

# KIC 005308609

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
005308609-01	OBS	No	0.568269	131.540023	3.7	2.078	8.2	1.5	4.20	6683	0.90	0.00

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005308609-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV

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

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

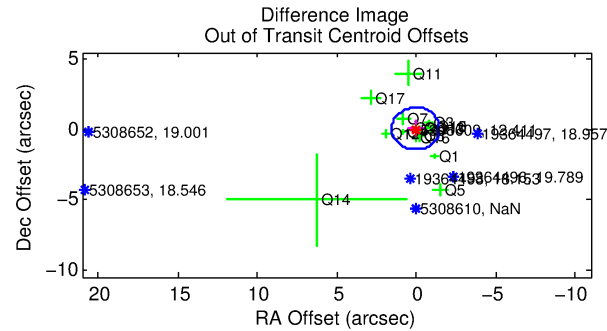
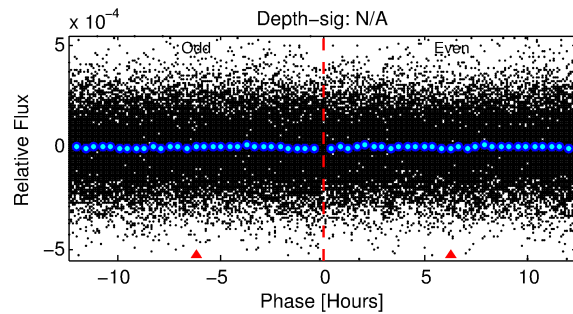
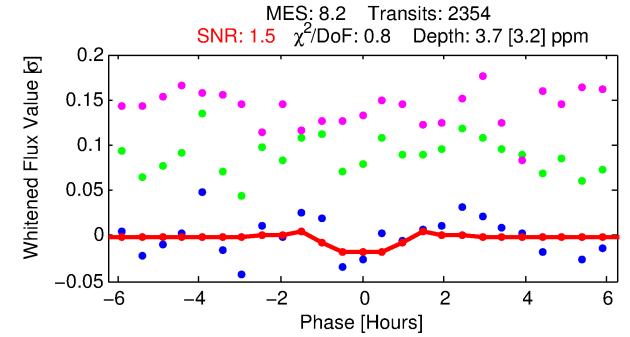
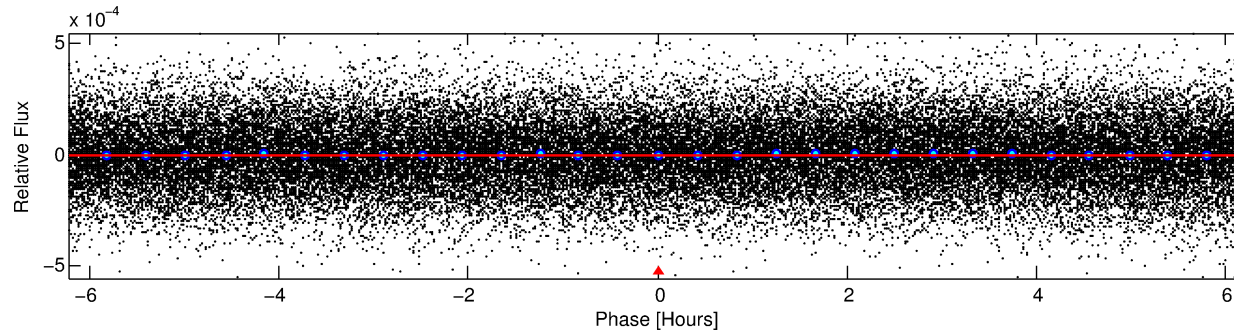
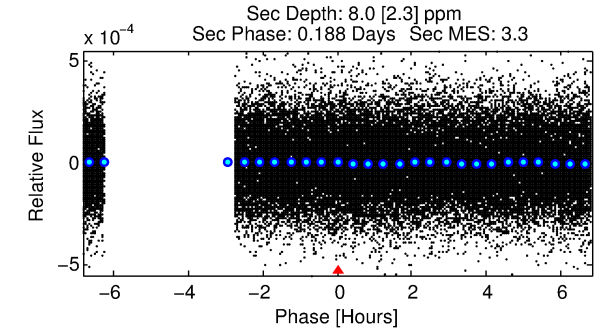
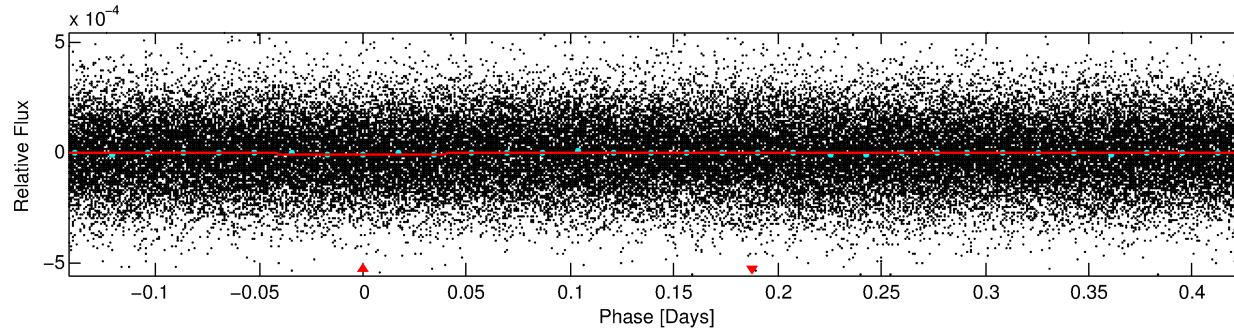
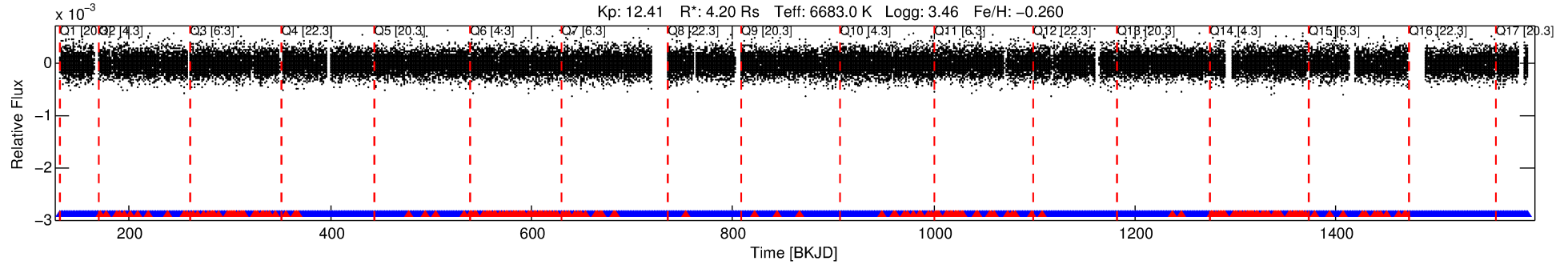
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 005308609-01

