

# KIC 004848423

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
004848423-01	OBS	3560.01	1.501830	131.537884	405955.8	5.769	23665.3	15369.7	1.29	6327	93.07	3118.30

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004848423-01	OBS	FP	0.00	0	1	0	0	MOD_ODDEVEN_DV—DEEP_V_SHAPED

**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.

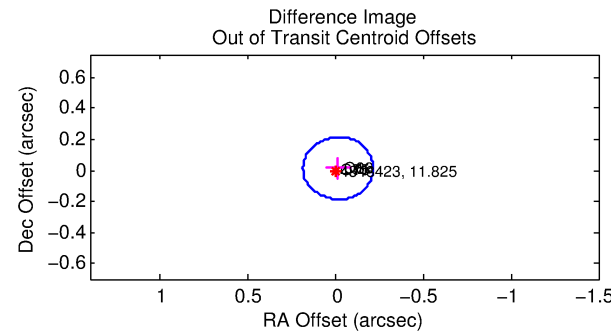
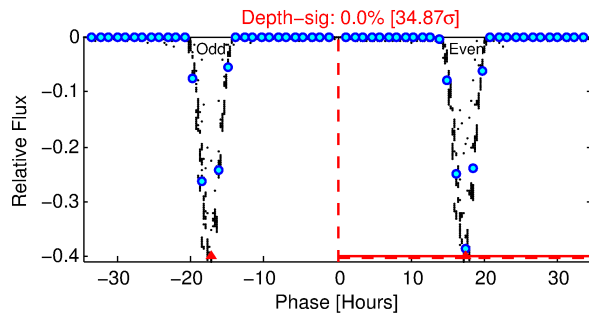
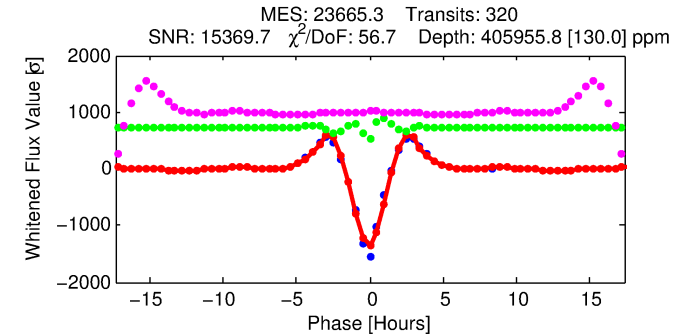
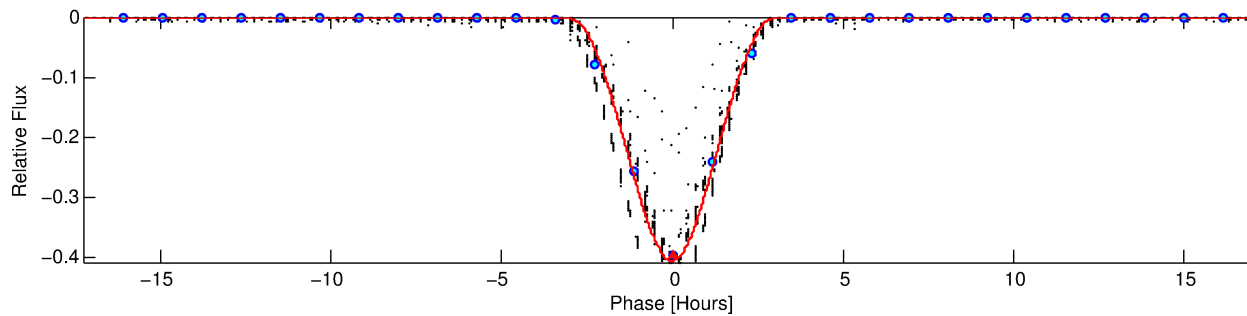
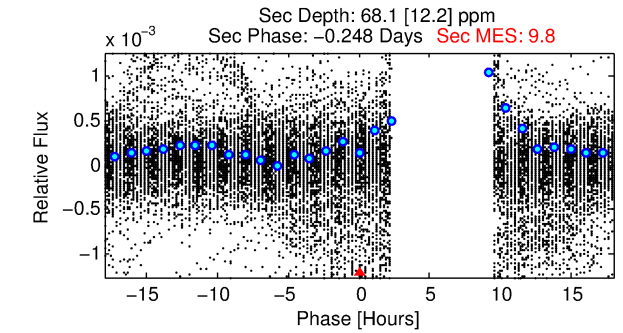
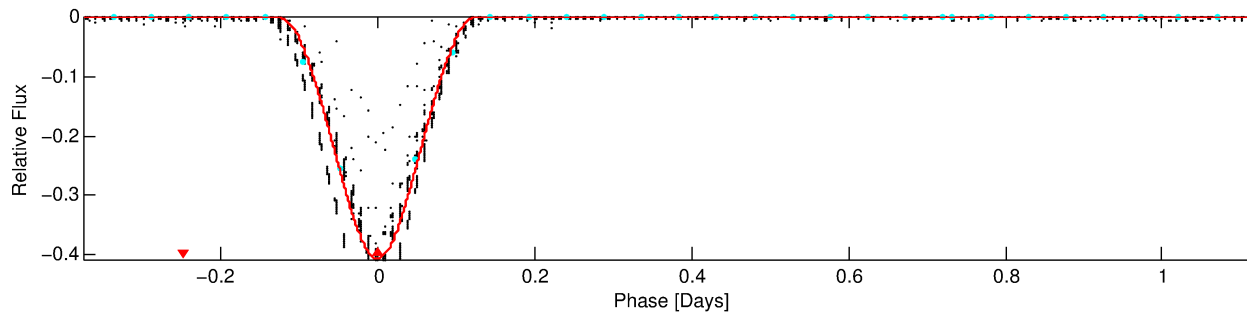
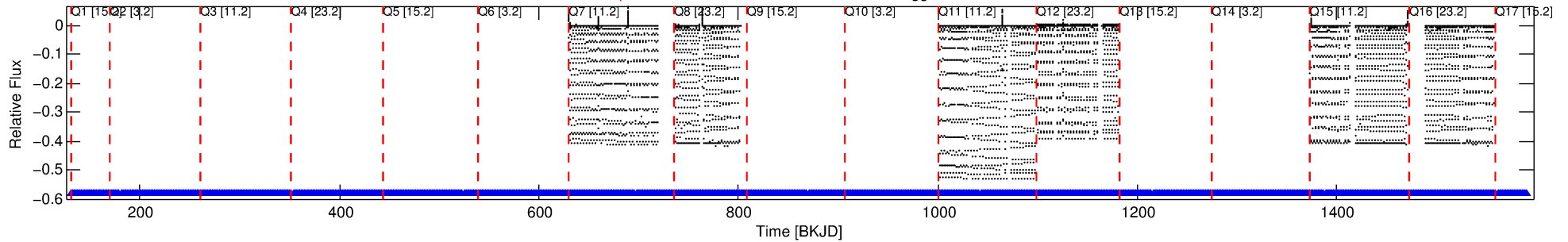
## Ephemeris Match Information For 004848423-01

No Significant Match Found

# DV One-Page Summary

KIC: 4848423 Candidate: 1 of 1 Period: 1.502 d  
KOI: K03560.01 Corr: 0.928

Kp: 11.82 R\*: 1.29 Rs Teff: 6327.0 K Logg: 4.32 Fe/H: 0.210



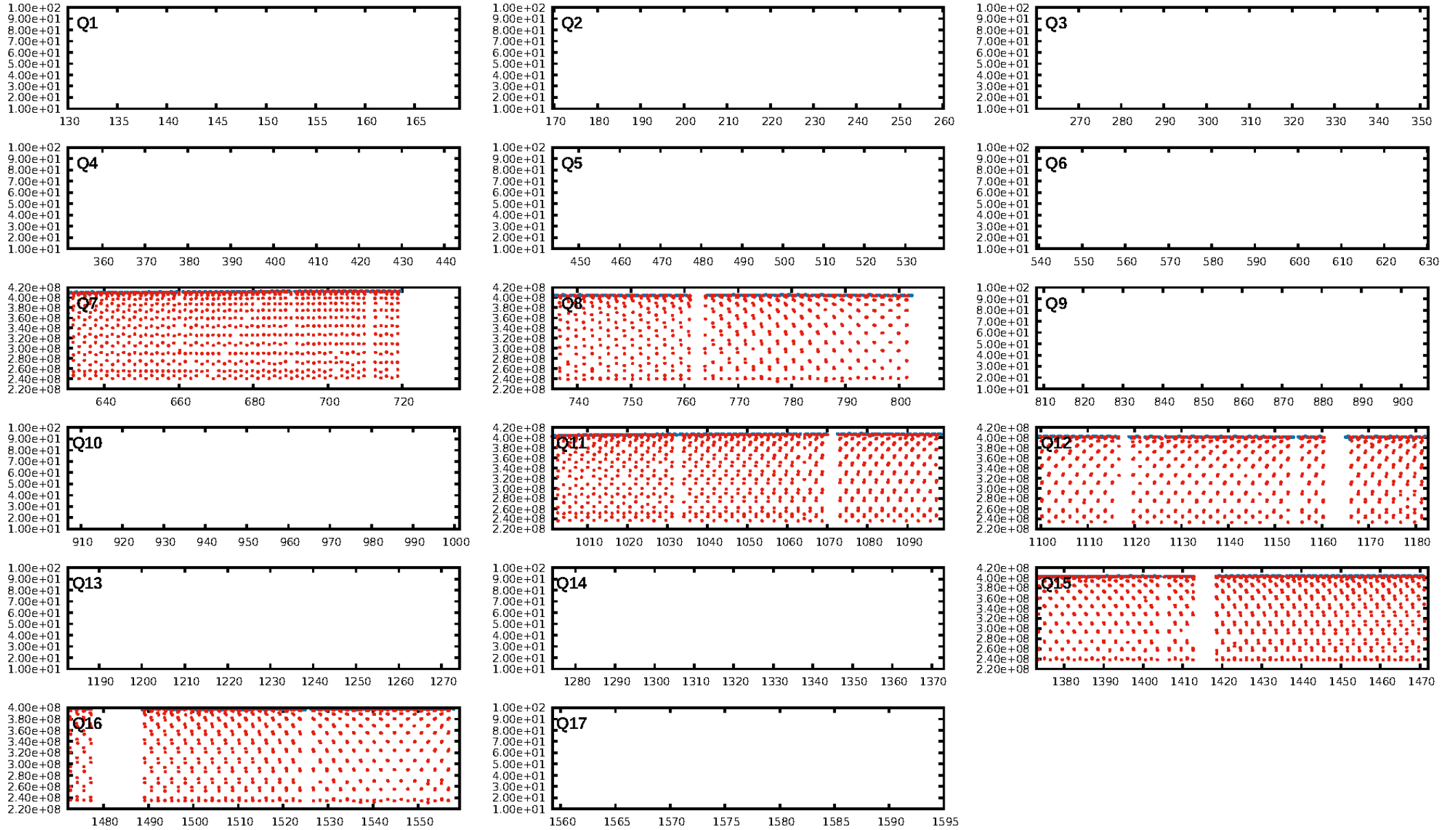
## DV Fit Results:

Period = 1.50183 [0.00000] d  
Epoch = 131.5379 [0.0000] BKJD  
Rp/R\* = 0.6612 [0.0041]  
a/R\* = 3.32 [0.01]  
b = 0.51 [0.01]  
Seff = 3118.30 [690.55]  
Teff = 1905 [105] K  
Rp = 93.07 [15.67] Re  
a = 0.0277 [0.0040] AU  
Ag = 0.00 [0.00] [-1074.46σ]  
Teffp = 707 [33] K [-10.84σ]

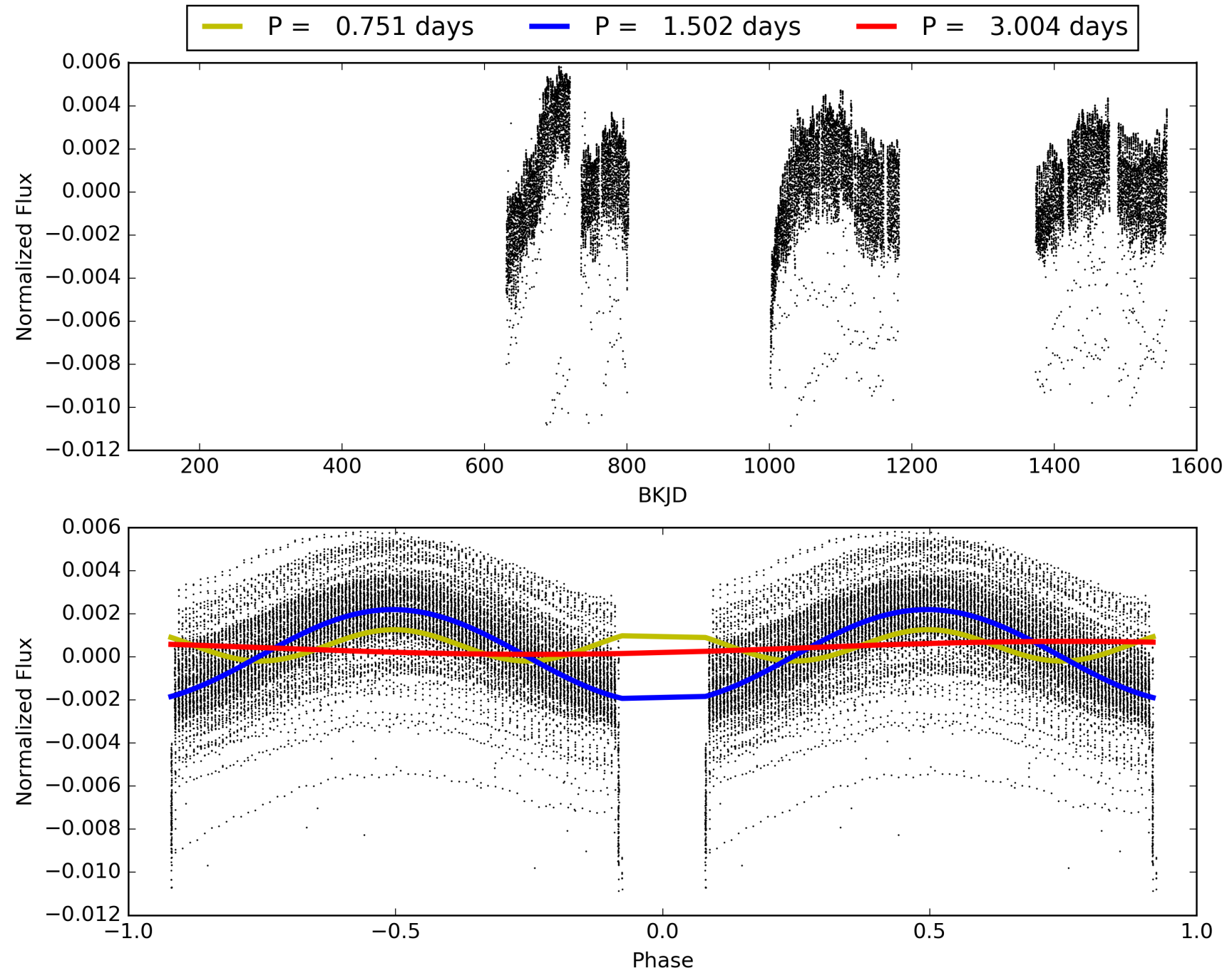
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [320/320]  
GhostDiagnostic-chr: 1.331  
Centroid-sig: N/A  
Centroid-so: 0.073 arcsec [259.36σ]  
OotOffset-rm: 0.021 arcsec [0.32σ]  
KicOffset-rm: 0.105 arcsec [1.41σ]  
OotOffset-st: 0/3/3/0 [6]  
KicOffset-st: 0/3/3/0 [6]  
DiffImageQuality-fgm: 1.00 [6/6]  
DiffImageOverlap-fno: 1.00 [6/6]

