

# KIC 012061605

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
012061605-01	OBS	No	8.189643	135.246716	33.3	33.698	8.0	10.6	0.94	5975	0.67	162.21

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012061605-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—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.

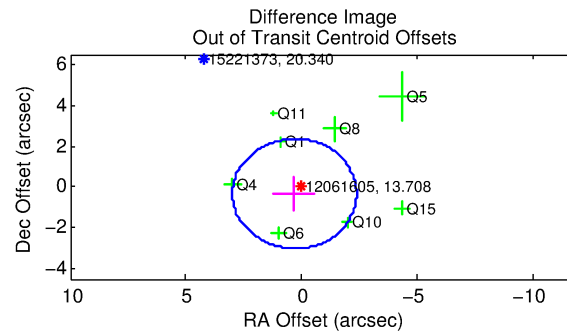
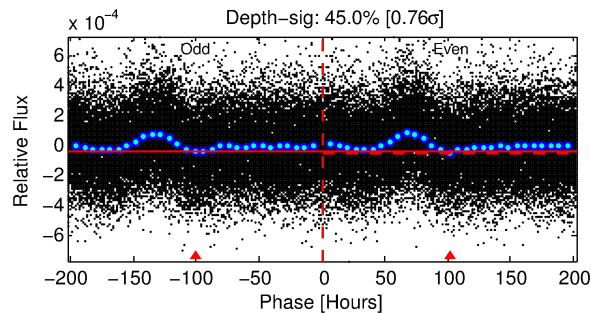
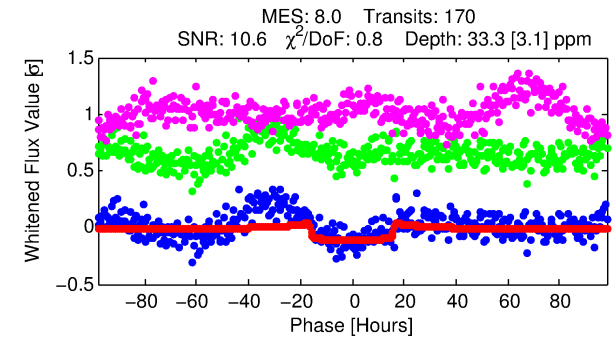
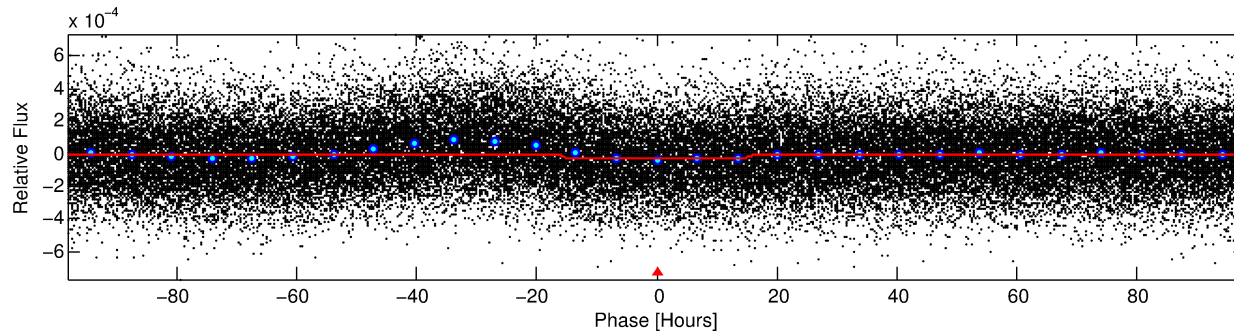
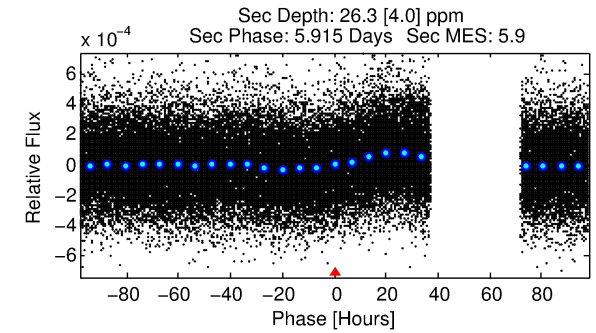
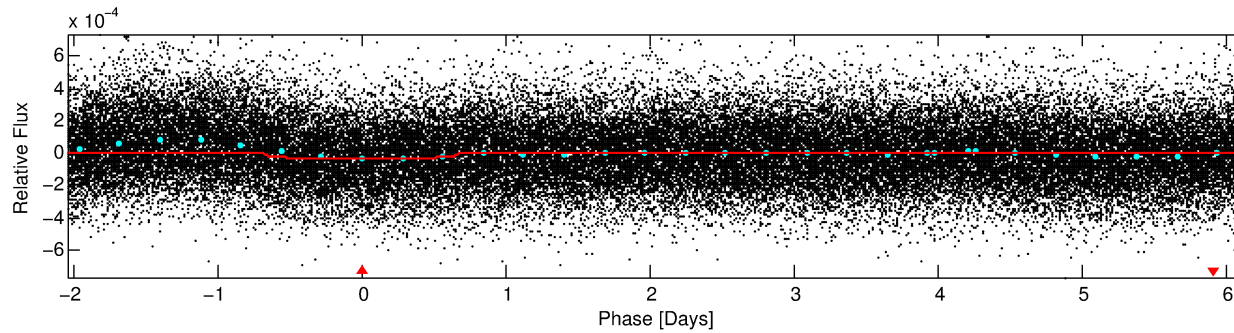
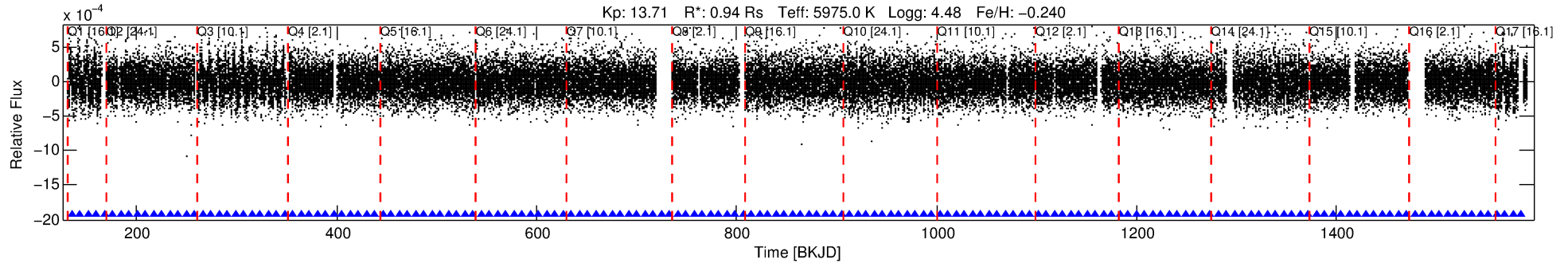
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 012061605-01

No Significant Match Found

# DV One-Page Summary

KIC: 12061605 Candidate: 1 of 1 Period: 8.190 d



## DV Fit Results:

Period = 8.18964 [0.00035] d  
Epoch = 135.2467 [0.0350] BKJD  
Rp/R\* = 0.0065 [0.0006]  
a/R\* = 1.18 [0.13]  
b = 0.94 [0.05]  
Seff = 162.21 [63.68]  
Teq = 910 [89] K  
Rp = 0.66 [0.20] Re  
a = 0.0785 [0.0198] AU  
Ag = 202.13 [89.12] [2.26σ]  
Teffp = 5305 [348] K [12.22σ]

