

# KIC 006460857

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006460857-01	OBS	No	0.837315	131.908879	30.6	3.745	8.5	7.9	4.57	6327	2.96	65411.02

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006460857-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT

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

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

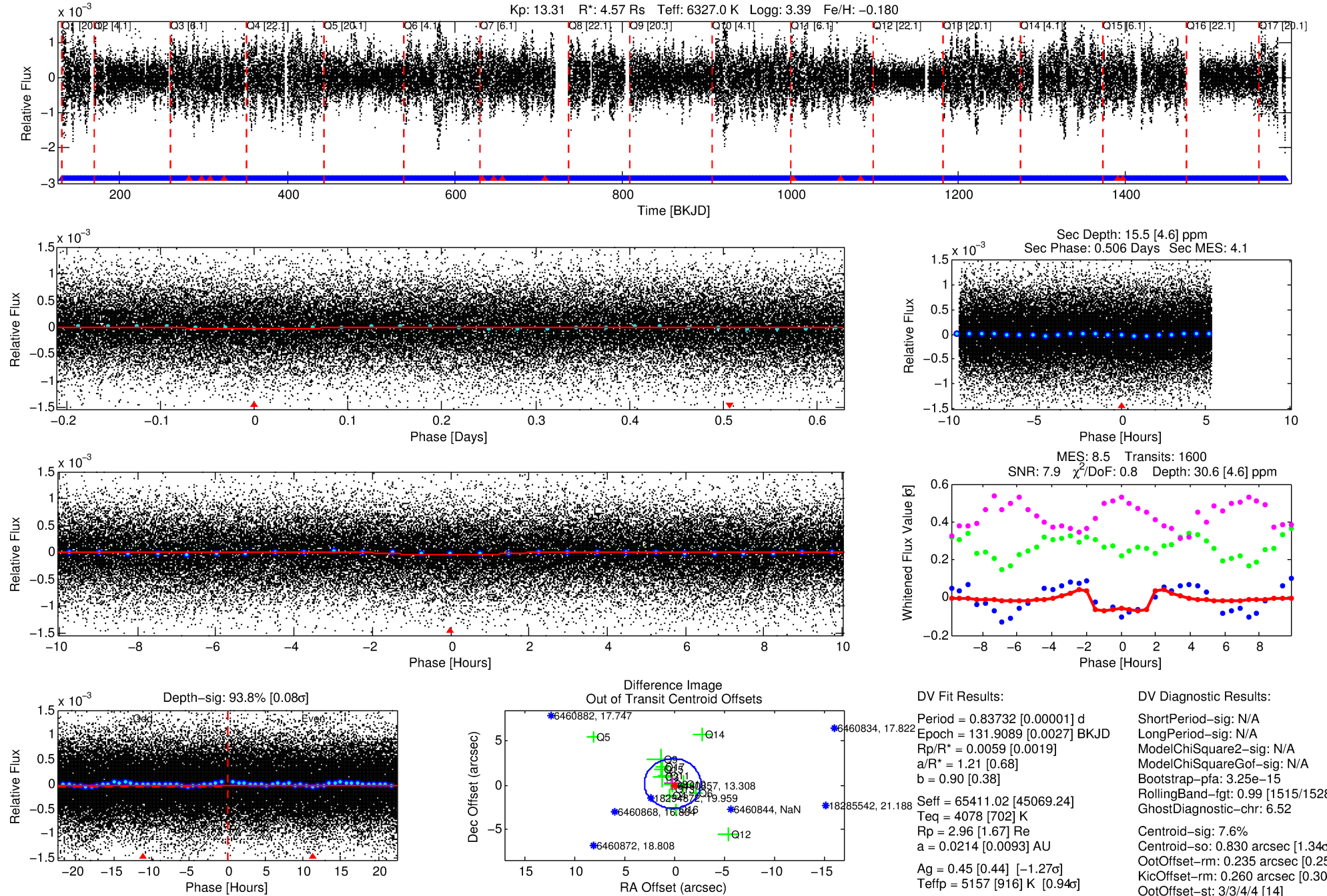
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 006460857-01

No Significant Match Found

# DV One-Page Summary

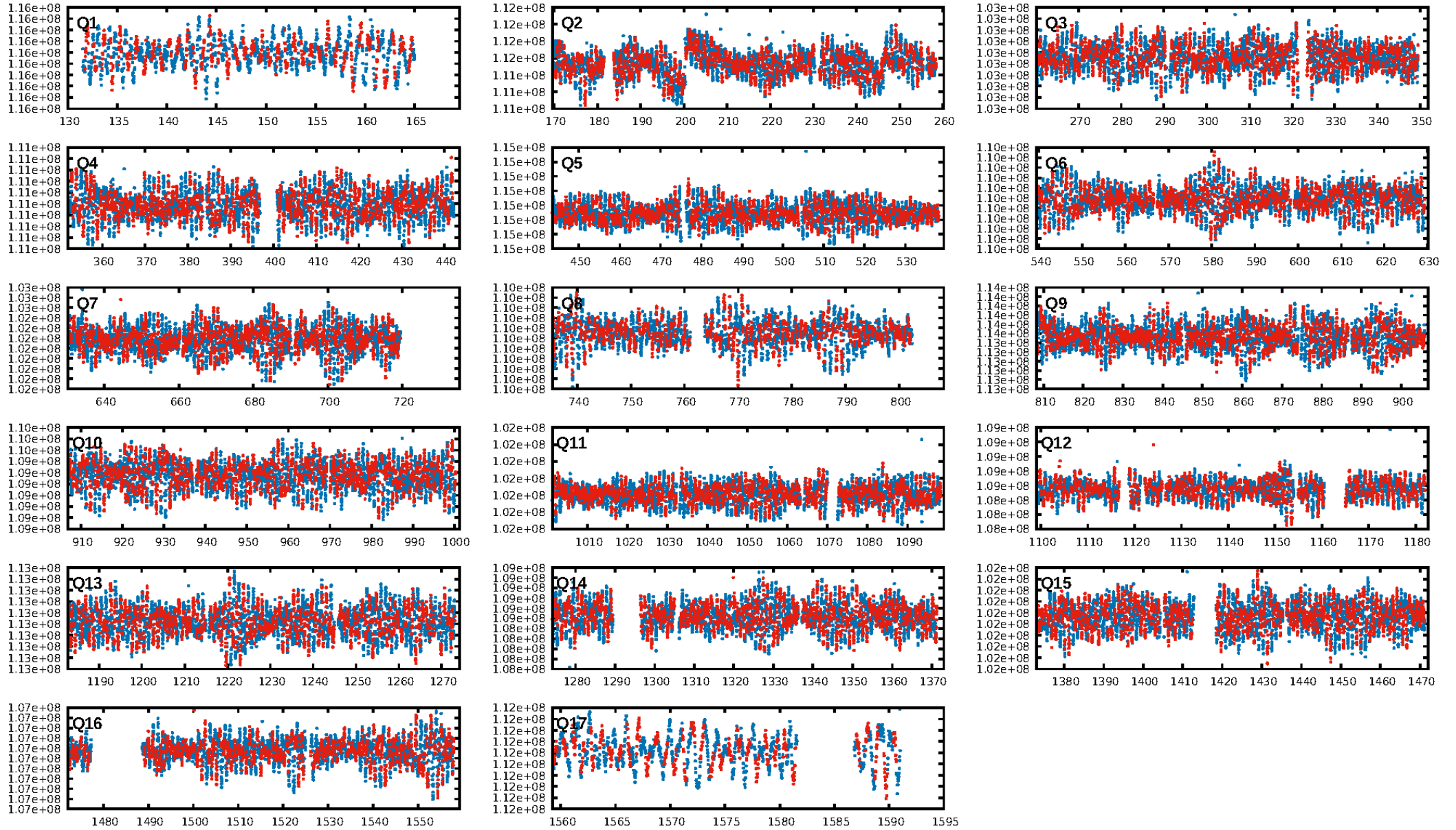
KIC: 6460857 Candidate: 1 of 1 Period: 0.837 d



Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 17:03:09 Z

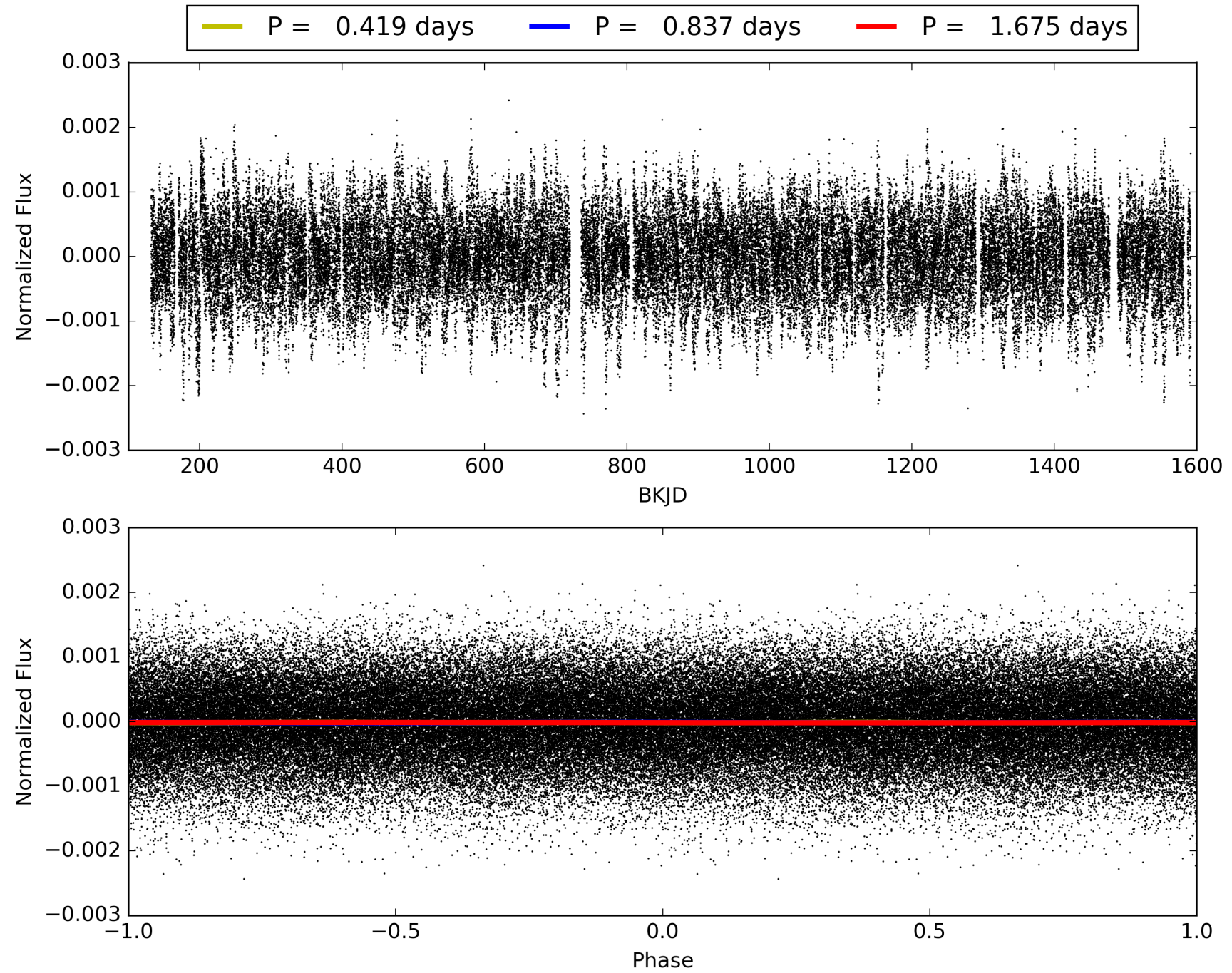
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 006460857-01, PDC Light Curves



