

# KIC 005892660

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
005892660-01	OBS	No	3.605249	133.729834	128.9	27.607	11.3	14.3	14.55	4741	16.11	0.00

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005892660-01	OBS	FP	0.00	1	0	1	0	LPP_DV—MOD_NONUNIQ_DV—CENT_RESOLVED_OFFSET

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

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

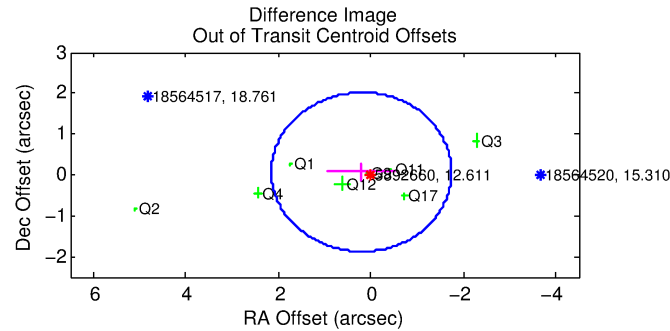
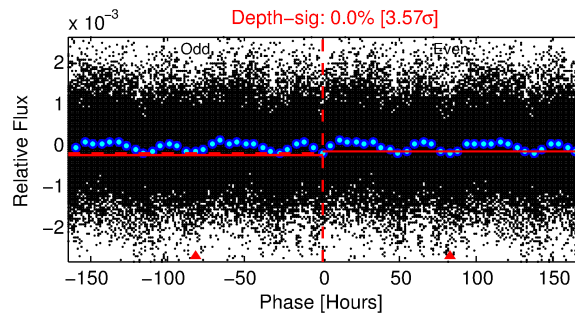
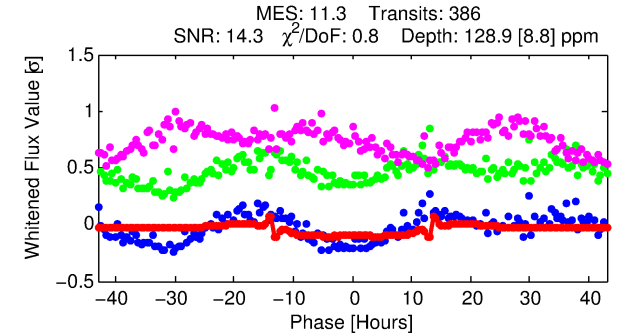
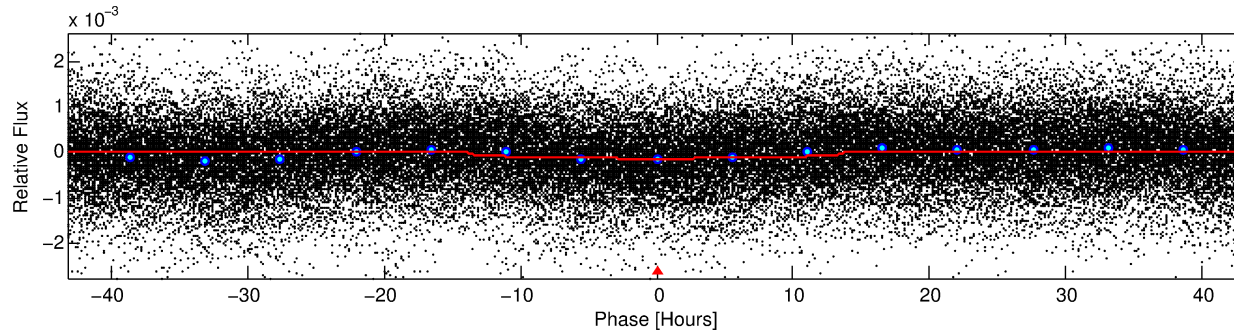
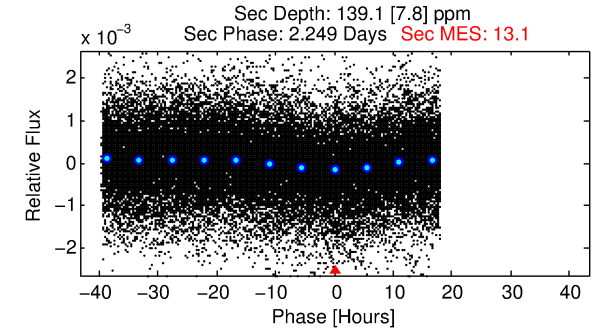
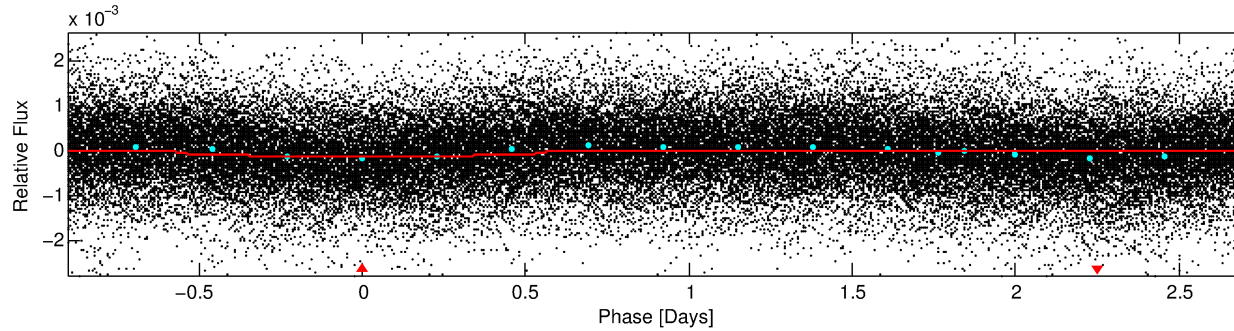
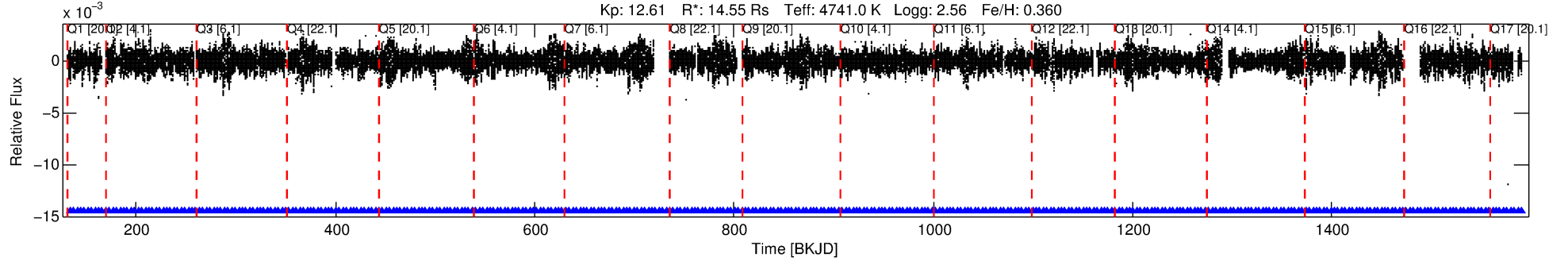
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 005892660-01

No Significant Match Found

# DV One-Page Summary

KIC: 5892660 Candidate: 1 of 1 Period: 3.605 d



## DV Fit Results:

Period = 3.60525 [0.00002] d  
Epoch = 133.7298 [0.0034] BKJD  
Rp/R\* = 0.0101 [0.0017]  
a/R\* = 1.18 [0.17]  
b = 0.34 [1.38]  
Seff = N/A  
Teq = N/A  
Rp = 16.11 [6.99] Re  
a = N/A  
Ag = N/A  
Teffp = N/A

