

# KIC 008121067

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008121067-01	OBS	6050.01	2.064898	132.874251	10036.4	5.586	1239.3	658.2	0.90	5714	13.37	802.80

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008121067-01	OBS	FP	0.00	0	1	1	0	MOD_SEC_ALT—DEEP_V_SHAPED—CENT_KIC_POS—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 008121067-01

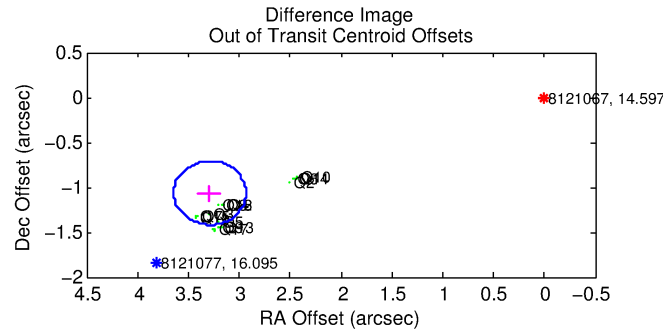
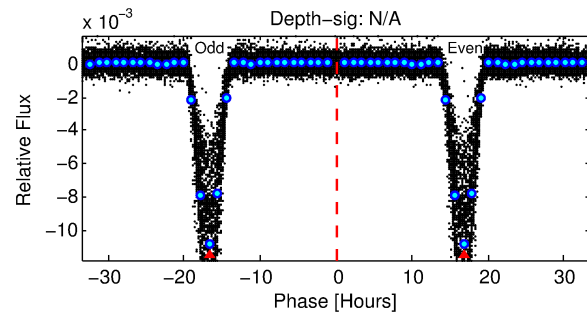
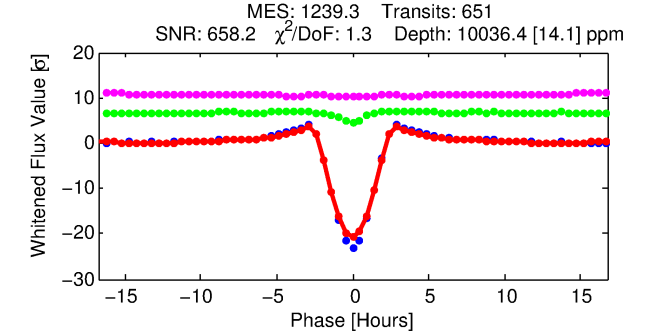
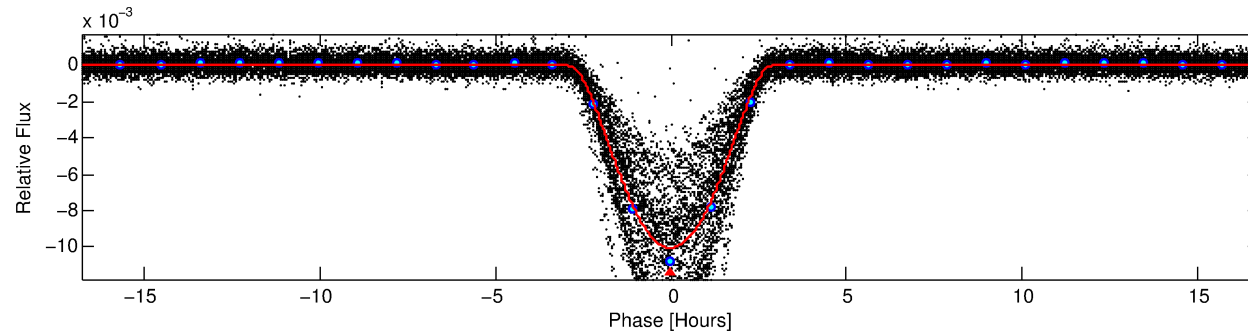
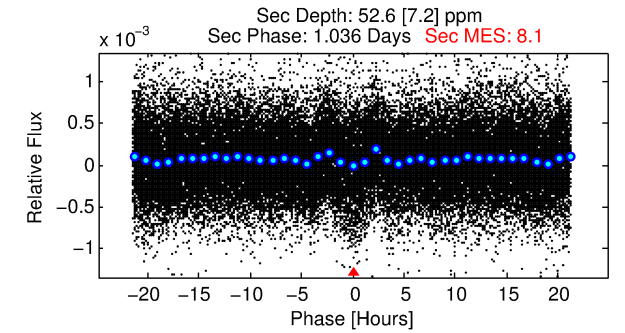
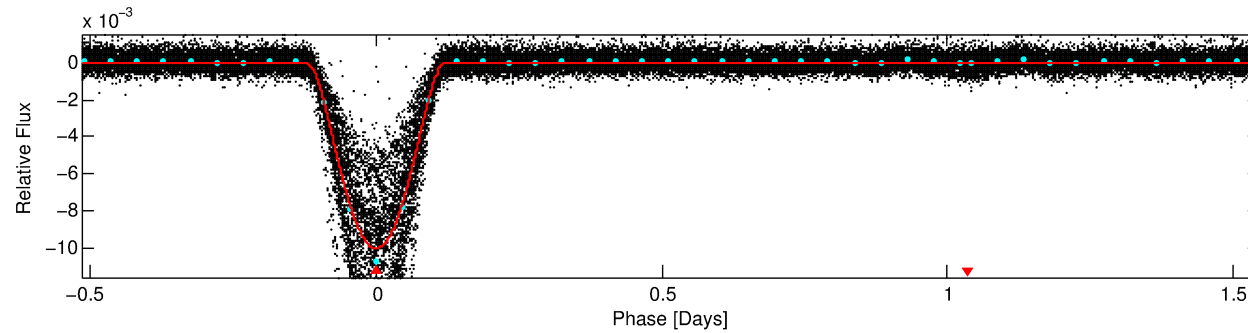
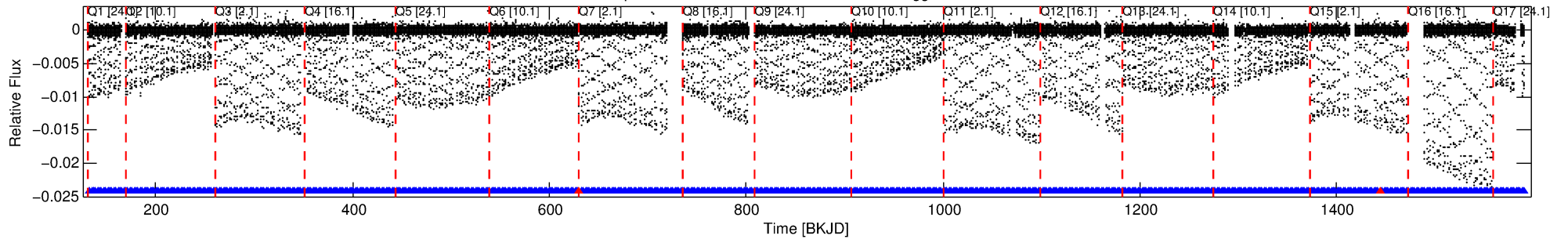
No Significant Match Found

# DV One-Page Summary

KIC: 8121067 Candidate: 1 of 1 Period: 2.065 d

KOI: K06050.01 Corr: 0.929

Kp: 14.60 R\*: 0.90 Rs Teff: 5714.0 K Logg: 4.50 Fe/H: -0.080



## DV Fit Results:

Period = 2.06490 [0.00000] d  
Epoch = 132.8743 [0.0001] BKJD  
Rp/R\* = 0.1360 [0.0026]  
a/R\* = 2.02 [0.01]  
b = 0.95 [0.00]  
Seff = 802.80 [292.34]  
Teq = 1357 [124] K  
Rp = 13.37 [3.78] Re  
a = 0.0311 [0.0074] AU  
Ag = 0.16 [0.06] [-14.48σ]  
Teffp = 1320 [61] K [-0.27σ]

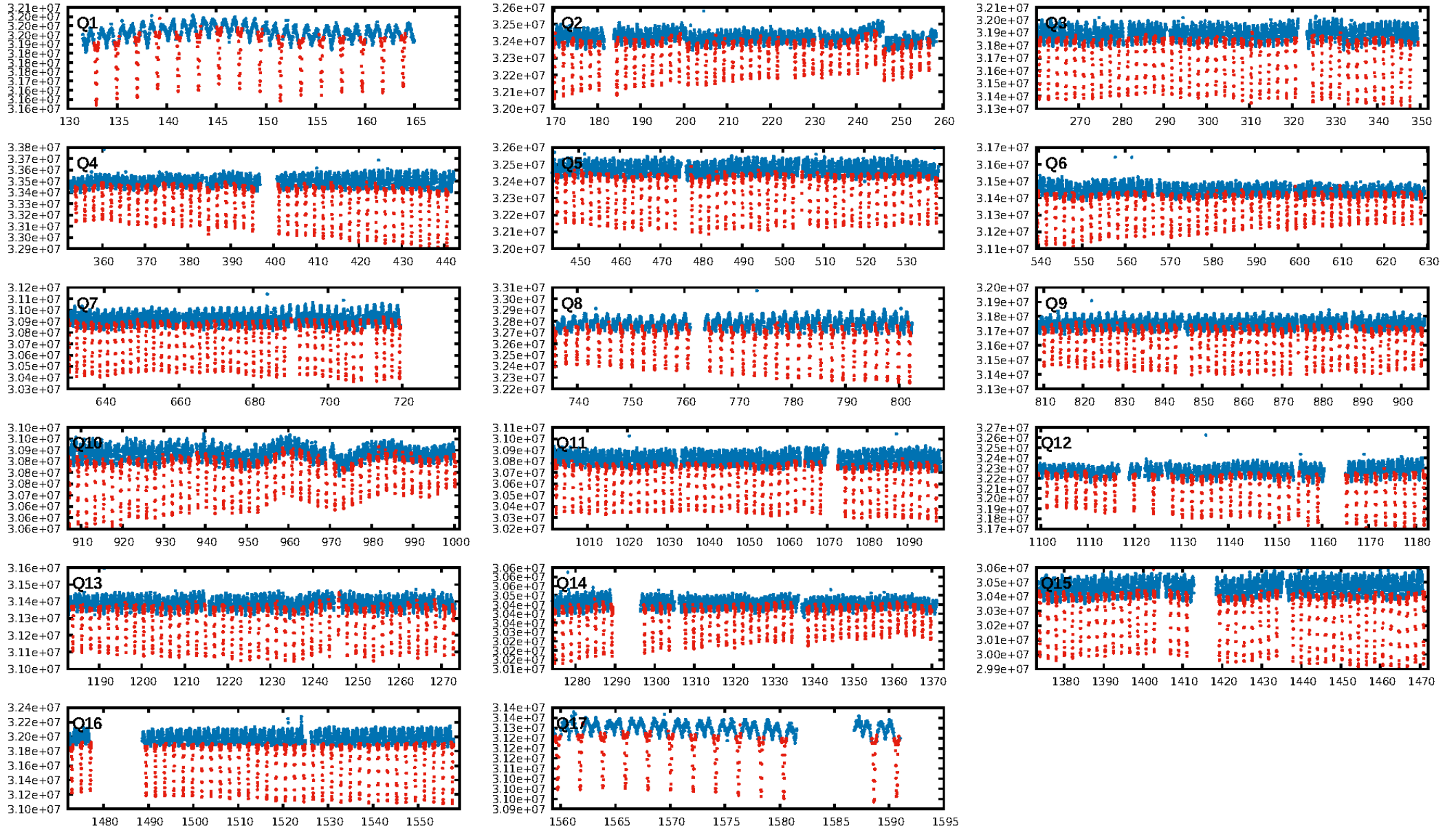
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [620/622]  
GhostDiagnostic-chr: -0.03339  
Centroid-sig: 0.0%  
Centroid-so: 6.724 arcsec [635.72σ]  
OotOffset-rm: 3.456 arcsec [29.25σ]  
KicOffset-rm: 4.182 arcsec [58.64σ]  
OotOffset-st: 4/4/4/5 [17]  
KicOffset-st: 4/4/4/5 [17]  
DiffImageQuality-fgm: 1.00 [17/17]  
DiffImageOverlap-fno: 1.00 [17/17]

