

# KIC 008129619

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008129619-01	OBS	No	0.571198	131.639275	1.0	3.760	8.7	2.0	2.21	10402	0.23	151556.41

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008129619-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

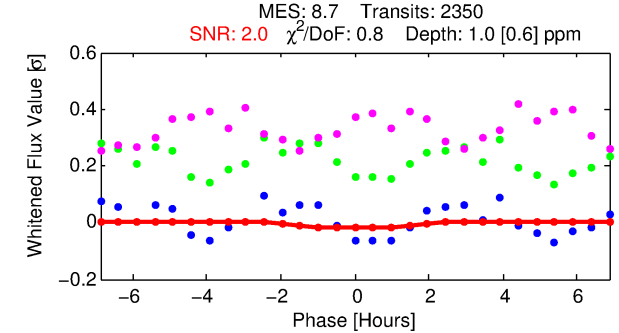
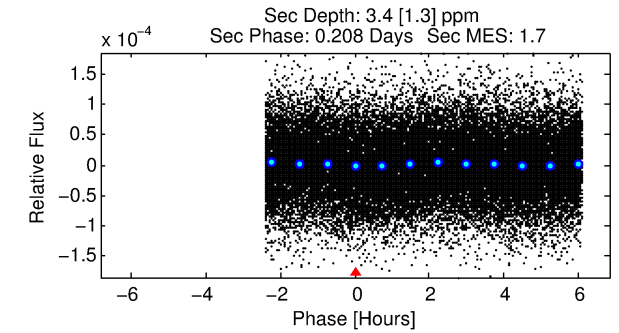
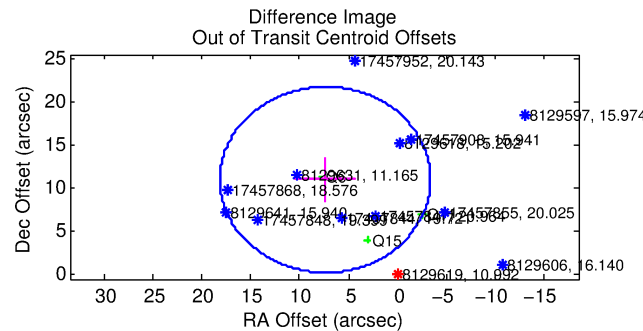
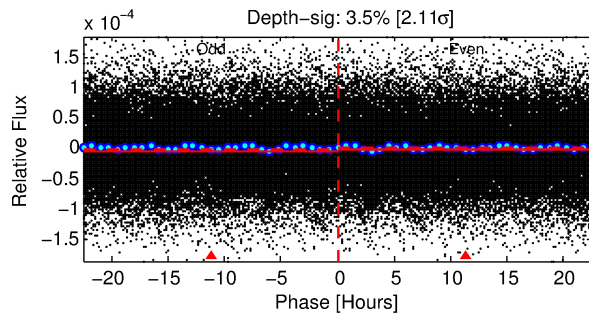
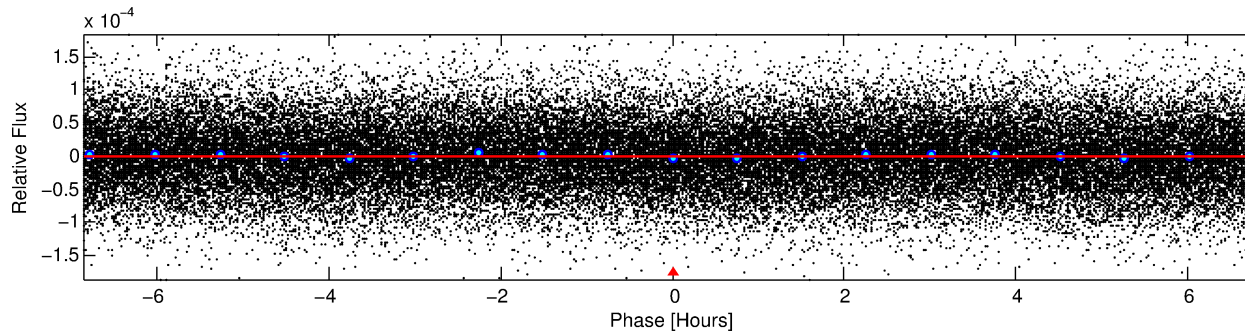
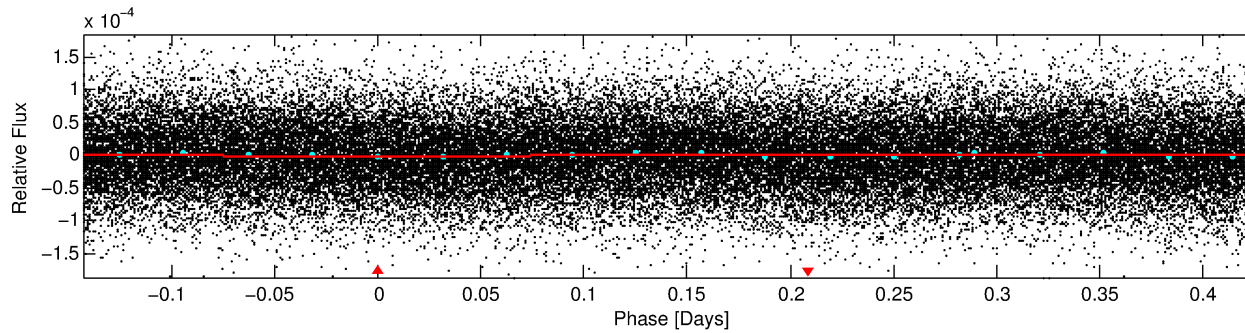
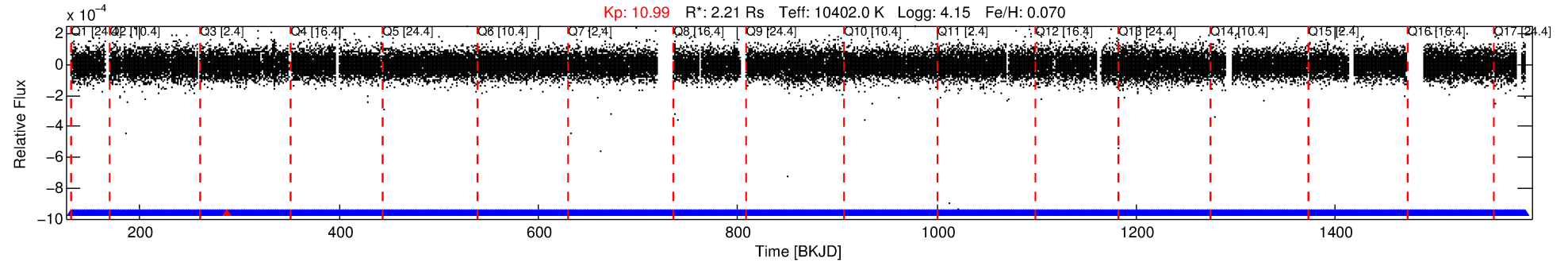
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008129619-01

No Significant Match Found

# DV One-Page Summary

KIC: 8129619 Candidate: 1 of 1 Period: 0.571 d



## DV Fit Results:

Period = 0.57120 [0.00005] d  
Epoch = 131.6393 [0.0185] BKJD  
Rp/R\* = 0.0009 [0.0010]  
a/R\* = 1.29 [3.85]  
b = 0.30 [22.50]  
Seff = 151556.41 [64092.25]  
Teq = 5031 [532] K  
Rp = 0.23 [0.25] Re  
a = 0.0184 [0.0052] AU  
Ag = 12.46 [26.51] [0.43 $\sigma$ ]  
Teffp = 14616 [7664] K [1.25 $\sigma$ ]

