

# KIC 005284133

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
005284133-01	OBS	6552.01	8.784576	134.675243	264829.2	5.328	31373.2	33567.7	1.91	8144	108.58	1384.35

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005284133-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—MOD_ODDEVEN_ALT—DEEP_V_SHAPED—CENT_NOFITS

**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.

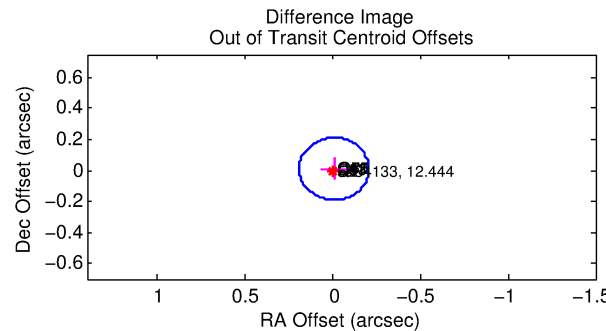
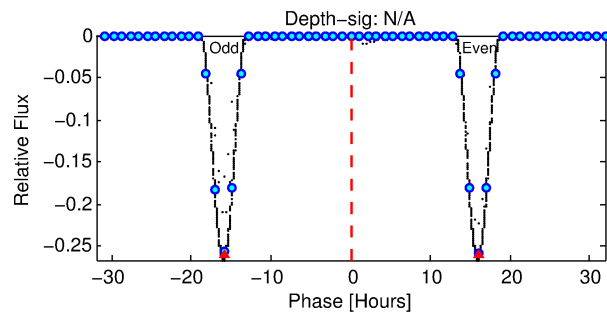
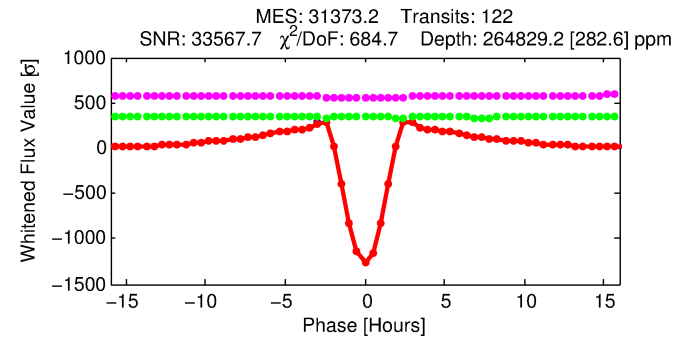
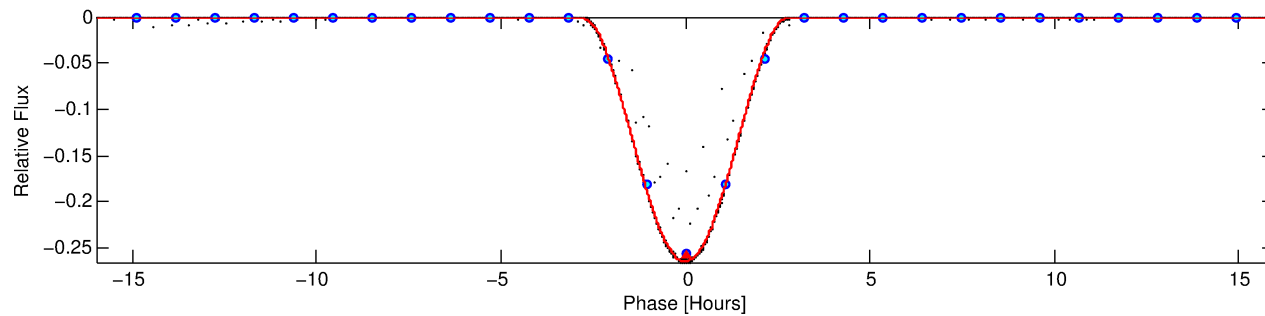
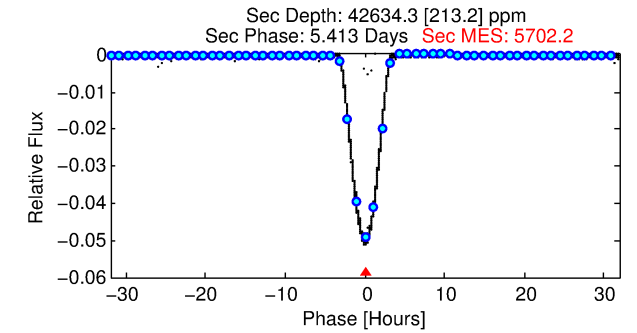
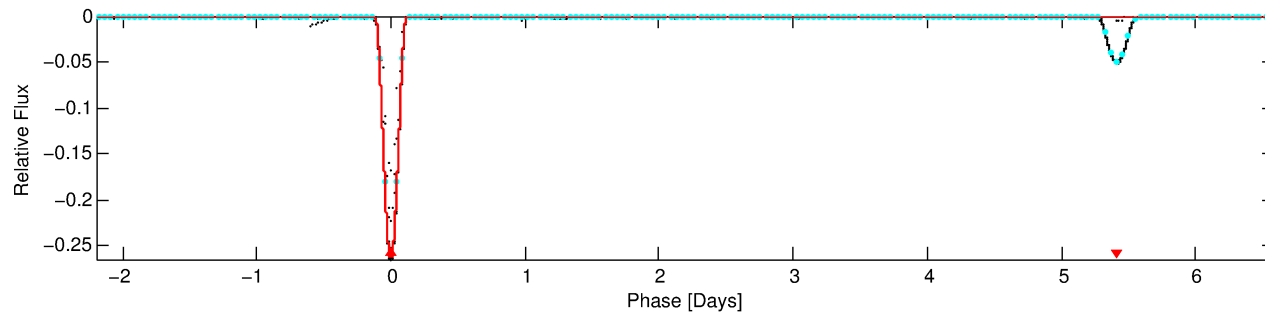
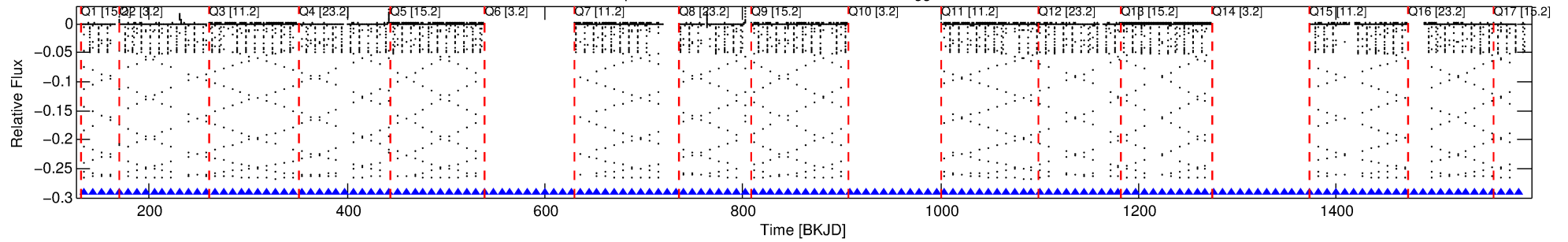
## Ephemeris Match Information For 005284133-01

No Significant Match Found

# DV One-Page Summary

KIC: 5284133 Candidate: 1 of 1 Period: 8.785 d  
KOI: K06552.01 Corr: 0.999

Kp: 12.44 R\*: 1.91 Rs Teff: 8144.0 K Logg: 4.14 Fe/H: 0.070



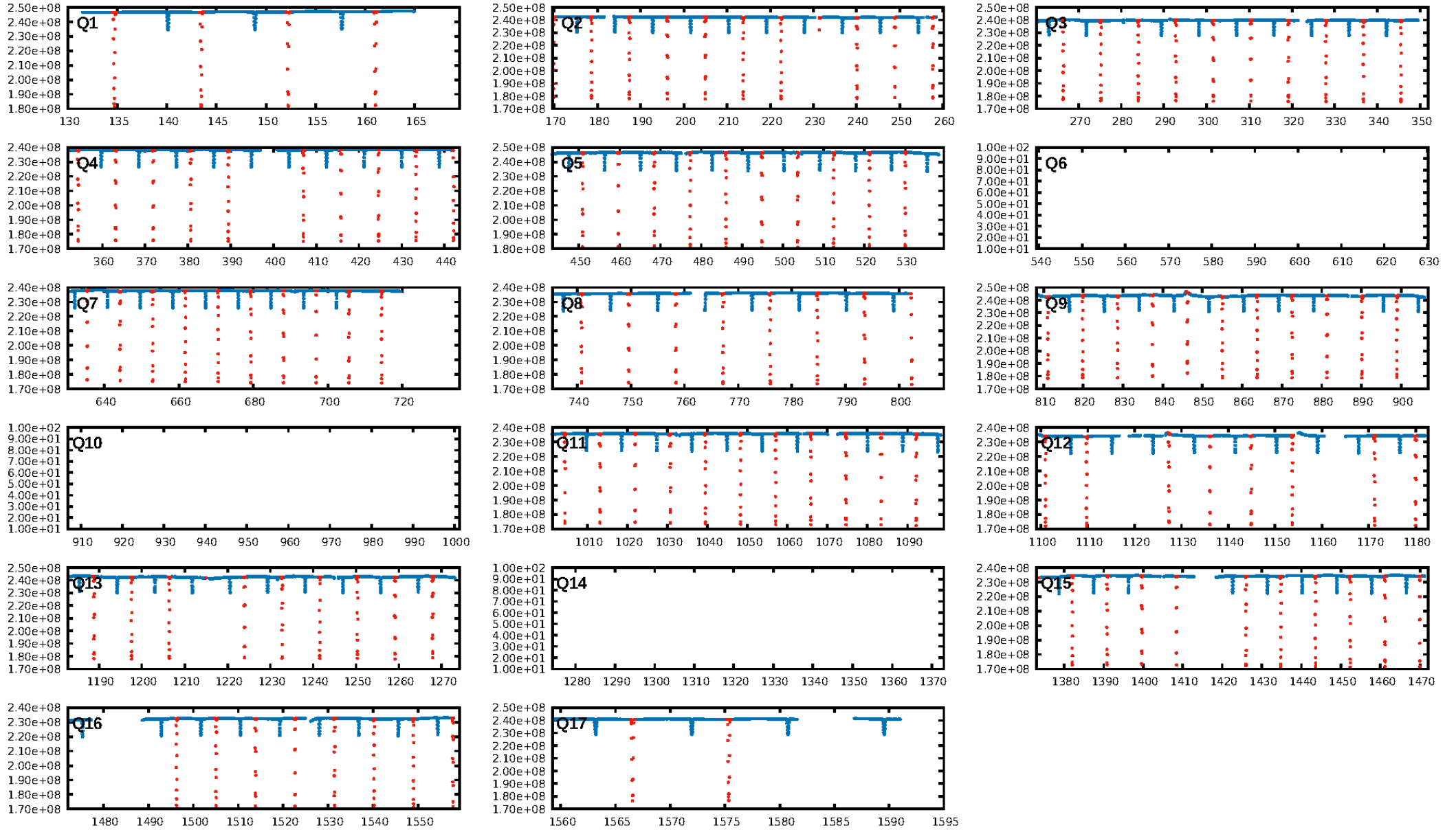
## DV Fit Results:

Period = 8.78458 [0.00000] d  
Epoch = 134.6752 [0.0001] BKJD  
Rp/R\* = 0.5199 [0.0027]  
a/R\* = 17.82 [0.01]  
b = 0.56 [0.01]  
Seff = 1384.35 [478.59]  
Teff = 1555 [134] K  
Rp = 108.58 [25.76] Re  
a = 0.1021 [0.0205] AU  
Ag = 20.75 [6.12] [3.23σ]  
Teffp = 5133 [232] K [13.32σ]

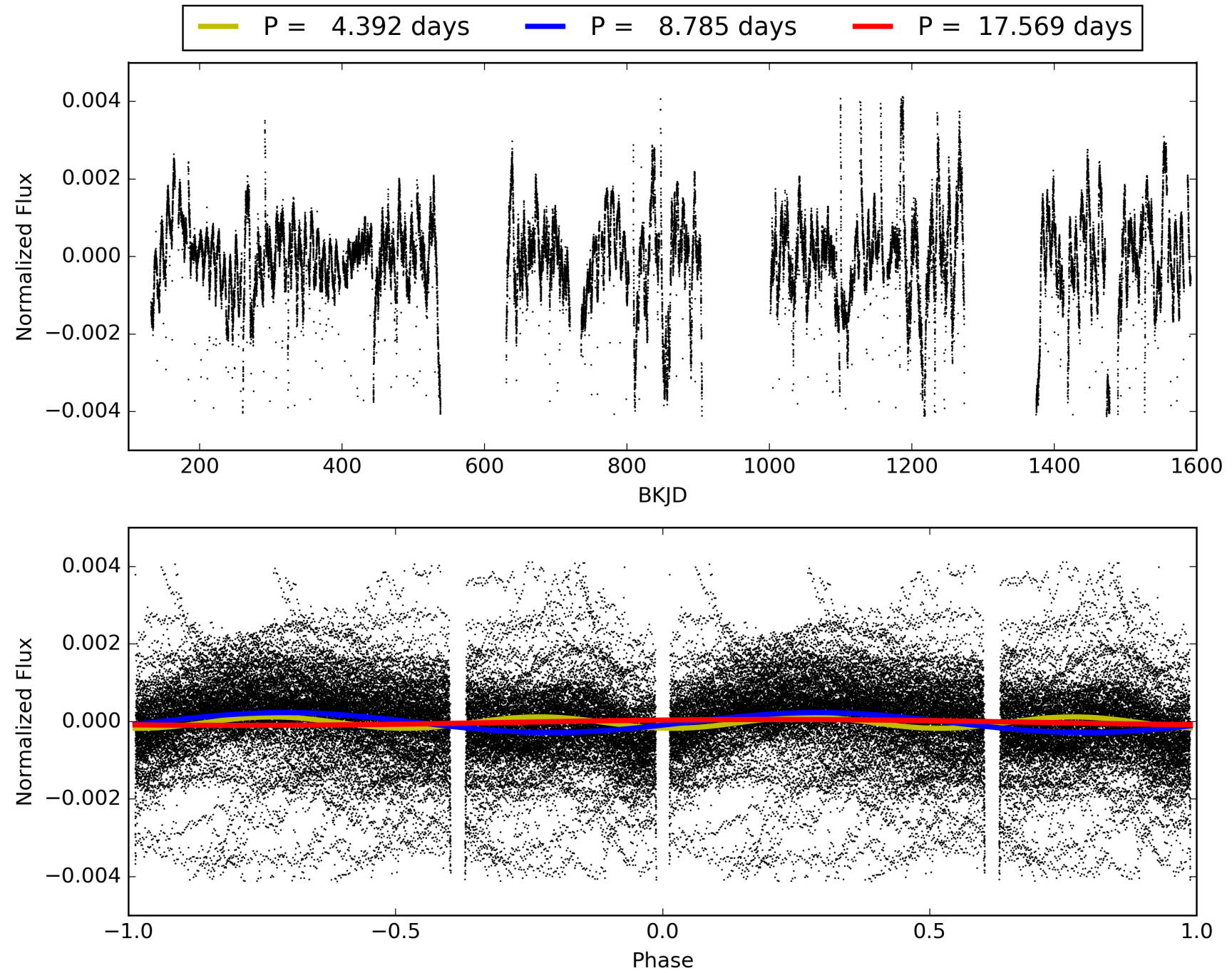
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 0.0%  
ModelChiSquareGof-sig: 0.0%  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [116/116]  
GhostDiagnostic-chr: 10.98  
Centroid-sig: 0.0%  
Centroid-so: 0.040 arcsec [154.68σ]  
OotOffset-rm: 0.013 arcsec [0.20σ]  
KicOffset-rm: 0.070 arcsec [1.03σ]  
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 005284133-01, PDC Light Curves

