

# KIC 004760946

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
004760946-01	OBS	No	1.419645	131.694890	1.7	14.647	9.5	1.2	1.67	6779	0.22	6957.19

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004760946-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—CENT_FEW_DIFFS

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

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

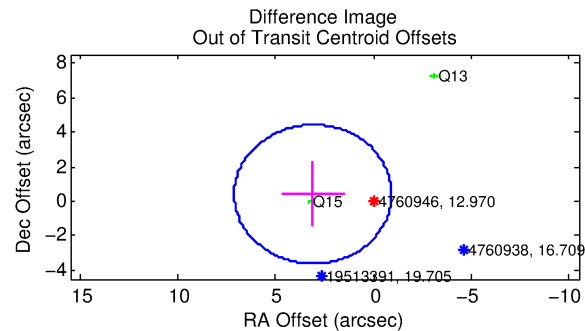
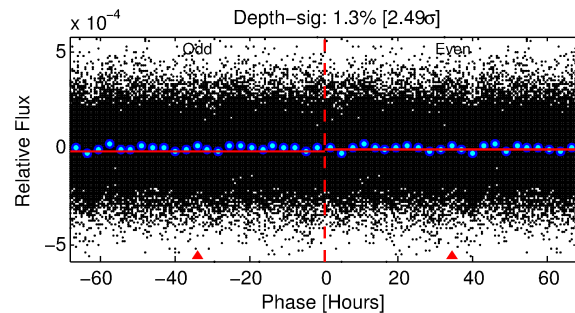
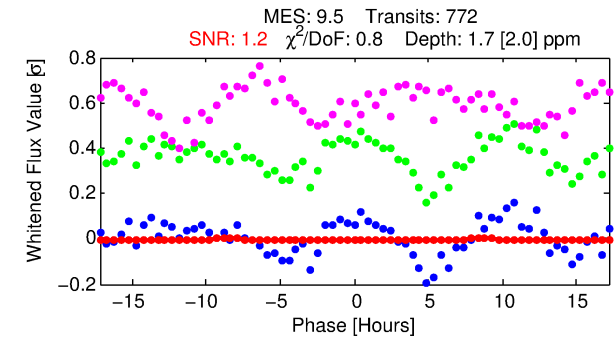
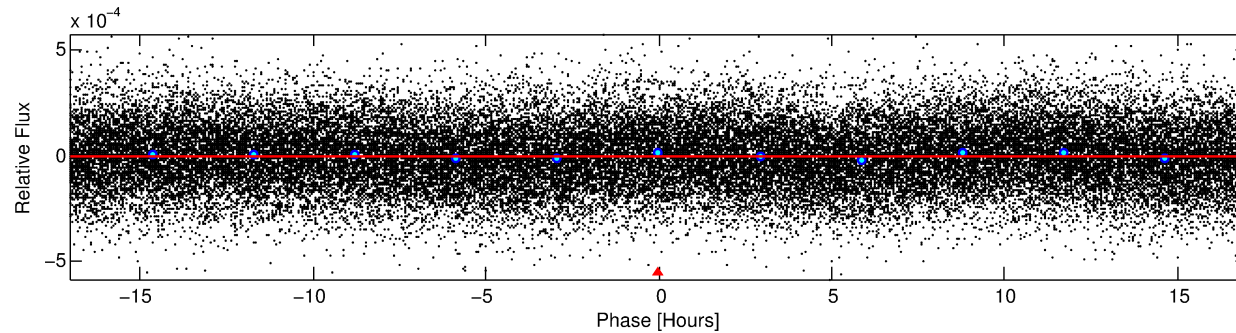
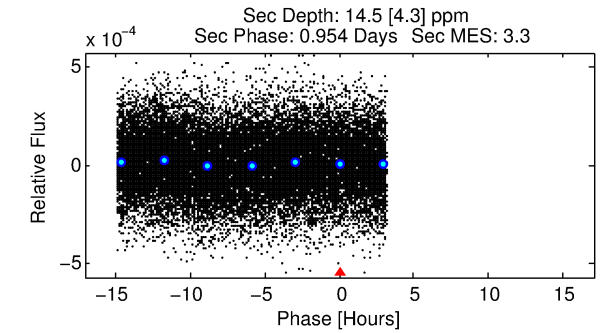
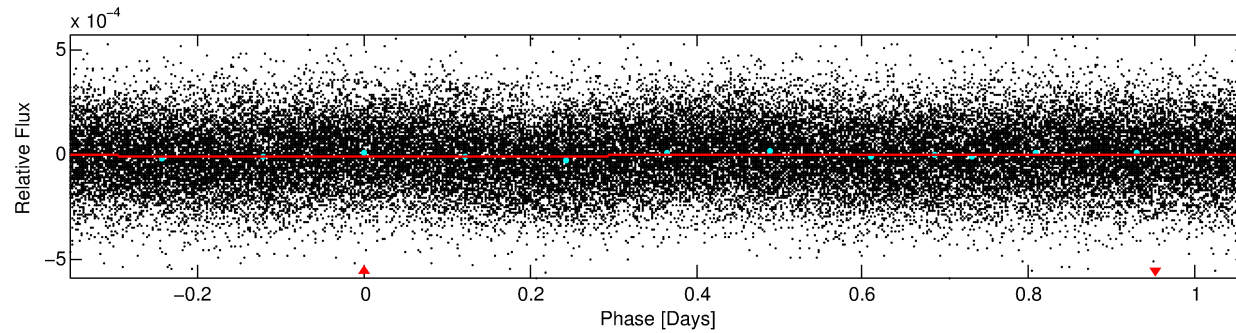
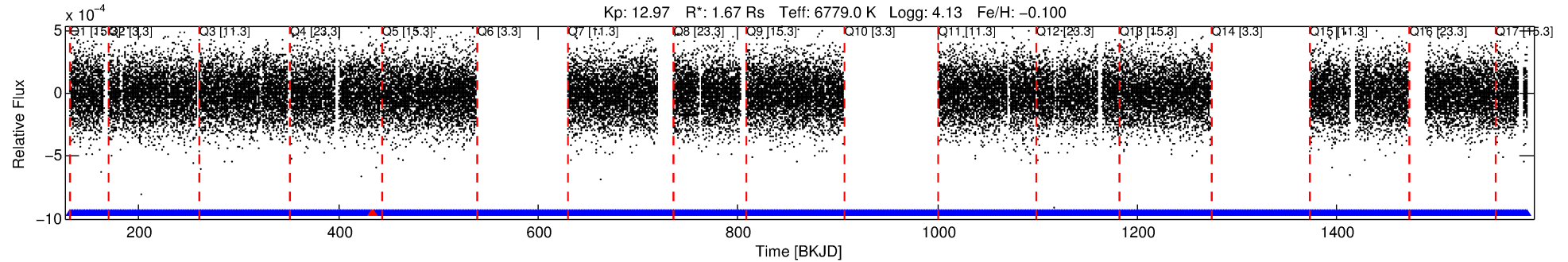
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 004760946-01

No Significant Match Found

# DV One-Page Summary

KIC: 4760946 Candidate: 1 of 1 Period: 1.420 d



## DV Fit Results:

Period = 1.41964 [0.00032] d  
Epoch = 131.6949 [0.0886] BKJD  
Rp/R\* = 0.0012 [0.0088]  
a/R\* = 1.03 [2.06]  
b = 0.05 [901.25]  
Seff = 6957.19 [1568.77]  
Teq = 2329 [131] K  
Rp = 0.22 [1.61] Re  
a = 0.0275 [0.0041] AU  
Ag = 124.08 [1811.05] [0.07σ]  
Teffp = 12017 [43847] K [0.2σ]

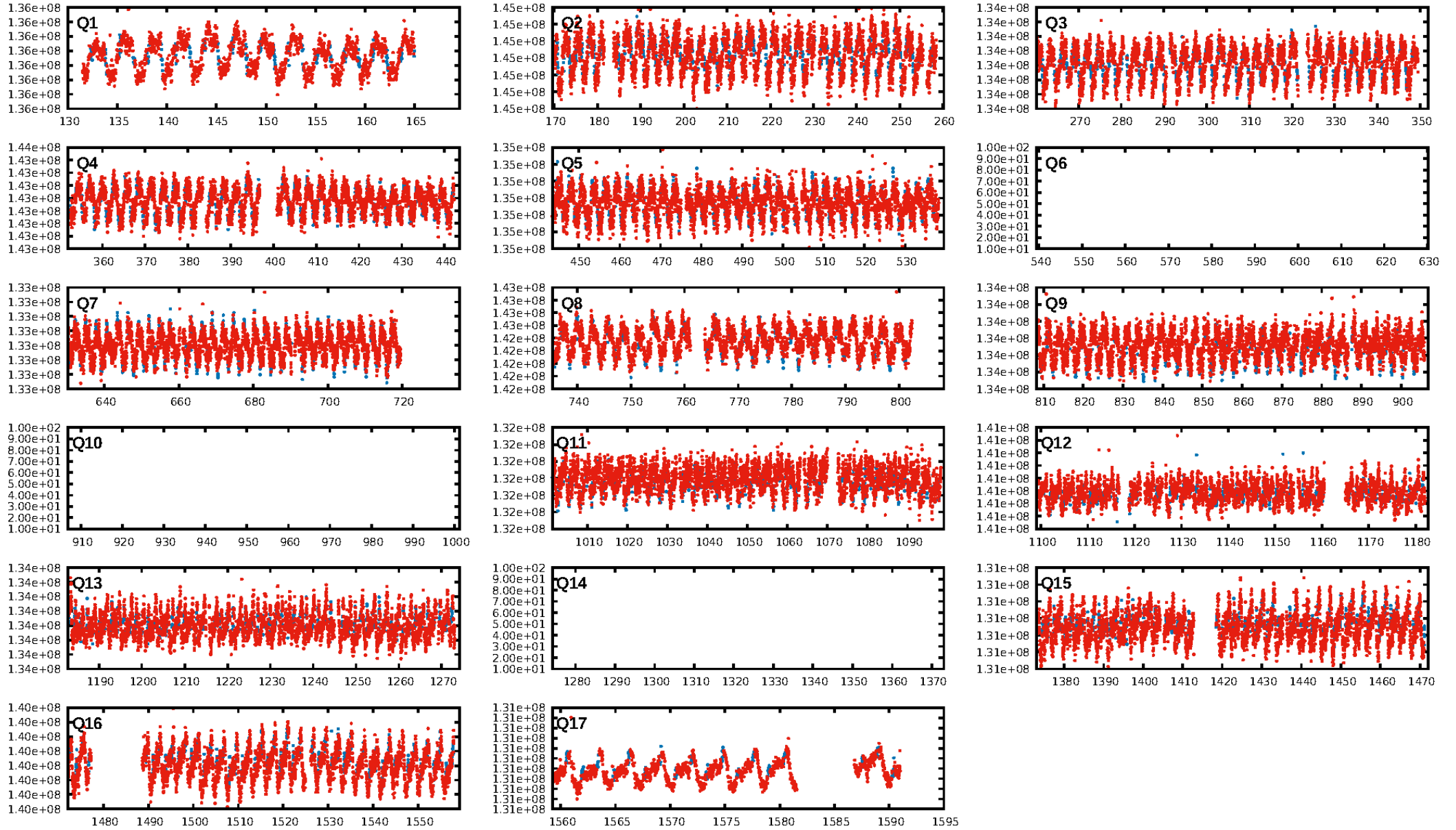
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [726/728]  
GhostDiagnostic-chr: N/A  
Centroid-sig: N/A  
Centroid-so: N/A  
OotOffset-rm: 3.124 arcsec [2.33σ]  
KicOffset-rm: 3.017 arcsec [2.14σ]  
OotOffset-st: 0/1/0/1 [2]  
KicOffset-st: 0/1/0/1 [2]  
DiffImageQuality-fgm: 0.50 [1/2]  
DiffImageOverlap-fno: 1.00 [14/14]

