

# KIC 008294896

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008294896-01	OBS	No	371.909982	228.591440	589.0	18.104	7.4	7.3	0.81	5265	2.05	0.47

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008294896-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST

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

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

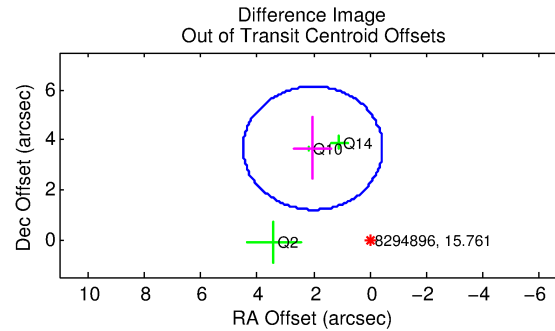
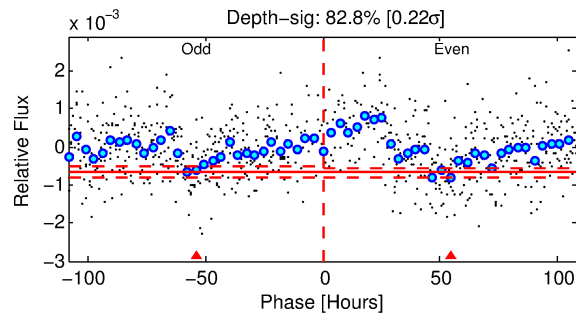
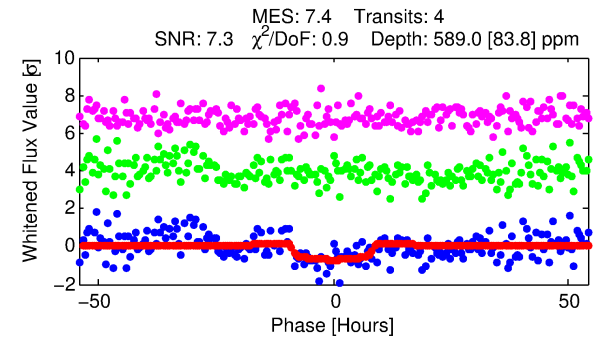
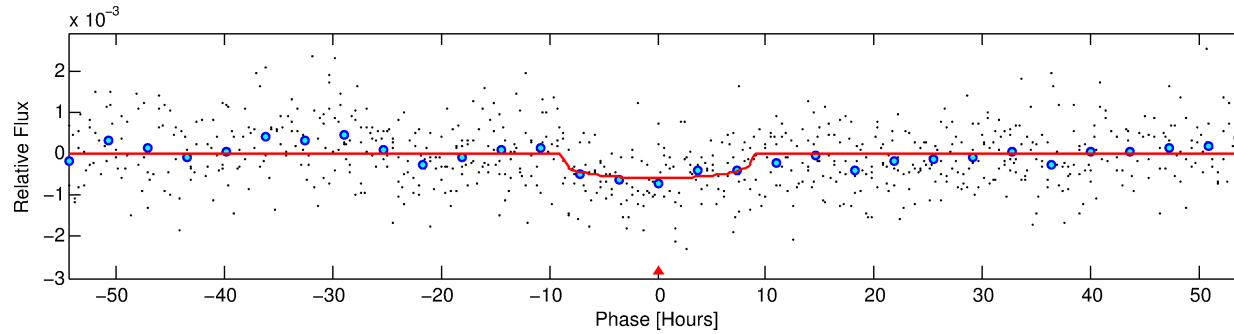
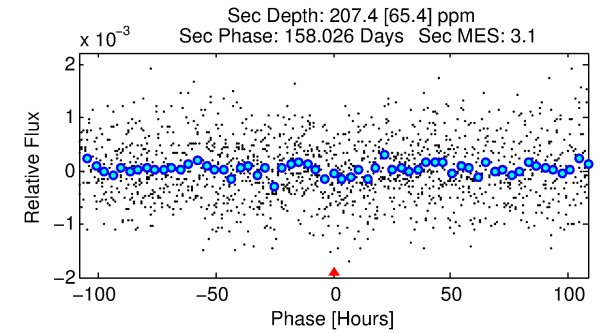
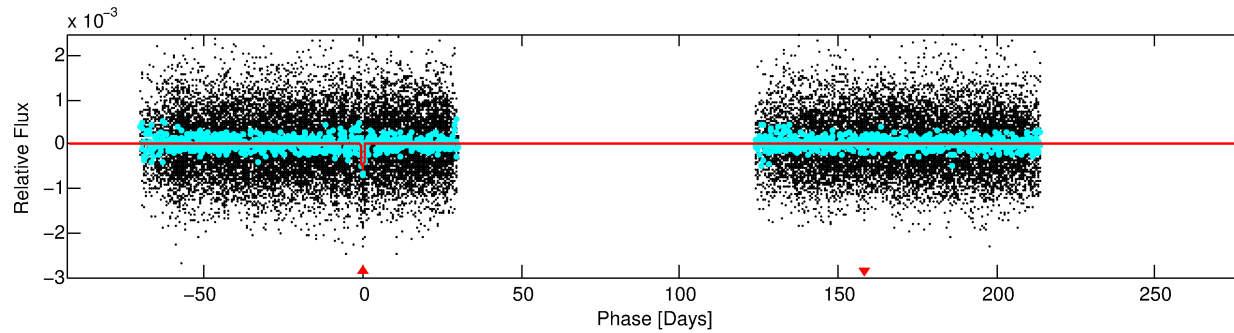
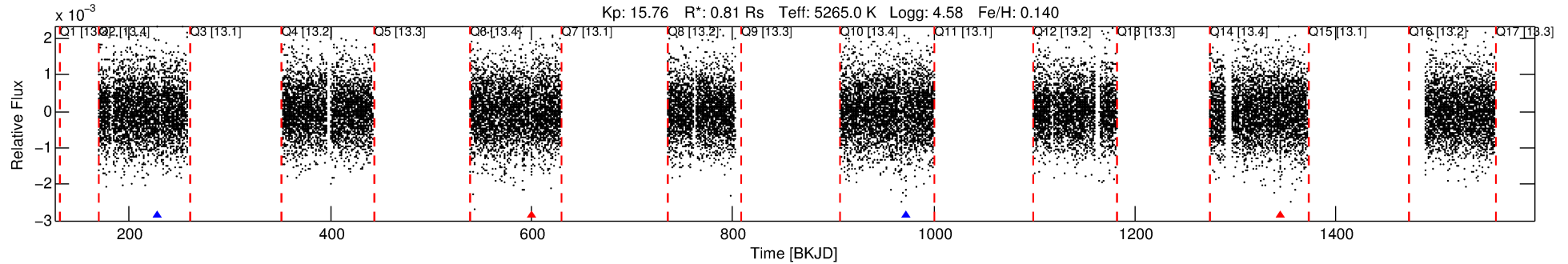
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008294896-01

No Significant Match Found

# DV One-Page Summary

KIC: 8294896 Candidate: 1 of 1 Period: 371.910 d



## DV Fit Results:

Period = 371.90998 [0.01655] d  
Epoch = 228.5914 [0.0320] BKJD  
Rp/R\* = 0.0232 [0.0140]  
a/R\* = 126.99 [280.68]  
b = 0.63 [2.17]  
Seff = 0.47 [0.12]  
Teq = 211 [14] K  
Rp = 2.05 [1.28] Re  
a = 0.9809 [0.1422] AU  
Ag = 26207.31 [33146.05] [0.79σ]  
Teff = 4152 [1302] K [3.03σ]

