

KIC 010471345

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R _★ (R _☉)	T _★ (K)	R _p (R _⊕)	S _p (S _⊕)
010471345-01	OBS	7614.01	0.933733	132.449390	61.0	3.589	8.7	8.8	0.74	5649	0.69	1650.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010471345-01	OBS	FP	0.00	1	0	1	1	LPP_DV—HALO_GHOST—EPHEM_MATCH

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 010471345-01

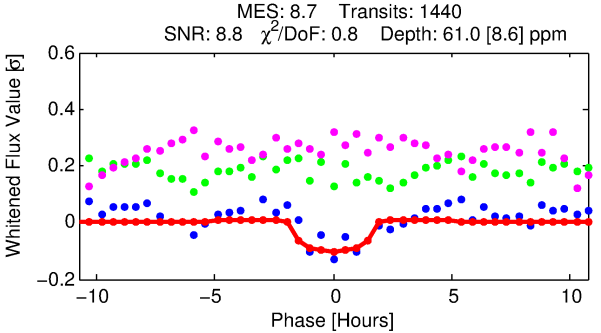
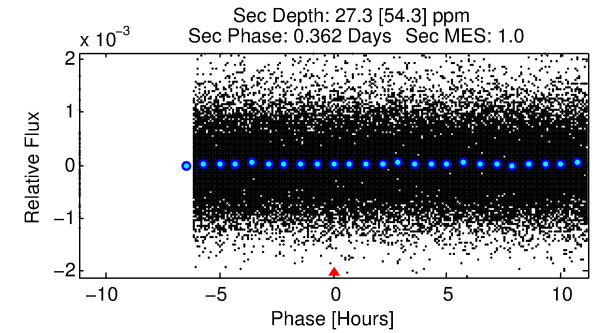
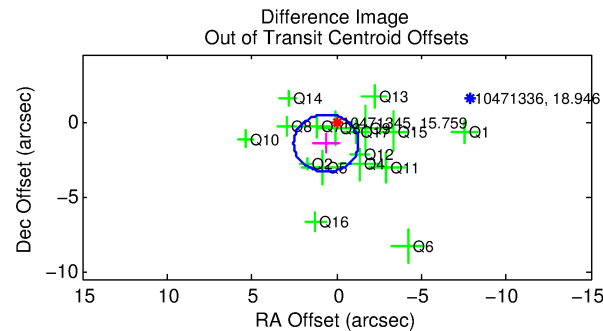
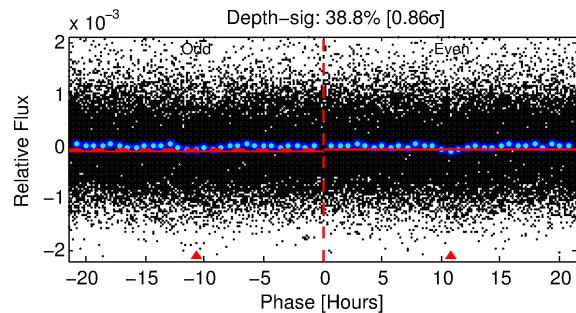
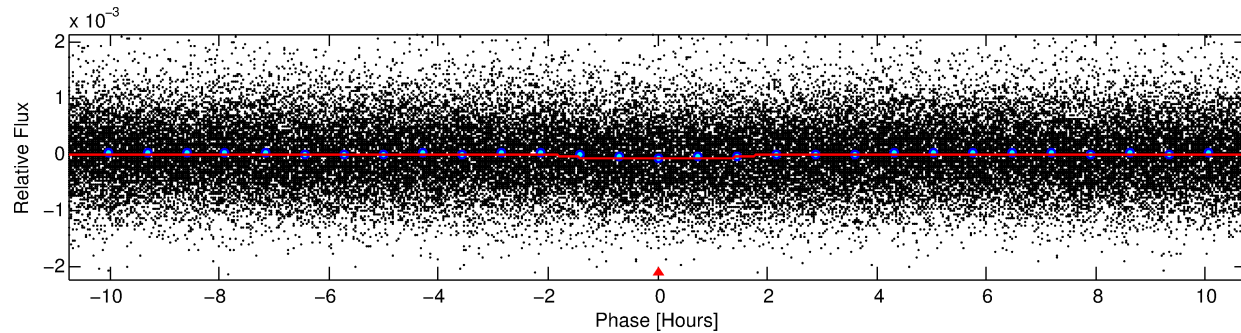
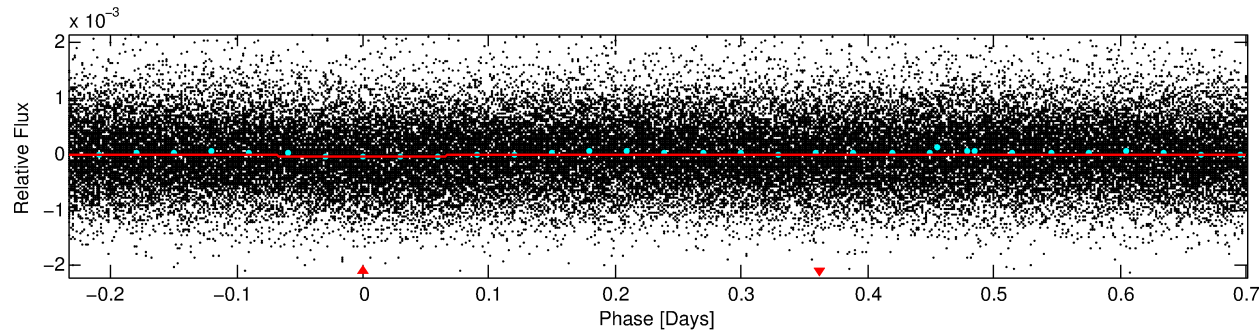
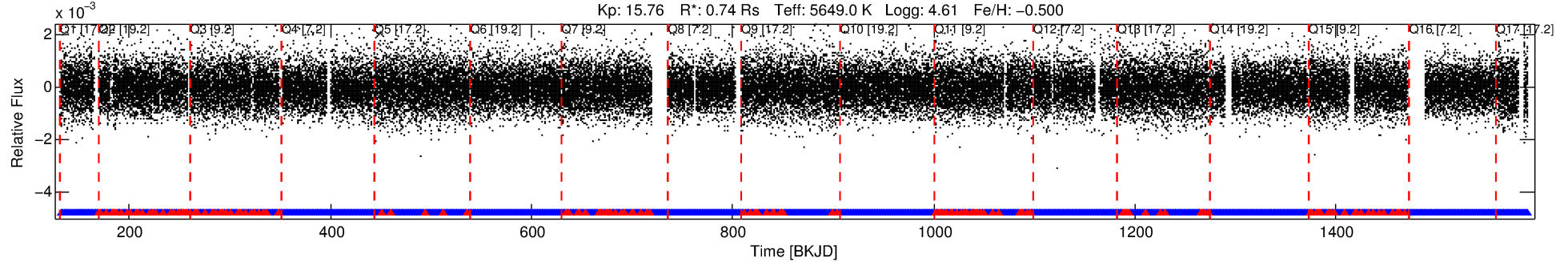
TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist (″)	ΔRow	ΔCol	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ _P	σ _T
010471345-01	10471345	V2083-Cyg-pri	10342012	1:2	1469.3	303	-212	6.90	15.76	3251.20	Direct-PRF	0	2.79	0.13

Notes: P₁:P₂ is the period ratio. Dist is the distance in arcseconds. ΔRow and ΔCol are the number of pixels apart in row and column. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant σ_P < 5.0 and σ_T < 5.0. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 10471345 Candidate: 1 of 1 Period: 0.934 d
KOI: K07614.01 Corr: 0.942

Kp: 15.76 R*: 0.74 Rs Teff: 5649.0 K Logg: 4.61 Fe/H: -0.500



DV Fit Results:

Period = 0.93373 [0.00001] d
Epoch = 132.4494 [0.0049] BKJD
Rp/R* = 0.0085 [0.0063]
a/R* = 1.29 [1.93]
b = 0.90 [0.76]
Seff = 1650.81 [455.00]
Teq = 1625 [112] K
Rp = 0.69 [0.53] Re
a = 0.0174 [0.0030] AU
Ag = 9.61 [23.96] [0.36σ]
Teffp = 4425 [2747] K [1.02σ]

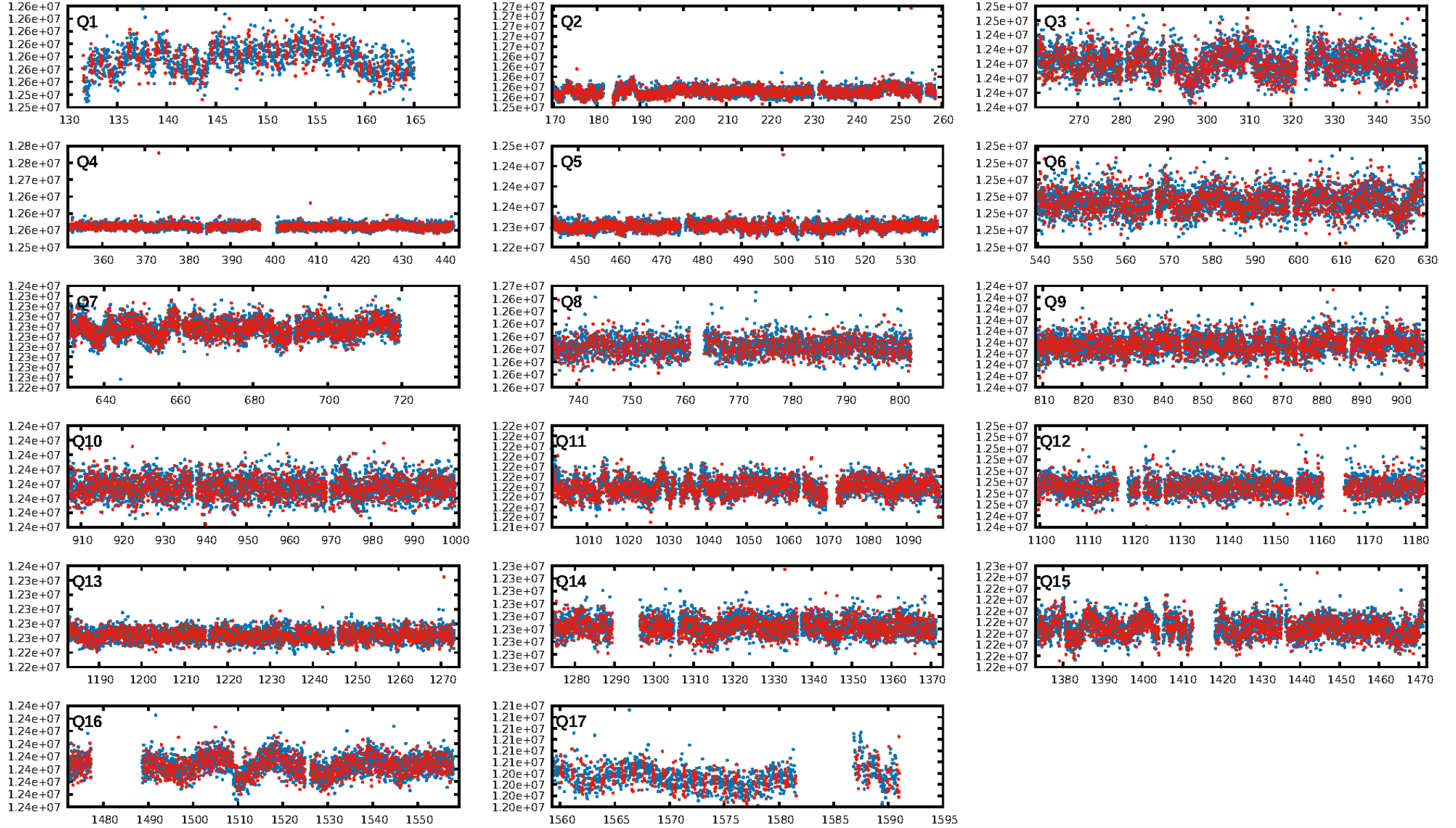
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.94e-20
RollingBand-fgt: 0.88 [1214/1374]
GhostDiagnostic-chr: 0.2382
Centroid-sig: 0.0%
Centroid-so: 5.407 arcsec [2.96σ]
OotOffset-rm: 1.559 arcsec [2.44σ]
KicOffset-rm: 1.533 arcsec [2.58σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.06 [1/17]
DiffImageOverlap-fno: 1.00 [17/17]

