

KIC 002018685

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})
002018685-01	OBS	No	4.214550	133.776690	60.4	24.066	9.8	11.6	1.19	6677	1.10	851.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002018685-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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

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

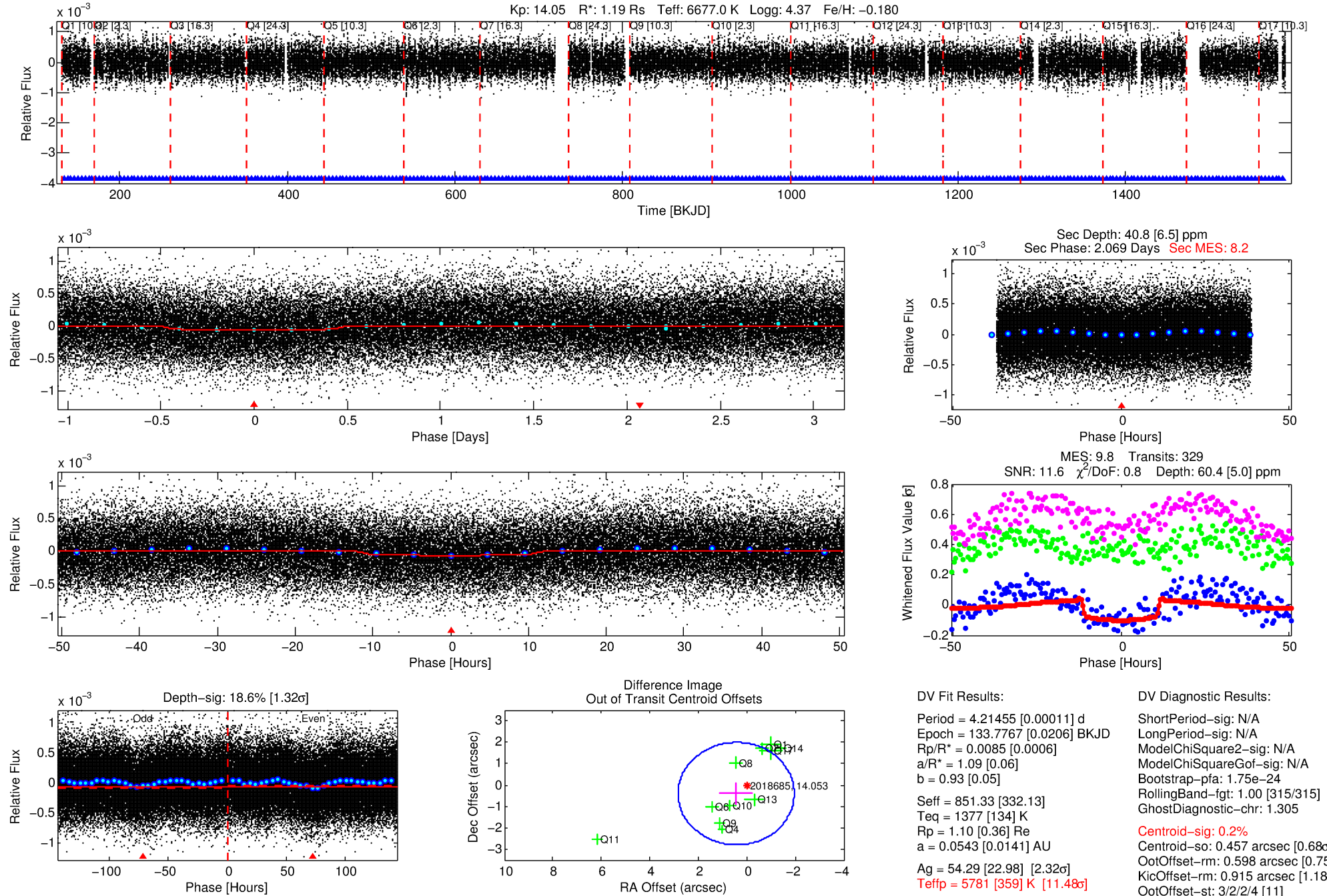
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002018685-01

No Significant Match Found

DV One-Page Summary

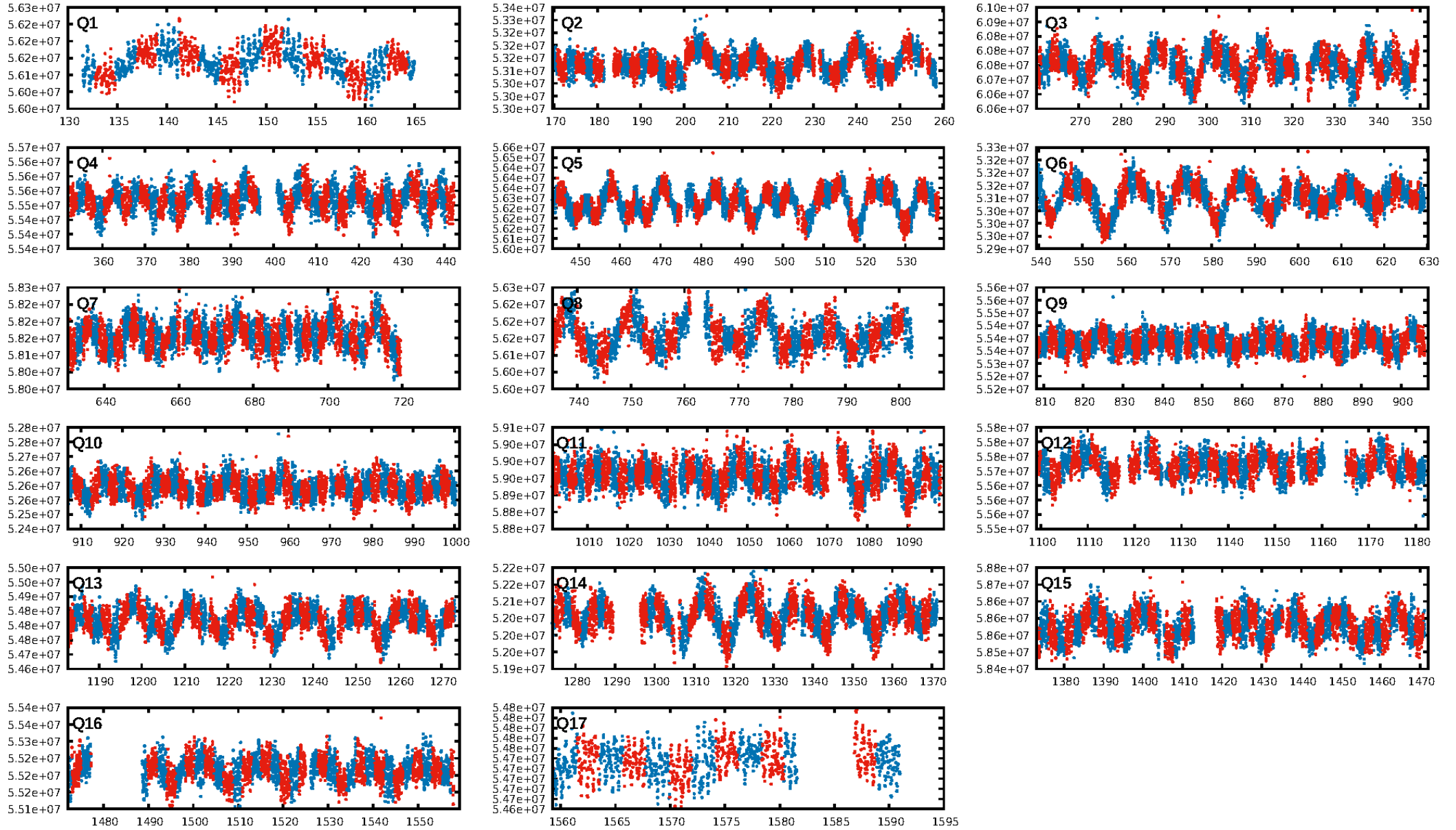
KIC: 2018685 Candidate: 1 of 1 Period: 4.215 d



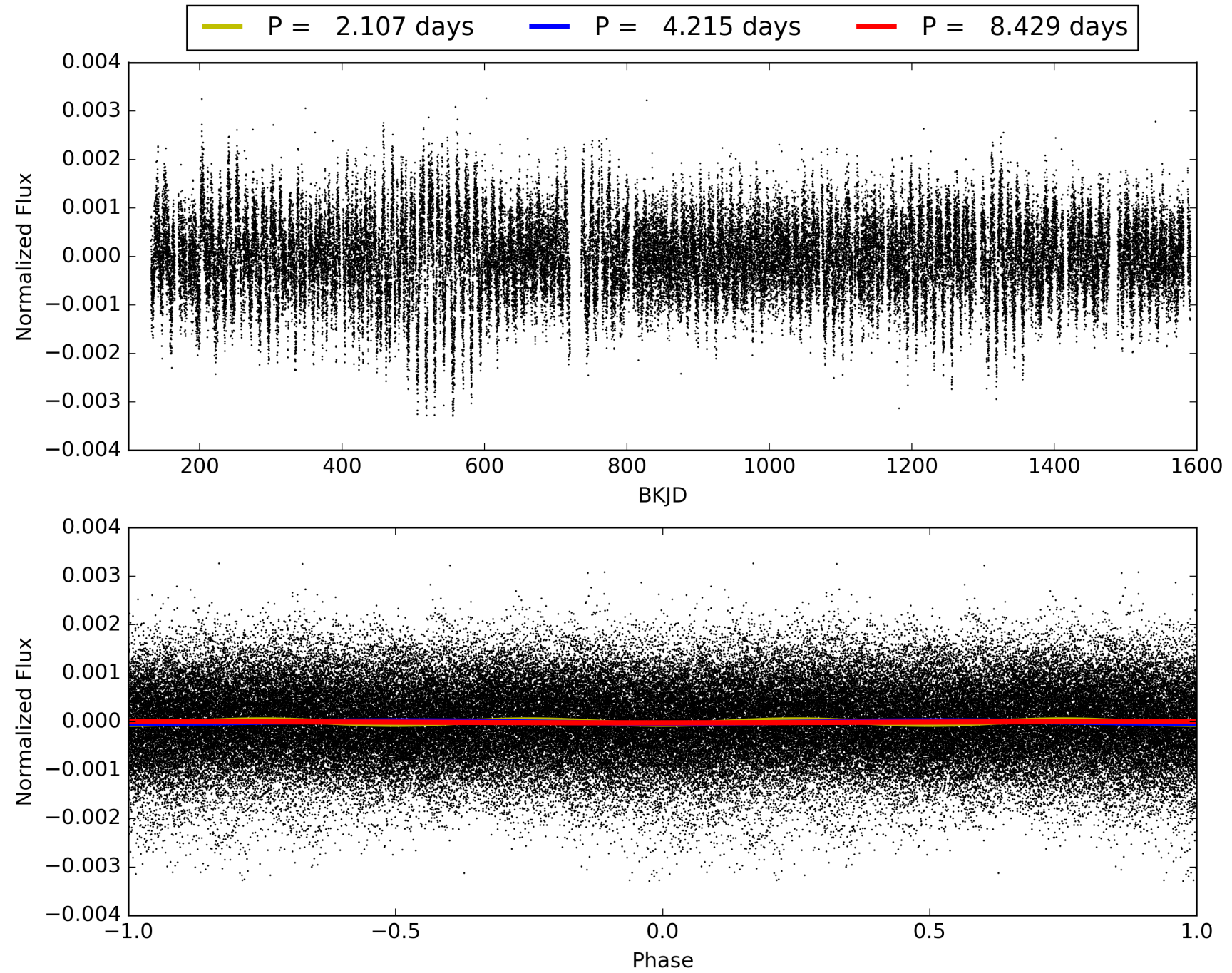
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 20:20:58 Z

