

# KIC 003839928

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
003839928-01	OBS	No	1.899601	133.318140	63.7	9.085	8.2	7.7	0.87	6015	0.69	1018.51

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003839928-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET—HALO_GHOST

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

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

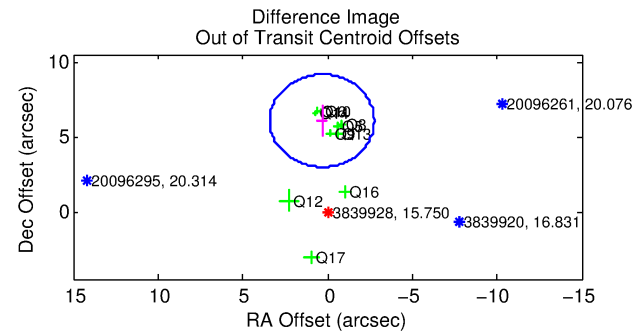
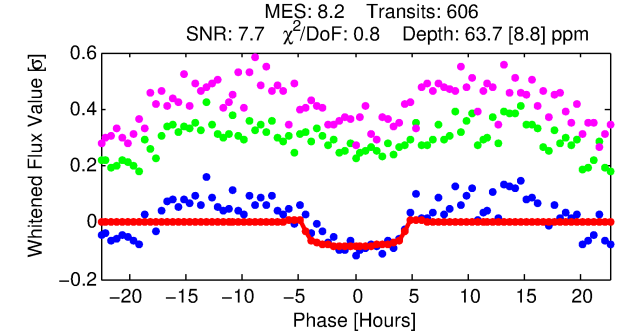
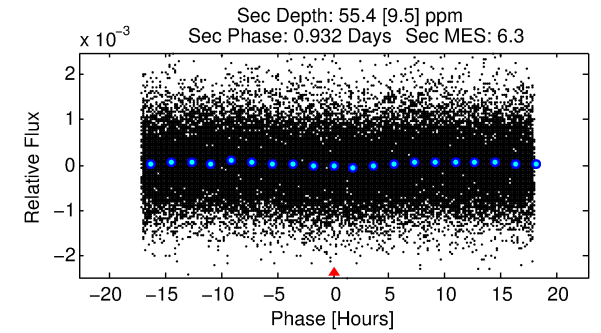
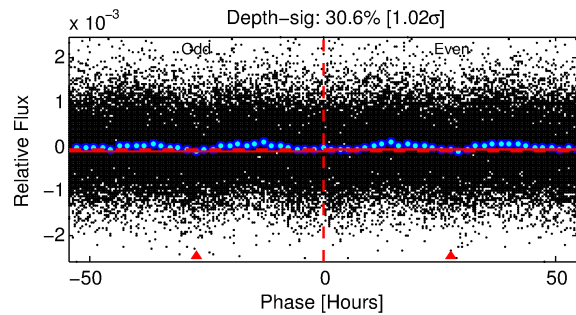
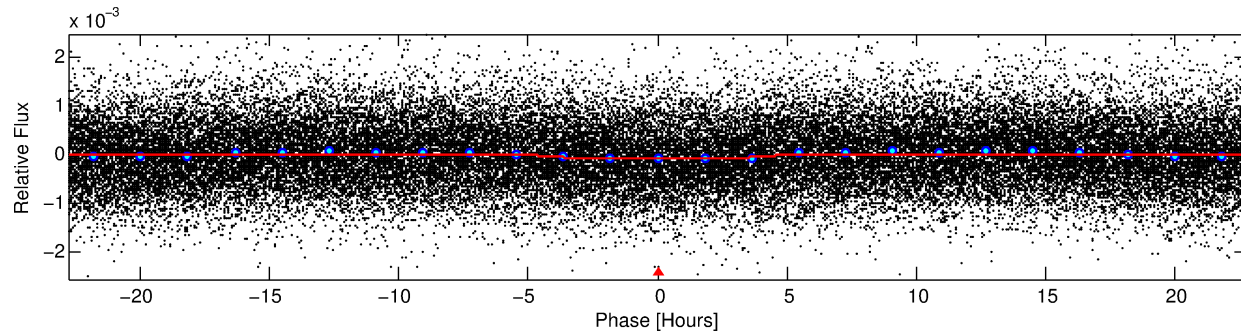
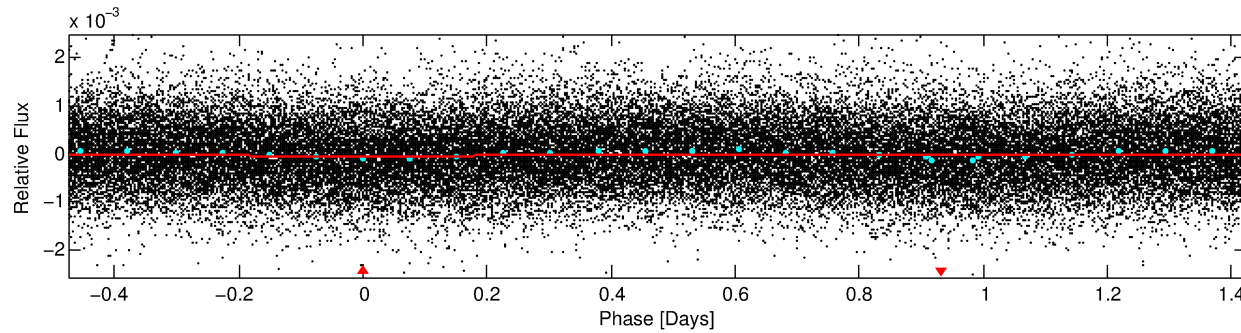
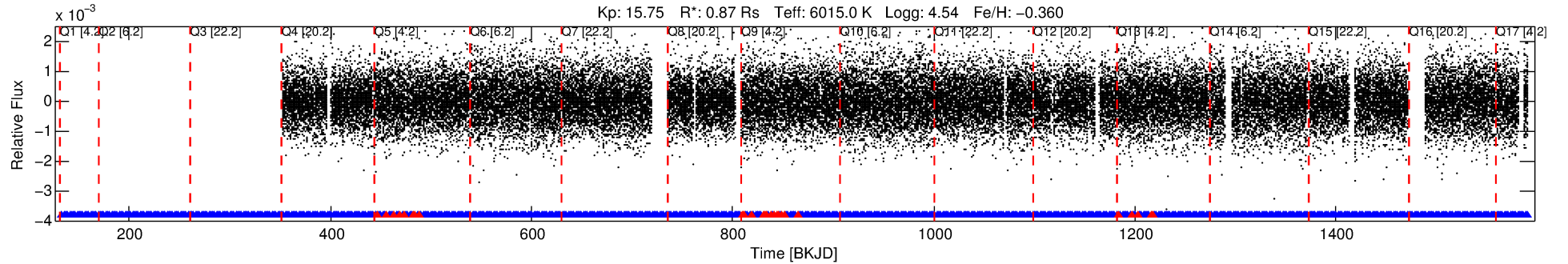
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 003839928-01

No Significant Match Found

# DV One-Page Summary

KIC: 3839928 Candidate: 1 of 1 Period: 1.900 d



## DV Fit Results:

Period = 1.89960 [0.00004] d  
Epoch = 133.3181 [0.0112] BKJD  
Rp/R\* = 0.0073 [0.0176]  
a/R\* = 1.72 [13.53]  
b = 0.04 [337.01]  
Seff = 1018.51 [384.21]  
Teq = 1441 [136] K  
Rp = 0.69 [1.68] Re  
a = 0.0295 [0.0071] AU  
Ag = 55.27 [266.91] [0.20 $\sigma$ ]  
Teffp = 6073 [7315] K [0.63 $\sigma$ ]

