

# KIC 011197853

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011197853-01	OBS	2813.01	0.698456	131.857760	107.8	1.100	17.3	23.4	12.56	4676	16.23	0.00

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011197853-01	OBS	PC	1.00	0	0	0	0	PLANET_IN_STAR

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

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

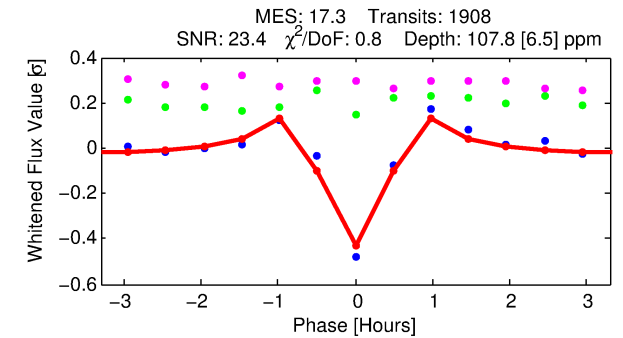
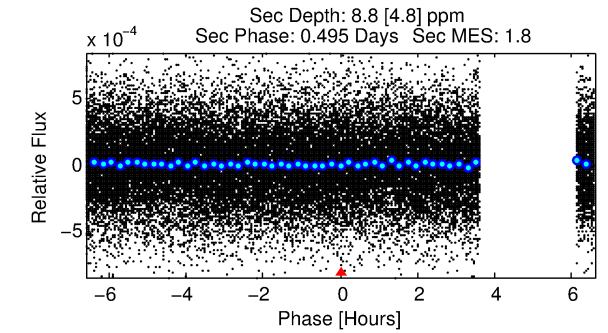
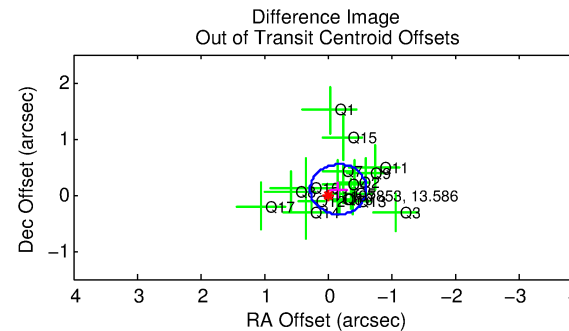
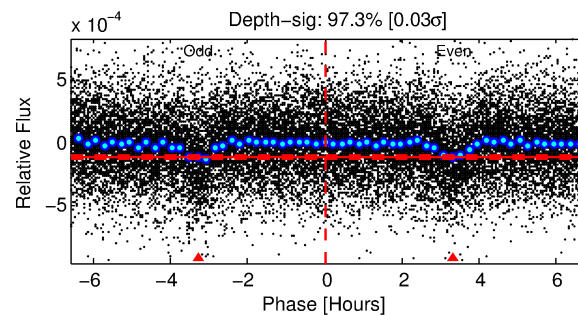
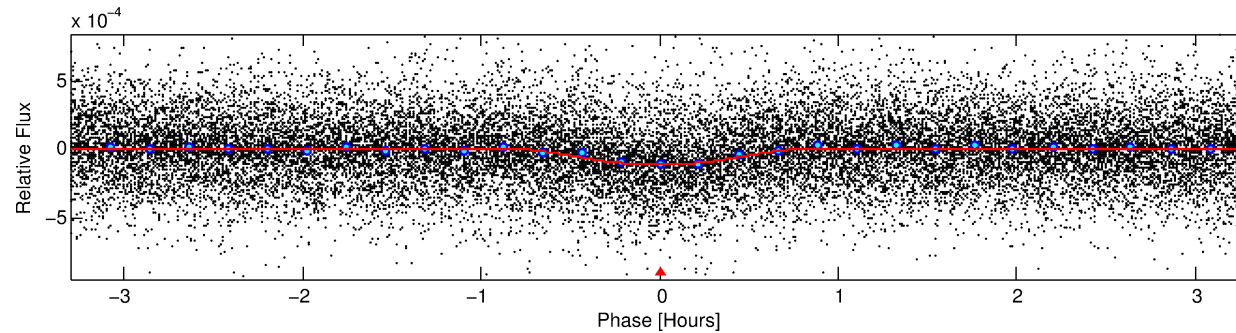
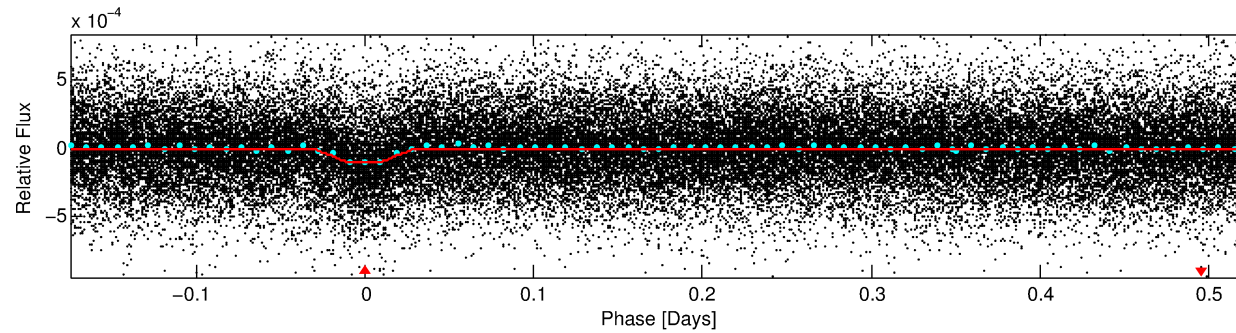
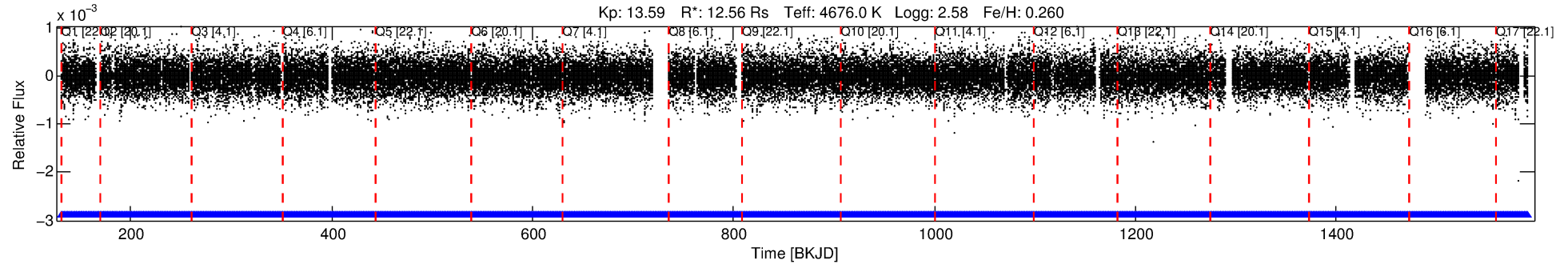
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 011197853-01

No Significant Match Found

# DV One-Page Summary

KIC: 11197853 Candidate: 1 of 1 Period: 0.698 d  
KOI: K02813.01 Corr: 0.846



## DV Fit Results:

Period = 0.69846 [0.00000] d  
Epoch = 131.8578 [0.0006] BKJD  
Rp/R\* = 0.0118 [0.0045]  
a/R\* = 2.43 [2.82]  
b = 0.90 [0.31]  
Seff = N/A  
Teq = N/A  
Rp = 16.23 [7.14] Re  
a = N/A  
Ag = N/A  
Teffp = N/A