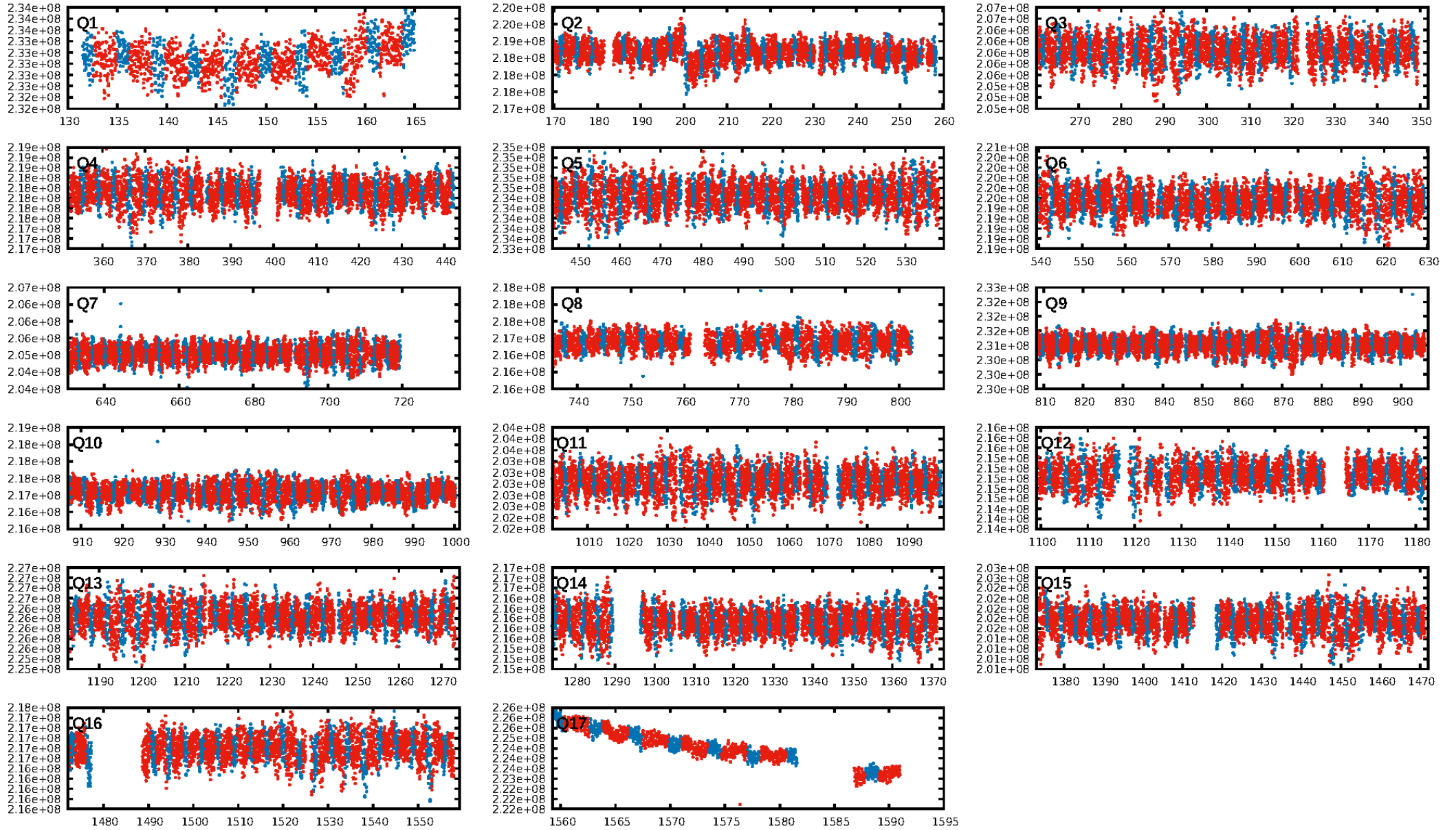
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [369/369]  
GhostDiagnostic-chr: 6.604  
**Centroid-sig: 0.0%**  
Centroid-so: 1.240 arcsec [2.97σ]  
OotOffset-rm: 0.215 arcsec [0.33σ]  
**KicOffset-rm: 7.021 arcsec [6.61σ]**  
OotOffset-st: 1/2/2/3 [8]  
KicOffset-st: 1/2/2/3 [8]  
DiffImageQuality-fgm: 1.00 [8/8]  
DiffImageOverlap-fno: 1.00 [17/17]

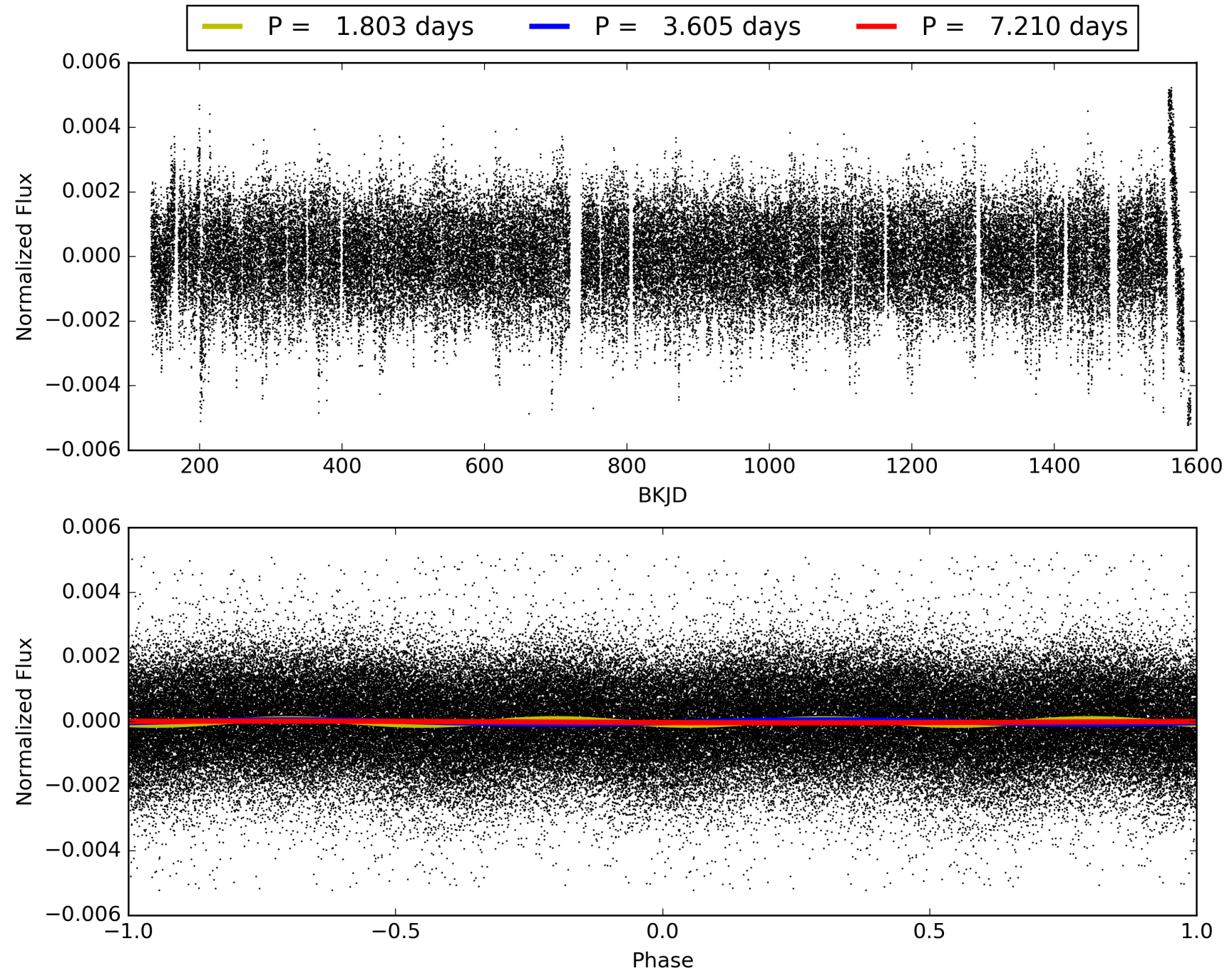
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:00:52 Z

