

# KIC 011294822

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011294822-01	OBS	8047.01	302.336386	418.970717	671.0	4.457	7.7	7.8	0.79	4829	2.51	0.44

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011294822-01	OBS	PC	0.51	0	0	0	0	NO_COMMENT

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

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

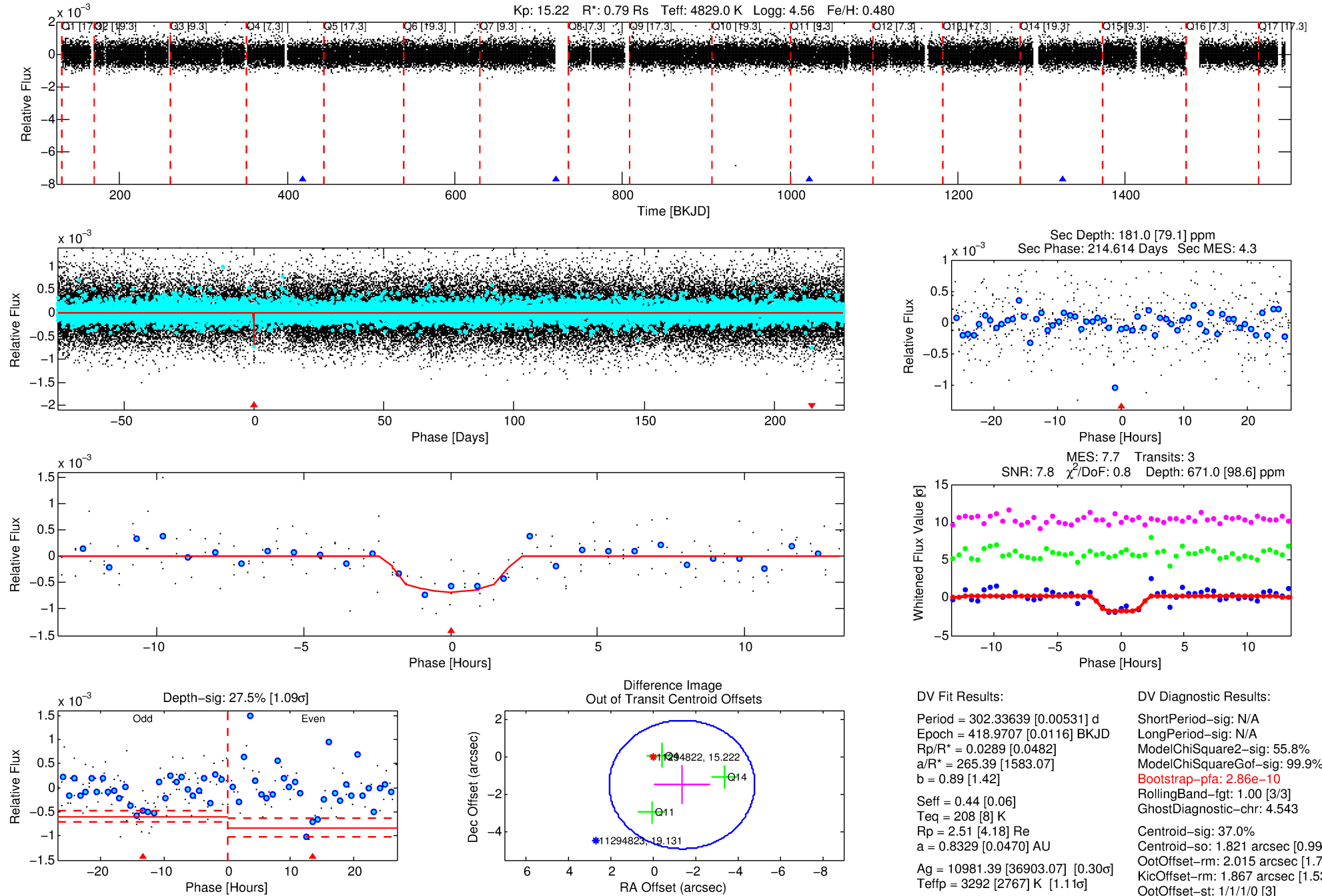
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 011294822-01

No Significant Match Found

# DV One-Page Summary

KIC: 11294822 Candidate: 1 of 1 Period: 302.336 d



## DV Fit Results:

Period = 302.33639 [0.00531] d  
Epoch = 418.9707 [0.0116] BKJD  
Rp/R\* = 0.0289 [0.0482]  
a/R\* = 265.39 [1583.07]  
b = 0.89 [1.42]  
Seff = 0.44 [0.06]  
Teq = 208 [8] K  
Rp = 2.51 [4.18] Re  
a = 0.8329 [0.0470] AU  
Ag = 10981.39 [36903.07] [0.30 $\sigma$ ]  
Teff = 3292 [2767] K [1.1 $\sigma$ ]

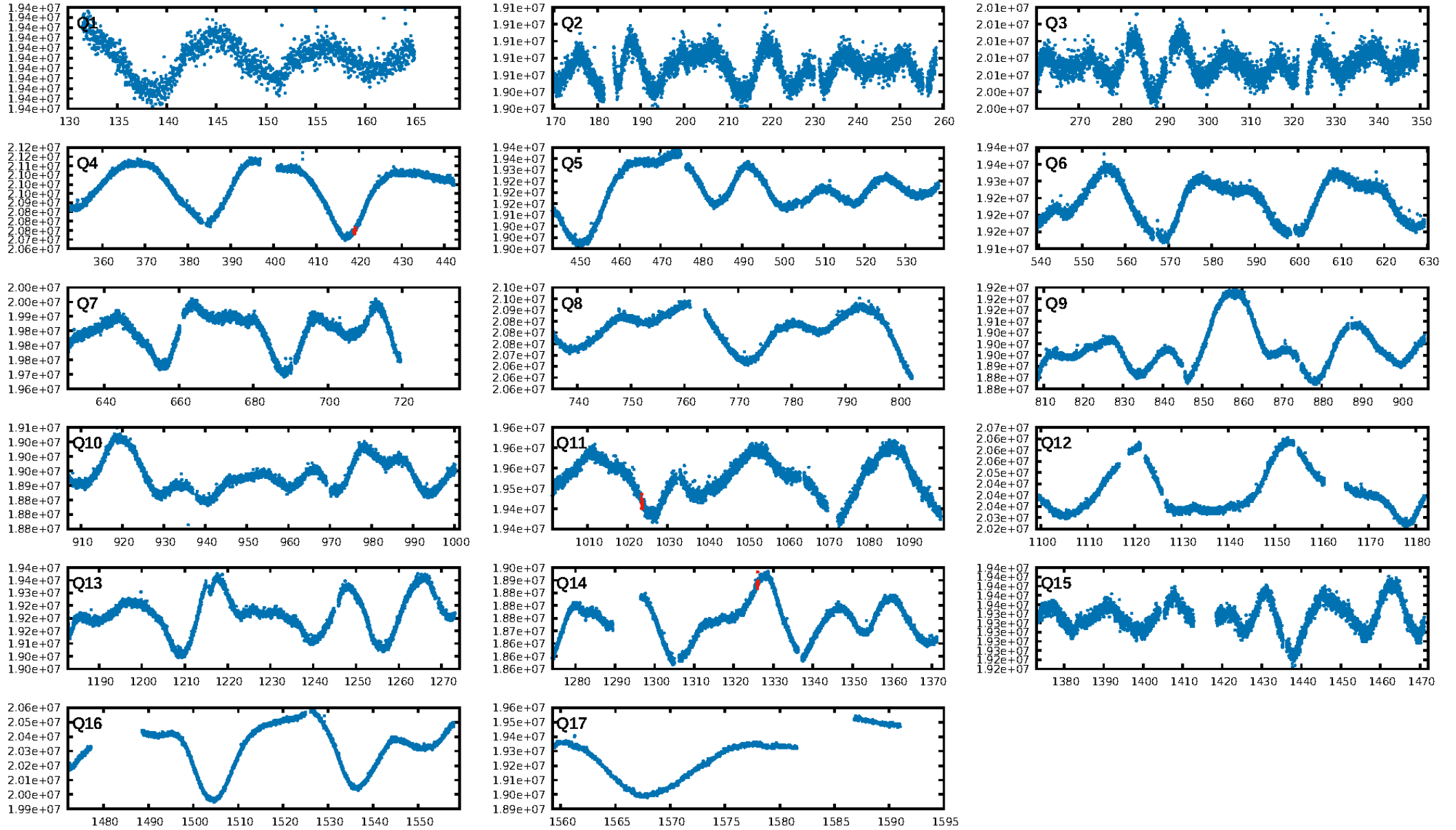
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 55.8%  
ModelChiSquareGof-sig: 99.9%  
**Bootstrap-pfa: 2.86e-10**  
RollingBand-fgt: 1.00 [3/3]  
GhostDiagnostic-chr: 4.543  
Centroid-sig: 37.0%  
Centroid-so: 1.821 arcsec [0.99 $\sigma$ ]  
OotOffset-rm: 2.015 arcsec [1.76 $\sigma$ ]  
KicOffset-rm: 1.867 arcsec [1.53 $\sigma$ ]  
OotOffset-st: 1/1/1/0 [3]  
KicOffset-st: 1/1/1/0 [3]  
DiffImageQuality-fgm: 0.33 [1/3]  
DiffImageOverlap-fno: 1.00 [3/3]