# TCE 004848423-01, PDC Light Curves

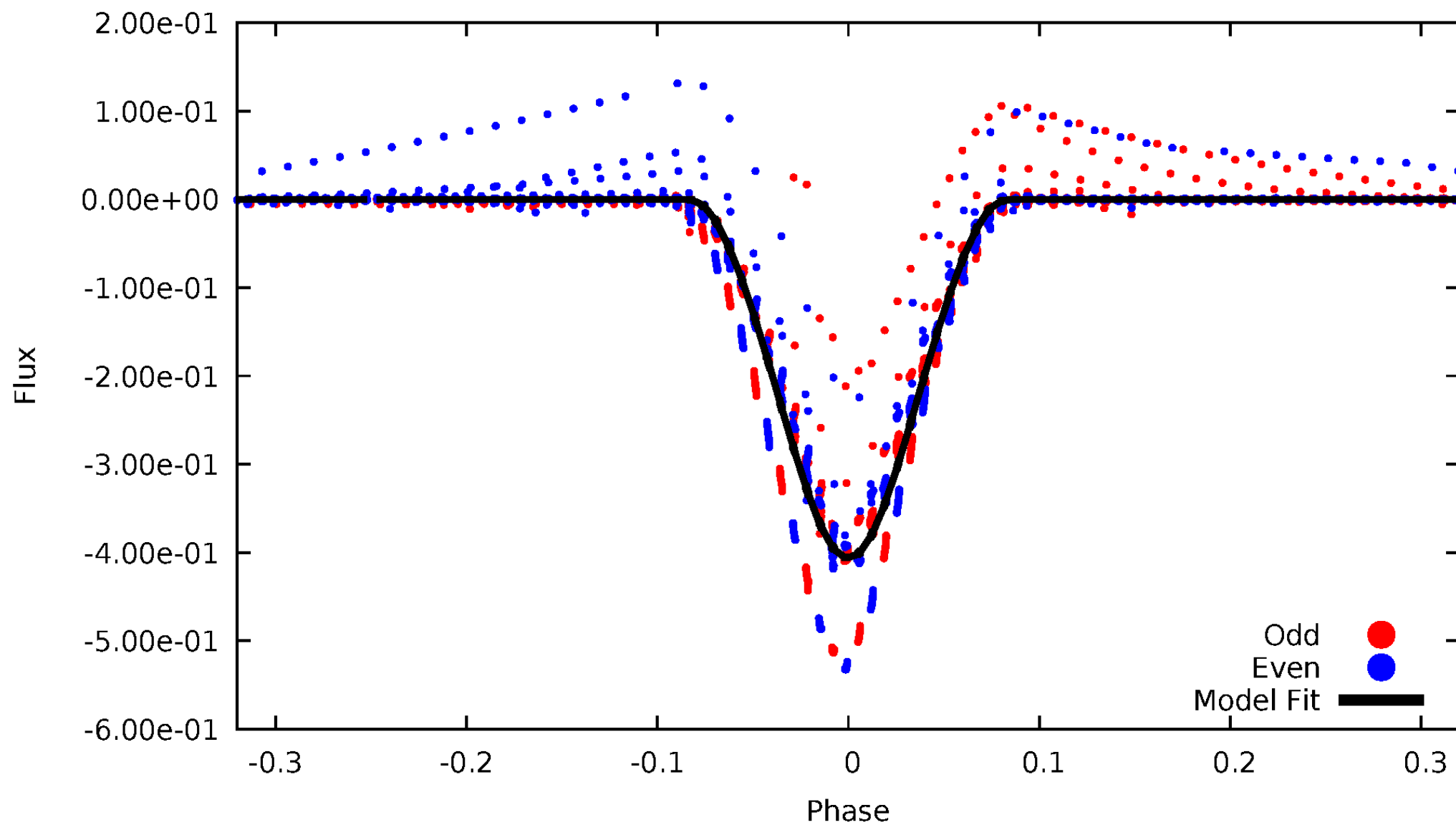


TCE 004848423-01



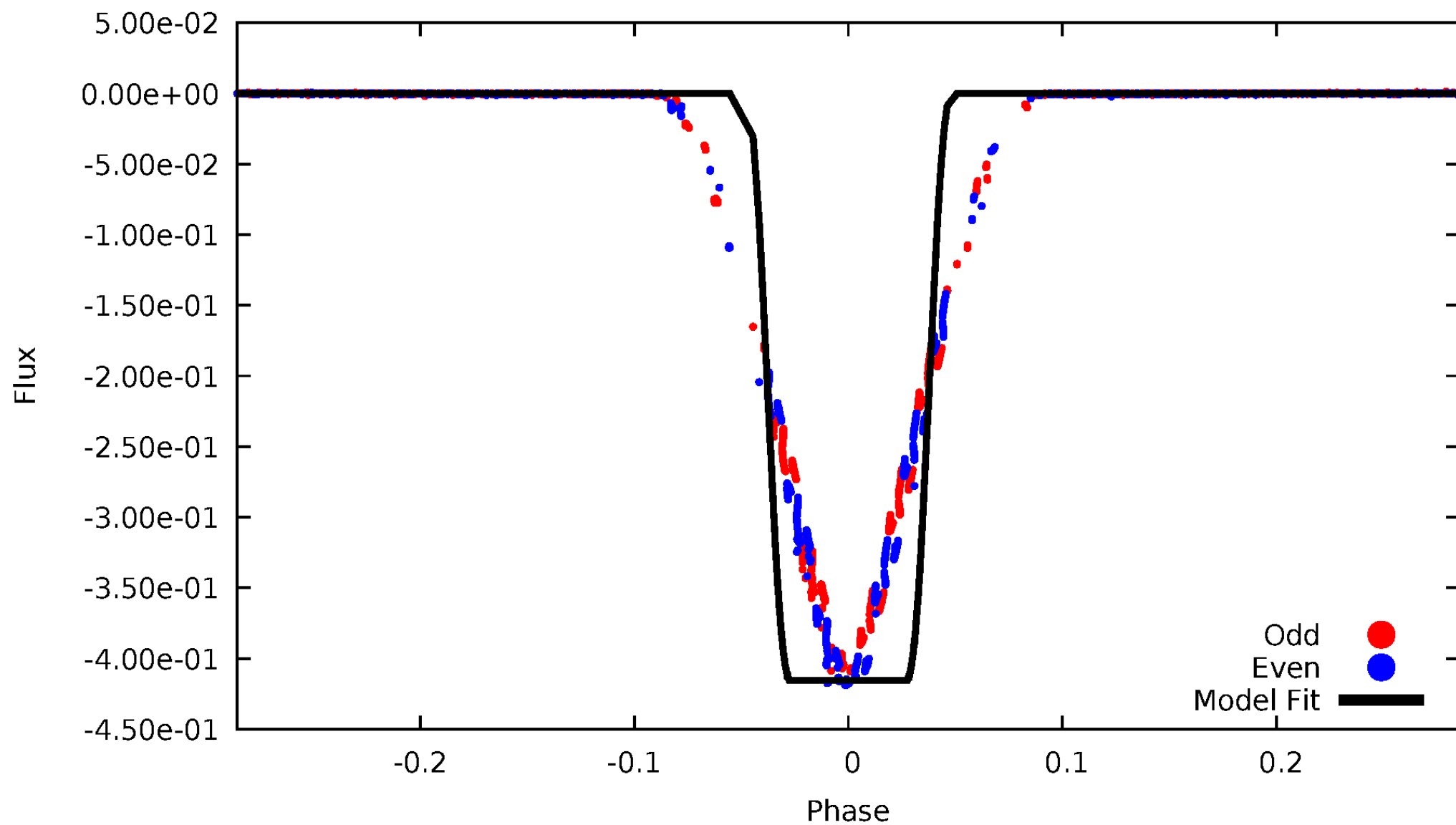
# DV Odd/Even

TCE 004848423-01



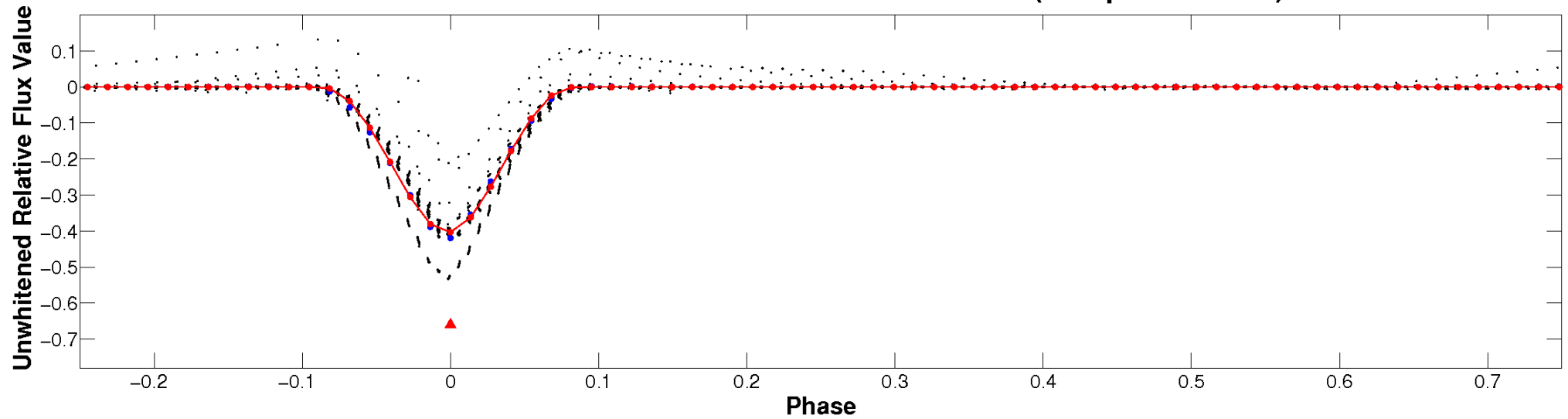
# ALT Odd/Even

TCE 004848423-01

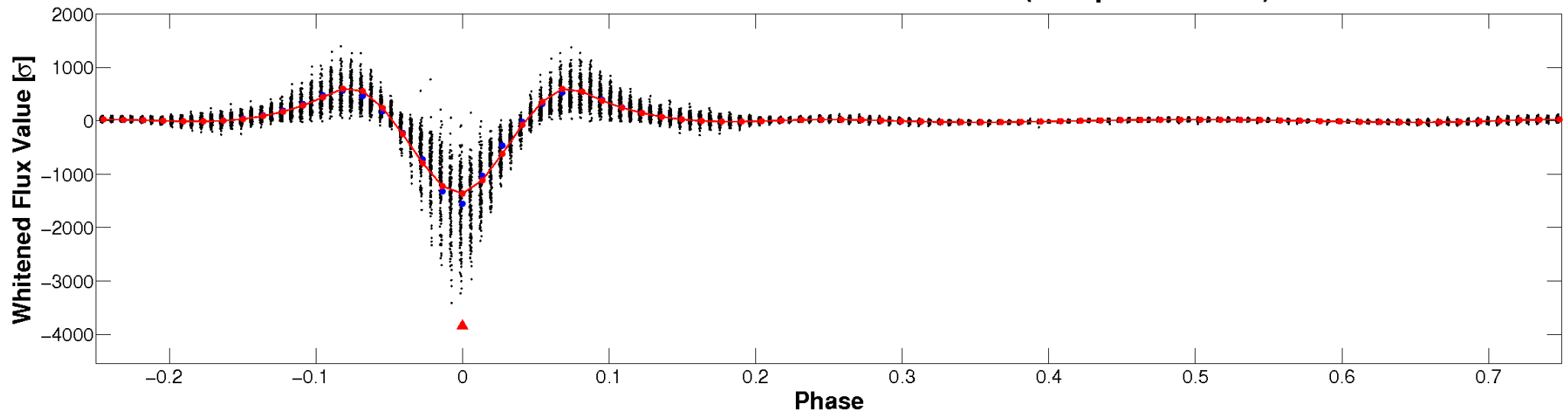


