

# KIC 006279974

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006279974-01	OBS	1812.01	0.805254	132.104299	1083.8	1.190	263.4	280.9	2.02	5872	7.98	13021.14

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006279974-01	OBS	FP	0.00	0	1	0	0	MOD_ODDEVEN_ALT—CENT_KIC_POS

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

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

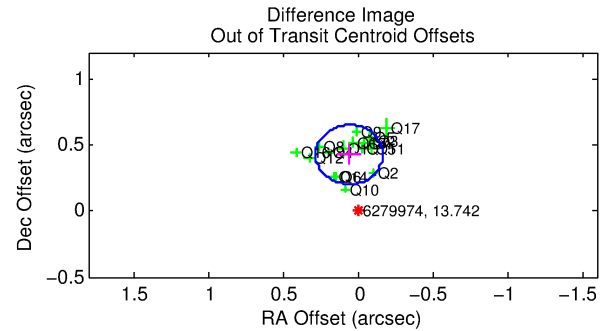
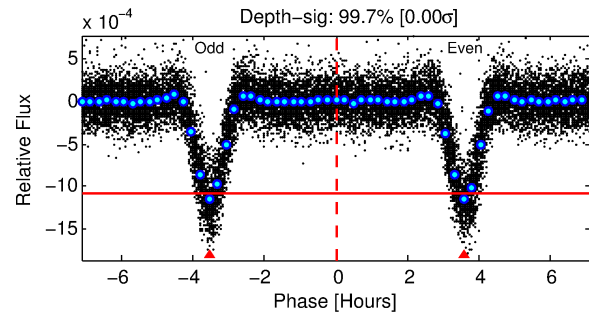
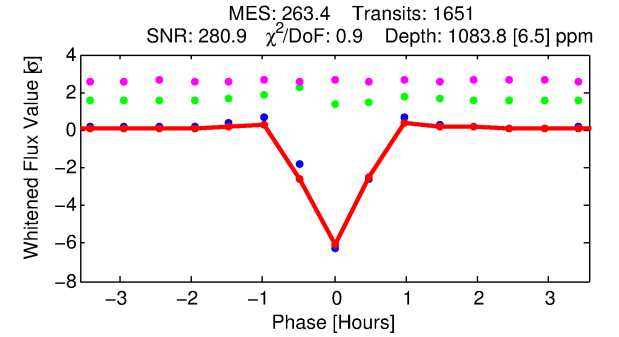
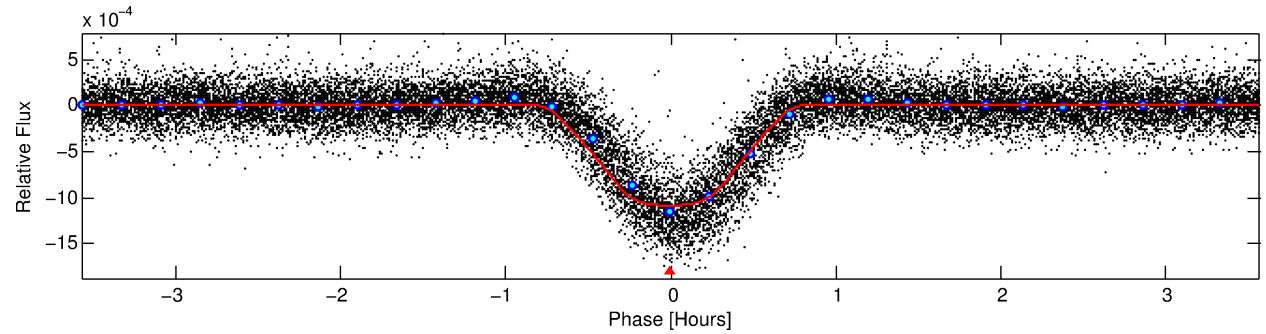
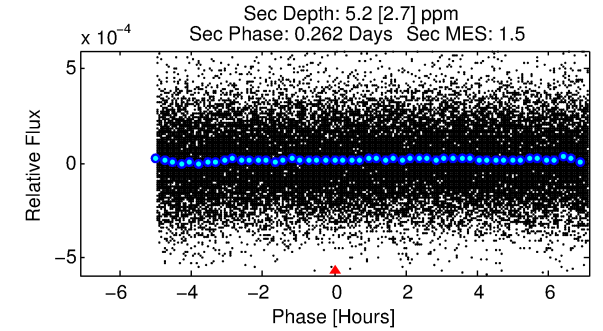
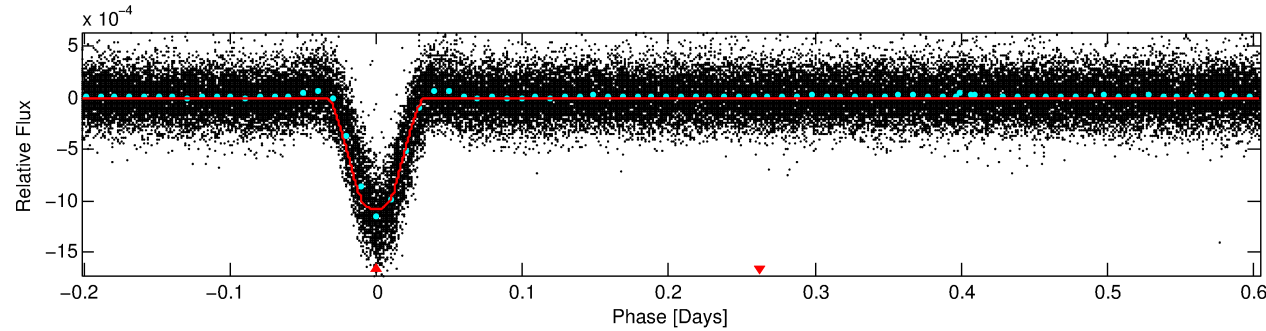
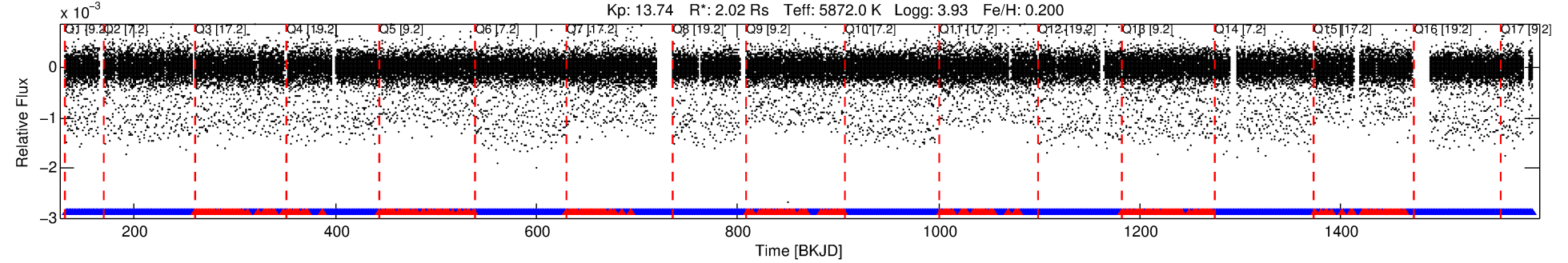
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 006279974-01

No Significant Match Found

# DV One-Page Summary

KIC: 6279974 Candidate: 1 of 1 Period: 0.805 d  
KOI: K01812.01 Corr: 0.911



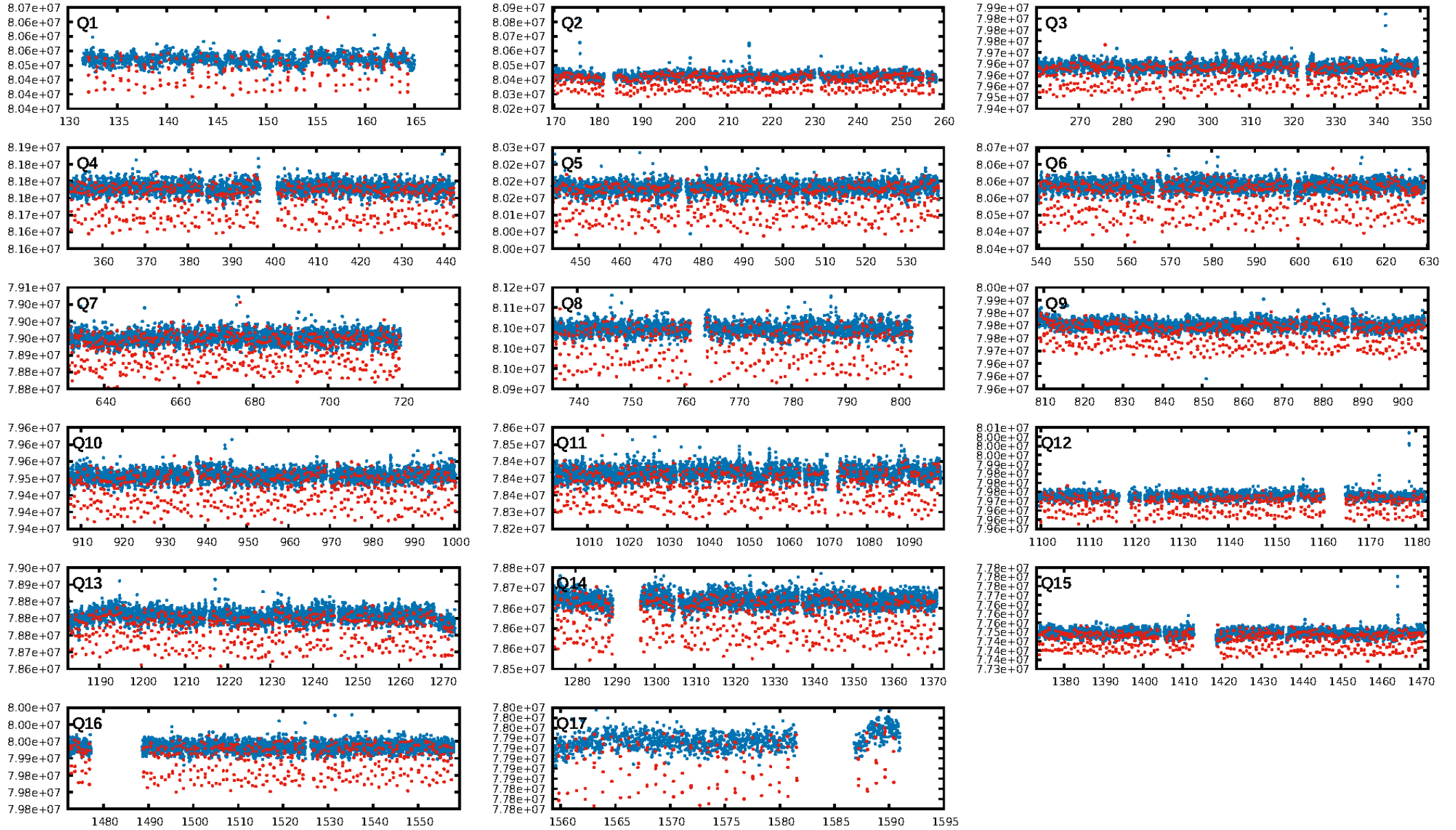
## DV Fit Results:

Period = 0.80525 [0.00000] d  
Epoch = 132.1043 [0.0001] BKJD  
Rp/R\* = 0.0362 [0.0006]  
a/R\* = 2.81 [0.17]  
b = 0.90 [0.02]  
Seff = 13021.14 [4657.08]  
Teq = 2724 [244] K  
Rp = 7.98 [2.04] Re  
a = 0.0183 [0.0042] AU  
Ag = 0.01 [0.01] [-103.32σ]  
Teffp = 1471 [197] K [-4.00σ]

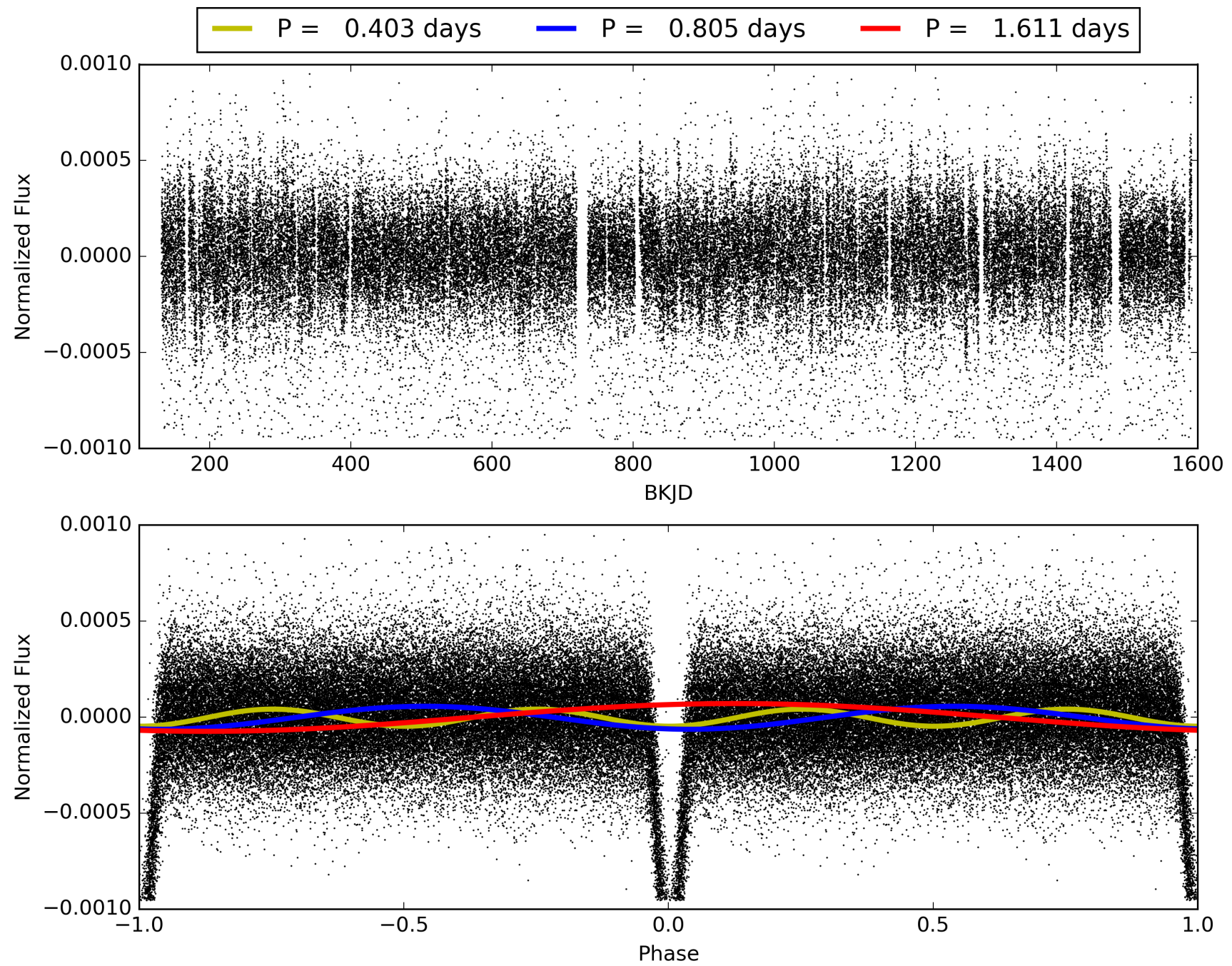
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 0.00e+00  
RollingBand-fgt: 0.79 [1244/1577]  
GhostDiagnostic-chr: 3.394  
Centroid-sig: 0.0%  
Centroid-so: 1.131 arcsec [34.51σ]  
OotOffset-rm: 0.430 arcsec [5.75σ]  
KicOffset-rm: 0.101 arcsec [1.37σ]  
OotOffset-st: 4/4/4/5 [17]  
KicOffset-st: 4/4/4/5 [17]  
DiffImageQuality-fgm: 1.00 [17/17]  
DiffImageOverlap-fno: 1.00 [17/17]

