

KIC 004670846

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})
004670846-01	OBS	No	0.799419	132.127562	14.5	6.954	9.1	11.0	3.14	8439	1.21	98479.89

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004670846-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_FEW_MEAS

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

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

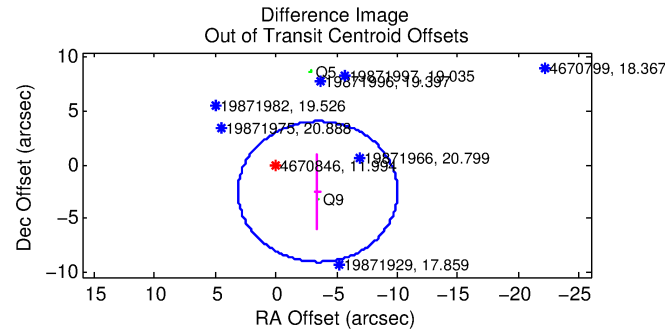
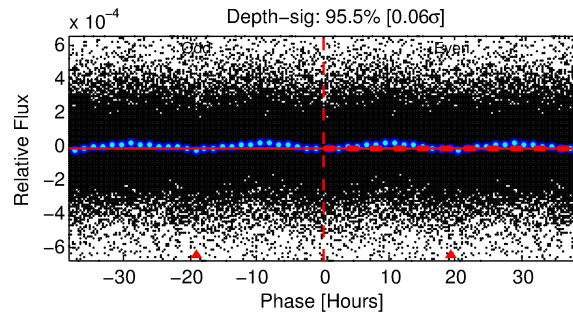
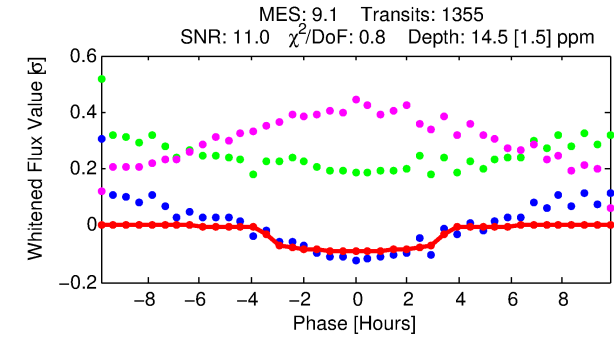
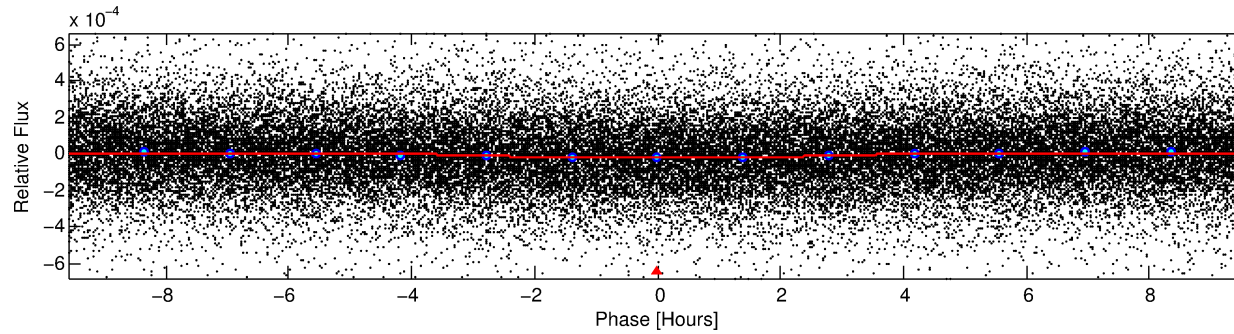
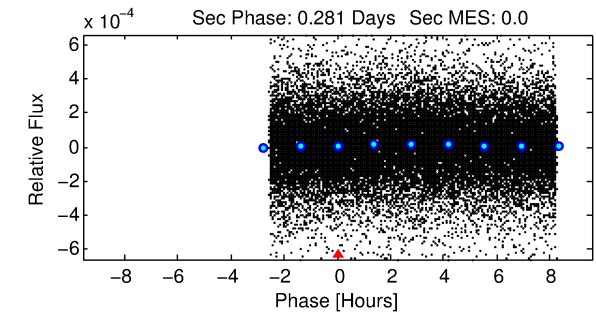
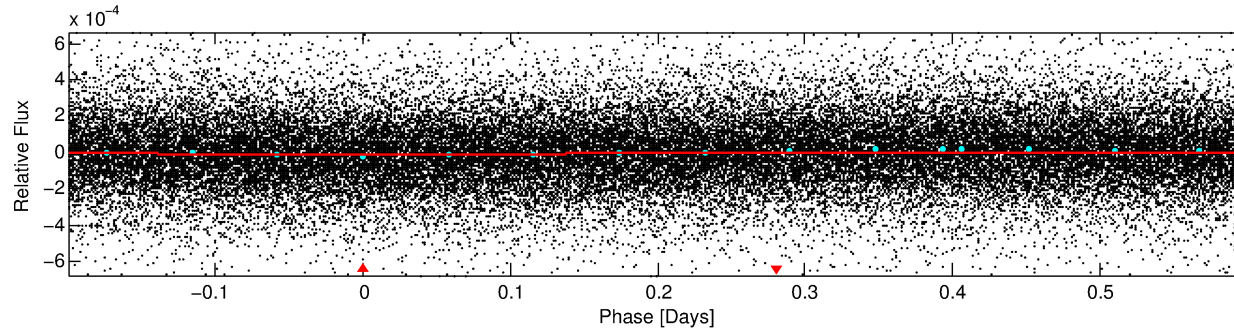
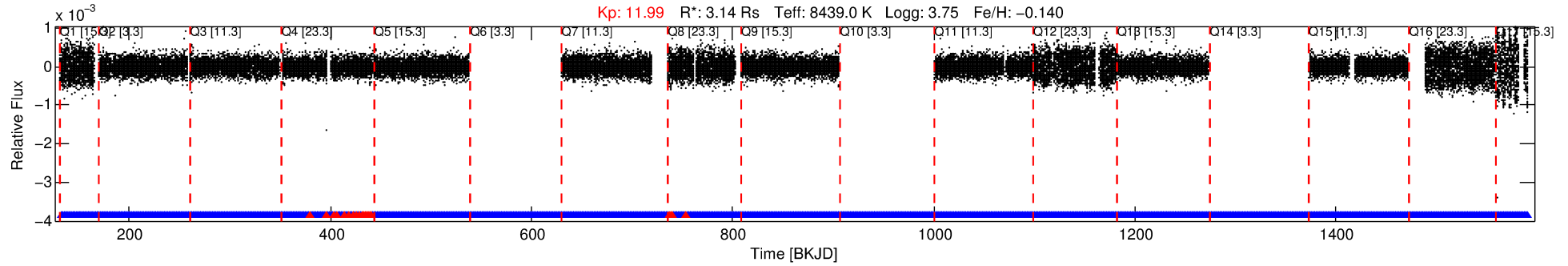
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004670846-01

No Significant Match Found

DV One-Page Summary

KIC: 4670846 Candidate: 1 of 1 Period: 0.799 d



DV Fit Results:

Period = 0.79942 [0.00001] d
Epoch = 132.1276 [0.0064] BKJD
 $R_p/R^* = 0.0035$ [0.0031]
 $a/R^* = 1.11$ [1.01]
 $b = 0.01$ [902.81]
 $\text{Seff} = 98479.89$ [71208.83]
 $T_{\text{eq}} = 4517$ [817] K
 $R_p = 1.21$ [1.17] R_{e}
 $a = 0.0214$ [0.0092] AU
 $A_g = \text{N/A}$
 $T_{\text{eff}} = \text{N/A}$

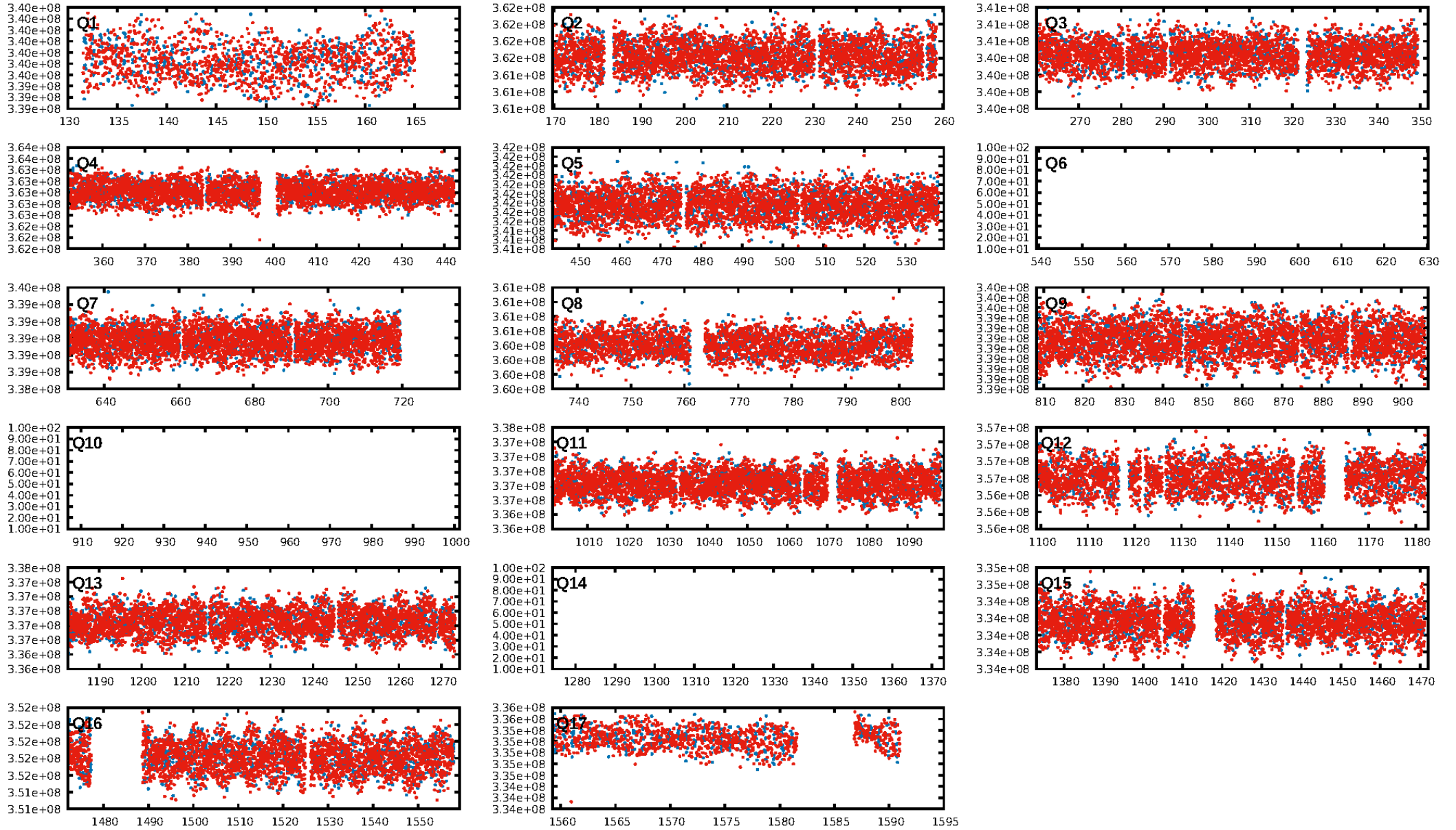
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.98 [1254/1279]
GhostDiagnostic-chr: -17.7
Centroid-sig: 91.7%
Centroid-so: 0.133 arcsec [0.18σ]
OotOffset-rm: 4.279 arcsec [1.95σ]
KicOffset-rm: 4.398 arcsec [1.41σ]
OotOffset-st: 0/0/0/2 [2]
KicOffset-st: 0/0/0/2 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [14/14]