No Significant Match Found

# DV One-Page Summary

KIC: 5308609 Candidate: 1 of 1 Period: 0.568 d



## DV Fit Results:

Period = 0.56827 [0.00007] d  
Epoch = 131.5400 [0.0142] BKJD  
Rp/R\* = 0.0020 [0.0011]  
a/R\* = 1.50 [1.84]  
b = 0.82 [0.90]  
Seff = N/A  
Teq = N/A  
Rp = 0.90 [0.64] Re  
a = N/A  
Ag = N/A  
Teffp = N/A

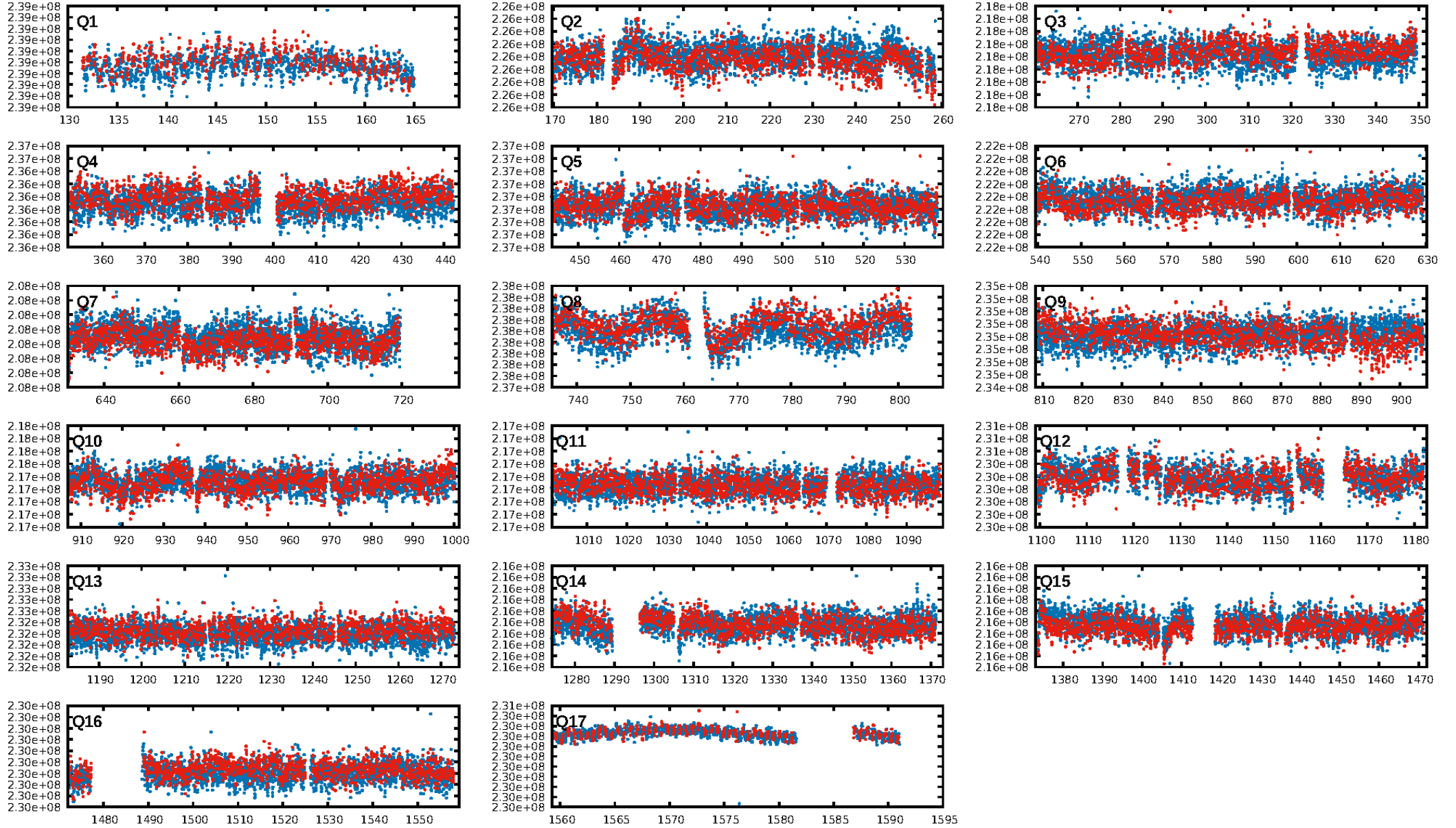
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 1.35e-12  
RollingBand-fgt: 0.90 [2023/2248]  
GhostDiagnostic-chr: N/A  
Centroid-sig: N/A  
Centroid-so: N/A  
OotOffset-rm: 0.077 arcsec [0.15σ]  
KicOffset-rm: 0.223 arcsec [0.49σ]  
OotOffset-st: 4/4/4/4 [16]  
KicOffset-st: 4/4/4/4 [16]  
DiffImageQuality-fgm: 0.38 [6/16]  
DiffImageOverlap-fno: 1.00 [17/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 16:00:48 Z

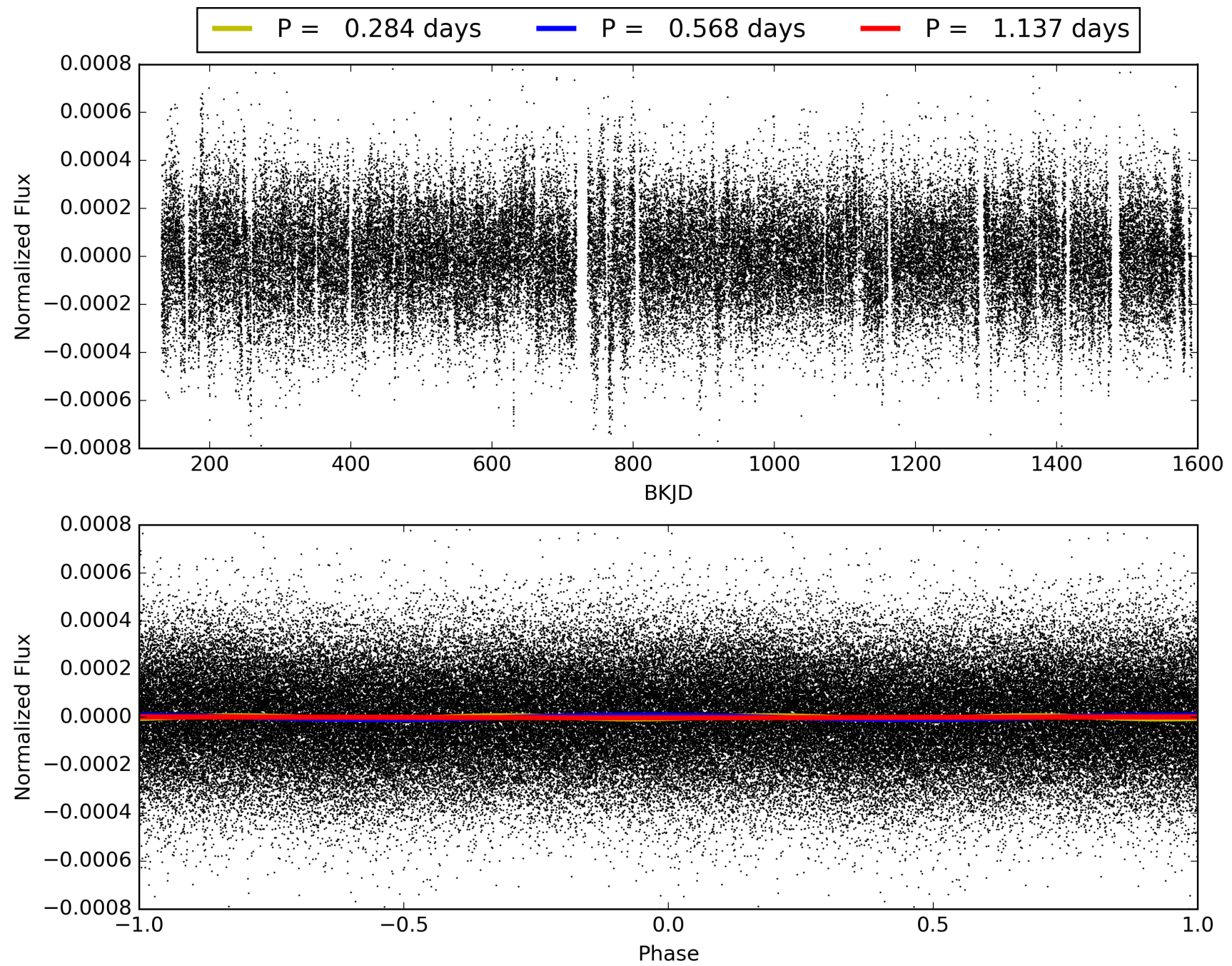
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 005308609-01, PDC Light Curves



