

# KIC 007977479

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007977479-01	OBS	No	644.445239	244.044417	374.3	7.219	8.2	6.0	0.85	5562	1.87	0.30

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007977479-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—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.

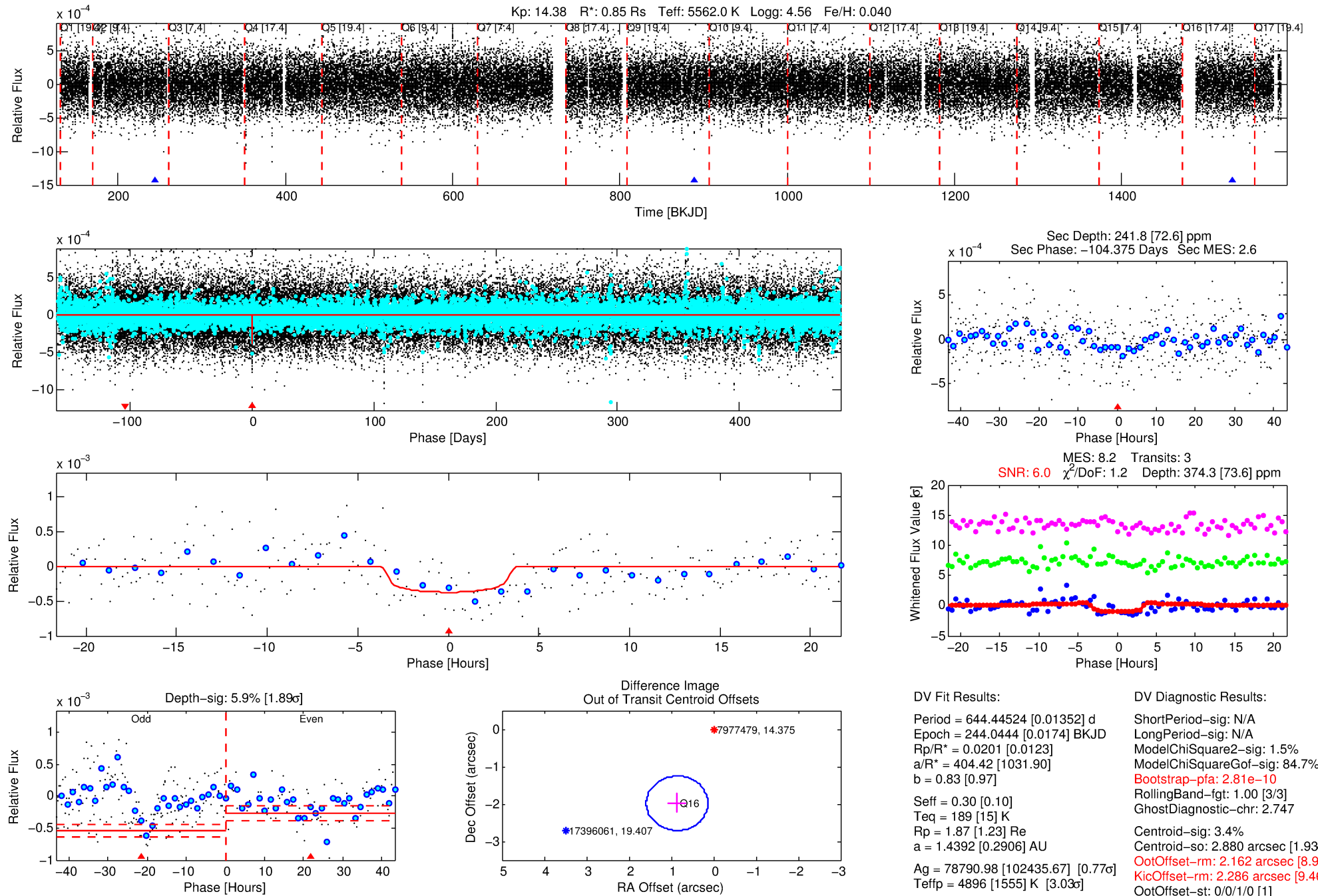
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 007977479-01

No Significant Match Found

# DV One-Page Summary

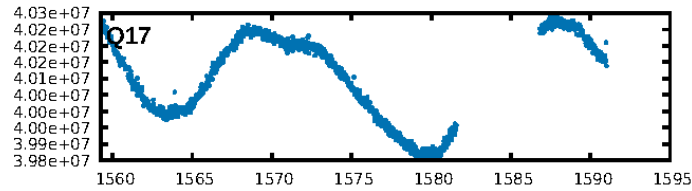
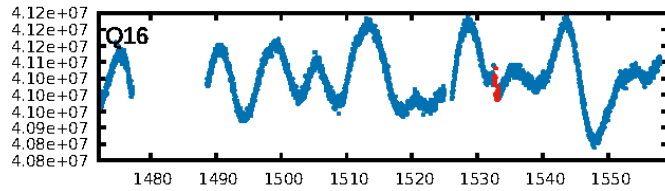
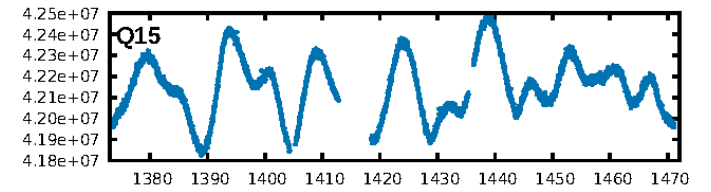
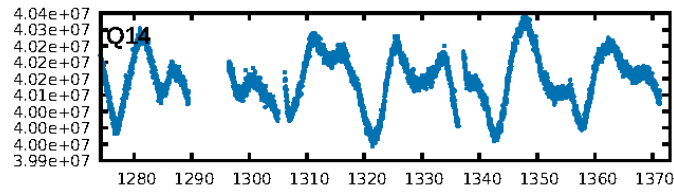
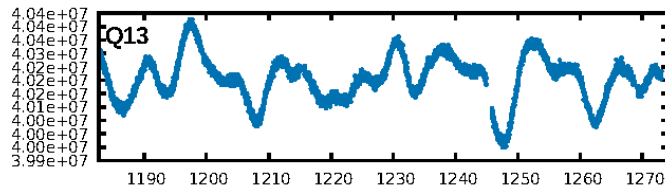
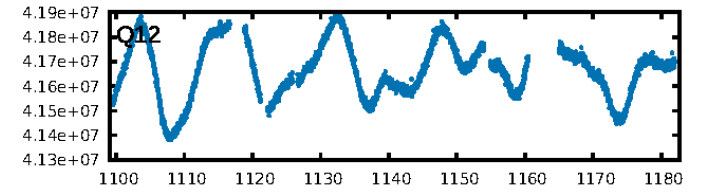
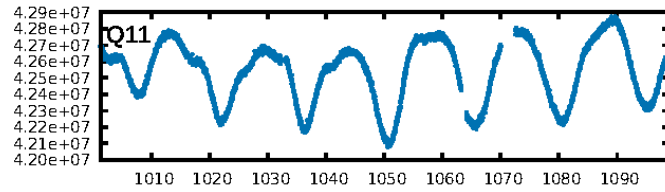
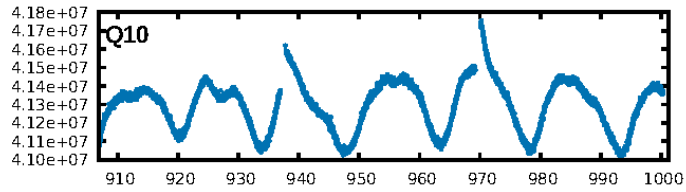
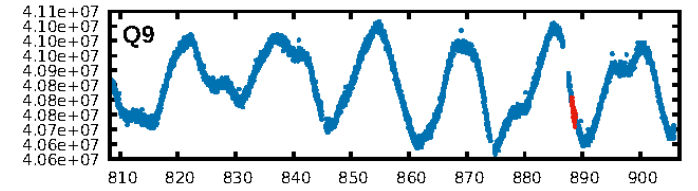
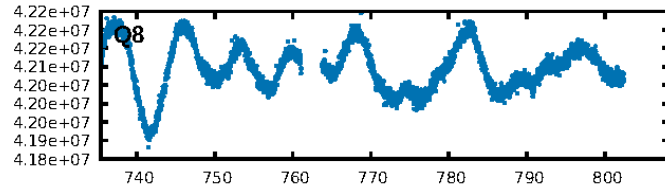
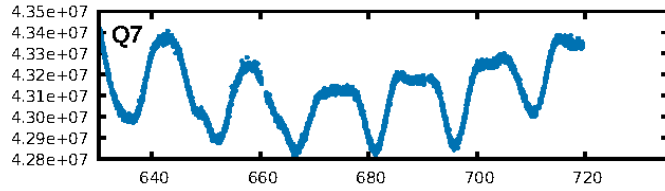
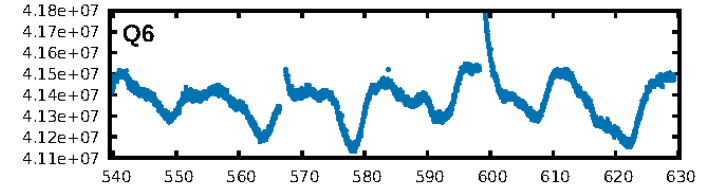
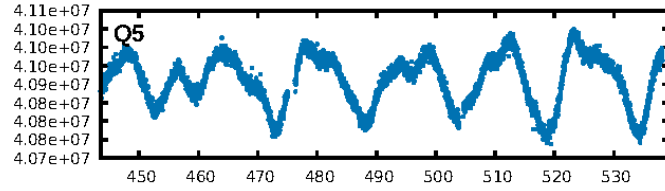
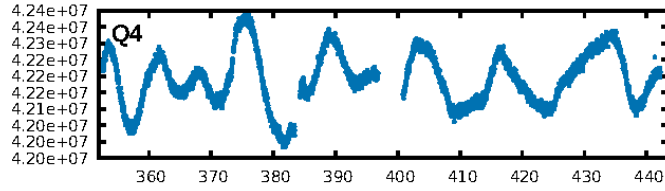
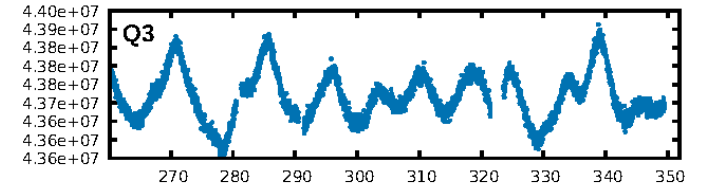
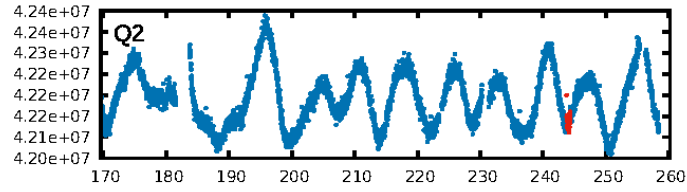
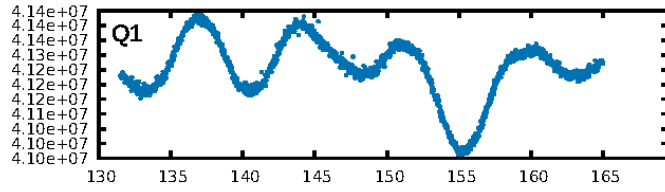
KIC: 7977479 Candidate: 1 of 1 Period: 644.445 d



