

KIC 011721444

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})
011721444-01	OBS	No	4.025238	134.782259	45.7	24.828	9.2	10.7	0.58	4830	0.42	95.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011721444-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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

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

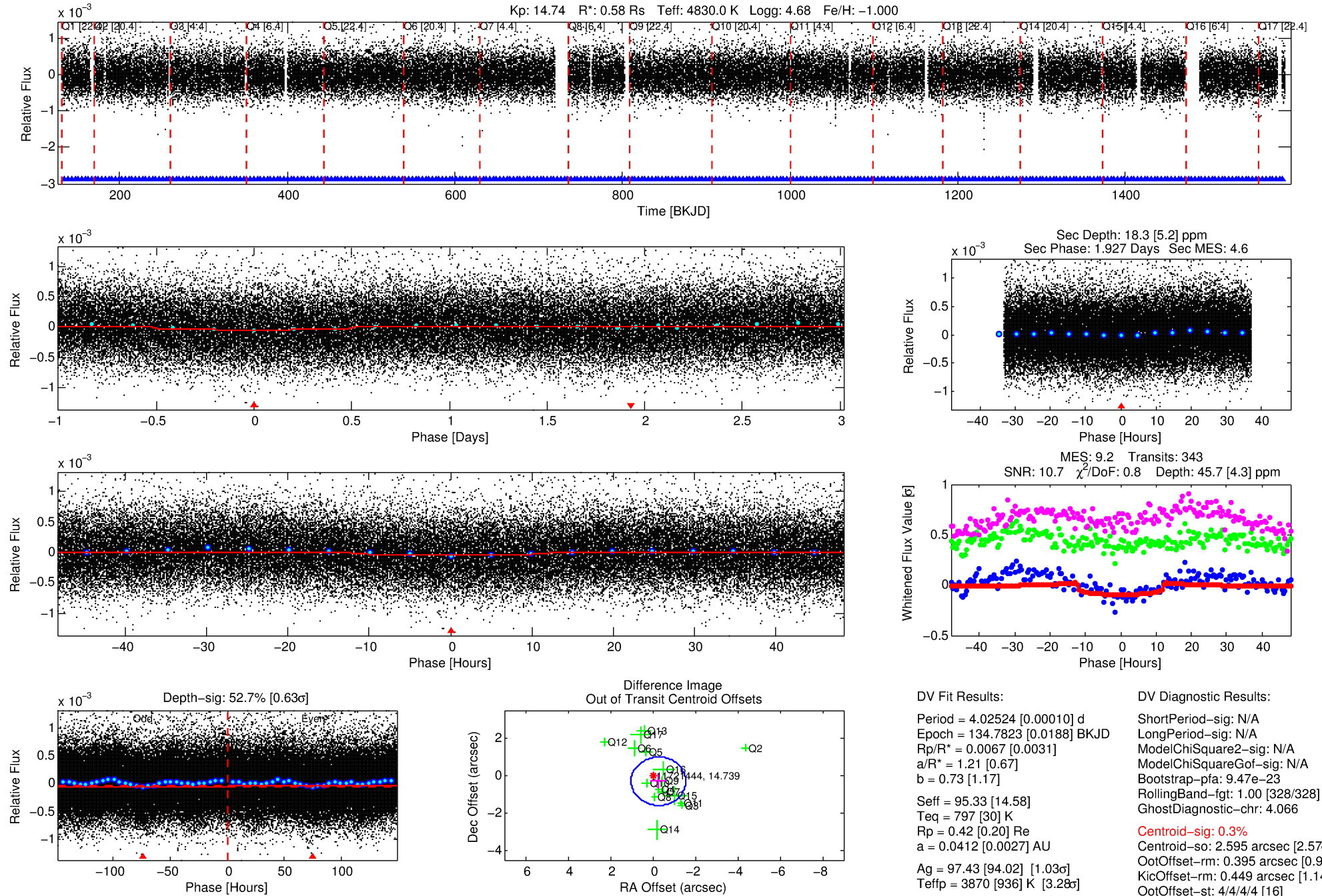
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011721444-01

No Significant Match Found

DV One-Page Summary

KIC: 11721444 Candidate: 1 of 1 Period: 4.025 d



DV Fit Results:

Period = 4.02524 [0.00010] d
Epoch = 134.7823 [0.0188] BKJD
Rp/R* = 0.0067 [0.0031]
a/R* = 1.21 [0.67]
b = 0.73 [1.17]
Seff = 95.33 [14.58]
Teff = 797 [30] K
Rp = 0.42 [0.20] Re
a = 0.0412 [0.0027] AU
Ag = 97.43 [94.02] [1.03 σ]
Teffp = 3870 [936] K [3.28 σ]

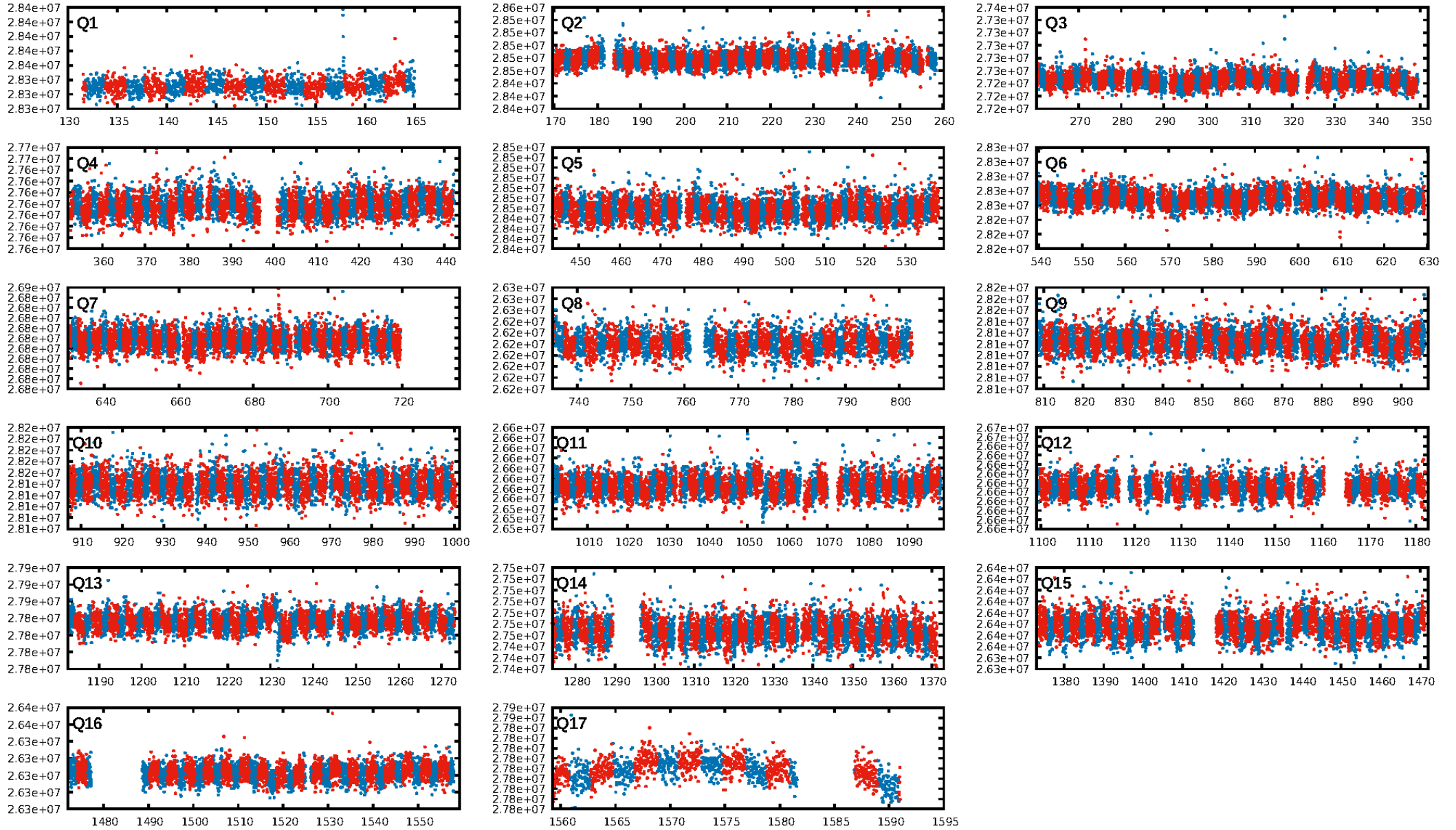
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 9.47e-23
RollingBand-fgt: 1.00 [328/328]
GhostDiagnostic-chr: 4.066
Centroid-sig: 0.3%
Centroid-so: 2.595 arcsec [2.57 σ]
OotOffset-rm: 0.395 arcsec [0.92 σ]
KicOffset-rm: 0.449 arcsec [1.14 σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.75 [12/16]
DiffImageOverlap-fno: 1.00 [17/17]

