

# KIC 007296094

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007296094-01	OBS	3790.01	0.890741	131.888234	104994.8	1.943	393.9	271.6	1.00	5780	37.19	3045.11

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007296094-01	OBS	FP	0.01	0	1	0	0	MOD_SEC_DV—DEEP_V_SHAPED—SEASONAL_DEPTH_DV—SEASONAL_DEPTH_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.

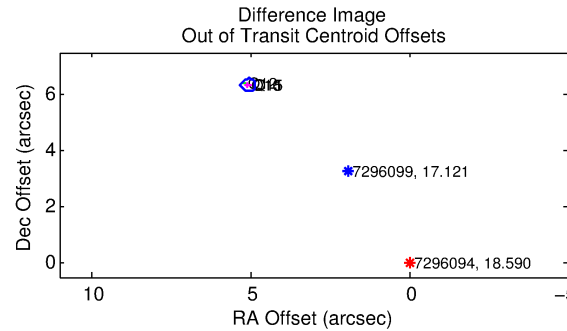
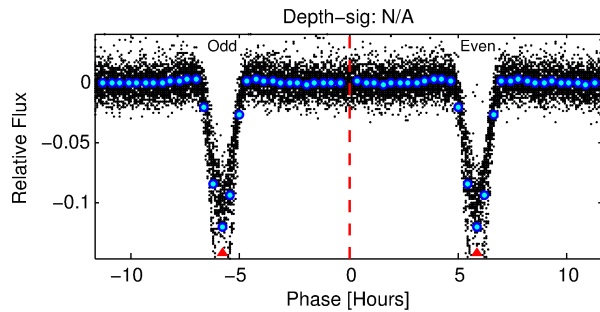
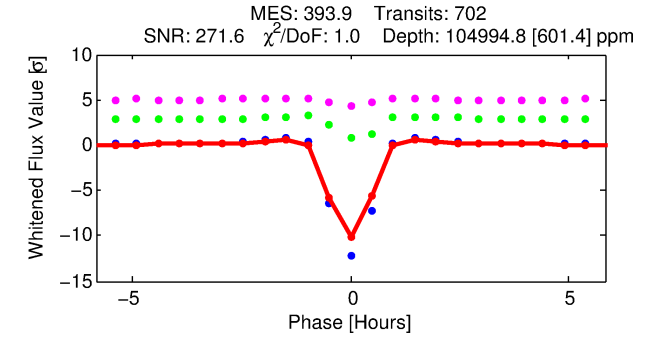
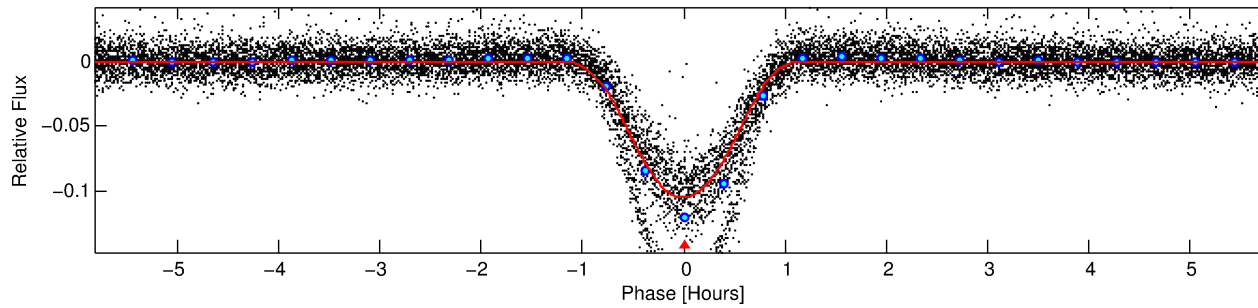
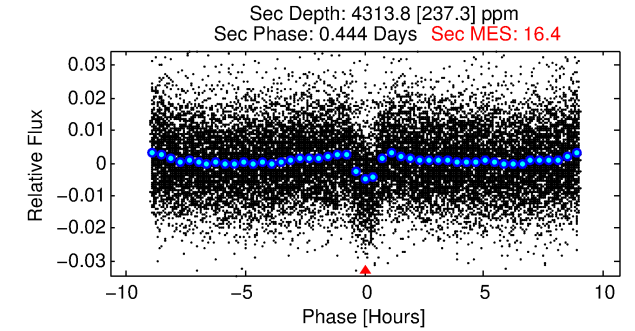
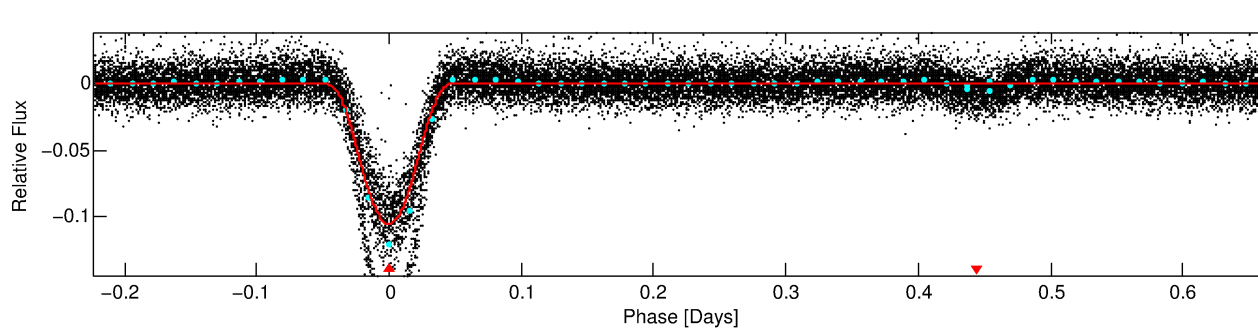
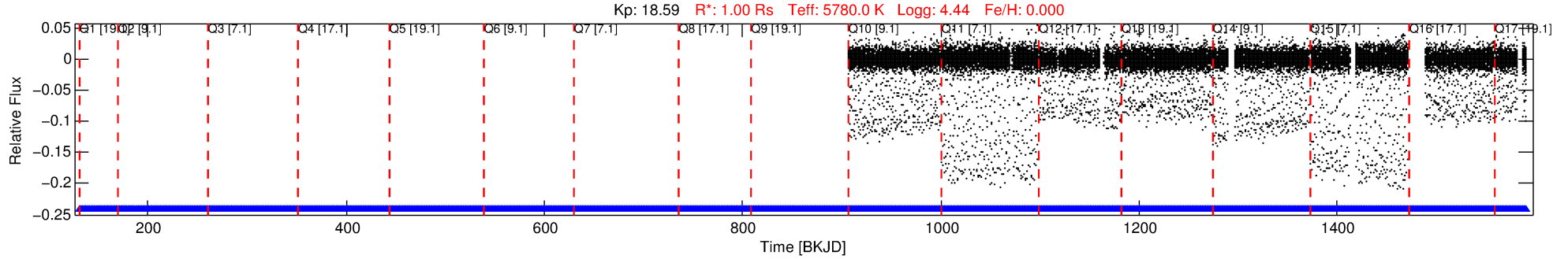
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 007296094-01