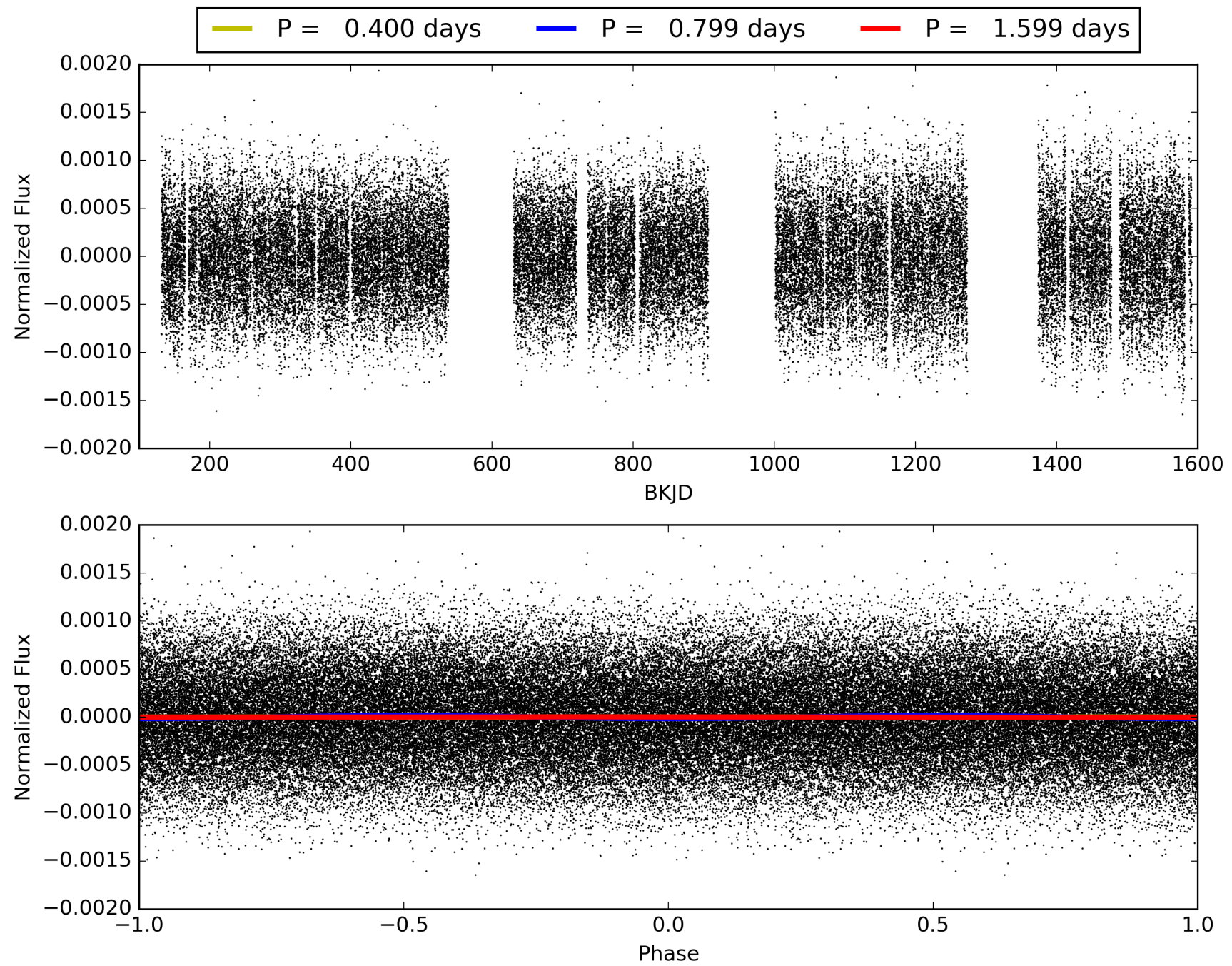
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 23:19:49 Z