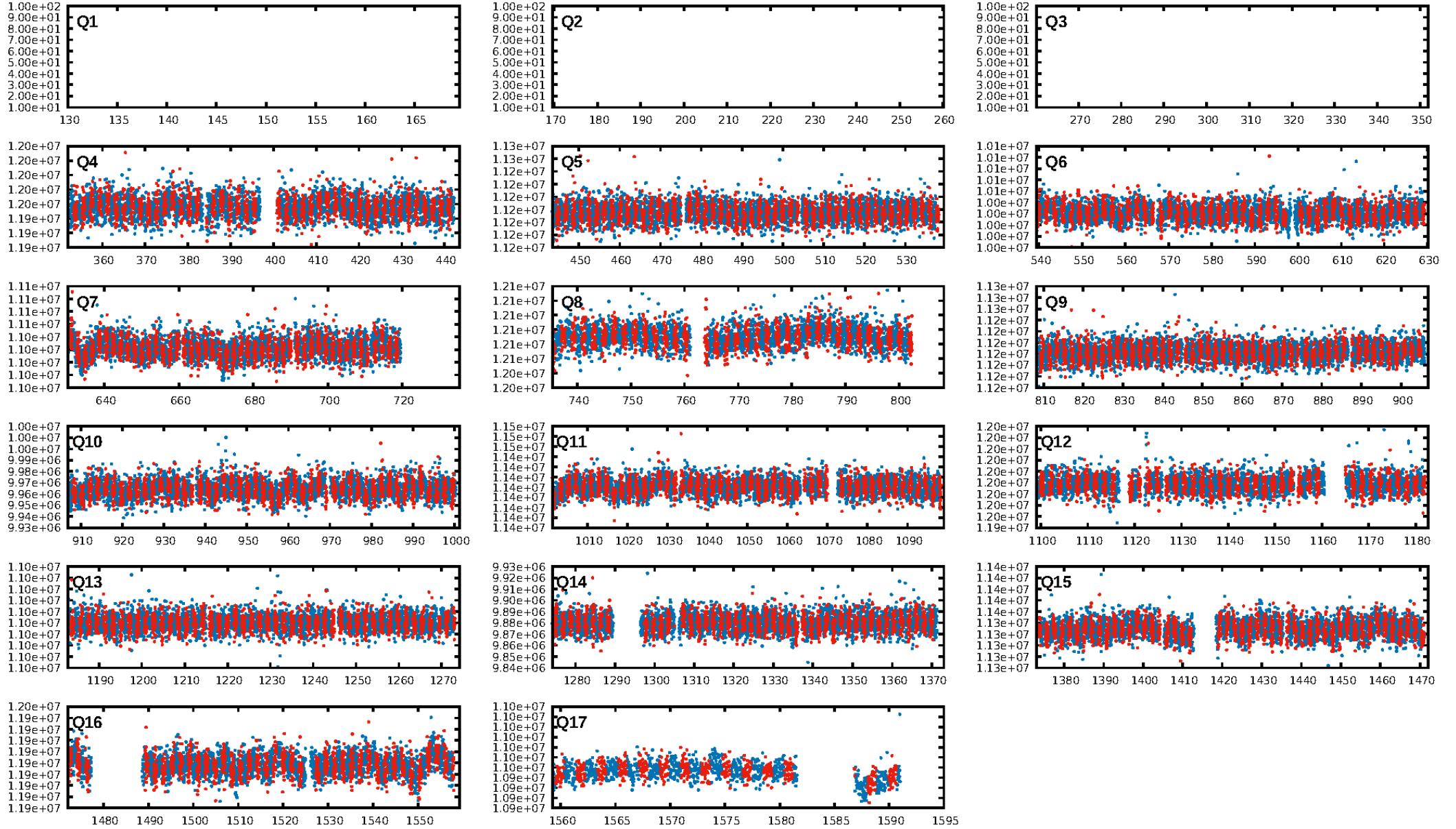
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 1.12e-12  
RollingBand-fgt: 0.96 [566/592]  
GhostDiagnostic-chr: 0.03101  
Centroid-sig: 0.0%  
Centroid-so: 7.026 arcsec [4.09 $\sigma$ ]  
OotOffset-rm: 6.077 arcsec [5.90 $\sigma$ ]  
KicOffset-rm: 5.836 arcsec [6.59 $\sigma$ ]  
OotOffset-st: 3/0/3/4 [10]  
KicOffset-st: 3/0/3/4 [10]  
DiffImageQuality-fgm: 0.50 [5/10]  
DiffImageOverlap-fno: 1.00 [14/14]

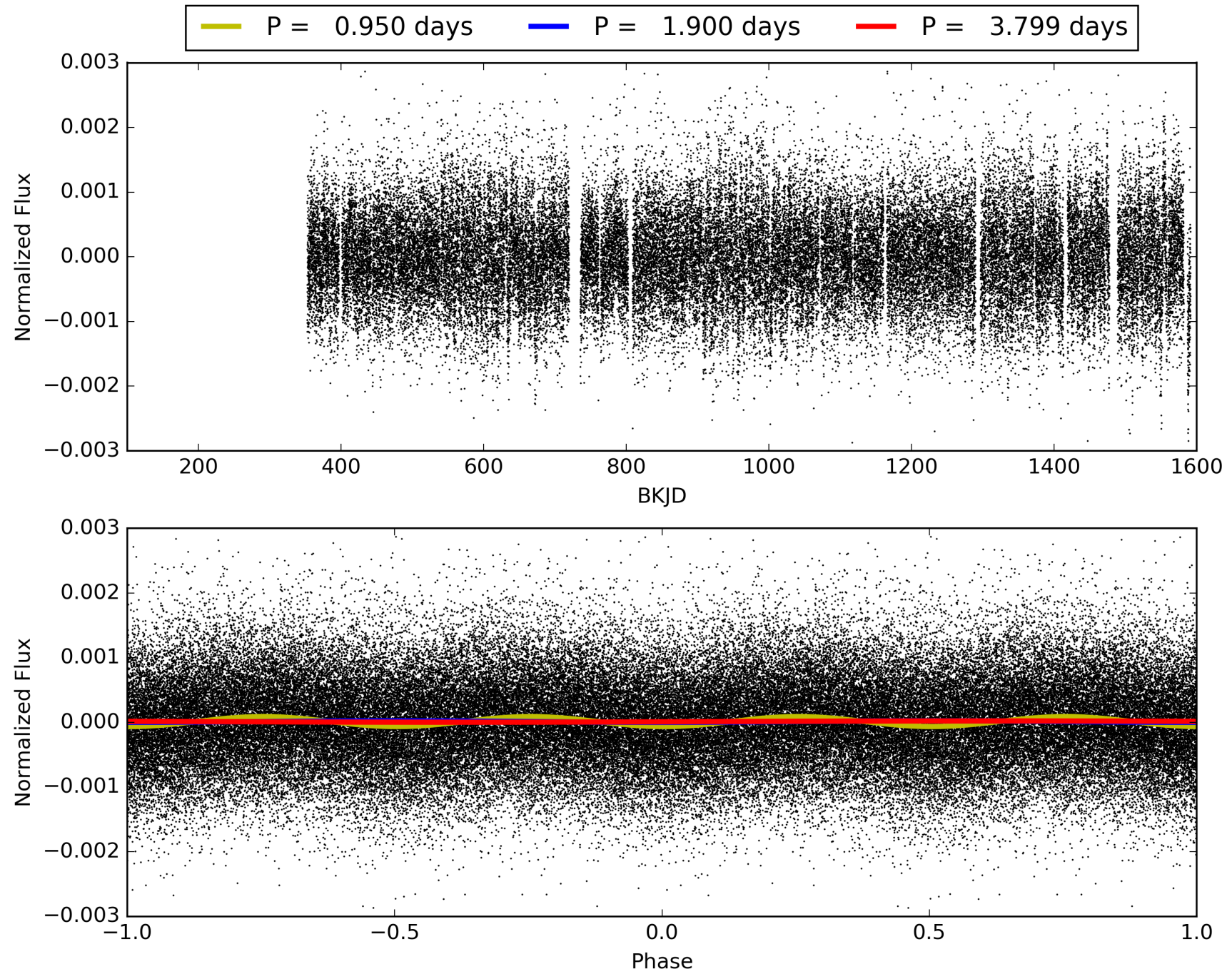
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 16:34:09 Z