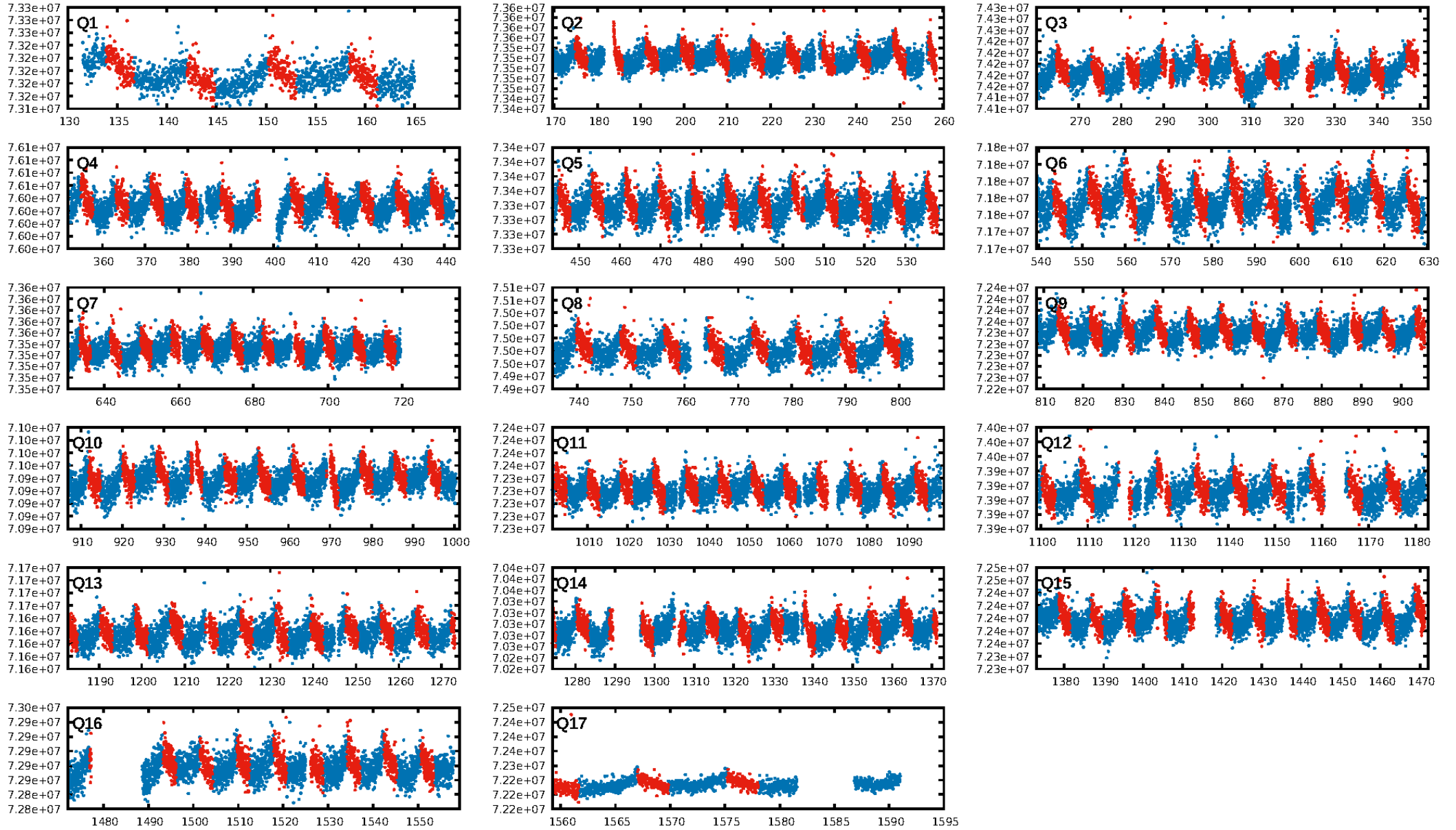
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 100.0%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: 4.18e-15  
RollingBand-fgt: 1.00 [163/163]  
GhostDiagnostic-chr: 2.968  
Centroid-sig: 82.1%  
Centroid-so: 0.483 arcsec [0.46σ]  
OotOffset-rm: 0.447 arcsec [0.50σ]  
OotOffset-st: 2/2/2 [8]  
KicOffset-rm: 0.548 arcsec [0.63σ]  
KicOffset-st: 2/2/2 [8]  
DiffImageQuality-fgm: 0.38 [3/8]  
DiffImageOverlap-fno: 1.00 [17/17]

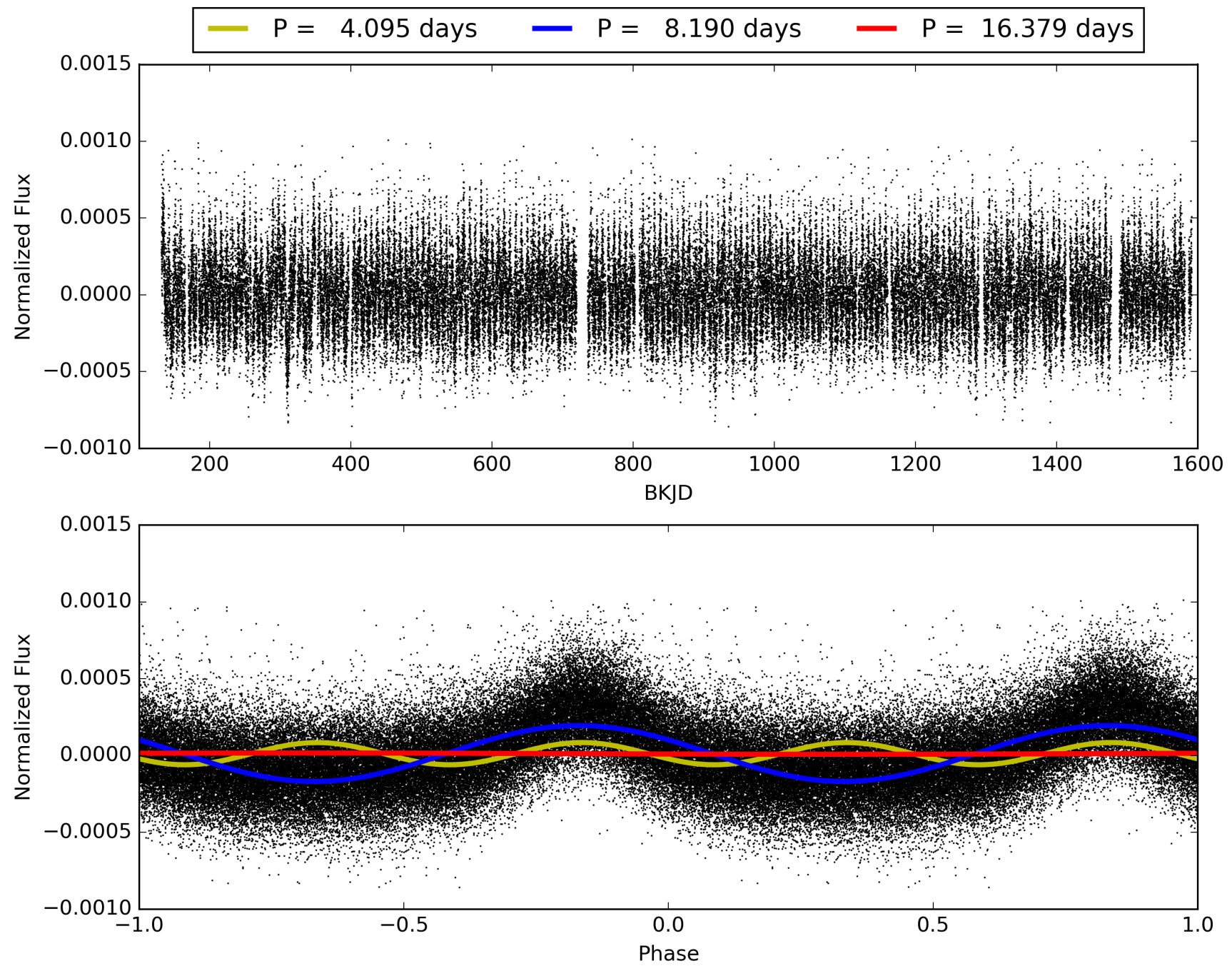
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:59:10 Z

