

# KIC 006289897

## Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R <sub>★</sub> (R <sub>☉</sub> )	T <sub>★</sub> (K)	R <sub>p</sub> (R <sub>⊕</sub> )	S <sub>p</sub> (S <sub>⊕</sub> )
006289897-01	OBS	5260.01	1.559306	132.564774	33.0	3.074	12.3	11.5	1.90	6475	1.28	7711.06

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006289897-01	OBS	FP	0.00	0	0	1	1	CENT_UNRESOLVED_OFFSET—EPHEM_MATCH

**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.

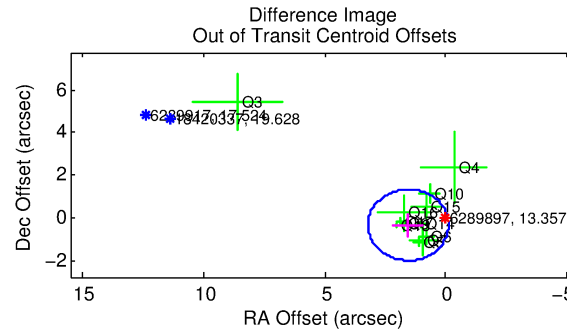
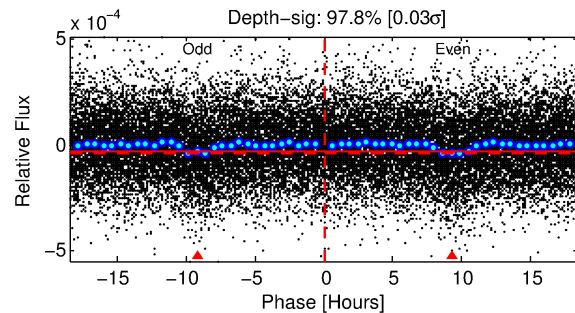
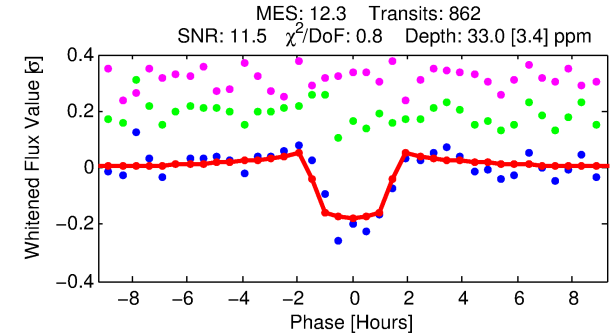
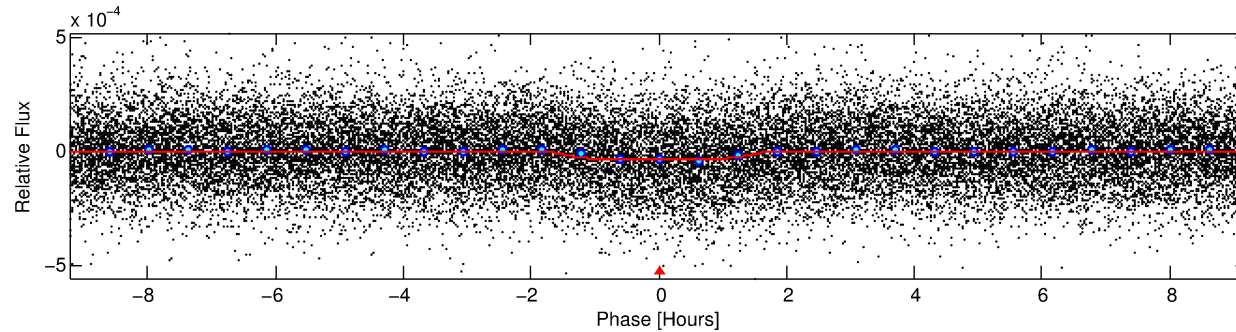
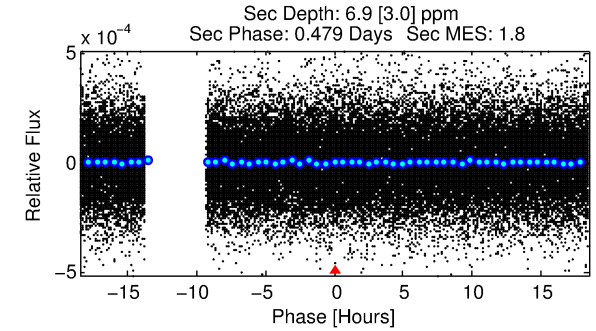
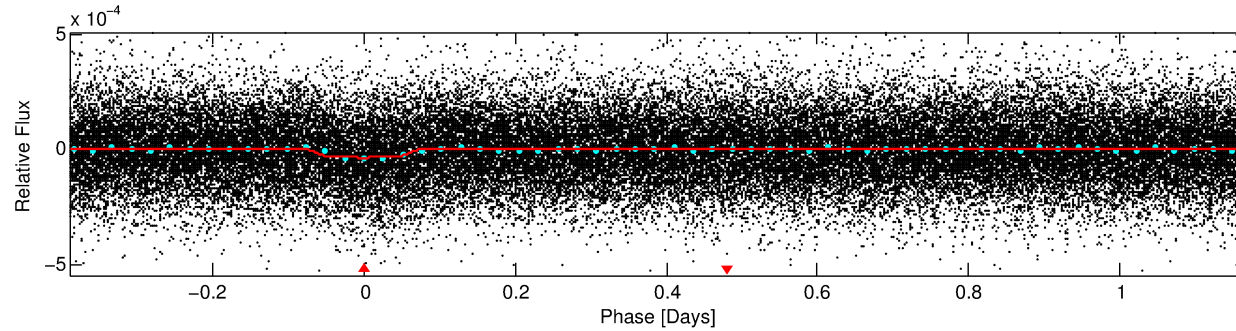
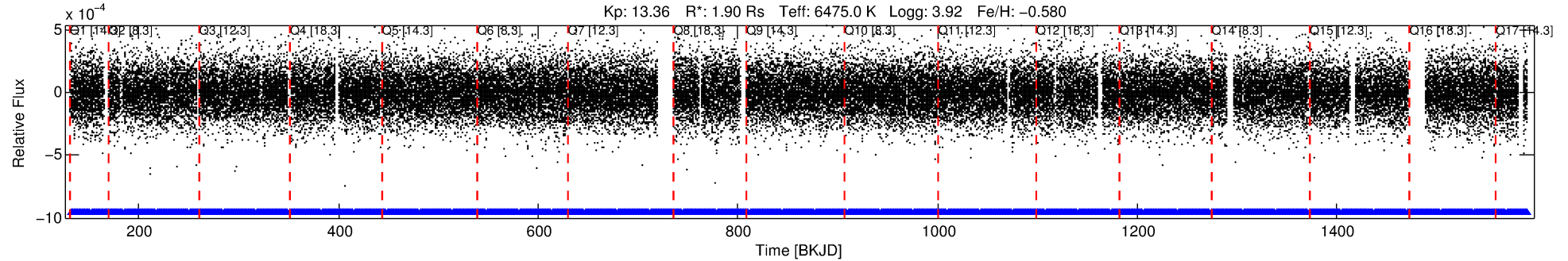
## Ephemeris Match Information For 006289897-01

TCE (1)	KIC	Parent (2)	Parent KIC	P <sub>1</sub> :P <sub>2</sub>	Dist (″)	ΔRow	ΔCol	m <sub>2</sub>	m <sub>1</sub>	D <sub>2</sub> /D <sub>1</sub>	Mechanism	Flag	σ <sub>P</sub>	σ <sub>T</sub>
006289897-01	6289897	006048106-pri	6048106	1:1	964.3	243	-1	14.09	13.36	8797.00	Col-Anomaly	0	2.75	1.64

**Notes:** P<sub>1</sub>:P<sub>2</sub> is the period ratio. Dist is the distance in arcseconds. ΔRow and ΔCol are the number of pixels apart in row and column. m<sub>2</sub> and m<sub>1</sub> are the magnitudes of the parent and child. D<sub>2</sub>/D<sub>1</sub> is the parent's transit depth divided by the child's. σ<sub>P</sub> and σ<sub>T</sub> are the significance of the match in period and epoch. For a match to be considered significant σ<sub>P</sub> < 5.0 and σ<sub>T</sub> < 5.0. Matches which have σ<sub>P</sub> and σ<sub>T</sub> very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

# DV One-Page Summary

KIC: 6289897 Candidate: 1 of 1 Period: 1.559 d  
KOI: K05260.01 Corr: 0.895



## DV Fit Results:

Period = 1.55931 [0.00001] d  
Epoch = 132.5648 [0.0027] BKJD  
Rp/R\* = 0.0062 [0.0019]  
a/R\* = 1.96 [2.60]  
b = 0.90 [0.37]  
Seff = 7711.06 [4000.31]  
Teq = 2389 [310] K  
Rp = 1.28 [0.59] Re  
a = 0.0272 [0.0088] AU  
Ag = 1.72 [1.56] [0.46σ]  
Teffp = 4229 [803] K [2.14σ]