No Significant Match Found

# DV One-Page Summary

KIC: 7296094 Candidate: 1 of 1 Period: 0.891 d  
KOI: K03790.01 Corr: 0.975



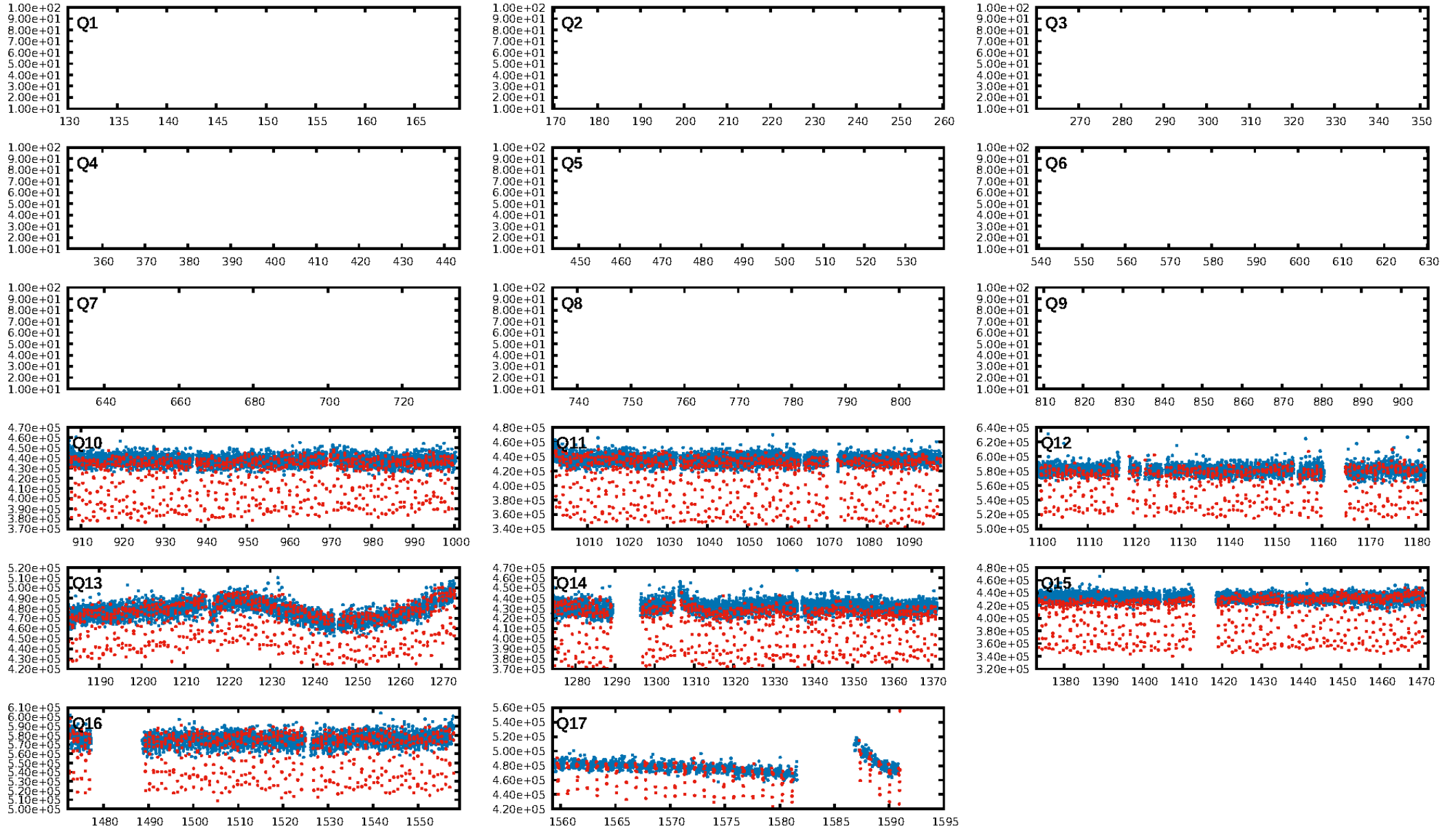
## DV Fit Results:

Period = 0.89074 [0.00000] d  
Epoch = 131.8882 [0.0001] BKJD  
Rp/R\* = 0.3408 [0.0127]  
a/R\* = 4.08 [0.04]  
b = 0.72 [0.03]  
Seff = 3045.11 [0.00]  
Teq = 1894 [0] K  
Rp = 37.19 [1.39] Re  
a = 0.0181 [0.0000] AU  
Ag = 0.56 [0.05] [-8.35 $\sigma$ ]  
Teffp = 2537 [59] K [10.93 $\sigma$ ]

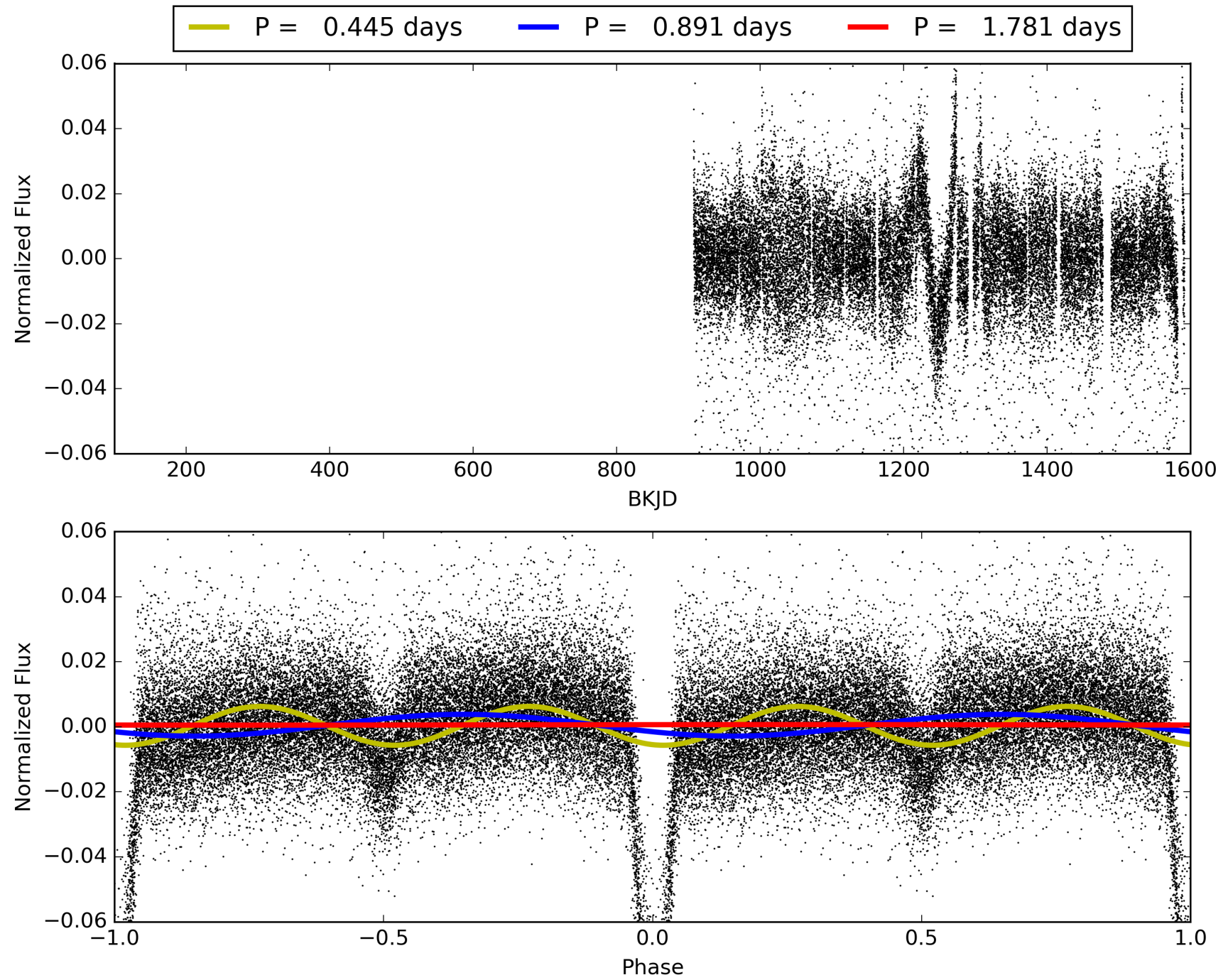
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [672/672]  
GhostDiagnostic-chr: 8.322  
Centroid-sig: 0.0%  
Centroid-so: 1.352 arcsec [466.93 $\sigma$ ]  
OotOffset-rm: 8.118 arcsec [106.78 $\sigma$ ]  
KicOffset-rm: 1.500 arcsec [20.14 $\sigma$ ]  
OotOffset-st: 0/2/2/0 [4]  
KicOffset-st: 2/2/2/2 [8]  
DiffImageQuality-fgm: 1.00 [8/8]  
DiffImageOverlap-fno: 1.00 [8/8]

