

KIC 008488972

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})
008488972-01	OBS	No	3.332031	133.383836	24.8	32.613	7.4	8.5	1.40	6813	0.74	1631.40

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008488972-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL —LPP_DV —CENT_FEW_DIFFS

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

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

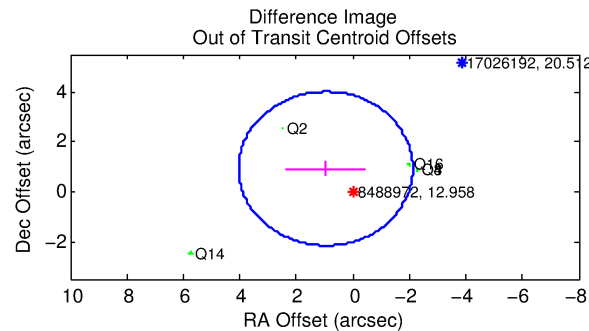
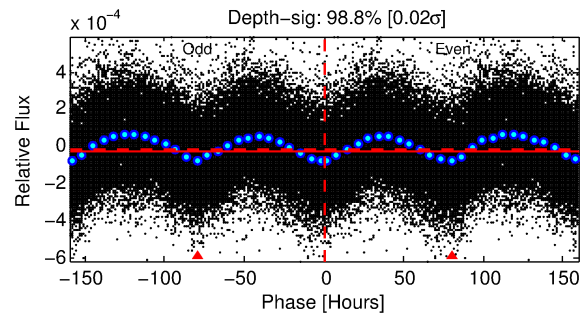
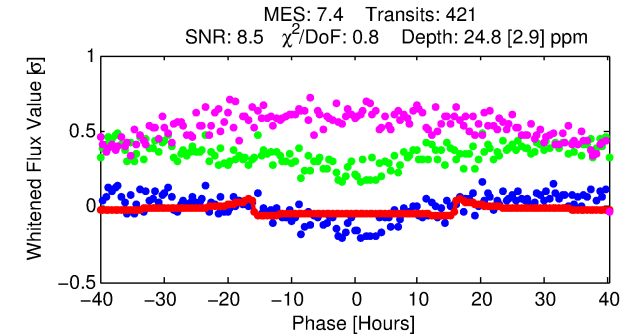
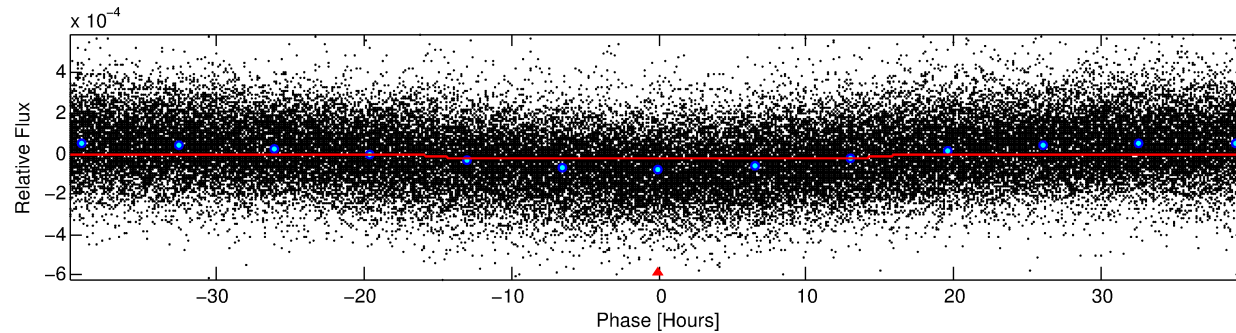
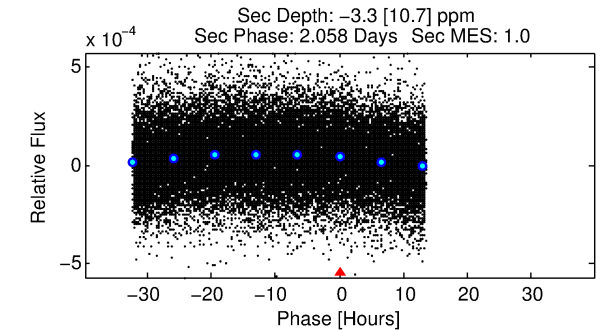
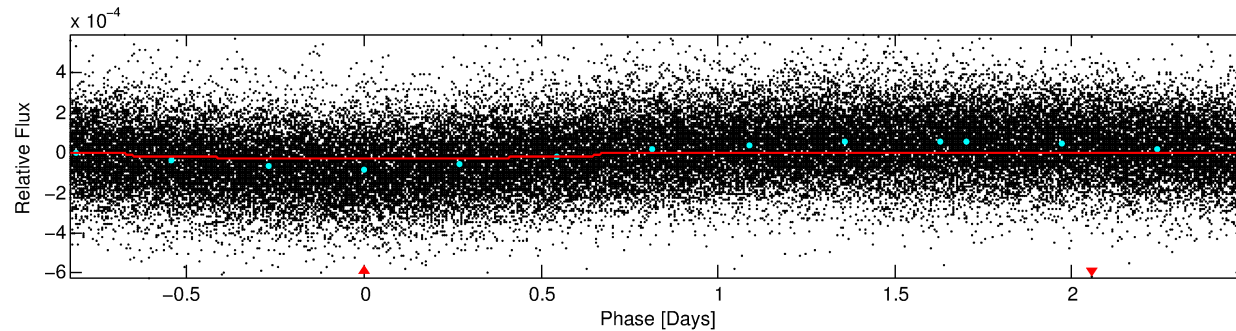
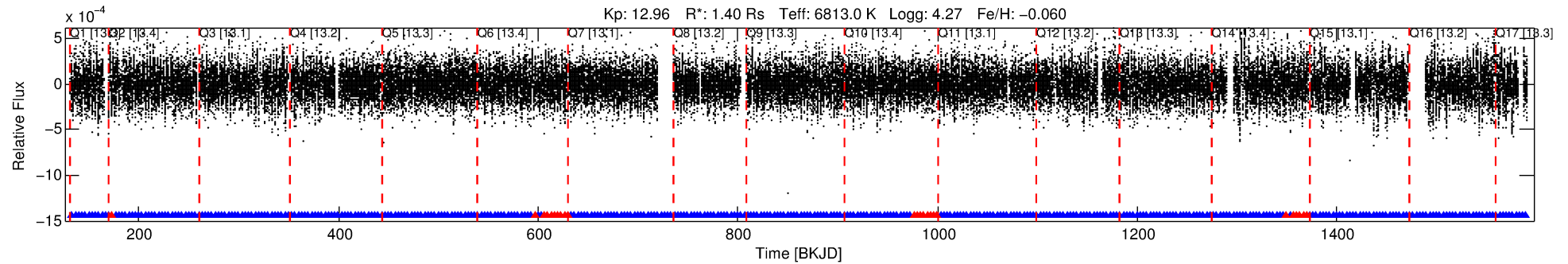
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008488972-01

No Significant Match Found

DV One-Page Summary

KIC: 8488972 Candidate: 1 of 1 Period: 3.332 d



DV Fit Results:

Period = 3.33203 [0.00006] d
Epoch = 133.3838 [0.0117] BKJD
Rp/R* = 0.0049 [0.0008]
a/R* = 1.03 [0.05]
b = 0.70 [0.68]
Seff = 1631.40 [667.92]
Teff = 1621 [166] K
Rp = 0.74 [0.28] Re
a = 0.0480 [0.0131] AU
Ag = N/A
Teffp = N/A