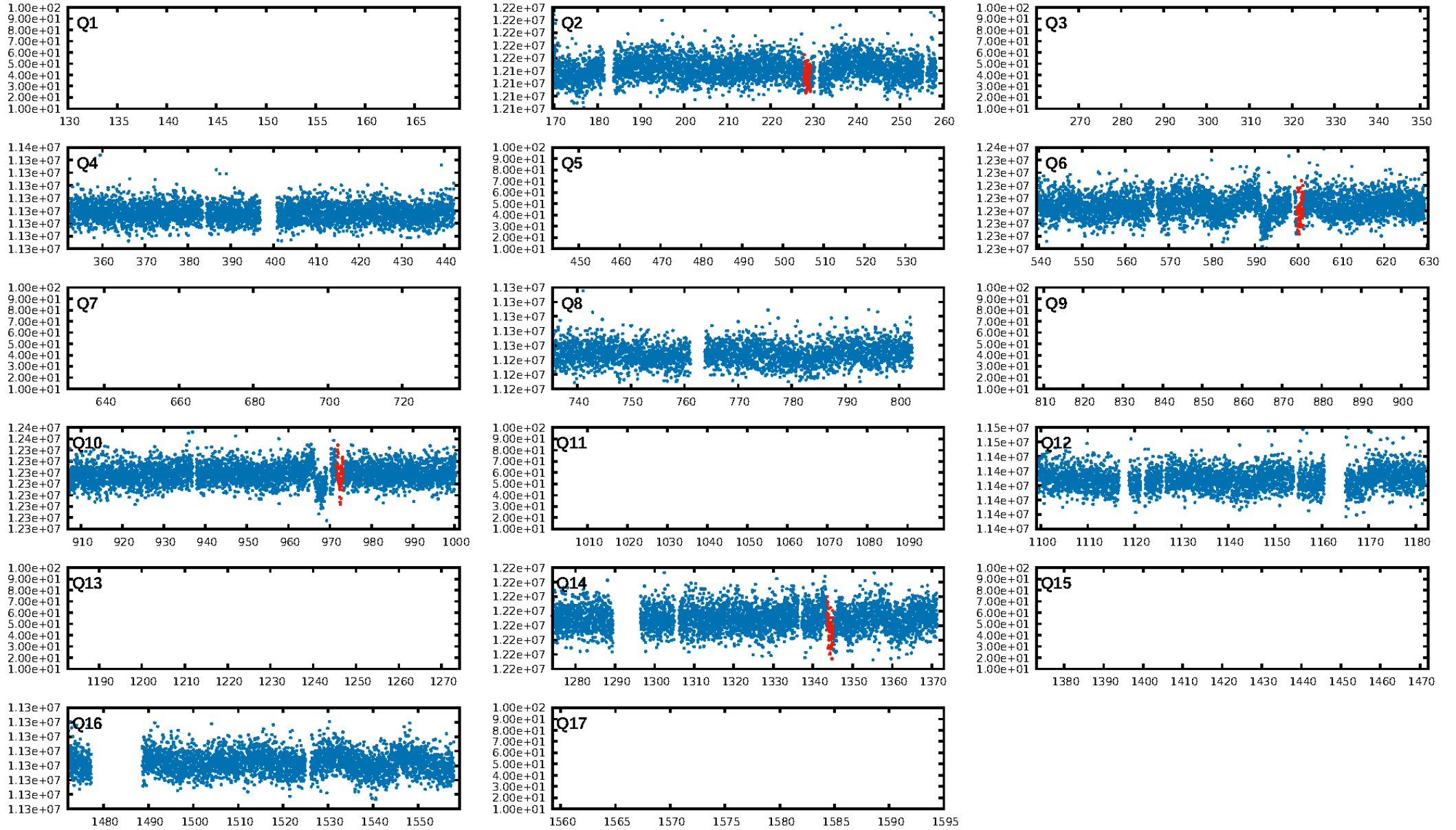
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 8.7%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: 2.08e-14  
RollingBand-fgt: 0.50 [2/4]  
GhostDiagnostic-chr: -0.06191  
Centroid-sig: 0.7%  
Centroid-so: 2.990 arcsec [1.78σ]  
OotOffset-rm: 4.181 arcsec [5.08σ]  
KicOffset-rm: 3.926 arcsec [8.23σ]  
OotOffset-st: 3/0/0/0 [3]  
KicOffset-st: 3/0/0/0 [3]  
DiffImageQuality-fgm: 0.00 [0/3]  
DiffImageOverlap-fno: 1.00 [3/3]

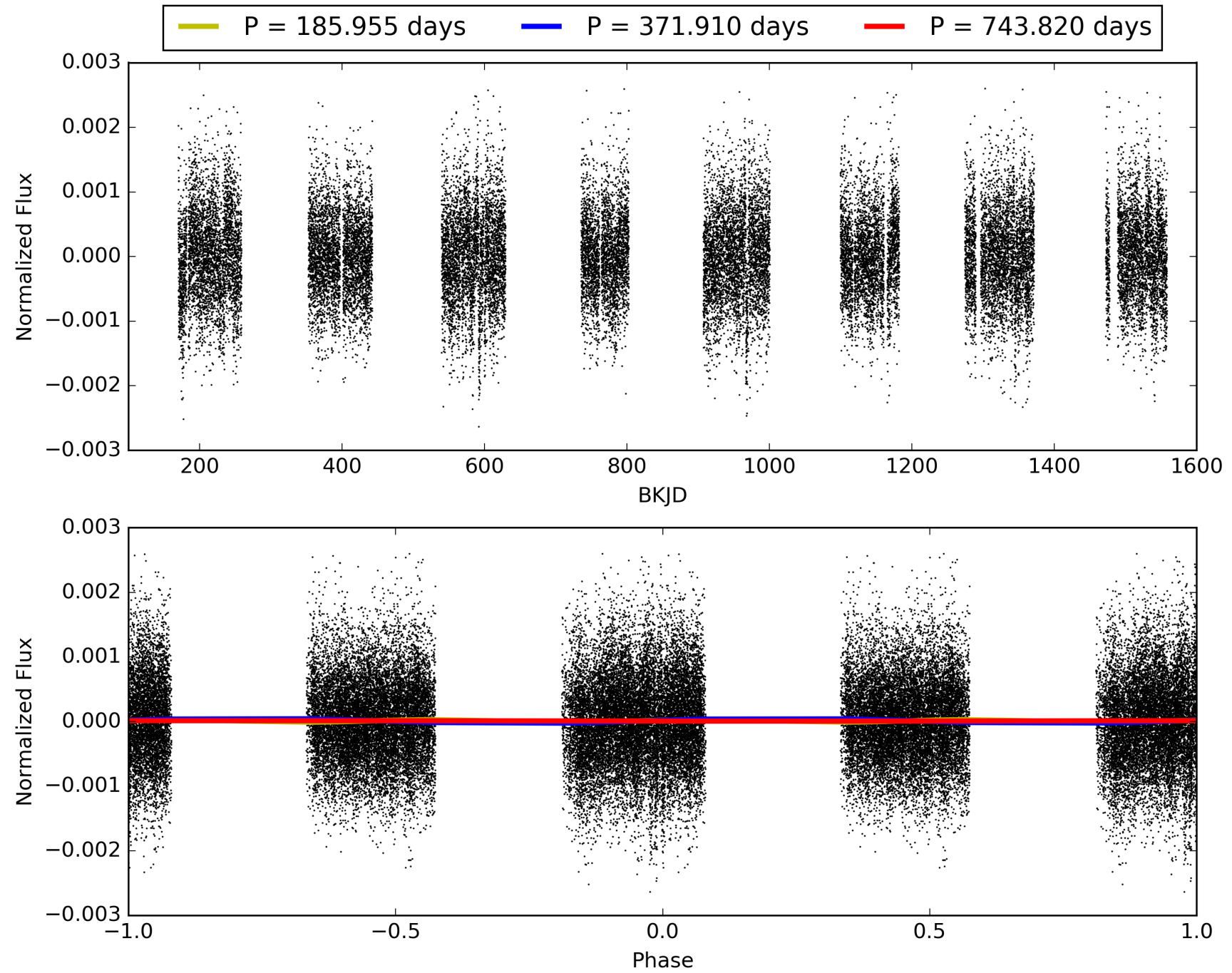
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:53:23 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 008294896-01, PDC Light Curves

