

# KIC 008218274

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008218274-01	OBS	1064.01	1.187337	132.284298	14472.0	2.895	3460.6	1934.6	1.49	6424	19.20	6080.62

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008218274-01	OBS	PC	0.56	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 008218274-01

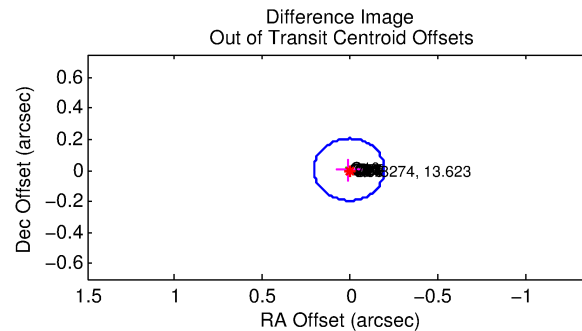
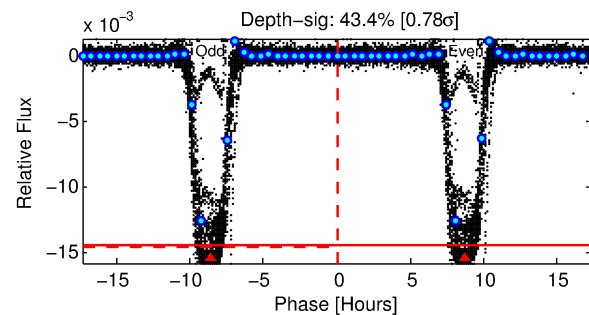
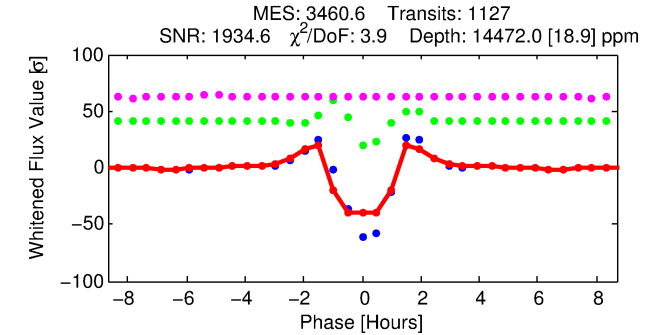
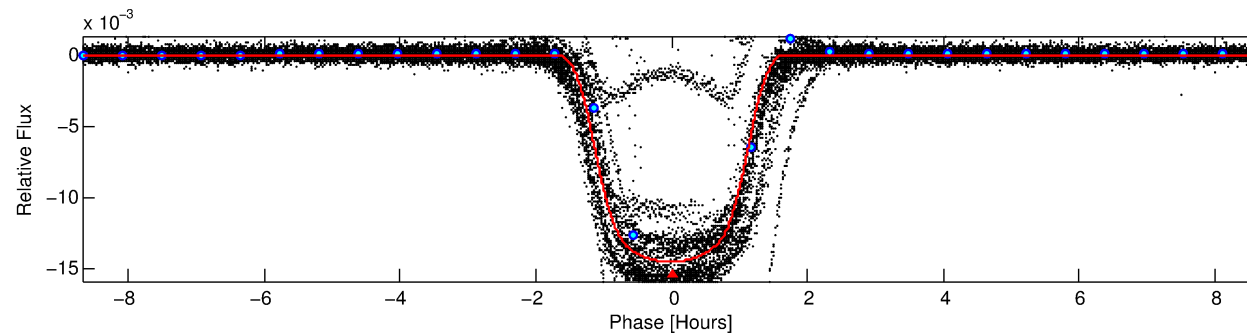
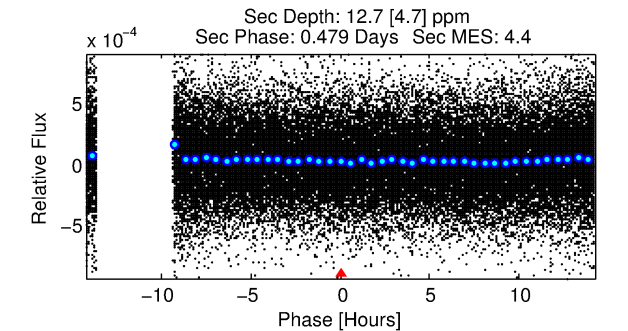
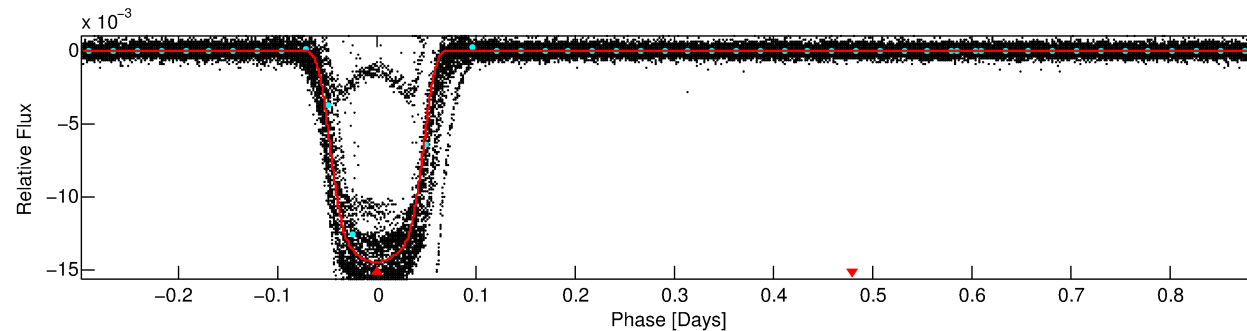
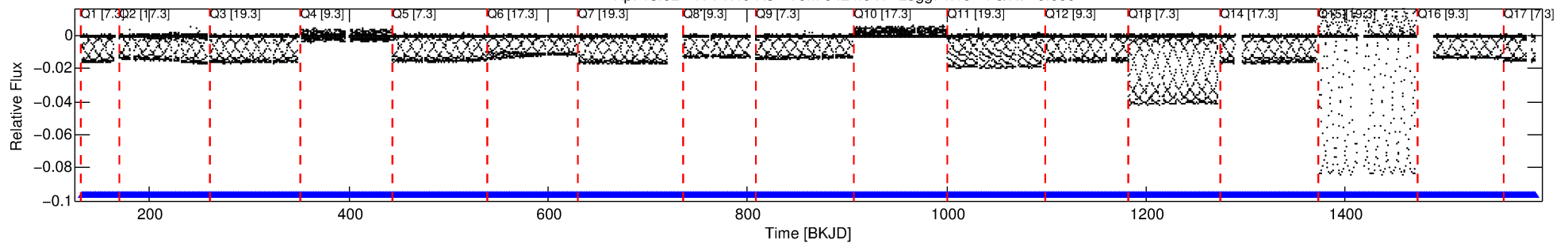
No Significant Match Found

# DV One-Page Summary

KIC: 8218274 Candidate: 1 of 1 Period: 1.187 d

KOI: K01064.01 Corr: 0.949

Kp: 13.62 R\*: 1.49 Rs Teff: 6424.0 K Logg: 4.19 Fe/H: -0.060



## DV Fit Results:

Period = 1.18734 [0.00000] d  
Epoch = 132.2843 [0.0000] BKJD  
Rp/R\* = 0.1182 [0.0001]  
a/R\* = 2.88 [0.01]  
b = 0.69 [0.00]  
Seff = 6080.62 [2269.80]  
Teq = 2252 [210] K  
Rp = 19.20 [5.71] Re  
a = 0.0236 [0.0057] AU  
Ag = 0.01 [0.01] [-187.56σ]  
Teffp = 1115 [111] K [-4.78σ]