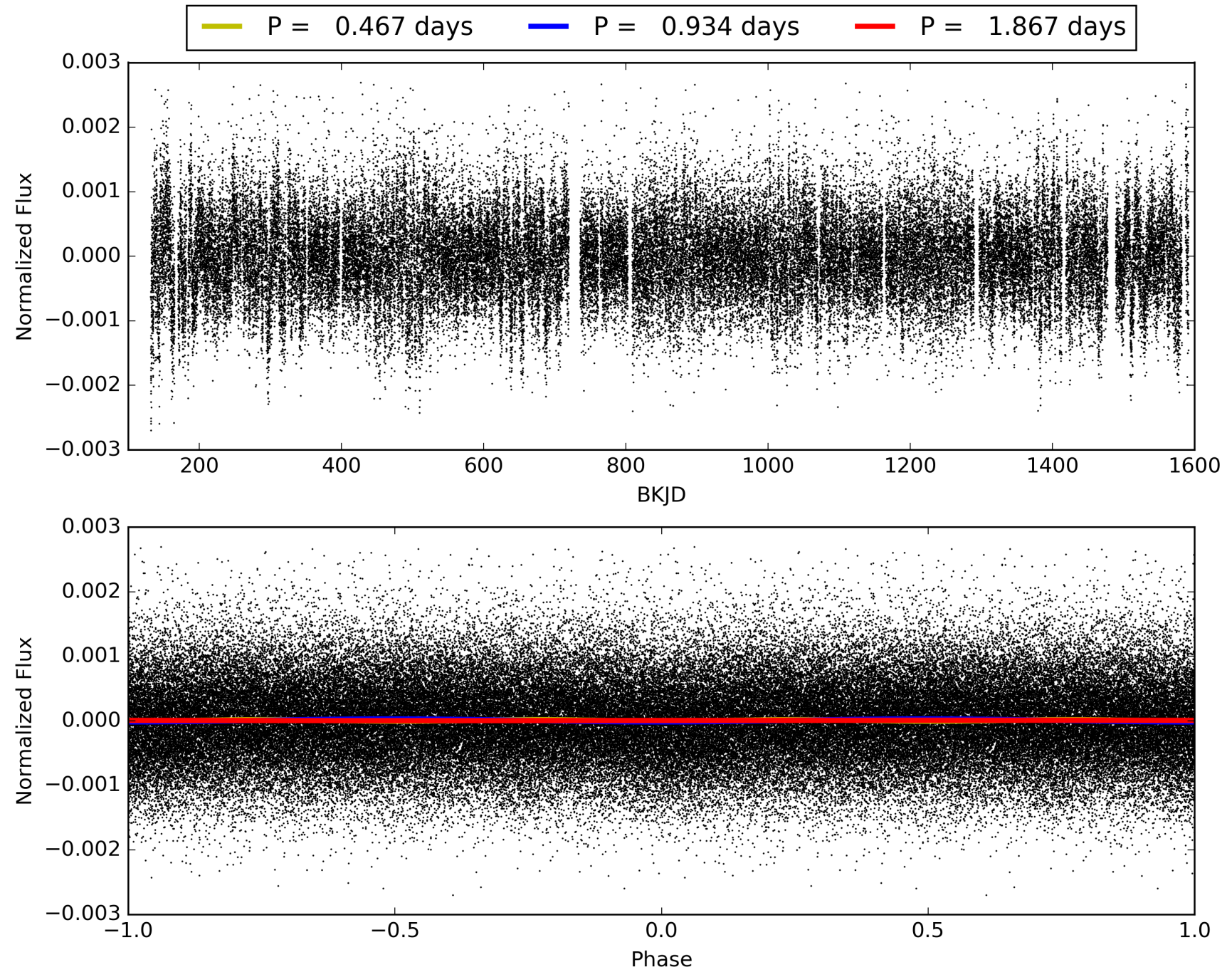
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 03:19:34 Z