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

# TCE 005892660-01, PDC Light Curves

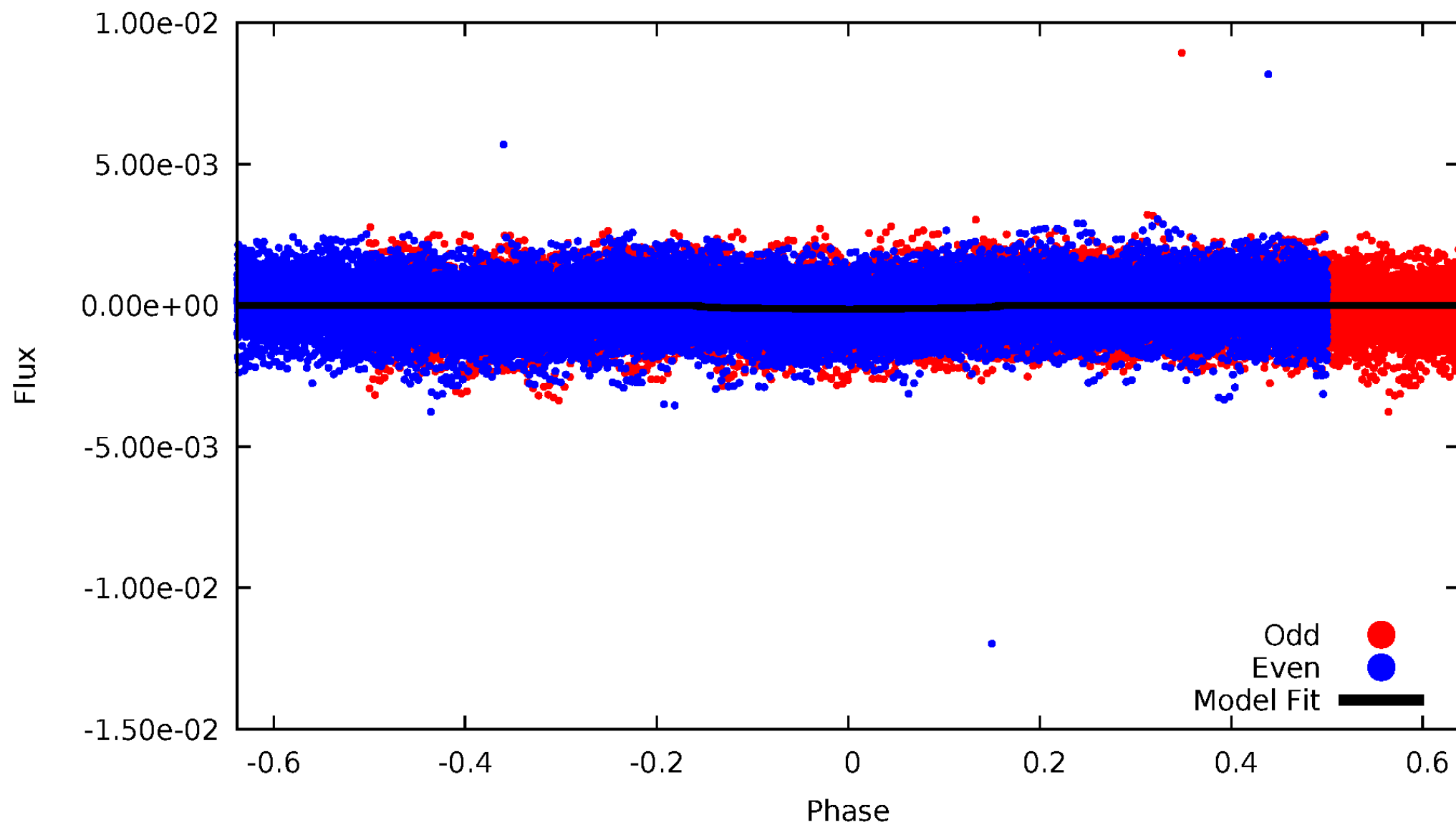


TCE 005892660-01



# DV Odd/Even

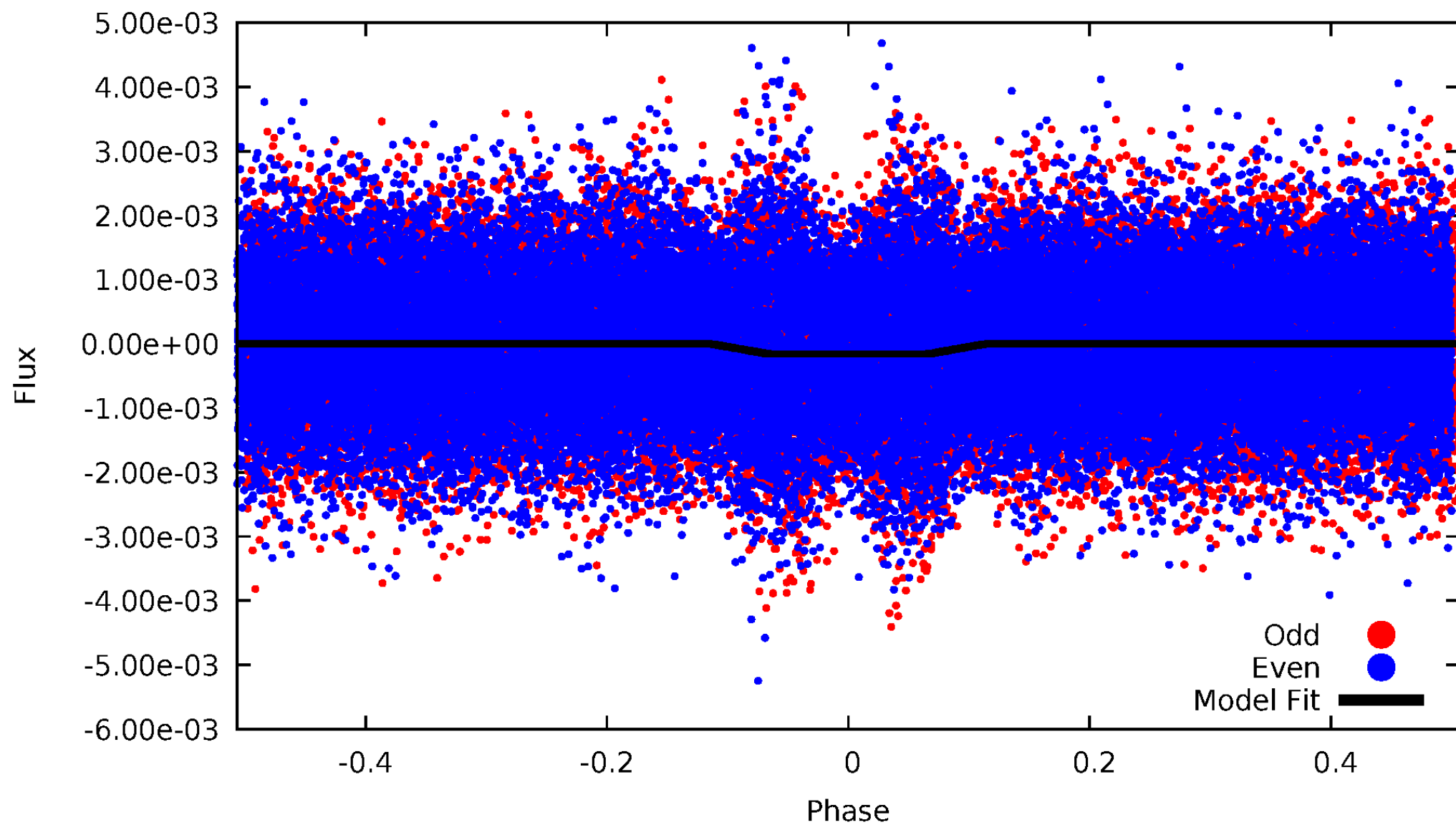
TCE 005892660-01



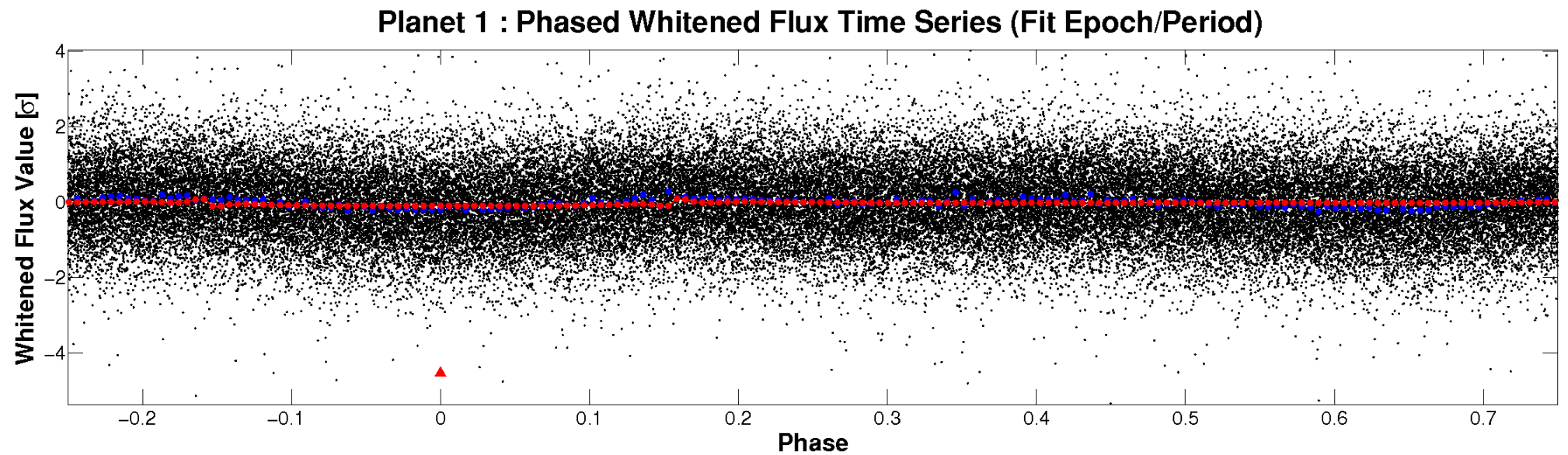
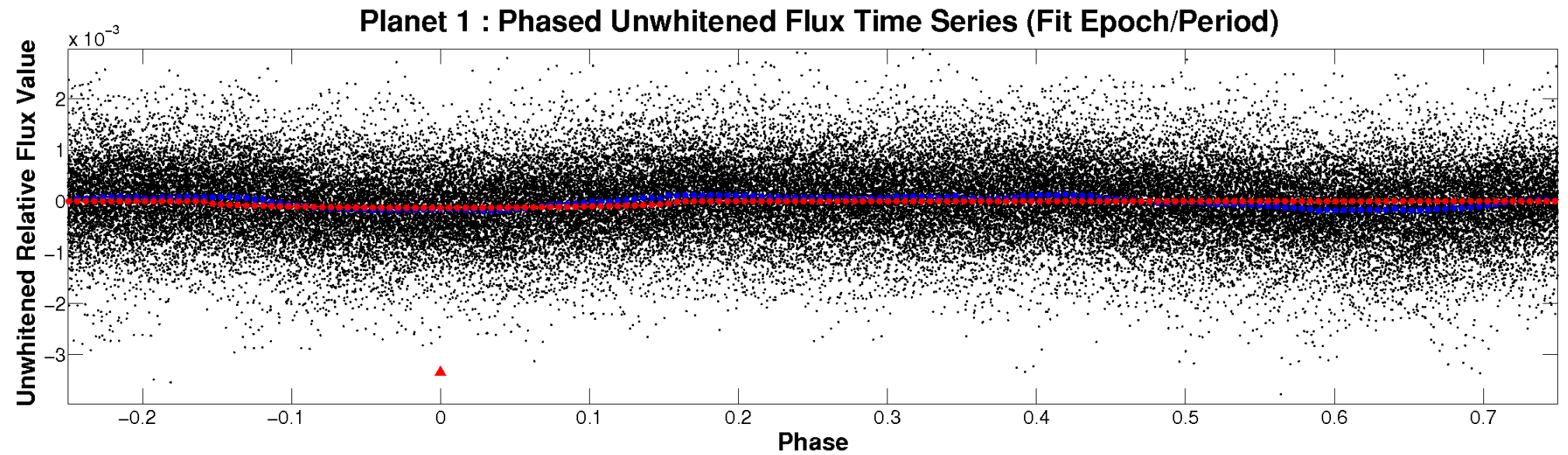