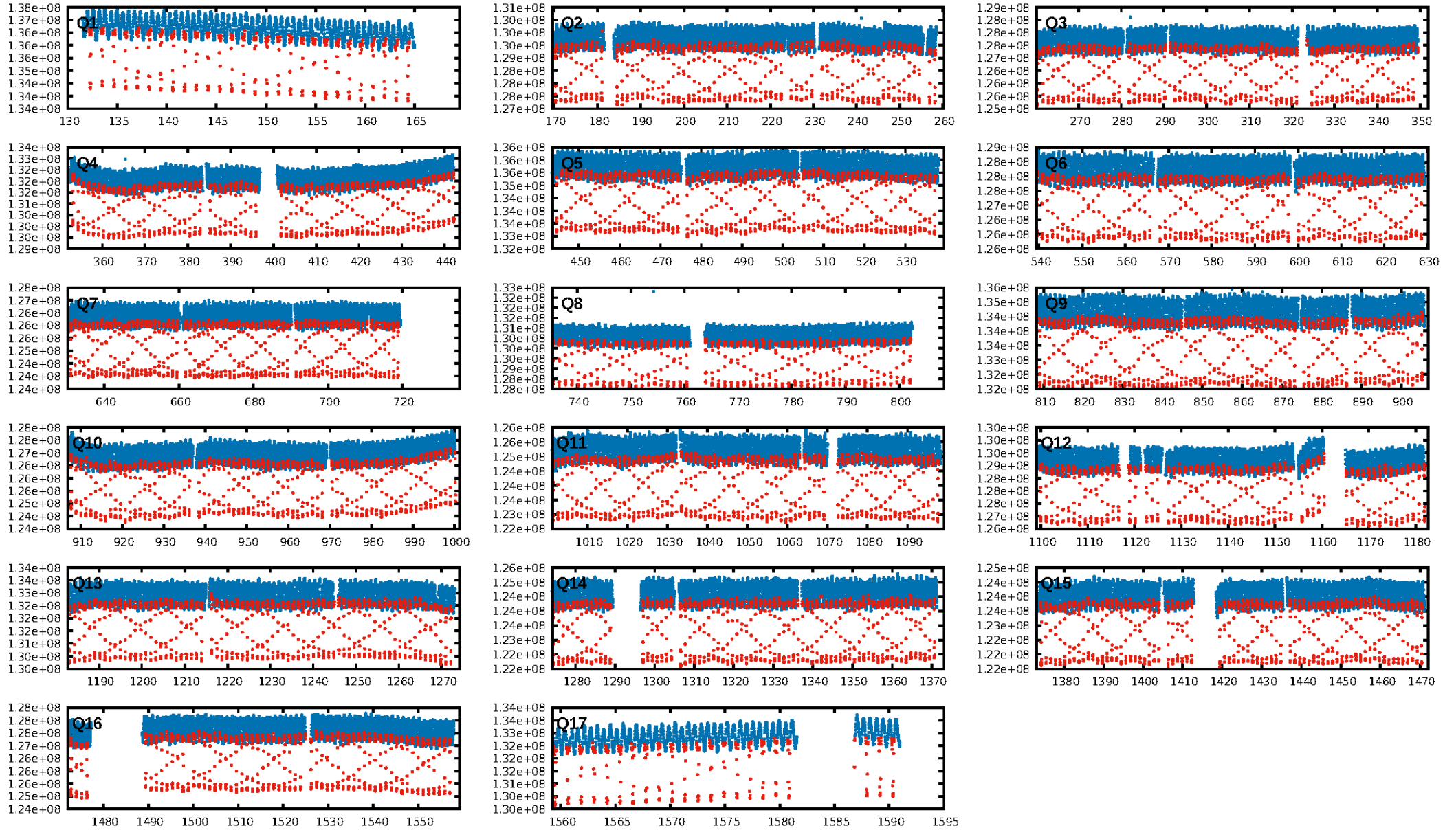
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 0.00e+00  
RollingBand-fgt: 1.00 [1076/1076]  
GhostDiagnostic-chr: 2.291  
Centroid-sig: 0.0%  
Centroid-so: 0.136 arcsec [97.58σ]  
OotOffset-rm: 0.010 arcsec [0.15σ]  
KicOffset-rm: 0.167 arcsec [2.46σ]  
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]

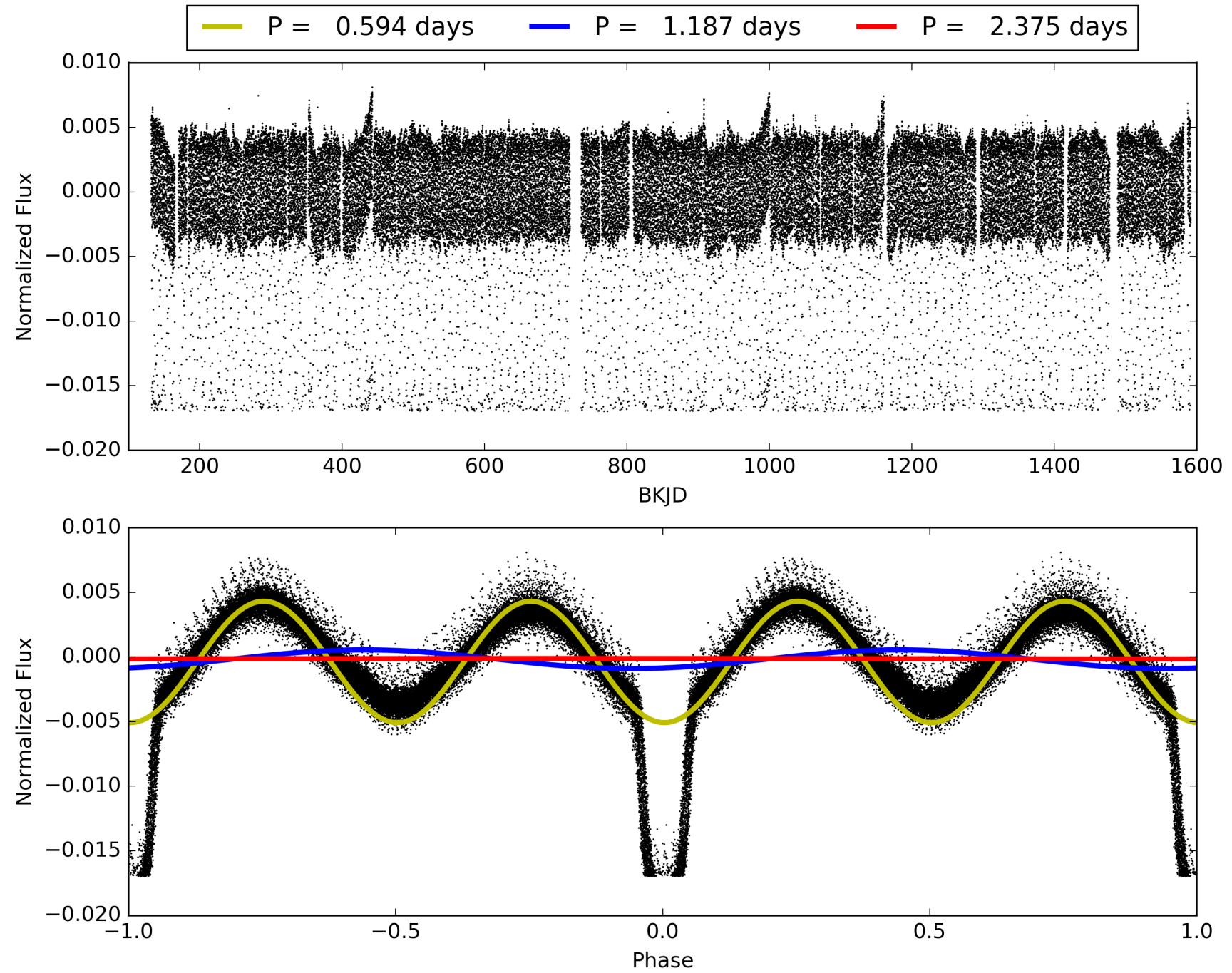
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 21:30:29 Z

