

# KIC 003351888

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
003351888-01	OBS	0801.01	1.625519	131.815582	7953.8	2.505	712.5	746.6	1.11	5539	10.30	1471.64

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003351888-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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

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

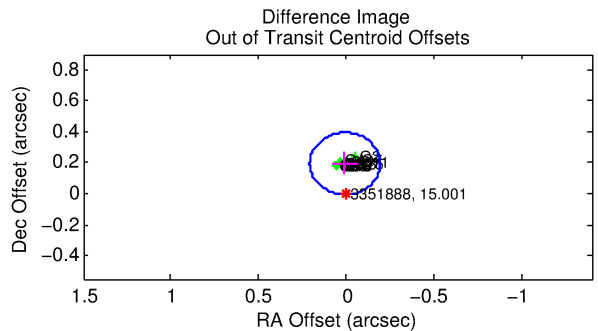
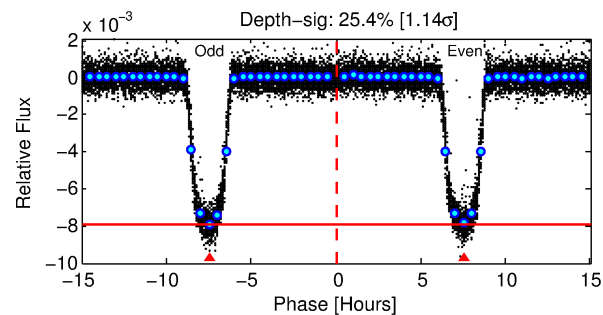
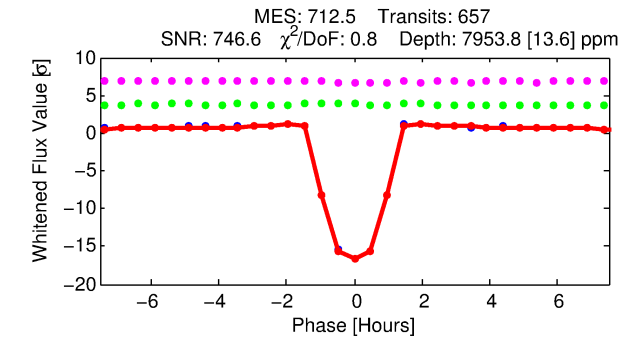
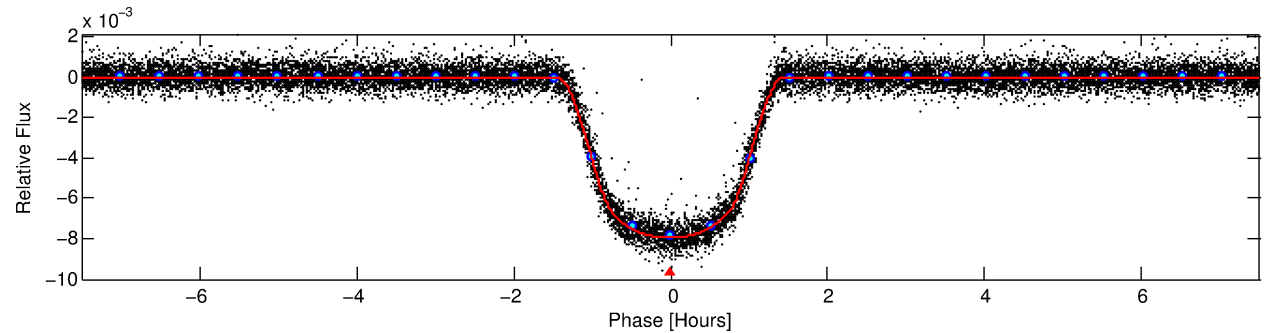
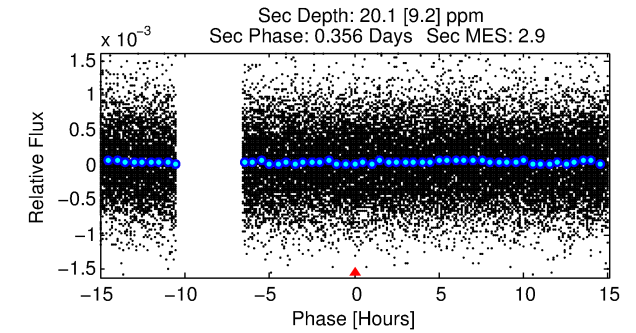
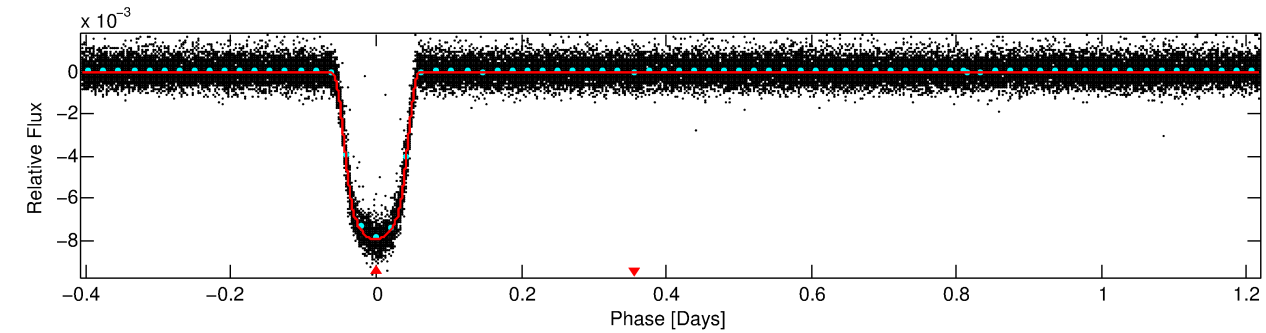
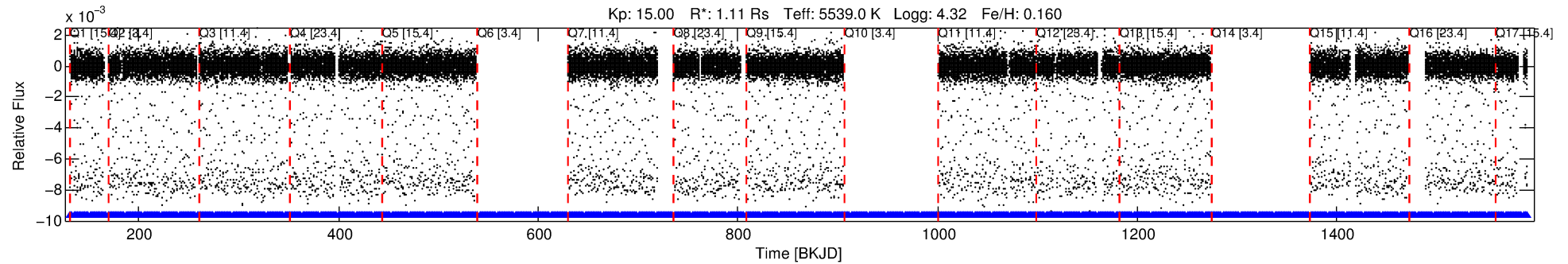
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 003351888-01

No Significant Match Found

# DV One-Page Summary

KIC: 3351888 Candidate: 1 of 1 Period: 1.626 d  
KOI: K00801.01 Corr: 0.976



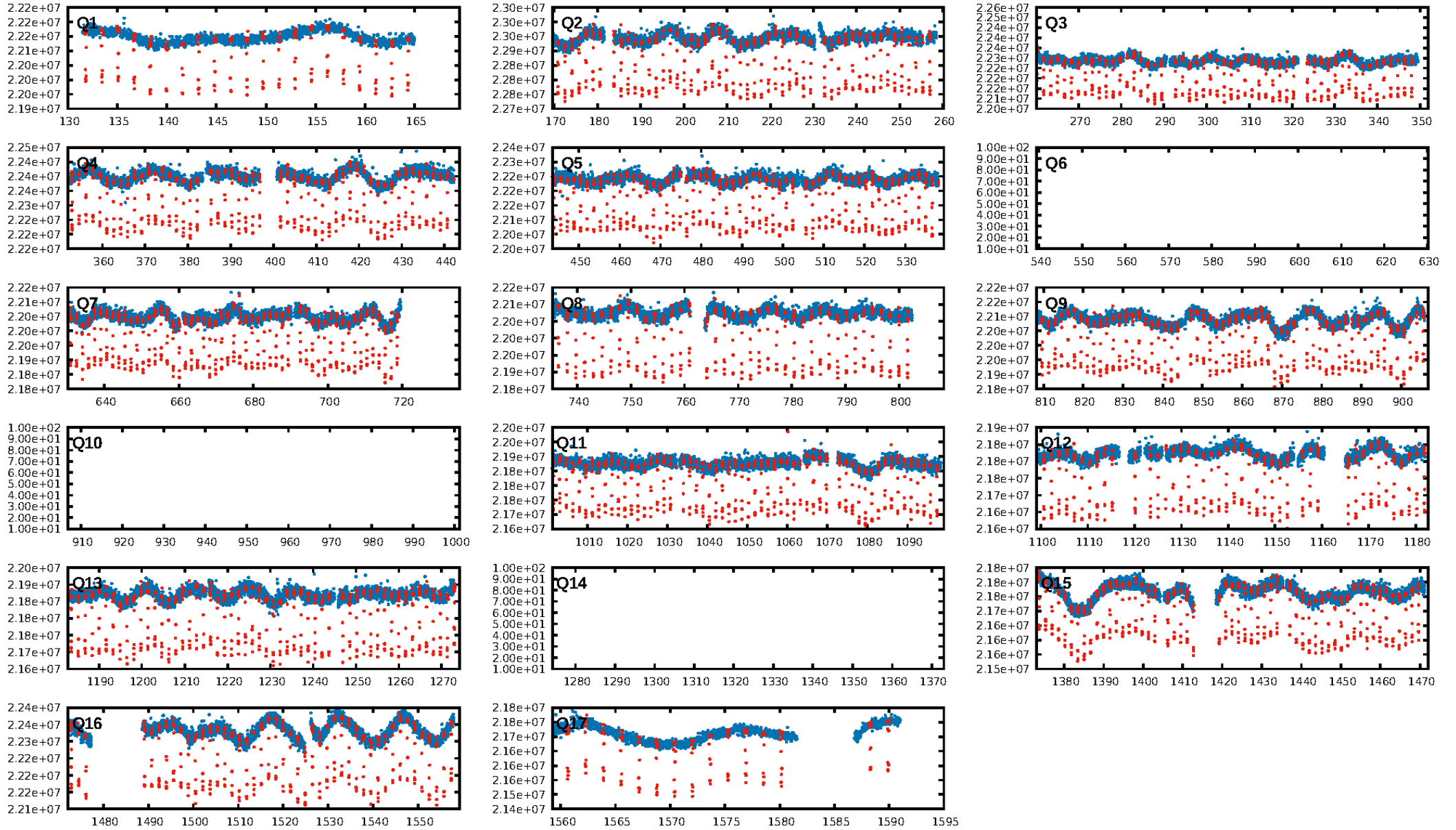
## DV Fit Results:

