

# KIC 008081905

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008081905-01	OBS	2619.01	3.276422	131.987841	288.4	2.356	15.3	15.7	0.96	5812	1.94	483.15

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008081905-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT

**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.

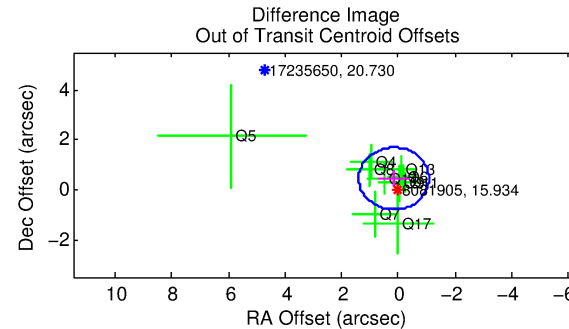
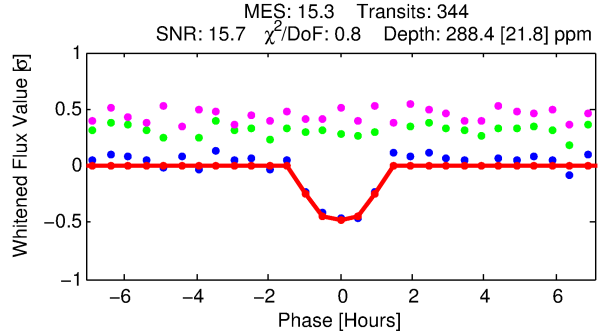
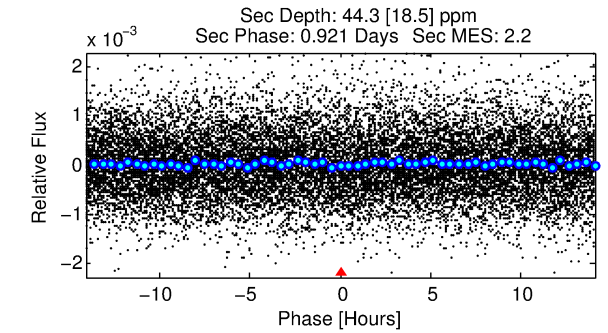
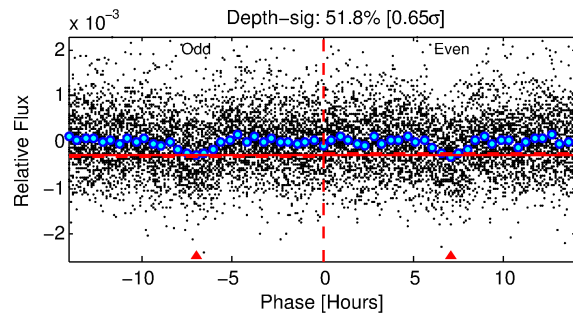
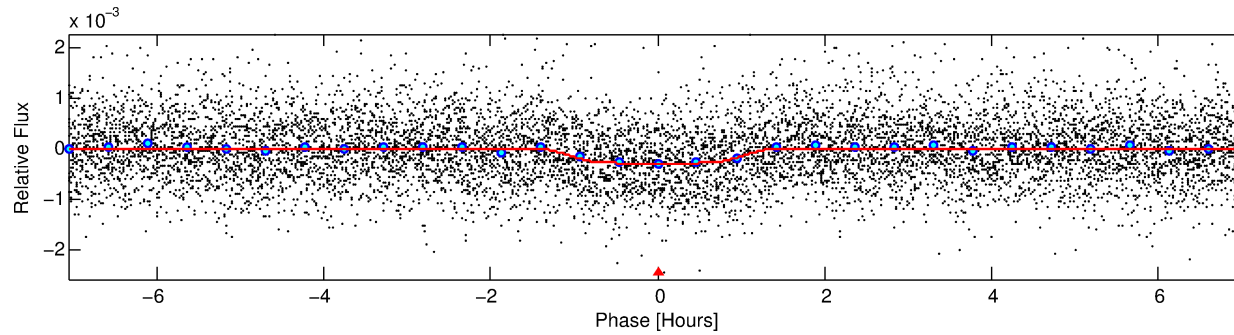
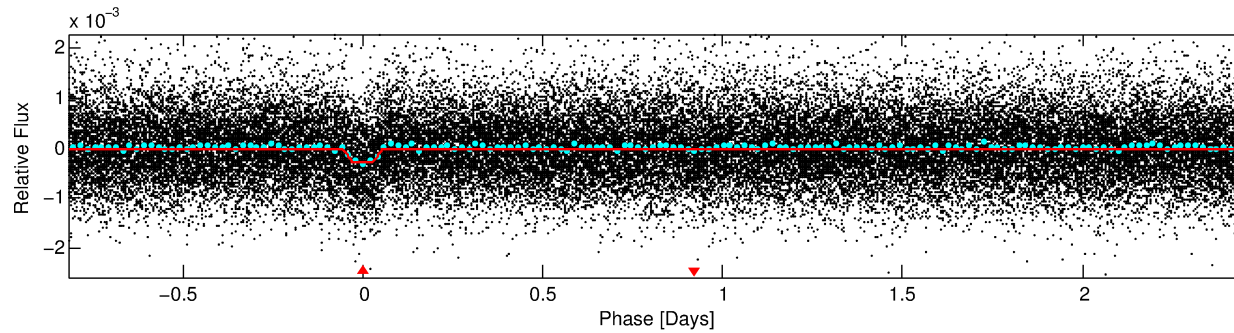
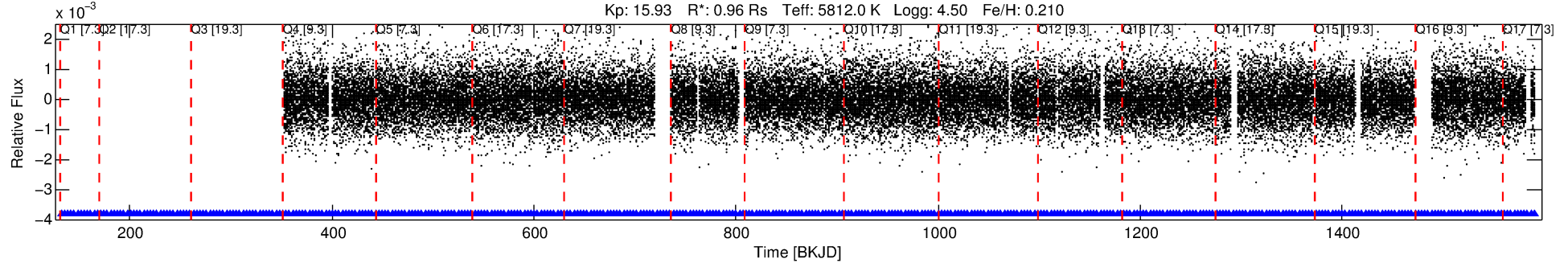
## Ephemeris Match Information For 008081905-01

No Significant Match Found

# DV One-Page Summary

KIC: 8081905 Candidate: 1 of 1 Period: 3.276 d  
KOI: K02619.01 Corr: 0.950

Kp: 15.93 R\*: 0.96 Rs Teff: 5812.0 K Logg: 4.50 Fe/H: 0.210



## DV Fit Results:

Period = 3.27642 [0.00001] d  
Epoch = 131.9878 [0.0027] BKJD  
Rp/R\* = 0.0185 [0.0075]  
a/R\* = 5.23 [9.53]  
b = 0.90 [0.43]  
Seff = 483.15 [194.16]  
Teq = 1195 [120] K  
Rp = 1.94 [0.98] Re  
a = 0.0443 [0.0113] AU  
Ag = 12.65 [12.51] [0.93σ]  
Teffp = 3486 [806] K [2.81σ]

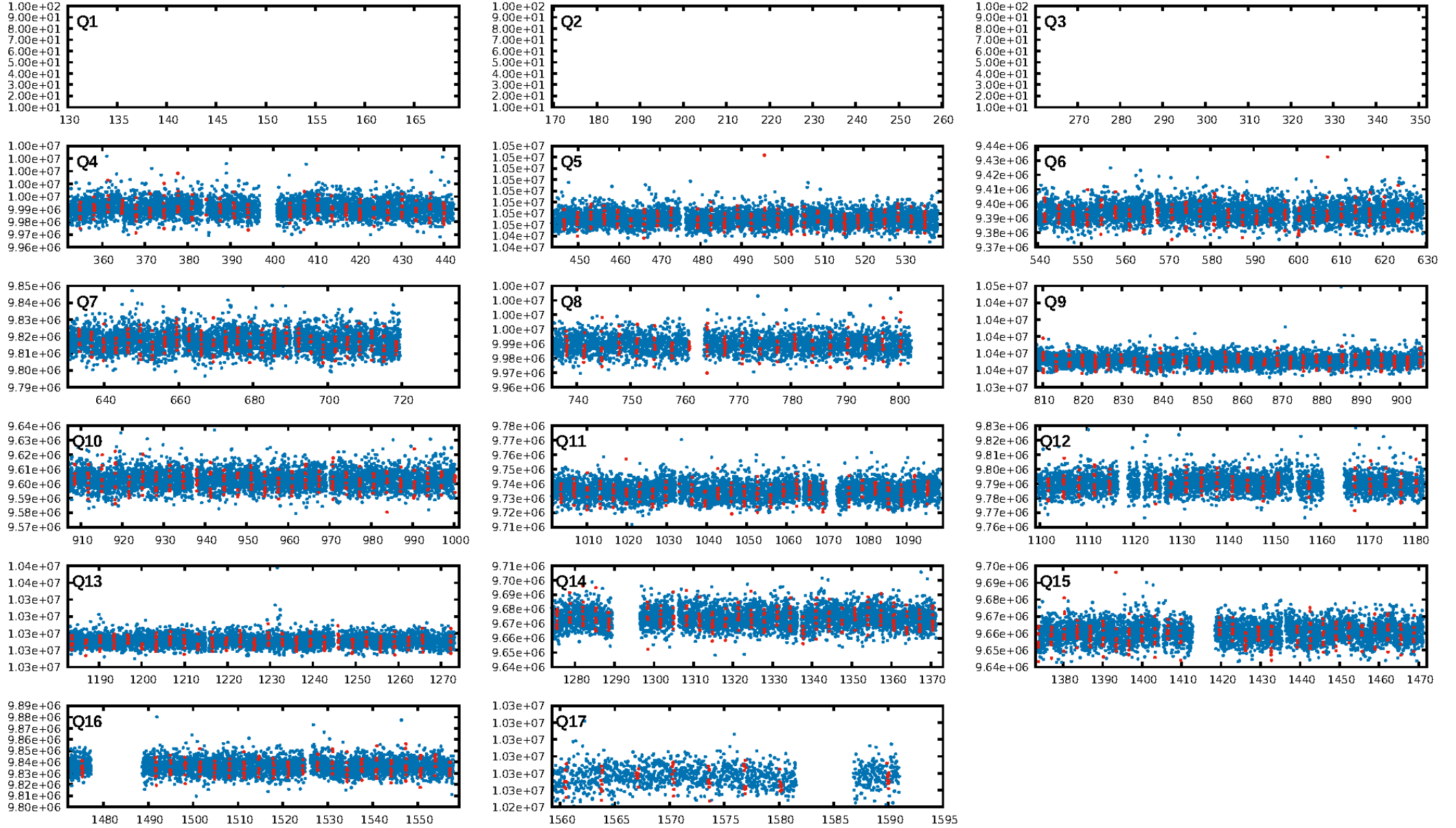
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 1.40e-52  
RollingBand-fgt: 1.00 [336/336]  
GhostDiagnostic-chr: 2.391  
Centroid-sig: 4.2%  
Centroid-so: 0.800 arcsec [0.77σ]  
OotOffset-rm: 0.472 arcsec [1.14σ]  
KicOffset-rm: 0.545 arcsec [1.26σ]  
OotOffset-st: 2/2/2/4 [10]  
KicOffset-st: 2/2/2/4 [10]  
DiffImageQuality-fgm: 0.70 [7/10]  
DiffImageOverlap-fno: 1.00 [14/14]