# TCE 007296094-01, PDC Light Curves

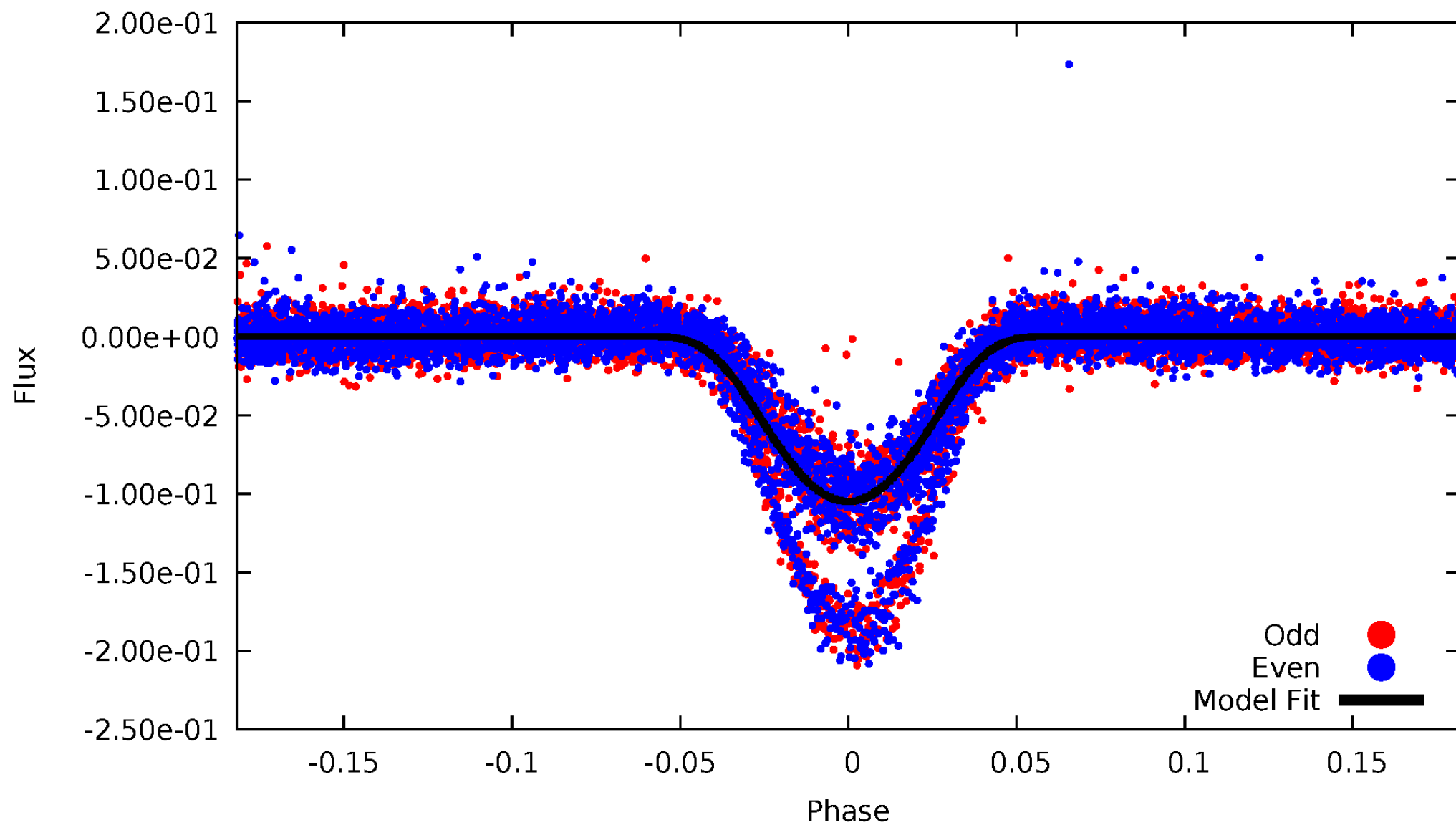


TCE 007296094-01



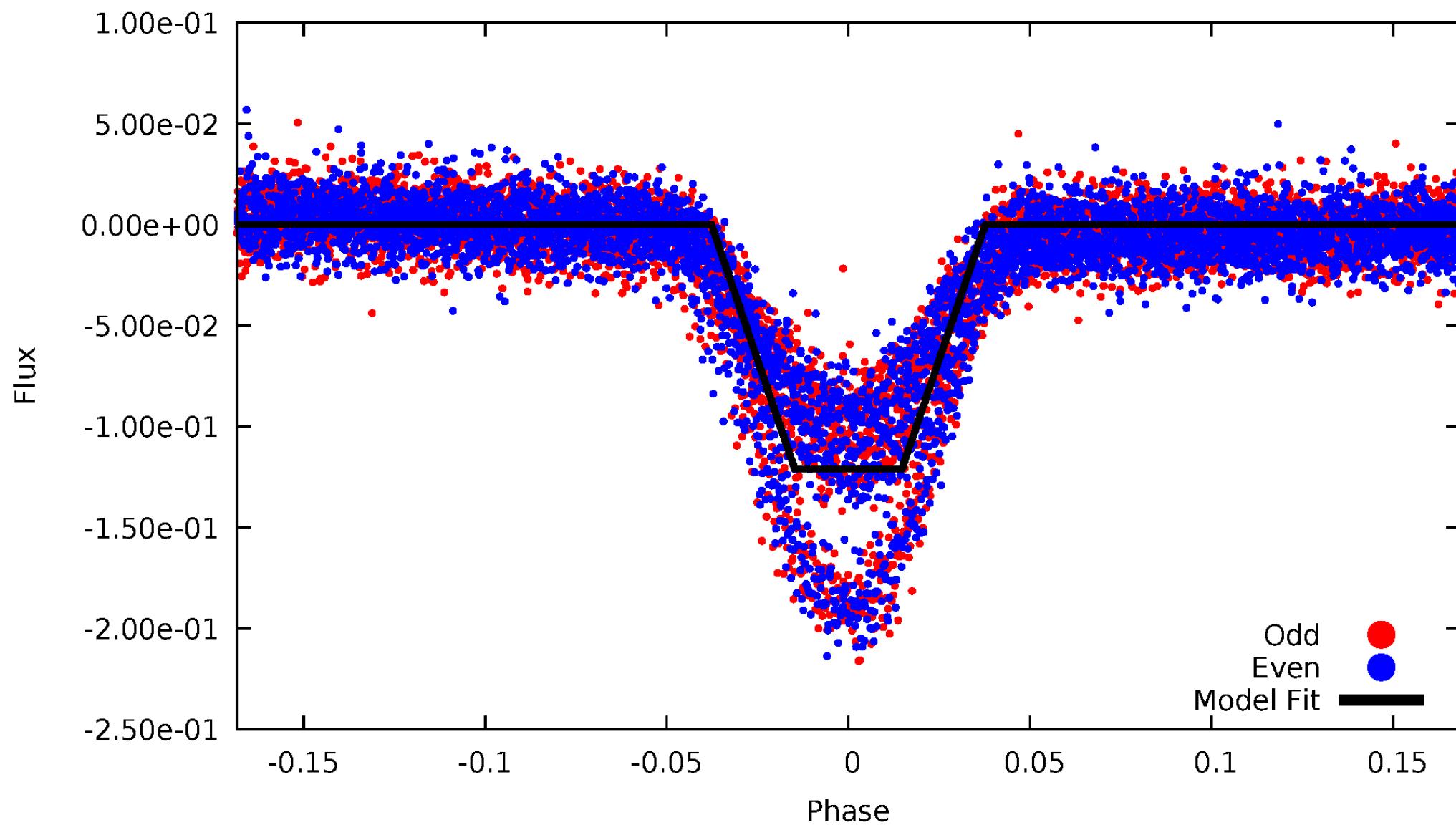
# DV Odd/Even

TCE 007296094-01



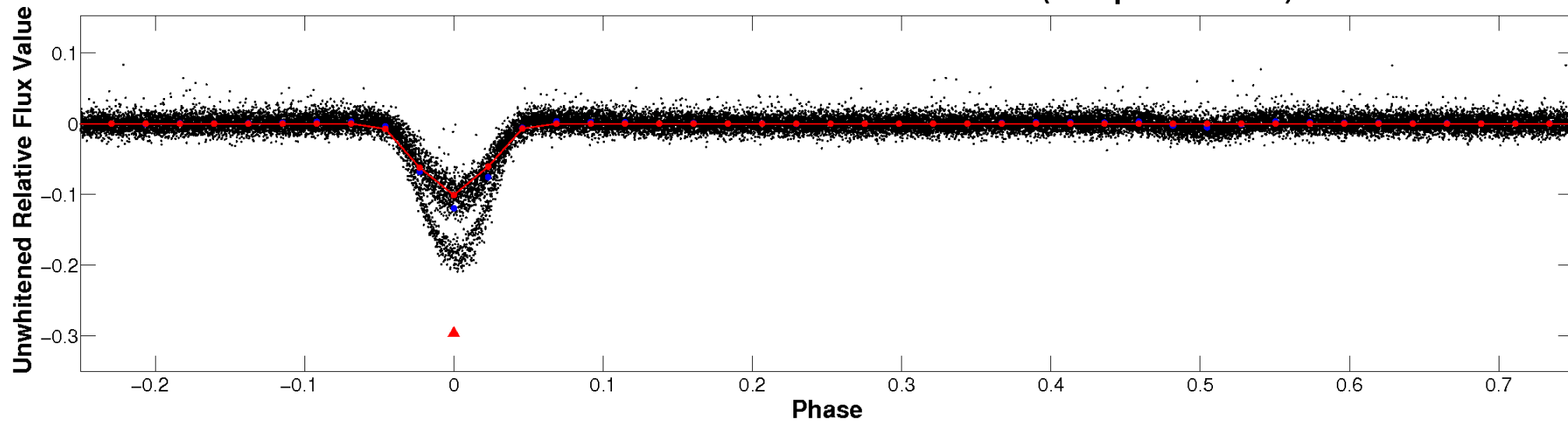
# ALT Odd/Even

TCE 007296094-01

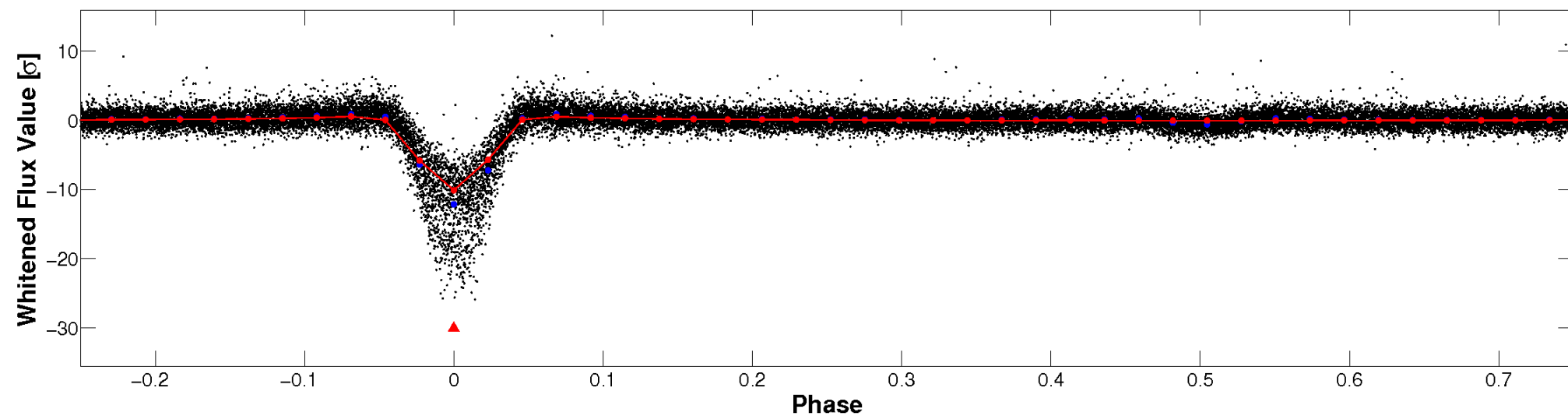