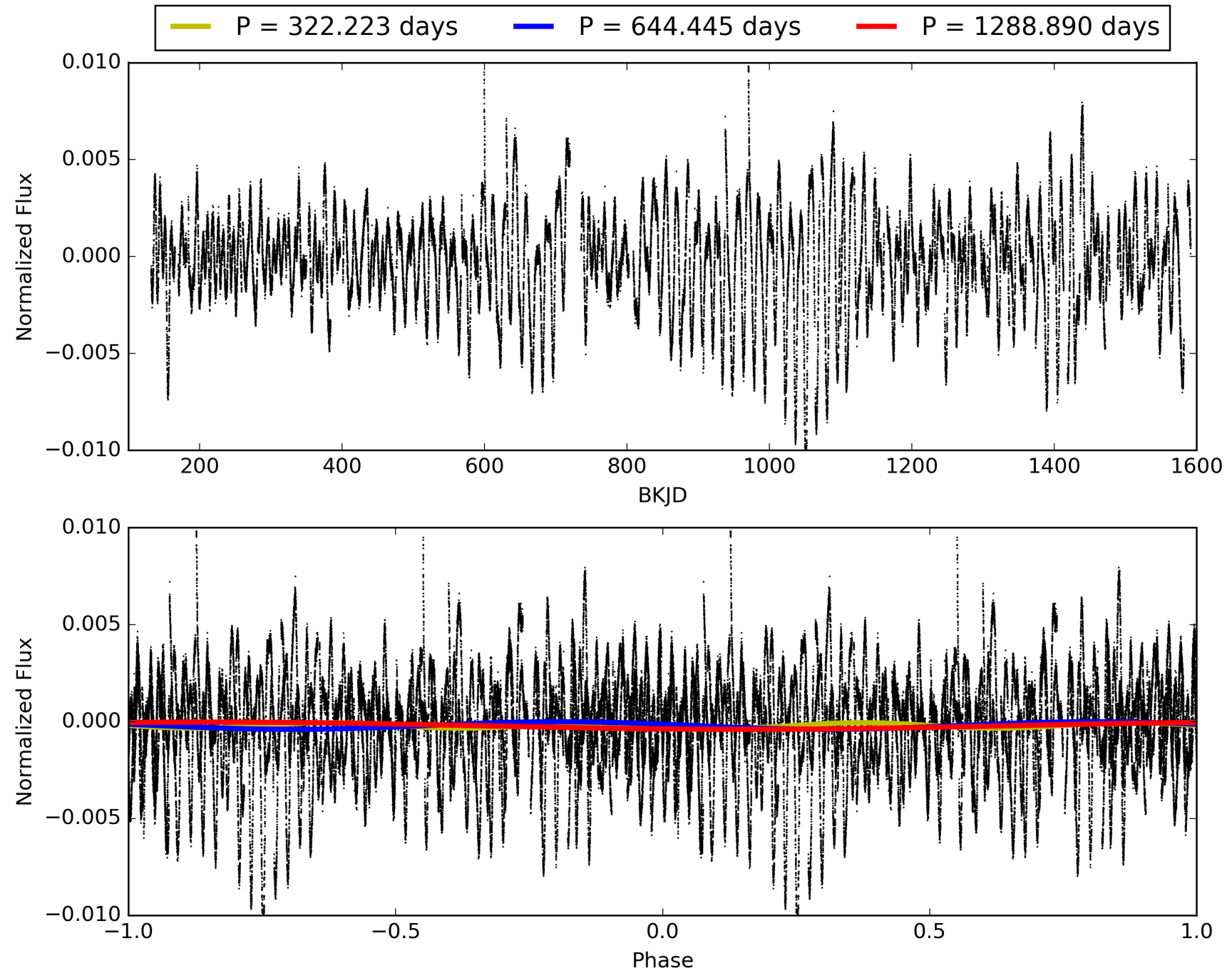
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 19:41:57 Z