Period = 1.62552 [0.00000] d  
Epoch = 131.8156 [0.0000] BKJD  
Rp/R\* = 0.0854 [0.0005]  
a/R\* = 4.50 [0.10]  
b = 0.62 [0.02]  
Seff = 1471.64 [352.08]  
Teq = 1579 [94] K  
Rp = 10.30 [1.50] Re  
a = 0.0265 [0.0038] AU  
Ag = 0.07 [0.04] [-24.76 $\sigma$ ]  
Teffp = 1270 [146] K [-1.78 $\sigma$ ]

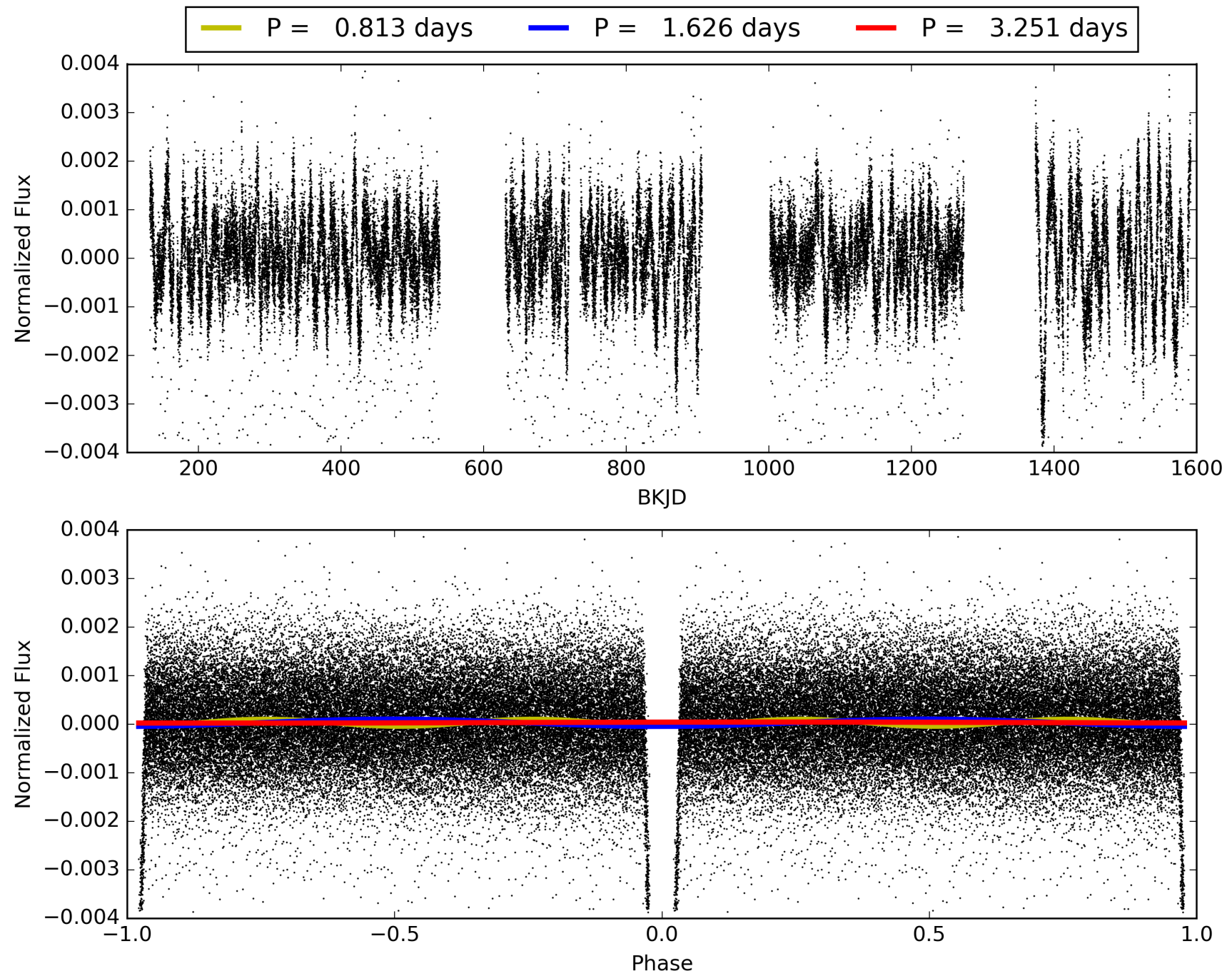
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 0.00e+00  
RollingBand-fgt: 1.00 [621/621]  
GhostDiagnostic-chr: 17.65  
Centroid-sig: 0.0%  
Centroid-so: 0.550 arcsec [30.40 $\sigma$ ]  
OotOffset-rm: 0.195 arcsec [2.91 $\sigma$ ]  
KicOffset-rm: 0.038 arcsec [0.56 $\sigma$ ]  
OotOffset-st: 1/4/4/5 [14]  
KicOffset-st: 1/4/4/5 [14]  
DiffImageQuality-fgm: 1.00 [14/14]  
DiffImageOverlap-fno: 1.00 [14/14]

