

KIC 004668393

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})
004668393-01	OBS	No	0.930114	131.774178	25.1	2.387	7.7	7.4	0.80	5843	0.47	2111.86

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004668393-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—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.

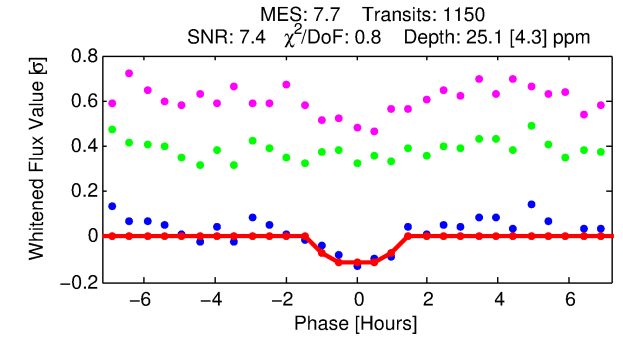
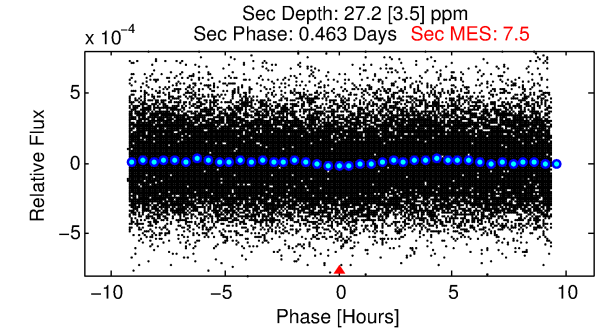
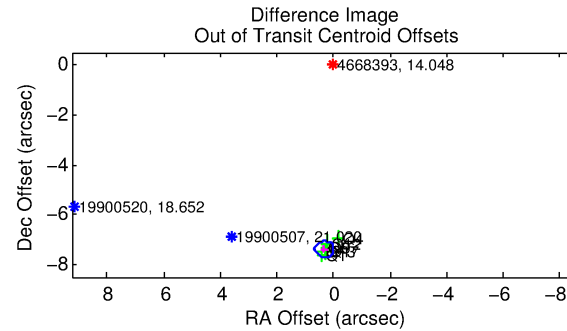
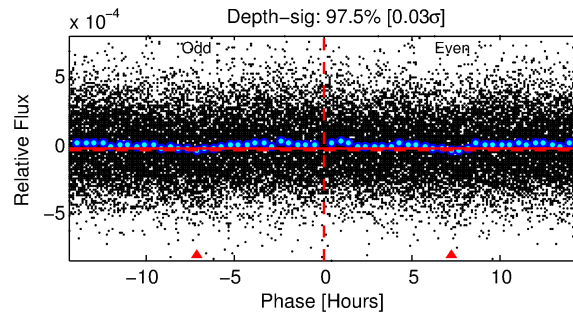
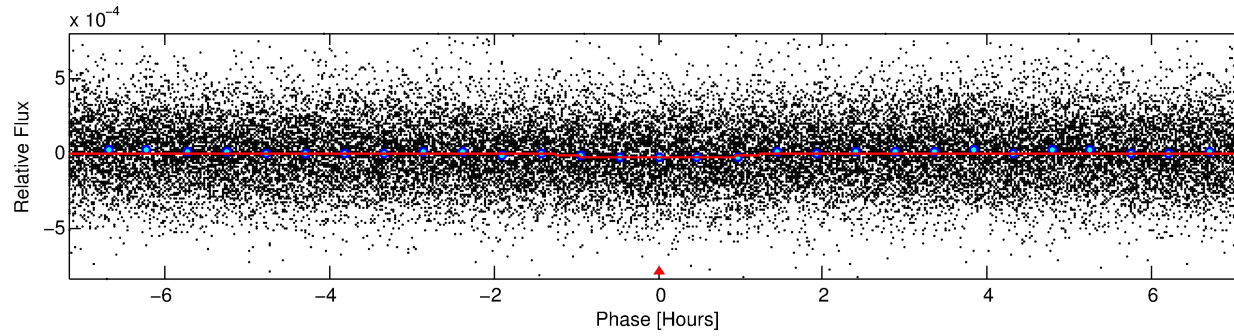
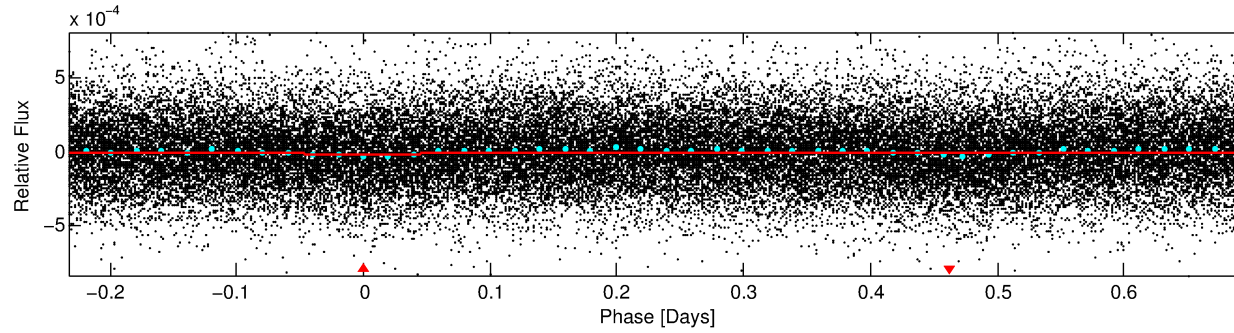
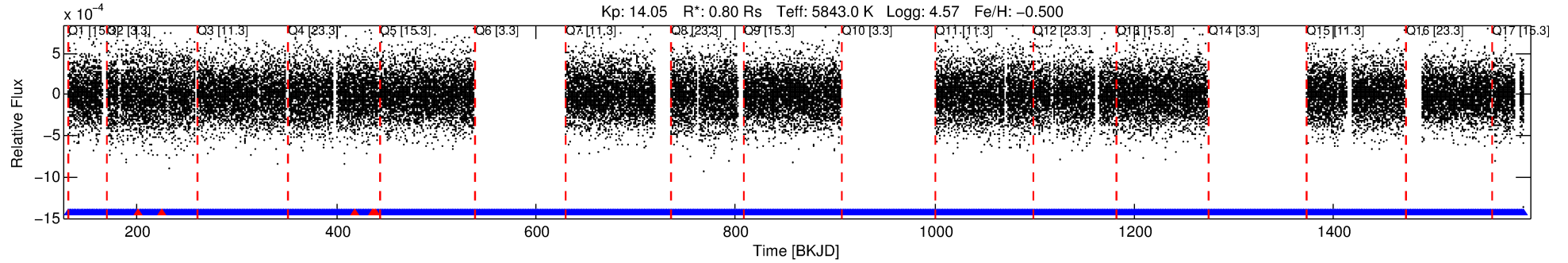
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004668393-01

No Significant Match Found

DV One-Page Summary

KIC: 4668393 Candidate: 1 of 1 Period: 0.930 d



DV Fit Results:

Period = 0.93011 [0.00001] d
Epoch = 131.7742 [0.0044] BKJD
Rp/R* = 0.0054 [0.0034]
a/R* = 1.63 [3.38]
b = 0.90 [0.71]
Seff = 2111.86 [727.68]
Teq = 1729 [149] K
Rp = 0.47 [0.32] Re
a = 0.0177 [0.0040] AU
Ag = 21.26 [28.08] [0.72 σ]
Teffp = 5739 [1842] K [2.17 σ]

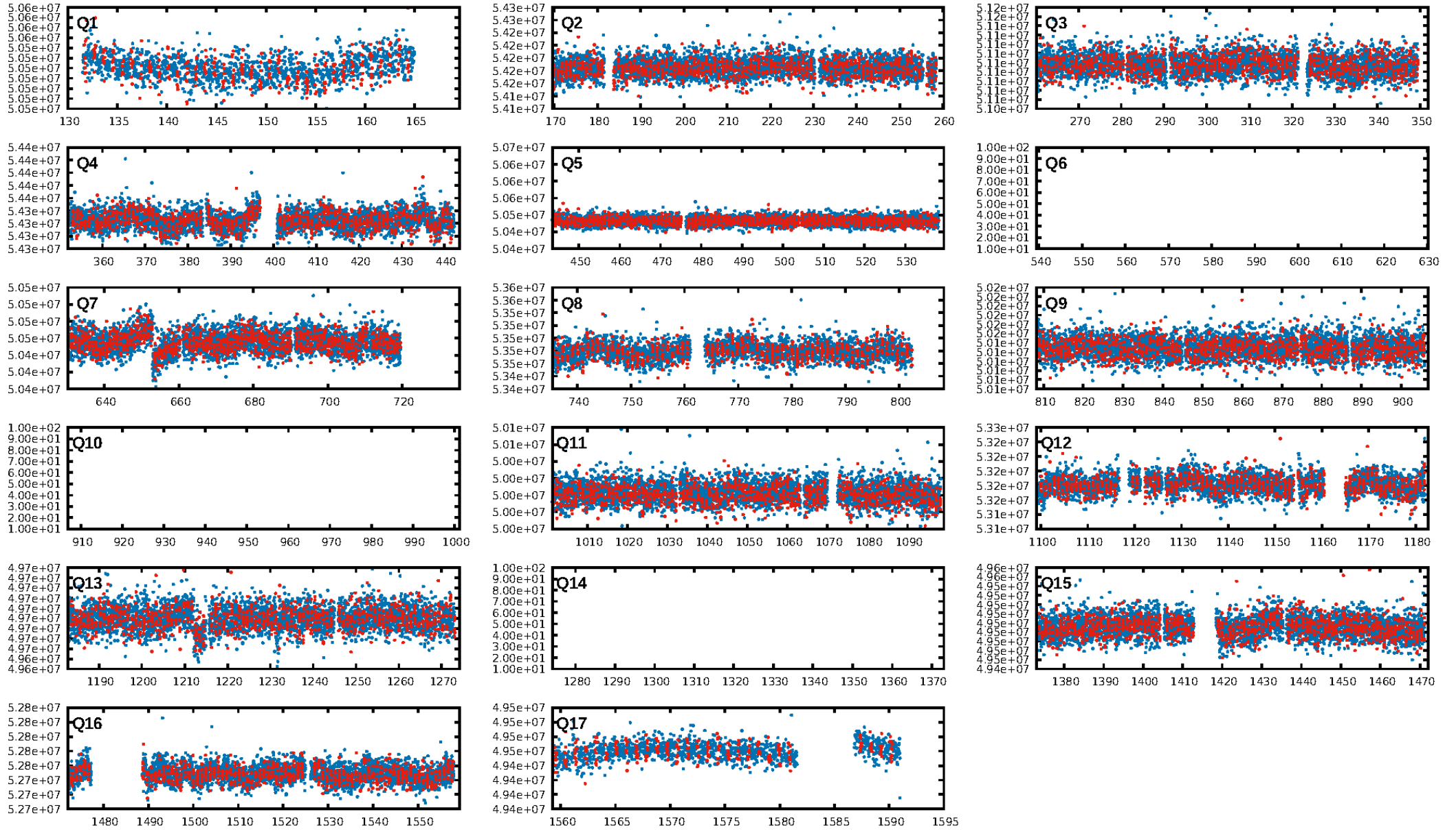
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.12e-16
RollingBand-fgt: 0.99 [1079/1086]
GhostDiagnostic-chr: -0.6578
Centroid-sig: 40.4%
Centroid-so: 1.596 arcsec [0.86 σ]
OotOffset-rm: 7.396 arcsec [68.92 σ]
KicOffset-rm: 7.384 arcsec [68.81 σ]
OotOffset-st: 0/0/2/5 [7]
KicOffset-st: 0/0/2/5 [7]
DiffImageQuality-fgm: 1.00 [7/7]
DiffImageOverlap-fno: 1.00 [14/14]

