

# KIC 008313144

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008313144-01	OBS	No	0.616776	131.642398	1.8	2.295	7.8	2.7	2.40	9155	0.40	104679.22

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008313144-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT

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

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

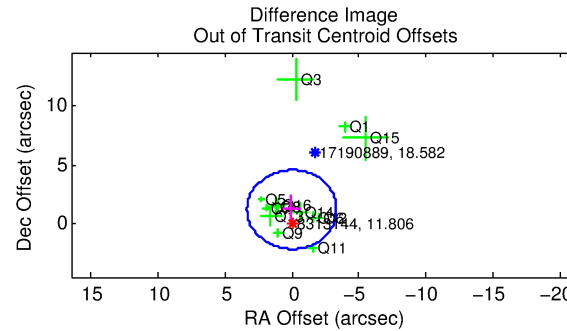
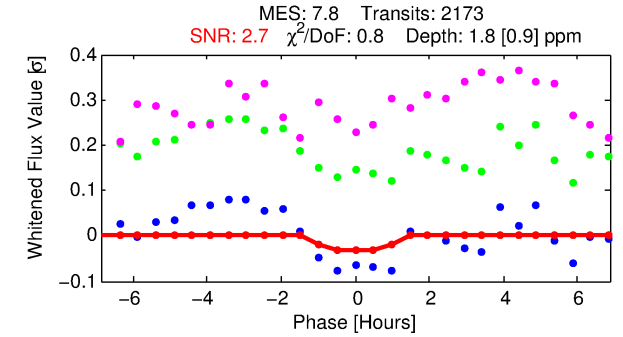
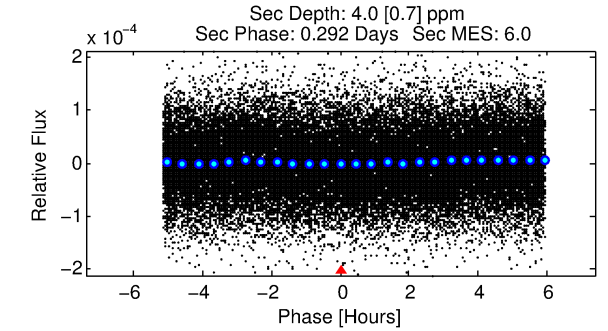
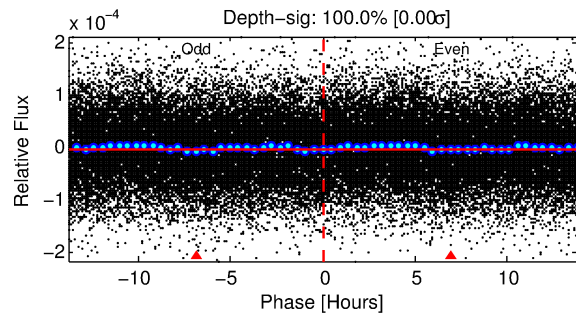
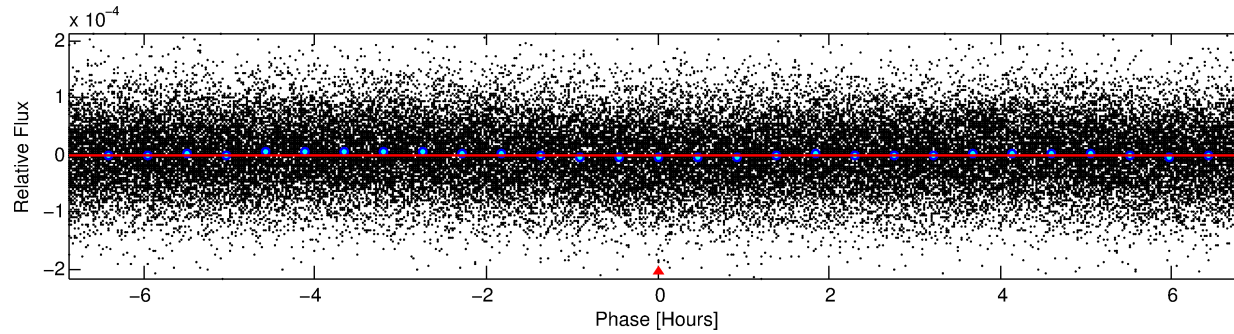
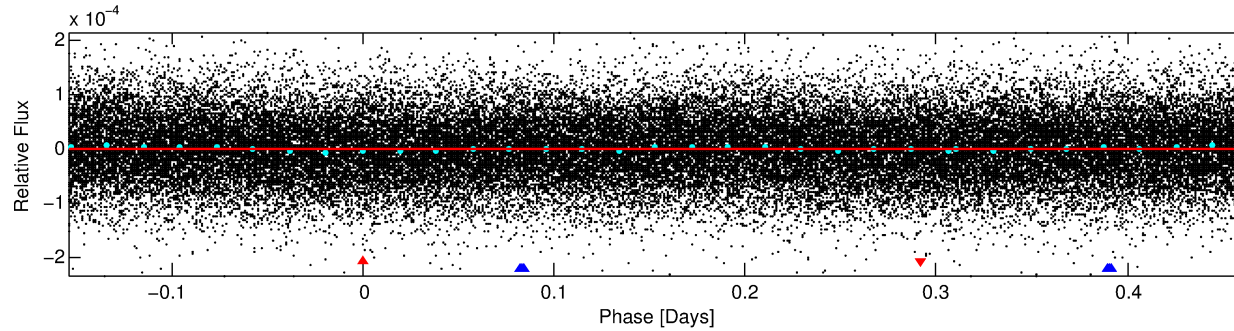
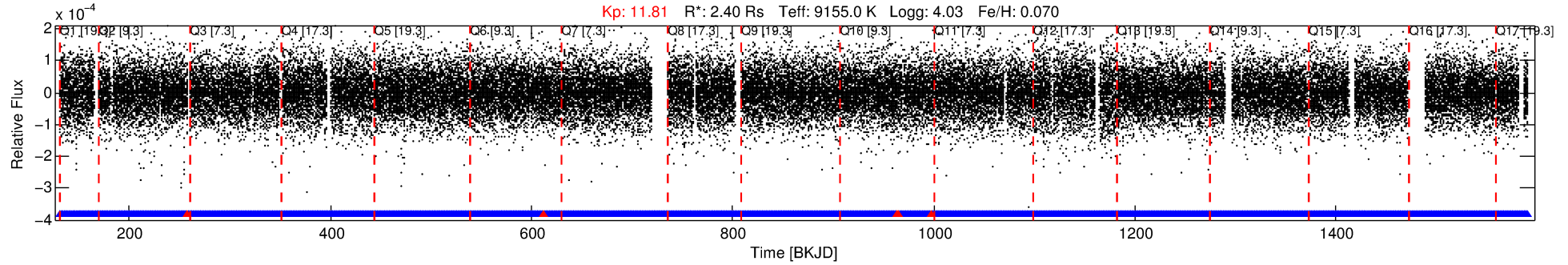
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008313144-01

No Significant Match Found

# DV One-Page Summary

KIC: 8313144 Candidate: 1 of 2 Period: 0.617 d



## DV Fit Results:

Period = 0.61678 [0.00004] d  
Epoch = 131.6424 [0.0107] BKJD  
Rp/R\* = 0.0015 [0.0008]  
a/R\* = 1.10 [0.83]  
b = 0.97 [0.25]  
Seff = 104679.22 [43722.45]  
Teq = 4587 [479] K  
Rp = 0.40 [0.26] Re  
a = 0.0186 [0.0051] AU  
Ag = 4.68 [5.42] [0.68σ]  
Teffp = 10431 [2904] K [1.99σ]