# ALT Odd/Even

TCE 005892660-01

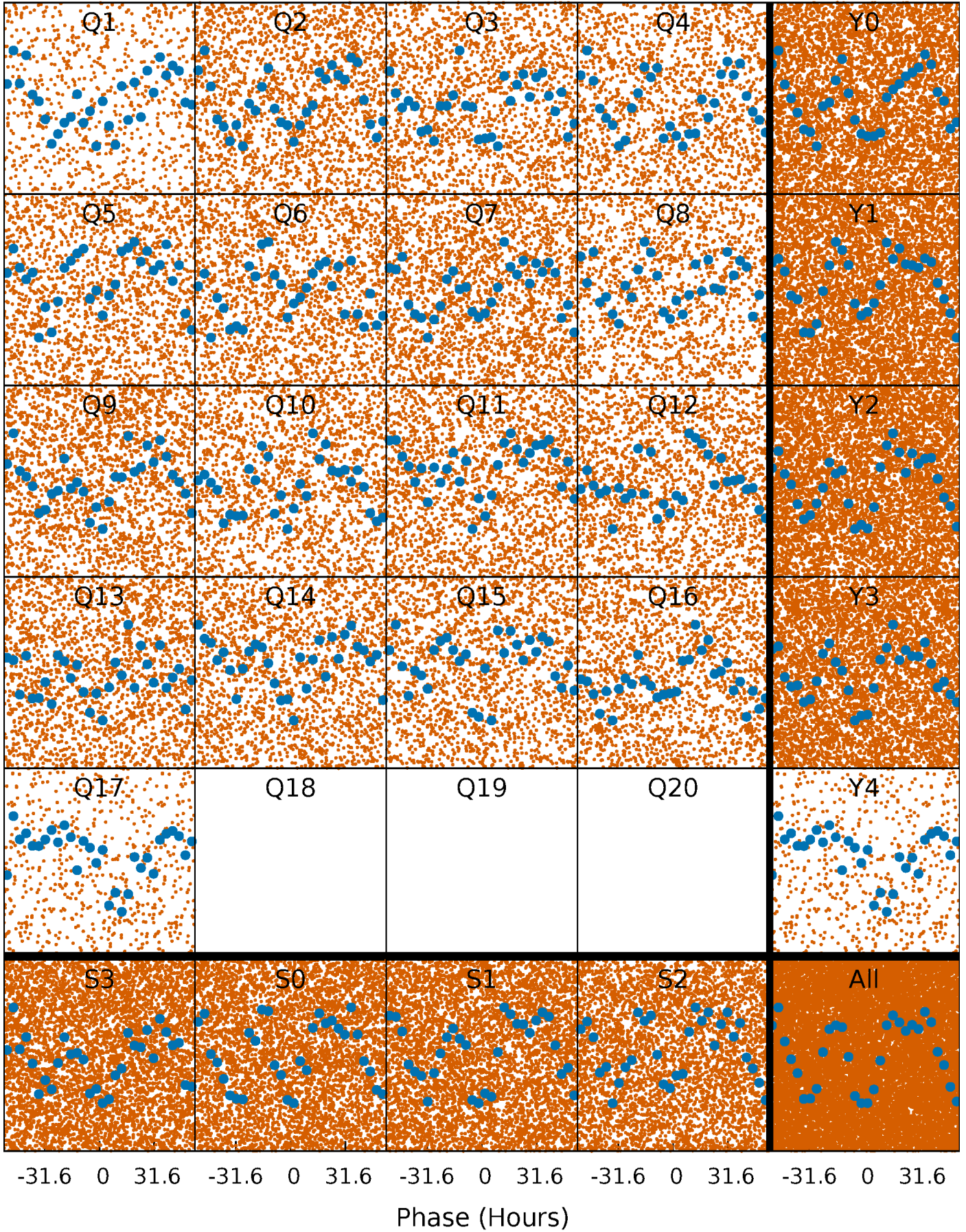


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

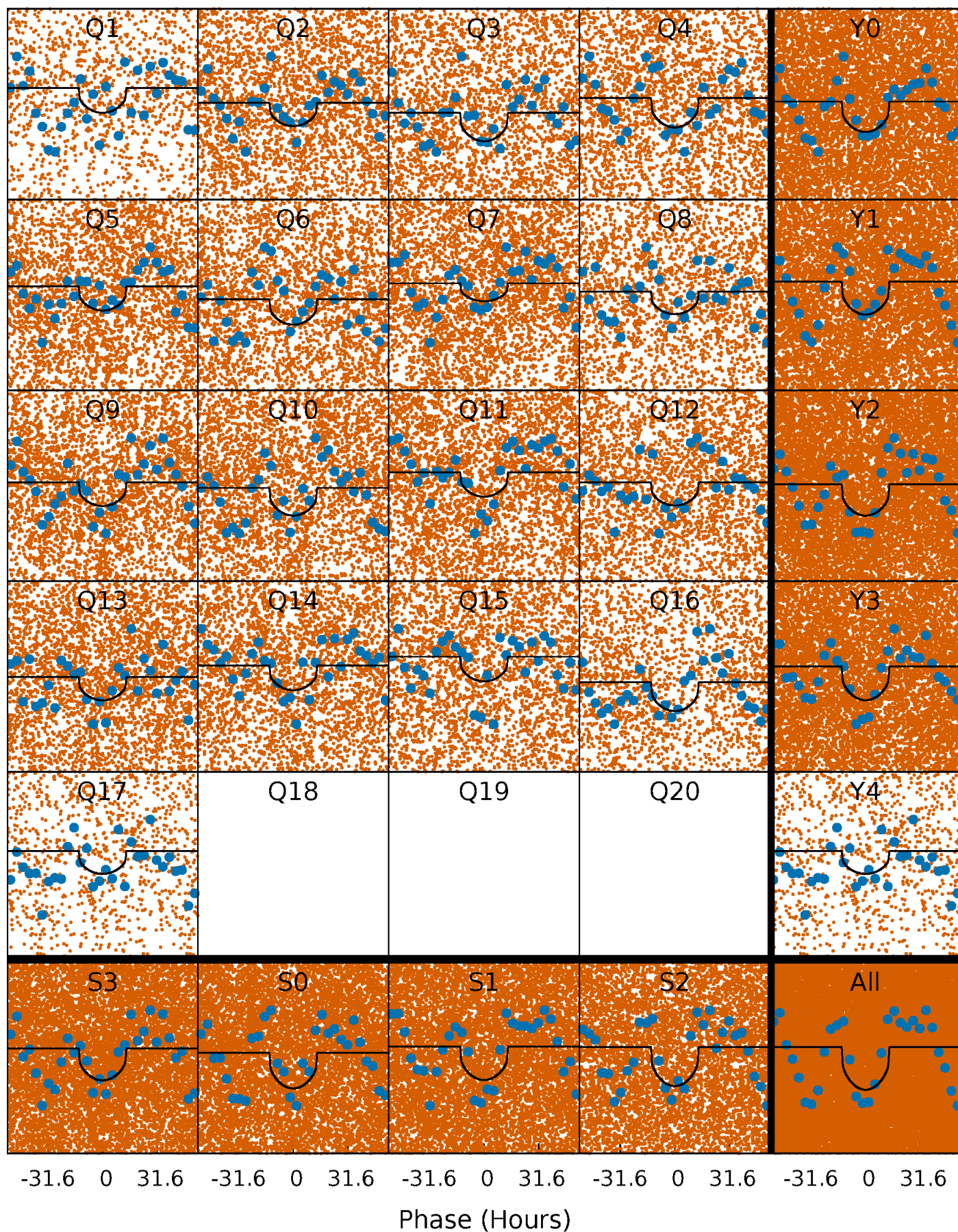
TCE 005892660-01 P= 3.605249 Days  $T_0=133.729834$  (BKJD)





