

# KIC 011924426

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011924426-01	OBS	5944.01	64.713019	171.363247	308238.6	3.500	7444.5	-1.0	0.97	6175	44.07	12.82

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011924426-01	OBS	FP	0.00	0	1	0	0	MOD_ODDEVEN_ALT—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.

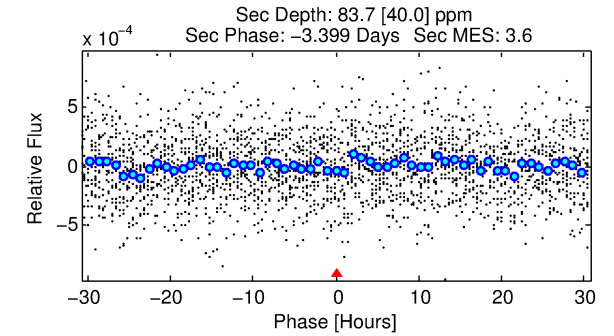
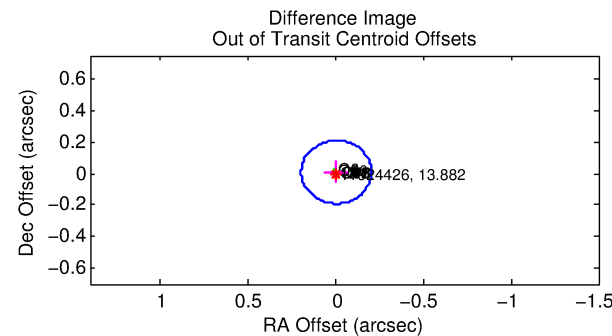
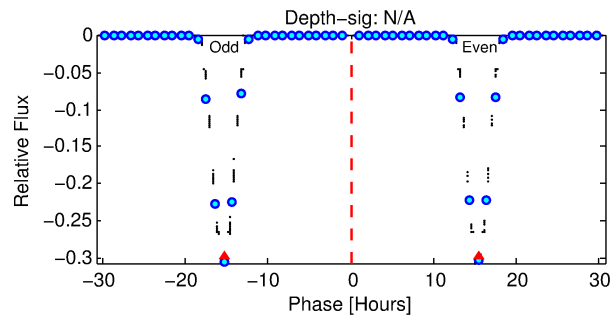
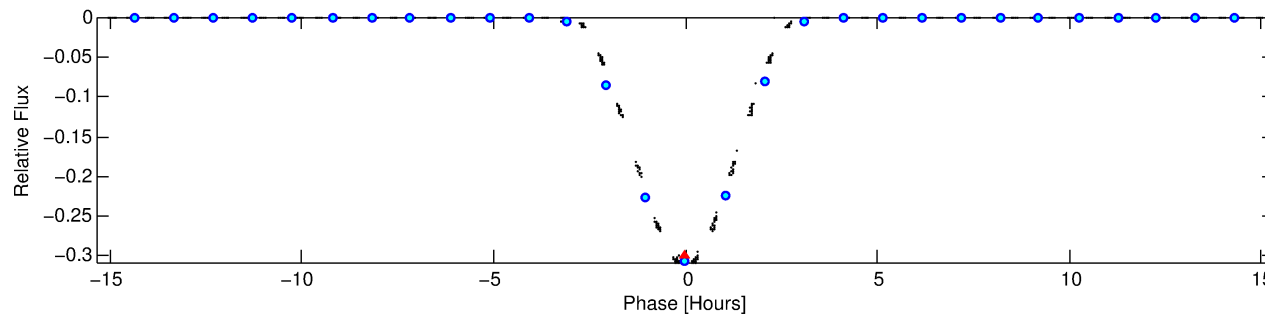
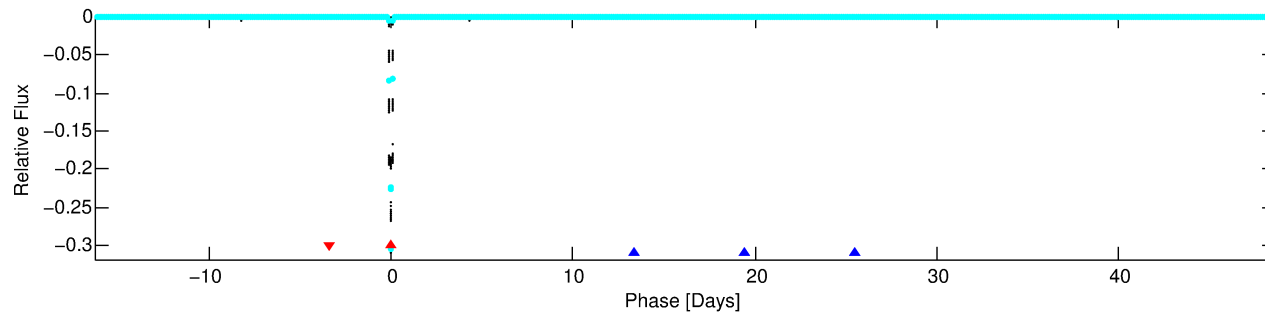
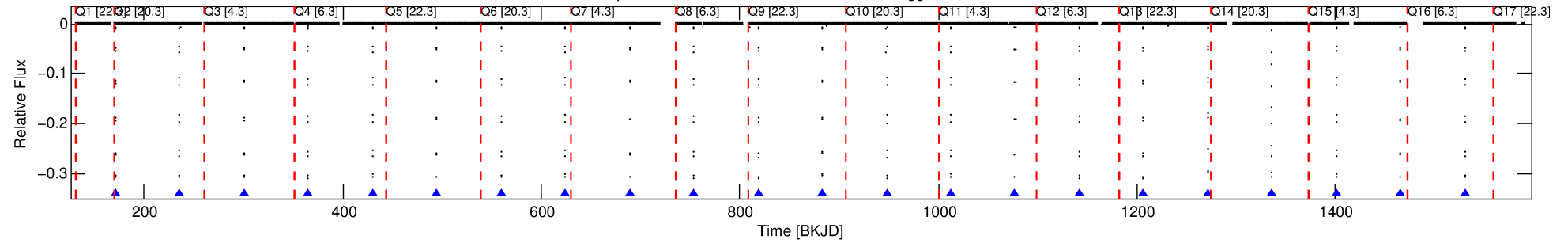
## Ephemeris Match Information For 011924426-01

