

# KIC 007819833

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007819833-01	OBS	No	0.550486	131.944166	18.5	4.747	10.2	10.9	1.69	7233	0.79	31230.79

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007819833-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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

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

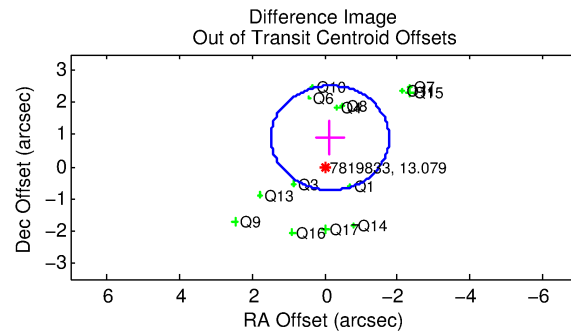
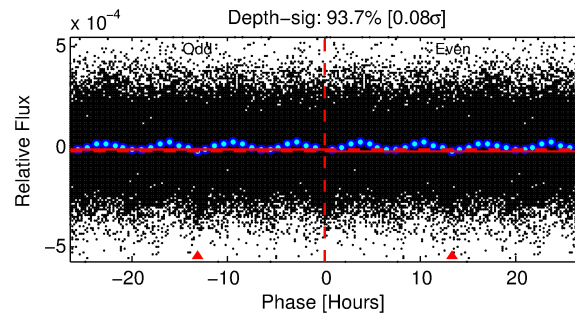
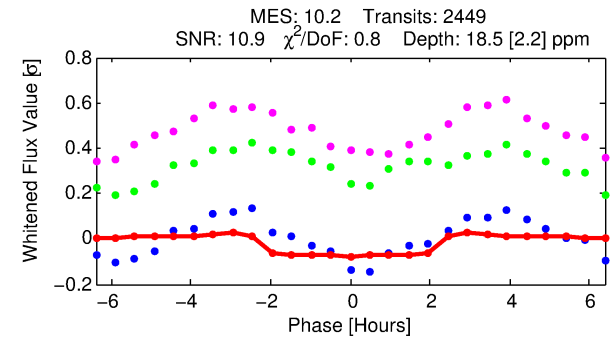
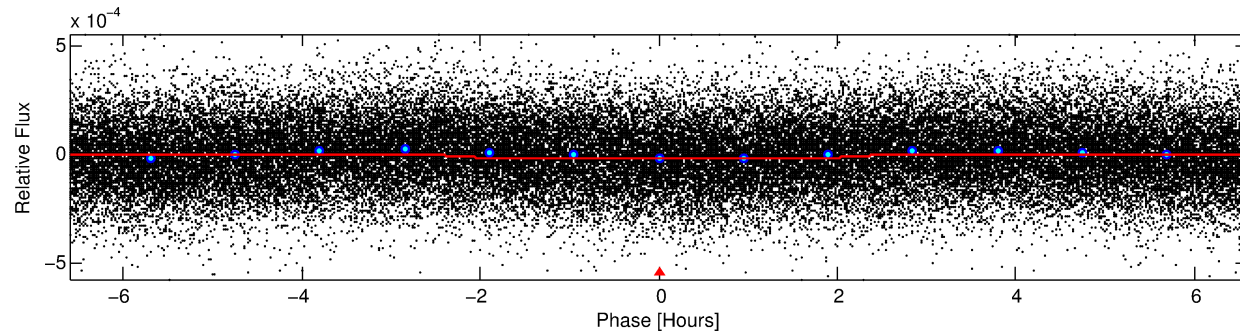
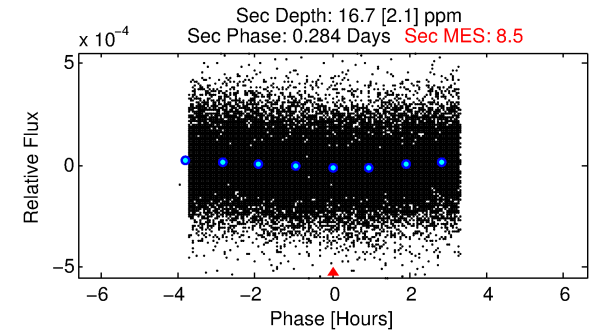
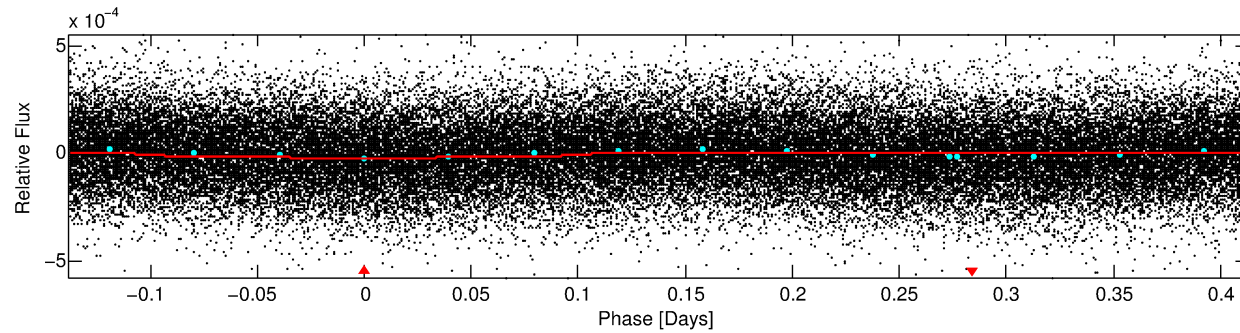
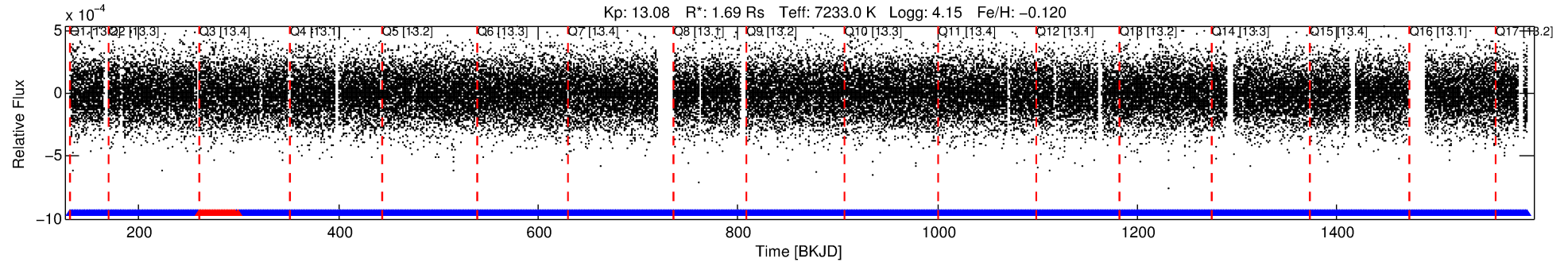
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 007819833-01

No Significant Match Found

# DV One-Page Summary

KIC: 7819833 Candidate: 1 of 1 Period: 0.550 d



## DV Fit Results:

Period = 0.55049 [0.00001] d  
Epoch = 131.9442 [0.0031] BKJD  
Rp/R\* = 0.0043 [0.0032]  
a/R\* = 1.05 [0.48]  
b = 0.74 [2.84]  
Seff = 31230.79 [12374.13]  
Teq = 3390 [336] K  
Rp = 0.79 [0.63] Re  
a = 0.0149 [0.0038] AU  
Ag = 3.34 [5.11] [0.46σ]  
Teffp = 7084 [2655] K [1.38σ]

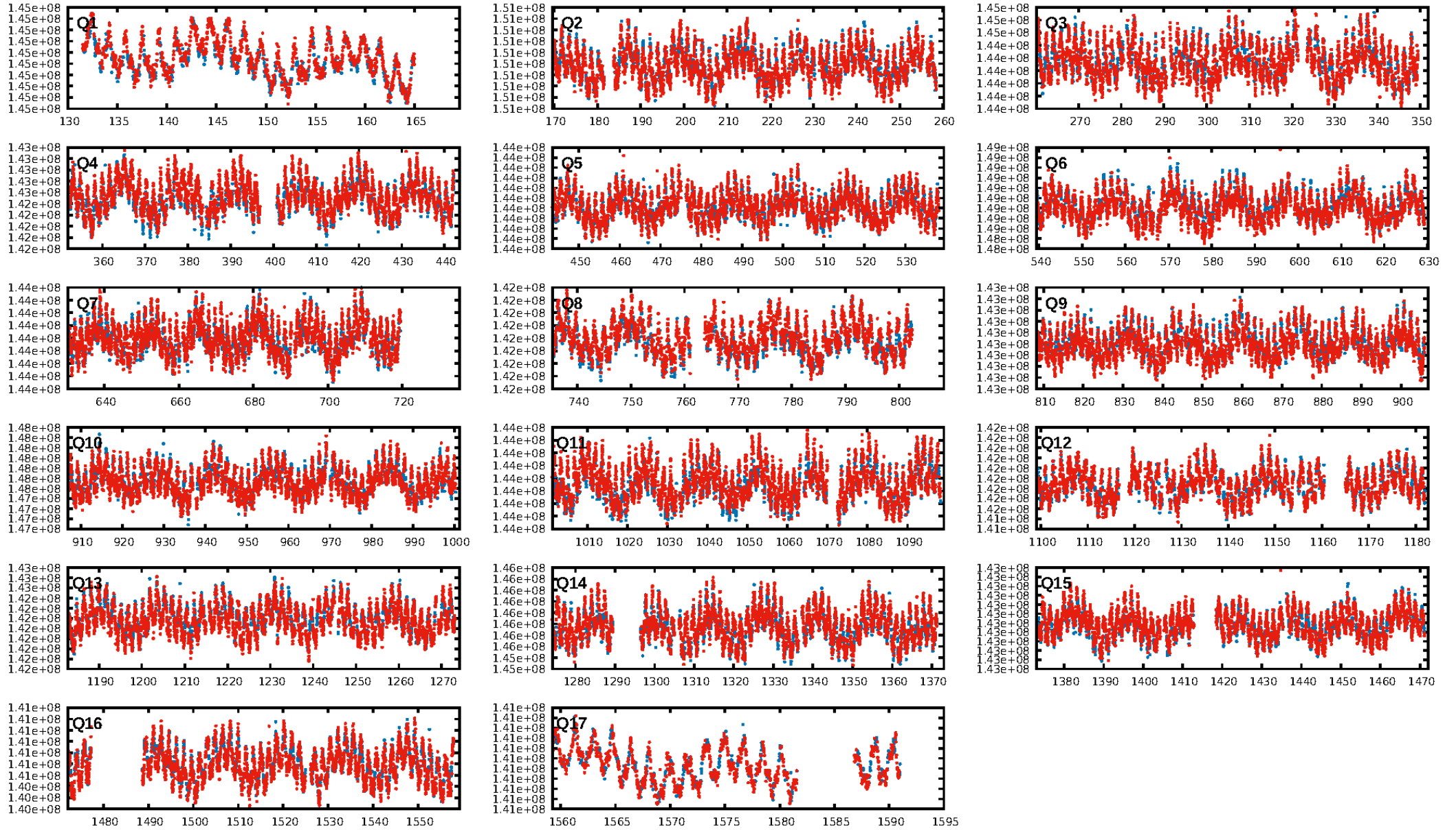
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 0.97 [2278/2339]  
**GhostDiagnostic-chr: 0.8872**  
**Centroid-sig: 0.0%**  
Centroid-so: 1.844 arcsec [2.63σ]  
OotOffset-rm: 0.908 arcsec [1.67σ]  
KicOffset-rm: 0.905 arcsec [1.71σ]  
OotOffset-st: 3/4/3/4 [14]  
KicOffset-st: 3/4/3/4 [14]  
DiffImageQuality-fgm: 0.36 [5/14]  
DiffImageOverlap-fno: 1.00 [17/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 17:09:37 Z