# TCE 003351888-01, PDC Light Curves

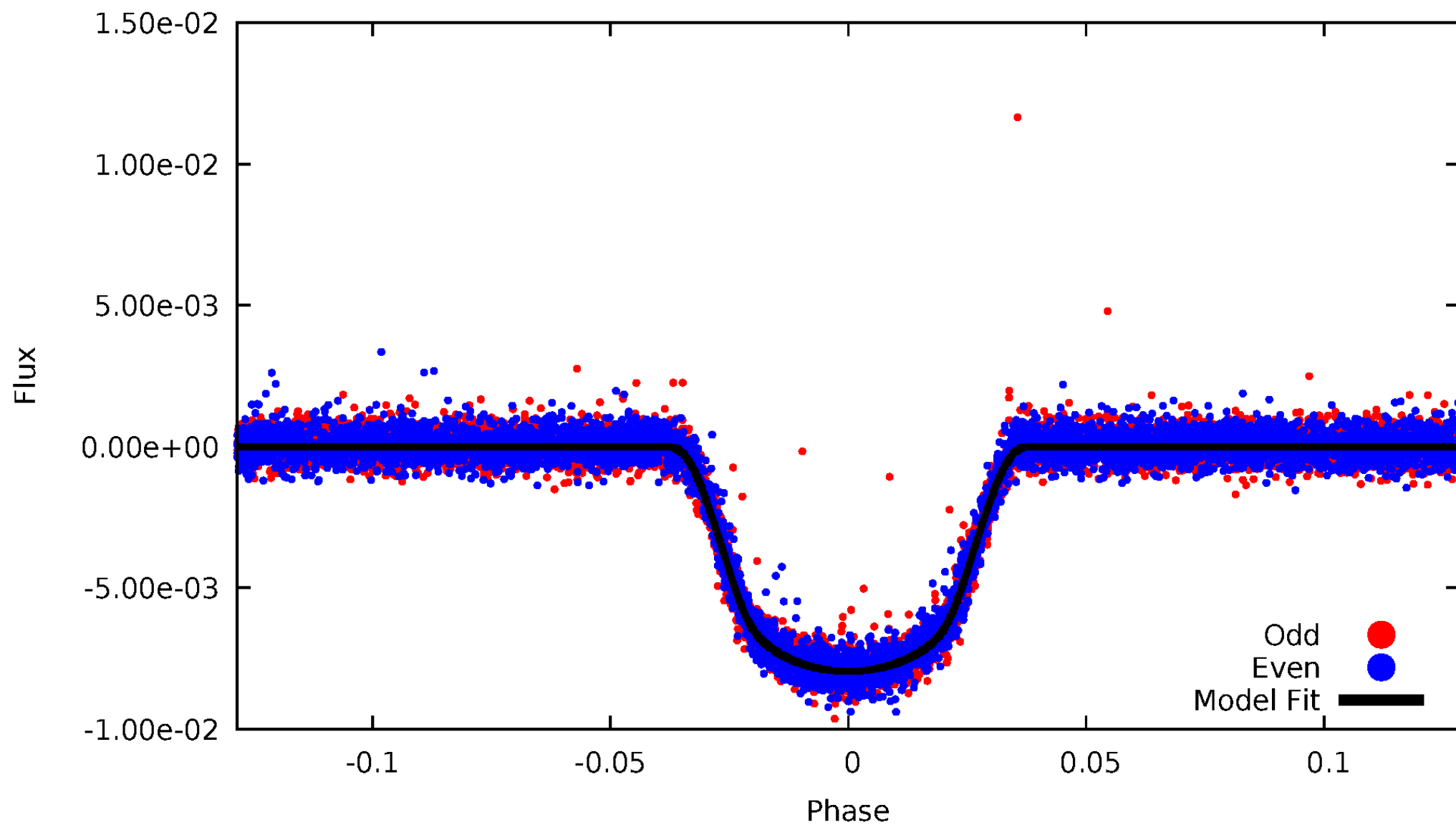


TCE 003351888-01



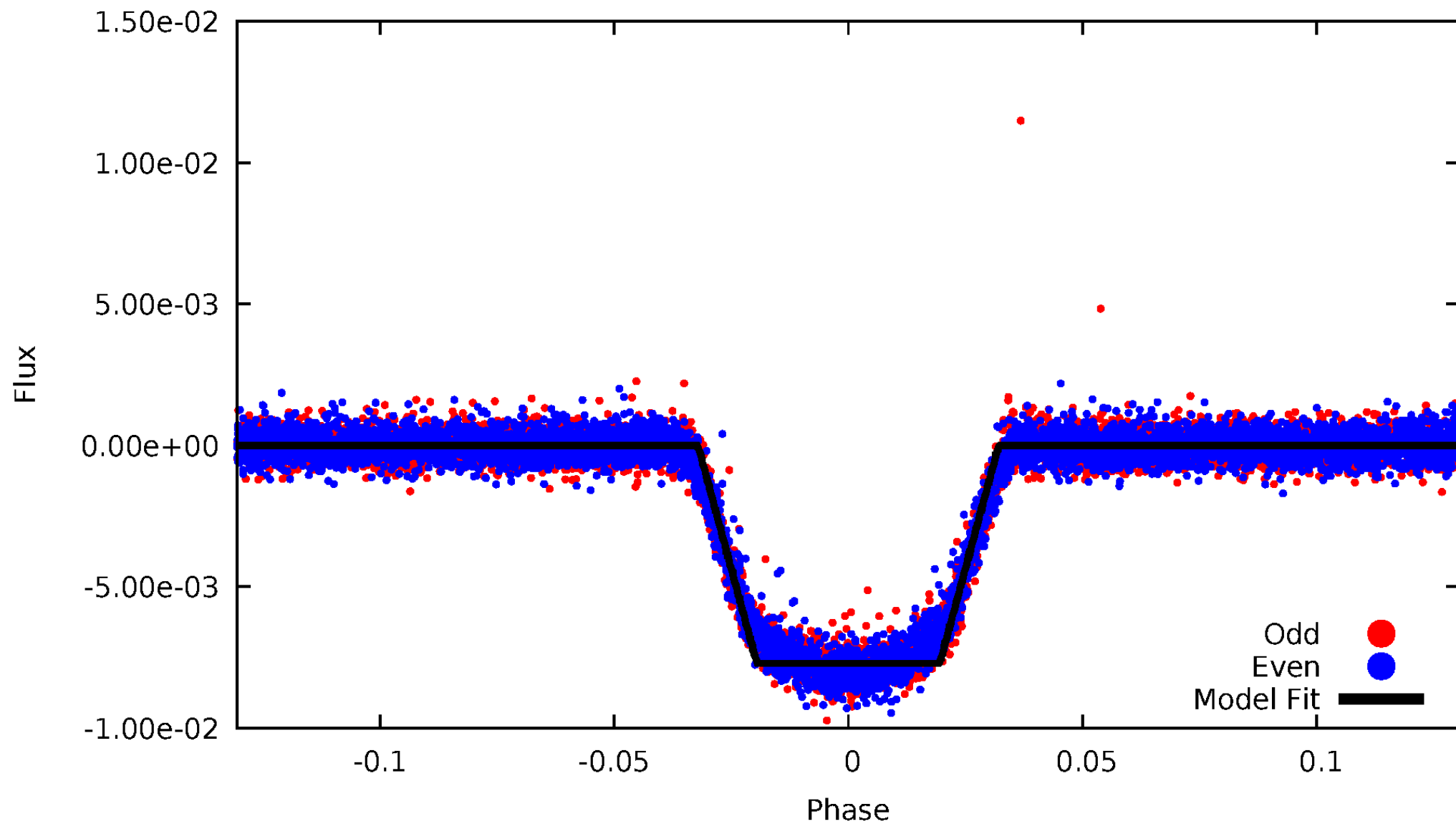
# DV Odd/Even

TCE 003351888-01



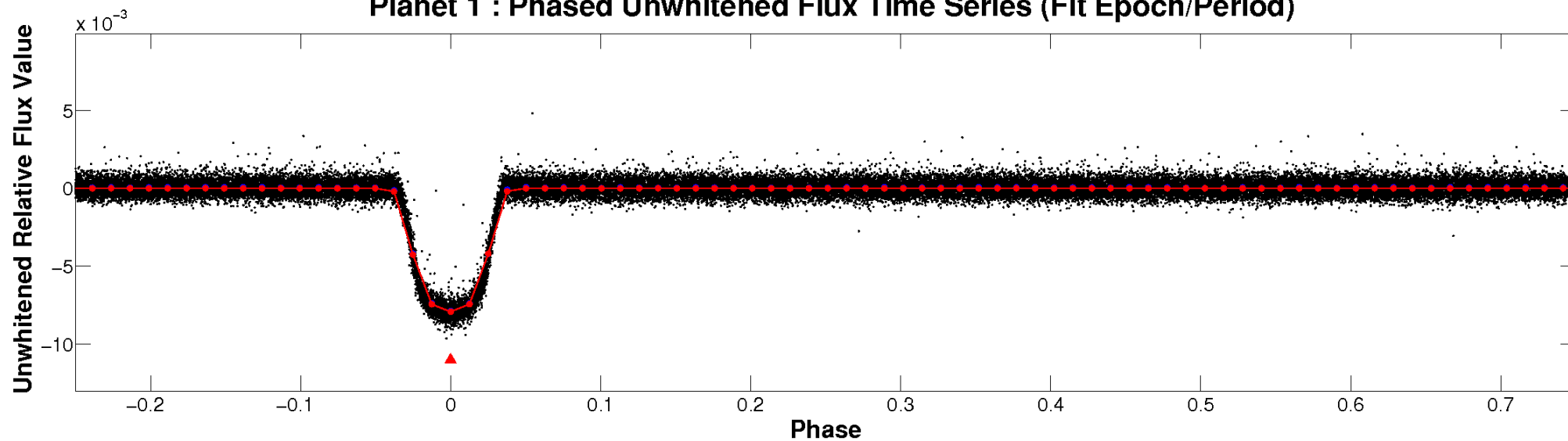
# ALT Odd/Even

TCE 003351888-01

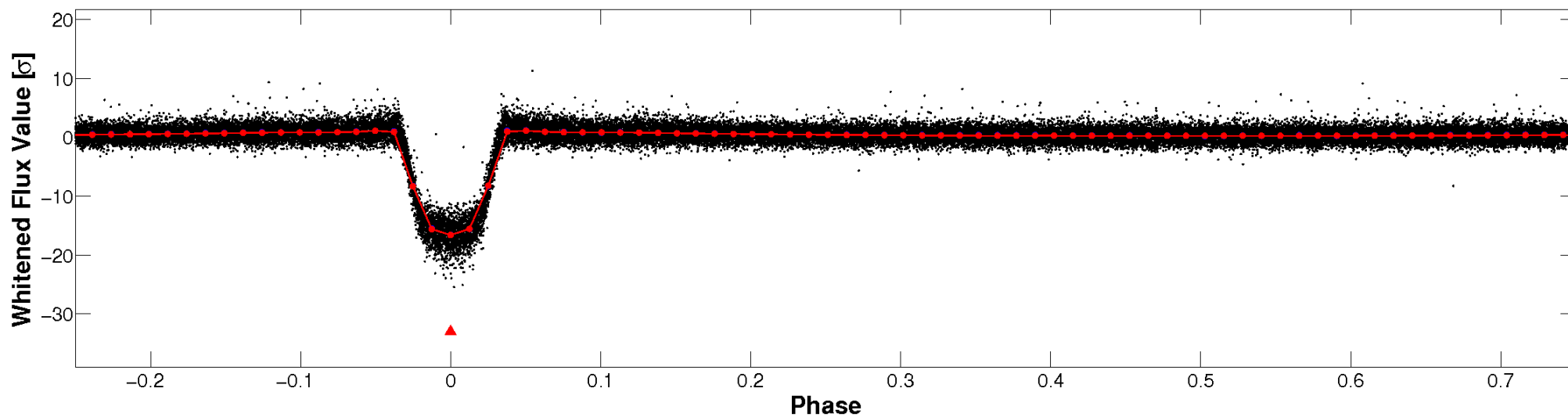


# Non-Whitened Vs. Whitened Light Curve

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



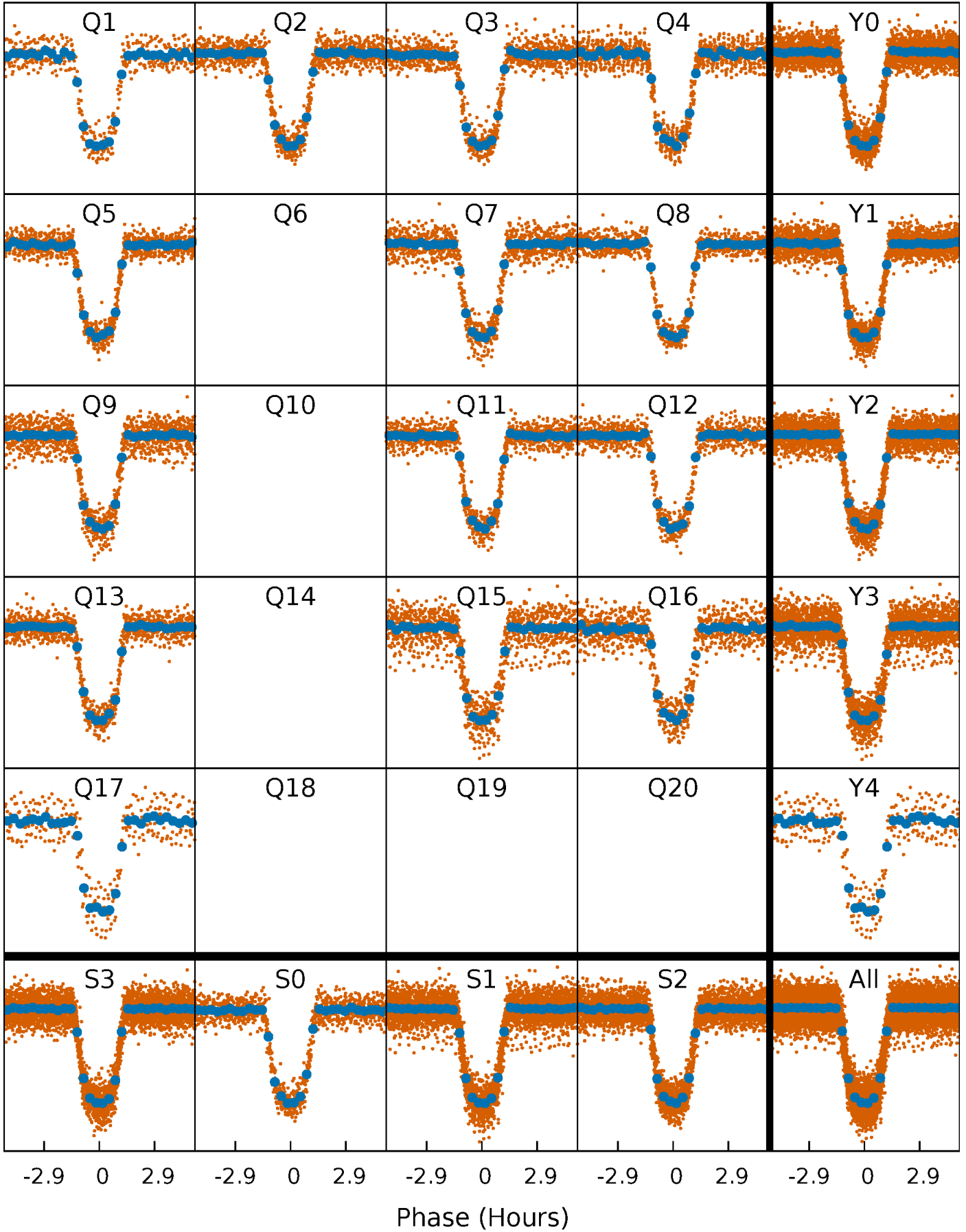
**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**