# Non-Whitened Vs. Whitened Light Curve

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

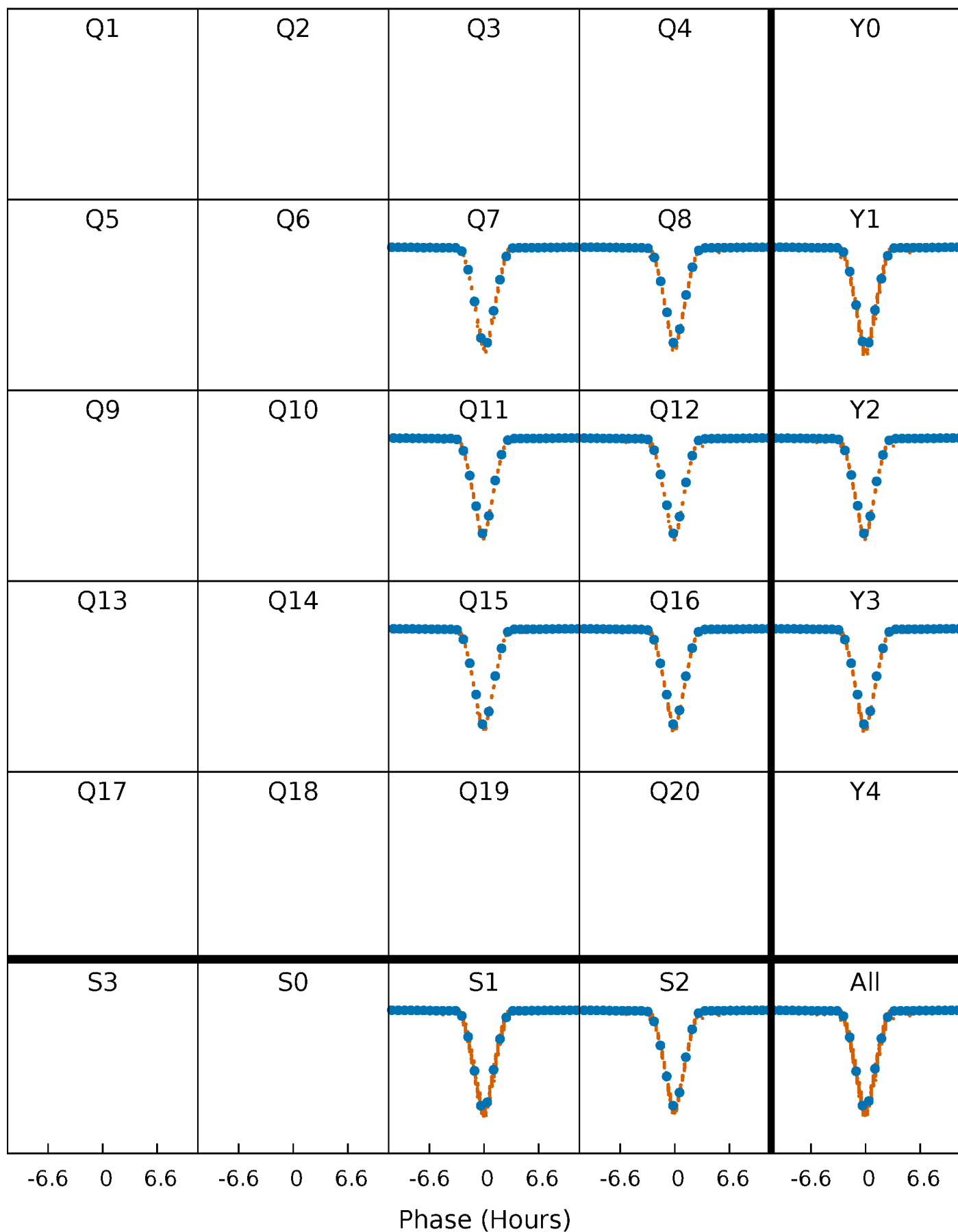


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

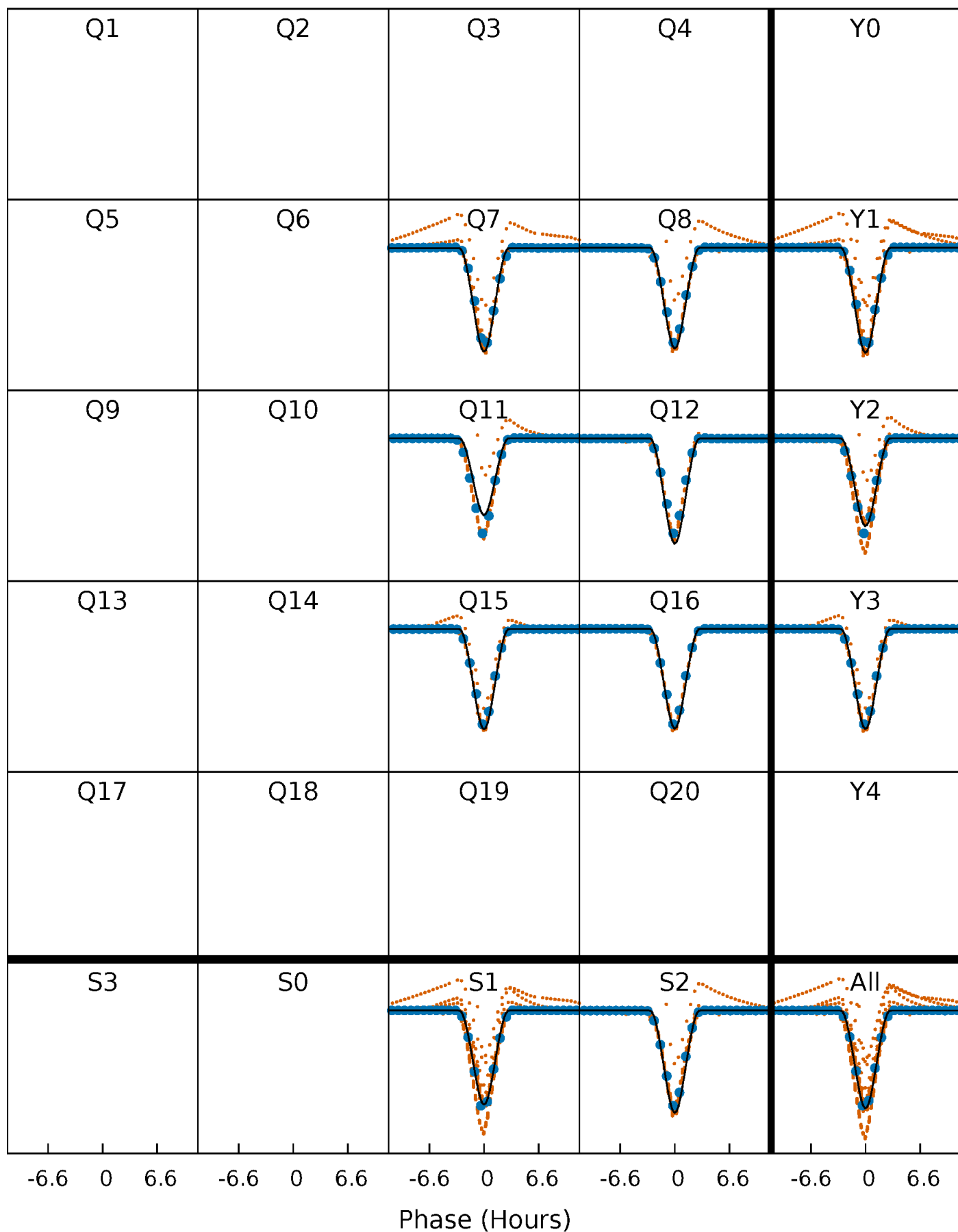
TCE 004848423-01   P= 1.501830 Days    $T_0=131.537884$  (BKJD)





