

# KIC 005979800

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
005979800-01	OBS	No	0.743309	132.240715	8.9	4.173	16.8	8.1	1.92	5162	0.62	8544.54

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005979800-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET—HALO_GHOST

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

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

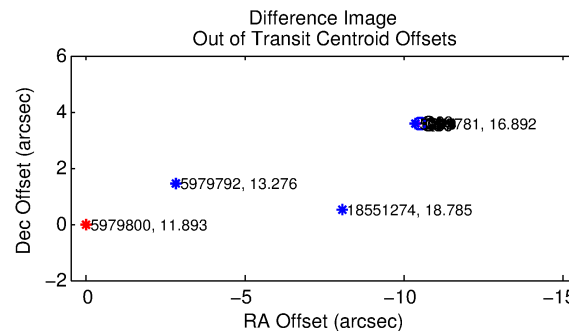
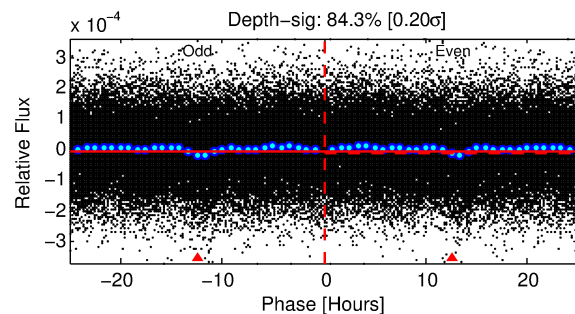
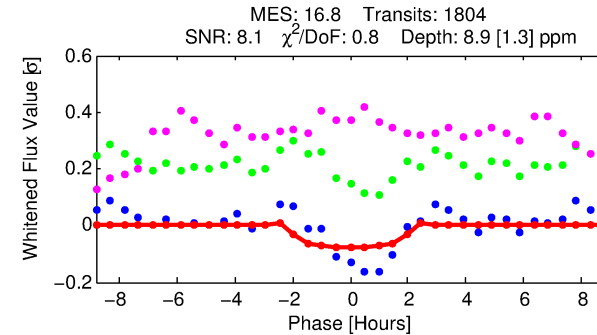
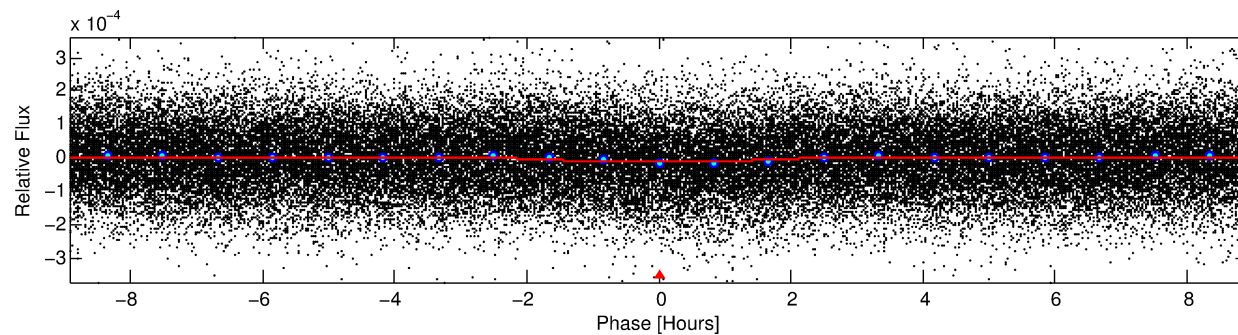
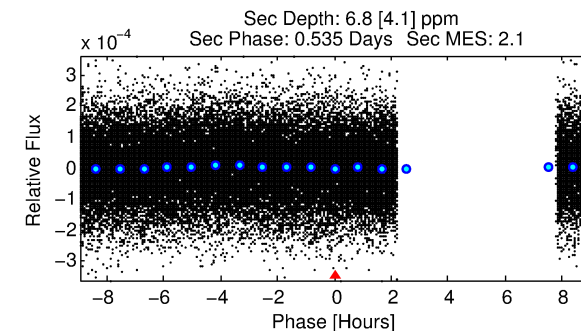
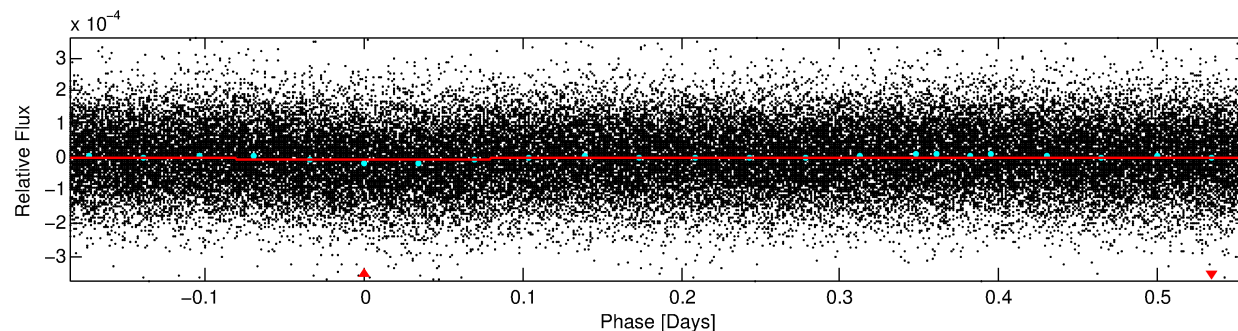
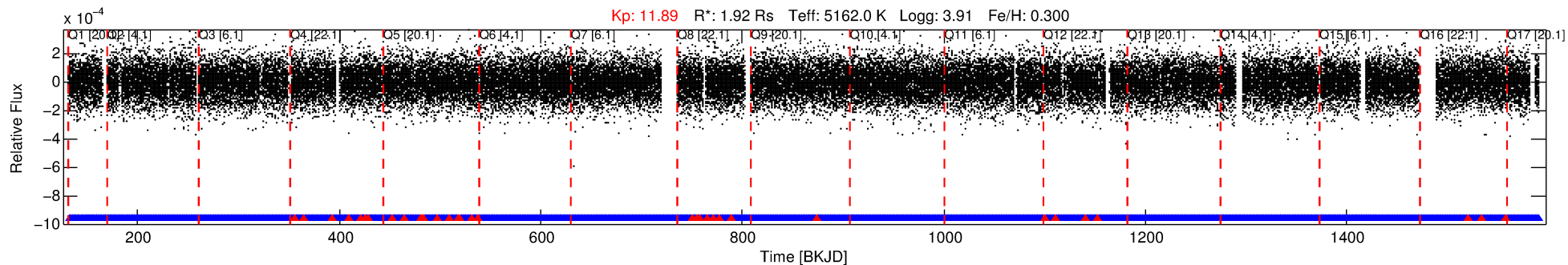
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 005979800-01

No Significant Match Found

# DV One-Page Summary

KIC: 5979800 Candidate: 1 of 1 Period: 0.743 d



## DV Fit Results:

Period = 0.74331 [0.00001] d  
Epoch = 132.2407 [0.0055] BKJD  
Rp/R\* = 0.0029 [0.0013]  
a/R\* = 1.26 [0.75]  
b = 0.73 [1.07]  
Seff = 8544.54 [1864.29]  
Teq = 2452 [134] K  
Rp = 0.62 [0.30] Re  
a = 0.0165 [0.0024] AU  
Ag = 2.71 [2.96] [0.58σ]  
Teff = 4865 [1307] K [1.84σ]