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

TCE 004670846-01, PDC Light Curves

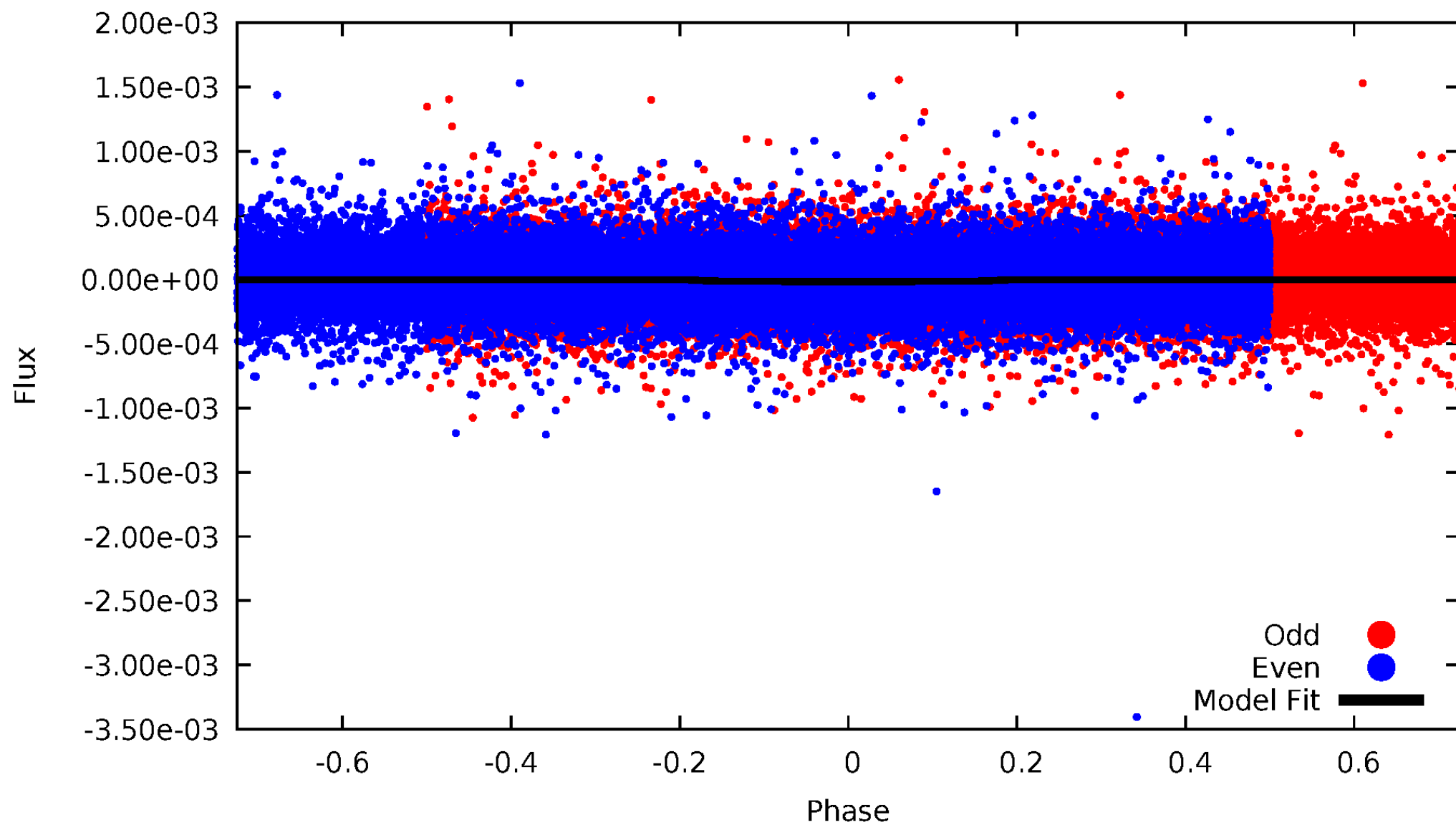


TCE 004670846-01



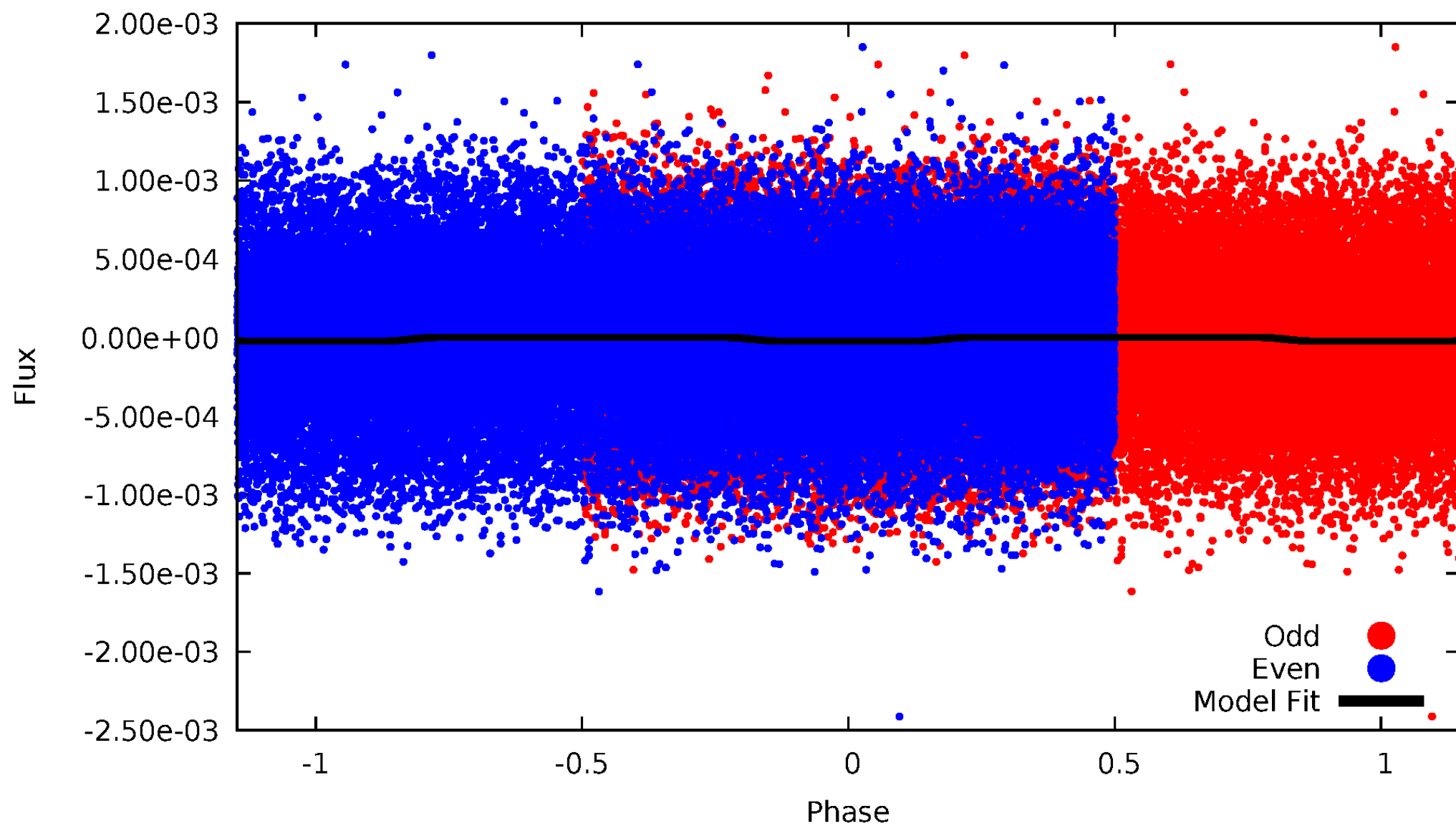
DV Odd/Even

TCE 004670846-01



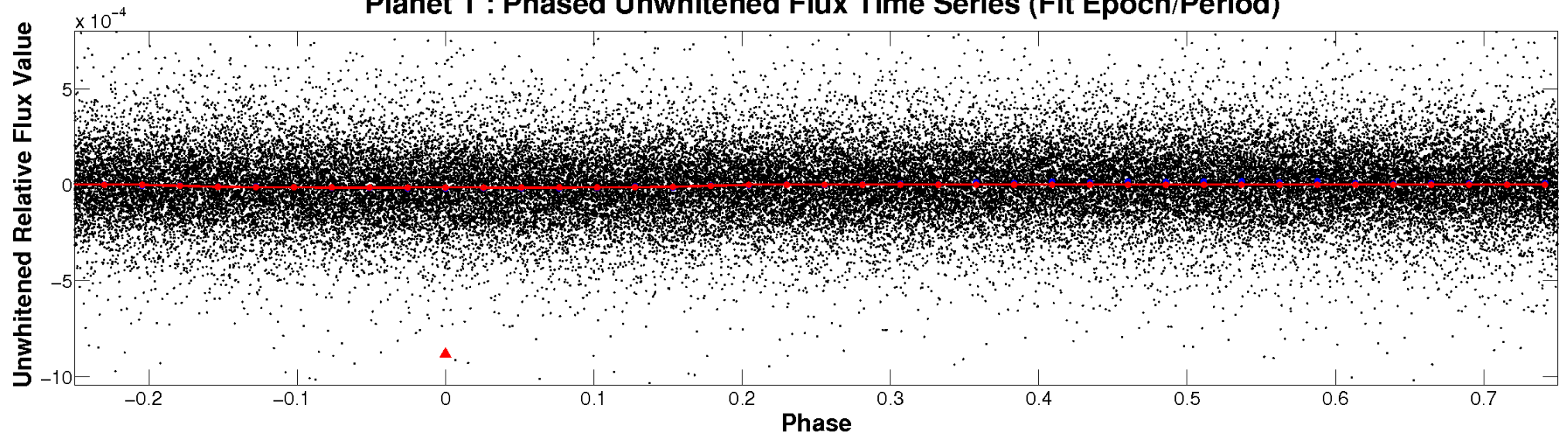
ALT Odd/Even

TCE 004670846-01

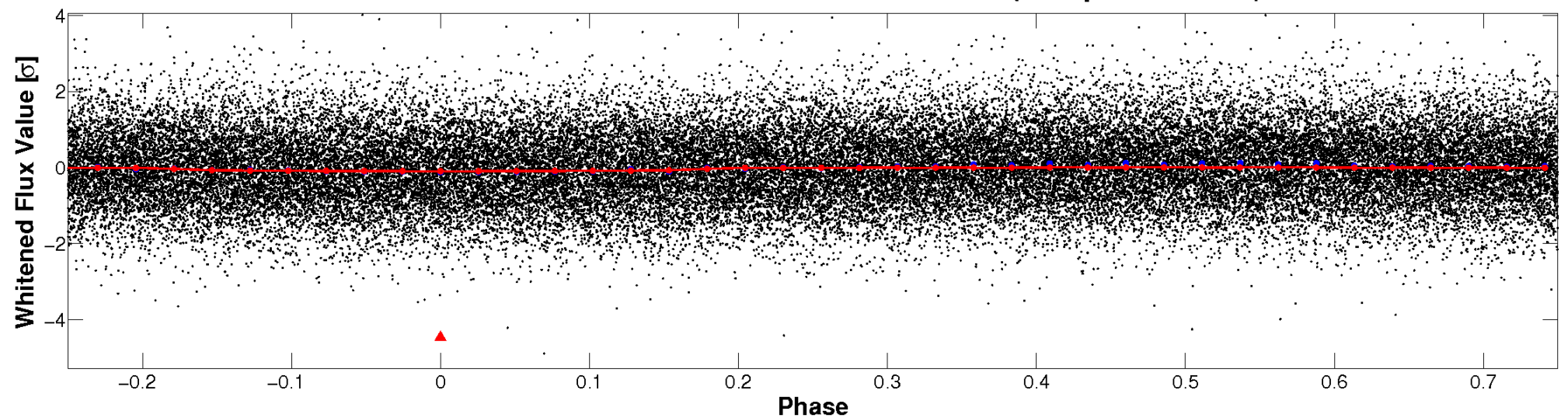


Non-Whitened Vs. Whitened Light Curve

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

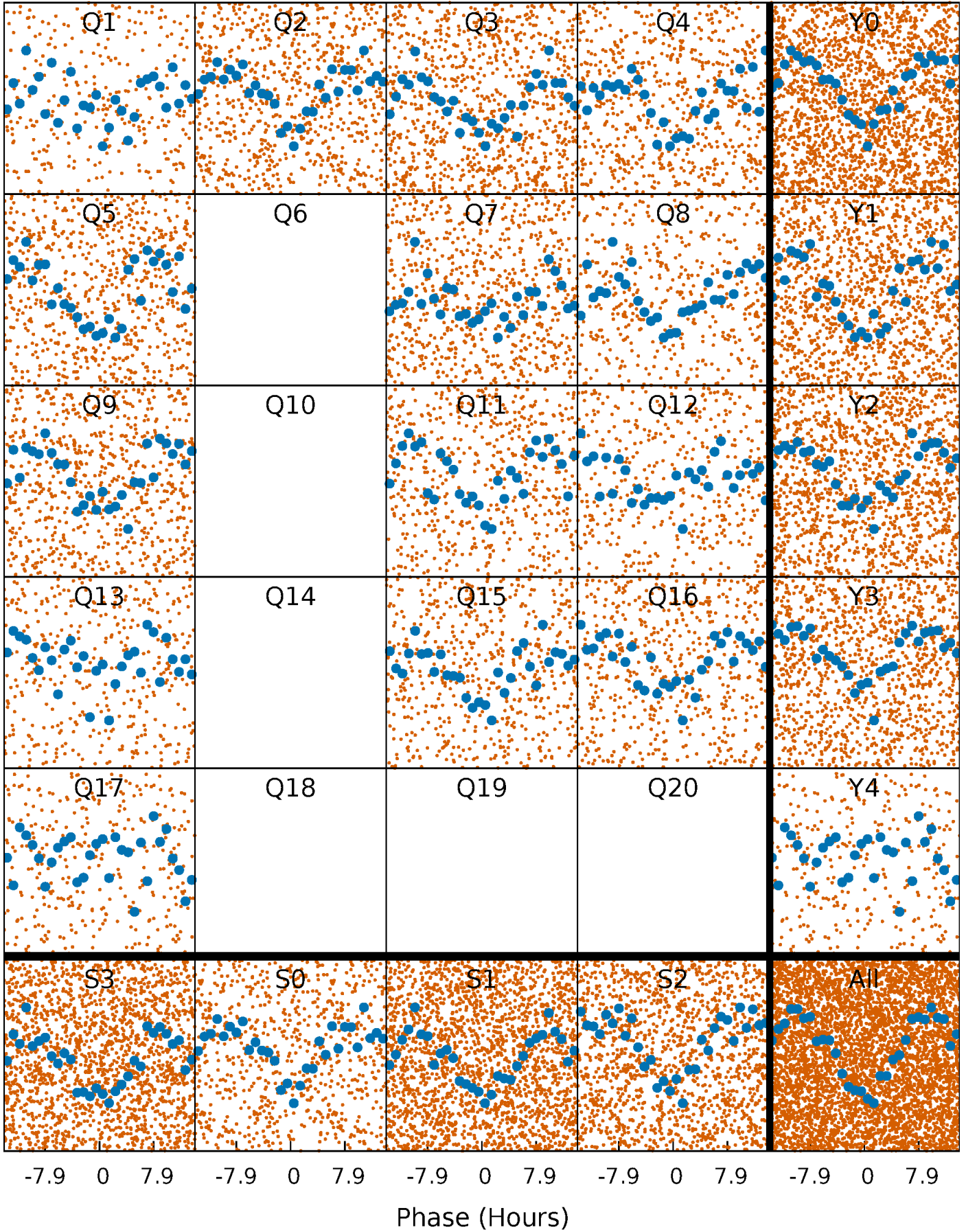