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

TCE 010471345-01, PDC Light Curves

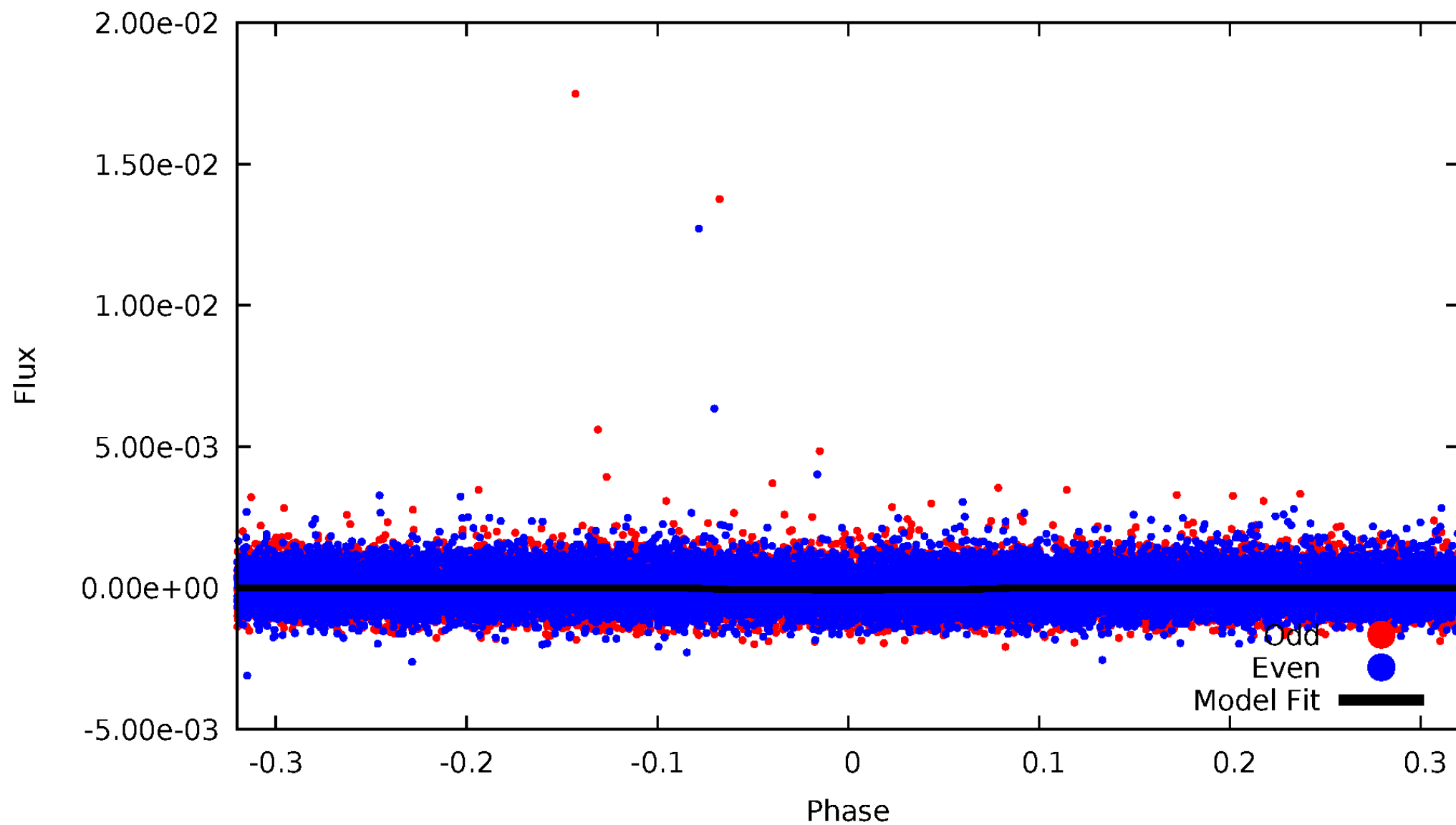


TCE 010471345-01



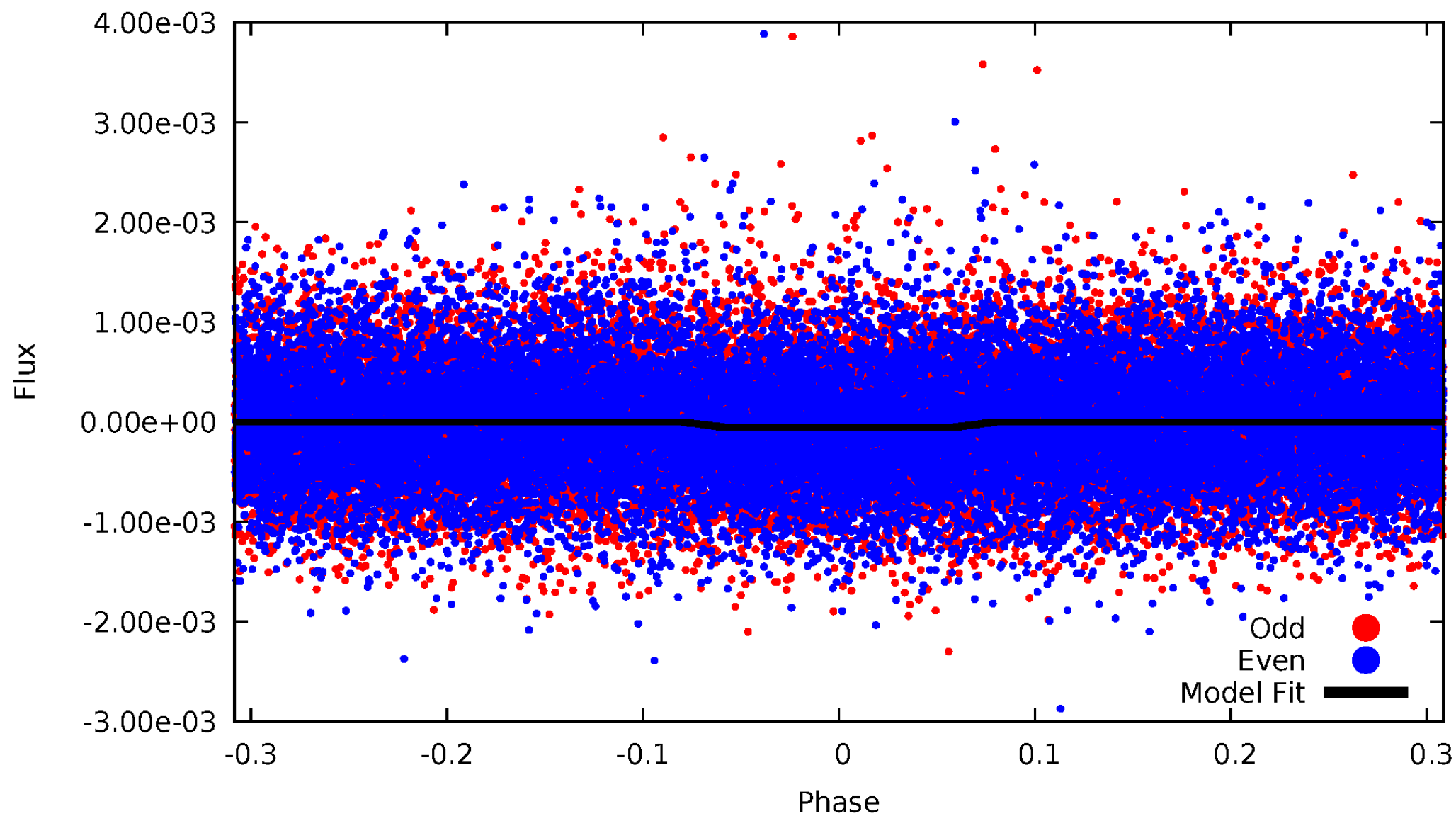
DV Odd/Even

TCE 010471345-01



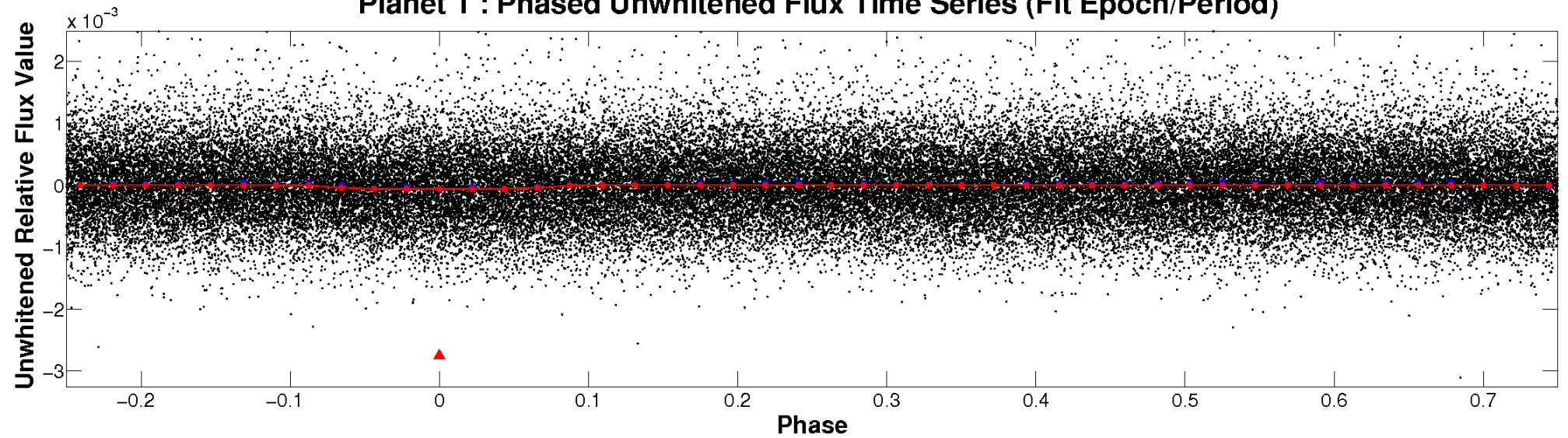
ALT Odd/Even

TCE 010471345-01

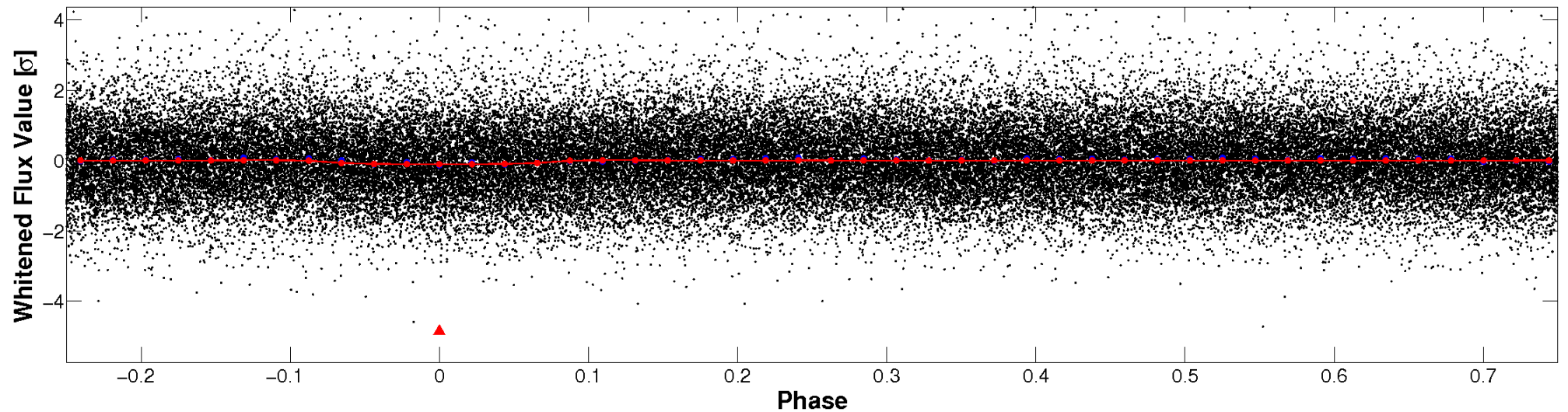


Non-Whitened Vs. Whitened Light Curve

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

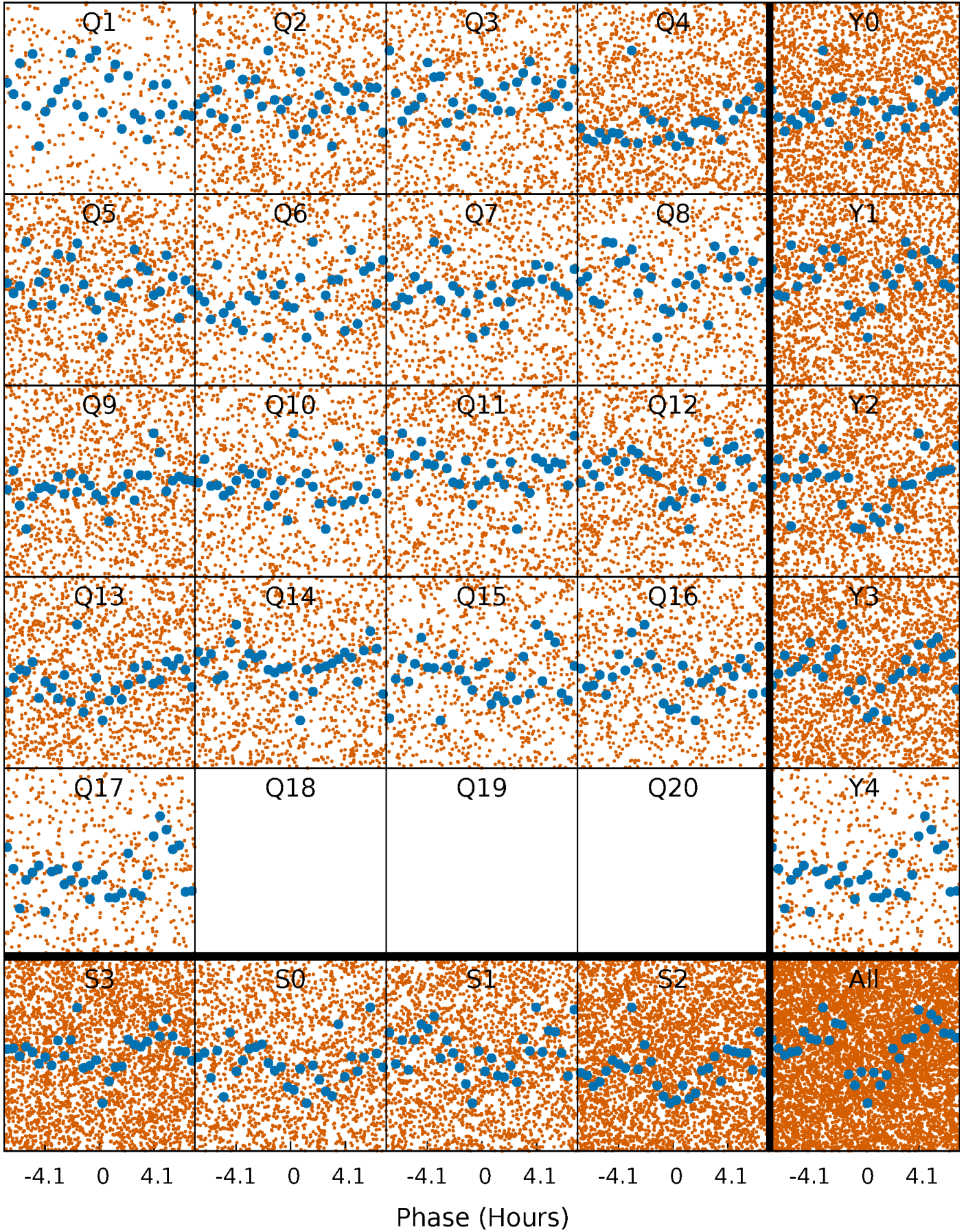


