

KIC 010971944

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})
010971944-01	OBS	No	2.834257	133.053878	33.5	23.441	9.1	7.2	1.98	6643	1.25	3804.44

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010971944-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV

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 010971944-01

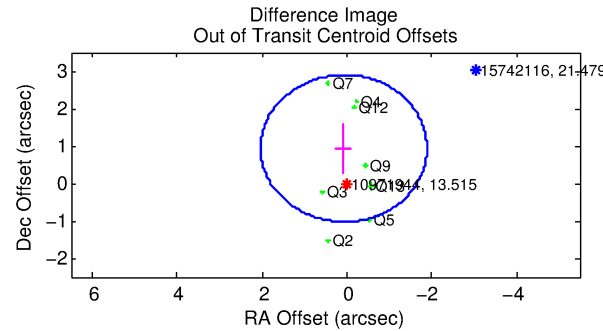
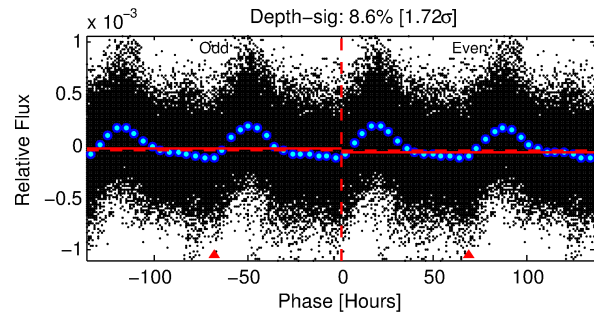
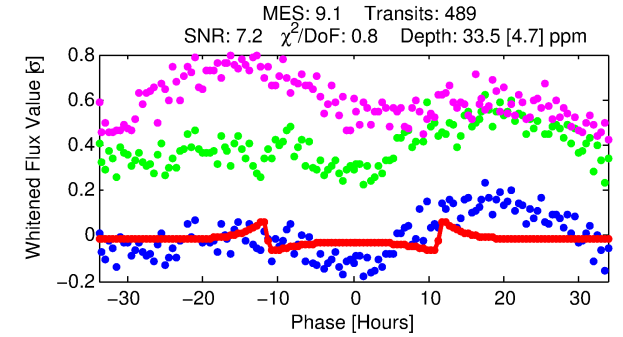
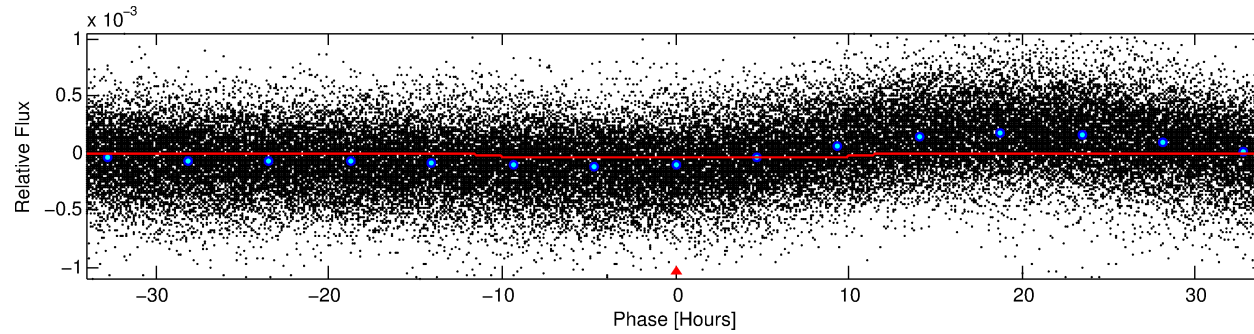
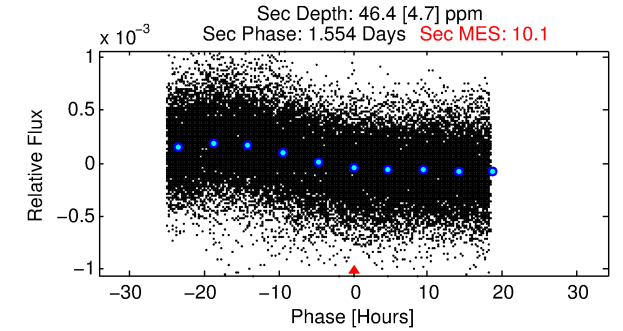
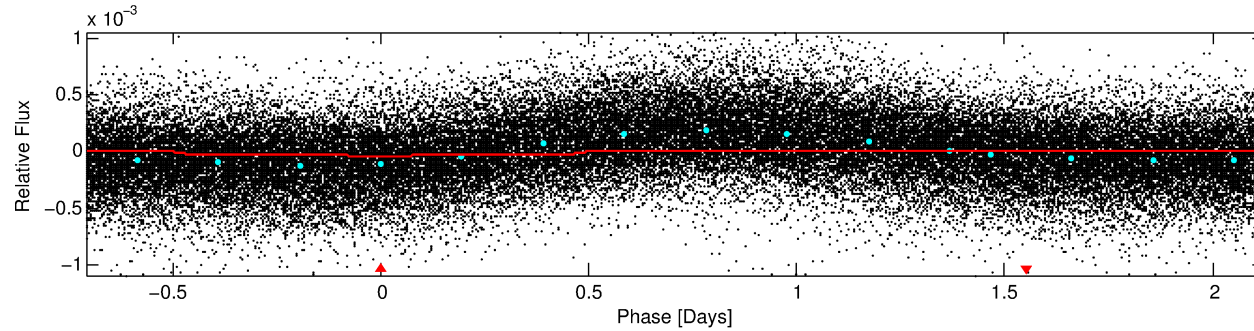
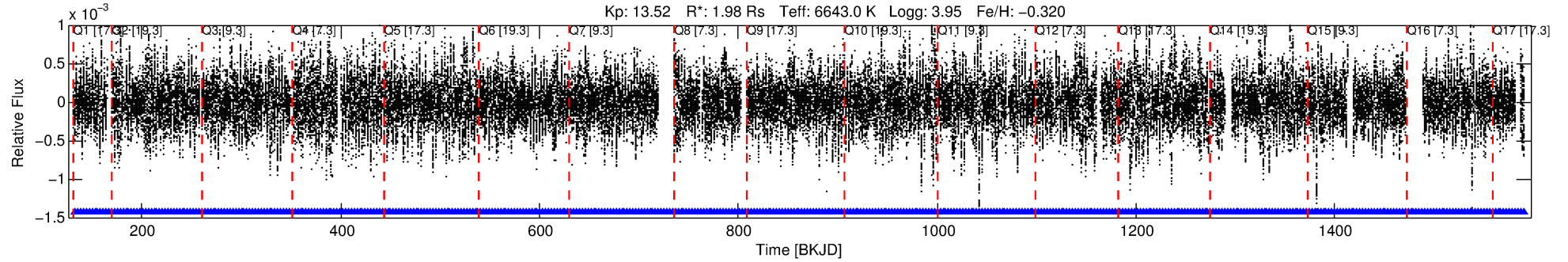
No Significant Match Found

DV One-Page Summary

KIC: 10971944 Candidate: 1 of 1 Period: 2.834 d

KOI: K06231 Corr: No Ephemeris Match

Kp: 13.52 R*: 1.98 Rs Teff: 6643.0 K Logg: 3.95 Fe/H: -0.320



DV Fit Results:

Period = 2.83426 [0.00003] d
Epoch = 133.0539 [0.0072] BKJD
Rp/R* = 0.0058 [0.0009]
a/R* = 1.06 [0.09]
b = 0.79 [0.38]
Seff = 3804.44 [2322.61]
Teq = 2003 [306] K
Rp = 1.26 [0.51] Re
a = 0.0423 [0.0156] AU
Ag = 29.02 [19.54] [1.43σ]
Teffp = 7186 [625] K [7.45σ]

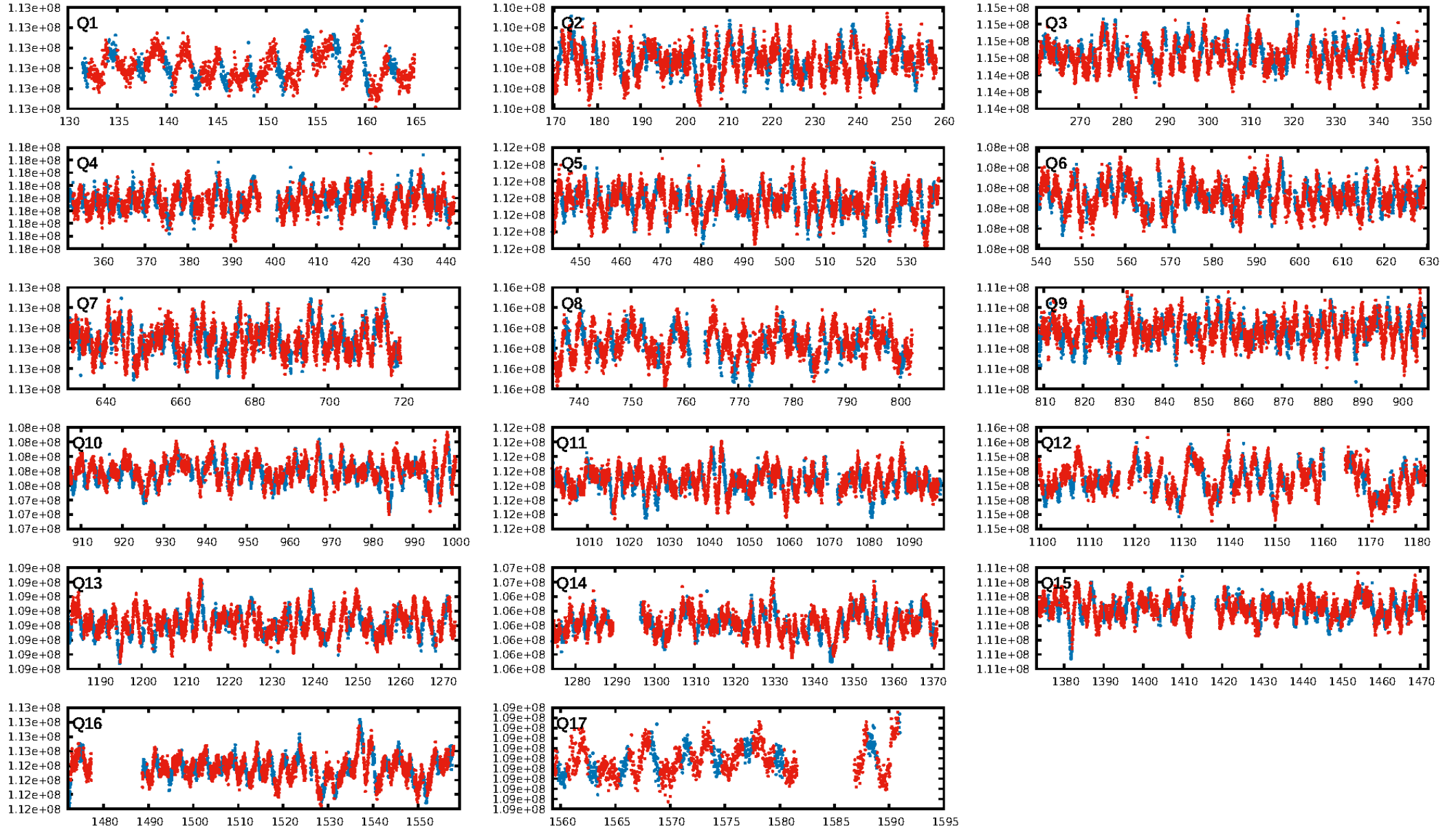
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [467/467]
GhostDiagnostic-chr: 2.504
Centroid-sig: 0.0%
Centroid-so: 0.987 arcsec [2.57σ]
OotOffset-rm: 0.936 arcsec [1.43σ]
KicOffset-rm: 1.020 arcsec [1.59σ]
OotOffset-st: 1/2/2/3 [8]
KicOffset-st: 1/2/2/3 [8]
DiffImageQuality-fgm: 0.88 [7/8]
DiffImageOverlap-fno: 1.00 [17/17]