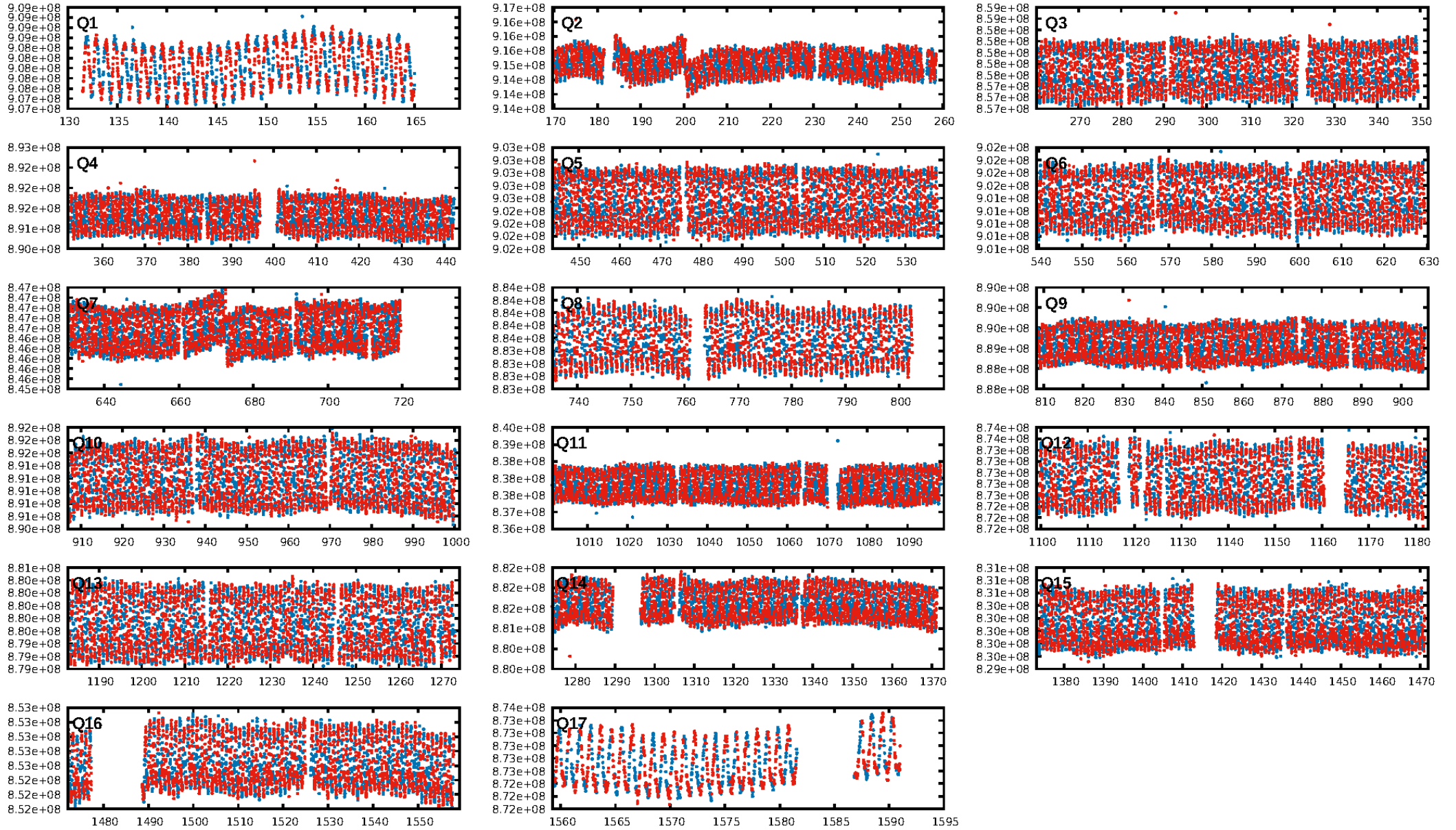
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 9.66e-08  
RollingBand-fgt: 1.00 [2243/2244]  
GhostDiagnostic-chr: N/A  
Centroid-sig: N/A  
Centroid-so: N/A  
OotOffset-rm: 13.243 arcsec [3.69 $\sigma$ ]  
KicOffset-rm: 13.311 arcsec [3.84 $\sigma$ ]  
OotOffset-st: 1/2/0/0 [3]  
KicOffset-st: 1/2/0/0 [3]  
DiffImageQuality-fgm: 0.00 [0/3]  
DiffImageOverlap-fno: 1.00 [17/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 03:11:13 Z

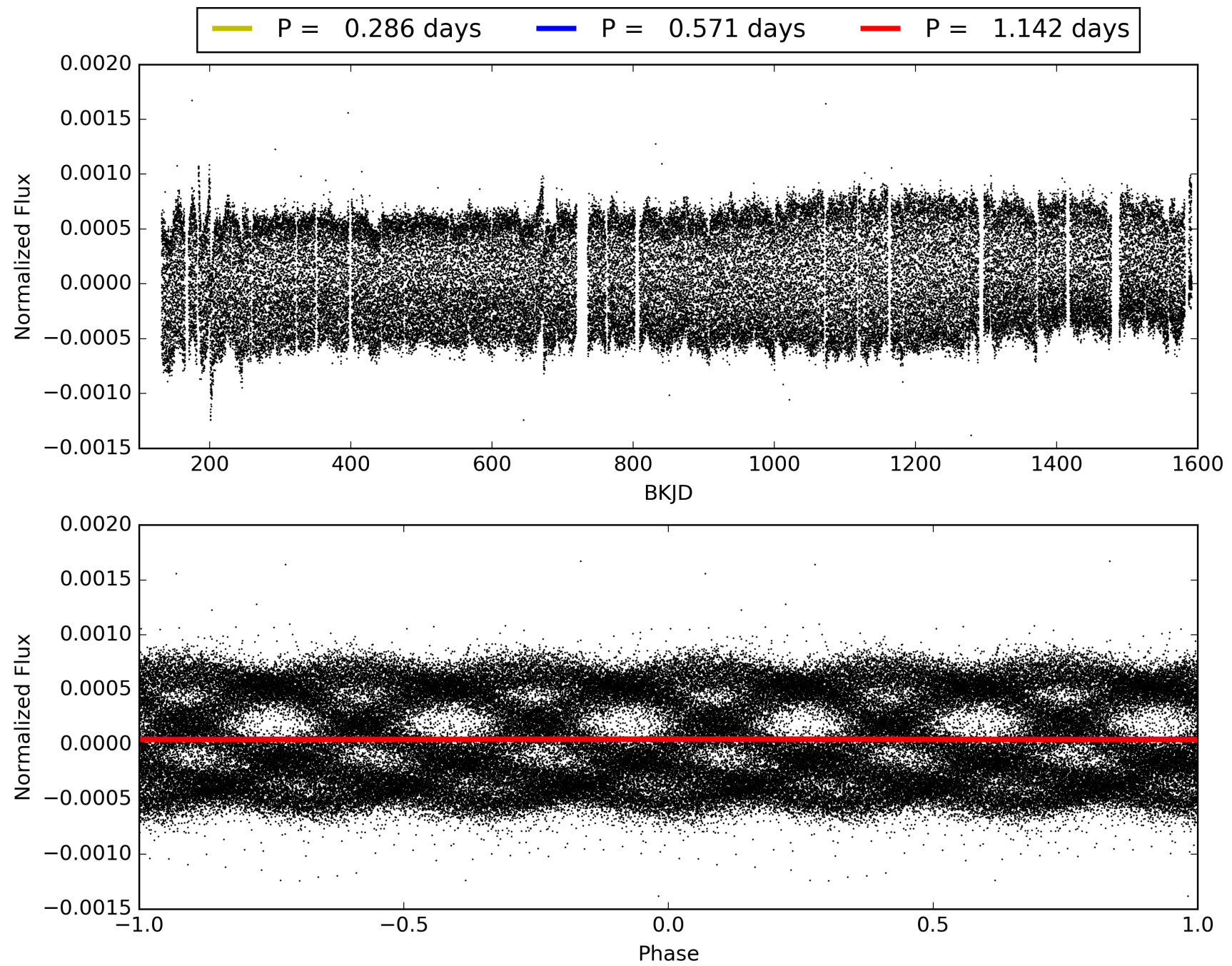
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 008129619-01, PDC Light Curves