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



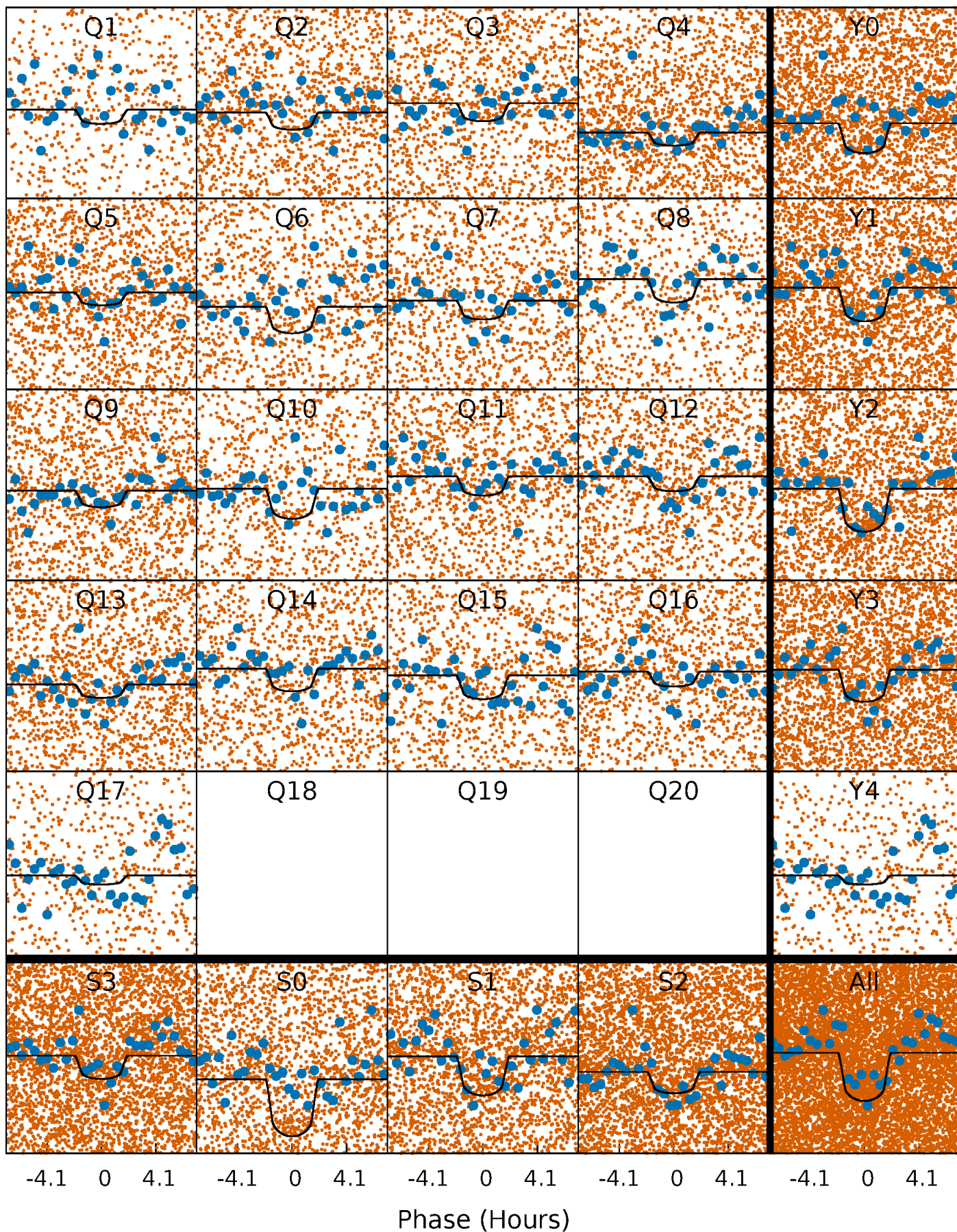
PDC Quarter-Phased Transit Curves

TCE 010471345-01 P= 0.933733 Days $T_0=132.449390$ (BKJD)



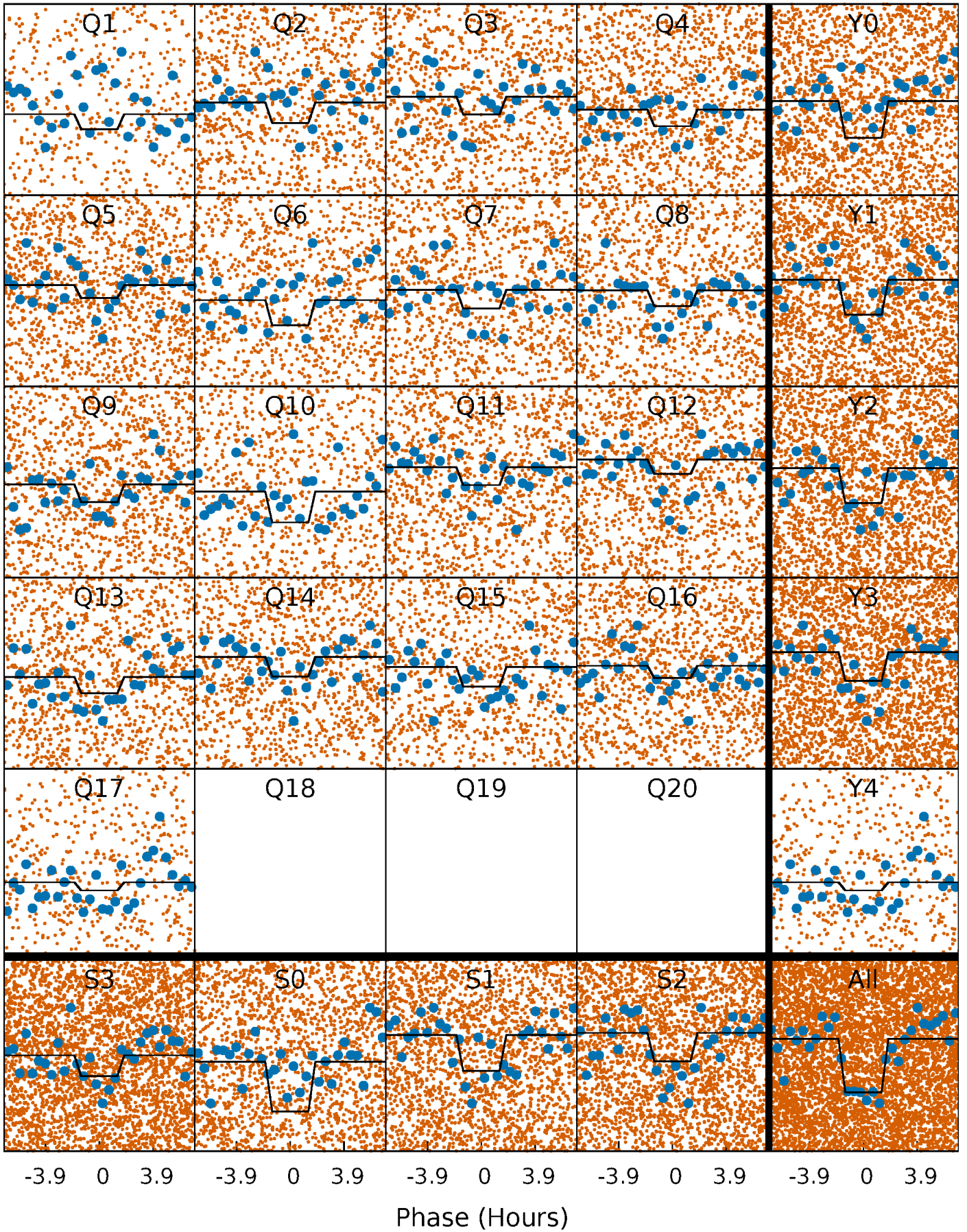
DV Quarter-Phased Transit Curves

TCE 010471345-01 P= 0.933733 Days $T_0=132.449390$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

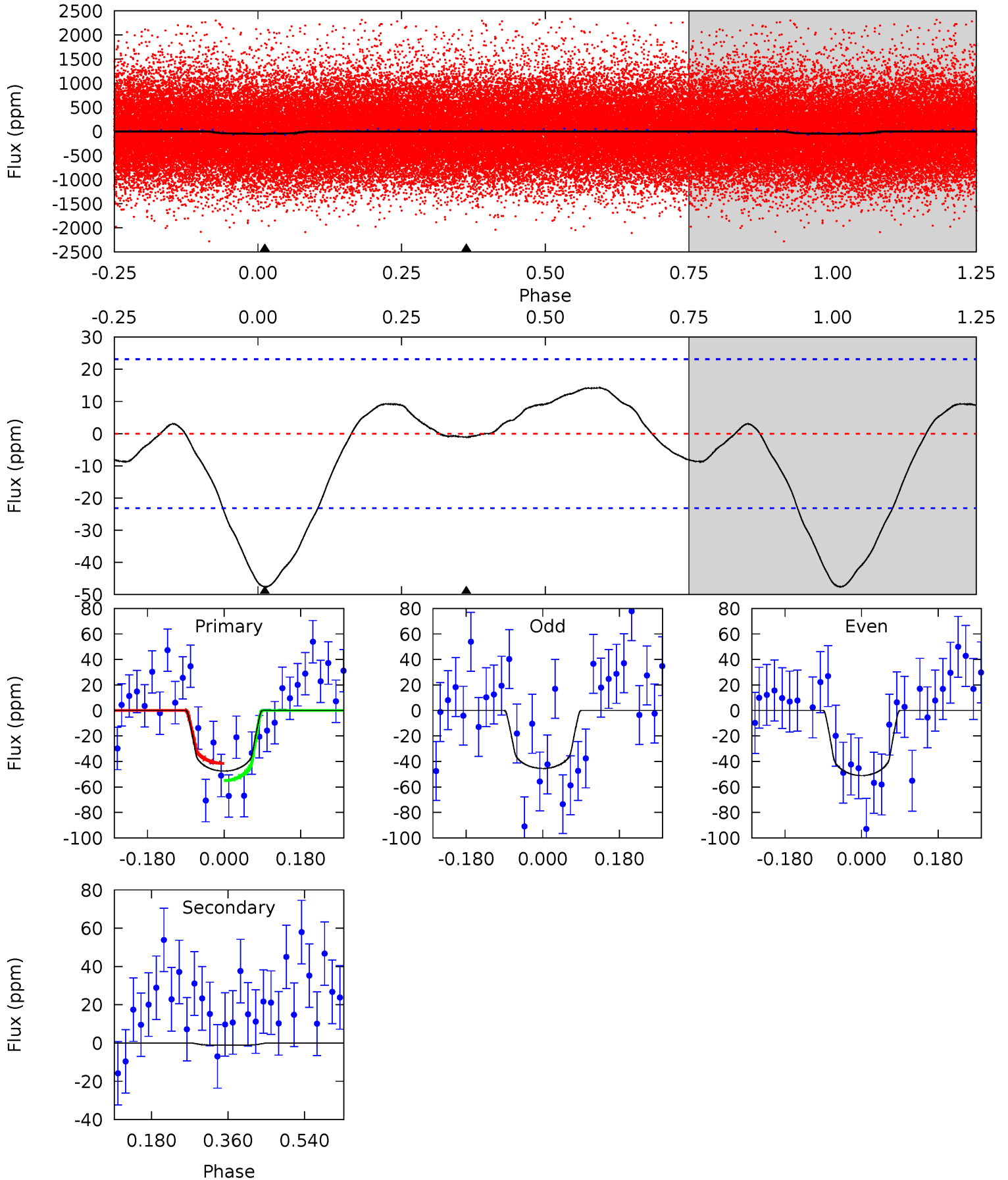
TCE 010471345-01 P= 0.933759 Days $T_0=132.433085$ (BKJD)