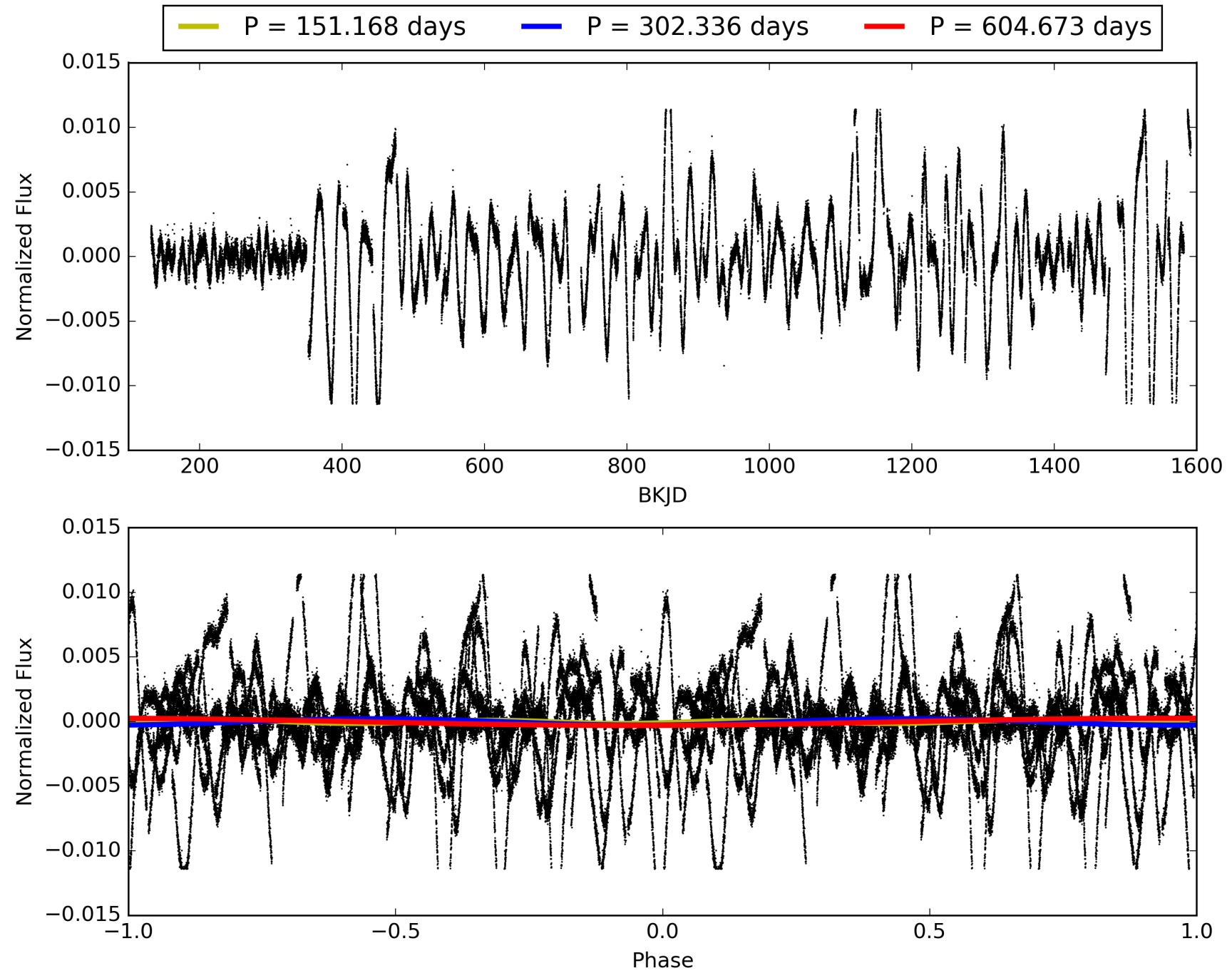
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:18:22 Z

