

# KIC 004929747

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
004929747-01	OBS	No	344.237348	433.795539	264.6	1.959	8.0	1.4	0.83	5195	1.72	0.58

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004929747-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

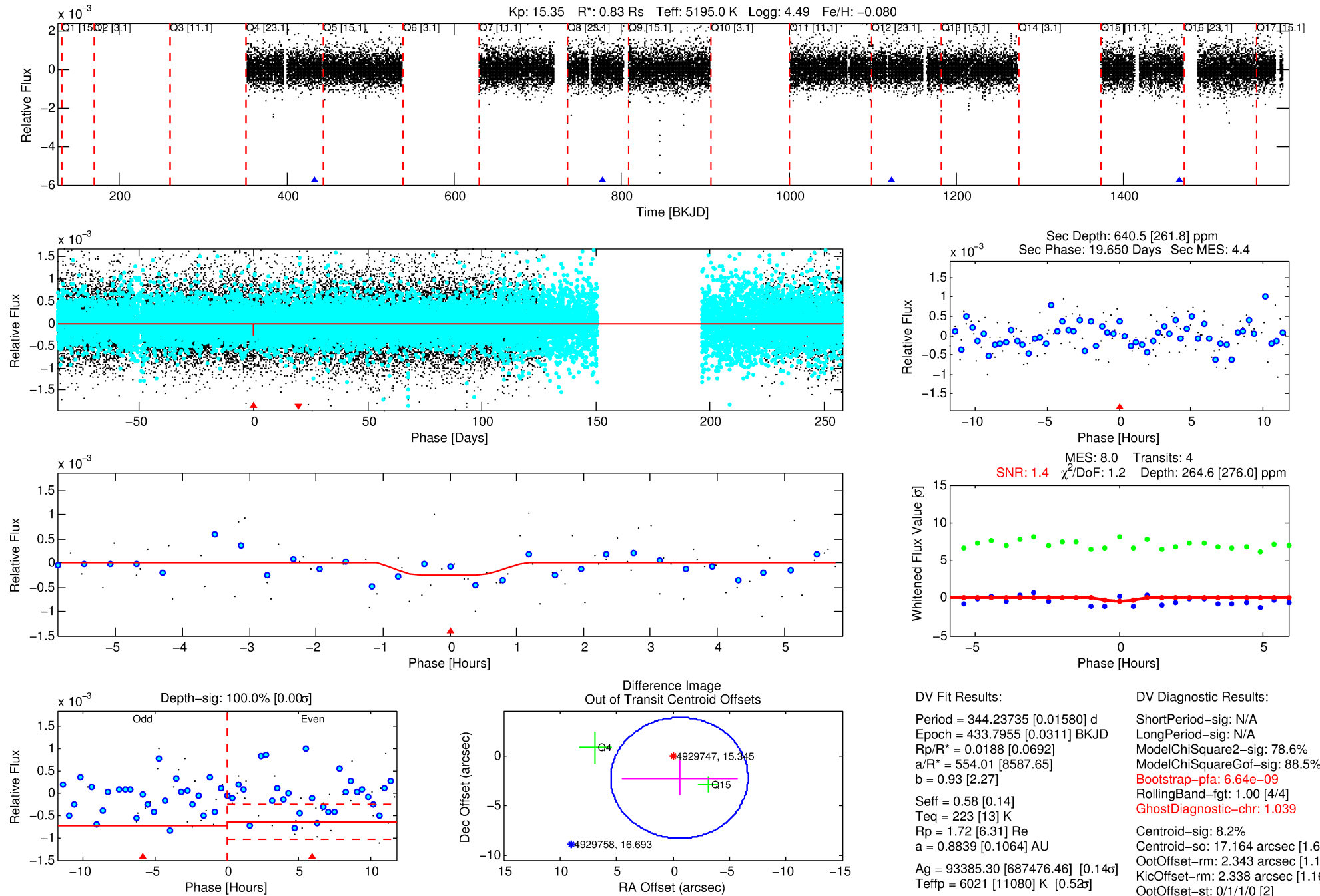
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 004929747-01

No Significant Match Found

# DV One-Page Summary

KIC: 4929747 Candidate: 1 of 1 Period: 344.237 d



## DV Fit Results:

Period = 344.23735 [0.01580] d  
Epoch = 433.7955 [0.0311] BKJD  
Rp/R\* = 0.0188 [0.0692]  
a/R\* = 554.01 [8587.65]  
b = 0.93 [2.27]  
Seff = 0.58 [0.14]  
Teq = 223 [13] K  
Rp = 1.72 [6.31] Re  
a = 0.8839 [0.1064] AU  
Ag = 93385.30 [687476.46] [0.14 $\sigma$ ]  
Teff = 6021 [11080] K [0.52 $\sigma$ ]

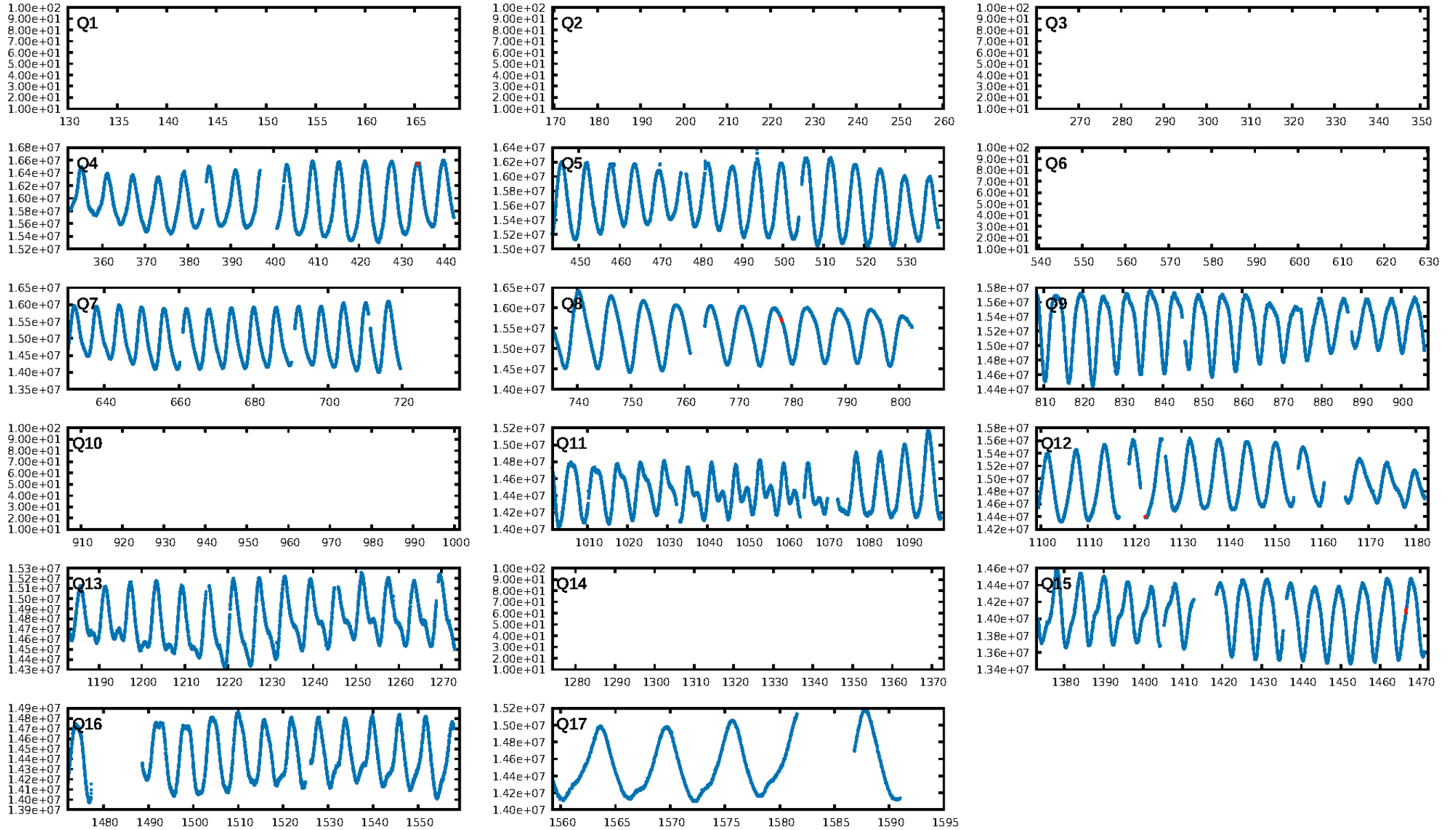
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 78.6%  
ModelChiSquareGof-sig: 88.5%  
Bootstrap-pfa: 6.64e-09  
RollingBand-fgt: 1.00 [4/4]  
GhostDiagnostic-chr: 1.039  
Centroid-sig: 8.2%  
Centroid-so: 17.164 arcsec [1.67 $\sigma$ ]  
OotOffset-rm: 2.343 arcsec [1.16 $\sigma$ ]  
KicOffset-rm: 2.338 arcsec [1.16 $\sigma$ ]  
OotOffset-st: 0/1/1/0 [2]  
KicOffset-st: 0/1/1/0 [2]  
DiffImageQuality-fgm: 0.00 [0/2]  
DiffImageOverlap-fno: 1.00 [3/3]