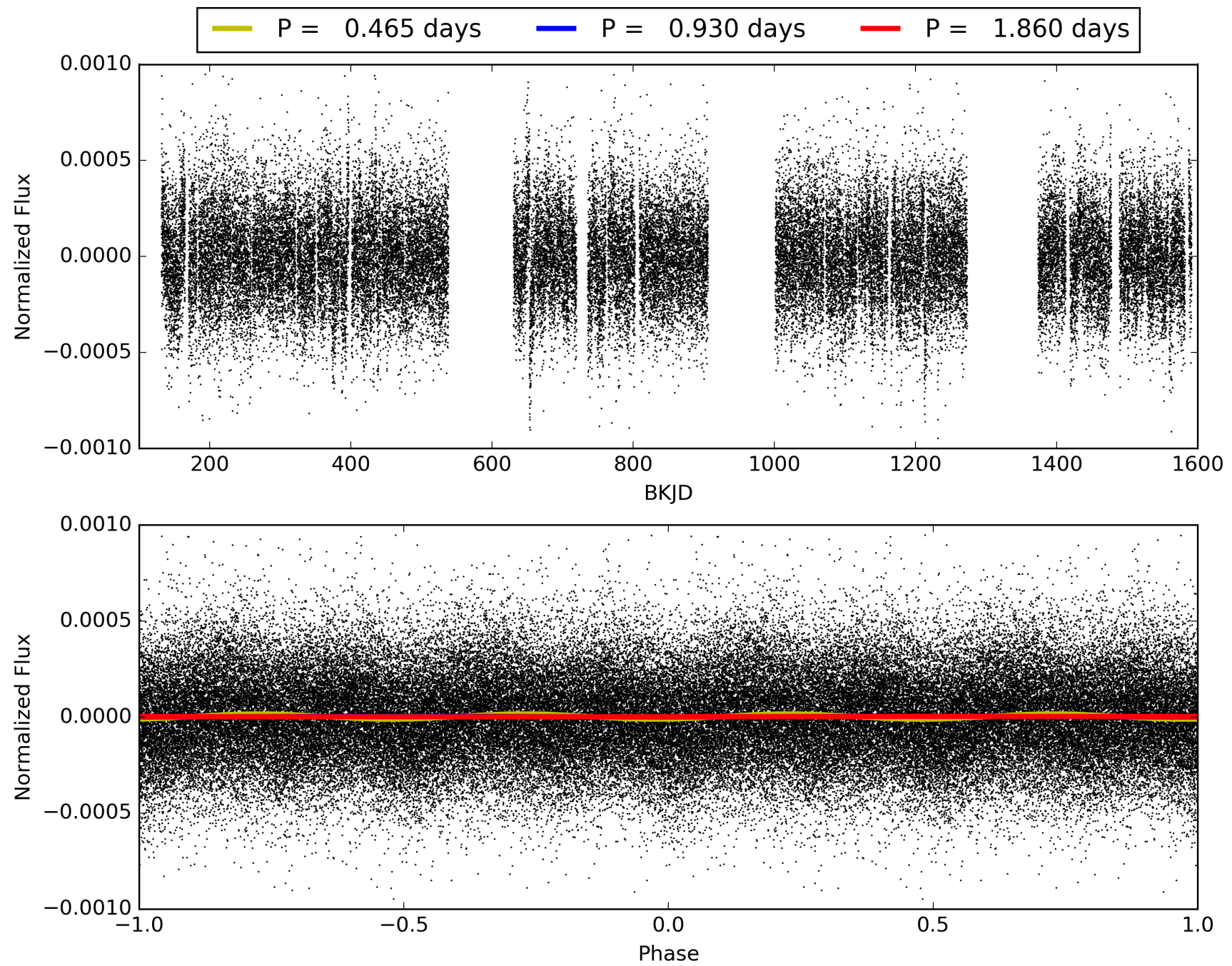
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 22:47:23 Z