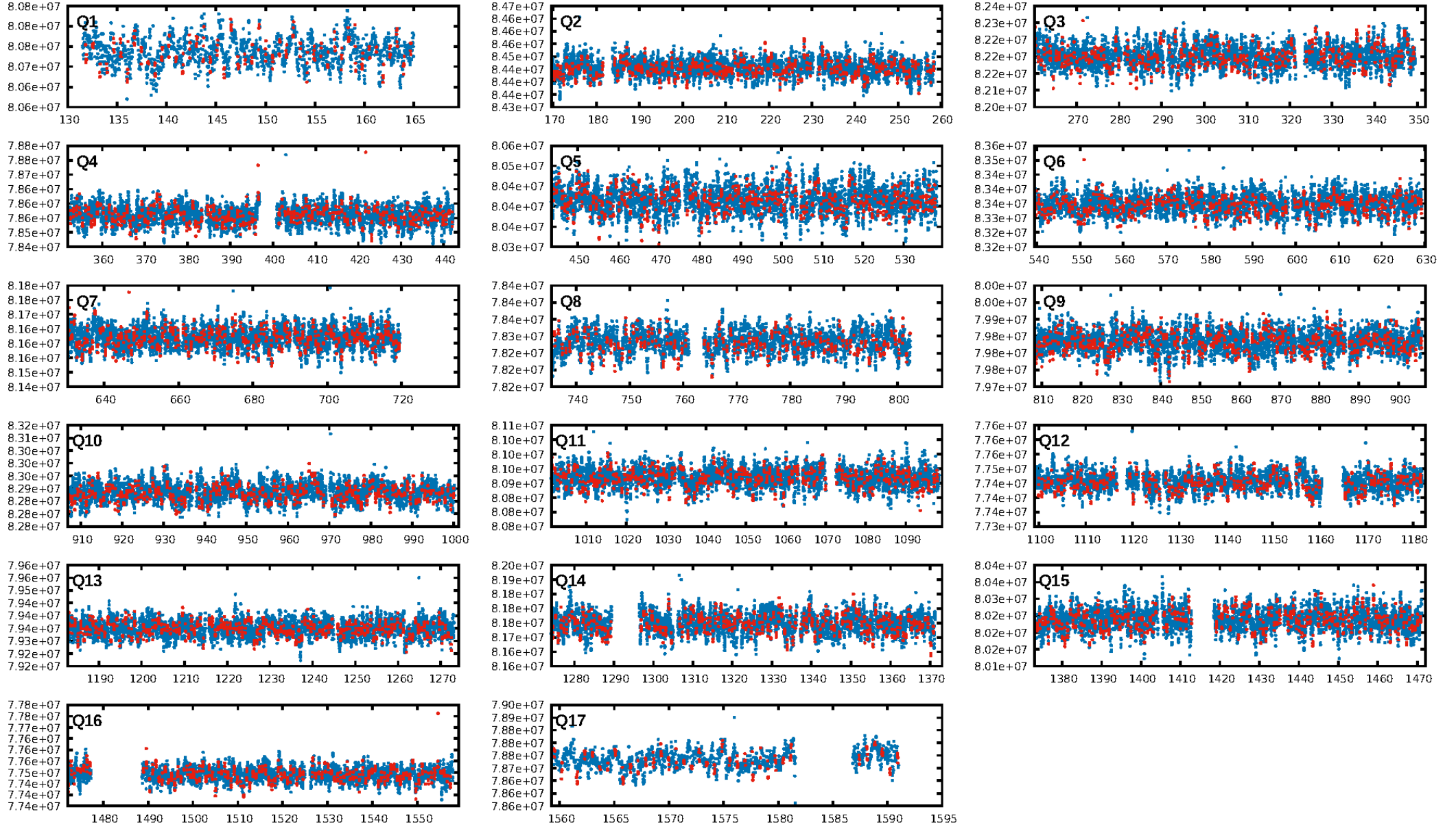
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 2.32e-65  
RollingBand-fgt: 1.00 [1823/1823]  
GhostDiagnostic-chr: 8.226  
Centroid-sig: 25.1%  
Centroid-so: 0.439 arcsec [1.28 $\sigma$ ]  
OotOffset-rm: 0.196 arcsec [1.32 $\sigma$ ]  
KicOffset-rm: 0.332 arcsec [2.38 $\sigma$ ]  
OotOffset-st: 4/4/4/5 [17]  
KicOffset-st: 4/4/4/5 [17]  
DiffImageQuality-fgm: 1.00 [17/17]  
DiffImageOverlap-fno: 1.00 [17/17]

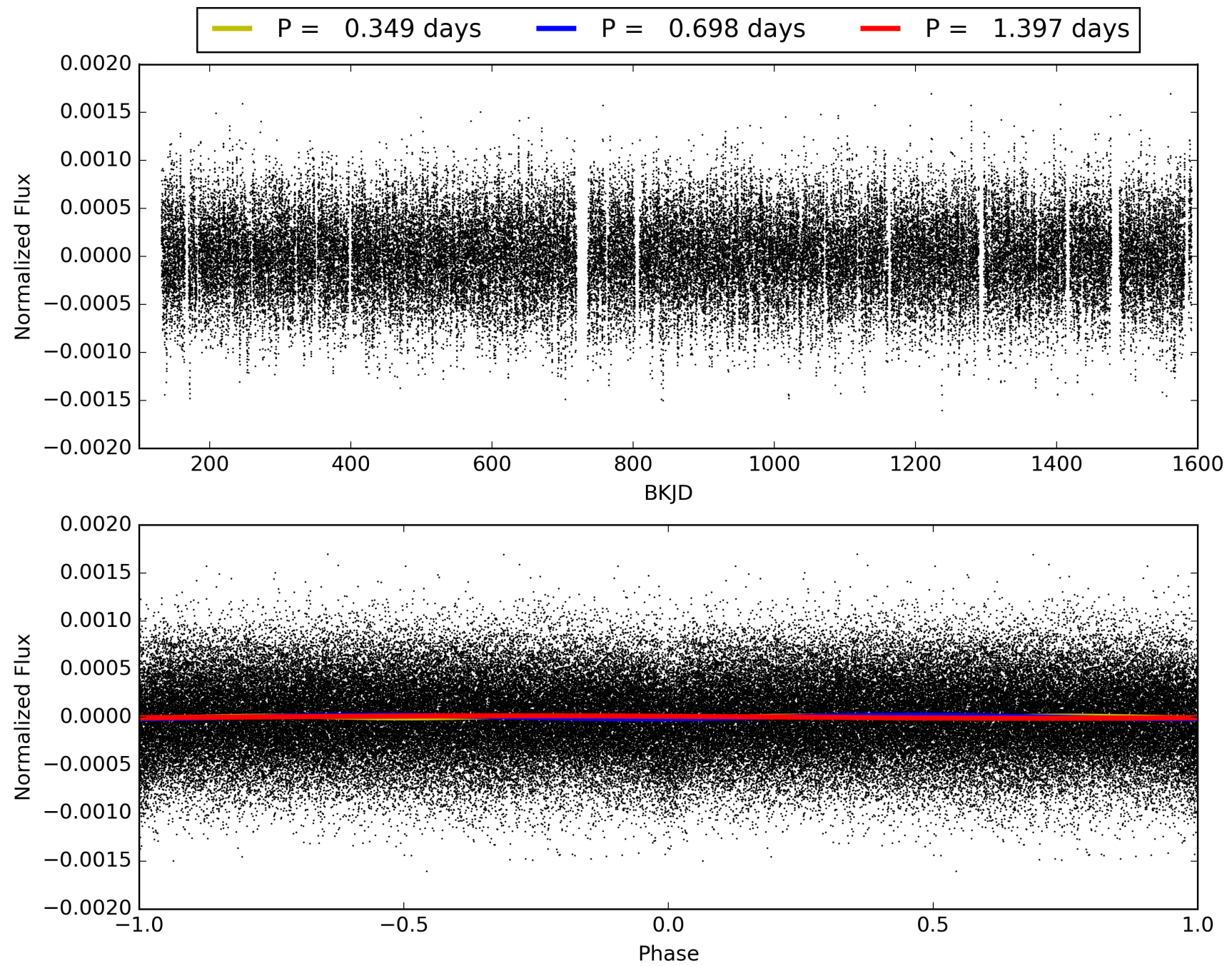
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 02:14:43 Z