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

# TCE 008218274-01, PDC Light Curves

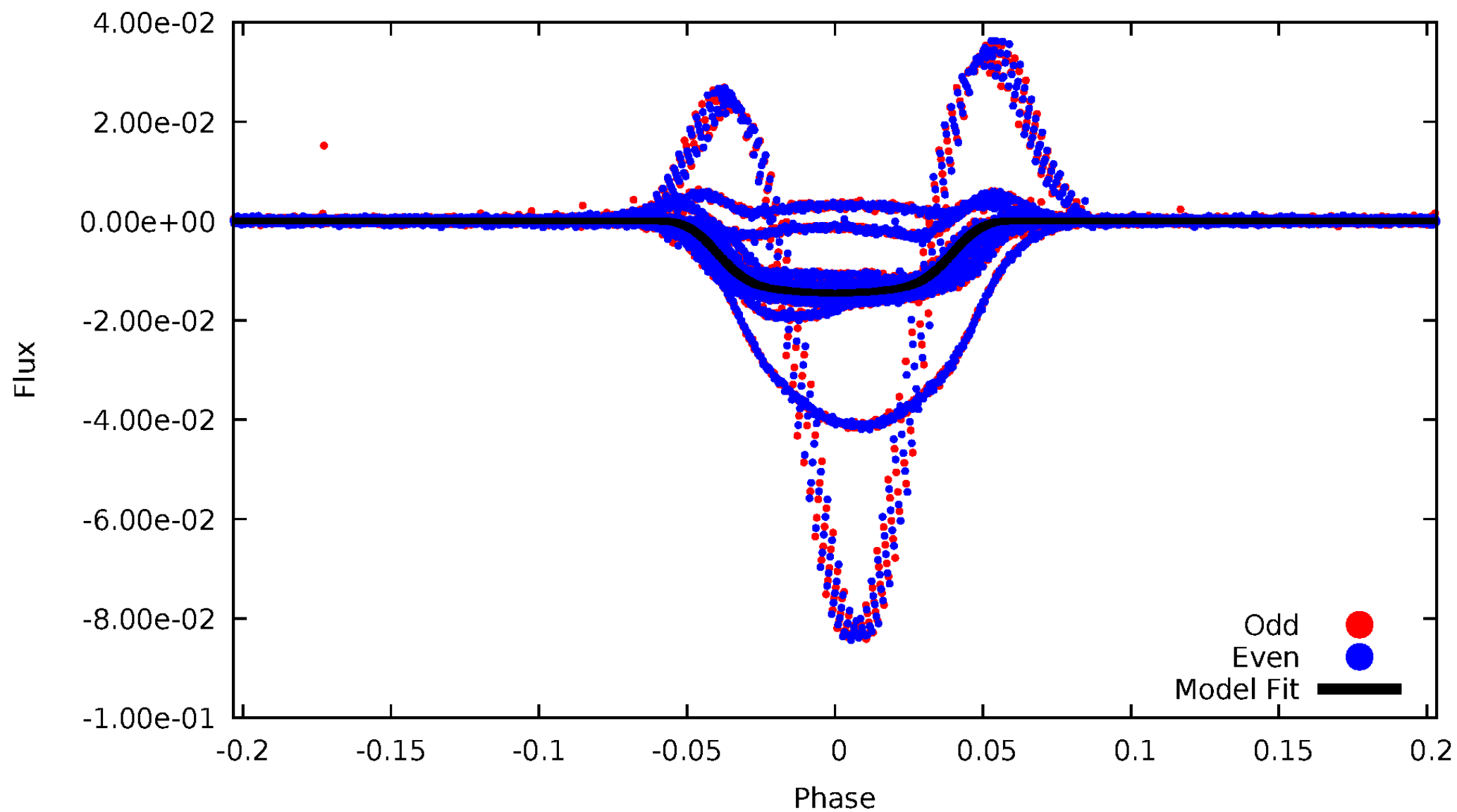


TCE 008218274-01



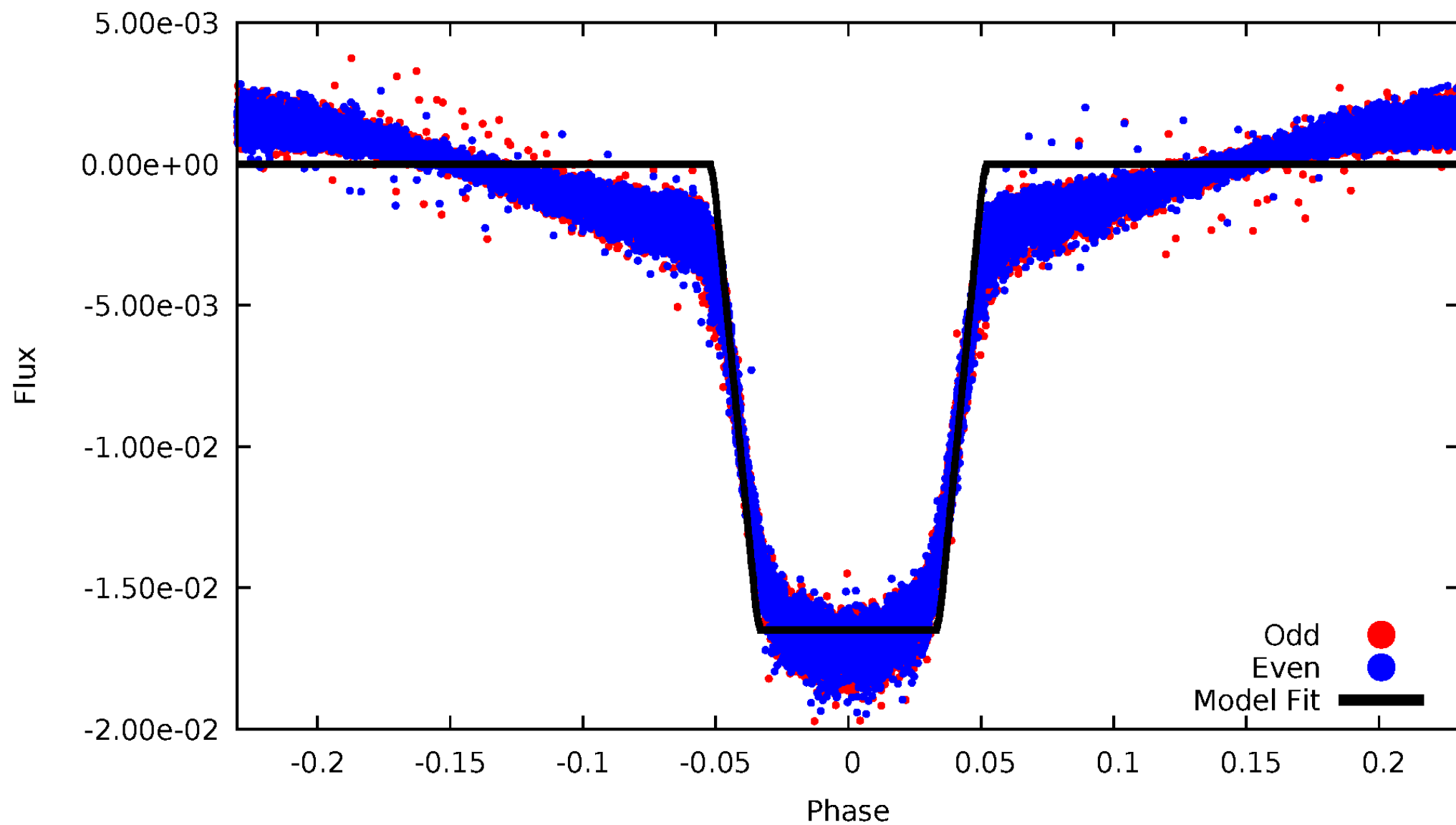
# DV Odd/Even

TCE 008218274-01



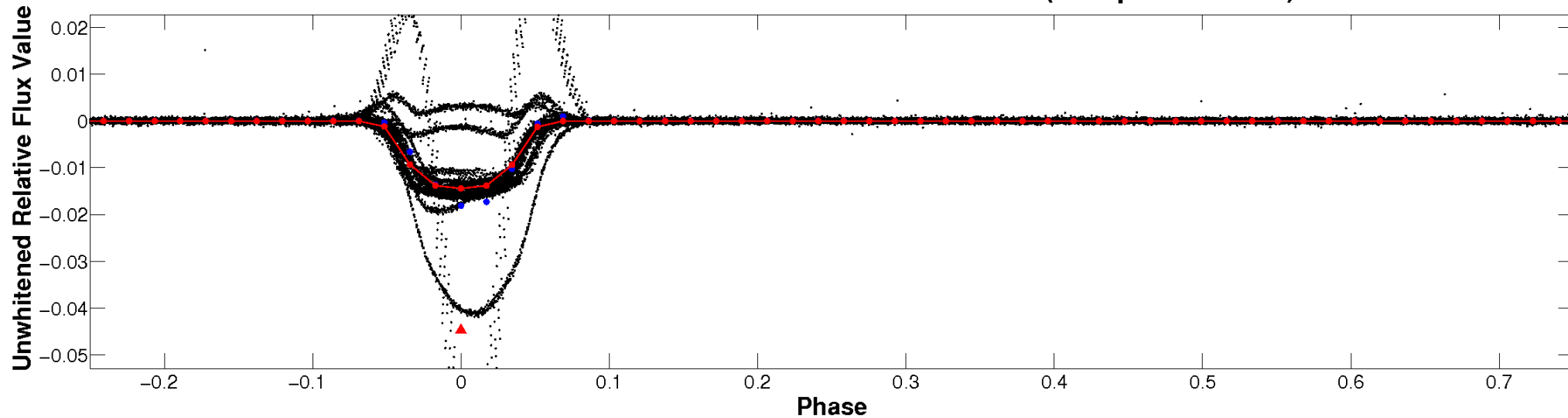
# ALT Odd/Even

TCE 008218274-01

