

# KIC 001429120

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
001429120-01	OBS	No	0.760615	132.294407	3.7	6.130	8.6	1.8	1.51	7143	0.30	14993.34

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
001429120-01	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.

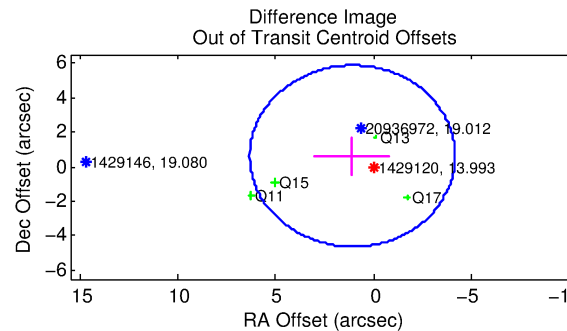
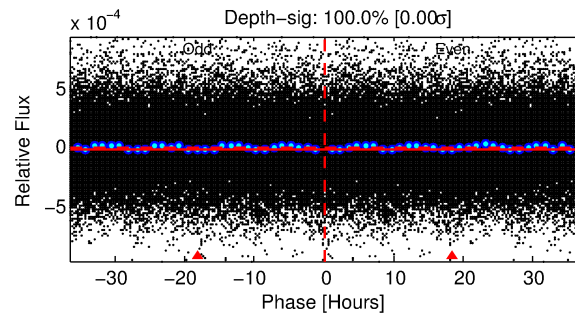
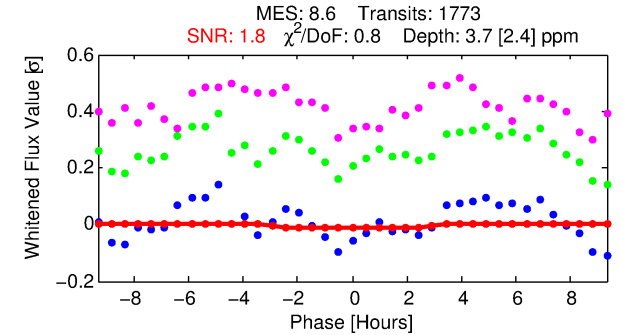
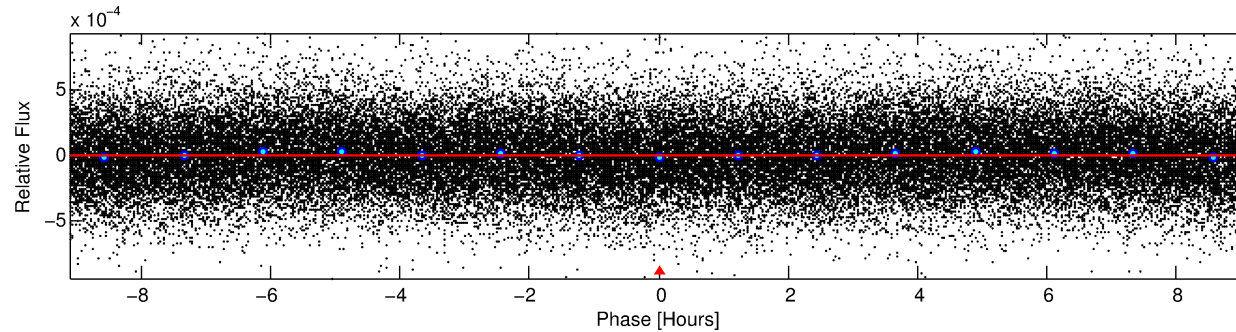
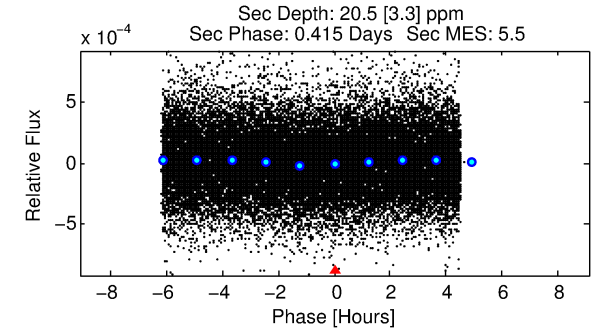
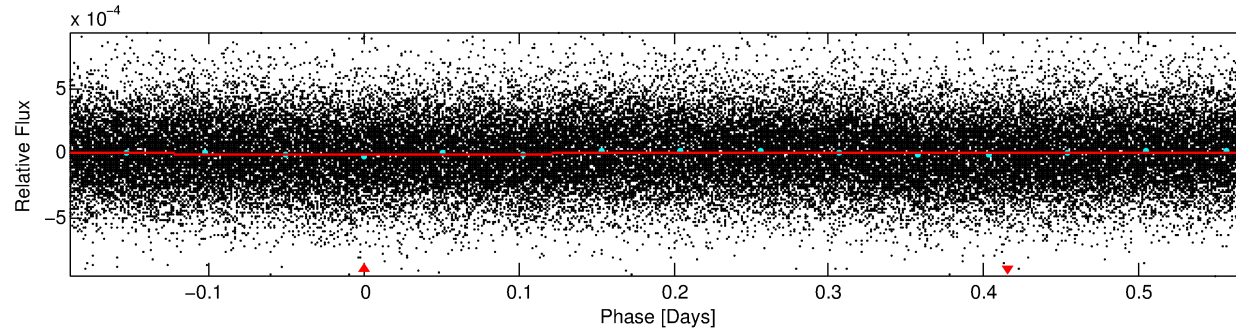
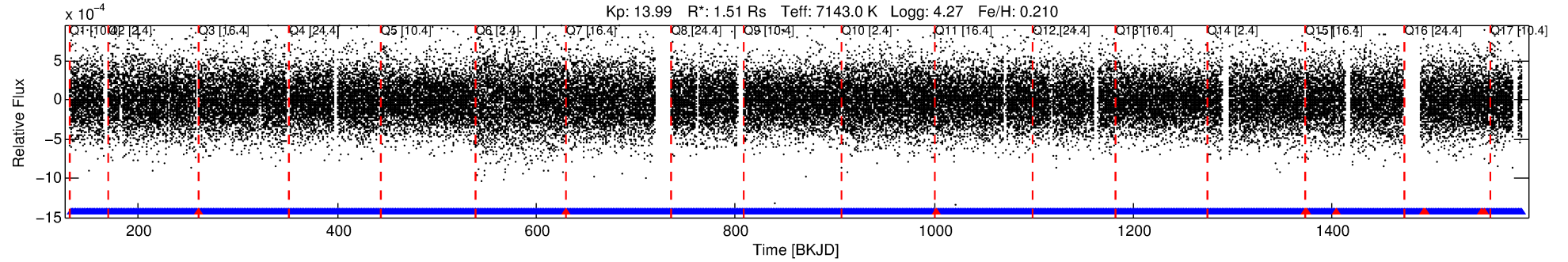
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 001429120-01

No Significant Match Found

# DV One-Page Summary

KIC: 1429120 Candidate: 1 of 1 Period: 0.761 d



## DV Fit Results:

Period = 0.76062 [0.00007] d  
Epoch = 132.2944 [0.0344] BKJD  
Rp/R\* = 0.0018 [0.0064]  
a/R\* = 1.12 [4.57]  
b = 0.50 [31.37]  
Seff = 14993.34 [7025.39]  
Teq = 2822 [331] K  
Rp = 0.30 [1.06] Re  
a = 0.0189 [0.0056] AU  
Ag = 44.38 [310.57] [0.14σ]  
Teffp = 11260 [19670] K [0.43σ]

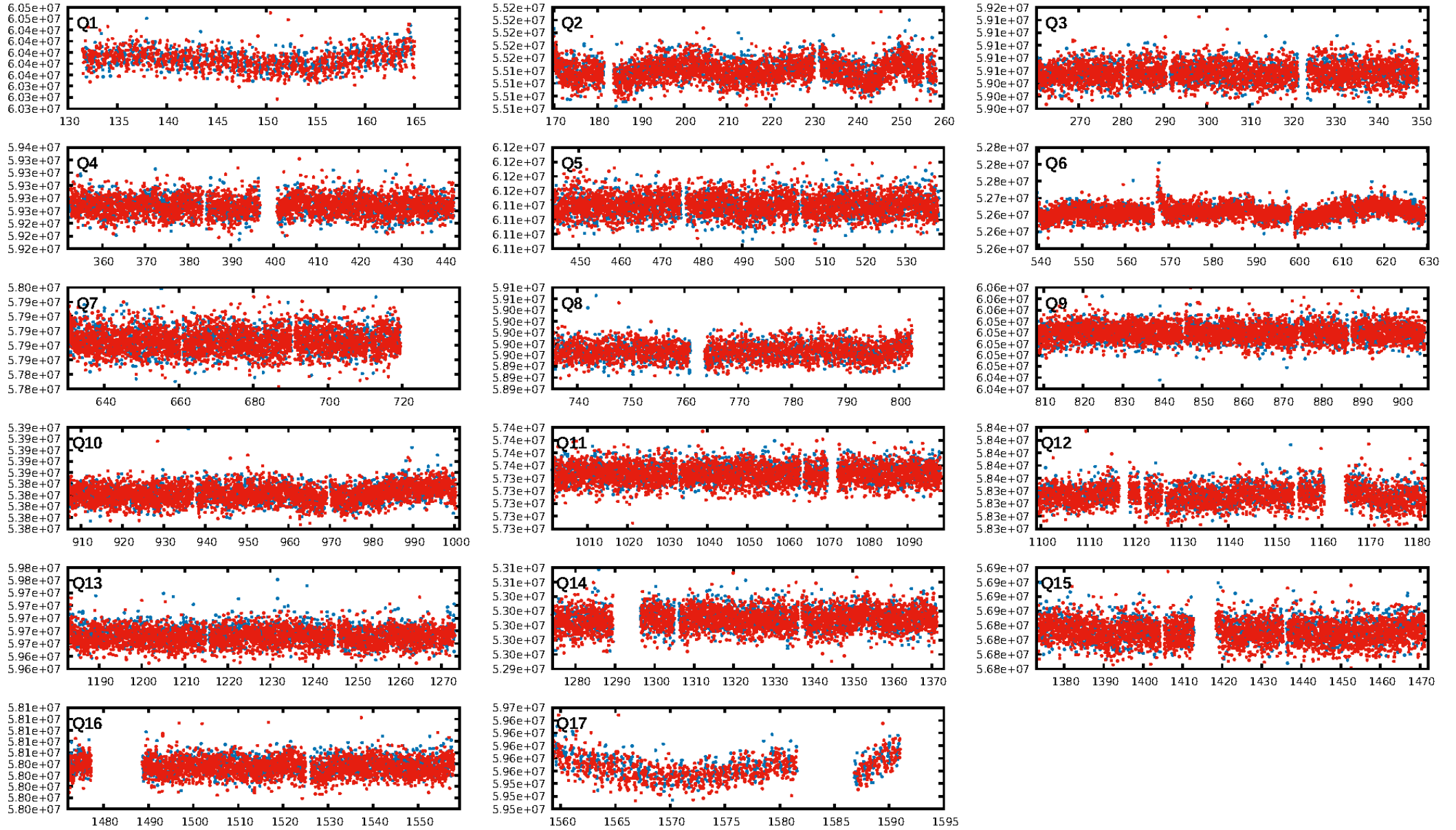
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 0.99 [1683/1693]  
GhostDiagnostic-chr: N/A  
Centroid-sig: N/A  
Centroid-so: N/A  
OotOffset-rm: 1.242 arcsec [0.71σ]  
KicOffset-rm: 1.262 arcsec [0.67σ]  
OotOffset-st: 0/2/0/2 [4]  
KicOffset-st: 0/2/0/2 [4]  
DiffImageQuality-fgm: 0.50 [2/4]  
DiffImageOverlap-fno: 1.00 [17/17]