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

# TCE 011197853-01, PDC Light Curves



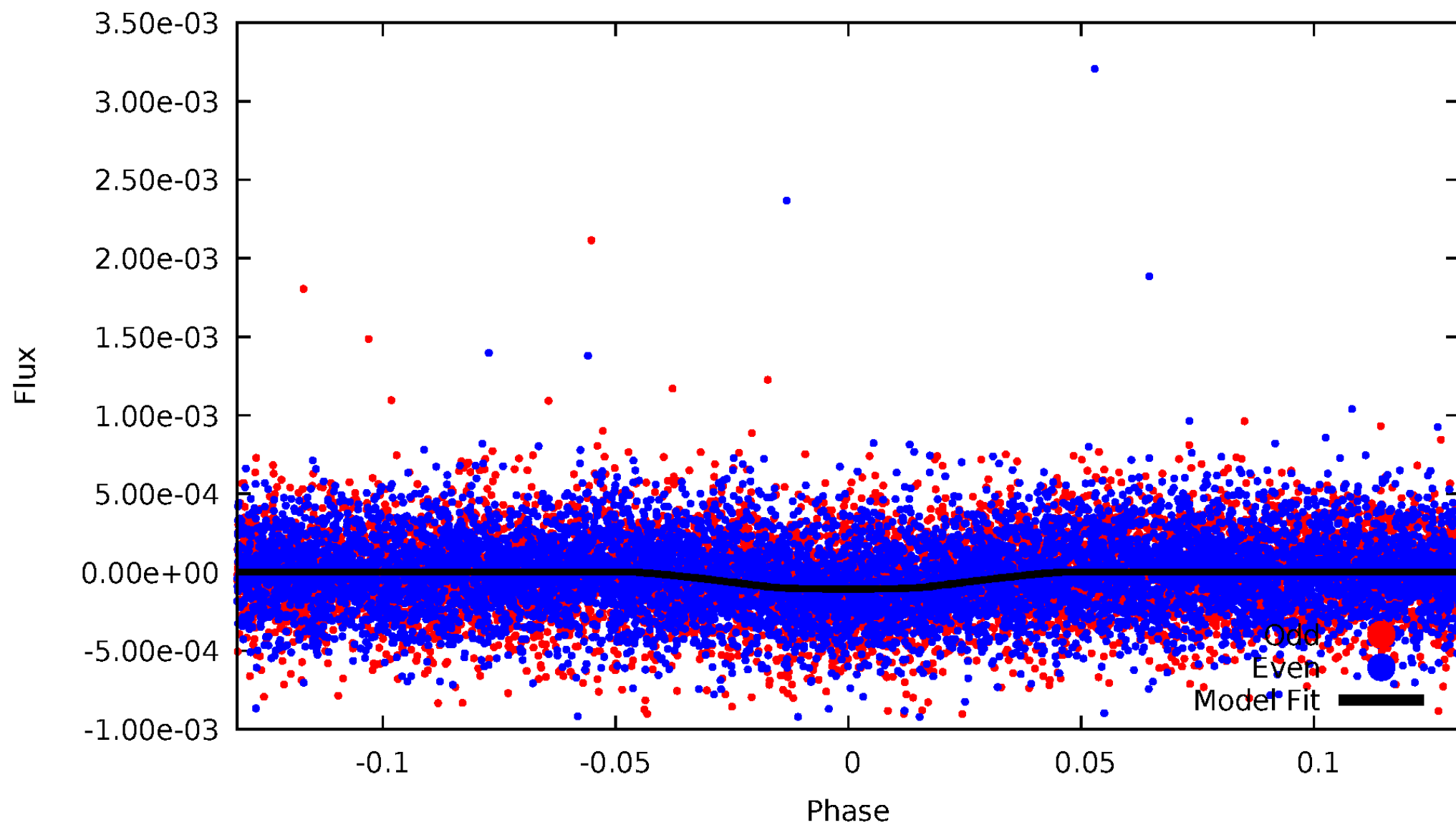
TCE 011197853-01





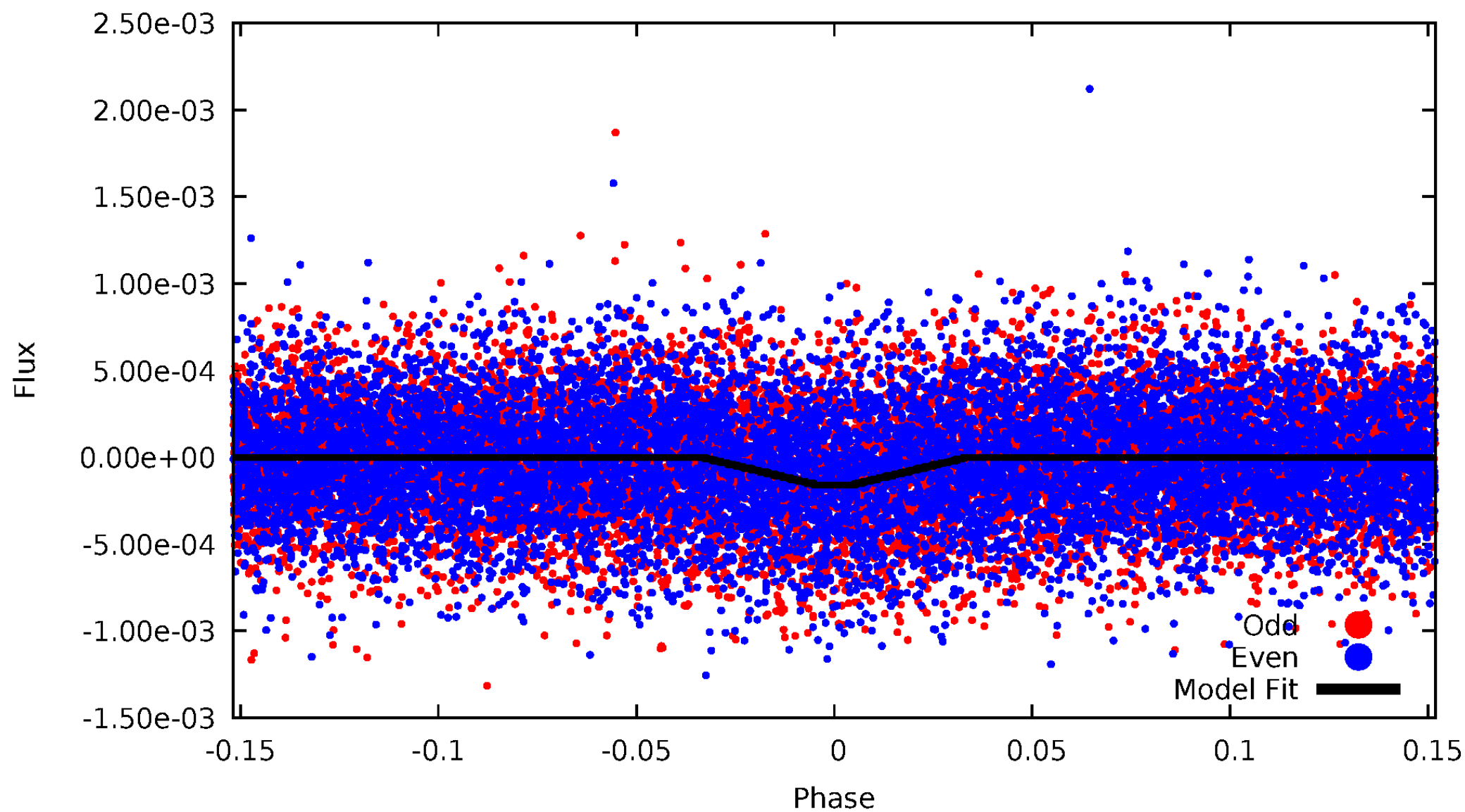
# DV Odd/Even

TCE 011197853-01



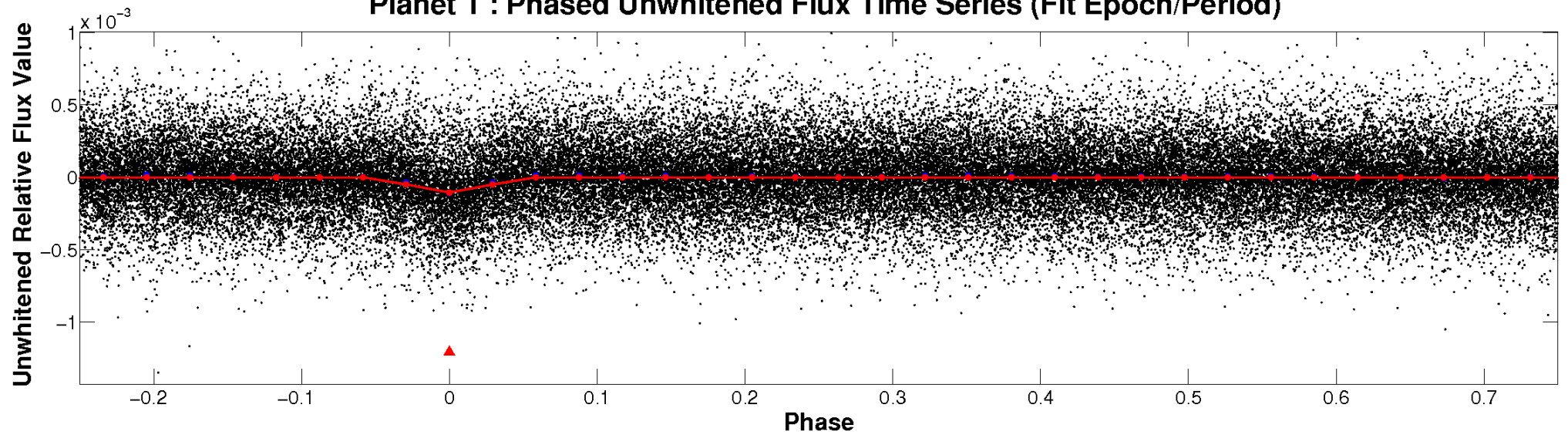
# ALT Odd/Even

TCE 011197853-01