# TCE 006279974-01, PDC Light Curves

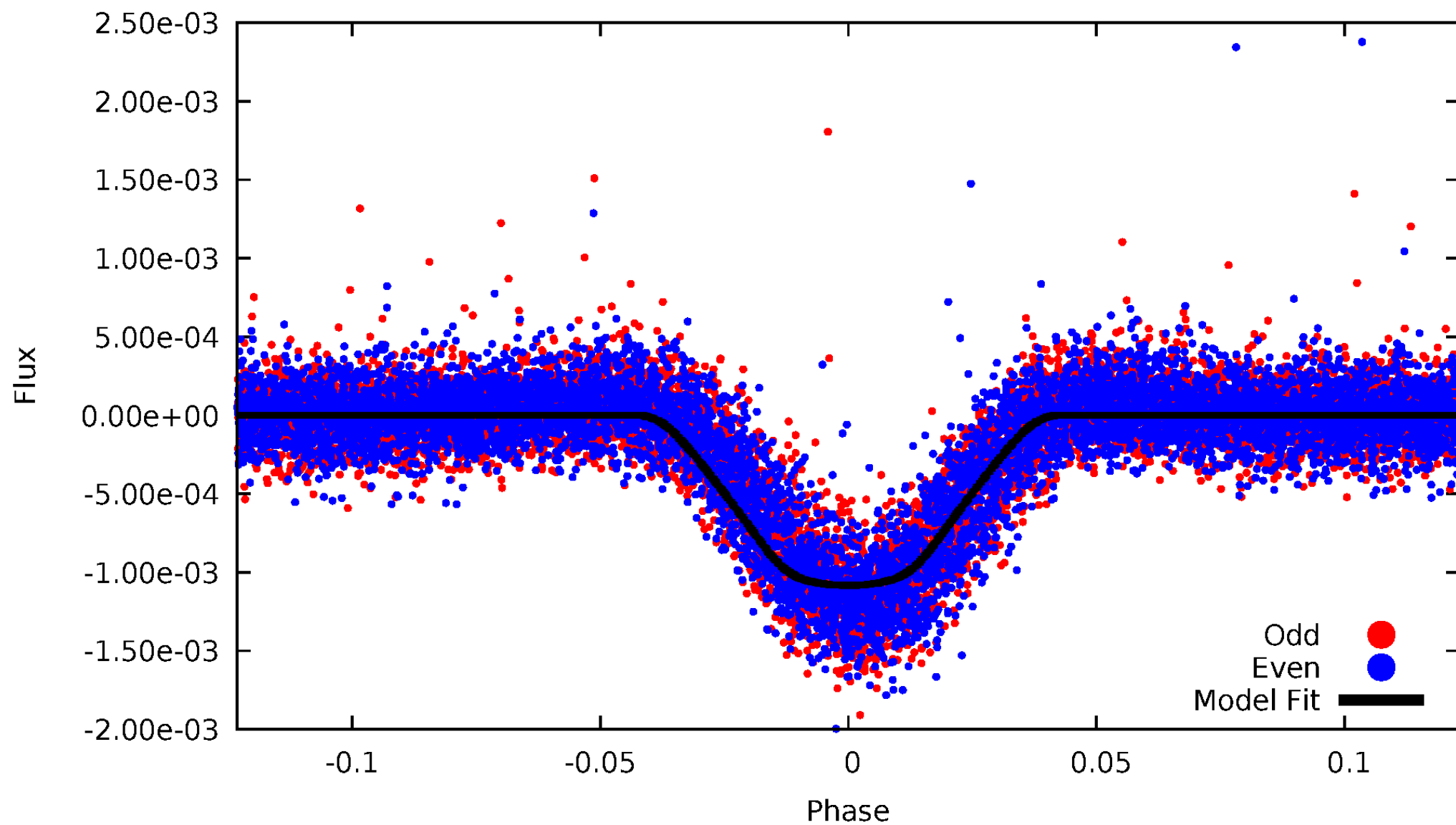


TCE 006279974-01



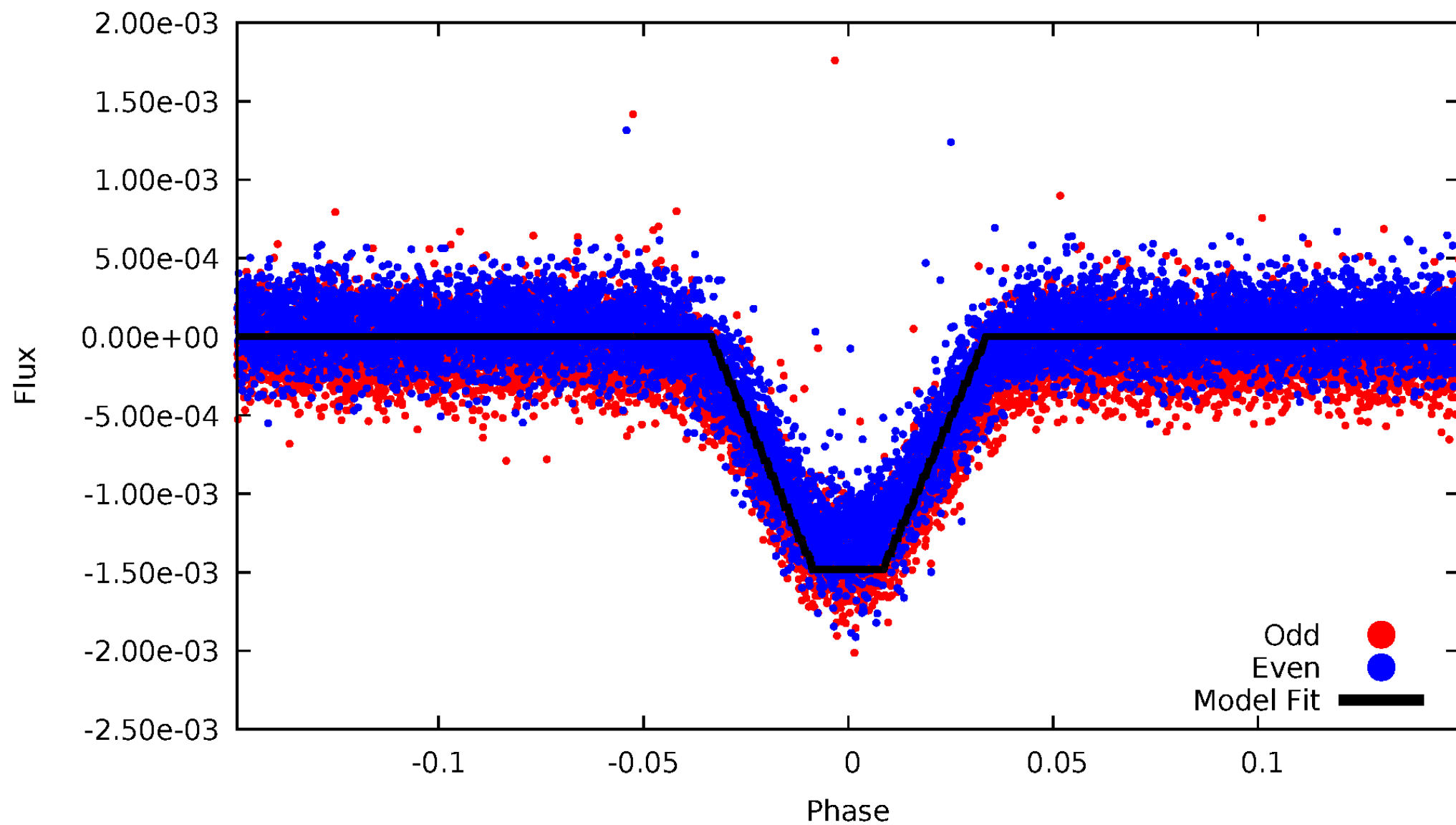
# DV Odd/Even

TCE 006279974-01

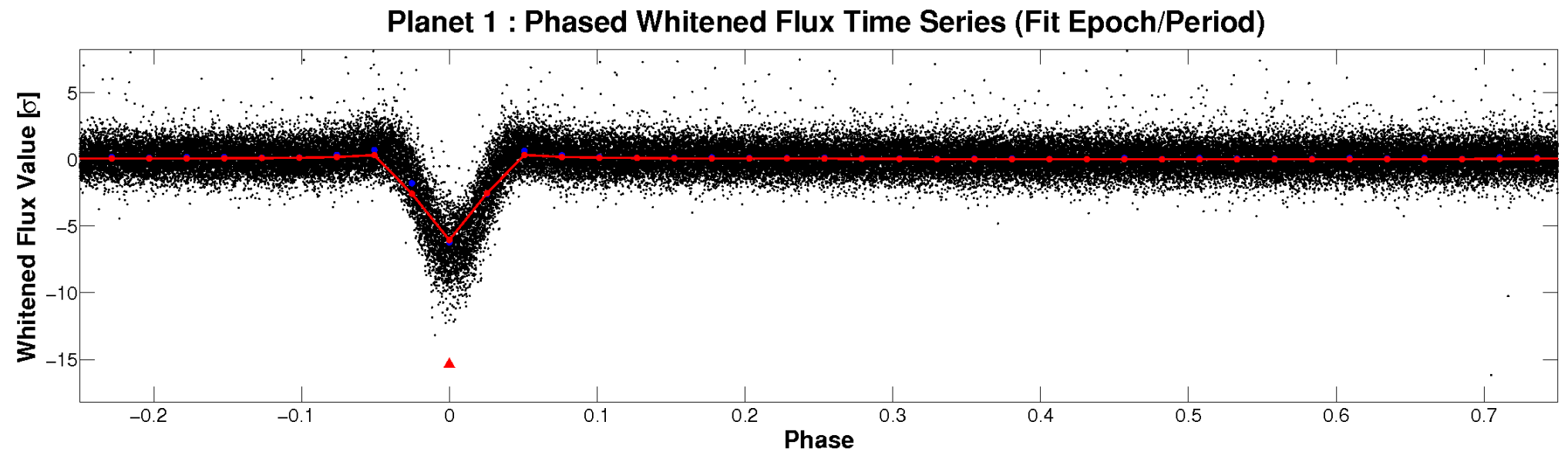
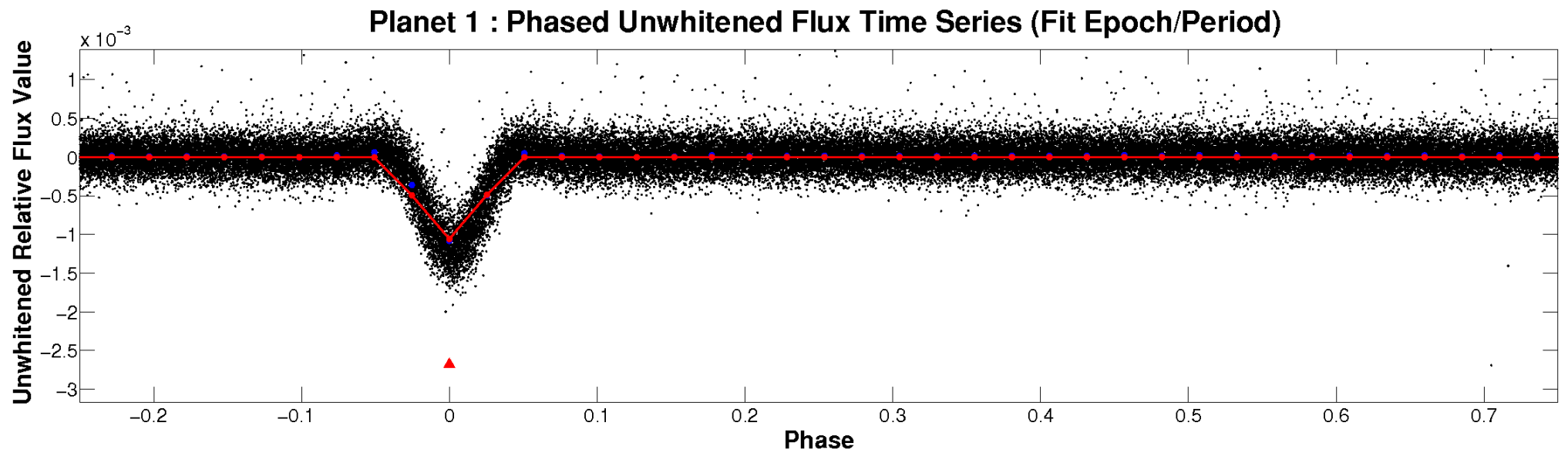