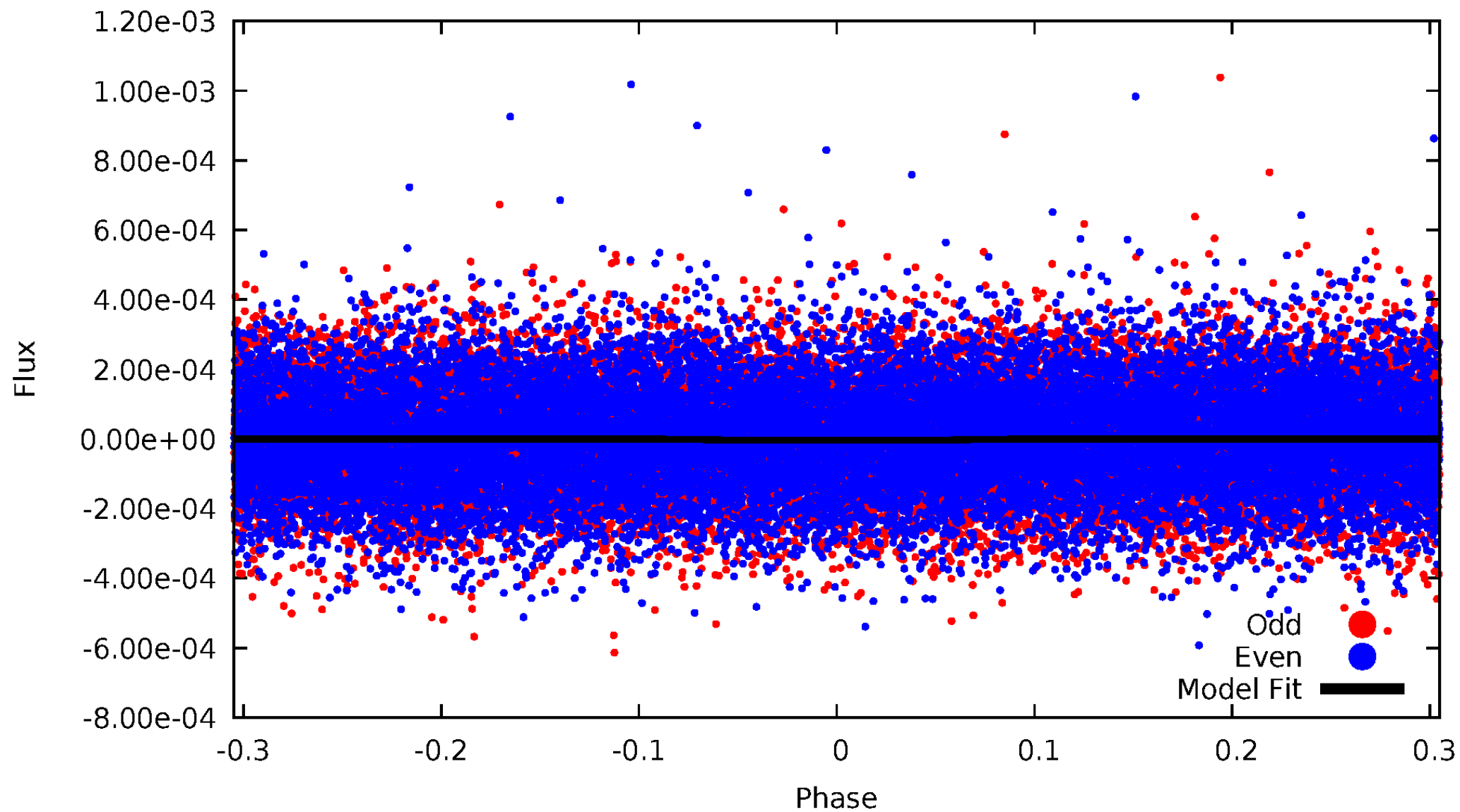


TCE 005308609-01



# DV Odd/Even

TCE 005308609-01



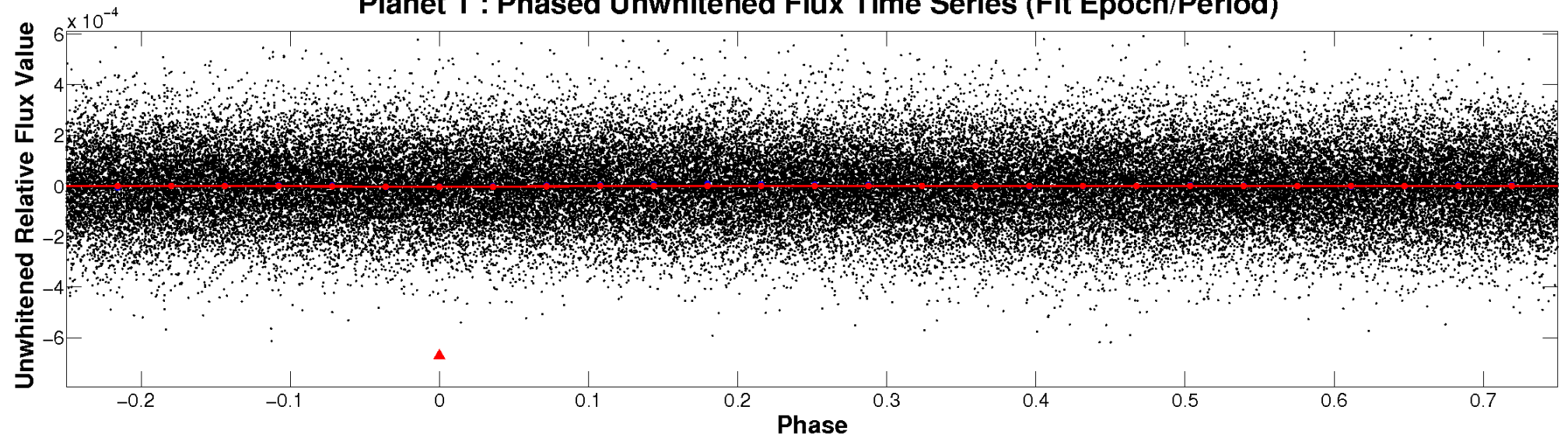


ALT Odd/Even

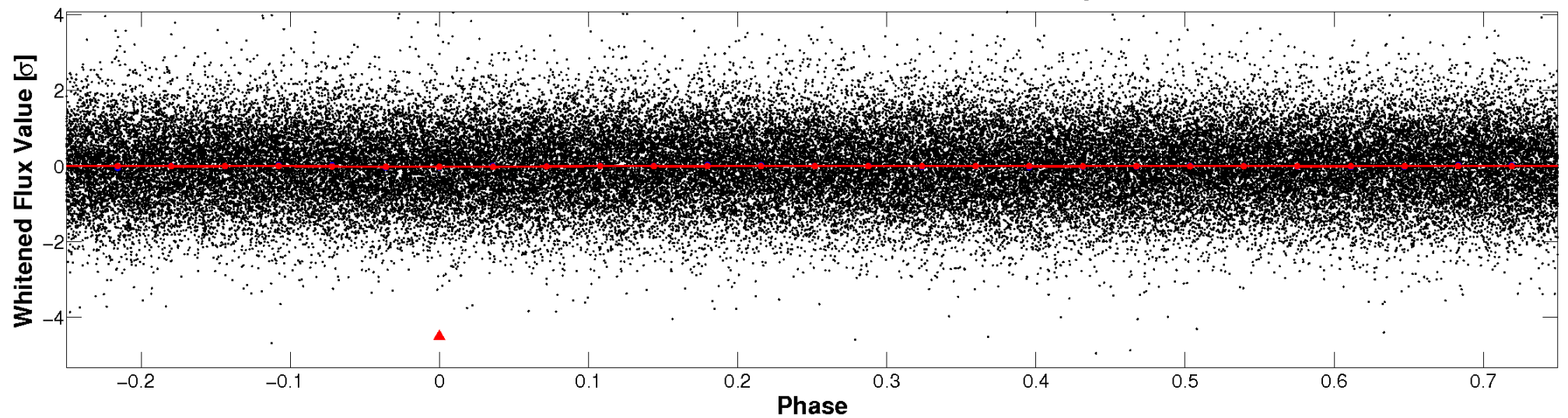
This plot does not exist for this TCE.

