

# KIC 007271892

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007271892-01	OBS	No	1.816489	131.968204	155.0	9.364	10.9	11.9	3.11	7471	4.21	19736.61

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007271892-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT

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

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

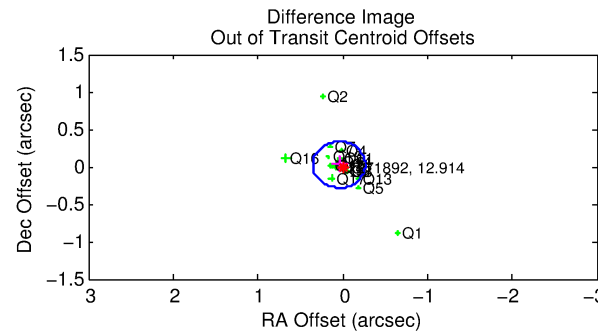
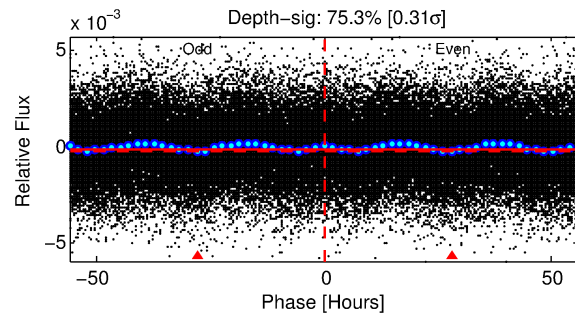
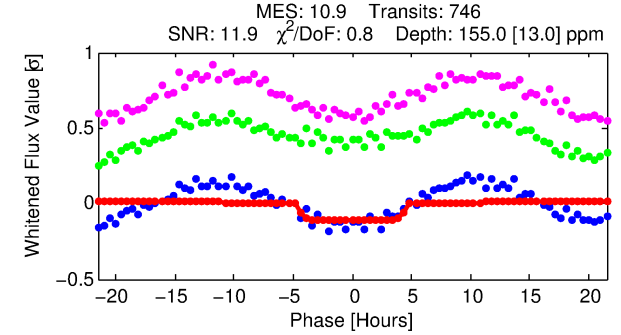
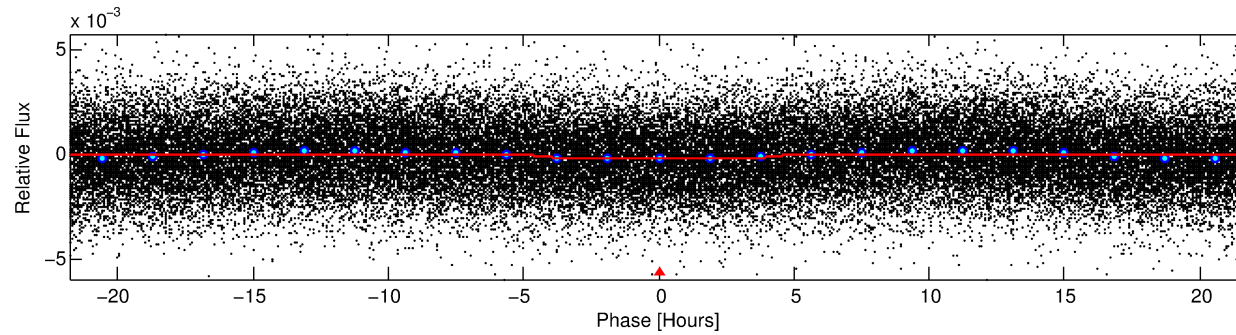
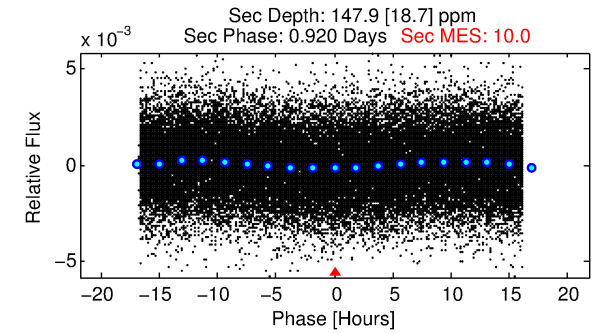
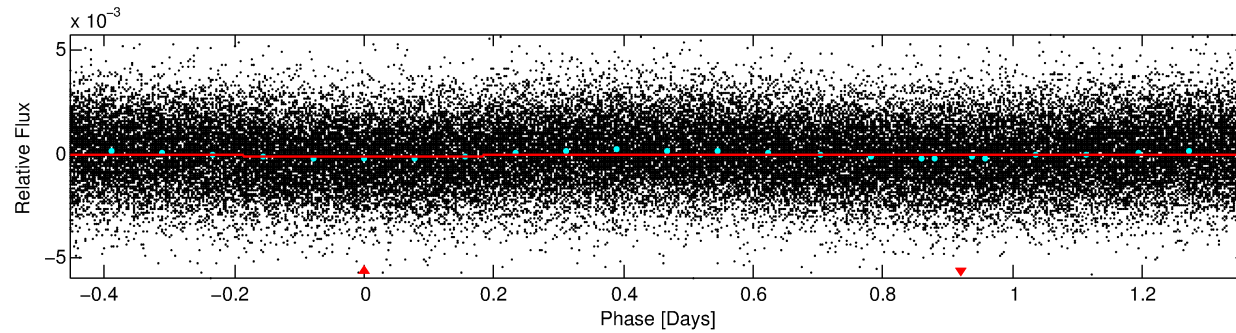
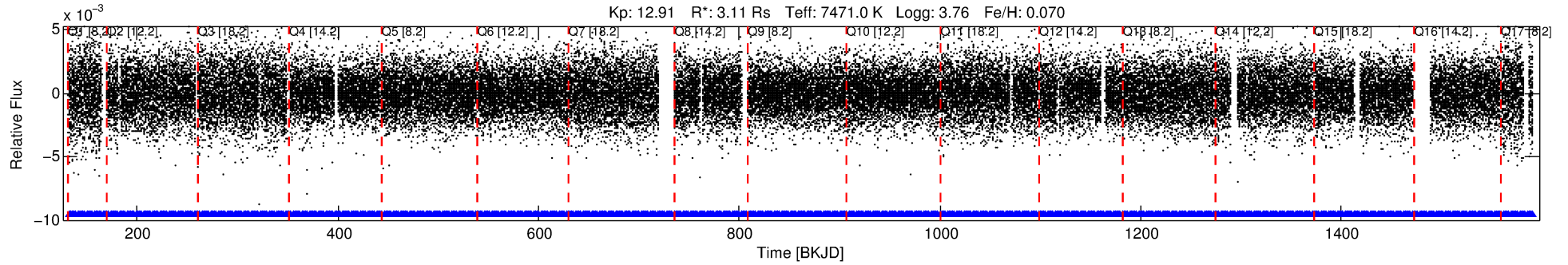
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 007271892-01

No Significant Match Found

# DV One-Page Summary

KIC: 7271892 Candidate: 1 of 1 Period: 1.816 d



## DV Fit Results:

Period = 1.81649 [0.00002] d  
Epoch = 131.9682 [0.0079] BKJD  
Rp/R\* = 0.0124 [0.0058]  
a/R\* = 1.32 [1.62]  
b = 0.75 [1.67]  
Seff = 19736.61 [12926.79]  
Teff = 3022 [495] K  
Rp = 4.21 [2.67] Re  
a = 0.0370 [0.0149] AU  
Ag = 6.29 [7.14] [0.74σ]  
Teffp = 7400 [1771] K [2.38σ]