# DV Quarter-Phased Transit Curves

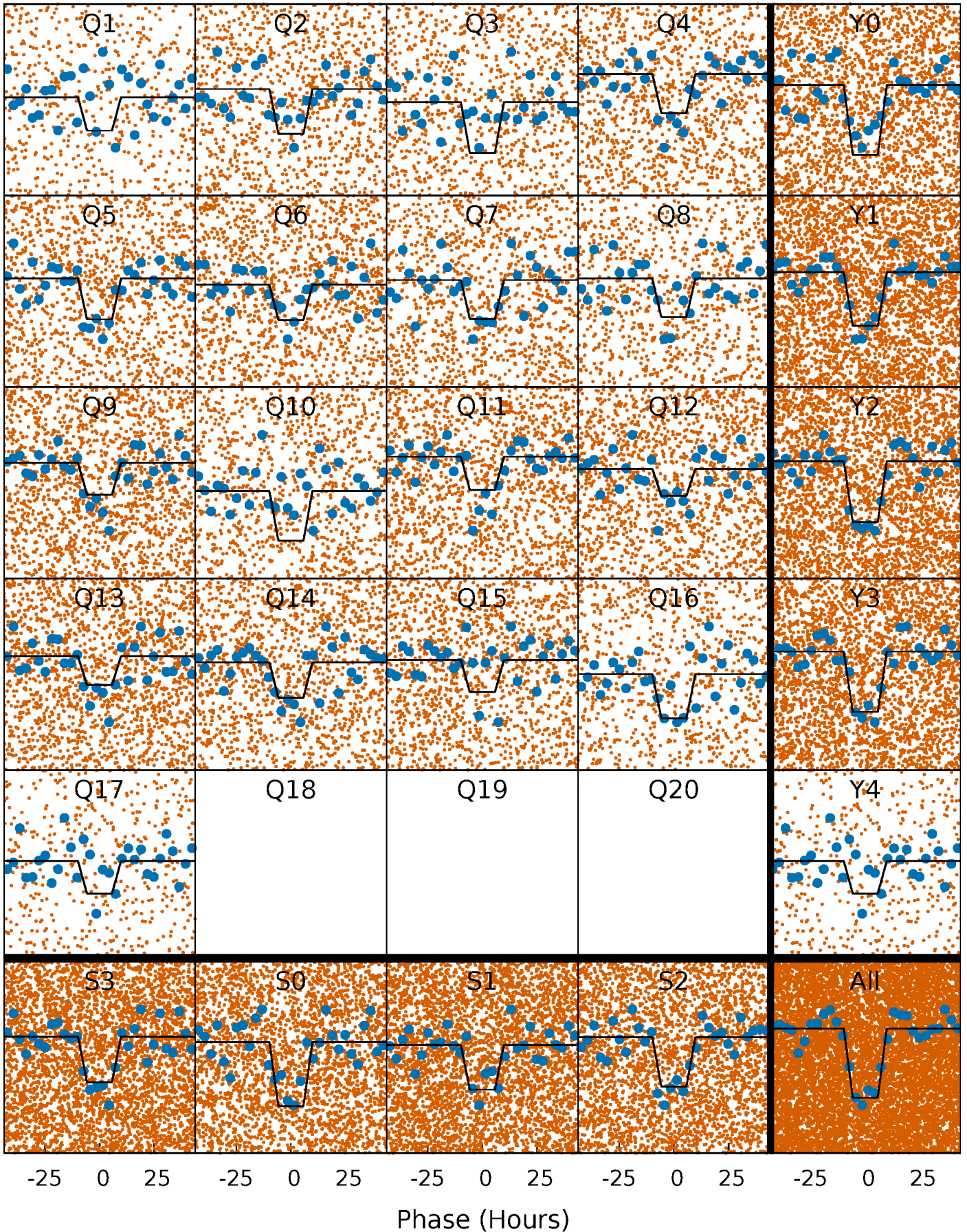
TCE 005892660-01 P= 3.605249 Days  $T_0=133.729834$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

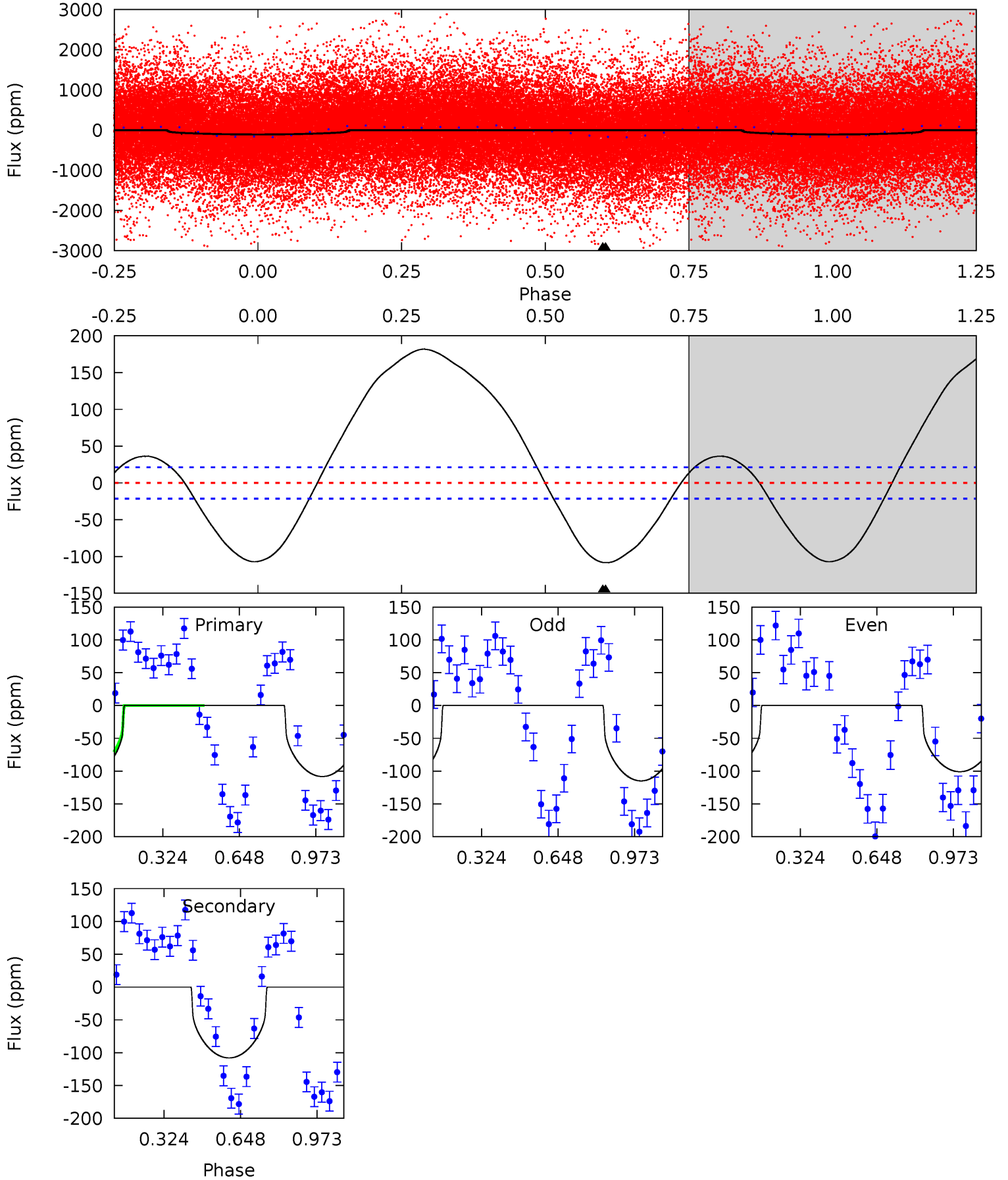
TCE 005892660-01 P= 3.604827 Days  $T_0=133.777693$  (BKJD)