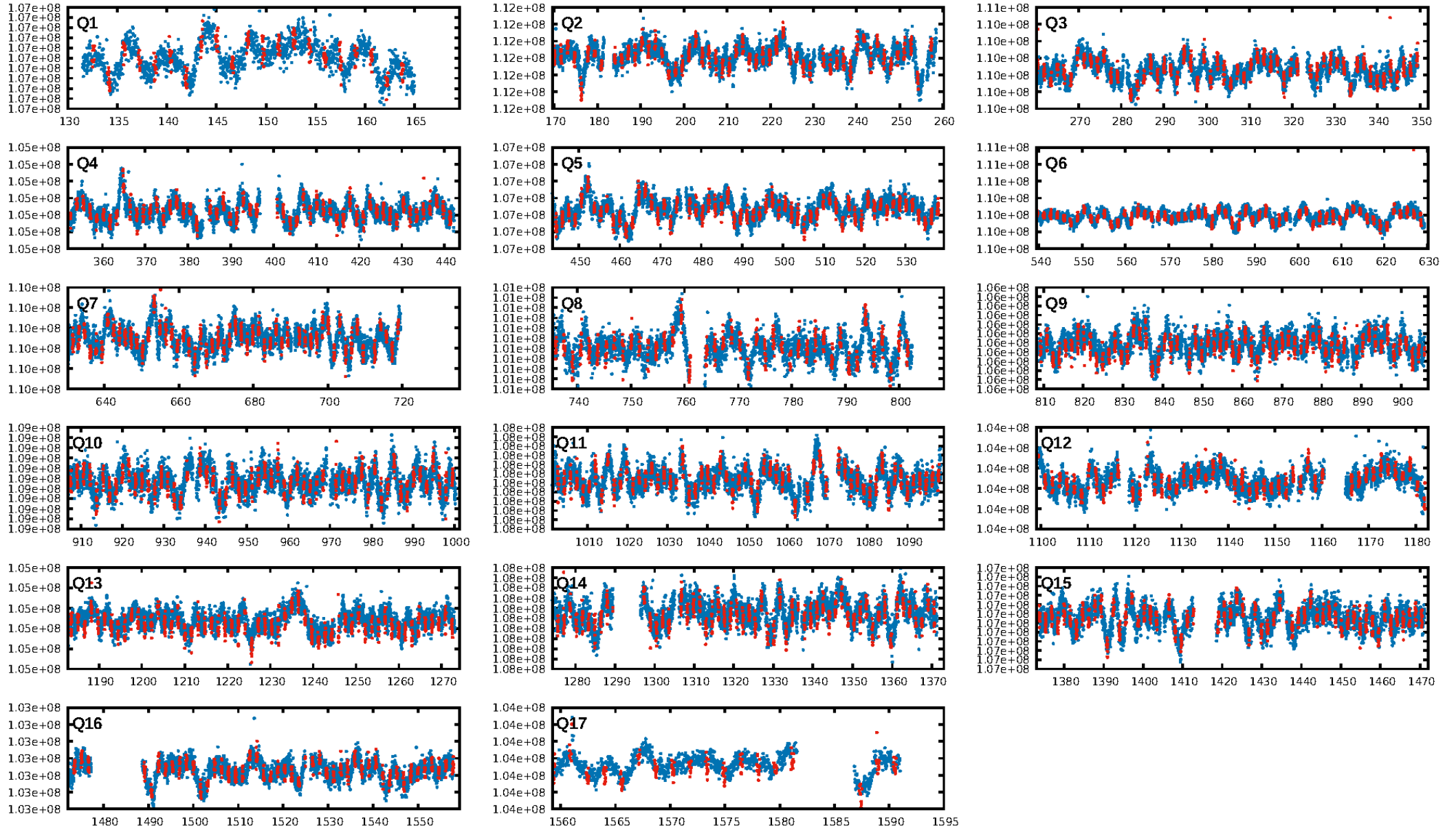
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 8.84e-33  
RollingBand-fgt: 1.00 [823/823]  
GhostDiagnostic-chr: -2.692  
Centroid-sig: 0.0%  
Centroid-so: 3.868 arcsec [4.76σ]  
OotOffset-rm: 1.589 arcsec [2.86σ]  
KicOffset-rm: 1.610 arcsec [2.84σ]  
OotOffset-st: 3/3/2/4 [12]  
KicOffset-st: 3/3/2/4 [12]  
DiffImageQuality-fgm: 0.83 [10/12]  
DiffImageOverlap-fno: 1.00 [17/17]

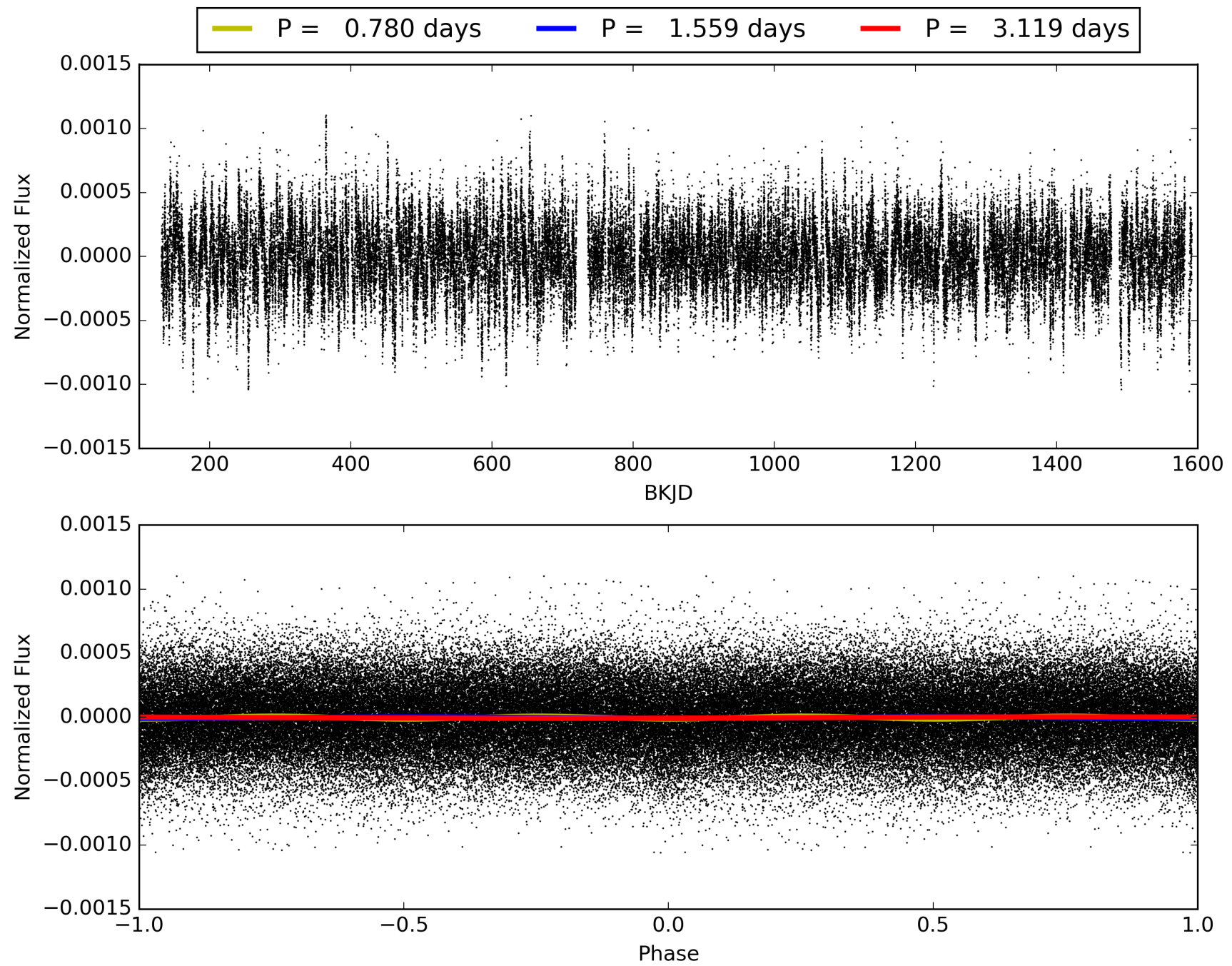
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 18:51:27 Z

