

# KIC 007899526

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007899526-01	OBS	No	497.829527	239.642109	282.8	1.708	14.1	8.9	148.39	3284	237.34	1324.35

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007899526-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE_TRACKER—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS—CENT_SATURATED

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

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

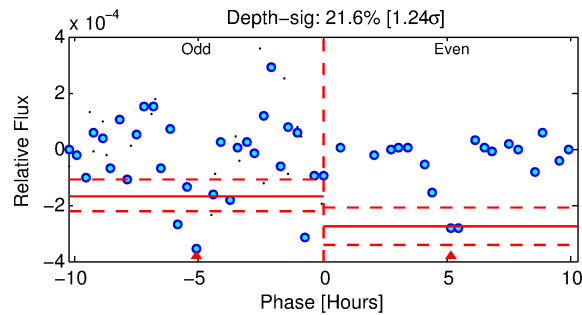
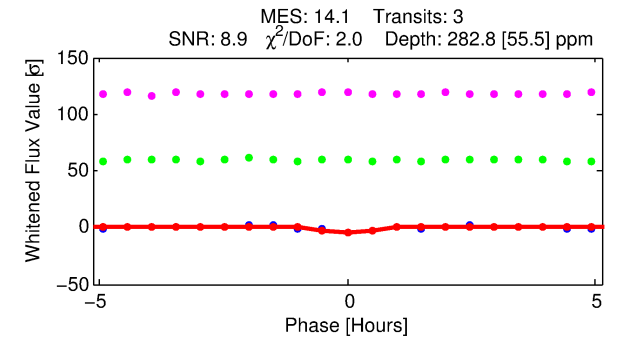
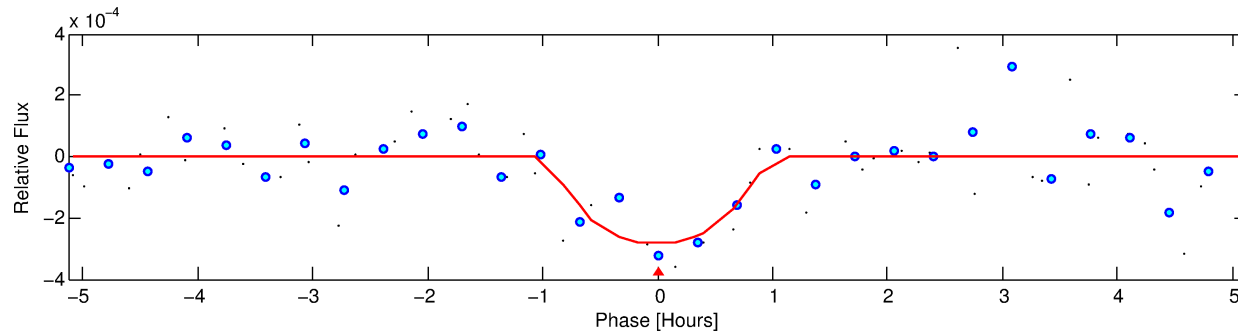
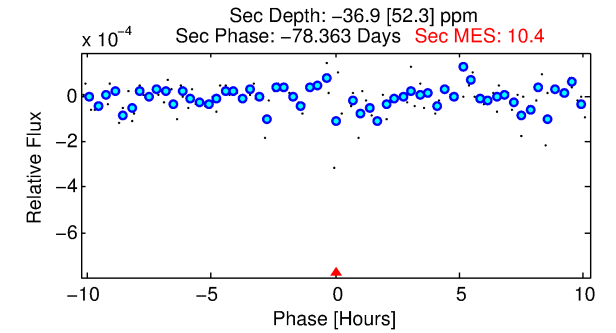
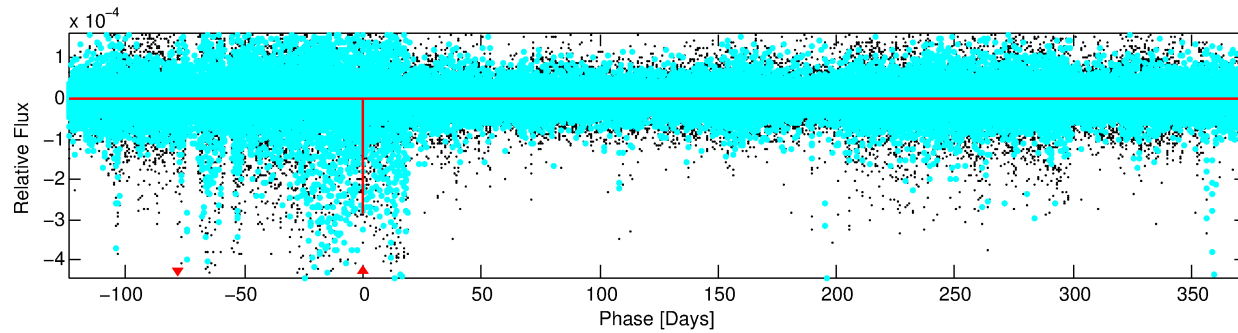
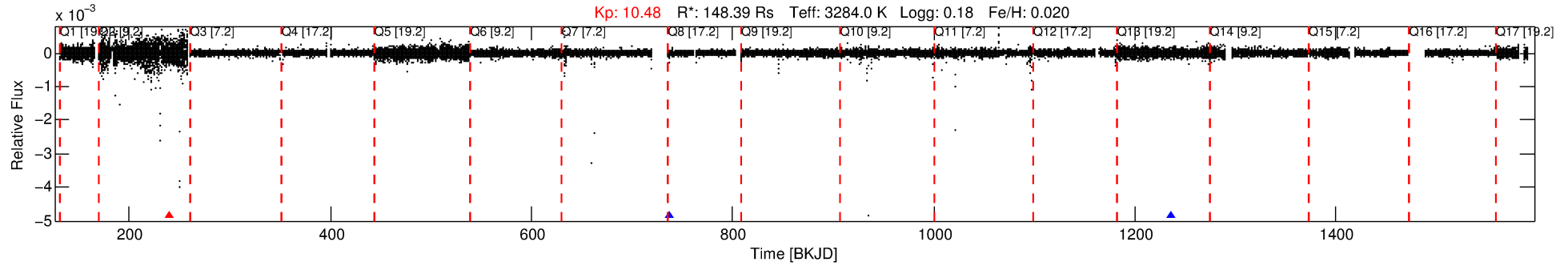
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 007899526-01

No Significant Match Found

# DV One-Page Summary

KIC: 7899526 Candidate: 1 of 1 Period: 497.830 d



## DV Fit Results:

Period = 497.82953 [0.00618] d  
Epoch = 239.6421 [0.0086] BKJD  
Rp/R\* = 0.0147 [0.0350]  
a/R\* = 2134.26 [9883.03]  
b = 0.33 [13.31]  
Seff = 1324.35 [542.87]  
Teff = 1538 [158] K  
Rp = 237.34 [569.06] Re  
a = 1.3163 [0.3019] AU  
Ag = N/A  
Teffp = N/A