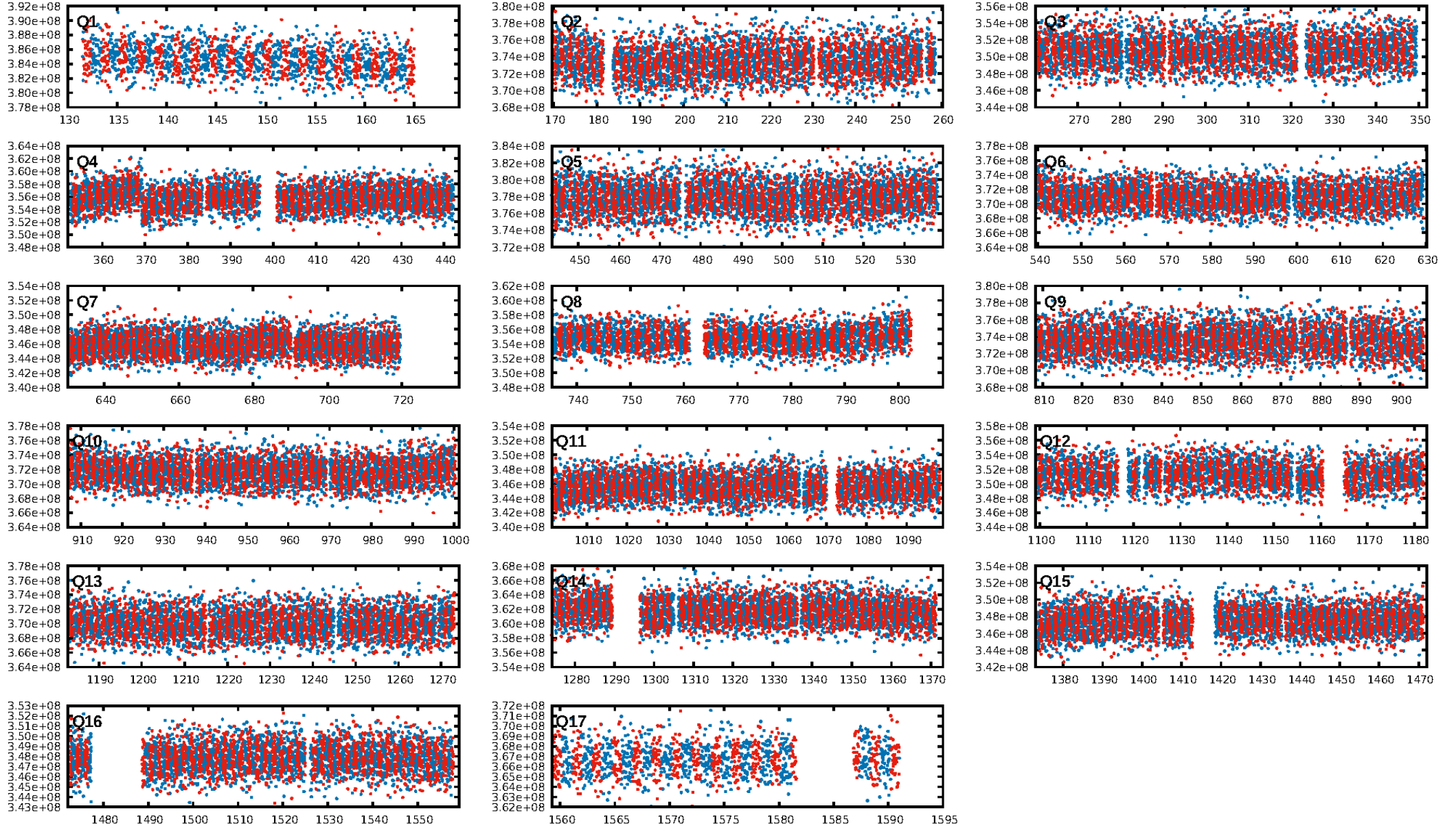
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 2.91e-18  
RollingBand-fgt: 1.00 [711/711]  
**GhostDiagnostic-chr: 0.5175**  
Centroid-sig: 0.3%  
Centroid-so: 0.082 arcsec [1.43σ]  
OotOffset-rm: 0.049 arcsec [0.47σ]  
KicOffset-rm: 0.117 arcsec [1.40σ]  
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: 01-Feb-2016 01:18:55 Z

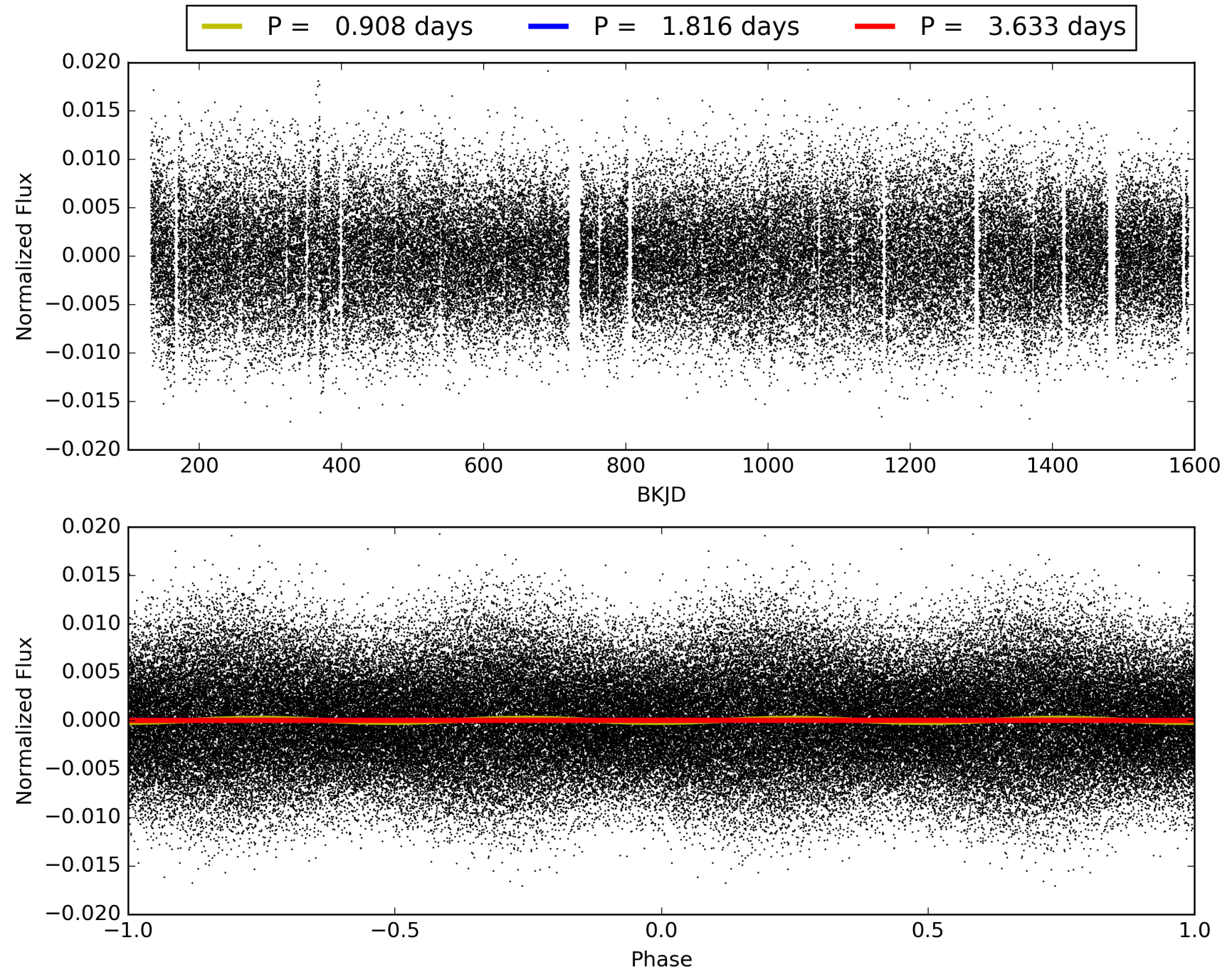
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 007271892-01, PDC Light Curves