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

# TCE 006289897-01, PDC Light Curves

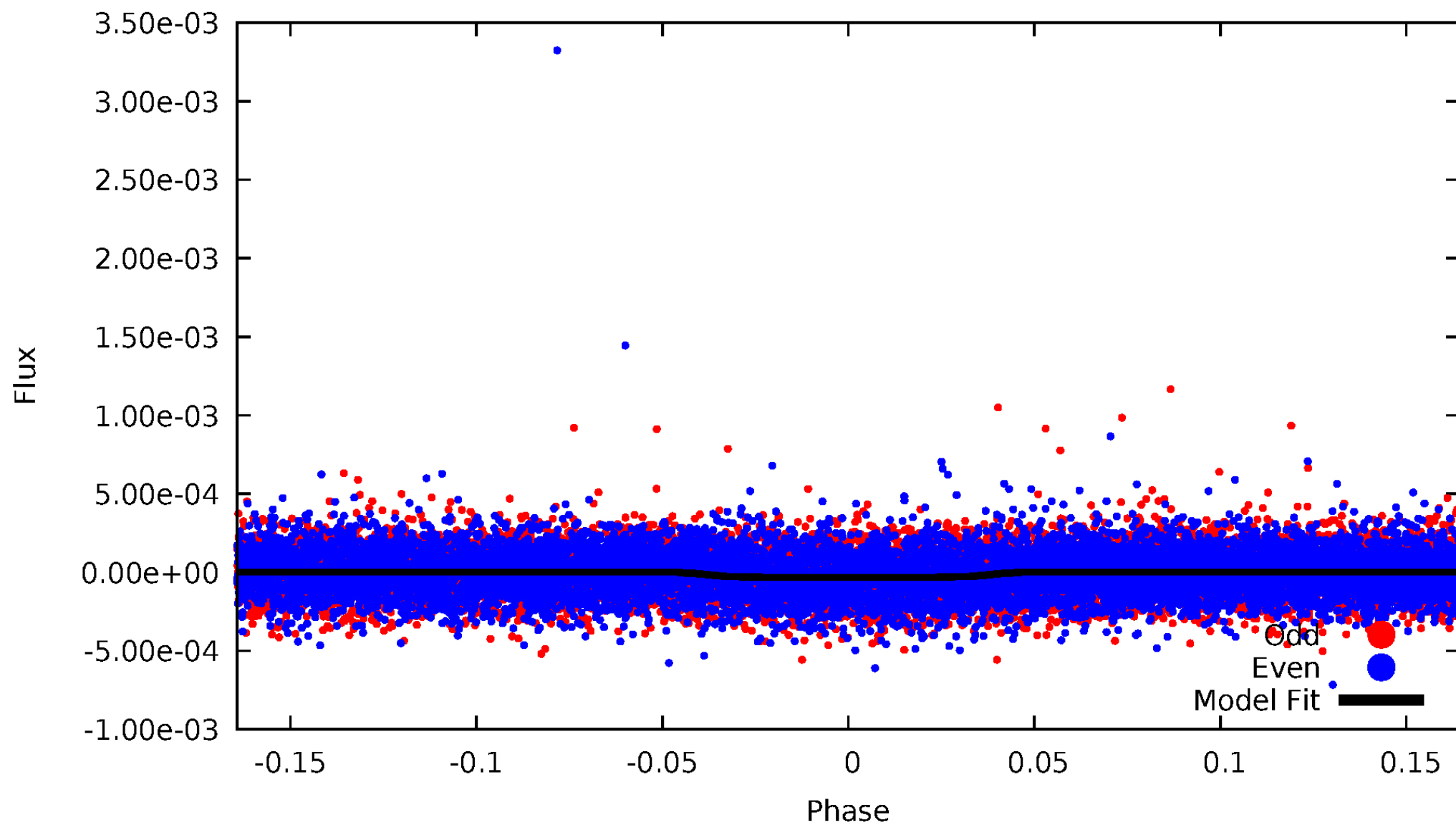


TCE 006289897-01



# DV Odd/Even

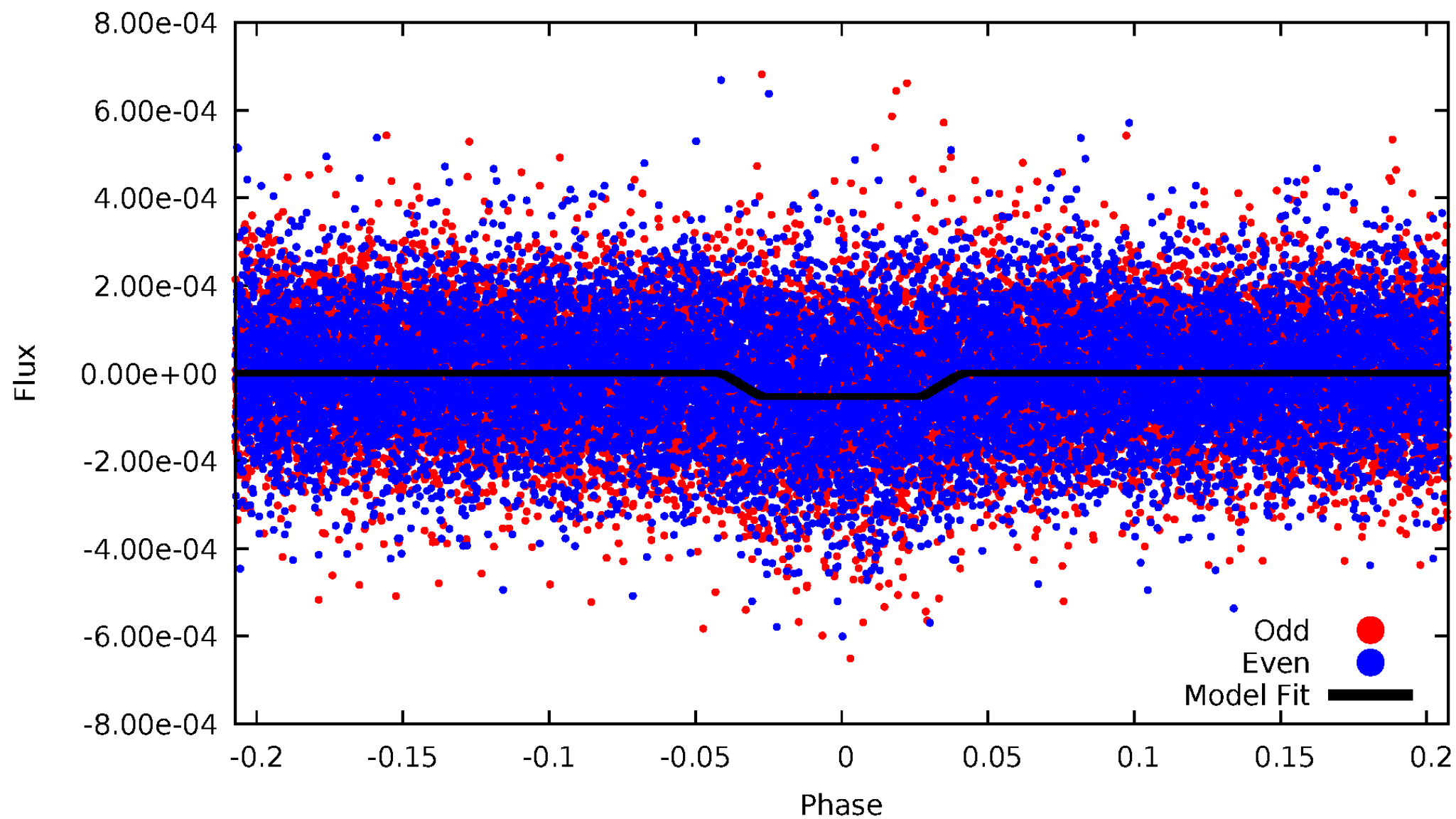
TCE 006289897-01



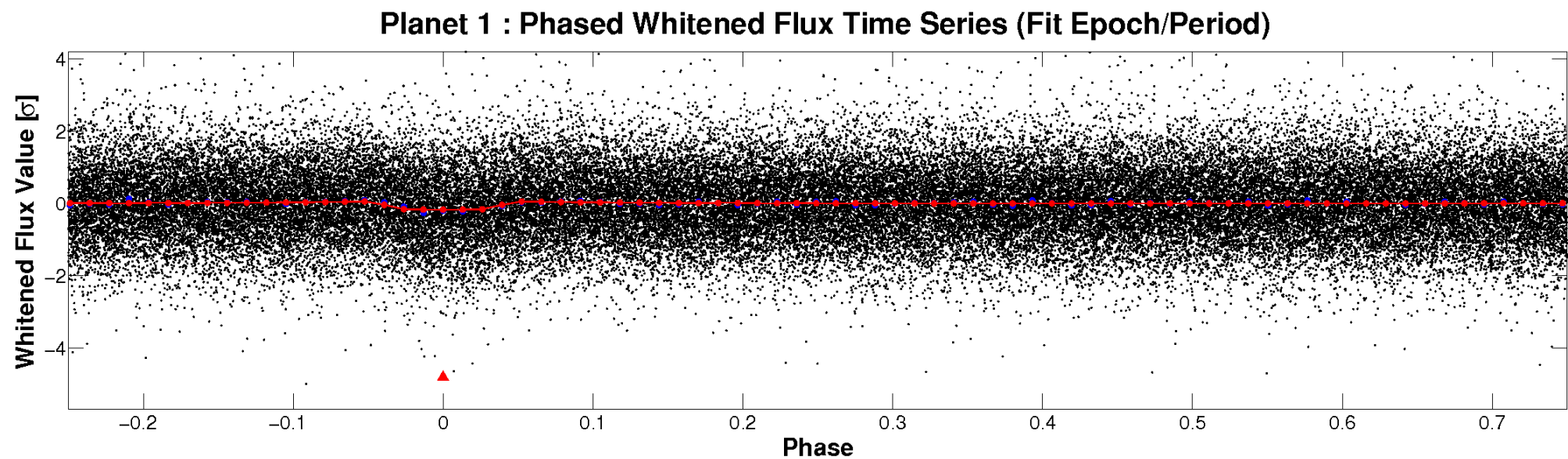
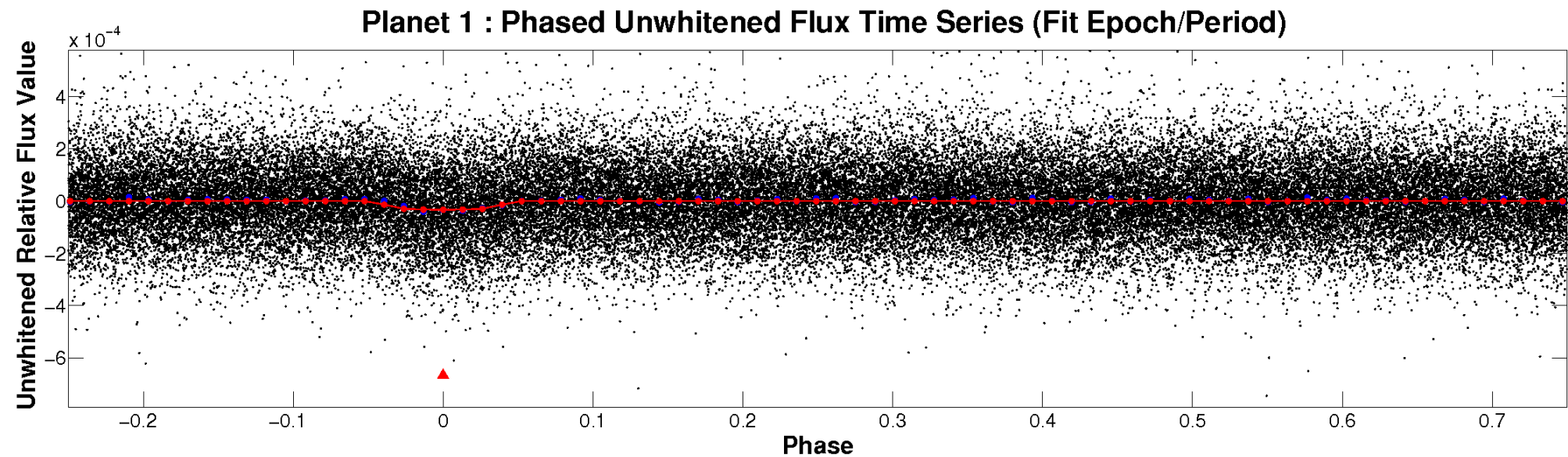


