

# KIC 011100331

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011100331-01	OBS	No	1.535137	132.080555	19.7	5.681	7.8	9.4	2.11	7700	1.14	14554.15

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011100331-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS—HALO_GHOST

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

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

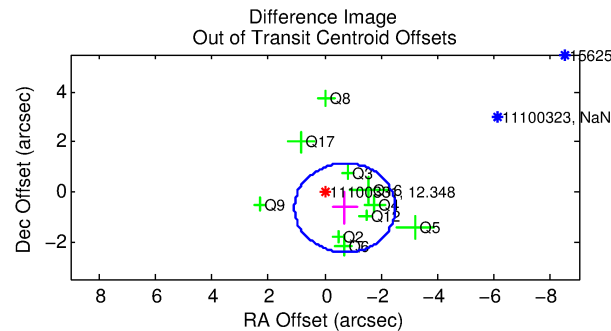
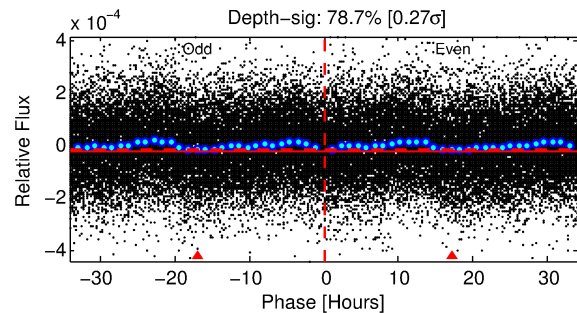
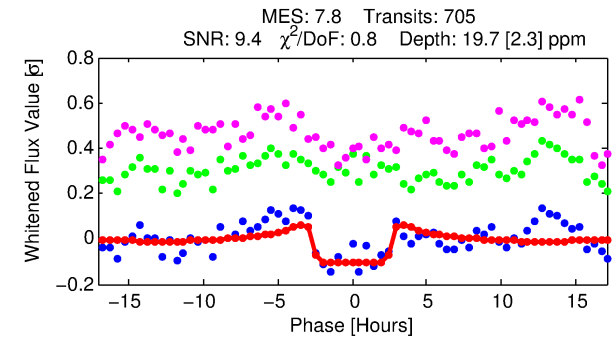
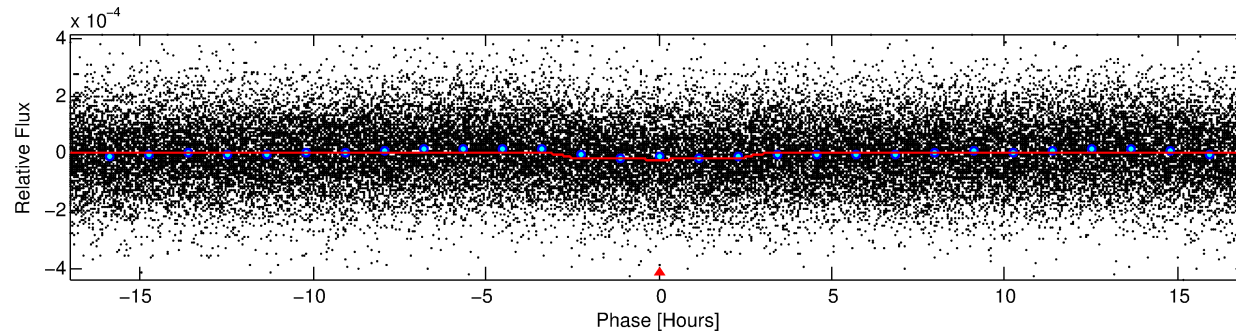
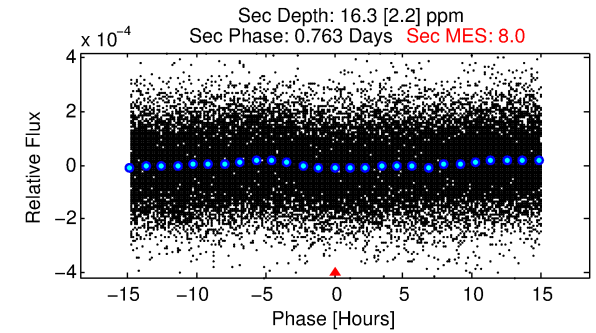
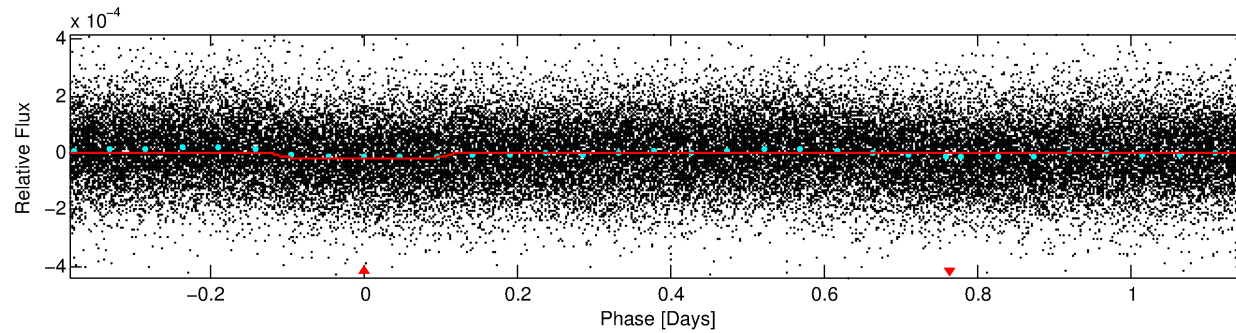
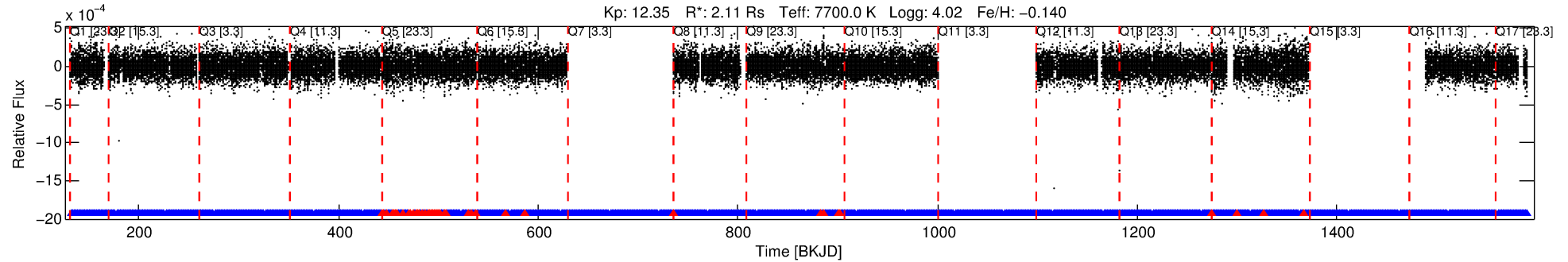
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 011100331-01

No Significant Match Found

# DV One-Page Summary

KIC: 11100331 Candidate: 1 of 1 Period: 1.535 d



## DV Fit Results:

Period = 1.53514 [0.00001] d  
Epoch = 132.0806 [0.0039] BKJD  
Rp/R\* = 0.0050 [0.0009]  
a/R\* = 1.19 [0.37]  
b = 0.95 [0.12]  
Seff = 14554.15 [5897.28]  
Teq = 2801 [284] K  
Rp = 1.14 [0.37] Re  
a = 0.0311 [0.0076] AU  
Ag = 6.64 [3.48] [1.62σ]  
**Teffp = 6952 [703] K [5.47σ]**

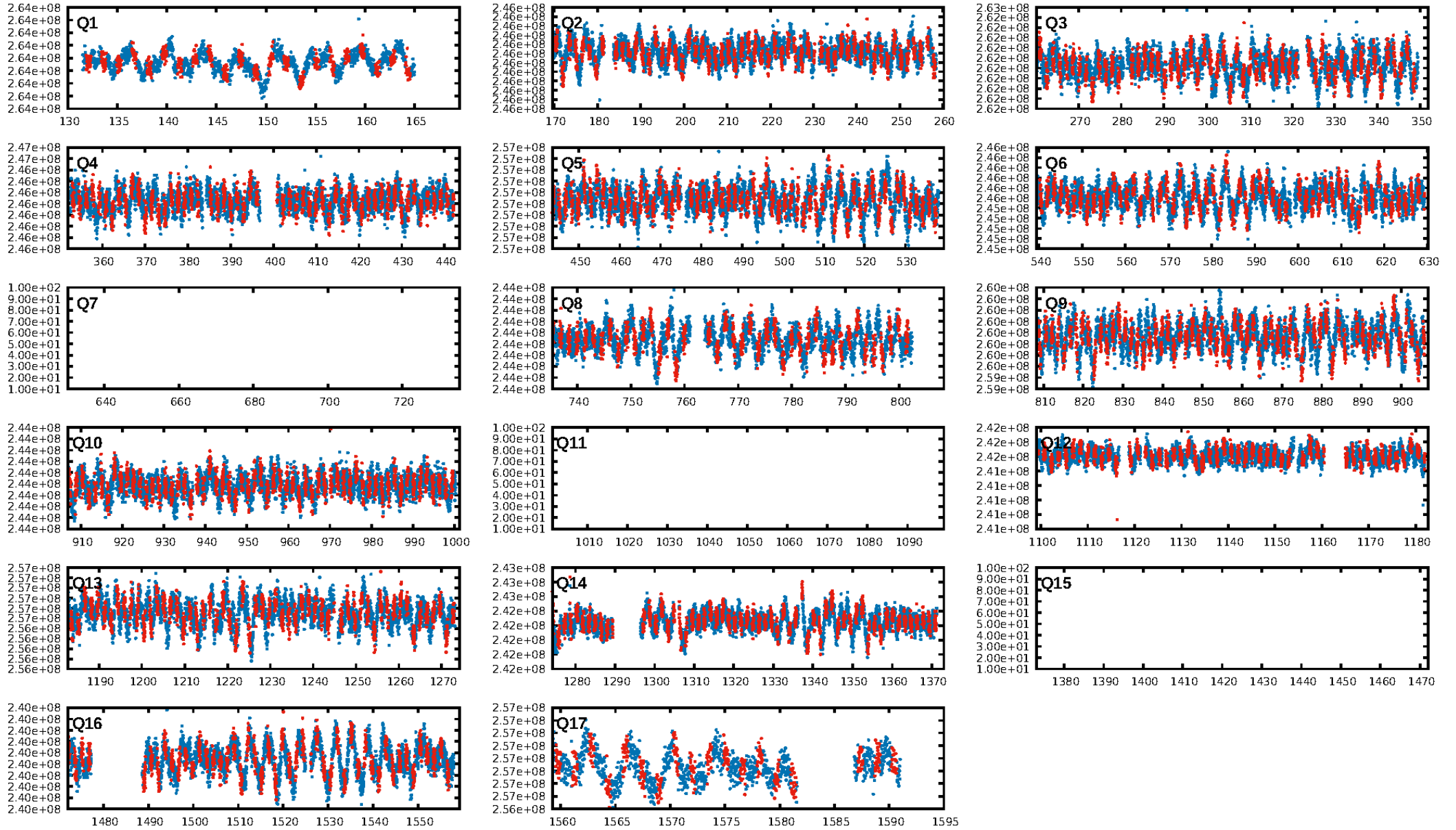
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
**Bootstrap-pfa: 2.22e-12**  
RollingBand-fgt: 0.94 [624/665]  
**GhostDiagnostic-chr: 0.207**  
Centroid-sig: 0.9%  
Centroid-so: 1.369 arcsec [1.60σ]  
OotOffset-rm: 0.970 arcsec [1.63σ]  
KicOffset-rm: 1.008 arcsec [1.79σ]  
OotOffset-st: 2/1/4/3 [10]  
KicOffset-st: 2/1/4/3 [10]  
DiffImageQuality-fgm: 0.40 [4/10]  
DiffImageOverlap-fno: 1.00 [14/14]