No Significant Match Found

# DV One-Page Summary

KIC: 11924426 Candidate: 1 of 2 Period: 64.713 d  
KOI: K05944.01 Corr: 0.786

Kp: 13.88 R\*: 0.97 Rs Teff: 6175.0 K Logg: 4.44 Fe/H: -0.420



## TPS TCE Results:

Period = 64.71302 d  
Epoch = 171.3632 BKJD

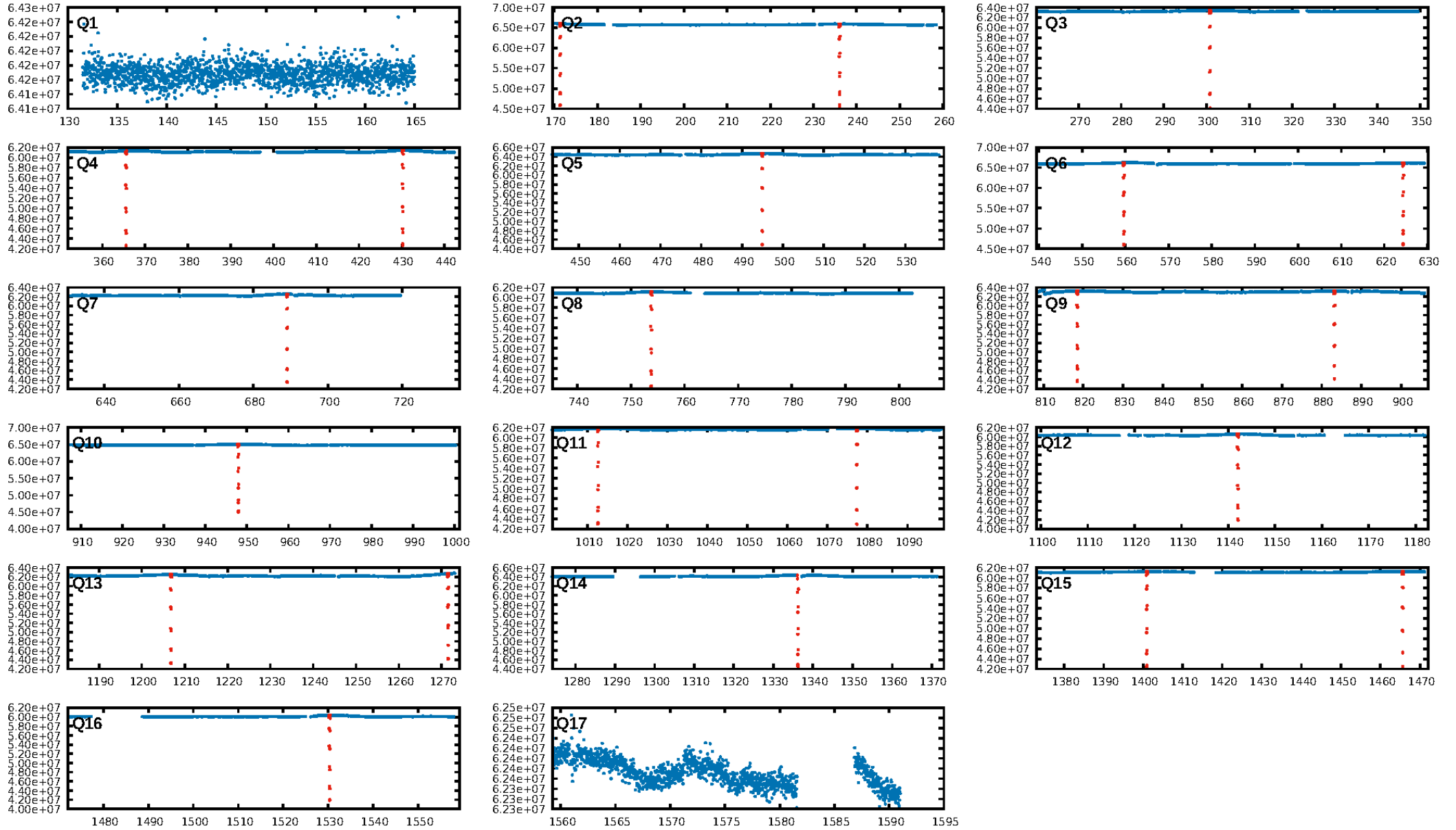
DV fit results are unavailable

## DV Diagnostic Results:

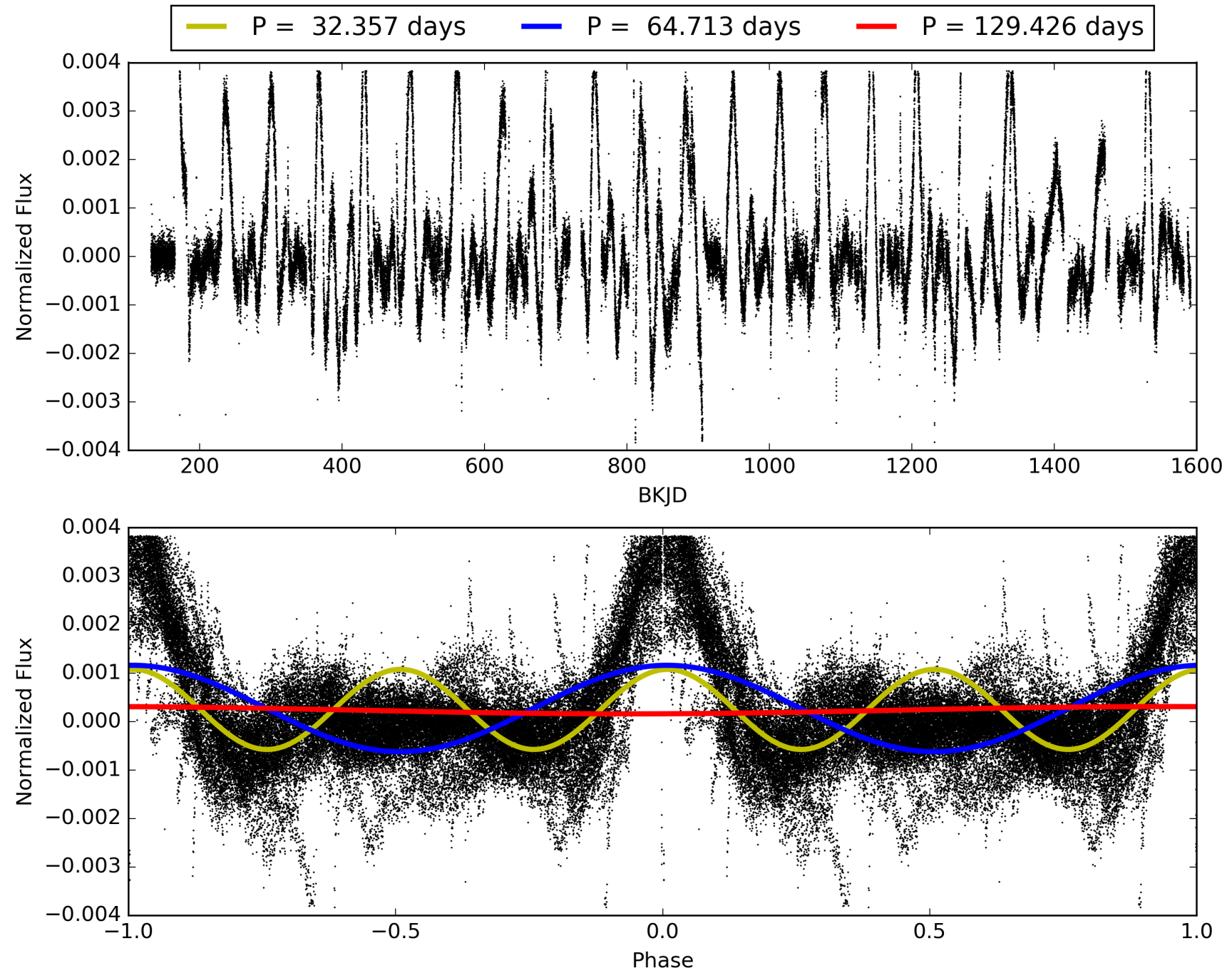
ShortPeriod-sig: N/A  
LongPeriod-sig: 100.0% [998.59σ]  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [22/22]  
GhostDiagnostic-chr: 11.11

Centroid-sig: 0.0%  
Centroid-so: 0.472 arcsec [501.24σ]  
OotOffset-rm: 0.011 arcsec [0.16σ]  
KicOffset-rm: 0.021 arcsec [0.31σ]  
OotOffset-st: 3/4/4/3 [14]  
KicOffset-st: 3/4/4/3 [14]  
DiffImageQuality-fgm: 1.00 [14/14]  
DiffImageOverlap-fno: 1.00 [14/14]