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

TCE 004668393-01, PDC Light Curves

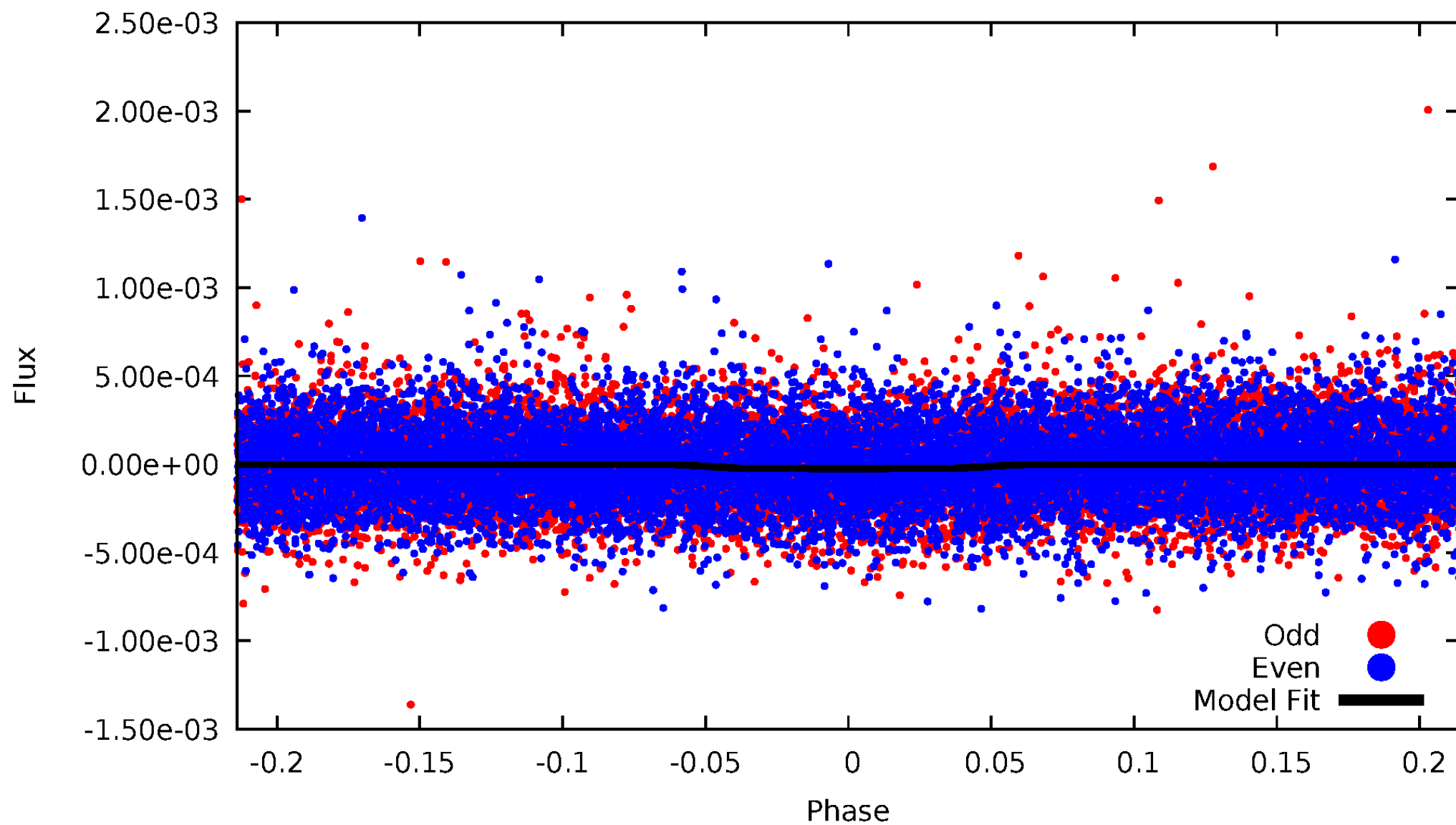


TCE 004668393-01



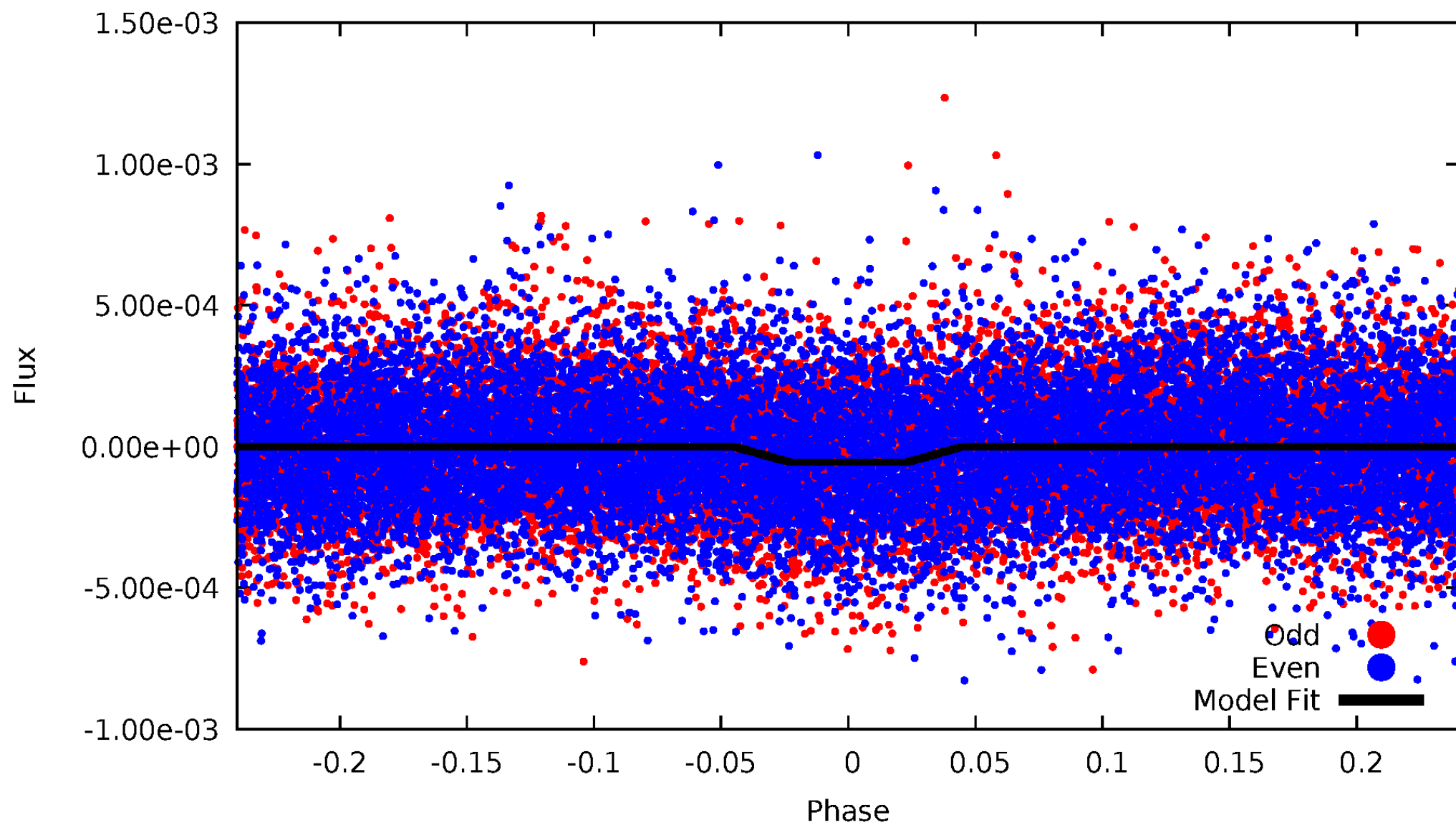
DV Odd/Even

TCE 004668393-01



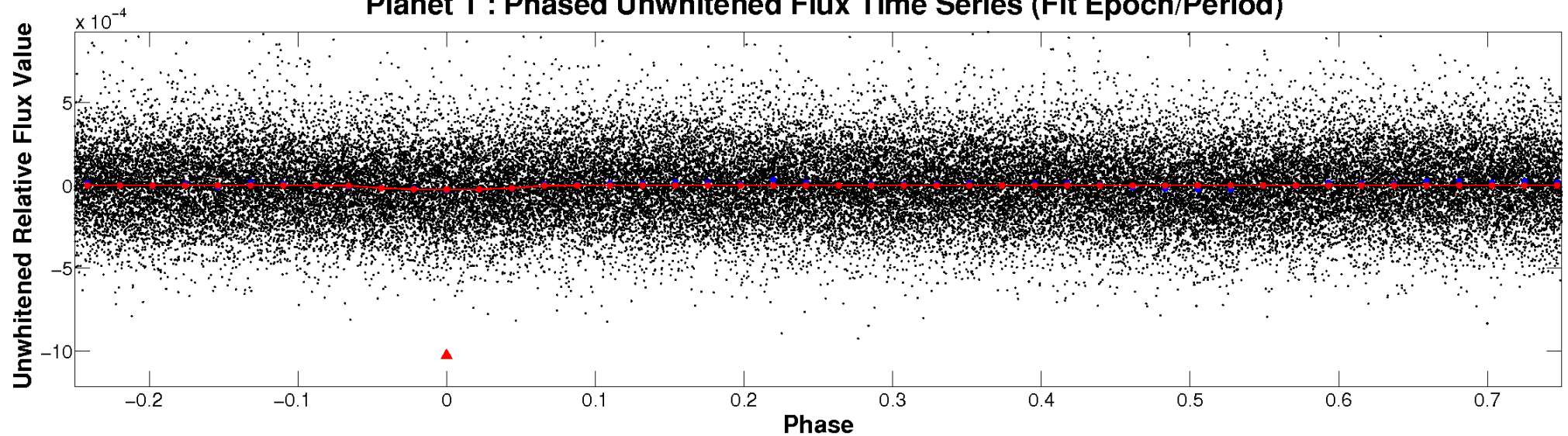
ALT Odd/Even

TCE 004668393-01

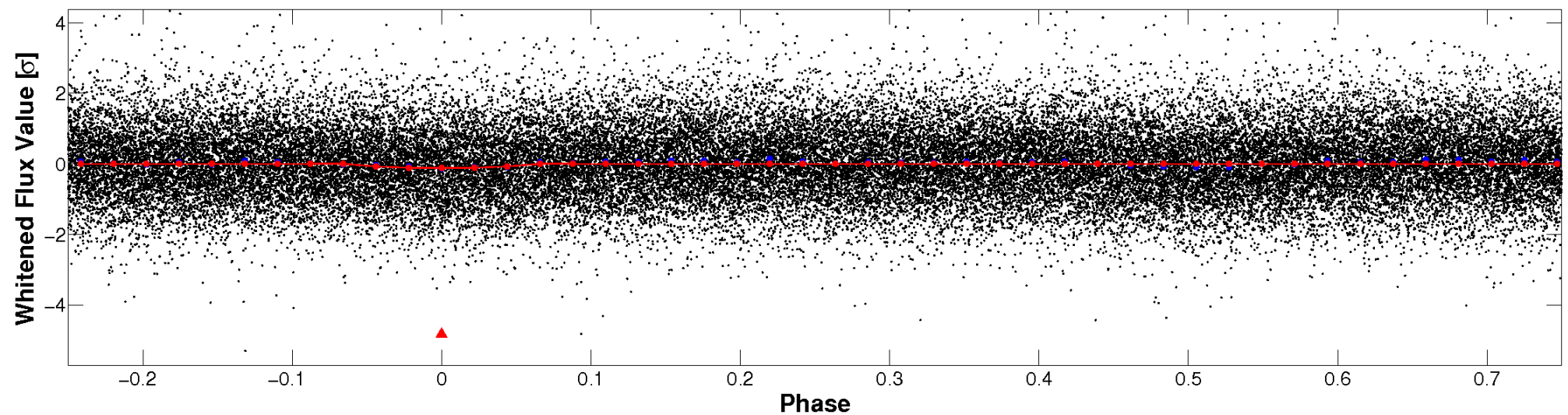


Non-Whitened Vs. Whitened Light Curve

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

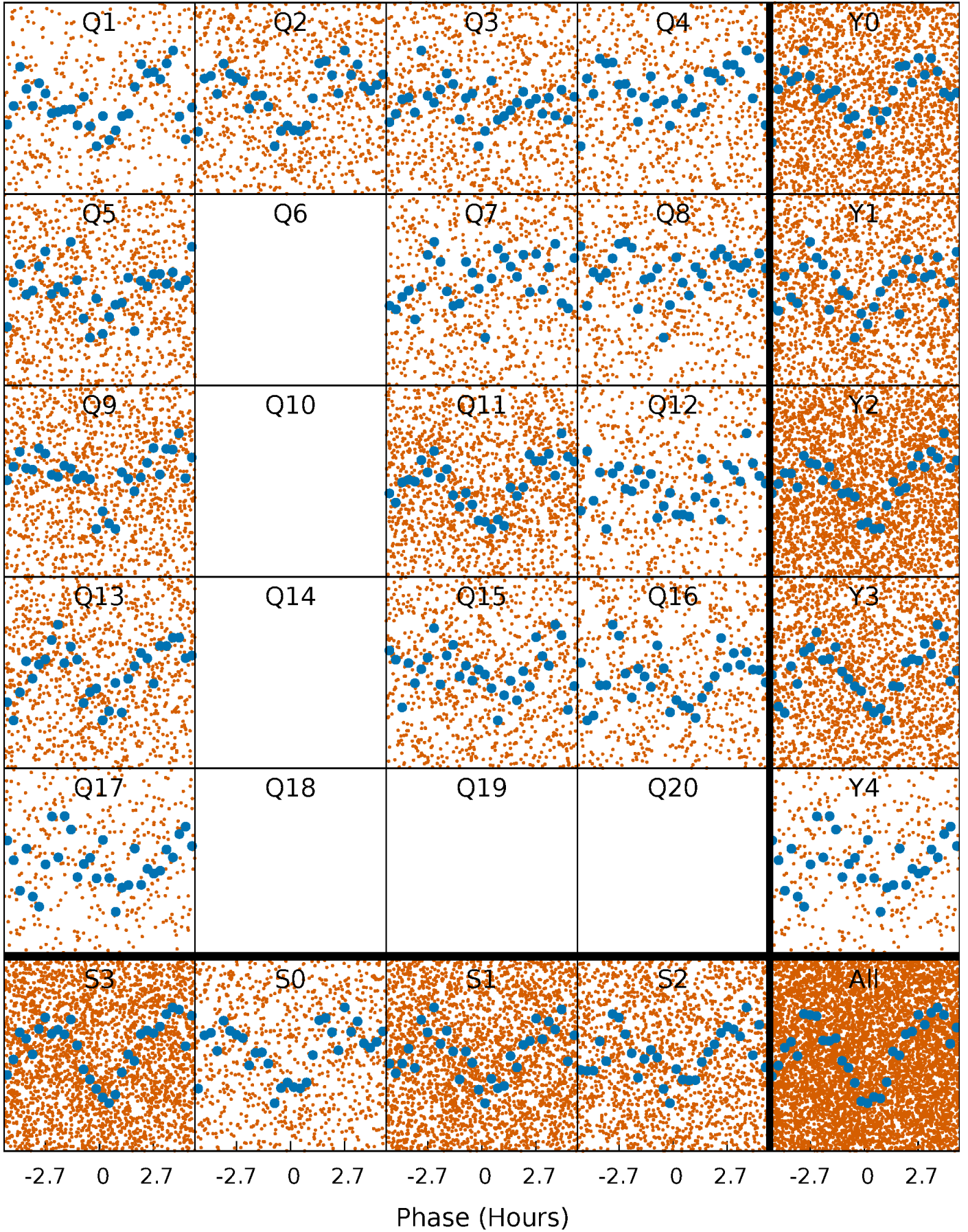