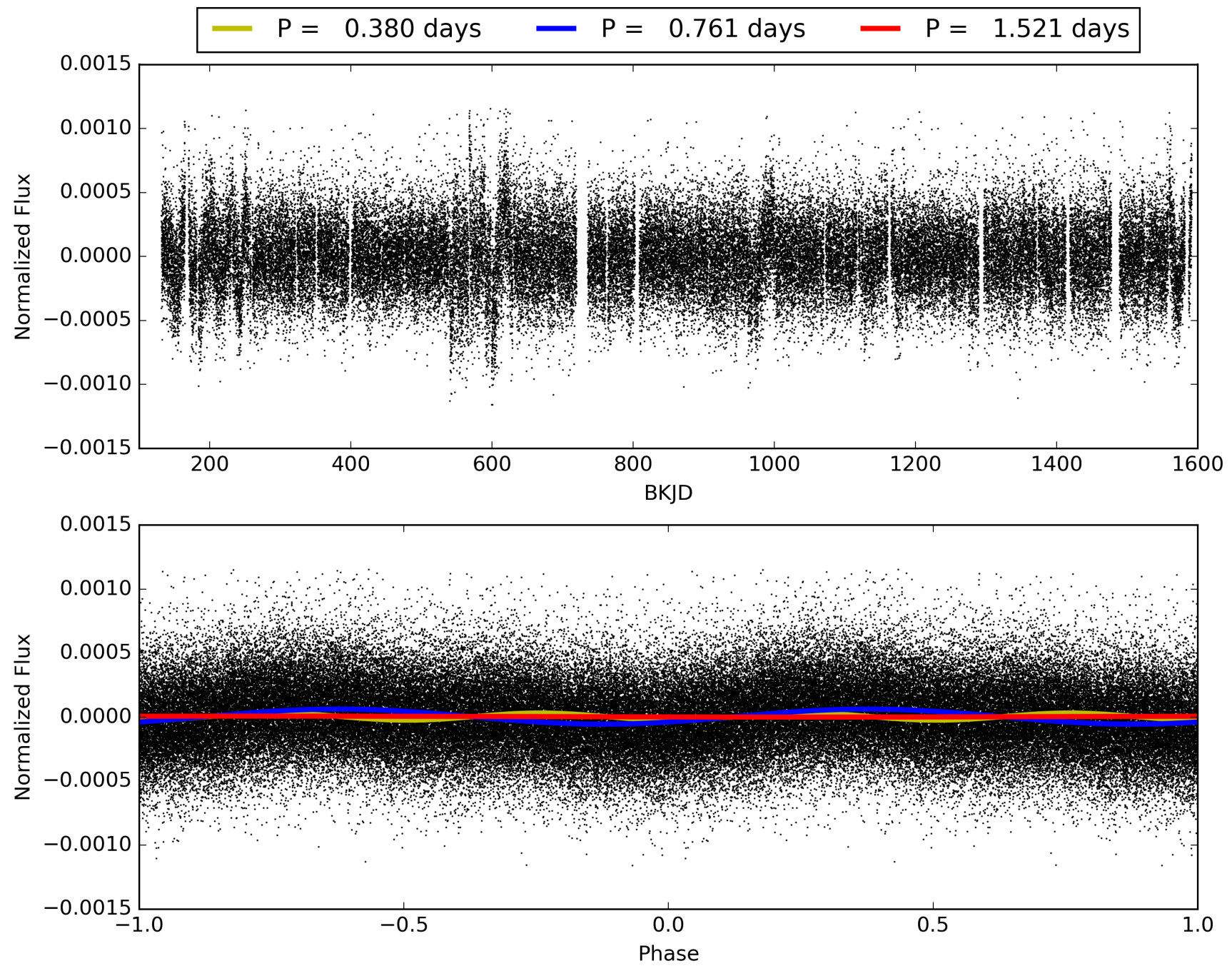
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 18:21:19 Z