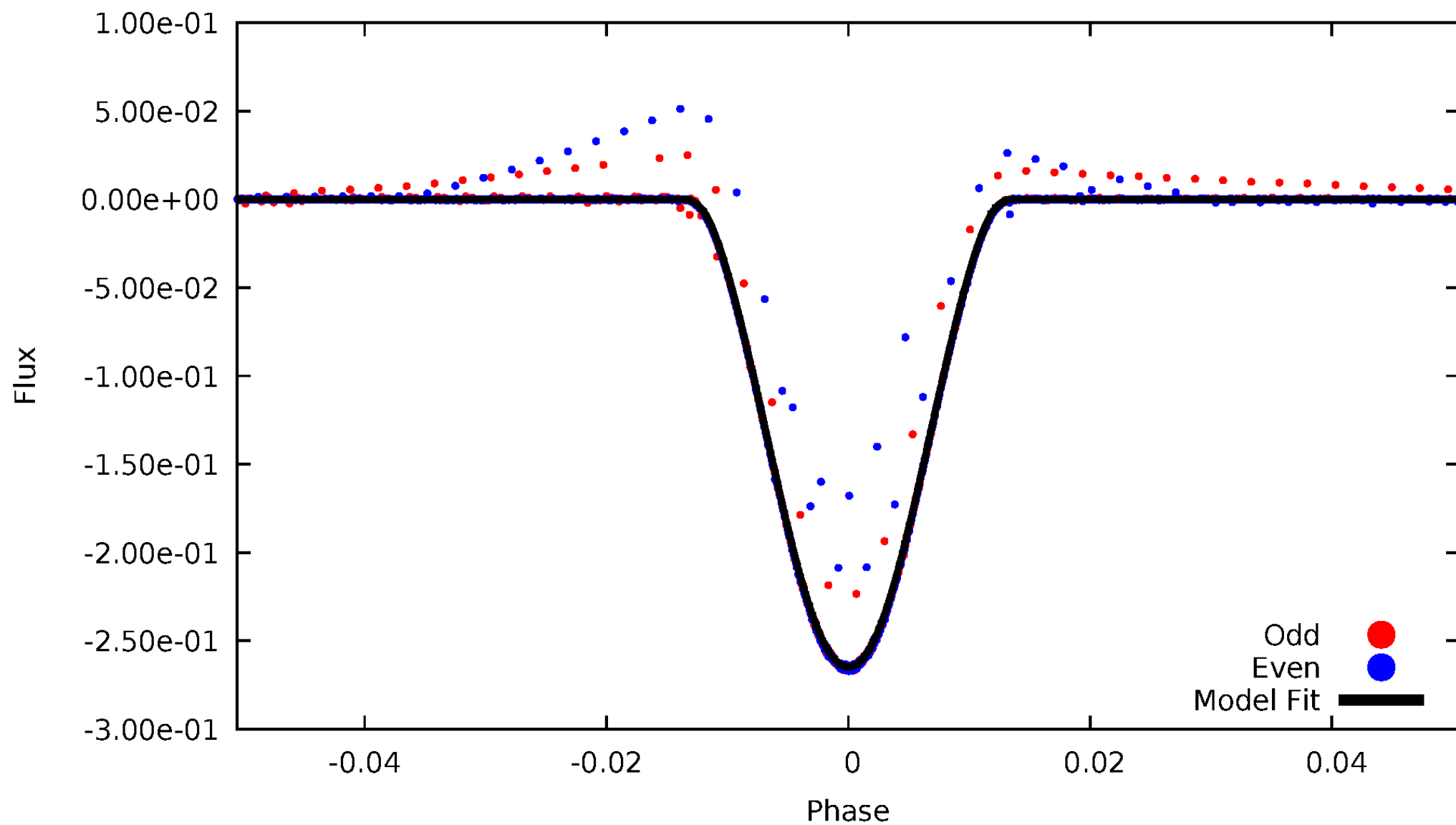


TCE 005284133-01



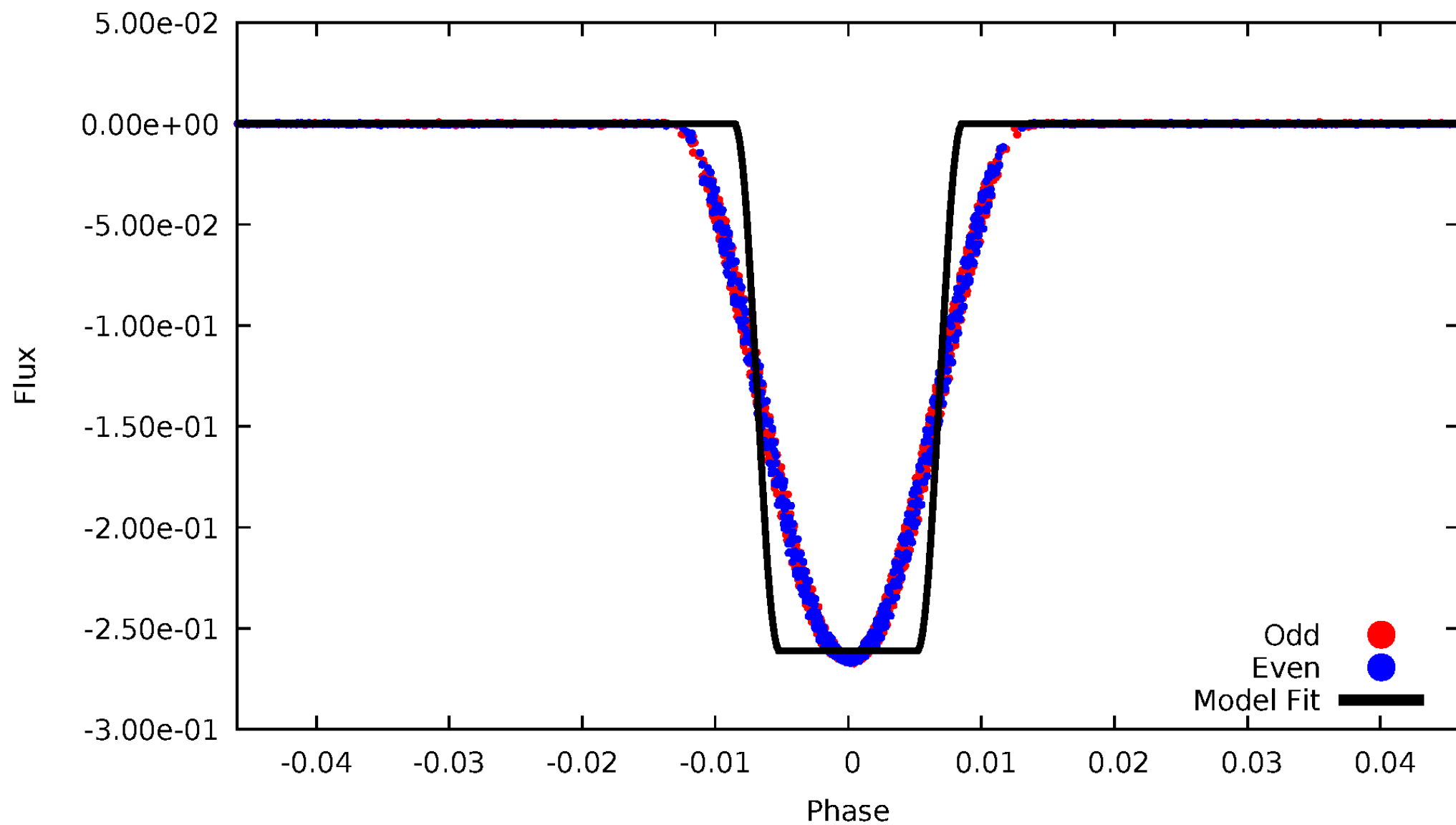
# DV Odd/Even

TCE 005284133-01



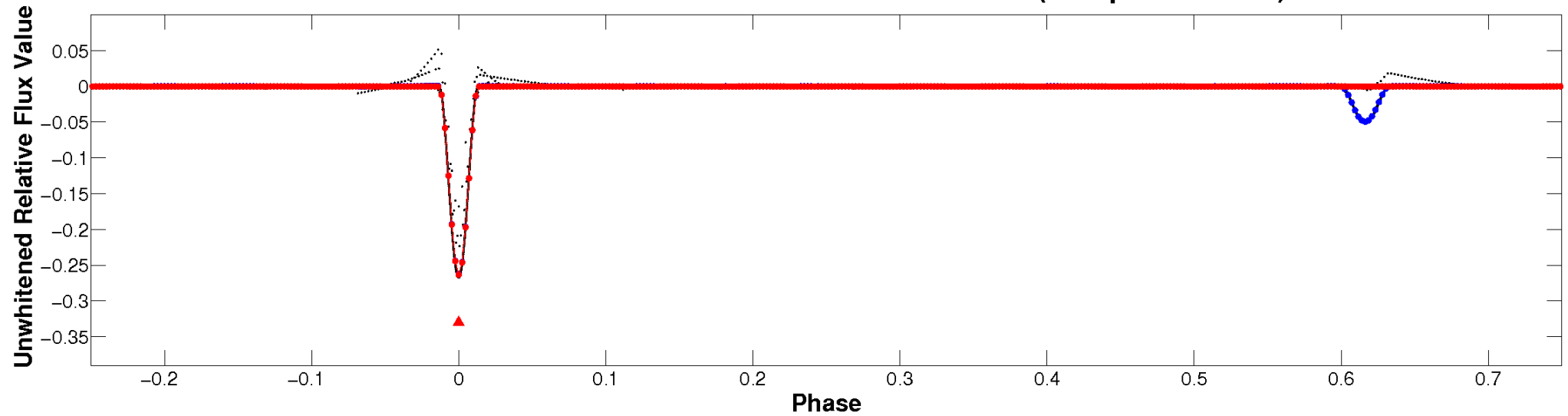
# ALT Odd/Even

TCE 005284133-01

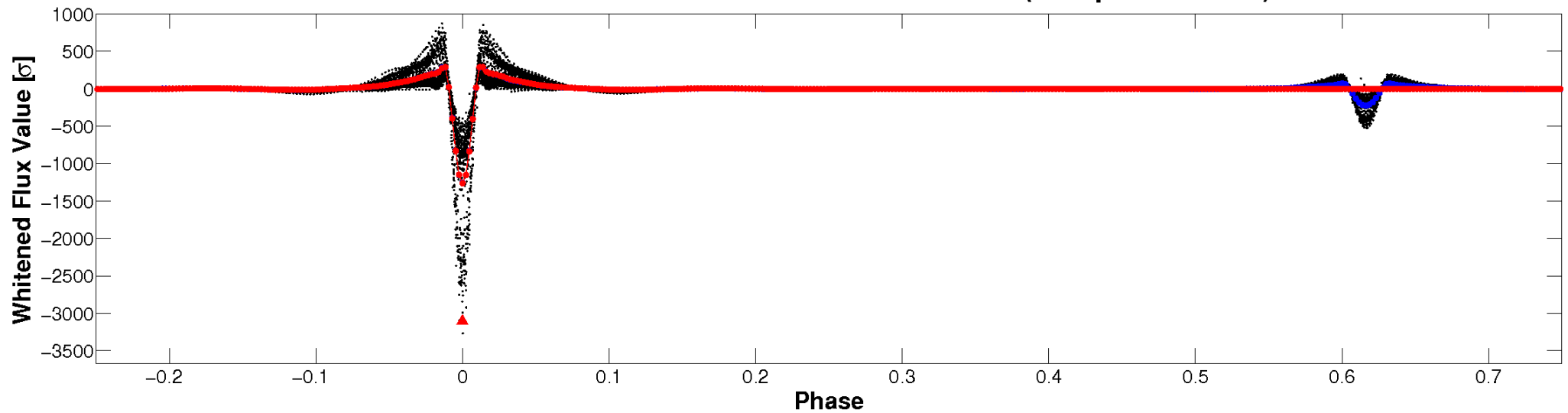


# Non-Whitened Vs. Whitened Light Curve

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

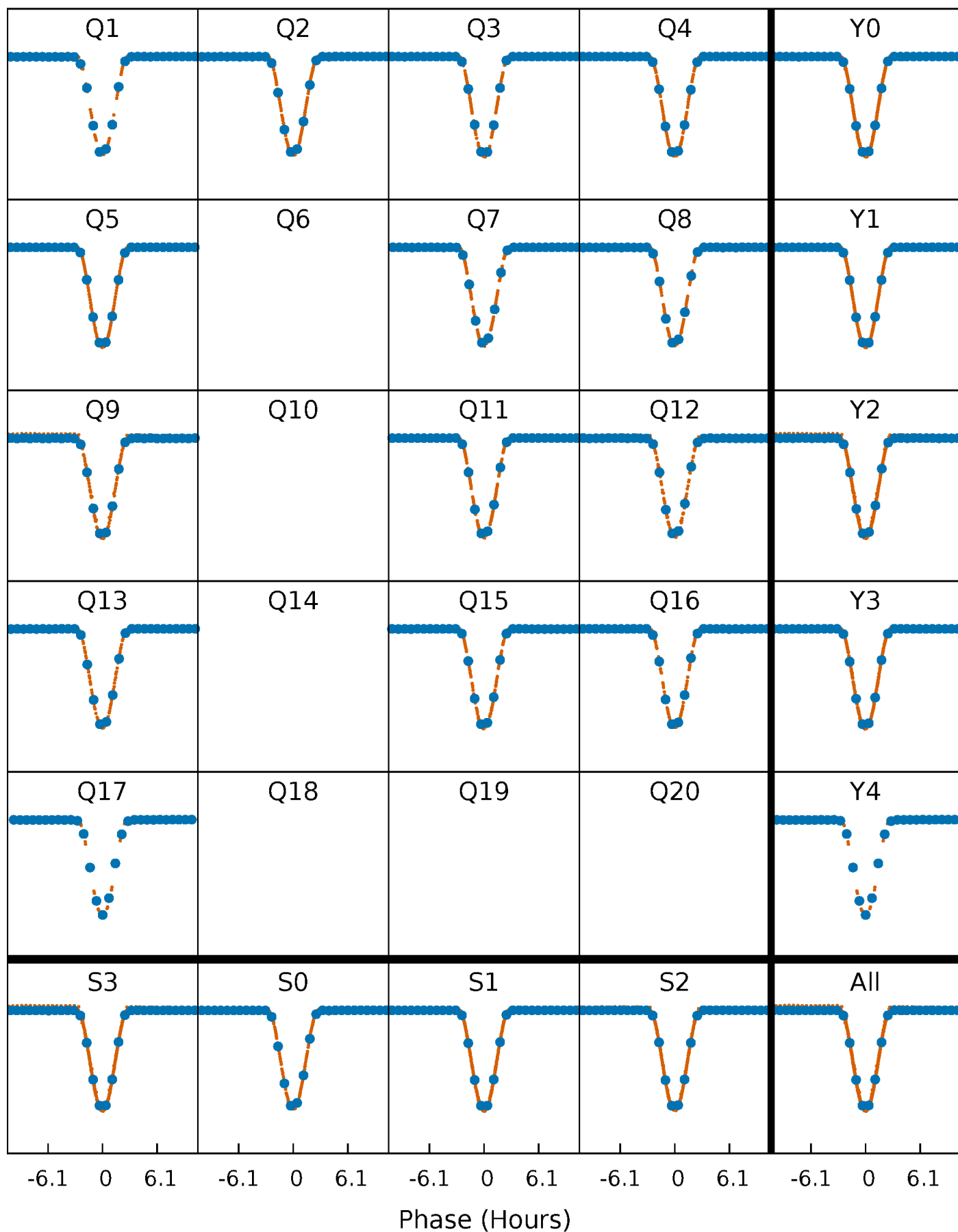


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