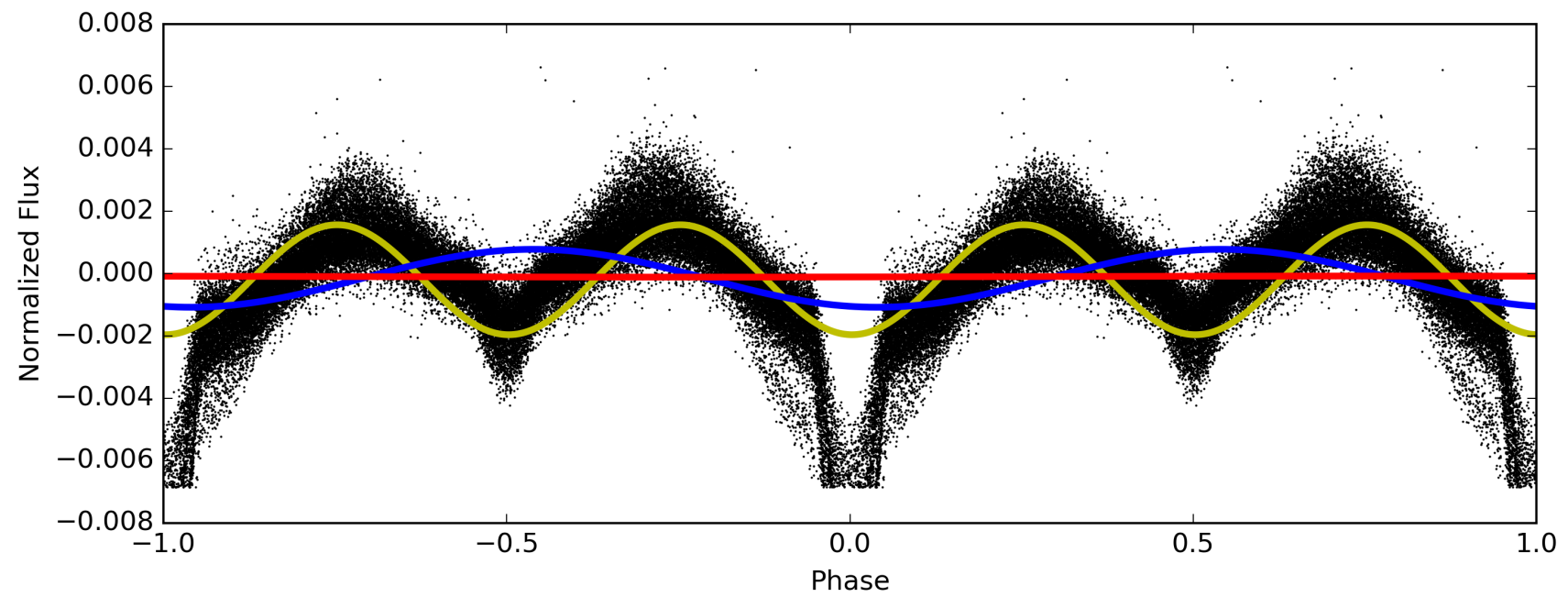
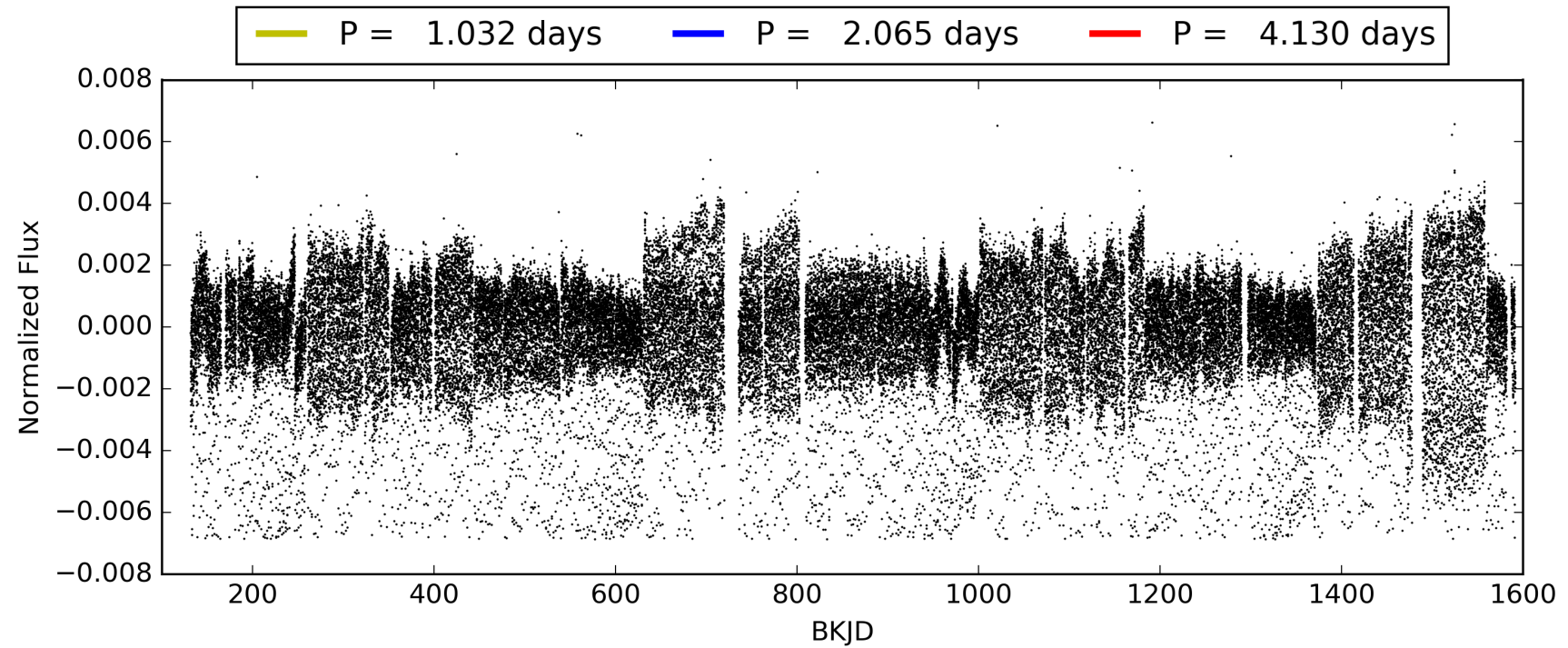
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:30:10 Z