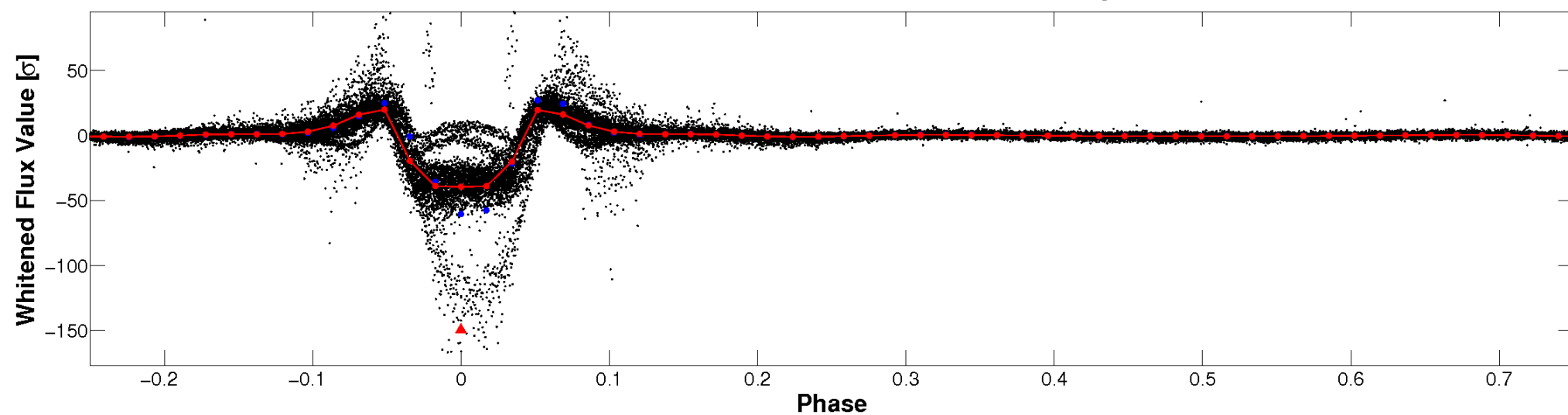


# Non-Whitened Vs. Whitened Light Curve

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

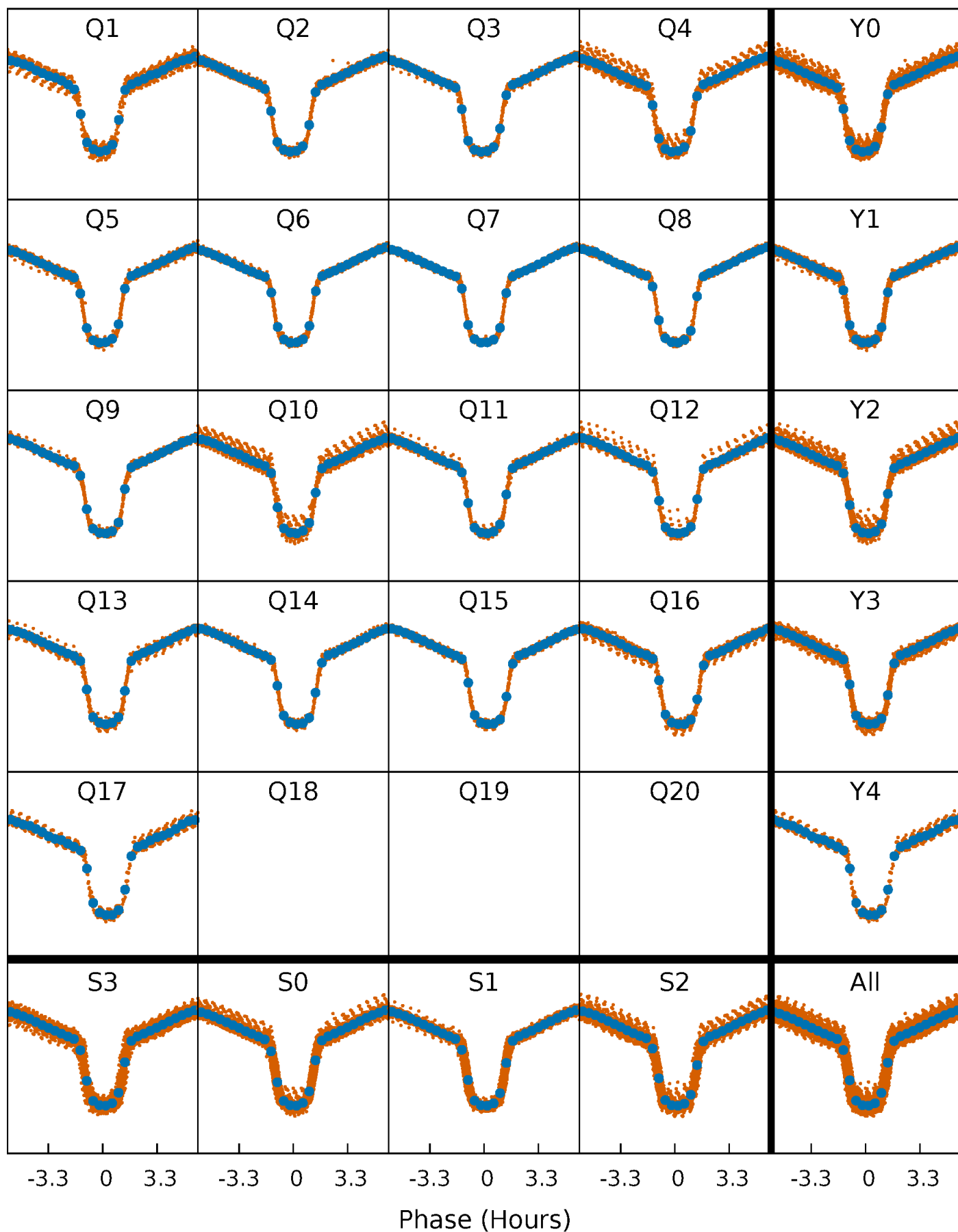


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

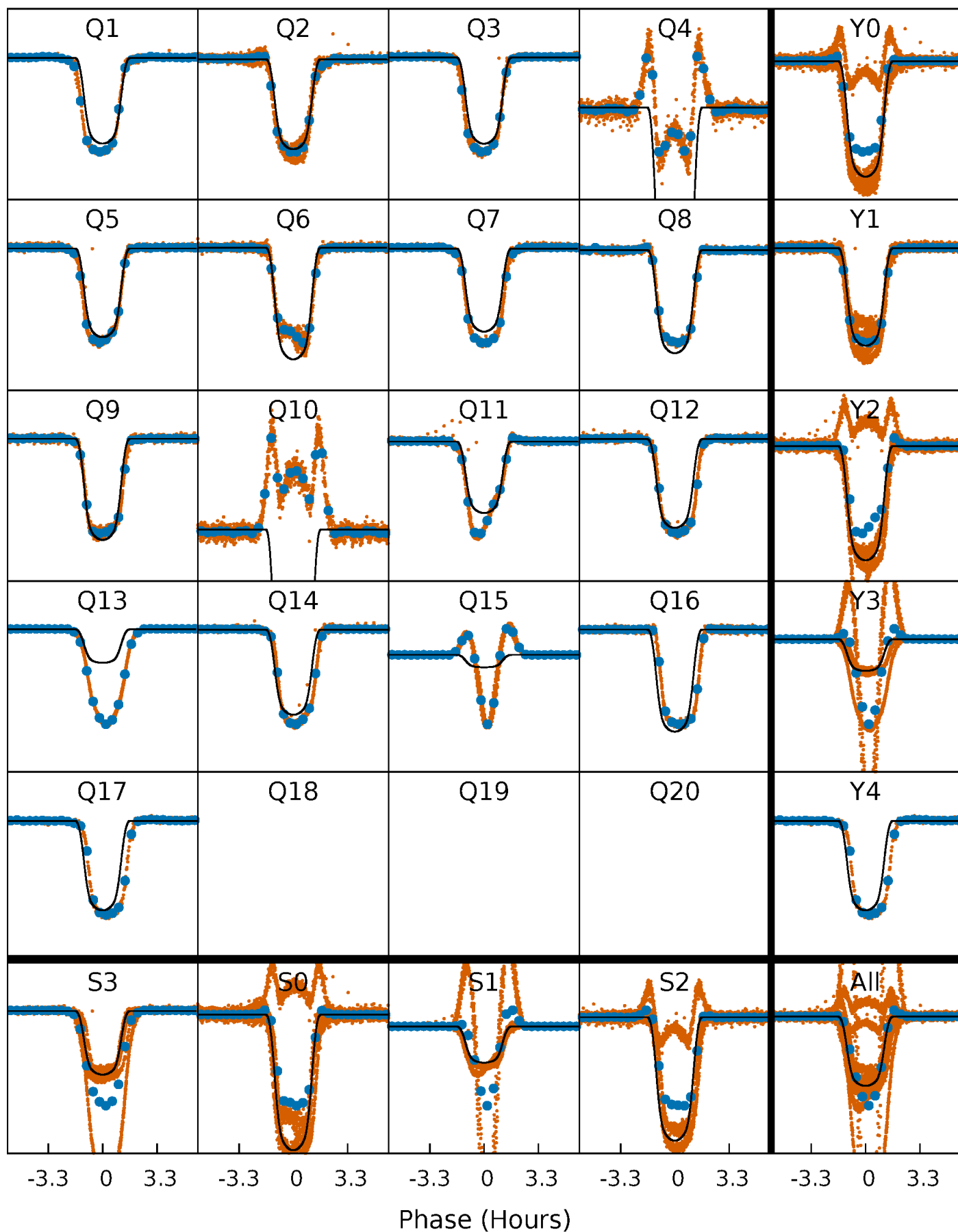
TCE 008218274-01 P= 1.187337 Days  $T_0=132.284298$  (BKJD)





