

# KIC 005739026

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
005739026-01	OBS	No	0.960662	132.368802	3.8	10.792	7.6	2.4	3.33	6777	0.69	42064.22

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005739026-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_FEW_DIFFS

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

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

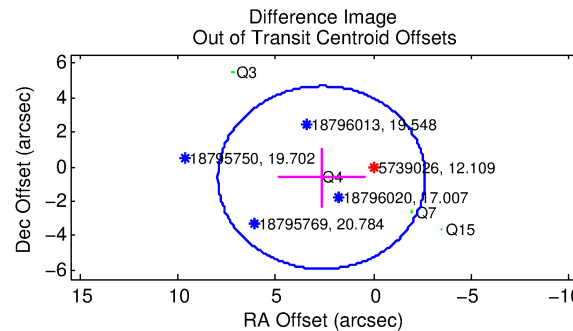
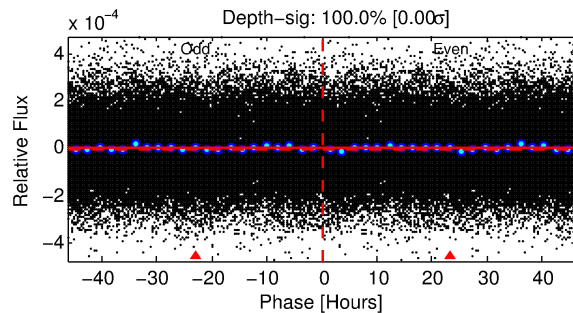
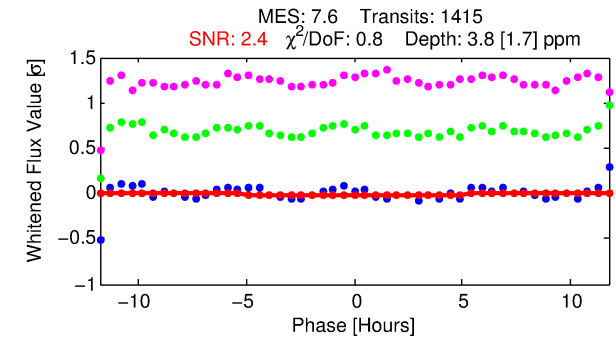
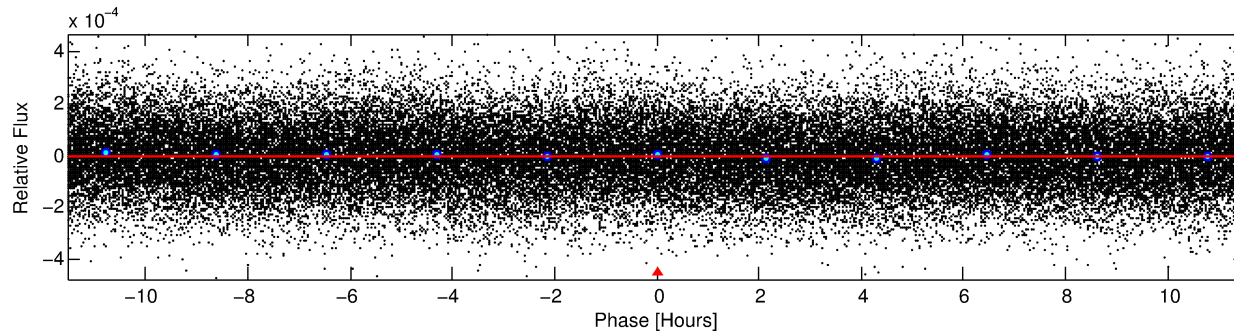
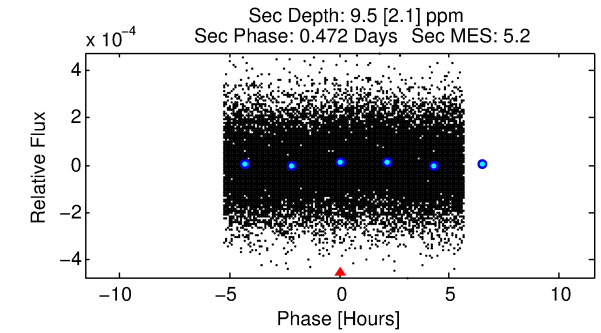
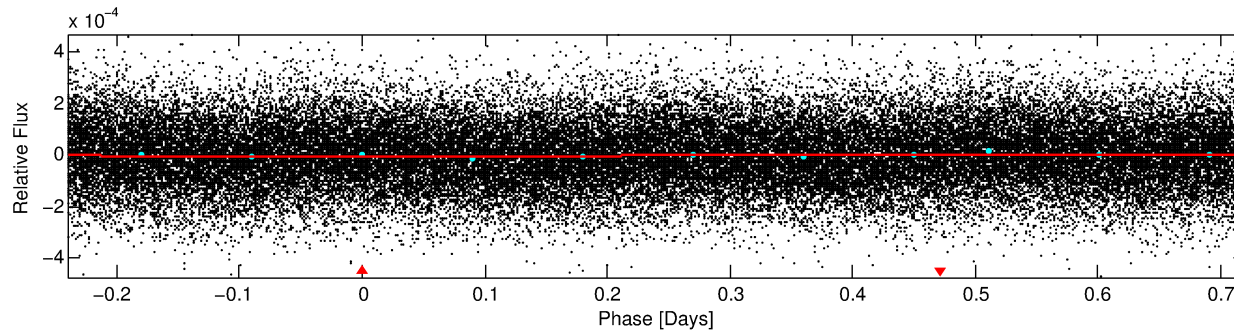
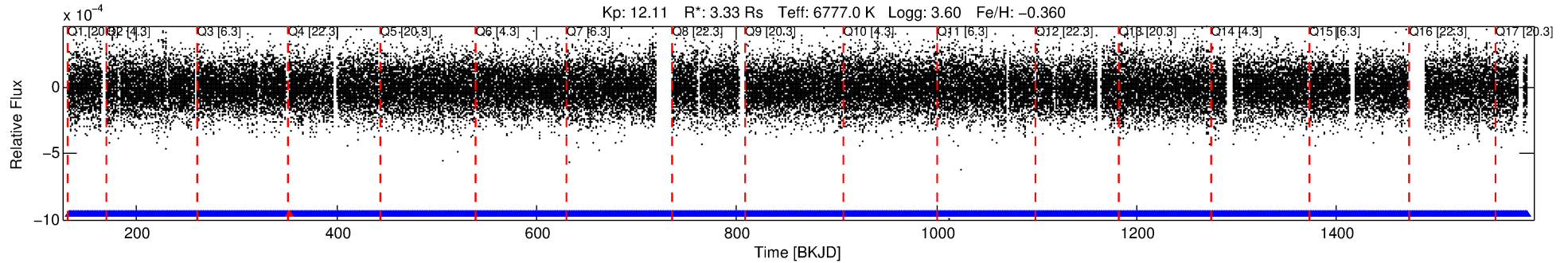
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 005739026-01

No Significant Match Found

# DV One-Page Summary

KIC: 5739026 Candidate: 1 of 1 Period: 0.961 d



## DV Fit Results:

Period = 0.96066 [0.00007] d  
Epoch = 132.3688 [0.0200] BKJD  
Rp/R\* = 0.0019 [0.0038]  
a/R\* = 1.00 [0.10]  
b = 0.68 [9.41]  
Seff = 42064.22 [24169.58]  
Teq = 3652 [525] K  
Rp = 0.69 [1.40] Re  
a = 0.0223 [0.0079] AU  
Ag = 5.45 [22.00] [0.20σ]  
Teffp = 8628 [8621] K [0.58σ]

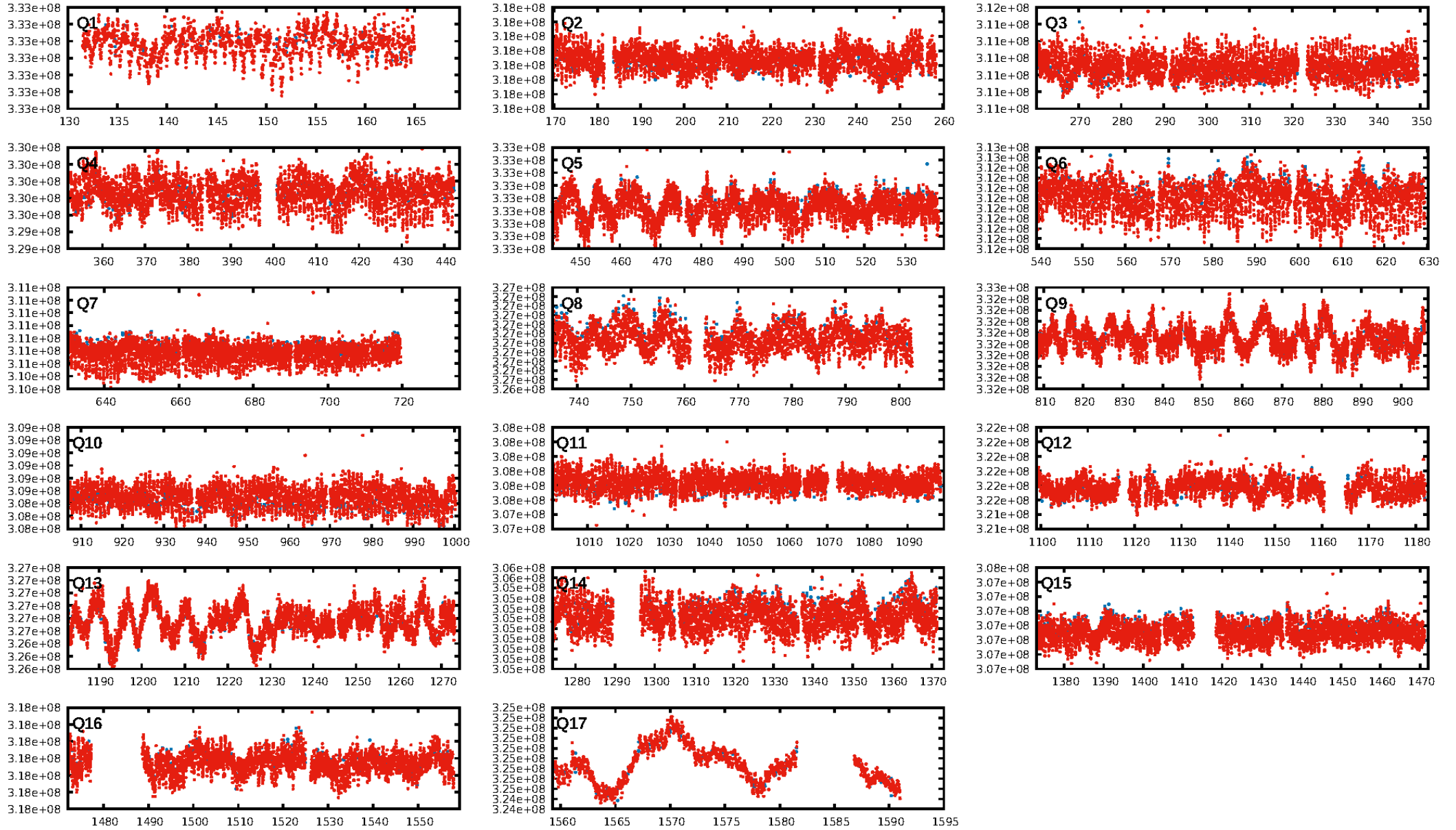
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [1350/1351]  
GhostDiagnostic-chr: N/A  
Centroid-sig: N/A  
Centroid-so: N/A  
OotOffset-rm: 2.730 arcsec [1.55σ]  
KicOffset-rm: 2.553 arcsec [2.13σ]  
OotOffset-st: 0/3/1/0 [4]  
KicOffset-st: 0/3/1/1 [5]  
DiffImageQuality-fgm: 0.20 [1/5]  
DiffImageOverlap-fno: 1.00 [17/17]