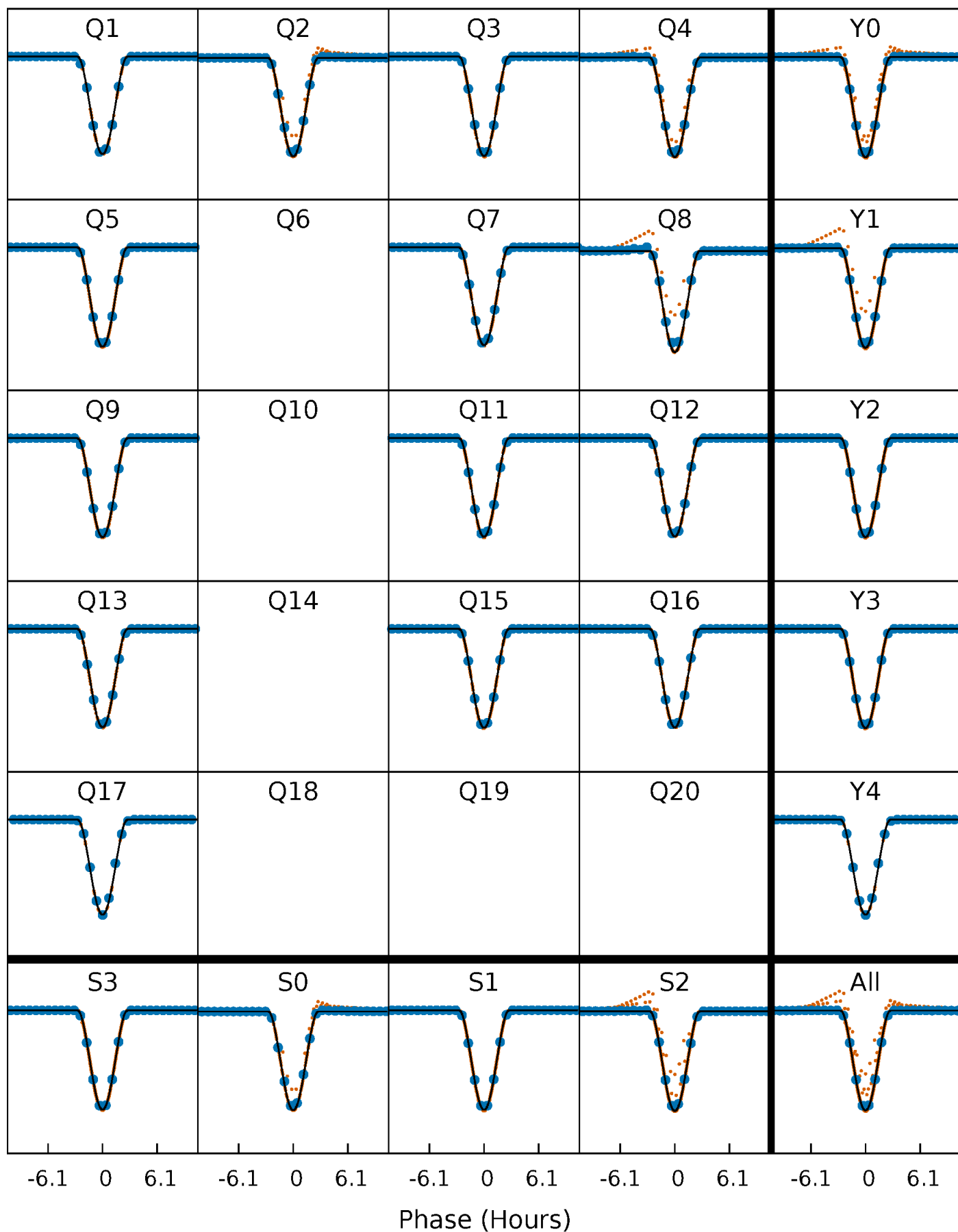
TCE 005284133-01   P= 8.784576 Days    $T_0=134.675243$  (BKJD)





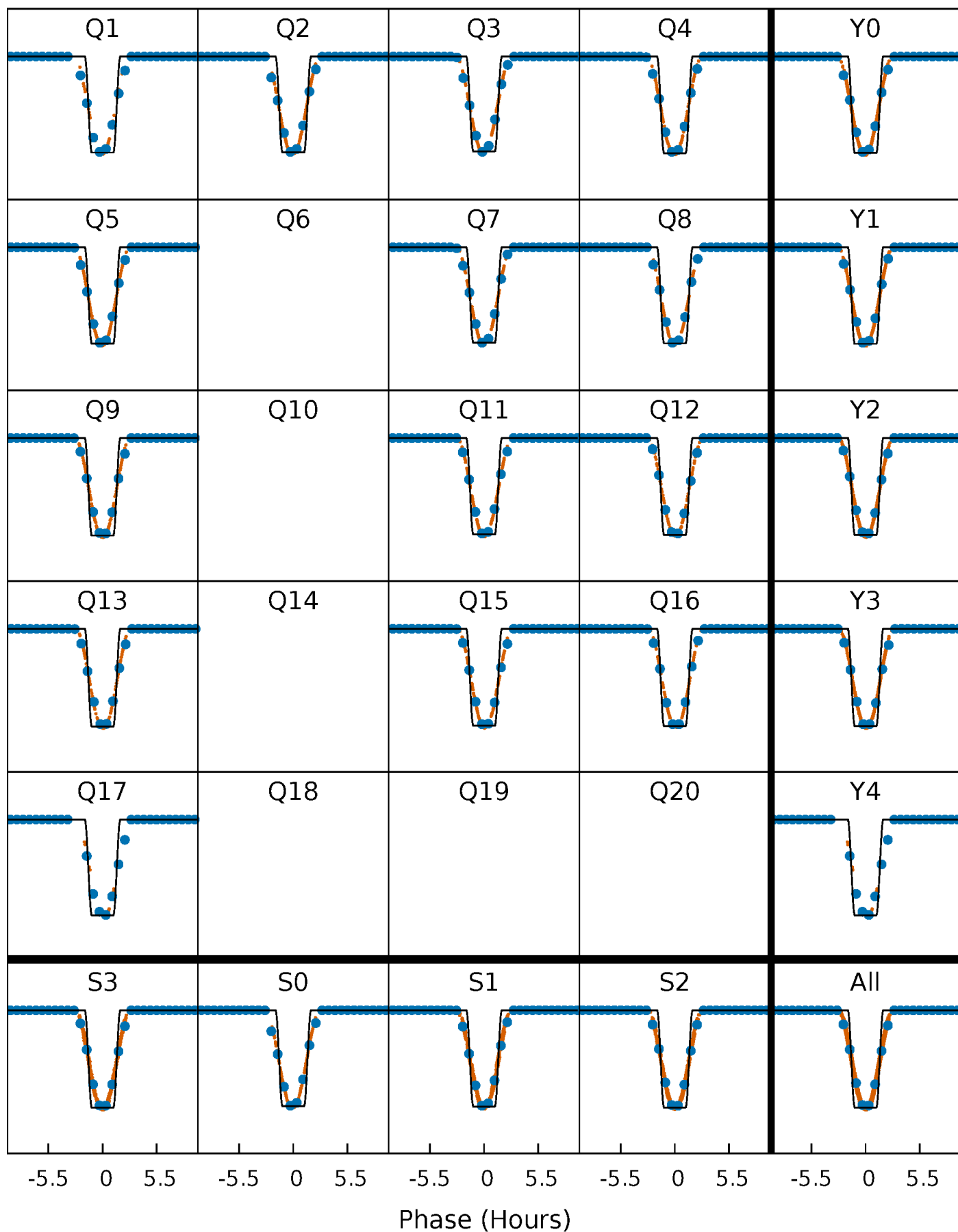
# DV Quarter-Phased Transit Curves

TCE 005284133-01 P= 8.784576 Days  $T_0=134.675243$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

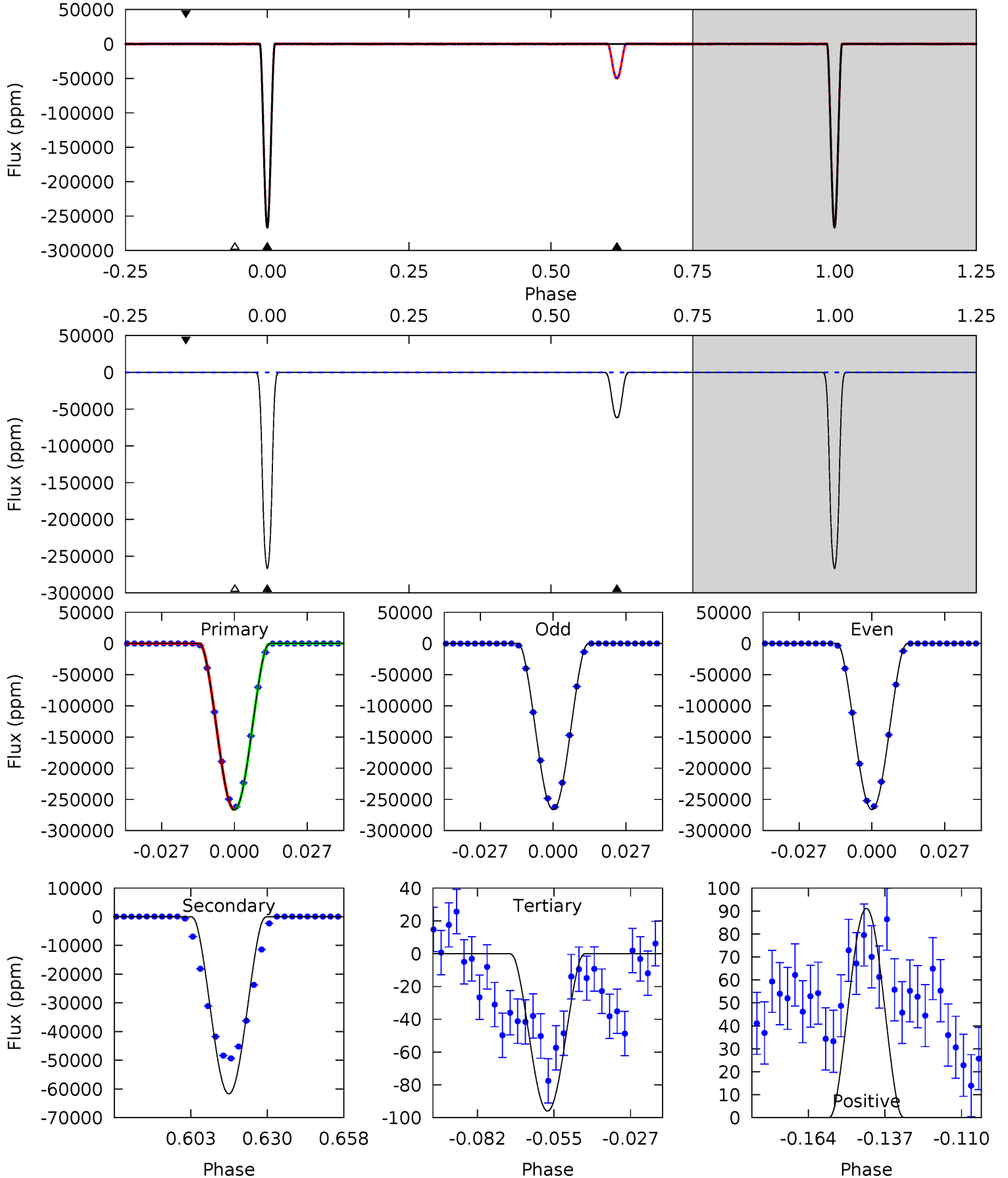
TCE 005284133-01 P= 8.784528 Days  $T_0=134.678289$  (BKJD)