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

# TCE 008121067-01, PDC Light Curves

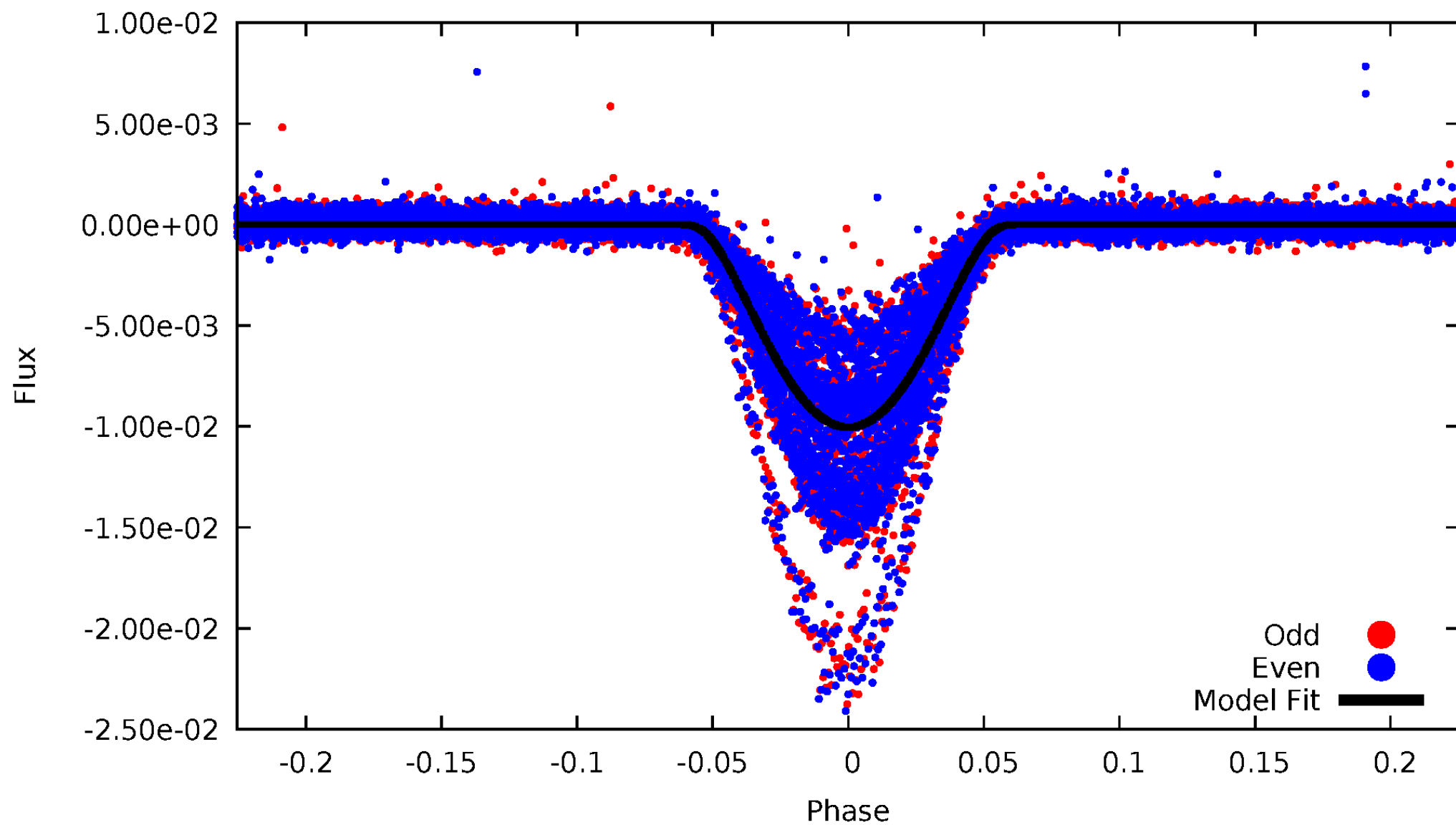


TCE 008121067-01



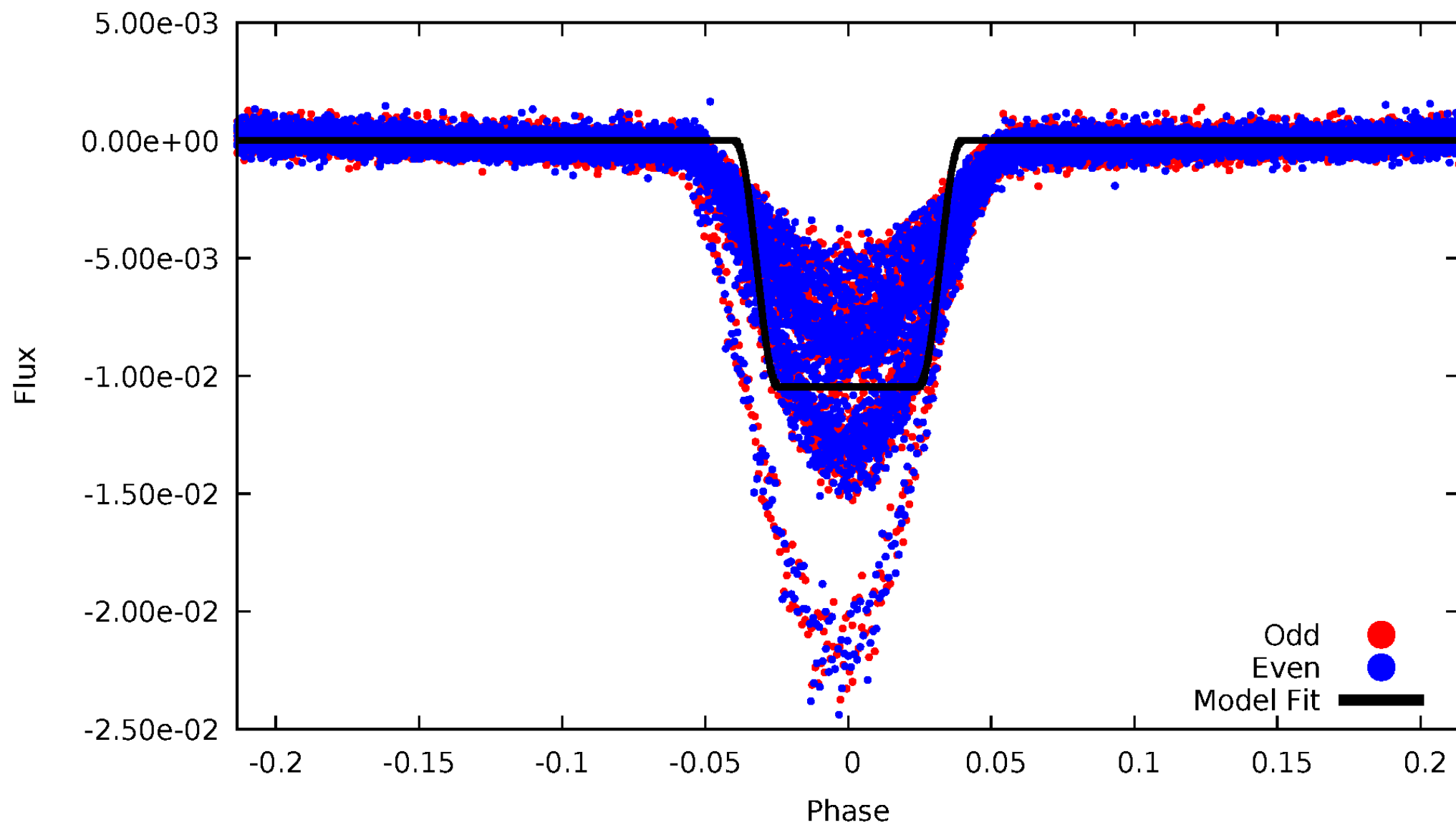
# DV Odd/Even

TCE 008121067-01



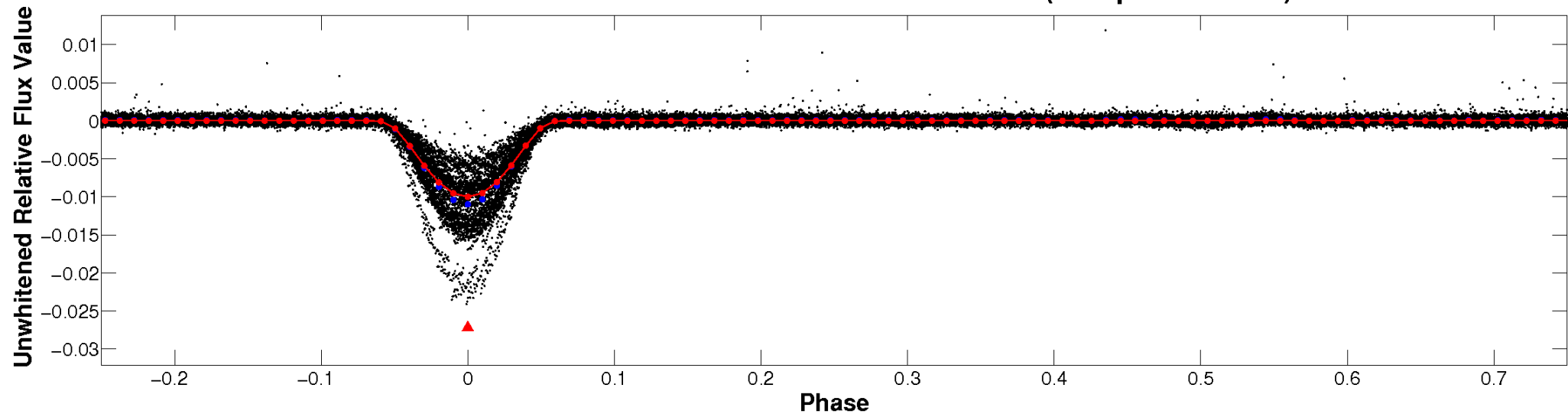
# ALT Odd/Even

TCE 008121067-01

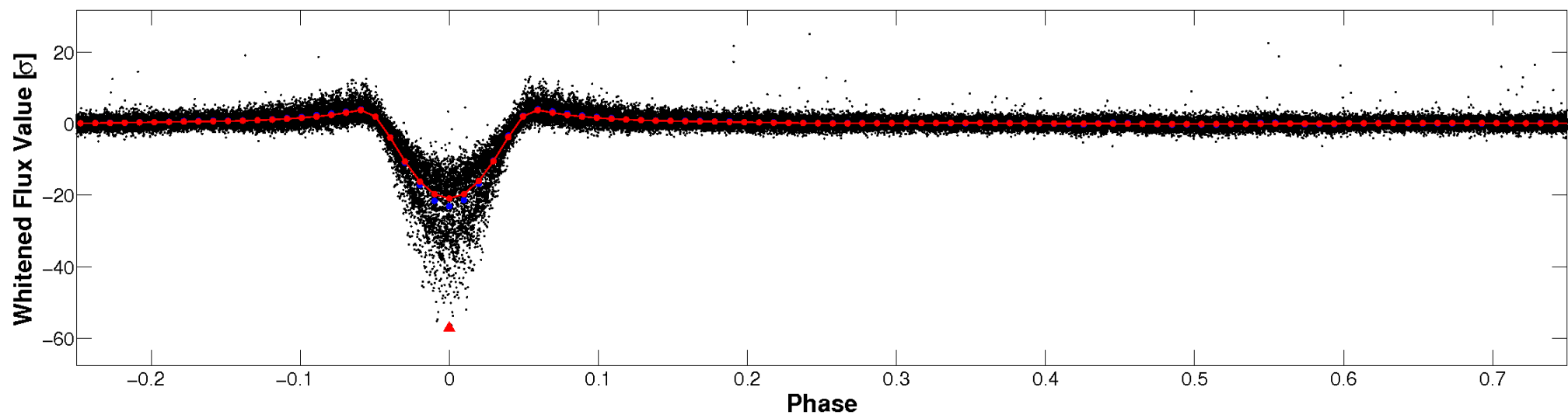


# Non-Whitened Vs. Whitened Light Curve

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



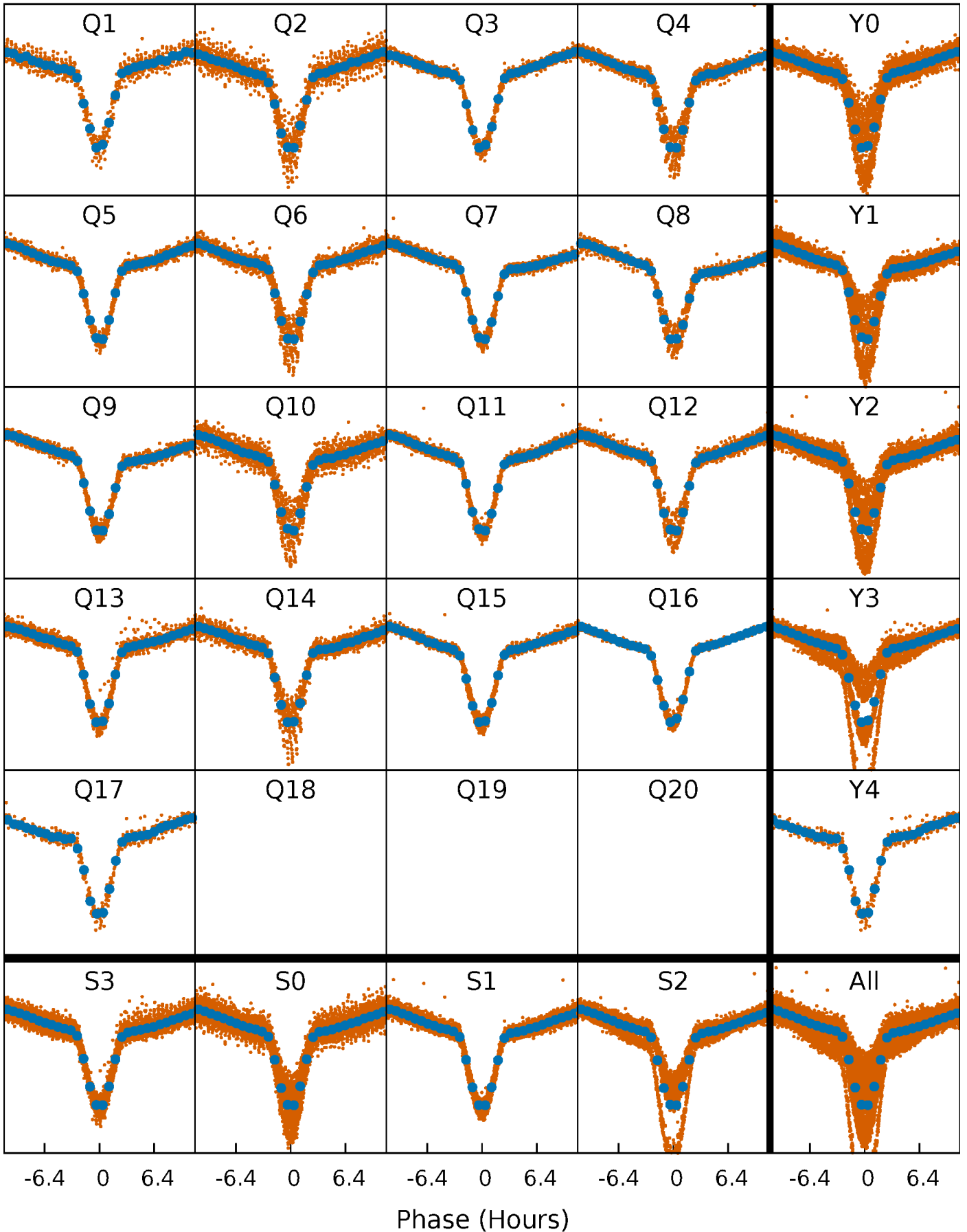
**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**





