

# KIC 008711908

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008711908-01	OBS	No	1.139284	132.417948	6.4	11.237	7.2	6.1	3.07	7561	0.79	38495.54

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008711908-01	OBS	FP	0.00	1	0	0	0	LPP_DV—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.

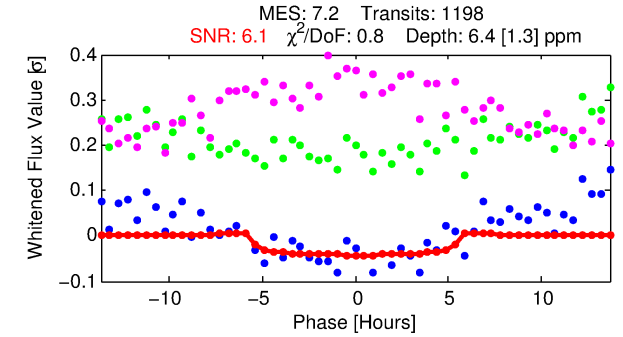
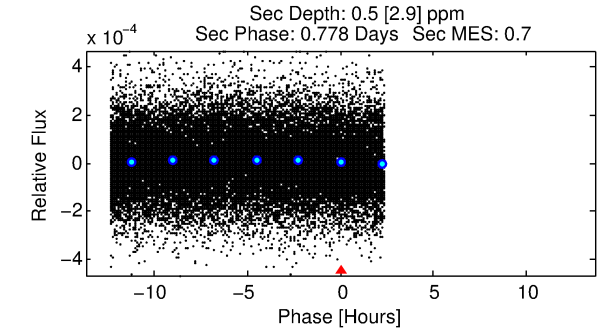
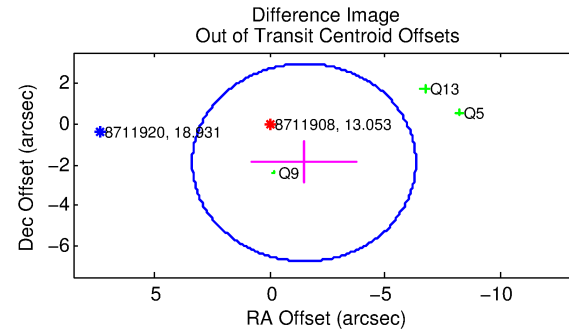
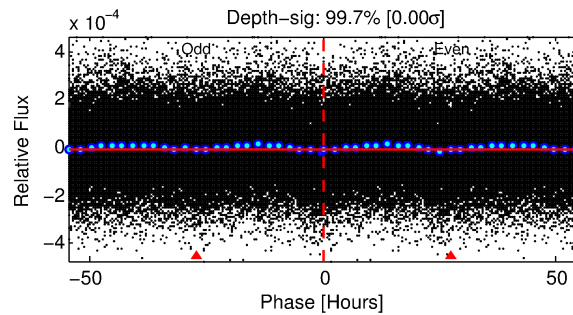
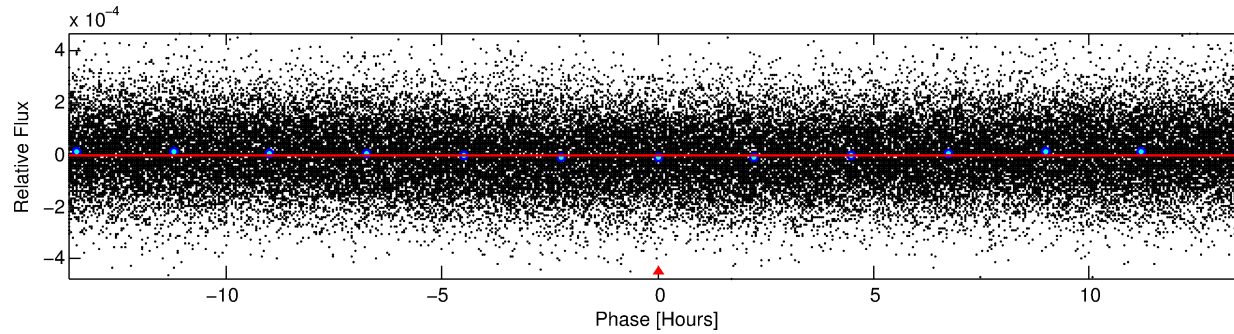
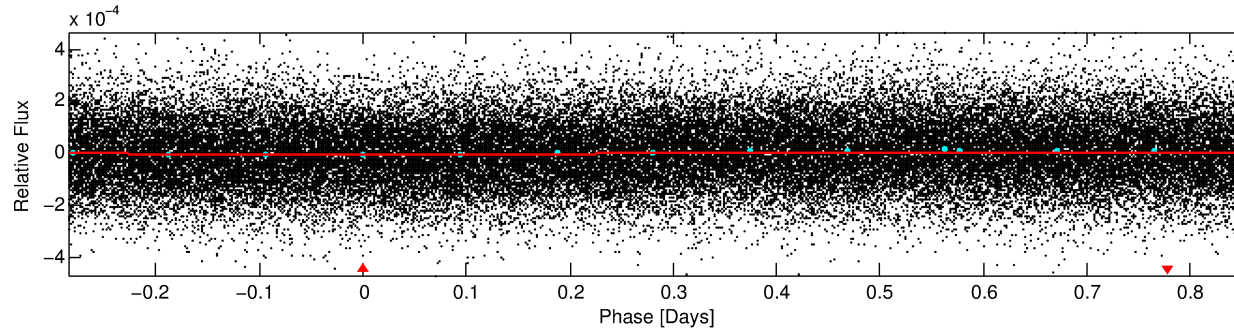
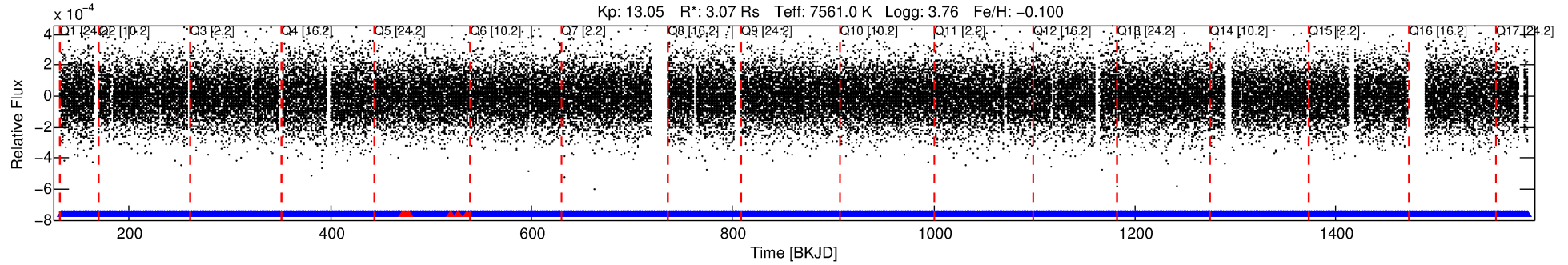
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008711908-01

No Significant Match Found

# DV One-Page Summary

KIC: 8711908 Candidate: 1 of 1 Period: 1.139 d



## DV Fit Results:

Period = 1.13928 [0.00004] d  
Epoch = 132.4179 [0.0146] BKJD  
Rp/R\* = 0.0024 [0.0031]  
a/R\* = 1.04 [0.63]  
b = 0.02 [383.94]  
Seff = 38495.54 [27036.82]  
Teq = 3572 [627] K  
Rp = 0.79 [1.09] Re  
a = 0.0268 [0.0115] AU  
Ag = 0.32 [2.02] [-0.34σ]  
Teffp = 4154 [6509] K [0.09σ]

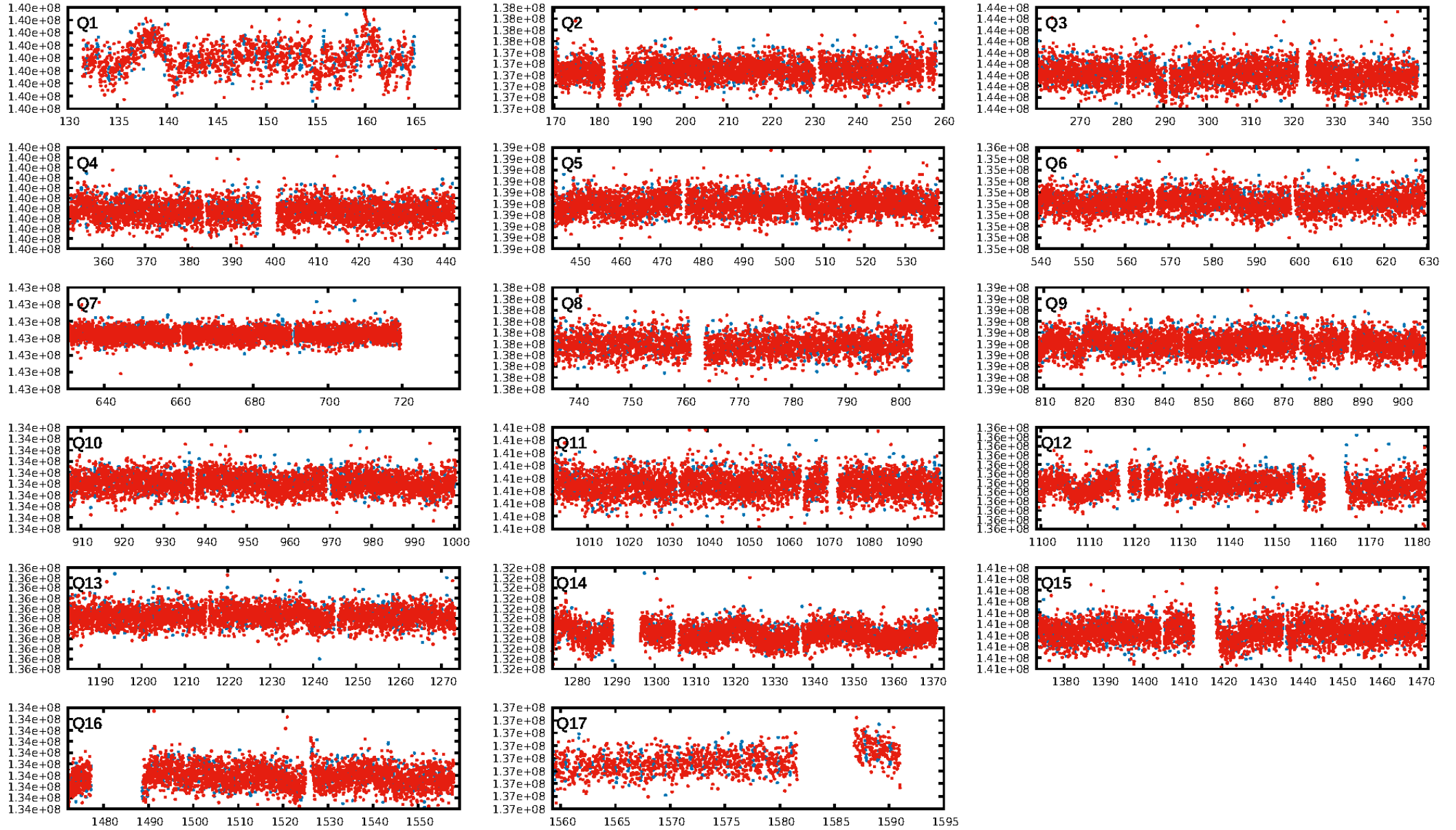
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 0.99 [1136/1144]  
GhostDiagnostic-chr: 2.068  
Centroid-sig: 12.9%  
Centroid-so: 3.504 arcsec [1.48σ]  
OotOffset-rm: 2.411 arcsec [1.50σ]  
KicOffset-rm: 2.398 arcsec [1.46σ]  
OotOffset-st: 0/0/0/3 [3]  
KicOffset-st: 0/0/0/3 [3]  
DiffImageQuality-fgm: 0.33 [1/3]  
DiffImageOverlap-fno: 1.00 [17/17]