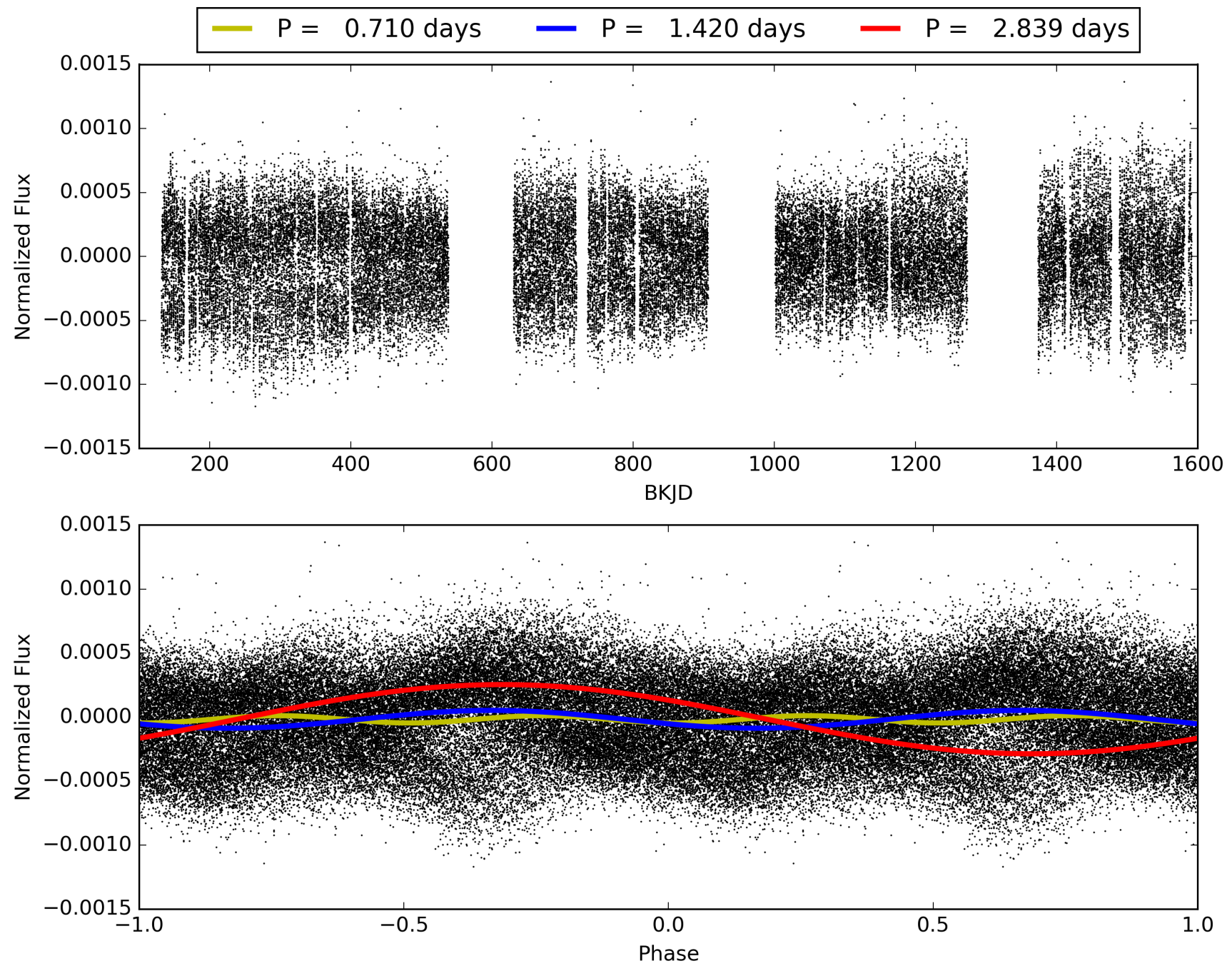
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 20:32:34 Z