# ALT Odd/Even

TCE 006289897-01

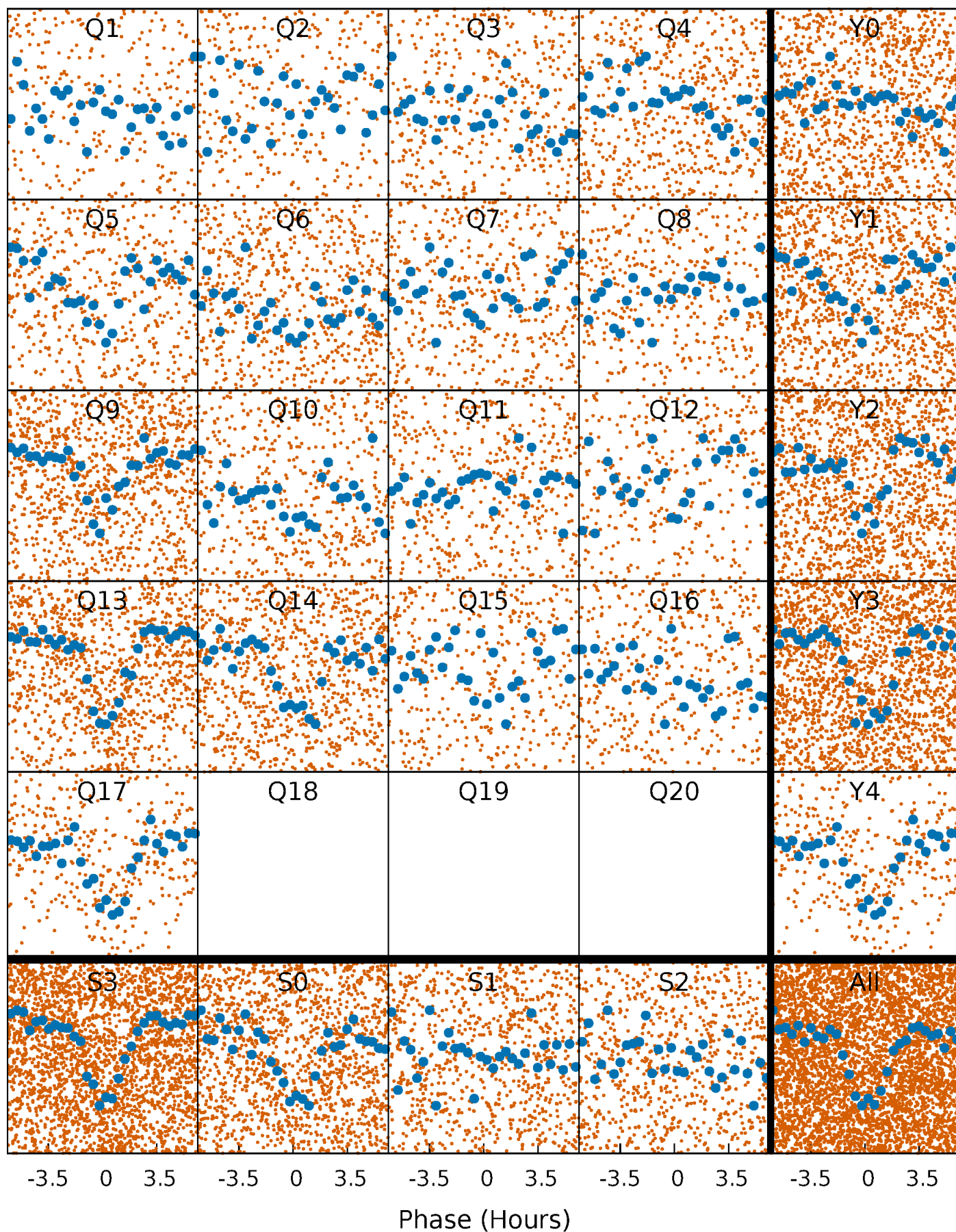


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

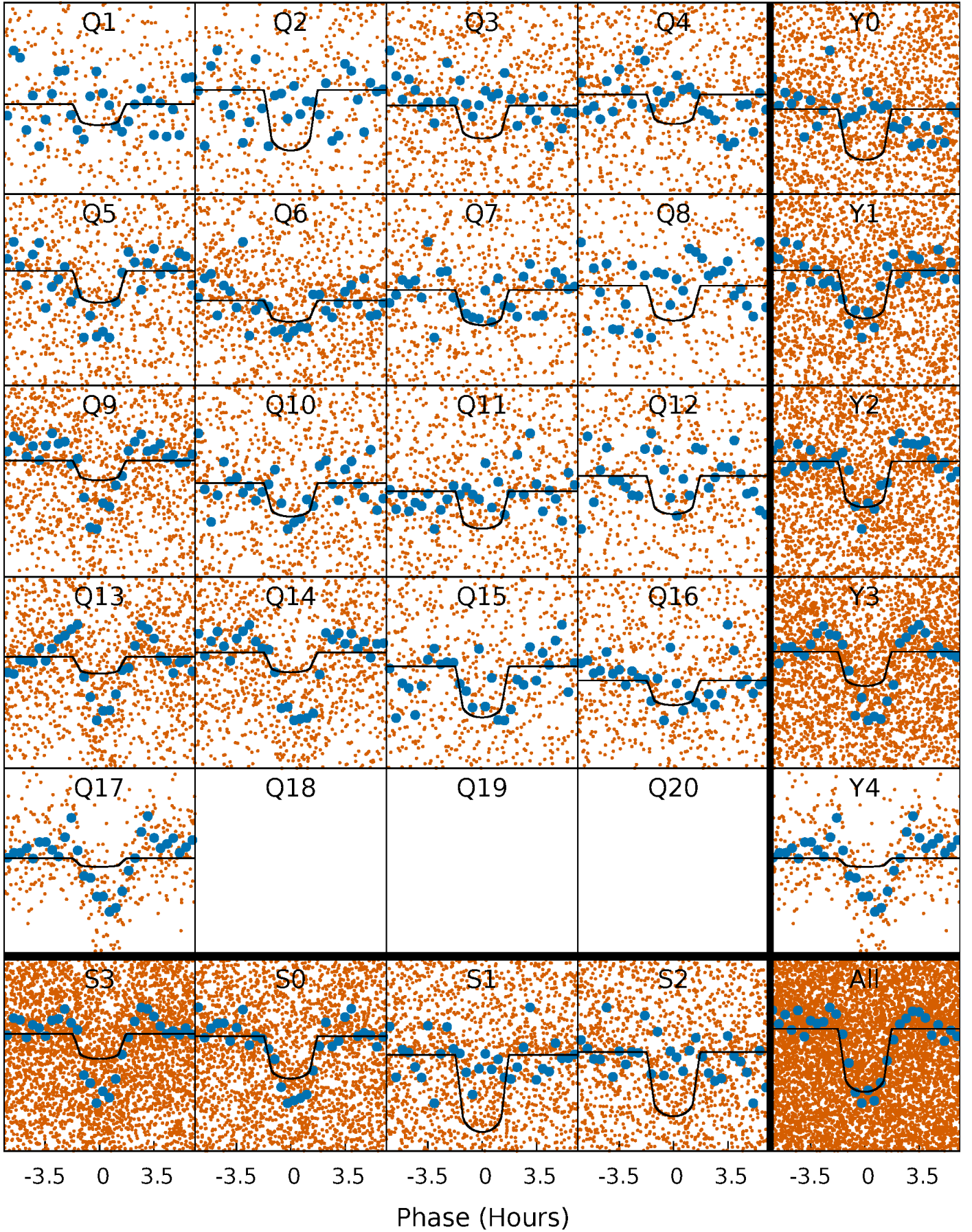
TCE 006289897-01 P= 1.559306 Days  $T_0=132.564774$  (BKJD)