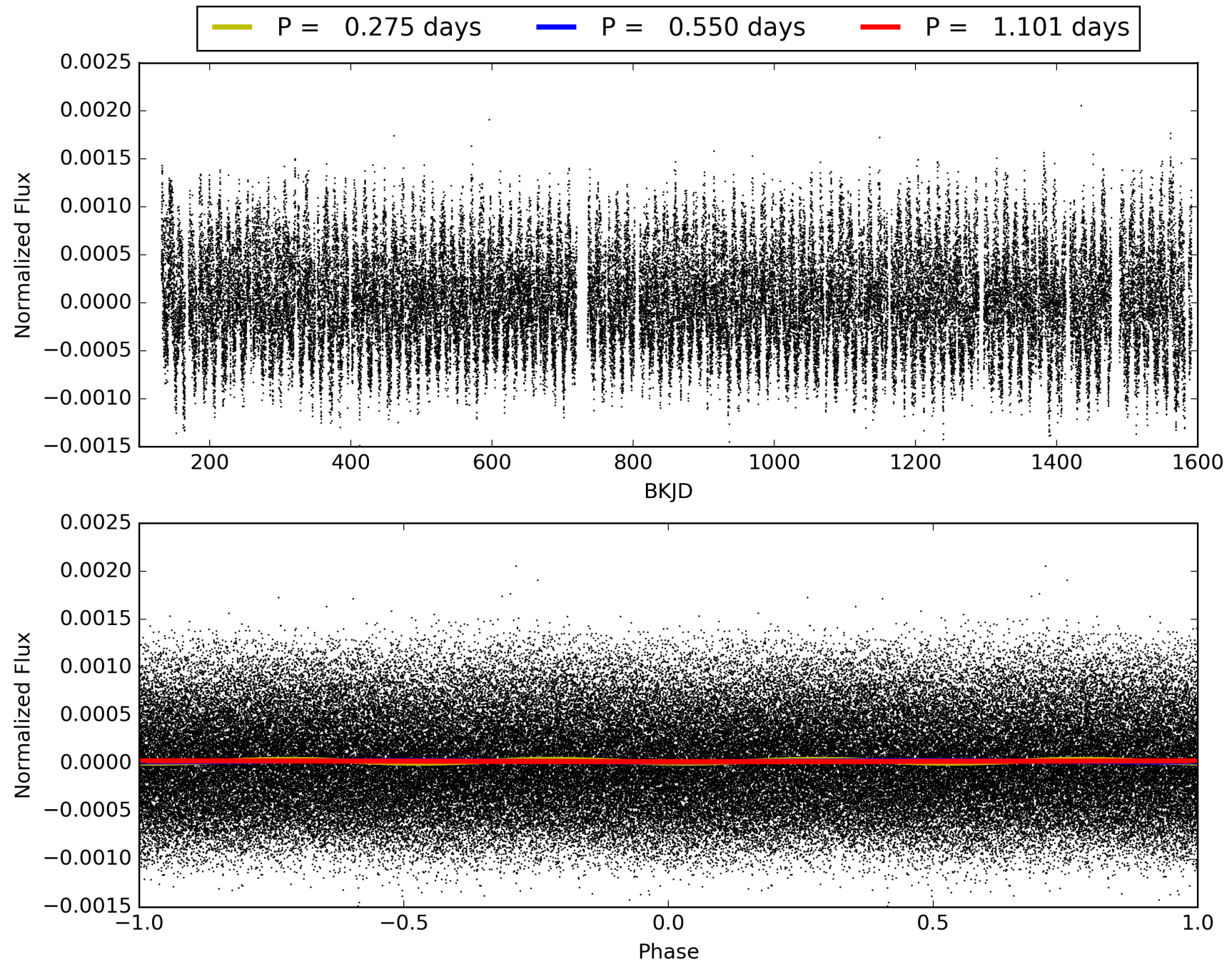
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 007819833-01, PDC Light Curves