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

# TCE 011294822-01, PDC Light Curves

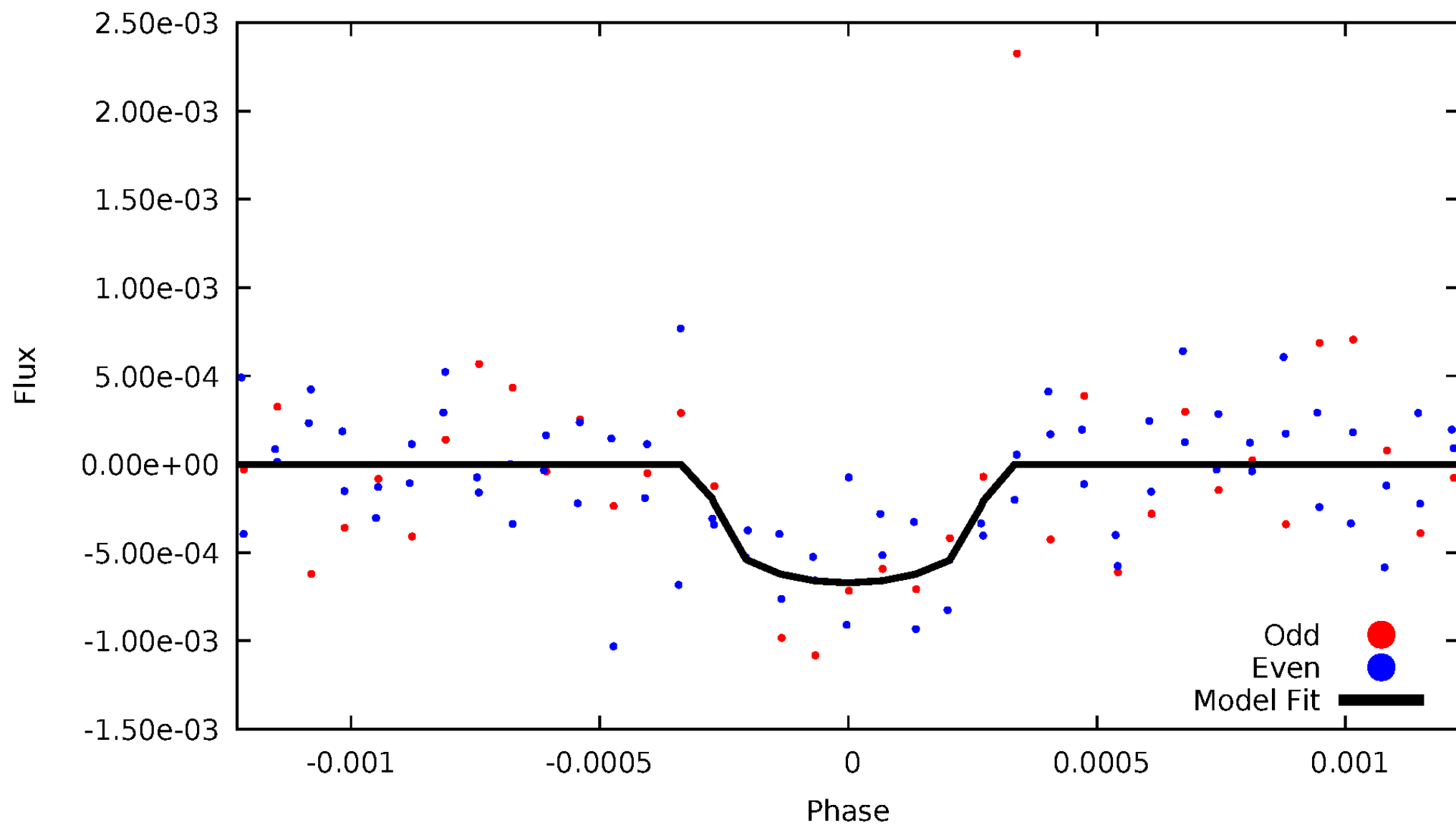


TCE 011294822-01



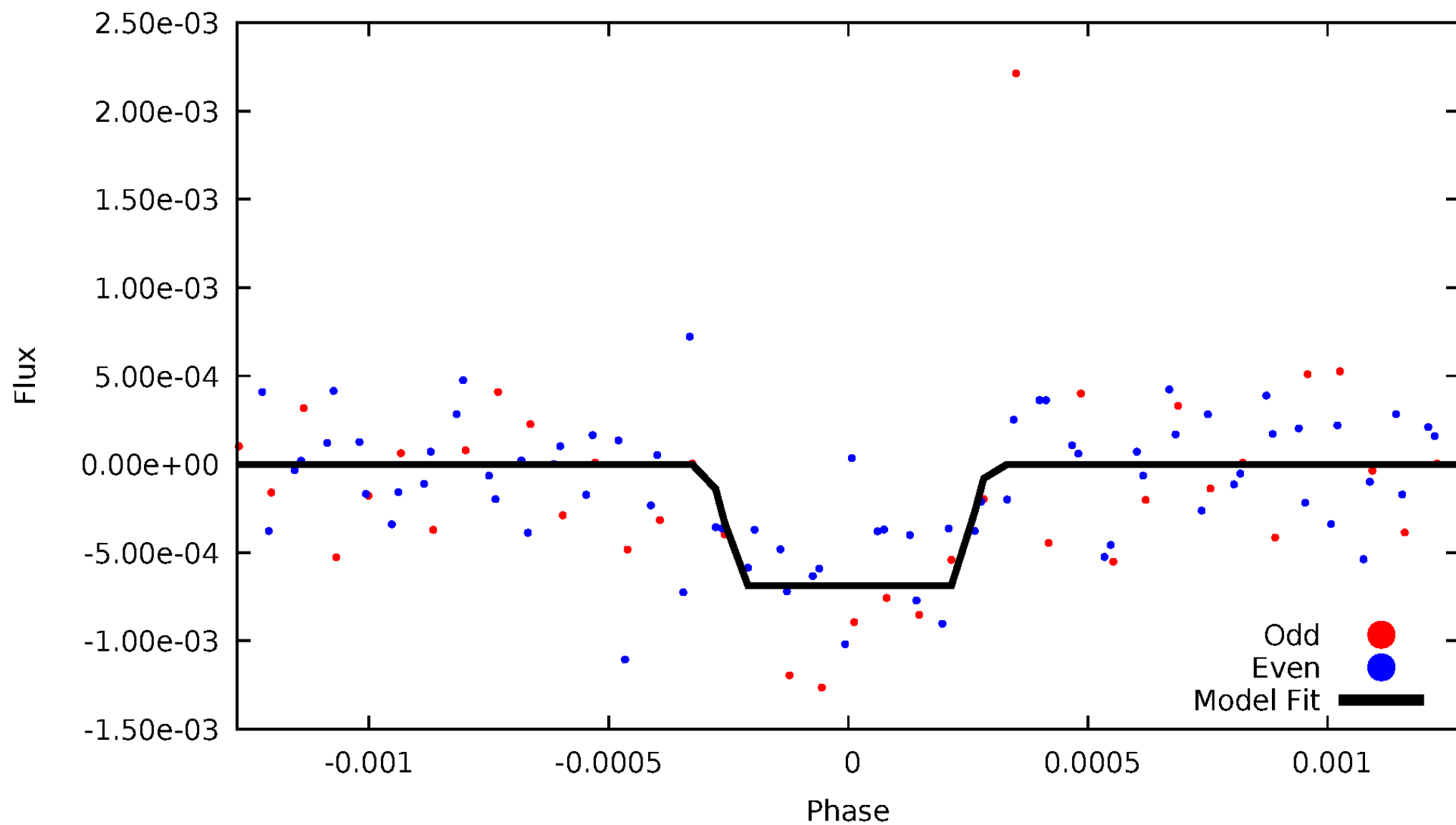
# DV Odd/Even

TCE 011294822-01



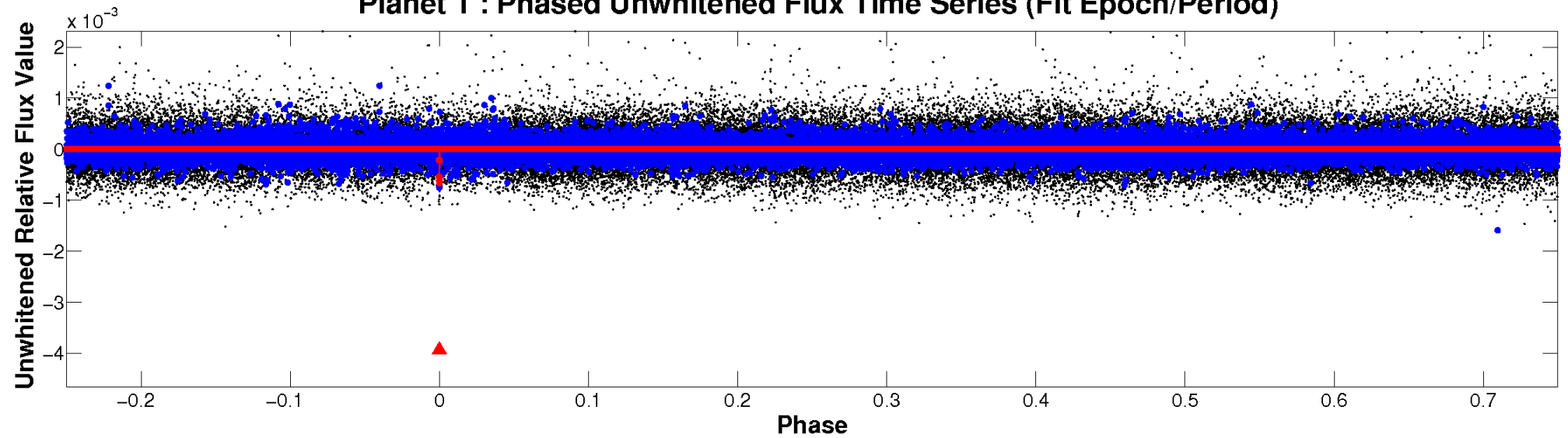
# ALT Odd/Even

TCE 011294822-01

