

# KIC 005391338

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
005391338-01	OBS	No	0.982316	132.237649	239.5	11.788	11.5	17.2	1.19	6856	2.16	6607.75

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005391338-01	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.

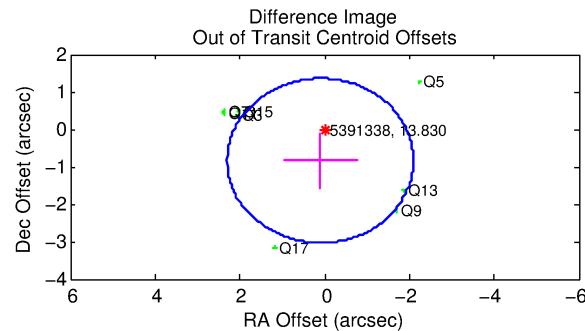
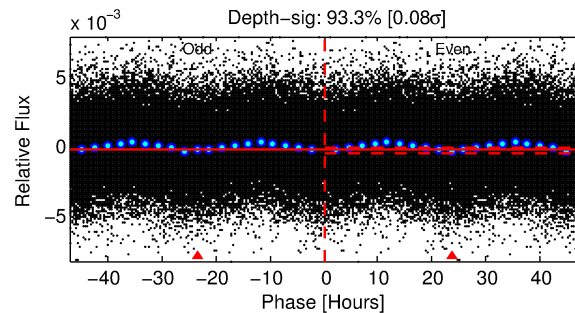
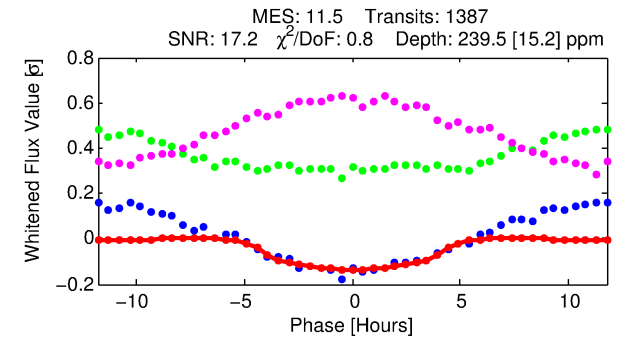
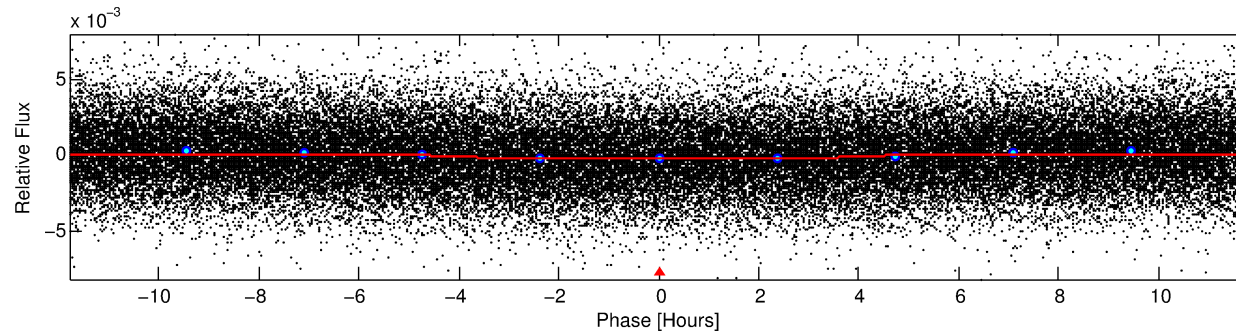
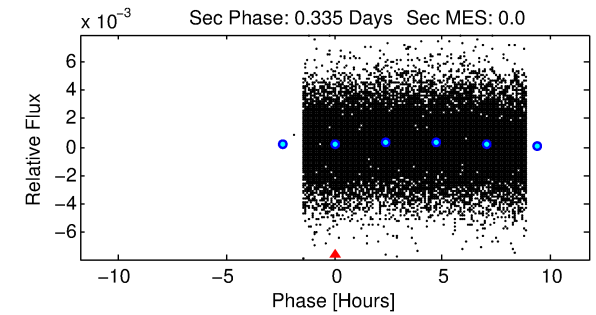
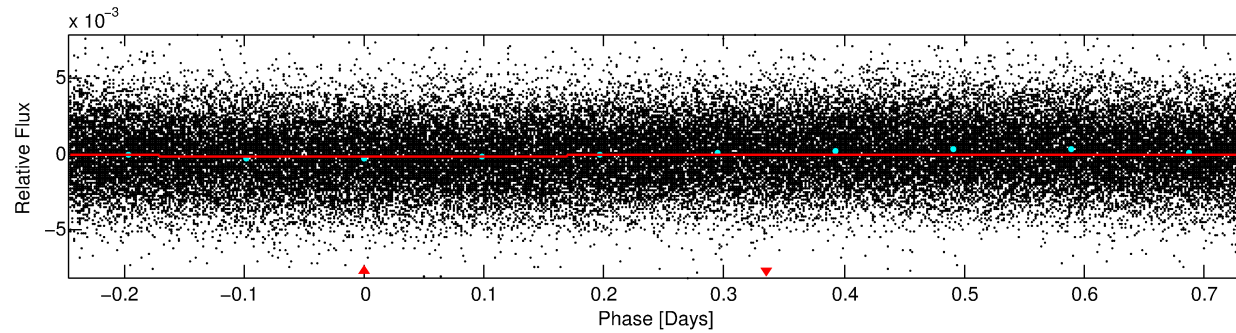
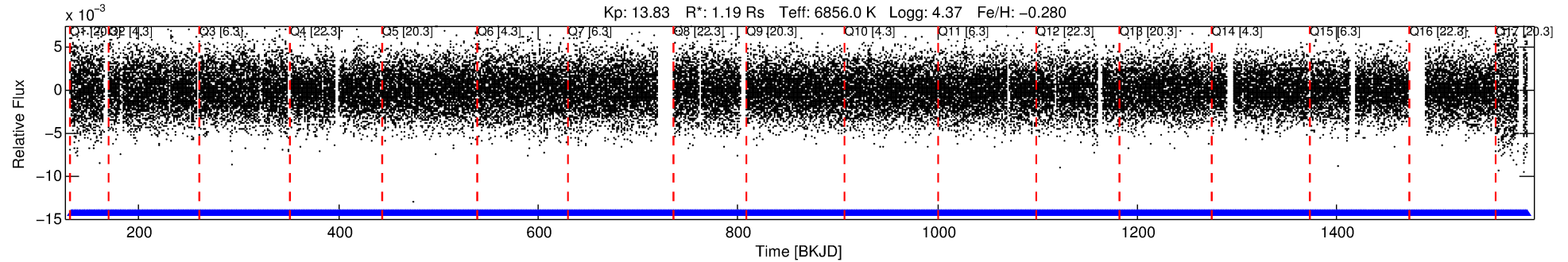
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 005391338-01

No Significant Match Found

# DV One-Page Summary

KIC: 5391338 Candidate: 1 of 1 Period: 0.982 d



## DV Fit Results:

Period = 0.98232 [0.00002] d  
Epoch = 132.2376 [0.0102] BKJD  
Rp/R\* = 0.0167 [0.0009]  
a/R\* = 1.02 [0.01]  
b = 0.91 [0.05]  
Seff = 6607.75 [2727.70]  
Teq = 2299 [237] K  
Rp = 2.16 [0.74] Re  
a = 0.0206 [0.0056] AU  
Ag = N/A  
Teffp = N/A