# Non-Whitened Vs. Whitened Light Curve

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



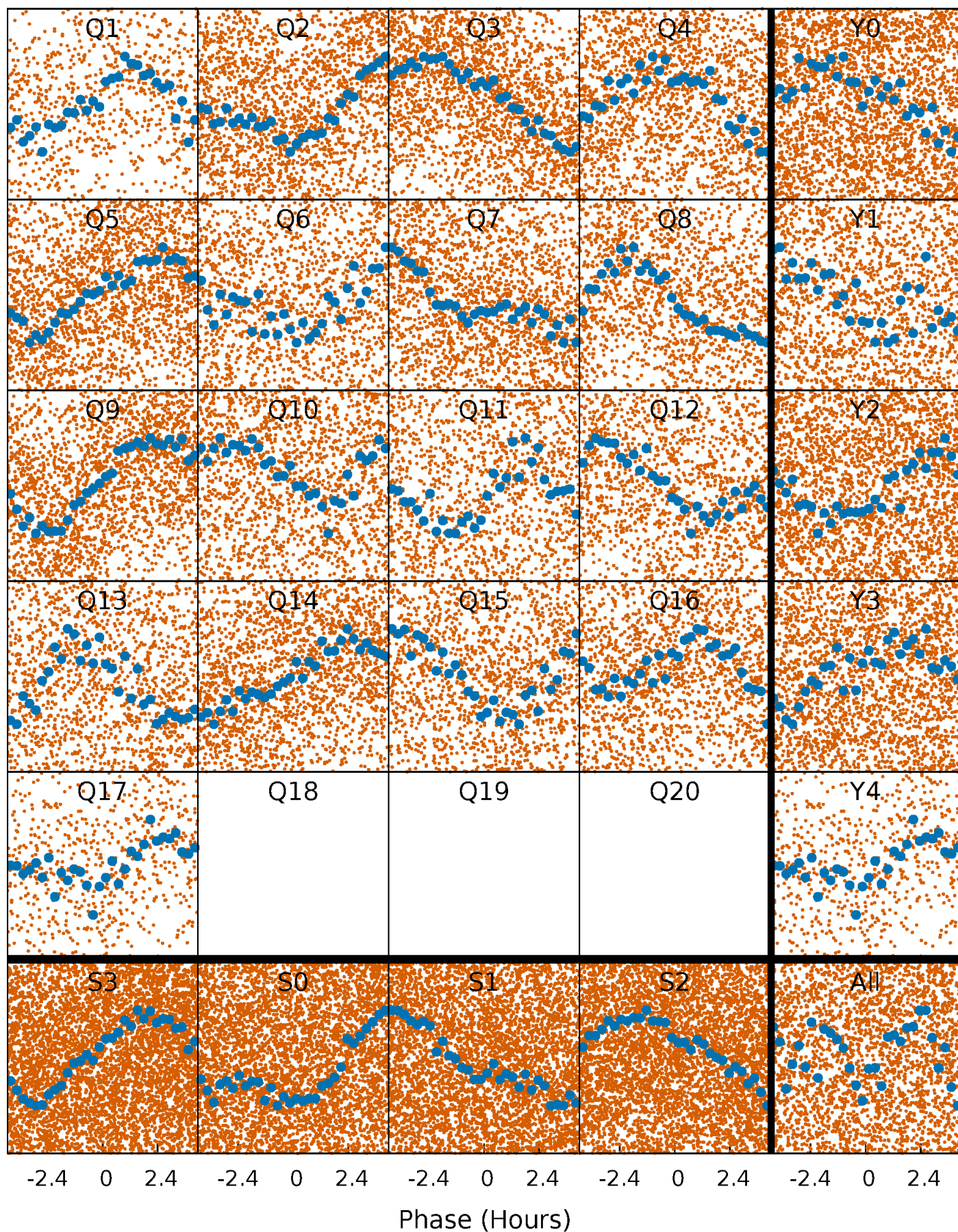
**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**