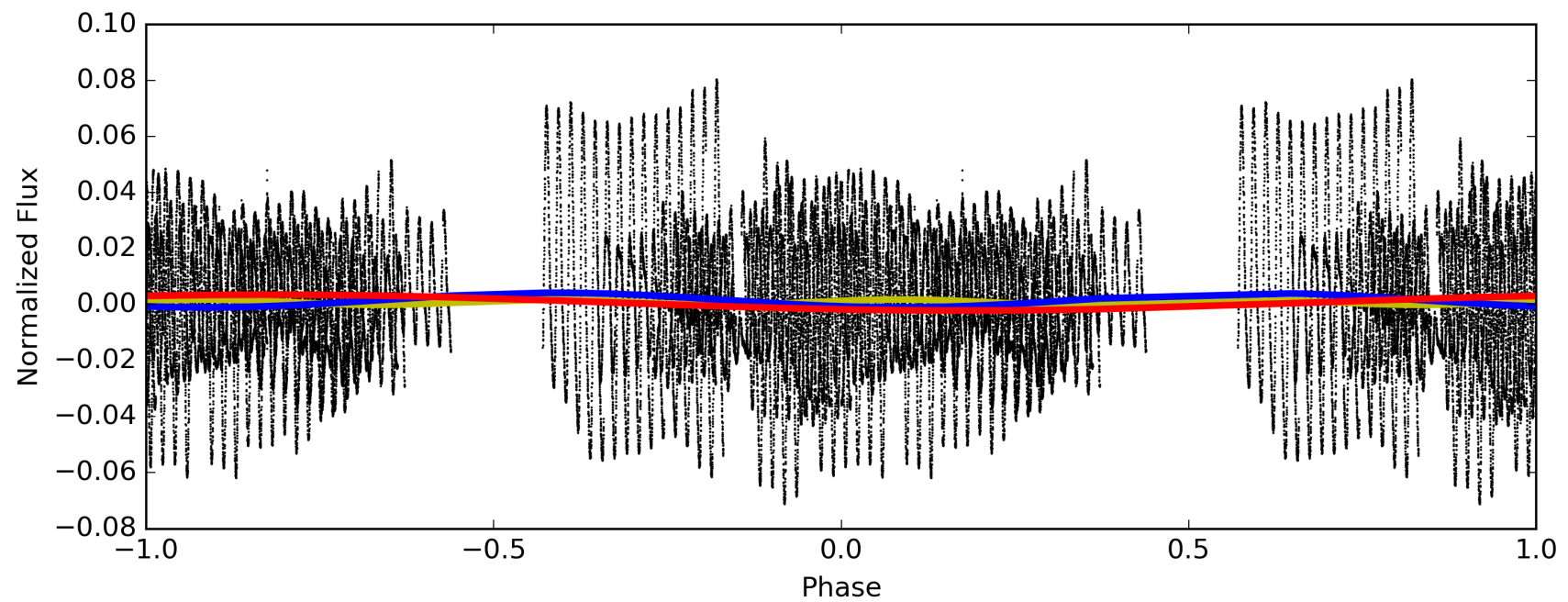
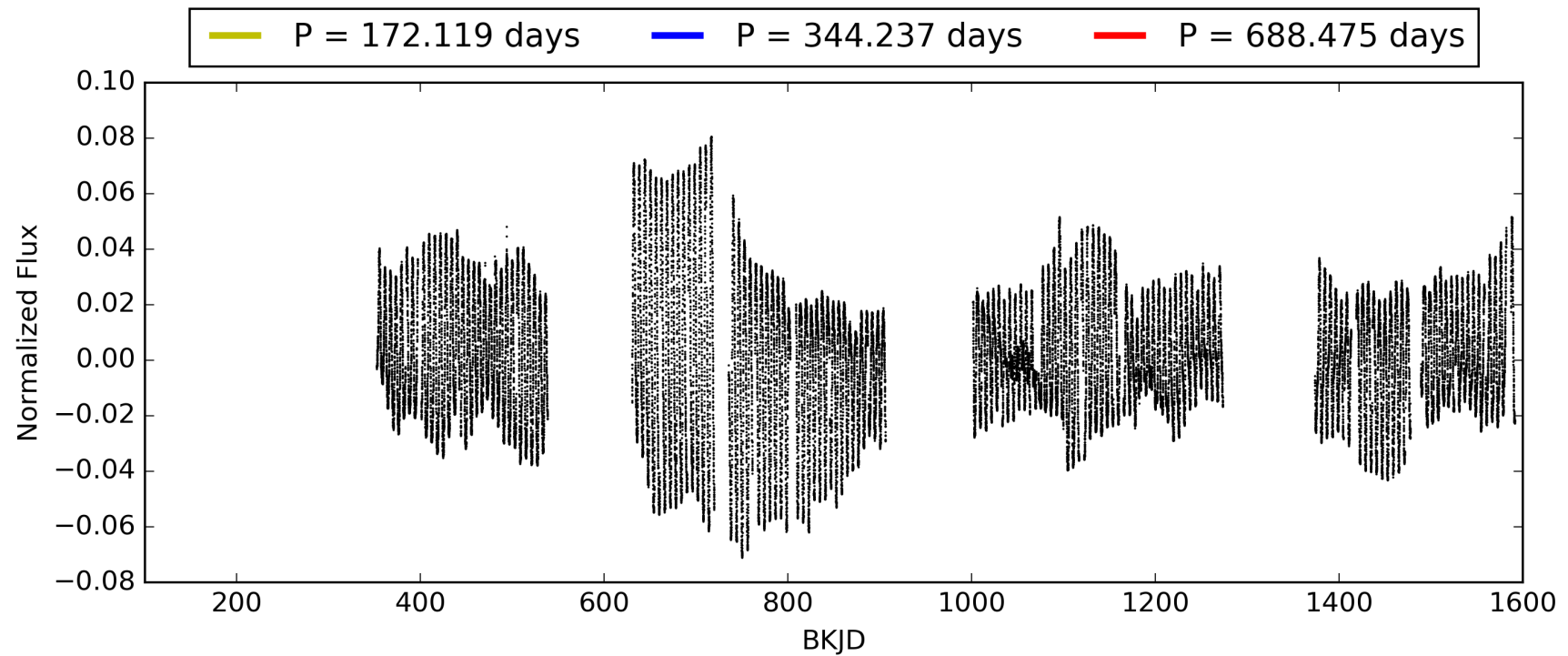
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:04:20 Z