# DV Model-Shift Uniqueness Test

005892660-01, P = 3.605249 Days, E = 130.124585 Days

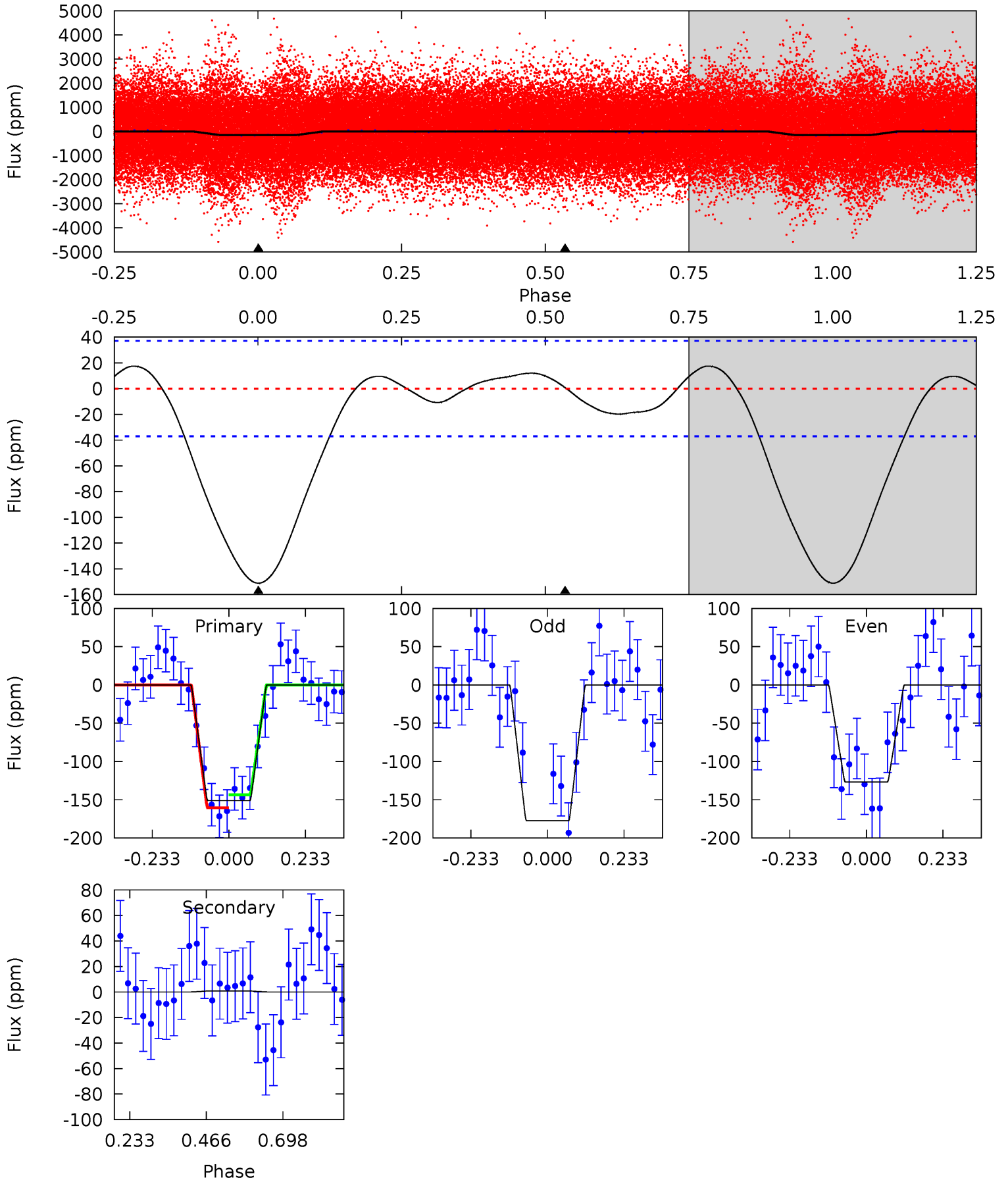
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.9	21.9	0	0	4.31	0.99	21.0	21.9	21.9	21.9	21.9	1.42	0.96	0.63	1.85



# Alt Model-Shift Uniqueness Test

005892660-01, P = 3.604827 Days, E = 130.172866 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
17.9	-0.09	0	0	4.38	1.19	1.00	17.9	17.9	-0.09	-0.09	3.00	0.92	0.10	0.99





### Stellar Parameters For KIC 005892660

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$4741^{+76}_{-114}$	$2.559^{+0.203}_{-0.101}$	$0.360^{+0.100}_{-0.250}$	$14.553^{+3.142}_{-5.835}$	$2.798^{+0.348}_{-1.394}$	$0.001^{+0.002}_{-0.000}$
	+2%/-2%	+8%/-4%	+28%/-69%	+22%/-40%	+12%/-50%	+154%/-33%
Source	SPE74	SPE74	SPE74	DSEP		

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

### Secondary Eclipse Parameters for KIC 005892660-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-108 \pm 5$	$15.54^{+3.43}_{-4.00}$	$4329^{+233}_{-311}$	$4470^{+503}_{-414}$	$1.037^{+0.665}_{-0.332}$
Alt.	$1 \pm 8$	$19.59^{+3.92}_{-4.28}$	$4344^{+214}_{-314}$	$-3836^{+247}_{-184}$	$-0.006^{+0.059}_{-0.053}$

$T_{max}$  = 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

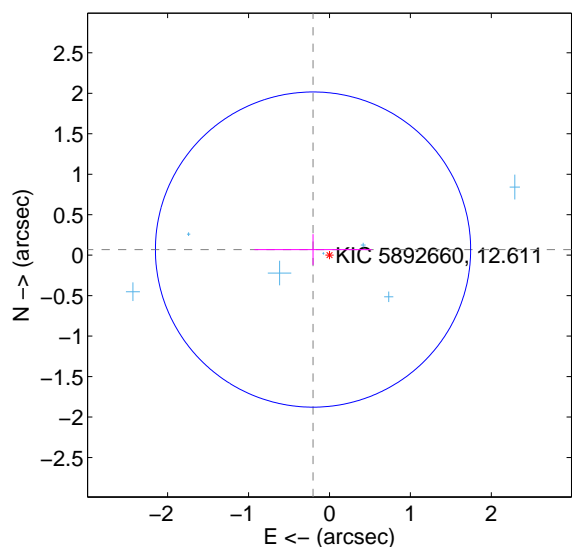
Supplemental centroid analysis for 005892660-01. Kepler magnitude: 12.61. Transit SNR 14.29

There are 8 quarters with good PRF difference image offsets

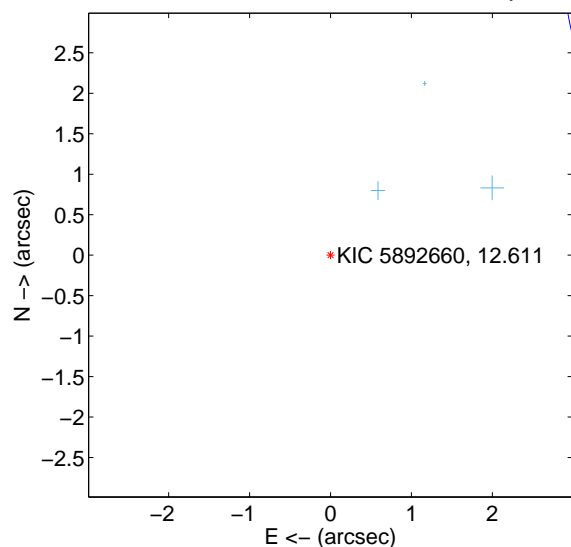
The OOT PRF centroid is offset from the target star catalog position by about 7.59 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.215 \pm 0.649$	0.33	$0.203 \pm 0.724$	$0.069 \pm 0.190$
PRF-fit source offset from KIC position	<b><math>7.021 \pm 1.062</math></b>	<b>6.61</b>	$-6.072 \pm 1.007$	$3.525 \pm 0.435$
photometric centroid source offset	$1.24 \pm 0.42$	2.97	$-1.08 \pm 0.46$	$0.62 \pm 0.24$

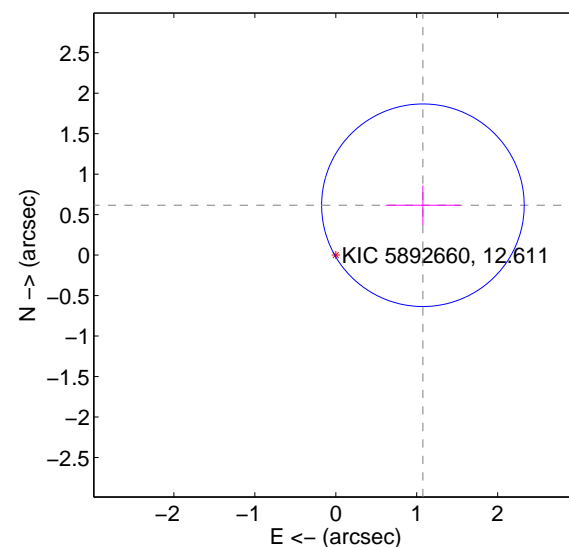
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

