

KIC 004074294

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})
004074294-01	OBS	7547.01	0.892956	131.578372	15.4	2.385	7.8	7.7	2.98	6228	1.37	27595.62

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004074294-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET—HALO_GHOST

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.

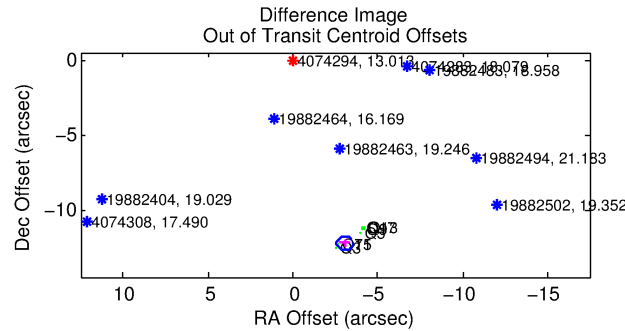
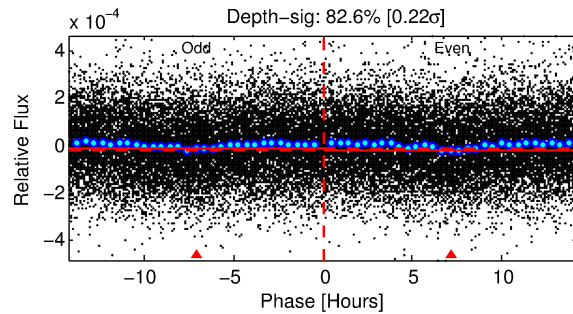
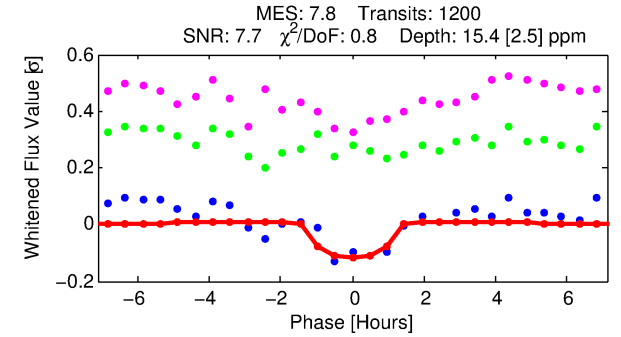
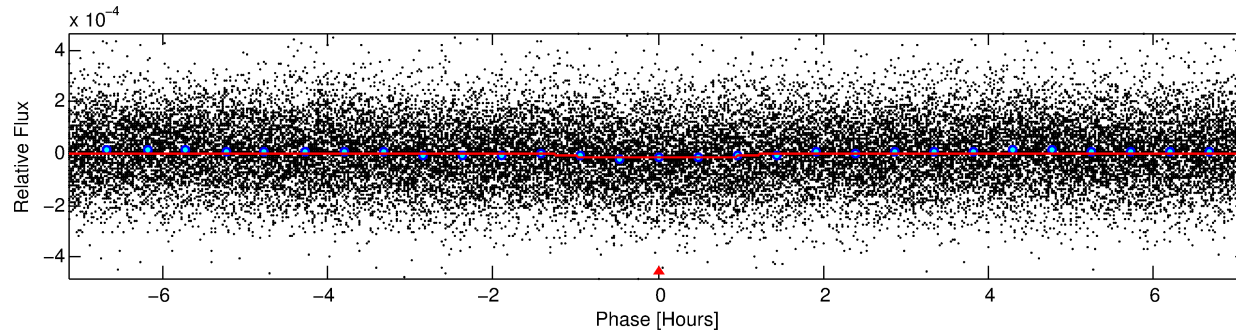
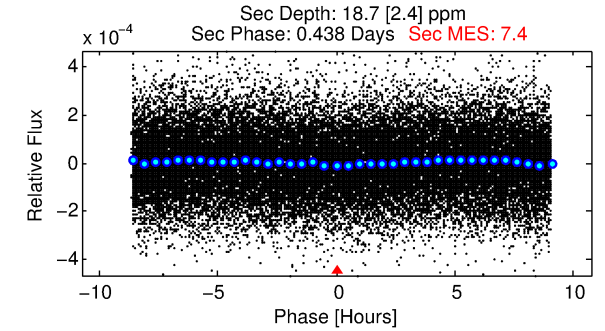
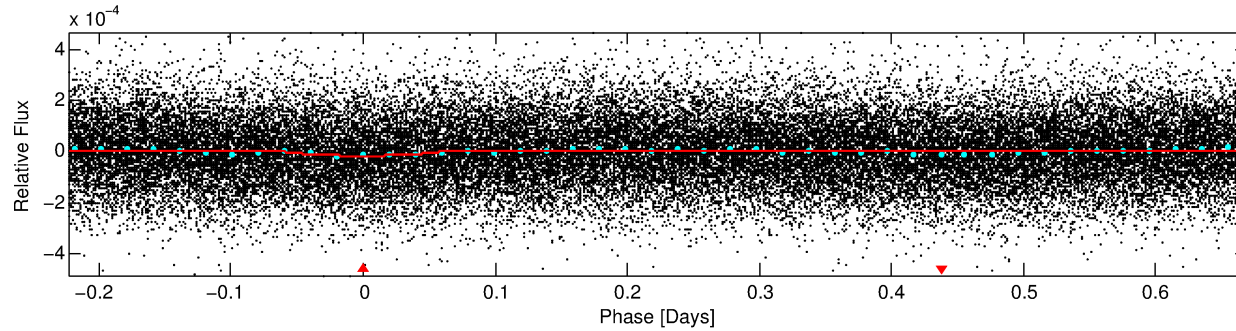
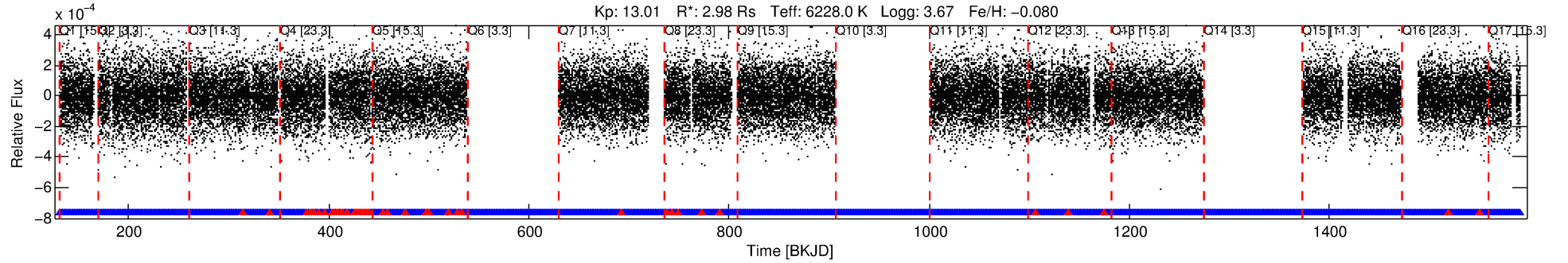
Ephemeris Match Information For 004074294-01

No Significant Match Found

DV One-Page Summary

KIC: 4074294 Candidate: 1 of 1 Period: 0.893 d

KOI: K07547.01 Corr: 0.823



DV Fit Results:

Period = 0.89296 [0.00001] d
Epoch = 131.5784 [0.0039] BKJD
Rp/R* = 0.0042 [0.0018]
a/R* = 1.59 [2.31]
b = 0.90 [0.53]
Seff = 27595.62 [15695.95]
Teff = 3287 [467] K
Rp = 1.37 [0.81] Re
a = 0.0208 [0.0075] AU
Ag = 2.38 [2.49] [0.55σ]
Teffp = 6311 [1411] K [2.03σ]

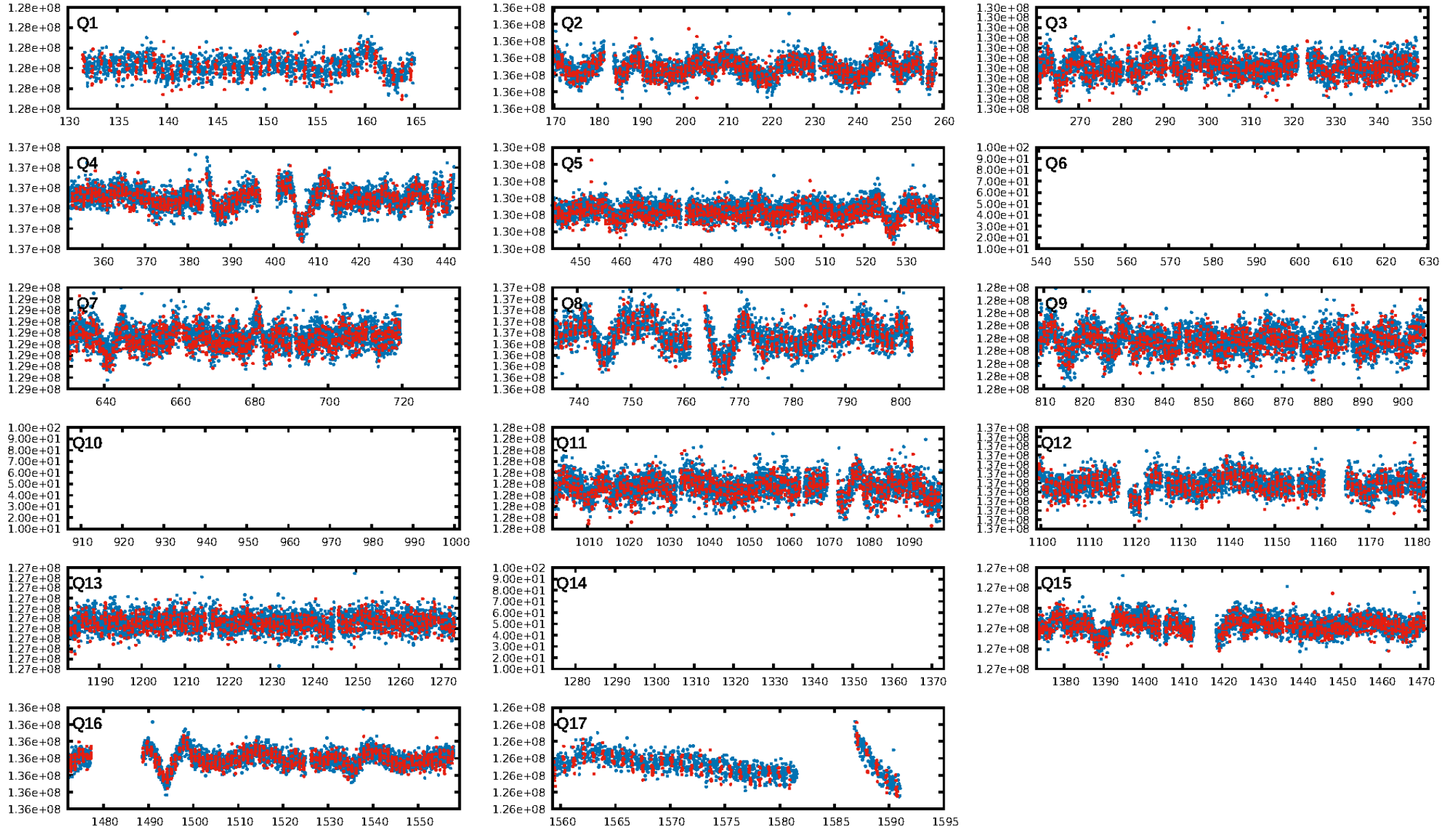
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.54e-14
RollingBand-fgt: 0.95 [1080/1132]
GhostDiagnostic-chr: -0.1216
Centroid-sig: 0.0%
Centroid-so: 8.688 arcsec [4.37σ]
OotOffset-rm: 12.622 arcsec [77.00σ]
KicOffset-rm: 12.708 arcsec [85.44σ]
OotOffset-st: 0/4/0/5 [9]
KicOffset-st: 0/4/0/5 [9]
DiffImageQuality-fgm: 1.00 [9/9]
DiffImageOverlap-fno: 1.00 [14/14]

