

KIC 010293980

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})
010293980-01	OBS	No	0.531119	132.091691	18.5	4.358	8.0	6.0	0.58	4898	0.25	1531.05

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010293980-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT

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

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

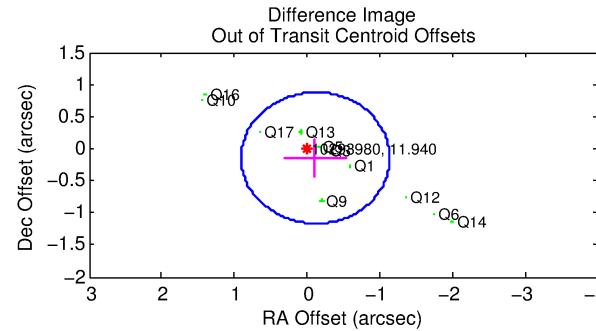
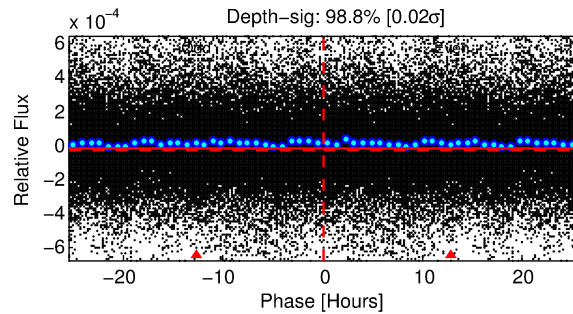
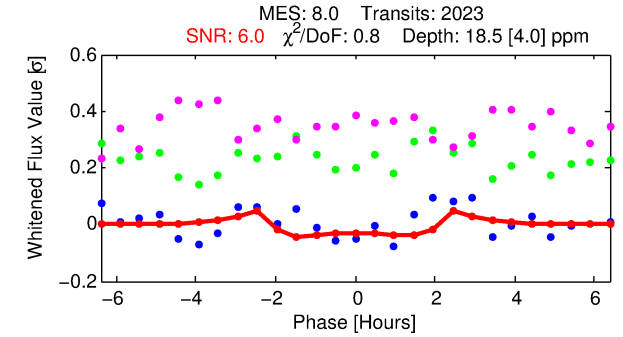
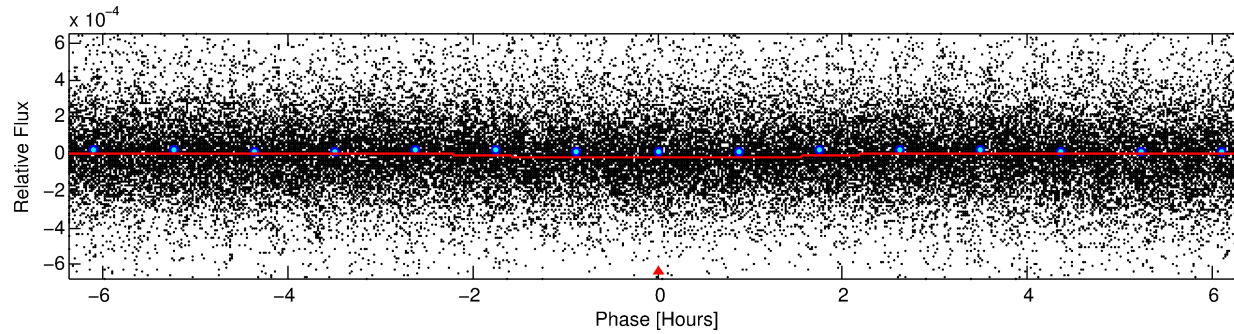
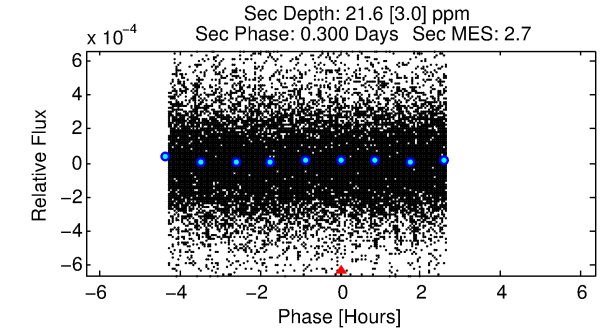
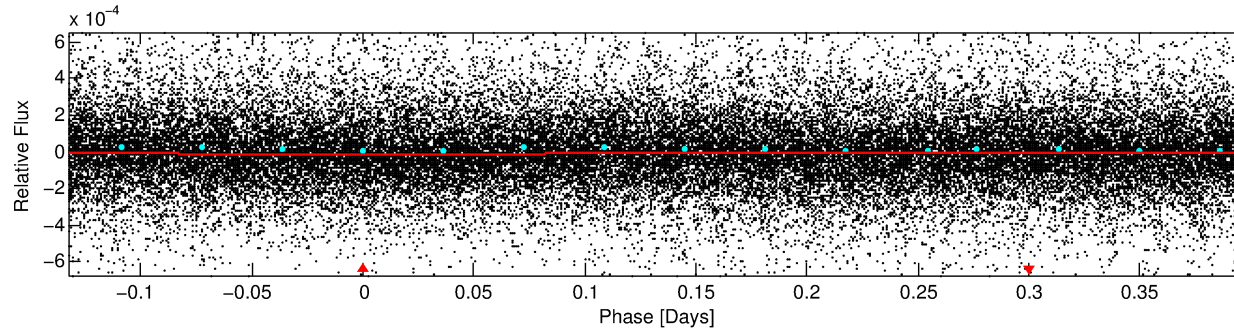
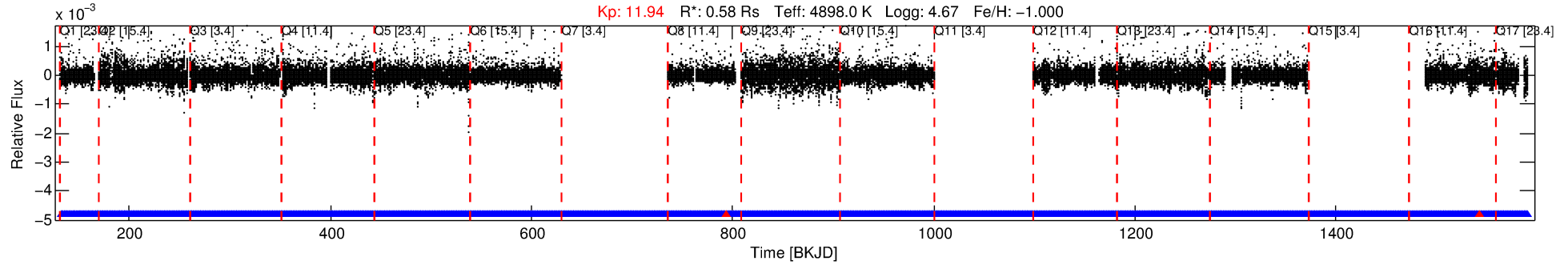
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010293980-01

No Significant Match Found

DV One-Page Summary

KIC: 10293980 Candidate: 1 of 1 Period: 0.531 d



DV Fit Results:

Period = 0.53112 [0.00002] d
Epoch = 132.0917 [0.0032] BKJD
Rp/R* = 0.0039 [0.0032]
a/R* = 1.14 [0.83]
b = 0.15 [21.59]
Seff = 1531.05 [236.23]
Teq = 1595 [62] K
Rp = 0.25 [0.20] Re
a = 0.0107 [0.0007] AU
Ag = 22.38 [37.13] [0.58σ]
Teffp = 5364 [2227] K [1.69σ]

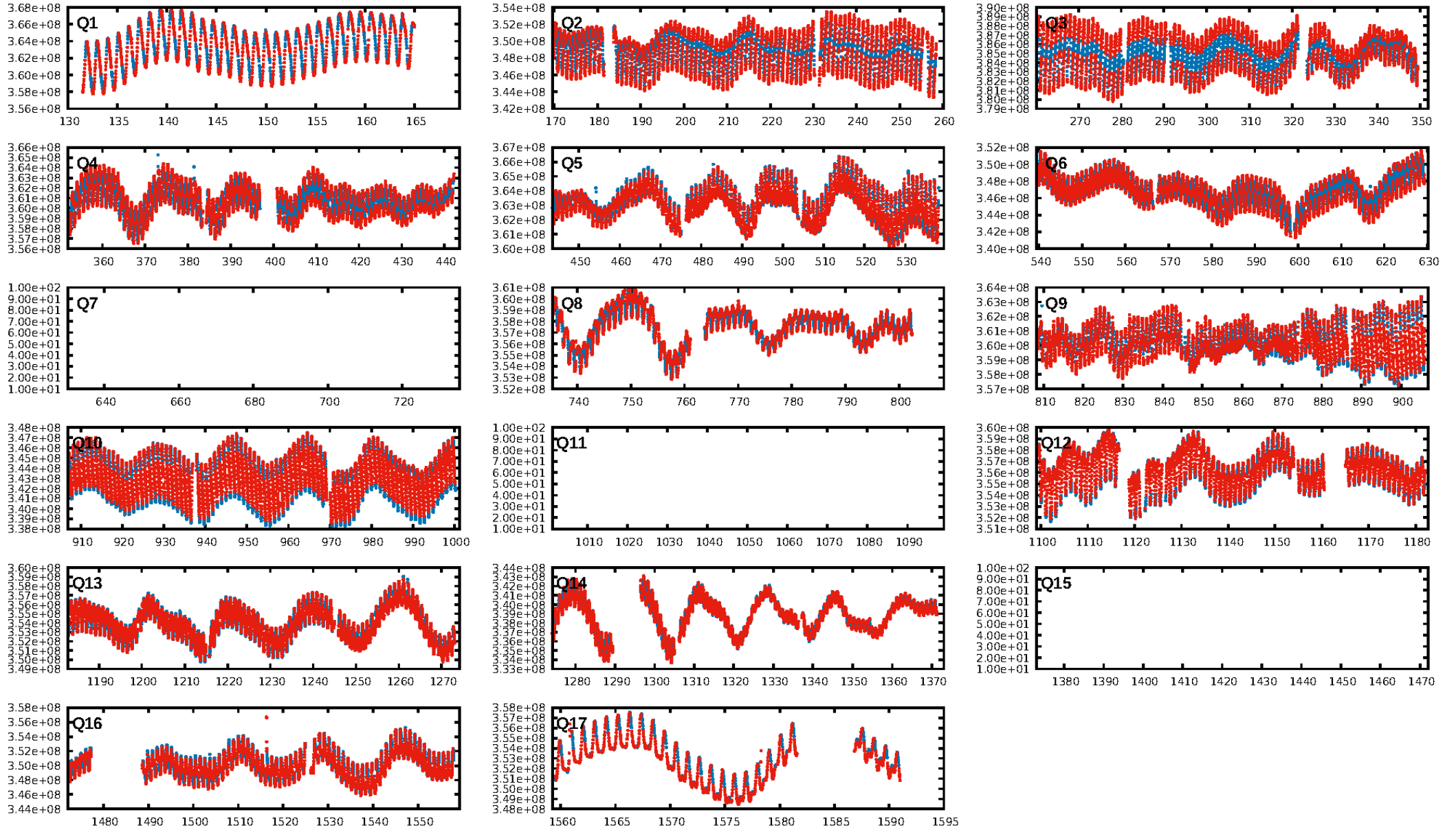
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1905/1907]
GhostDiagnostic-chr: 1.117
Centroid-sig: 0.2%
Centroid-so: 1.420 arcsec [2.64σ]
OotOffset-rm: 0.185 arcsec [0.54σ]
KicOffset-rm: 0.239 arcsec [0.80σ]
OotOffset-st: 3/1/2/5 [11]
KicOffset-st: 3/1/2/5 [11]
DiffImageQuality-fgm: 0.64 [7/11]
DiffImageOverlap-fno: 1.00 [14/14]