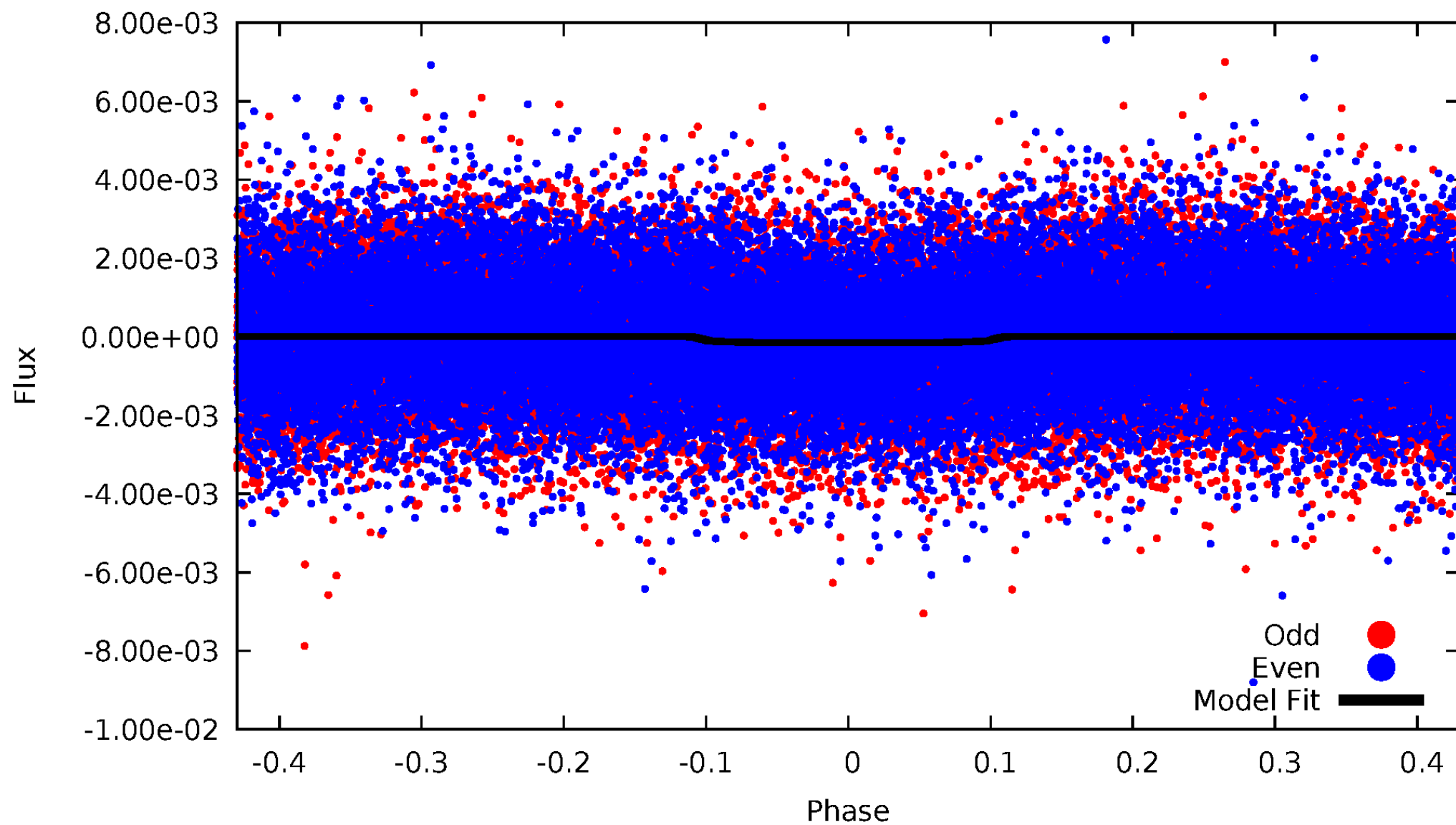


# TCE 007271892-01



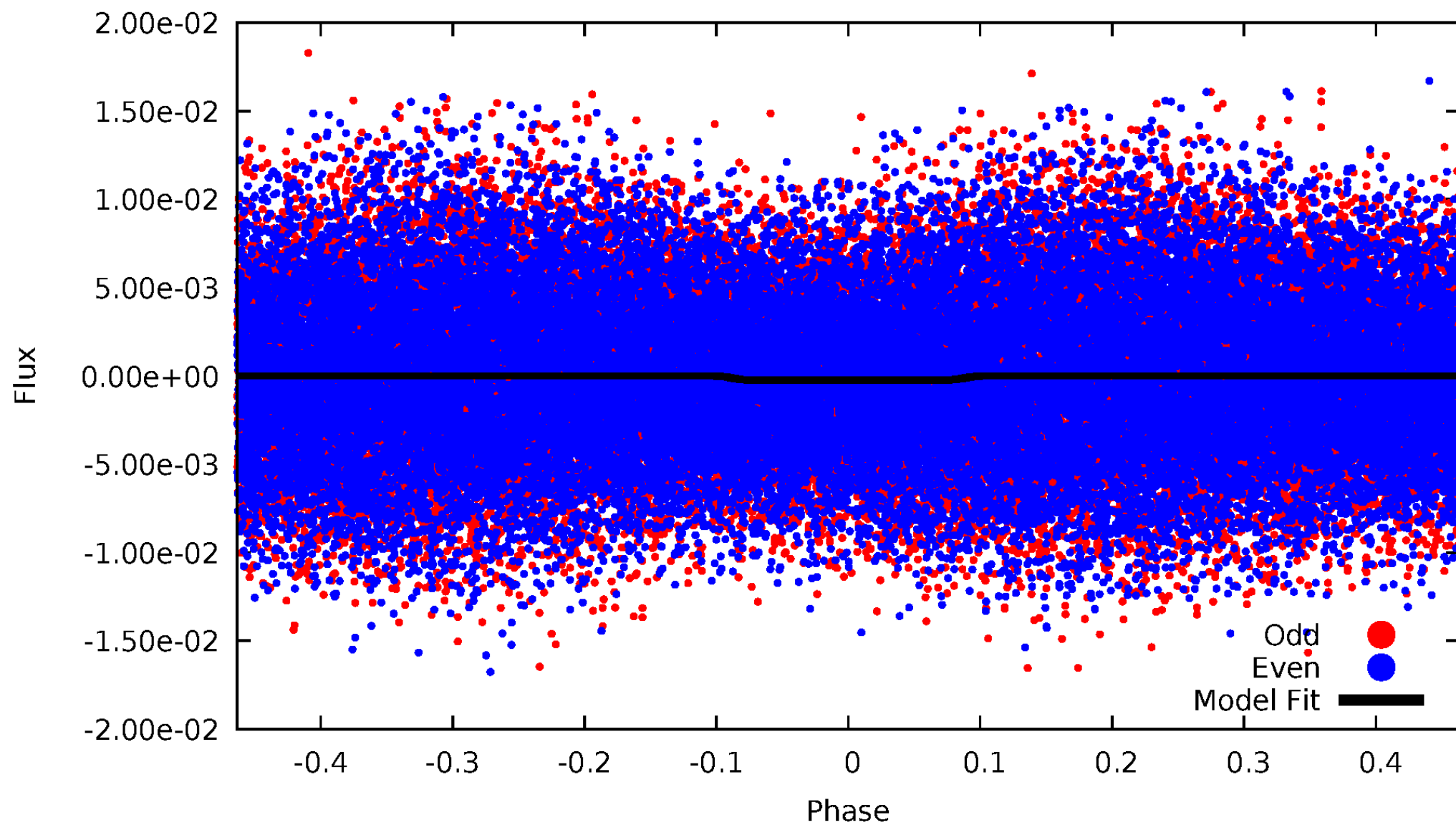
# DV Odd/Even

TCE 007271892-01



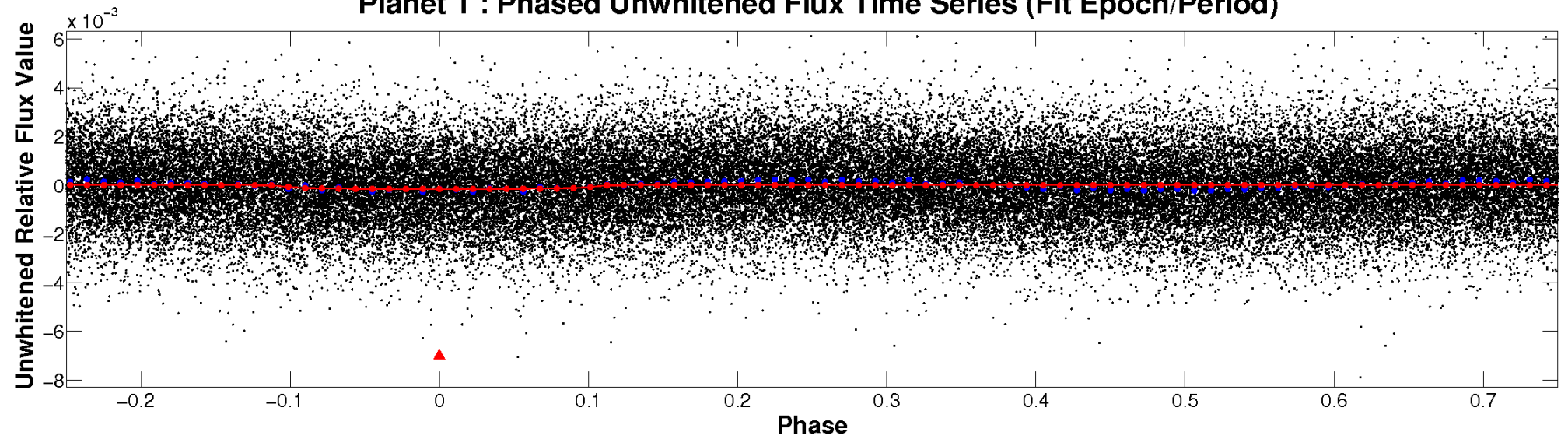
# ALT Odd/Even

TCE 007271892-01

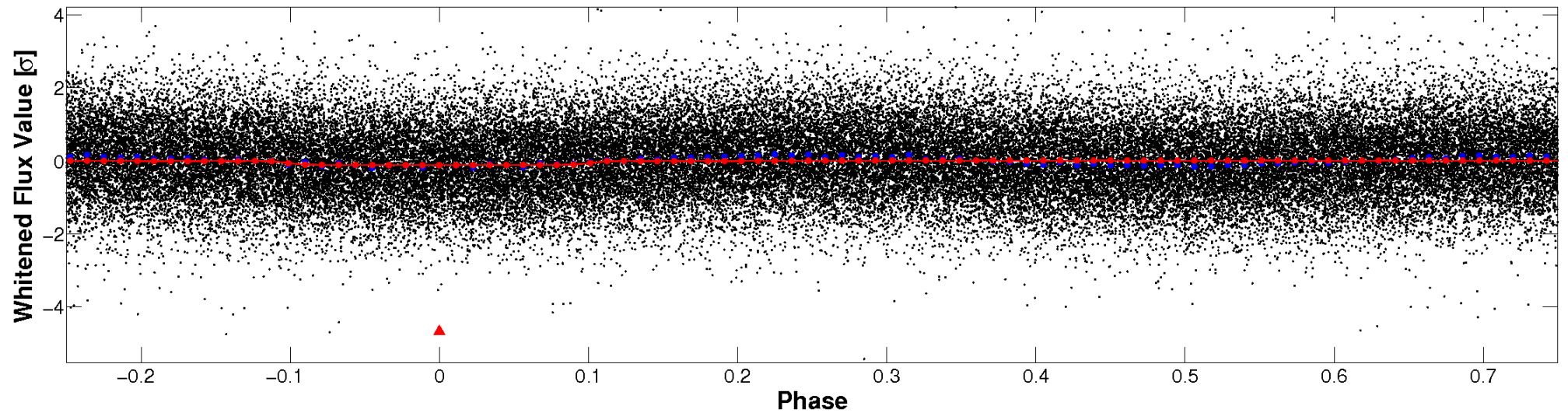


# Non-Whitened Vs. Whitened Light Curve

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



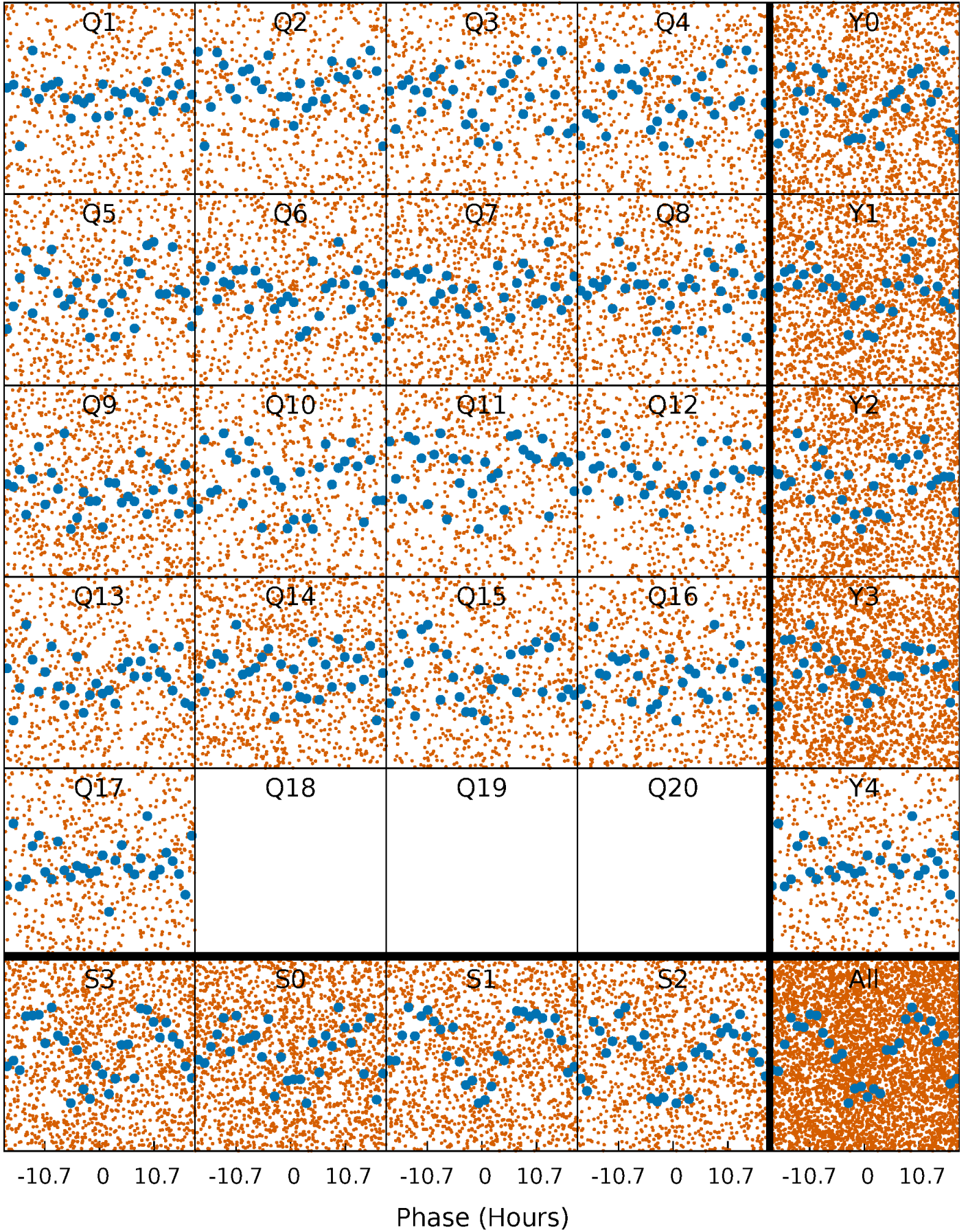