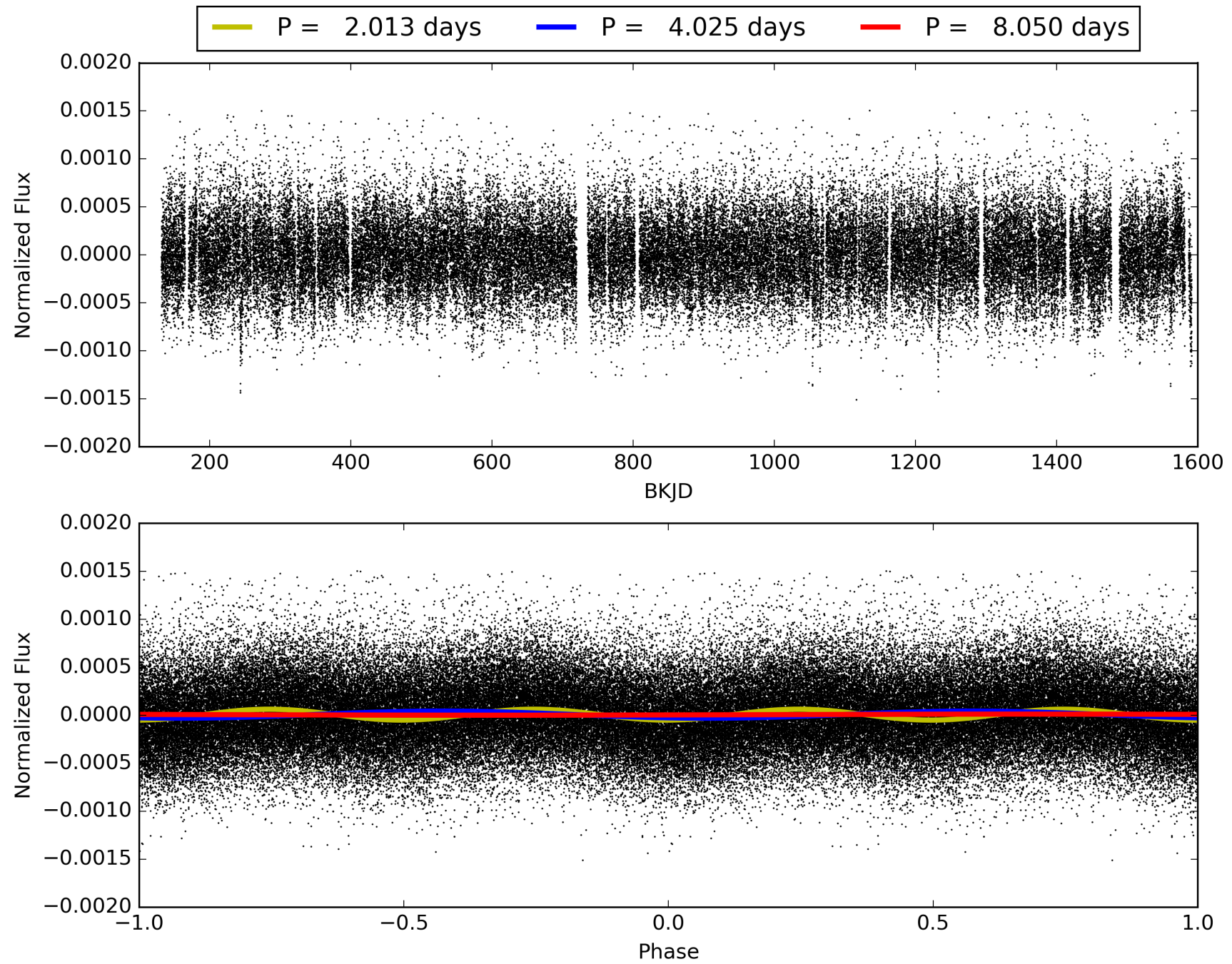
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:20:33 Z