# DV Model-Shift Uniqueness Test

005284133-01, P = 8.784576 Days, E = 125.890667 Days

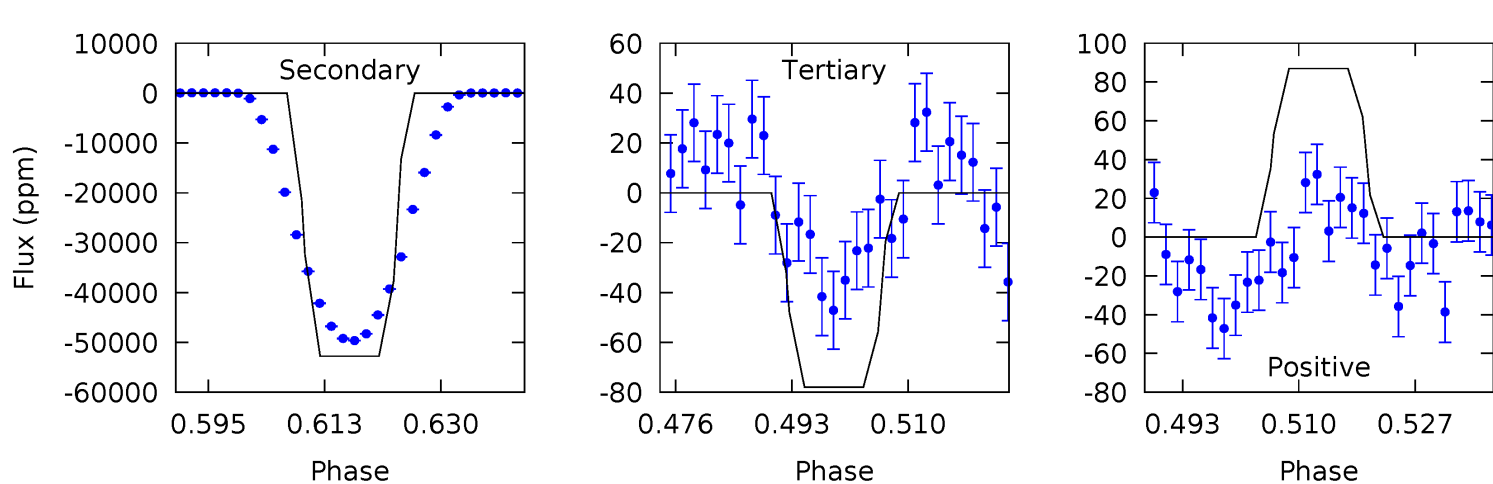
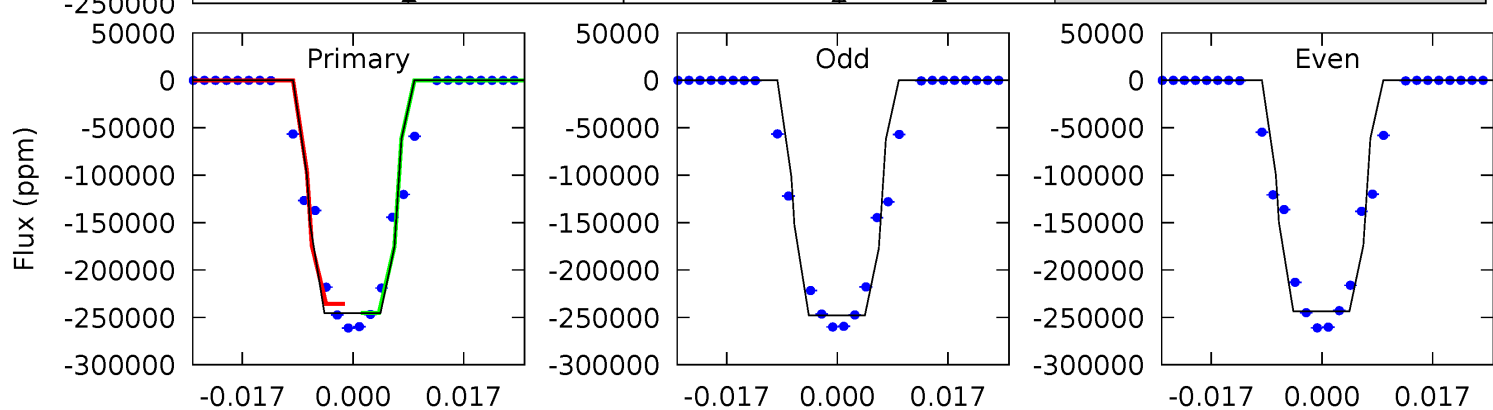
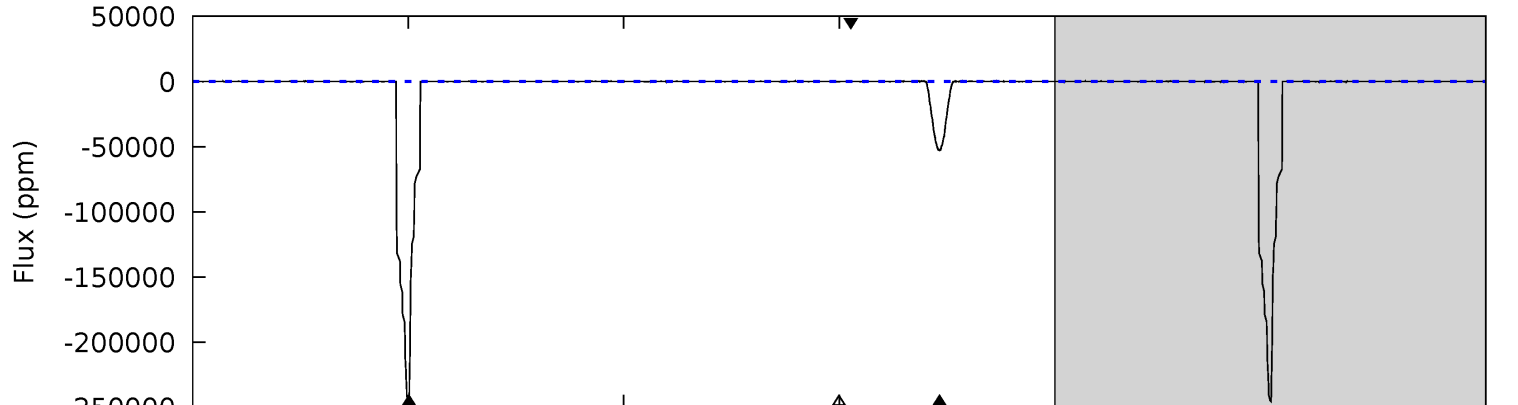
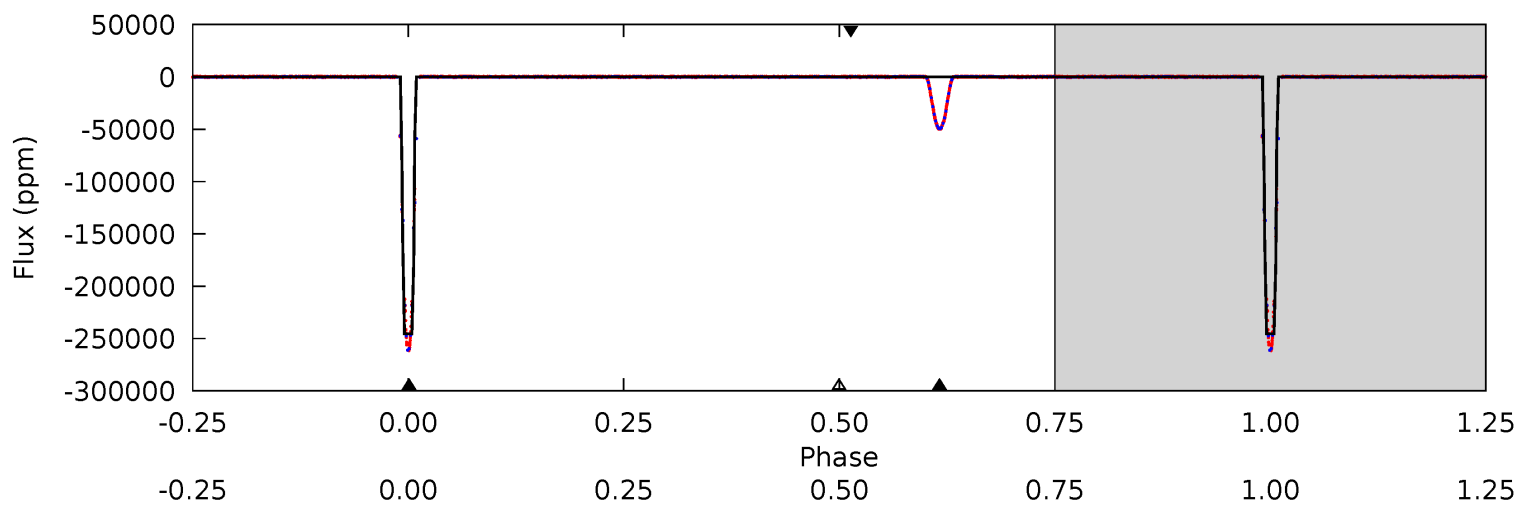
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
51365	11897	18.5	17.6	4.83	2.21	8.00	51347	51347	11879	11880	2.02	0.99	0.00	0



# Alt Model-Shift Uniqueness Test

005284133-01, P = 8.784528 Days, E = 125.893761 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
12736	2737	4.05	4.51	4.92	2.39	1.19	12732	12731	2733	2733	128.3	1.00	0.00	0



### Stellar Parameters For KIC 005284133

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$8144^{+226}_{-368}$	$4.139^{+0.108}_{-0.162}$	$0.070^{+0.150}_{-0.450}$	$1.914^{+0.454}_{-0.372}$	$1.841^{+0.218}_{-0.327}$	$0.370^{+0.219}_{-0.171}$
	+3%/-5%	+3%/-4%	+214%/-643%	+24%/-19%	+12%/-18%	+59%/-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 005284133-01 / KOI 6552.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-61690 \pm 5$	$111.12^{+14.10}_{-11.53}$	$2183^{+143}_{-116}$	$5558^{+116}_{-176}$	$30^{+7}_{-6}$
Alt.	$-52758 \pm 19$	$109.01^{+14.09}_{-11.74}$	$2187^{+141}_{-126}$	$5390^{+108}_{-171}$	$27^{+6}_{-5}$