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

# TCE 007977479-01, PDC Light Curves

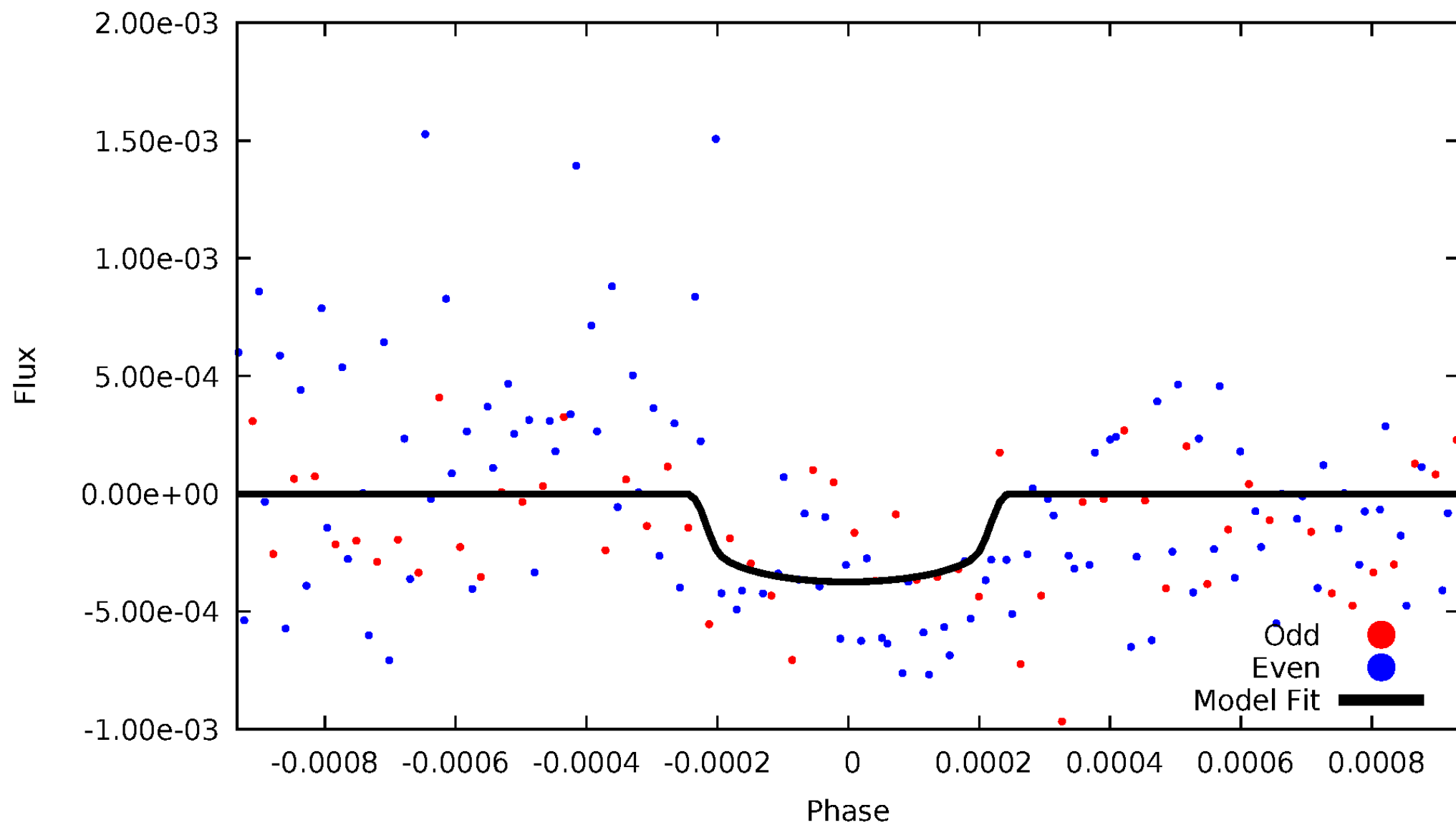


TCE 007977479-01



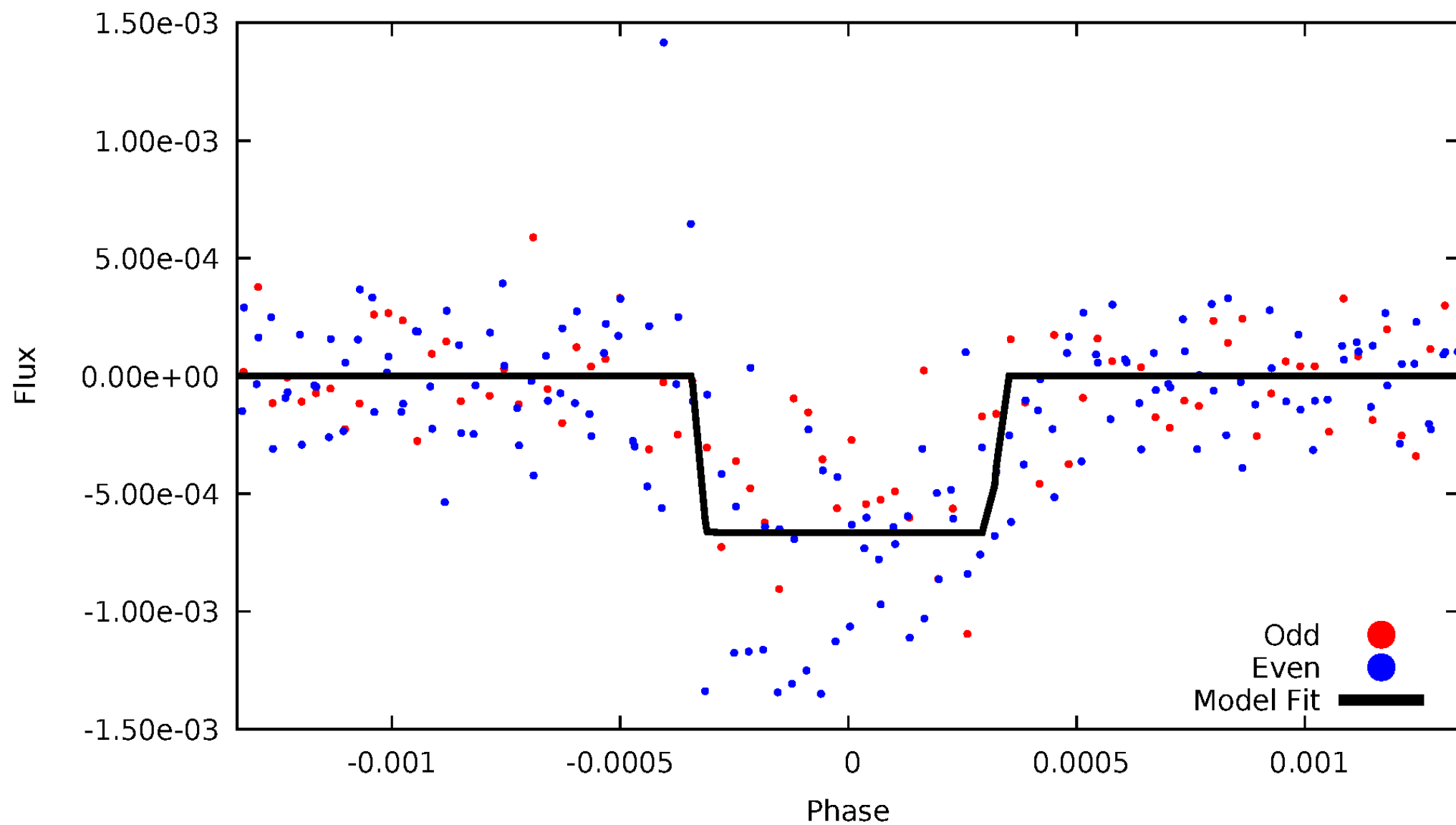
# DV Odd/Even

TCE 007977479-01

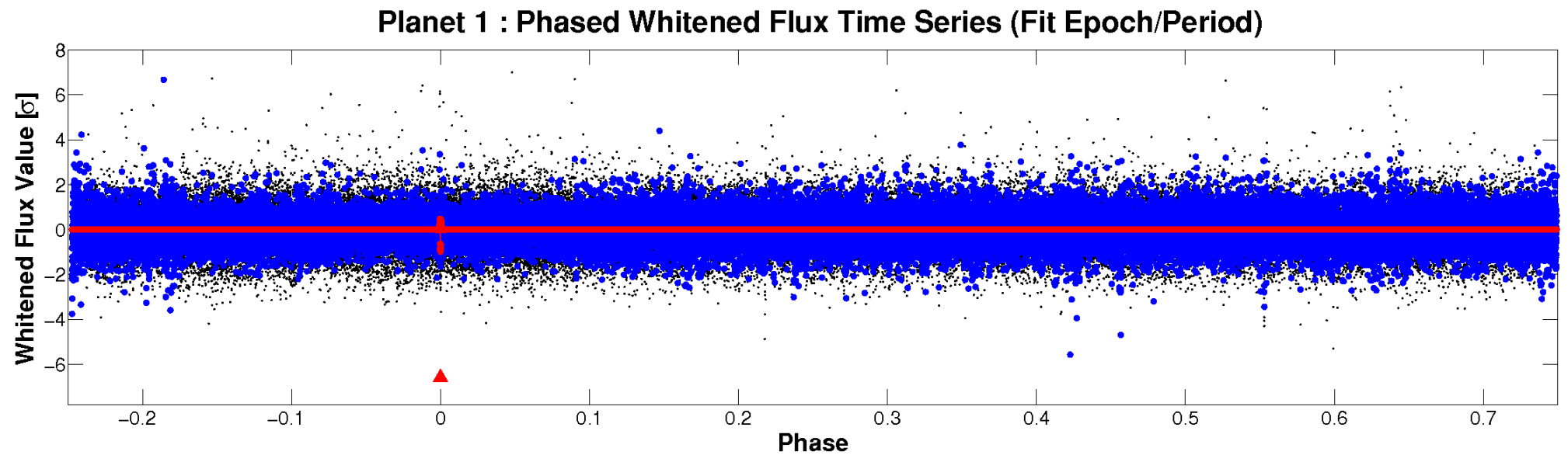
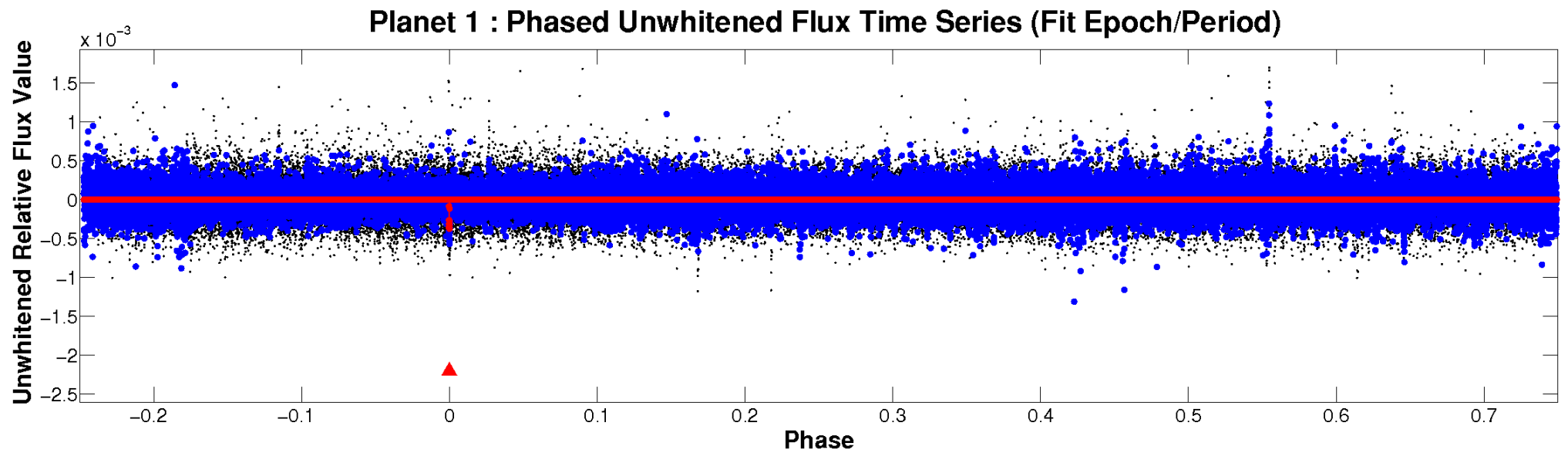