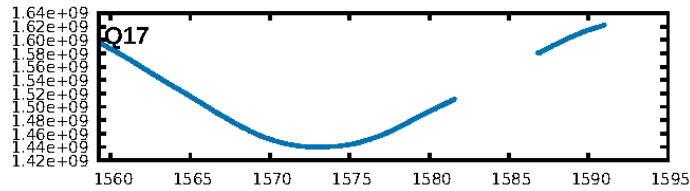
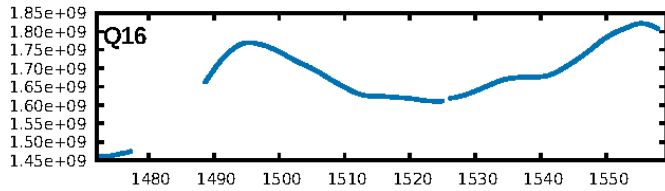
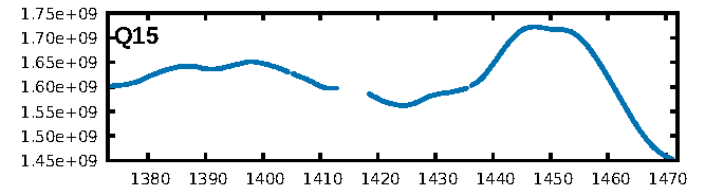
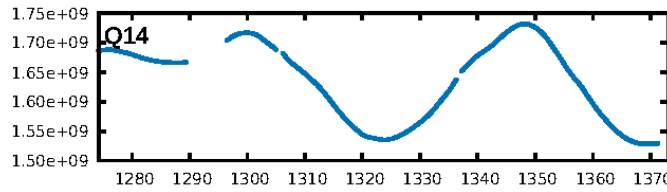
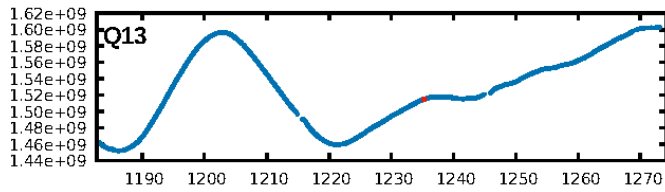
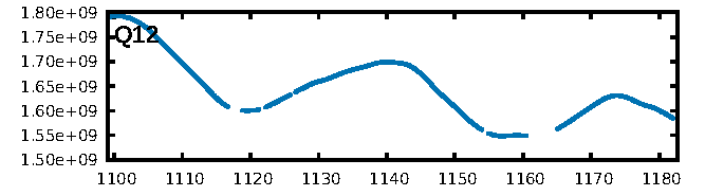
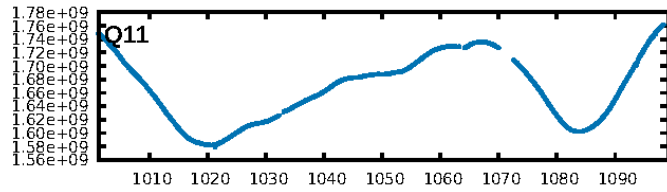
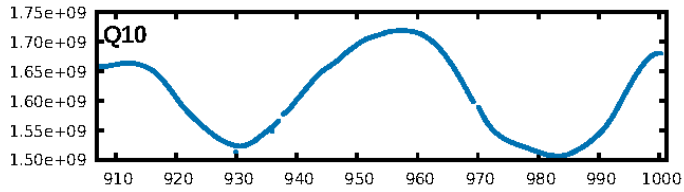
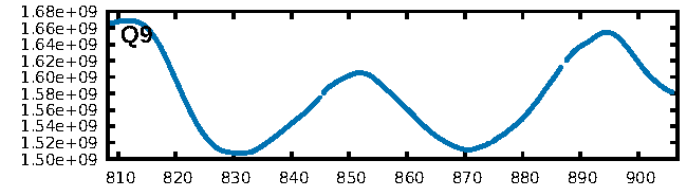
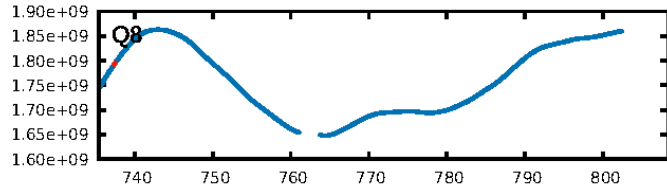
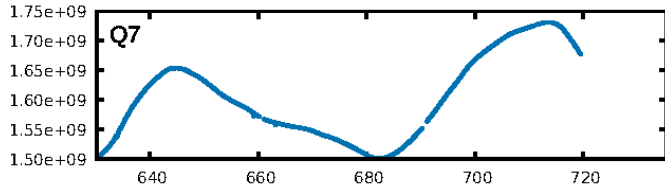
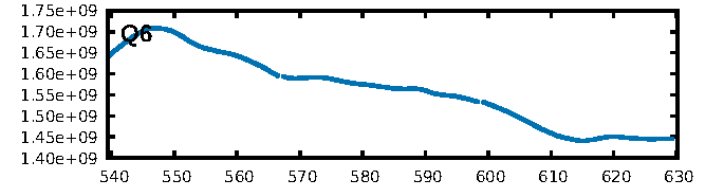
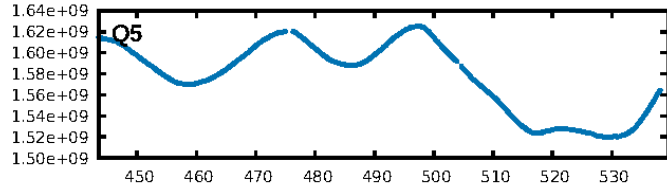
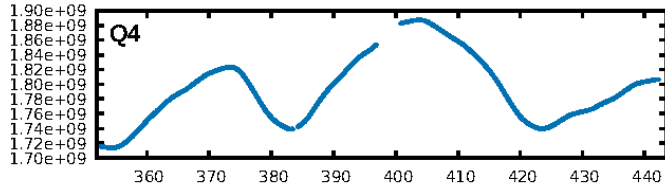
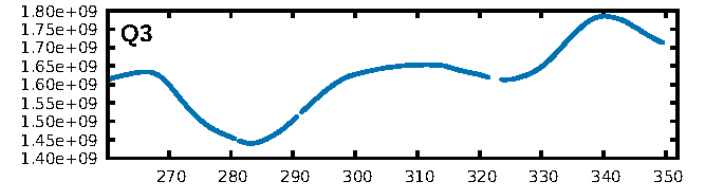
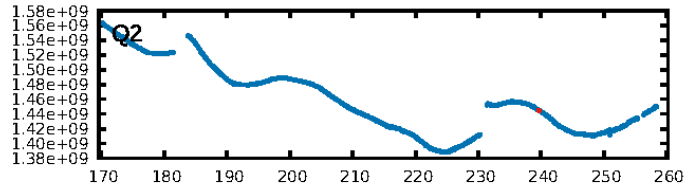
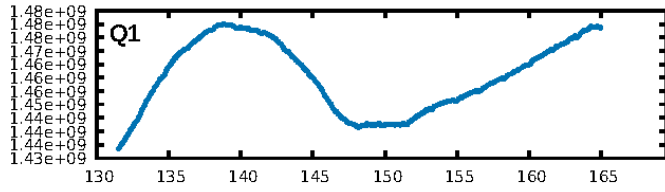
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 58.7%  
ModelChiSquareGof-sig: 66.0%  
Bootstrap-pfa: 5.66e-05  
RollingBand-fgt: 0.67 [2/3]  
GhostDiagnostic-chr: N/A  
Centroid-sig: 2.4%  
Centroid-so: 3.826 arcsec [1.18σ]  
OotOffset-rm: N/A  
KicOffset-rm: N/A  
OotOffset-st: 0/0/0 [0]  
KicOffset-st: 0/0/0 [0]  
DiffImageQuality-fgm: N/A  
DiffImageOverlap-fno: 1.00 [2/2]

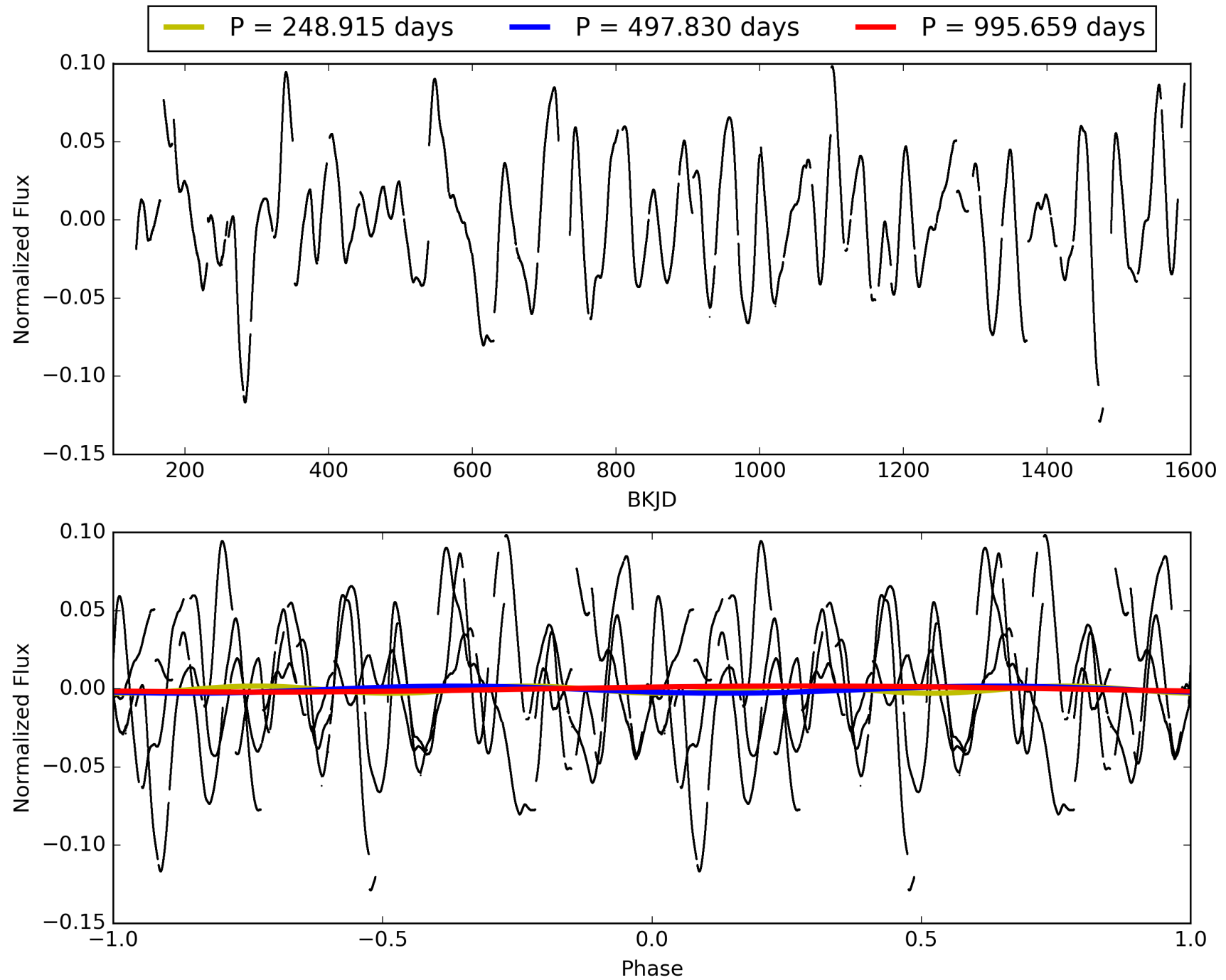
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 02:41:54 Z