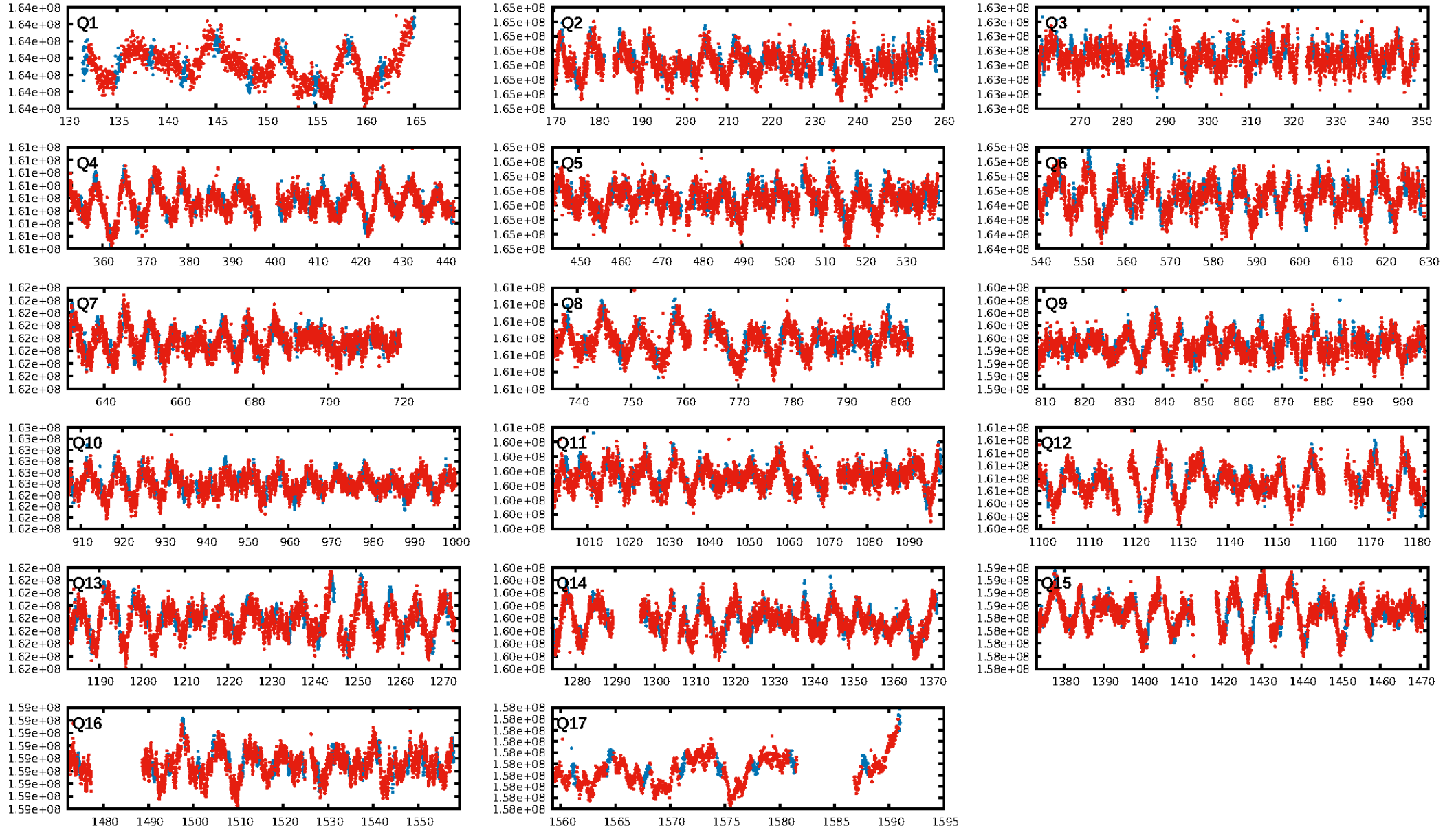
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.94 [378/402]
GhostDiagnostic-chr: N/A
Centroid-sig: 0.0%
Centroid-so: 2.853 arcsec [4.49σ]
OotOffset-rm: 1.332 arcsec [1.30σ]
KicOffset-rm: 1.388 arcsec [1.32σ]
OotOffset-st: 2/0/3/0 [5]
KicOffset-st: 2/0/3/0 [5]
DiffImageQuality-fgm: 0.20 [1/5]
DiffImageOverlap-fno: 1.00 [17/17]

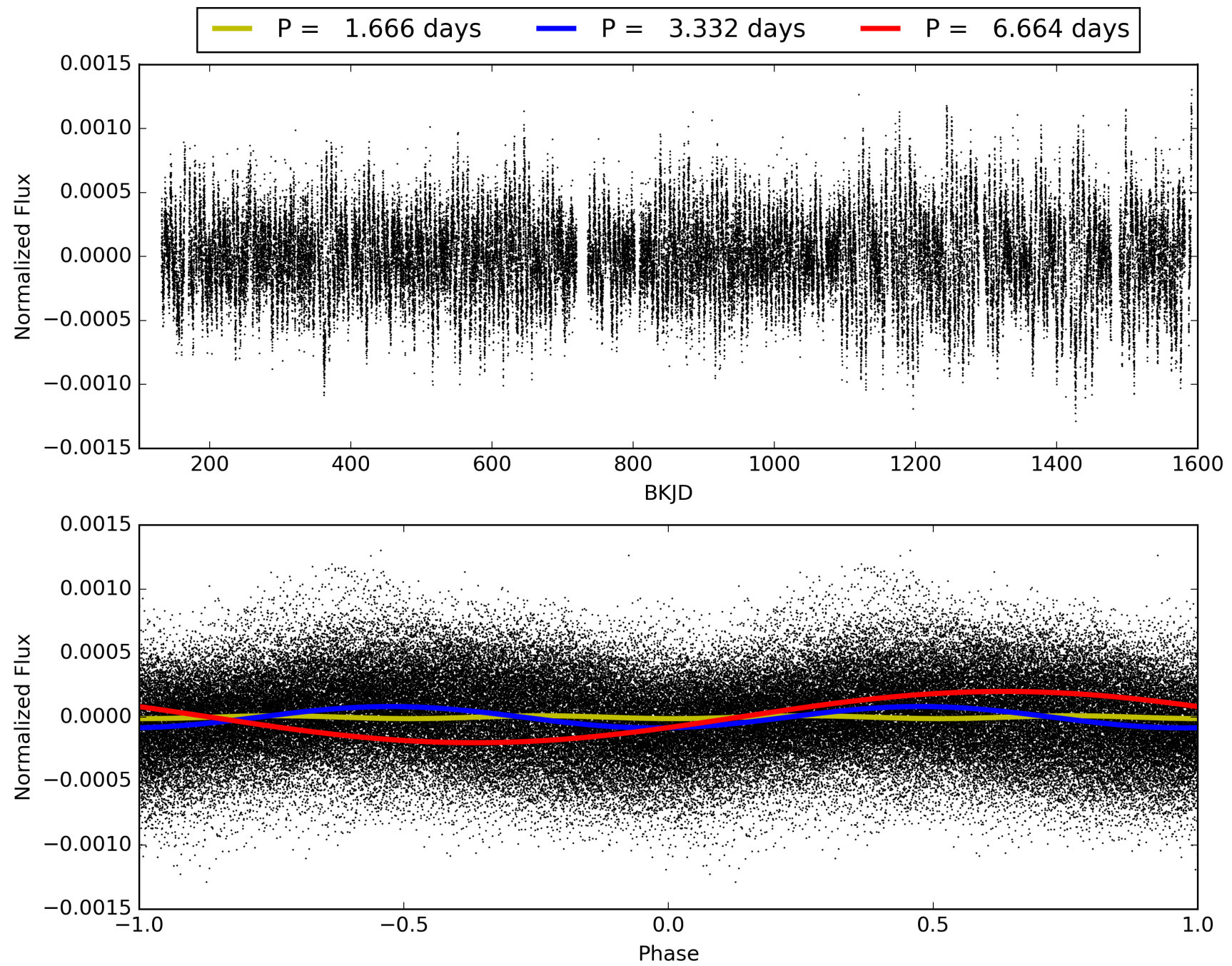
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:16:45 Z