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

TCE 002018685-01, PDC Light Curves

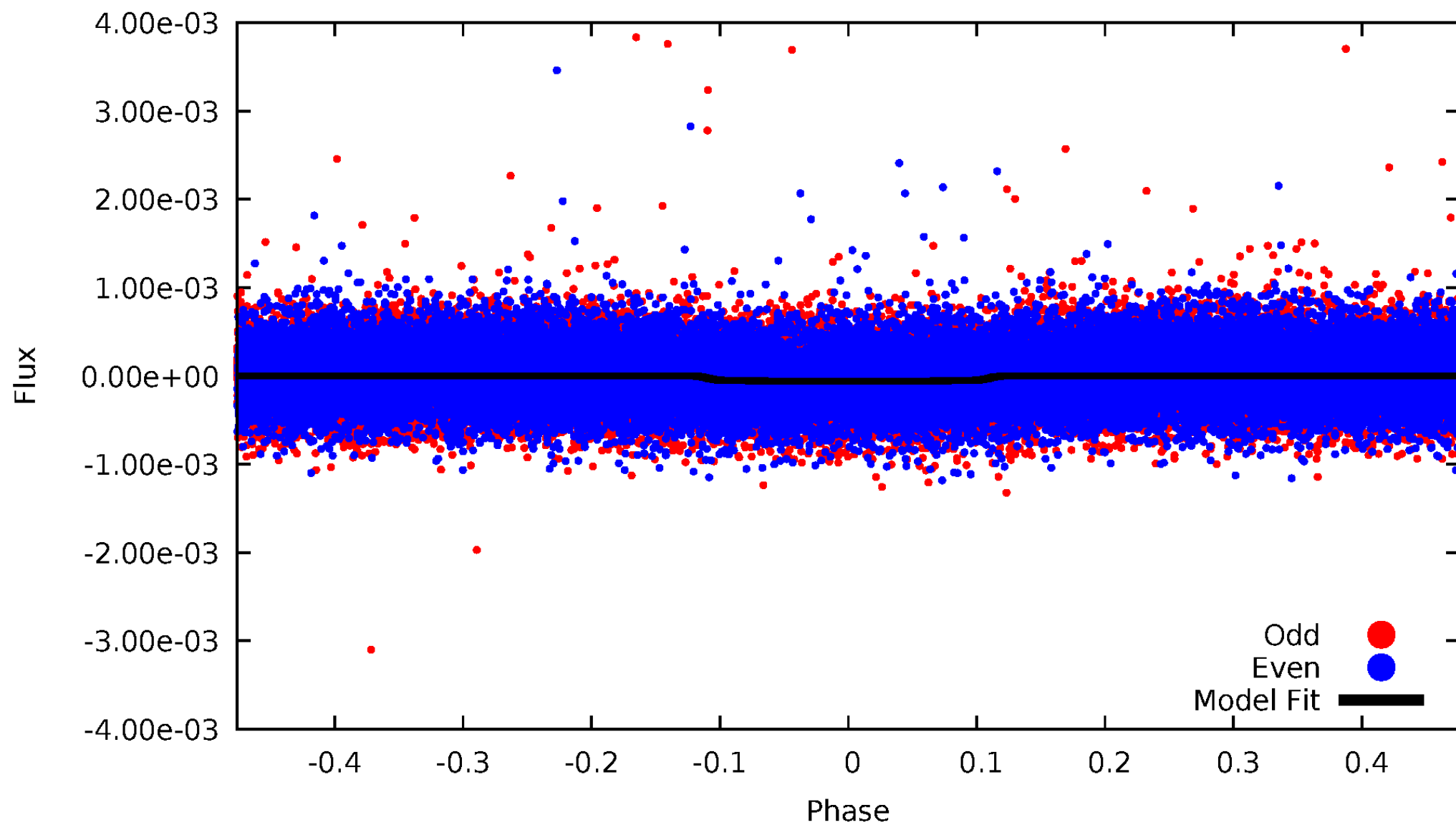


TCE 002018685-01



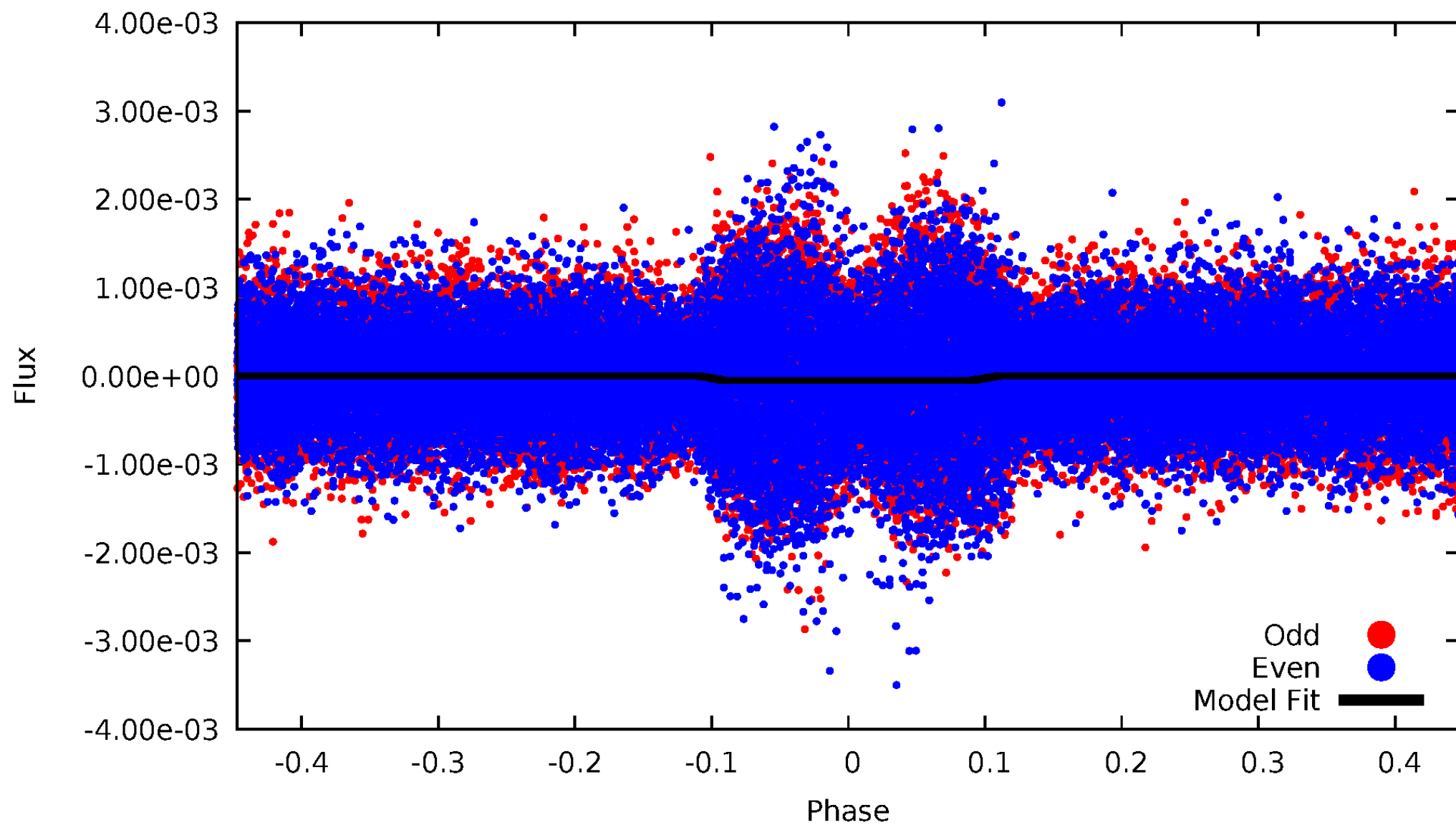
DV Odd/Even

TCE 002018685-01



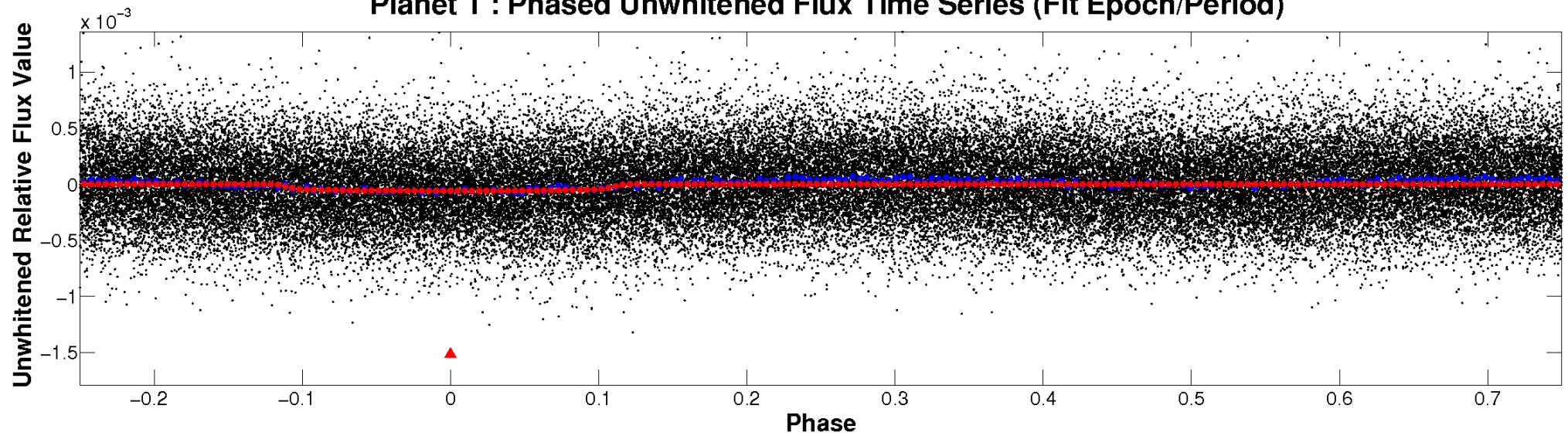
ALT Odd/Even

TCE 002018685-01