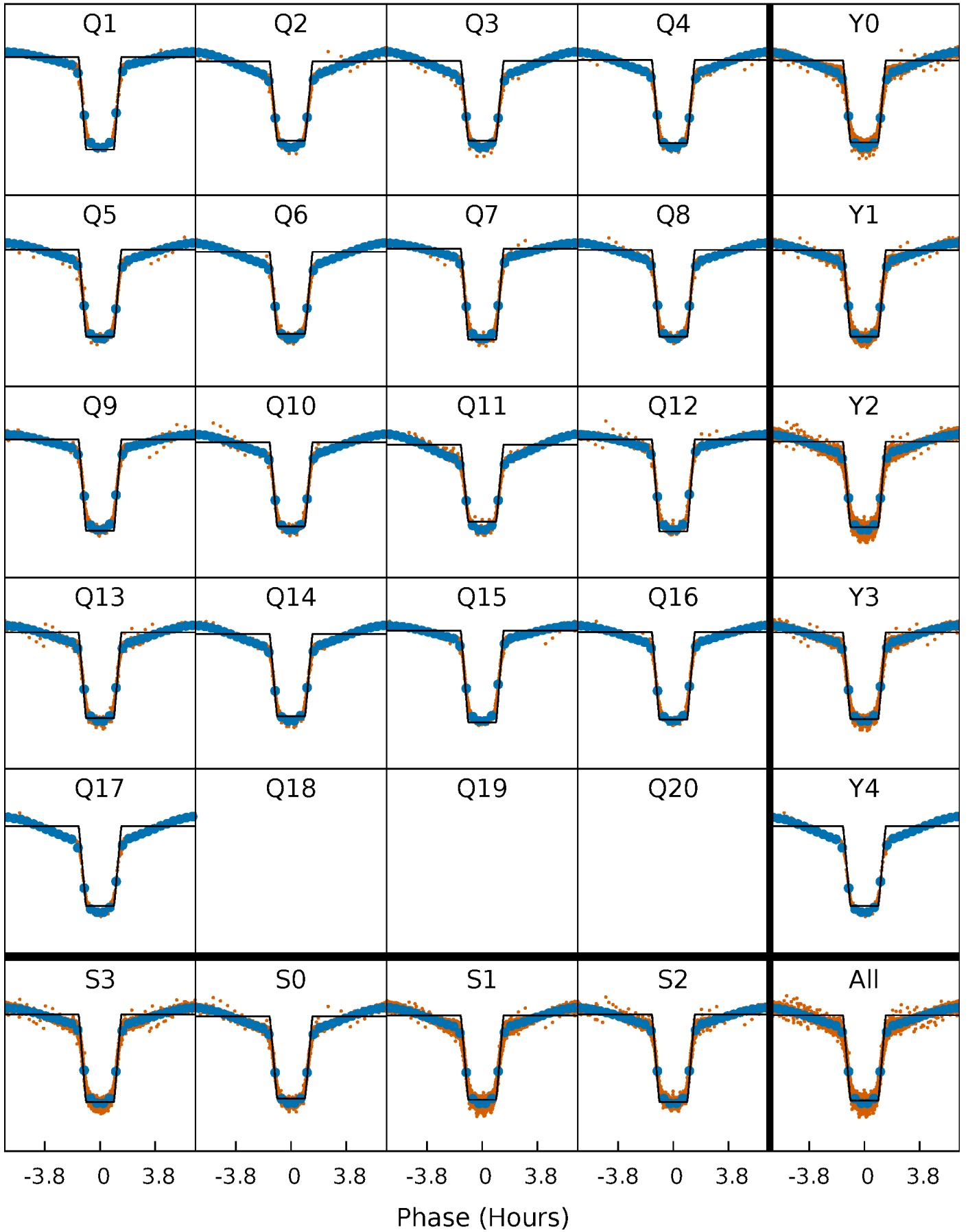
# DV Quarter-Phased Transit Curves

TCE 008218274-01 P= 1.187337 Days  $T_0=132.284298$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

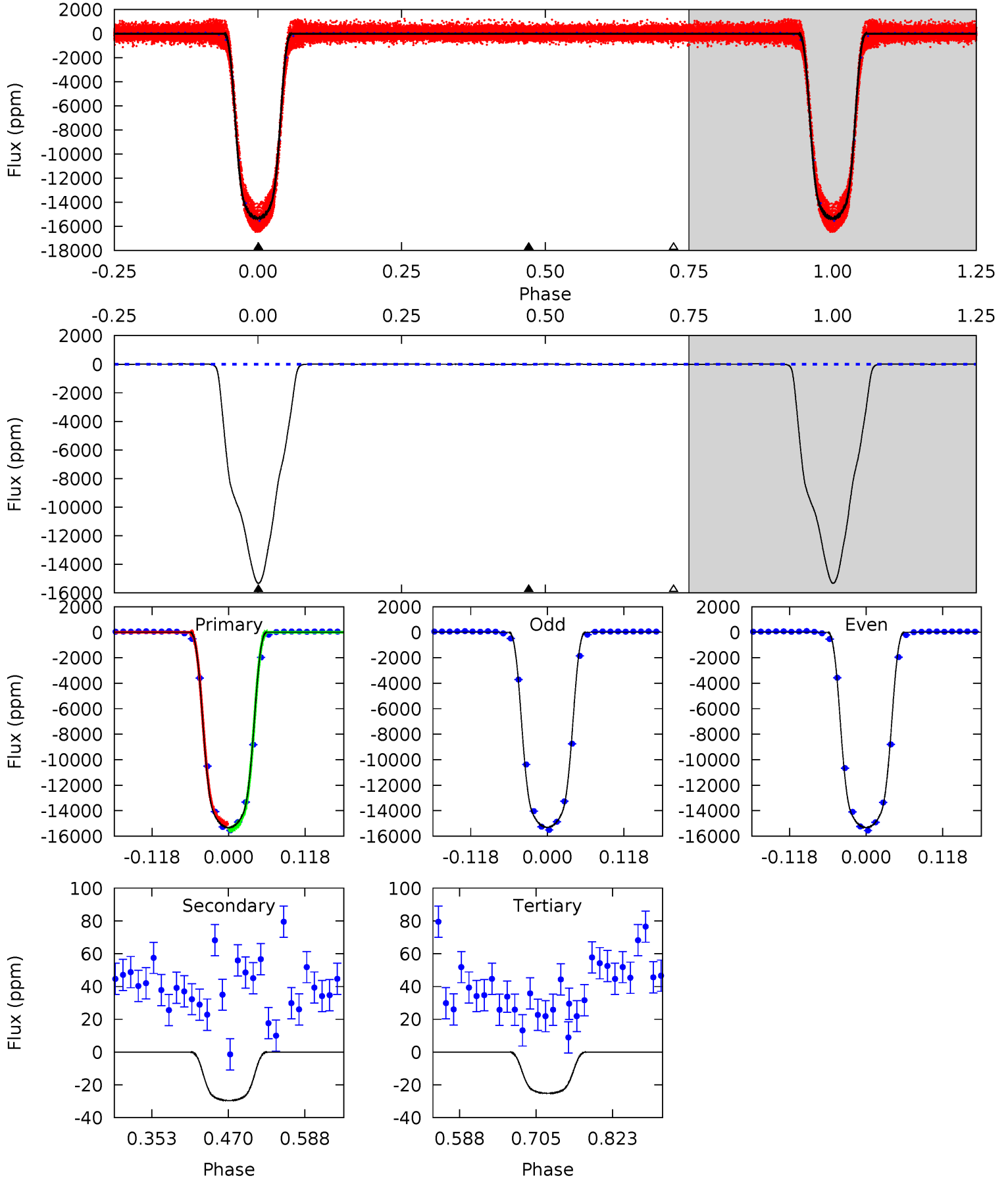
TCE 008218274-01 P= 1.187353 Days  $T_0=132.277974$  (BKJD)



# DV Model-Shift Uniqueness Test

008218274-01, P = 1.187337 Days, E = 131.096961 Days

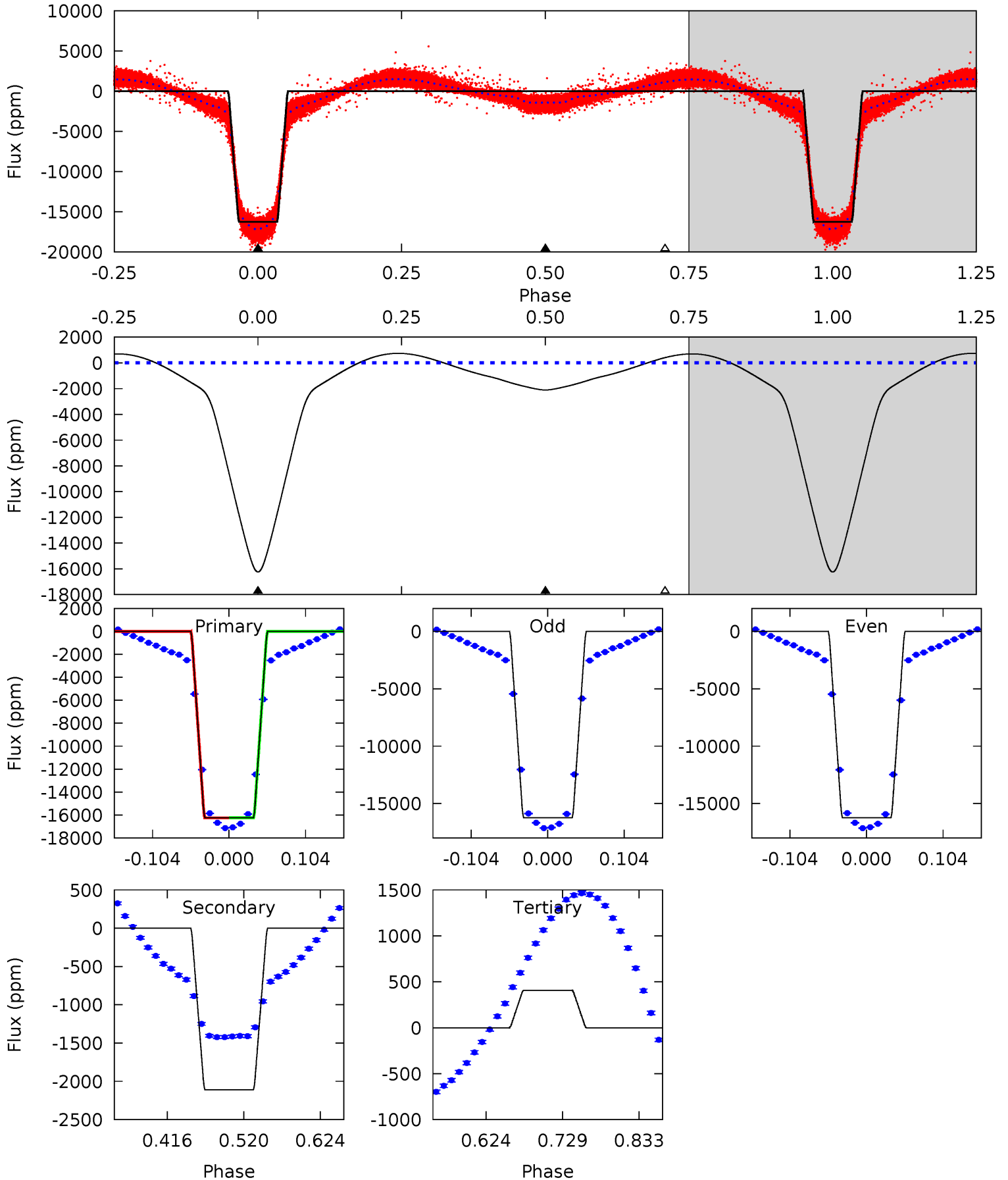
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3144	6.07	5.16	0	4.53	1.57	2.74	3139	3144	0.90	6.07	2.74	1.02	0.00	0