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

TCE 008488972-01, PDC Light Curves

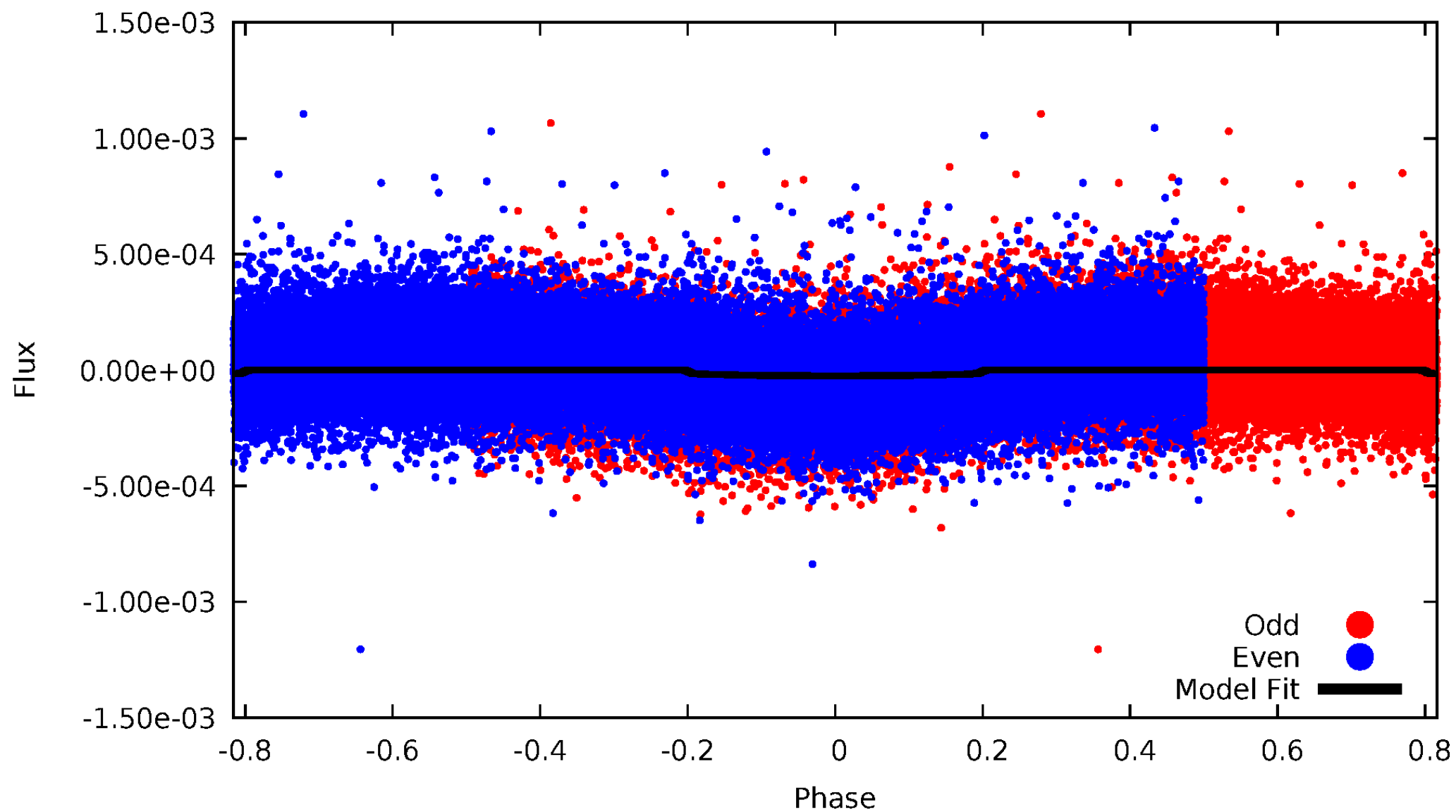


TCE 008488972-01



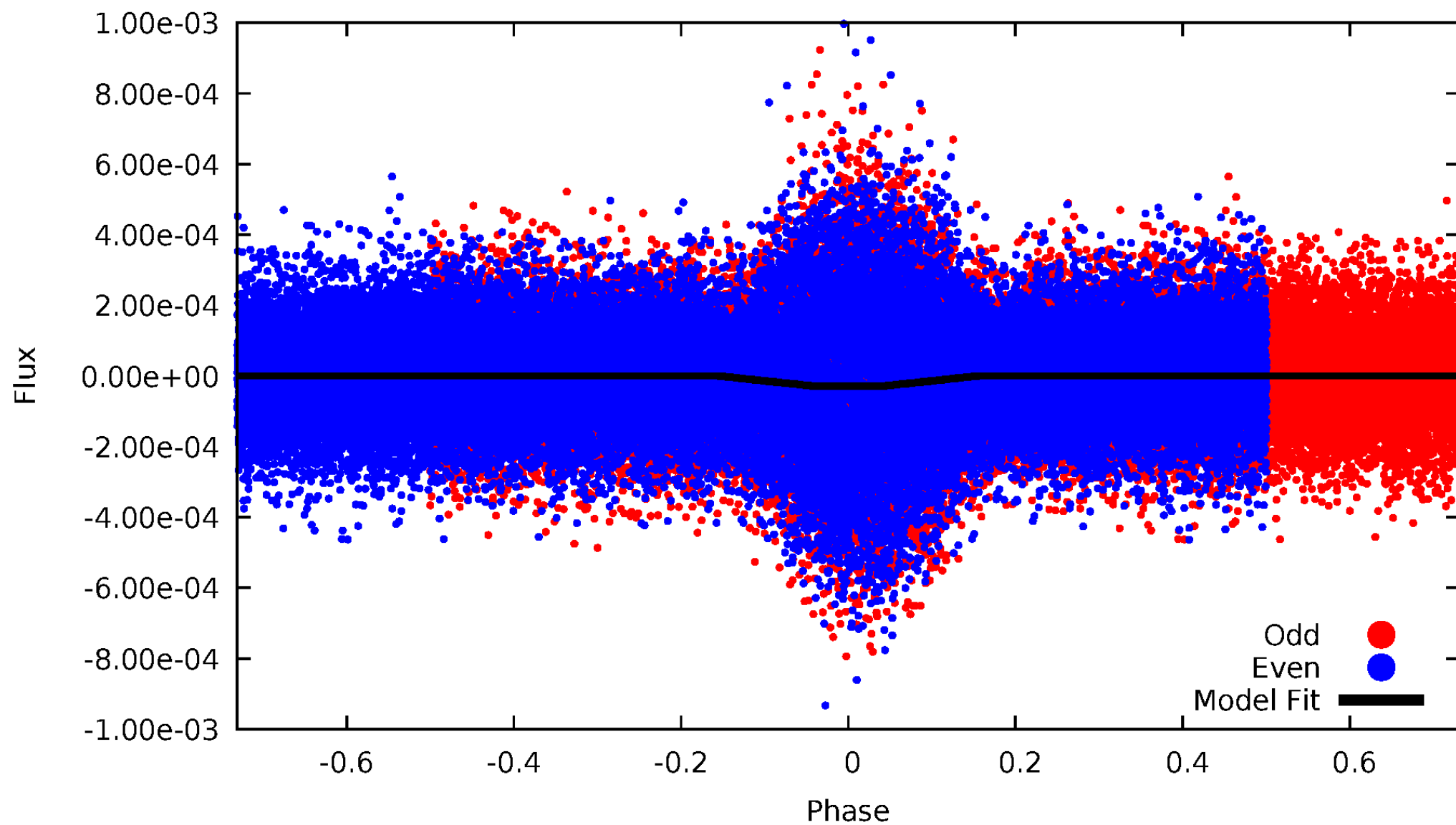
DV Odd/Even

TCE 008488972-01



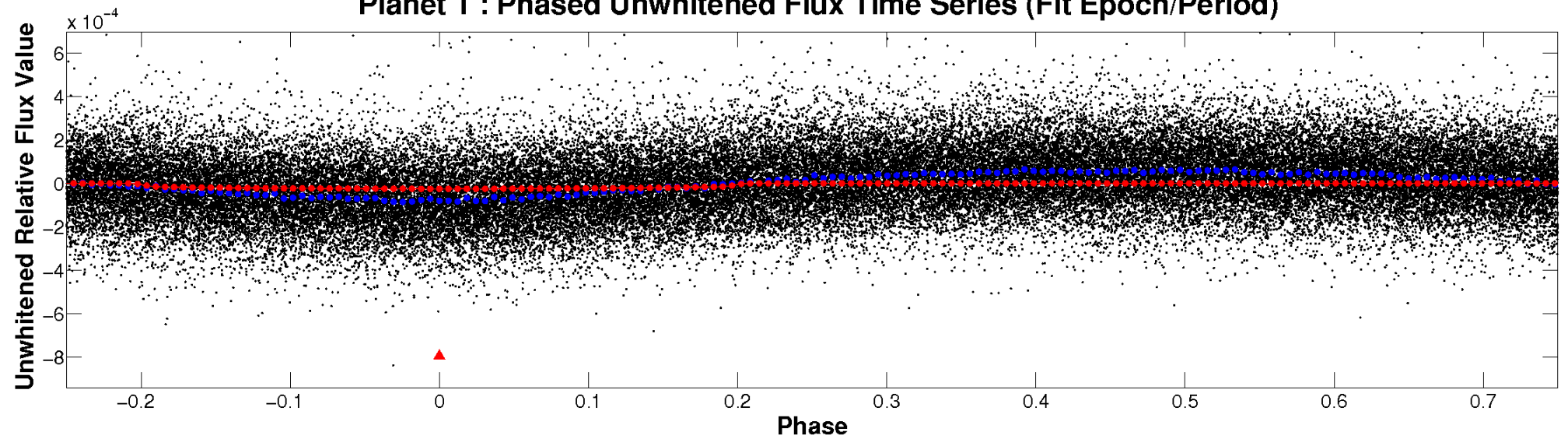
ALT Odd/Even

TCE 008488972-01

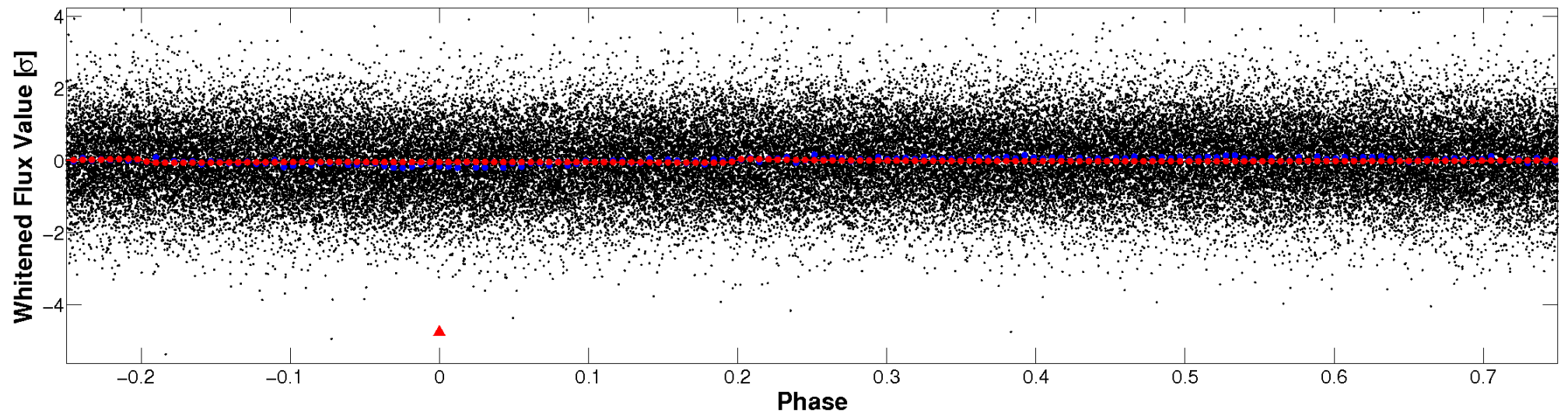