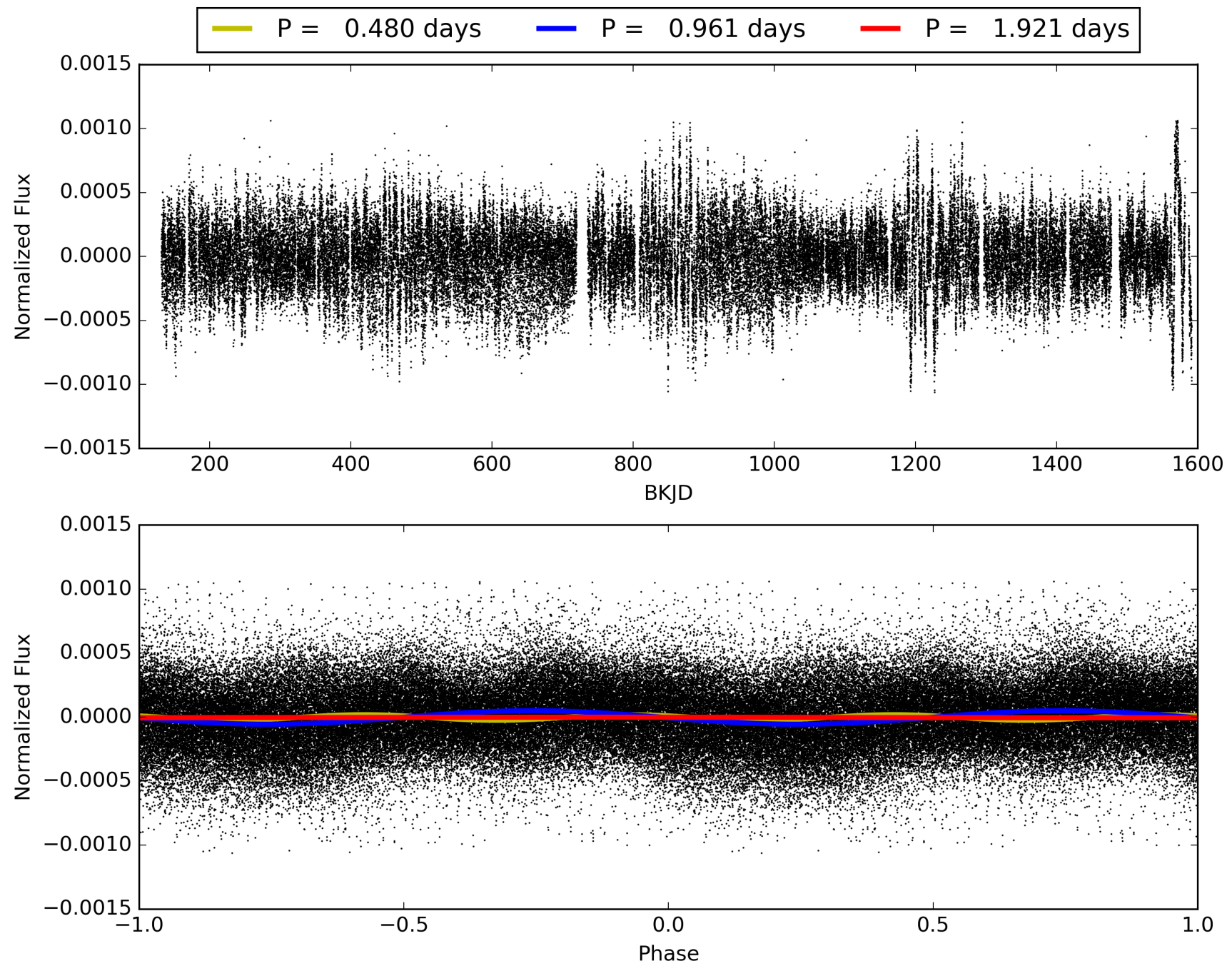
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 09:07:07 Z