# Alt Model-Shift Uniqueness Test

008218274-01, P = 1.187353 Days, E = 131.090621 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
1315	170.8	-33.0	0	4.56	1.63	55.8	1348	1315	203.8	170.8	0.08	1.00	0.04	0.35



### Stellar Parameters For KIC 008218274

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6424^{+179}_{-247}$	$4.186^{+0.180}_{-0.180}$	$-0.060^{+0.250}_{-0.300}$	$1.489^{+0.443}_{-0.363}$	$1.243^{+0.192}_{-0.192}$	$0.530^{+0.525}_{-0.266}$
	+3%/-4%	+4%/-4%	+417%/-500%	+30%/-24%	+15%/-15%	+99%/-50%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology  
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

### Secondary Eclipse Parameters for KIC 008218274-01 / KOI 1064.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-30 \pm 5$	$19.23^{+3.33}_{-2.37}$	$3154^{+237}_{-231}$	$-3143^{+142}_{-150}$	$0.024^{+0.008}_{-0.007}$
Alt.	$-2109 \pm 12$	$20.87^{+3.48}_{-2.66}$	$3134^{+258}_{-211}$	$3950^{+95}_{-111}$	$1.478^{+0.429}_{-0.364}$

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

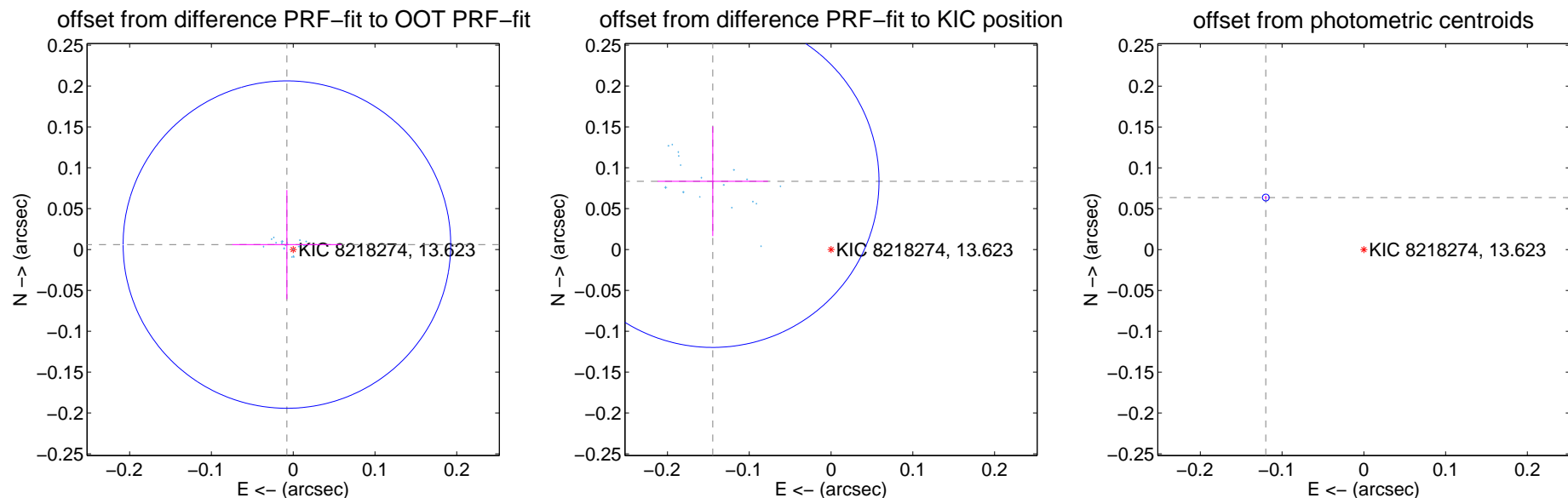
## DV Centroid Data

Supplemental centroid analysis for 008218274-01. Kepler magnitude: 13.62. Transit SNR 1934.63

There are 17 quarters with good PRF difference image offsets

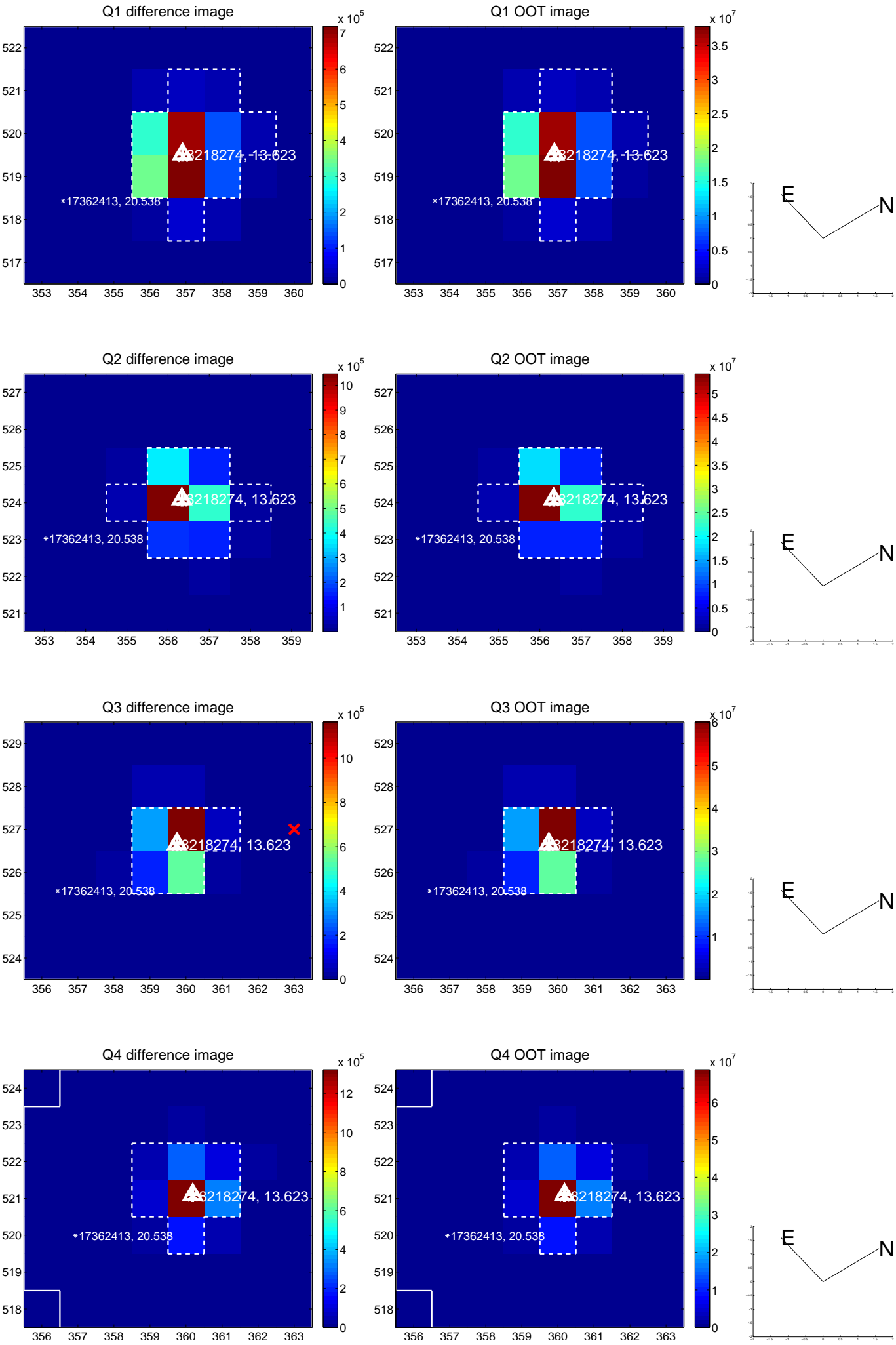
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.010 \pm 0.067$	0.15	$0.008 \pm 0.067$	$0.006 \pm 0.067$
PRF-fit source offset from KIC position	$0.167 \pm 0.068$	2.46	$0.145 \pm 0.068$	$0.083 \pm 0.067$
photometric centroid source offset	$0.14 \pm 0.00$	97.58	$0.12 \pm 0.00$	$0.06 \pm 0.00$