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

# TCE 003839928-01, PDC Light Curves



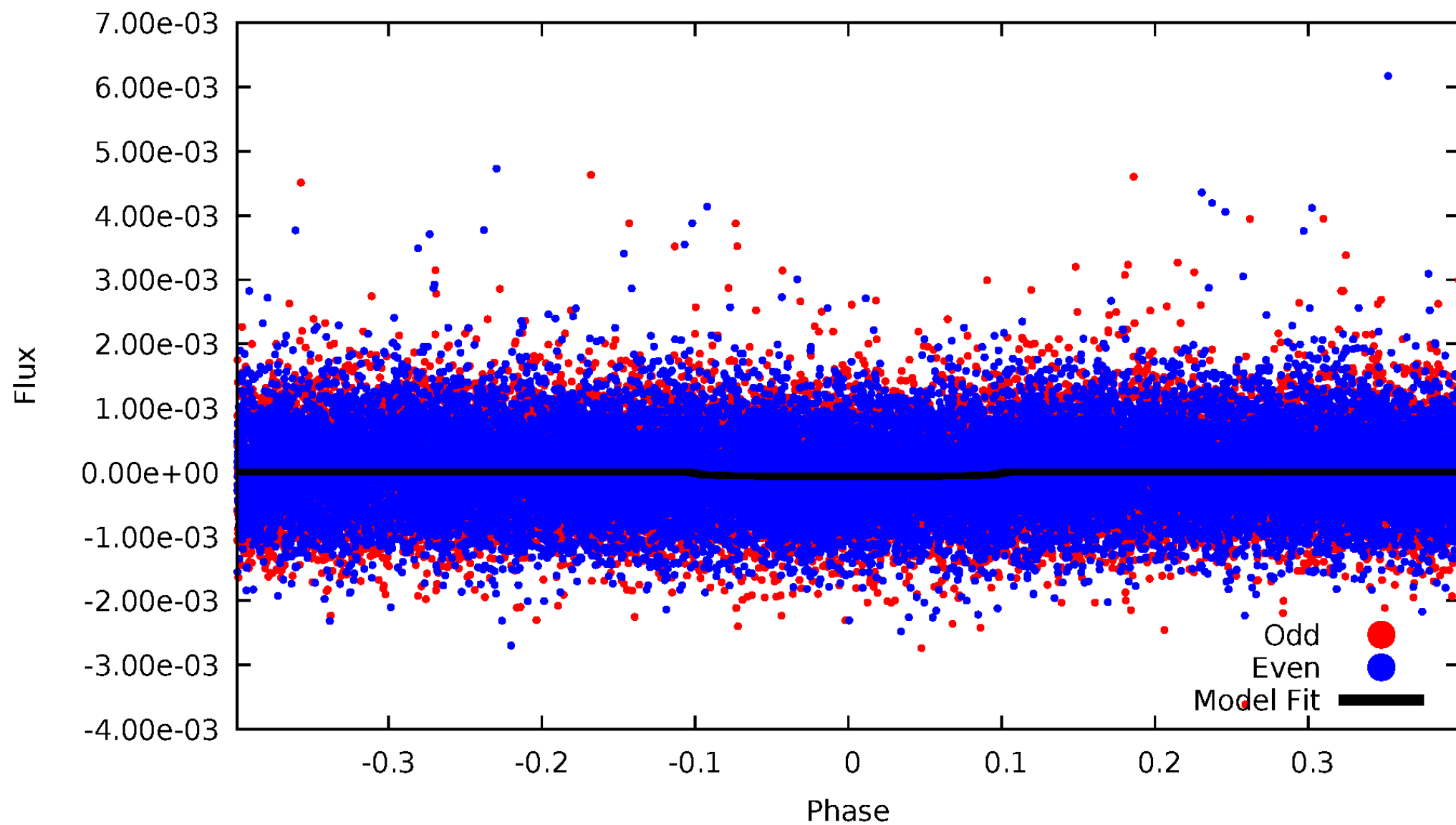
TCE 003839928-01





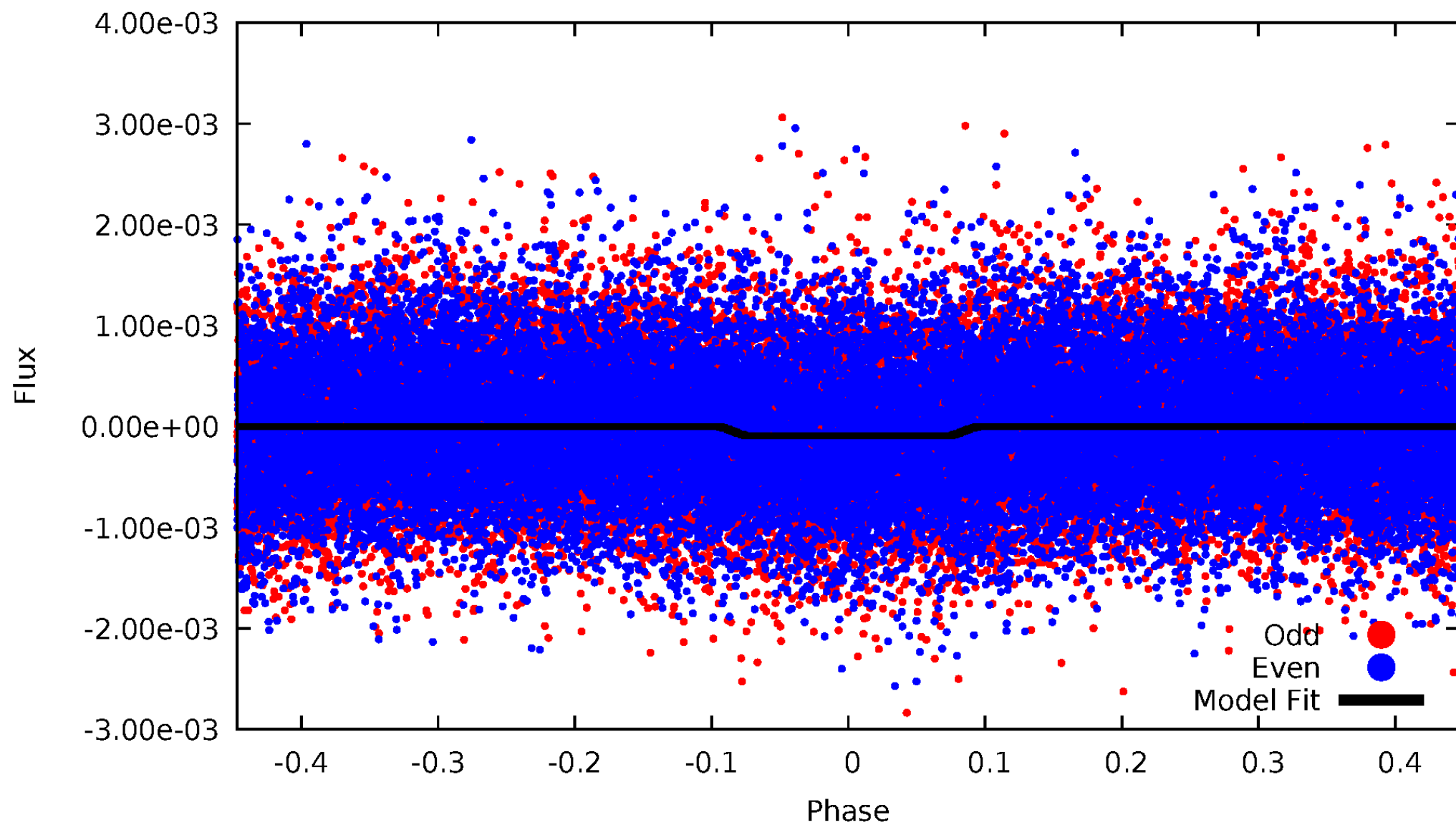
# DV Odd/Even

TCE 003839928-01



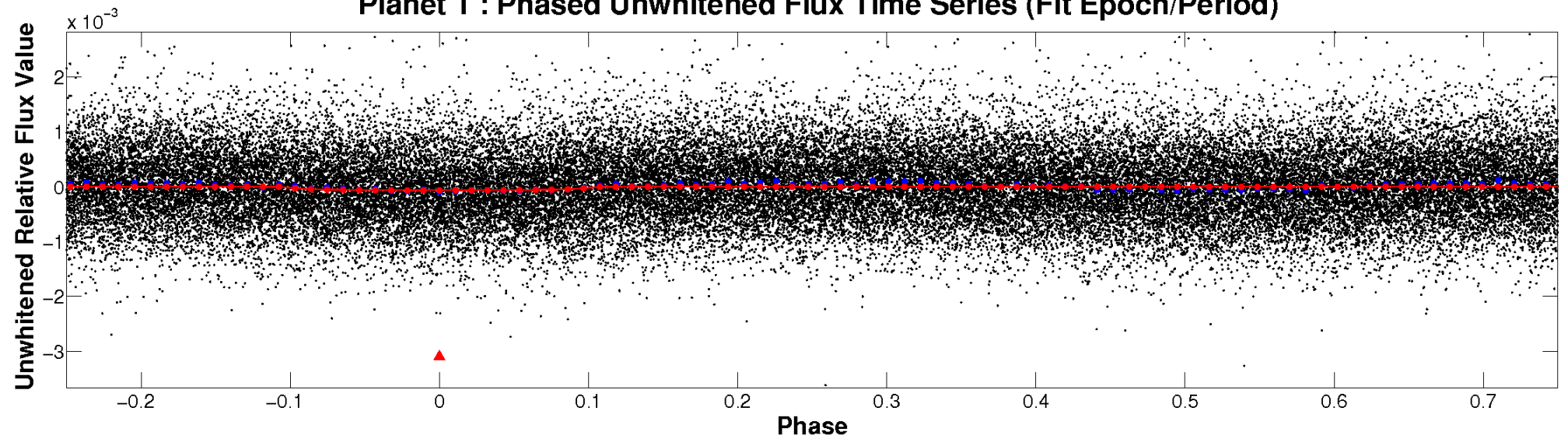
# ALT Odd/Even

TCE 003839928-01

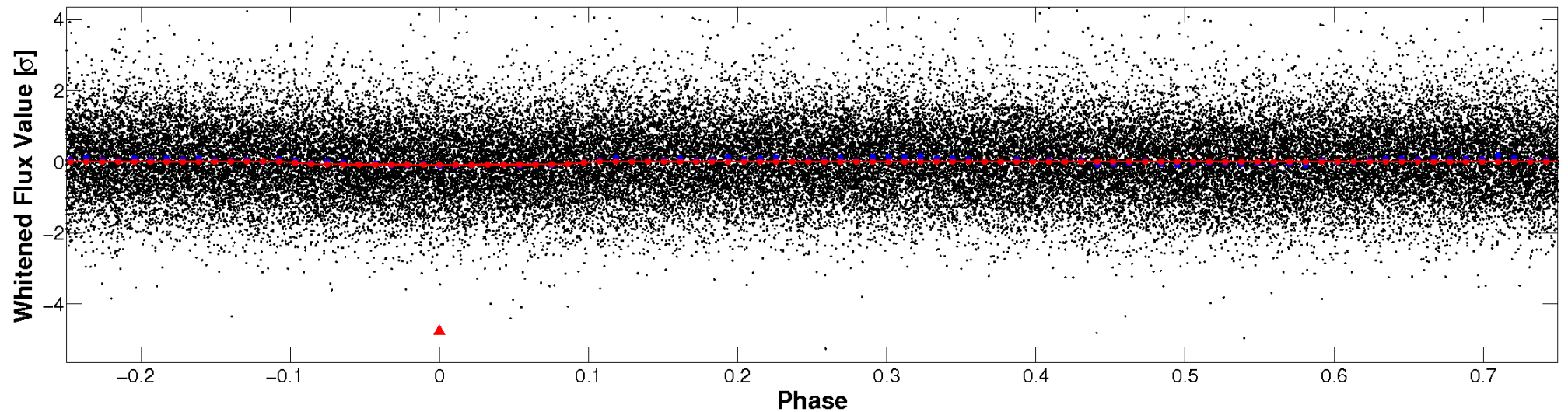


# Non-Whitened Vs. Whitened Light Curve

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