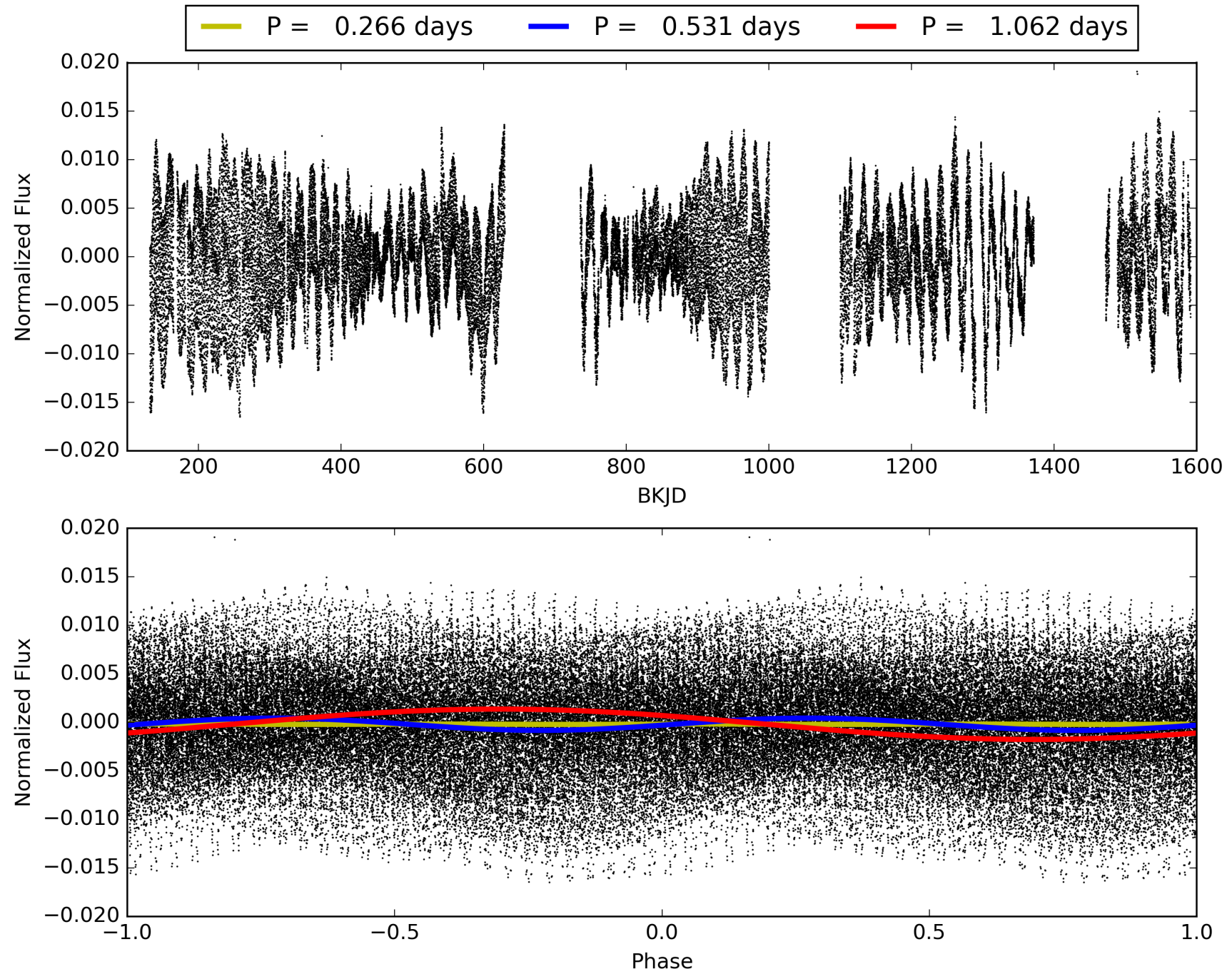
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 18:06:29 Z