# PDC Quarter-Phased Transit Curves

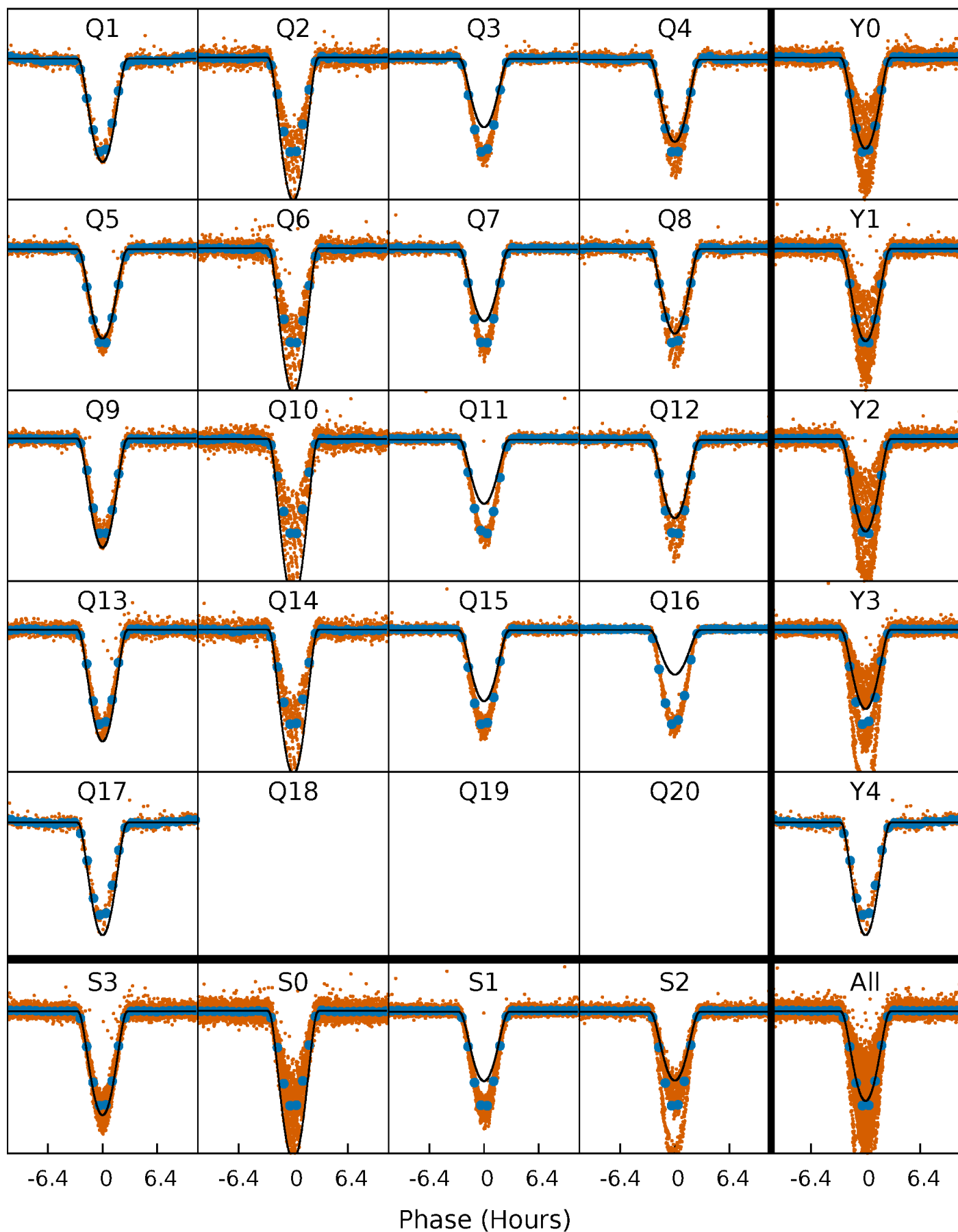
TCE 008121067-01 P= 2.064898 Days  $T_0=132.874251$  (BKJD)





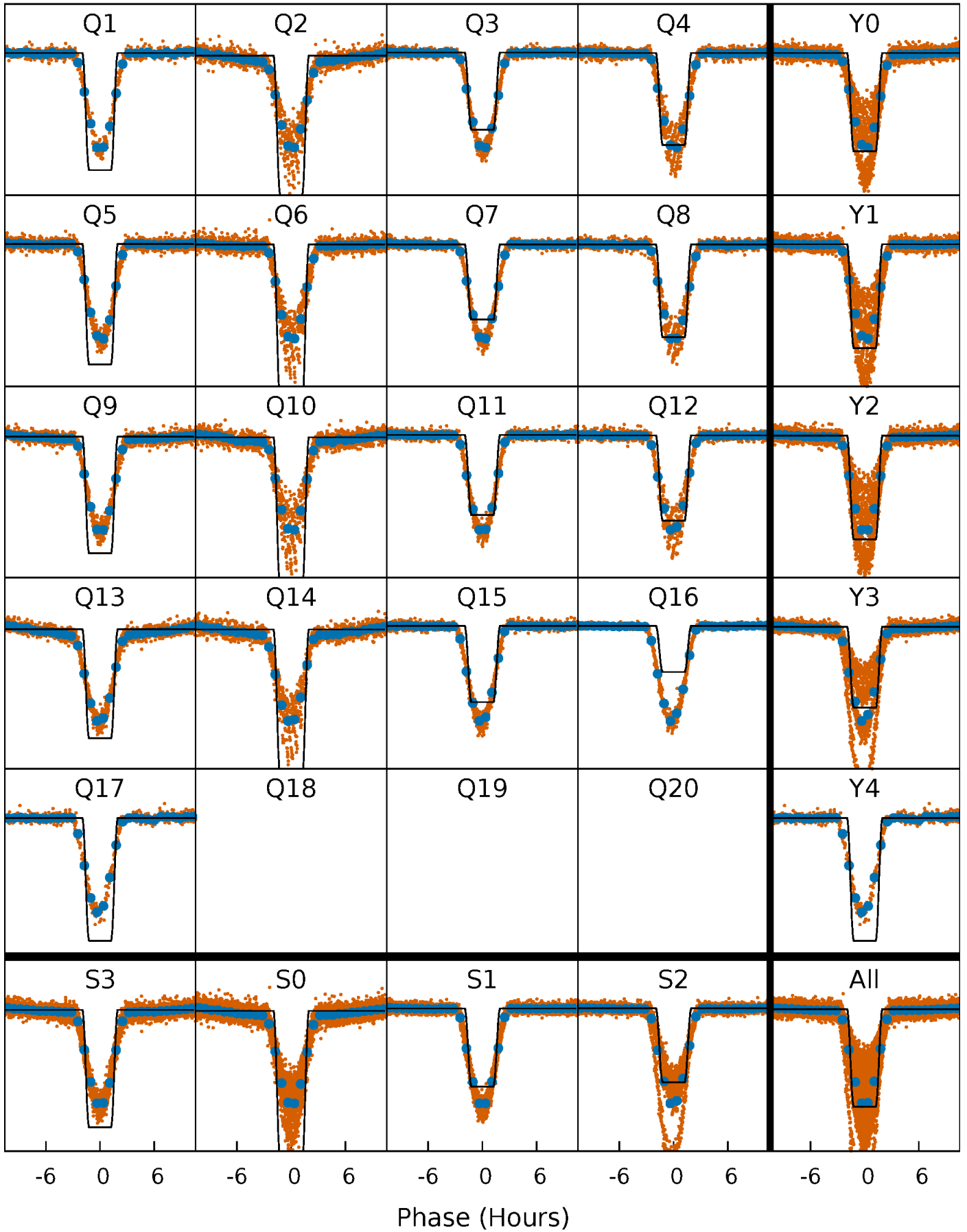
# DV Quarter-Phased Transit Curves

TCE 008121067-01 P= 2.064898 Days  $T_0=132.874251$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

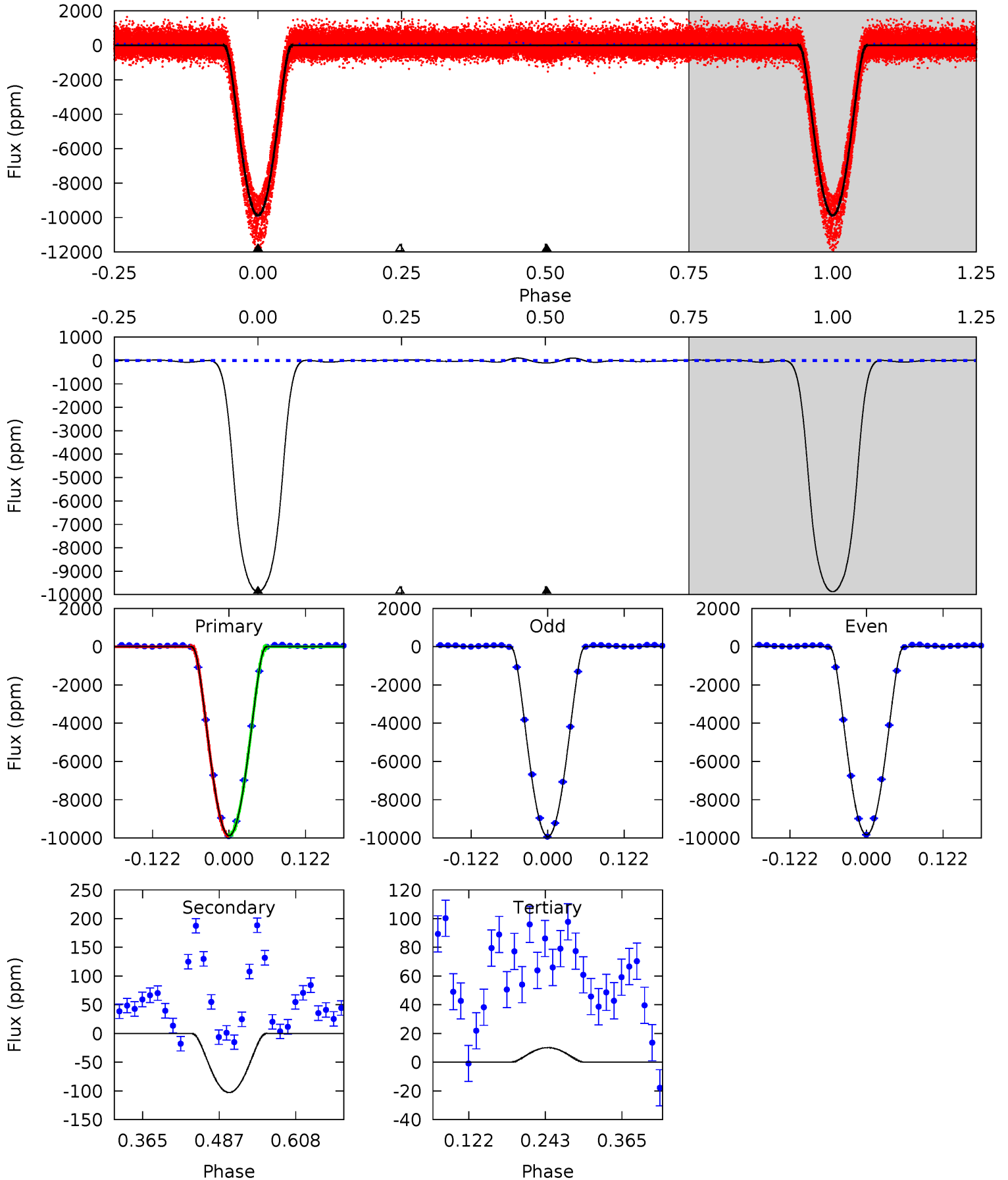
TCE 008121067-01   P= 2.064913 Days    $T_0=132.868516$  (BKJD)



