

# KIC 004136314

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
004136314-01	OBS	No	0.790881	132.305455	0.1	4.929	7.3	0.0	1.00	5780	0.03	3568.27

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004136314-01	OBS	FP	0.00	1	0	1	0	SWEET_NTL—LPP_DV—LPP_ALT—CENT_RESOLVED_OFFSET

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

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

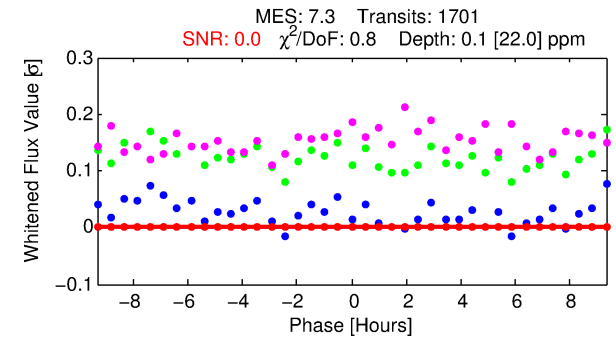
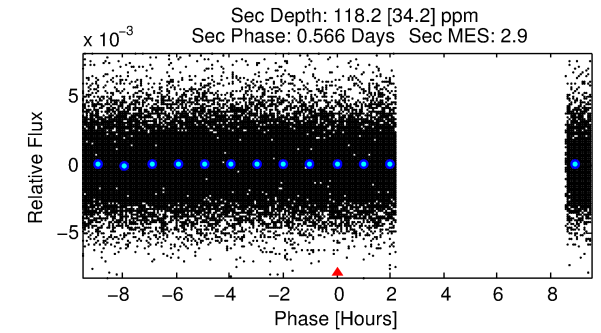
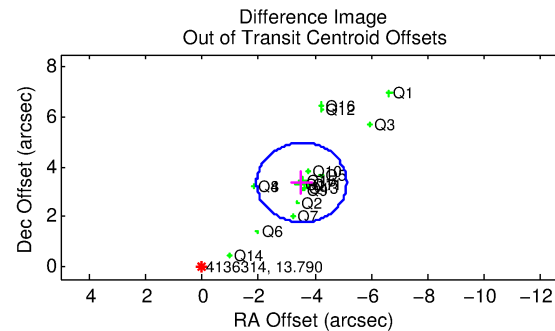
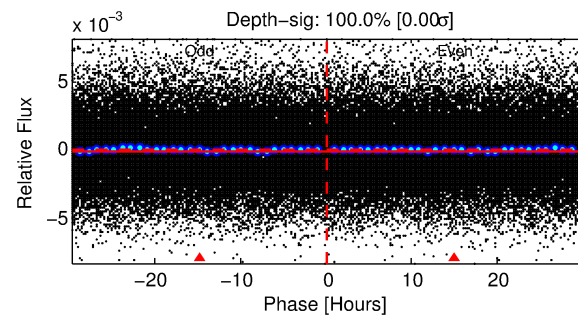
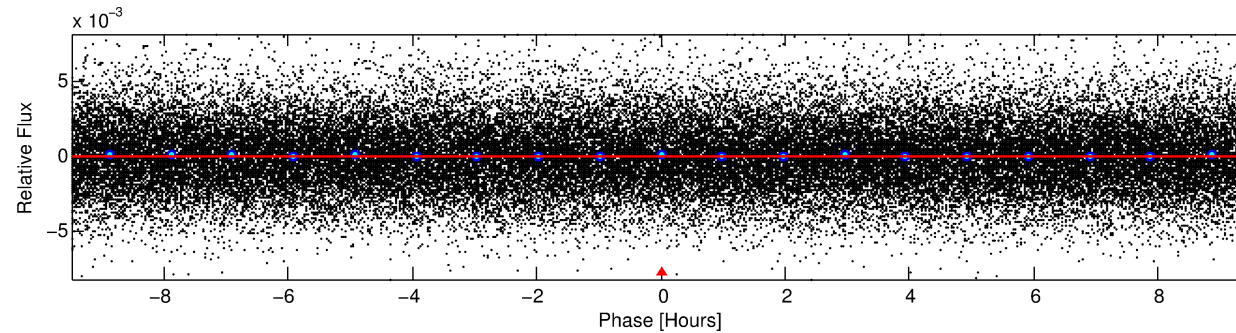
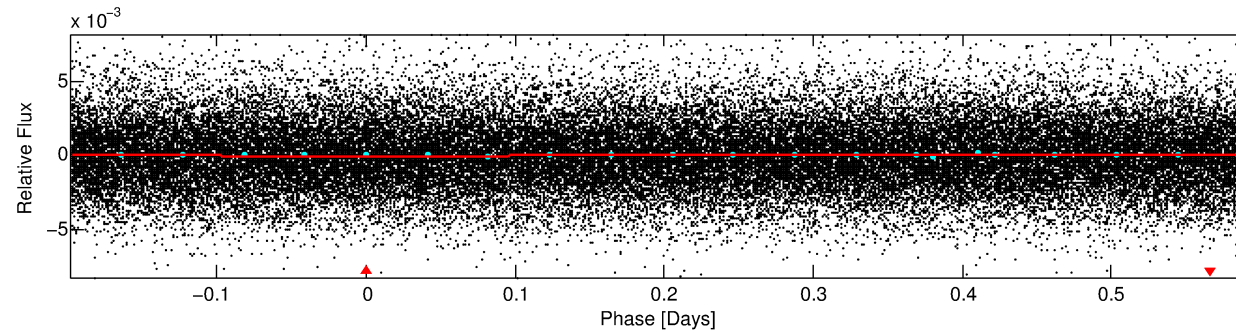
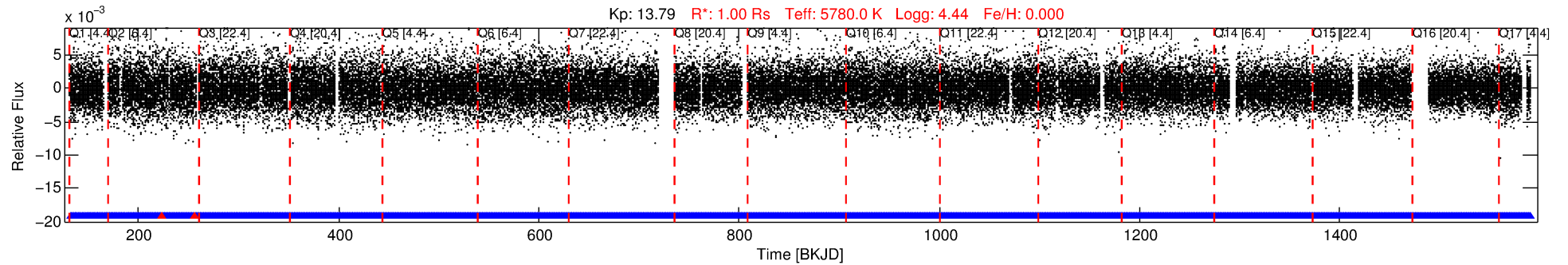
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 004136314-01

No Significant Match Found

# DV One-Page Summary

KIC: 4136314 Candidate: 1 of 1 Period: 0.791 d



## DV Fit Results:

Period = 0.79088 [0.03876] d  
Epoch = 132.3055 [18.8884] BKJD  
Rp/R\* = 0.0002 [0.0538]  
a/R\* = 1.33 [378.83]  
b = 0.37 [1547.05]  
Seff = 3568.27 [233.17]  
Teff = 1971 [32] K  
Rp = 0.02 [5.87] Re  
a = 0.0167 [0.0005] AU  
Ag = 29910.28 [14221370.98] [0.00σ]  
Teffp = 40072 [4763444] K [0.01σ]