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

# TCE 007899526-01, PDC Light Curves

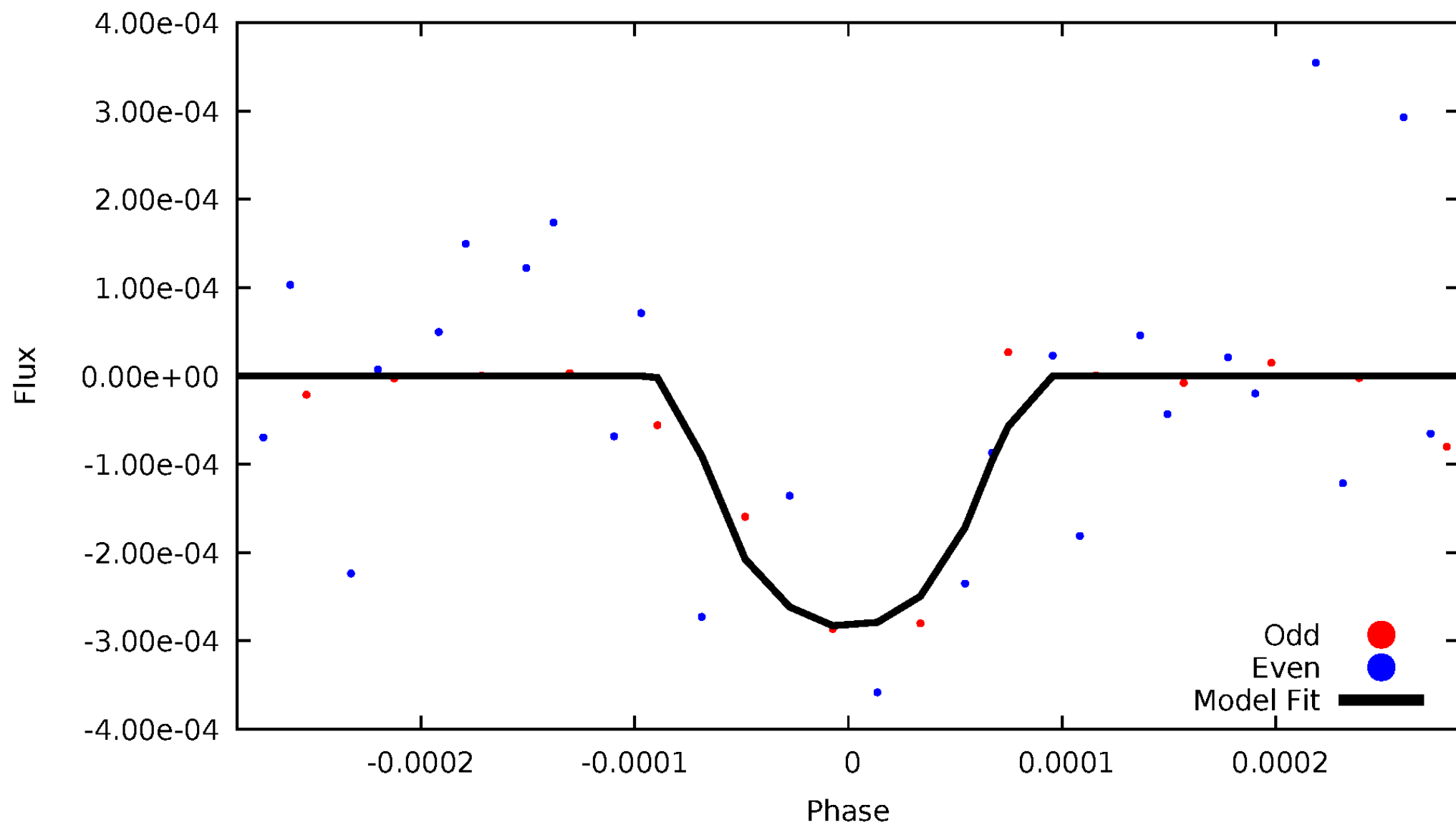


TCE 007899526-01



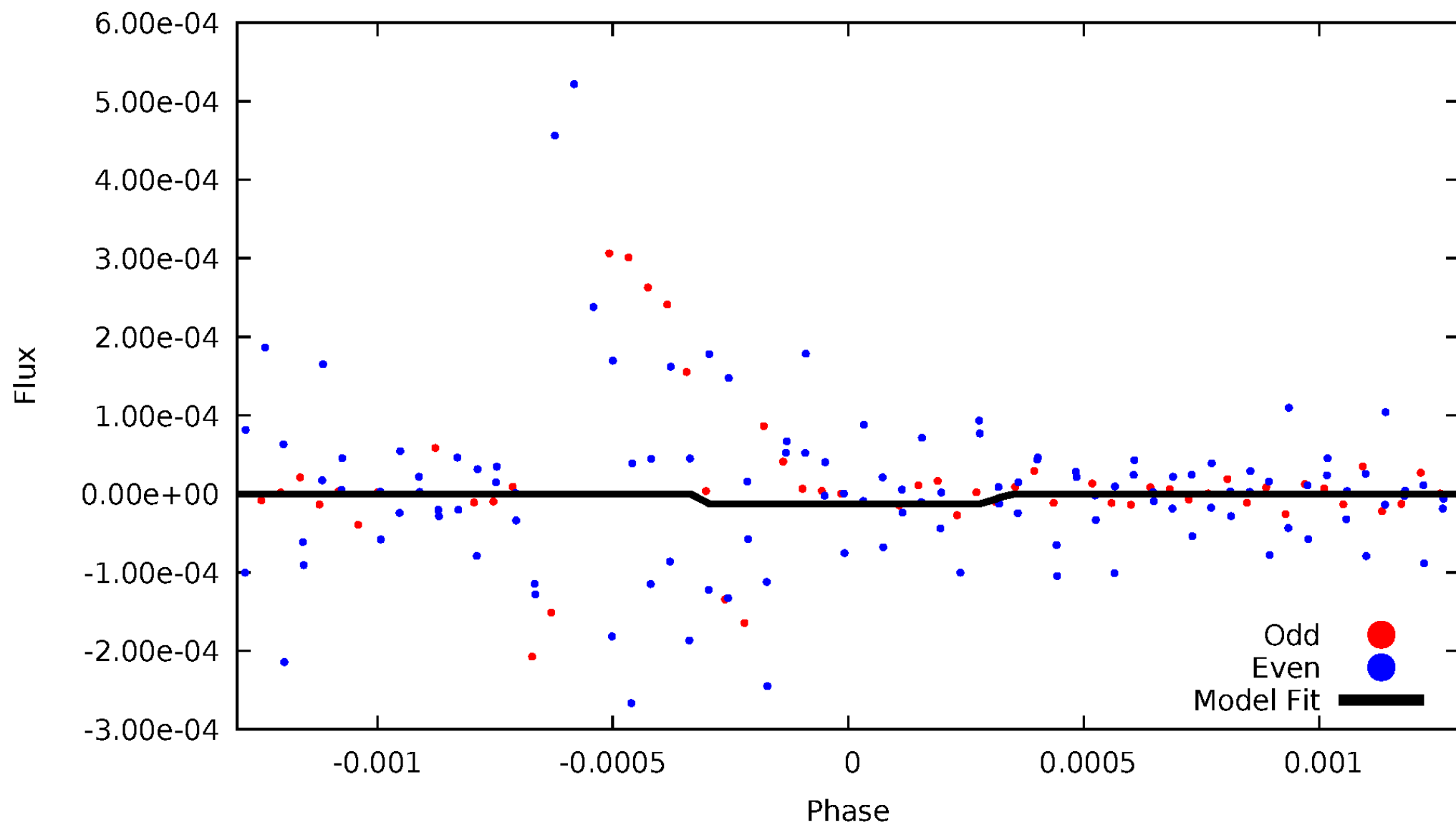
# DV Odd/Even

TCE 007899526-01



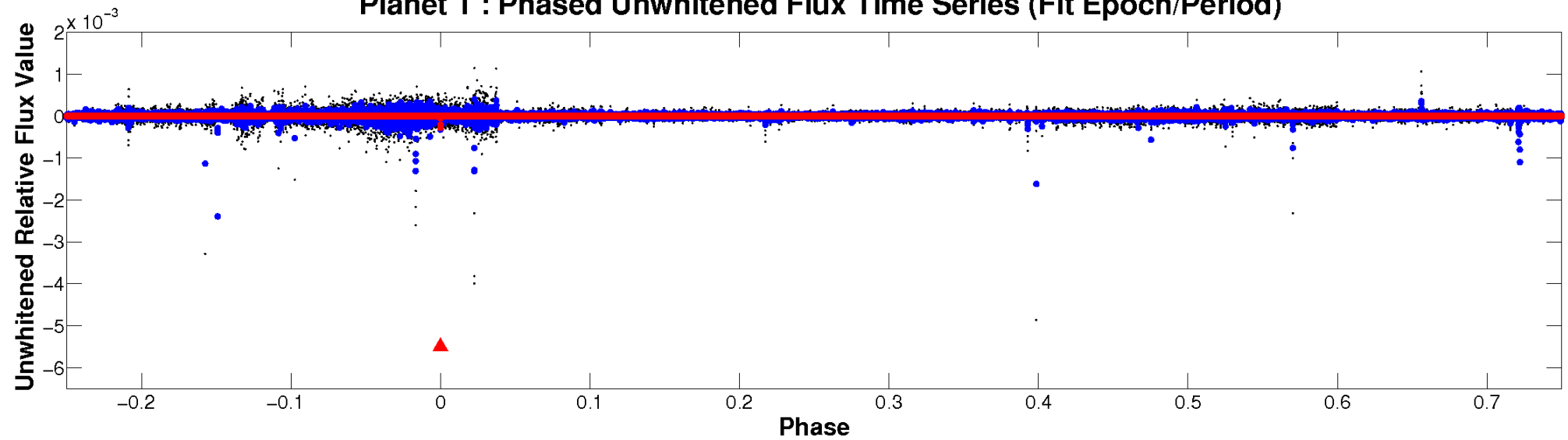
# ALT Odd/Even

TCE 007899526-01