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

# TCE 012061605-01, PDC Light Curves

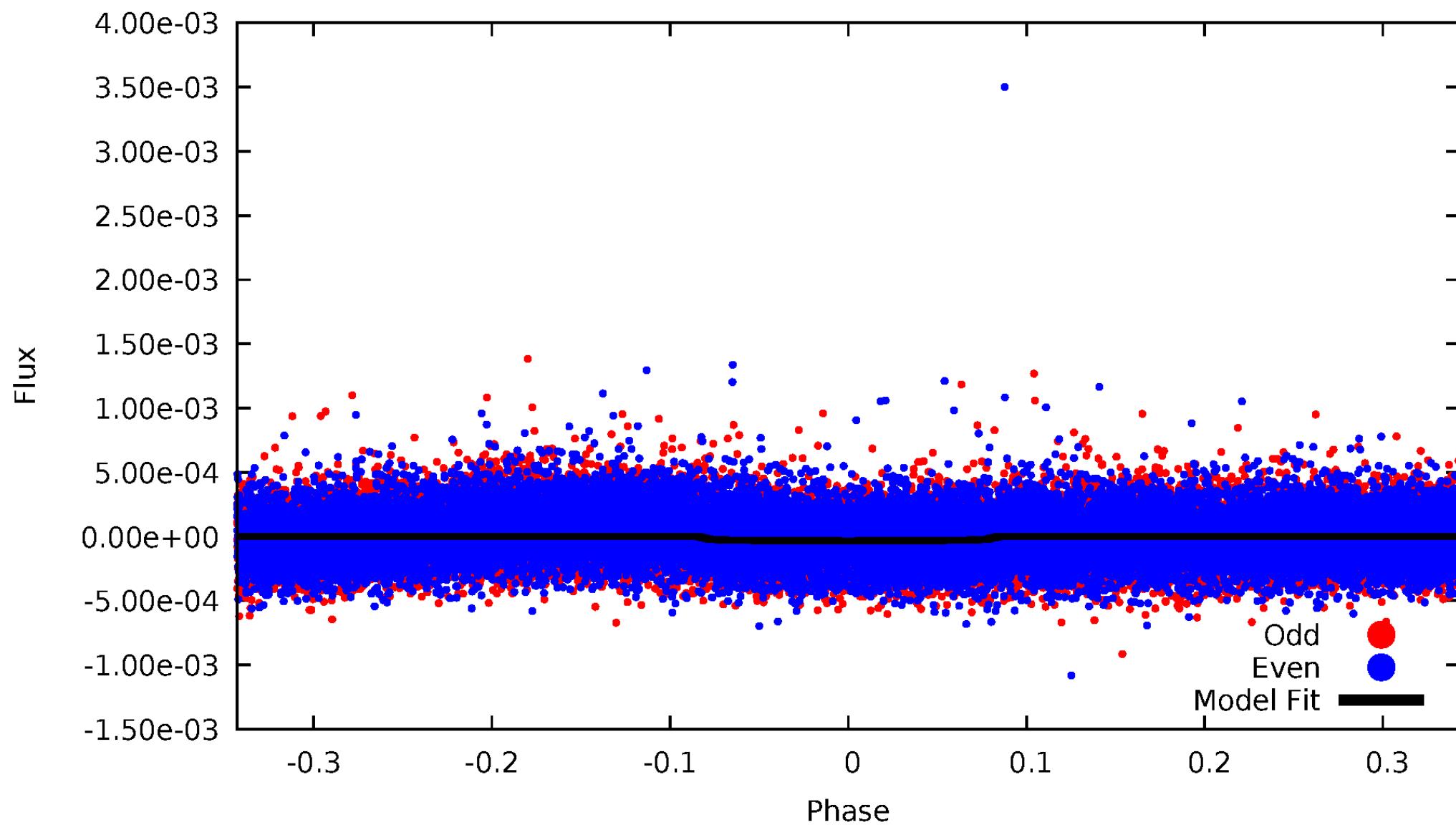


TCE 012061605-01



# DV Odd/Even

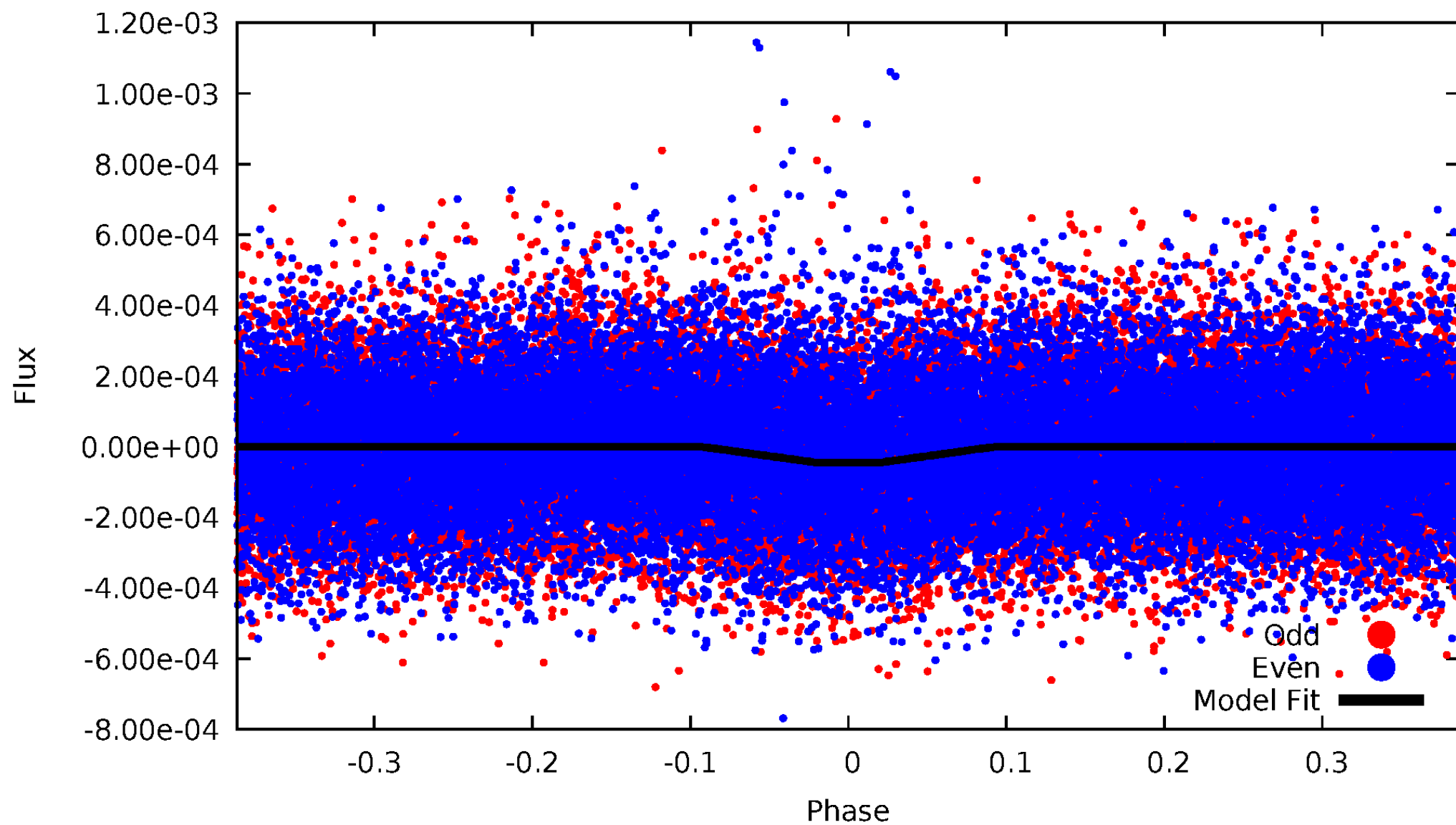
TCE 012061605-01



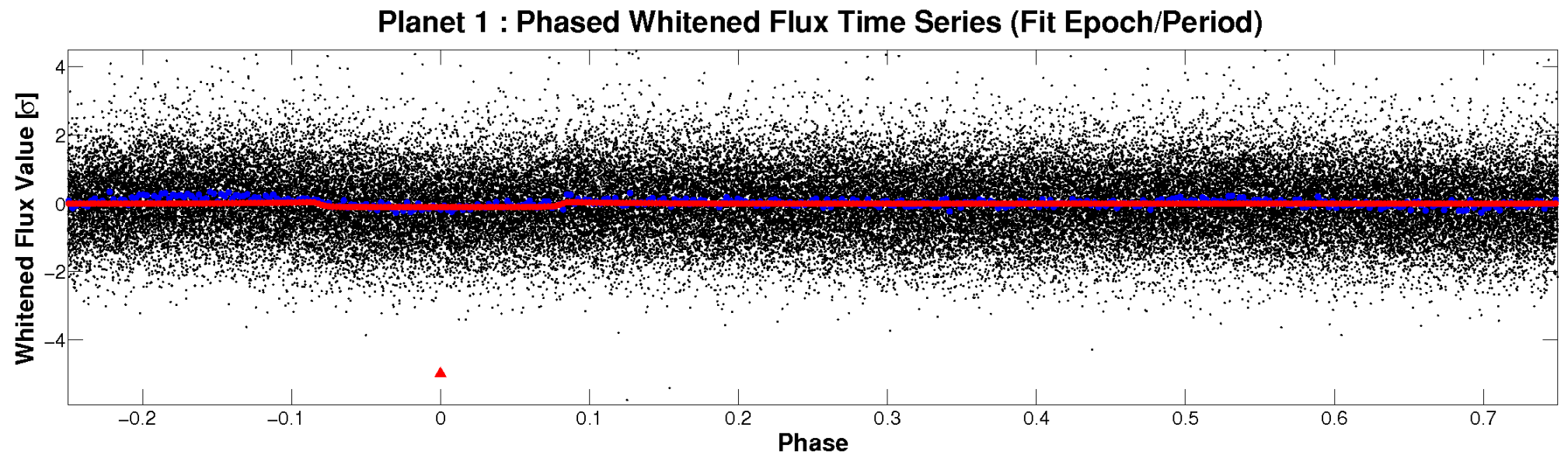
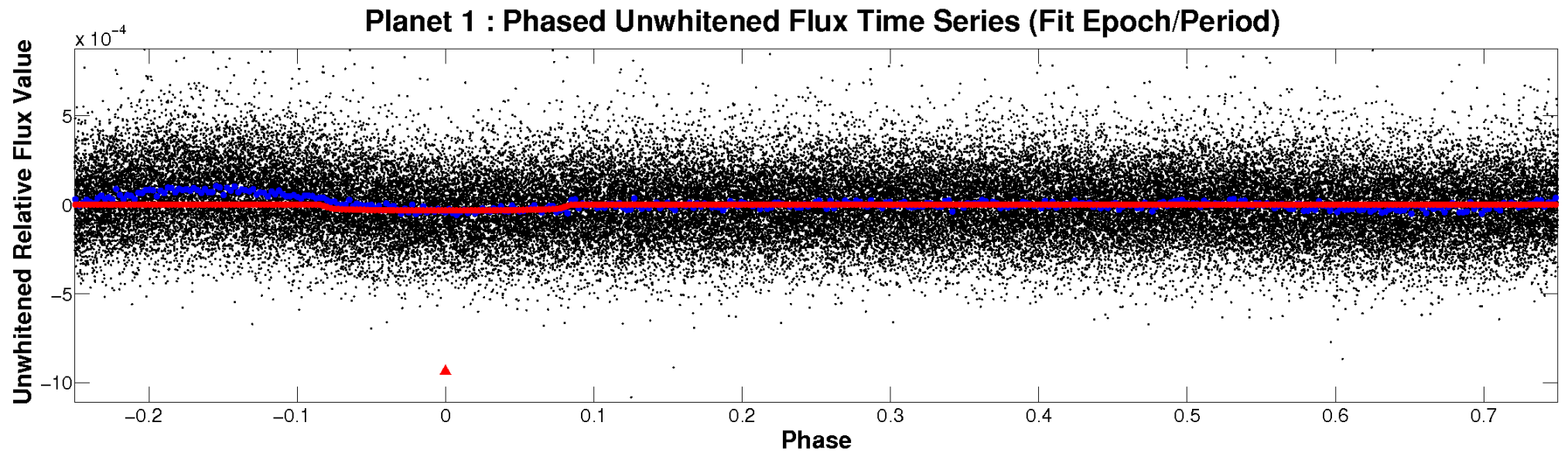