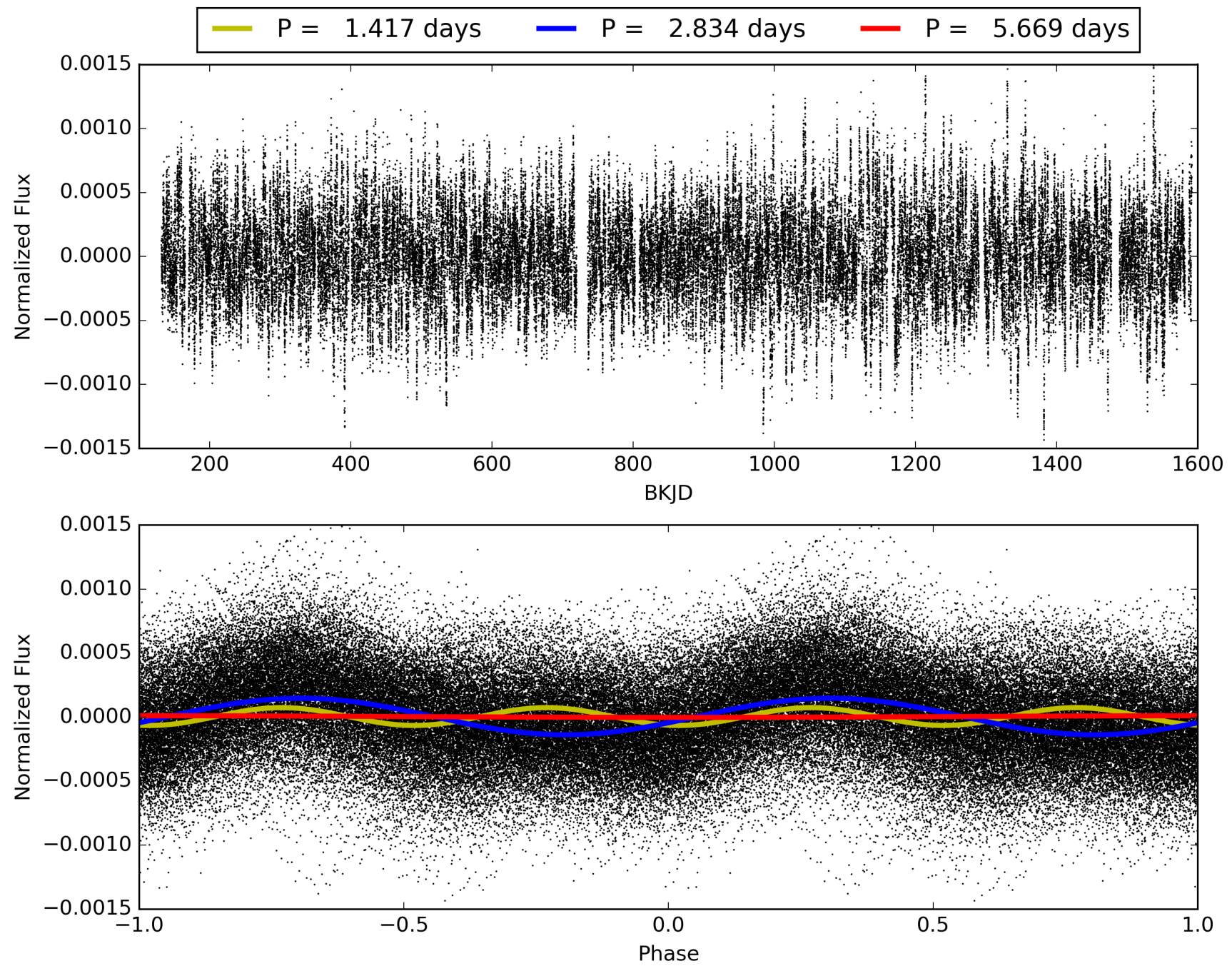
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:38:50 Z