**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**





# PDC Quarter-Phased Transit Curves

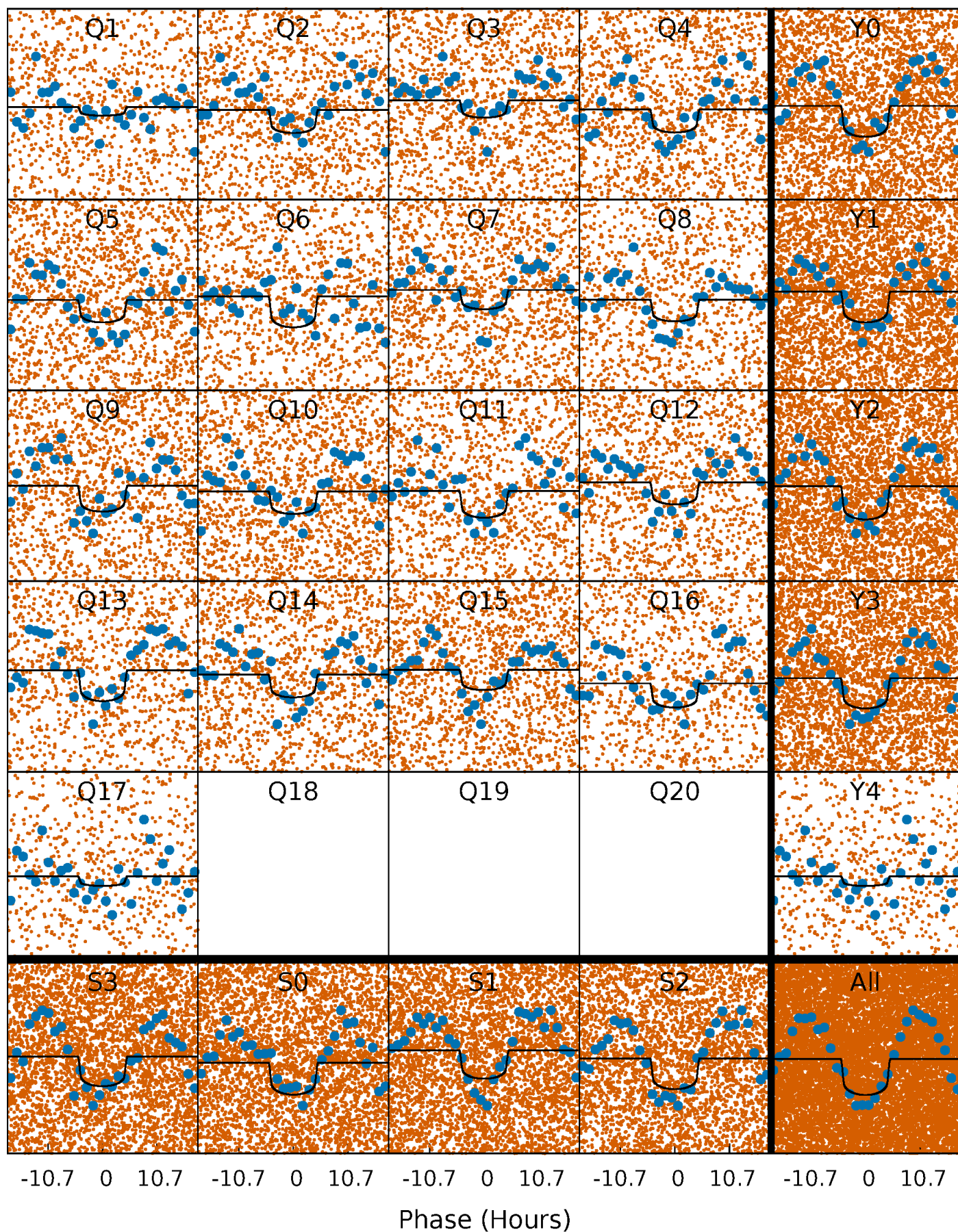
TCE 007271892-01 P= 1.816489 Days  $T_0=131.968204$  (BKJD)





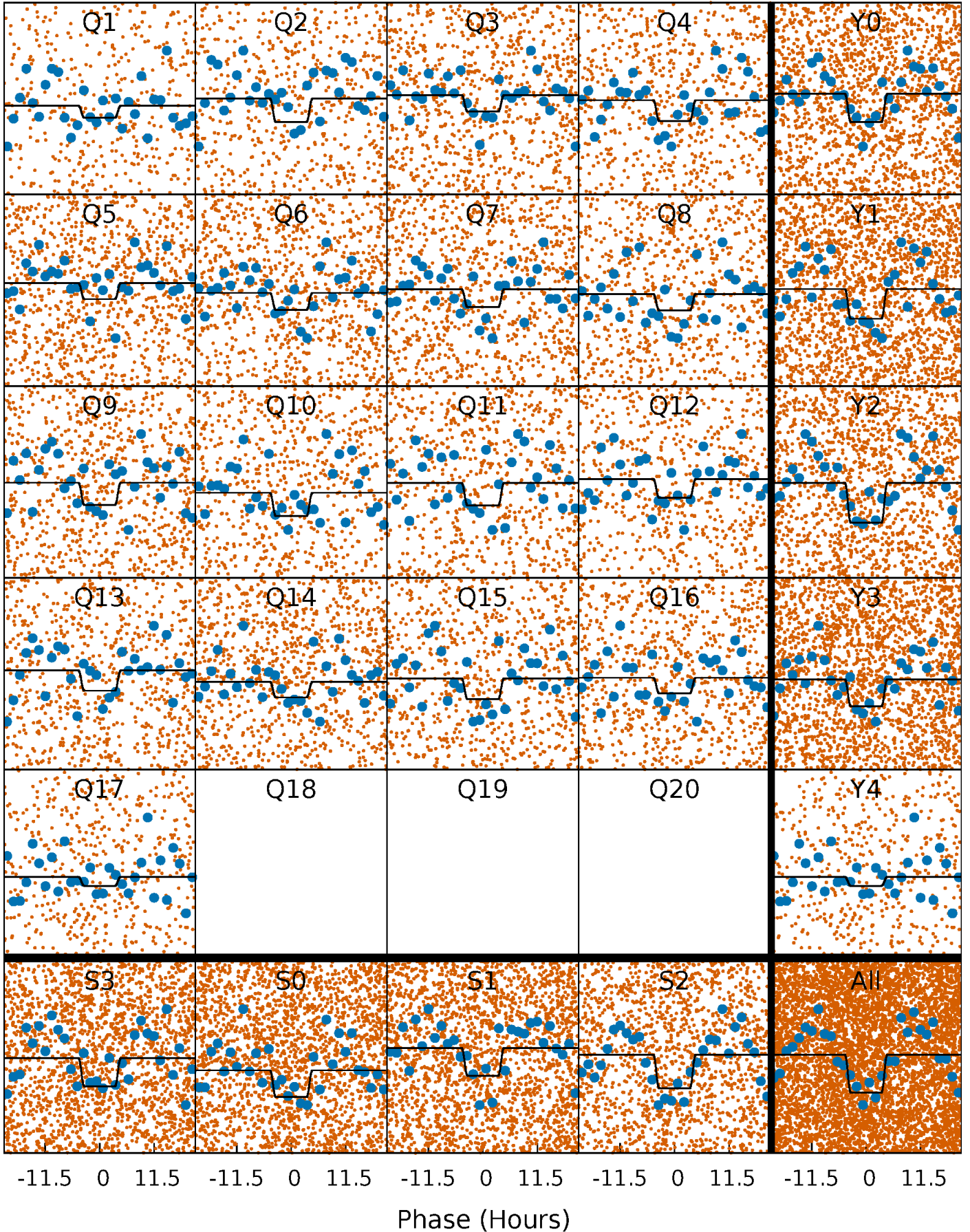
# DV Quarter-Phased Transit Curves

TCE 007271892-01 P= 1.816489 Days  $T_0=131.968204$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 007271892-01 P= 1.816415 Days  $T_0=131.993277$  (BKJD)

