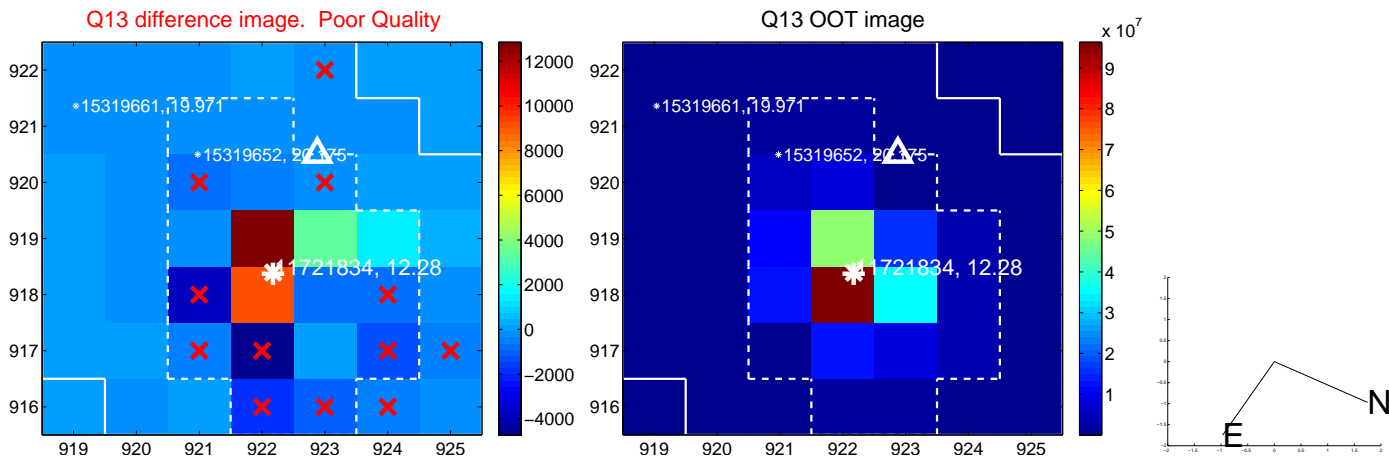




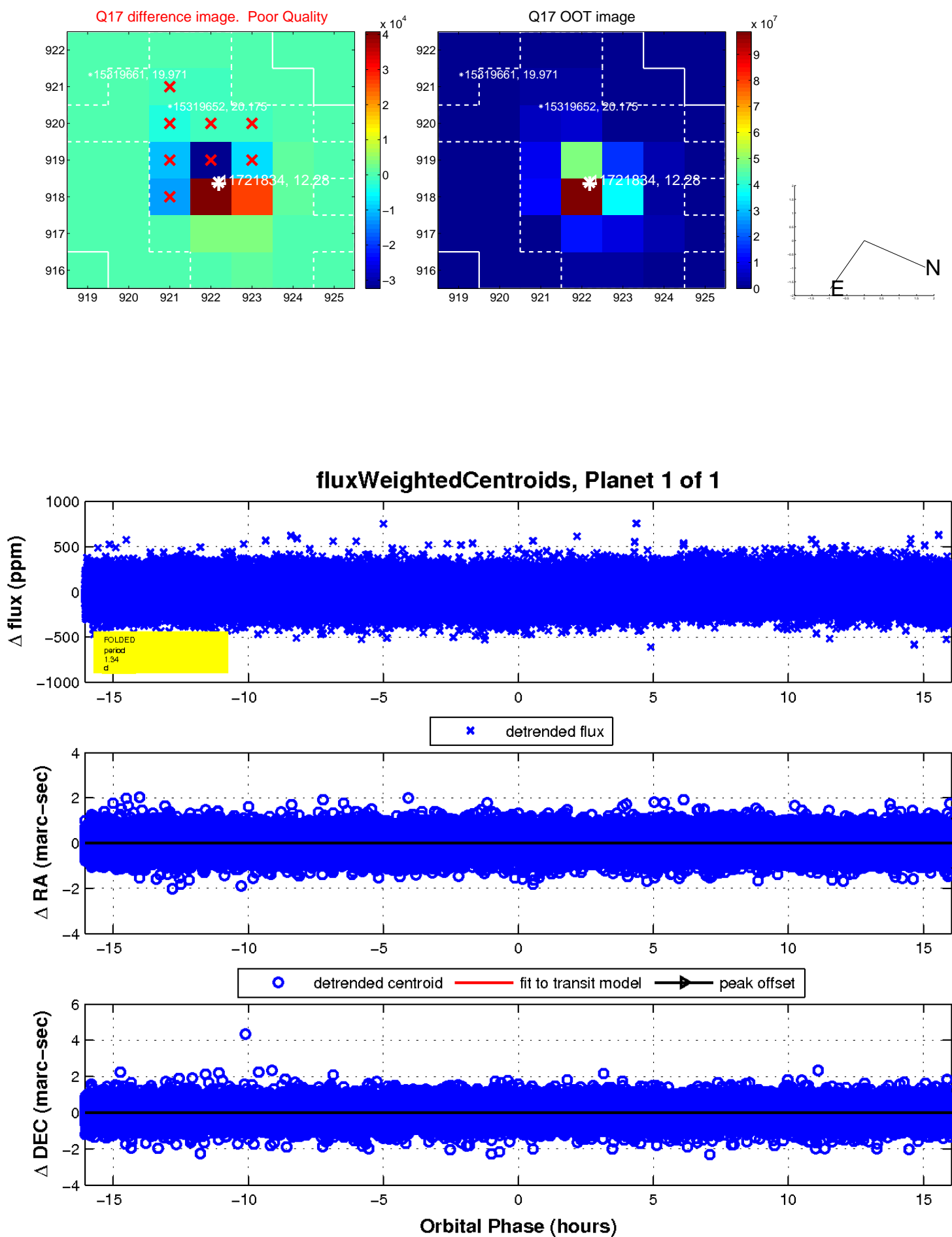
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



UKIRT Image