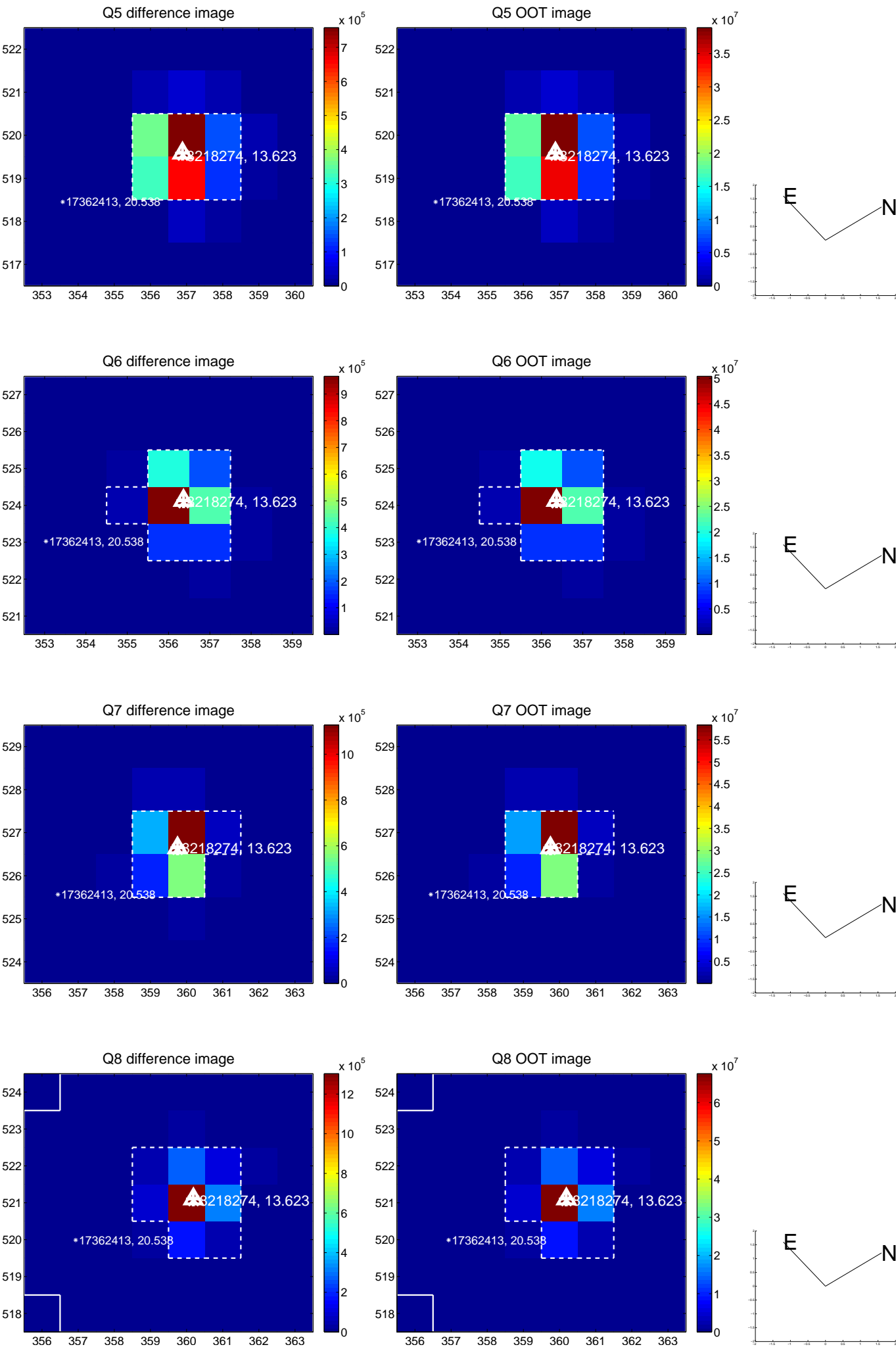


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

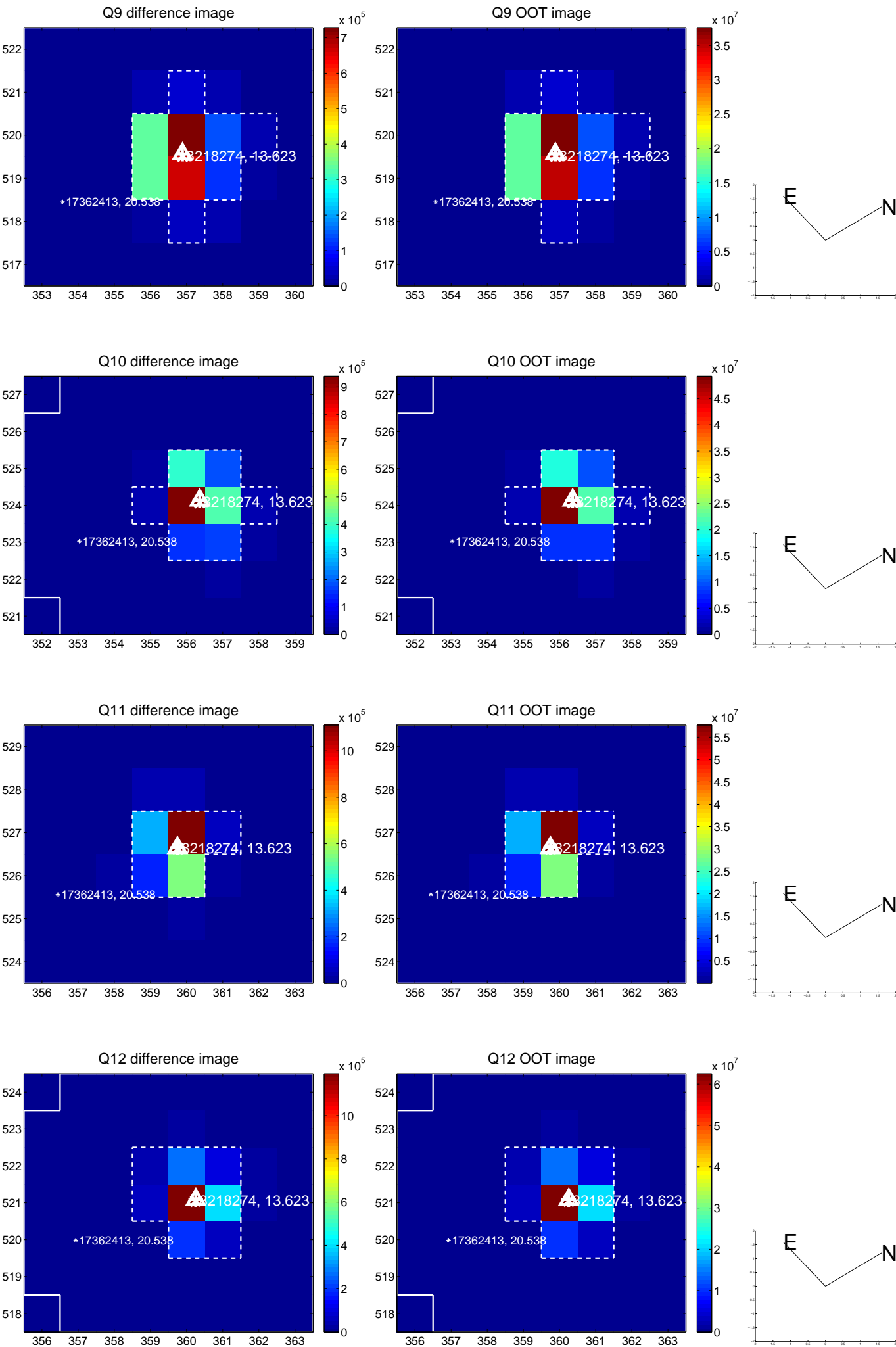


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