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

# TCE 005739026-01, PDC Light Curves

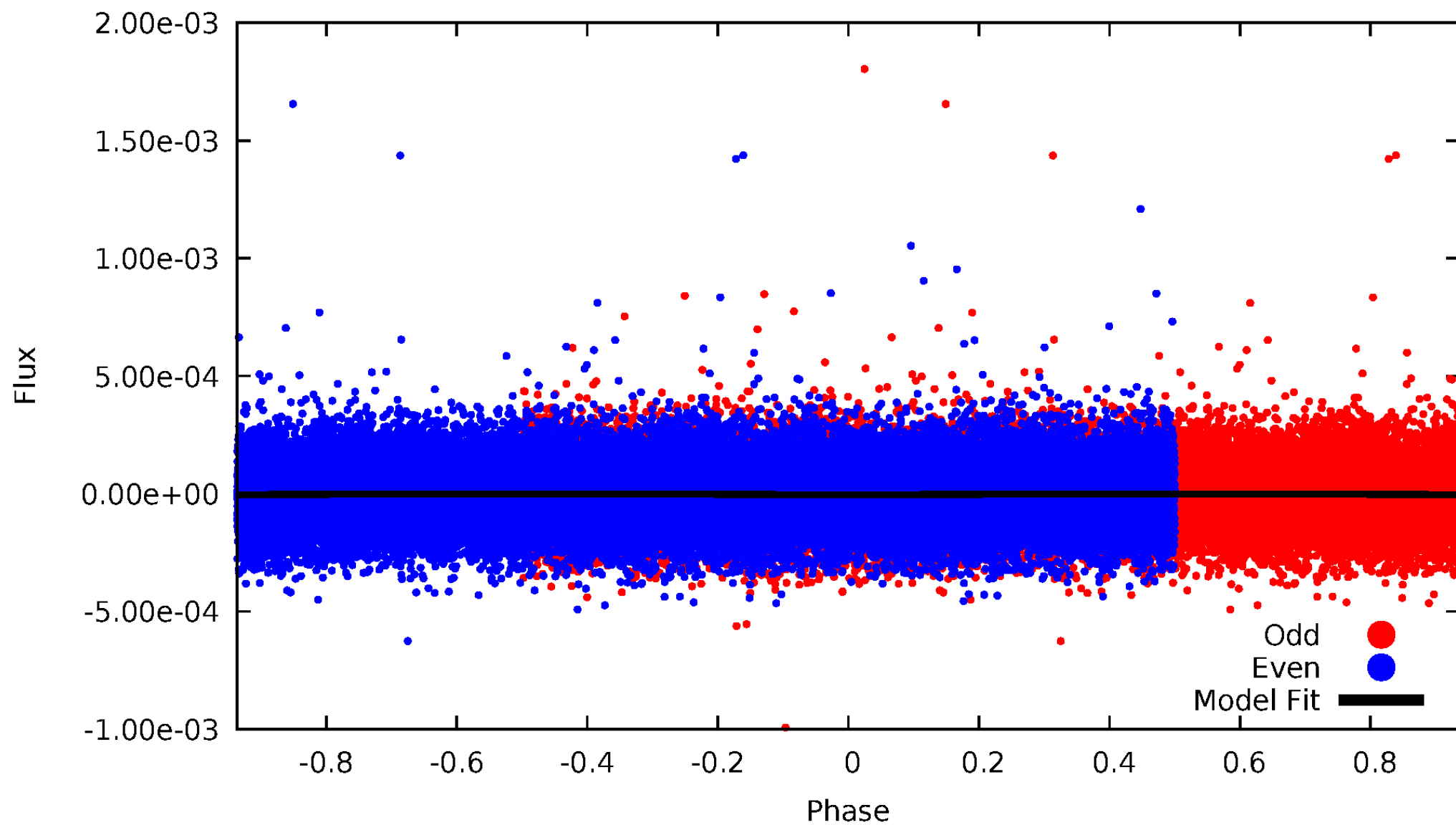


TCE 005739026-01



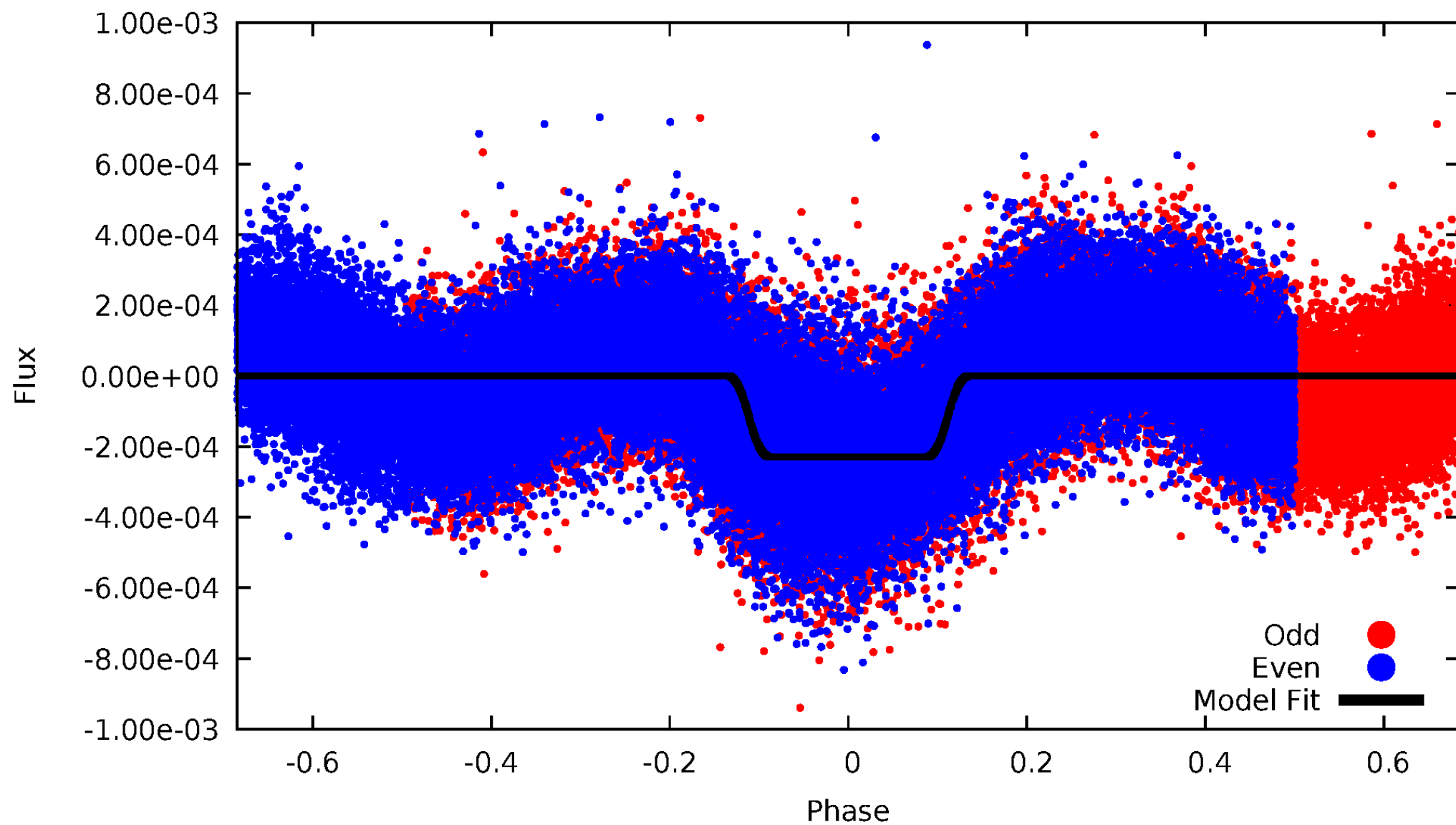
# DV Odd/Even

TCE 005739026-01



# ALT Odd/Even

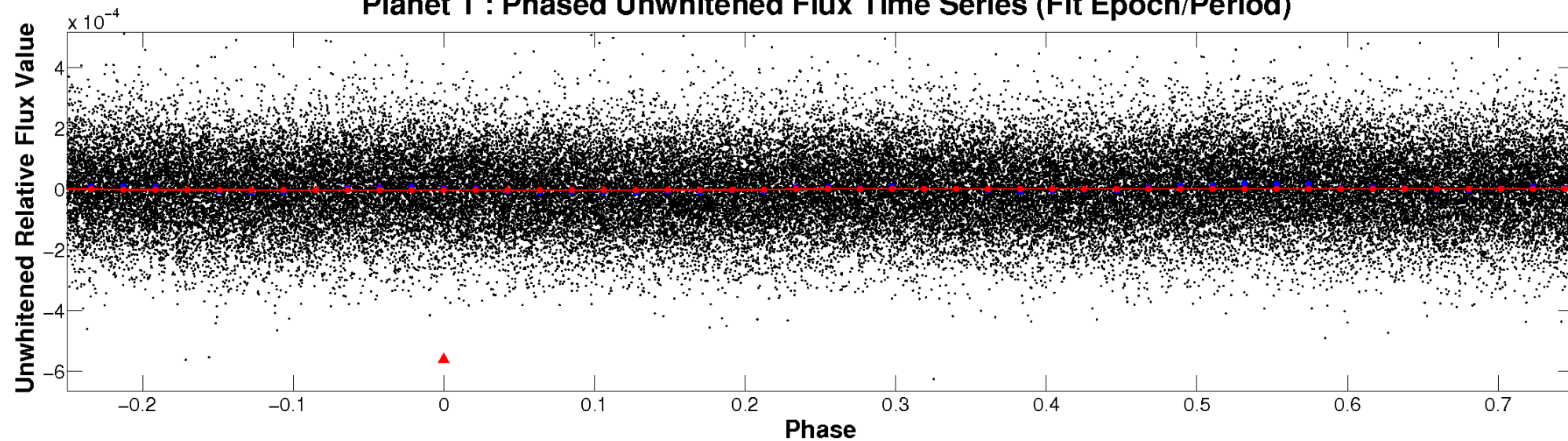
TCE 005739026-01



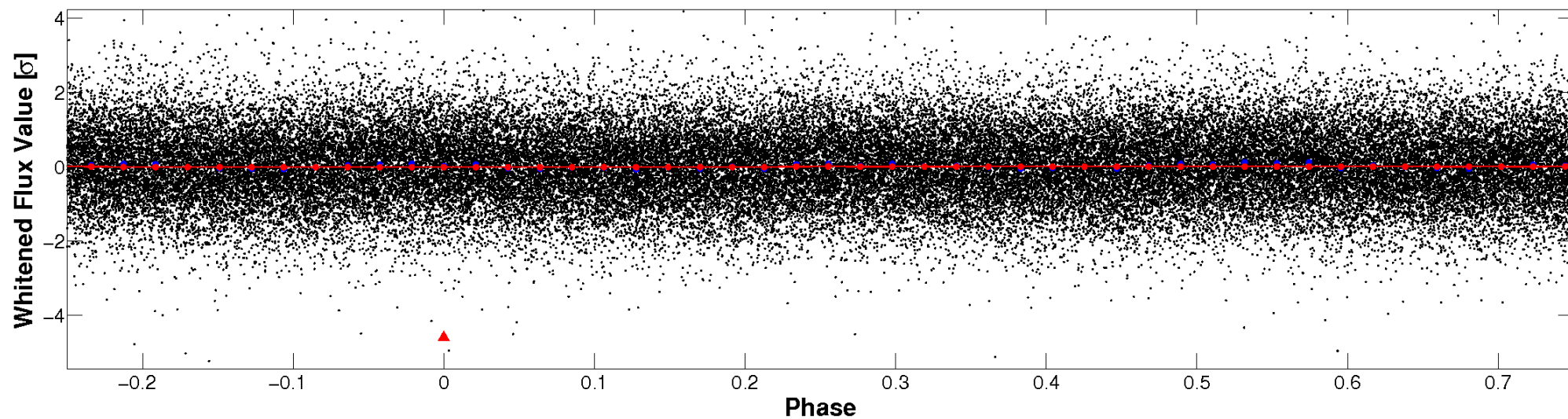


# Non-Whitened Vs. Whitened Light Curve

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