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

TCE 011721444-01, PDC Light Curves

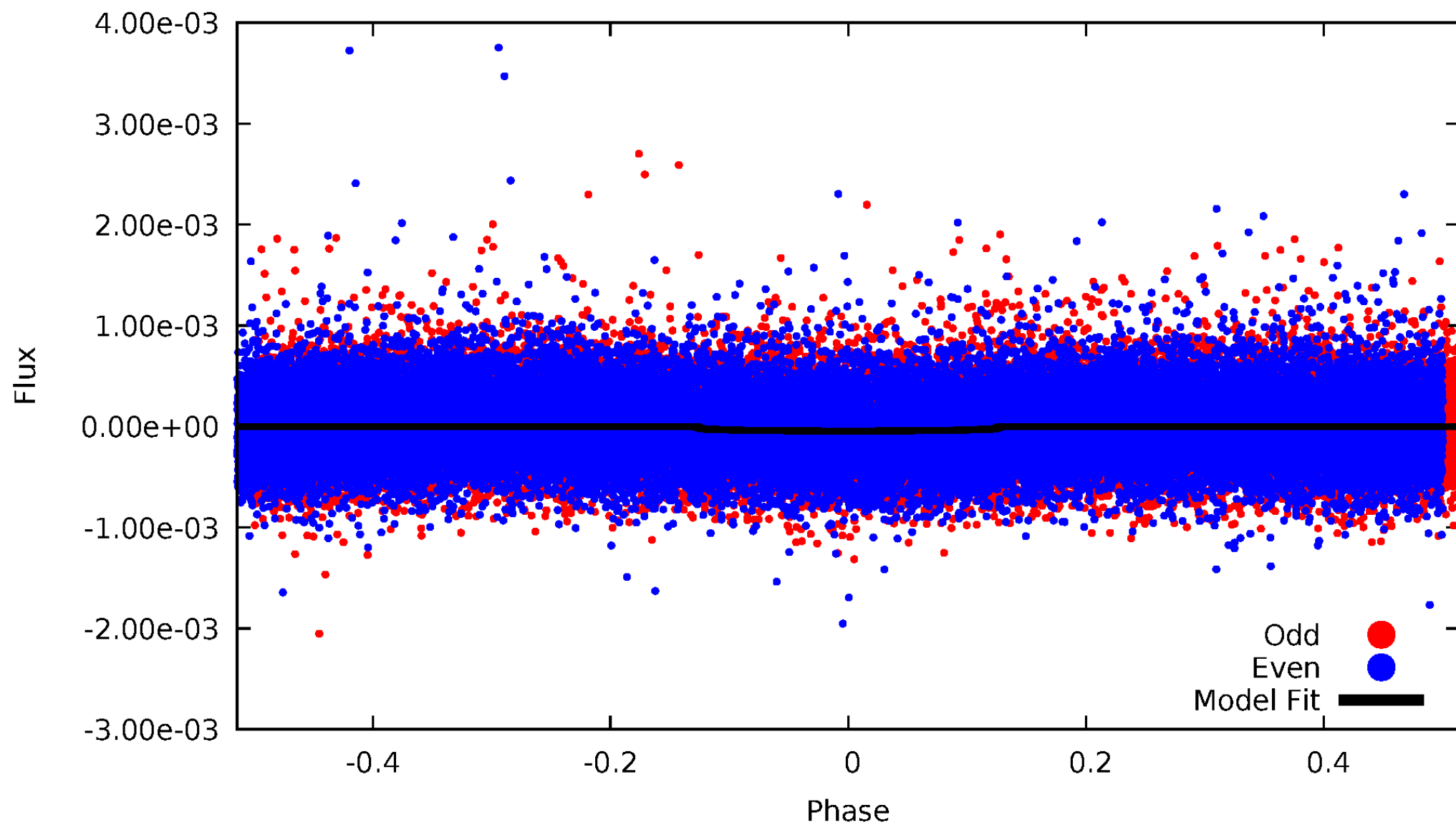


TCE 011721444-01



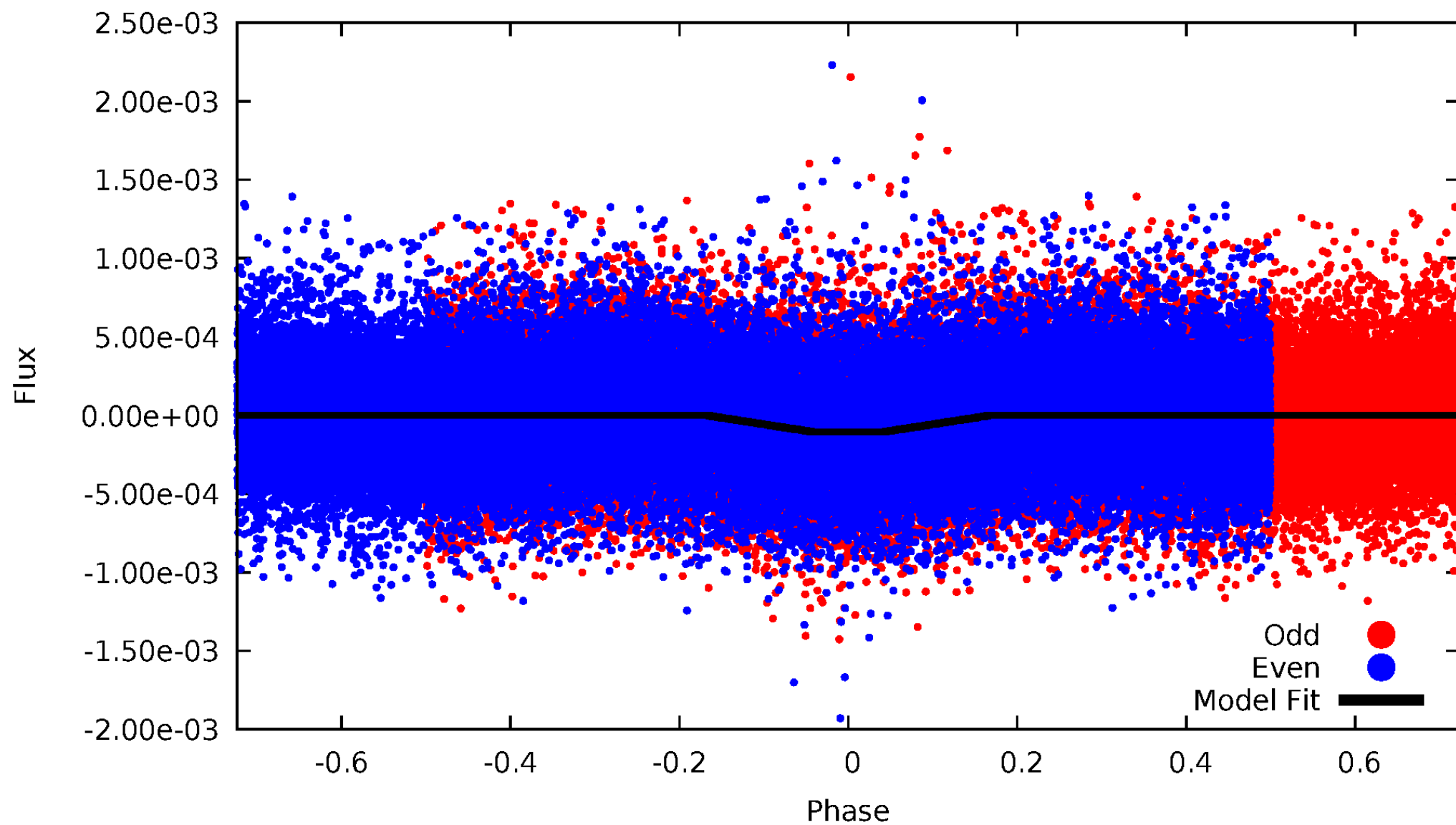
DV Odd/Even

TCE 011721444-01



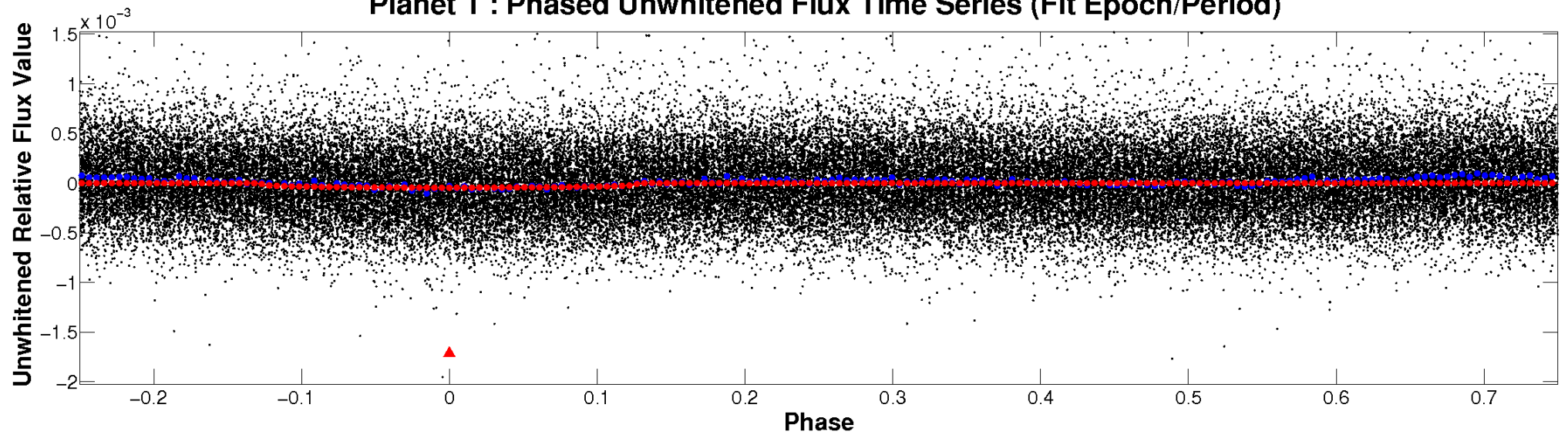
ALT Odd/Even

TCE 011721444-01