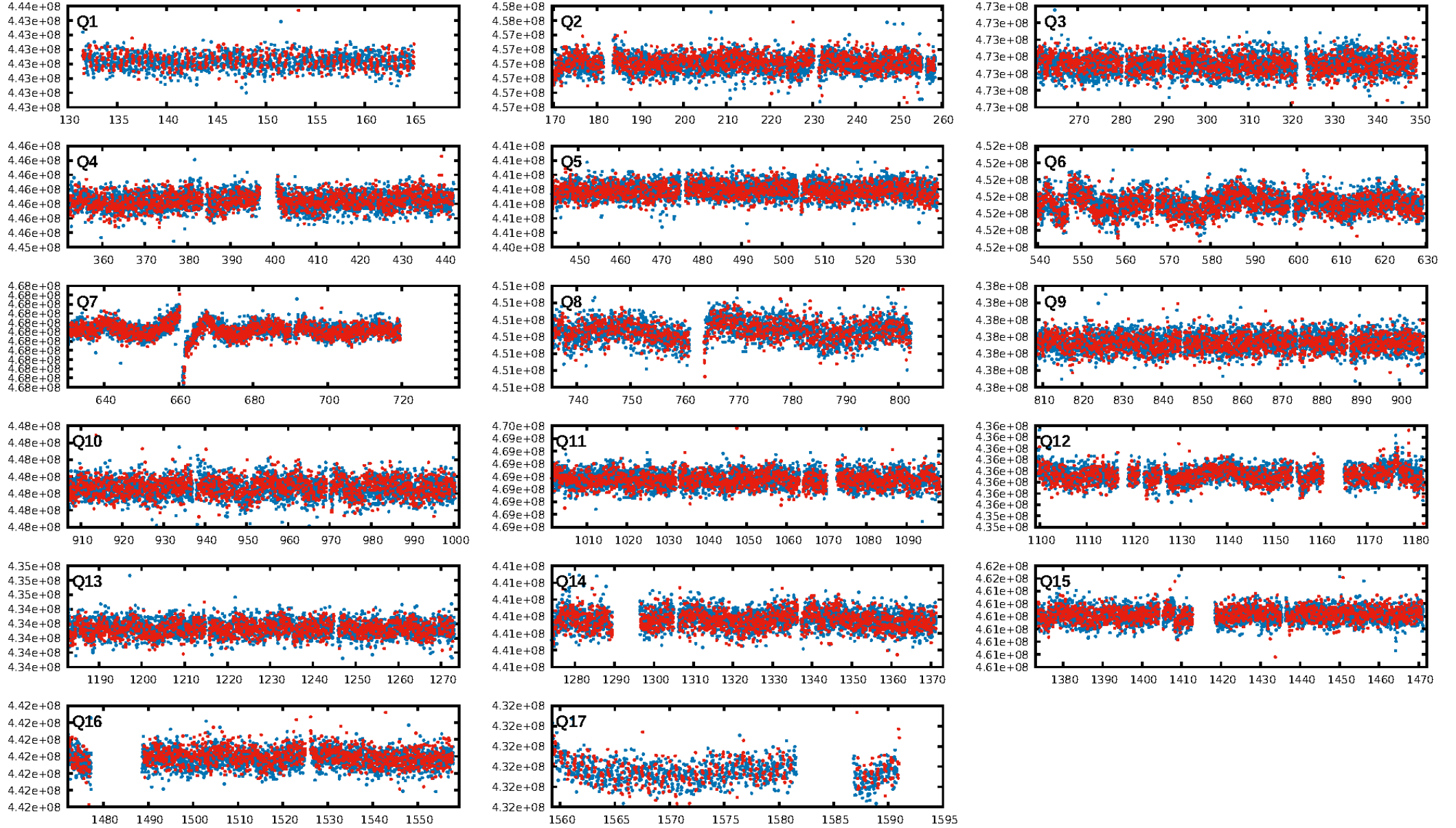
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: 100.0% [940.08σ]  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 1.71e-12  
RollingBand-fgt: 1.00 [2070/2075]  
GhostDiagnostic-chr: N/A  
Centroid-sig: N/A  
Centroid-so: N/A  
OotOffset-rm: 1.201 arcsec [1.08σ]  
KicOffset-rm: 1.054 arcsec [0.98σ]  
OotOffset-st: 2/4/3/4 [13]  
KicOffset-st: 2/4/3/4 [13]  
DiffImageQuality-fgm: 0.69 [9/13]  
DiffImageOverlap-fno: 1.00 [17/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 23:40:35 Z

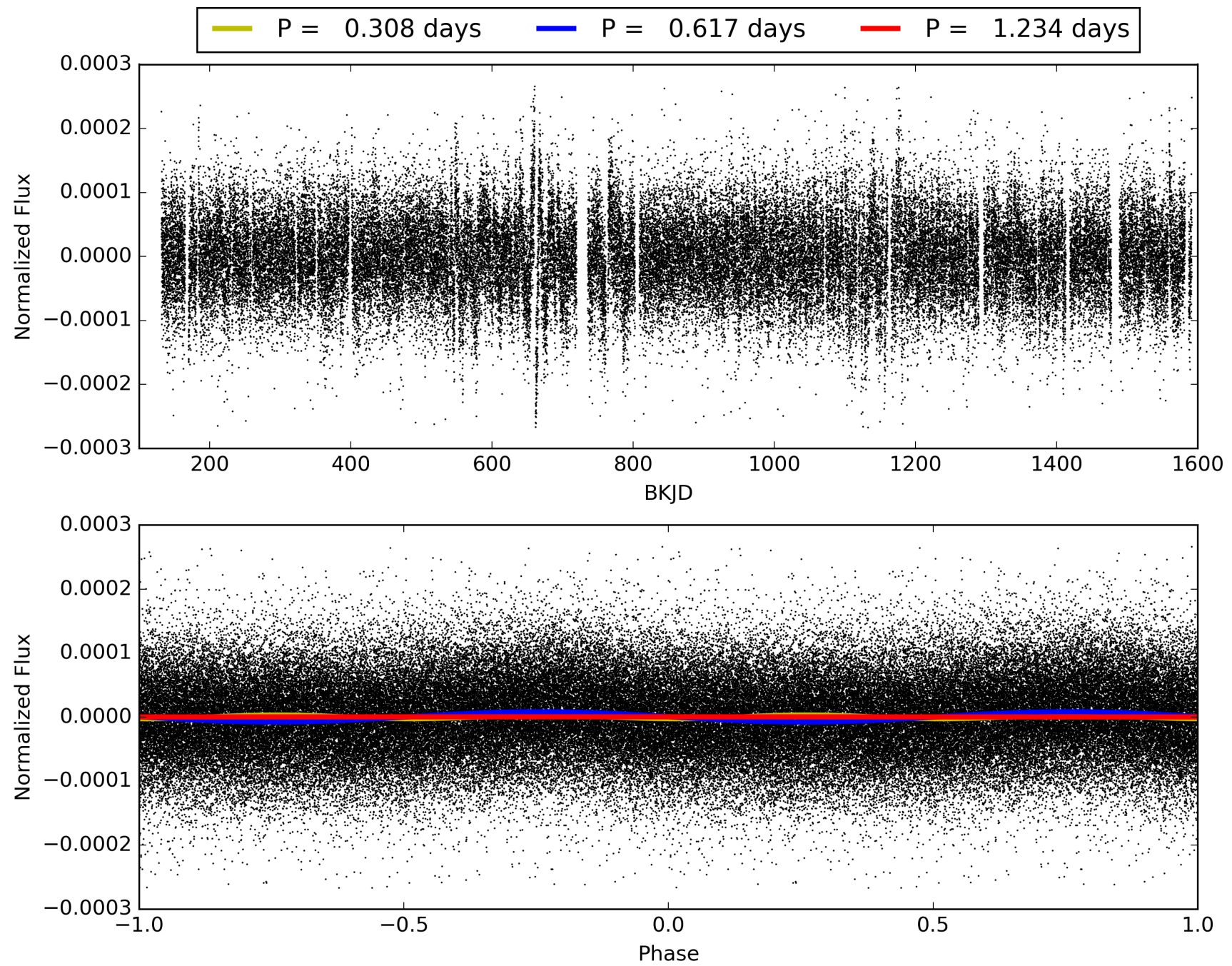
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 008313144-01, PDC Light Curves