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



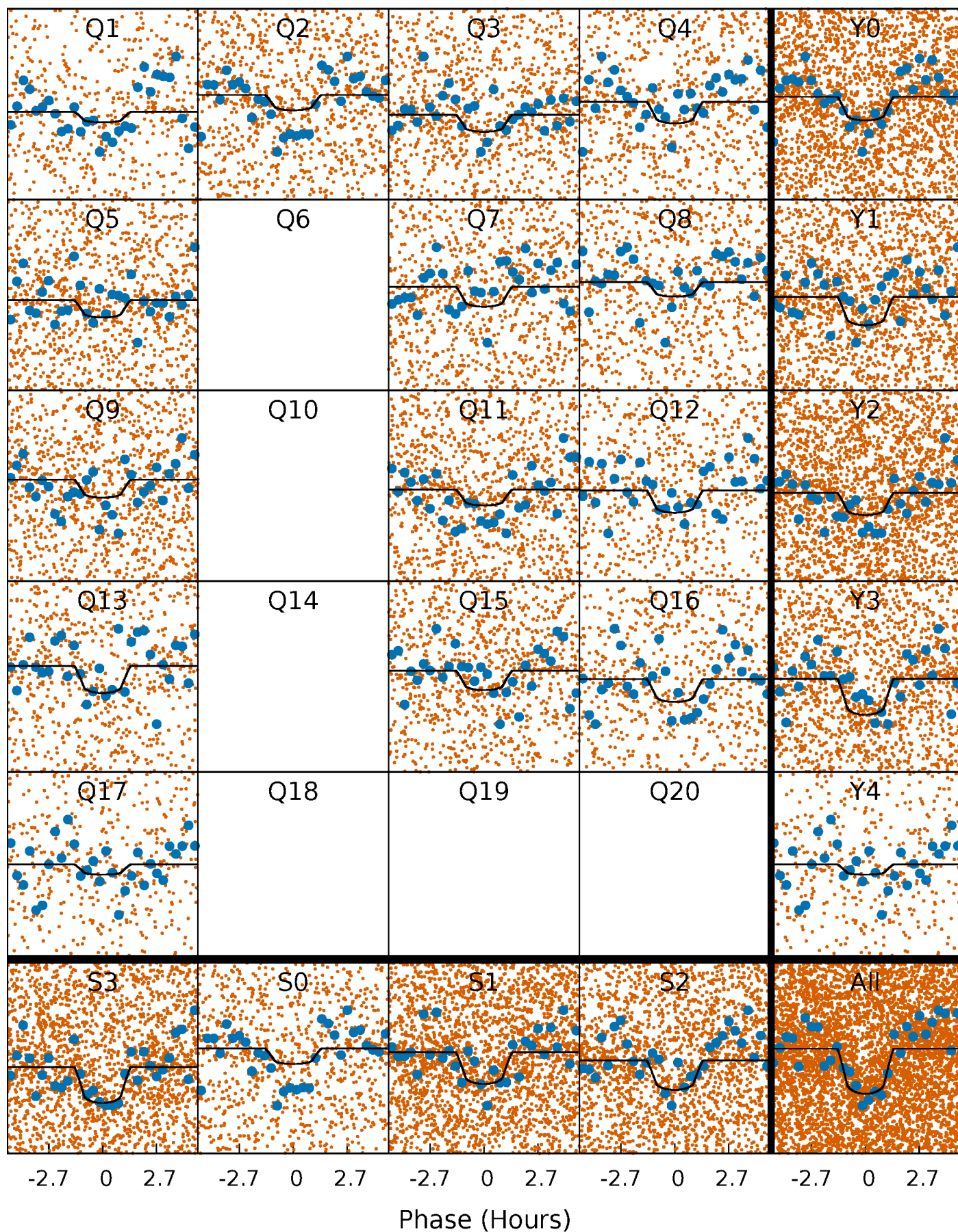
PDC Quarter-Phased Transit Curves

TCE 004668393-01 P= 0.930114 Days $T_0=131.774178$ (BKJD)



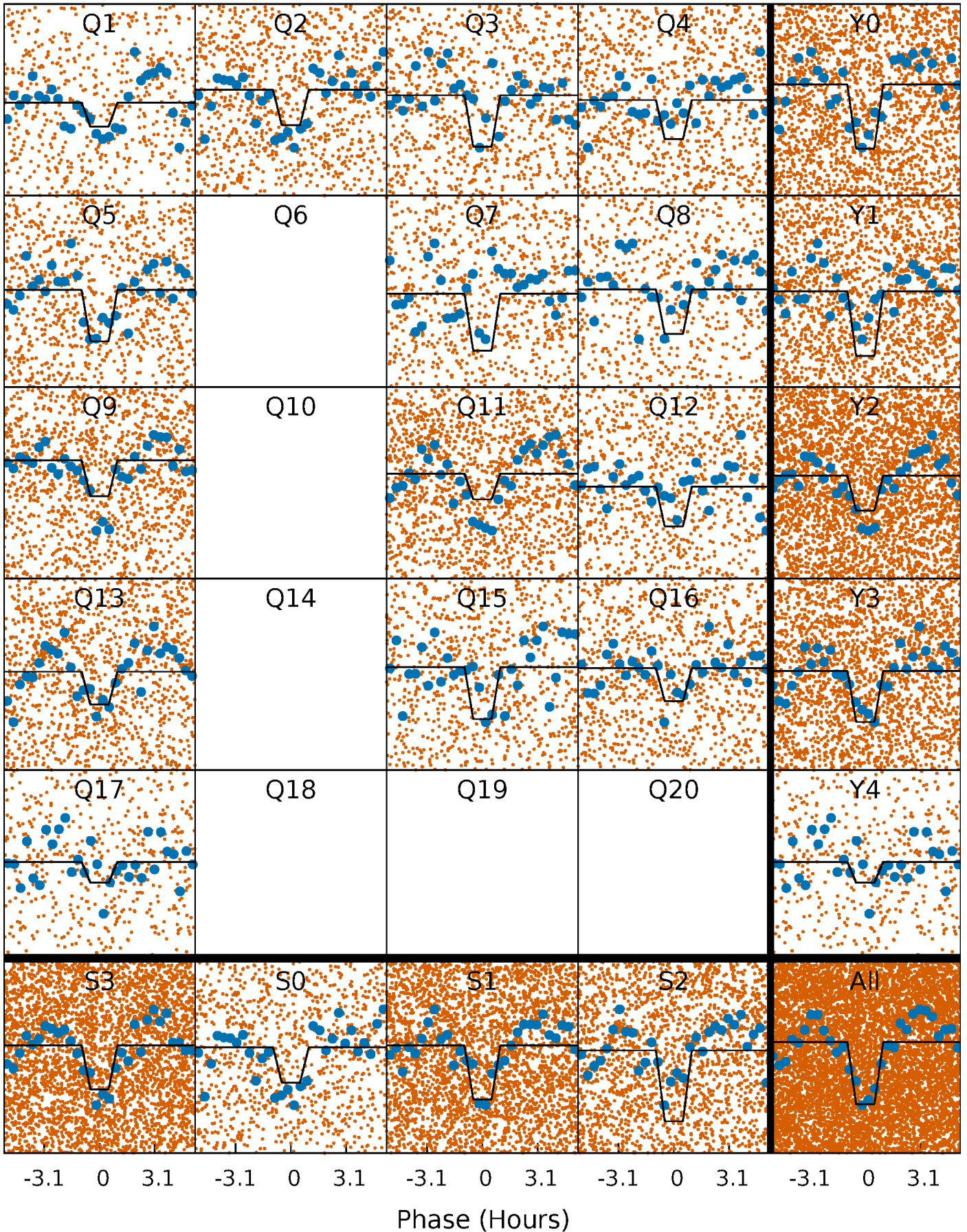
DV Quarter-Phased Transit Curves

TCE 004668393-01 P= 0.930114 Days $T_0=131.774178$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

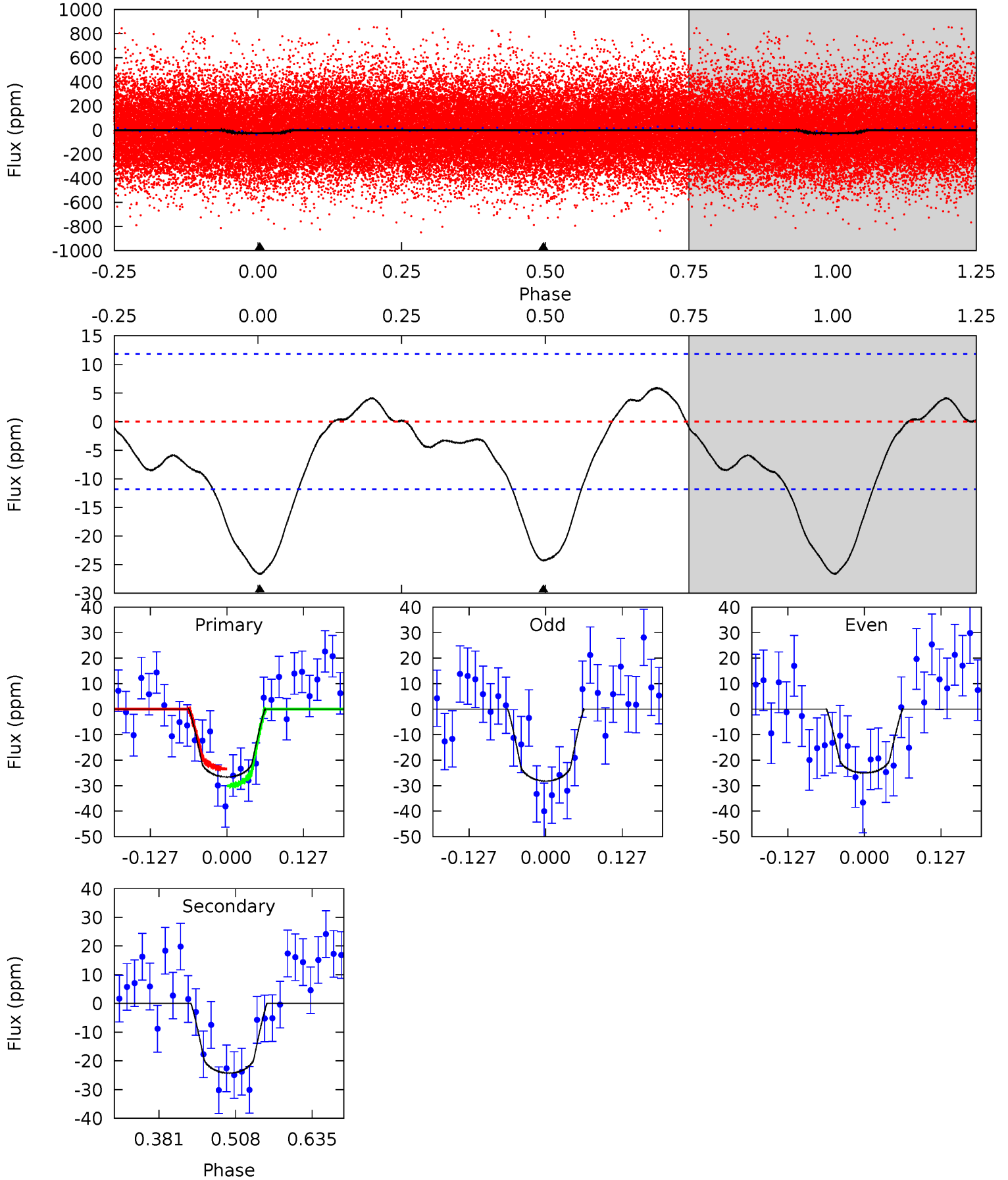
TCE 004668393-01 P= 0.930128 Days $T_0=131.774148$ (BKJD)



