

# KIC 001432149

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
001432149-01	OBS	No	0.583206	131.873164	22.2	2.544	9.7	10.3	2.00	7466	1.11	43884.86

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
001432149-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

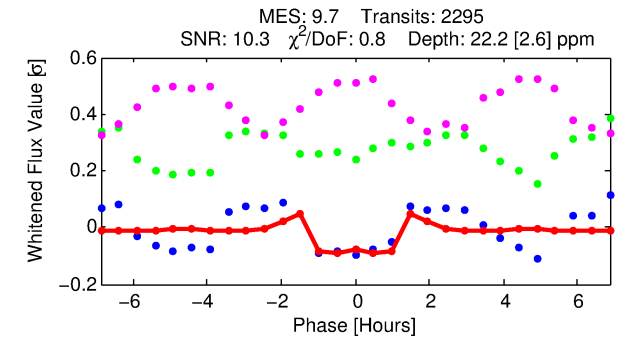
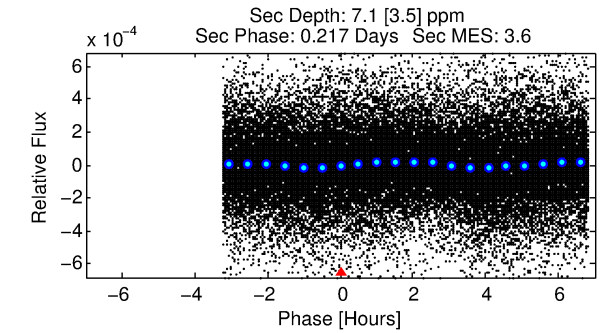
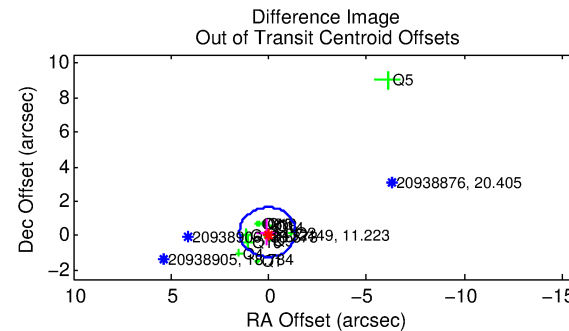
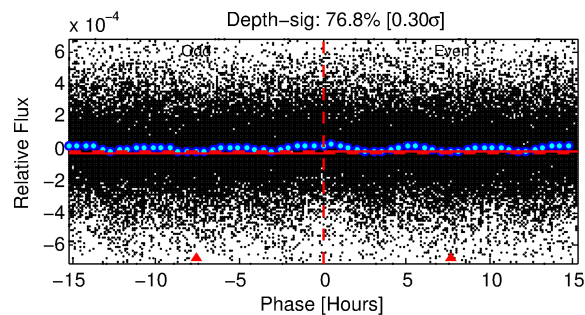
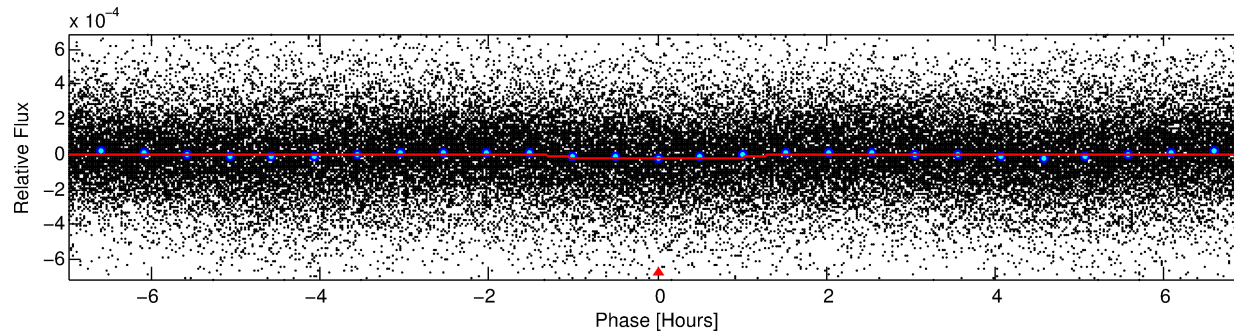
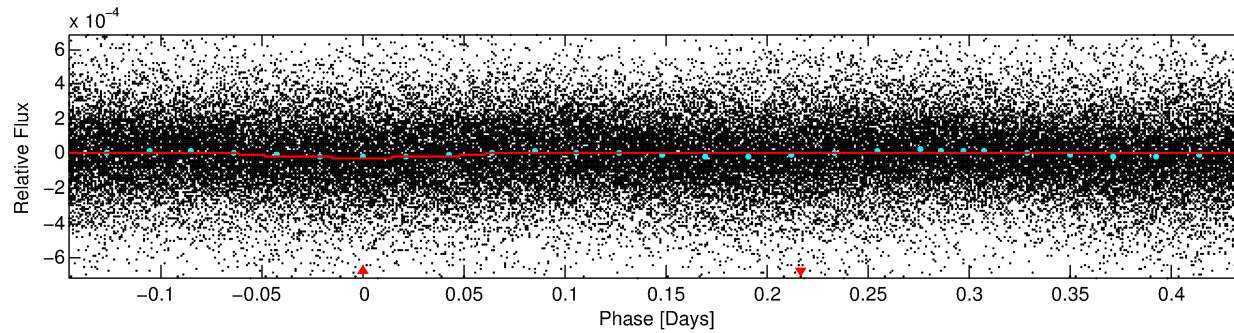
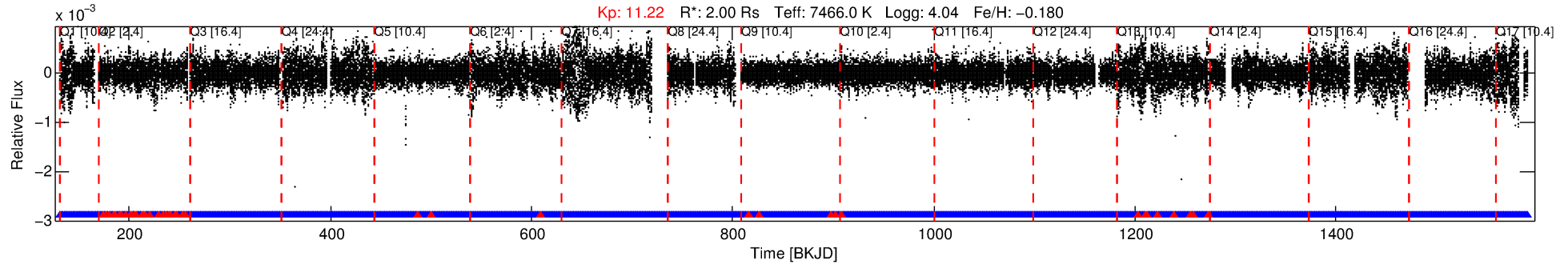
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 001432149-01

No Significant Match Found

# DV One-Page Summary

KIC: 1432149 Candidate: 1 of 1 Period: 0.583 d



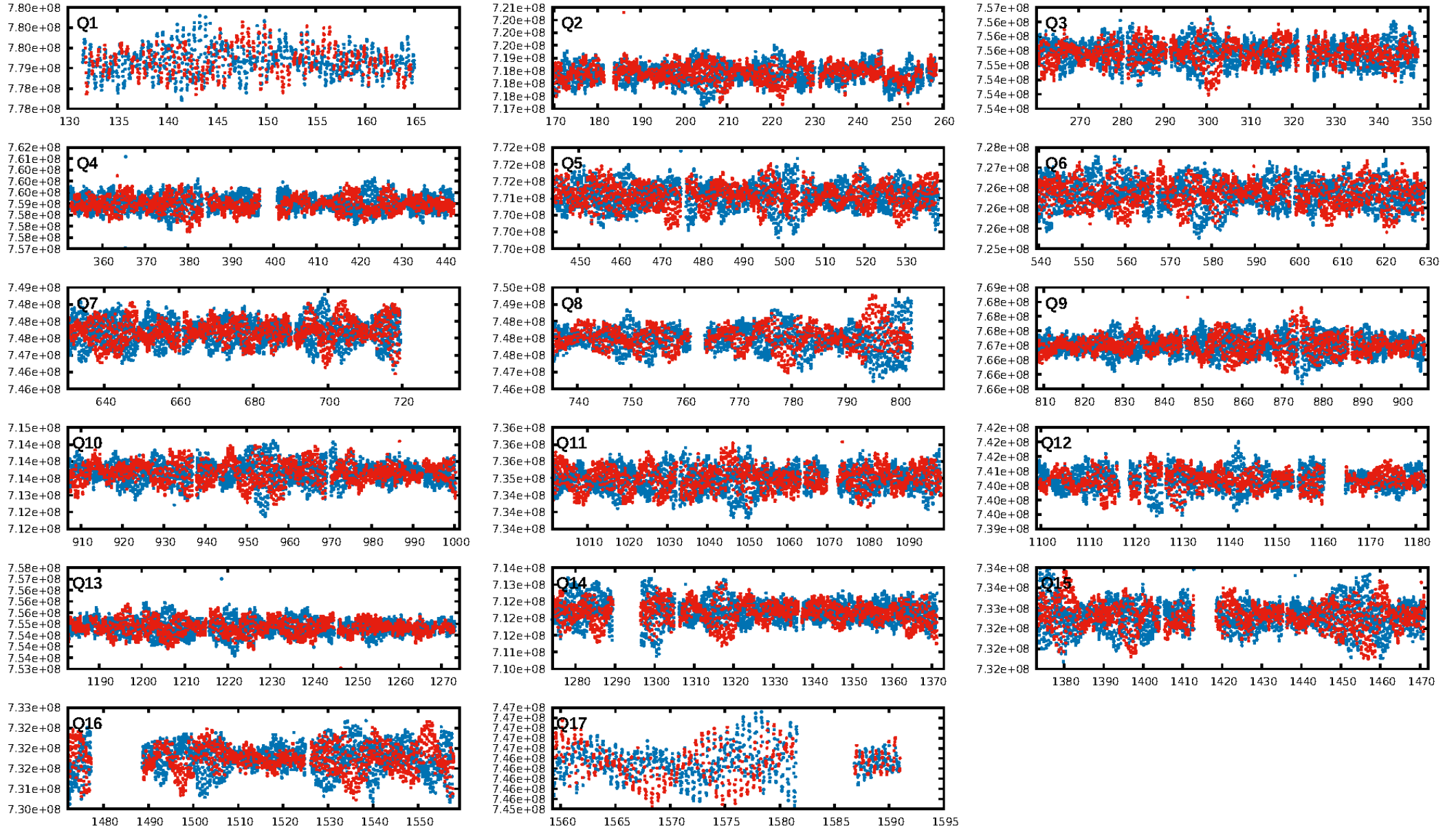
## DV Fit Results:

Period = 0.58321 [0.00001] d  
Epoch = 131.8732 [0.0015] BKJD  
Rp/R\* = 0.0051 [0.0010]  
a/R\* = 1.22 [0.44]  
b = 0.90 [0.23]  
Seff = 43884.86 [17121.58]  
Teq = 3691 [360] K  
Rp = 1.11 [0.36] Re  
a = 0.0159 [0.0037] AU  
Ag = 0.81 [0.58] [-0.34 $\sigma$ ]  
Teffp = 5407 [872] K [1.82 $\sigma$ ]