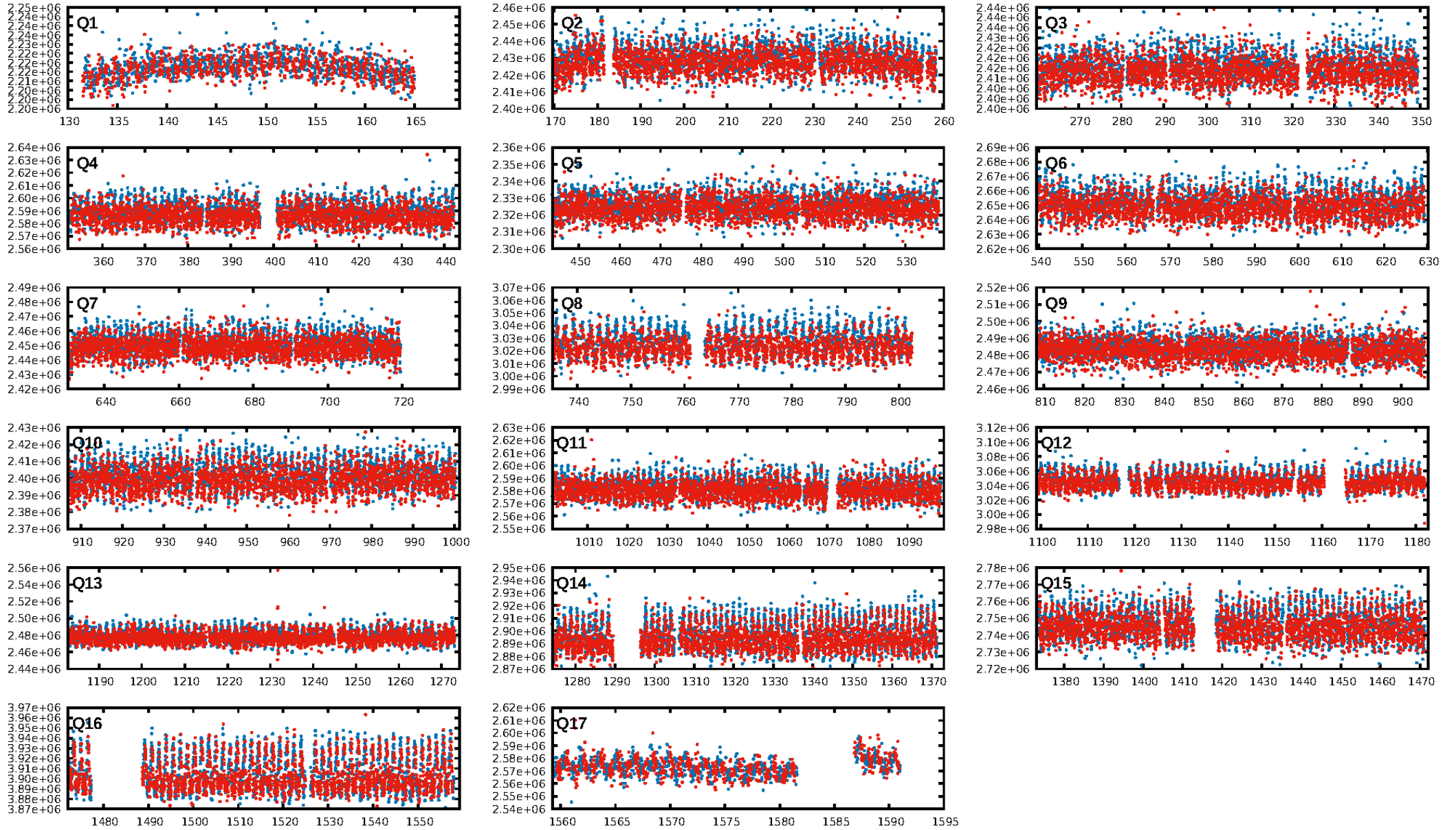
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 2.85e-09  
RollingBand-fgt: 1.00 [1622/1624]  
GhostDiagnostic-chr: N/A  
Centroid-sig: N/A  
Centroid-so: N/A  
OotOffset-rm: 4.876 arcsec [9.18σ]  
KicOffset-rm: 5.392 arcsec [11.28σ]  
OotOffset-st: 4/4/4/5 [17]  
KicOffset-st: 4/4/4/5 [17]  
DiffImageQuality-fgm: 0.00 [0/17]  
DiffImageOverlap-fno: 1.00 [17/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 02:16:10 Z

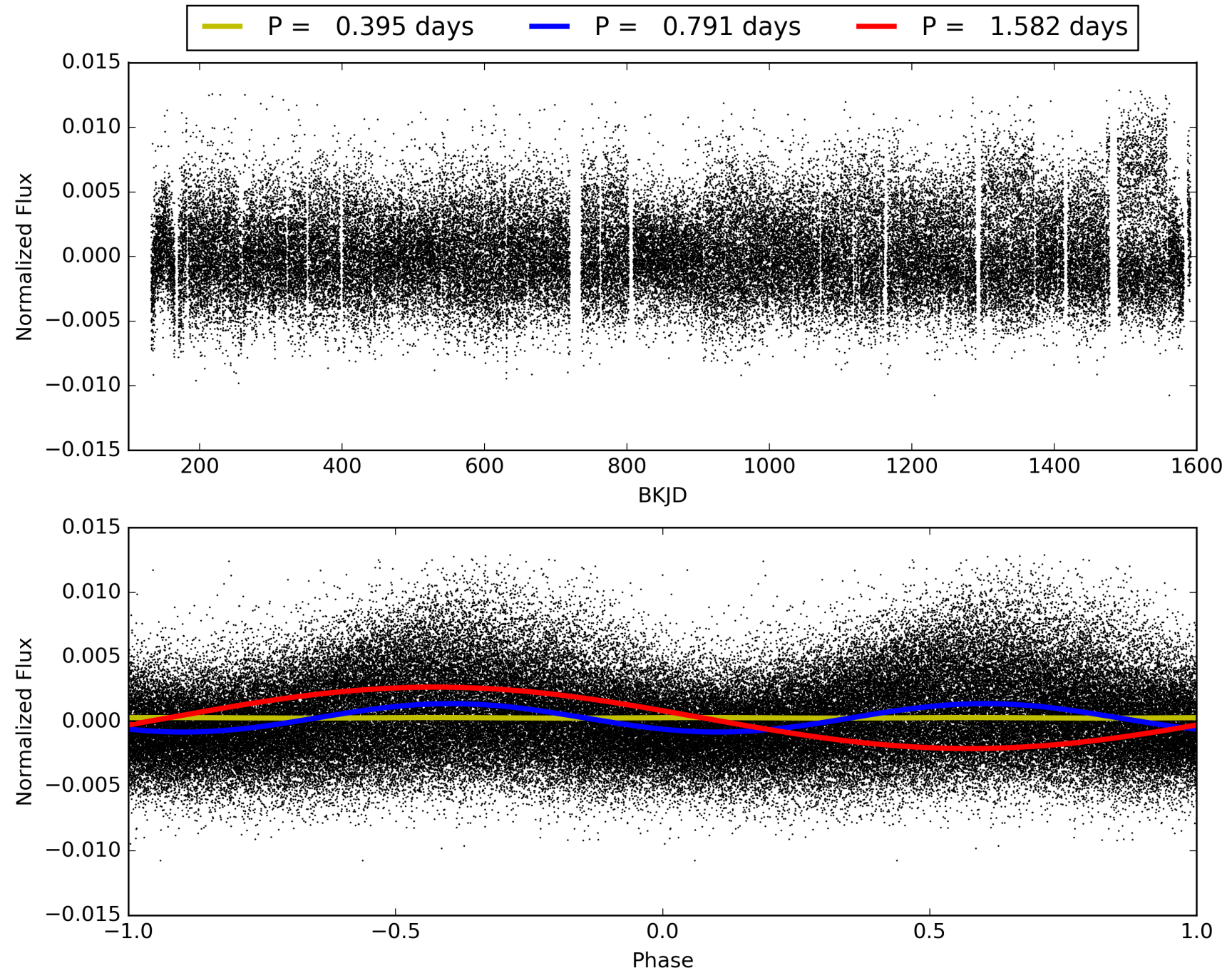
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 004136314-01, PDC Light Curves