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

TCE 010293980-01, PDC Light Curves

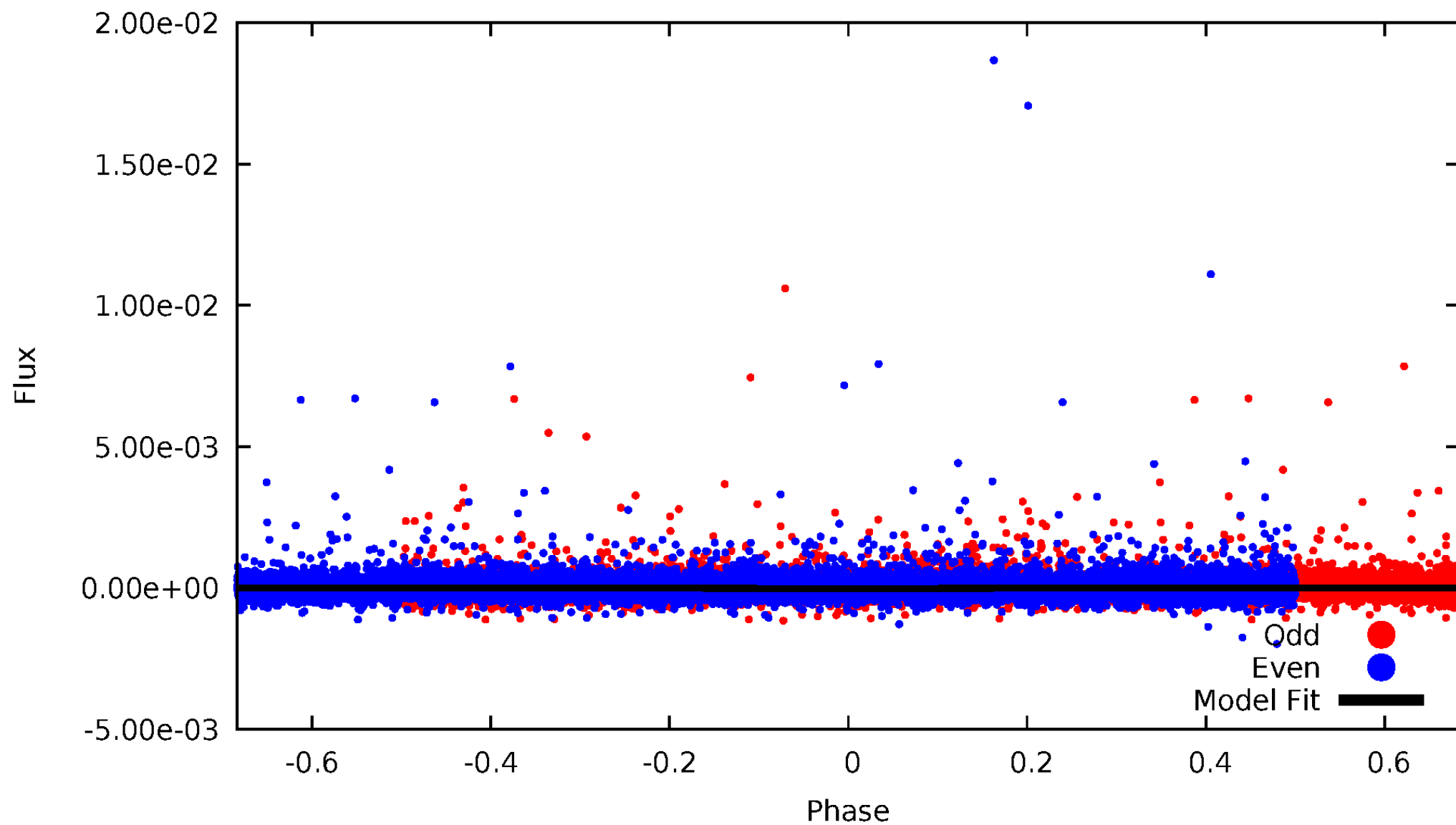


TCE 010293980-01



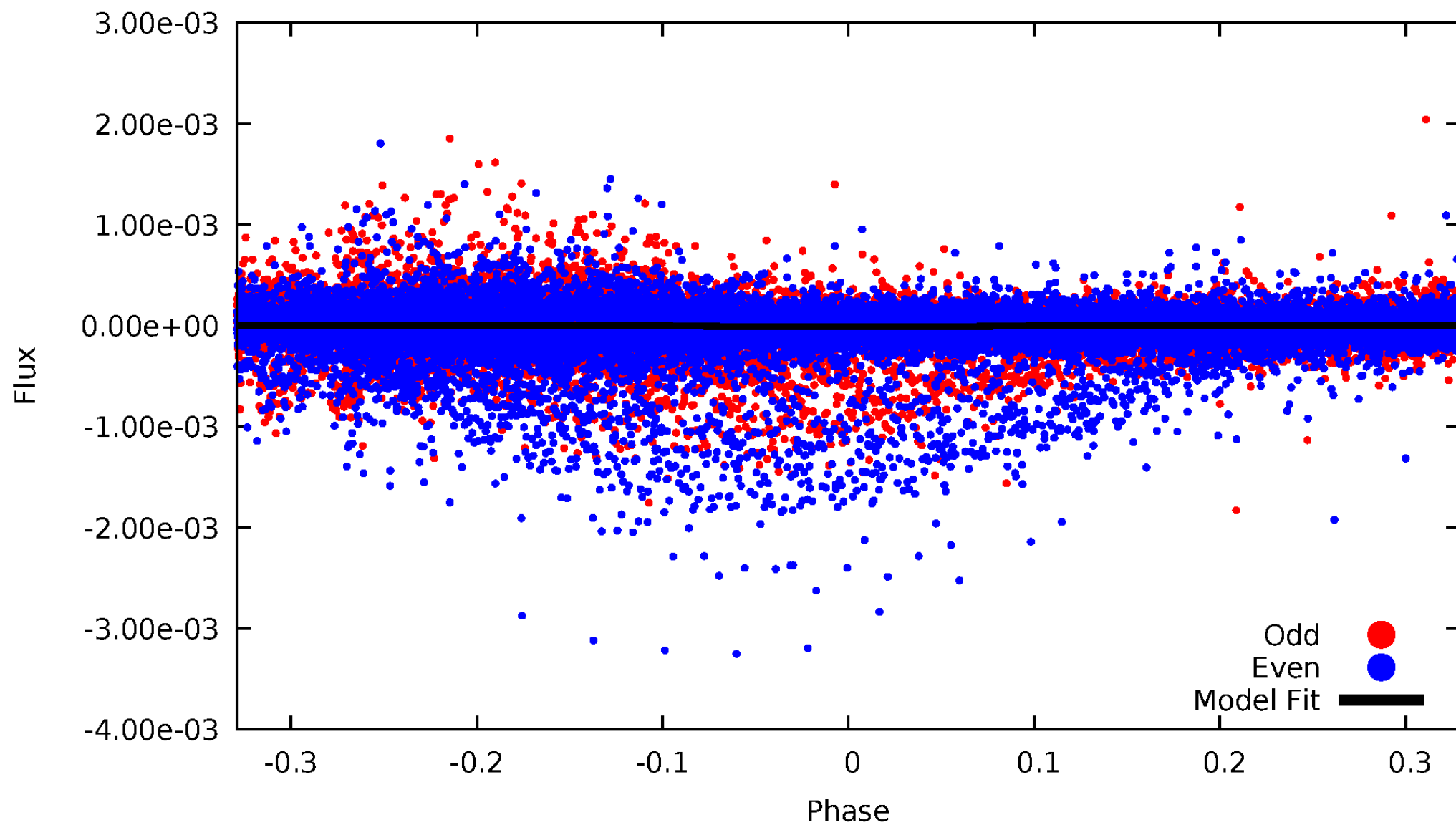
DV Odd/Even

TCE 010293980-01



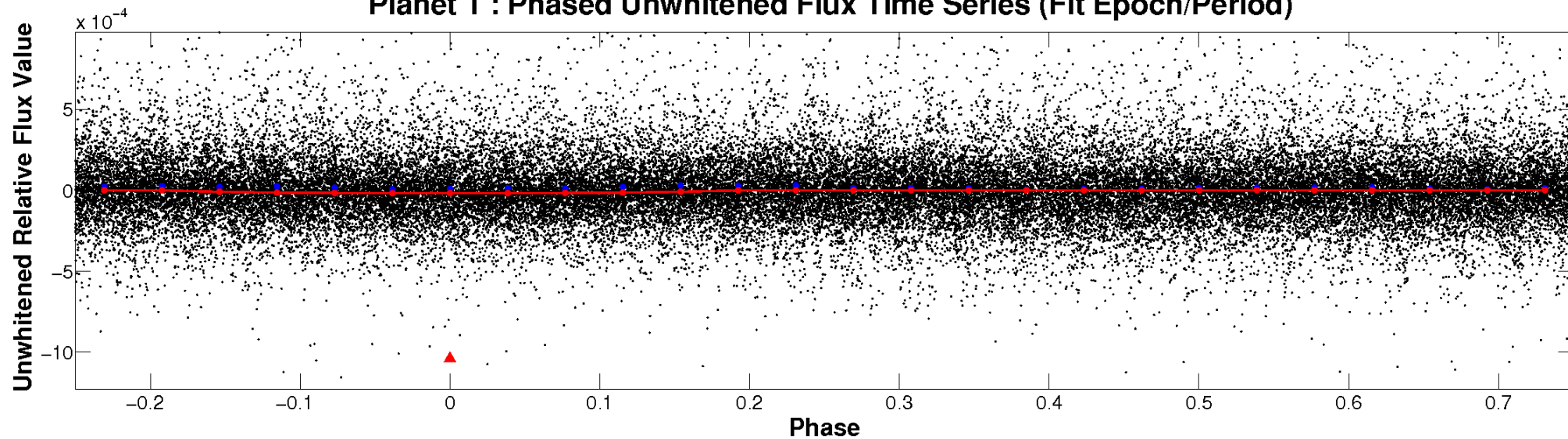
ALT Odd/Even

TCE 010293980-01

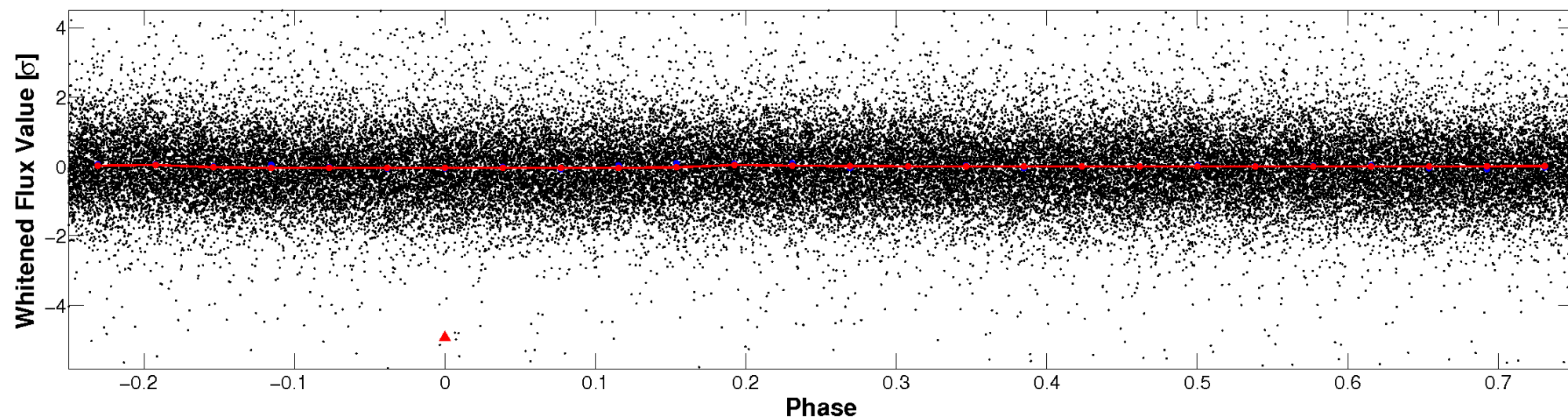


Non-Whitened Vs. Whitened Light Curve

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

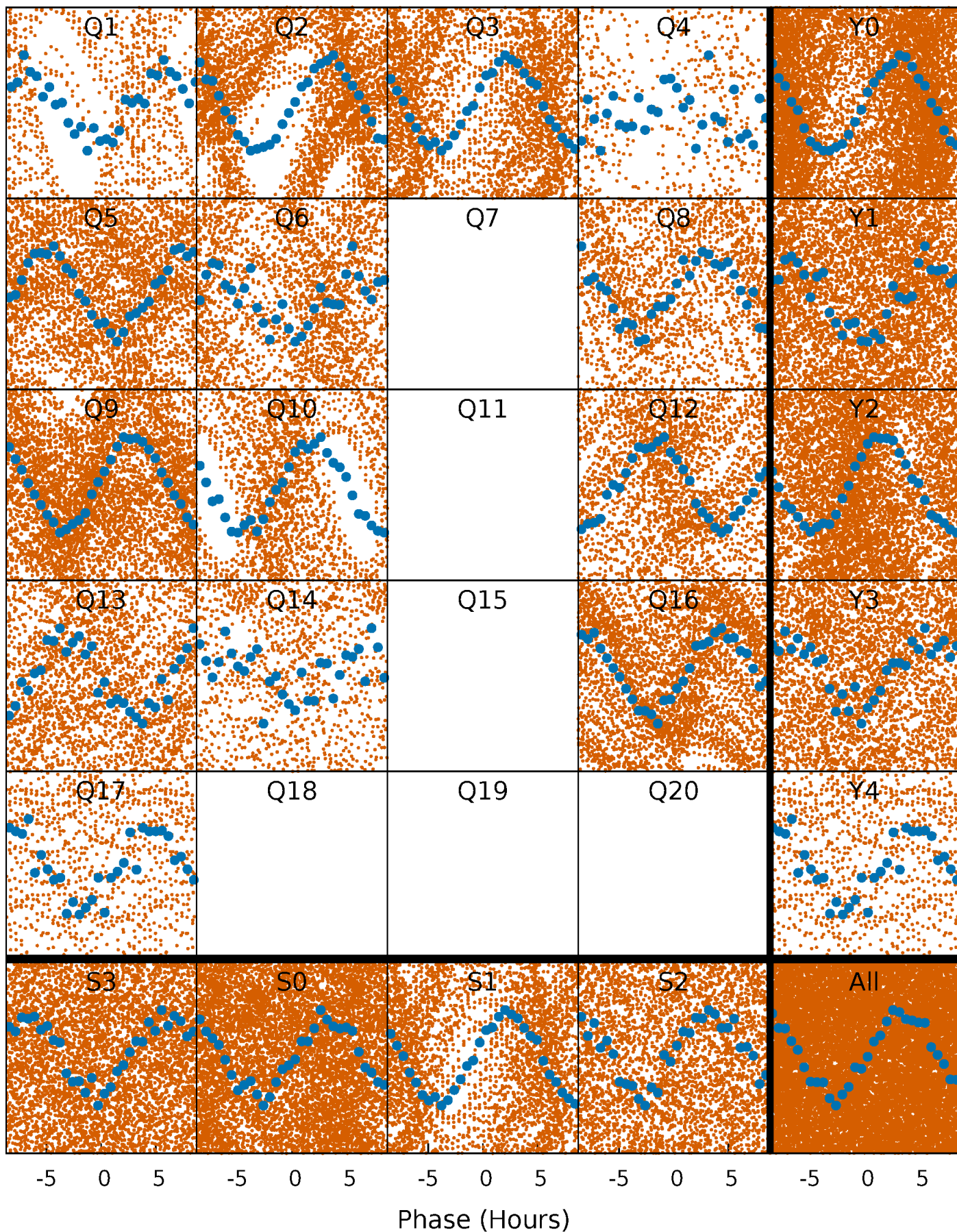