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

# TCE 004929747-01, PDC Light Curves

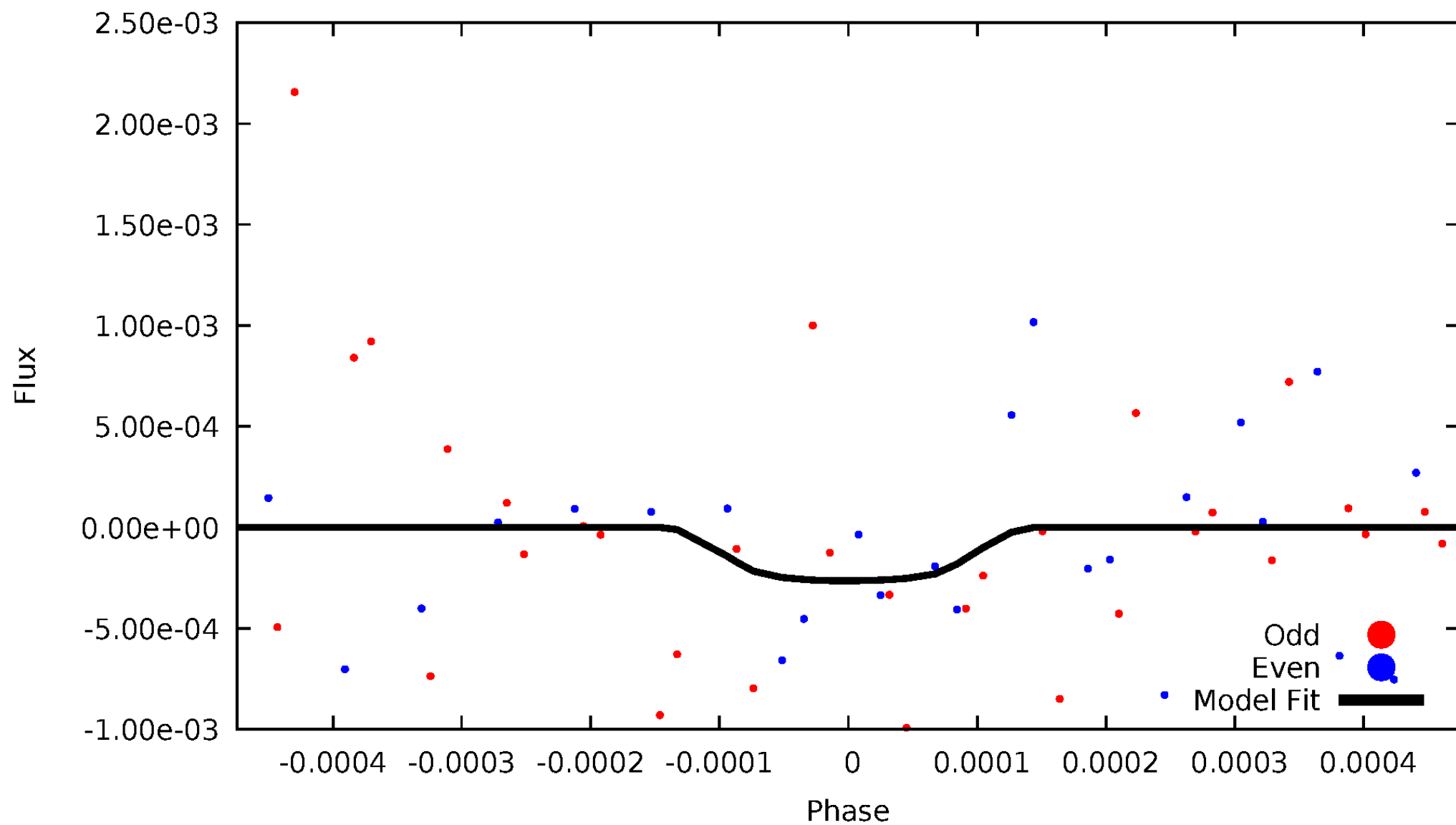


TCE 004929747-01



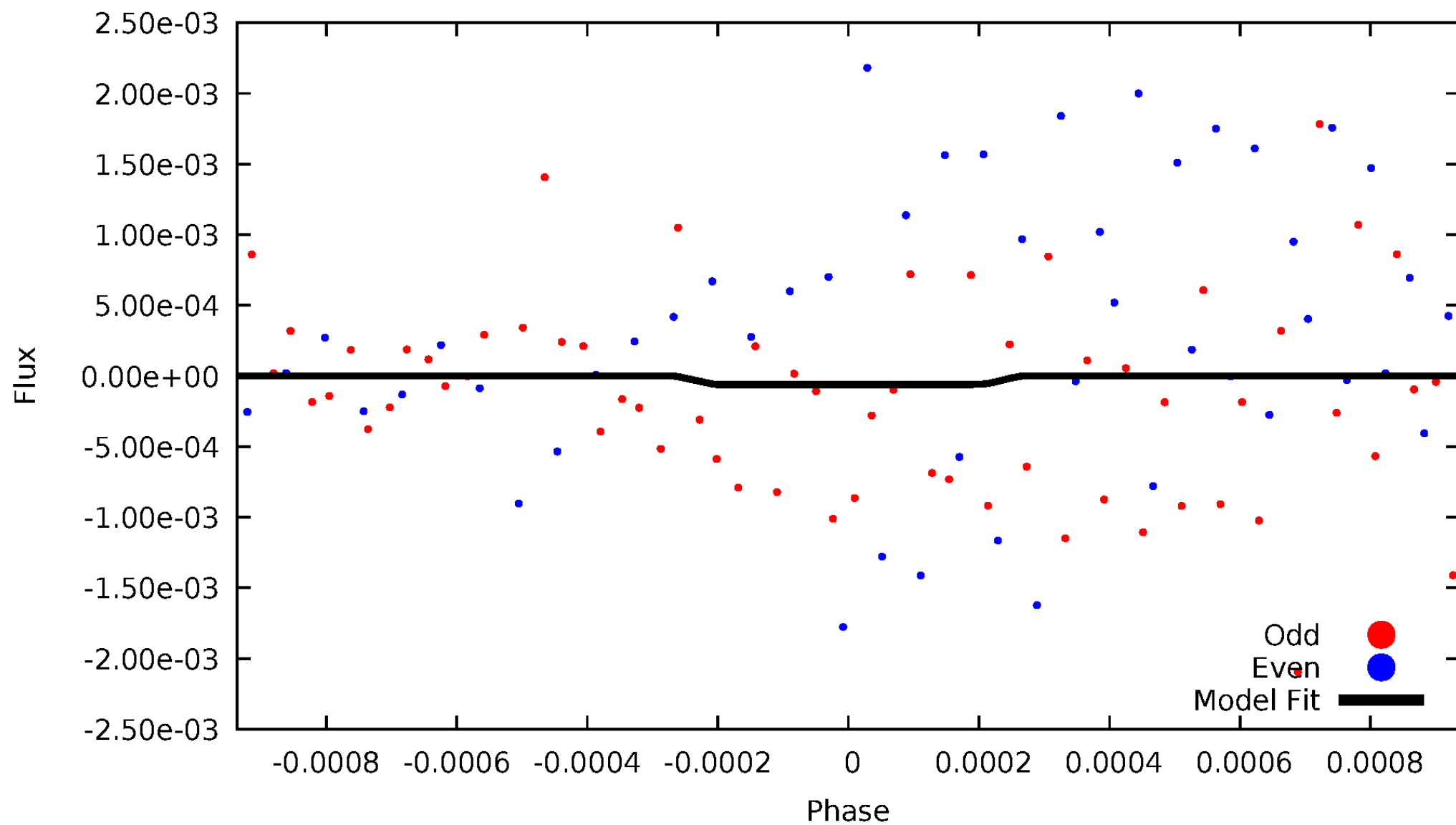
# DV Odd/Even

TCE 004929747-01



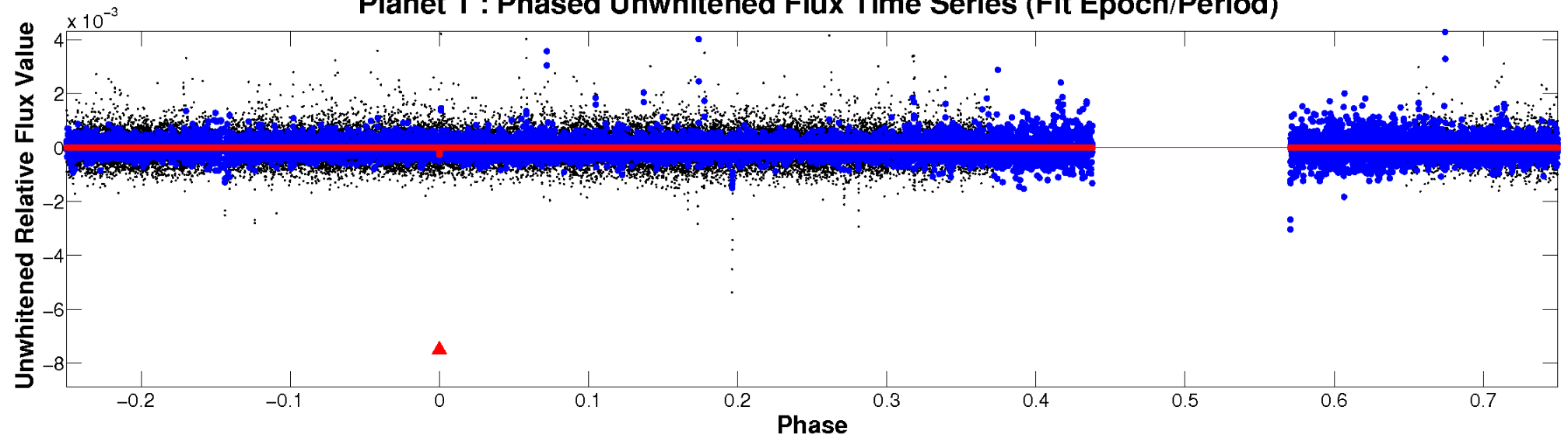
# ALT Odd/Even

TCE 004929747-01