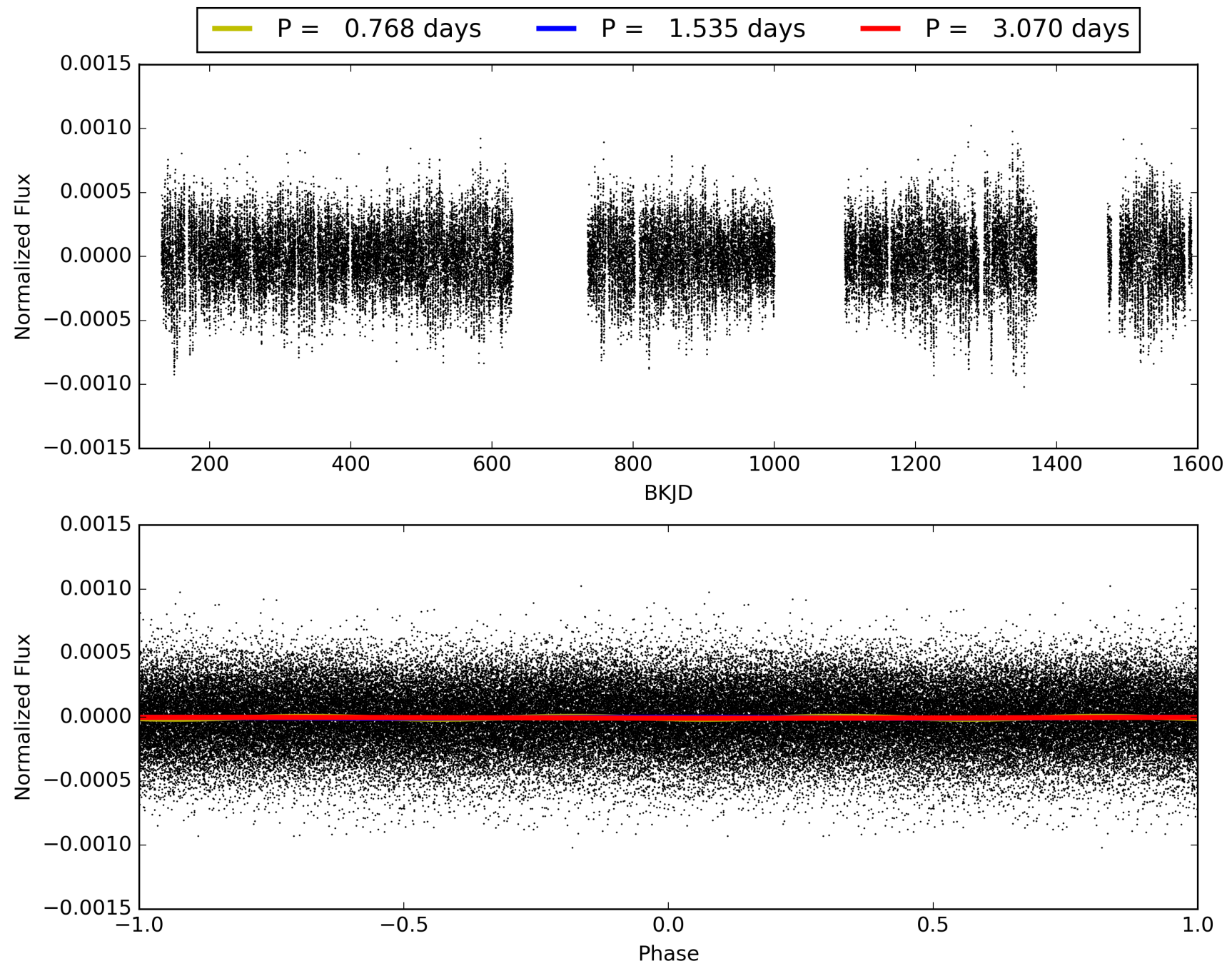
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:40:09 Z