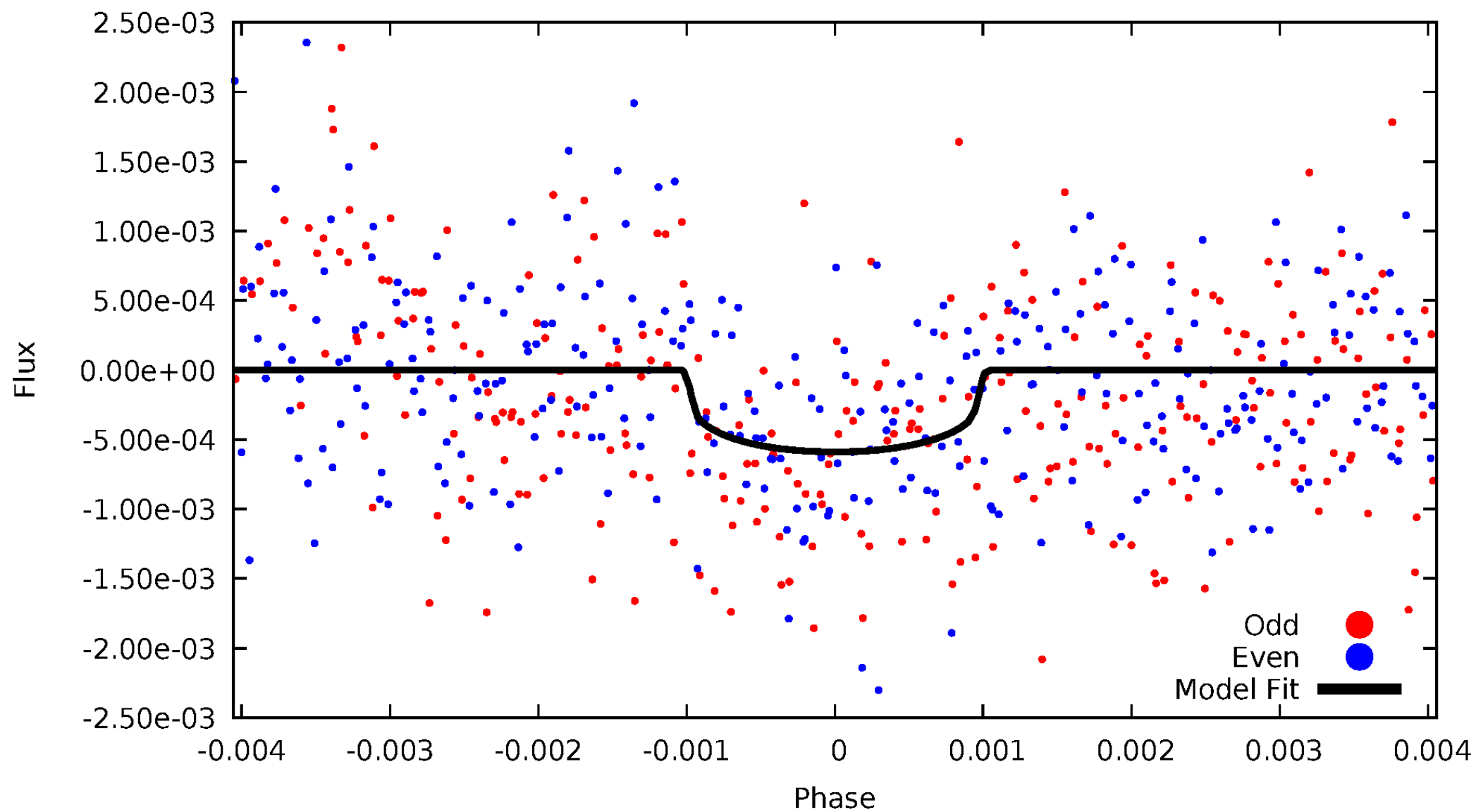


TCE 008294896-01



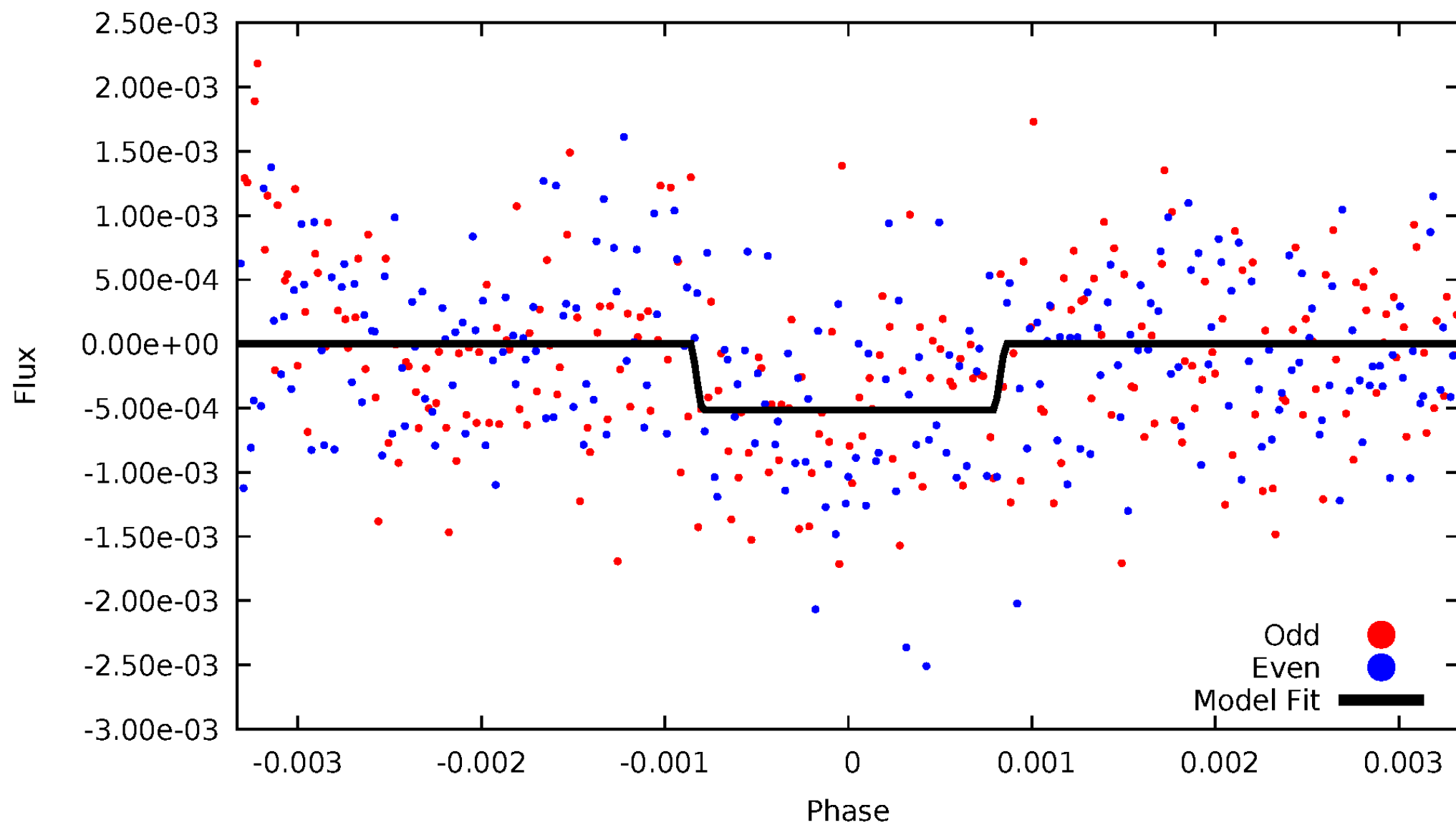
# DV Odd/Even

TCE 008294896-01



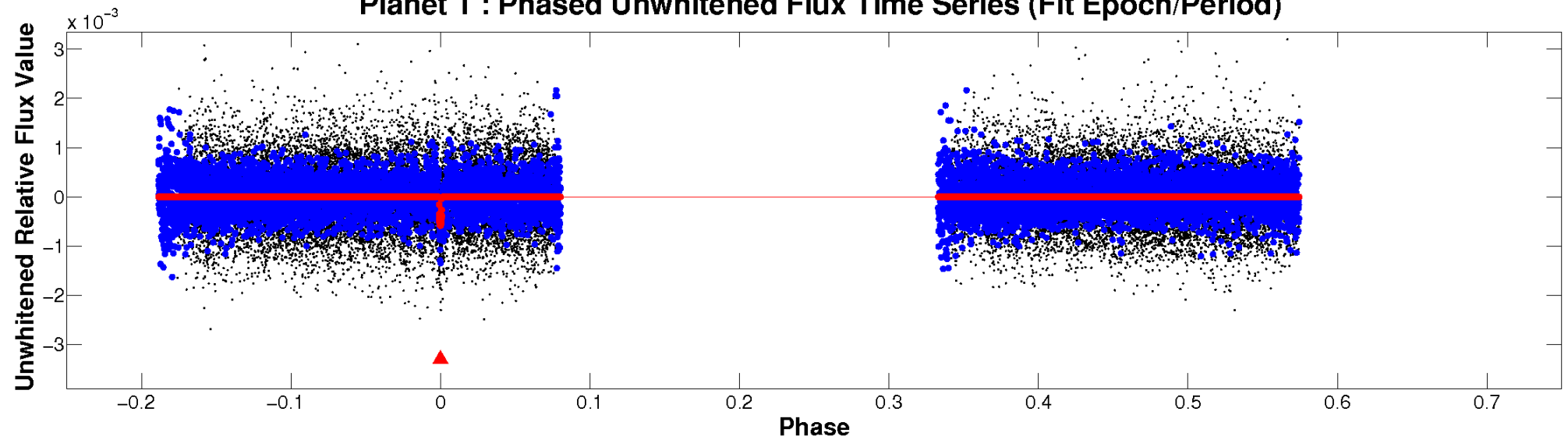
# ALT Odd/Even

TCE 008294896-01

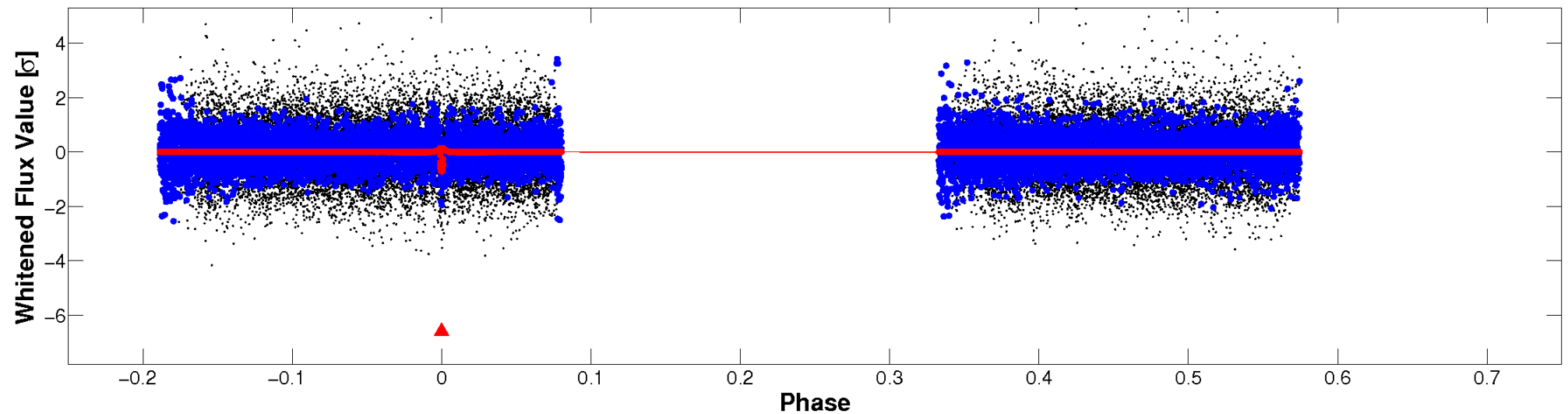


# Non-Whitened Vs. Whitened Light Curve