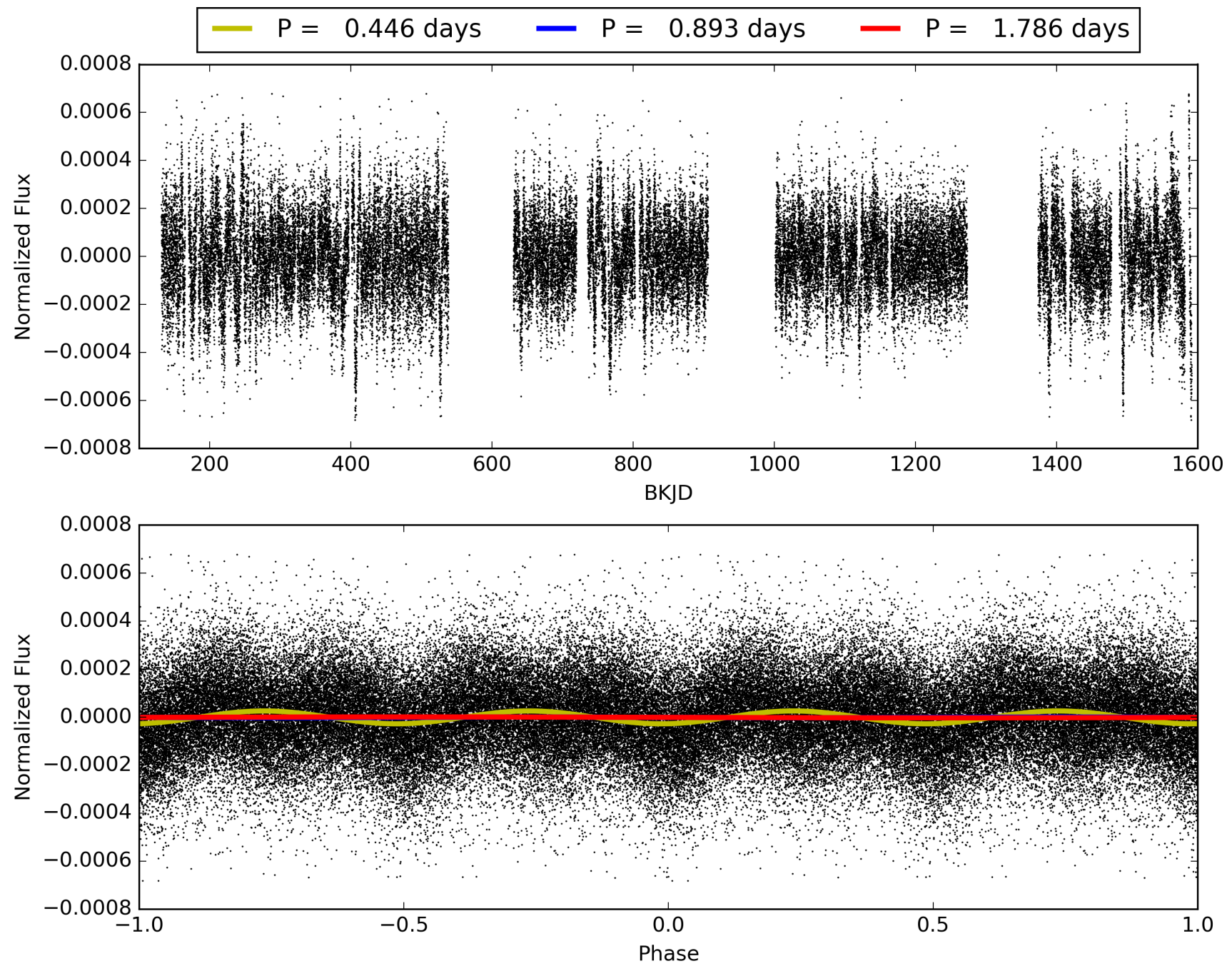
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 03:30:45 Z