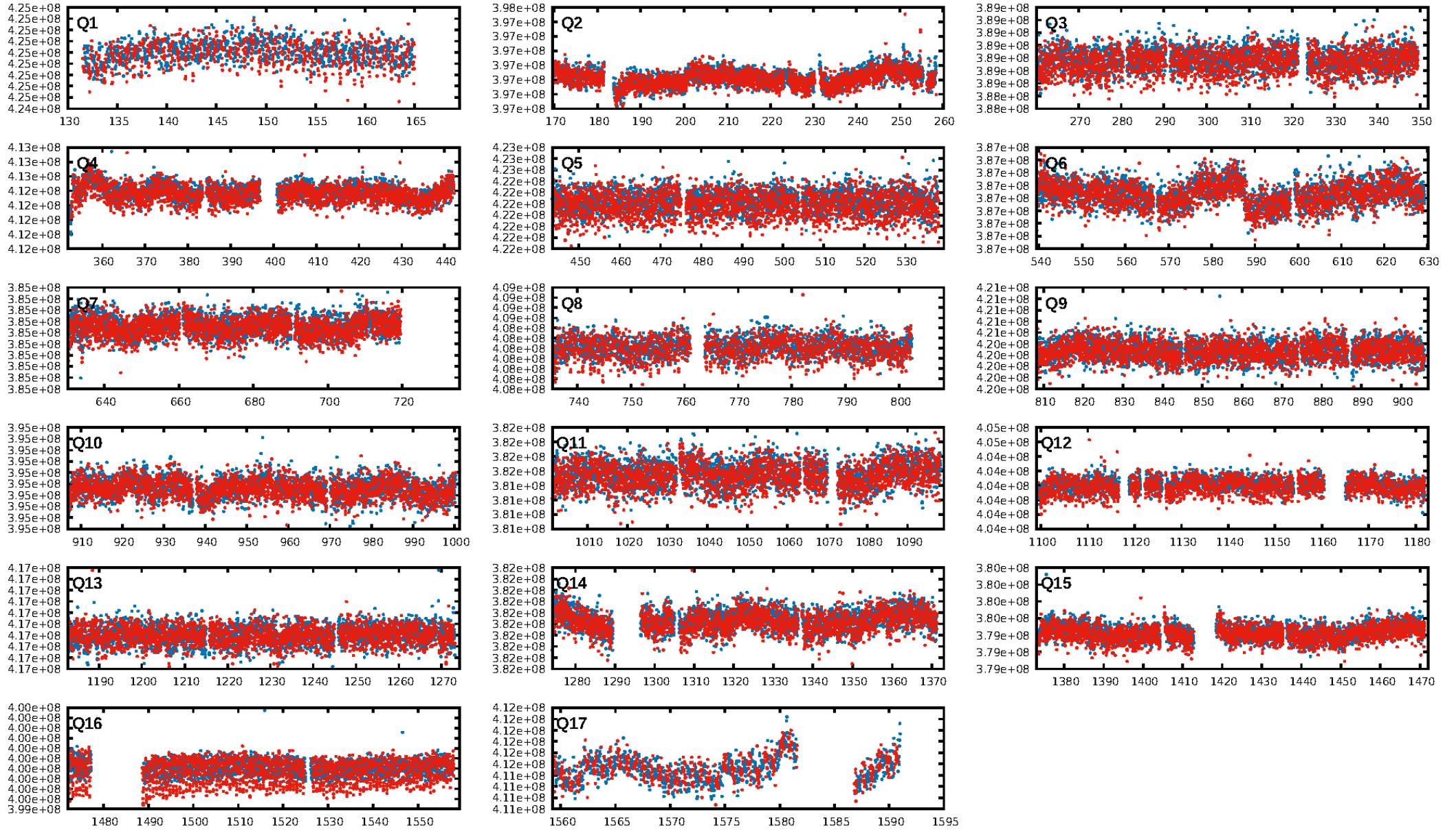
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 1.17e-39  
RollingBand-fgt: 0.98 [1688/1722]  
GhostDiagnostic-chr: -0.03539  
Centroid-sig: N/A  
Centroid-so: 275.019 arcsec [166.85σ]  
OotOffset-rm: 11.074 arcsec [163.09σ]  
KicOffset-rm: 10.950 arcsec [162.63σ]  
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]

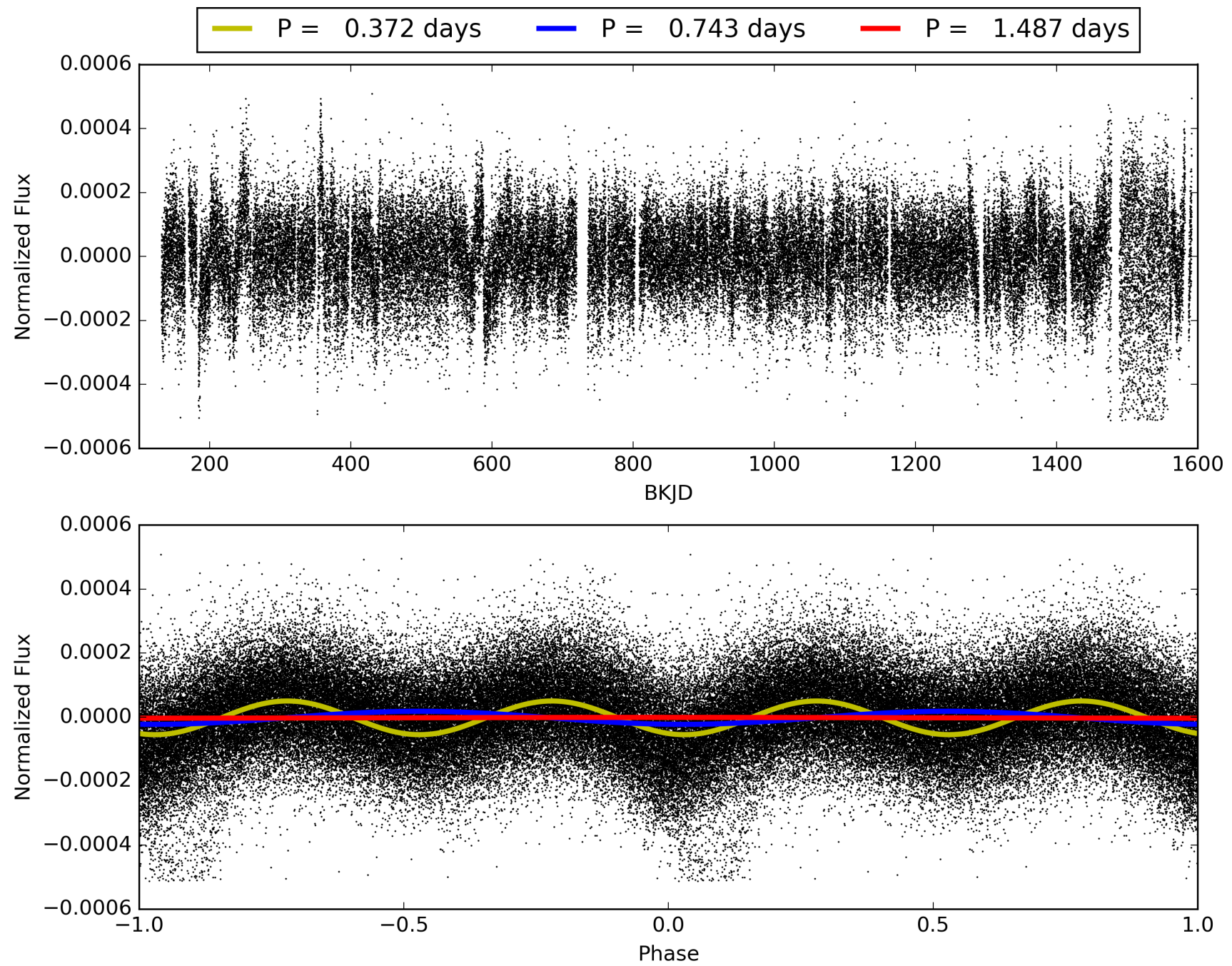
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 20:10:30 Z