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

# TCE 004760946-01, PDC Light Curves

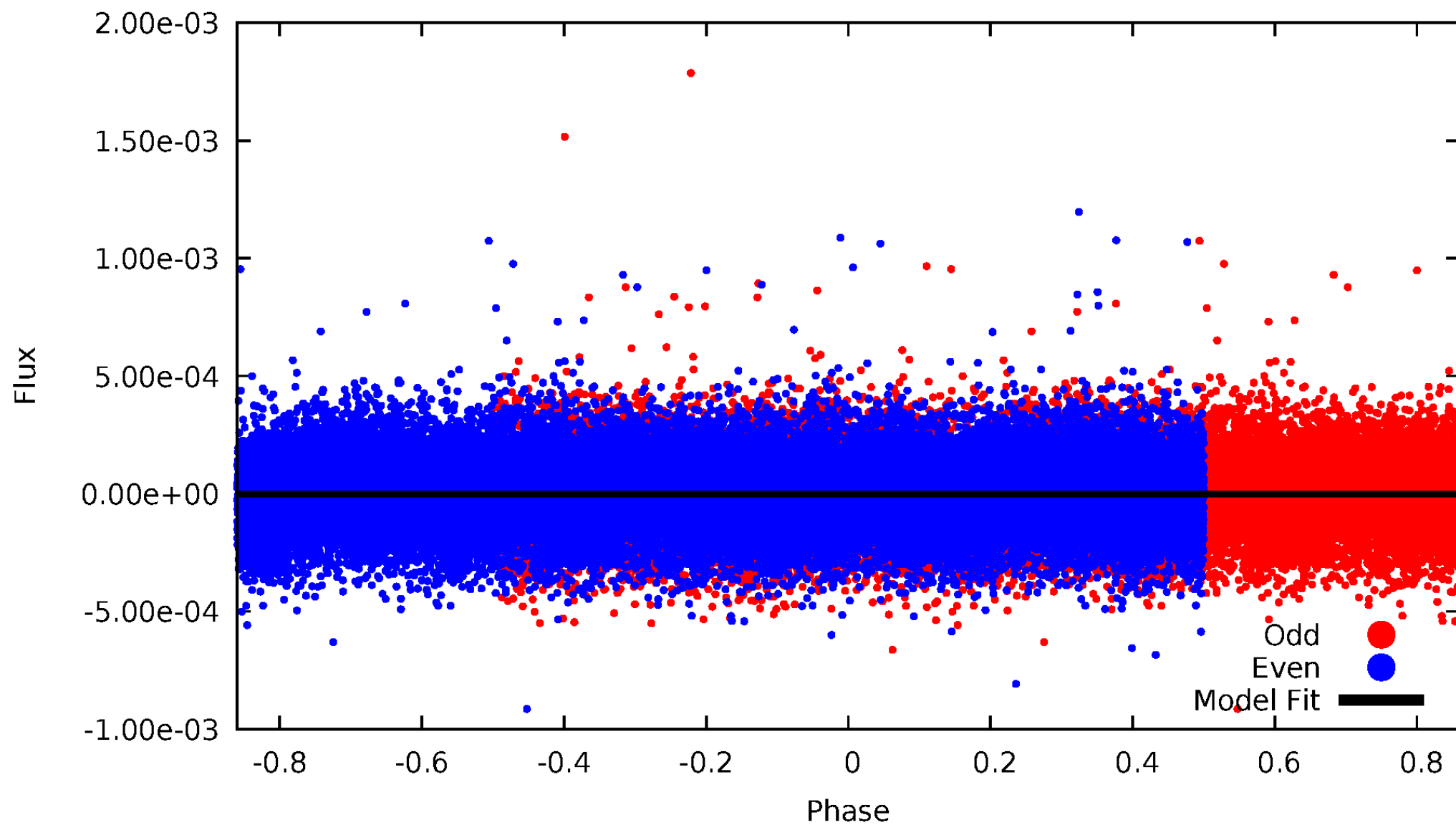


TCE 004760946-01



# DV Odd/Even

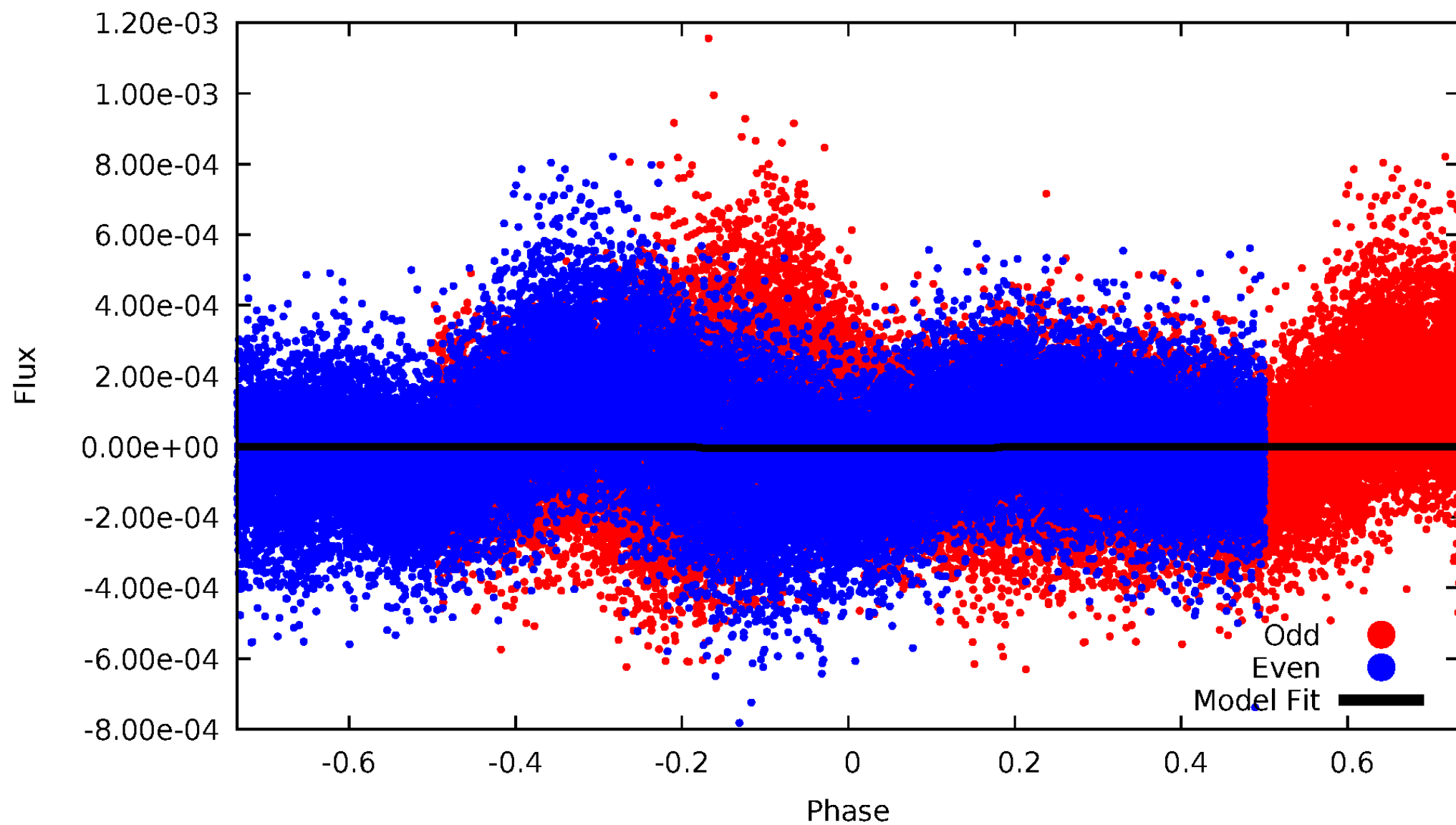
TCE 004760946-01





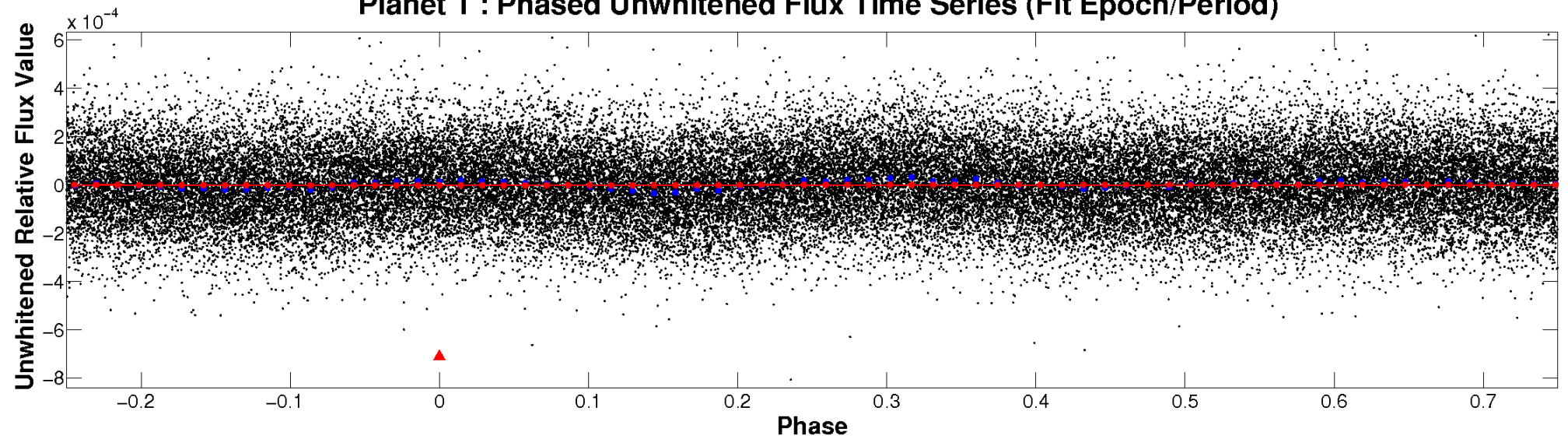
# ALT Odd/Even

TCE 004760946-01

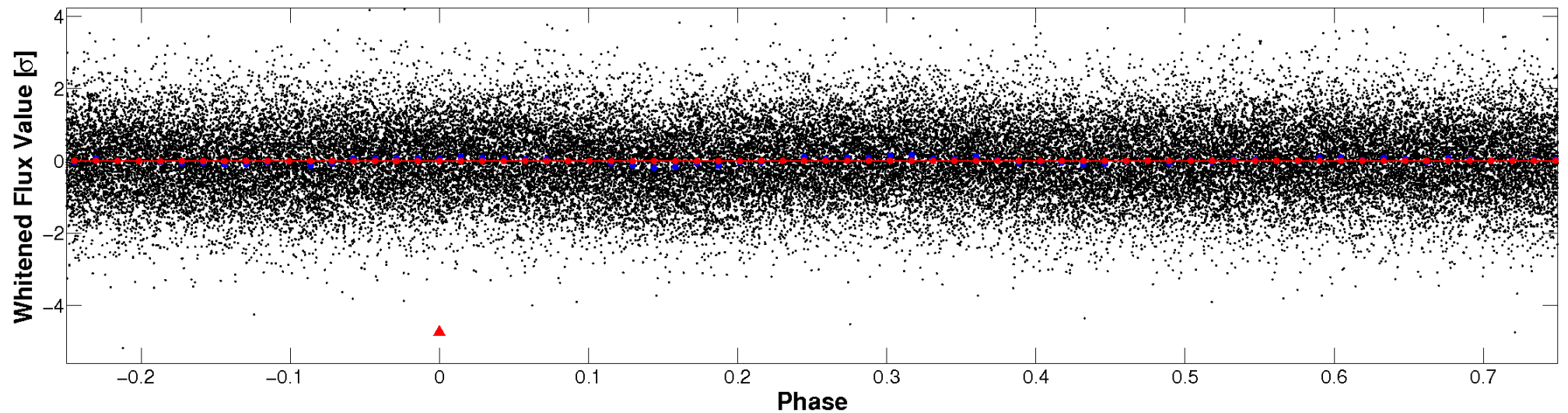


# Non-Whitened Vs. Whitened Light Curve

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