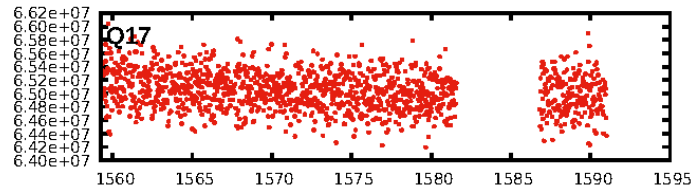
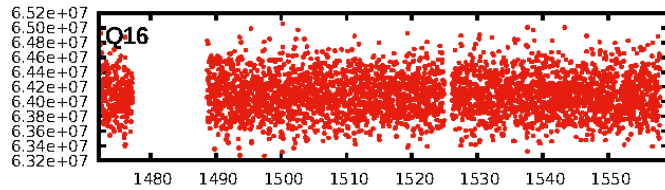
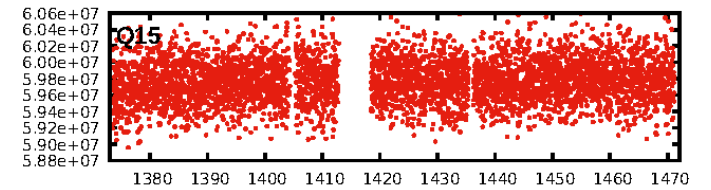
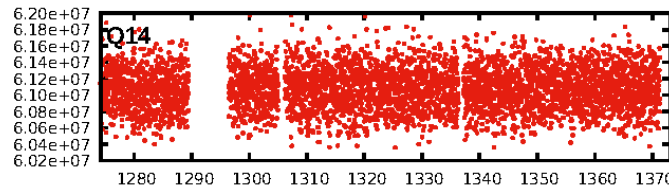
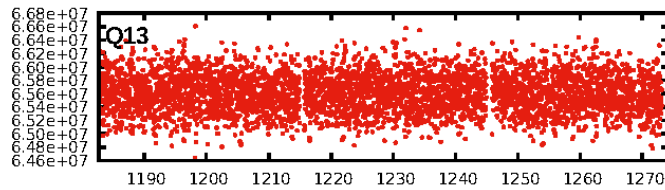
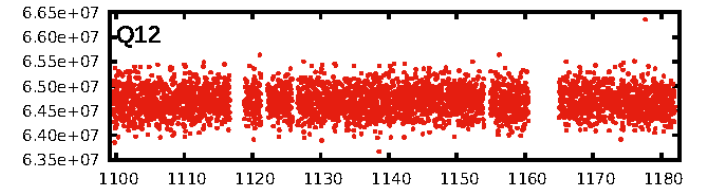
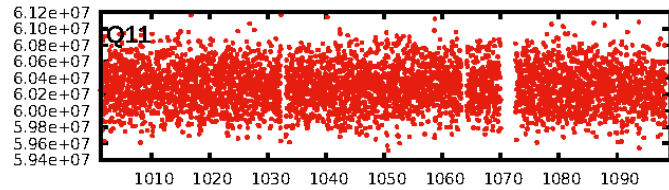
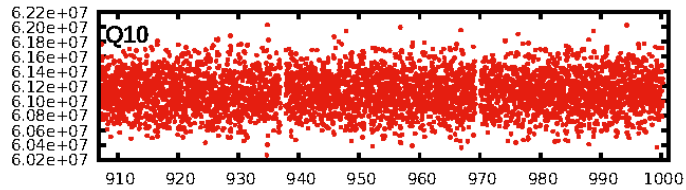
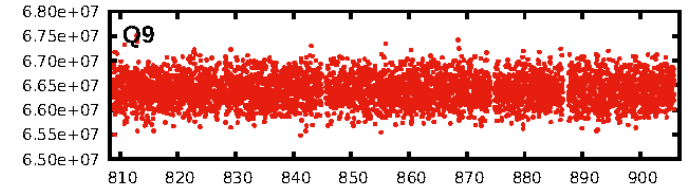
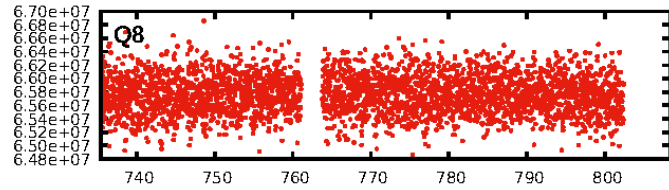
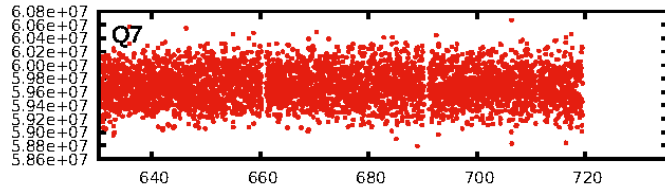
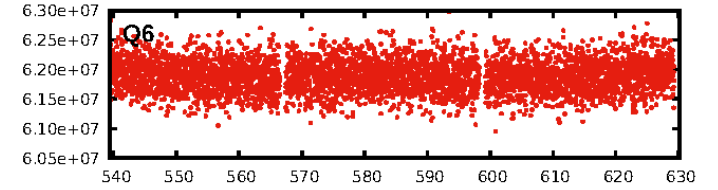
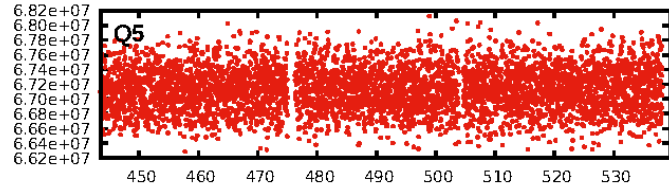
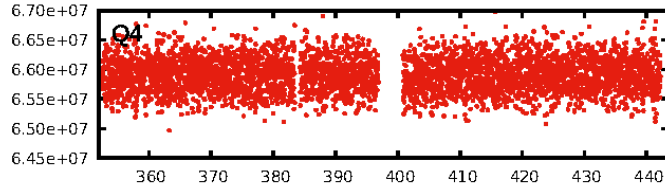
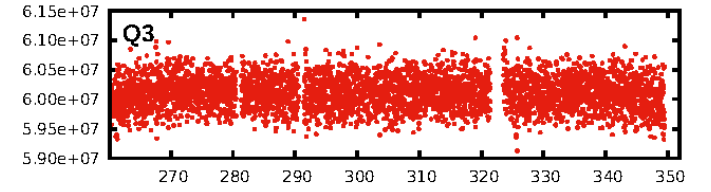
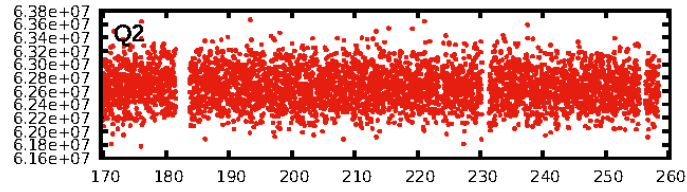
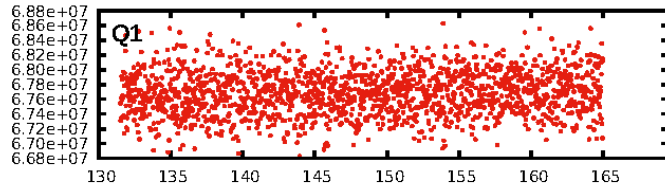
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [1325/1325]  
GhostDiagnostic-chr: 1.458  
Centroid-sig: 0.0%  
Centroid-so: 0.568 arcsec [5.78σ]  
OotOffset-rm: 0.846 arcsec [1.16σ]  
KicOffset-rm: 0.771 arcsec [1.05σ]  
OotOffset-st: 0/4/0/4 [8]  
KicOffset-st: 0/4/0/4 [8]  
DiffImageQuality-fgm: 0.75 [6/8]  
DiffImageOverlap-fno: 1.00 [17/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 00:09:58 Z

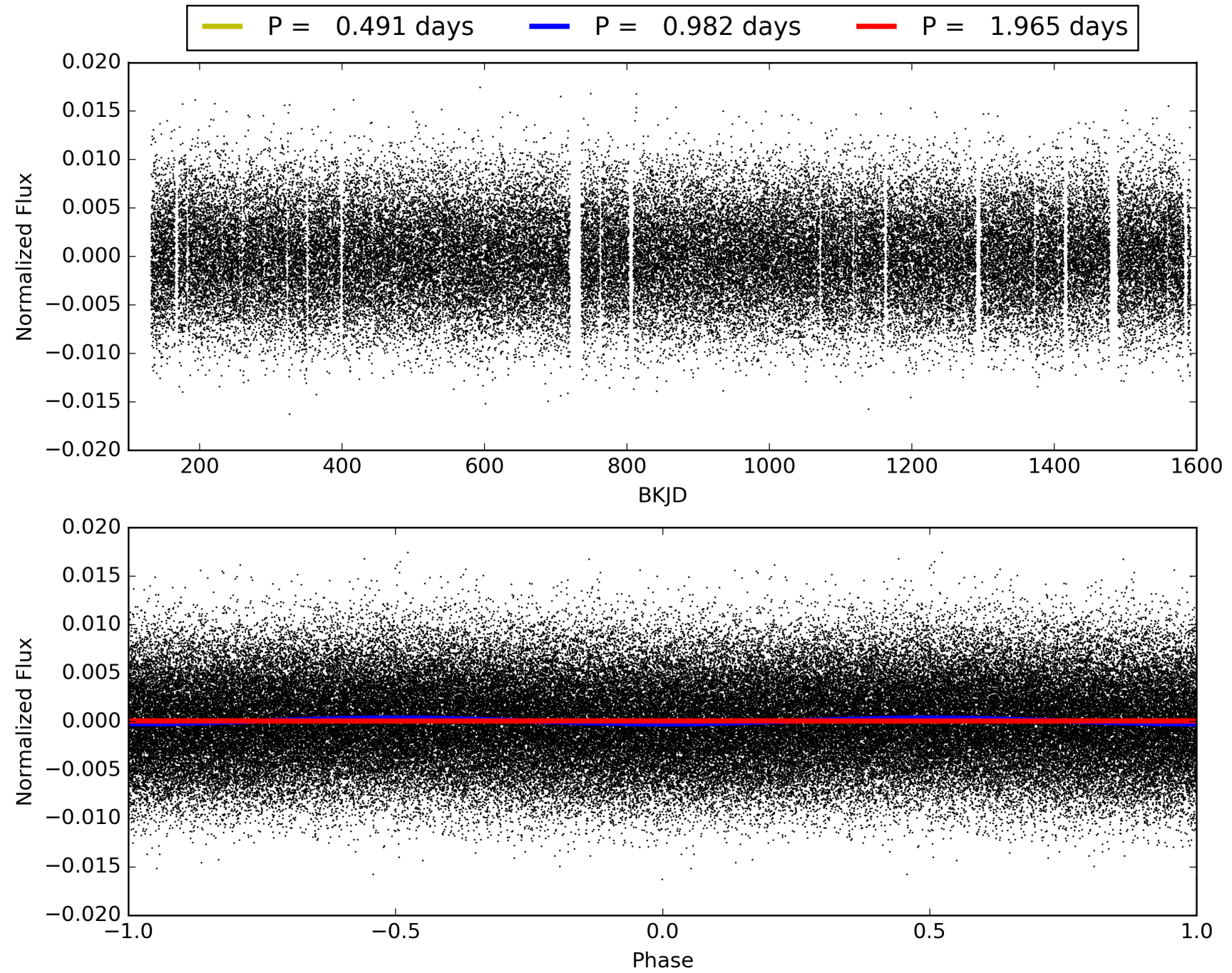
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 005391338-01, PDC Light Curves