## DV Diagnostic Results:

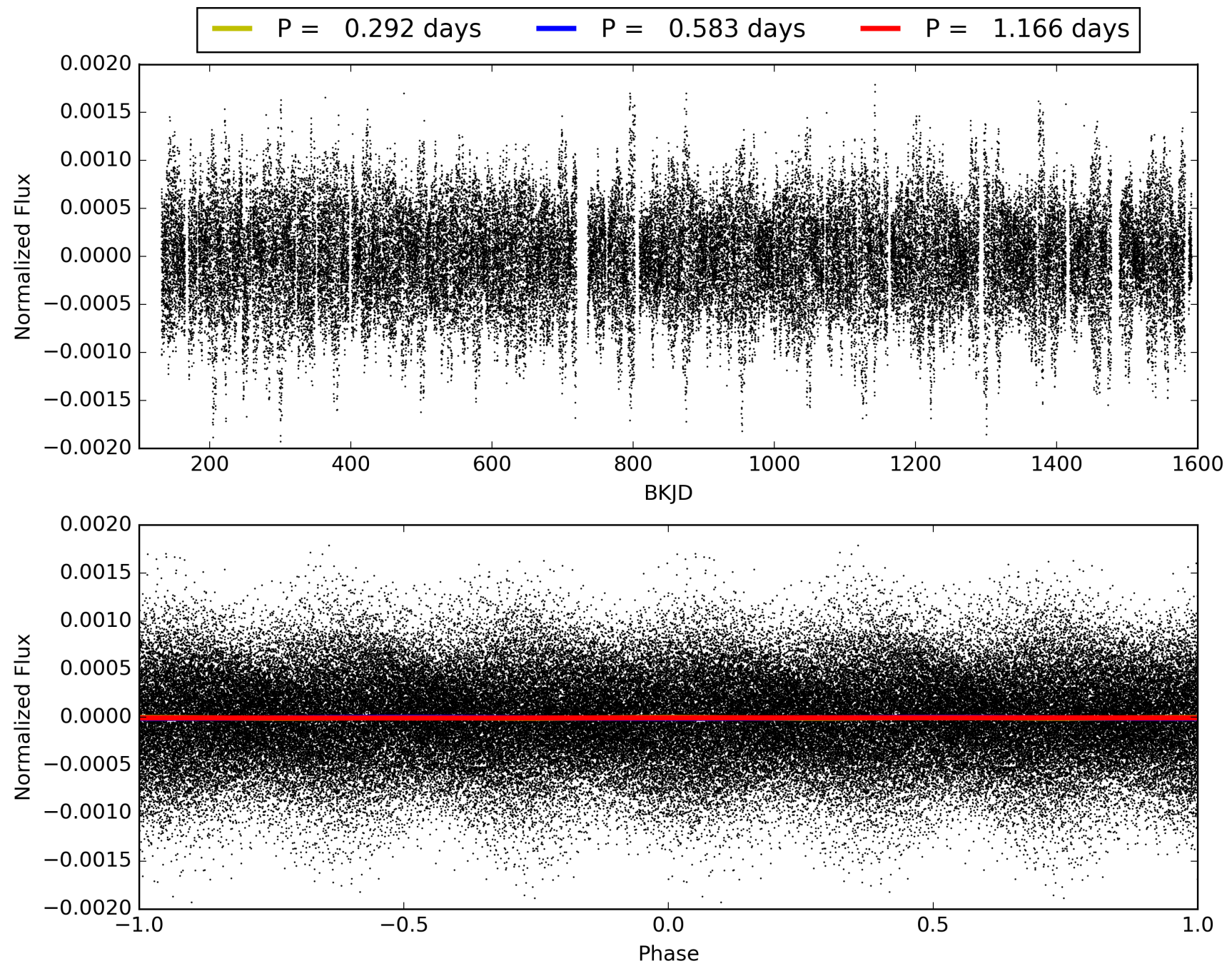
ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 6.23e-18  
RollingBand-fgt: 0.98 [2146/2192]  
GhostDiagnostic-chr: 2.82  
Centroid-sig: N/A  
Centroid-so: 0.597 arcsec [0.73 $\sigma$ ]  
OotOffset-rm: 0.220 arcsec [0.46 $\sigma$ ]  
KicOffset-rm: 0.264 arcsec [0.35 $\sigma$ ]  
OotOffset-st: 4/1/4/4 [13]  
KicOffset-st: 4/1/4/4 [13]  
DiffImageQuality-fgm: 0.62 [8/13]  
DiffImageOverlap-fno: 1.00 [17/17]