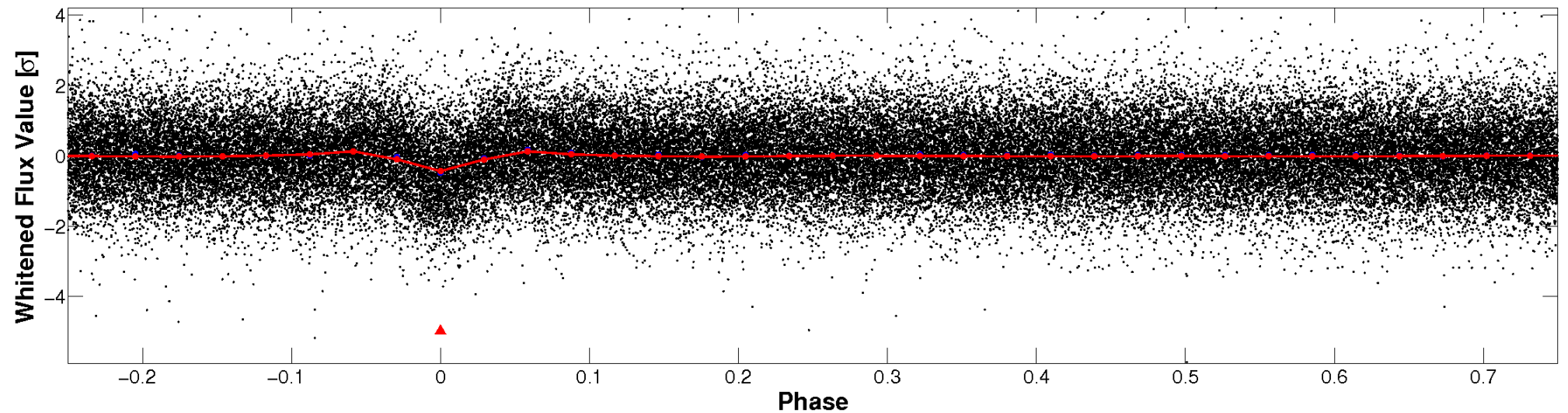


# Non-Whitened Vs. Whitened Light Curve

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

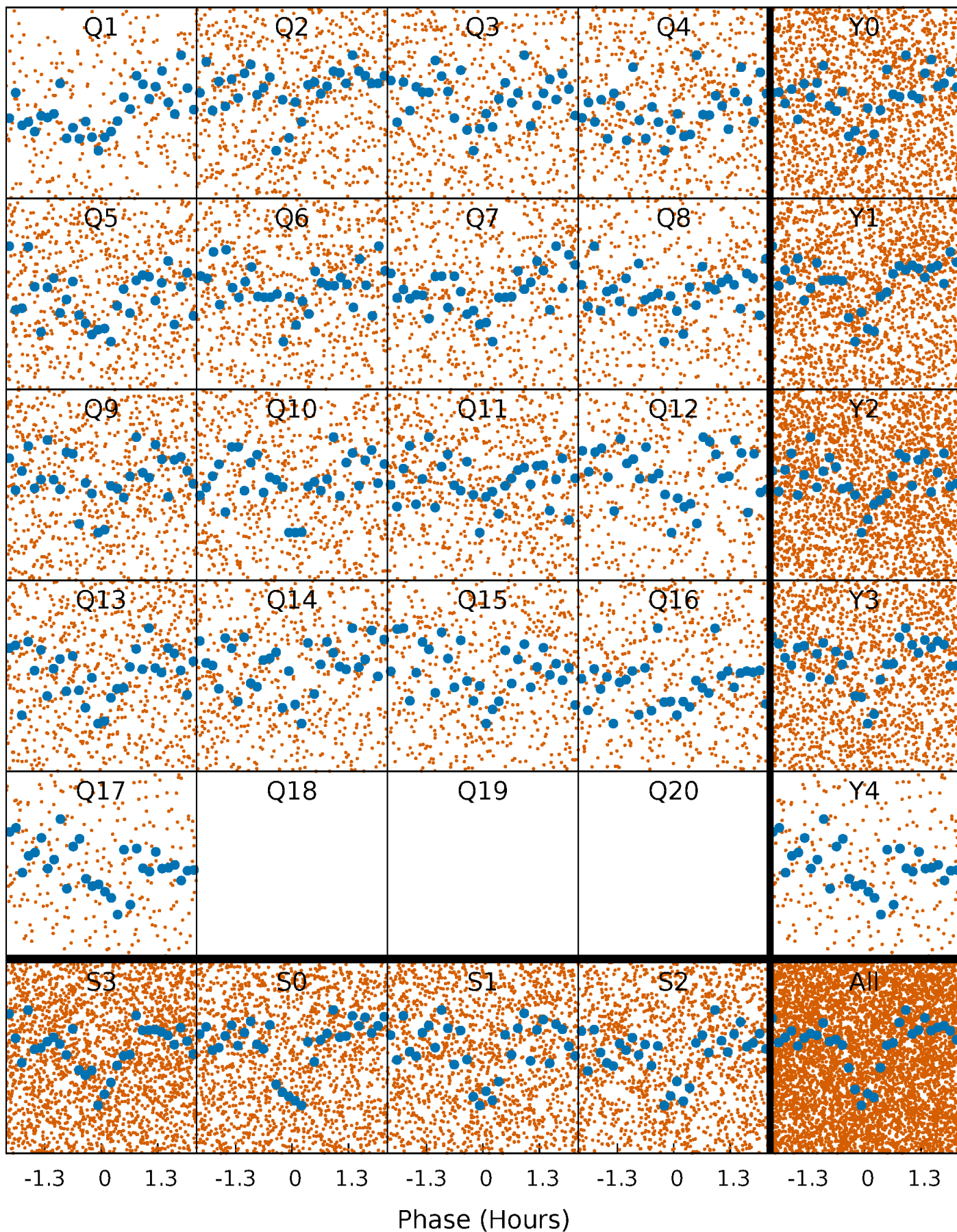


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

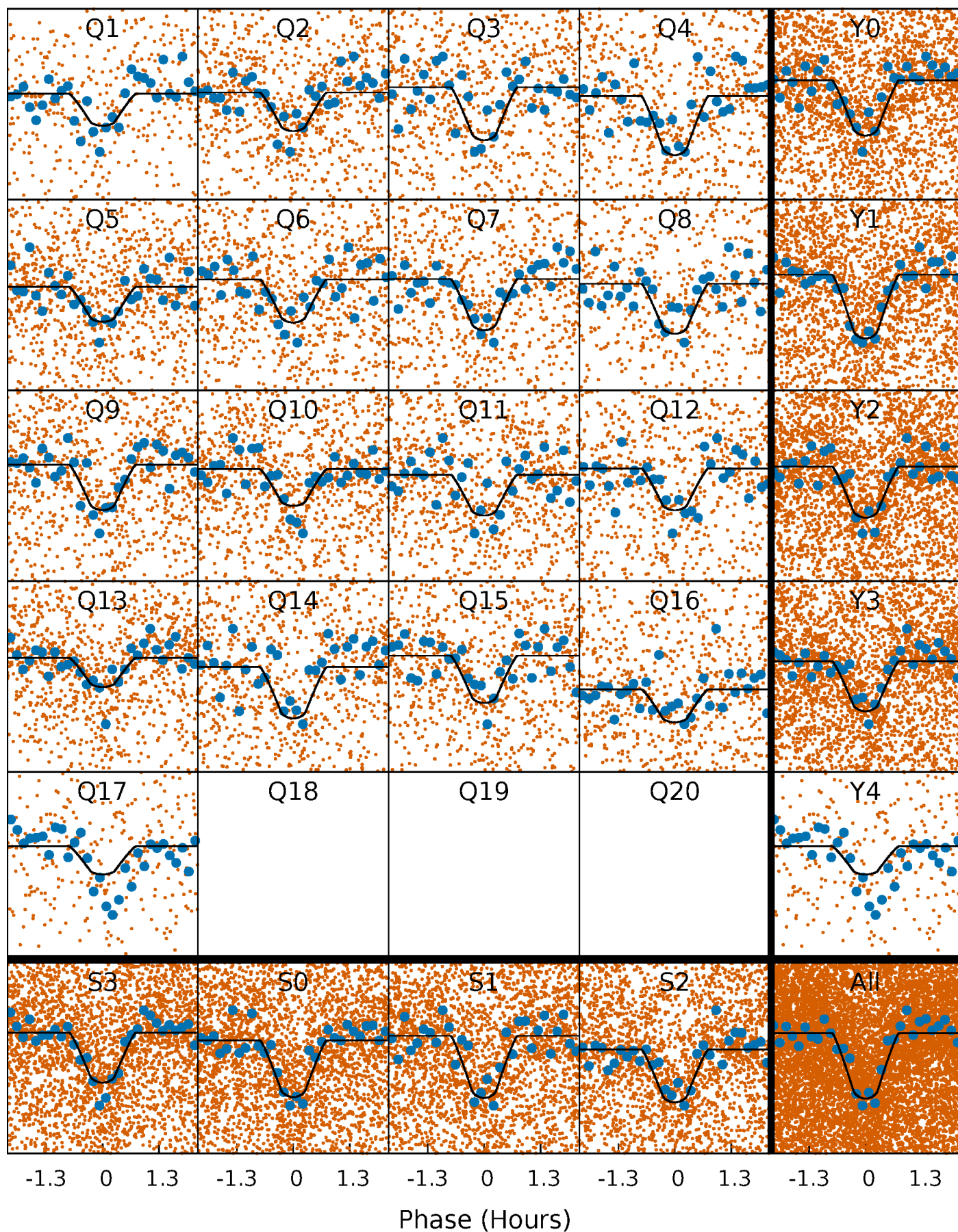
TCE 011197853-01 P= 0.698456 Days  $T_0=131.857760$  (BKJD)