DV Model-Shift Uniqueness Test

004668393-01, P = 0.930114 Days, E = 130.844064 Days

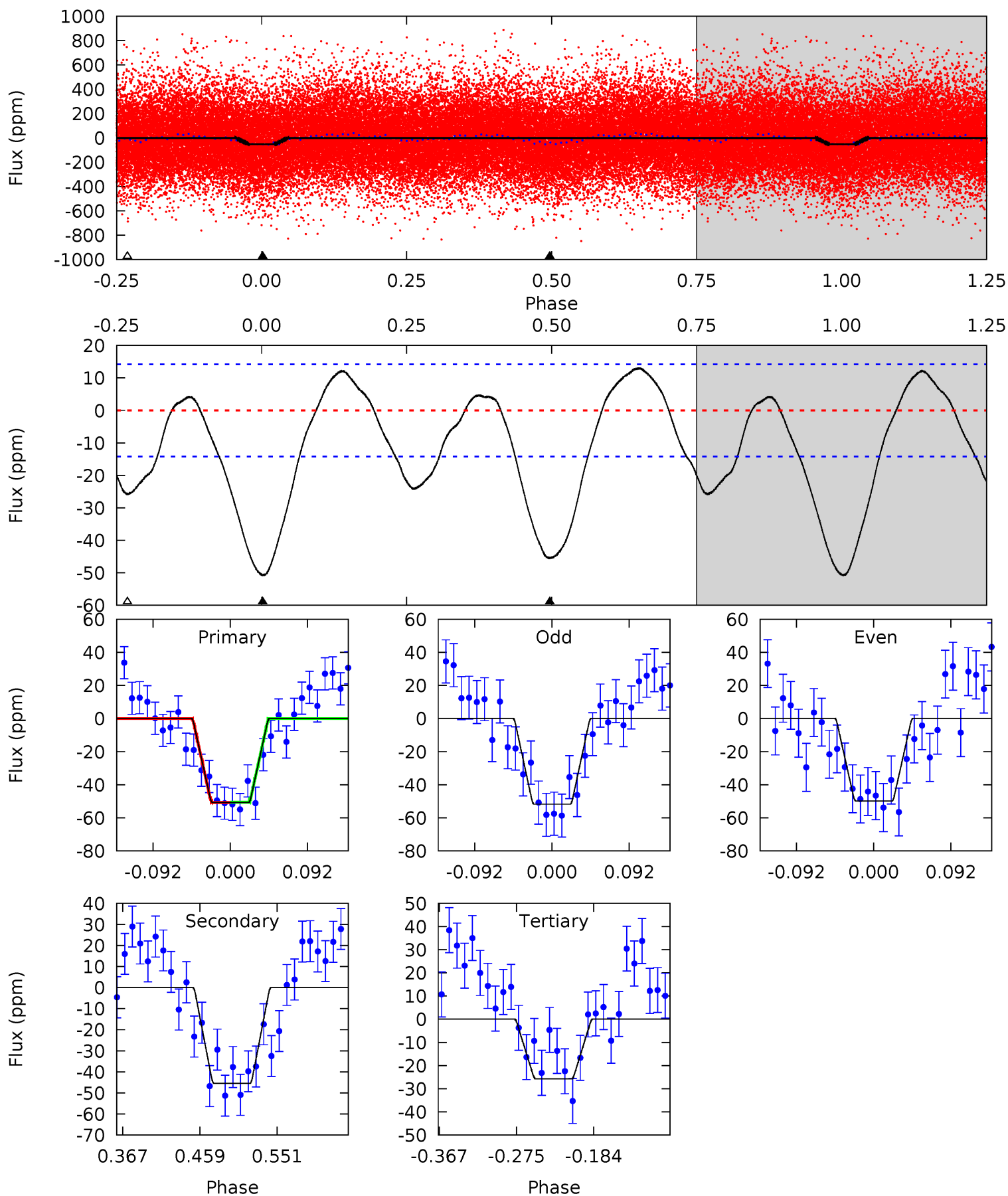
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.2	9.26	0	0	4.51	1.53	1.60	10.2	10.2	9.26	9.26	0.61	0.94	0.18	1.27



Alt Model-Shift Uniqueness Test

004668393-01, P = 0.930128 Days, E = 130.844020 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.4	14.7	8.32	0	4.58	1.69	3.84	8.05	16.4	6.36	14.7	0.31	1.10	0.20	0.03



Stellar Parameters For KIC 004668393

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5843^{+158}_{-158}	$4.568^{+0.042}_{-0.179}$	$-0.500^{+0.300}_{-0.300}$	$0.796^{+0.212}_{-0.066}$	$0.855^{+0.089}_{-0.081}$	$2.387^{+0.533}_{-1.136}$
	+3%/-3%	+1%/-4%	+60%/-60%	+27%/-8%	+10%/-9%	+22%/-48%
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 004668393-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-24 ± 3	$0.51^{+0.30}_{-0.29}$	2463^{+148}_{-105}	5445^{+2947}_{-1006}	16^{+66}_{-10}
Alt.	-45 ± 3	$0.66^{+0.31}_{-0.28}$	2453^{+164}_{-107}	5598^{+1945}_{-868}	18^{+38}_{-10}

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

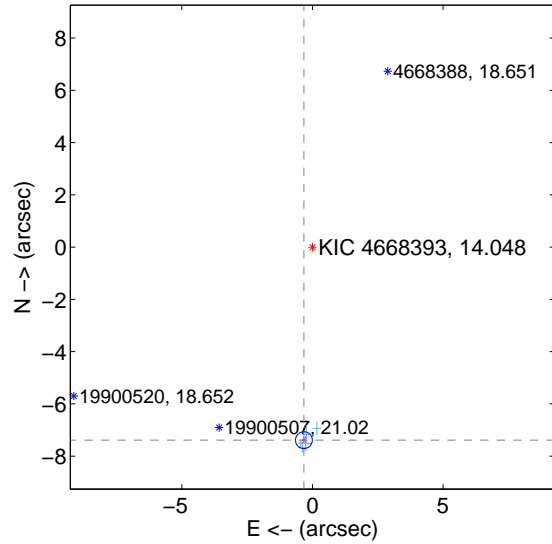
Supplemental centroid analysis for 004668393-01. Kepler magnitude: 14.05. Transit SNR 7.36

There are 7 quarters with good PRF difference image offsets

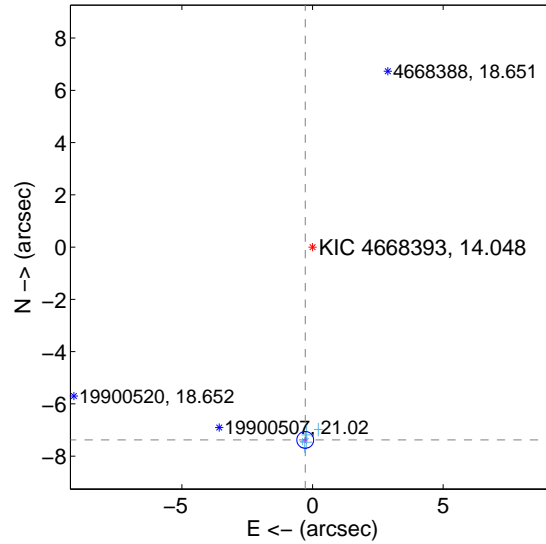
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.396 ± 0.107	68.92	0.326 ± 0.088	-7.389 ± 0.107
PRF-fit source offset from KIC position	7.384 ± 0.107	68.81	0.279 ± 0.088	-7.379 ± 0.107
photometric centroid source offset	1.60 ± 1.85	0.86	1.24 ± 1.81	-1.00 ± 1.90

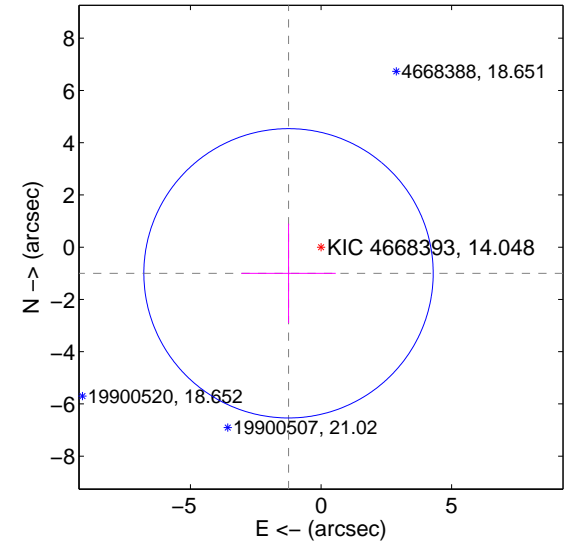
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