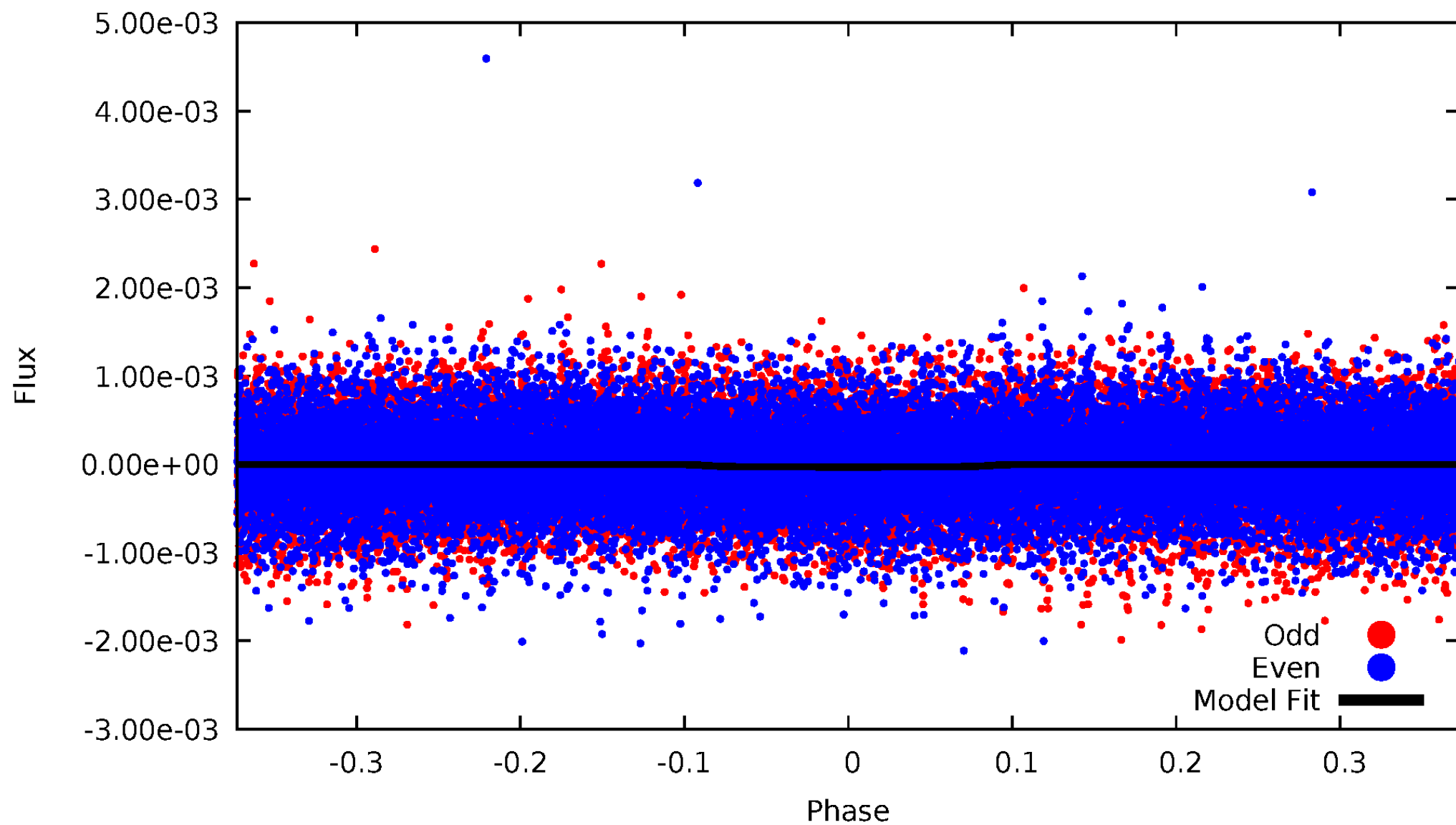


TCE 006460857-01



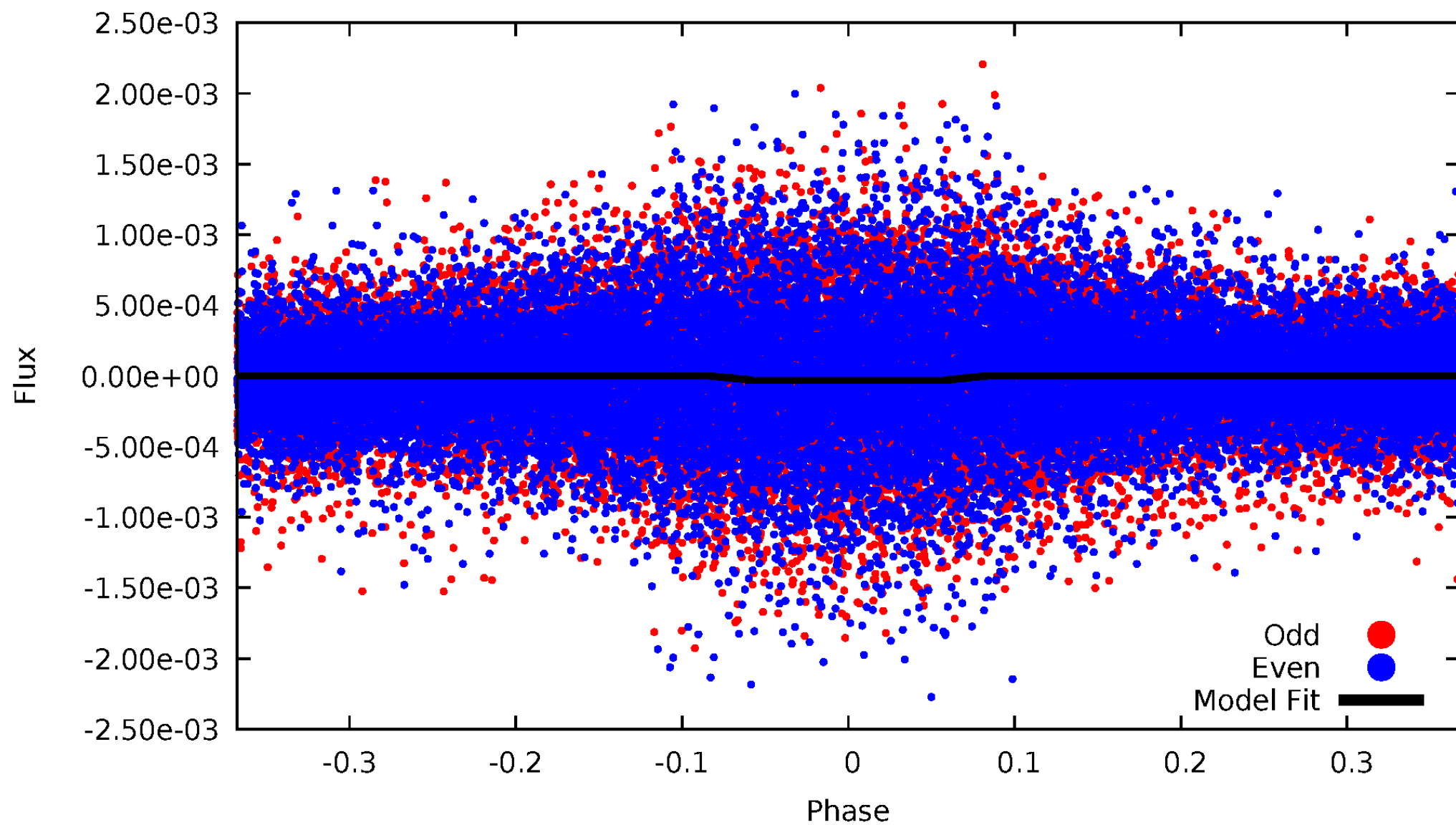
# DV Odd/Even

TCE 006460857-01

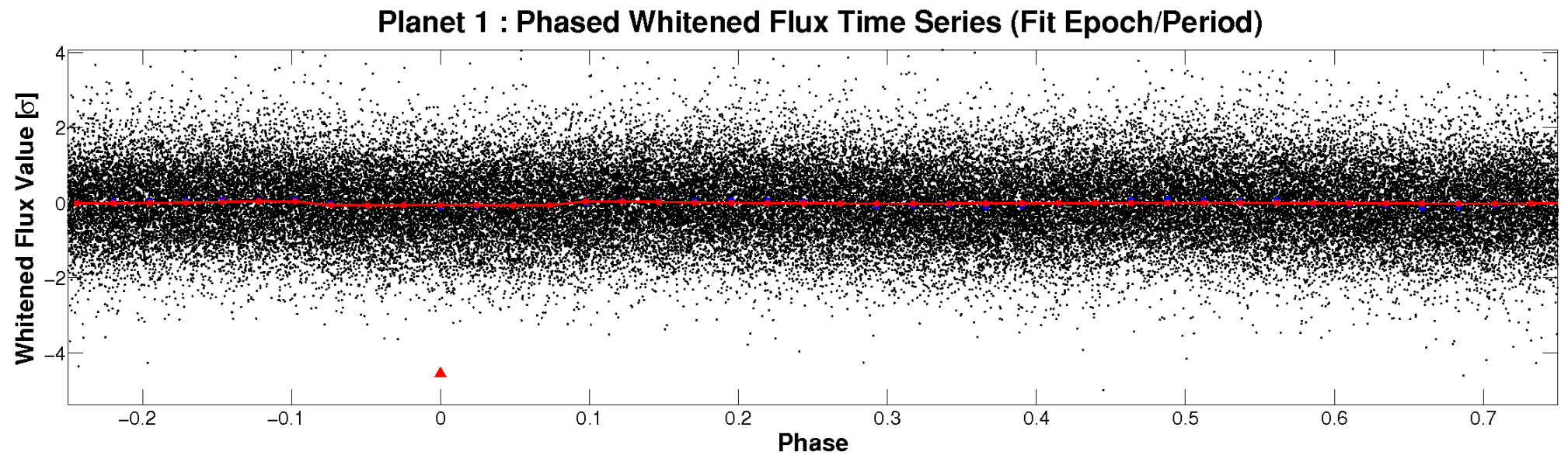
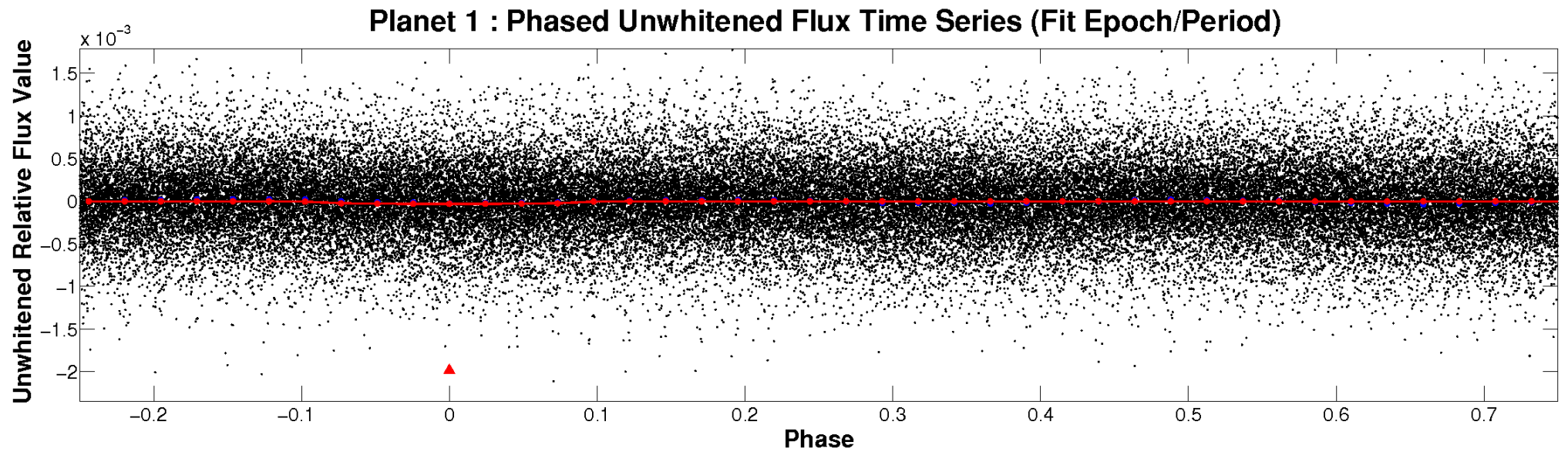


# ALT Odd/Even

TCE 006460857-01