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



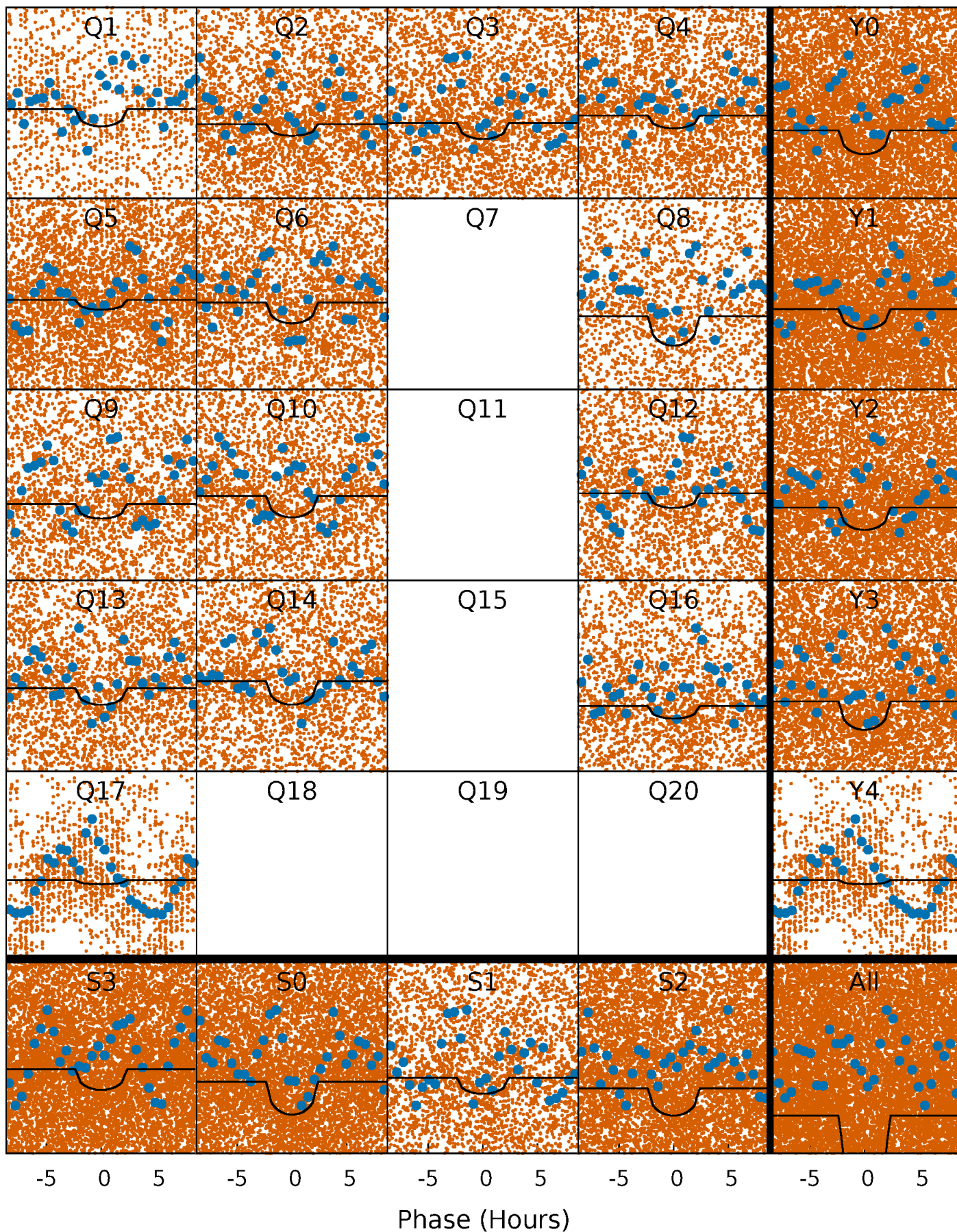
PDC Quarter-Phased Transit Curves

TCE 010293980-01 P= 0.531119 Days $T_0=132.091691$ (BKJD)



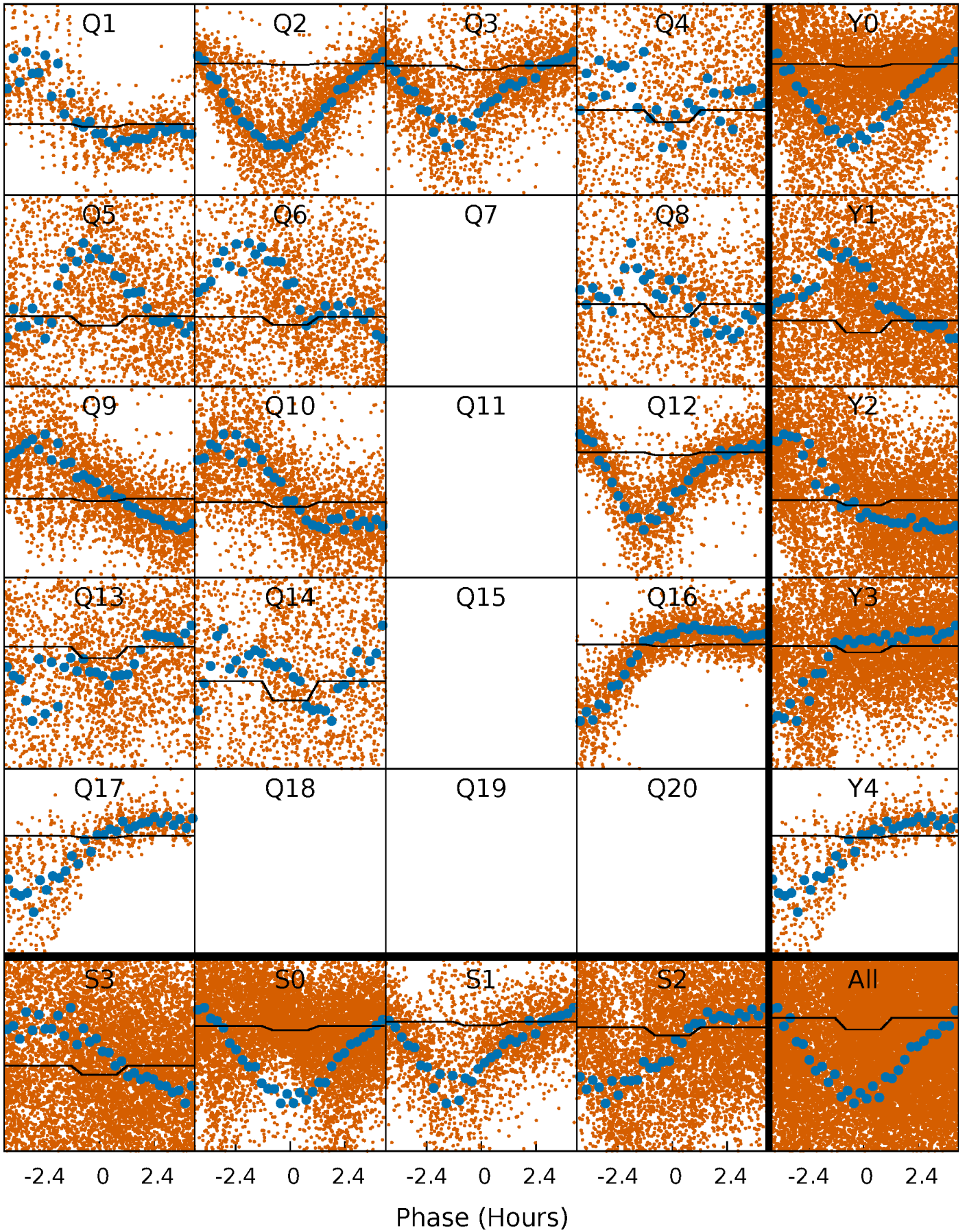
DV Quarter-Phased Transit Curves

TCE 010293980-01 P= 0.531119 Days $T_0=132.091691$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

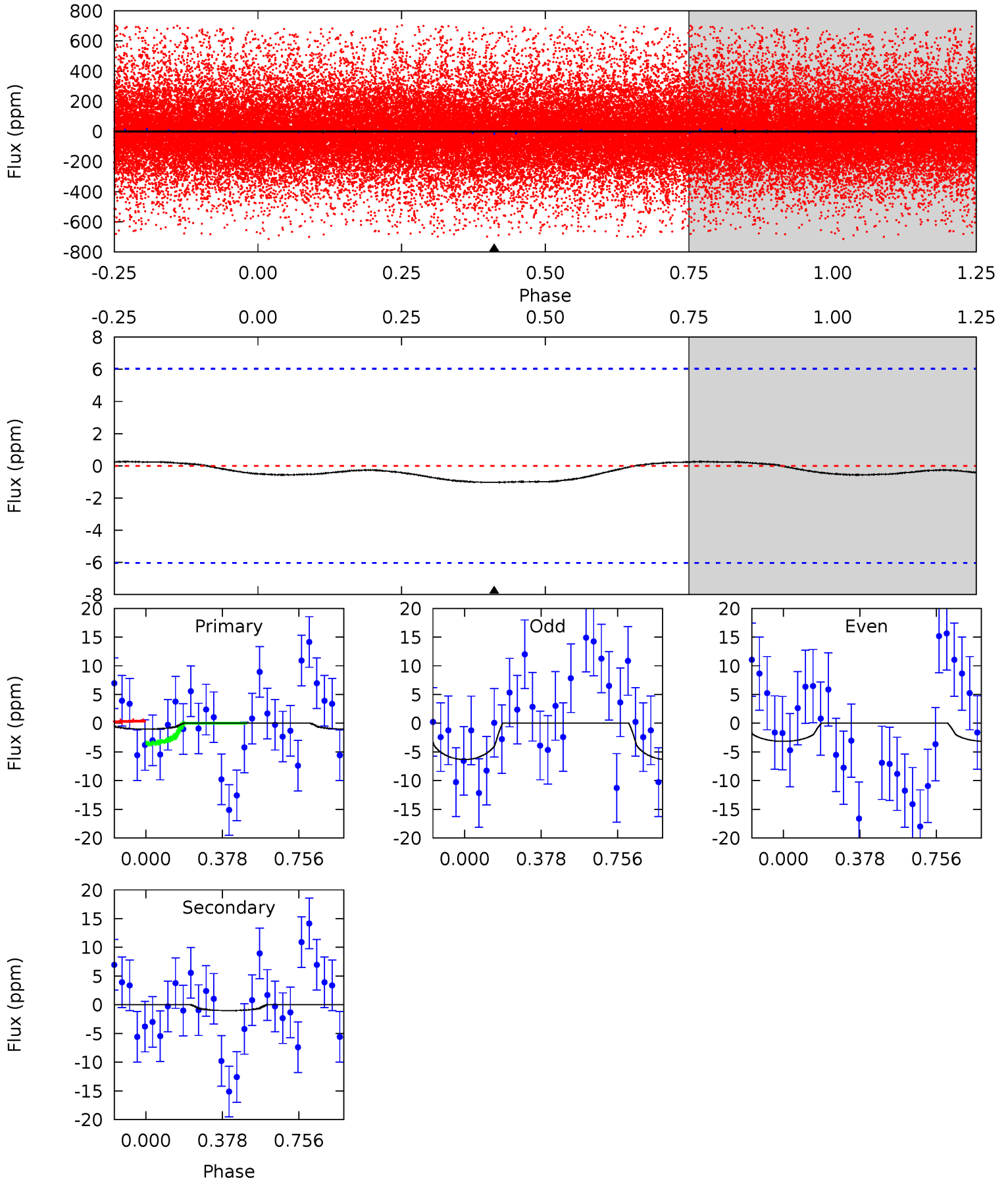
TCE 010293980-01 P= 0.530996 Days $T_0=131.978885$ (BKJD)