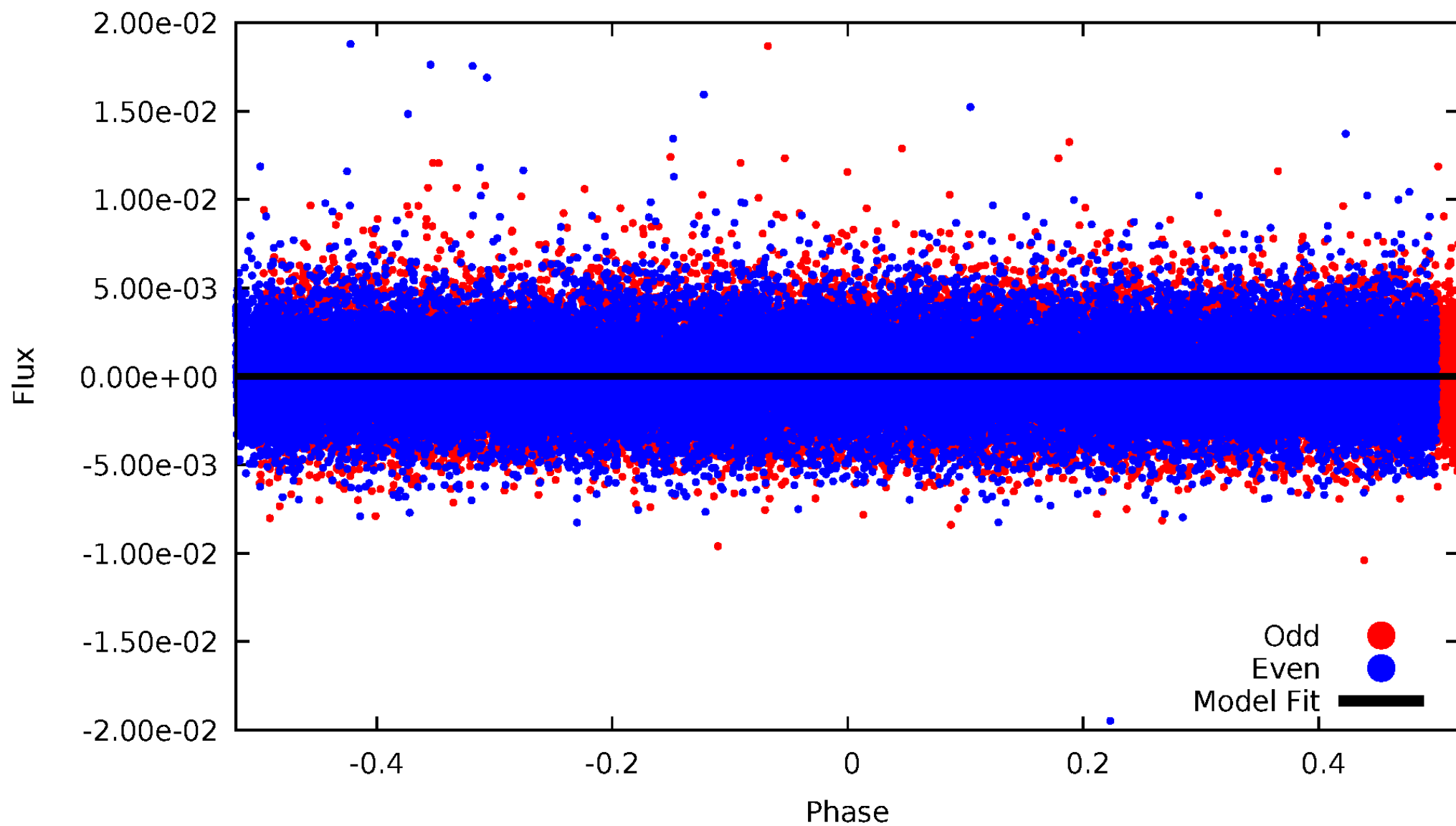


TCE 004136314-01



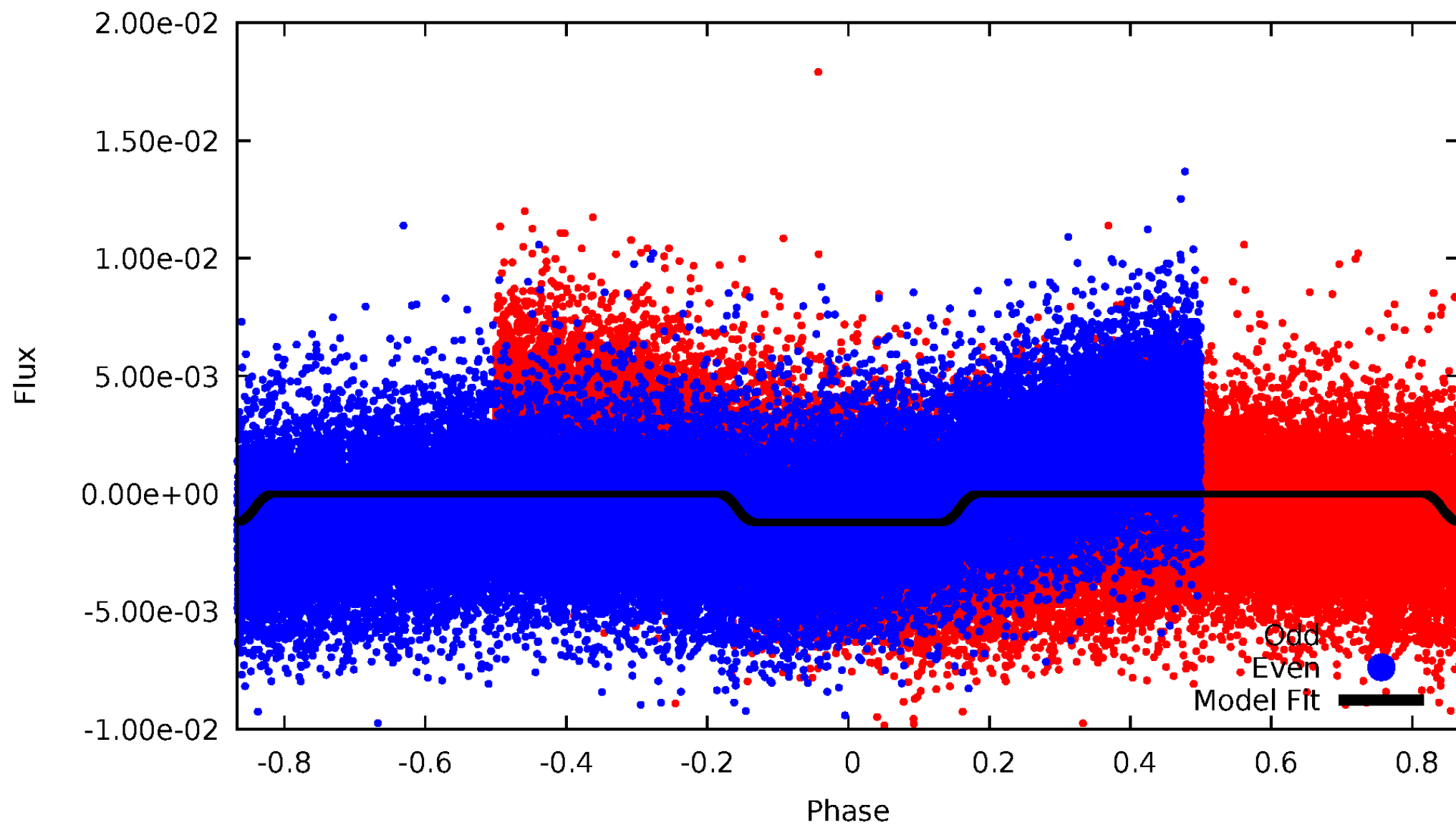
# DV Odd/Even

TCE 004136314-01

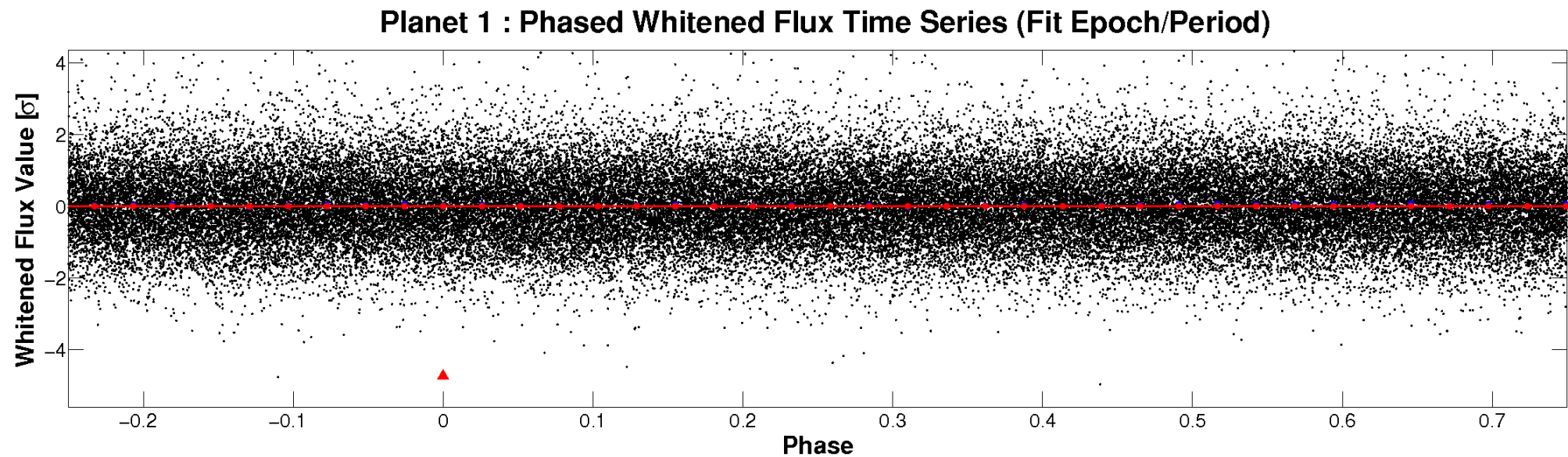
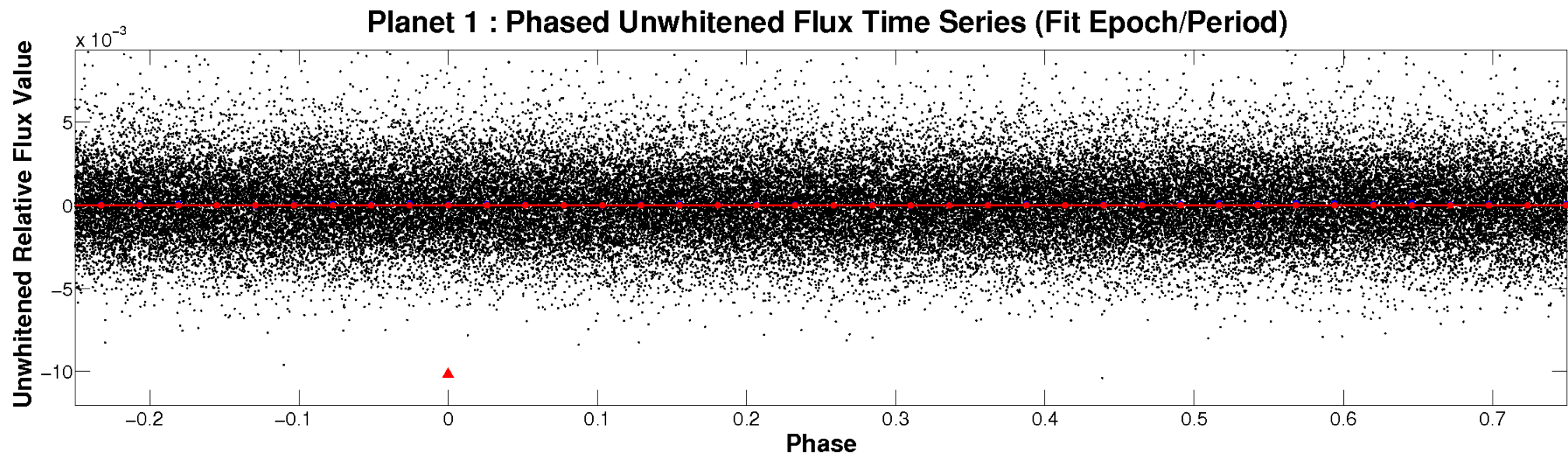


# ALT Odd/Even

TCE 004136314-01