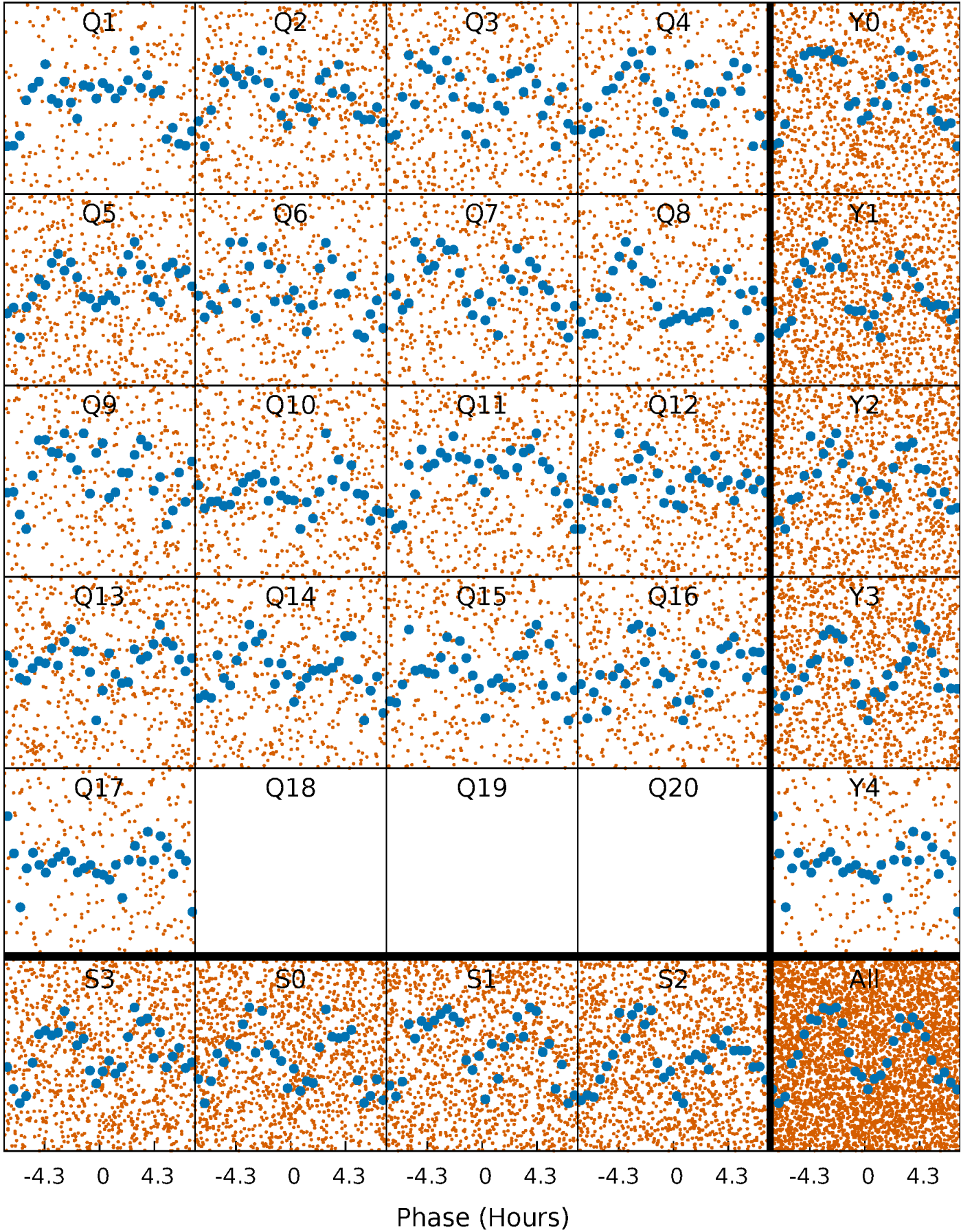
# Non-Whitened Vs. Whitened Light Curve





# PDC Quarter-Phased Transit Curves

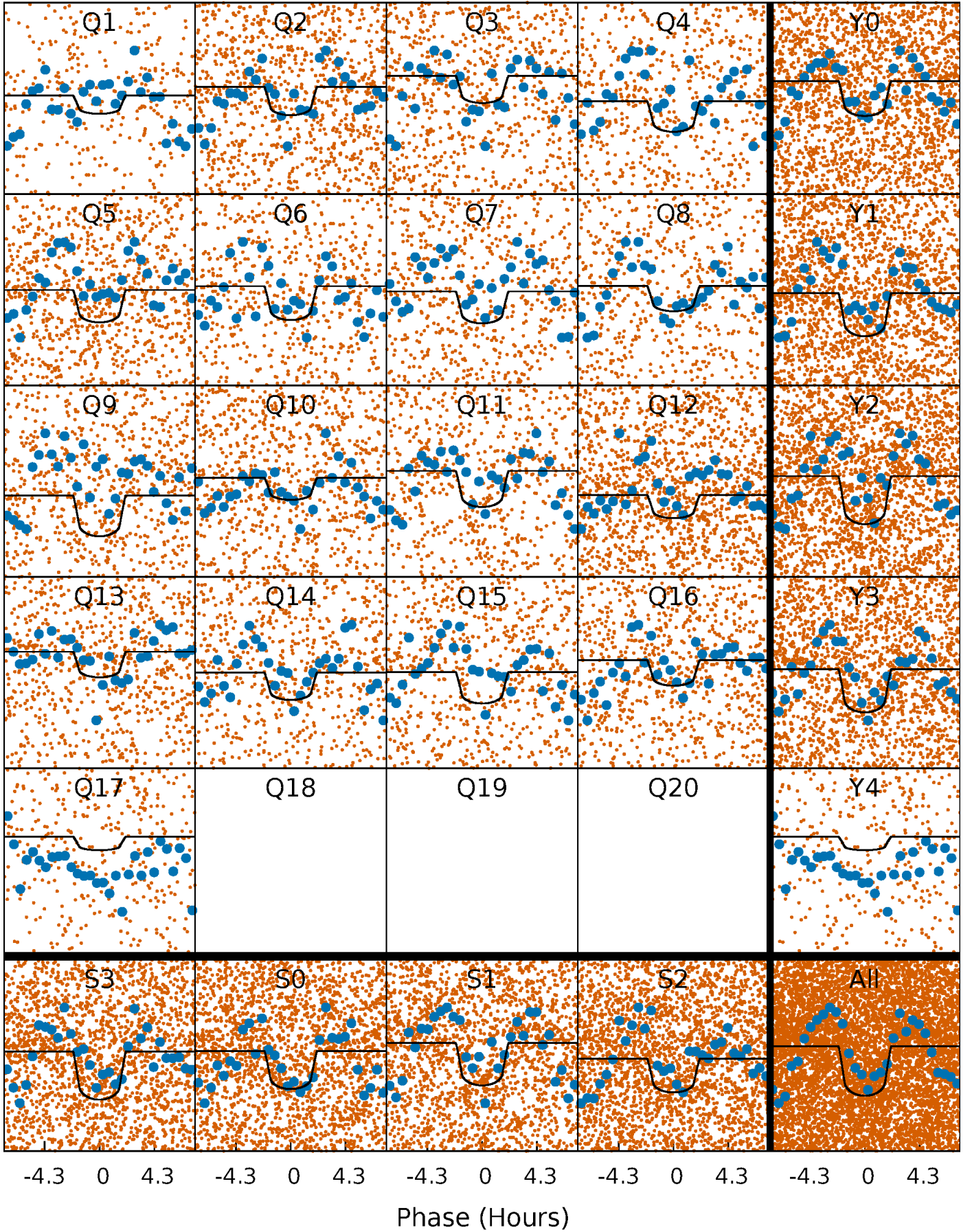
TCE 006460857-01   P= 0.837315 Days    $T_0=131.908879$  (BKJD)