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

TCE 010971944-01, PDC Light Curves

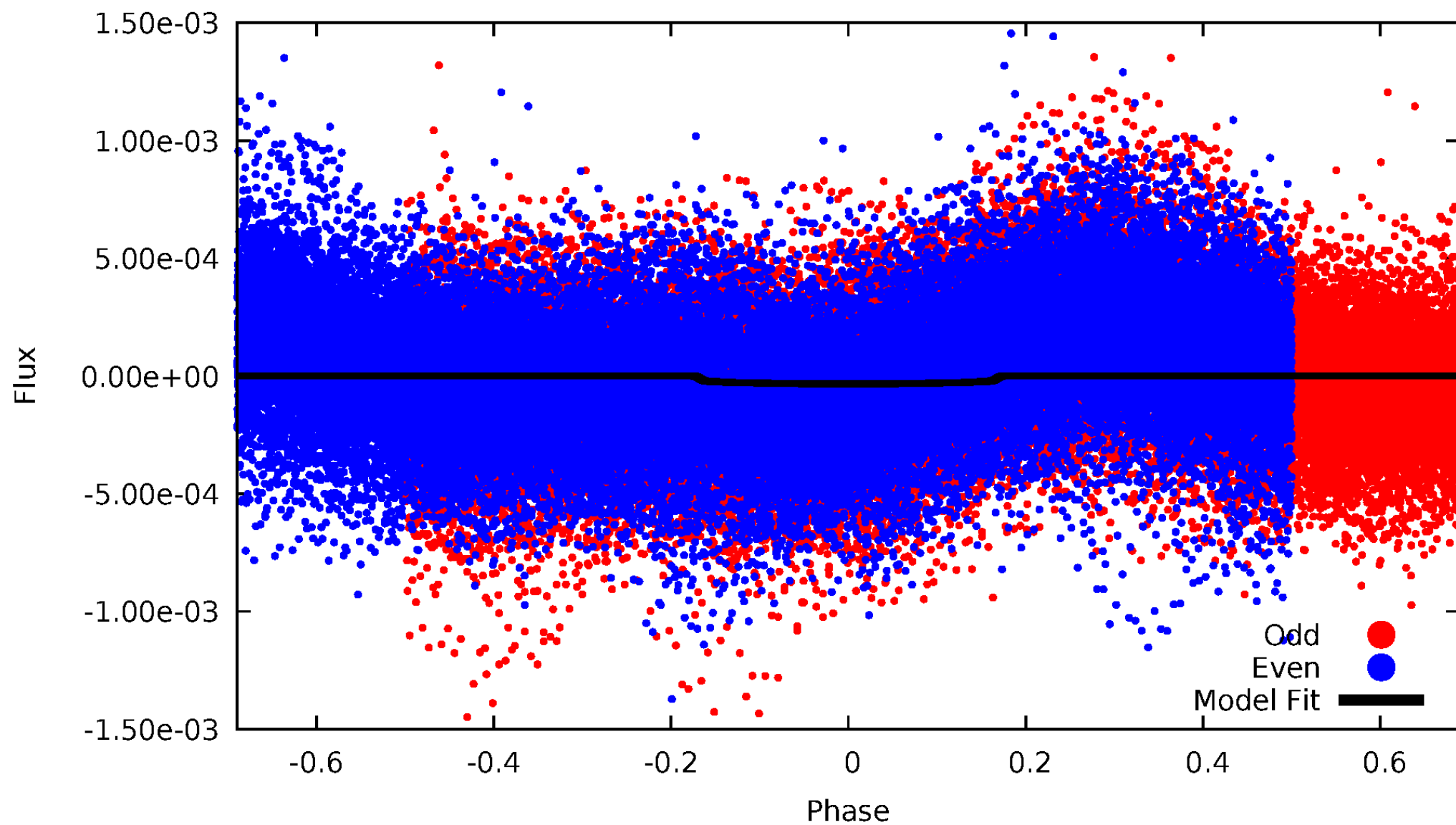


TCE 010971944-01



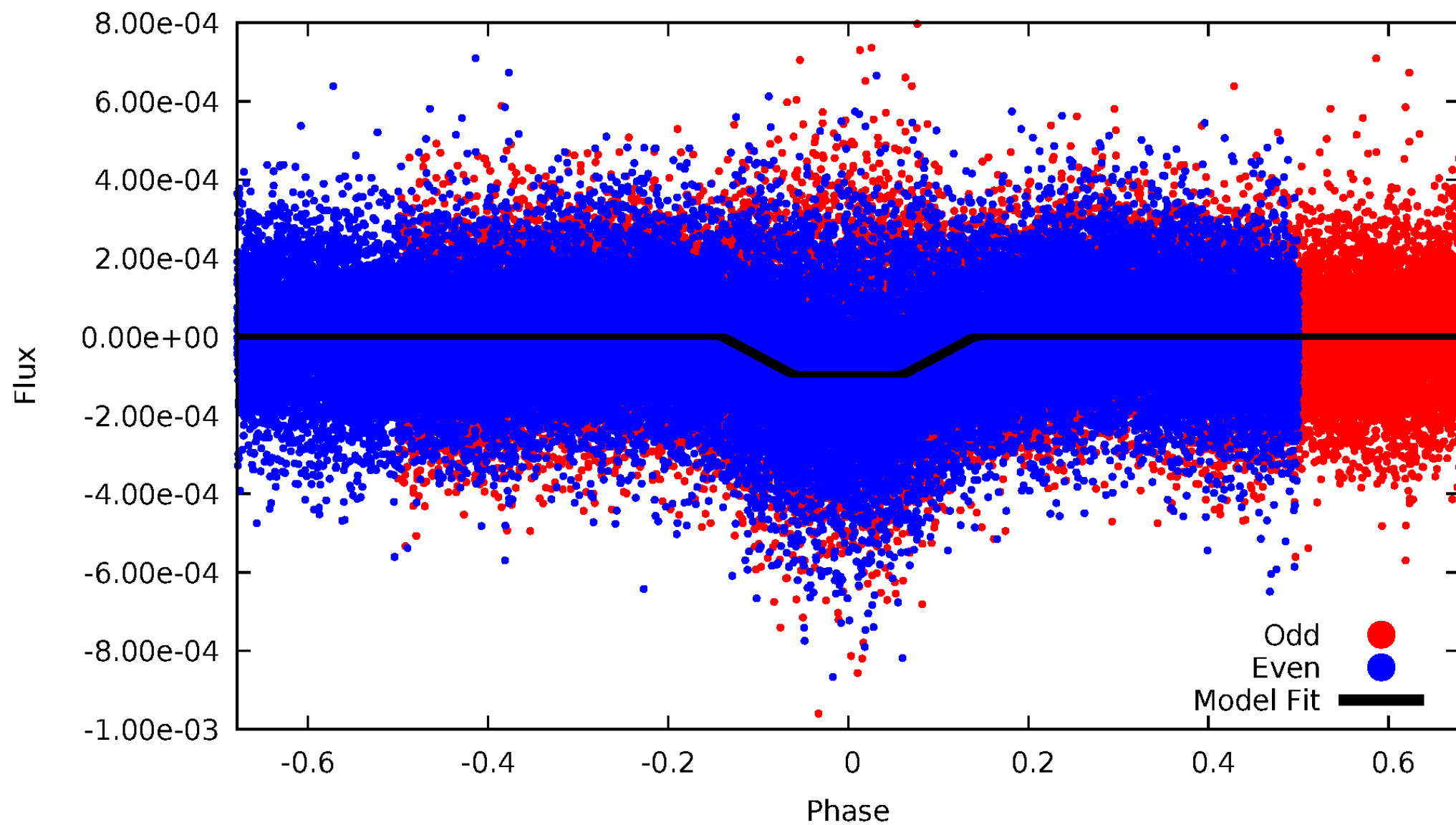
DV Odd/Even

TCE 010971944-01



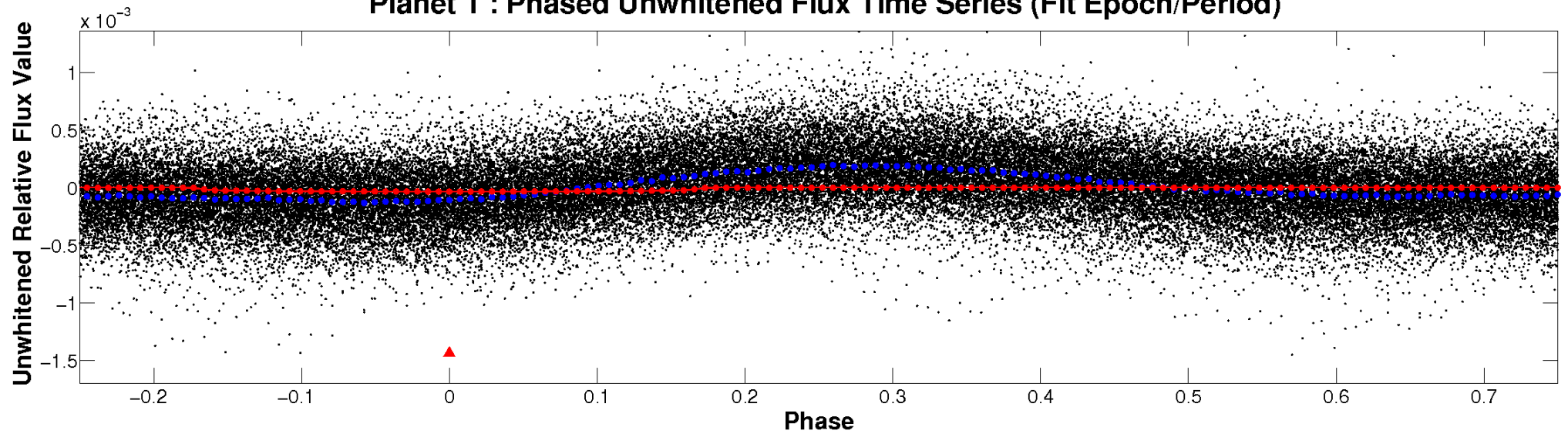
ALT Odd/Even

TCE 010971944-01

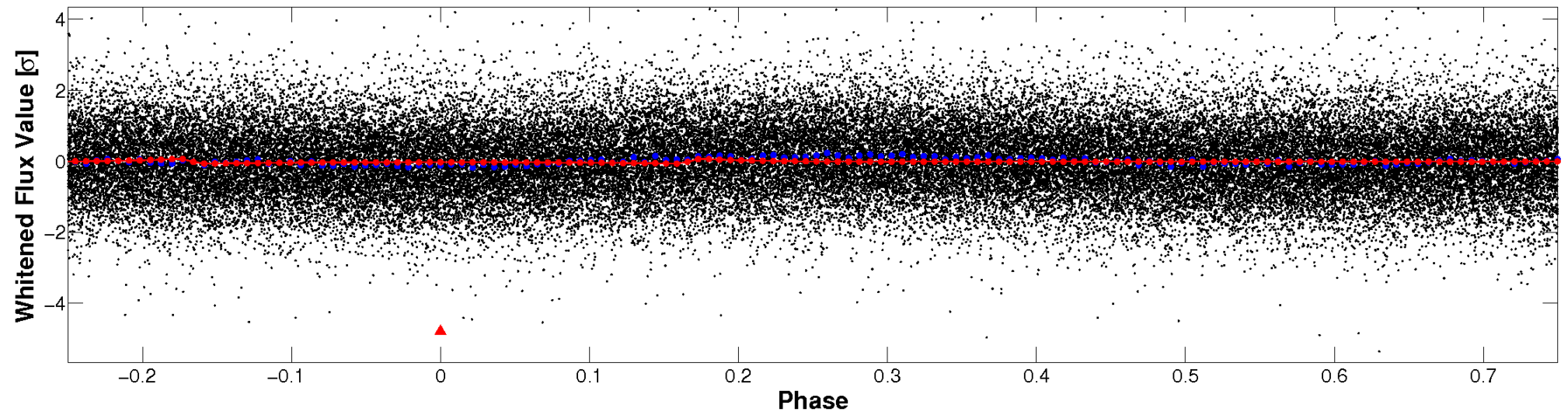


Non-Whitened Vs. Whitened Light Curve

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

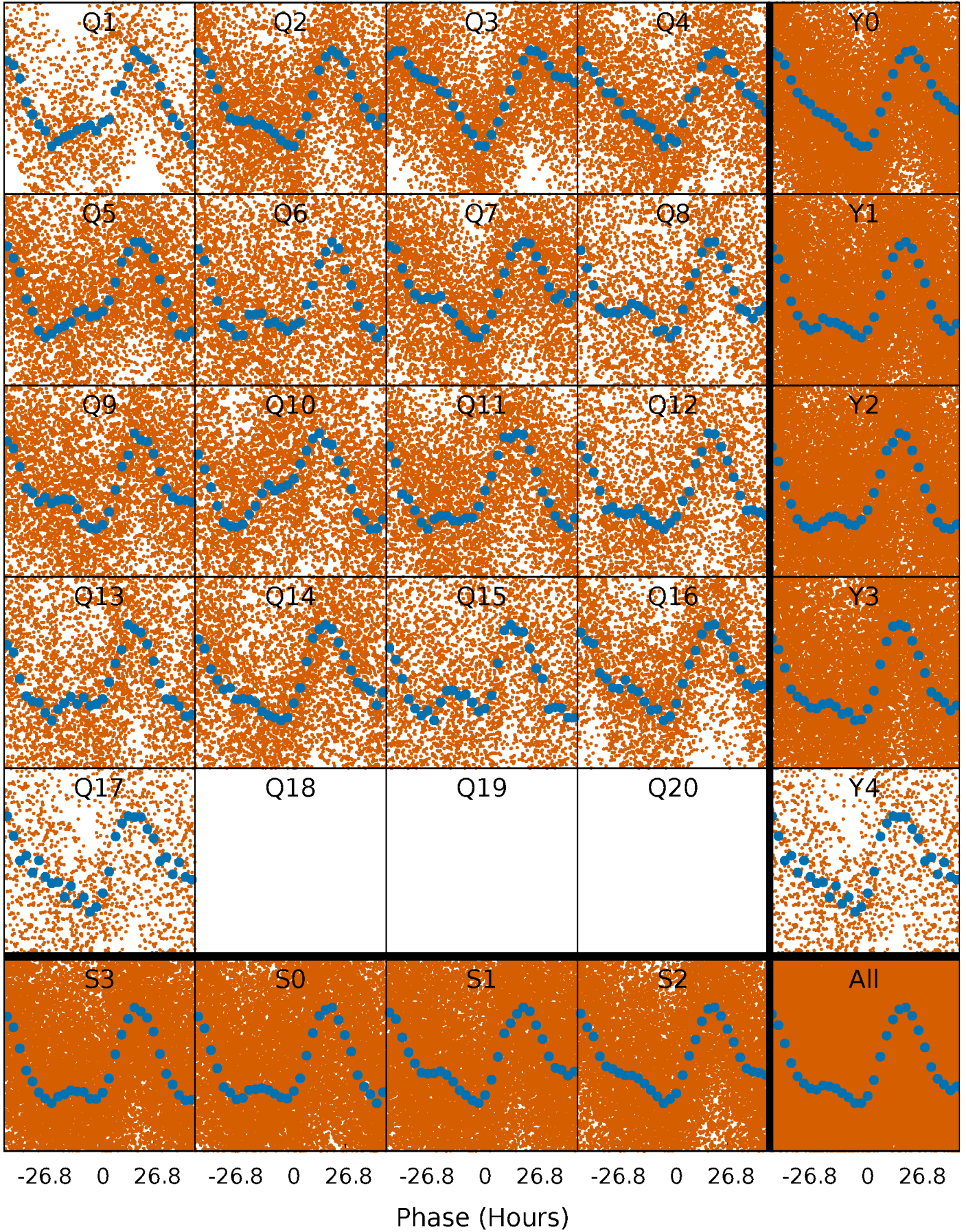