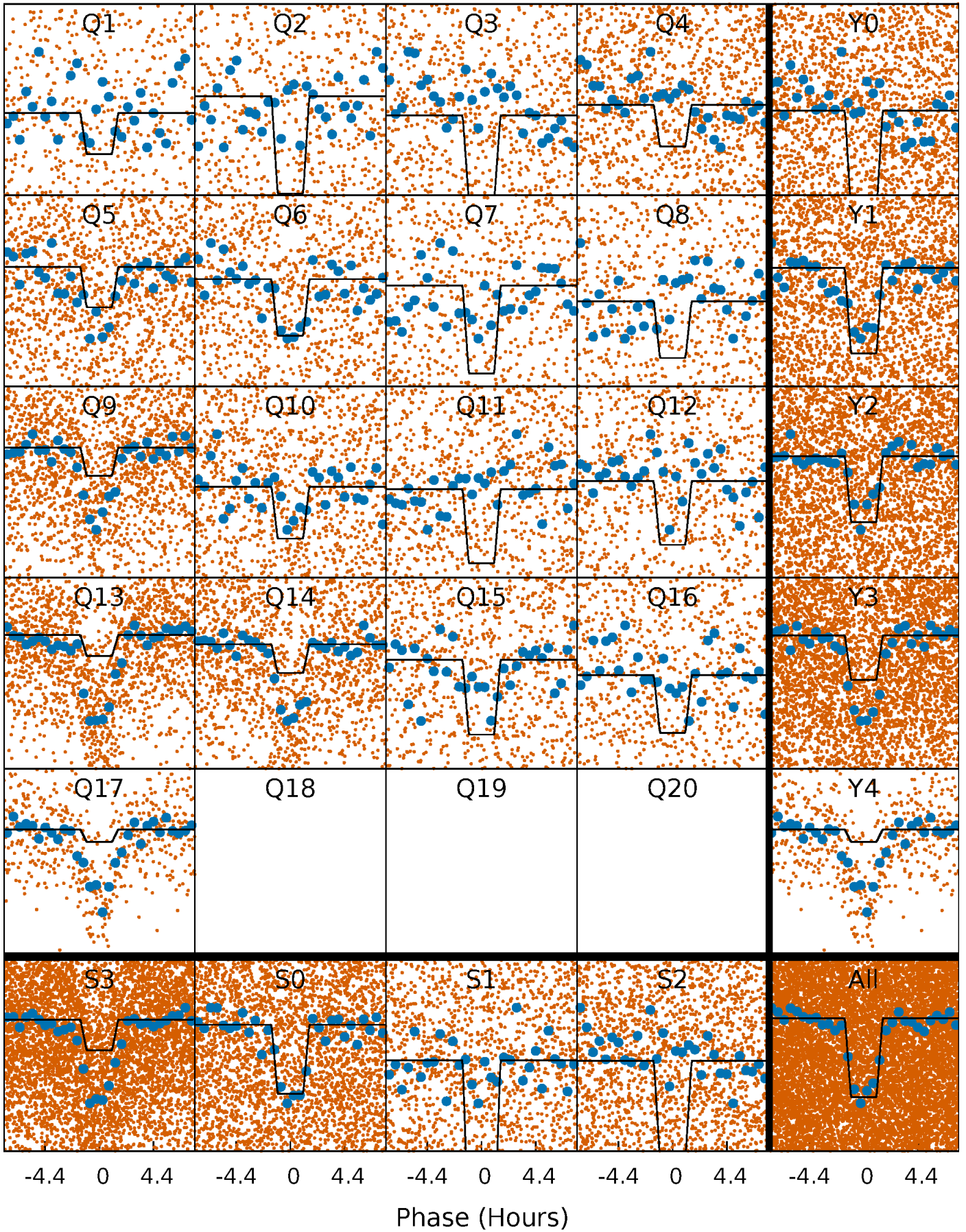
# DV Quarter-Phased Transit Curves

TCE 006289897-01   P= 1.559306 Days    $T_0=132.564774$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 006289897-01 P= 1.559350 Days  $T_0=132.547293$  (BKJD)