# ALT Odd/Even

TCE 006279974-01

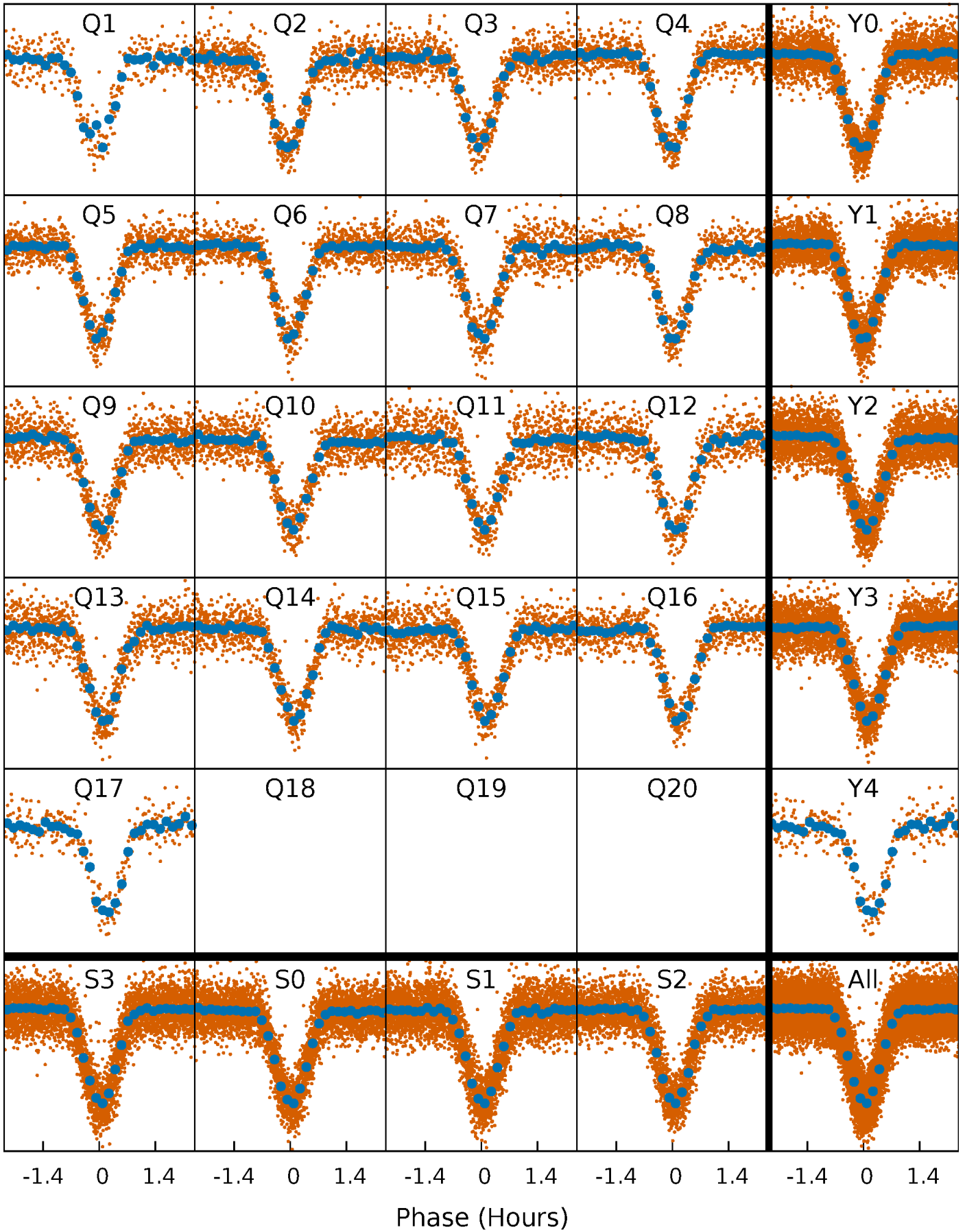


# Non-Whitened Vs. Whitened Light Curve



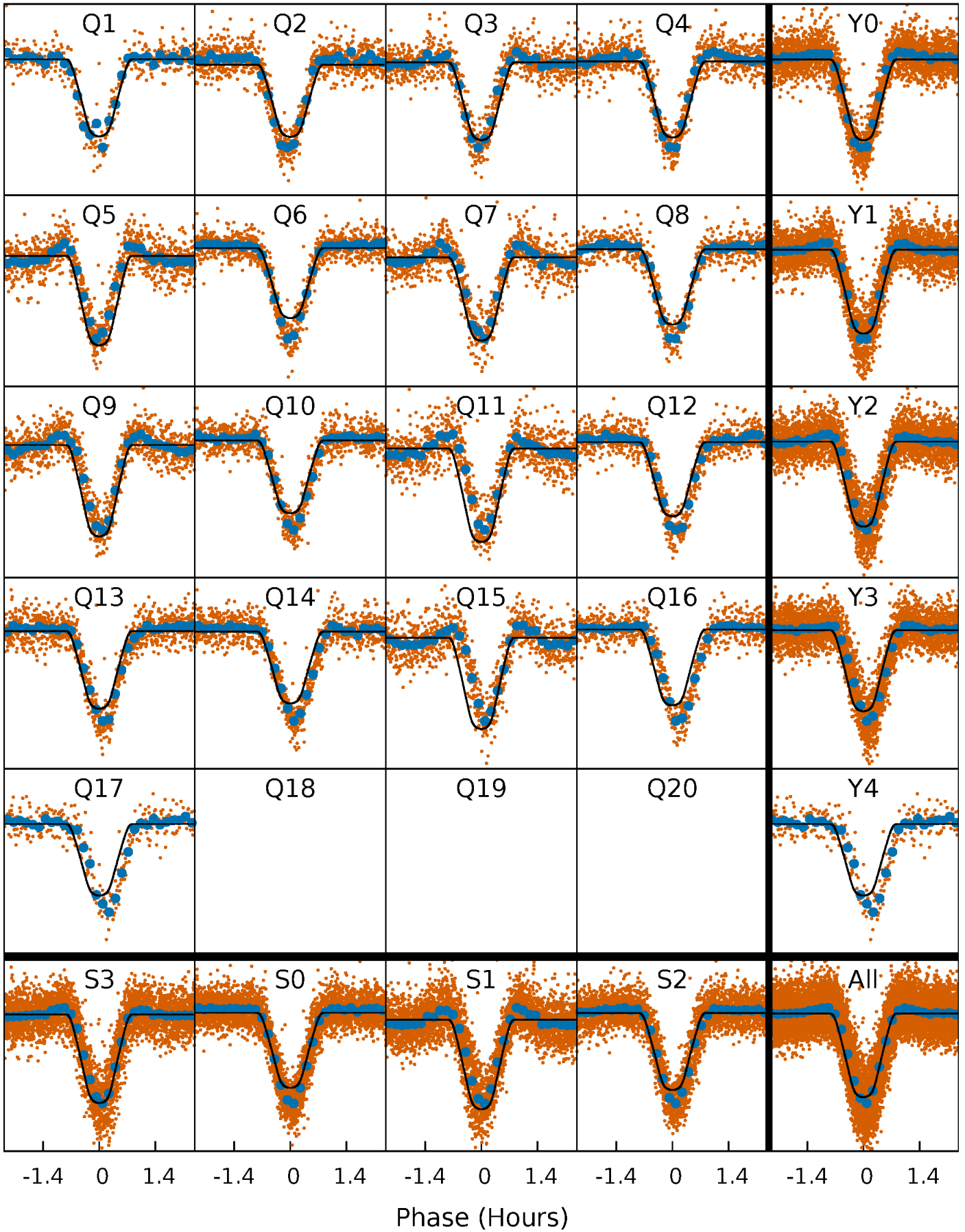
# PDC Quarter-Phased Transit Curves

TCE 006279974-01   P= 0.805254 Days    $T_0=132.104299$  (BKJD)



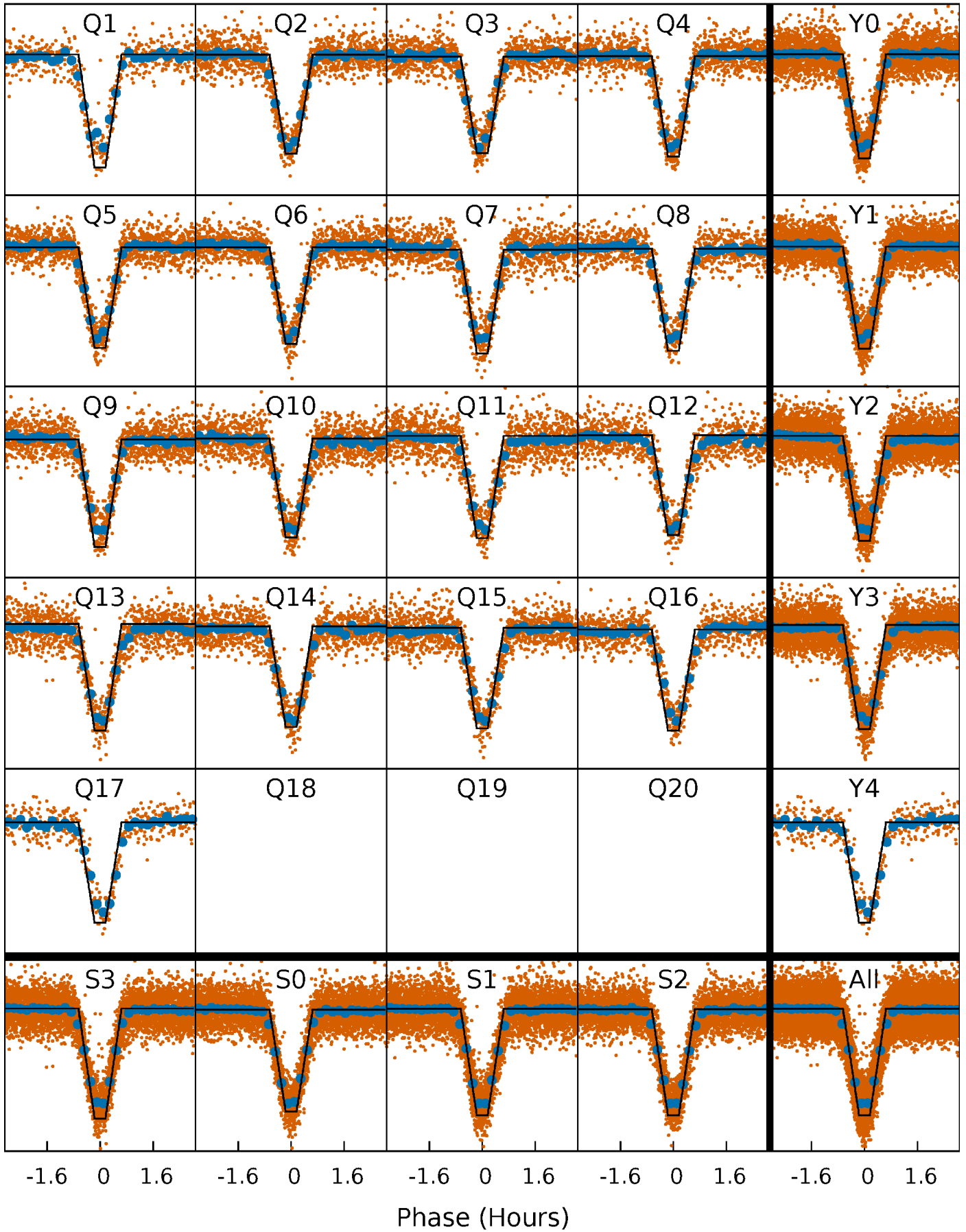
# DV Quarter-Phased Transit Curves

TCE 006279974-01 P= 0.805254 Days  $T_0=132.104299$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

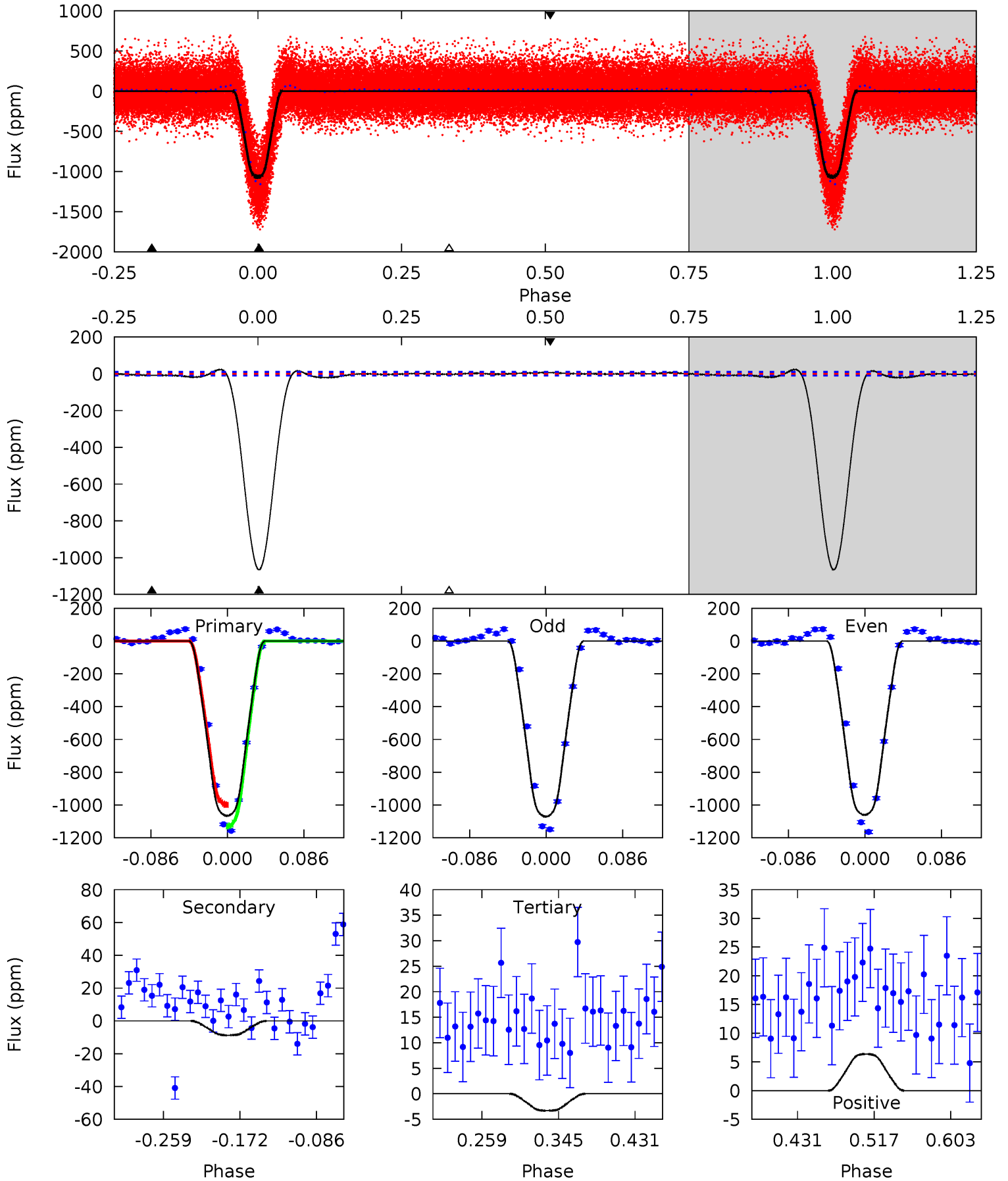
TCE 006279974-01 P= 0.805256 Days  $T_0=132.103541$  (BKJD)