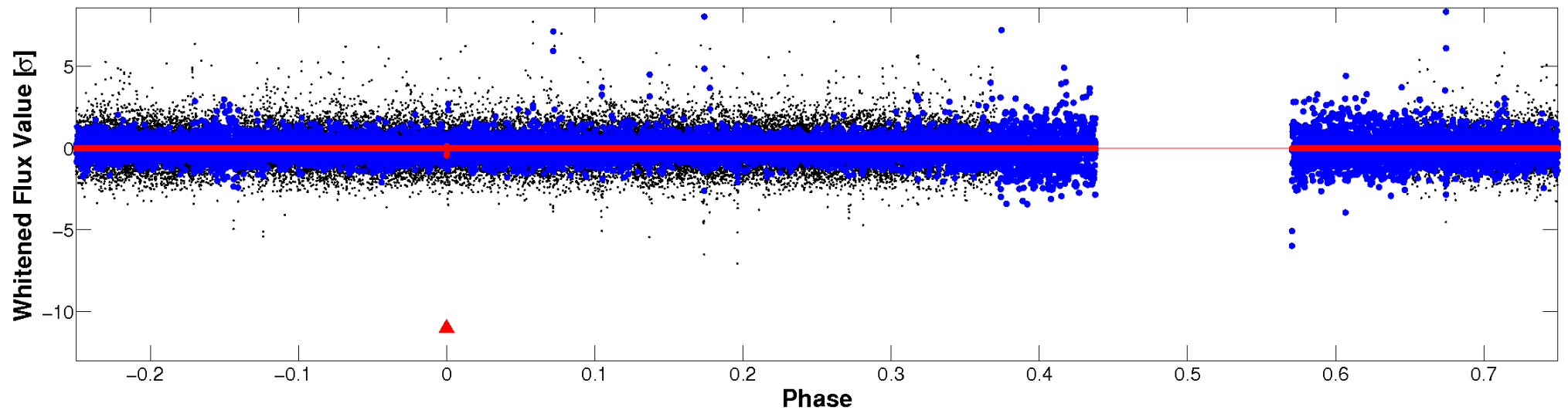


# Non-Whitened Vs. Whitened Light Curve

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

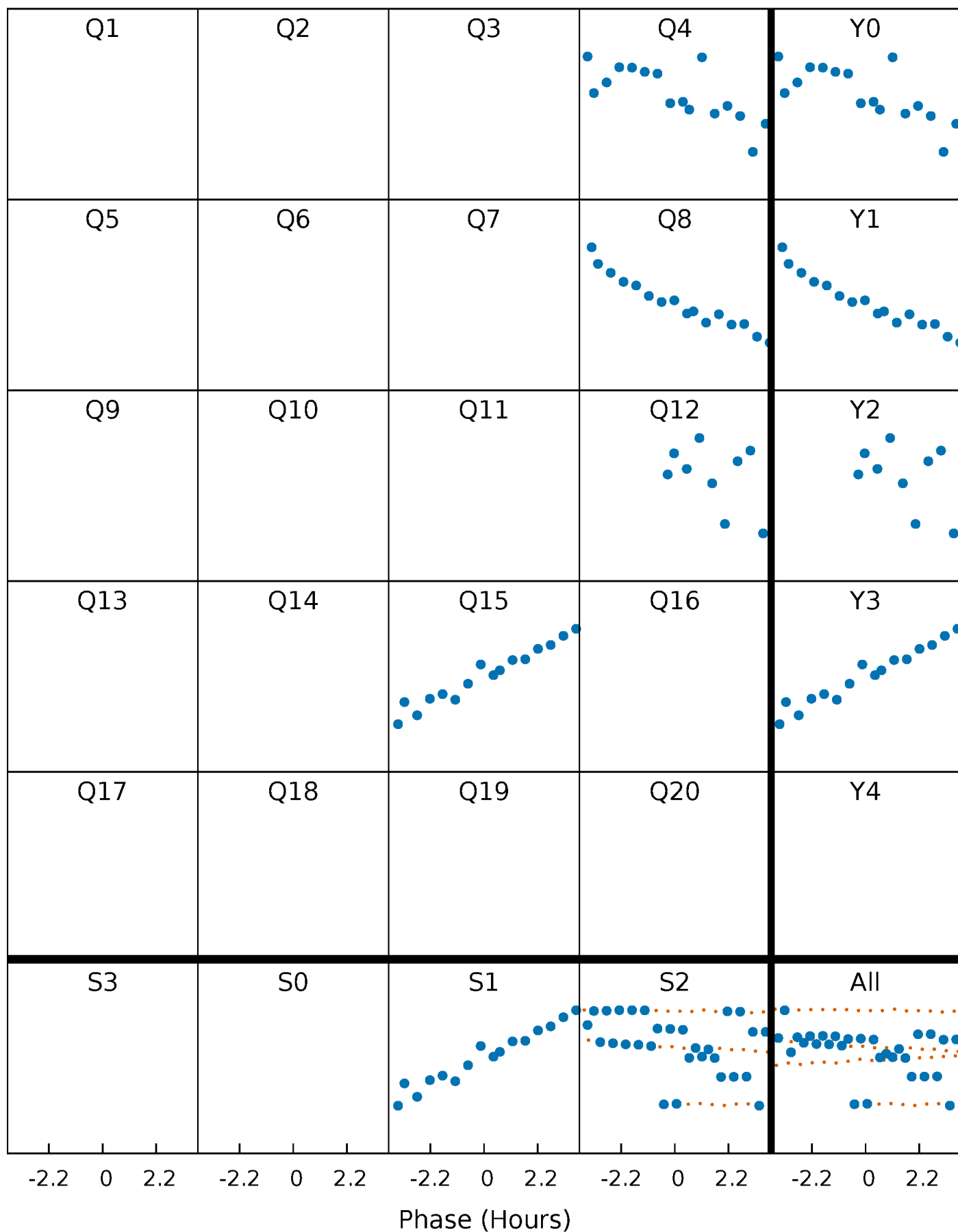


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

TCE 004929747-01 P=344.237348 Days  $T_0=433.795539$  (BKJD)