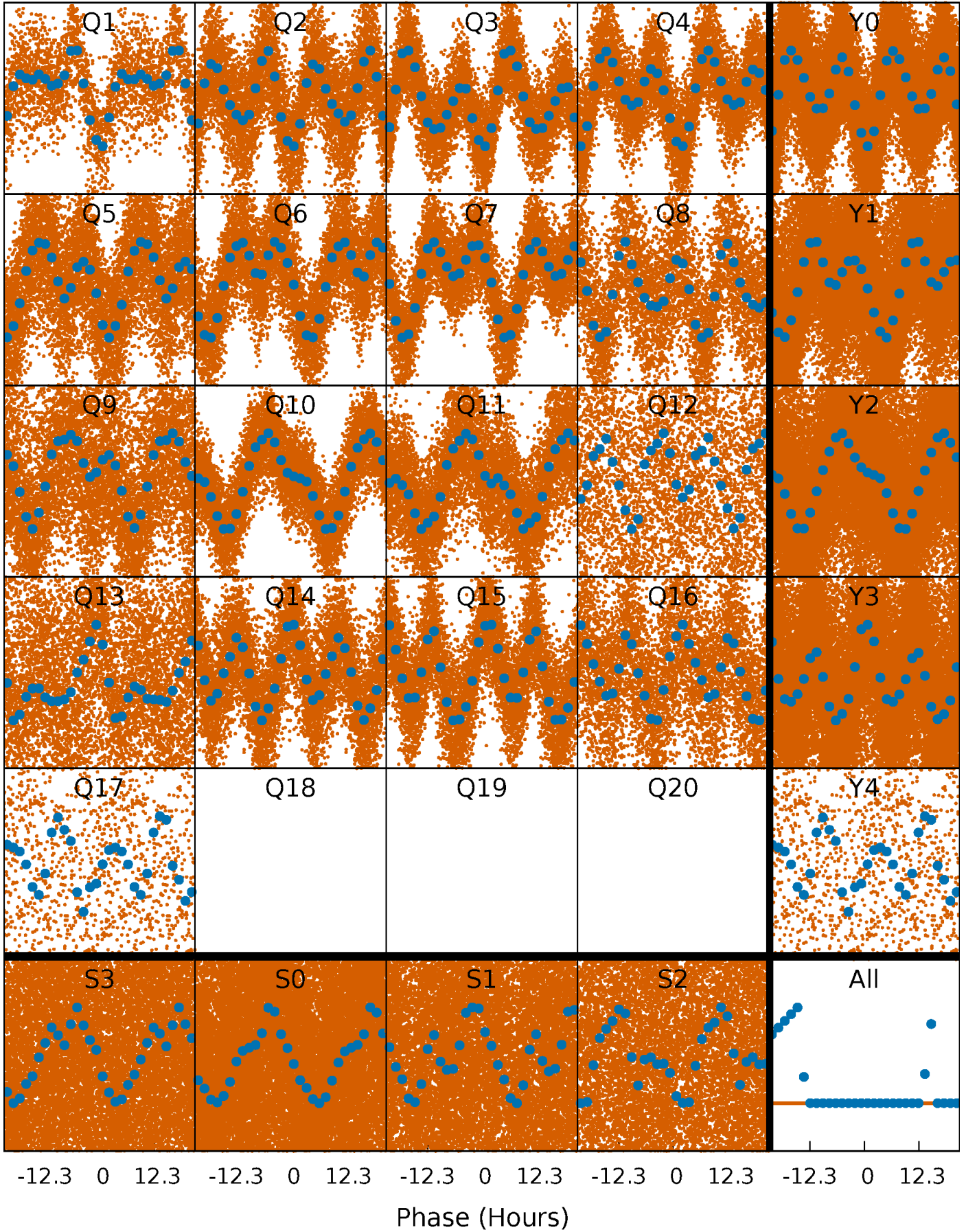


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

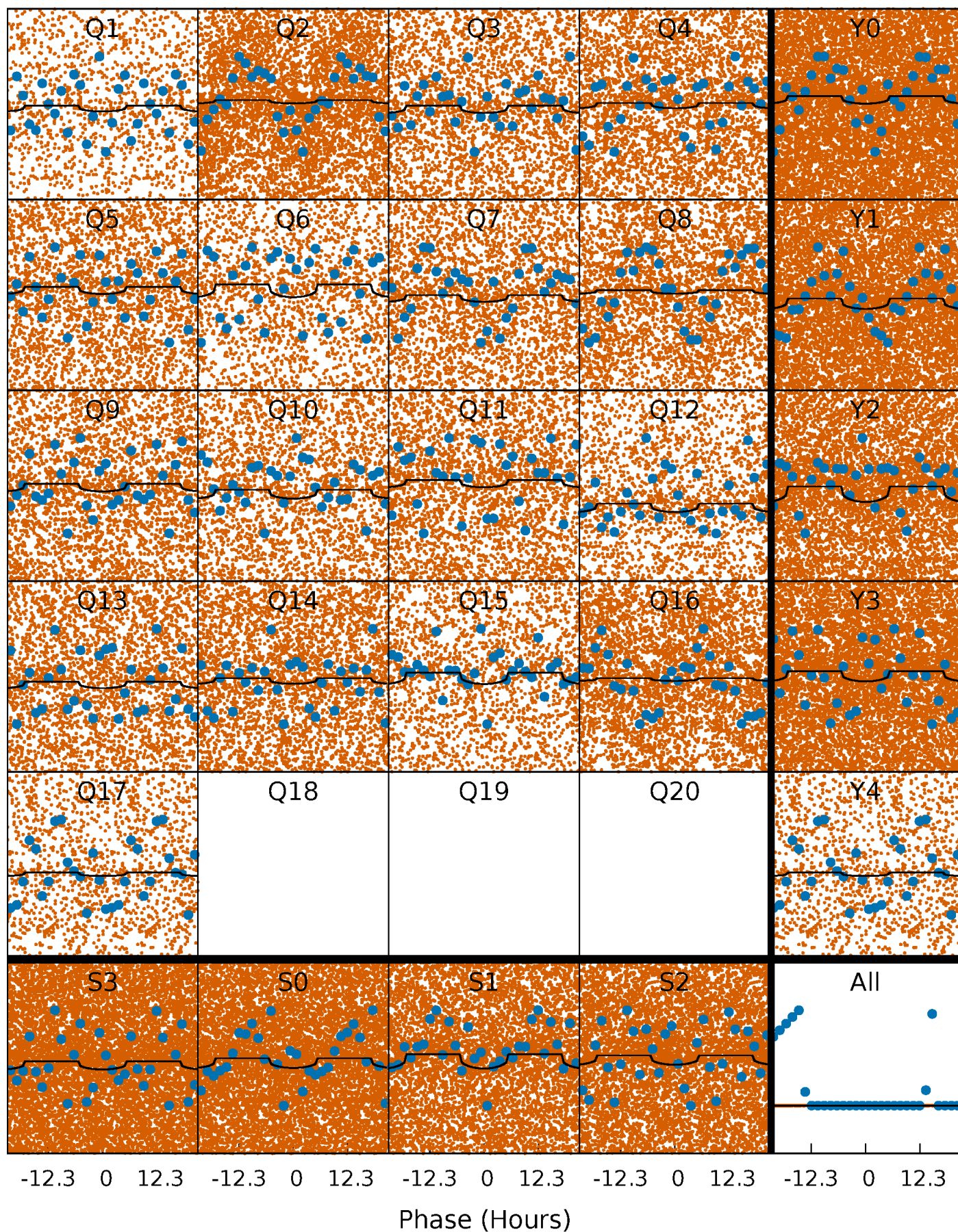
TCE 005739026-01   P= 0.960662 Days    $T_0=132.368802$  (BKJD)





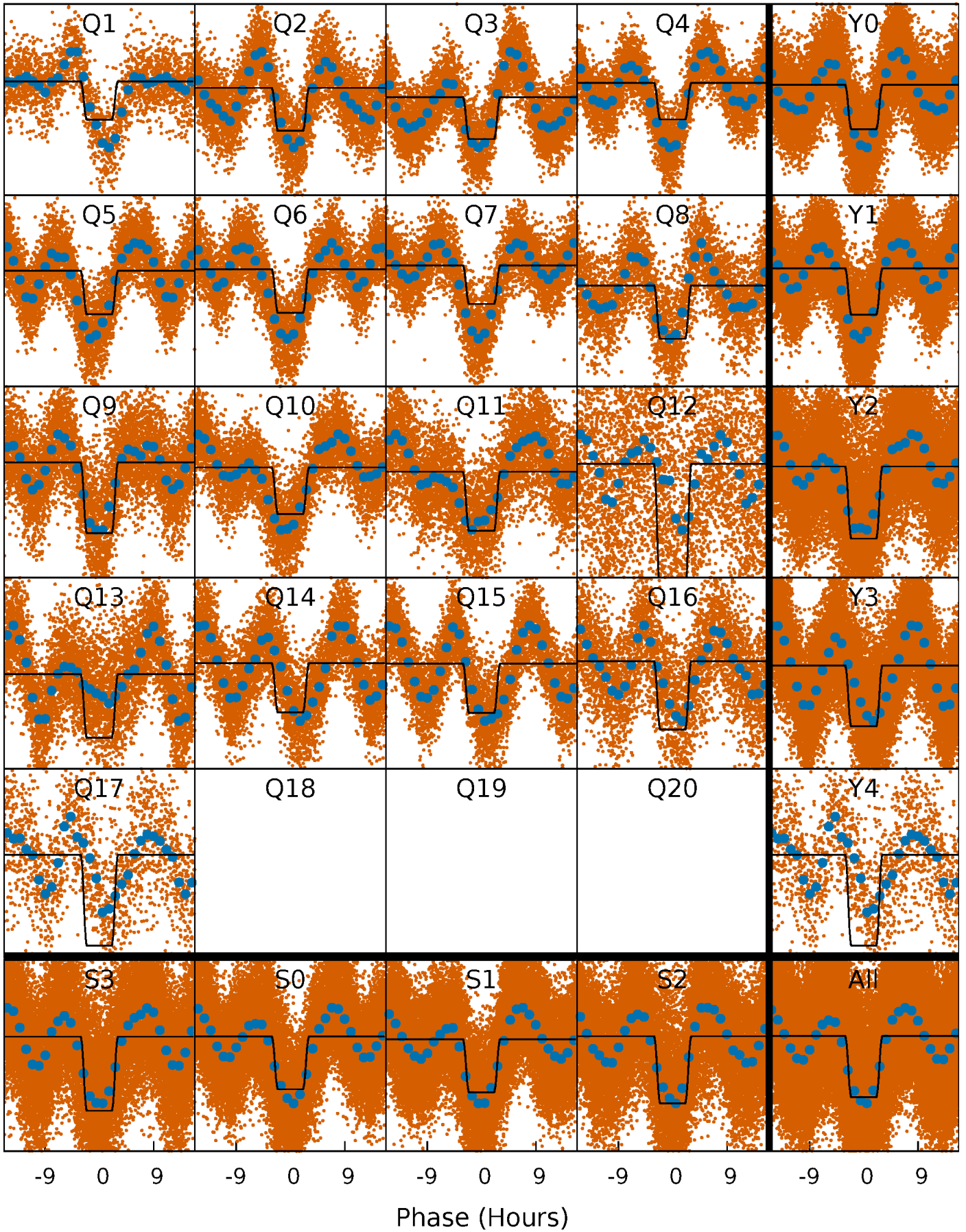
# DV Quarter-Phased Transit Curves

TCE 005739026-01 P= 0.960662 Days  $T_0=132.368802$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 005739026-01 P= 0.961211 Days  $T_0=132.310054$  (BKJD)