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



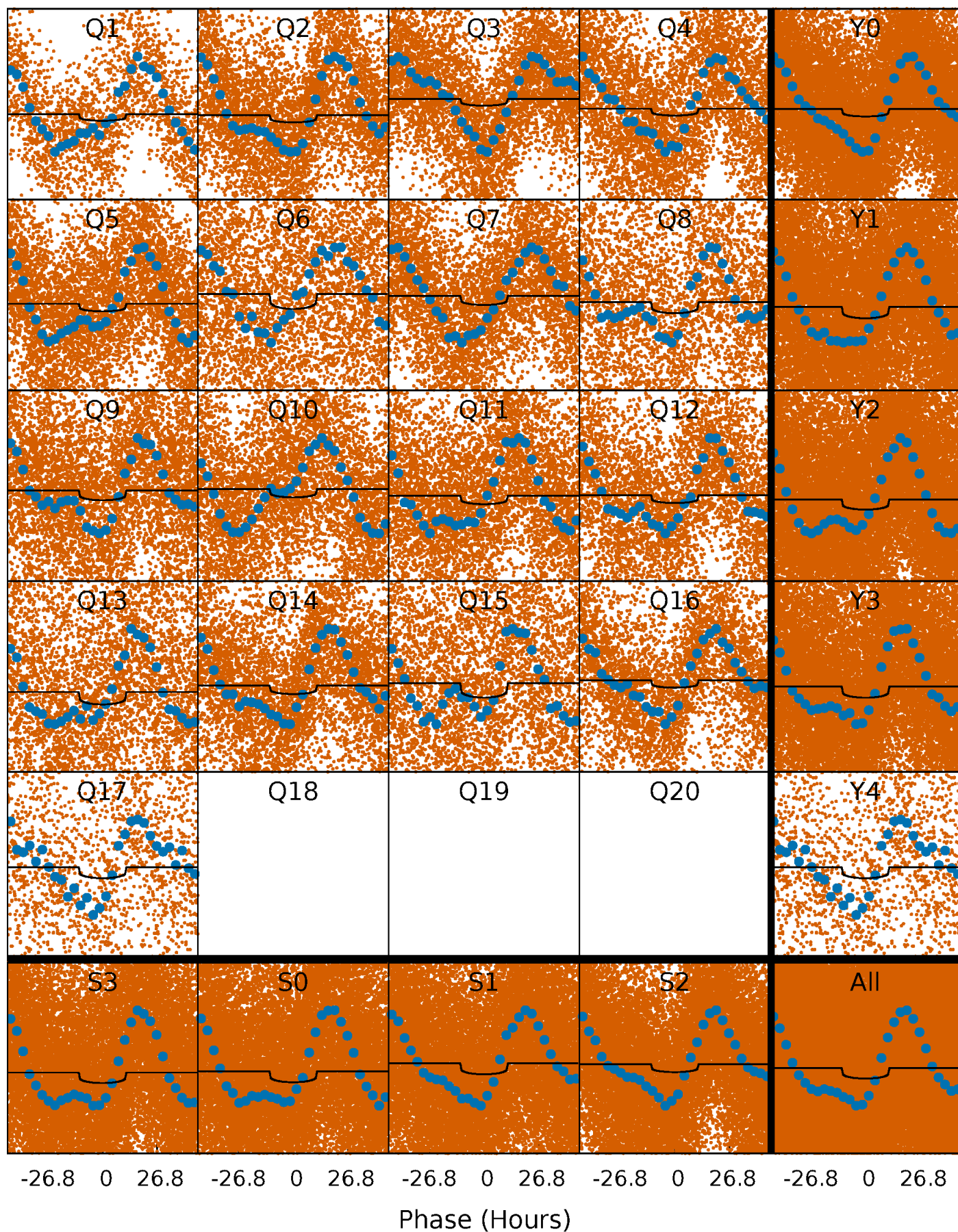
PDC Quarter-Phased Transit Curves

TCE 010971944-01 P= 2.834257 Days $T_0=133.053878$ (BKJD)



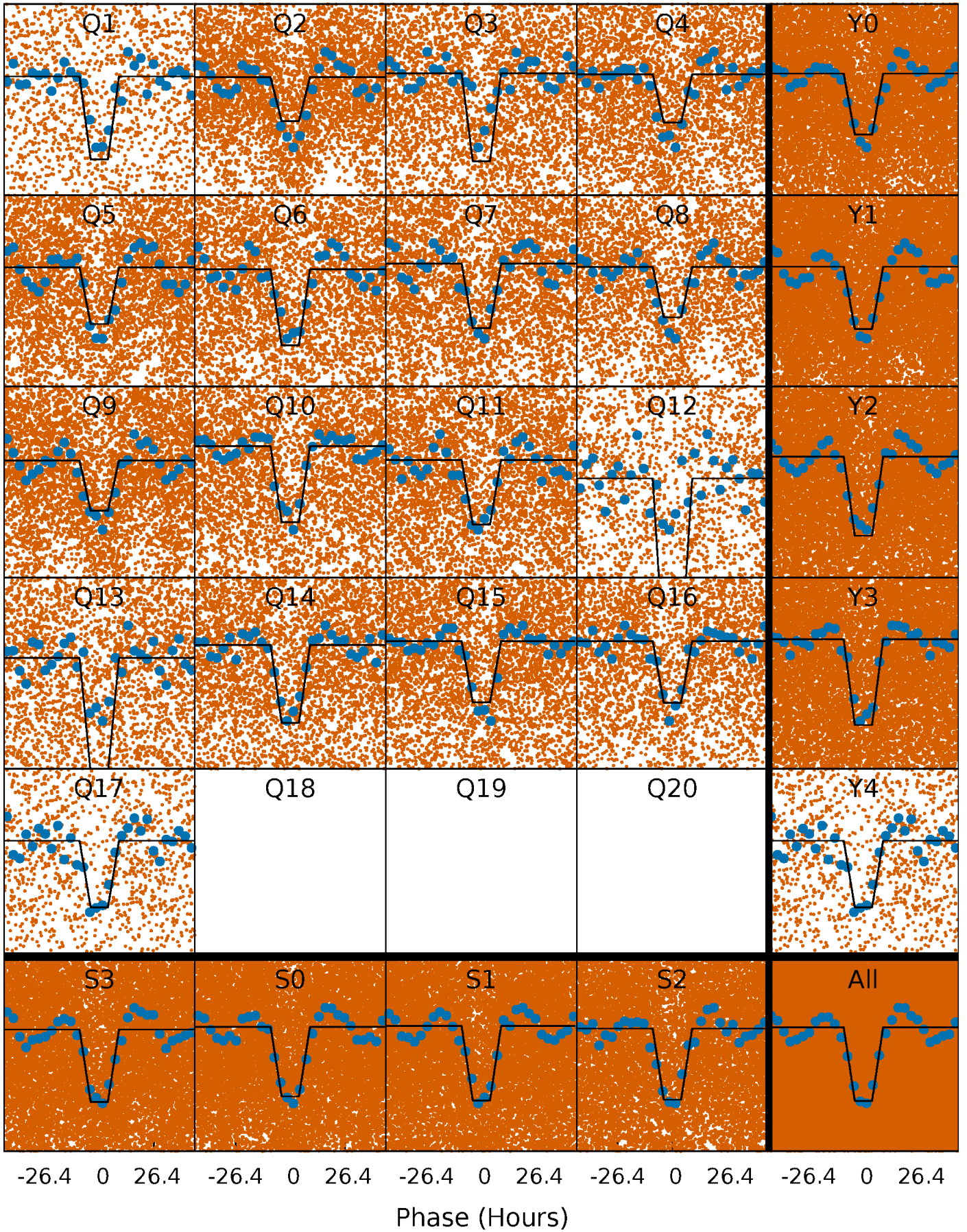
DV Quarter-Phased Transit Curves

TCE 010971944-01 P= 2.834257 Days $T_0=133.053878$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

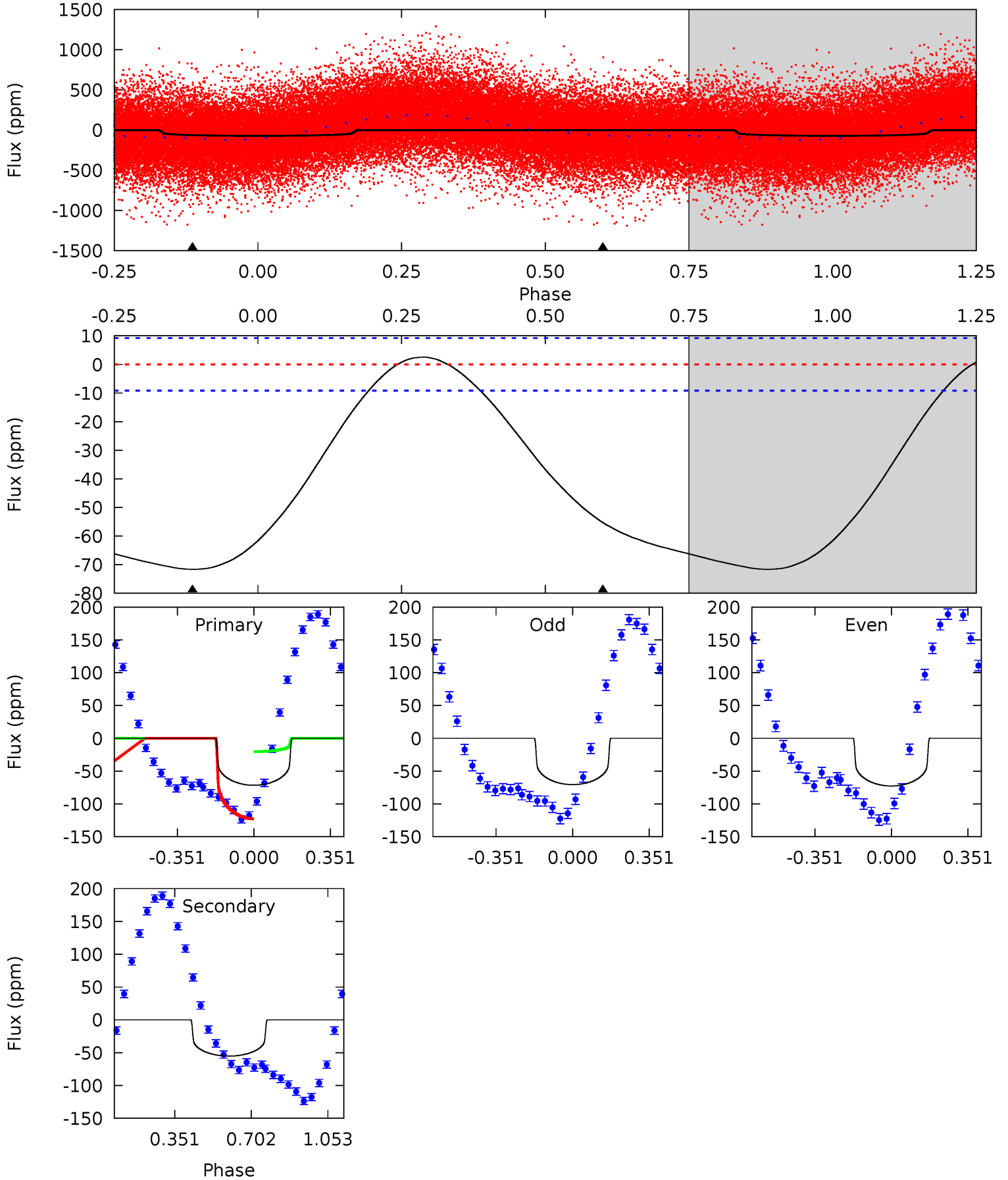
TCE 010971944-01 P= 2.834083 Days $T_0=133.114638$ (BKJD)