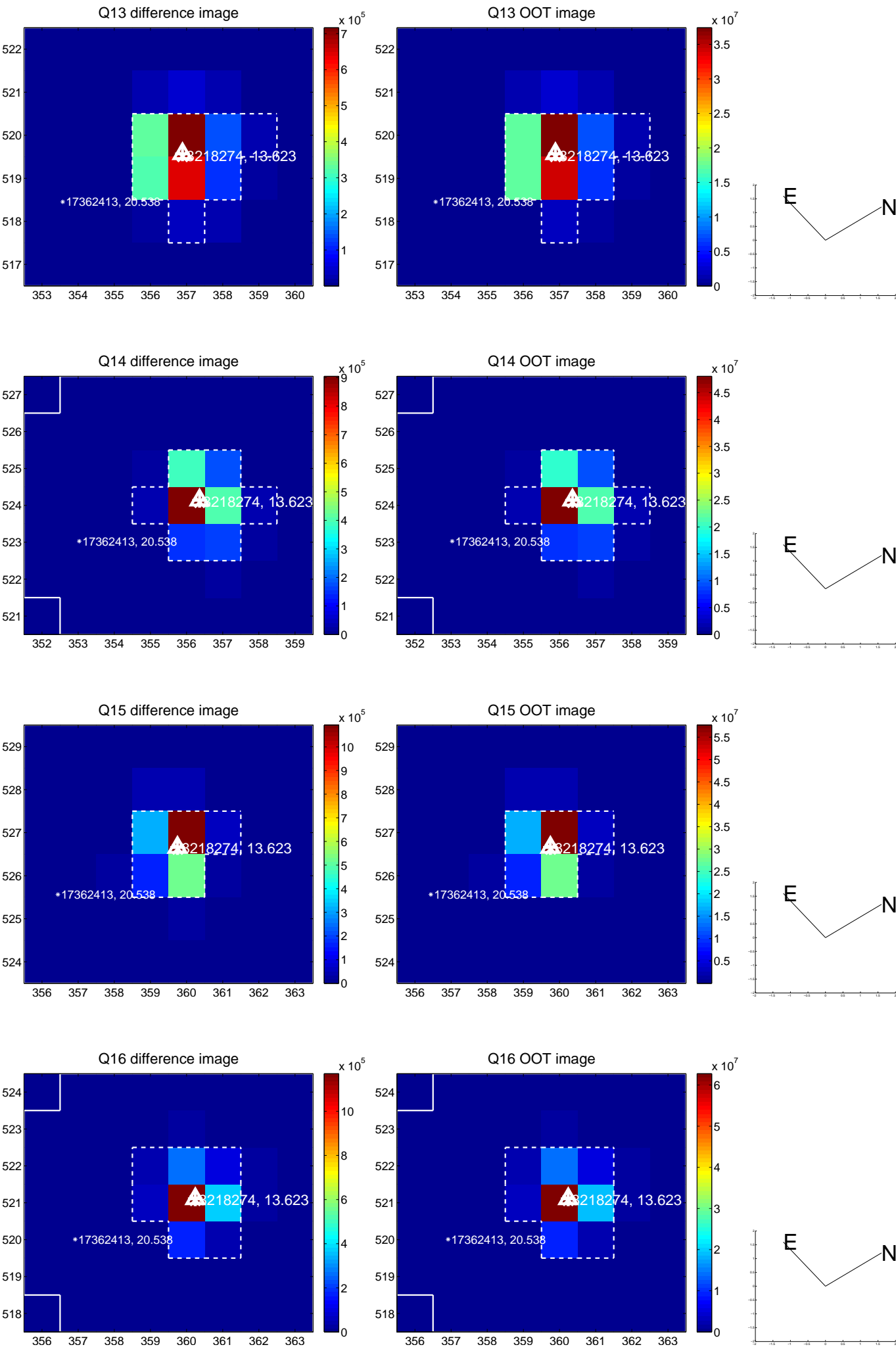




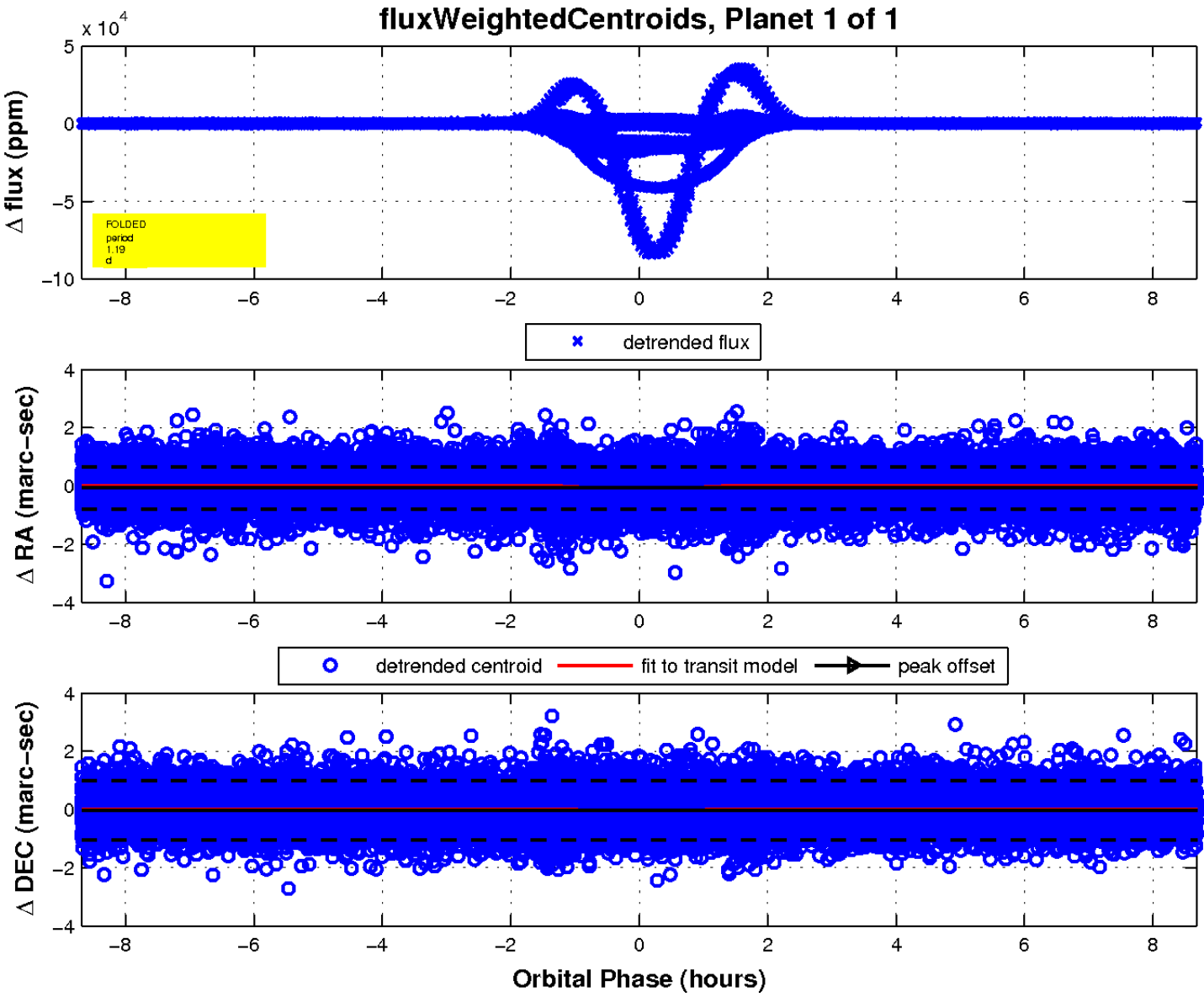
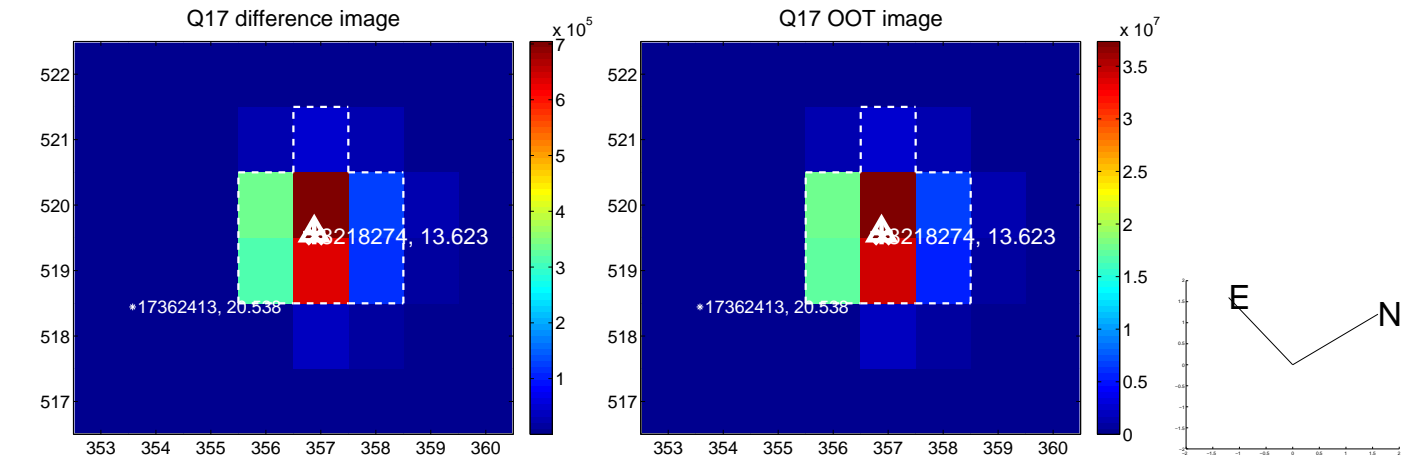
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



# UKIRT Image

Declination