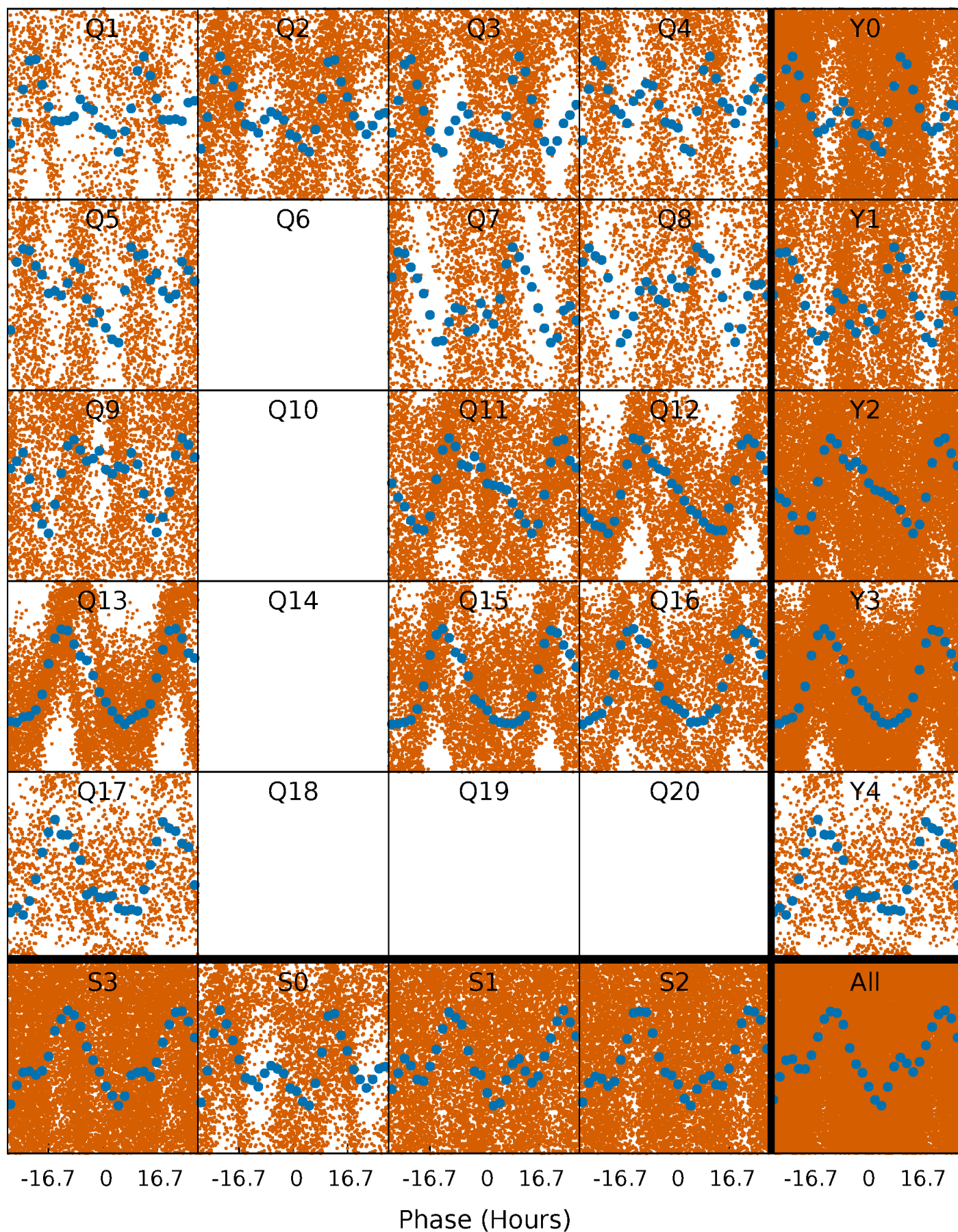


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

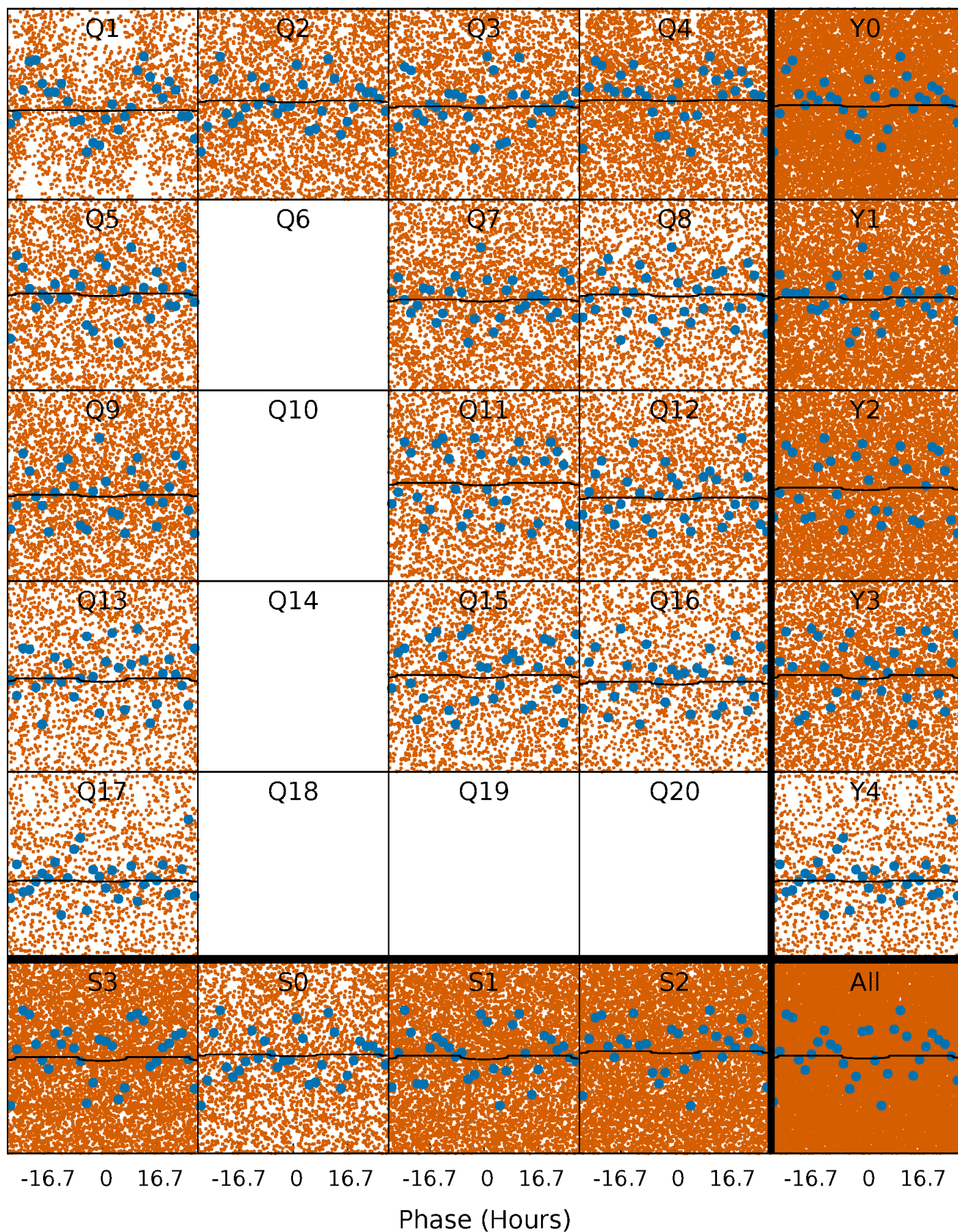
TCE 004760946-01 P= 1.419645 Days  $T_0=131.694890$  (BKJD)





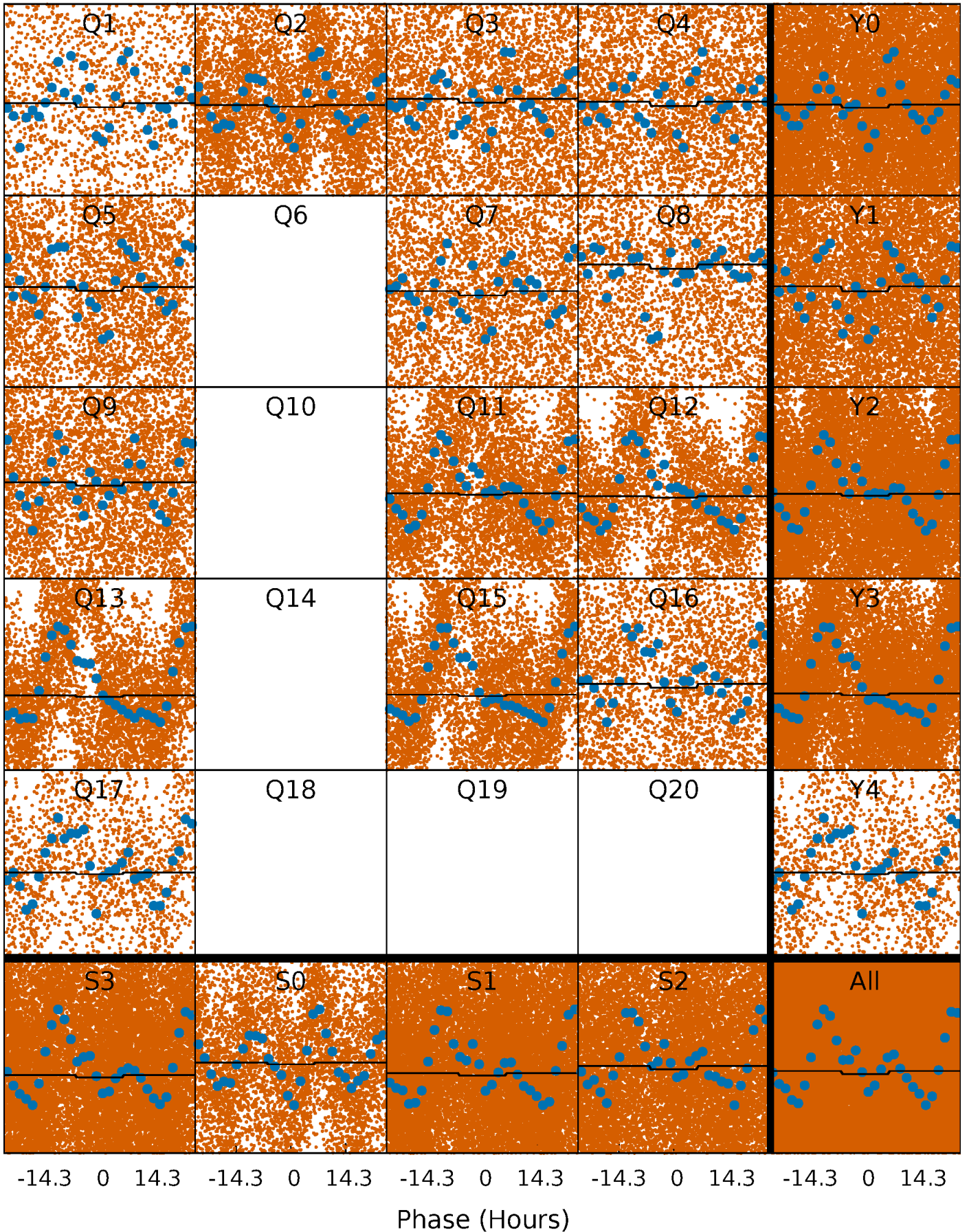
# DV Quarter-Phased Transit Curves

TCE 004760946-01 P= 1.419645 Days  $T_0=131.694890$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 004760946-01 P= 1.419267 Days  $T_0=131.908112$  (BKJD)