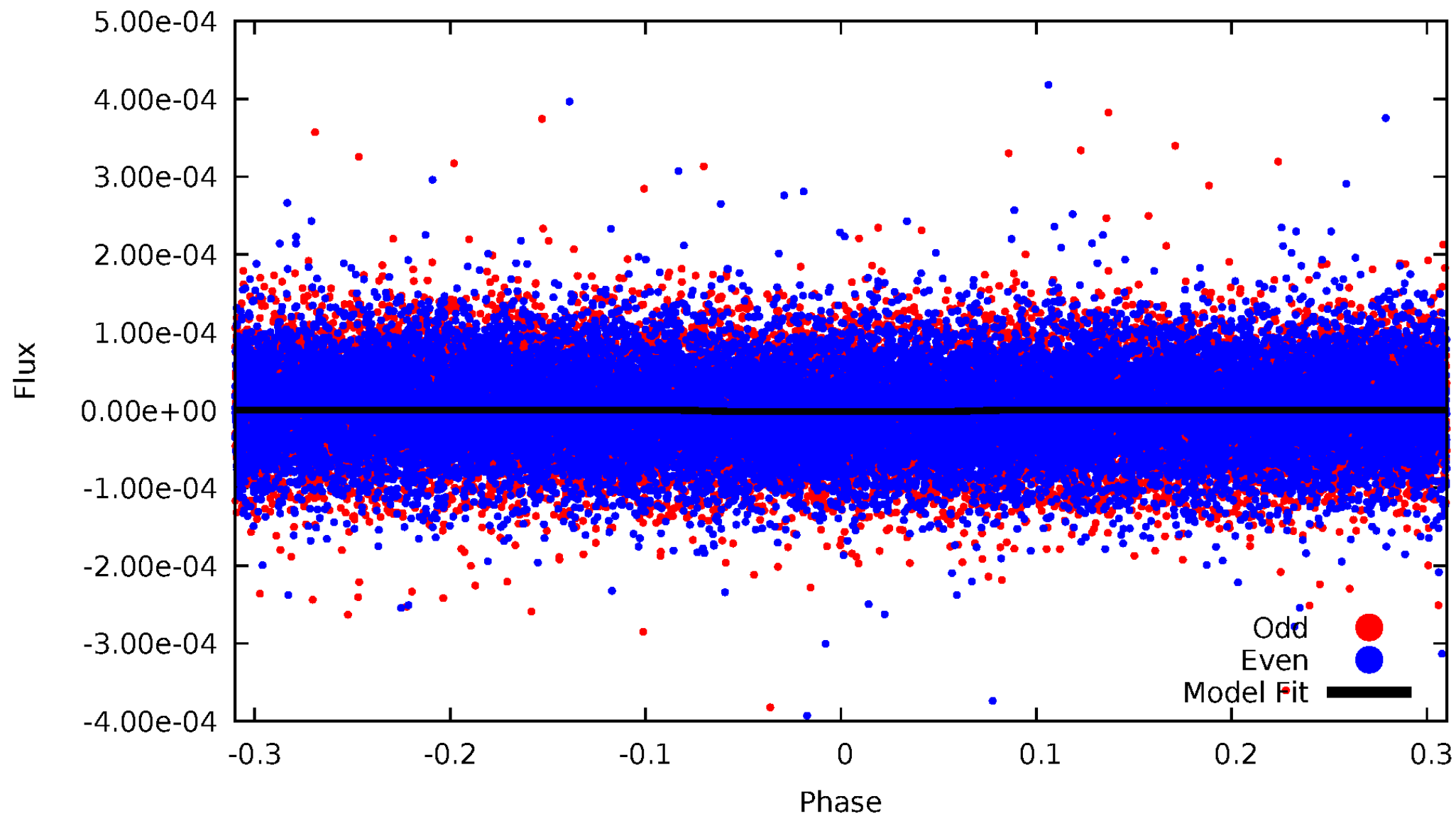


TCE 008313144-01



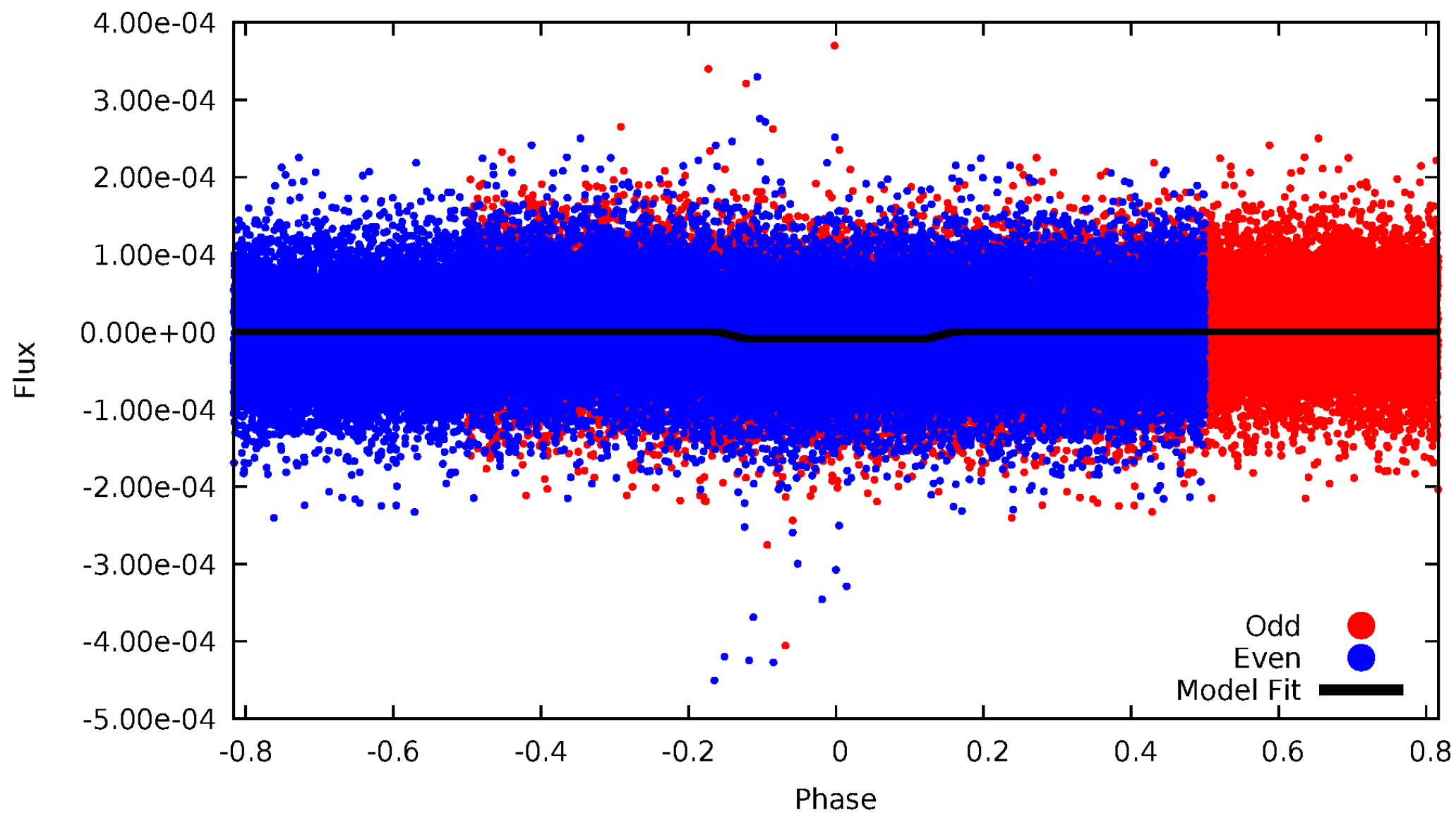
# DV Odd/Even

TCE 008313144-01

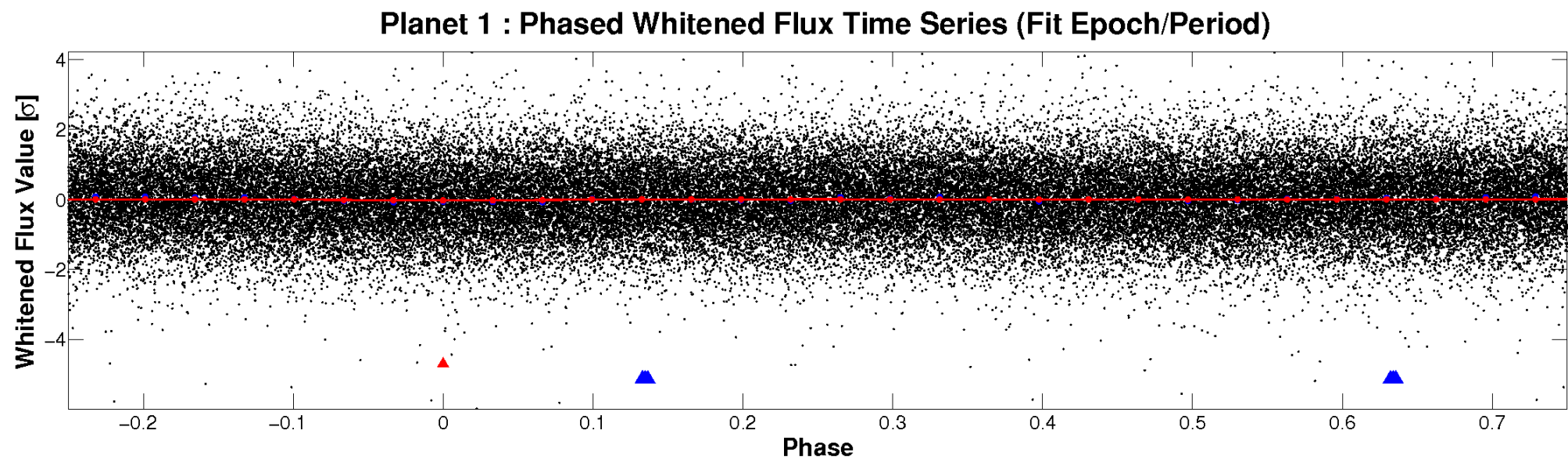
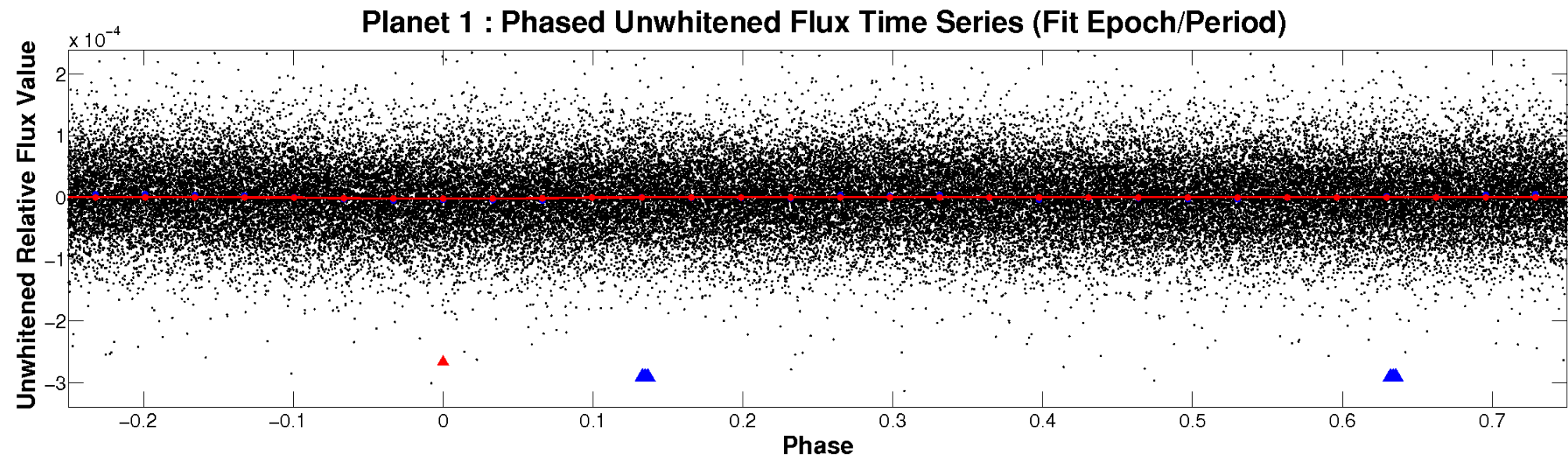