# PDC Quarter-Phased Transit Curves

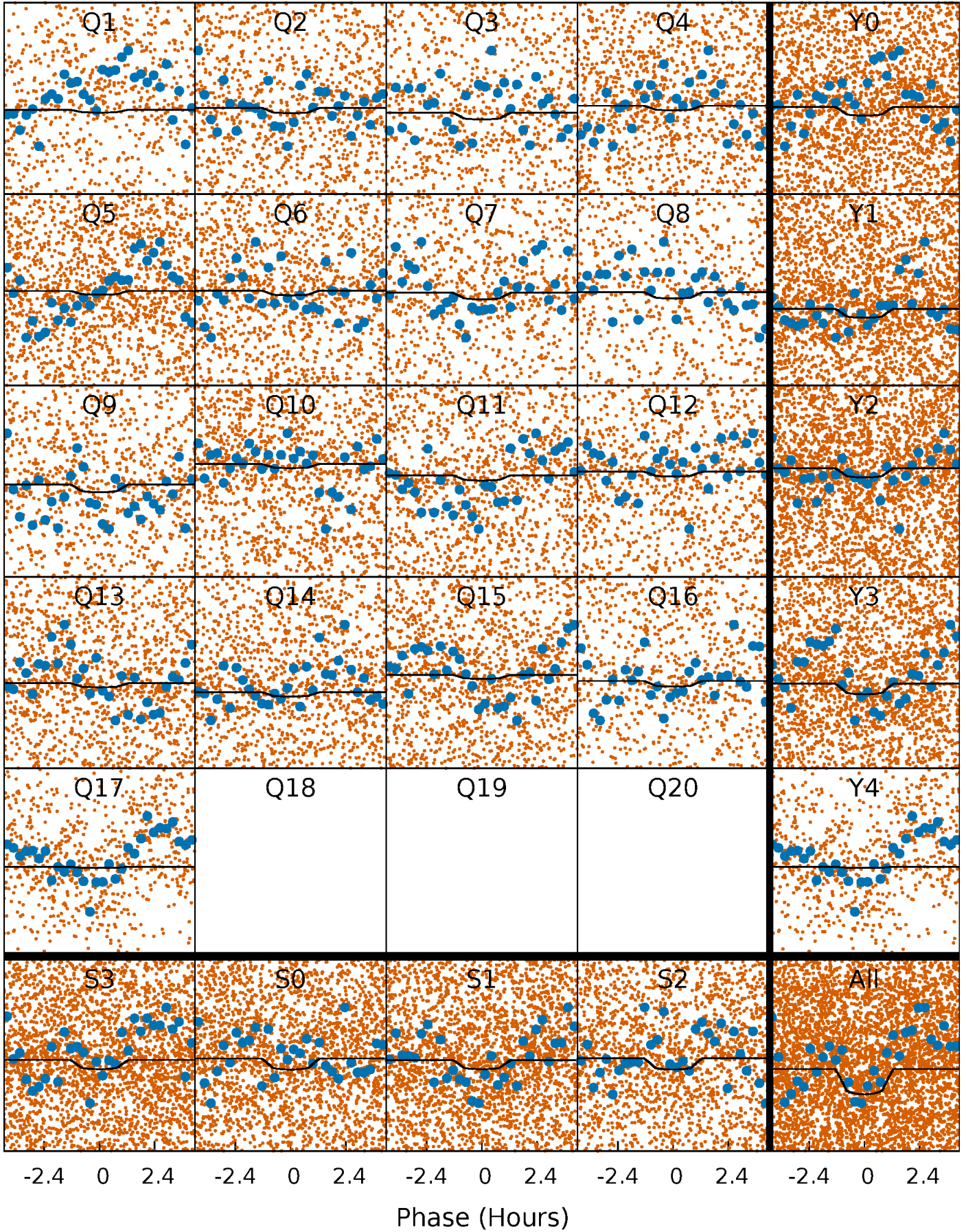
TCE 005308609-01 P= 0.568269 Days  $T_0=131.540023$  (BKJD)





# DV Quarter-Phased Transit Curves

TCE 005308609-01 P= 0.568269 Days  $T_0=131.540023$  (BKJD)

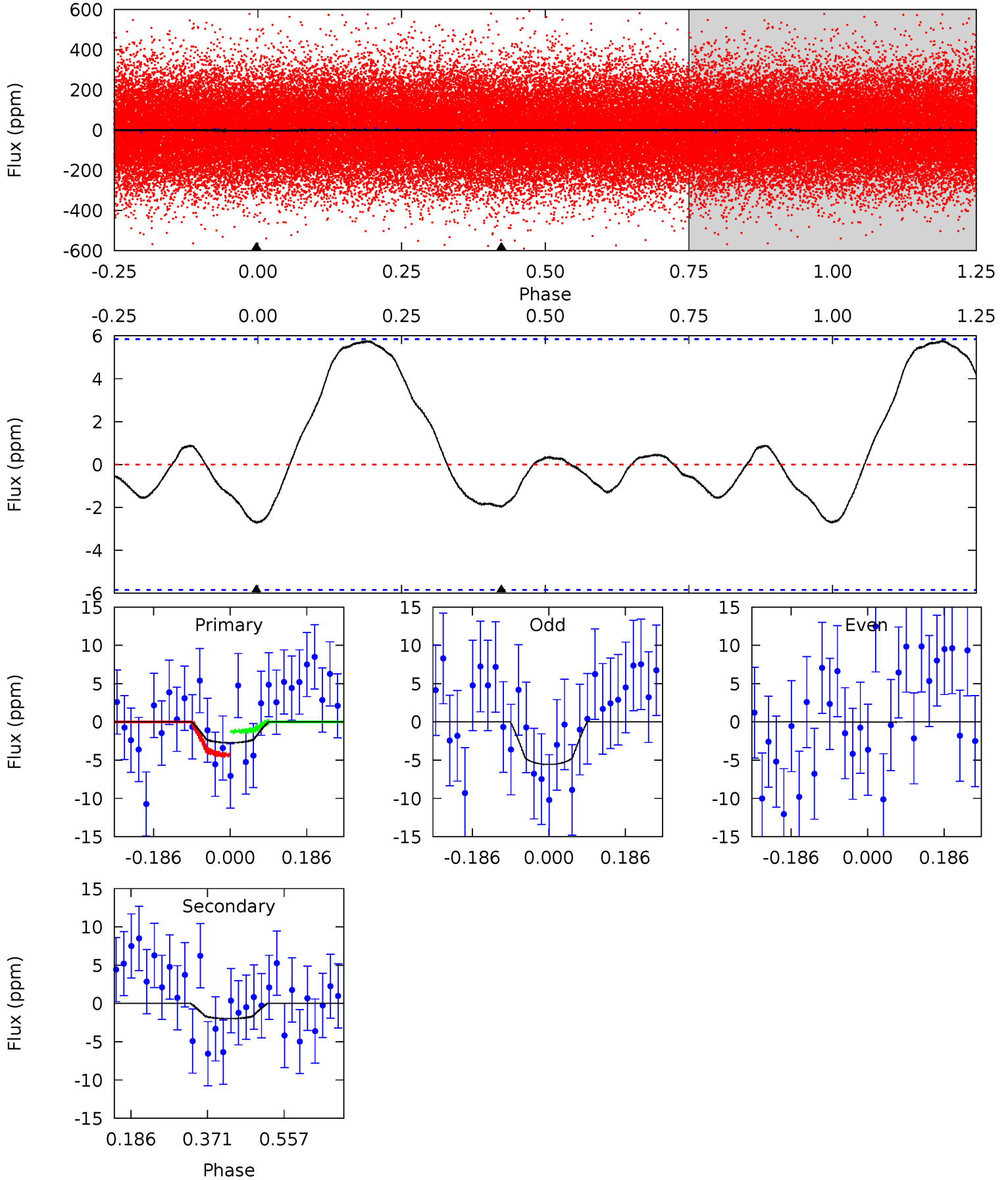


This plot does not exist for this TCE.