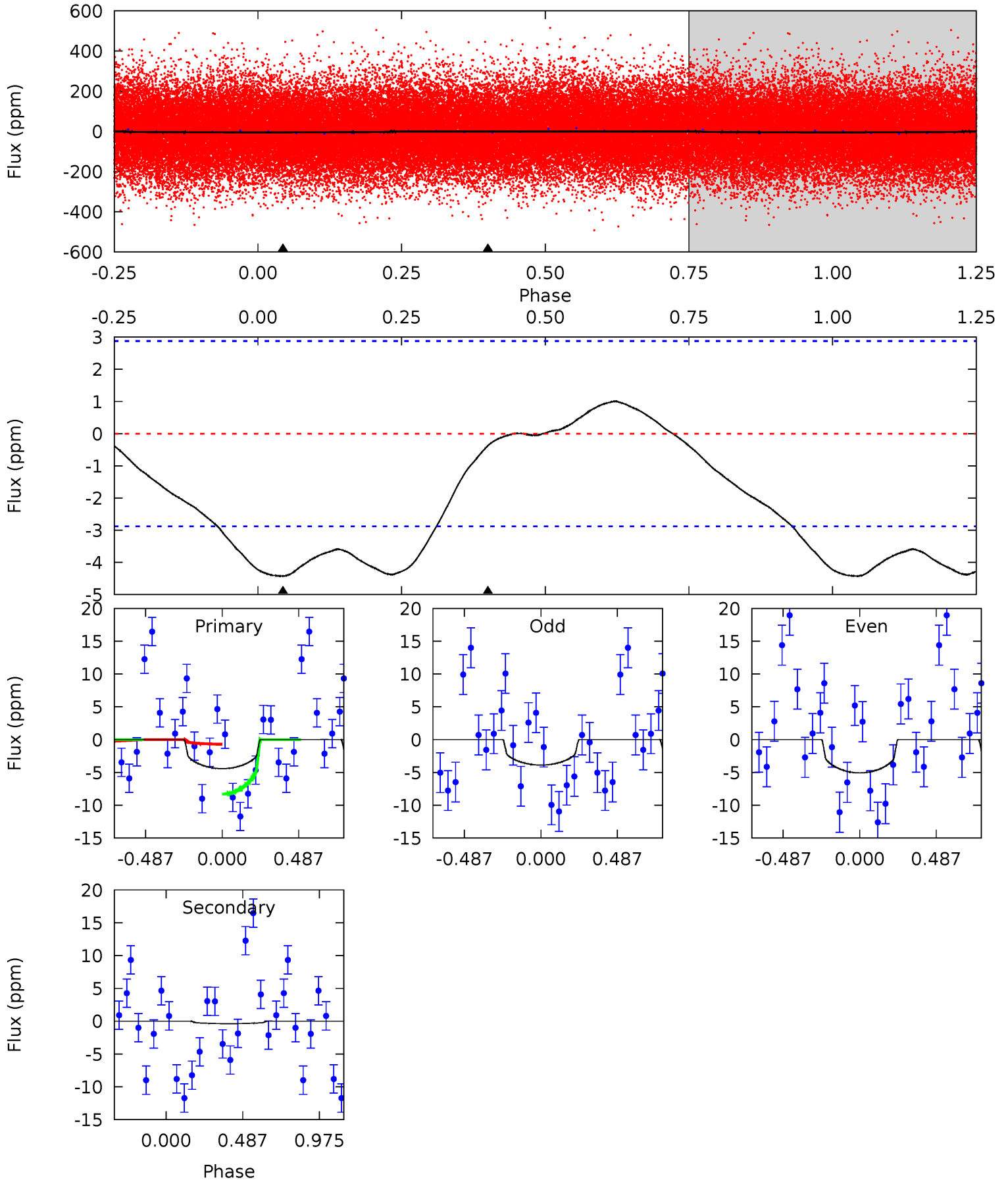




# DV Model-Shift Uniqueness Test

005739026-01, P = 0.960662 Days, E = 131.408140 Days

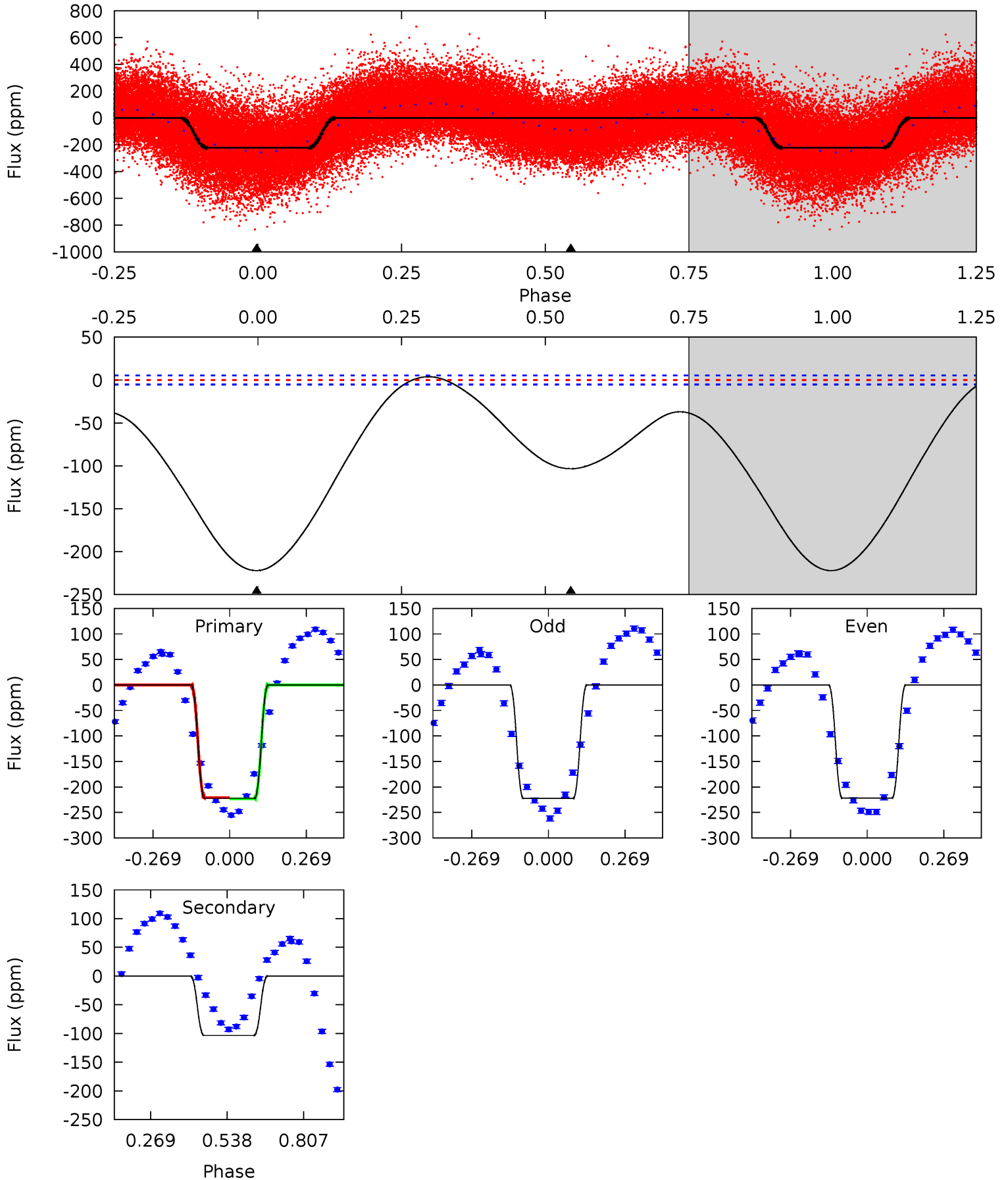
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.49	0.55	0	0	4.22	0.69	0.58	6.49	6.49	0.55	0.55	0.86	1.32	0.19	5.57



# Alt Model-Shift Uniqueness Test

005739026-01, P = 0.961211 Days, E = 131.348843 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
182.0	84.7	0	0	4.35	1.11	9.60	182.0	182.0	84.7	84.7	0.27	1.00	0.02	1.00



### Stellar Parameters For KIC 005739026

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$6777^{+168}_{-202}$	$3.599^{+0.328}_{-0.082}$	$-0.360^{+0.350}_{-0.250}$	$3.330^{+0.416}_{-1.248}$	$1.607^{+0.258}_{-0.345}$	$0.061^{+0.144}_{-0.016}$
	+2%/-3%	+9%/-2%	+97%/-69%	+12%/-37%	+16%/-21%	+234%/-26%
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 005739026-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$-0 \pm 1$	$1.15^{+1.11}_{-0.81}$	$4999^{+287}_{-468}$	$-4084^{+8622}_{-431}$	$0.053^{+0.723}_{-0.102}$
Alt.	$-103 \pm 1$	$5.16^{+1.56}_{-1.55}$	$4986^{+271}_{-486}$	$5129^{+978}_{-660}$	$1.088^{+1.058}_{-0.432}$

$T_{\text{max}}$  = 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

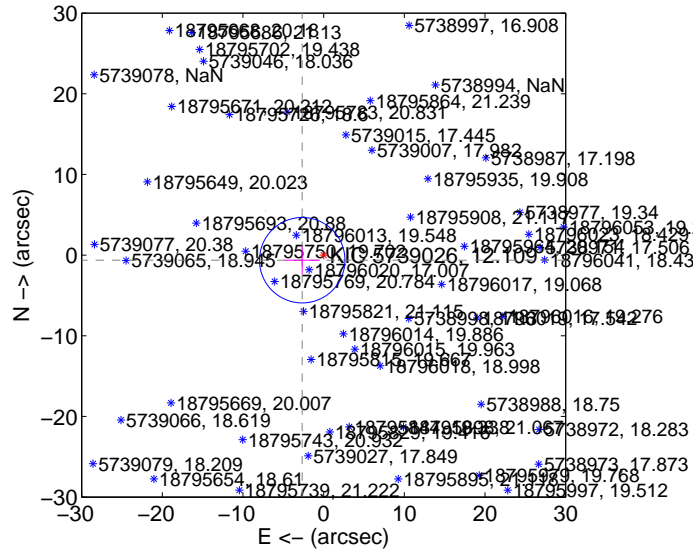
Supplemental centroid analysis for 005739026-01. Kepler magnitude: 12.11. Transit SNR 2.43

There are 1 quarters with good PRF difference image offsets

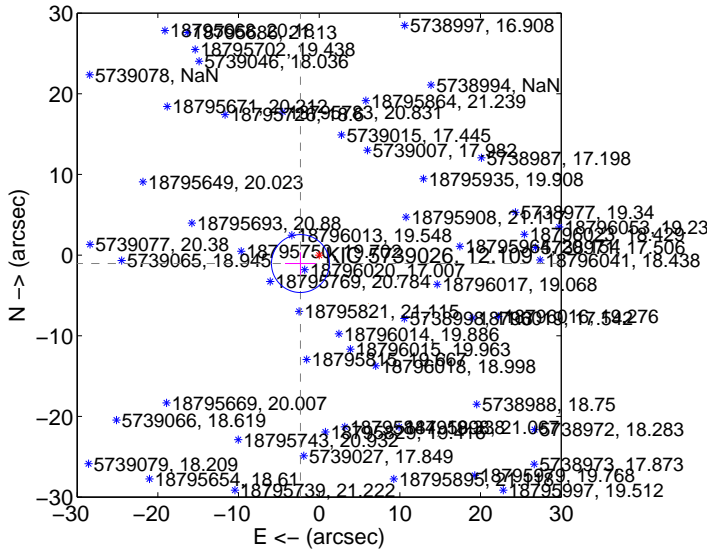
The OOT PRF centroid is offset from the target star catalog position by about 5.33 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$2.730 \pm 1.765$	1.55	$2.655 \pm 2.200$	$-0.633 \pm 1.702$
PRF-fit source offset from KIC position	$2.553 \pm 1.196$	2.13	$2.328 \pm 1.904$	$-1.047 \pm 1.405$
photometric centroid source offset	—	—	—	—

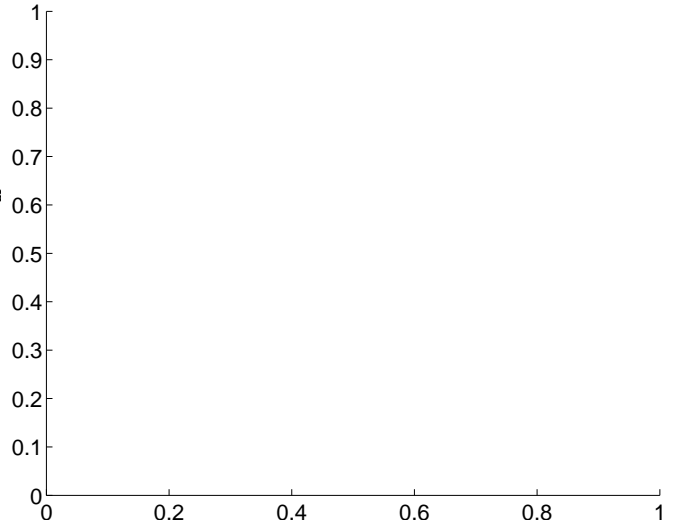
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