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

TCE 004074294-01, PDC Light Curves

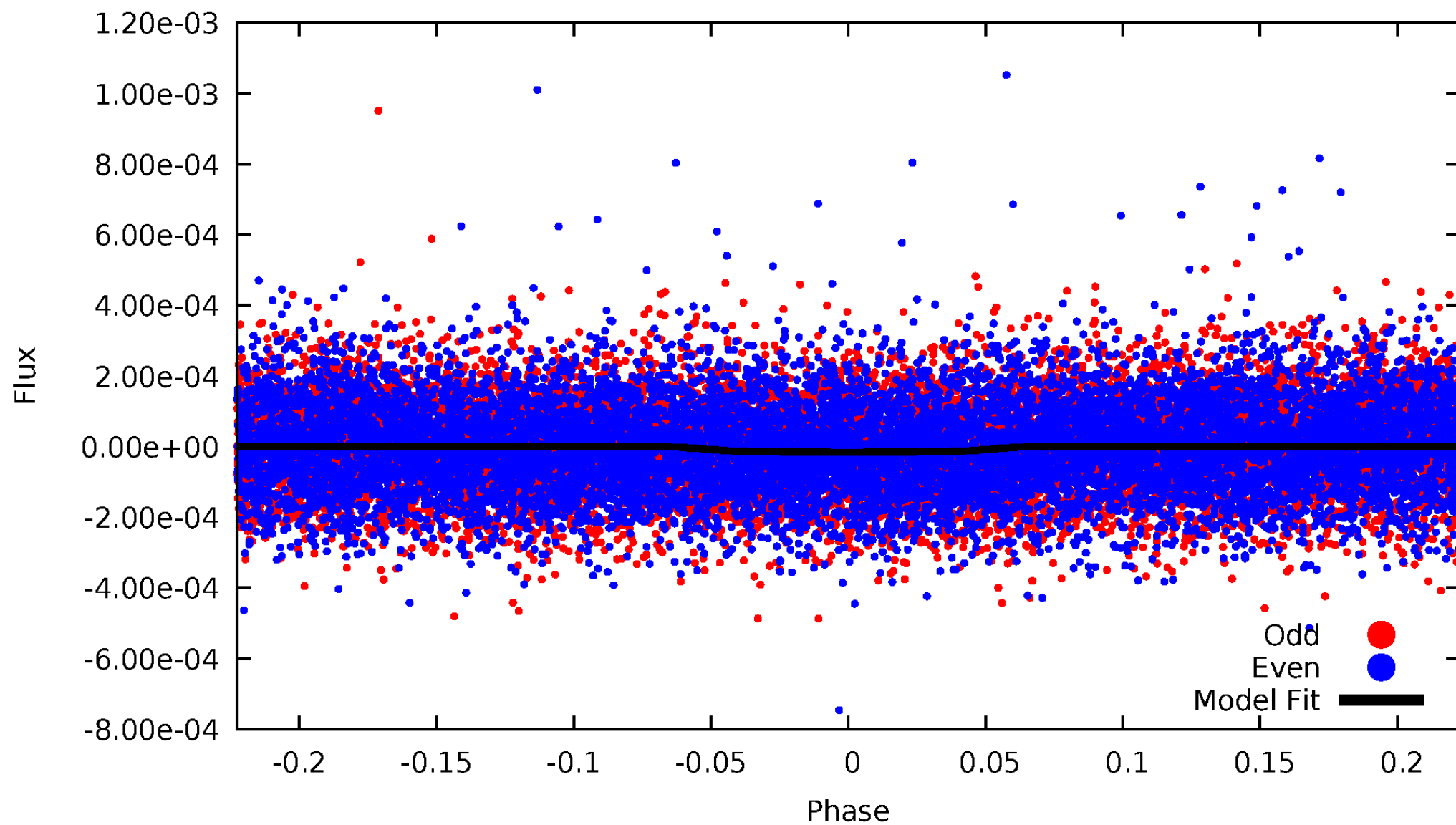


TCE 004074294-01



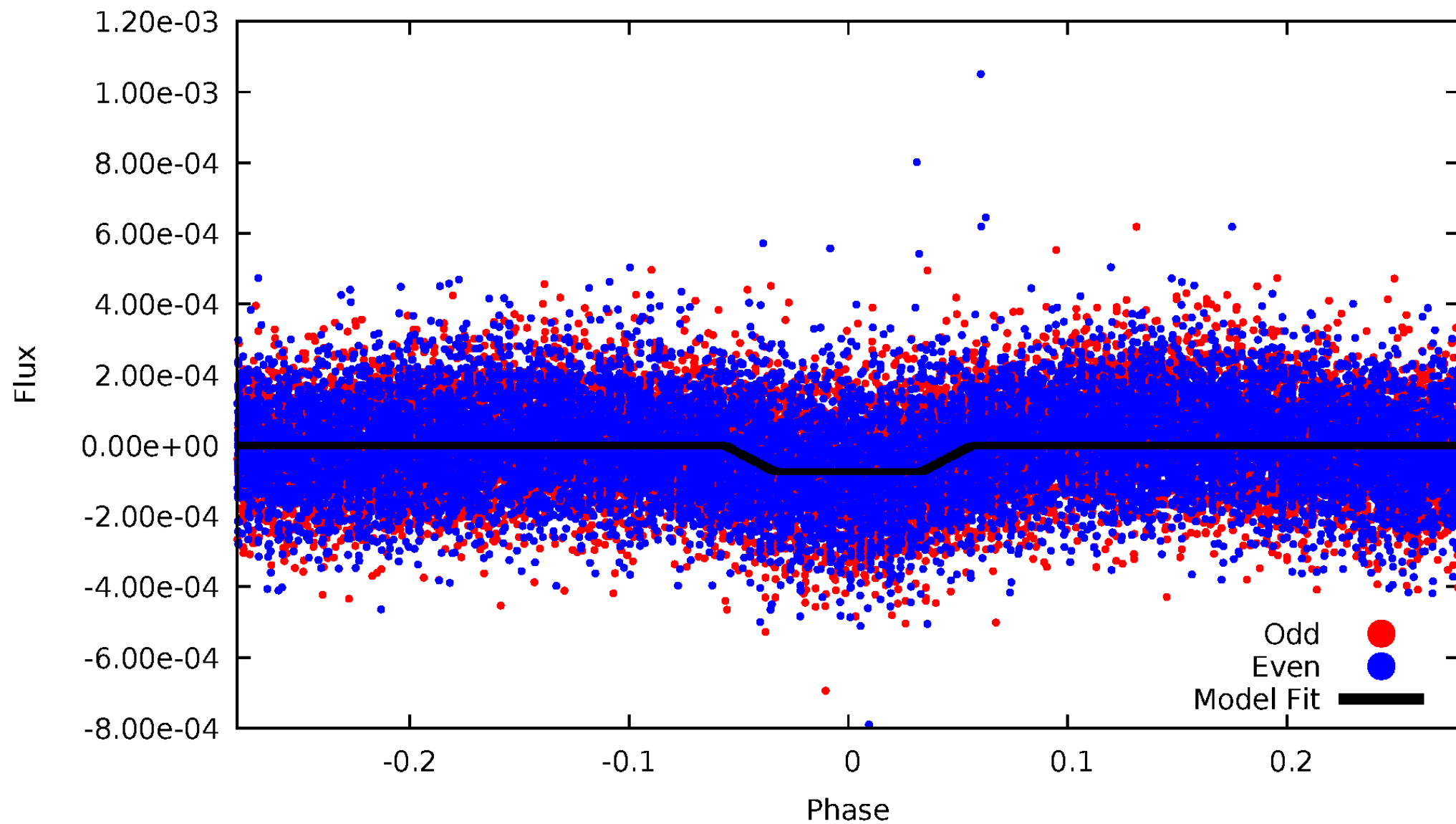
DV Odd/Even

TCE 004074294-01



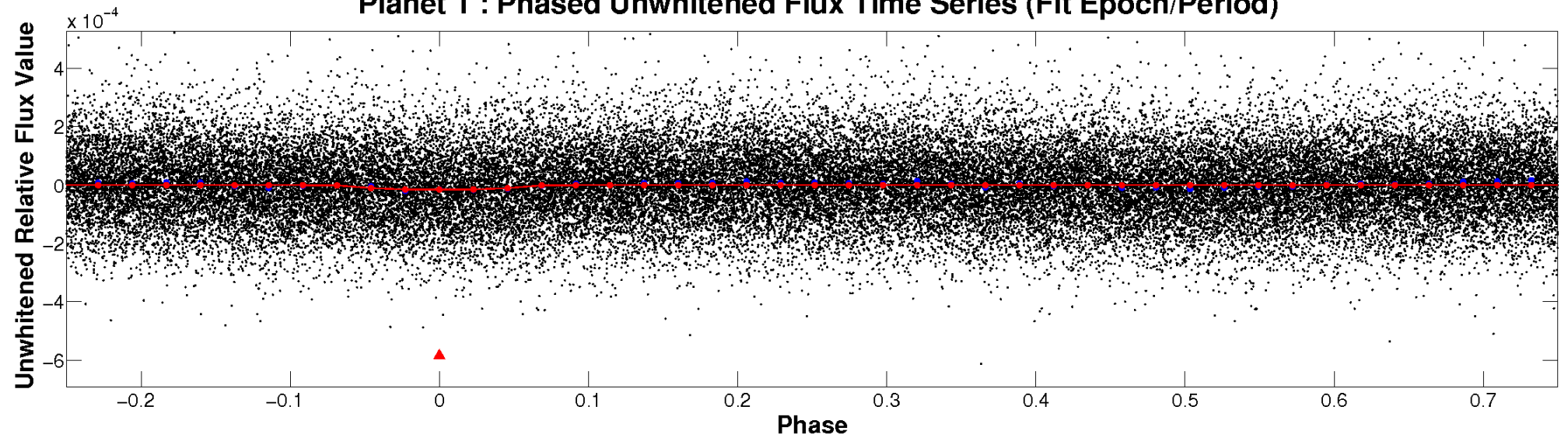
ALT Odd/Even

TCE 004074294-01

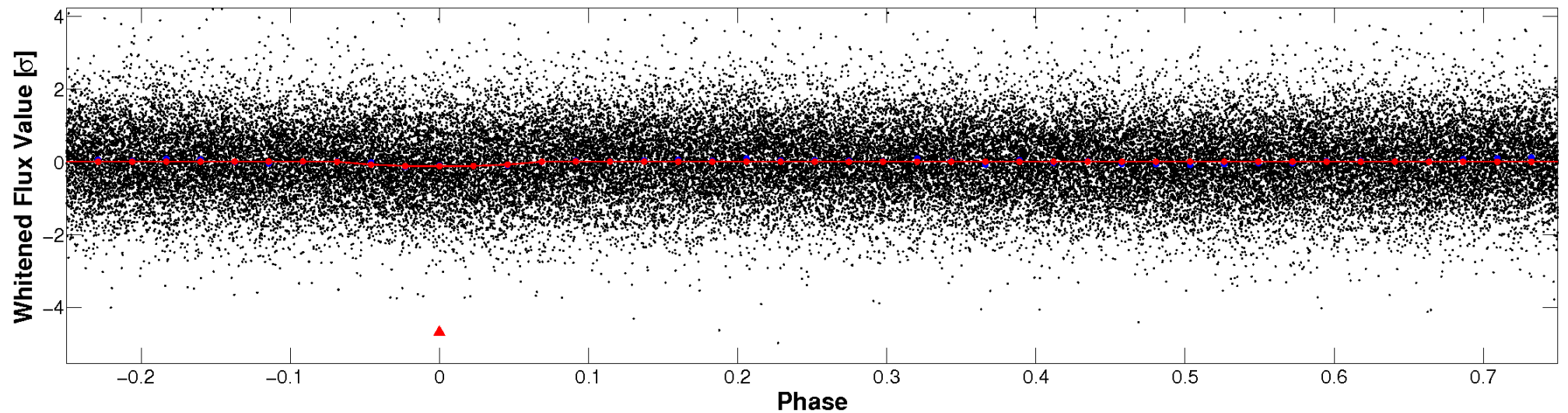


Non-Whitened Vs. Whitened Light Curve

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