DV Model-Shift Uniqueness Test

010471345-01, P = 0.933733 Days, E = 130.581924 Days

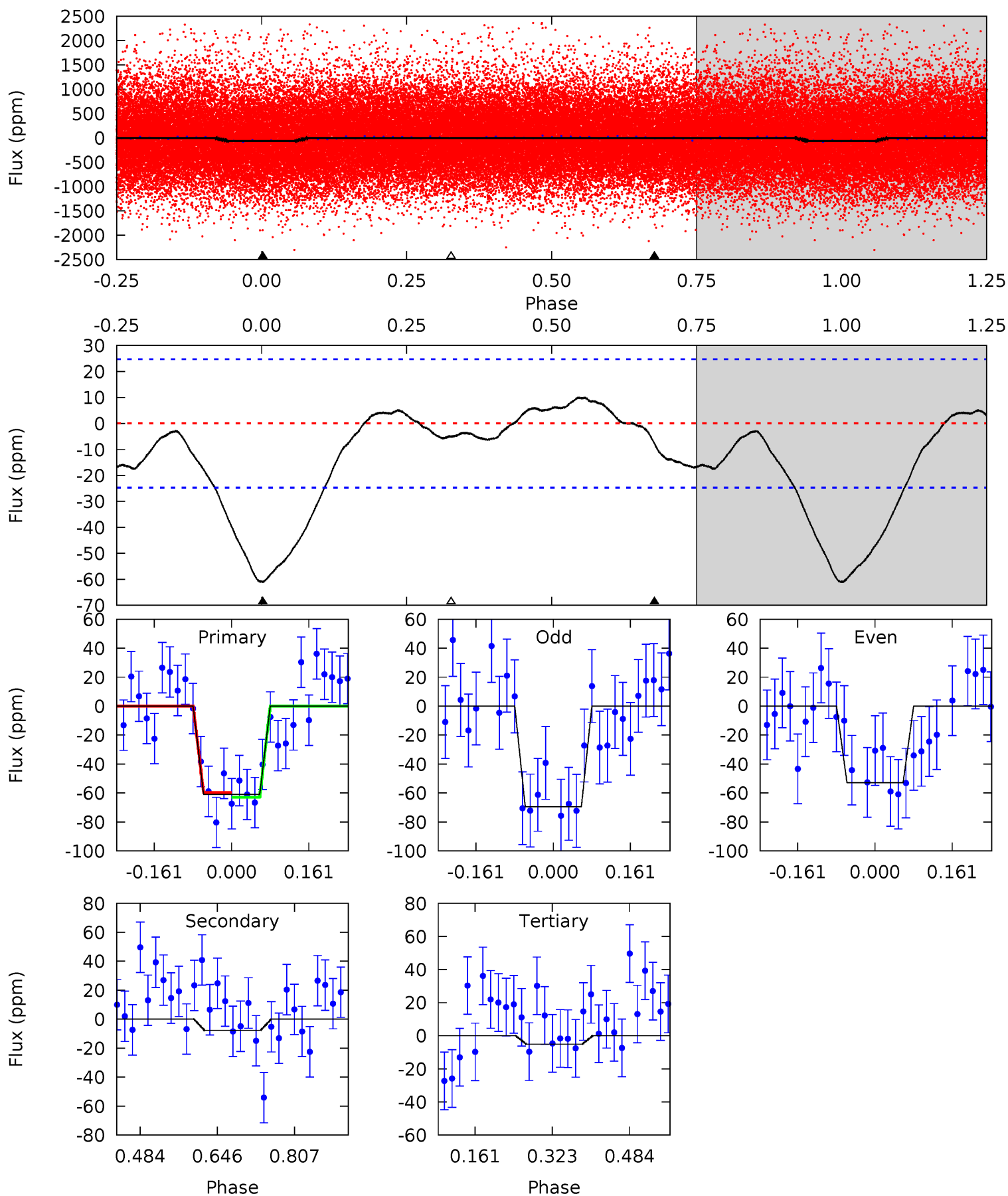
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.12	0.21	0	0	4.44	1.34	1.64	9.12	9.12	0.21	0.21	0.54	0.98	0.23	1.29



Alt Model-Shift Uniqueness Test

010471345-01, P = 0.933759 Days, E = 131.499326 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.0	1.39	0.91	0	4.46	1.40	0.77	10.1	11.0	0.48	1.39	1.50	0.91	0.14	0.30



Stellar Parameters For KIC 010471345

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5649^{+169}_{-169}	$4.606^{+0.036}_{-0.135}$	$-0.500^{+0.300}_{-0.300}$	$0.741^{+0.152}_{-0.054}$	$0.841^{+0.079}_{-0.097}$	$2.907^{+0.402}_{-1.178}$
	+3%/-3%	+1%/-3%	+60%/-60%	+21%/-7%	+9%/-12%	+14%/-41%
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 010471345-01 / KOI 7614.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1 ± 5	$0.79^{+0.52}_{-0.47}$	2318^{+120}_{-89}	-2189^{+5874}_{-1218}	$0.243^{+2.714}_{-1.465}$
Alt.	-8 ± 6	$0.71^{+0.50}_{-0.43}$	2307^{+127}_{-84}	3476^{+1672}_{-1050}	$2.126^{+13.615}_{-1.711}$

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 $A_{obs} \gg 1.0$

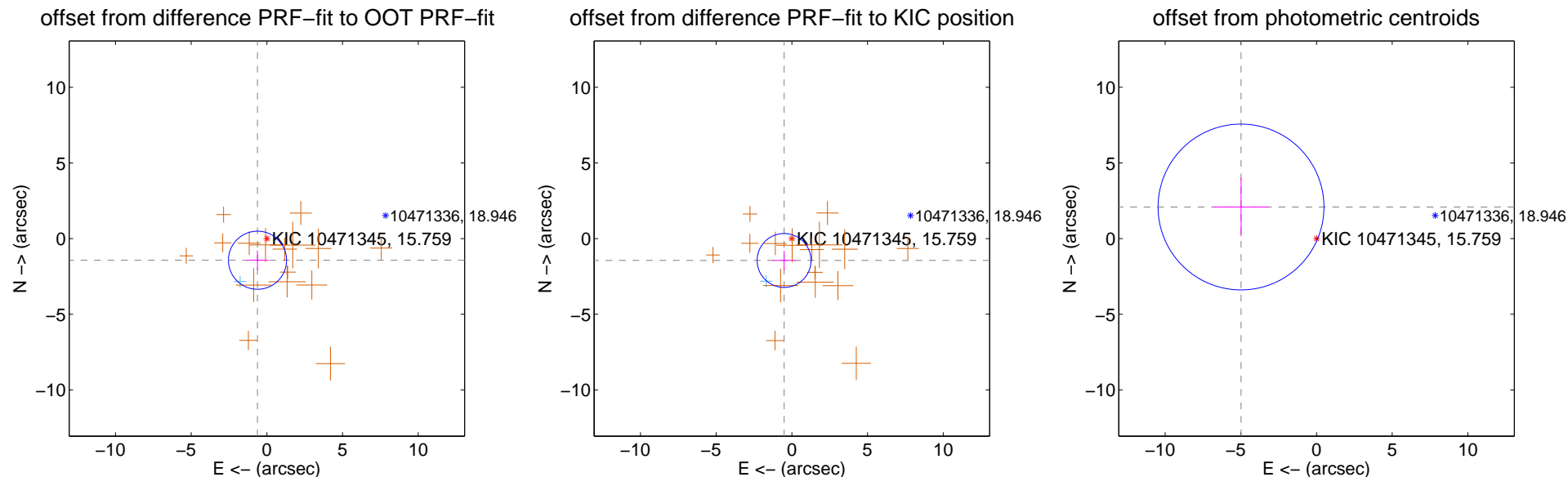
DV Centroid Data

Supplemental centroid analysis for 010471345-01. Kepler magnitude: 15.76. Transit SNR 8.78

There are 1 quarters with good PRF difference image offsets

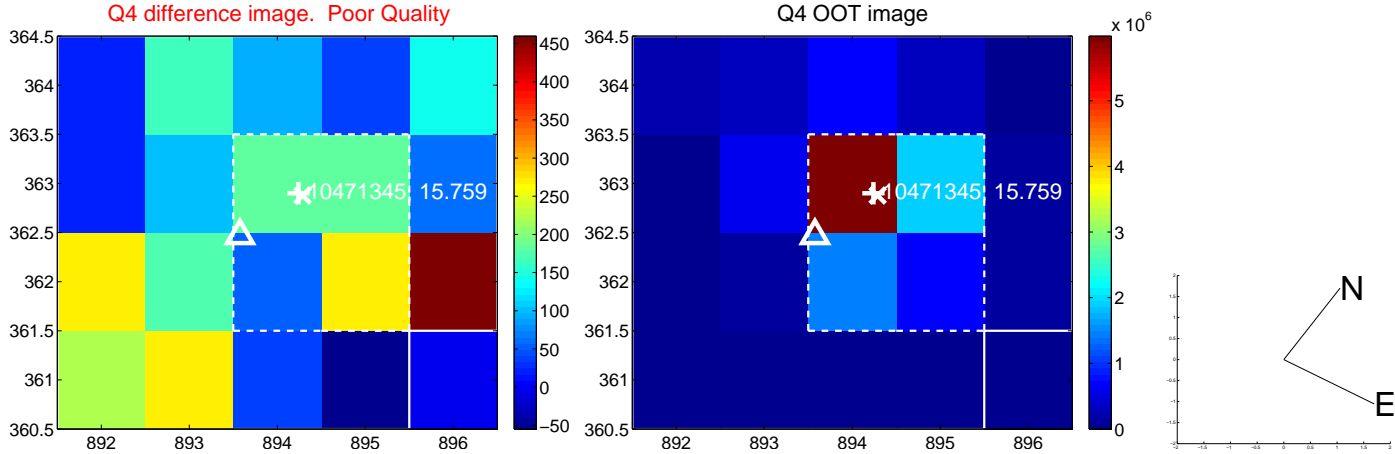
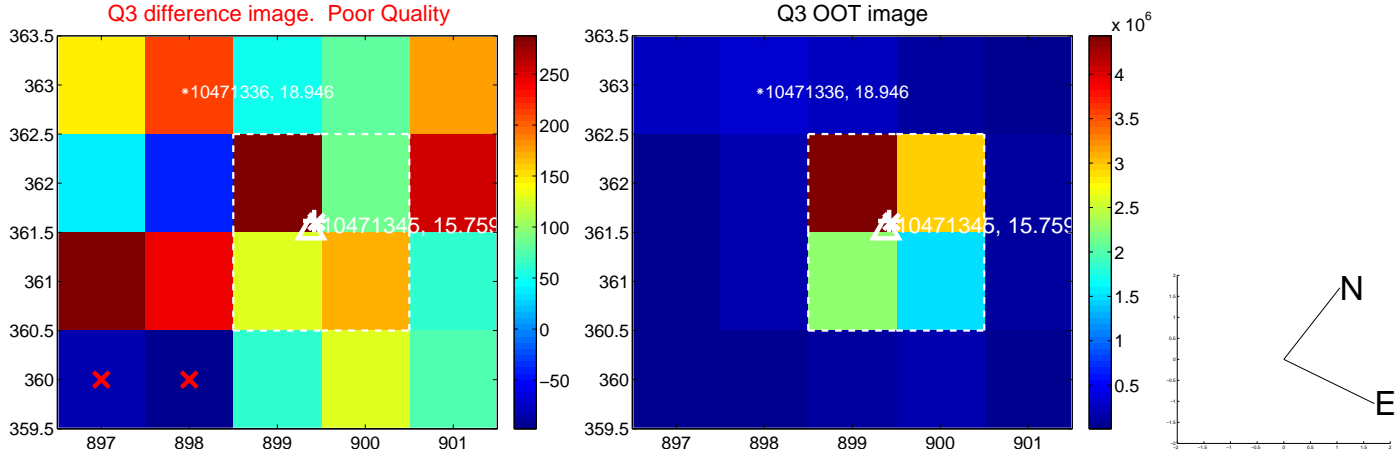
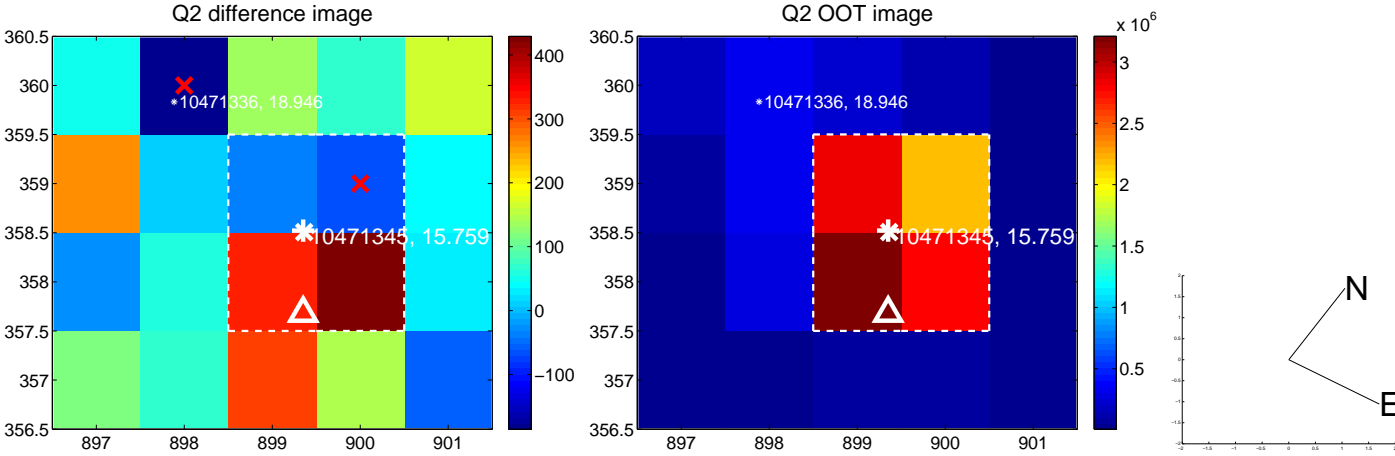
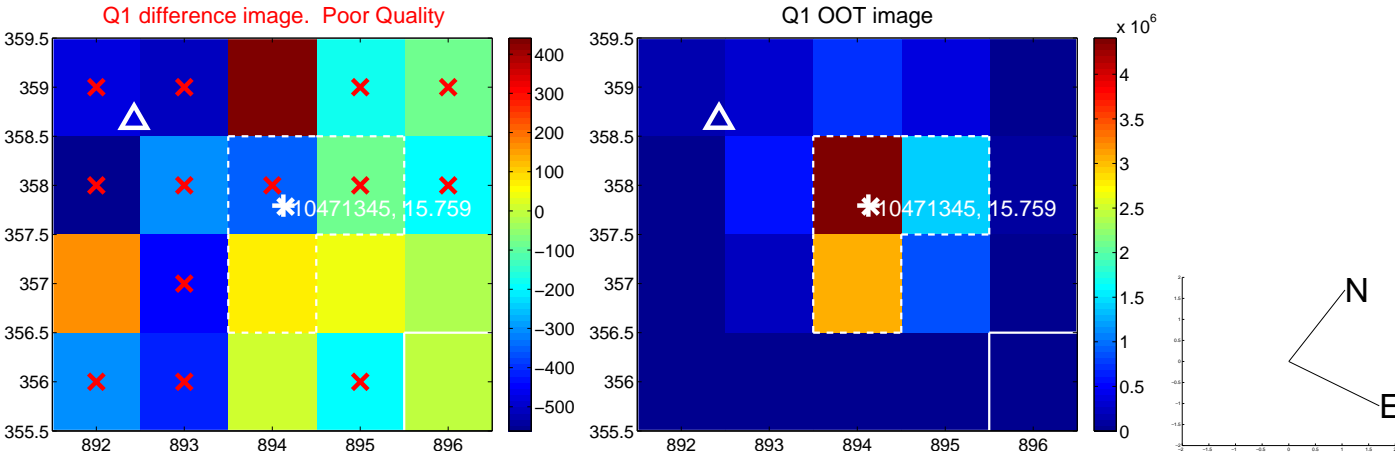
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.559 ± 0.640	2.44	0.619 ± 0.739	-1.431 ± 0.645
PRF-fit source offset from KIC position	1.533 ± 0.593	2.58	0.512 ± 0.759	-1.445 ± 0.636
photometric centroid source offset	5.41 ± 1.83	2.96	4.99 ± 1.81	2.09 ± 1.93