# ALT Odd/Even

TCE 008313144-01



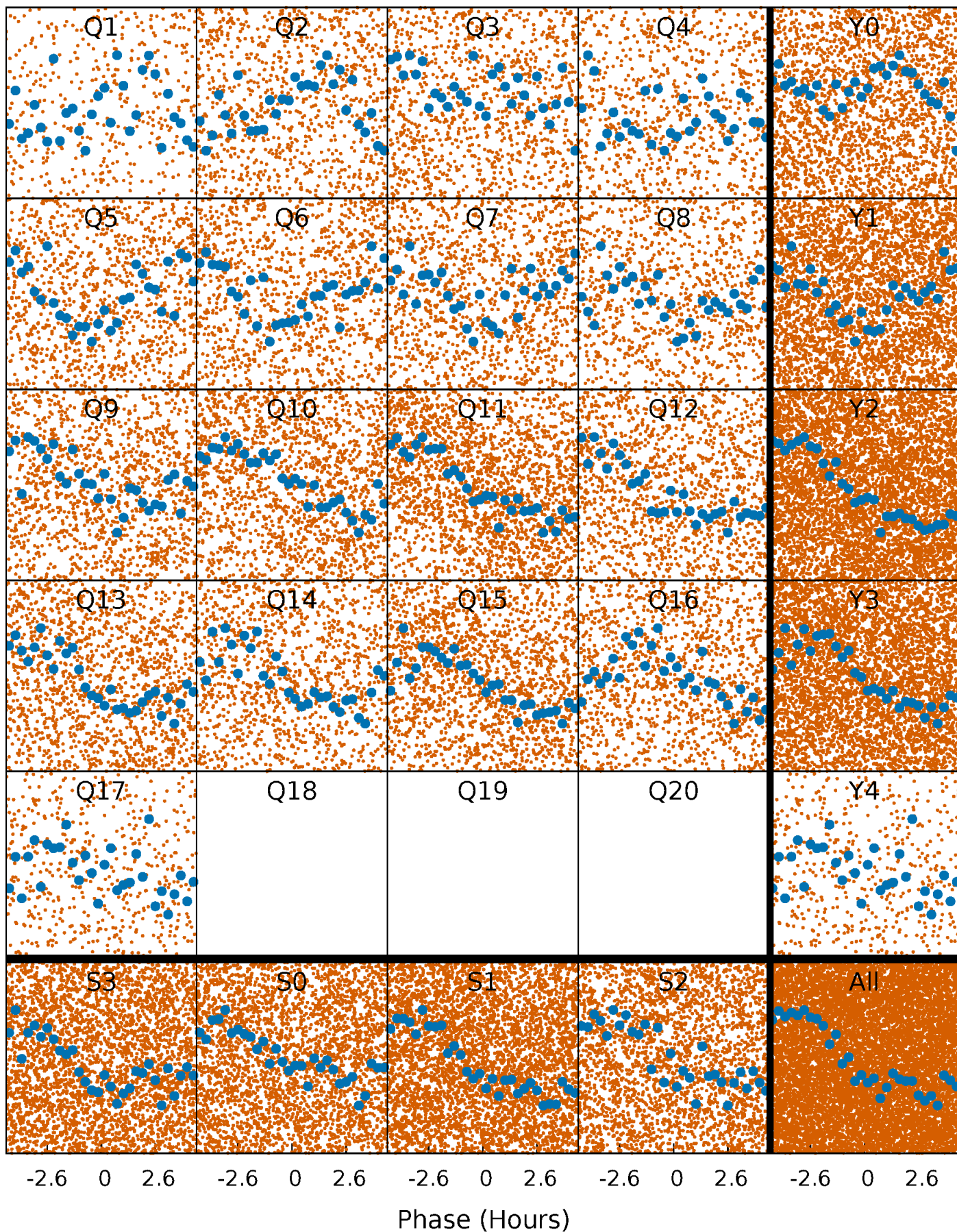
# Non-Whitened Vs. Whitened Light Curve





# PDC Quarter-Phased Transit Curves

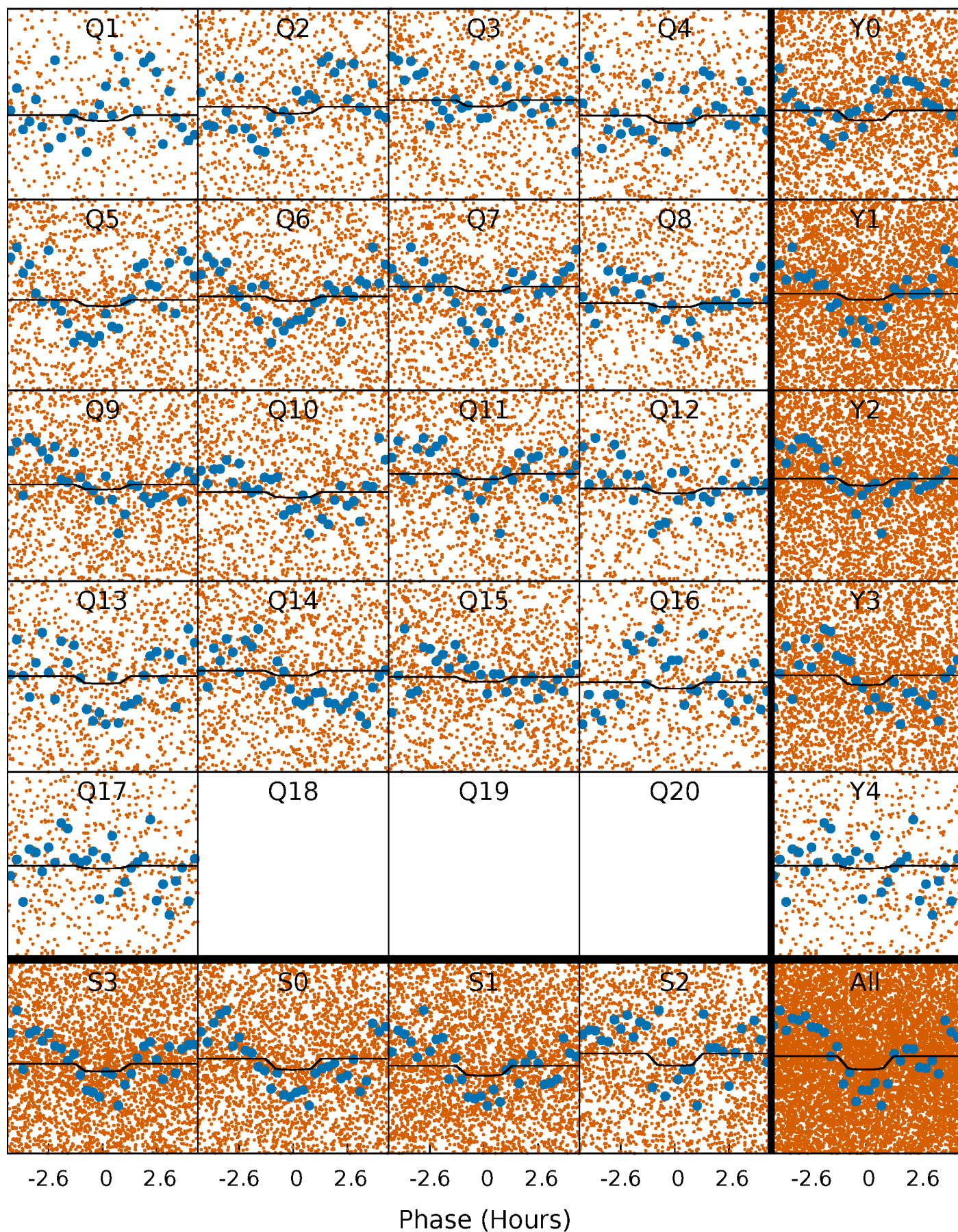
TCE 008313144-01 P= 0.616776 Days  $T_0=131.642398$  (BKJD)