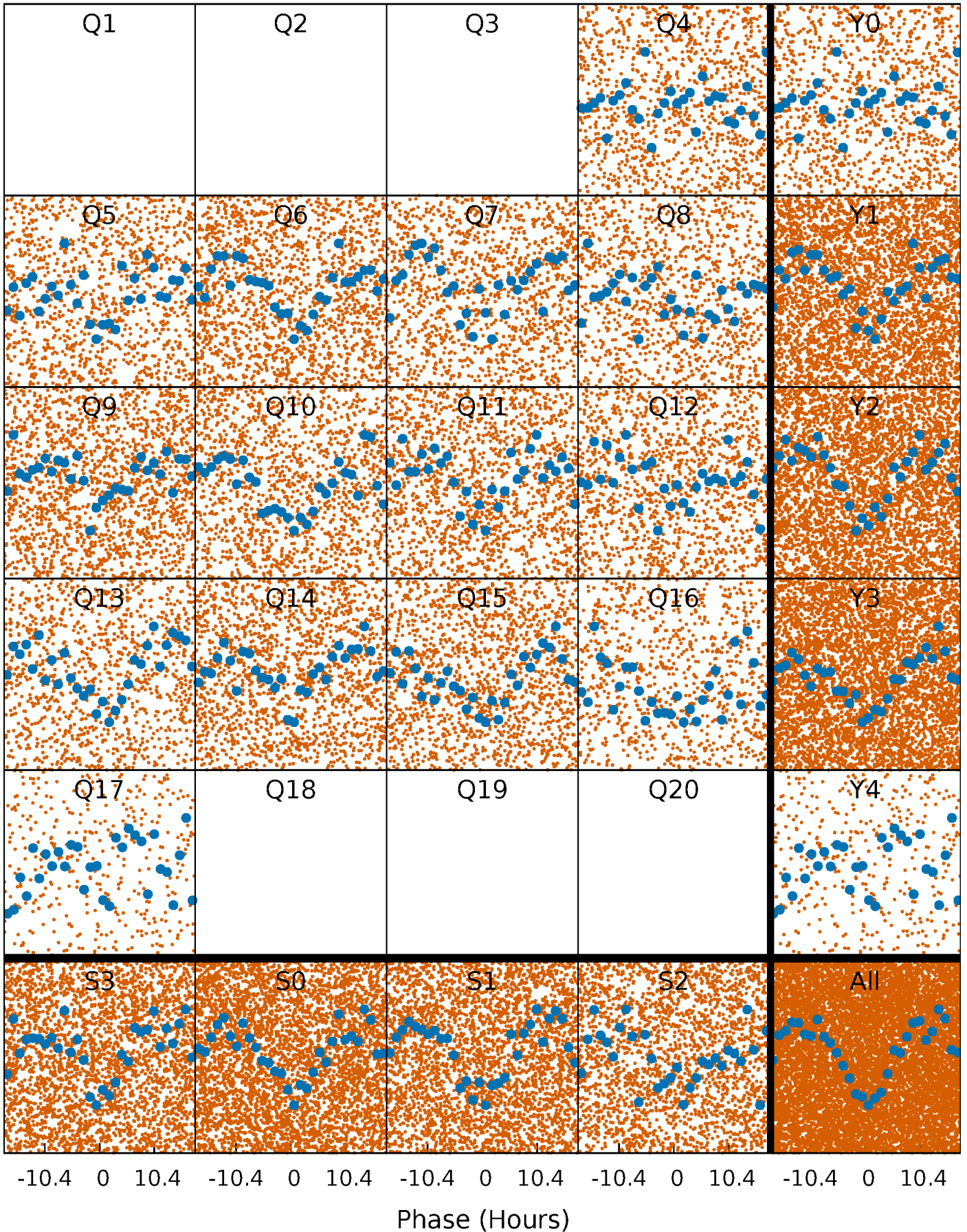


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

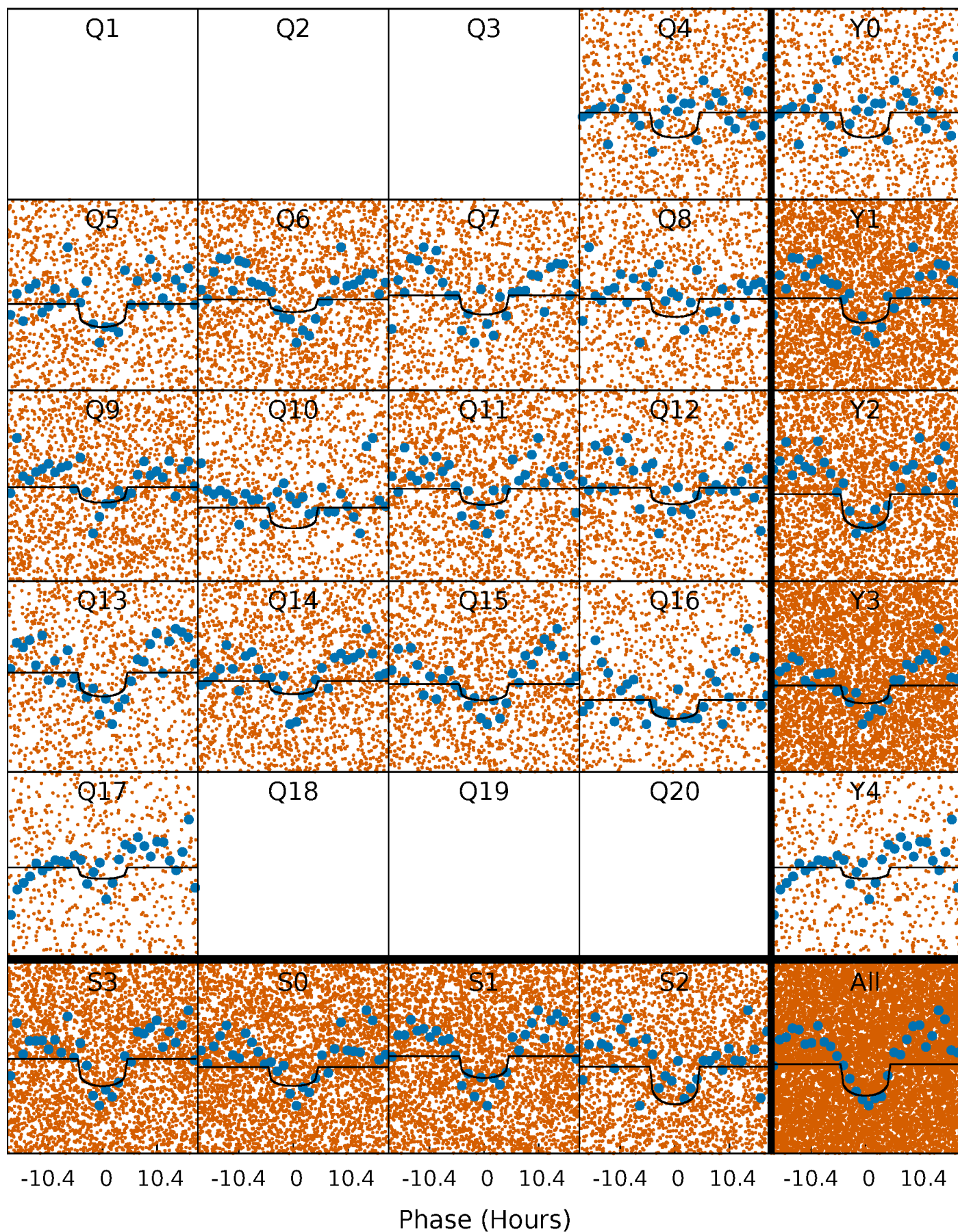
TCE 003839928-01 P= 1.899601 Days  $T_0=133.318140$  (BKJD)





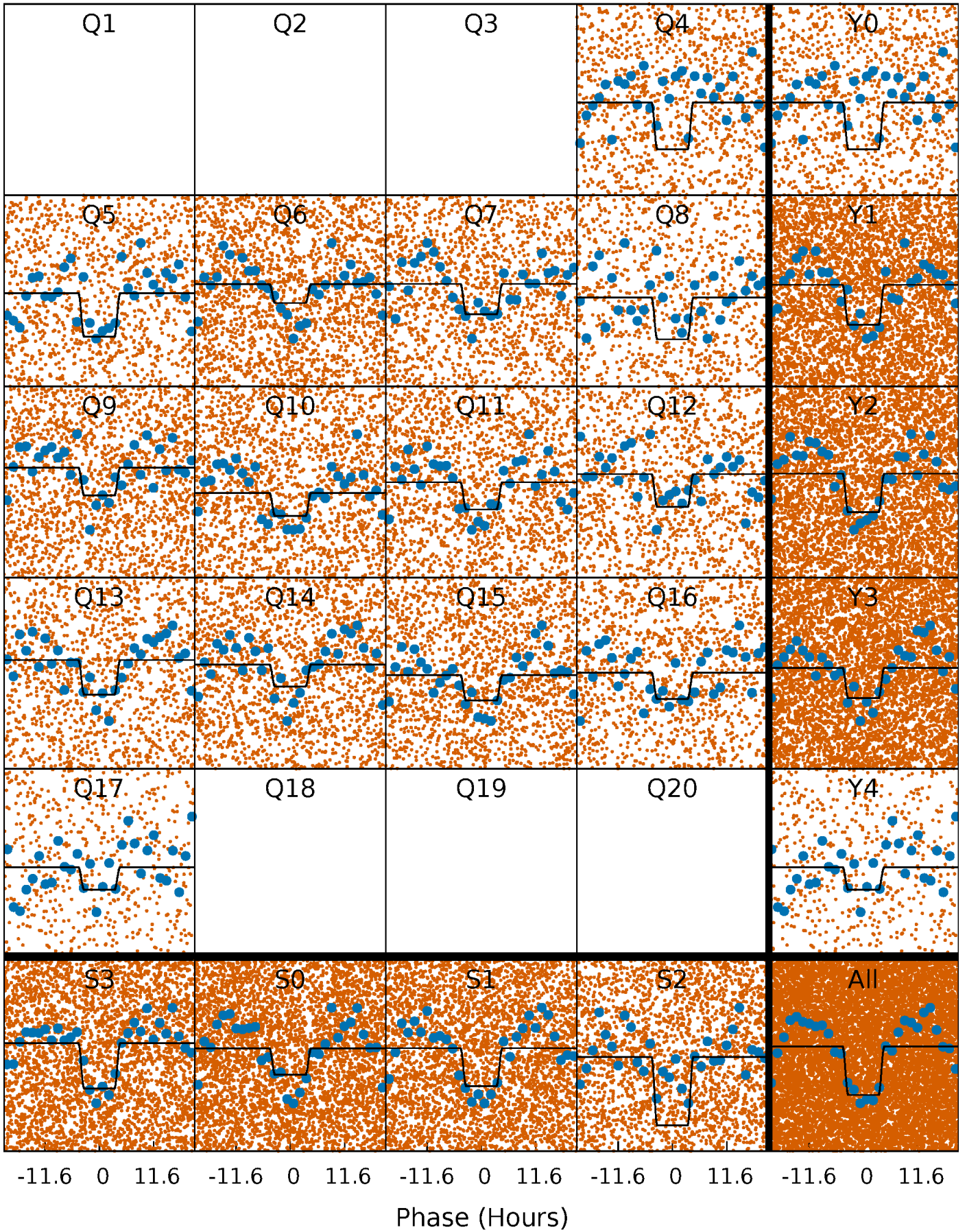
# DV Quarter-Phased Transit Curves

TCE 003839928-01 P= 1.899601 Days  $T_0=133.318140$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 003839928-01 P= 1.899604 Days  $T_0=133.327116$  (BKJD)