# Non-Whitened Vs. Whitened Light Curve

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



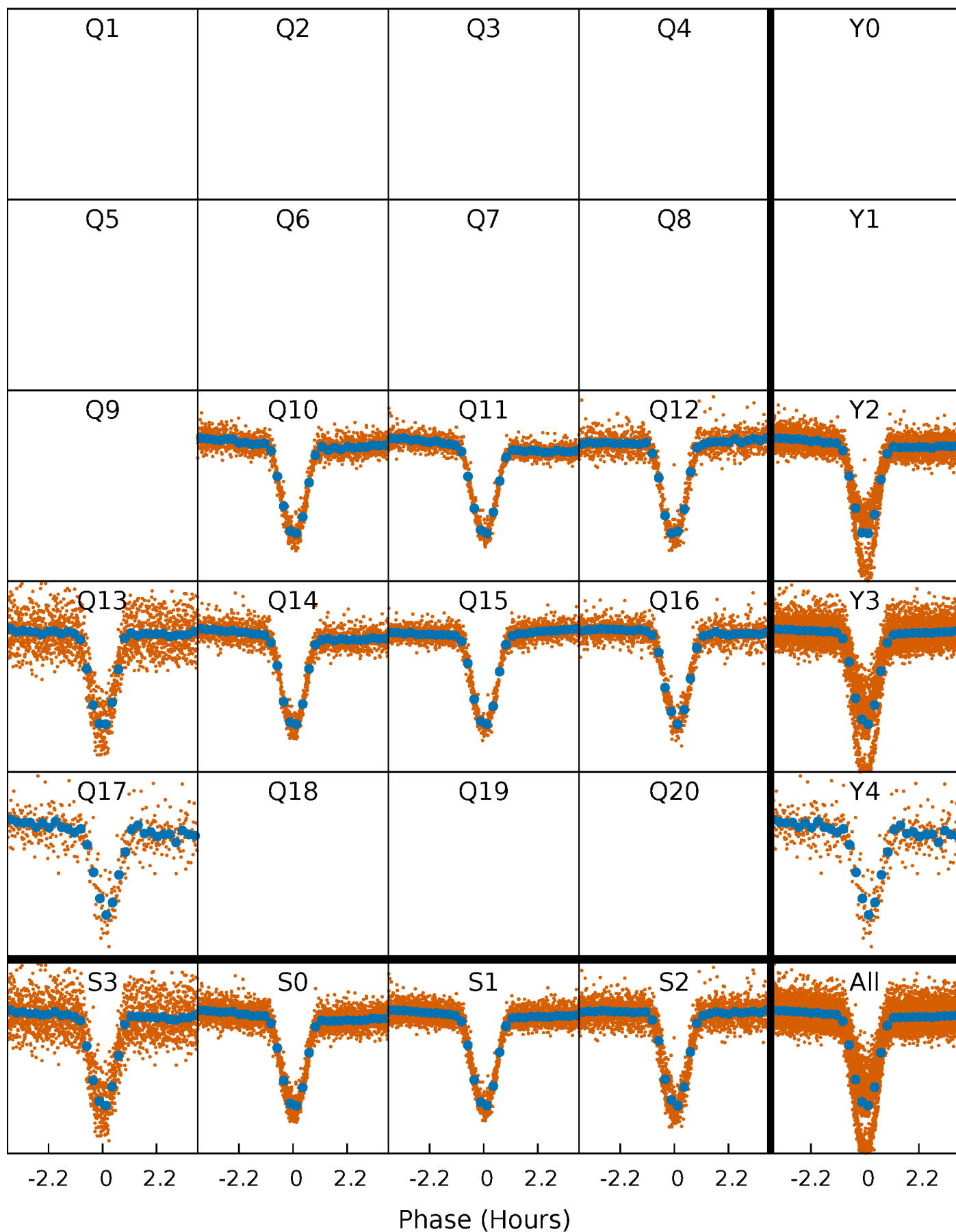
**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**





# PDC Quarter-Phased Transit Curves

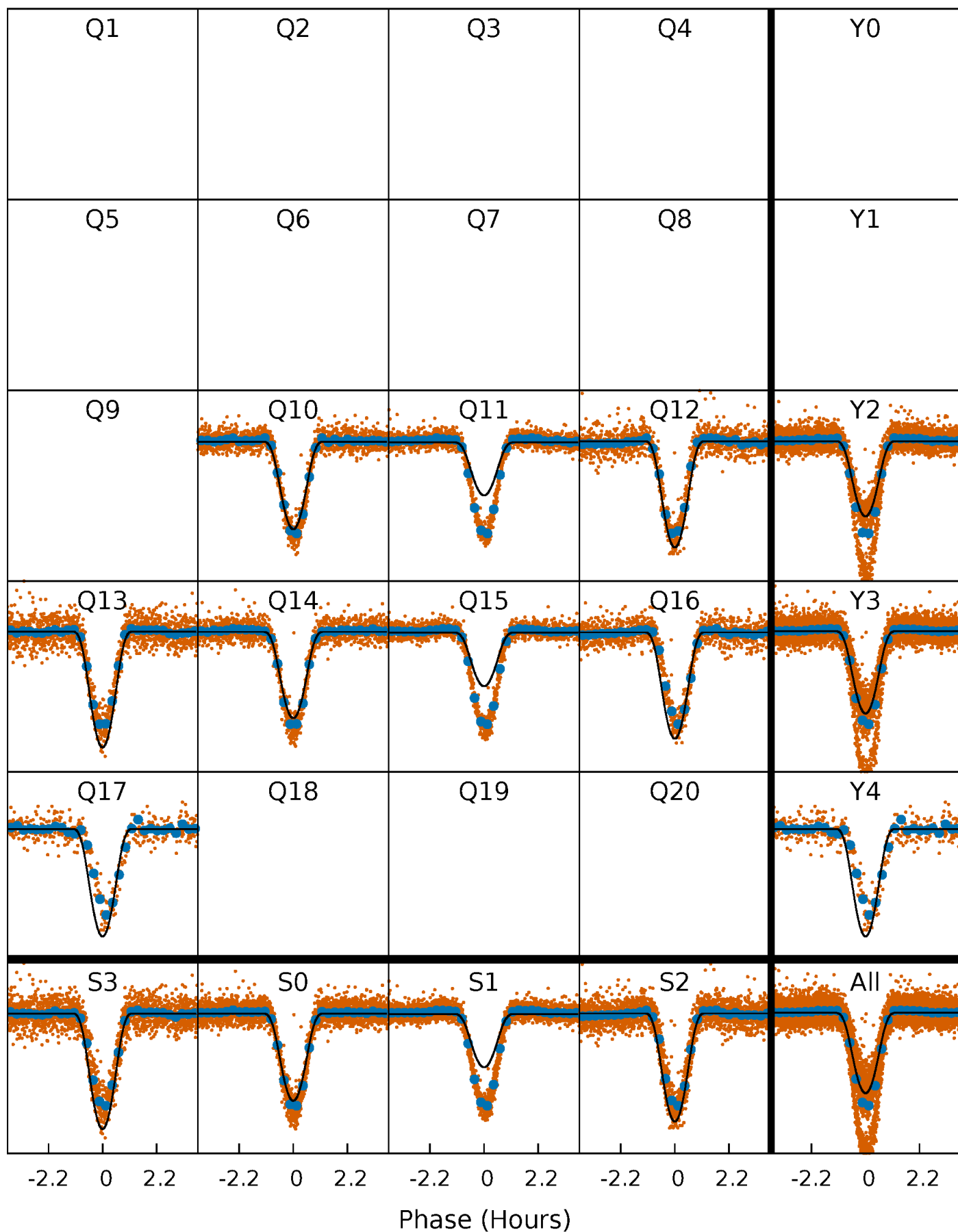
TCE 007296094-01 P= 0.890741 Days  $T_0=131.888234$  (BKJD)