# DV Quarter-Phased Transit Curves

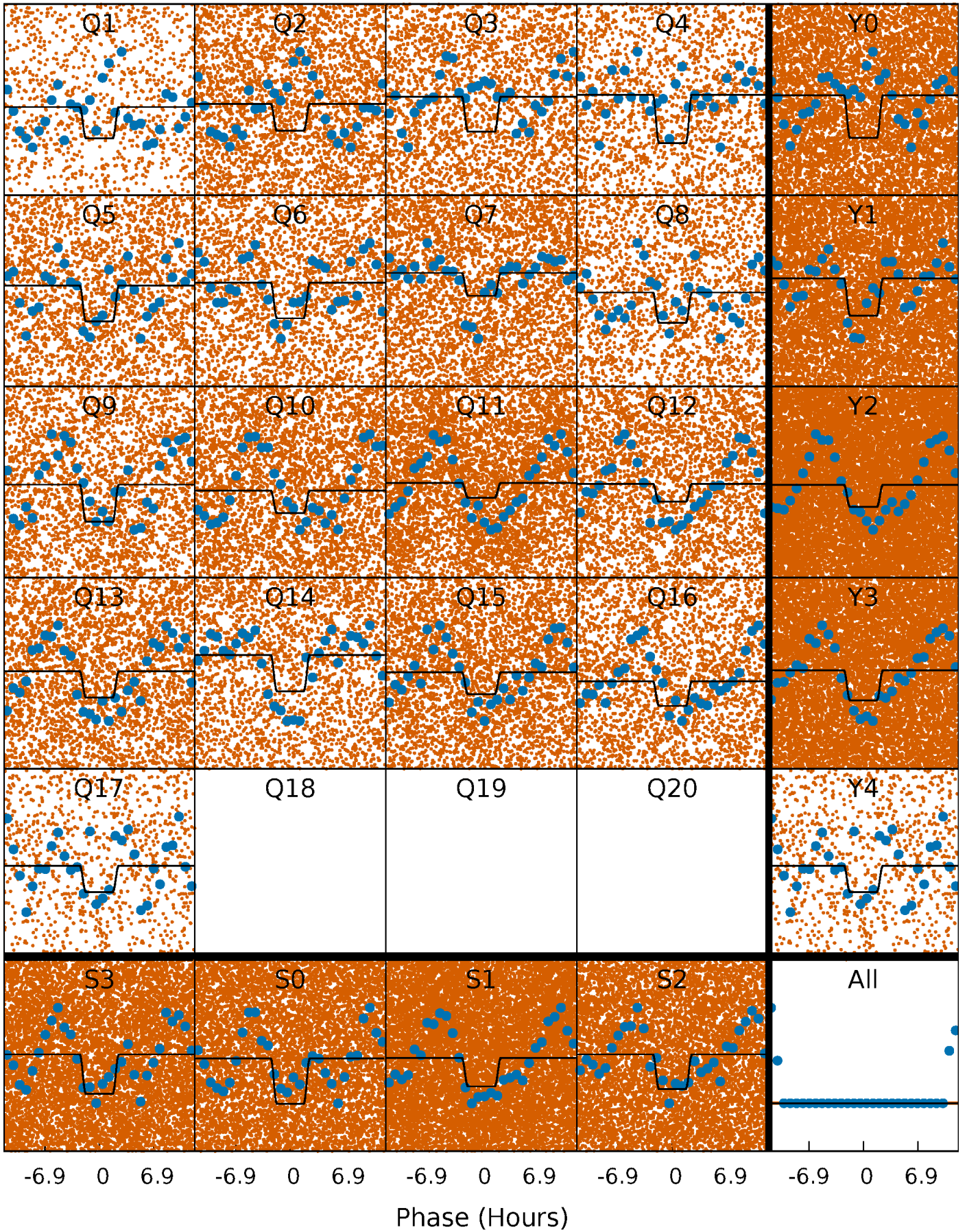
TCE 008313144-01 P= 0.616776 Days  $T_0=131.642398$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

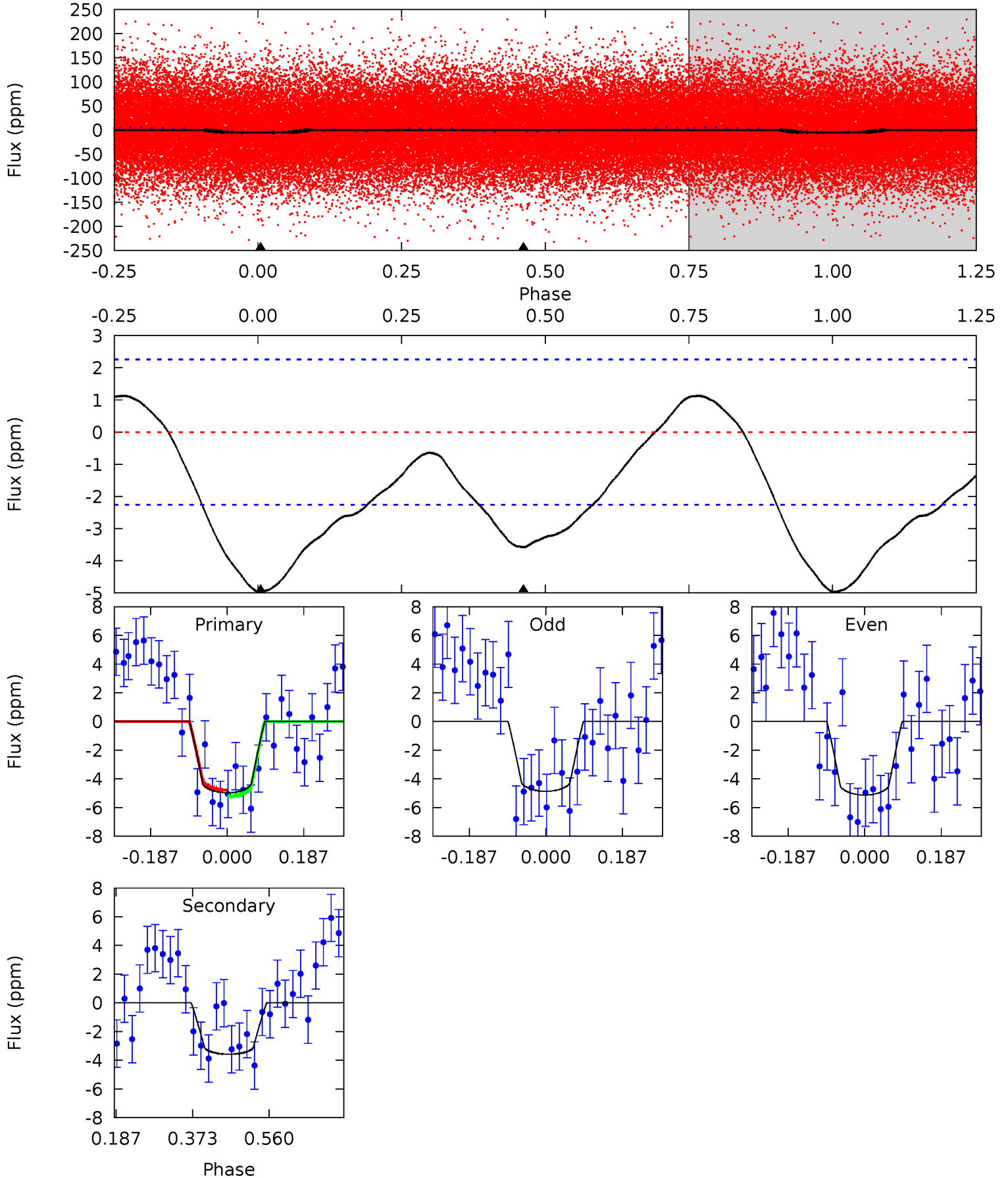
TCE 008313144-01 P= 0.616839 Days  $T_0=131.625238$  (BKJD)



# DV Model-Shift Uniqueness Test

008313144-01, P = 0.616776 Days, E = 131.025622 Days

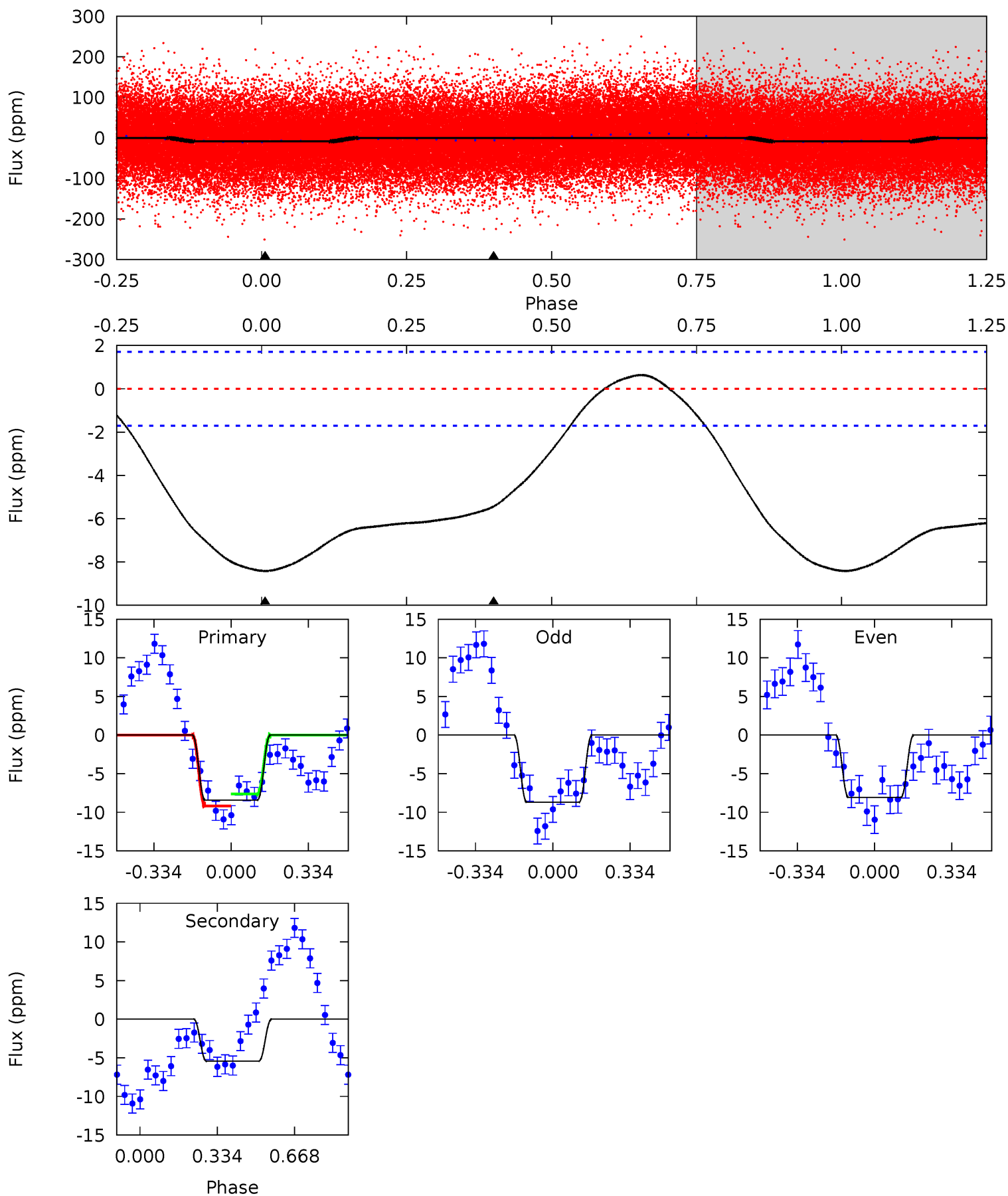
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.75	7.03	0	0	4.43	1.32	2.19	9.75	9.75	7.03	7.03	0.25	1.04	0.19	0.43