# PDC Quarter-Phased Transit Curves

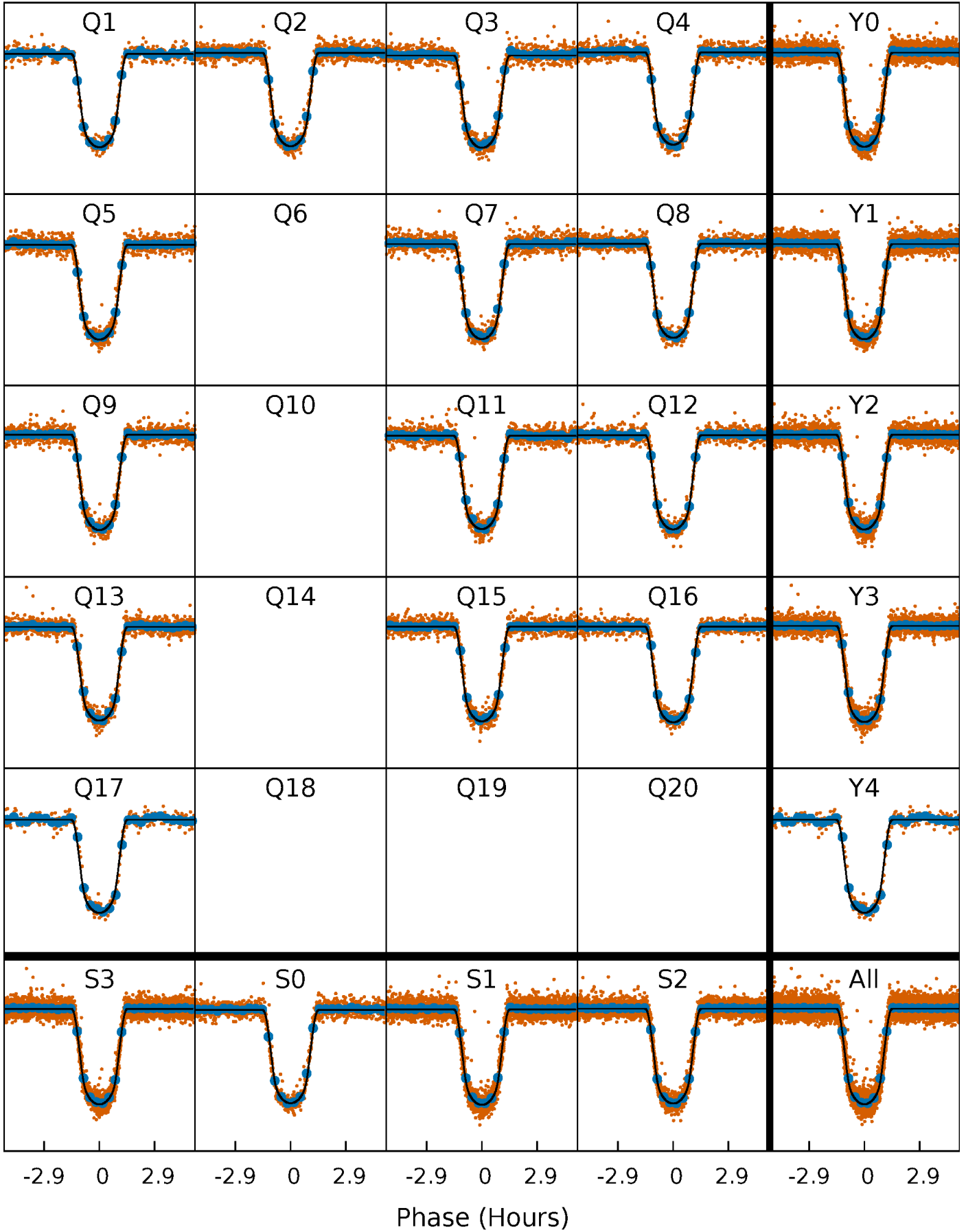
TCE 003351888-01   P= 1.625519 Days    $T_0=131.815582$  (BKJD)





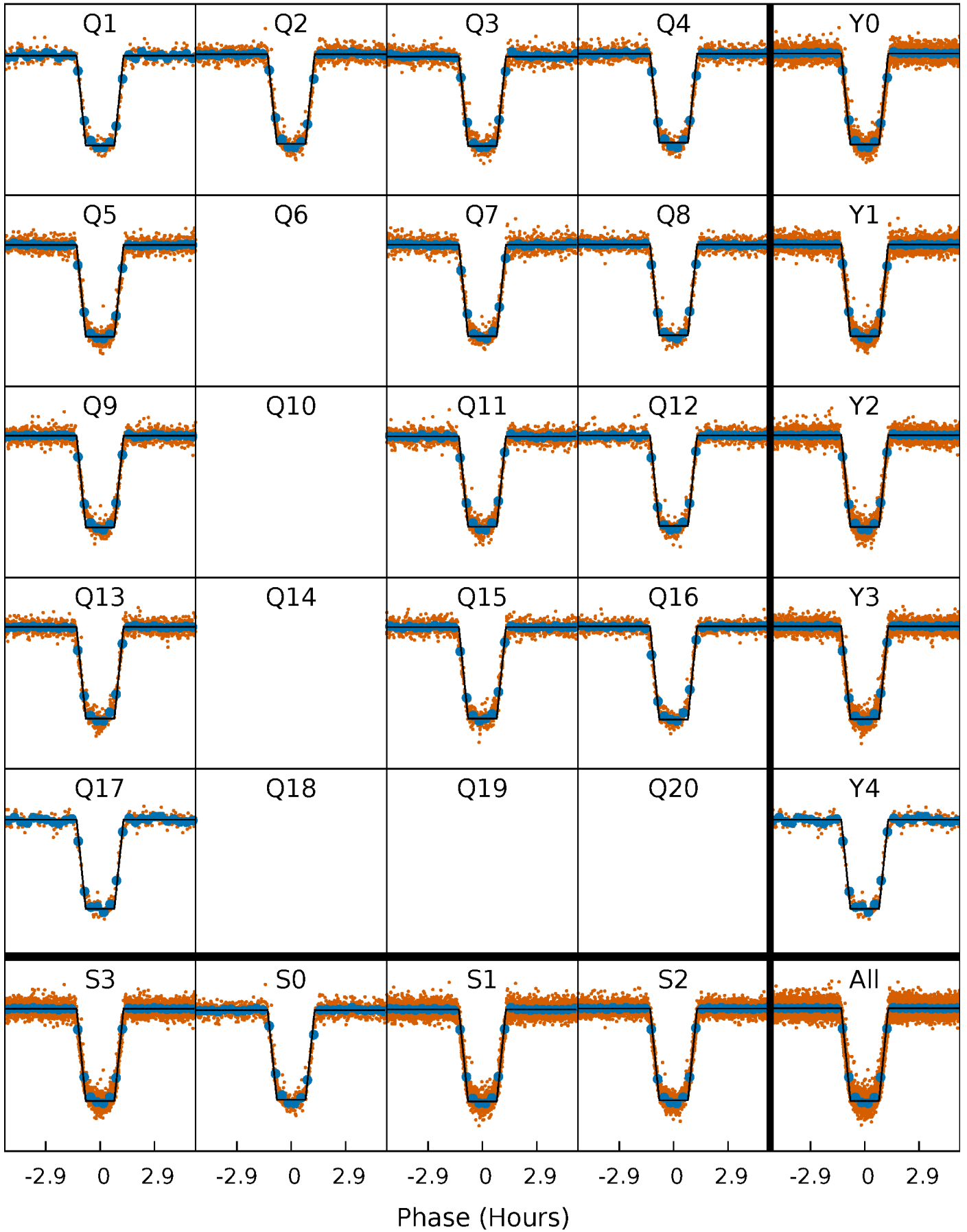
# DV Quarter-Phased Transit Curves

TCE 003351888-01 P= 1.625519 Days  $T_0=131.815582$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