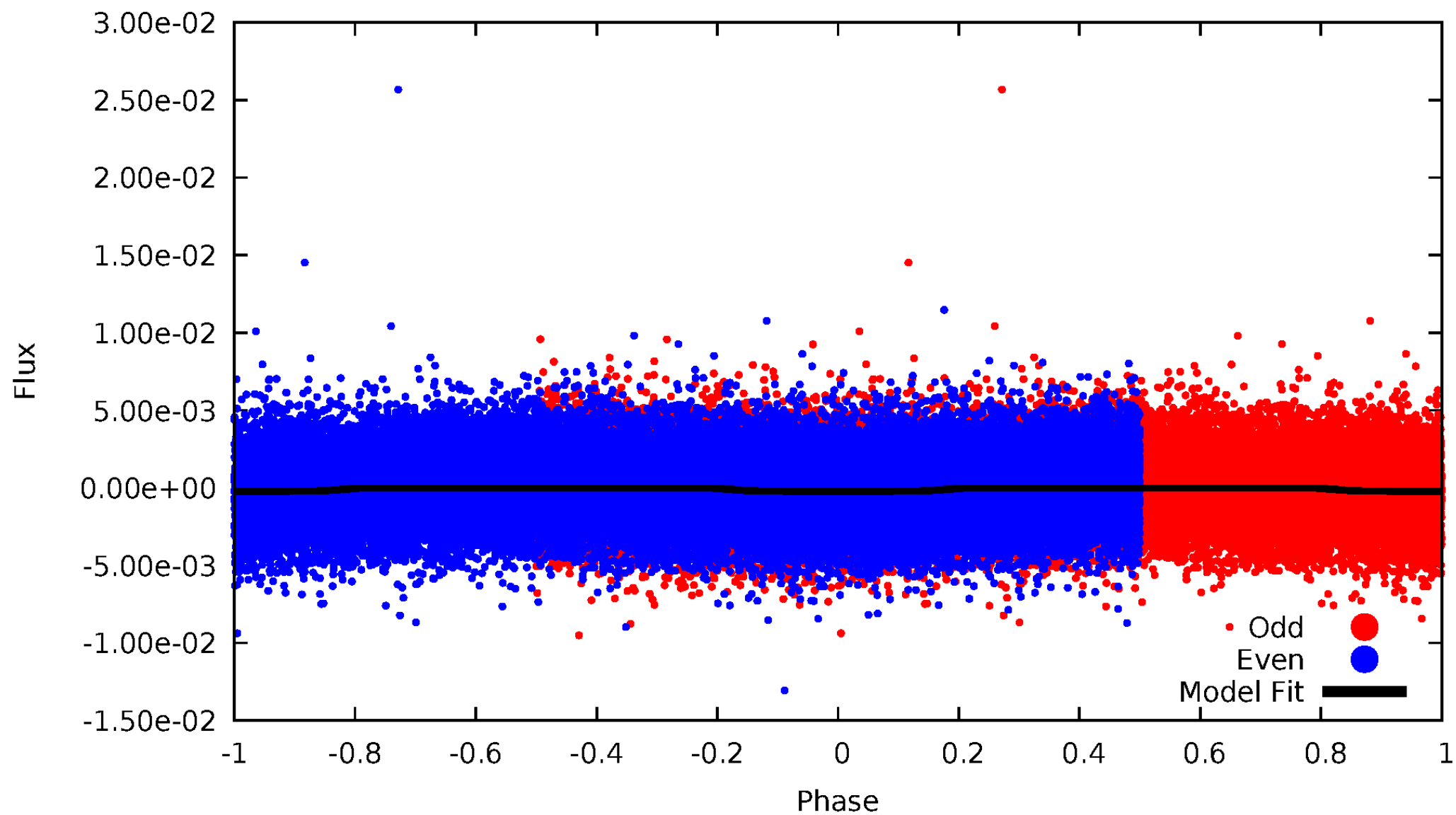


TCE 005391338-01



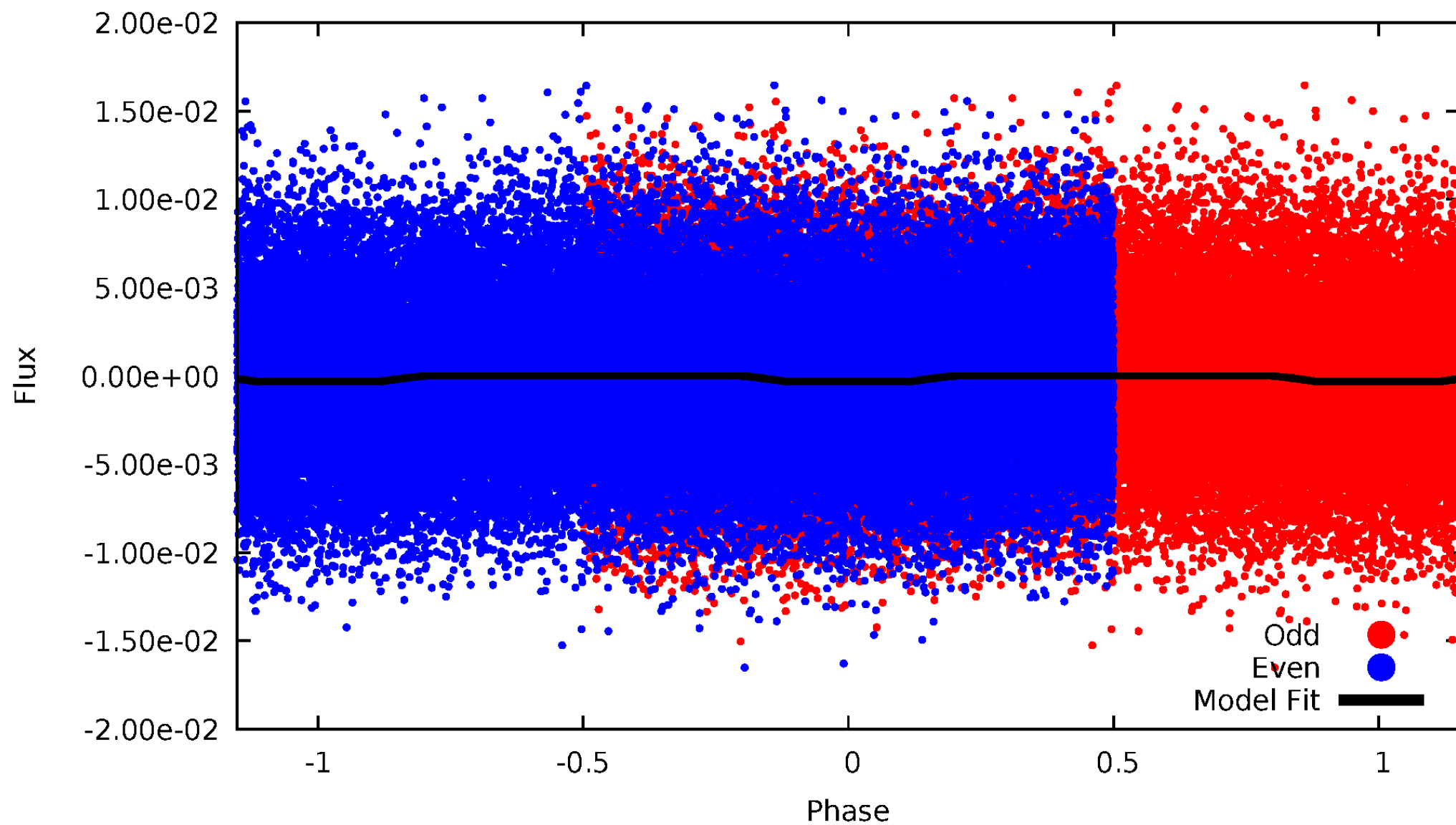
# DV Odd/Even

TCE 005391338-01

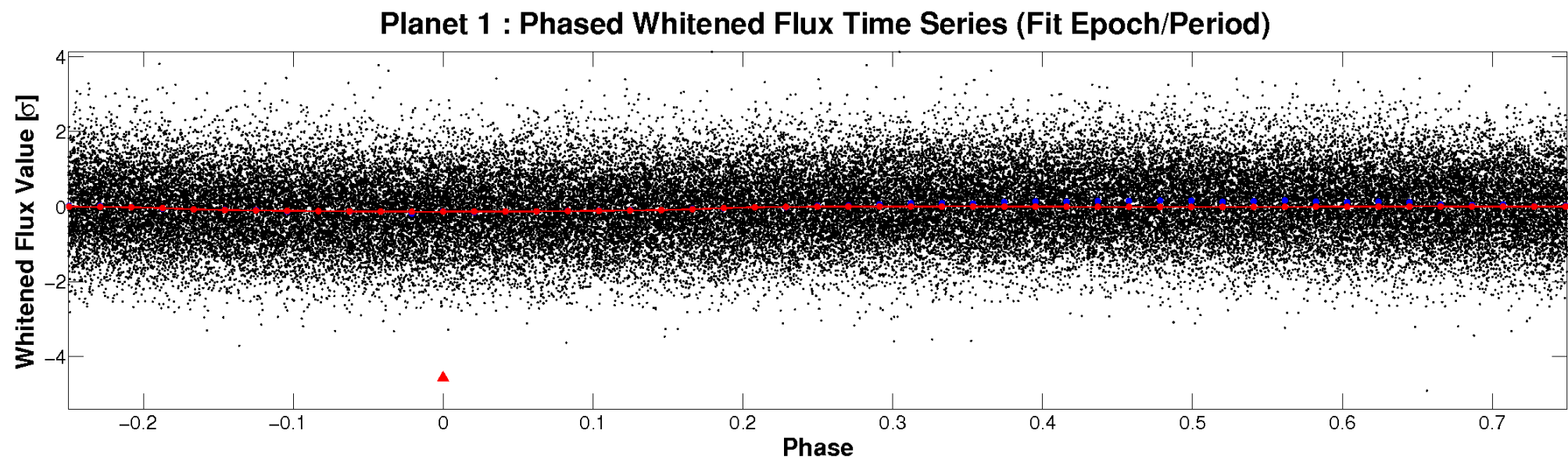
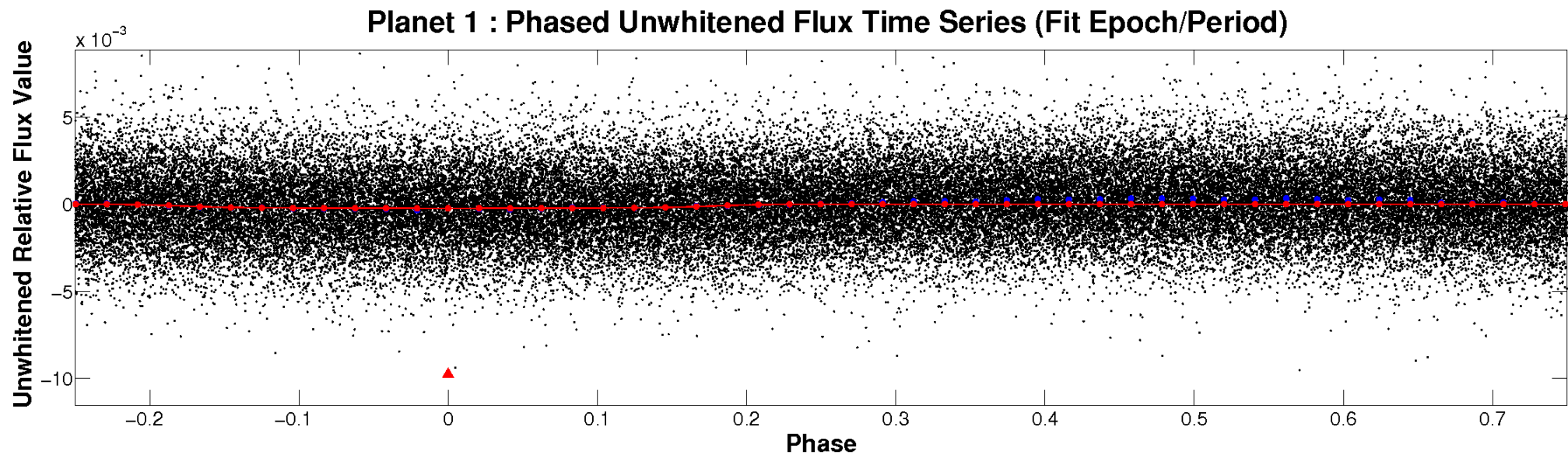


# ALT Odd/Even

TCE 005391338-01