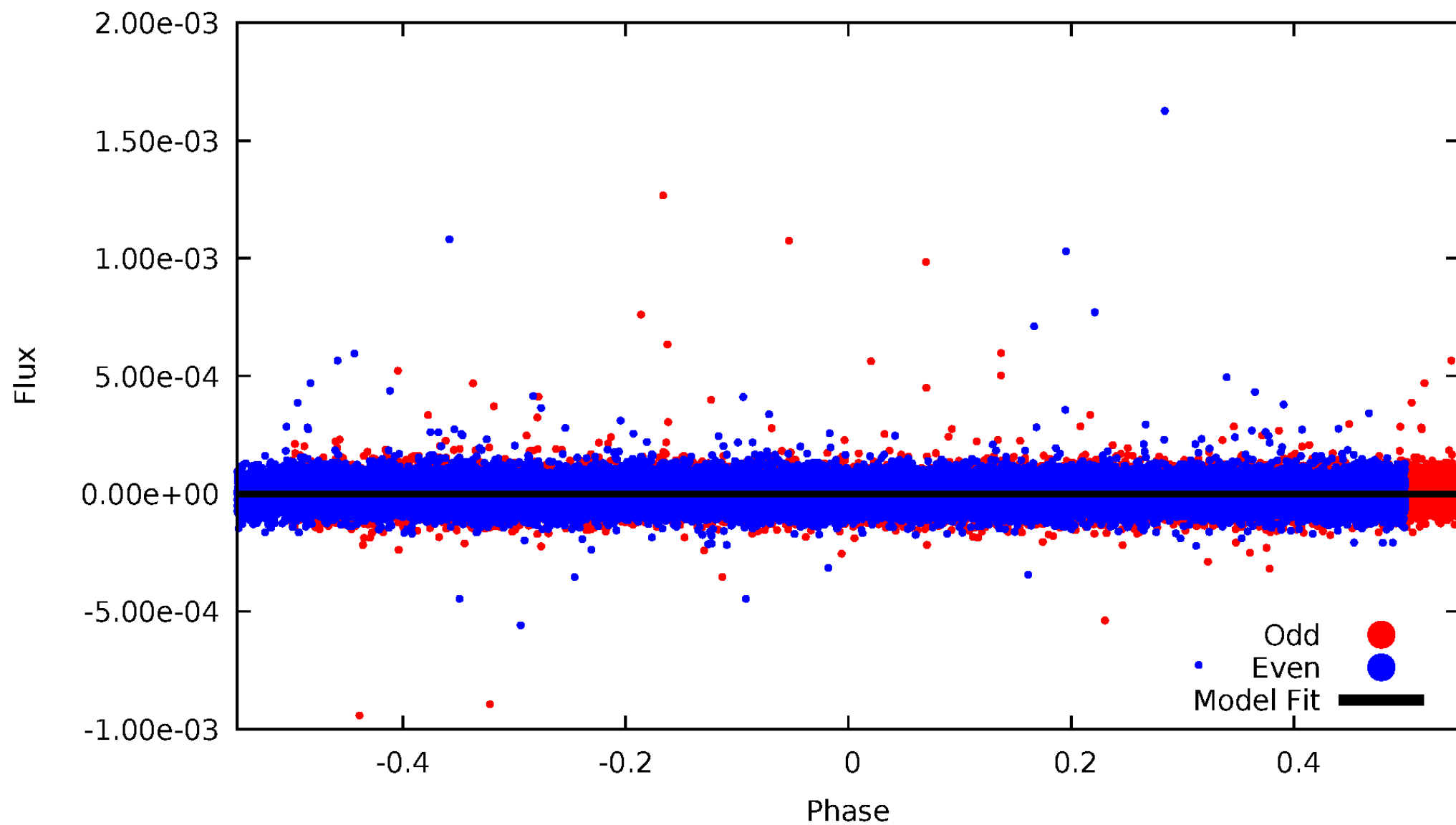


TCE 008129619-01



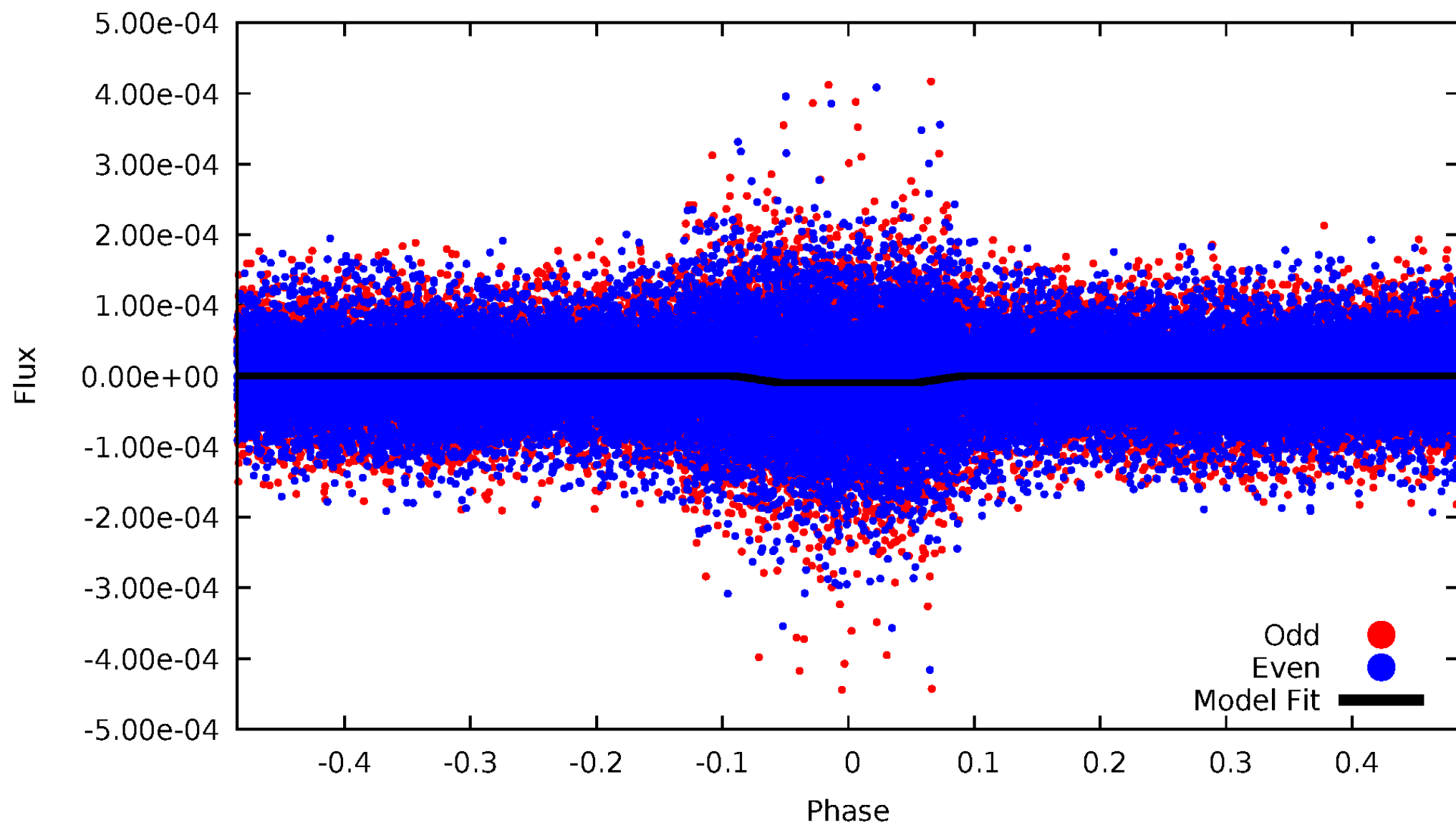
# DV Odd/Even

TCE 008129619-01

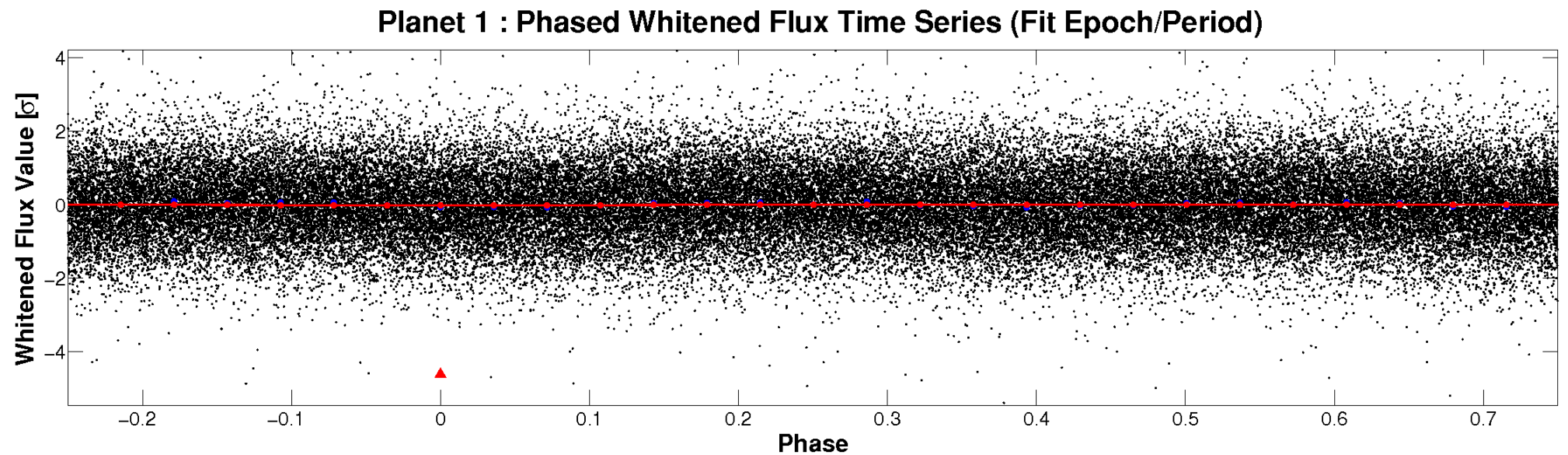
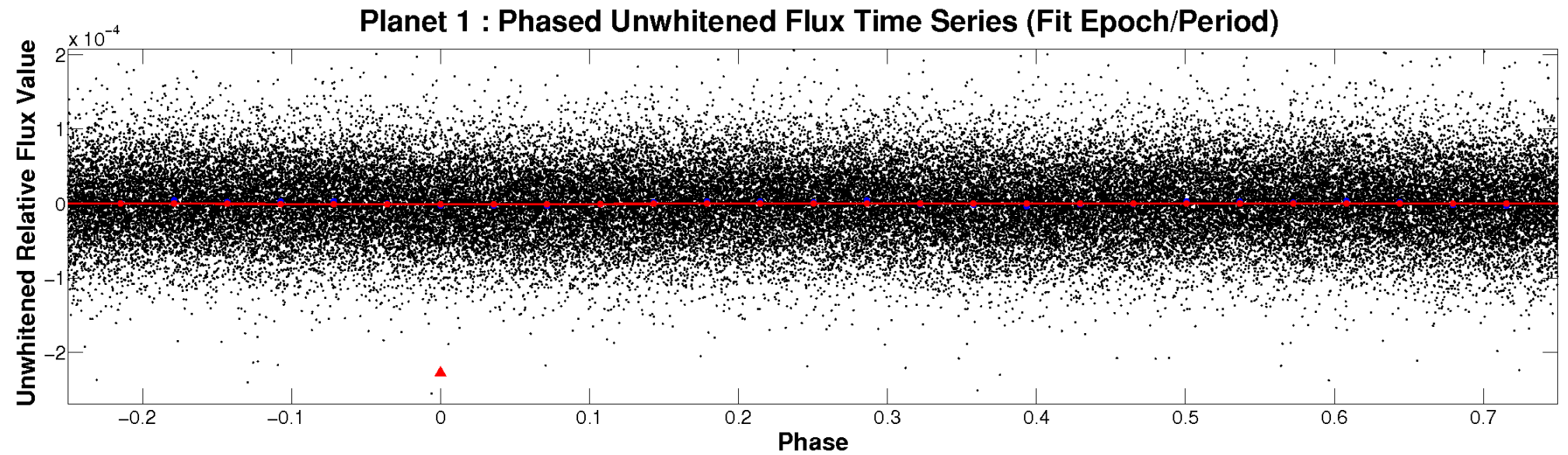