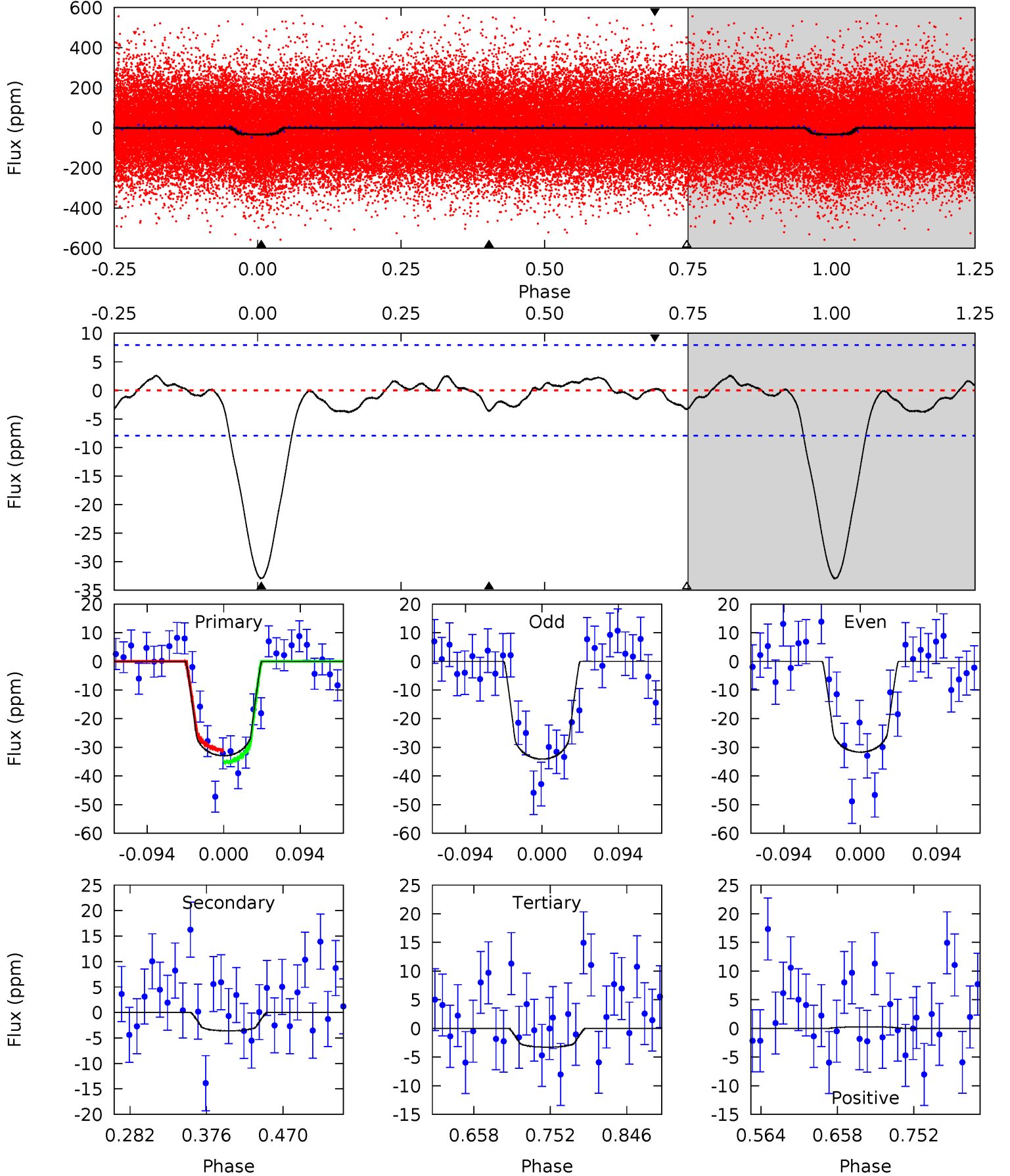




# DV Model-Shift Uniqueness Test

006289897-01, P = 1.559306 Days, E = 131.005468 Days

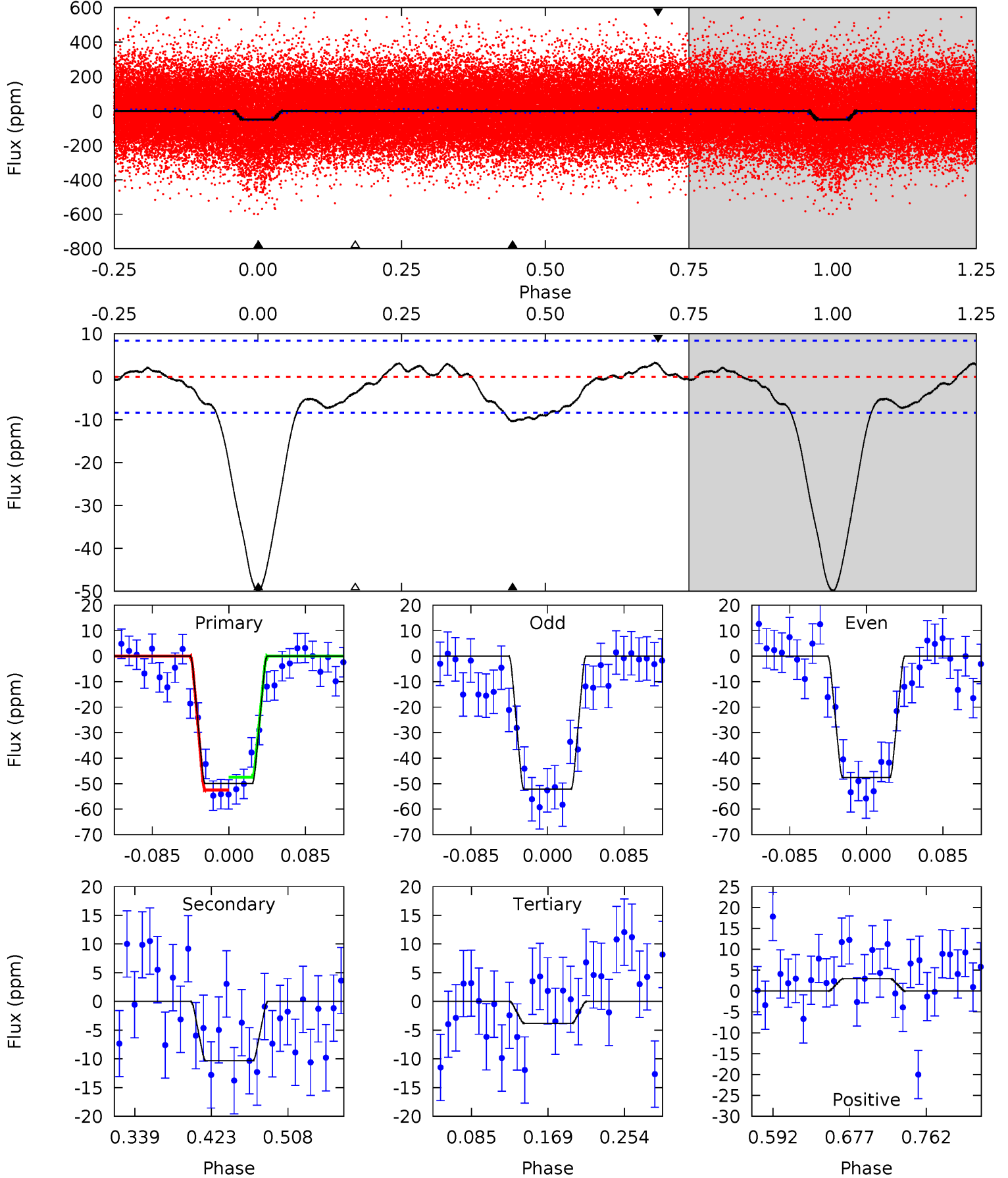
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.0	2.08	1.89	0.14	4.58	1.67	0.95	17.1	18.9	0.19	1.94	0.70	1.15	0.07	1.26



# Alt Model-Shift Uniqueness Test

006289897-01, P = 1.559350 Days, E = 130.987943 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
27.3	5.66	2.10	1.60	4.60	1.72	1.63	25.2	25.7	3.55	4.06	1.26	1.20	0.06	1.39





### Stellar Parameters For KIC 006289897

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$6475^{+156}_{-176}$	$3.921^{+0.294}_{-0.105}$	$-0.580^{+0.350}_{-0.300}$	$1.900^{+0.406}_{-0.660}$	$1.097^{+0.178}_{-0.161}$	$0.225^{+0.482}_{-0.082}$
	+2%/-3%	+7%/-3%	+60%/-52%	+21%/-35%	+16%/-15%	+214%/-36%
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 006289897-01 / KOI 5260.01

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$-4 \pm 2$	$1.20^{+0.47}_{-0.42}$	$3276^{+202}_{-303}$	$3648^{+803}_{-815}$	$0.947^{+1.689}_{-0.535}$
Alt.	$-10 \pm 2$	$1.40^{+0.49}_{-0.40}$	$3282^{+199}_{-277}$	$4362^{+658}_{-487}$	$2.127^{+2.042}_{-1.015}$

$T_{\text{max}}$  = 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

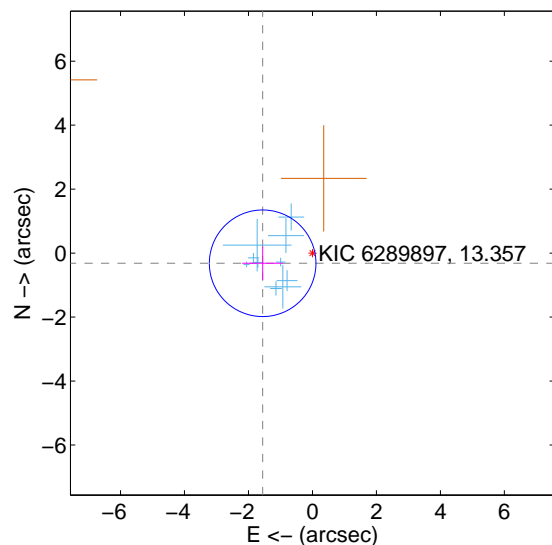
Supplemental centroid analysis for 006289897-01. Kepler magnitude: 13.36. Transit SNR 11.53

There are 10 quarters with good PRF difference image offsets

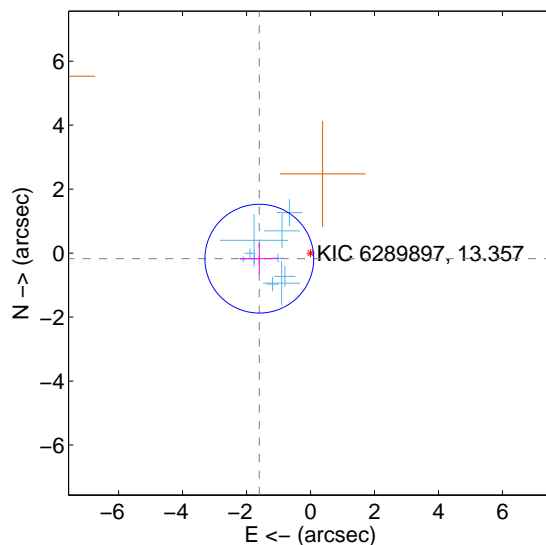
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.589 \pm 0.555$	2.86	$1.557 \pm 0.640$	$-0.318 \pm 0.522$
PRF-fit source offset from KIC position	$1.610 \pm 0.567$	2.84	$1.601 \pm 0.606$	$-0.174 \pm 0.488$
photometric centroid source offset	$3.87 \pm 0.81$	4.76	$3.75 \pm 0.82$	$-0.97 \pm 0.71$

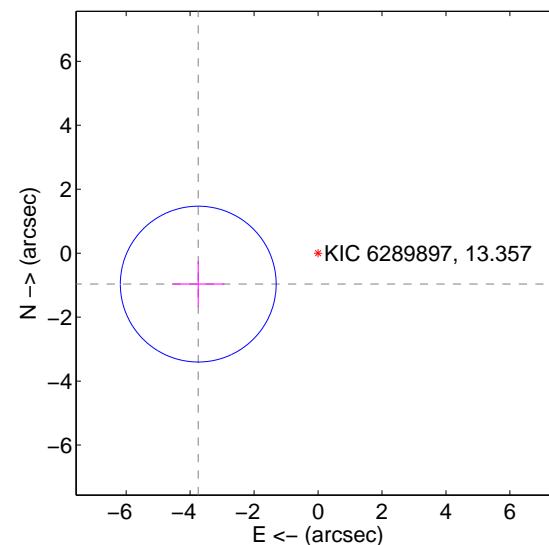
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