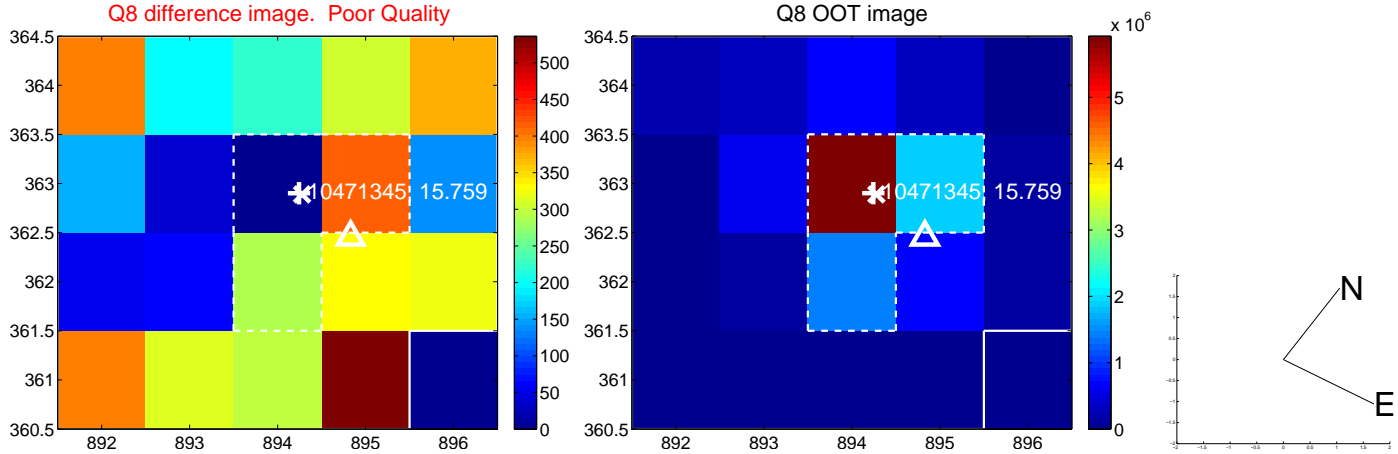
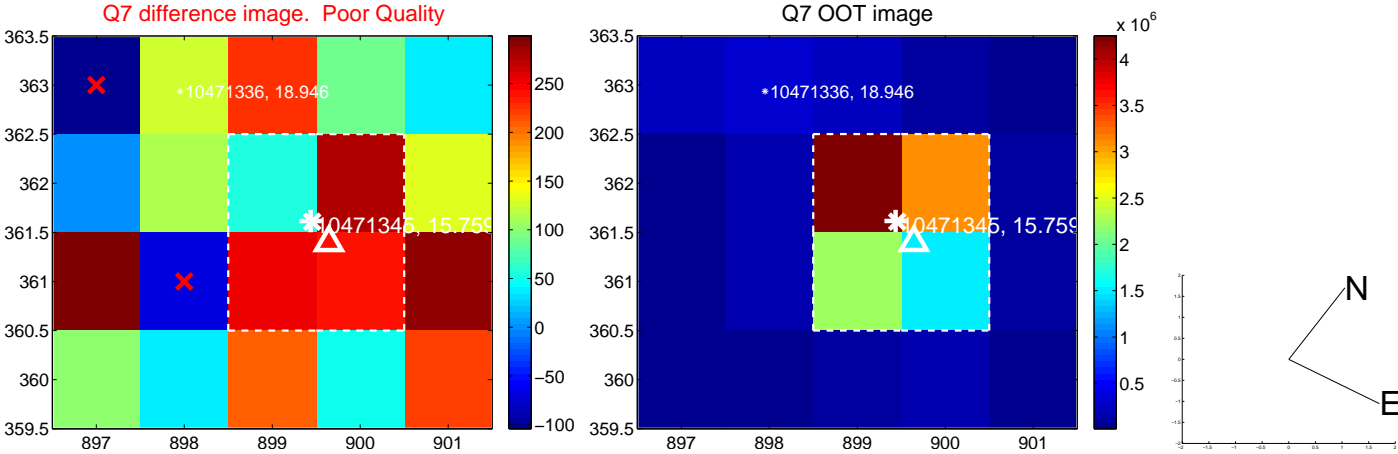
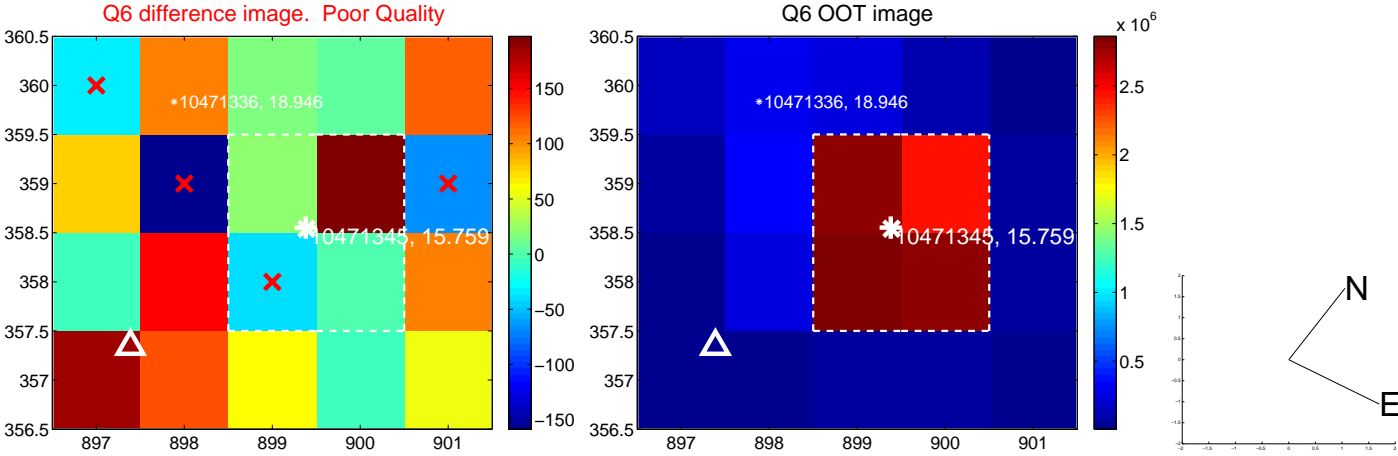
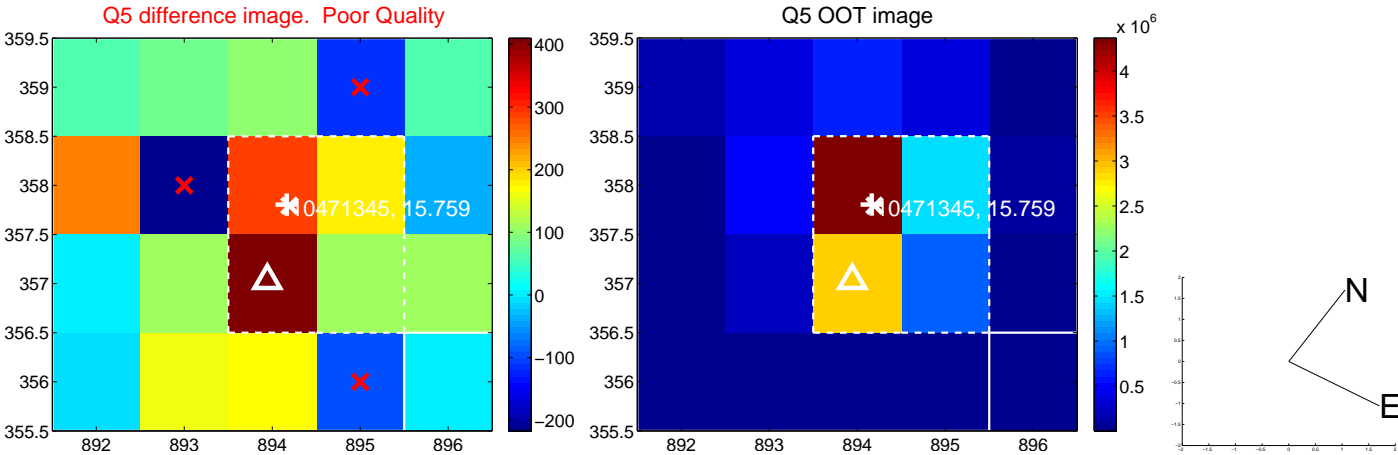