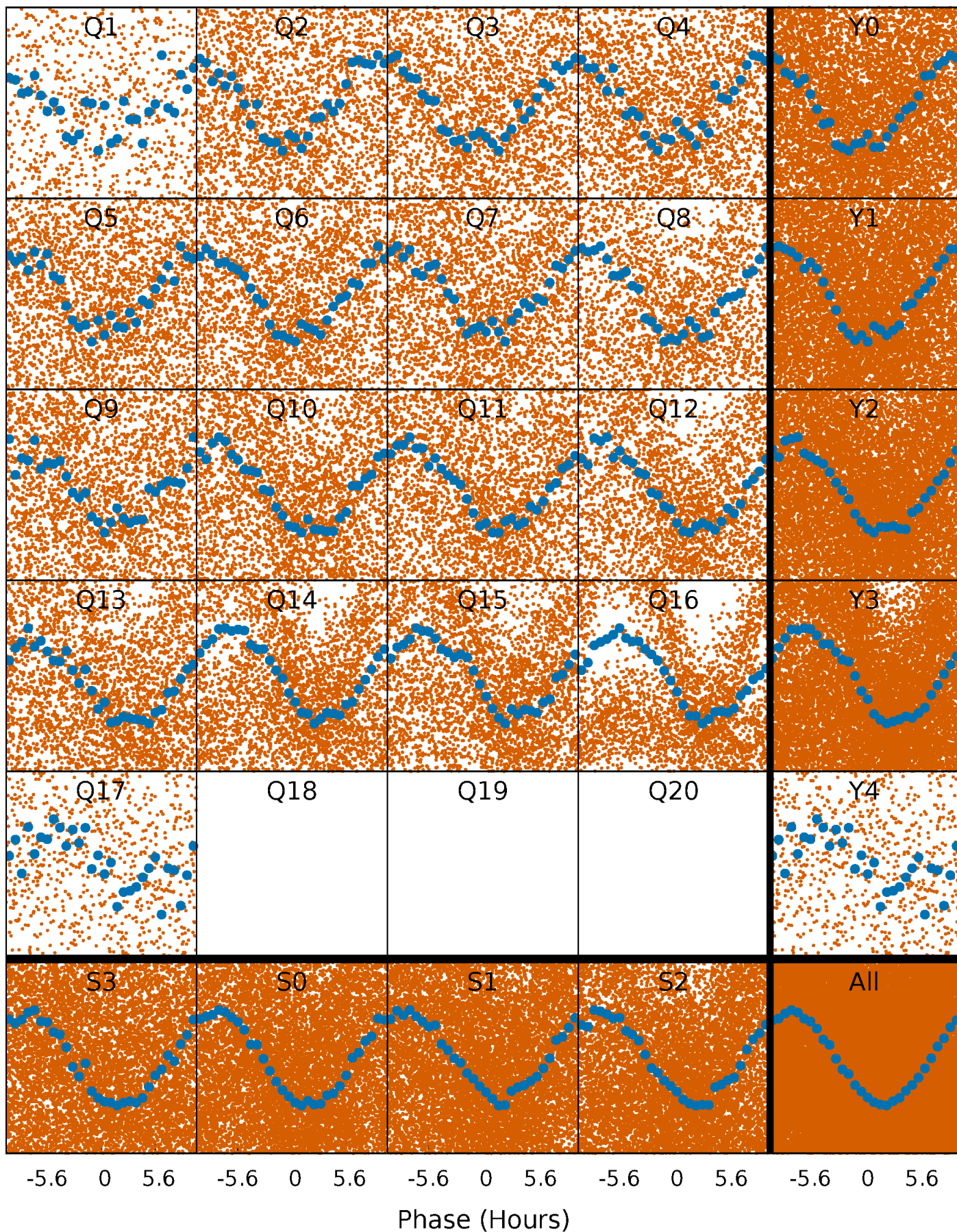
# Non-Whitened Vs. Whitened Light Curve





# PDC Quarter-Phased Transit Curves

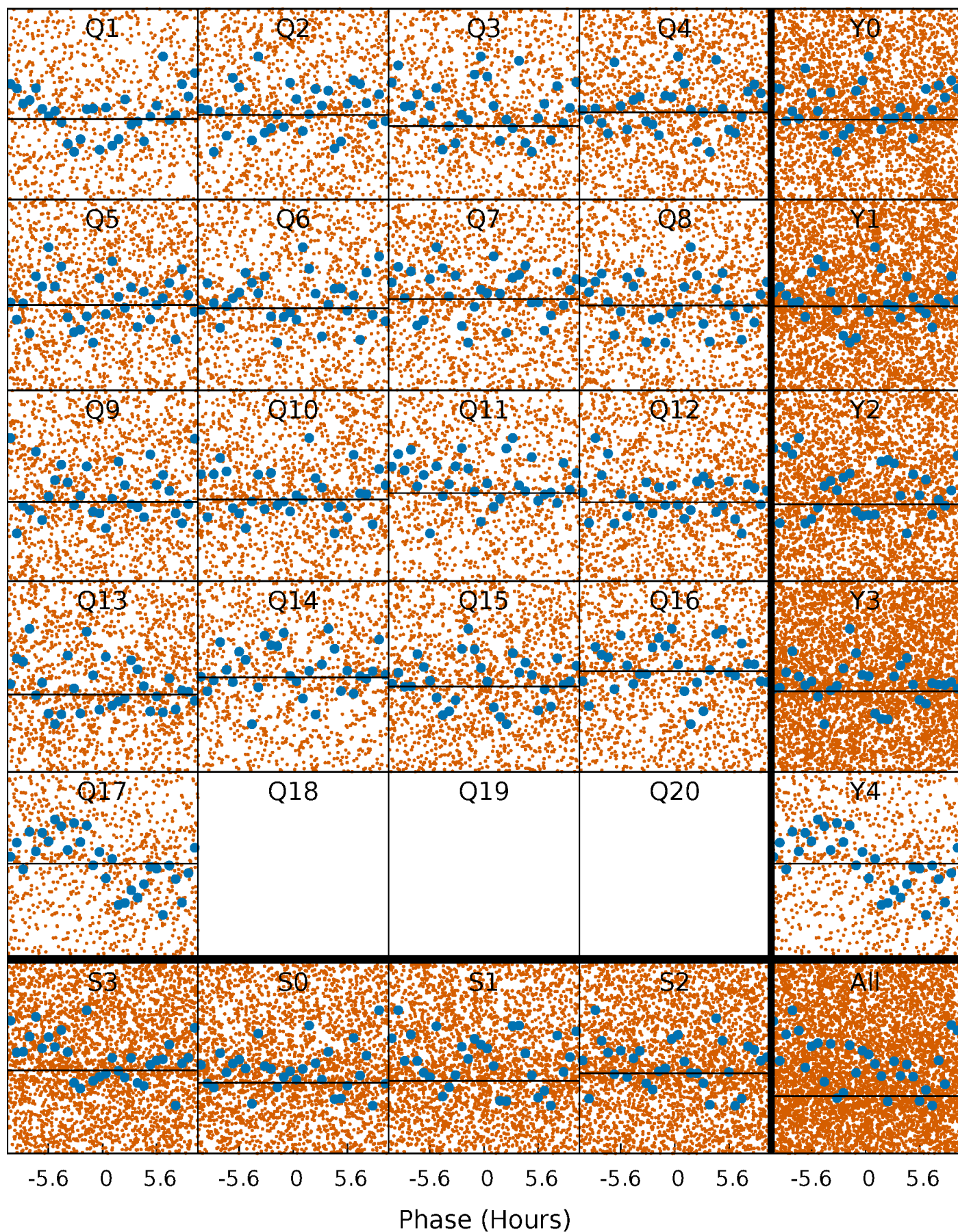
TCE 004136314-01 P= 0.790881 Days  $T_0=132.305455$  (BKJD)