DV Model-Shift Uniqueness Test

010971944-01, P = 2.834257 Days, E = 130.219621 Days

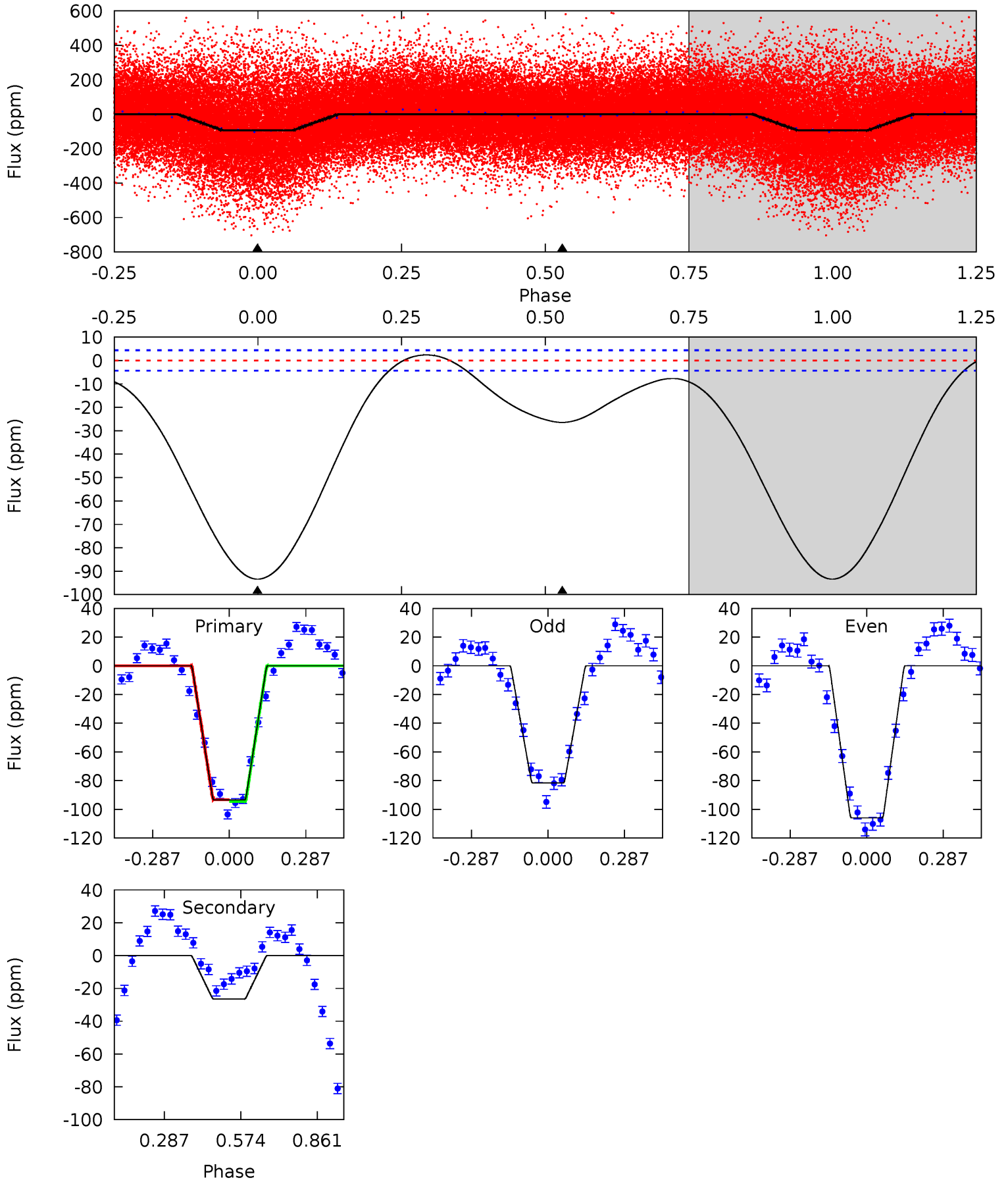
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.5	25.9	0	0	4.29	0.93	1.70	33.5	33.5	25.9	25.9	0.50	1.13	0.03	29.0



Alt Model-Shift Uniqueness Test

010971944-01, P = 2.834083 Days, E = 130.280555 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
93.1	26.4	0	0	4.34	1.06	5.05	93.1	93.1	26.4	26.4	12.2	0.99	0.03	0.63



Stellar Parameters For KIC 010971944

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6643^{+188}_{-235}	$3.946^{+0.350}_{-0.150}$	$-0.320^{+0.250}_{-0.300}$	$1.976^{+0.500}_{-0.750}$	$1.259^{+0.183}_{-0.224}$	$0.230^{+0.687}_{-0.095}$
	+3%/-4%	+9%/-4%	+78%/-94%	+25%/-38%	+15%/-18%	+299%/-41%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 010971944-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-55 ± 2	$1.20^{+0.29}_{-0.27}$	2743^{+245}_{-268}	7602^{+866}_{-683}	38^{+25}_{-13}
Alt.	-26 ± 1	$2.02^{+0.39}_{-0.46}$	2741^{+216}_{-291}	4847^{+245}_{-217}	$6.291^{+3.838}_{-1.805}$

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 $A_{obs} \gg 1.0$

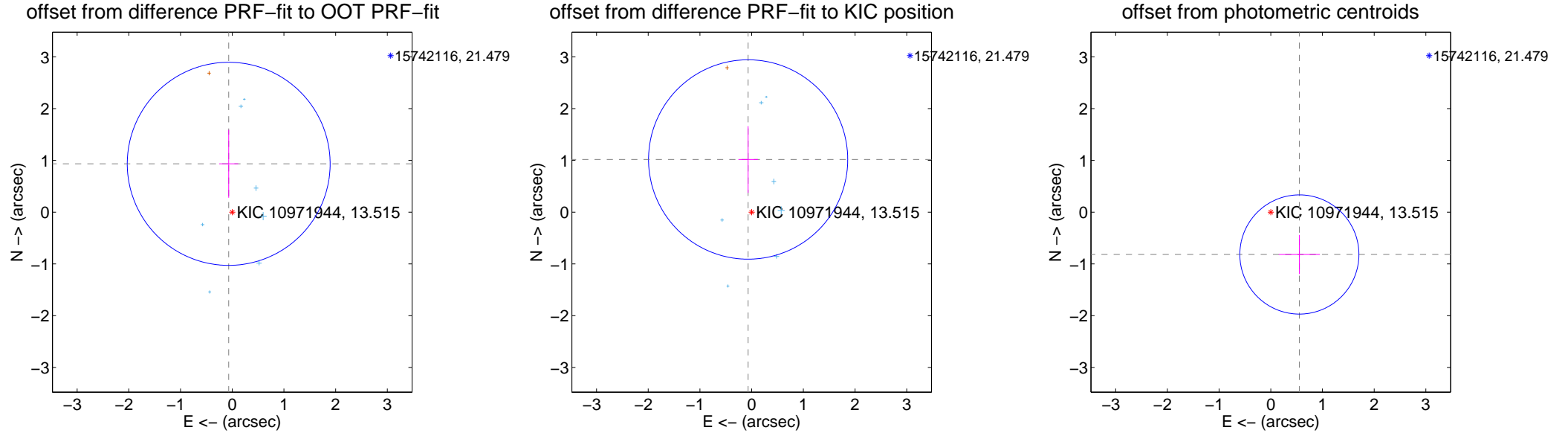
DV Centroid Data

Supplemental centroid analysis for 010971944-01. Kepler magnitude: 13.52. Transit SNR 7.25

There are 7 quarters with good PRF difference image offsets

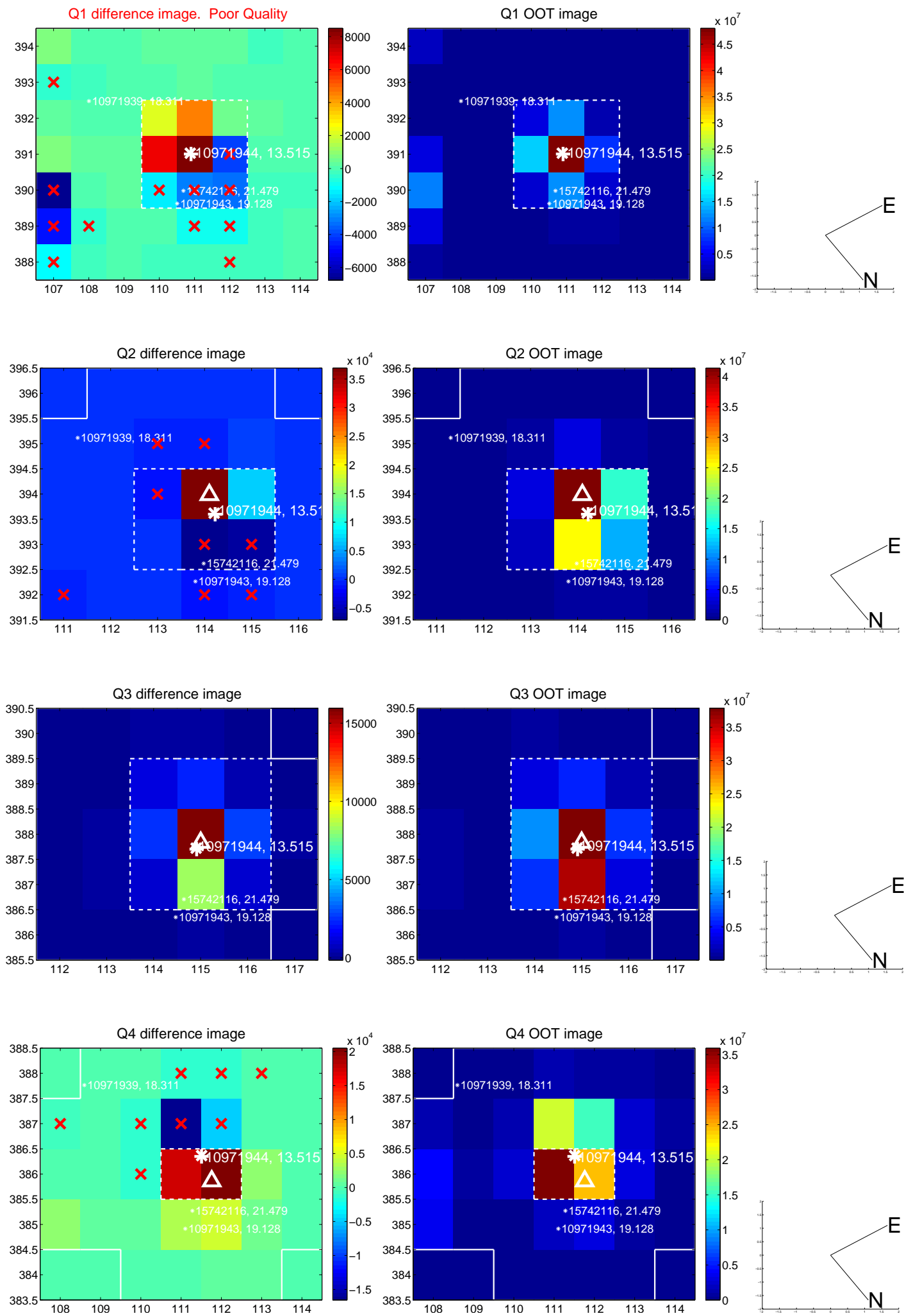
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.936 ± 0.654	1.43	0.068 ± 0.184	0.934 ± 0.656
PRF-fit source offset from KIC position	1.020 ± 0.642	1.59	0.068 ± 0.189	1.018 ± 0.643
photometric centroid source offset	0.99 ± 0.38	2.57	-0.55 ± 0.40	-0.82 ± 0.38