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

# TCE 001429120-01, PDC Light Curves

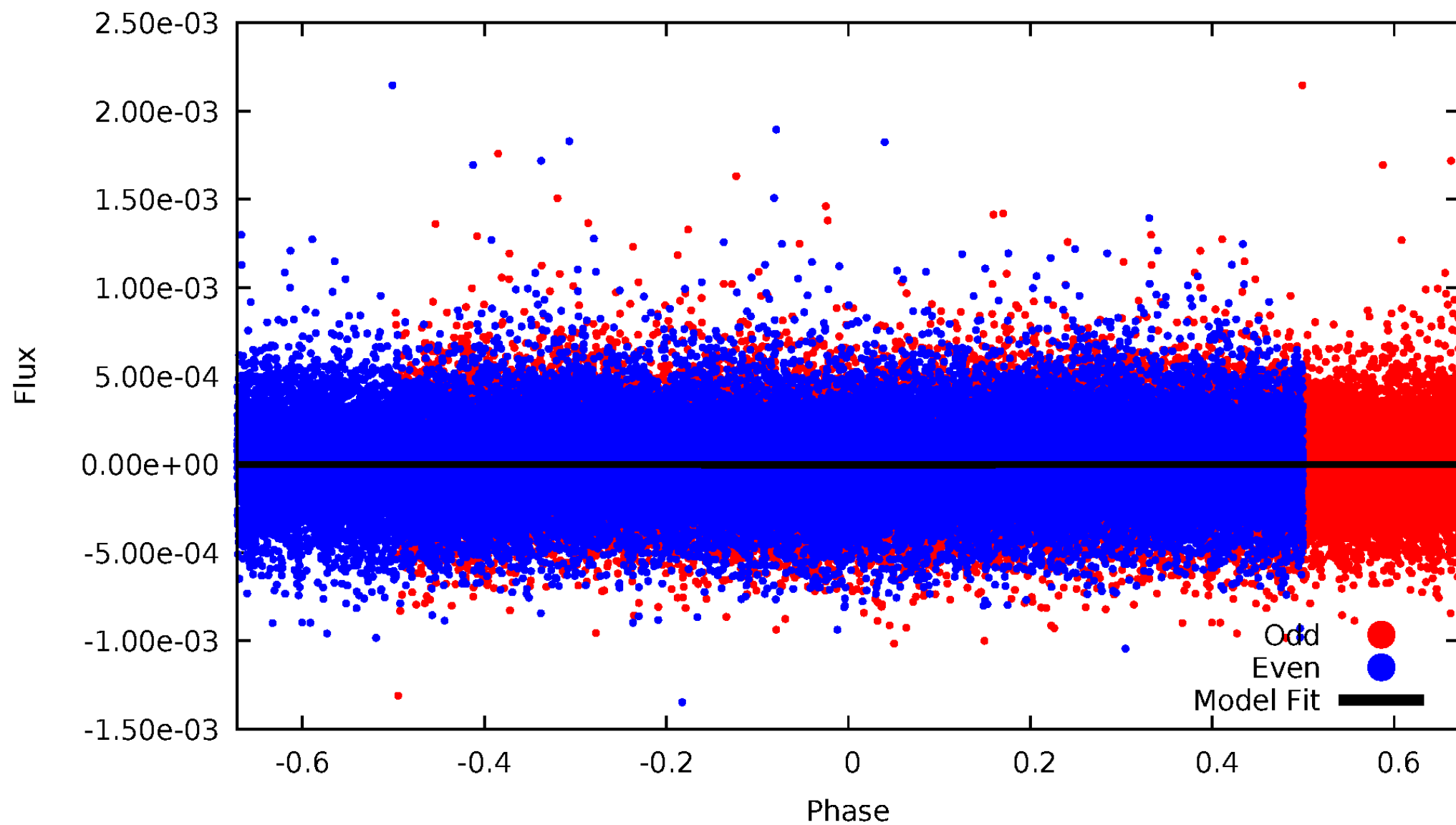


# TCE 001429120-01



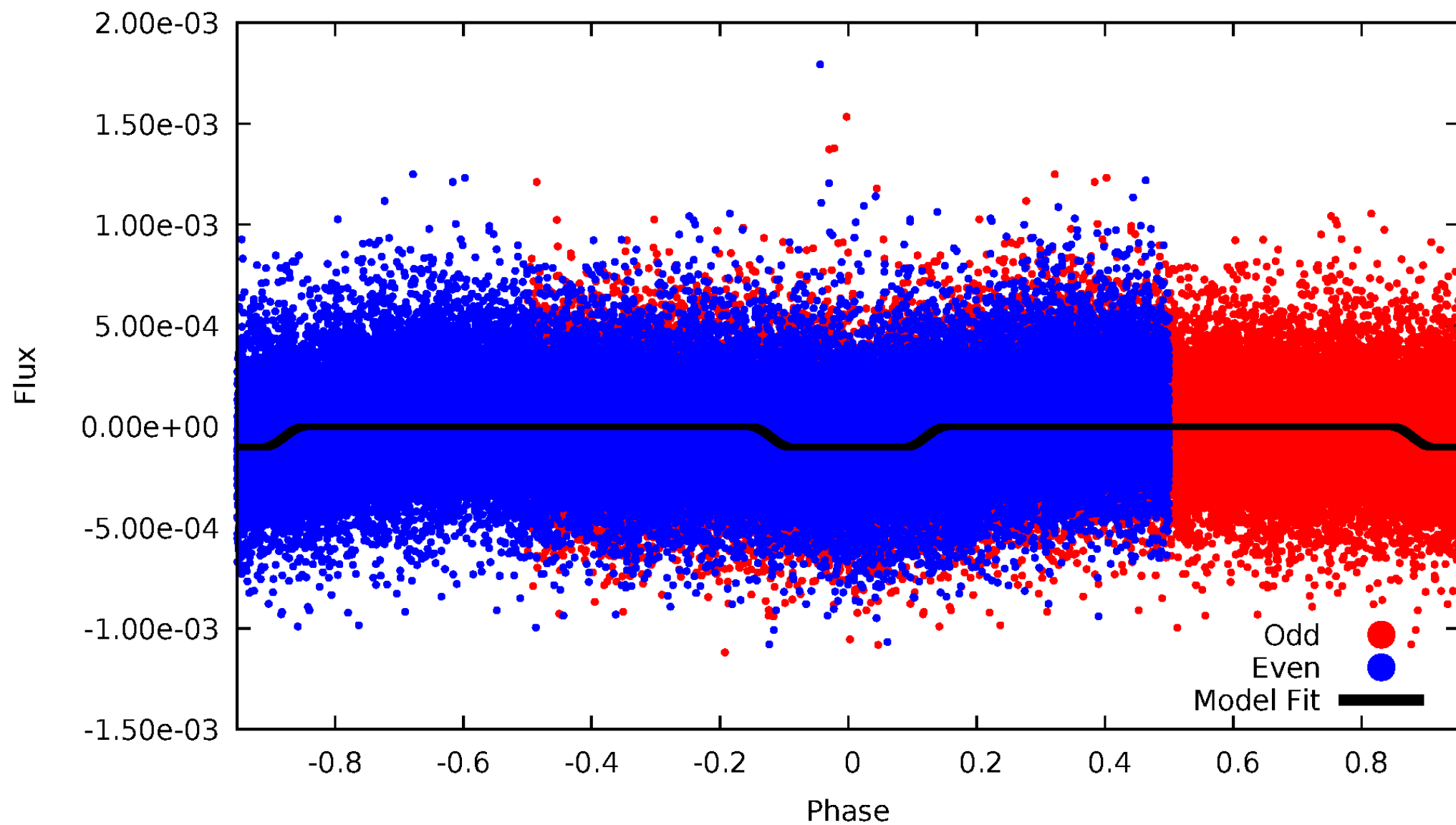
# DV Odd/Even

TCE 001429120-01



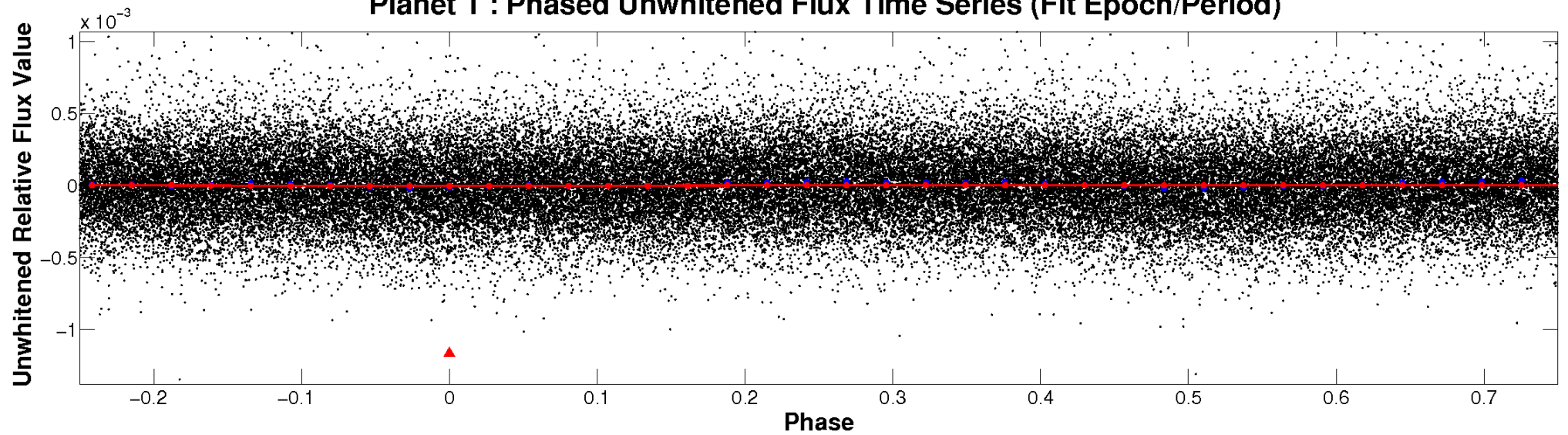
# ALT Odd/Even

TCE 001429120-01

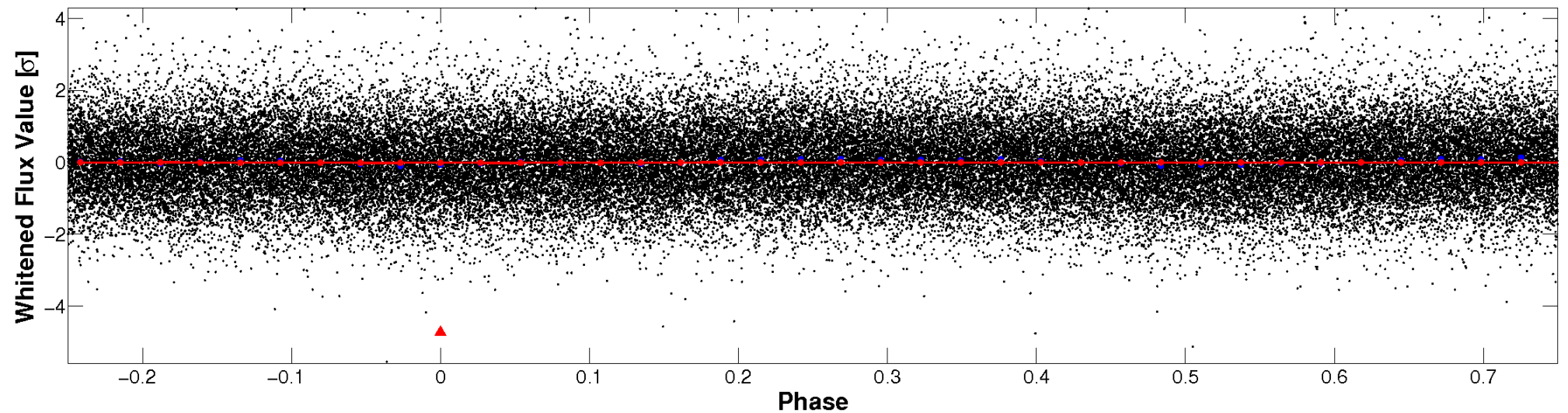


# Non-Whitened Vs. Whitened Light Curve

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

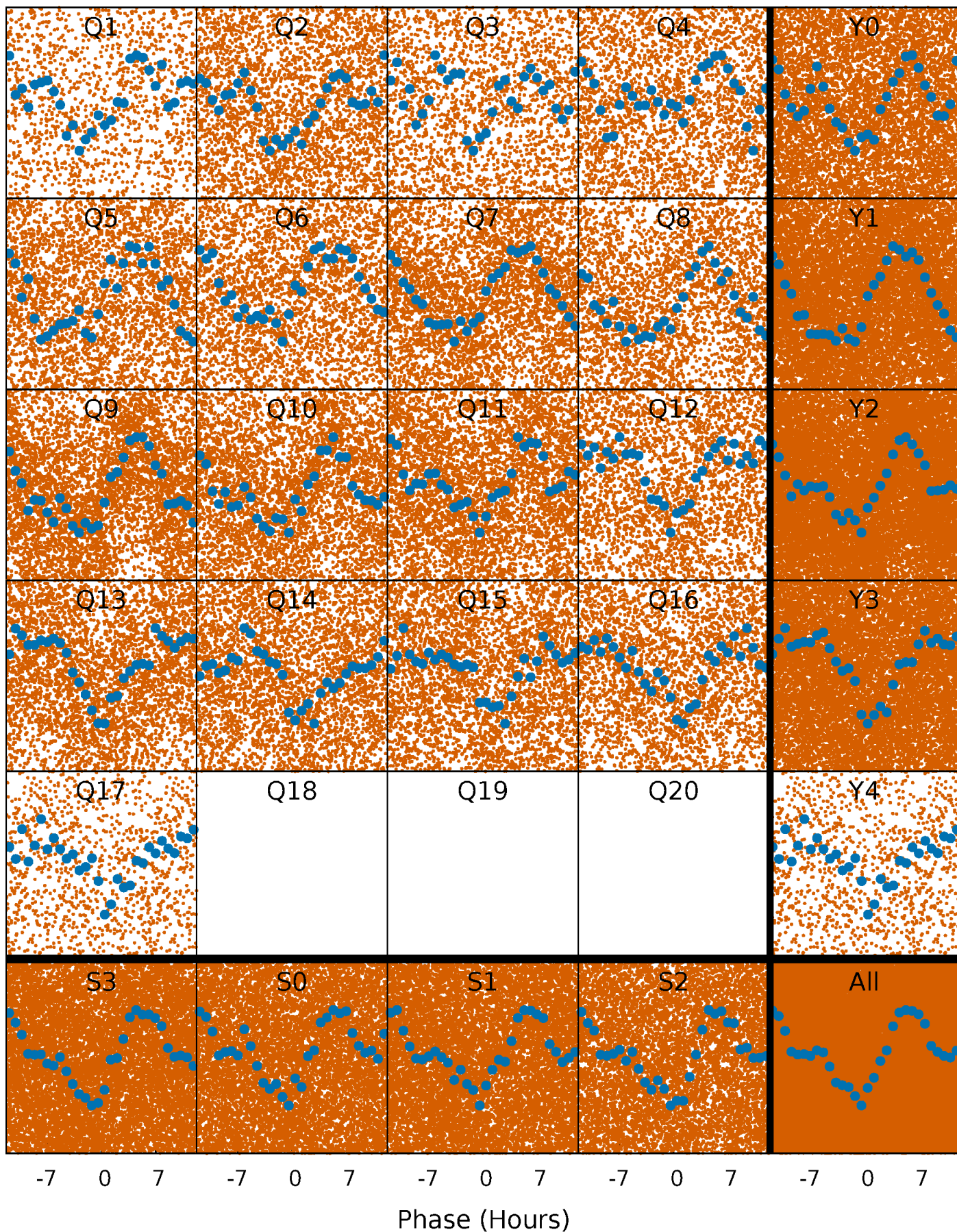