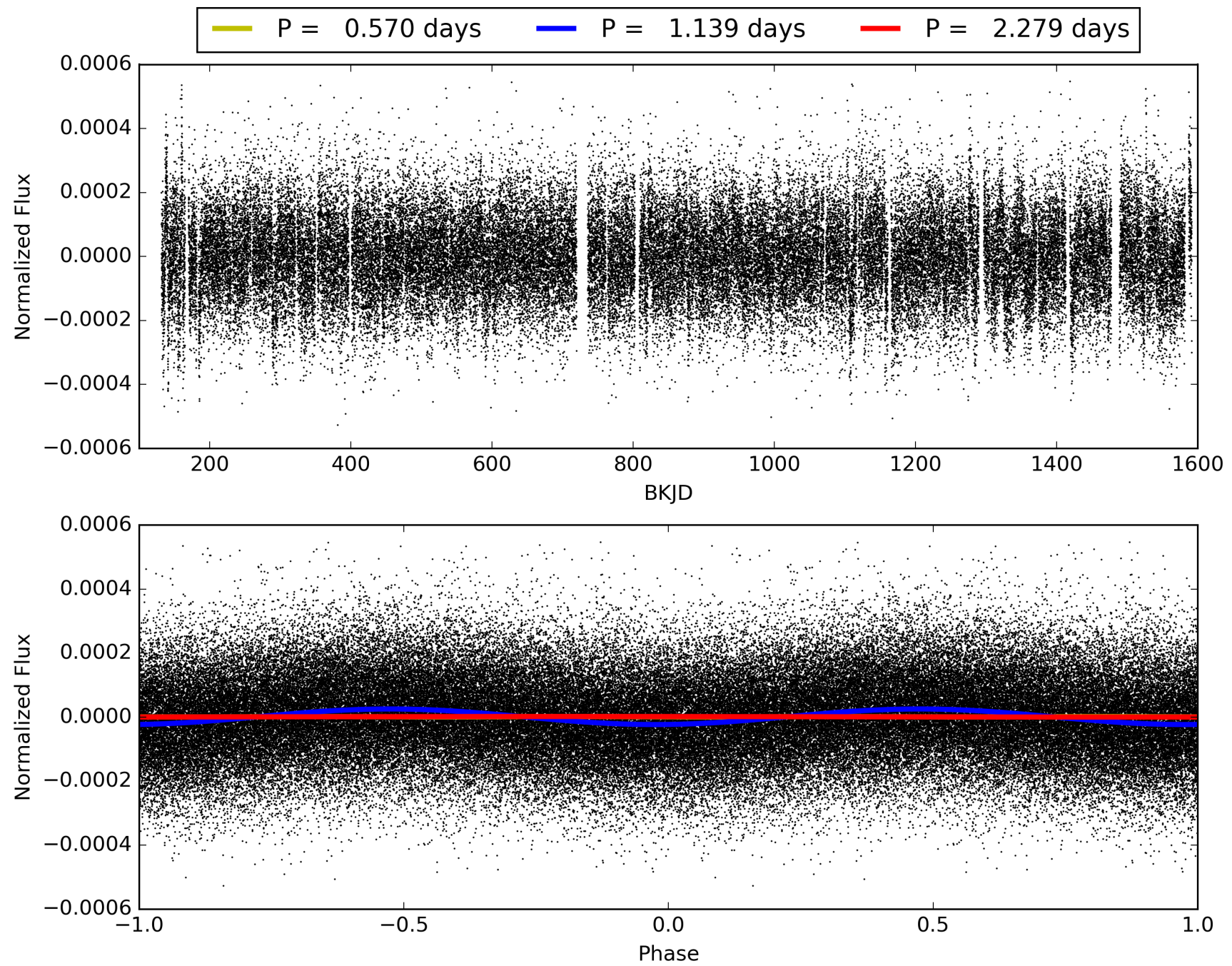
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 16:48:23 Z