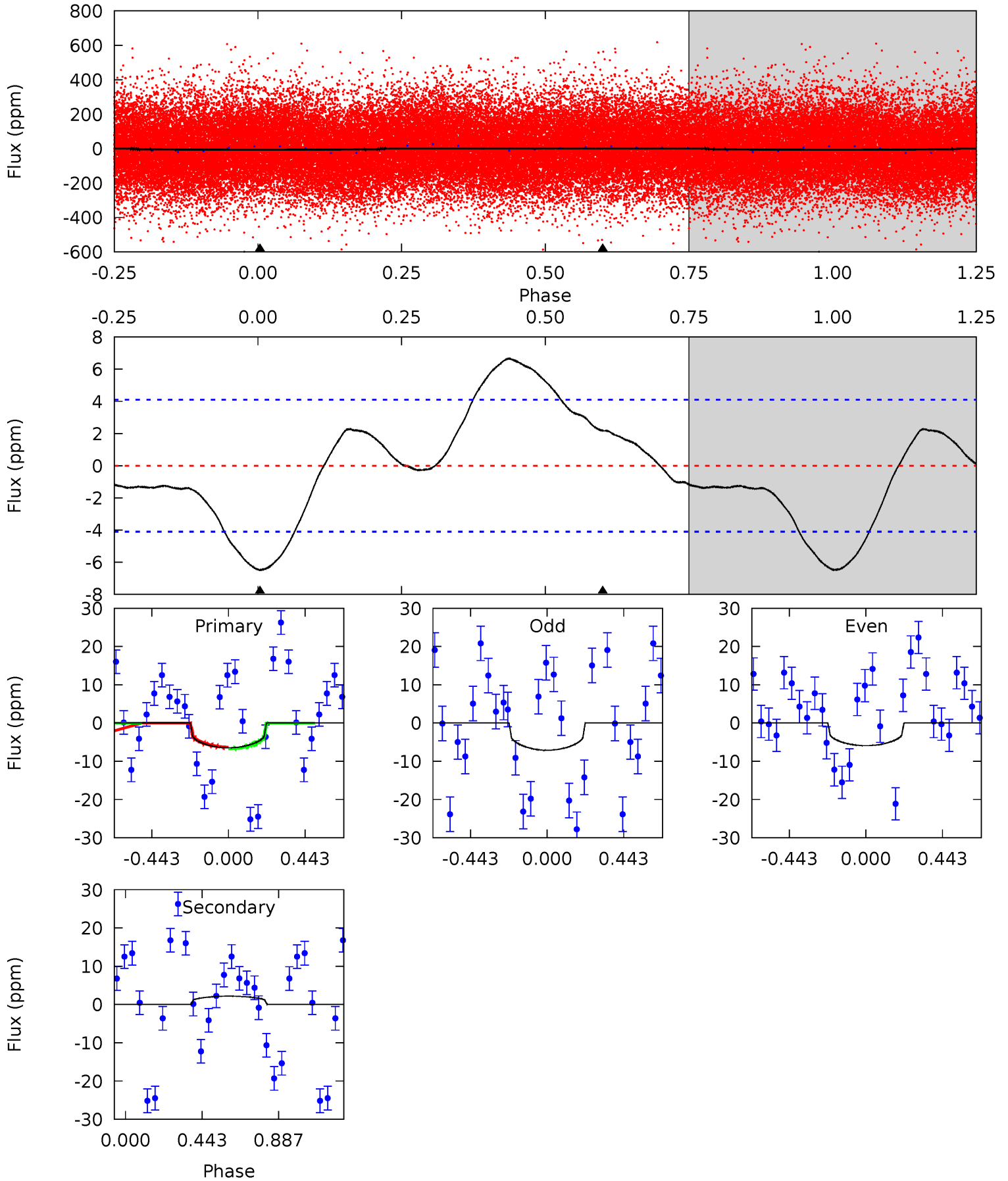




# DV Model-Shift Uniqueness Test

004760946-01, P = 1.419645 Days, E = 130.275245 Days

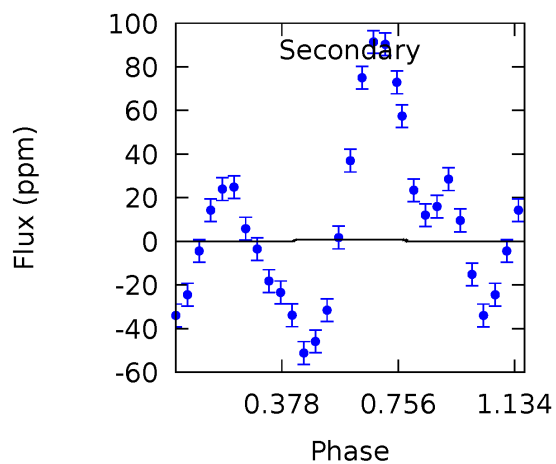
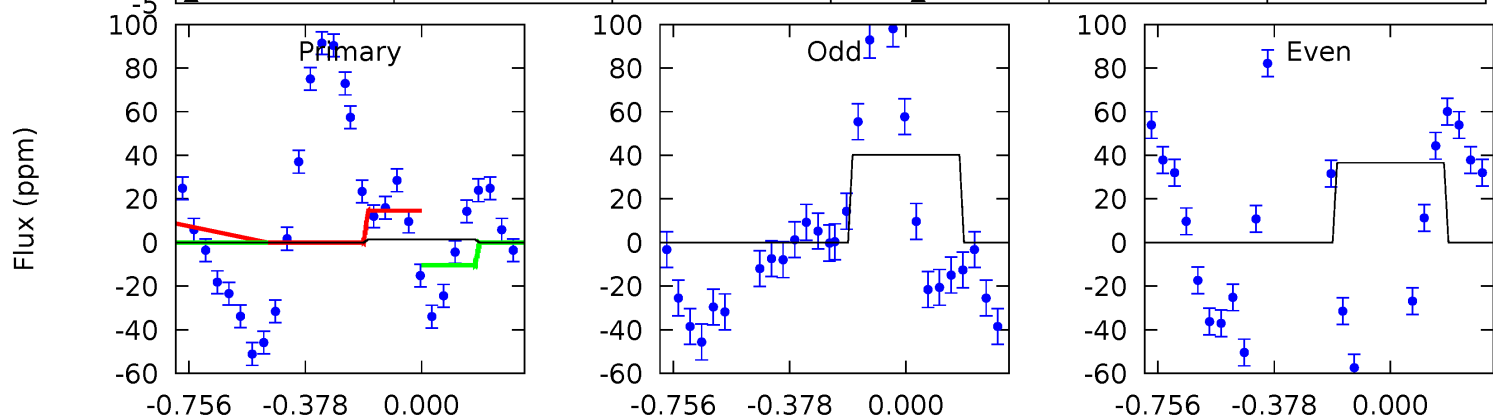
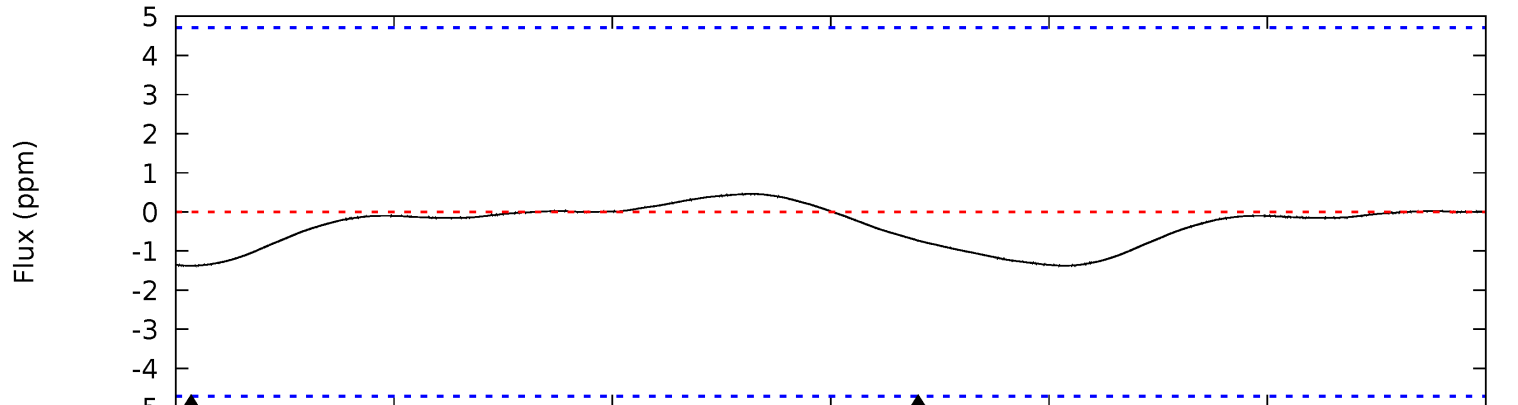
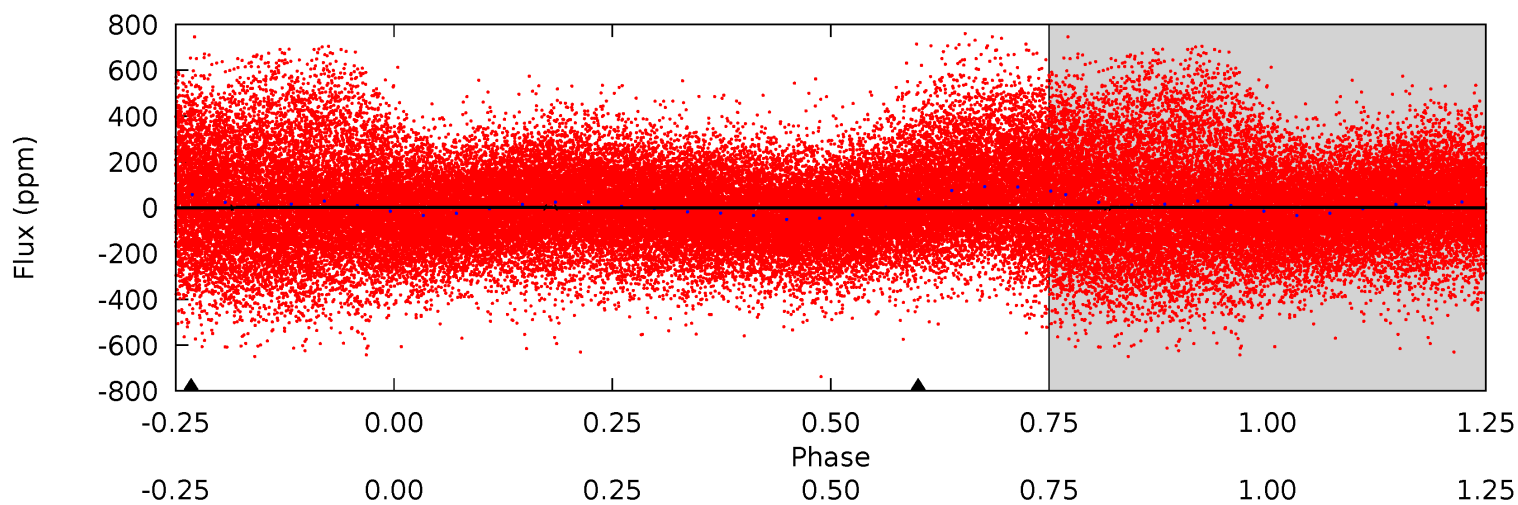
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.71	-2.25	0	0	4.24	0.77	0.84	6.71	6.71	-2.25	-2.25	0.61	1.42	0.51	0.22



# Alt Model-Shift Uniqueness Test

004760946-01, P = 1.419267 Days, E = 130.488845 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
1.25	0.67	0	0	4.28	0.88	0.01	1.25	1.25	0.67	0.67	1.22	-0.20	0.25	1.70





### Stellar Parameters For KIC 004760946

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6779^{+71}_{-91}$	$4.132^{+0.120}_{-0.120}$	$-0.100^{+0.150}_{-0.150}$	$1.666^{+0.296}_{-0.269}$	$1.381^{+0.100}_{-0.110}$	$0.420^{+0.233}_{-0.150}$
	+1%/-1%	+3%/-3%	+150%/-150%	+18%/-16%	+7%/-8%	+55%/-36%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology  
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

### Secondary Eclipse Parameters for KIC 004760946-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$2\pm 1$	$1.15^{+1.15}_{-0.82}$	$3253^{+147}_{-137}$	$-3886^{+454}_{-2128}$	$-0.623^{+0.488}_{-7.232}$
Alt.	$-1\pm 1$	$1.20^{+1.28}_{-0.84}$	$3250^{+144}_{-139}$	$-2968^{+7087}_{-436}$	$0.129^{+1.578}_{-0.233}$

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

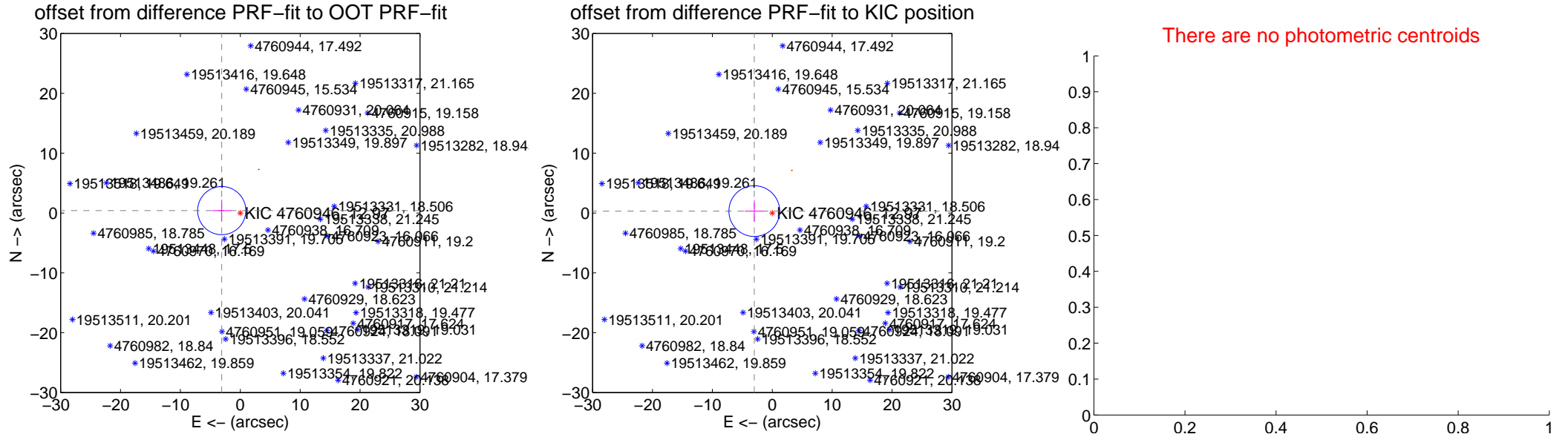
## DV Centroid Data

Supplemental centroid analysis for 004760946-01. Kepler magnitude: 12.97. Transit SNR 1.24