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



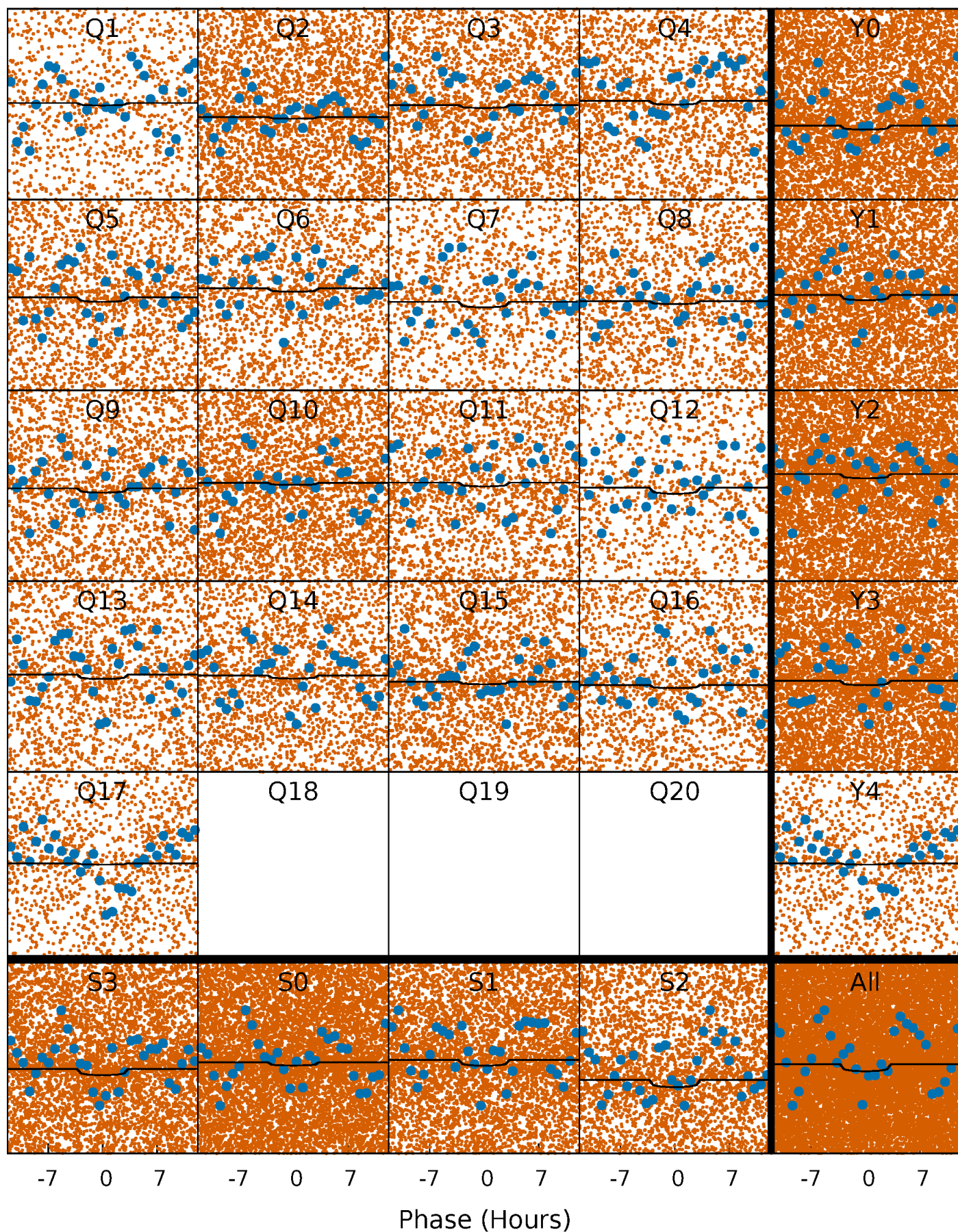
# PDC Quarter-Phased Transit Curves

TCE 001429120-01 P= 0.760615 Days  $T_0=132.294407$  (BKJD)



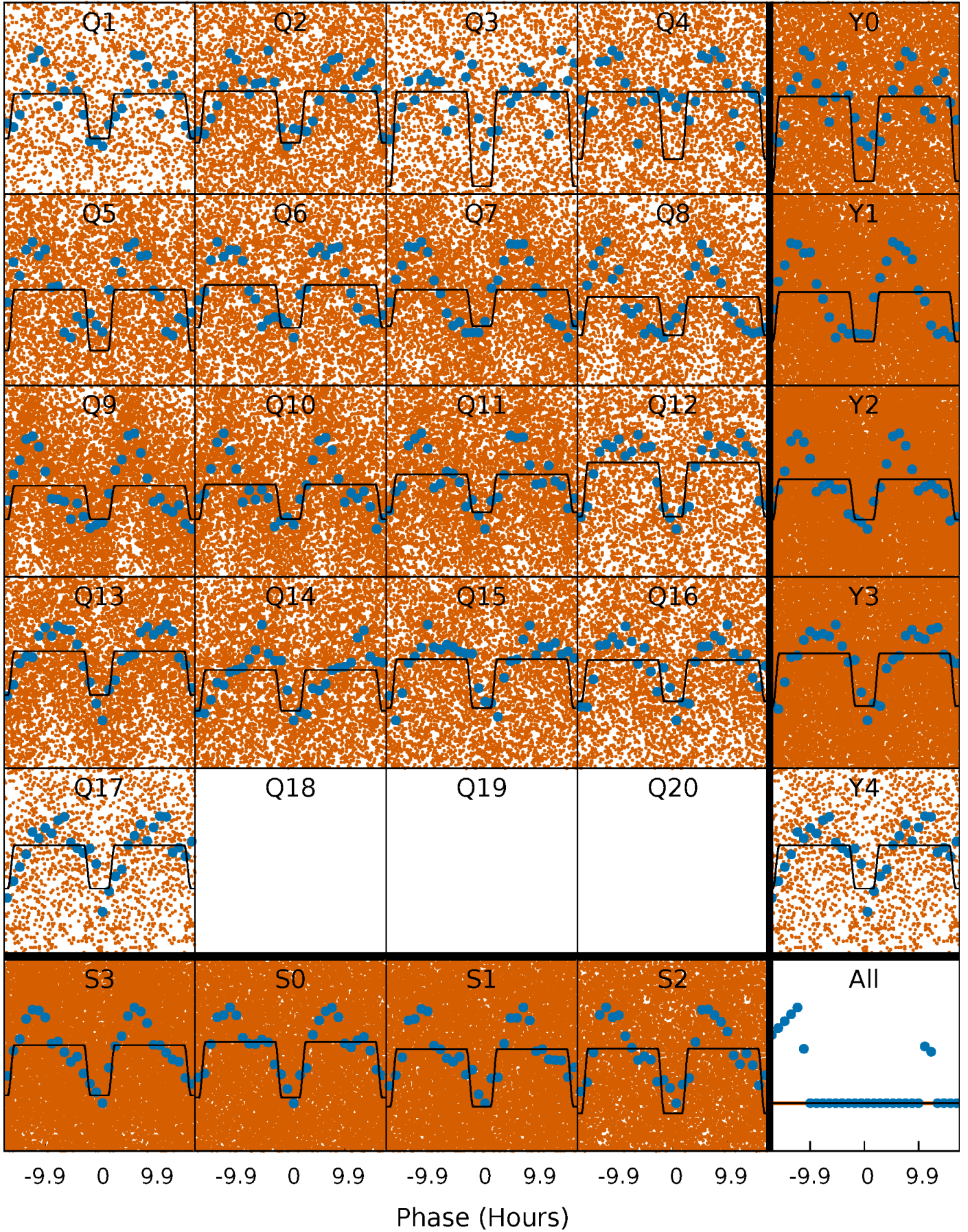
# DV Quarter-Phased Transit Curves

TCE 001429120-01 P= 0.760615 Days  $T_0=132.294407$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

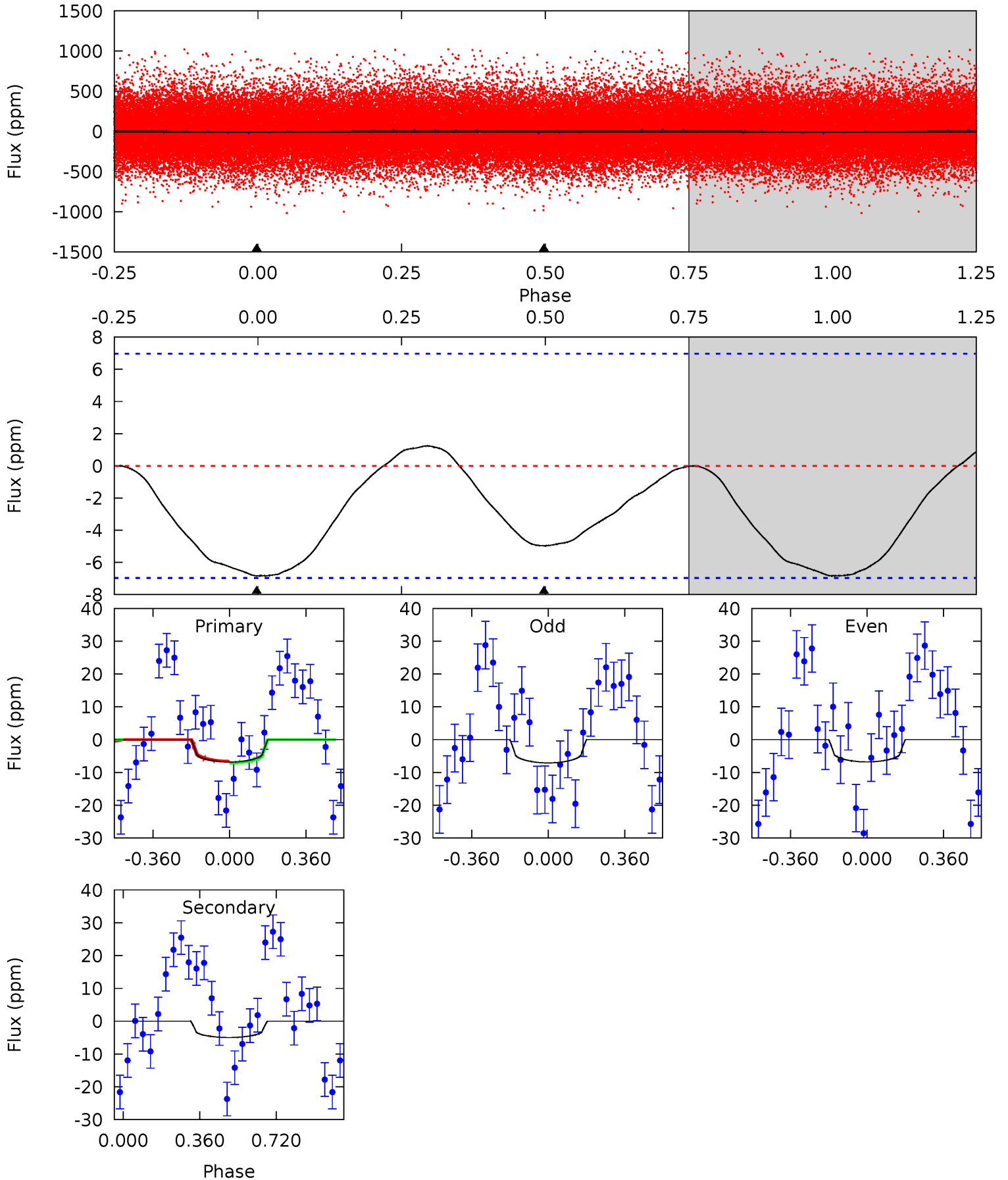
TCE 001429120-01   P= 0.760667 Days    $T_0=132.201425$  (BKJD)