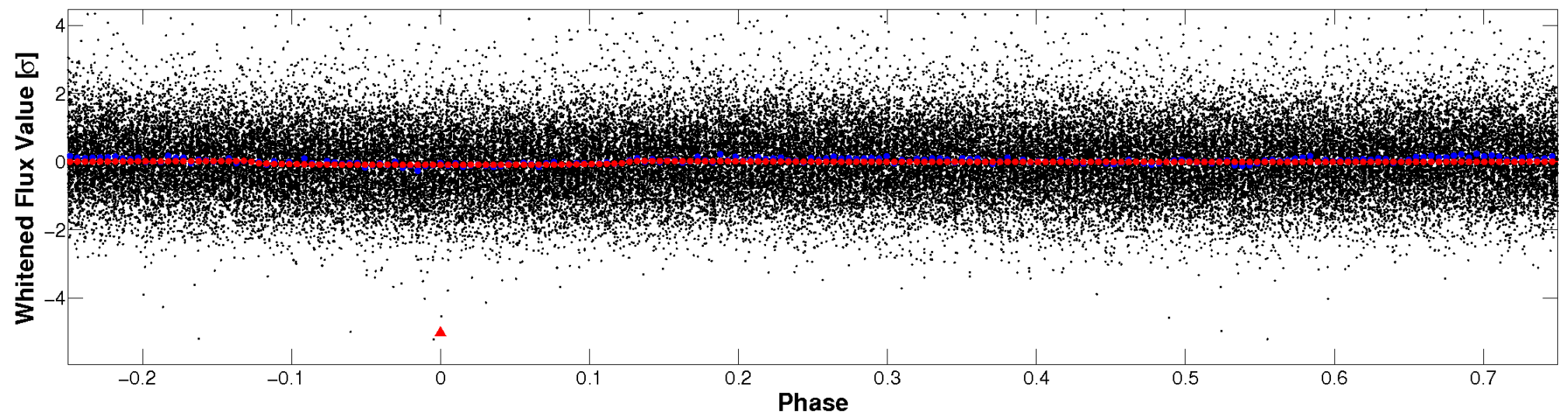


Non-Whitened Vs. Whitened Light Curve

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

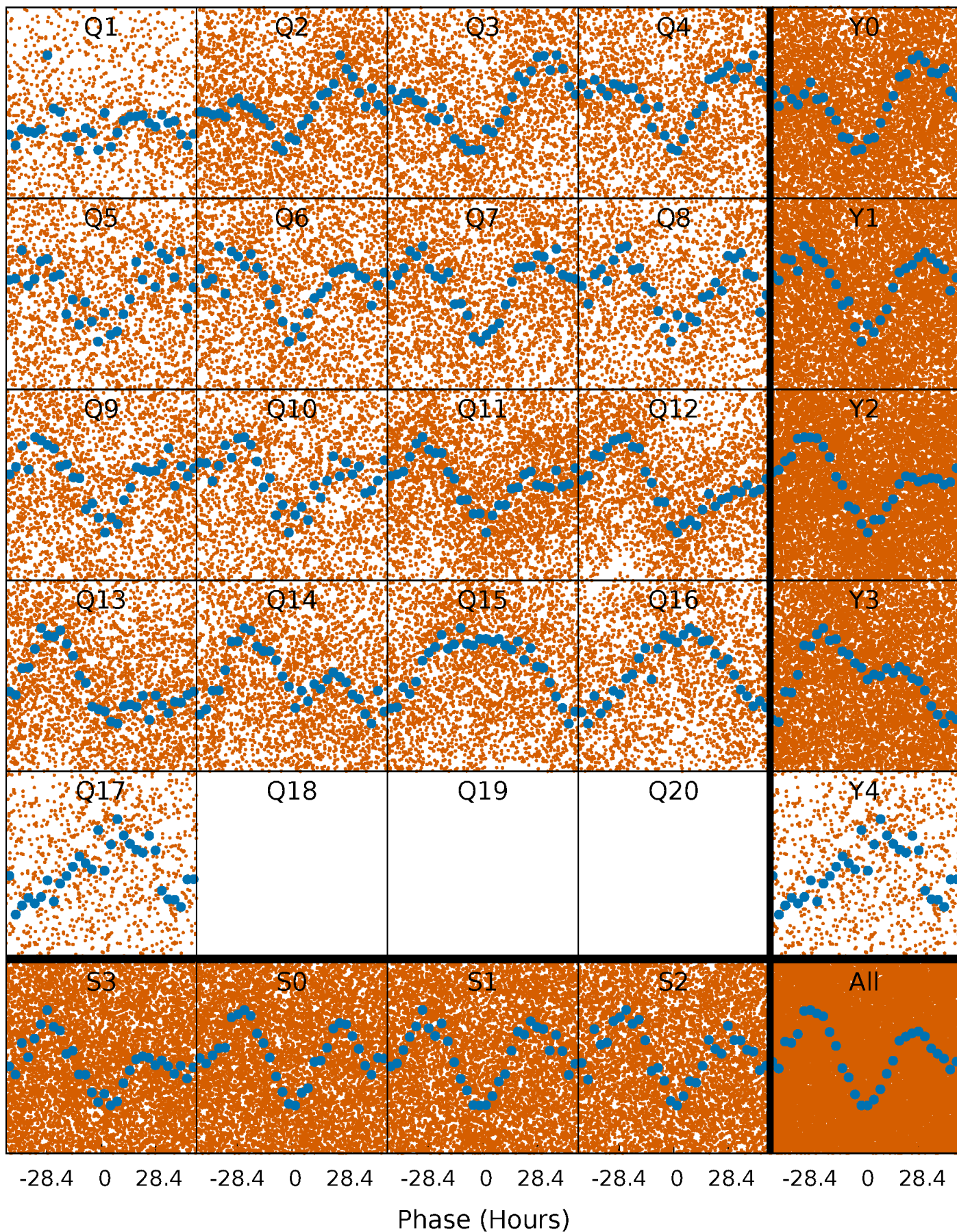


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



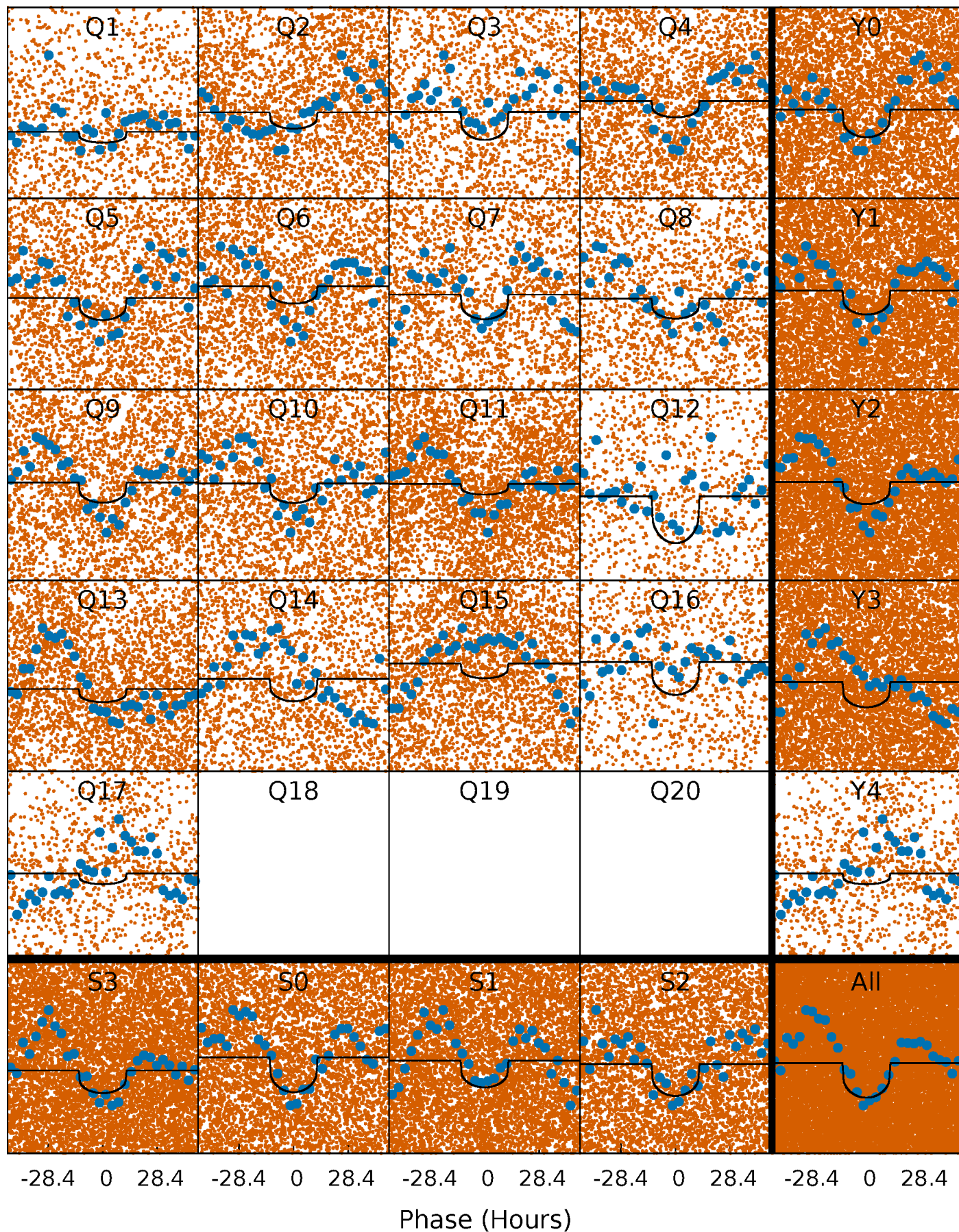
PDC Quarter-Phased Transit Curves