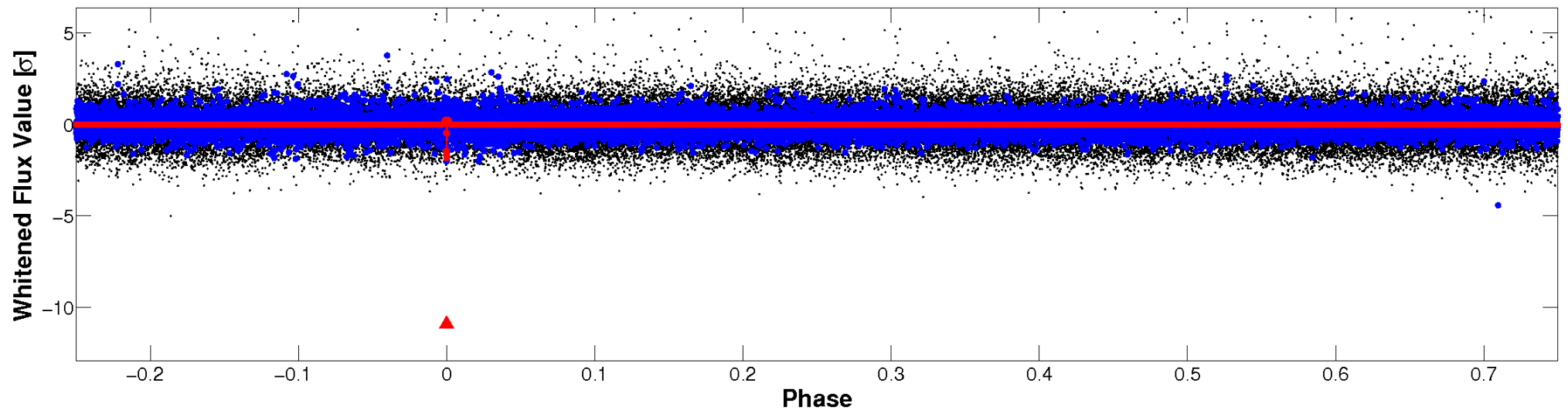


# Non-Whitened Vs. Whitened Light Curve

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

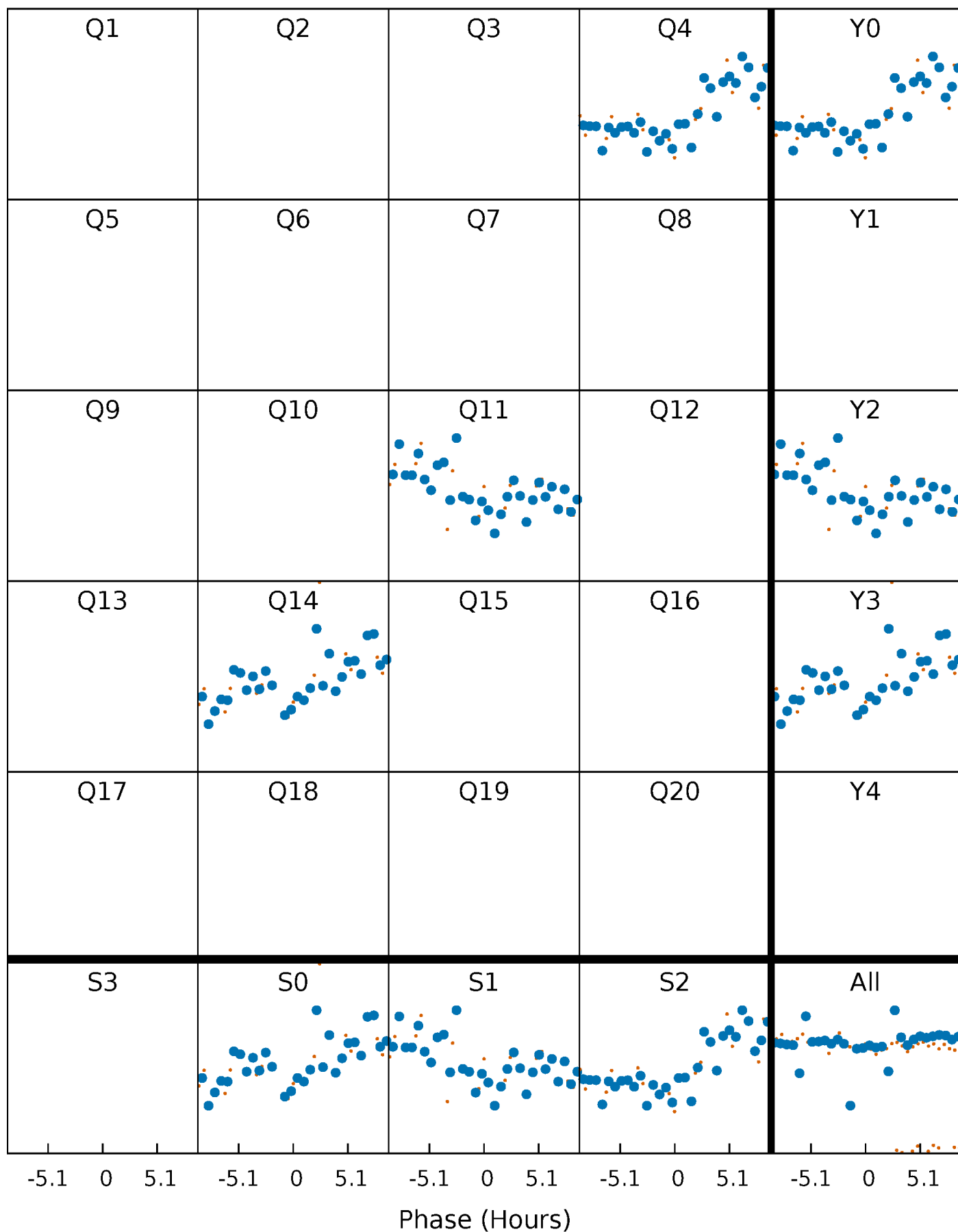


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

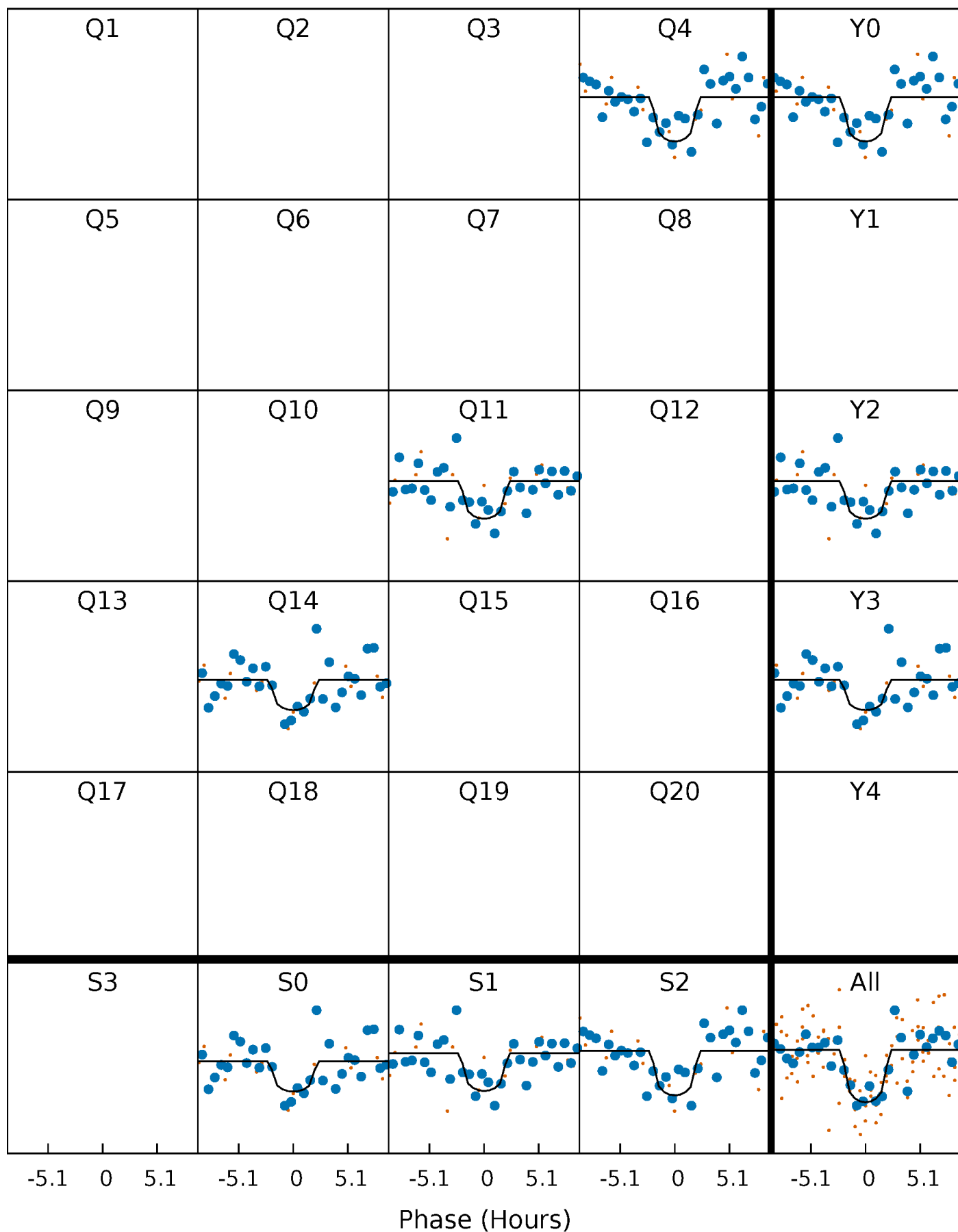
TCE 011294822-01 P=302.336386 Days  $T_0=418.970716$  (BKJD)