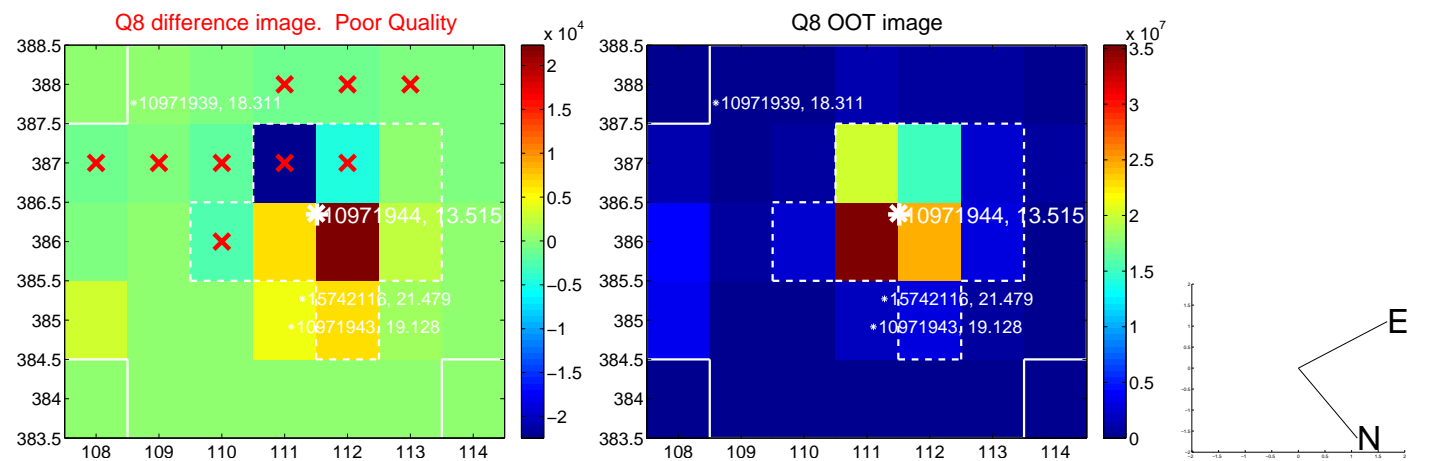
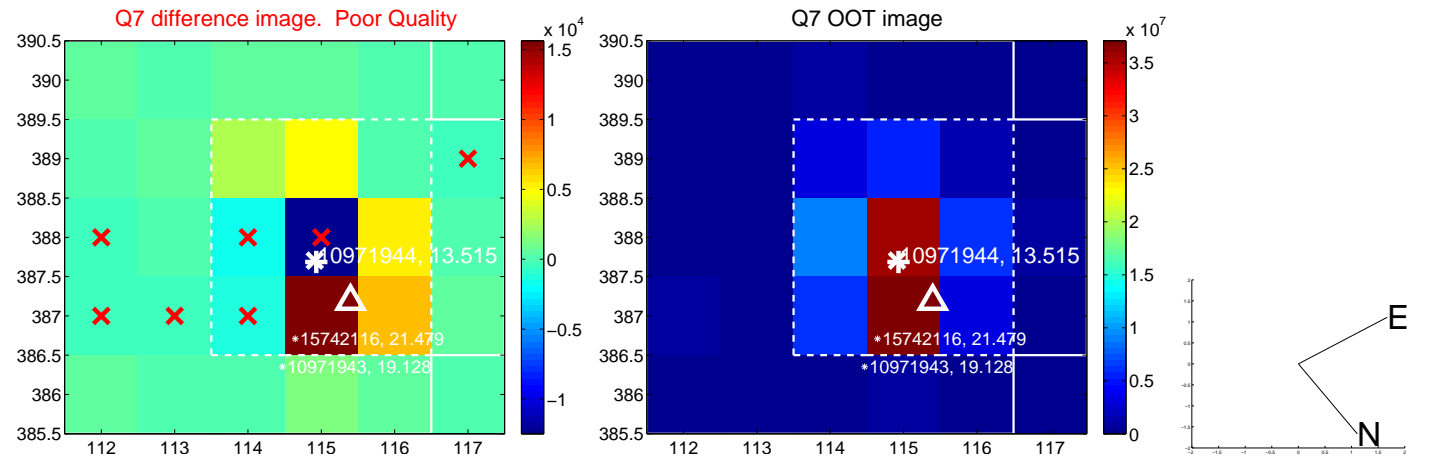
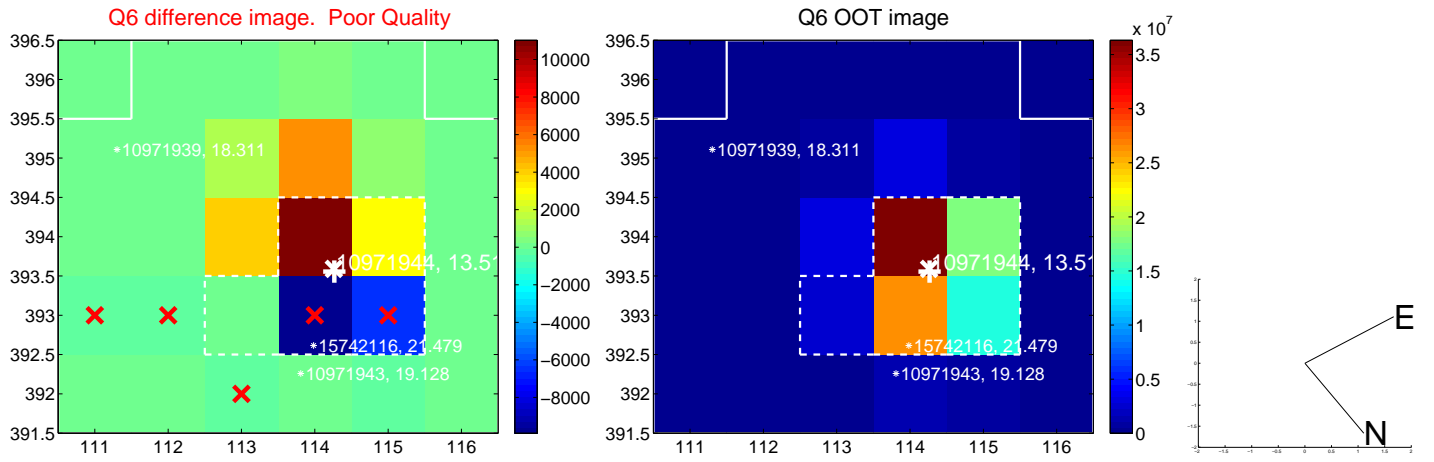
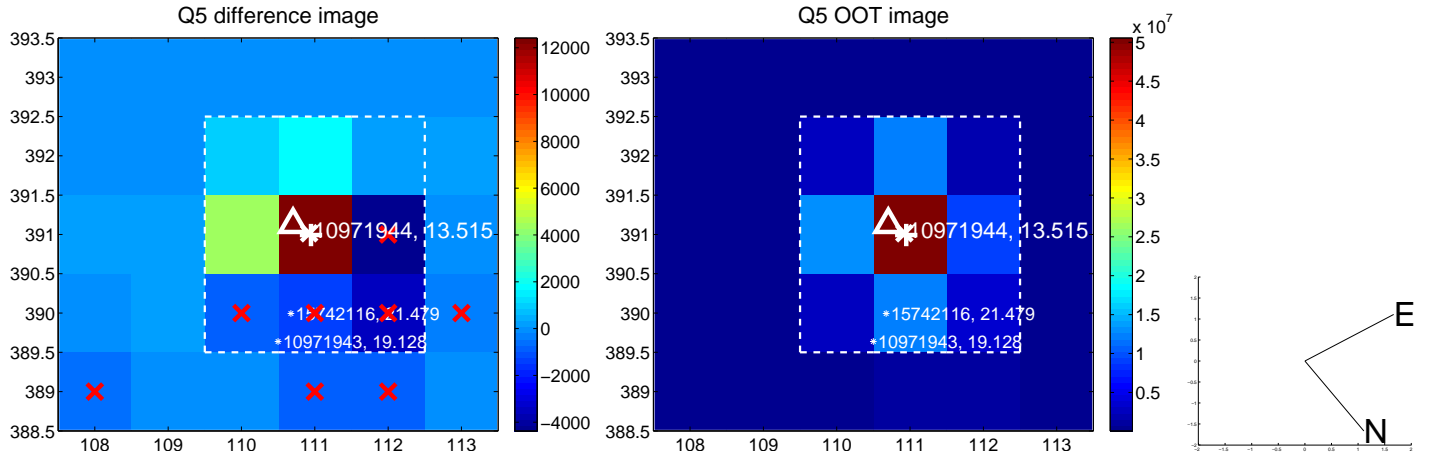