# DV Model-Shift Uniqueness Test

001429120-01, P = 0.760615 Days, E = 130.773177 Days

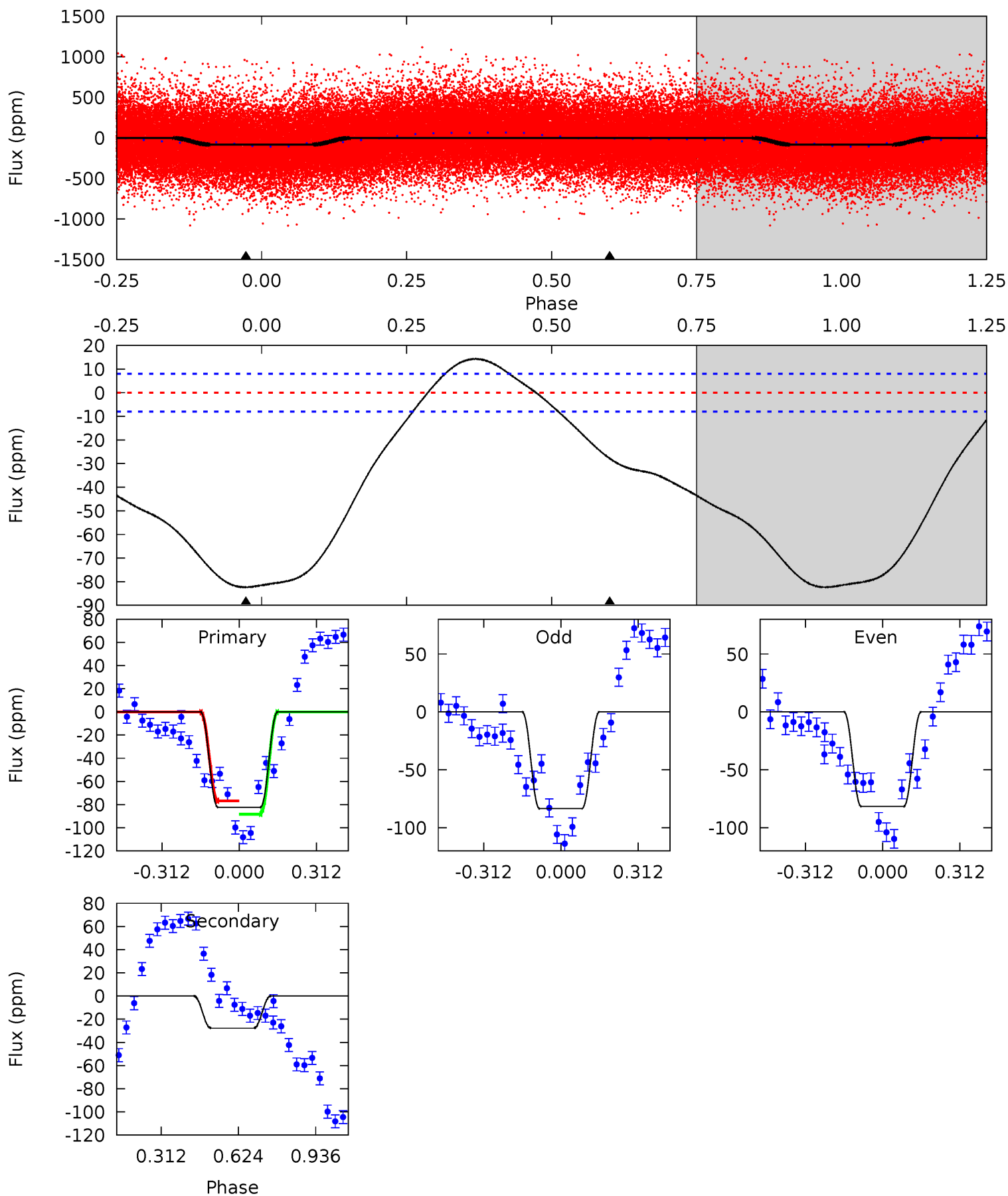
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.21	3.06	0	0	4.29	0.92	0.29	4.21	4.21	3.06	3.06	0.10	1.00	0.15	0.15



# Alt Model-Shift Uniqueness Test

001429120-01, P = 0.760667 Days, E = 131.440758 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
44.3	15.0	0	0	4.32	1.01	4.56	44.3	44.3	15.0	15.0	0.50	0.98	0.15	3.19



### Stellar Parameters For KIC 001429120

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$7143^{+195}_{-335}$	$4.268^{+0.058}_{-0.232}$	$0.210^{+0.150}_{-0.350}$	$1.512^{+0.544}_{-0.181}$	$1.550^{+0.199}_{-0.199}$	$0.631^{+0.196}_{-0.350}$
	+3%/-5%	+1%/-5%	+71%/-167%	+36%/-12%	+13%/-13%	+31%/-55%
Source	PHO1	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 001429120-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-5 \pm 2$	$0.94^{+0.93}_{-0.65}$	$4024^{+319}_{-227}$	$4399^{+3876}_{-7180}$	$1.080^{+10.442}_{-0.826}$
Alt.	$-28 \pm 2$	$1.83^{+1.15}_{-1.02}$	$4018^{+310}_{-235}$	$4868^{+2643}_{-1186}$	$1.597^{+6.780}_{-0.994}$

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

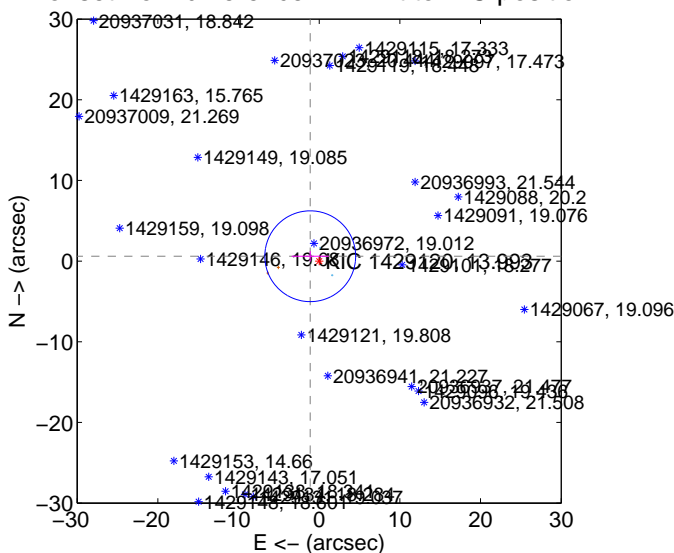
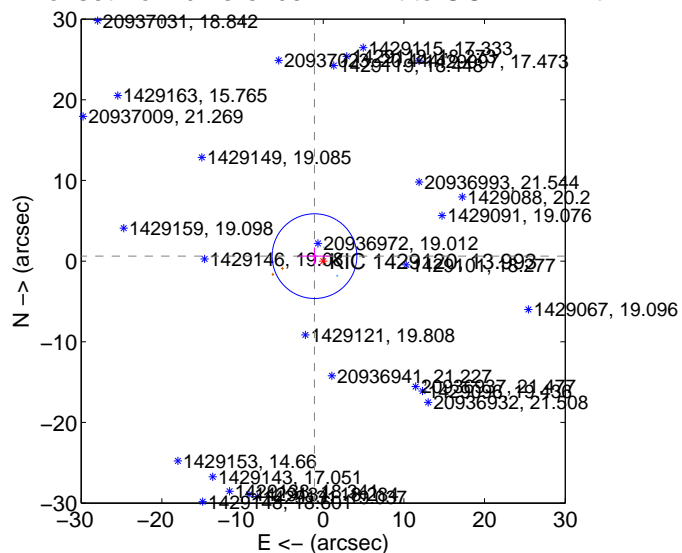
## DV Centroid Data

Supplemental centroid analysis for 001429120-01. Kepler magnitude: 13.99. Transit SNR 1.80

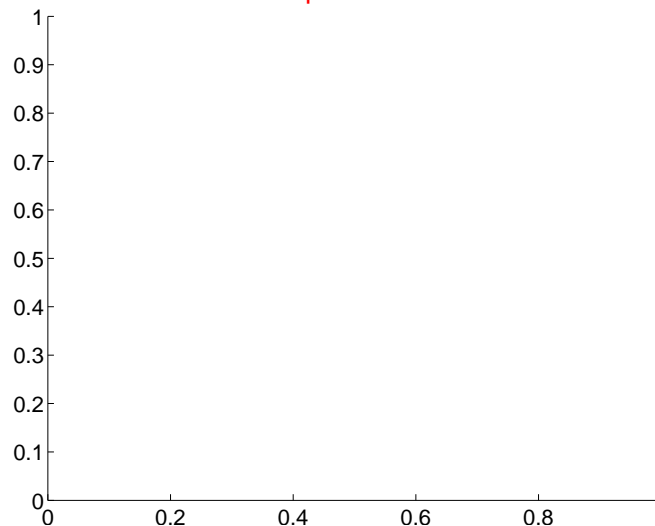
There are 2 quarters with good PRF difference image offsets

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	$1.242 \pm 1.750$	0.71	$1.079 \pm 1.923$	$0.616 \pm 1.052$
PRF-fit source offset from KIC position	$1.262 \pm 1.876$	0.67	$1.108 \pm 2.291$	$0.603 \pm 0.636$
photometric centroid source offset	—	—	—	—