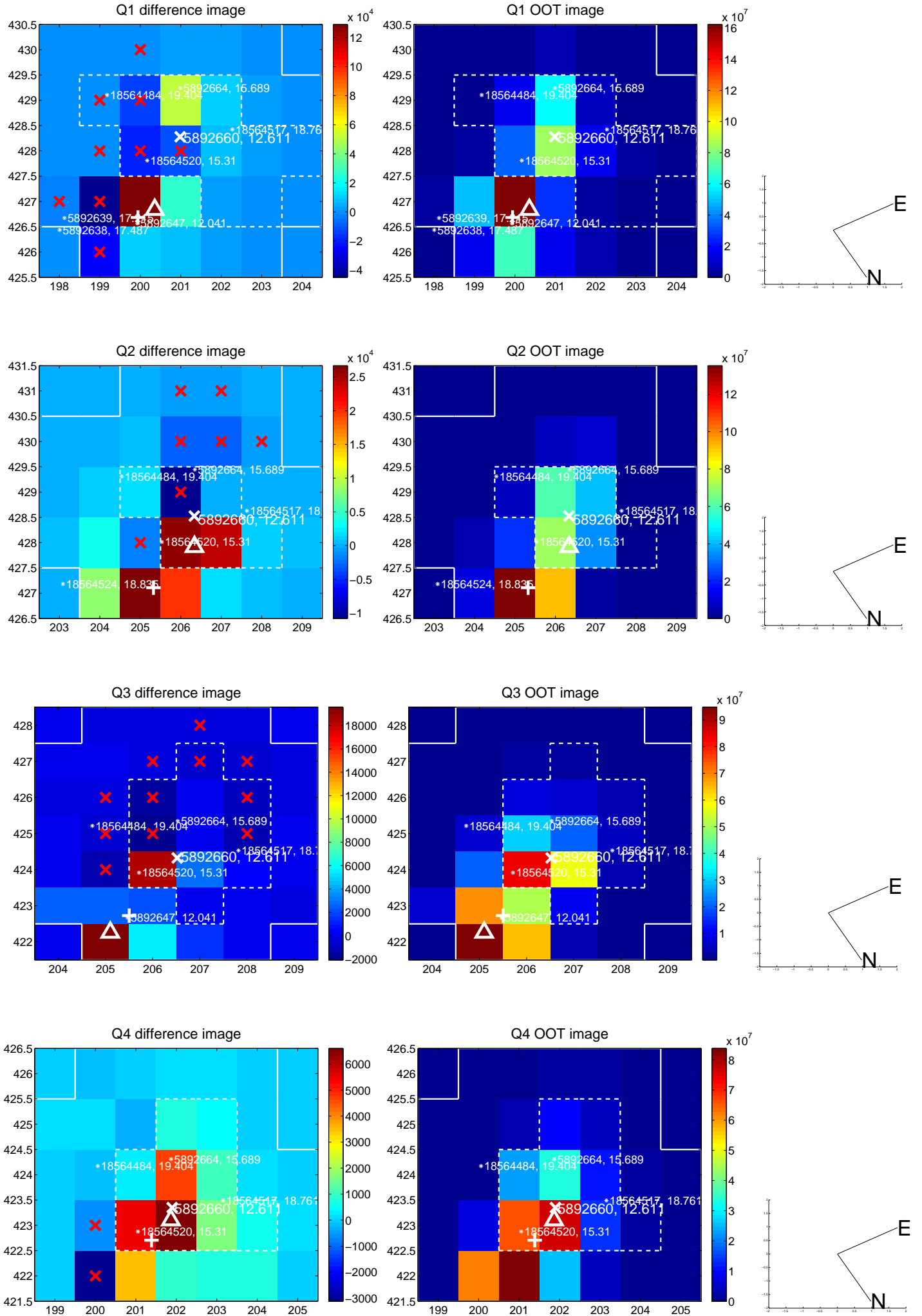


offset from photometric centroids

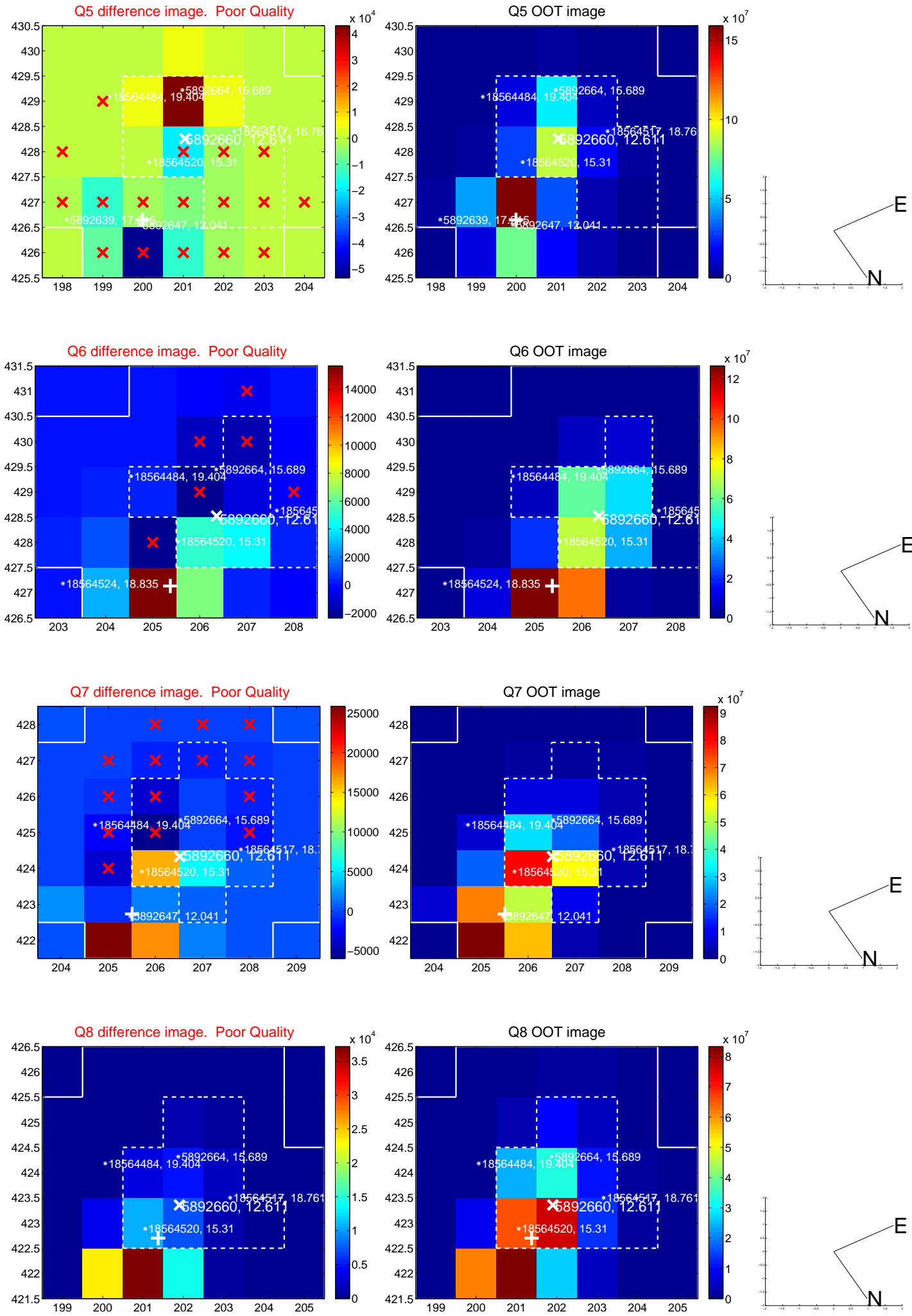


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

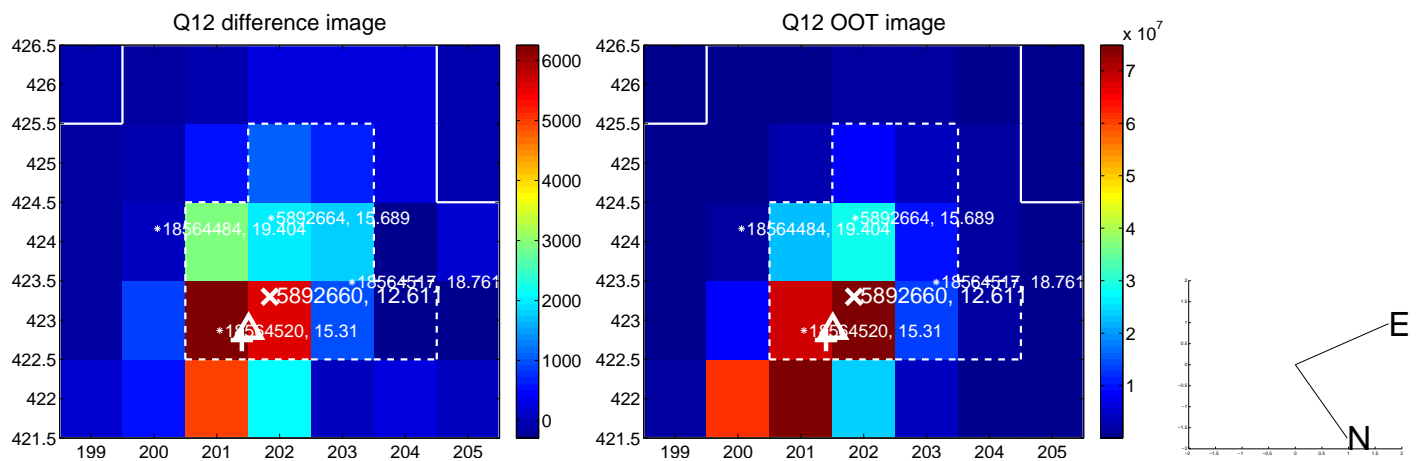
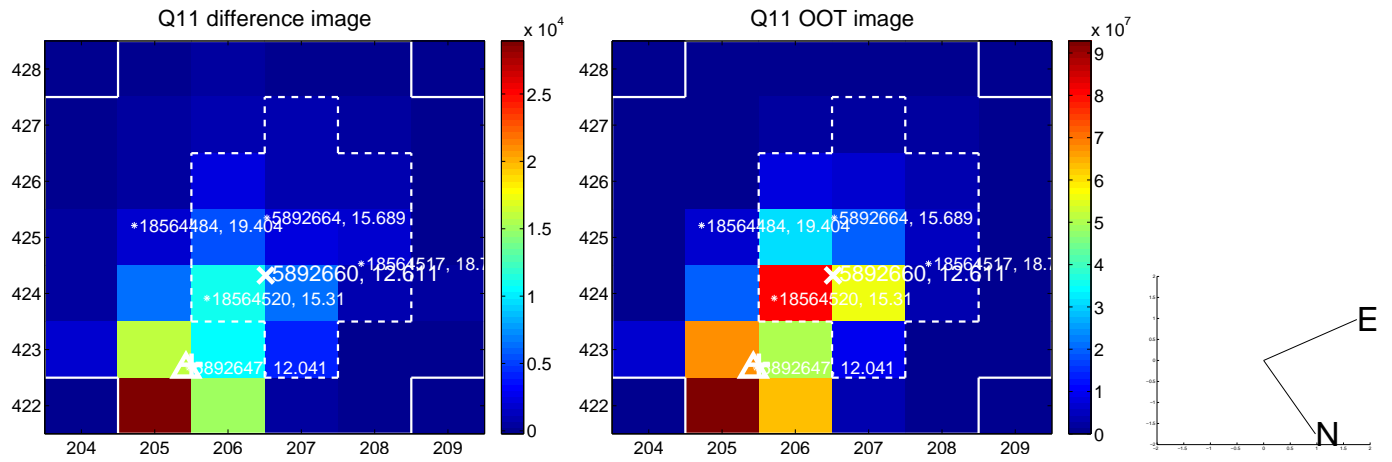
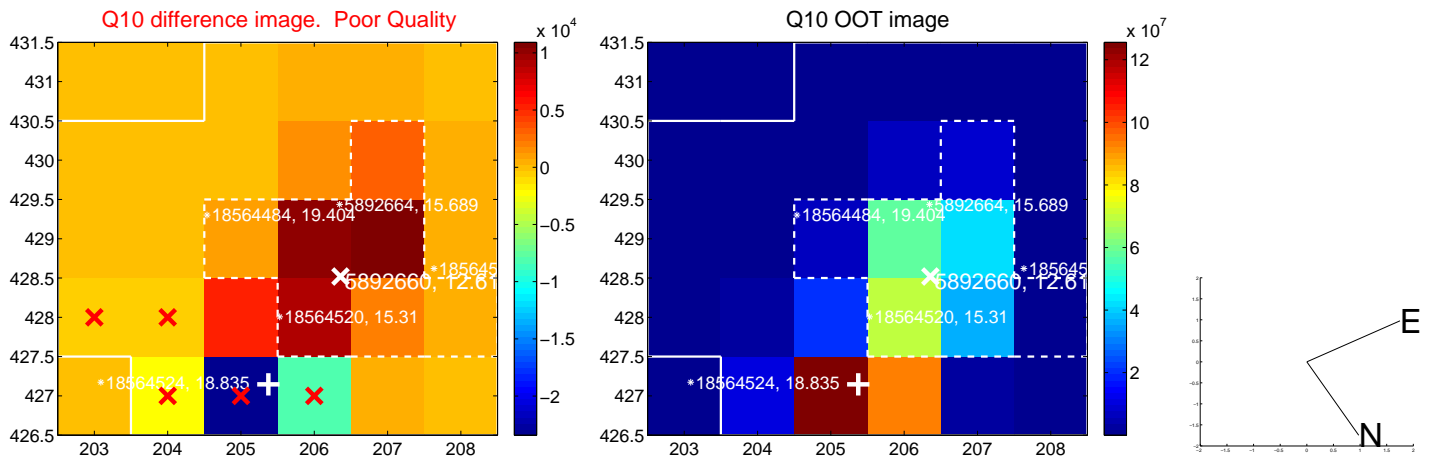