# ALT Odd/Even

TCE 007977479-01

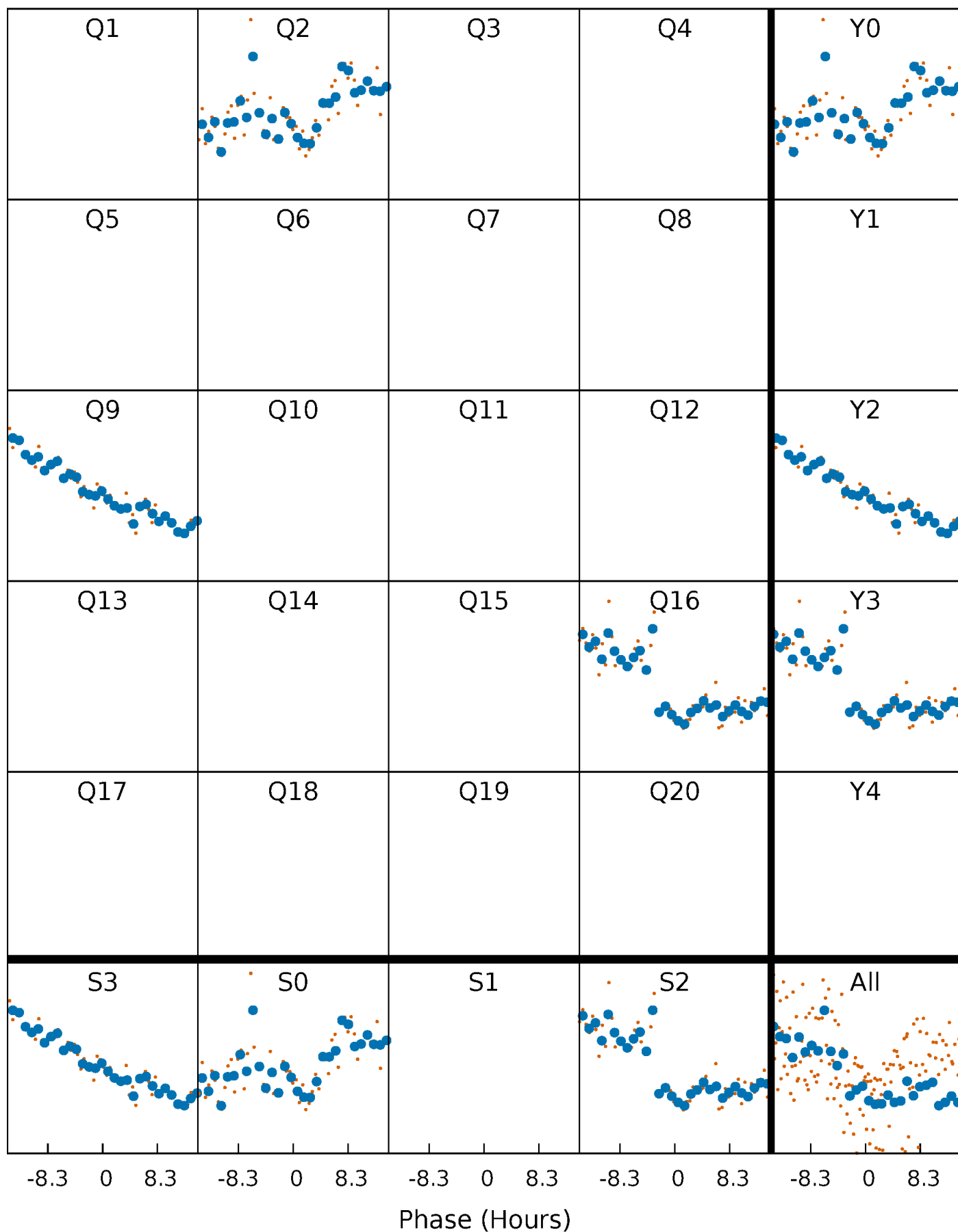


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

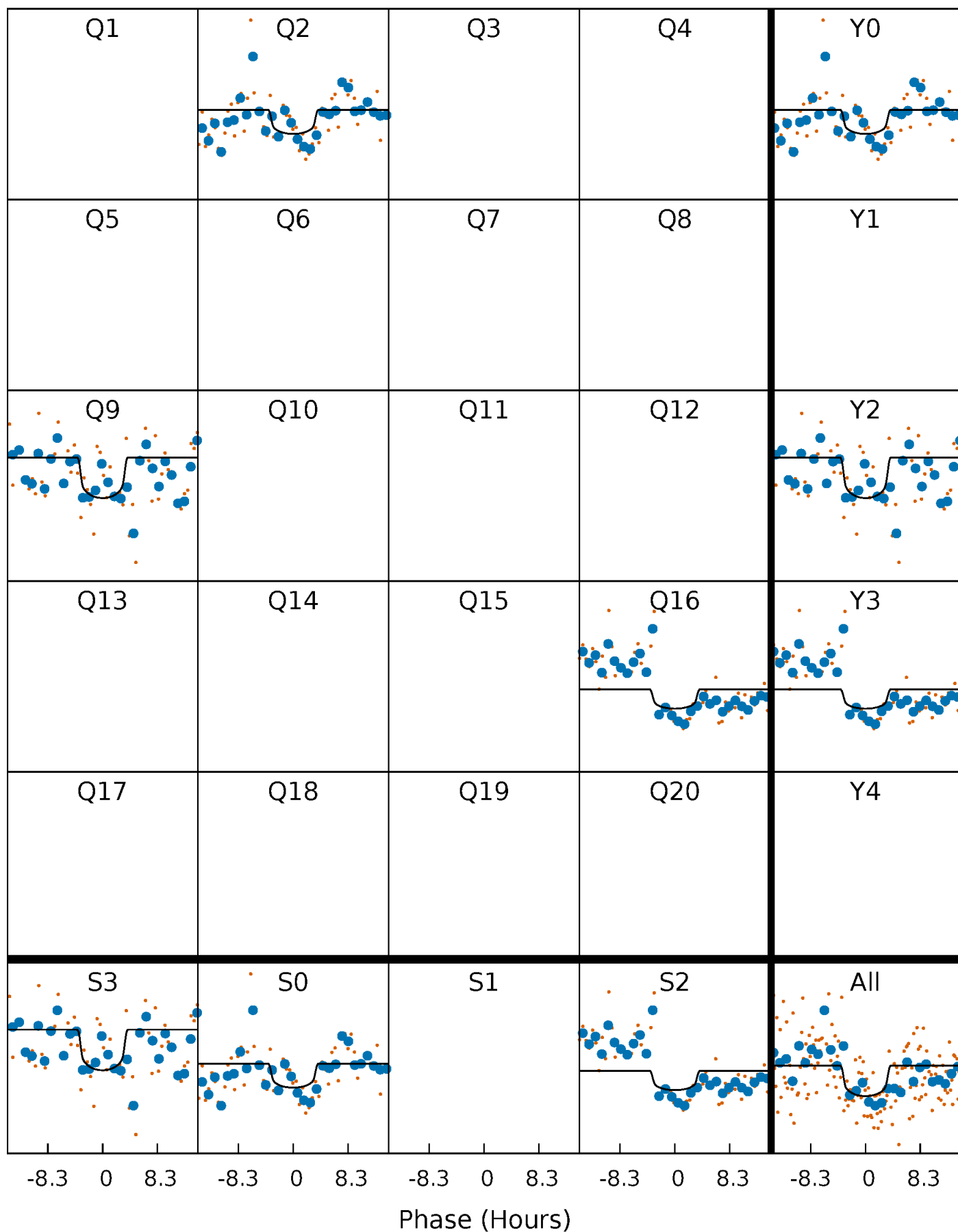
TCE 007977479-01 P=644.445239 Days  $T_0=244.044417$  (BKJD)