**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 008294896-01     $P=371.909982$  Days     $T_0=228.591440$  (BKJD)





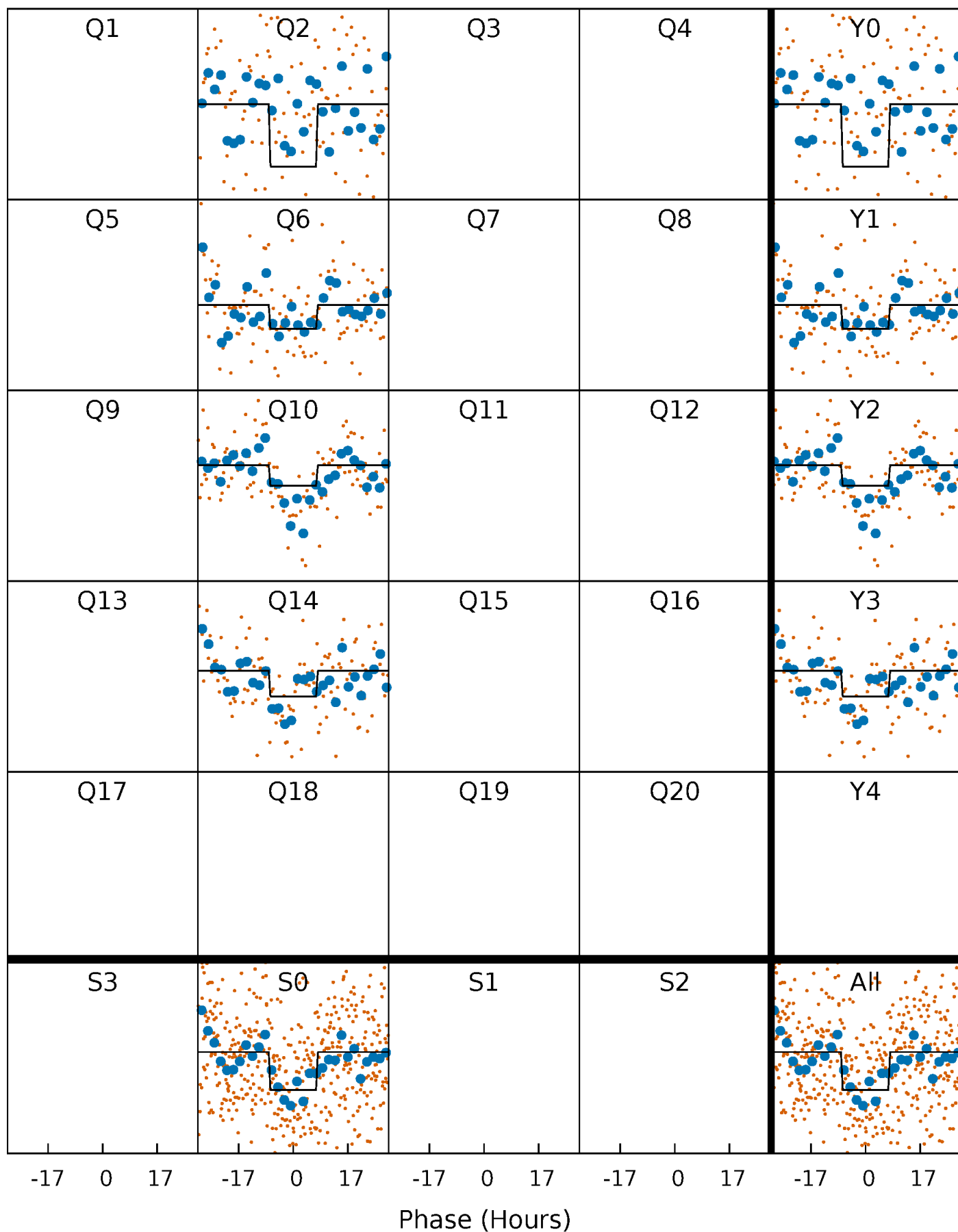
# DV Quarter-Phased Transit Curves

TCE 008294896-01 P=371.909982 Days  $T_0=228.591440$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