# Alt Model-Shift Uniqueness Test

008313144-01, P = 0.616839 Days, E = 131.008399 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
21.3	13.7	0	0	4.30	0.97	1.52	21.3	21.3	13.7	13.7	0.79	1.01	0.07	0





### Stellar Parameters For KIC 008313144

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$9155^{+292}_{-438}$	$4.032^{+0.190}_{-0.171}$	$0.070^{+0.150}_{-0.700}$	$2.403^{+0.828}_{-0.753}$	$2.265^{+0.361}_{-0.671}$	$0.230^{+0.292}_{-0.112}$
	+3%/-5%	+5%/-4%	+214%/-1000%	+34%/-31%	+16%/-30%	+127%/-49%
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 008313144-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-4 \pm 1$	$0.39^{+0.24}_{-0.18}$	$6367^{+506}_{-511}$	$10354^{+8461}_{-2916}$	$4.341^{+11.592}_{-2.651}$
Alt.	$-5 \pm 0$	$0.77^{+0.24}_{-0.24}$	$6369^{+471}_{-508}$	$7322^{+1809}_{-1260}$	$1.723^{+1.650}_{-0.721}$

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

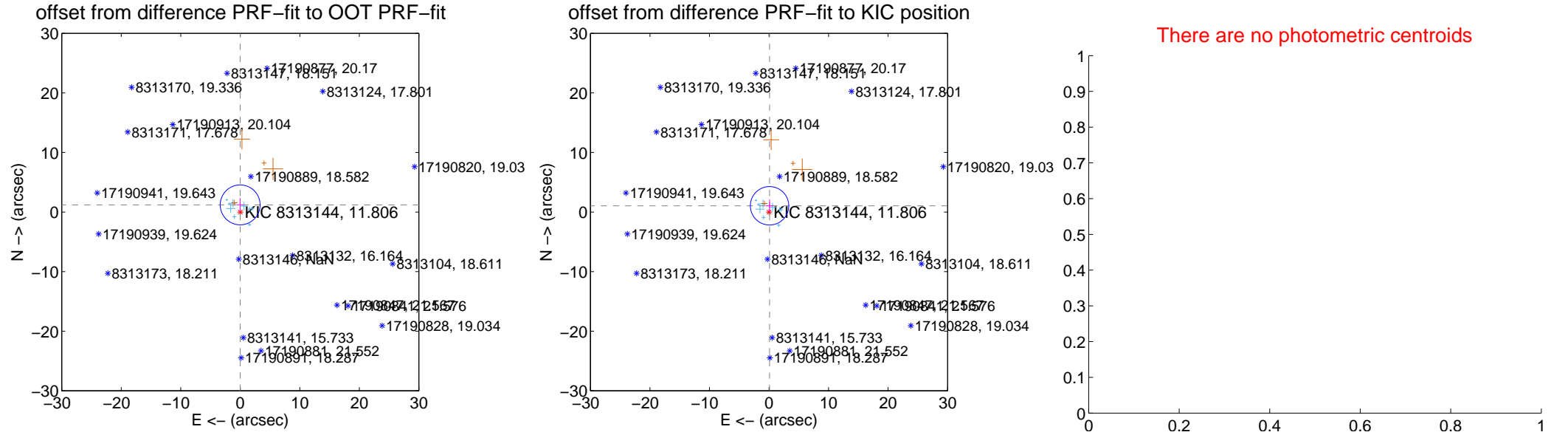
## DV Centroid Data

Supplemental centroid analysis for 008313144-01. **Kepler magnitude: 11.81.** Transit SNR 2.71

There are 9 quarters with good PRF difference image offsets

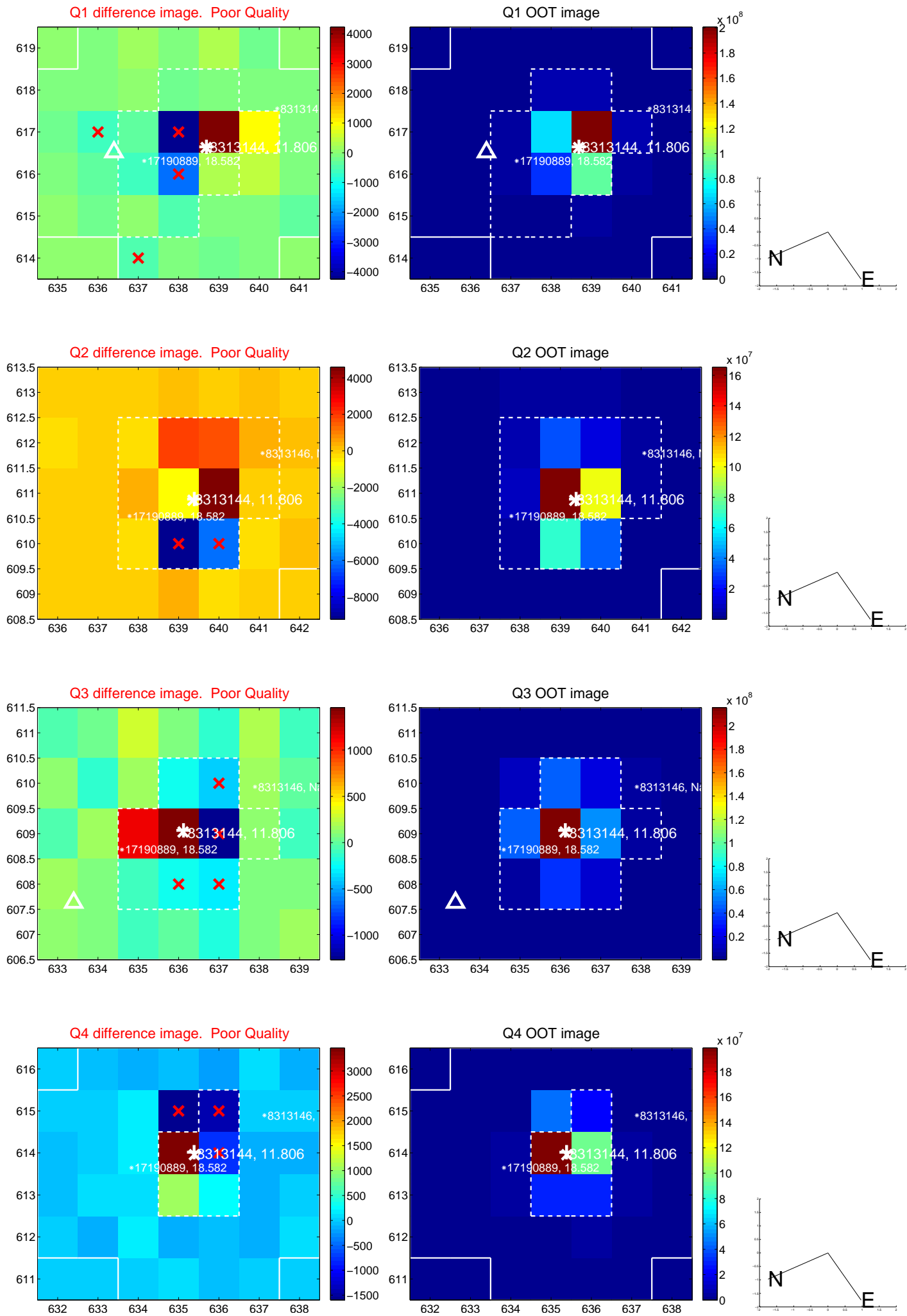
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.201 \pm 1.116$	1.08	$0.020 \pm 0.586$	$1.201 \pm 1.120$
PRF-fit source offset from KIC position	$1.054 \pm 1.075$	0.98	$-0.090 \pm 0.639$	$1.050 \pm 1.055$
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.