DV Model-Shift Uniqueness Test

010293980-01, P = 0.531119 Days, E = 131.029453 Days

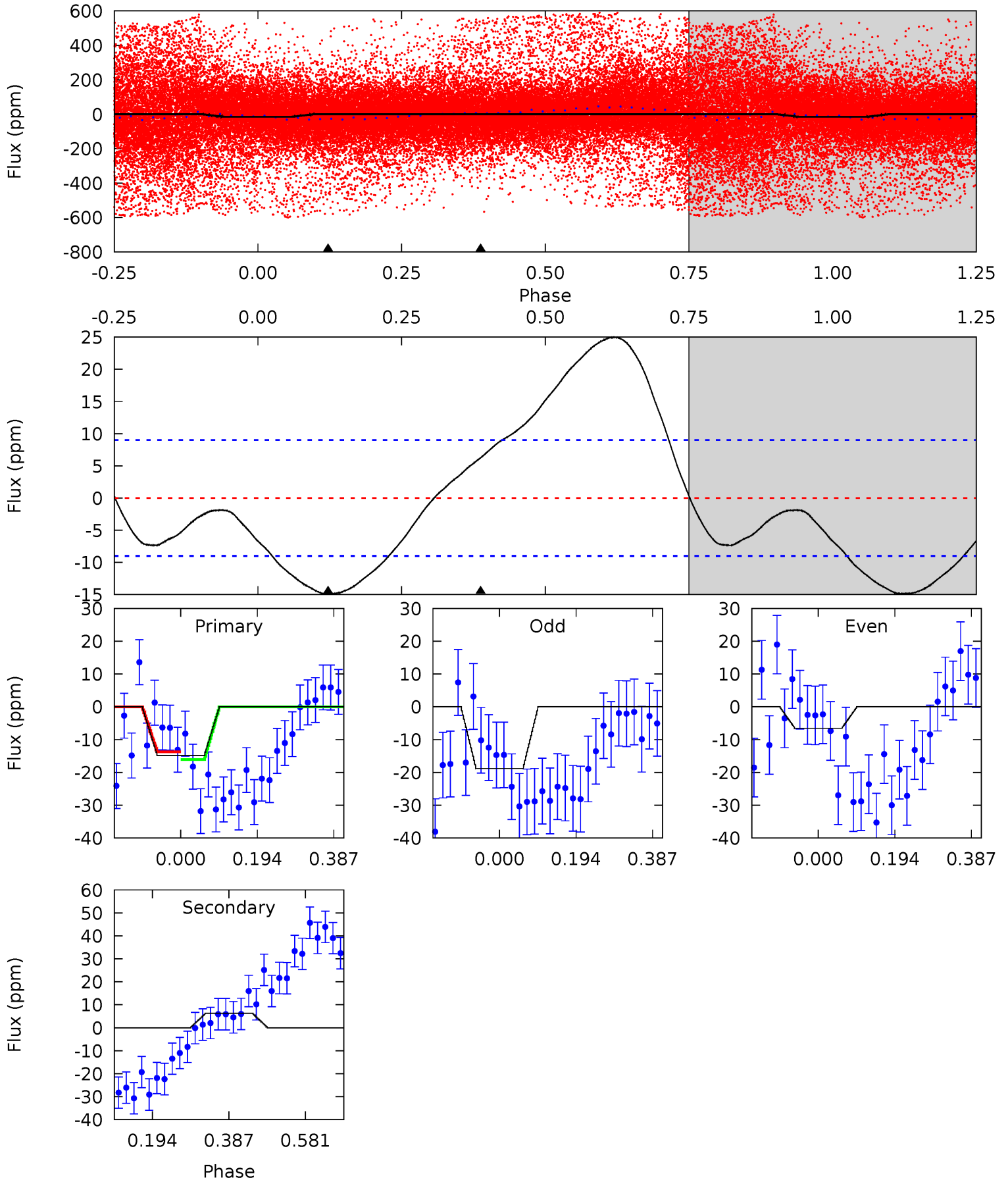
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.73	0.73	0	0	4.28	0.88	0.21	0.73	0.73	0.73	0.73	1.14	-19.3	0.21	1.13



Alt Model-Shift Uniqueness Test

010293980-01, P = 0.530996 Days, E = 131.447889 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.31	-3.07	0	0	4.42	1.30	6.14	7.31	7.31	-3.07	-3.07	3.52	-111.6	0.63	0.73



Stellar Parameters For KIC 010293980

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4898^{+132}_{-147}	$4.670^{+0.054}_{-0.032}$	$-1.000^{+0.300}_{-0.300}$	$0.584^{+0.040}_{-0.044}$	$0.582^{+0.046}_{-0.025}$	$4.118^{+0.878}_{-0.556}$
	+3%/-3%	+1%/-1%	+30%/-30%	+7%/-8%	+8%/-4%	+21%/-13%
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 010293980-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1 ± 1	$0.27^{+0.20}_{-0.17}$	2219^{+71}_{-82}	2709^{+1268}_{-5463}	$0.745^{+4.623}_{-0.933}$
Alt.	6 ± 2	$0.26^{+0.18}_{-0.16}$	2223^{+65}_{-78}	-4082^{+657}_{-1893}	$-5.789^{+3.932}_{-33.503}$

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

DV Centroid Data

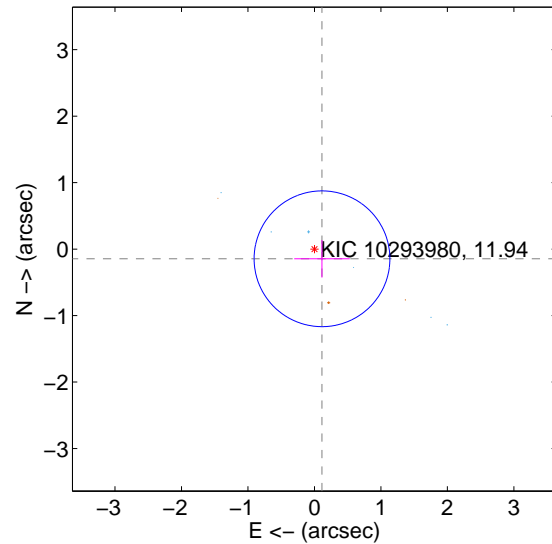
Supplemental centroid analysis for 010293980-01. **Kepler magnitude: 11.94.** Transit SNR 5.97

There are 7 quarters with good PRF difference image offsets

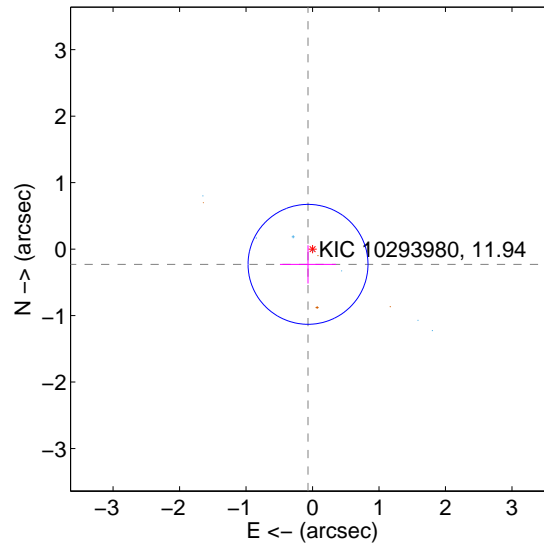
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.185 ± 0.340	0.54	-0.114 ± 0.418	-0.146 ± 0.283
PRF-fit source offset from KIC position	0.239 ± 0.301	0.80	0.068 ± 0.422	-0.229 ± 0.288
photometric centroid source offset	1.42 ± 0.54	2.64	1.18 ± 0.55	-0.79 ± 0.51

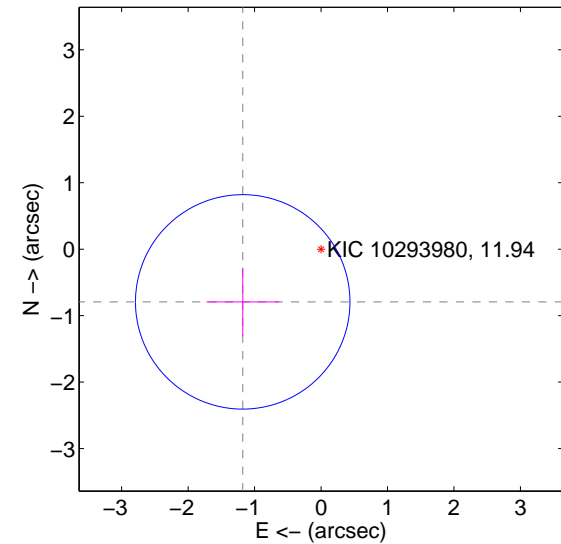
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