# TCE 011924426-01, PDC Light Curves

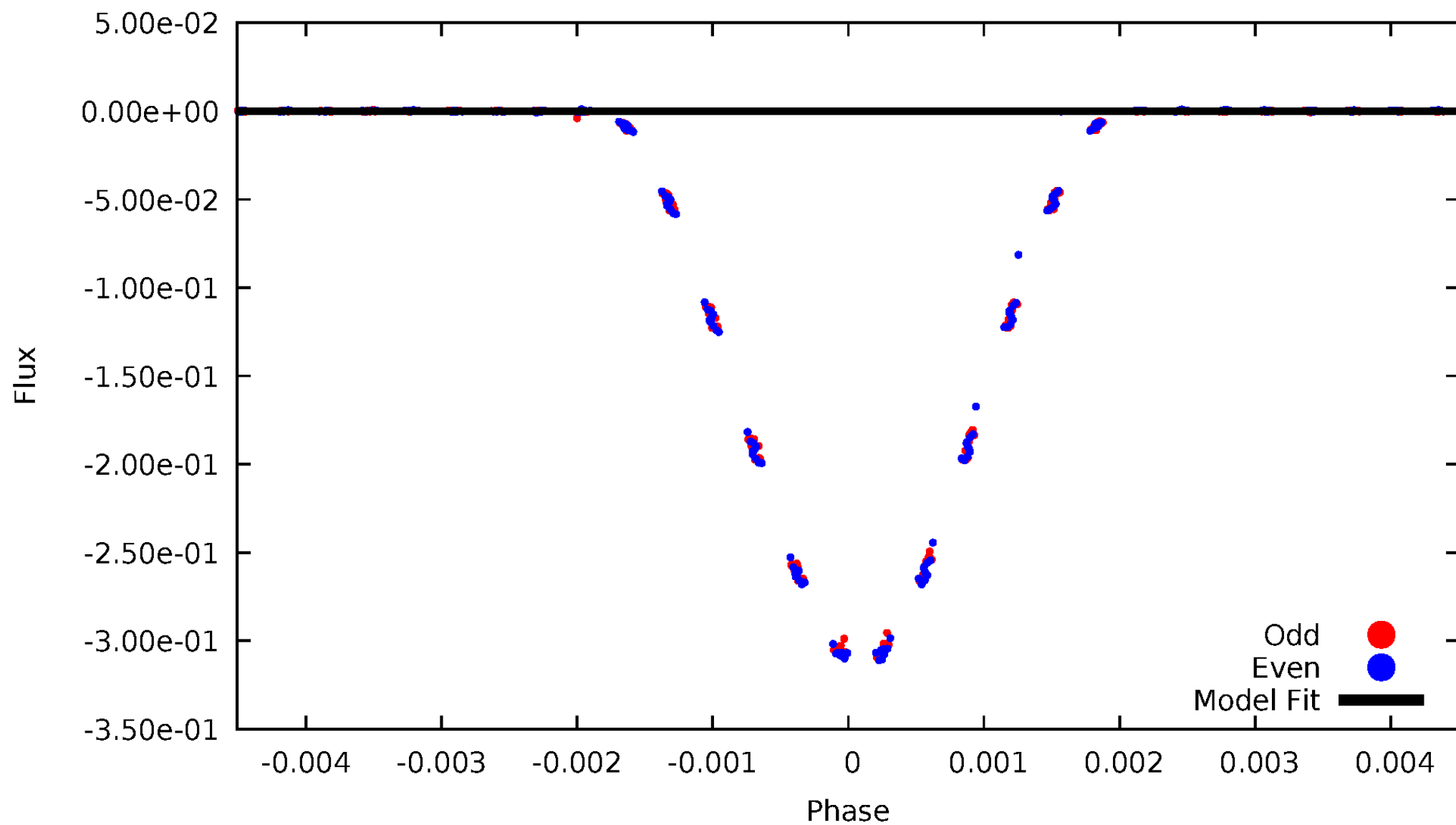


TCE 011924426-01



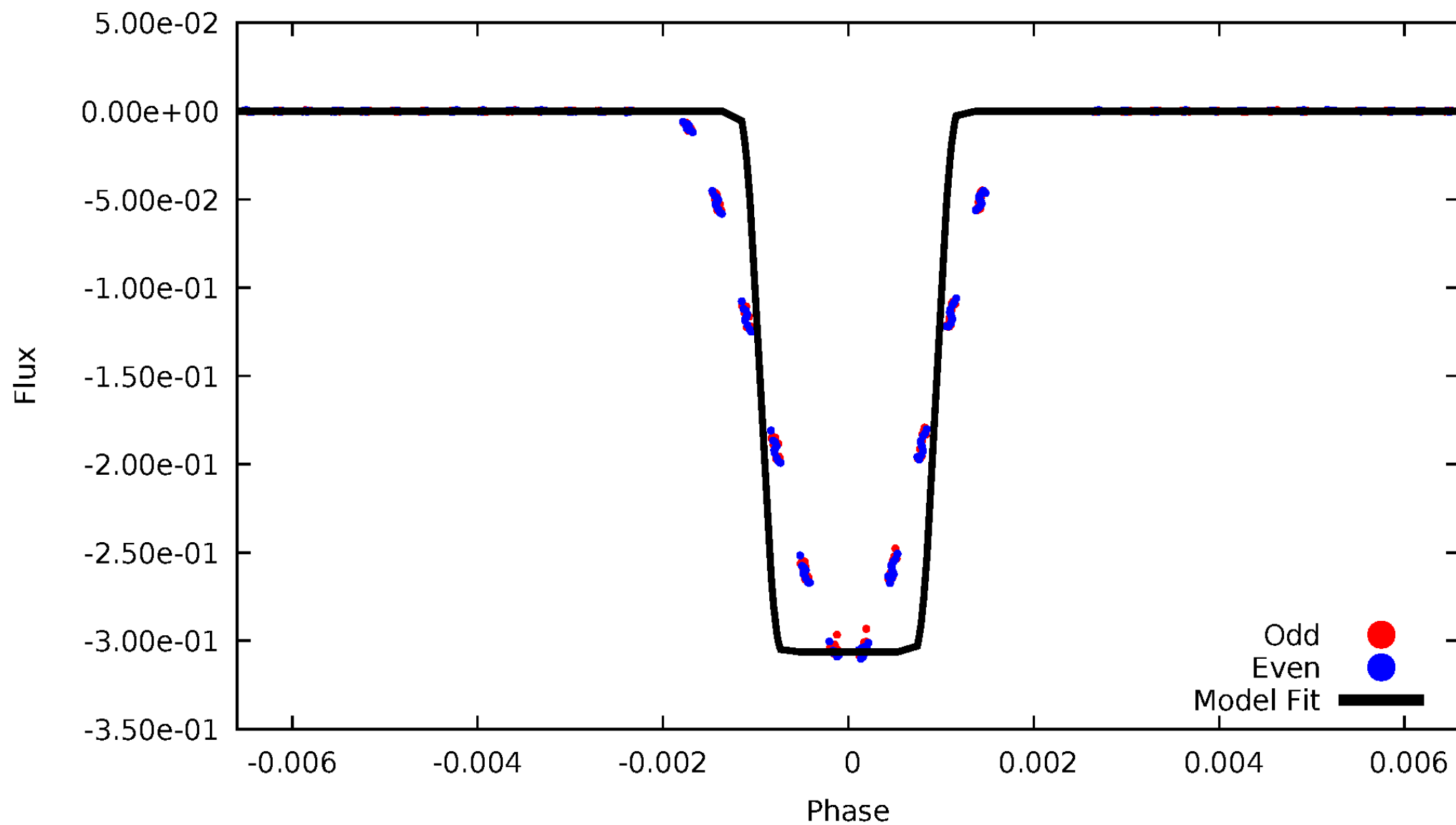
# DV Odd/Even

TCE 011924426-01



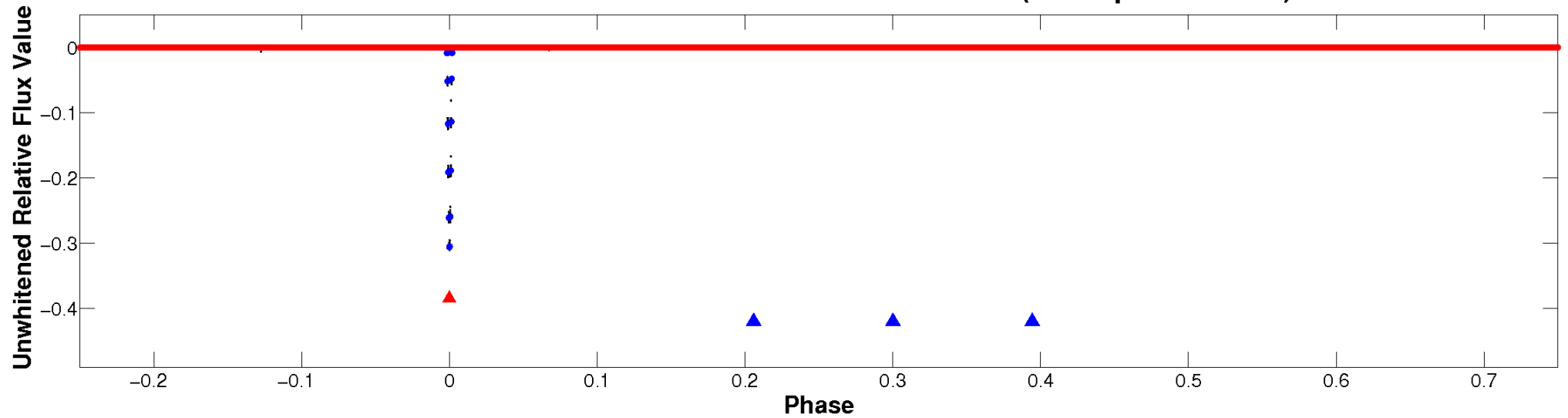
# ALT Odd/Even

TCE 011924426-01



# Non-Whitened Vs. Whitened Light Curve

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

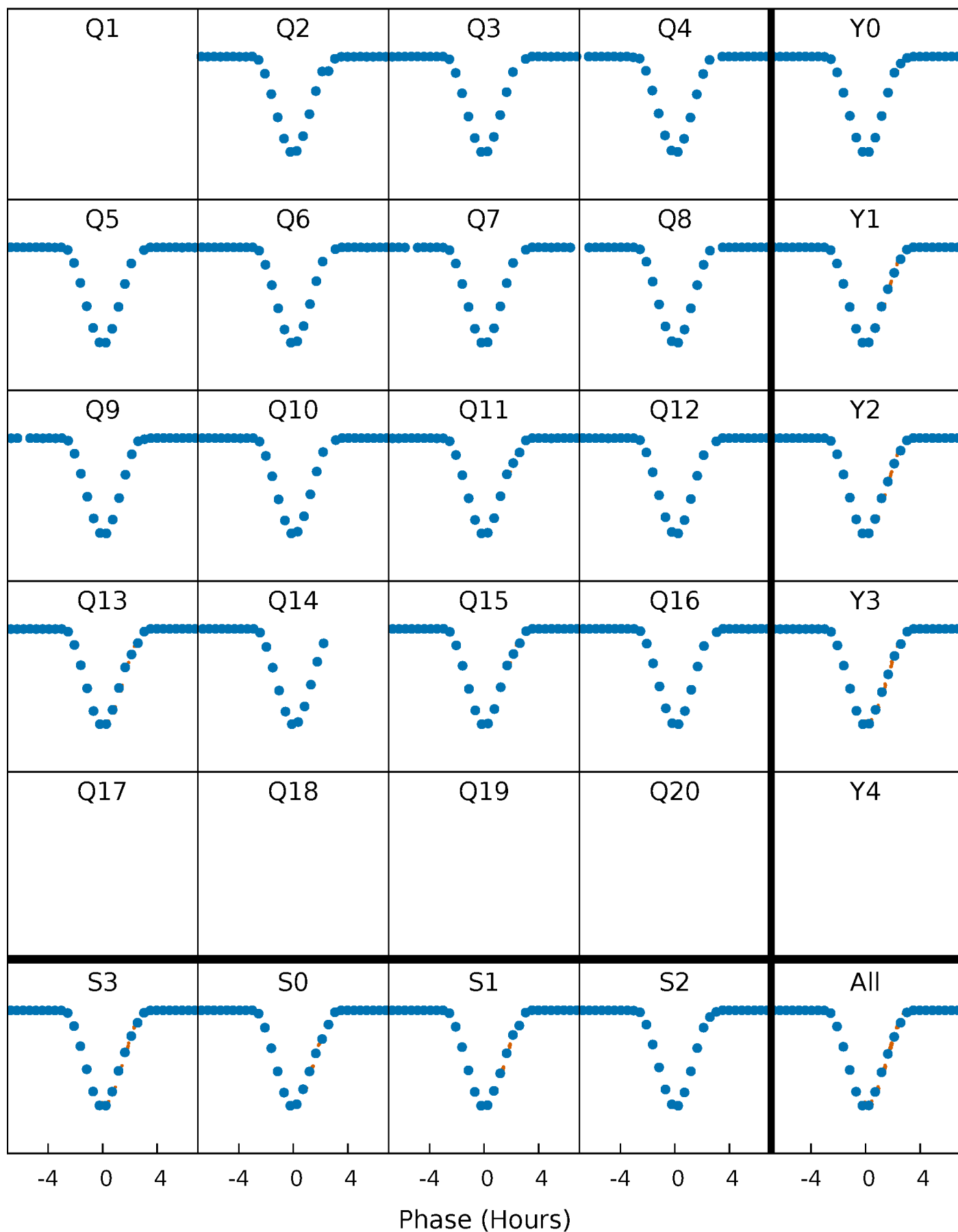


**Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)**



# PDC Quarter-Phased Transit Curves

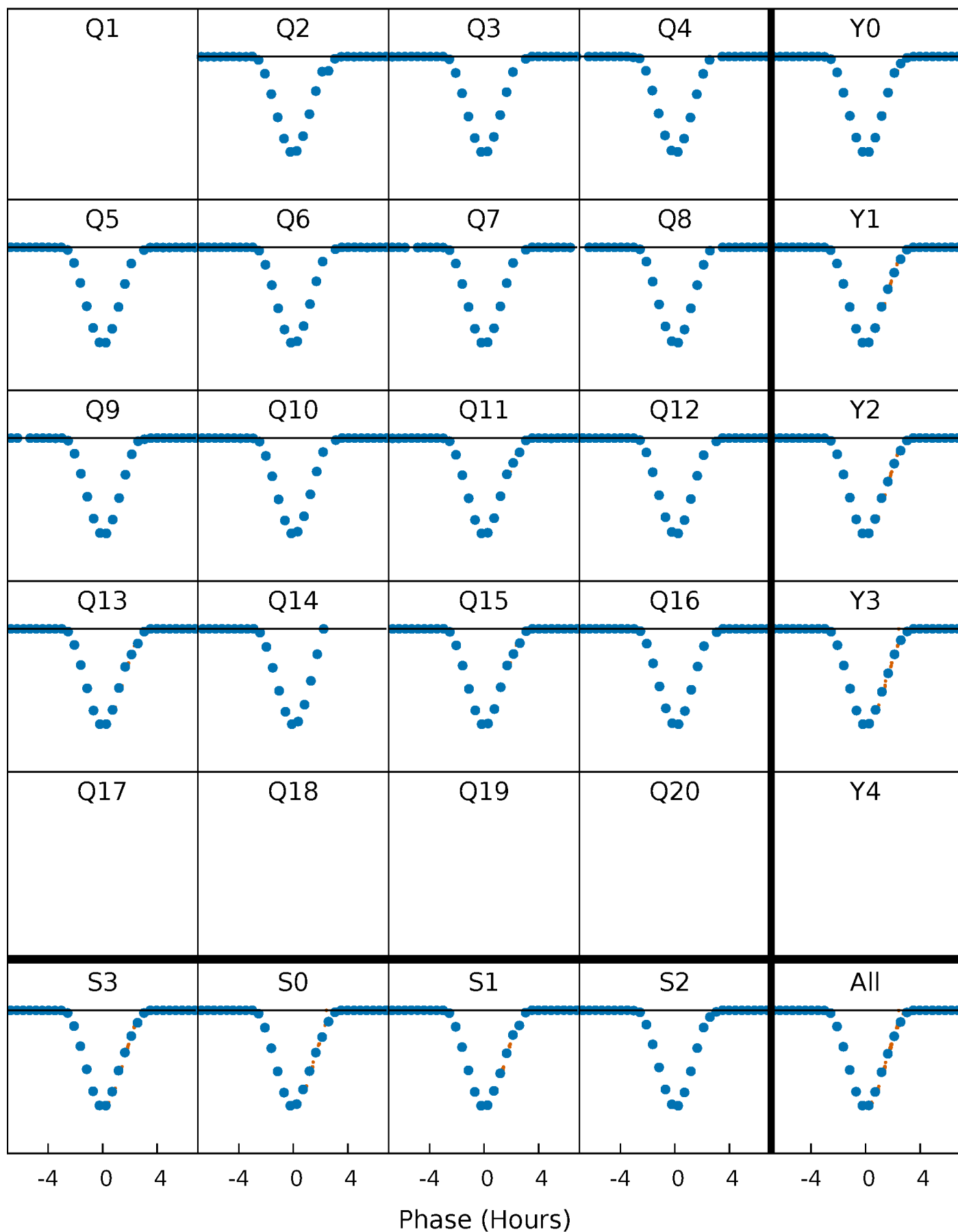
TCE 011924426-01 P= 64.713019 Days  $T_0=171.363247$  (BKJD)