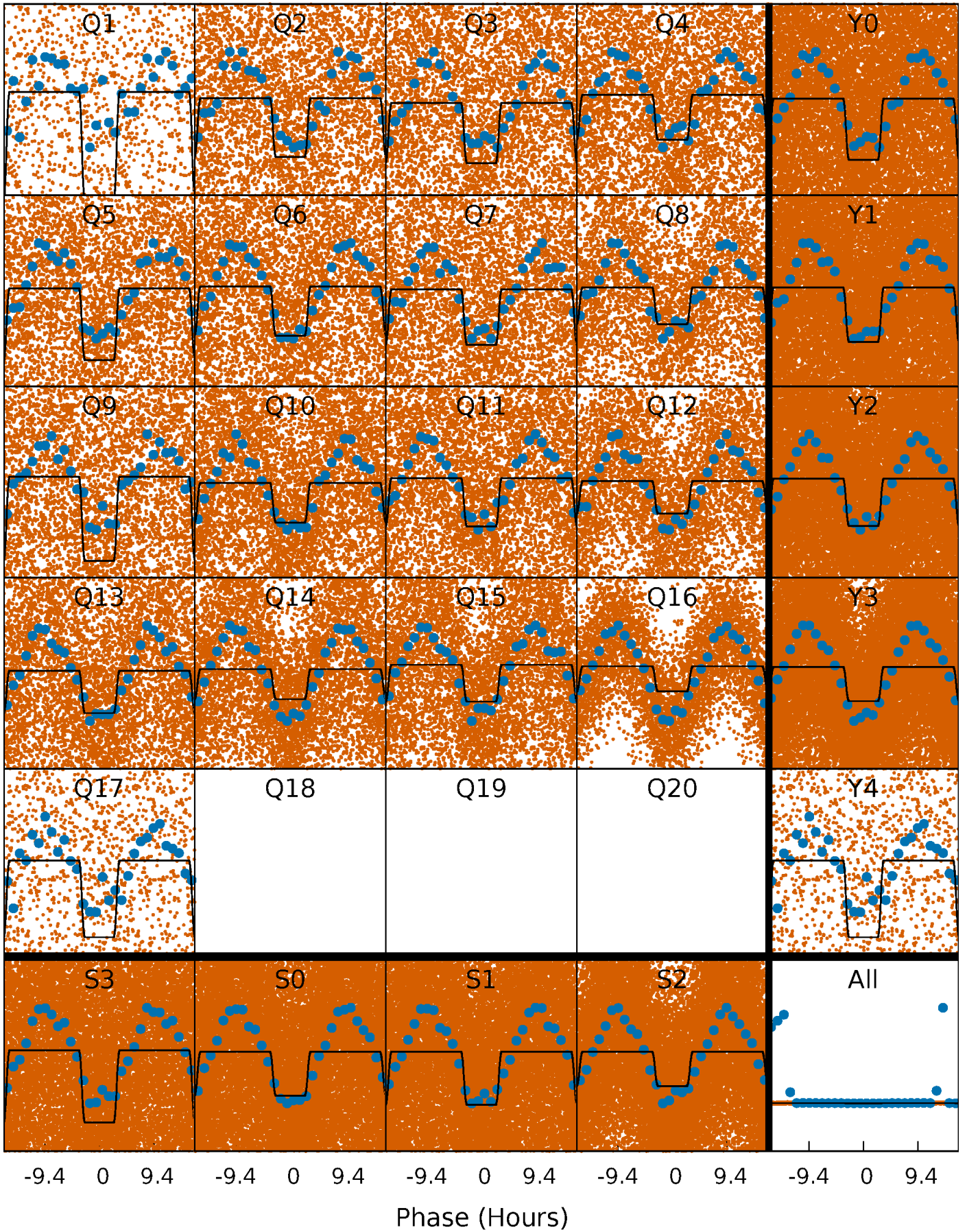
# DV Quarter-Phased Transit Curves

TCE 004136314-01 P= 0.790881 Days  $T_0=132.305455$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 004136314-01 P= 0.791016 Days  $T_0=132.233640$  (BKJD)