# DV Model-Shift Uniqueness Test

005308609-01, P = 0.568269 Days, E = 130.971754 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
2.06	1.50	0	0	4.43	1.32	1.88	2.06	2.06	1.50	1.50	2.10	0.46	0.68	1.17



## Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.



### Stellar Parameters For KIC 005308609

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$6683^{+180}_{-200}$	$3.455^{+0.391}_{-0.092}$	$-0.260^{+0.350}_{-0.300}$	$4.200^{+0.575}_{-1.725}$	$1.837^{+0.133}_{-0.427}$	$0.035^{+0.107}_{-0.010}$
	+3%/-3%	+11%/-3%	+135%/-115%	+14%/-41%	+7%/-23%	+305%/-30%
Source	PHO1	FLK73	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 005308609-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-2 \pm 1$	$0.85^{+0.53}_{-0.47}$	$6442^{+396}_{-649}$	$3530^{+4160}_{-8510}$	$0.343^{+1.438}_{-0.275}$
Alt.	N/A	N/A	N/A	N/A	N/A

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

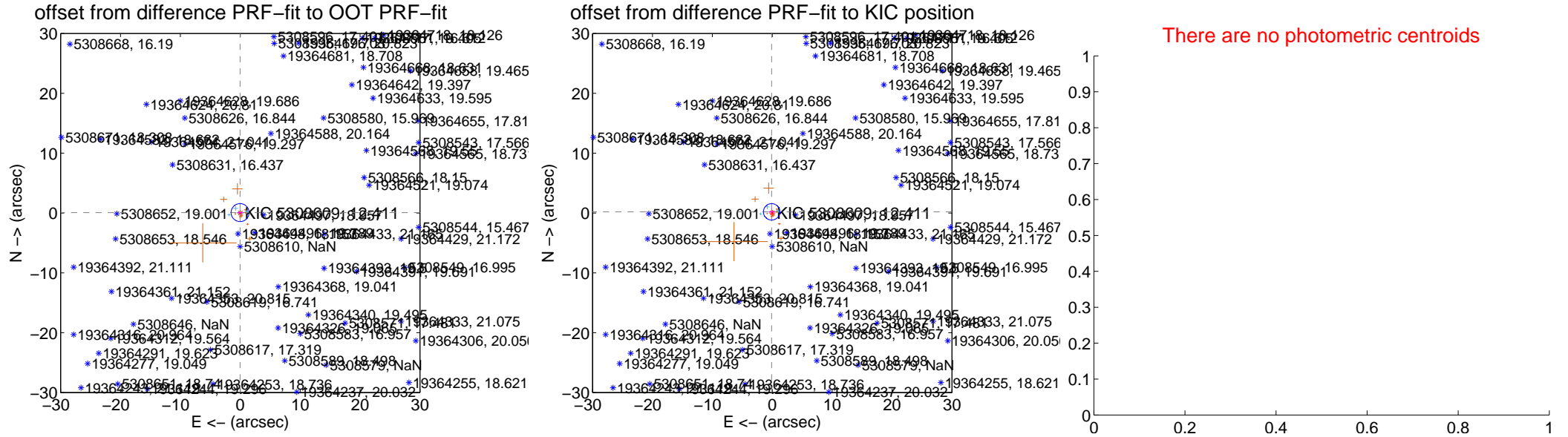
## DV Centroid Data

Supplemental centroid analysis for 005308609-01. Kepler magnitude: 12.41. Transit SNR 1.45

There are 6 quarters with good PRF difference image offsets

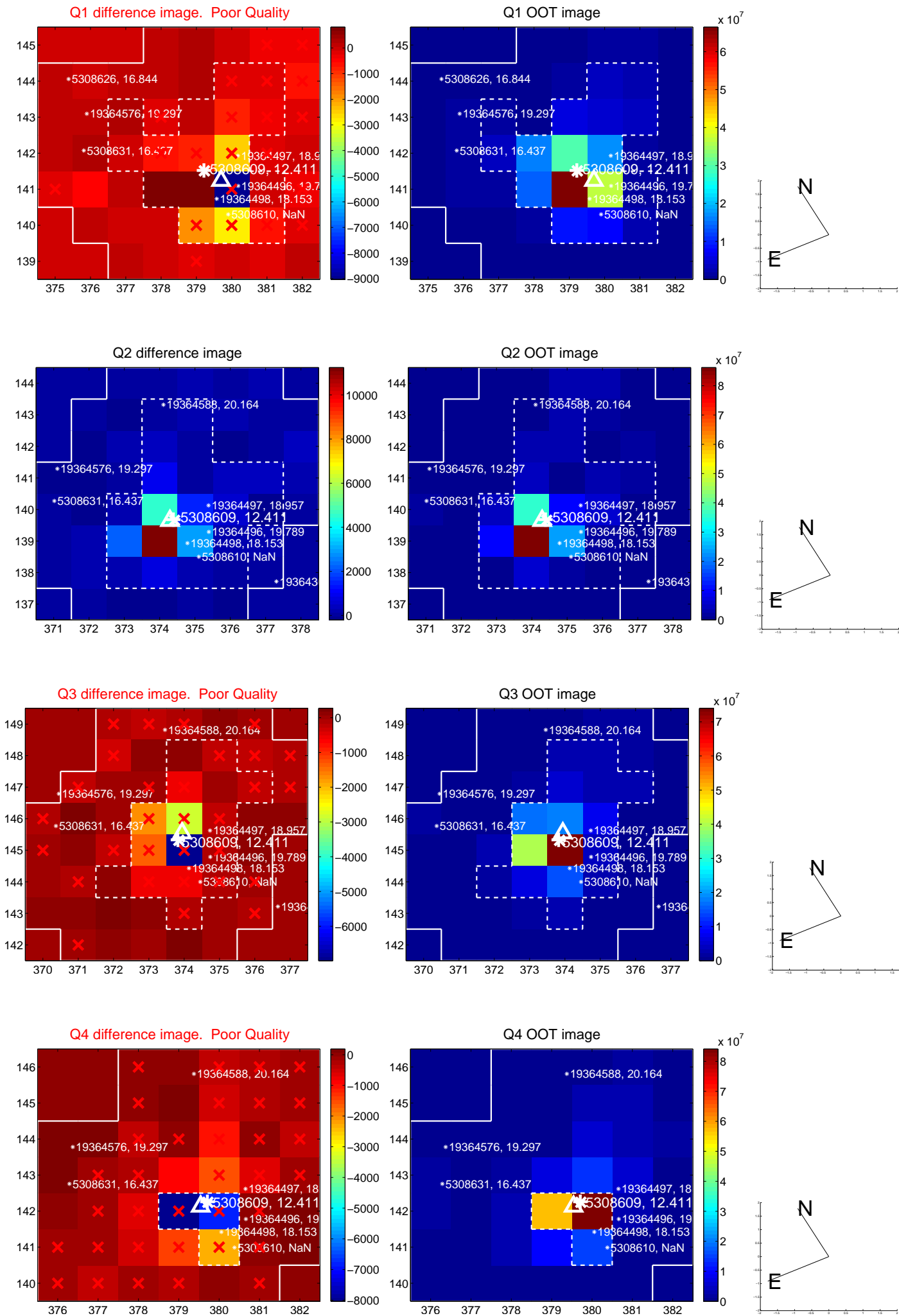
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.077 \pm 0.501$	0.15	$0.034 \pm 0.467$	$0.069 \pm 0.539$
PRF-fit source offset from KIC position	$0.223 \pm 0.457$	0.49	$0.106 \pm 0.467$	$0.196 \pm 0.536$
photometric centroid source offset	—	—	—	—