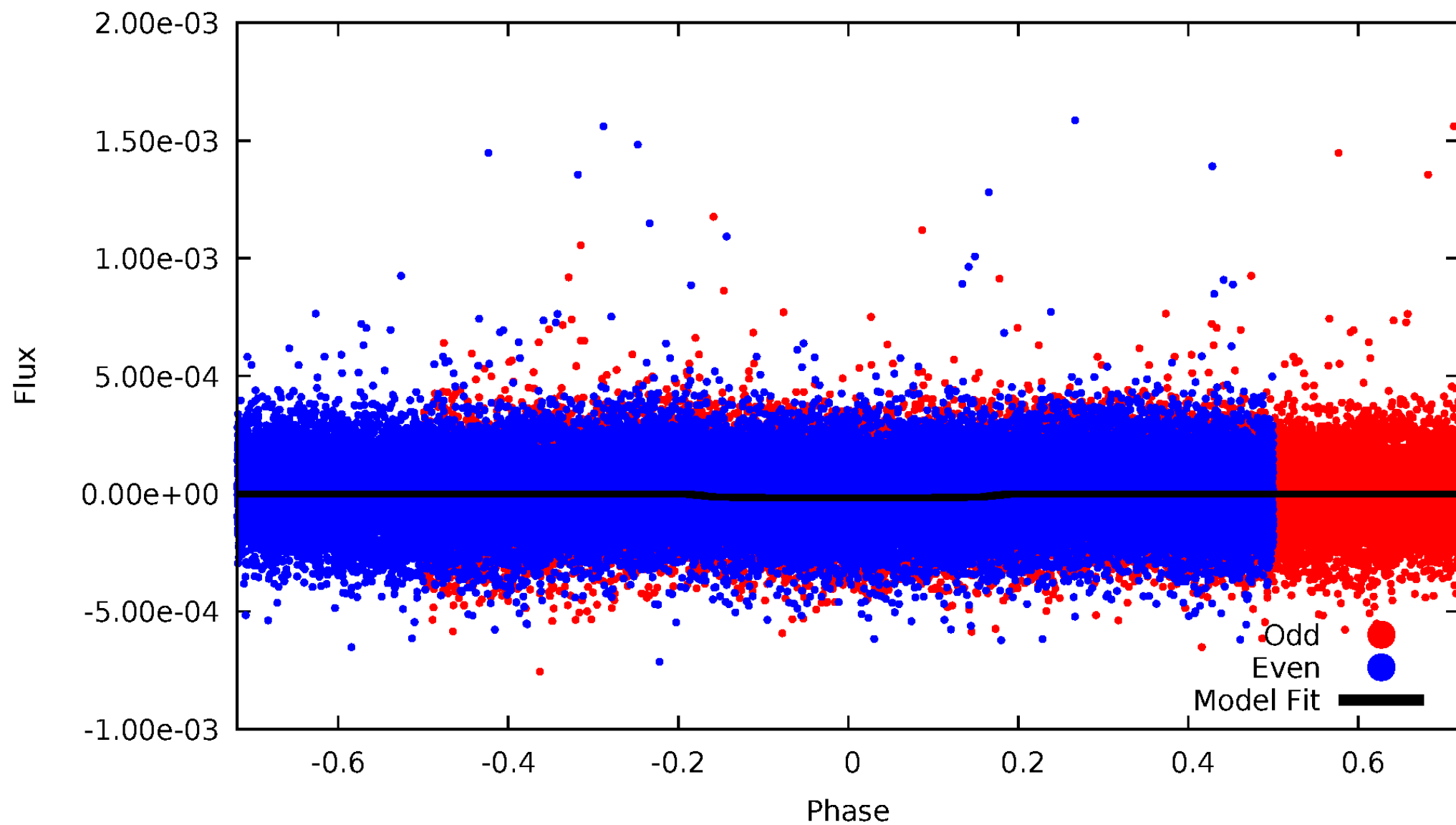


TCE 007819833-01



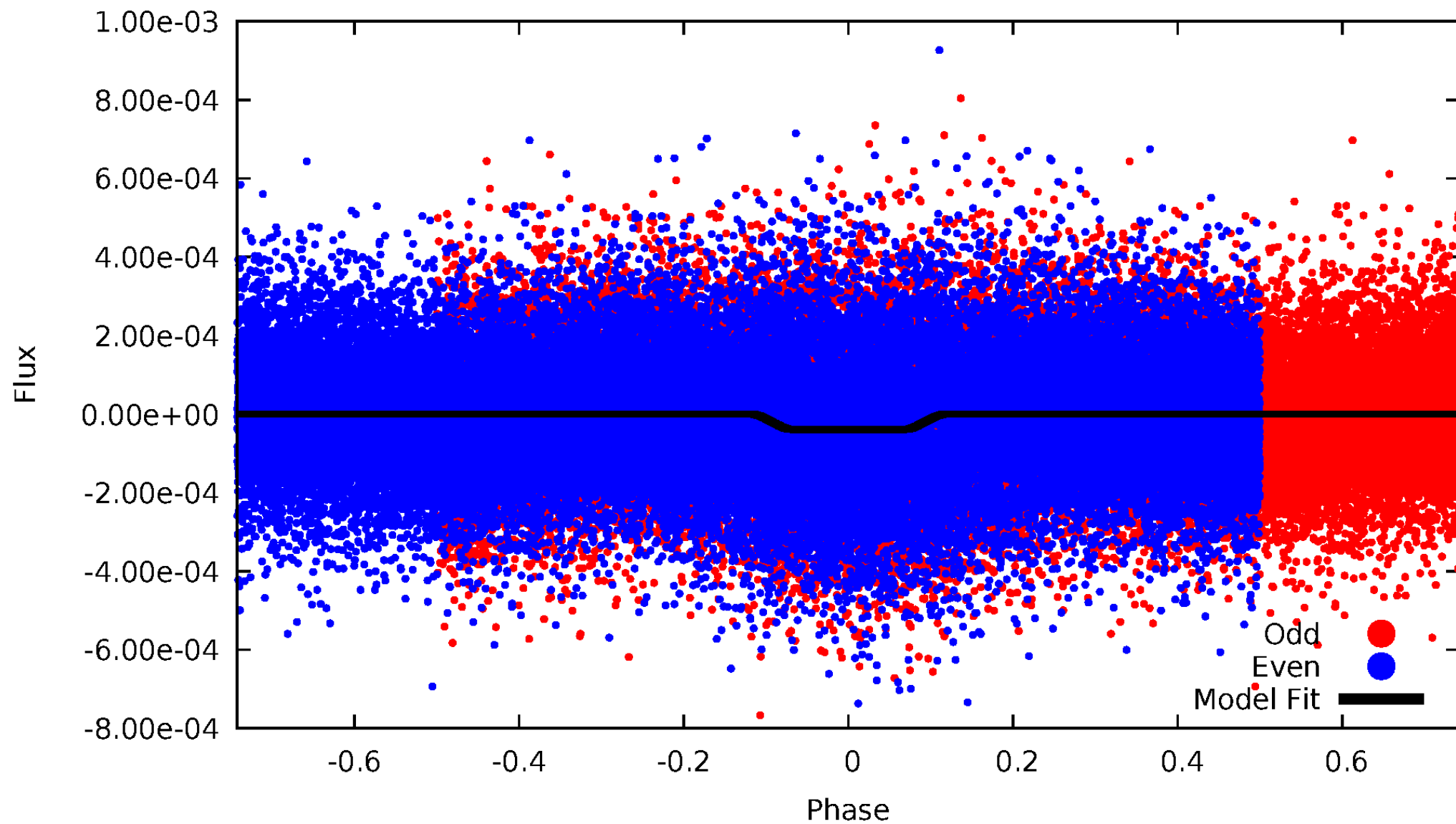
# DV Odd/Even

TCE 007819833-01



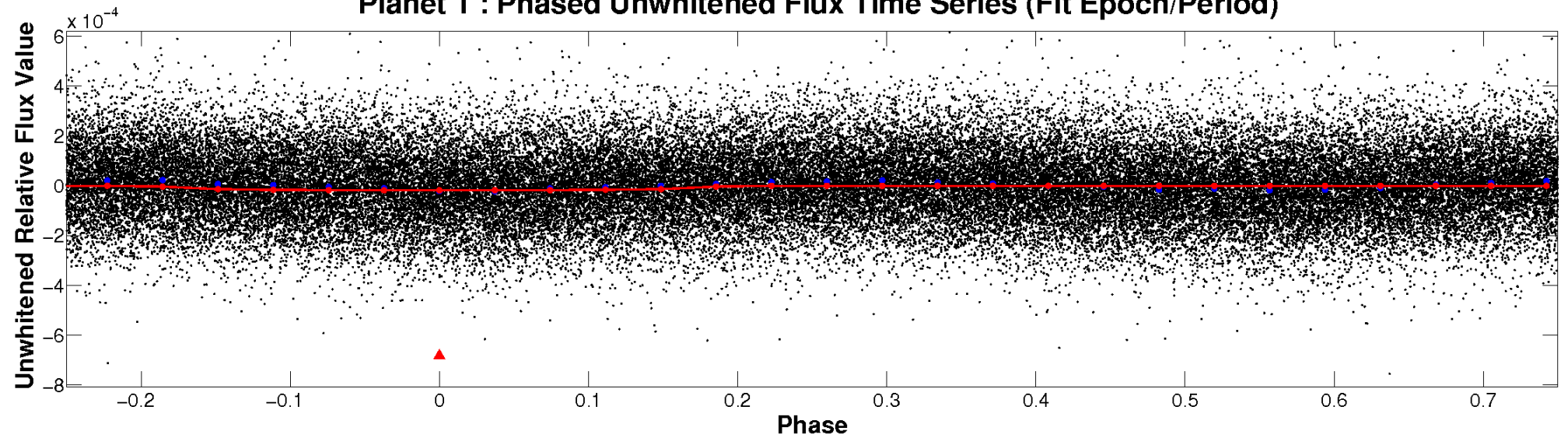
# ALT Odd/Even

TCE 007819833-01

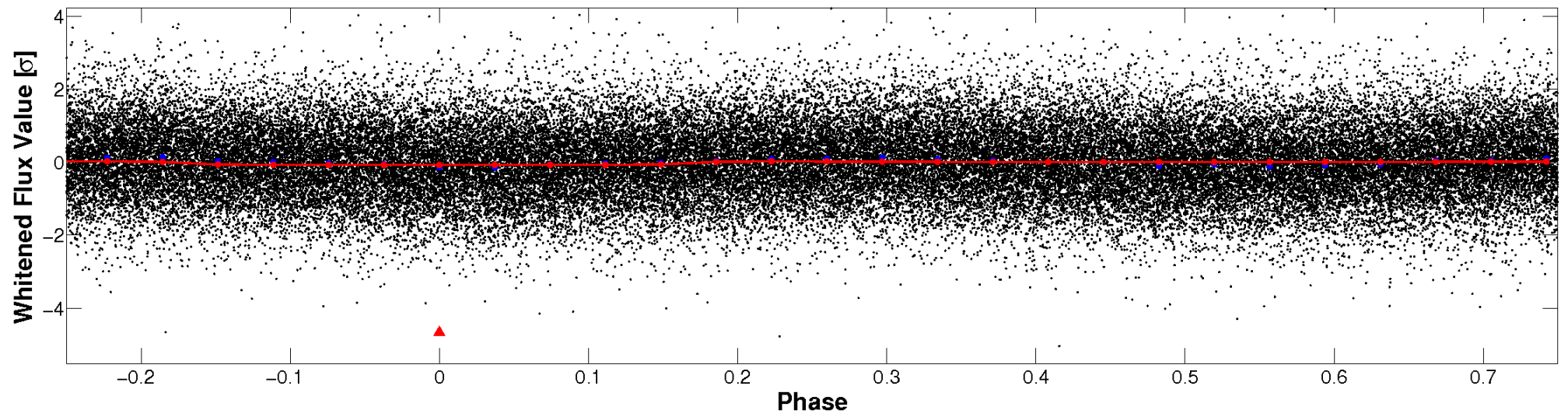


# Non-Whitened Vs. Whitened Light Curve

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



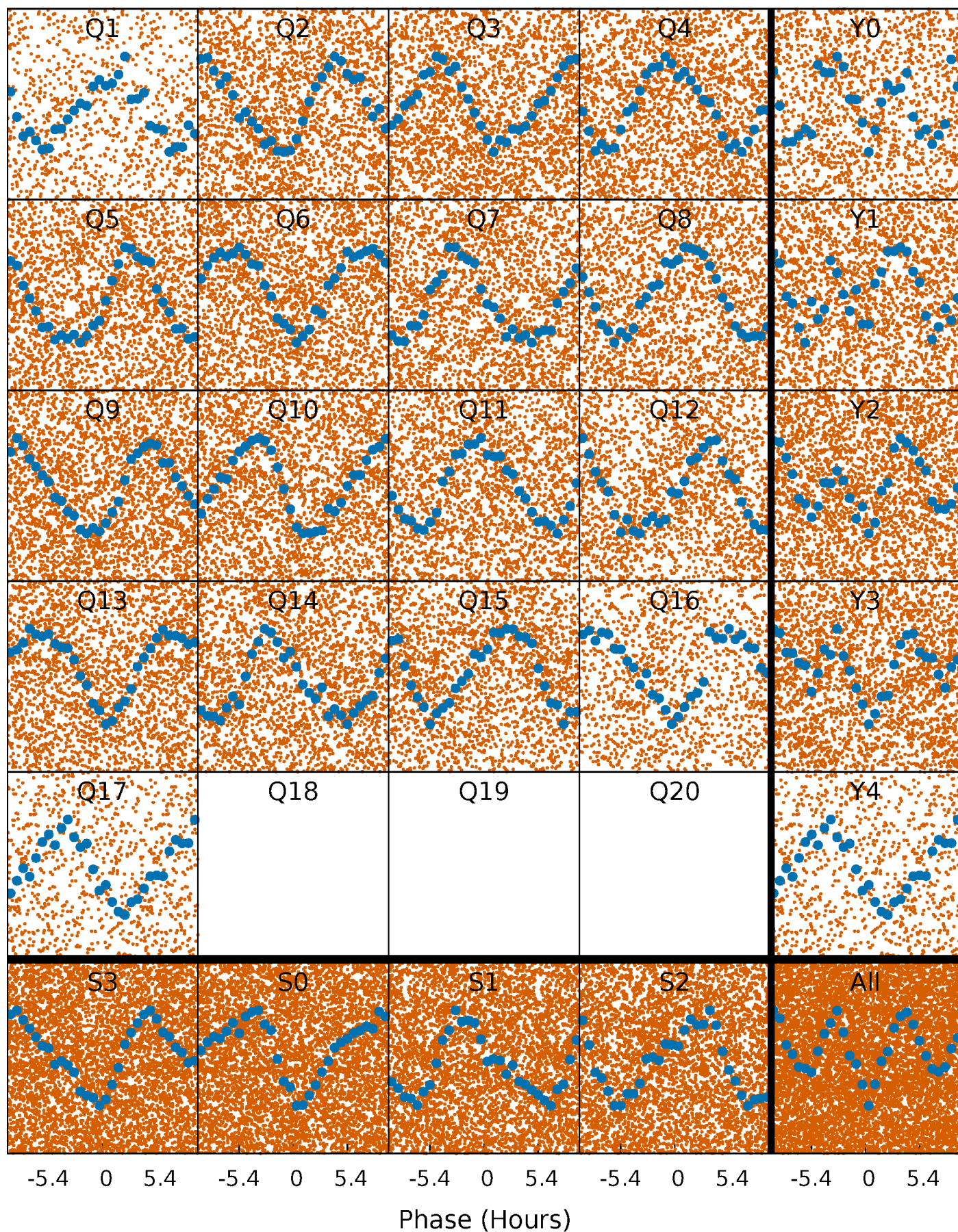
**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**





# PDC Quarter-Phased Transit Curves

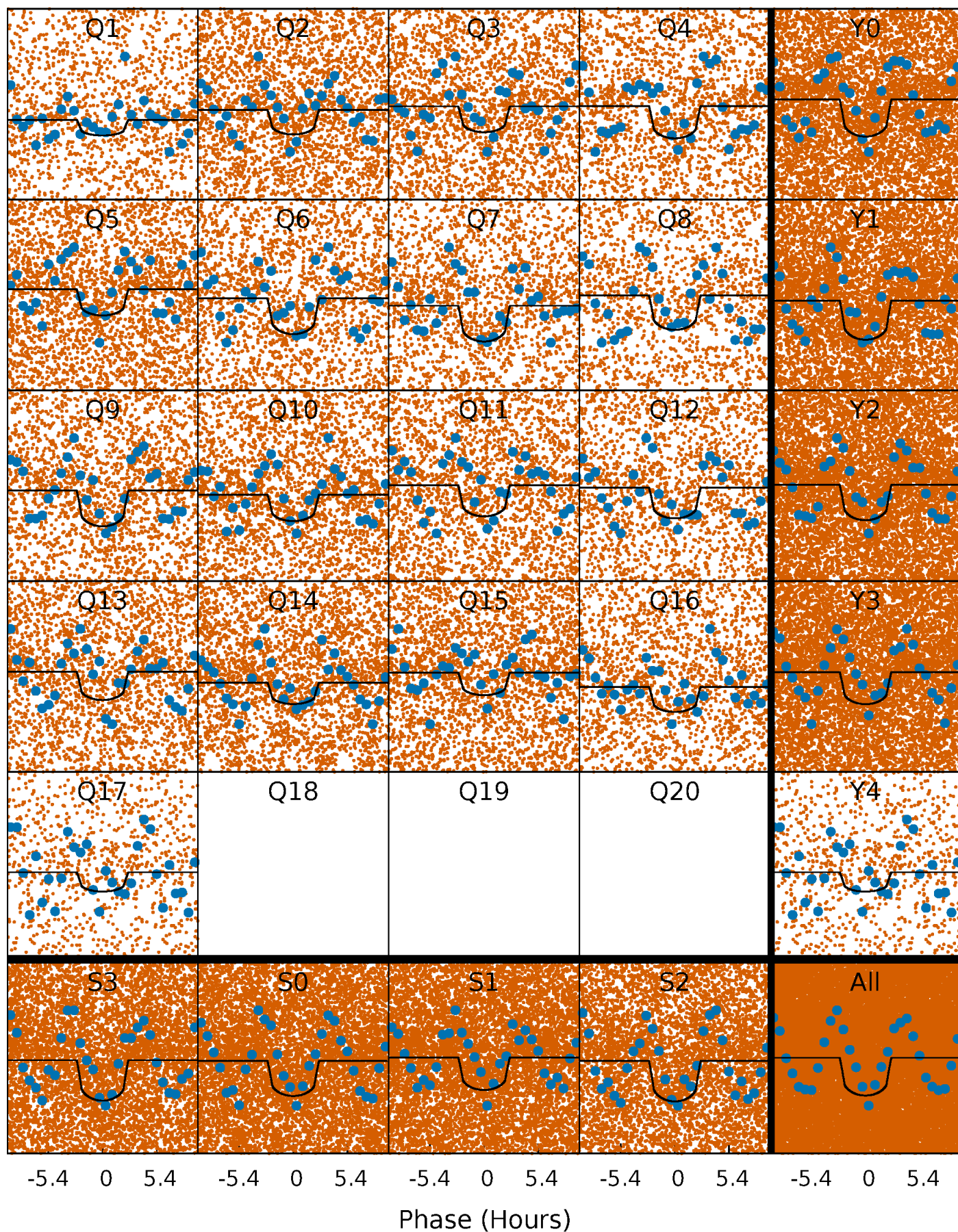
TCE 007819833-01 P= 0.550486 Days  $T_0=131.944166$  (BKJD)