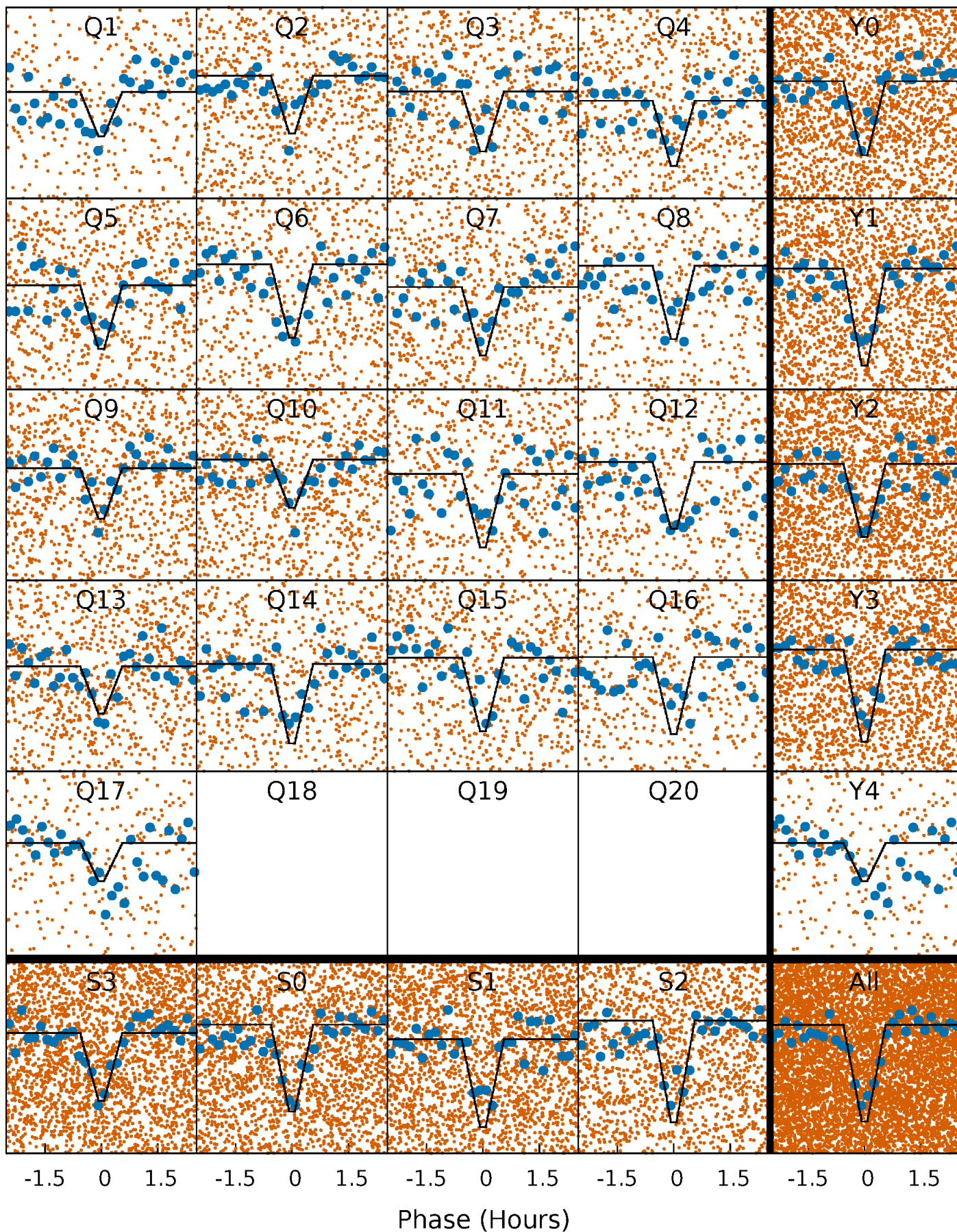
# DV Quarter-Phased Transit Curves

TCE 011197853-01 P= 0.698456 Days  $T_0=131.857760$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

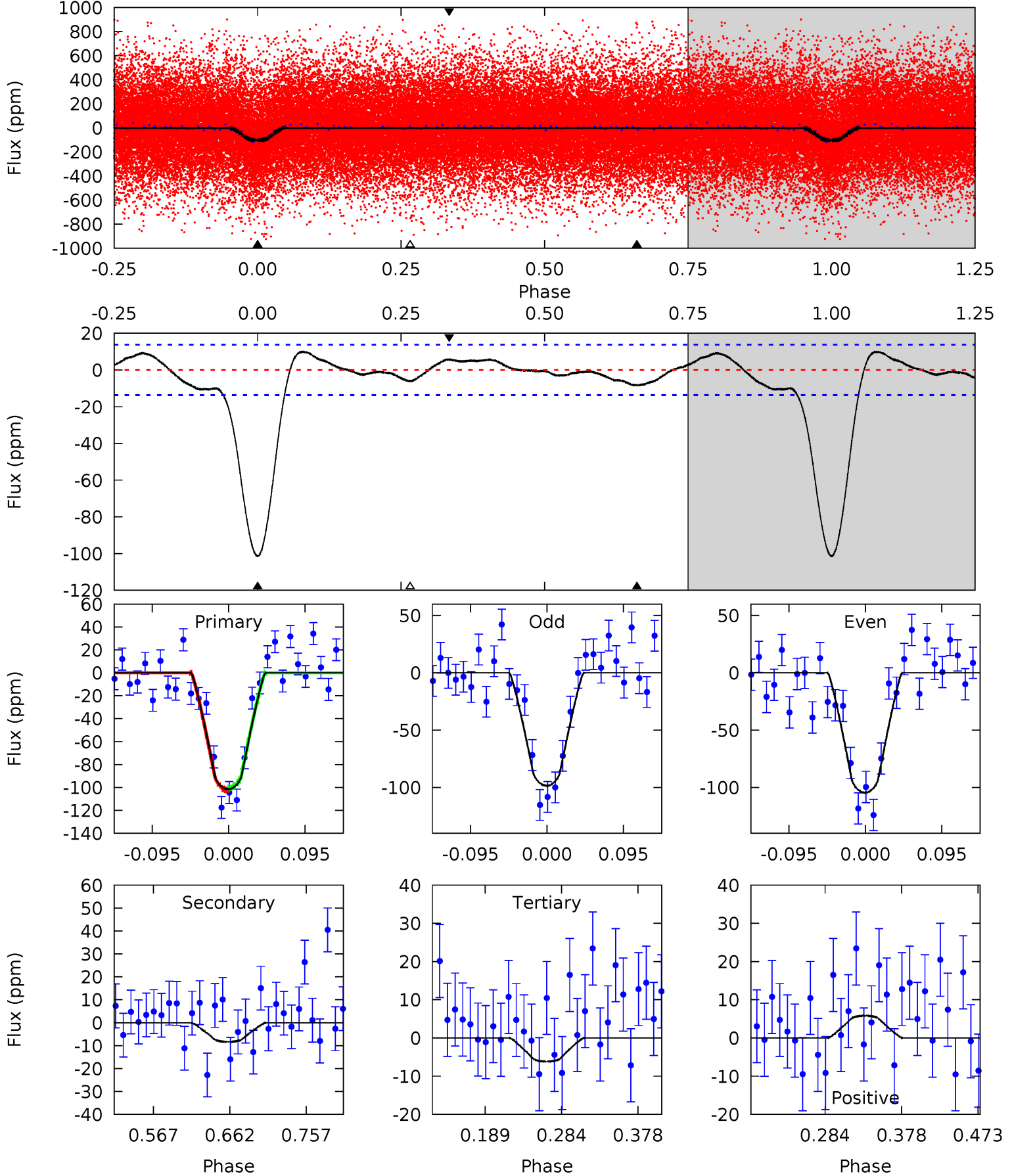
TCE 011197853-01 P= 0.698456 Days  $T_0=131.857457$  (BKJD)



# DV Model-Shift Uniqueness Test

011197853-01, P = 0.698456 Days, E = 131.159304 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
33.9	2.80	2.06	1.95	4.58	1.67	1.50	31.9	32.0	0.73	0.85	1.01	0.94	0.09	0.33