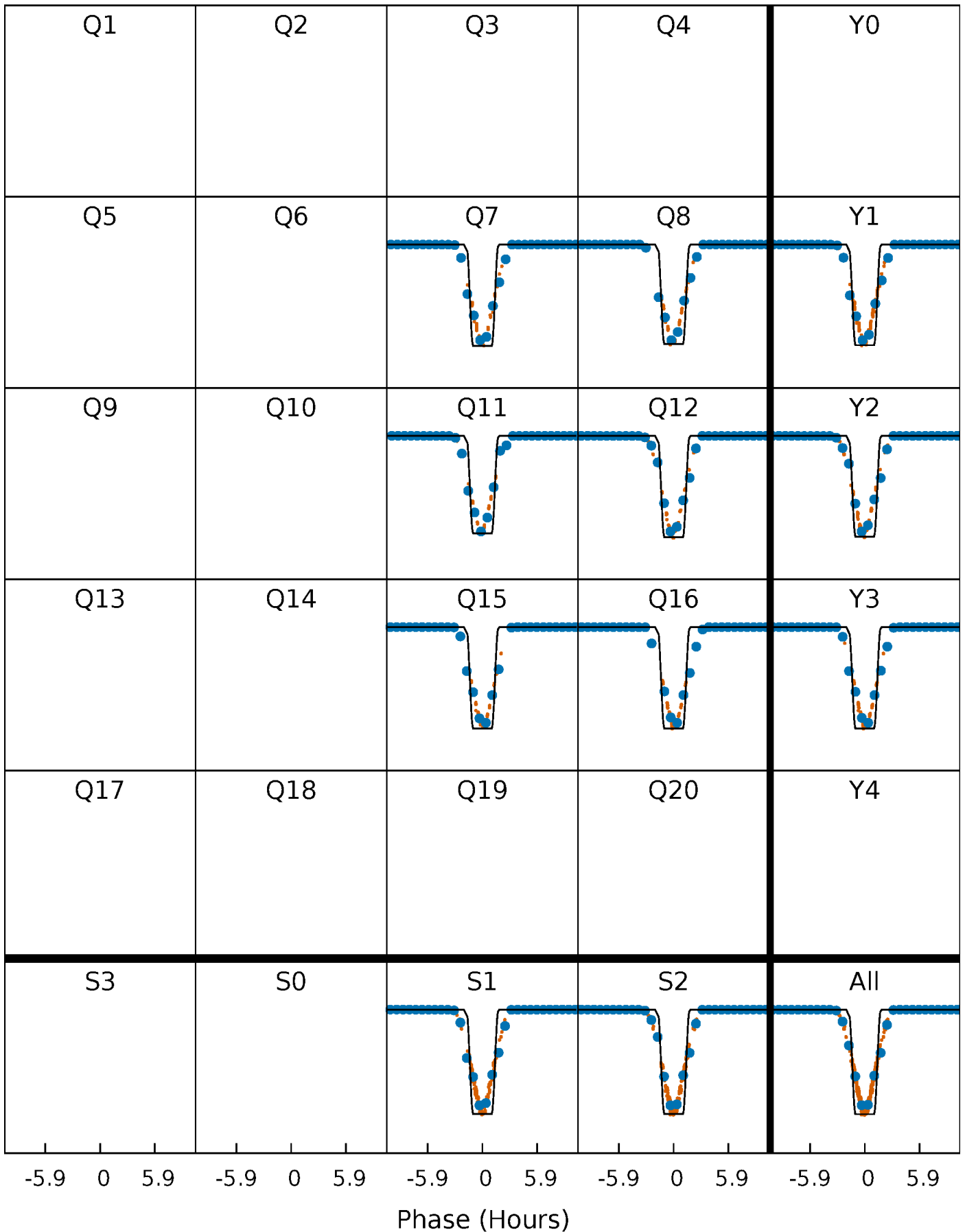
# DV Quarter-Phased Transit Curves

TCE 004848423-01 P= 1.501830 Days  $T_0=131.537884$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

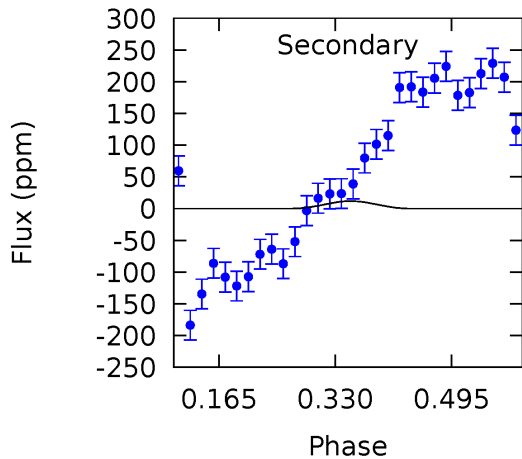
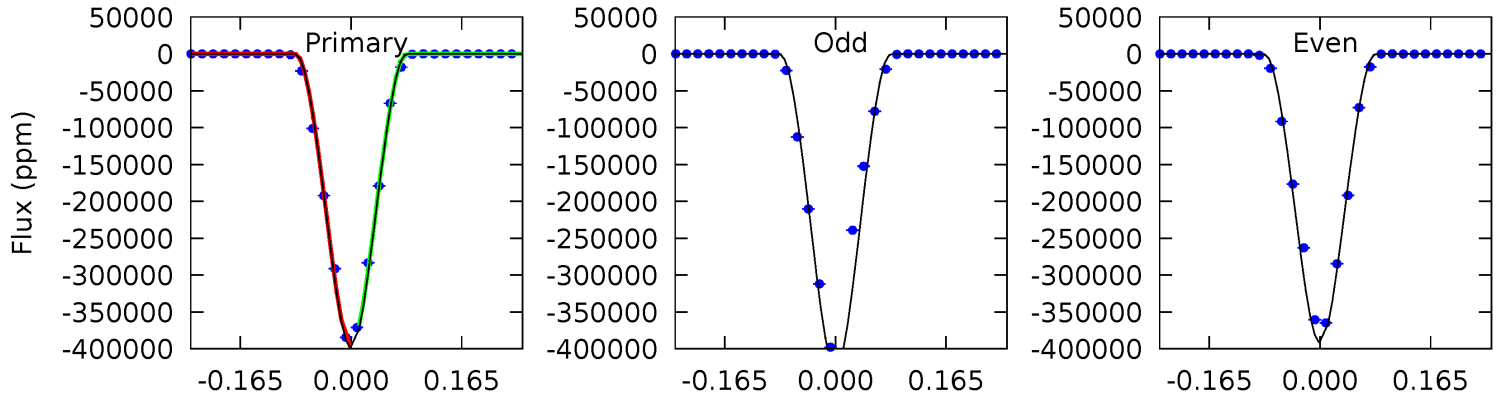
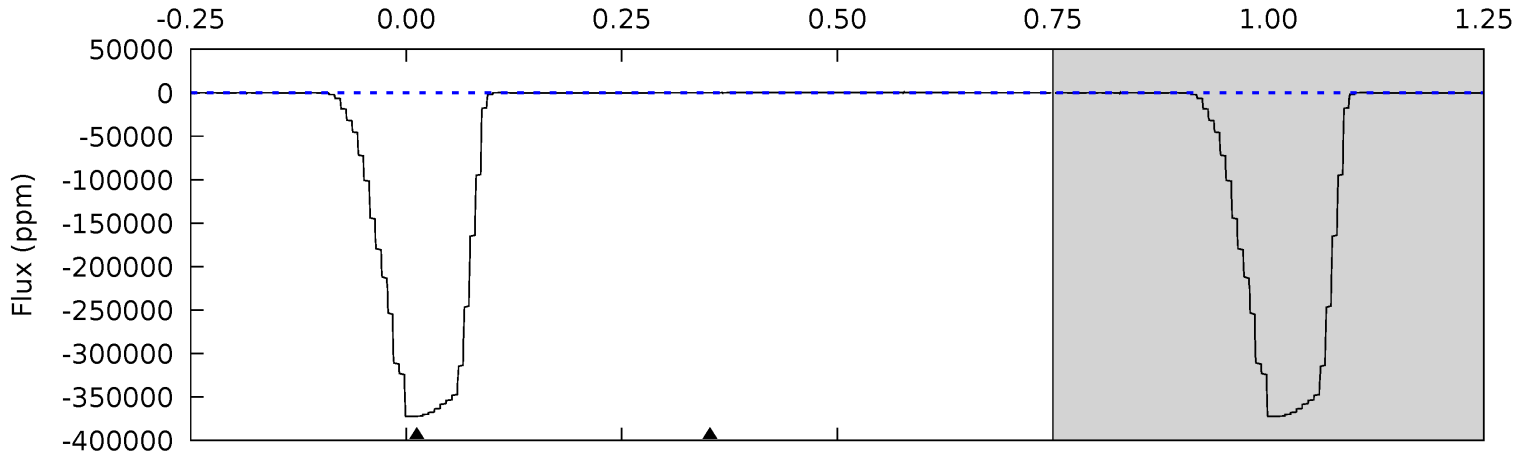
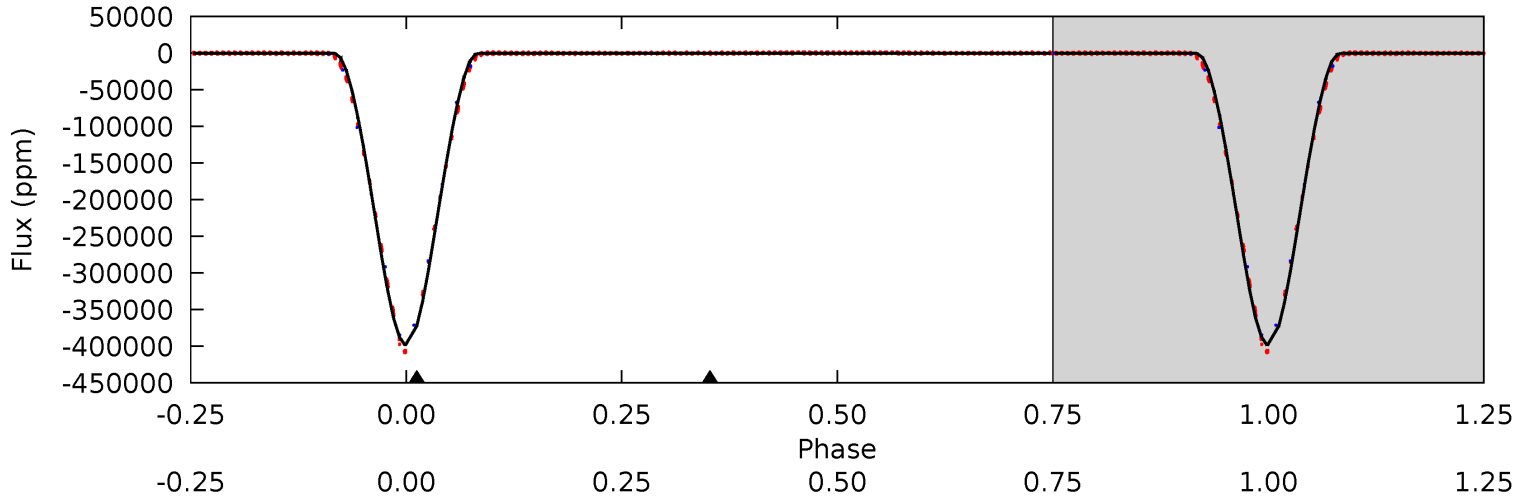
TCE 004848423-01 P= 1.501815 Days  $T_0=131.547216$  (BKJD)