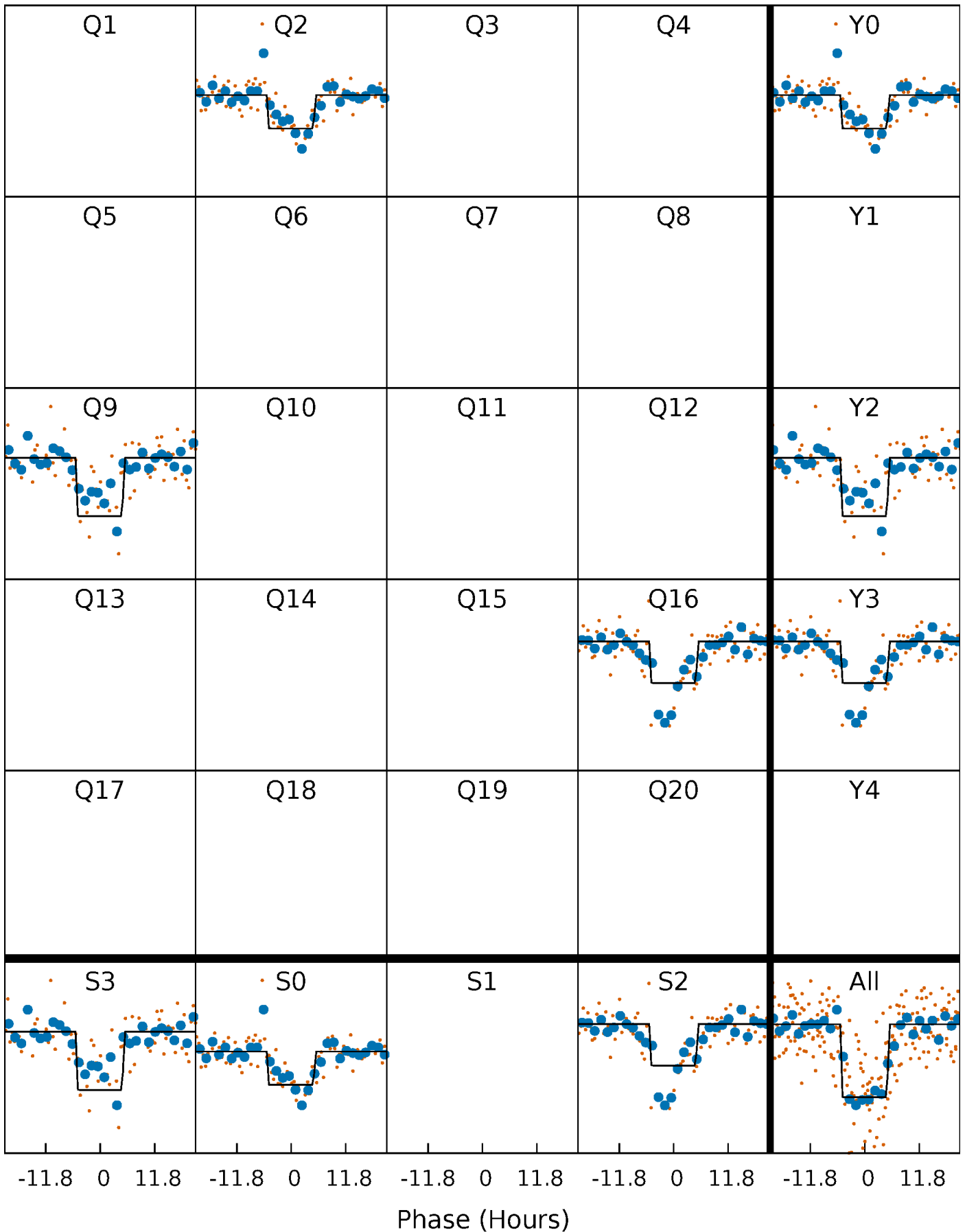
# DV Quarter-Phased Transit Curves

TCE 007977479-01 P=644.445239 Days  $T_0=244.044417$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

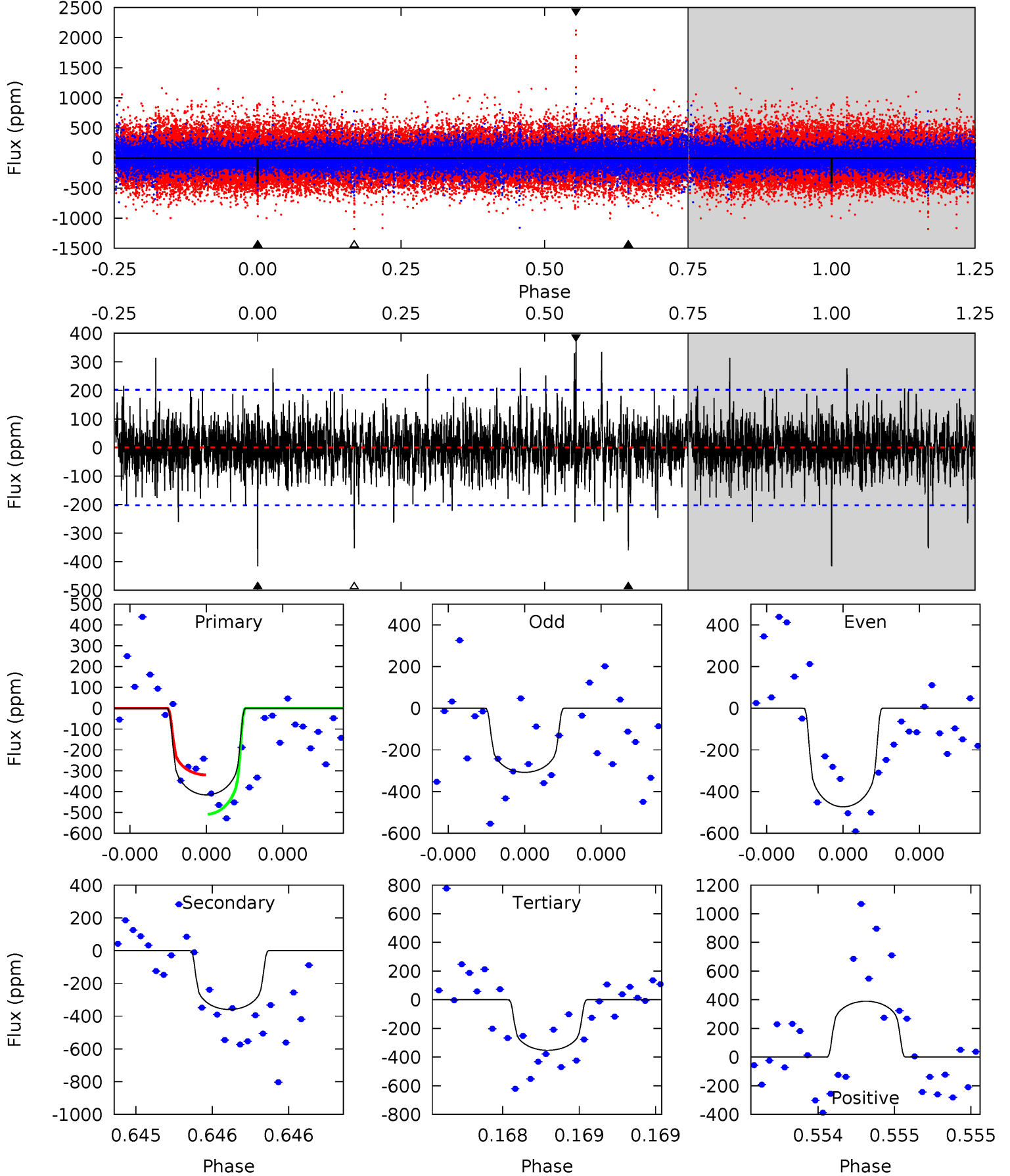
TCE 007977479-01 P=644.494916 Days  $T_0=244.037133$  (BKJD)