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

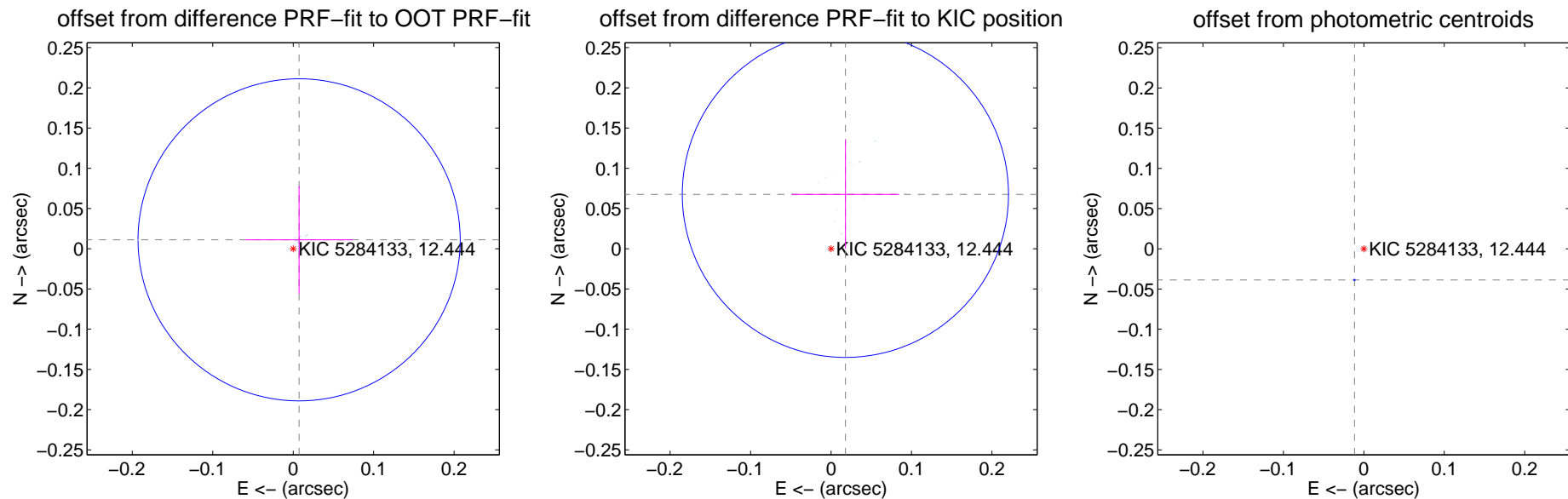
## DV Centroid Data

Supplemental centroid analysis for 005284133-01. Kepler magnitude: 12.44. Transit SNR 33567.69

There are 14 quarters with good PRF difference image offsets

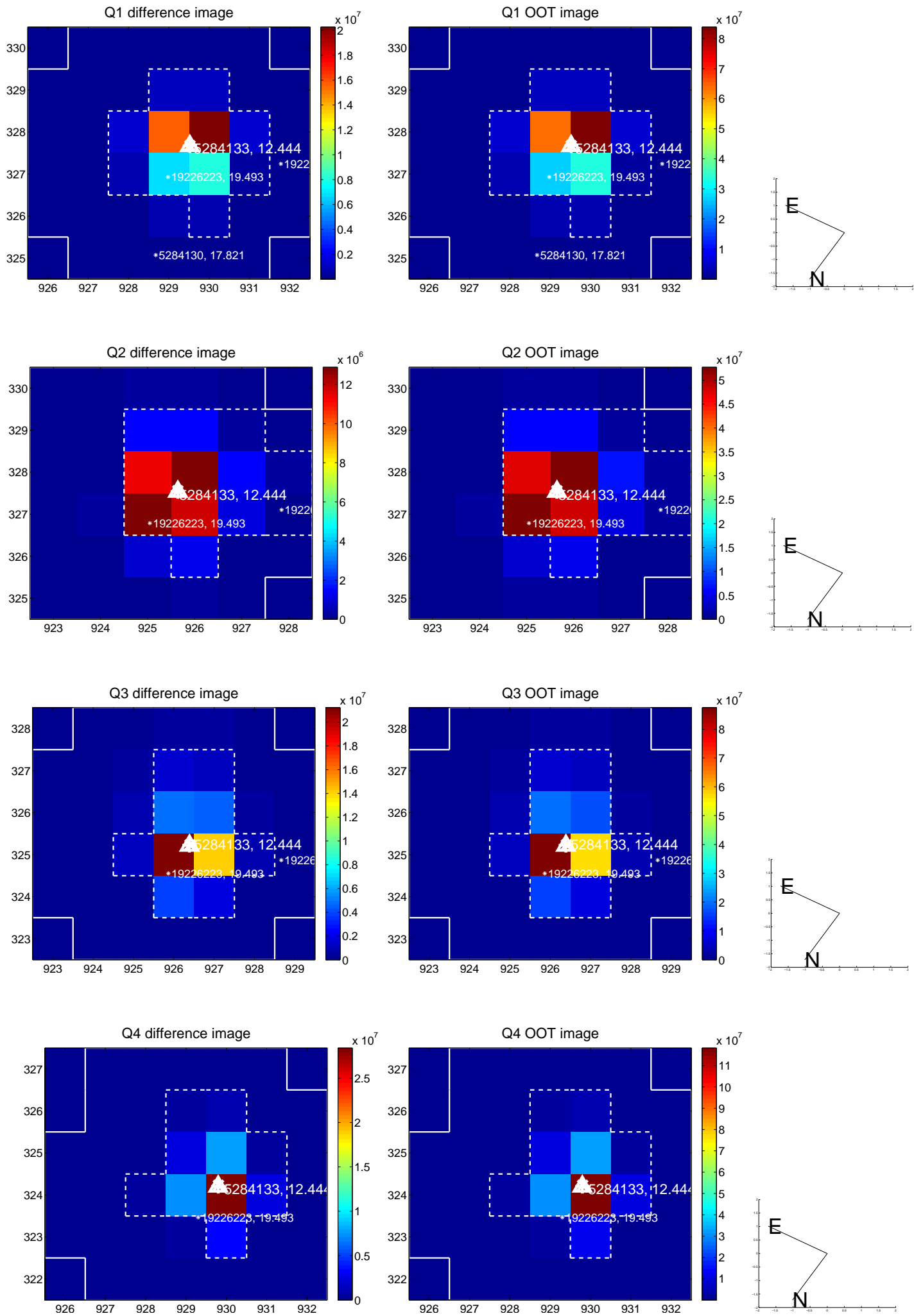
The direct PRF centroid is offset from the target star catalog position by about 0.01 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.013 \pm 0.067$	0.20	$-0.007 \pm 0.067$	$0.011 \pm 0.067$
PRF-fit source offset from KIC position	$0.070 \pm 0.068$	1.03	$-0.018 \pm 0.067$	$0.068 \pm 0.068$
photometric centroid source offset	$0.04 \pm 0.00$	154.68	$0.01 \pm 0.00$	$-0.04 \pm 0.00$