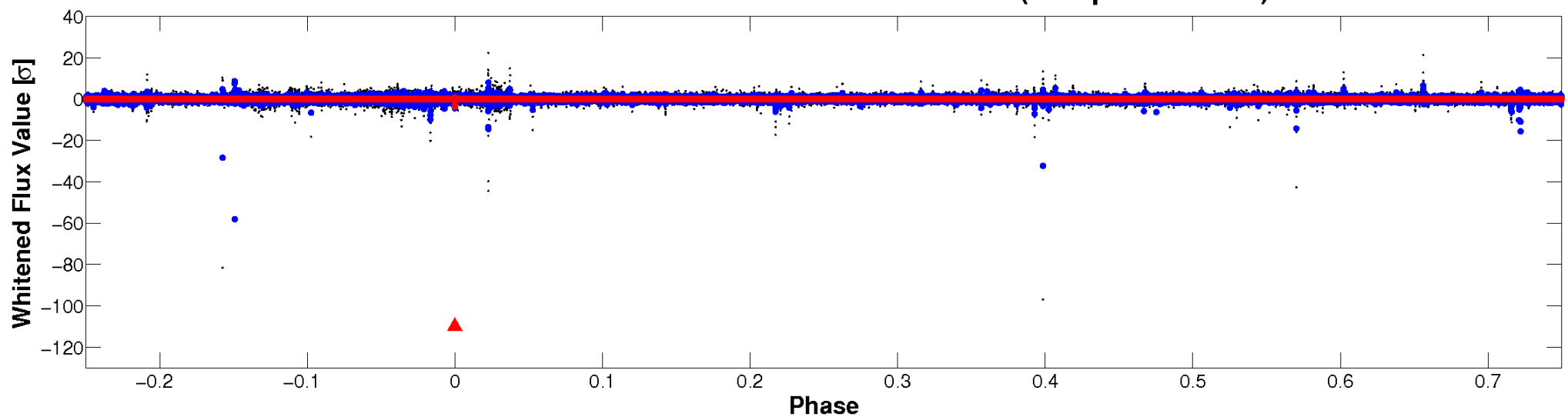


# Non-Whitened Vs. Whitened Light Curve

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

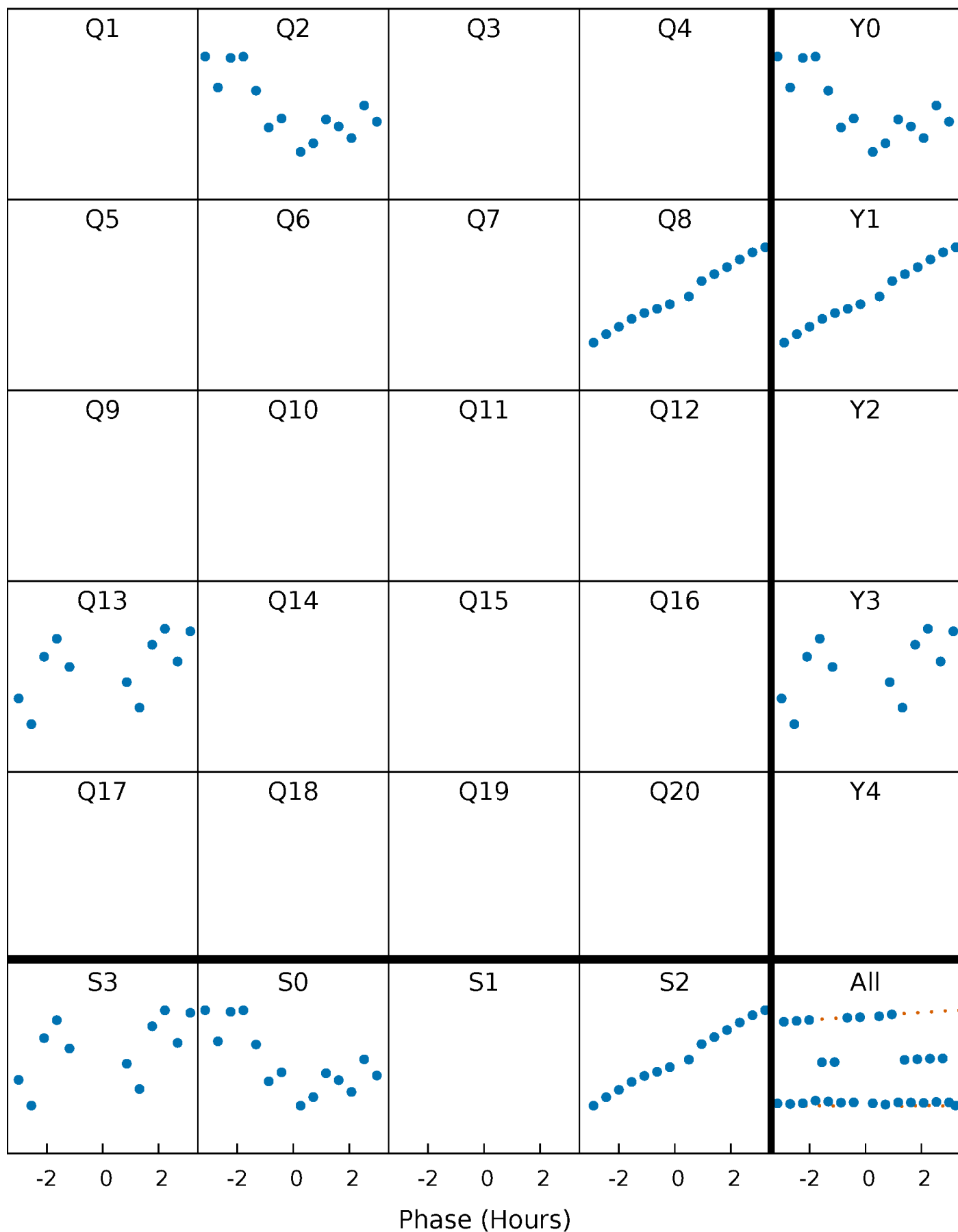


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

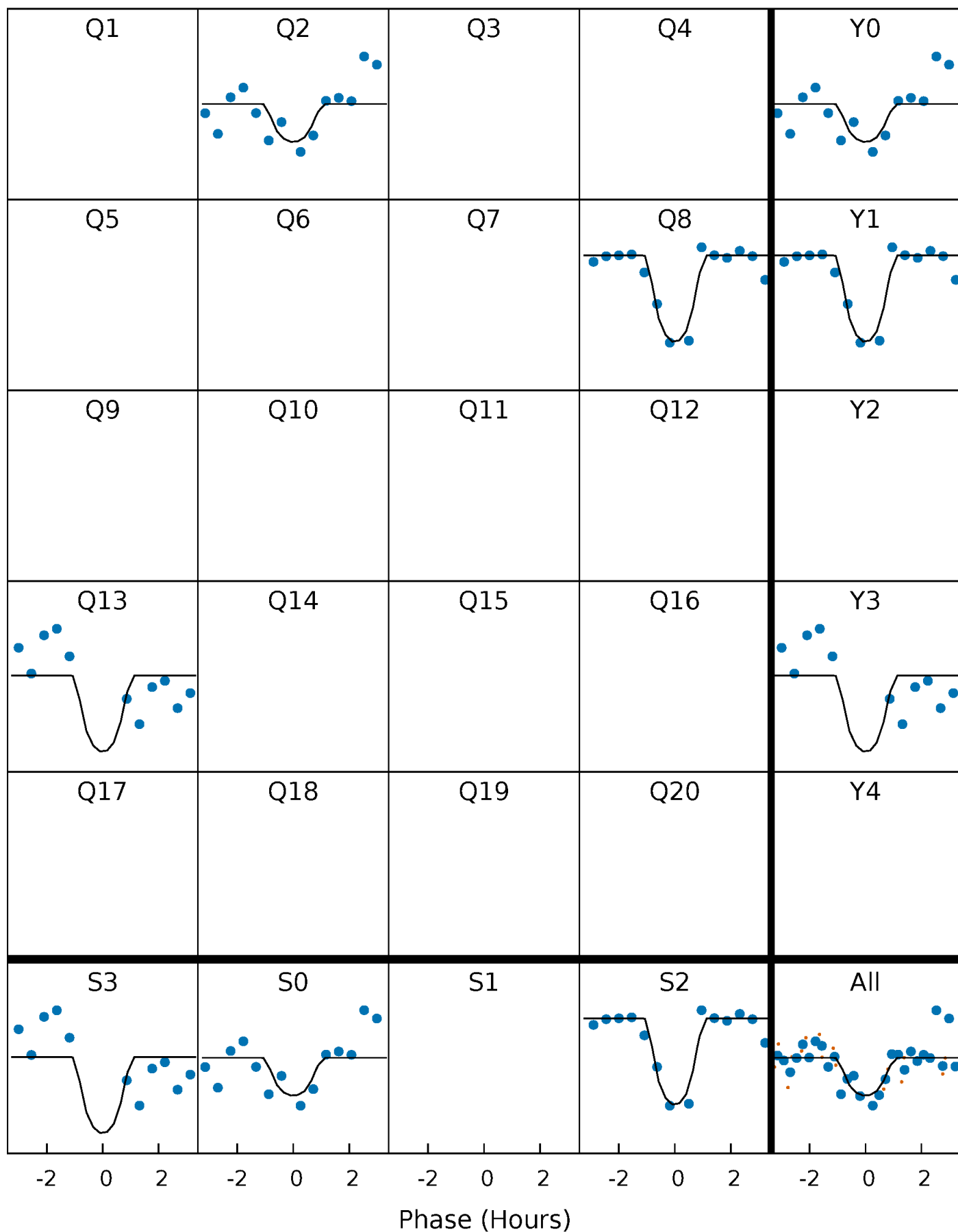
TCE 007899526-01 P=497.829527 Days  $T_0=239.642109$  (BKJD)