TCE 011721444-01 P= 4.025238 Days $T_0=134.782259$ (BKJD)



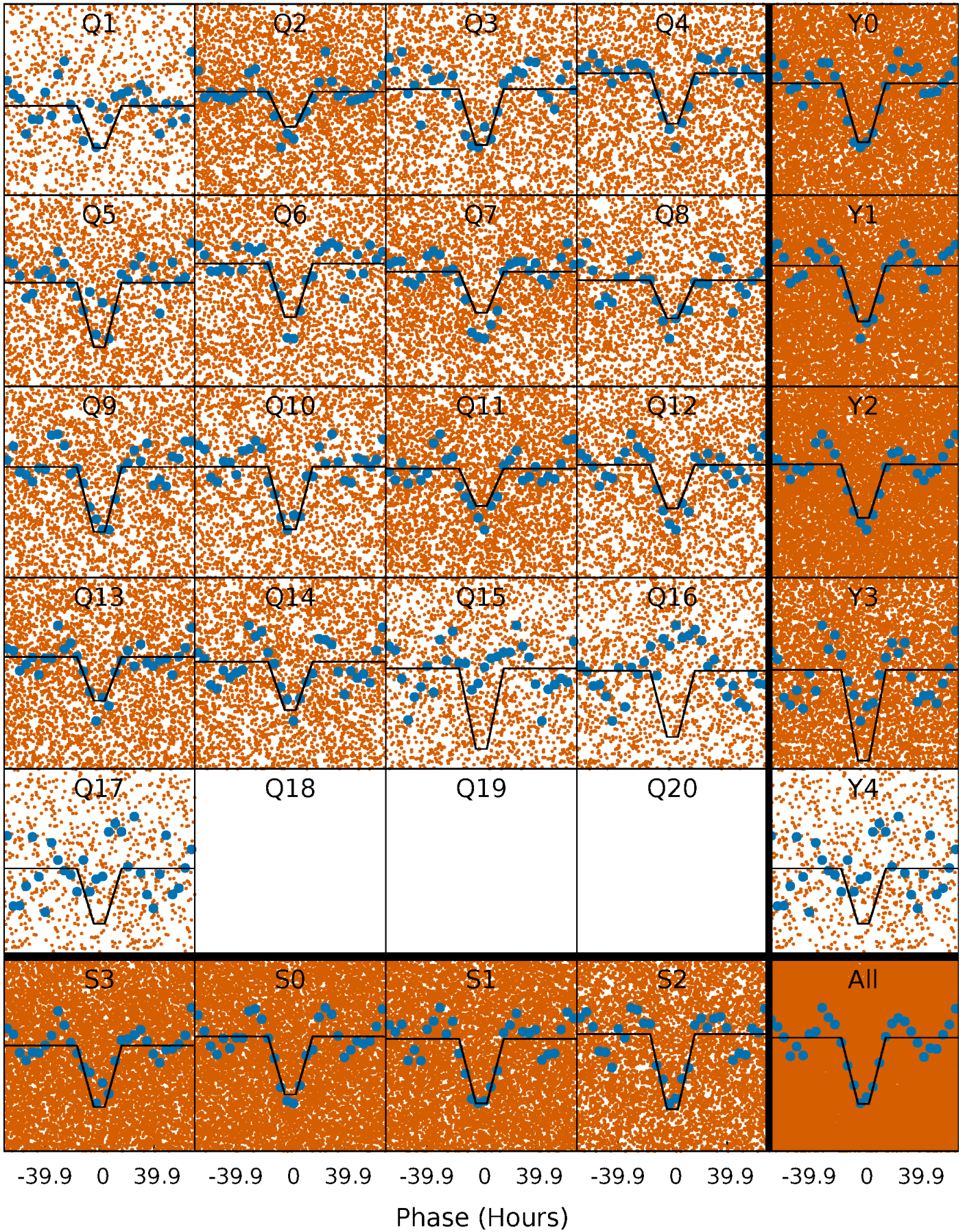
DV Quarter-Phased Transit Curves

TCE 011721444-01 P= 4.025238 Days $T_0=134.782259$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

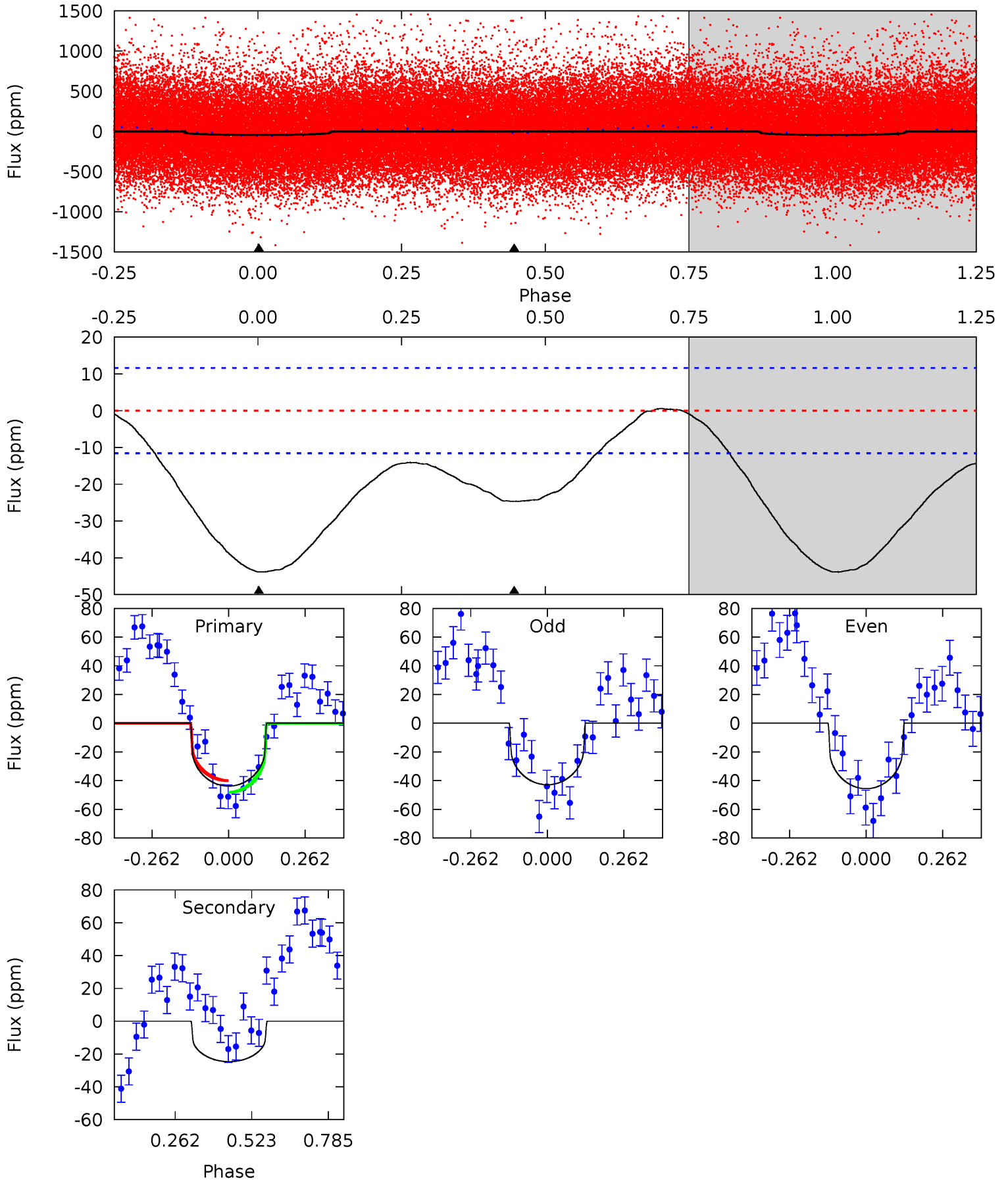
TCE 011721444-01 P= 4.024948 Days $T_0=134.835638$ (BKJD)