Non-Whitened Vs. Whitened Light Curve

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

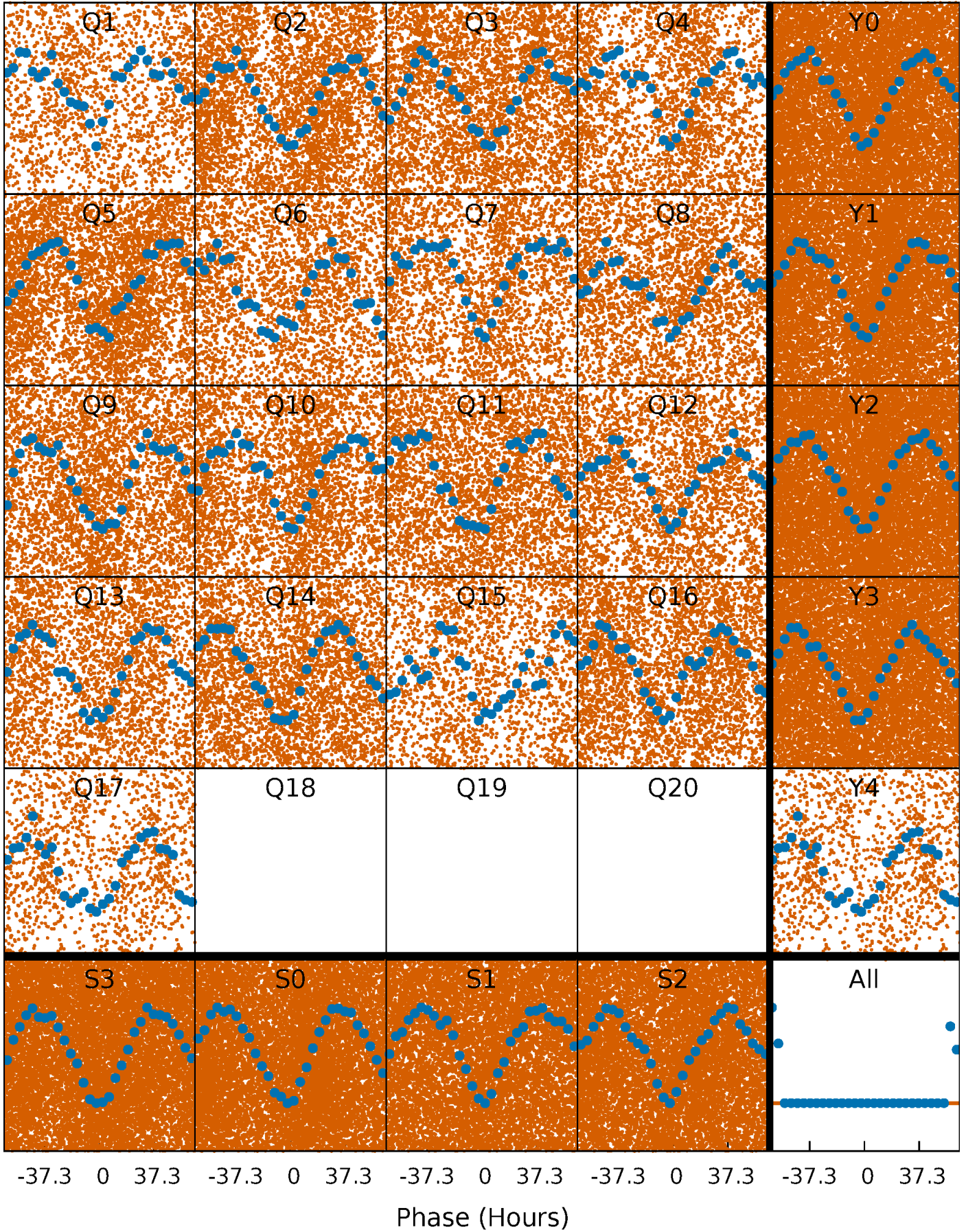


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



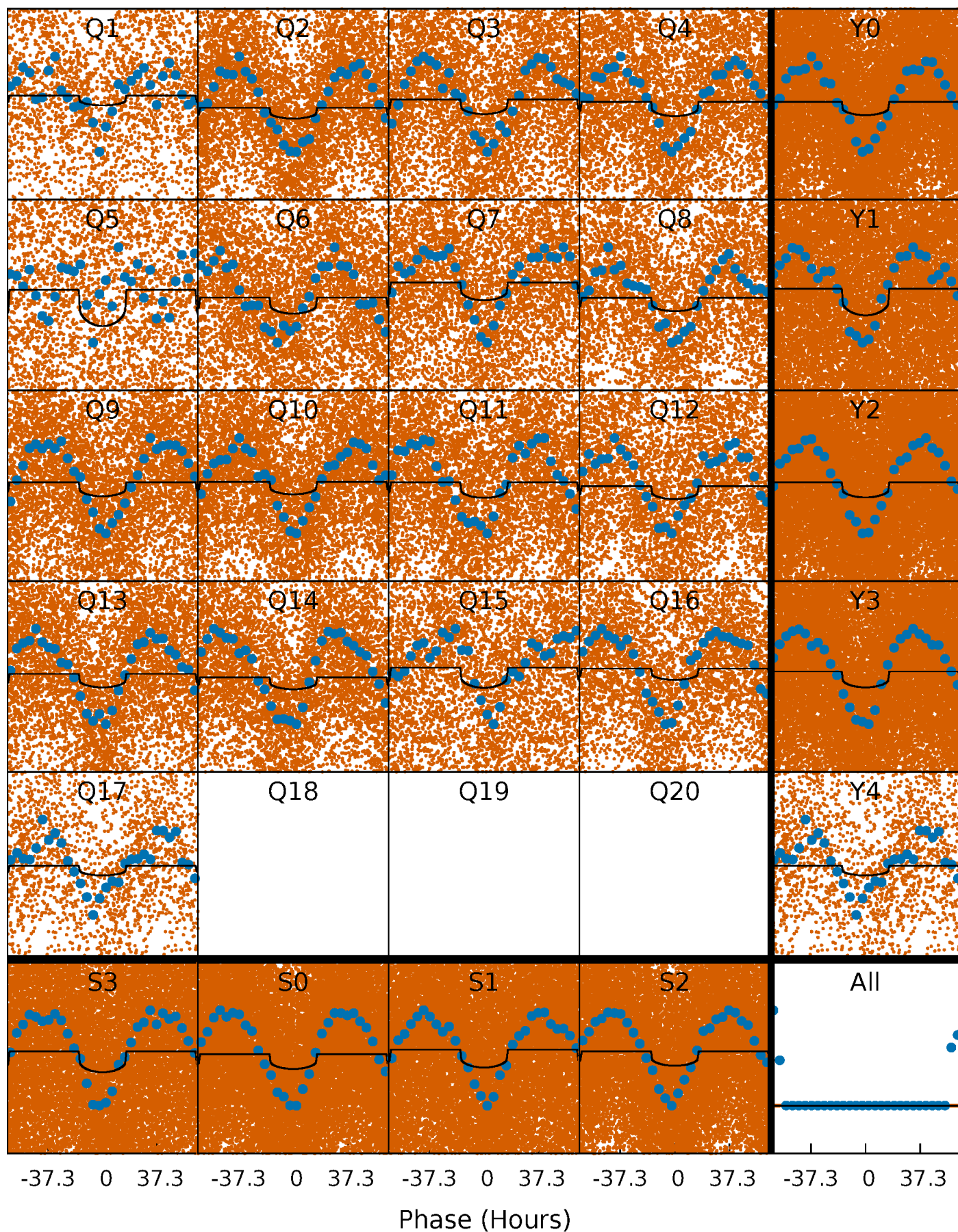
PDC Quarter-Phased Transit Curves

TCE 008488972-01 P= 3.332031 Days $T_0=133.383836$ (BKJD)