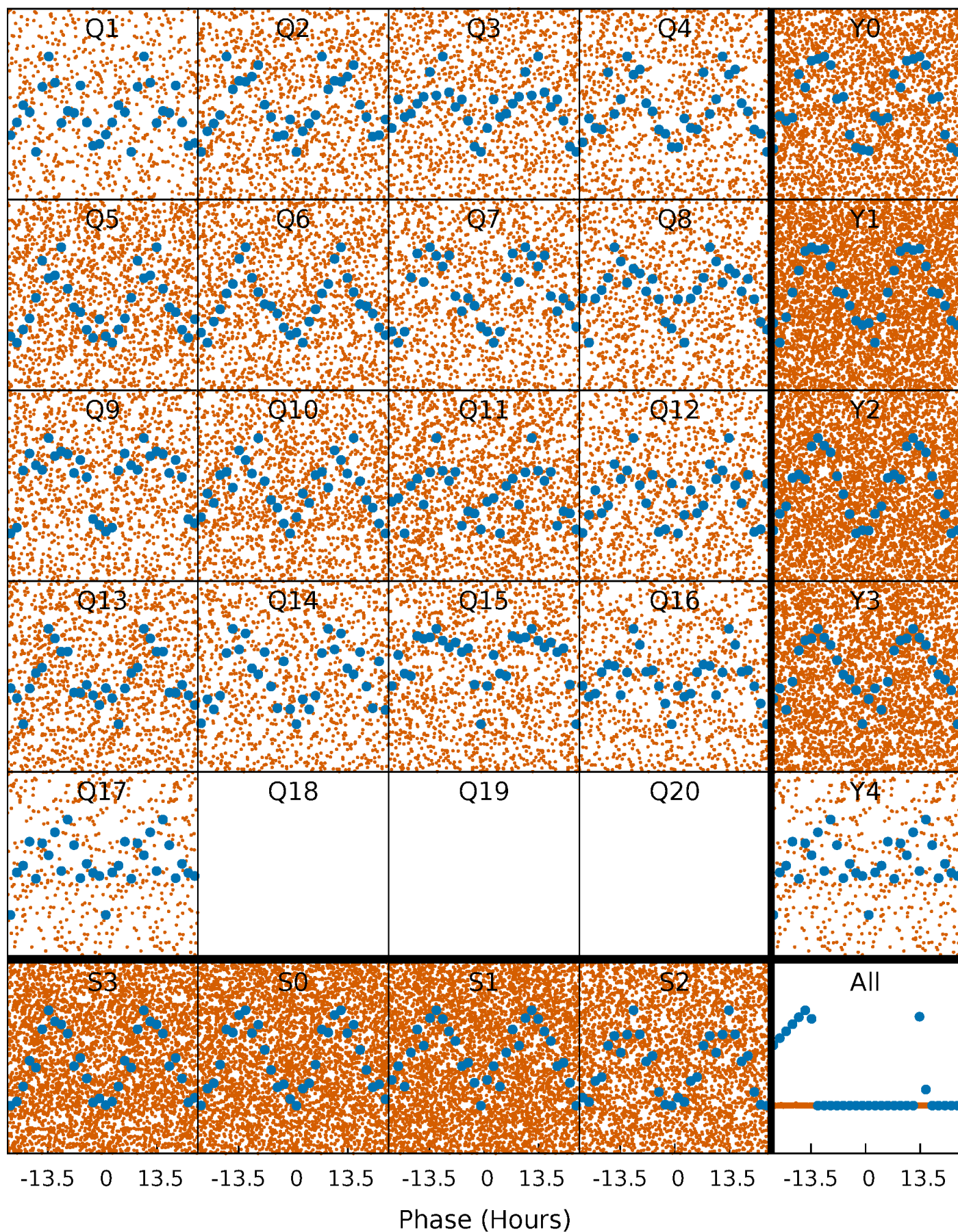
# Non-Whitened Vs. Whitened Light Curve





# PDC Quarter-Phased Transit Curves

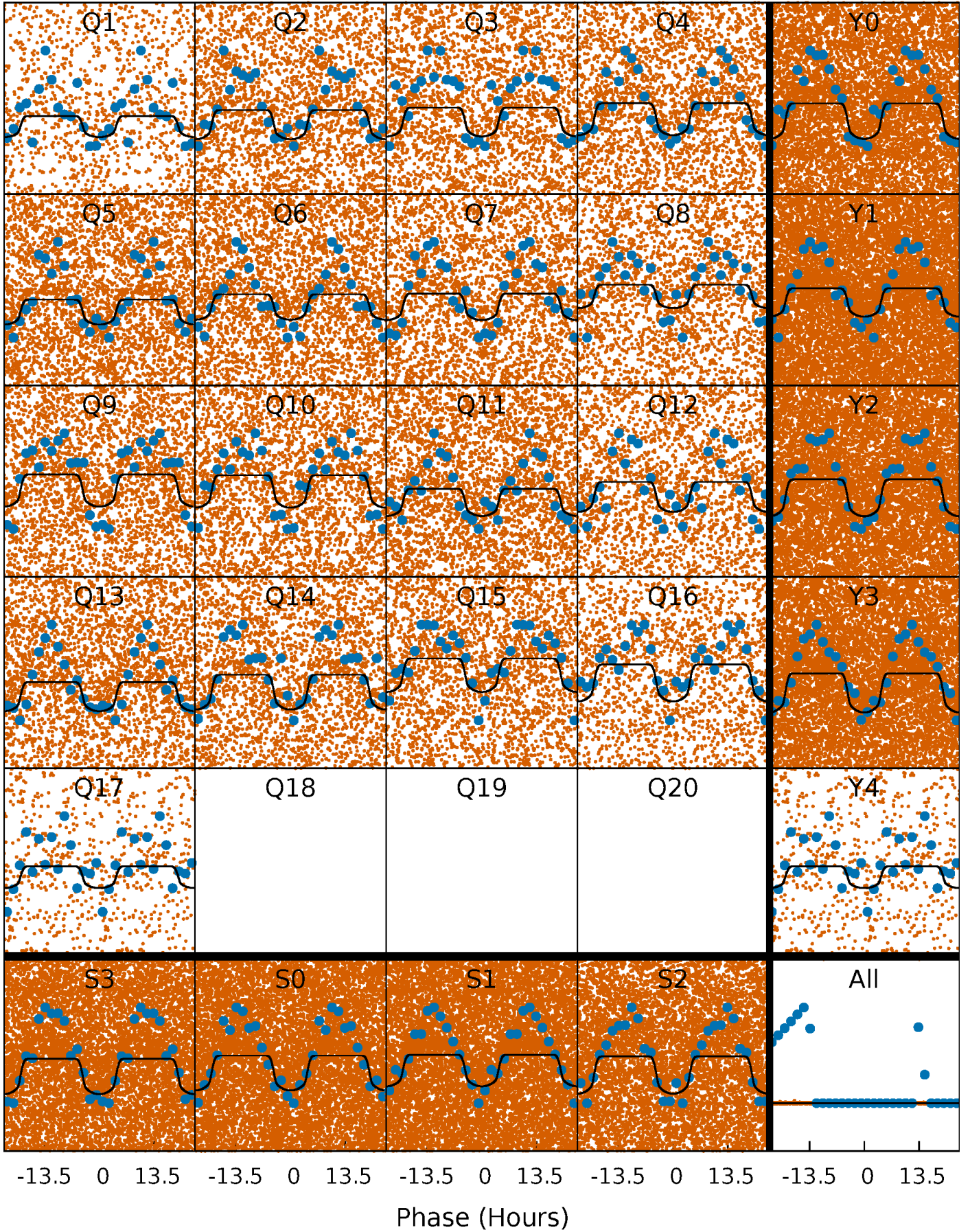
TCE 005391338-01 P= 0.982316 Days  $T_0=132.237649$  (BKJD)