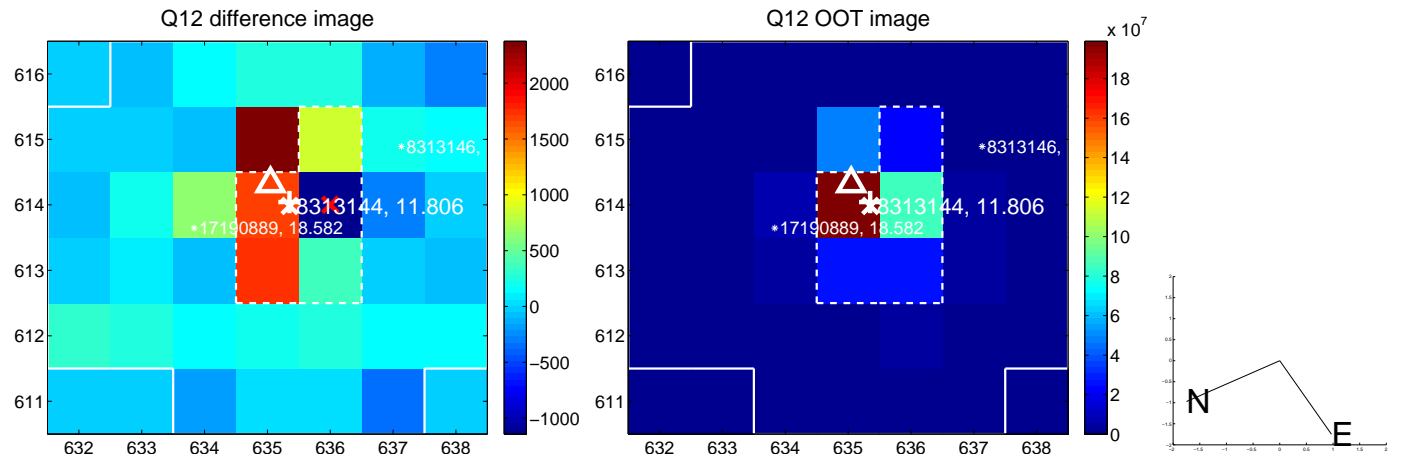
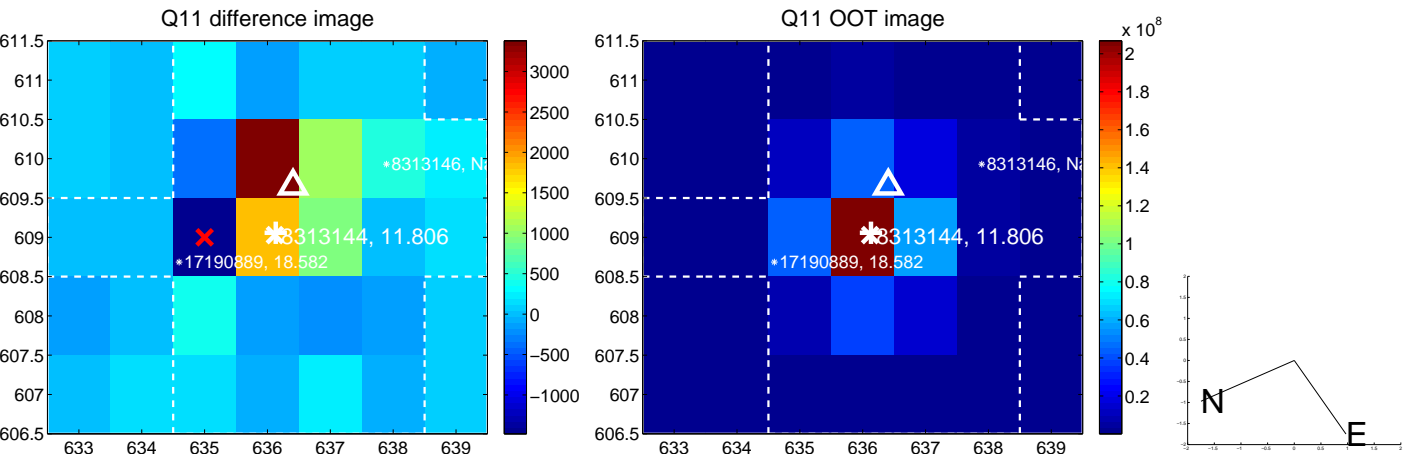
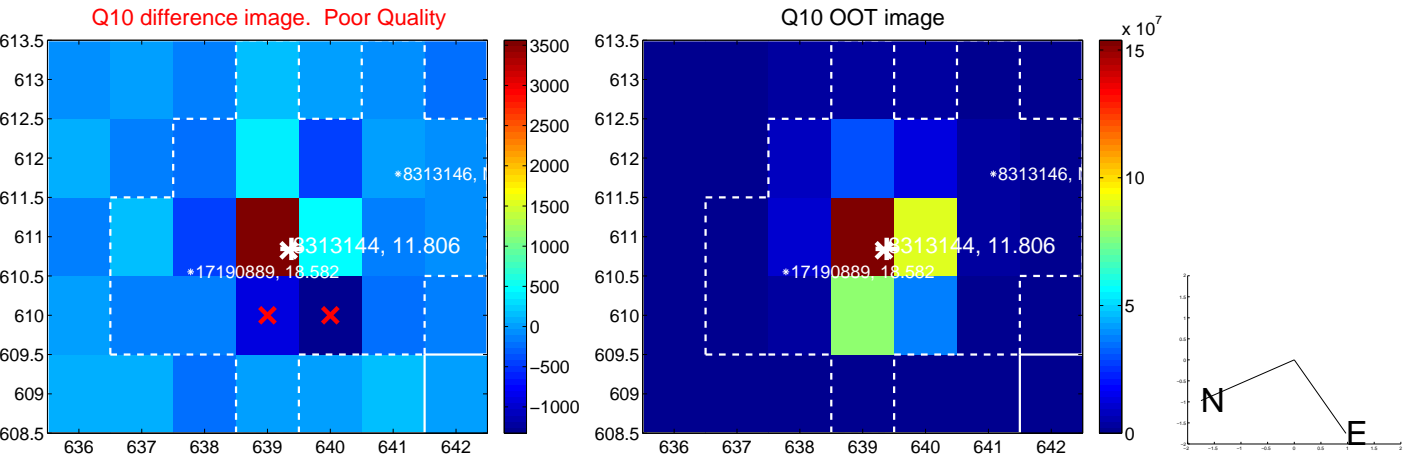
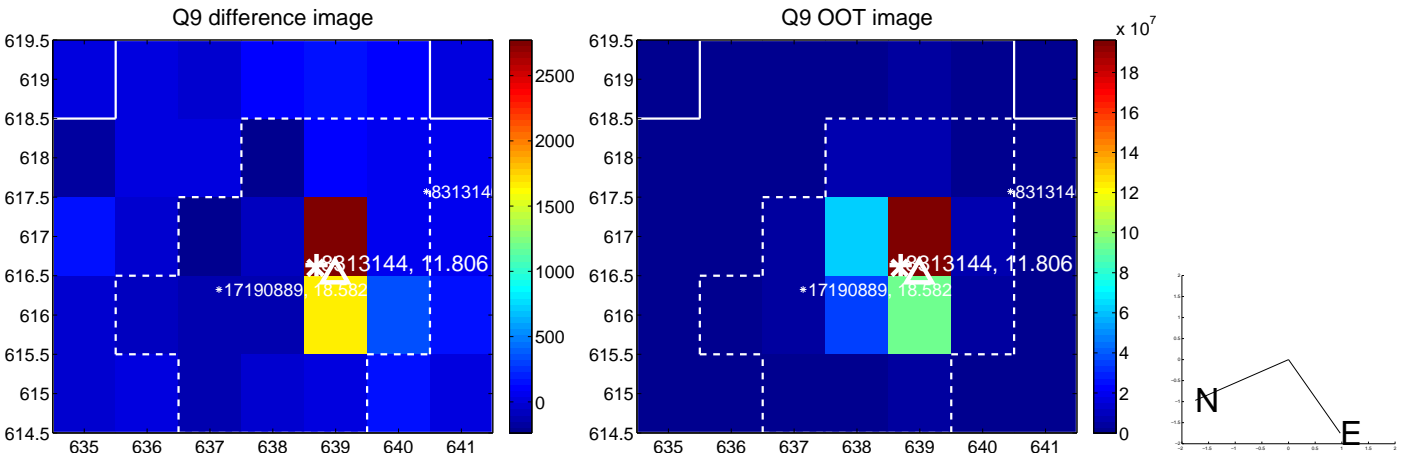
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