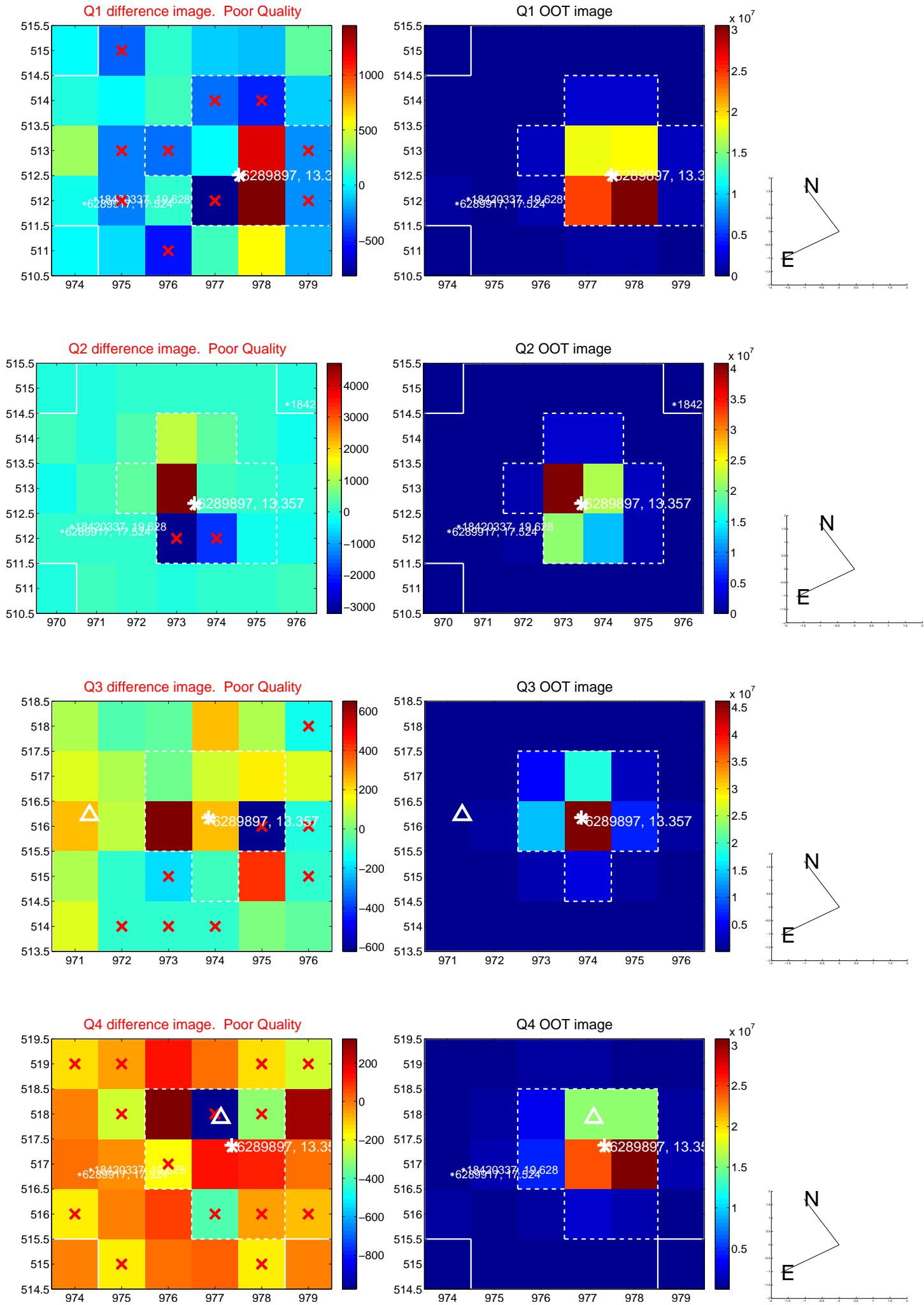


offset from photometric centroids

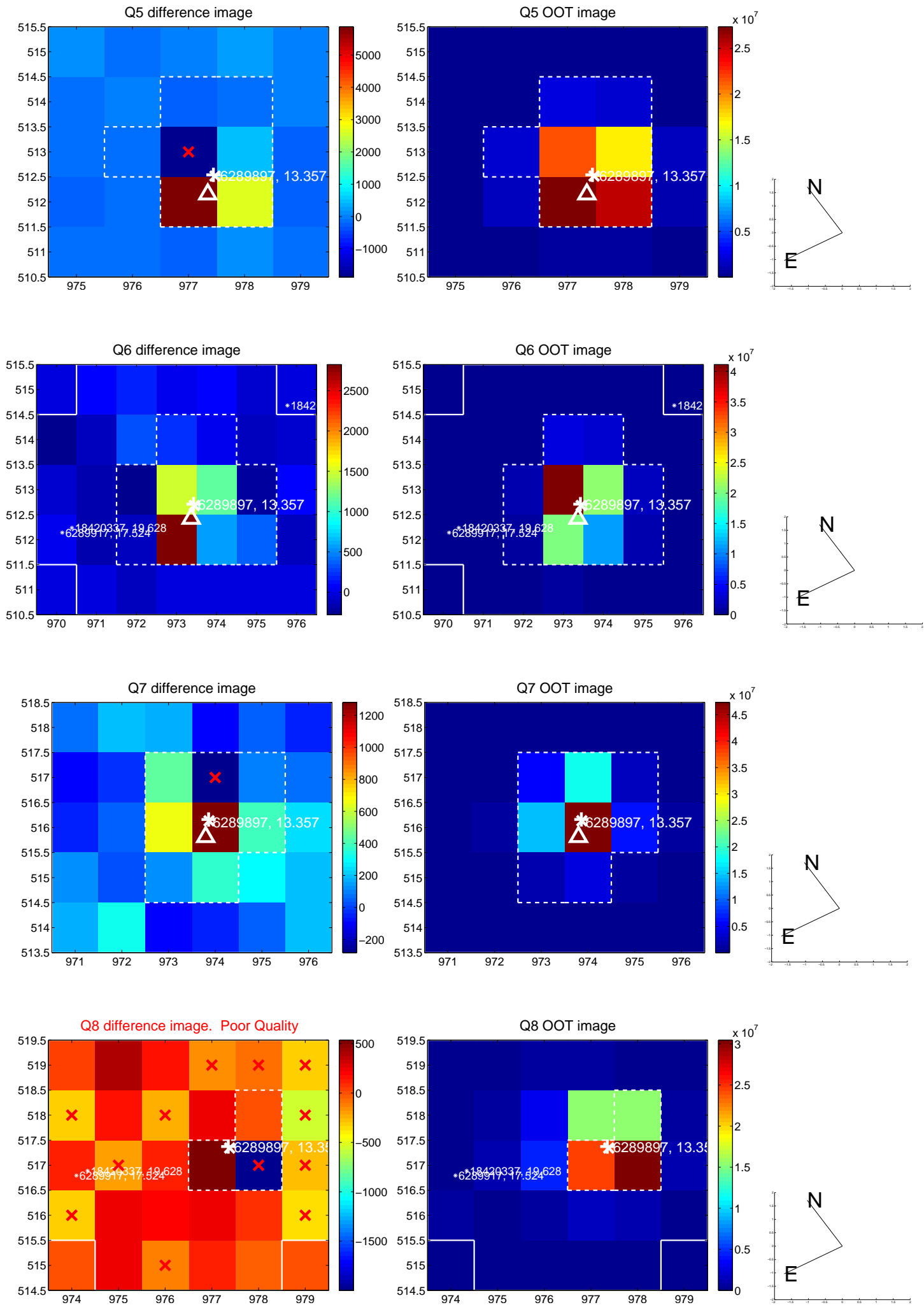


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

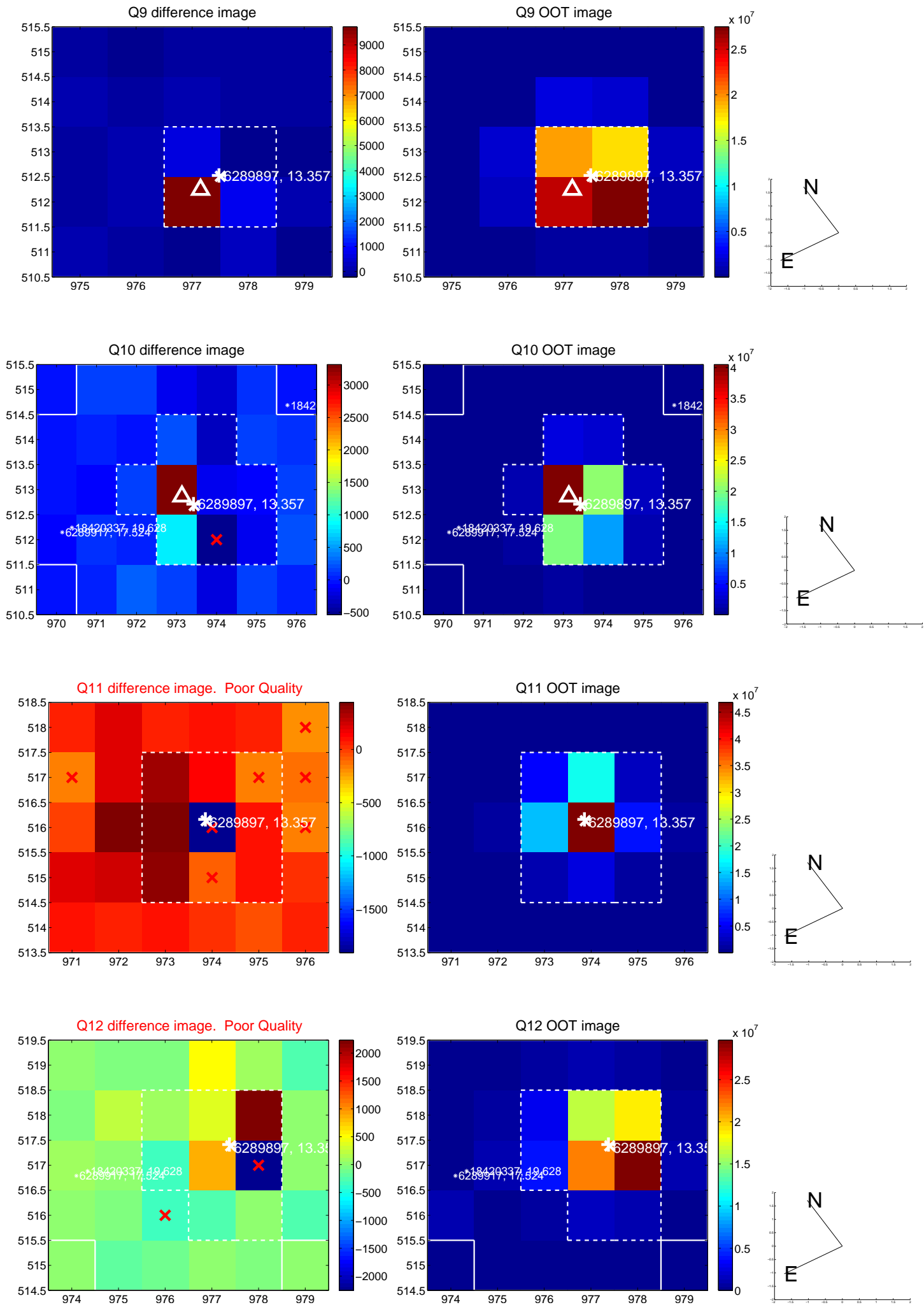


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