# DV Quarter-Phased Transit Curves

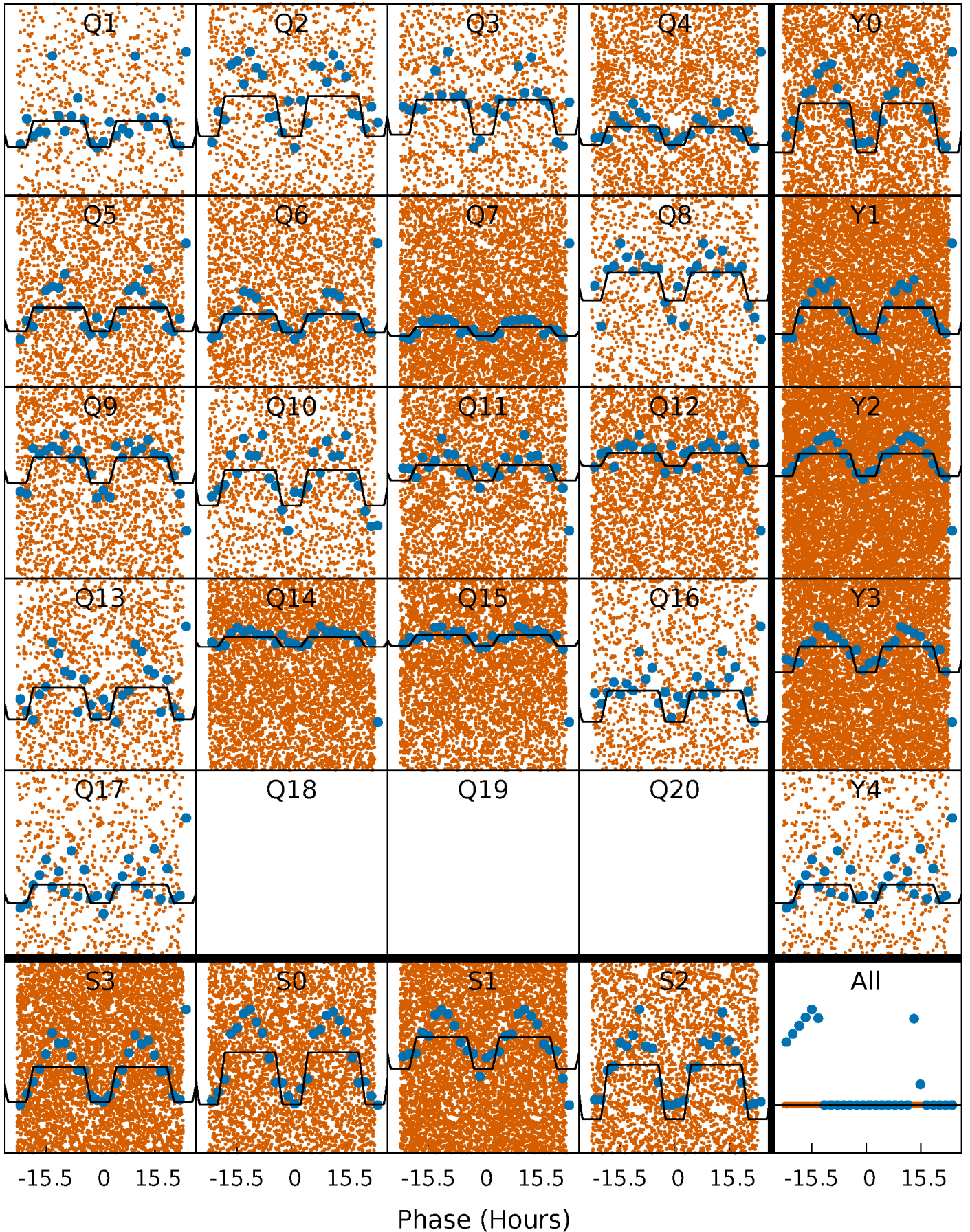
TCE 005391338-01 P= 0.982316 Days  $T_0=132.237649$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

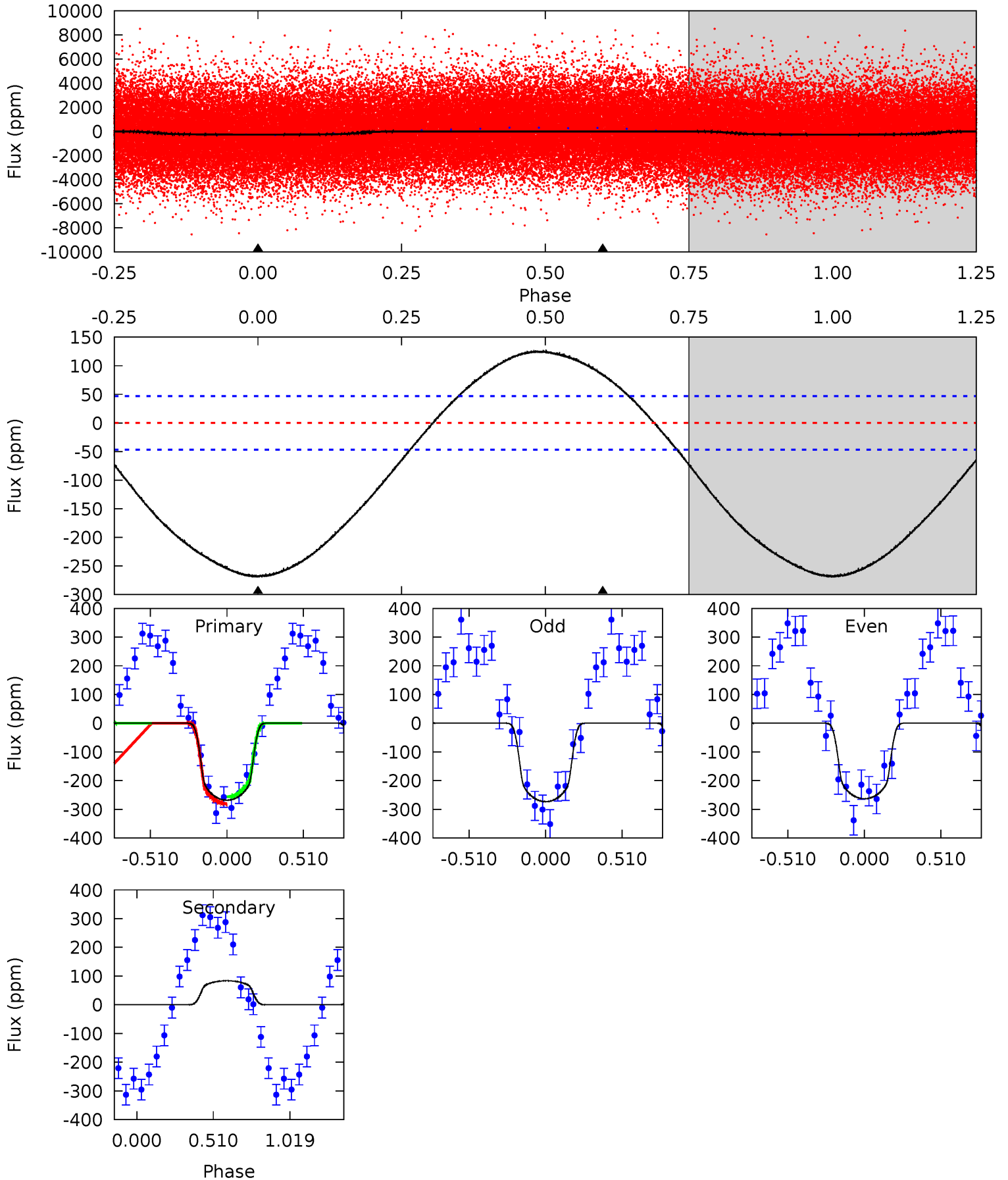
TCE 005391338-01   P= 0.982304 Days    $T_0=132.247731$  (BKJD)