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

# TCE 005979800-01, PDC Light Curves



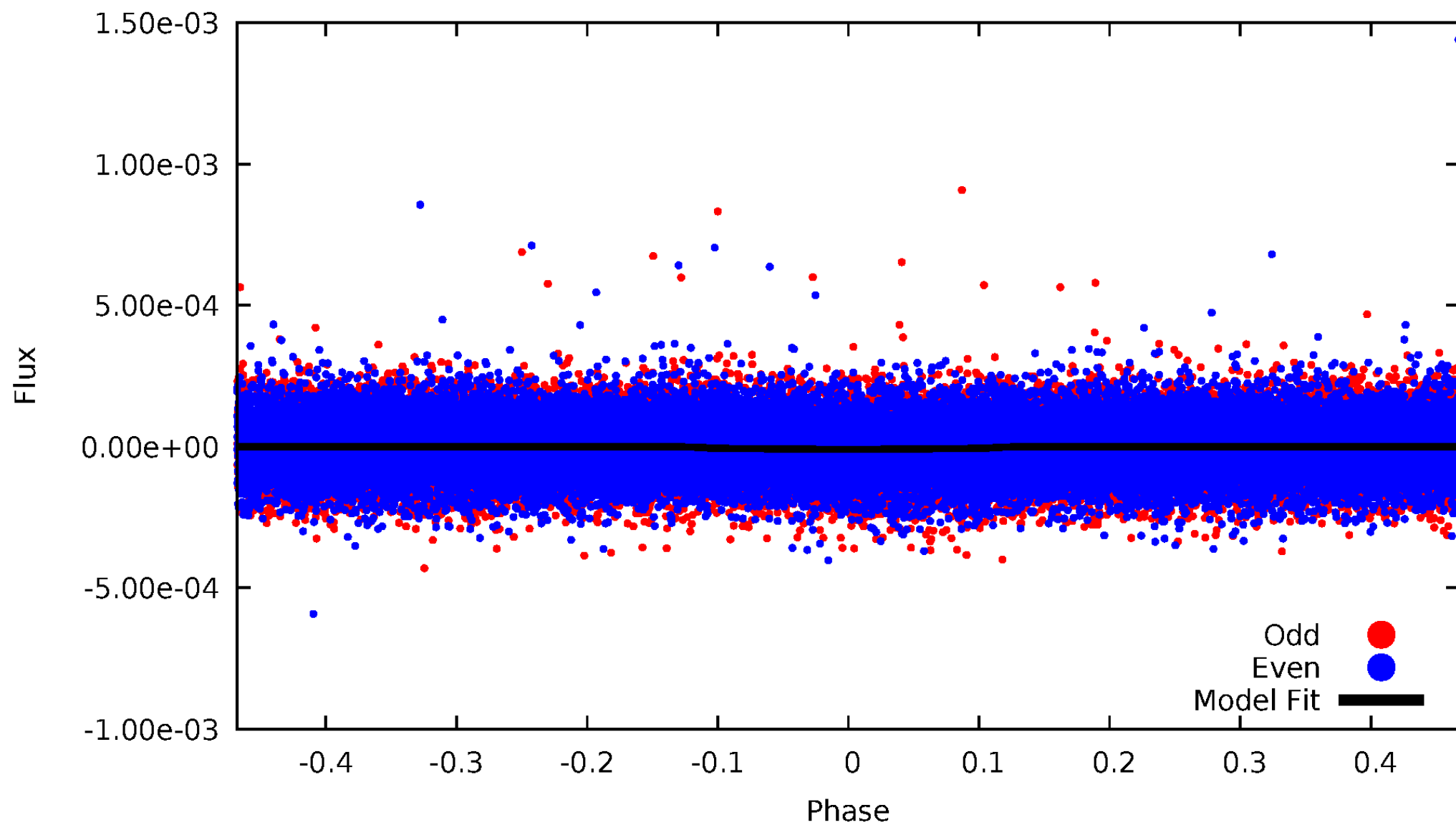
TCE 005979800-01





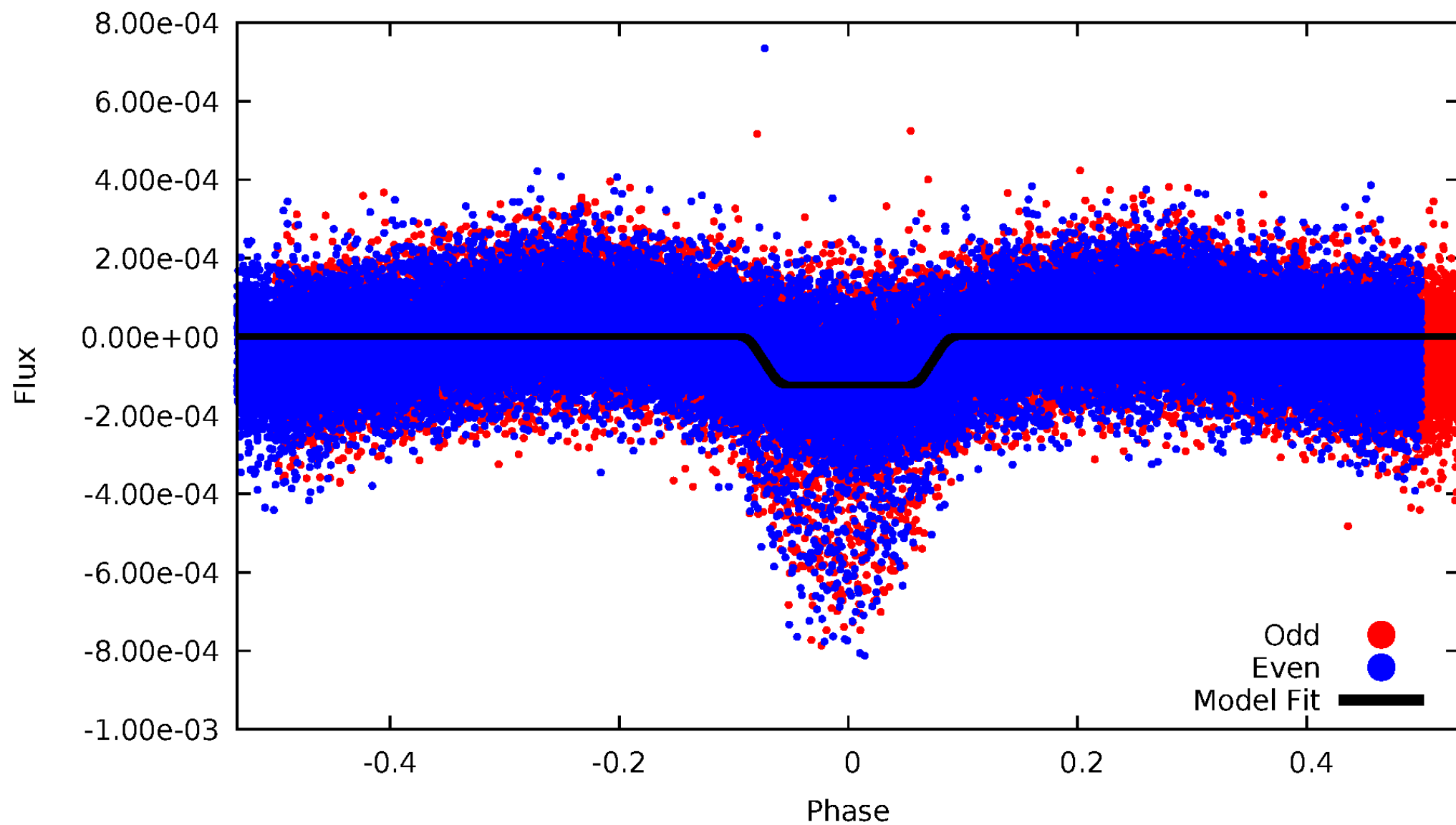
# DV Odd/Even

TCE 005979800-01



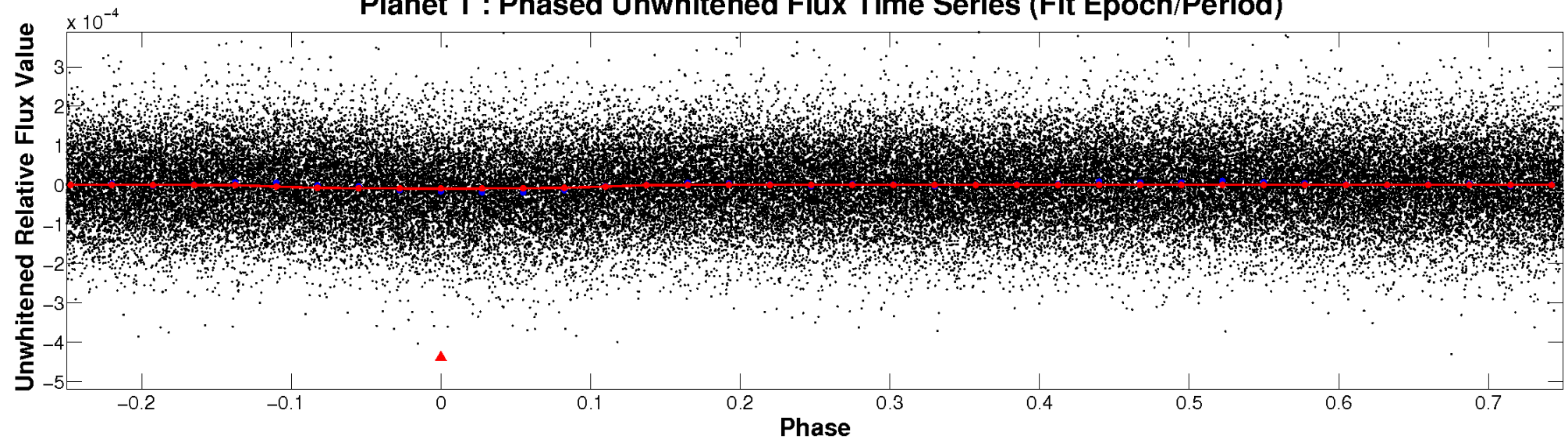
# ALT Odd/Even

TCE 005979800-01