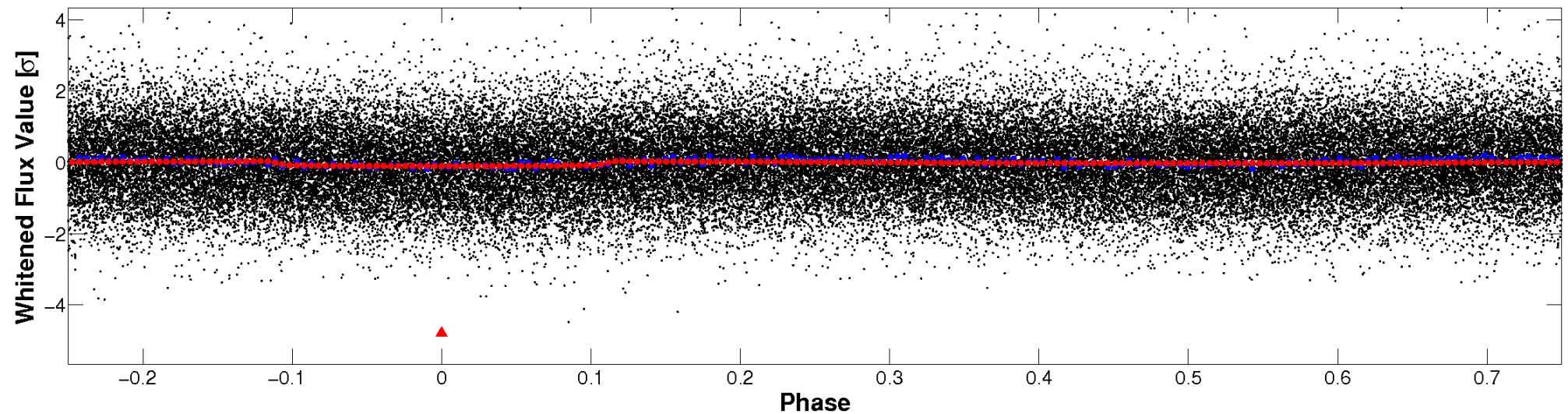


Non-Whitened Vs. Whitened Light Curve

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

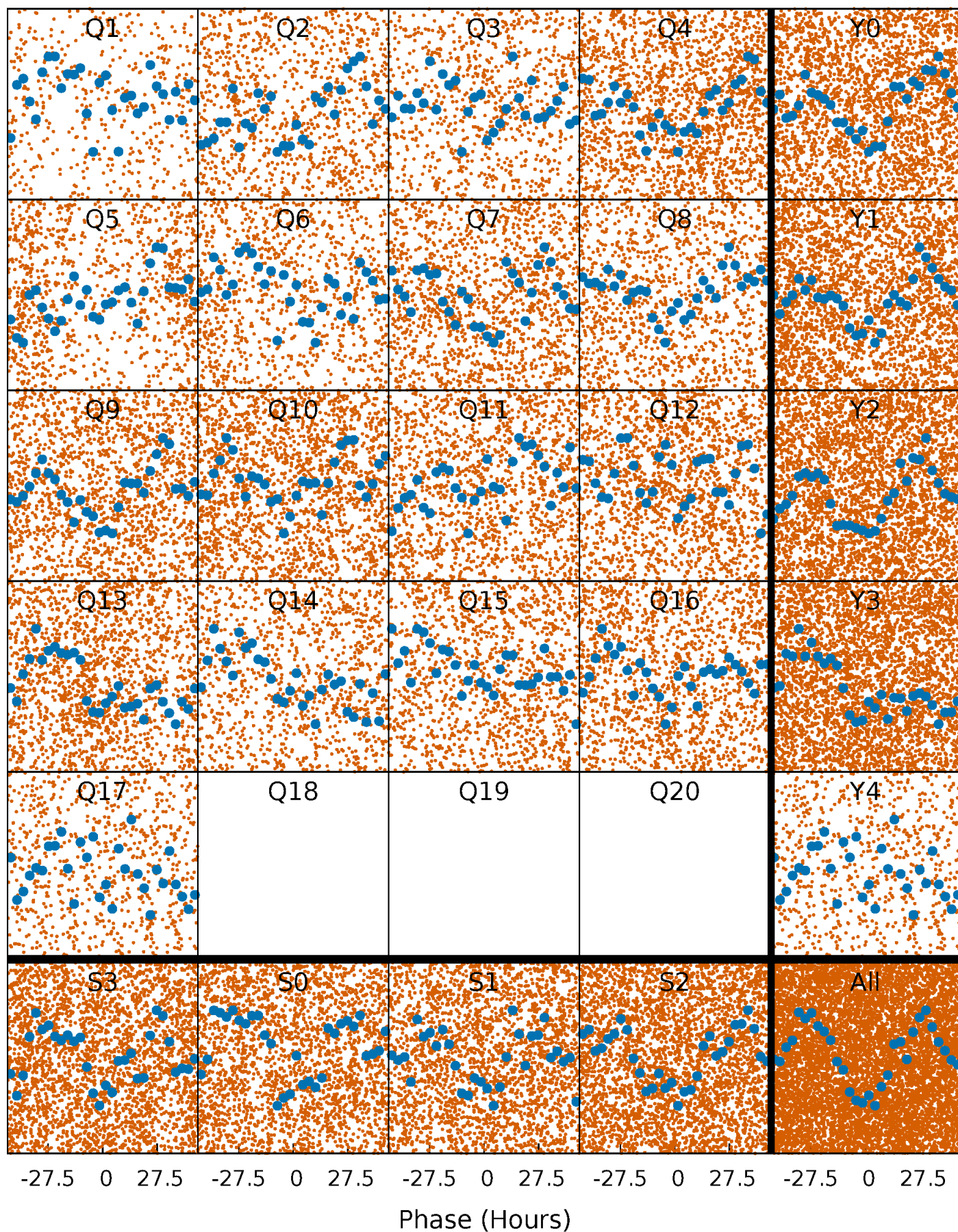


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



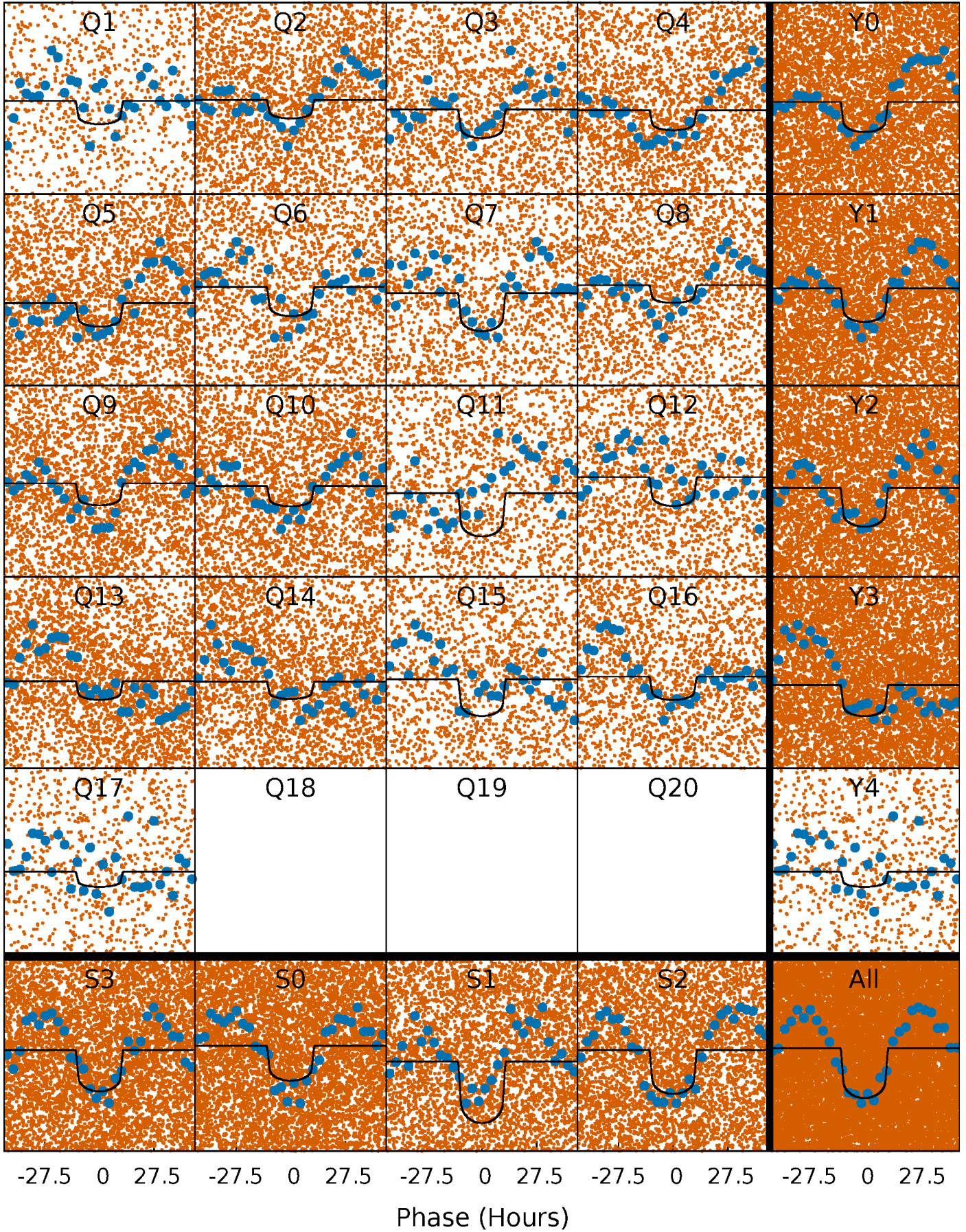
PDC Quarter-Phased Transit Curves