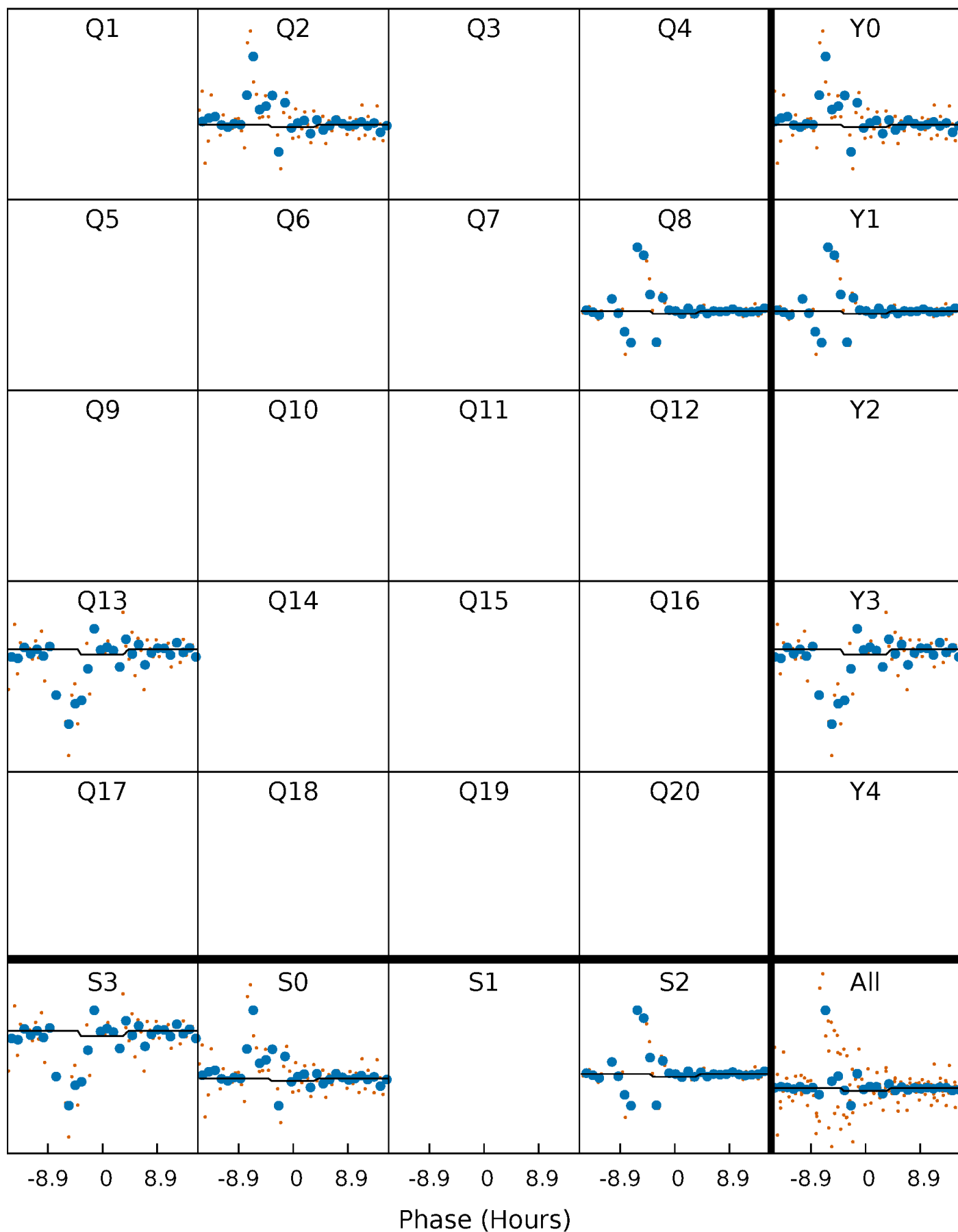
# DV Quarter-Phased Transit Curves

TCE 007899526-01 P=497.829527 Days  $T_0=239.642109$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

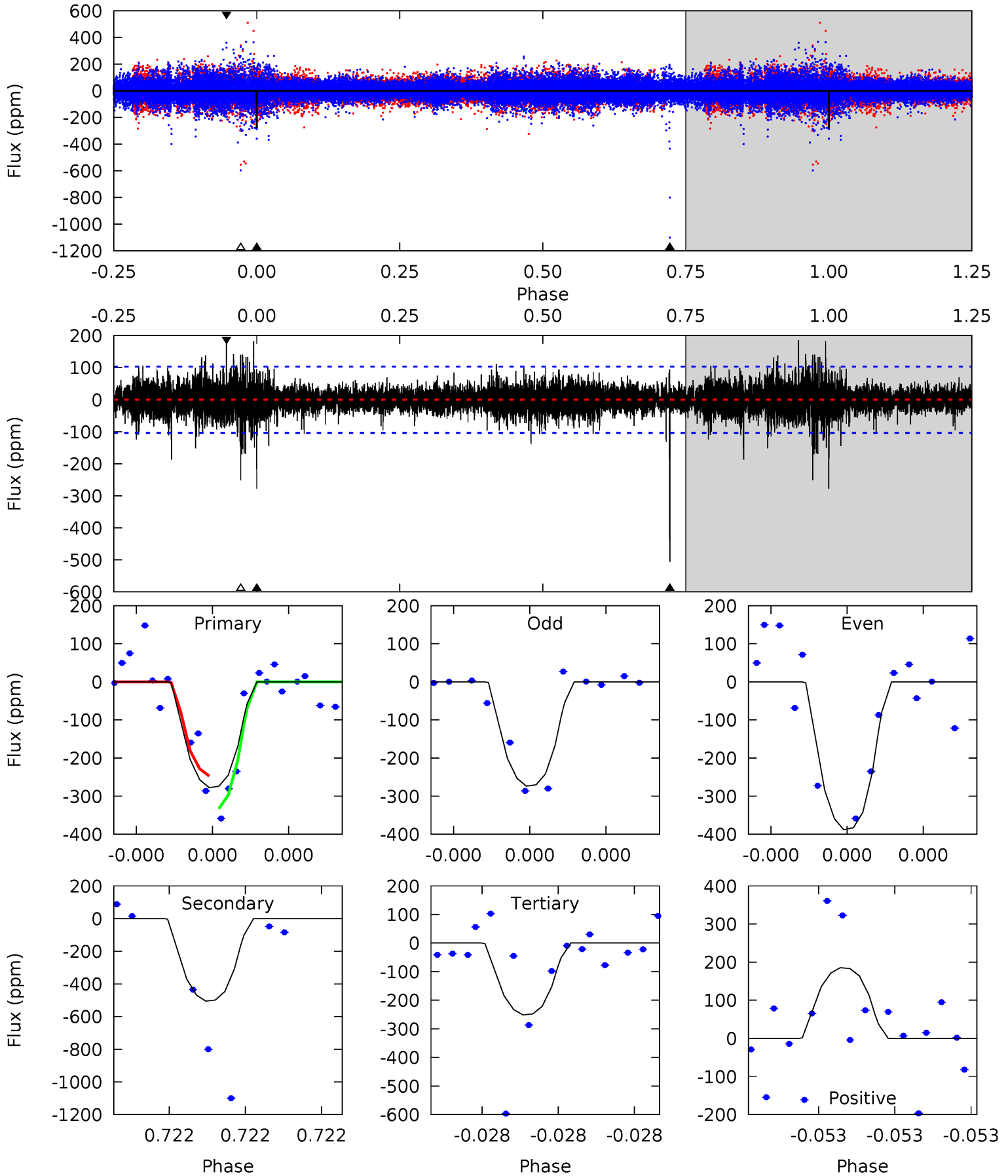
TCE 007899526-01 P=497.986291 Days  $T_0=239.611946$  (BKJD)