# ALT Odd/Even

TCE 012061605-01

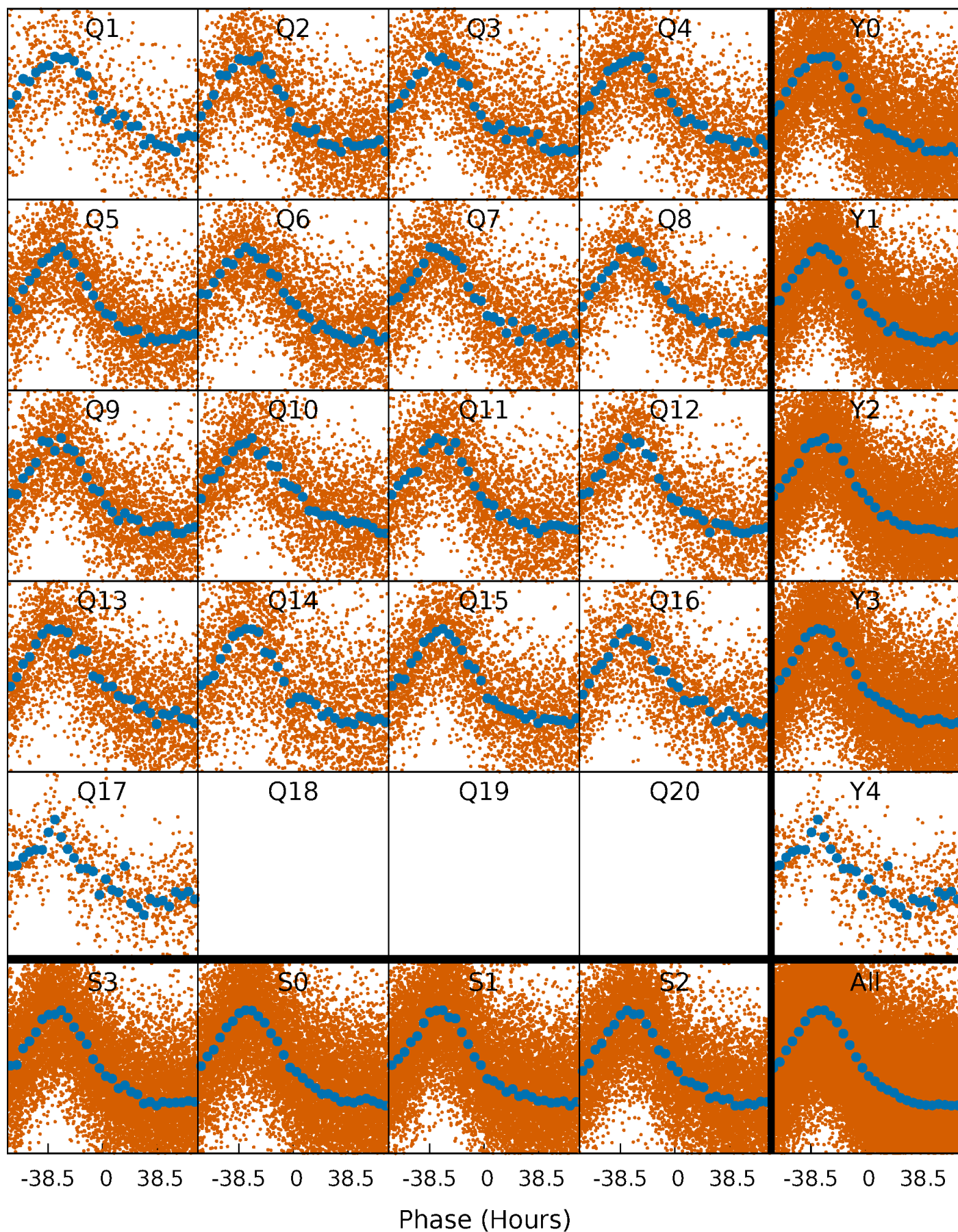


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

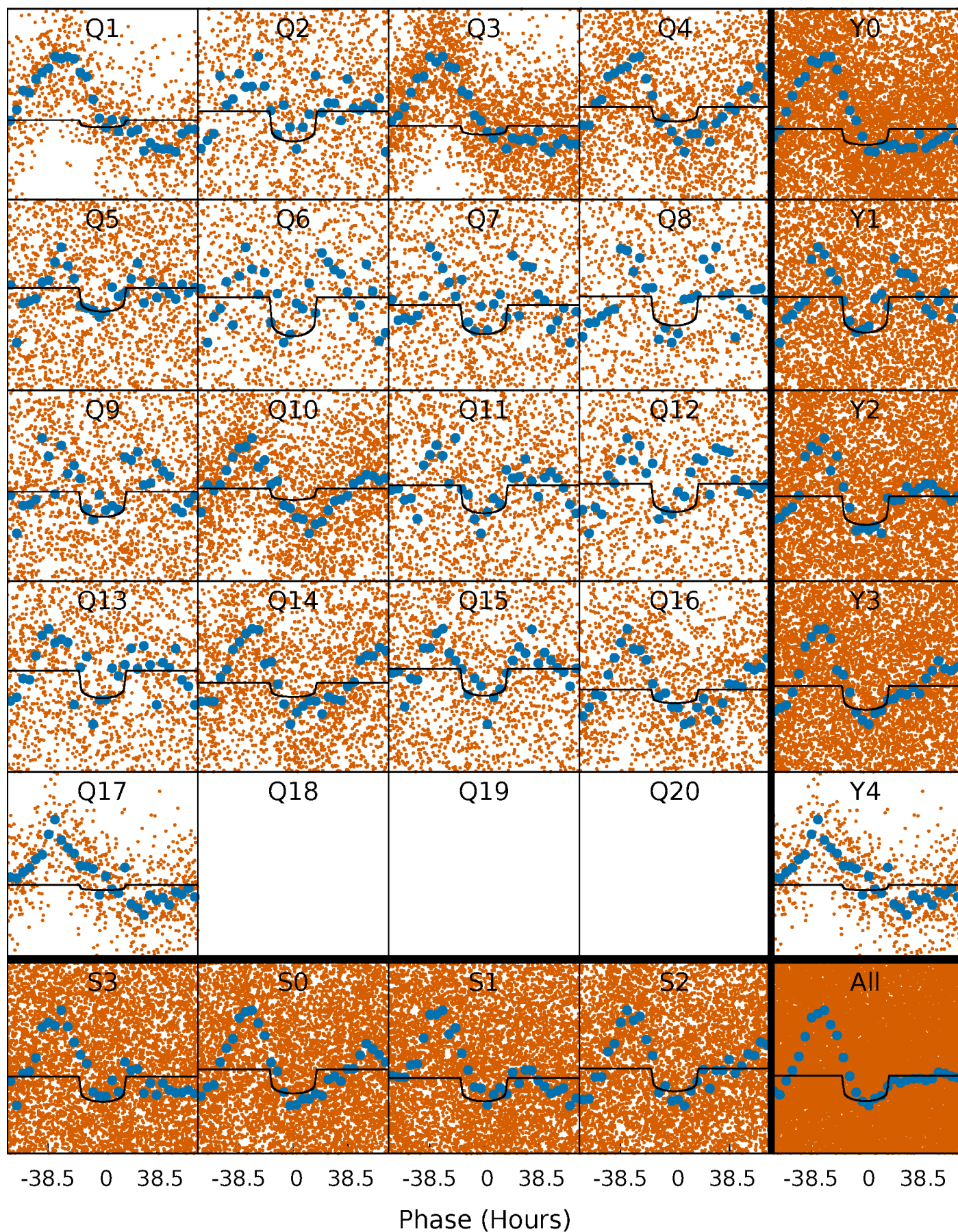
TCE 012061605-01 P= 8.189643 Days  $T_0=135.246716$  (BKJD)