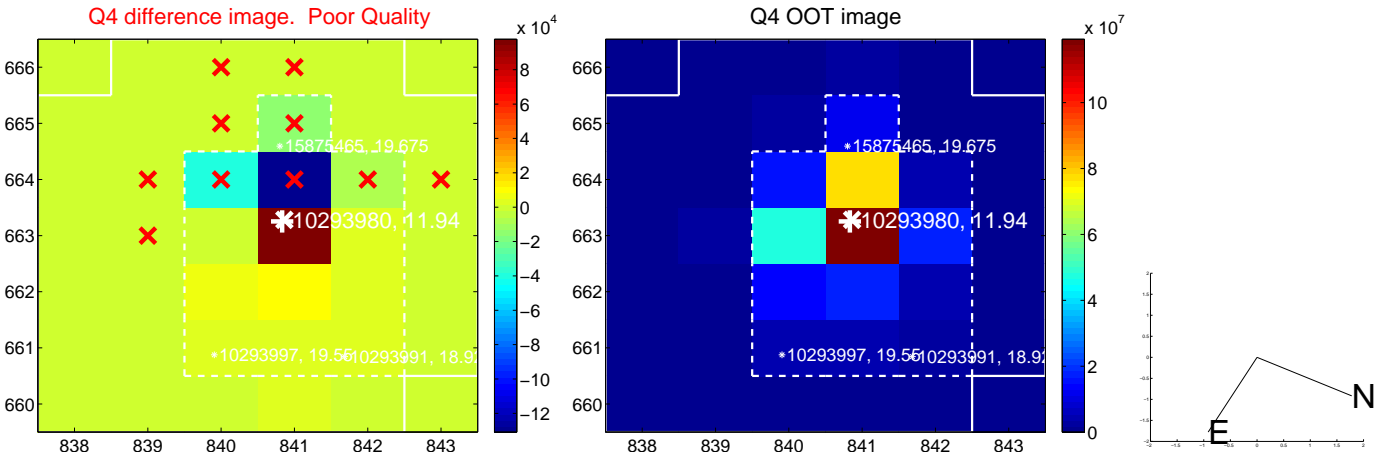
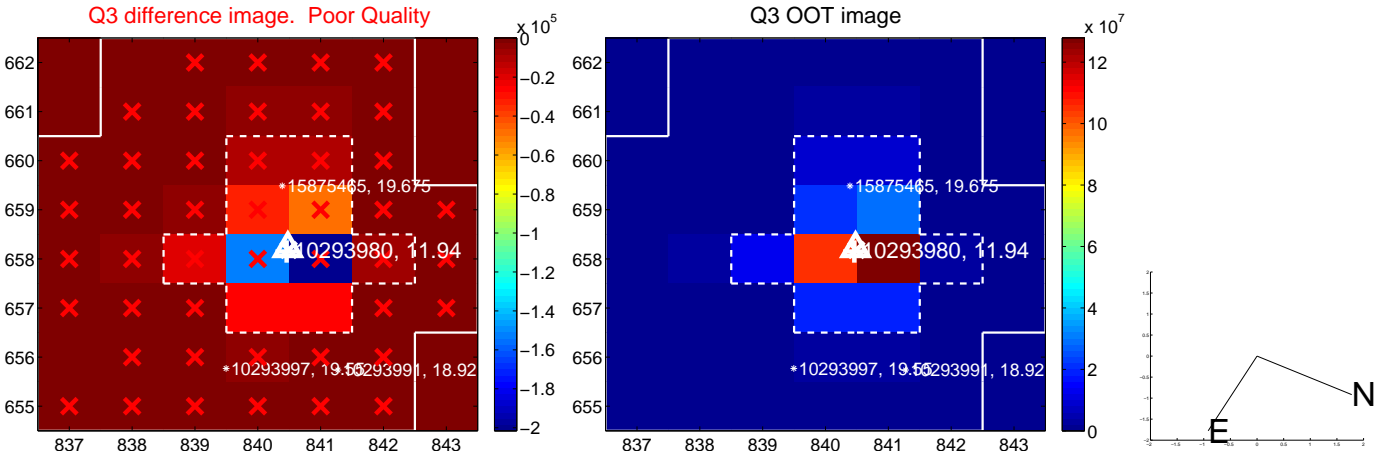
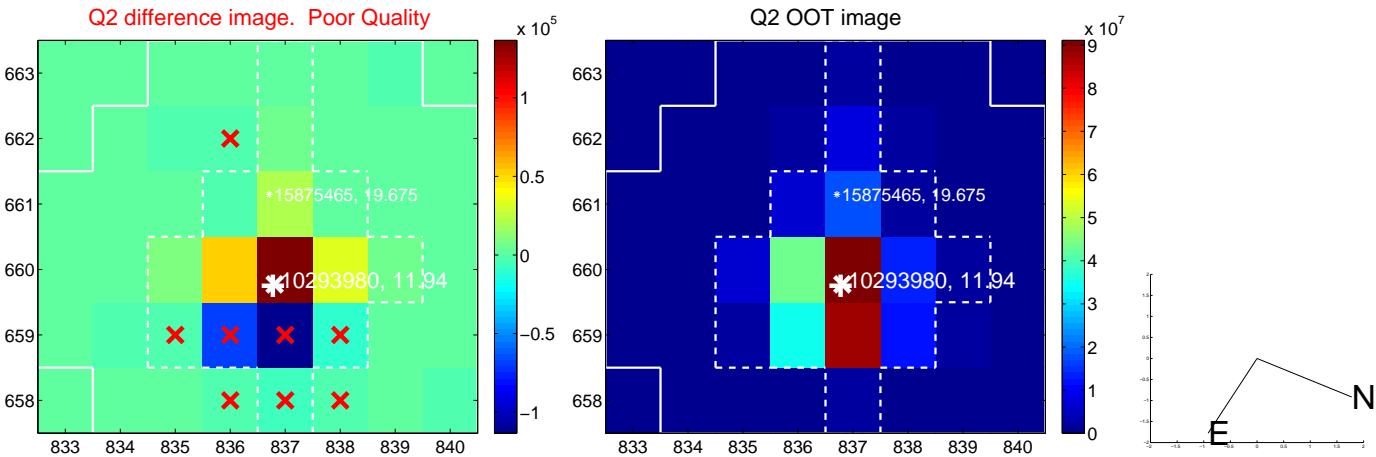
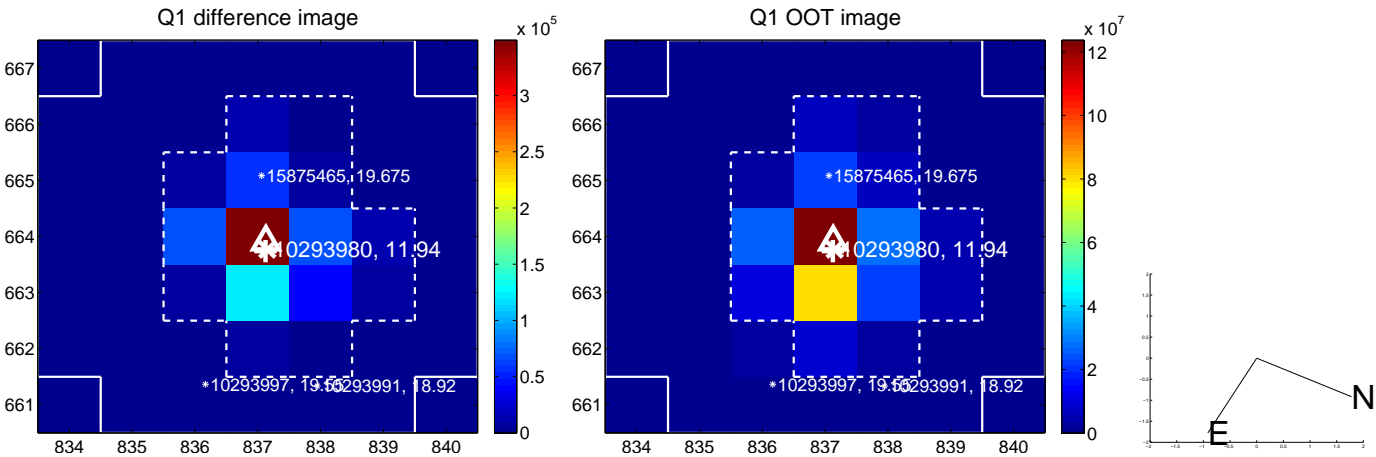


offset from photometric centroids

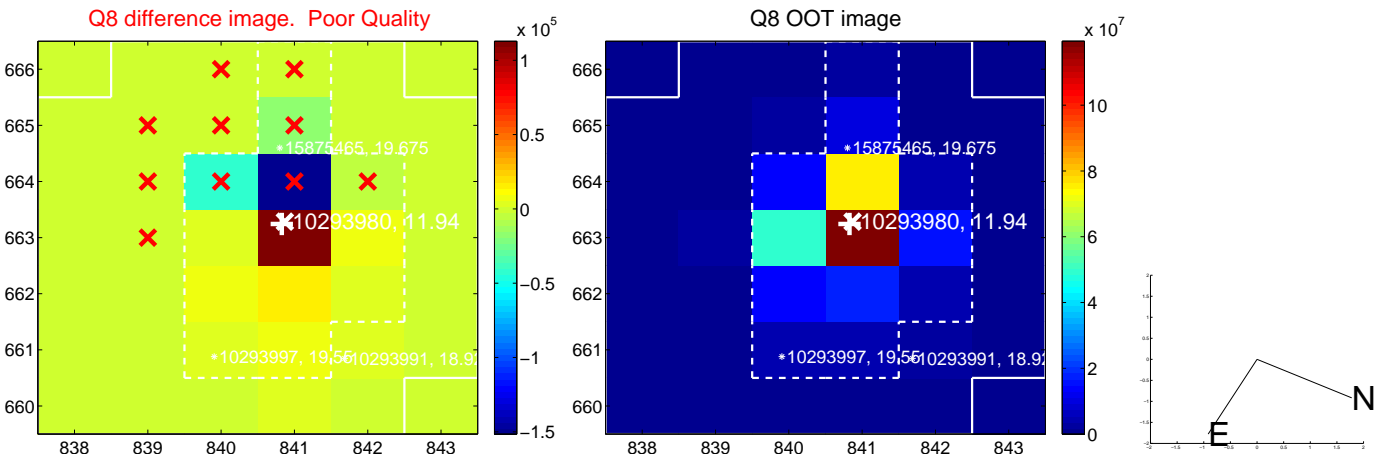
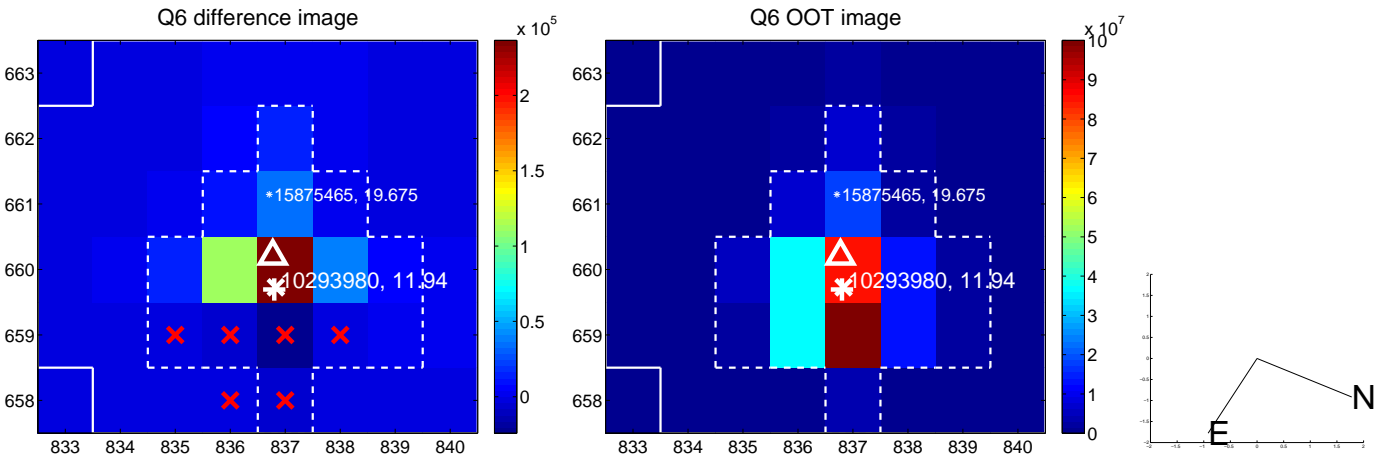
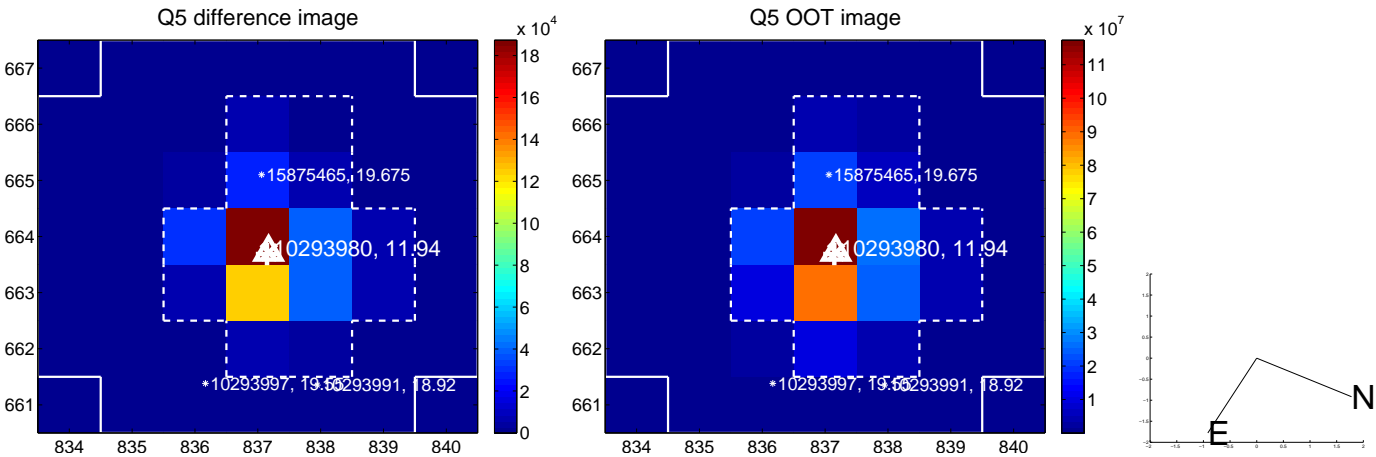