# TCE 001432149-01, PDC Light Curves



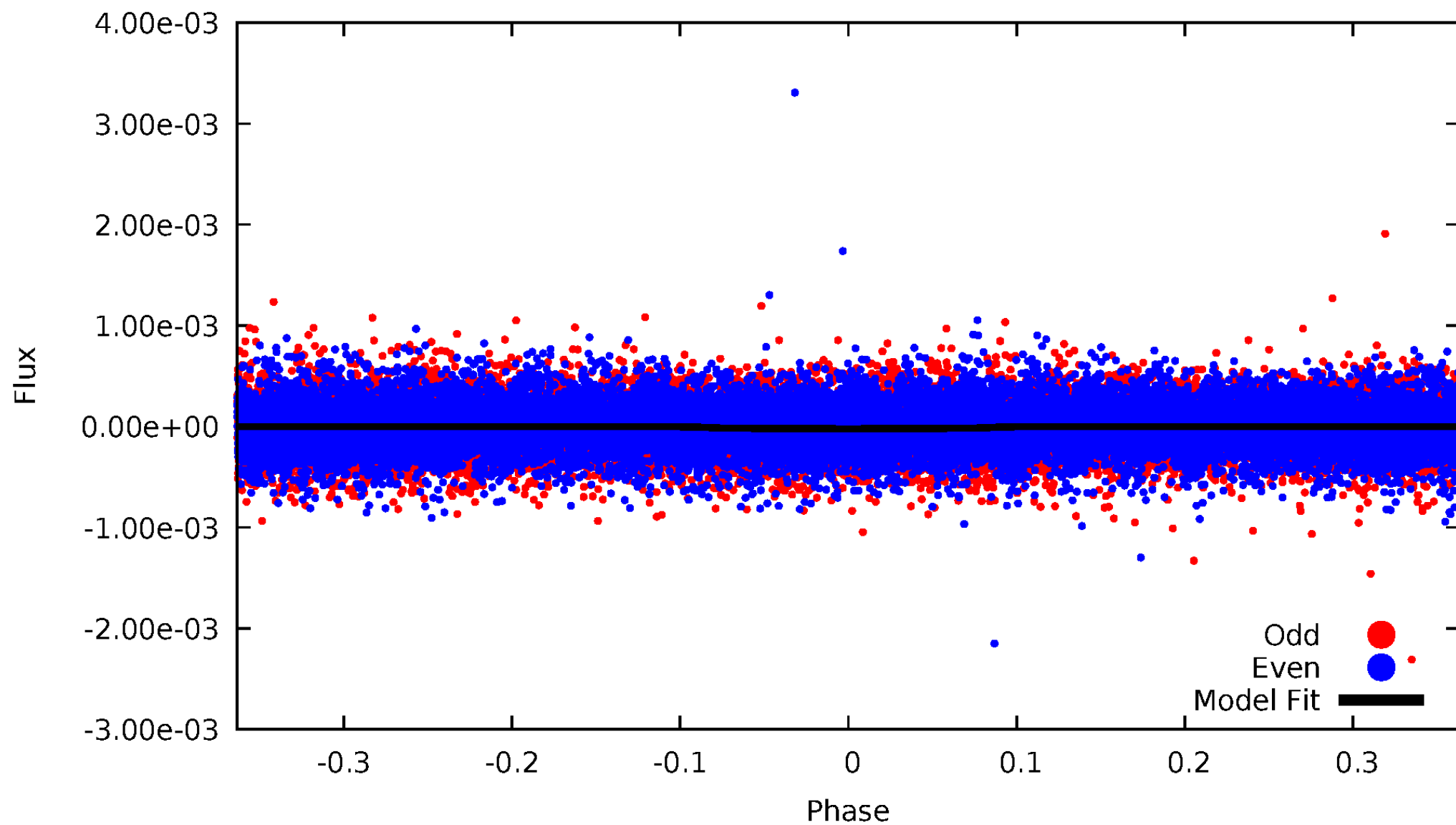


TCE 001432149-01



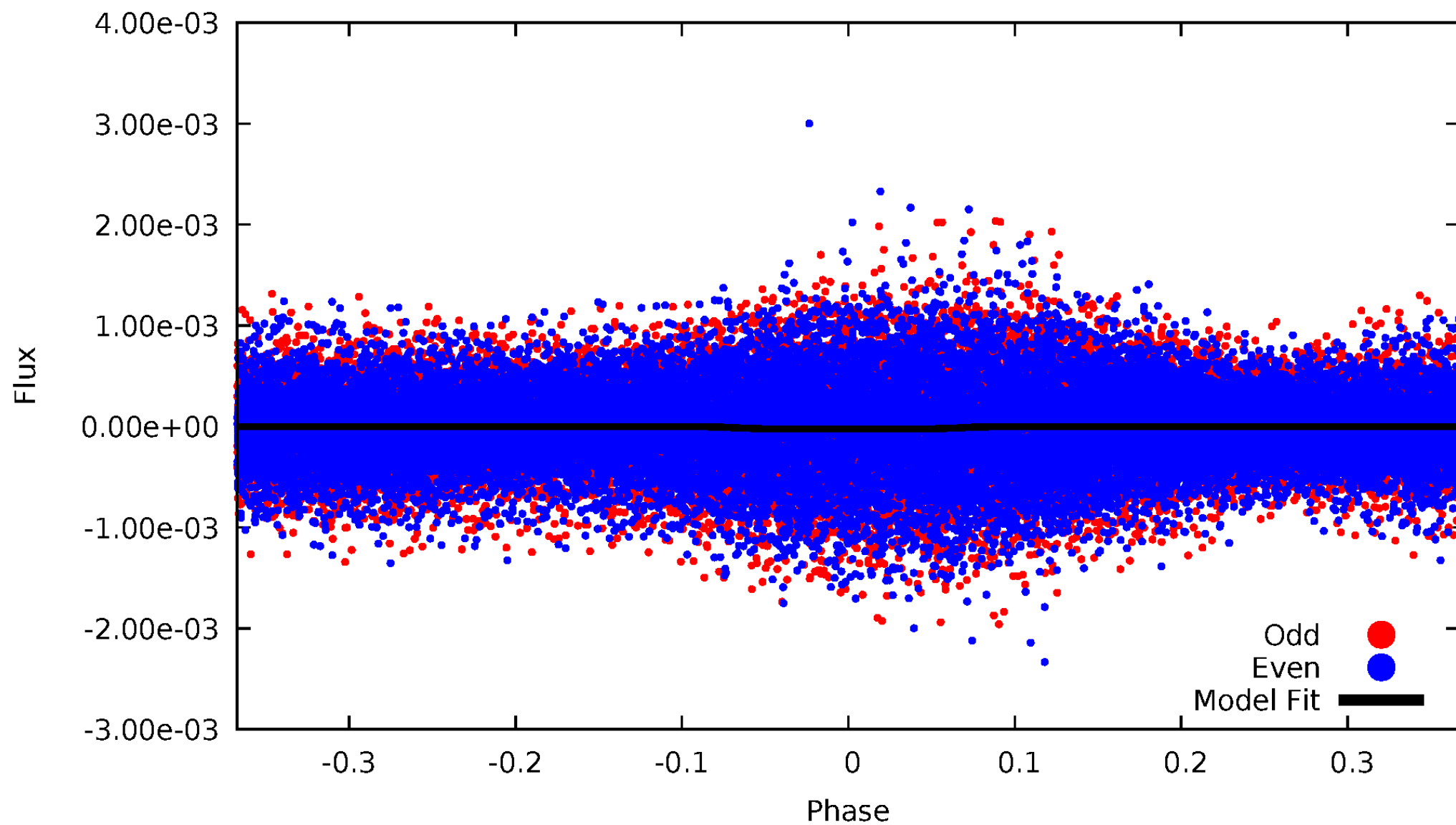
# DV Odd/Even

TCE 001432149-01

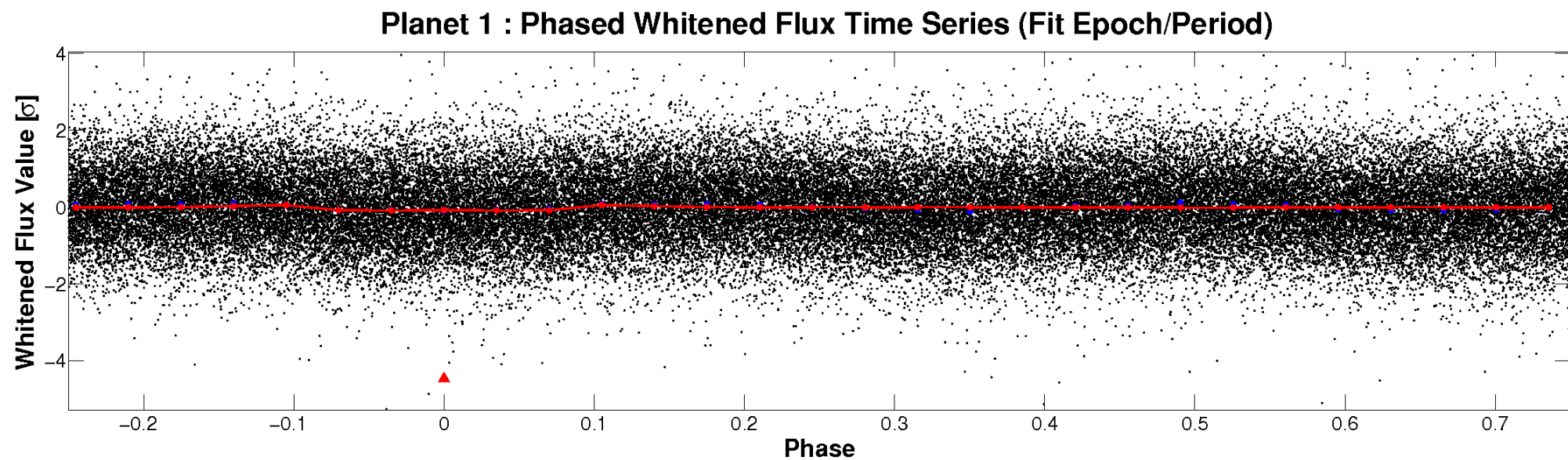
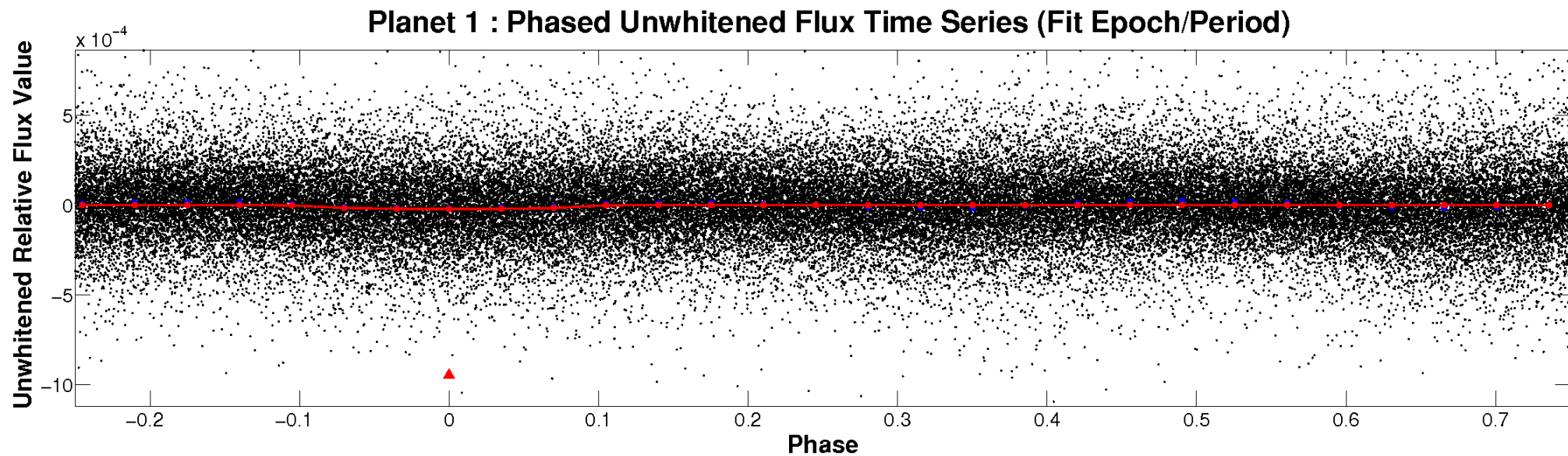


# ALT Odd/Even

TCE 001432149-01



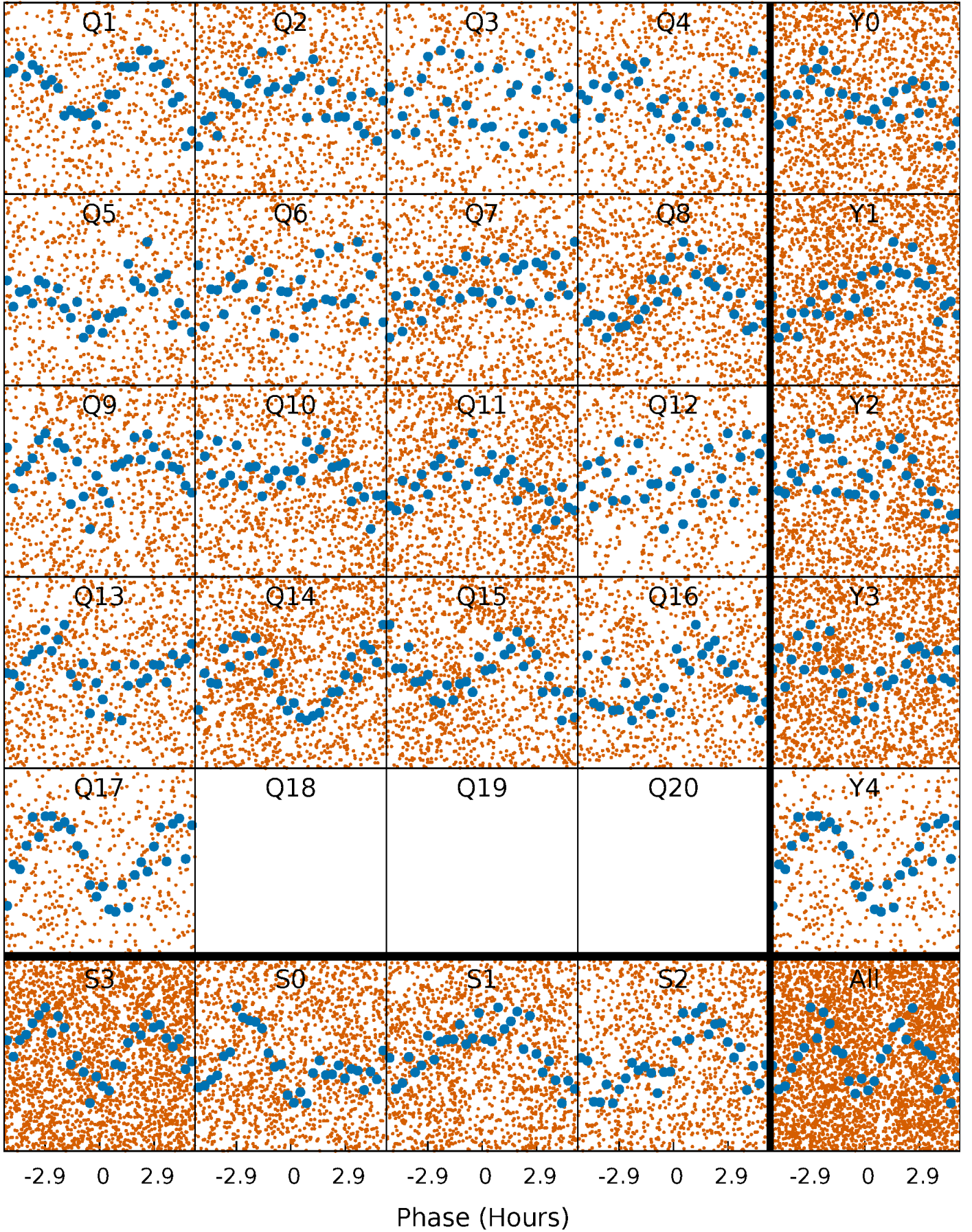
# Non-Whitened Vs. Whitened Light Curve





# PDC Quarter-Phased Transit Curves

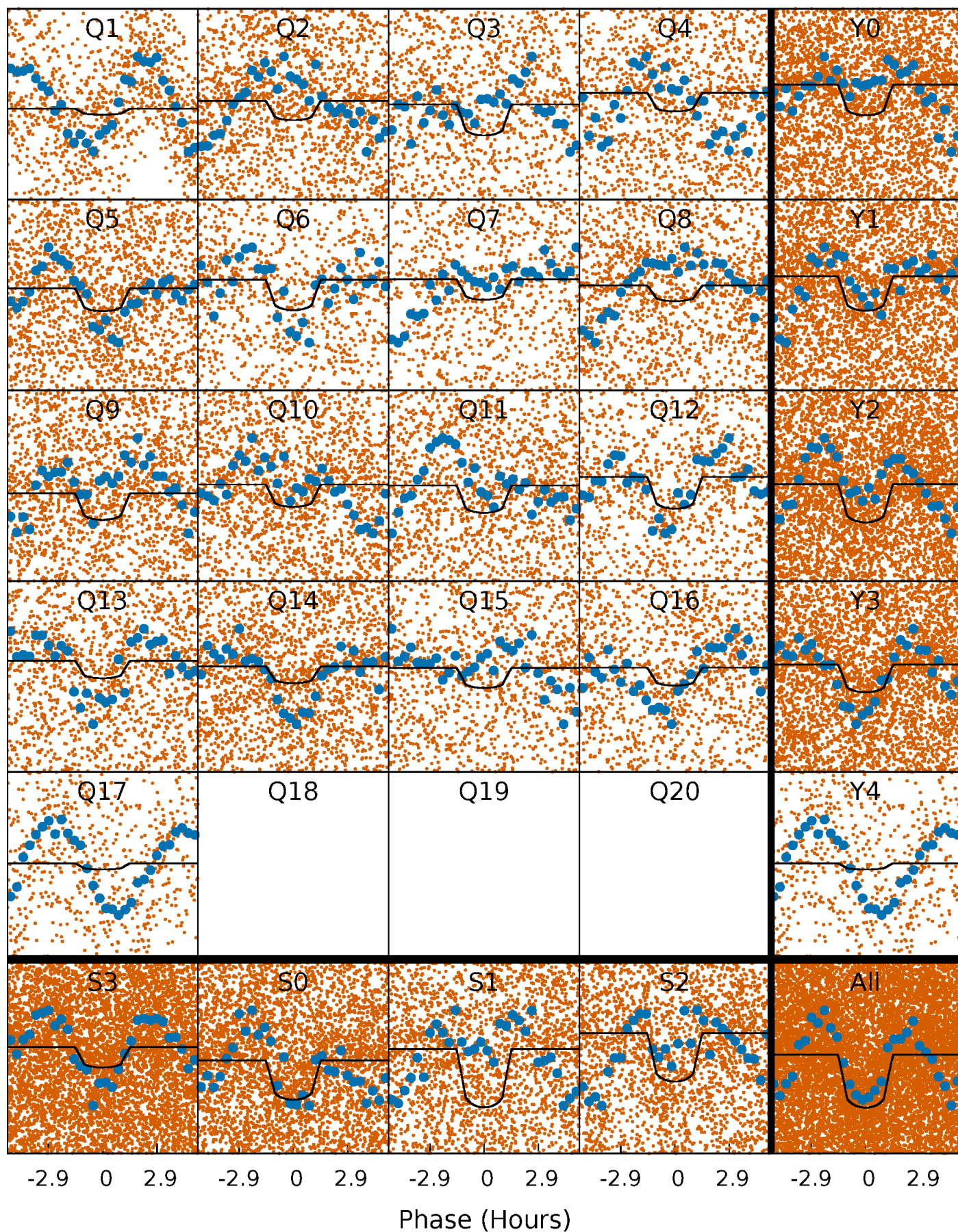
TCE 001432149-01   P= 0.583206 Days    $T_0=131.873164$  (BKJD)