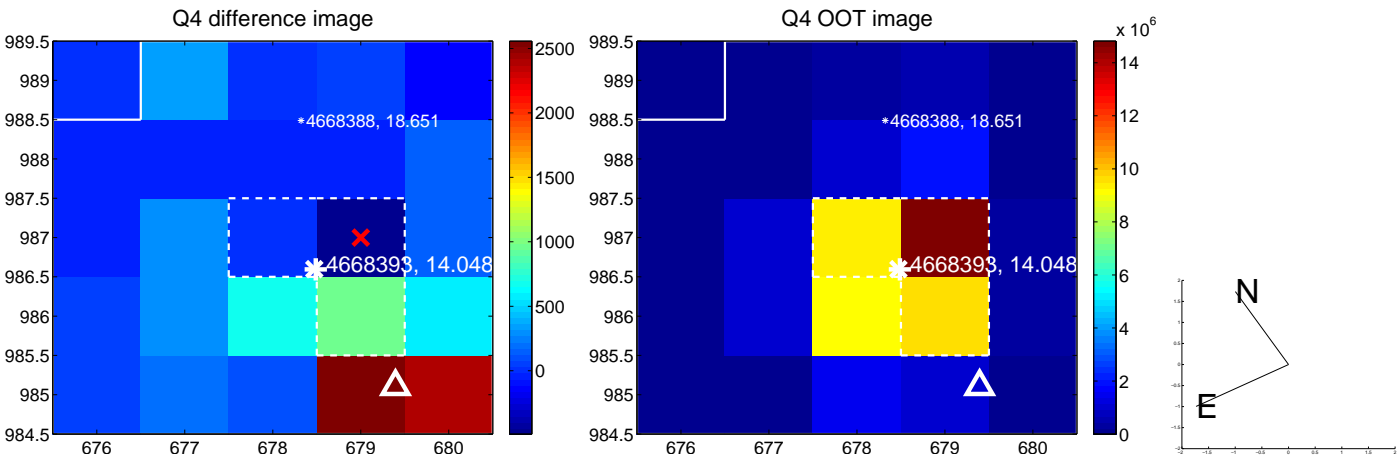
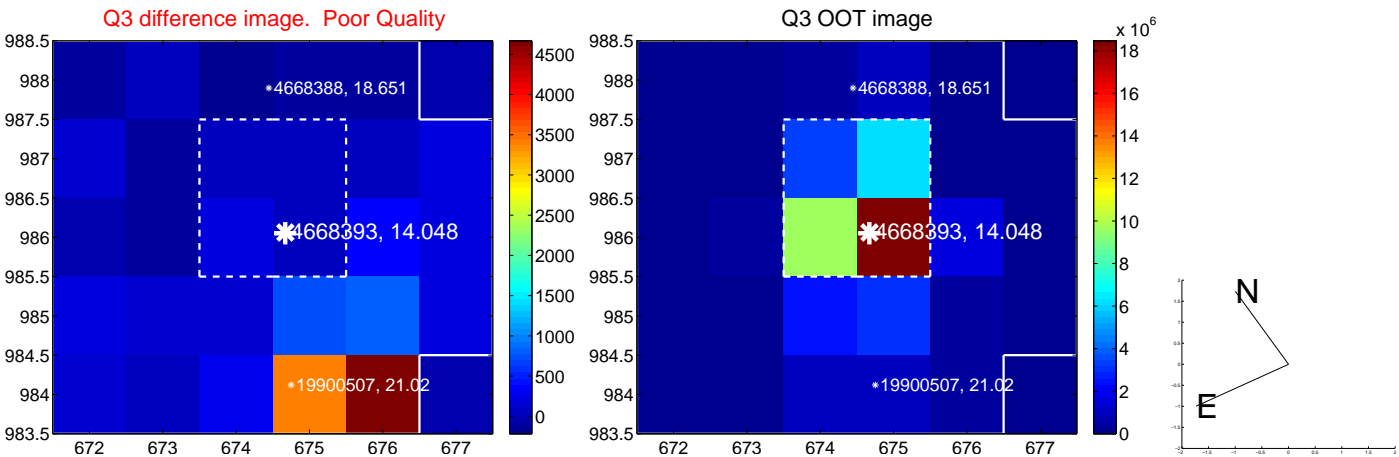
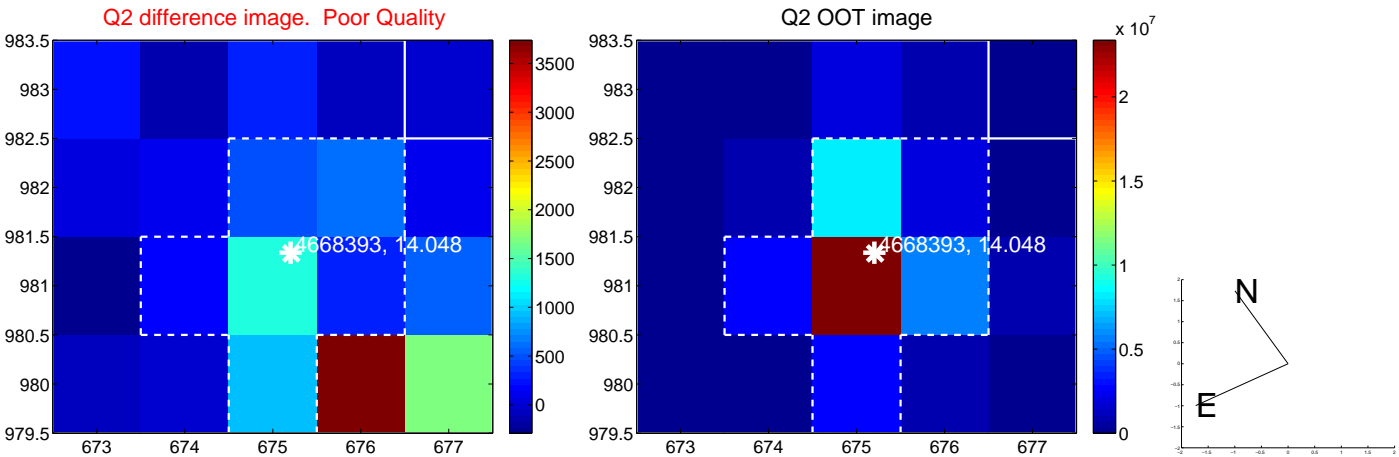
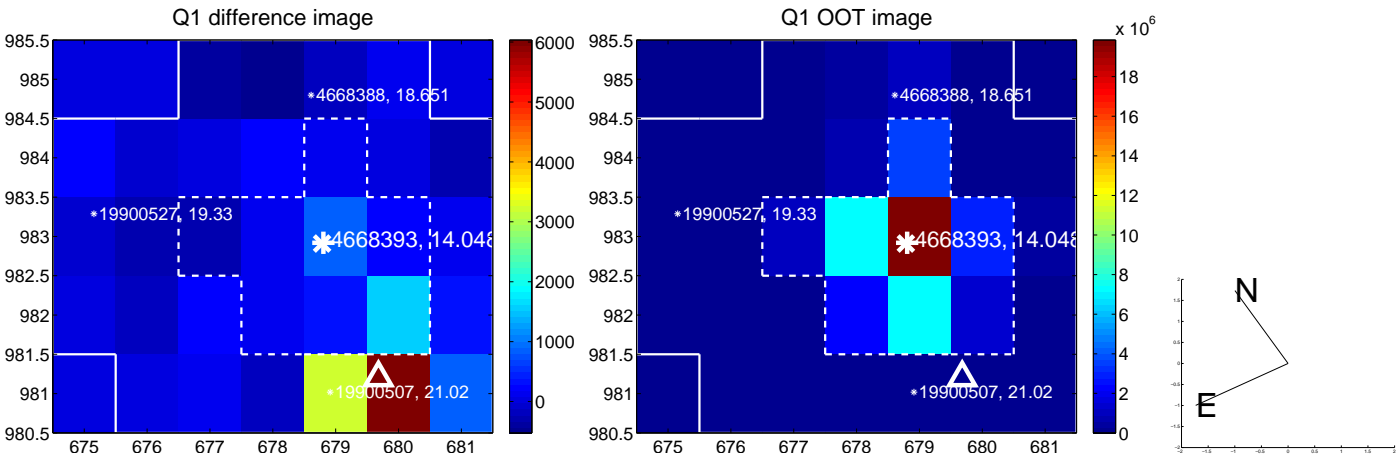


offset from photometric centroids

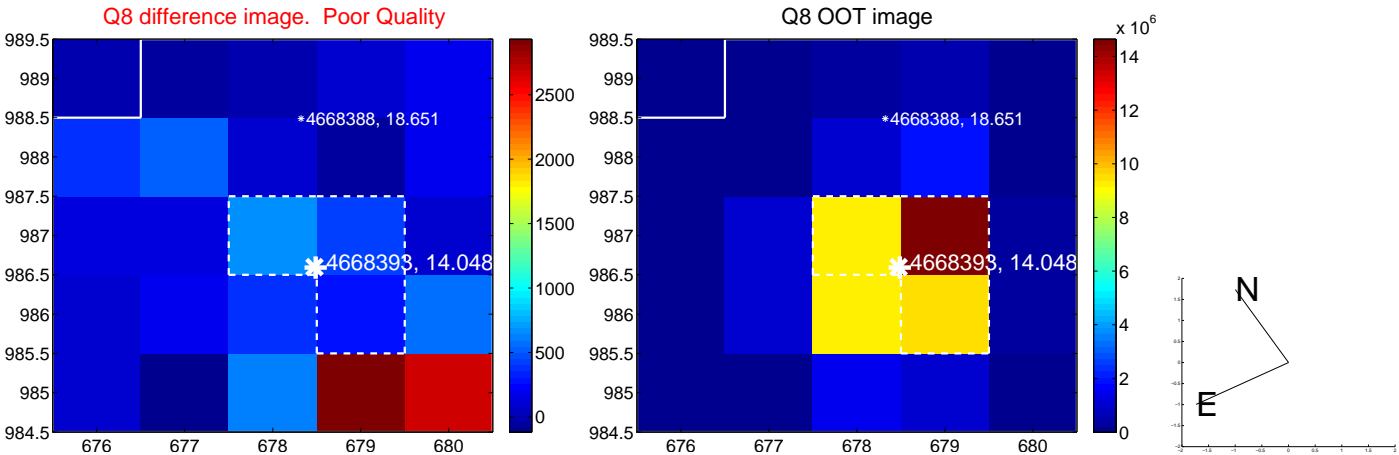
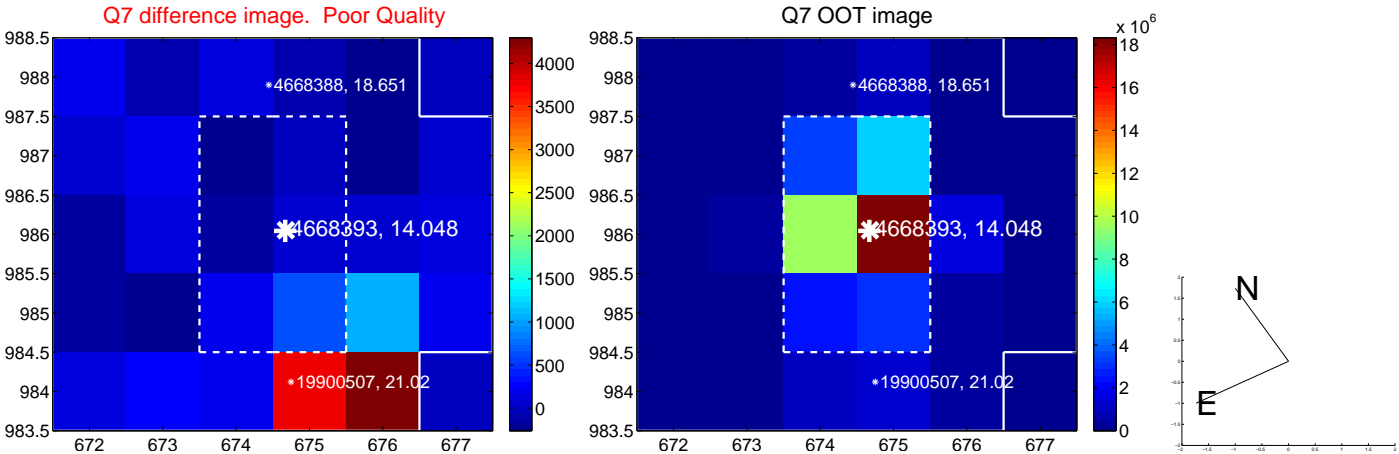
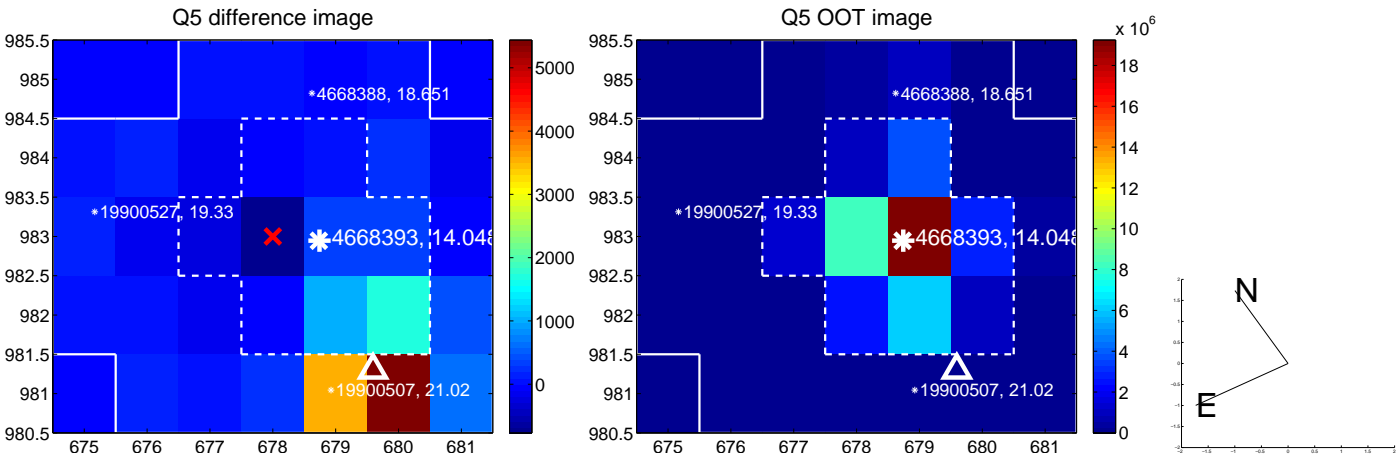