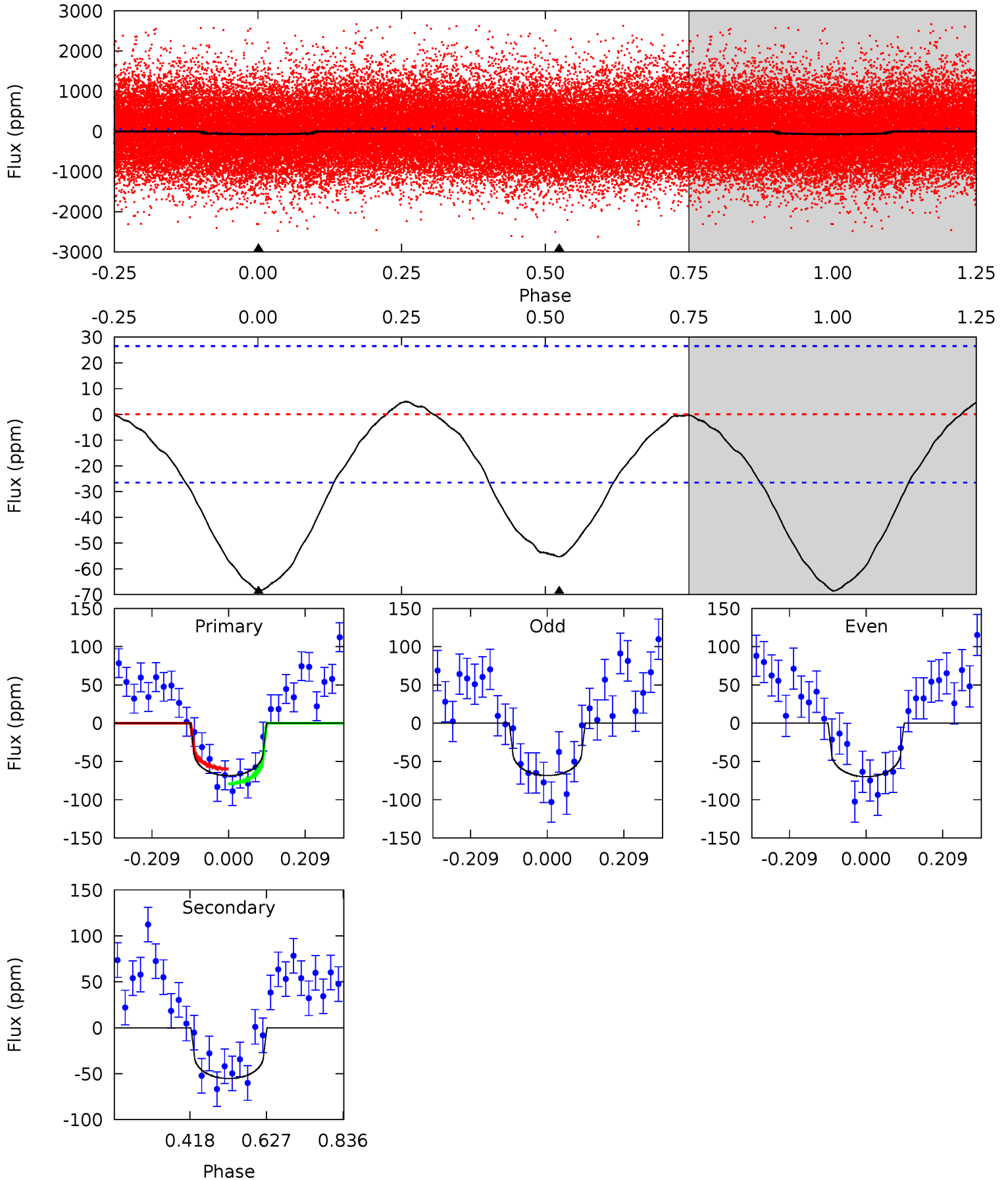




# DV Model-Shift Uniqueness Test

003839928-01, P = 1.899601 Days, E = 133.318140 Days

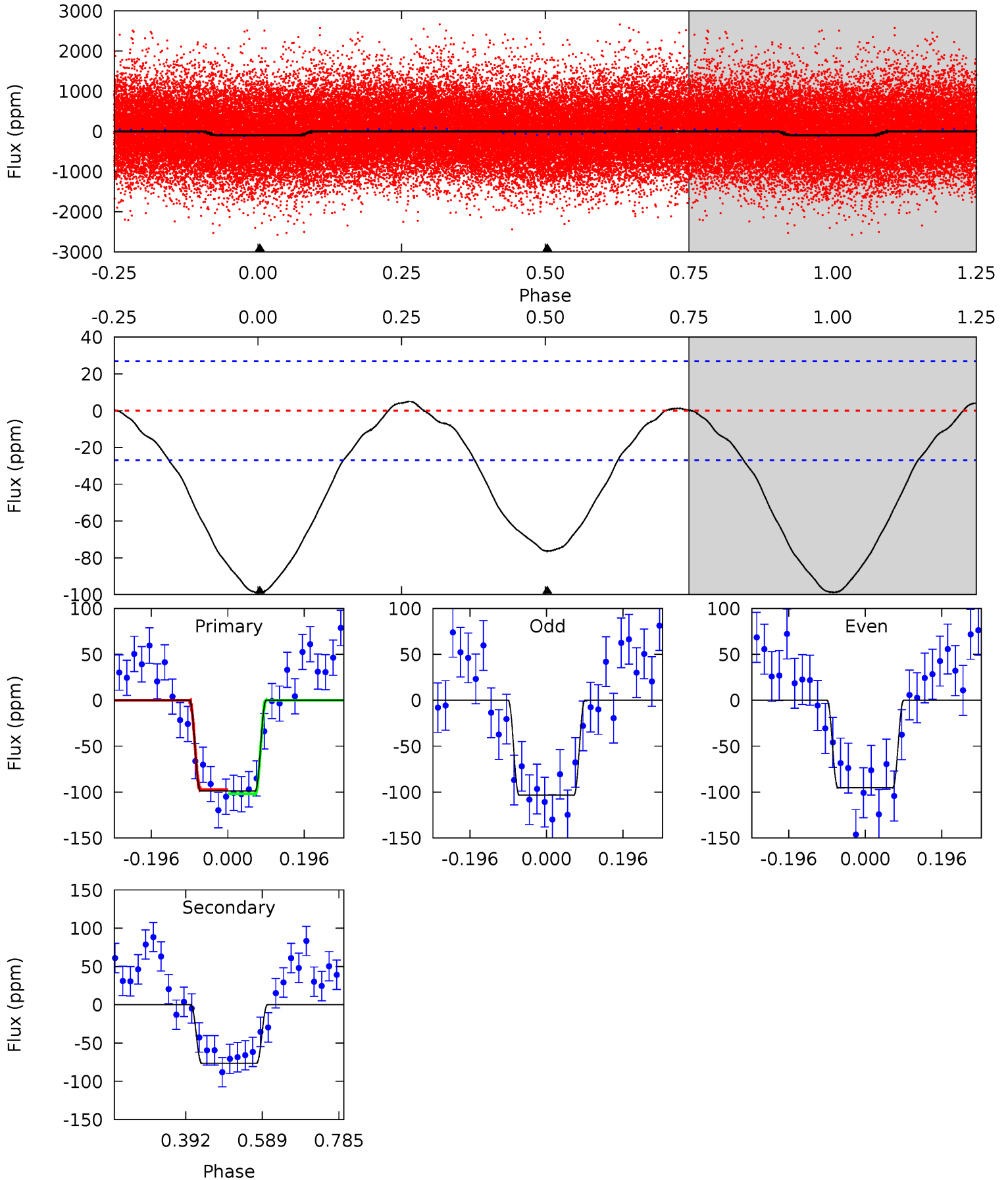
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.4	9.20	0	0	4.41	1.26	0.46	11.4	11.4	9.20	9.20	0.13	0.95	0.07	1.63



# Alt Model-Shift Uniqueness Test

003839928-01, P = 1.899604 Days, E = 133.327116 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
16.2	12.5	0	0	4.42	1.29	0.76	16.2	16.2	12.5	12.5	0.66	1.02	0.05	0.38





### Stellar Parameters For KIC 003839928

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (g \cdot cm^{-3})$
	$6015^{+188}_{-209}$	$4.537^{+0.048}_{-0.192}$	$-0.360^{+0.300}_{-0.300}$	$0.870^{+0.248}_{-0.083}$	$0.949^{+0.106}_{-0.118}$	$2.032^{+0.512}_{-0.996}$
	+3%/-3%	+1%/-4%	+83%/-83%	+29%/-10%	+11%/-12%	+25%/-49%
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 003839928-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-55 \pm 6$	$1.41^{+1.47}_{-0.97}$	$2056^{+129}_{-99}$	$4498^{+3442}_{-1031}$	$12^{+116}_{-9}$
Alt.	$-76 \pm 6$	$1.57^{+1.52}_{-1.04}$	$2058^{+126}_{-107}$	$4587^{+3256}_{-997}$	$15^{+112}_{-11}$