# DV Model-Shift Uniqueness Test

004848423-01, P = 1.501830 Days, E = 131.537884 Days

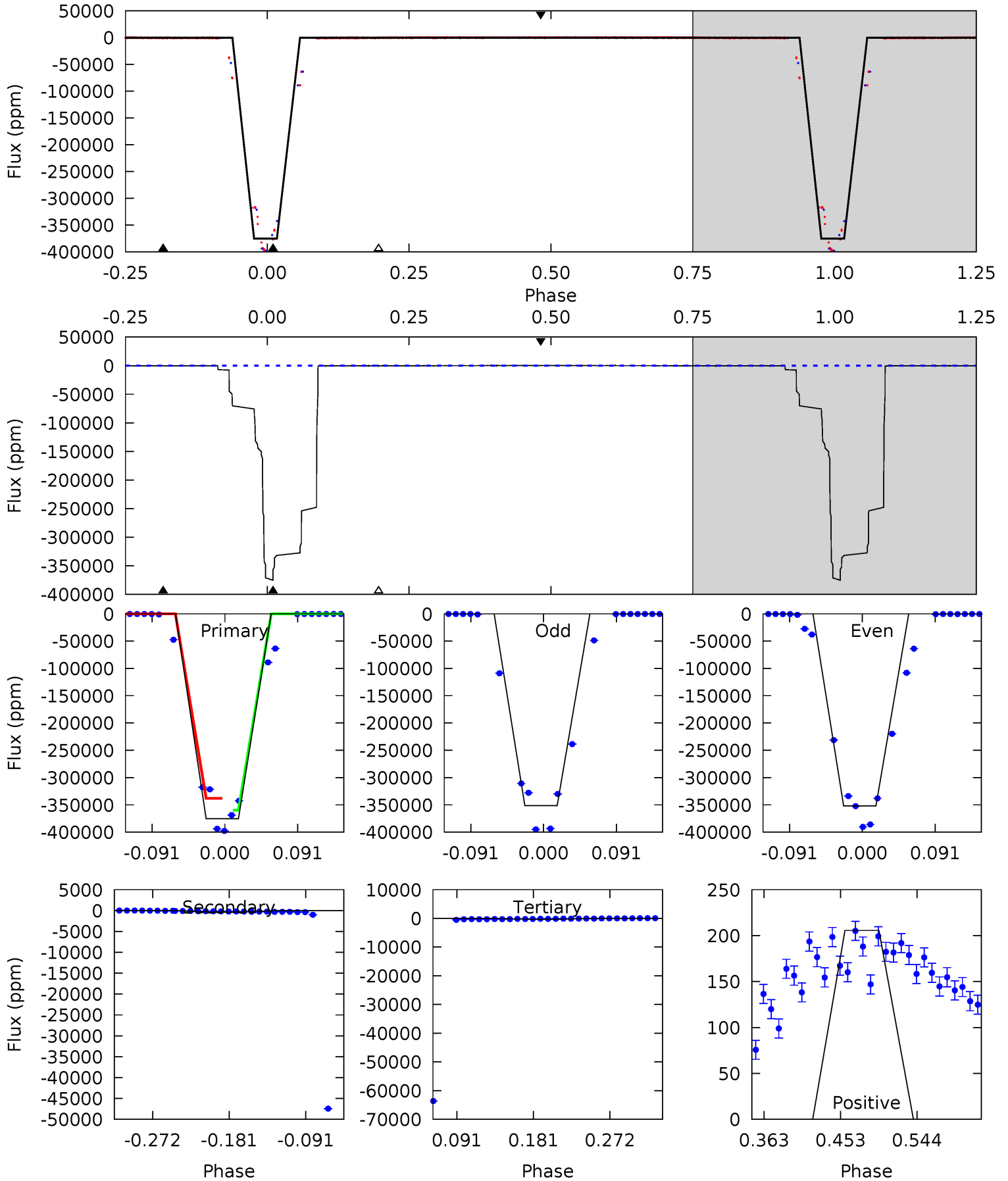
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21317	-0.64	0	0	4.46	1.39	7.58	21317	21317	-0.64	-0.64	1058	1.04	0.00	0



# Alt Model-Shift Uniqueness Test

004848423-01, P = 1.501815 Days, E = 131.547216 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
14362	14.2	10.4	7.87	4.59	1.69	7.37	14352	14354	3.79	6.31	14.2	1.00	0.00	0



### Stellar Parameters For KIC 004848423

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R$ ( $R_{\odot}$ )	$M$ ( $M_{\odot}$ )	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$6327^{+69}_{-88}$	$4.315^{+0.051}_{-0.119}$	$0.210^{+0.150}_{-0.200}$	$1.290^{+0.217}_{-0.100}$	$1.257^{+0.081}_{-0.099}$	$0.824^{+0.171}_{-0.294}$
	+1%/-1%	+1%/-3%	+71%/-95%	+17%/-8%	+6%/-8%	+21%/-36%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology  
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

### Secondary Eclipse Parameters for KIC 004848423-01 / KOI 3560.01

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$11 \pm 17$	$93.61^{+8.58}_{-4.67}$	$2674^{+111}_{-74}$	$-2902^{+43}_{-65}$	$-0.001^{+0.001}_{-0.001}$
Alt.	$-370 \pm 26$	$91.45^{+7.97}_{-4.60}$	$2680^{+104}_{-73}$	$-2878^{+45}_{-66}$	$0.018^{+0.002}_{-0.003}$

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

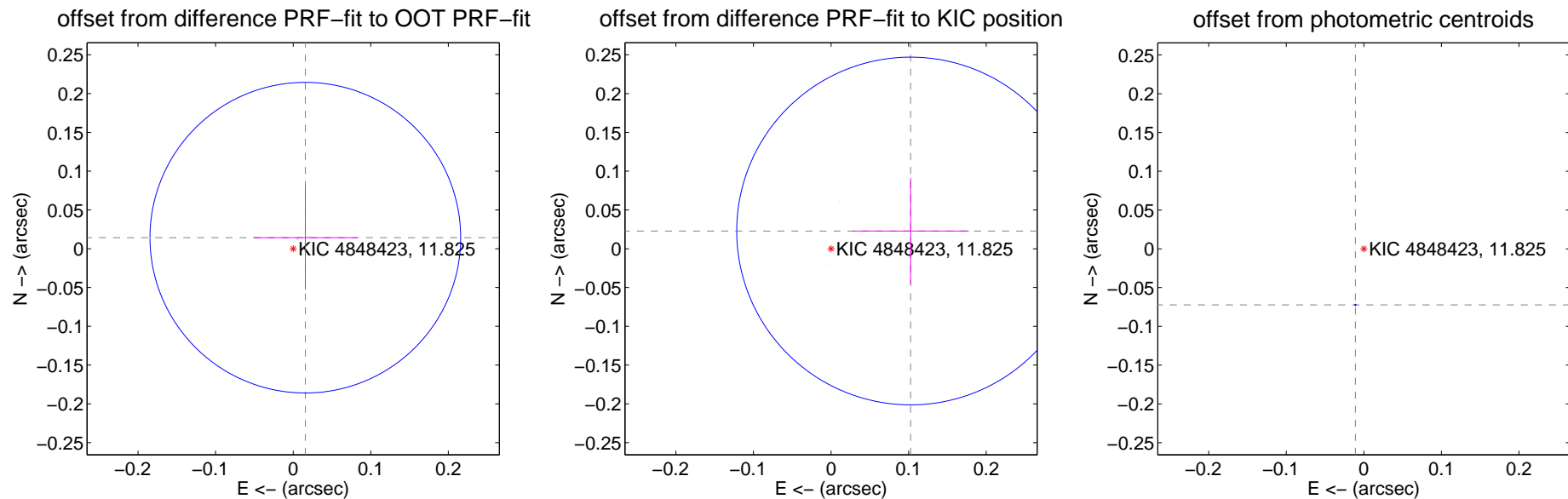
## DV Centroid Data

Supplemental centroid analysis for 004848423-01. **Kepler magnitude: 11.82.** Transit SNR 15369.66

There are 6 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.021 \pm 0.067$	0.32	$-0.016 \pm 0.067$	$0.014 \pm 0.067$
PRF-fit source offset from KIC position	$0.105 \pm 0.075$	1.41	$-0.103 \pm 0.075$	$0.023 \pm 0.069$
photometric centroid source offset	<b><math>0.07 \pm 0.00</math></b>	<b>259.36</b>	$0.01 \pm 0.00$	$-0.07 \pm 0.00$