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



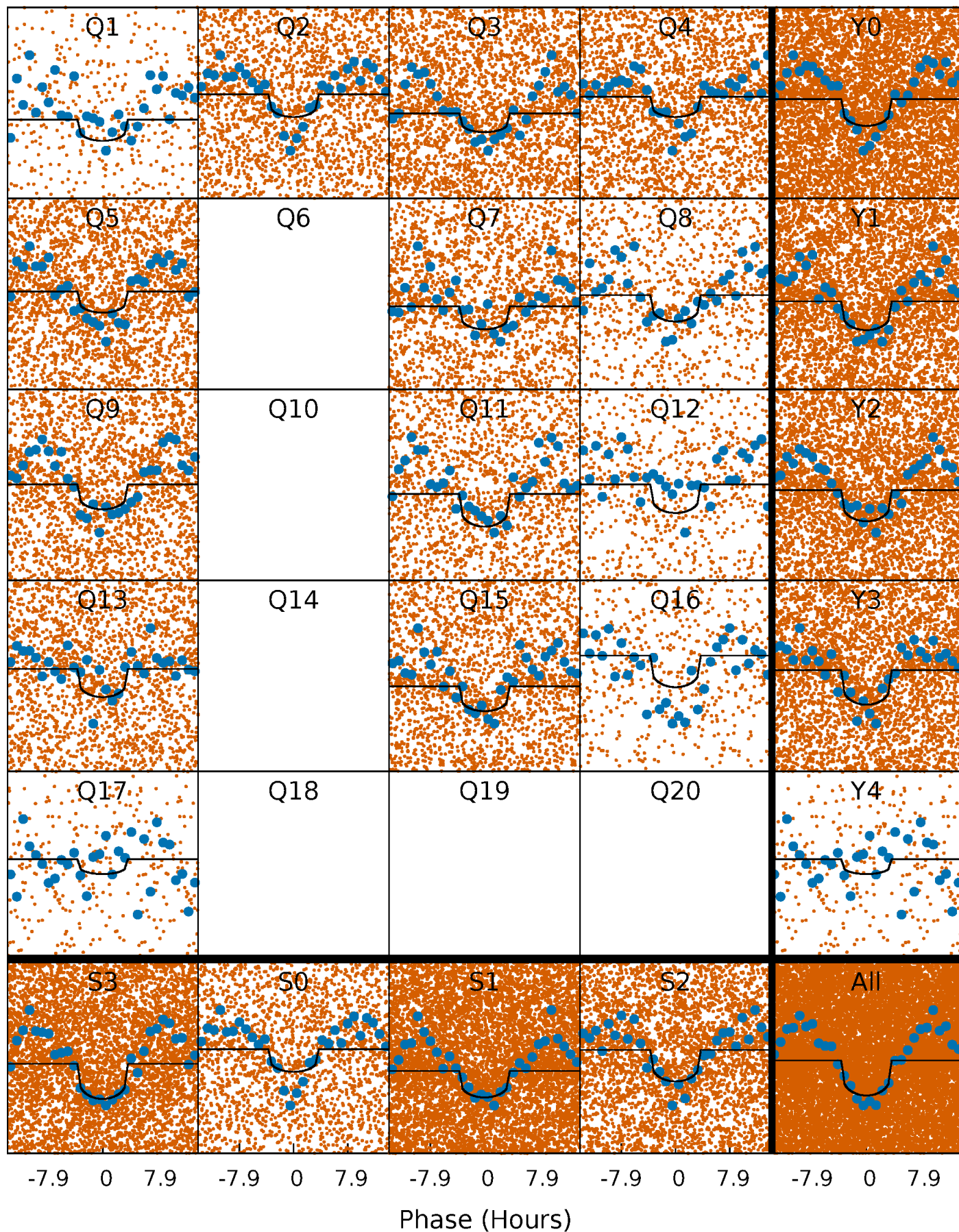
PDC Quarter-Phased Transit Curves

TCE 004670846-01 P= 0.799419 Days $T_0=132.127562$ (BKJD)



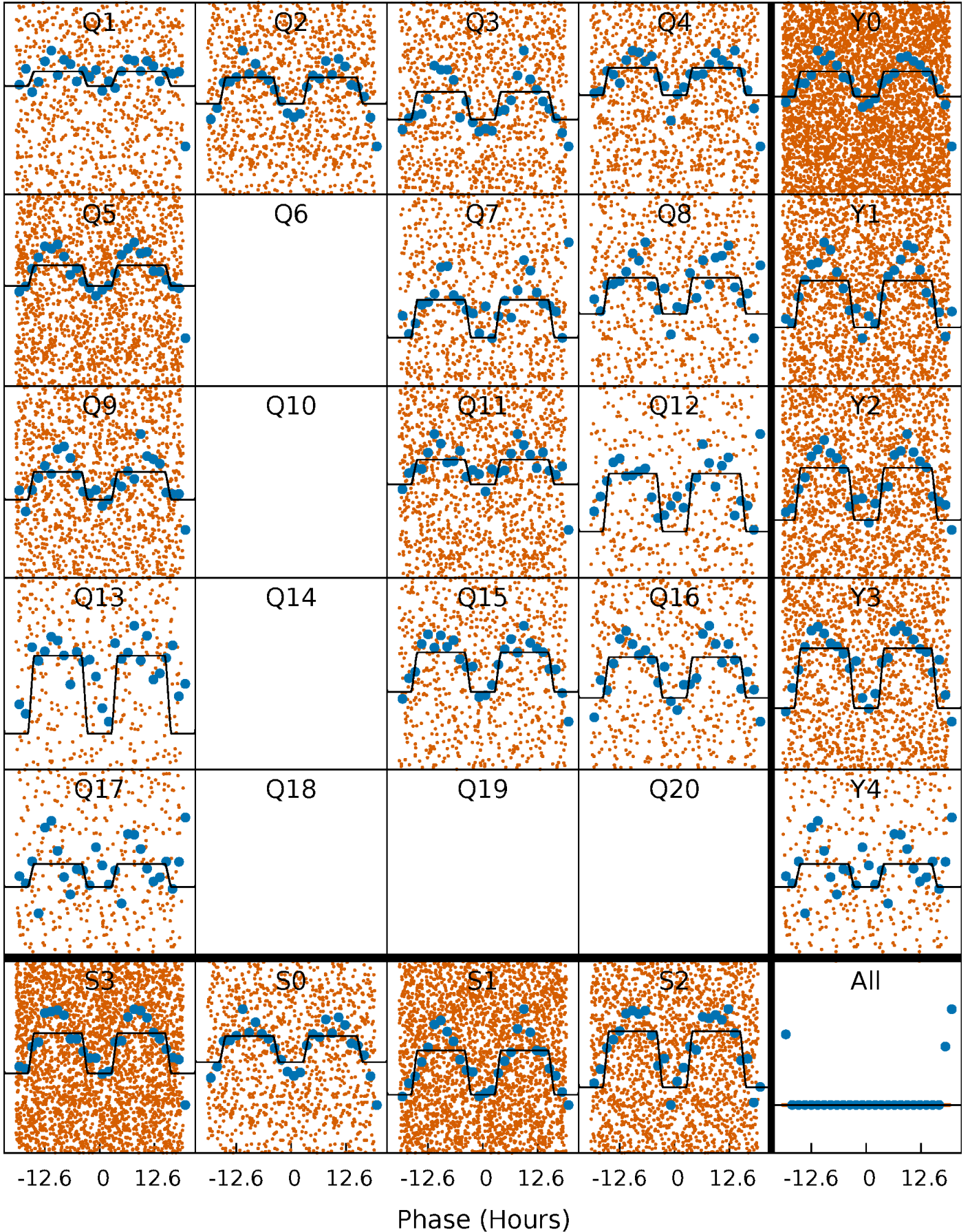
DV Quarter-Phased Transit Curves

TCE 004670846-01 P= 0.799419 Days $T_0=132.127562$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

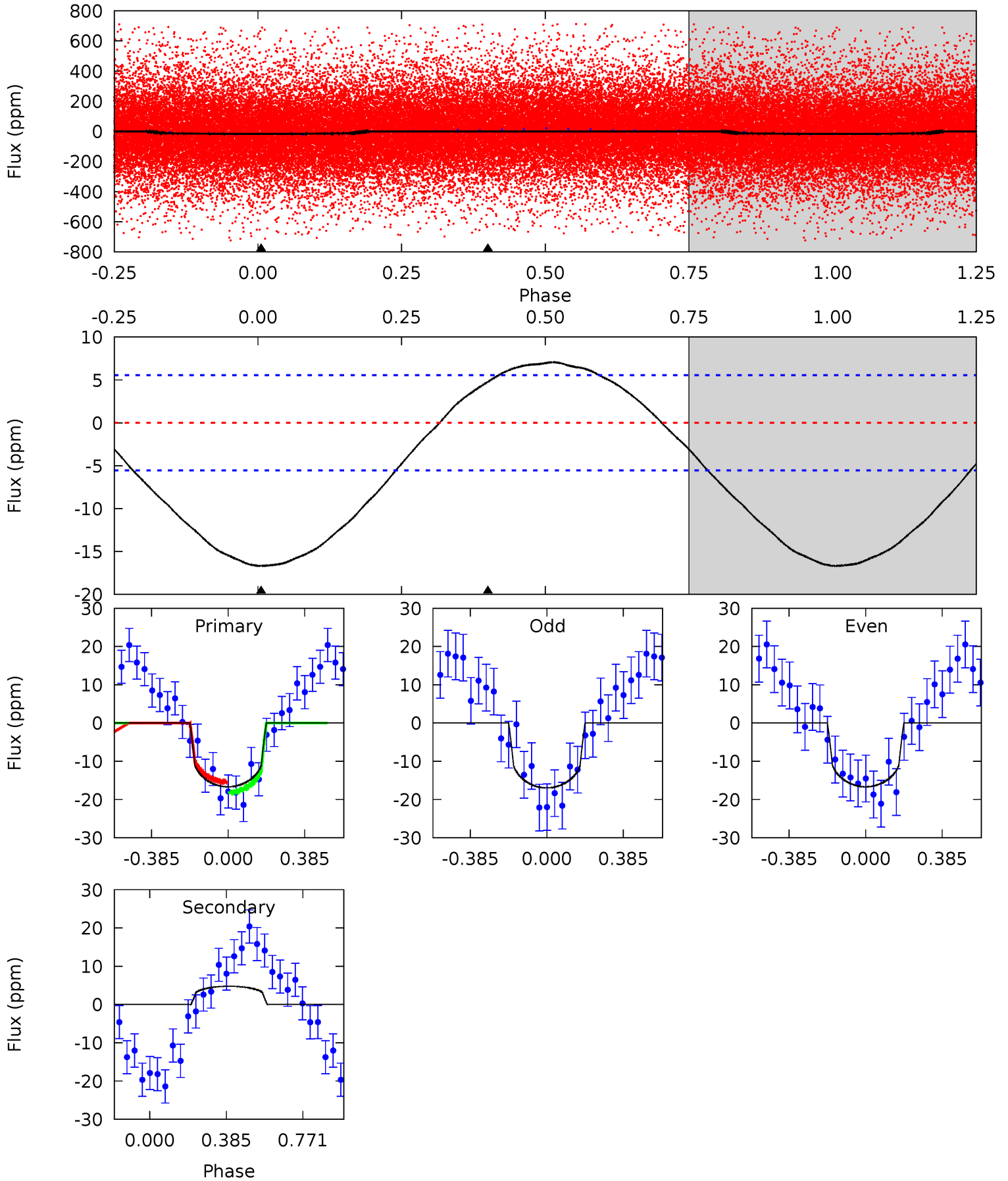
TCE 004670846-01 P= 0.799412 Days $T_0=132.136701$ (BKJD)



