

KIC 002712821

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})
002712821-01	OBS	No	0.750045	132.006448	8.6	6.435	9.8	7.0	2.72	7707	0.81	55453.10

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002712821-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_SATURATED

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

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

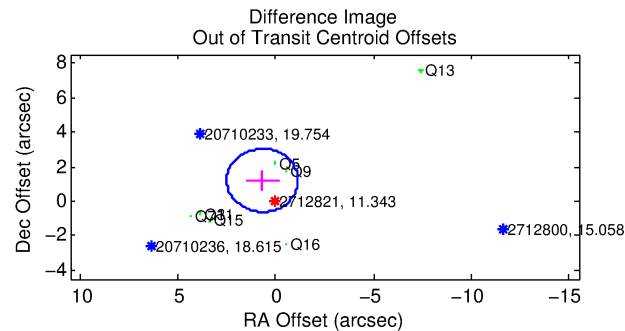
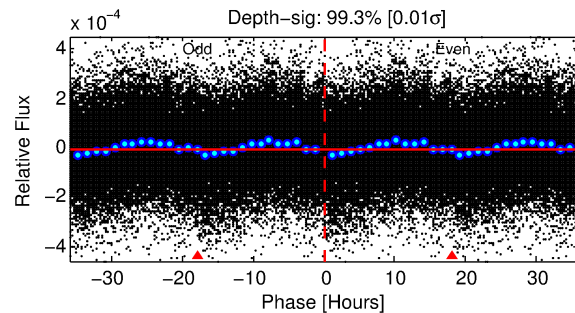
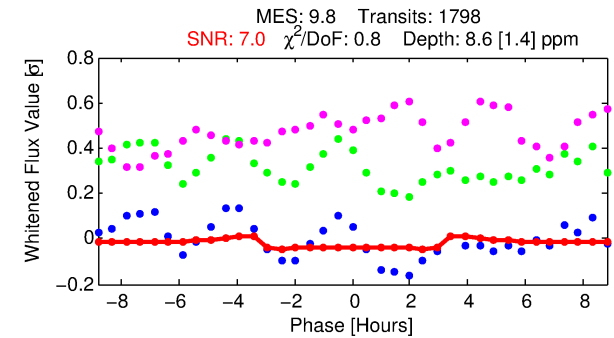
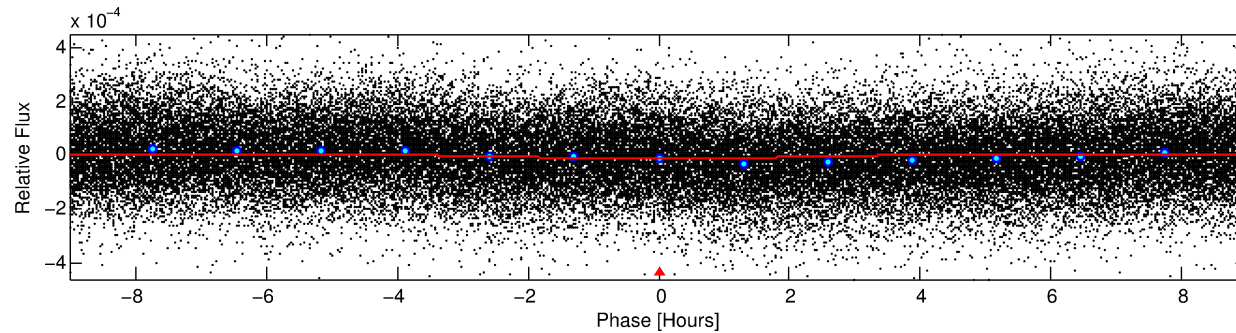
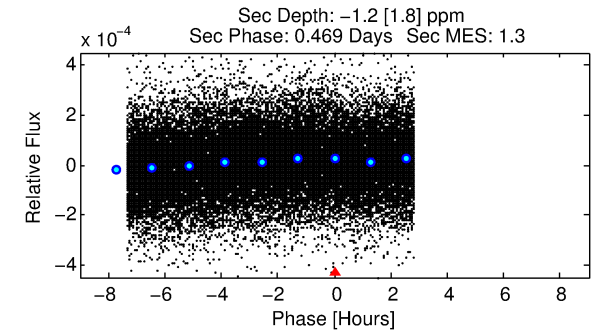
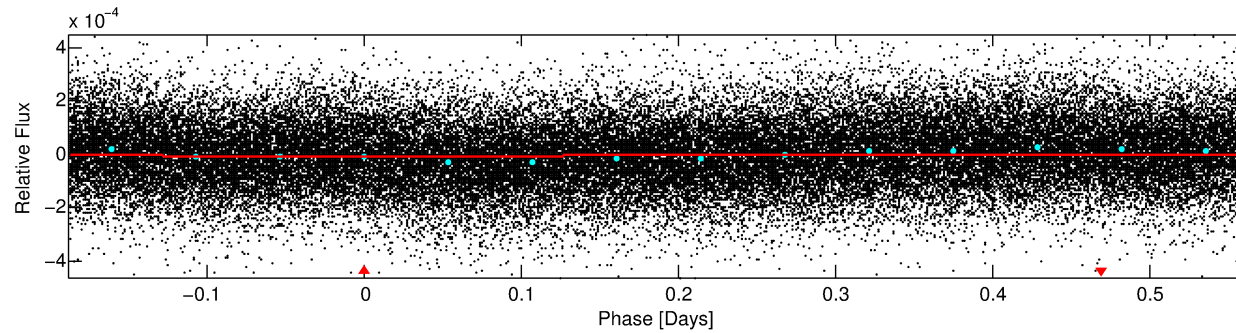
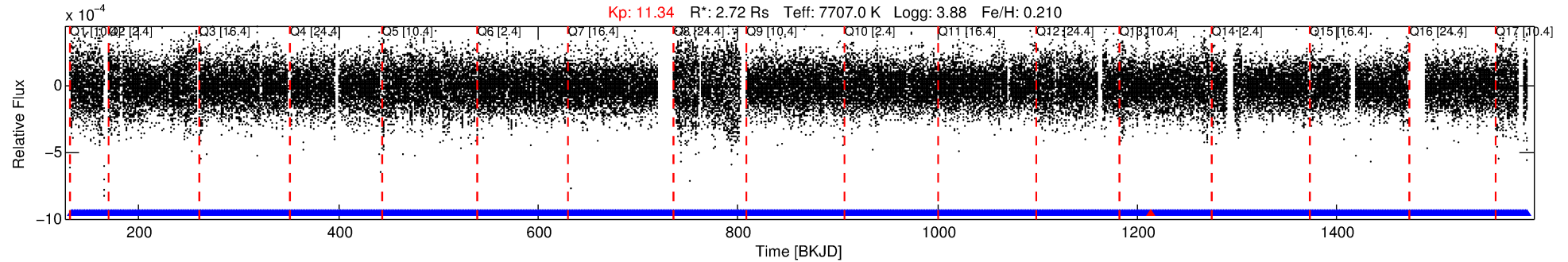
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002712821-01

No Significant Match Found

DV One-Page Summary

KIC: 2712821 Candidate: 1 of 1 Period: 0.750 d



DV Fit Results:

Period = 0.75004 [0.00002] d
Epoch = 132.0064 [0.0054] BKJD
Rp/R* = 0.0027 [0.0025]
a/R* = 1.11 [1.16]
b = 0.03 [162.46]
Seff = 55453.10 [27014.62]
Teq = 3913 [477] K
Rp = 0.81 [0.79] Re
a = 0.0205 [0.0062] AU
Ag = N/A
Teffp = N/A