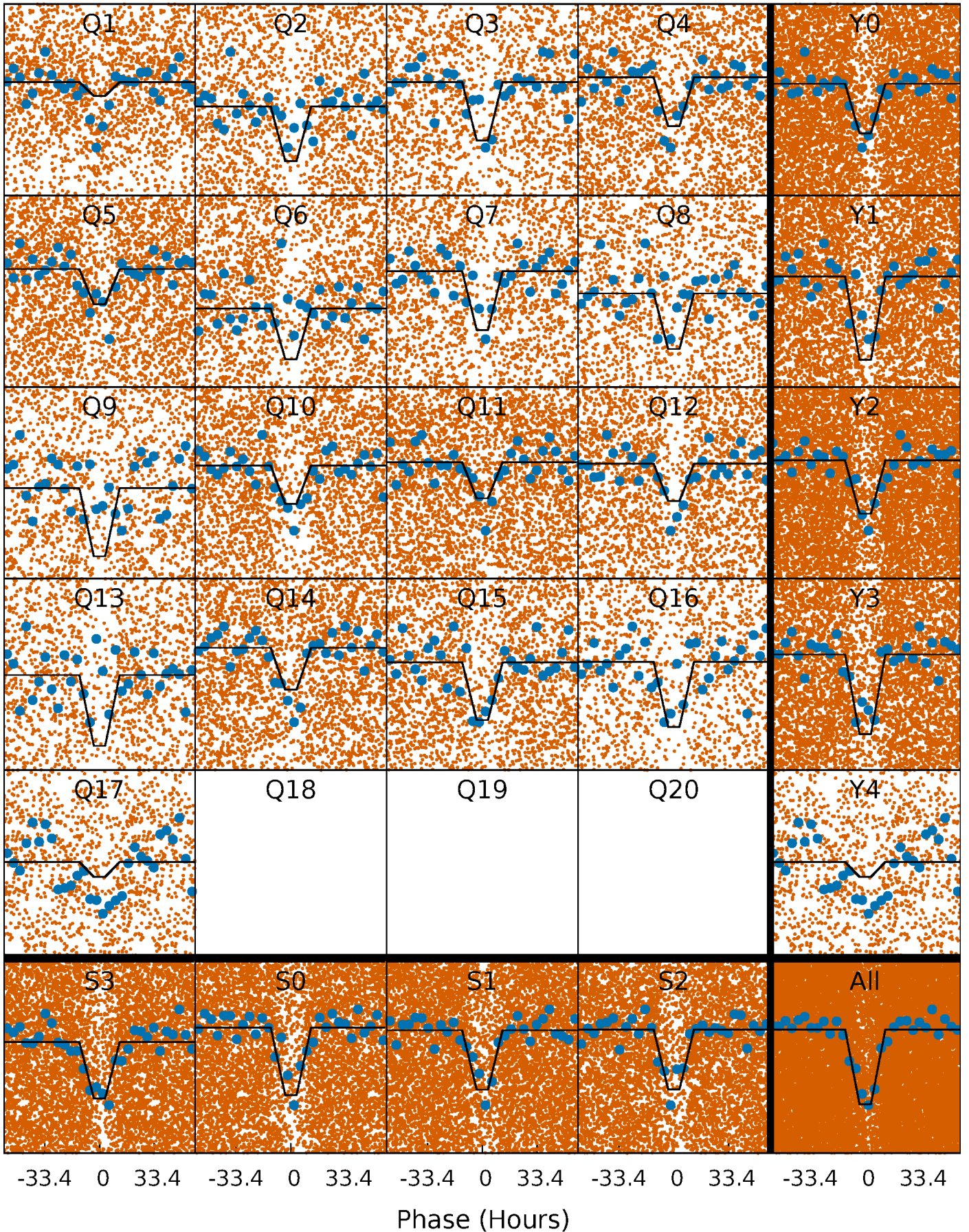
DV Quarter-Phased Transit Curves

TCE 008488972-01 P= 3.332031 Days $T_0=133.383836$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

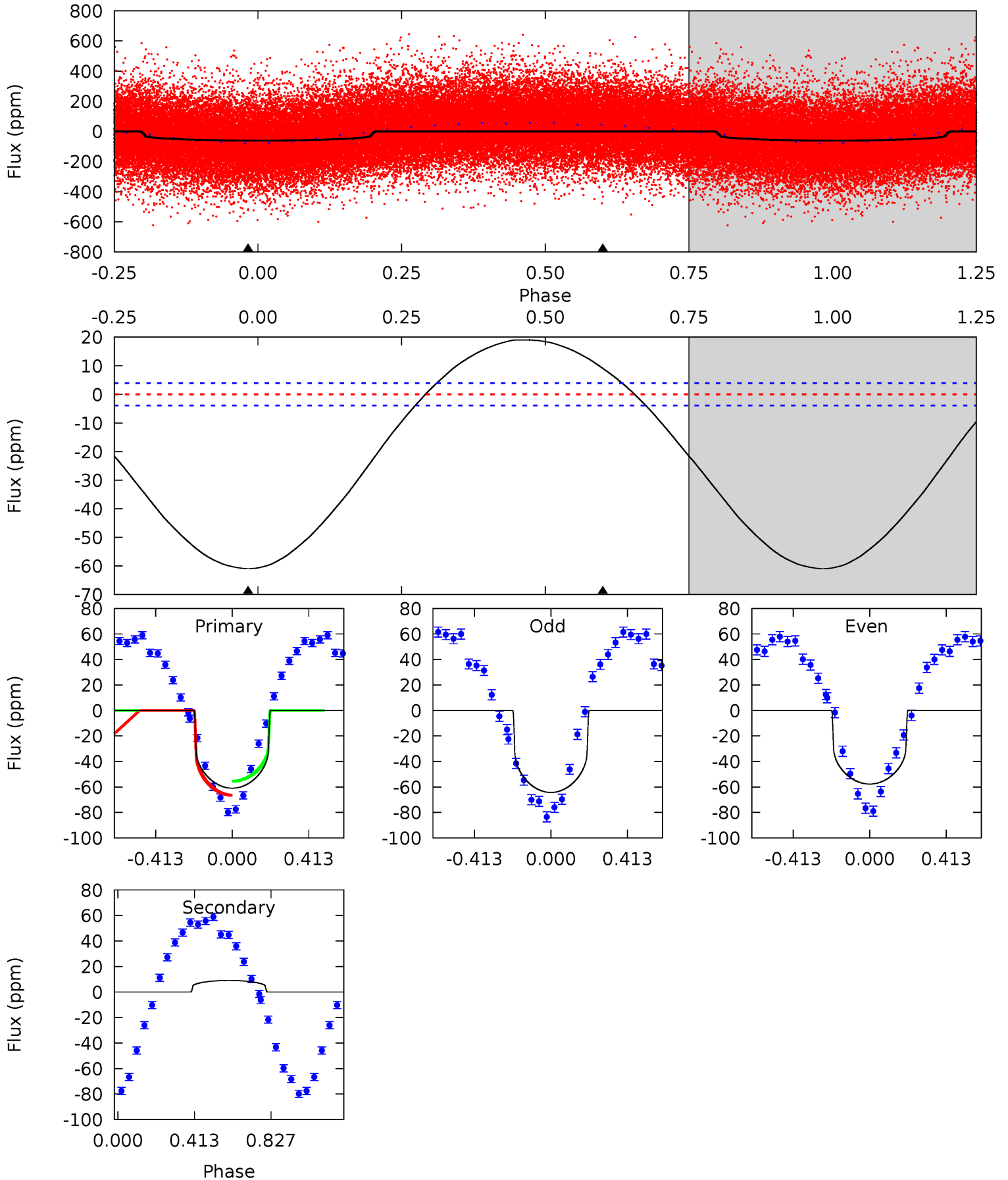
TCE 008488972-01 P= 3.331981 Days $T_0=133.391113$ (BKJD)