# ALT Odd/Even

TCE 008129619-01

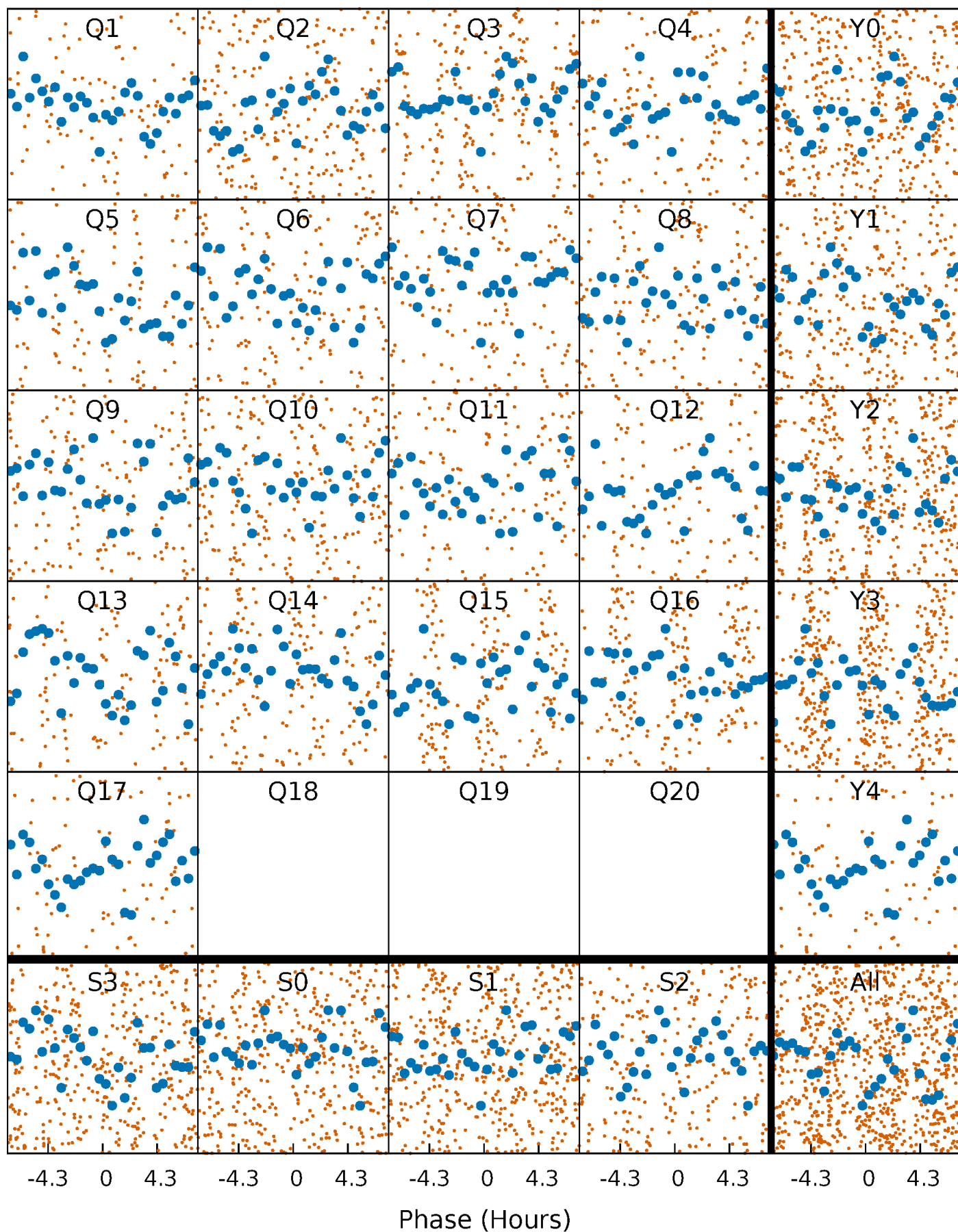


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

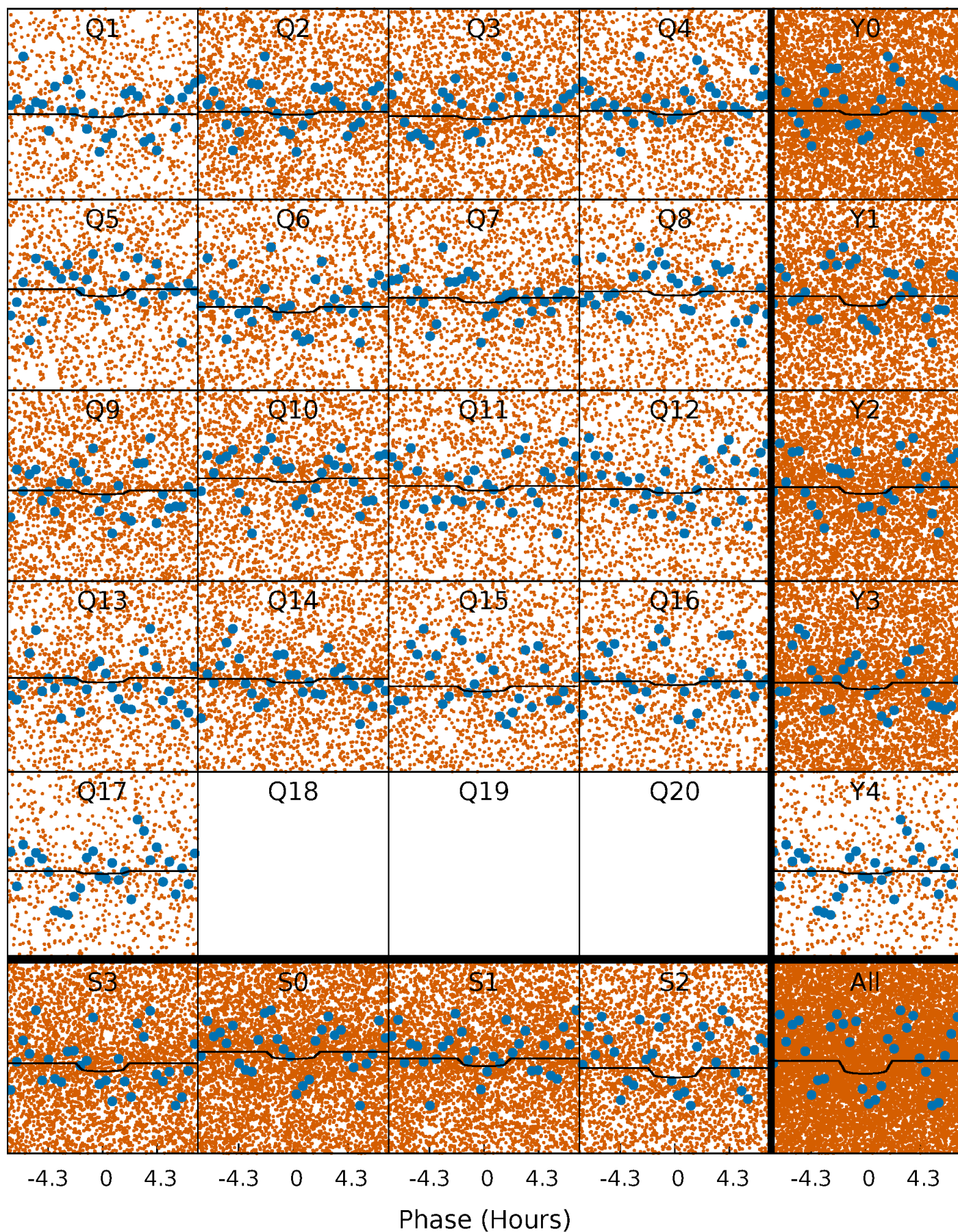
TCE 008129619-01 P= 0.571198 Days  $T_0=131.639275$  (BKJD)





# DV Quarter-Phased Transit Curves

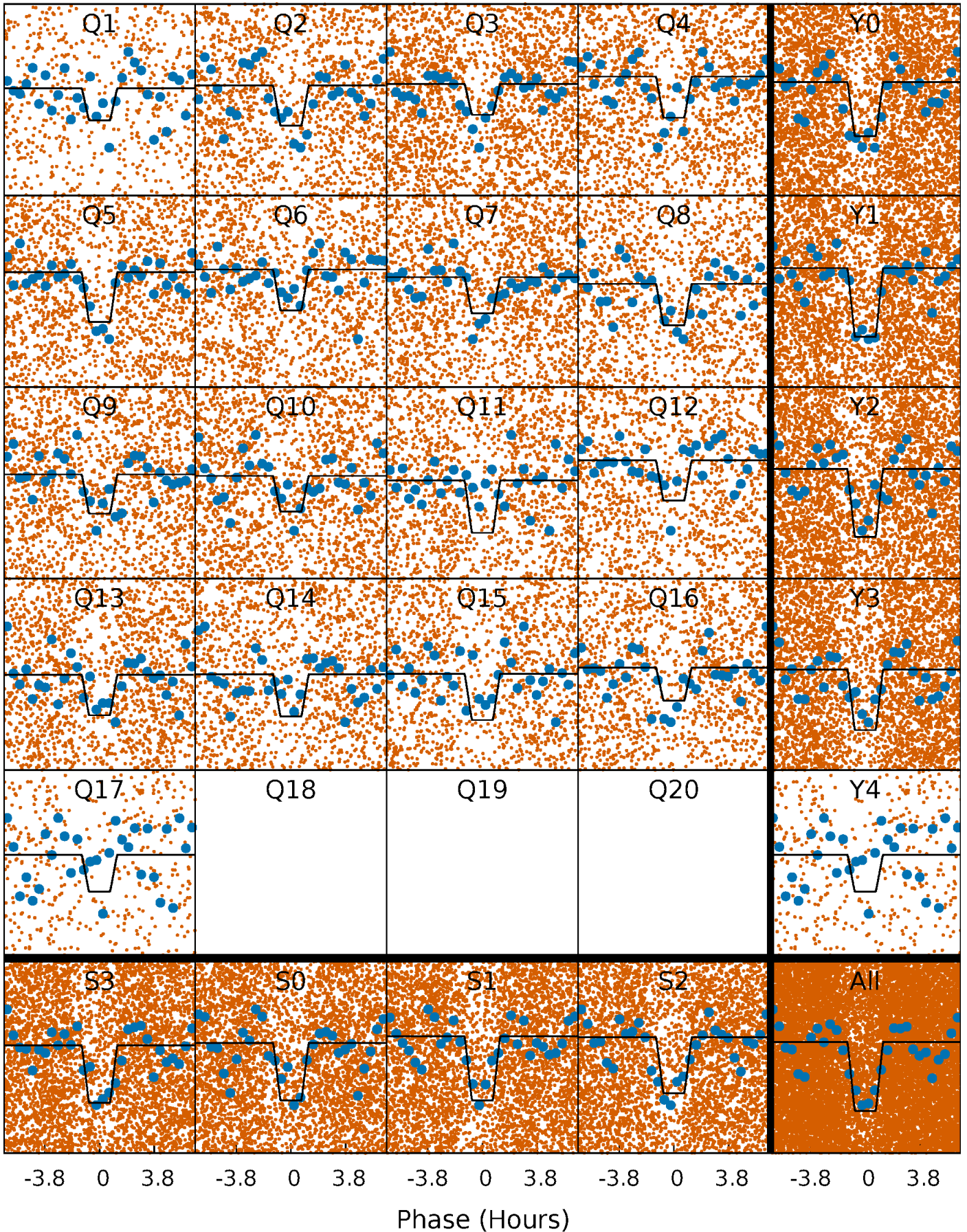
TCE 008129619-01 P= 0.571198 Days  $T_0=131.639275$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