DV Model-Shift Uniqueness Test

004670846-01, P = 0.799419 Days, E = 131.328143 Days

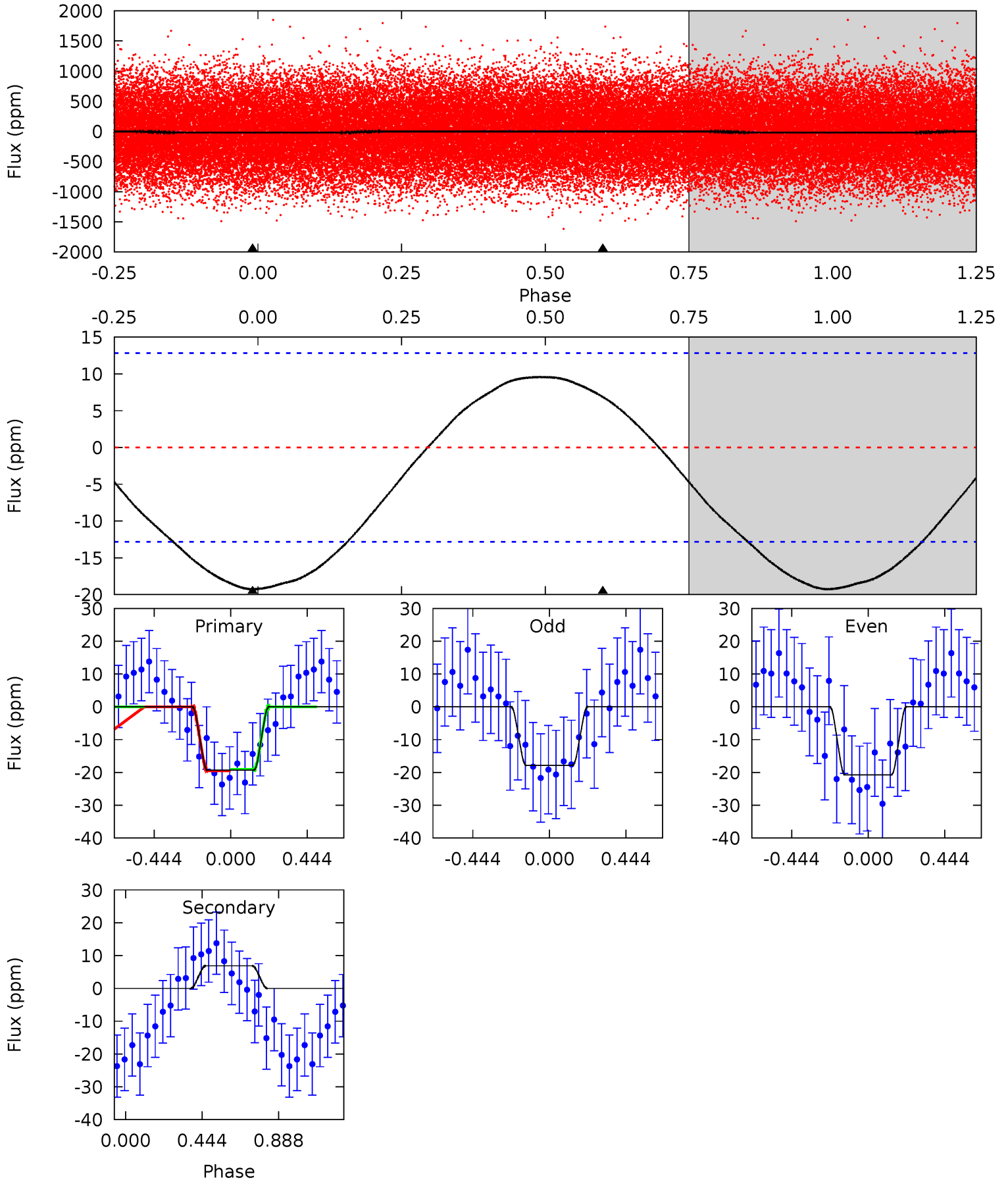
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.8	-3.67	0	0	4.27	0.87	1.44	12.8	12.8	-3.67	-3.67	0.11	0.93	0.30	1.07



Alt Model-Shift Uniqueness Test

004670846-01, P = 0.799412 Days, E = 131.337289 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.38	-2.27	0	0	4.24	0.77	0.86	6.38	6.38	-2.27	-2.27	0.48	1.00	0.33	0.07



Stellar Parameters For KIC 004670846

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8439^{+233}_{-350}	$3.751^{+0.420}_{-0.168}$	$-0.140^{+0.400}_{-0.350}$	$3.144^{+1.089}_{-1.331}$	$2.032^{+0.443}_{-0.443}$	$0.092^{+0.317}_{-0.043}$
	+3%/-4%	+11%/-4%	+286%/-250%	+35%/-42%	+22%/-22%	+344%/-47%
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 004670846-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	5 ± 1	$1.24^{+1.07}_{-0.74}$	6170^{+589}_{-712}	-6601^{+995}_{-4087}	$-0.703^{+0.481}_{-4.235}$
Alt.	7 ± 3	$1.61^{+1.10}_{-0.94}$	6122^{+567}_{-671}	-6462^{+1046}_{-3354}	$-0.608^{+0.425}_{-3.233}$

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 $A_{obs} \gg 1.0$

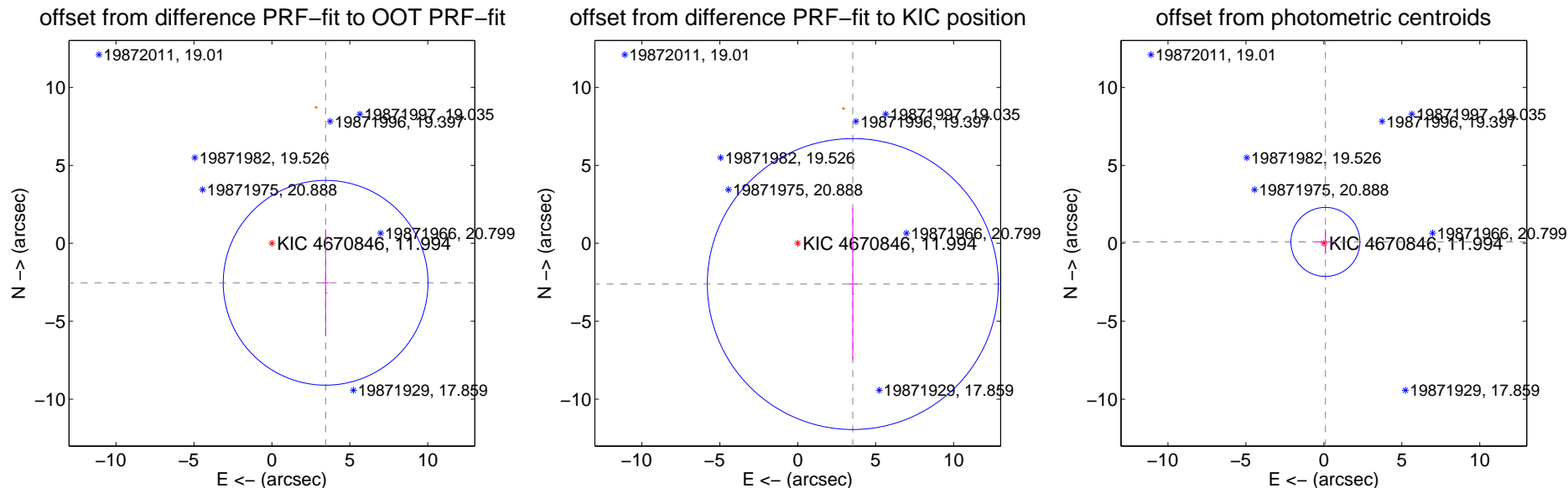
DV Centroid Data

Supplemental centroid analysis for 004670846-01. **Kepler magnitude: 11.99.** Transit SNR 11.04

There are 0 quarters with good PRF difference image offsets

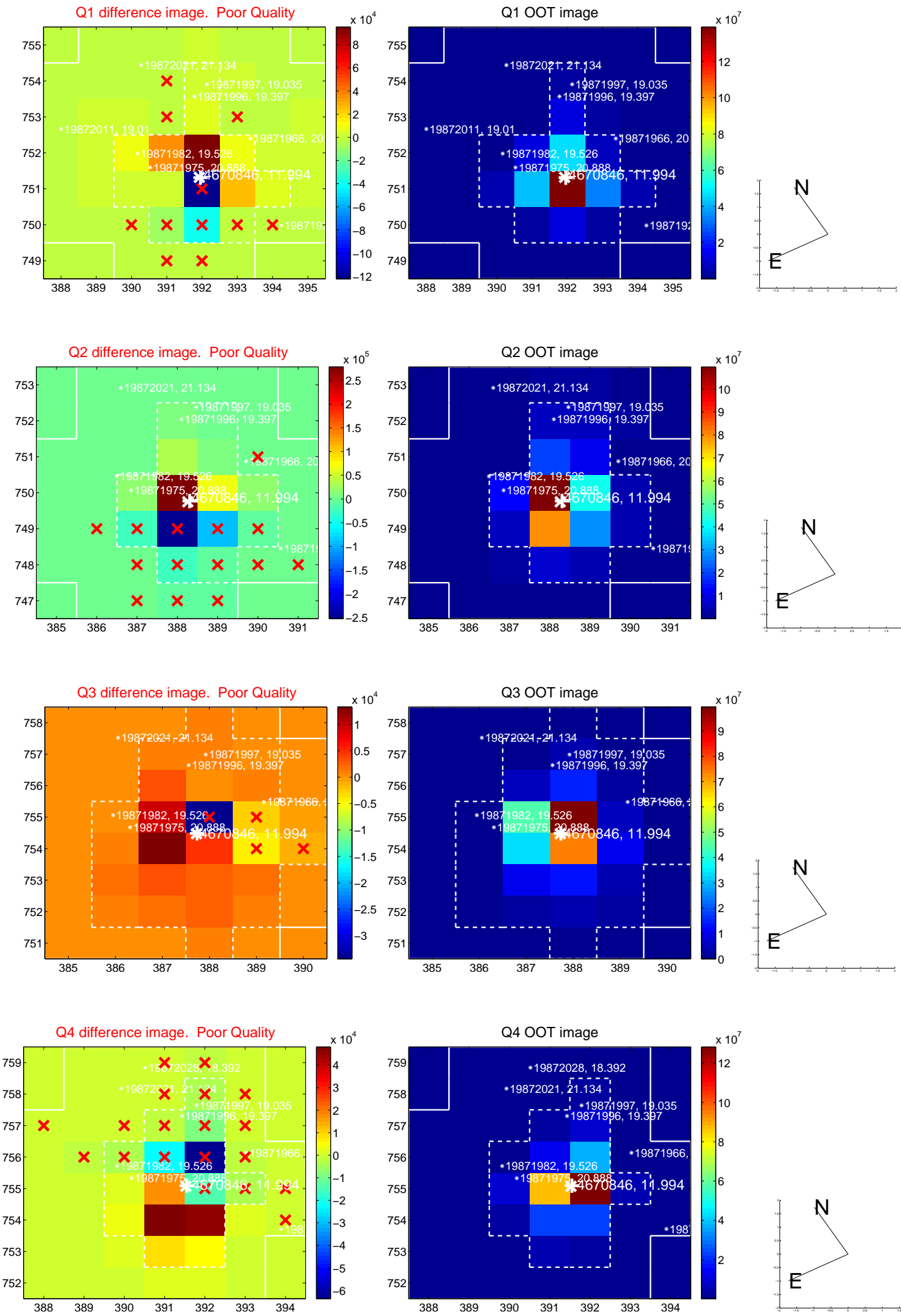
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.279 ± 2.190	1.95	-3.448 ± 0.204	-2.534 ± 3.435
PRF-fit source offset from KIC position	4.398 ± 3.112	1.41	-3.536 ± 0.280	-2.615 ± 4.865
photometric centroid source offset	0.13 ± 0.74	0.18	-0.10 ± 0.67	0.09 ± 0.81