DV Model-Shift Uniqueness Test

008488972-01, P = 3.332031 Days, E = 130.051805 Days

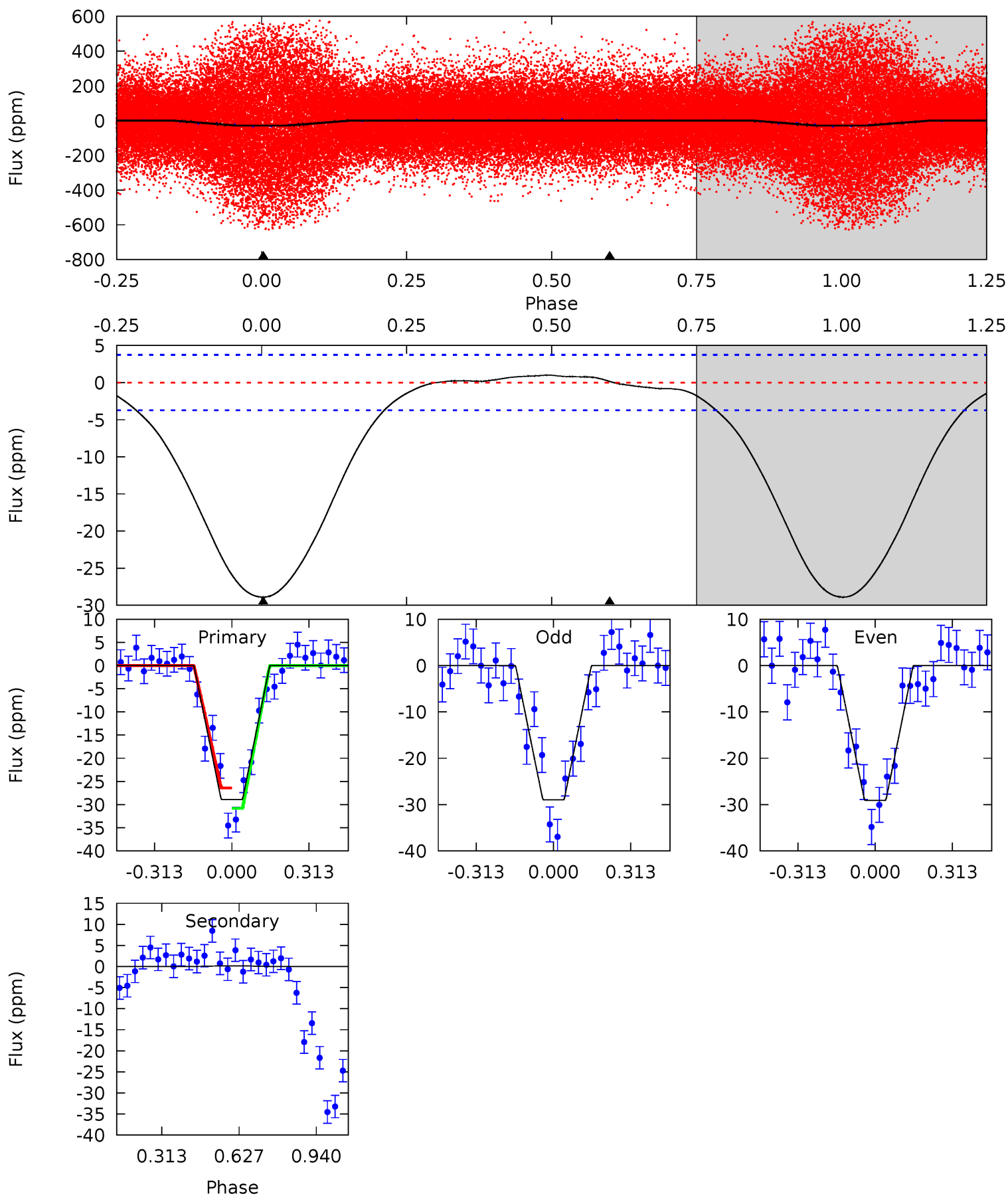
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
66.4	-9.91	0	0	4.26	0.82	6.63	66.4	66.4	-9.91	-9.91	3.68	1.07	0.24	6.12



Alt Model-Shift Uniqueness Test

008488972-01, P = 3.331981 Days, E = 130.059132 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	-0.18	0	0	4.32	1.01	0.56	33.5	33.5	-0.18	-0.18	0.07	1.00	0.03	1.87



Stellar Parameters For KIC 008488972

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6813^{+162}_{-243}	$4.272^{+0.087}_{-0.203}$	$-0.060^{+0.250}_{-0.350}$	$1.396^{+0.469}_{-0.201}$	$1.333^{+0.190}_{-0.209}$	$0.691^{+0.274}_{-0.376}$
	+2%/-4%	+2%/-5%	+417%/-583%	+34%/-14%	+14%/-16%	+40%/-54%
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 008488972-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	9 ± 1	$0.77^{+0.20}_{-0.15}$	2303^{+170}_{-134}	-5367^{+407}_{-498}	$-18.770^{+6.479}_{-9.940}$
Alt.	0 ± 1	$0.84^{+0.19}_{-0.15}$	2293^{+157}_{-128}	-2934^{+6106}_{-640}	$-0.274^{+1.633}_{-1.641}$

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 $A_{\text{obs}} \gg 1.0$

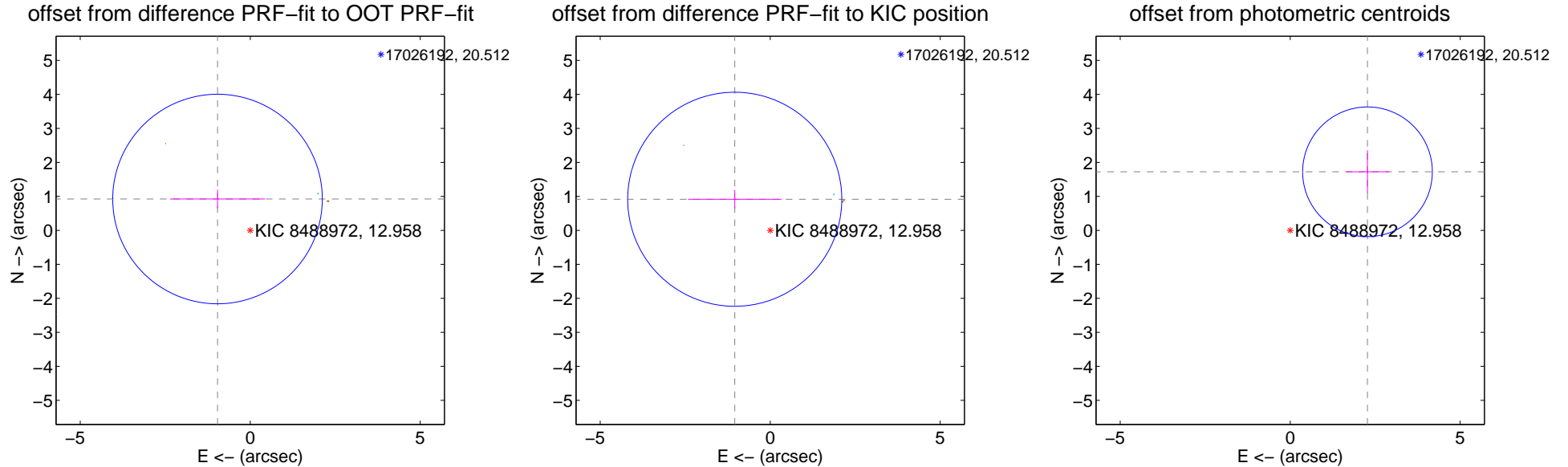
DV Centroid Data

Supplemental centroid analysis for 008488972-01. Kepler magnitude: 12.96. Transit SNR 8.53