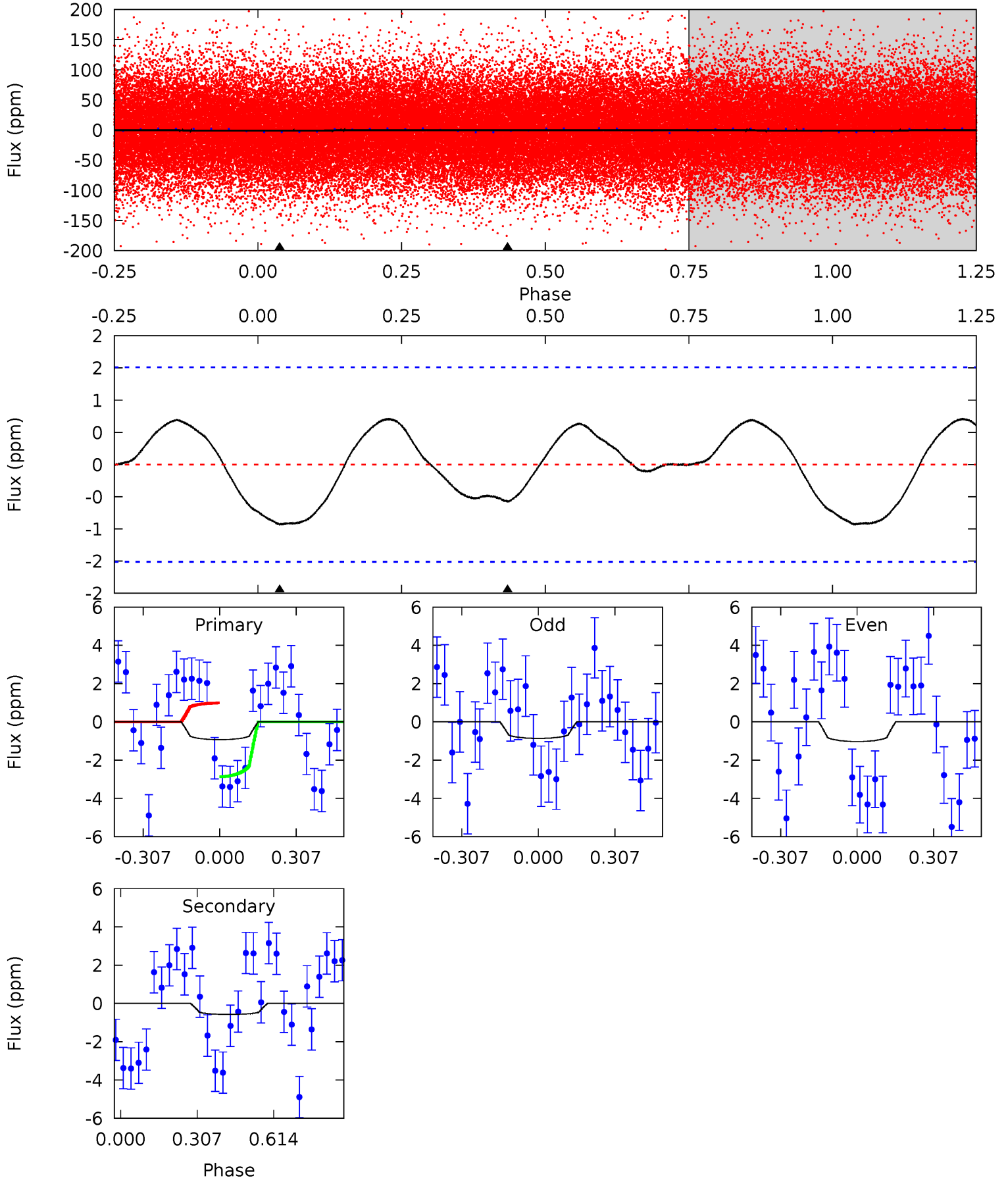
TCE 008129619-01 P= 0.571232 Days  $T_0=131.626662$  (BKJD)



# DV Model-Shift Uniqueness Test

008129619-01, P = 0.571198 Days, E = 131.068077 Days

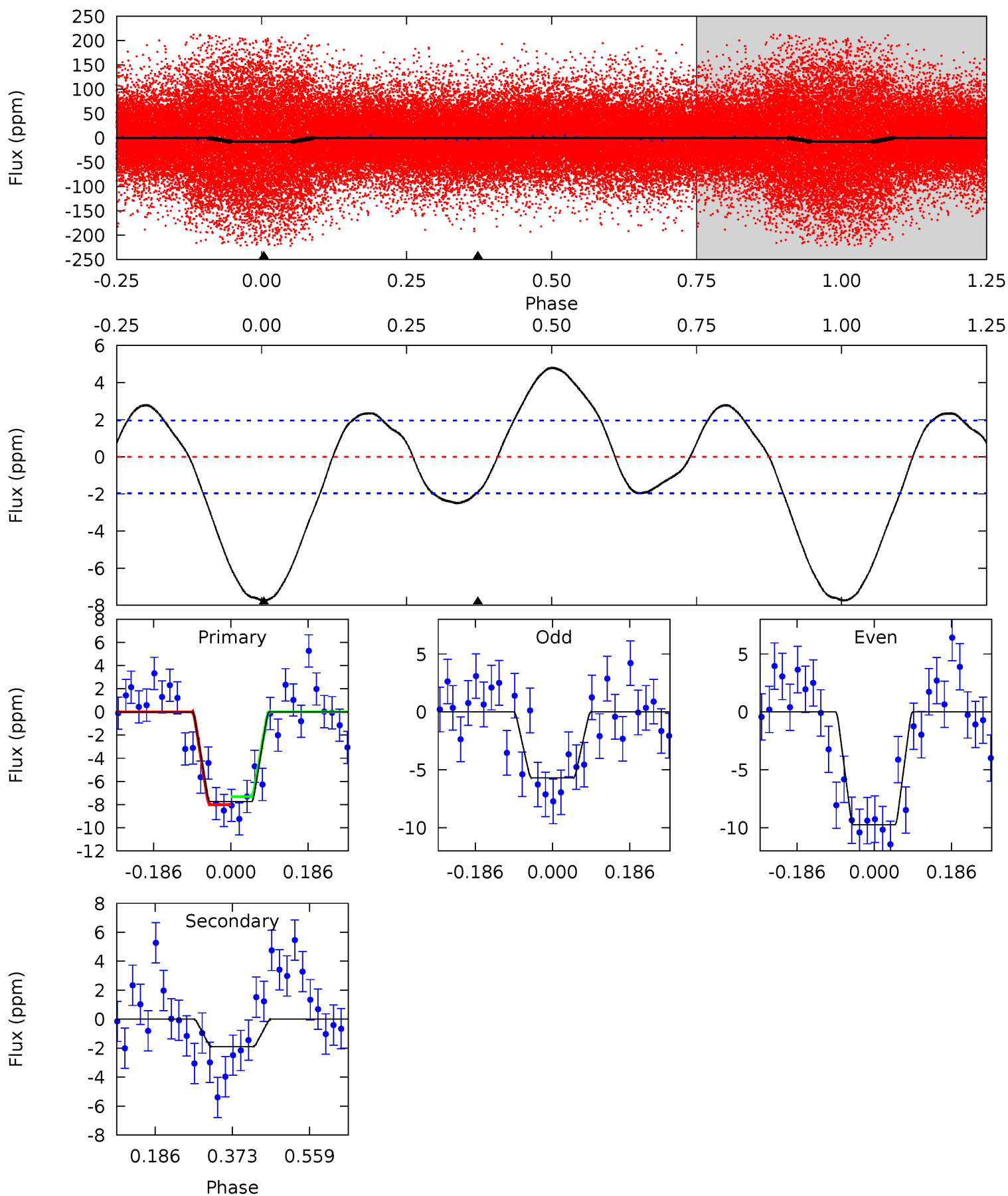
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.66	1.65	0	0	4.32	1.02	0.10	2.66	2.66	1.65	1.65	0.23	0.55	0.43	2.72



# Alt Model-Shift Uniqueness Test

008129619-01, P = 0.571232 Days, E = 131.055430 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	4.28	0	0	4.43	1.32	3.99	17.5	17.5	4.28	4.28	4.55	1.30	0.38	0.78