# DV Model-Shift Uniqueness Test

006279974-01, P = 0.805254 Days, E = 131.299045 Days

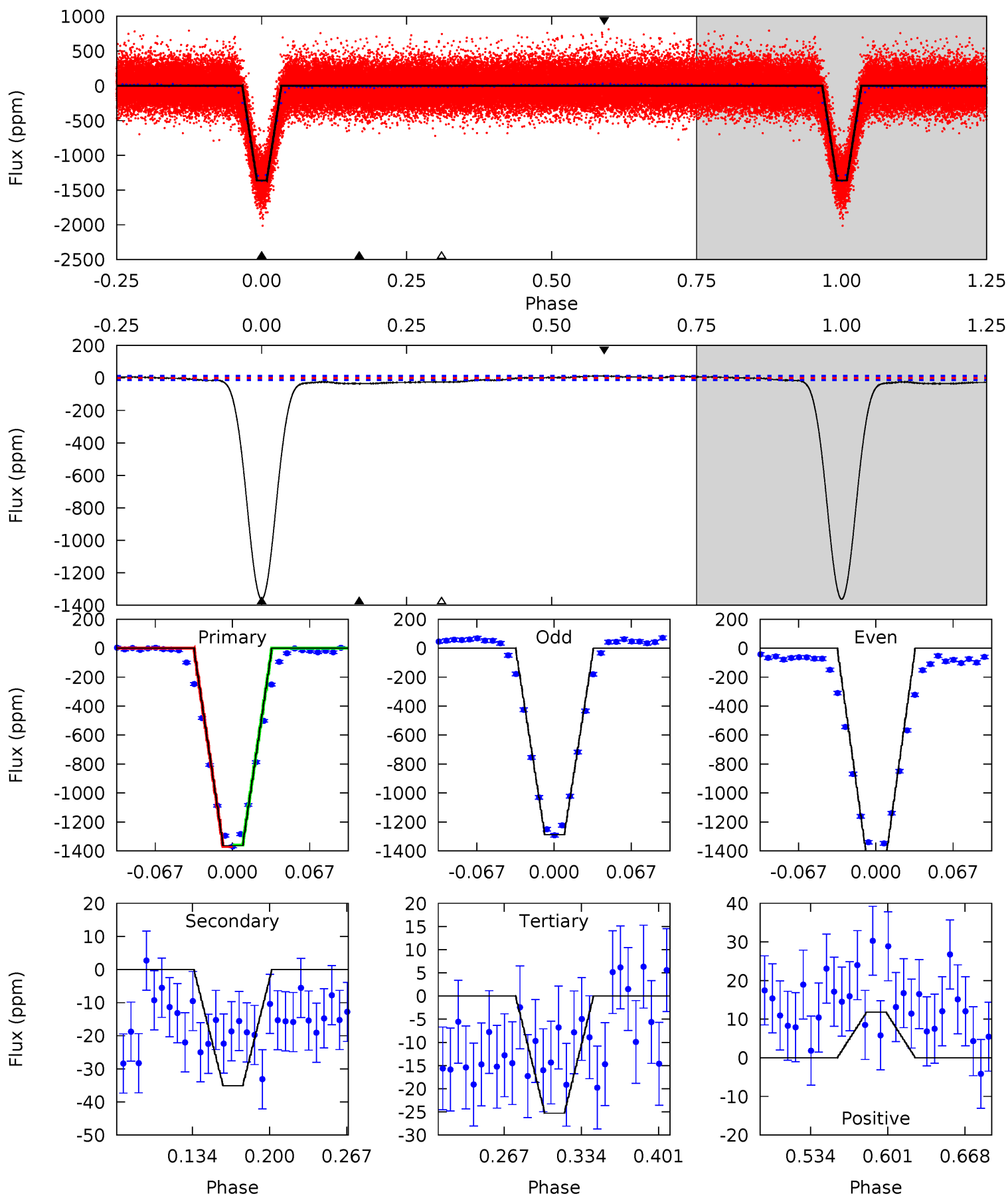
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
485.7	3.99	1.51	2.91	4.60	1.72	2.66	484.2	482.8	2.47	1.08	2.28	0.98	0.02	30.2



# Alt Model-Shift Uniqueness Test

006279974-01, P = 0.805256 Days, E = 131.298285 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
488.1	12.6	9.05	4.22	4.65	1.83	4.72	479.0	483.9	3.53	8.36	27.8	1.00	0.01	2.00



### Stellar Parameters For KIC 006279974

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$5872^{+78}_{-78}$	$3.926^{+0.202}_{-0.067}$	$0.200^{+0.150}_{-0.150}$	$2.022^{+0.258}_{-0.516}$	$1.256^{+0.134}_{-0.148}$	$0.214^{+0.226}_{-0.049}$
	+1%/-1%	+5%/-2%	+75%/-75%	+13%/-26%	+11%/-12%	+106%/-23%
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 006279974-01 / KOI 1812.01

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-9 \pm 2$	$7.85^{+0.66}_{-1.02}$	$3757^{+145}_{-224}$	$-3494^{+143}_{-96}$	$0.027^{+0.011}_{-0.008}$
Alt.	$-35 \pm 3$	$8.42^{+0.63}_{-1.13}$	$3767^{+137}_{-226}$	$-3351^{+183}_{-102}$	$0.093^{+0.028}_{-0.014}$

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

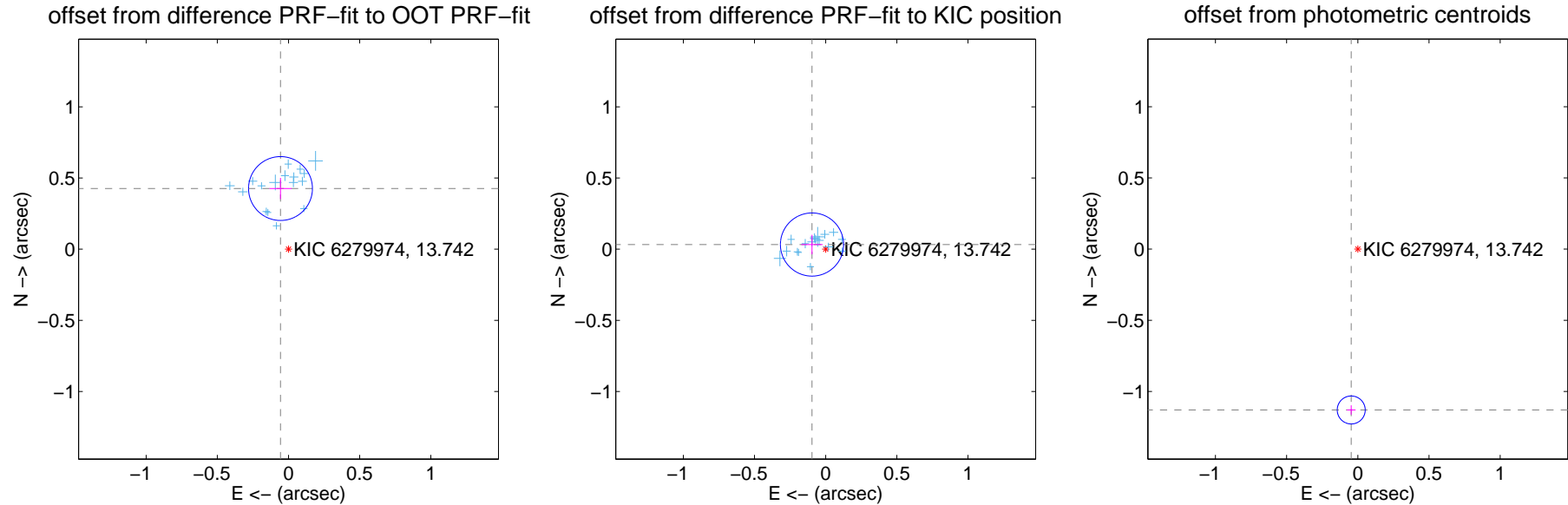
## DV Centroid Data

Supplemental centroid analysis for 006279974-01. Kepler magnitude: 13.74. Transit SNR 280.94

There are 17 quarters with good PRF difference image offsets

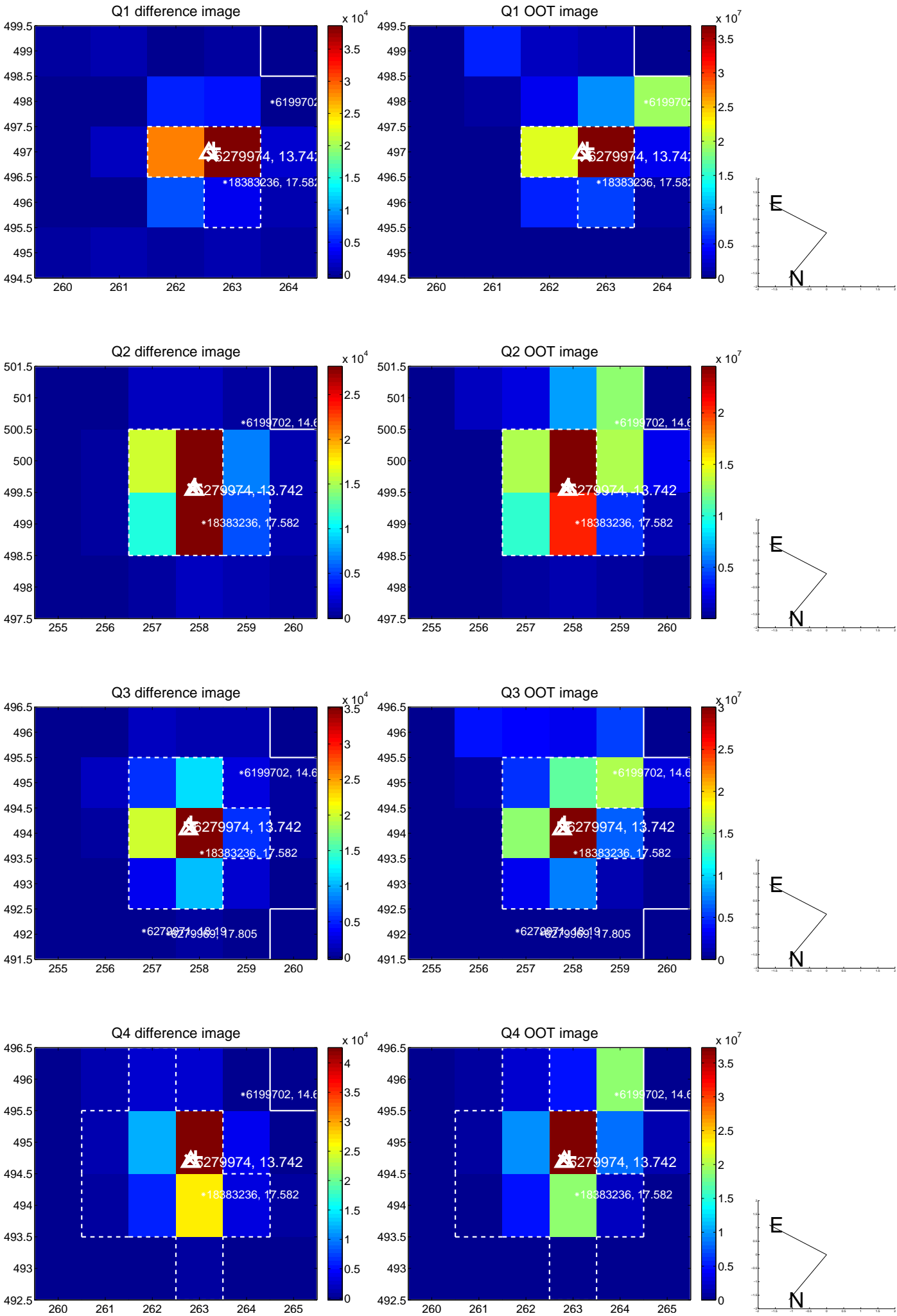
The direct PRF centroid is offset from the target star catalog position by about 0.59 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	<b><math>0.430 \pm 0.075</math></b>	<b>5.75</b>	$0.056 \pm 0.077$	$0.426 \pm 0.075$
PRF-fit source offset from KIC position	$0.101 \pm 0.074$	1.37	$0.096 \pm 0.075$	$0.033 \pm 0.068$
photometric centroid source offset	<b><math>1.13 \pm 0.03</math></b>	<b>34.51</b>	$0.05 \pm 0.03$	$-1.13 \pm 0.03$