There are 1 quarters with good PRF difference image offsets

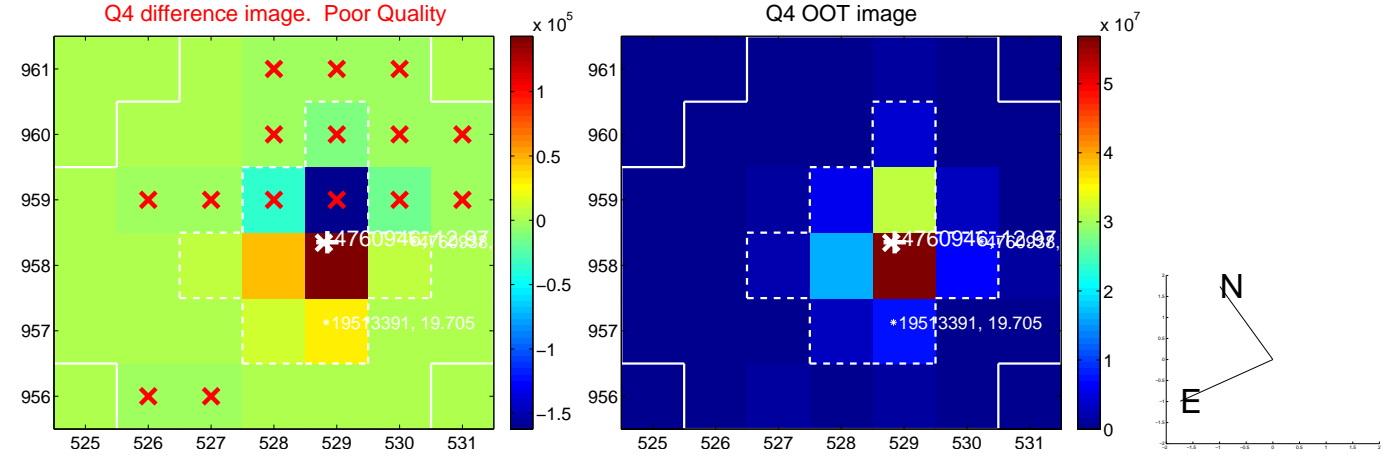
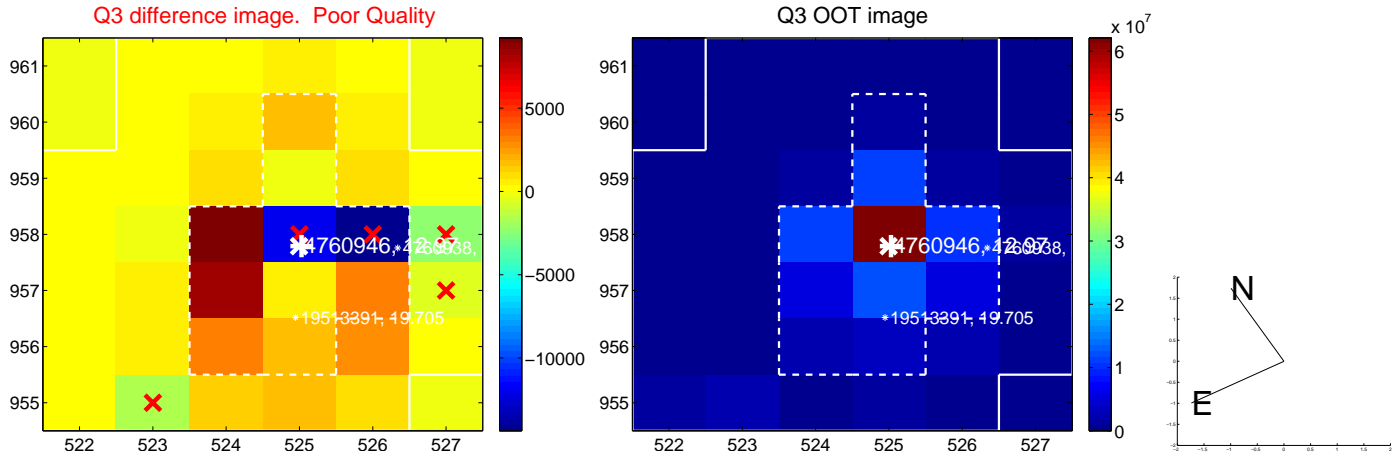
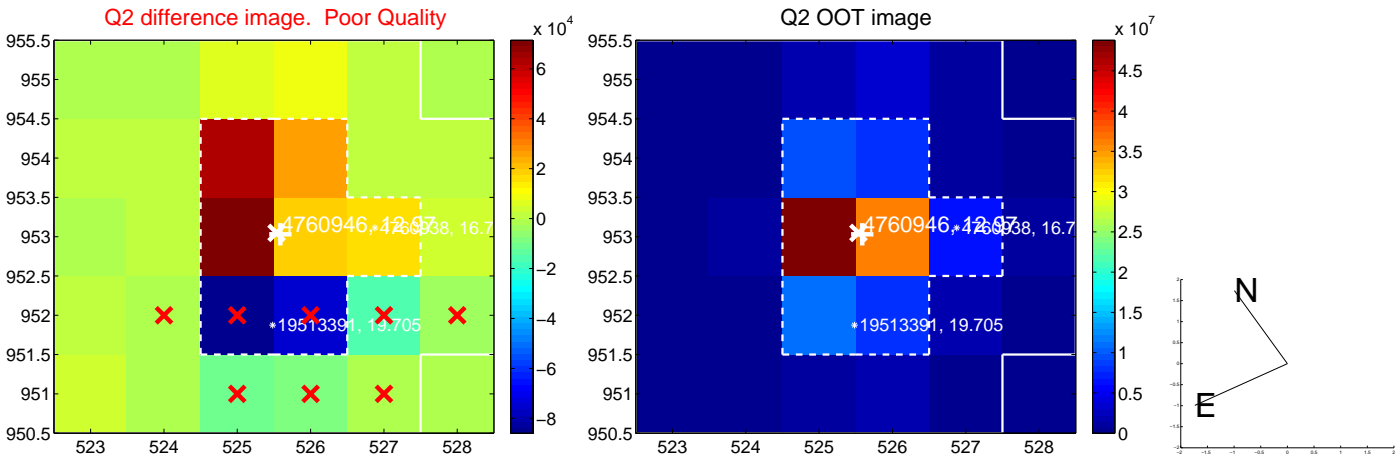
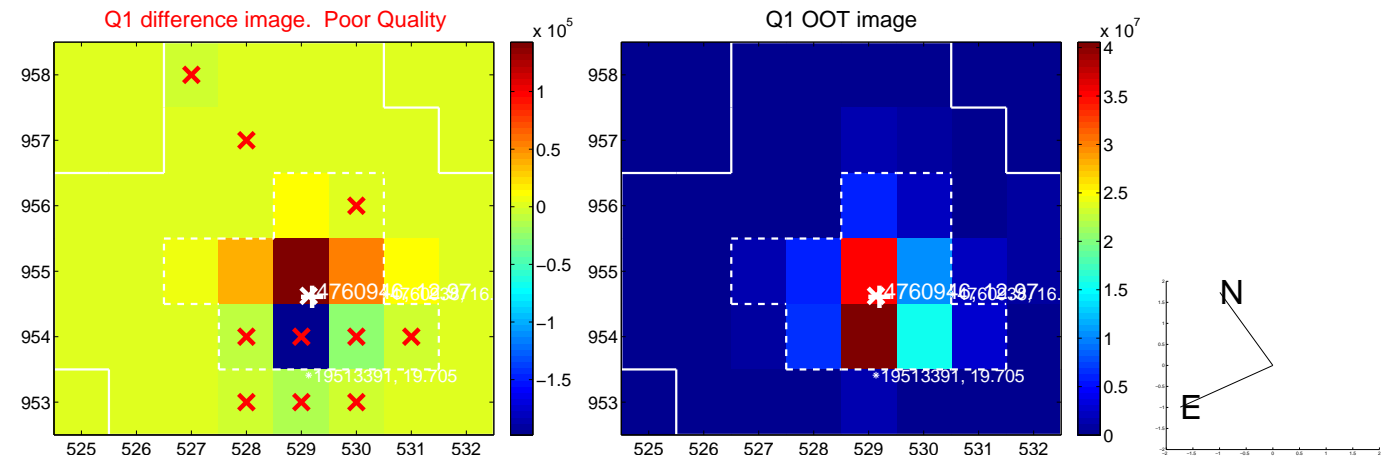
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$3.124 \pm 1.341$	2.33	$3.098 \pm 1.588$	$0.402 \pm 1.829$
PRF-fit source offset from KIC position	$3.017 \pm 1.413$	2.14	$3.000 \pm 1.613$	$0.320 \pm 1.810$
photometric centroid source offset	—	—	—	—