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

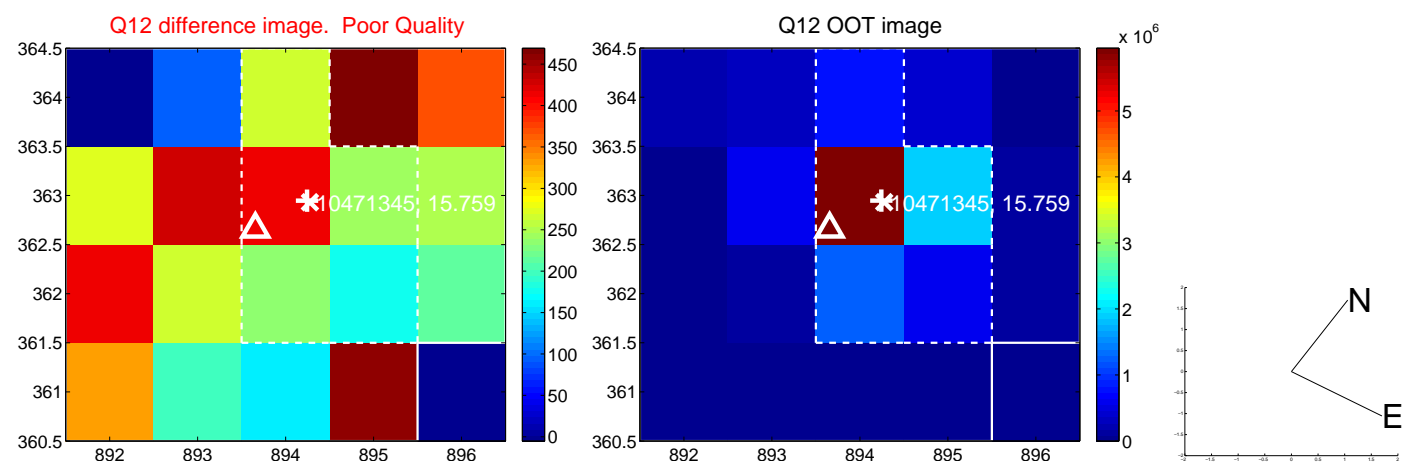
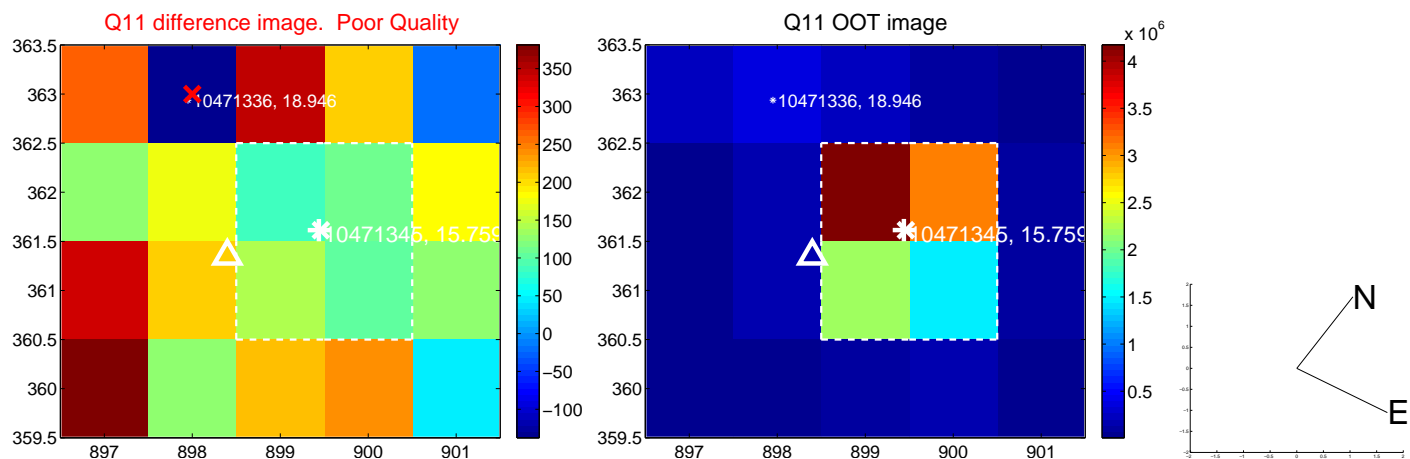
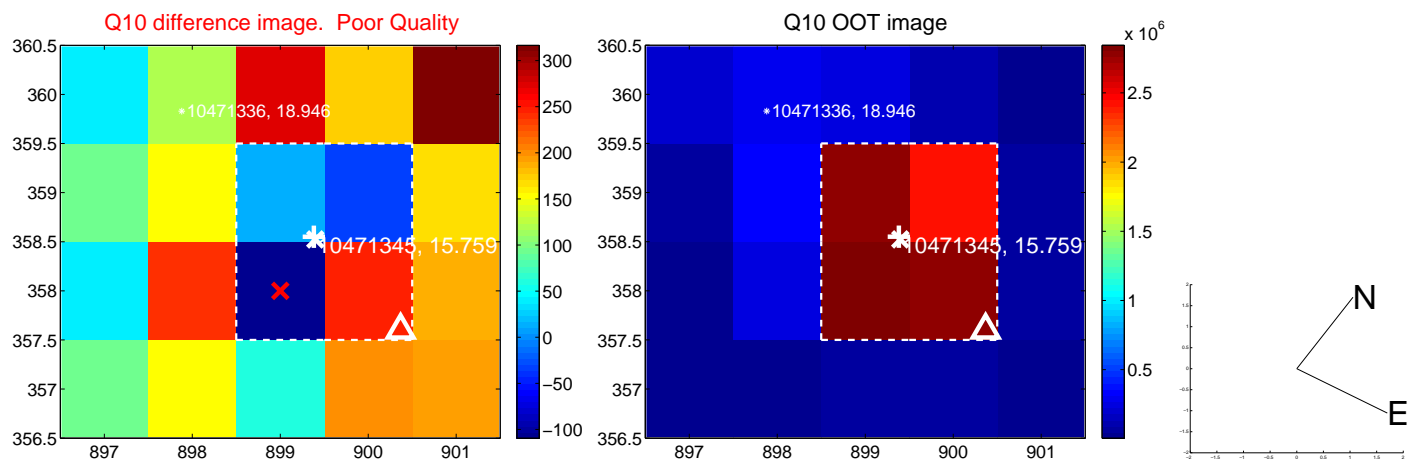
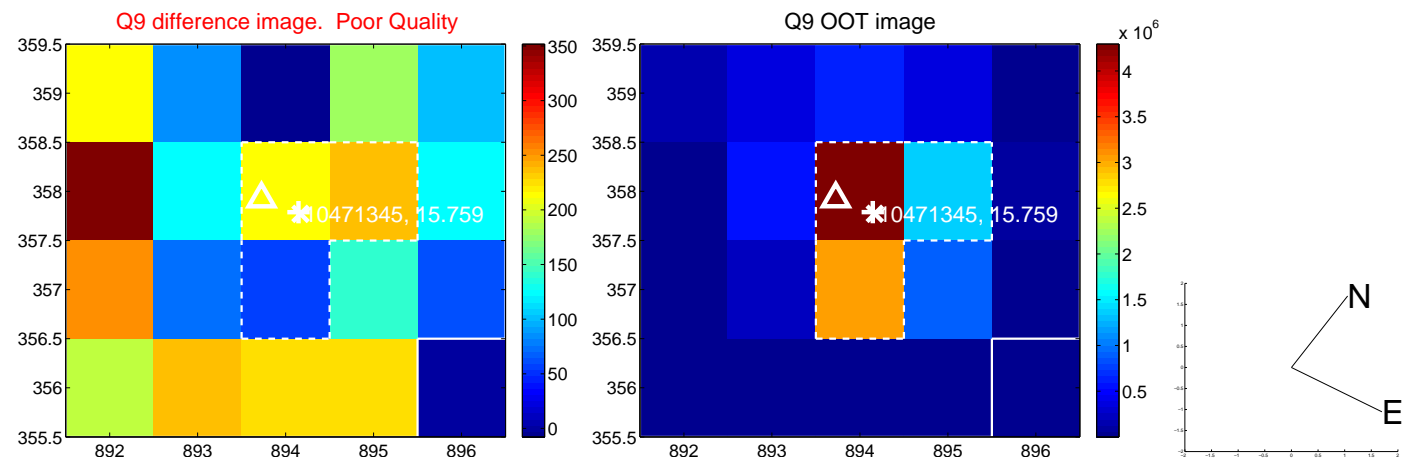
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