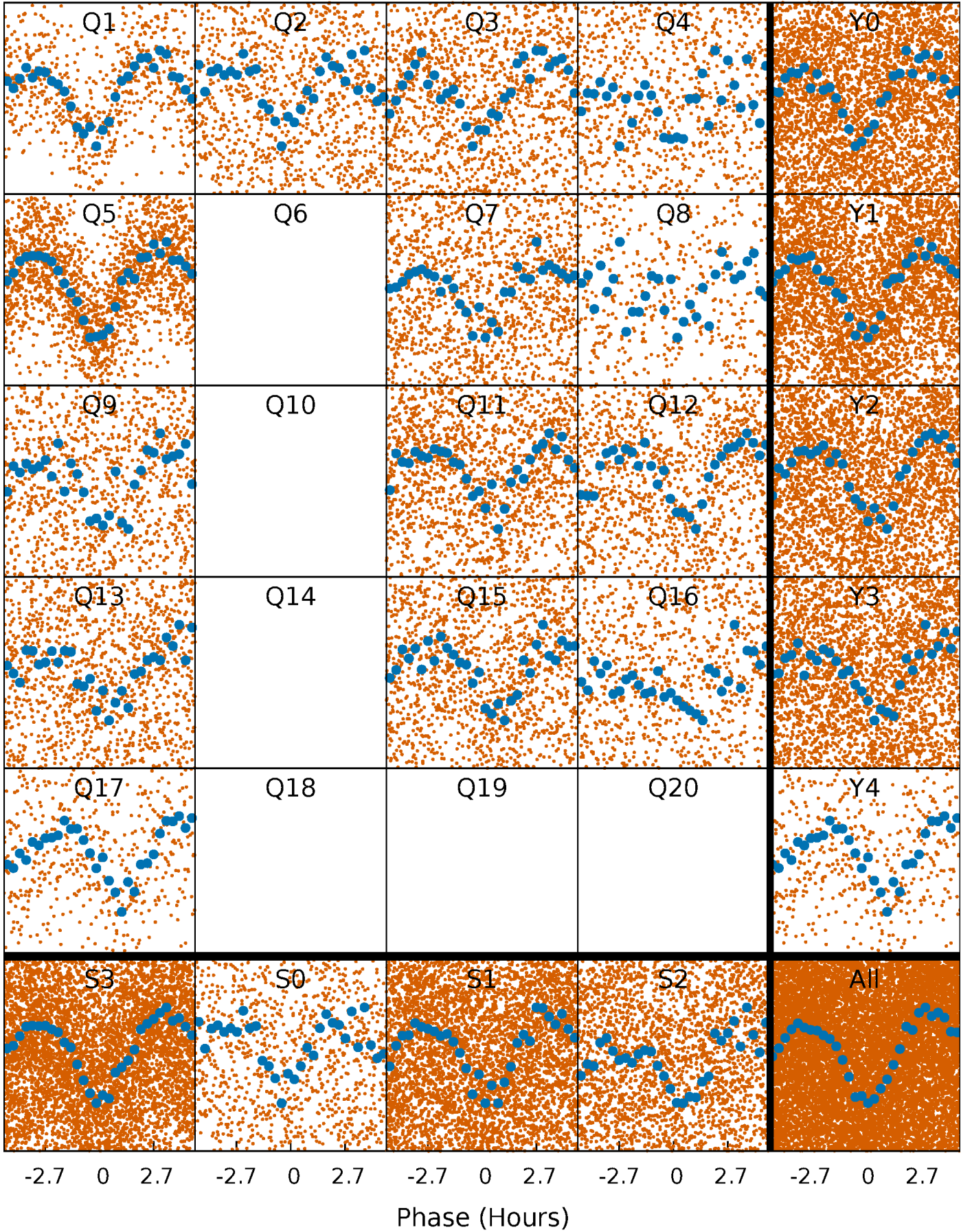


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



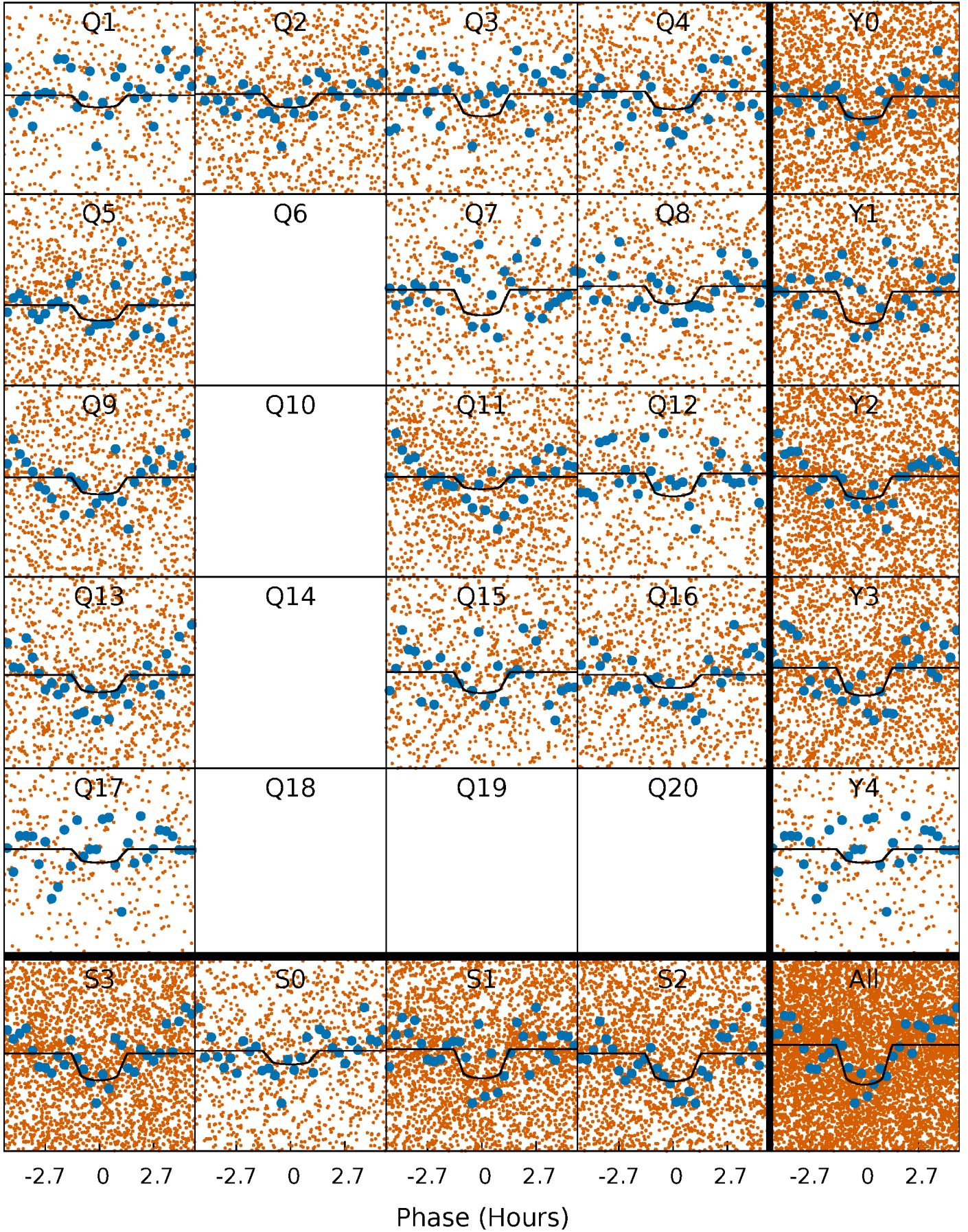
PDC Quarter-Phased Transit Curves

TCE 004074294-01 P= 0.892956 Days $T_0=131.578372$ (BKJD)



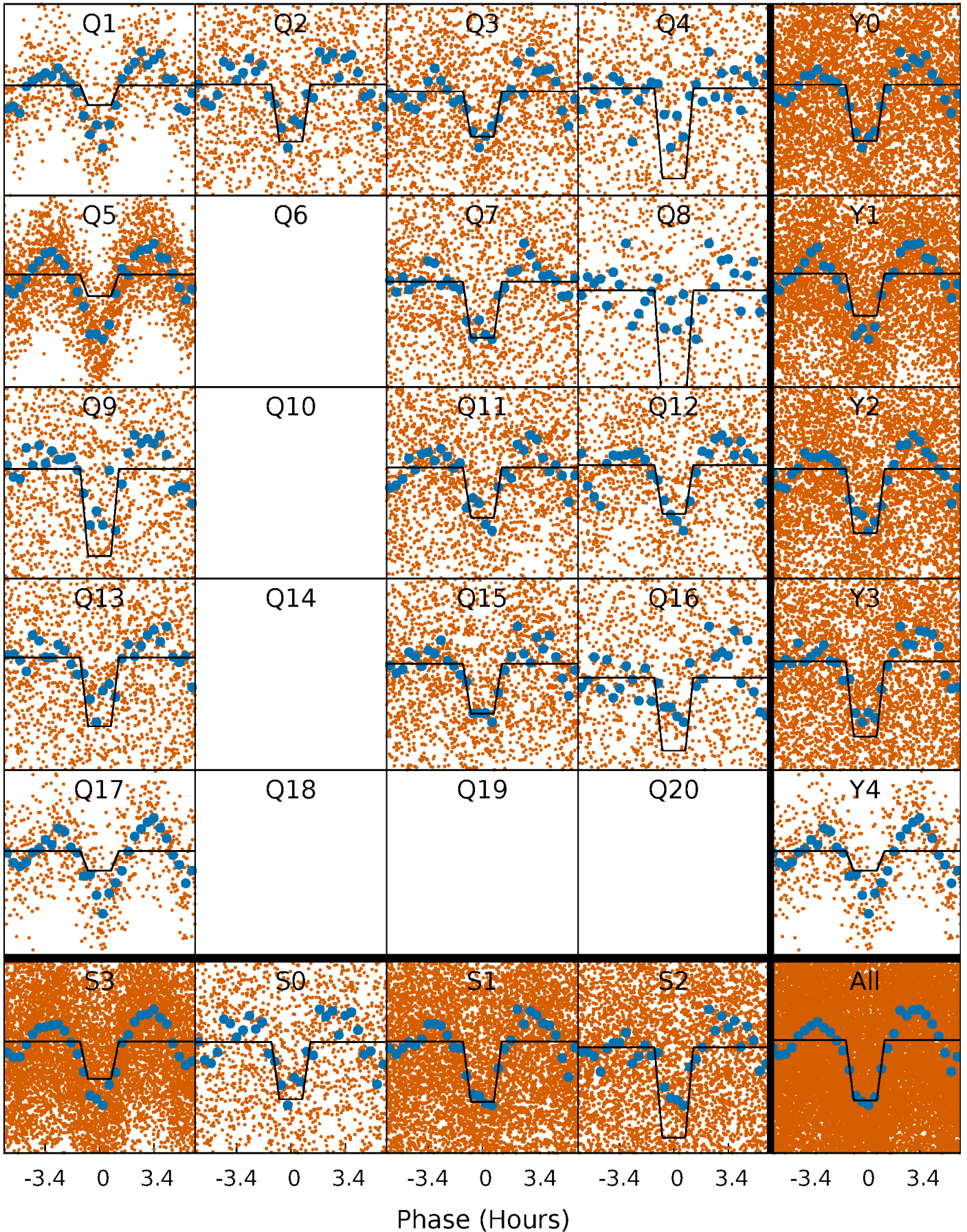
DV Quarter-Phased Transit Curves

TCE 004074294-01 P= 0.892956 Days $T_0=131.578372$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