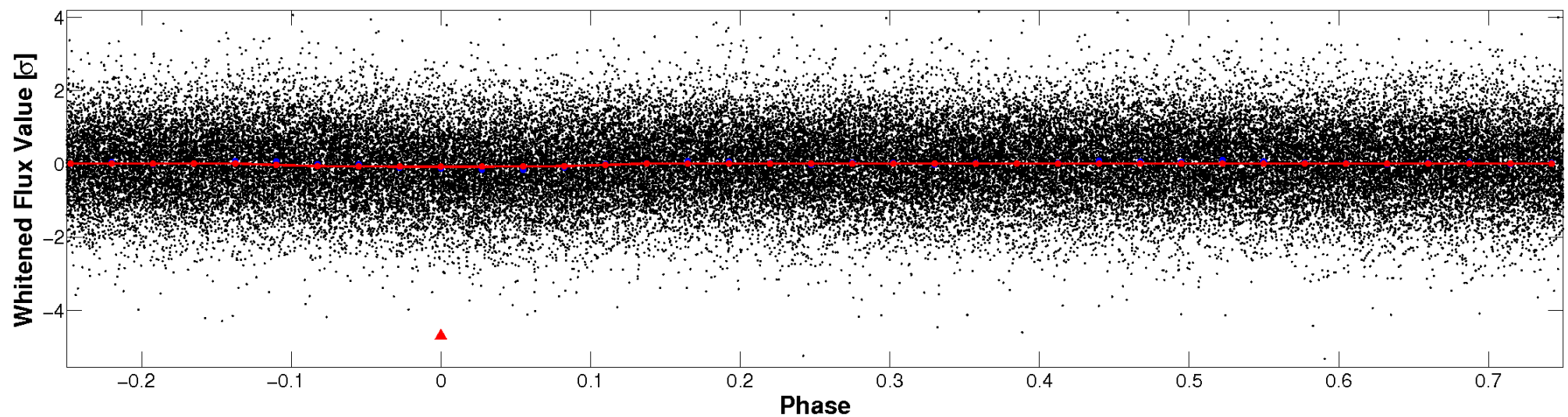


# Non-Whitened Vs. Whitened Light Curve

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

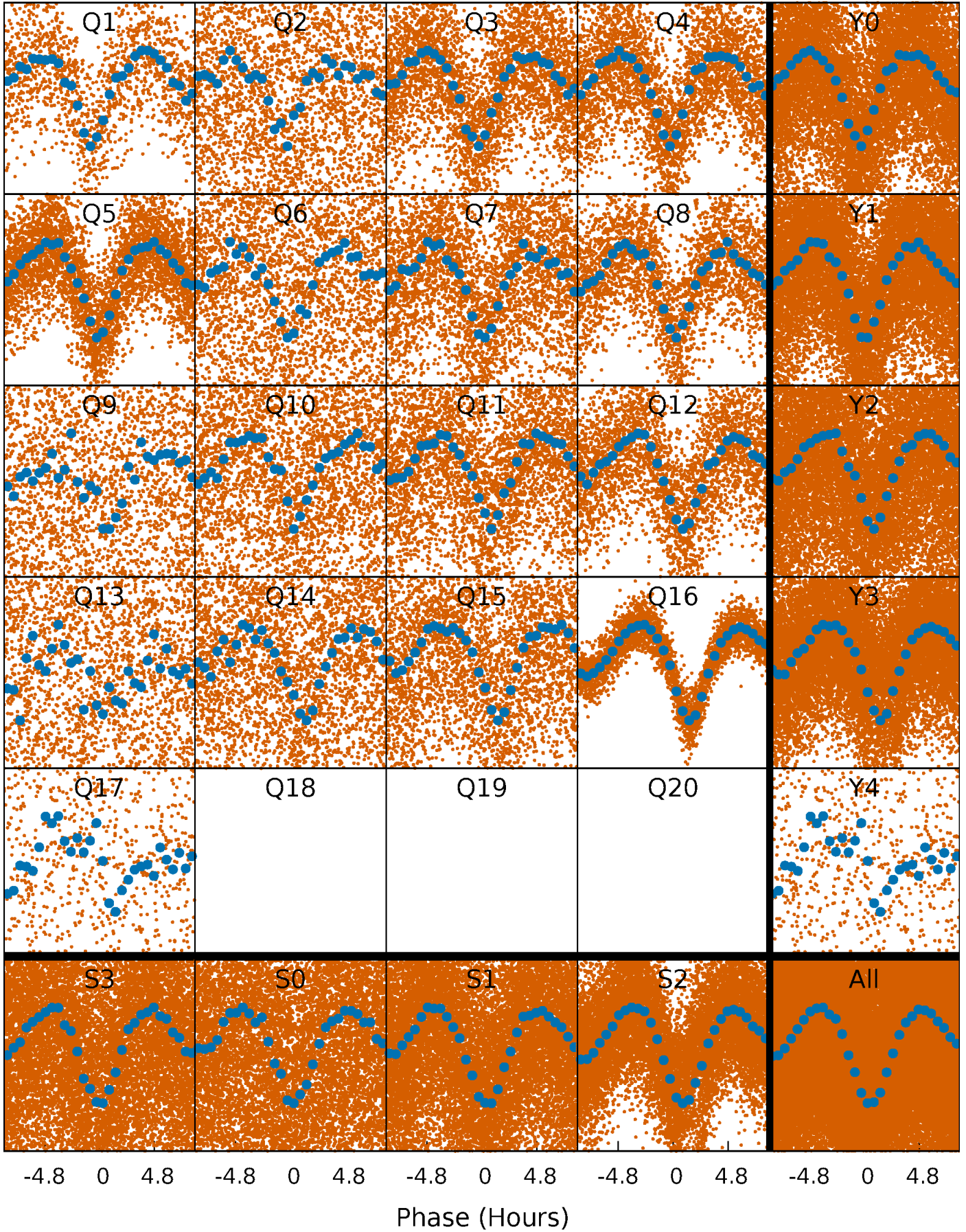


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

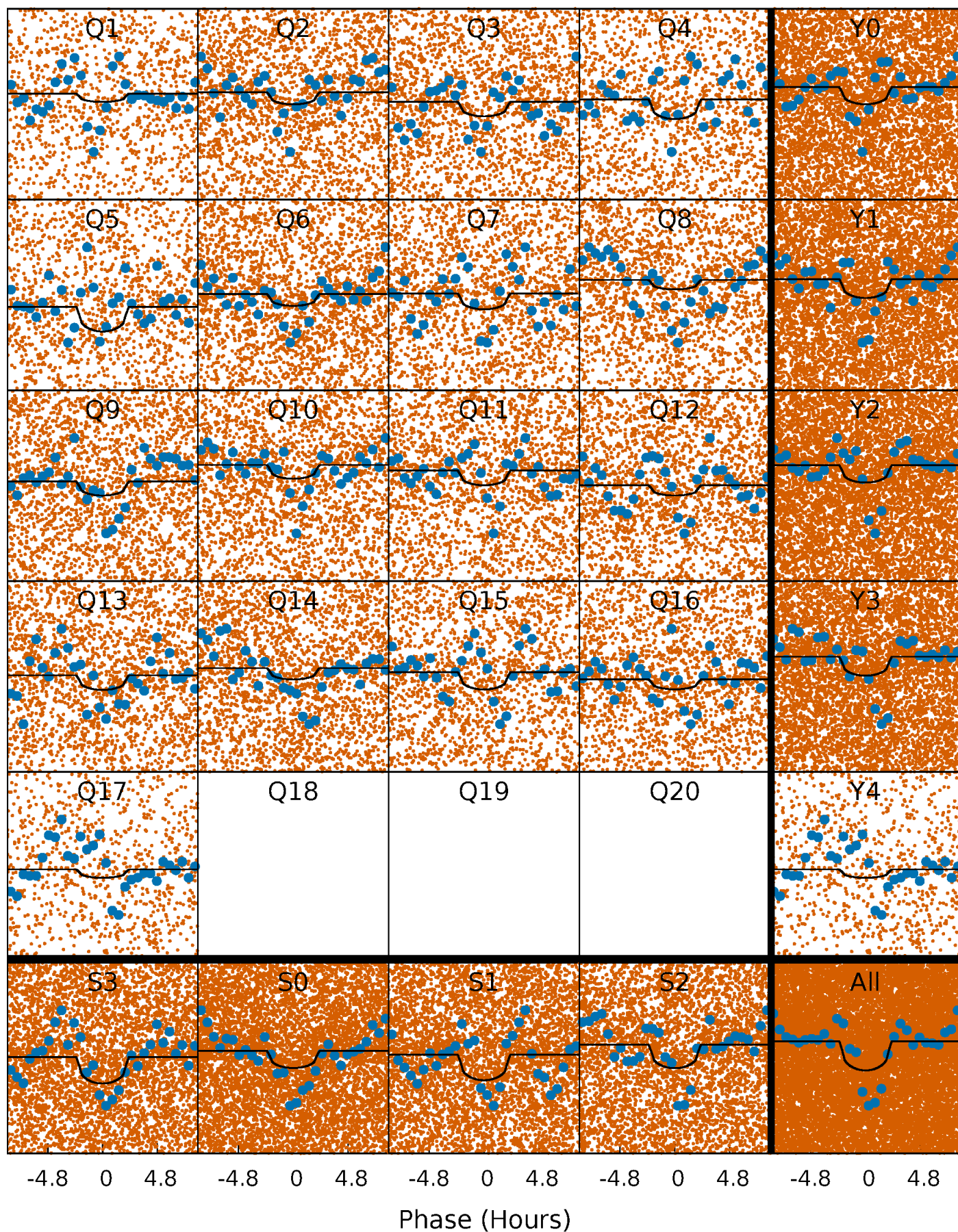
TCE 005979800-01 P= 0.743309 Days  $T_0=132.240715$  (BKJD)