# DV Quarter-Phased Transit Curves

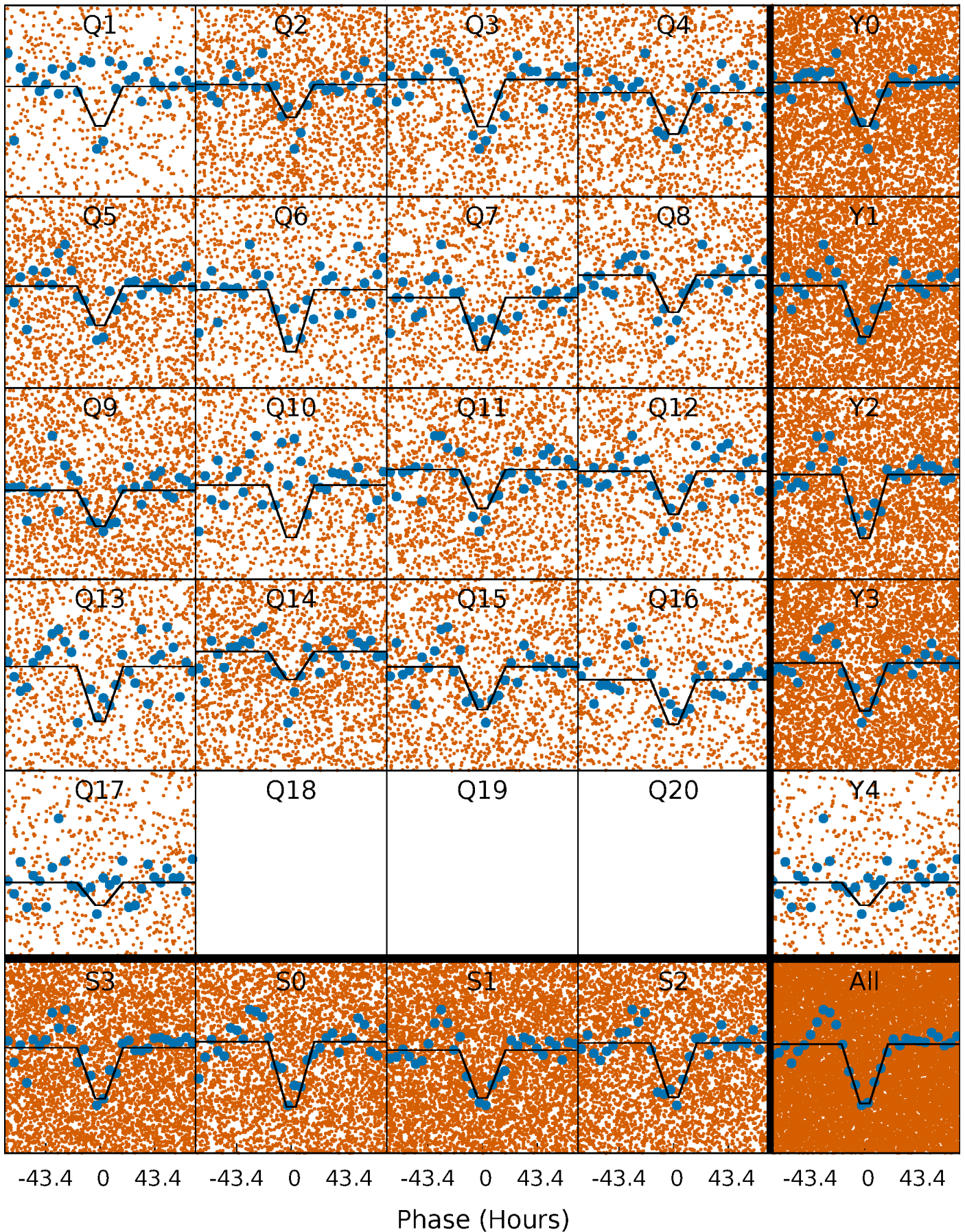
TCE 012061605-01 P= 8.189643 Days  $T_0=135.246716$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

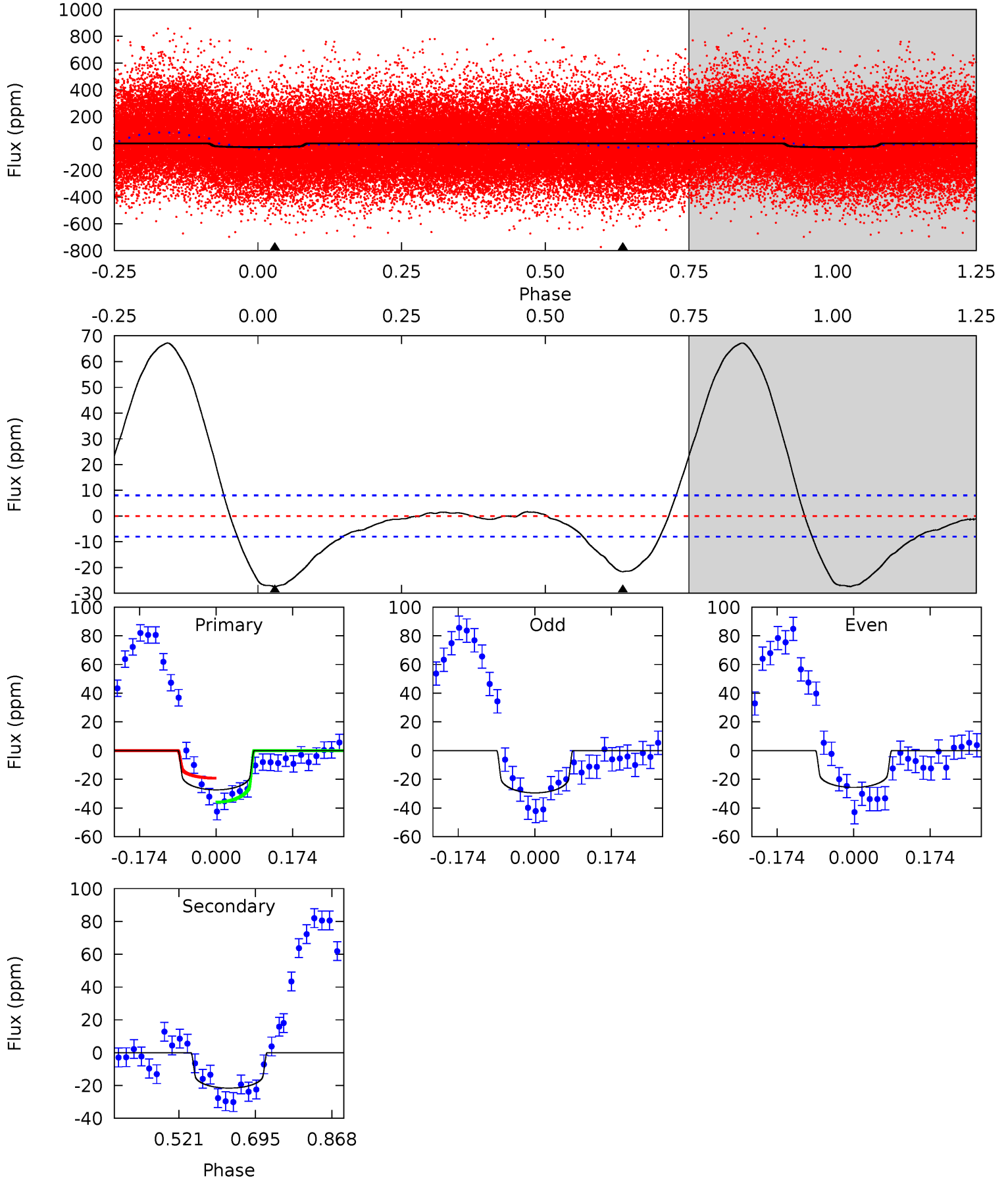
TCE 012061605-01 P= 8.189506 Days  $T_0=135.193635$  (BKJD)



# DV Model-Shift Uniqueness Test

012061605-01, P = 8.189643 Days, E = 127.057073 Days

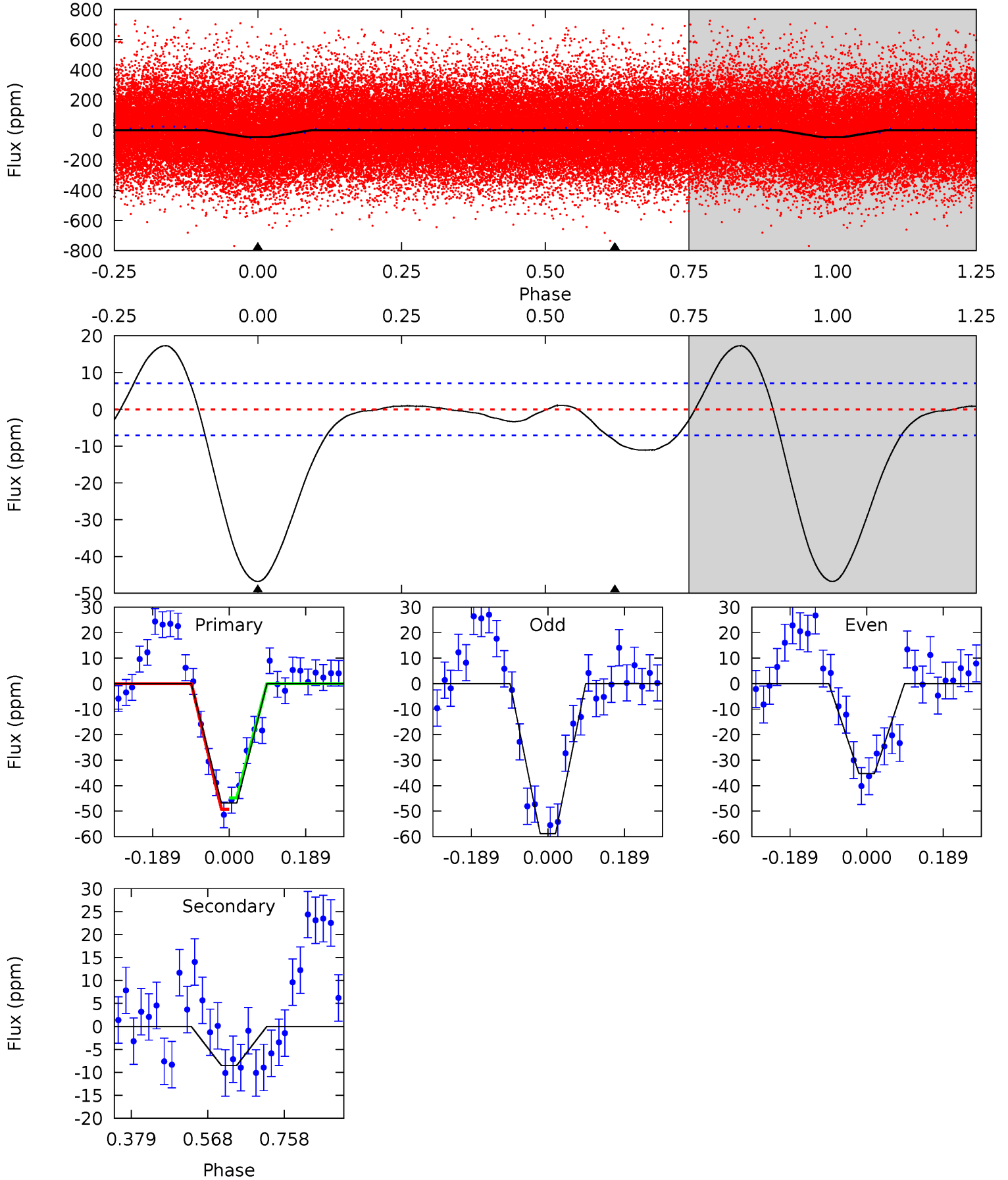
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.3	12.1	0	0	4.45	1.36	13.1	15.3	15.3	12.1	12.1	1.07	1.25	0.71	4.64