# DV Model-Shift Uniqueness Test

007899526-01, P = 497.829527 Days, E = 239.642109 Days

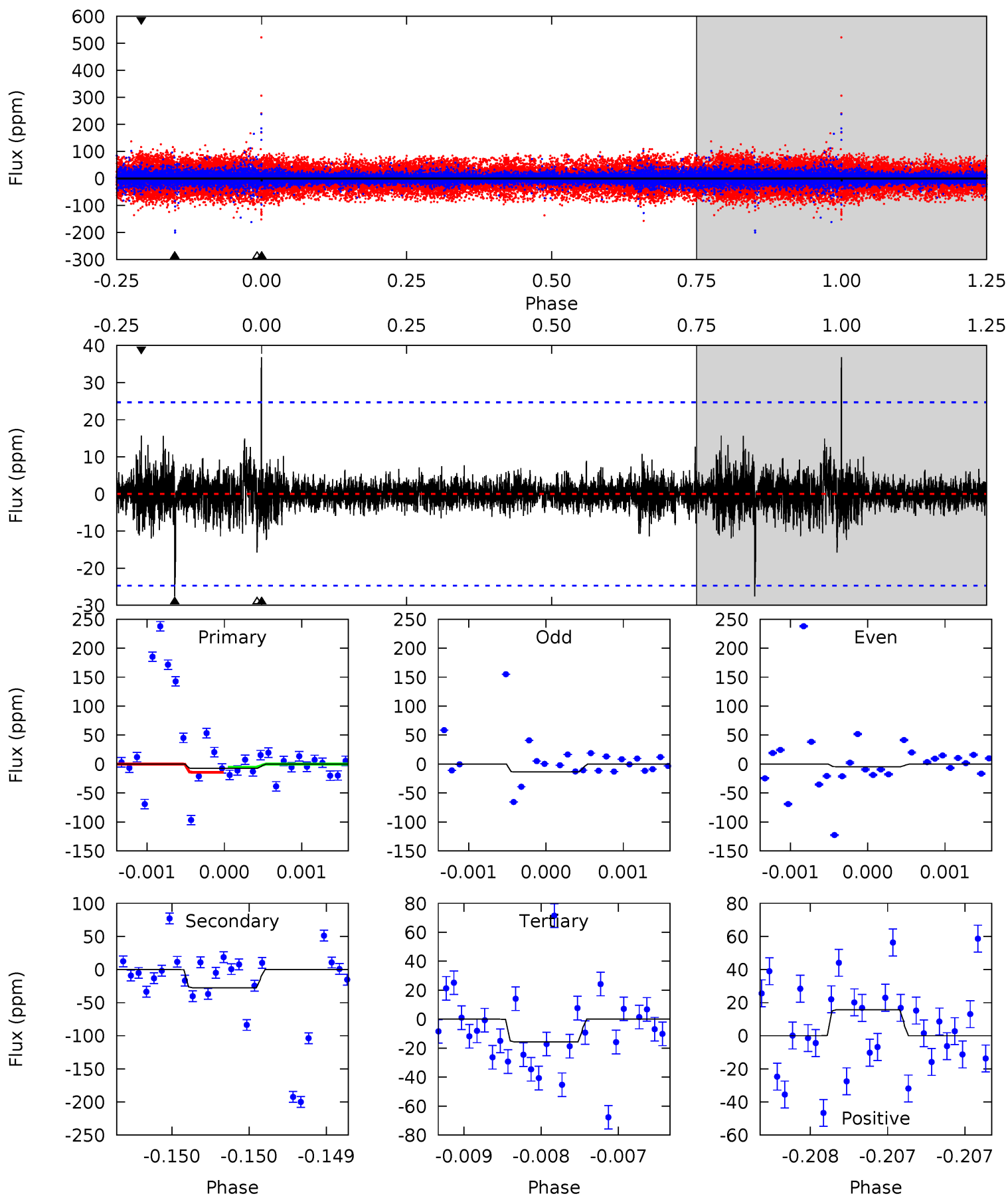
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.5	28.2	14.0	10.3	5.76	3.77	1.40	1.47	5.13	14.2	17.8	2.75	1.00	0.27	2.21



# Alt Model-Shift Uniqueness Test

007899526-01, P = 497.986291 Days, E = 239.611946 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
1.67	6.18	3.52	3.51	5.53	3.41	0.59	-1.85	-1.84	2.65	2.67	1.01	0.23	0.57	0.97



### Stellar Parameters For KIC 007899526

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$3284^{+117}_{-88}$	$0.184^{+0.232}_{-0.058}$	$0.020^{+0.250}_{-0.150}$	$148.390^{+11.490}_{-32.172}$	$1.226^{+0.235}_{-0.157}$	$0.000^{+0.000}_{-0.000}$
	+4%/-3%	+126%/-32%	+1250%/-750%	+8%/-22%	+19%/-13%	+115%/-17%
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 007899526-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-505 \pm 18$	$461.96^{+414.43}_{-303.46}$	$2118^{+104}_{-125}$	$2978^{+1327}_{-621}$	$2.335^{+16.748}_{-1.708}$
Alt.	$-28 \pm 4$	$383.69^{+409.51}_{-269.09}$	$2106^{+100}_{-121}$	$-2077^{+4990}_{-226}$	$0.187^{+2.004}_{-0.143}$

$T_{max}$  = 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 007899526-01. **Kepler magnitude: 10.48.** Transit SNR 8.87

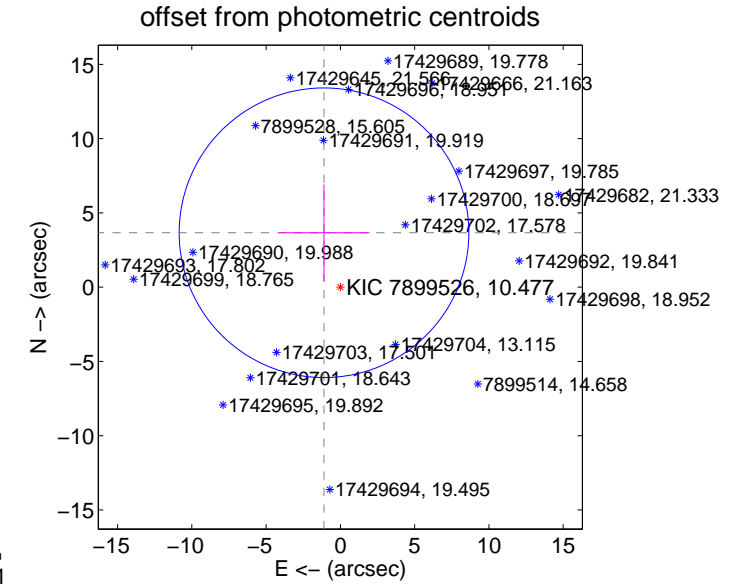
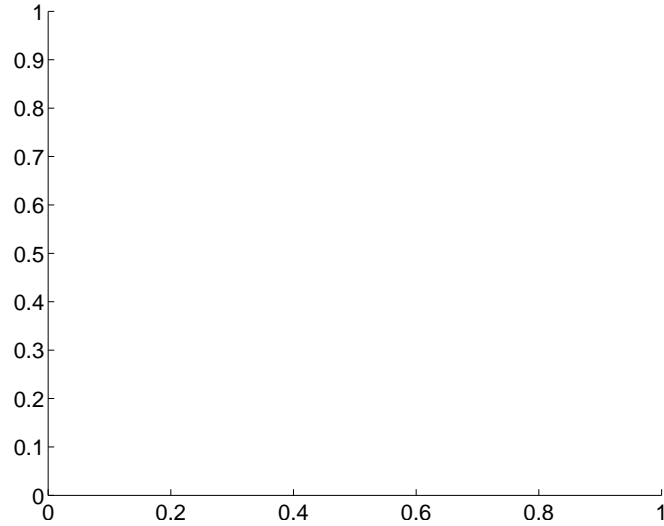
**There are 0 quarters with good PRF difference image offsets**

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

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	$3.83 \pm 3.25$	1.18	$1.10 \pm 3.06$	$3.66 \pm 3.27$