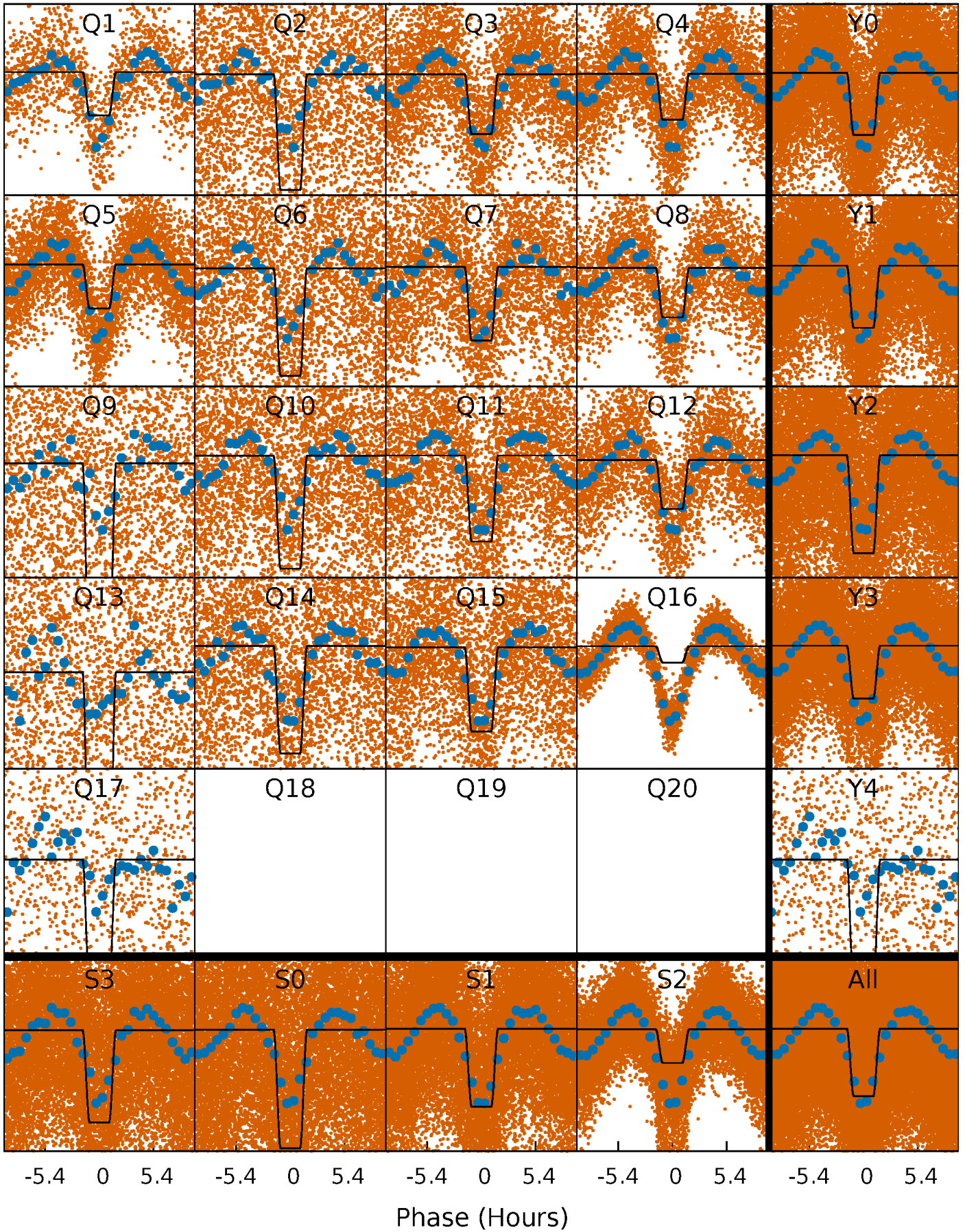
# DV Quarter-Phased Transit Curves

TCE 005979800-01   P= 0.743309 Days    $T_0=132.240715$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 005979800-01 P= 0.743359 Days  $T_0=132.210352$  (BKJD)

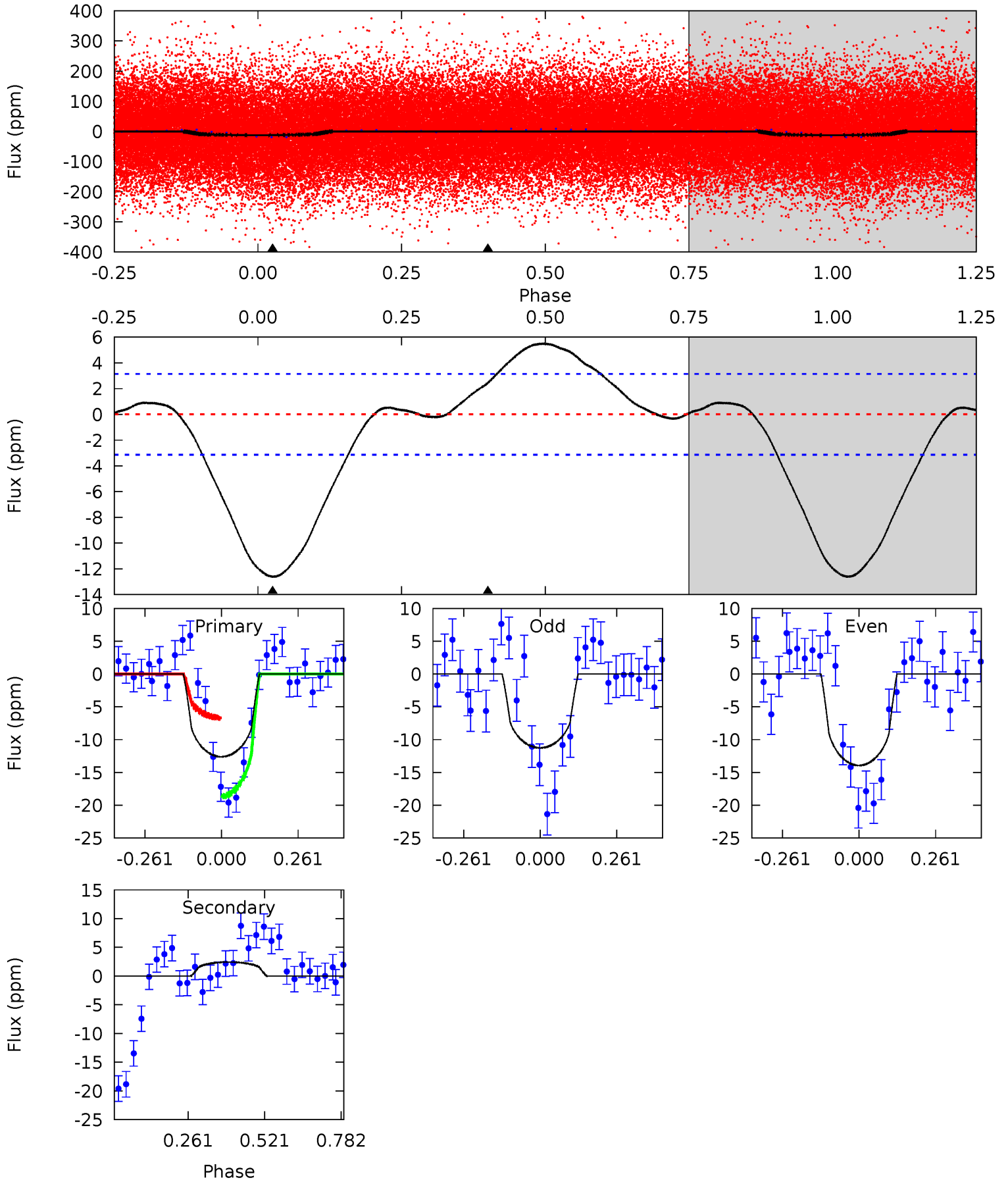




# DV Model-Shift Uniqueness Test

005979800-01, P = 0.743309 Days, E = 131.497406 Days

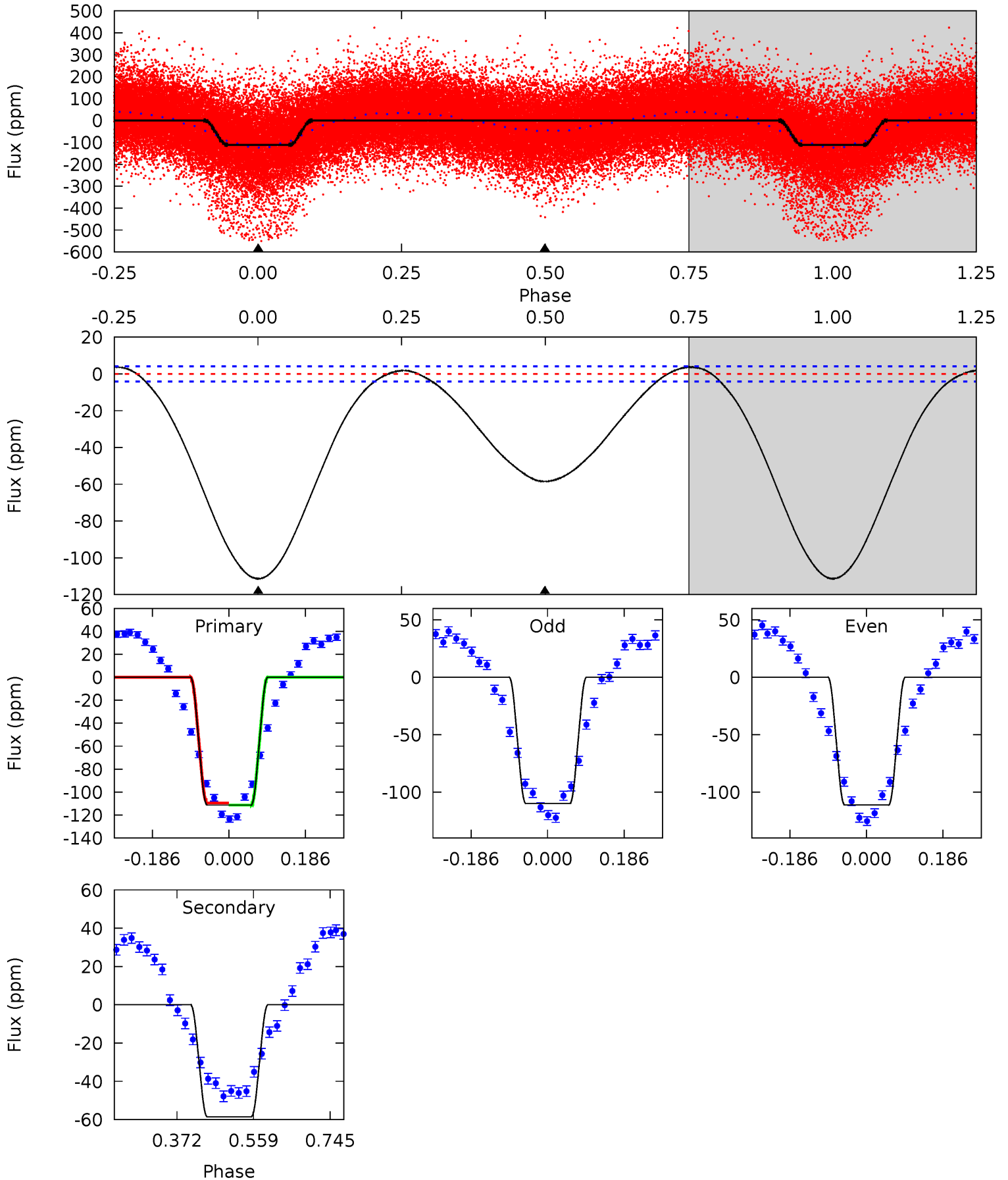
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.5	-3.39	0	0	4.36	1.13	0.40	17.5	17.5	-3.39	-3.39	1.84	1.14	0.30	8.31