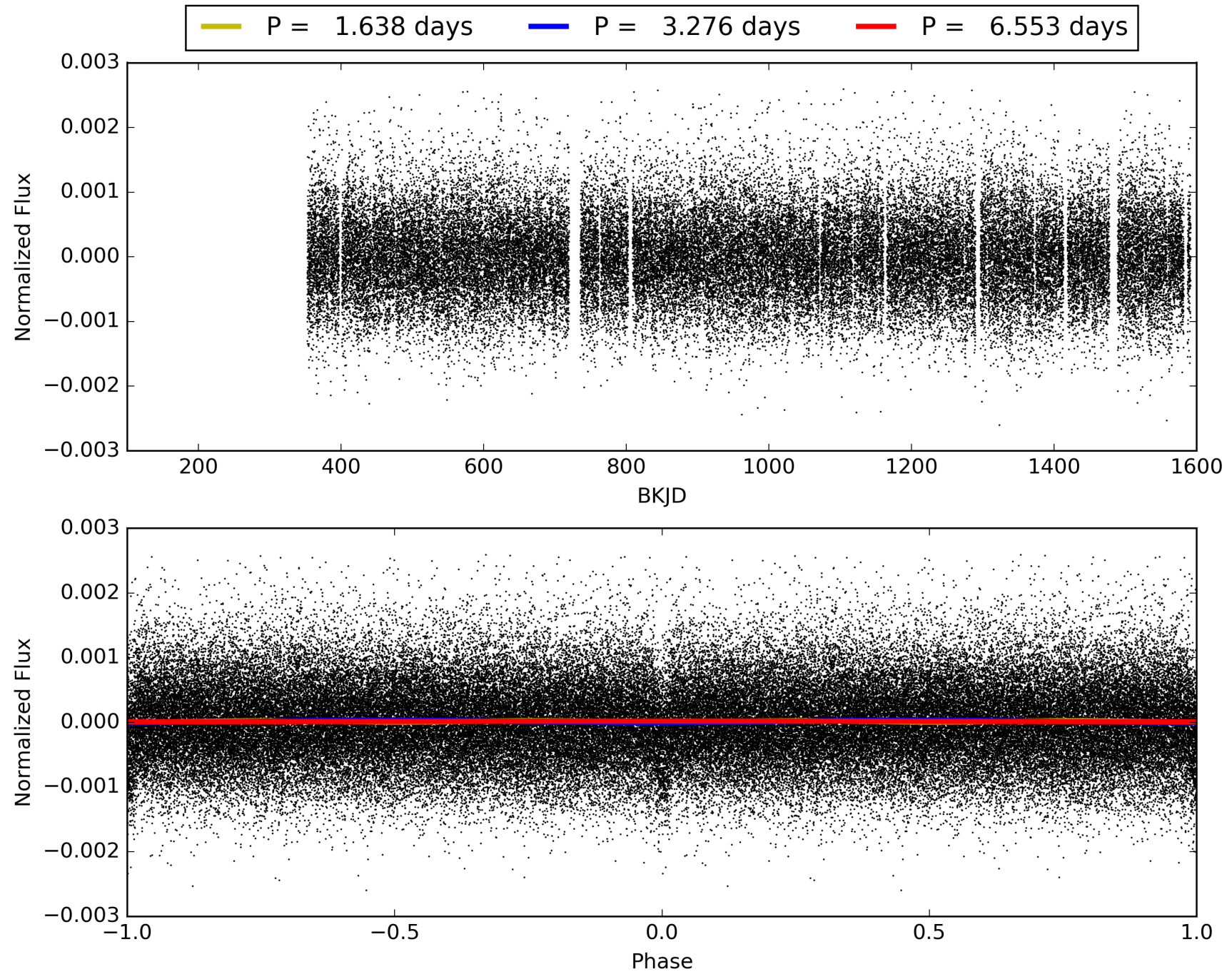
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:49:32 Z