DV Model-Shift Uniqueness Test

011721444-01, P = 4.025238 Days, E = 130.757021 Days

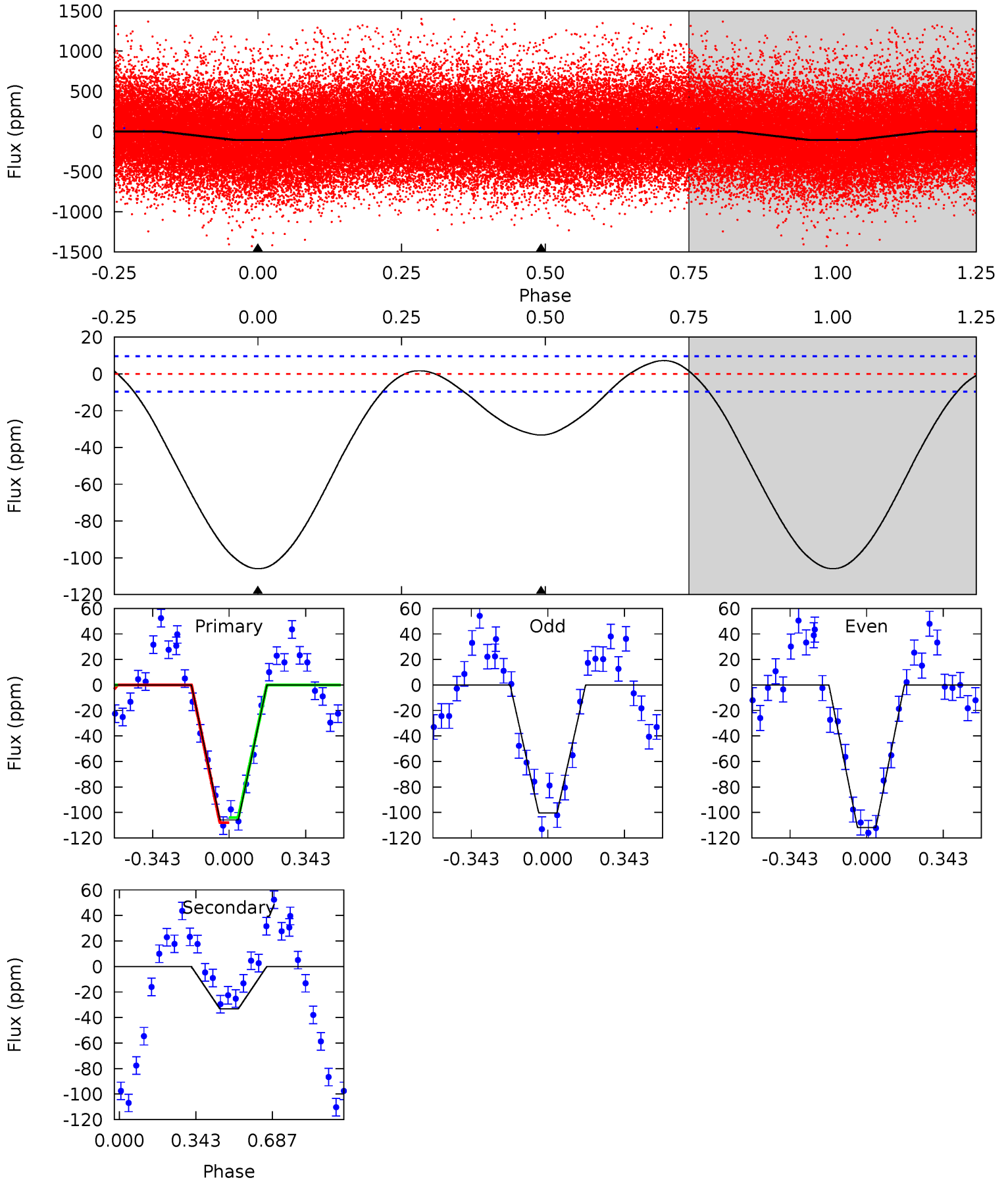
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.5	9.29	0	0	4.36	1.12	0.40	16.5	16.5	9.29	9.29	0.51	0.90	0.01	1.56



Alt Model-Shift Uniqueness Test

011721444-01, P = 4.024948 Days, E = 130.810690 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
47.3	14.9	0	0	4.30	0.95	1.70	47.3	47.3	14.9	14.9	2.55	1.13	0.06	0.89



Stellar Parameters For KIC 011721444

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4830^{+145}_{-145}	$4.677^{+0.052}_{-0.032}$	$-1.000^{+0.300}_{-0.300}$	$0.576^{+0.044}_{-0.040}$	$0.574^{+0.049}_{-0.021}$	$4.239^{+0.901}_{-0.570}$
	+3%/-3%	+1%/-1%	+30%/-30%	+8%/-7%	+9%/-4%	+21%/-13%
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 011721444-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-25 ± 3	$0.42^{+0.18}_{-0.17}$	1108^{+40}_{-38}	4258^{+1080}_{-520}	128^{+243}_{-66}
Alt.	-33 ± 2	$0.65^{+0.20}_{-0.21}$	1107^{+39}_{-36}	3879^{+580}_{-364}	75^{+89}_{-32}