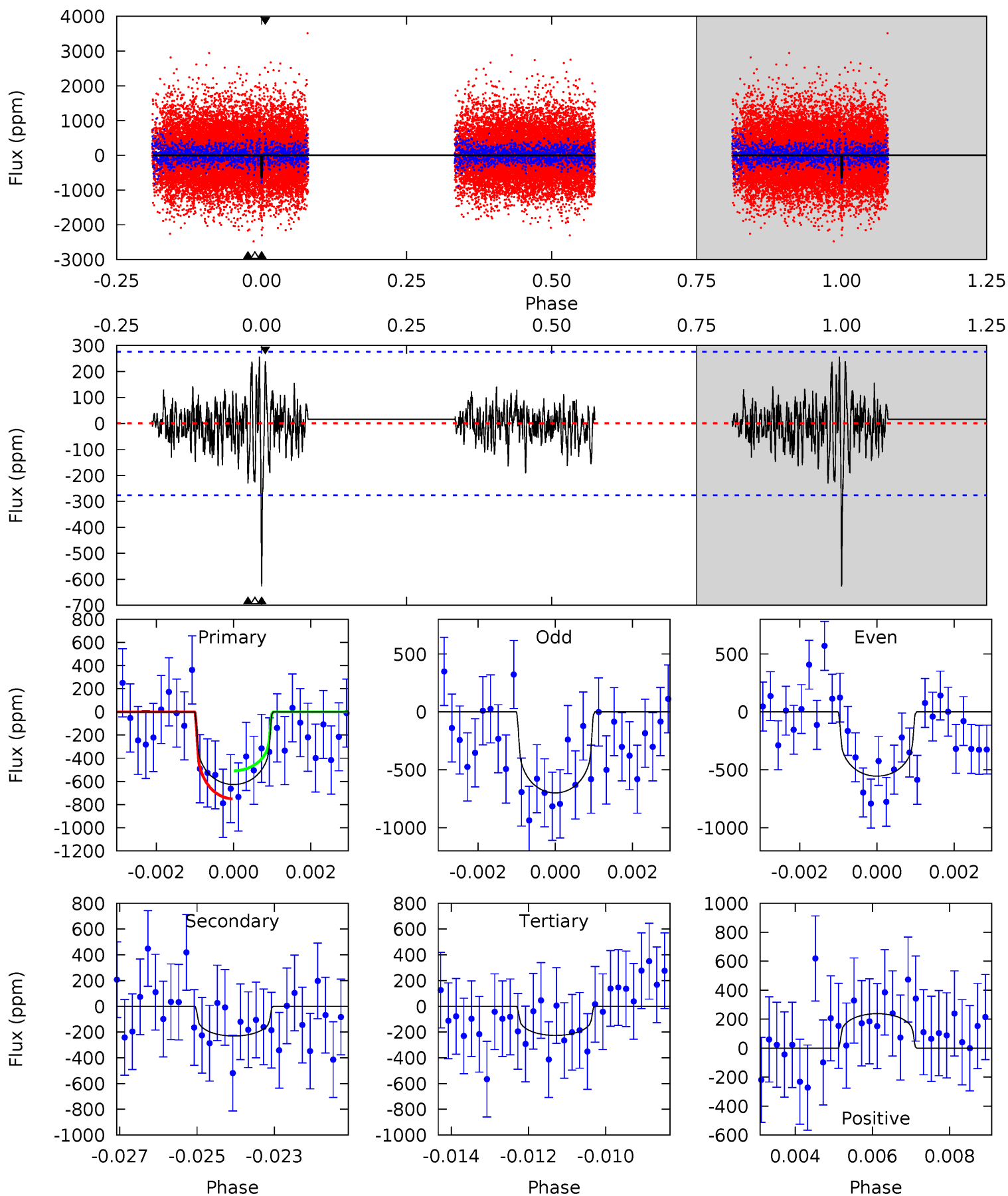
TCE 008294896-01 P=371.924848 Days  $T_0=228.512322$  (BKJD)



# DV Model-Shift Uniqueness Test

008294896-01, P = 371.909982 Days, E = 228.591440 Days

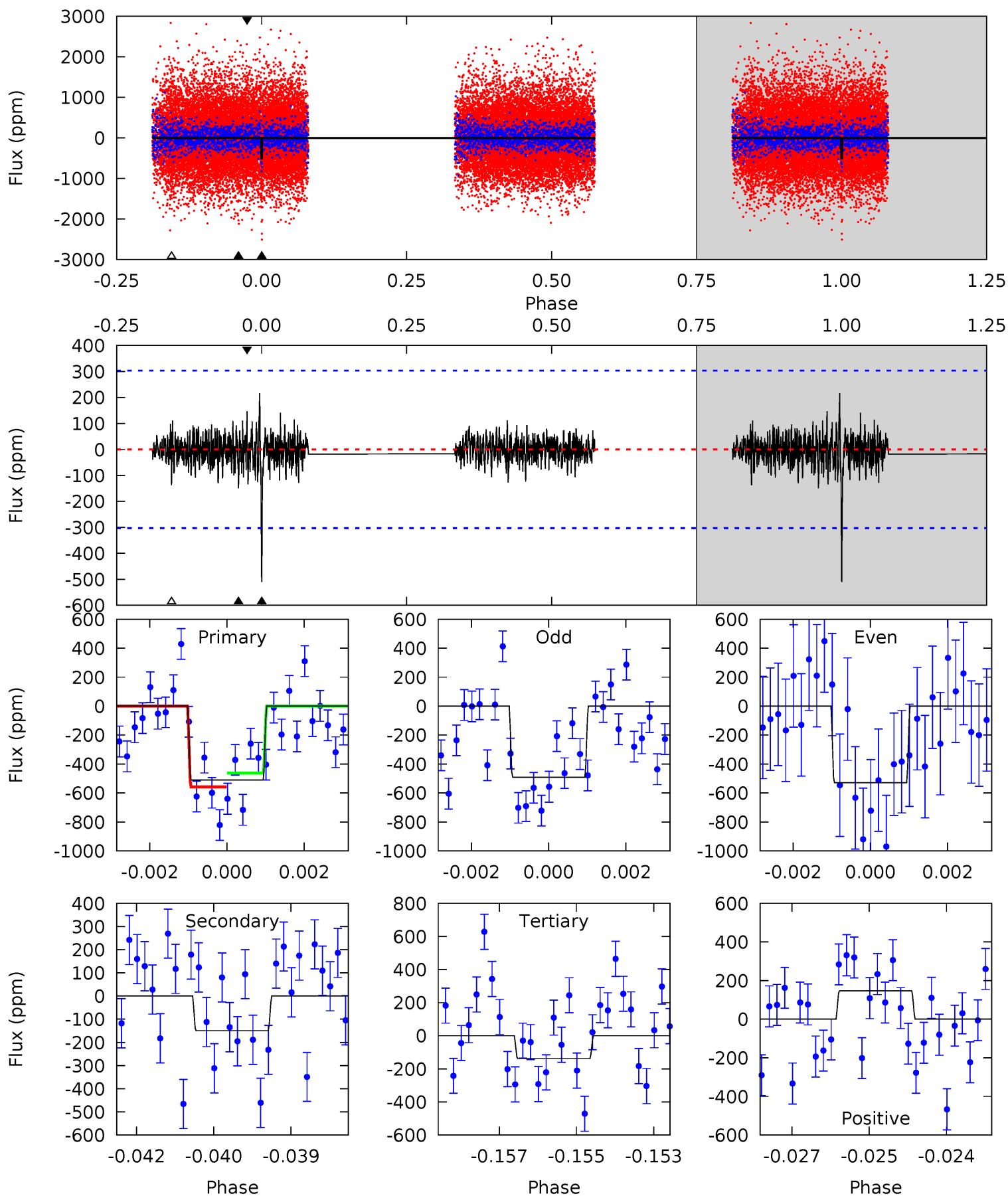
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.1	4.44	4.36	4.59	5.32	3.08	1.28	7.72	7.49	0.08	-0.14	1.40	0.91	0.29	2.34



# Alt Model-Shift Uniqueness Test

008294896-01, P = 371.924848 Days, E = 228.512322 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
9.01	2.64	2.44	2.58	5.36	3.14	0.73	6.57	6.42	0.20	0.06	0.33	1.04	0.30	0.85