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

# TCE 008081905-01, PDC Light Curves



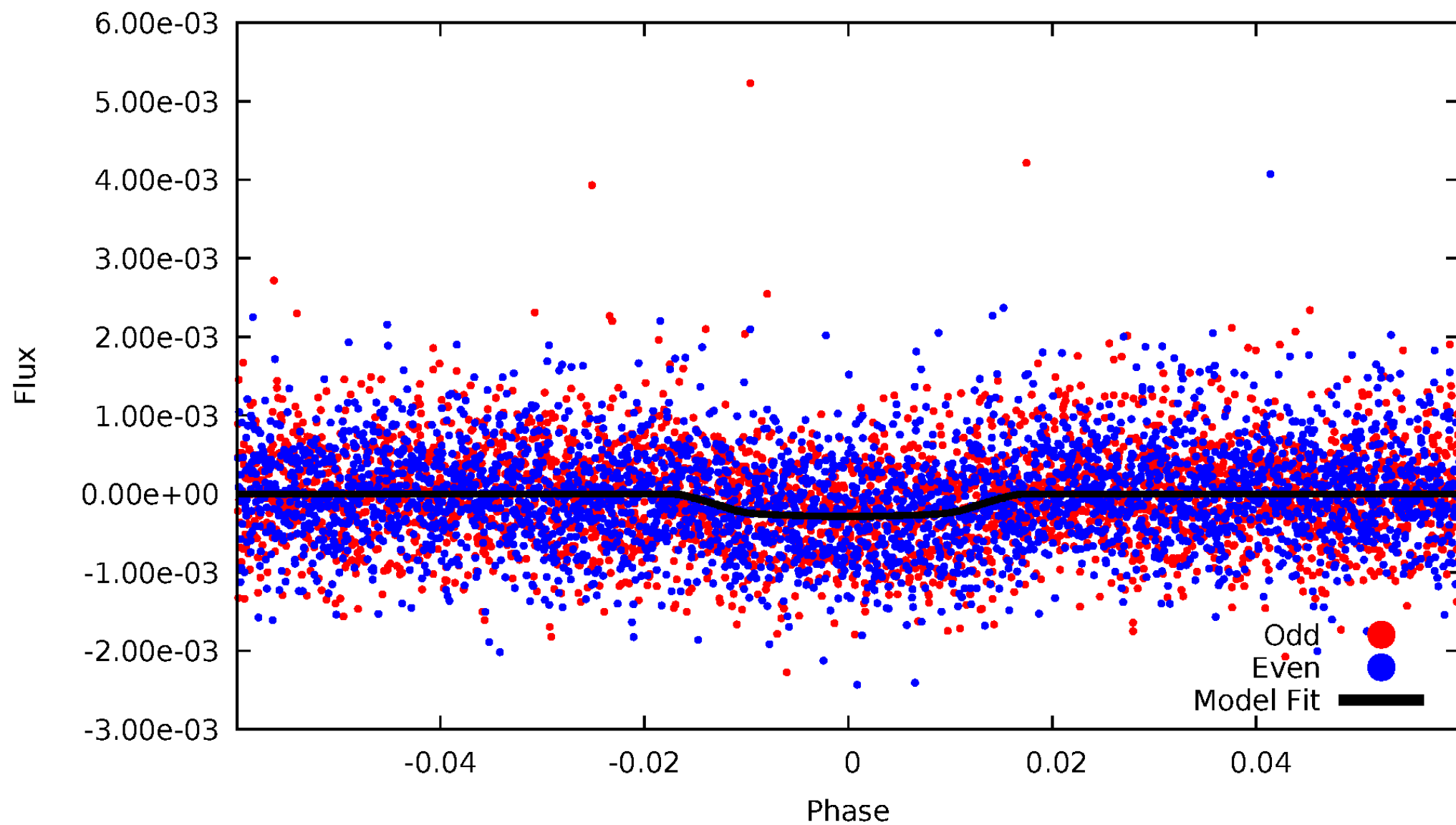
TCE 008081905-01





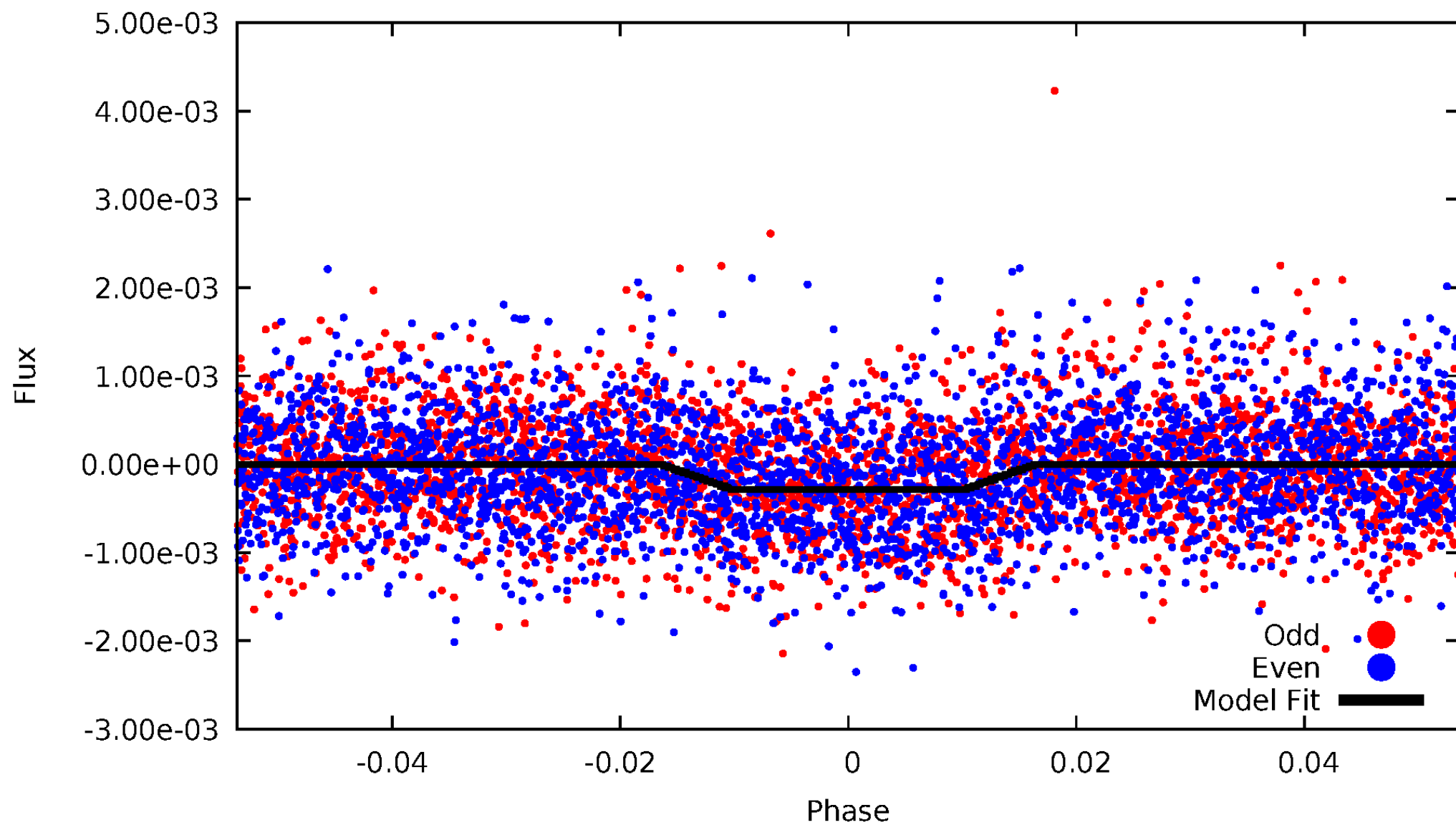
# DV Odd/Even

TCE 008081905-01



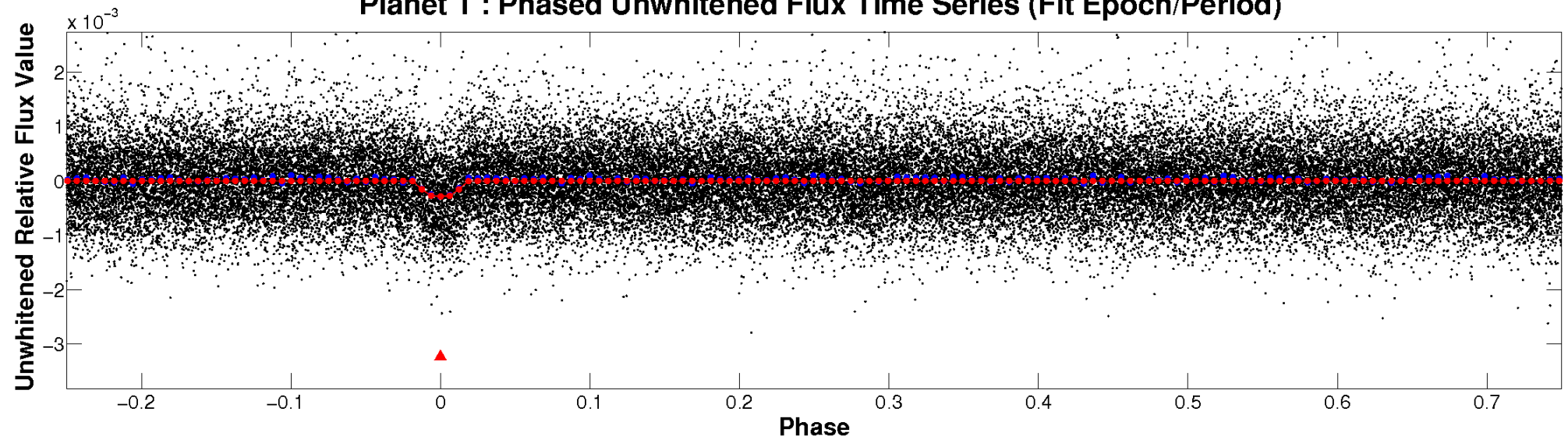
# ALT Odd/Even

TCE 008081905-01

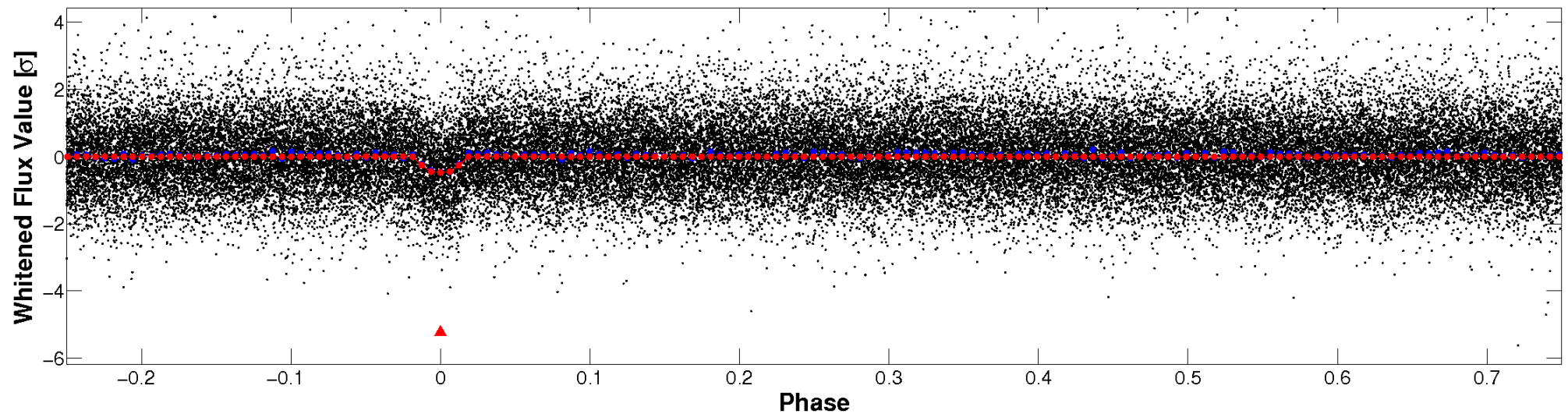


# Non-Whitened Vs. Whitened Light Curve

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