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

# TCE 011100331-01, PDC Light Curves

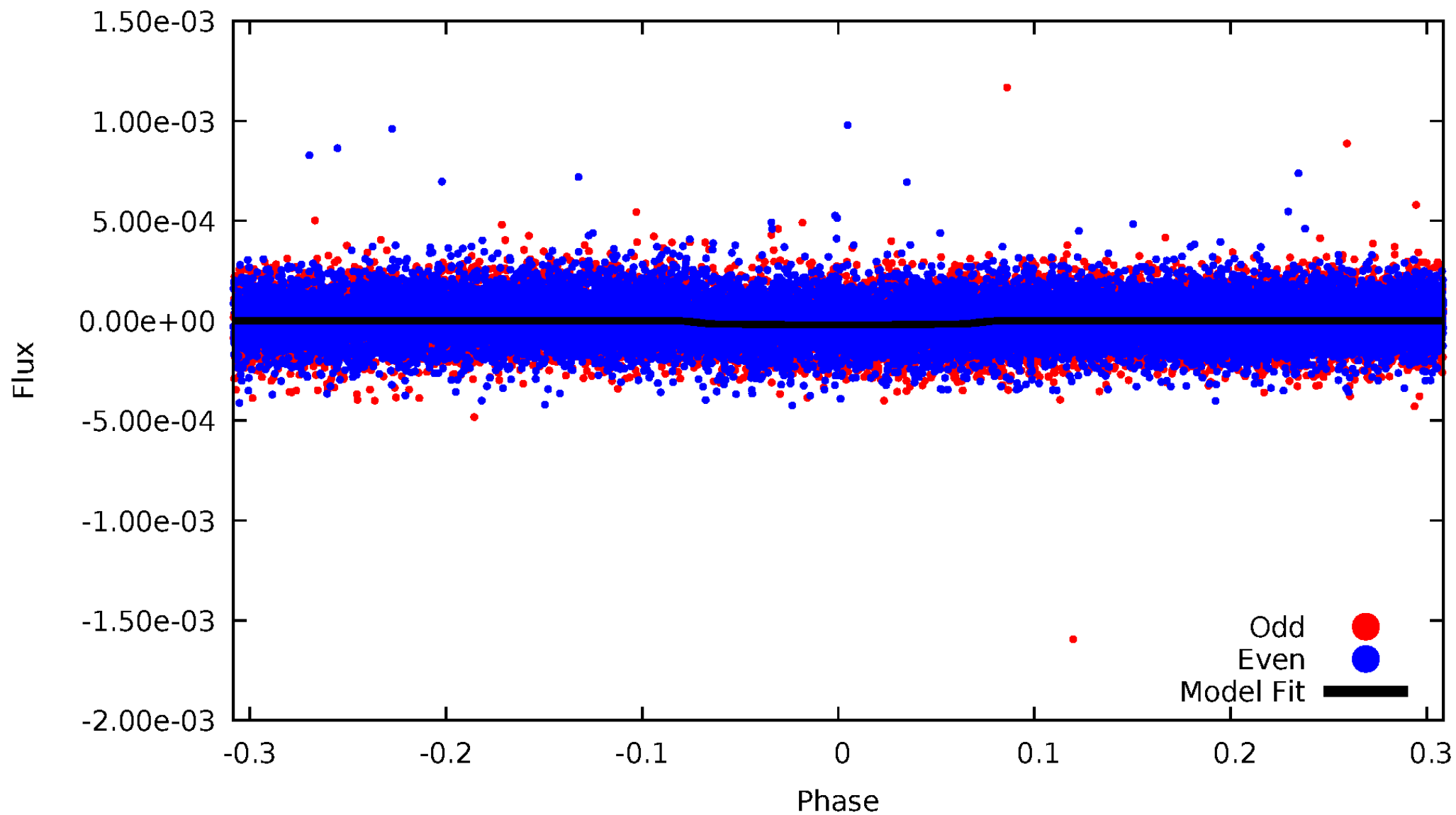


TCE 011100331-01



# DV Odd/Even

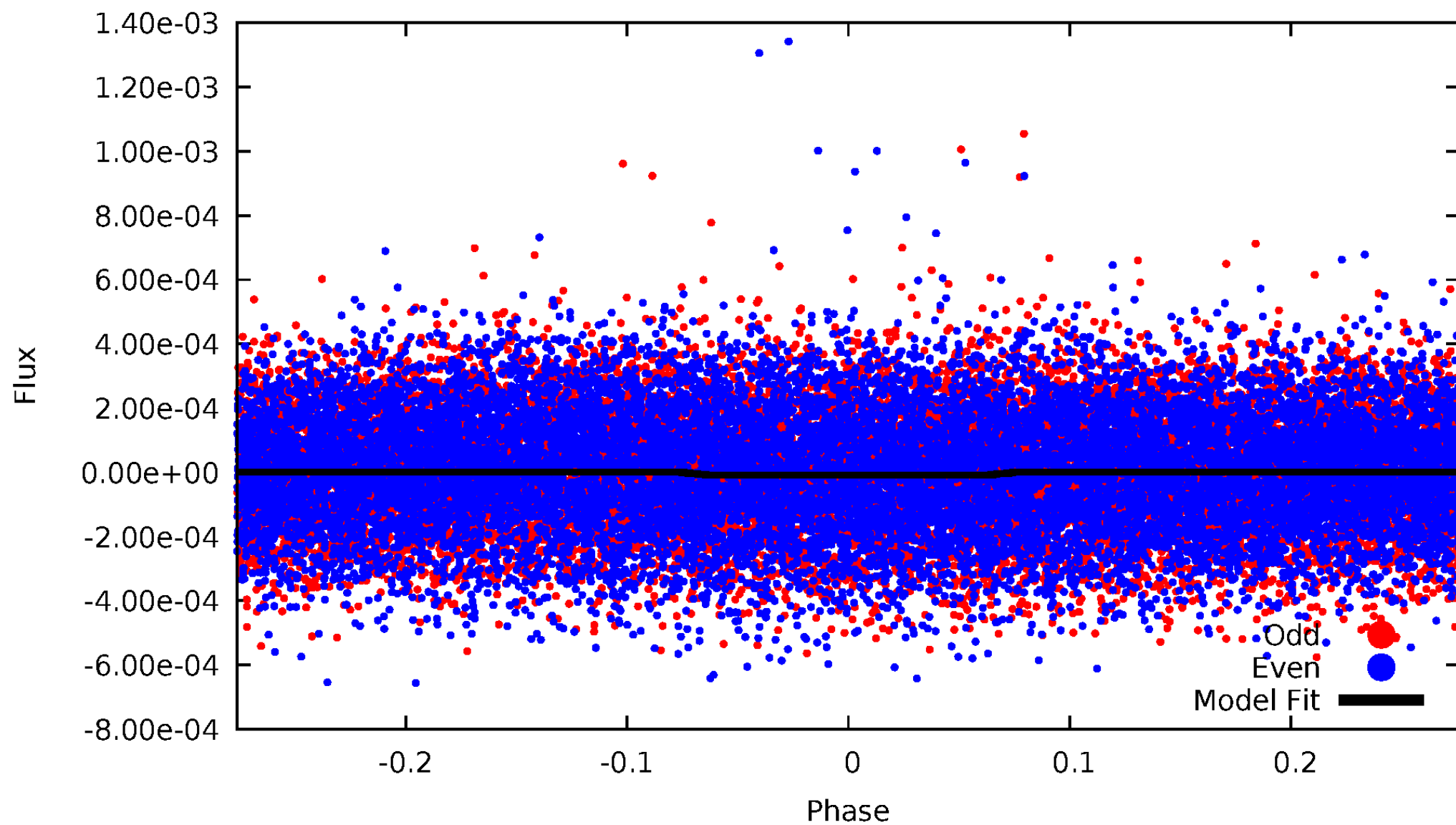
TCE 011100331-01



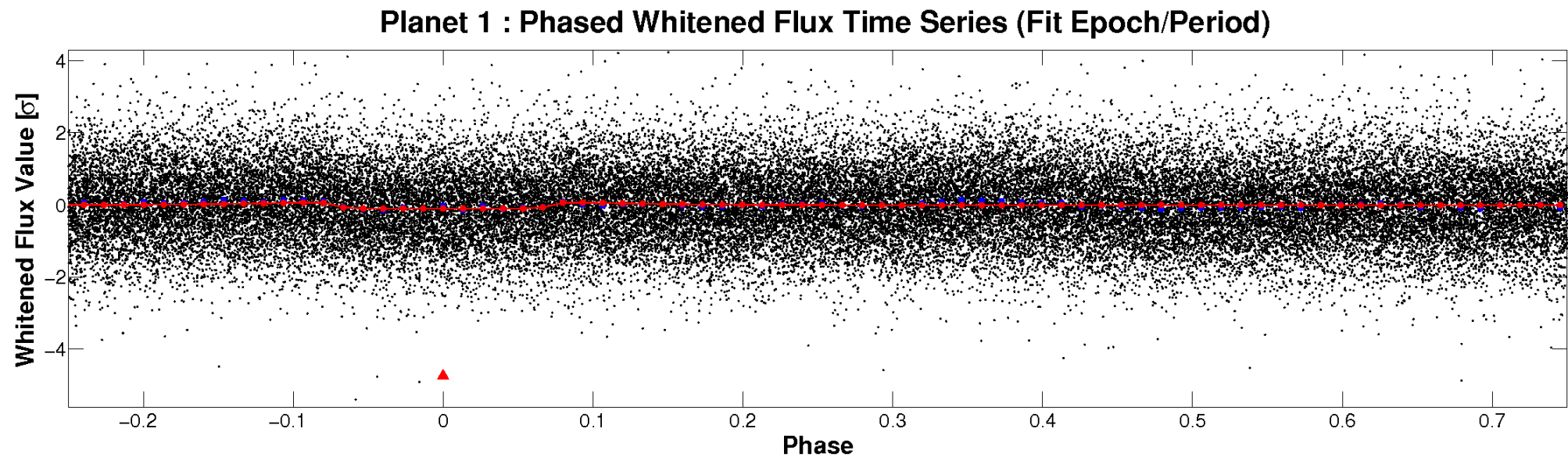
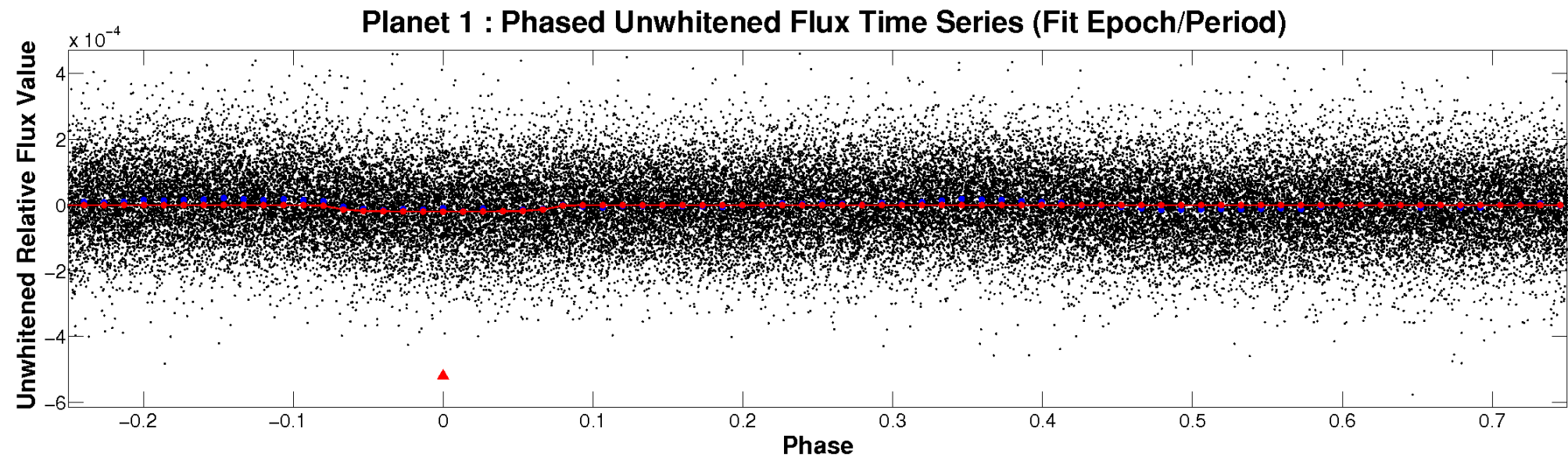