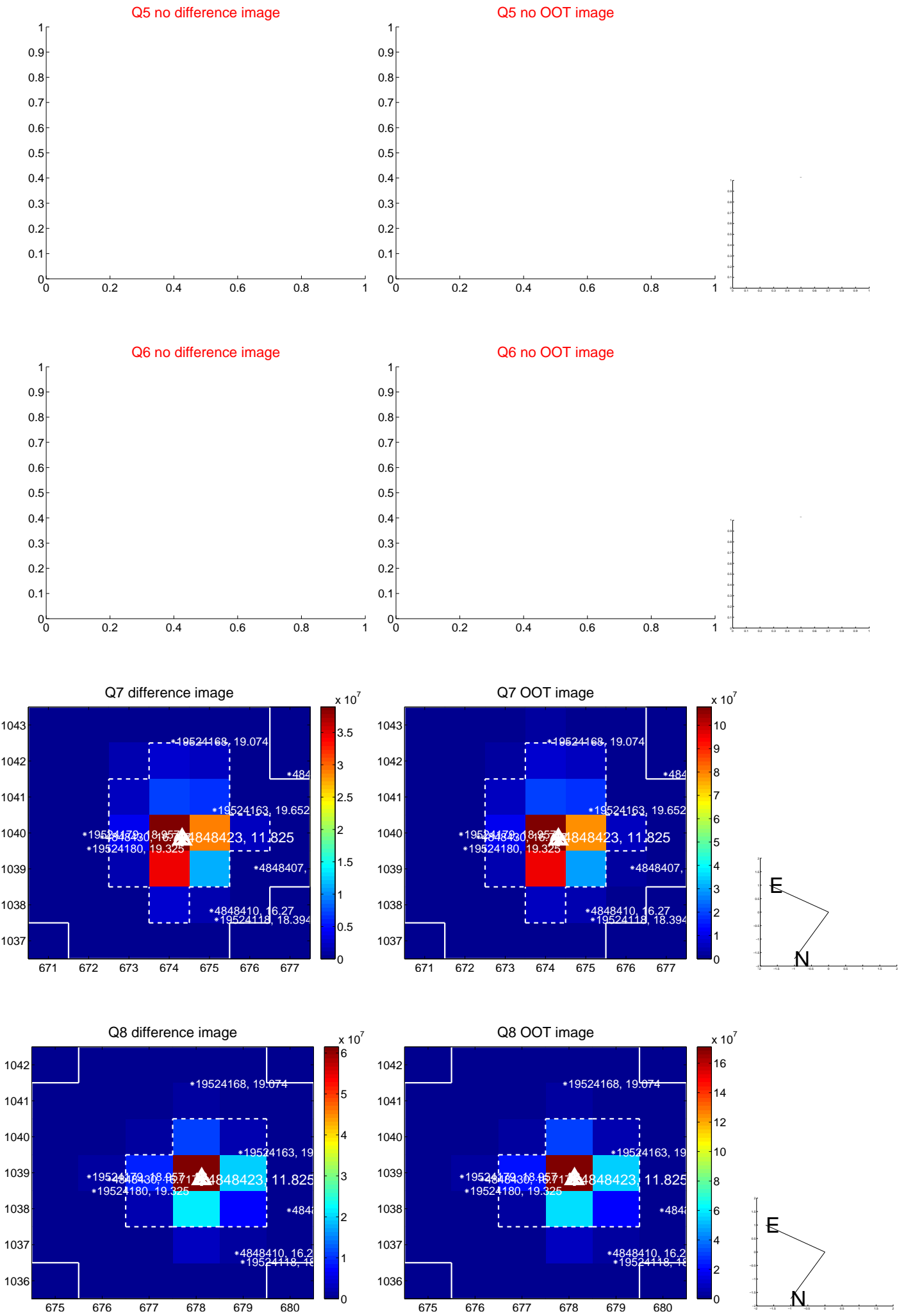


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

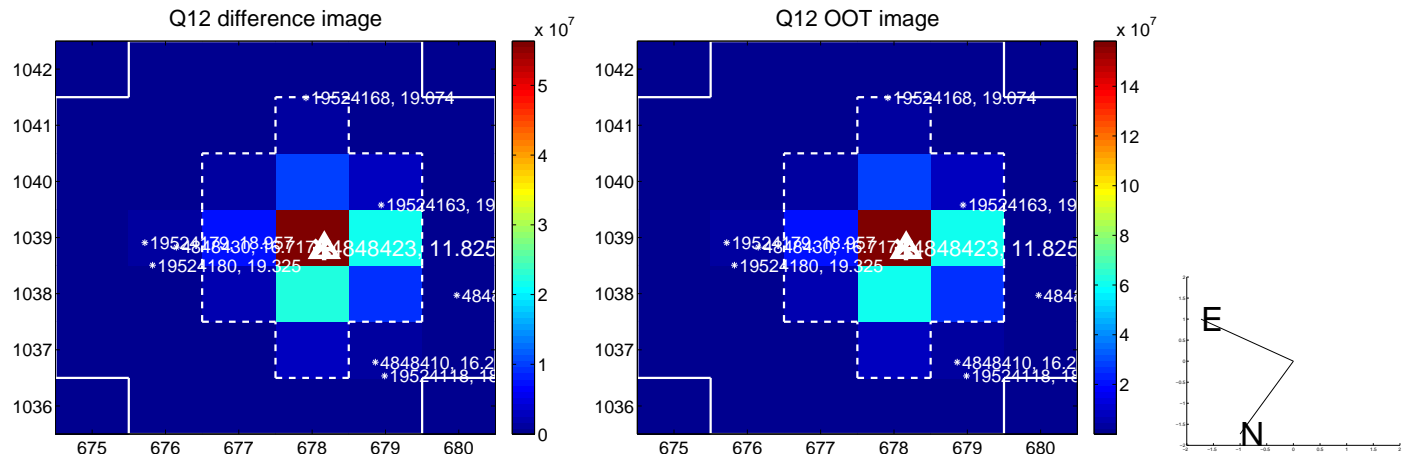
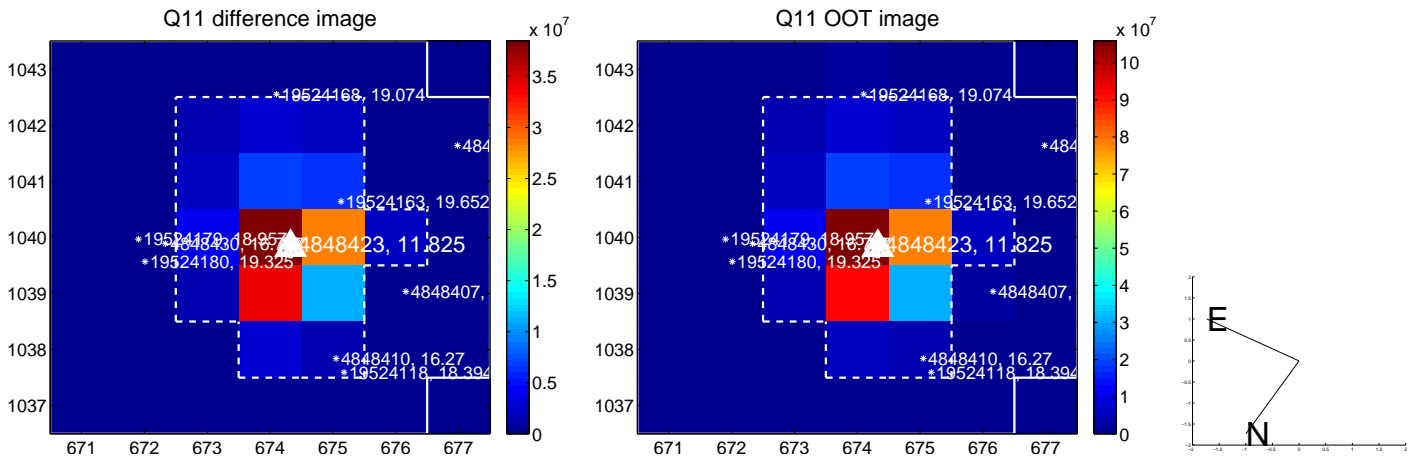
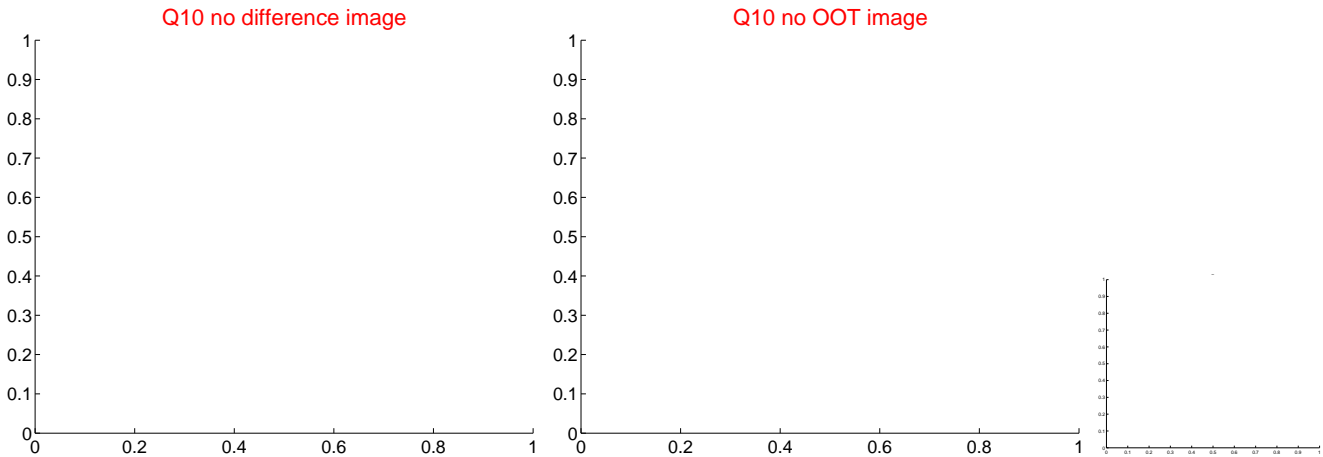
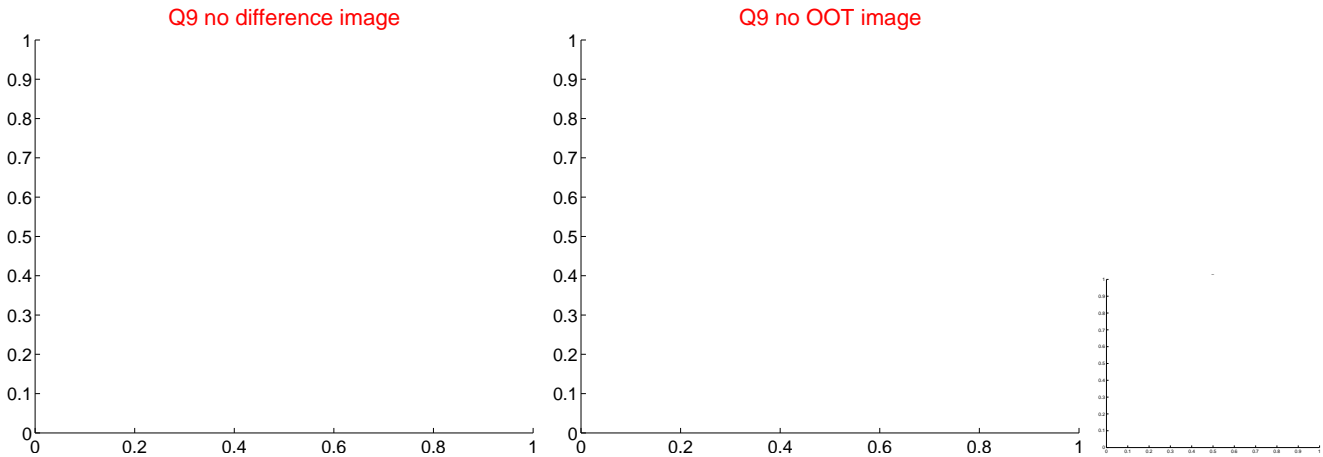