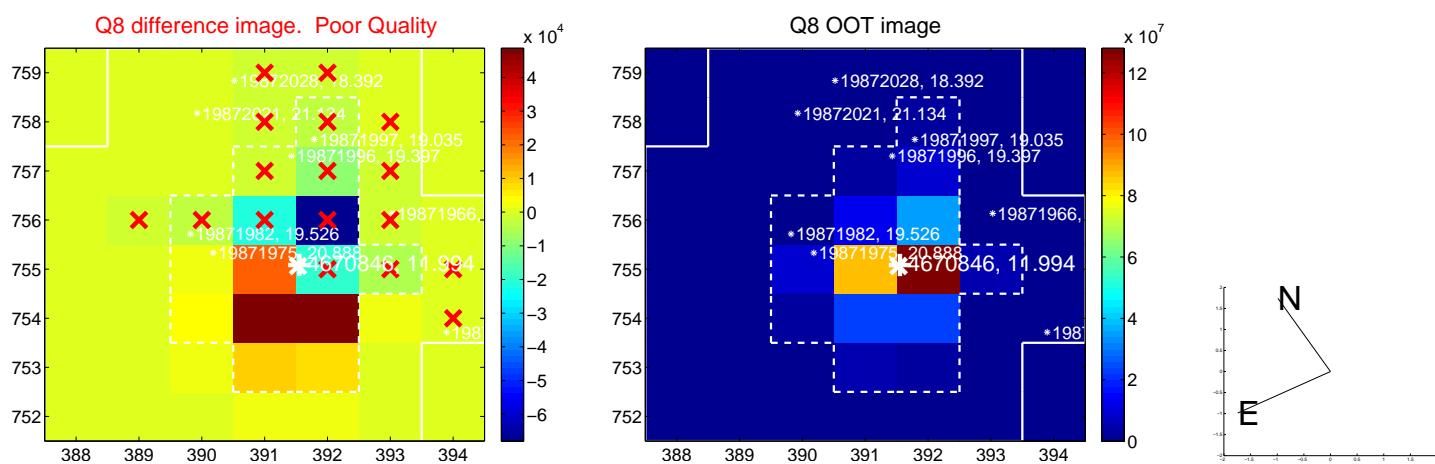
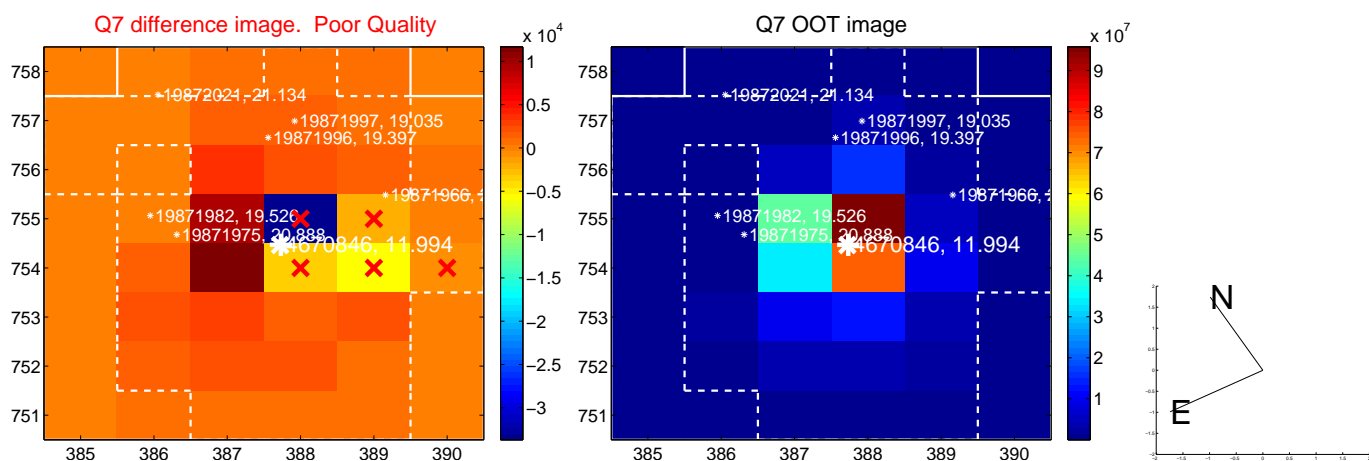
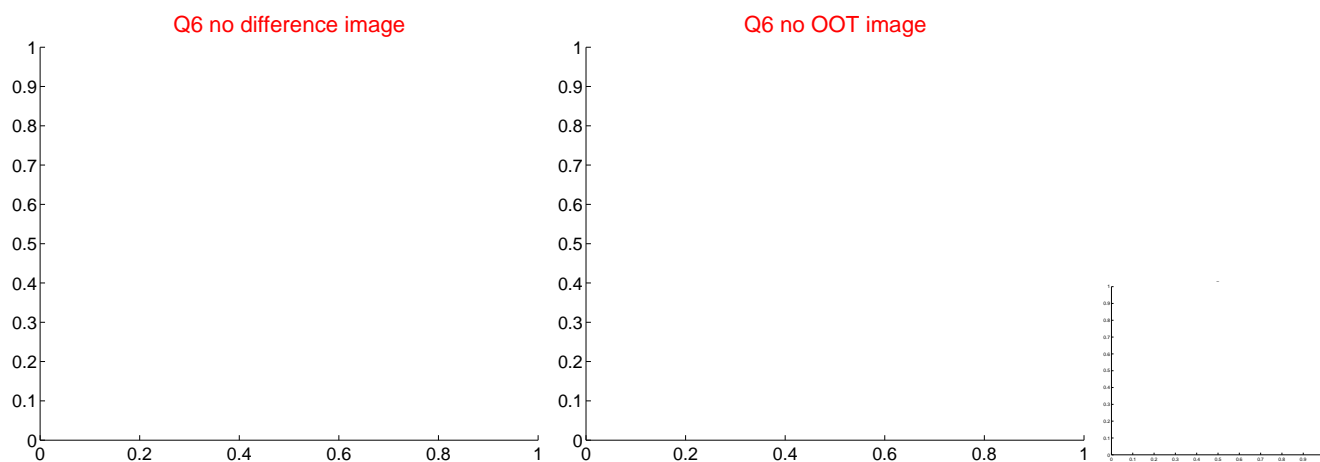
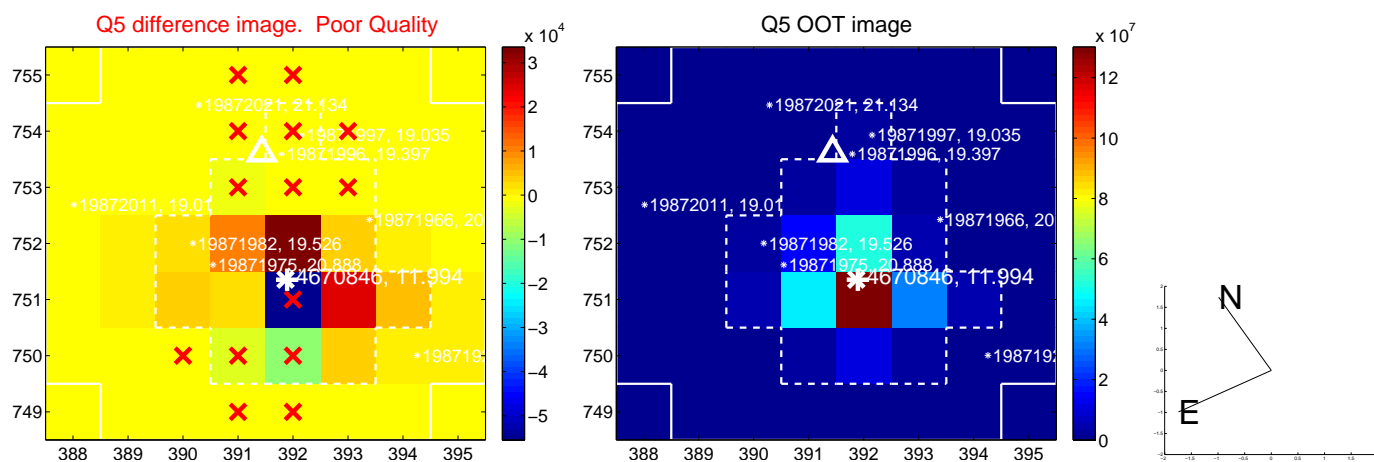