### Stellar Parameters For KIC 008294896

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5265^{+183}_{-183}$	$4.580^{+0.030}_{-0.120}$	$0.140^{+0.250}_{-0.300}$	$0.810^{+0.136}_{-0.063}$	$0.910^{+0.062}_{-0.101}$	$2.407^{+0.359}_{-0.823}$
	+3%/-3%	+1%/-3%	+179%/-214%	+17%/-8%	+7%/-11%	+15%/-34%
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 008294896-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-231 \pm 52$	$2.14^{+1.24}_{-1.06}$	$301^{+13}_{-15}$	$4358^{+1572}_{-631}$	$25296^{+79944}_{-14923}$
Alt.	$-149 \pm 57$	$2.17^{+1.25}_{-1.18}$	$300^{+14}_{-13}$	$4007^{+1500}_{-618}$	$15477^{+59729}_{-9673}$

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

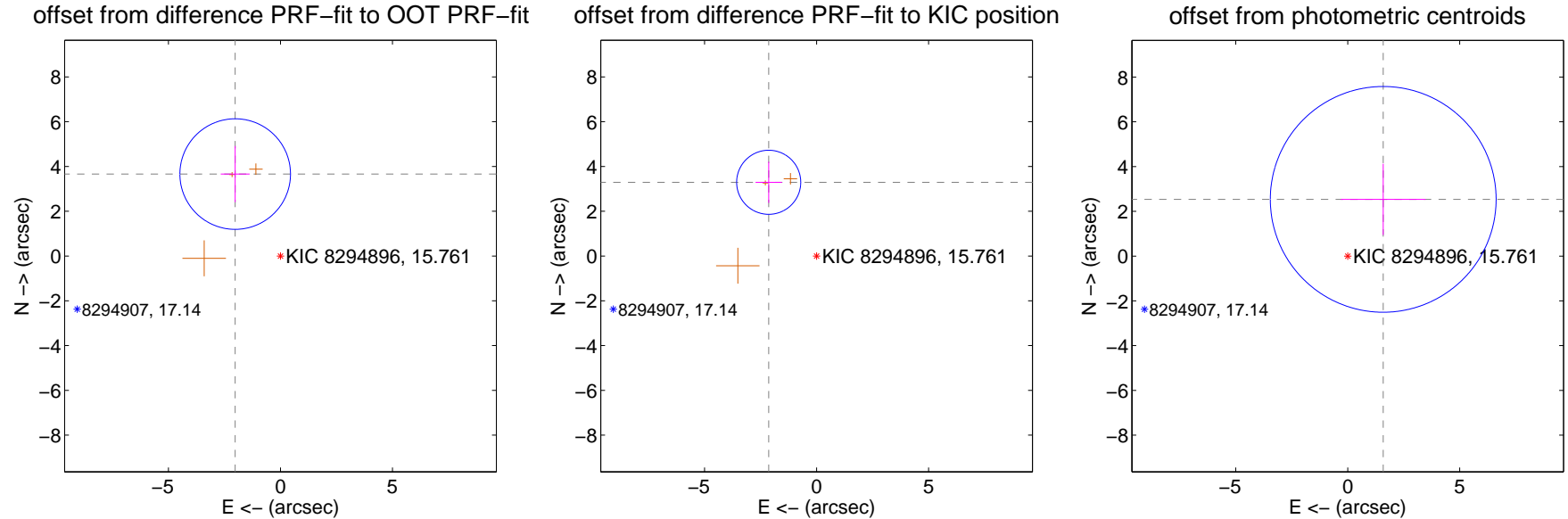
## DV Centroid Data

Supplemental centroid analysis for 008294896-01. Kepler magnitude: 15.76. Transit SNR 7.34

There are 0 quarters with good PRF difference image offsets

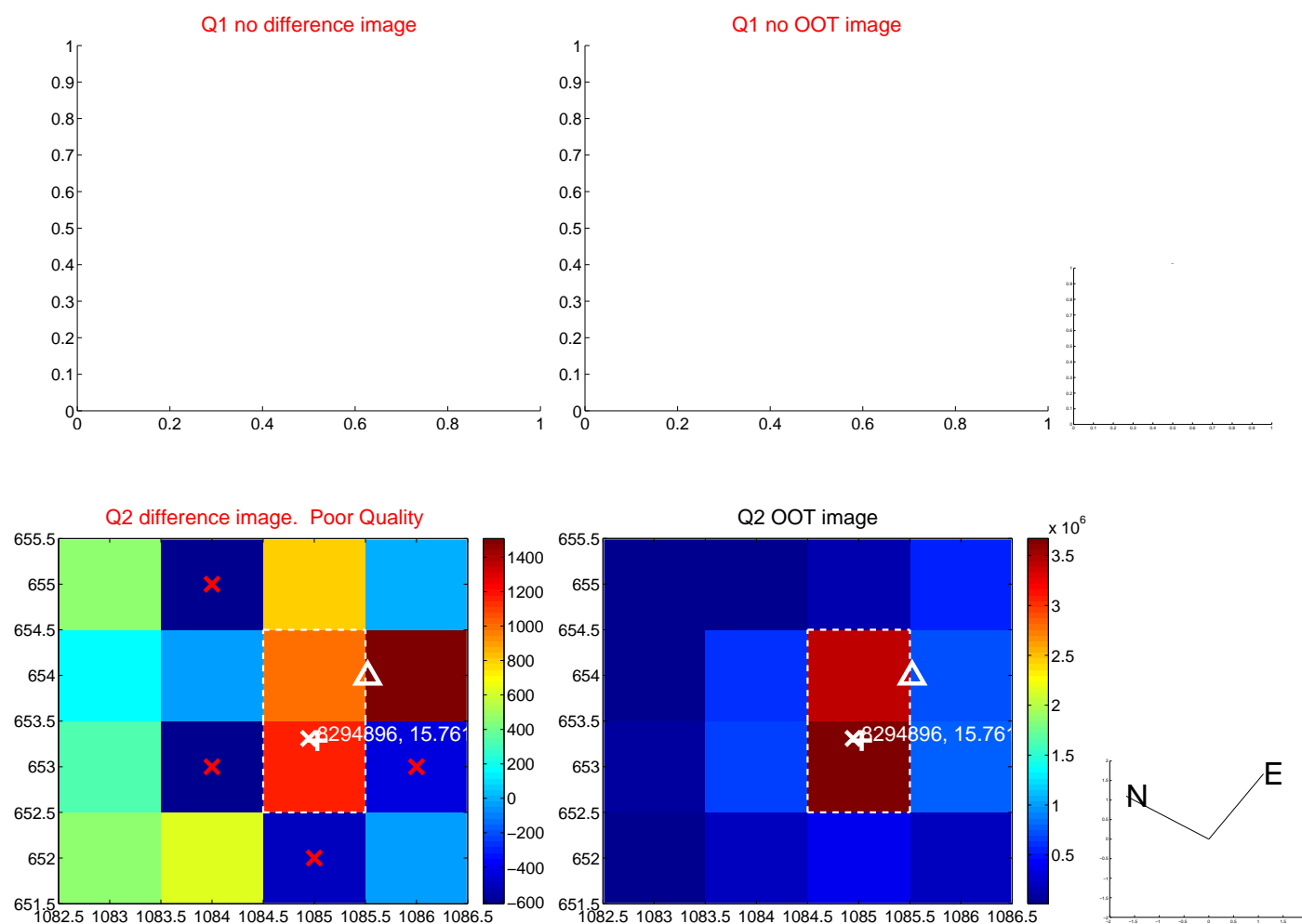
The direct PRF centroid is offset from the target star catalog position by about 0.44 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$4.181 \pm 0.823$	5.08	$2.021 \pm 0.644$	$3.661 \pm 1.254$
PRF-fit source offset from KIC position	$3.926 \pm 0.477$	8.23	$2.138 \pm 0.588$	$3.293 \pm 0.918$
photometric centroid source offset	$2.99 \pm 1.68$	1.78	$-1.59 \pm 1.89$	$2.53 \pm 1.59$