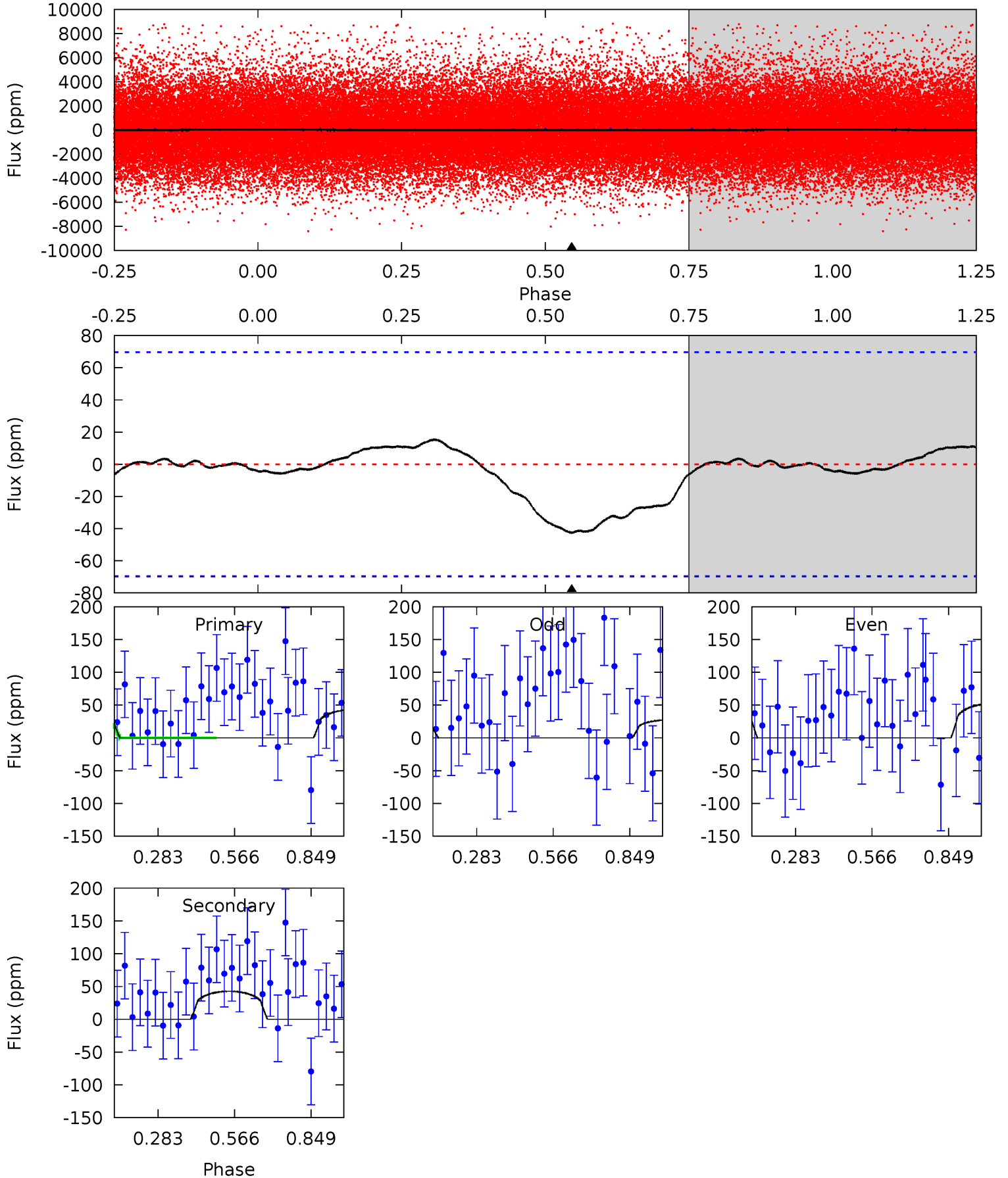




# DV Model-Shift Uniqueness Test

004136314-01, P = 0.790881 Days, E = 130.723693 Days

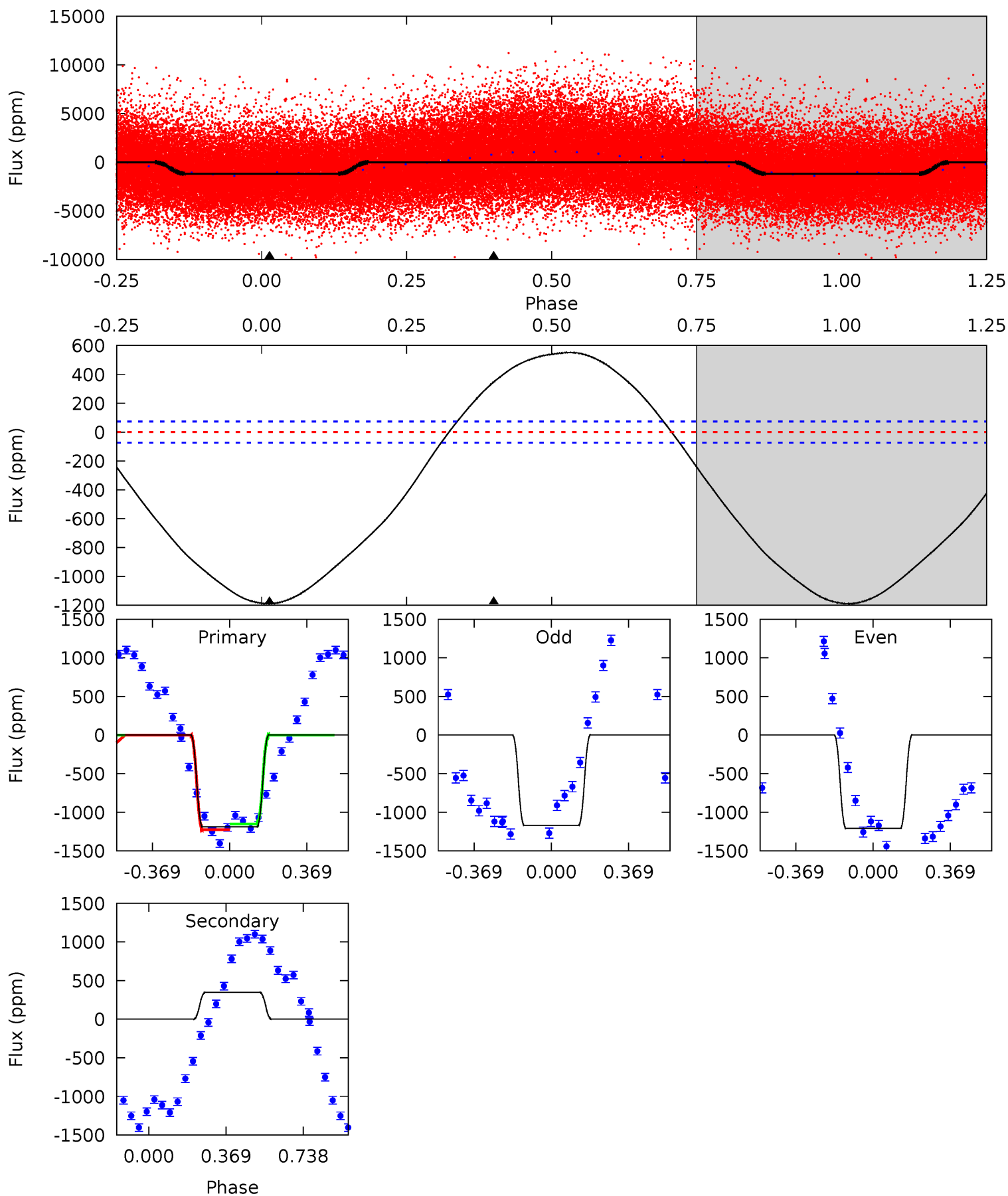
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.66	2.66	0	0	4.34	1.07	0.33	2.66	2.66	2.66	2.66	0.75	1.41	0.27	0.25



# Alt Model-Shift Uniqueness Test

004136314-01, P = 0.791016 Days, E = 131.442624 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
69.2	-20.2	0	0	4.28	0.90	9.34	69.2	69.2	-20.2	-20.2	1.34	1.00	0.32	2.32





### Stellar Parameters For KIC 004136314

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5780^{+1}_{-1}$	$4.438^{+1.000}_{-1.000}$	$0.000^{+1.000}_{-1.000}$	$1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$
	+0%/-0%	+23%/-23%	+inf%/-inf%	+100%/-100%	+100%/-100%	+100%/-100%
Source	Solar	Solar	Solar	Solar		

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

### Secondary Eclipse Parameters for KIC 004136314-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-43 \pm 16$	$4.03^{+4.35}_{-2.78}$	$2760^{+136}_{-145}$	$2576^{+1979}_{-5391}$	$0.407^{+4.130}_{-0.322}$
Alt.	$347 \pm 17$	$5.87^{+4.95}_{-3.86}$	$2749^{+148}_{-140}$	$-3924^{+580}_{-1877}$	$-1.580^{+1.132}_{-11.595}$

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

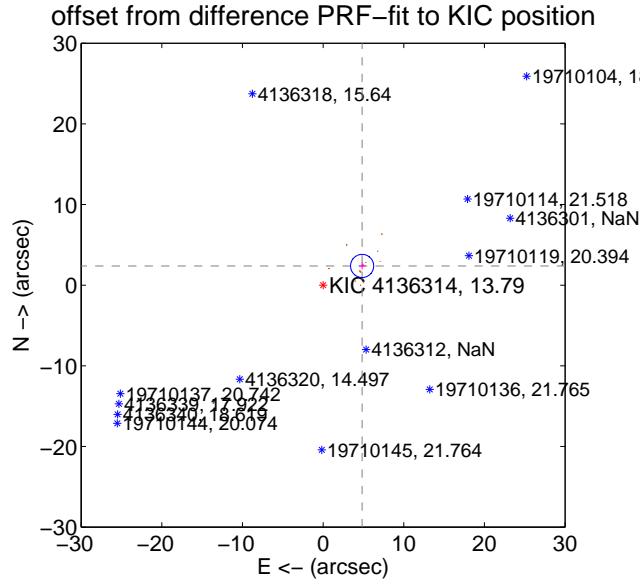
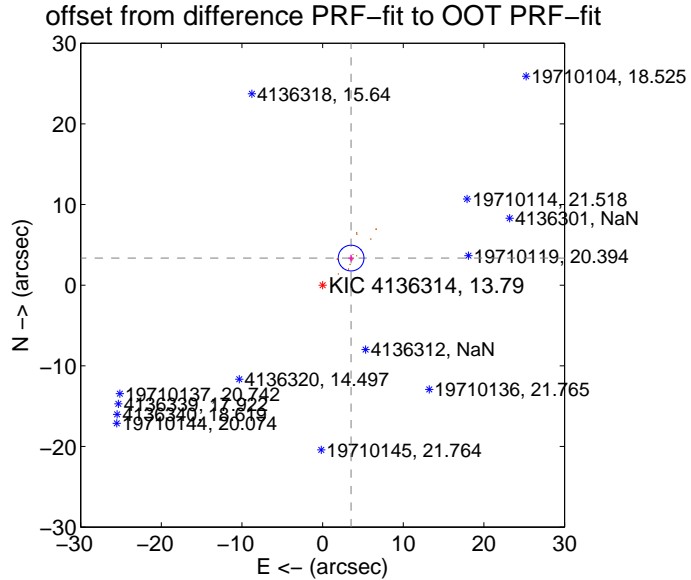
## DV Centroid Data

Supplemental centroid analysis for 004136314-01. Kepler magnitude: 13.79. Transit SNR 0.00