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

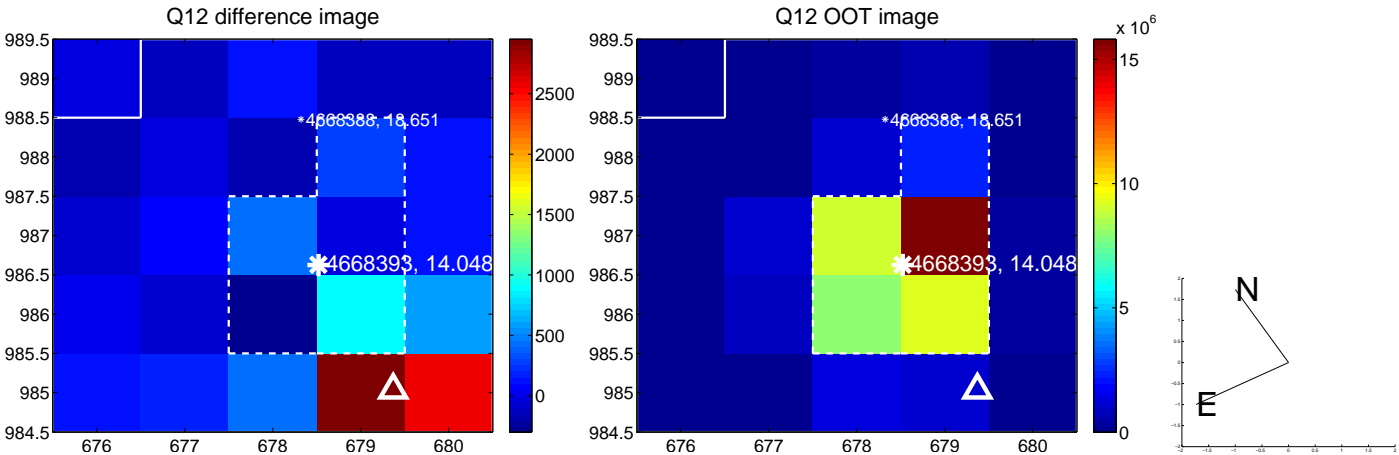
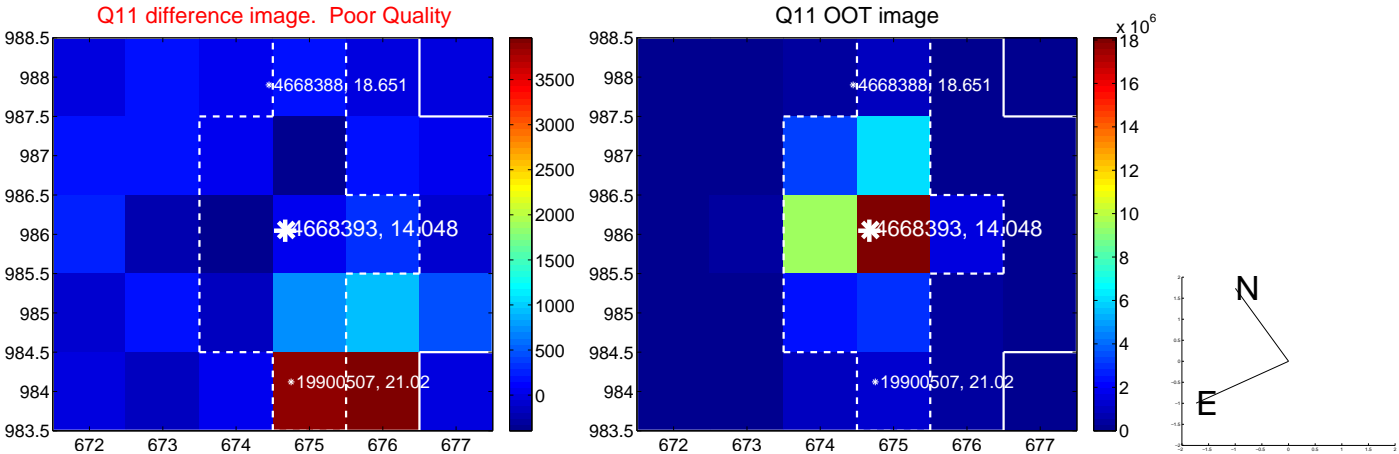
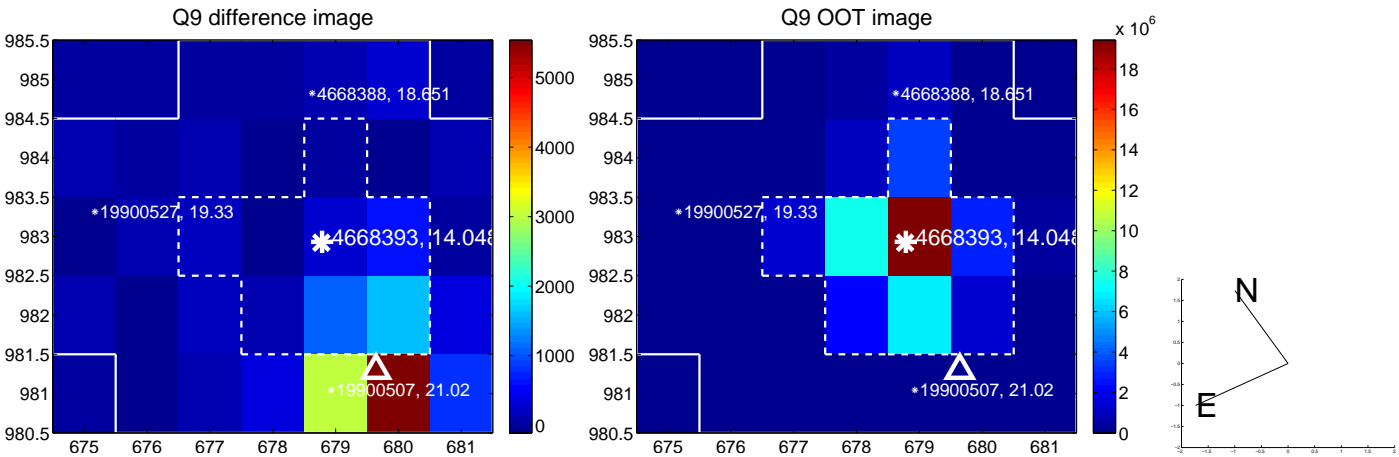
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