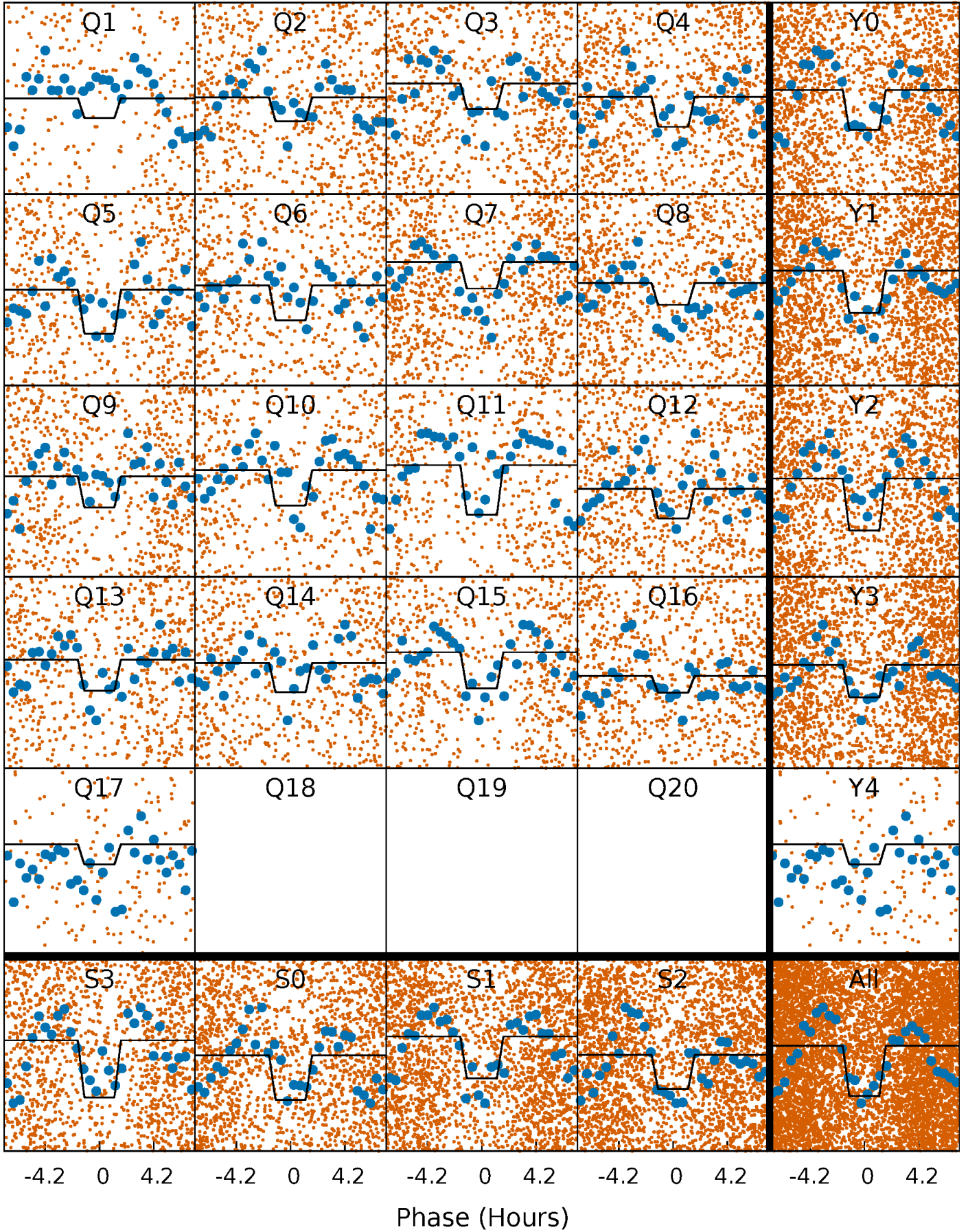
# DV Quarter-Phased Transit Curves

TCE 006460857-01   P= 0.837315 Days    $T_0=131.908879$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

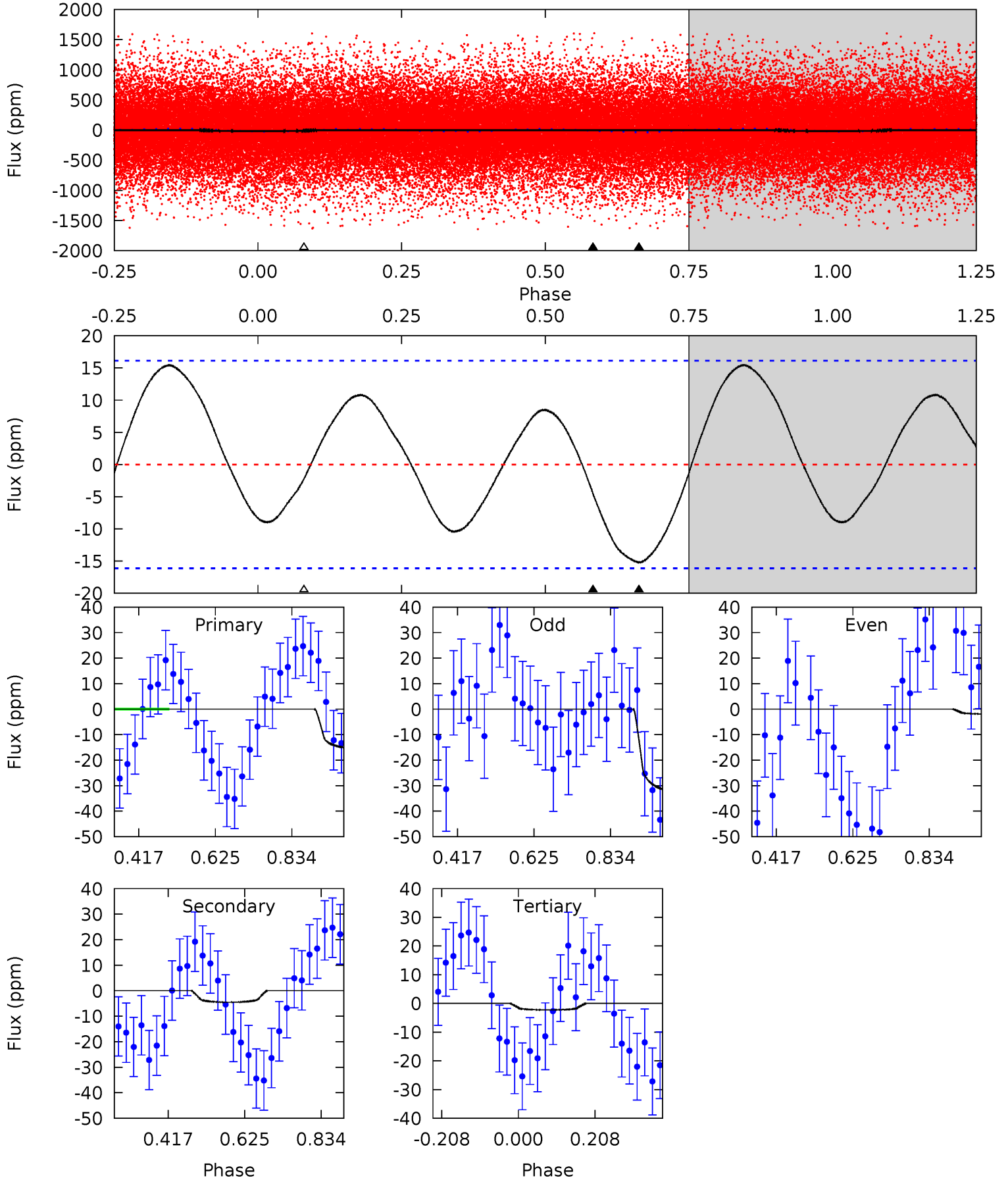
TCE 006460857-01 P= 0.837326 Days  $T_0=131.907105$  (BKJD)



# DV Model-Shift Uniqueness Test

006460857-01, P = 0.837315 Days, E = 131.071564 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
4.17	1.24	0.62	0	4.41	1.26	2.03	3.55	4.17	0.62	1.24	4.12	1.47	0.50	1.25

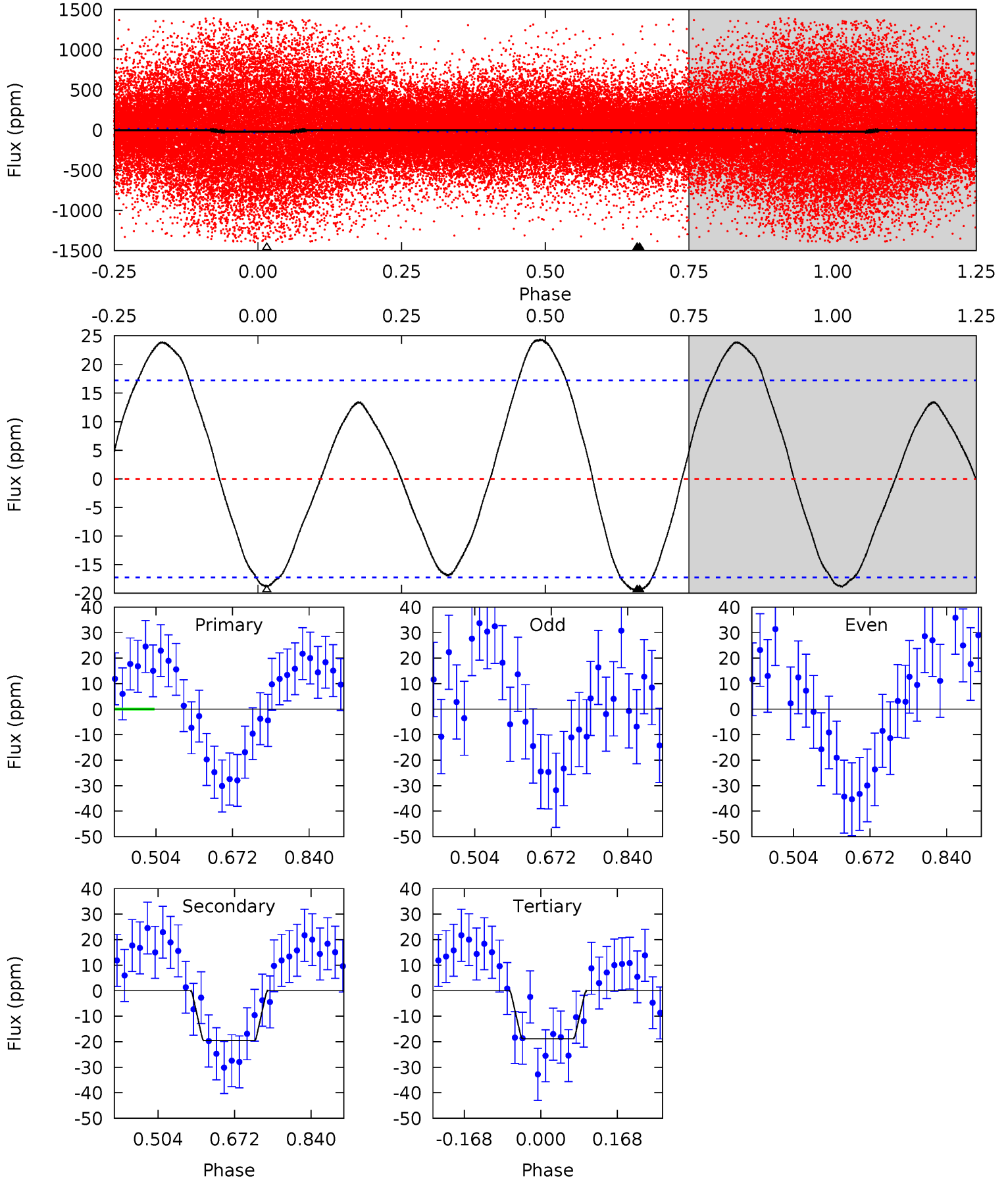




# Alt Model-Shift Uniqueness Test

006460857-01, P = 0.837326 Days, E = 131.069779 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
5.02	5.05	4.87	0	4.45	1.38	3.37	0.15	5.02	0.17	5.05	2.18	3.35	0.55	0.92