# DV Model-Shift Uniqueness Test

007977479-01, P = 644.445239 Days, E = 244.044417 Days

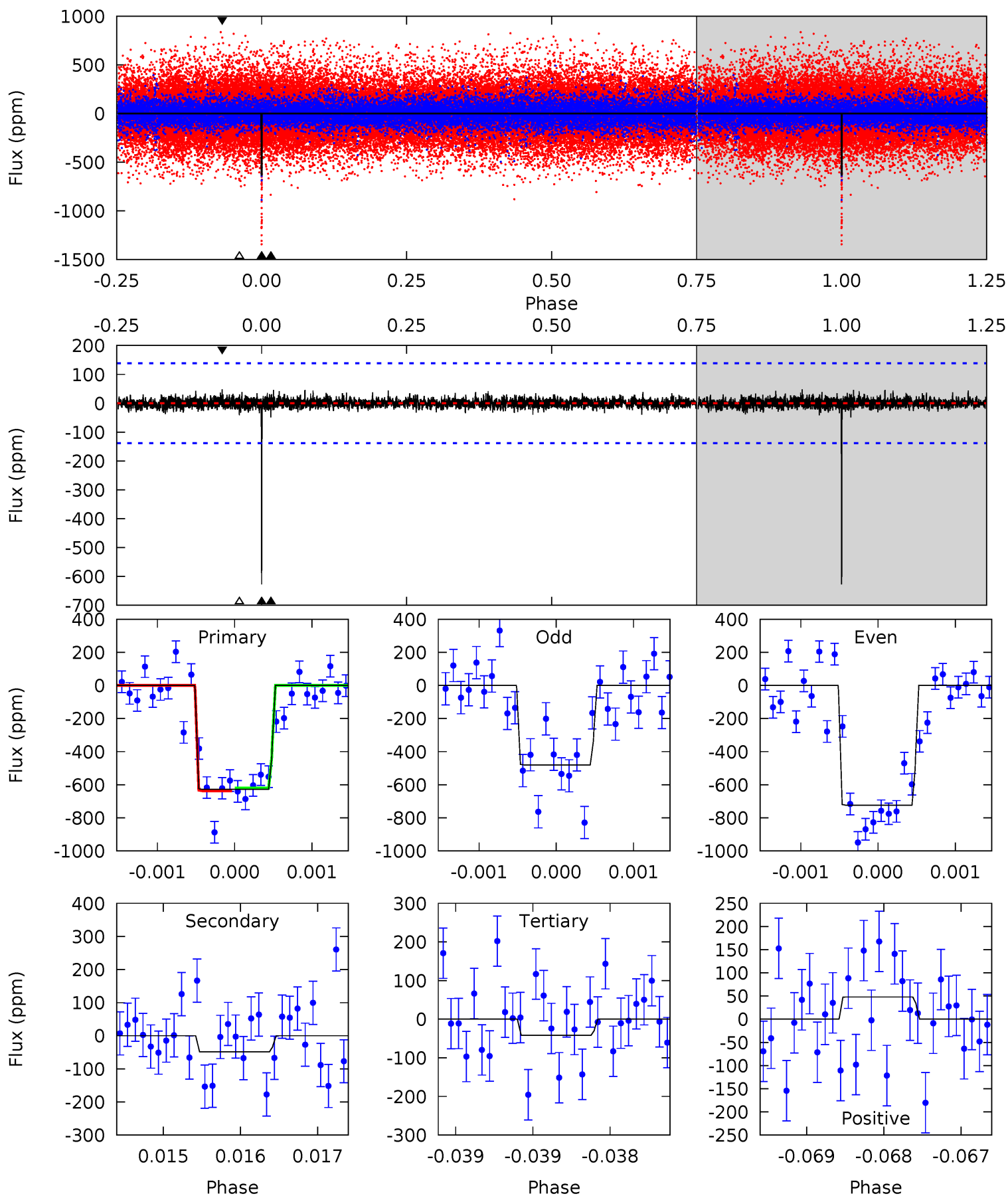
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.5	9.92	9.74	10.8	5.58	3.49	1.79	1.74	0.72	0.19	-0.84	2.19	0.95	0.48	2.60



# Alt Model-Shift Uniqueness Test

007977479-01, P = 644.494916 Days, E = 244.037133 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
25.1	1.94	1.67	1.91	5.52	3.40	0.40	23.4	23.2	0.27	0.02	4.69	1.11	0.07	0.32



### Stellar Parameters For KIC 007977479

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5562^{+149}_{-166}$	$4.556^{+0.032}_{-0.168}$	$0.040^{+0.250}_{-0.300}$	$0.854^{+0.199}_{-0.071}$	$0.955^{+0.074}_{-0.111}$	$2.162^{+0.357}_{-0.990}$
	+3%/-3%	+1%/-4%	+625%/-750%	+23%/-8%	+8%/-12%	+17%/-46%
Source	PHO1	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 007977479-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-359 \pm 36$	$1.97^{+1.17}_{-1.04}$	$270^{+16}_{-12}$	$5416^{+2546}_{-1007}$	$103022^{+384344}_{-62918}$
Alt.	$-49 \pm 25$	$2.57^{+1.17}_{-1.16}$	$270^{+14}_{-12}$	$3294^{+821}_{-458}$	$7117^{+19572}_{-4718}$

$T_{\text{max}}$  = 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

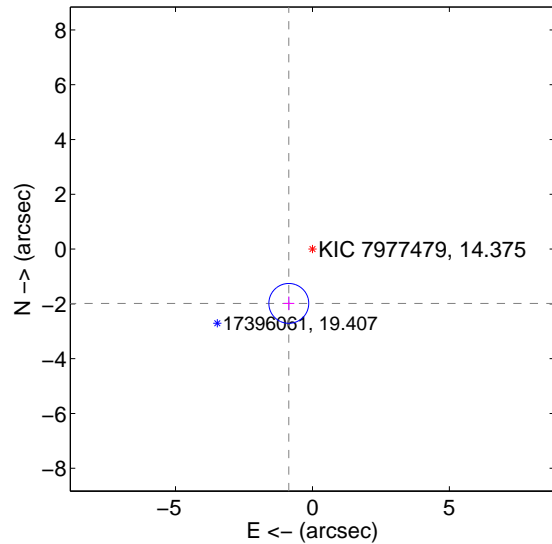
Supplemental centroid analysis for 007977479-01. Kepler magnitude: 14.38. Transit SNR 6.05

There are 1 quarters with good PRF difference image offsets

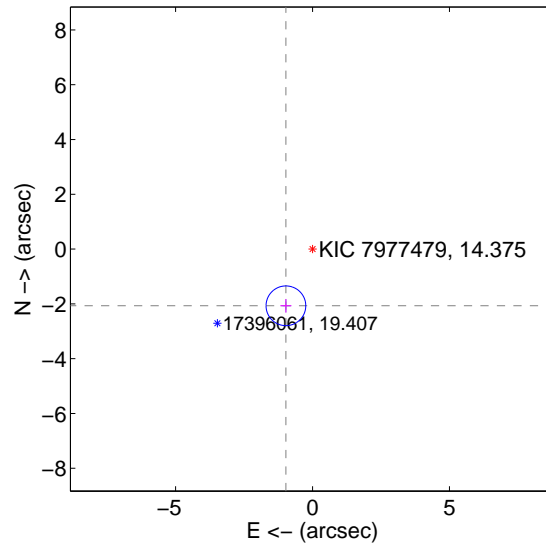
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	2.162 $\pm$ 0.243	8.91	0.863 $\pm$ 0.202	-1.982 $\pm$ 0.250
PRF-fit source offset from KIC position	2.286 $\pm$ 0.242	9.46	0.972 $\pm$ 0.202	-2.069 $\pm$ 0.250
photometric centroid source offset	2.88 $\pm$ 1.49	1.93	-2.71 $\pm$ 1.51	-0.98 $\pm$ 1.34

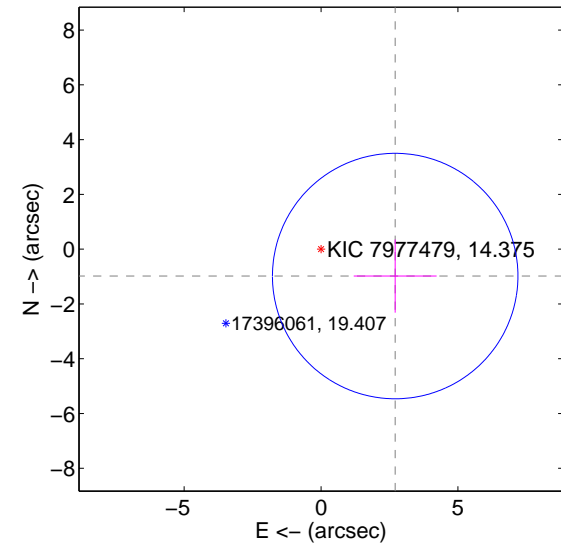
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