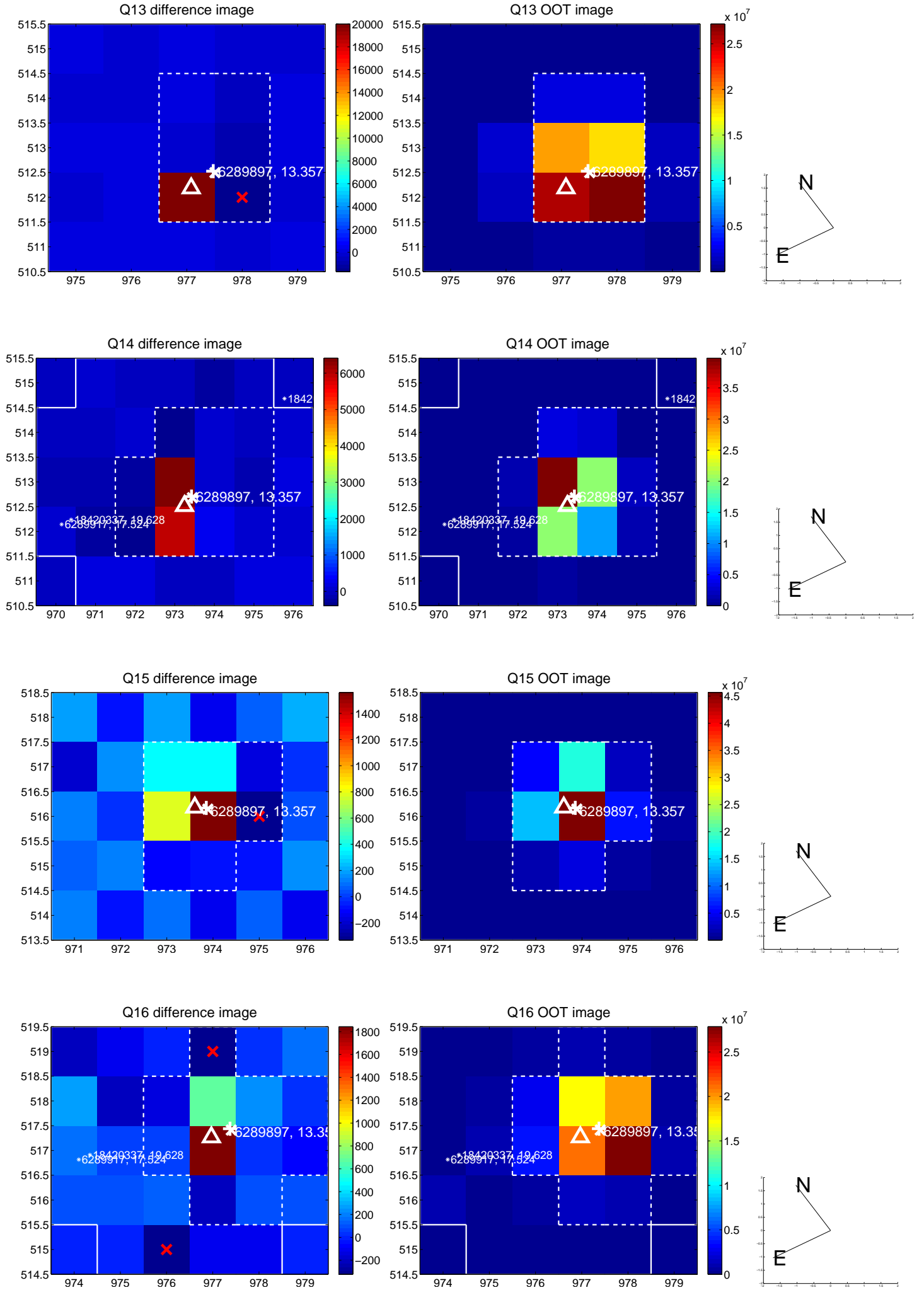




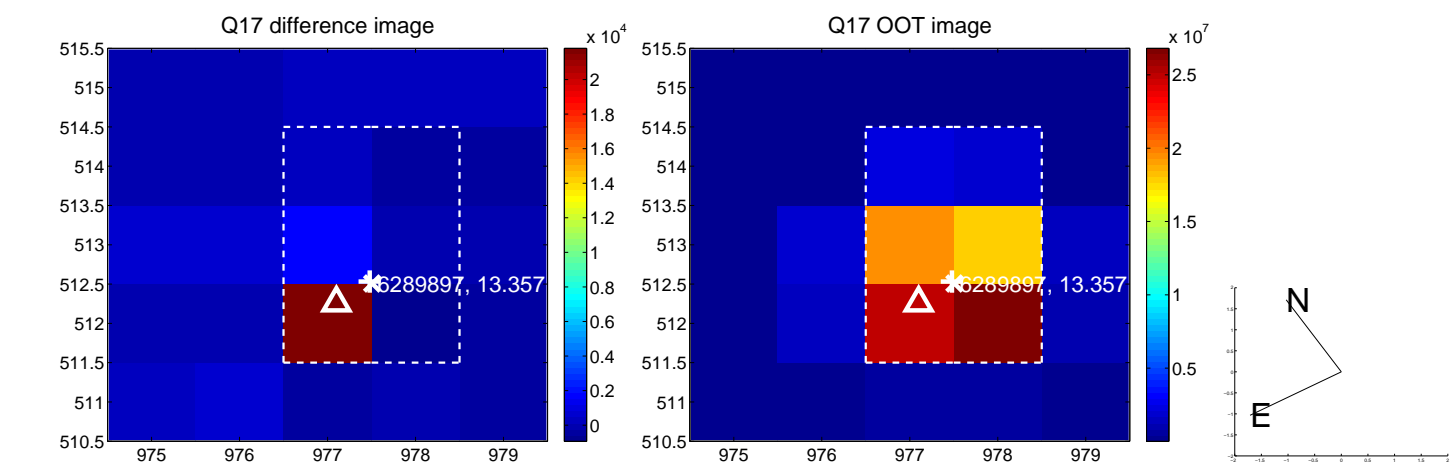
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



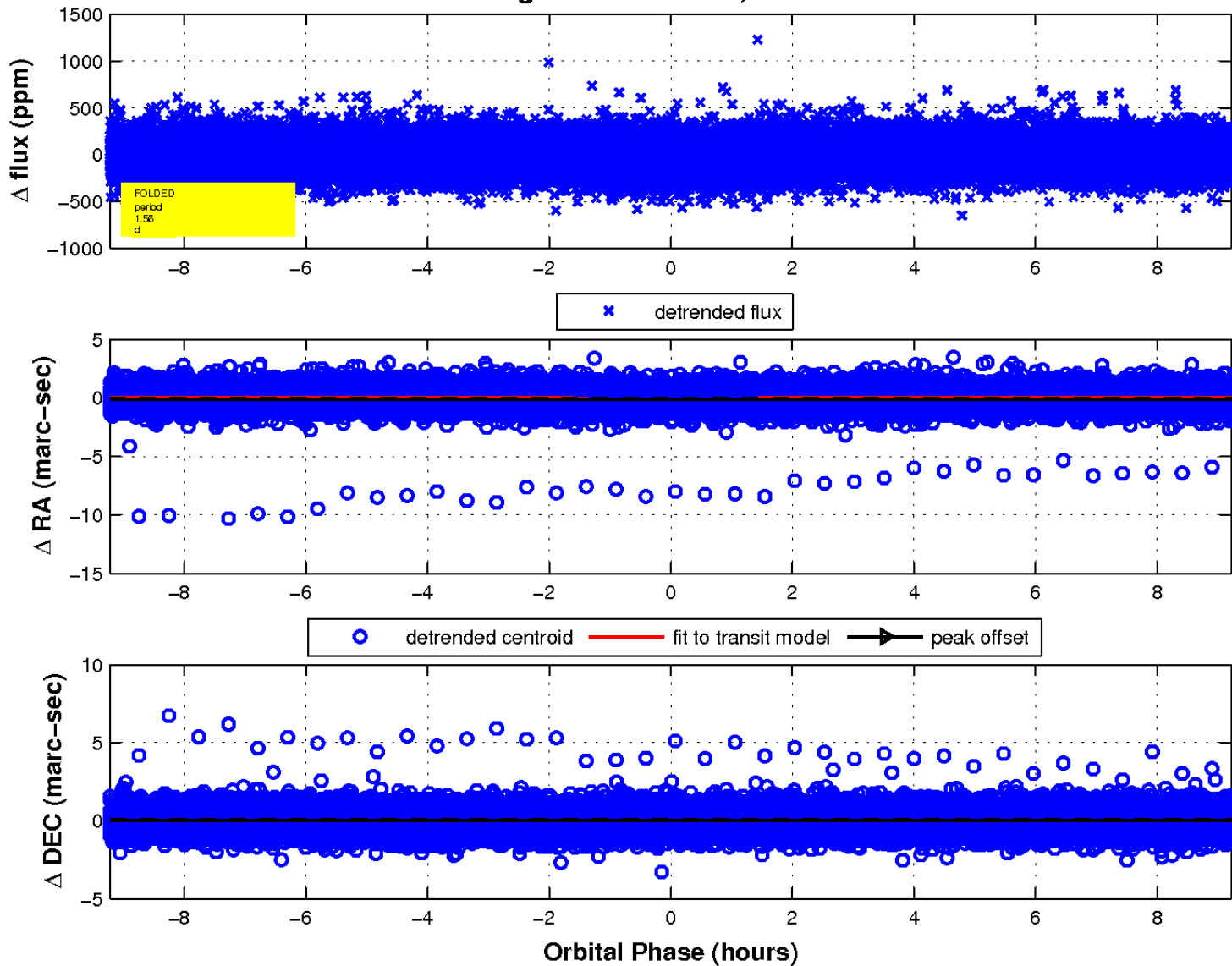
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