# DV Model-Shift Uniqueness Test

008121067-01, P = 2.064898 Days, E = 130.809353 Days

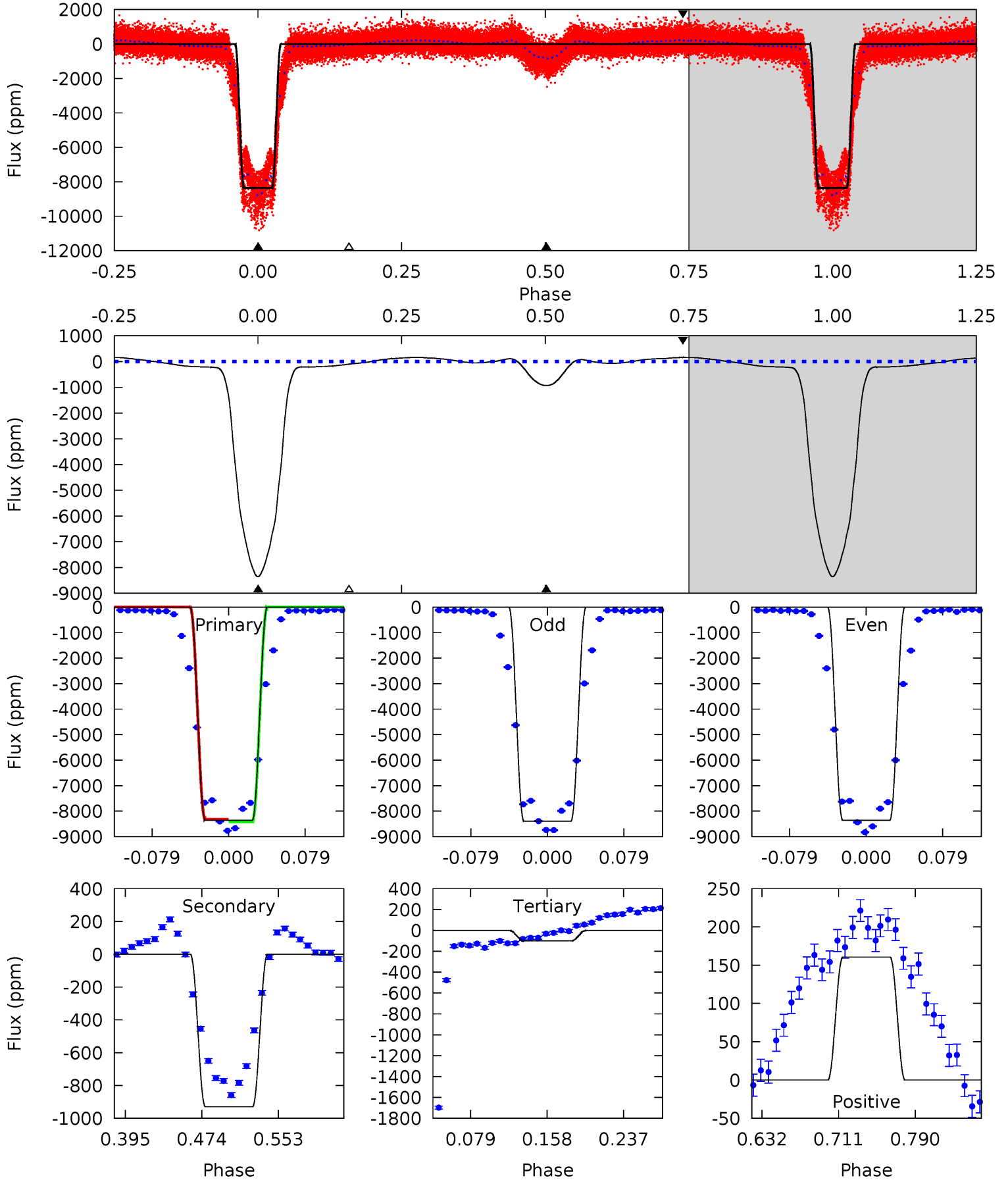
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1947	20.3	-2.00	0	4.52	1.55	5.02	1949	1947	22.3	20.3	8.70	1.06	0.01	4.41



# Alt Model-Shift Uniqueness Test

008121067-01, P = 2.064913 Days, E = 130.803603 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
1186	132.1	14.3	22.8	4.61	1.76	16.9	1172	1164	117.8	109.3	2.37	1.13	0.02	7.39



### Stellar Parameters For KIC 008121067

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5714^{+152}_{-169}$	$4.501^{+0.062}_{-0.188}$	$-0.080^{+0.300}_{-0.300}$	$0.901^{+0.254}_{-0.091}$	$0.939^{+0.104}_{-0.104}$	$1.808^{+0.551}_{-0.874}$
	+3%/-3%	+1%/-4%	+375%/-375%	+28%/-10%	+11%/-11%	+30%/-48%
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 008121067-01 / KOI 6050.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-103 \pm 5$	$13.55^{+2.16}_{-0.97}$	$1920^{+133}_{-87}$	$-1728^{+3650}_{-413}$	$0.289^{+0.049}_{-0.064}$
Alt.	$-930 \pm 7$	$10.24^{+1.52}_{-0.76}$	$1928^{+117}_{-88}$	$3537^{+67}_{-74}$	$4.648^{+0.748}_{-0.977}$

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

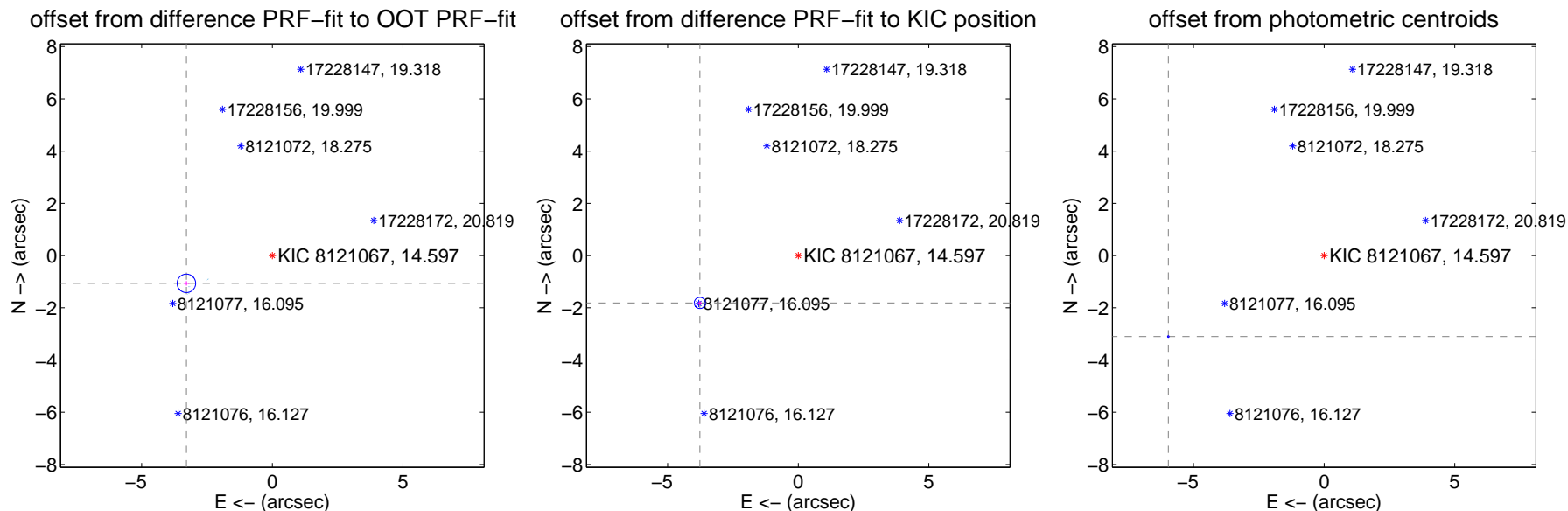
## DV Centroid Data

Supplemental centroid analysis for 008121067-01. Kepler magnitude: 14.60. Transit SNR 658.20

There are 17 quarters with good PRF difference image offsets

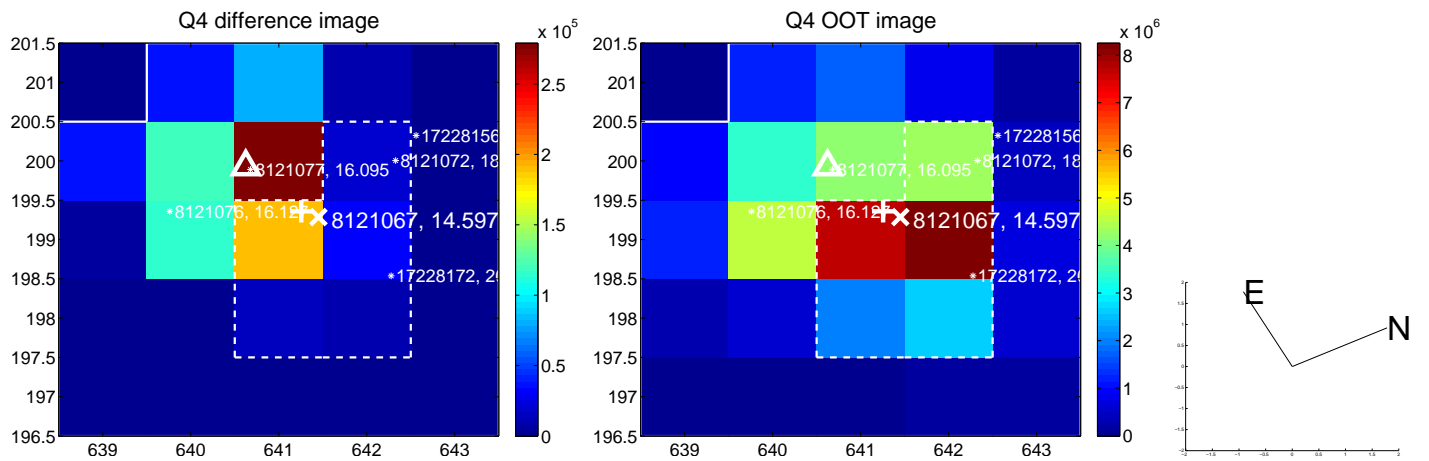
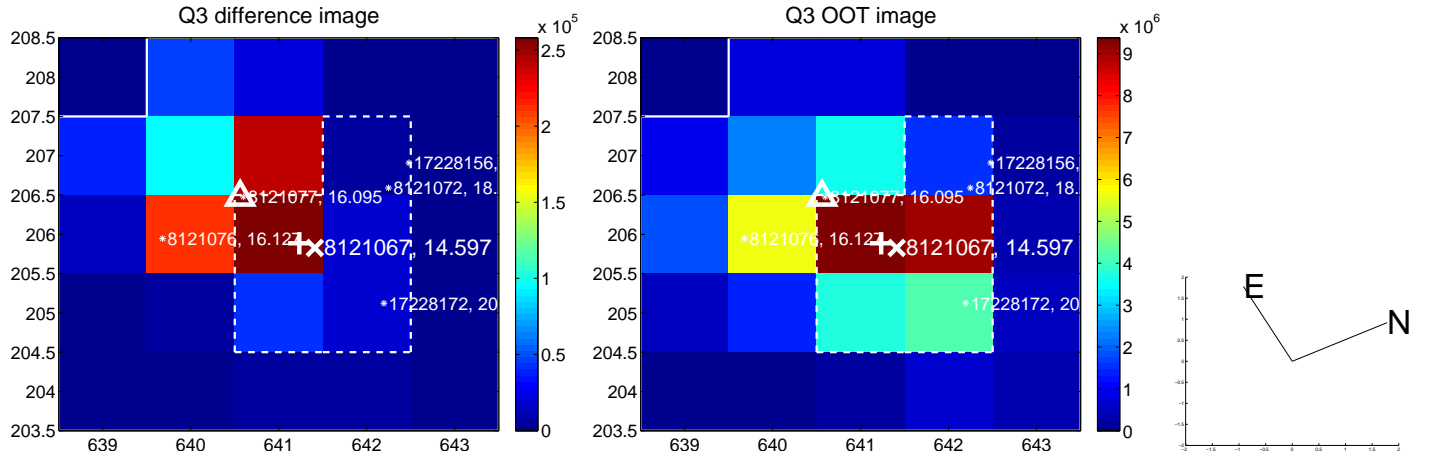
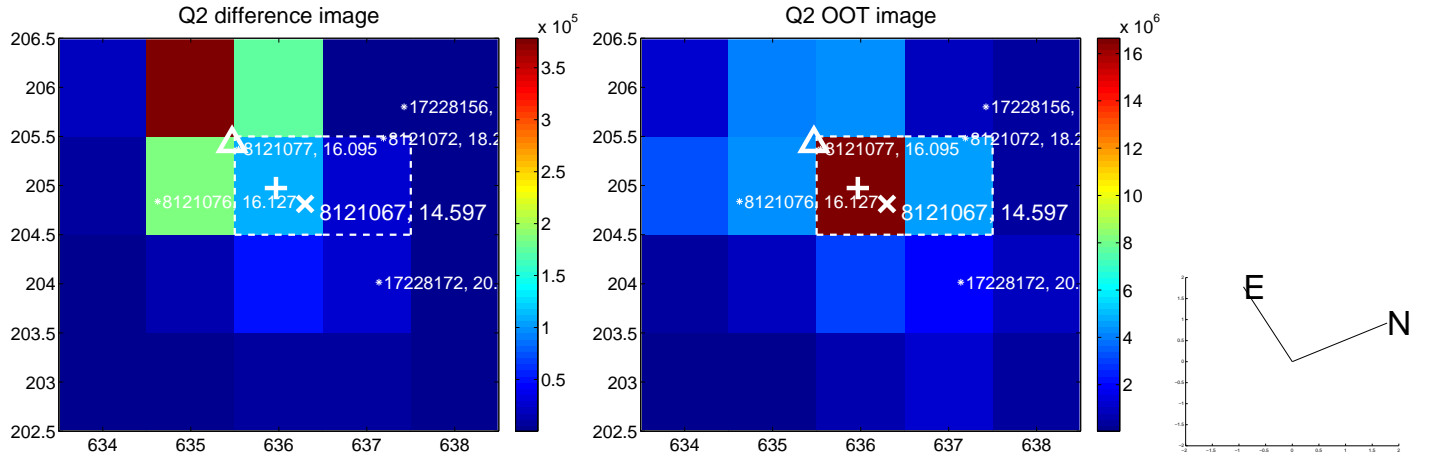
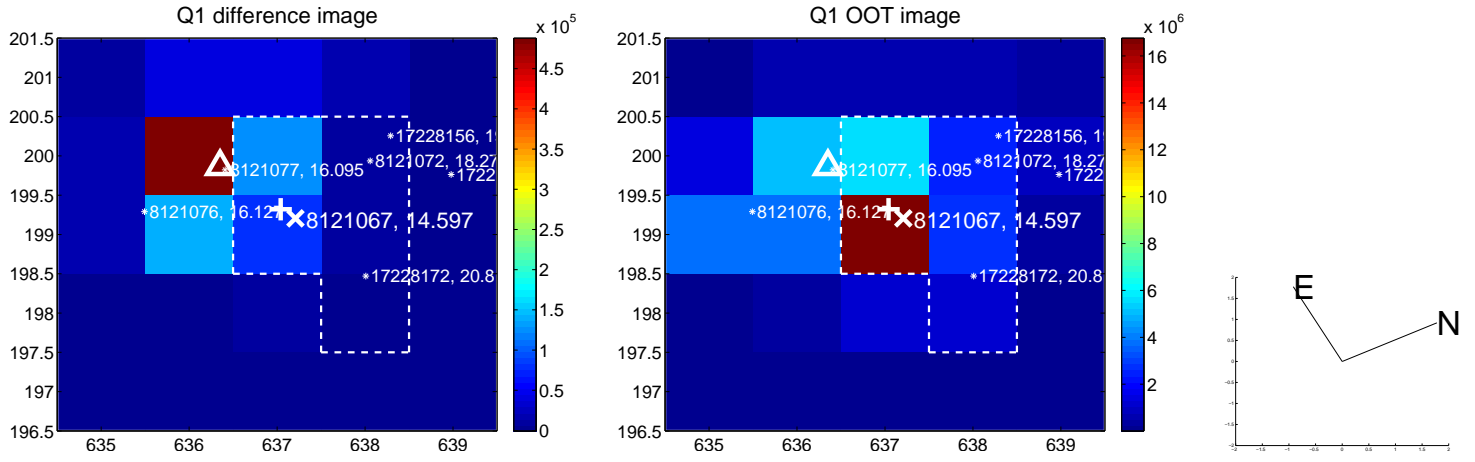
The direct PRF centroid is offset from the target star catalog position by about 0.71 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	<b>3.456 <math>\pm</math> 0.118</b>	<b>29.25</b>	3.288 $\pm$ 0.111	-1.065 $\pm$ 0.083
PRF-fit source offset from KIC position	<b>4.182 <math>\pm</math> 0.071</b>	<b>58.64</b>	3.767 $\pm$ 0.072	-1.816 $\pm$ 0.067
photometric centroid source offset	<b>6.72 <math>\pm</math> 0.01</b>	<b>635.72</b>	5.97 $\pm$ 0.01	-3.10 $\pm$ 0.01