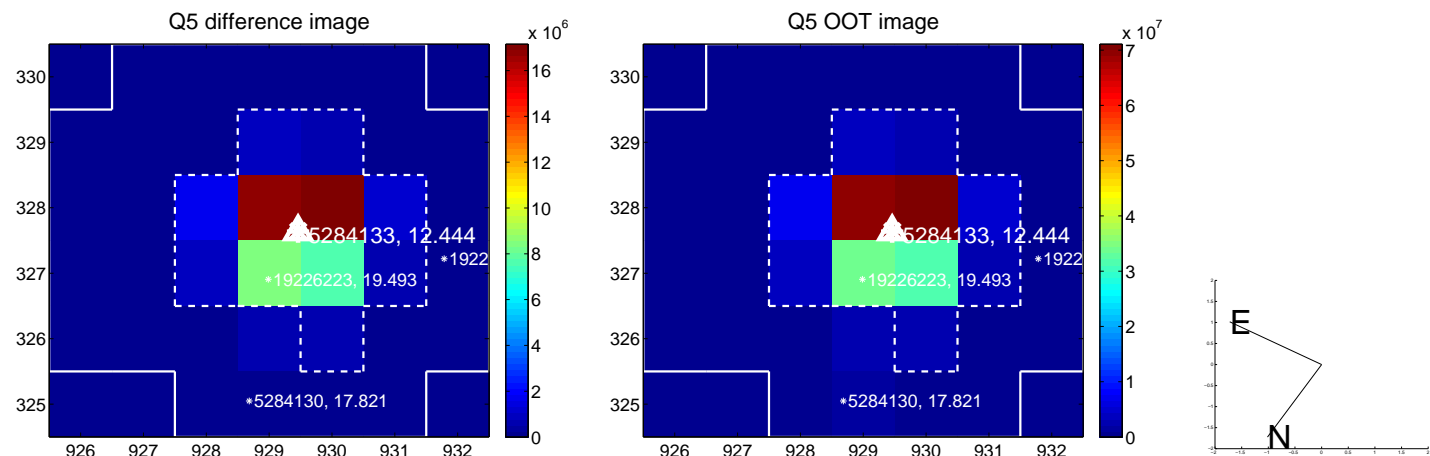


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

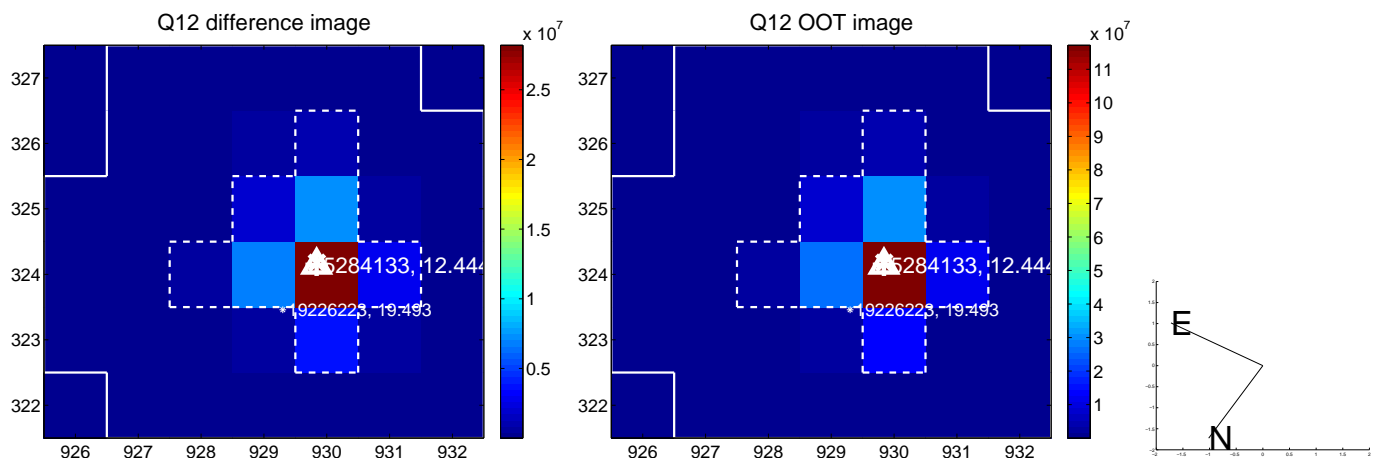
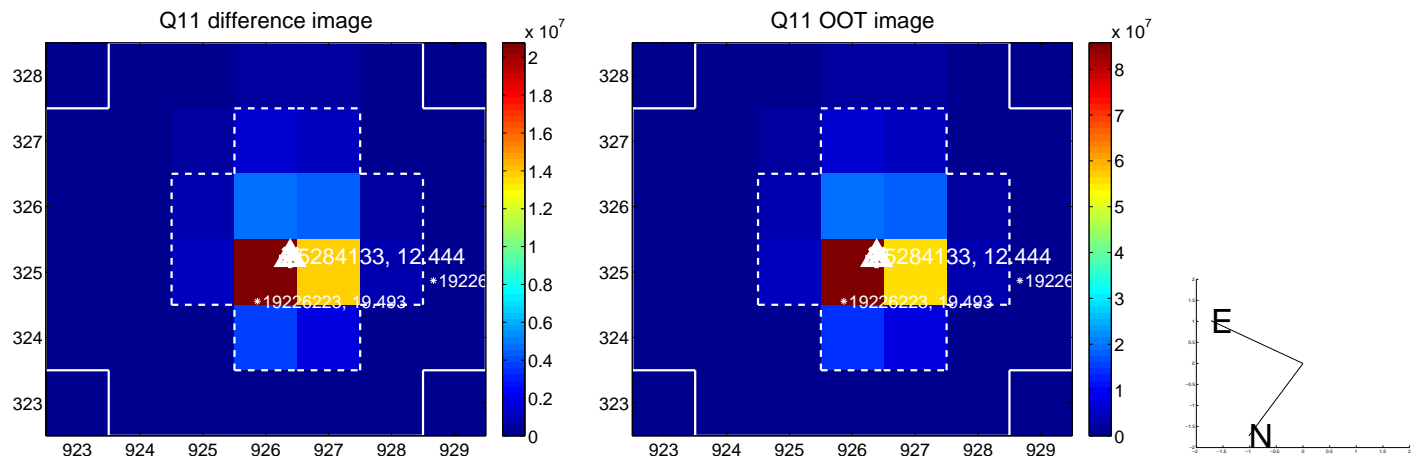
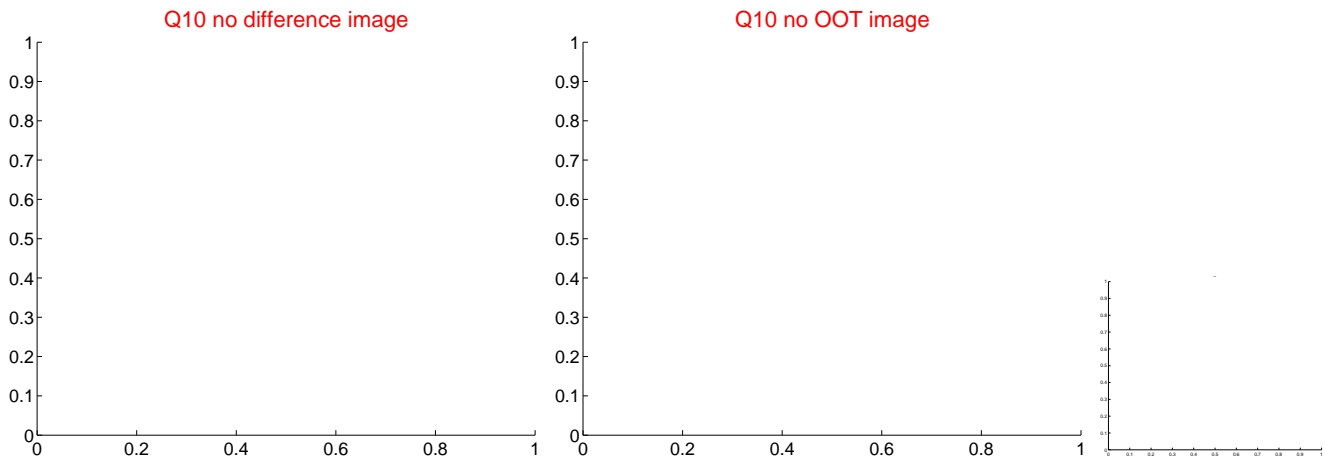
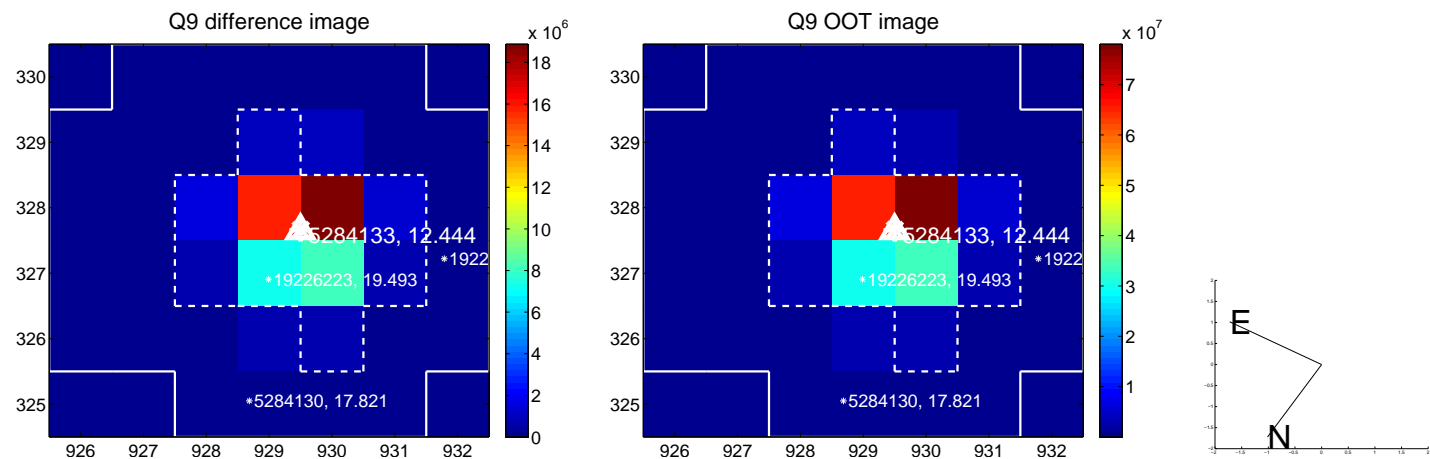