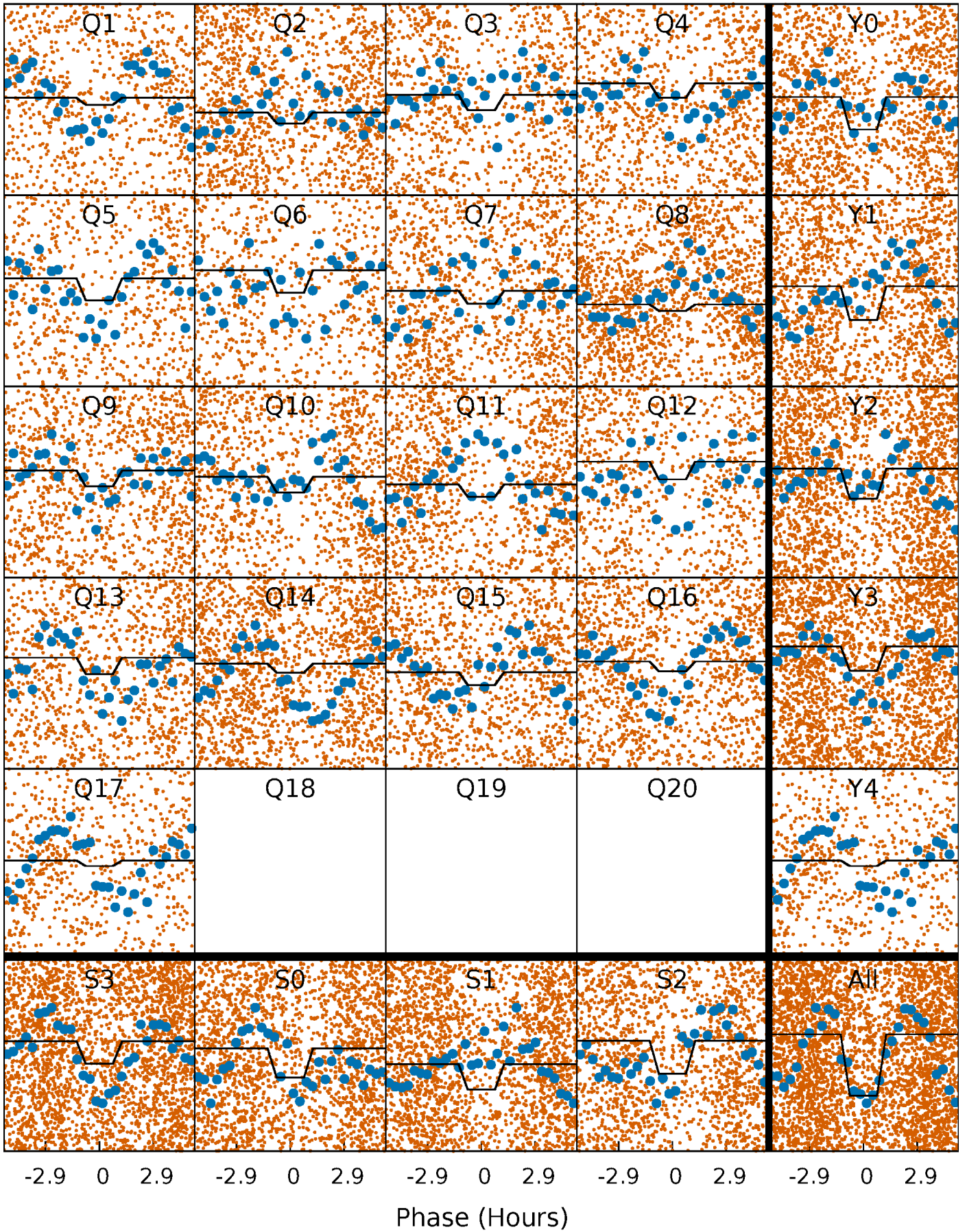
# DV Quarter-Phased Transit Curves

TCE 001432149-01 P= 0.583206 Days  $T_0=131.873164$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 001432149-01 P= 0.583199 Days  $T_0=131.868994$  (BKJD)