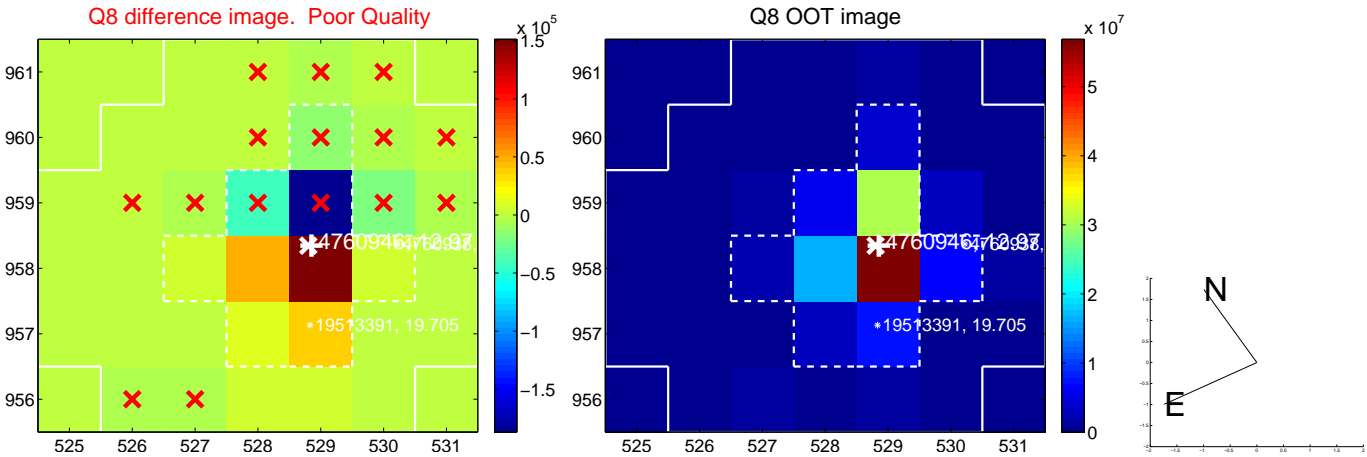
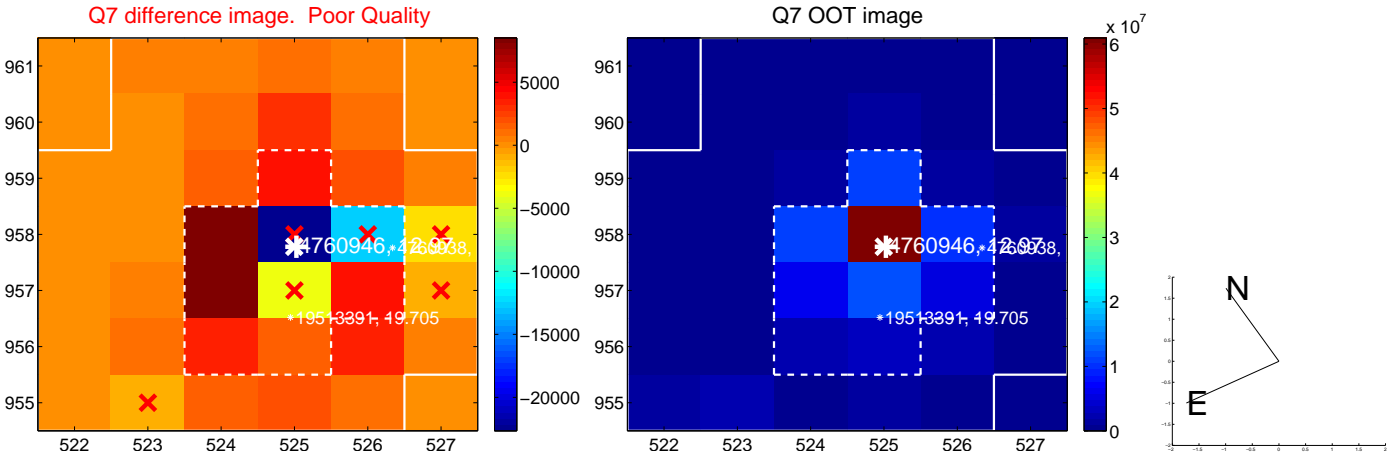
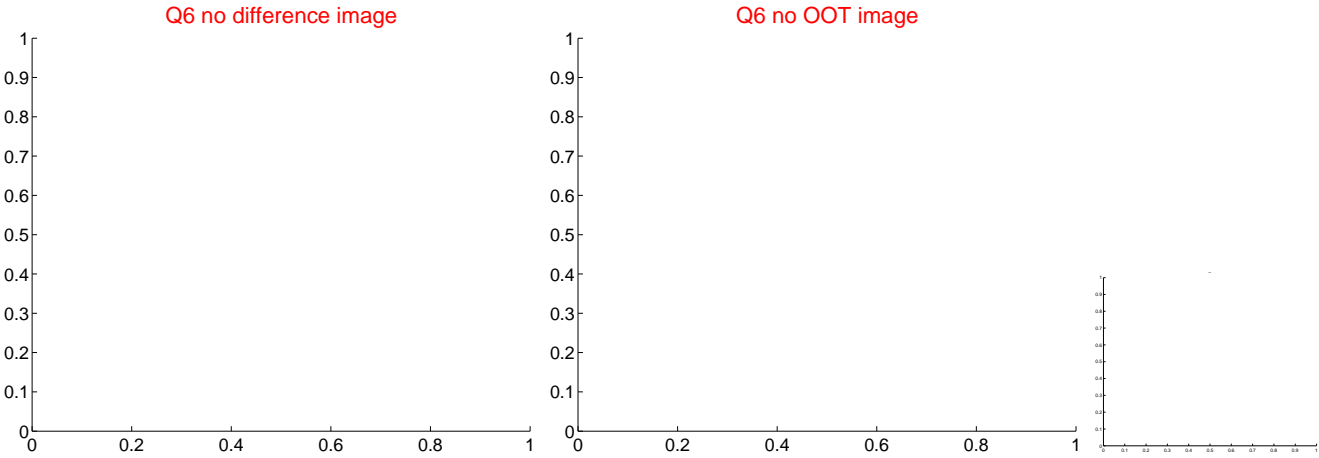
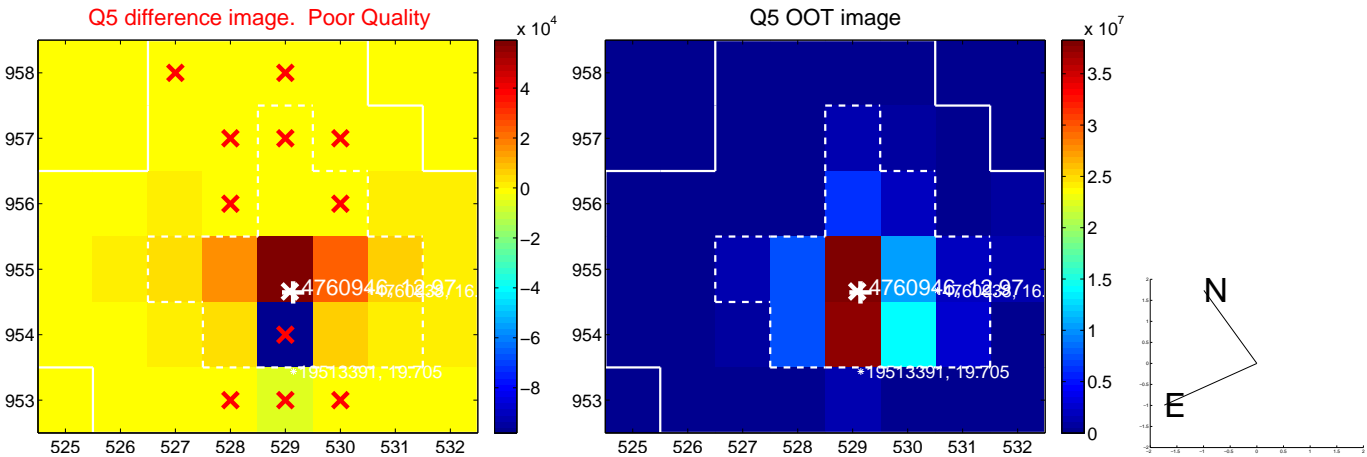


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

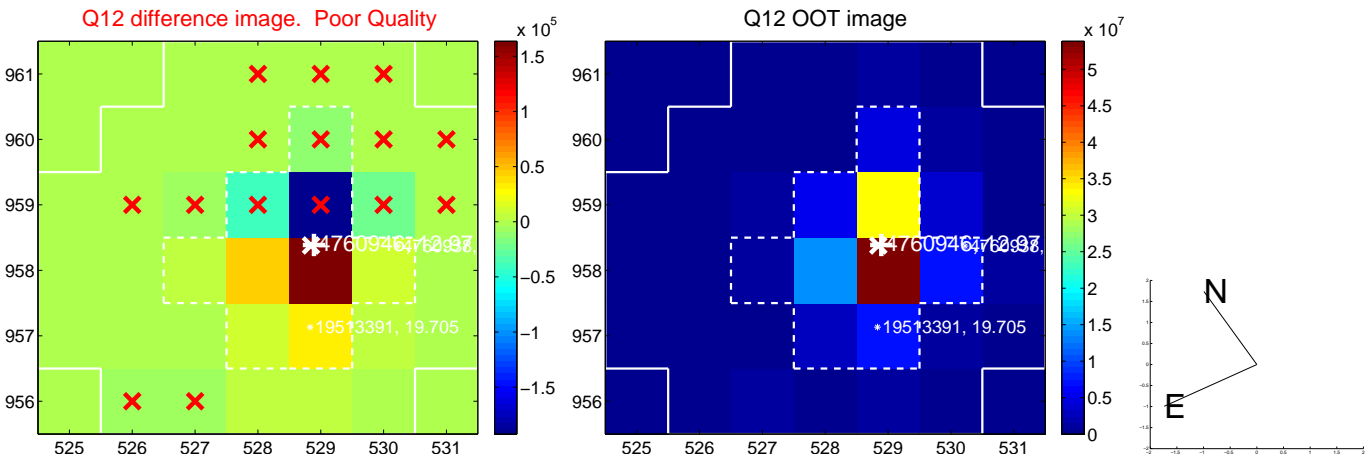
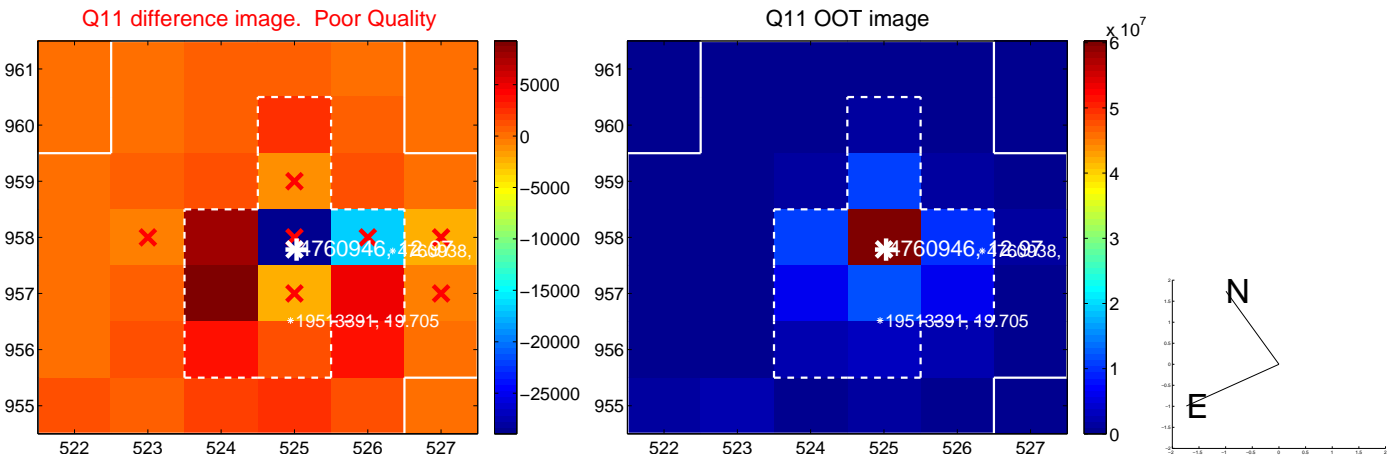
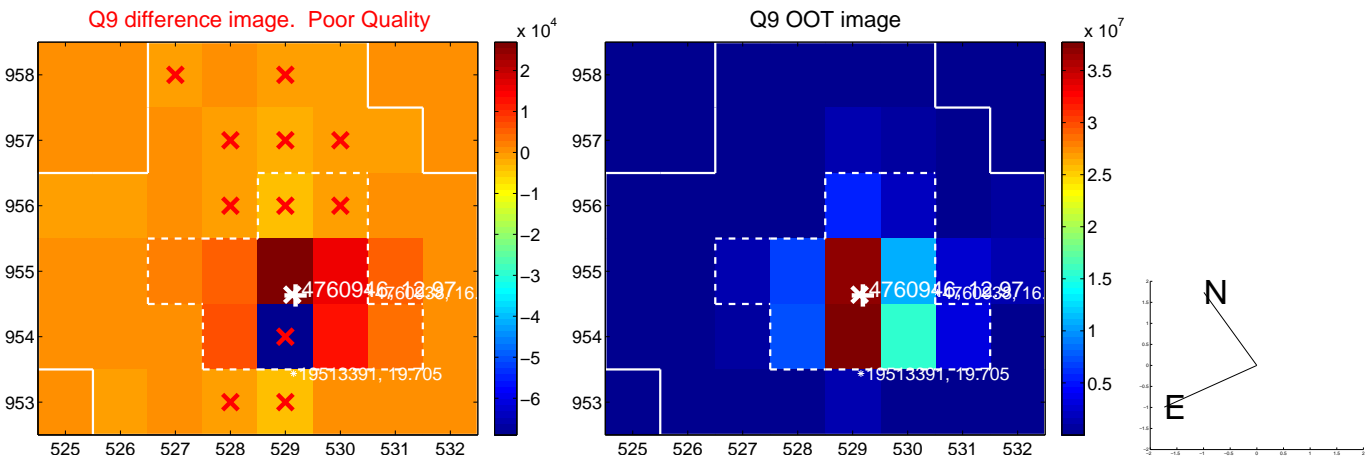