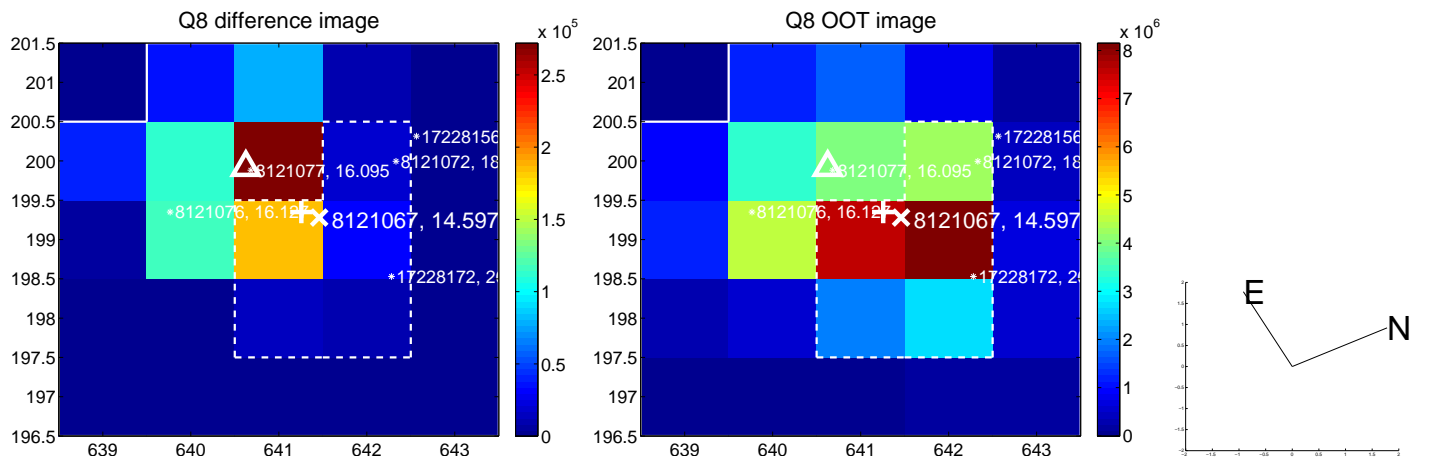
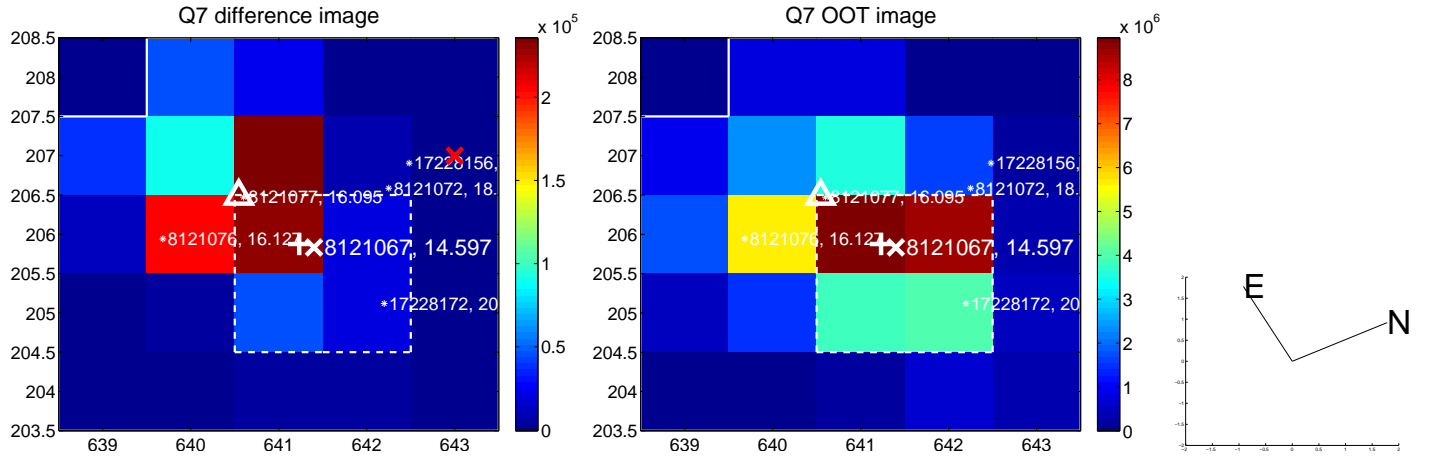
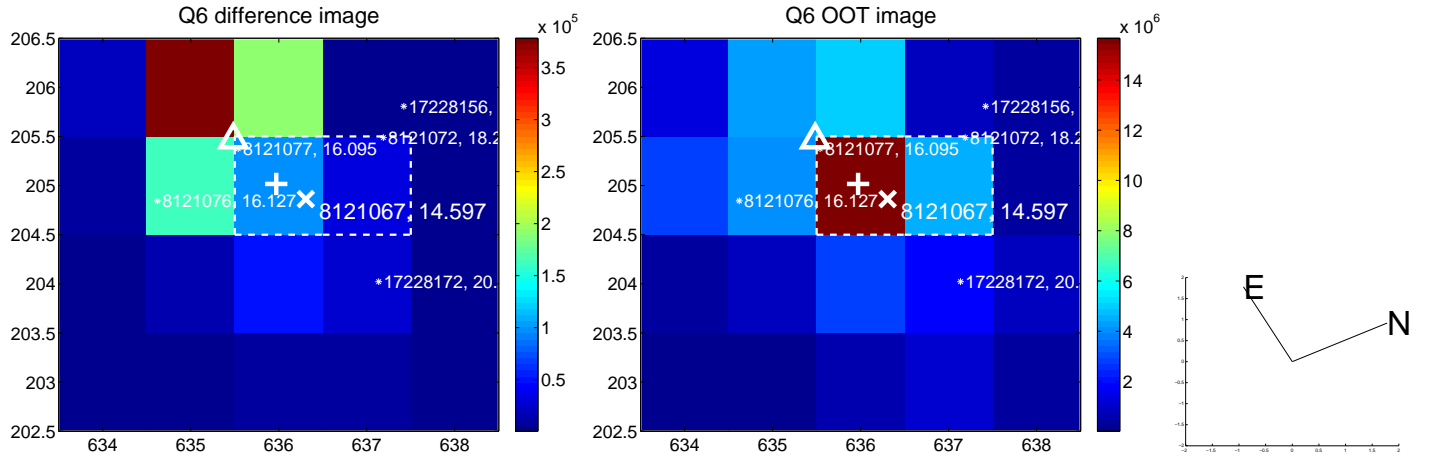
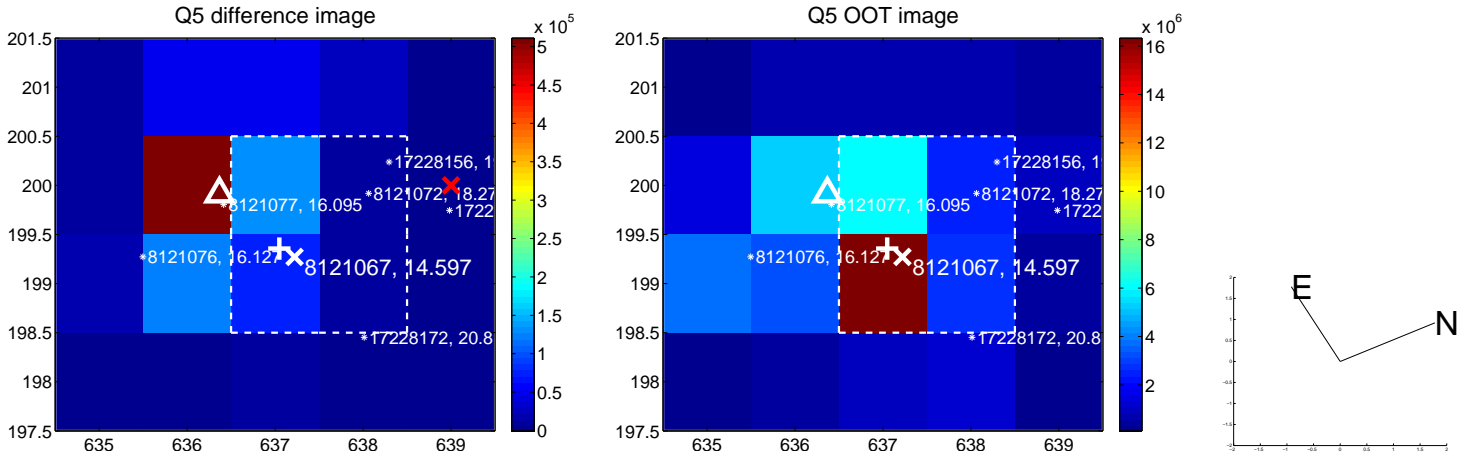
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