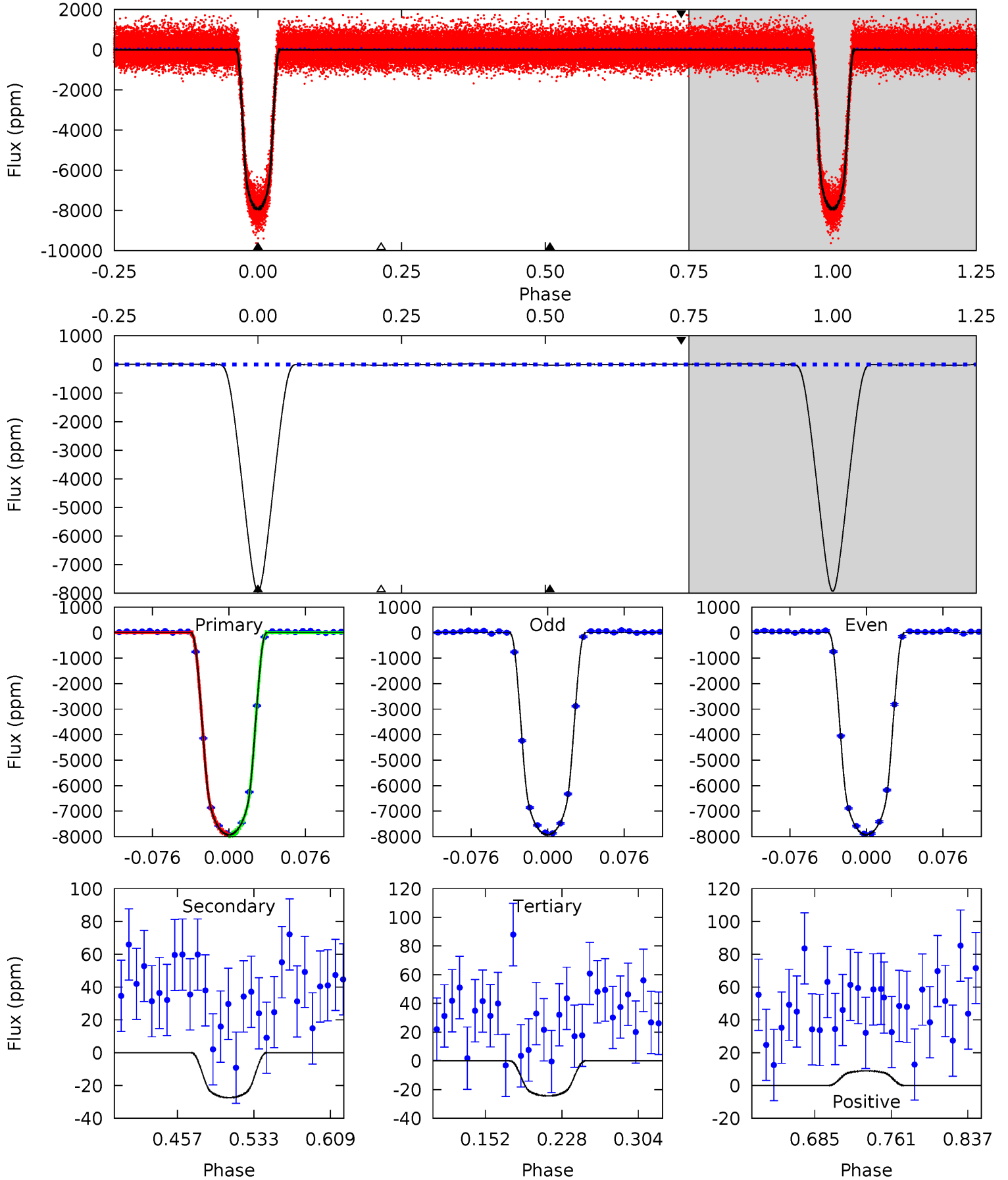
TCE 003351888-01   P= 1.625526 Days    $T_0=131.812550$  (BKJD)



# DV Model-Shift Uniqueness Test

003351888-01, P = 1.625519 Days, E = 130.190063 Days

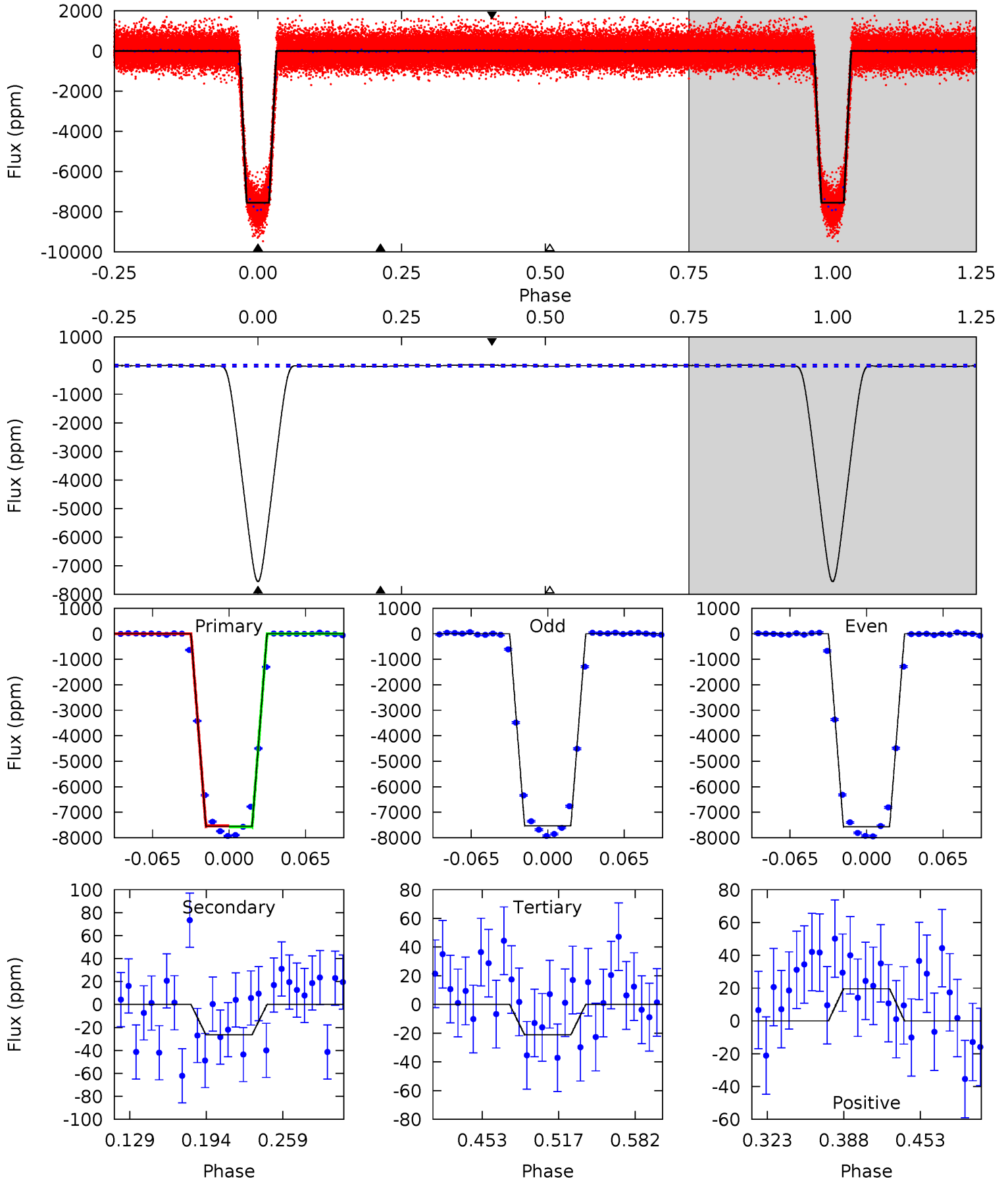
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1139	3.94	3.51	1.28	4.62	1.77	1.66	1136	1138	0.43	2.66	0.26	1.00	0.00	2.67



# Alt Model-Shift Uniqueness Test

003351888-01, P = 1.625526 Days, E = 130.187024 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
1009	3.51	2.82	2.61	4.66	1.85	1.58	1006	1006	0.69	0.90	2.19	1.00	0.00	2.48



### Stellar Parameters For KIC 003351888

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$5539^{+83}_{-74}$	$4.322^{+0.137}_{-0.100}$	$0.160^{+0.150}_{-0.150}$	$1.106^{+0.161}_{-0.161}$	$0.935^{+0.062}_{-0.043}$	$0.974^{+0.601}_{-0.317}$
	+1%/-1%	+3%/-2%	+94%/-94%	+15%/-15%	+7%/-5%	+62%/-33%
Source	SPE90	SPE90	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 003351888-01 / KOI 0801.01

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$-27 \pm 7$	$10.30^{+0.79}_{-0.93}$	$2204^{+89}_{-99}$	$-2487^{+104}_{-73}$	$0.101^{+0.037}_{-0.029}$
Alt.	$-26 \pm 7$	$10.57^{+0.84}_{-0.84}$	$2201^{+88}_{-90}$	$-2497^{+86}_{-77}$	$0.090^{+0.035}_{-0.028}$

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

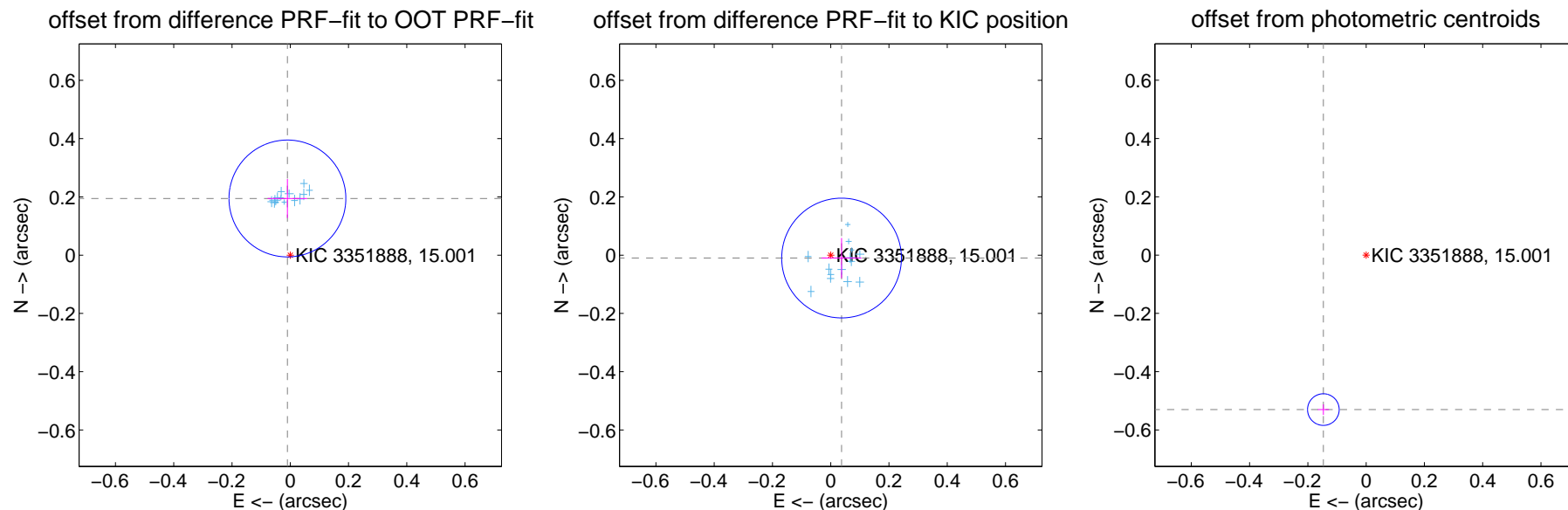
## DV Centroid Data

Supplemental centroid analysis for 003351888-01. Kepler magnitude: 15.00. Transit SNR 746.56