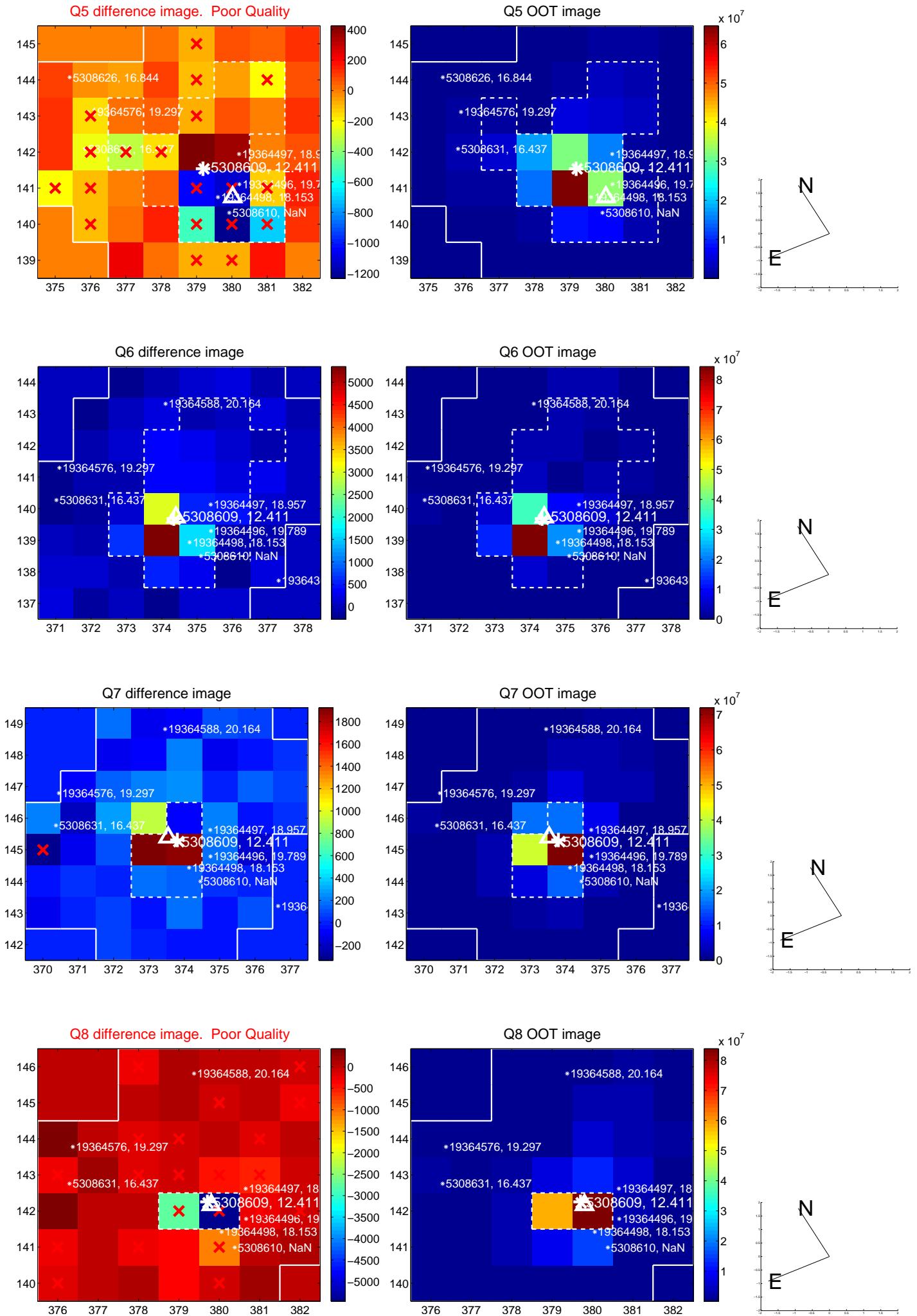


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

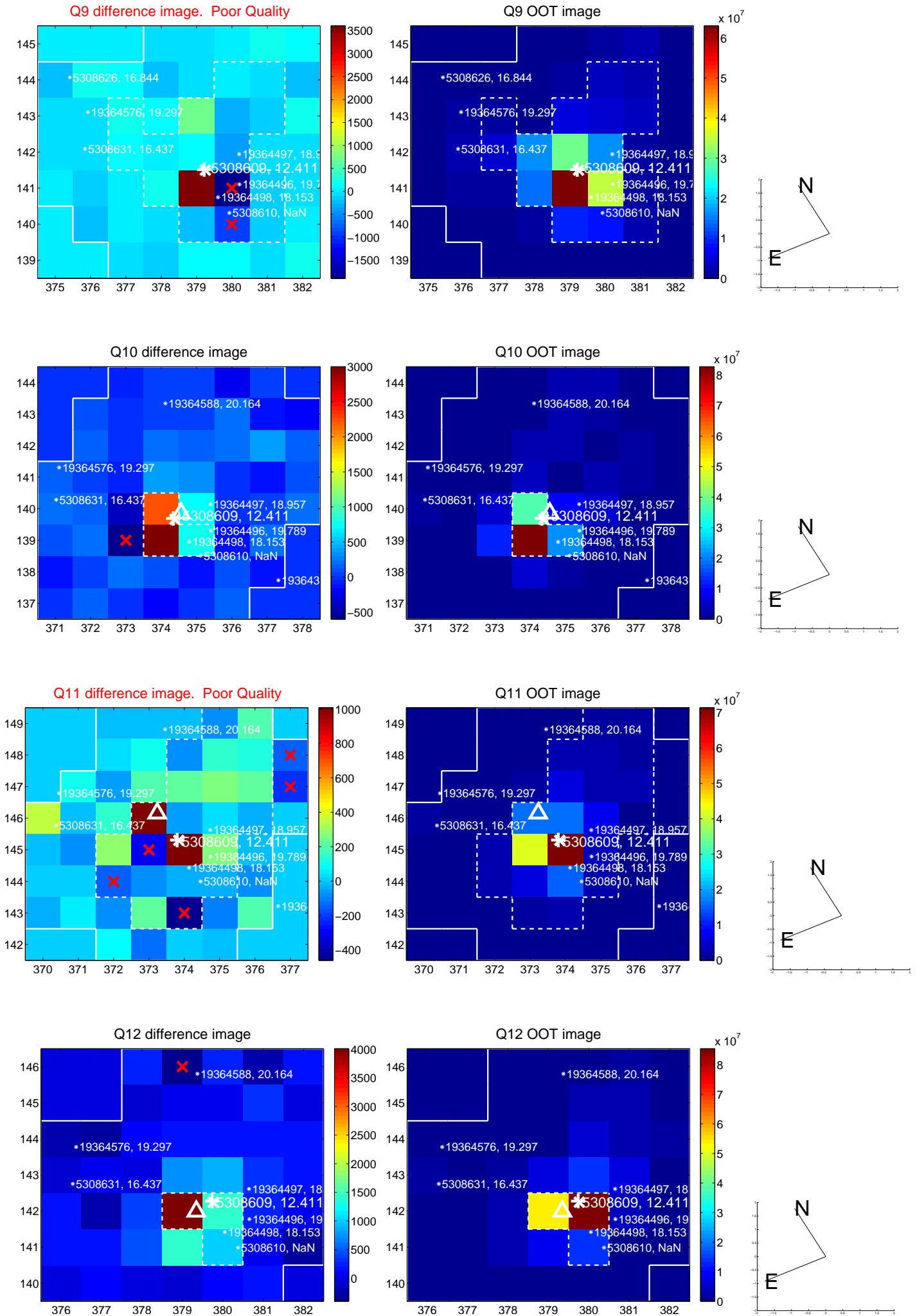
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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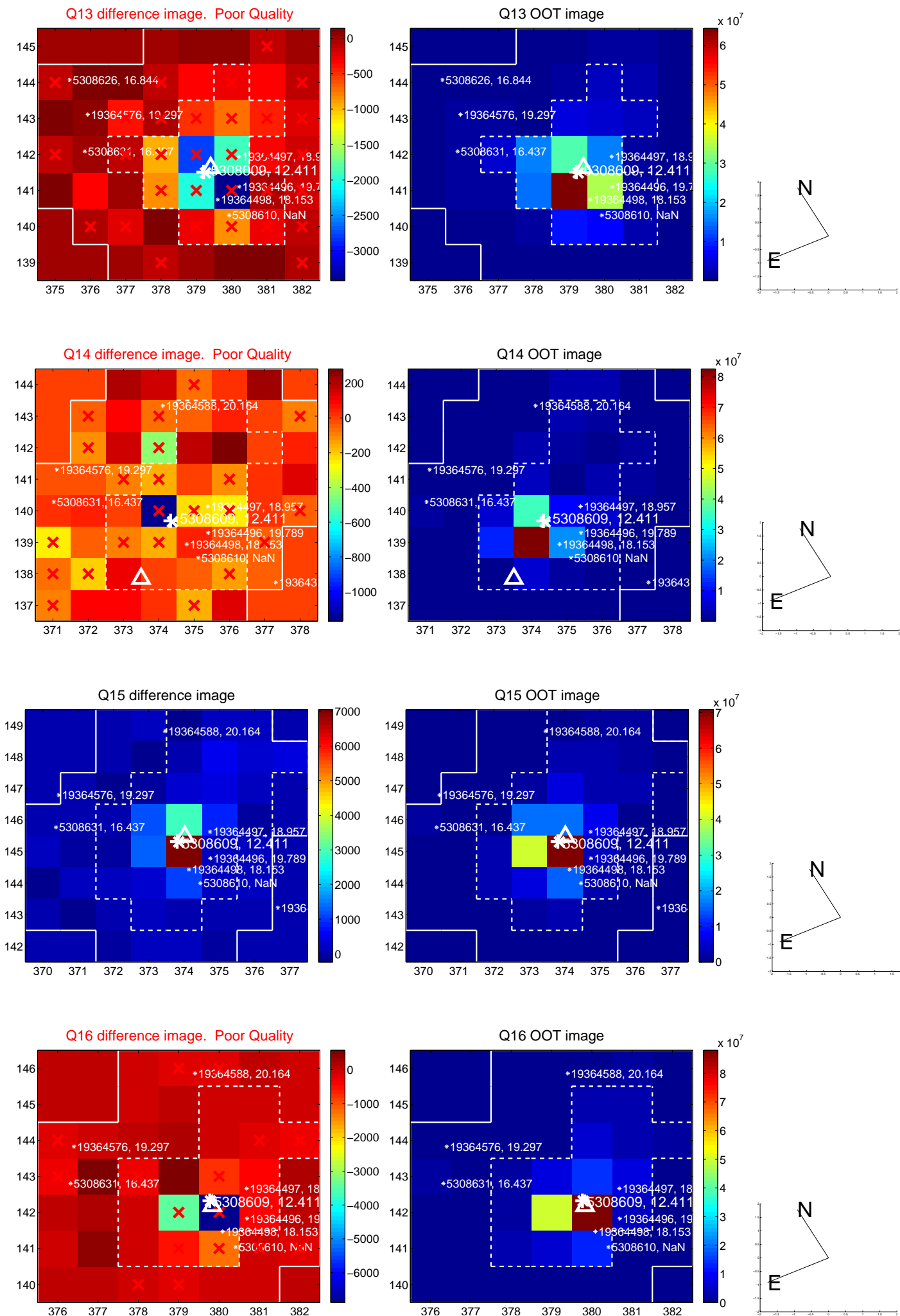