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

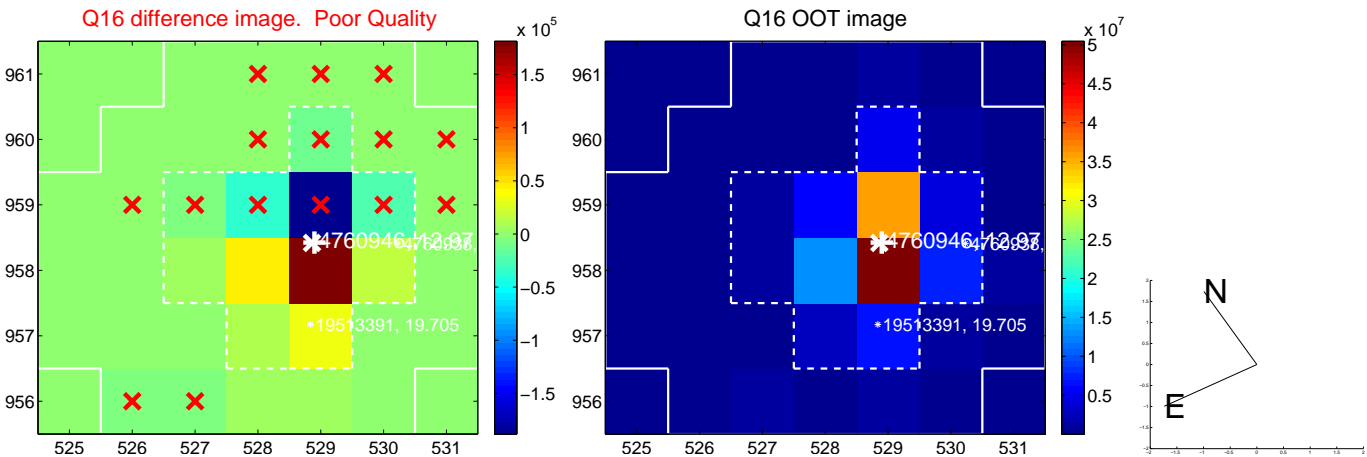
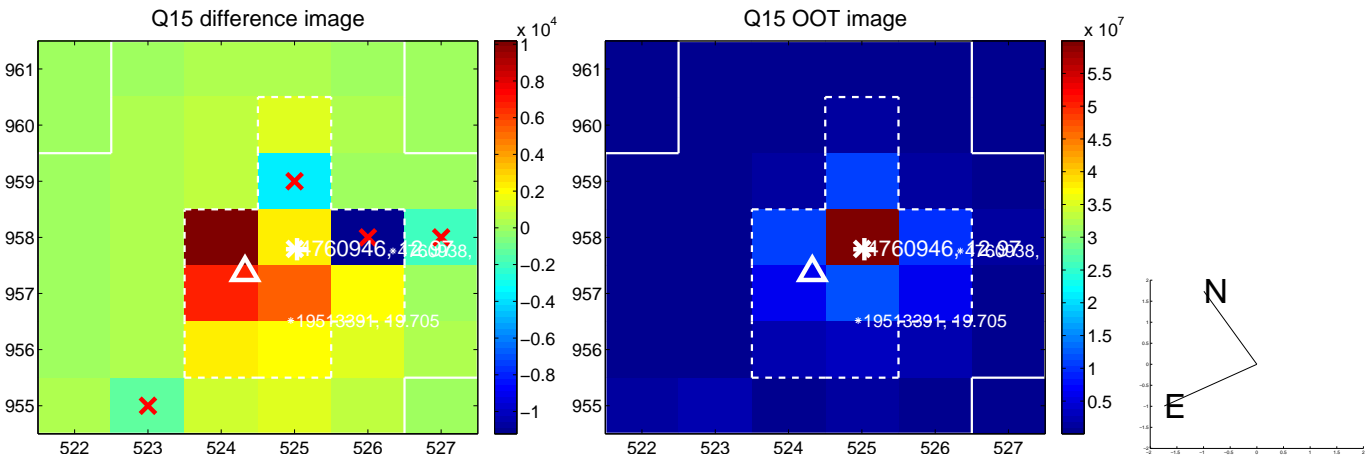
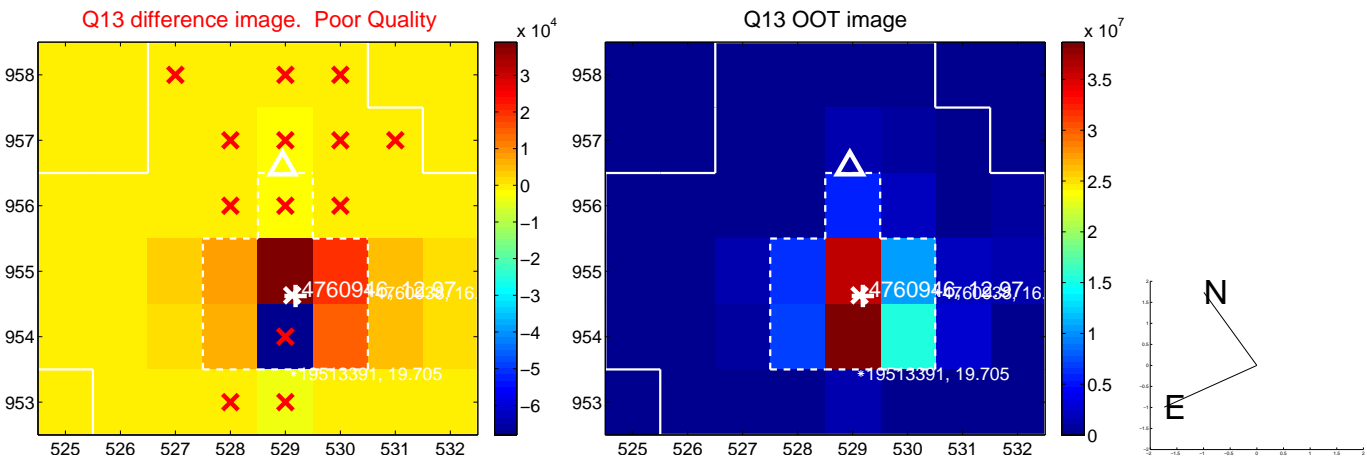




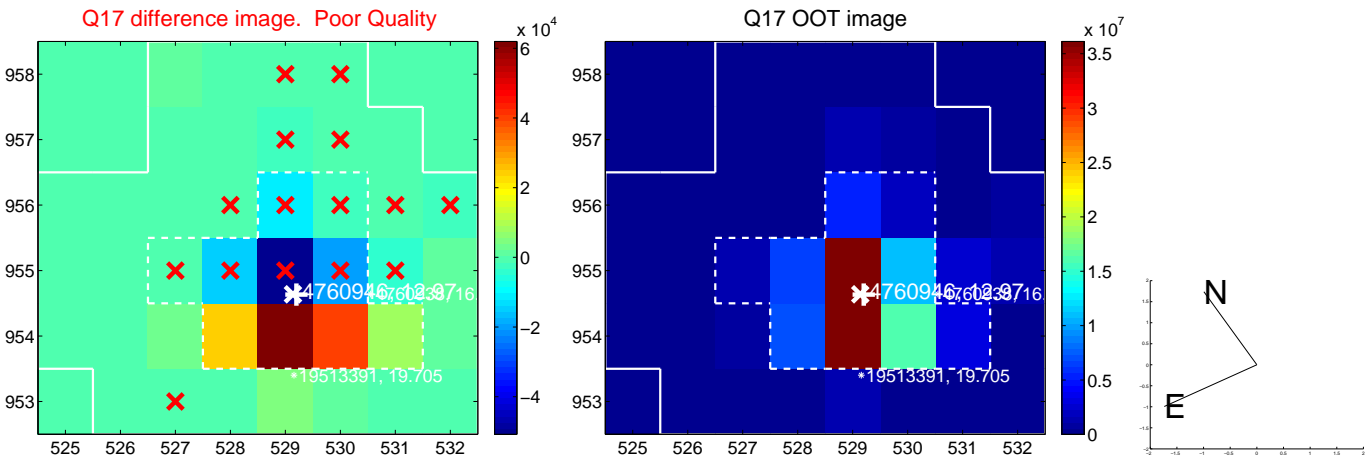
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white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



folded centroid time series figure for this object.