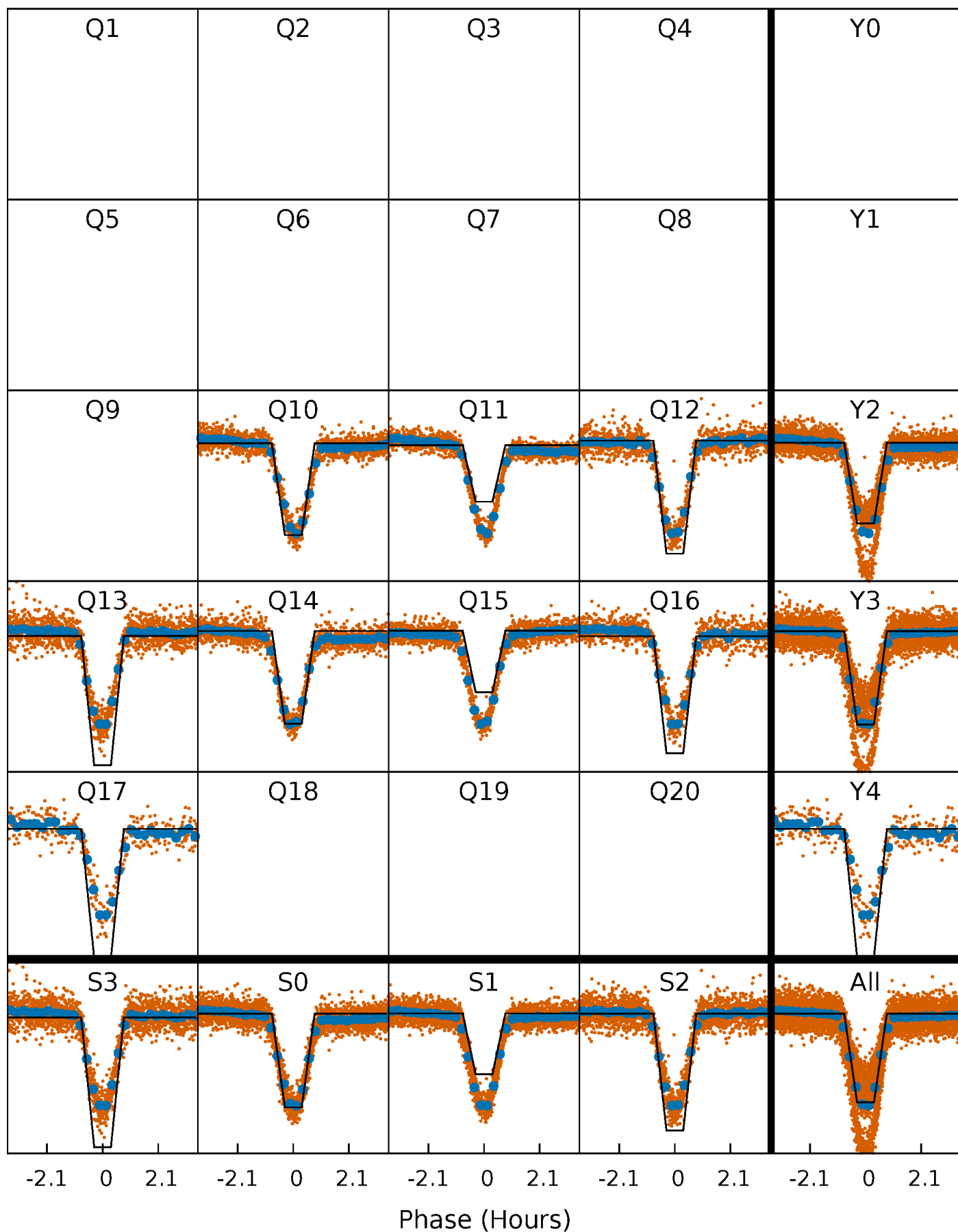
# DV Quarter-Phased Transit Curves

TCE 007296094-01   P= 0.890741 Days    $T_0=131.888234$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

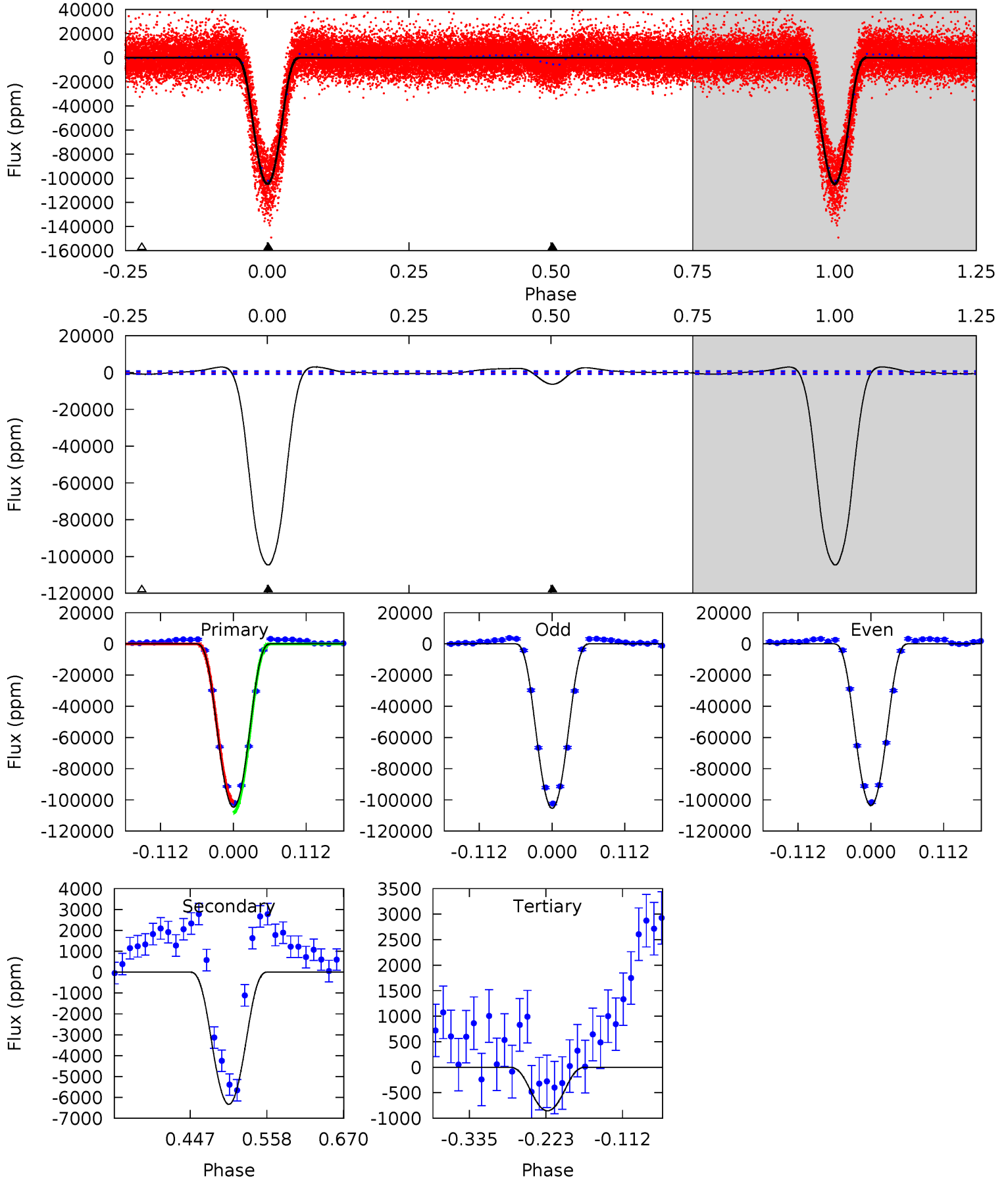
TCE 007296094-01   P= 0.890750 Days    $T_0=131.878573$  (BKJD)