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

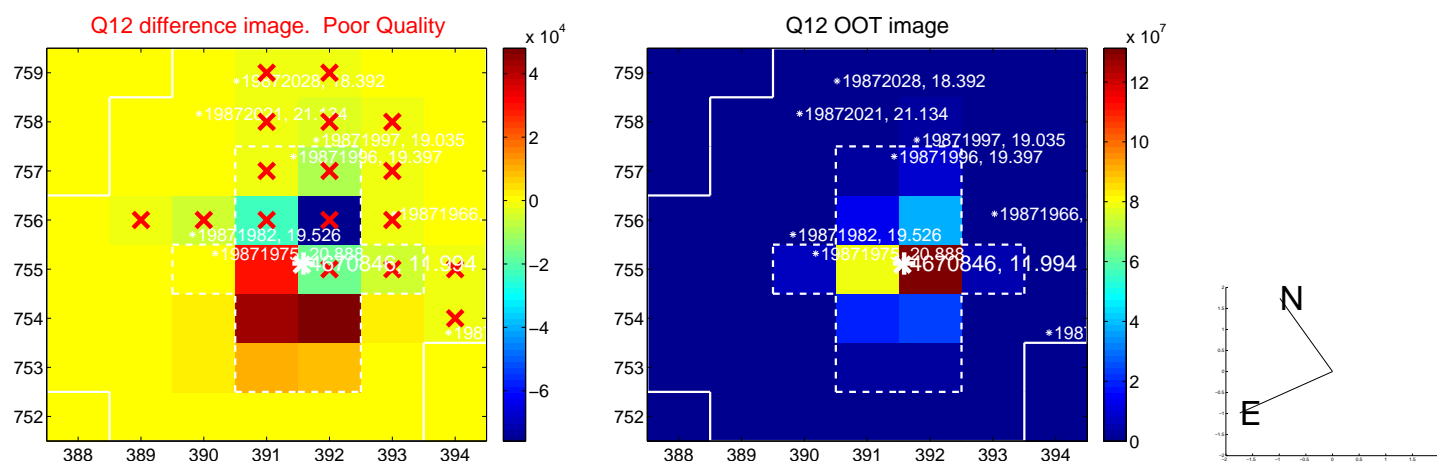
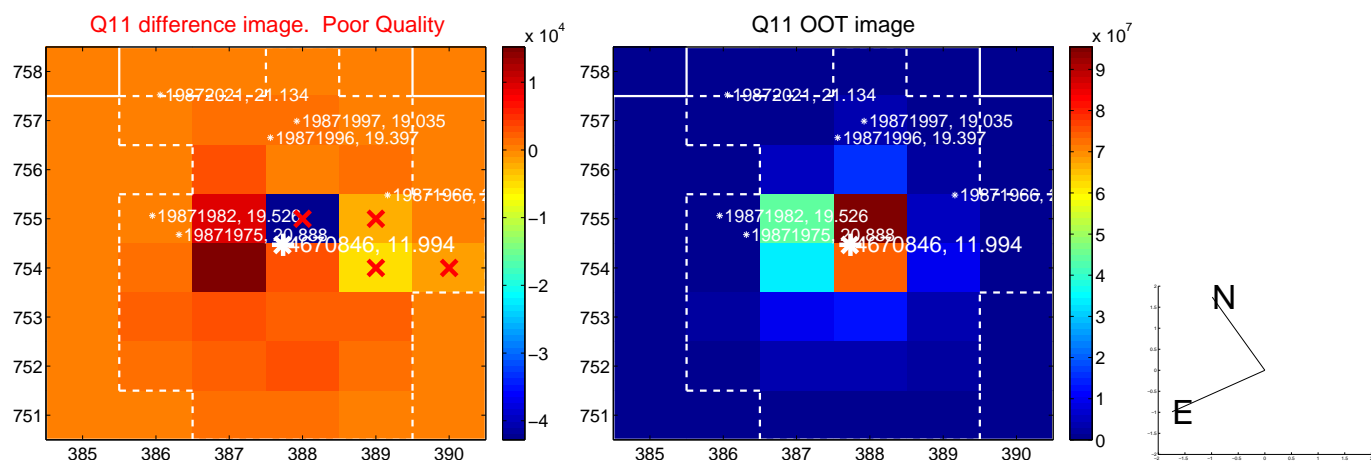
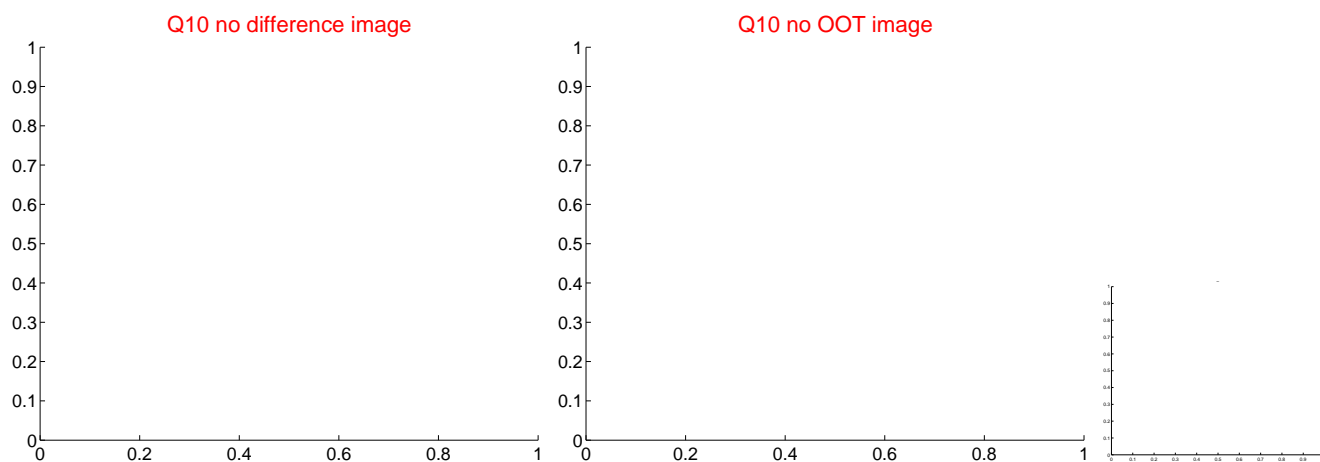
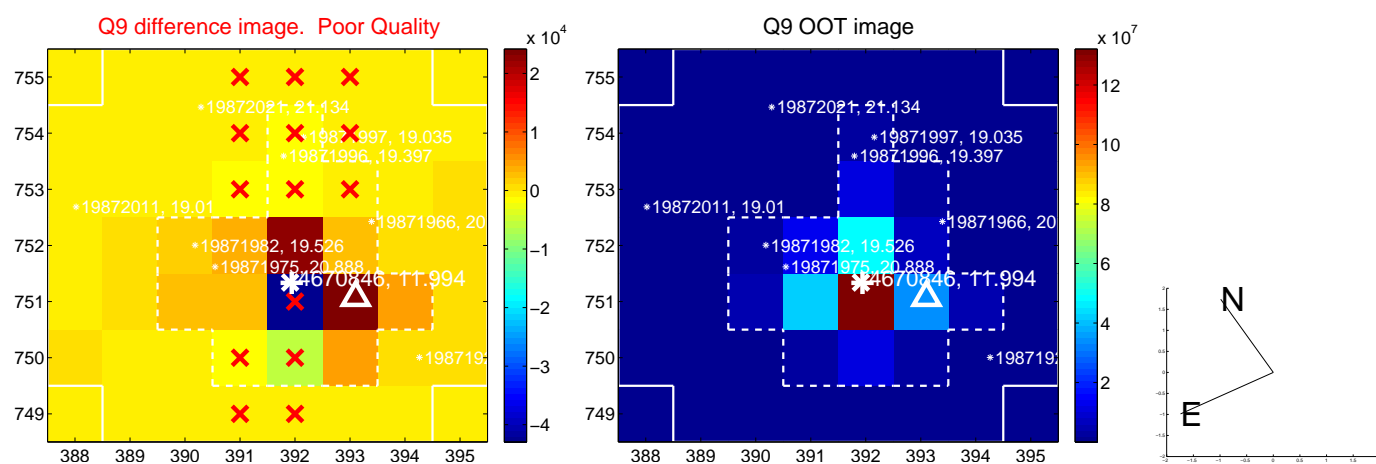
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