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

# TCE 008711908-01, PDC Light Curves



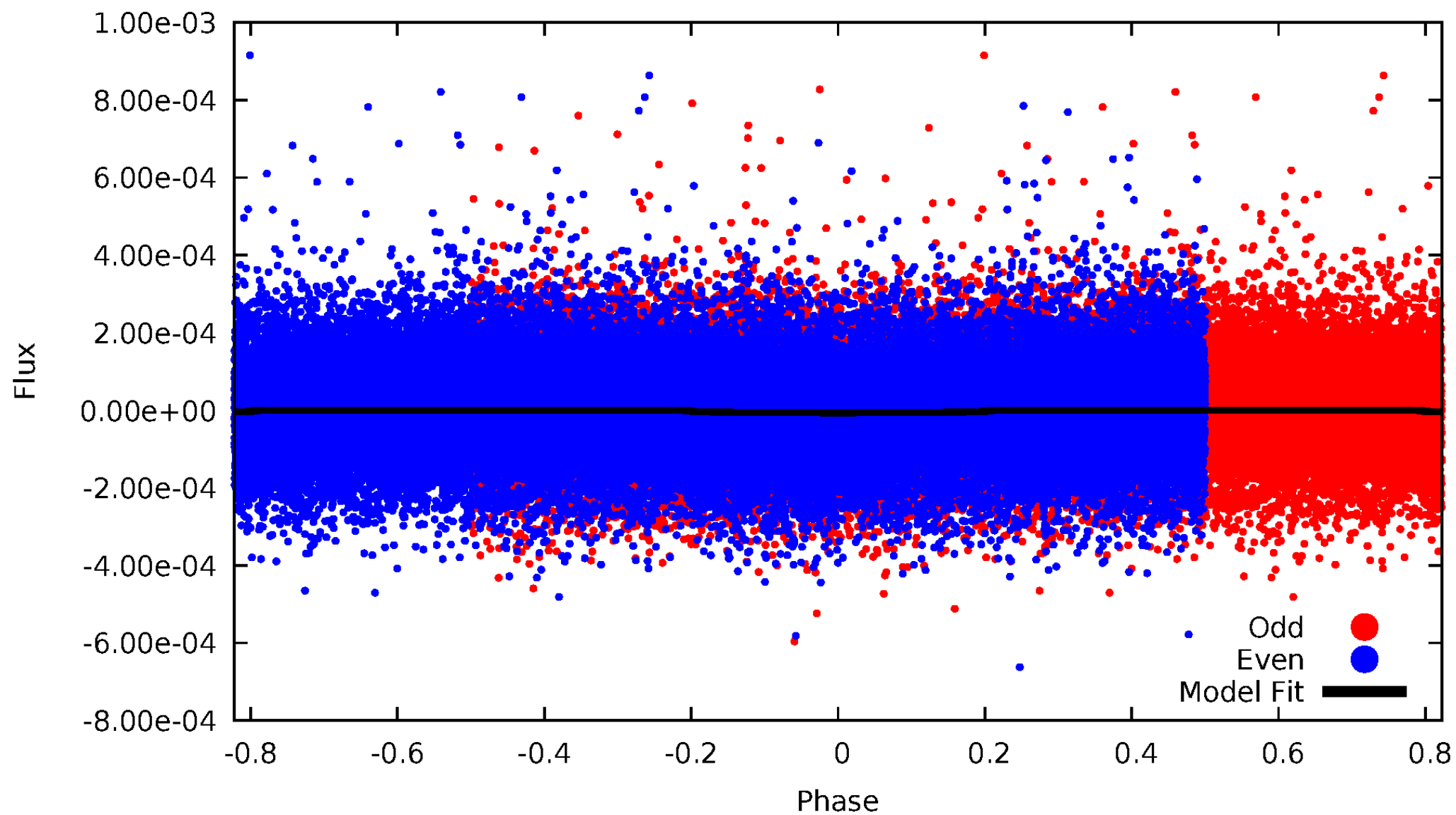
# TCE 008711908-01





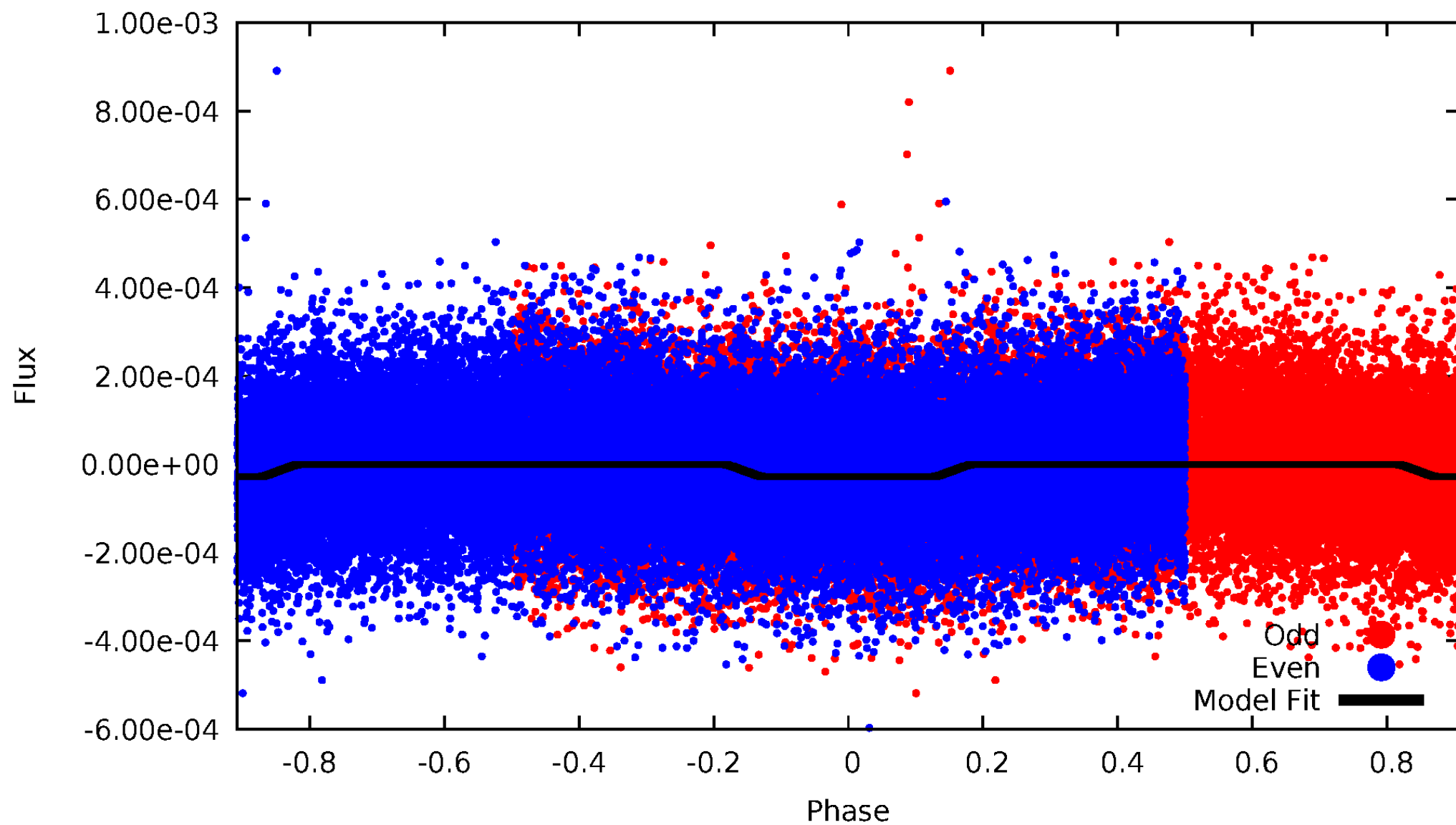
# DV Odd/Even

TCE 008711908-01

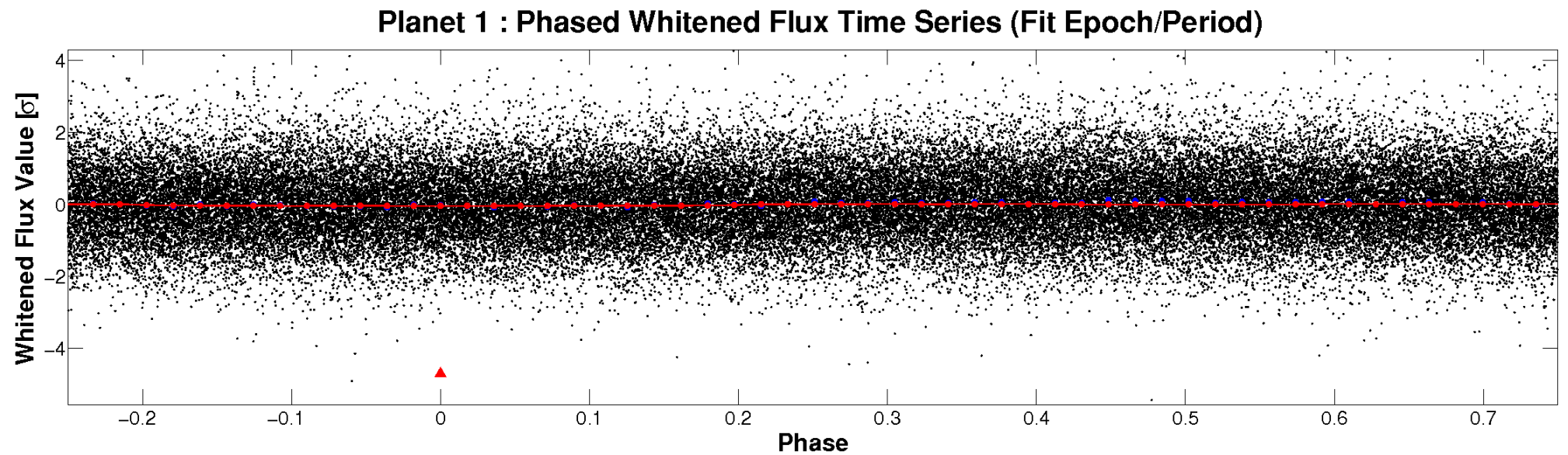
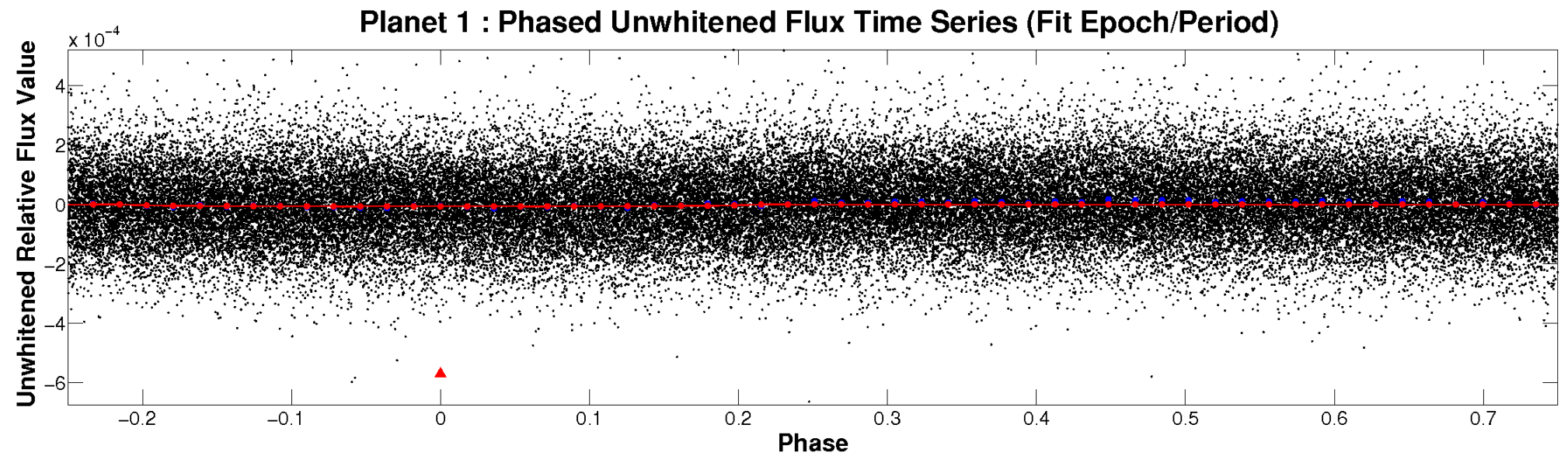