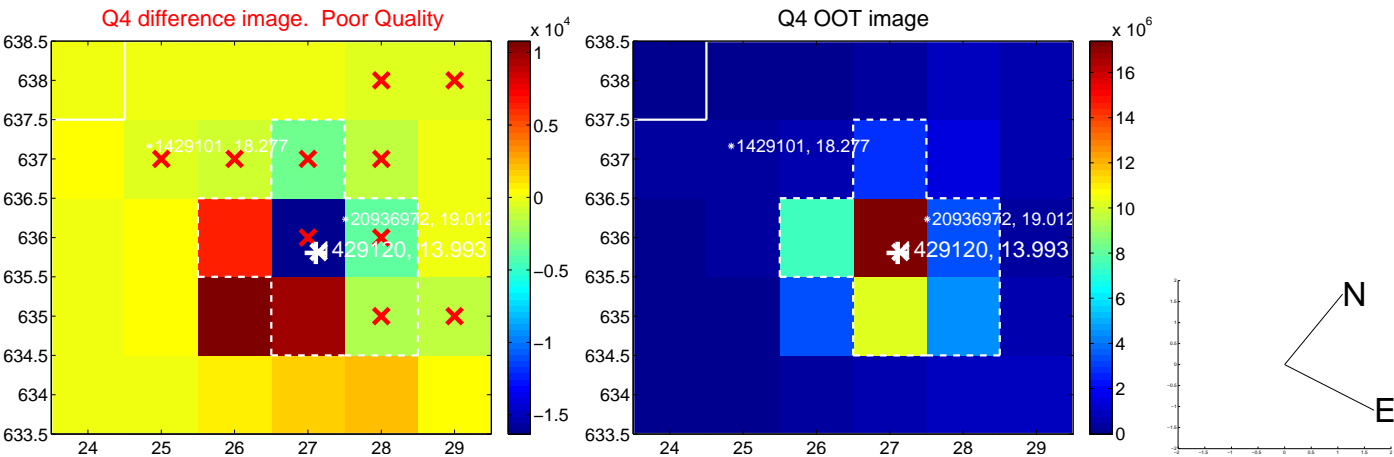
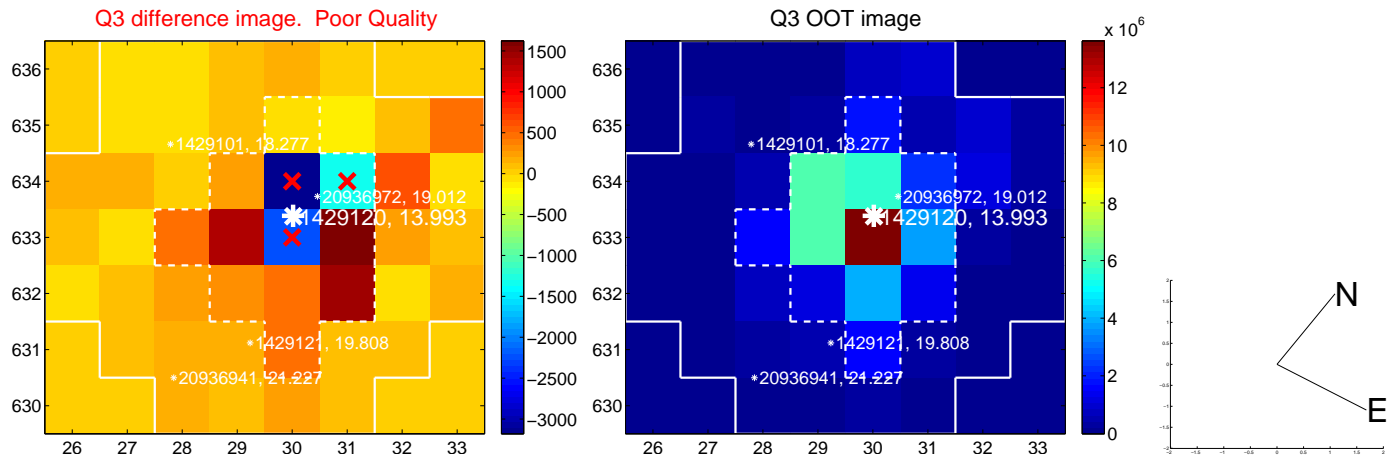
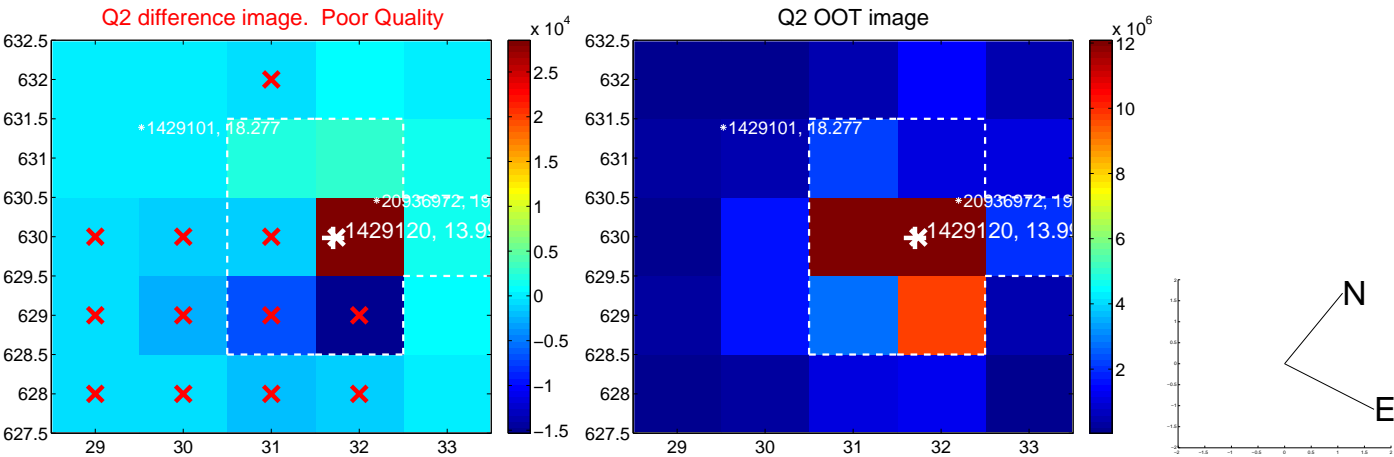
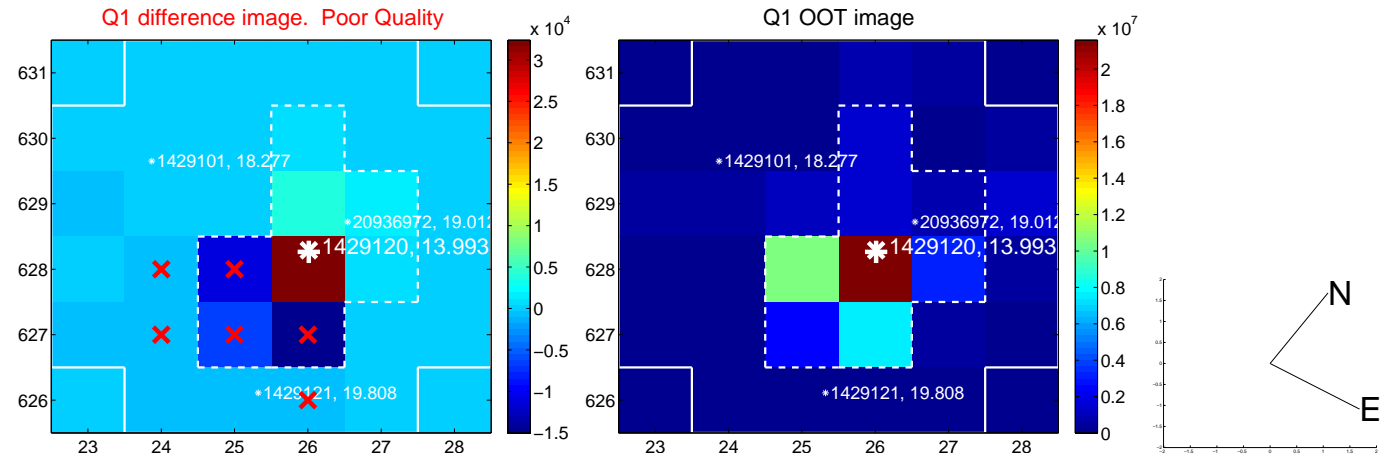


There are no photometric centroids

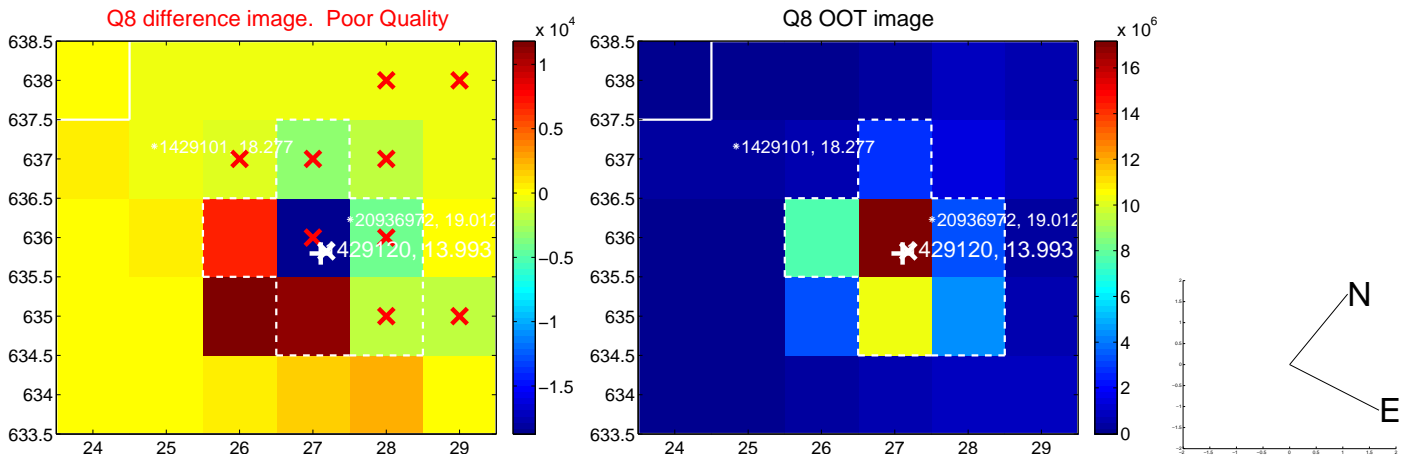
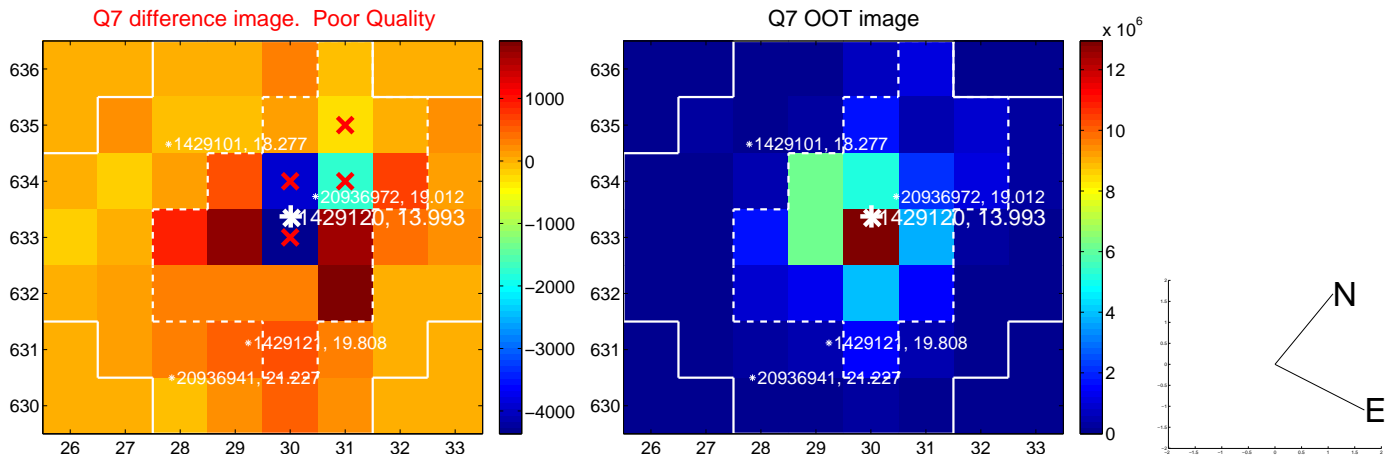
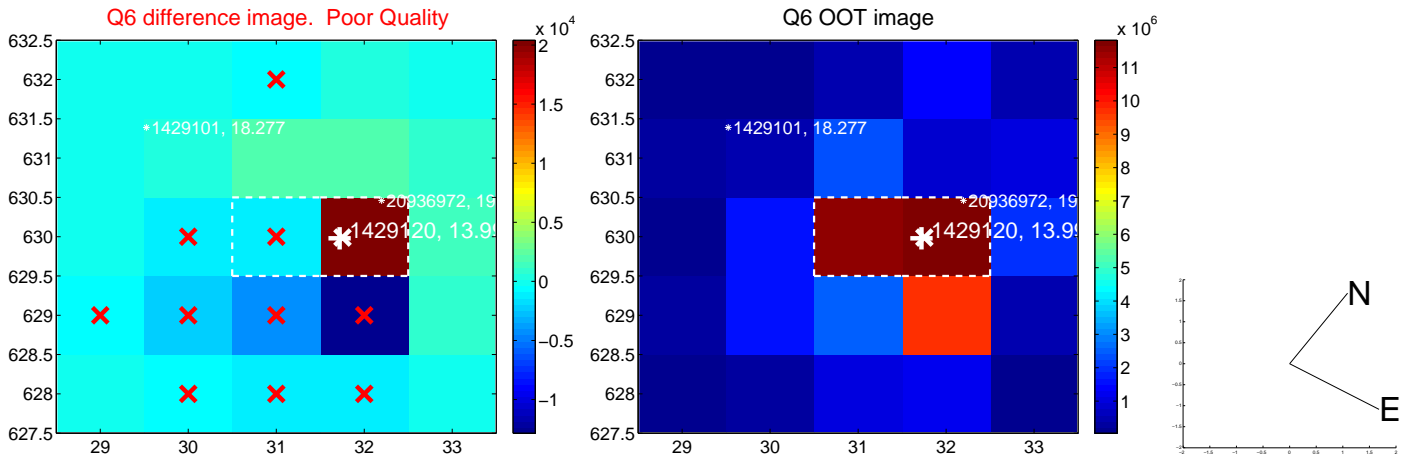
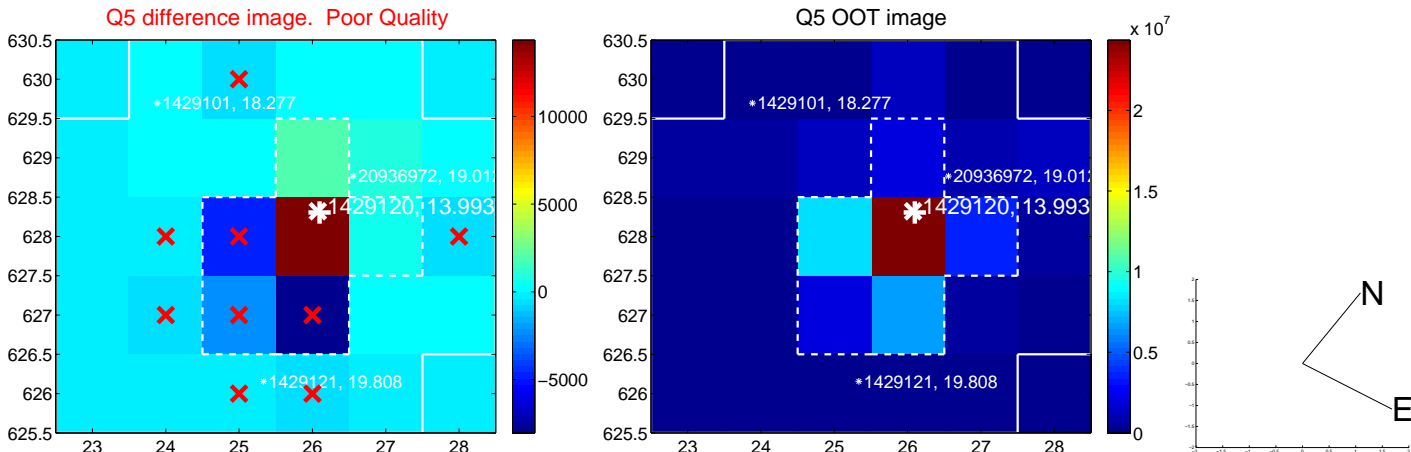