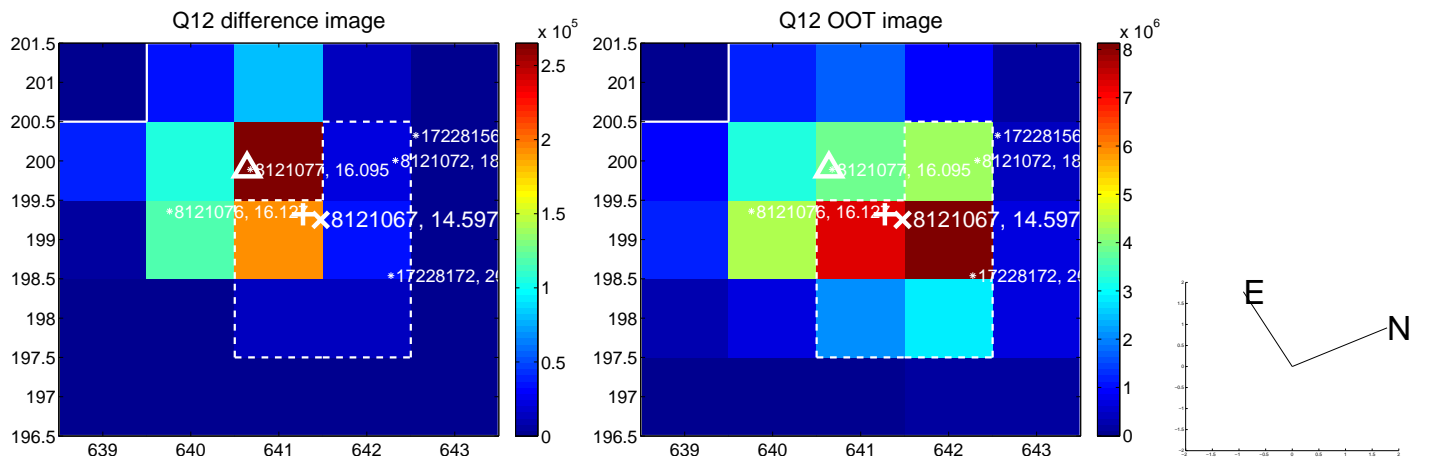
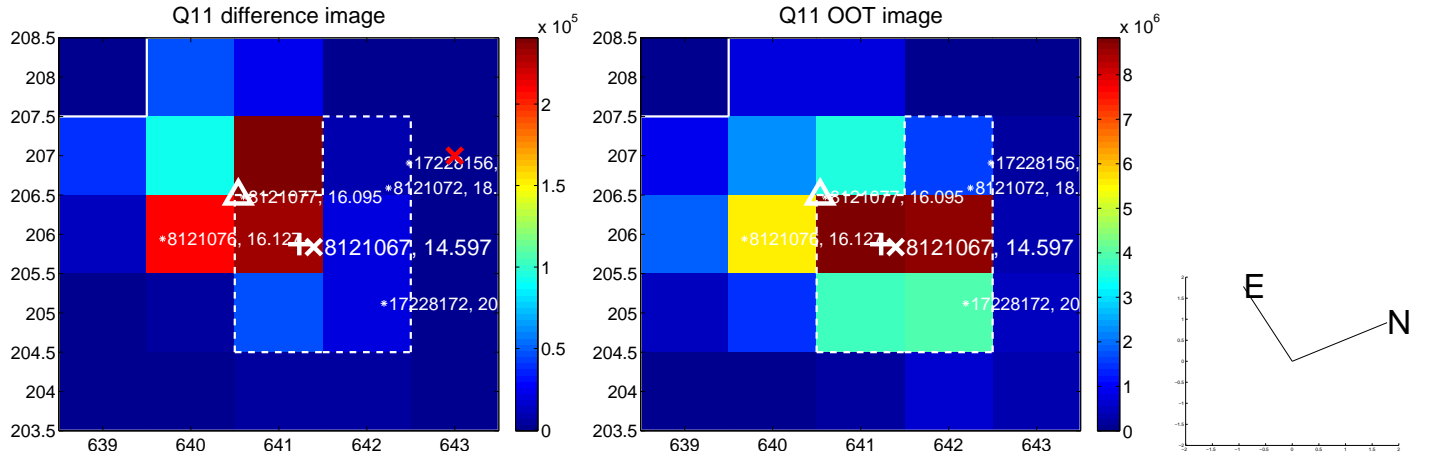
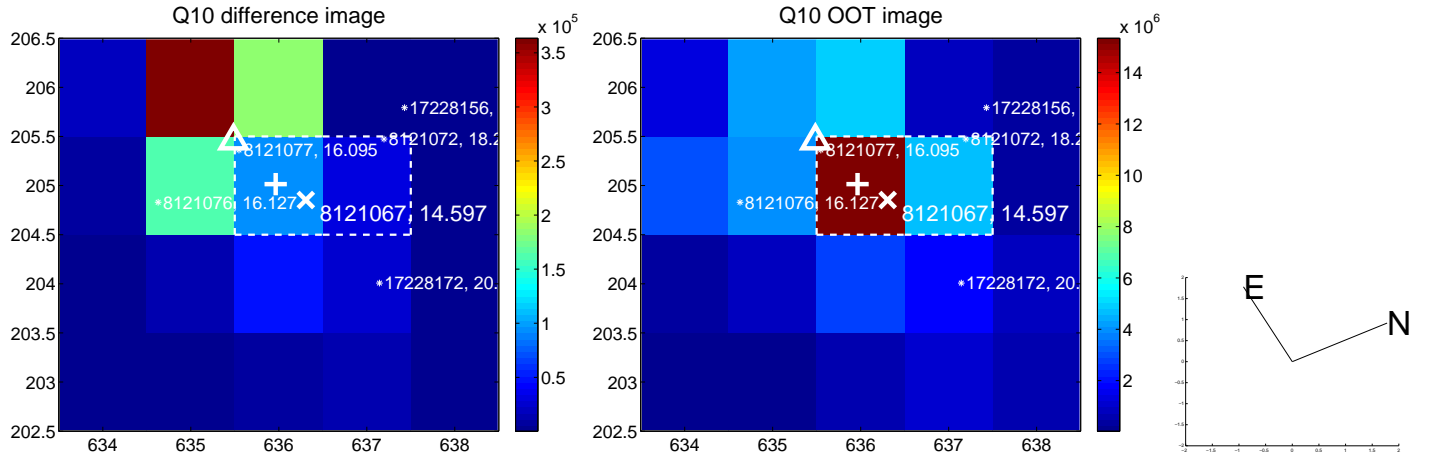
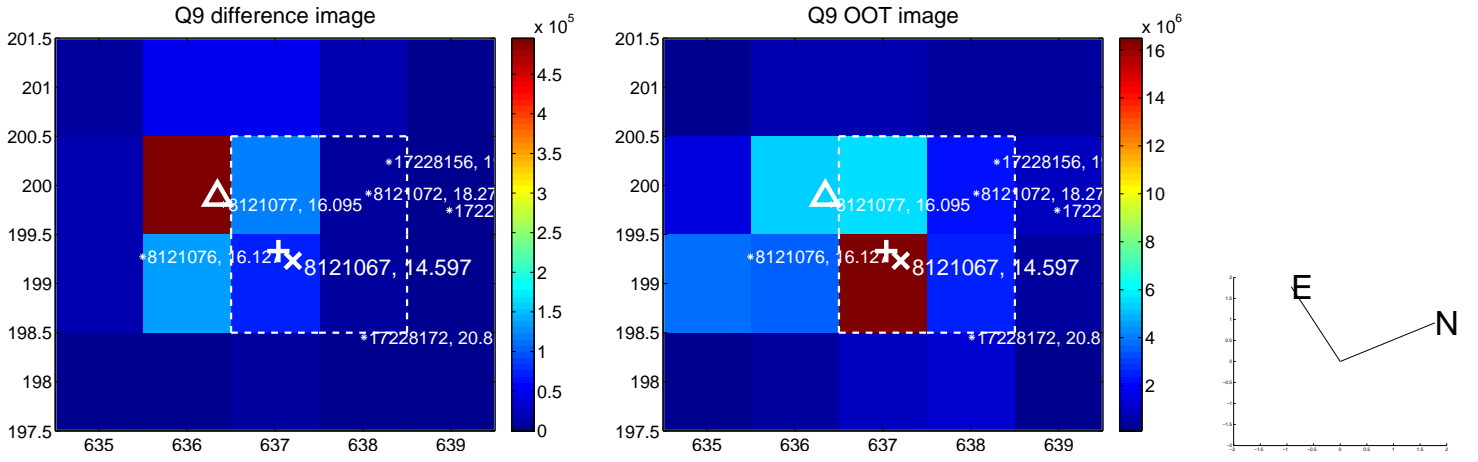