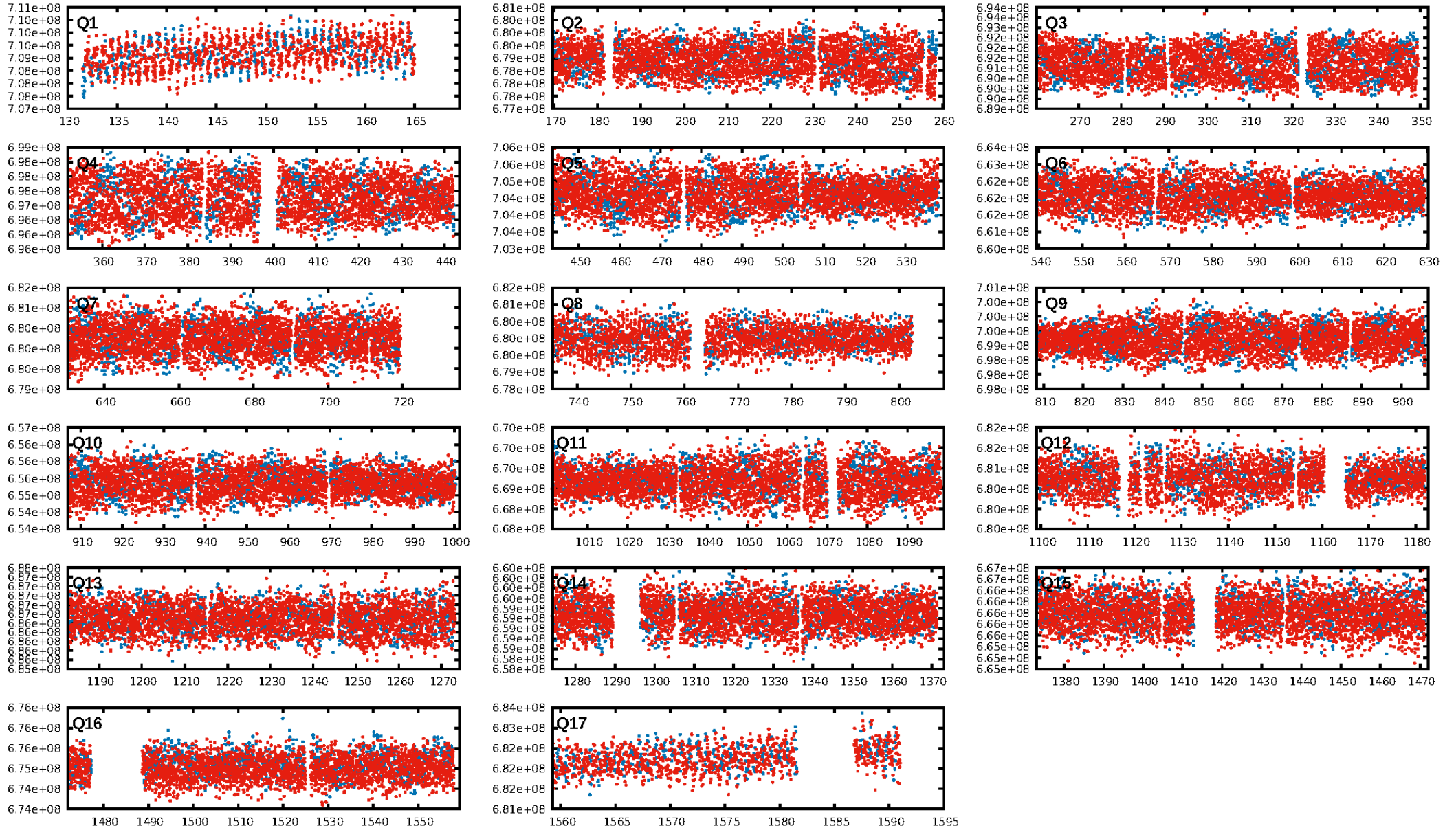
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1716/1717]
GhostDiagnostic-chr: 0.6452
Centroid-sig: 0.0%
Centroid-so: 4.458 arcsec [3.93σ]
OotOffset-rm: 1.386 arcsec [2.28σ]
KicOffset-rm: 1.374 arcsec [2.22σ]
OotOffset-st: 0/4/1/3 [8]
KicOffset-st: 0/4/1/3 [8]
DiffImageQuality-fgm: 0.25 [2/8]
DiffImageOverlap-fno: 1.00 [17/17]

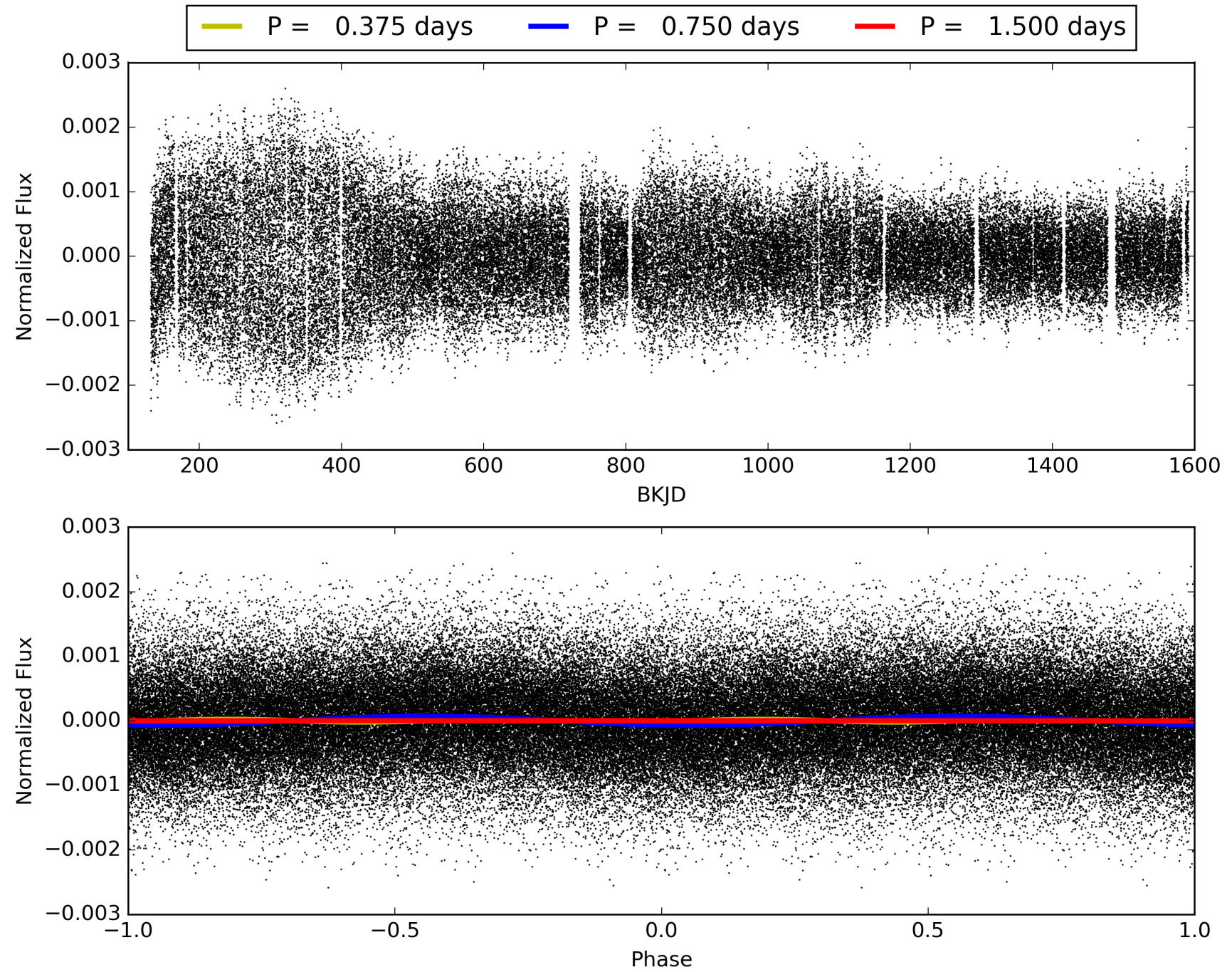
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 19:52:44 Z