# DV Quarter-Phased Transit Curves

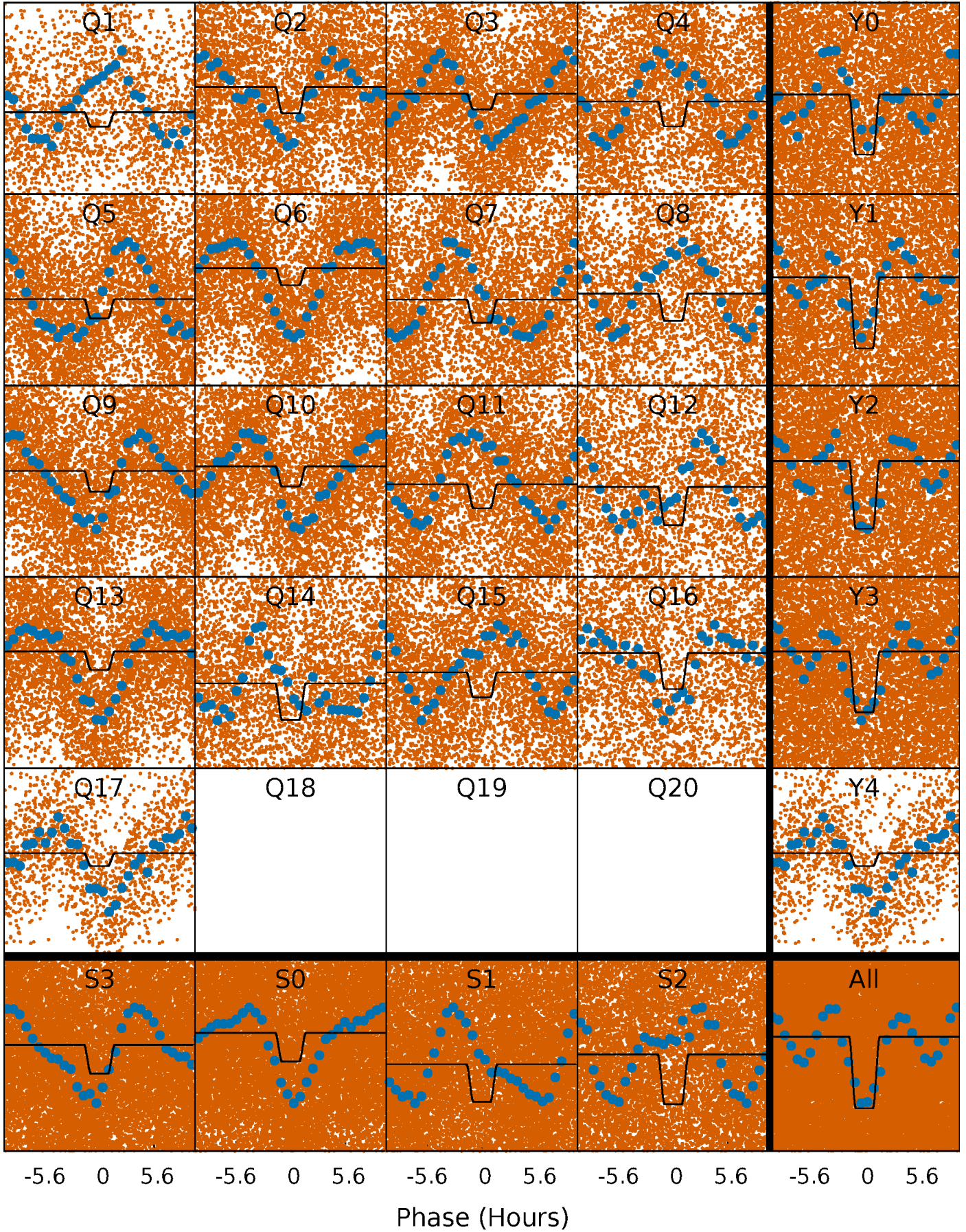
TCE 007819833-01 P= 0.550486 Days  $T_0=131.944166$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

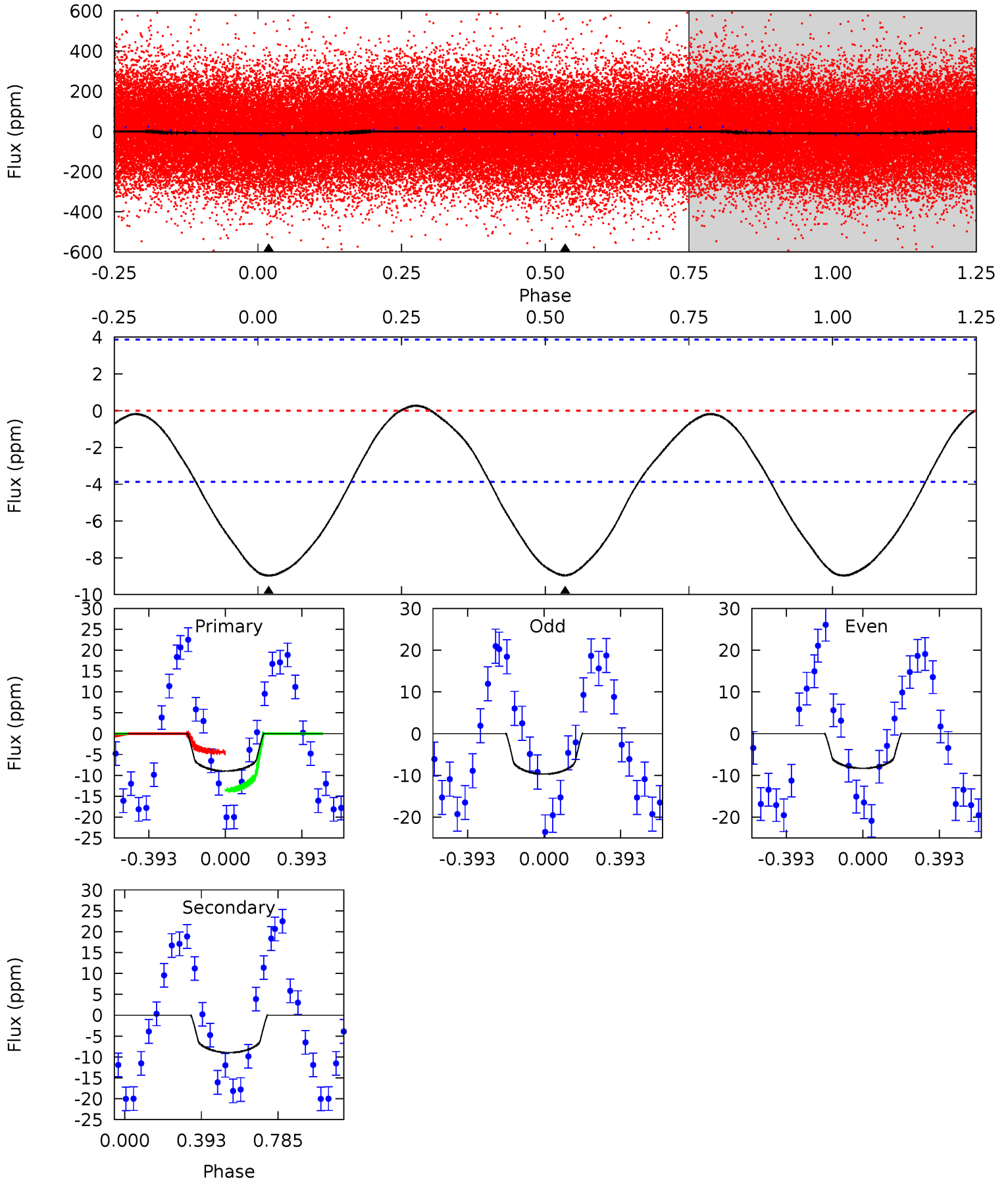
TCE 007819833-01 P= 0.550500 Days  $T_0=131.939792$  (BKJD)



# DV Model-Shift Uniqueness Test

007819833-01, P = 0.550486 Days, E = 131.393680 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
9.89	9.88	0	0	4.27	0.85	0.25	9.89	9.89	9.88	9.88	0.76	0.91	0.03	4.96