# DV Model-Shift Uniqueness Test

005391338-01, P = 0.982316 Days, E = 131.255333 Days

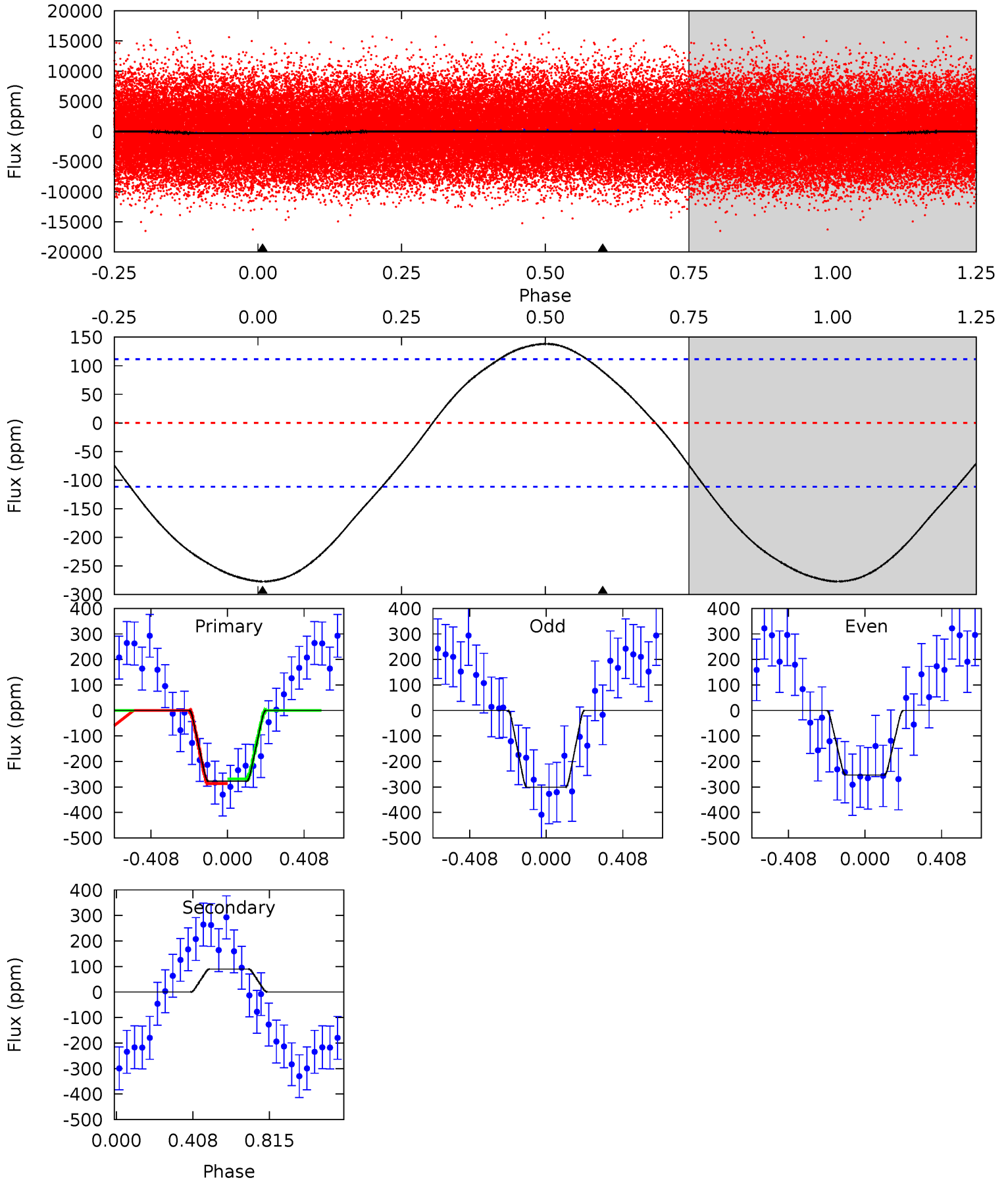
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.2	-7.54	0	0	4.21	0.66	2.94	24.2	24.2	-7.54	-7.54	0.45	0.54	0.32	1.07



# Alt Model-Shift Uniqueness Test

005391338-01, P = 0.982304 Days, E = 131.265427 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
10.6	-3.44	0	0	4.26	0.83	1.46	10.6	10.6	-3.44	-3.44	0.92	1.01	0.33	0.35





### Stellar Parameters For KIC 005391338

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6856^{+191}_{-262}$	$4.368^{+0.067}_{-0.202}$	$-0.280^{+0.250}_{-0.350}$	$1.188^{+0.402}_{-0.134}$	$1.217^{+0.195}_{-0.160}$	$1.022^{+0.299}_{-0.553}$
	+3%/-4%	+2%/-5%	+89%/-125%	+34%/-11%	+16%/-13%	+29%/-54%
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 005391338-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$84 \pm 11$	$2.24^{+0.39}_{-0.24}$	$3262^{+245}_{-178}$	$-5188^{+222}_{-241}$	$-3.801^{+1.021}_{-1.076}$
Alt.	$90 \pm 26$	$2.40^{+0.40}_{-0.26}$	$3263^{+235}_{-177}$	$-5088^{+348}_{-350}$	$-3.437^{+1.195}_{-1.248}$

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

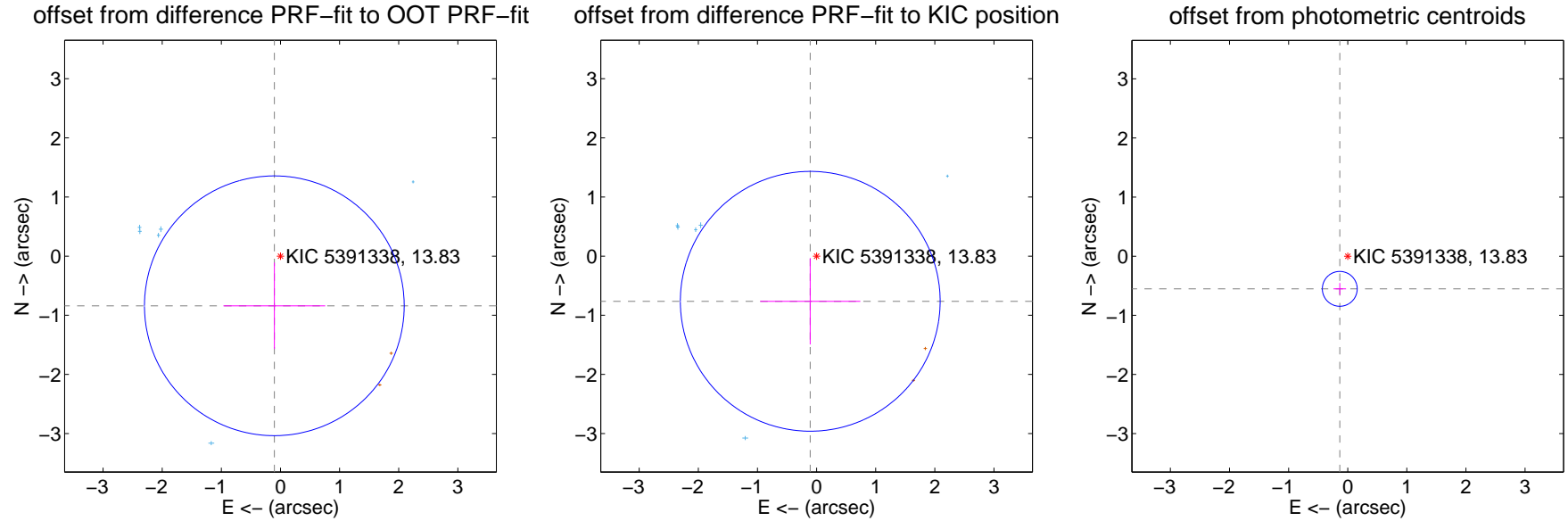
## DV Centroid Data

Supplemental centroid analysis for 005391338-01. Kepler magnitude: 13.83. Transit SNR 17.22

There are 6 quarters with good PRF difference image offsets

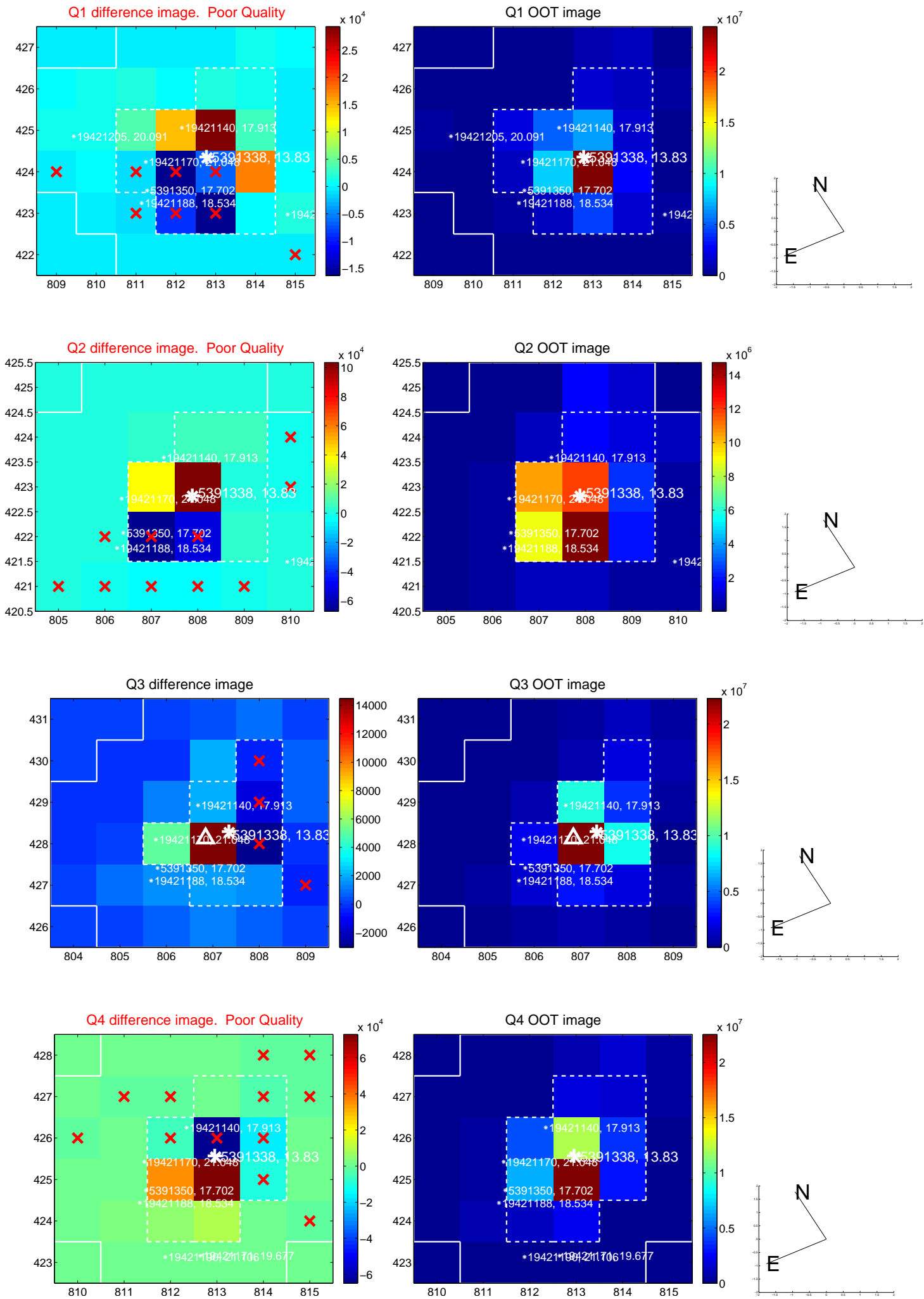
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.846 \pm 0.732$	1.16	$0.104 \pm 0.861$	$-0.840 \pm 0.730$
PRF-fit source offset from KIC position	$0.771 \pm 0.732$	1.05	$0.107 \pm 0.848$	$-0.764 \pm 0.730$
photometric centroid source offset	$0.57 \pm 0.10$	5.78	$0.13 \pm 0.11$	$-0.55 \pm 0.10$