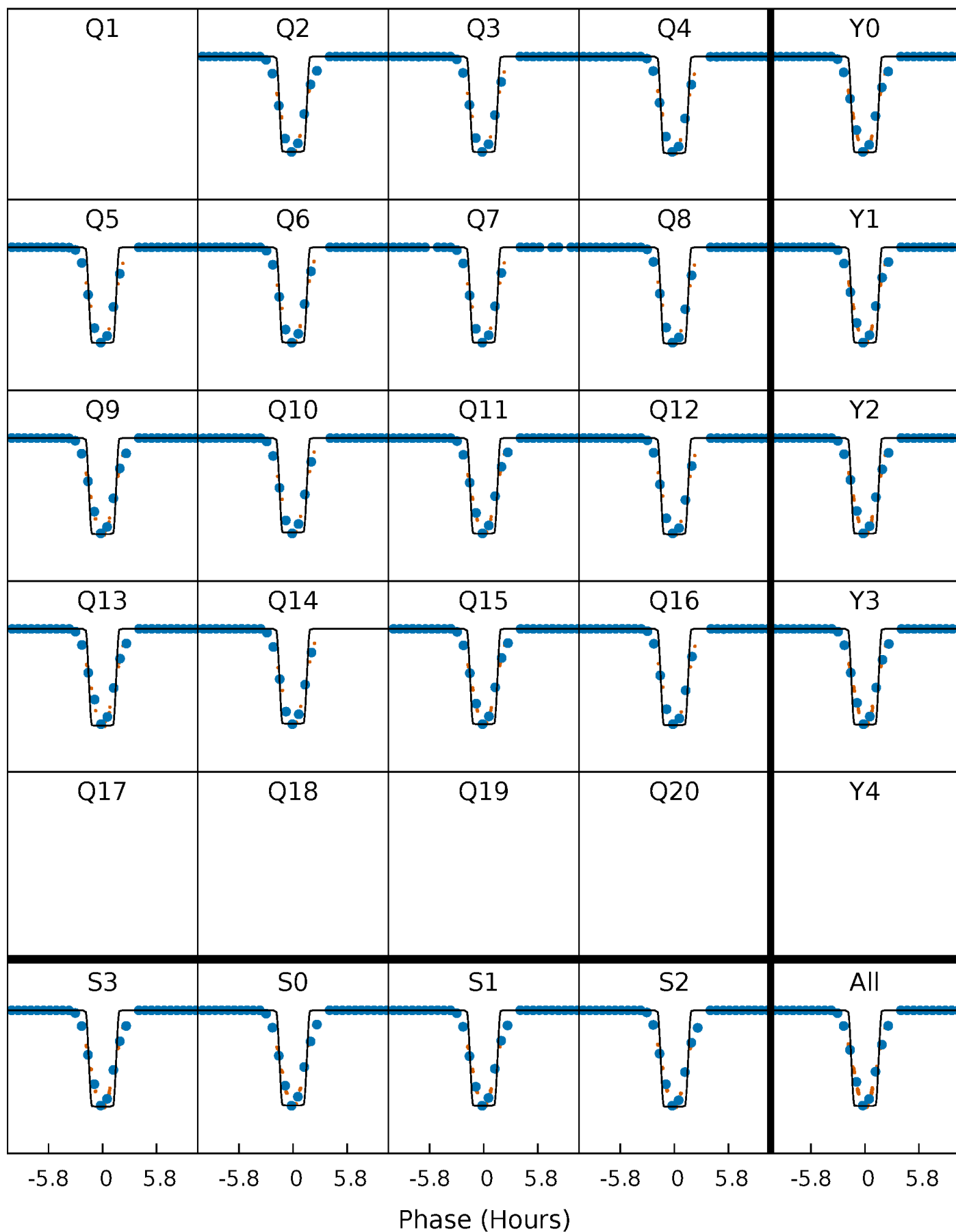
# DV Quarter-Phased Transit Curves

TCE 011924426-01 P= 64.713019 Days  $T_0=171.363247$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

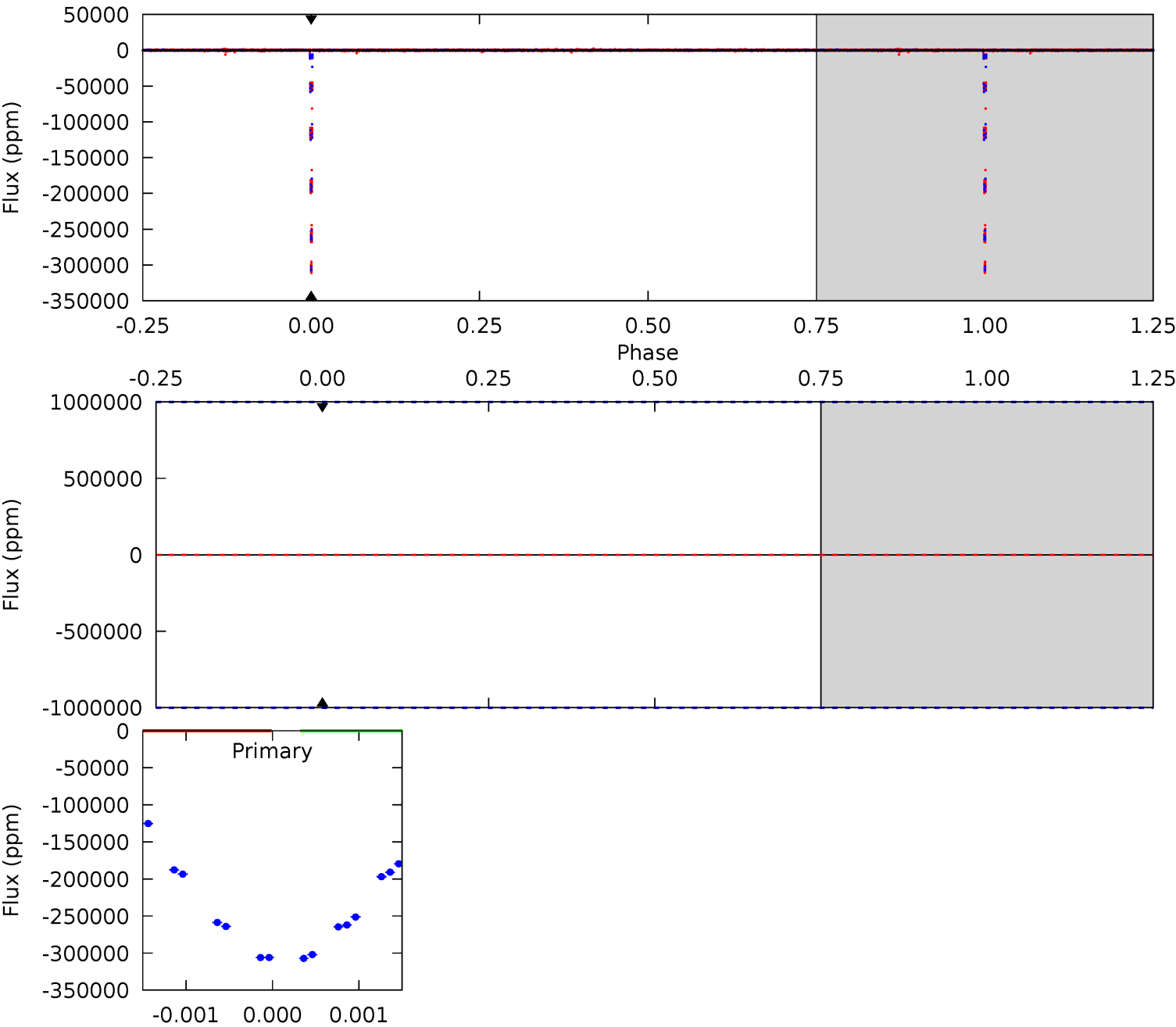
TCE 011924426-01 P= 64.713019 Days  $T_0=171.369206$  (BKJD)