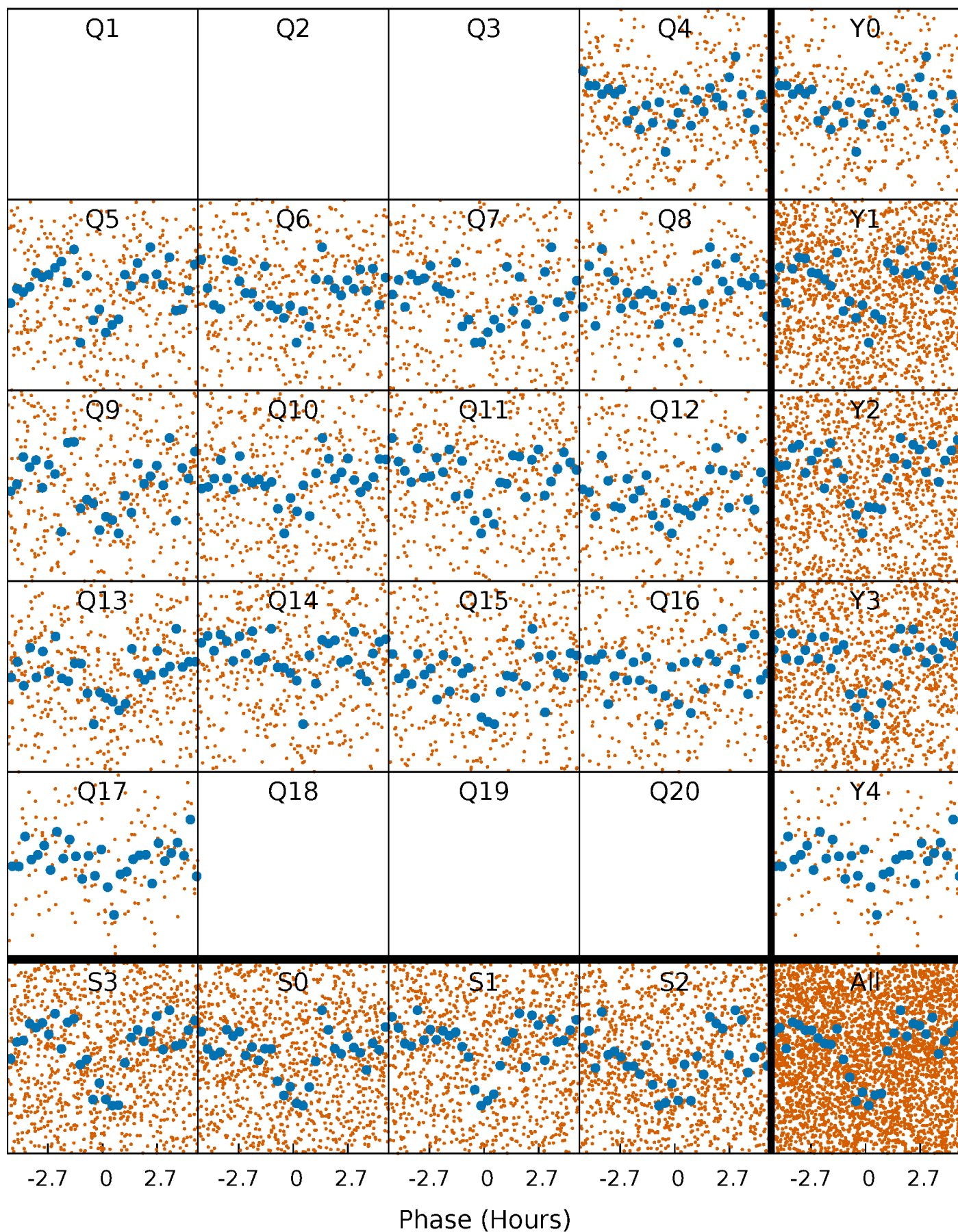


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

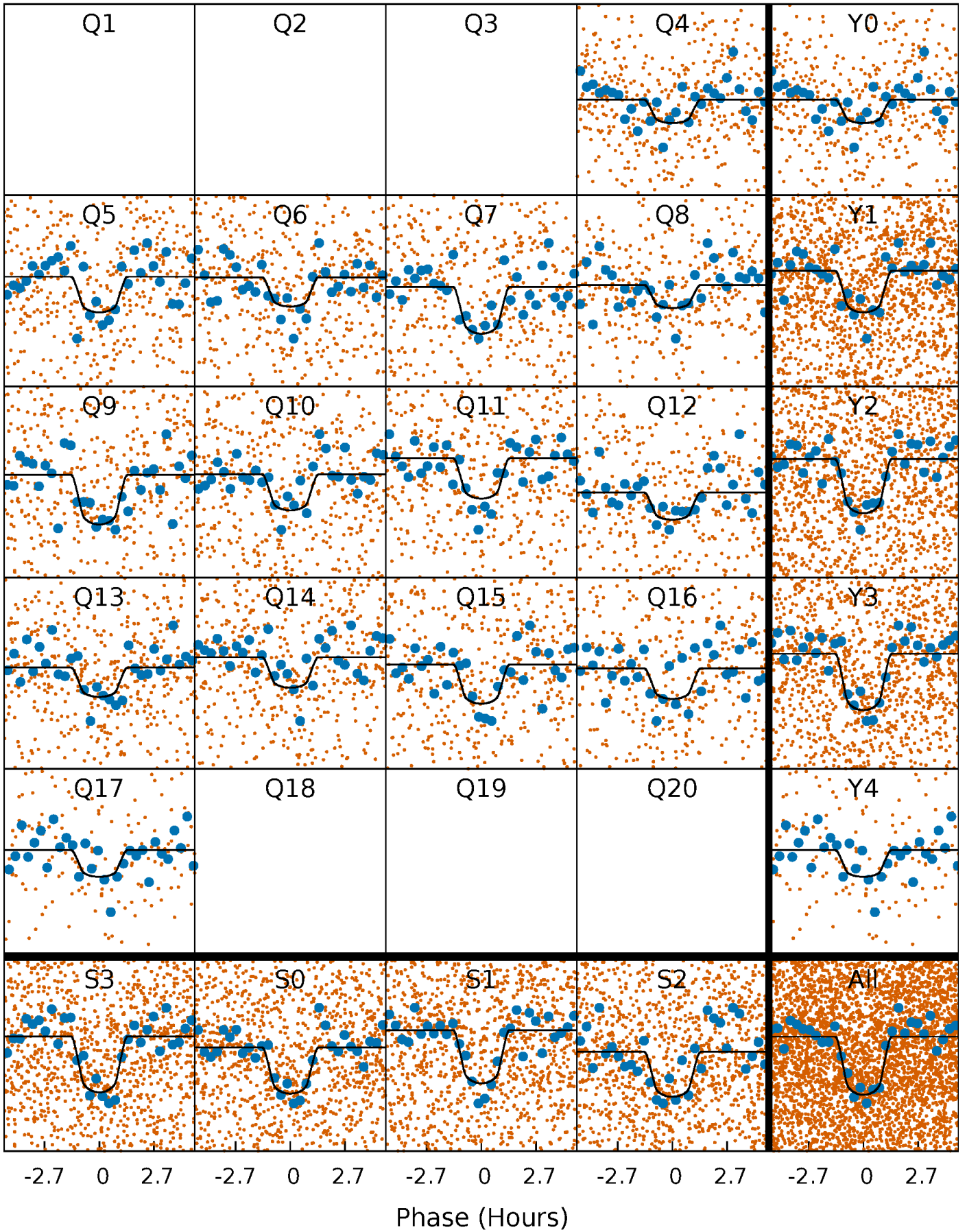
TCE 008081905-01 P= 3.276422 Days  $T_0=131.987841$  (BKJD)





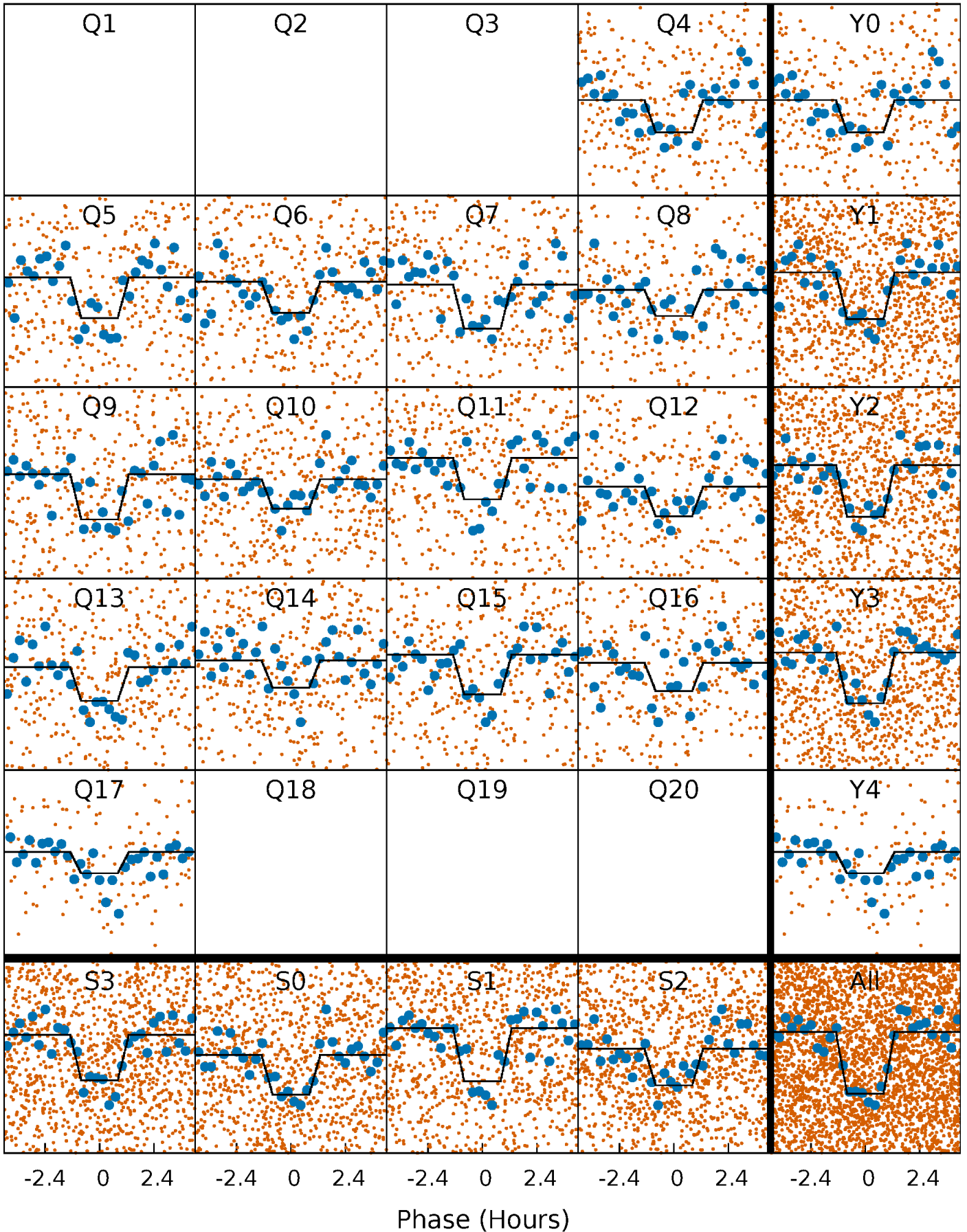
# DV Quarter-Phased Transit Curves

TCE 008081905-01 P= 3.276422 Days  $T_0=131.987841$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

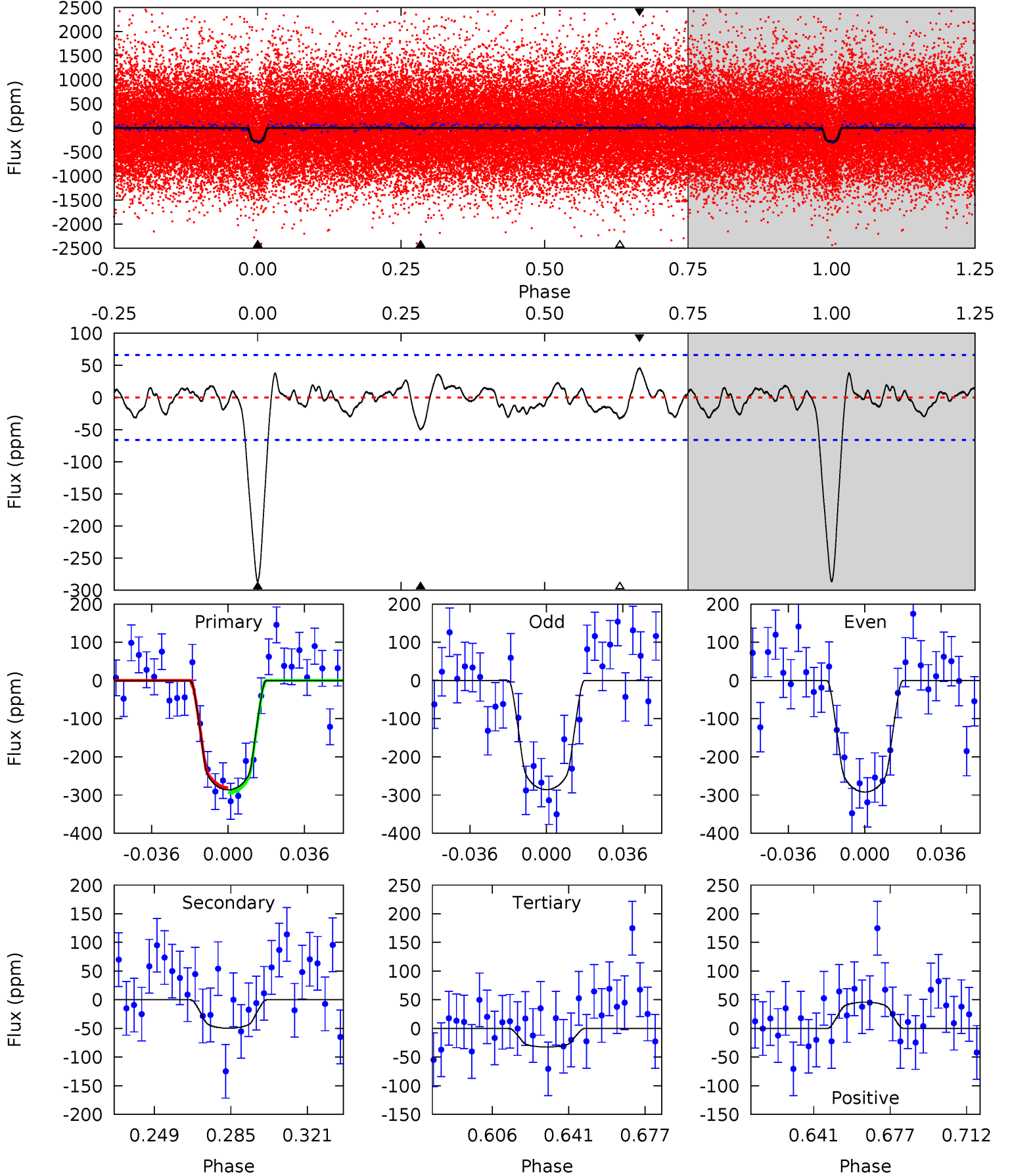
TCE 008081905-01 P= 3.276445 Days  $T_0=131.982410$  (BKJD)