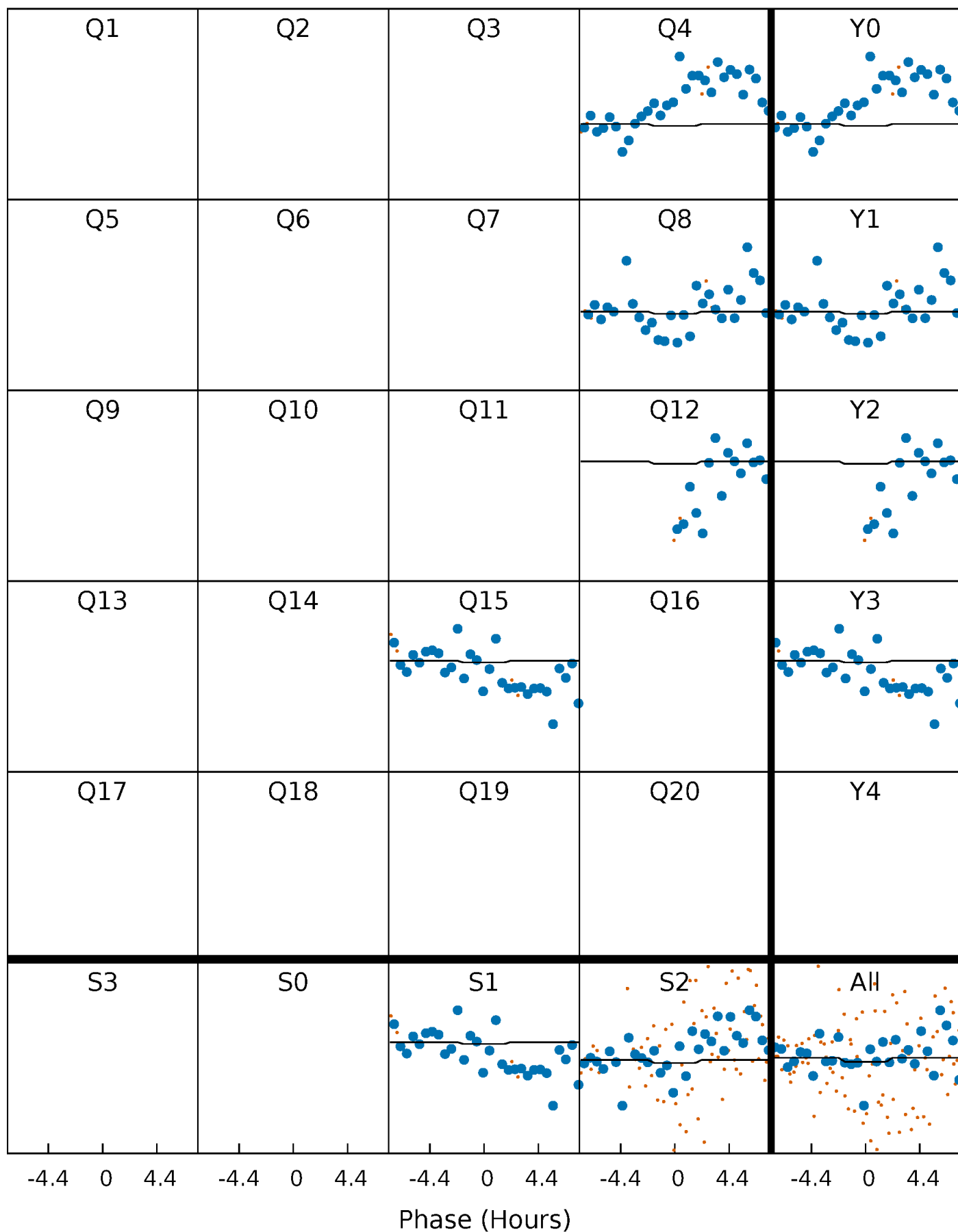
# DV Quarter-Phased Transit Curves

TCE 004929747-01 P=344.237348 Days  $T_0=433.795539$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

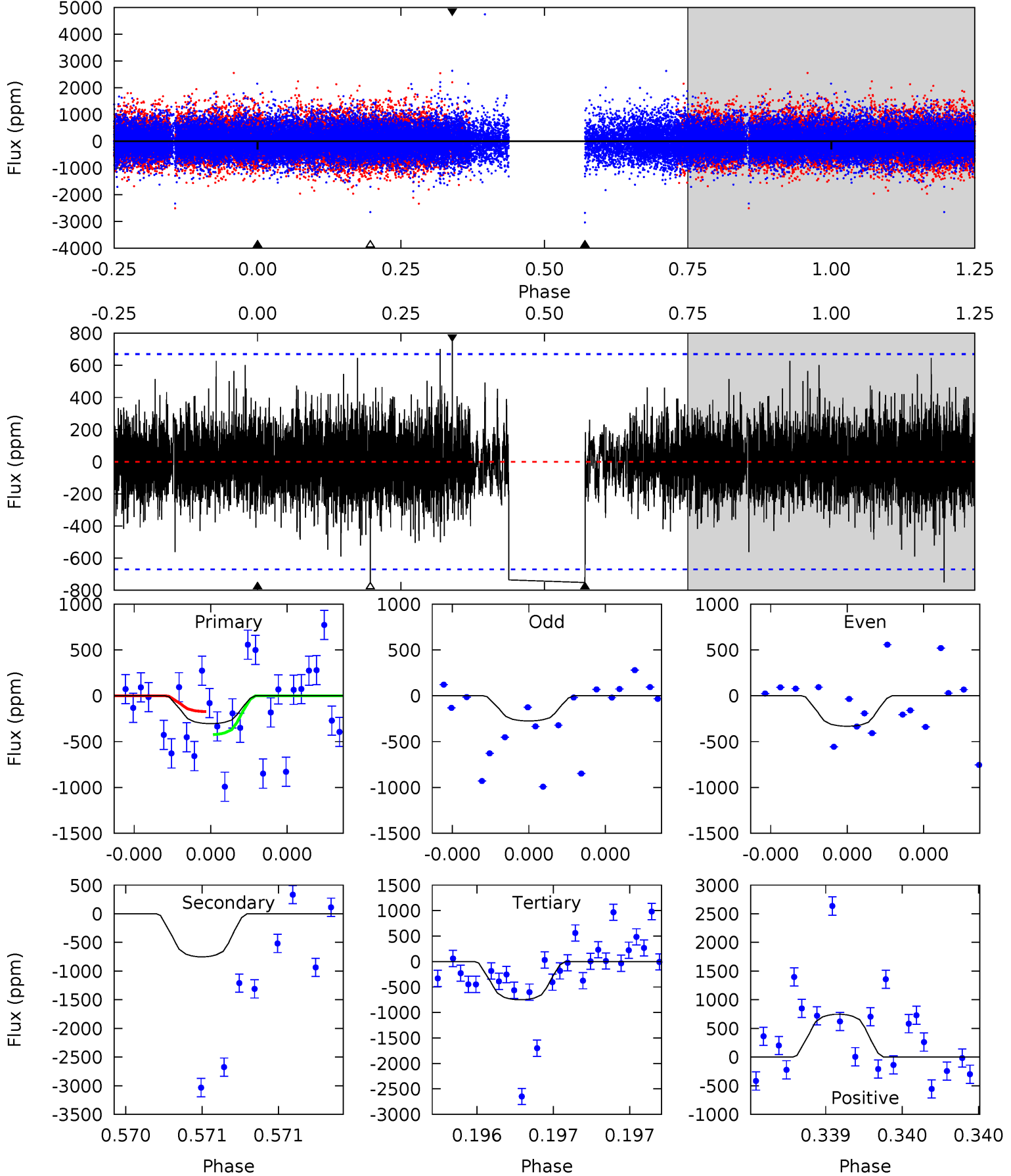
TCE 004929747-01 P=344.210129 Days  $T_0=433.835009$  (BKJD)



# DV Model-Shift Uniqueness Test

004929747-01, P = 344.237348 Days, E = 89.558191 Days

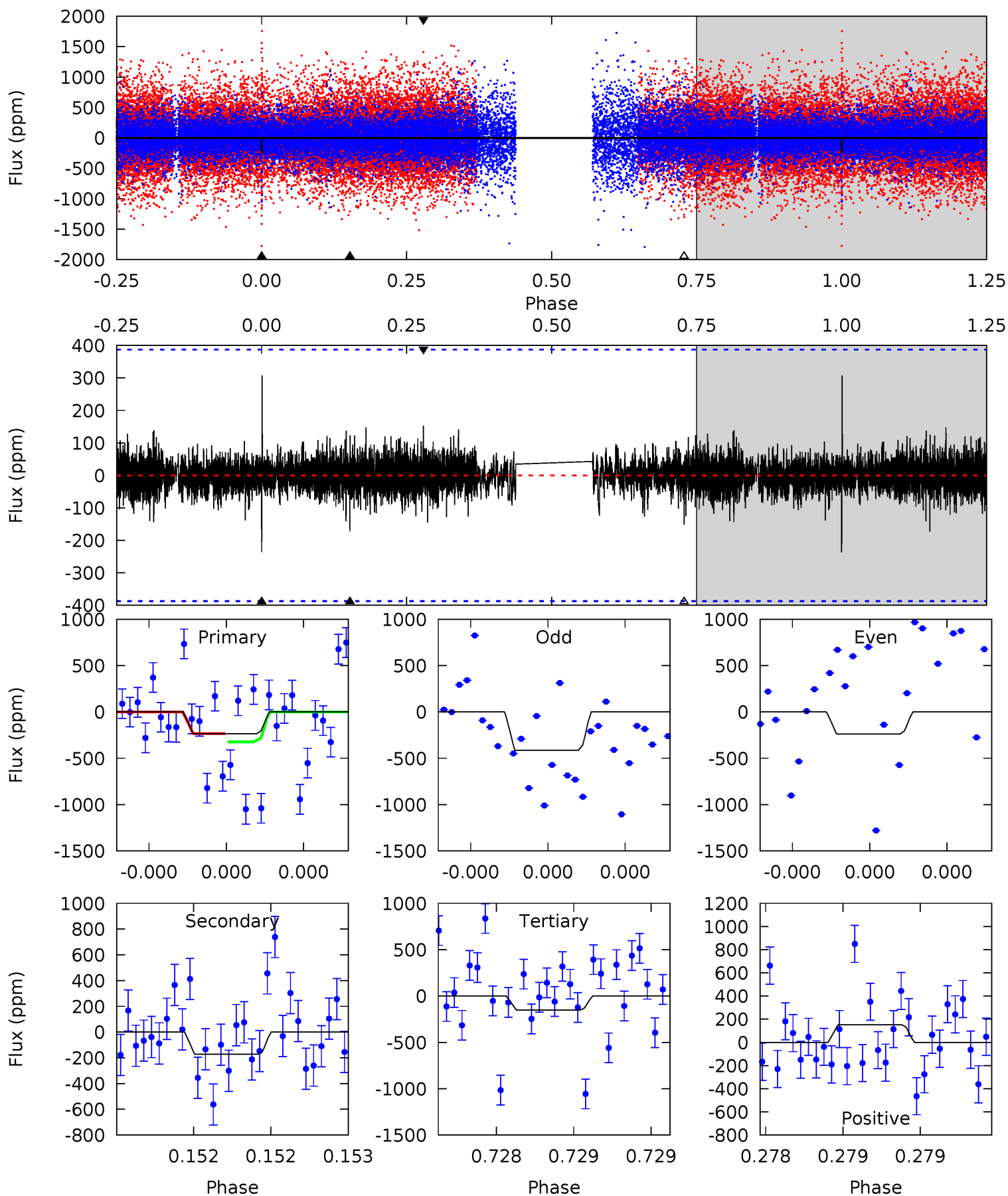
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.58	6.39	6.38	6.35	5.70	3.67	1.22	-3.80	-3.77	0.01	0.04	0.24	0.91	0.50	1.04