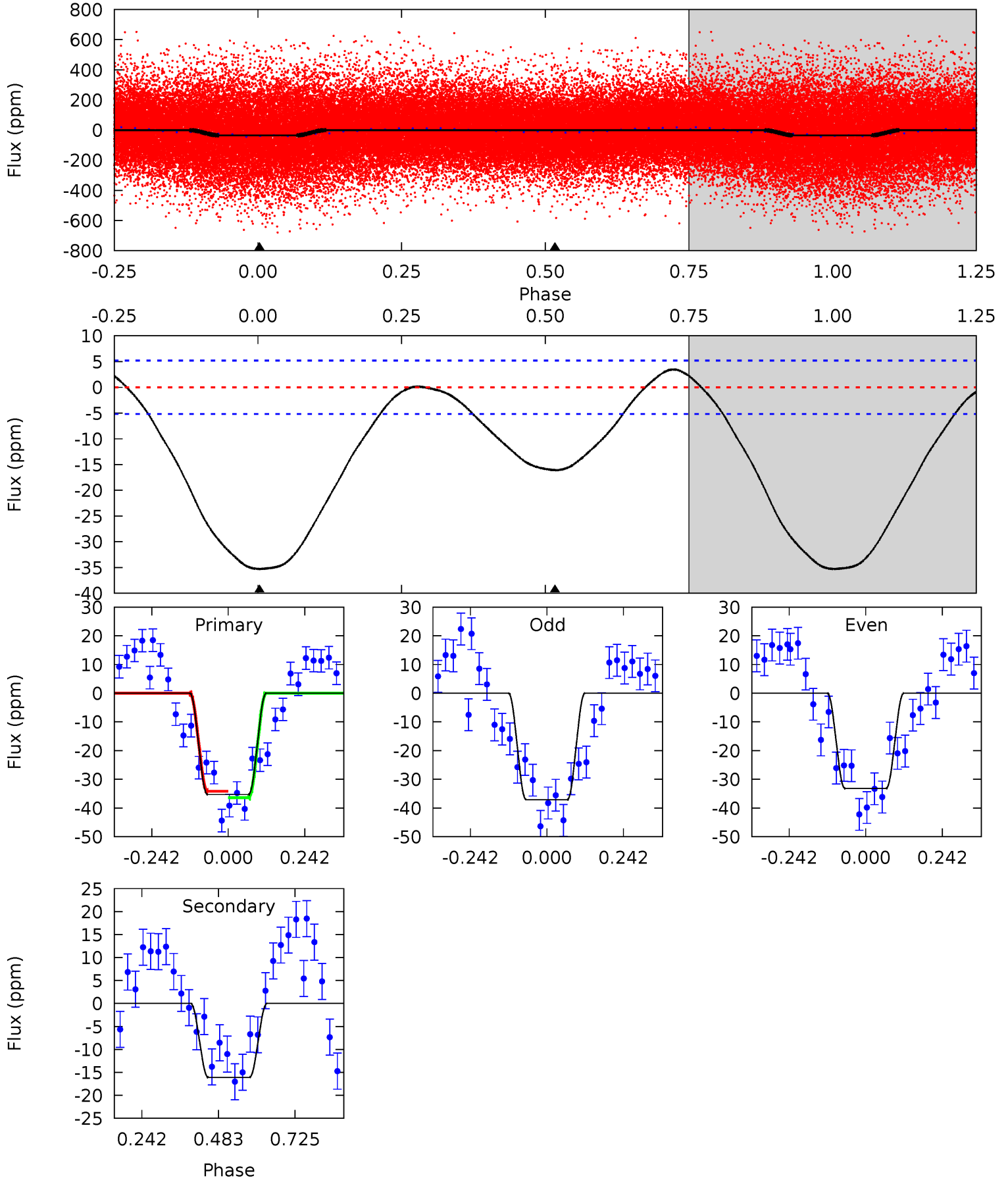




# Alt Model-Shift Uniqueness Test

007819833-01, P = 0.550500 Days, E = 131.389292 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
29.8	13.6	0	0	4.38	1.17	1.15	29.8	29.8	13.6	13.6	1.67	1.03	0.09	0.93



### Stellar Parameters For KIC 007819833

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$7233^{+226}_{-302}$	$4.151^{+0.128}_{-0.192}$	$-0.120^{+0.250}_{-0.350}$	$1.687^{+0.520}_{-0.347}$	$1.470^{+0.221}_{-0.243}$	$0.431^{+0.315}_{-0.208}$
	+3%/-4%	+3%/-5%	+208%/-292%	+31%/-21%	+15%/-17%	+73%/-48%
Source	PHO1	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 007819833-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-9 \pm 1$	$0.86^{+0.55}_{-0.55}$	$4778^{+375}_{-338}$	$5458^{+5173}_{-1460}$	$1.458^{+10.024}_{-0.910}$
Alt.	$-16 \pm 1$	$1.18^{+0.58}_{-0.53}$	$4779^{+378}_{-324}$	$5422^{+2288}_{-1212}$	$1.446^{+3.095}_{-0.817}$

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

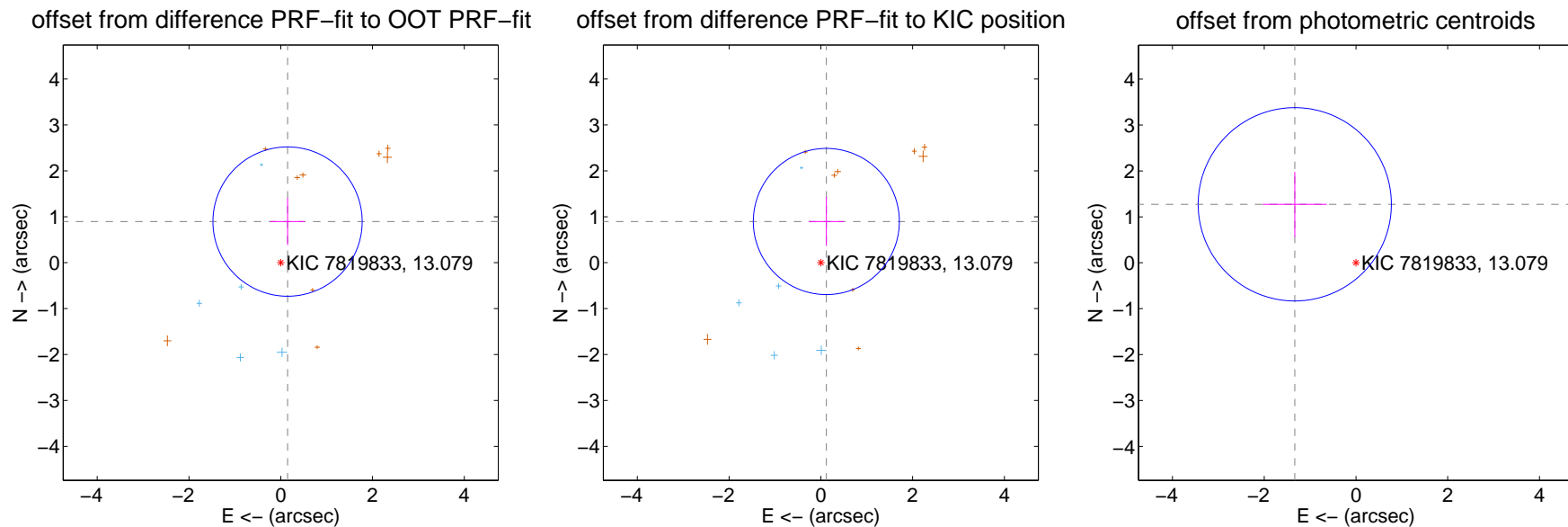
## DV Centroid Data

Supplemental centroid analysis for 007819833-01. Kepler magnitude: 13.08. Transit SNR 10.86

There are 5 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

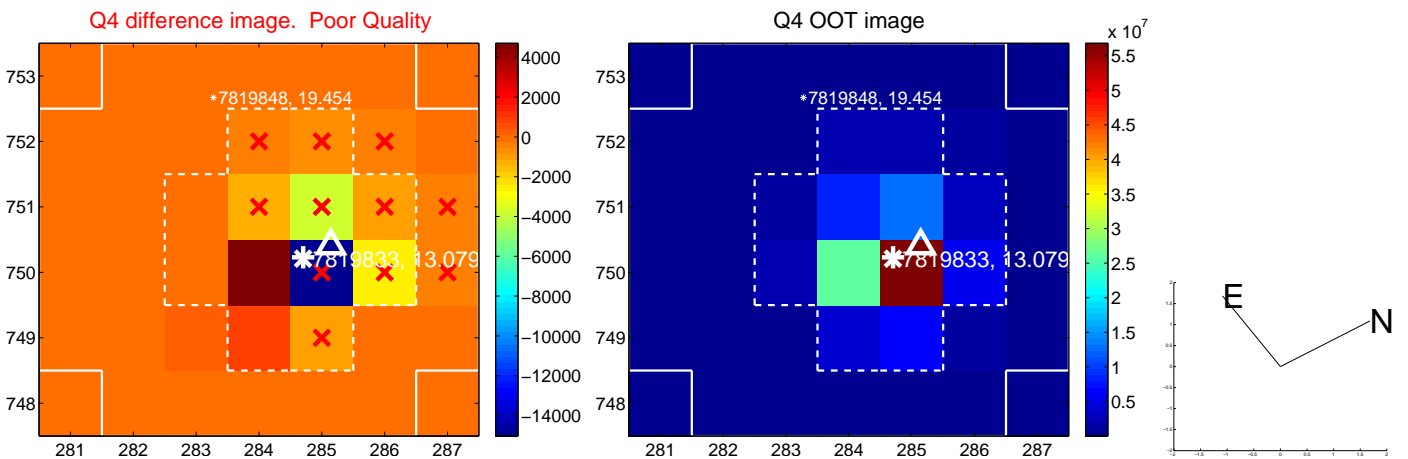
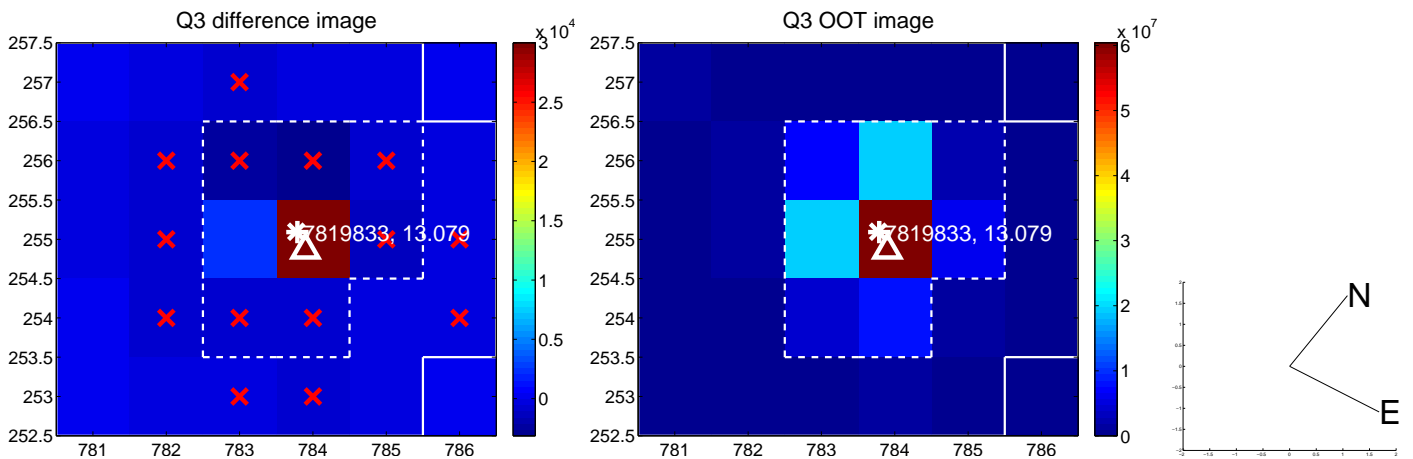
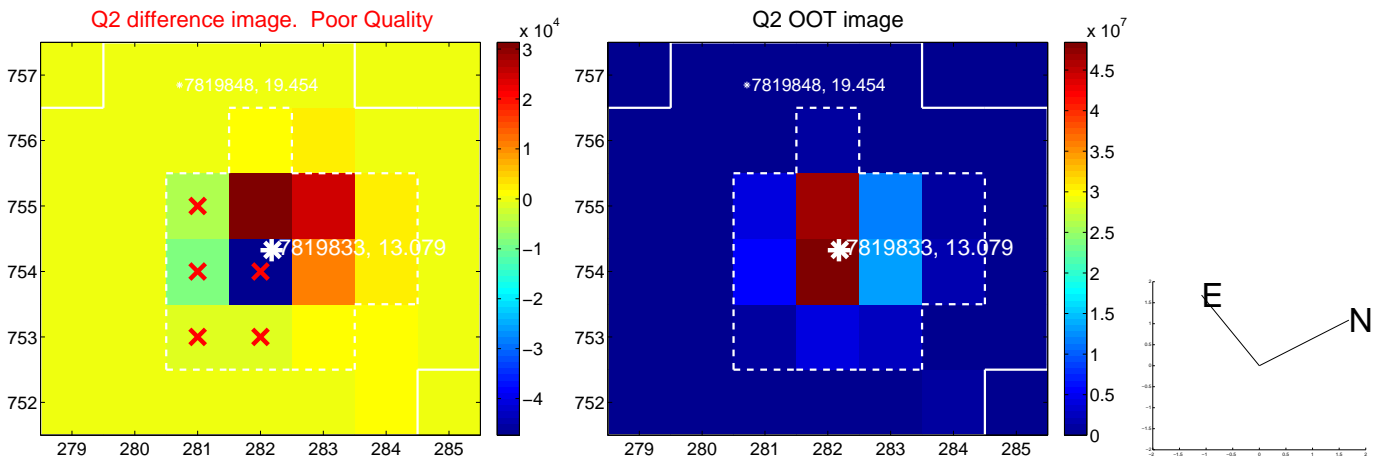
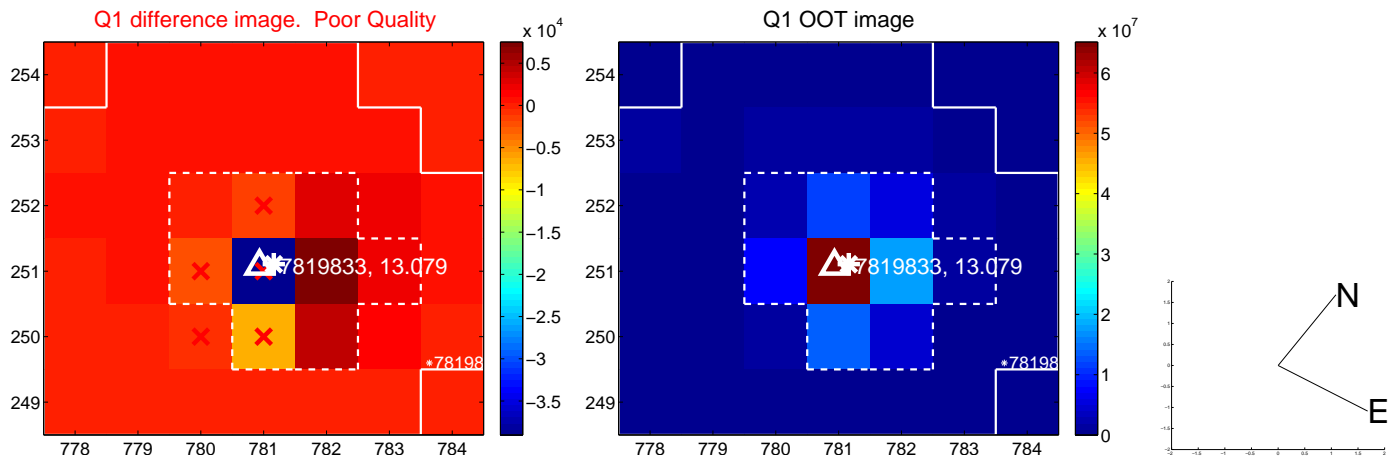
	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.908 \pm 0.542$	1.67	$-0.148 \pm 0.377$	$0.895 \pm 0.512$
PRF-fit source offset from KIC position	$0.905 \pm 0.530$	1.71	$-0.119 \pm 0.381$	$0.897 \pm 0.533$
photometric centroid source offset	$1.84 \pm 0.70$	2.63	$1.33 \pm 0.70$	$1.27 \pm 0.71$