TCE 002018685-01 P= 4.214550 Days $T_0=133.776690$ (BKJD)



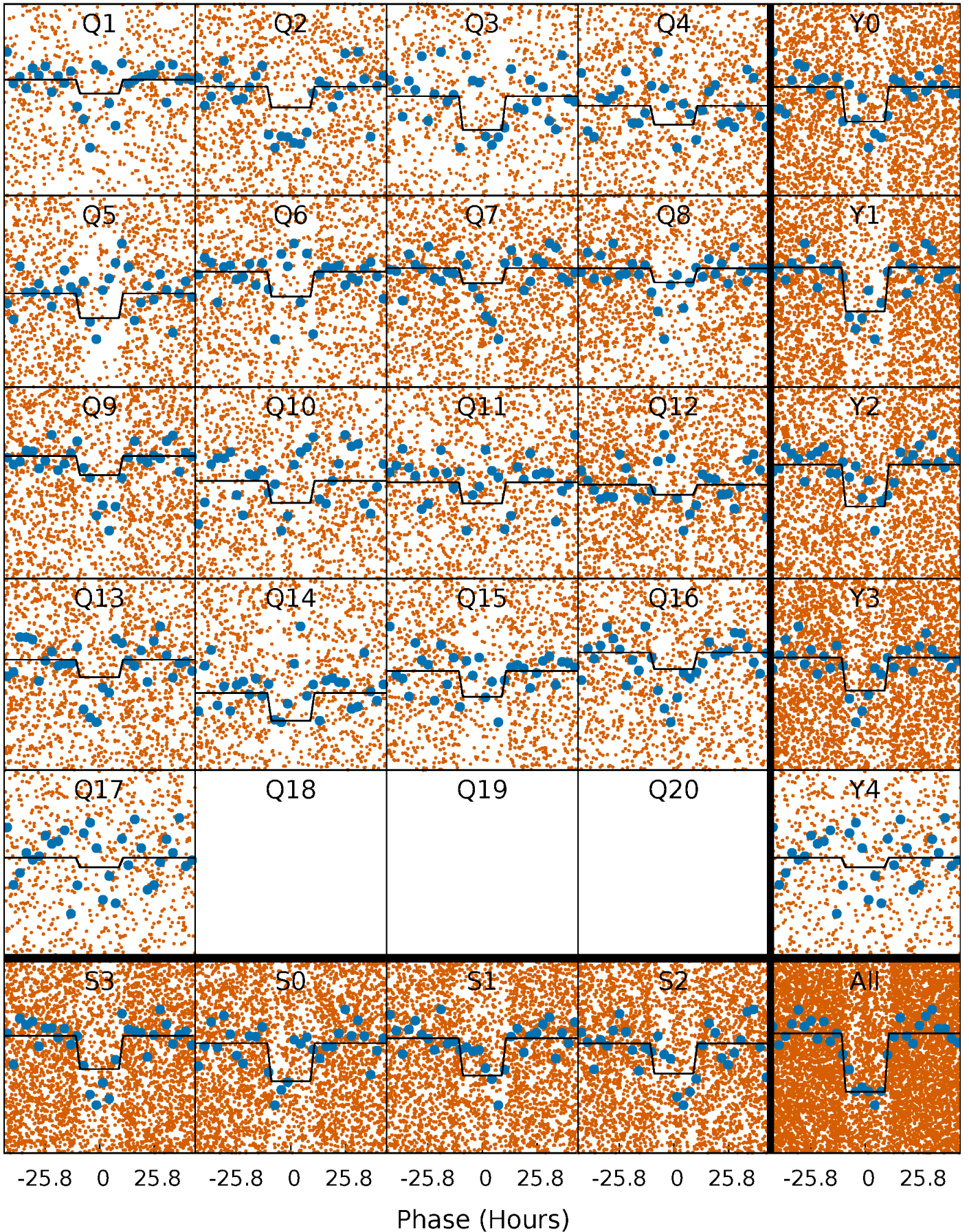
DV Quarter-Phased Transit Curves

TCE 002018685-01 P= 4.214550 Days $T_0=133.776690$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

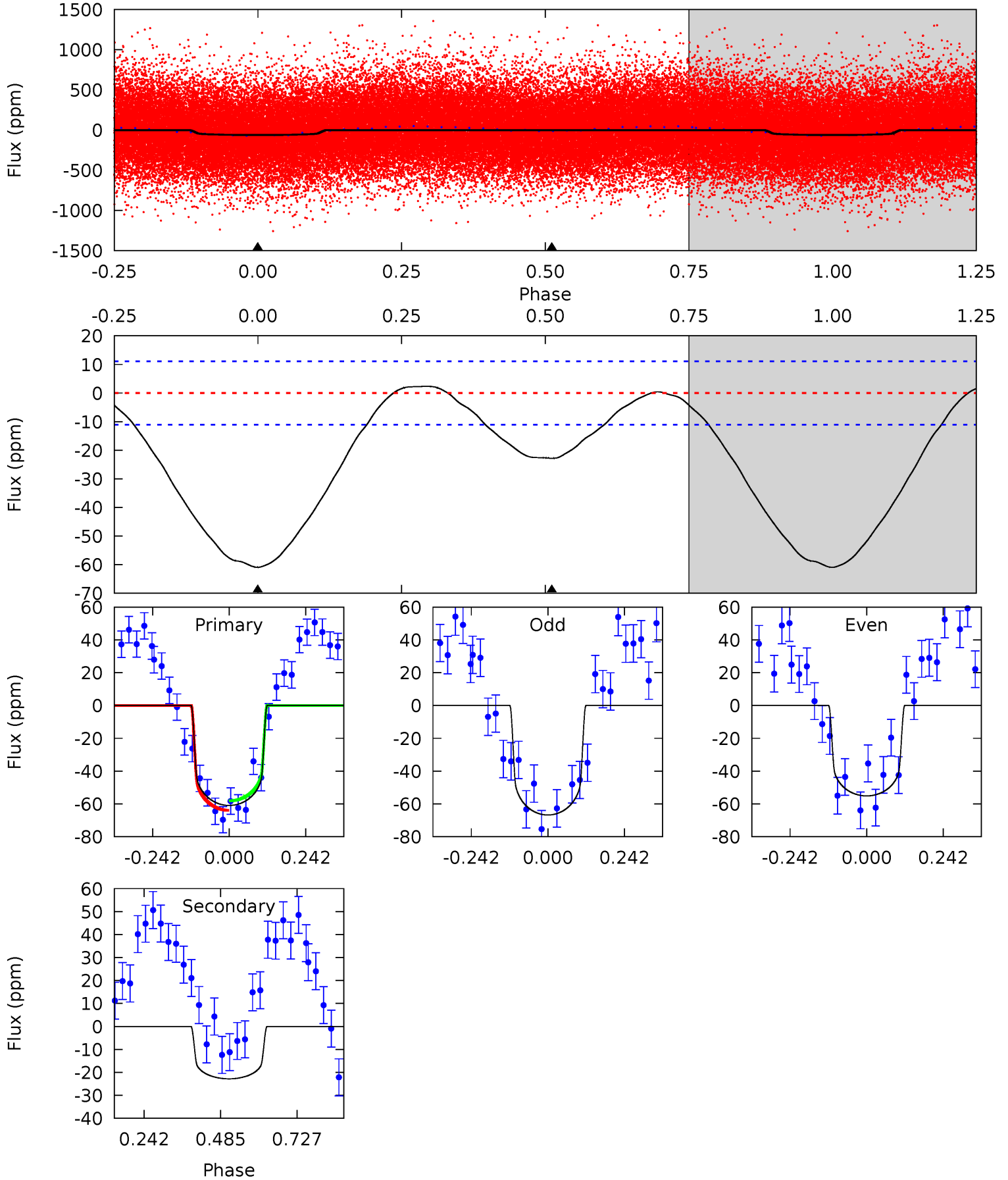
TCE 002018685-01 P= 4.214101 Days $T_0=133.833510$ (BKJD)