# ALT Odd/Even

TCE 008711908-01

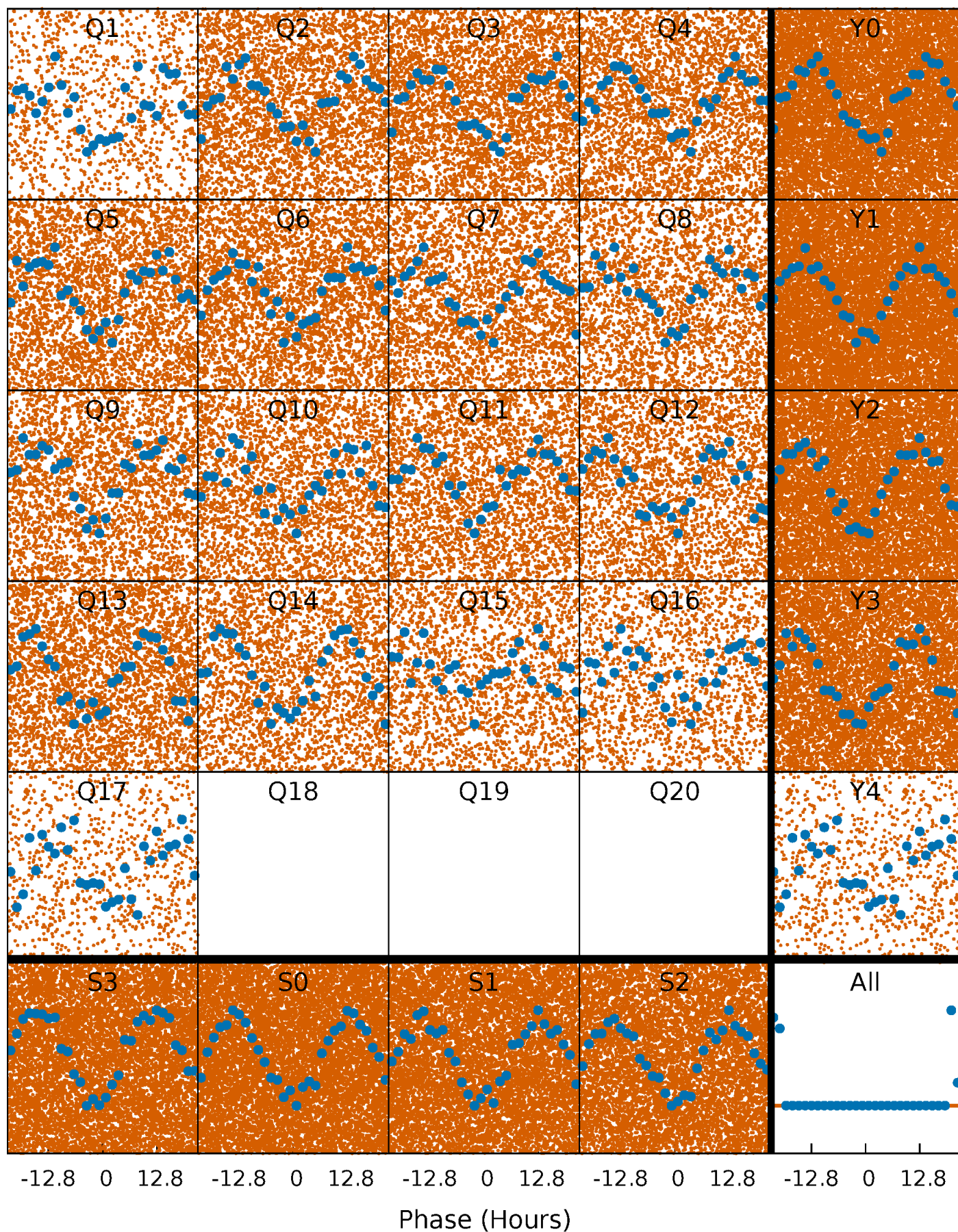


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

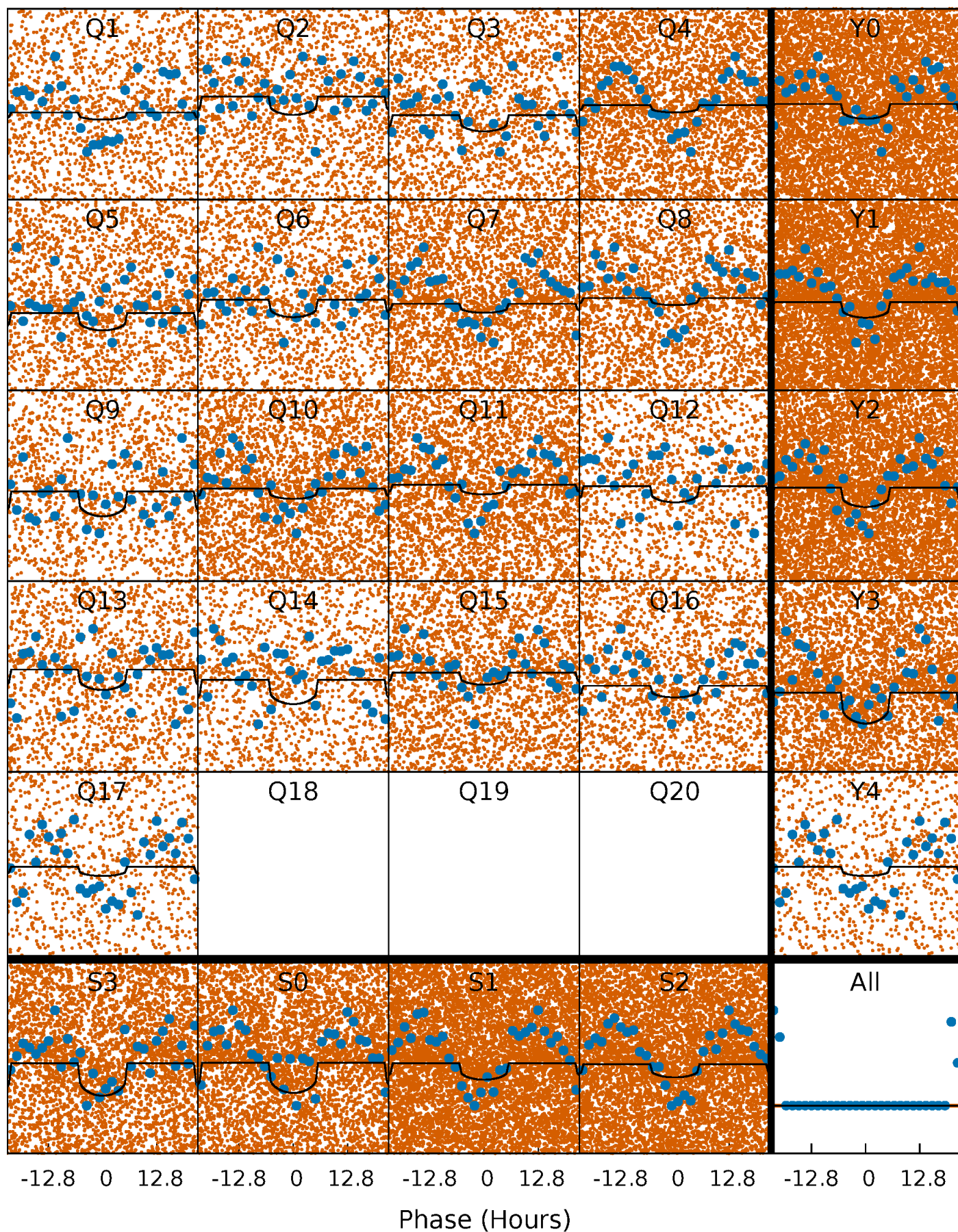
TCE 008711908-01 P= 1.139284 Days  $T_0=132.417948$  (BKJD)





# DV Quarter-Phased Transit Curves

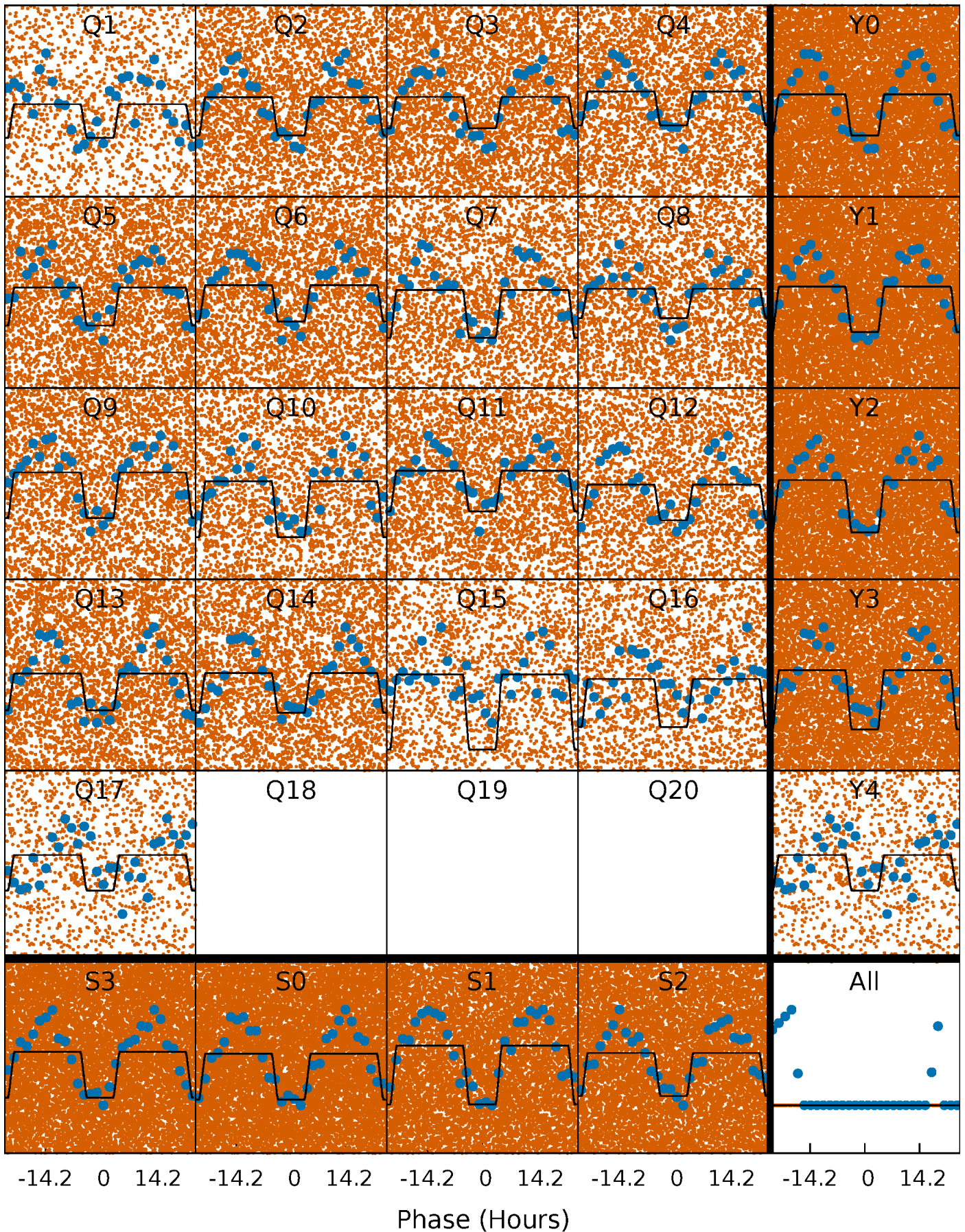
TCE 008711908-01 P= 1.139284 Days  $T_0=132.417948$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