# DV Model-Shift Uniqueness Test

011924426-01, P = 64.713019 Days, E = 106.650228 Days

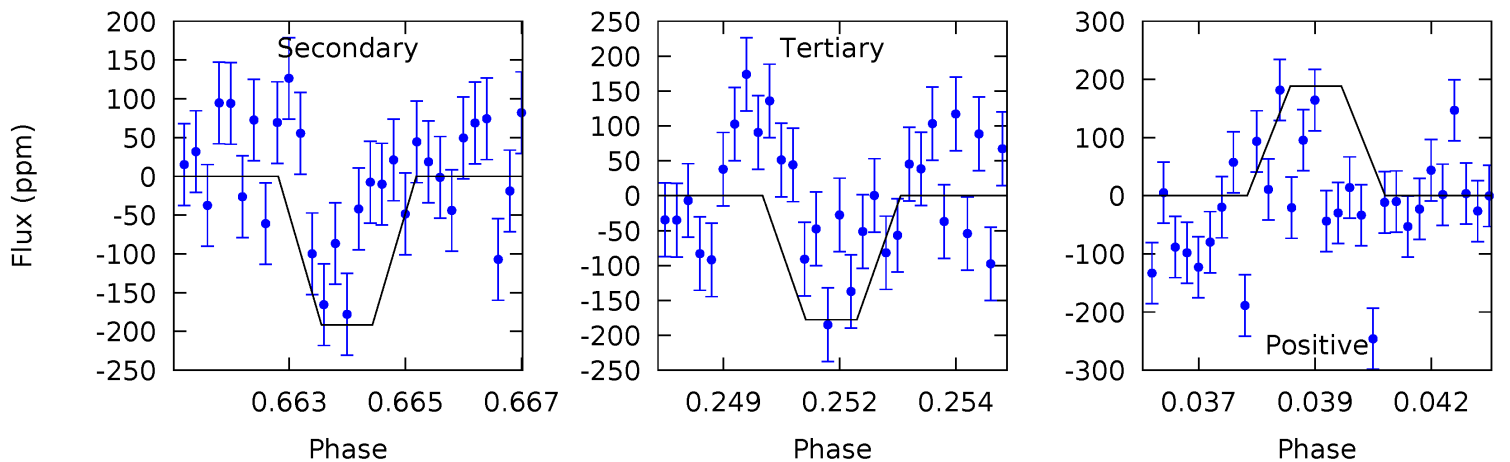
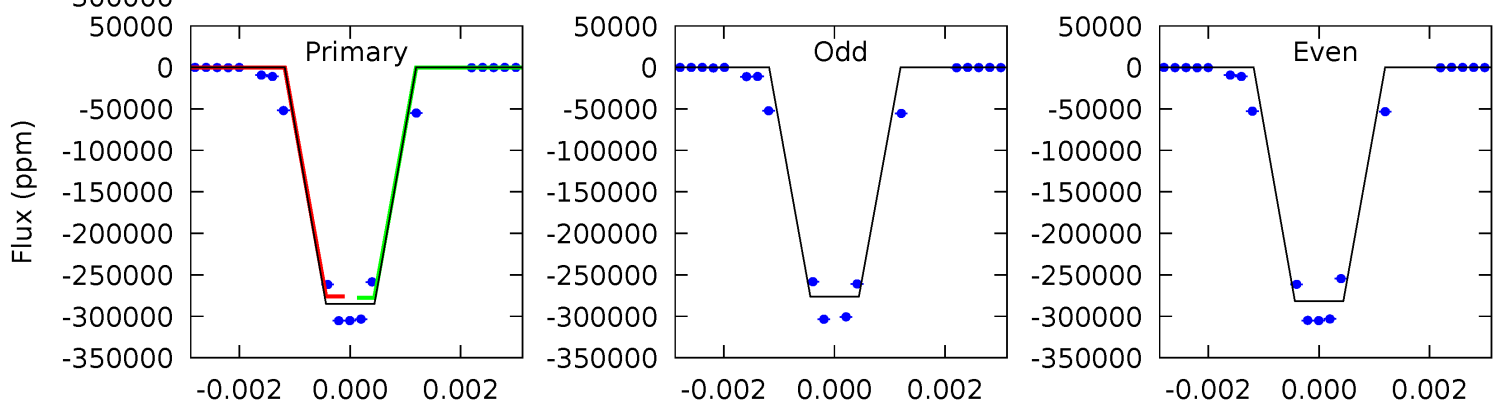
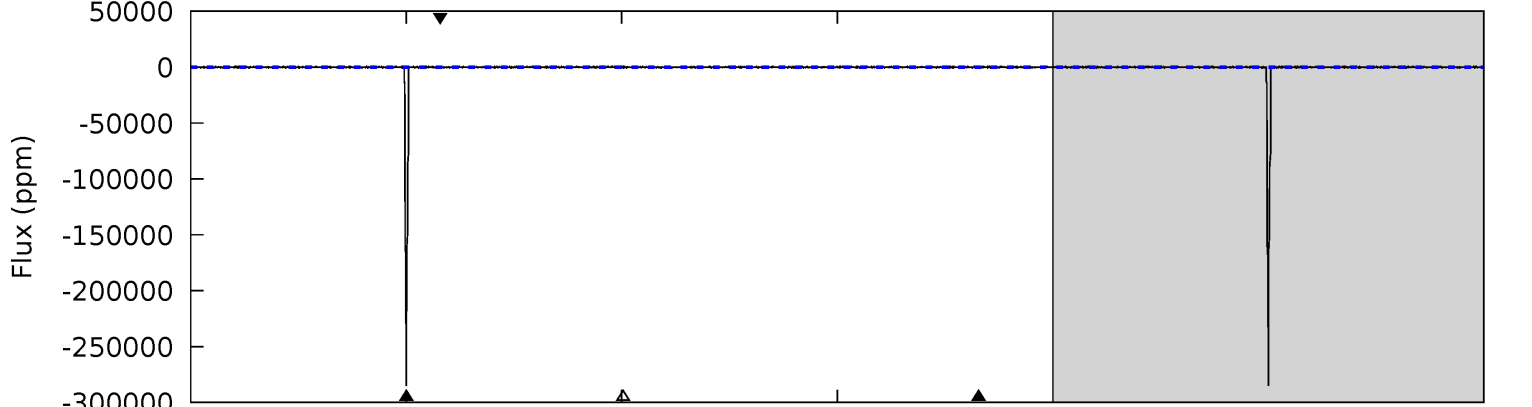
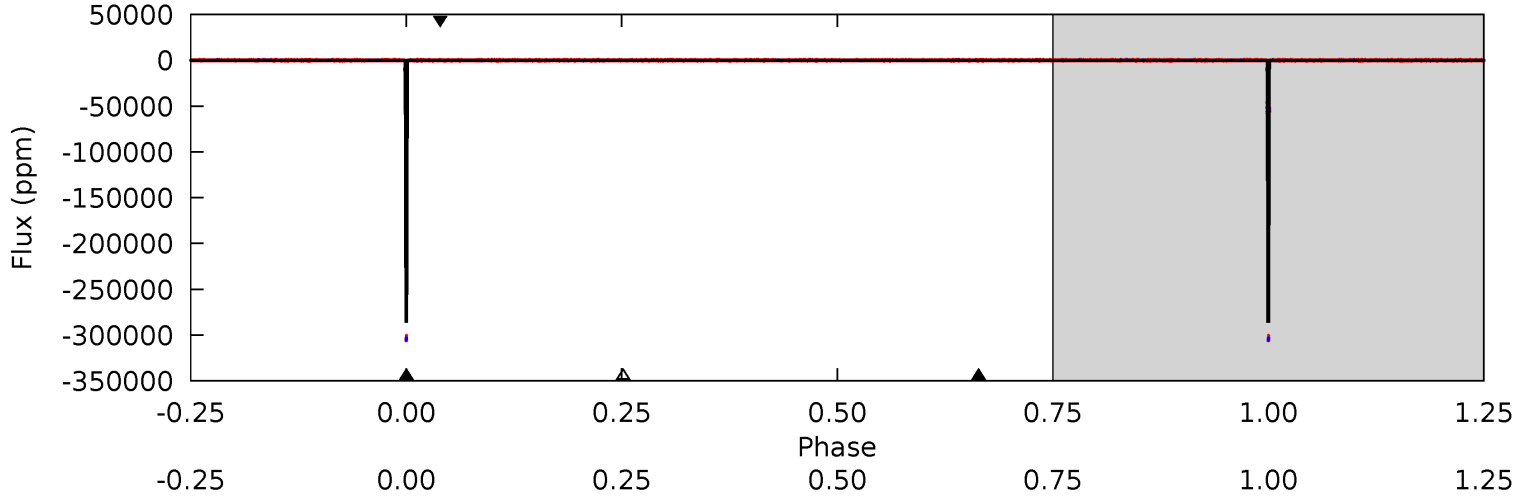
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



# Alt Model-Shift Uniqueness Test

011924426-01, P = 64.713019 Days, E = 106.656187 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
6085	4.09	3.79	4.02	5.30	3.05	11.3	6081	6081	0.29	0.07	59.3	1.00	0.00	0



### Stellar Parameters For KIC 011924426

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6175^{+166}_{-185}$	$4.440^{+0.084}_{-0.196}$	$-0.420^{+0.300}_{-0.300}$	$0.974^{+0.289}_{-0.124}$	$0.952^{+0.127}_{-0.104}$	$1.452^{+0.530}_{-0.750}$
	+3%/-3%	+2%/-4%	+71%/-71%	+30%/-13%	+13%/-11%	+37%/-52%
Source	PHO1	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 011924426-01 / KOI 5944.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$0 \pm 1000000$	$45.73^{+13.21}_{-11.99}$	$681^{+51}_{-32}$	$-3742^{+9349}_{-1917}$	$-328.666^{+3338.252}_{-2600.957}$
Alt.	$-191 \pm 47$	$61.05^{+13.08}_{-12.29}$	$684^{+49}_{-33}$	$1956^{+116}_{-102}$	$2.707^{+1.786}_{-1.118}$

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

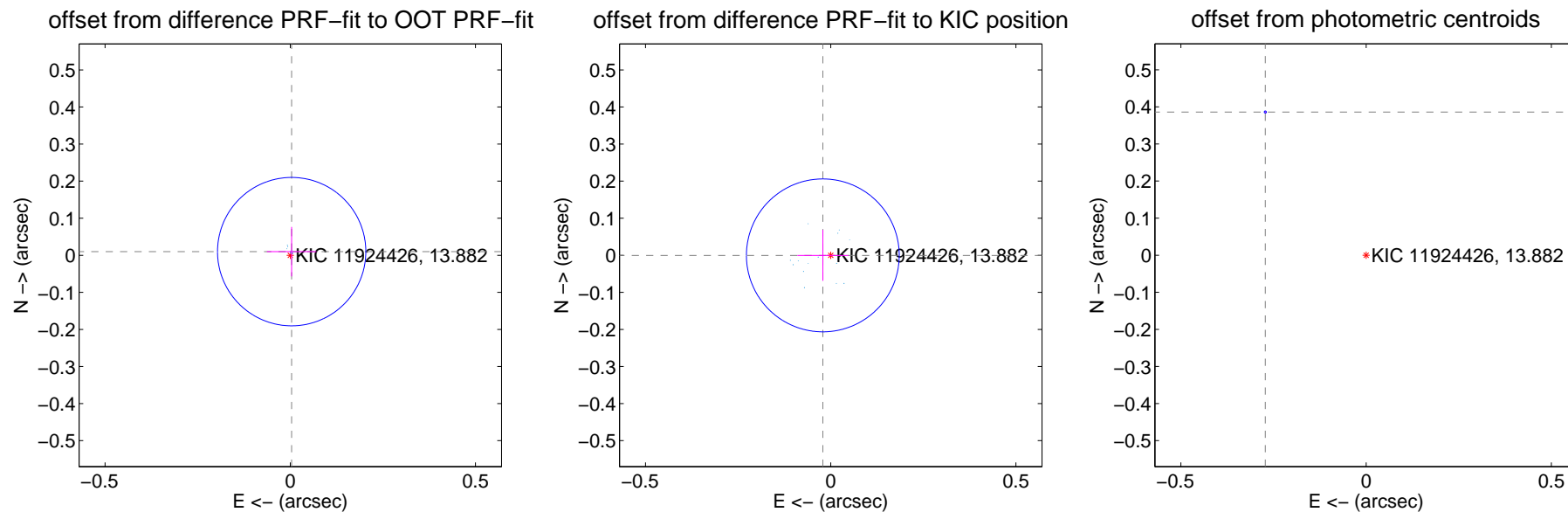
## DV Centroid Data

Supplemental centroid analysis for 011924426-01. Kepler magnitude: 13.88. Transit SNR -1.00