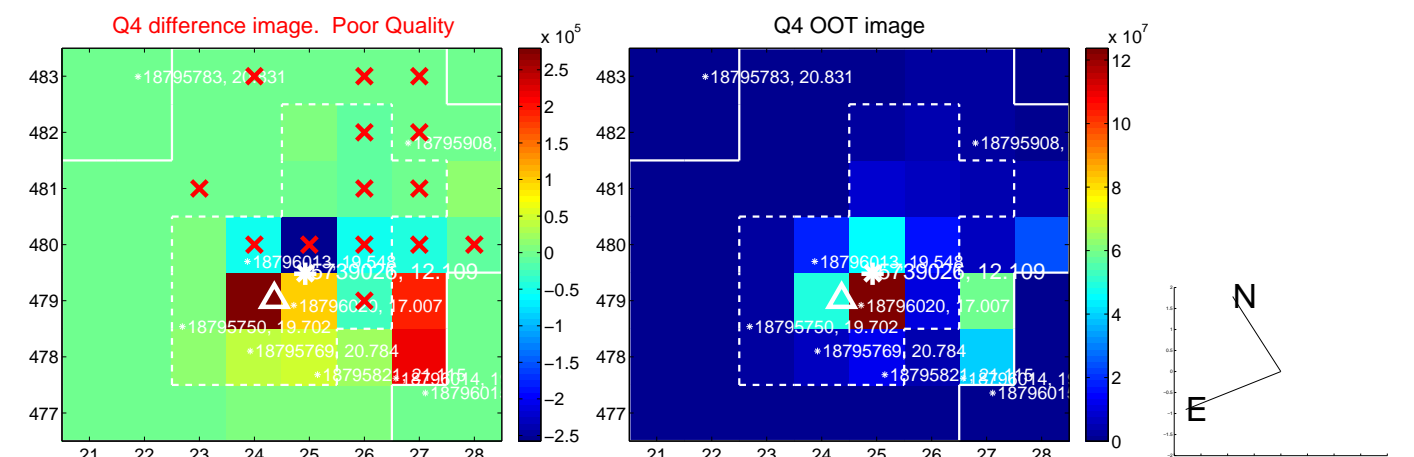
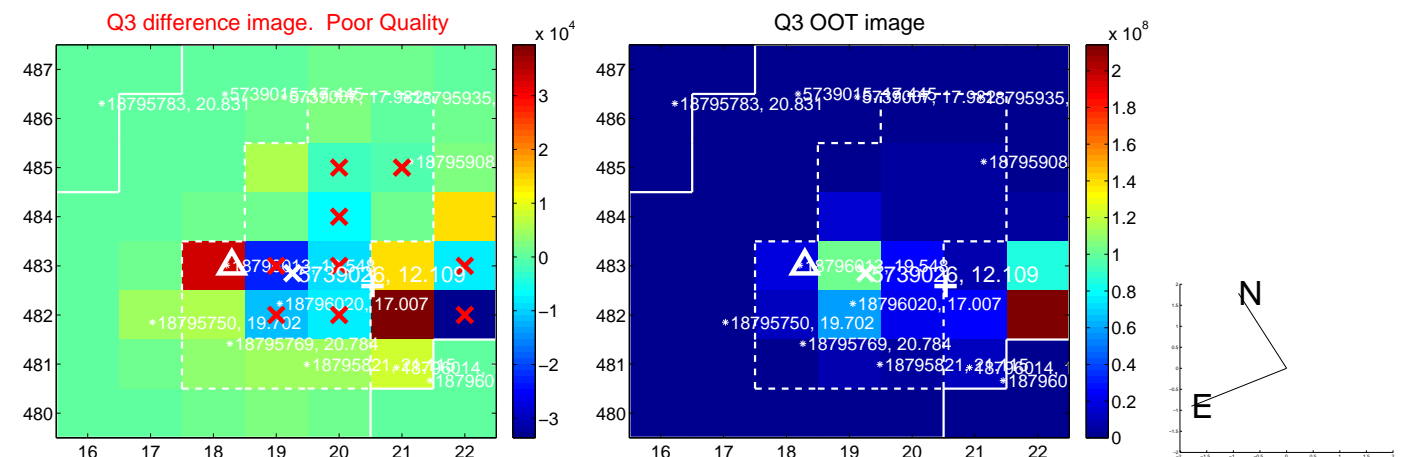
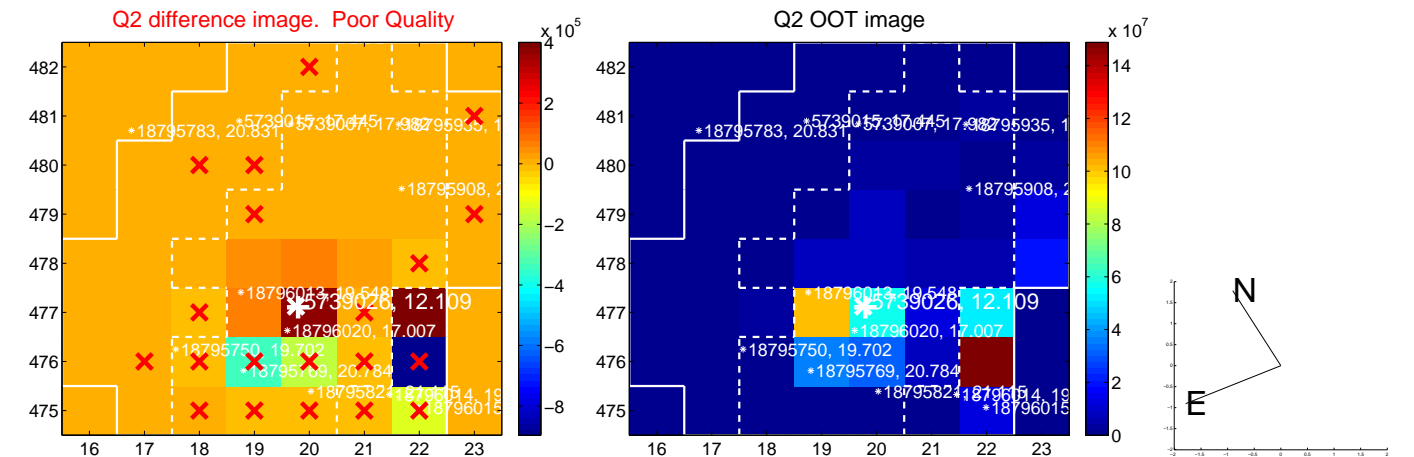
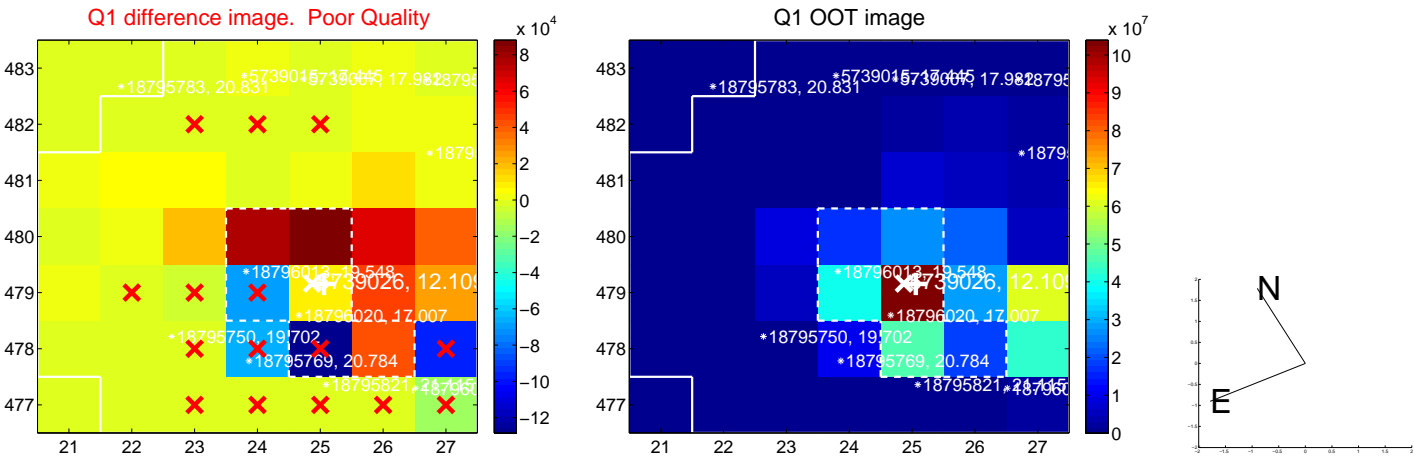


There are no photometric centroids

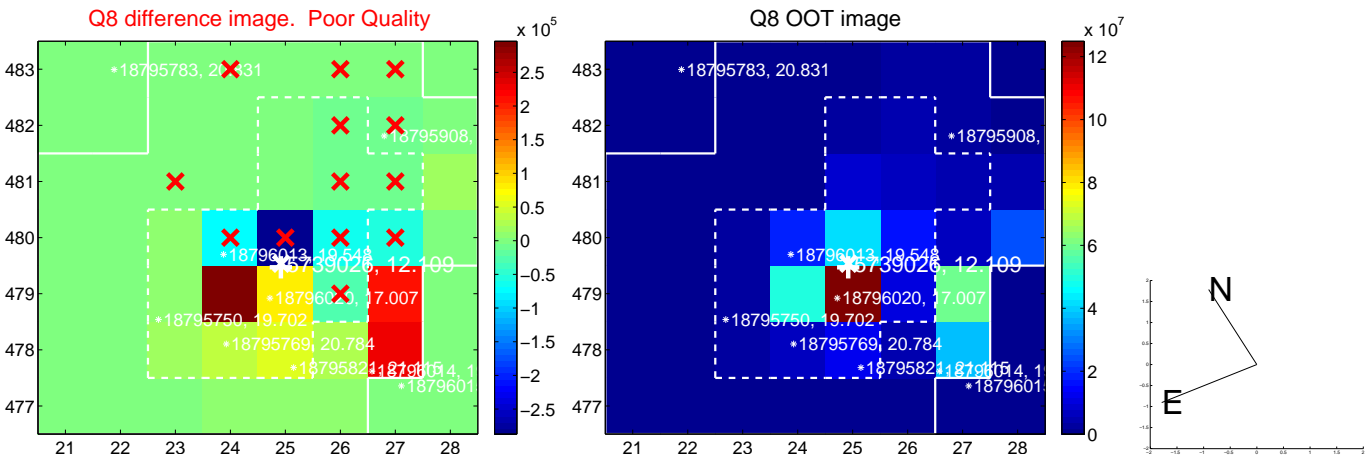
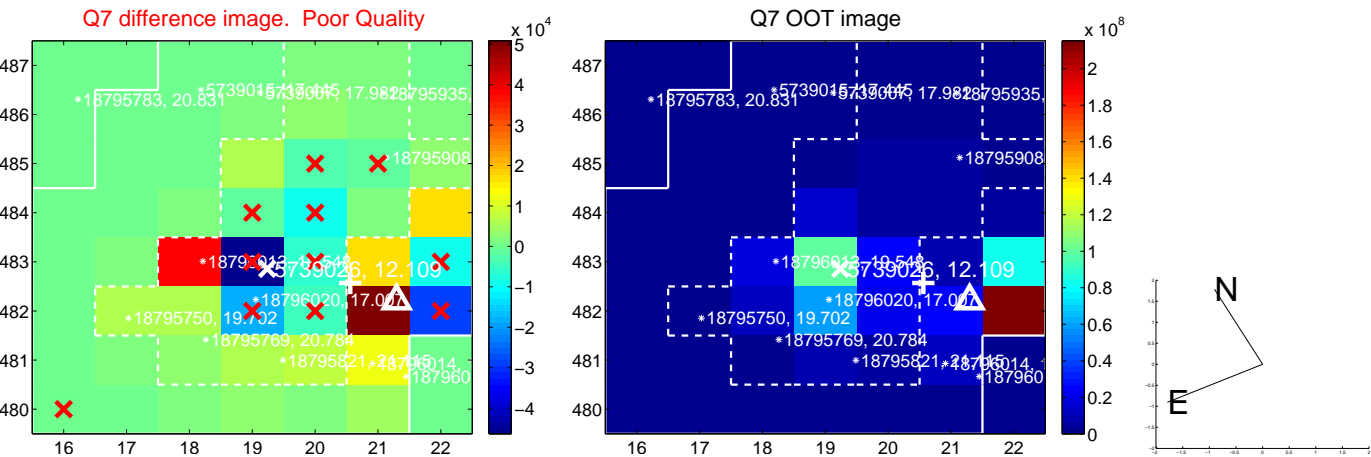
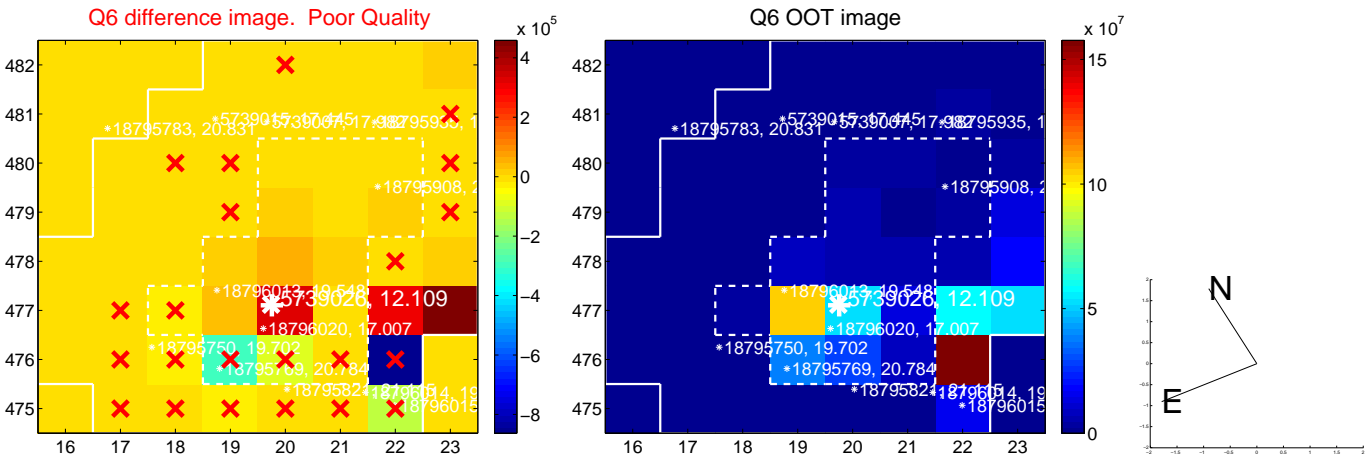
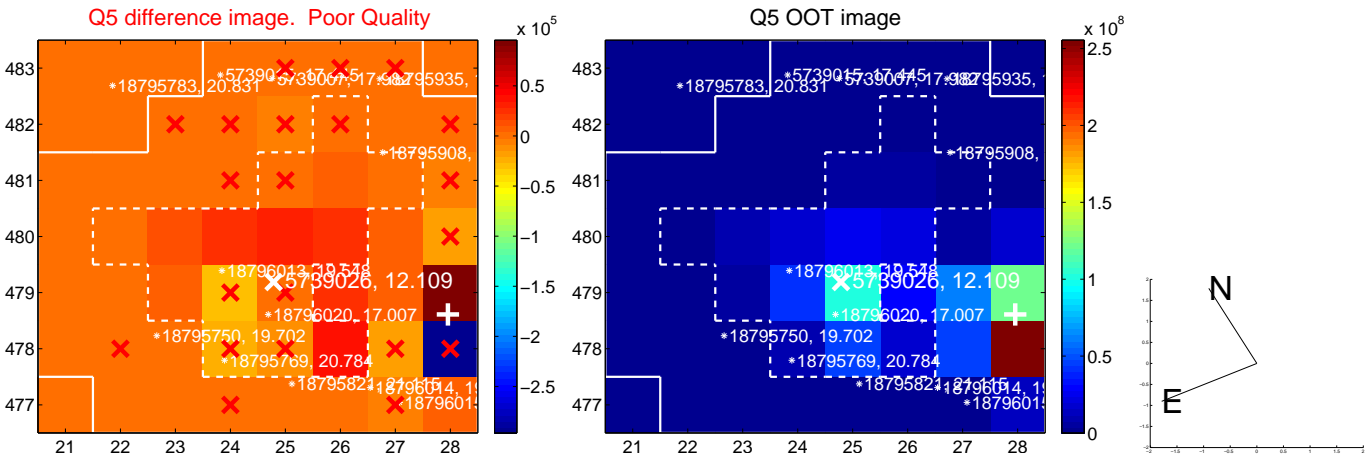