### Stellar Parameters For KIC 006460857

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$6327^{+195}_{-195}$	$3.389^{+0.392}_{-0.073}$	$-0.180^{+0.350}_{-0.300}$	$4.568^{+0.668}_{-2.139}$	$1.867^{+0.117}_{-0.470}$	$0.028^{+0.096}_{-0.007}$
	+3%/-3%	+12%/-2%	+194%/-167%	+15%/-47%	+6%/-25%	+349%/-25%
Source	PHO1	FLK73	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 006460857-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-5\pm4$	$2.67^{+0.91}_{-1.03}$	$5518^{+379}_{-615}$	$-4030^{+7989}_{-614}$	$0.150^{+0.300}_{-0.125}$
Alt.	$-20\pm4$	$2.38^{+1.15}_{-0.86}$	$5554^{+347}_{-602}$	$5151^{+1673}_{-1347}$	$0.826^{+1.291}_{-0.437}$

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

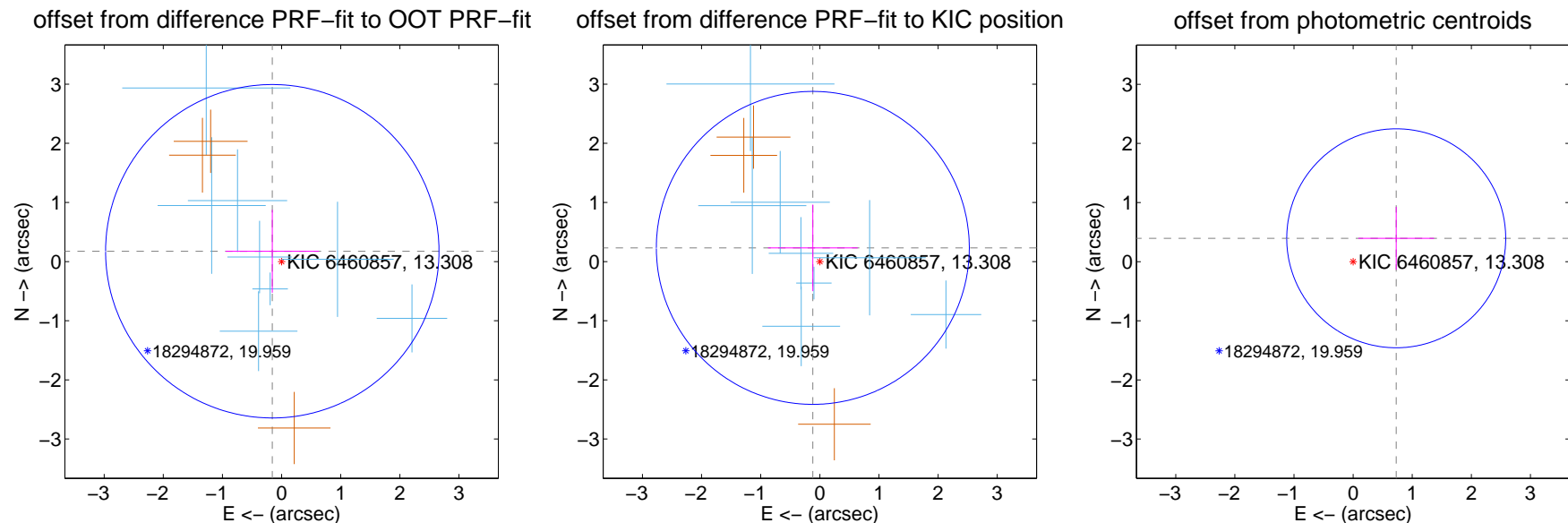
## DV Centroid Data

Supplemental centroid analysis for 006460857-01. Kepler magnitude: 13.31. Transit SNR 7.89

There are 8 quarters with good PRF difference image offsets

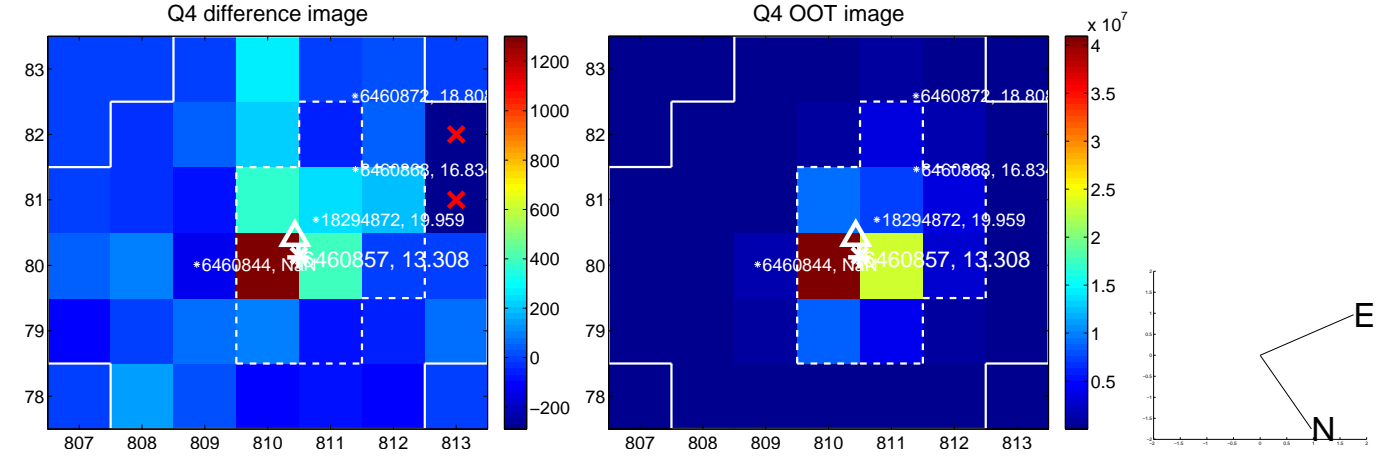
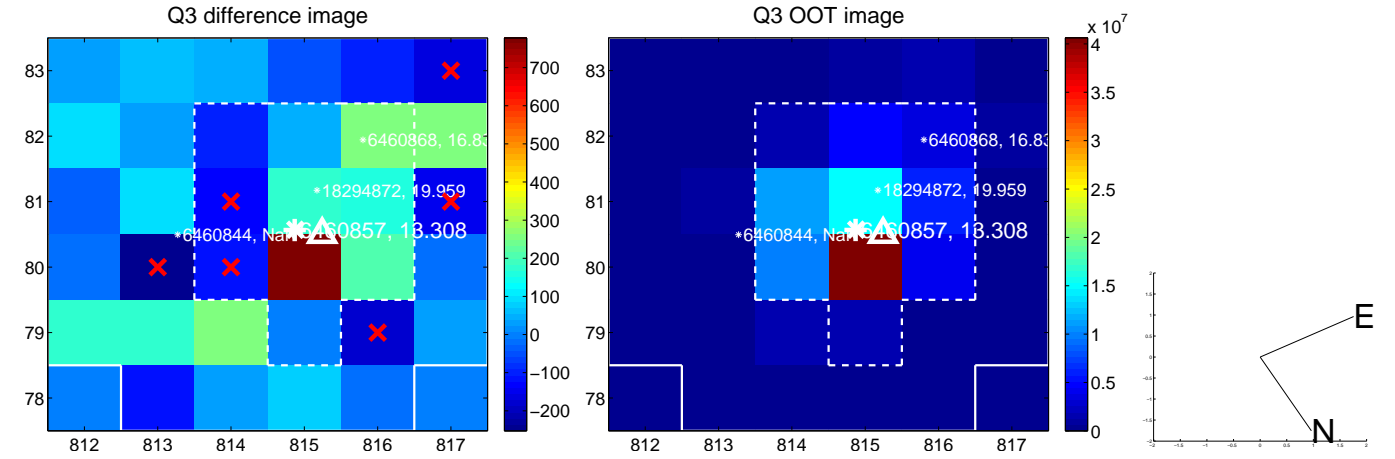
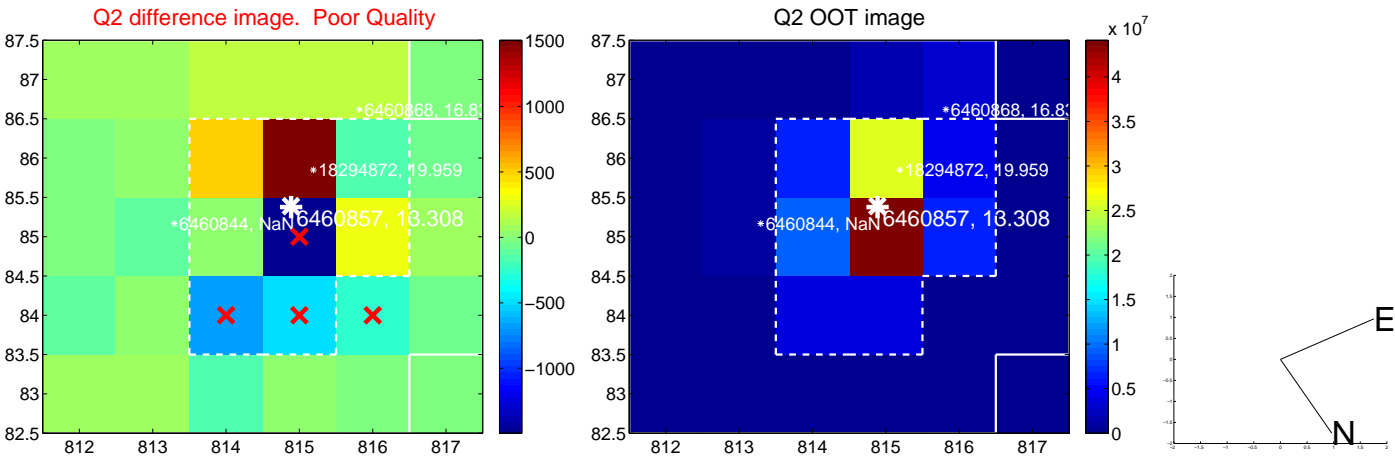
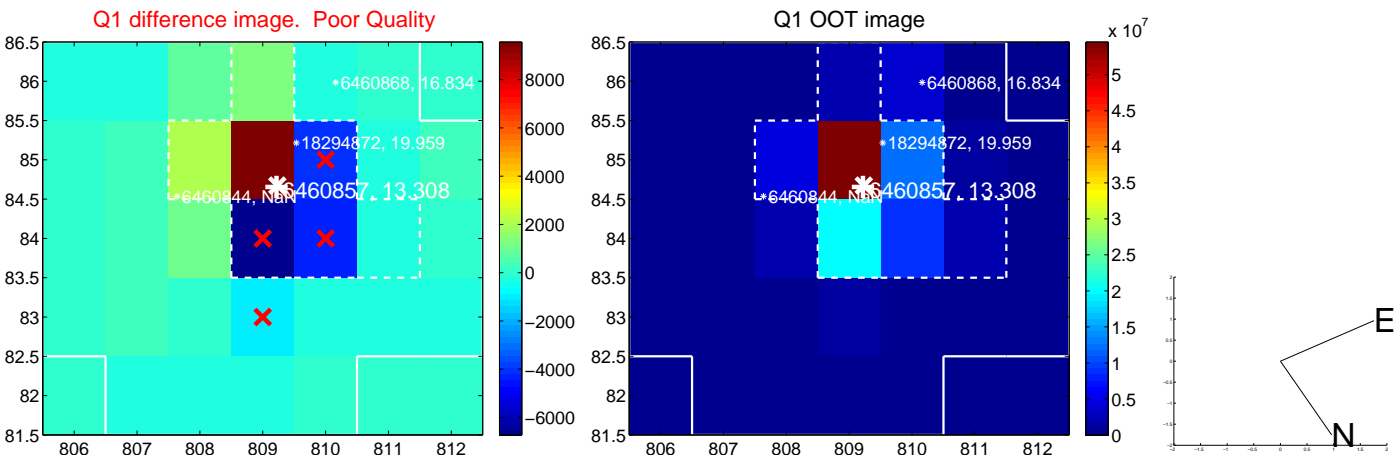
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.235 \pm 0.940$	0.25	$0.157 \pm 0.790$	$0.175 \pm 0.701$
PRF-fit source offset from KIC position	$0.260 \pm 0.882$	0.30	$0.119 \pm 0.758$	$0.232 \pm 0.732$
photometric centroid source offset	$0.83 \pm 0.62$	1.34	$-0.73 \pm 0.64$	$0.40 \pm 0.53$