# Alt Model-Shift Uniqueness Test

004929747-01, P = 344.210129 Days, E = 89.624880 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
3.41	2.49	2.19	2.20	5.58	3.49	0.50	1.22	1.21	0.31	0.29	1.25	0.66	0.57	0.64



### Stellar Parameters For KIC 004929747

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5195^{+203}_{-166}$	$4.485^{+0.105}_{-0.105}$	$-0.080^{+0.300}_{-0.300}$	$0.835^{+0.112}_{-0.102}$	$0.776^{+0.112}_{-0.060}$	$1.881^{+0.751}_{-0.589}$
	+4%/-3%	+2%/-2%	+375%/-375%	+13%/-12%	+14%/-8%	+40%/-31%
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 004929747-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-752 \pm 118$	$5.12^{+5.25}_{-3.48}$	$312^{+17}_{-14}$	$3902^{+2327}_{-765}$	$12227^{+104043}_{-9319}$
Alt.	$-173 \pm 69$	$4.69^{+4.79}_{-3.26}$	$312^{+18}_{-16}$	$3178^{+1664}_{-598}$	$3201^{+34092}_{-2496}$

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

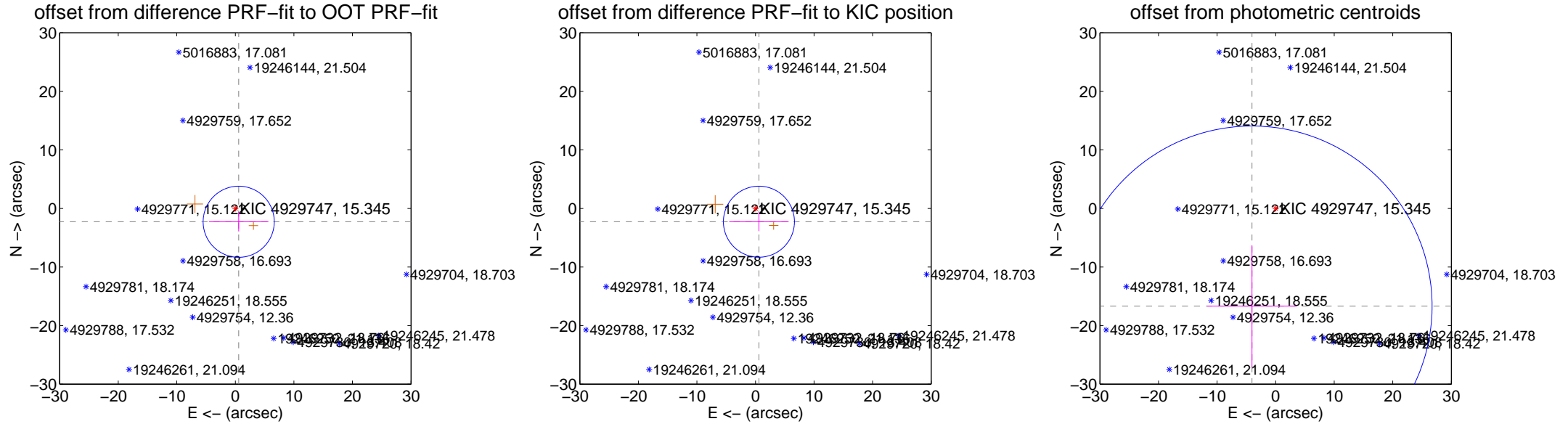
## DV Centroid Data

Supplemental centroid analysis for 004929747-01. Kepler magnitude: 15.35. Transit SNR 1.38

There are 0 quarters with good PRF difference image offsets

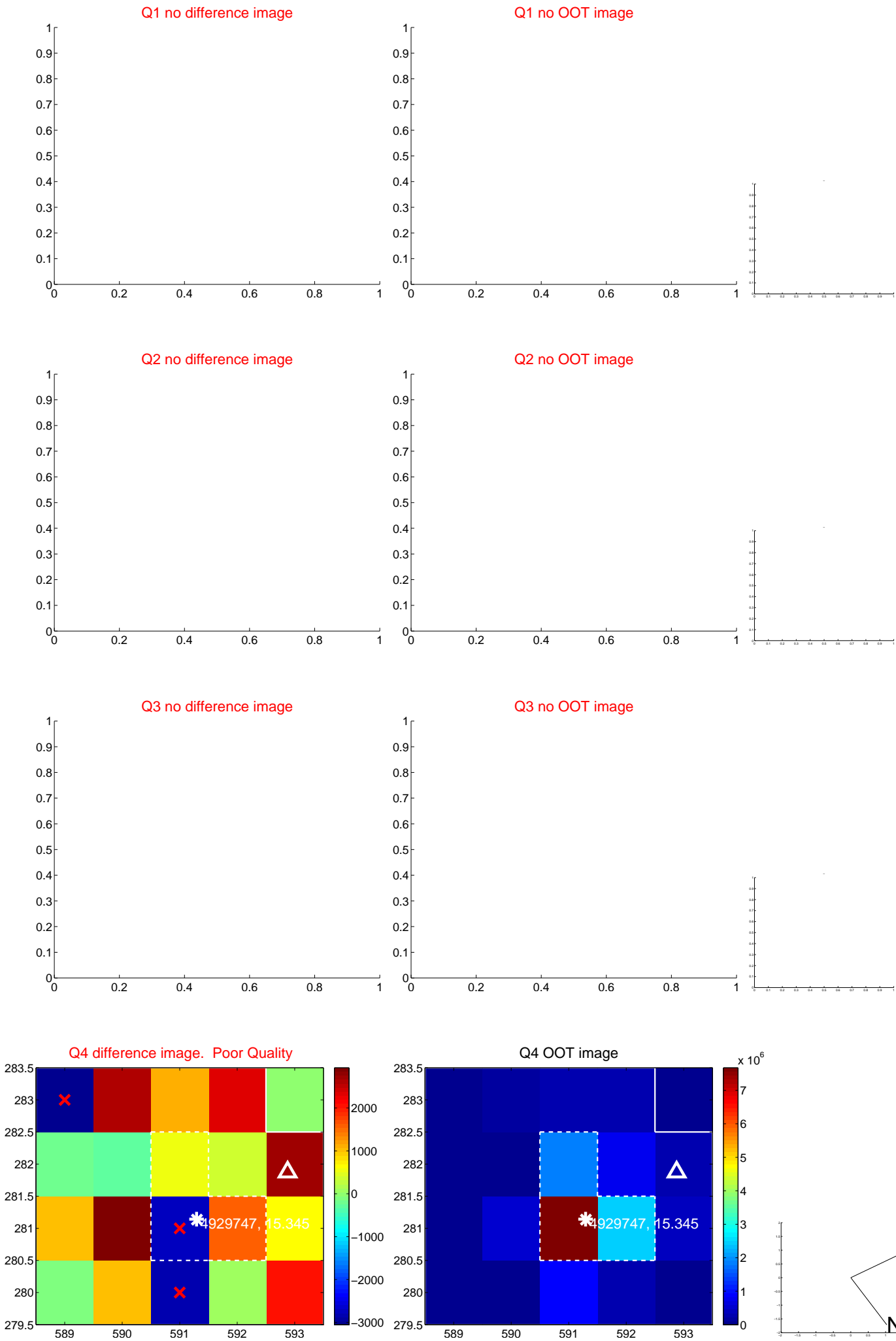
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$2.343 \pm 2.024$	1.16	$-0.574 \pm 5.065$	$-2.271 \pm 1.649$
PRF-fit source offset from KIC position	$2.338 \pm 2.021$	1.16	$-0.587 \pm 5.069$	$-2.263 \pm 1.622$
photometric centroid source offset	$17.16 \pm 10.25$	1.67	$4.04 \pm 7.67$	$-16.68 \pm 10.38$