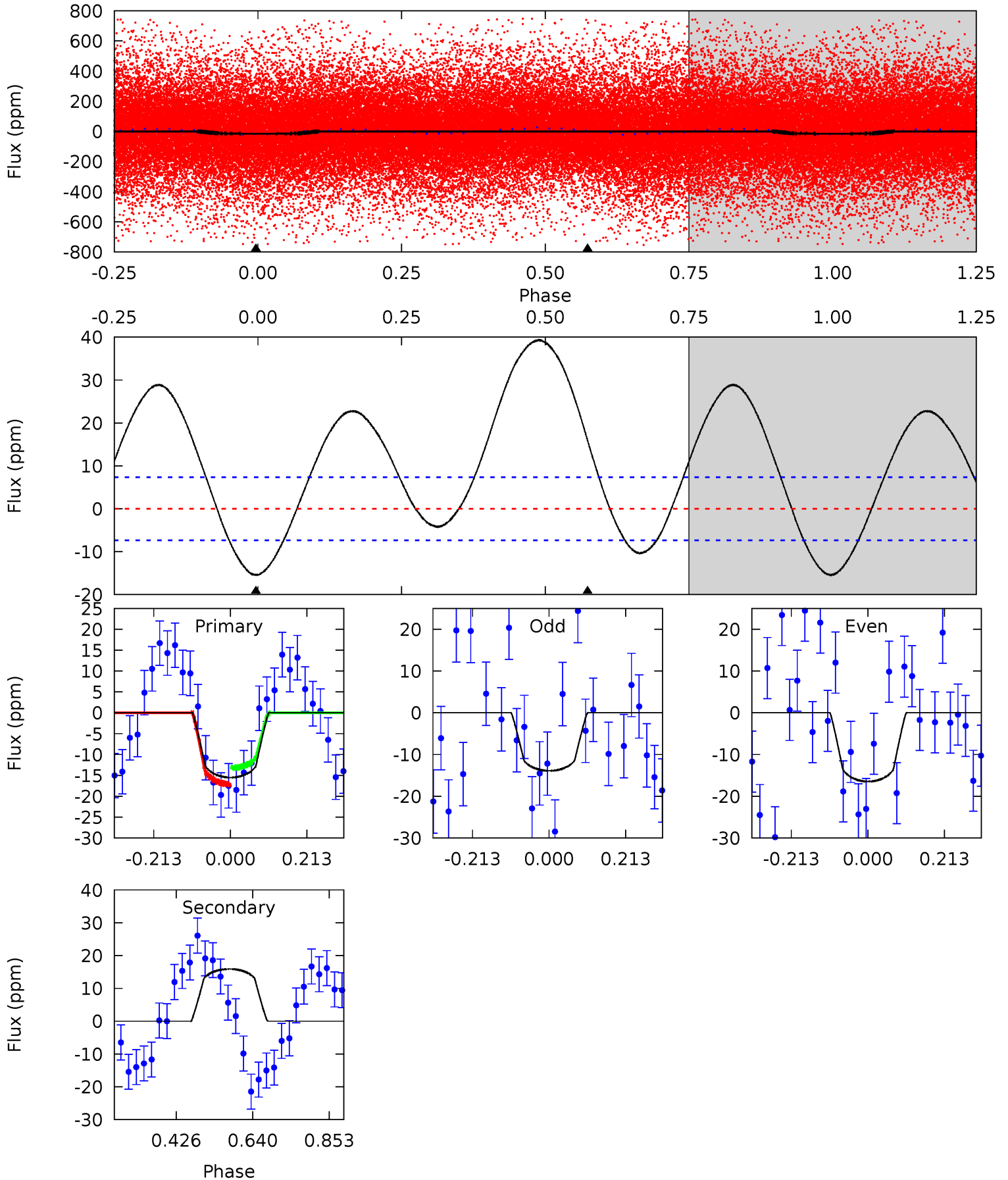




# DV Model-Shift Uniqueness Test

001432149-01, P = 0.583206 Days, E = 131.289958 Days

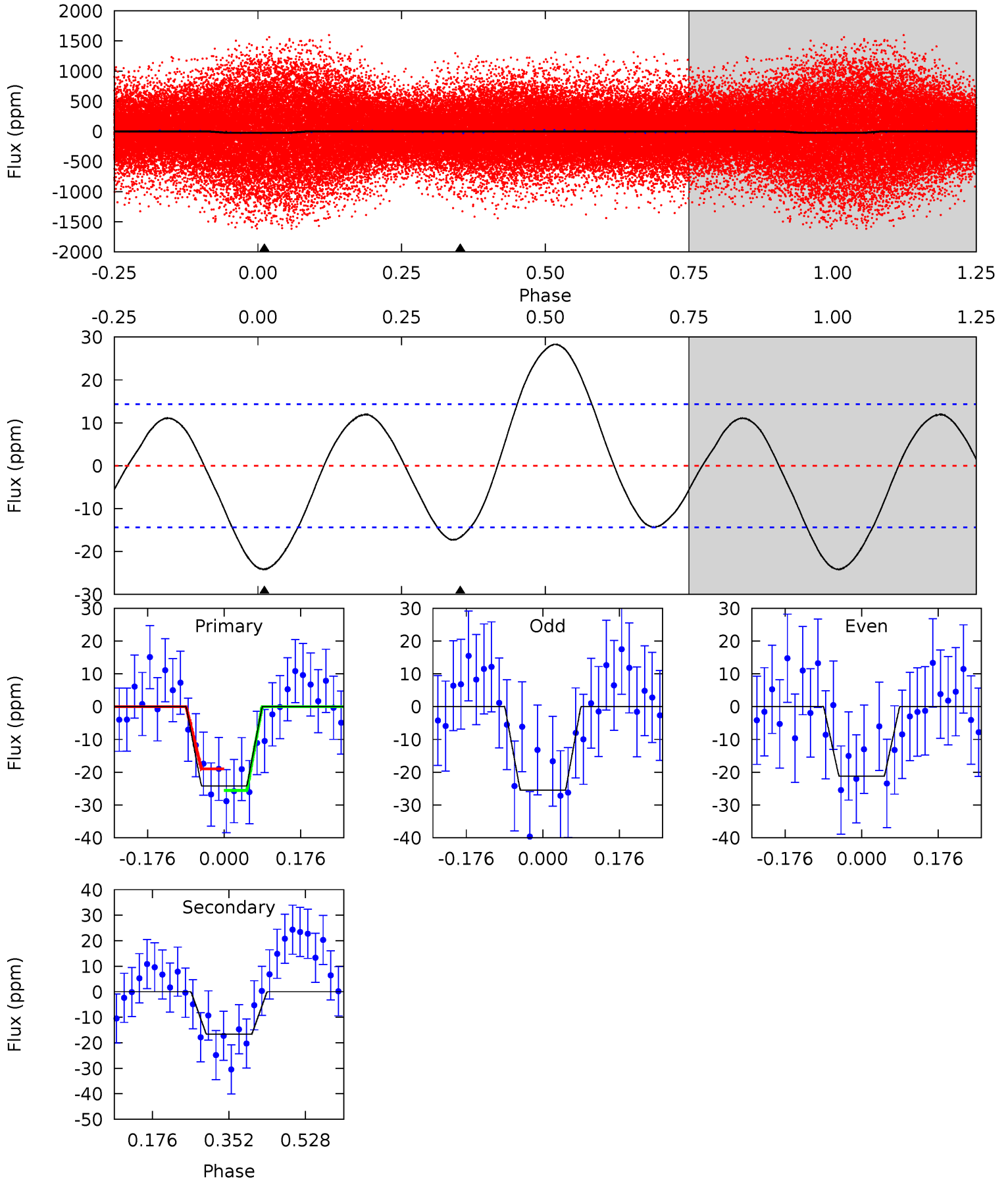
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.27	-9.51	0	0	4.40	1.24	3.87	9.27	9.27	-9.51	-9.51	0.77	0.95	0.72	1.13



# Alt Model-Shift Uniqueness Test

001432149-01, P = 0.583199 Days, E = 131.285795 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
7.48	5.16	0	0	4.44	1.35	3.84	7.48	7.48	5.16	5.16	0.65	1.94	0.54	0.85





### Stellar Parameters For KIC 001432149

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$7466^{+235}_{-314}$	$4.036^{+0.198}_{-0.162}$	$-0.180^{+0.200}_{-0.350}$	$2.001^{+0.533}_{-0.533}$	$1.584^{+0.212}_{-0.259}$	$0.279^{+0.316}_{-0.129}$
	+3%/-4%	+5%/-4%	+111%/-194%	+27%/-27%	+13%/-16%	+114%/-46%
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 001432149-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$16 \pm 2$	$1.08^{+0.29}_{-0.25}$	$5141^{+388}_{-421}$	$-6808^{+598}_{-885}$	$-1.843^{+0.663}_{-1.337}$
Alt.	$-17 \pm 3$	$1.02^{+0.27}_{-0.26}$	$5132^{+385}_{-388}$	$6562^{+1175}_{-801}$	$2.208^{+1.943}_{-0.881}$

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

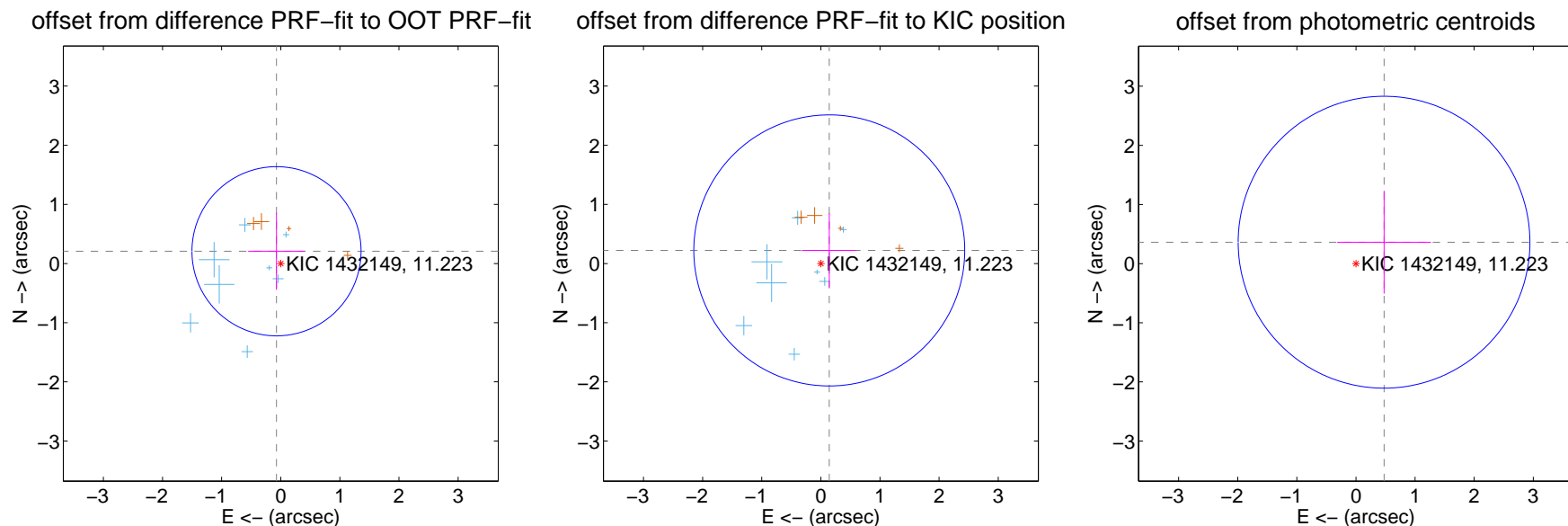
## DV Centroid Data

Supplemental centroid analysis for 001432149-01. **Kepler magnitude: 11.22.** Transit SNR 10.33

There are 8 quarters with good PRF difference image offsets

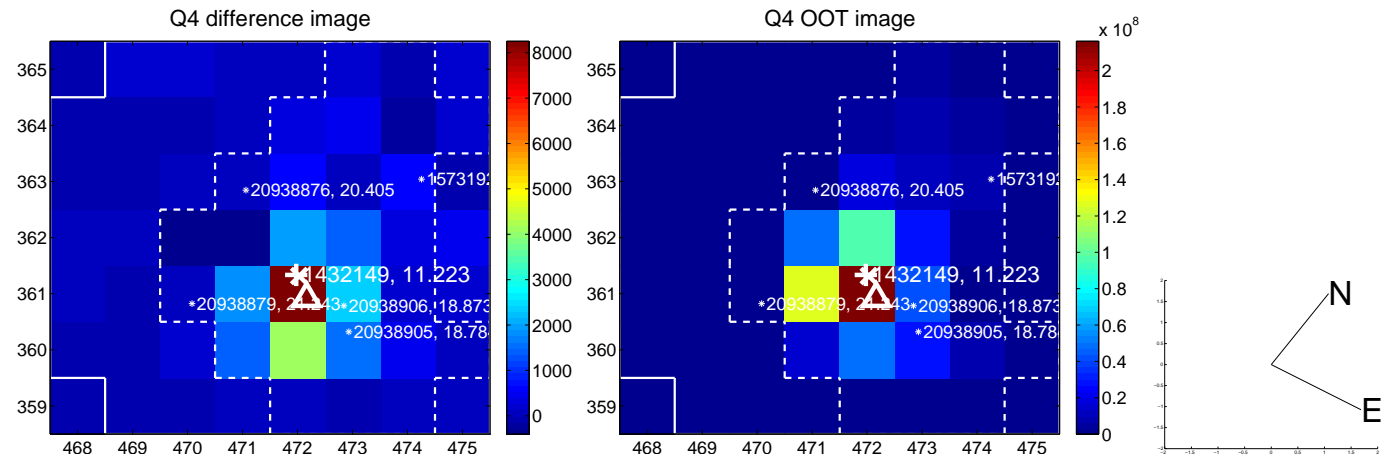
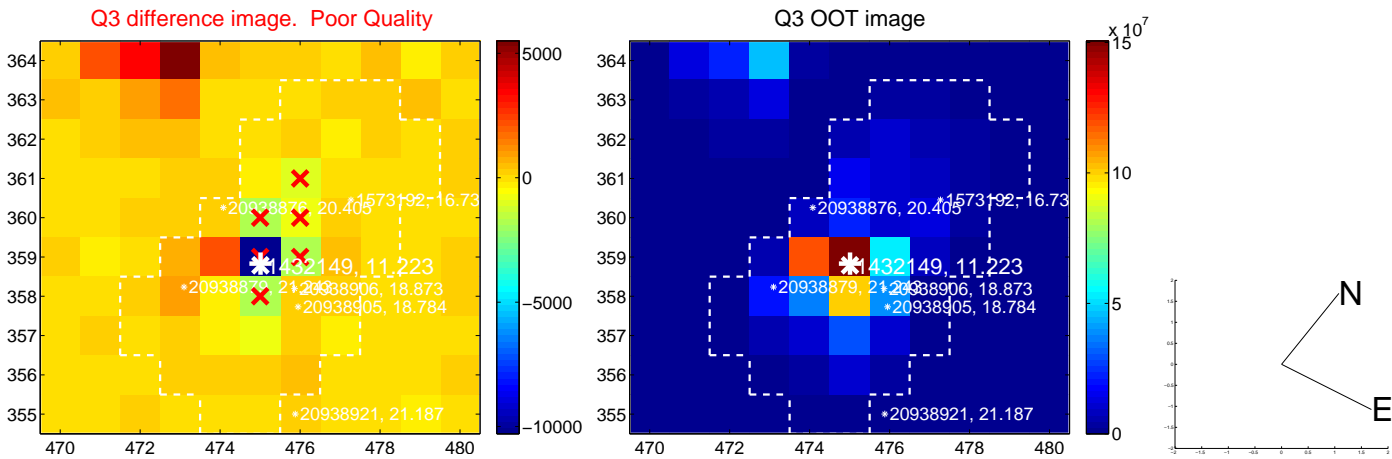
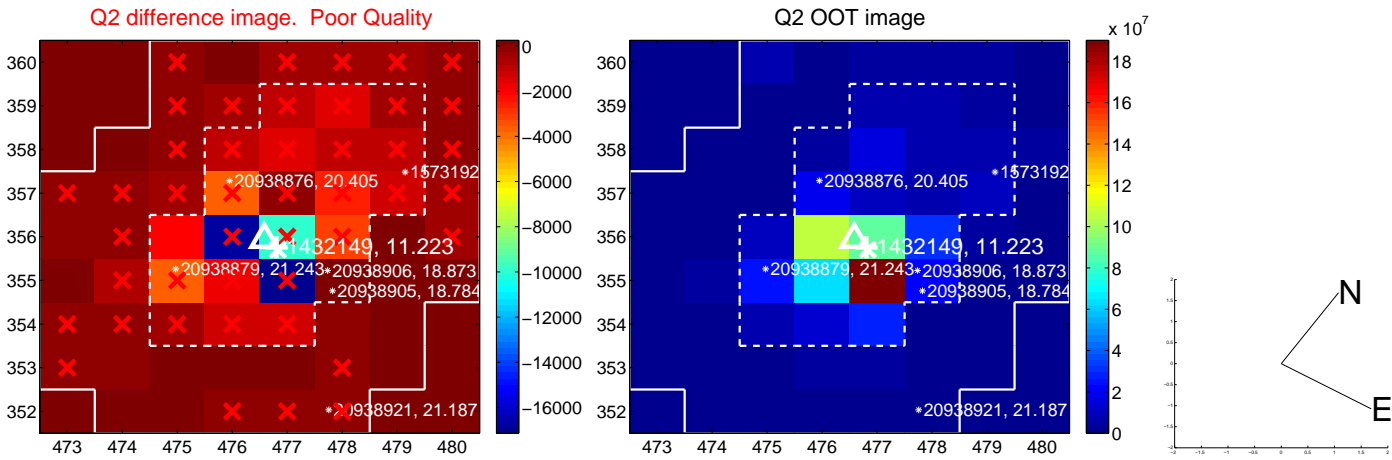
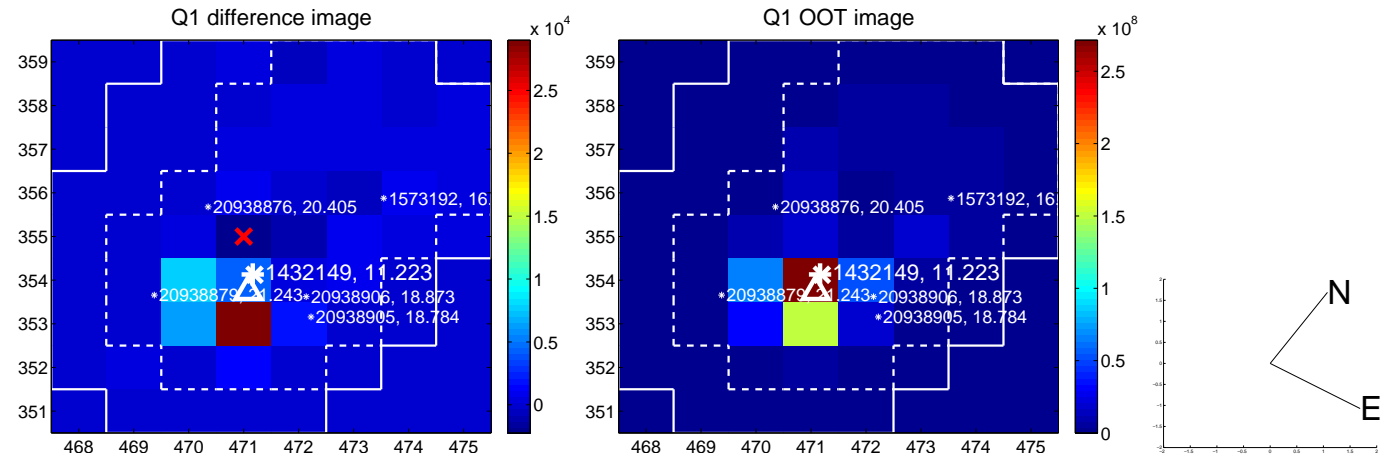
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.220 \pm 0.477$	0.46	$0.072 \pm 0.479$	$0.208 \pm 0.652$
PRF-fit source offset from KIC position	$0.264 \pm 0.764$	0.35	$-0.142 \pm 0.461$	$0.222 \pm 0.626$
photometric centroid source offset	$0.60 \pm 0.82$	0.73	$-0.48 \pm 0.79$	$0.36 \pm 0.87$