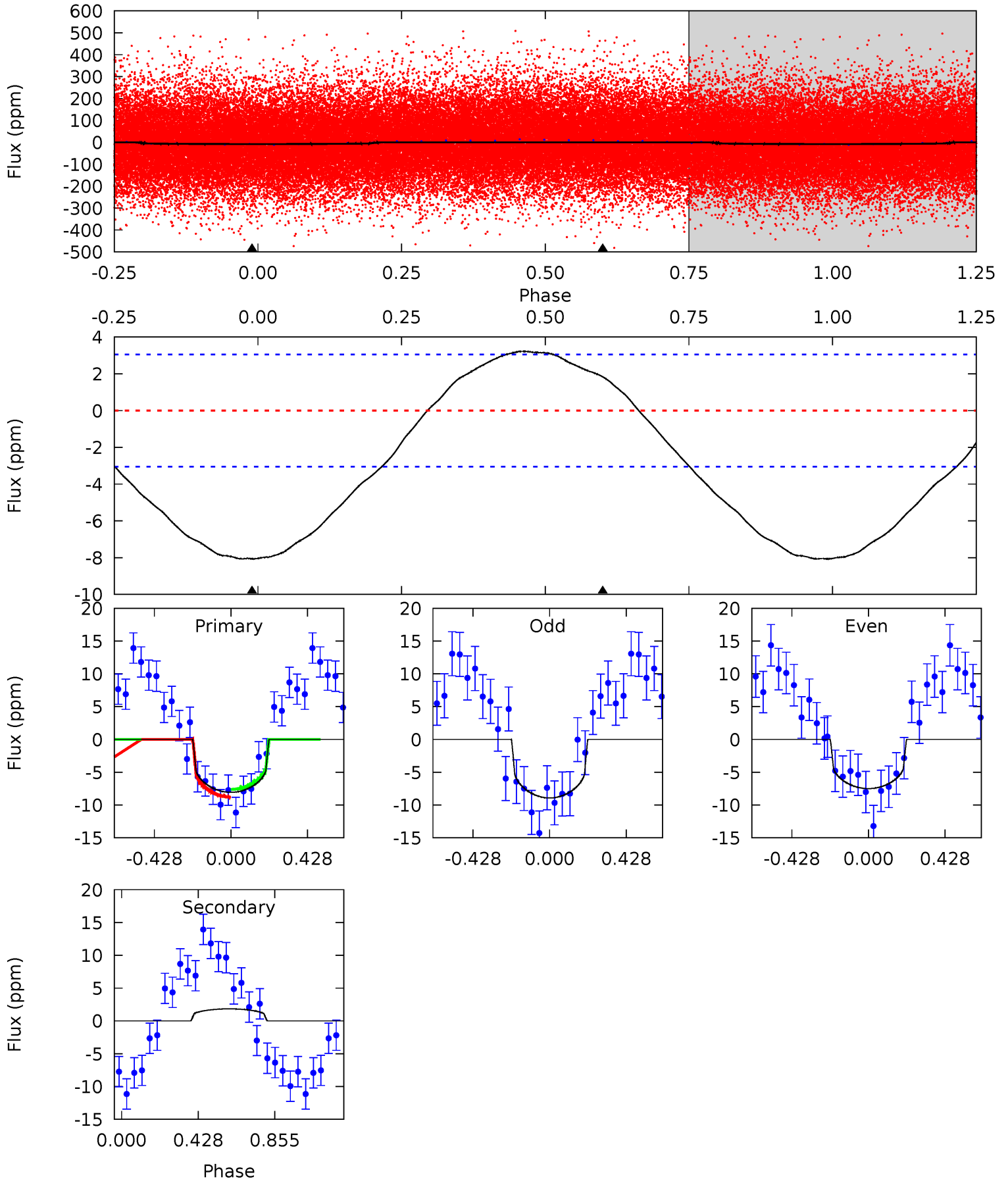
TCE 008711908-01 P= 1.139046 Days  $T_0=132.536191$  (BKJD)



# DV Model-Shift Uniqueness Test

008711908-01, P = 1.139284 Days, E = 131.278664 Days

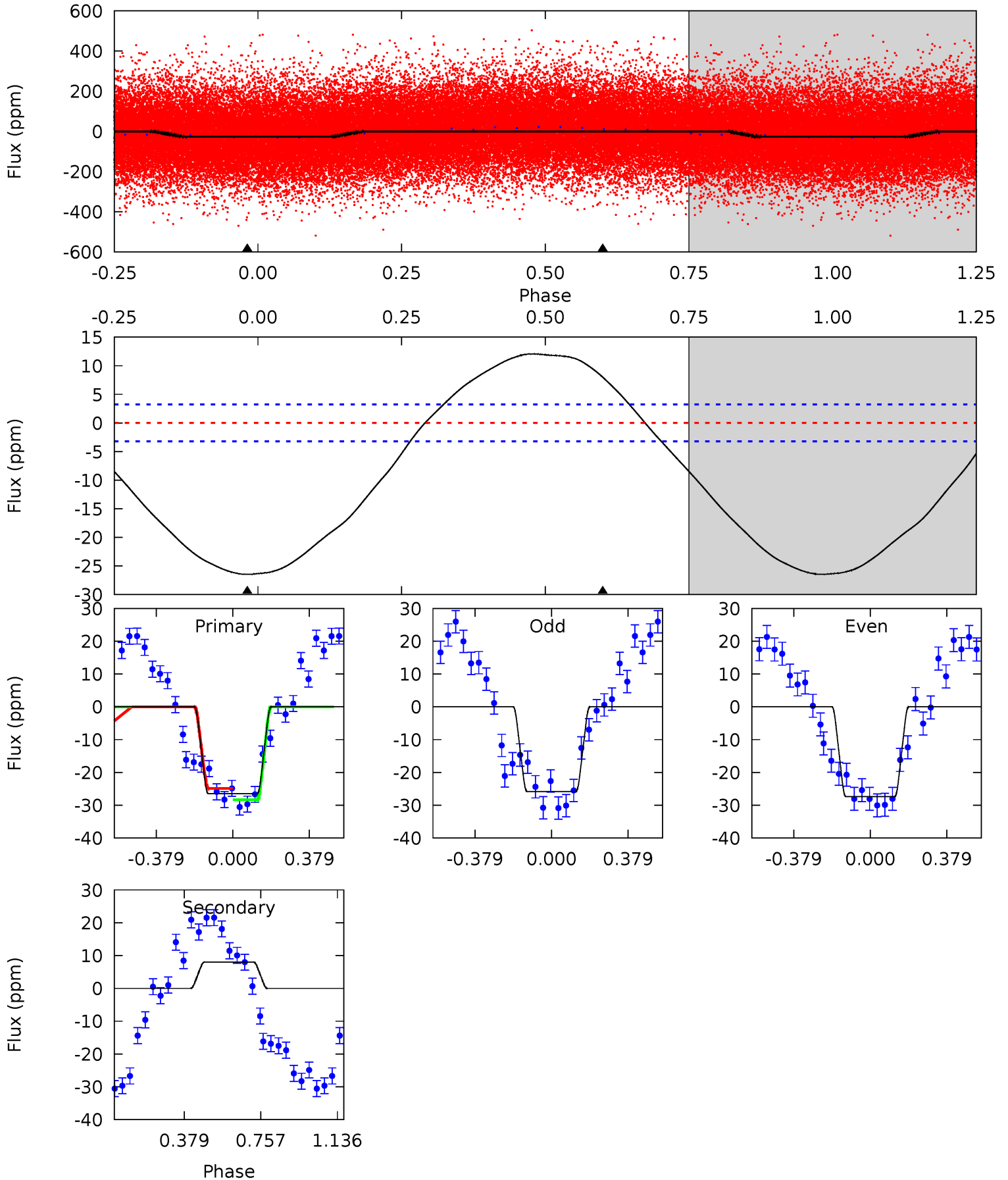
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.2	-2.55	0	0	4.25	0.79	1.44	11.2	11.2	-2.55	-2.55	0.99	1.05	0.29	0.81



# Alt Model-Shift Uniqueness Test

008711908-01, P = 1.139046 Days, E = 131.397145 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
35.1	-10.6	0	0	4.28	0.88	4.56	35.1	35.1	-10.6	-10.6	1.03	0.99	0.31	2.27





### Stellar Parameters For KIC 008711908

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$7561^{+235}_{-314}$	$3.759^{+0.399}_{-0.070}$	$-0.100^{+0.200}_{-0.350}$	$3.073^{+0.347}_{-1.387}$	$1.977^{+0.093}_{-0.525}$	$0.096^{+0.336}_{-0.022}$
	+3%/-4%	+11%/-2%	+200%/-350%	+11%/-45%	+5%/-27%	+350%/-23%
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 008711908-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$2\pm 1$	$0.93^{+0.90}_{-0.60}$	$4857^{+300}_{-513}$	$-5322^{+775}_{-3171}$	$-0.754^{+0.576}_{-5.840}$
Alt.	$8\pm 1$	$1.60^{+1.10}_{-0.83}$	$4854^{+316}_{-530}$	$-5689^{+762}_{-2233}$	$-1.154^{+0.736}_{-3.912}$

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

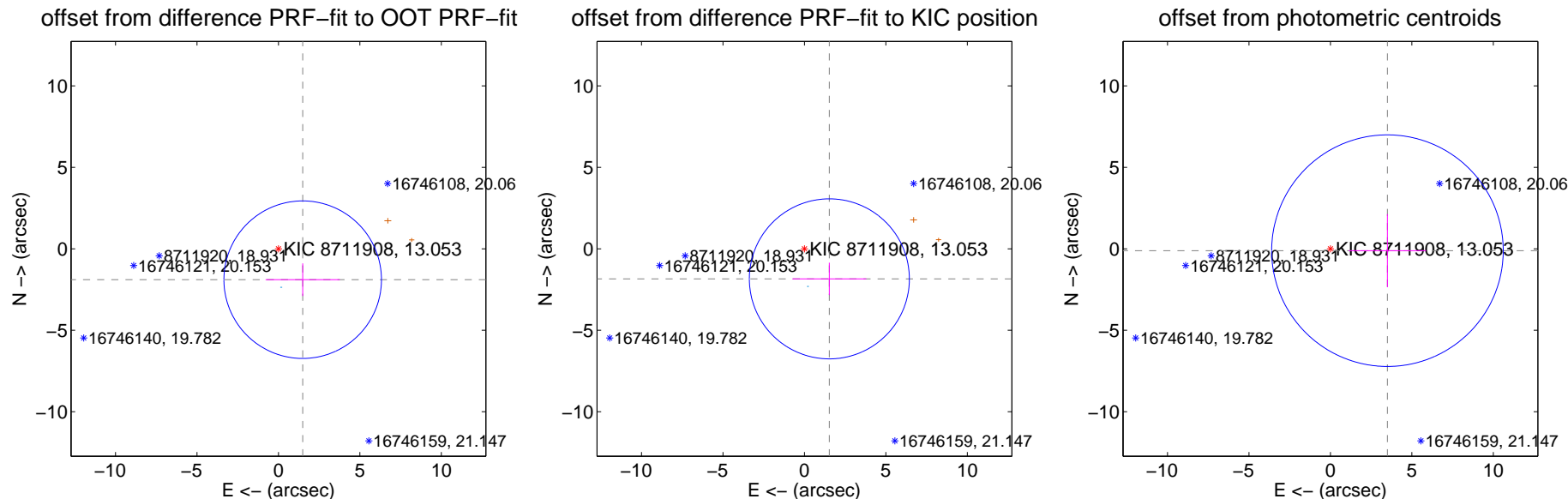
## DV Centroid Data

Supplemental centroid analysis for 008711908-01. Kepler magnitude: 13.05. Transit SNR 6.12