DV Model-Shift Uniqueness Test

002018685-01, P = 4.214550 Days, E = 129.562140 Days

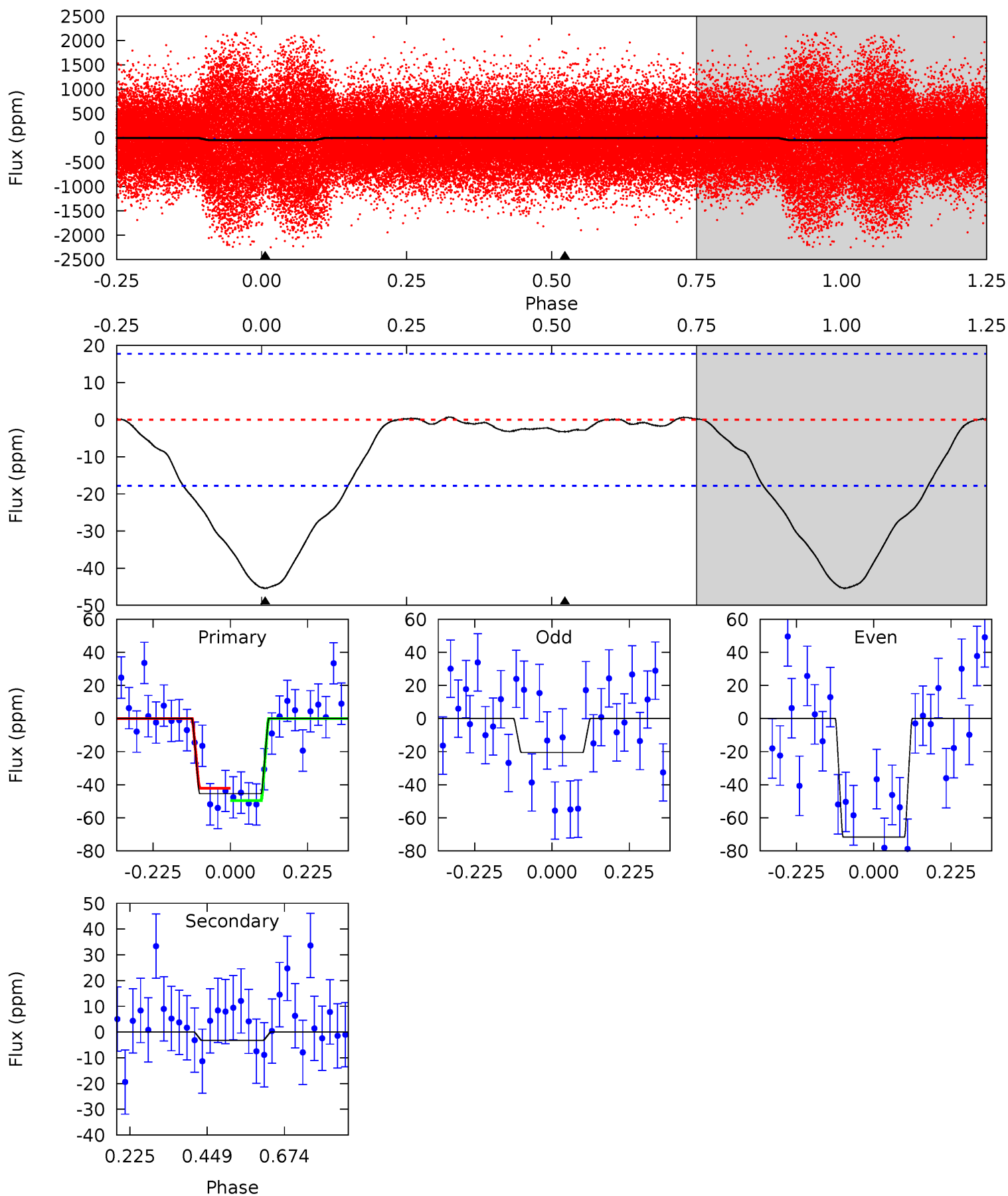
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.1	9.01	0	0	4.38	1.17	1.41	24.1	24.1	9.01	9.01	2.30	1.13	0.04	1.15



Alt Model-Shift Uniqueness Test

002018685-01, P = 4.214101 Days, E = 129.619409 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.2	0.79	0	0	4.39	1.21	0.16	11.2	11.2	0.79	0.79	6.35	1.31	0.02	0.93



Stellar Parameters For KIC 002018685

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6677^{+160}_{-220}	$4.369^{+0.065}_{-0.195}$	$-0.180^{+0.250}_{-0.300}$	$1.188^{+0.379}_{-0.126}$	$1.211^{+0.185}_{-0.168}$	$1.018^{+0.335}_{-0.514}$
	+2%/-3%	+1%/-4%	+139%/-167%	+32%/-11%	+15%/-14%	+33%/-50%
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 002018685-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-23±3	$1.13^{+0.20}_{-0.12}$	1955^{+130}_{-101}	5030^{+235}_{-214}	28^{+8}_{-7}
Alt.	-3±4	$0.92^{+0.16}_{-0.11}$	1948^{+133}_{-87}	3700^{+656}_{-6883}	$5.553^{+7.829}_{-7.377}$

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 $A_{obs} \gg 1.0$

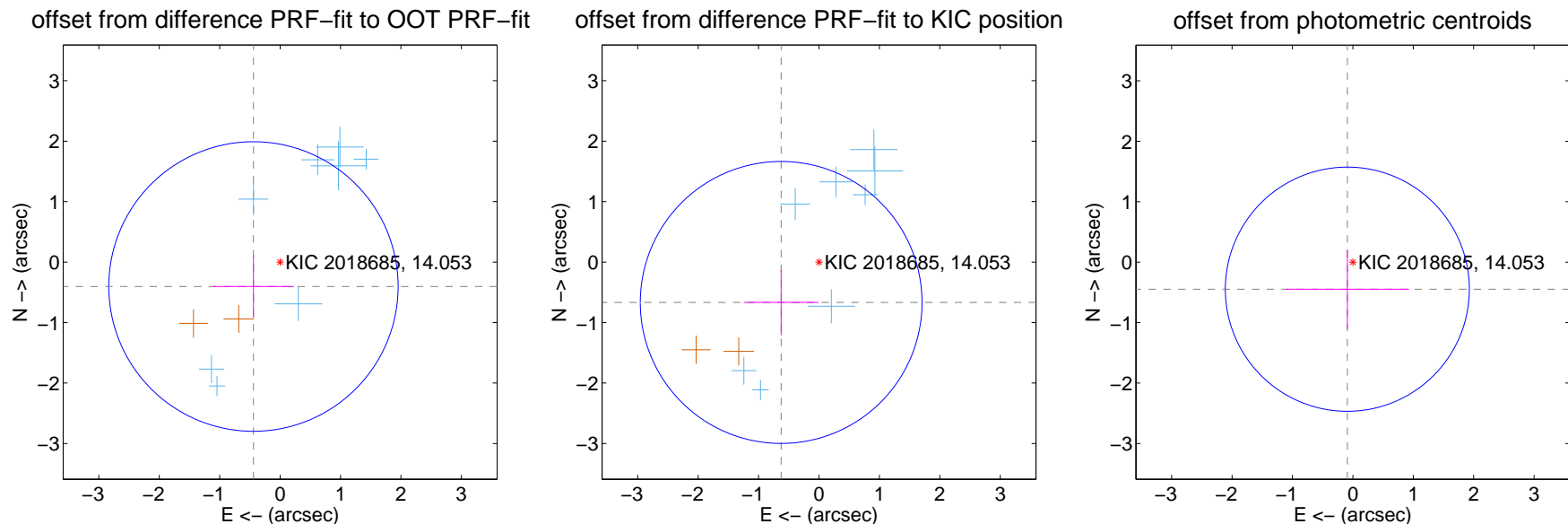
DV Centroid Data

Supplemental centroid analysis for 002018685-01. Kepler magnitude: 14.05. Transit SNR 11.56