# Alt Model-Shift Uniqueness Test

012061605-01, P = 8.189506 Days, E = 127.004129 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
29.3	5.32	0	0	4.43	1.31	0.70	29.3	29.3	5.32	5.32	7.36	0.95	0.27	1.39





### Stellar Parameters For KIC 012061605

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5975^{+161}_{-179}$	$4.479^{+0.065}_{-0.208}$	$-0.240^{+0.300}_{-0.300}$	$0.936^{+0.273}_{-0.098}$	$0.963^{+0.121}_{-0.121}$	$1.655^{+0.469}_{-0.875}$
	+3%/-3%	+1%/-5%	+125%/-125%	+29%/-10%	+13%/-13%	+28%/-53%
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 012061605-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-22 \pm 2$	$0.69^{+0.11}_{-0.08}$	$1294^{+86}_{-60}$	$5115^{+236}_{-237}$	$153^{+43}_{-38}$
Alt.	$-9 \pm 2$	$0.72^{+0.13}_{-0.09}$	$1298^{+100}_{-69}$	$4171^{+240}_{-213}$	$53^{+21}_{-16}$

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

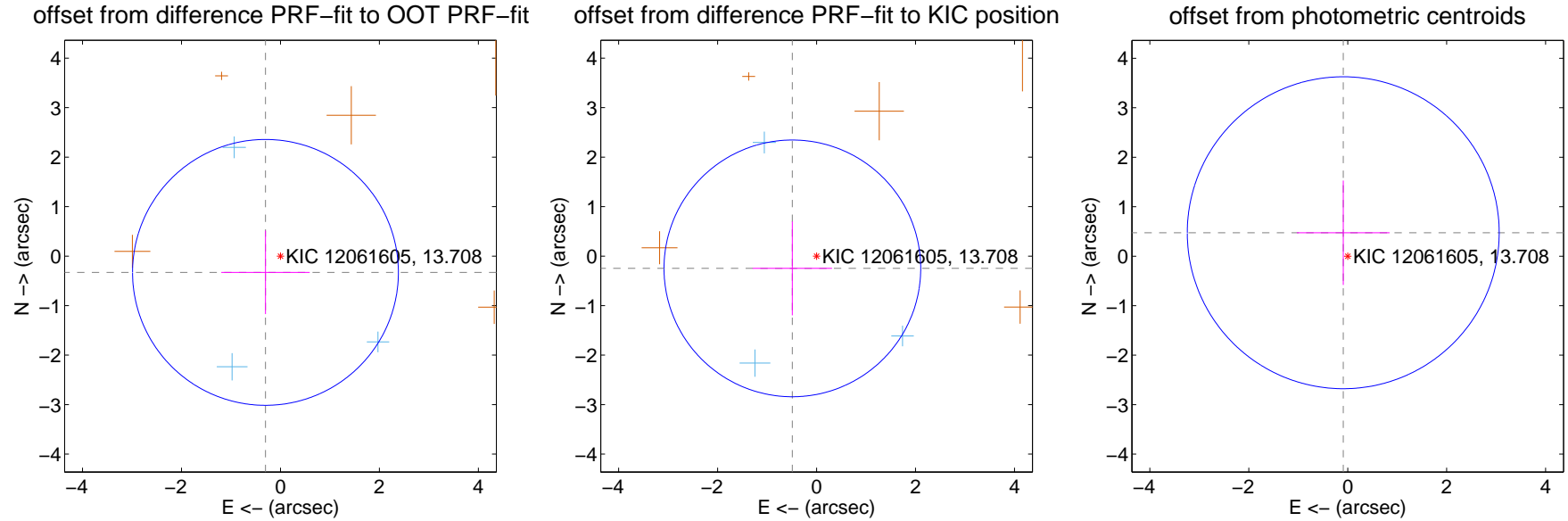
## DV Centroid Data

Supplemental centroid analysis for 012061605-01. Kepler magnitude: 13.71. Transit SNR 10.60

There are 3 quarters with good PRF difference image offsets

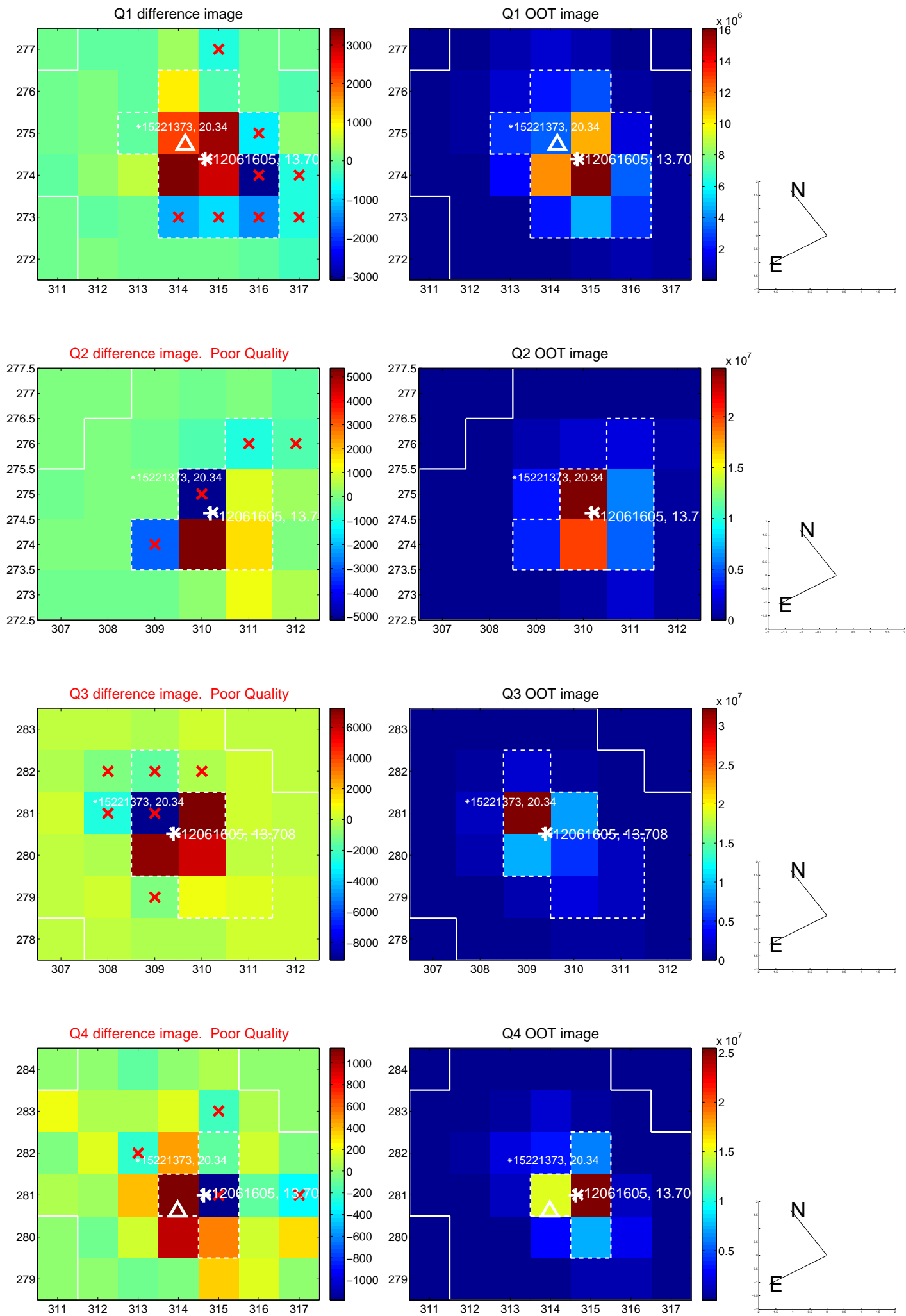
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.447 \pm 0.895$	0.50	$0.303 \pm 0.894$	$-0.328 \pm 0.844$
PRF-fit source offset from KIC position	$0.548 \pm 0.865$	0.63	$0.489 \pm 0.801$	$-0.248 \pm 0.948$
photometric centroid source offset	$0.48 \pm 1.05$	0.46	$0.09 \pm 0.94$	$0.47 \pm 1.05$