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

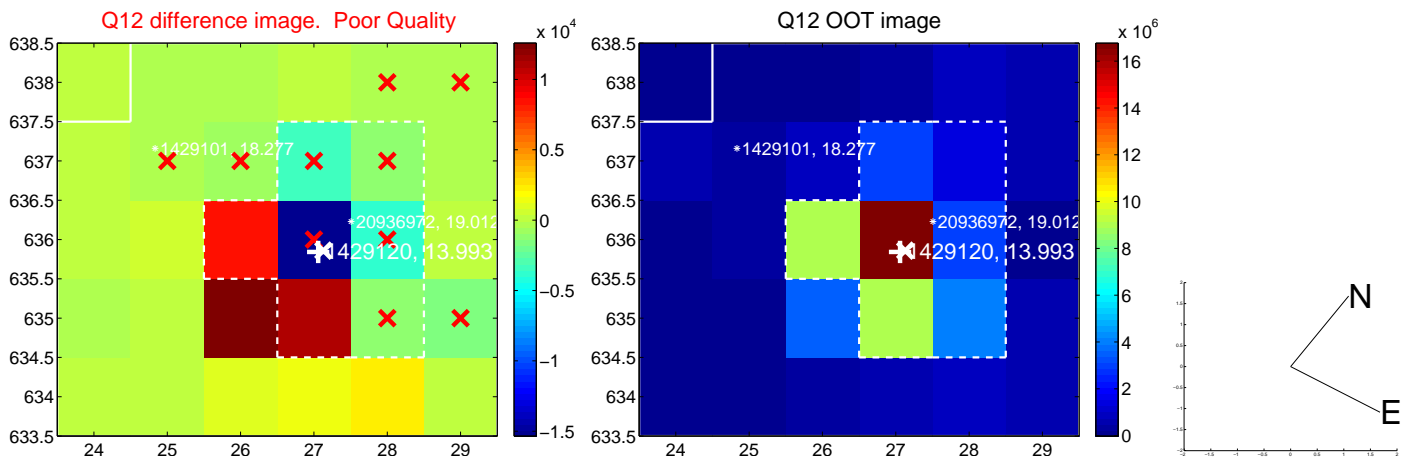
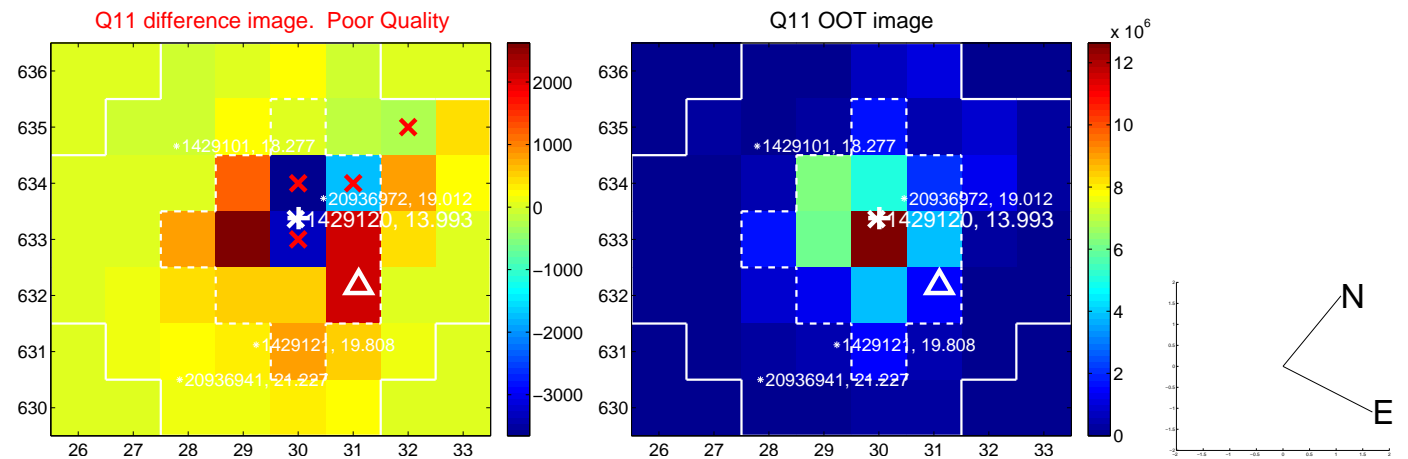
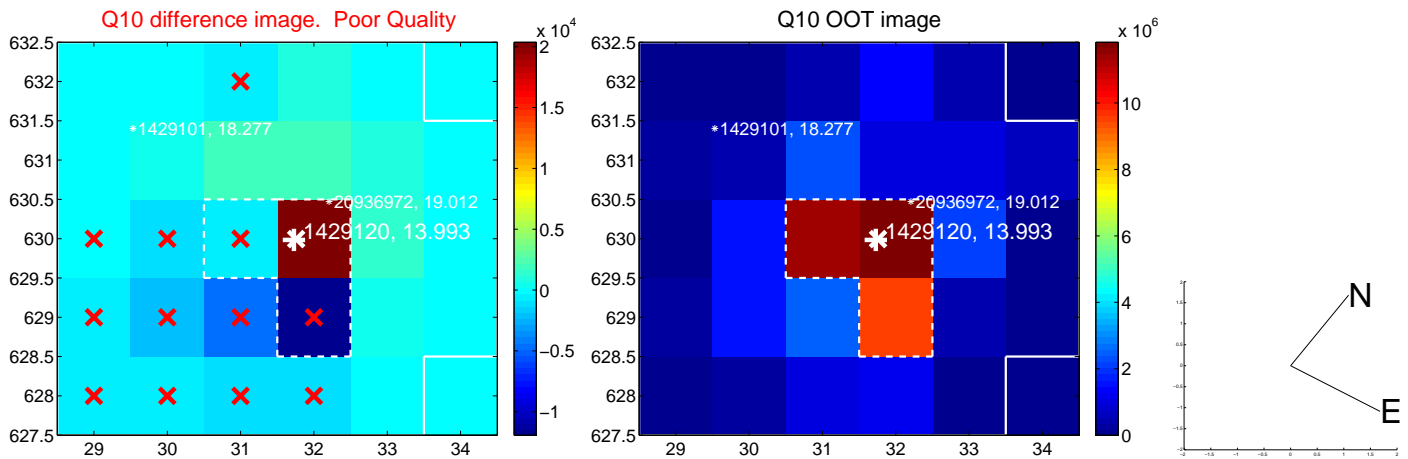
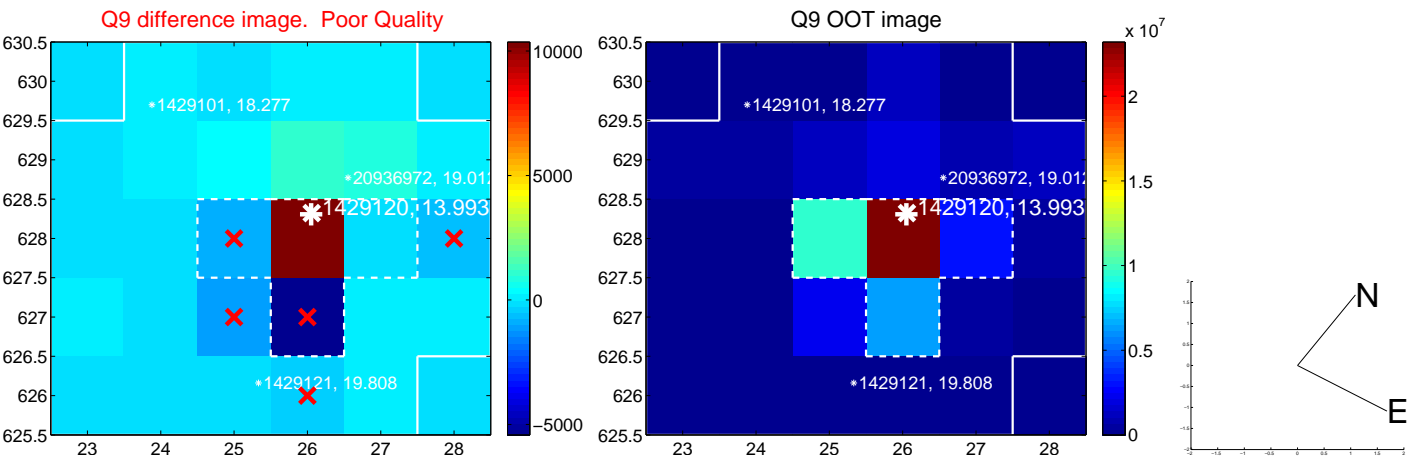
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