### Stellar Parameters For KIC 008129619

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$10402^{+286}_{-429}$	$4.154^{+0.200}_{-0.200}$	$0.070^{+0.150}_{-0.550}$	$2.210^{+0.794}_{-0.650}$	$2.539^{+0.336}_{-0.577}$	$0.332^{+0.383}_{-0.175}$
	+3%/-4%	+5%/-5%	+214%/-786%	+36%/-29%	+13%/-23%	+116%/-53%
Source	KIC0	KIC0	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 008129619-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-1 \pm 0$	$0.26^{+0.23}_{-0.17}$	$7015^{+612}_{-591}$	$6947^{+9276}_{-10681}$	$1.259^{+8.353}_{-1.009}$
Alt.	$-2 \pm 0$	$0.73^{+0.30}_{-0.24}$	$7024^{+625}_{-603}$	$5327^{+1838}_{-2253}$	$0.617^{+0.822}_{-0.299}$

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



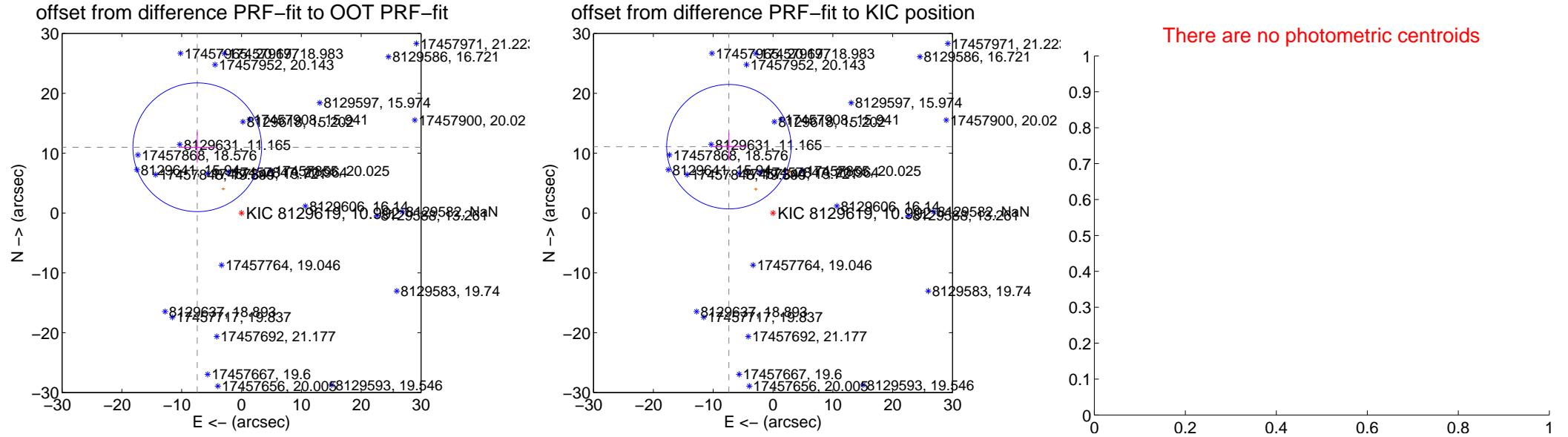
## DV Centroid Data

Supplemental centroid analysis for 008129619-01. **Kepler magnitude: 10.99.** Transit SNR 1.99

**There are 0 quarters with good PRF difference image offsets**

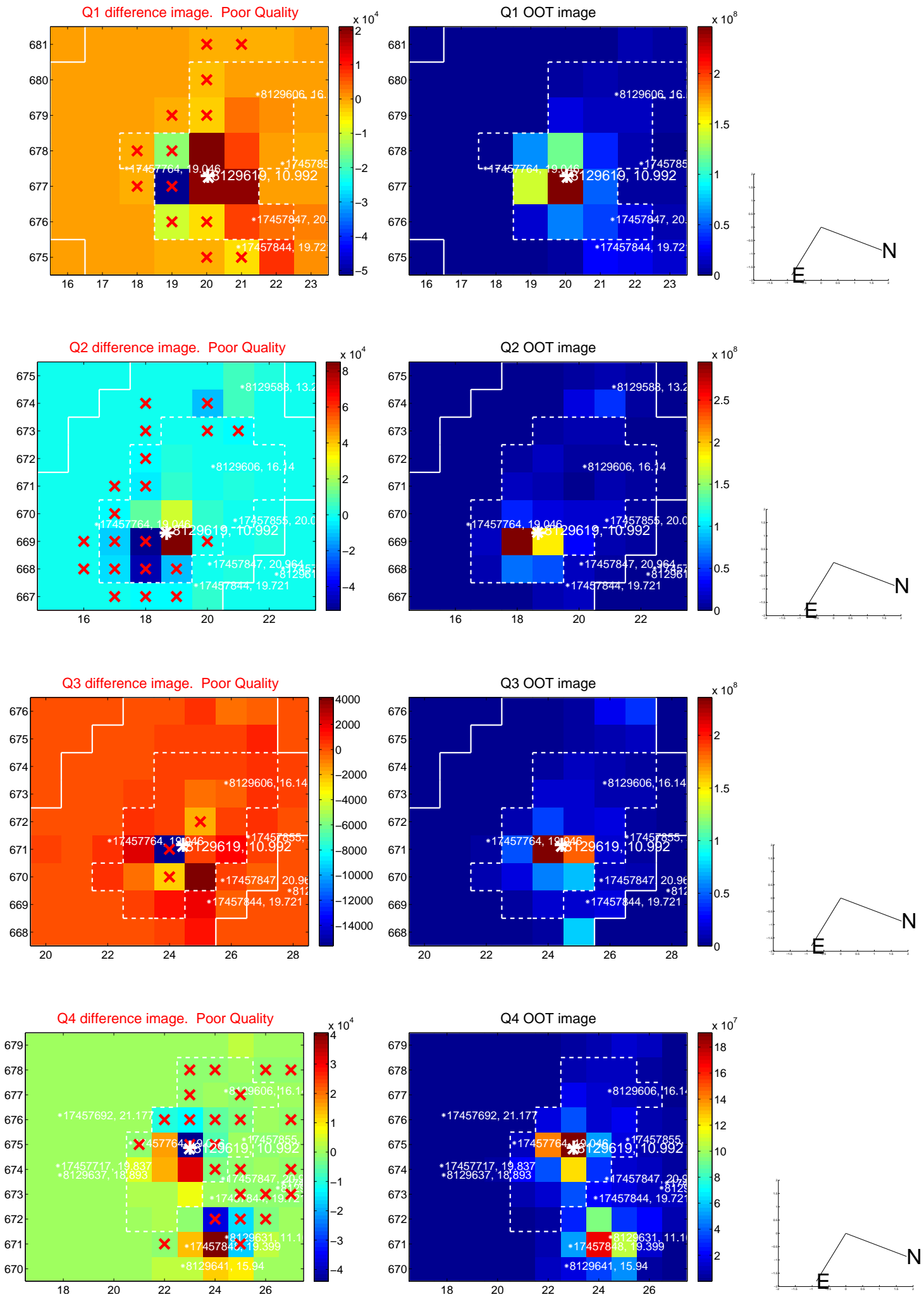
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	<b>13.243 <math>\pm</math> 3.585</b>	<b>3.69</b>	$7.397 \pm 3.135$	$10.984 \pm 2.589$
PRF-fit source offset from KIC position	<b>13.311 <math>\pm</math> 3.465</b>	<b>3.84</b>	$7.372 \pm 2.974$	$11.083 \pm 2.321$
photometric centroid source offset	—	—	—	—