There are 8 quarters with good PRF difference image offsets

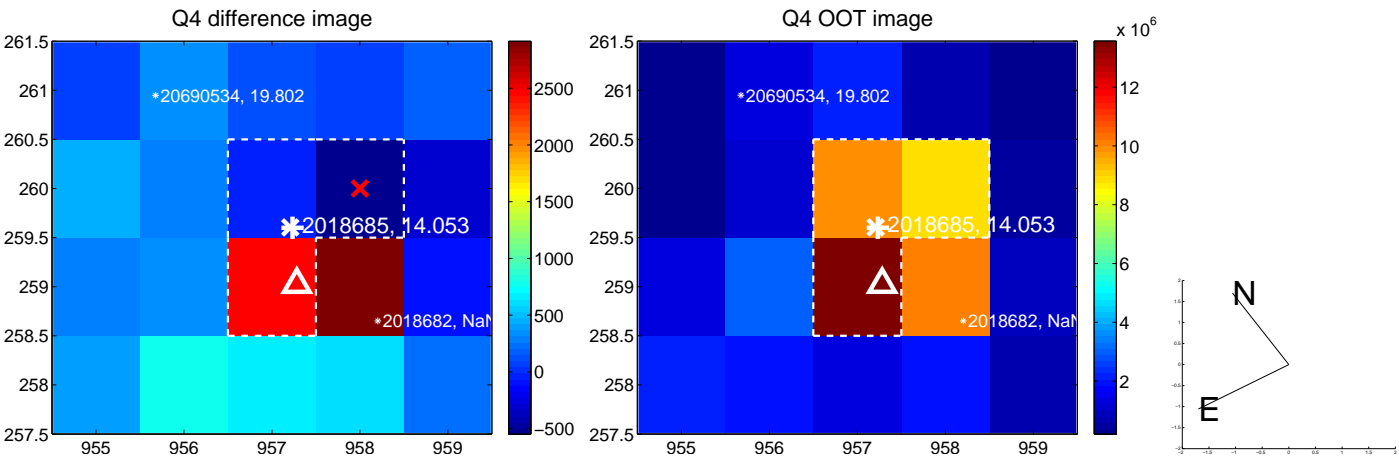
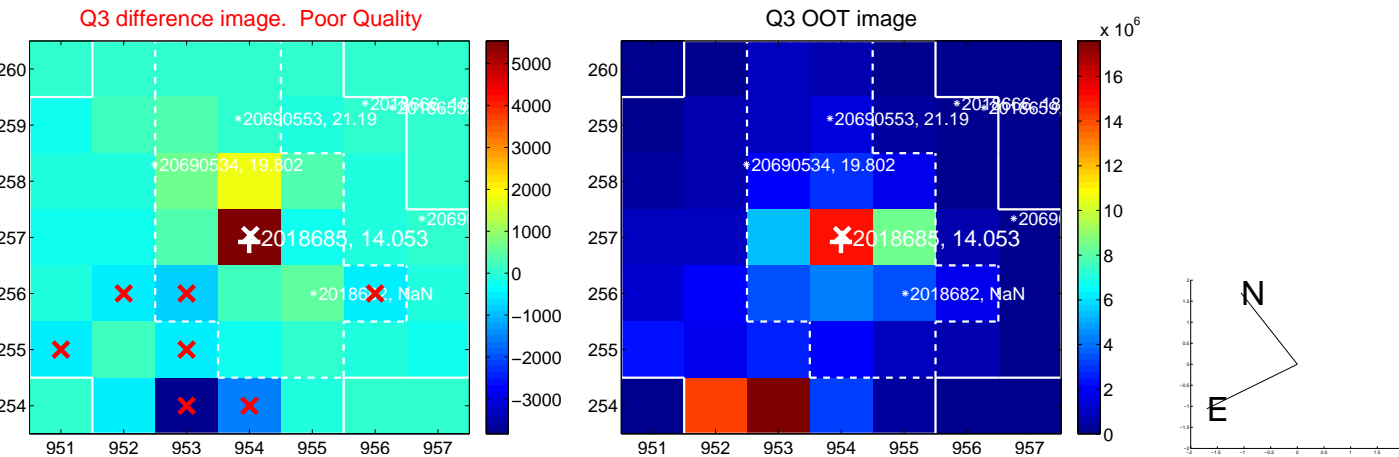
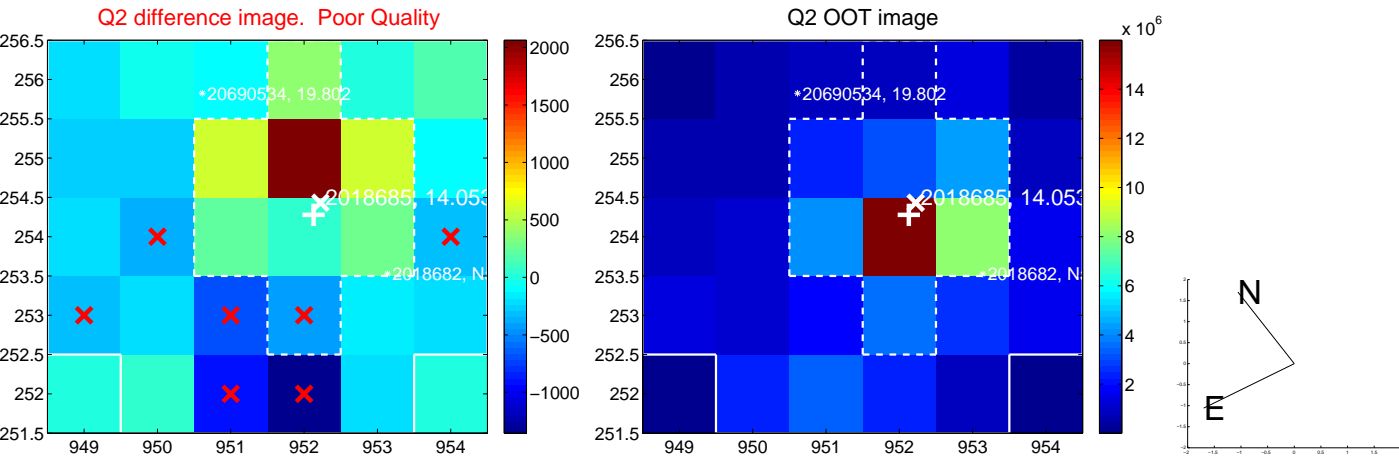
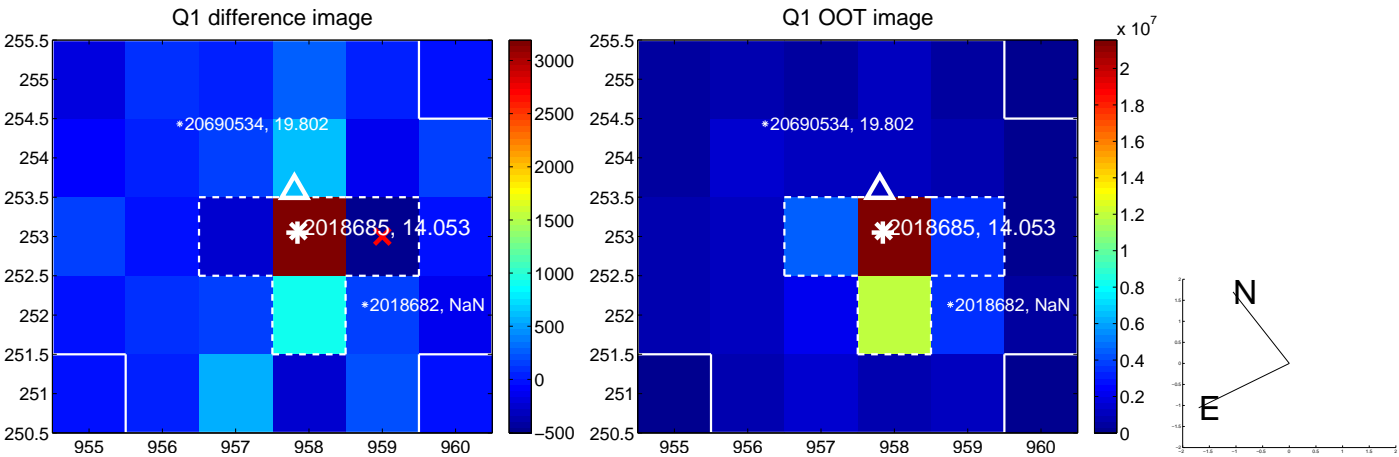
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.598 ± 0.798	0.75	0.441 ± 0.672	-0.404 ± 0.517
PRF-fit source offset from KIC position	0.915 ± 0.777	1.18	0.626 ± 0.620	-0.667 ± 0.544
photometric centroid source offset	0.46 ± 0.67	0.68	0.09 ± 1.02	-0.45 ± 0.65