There are 1 quarters with good PRF difference image offsets

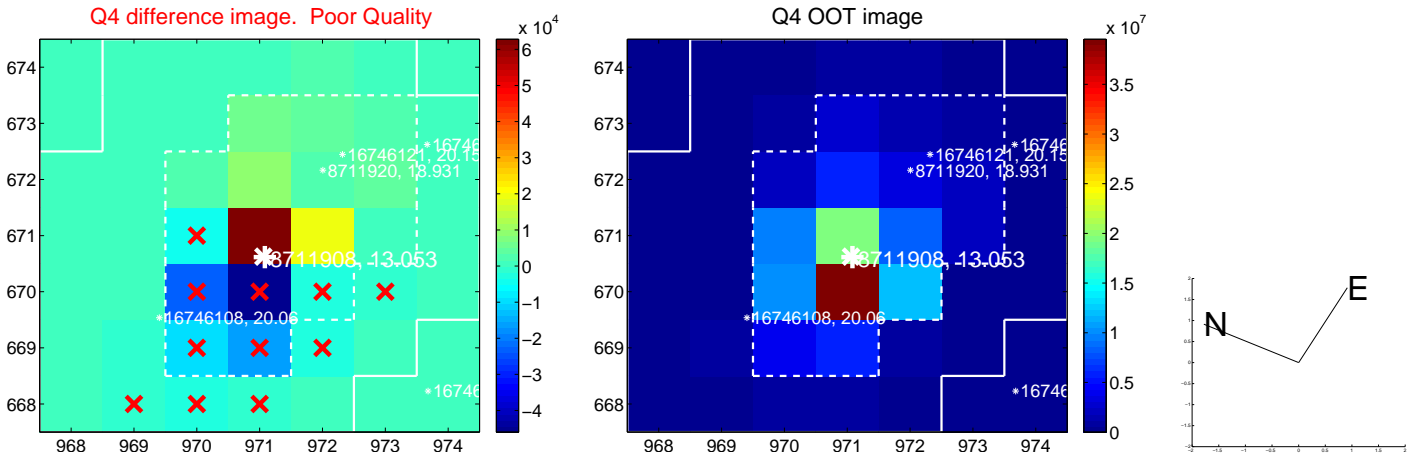
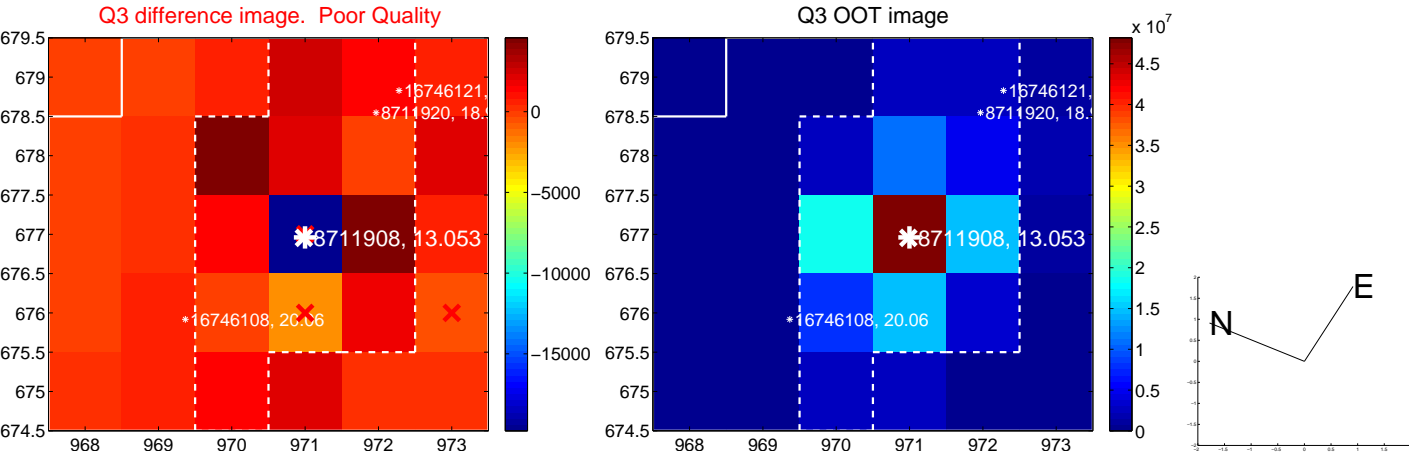
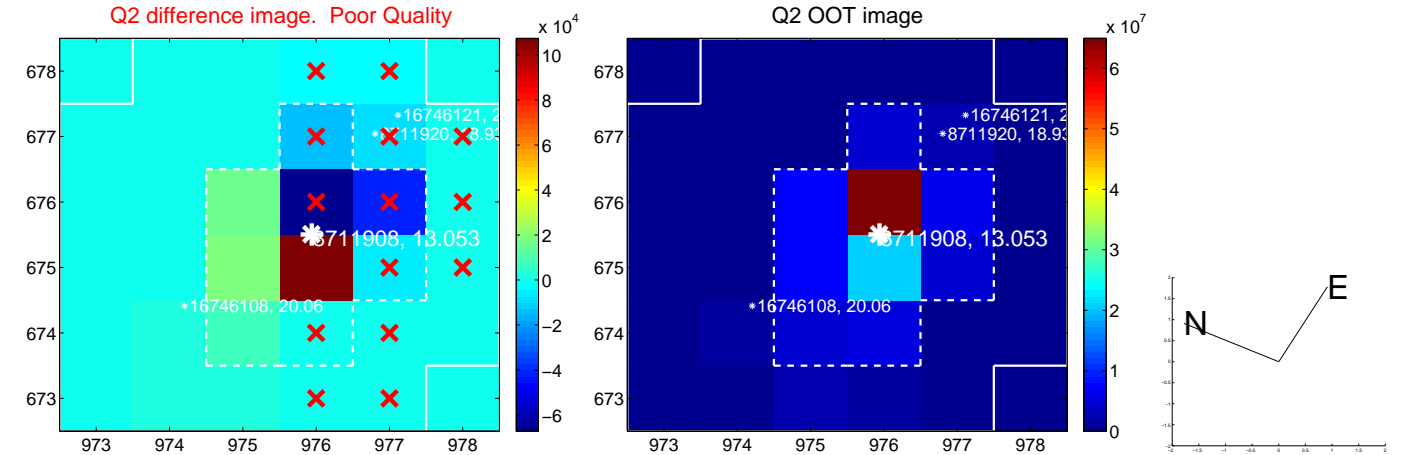
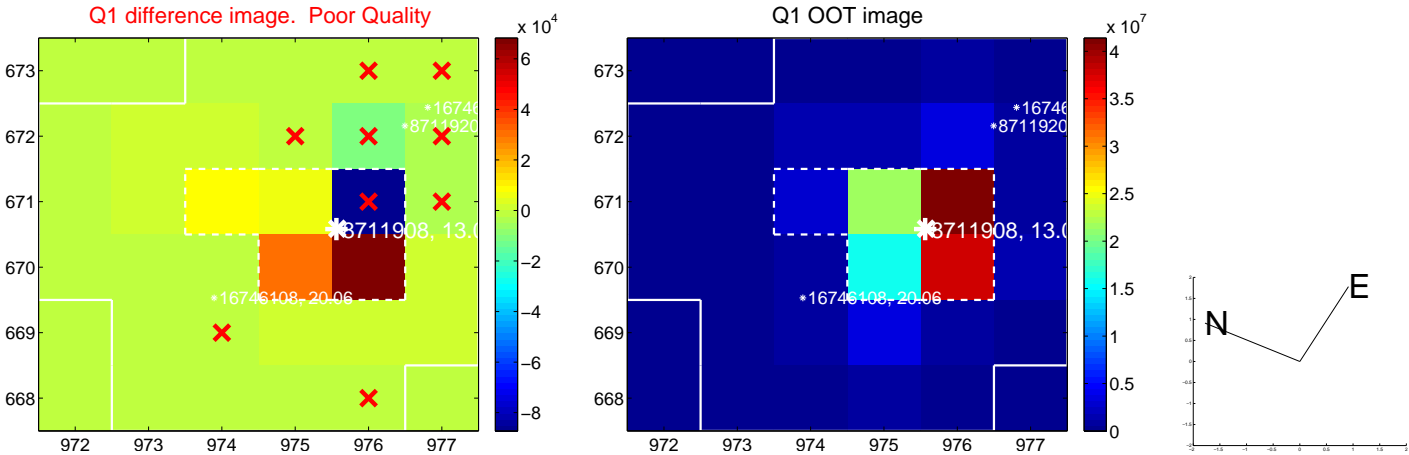
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$2.411 \pm 1.612$	1.50	$-1.489 \pm 2.277$	$-1.896 \pm 1.001$
PRF-fit source offset from KIC position	$2.398 \pm 1.637$	1.46	$-1.530 \pm 2.271$	$-1.846 \pm 0.990$
photometric centroid source offset	$3.50 \pm 2.37$	1.48	$-3.50 \pm 2.37$	$-0.11 \pm 2.25$