There are 14 quarters with good PRF difference image offsets

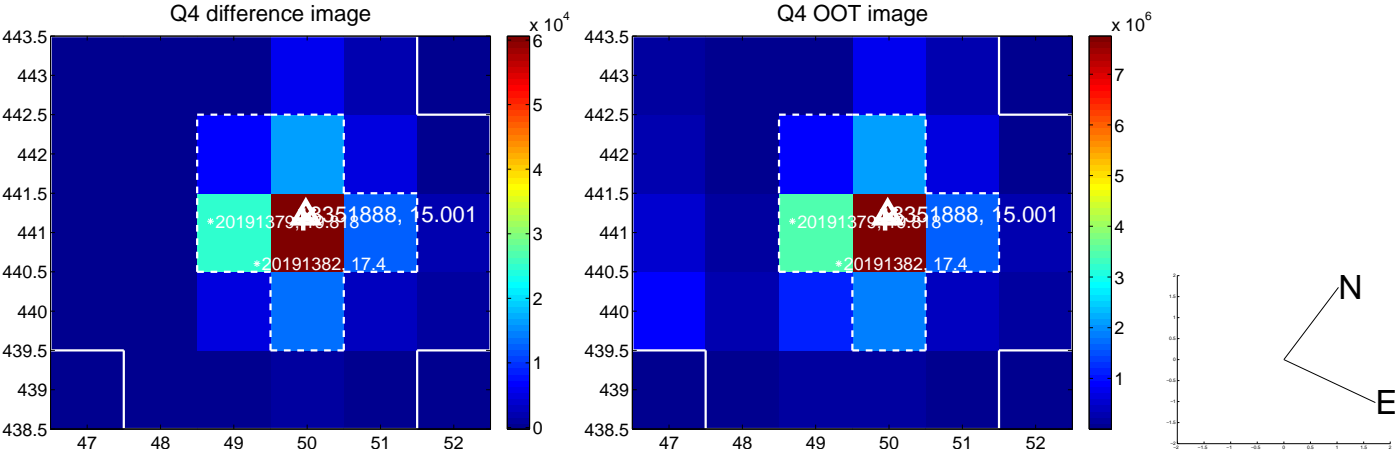
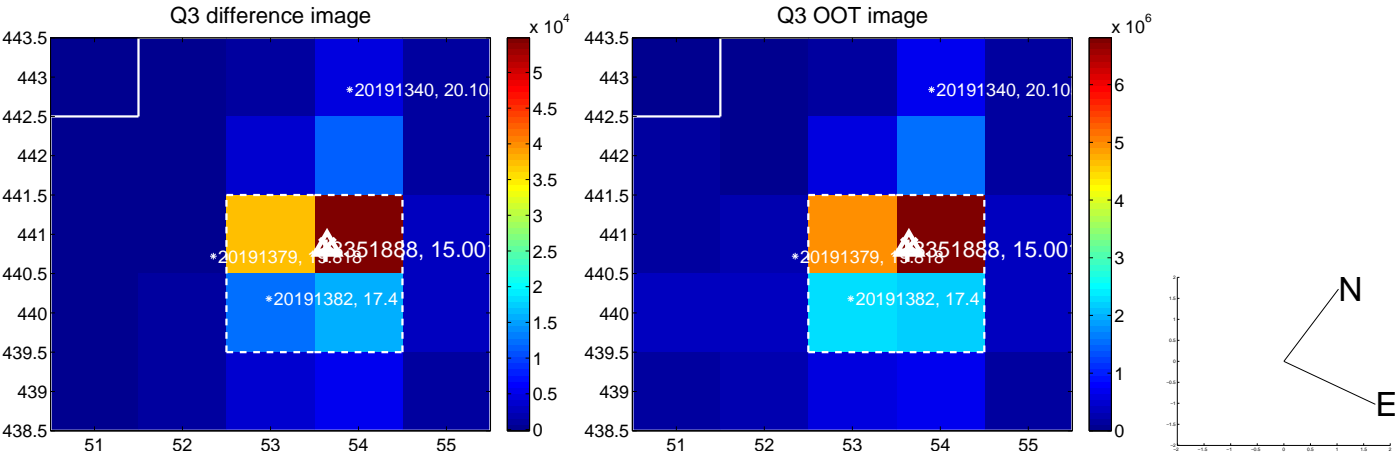
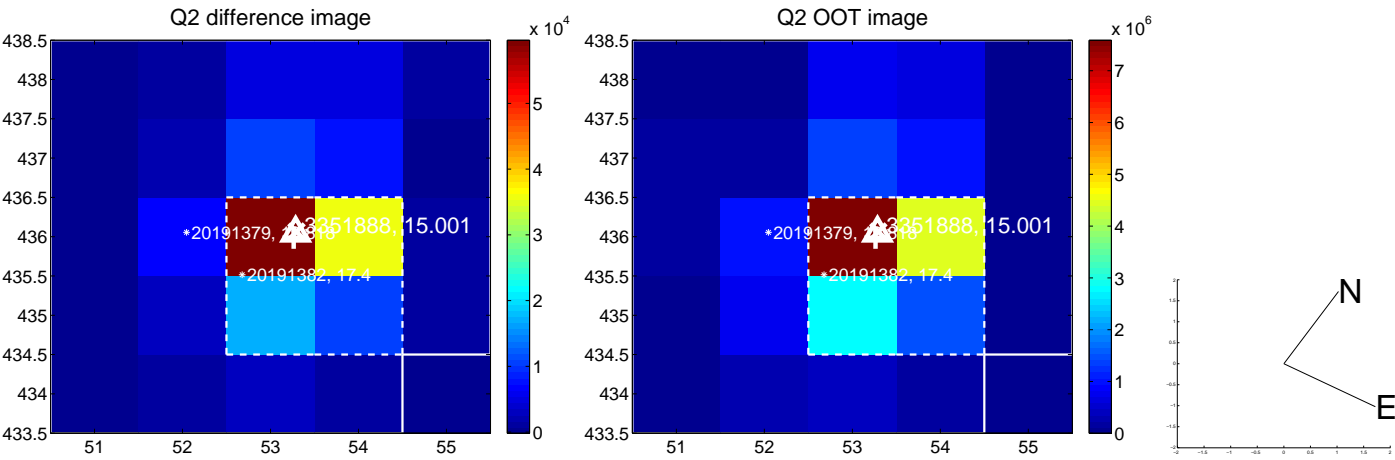
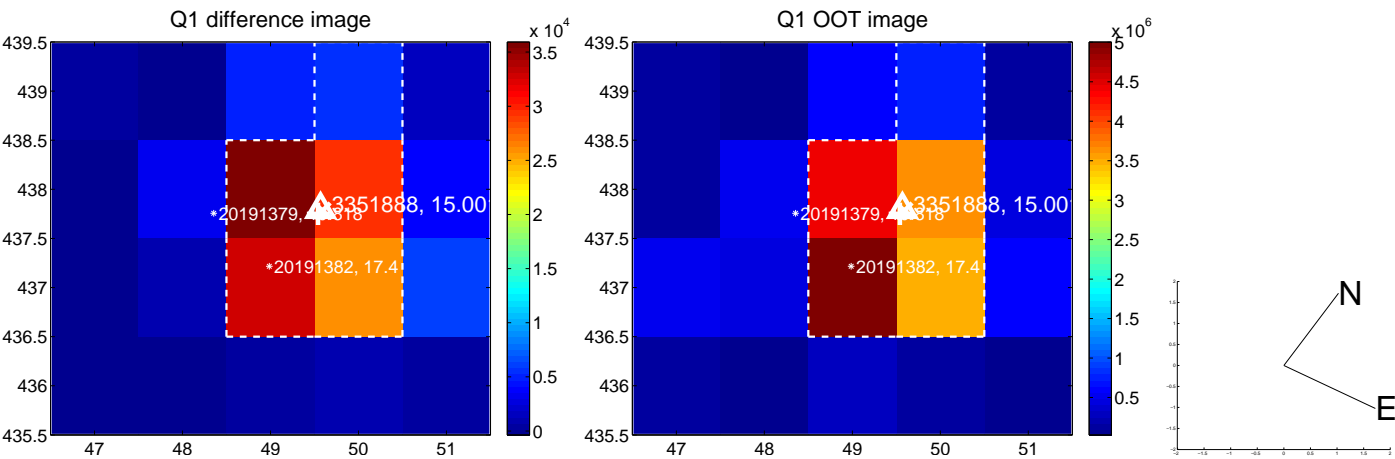
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.195 \pm 0.067$	2.91	$0.010 \pm 0.068$	$0.195 \pm 0.067$
PRF-fit source offset from KIC position	$0.038 \pm 0.068$	0.56	$-0.037 \pm 0.068$	$-0.010 \pm 0.069$
photometric centroid source offset	$0.55 \pm 0.02$	30.40	$0.15 \pm 0.02$	$-0.53 \pm 0.02$