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

TCE 002712821-01, PDC Light Curves

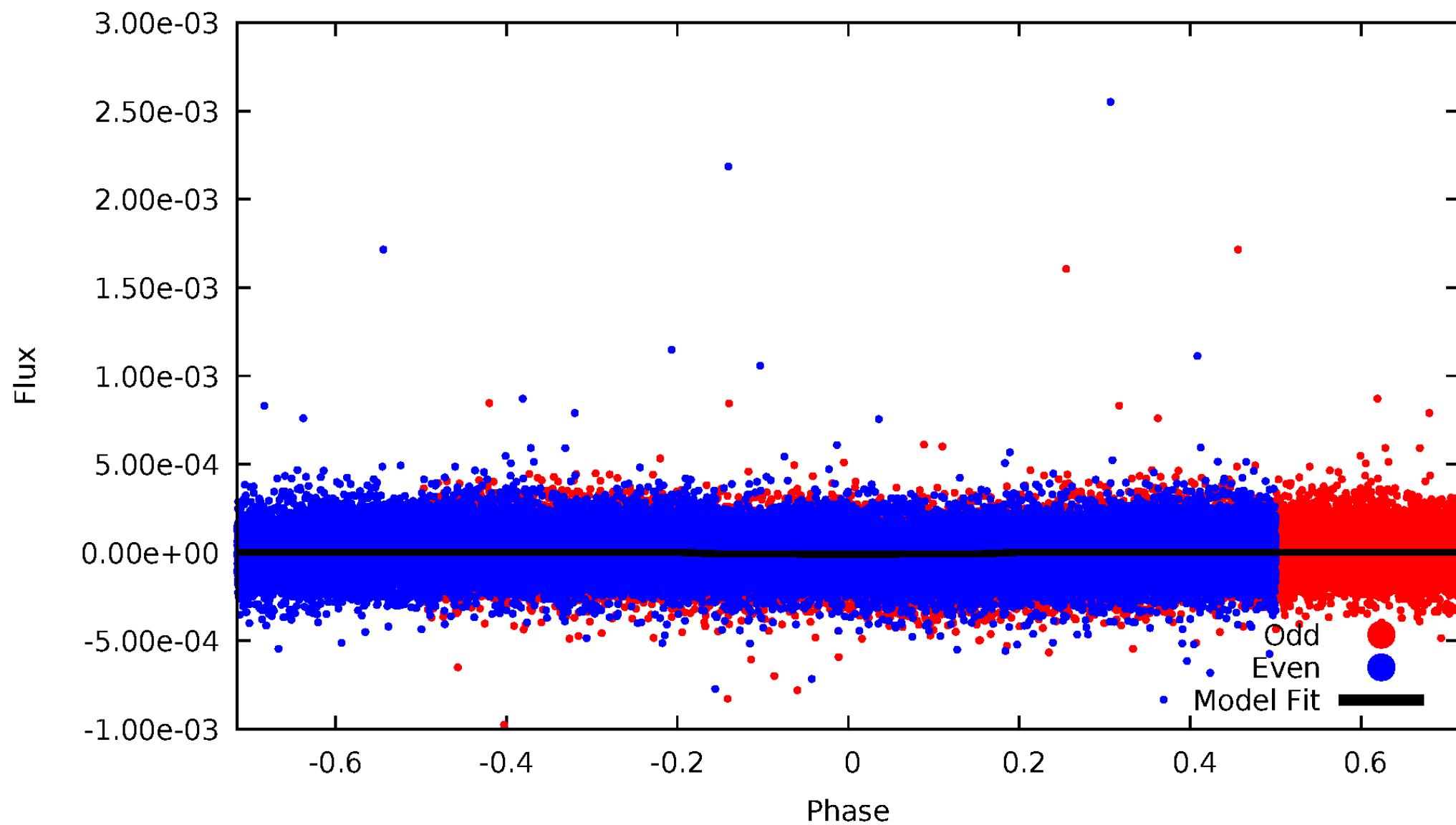


TCE 002712821-01



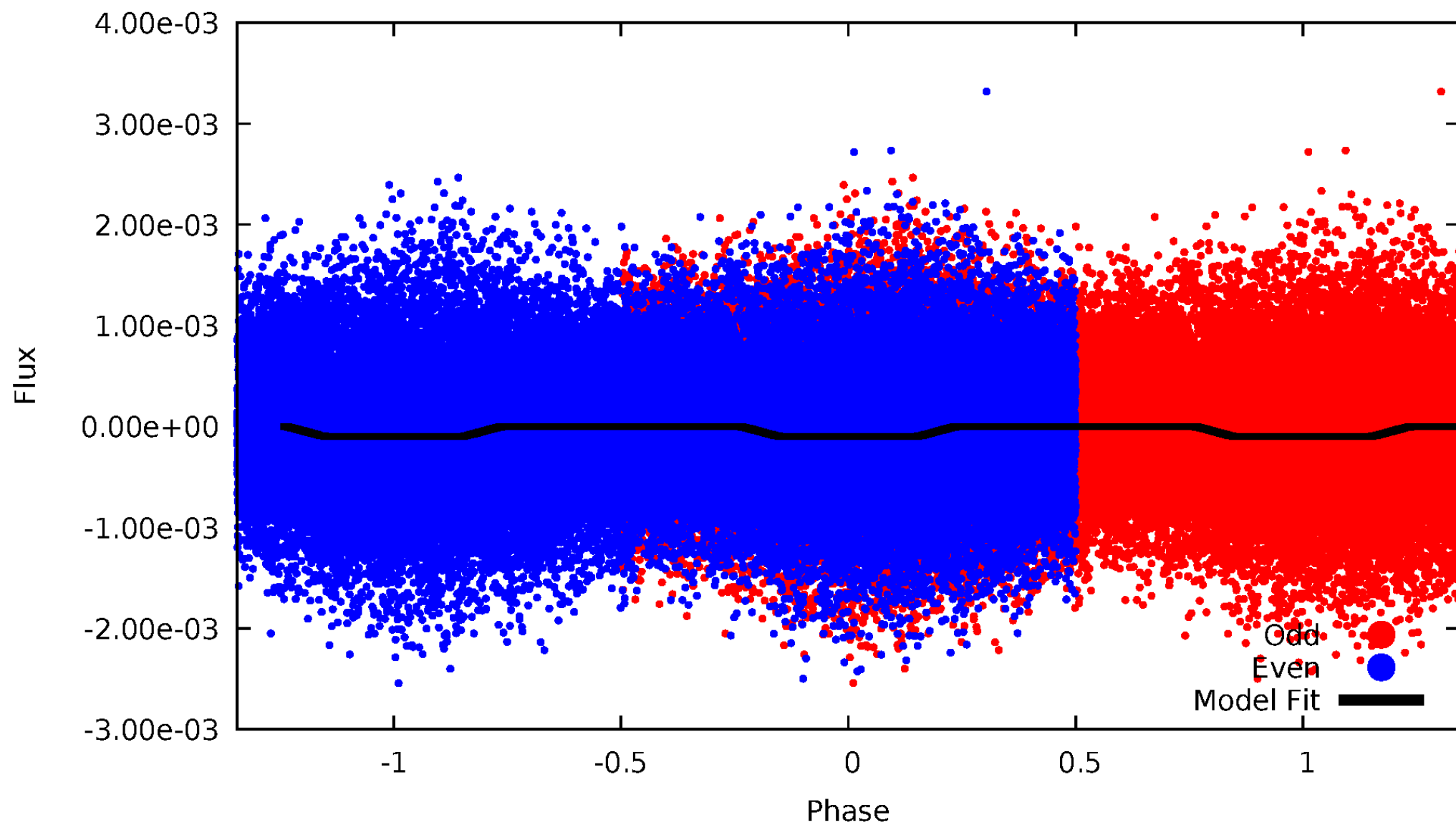
DV Odd/Even

TCE 002712821-01

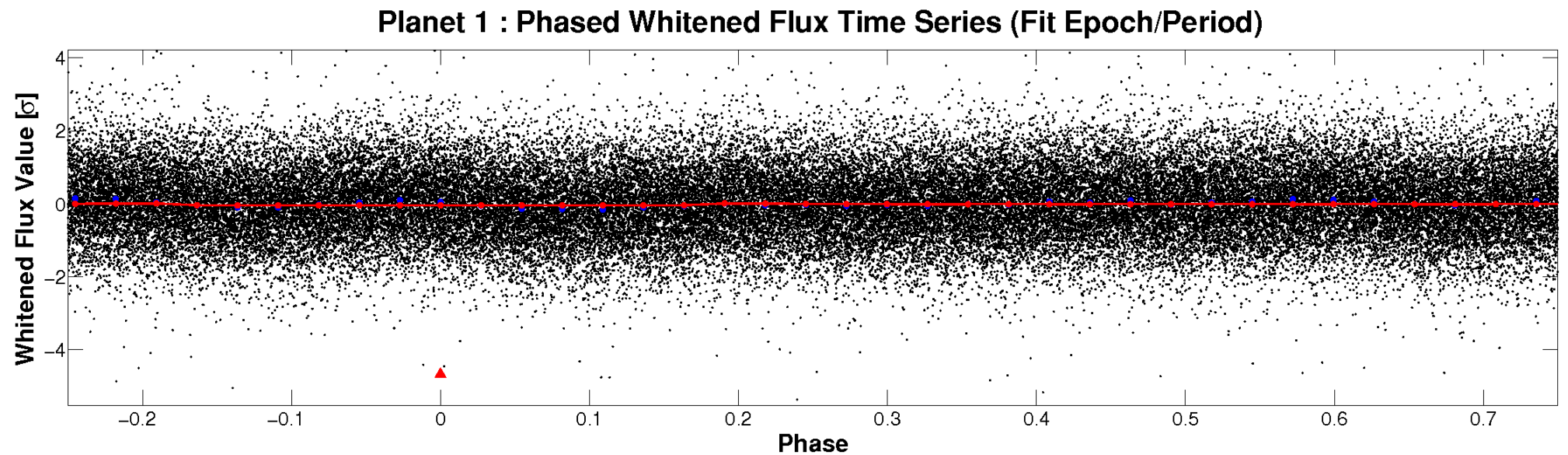
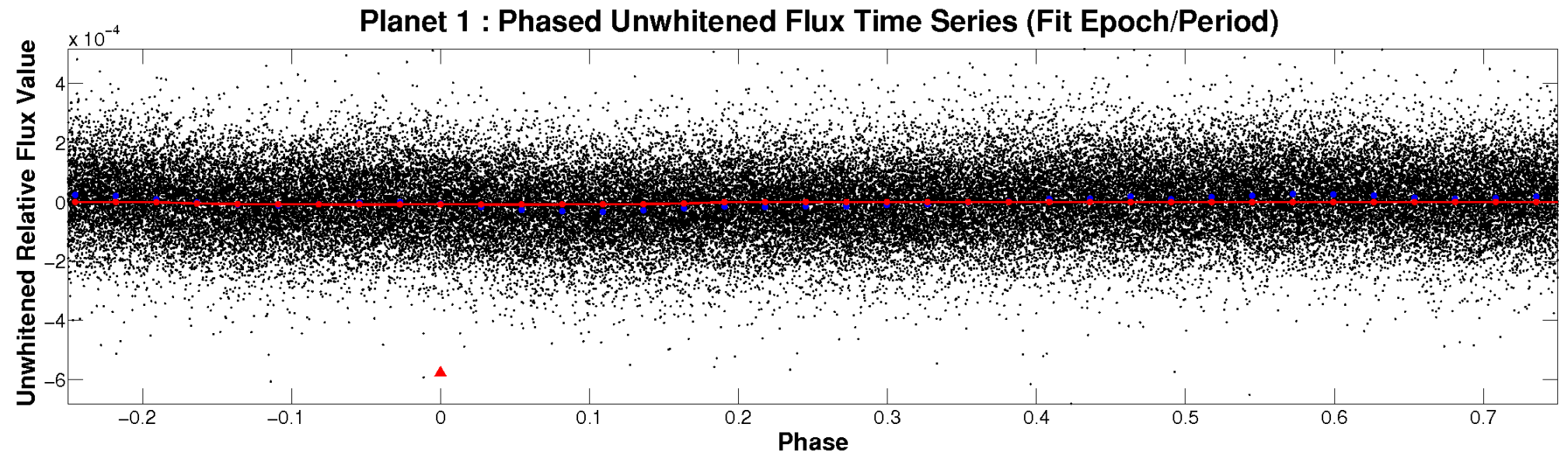