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

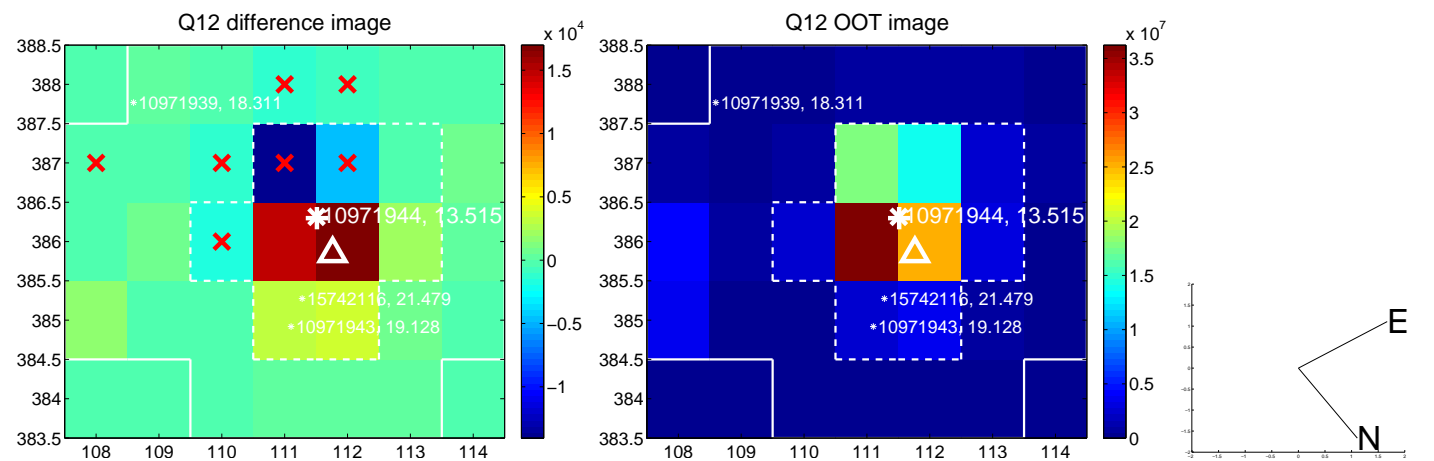
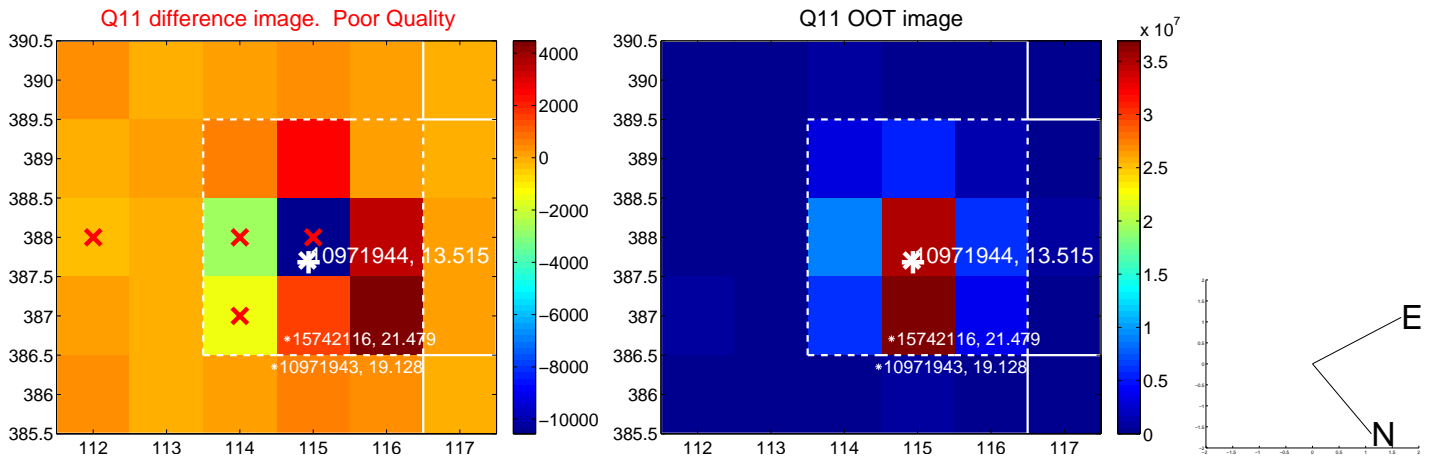
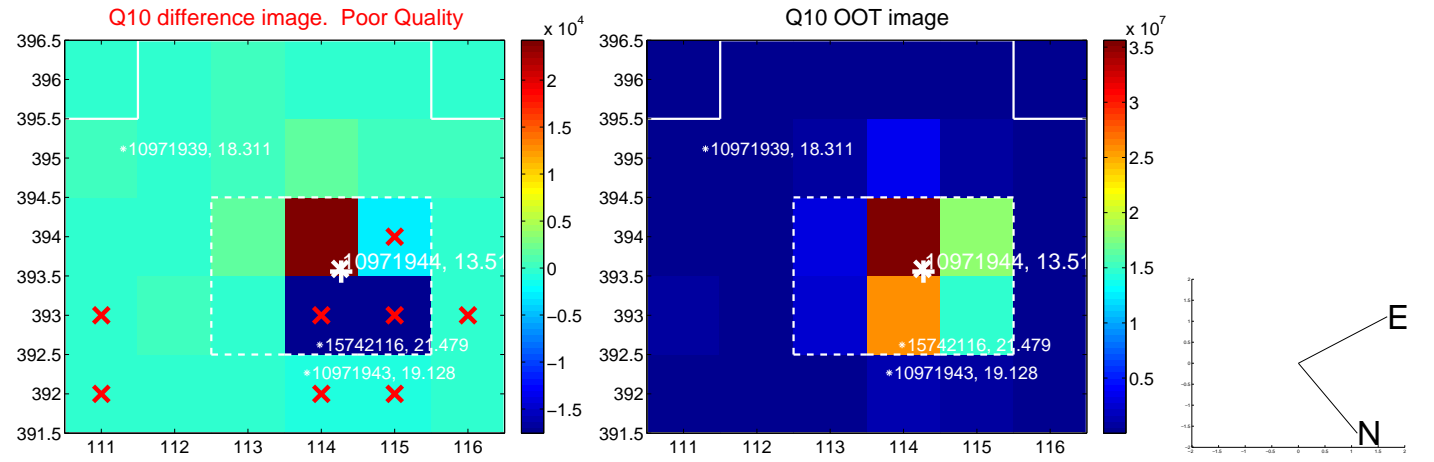
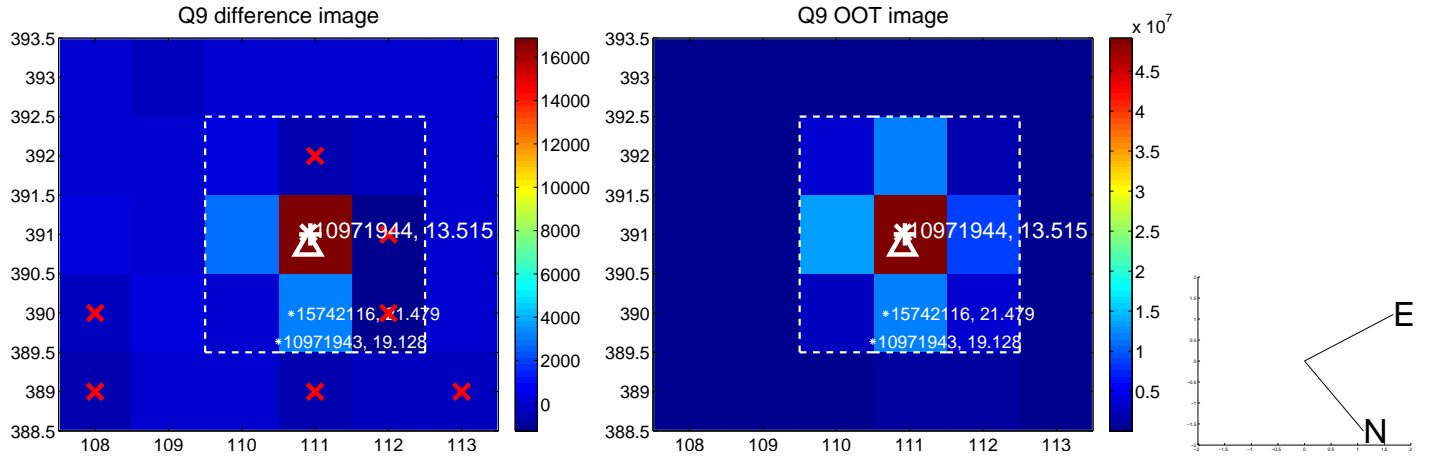
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