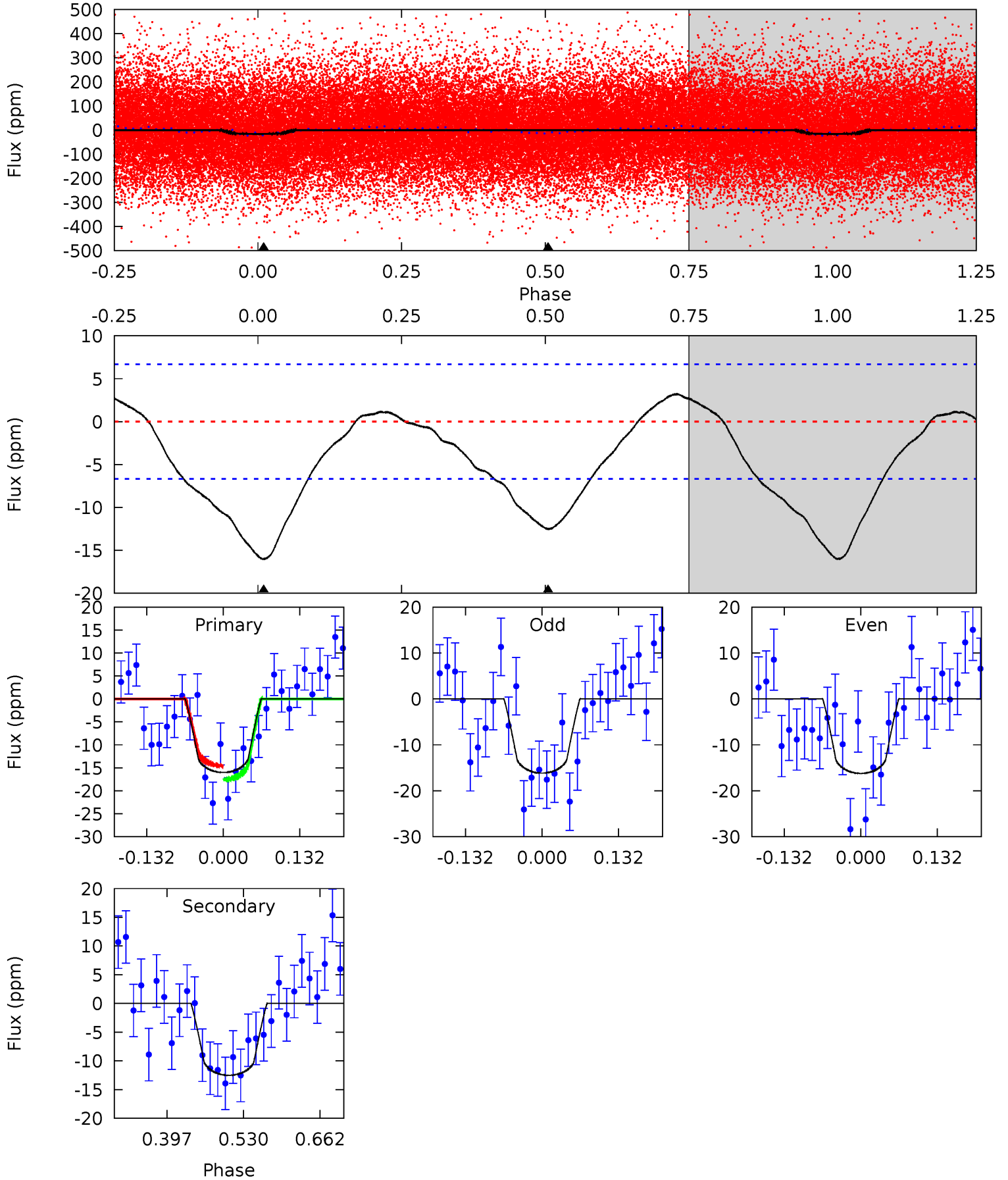
TCE 004074294-01 P= 0.892987 Days $T_0=131.564504$ (BKJD)



DV Model-Shift Uniqueness Test

004074294-01, $P = 0.892956$ Days, $E = 130.685416$ Days

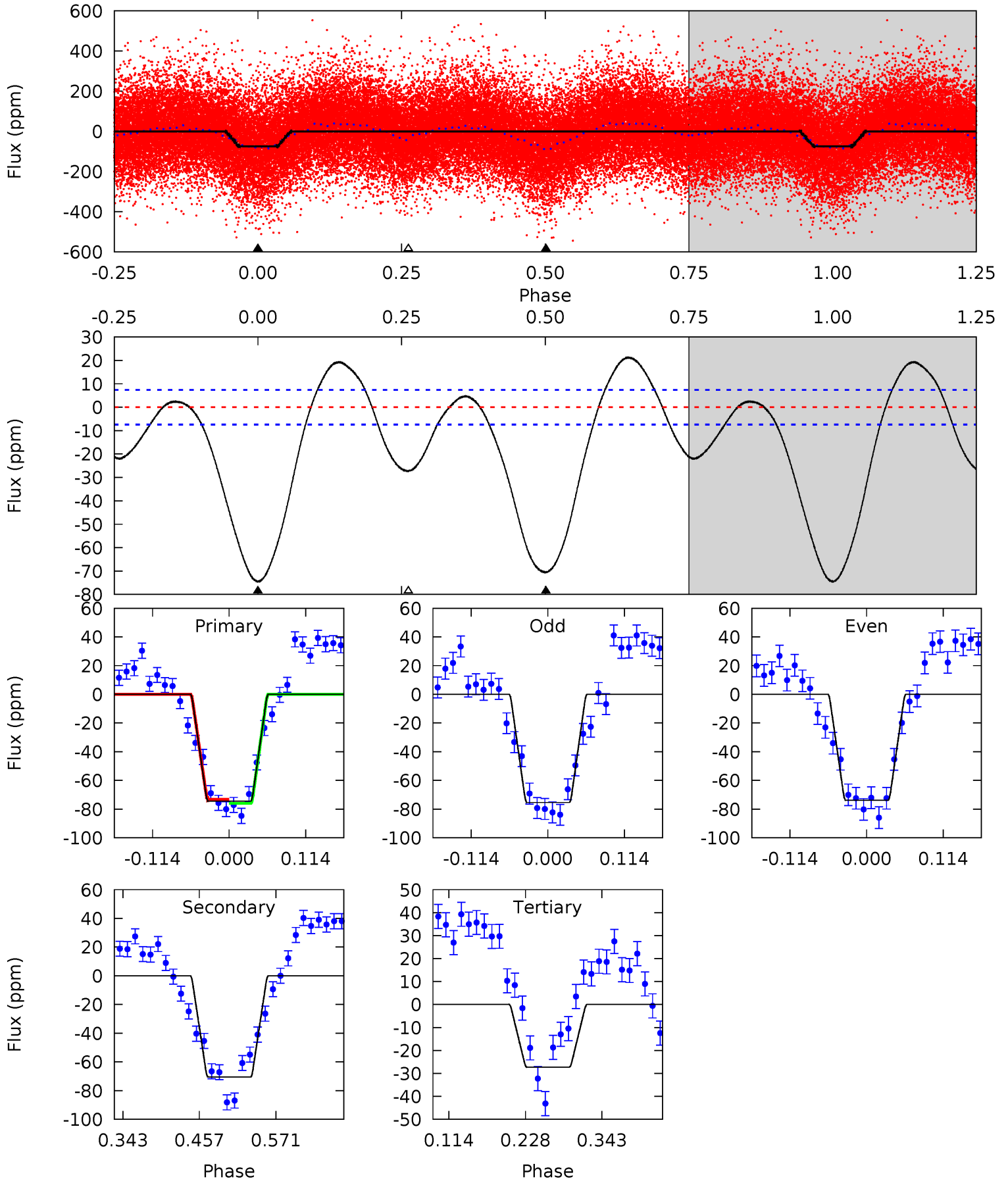
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.8	8.44	0	0	4.51	1.50	1.61	10.8	10.8	8.44	8.44	0.02	0.95	0.17	1.02



Alt Model-Shift Uniqueness Test

004074294-01, P = 0.892987 Days, E = 130.671517 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
45.5	43.1	16.7	0	4.54	1.58	8.89	28.8	45.5	26.4	43.1	0.50	1.08	0.22	0.86



Stellar Parameters For KIC 004074294

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6228^{+171}_{-152}	$3.668^{+0.320}_{-0.080}$	$-0.080^{+0.300}_{-0.250}$	$2.975^{+0.394}_{-1.182}$	$1.504^{+0.229}_{-0.344}$	$0.080^{+0.183}_{-0.022}$
	+3%/-2%	+9%/-2%	+375%/-312%	+13%/-40%	+15%/-23%	+227%/-27%
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 004074294-01 / KOI 7547.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-13 ± 1	$1.27^{+0.60}_{-0.56}$	4516^{+243}_{-453}	5462^{+2024}_{-1050}	$1.913^{+4.058}_{-1.082}$
Alt.	-71 ± 2	$2.58^{+0.78}_{-0.63}$	4514^{+222}_{-418}	5944^{+929}_{-631}	$2.521^{+1.760}_{-0.984}$

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 $A_{obs} \gg 1.0$

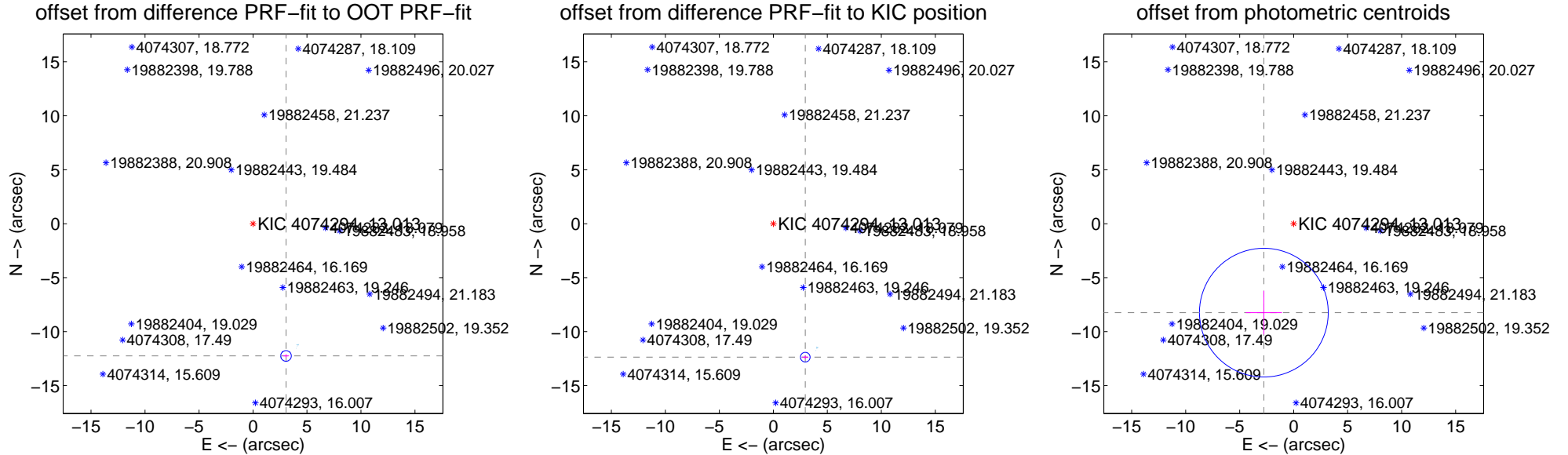
DV Centroid Data

Supplemental centroid analysis for 004074294-01. Kepler magnitude: 13.01. Transit SNR 7.69