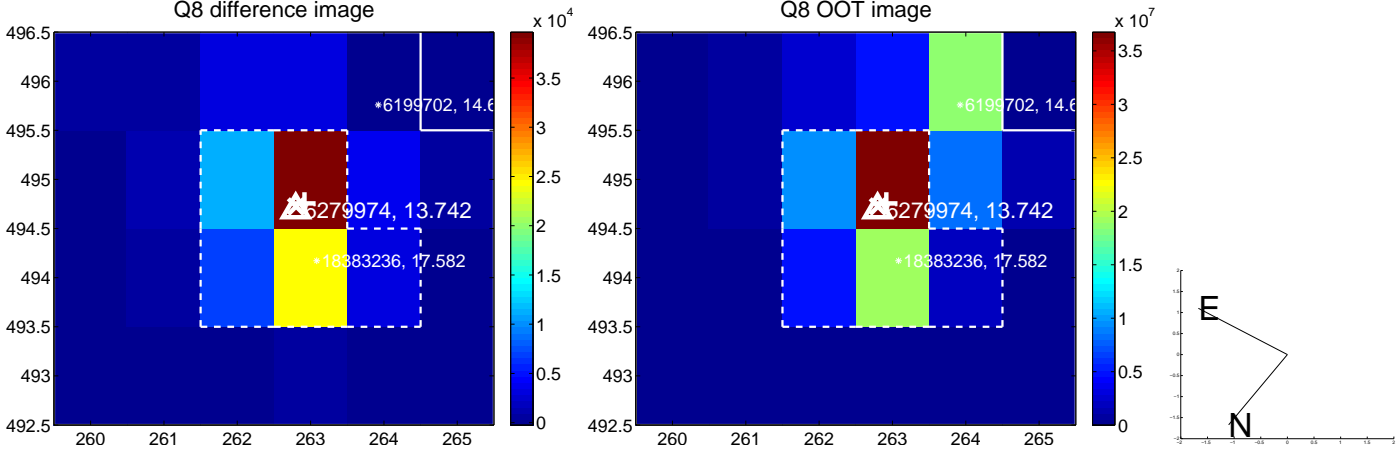
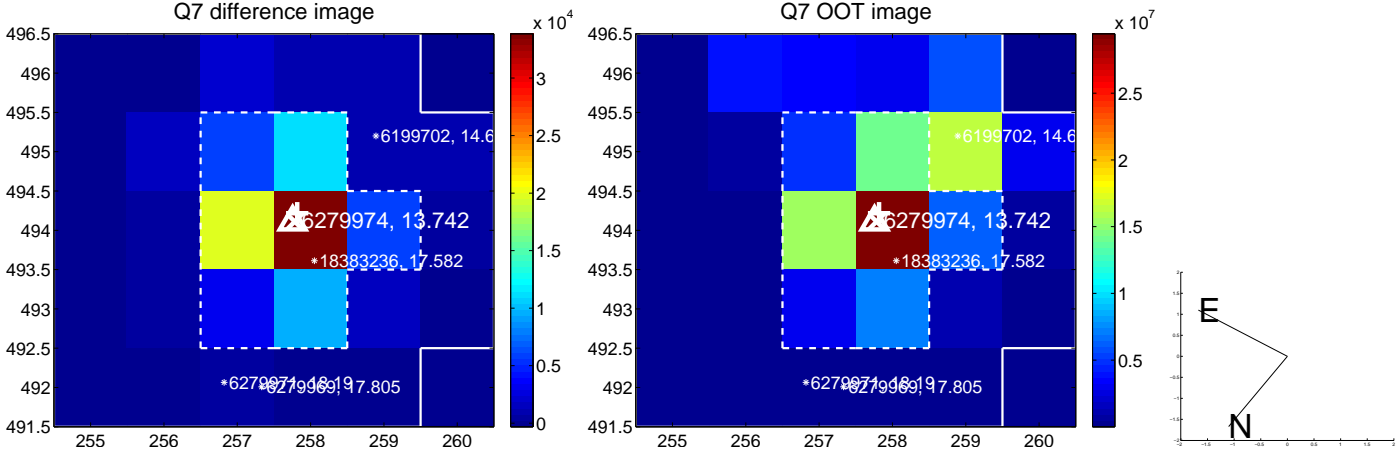
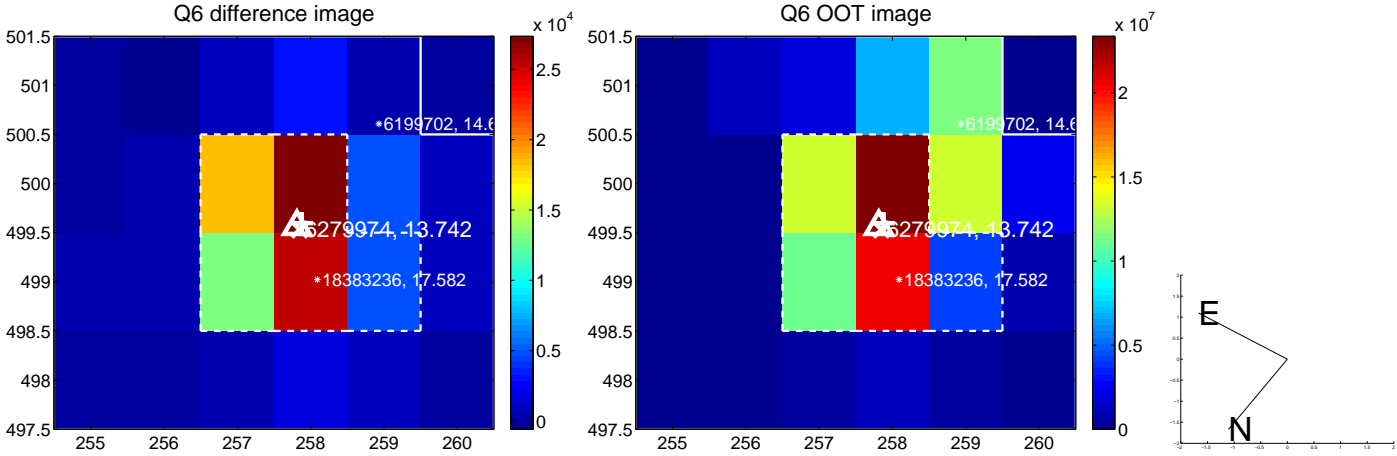
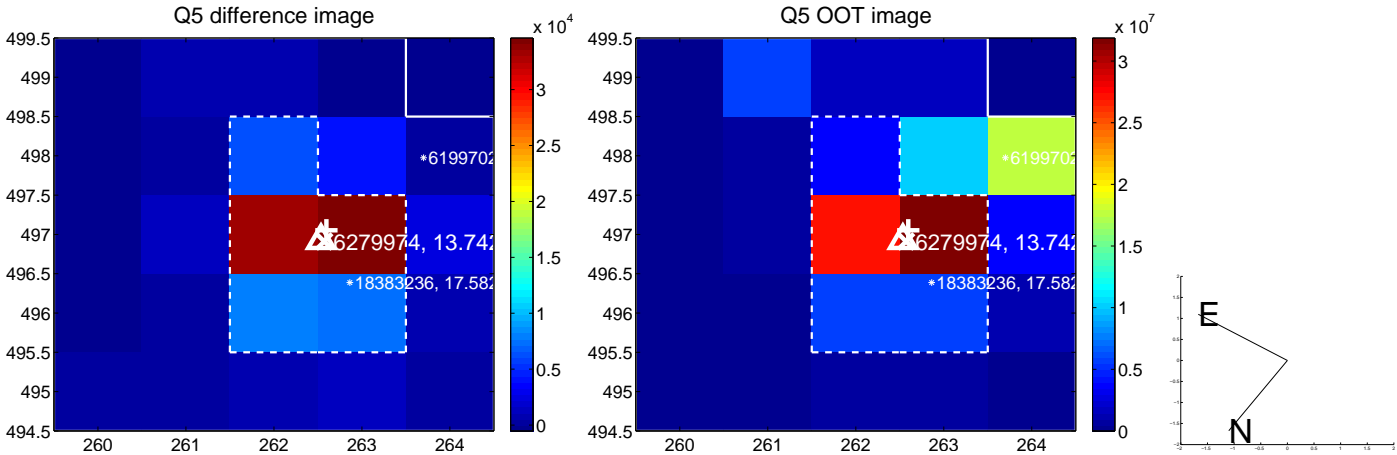