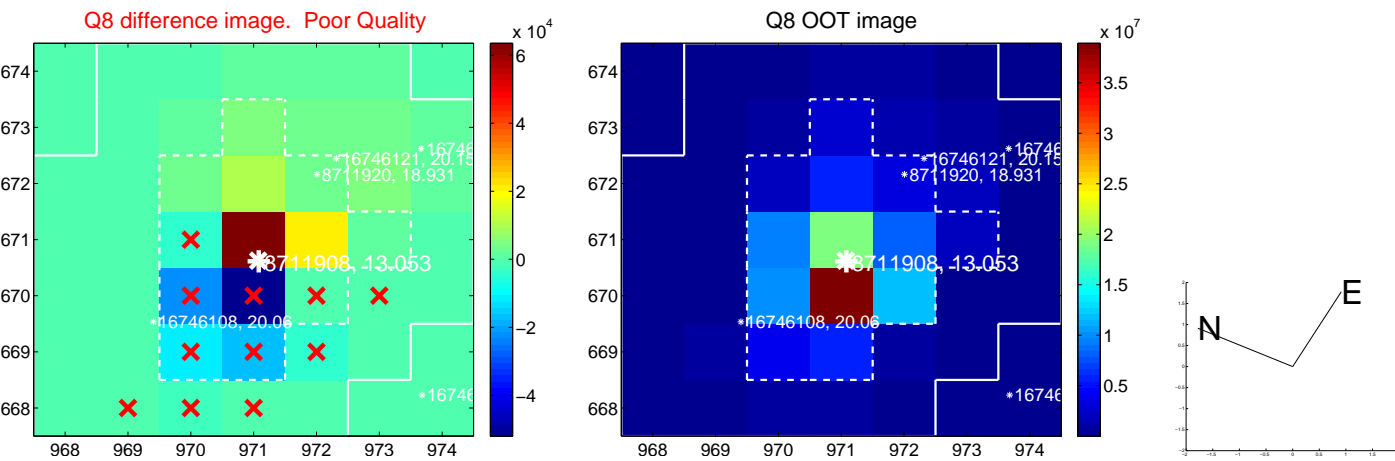
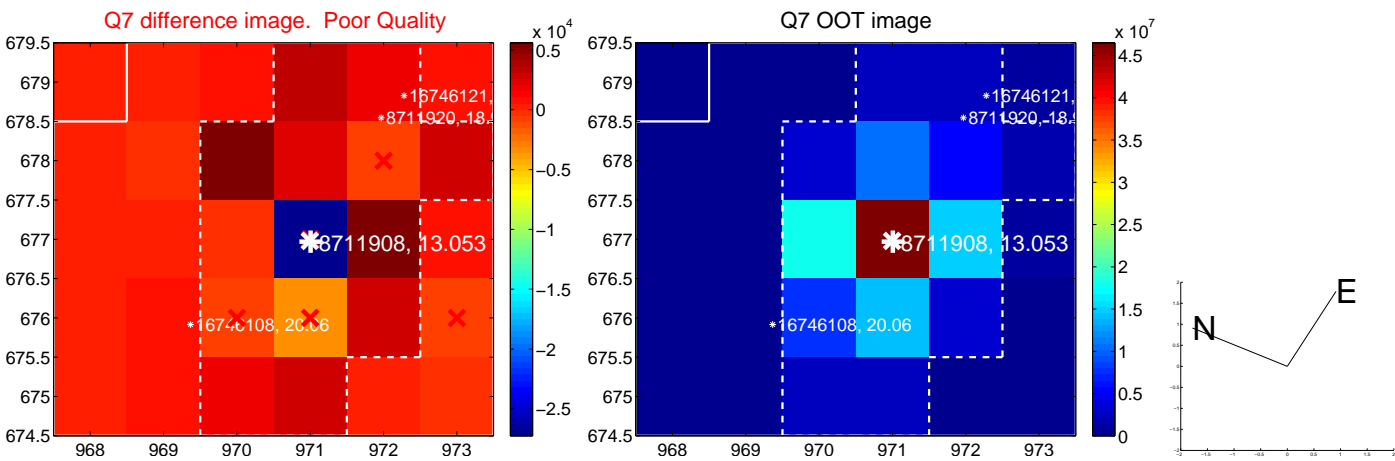
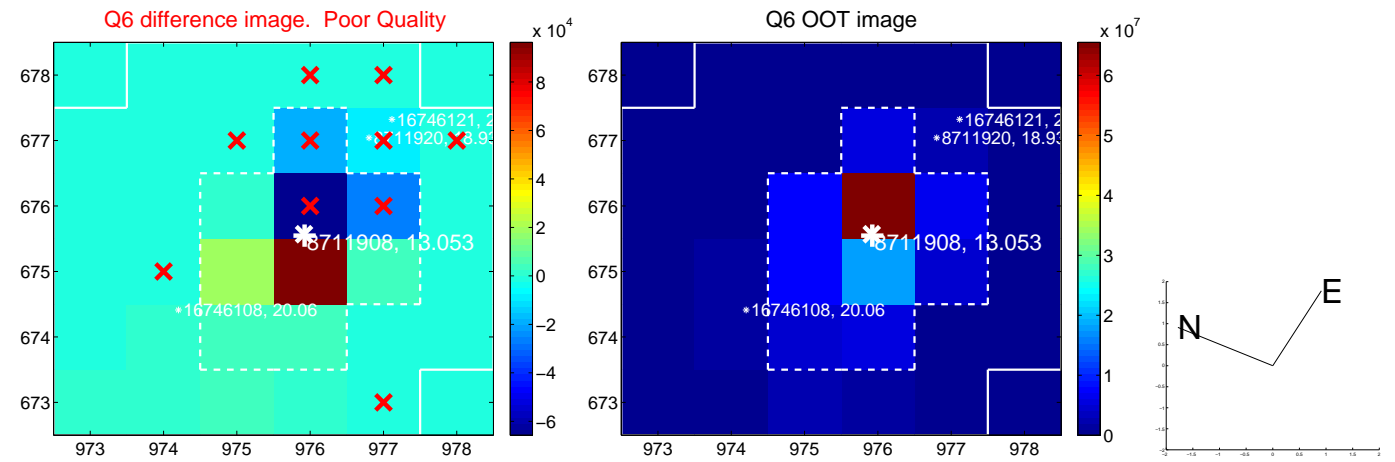
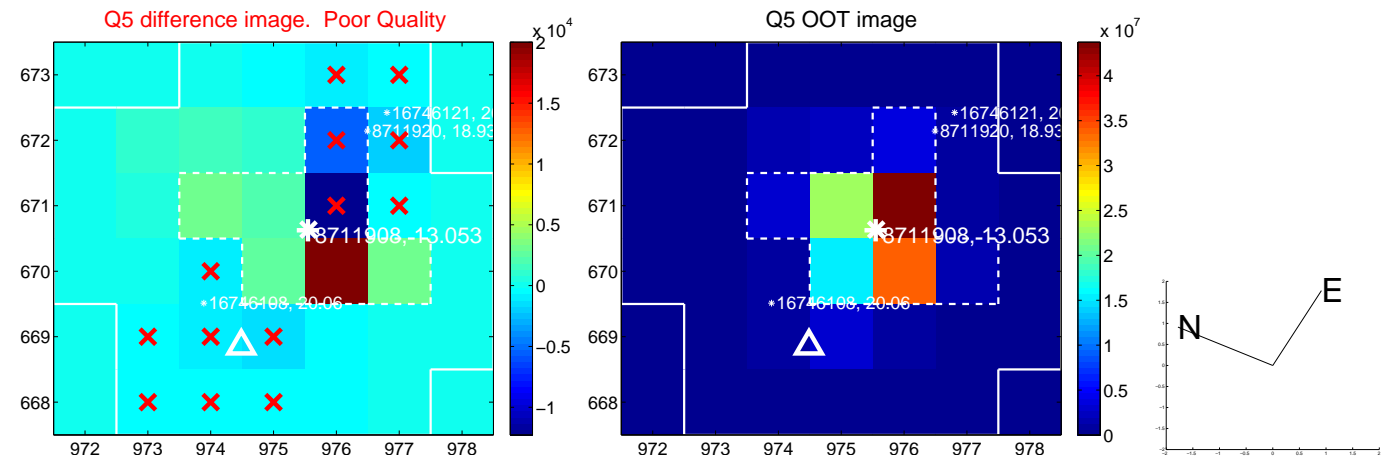