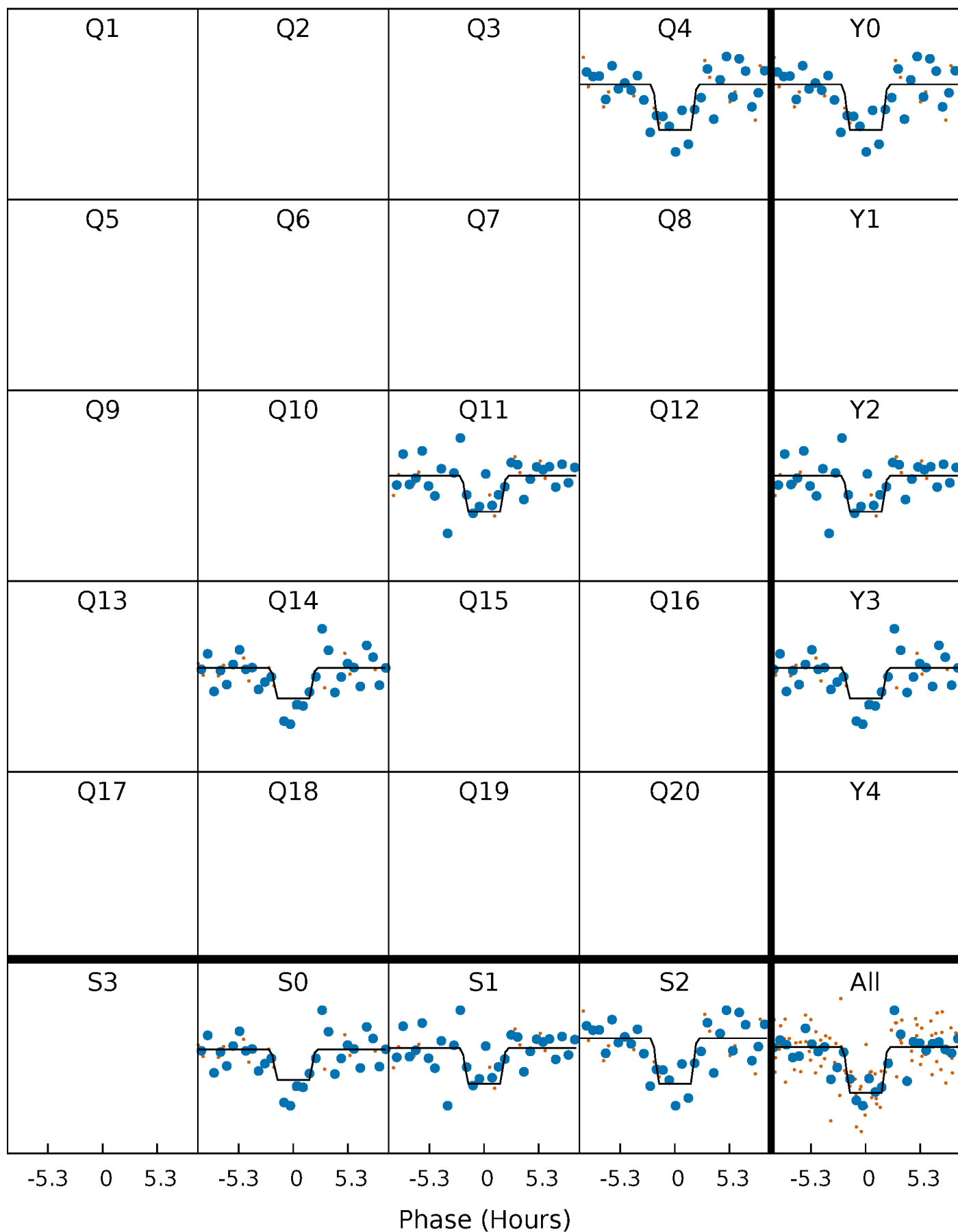
# DV Quarter-Phased Transit Curves

TCE 011294822-01 P=302.336386 Days  $T_0=418.970716$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

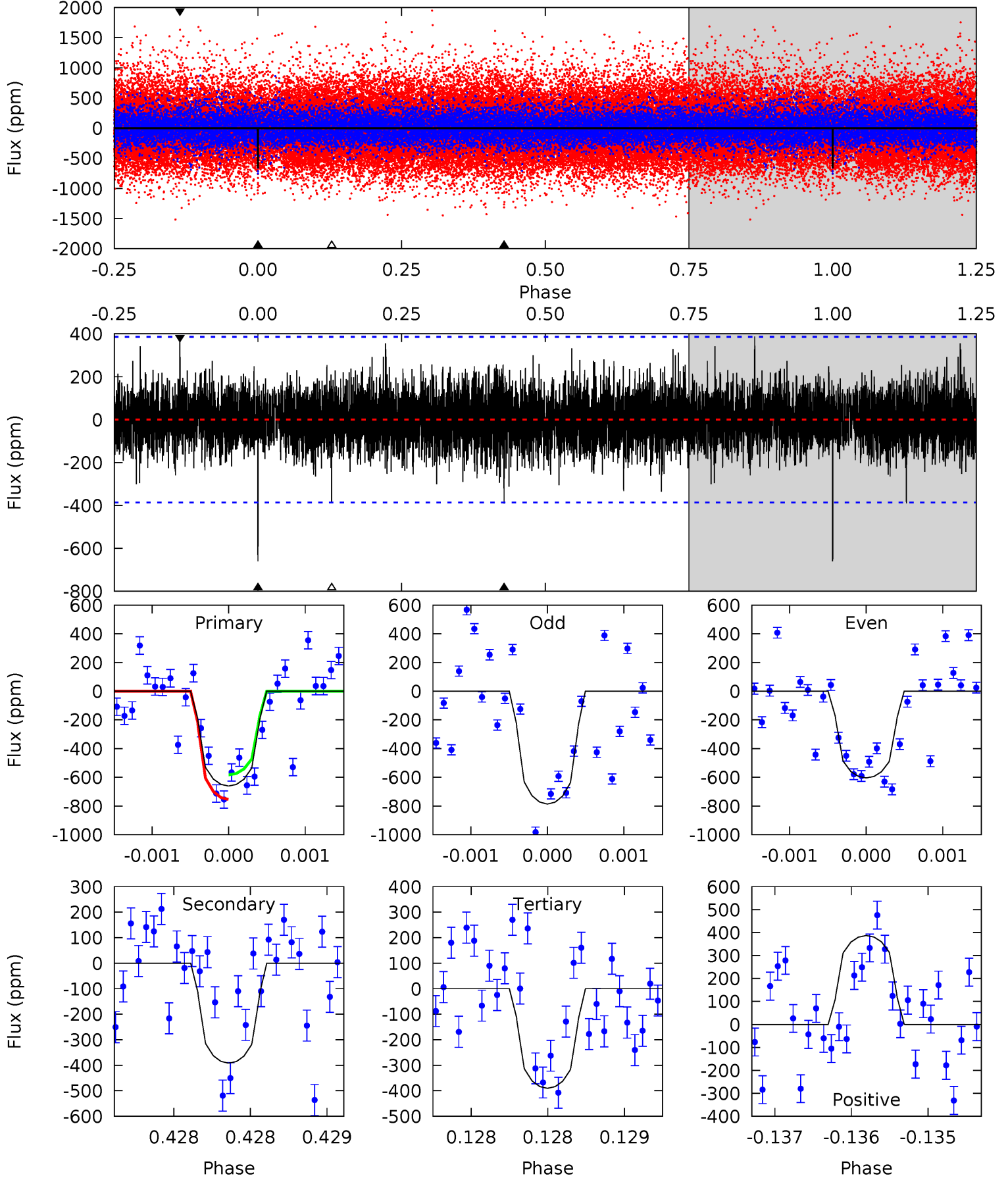
TCE 011294822-01 P=302.334954 Days  $T_0=418.971628$  (BKJD)



# DV Model-Shift Uniqueness Test

011294822-01,  $P = 302.336386$  Days,  $E = 116.634330$  Days

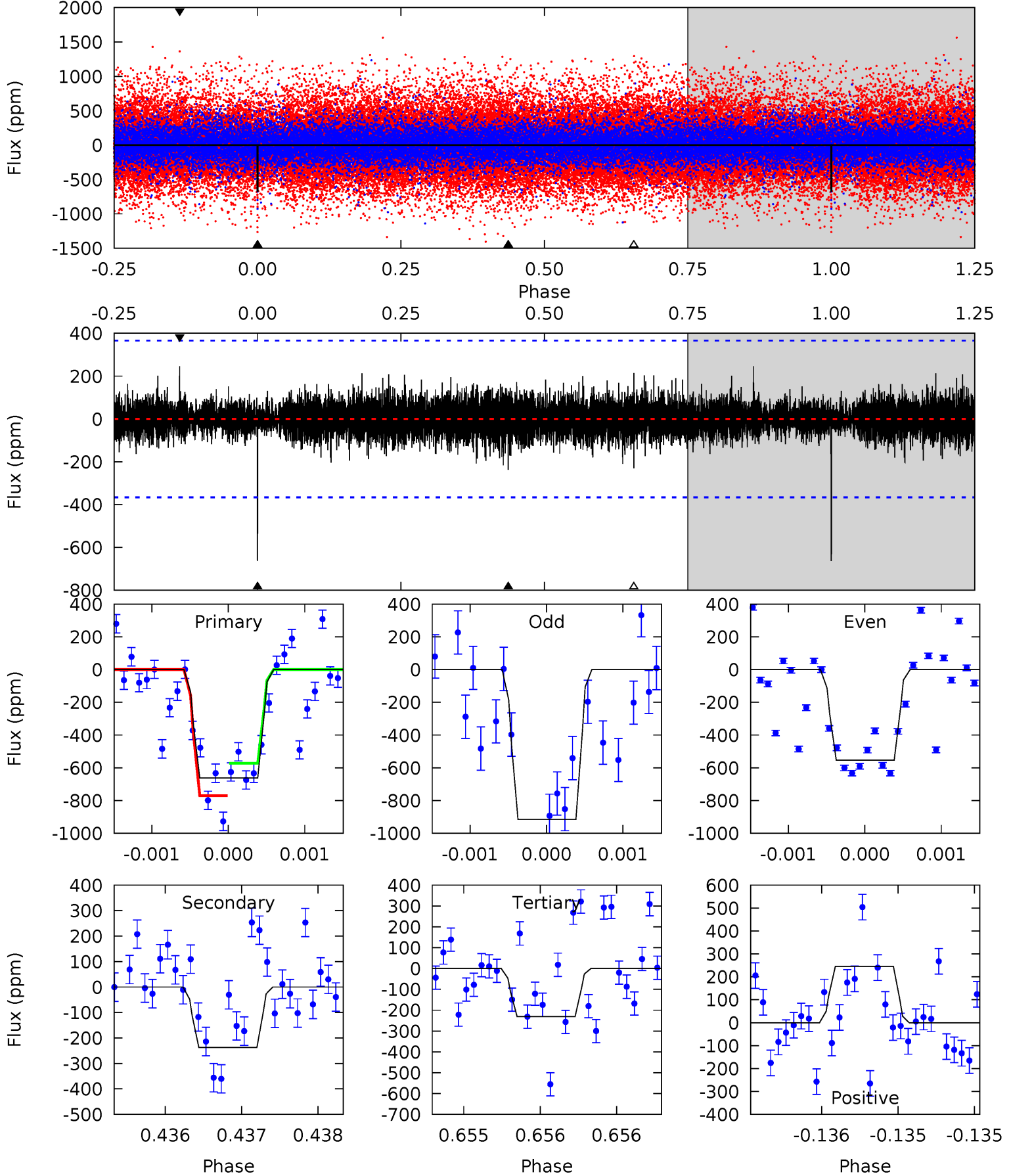
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.44	5.60	5.58	5.53	5.52	3.40	1.30	3.87	3.91	0.02	0.07	1.20	1.08	0.37	1.22