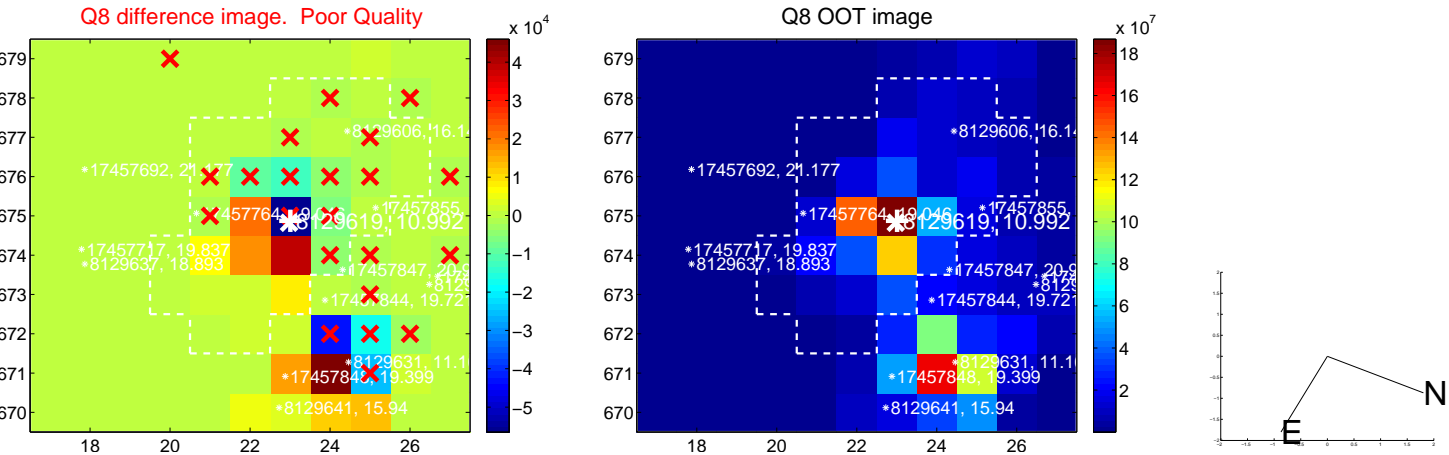
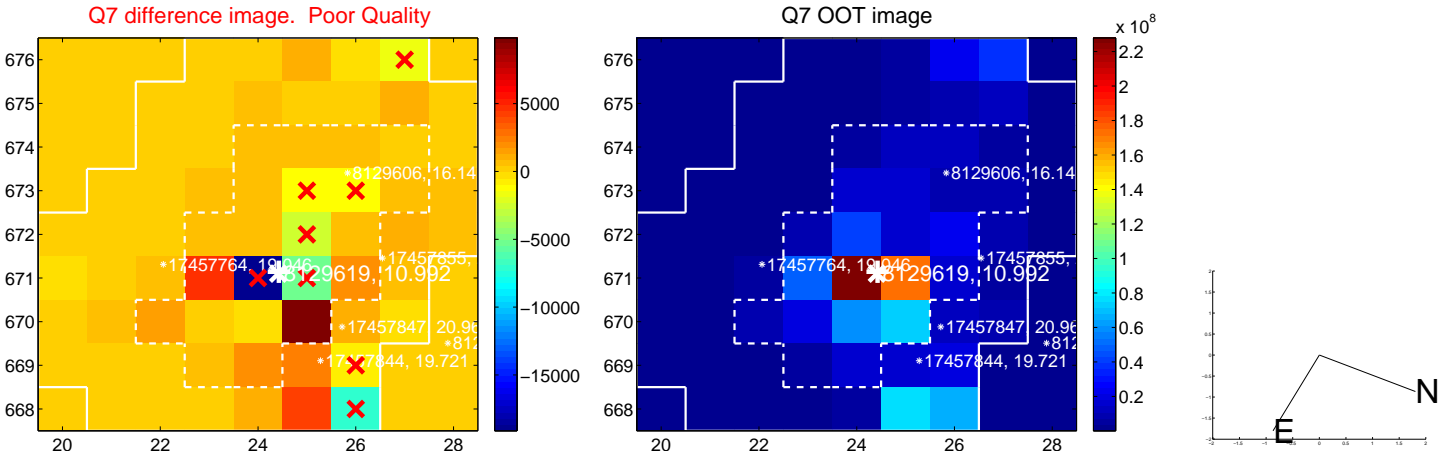
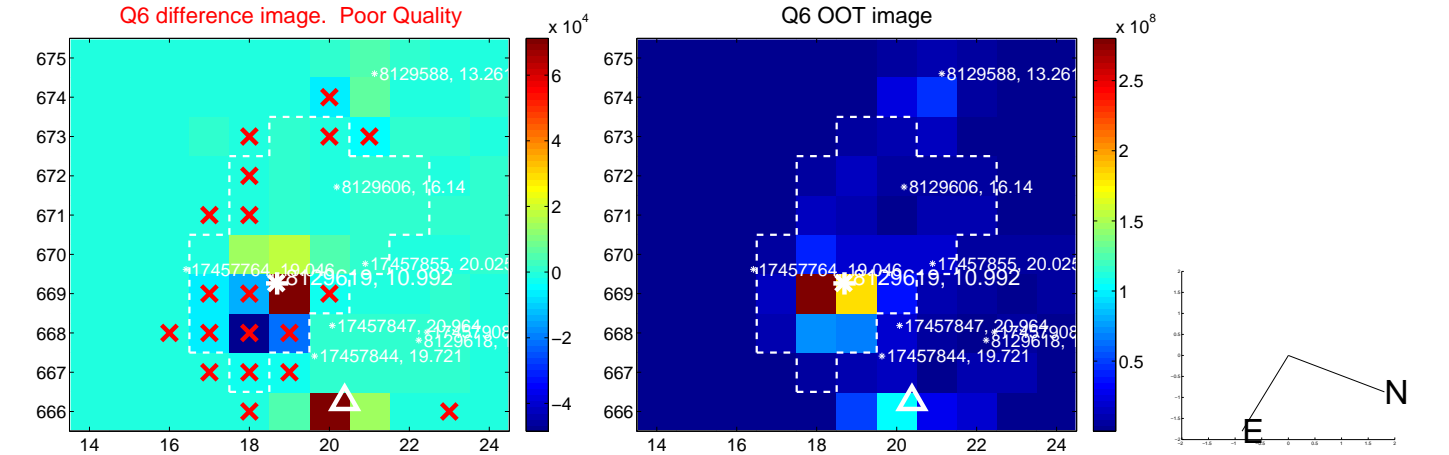
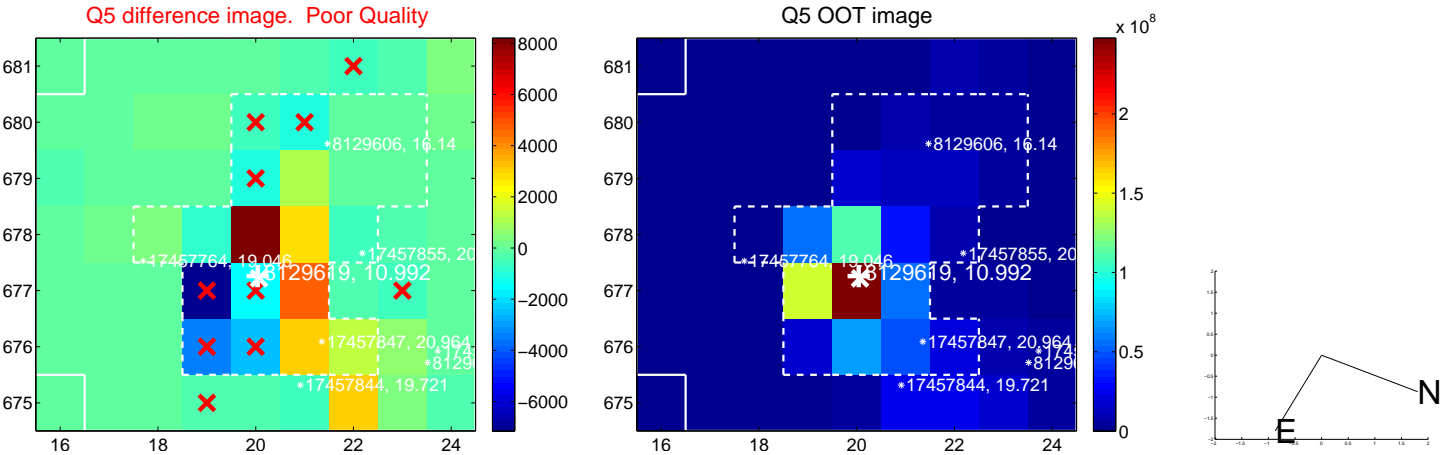


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

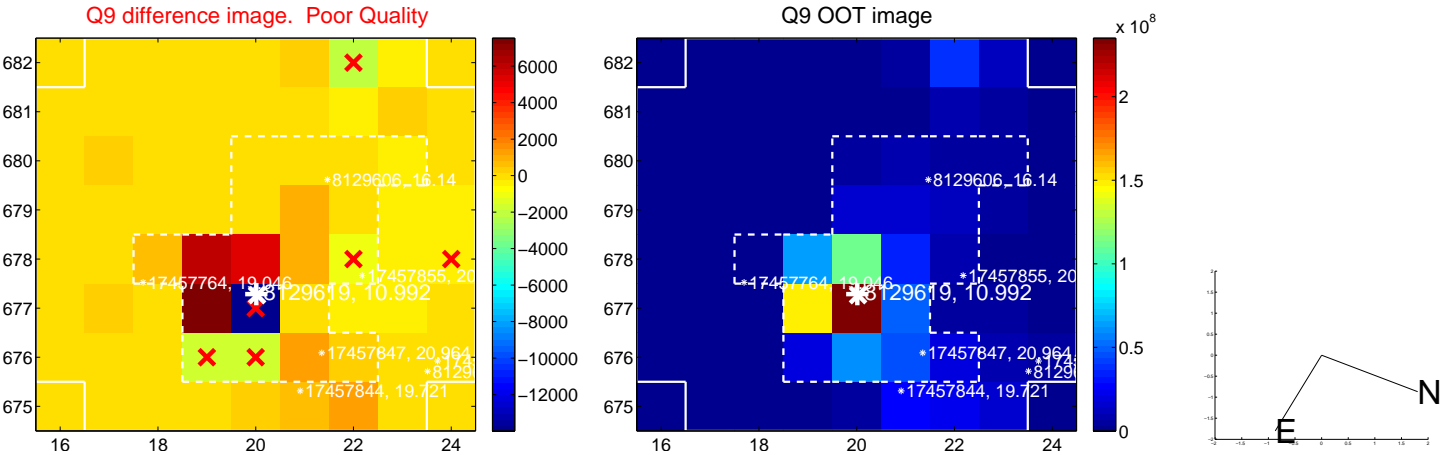
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