There are 1 quarters with good PRF difference image offsets

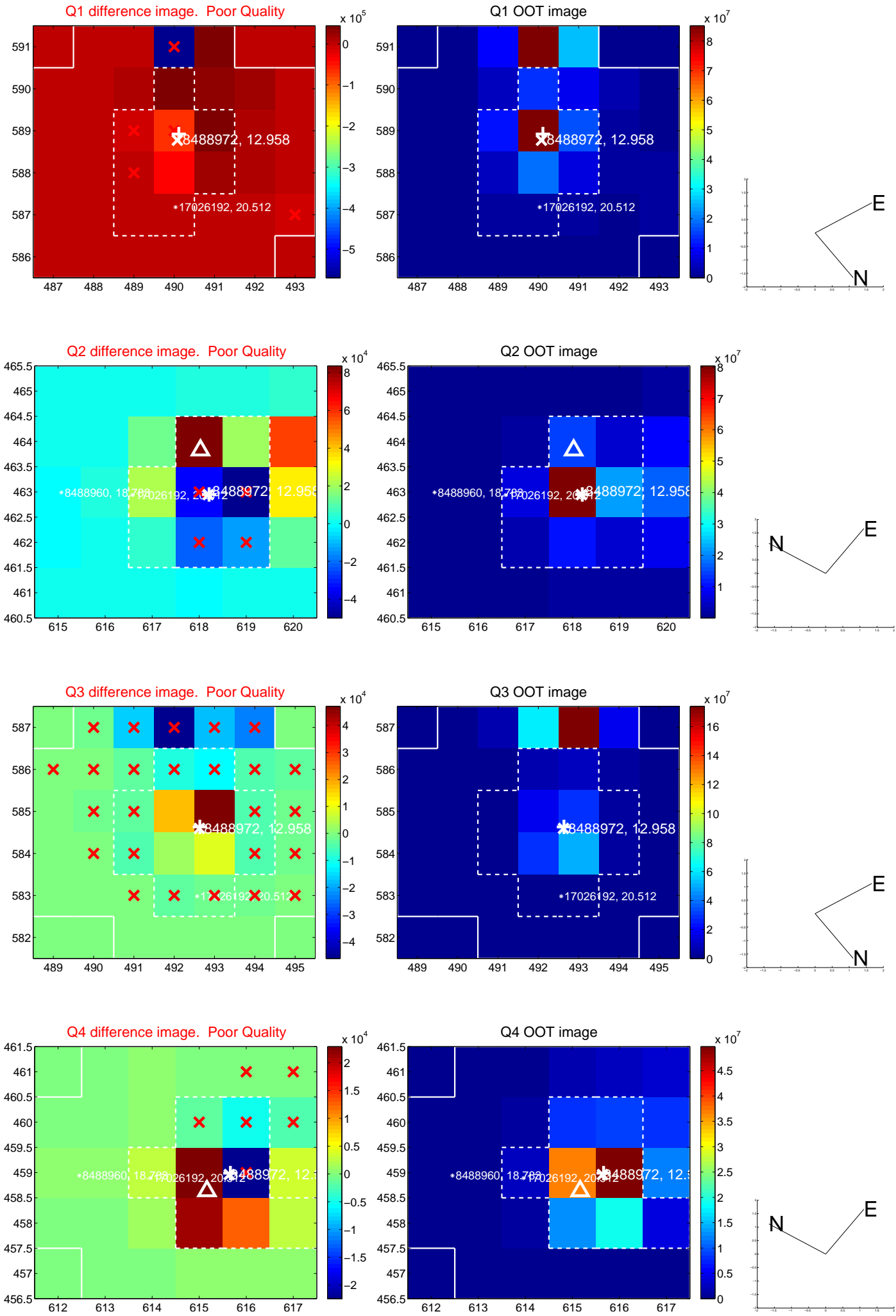
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.332 ± 1.027	1.30	0.962 ± 1.398	0.922 ± 0.275
PRF-fit source offset from KIC position	1.388 ± 1.049	1.32	1.043 ± 1.376	0.915 ± 0.272
photometric centroid source offset	2.85 ± 0.64	4.49	-2.27 ± 0.64	1.72 ± 0.63

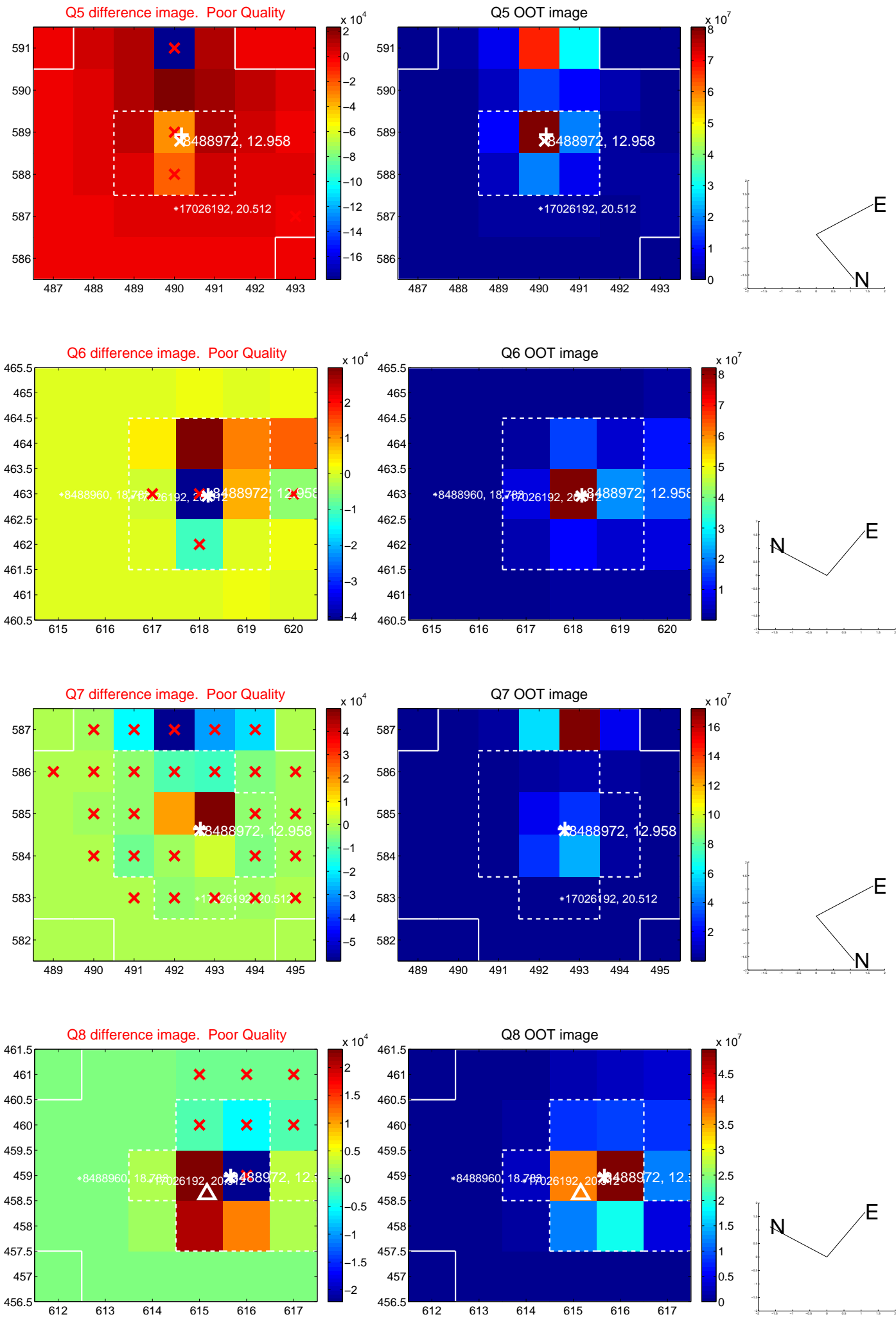


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

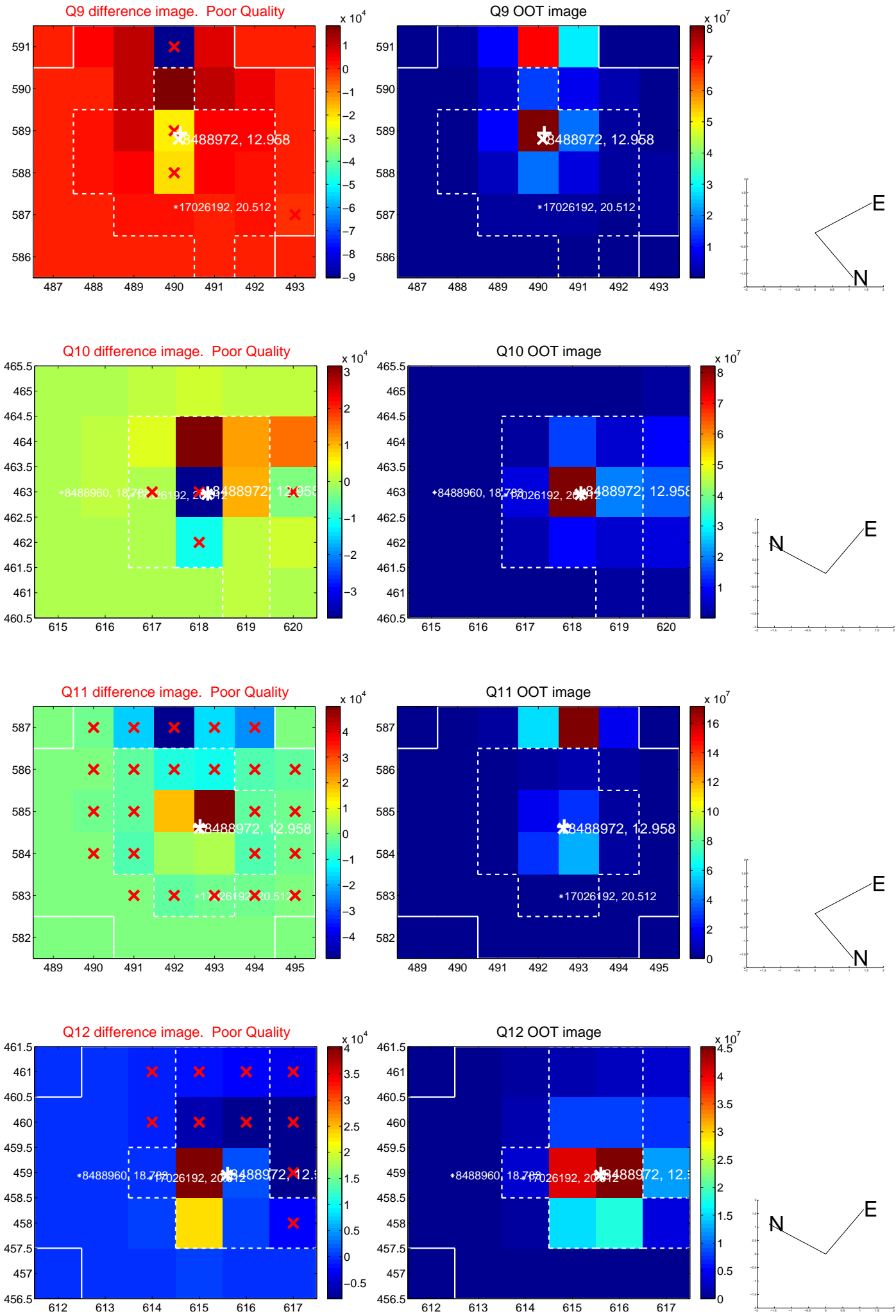
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