# Alt Model-Shift Uniqueness Test

011294822-01, P = 302.334954 Days, E = 116.636674 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
10.1	3.61	3.50	3.73	5.55	3.45	0.80	6.56	6.32	0.11	-0.13	2.49	1.05	0.27	1.51



### Stellar Parameters For KIC 011294822

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$4829^{+144}_{-129}$	$4.564^{+0.032}_{-0.048}$	$0.480^{+0.050}_{-0.300}$	$0.794^{+0.046}_{-0.051}$	$0.843^{+0.036}_{-0.056}$	$2.369^{+0.343}_{-0.361}$
	+3%/-3%	+1%/-1%	+10%/-62%	+6%/-6%	+4%/-7%	+14%/-15%
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 011294822-01 / KOI 8047.01

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-392 \pm 70$	$4.02^{+3.90}_{-2.69}$	$292^{+10}_{-9}$	$3535^{+1775}_{-624}$	$8967^{+74408}_{-6588}$
Alt.	$-238 \pm 66$	$4.16^{+3.28}_{-2.77}$	$292^{+10}_{-9}$	$3256^{+1485}_{-505}$	$5237^{+40262}_{-3644}$

$T_{max}$  = 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

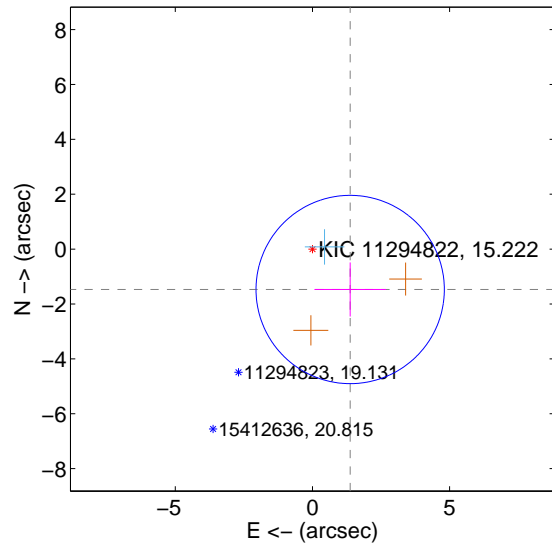
Supplemental centroid analysis for 011294822-01. Kepler magnitude: 15.22. Transit SNR 7.77

There are 1 quarters with good PRF difference image offsets

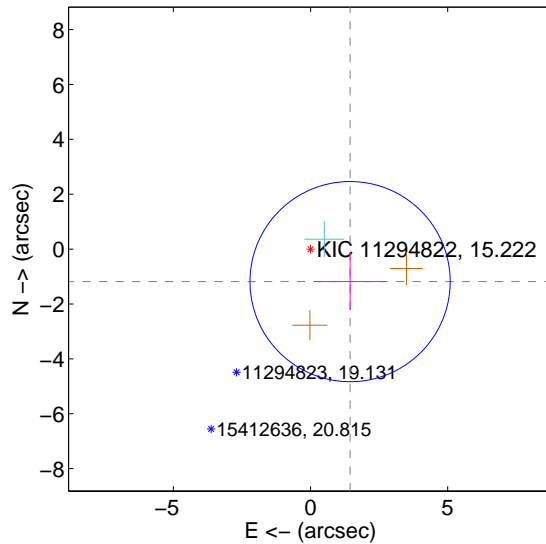
The direct PRF centroid is offset from the target star catalog position by about 0.40 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$2.015 \pm 1.144$	1.76	$-1.375 \pm 1.302$	$-1.473 \pm 0.986$
PRF-fit source offset from KIC position	$1.867 \pm 1.216$	1.53	$-1.442 \pm 1.323$	$-1.185 \pm 1.039$
photometric centroid source offset	$1.82 \pm 1.84$	0.99	$-0.93 \pm 2.03$	$1.57 \pm 1.77$

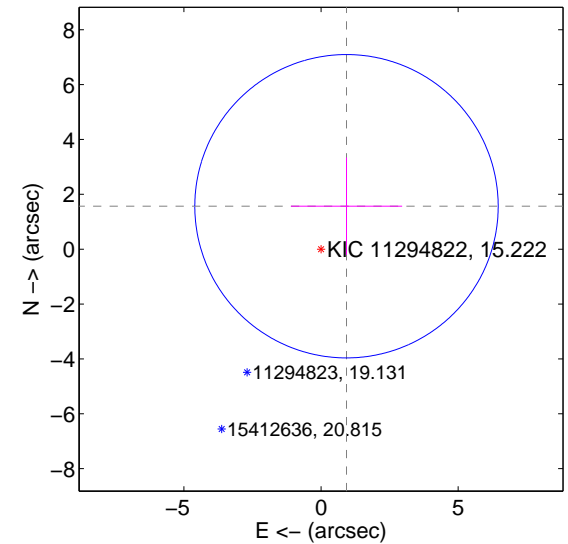
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