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

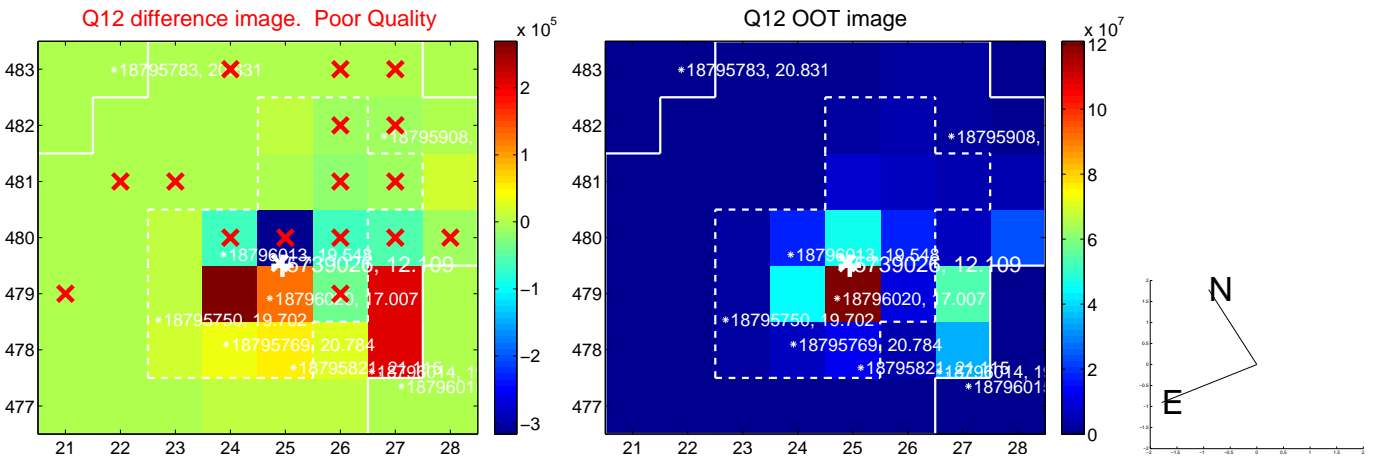
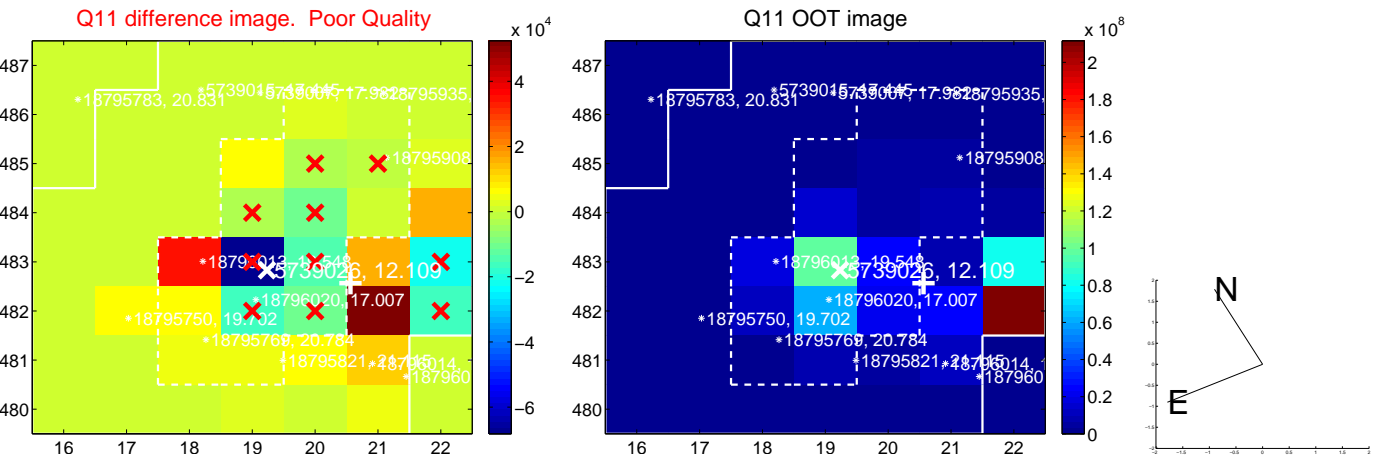
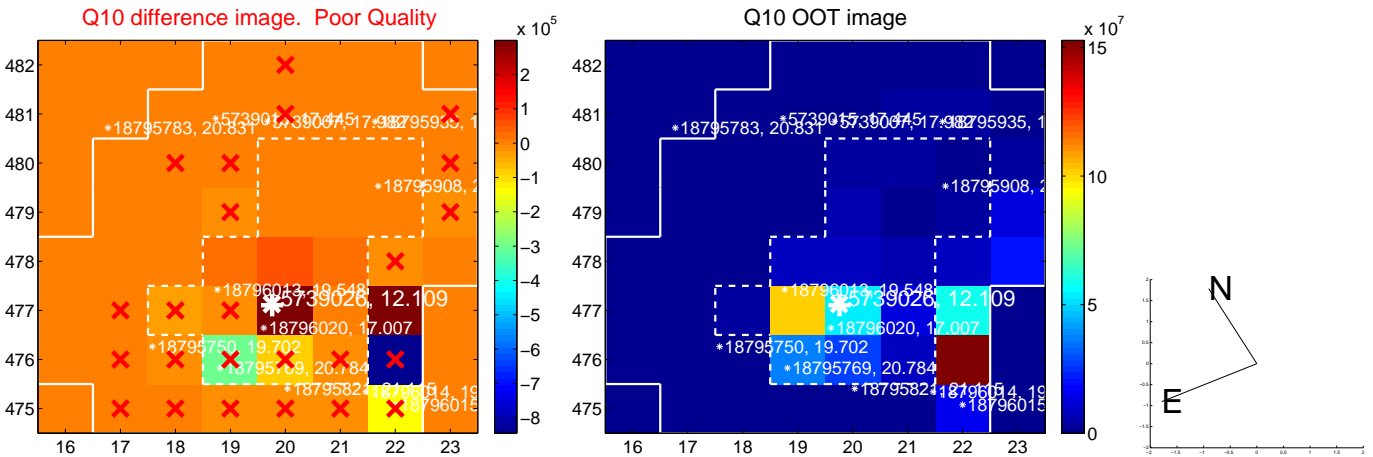
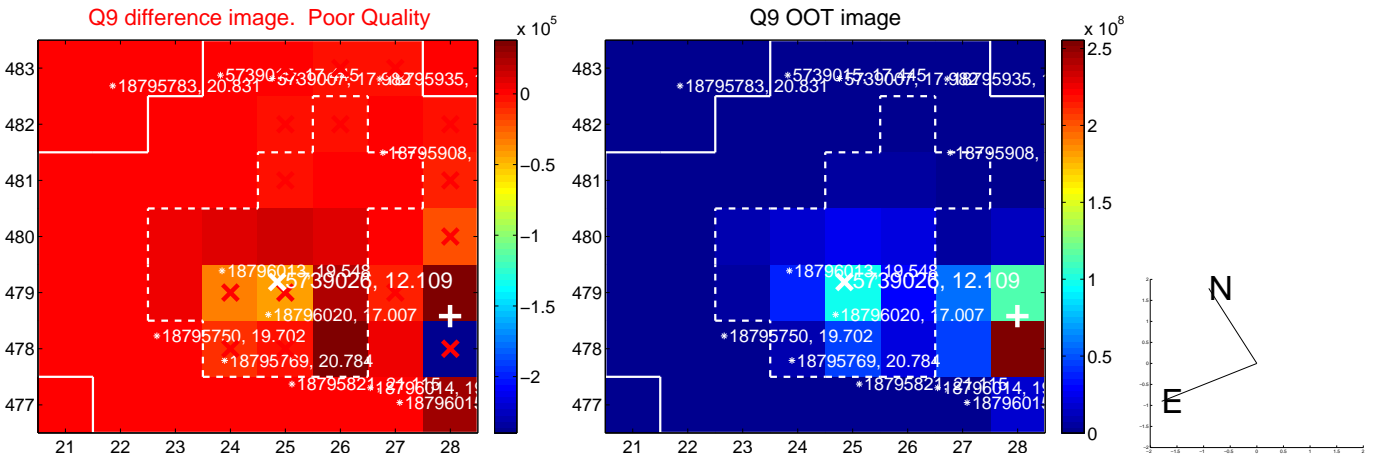
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