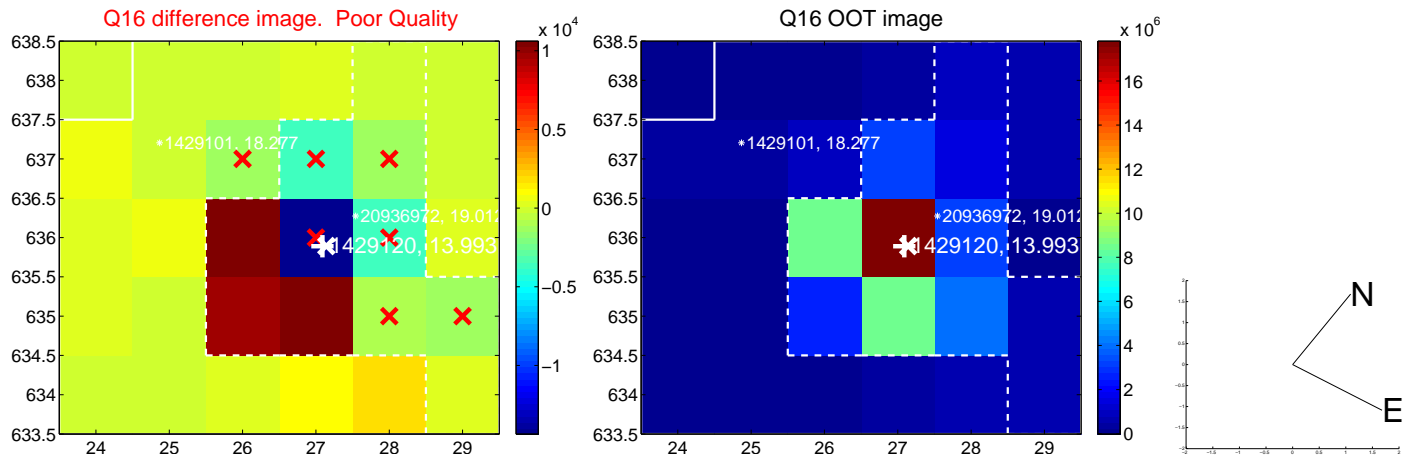
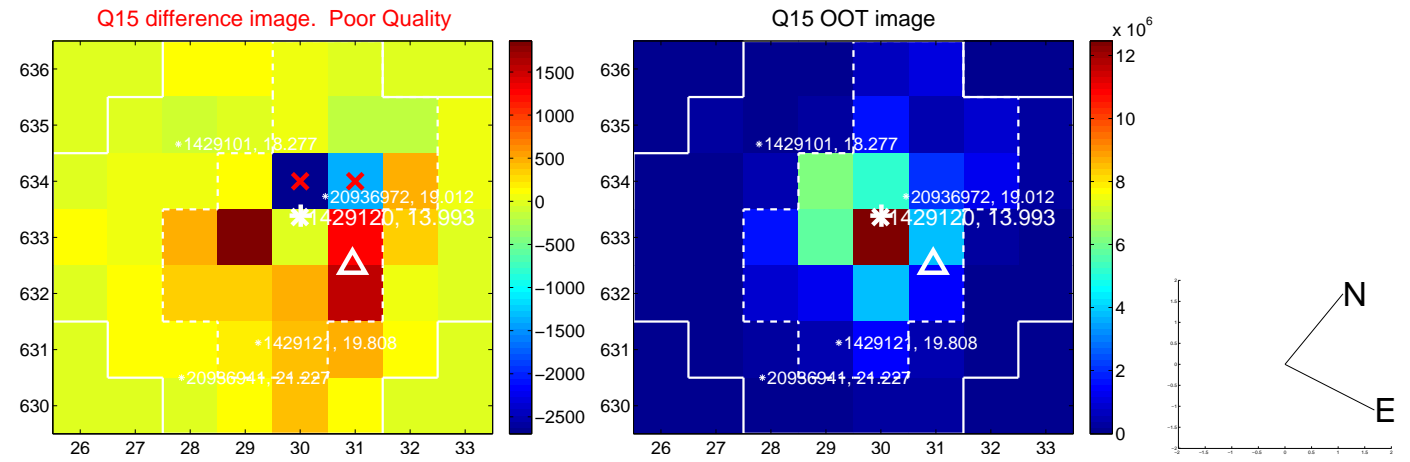
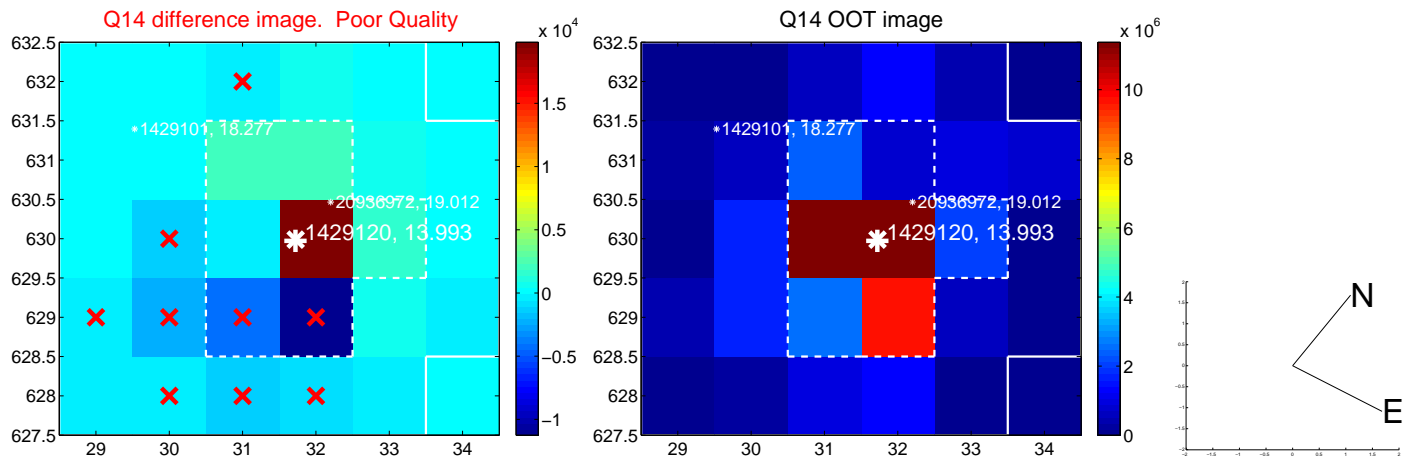
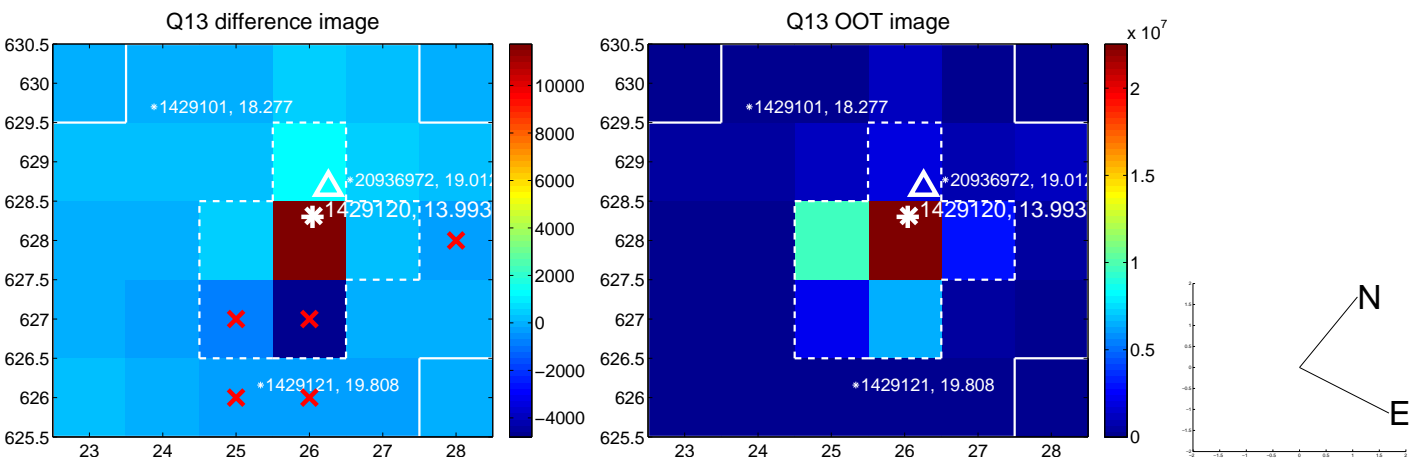
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



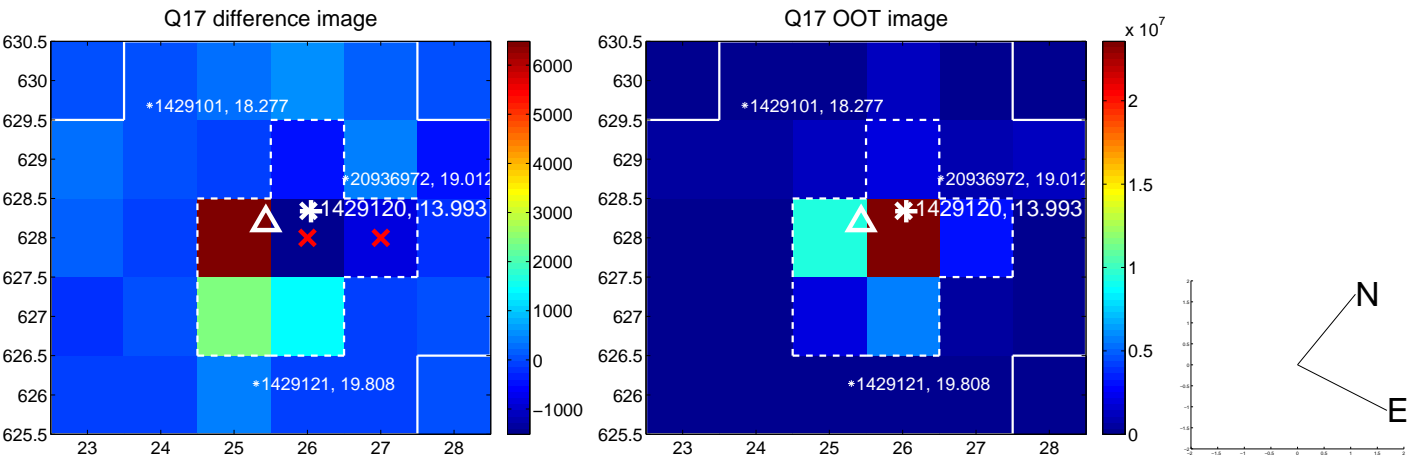
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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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