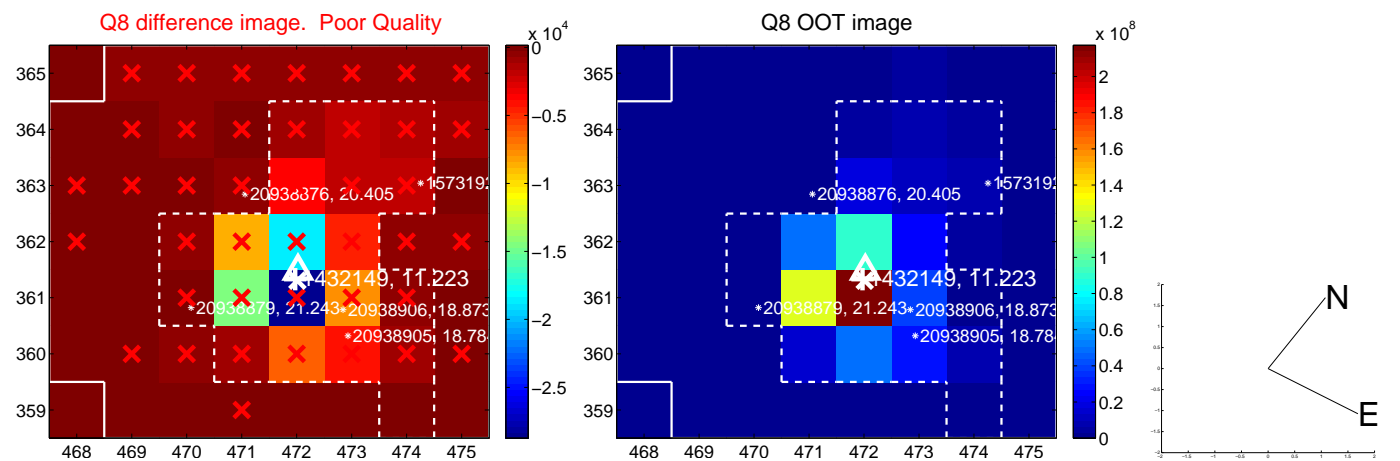
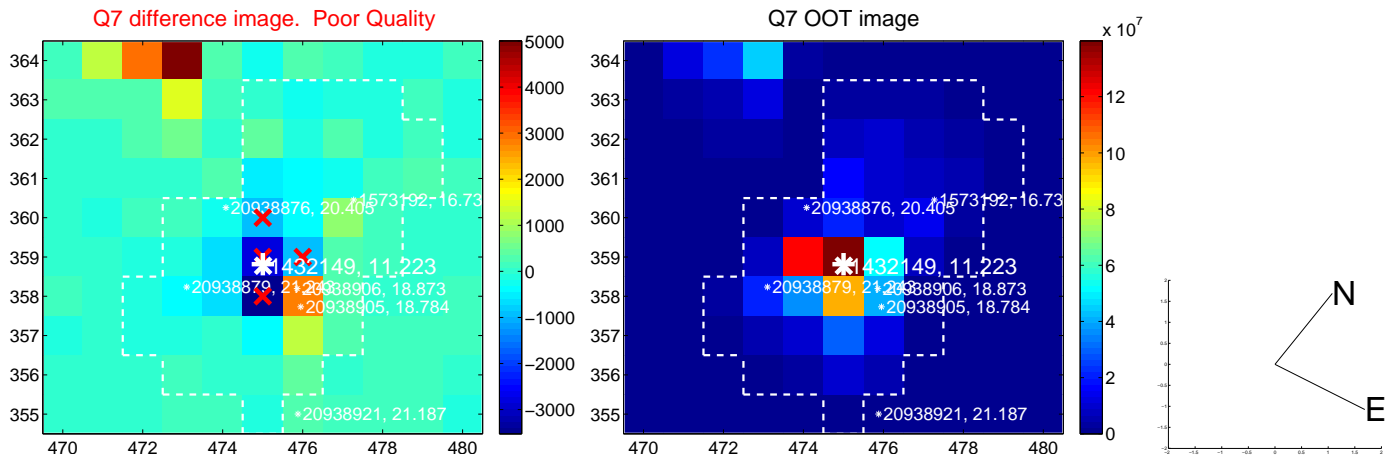
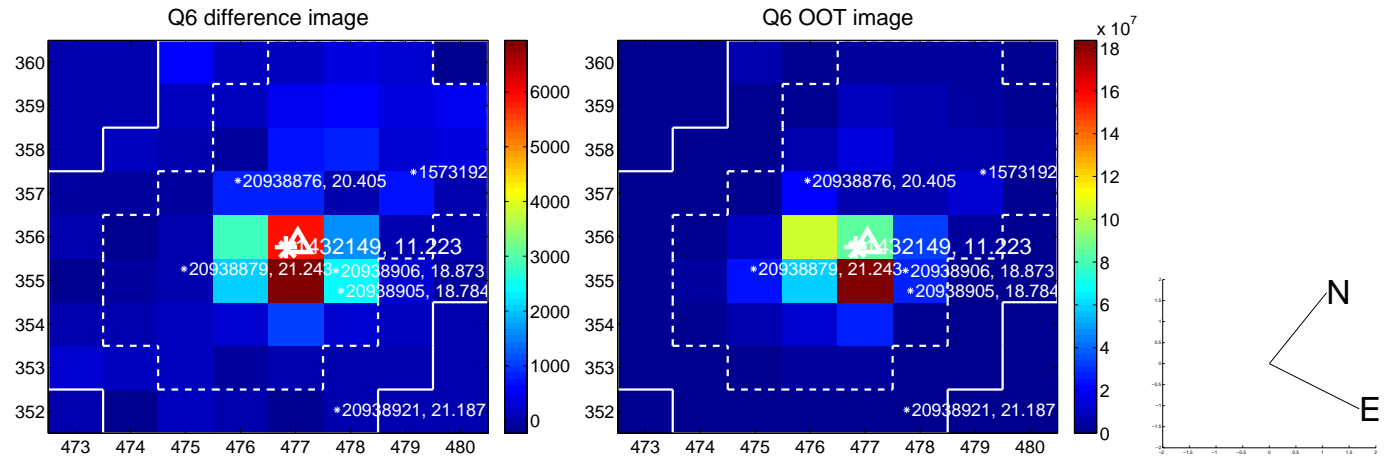
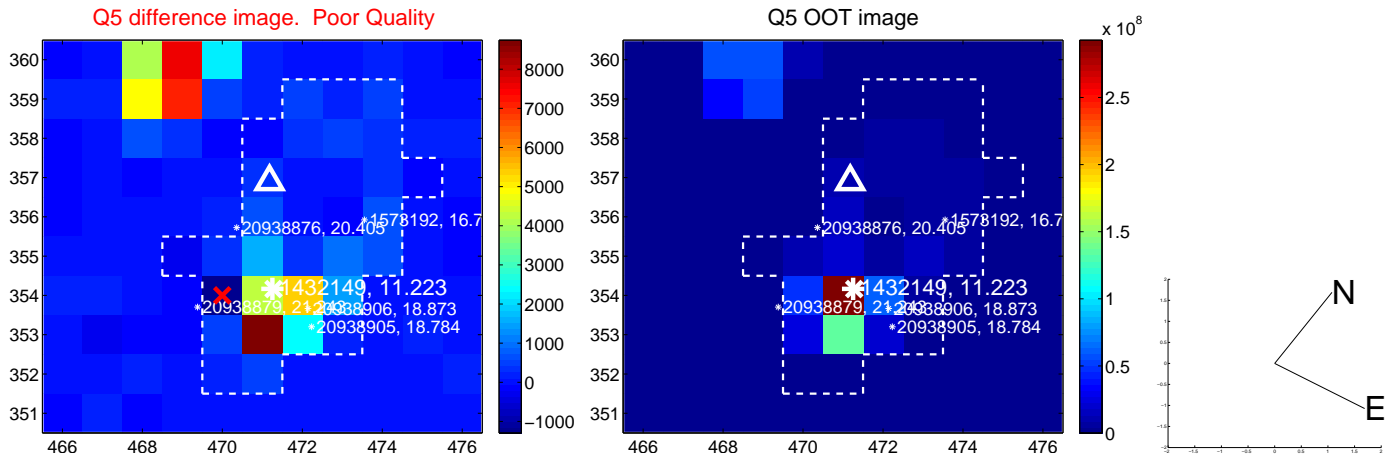