# DV Model-Shift Uniqueness Test

007296094-01, P = 0.890741 Days, E = 131.888234 Days

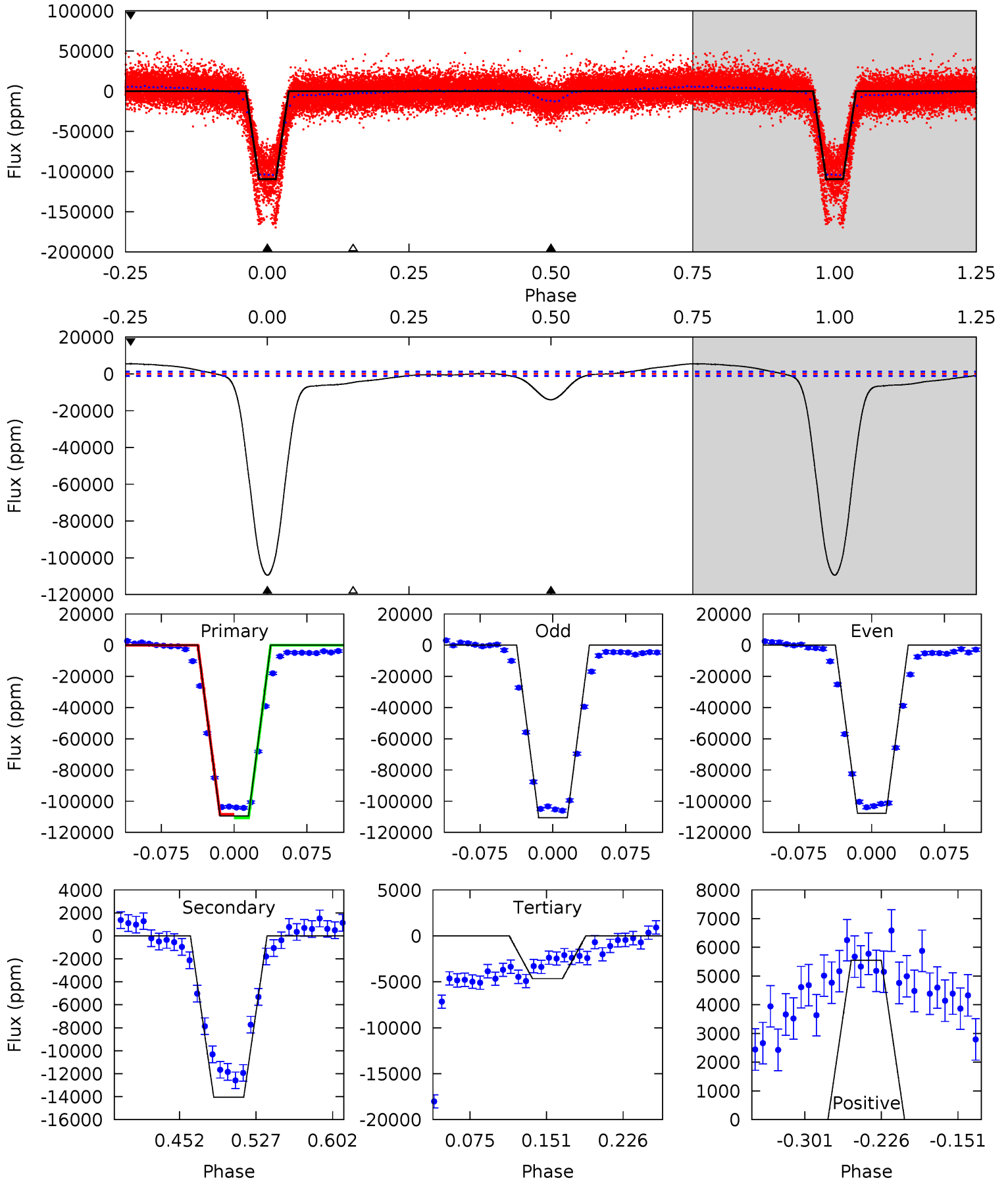
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
617.4	37.3	5.03	0	4.54	1.59	3.58	612.4	617.4	32.3	37.3	5.29	1.12	0.03	20.8



# Alt Model-Shift Uniqueness Test

007296094-01, P = 0.890750 Days, E = 131.878573 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
423.9	54.4	18.0	21.5	4.62	1.78	12.9	405.9	402.4	36.4	32.9	5.47	1.09	0.05	4.17



### Stellar Parameters For KIC 007296094

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5780^{+1}_{-1}$	$4.438^{+1.000}_{-1.000}$	$0.000^{+1.000}_{-1.000}$	$1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$
	+0%/-0%	+23%/-23%	+inf%/-inf%	+100%/-100%	+100%/-100%	+100%/-100%
Source	Solar	Solar	Solar	Solar		

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

### Secondary Eclipse Parameters for KIC 007296094-01 / KOI 3790.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	-6329±169	$37.31^{+3.02}_{-2.88}$	$2646^{+136}_{-126}$	$3118^{+92}_{-88}$	$0.829^{+0.134}_{-0.112}$
Alt.	-14050±258	$37.90^{+3.16}_{-2.83}$	$2645^{+131}_{-114}$	$3657^{+109}_{-98}$	$1.799^{+0.275}_{-0.261}$

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

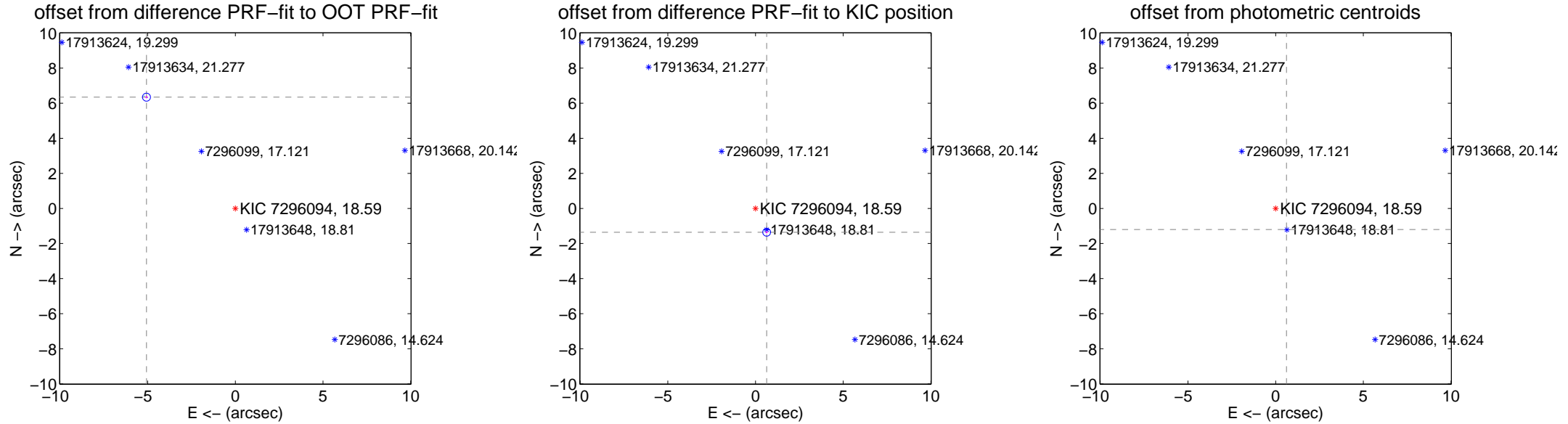
## DV Centroid Data

Supplemental centroid analysis for 007296094-01. Kepler magnitude: 18.59. Transit SNR 271.64

There are 8 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 9.60 arcsec so the offset from difference PRF-fit to OOT PRF-fit may be invalid.

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$8.118 \pm 0.076$	106.78	$5.066 \pm 0.076$	$6.343 \pm 0.069$
PRF-fit source offset from KIC position	$1.500 \pm 0.074$	20.14	$-0.637 \pm 0.071$	$-1.358 \pm 0.072$
photometric centroid source offset	$1.35 \pm 0.00$	466.93	$-0.62 \pm 0.00$	$-1.20 \pm 0.00$



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.