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

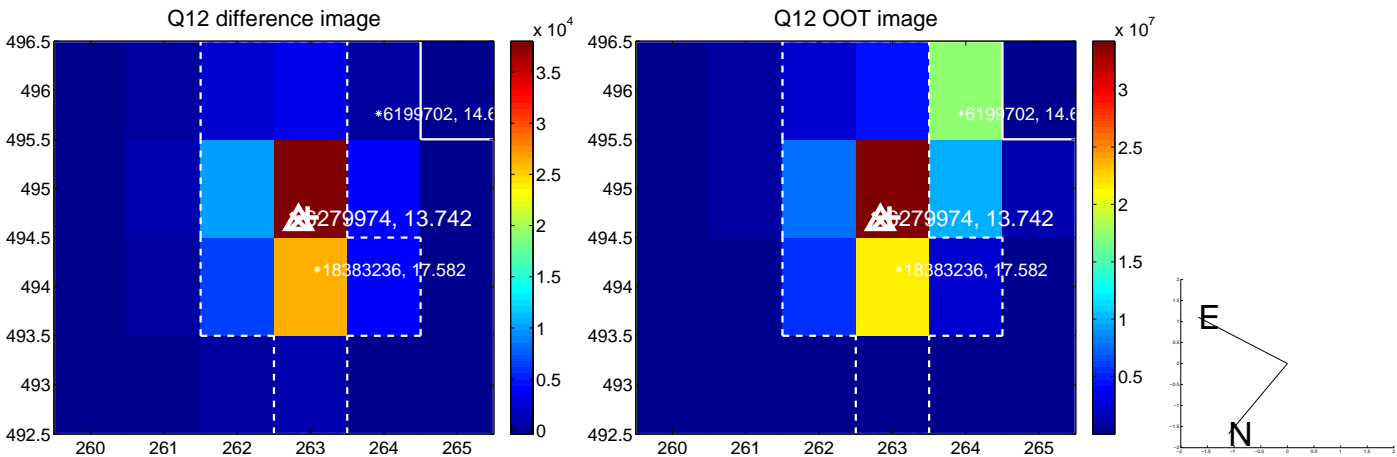
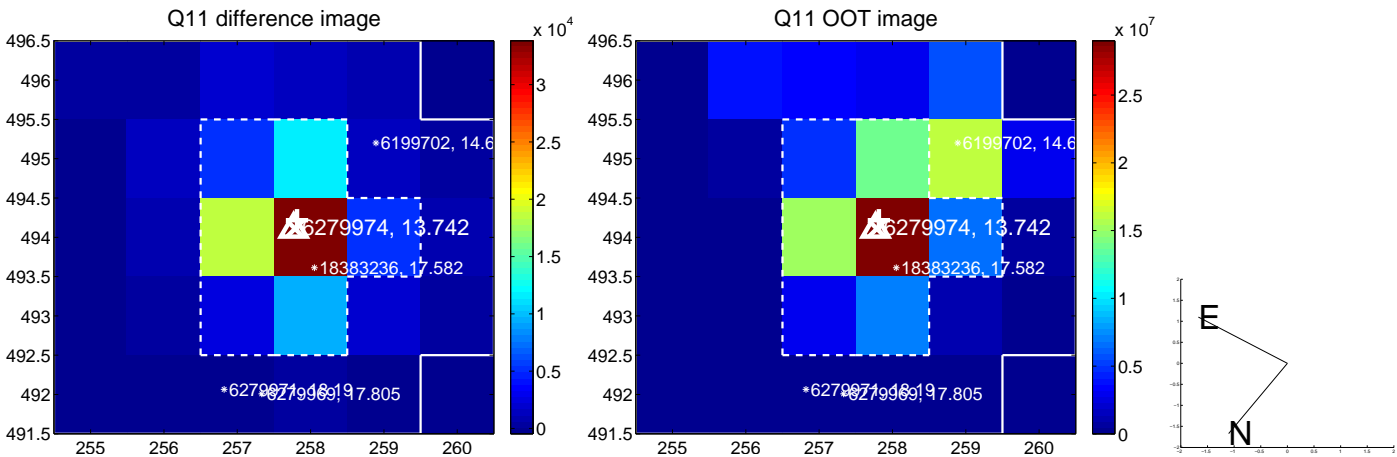
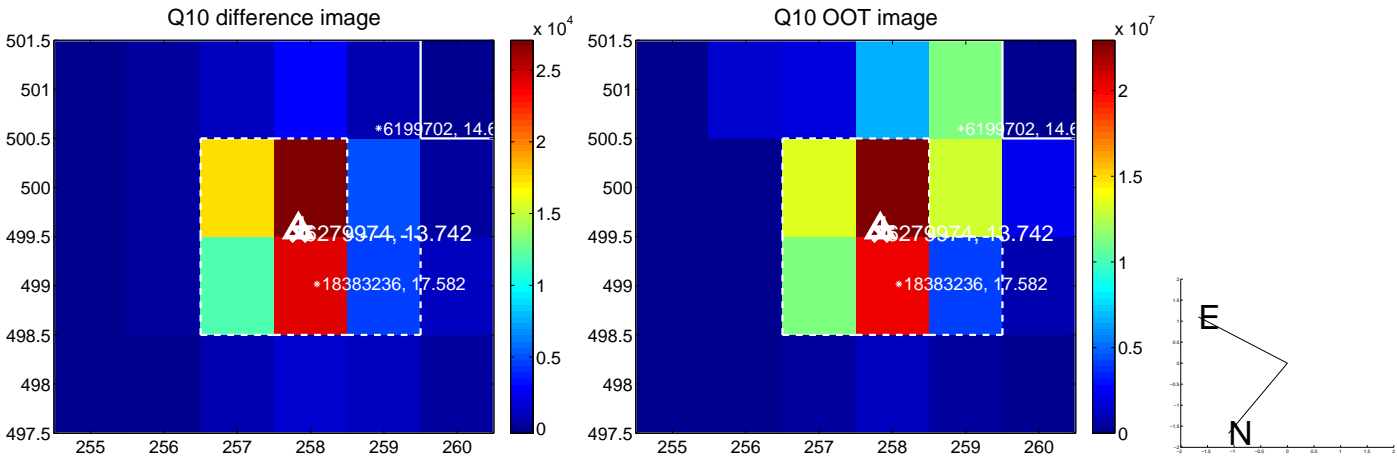
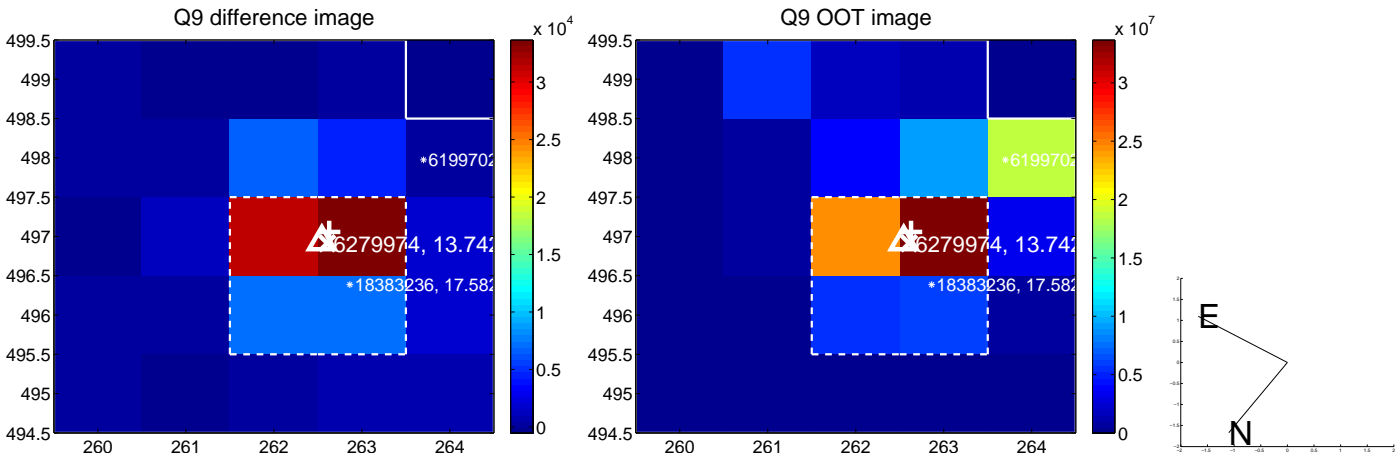
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