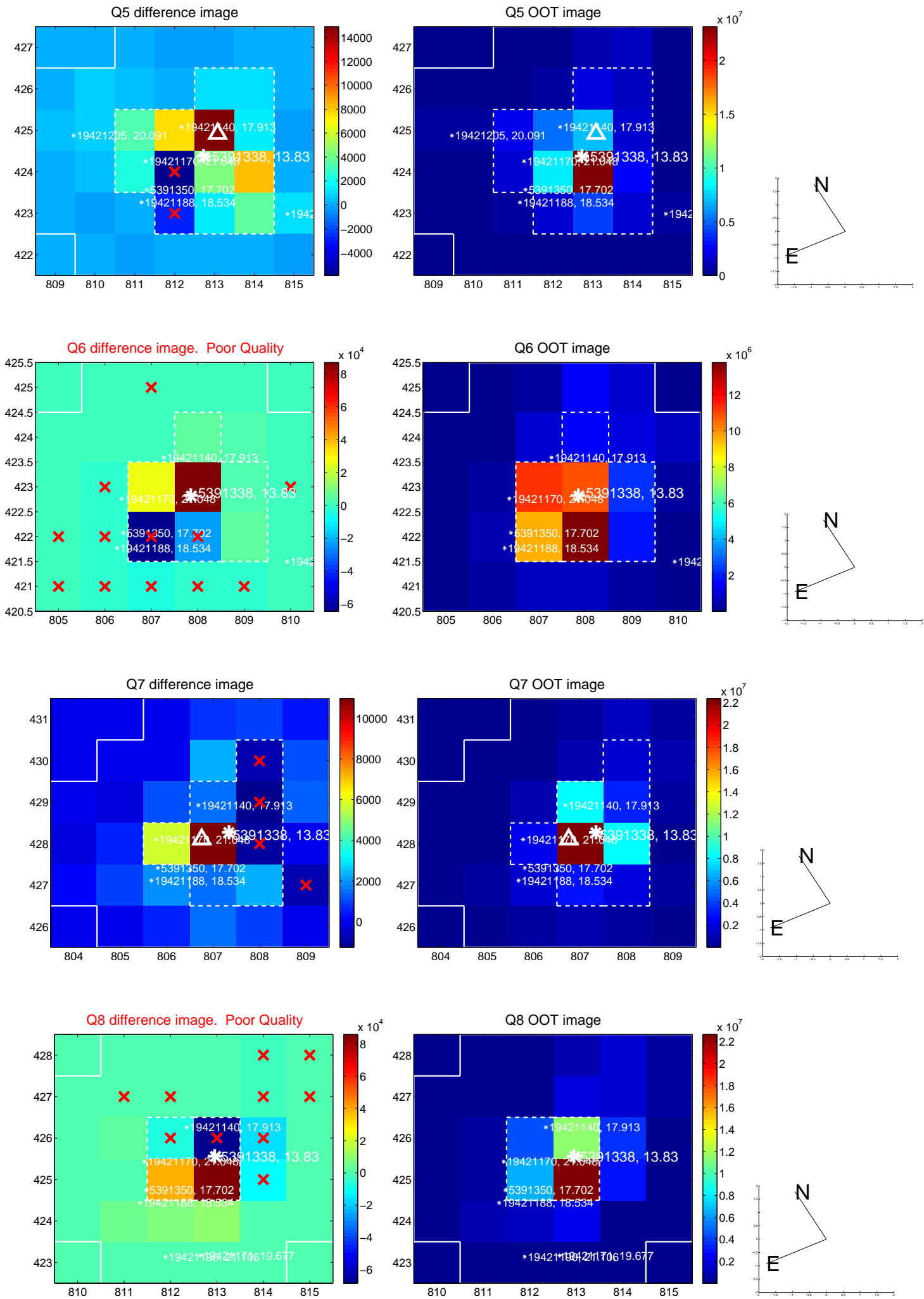


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

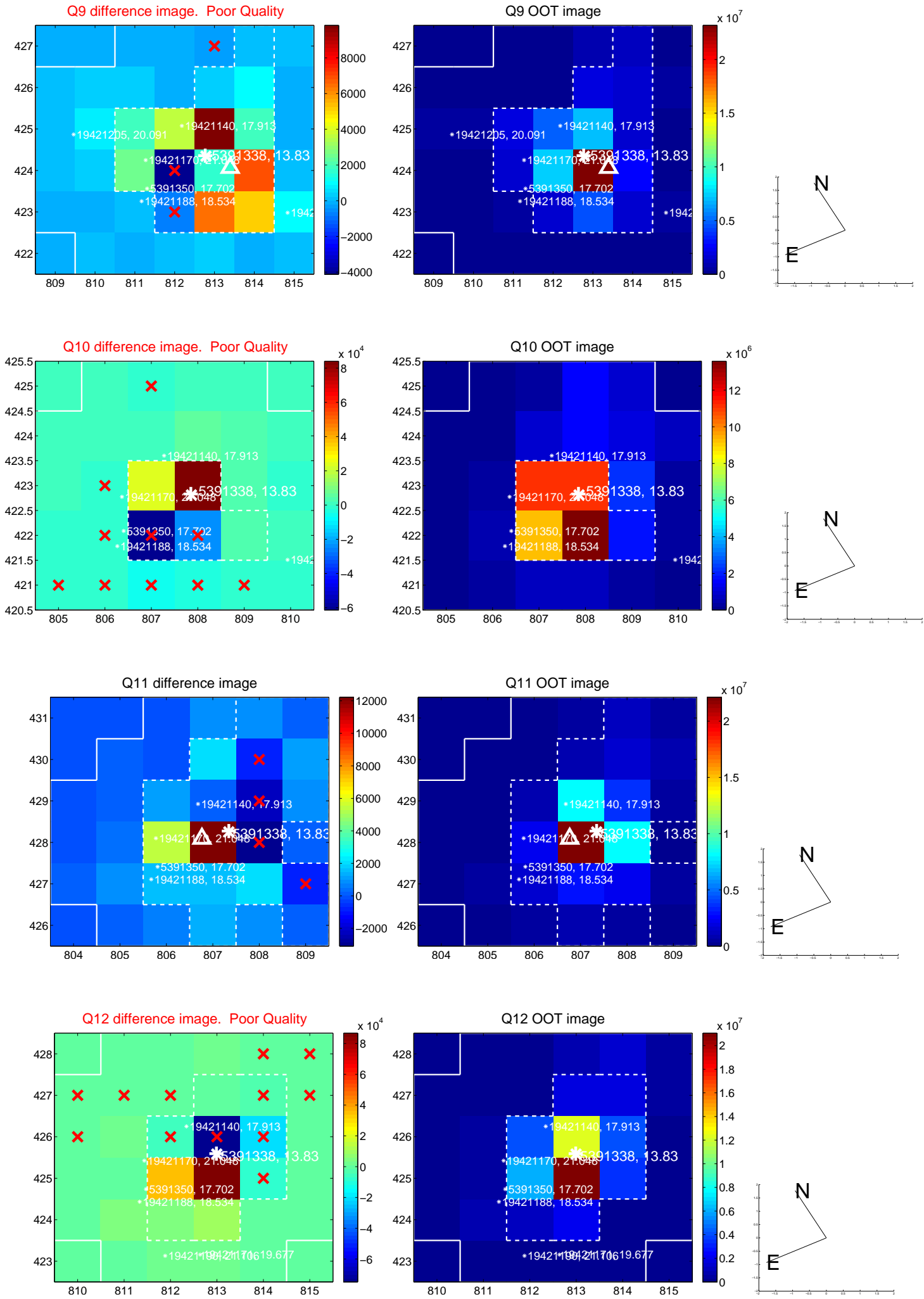


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

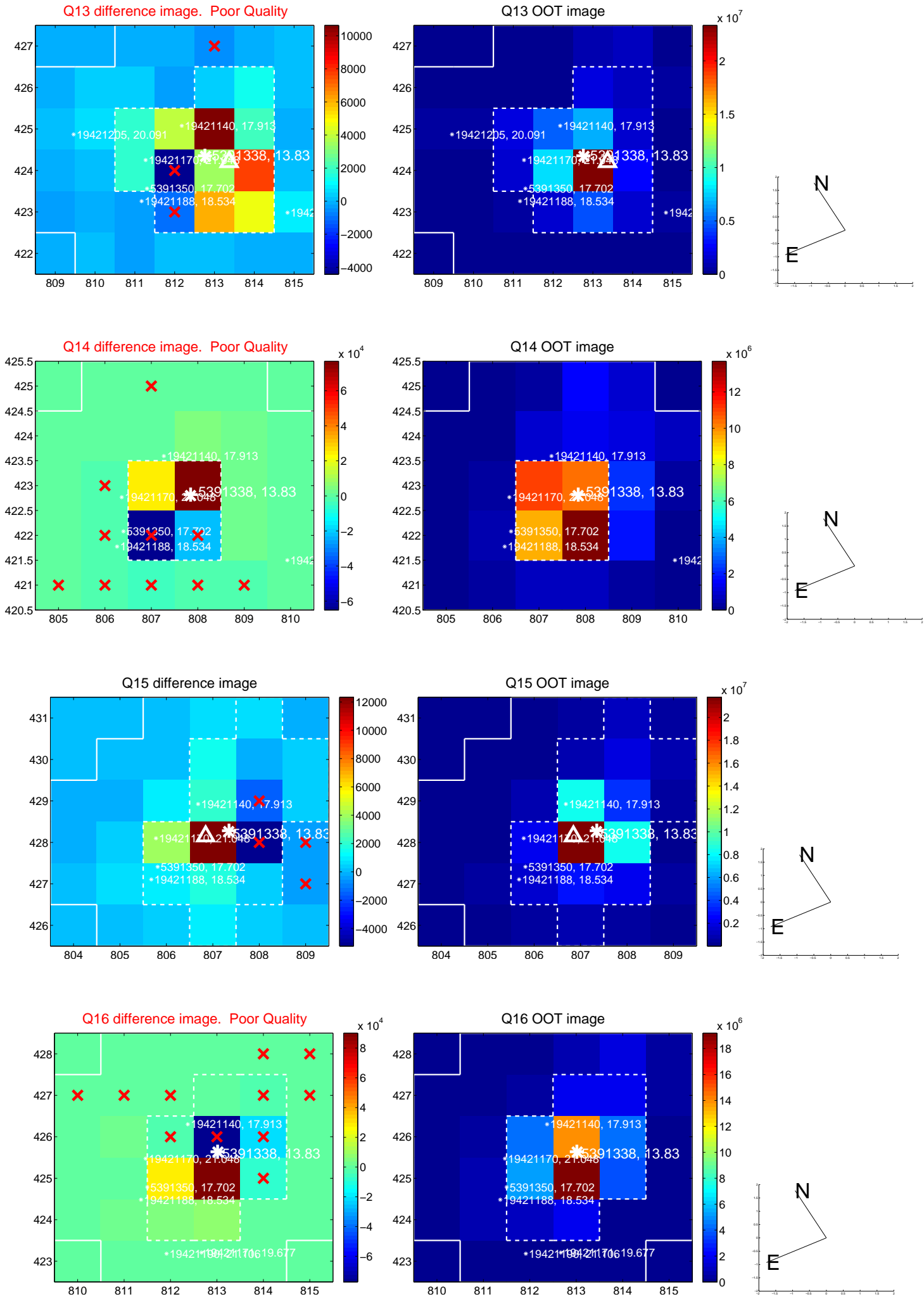




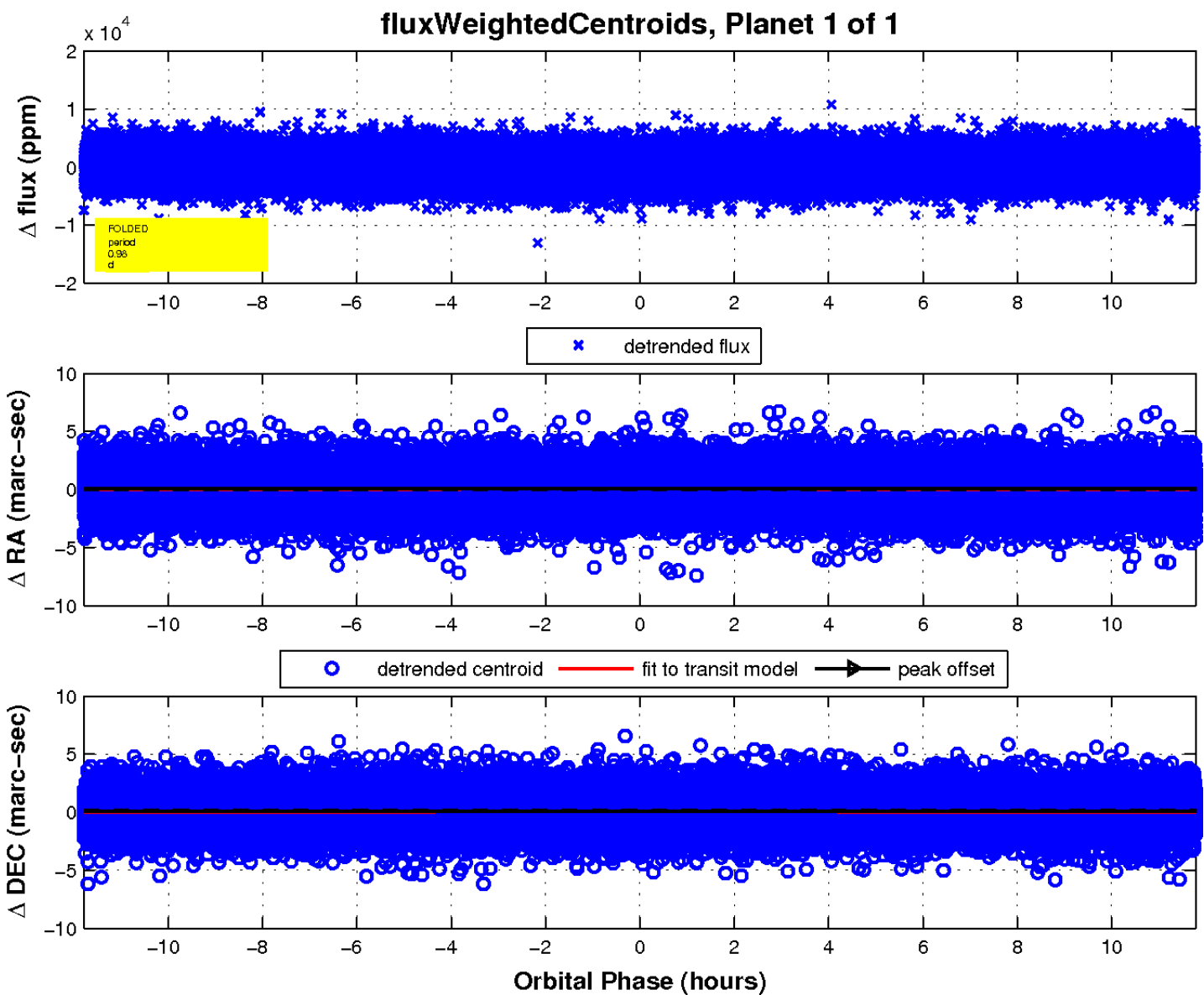
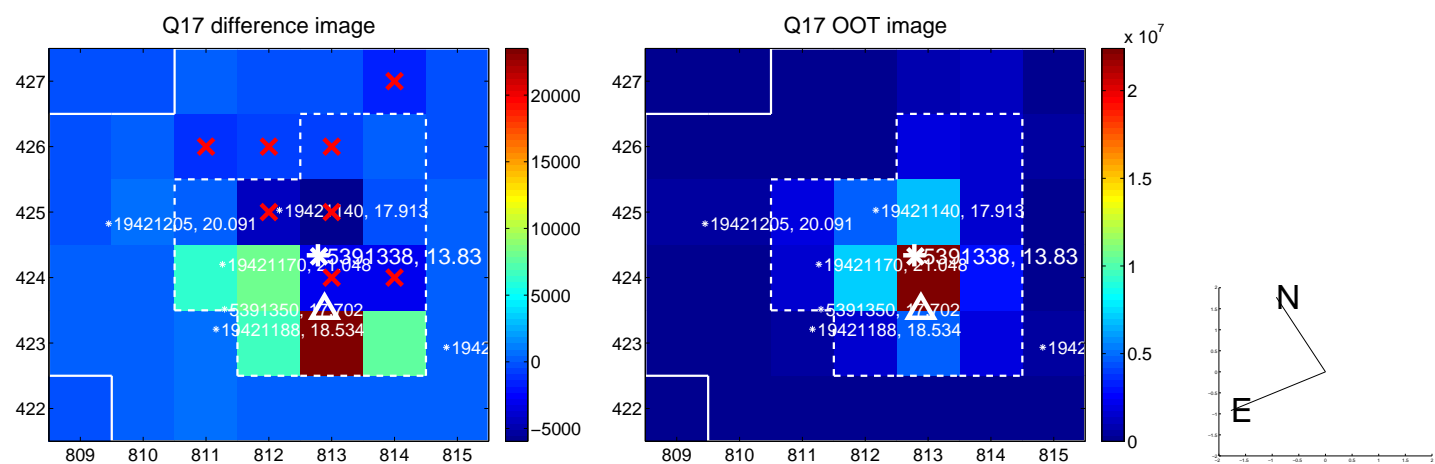
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white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



A deep-sky image showing a field of galaxies and stars. A blue grid is overlaid on the image. A red crosshair marks a specific location. Green text labels the grid coordinates: '14.0', '13.0', '12.0', '11.0' along the top and '31:30.0', '40.0', '50.0', '59:55:10.0' along the right side.

Declination