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

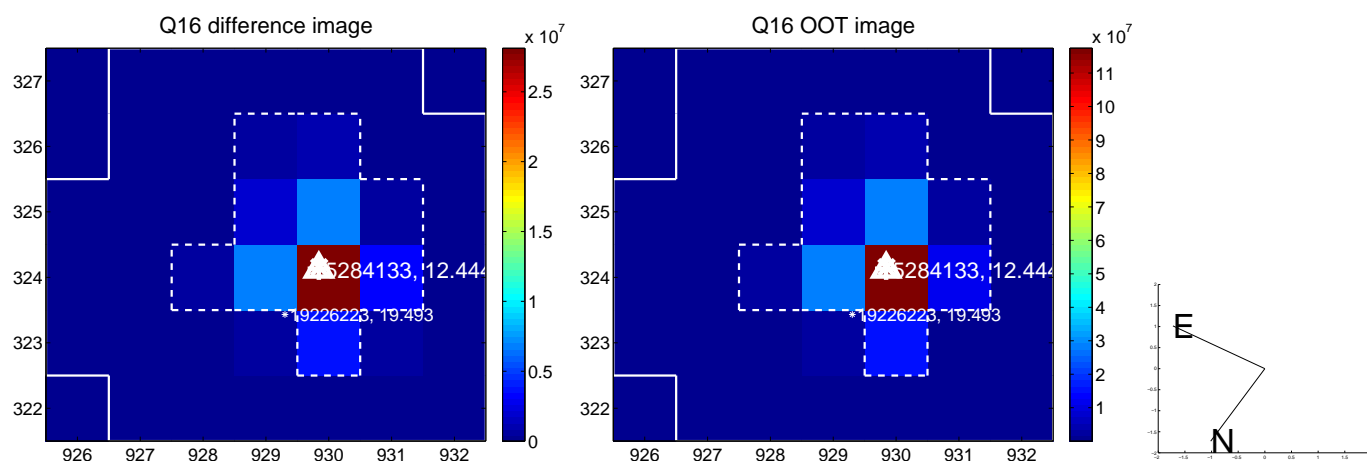
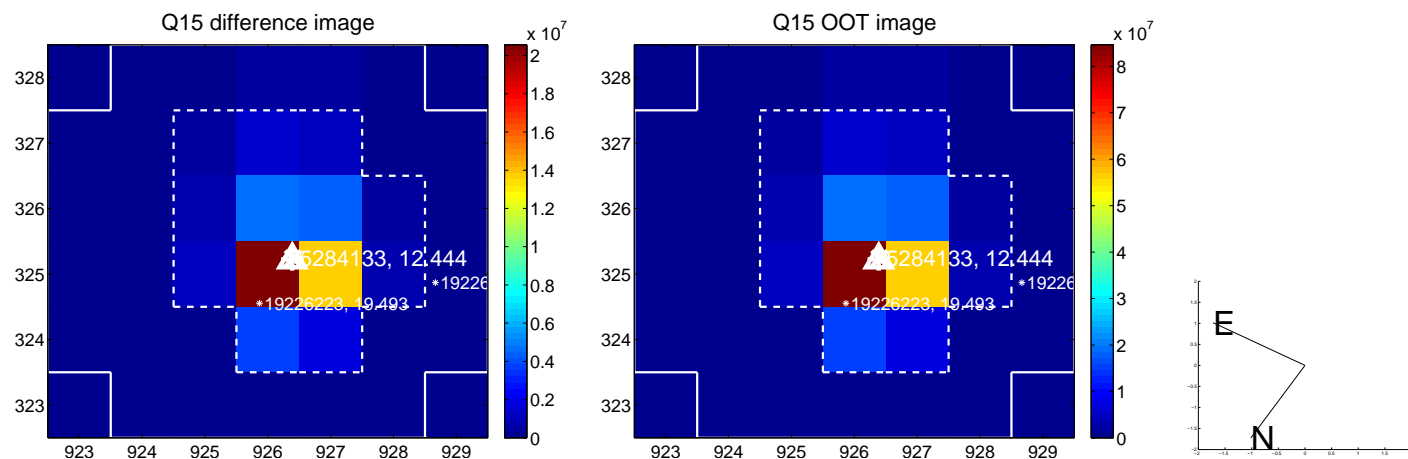
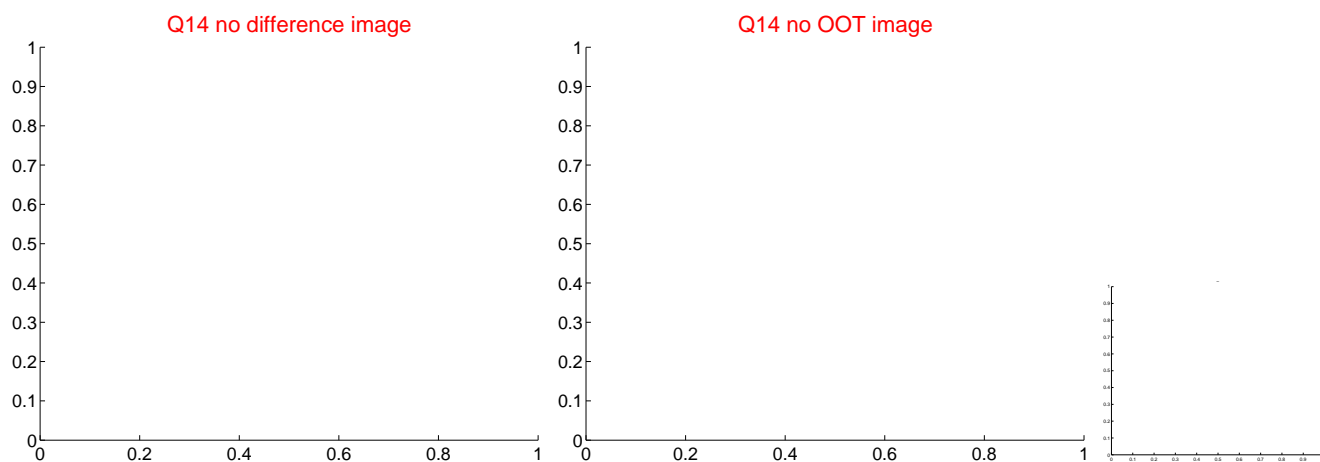
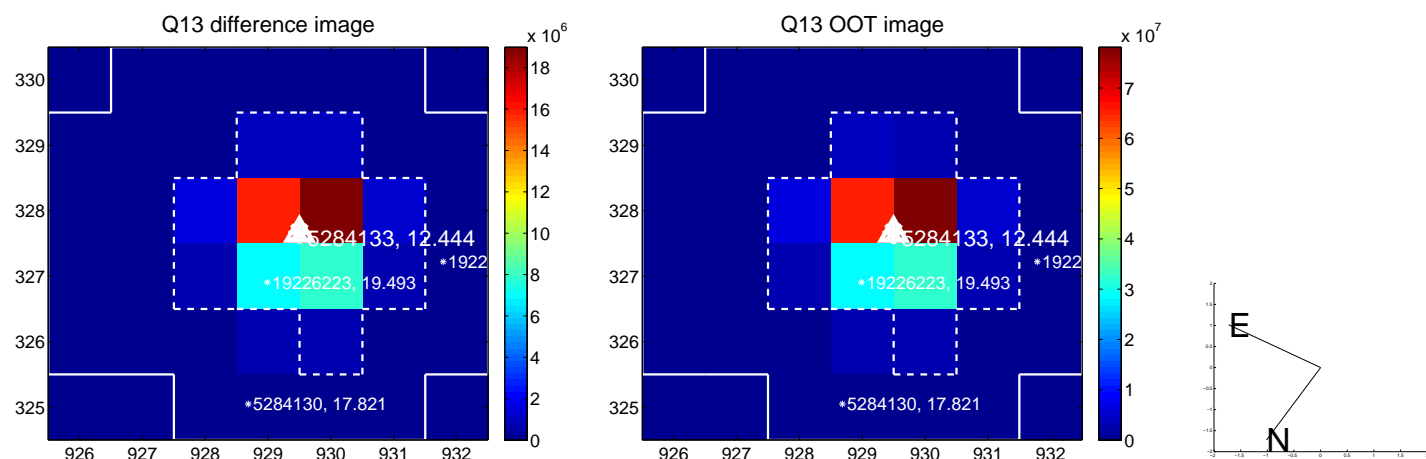




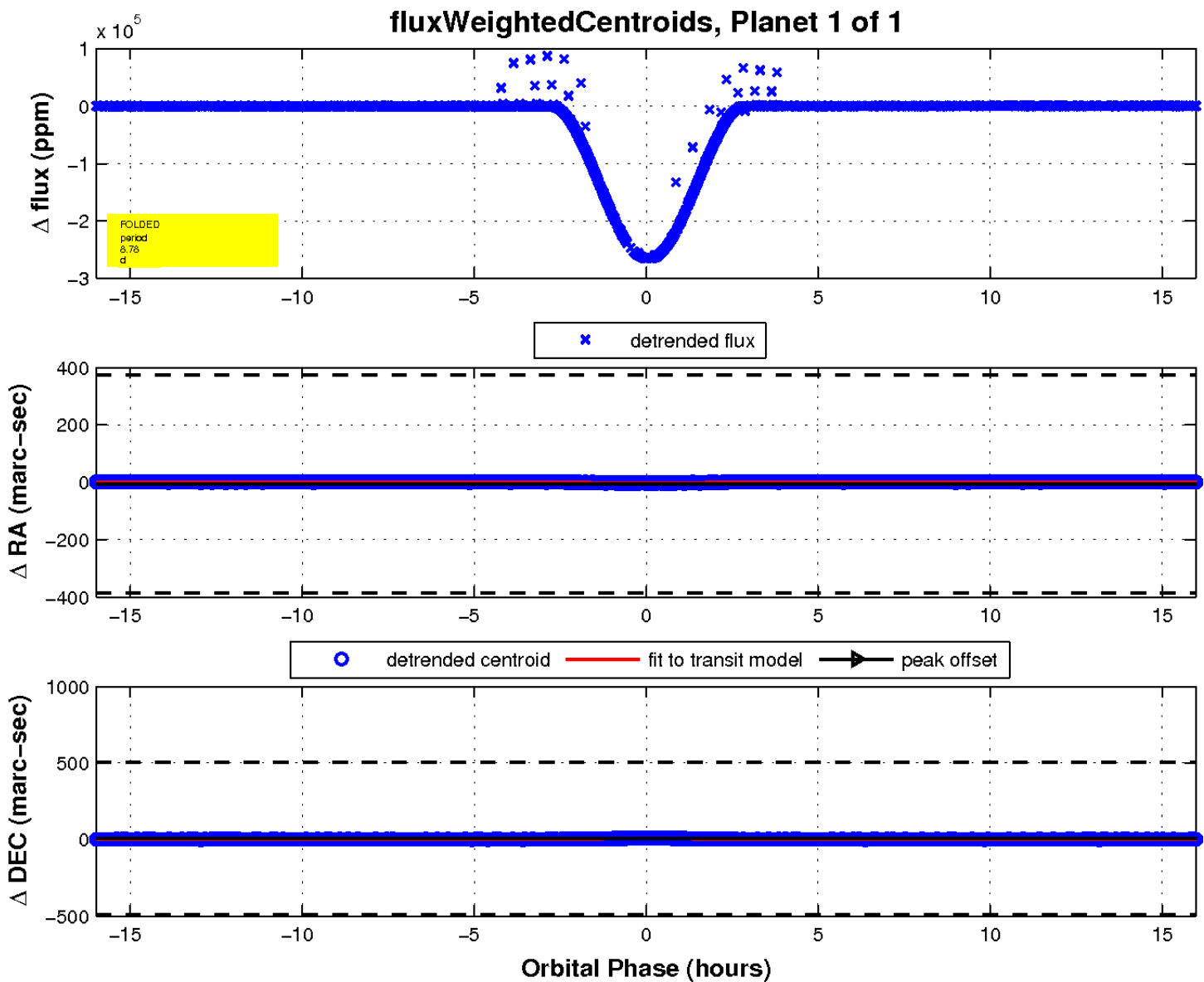
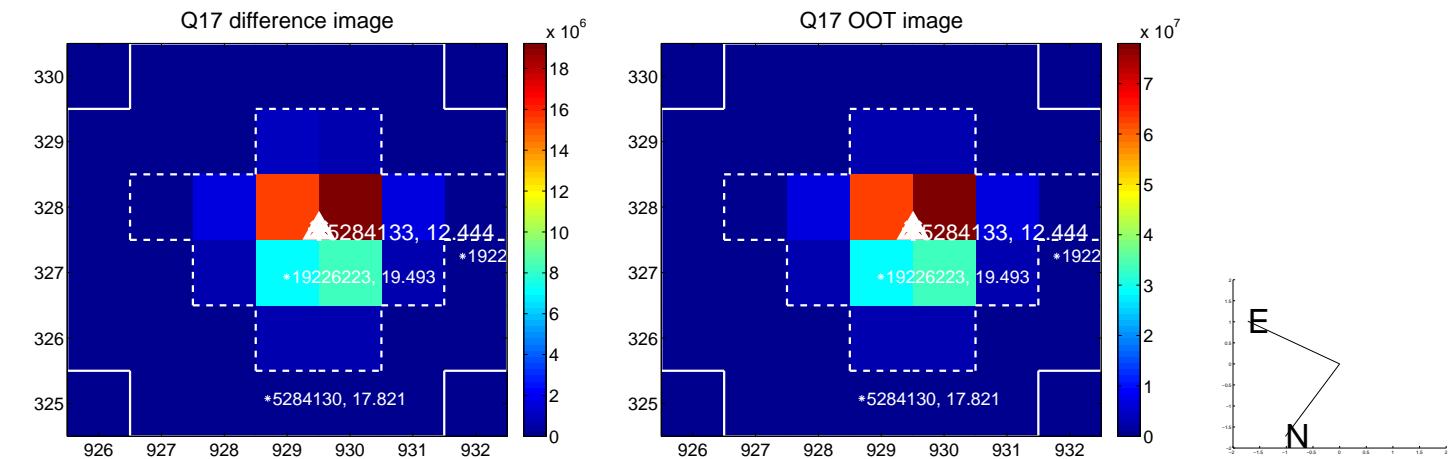
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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UKIRT Image

Declination