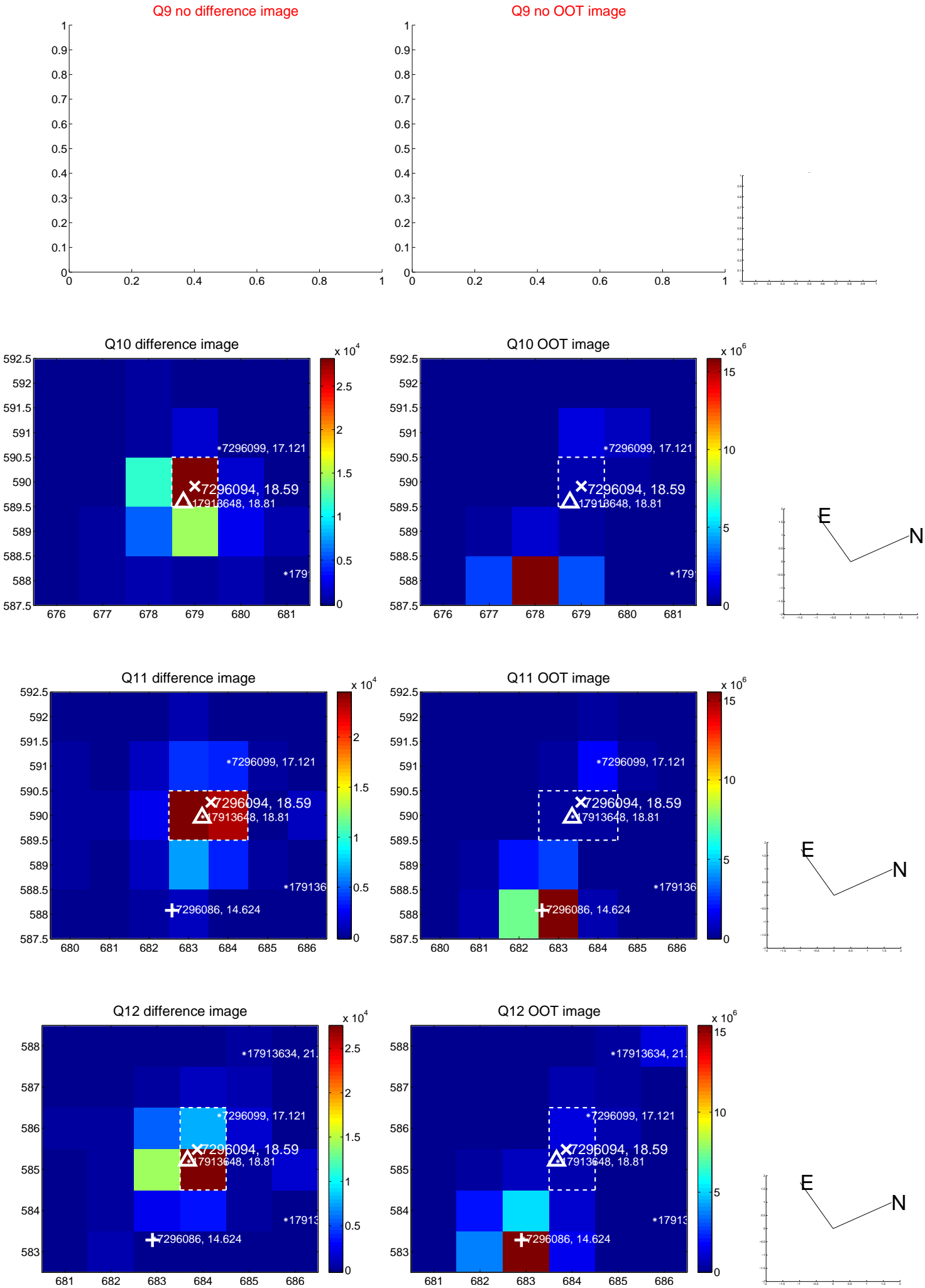




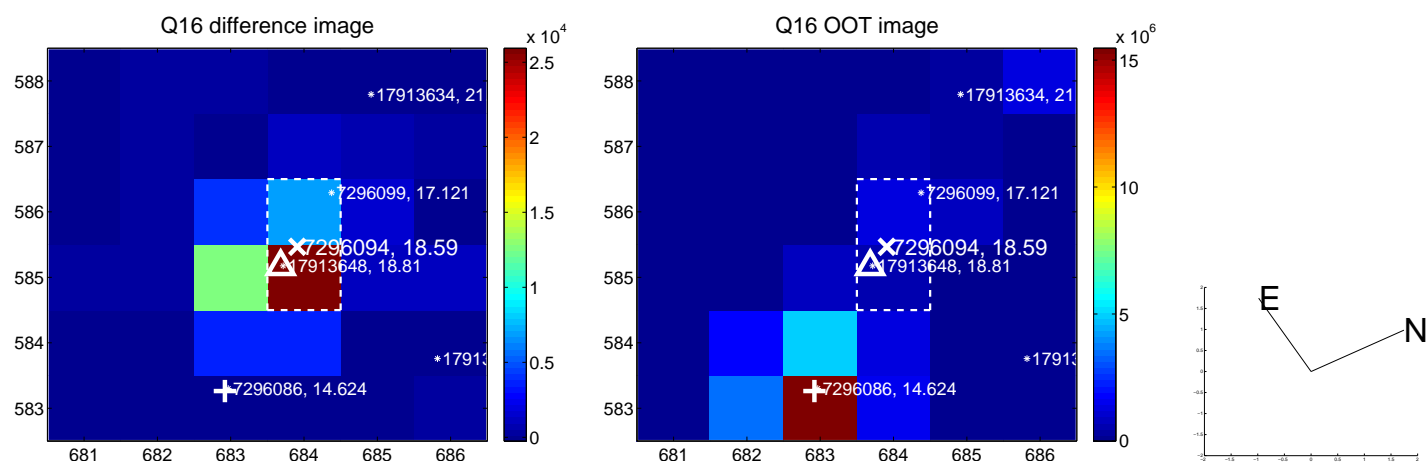
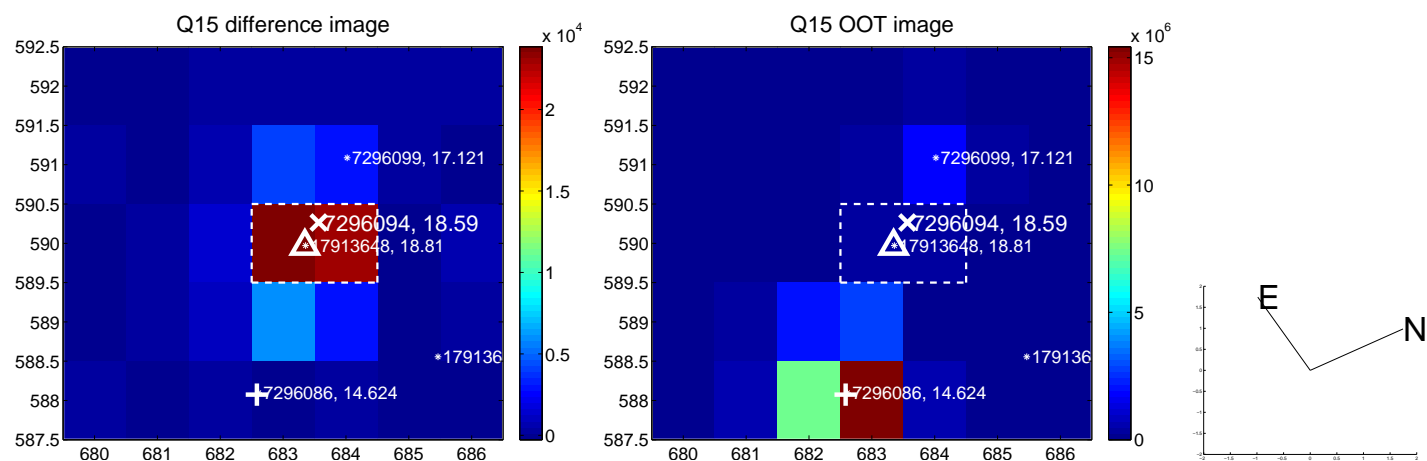
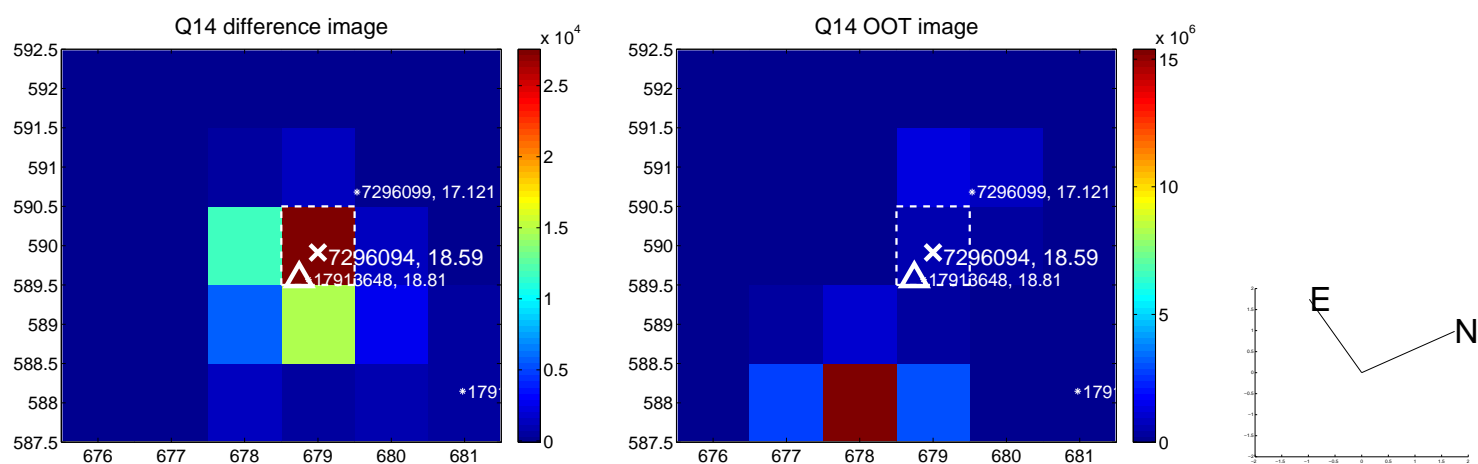
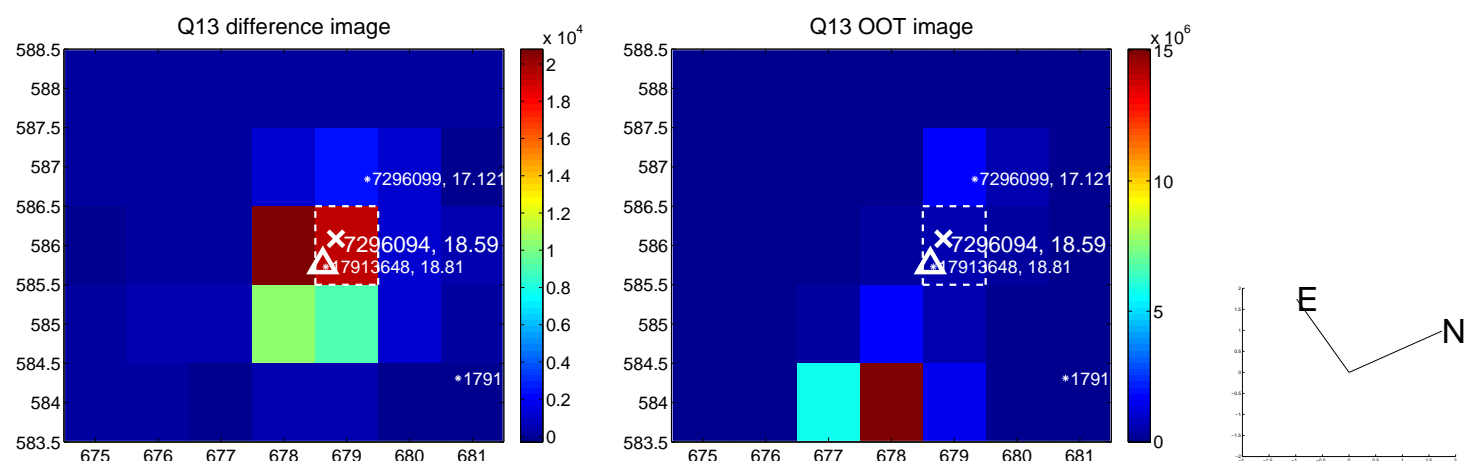