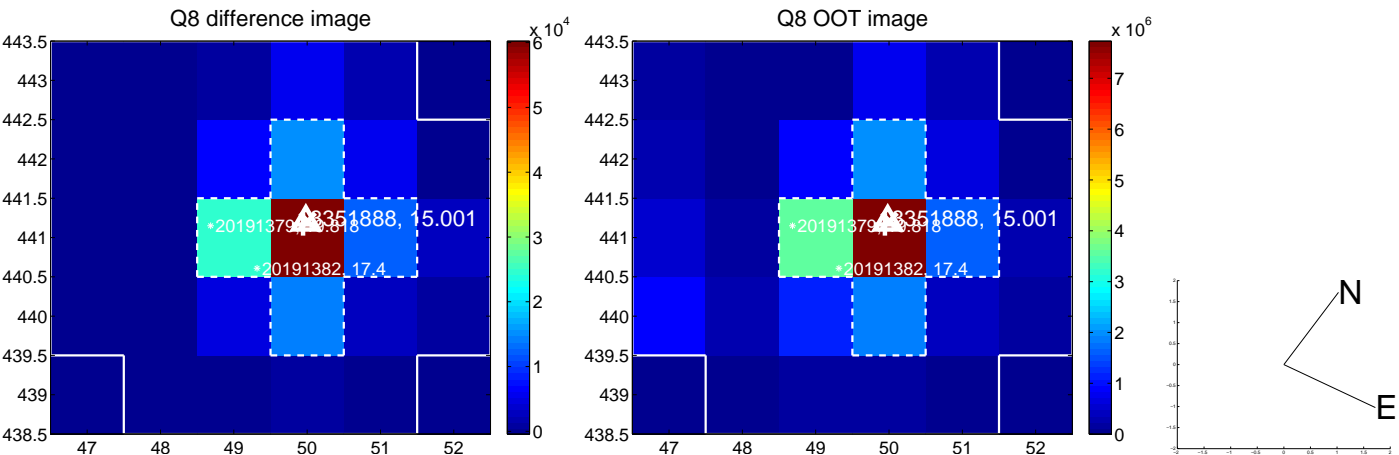
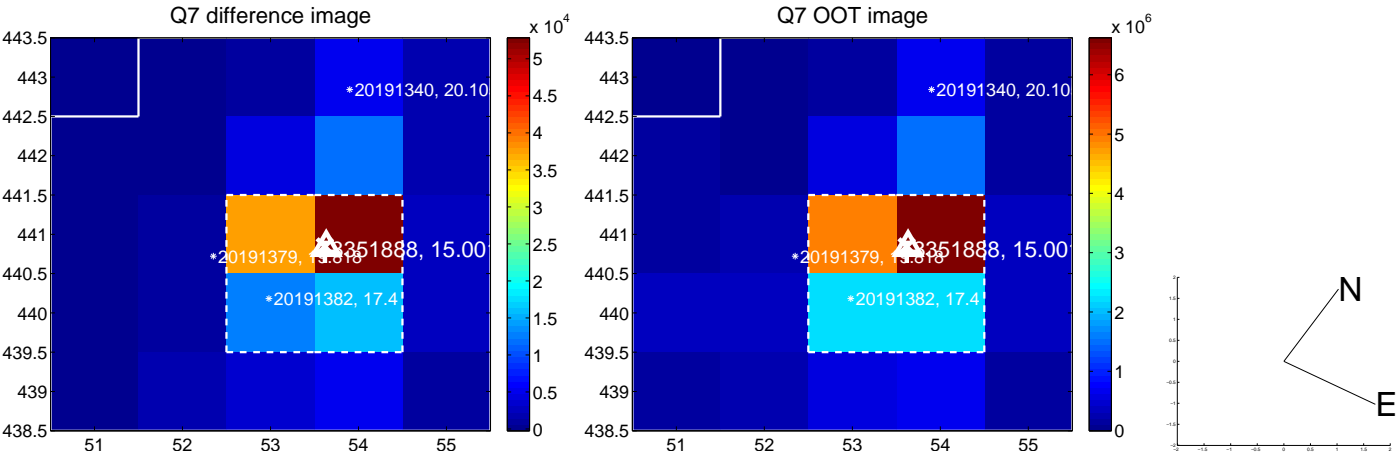
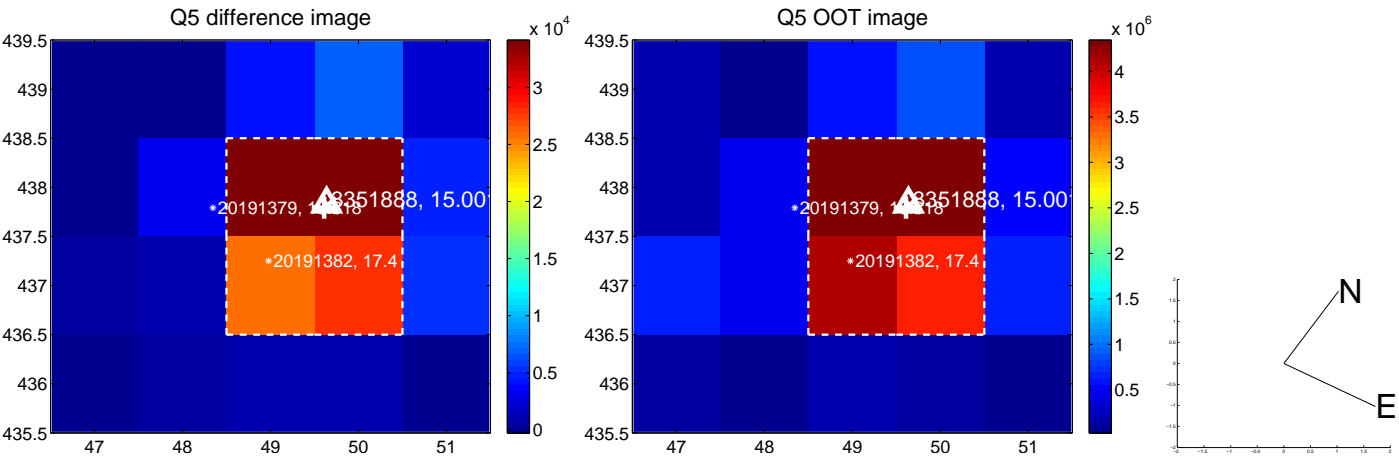
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

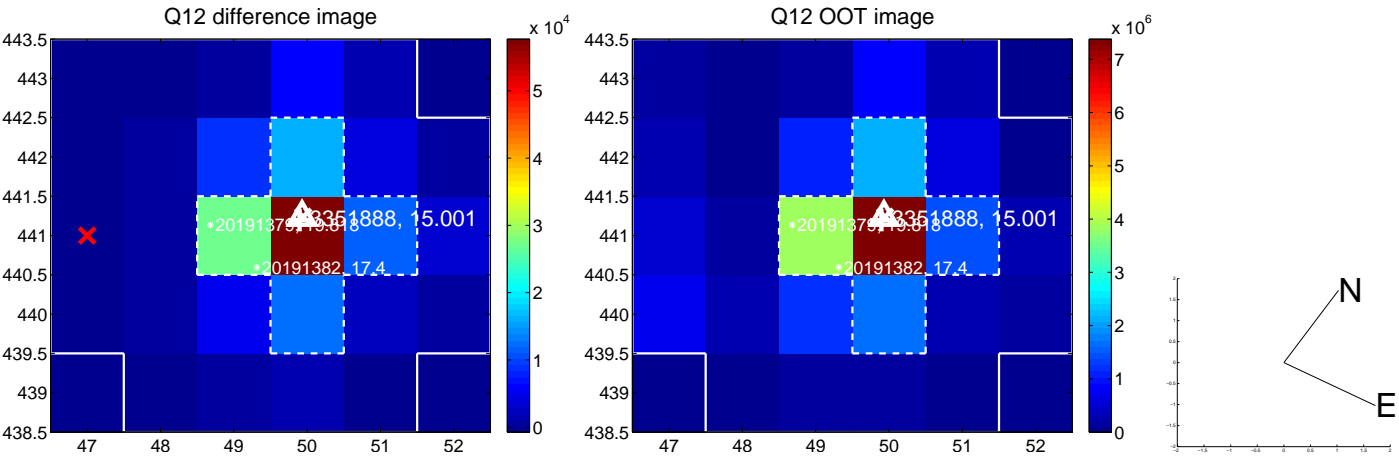
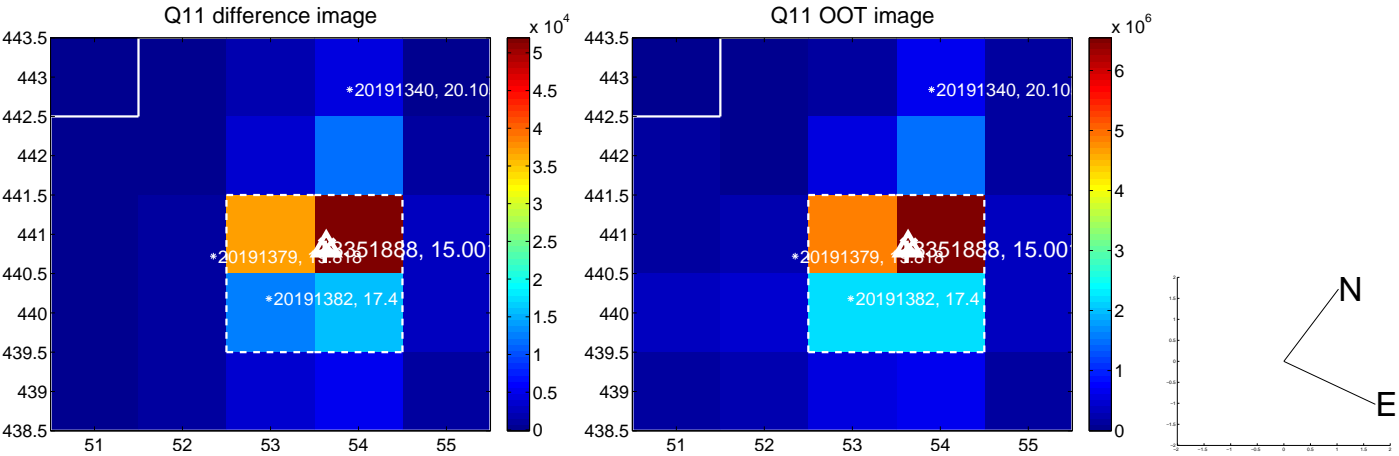
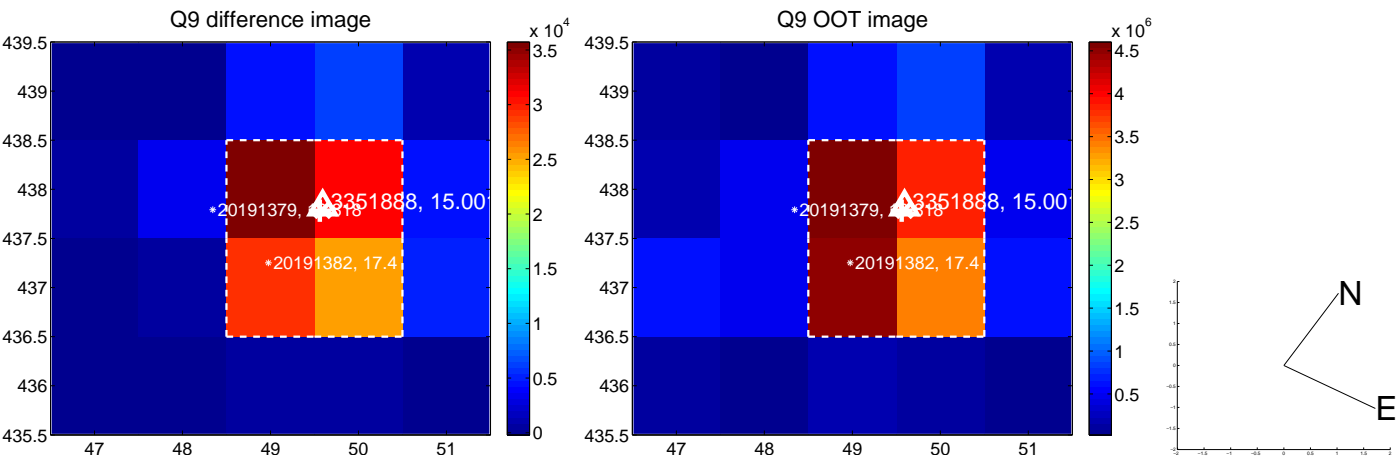