# Alt Model-Shift Uniqueness Test

005979800-01, P = 0.743359 Days, E = 131.466993 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
119.6	62.9	0	0	4.43	1.32	3.37	119.6	119.6	62.9	62.9	0.67	1.14	0.03	1.00





### Stellar Parameters For KIC 005979800

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5162^{+93}_{-82}$	$3.911^{+0.110}_{-0.090}$	$0.300^{+0.150}_{-0.150}$	$1.917^{+0.339}_{-0.308}$	$1.092^{+0.131}_{-0.118}$	$0.218^{+0.105}_{-0.071}$
	+2%/-2%	+3%/-2%	+50%/-50%	+18%/-16%	+12%/-11%	+48%/-32%
Source	SPE68	SPE68	SPE68	DSEP		

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

### Secondary Eclipse Parameters for KIC 005979800-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$2\pm 1$	$0.61^{+0.29}_{-0.26}$	$3415^{+139}_{-155}$	$-4232^{+418}_{-880}$	$-0.979^{+0.562}_{-2.051}$
Alt.	$-59\pm 1$	$2.30^{+0.35}_{-0.33}$	$3425^{+151}_{-147}$	$4286^{+252}_{-221}$	$1.669^{+0.583}_{-0.384}$

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

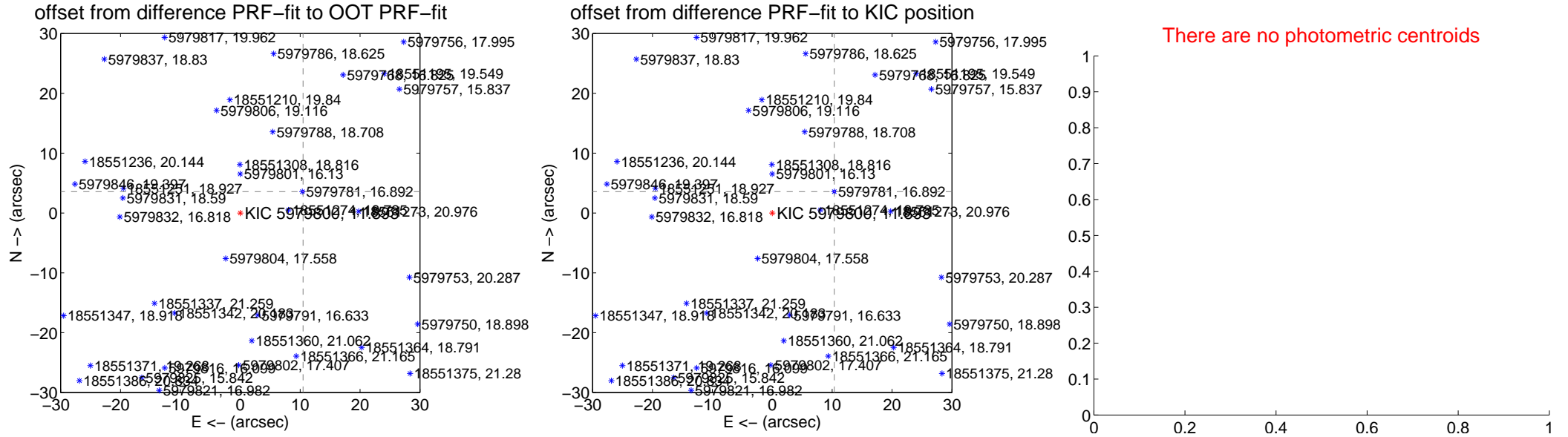
## DV Centroid Data

Supplemental centroid analysis for 005979800-01. **Kepler magnitude: 11.89.** Transit SNR 8.14

There are 17 quarters with good PRF difference image offsets

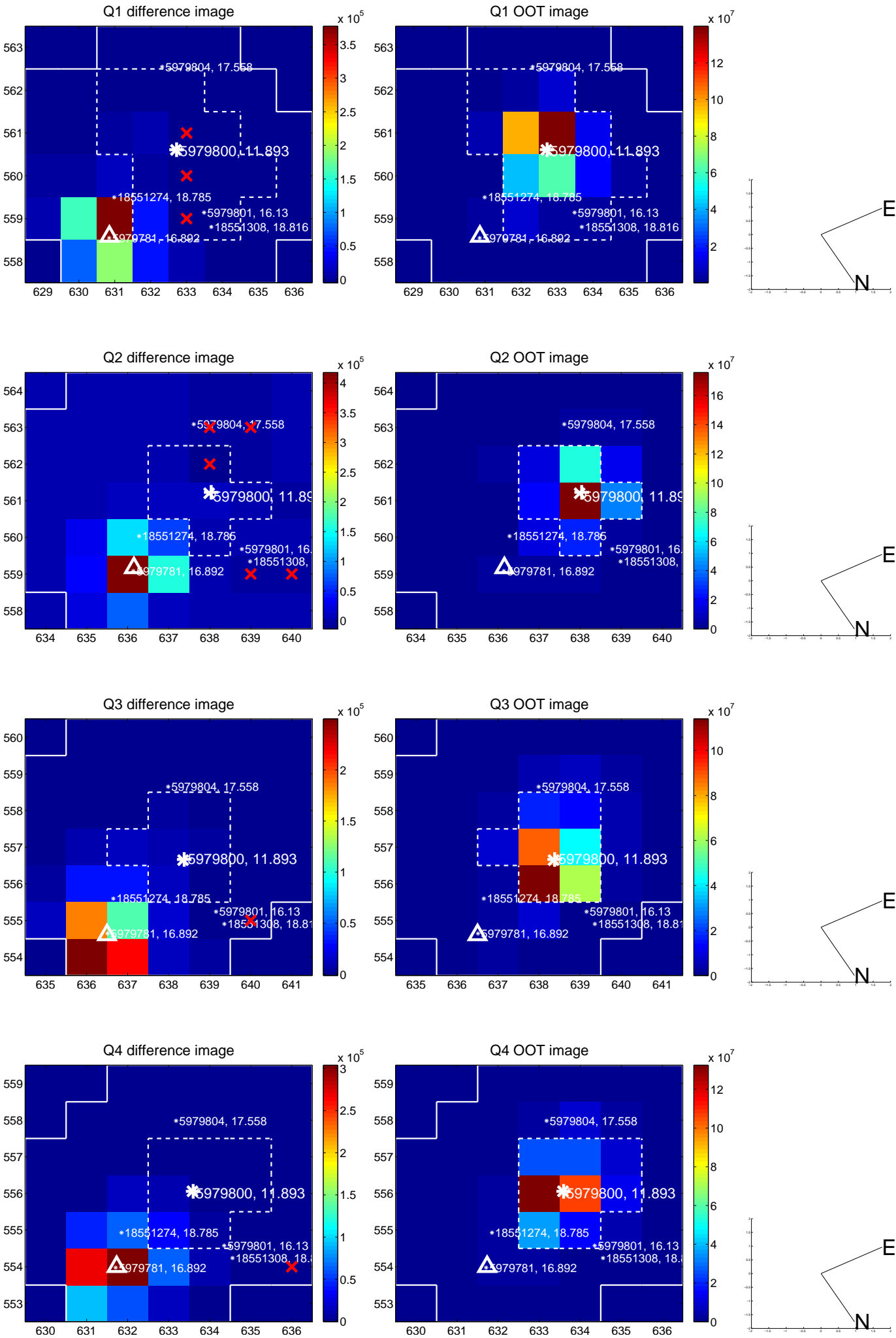
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	<b>11.074 <math>\pm</math> 0.068</b>	<b>163.09</b>	-10.483 $\pm$ 0.068	3.570 $\pm$ 0.067
PRF-fit source offset from KIC position	<b>10.950 <math>\pm</math> 0.067</b>	<b>162.63</b>	-10.352 $\pm$ 0.067	3.570 $\pm$ 0.067
photometric centroid source offset	—	—	—	—