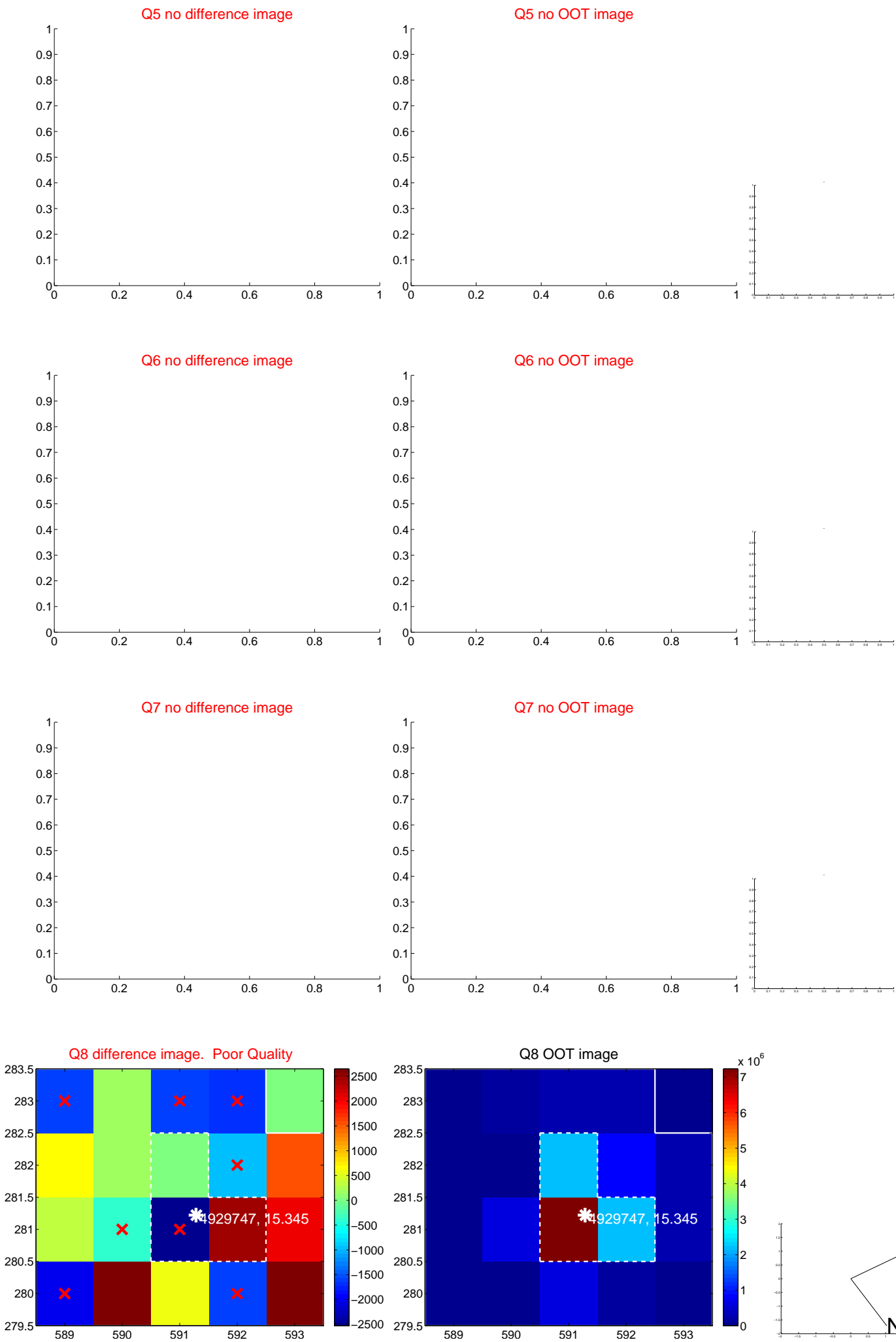


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three- $\sigma$ . 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 ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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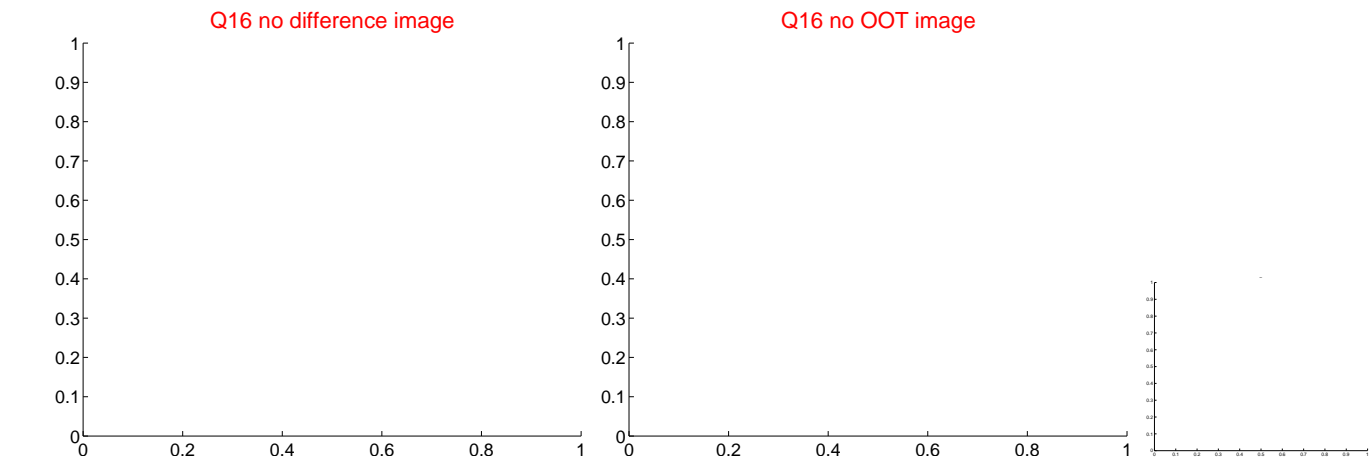