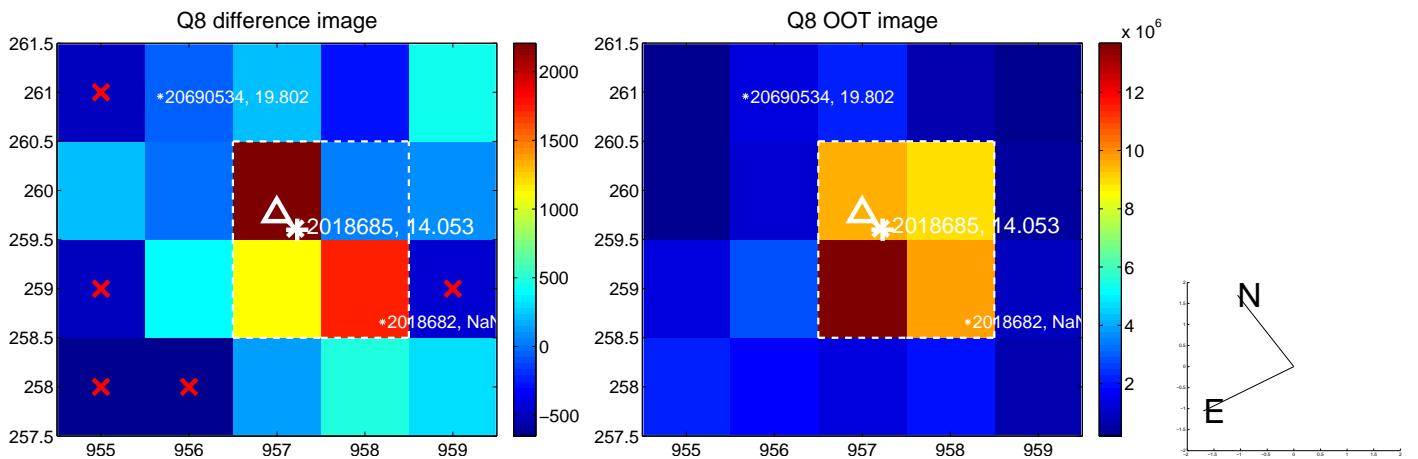
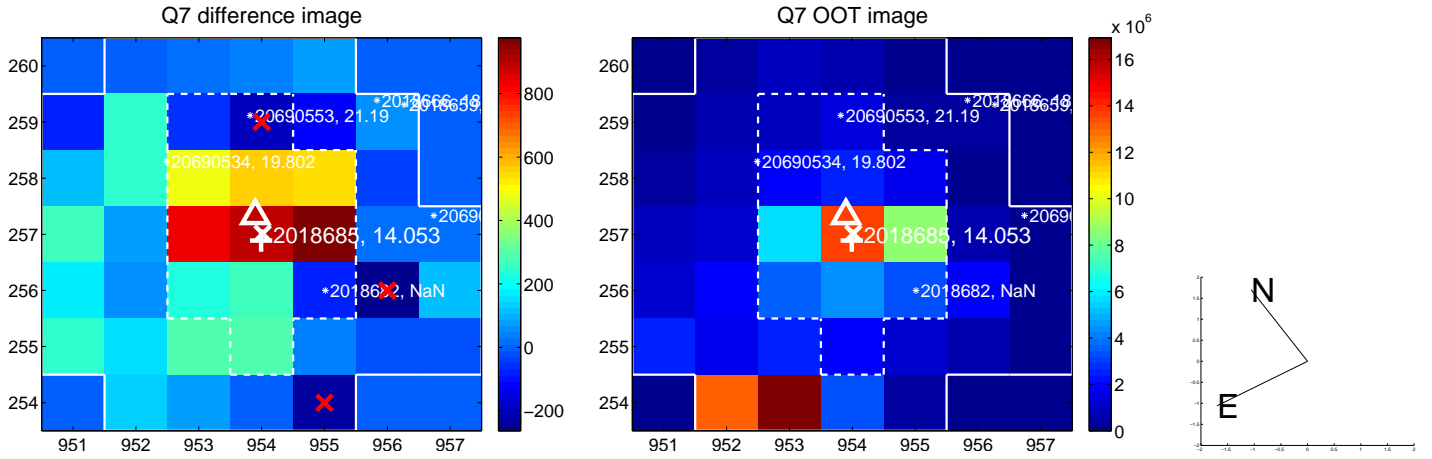
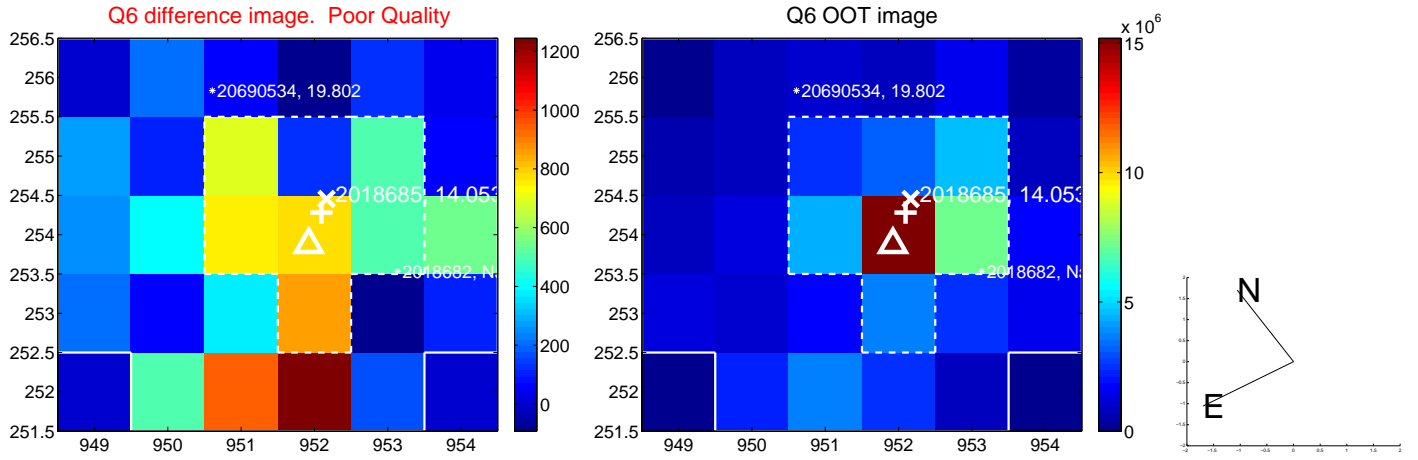
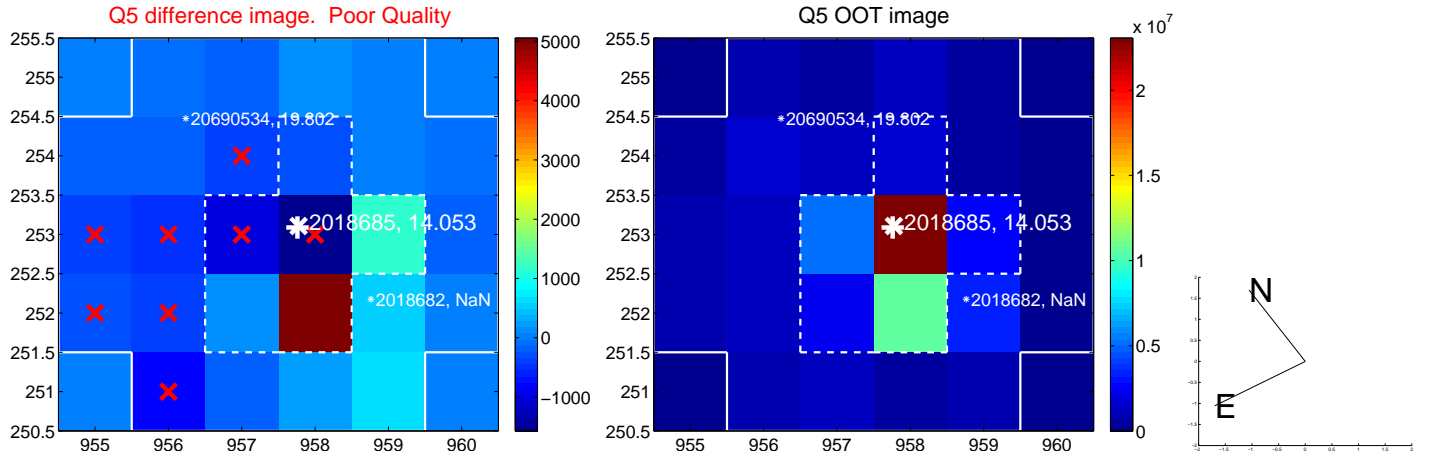


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

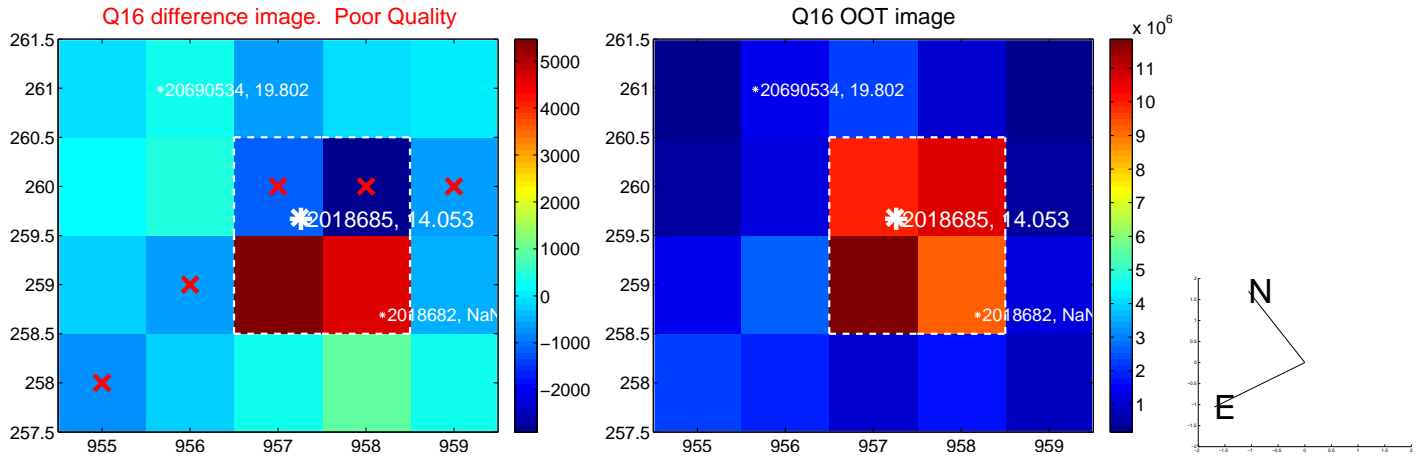
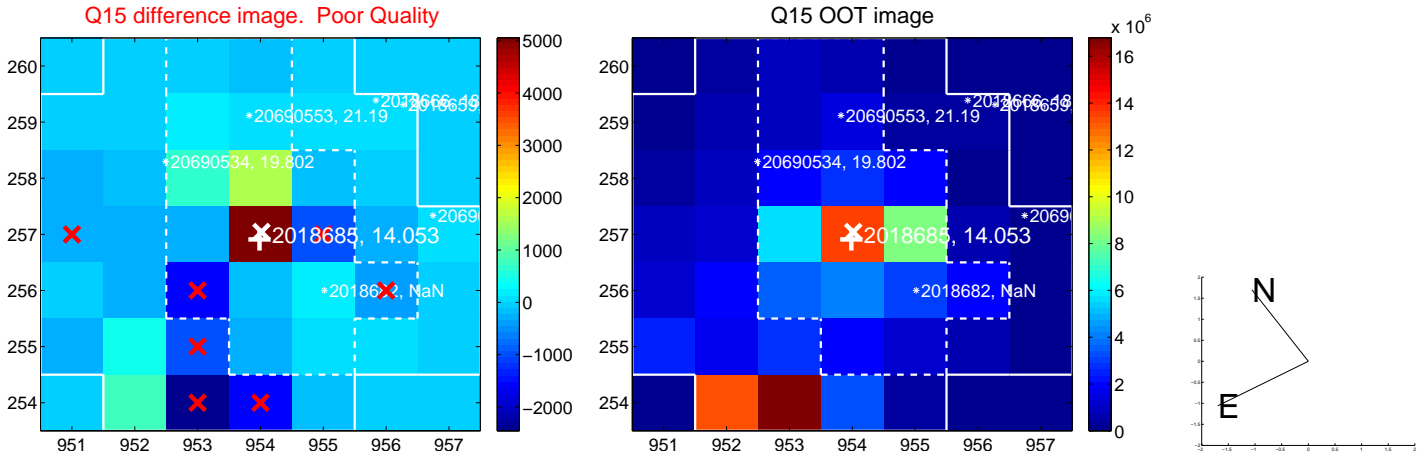
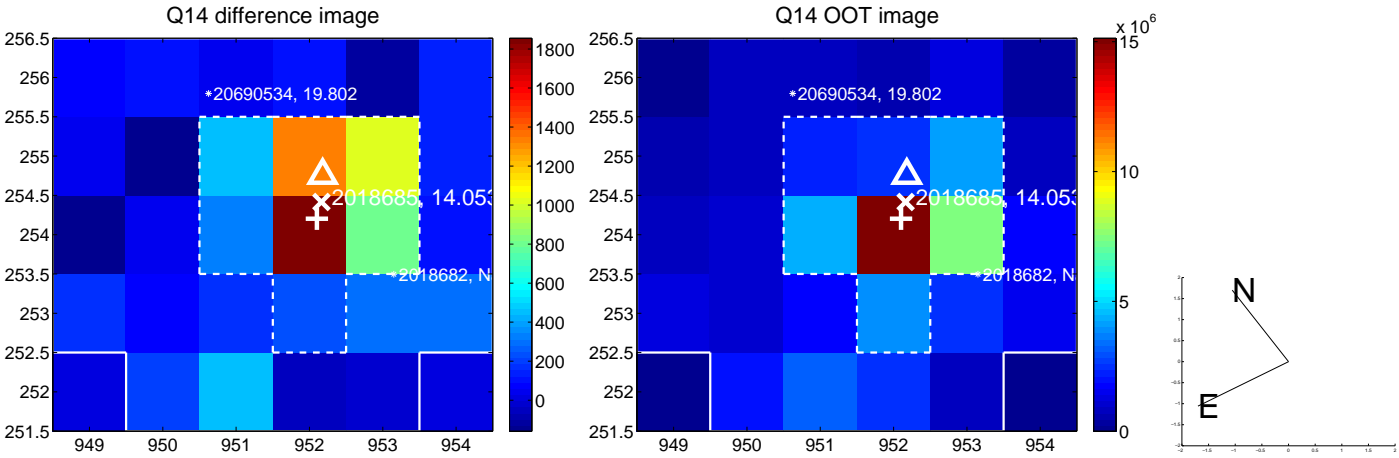
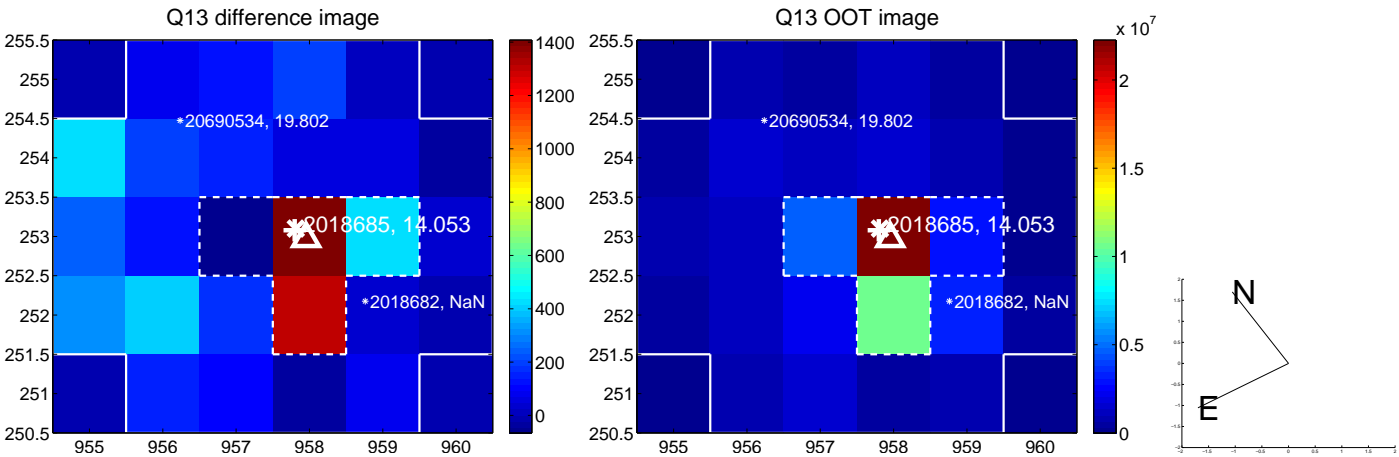
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