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

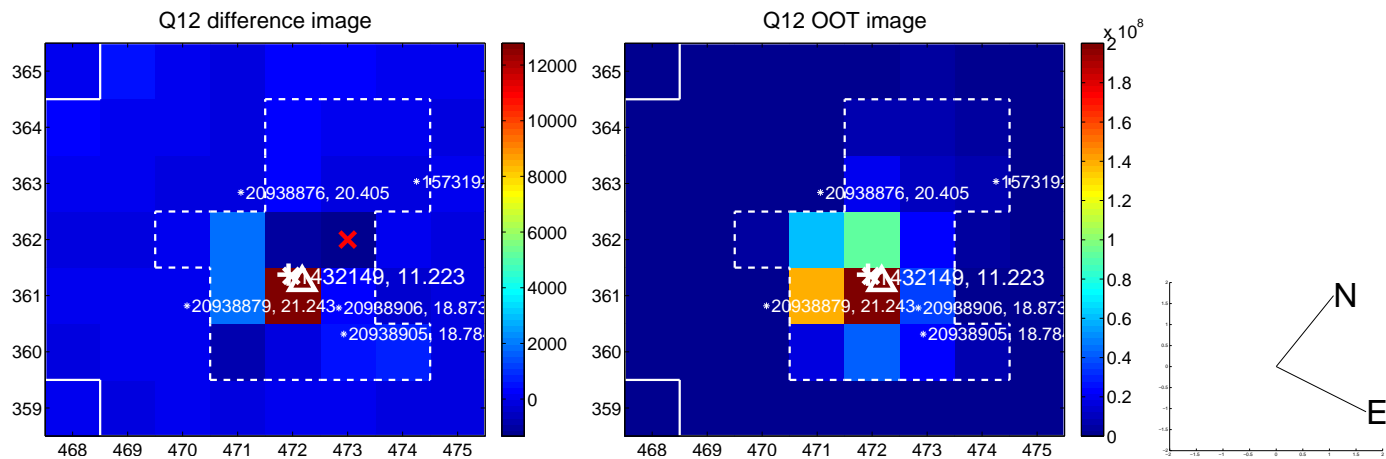
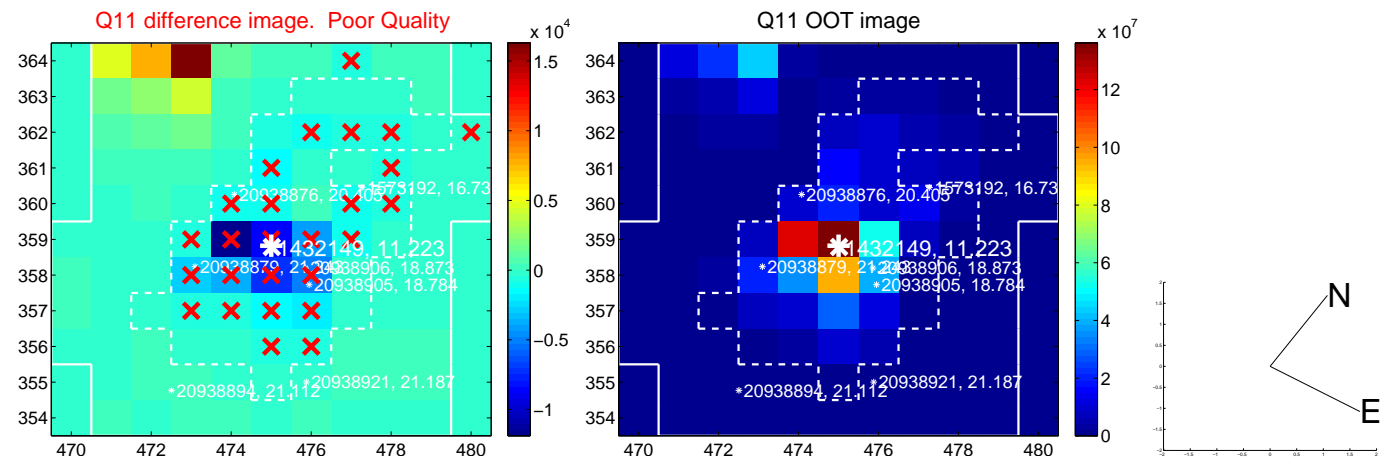
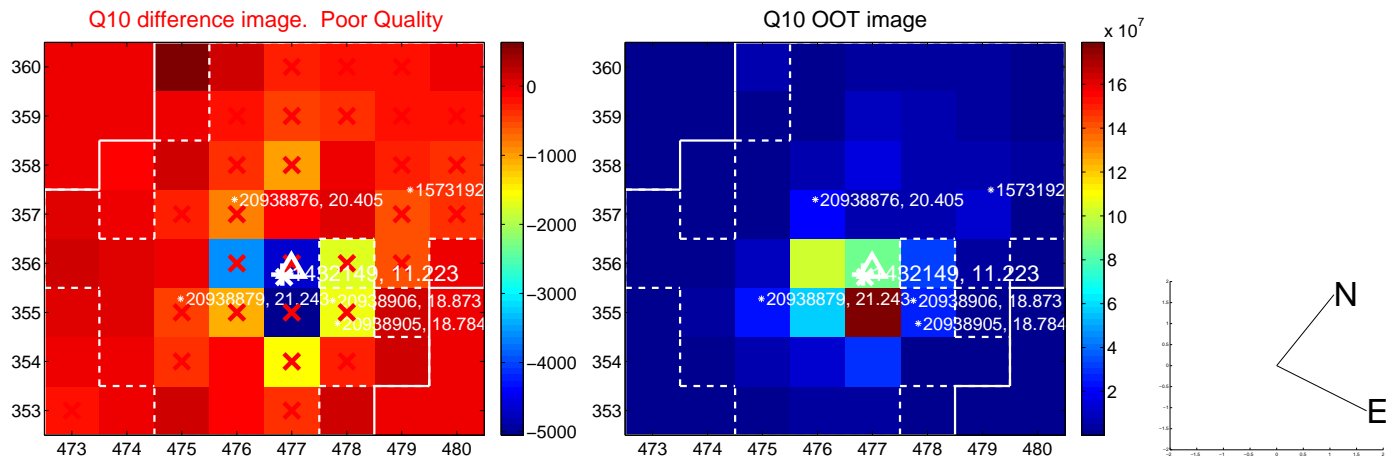
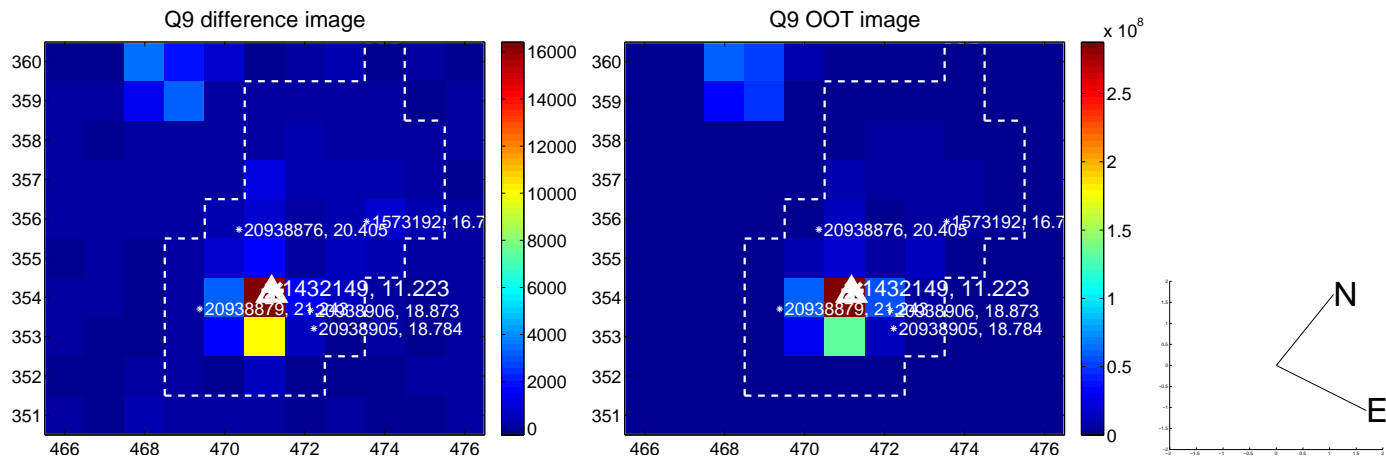