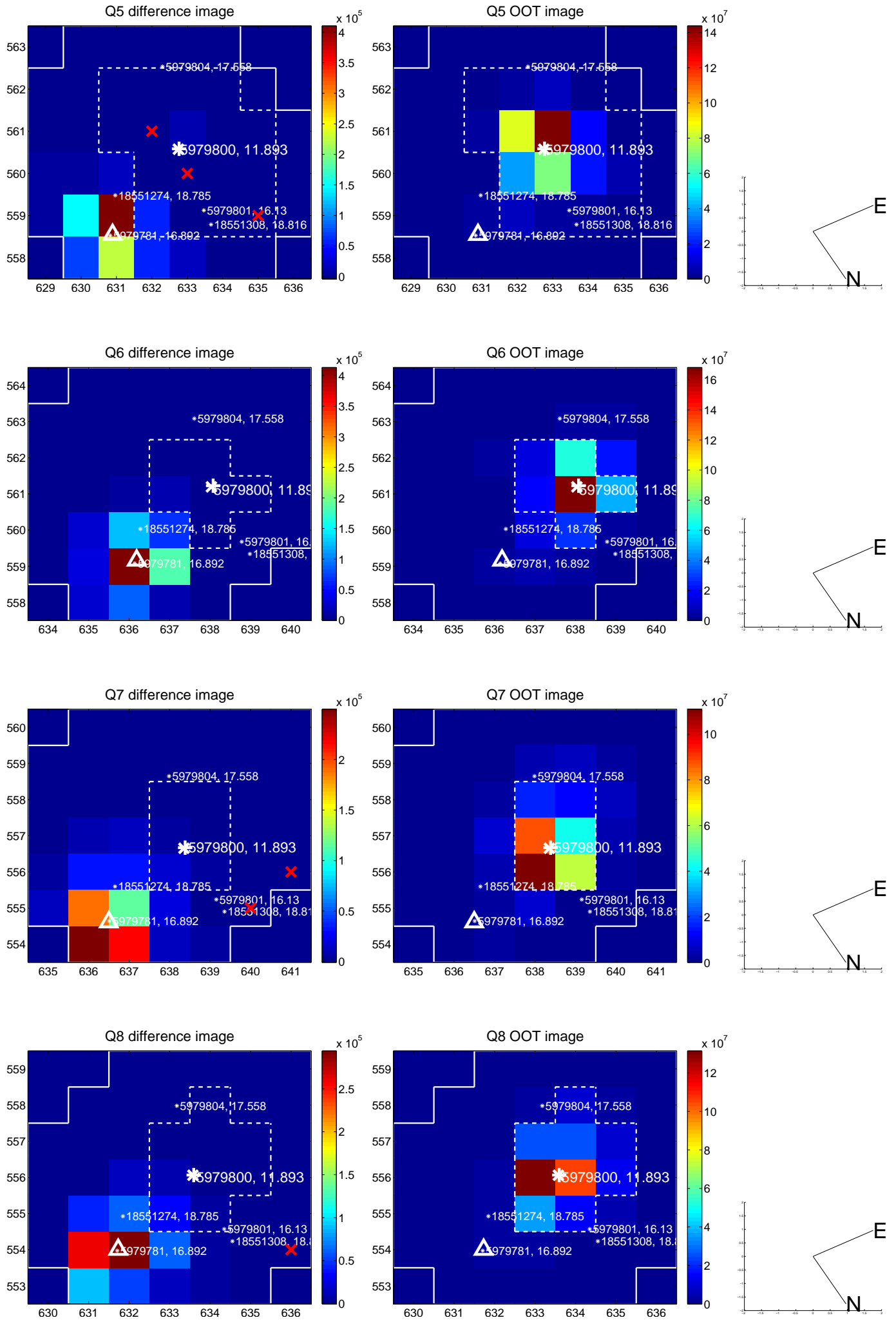


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

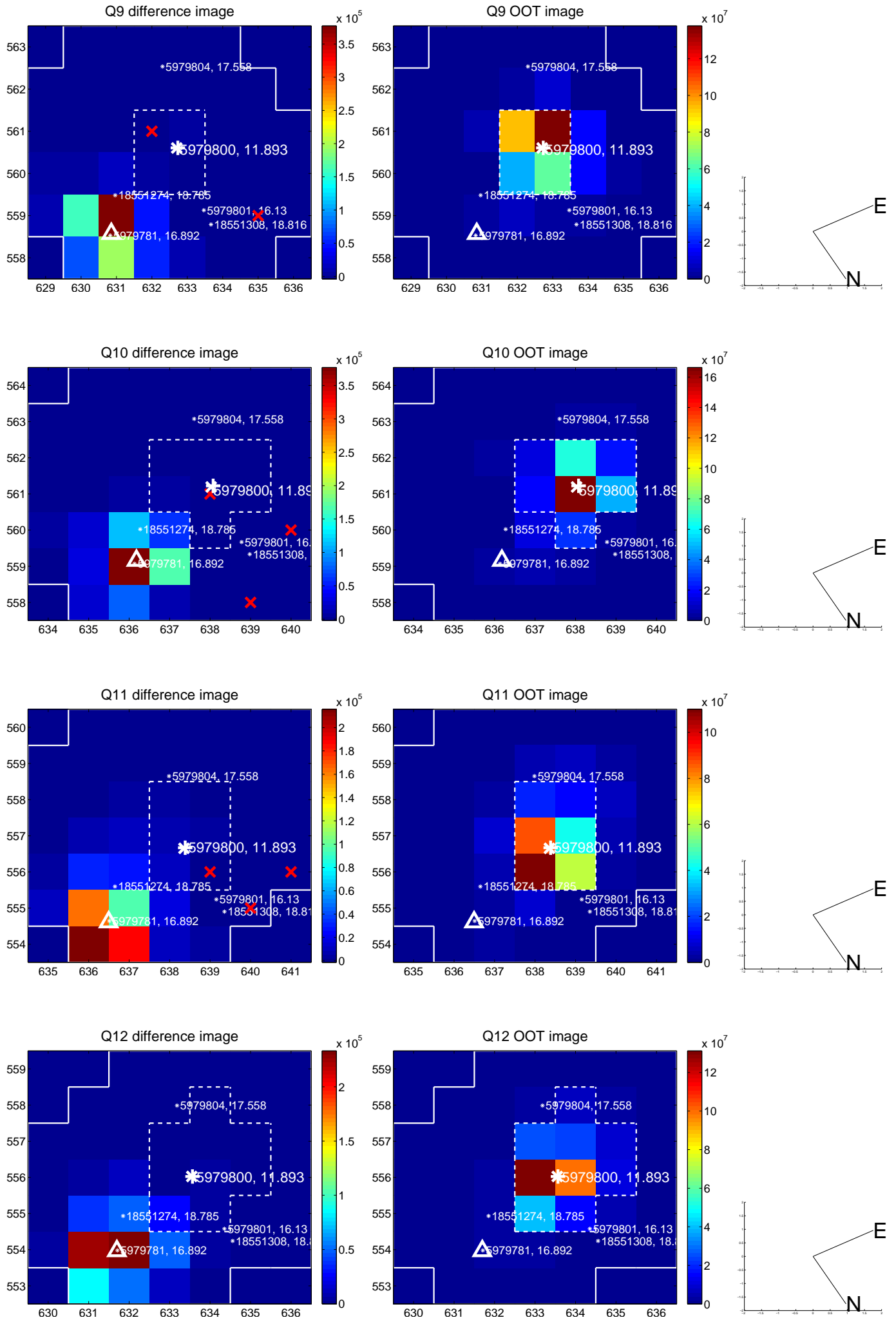


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

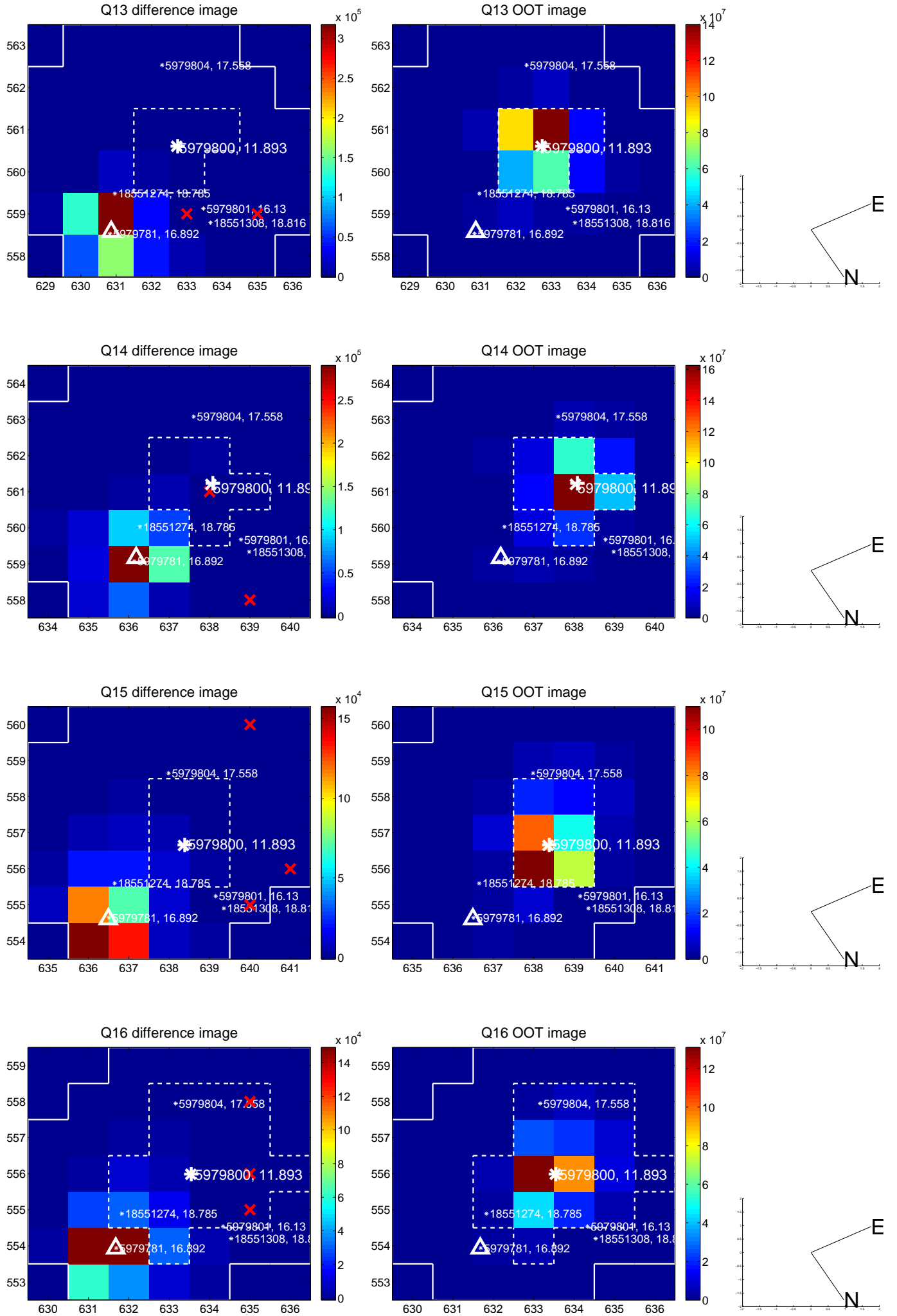