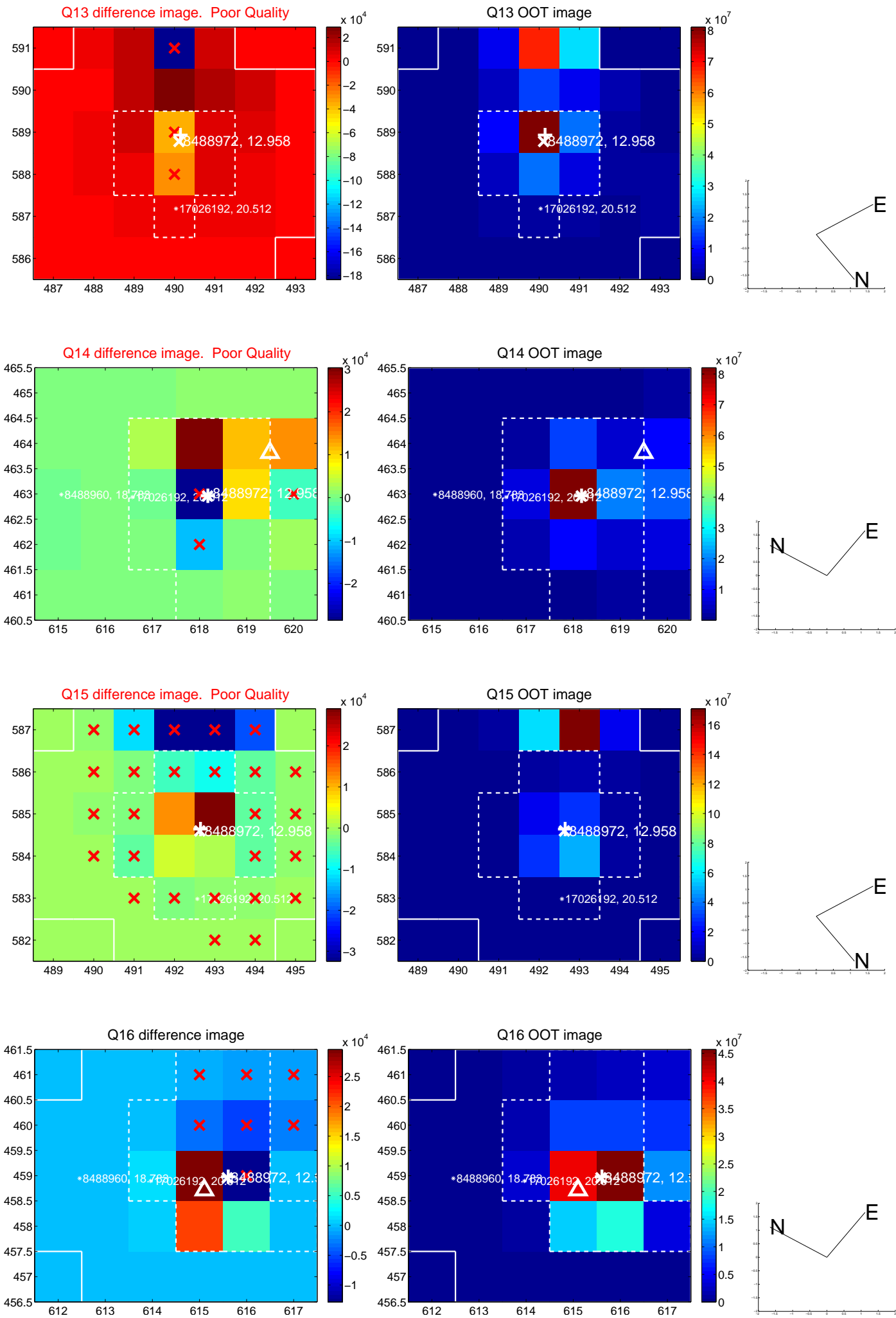
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



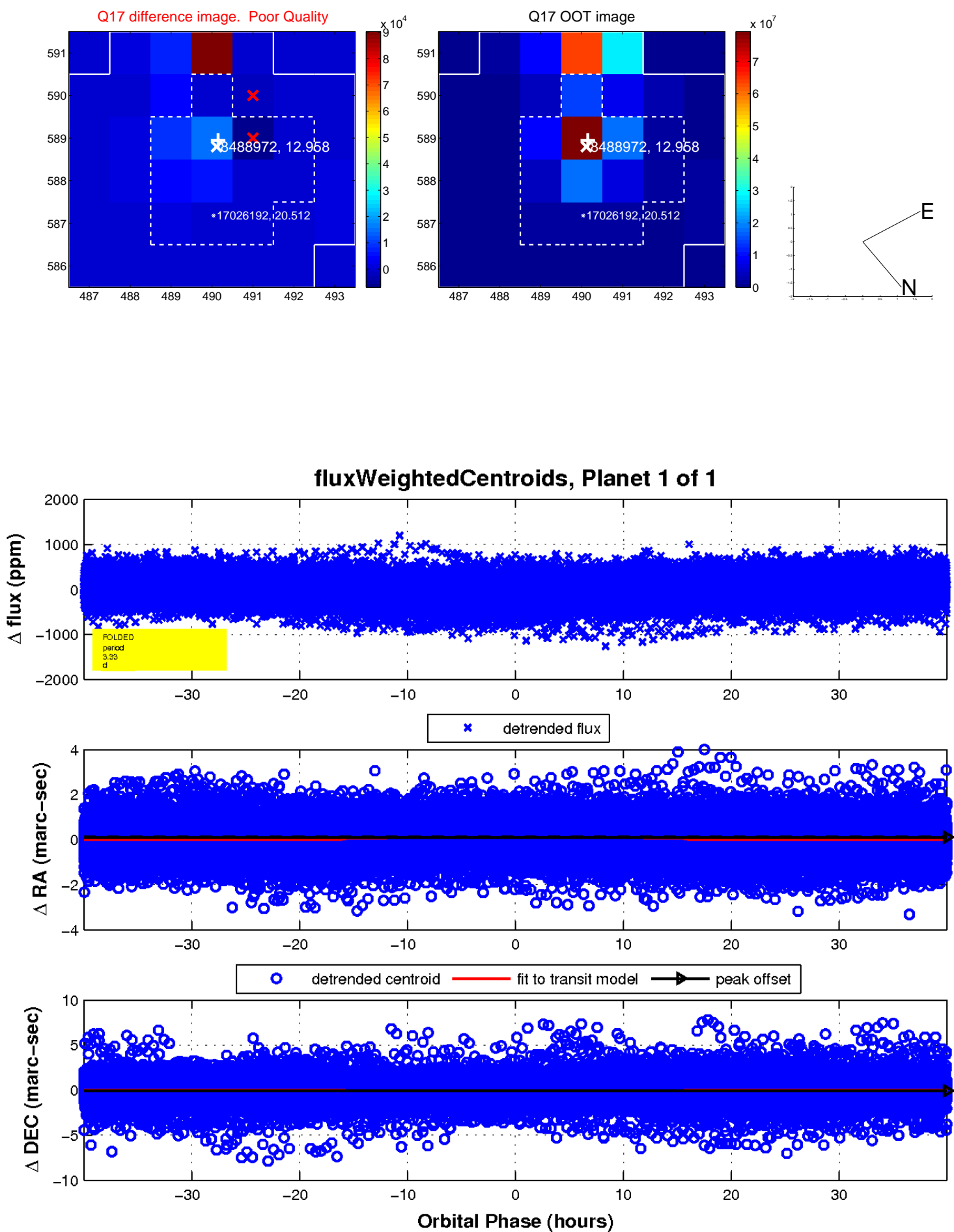
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