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

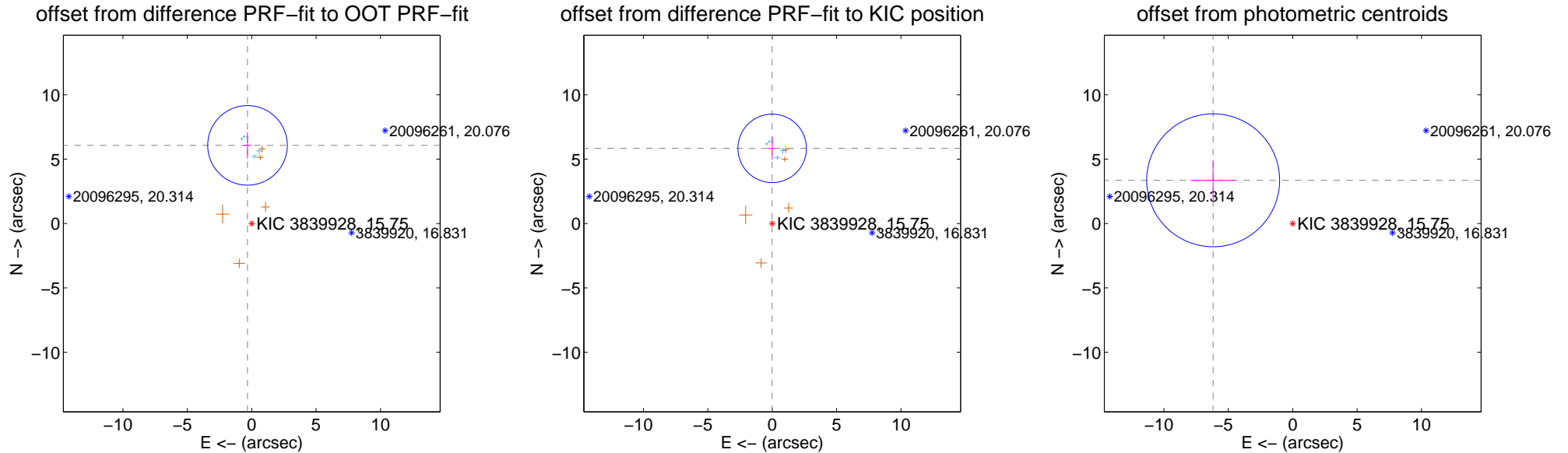
## DV Centroid Data

Supplemental centroid analysis for 003839928-01. Kepler magnitude: 15.75. Transit SNR 7.70

There are 5 quarters with good PRF difference image offsets

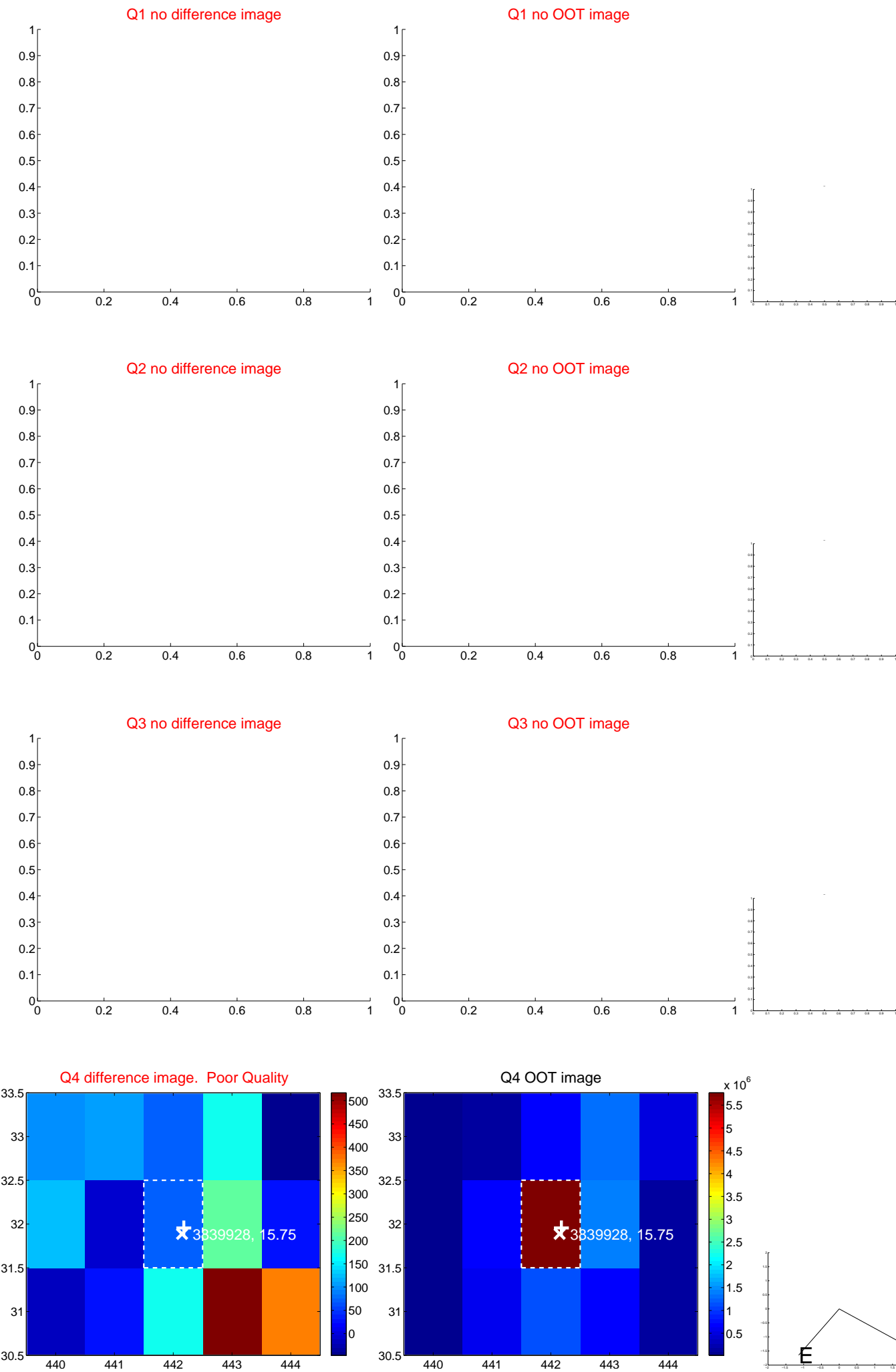
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$6.077 \pm 1.030$	5.90	$0.327 \pm 0.315$	$6.068 \pm 1.037$
PRF-fit source offset from KIC position	$5.836 \pm 0.886$	6.59	$0.001 \pm 0.325$	$5.836 \pm 0.886$
photometric centroid source offset	$7.03 \pm 1.72$	4.09	$6.17 \pm 1.76$	$3.36 \pm 1.56$

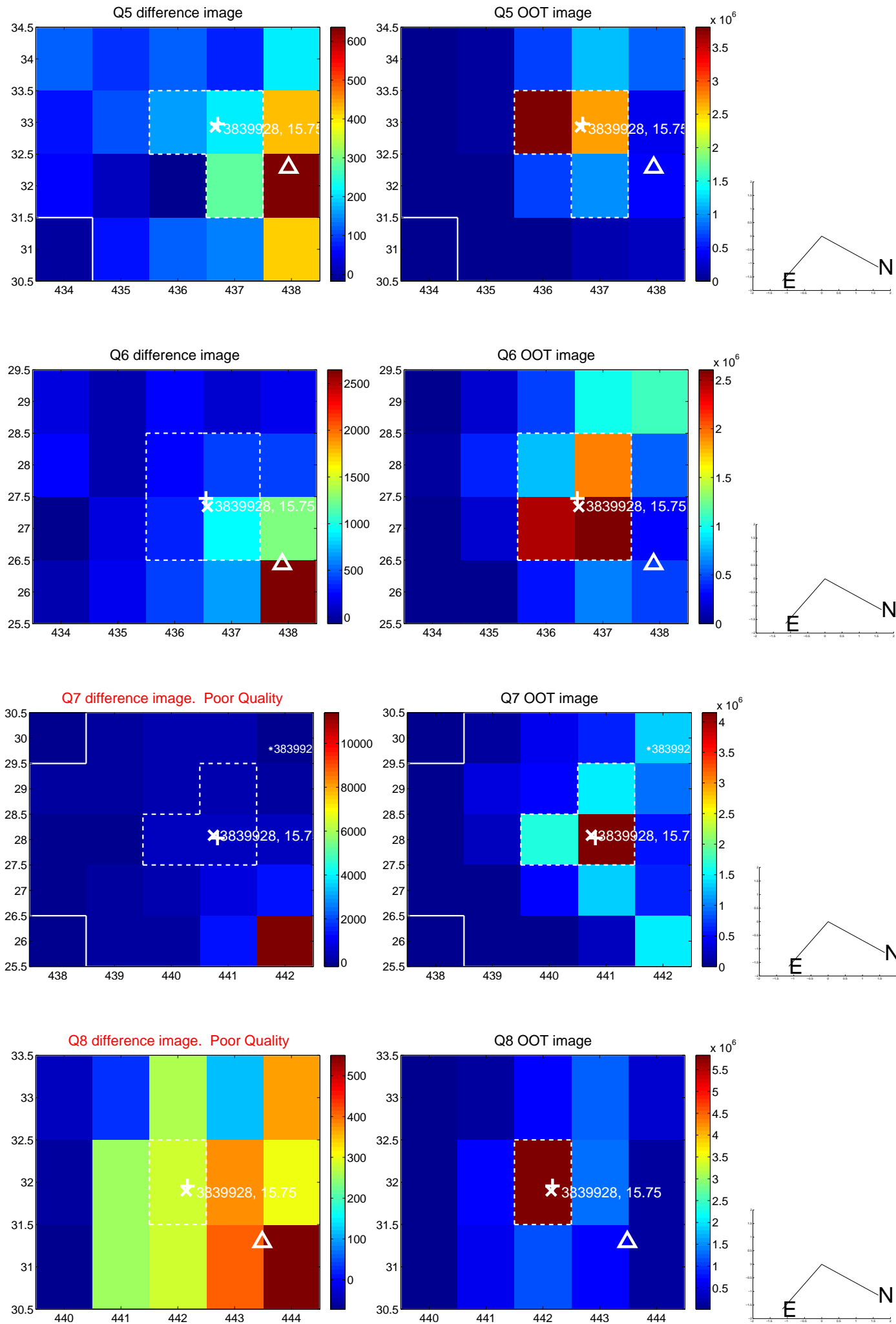


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: 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 ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