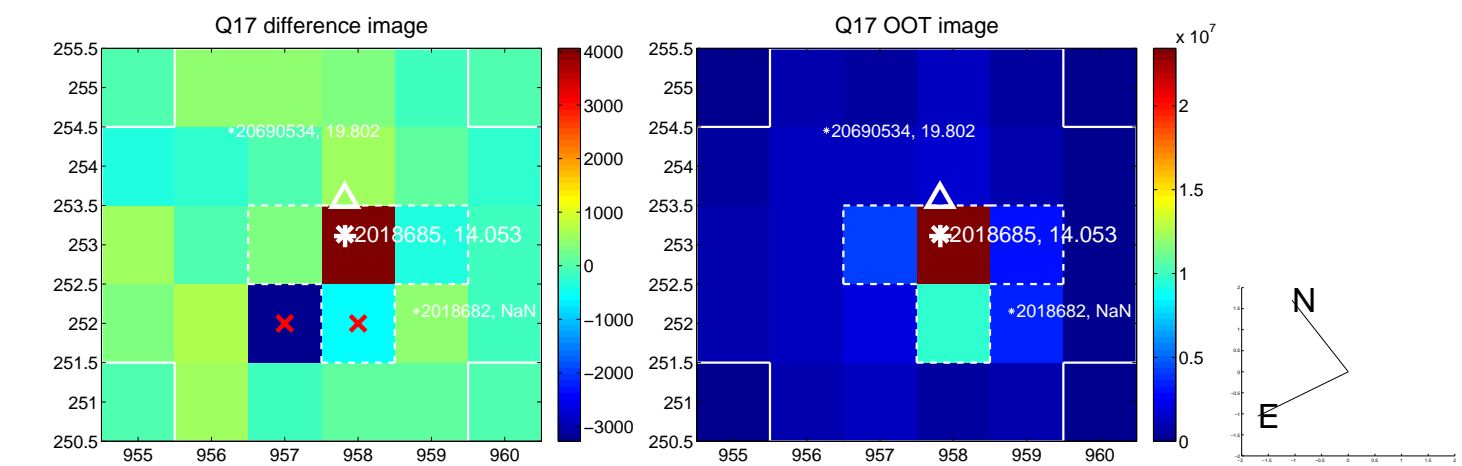
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



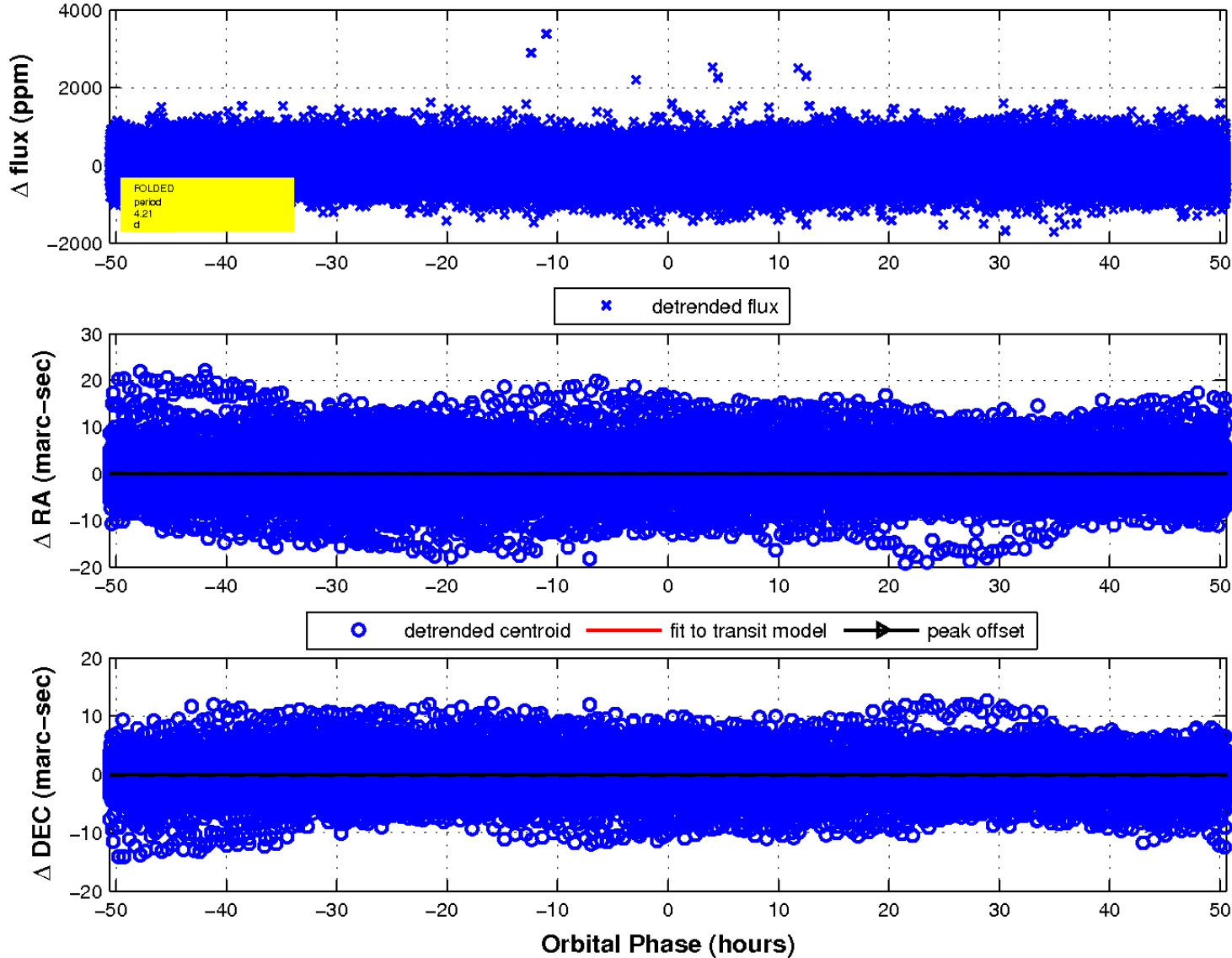
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