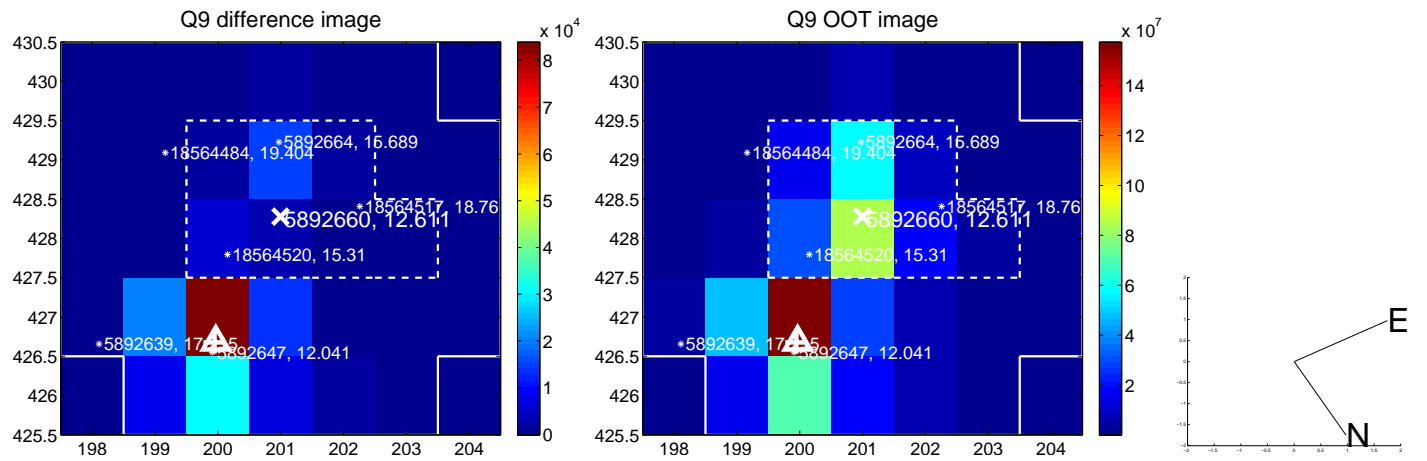


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

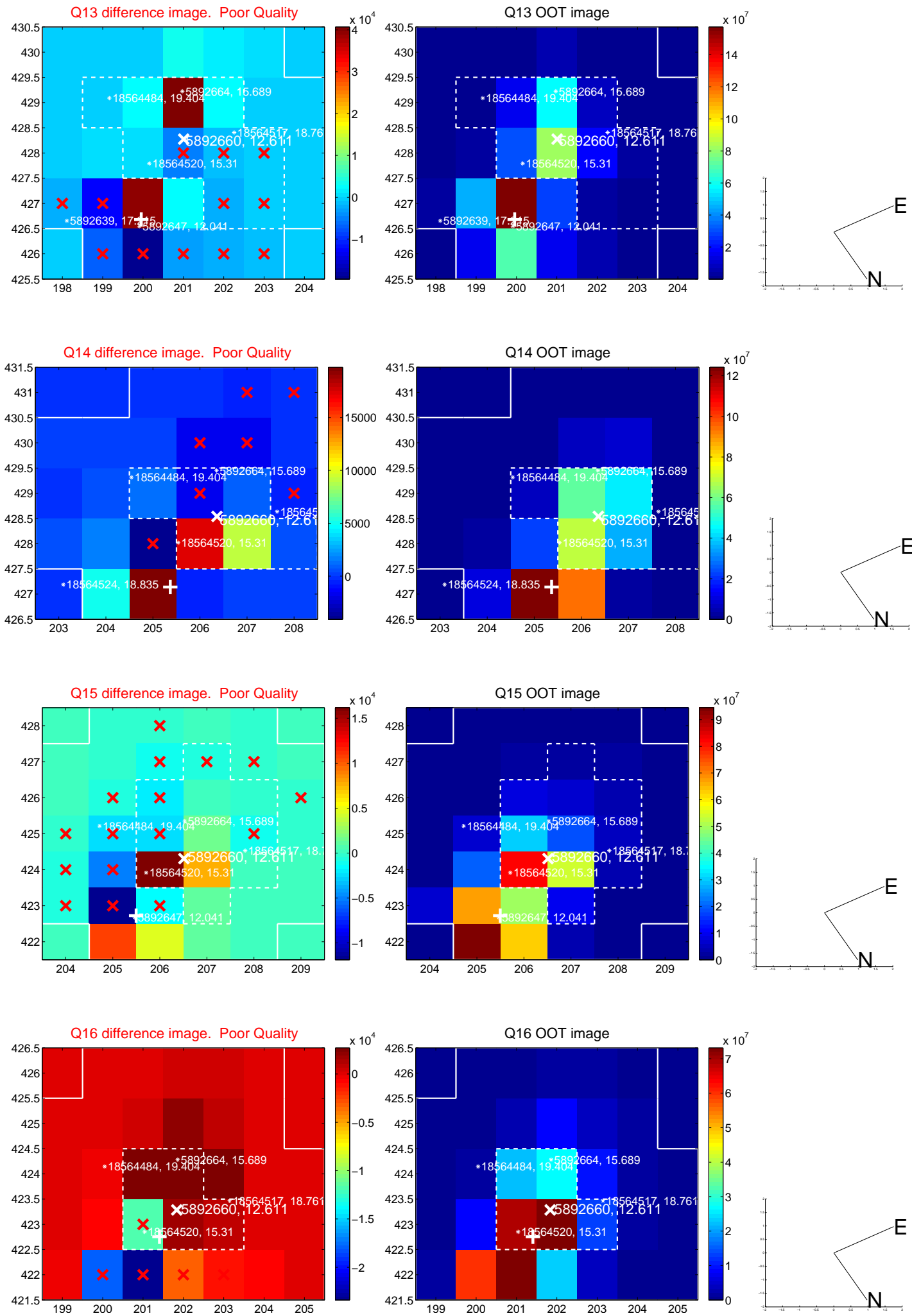




white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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





UKIRT Image