There are 9 quarters with good PRF difference image offsets

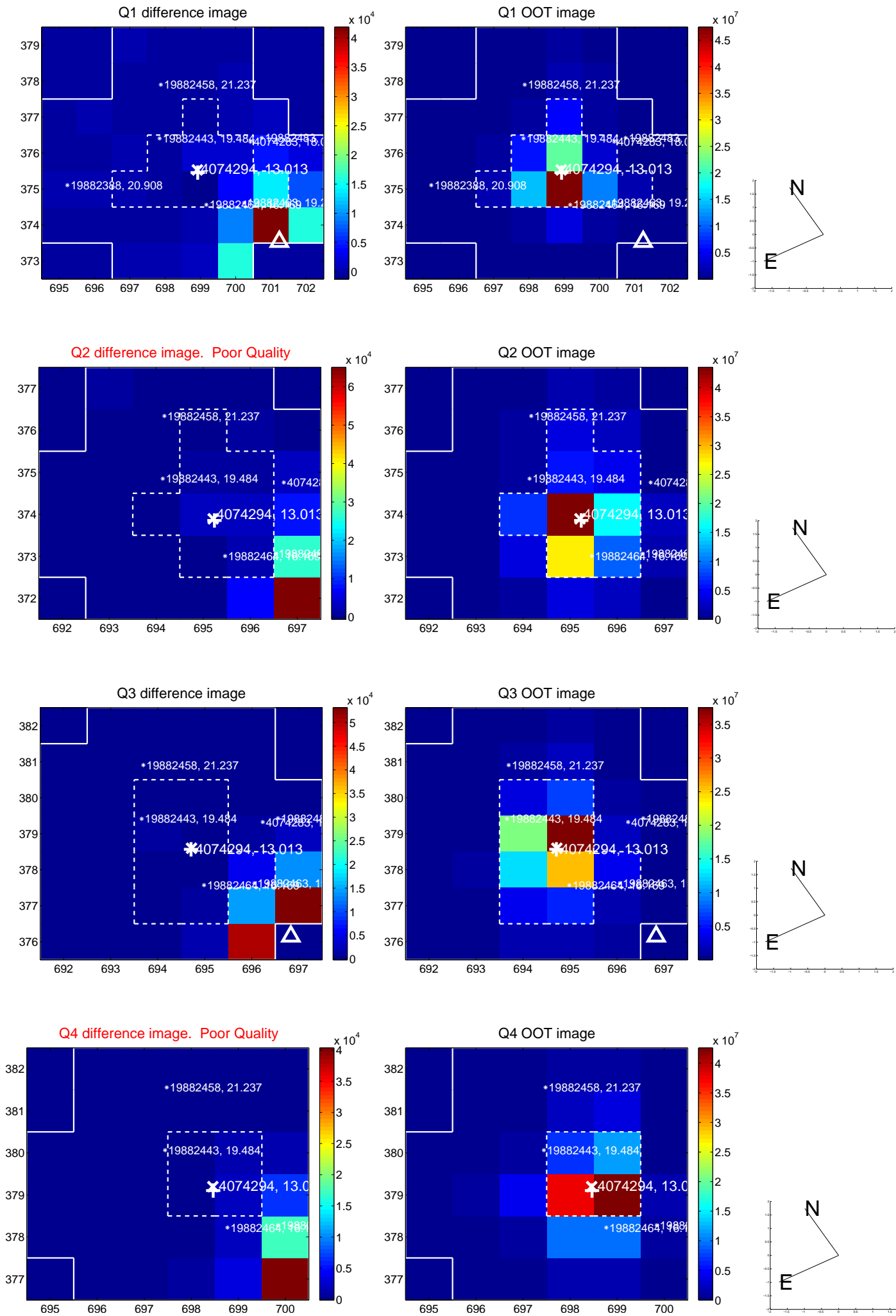
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	12.622 ± 0.164	77.00	-3.057 ± 0.278	-12.246 ± 0.154
PRF-fit source offset from KIC position	12.708 ± 0.149	85.44	-2.957 ± 0.283	-12.360 ± 0.137
photometric centroid source offset	8.69 ± 1.99	4.37	2.76 ± 1.67	-8.24 ± 2.02

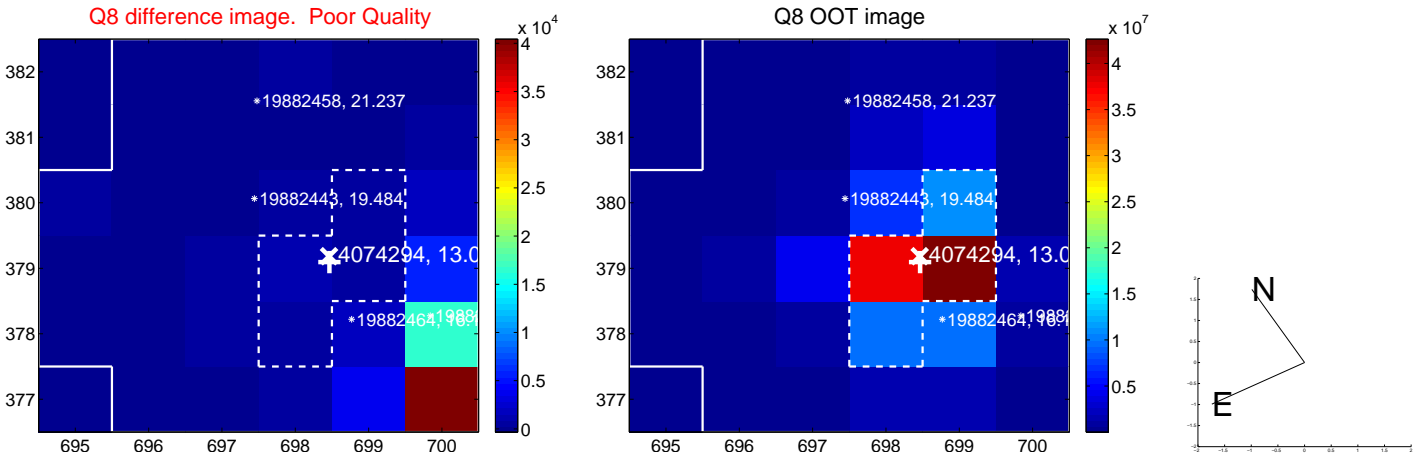
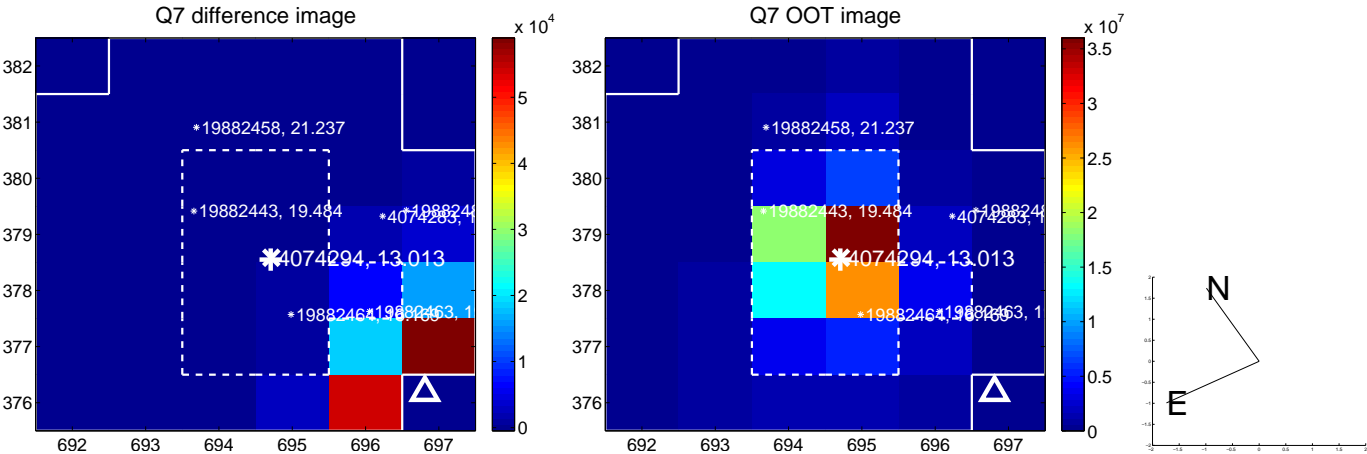
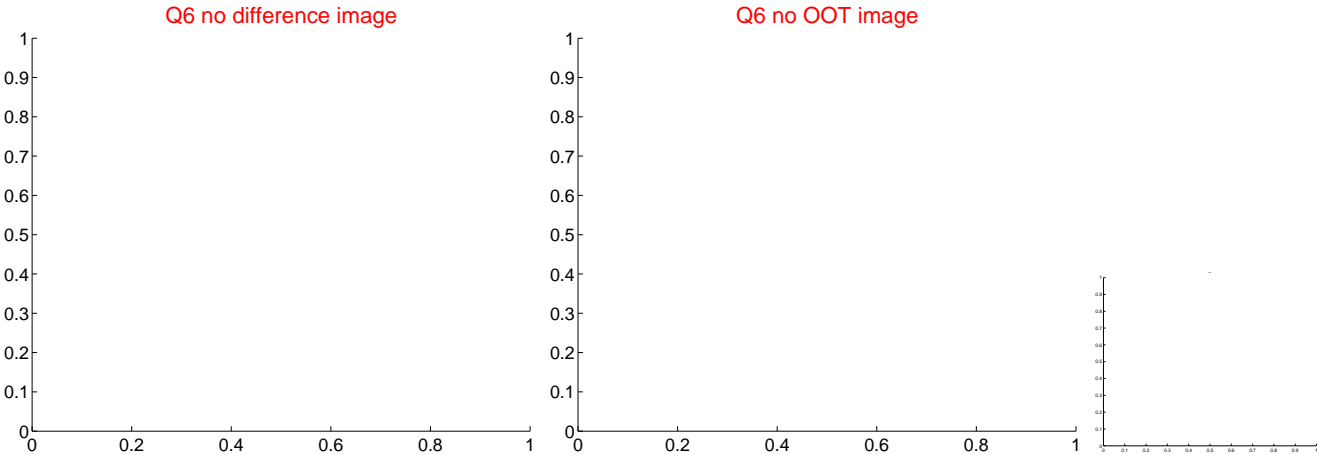
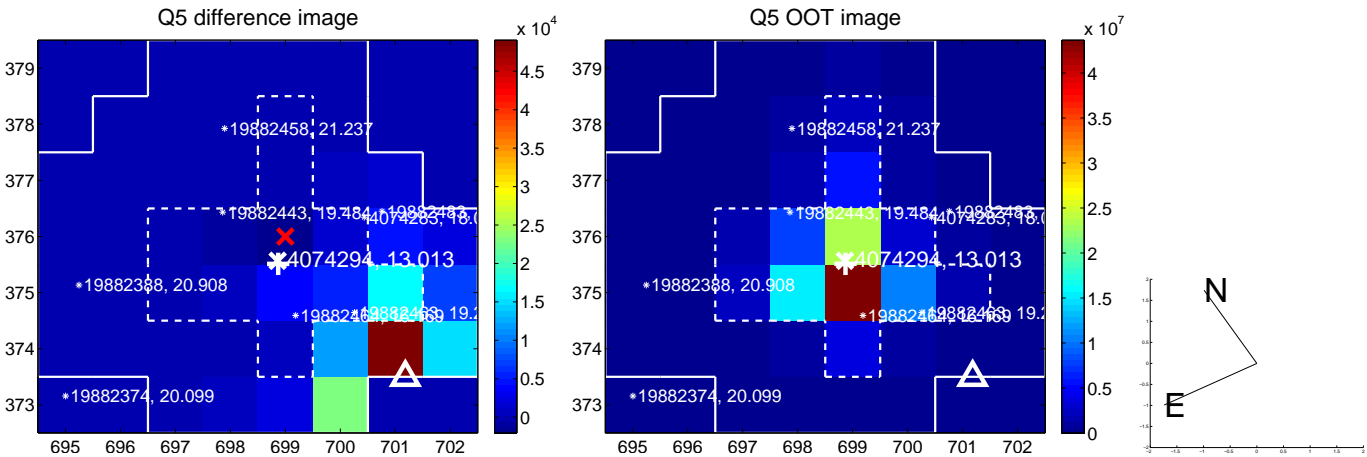