ALT Odd/Even

TCE 002712821-01

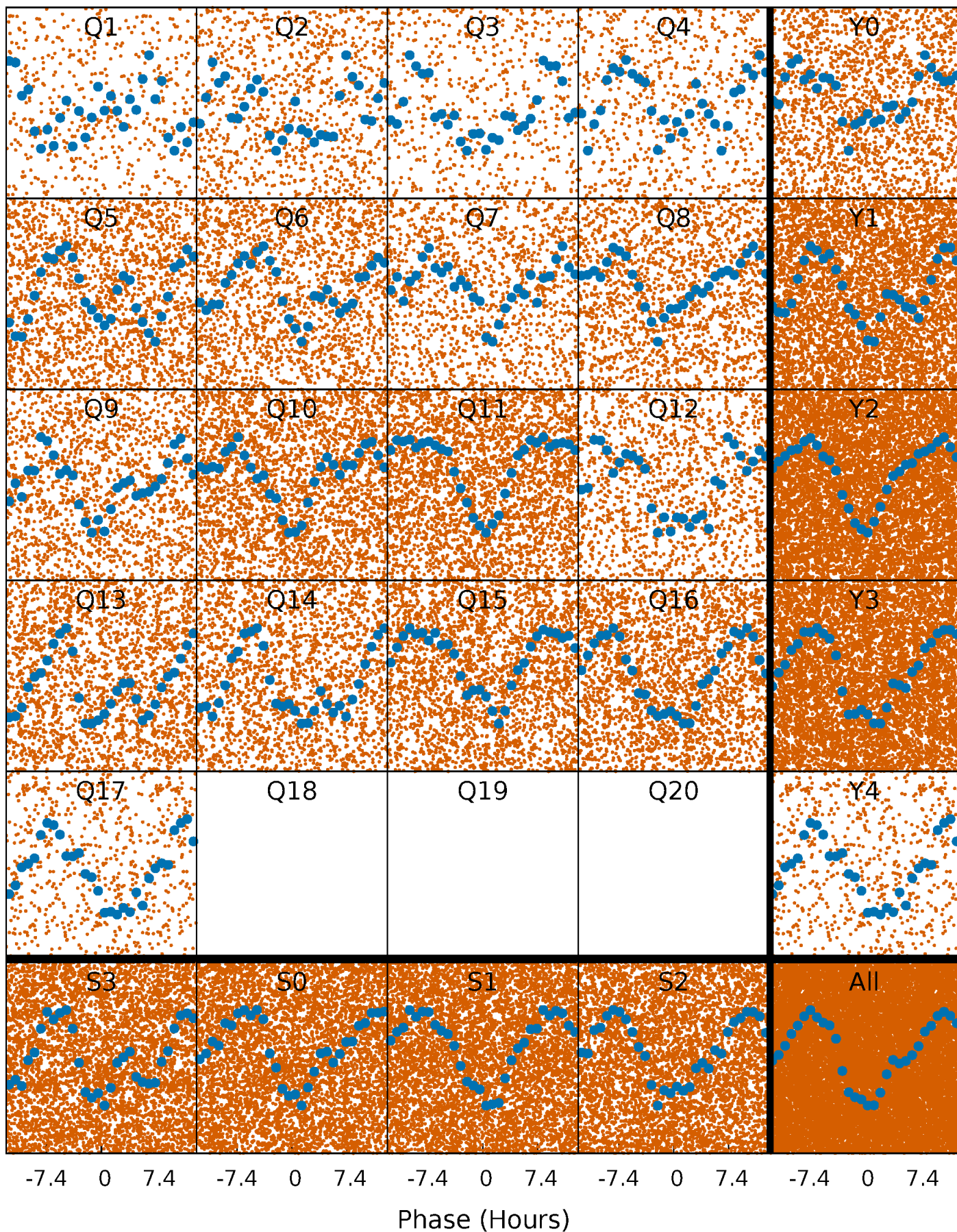


Non-Whitened Vs. Whitened Light Curve



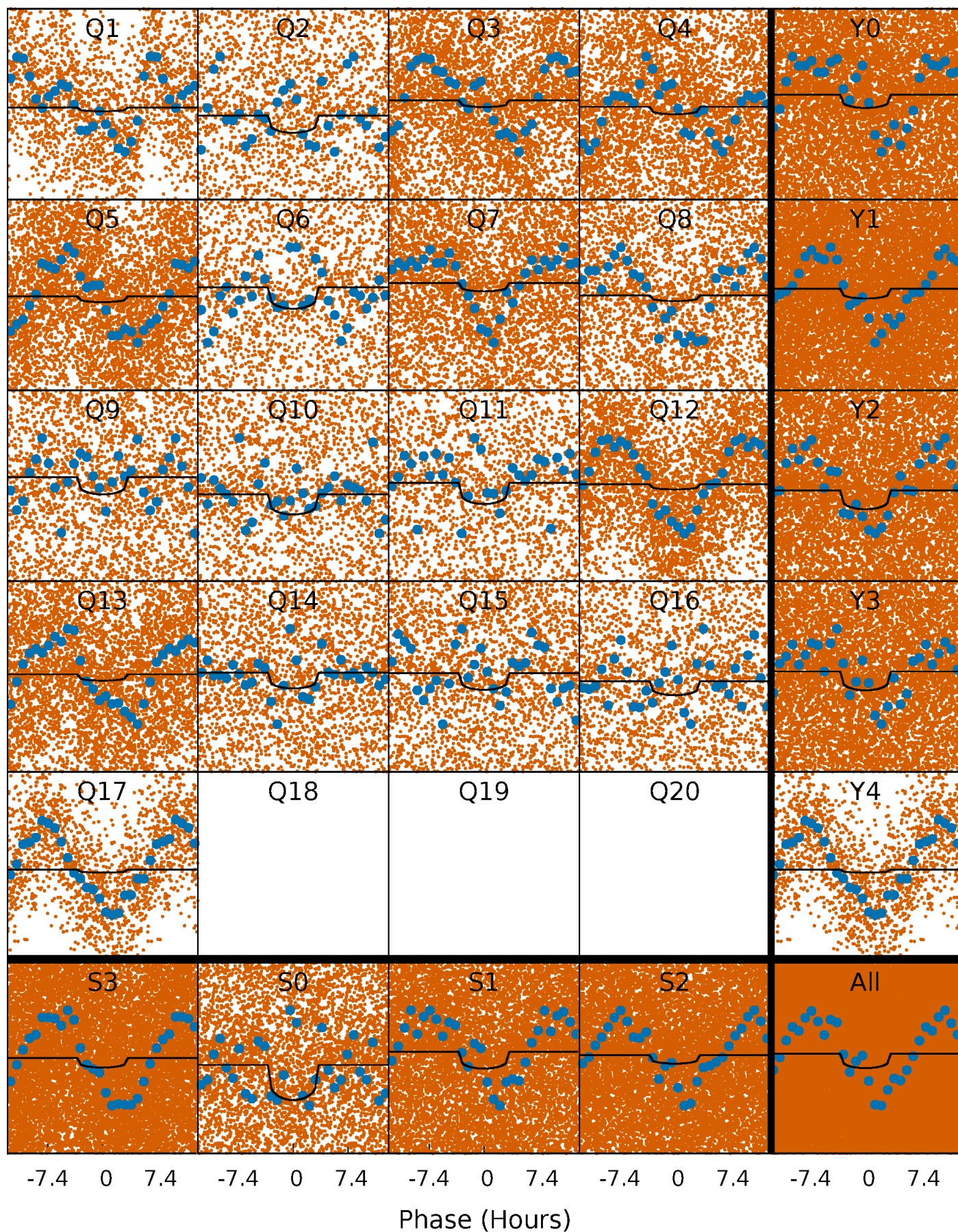
PDC Quarter-Phased Transit Curves

TCE 002712821-01 P= 0.750045 Days $T_0=132.006448$ (BKJD)