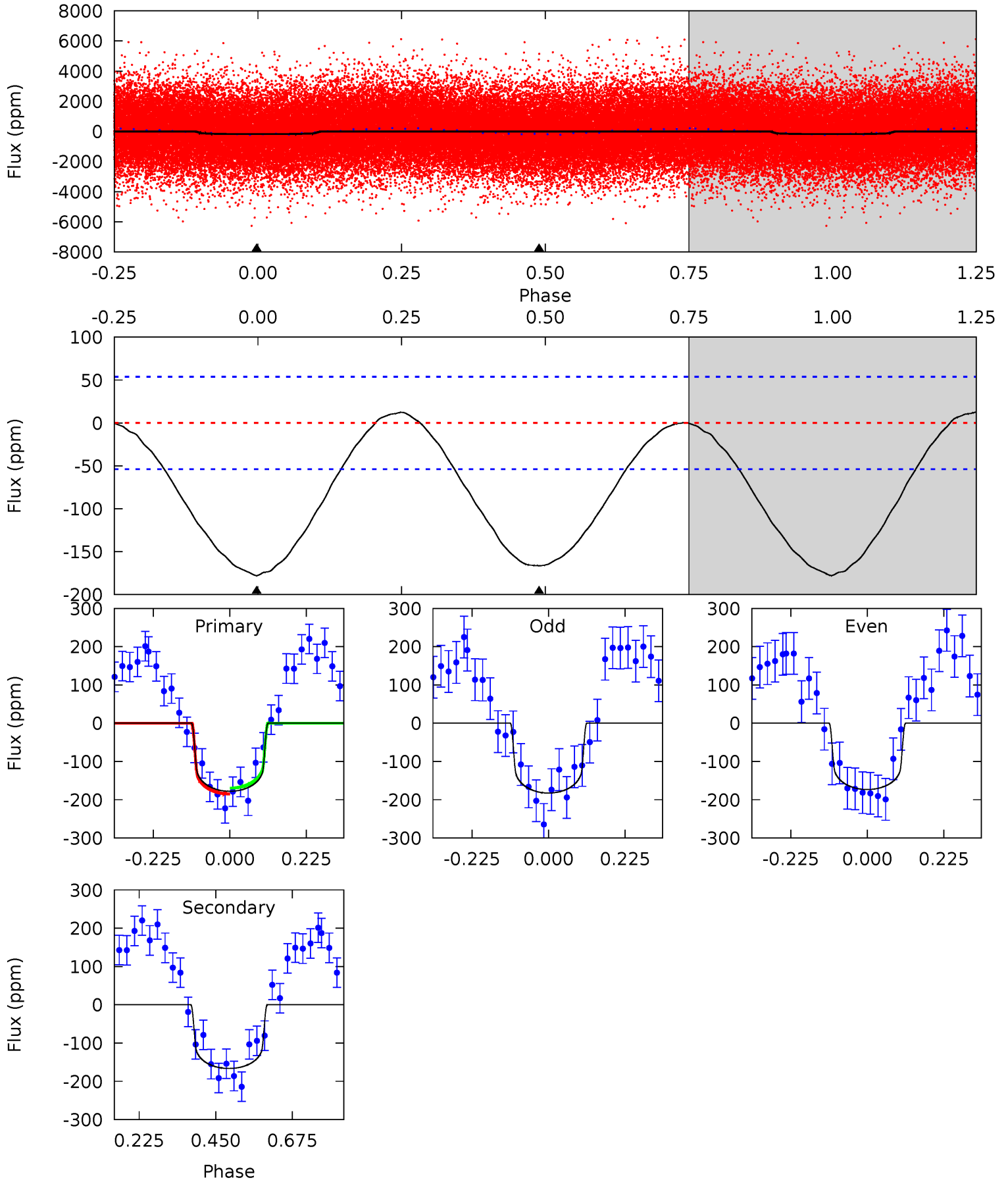




# DV Model-Shift Uniqueness Test

007271892-01, P = 1.816489 Days, E = 130.151715 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
14.5	13.6	0	0	4.39	1.21	0.54	14.5	14.5	13.6	13.6	0.38	1.00	0.07	0.63

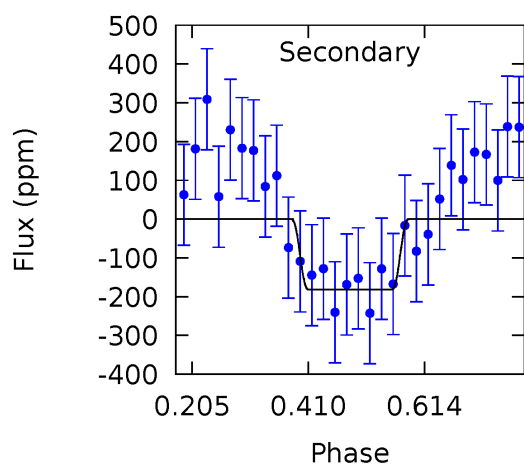
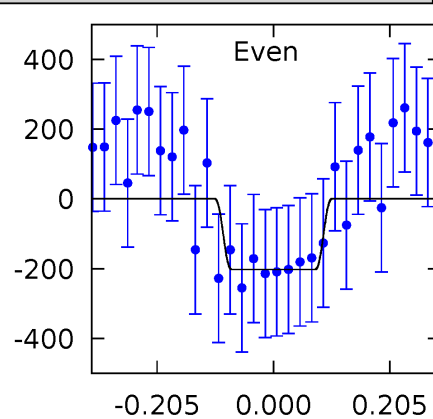
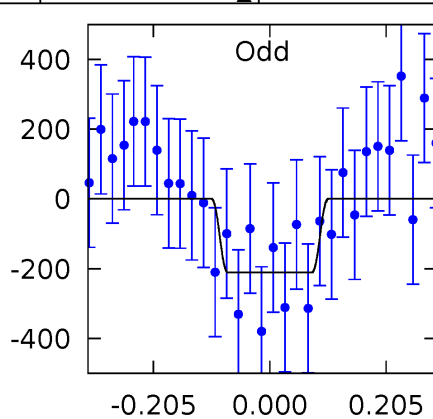
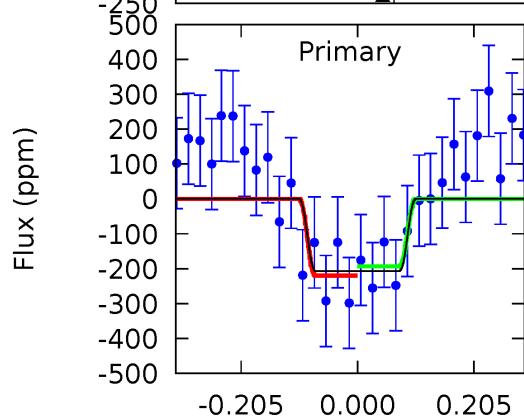
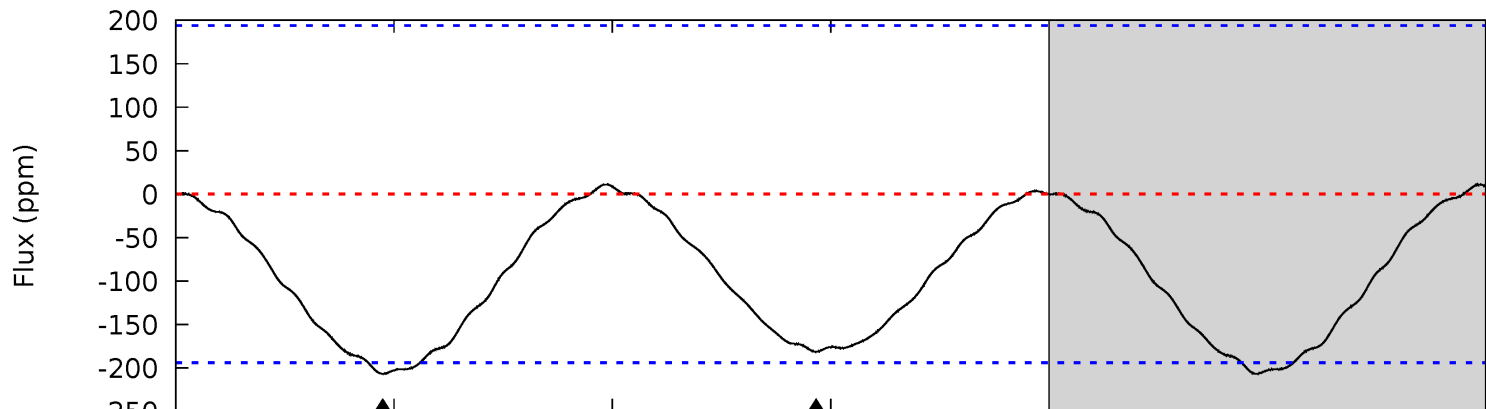
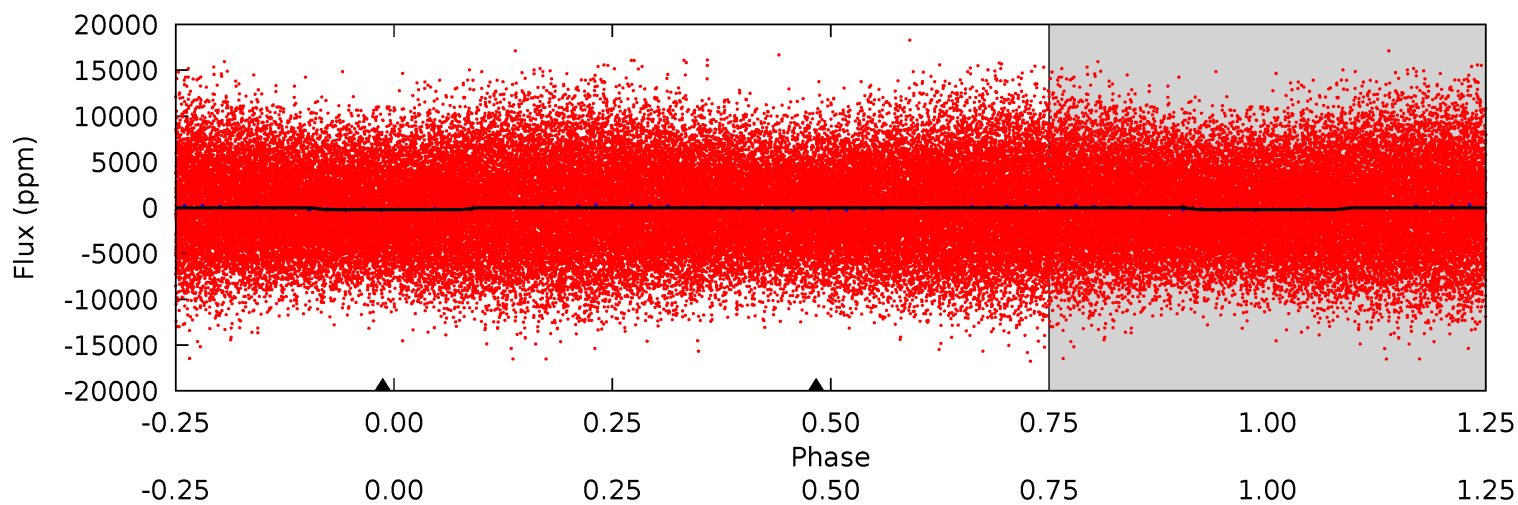