# DV Model-Shift Uniqueness Test

008081905-01, P = 3.276422 Days, E = 131.987841 Days

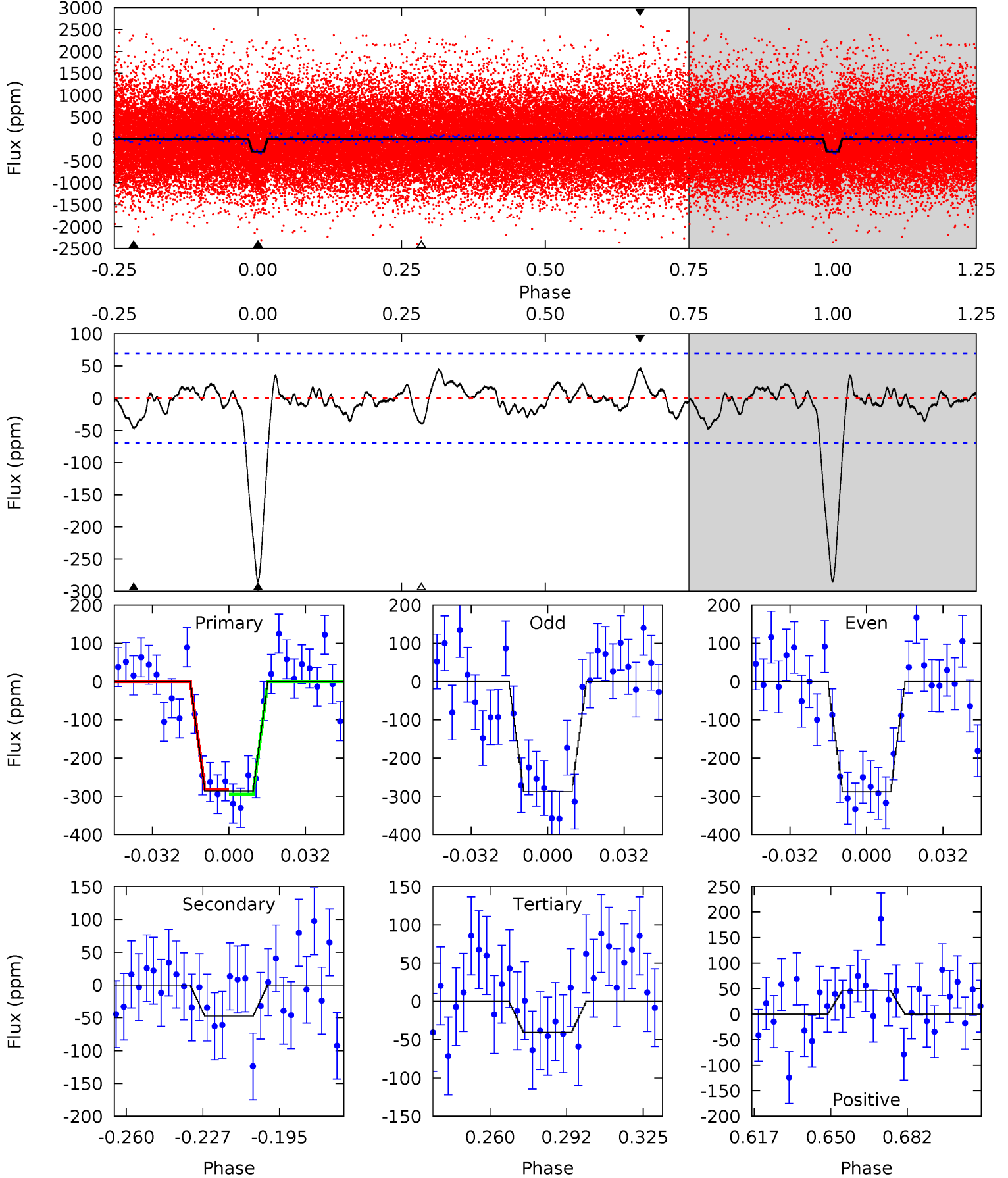
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.7	3.59	2.34	3.31	4.78	2.10	1.09	18.3	17.4	1.25	0.28	0.23	0.93	0.14	0.48



# Alt Model-Shift Uniqueness Test

008081905-01, P = 3.276445 Days, E = 131.982410 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
19.7	3.26	2.76	3.20	4.80	2.14	1.12	17.0	16.5	0.50	0.05	0.02	0.94	0.14	0.45





### Stellar Parameters For KIC 008081905

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5812^{+162}_{-203}$	$4.504^{+0.039}_{-0.208}$	$0.210^{+0.200}_{-0.300}$	$0.963^{+0.289}_{-0.096}$	$1.079^{+0.112}_{-0.137}$	$1.701^{+0.348}_{-0.887}$
	+3%/-3%	+1%/-5%	+95%/-143%	+30%/-10%	+10%/-13%	+20%/-52%
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 008081905-01 / KOI 2619.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-50 \pm 14$	$2.02^{+0.89}_{-0.76}$	$1713^{+121}_{-82}$	$3884^{+860}_{-446}$	$12^{+22}_{-6}$
Alt.	$-47 \pm 15$	$1.83^{+0.90}_{-0.79}$	$1709^{+118}_{-80}$	$3988^{+1020}_{-549}$	$14^{+33}_{-8}$

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

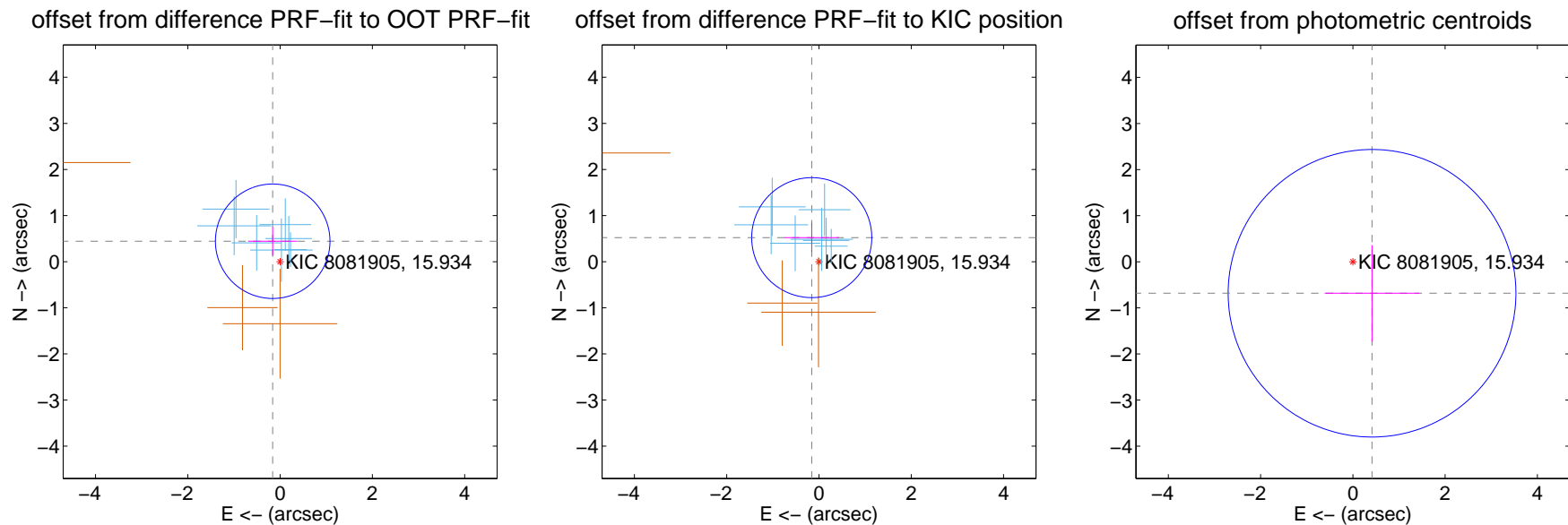
## DV Centroid Data

Supplemental centroid analysis for 008081905-01. Kepler magnitude: 15.93. Transit SNR 15.68

There are 7 quarters with good PRF difference image offsets

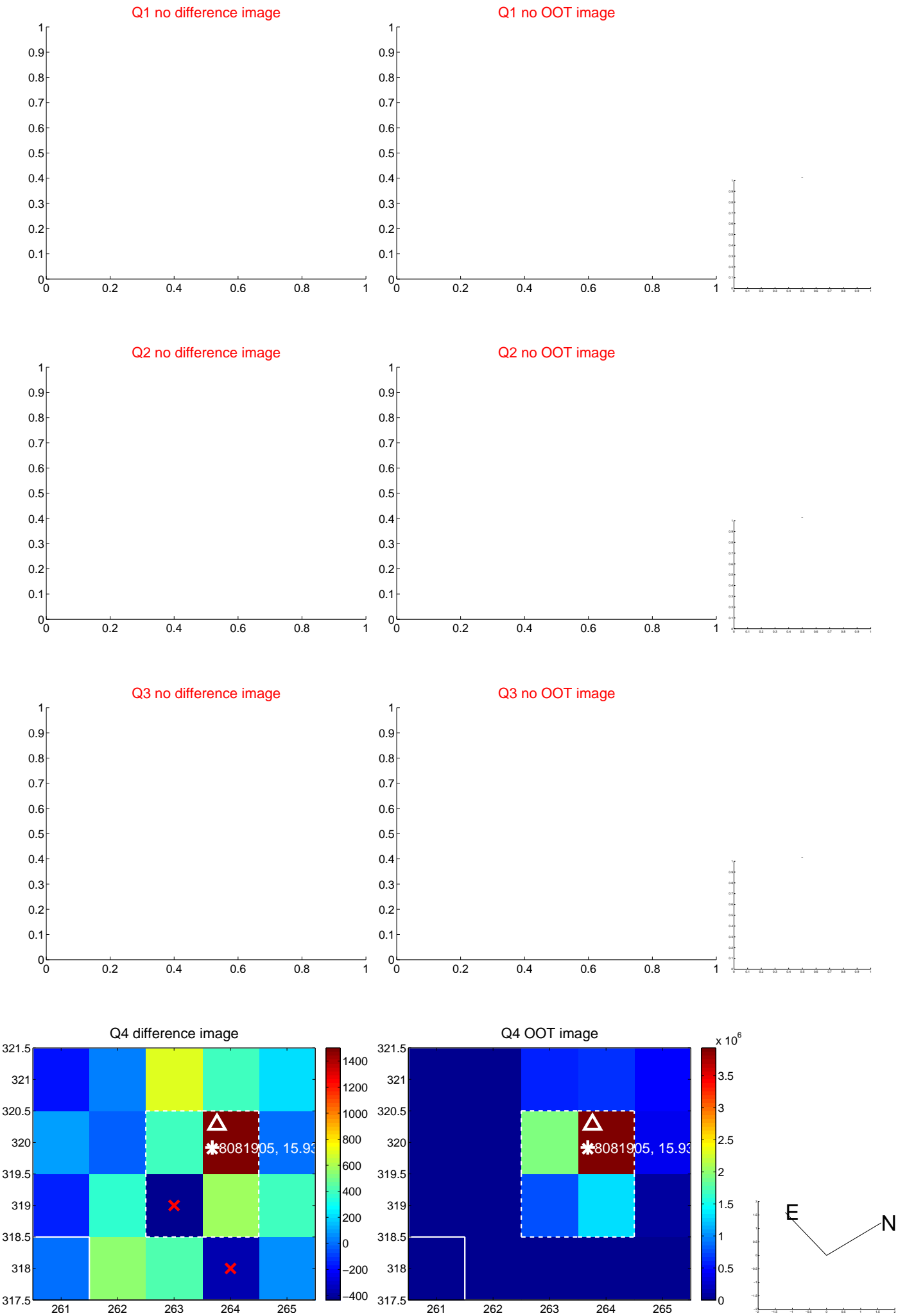
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.472 \pm 0.414$	1.14	$0.161 \pm 0.532$	$0.444 \pm 0.310$
PRF-fit source offset from KIC position	$0.545 \pm 0.434$	1.26	$0.157 \pm 0.593$	$0.522 \pm 0.316$
photometric centroid source offset	$0.80 \pm 1.04$	0.77	$-0.42 \pm 1.03$	$-0.68 \pm 1.05$