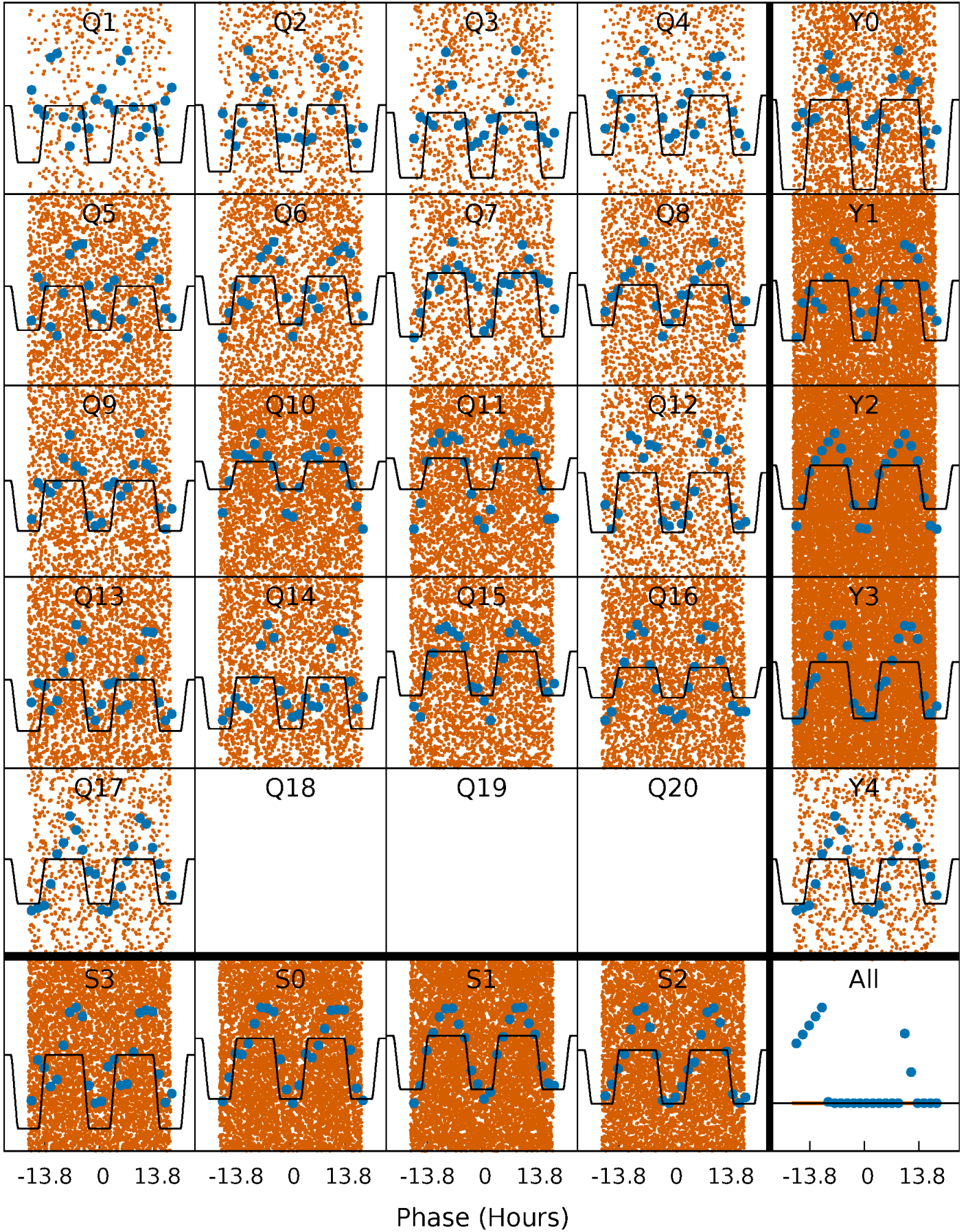
DV Quarter-Phased Transit Curves

TCE 002712821-01 P= 0.750045 Days $T_0=132.006448$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

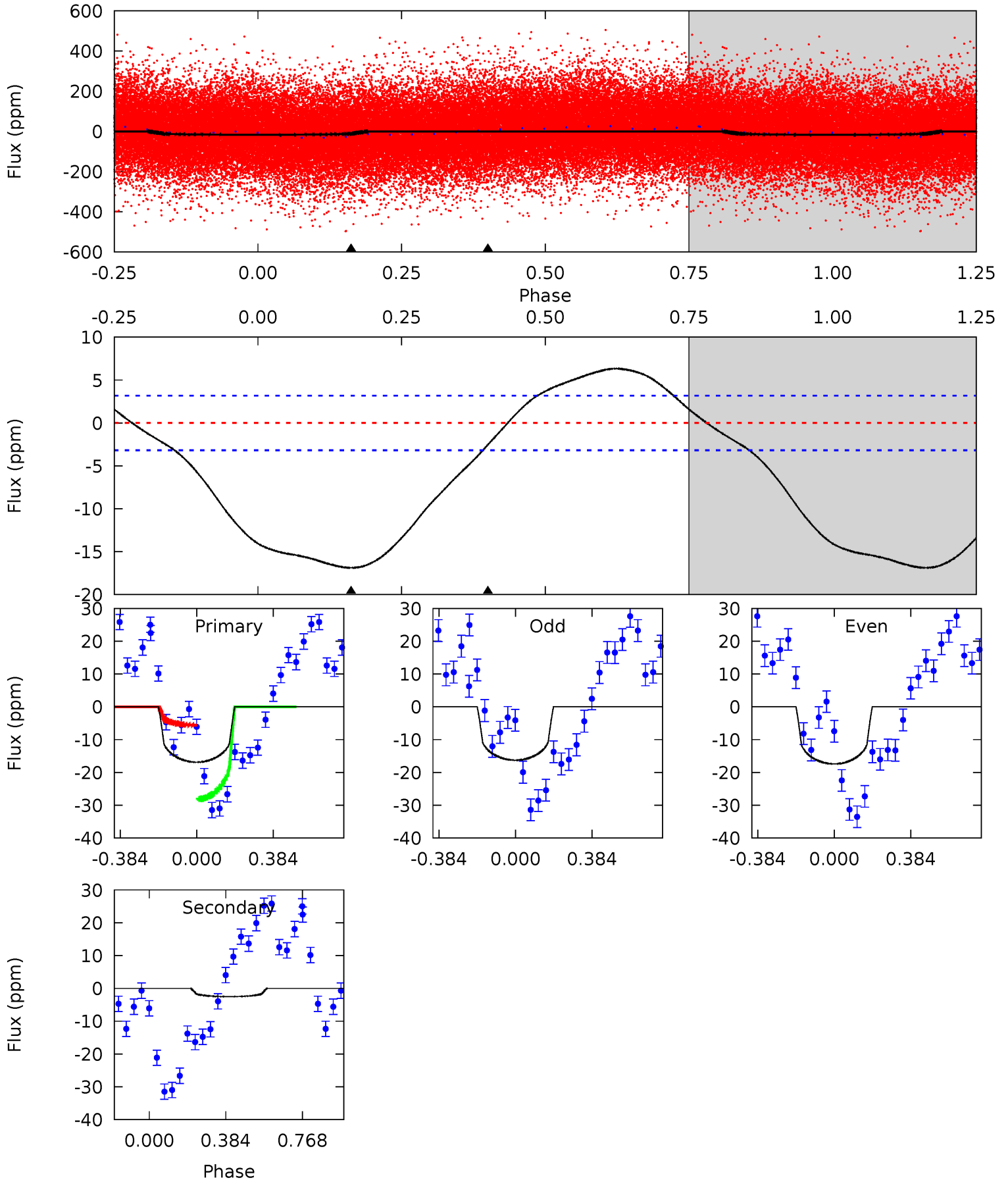
TCE 002712821-01 P= 0.750049 Days $T_0=132.007280$ (BKJD)



DV Model-Shift Uniqueness Test

002712821-01, $P = 0.750045$ Days, $E = 131.256403$ Days

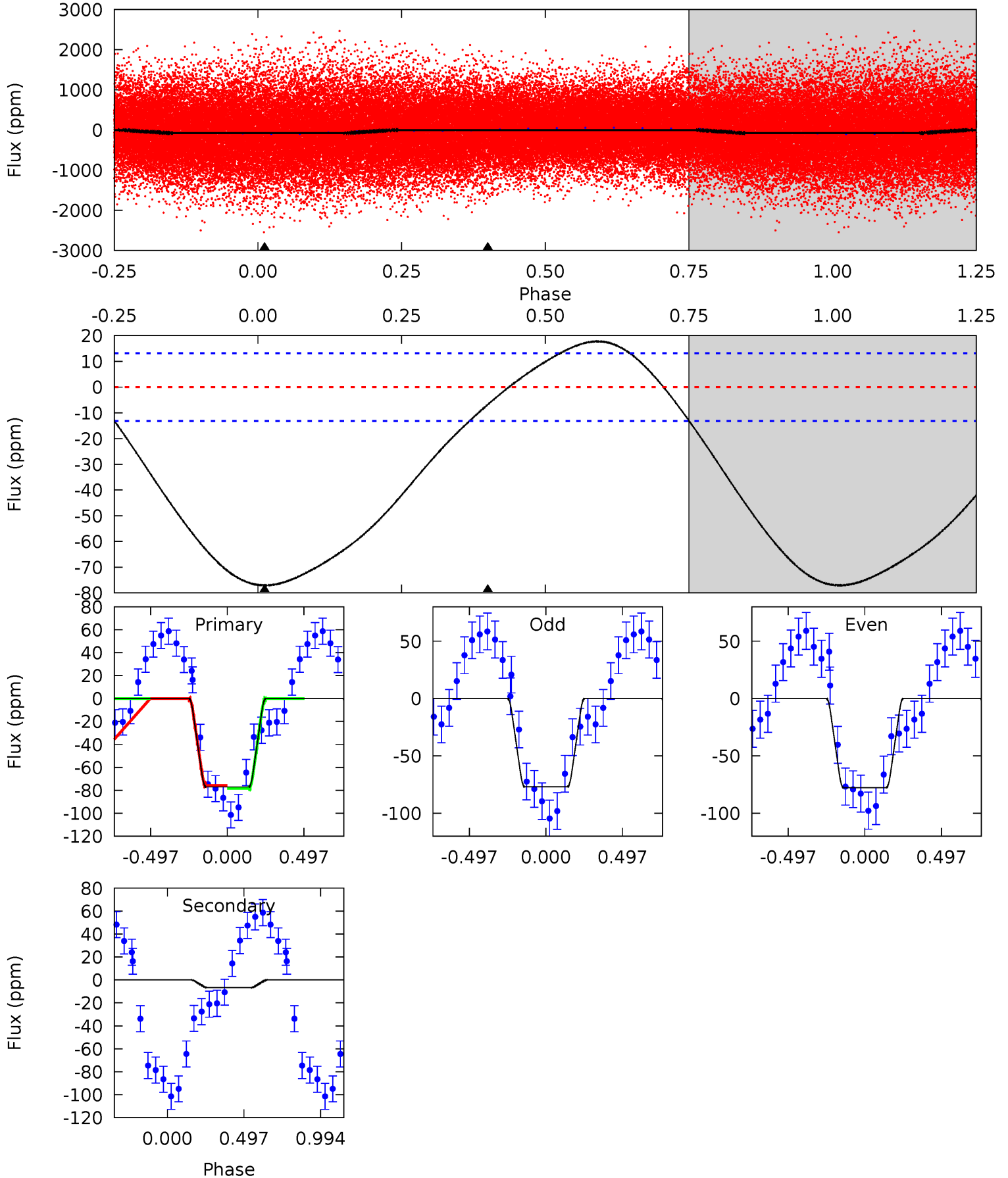
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.7	3.41	0	0	4.27	0.87	1.92	22.7	22.7	3.41	3.41	0.77	1.13	0.27	15.1