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

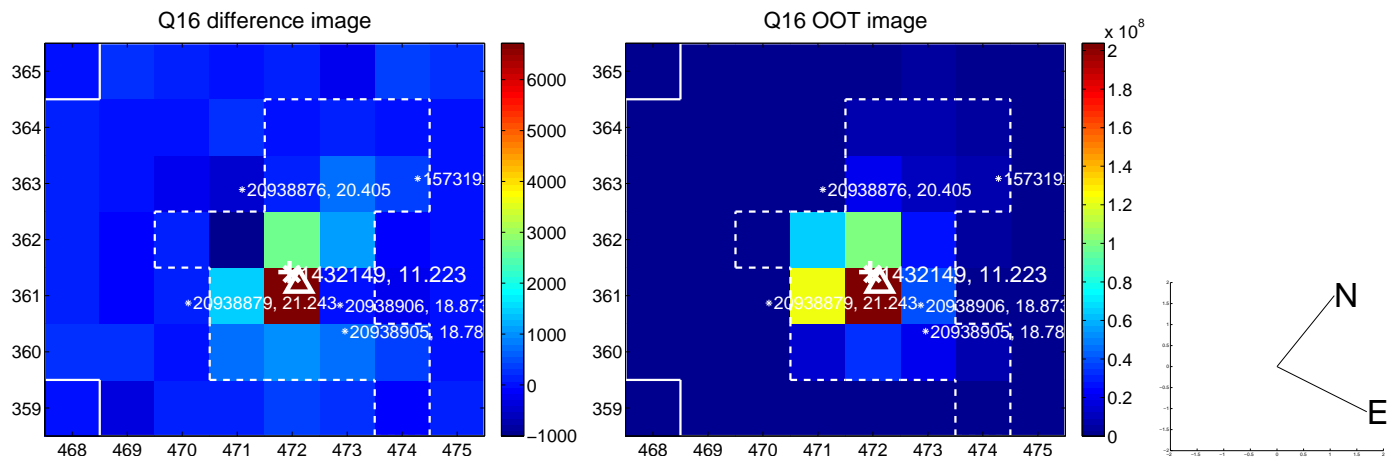
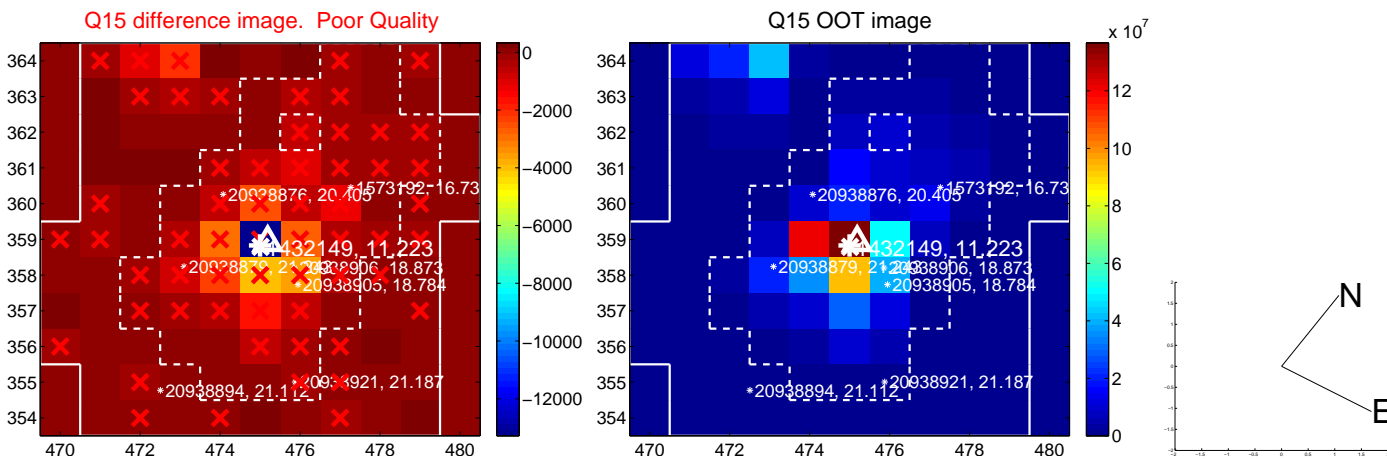
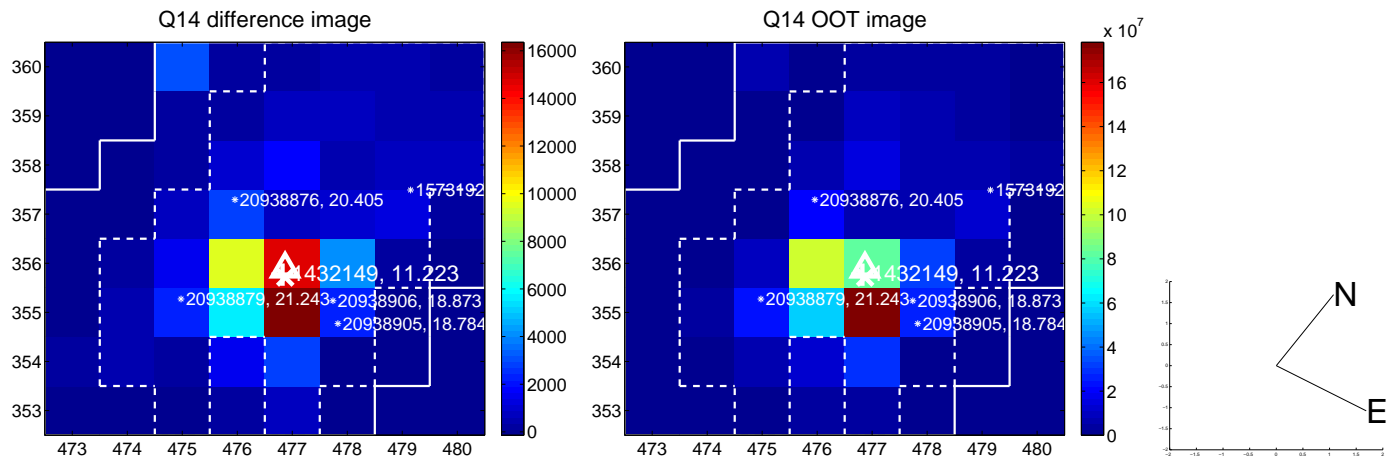
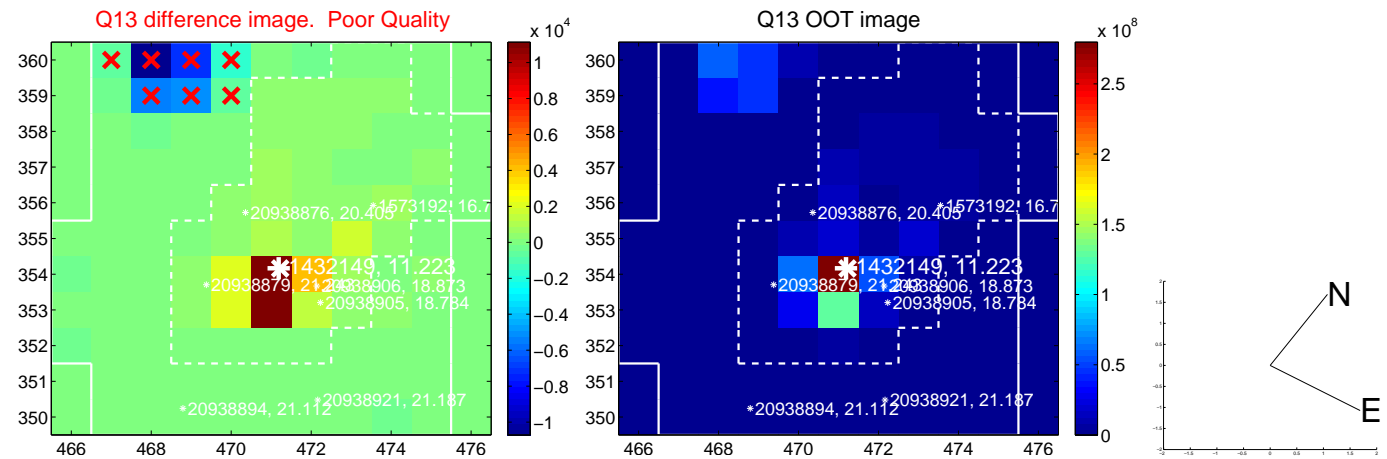




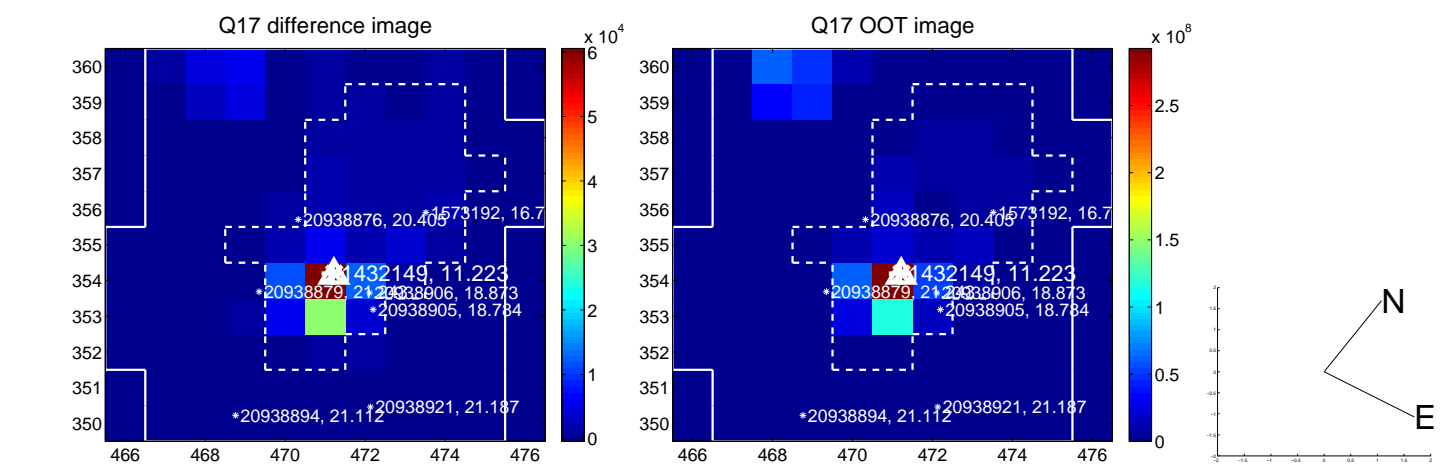
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



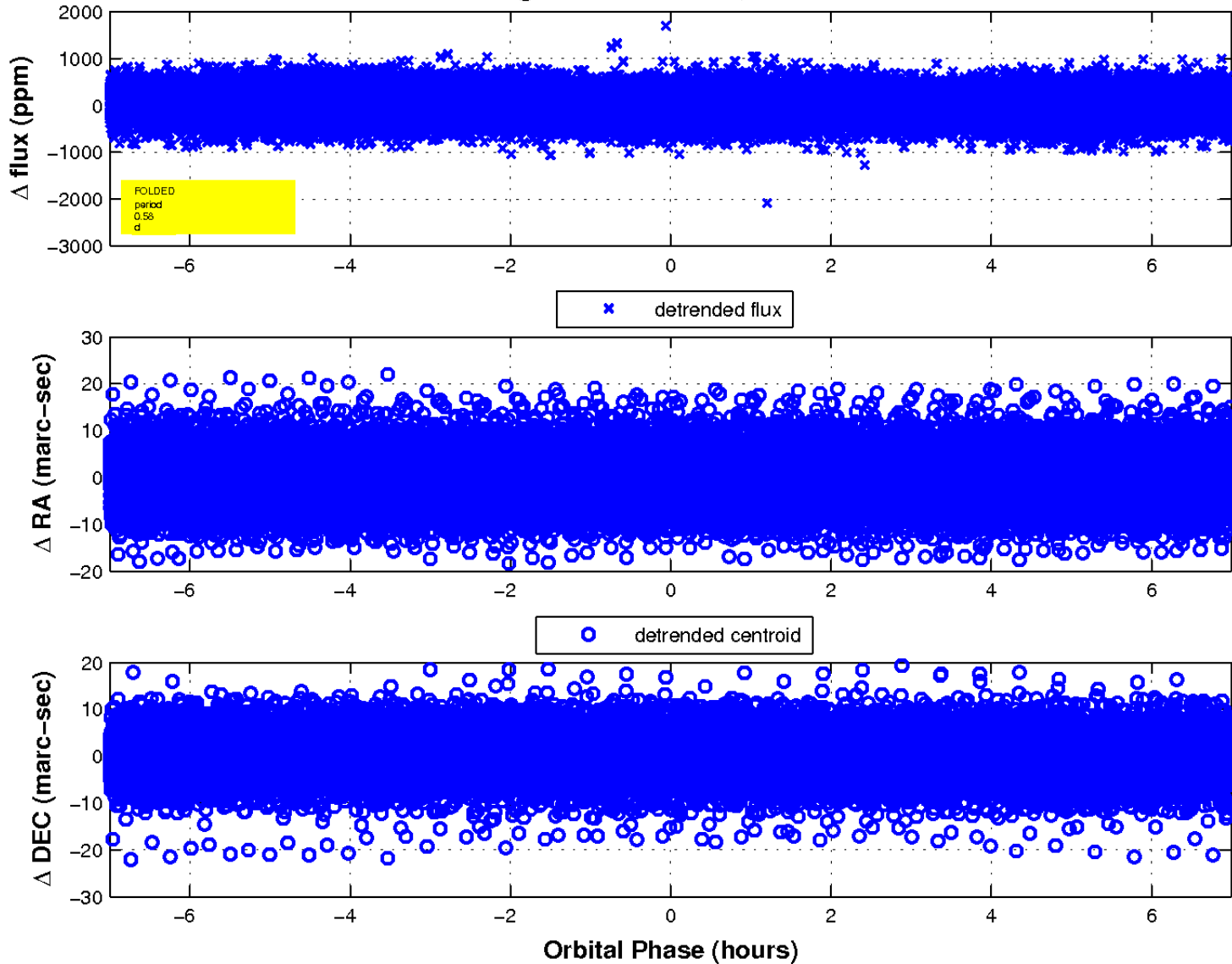
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