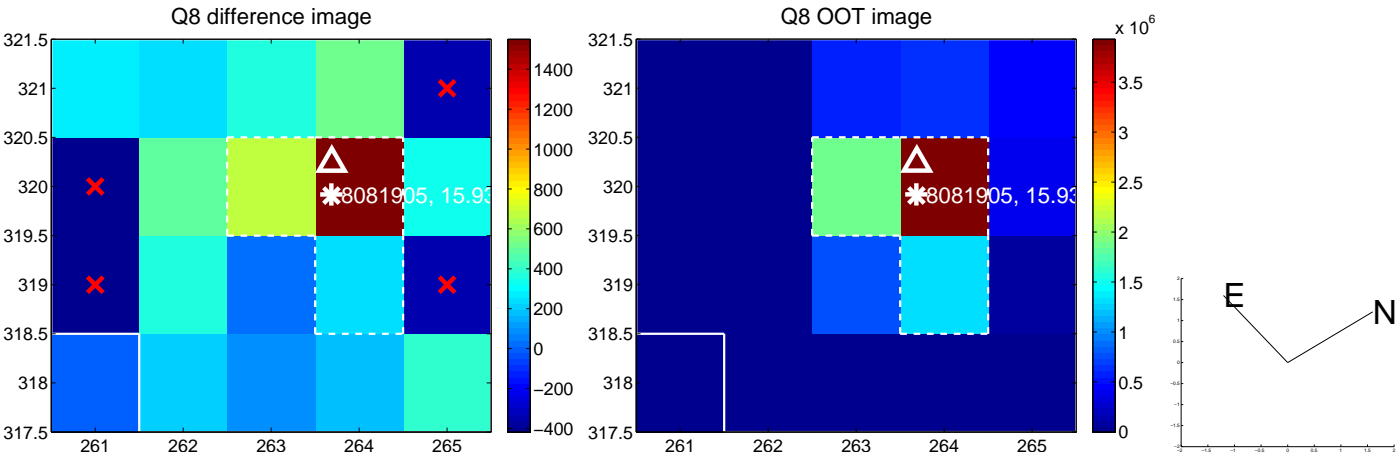
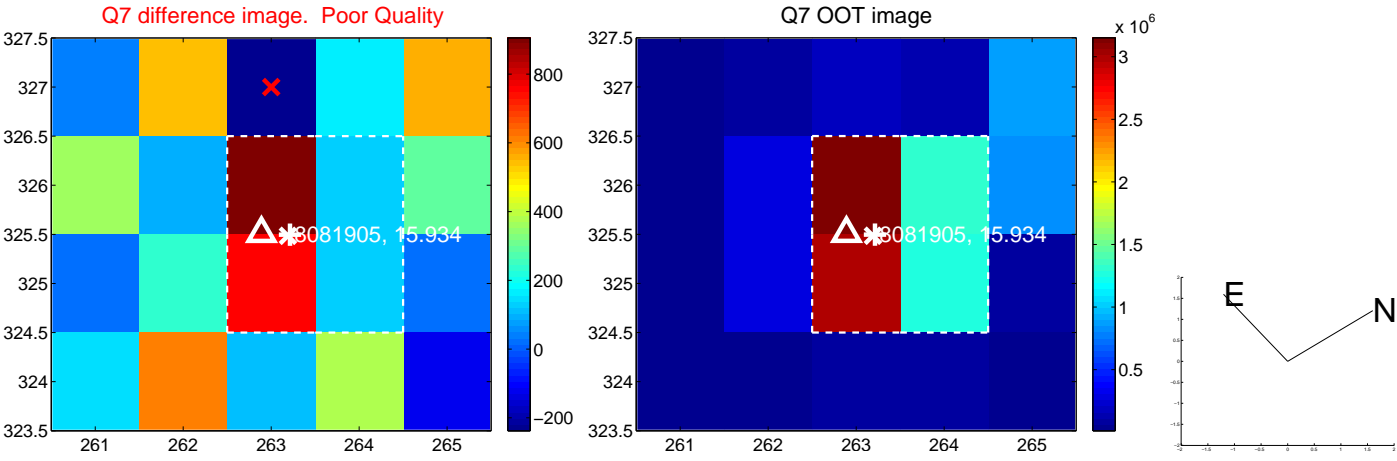
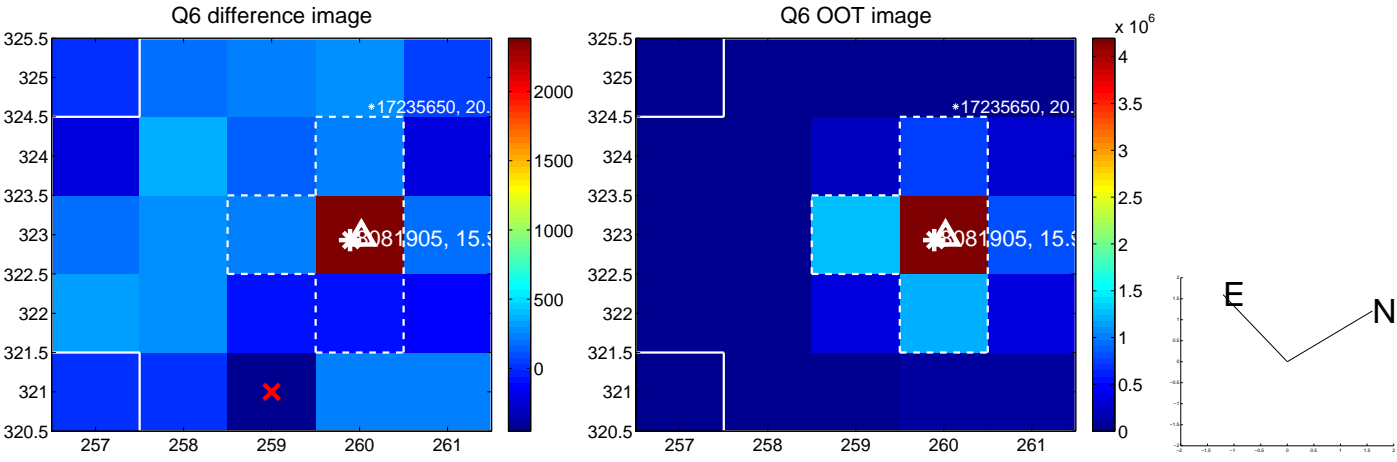
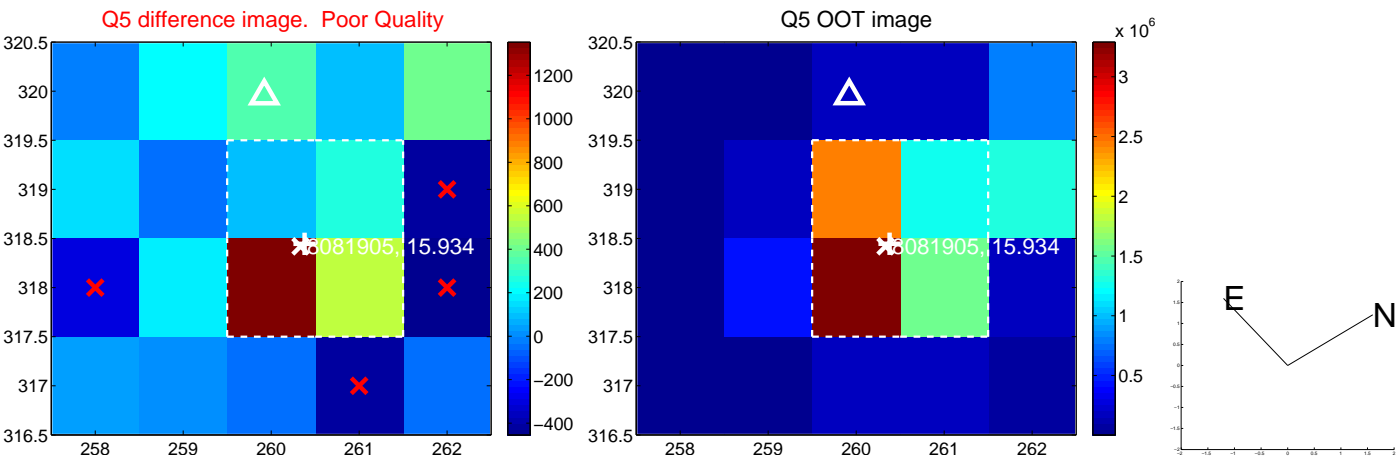