Alt Model-Shift Uniqueness Test

002712821-01, P = 0.750049 Days, E = 131.257231 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.7	2.17	0	0	4.22	0.68	2.59	24.7	24.7	2.17	2.17	0.12	0.84	0.19	0.33



Stellar Parameters For KIC 002712821

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7707^{+214}_{-349}	$3.881^{+0.253}_{-0.136}$	$0.210^{+0.150}_{-0.400}$	$2.719^{+0.509}_{-0.945}$	$2.049^{+0.249}_{-0.462}$	$0.144^{+0.250}_{-0.050}$
	+3%/-5%	+7%/-4%	+71%/-190%	+19%/-35%	+12%/-23%	+174%/-35%
Source	KIC0	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 002712821-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-3 ± 1	$0.90^{+0.78}_{-0.53}$	5387^{+372}_{-461}	4644^{+3561}_{-8436}	$0.658^{+3.082}_{-0.467}$
Alt.	-7 ± 3	$2.90^{+0.93}_{-0.83}$	5414^{+374}_{-480}	-3815^{+7392}_{-528}	$0.181^{+0.213}_{-0.097}$

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 $A_{obs} \gg 1.0$

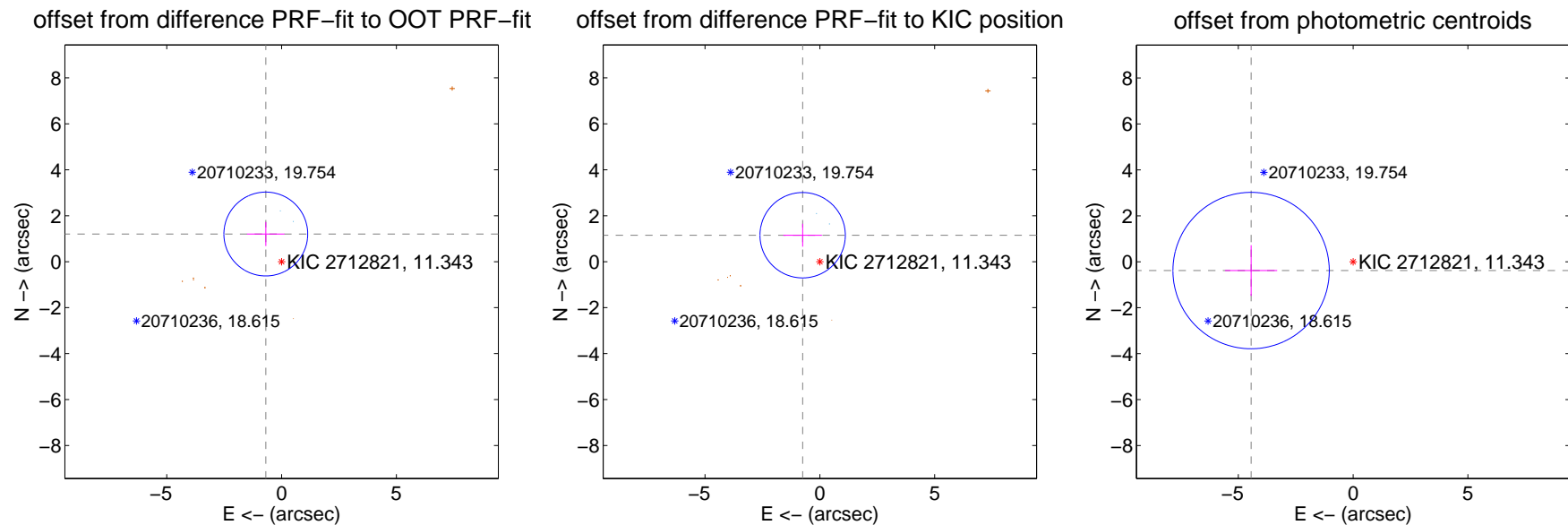
DV Centroid Data

Supplemental centroid analysis for 002712821-01. **Kepler magnitude: 11.34.** Transit SNR 6.96

There are 2 quarters with good PRF difference image offsets

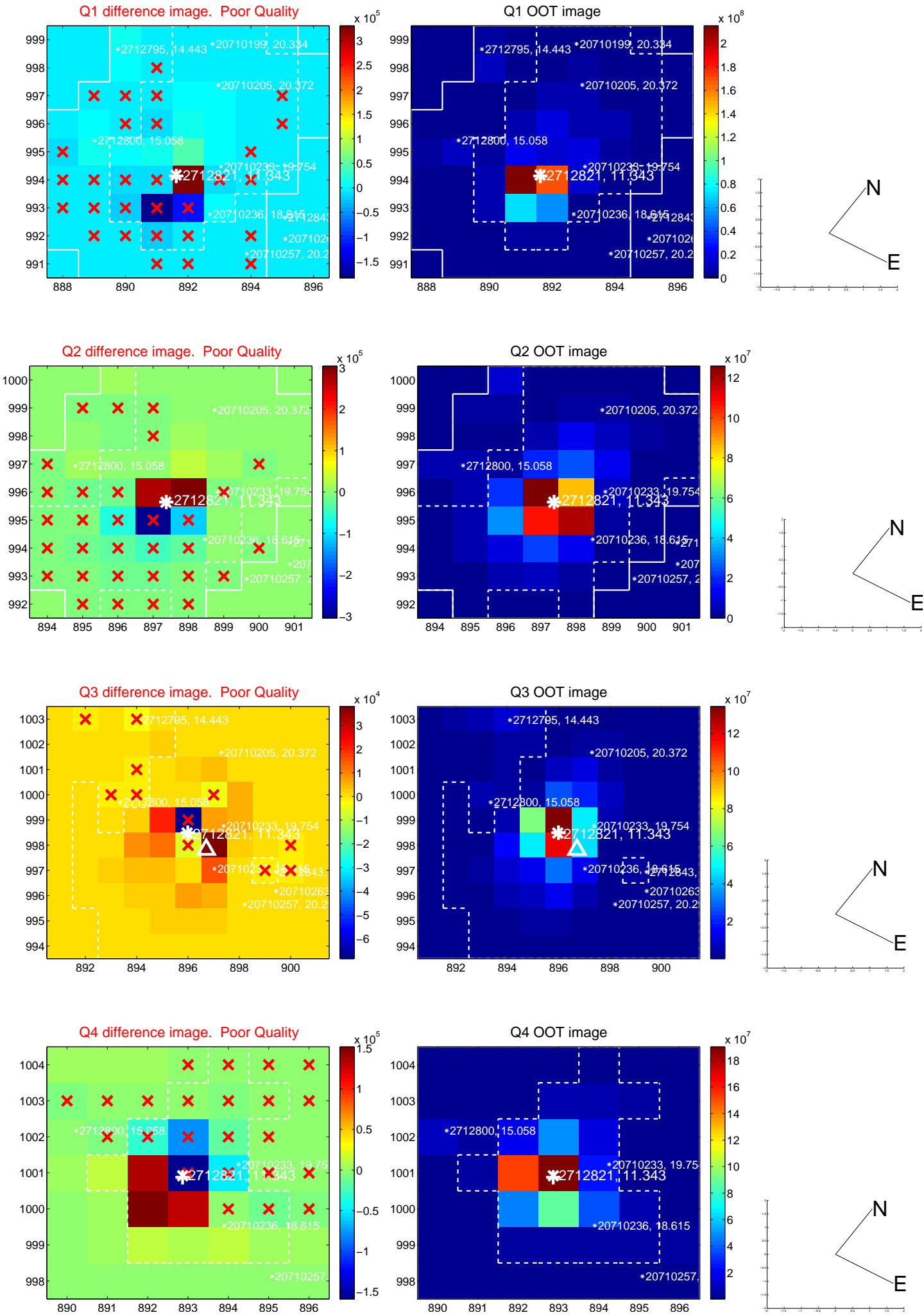
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.386 ± 0.608	2.28	0.687 ± 0.816	1.204 ± 0.523
PRF-fit source offset from KIC position	1.374 ± 0.619	2.22	0.749 ± 0.839	1.152 ± 0.498
photometric centroid source offset	4.46 ± 1.13	3.93	4.44 ± 1.13	-0.38 ± 1.10