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

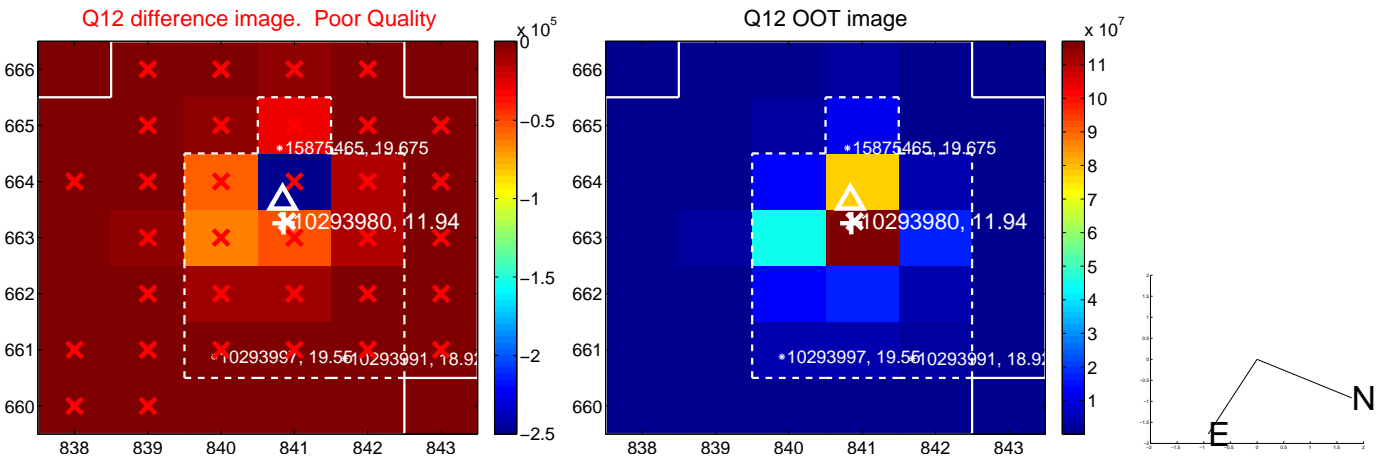
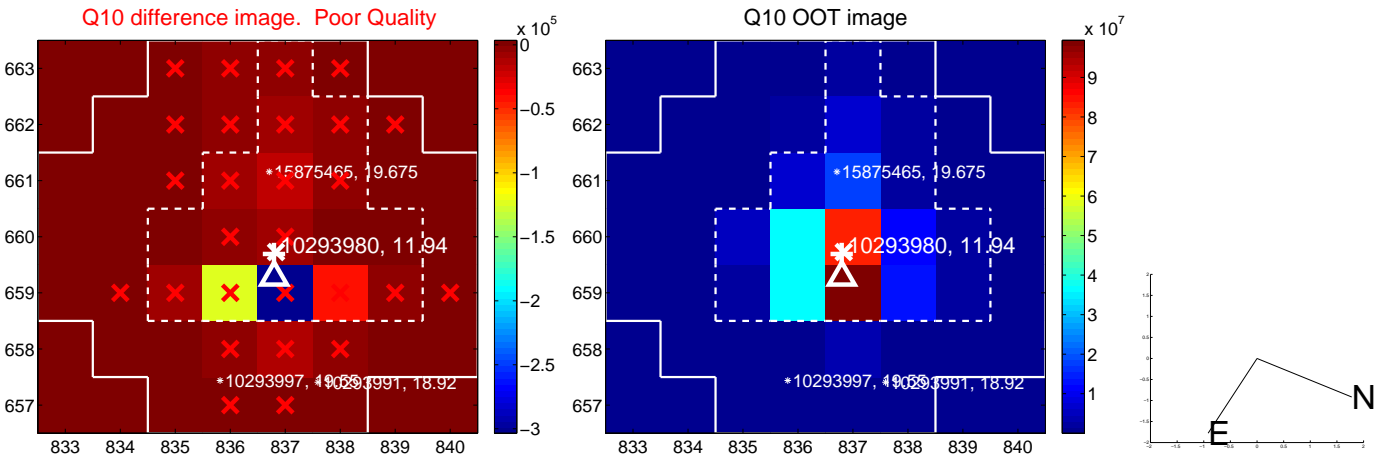
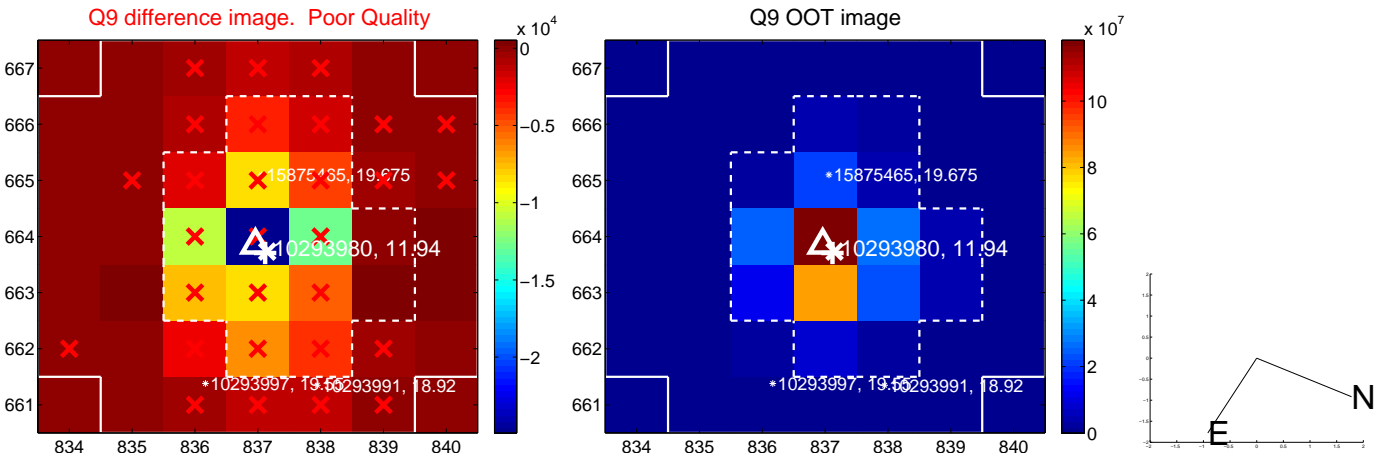
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