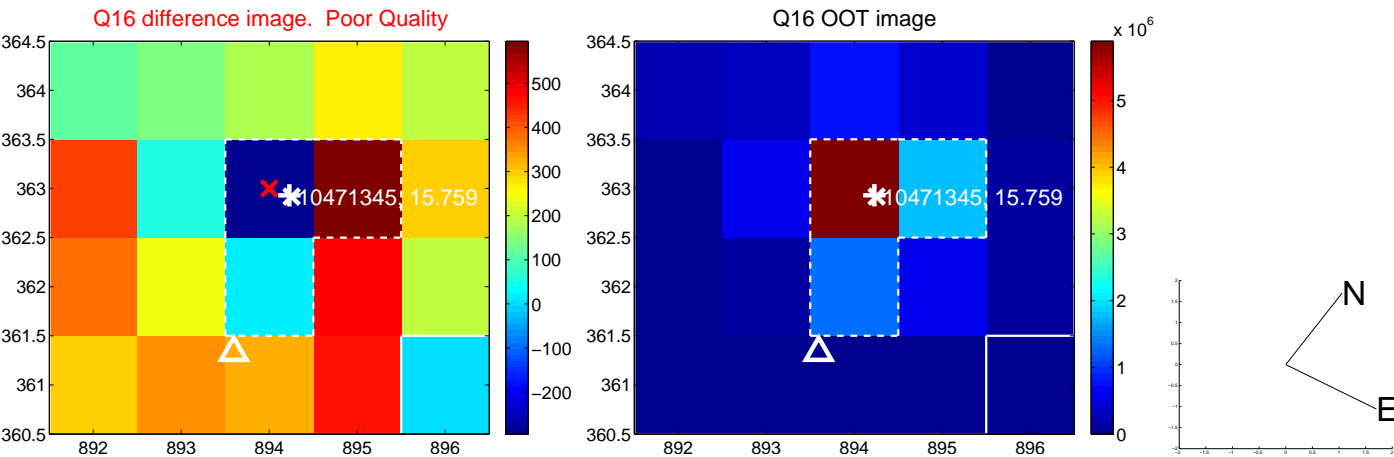
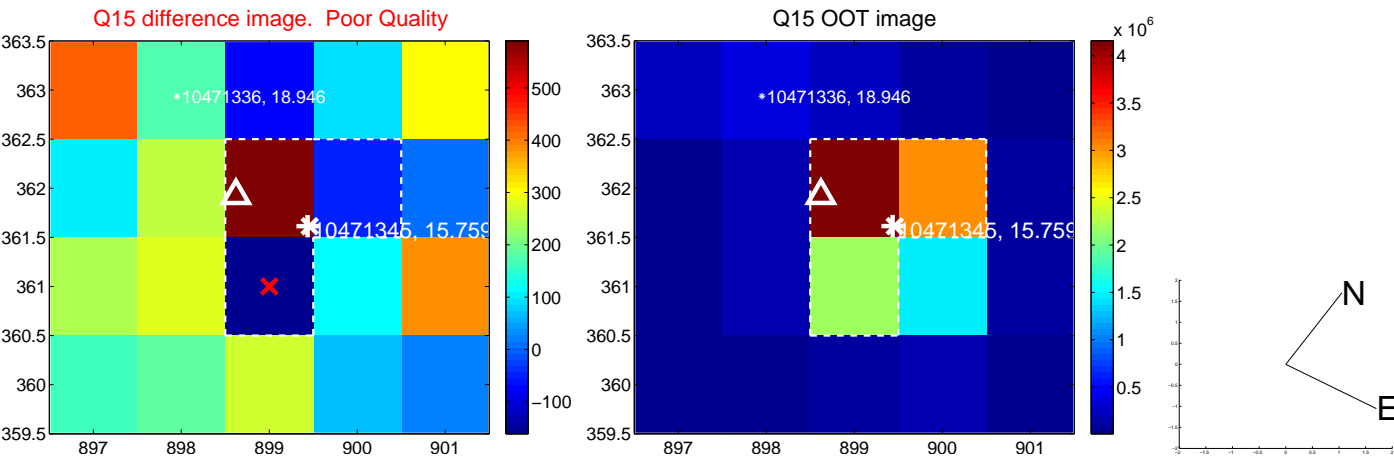
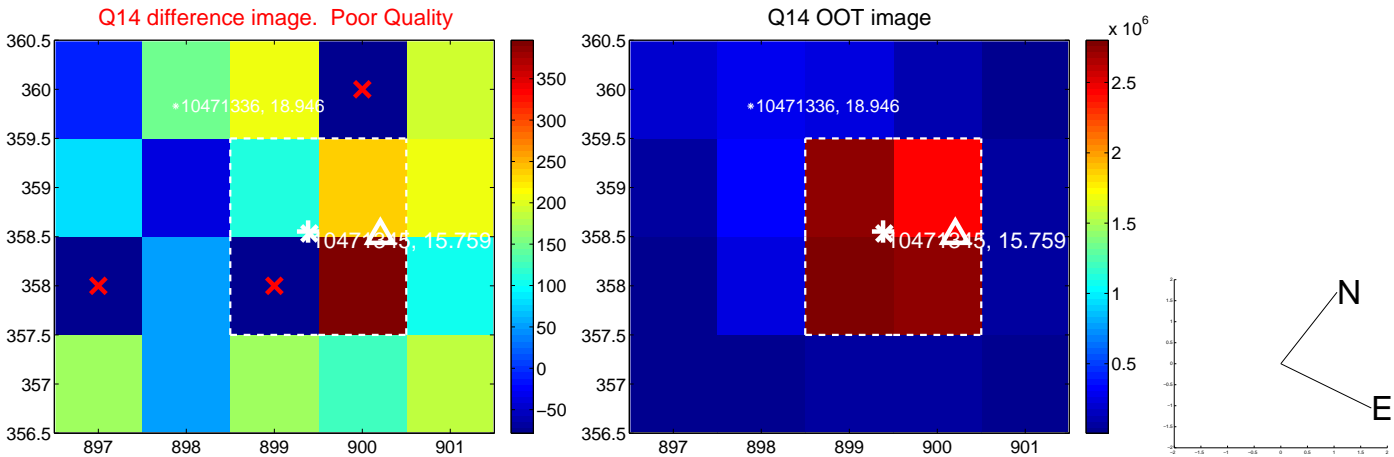
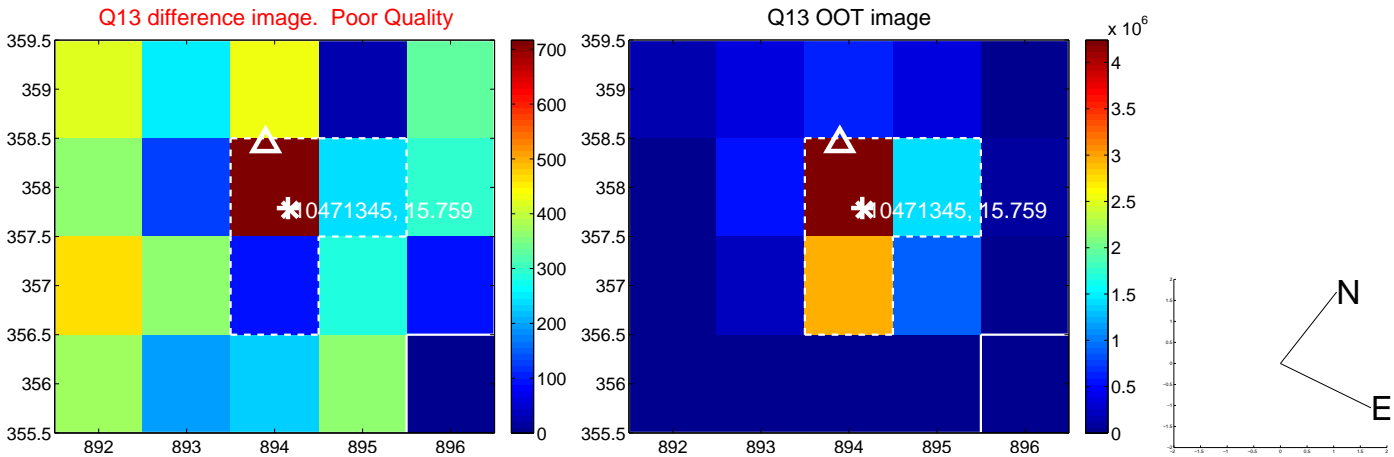
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



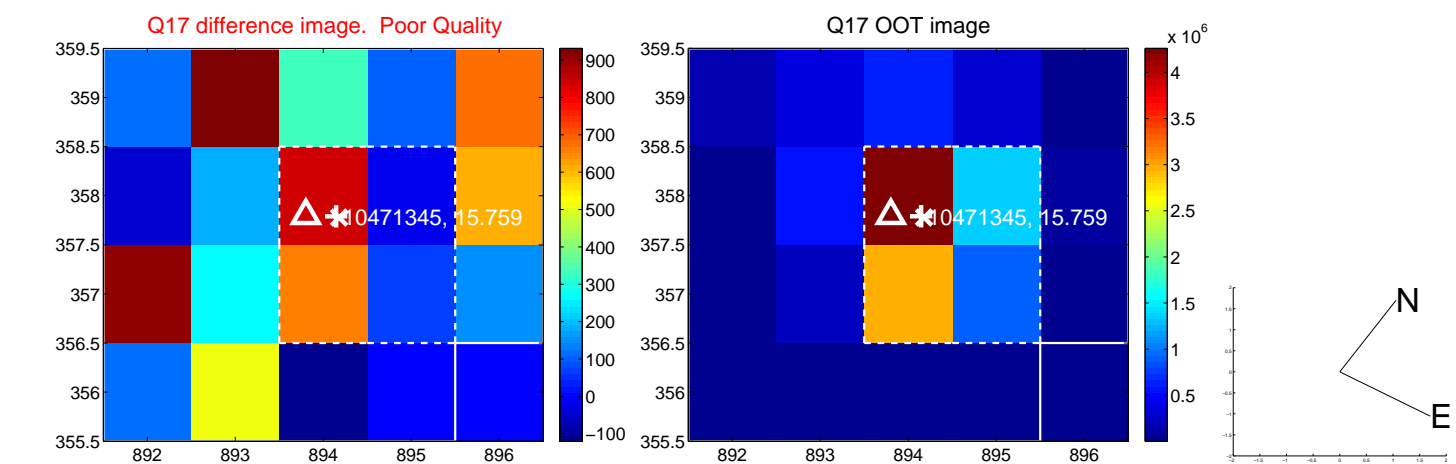
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



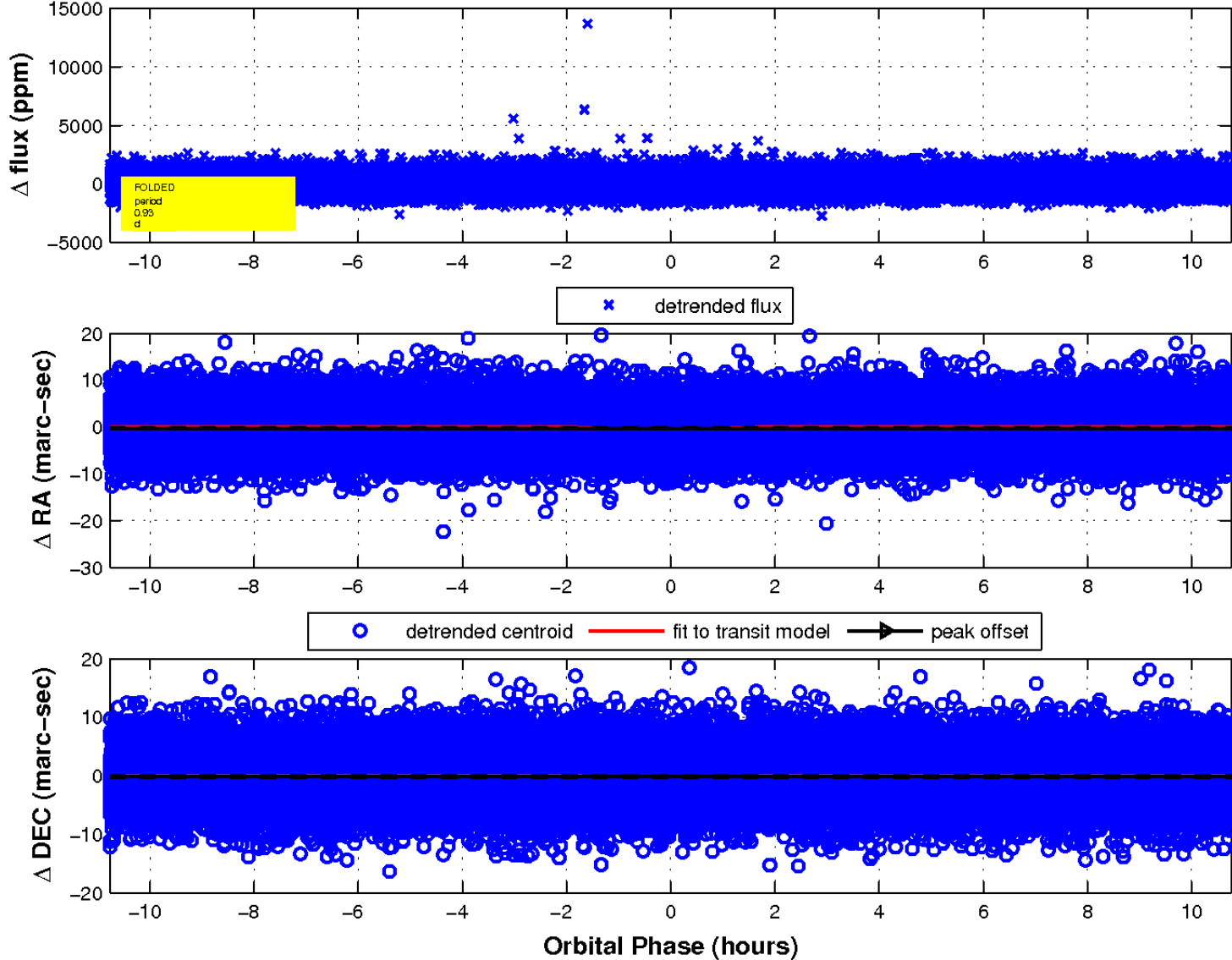
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