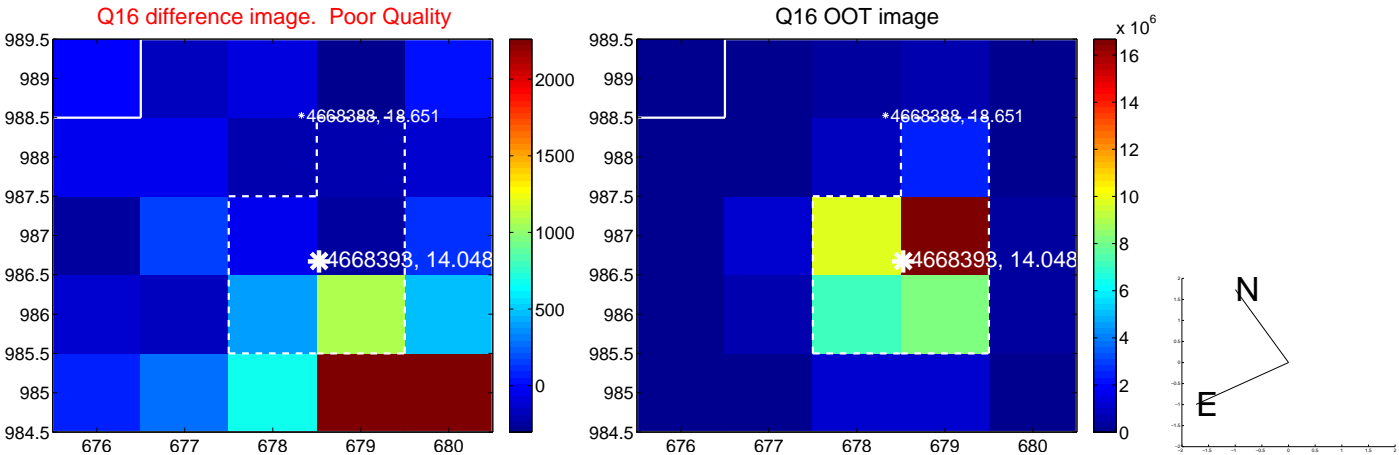
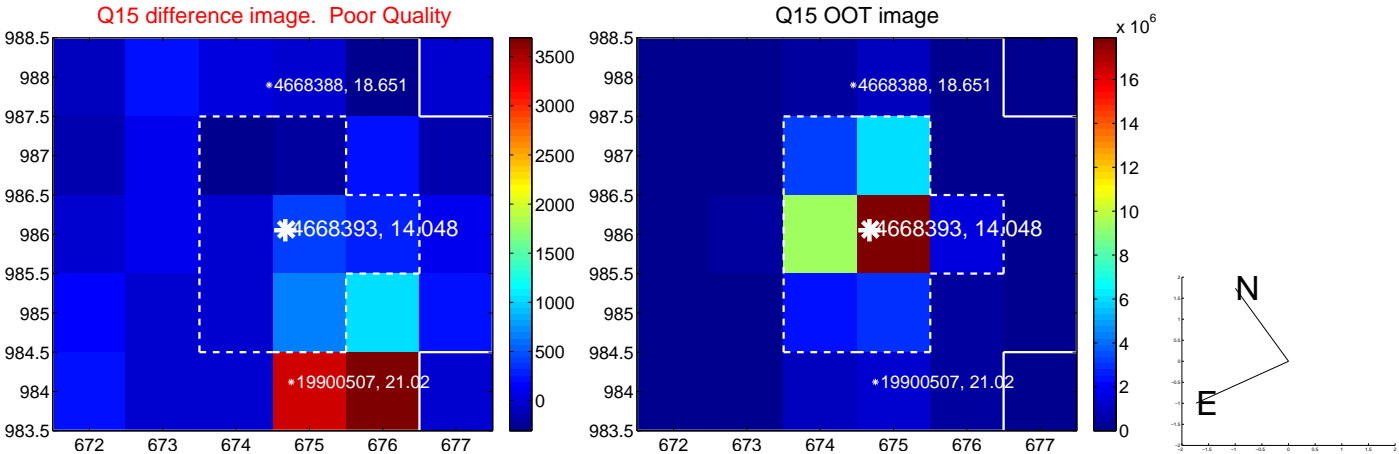
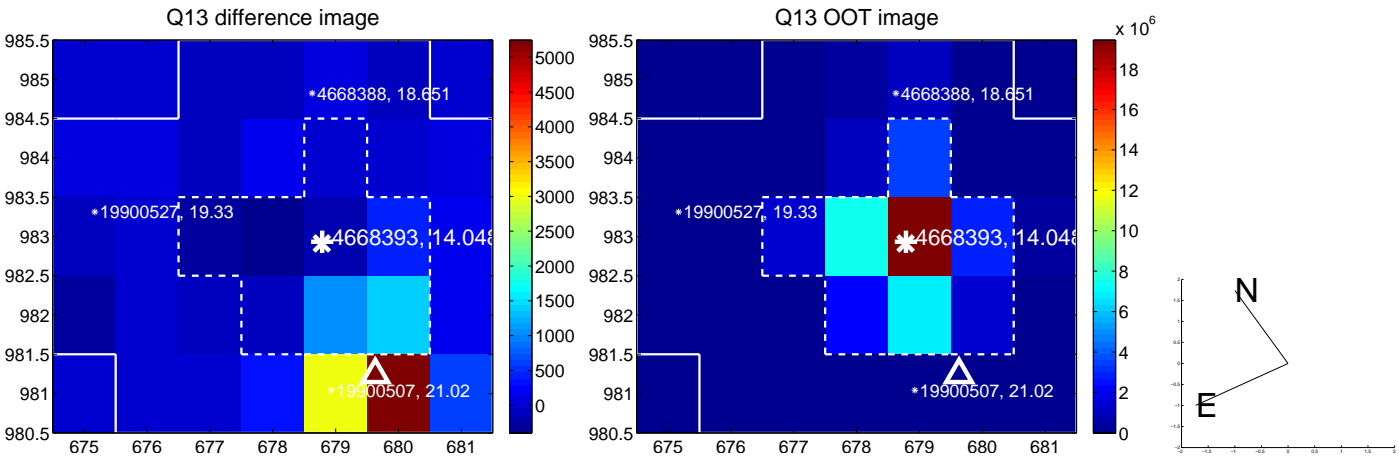
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



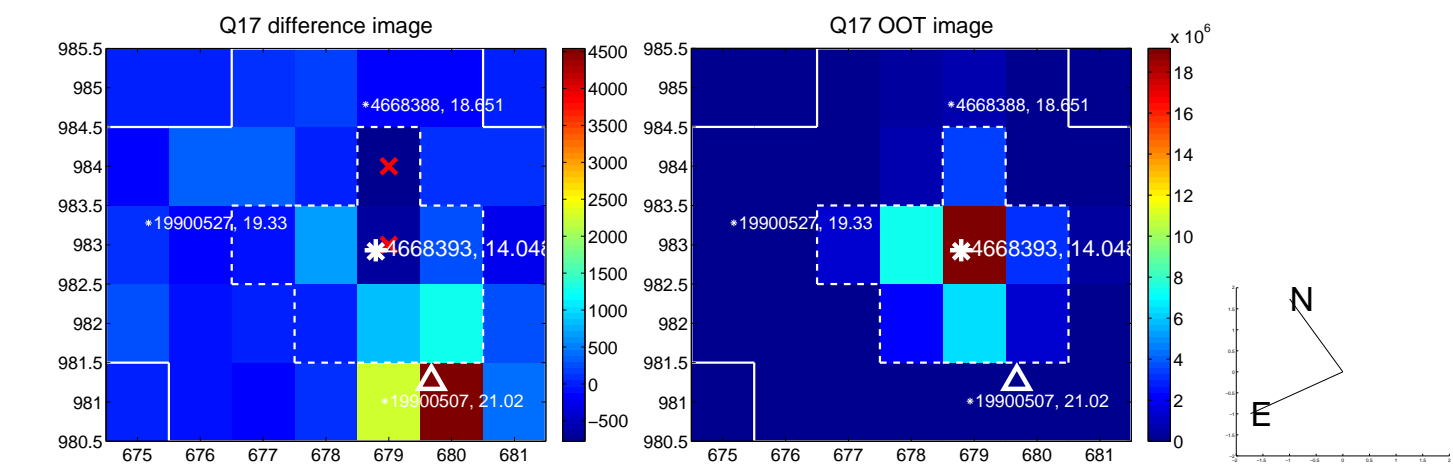
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



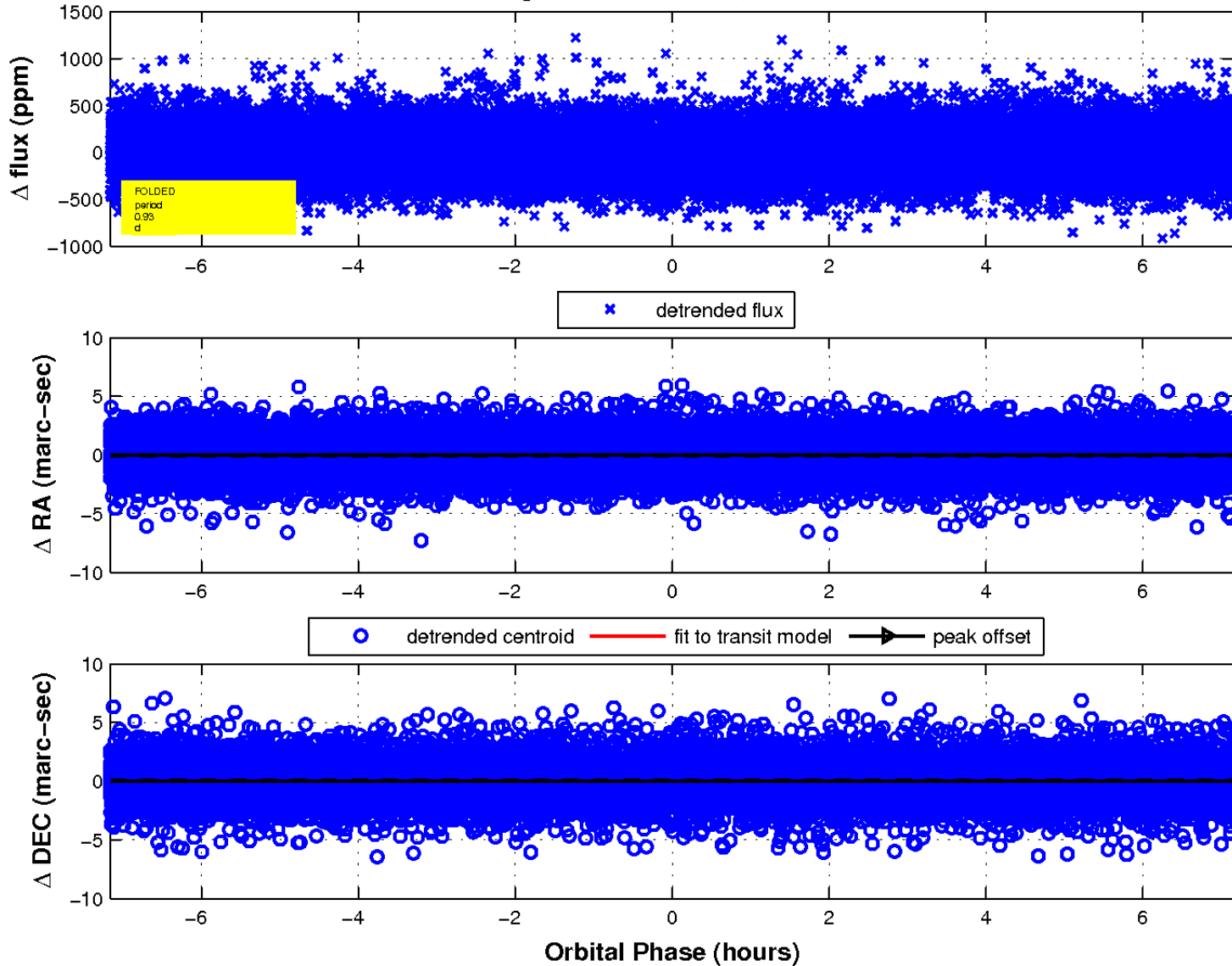
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