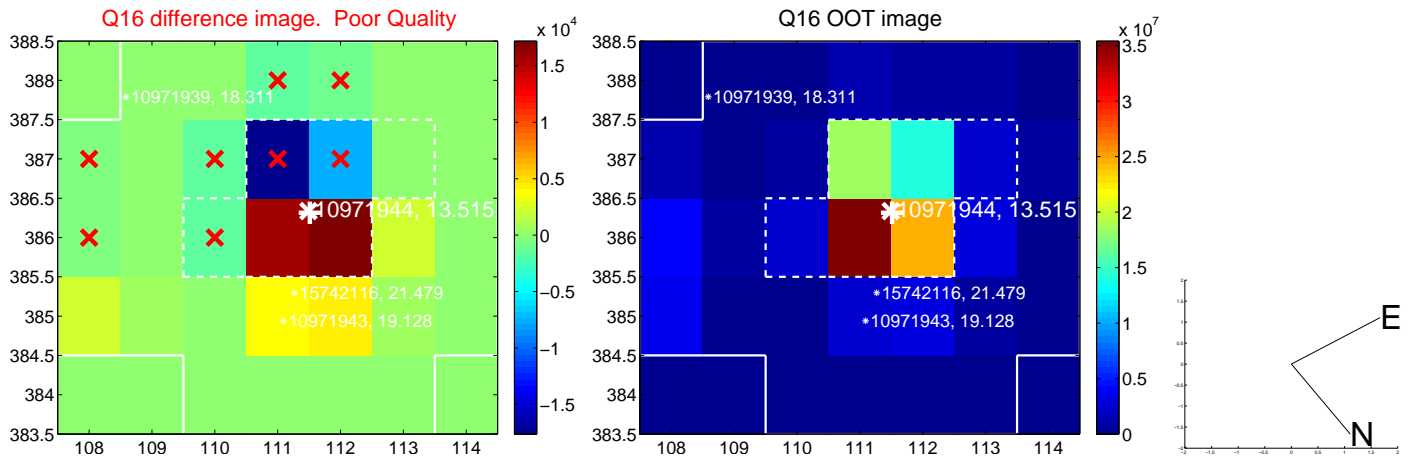
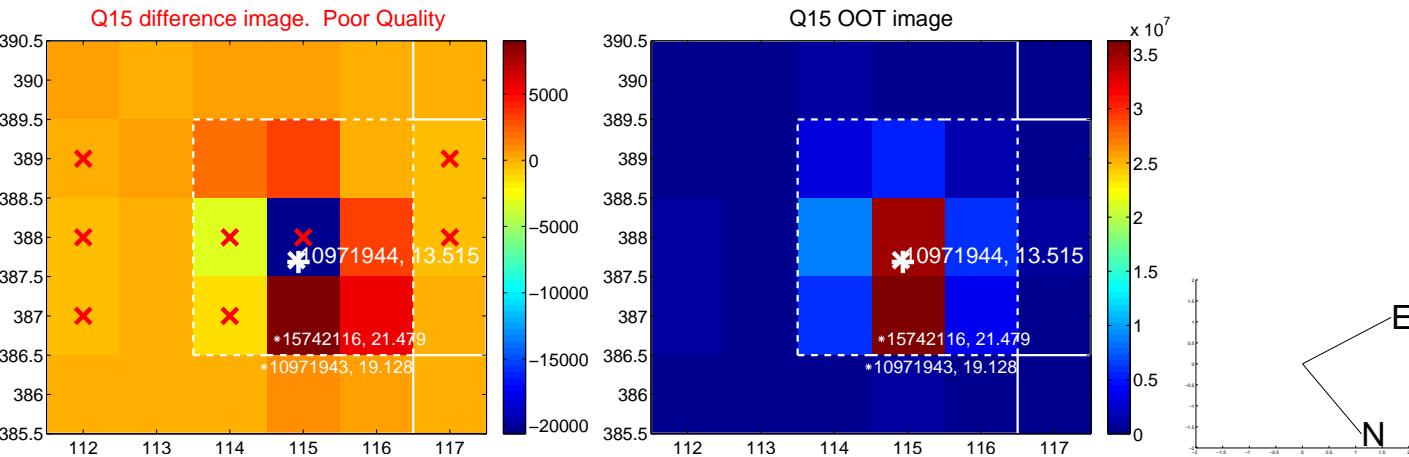
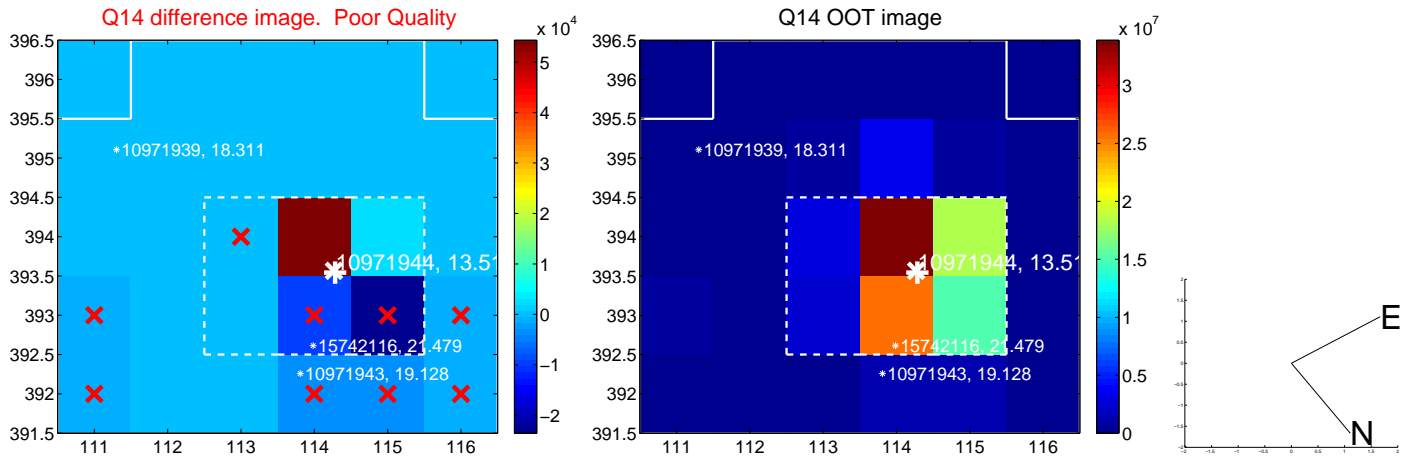
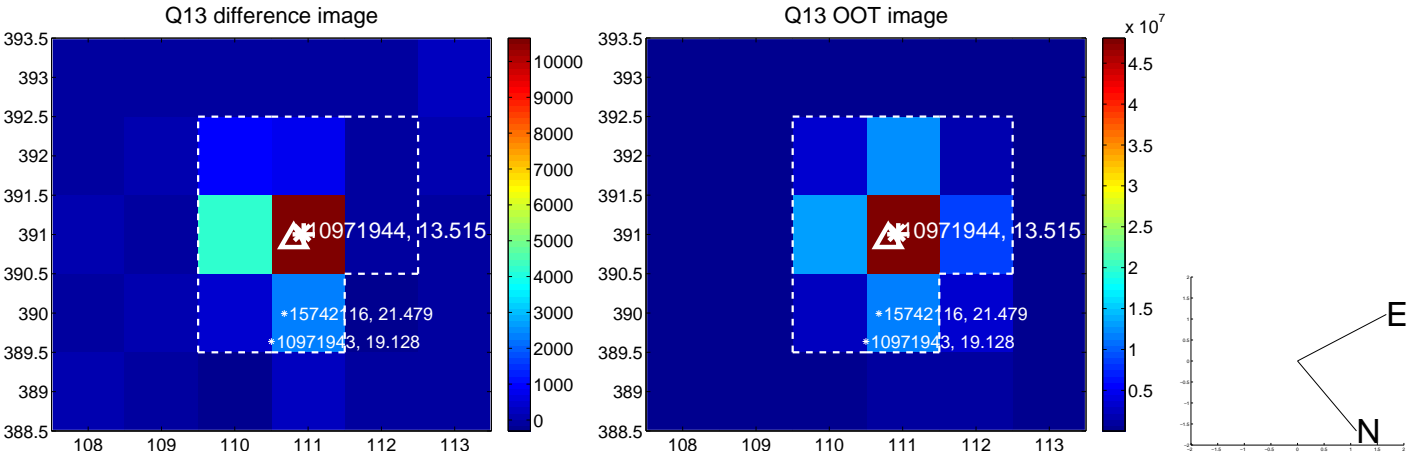
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



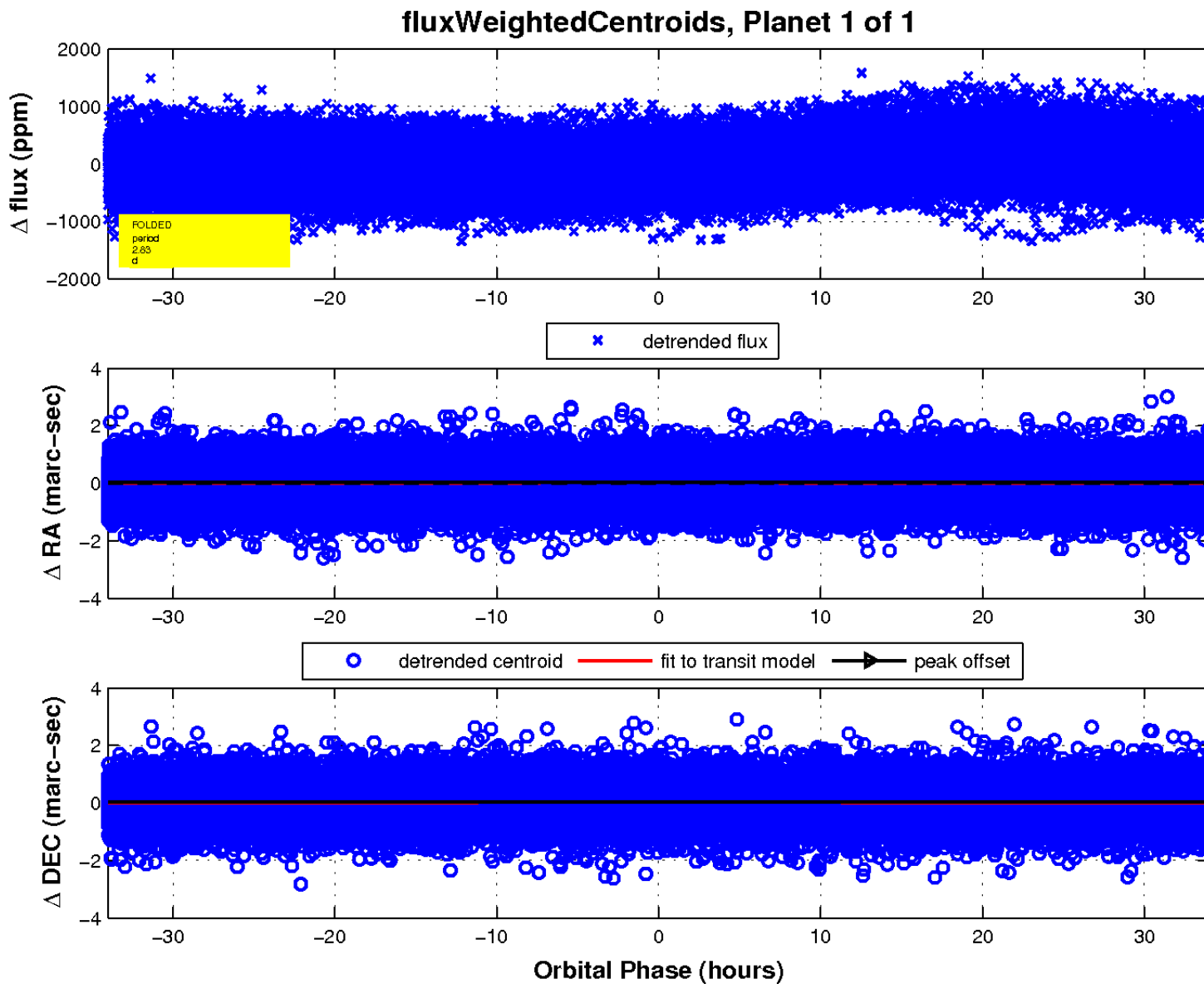
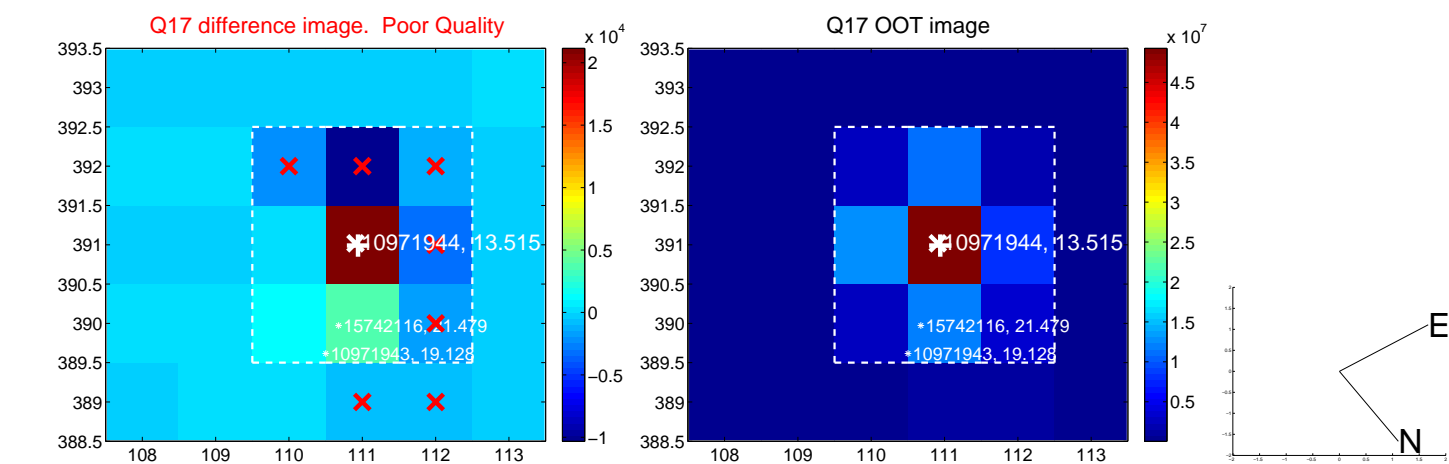
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