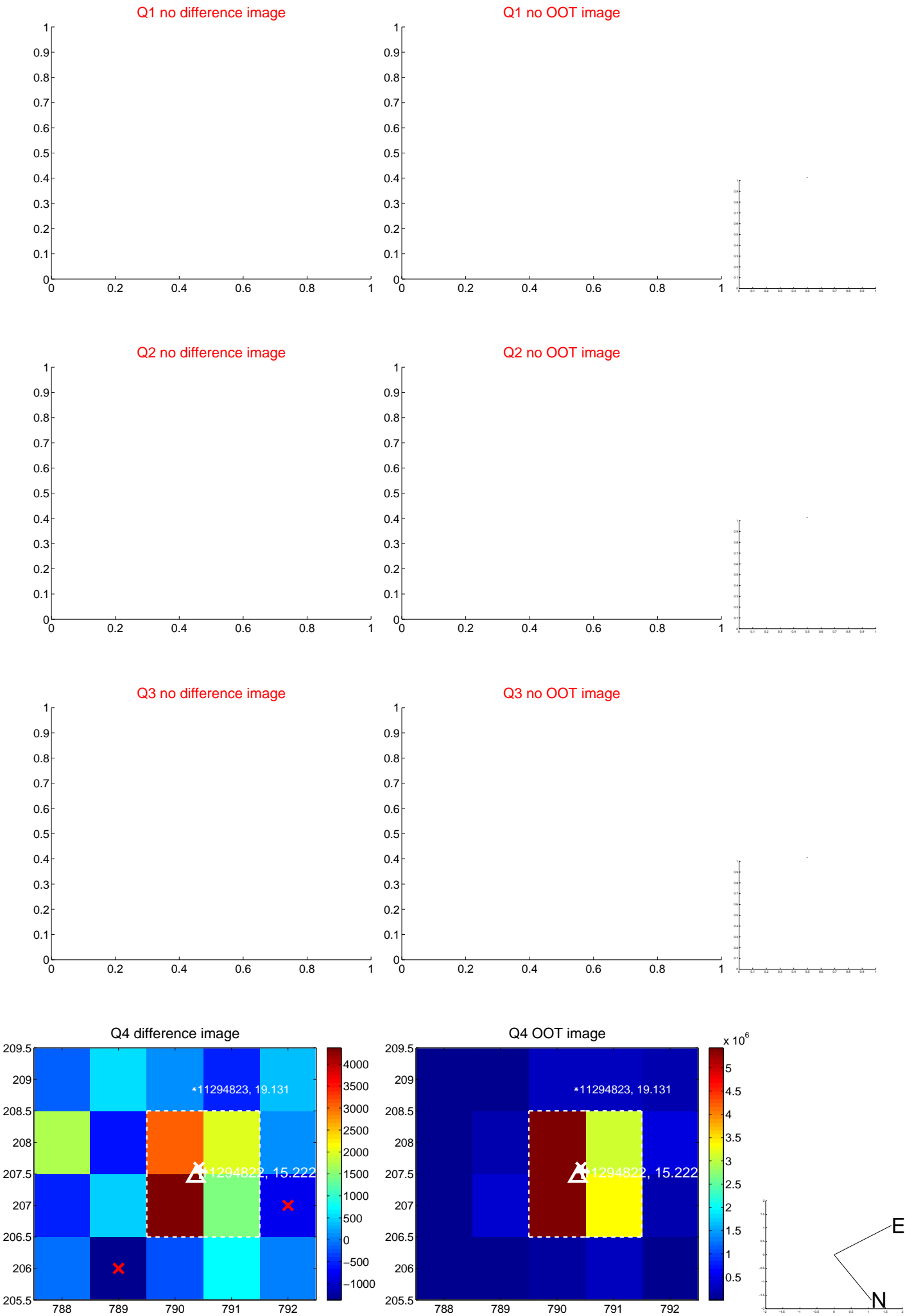


offset from photometric centroids



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.