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

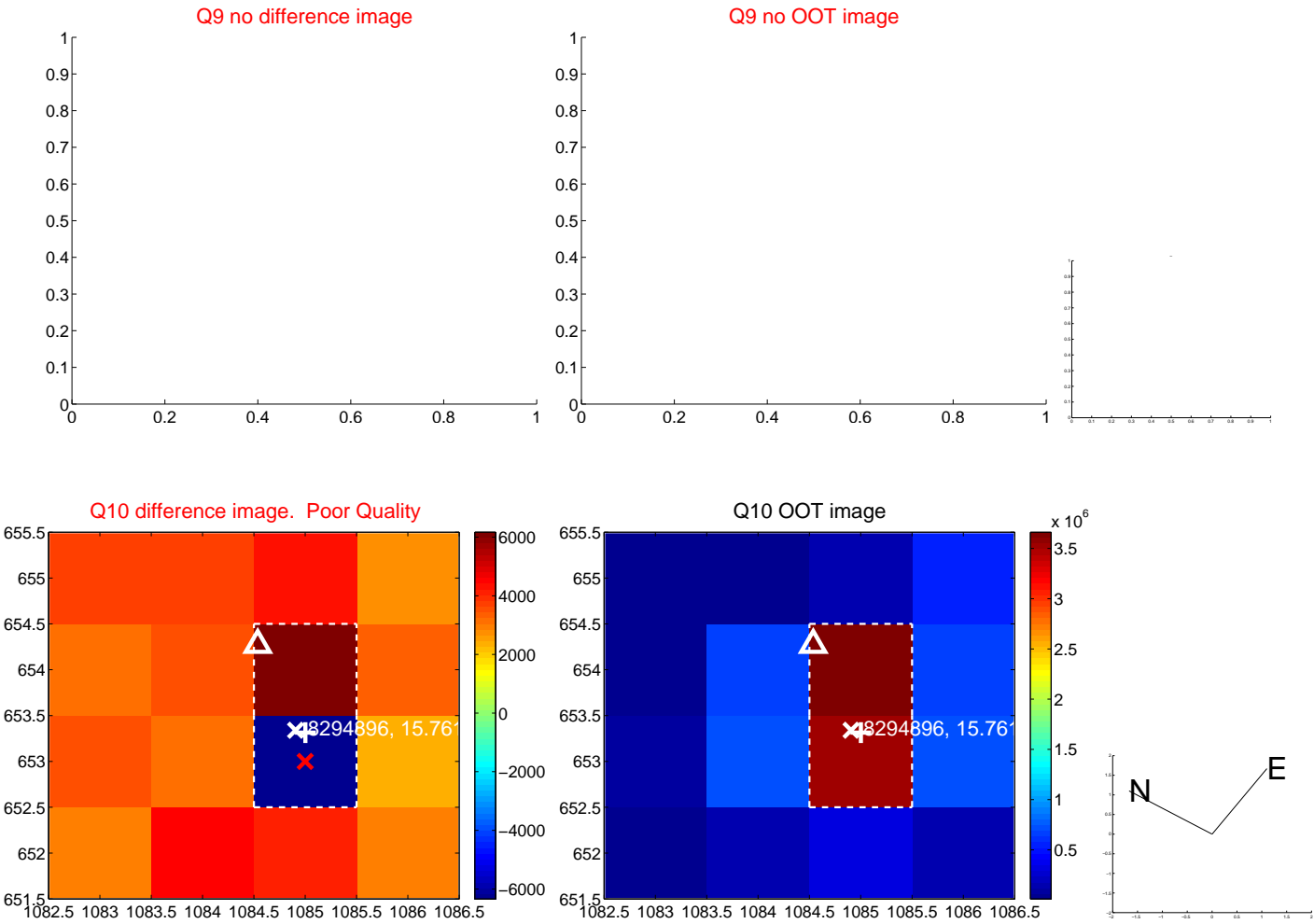


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

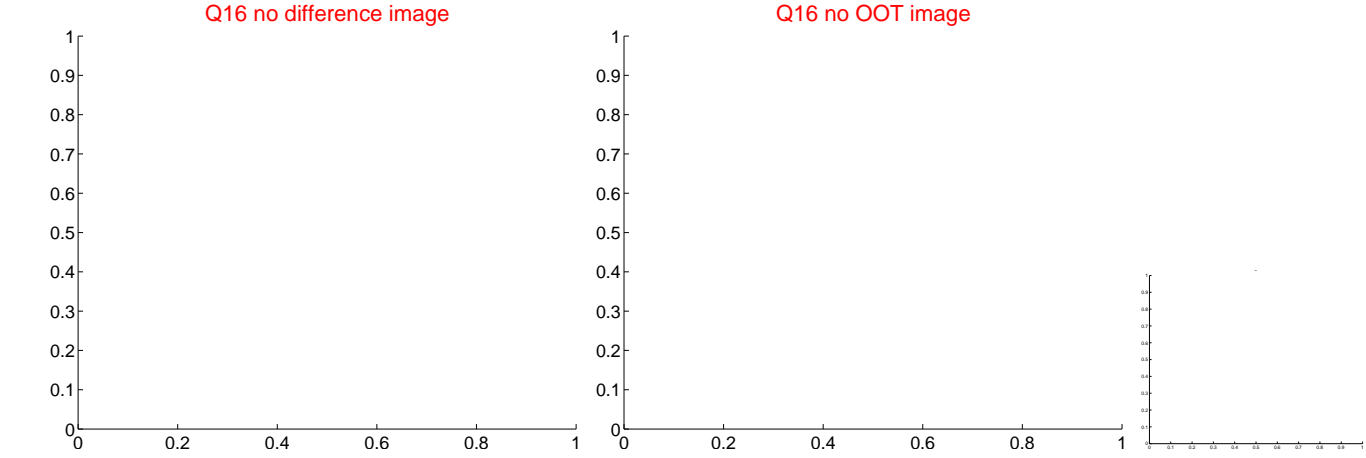
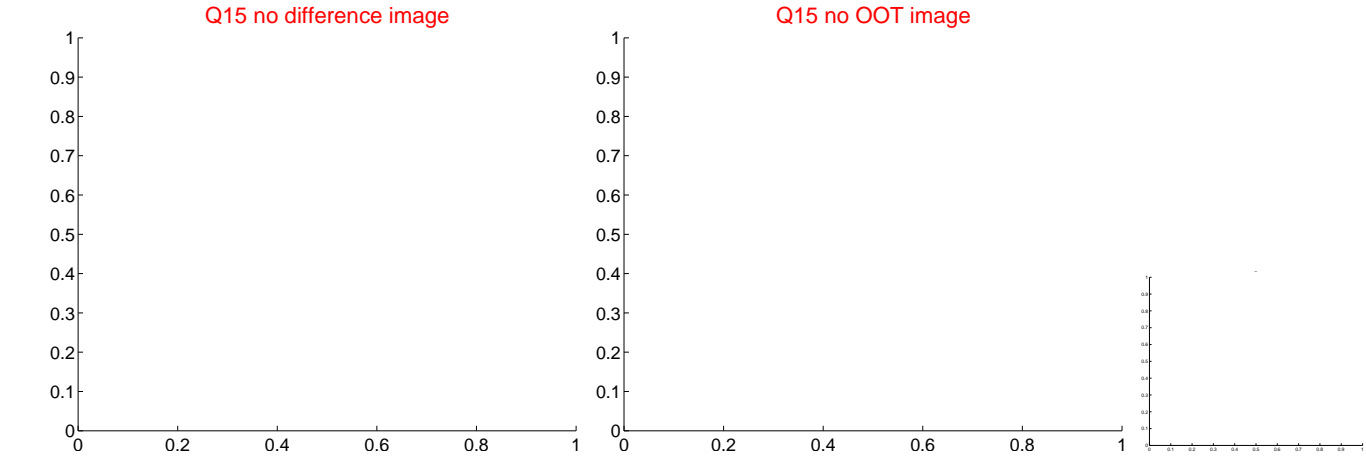