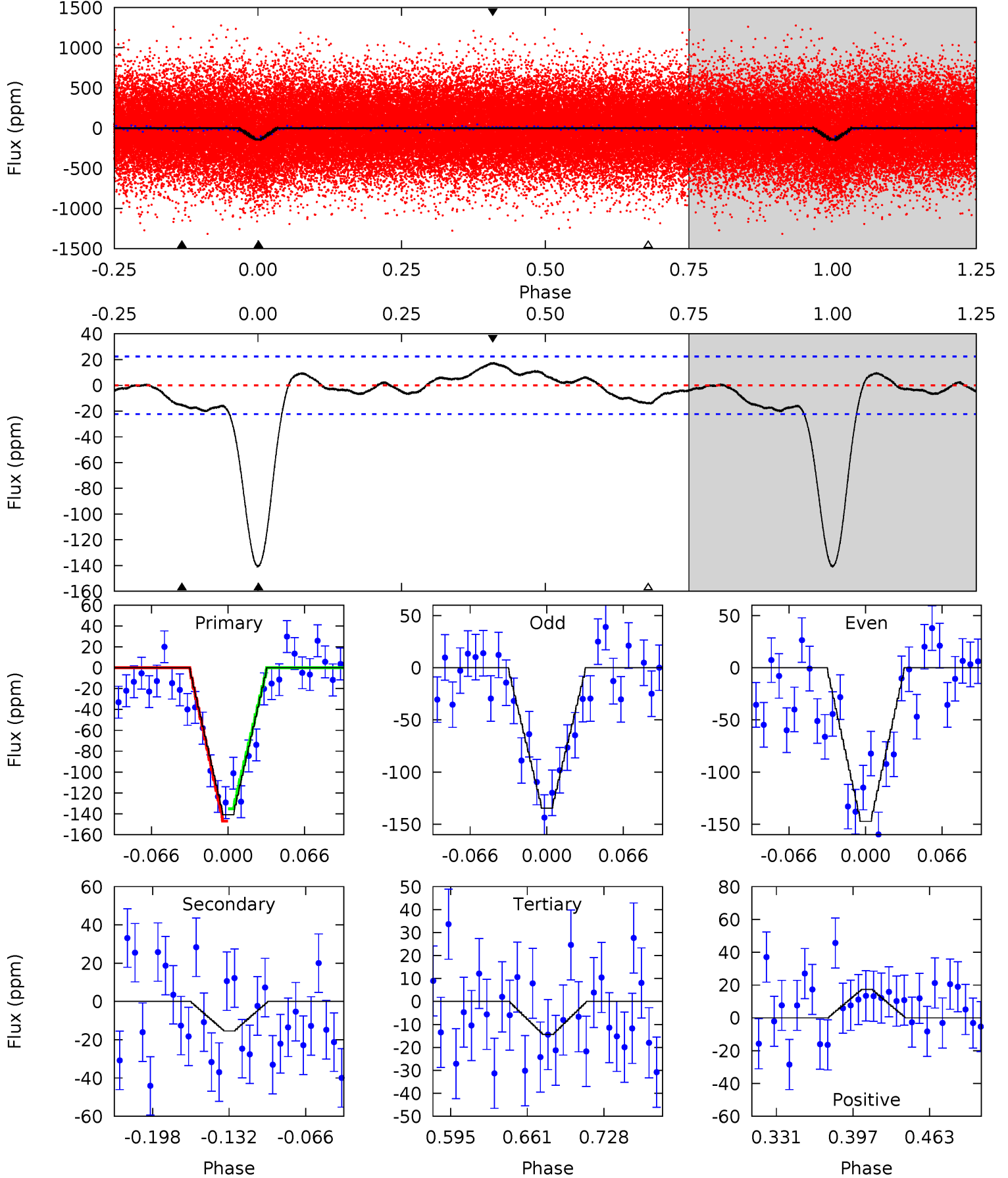




# Alt Model-Shift Uniqueness Test

011197853-01, P = 0.698456 Days, E = 131.159001 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	3.21	2.98	3.61	4.65	1.84	1.56	26.3	25.7	0.23	-0.40	1.32	1.03	0.11	1.22





### Stellar Parameters For KIC 011197853

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$4676^{+80}_{-126}$	$2.577^{+0.030}_{-0.027}$	$0.260^{+0.100}_{-0.200}$	$12.558^{+2.292}_{-2.802}$	$2.170^{+0.754}_{-0.922}$	$0.002^{+0.001}_{-0.000}$
	+2%/-3%	+1%/-1%	+38%/-77%	+18%/-22%	+35%/-42%	+35%/-15%
Source	SPE90	AST71	SPE90	DSEP		

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

### Secondary Eclipse Parameters for KIC 011197853-01 / KOI 2813.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-8 \pm 3$	$16.26^{+7.49}_{-6.97}$	$7208^{+252}_{-250}$	$-5676^{+253}_{-207}$	$0.007^{+0.013}_{-0.004}$
Alt.	$-15 \pm 5$	$17.74^{+7.27}_{-6.51}$	$7230^{+221}_{-260}$	$-5661^{+234}_{-207}$	$0.011^{+0.017}_{-0.006}$

$T_{\text{max}}$  = Theoretical Maximum Planetary Temperature

$T_{\text{obs}}$  = Observed Planetary Temperature (Assuming  $A=0.3$ )

$A_{\text{obs}}$  = Observed Albedo (Assuming  $T=0$ )

If a secondary eclipse is present, the system is likely an EB if  $T_{\text{obs}} \gg T_{\text{max}}$  AND  $A_{\text{obs}} \gg 1.0$

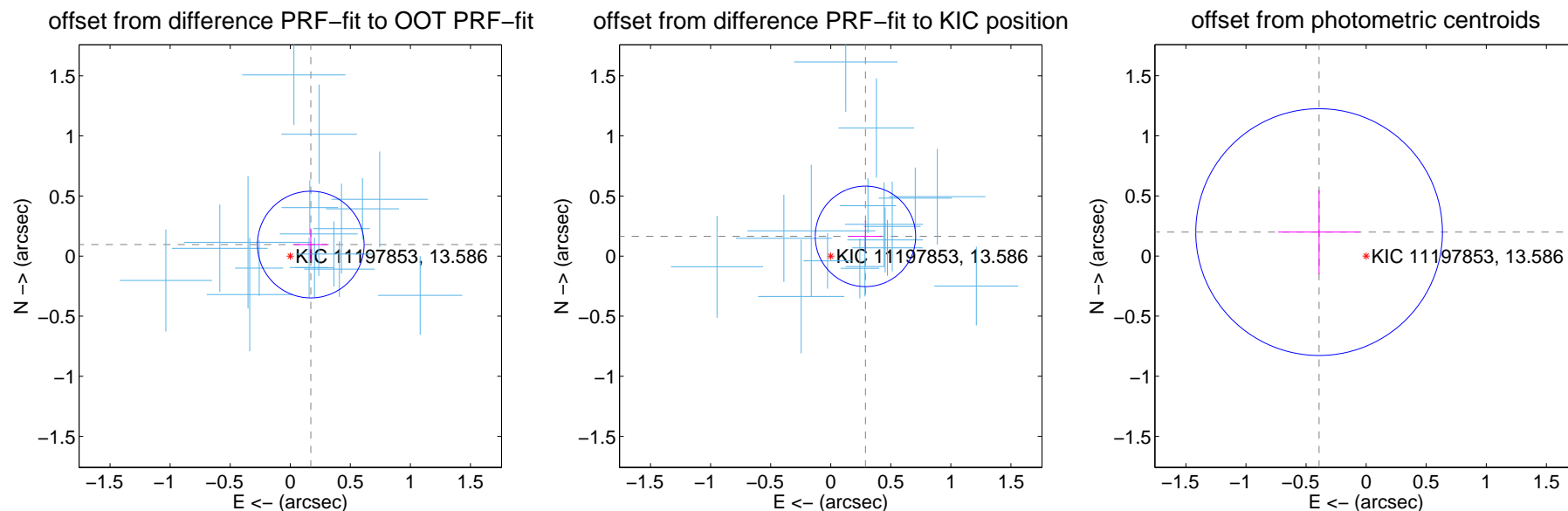
## DV Centroid Data

Supplemental centroid analysis for 011197853-01. Kepler magnitude: 13.59. Transit SNR 23.40

There are 17 quarters with good PRF difference image offsets

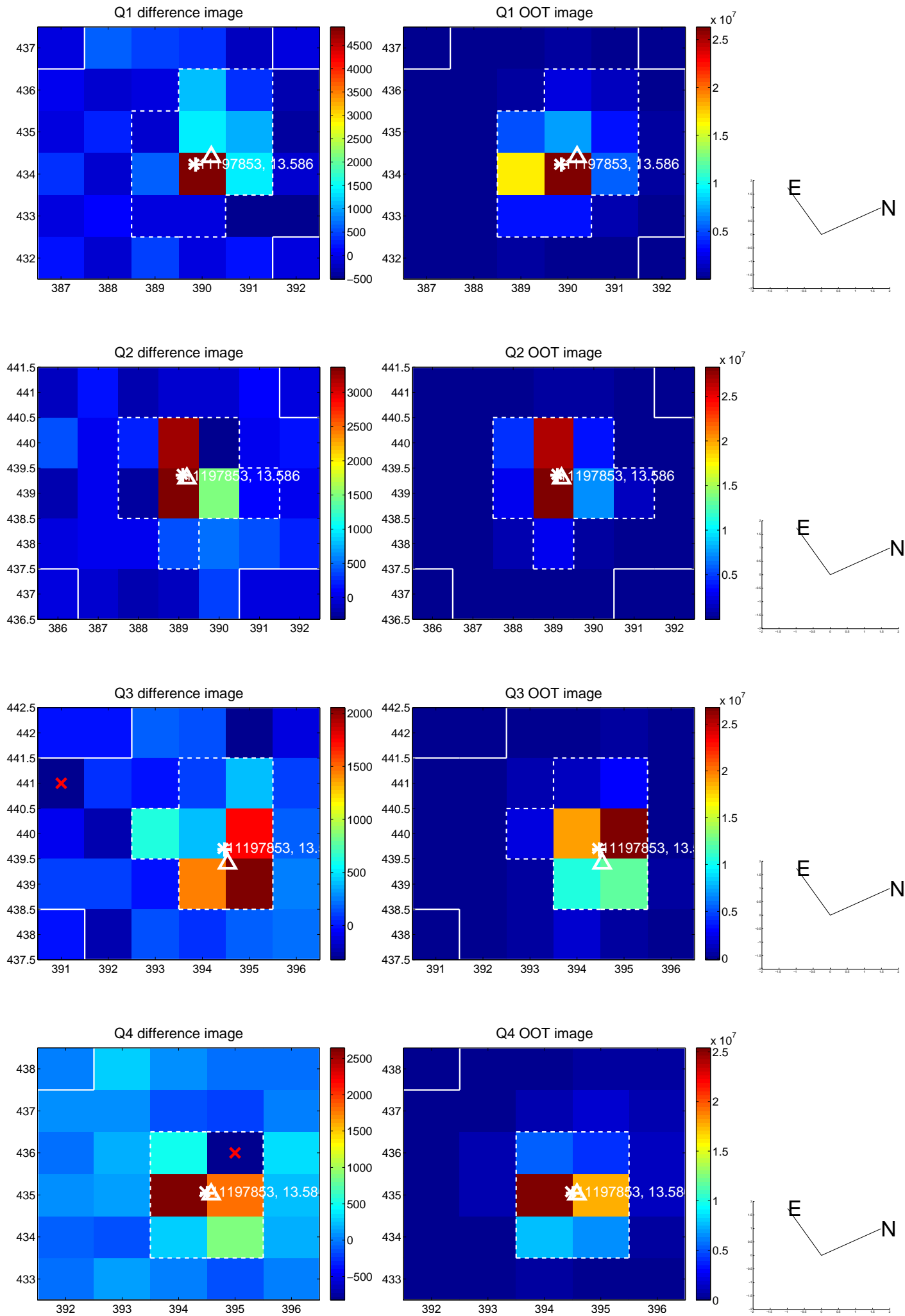
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.196 \pm 0.148$	1.32	$-0.171 \pm 0.140$	$0.096 \pm 0.134$
PRF-fit source offset from KIC position	$0.332 \pm 0.139$	2.38	$-0.289 \pm 0.136$	$0.164 \pm 0.131$
photometric centroid source offset	$0.44 \pm 0.34$	1.28	$0.39 \pm 0.34$	$0.20 \pm 0.35$