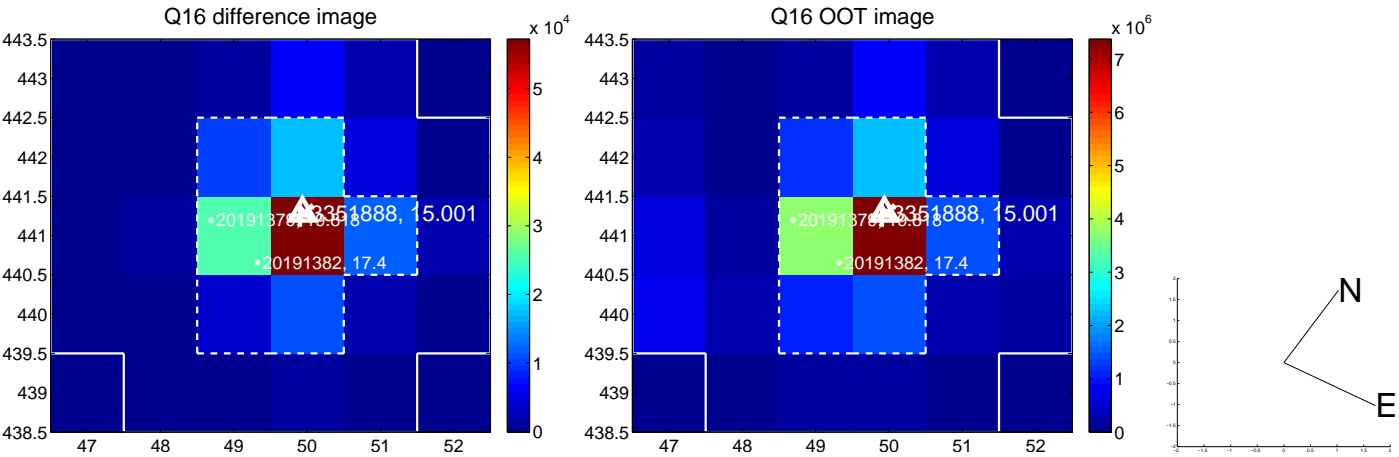
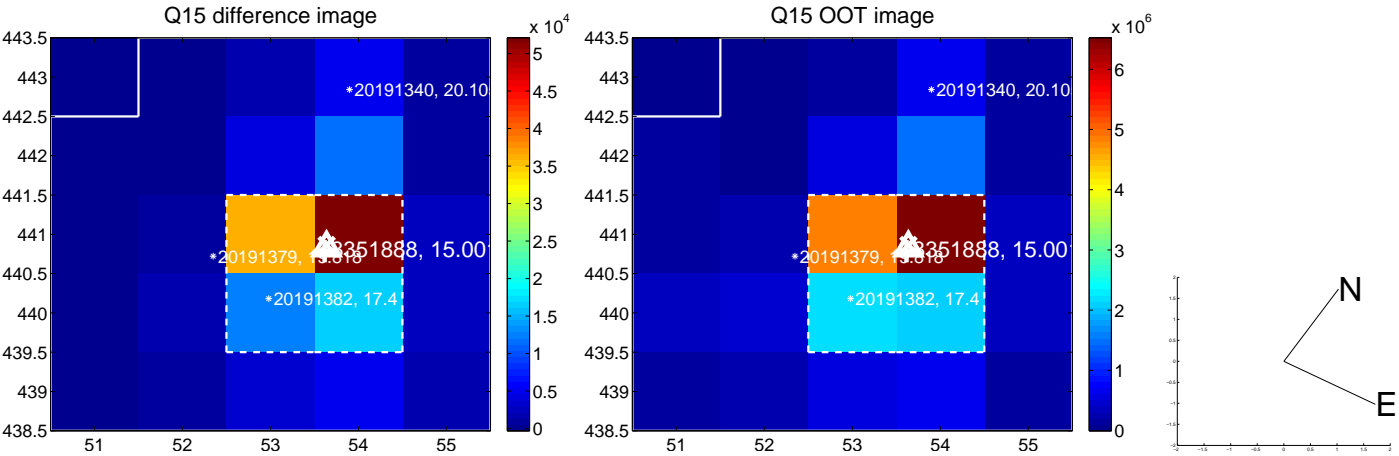
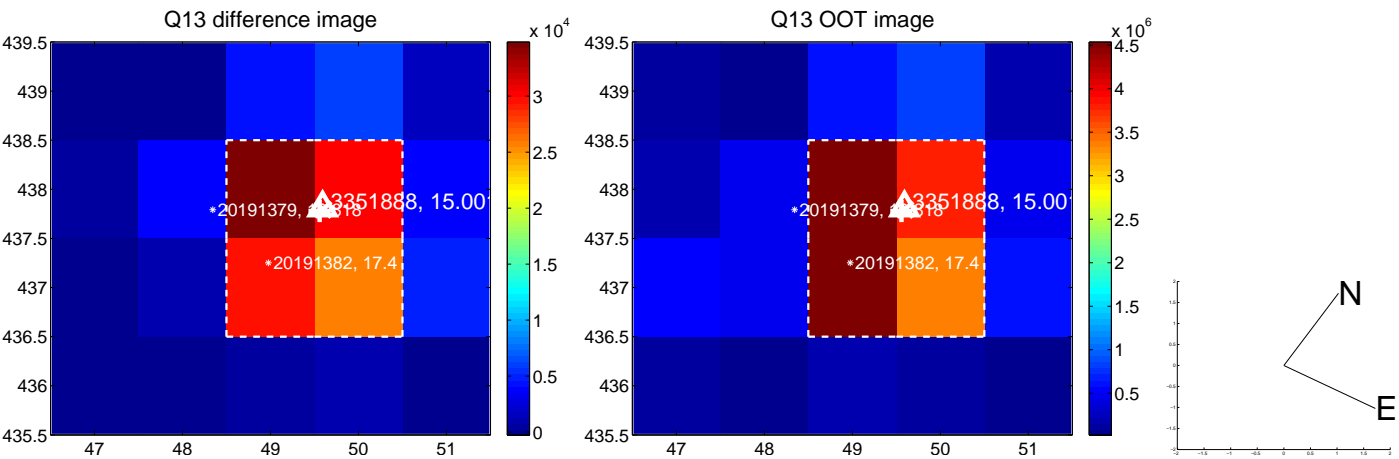
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



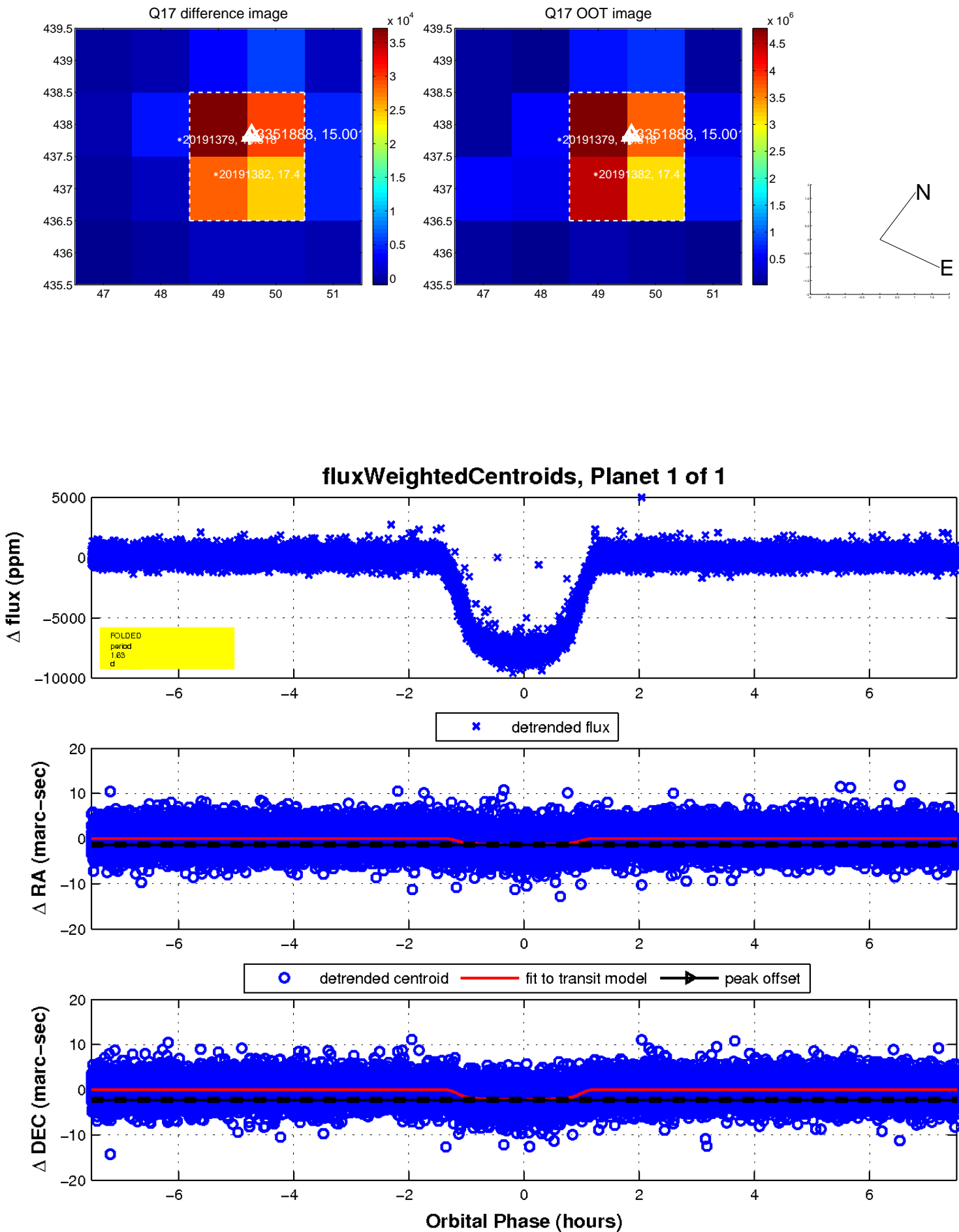
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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UKIRT Image