# ALT Odd/Even

TCE 011100331-01

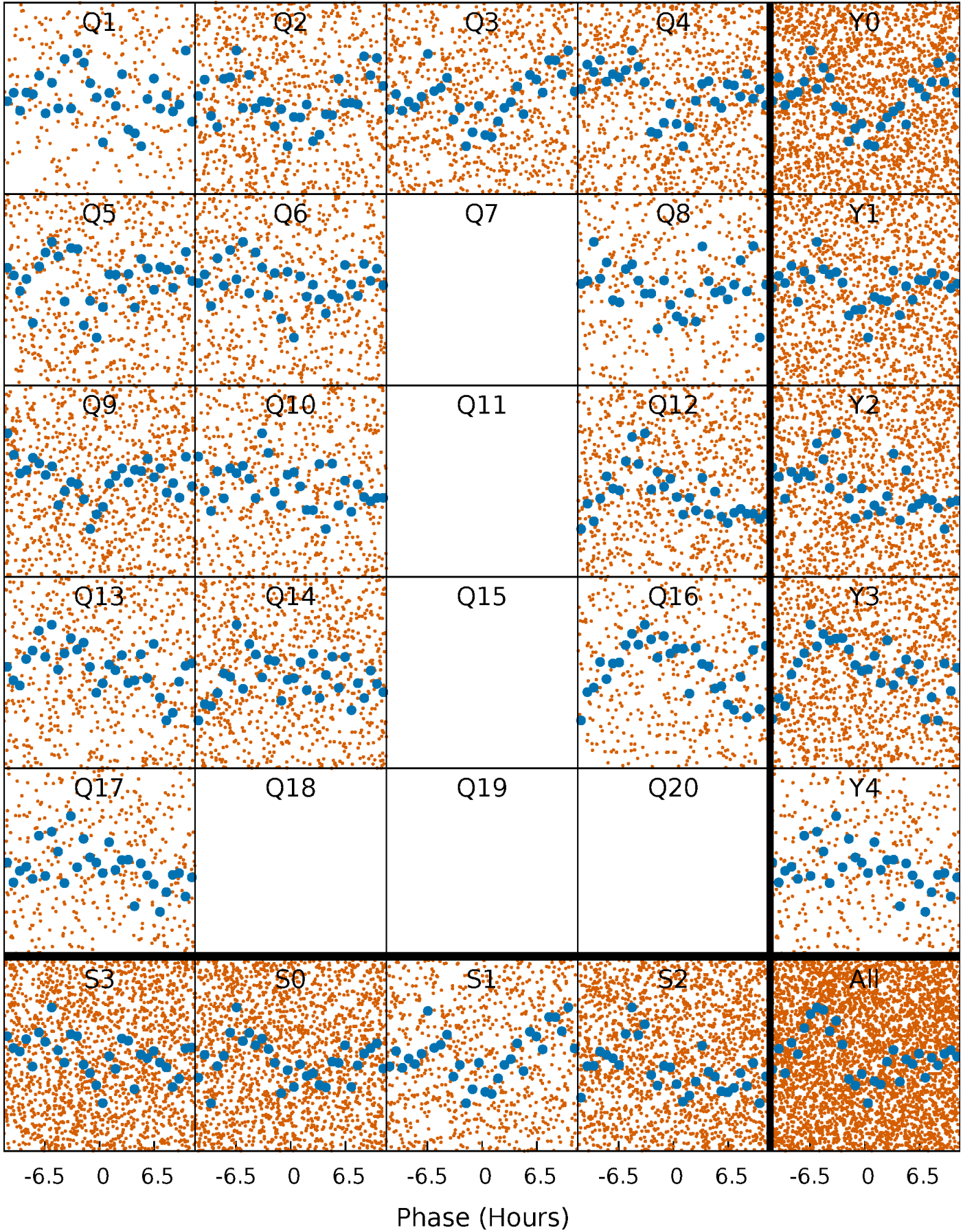


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

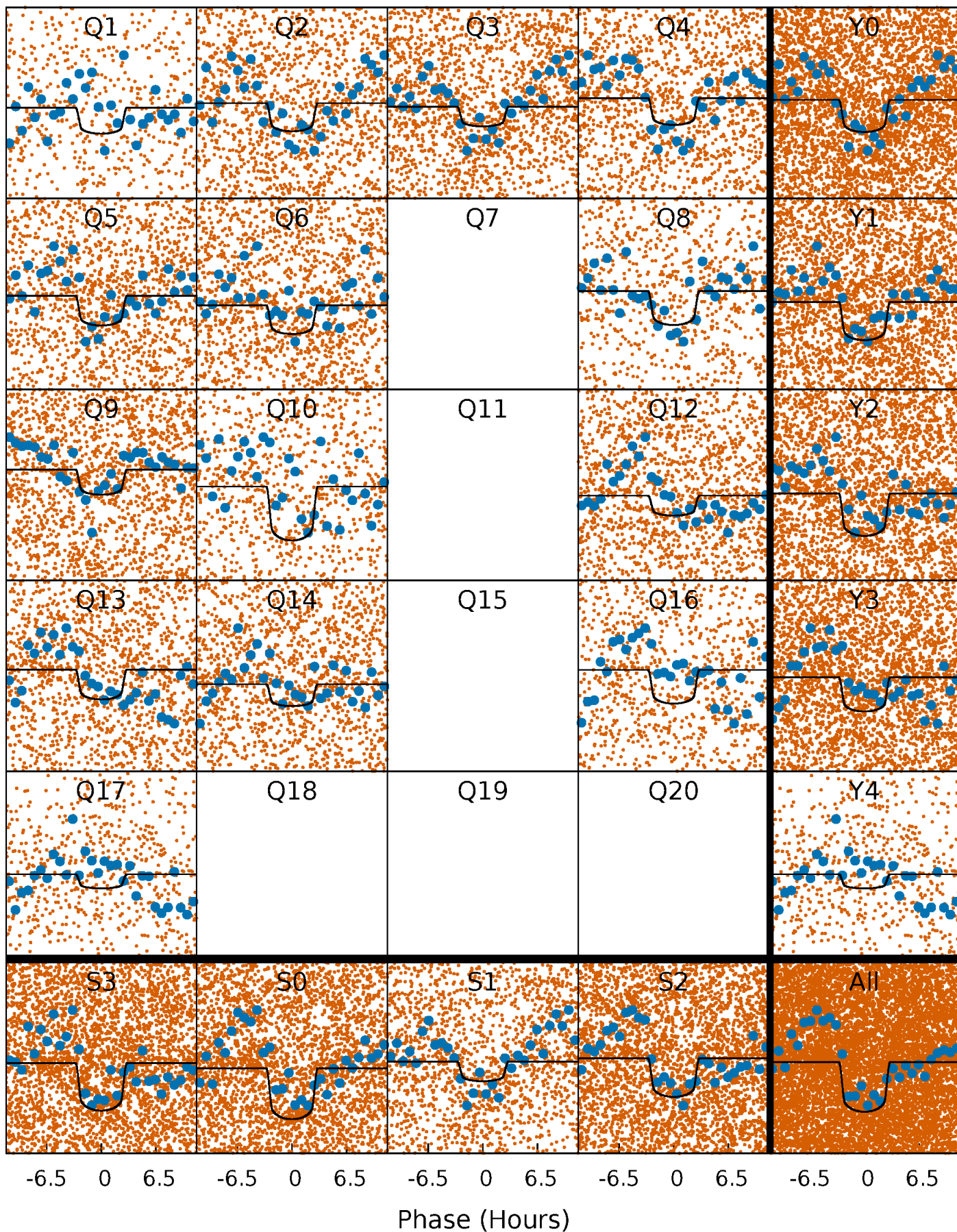
TCE 011100331-01 P= 1.535137 Days  $T_0=132.080556$  (BKJD)





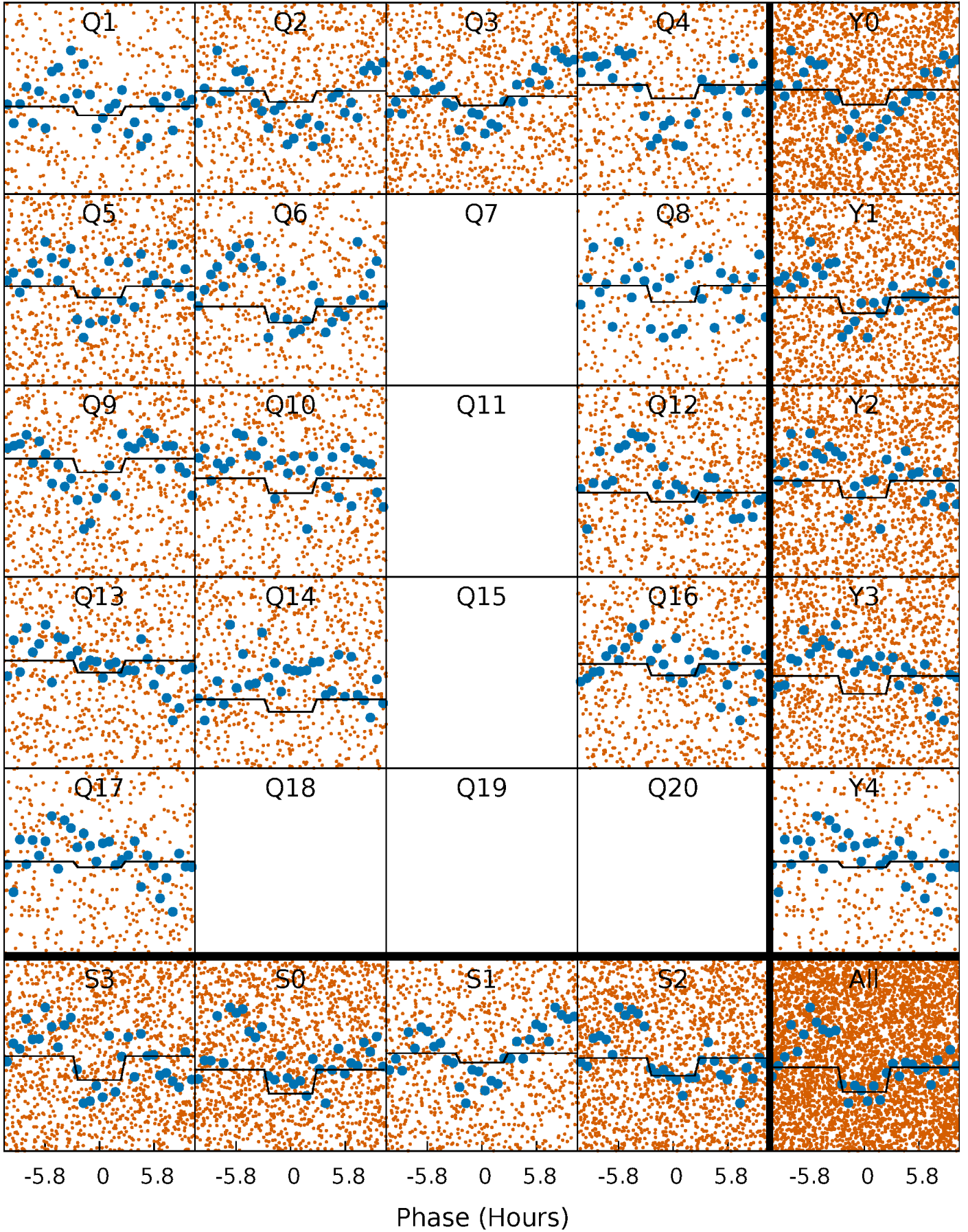
# DV Quarter-Phased Transit Curves

TCE 011100331-01 P= 1.535137 Days  $T_0=132.080556$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

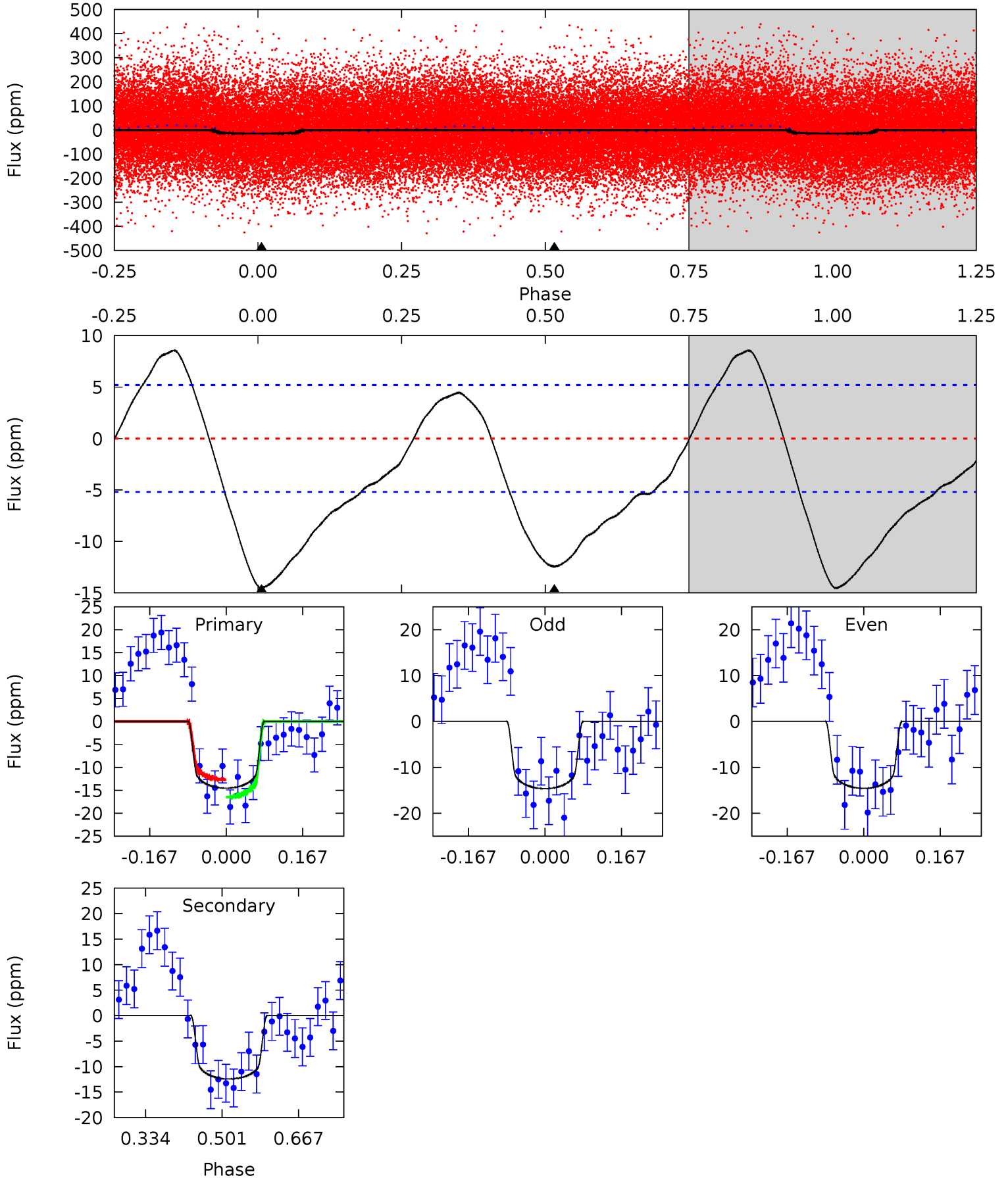
TCE 011100331-01 P= 1.535119 Days  $T_0=132.092807$  (BKJD)



# DV Model-Shift Uniqueness Test

011100331-01, P = 1.535137 Days, E = 130.545419 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
12.5	10.7	0	0	4.46	1.38	3.44	12.5	12.5	10.7	10.7	0.03	0.93	0.37	1.62