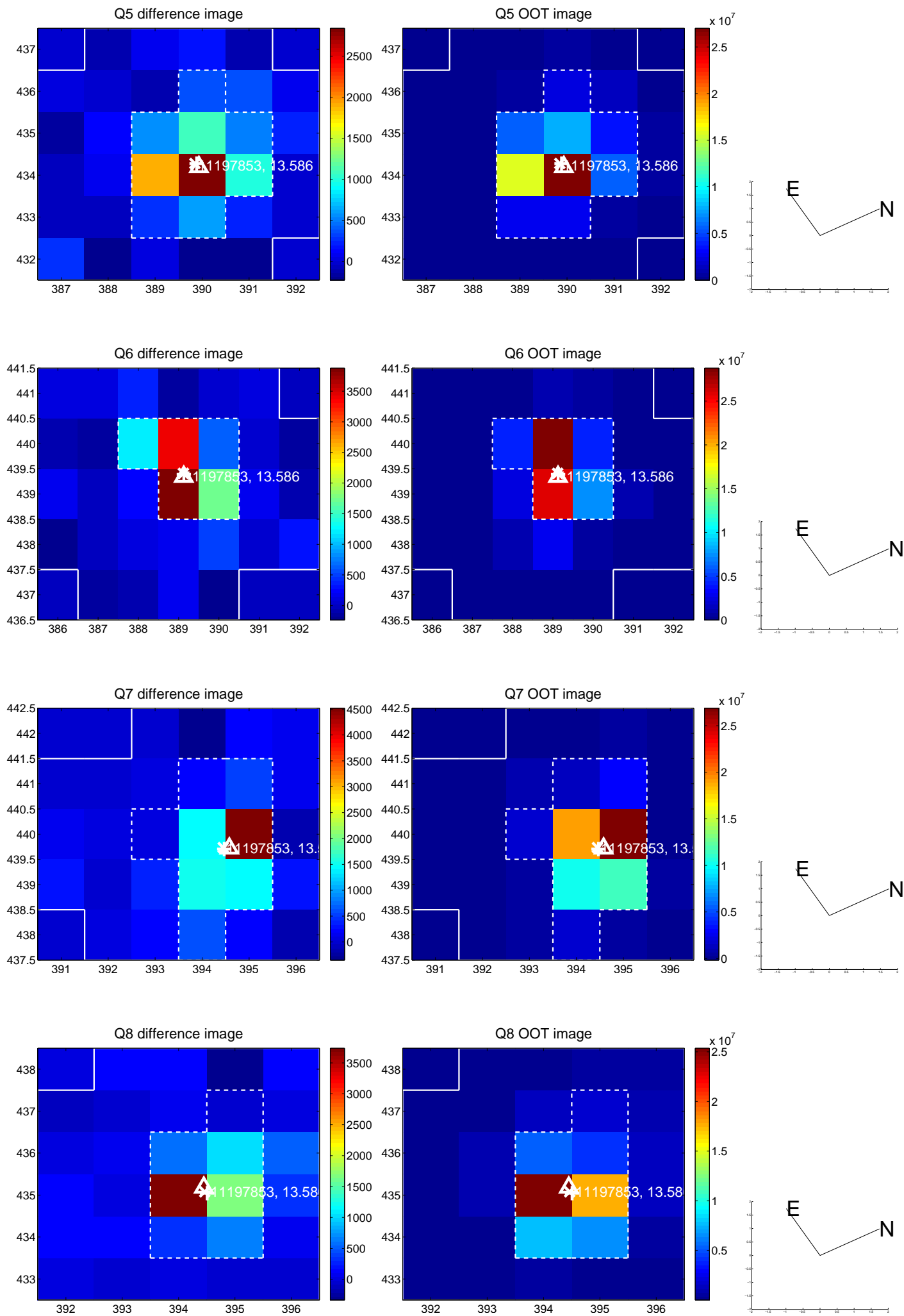


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

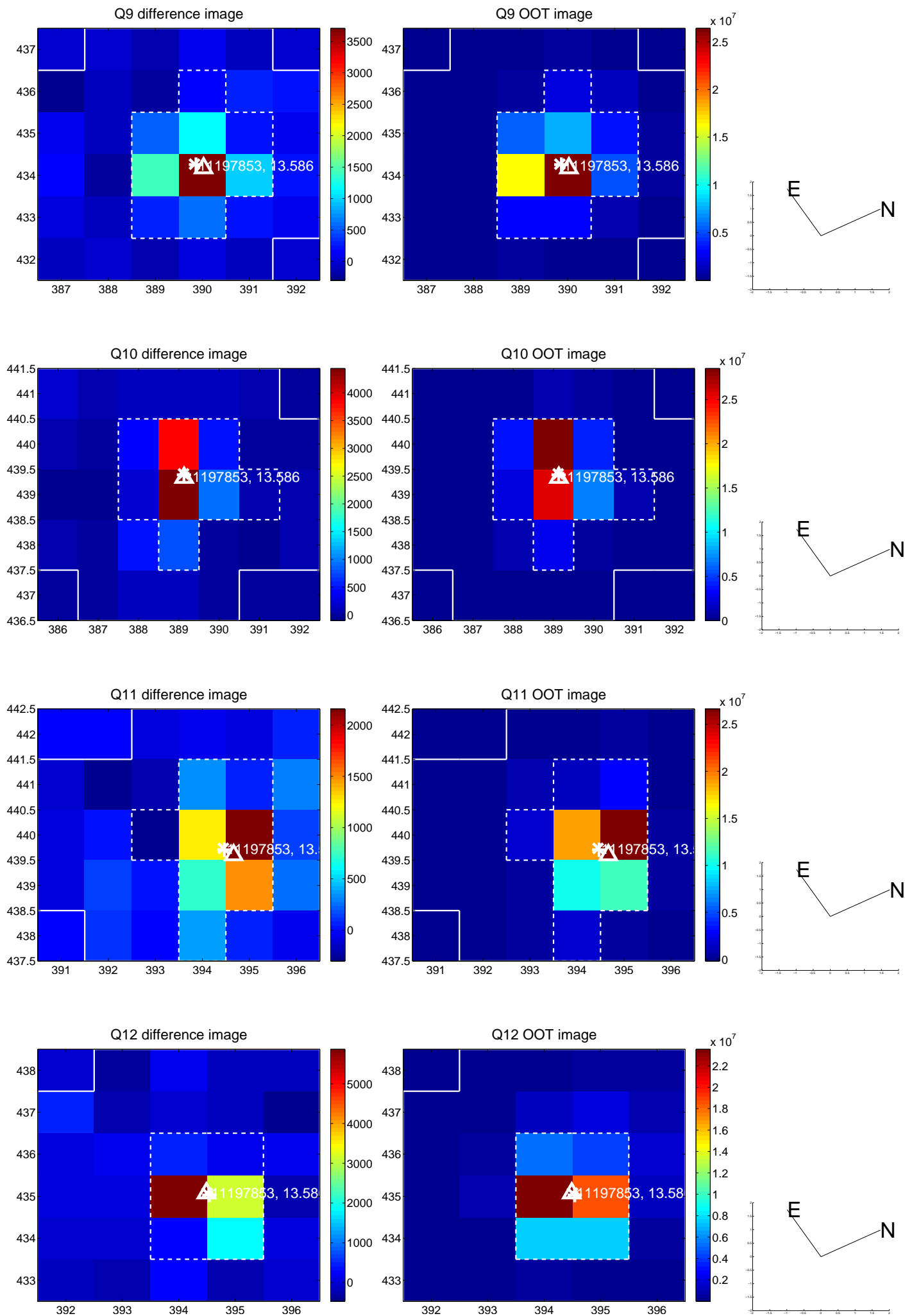


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