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

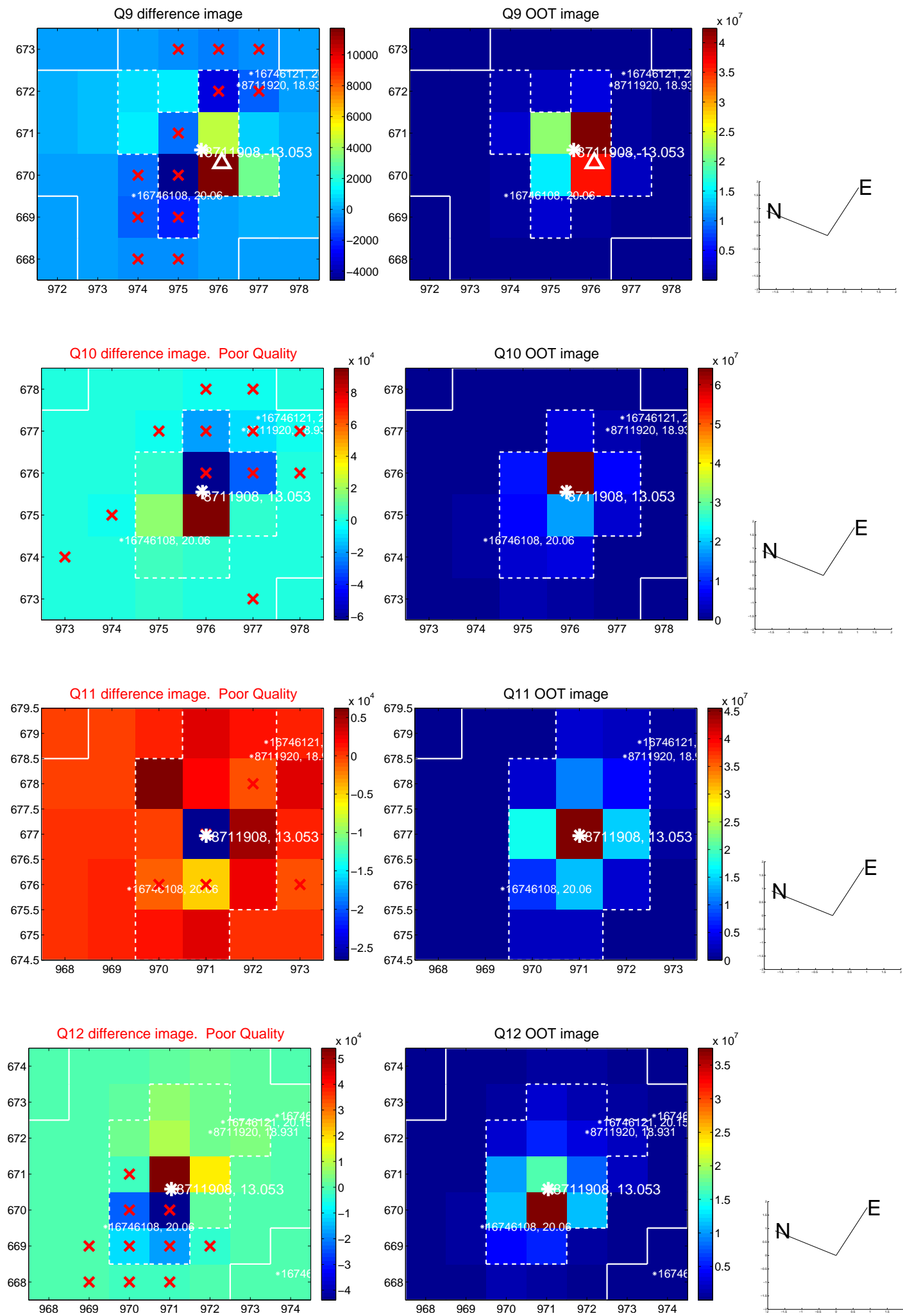


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

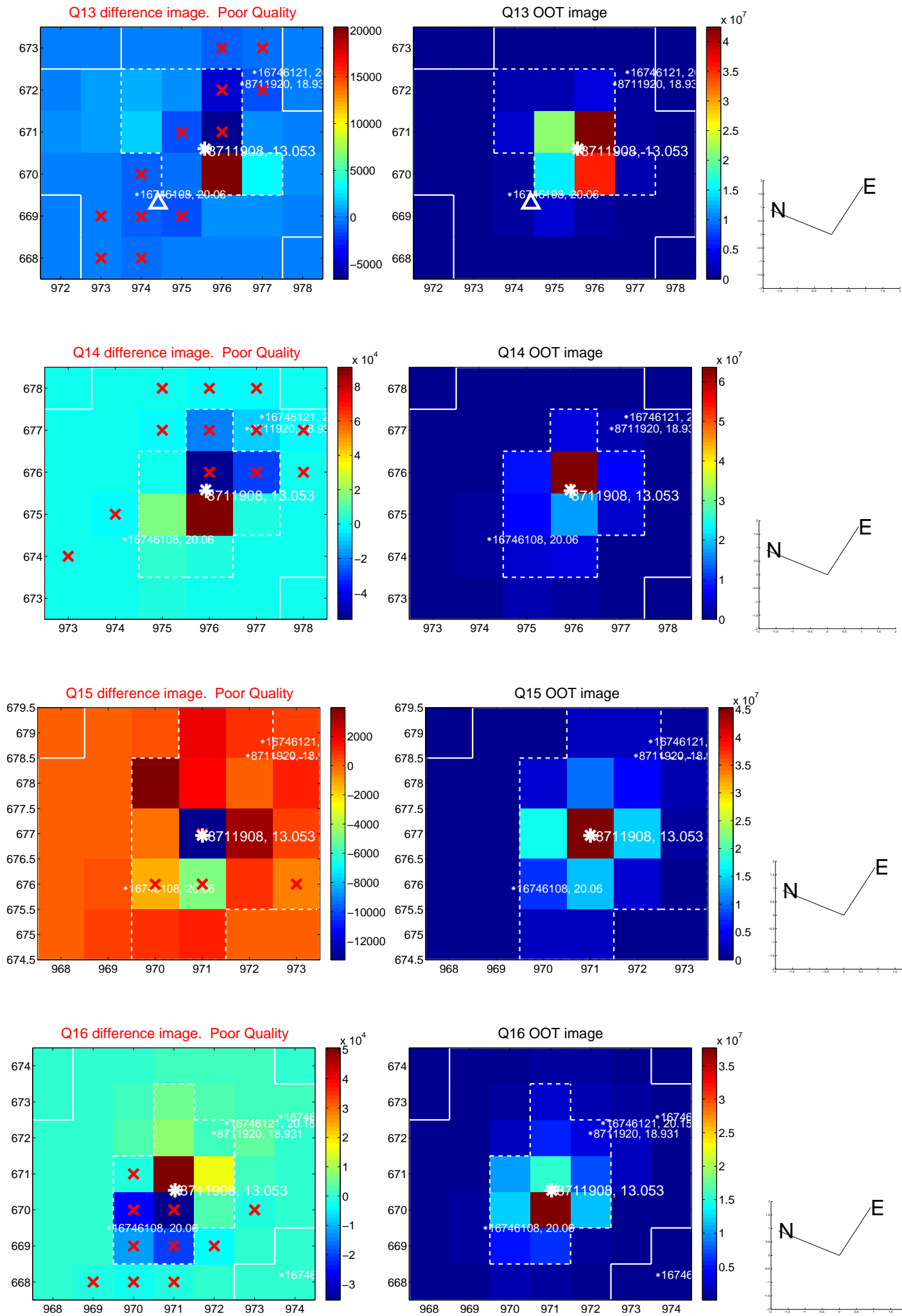




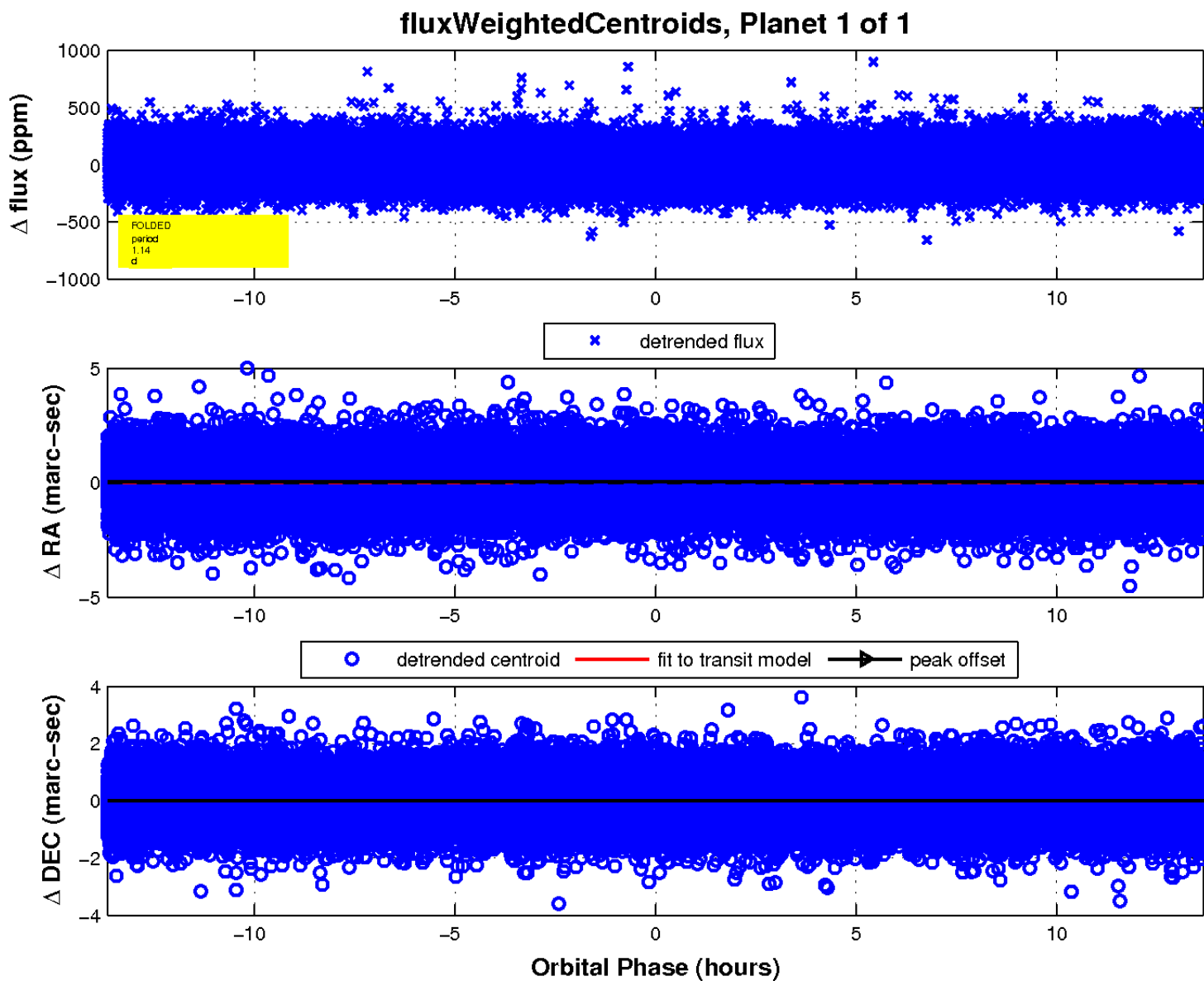
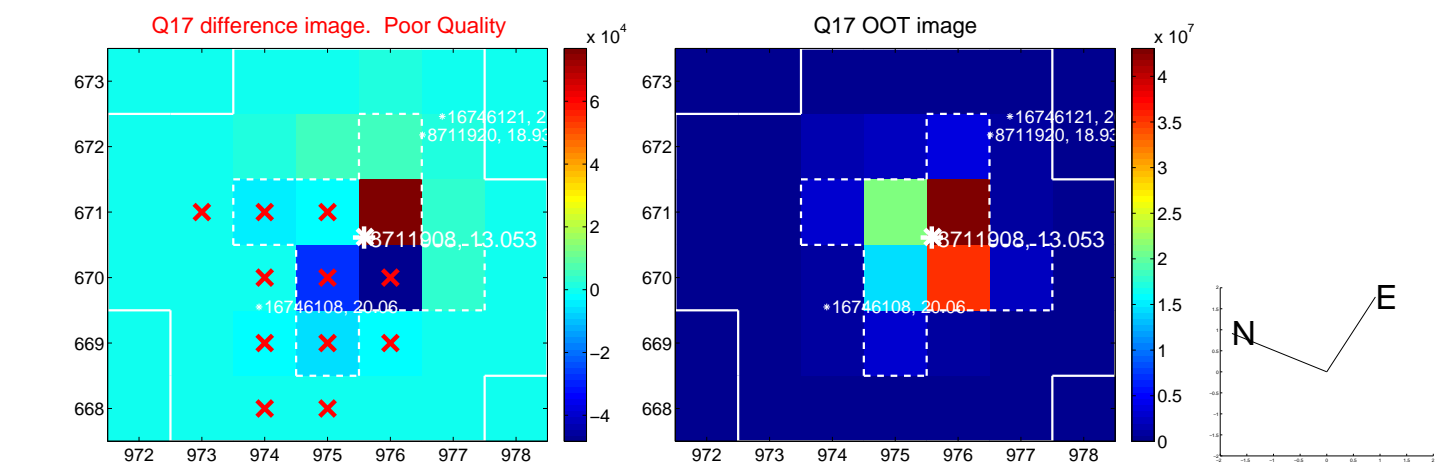
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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.



UKIRT Image