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

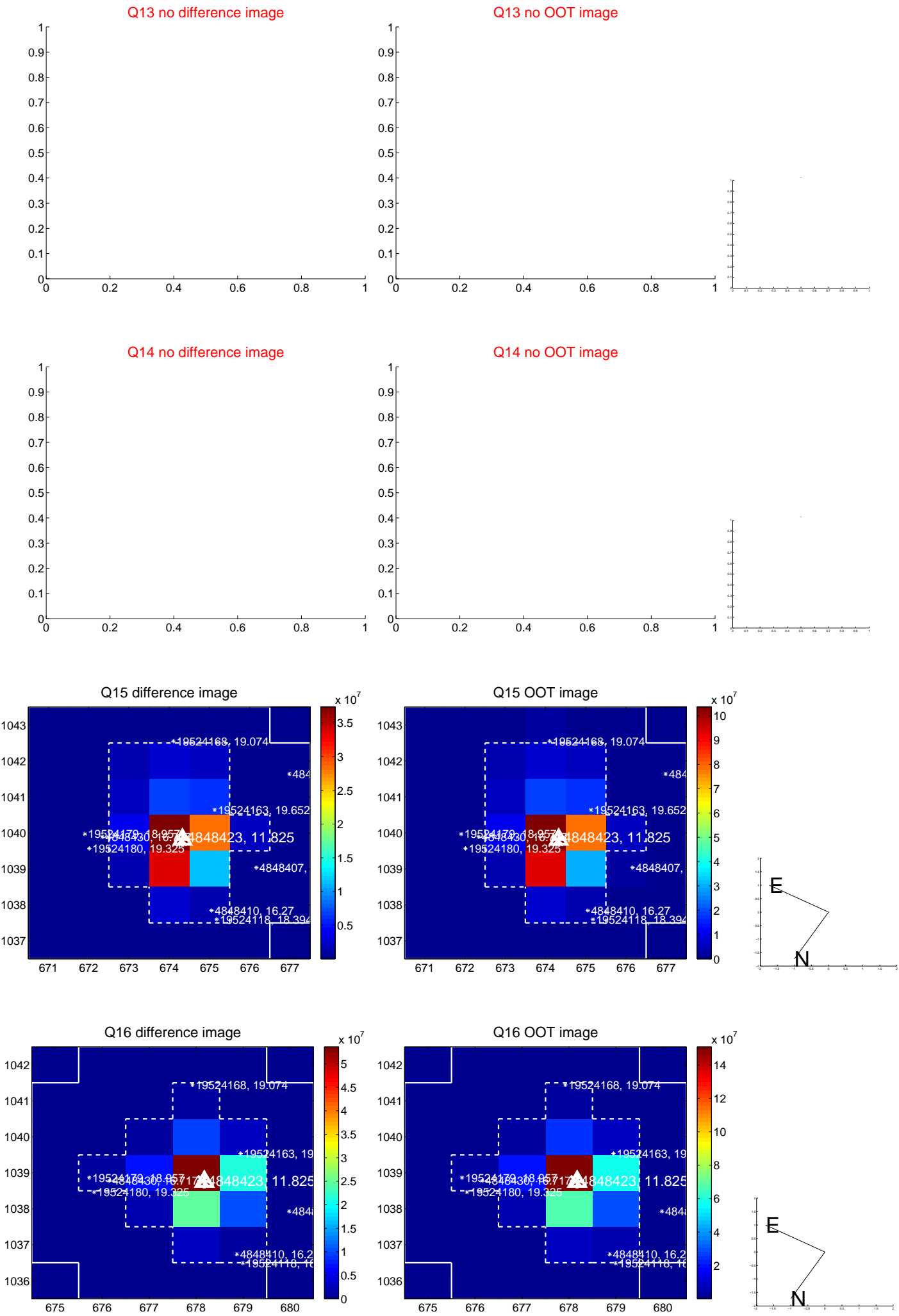




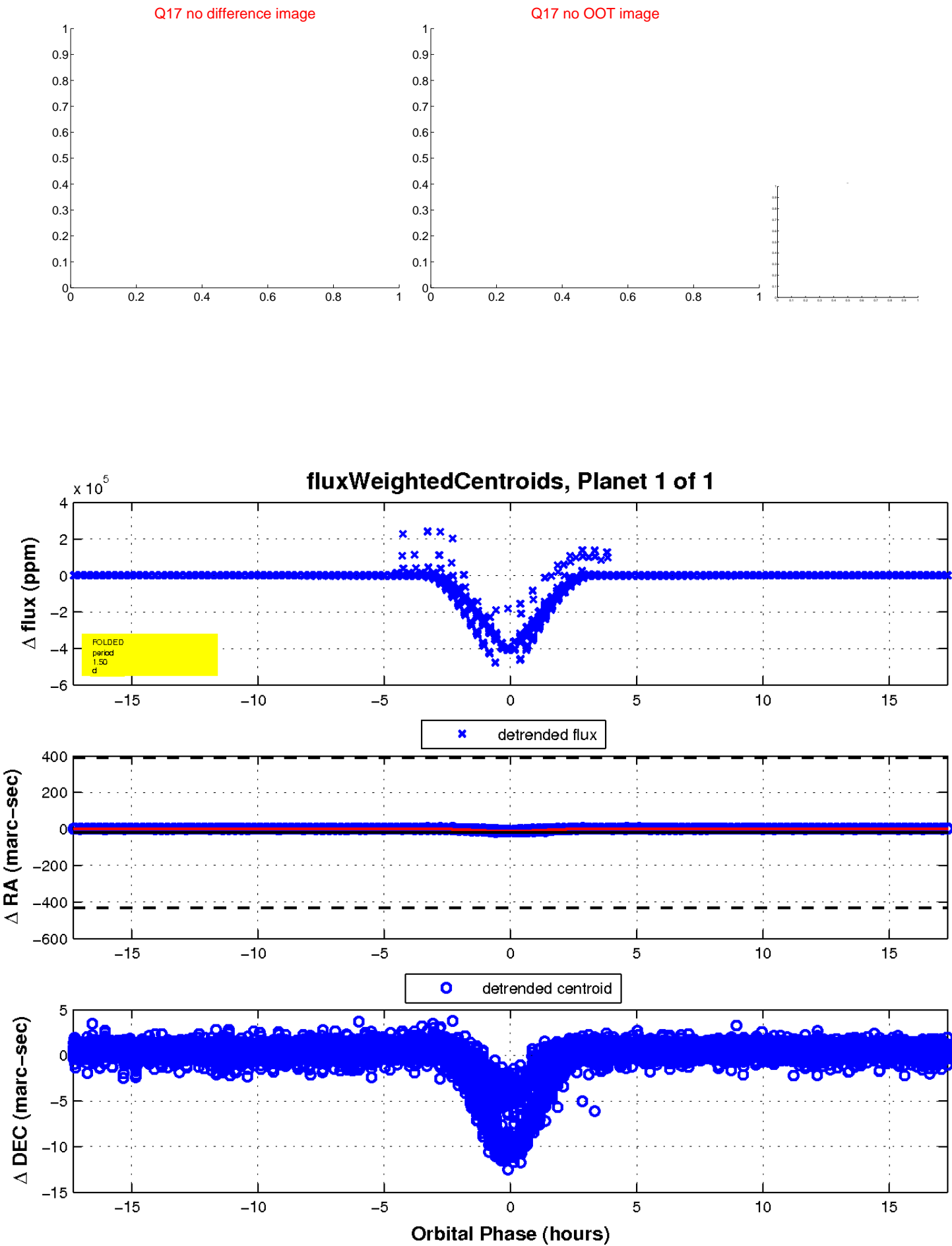
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UKIRT Image

Declination