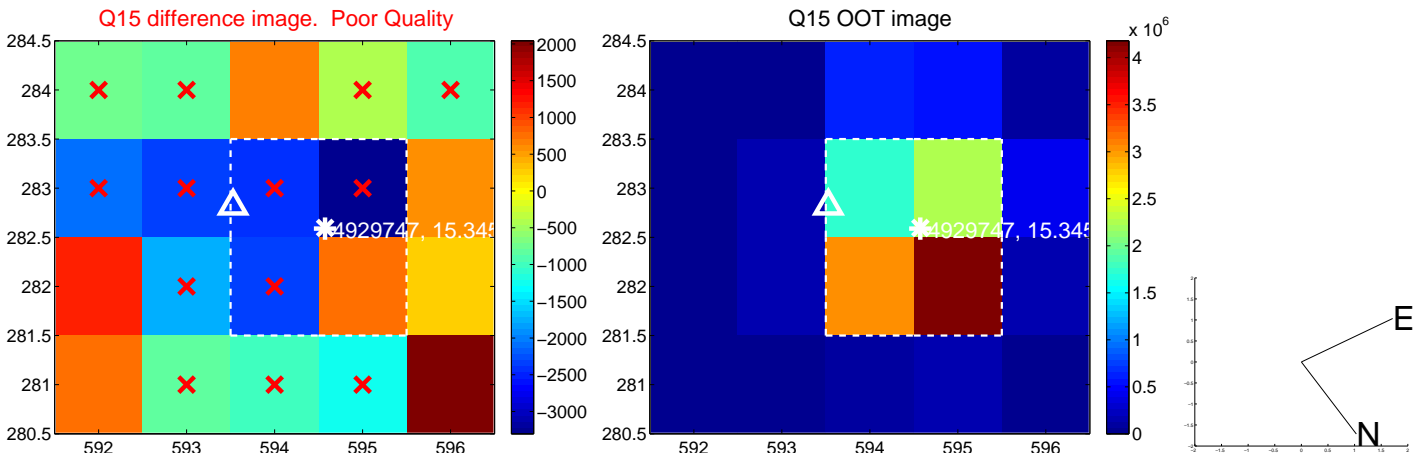
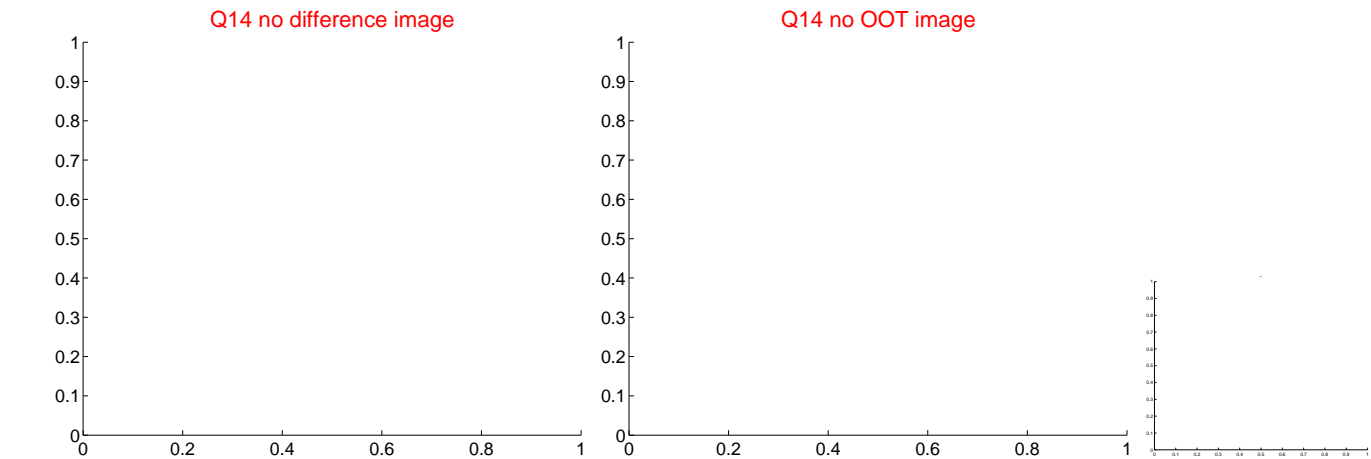
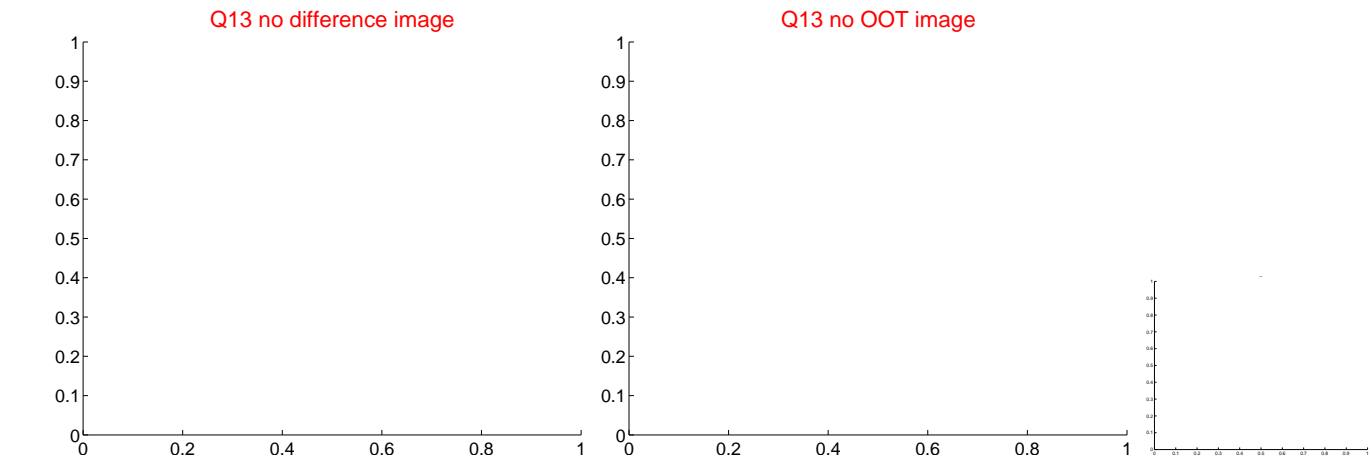




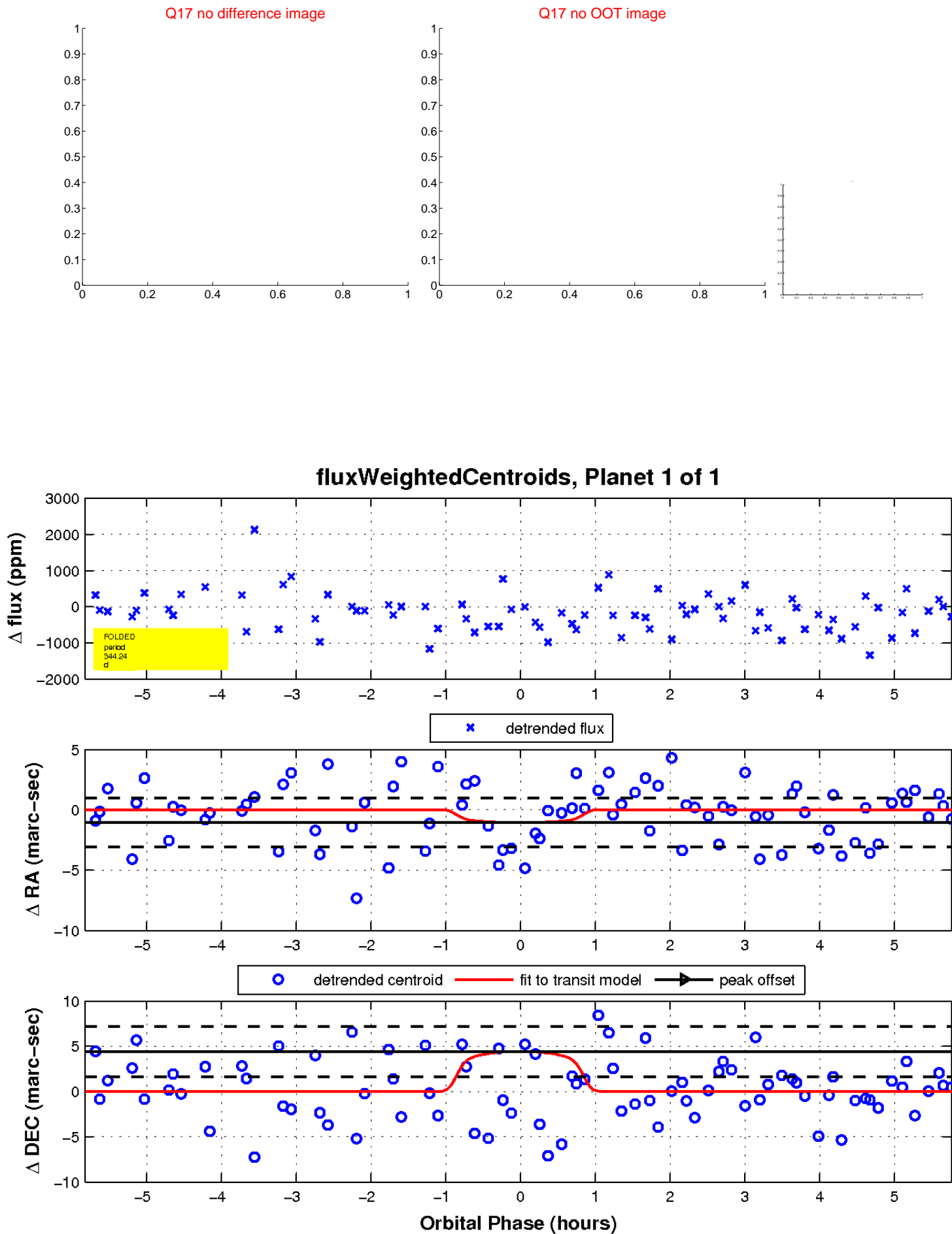
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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UKIRT Image

Declination