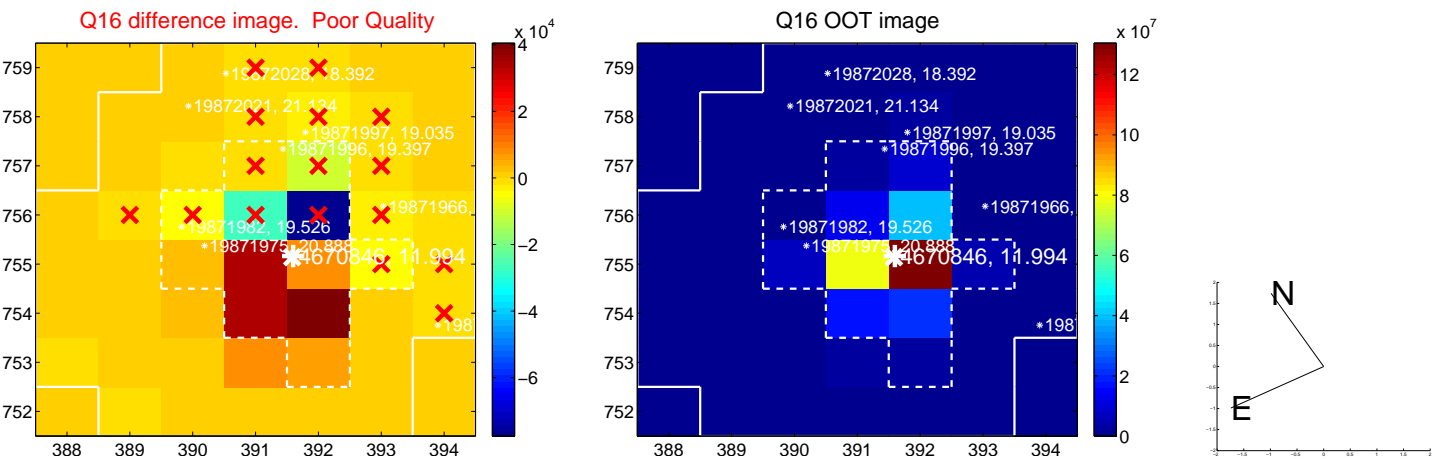
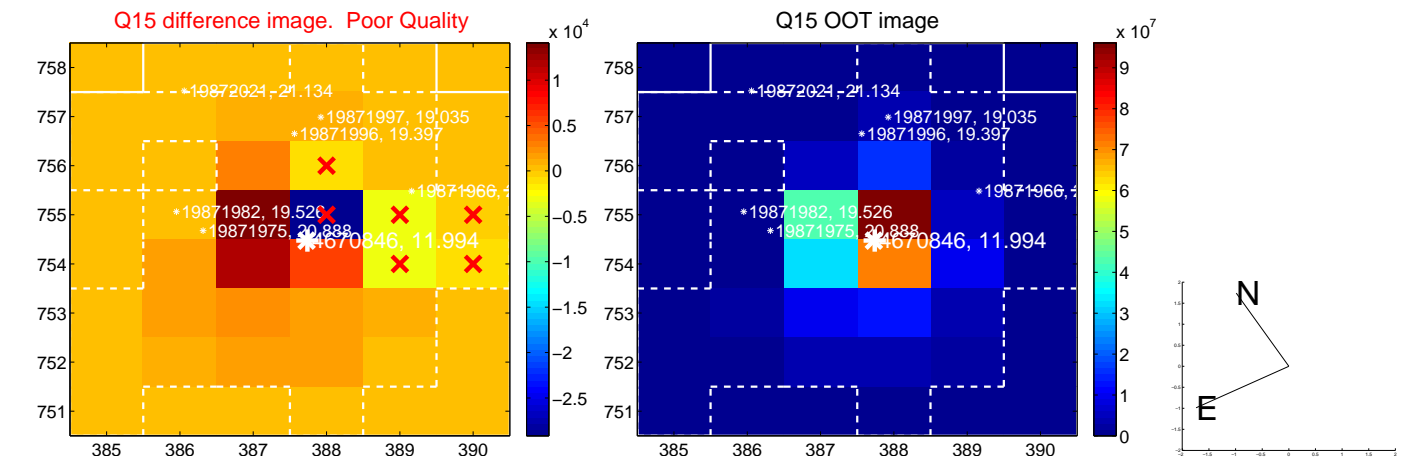
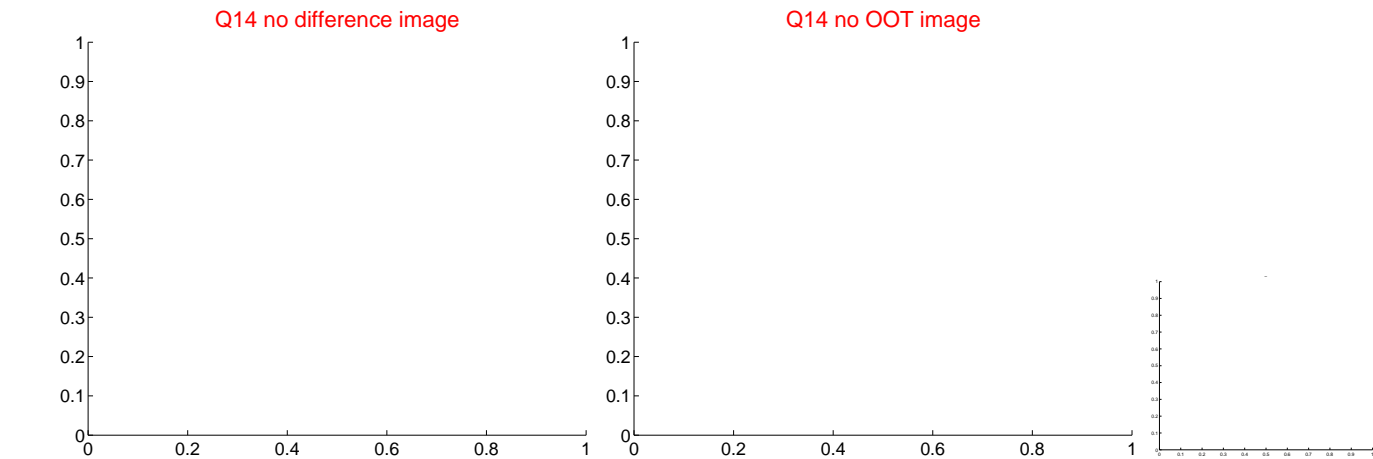
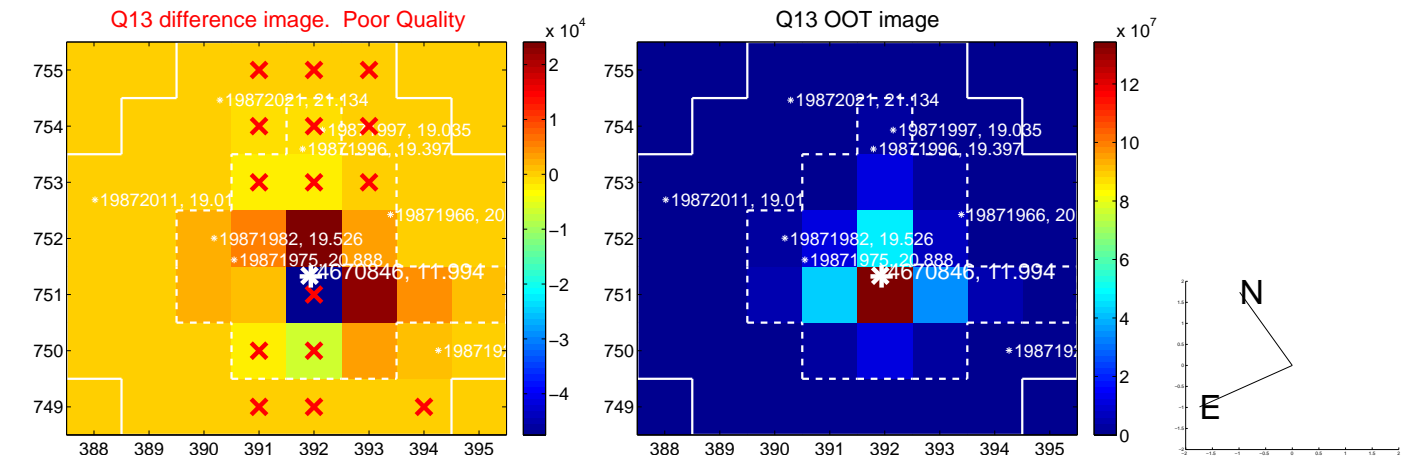
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



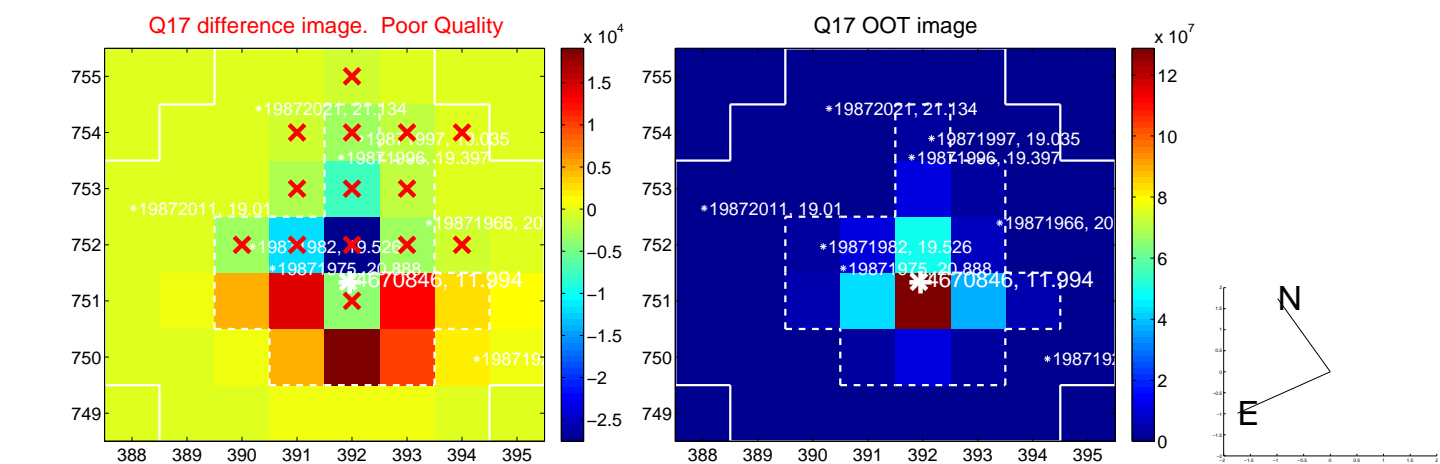
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



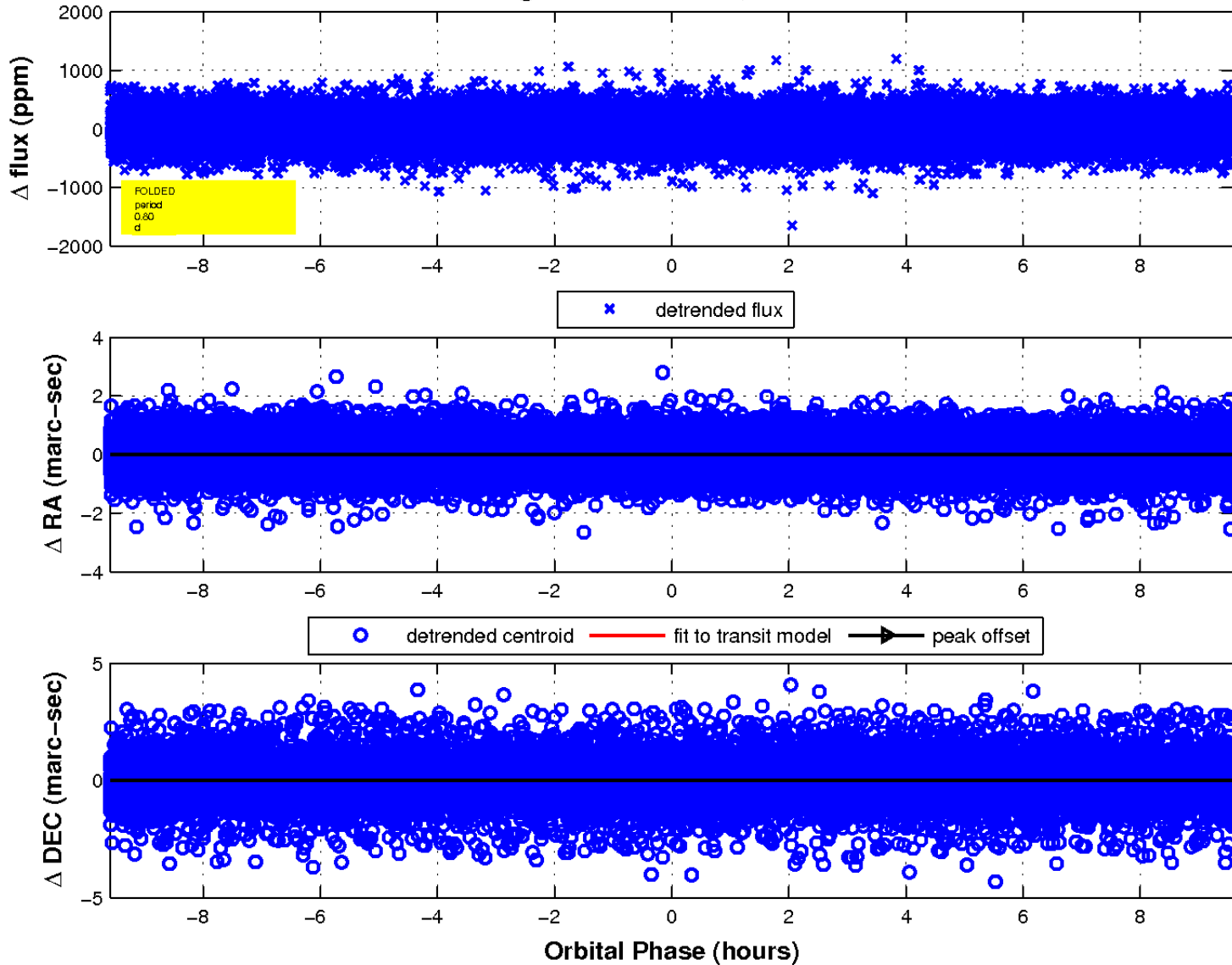
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