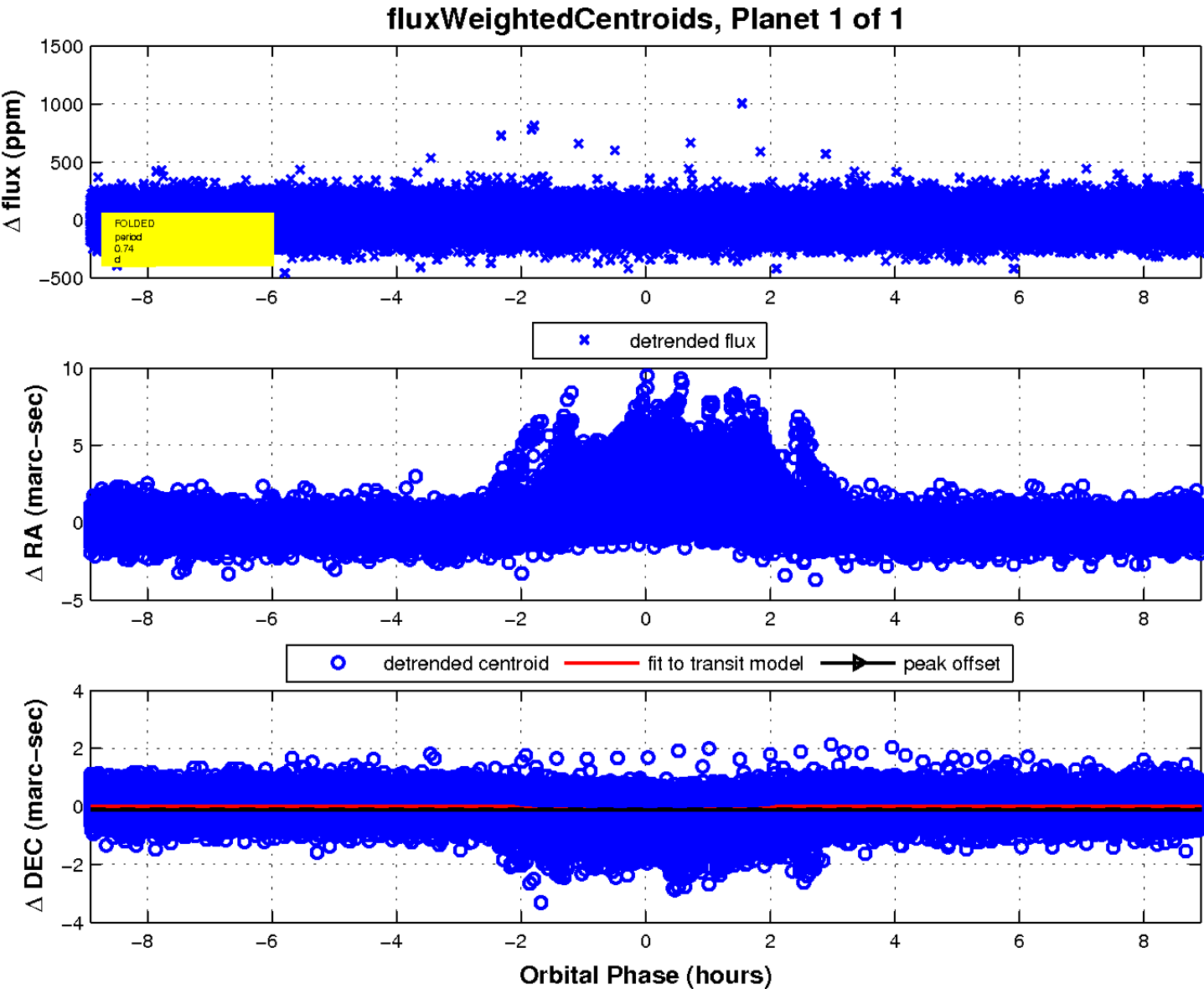
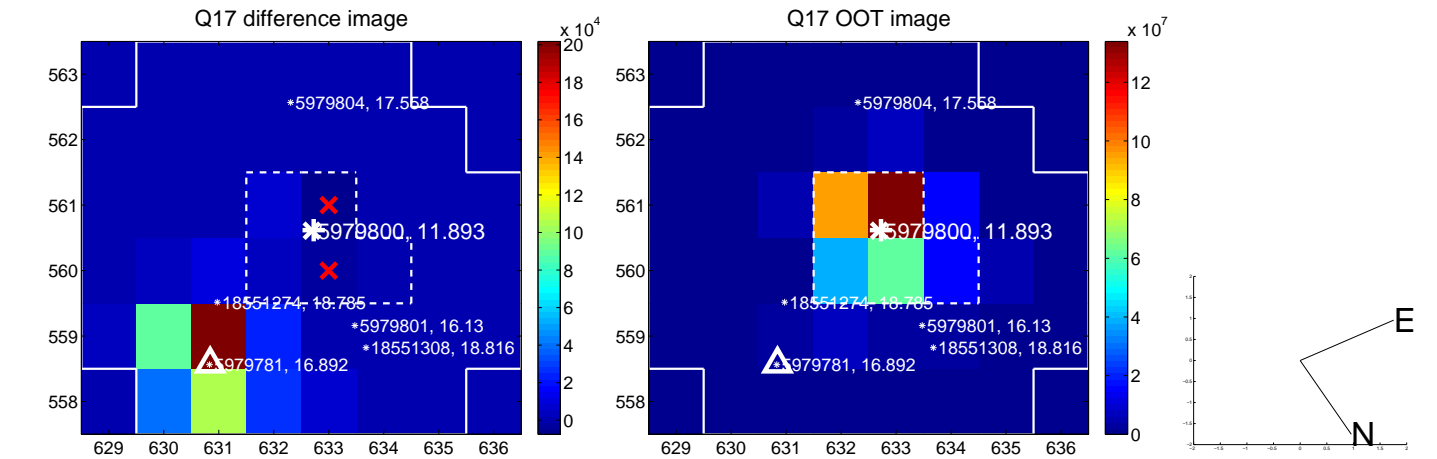
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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.



UKIRT Image