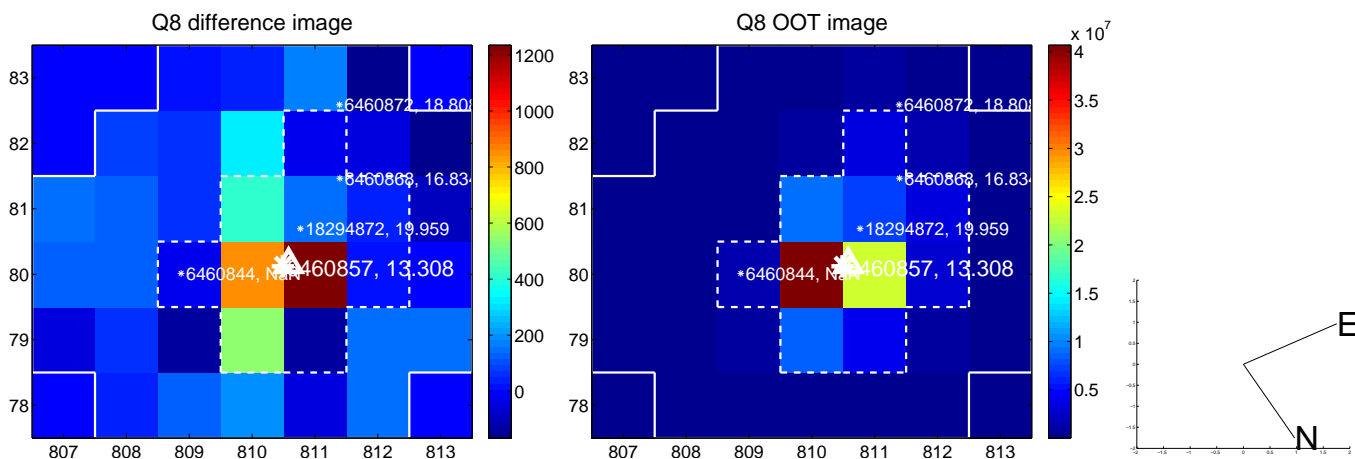
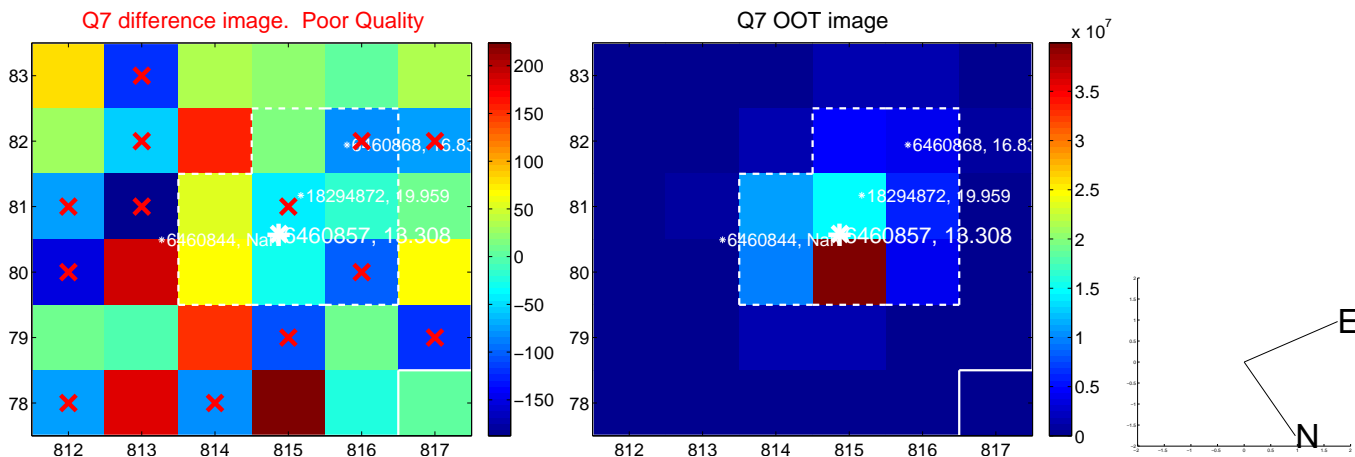
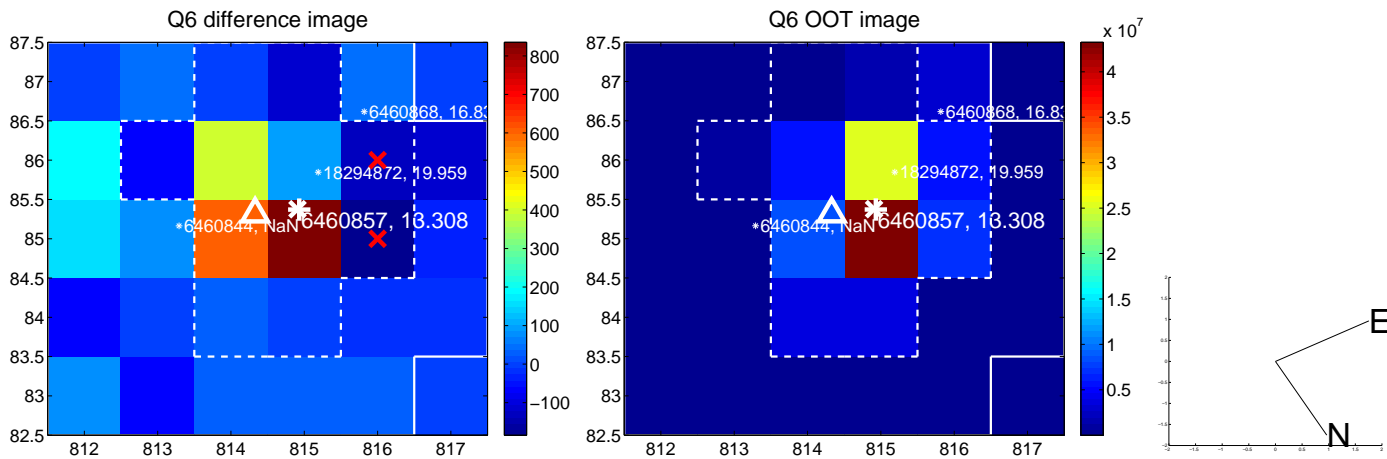
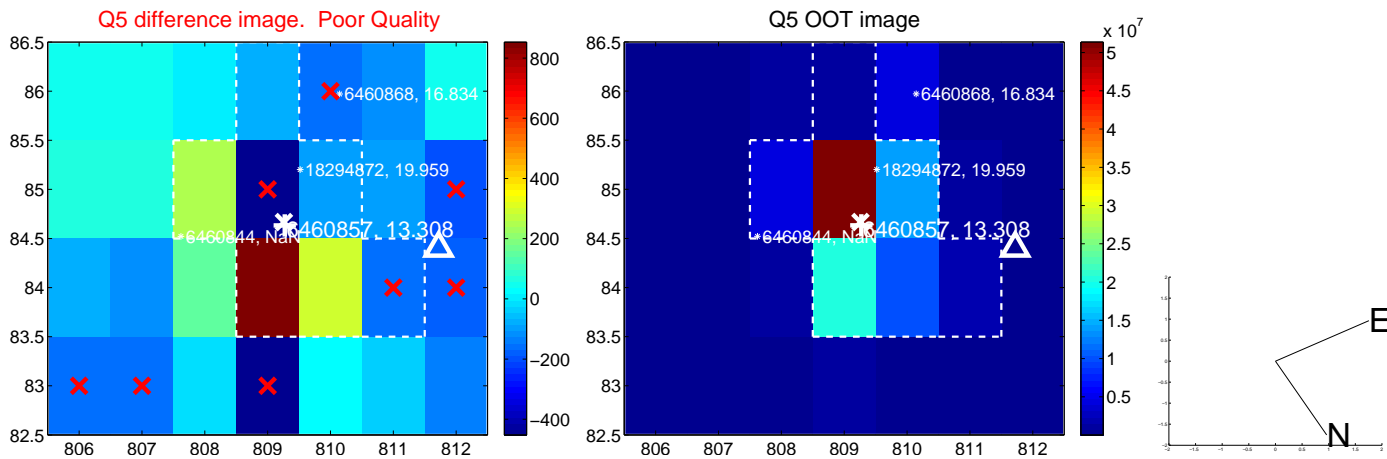