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

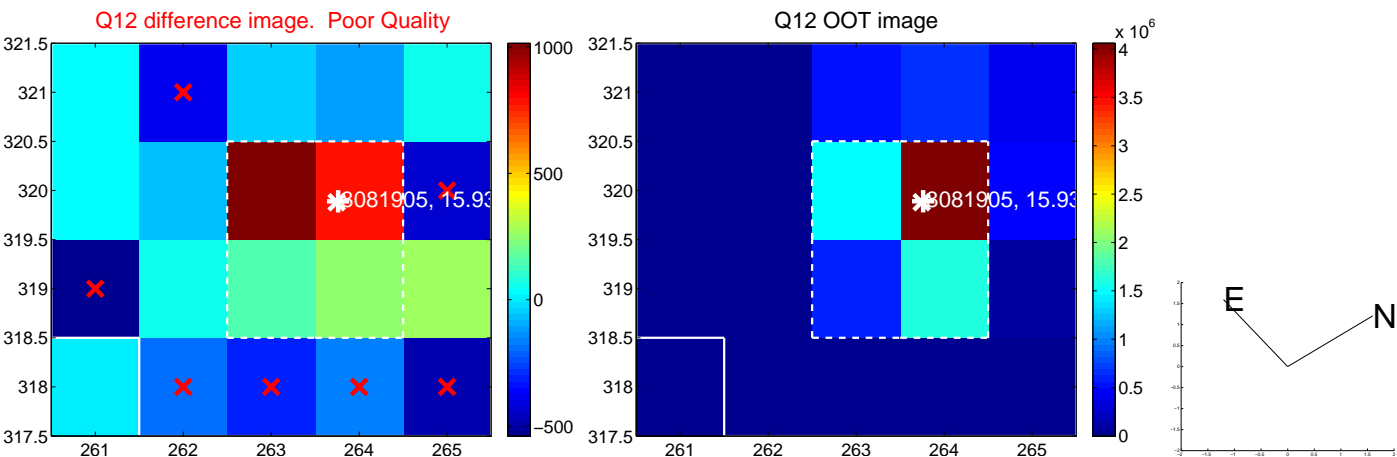
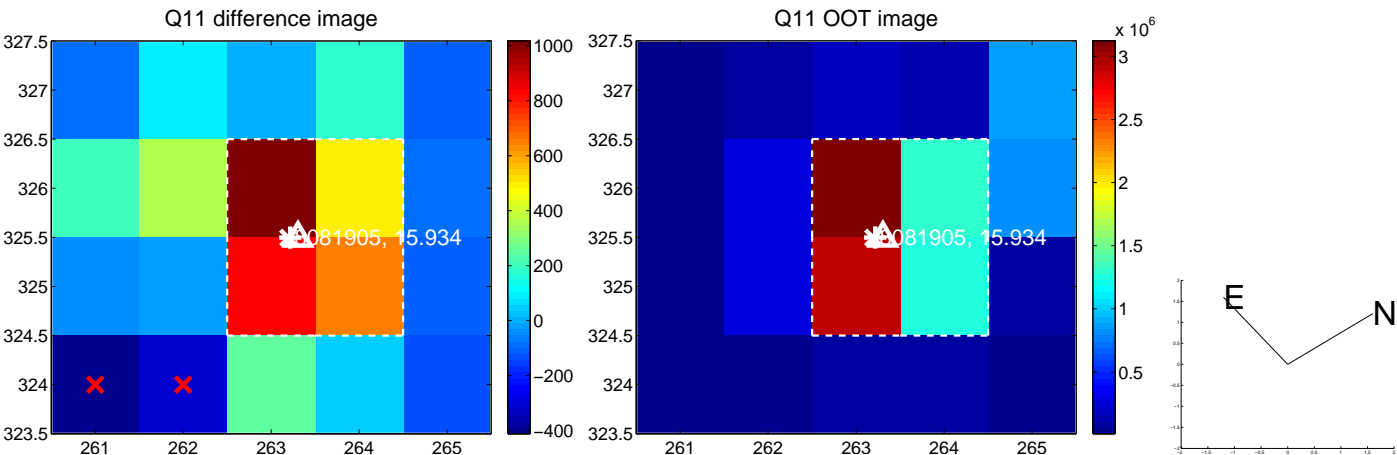
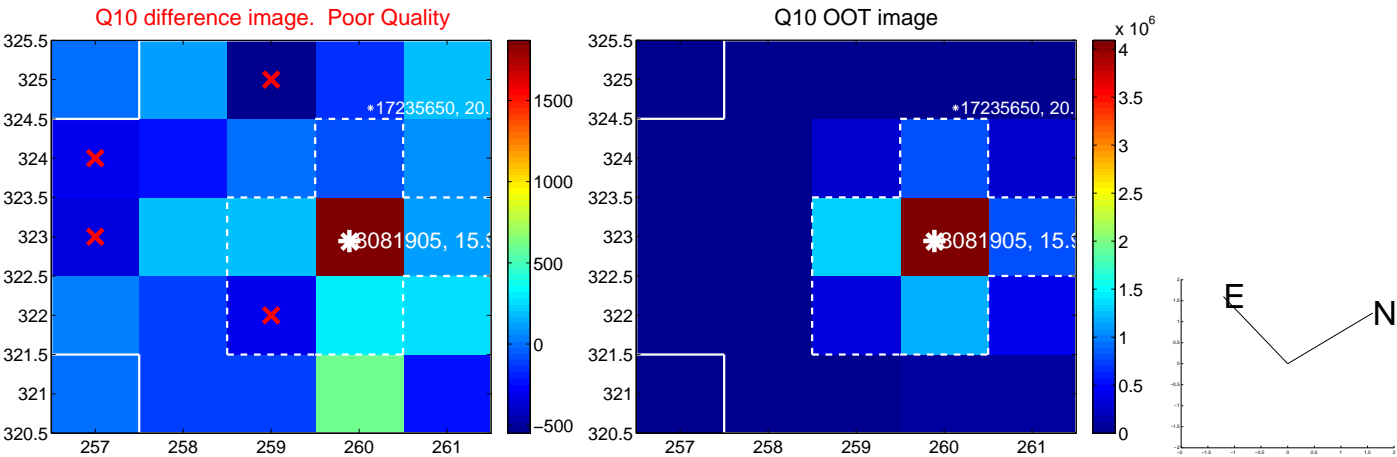
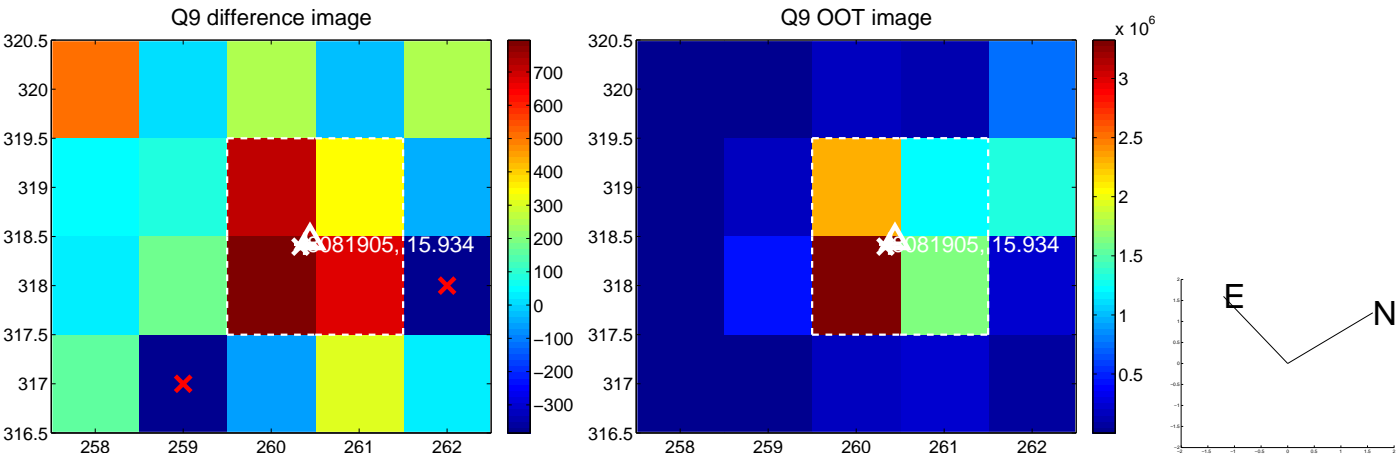