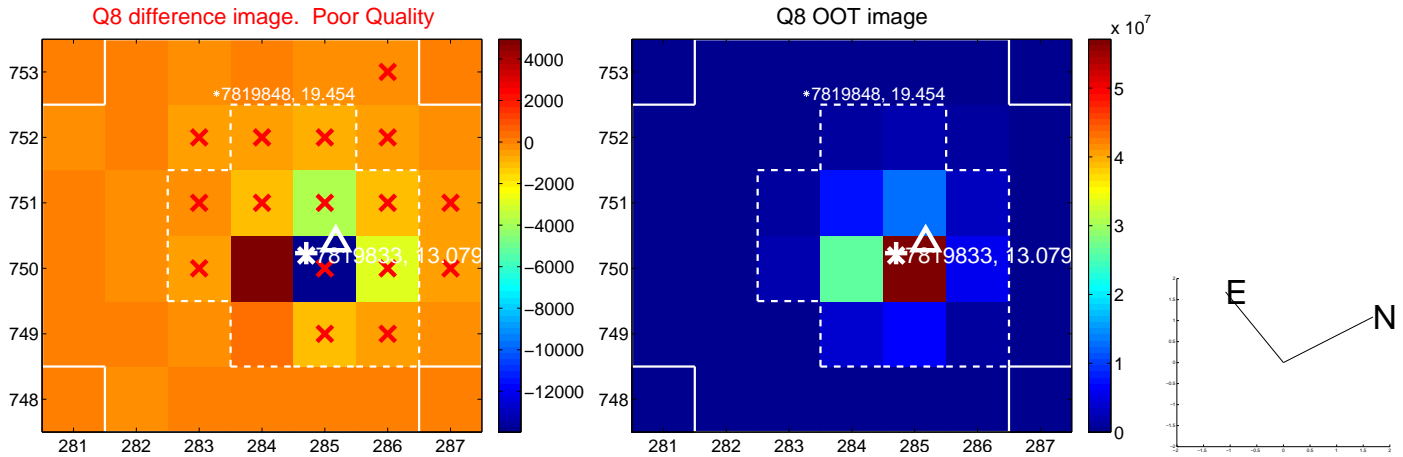
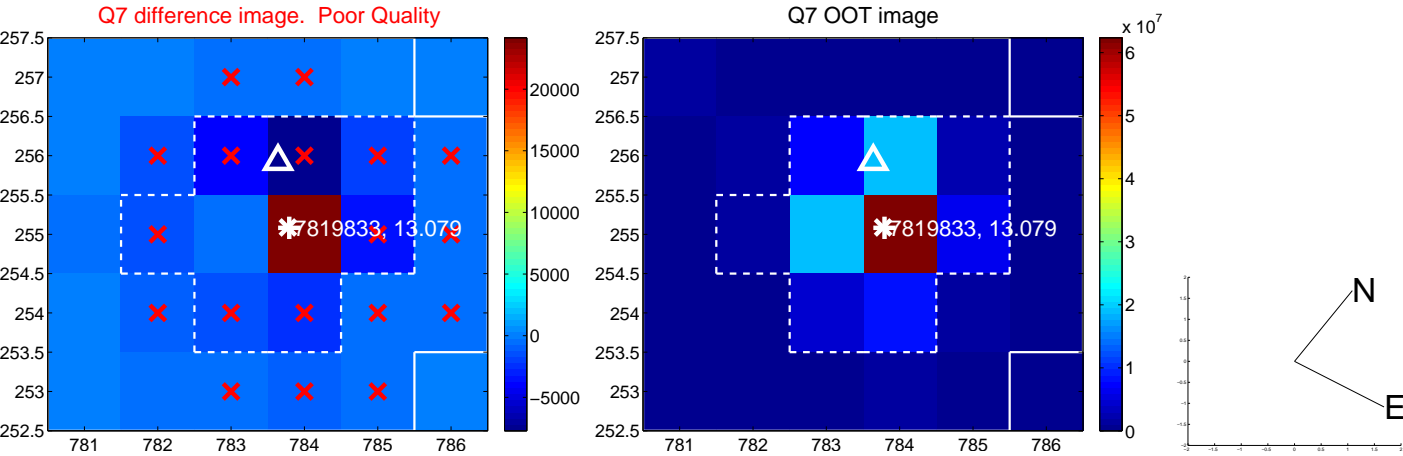
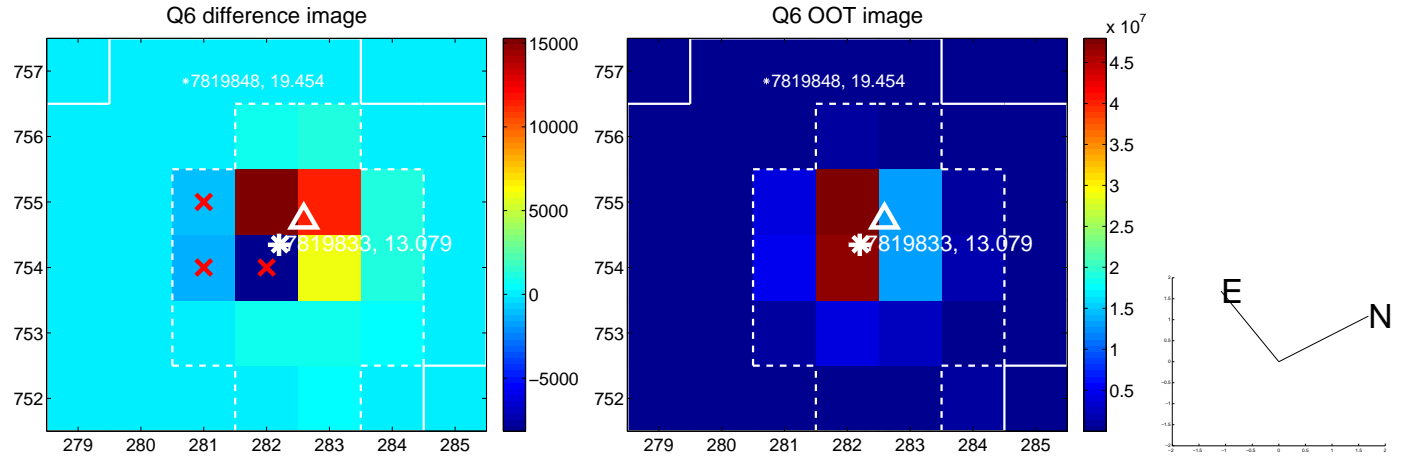
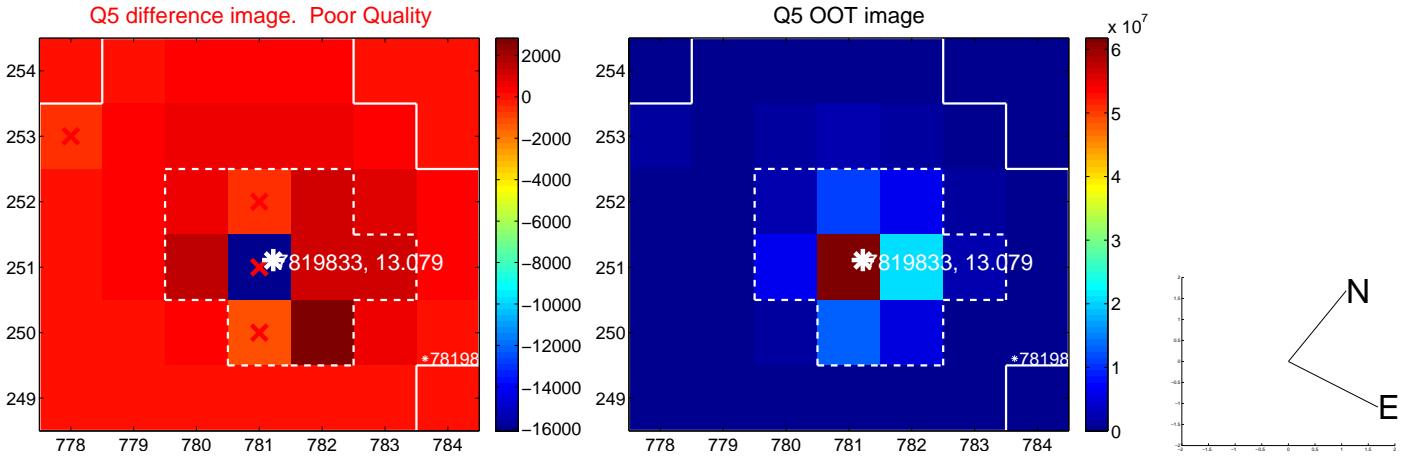
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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