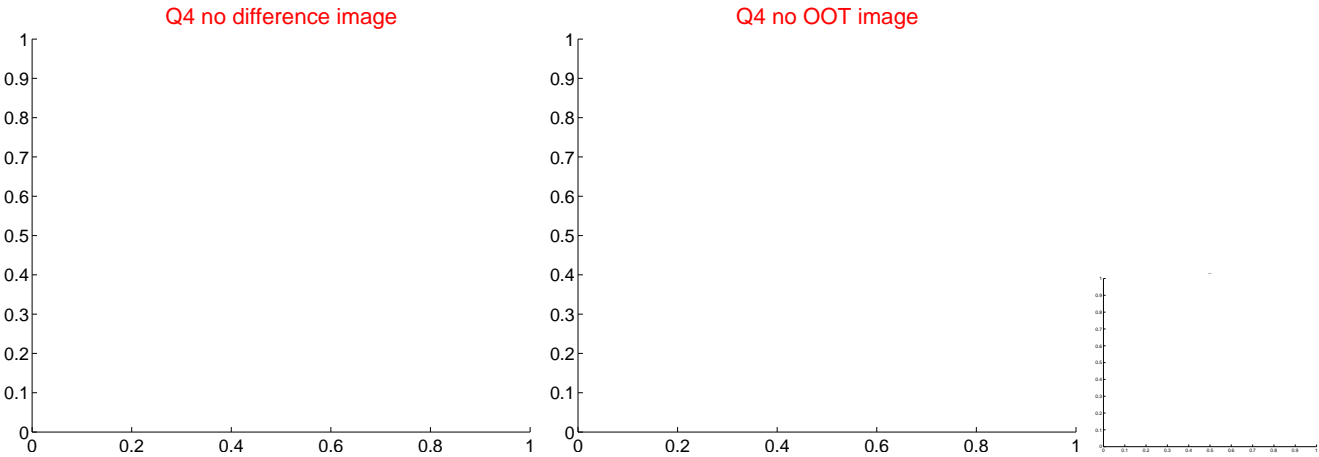
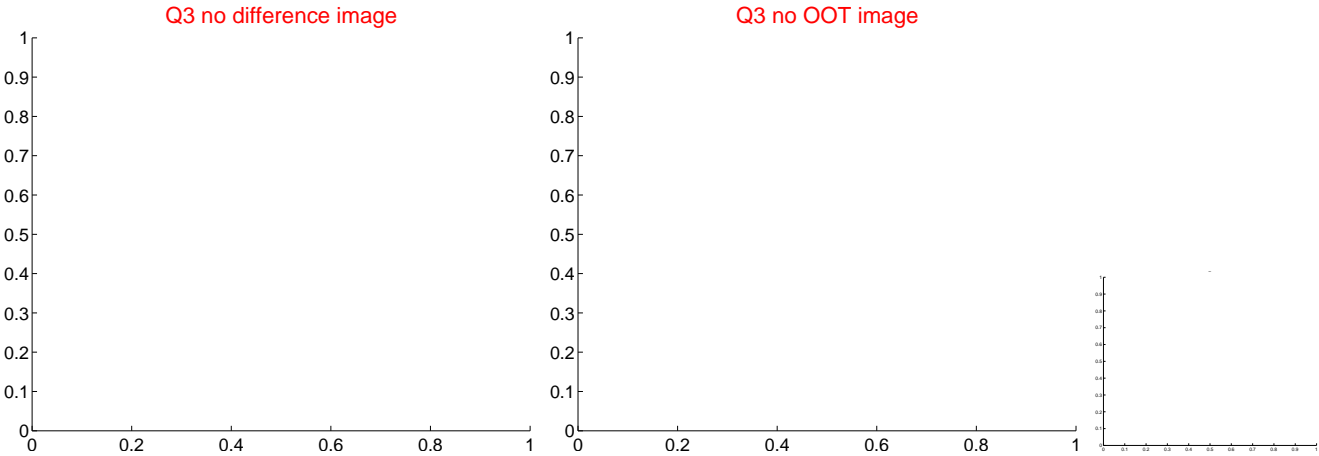
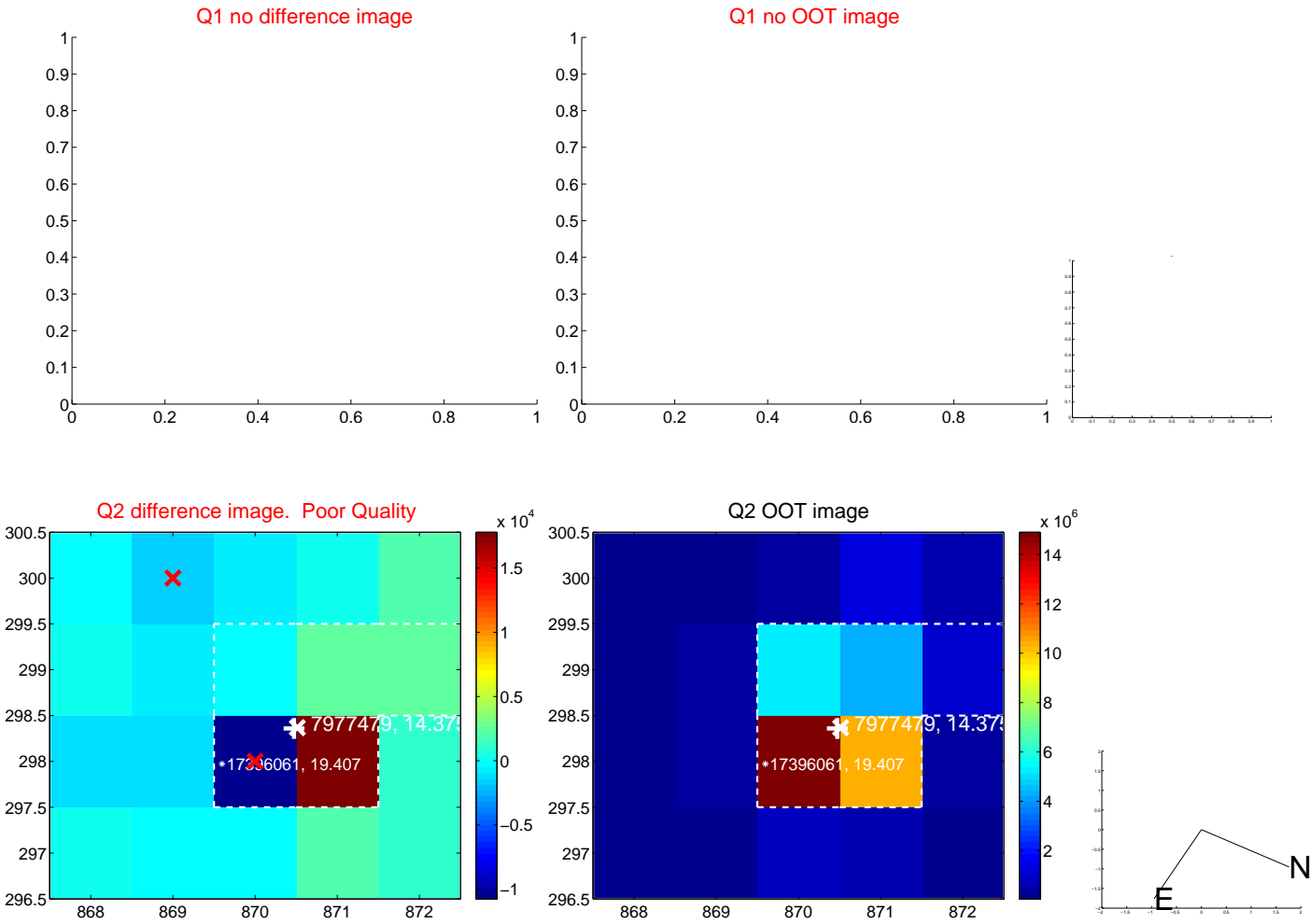


offset from photometric centroids



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.