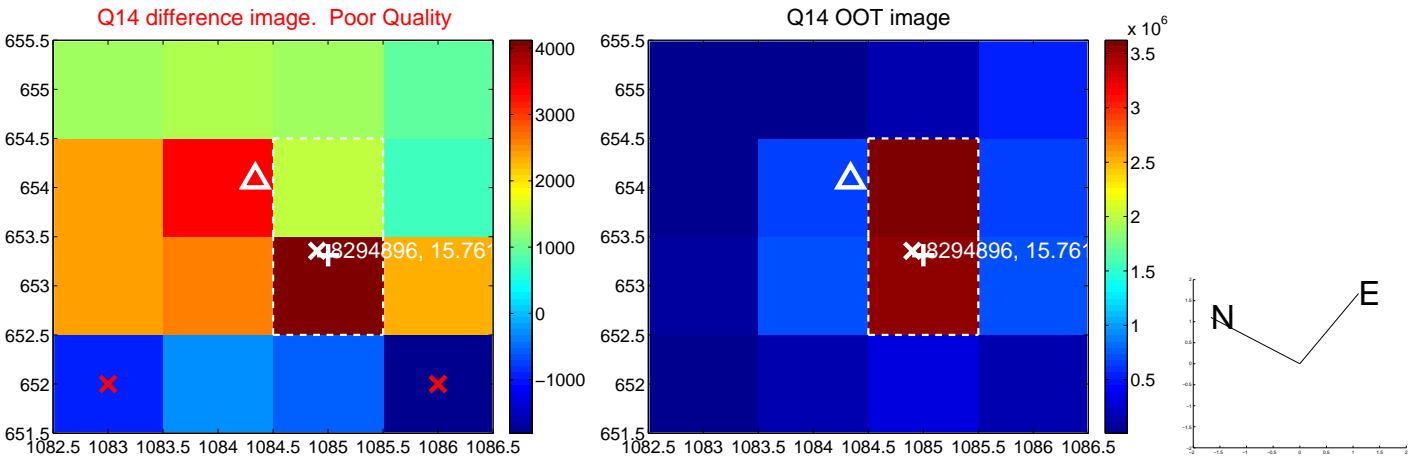
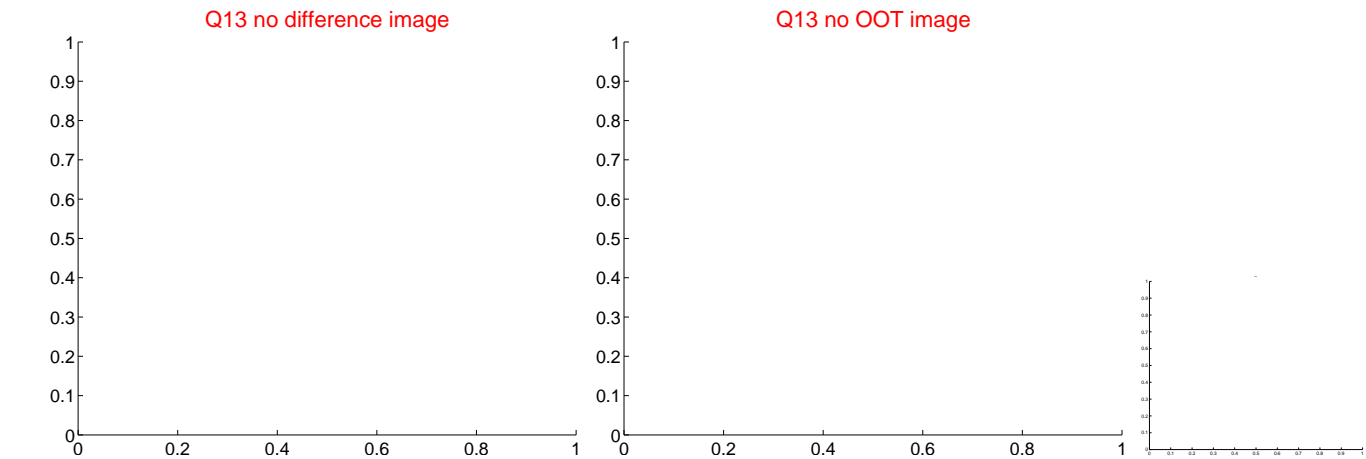




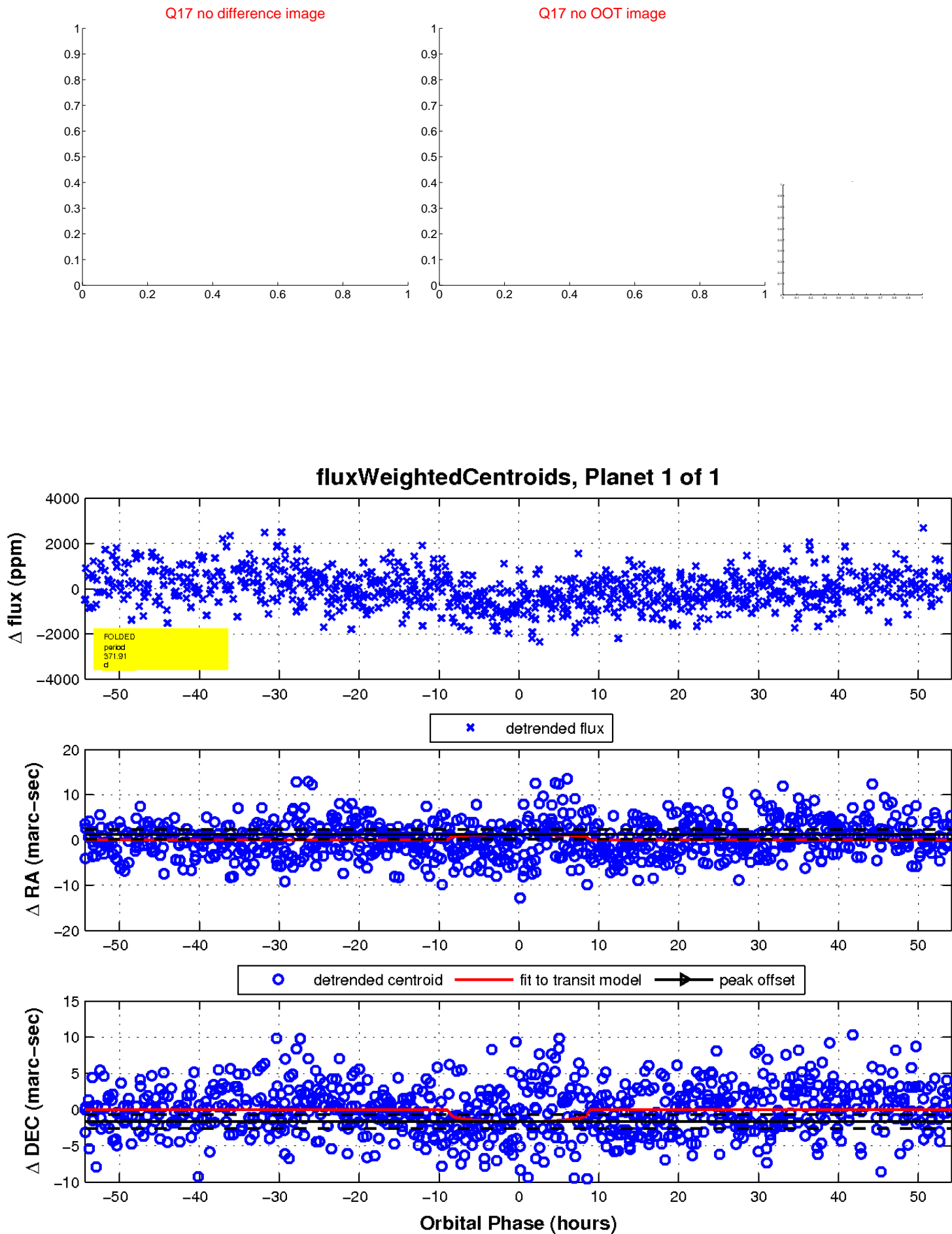
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UKIRT Image

Declination