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

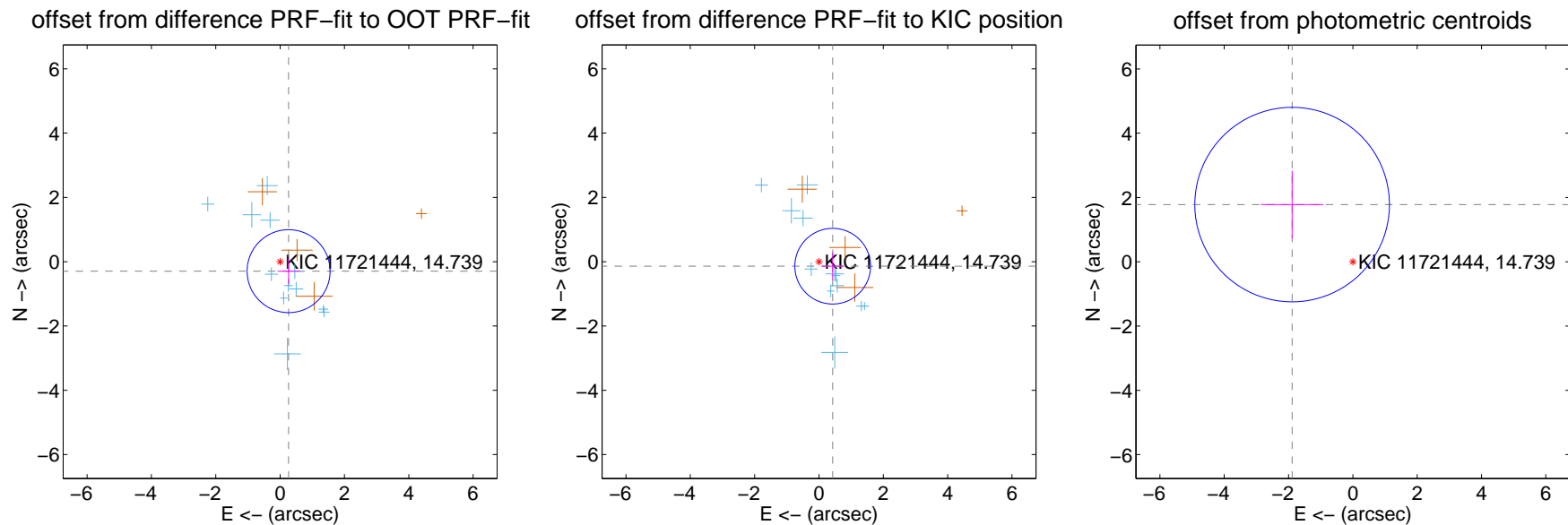
DV Centroid Data

Supplemental centroid analysis for 011721444-01. Kepler magnitude: 14.74. Transit SNR 10.66

There are 12 quarters with good PRF difference image offsets

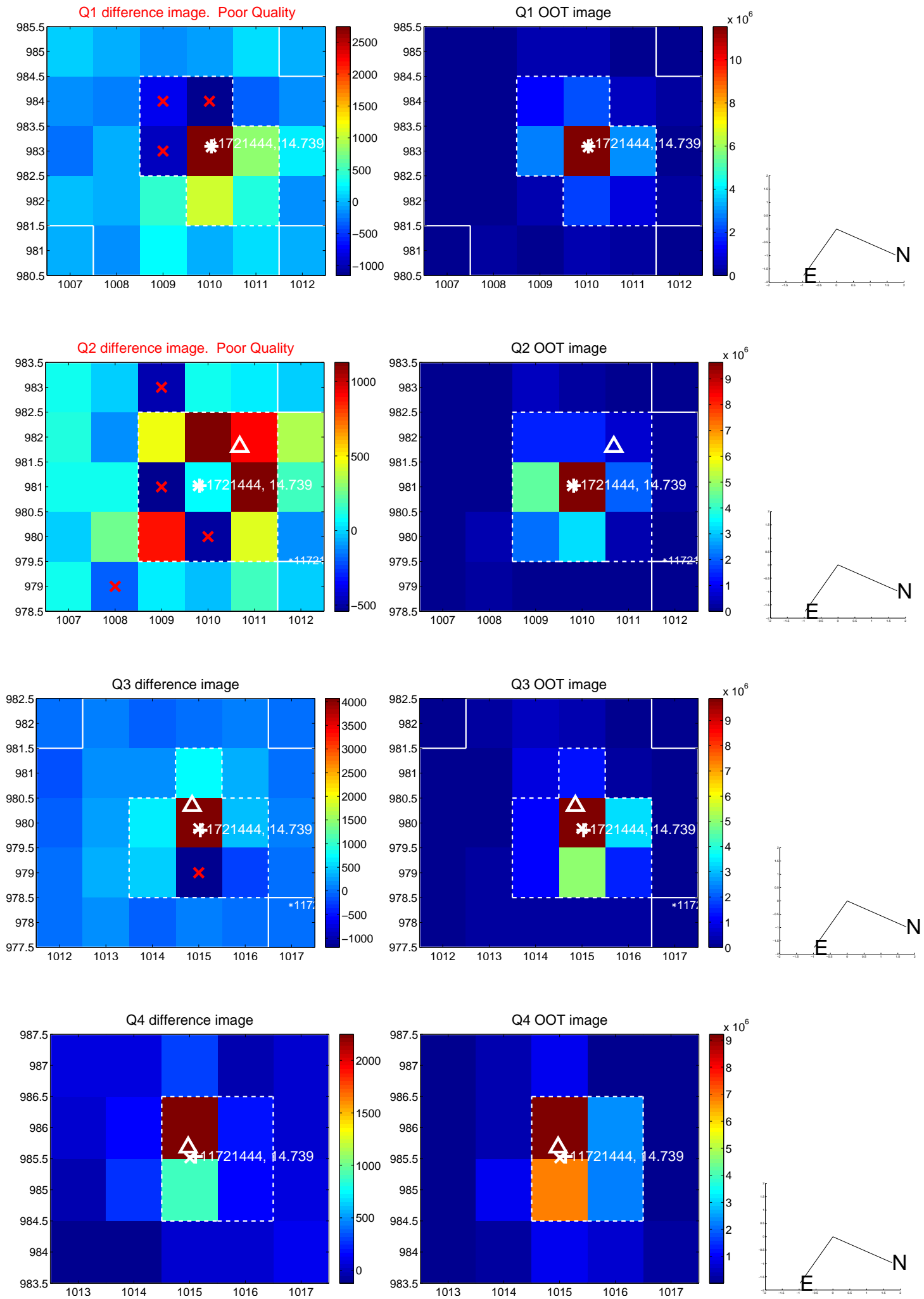
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.395 ± 0.430	0.92	-0.264 ± 0.347	-0.294 ± 0.393
PRF-fit source offset from KIC position	0.449 ± 0.392	1.14	-0.426 ± 0.346	-0.140 ± 0.423
photometric centroid source offset	2.59 ± 1.01	2.57	1.89 ± 0.97	1.78 ± 1.05