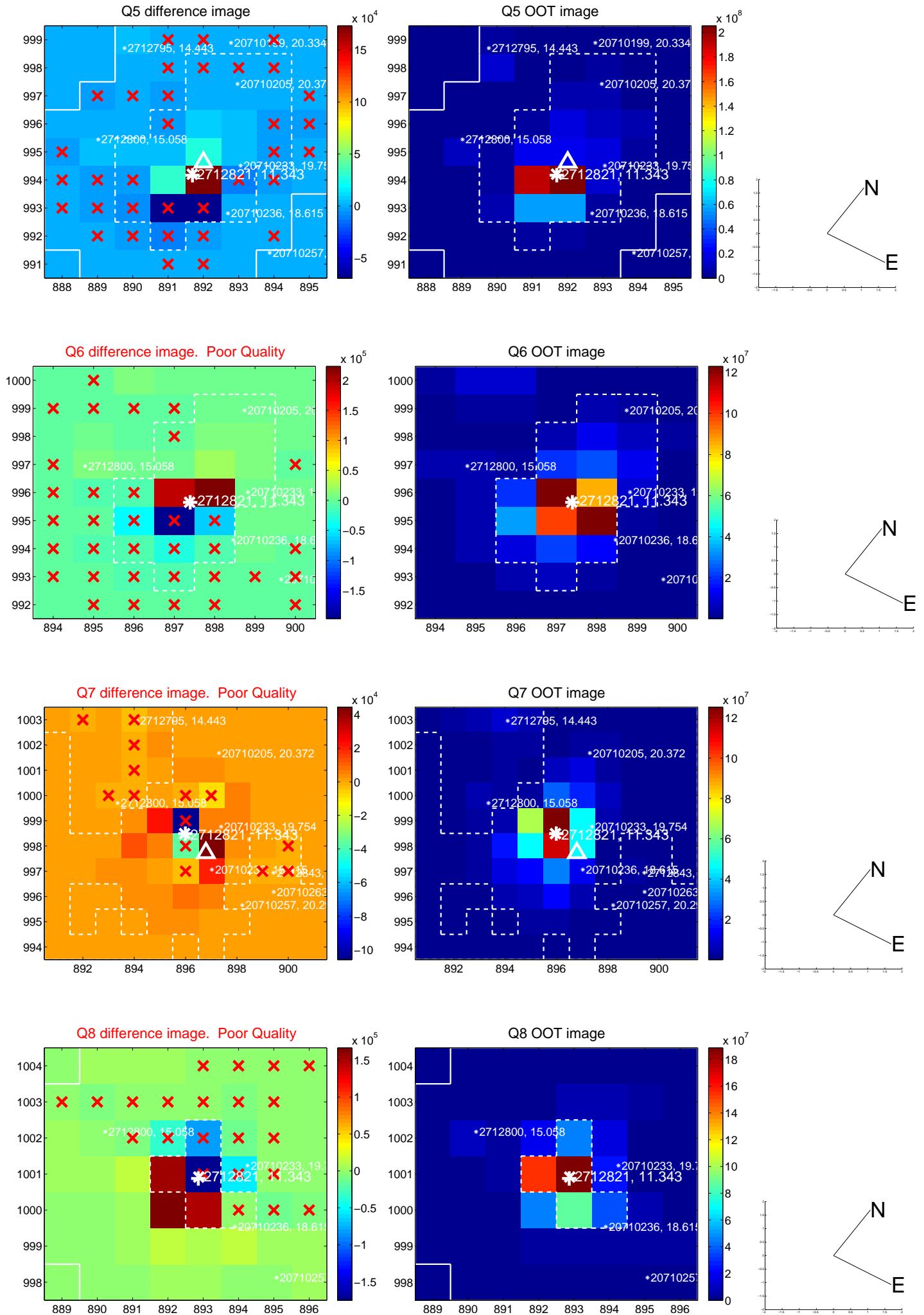


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

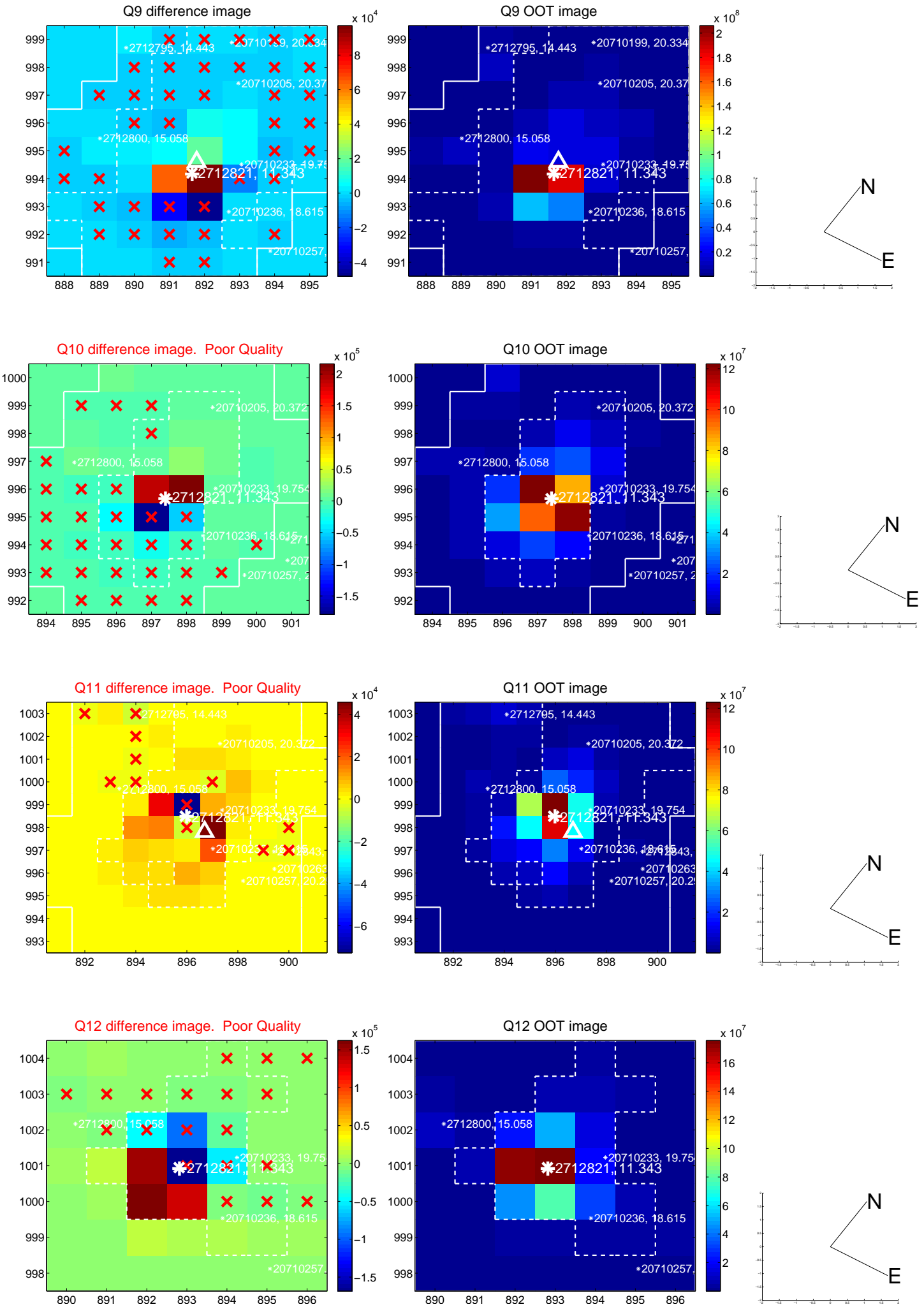
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