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

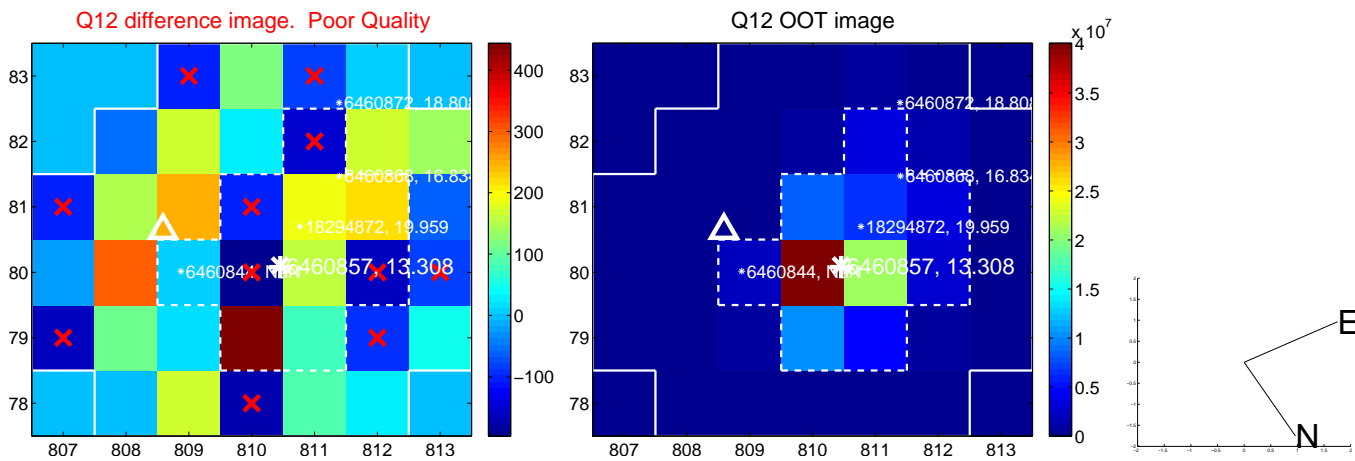
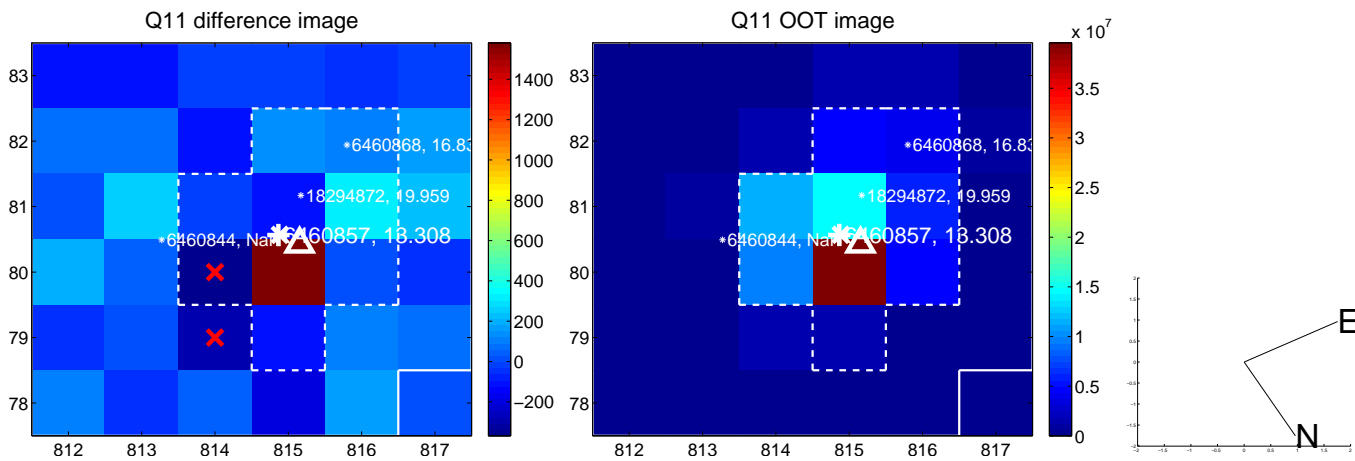
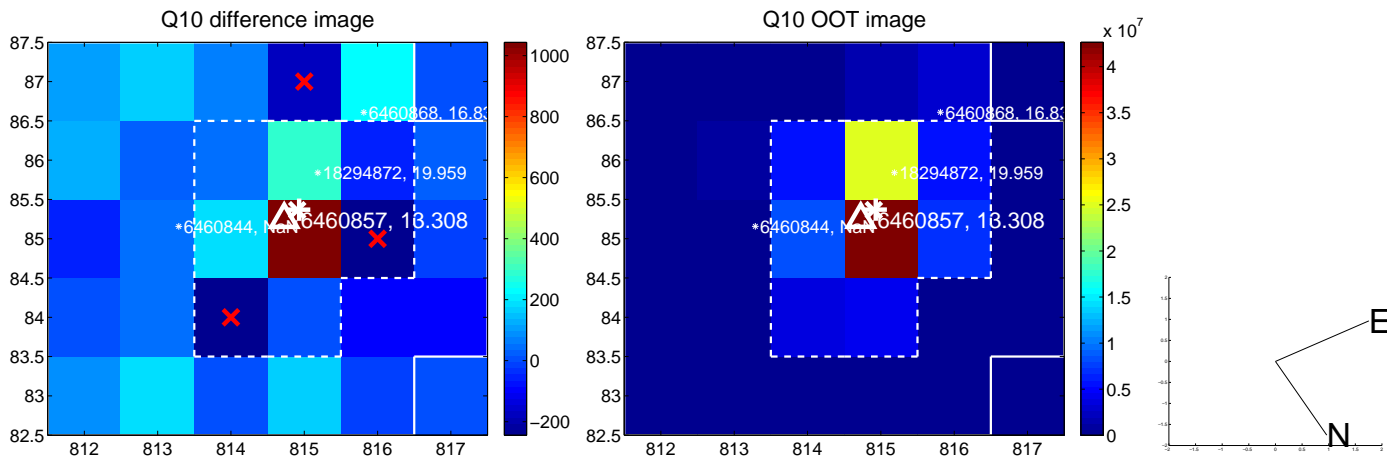
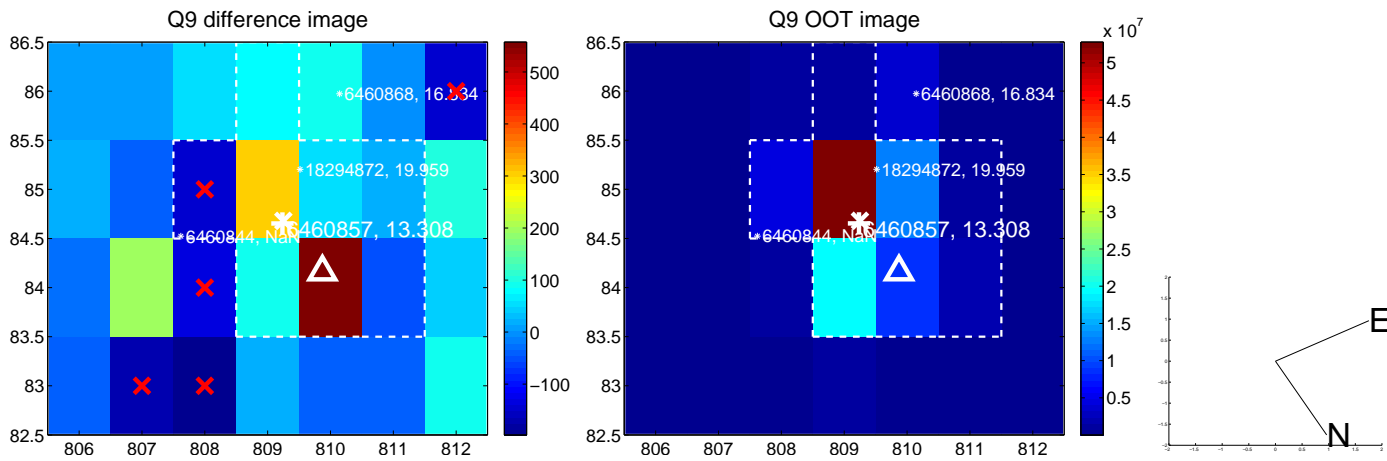