# Alt Model-Shift Uniqueness Test

007271892-01, P = 1.816415 Days, E = 130.176862 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
4.70	4.13	0	0	4.41	1.27	0.16	4.70	4.70	4.13	4.13	0.10	1.15	0.05	0.30



### Stellar Parameters For KIC 007271892

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$\rho_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$7471^{+207}_{-311}$	$3.763^{+0.368}_{-0.092}$	$0.070^{+0.200}_{-0.350}$	$3.110^{+0.446}_{-1.337}$	$2.042^{+0.232}_{-0.541}$	$0.096^{+0.299}_{-0.029}$
	+3%/-4%	+10%/-2%	+286%/-500%	+14%/-43%	+11%/-26%	+313%/-30%
Source	PHO54	PHO54	PHO54	DSEP		

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

### Secondary Eclipse Parameters for KIC 007271892-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$-166 \pm 12$	$3.85^{+2.03}_{-1.99}$	$4104^{+266}_{-391}$	$7554^{+4620}_{-1512}$	$8.257^{+26.320}_{-4.577}$
Alt.	$-181 \pm 44$	$4.62^{+2.21}_{-1.97}$	$4140^{+241}_{-448}$	$6868^{+2791}_{-1168}$	$6.121^{+12.552}_{-3.350}$

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

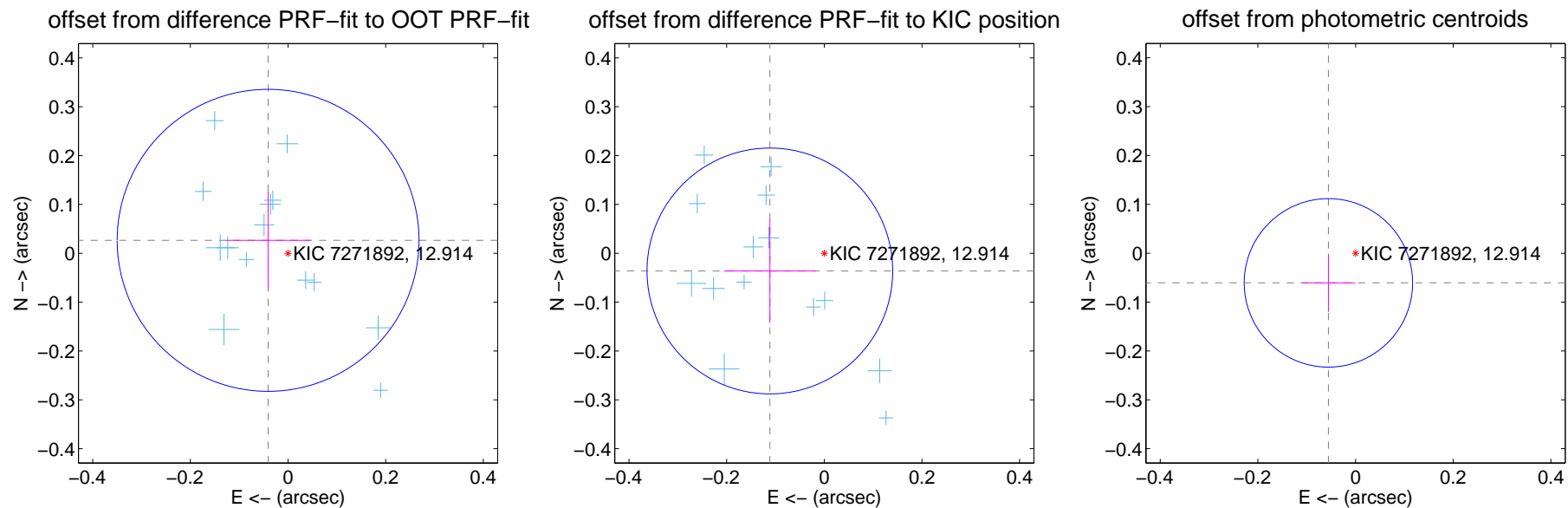
## DV Centroid Data

Supplemental centroid analysis for 007271892-01. Kepler magnitude: 12.91. Transit SNR 11.90

There are 17 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

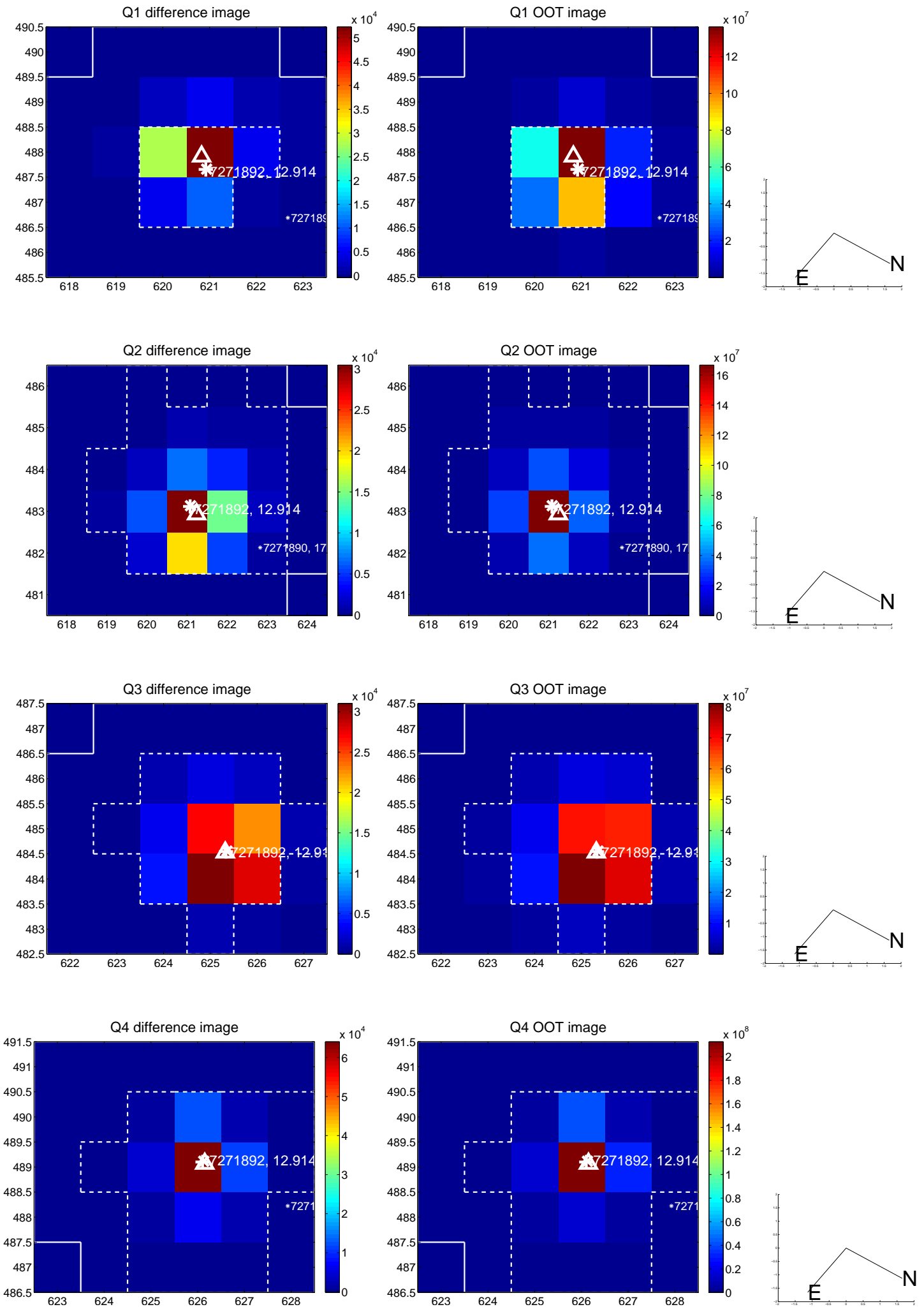
	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.049 \pm 0.103$	0.47	$0.041 \pm 0.087$	$0.027 \pm 0.100$
PRF-fit source offset from KIC position	$0.117 \pm 0.084$	1.40	$0.111 \pm 0.094$	$-0.036 \pm 0.106$
photometric centroid source offset	$0.08 \pm 0.06$	1.43	$0.06 \pm 0.06$	$-0.06 \pm 0.06$