There are 14 quarters with good PRF difference image offsets

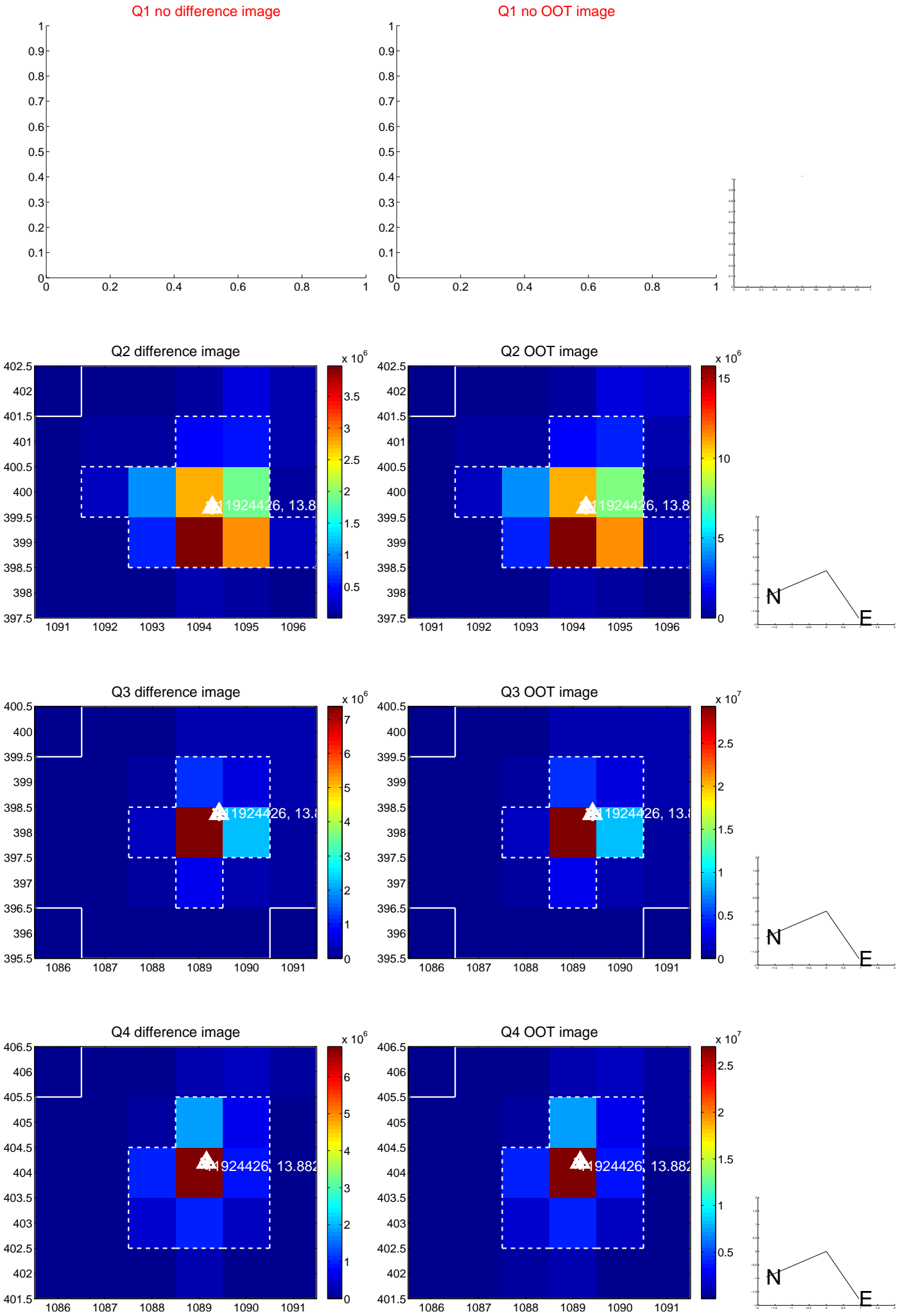
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.011 \pm 0.067$	0.16	$-0.004 \pm 0.067$	$0.010 \pm 0.067$
PRF-fit source offset from KIC position	$0.021 \pm 0.069$	0.31	$0.021 \pm 0.069$	$-0.000 \pm 0.069$
photometric centroid source offset	$0.47 \pm 0.00$	501.24	$0.27 \pm 0.00$	$0.39 \pm 0.00$

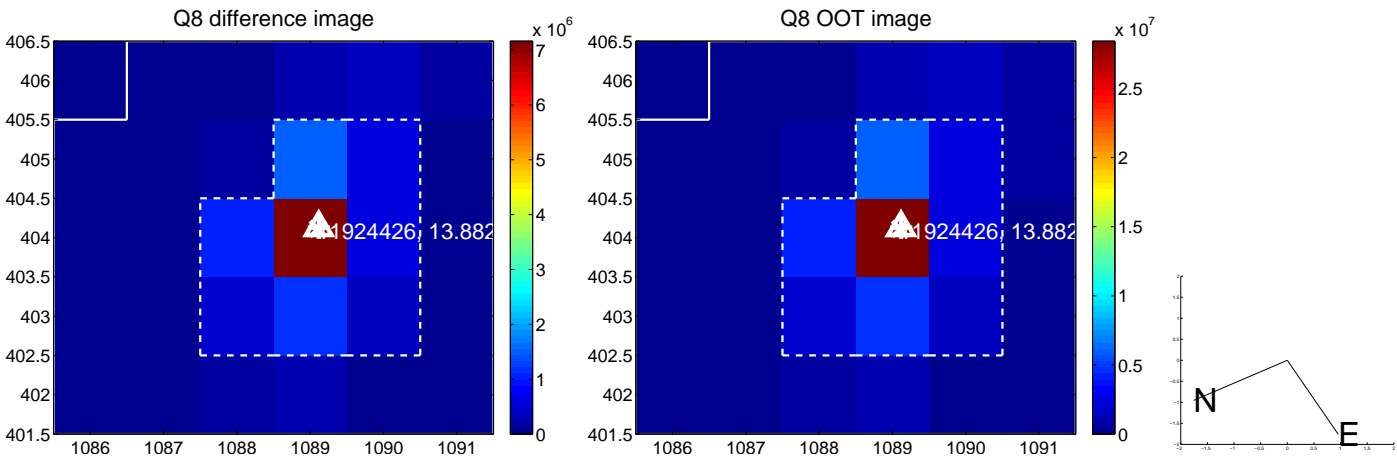
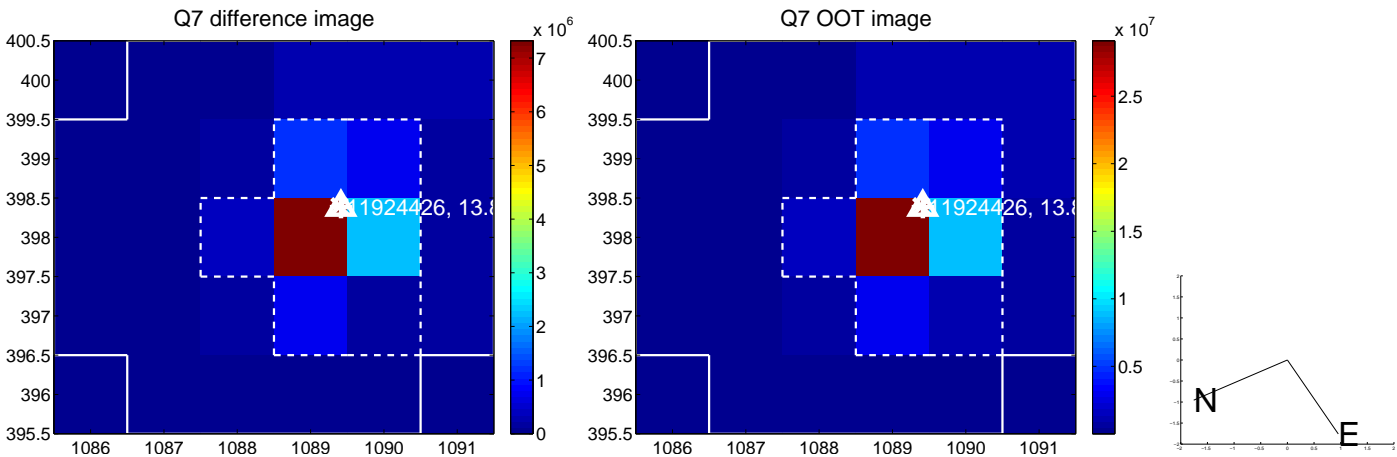
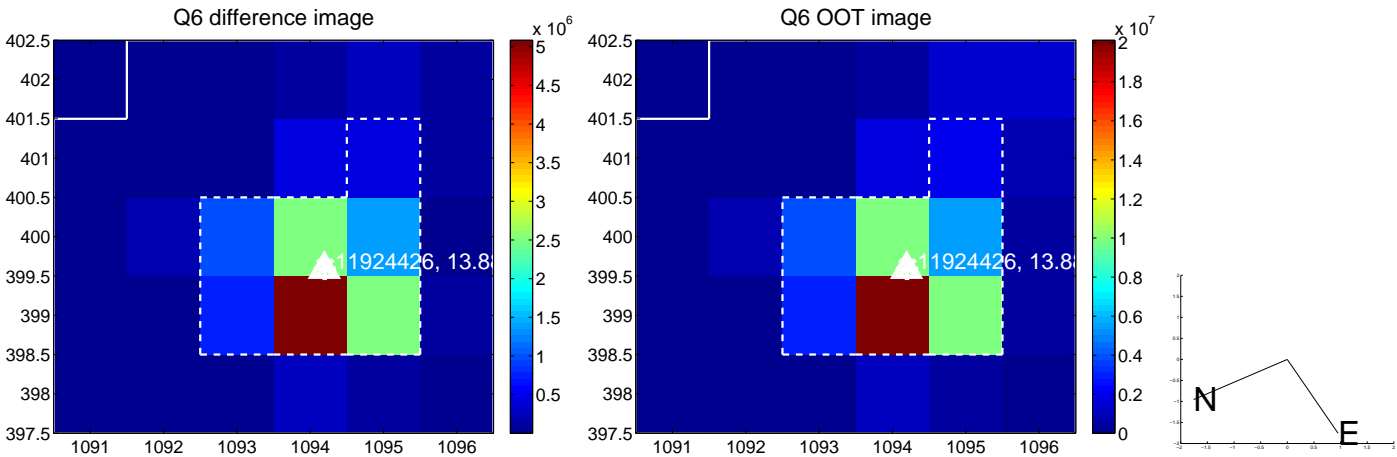
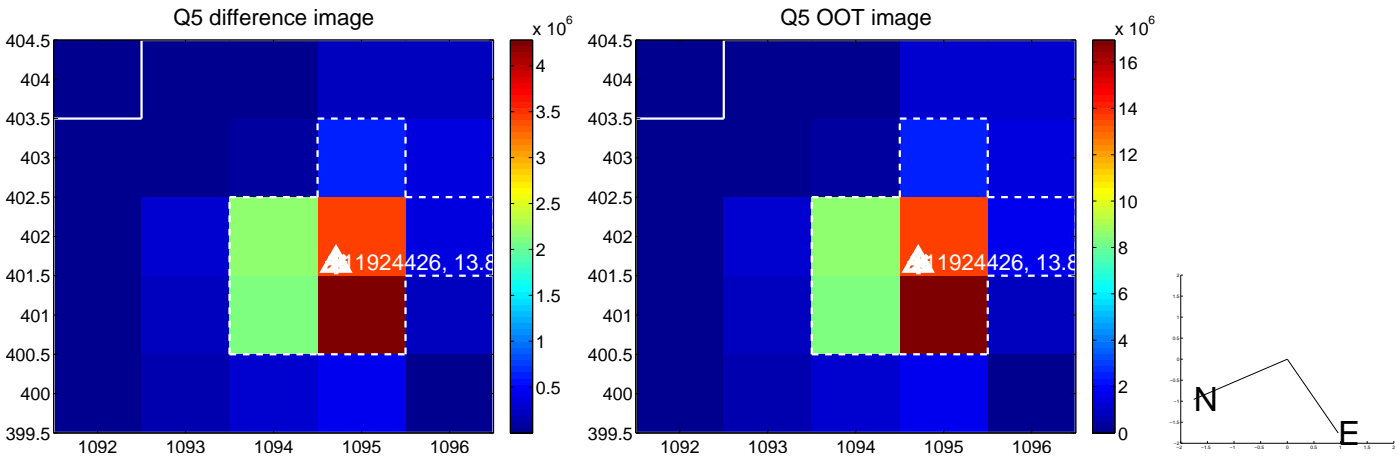