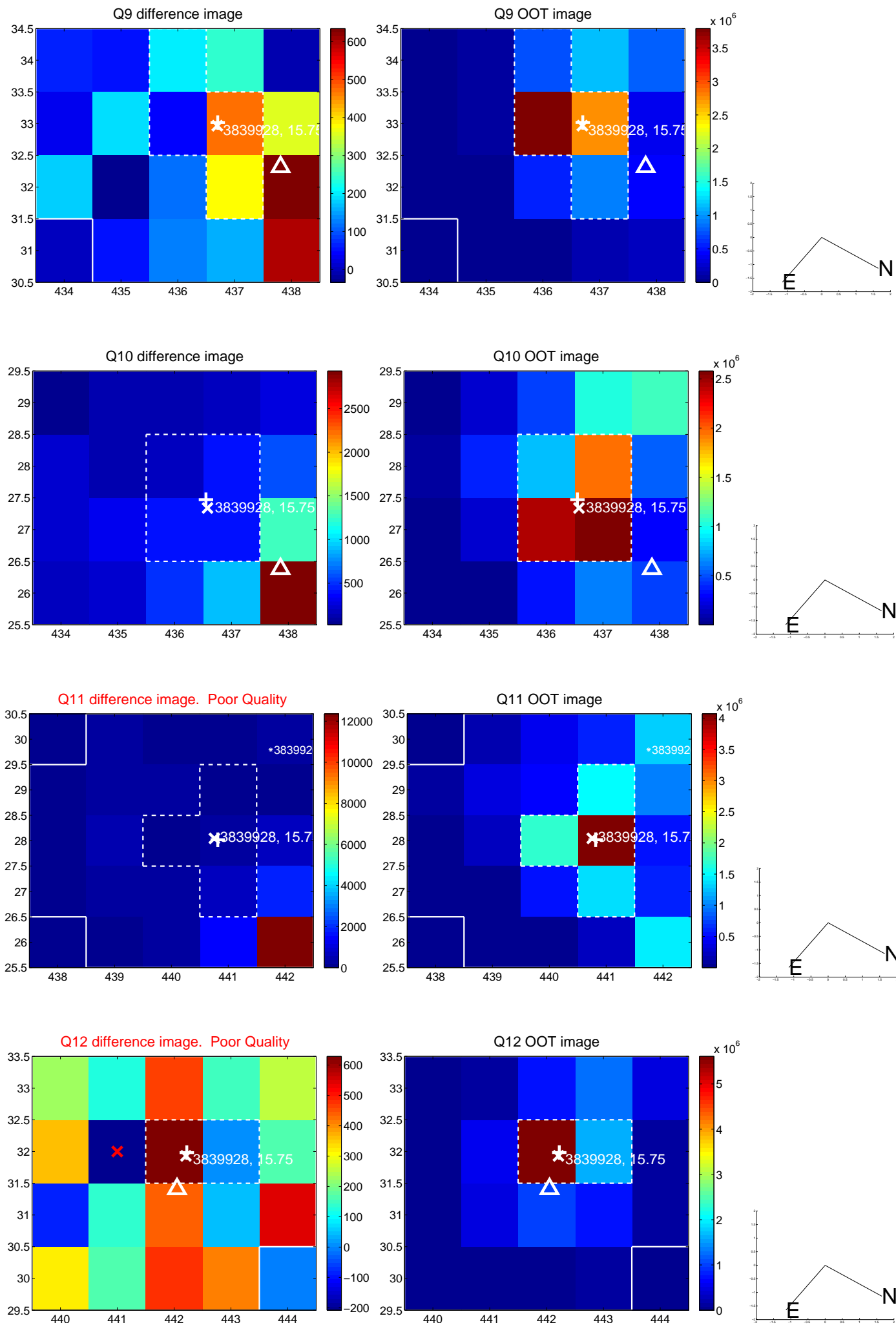


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

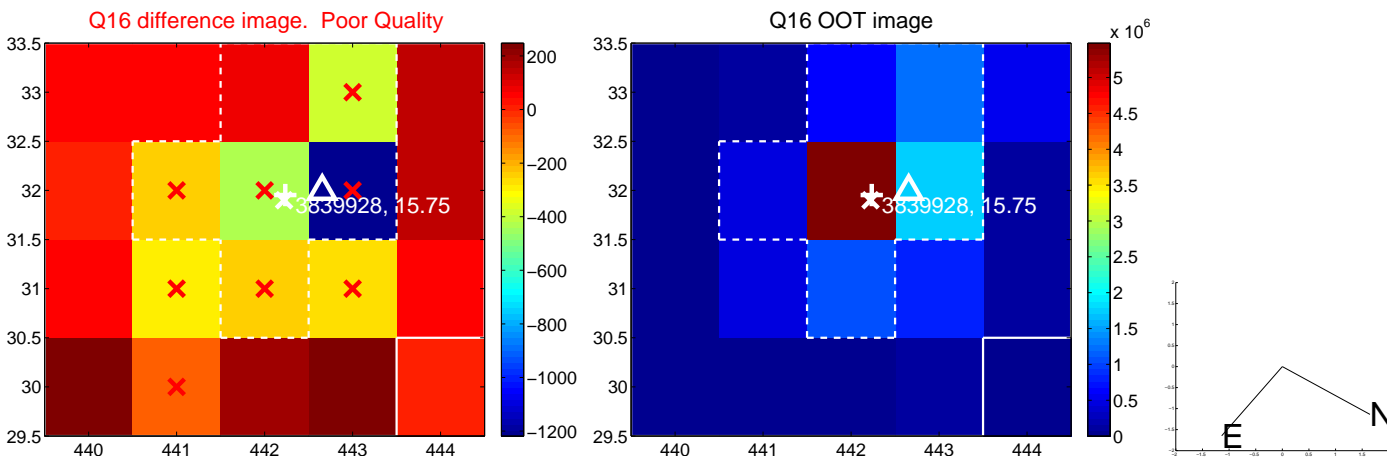
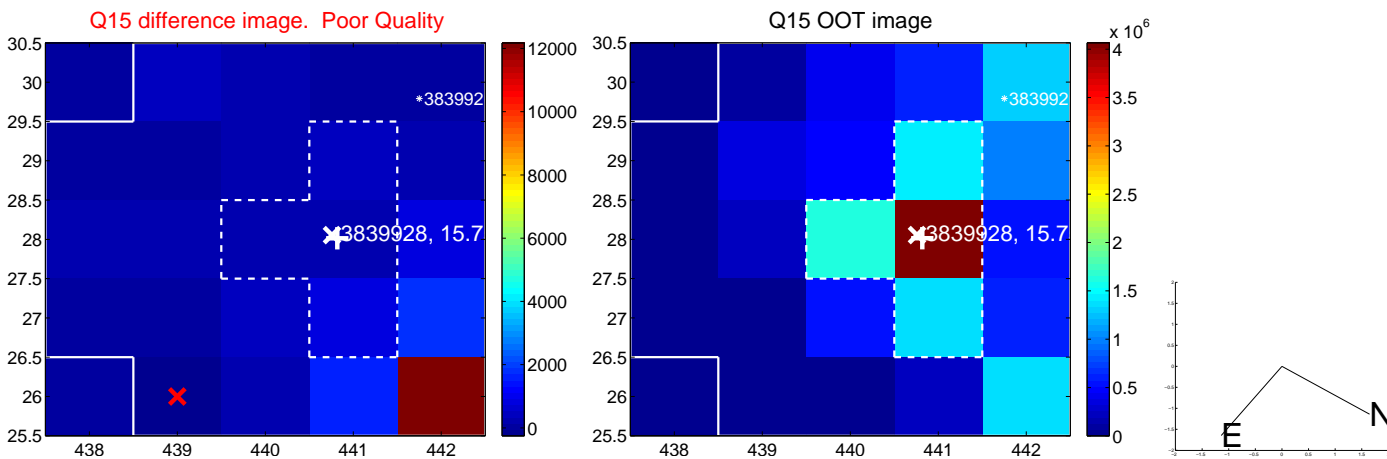
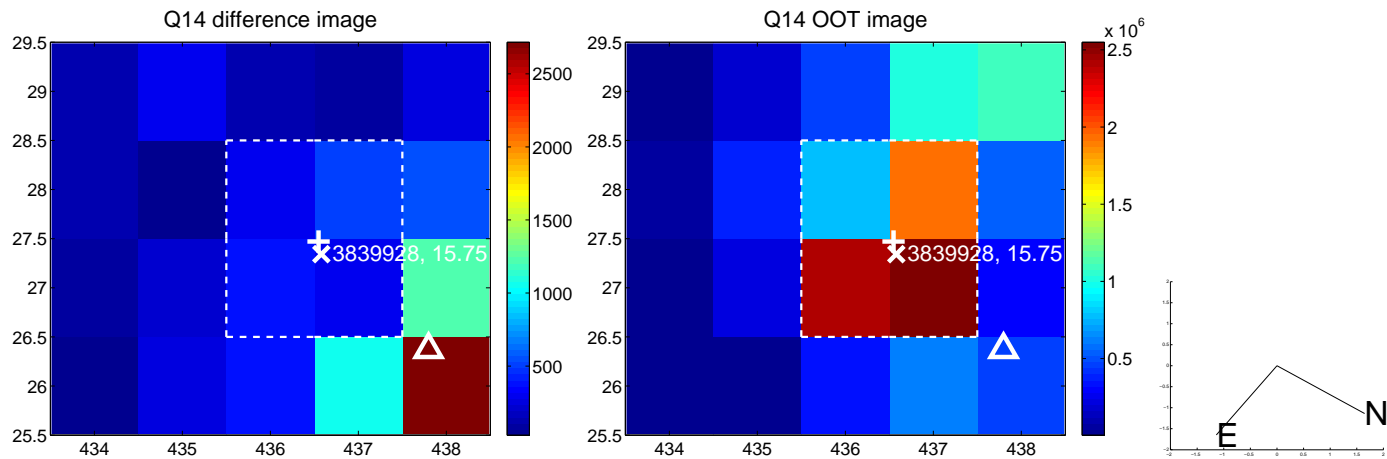
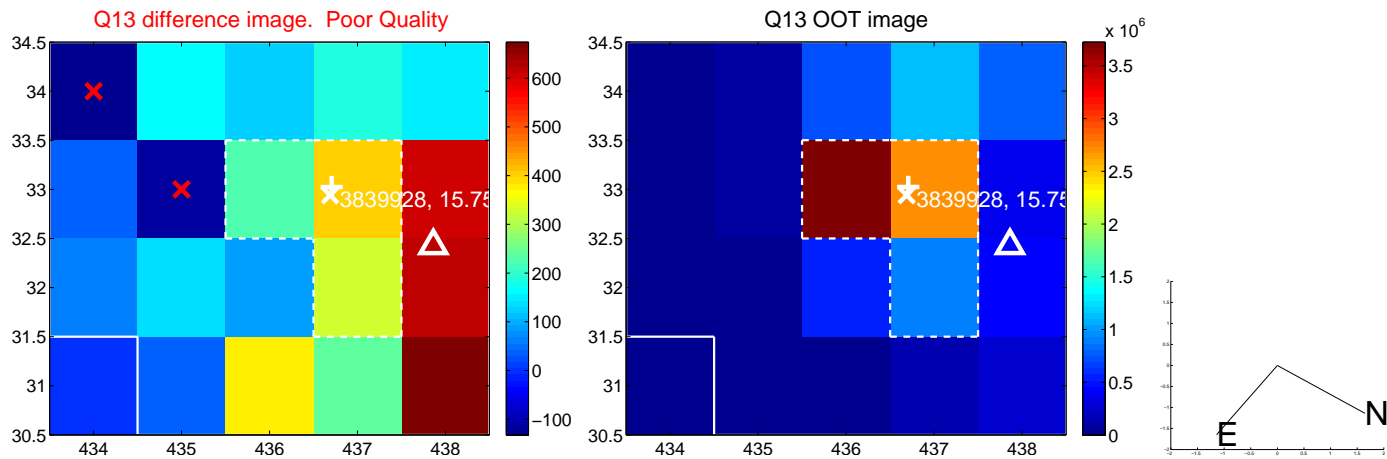