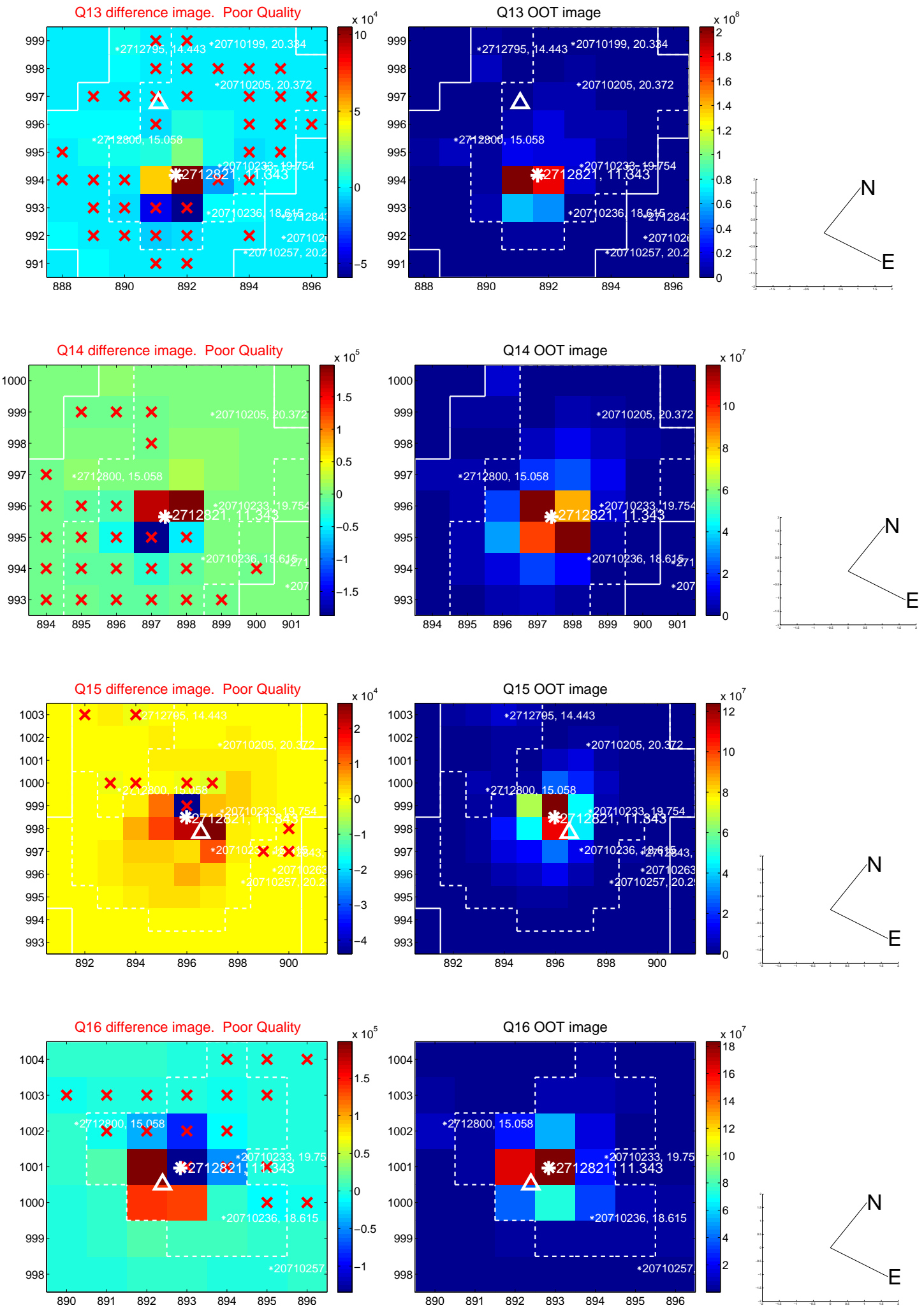
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



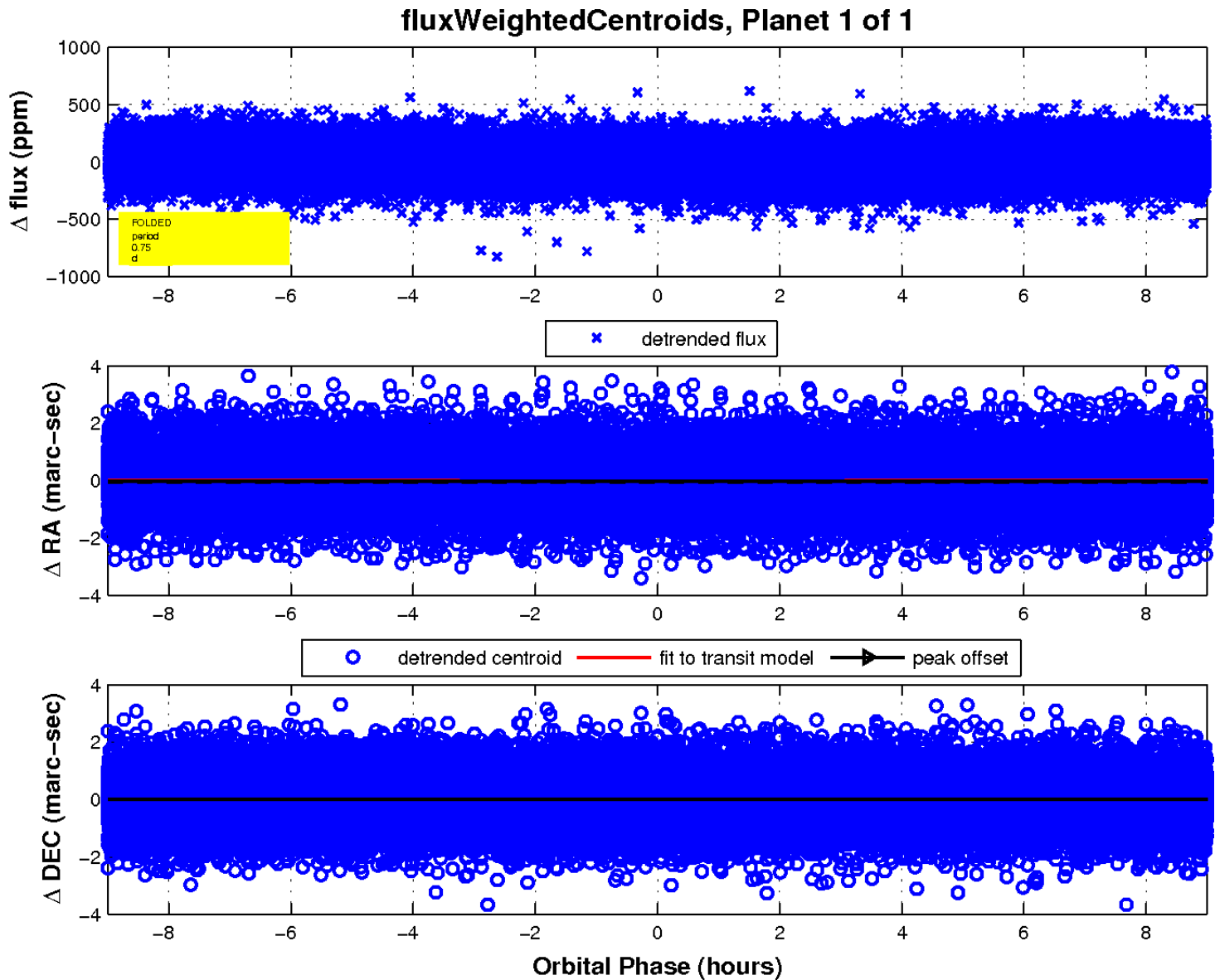
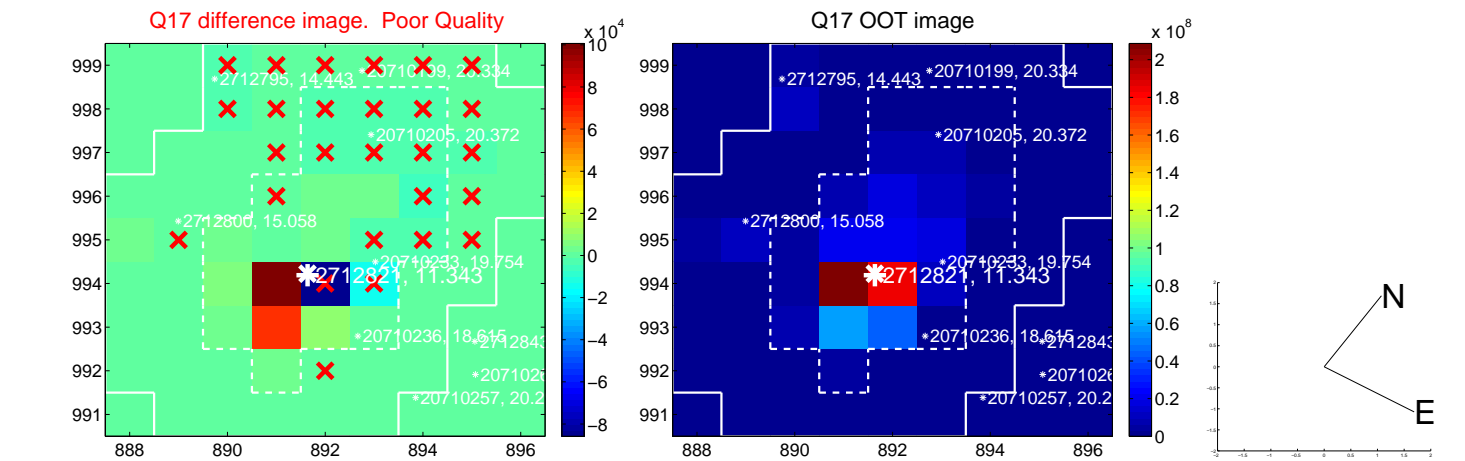
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