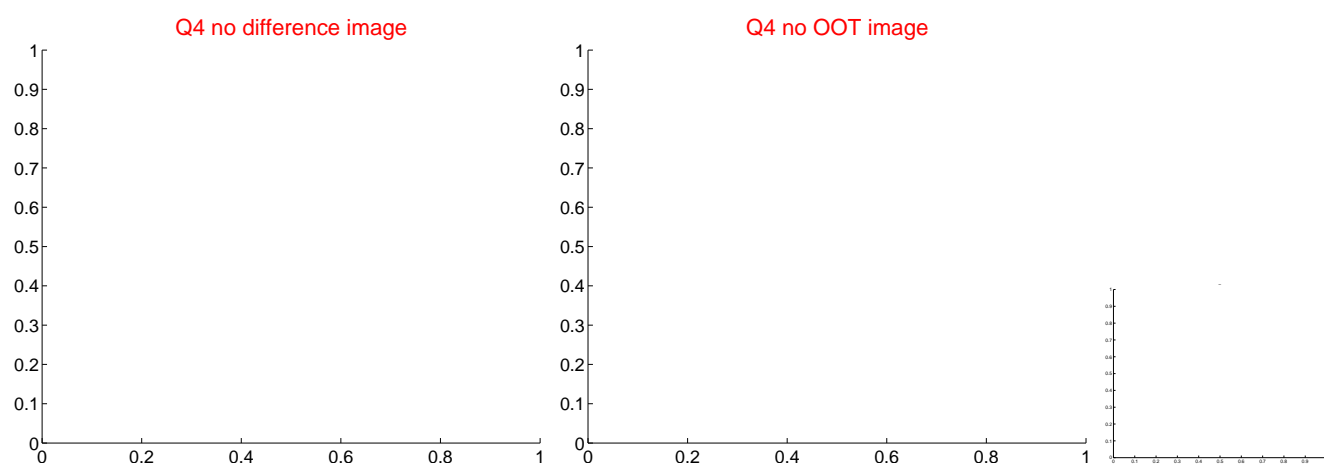
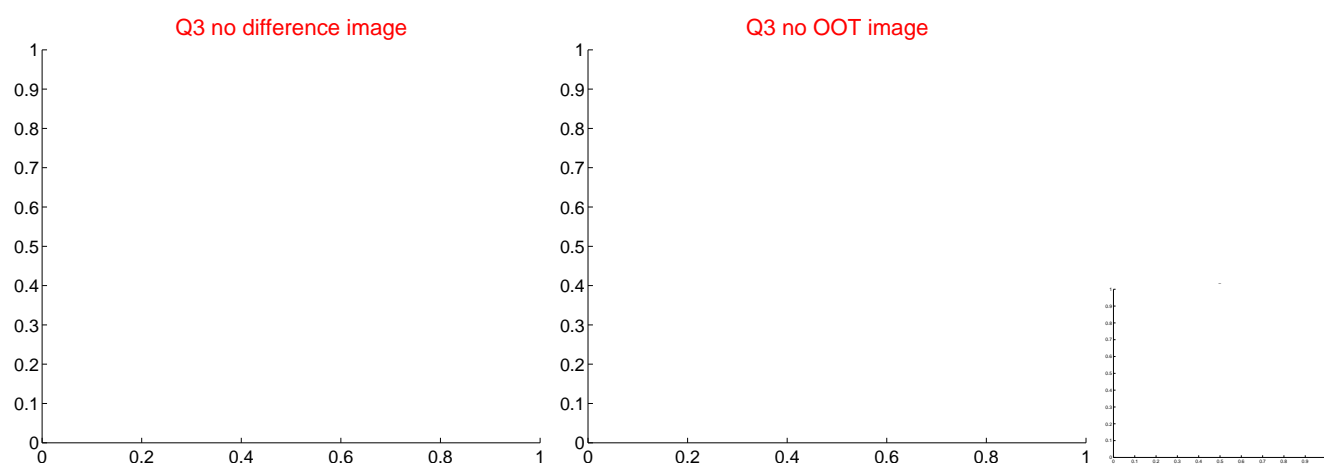
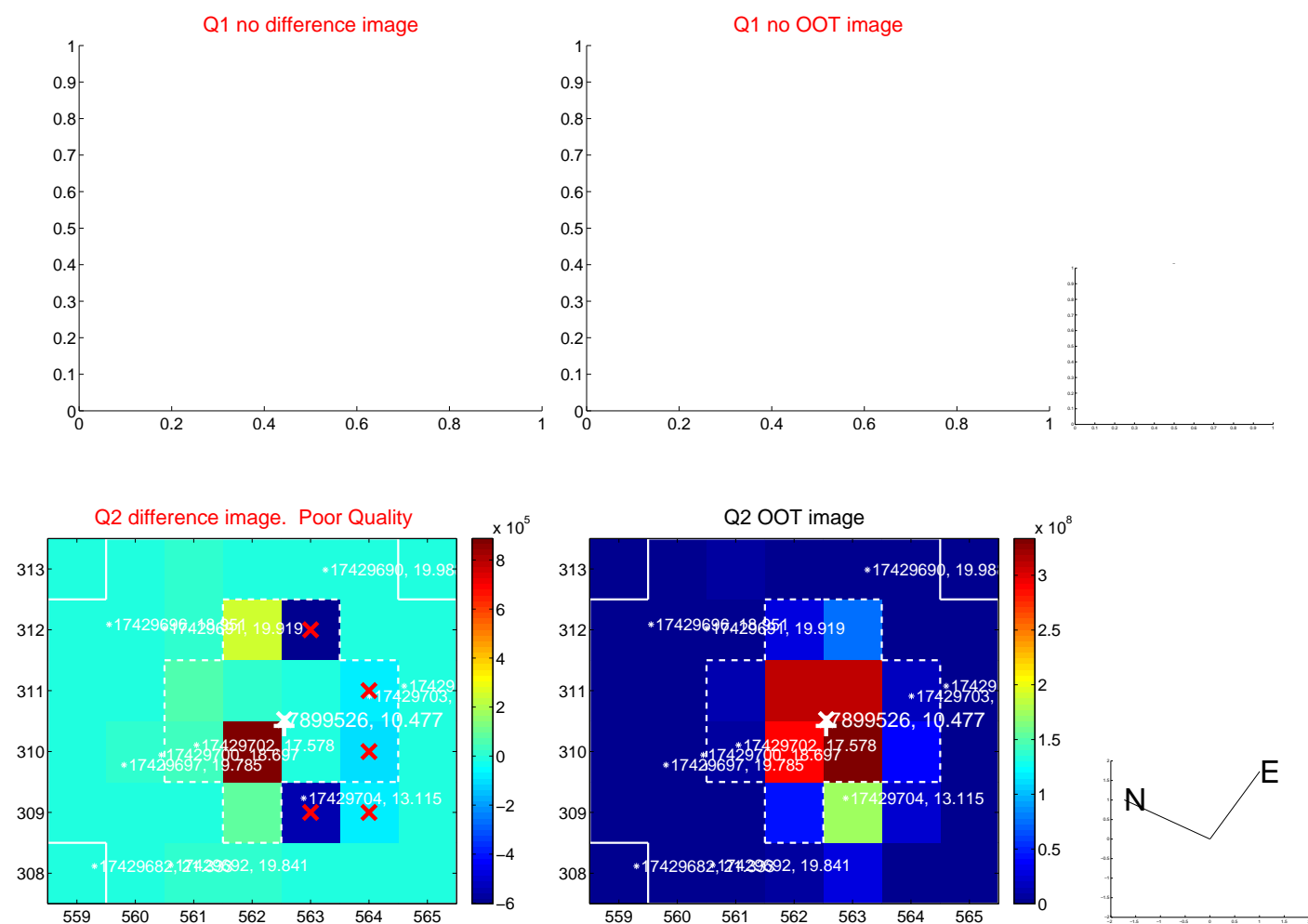
There is no PRF-fit offset from OOT-fit