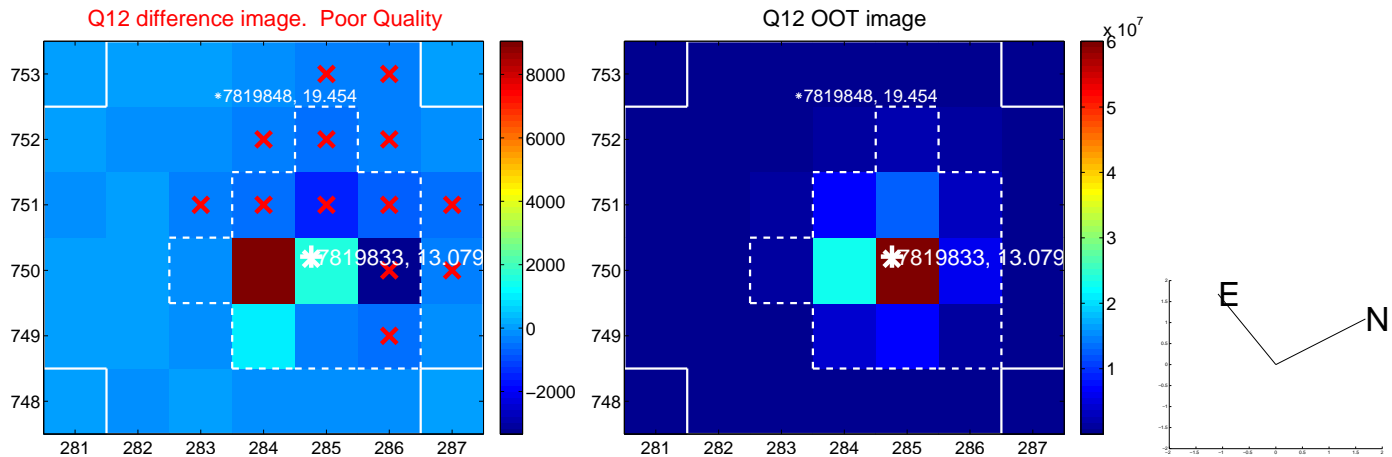
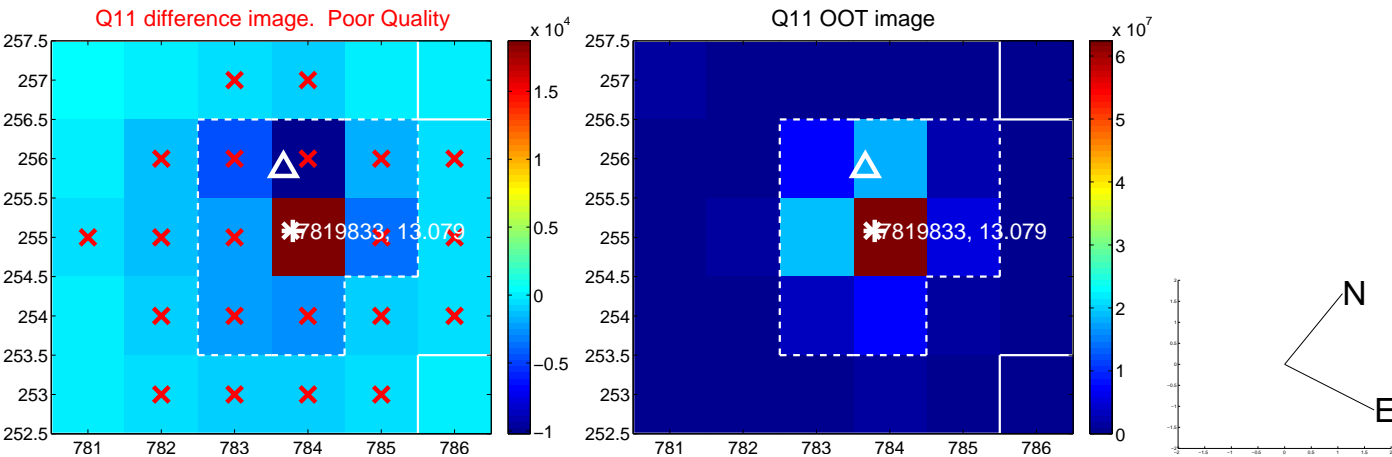
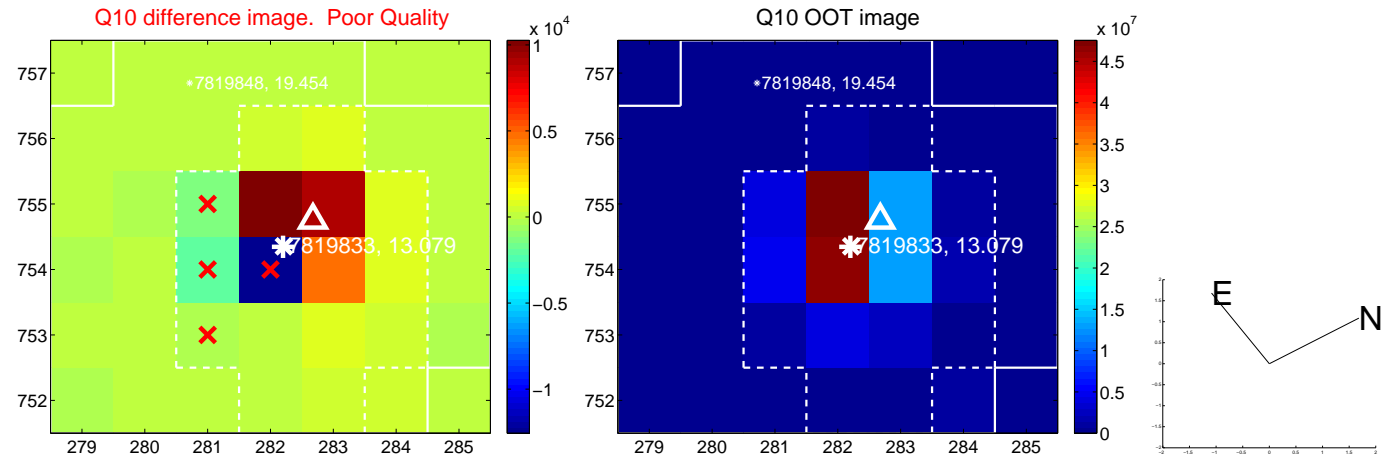
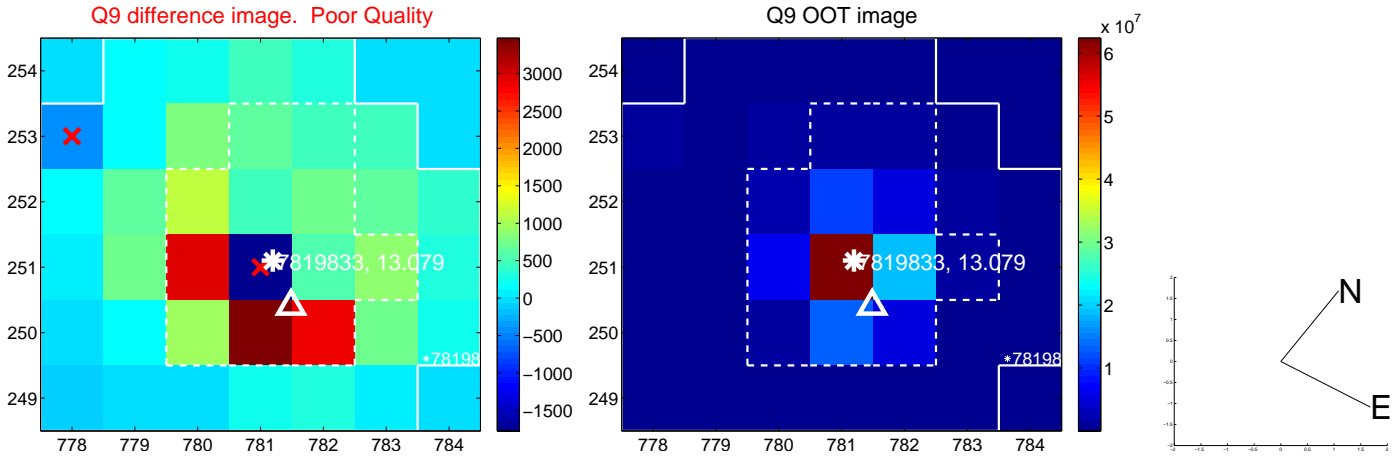
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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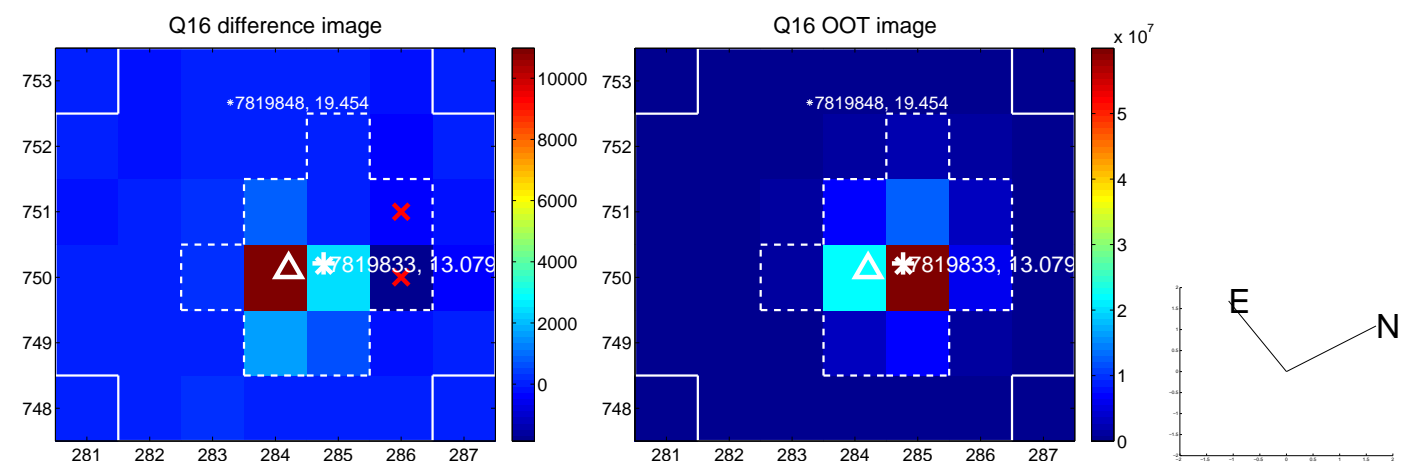
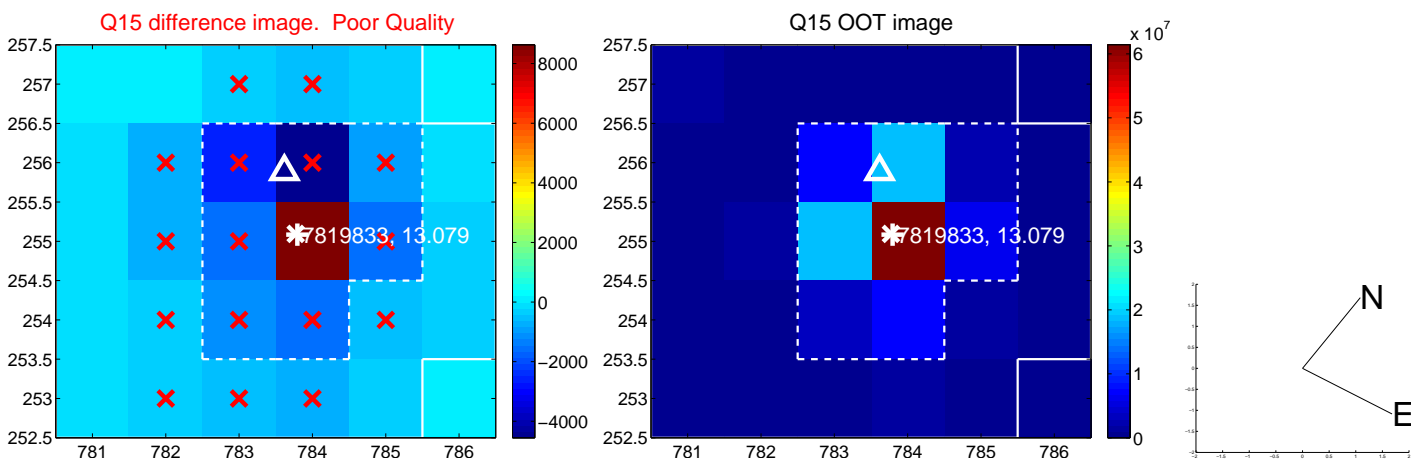
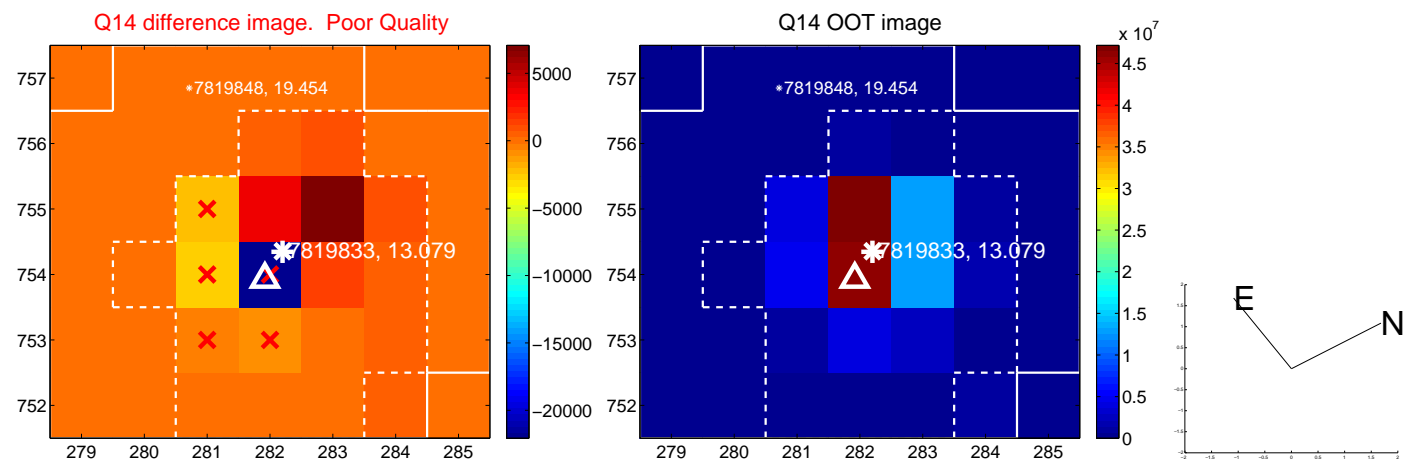
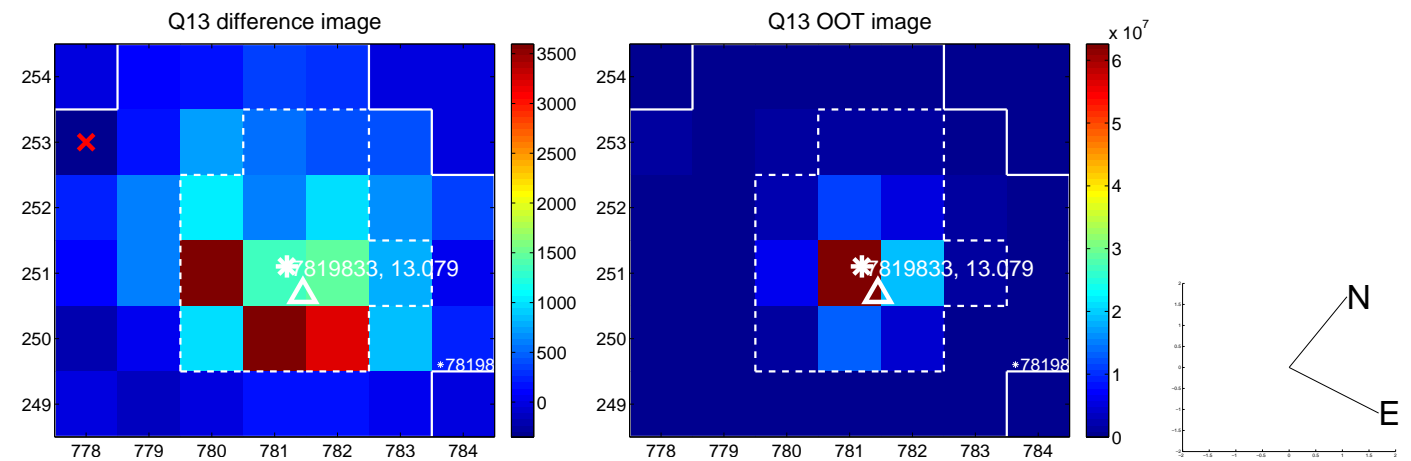