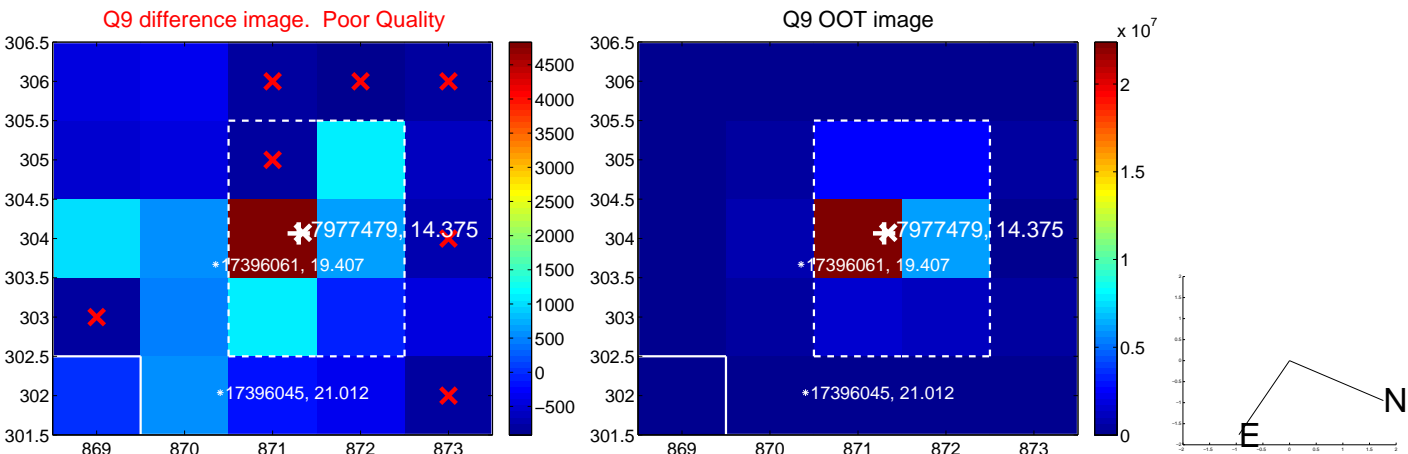


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

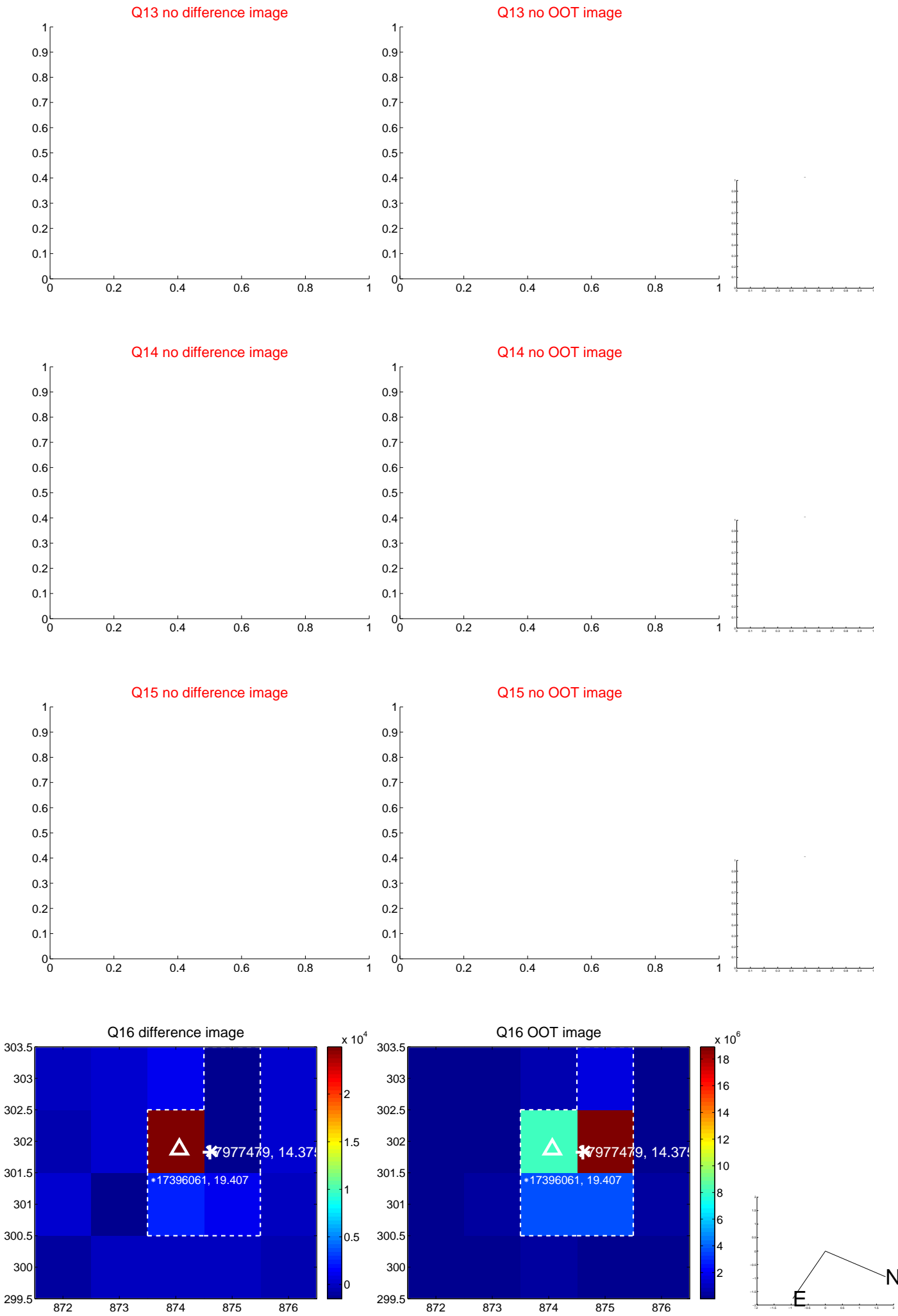




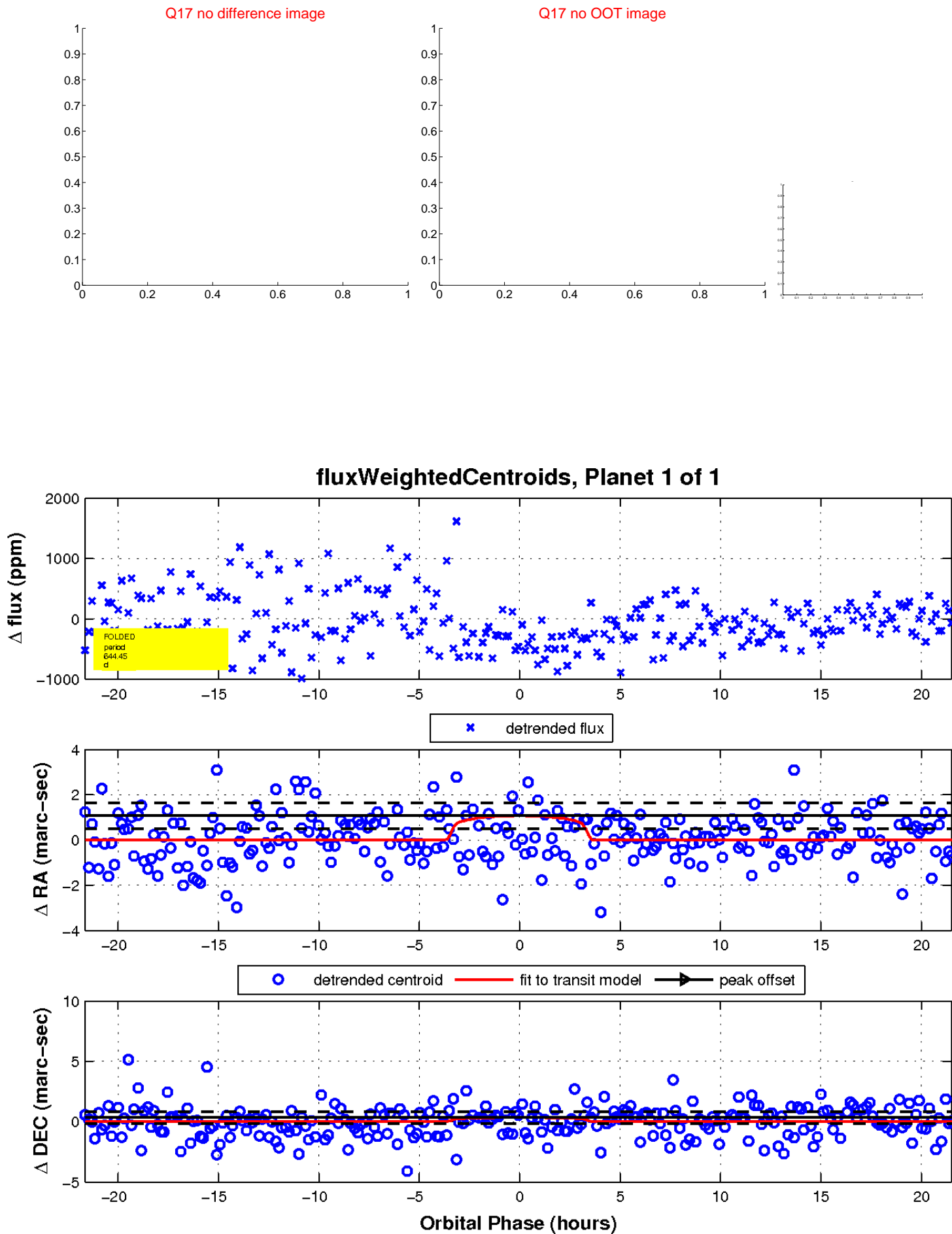
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



UKIRT Image

Declination