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

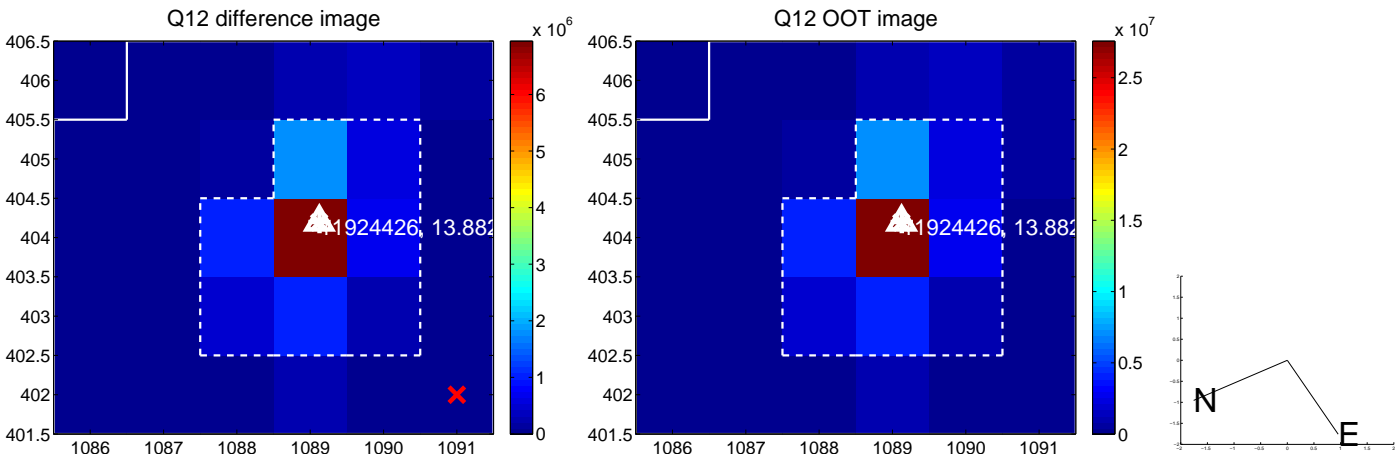
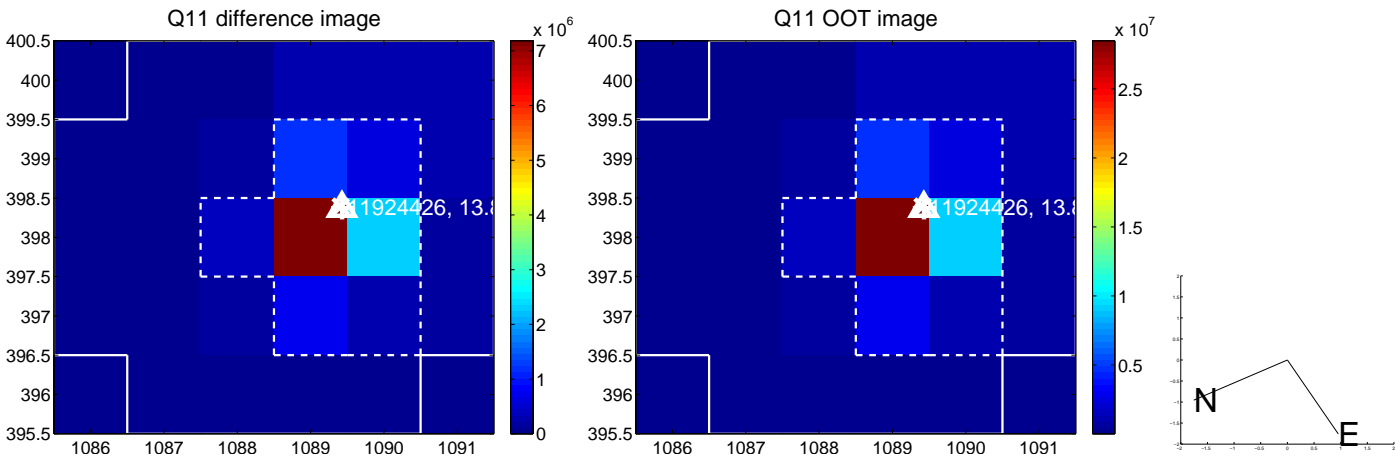
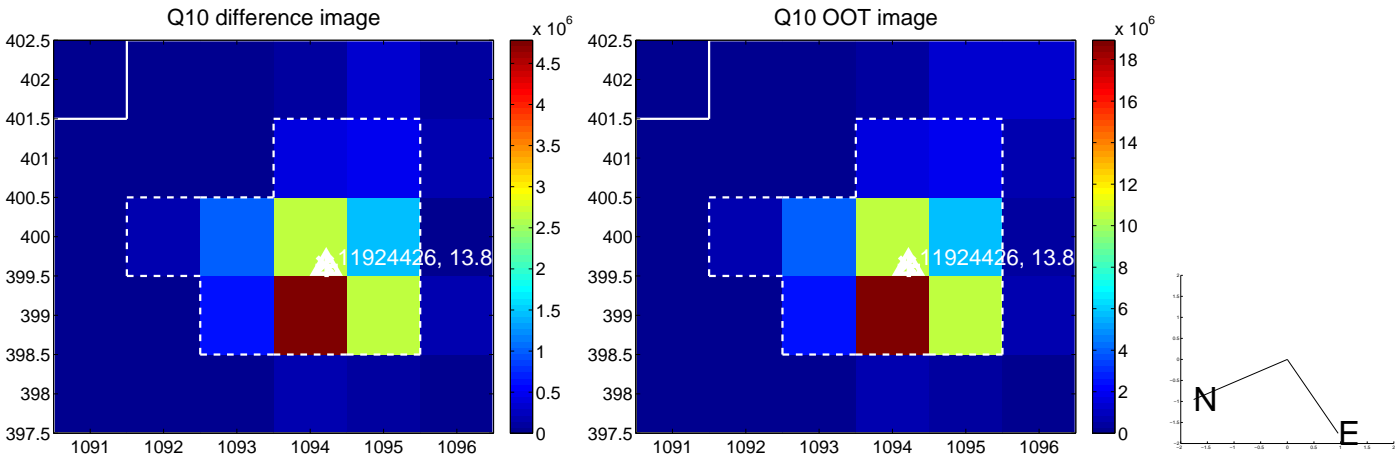
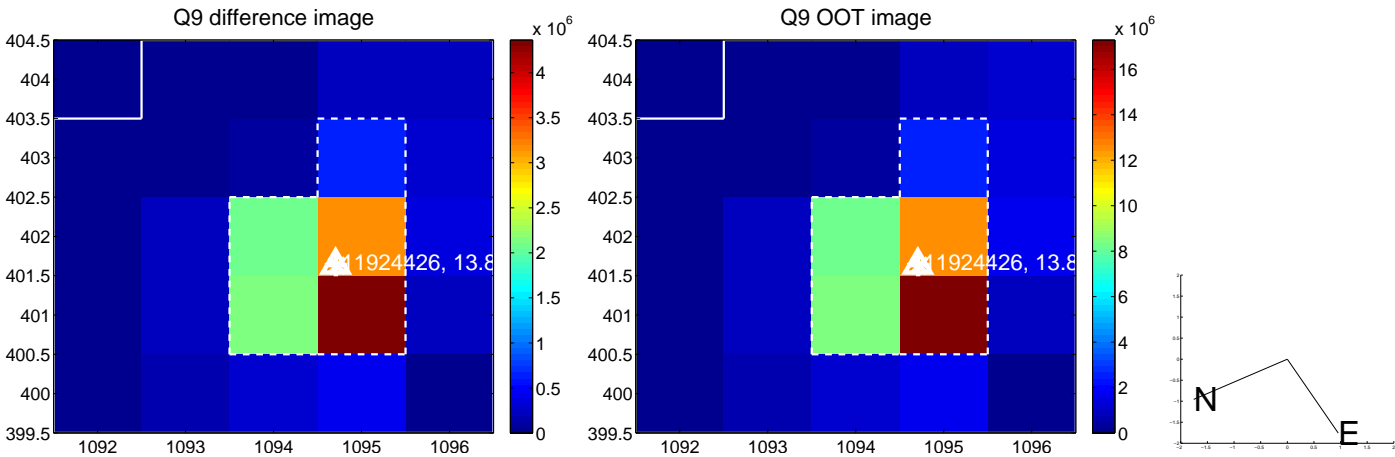