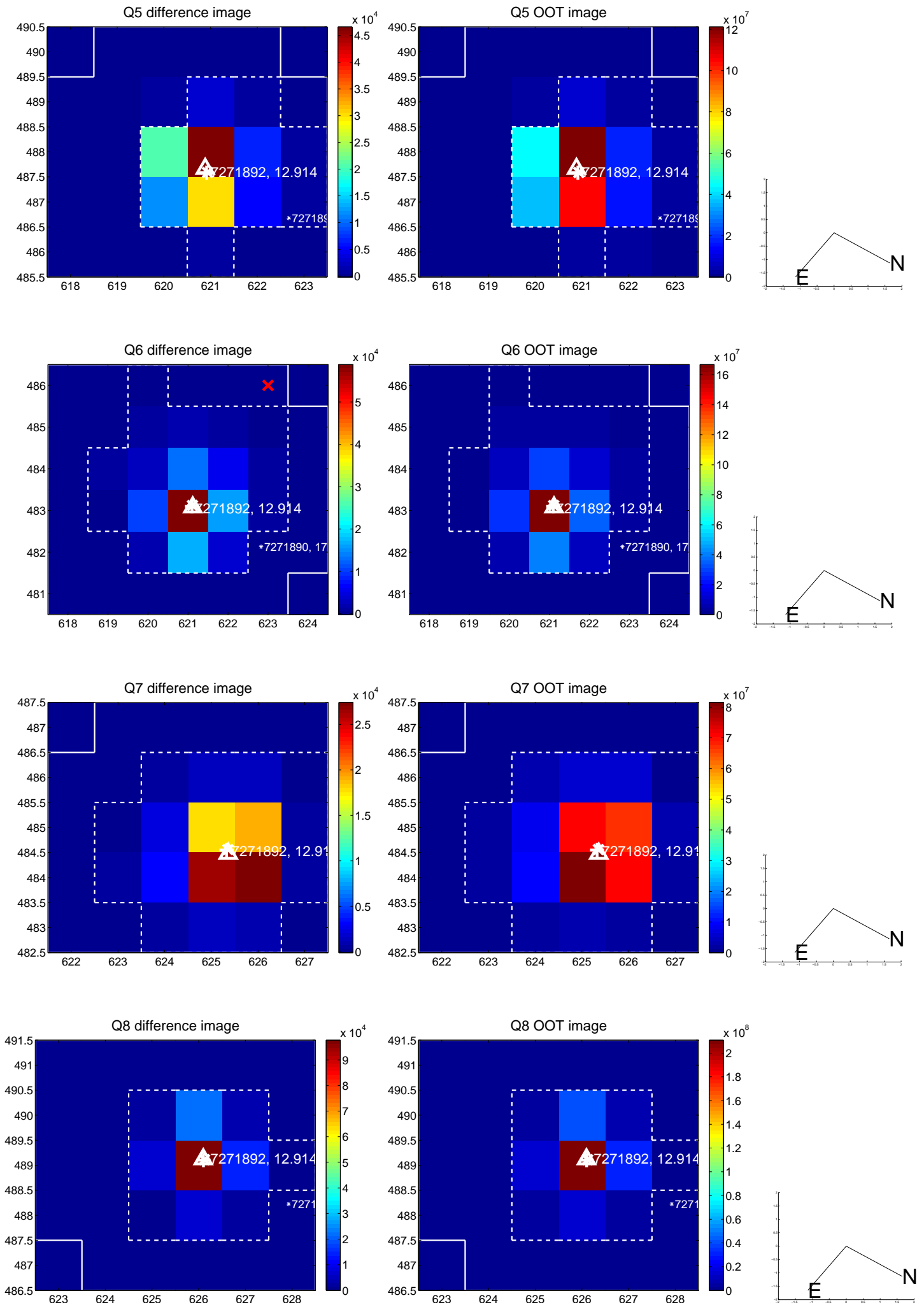
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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



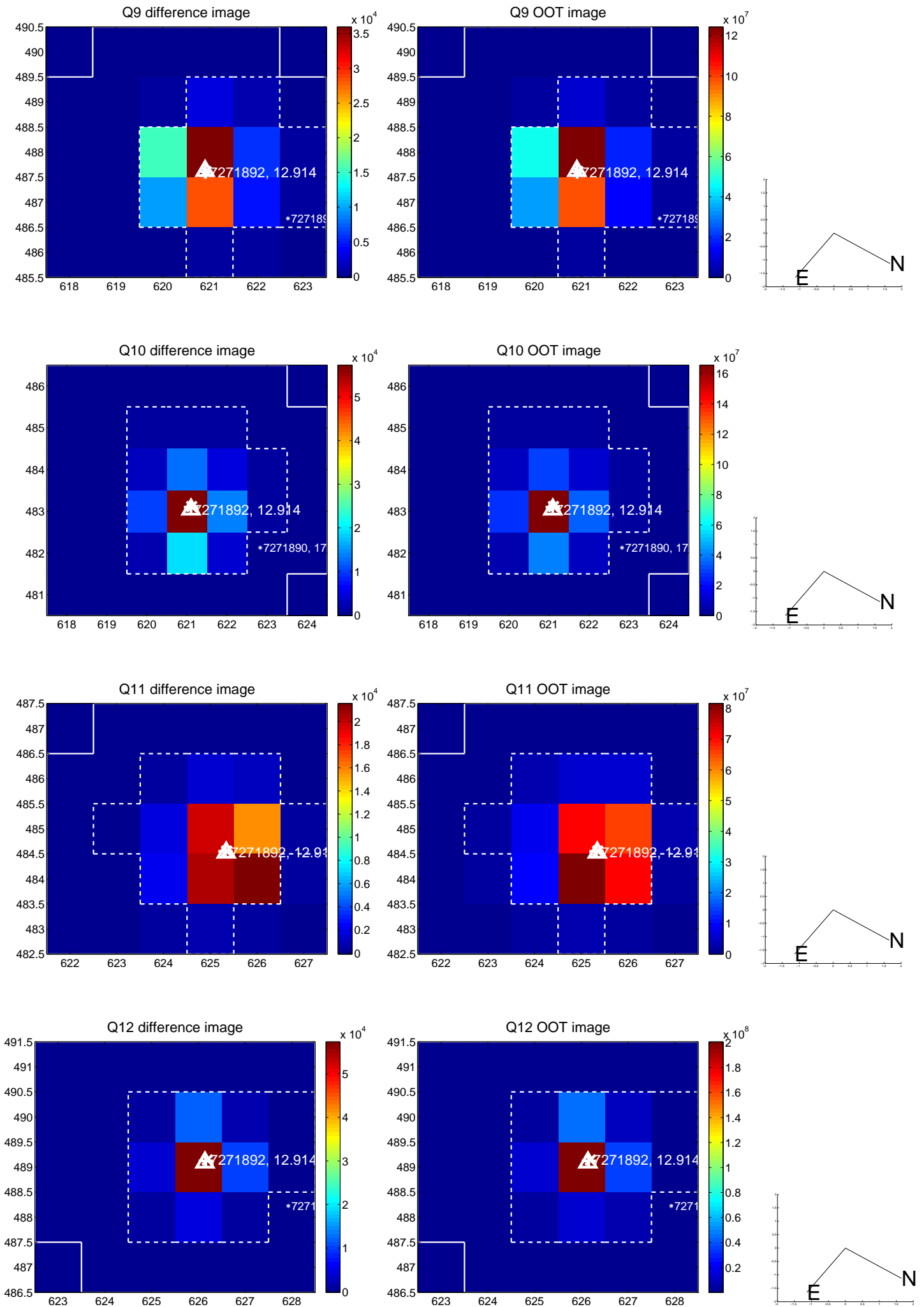
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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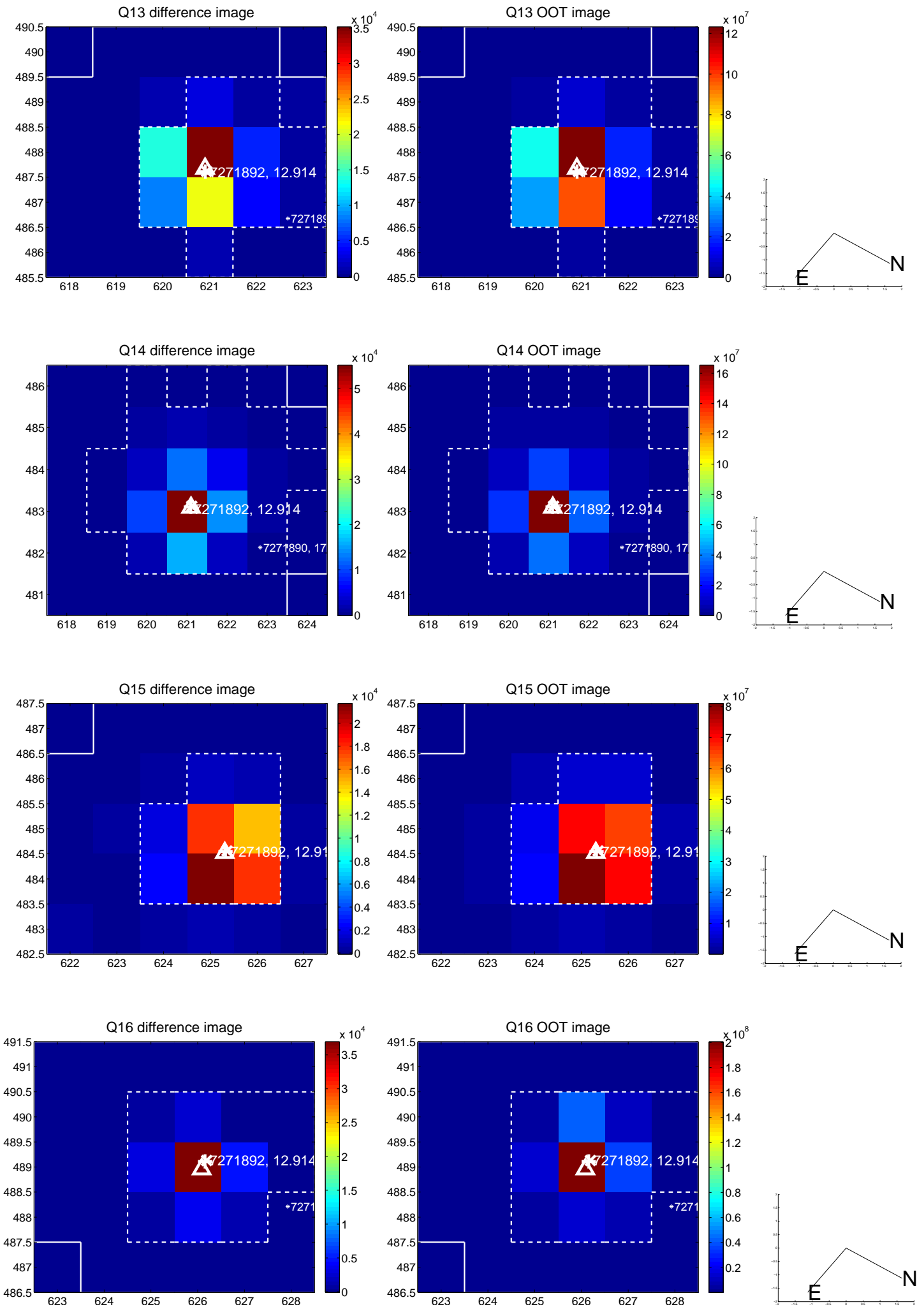