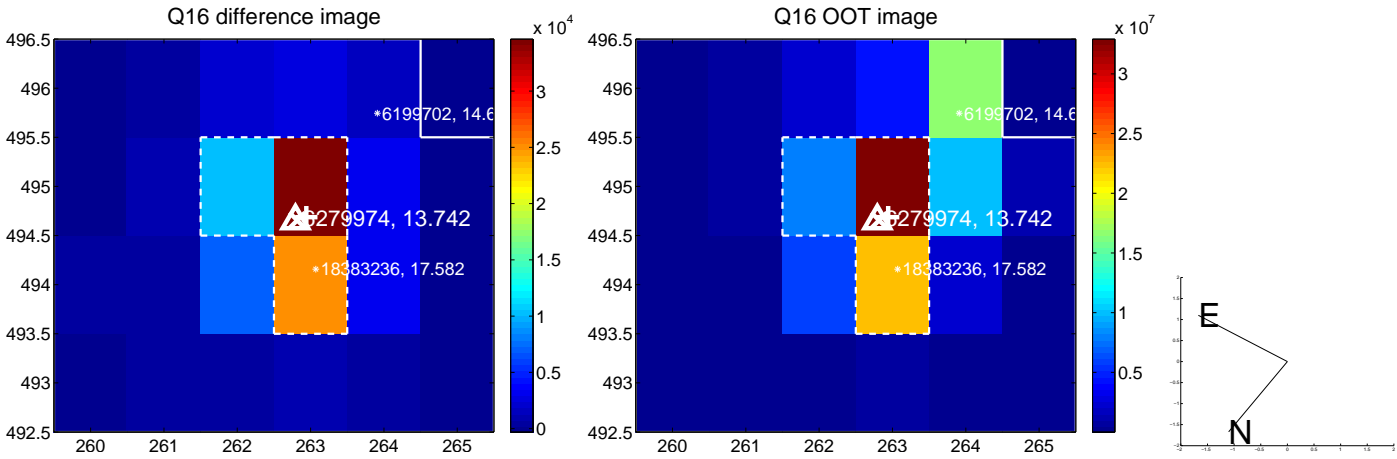
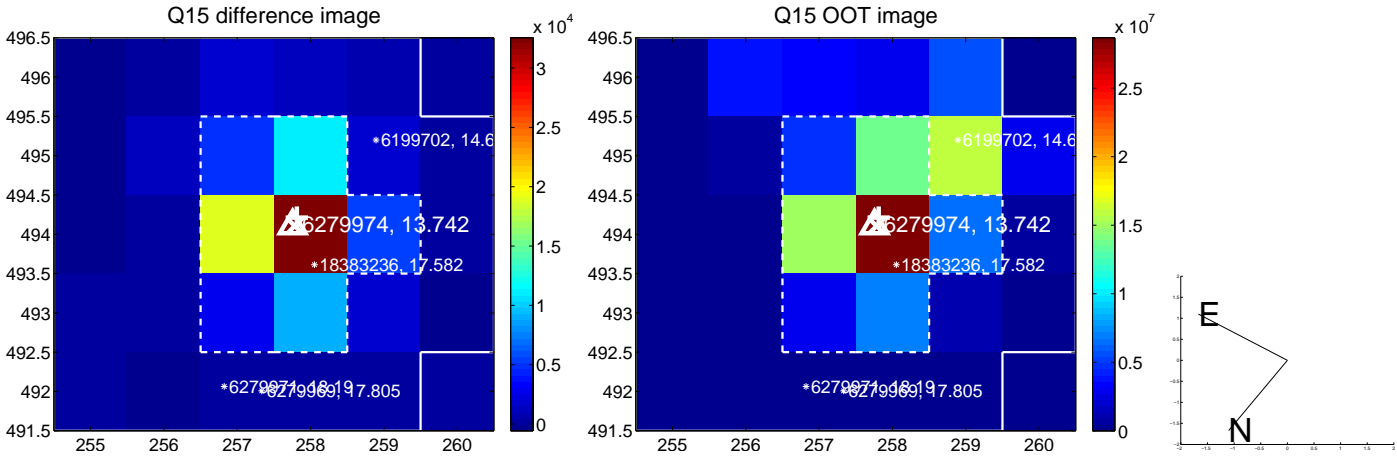
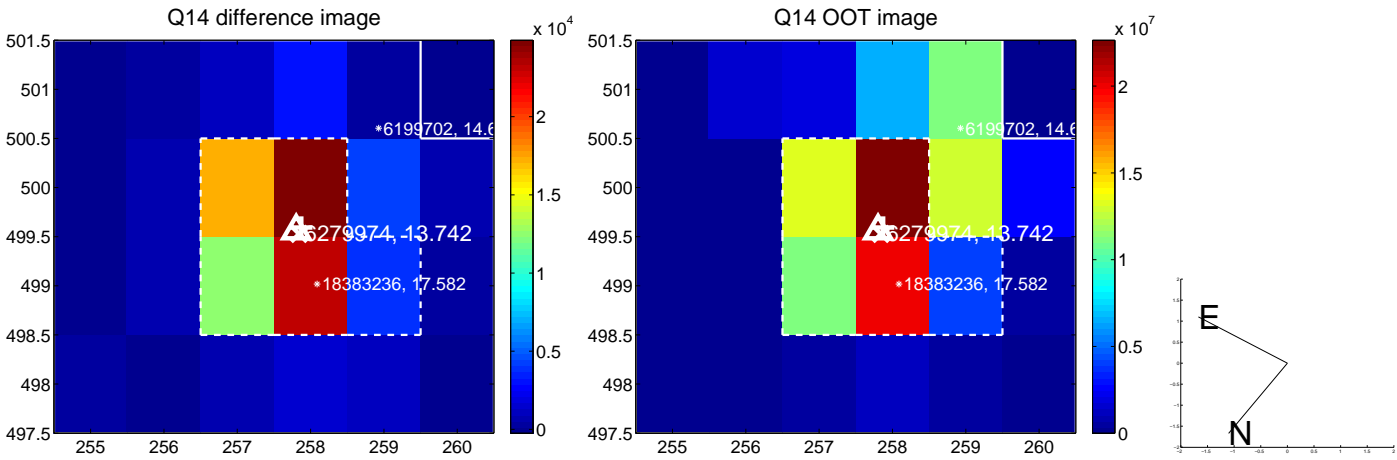
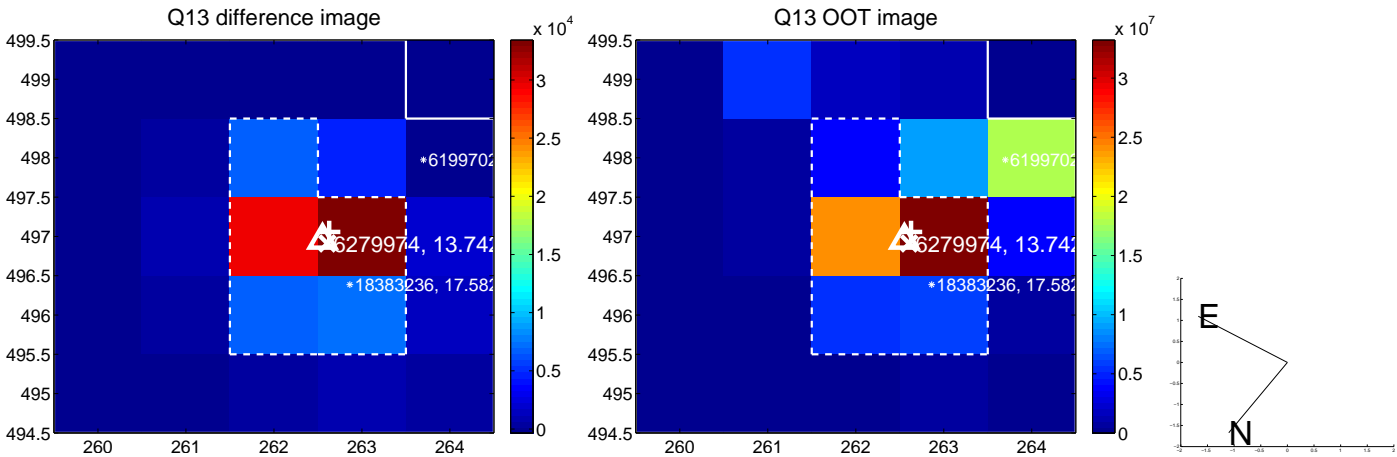
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



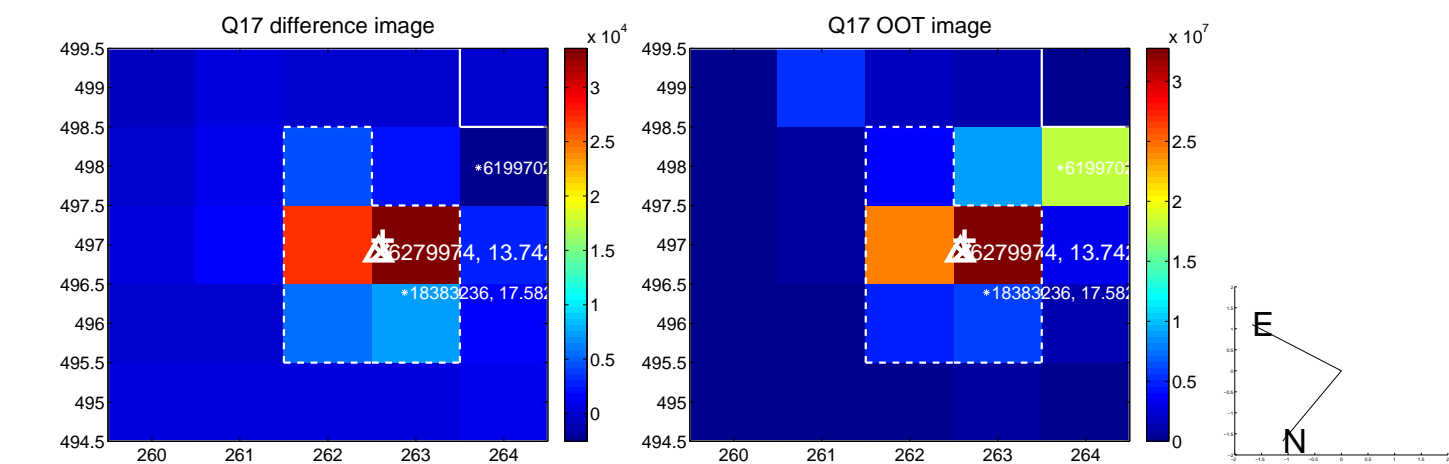
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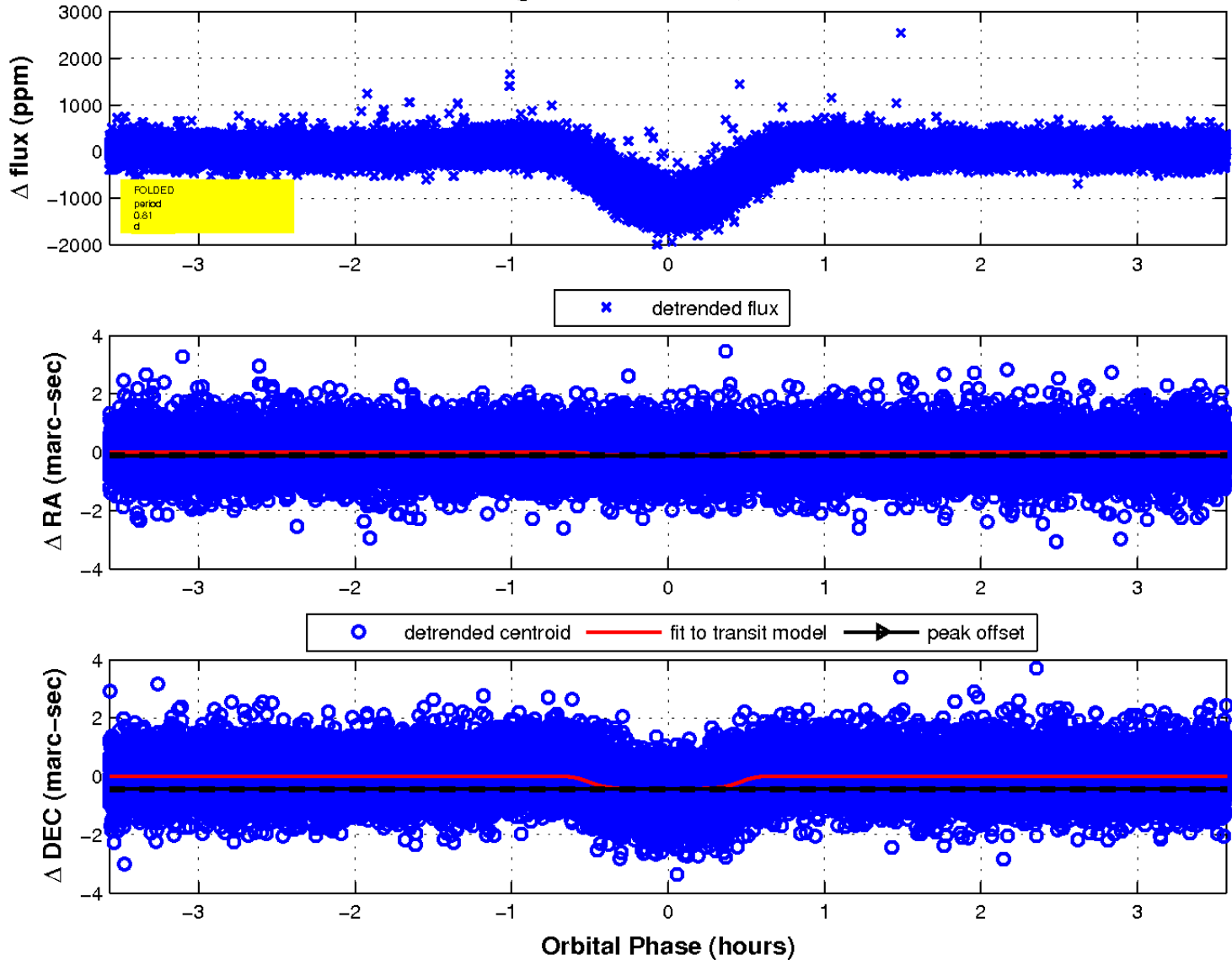
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