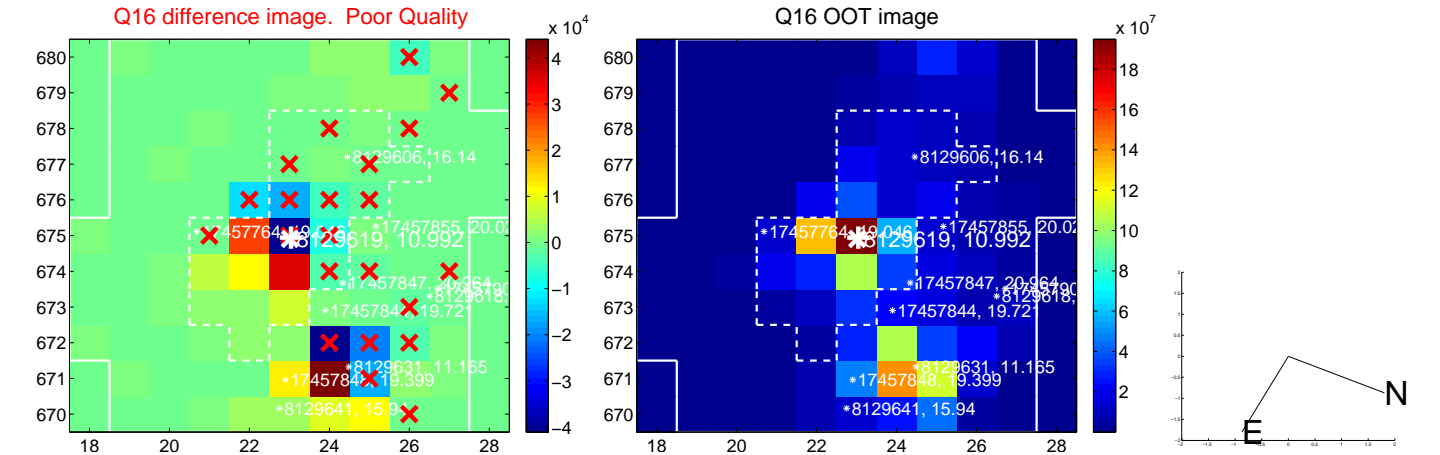
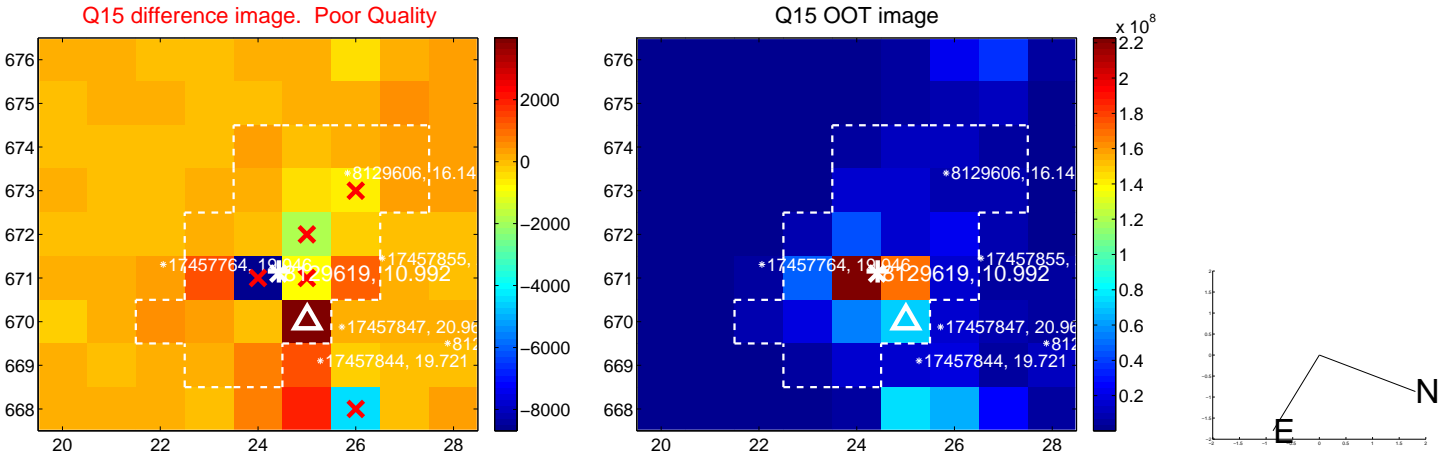
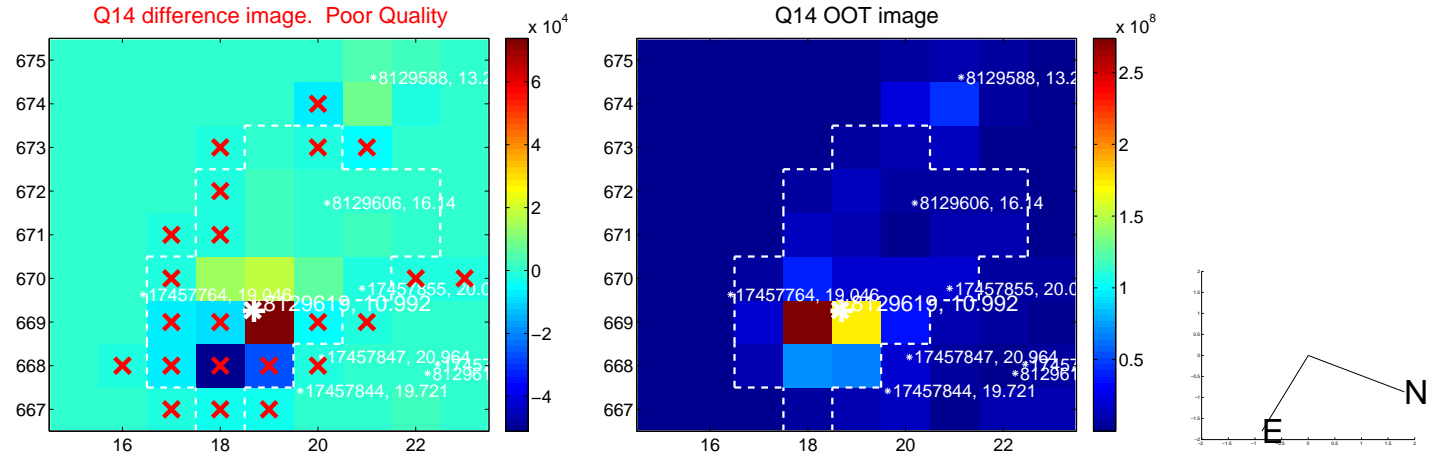
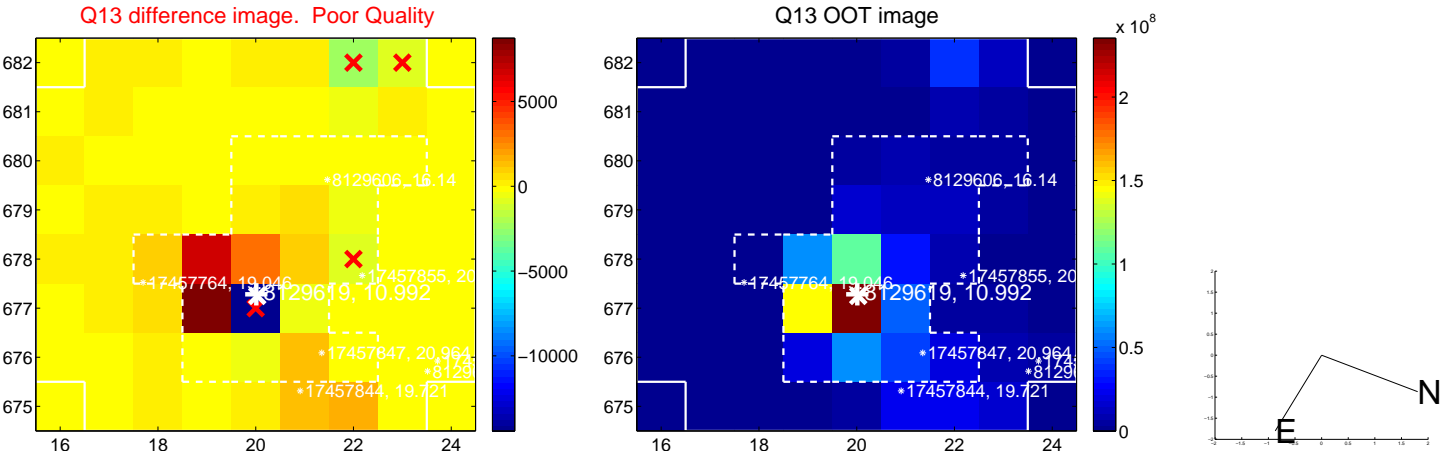
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

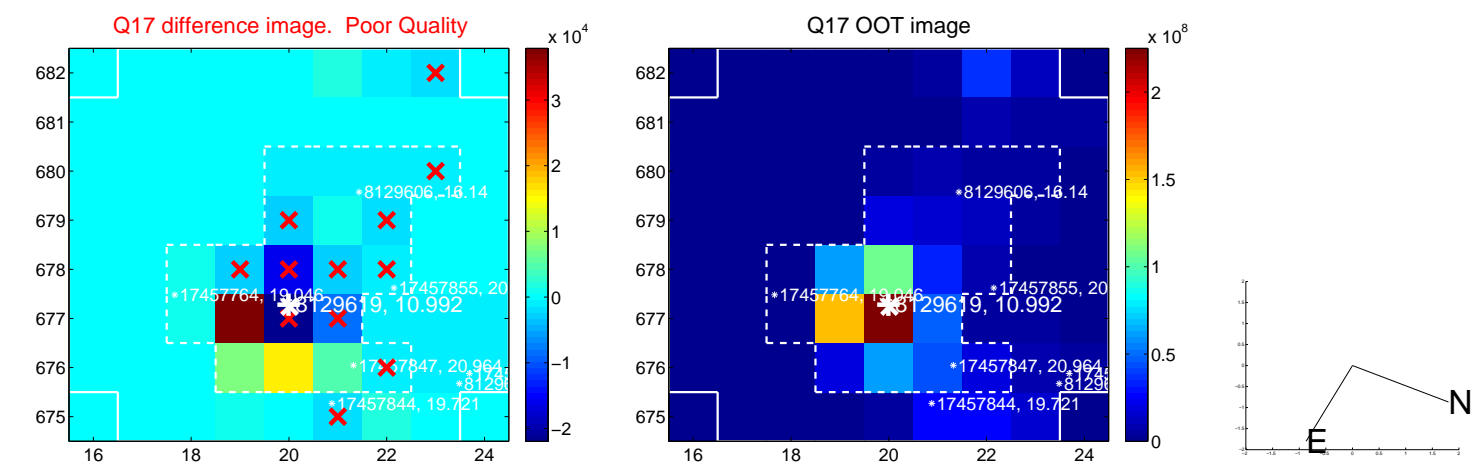


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.





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



folded centroid time series figure for this object.

UKIRT Image