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

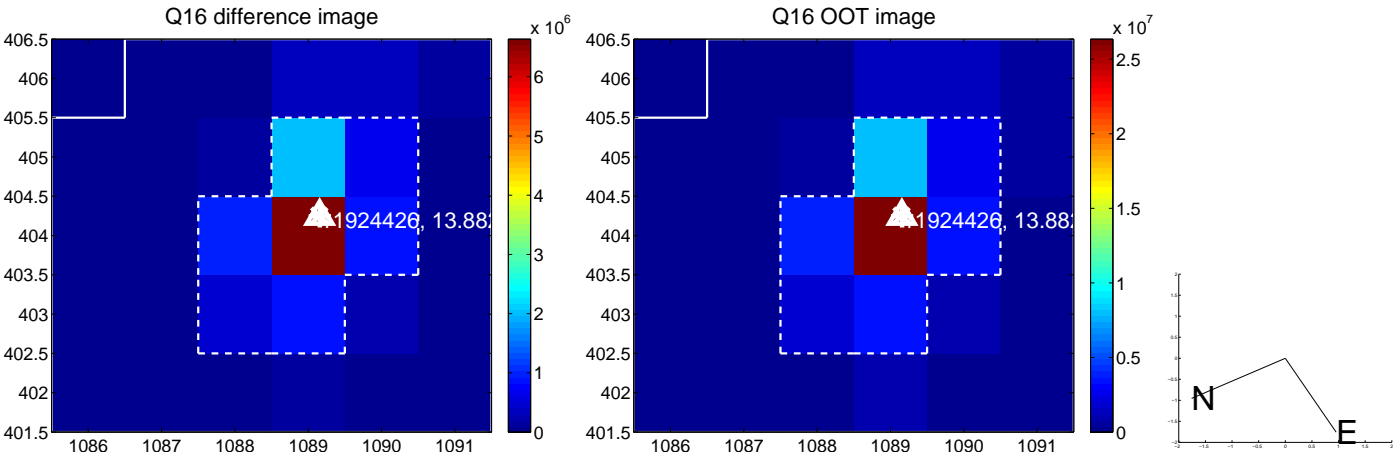
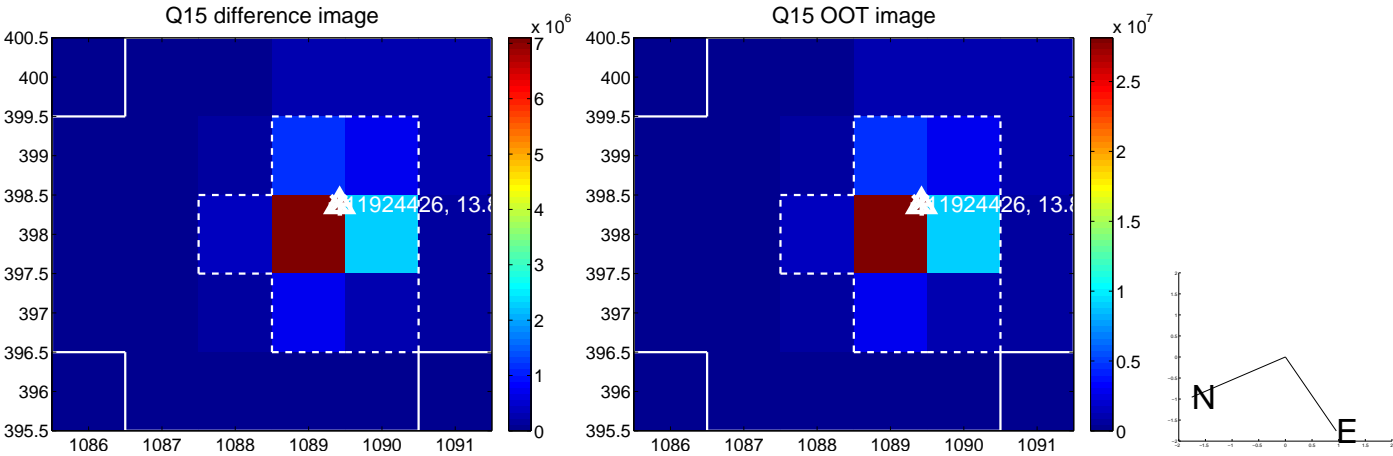
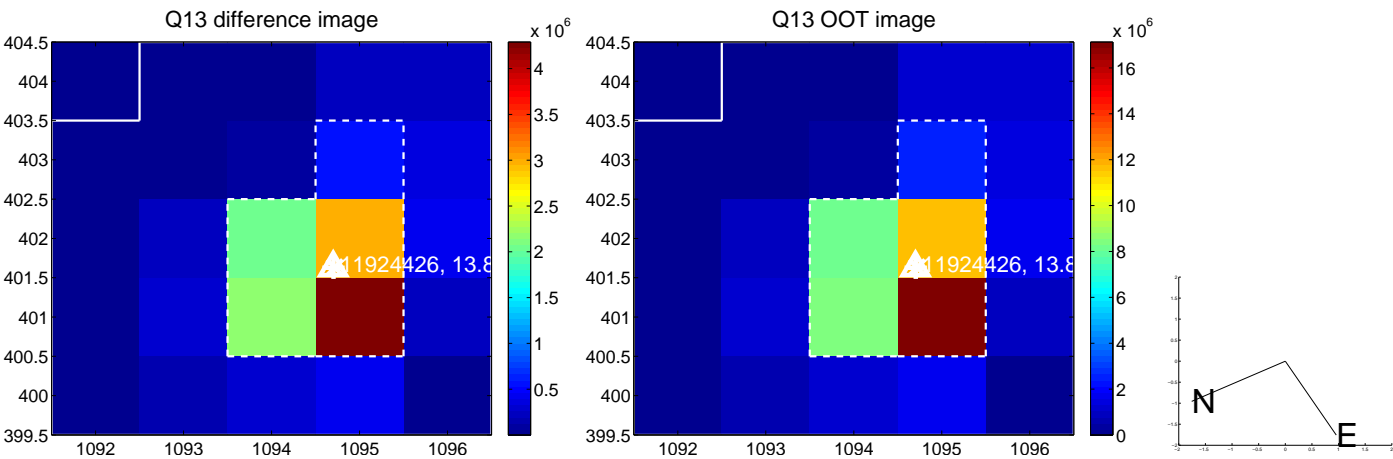




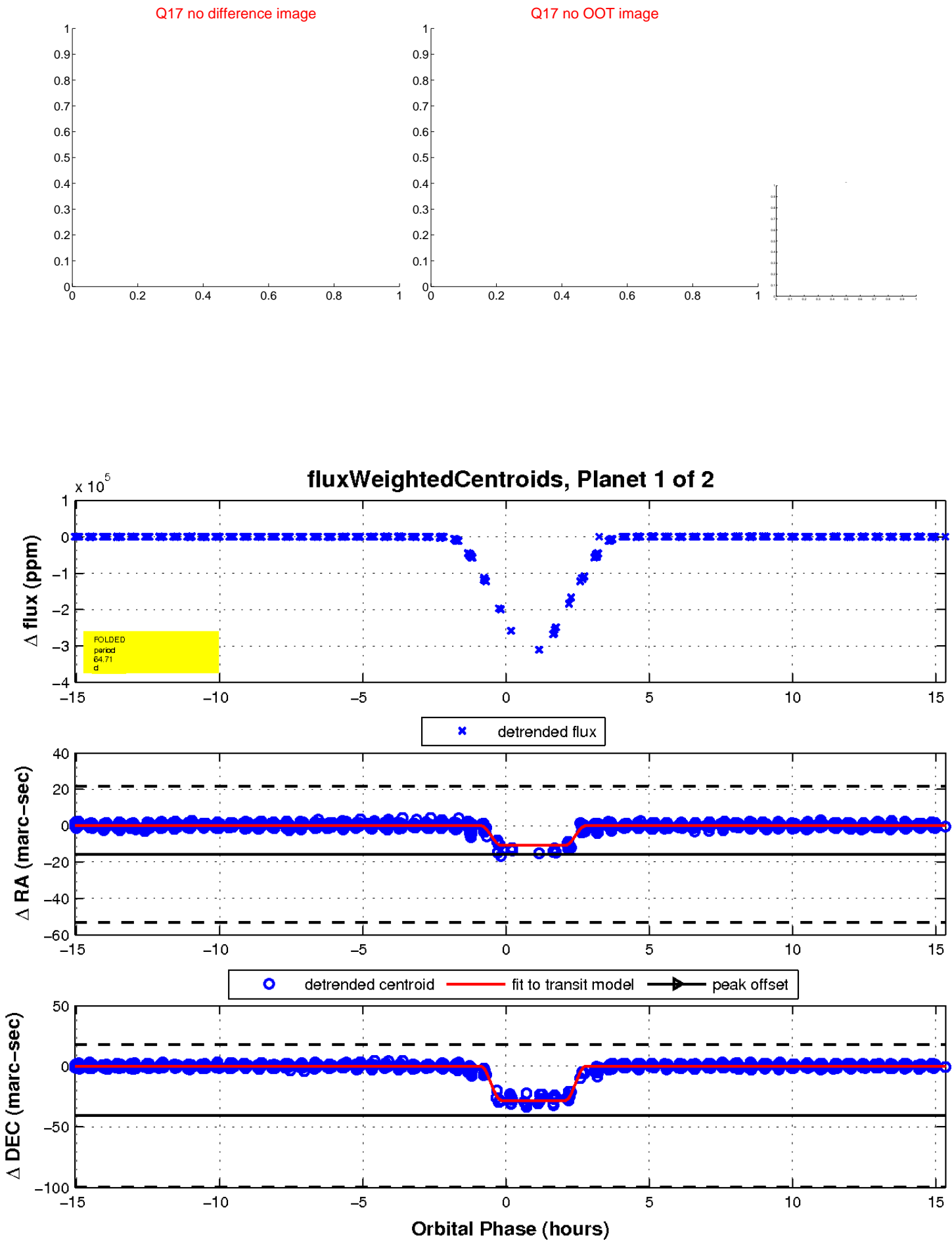
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white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



UKIRT Image

Declination