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

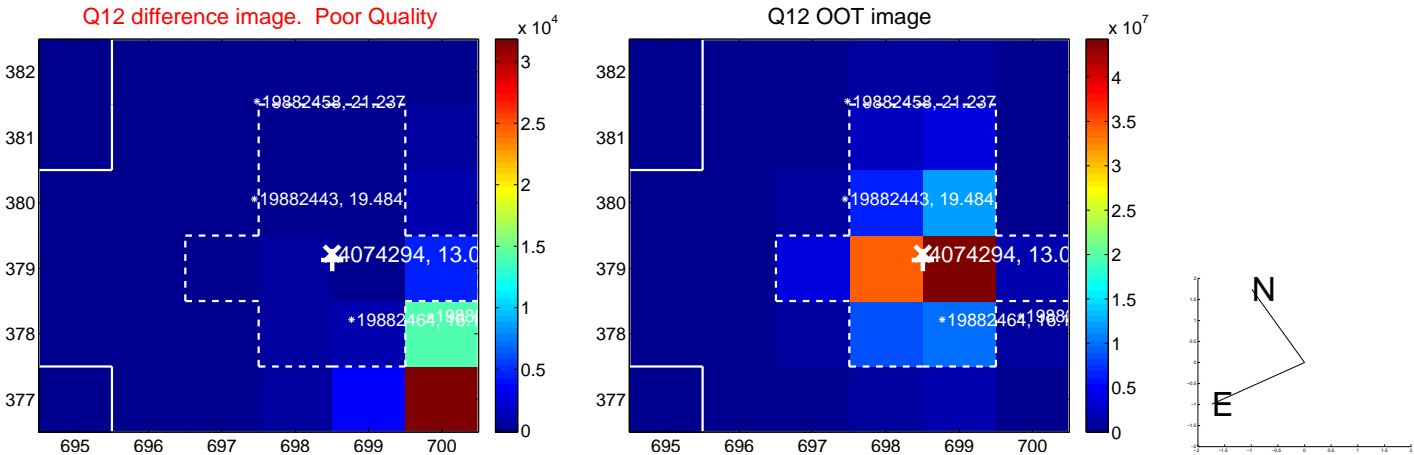
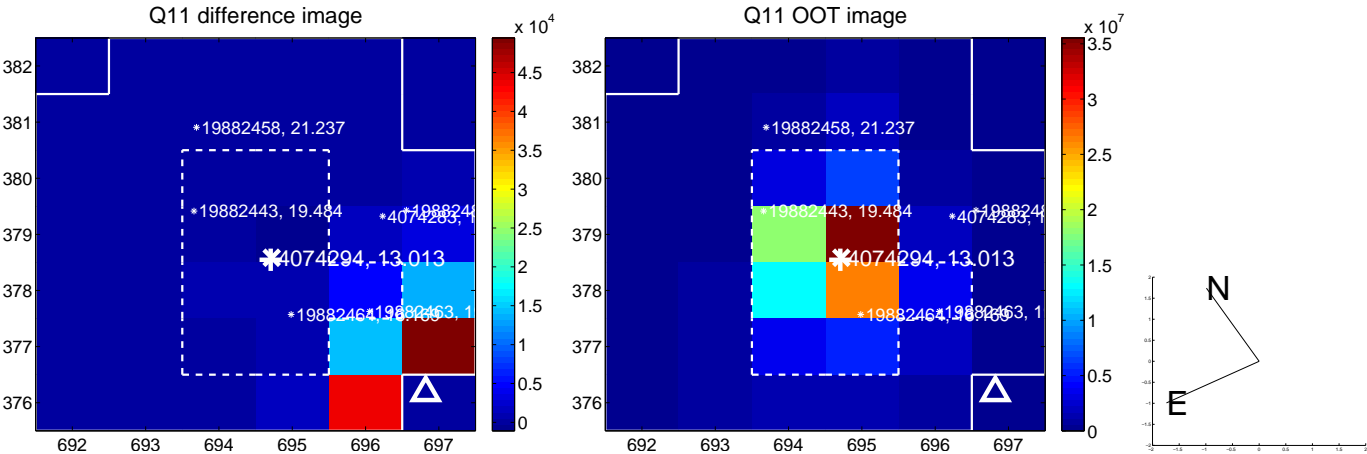
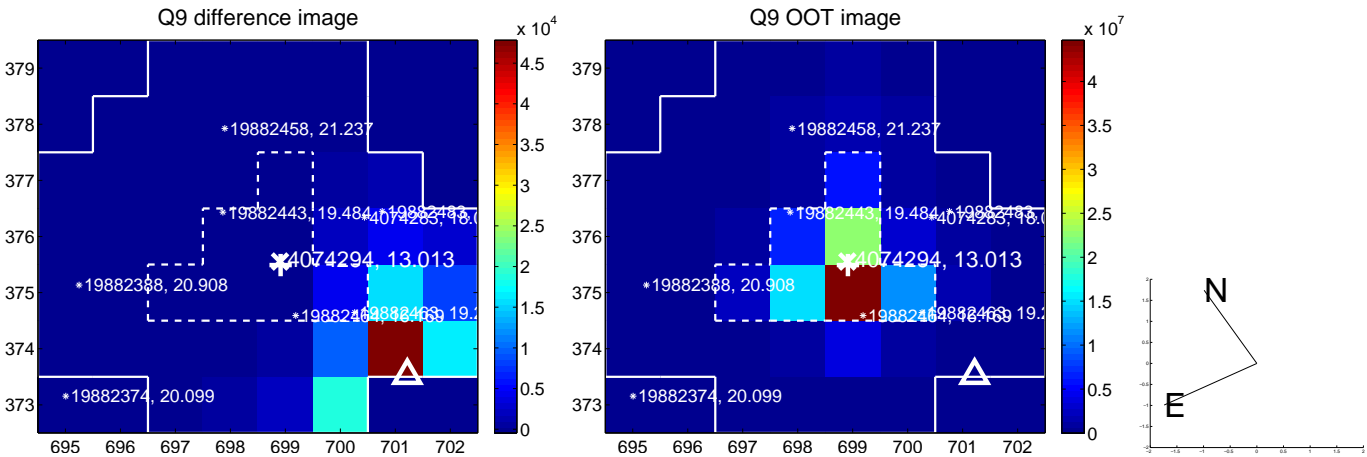
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