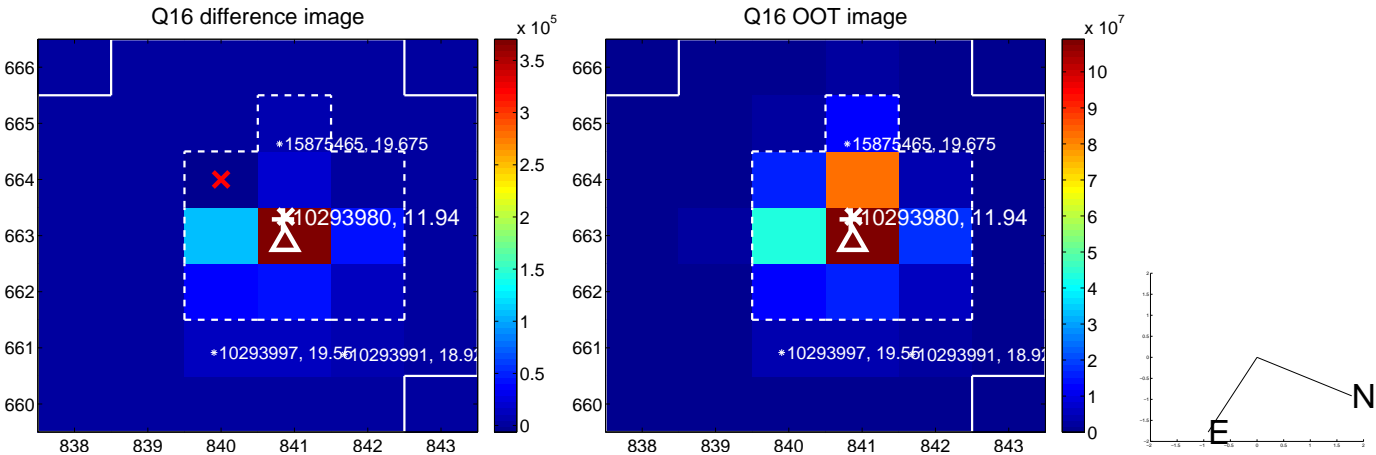
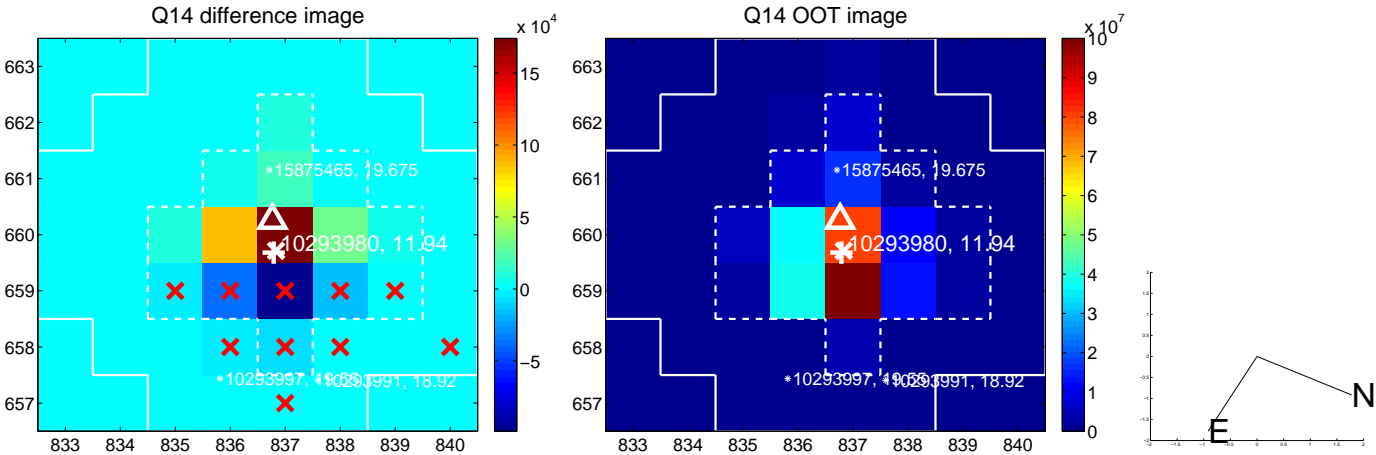
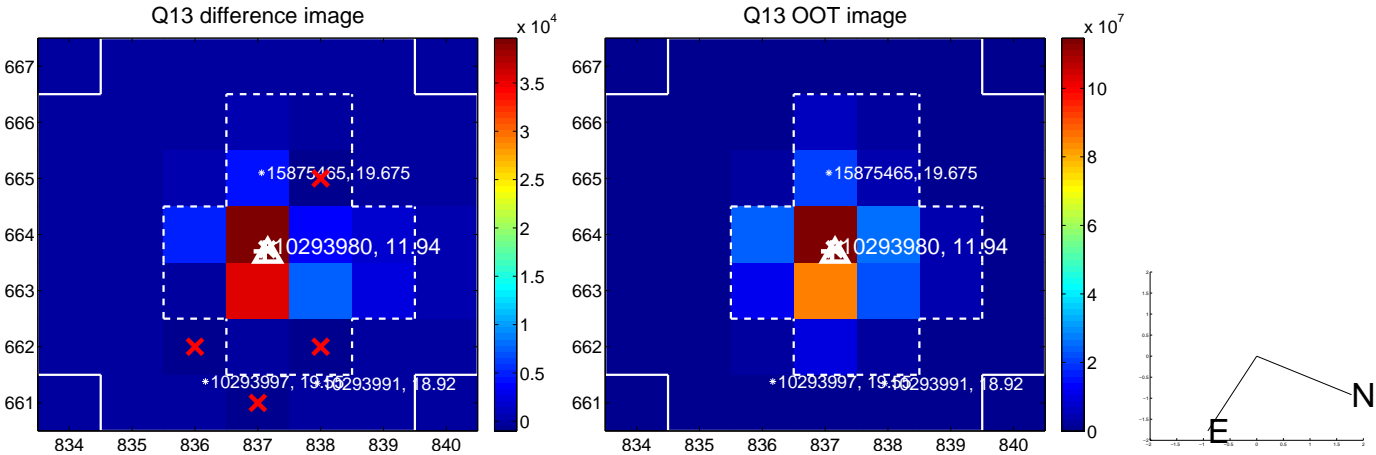
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



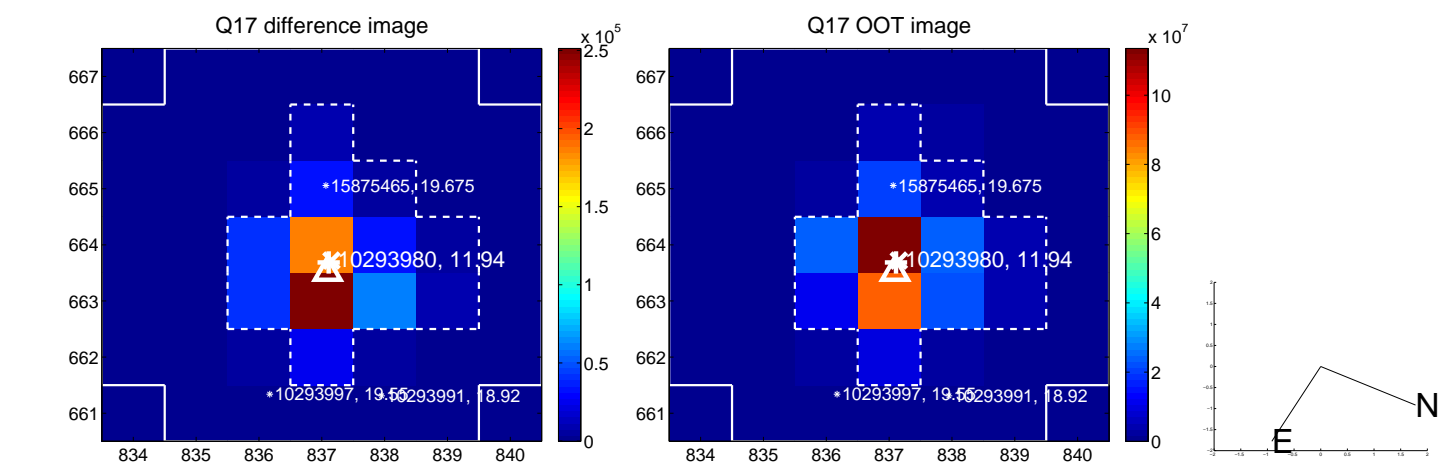
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



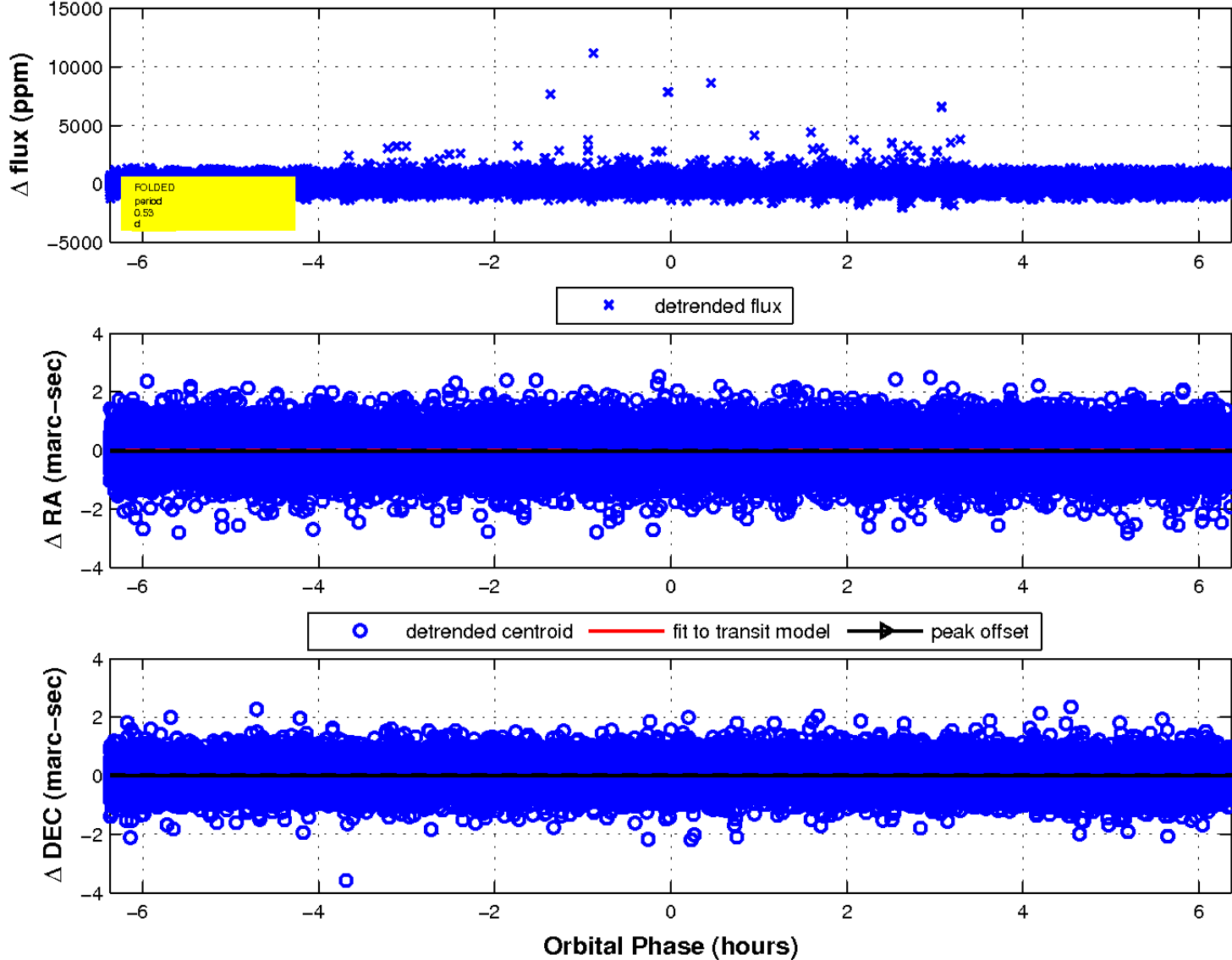
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