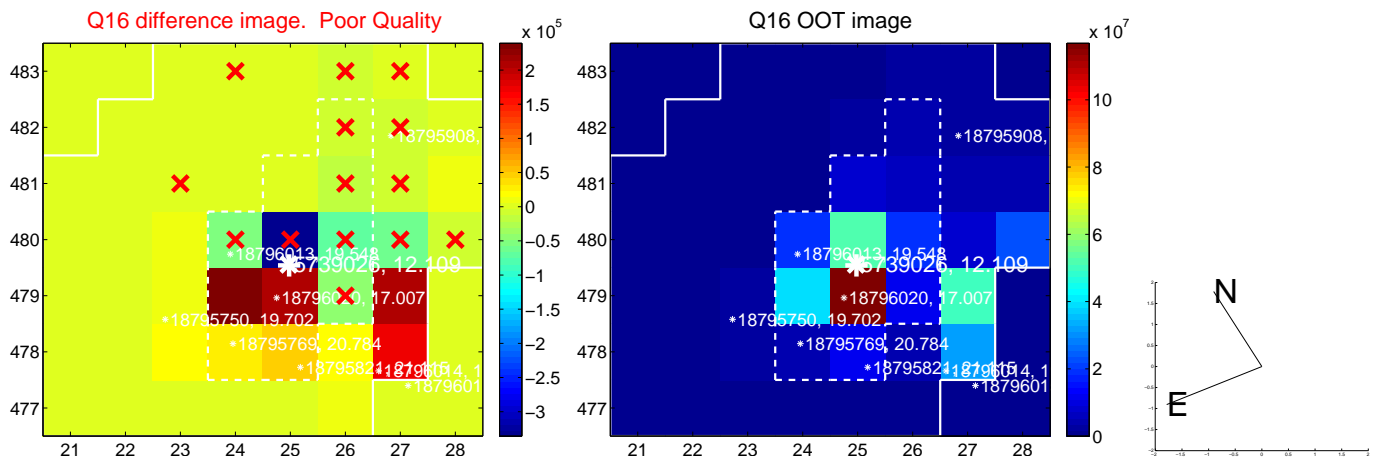
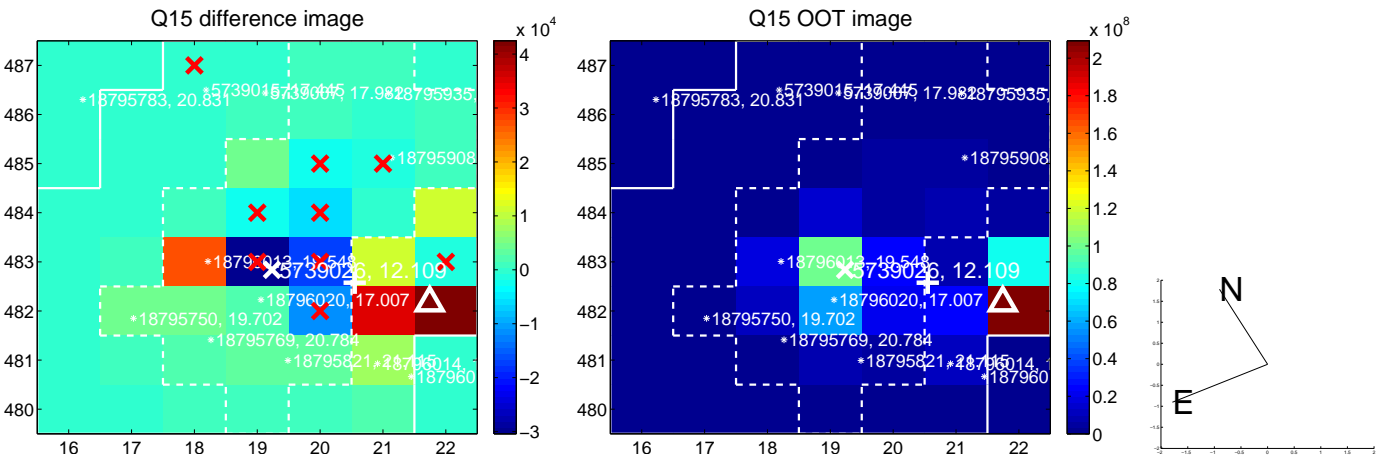
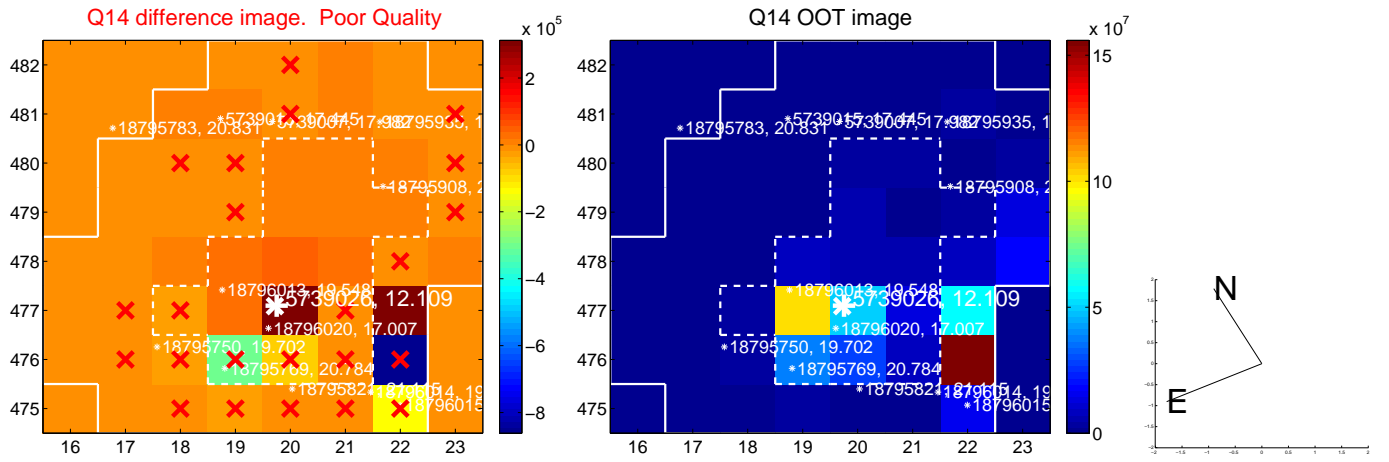
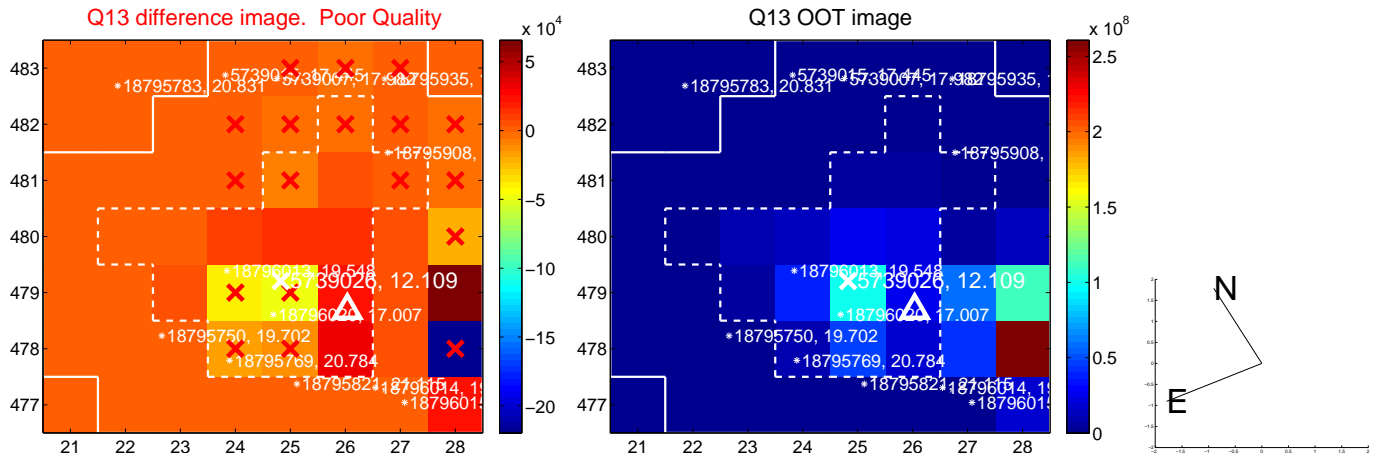
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

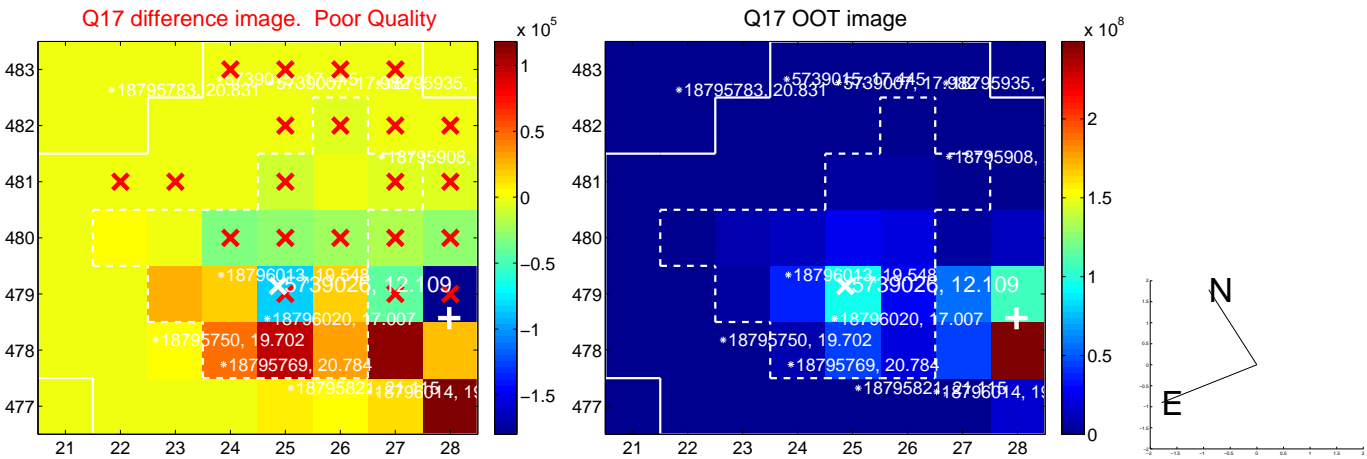


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.





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