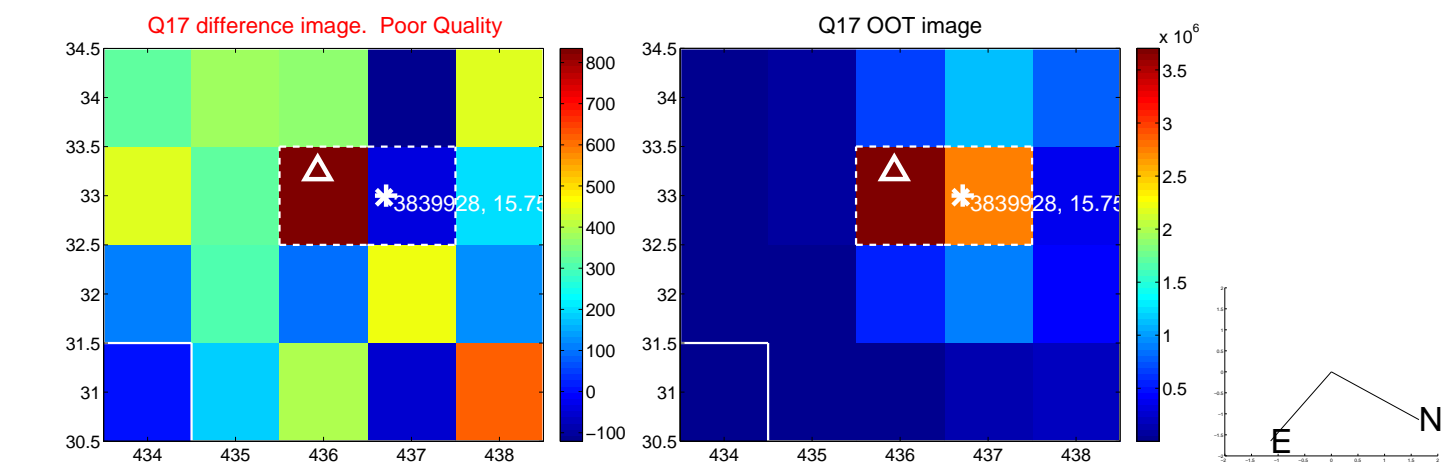
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



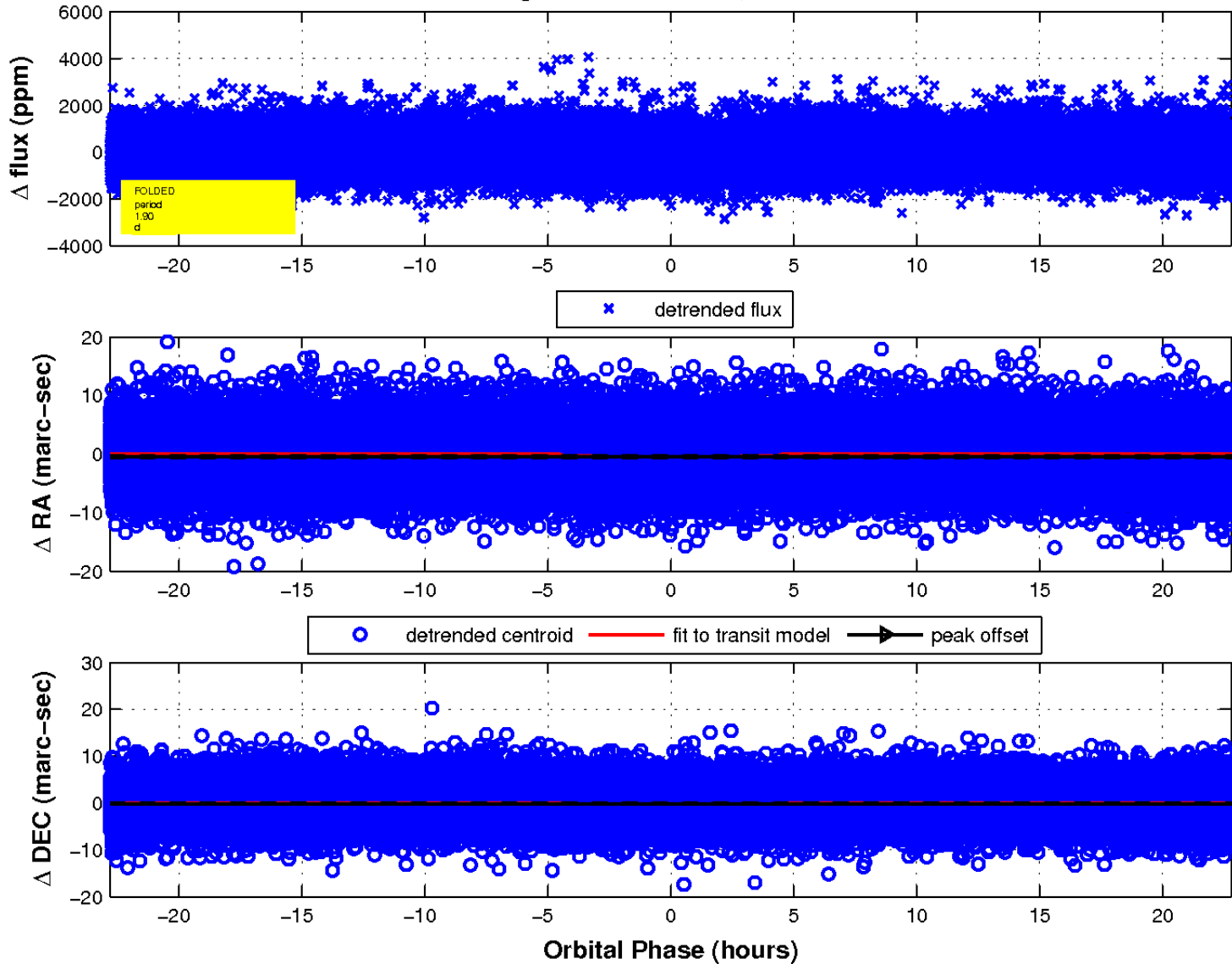
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