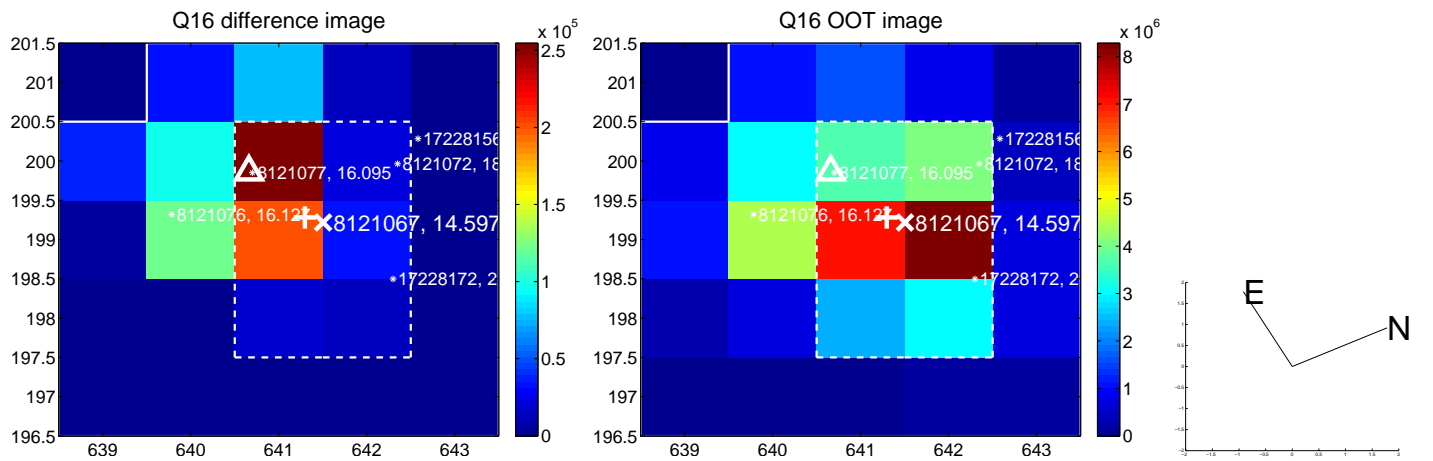
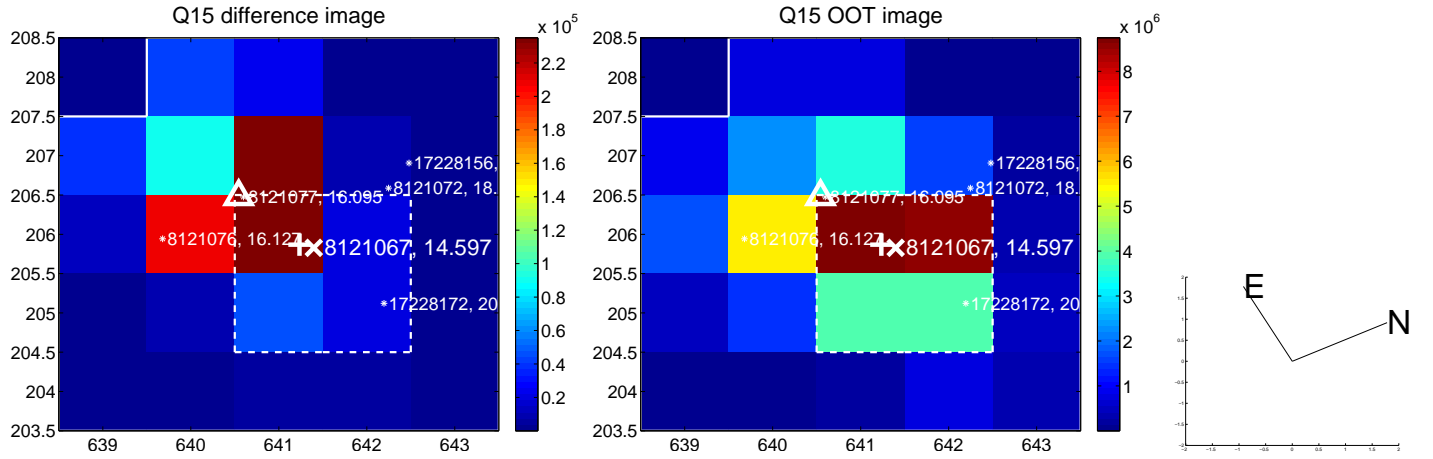
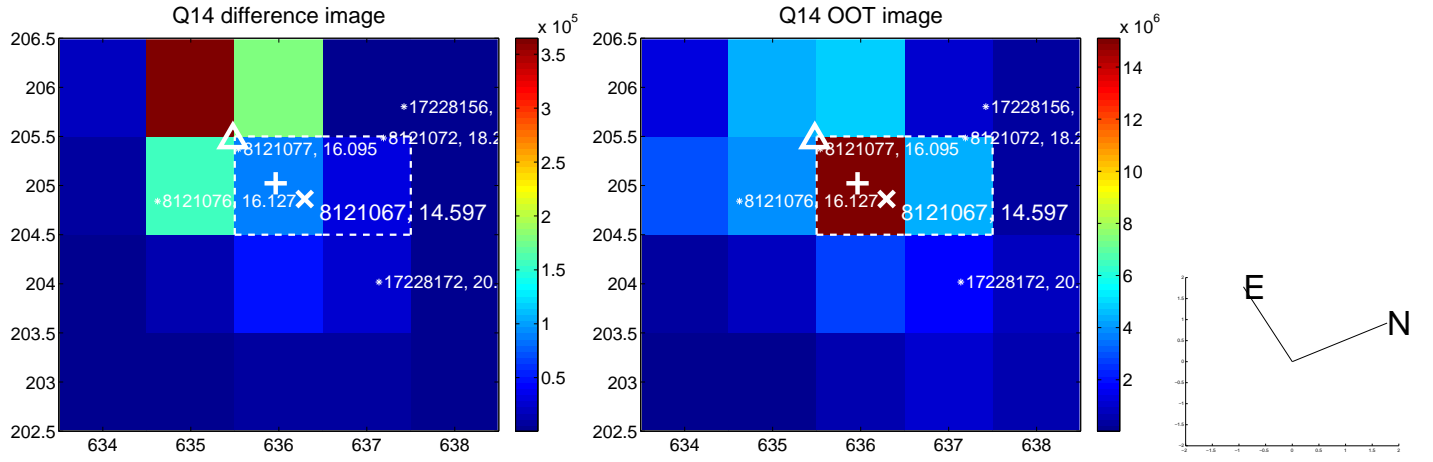
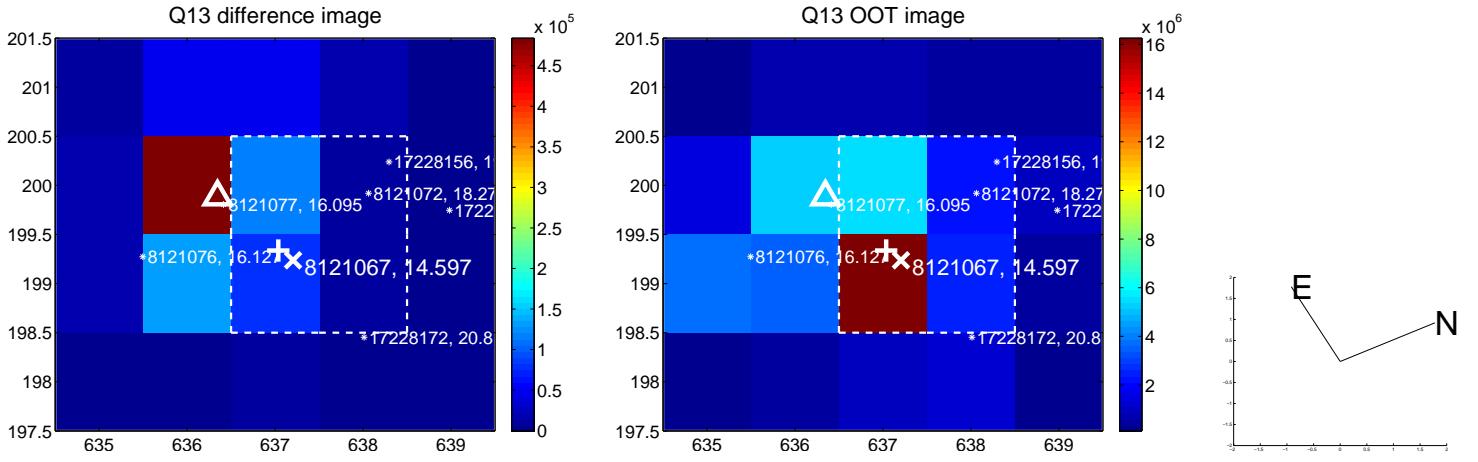
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



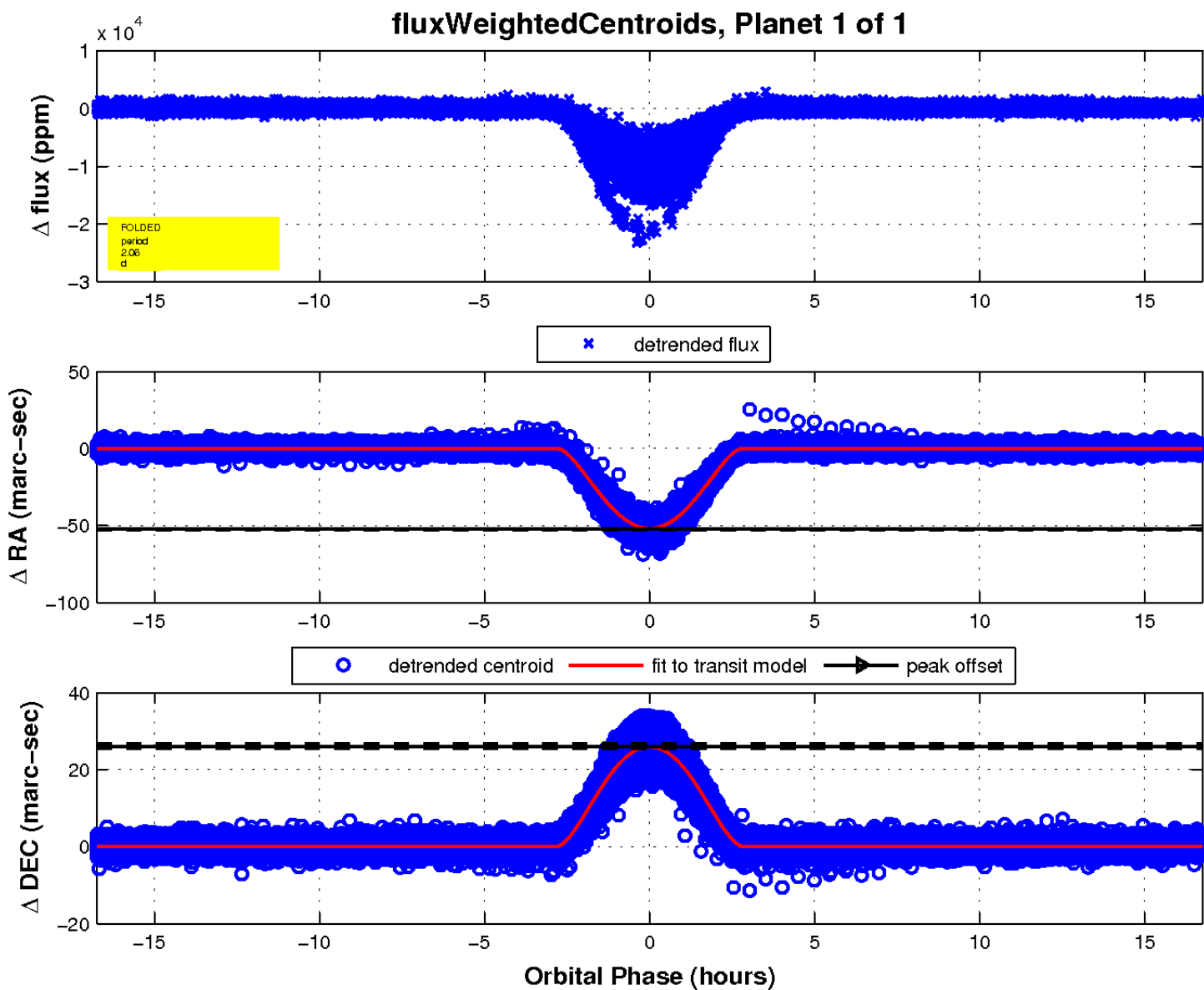
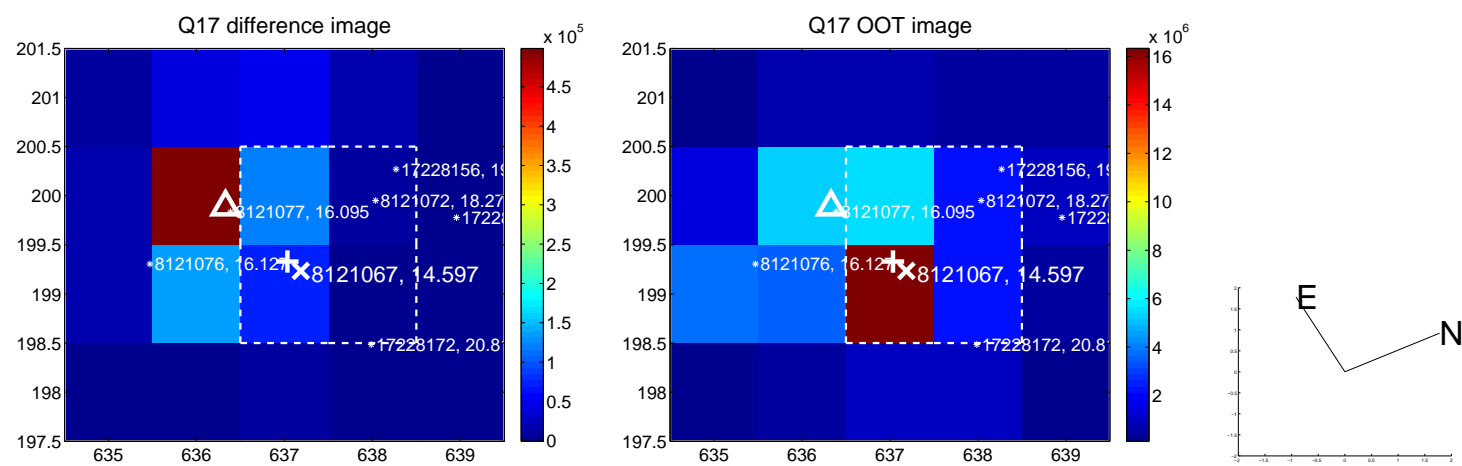
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white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\Delta$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination