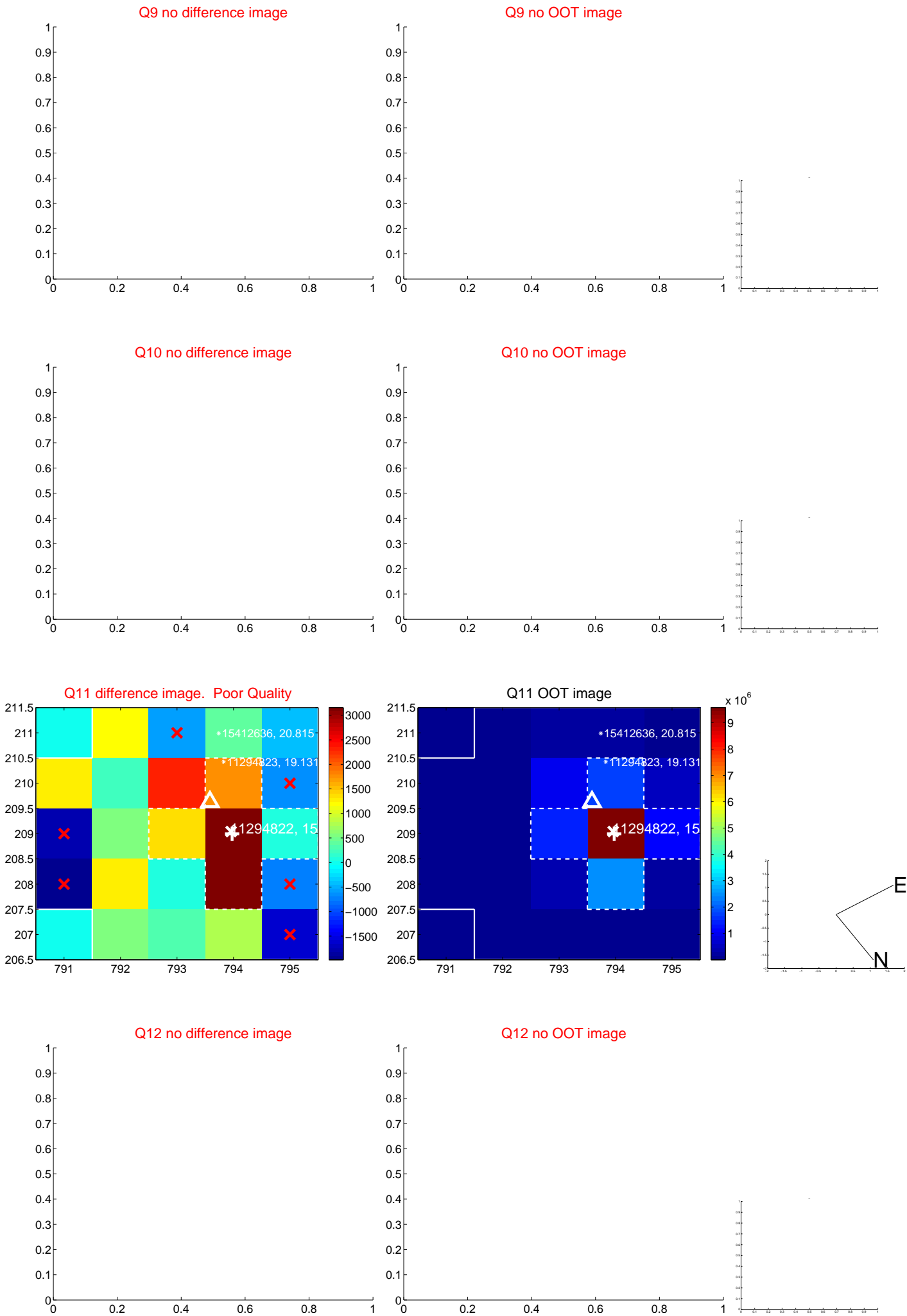


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

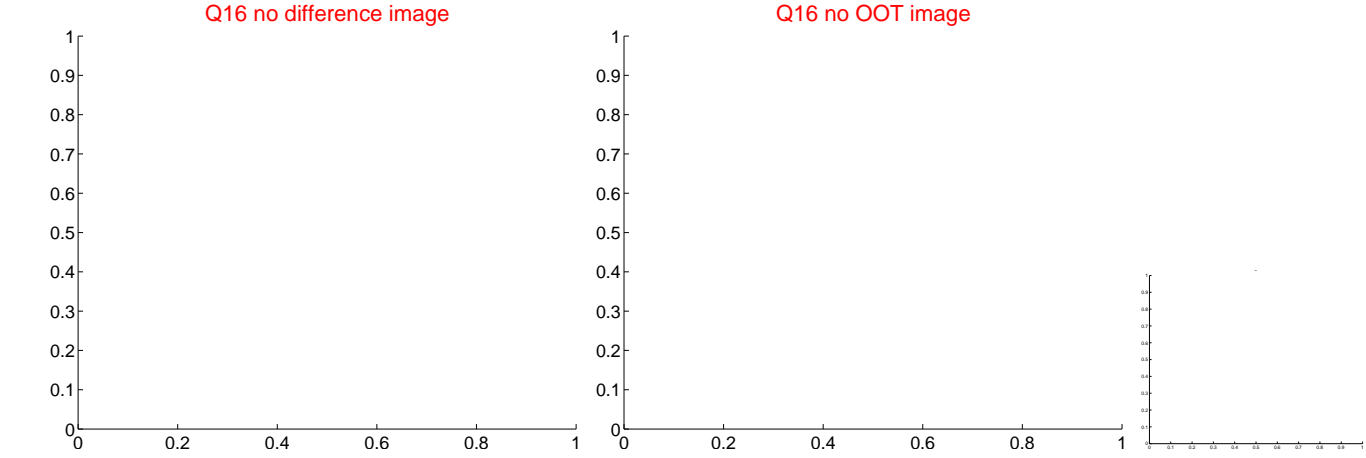
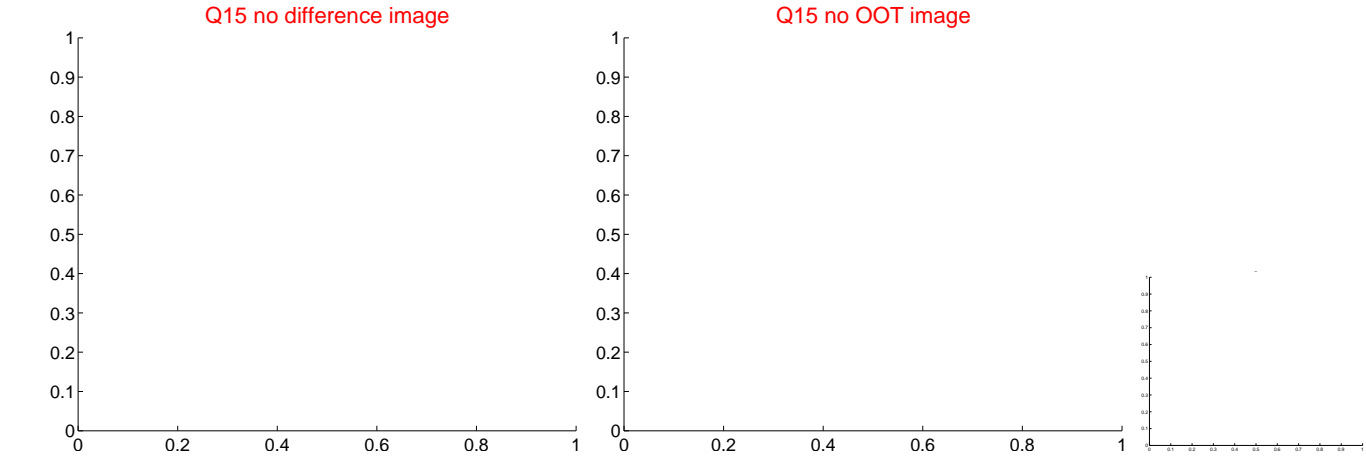
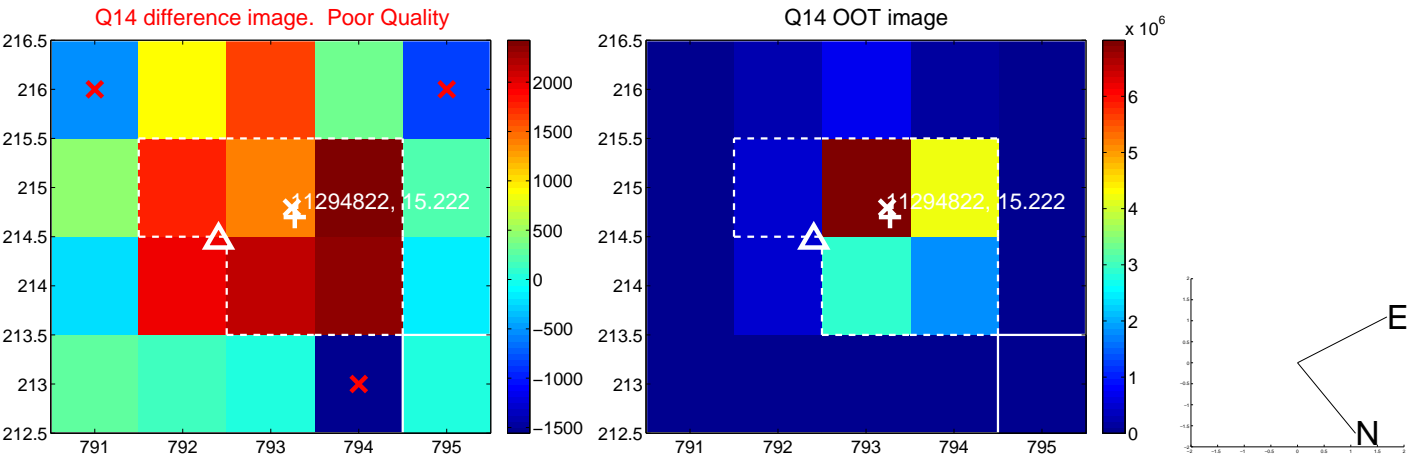
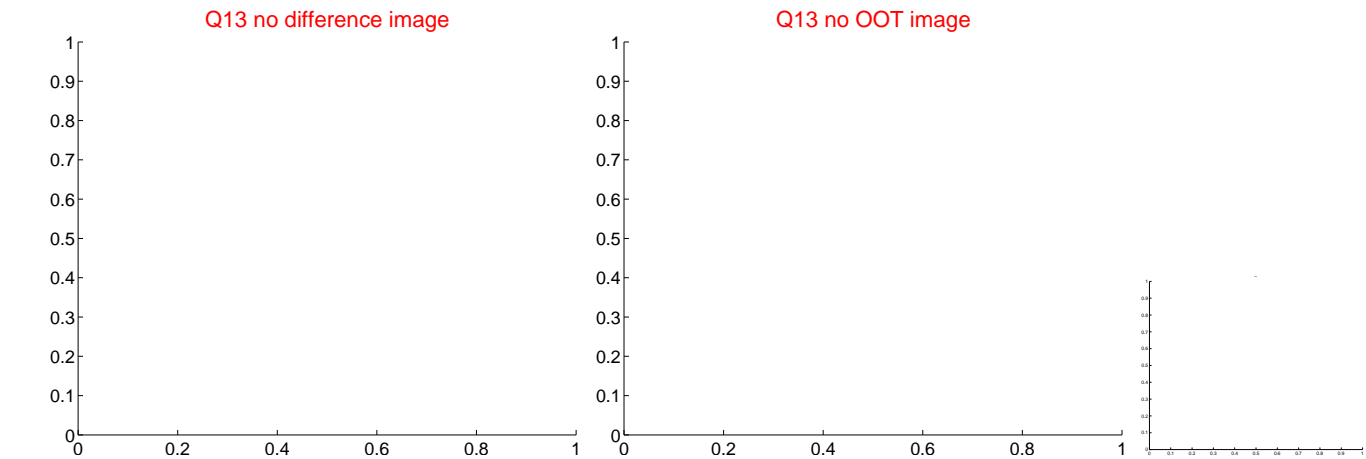




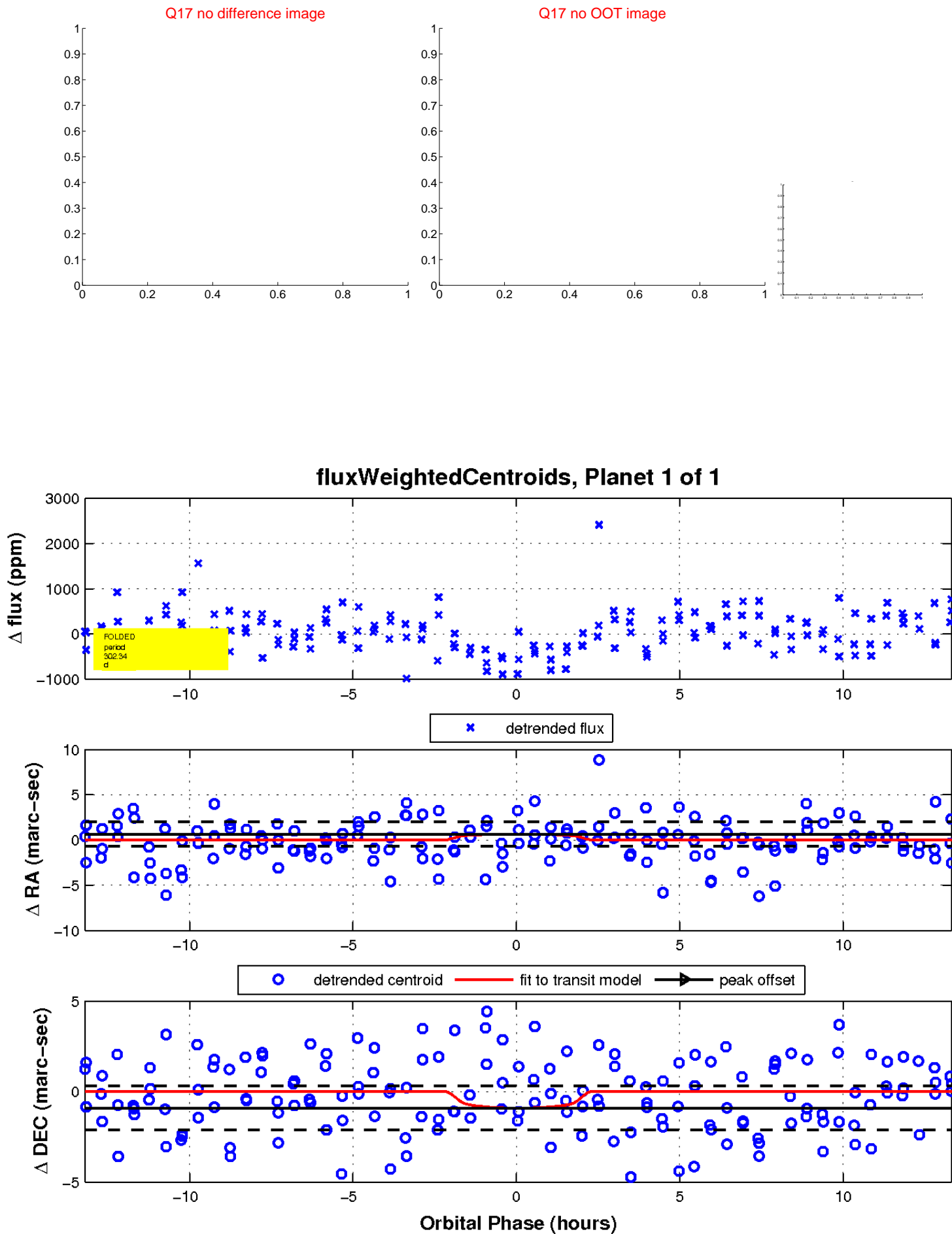
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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# UKIRT Image

Declination