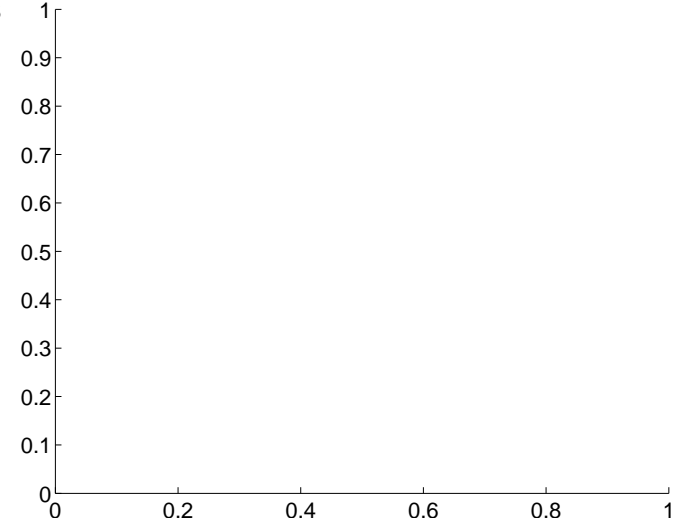
There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 1.63 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	4.876 $\pm$ 0.531	9.18	-3.534 $\pm$ 0.363	3.359 $\pm$ 0.428
PRF-fit source offset from KIC position	5.392 $\pm$ 0.478	11.28	-4.837 $\pm$ 0.444	2.382 $\pm$ 0.443
photometric centroid source offset	—	—	—	—