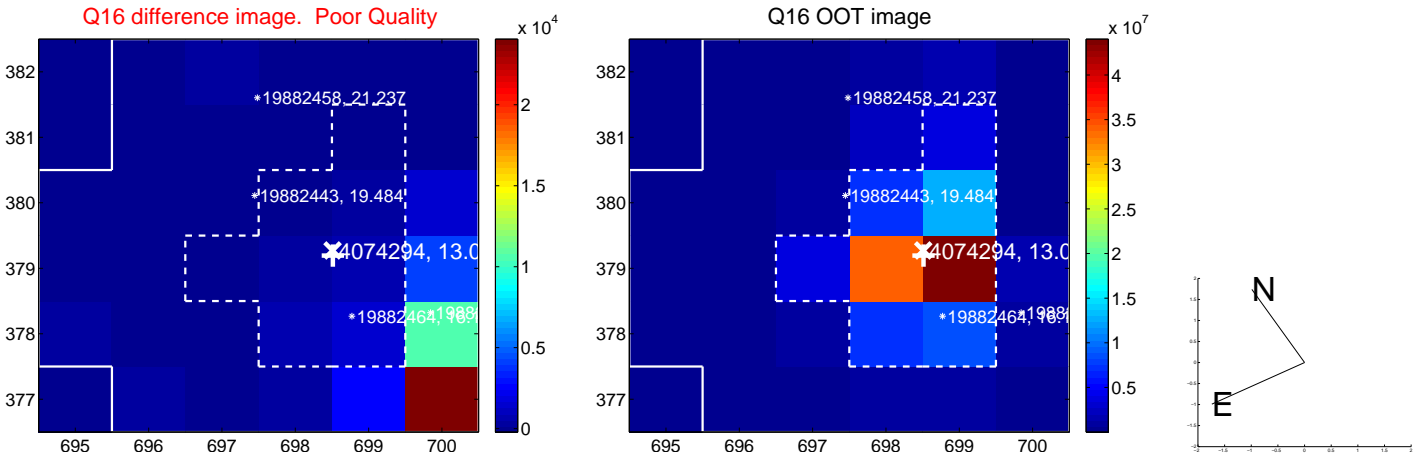
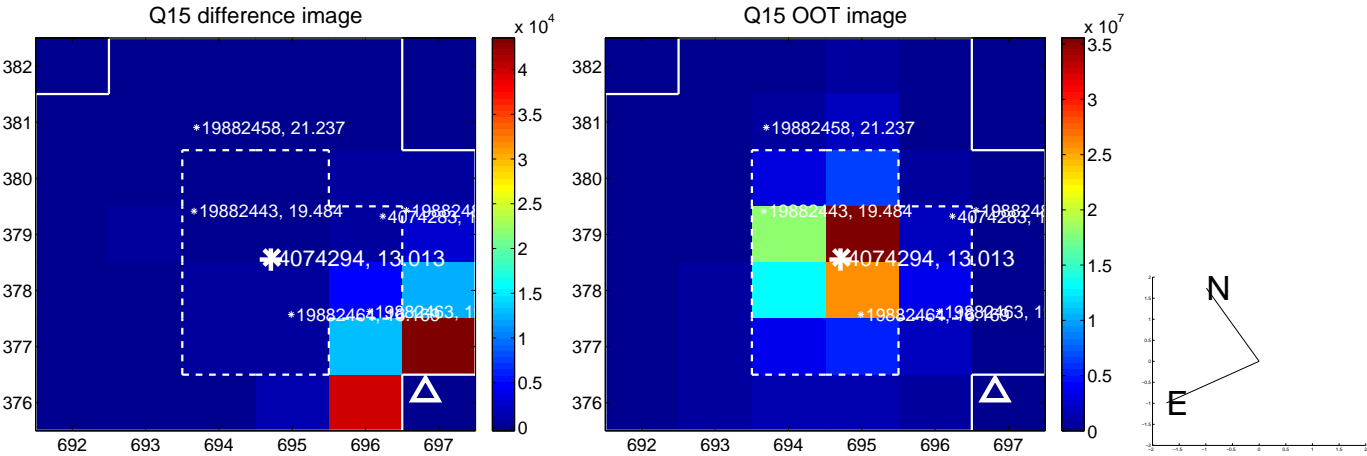
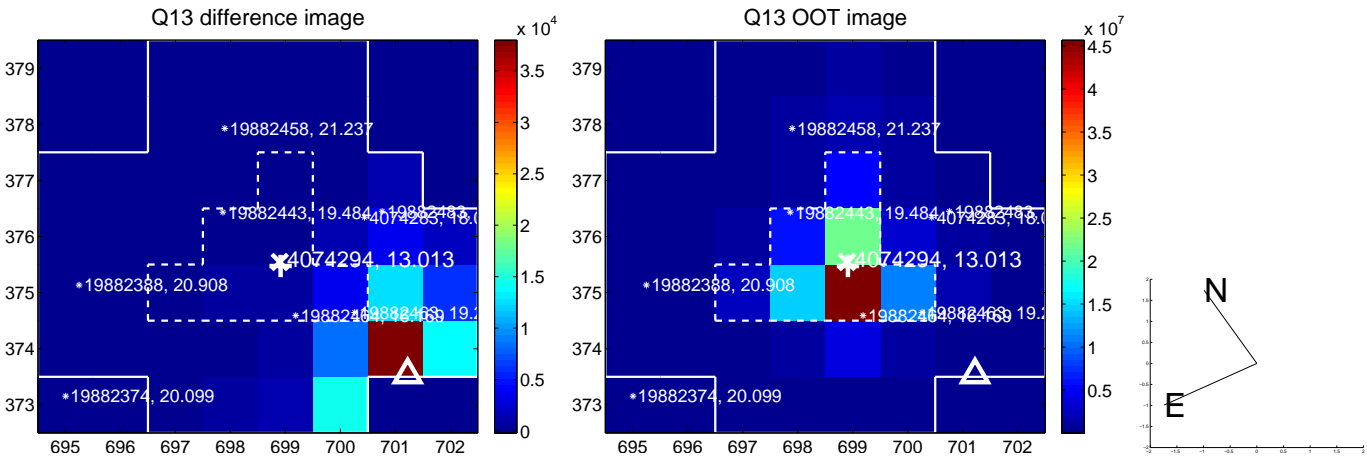
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



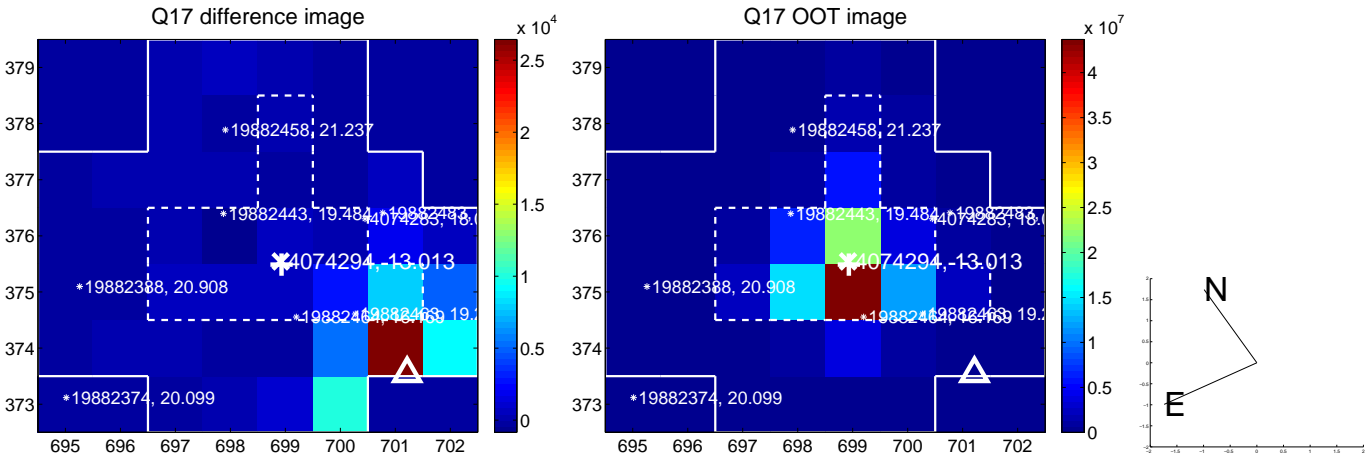
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



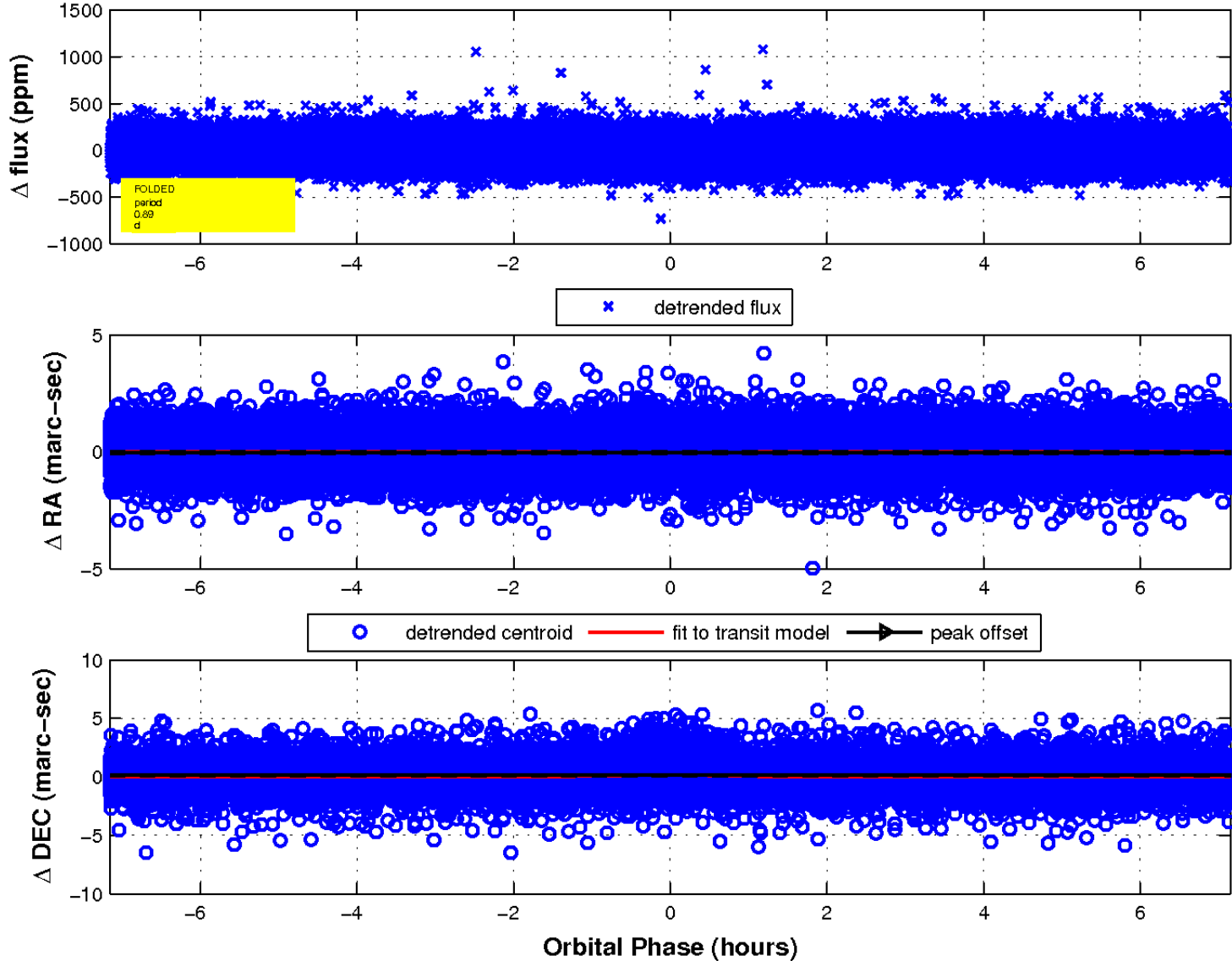
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