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

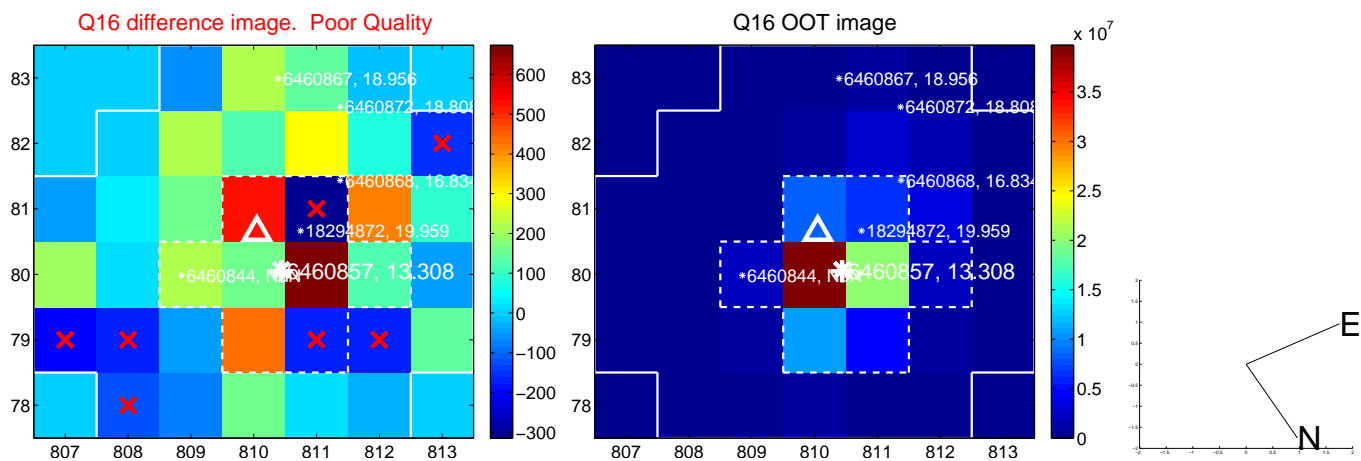
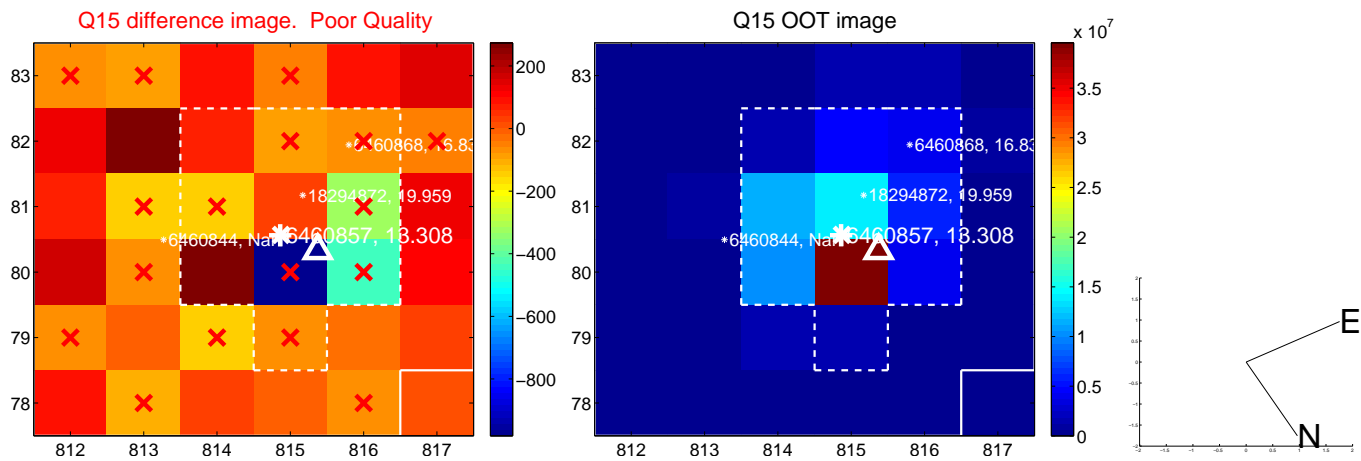
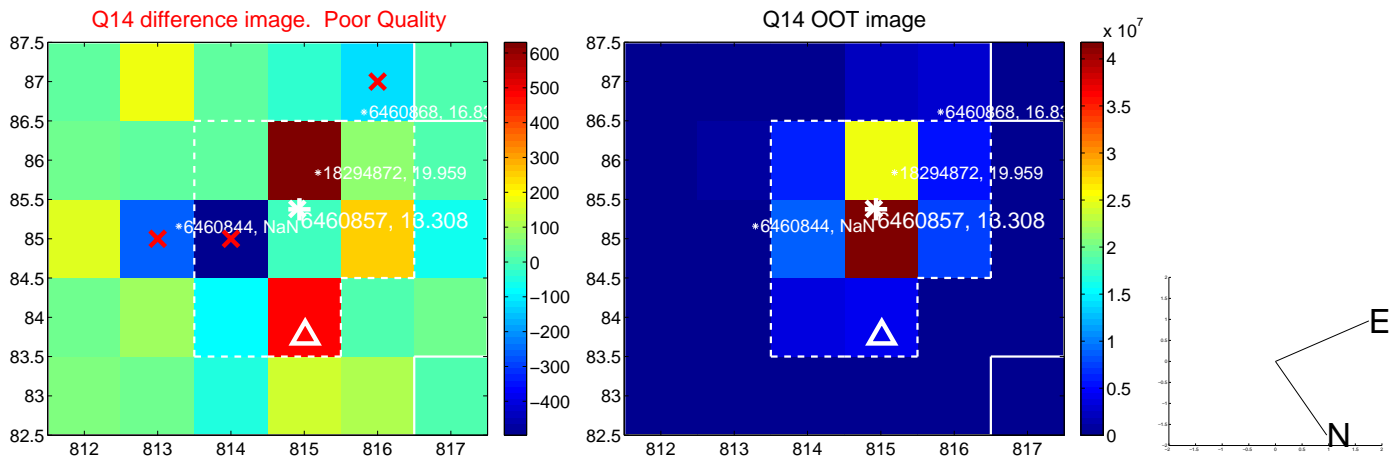
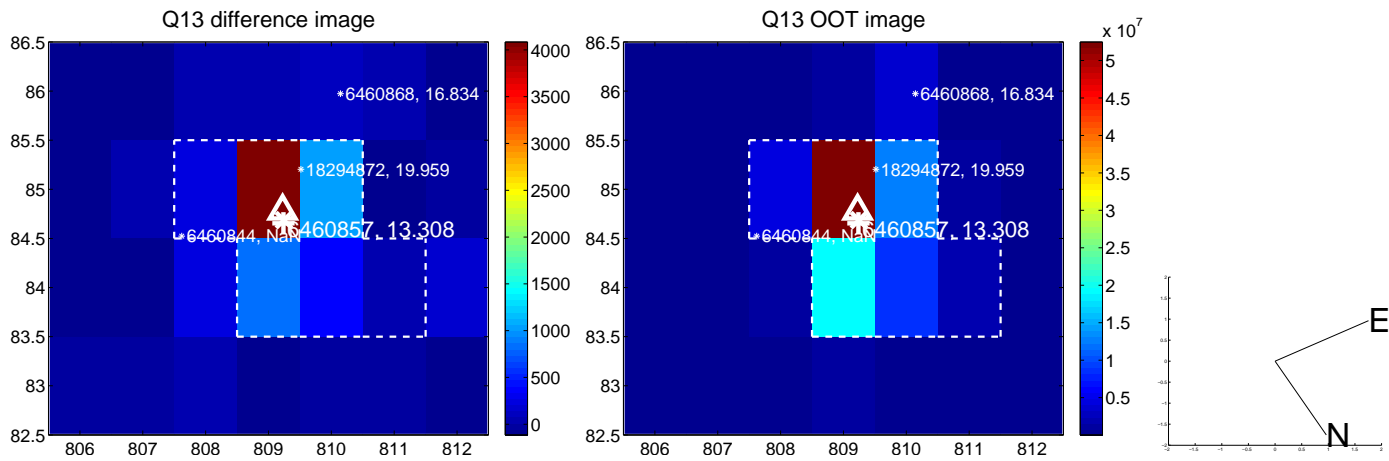




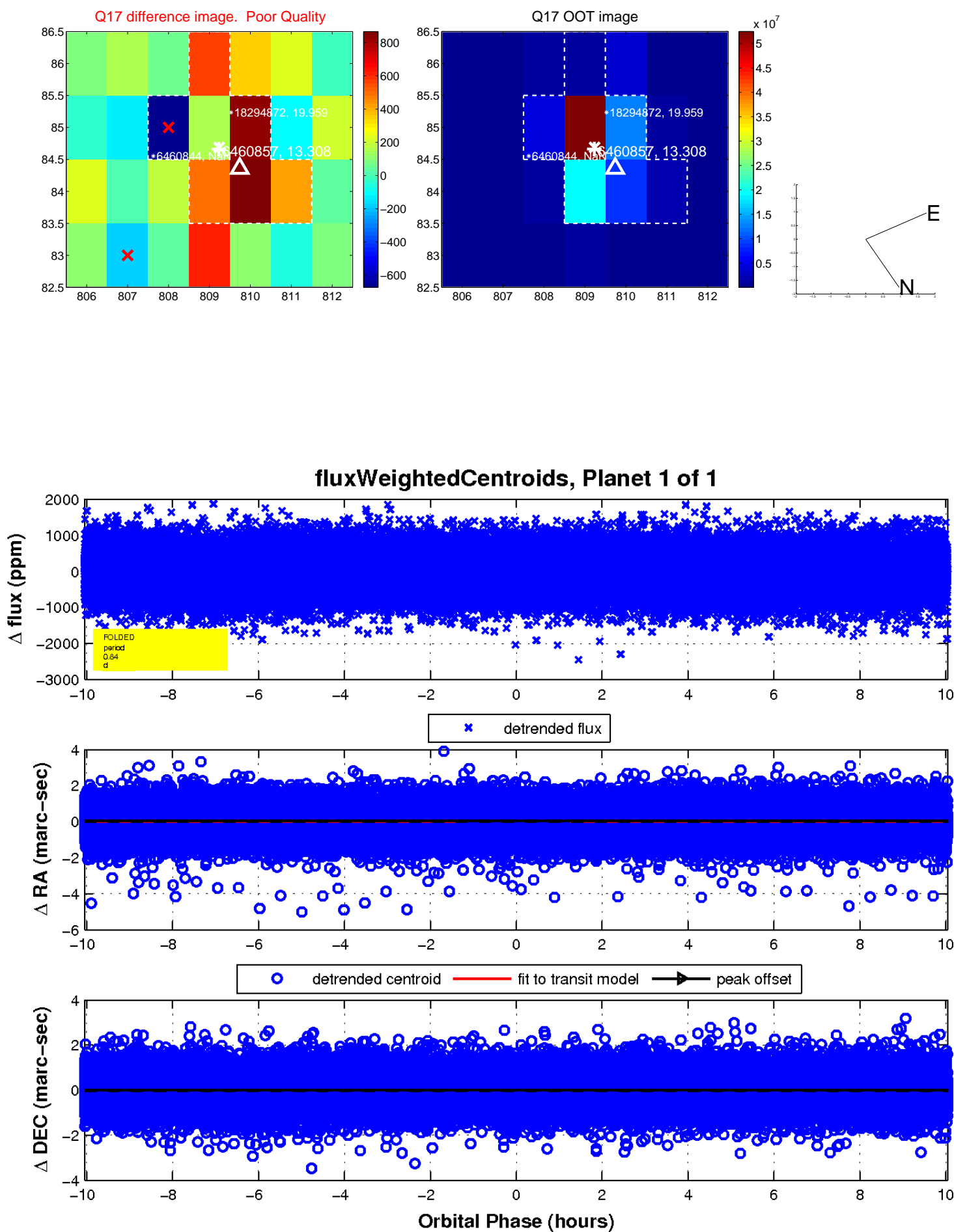
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

Declination