There is no PRF-fit offset from KIC

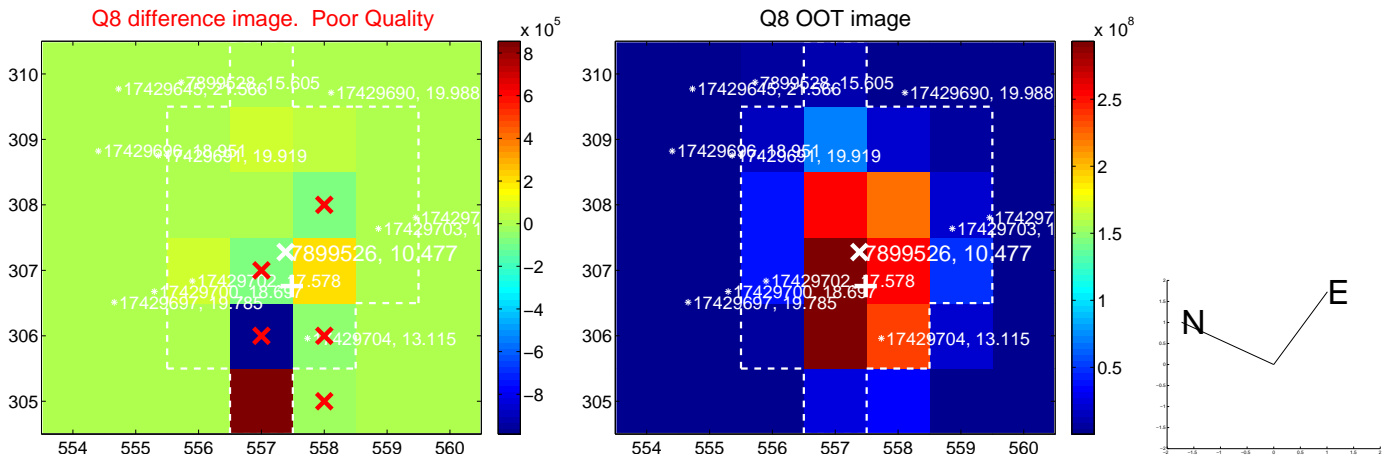
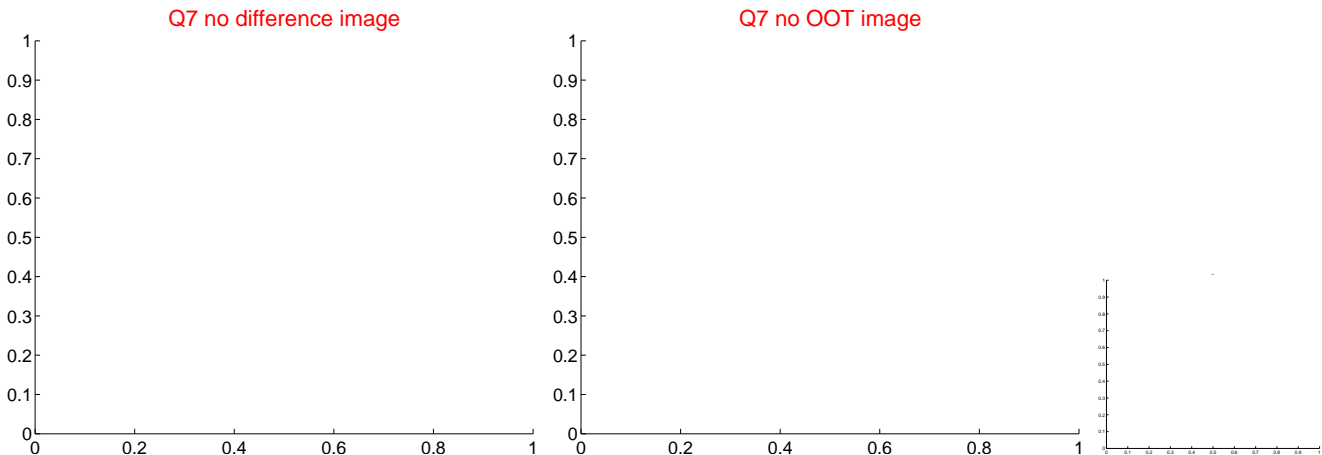
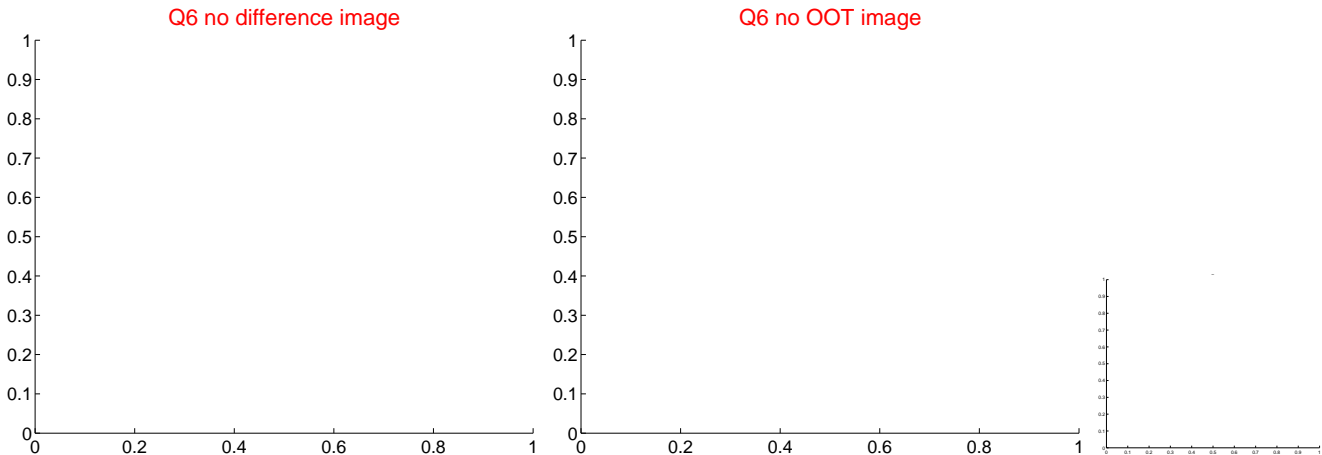
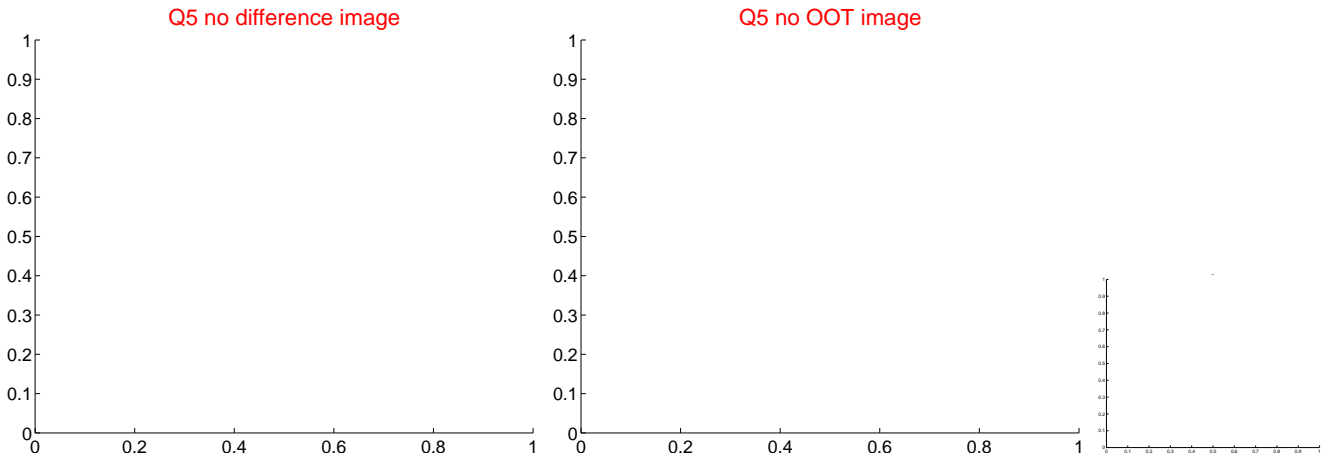


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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





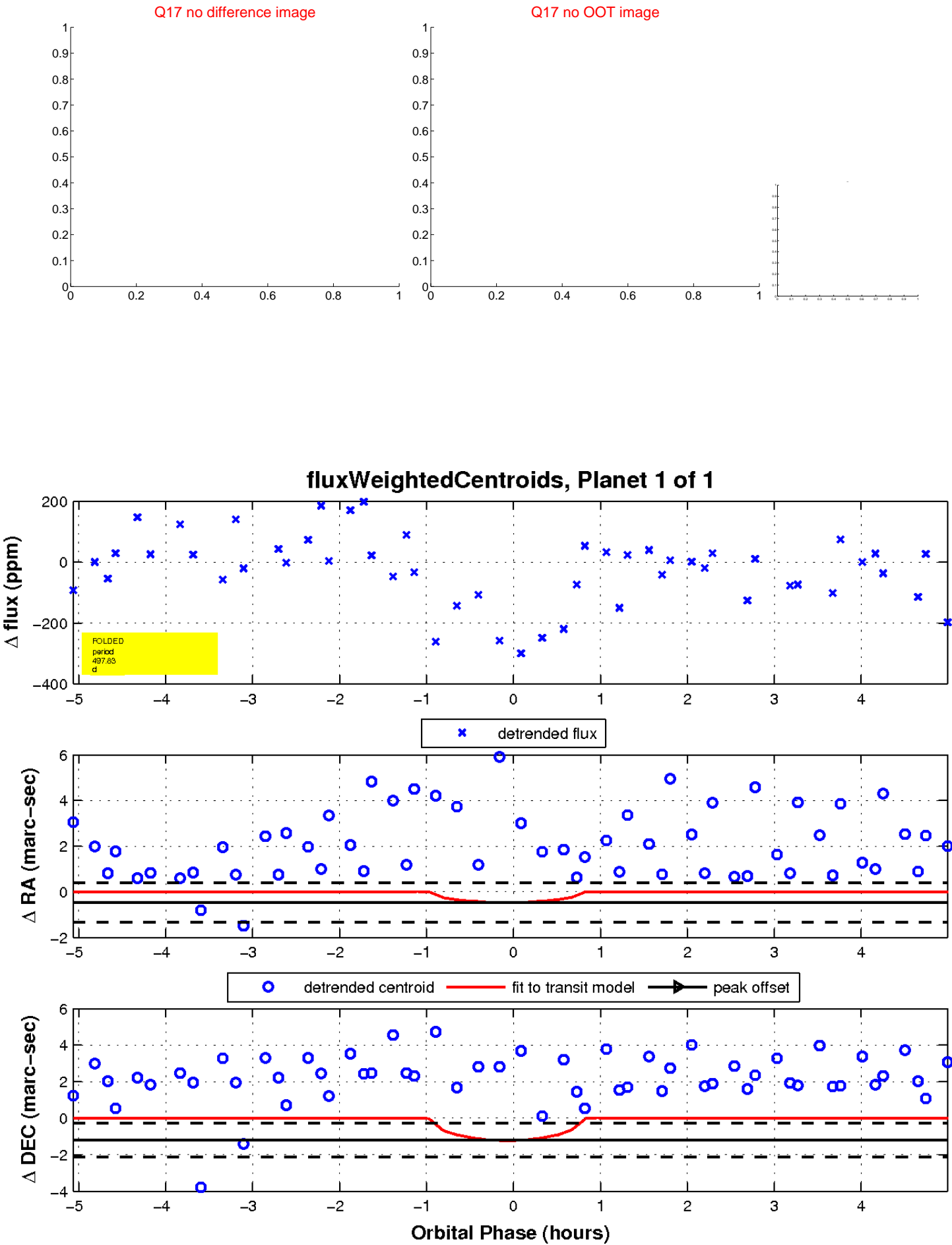
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



UKIRT Image