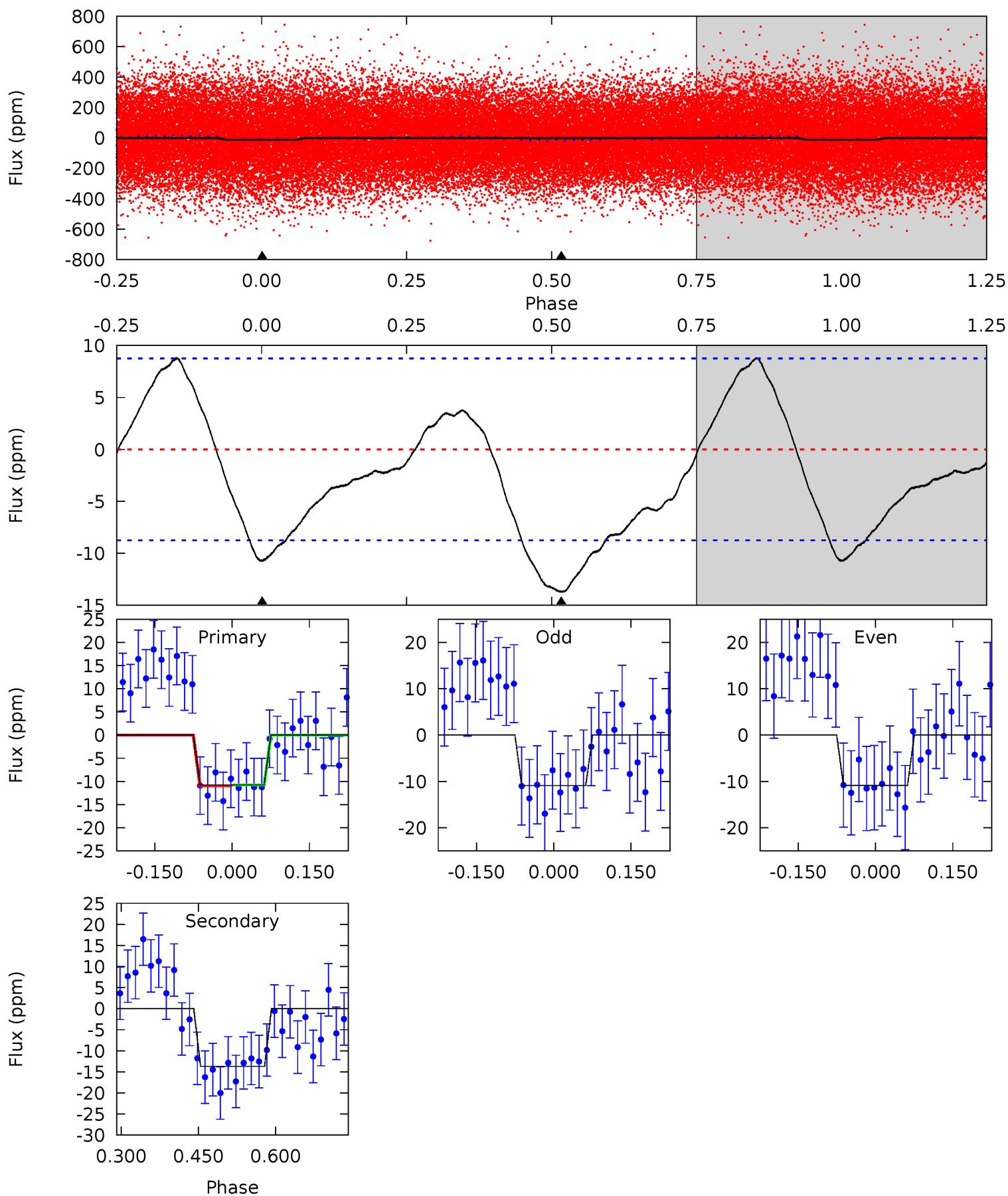




# Alt Model-Shift Uniqueness Test

011100331-01, P = 1.535119 Days, E = 130.557688 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
5.50	7.01	0	0	4.48	1.44	1.97	5.50	5.50	7.01	7.01	0.01	0.90	0.39	0.05





### Stellar Parameters For KIC 011100331

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$7700^{+211}_{-316}$	$4.018^{+0.210}_{-0.158}$	$-0.140^{+0.200}_{-0.350}$	$2.111^{+0.473}_{-0.578}$	$1.692^{+0.198}_{-0.298}$	$0.254^{+0.309}_{-0.104}$
	+3%/-4%	+5%/-4%	+143%/-250%	+22%/-27%	+12%/-18%	+122%/-41%
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 011100331-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-12 \pm 1$	$1.13^{+0.27}_{-0.26}$	$3893^{+278}_{-295}$	$6227^{+749}_{-525}$	$5.115^{+3.195}_{-1.799}$
Alt.	$-14 \pm 2$	$0.67^{+0.25}_{-0.21}$	$3882^{+293}_{-317}$	$8557^{+2627}_{-1342}$	$15^{+18}_{-7}$

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

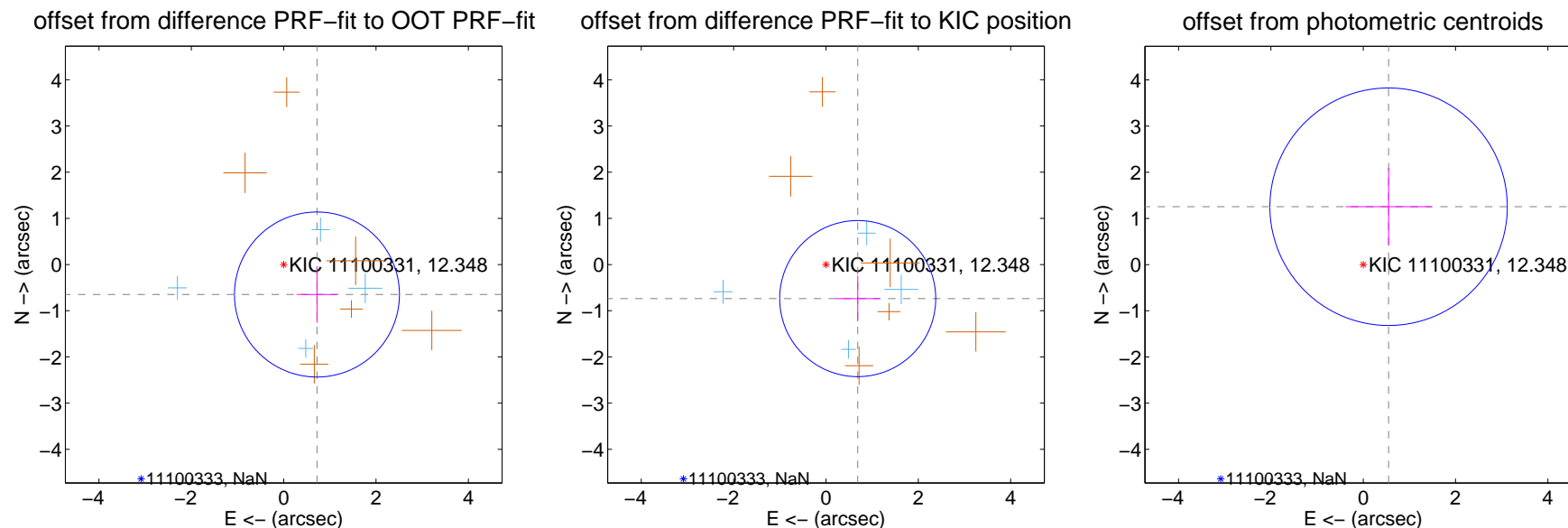
## DV Centroid Data

Supplemental centroid analysis for 011100331-01. Kepler magnitude: 12.35. Transit SNR 9.41