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

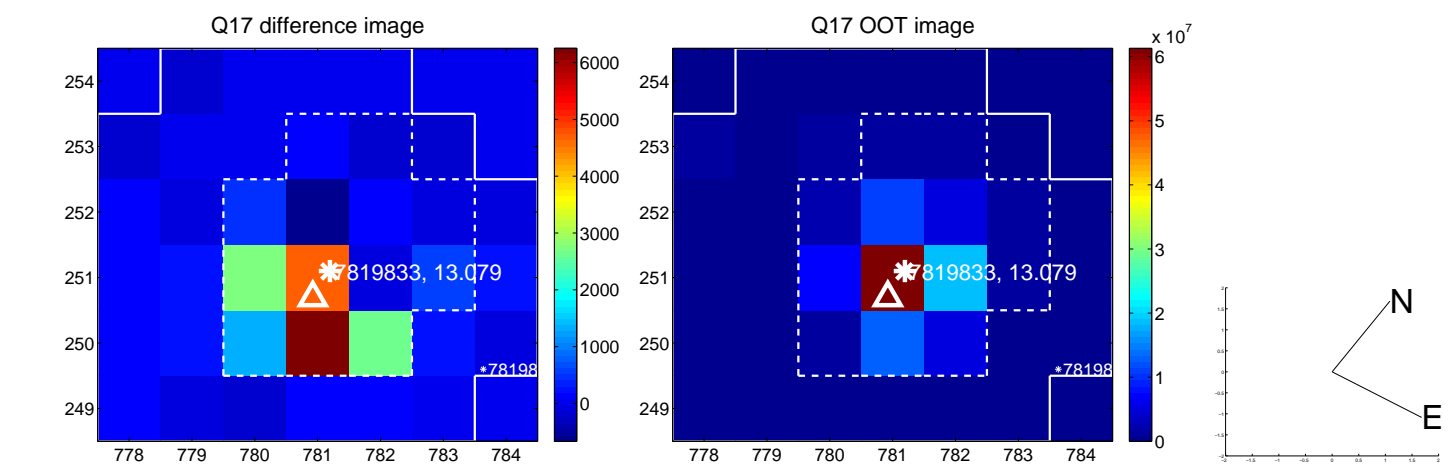




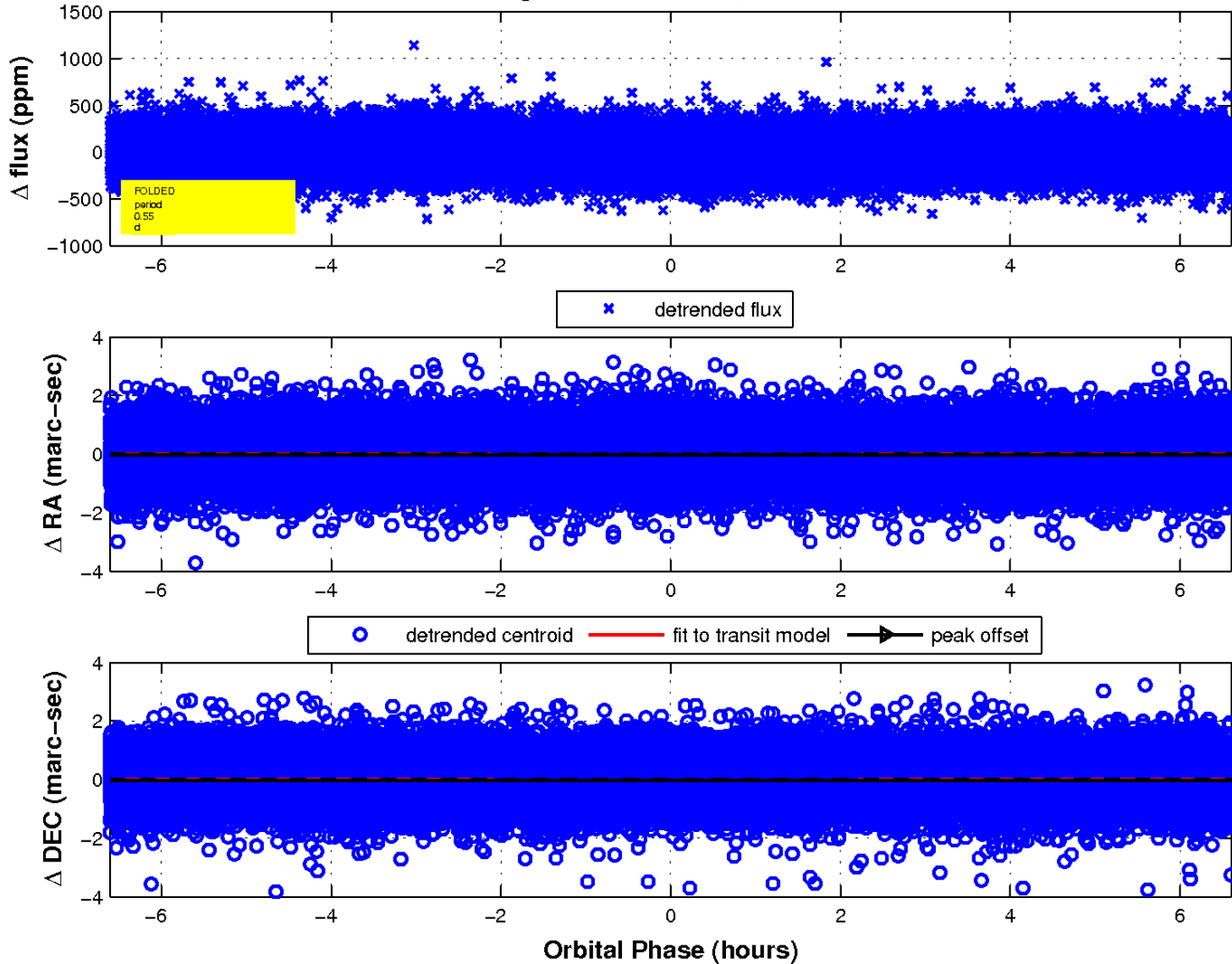
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white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