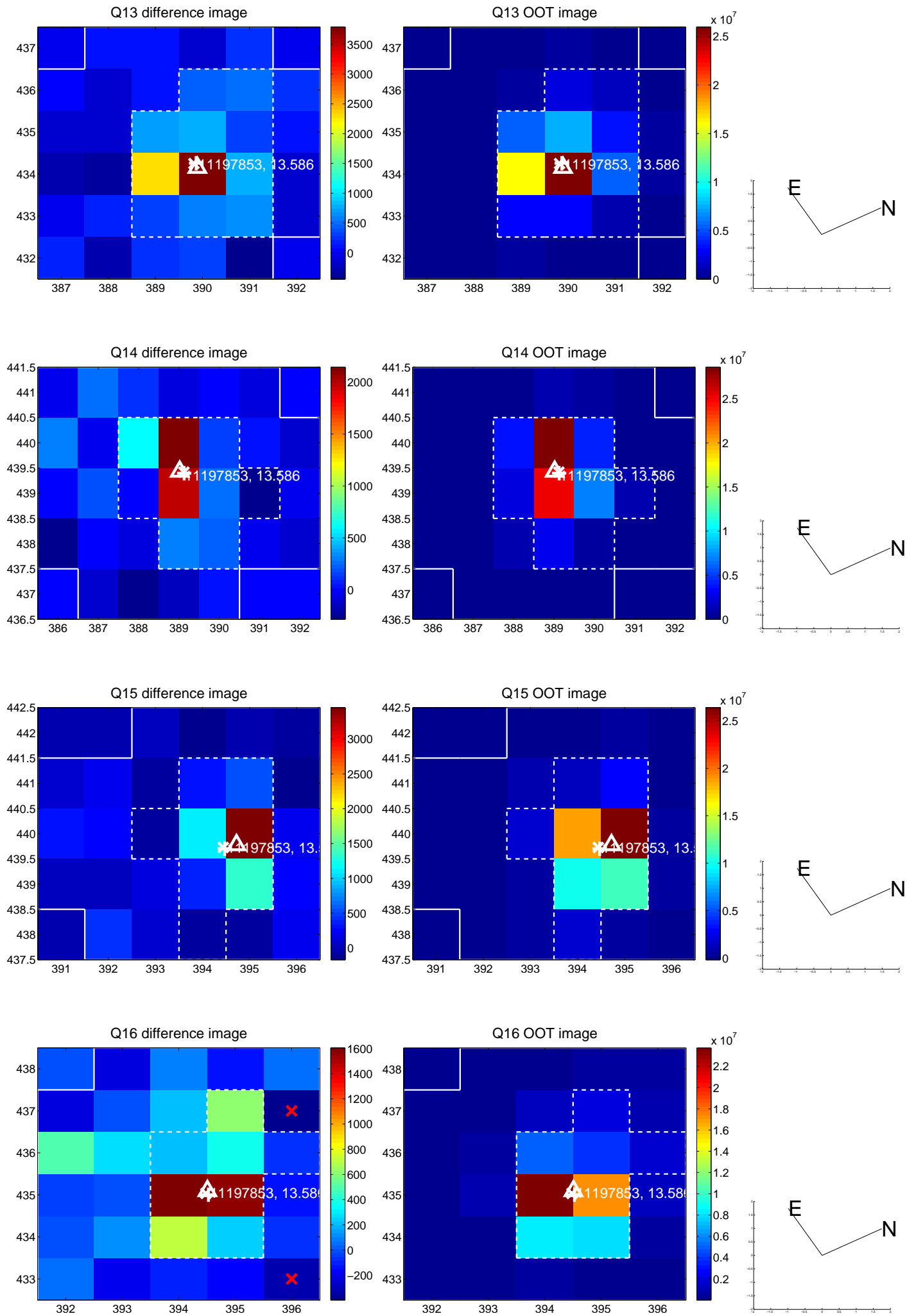




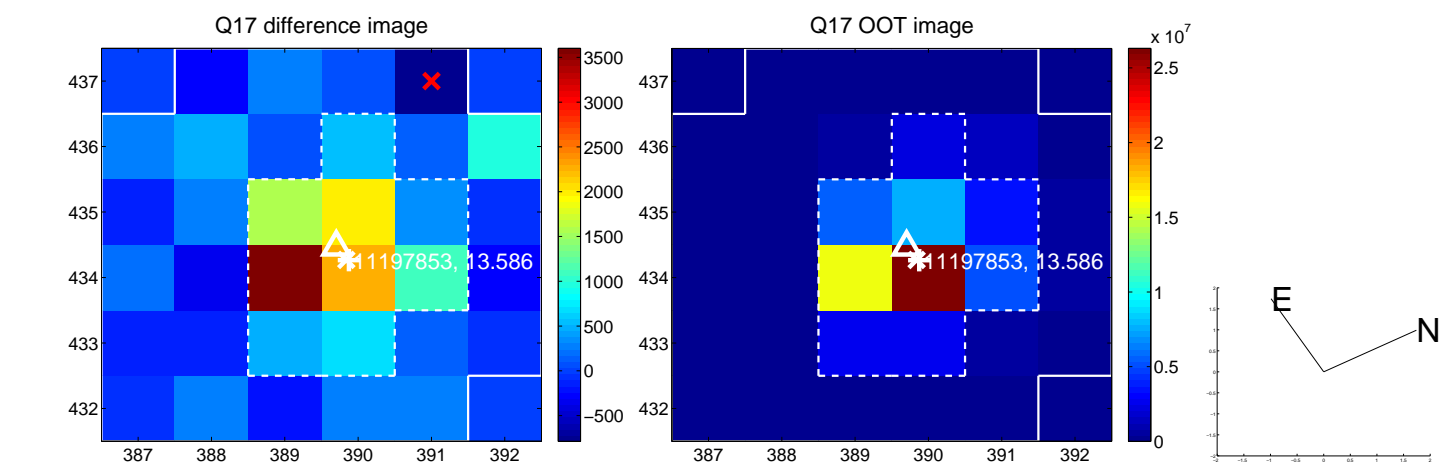
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



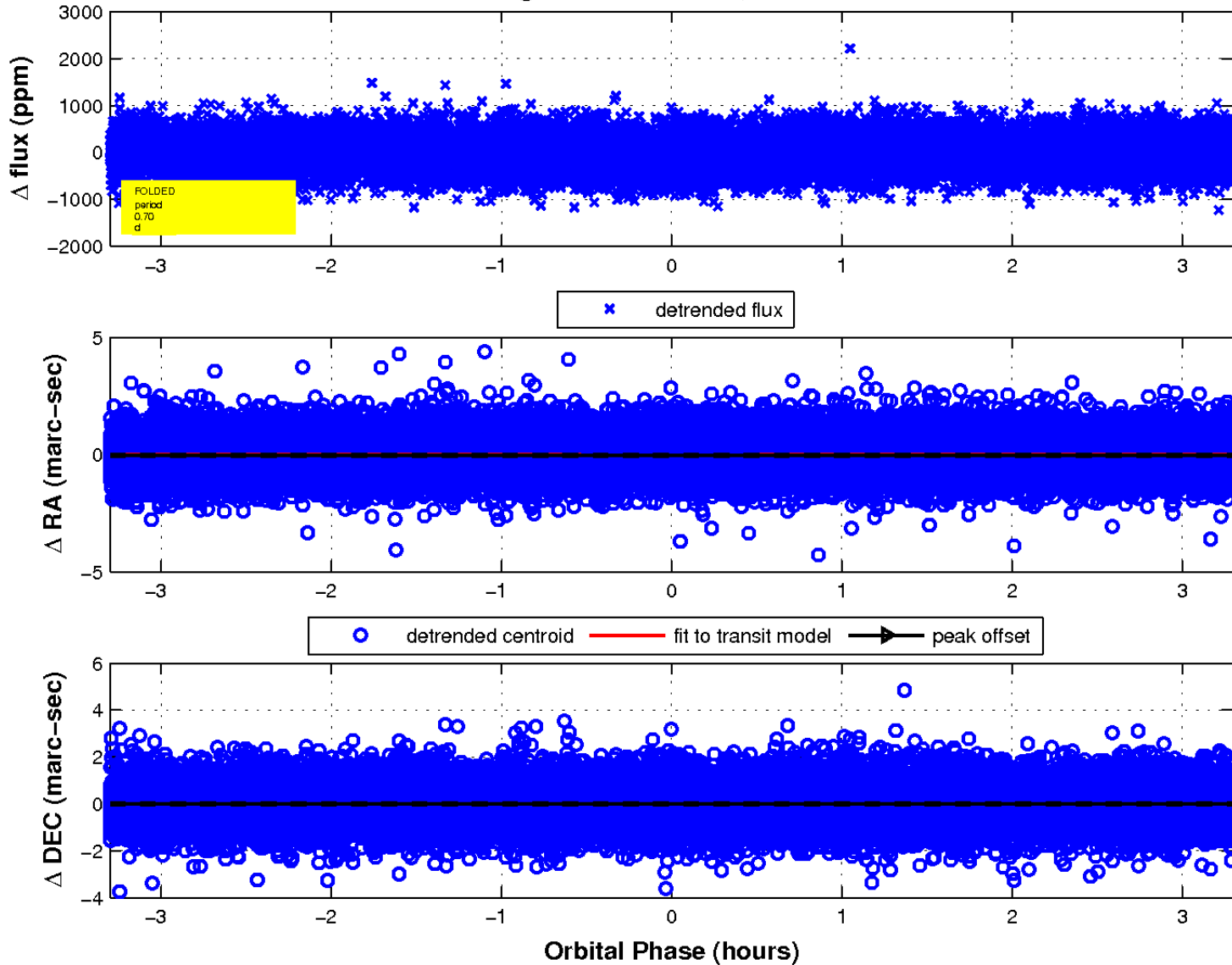
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