There are 4 quarters with good PRF difference image offsets

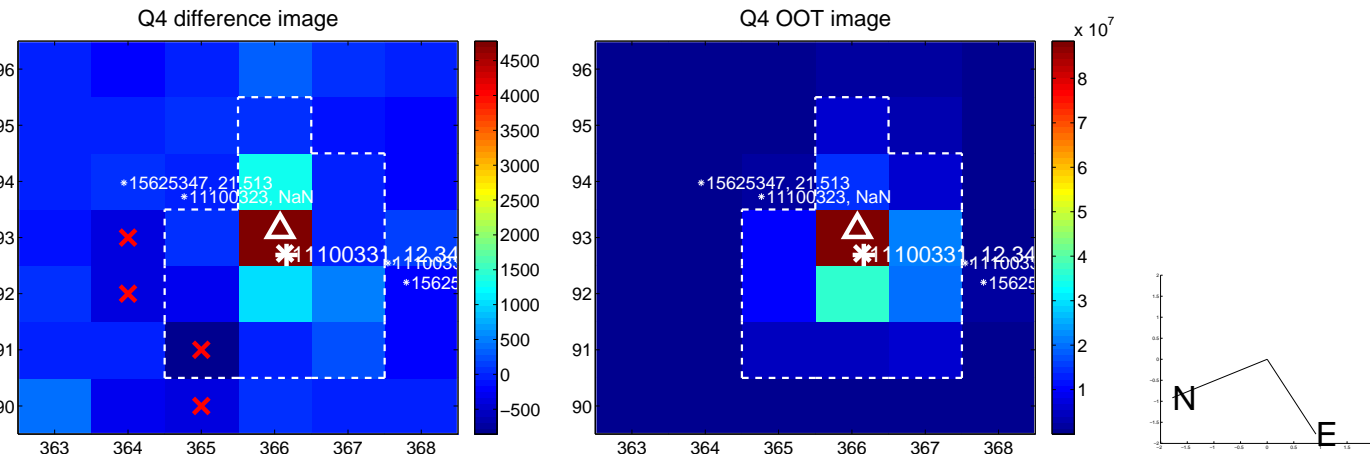
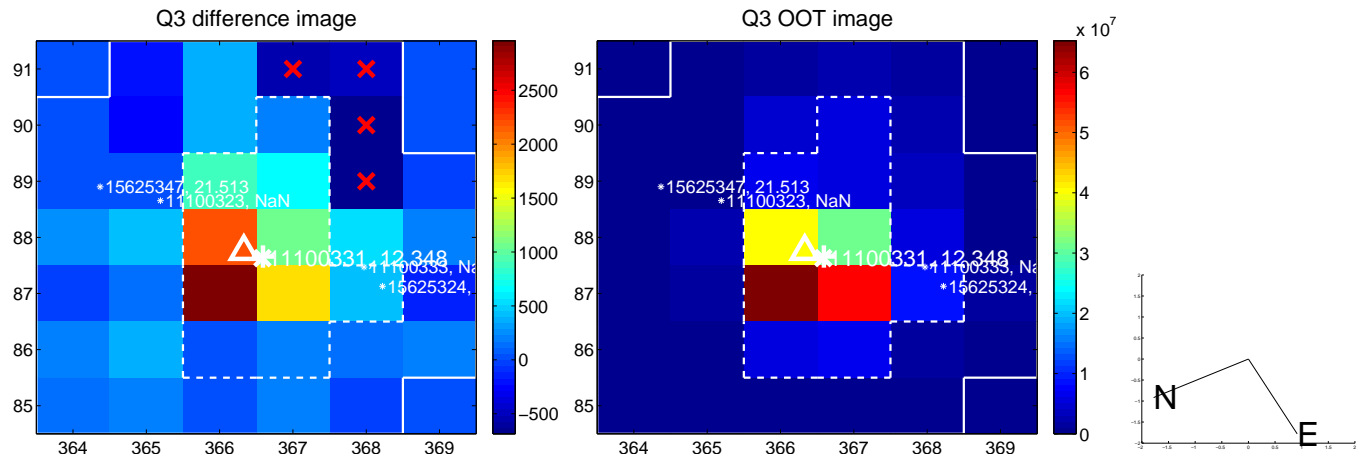
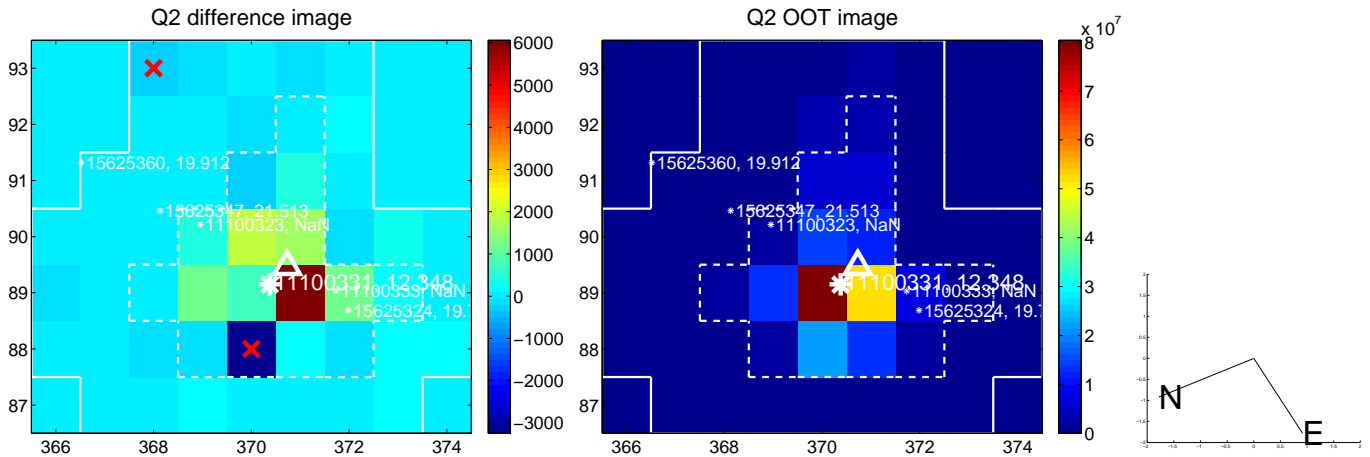
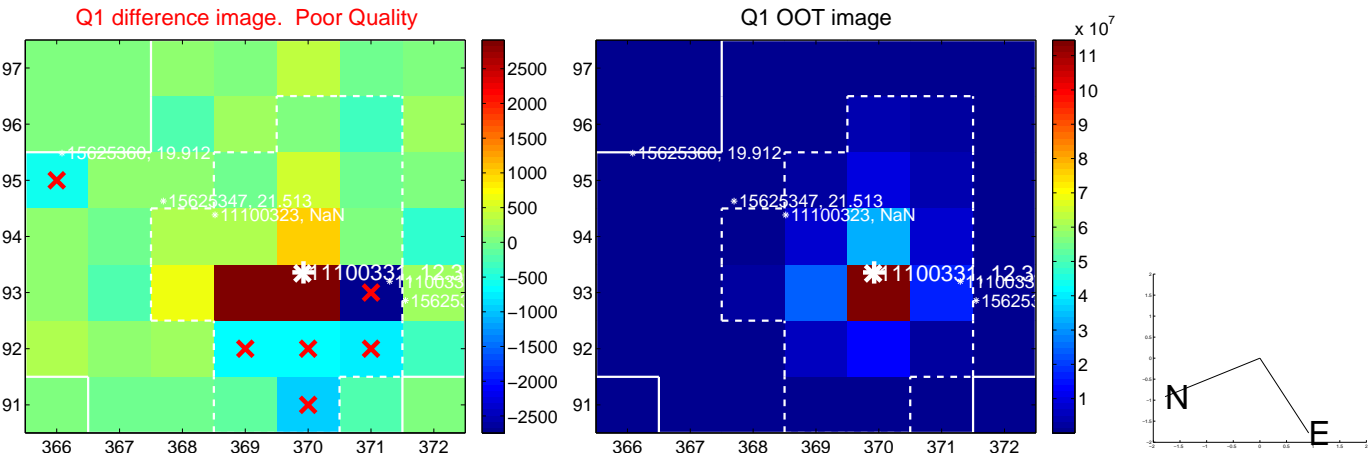
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.970 \pm 0.595$	1.63	$-0.721 \pm 0.438$	$-0.649 \pm 0.611$
PRF-fit source offset from KIC position	$1.008 \pm 0.563$	1.79	$-0.687 \pm 0.485$	$-0.737 \pm 0.496$
photometric centroid source offset	$1.37 \pm 0.86$	1.60	$-0.55 \pm 0.93$	$1.25 \pm 0.84$

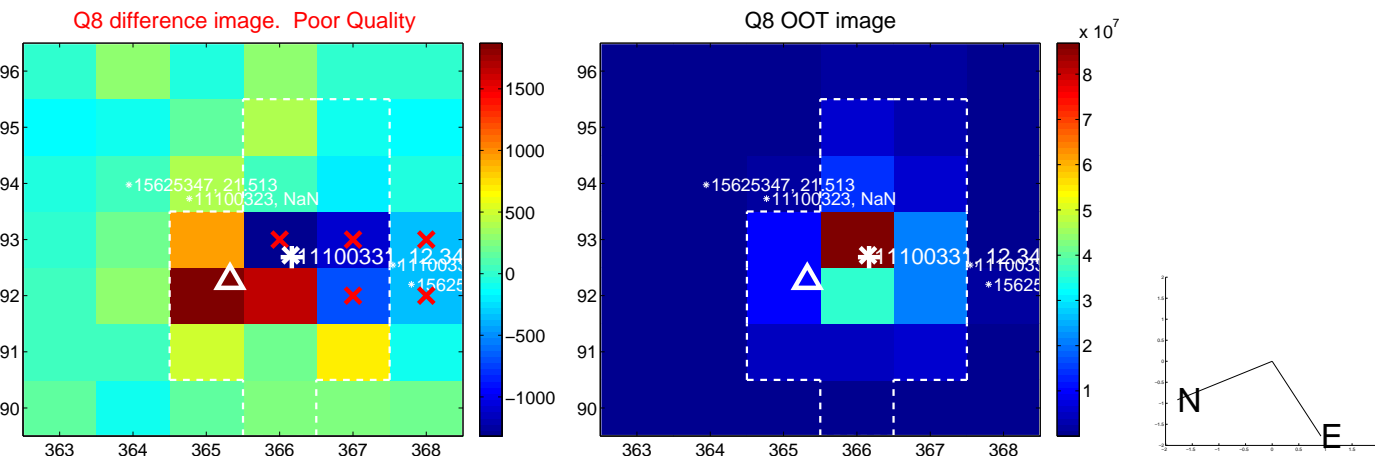
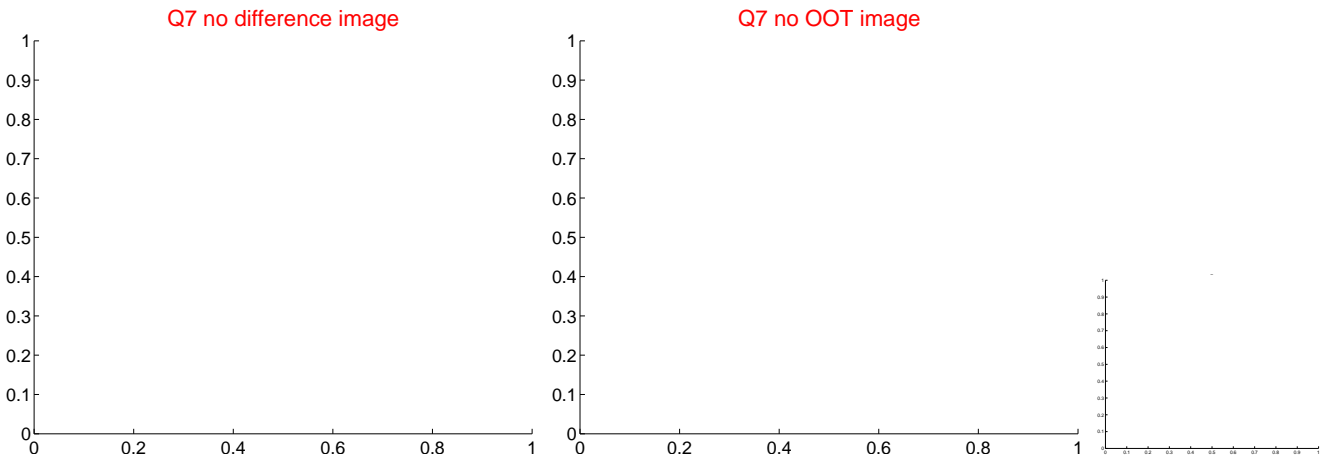
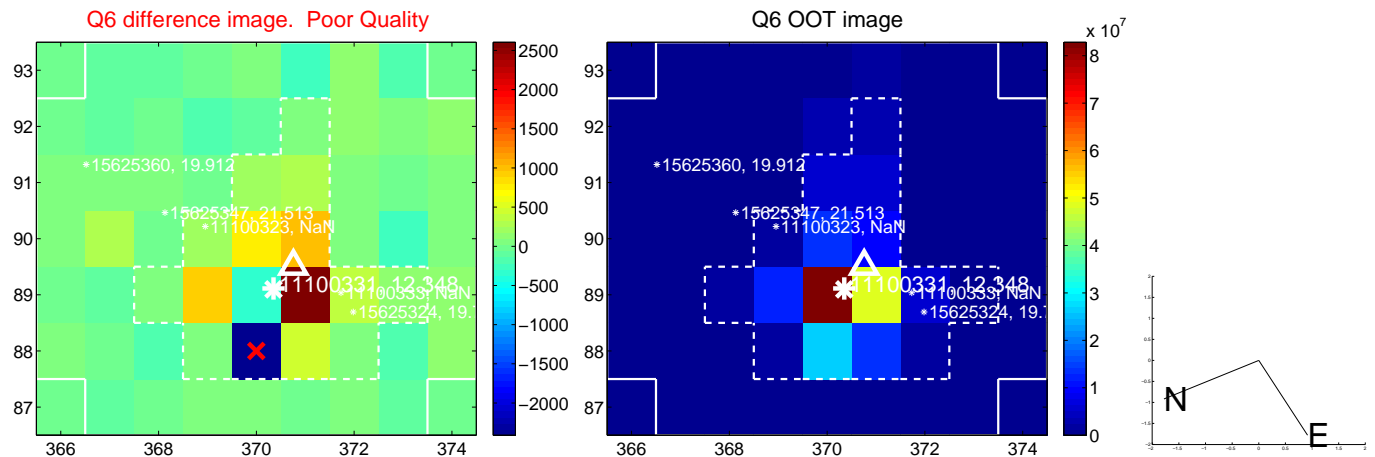
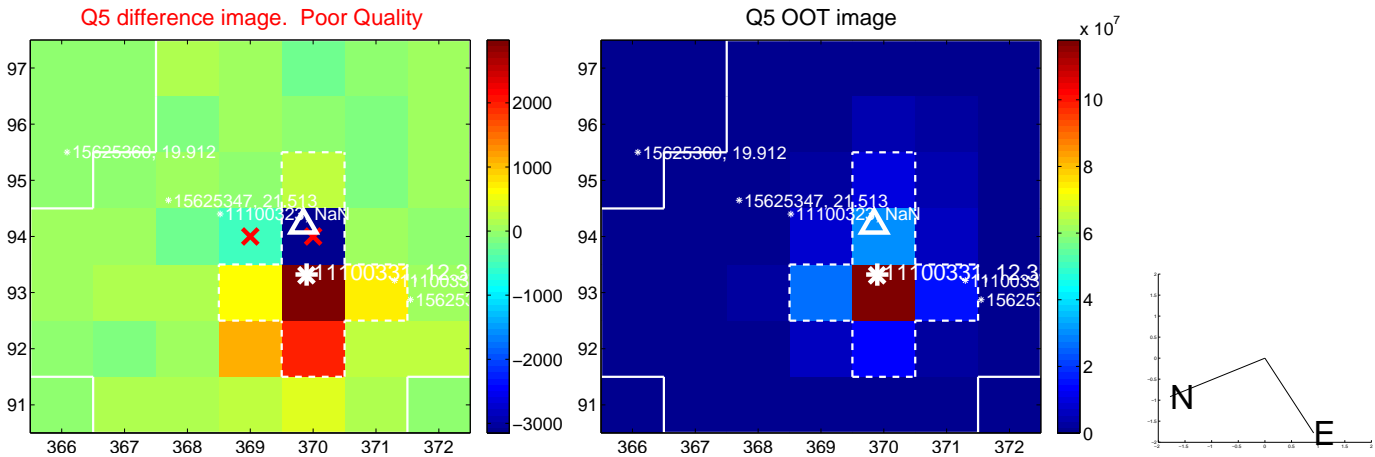