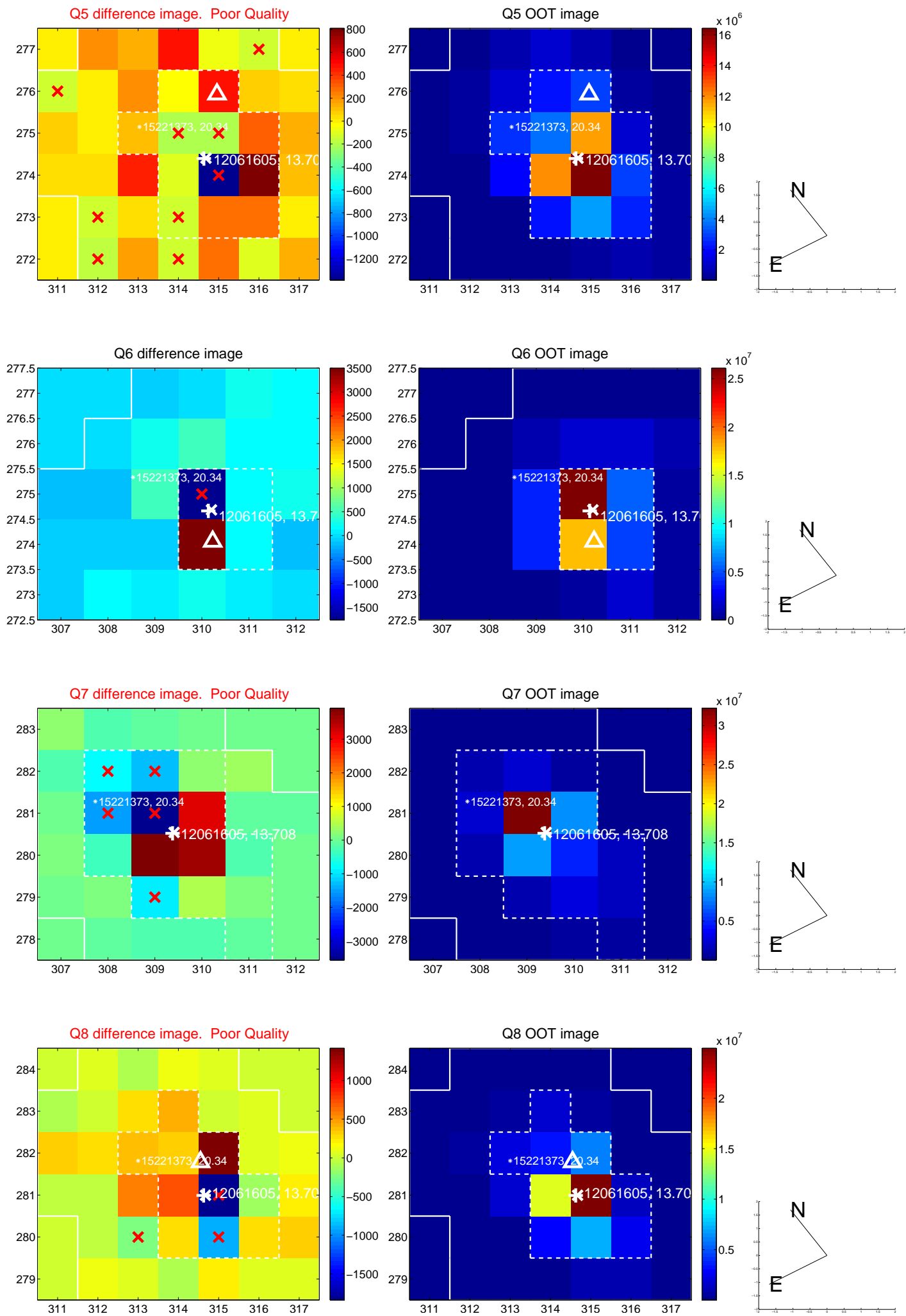


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

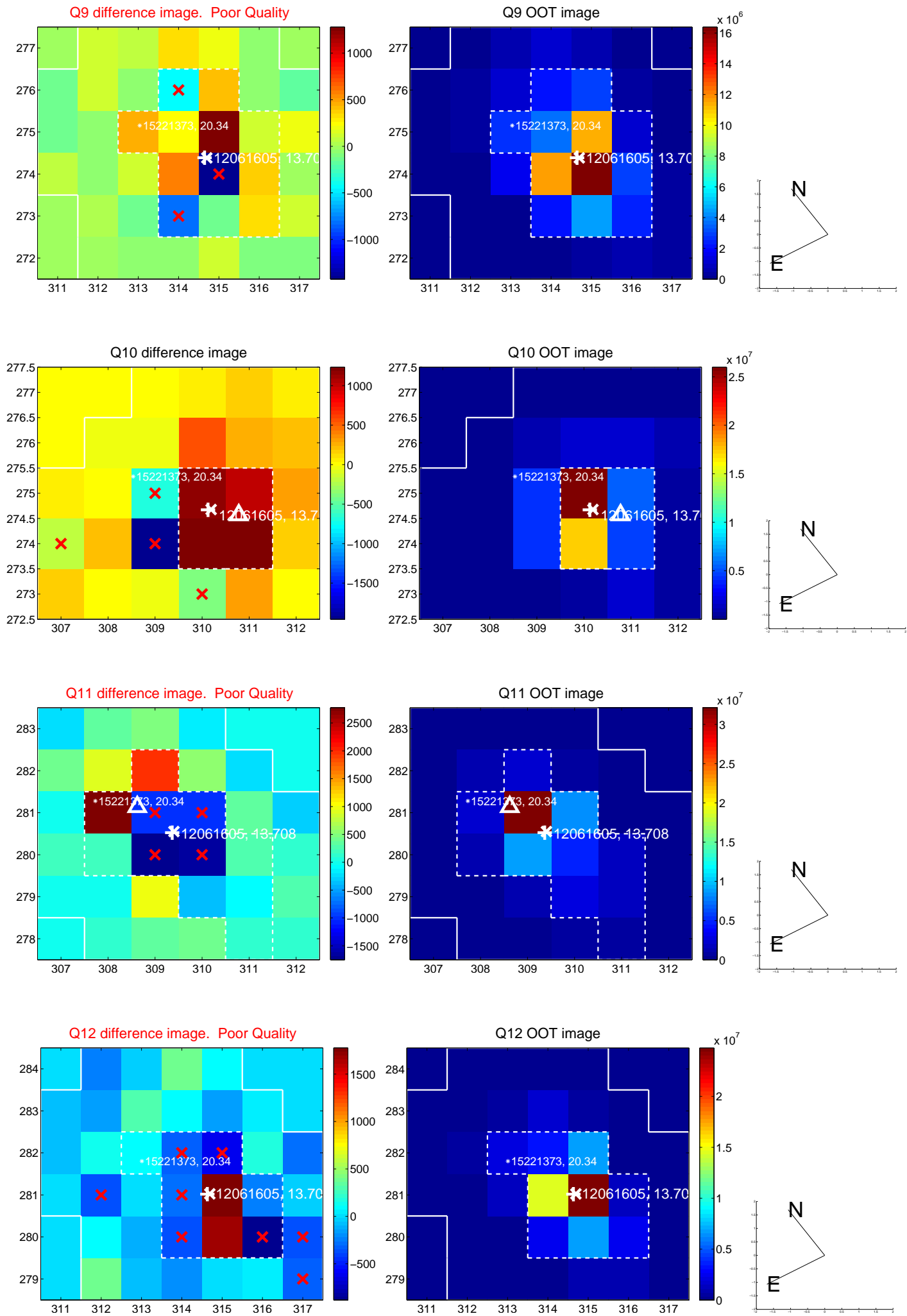


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