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

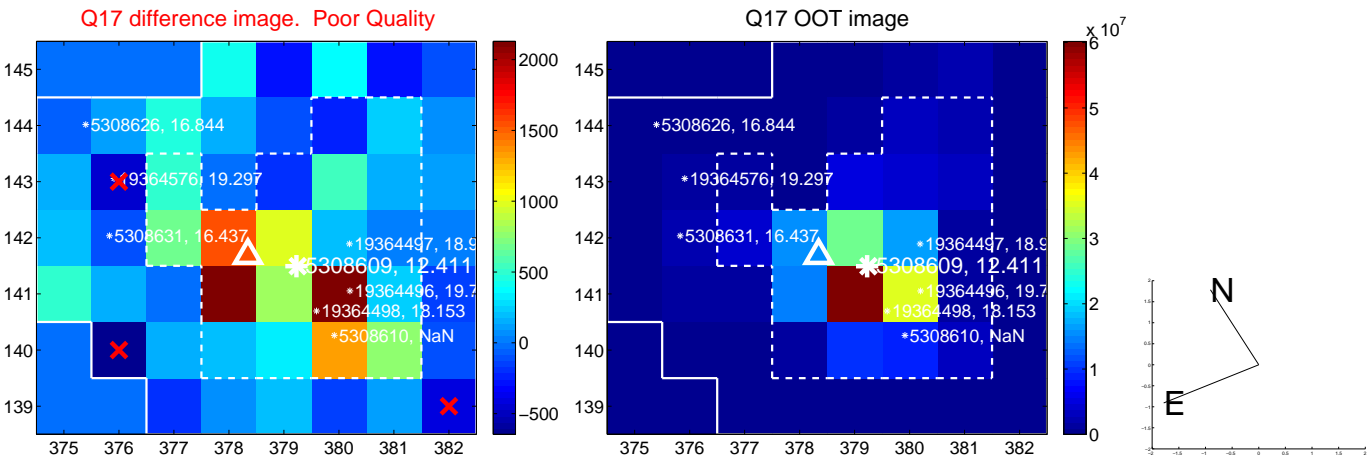




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folded centroid time series figure for this object.

UKIRT Image

Declination