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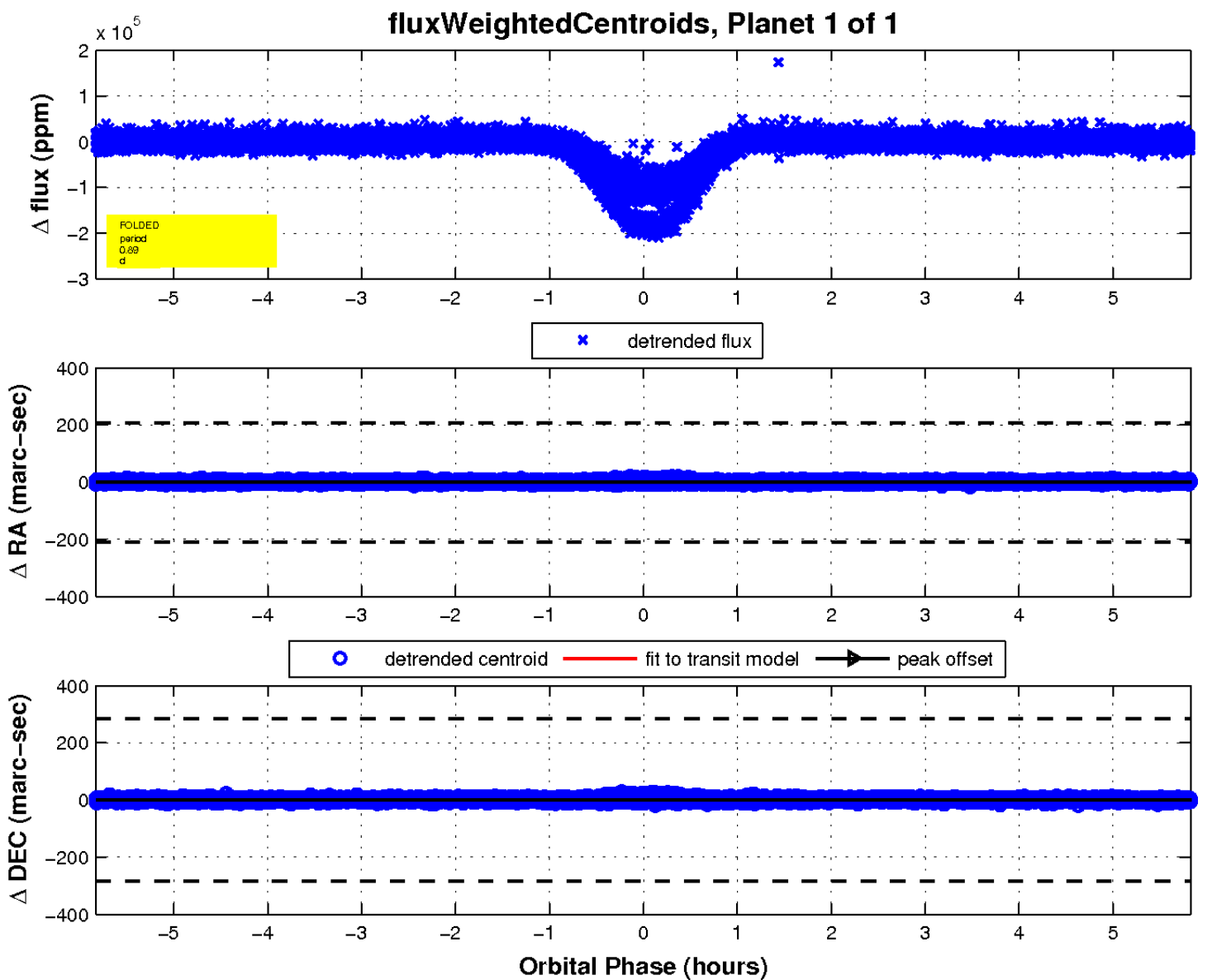
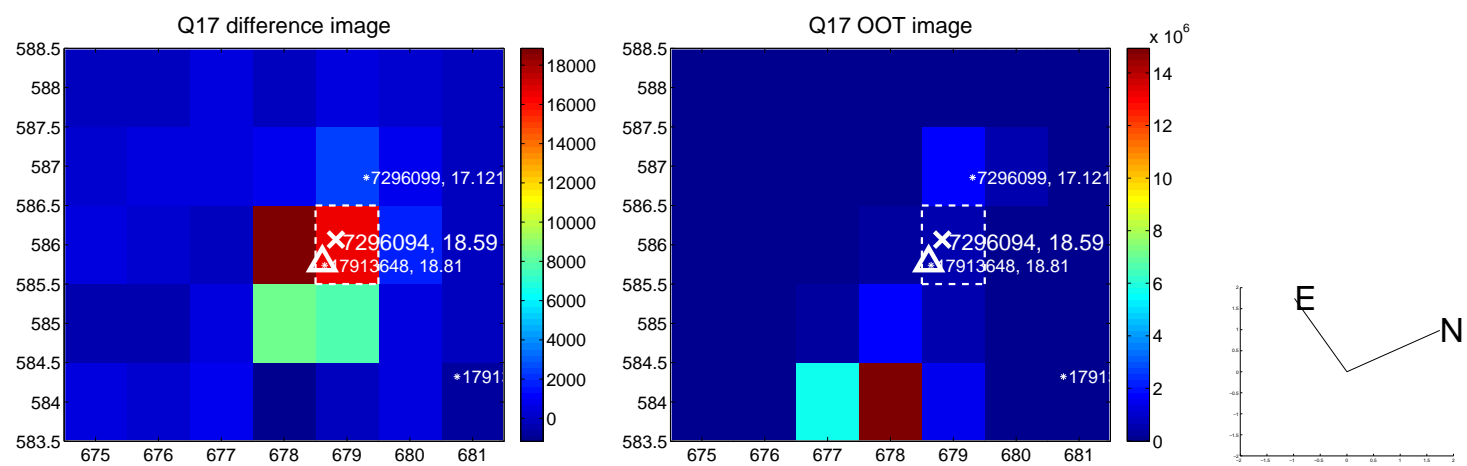
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UKIRT Image

Declination