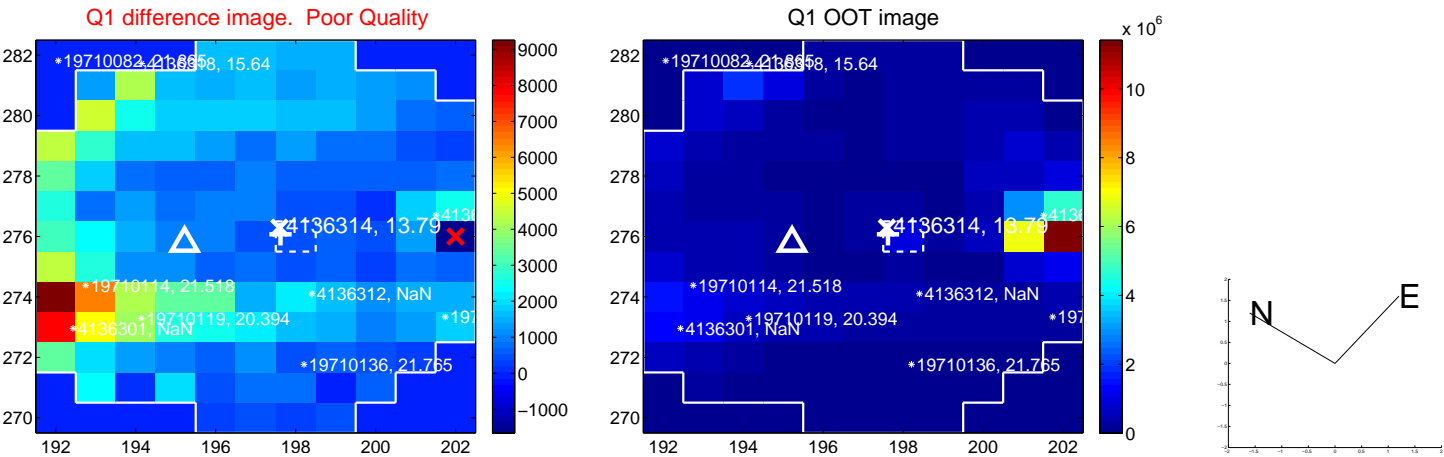


There are no photometric centroids

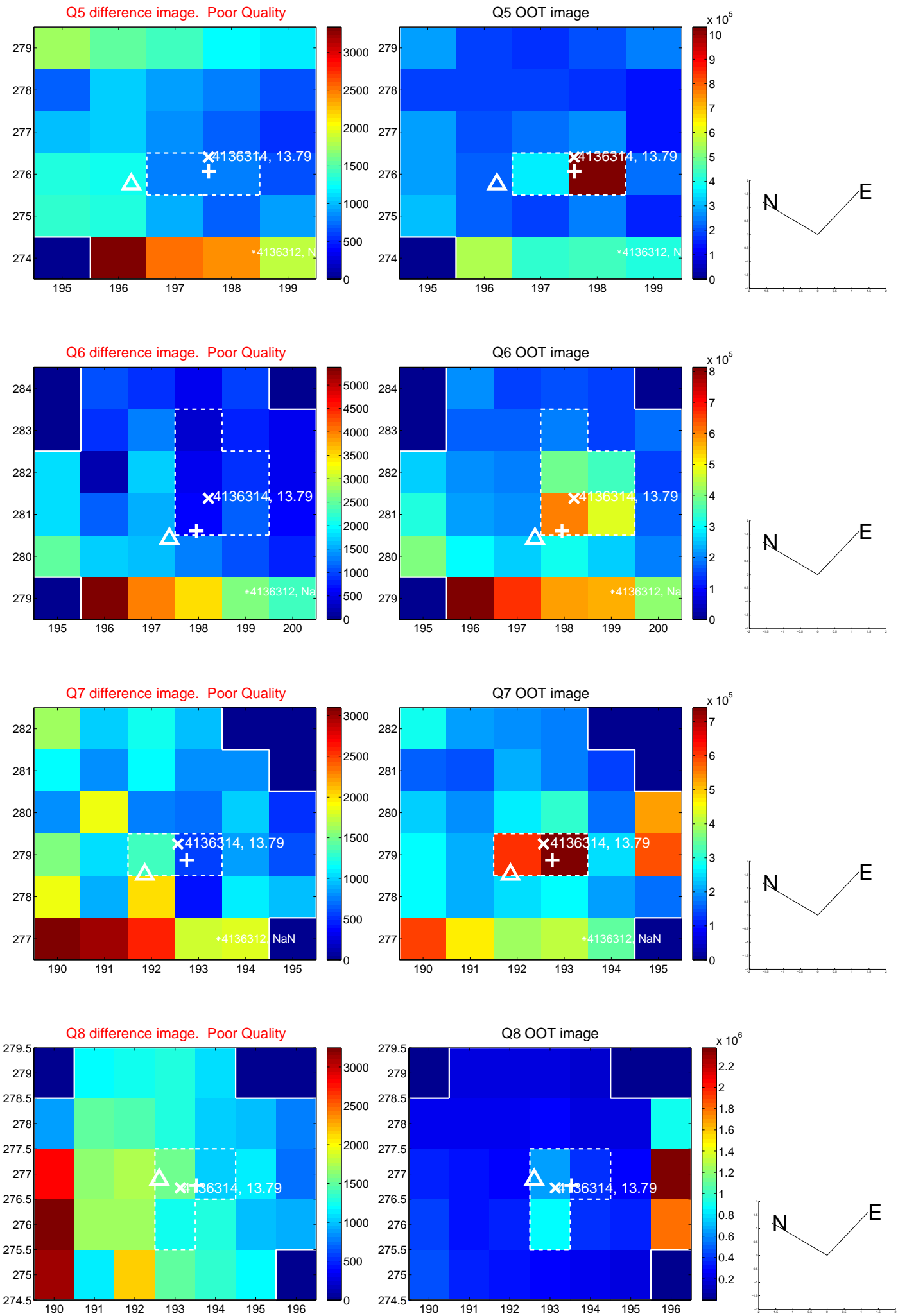


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

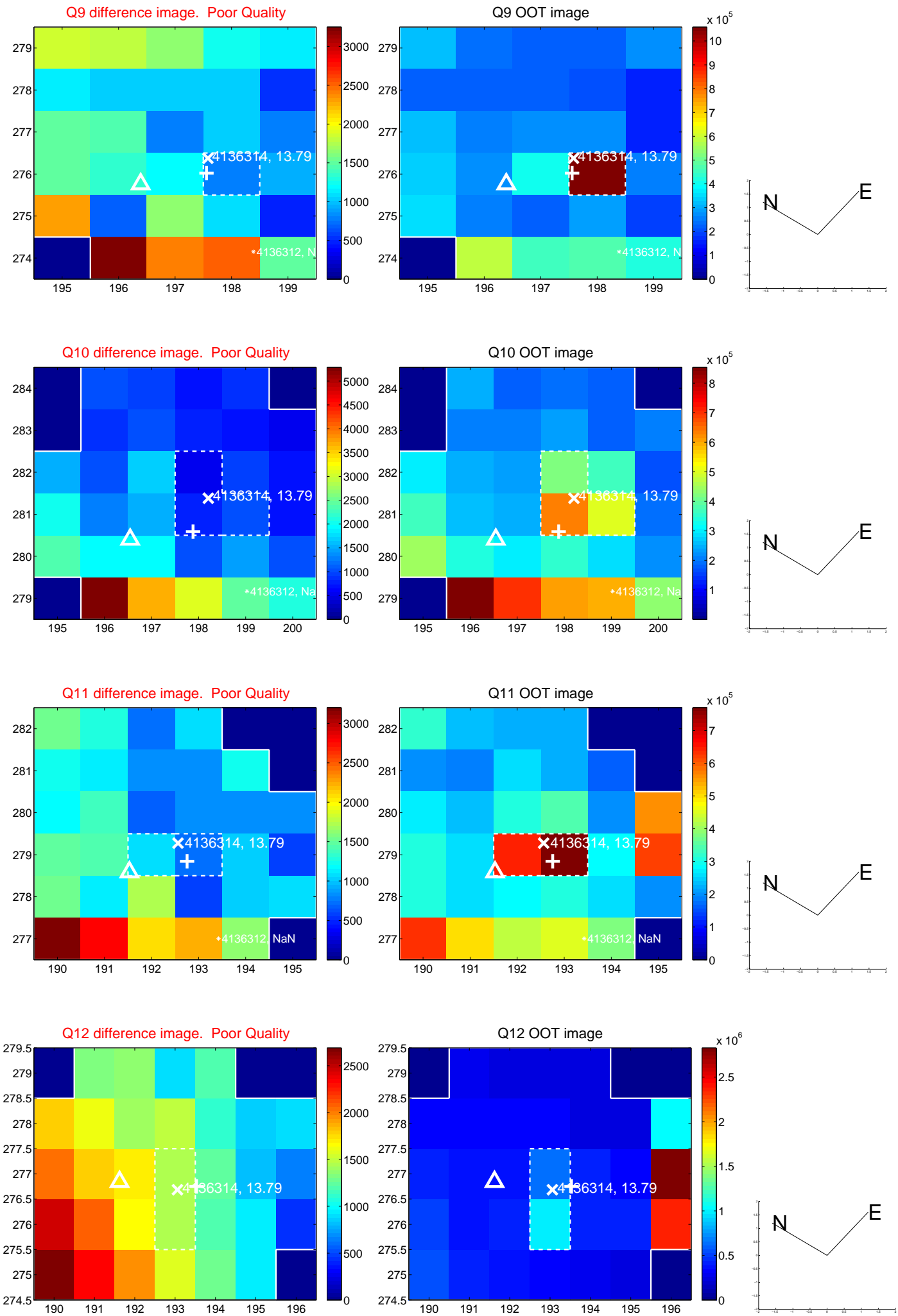


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

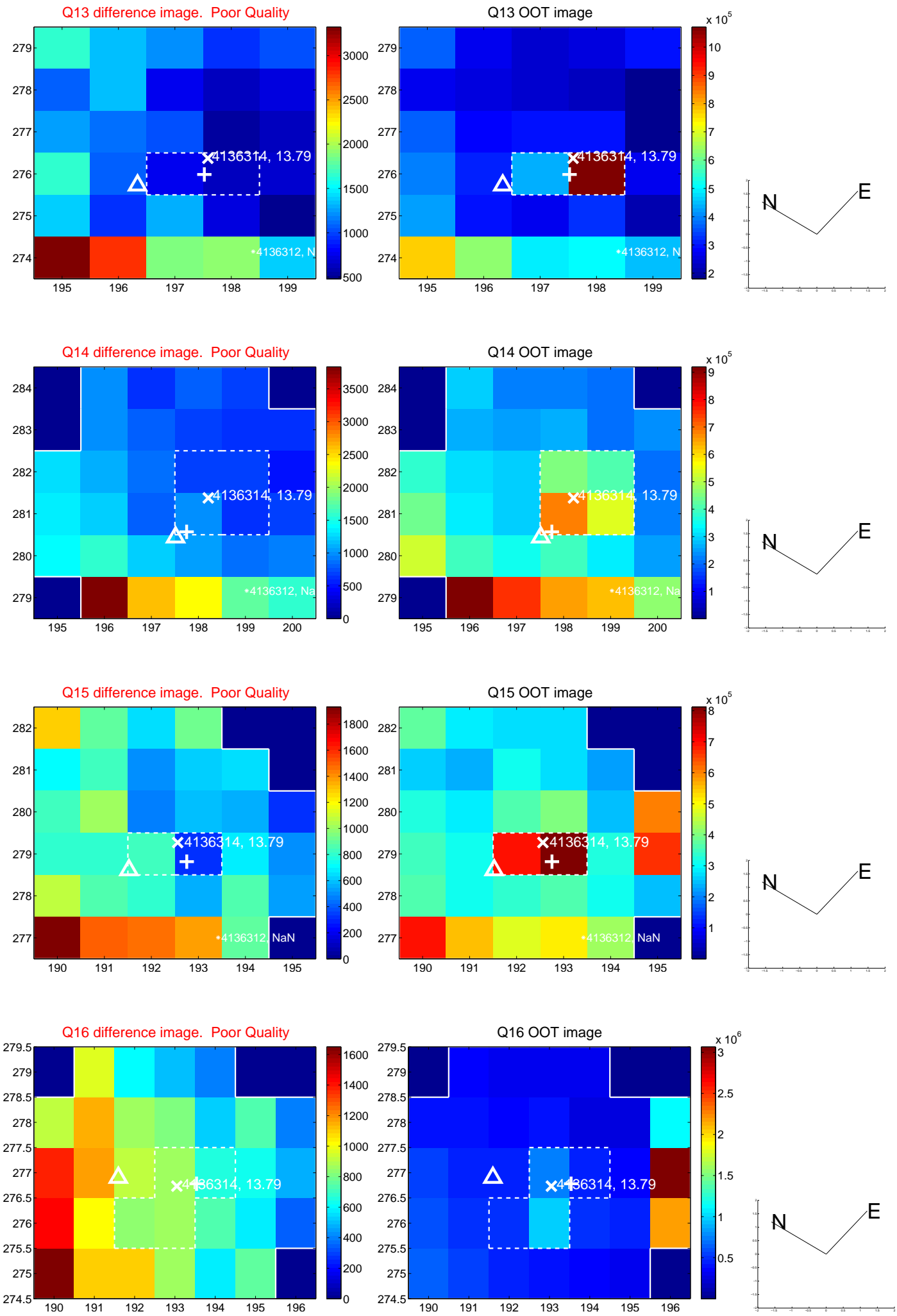




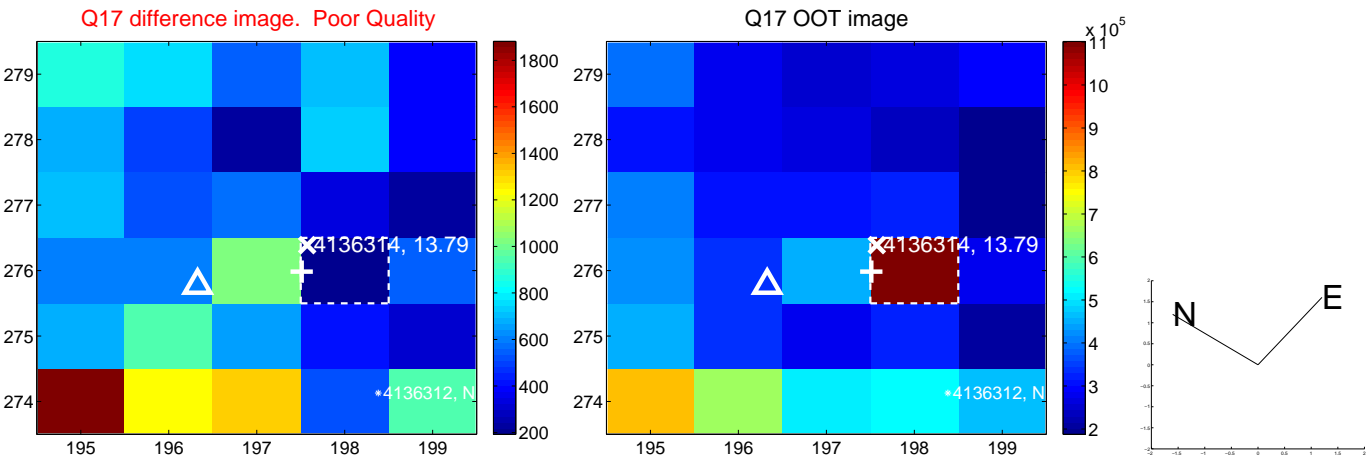
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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.



folded centroid time series figure for this object.

UKIRT Image

Declination