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

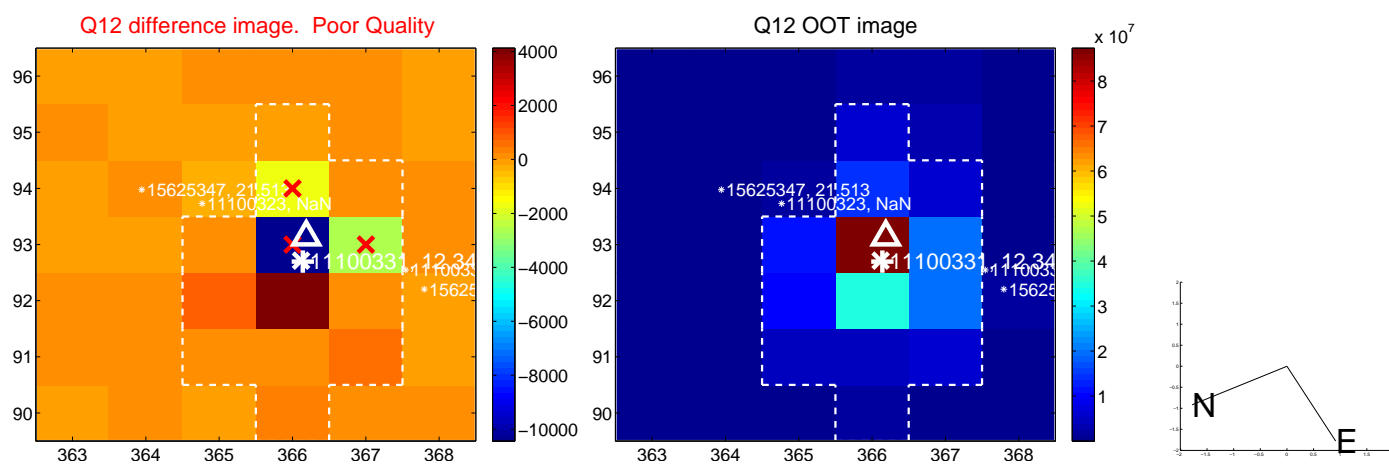
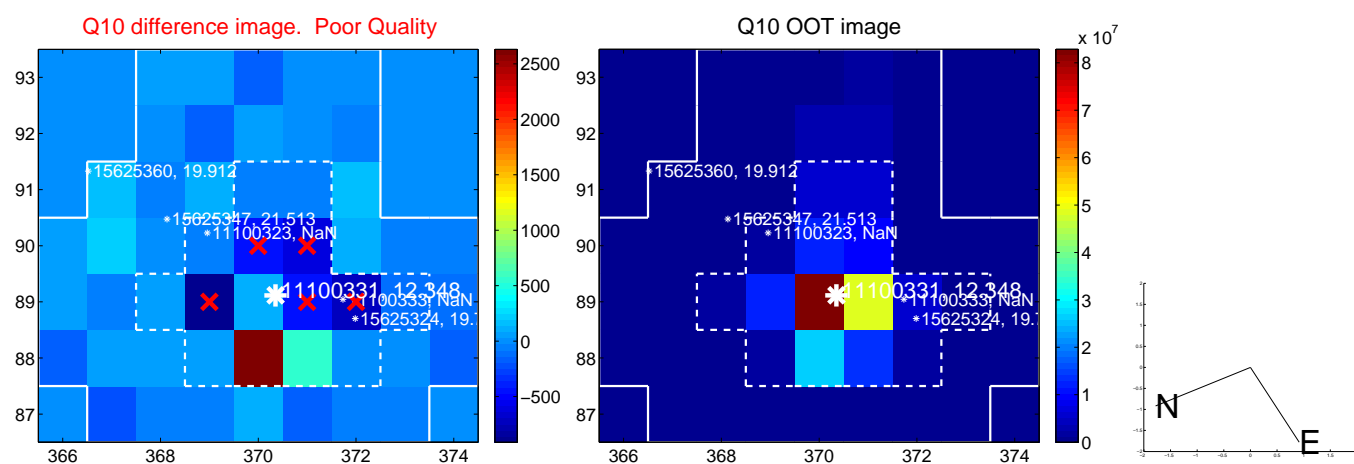
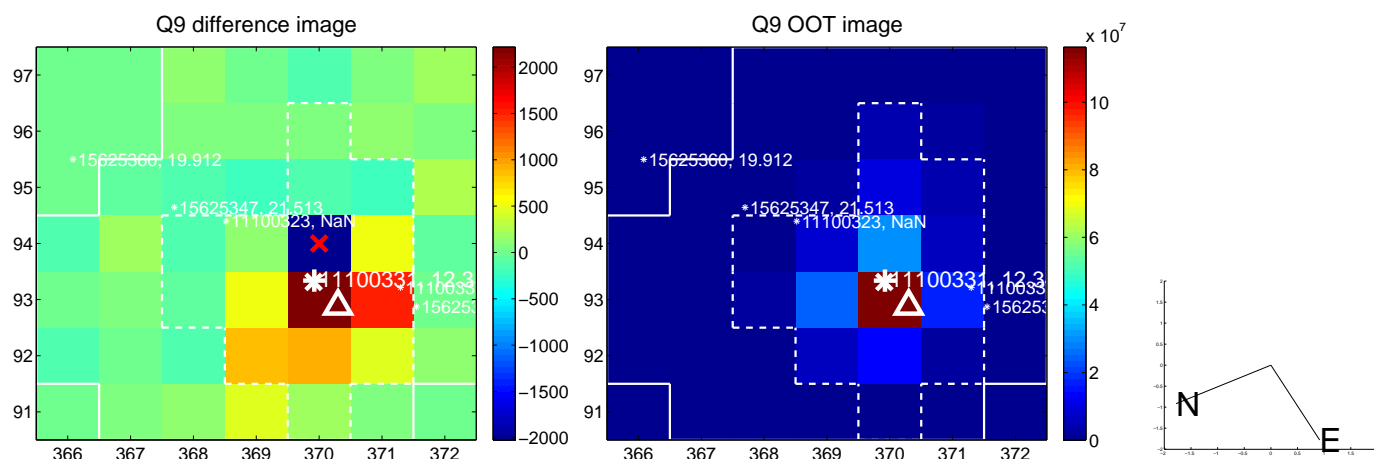