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

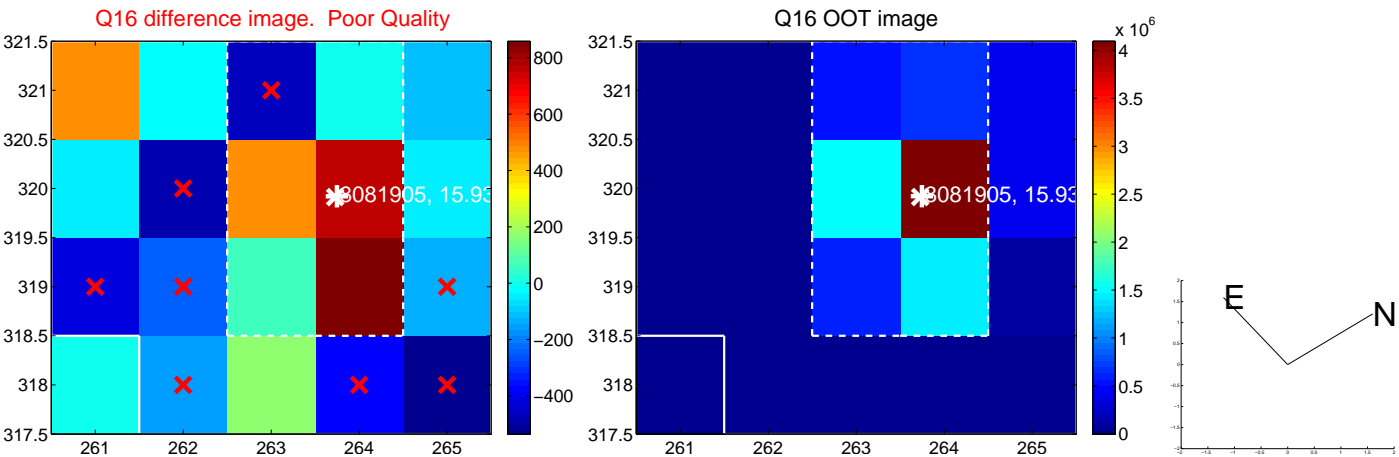
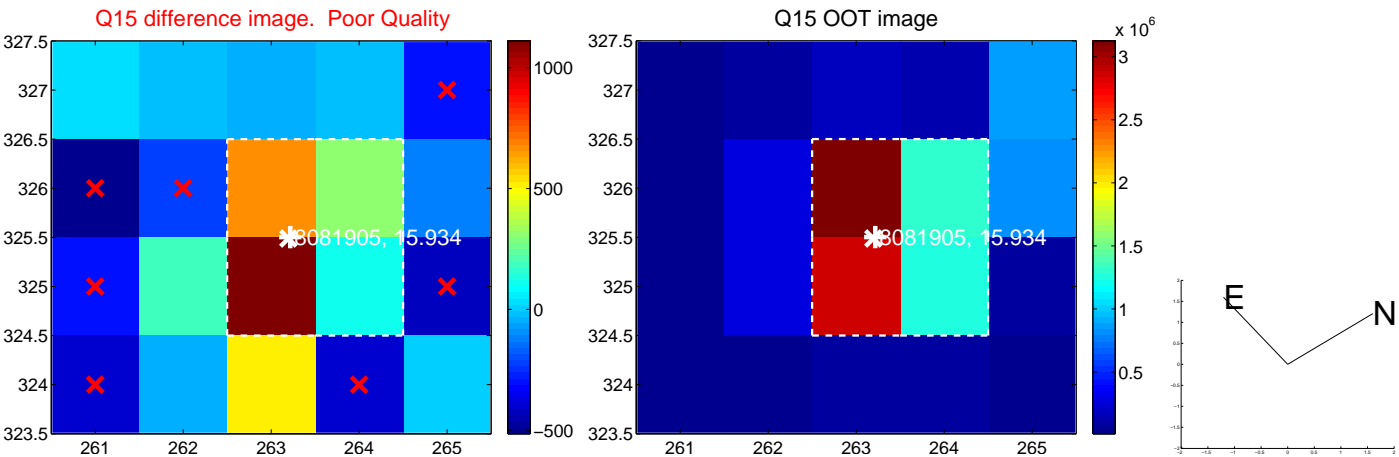
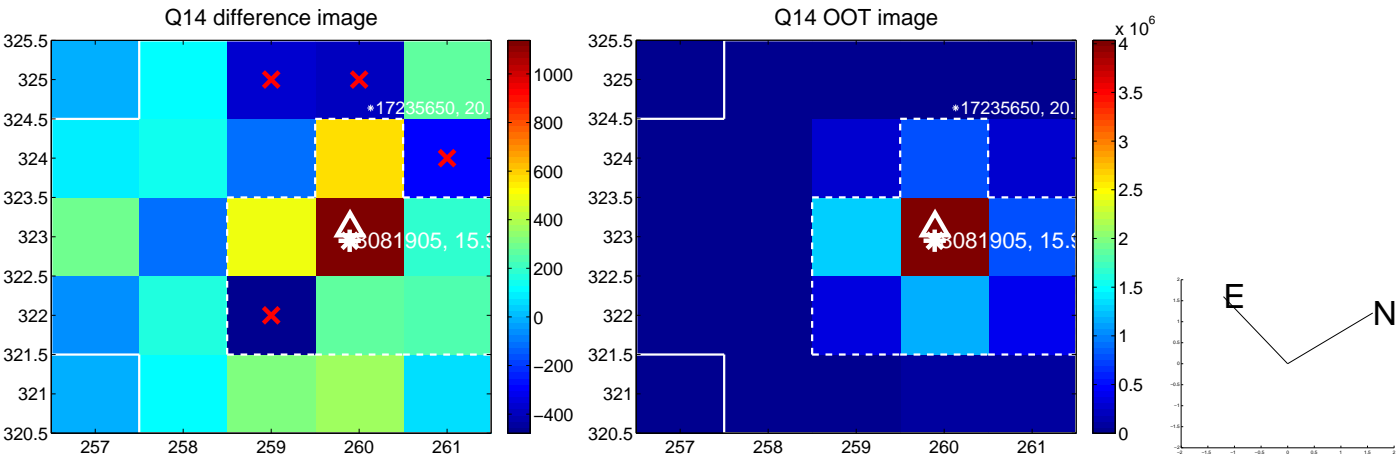
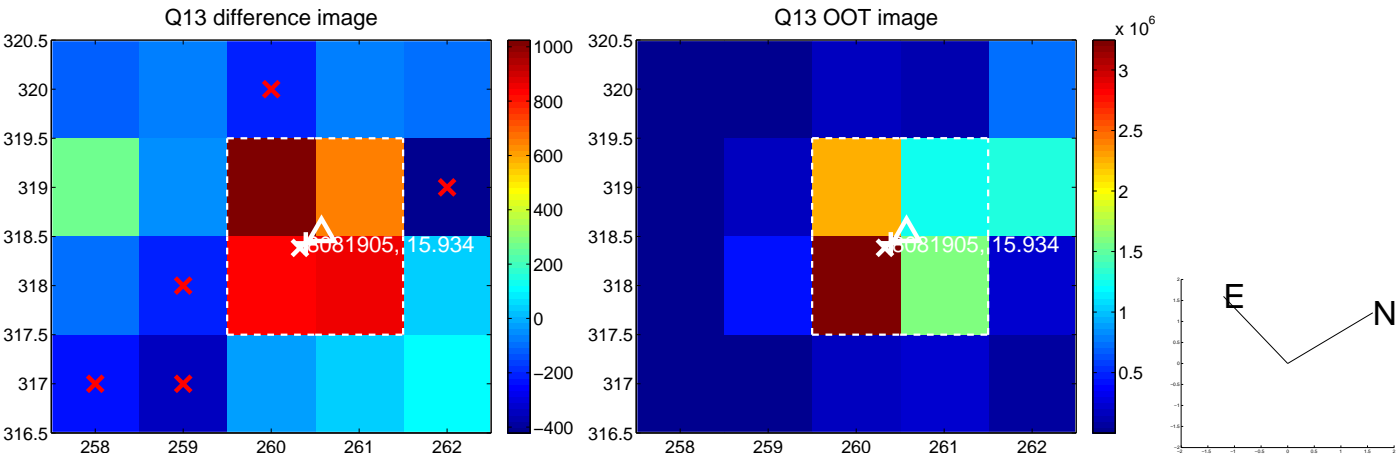




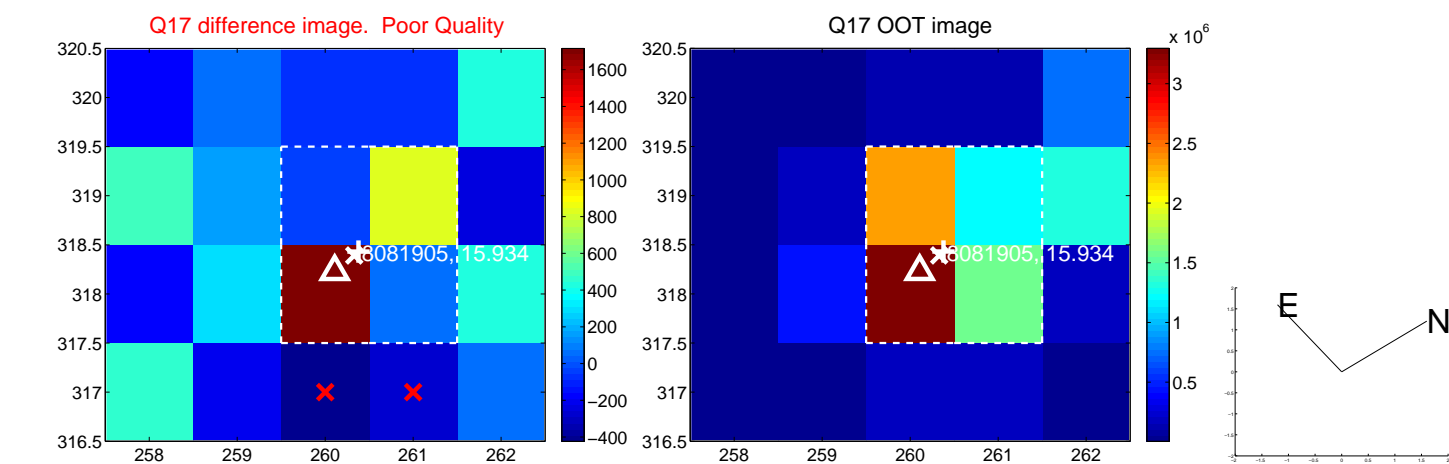
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



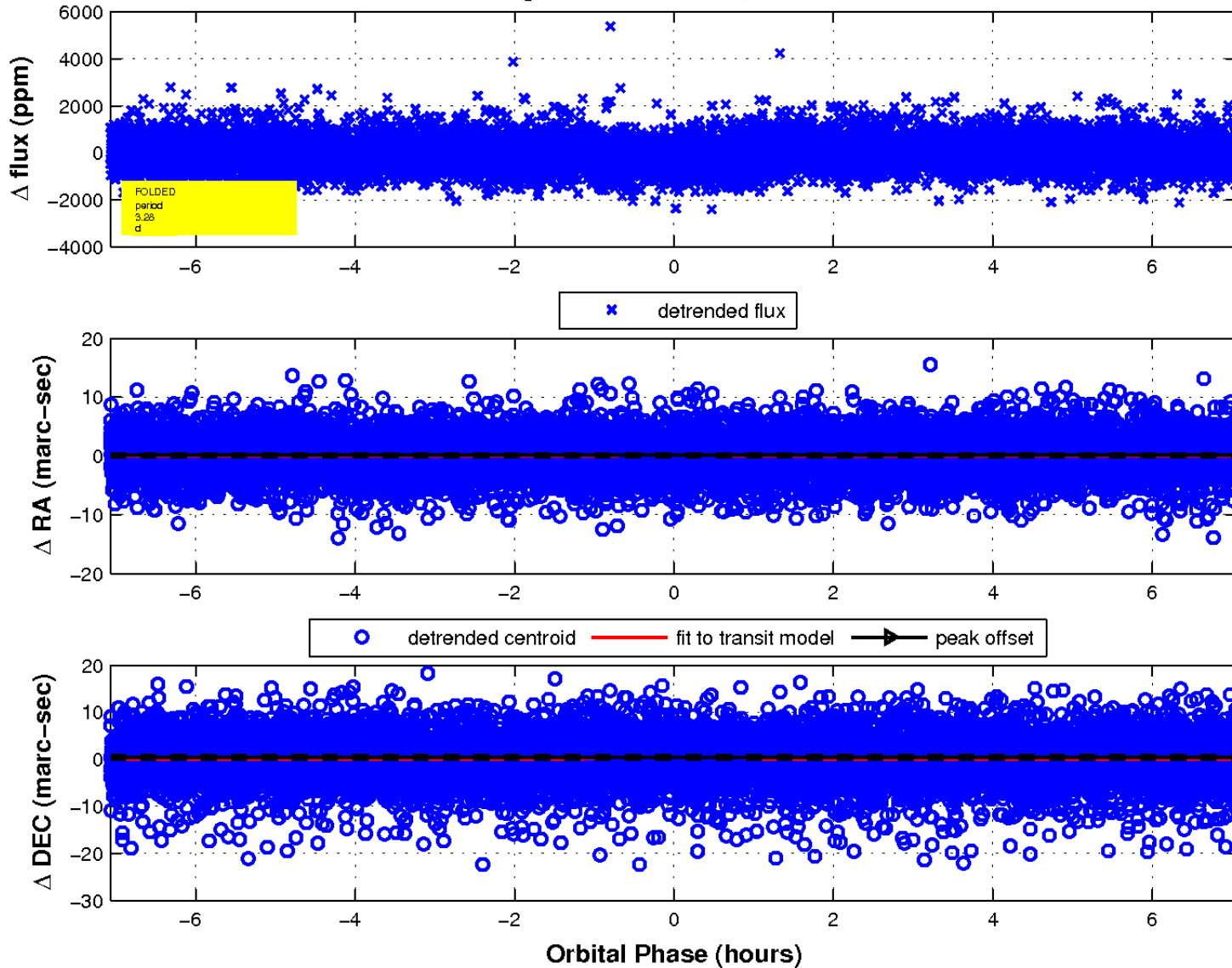
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