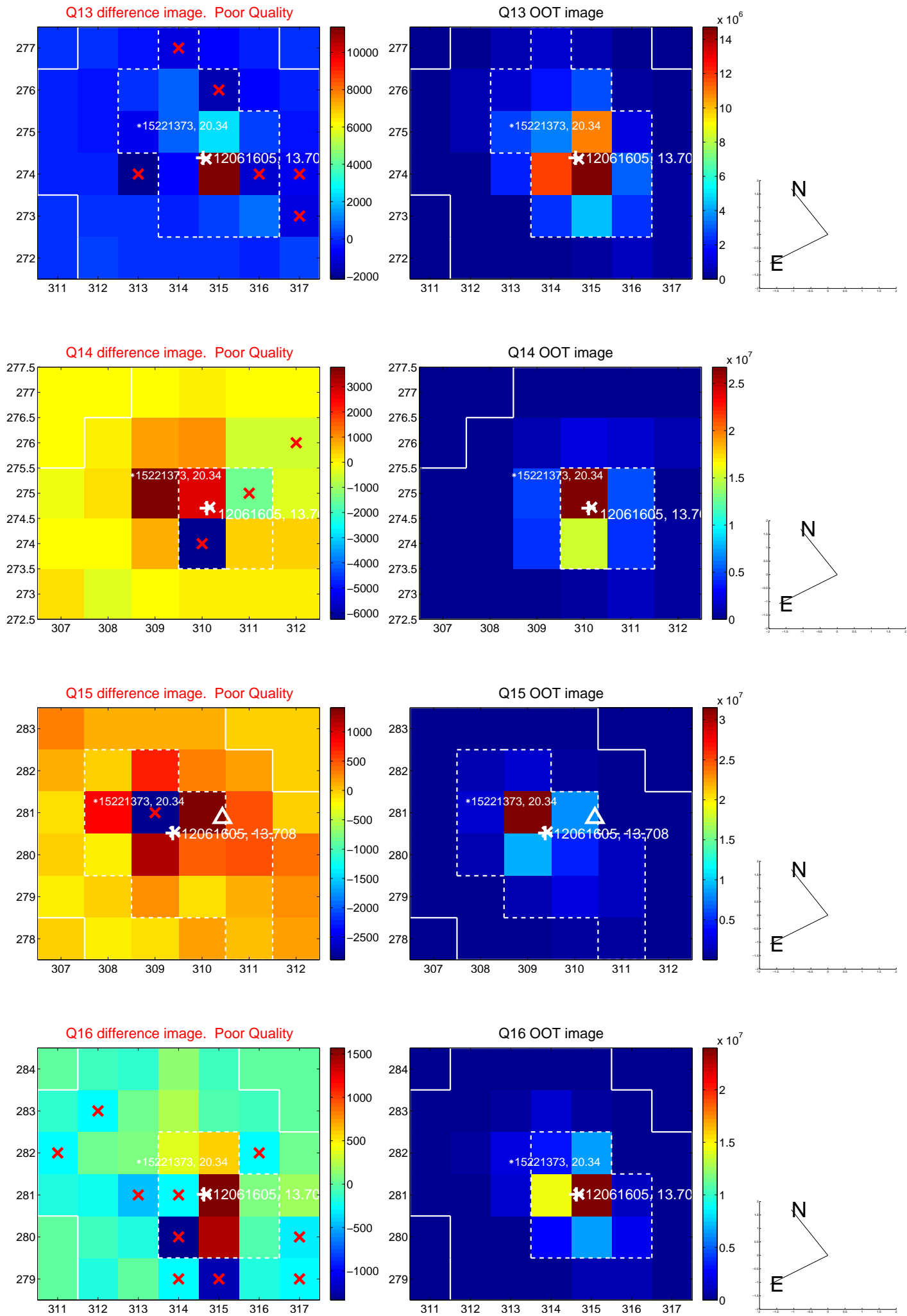




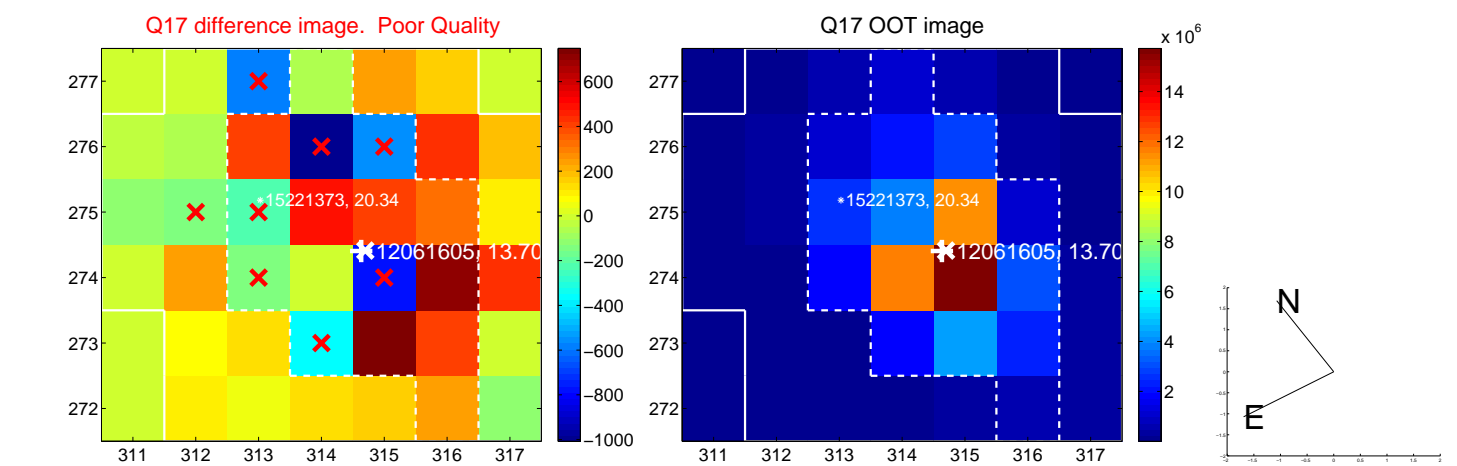
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



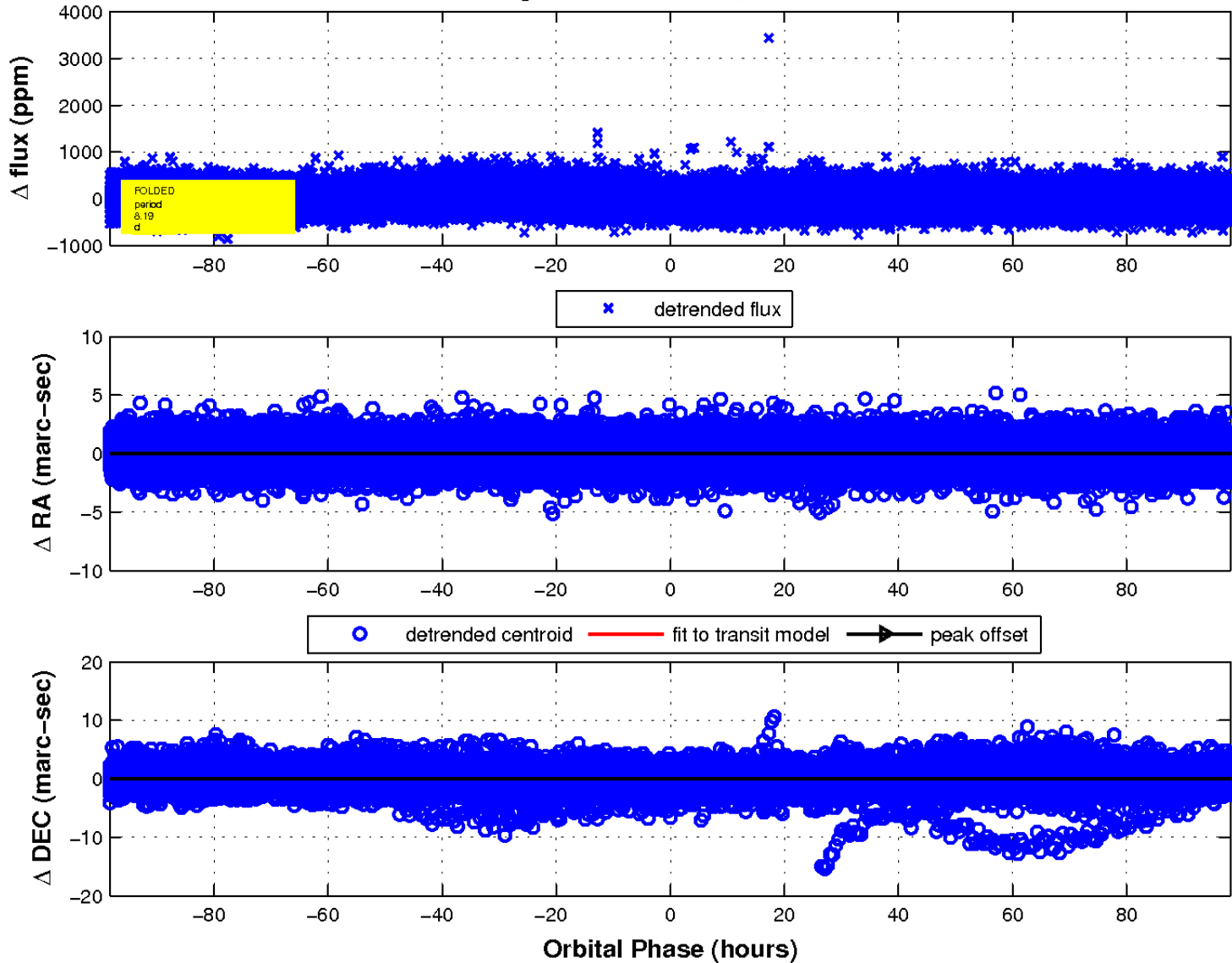
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