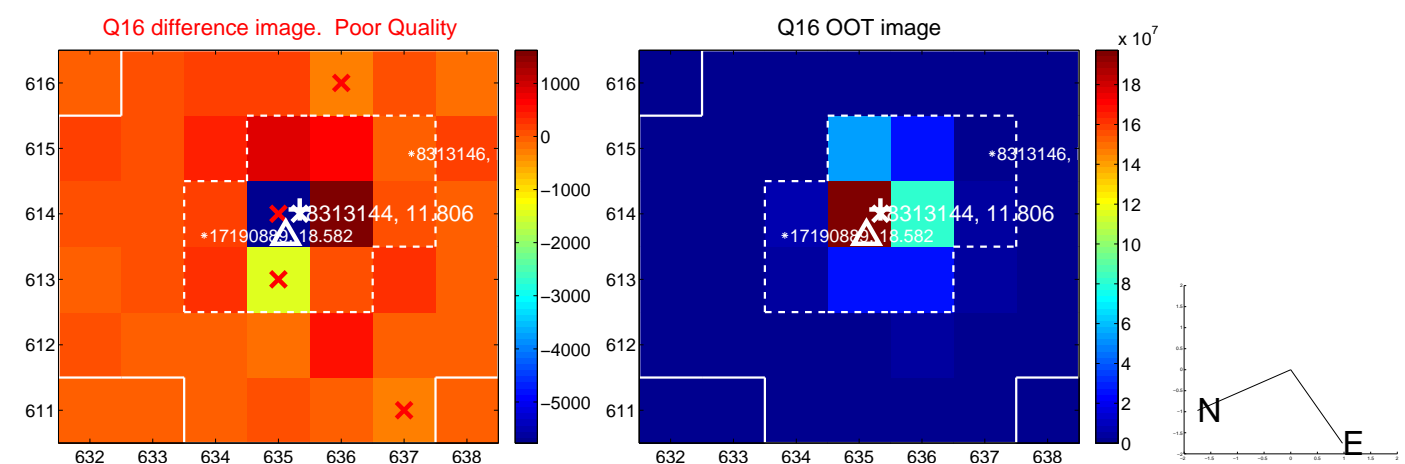
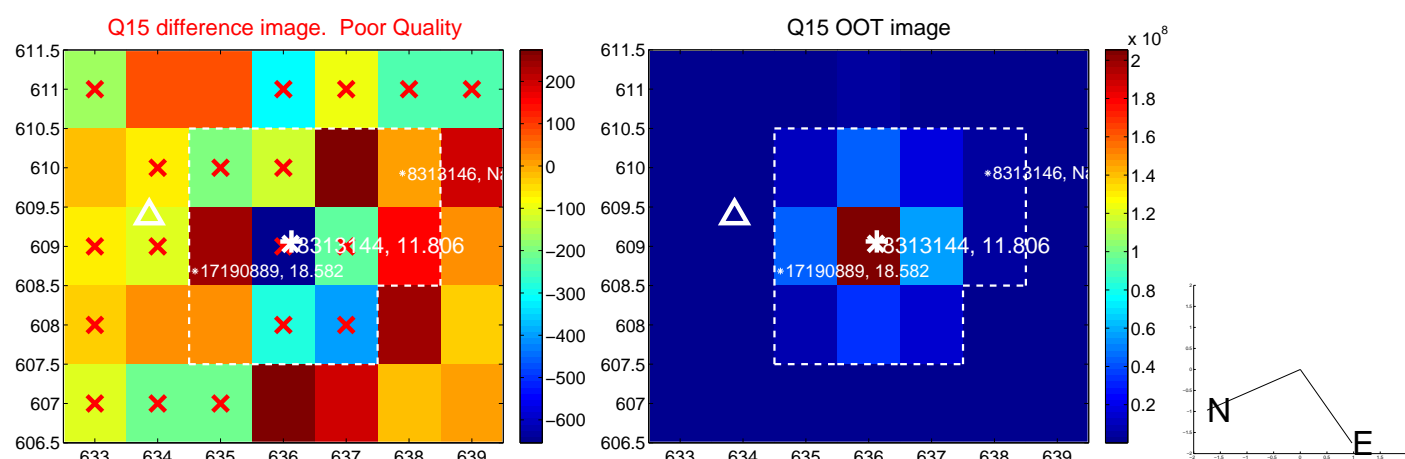
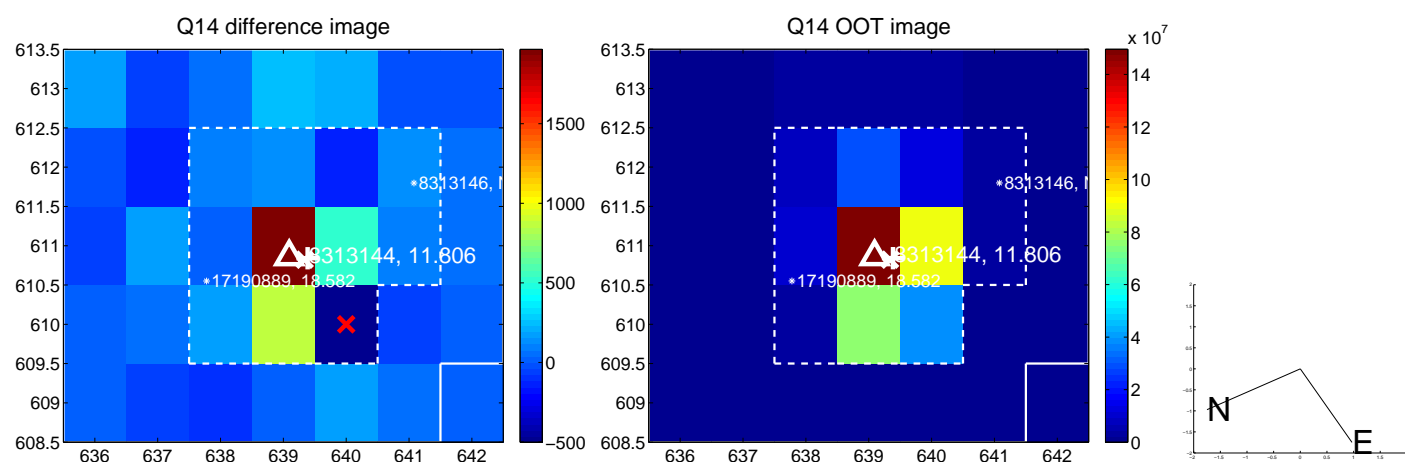
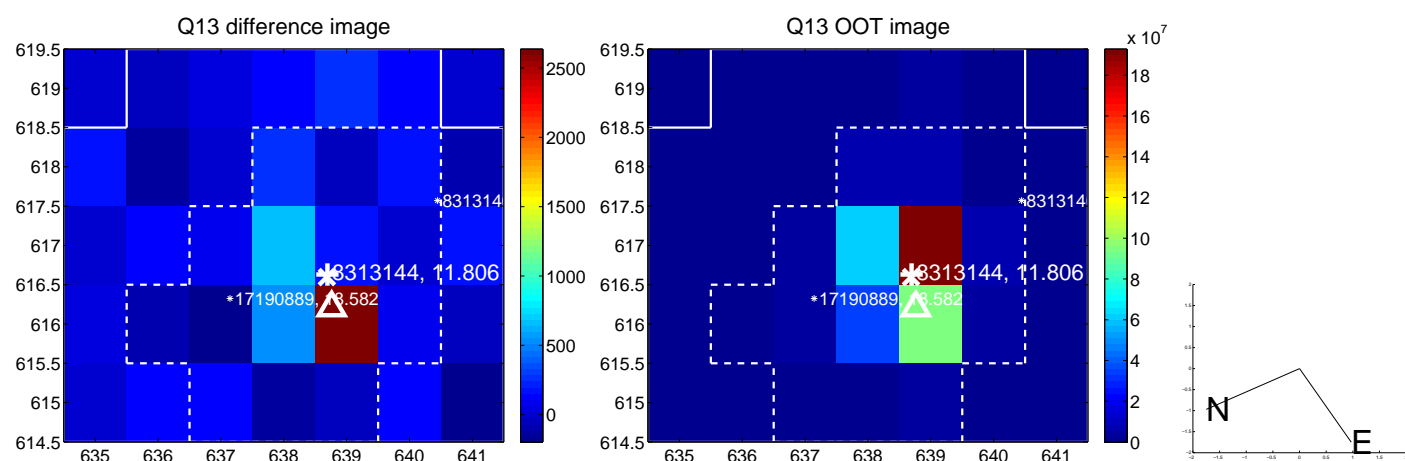




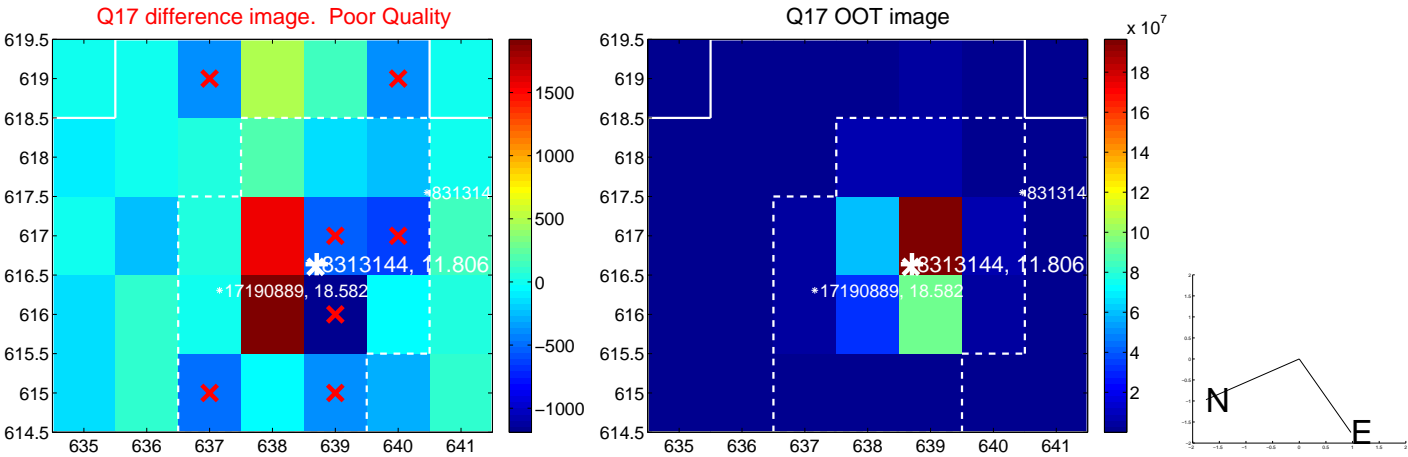
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



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



folded centroid time series figure for this object.

UKIRT Image

Declination