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

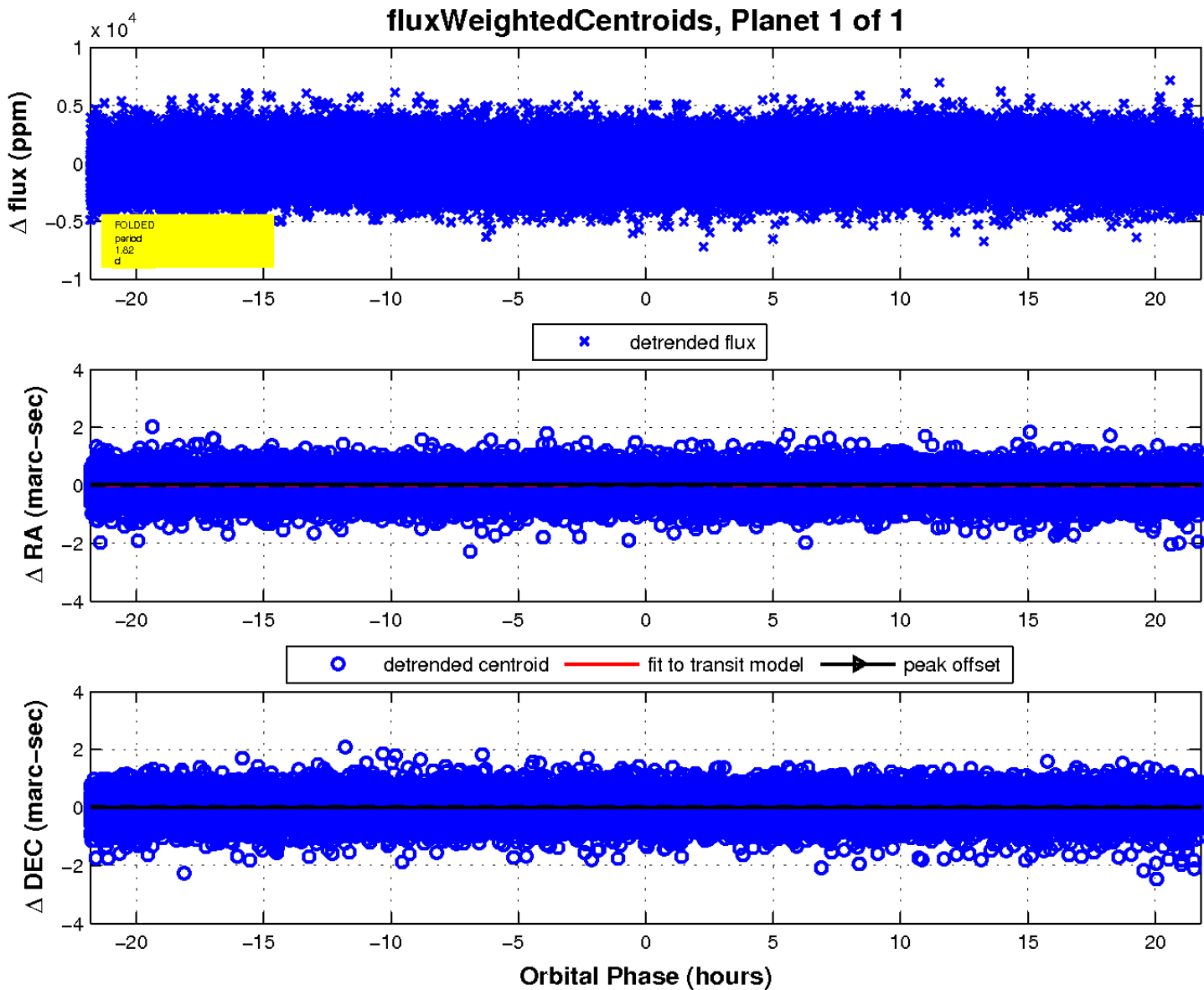
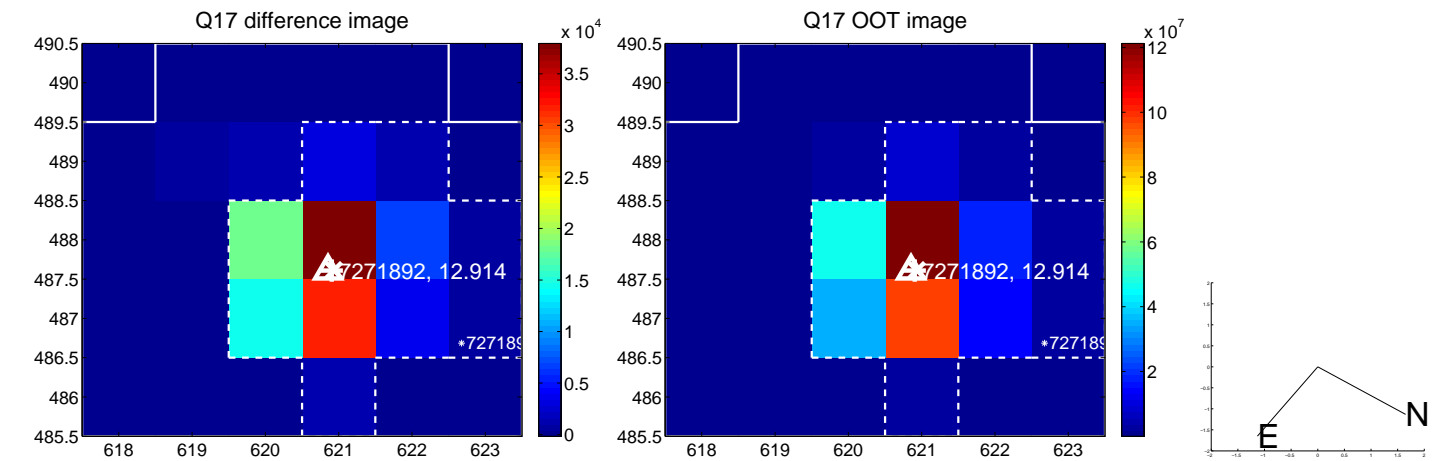




white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



UKIRT Image

Declination