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

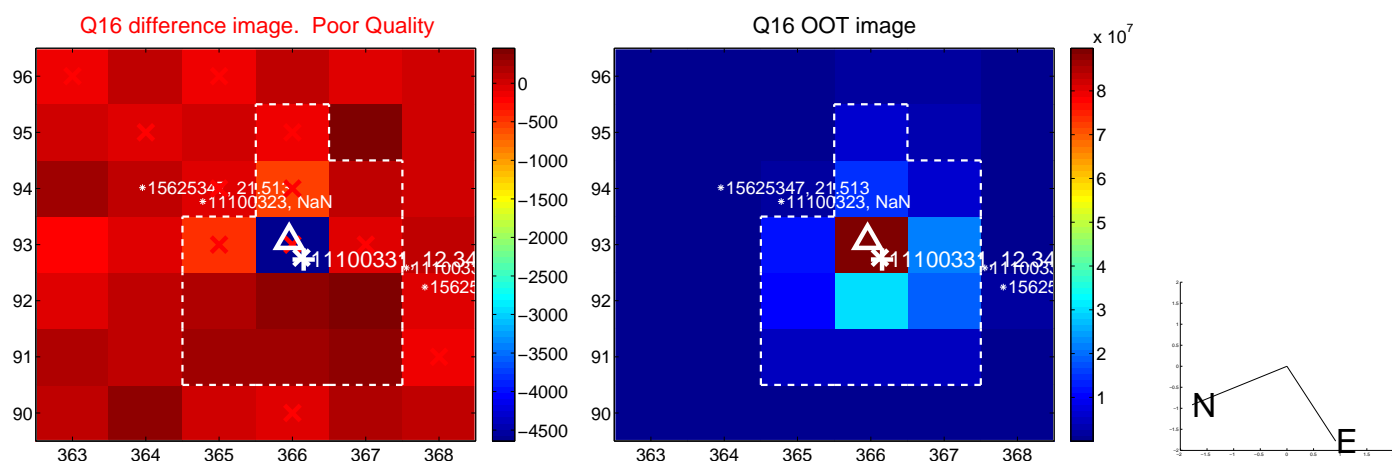
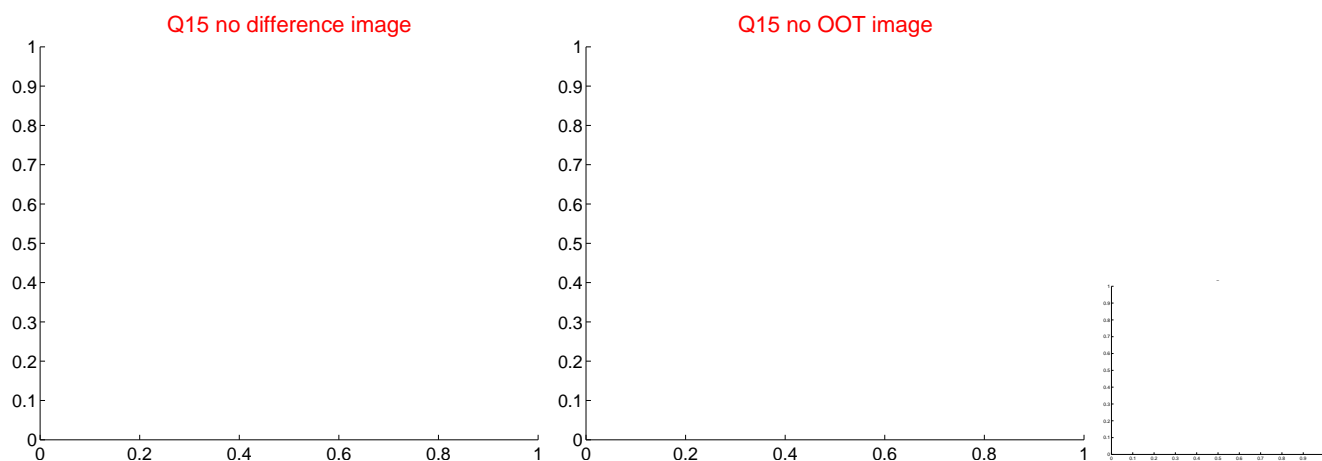
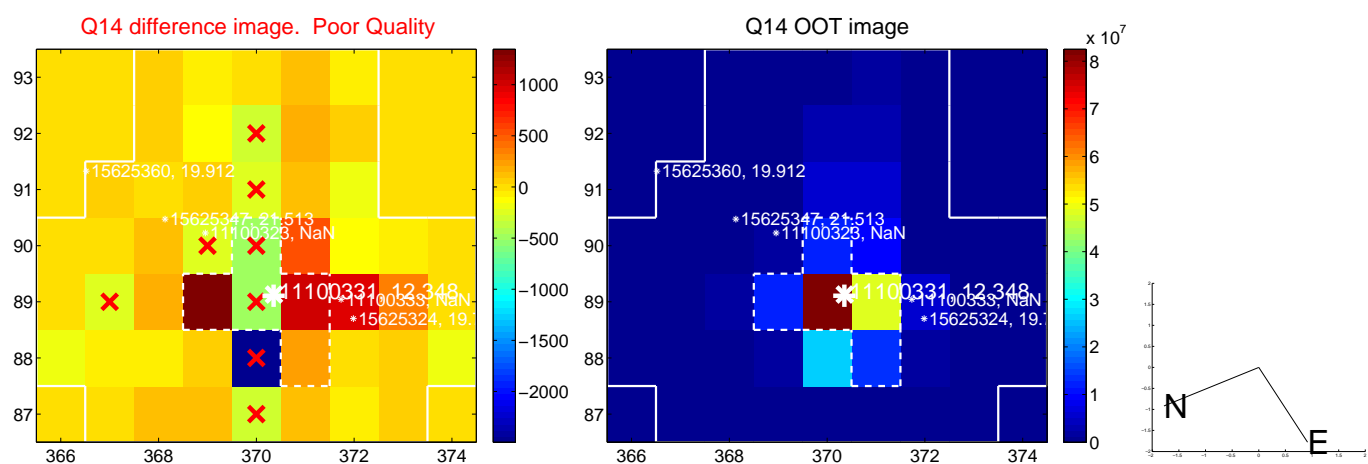
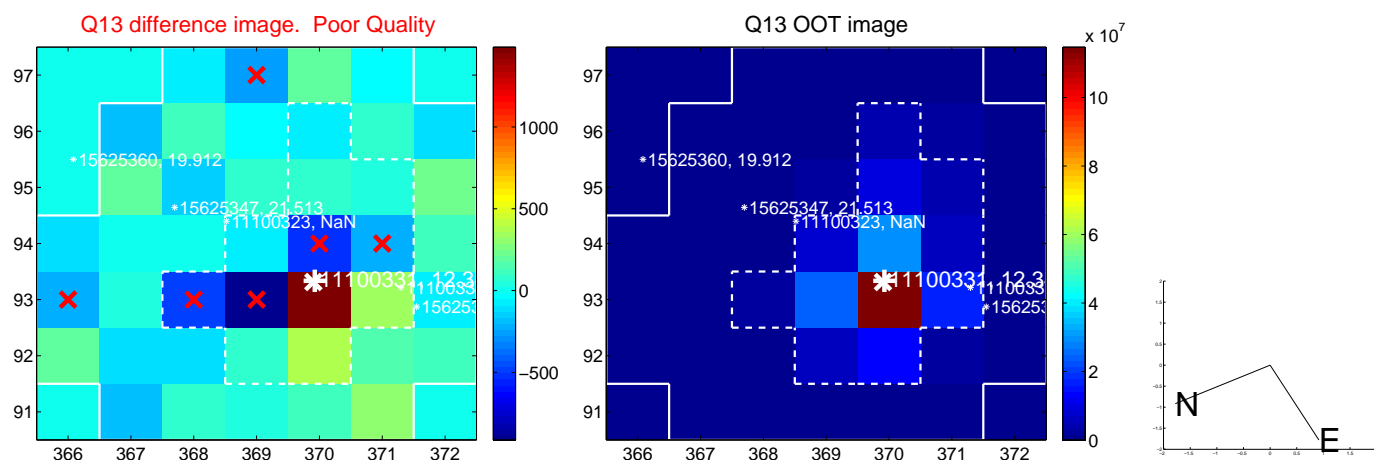




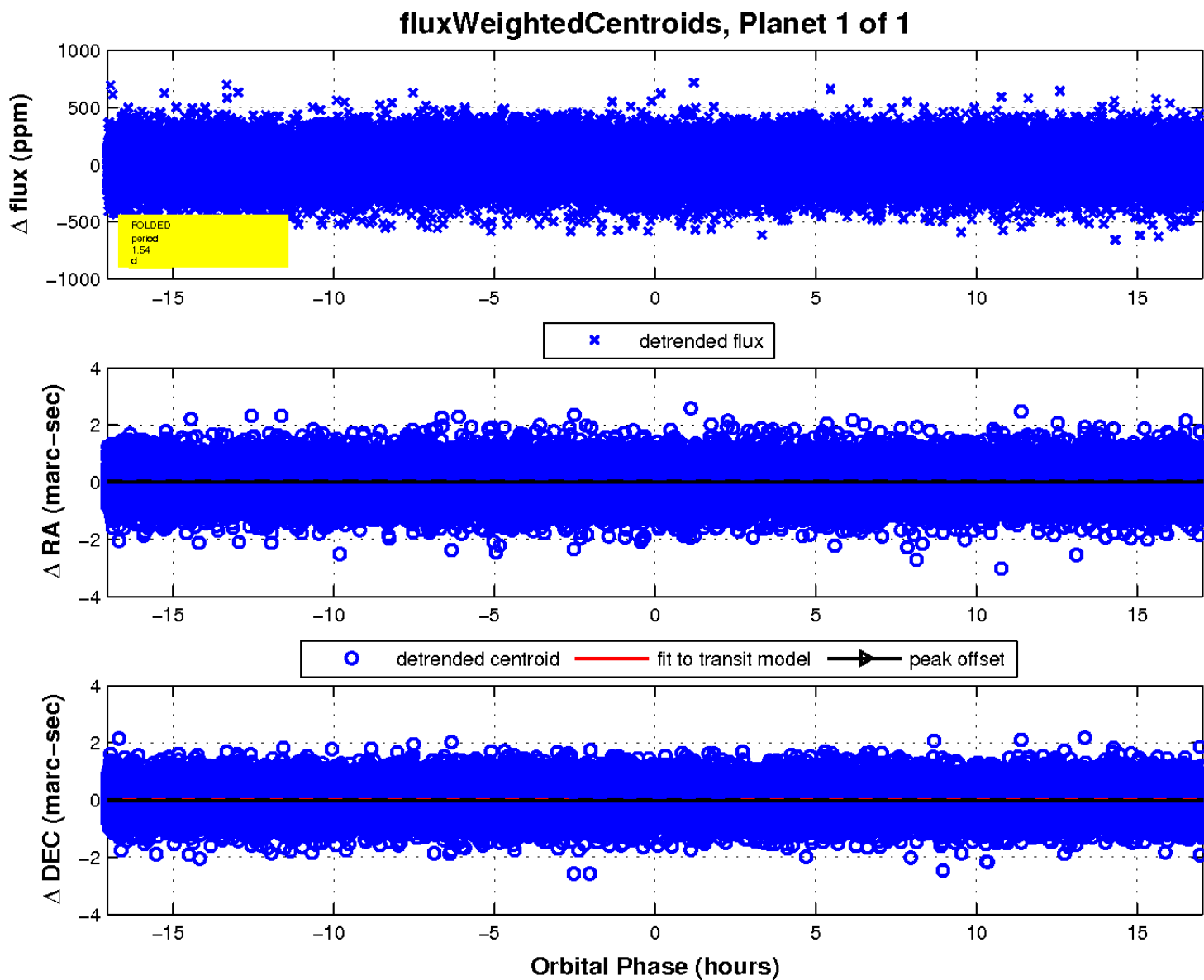
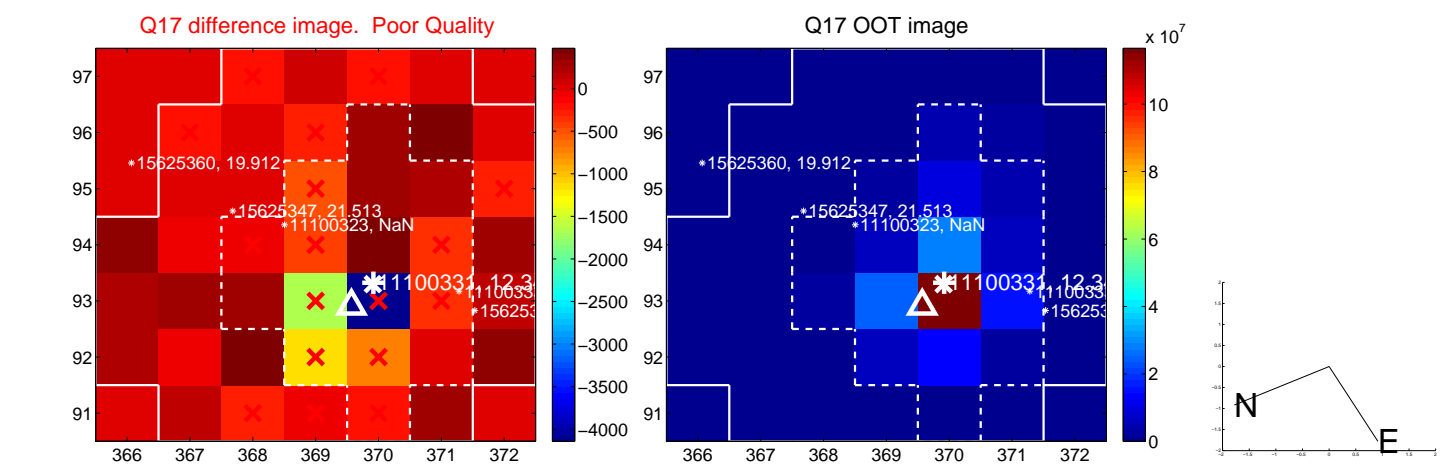
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



UKIRT Image

Declination