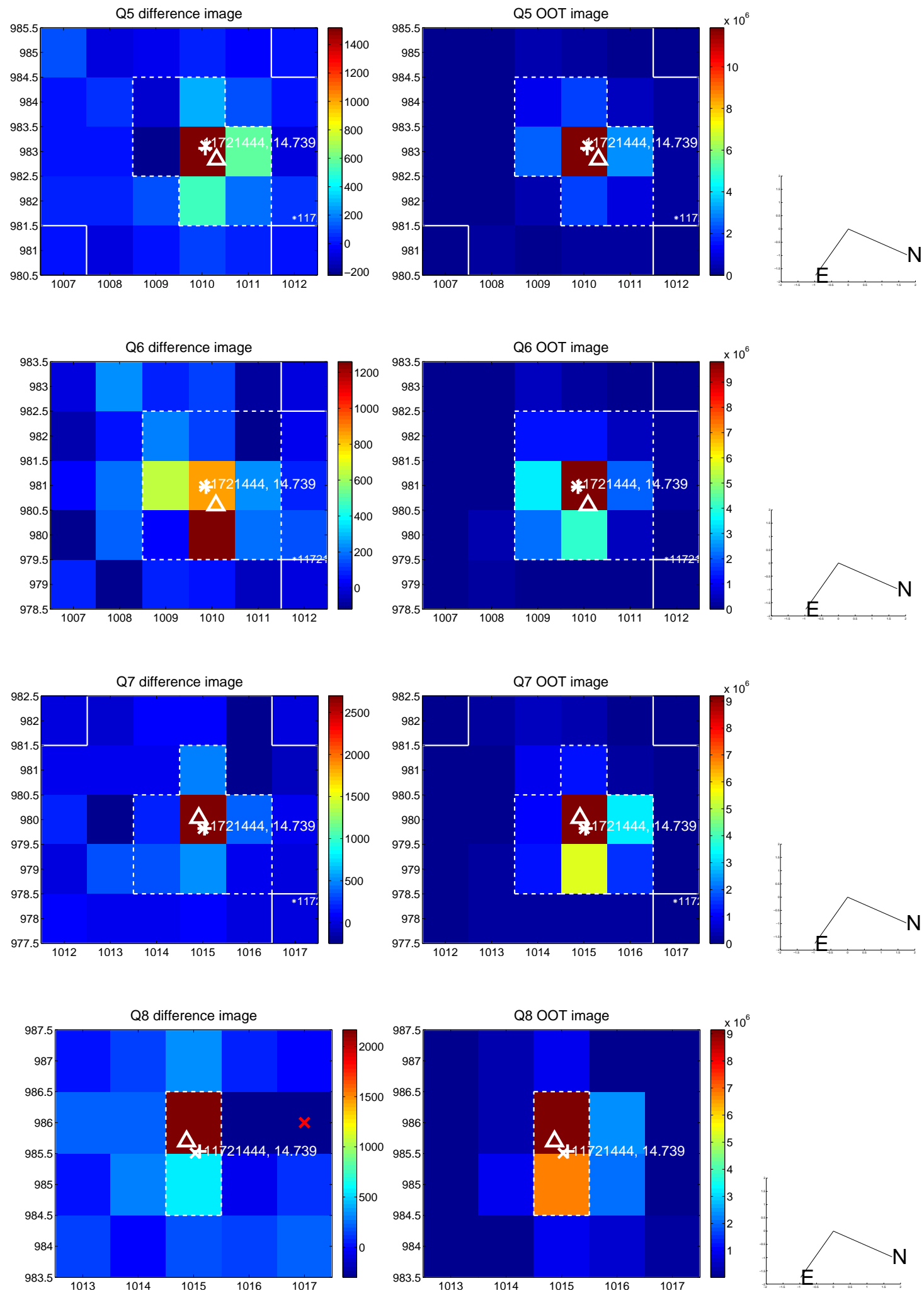


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

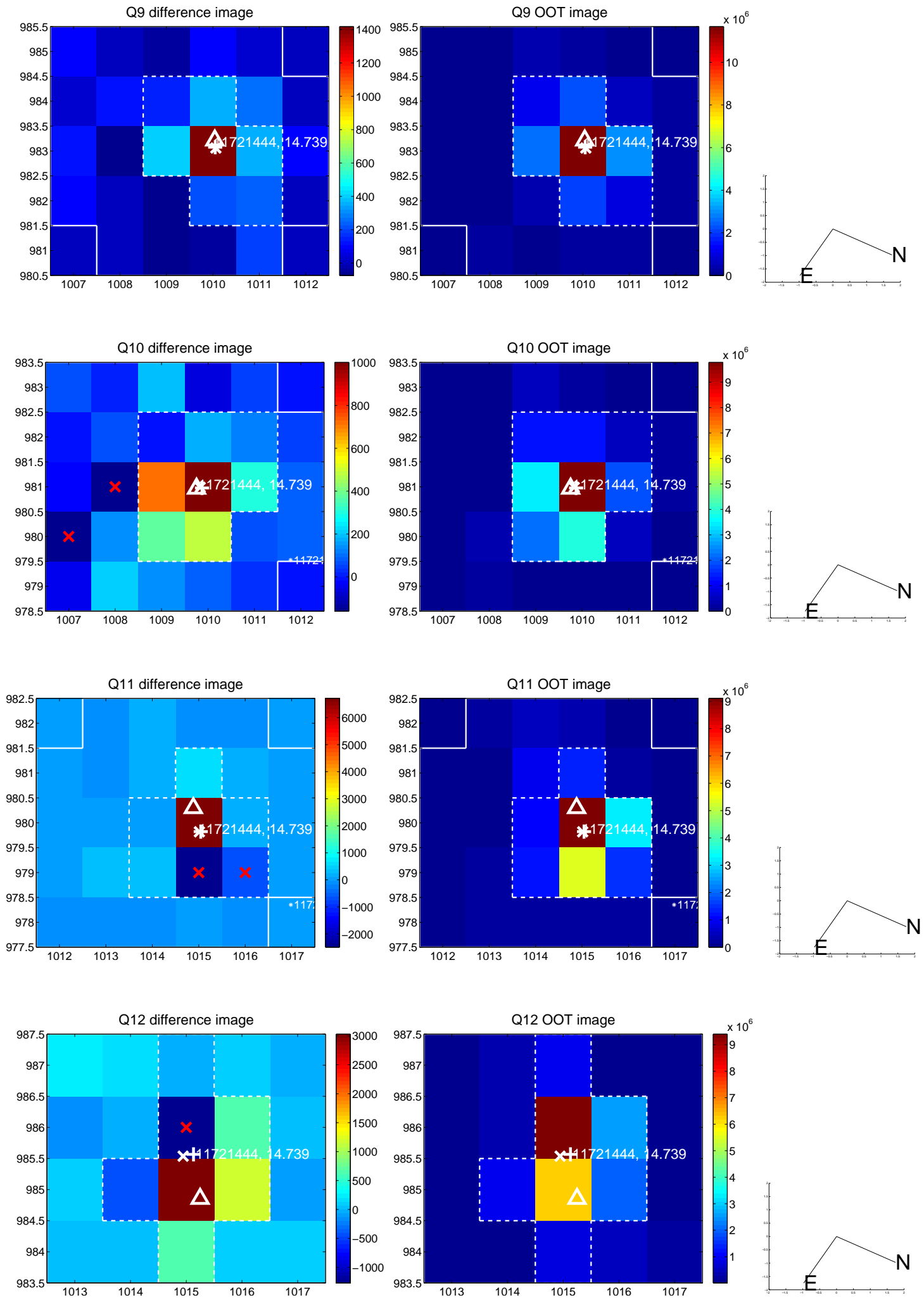
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



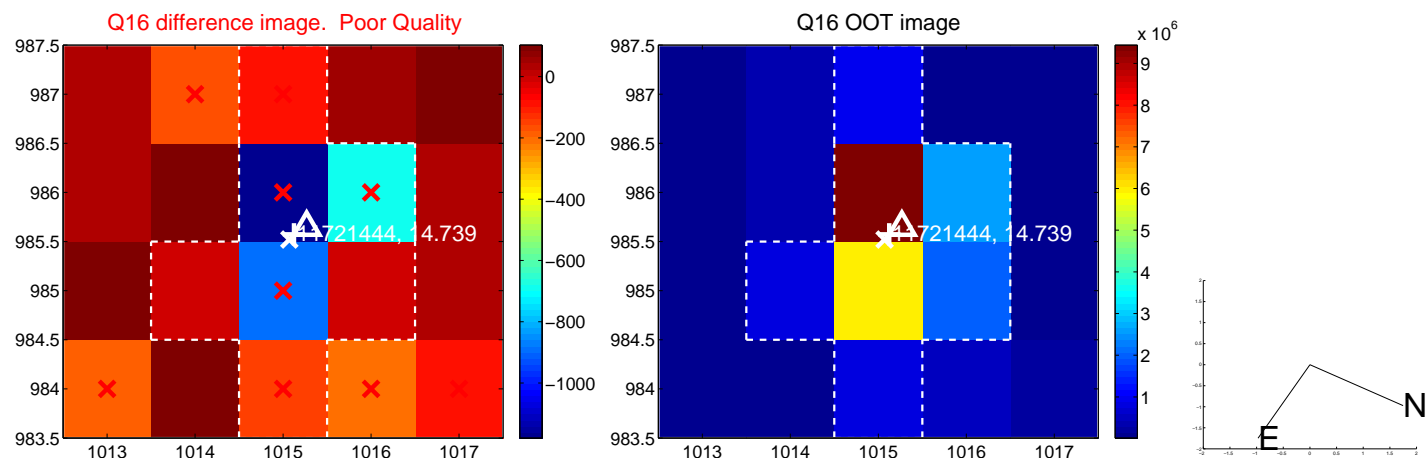
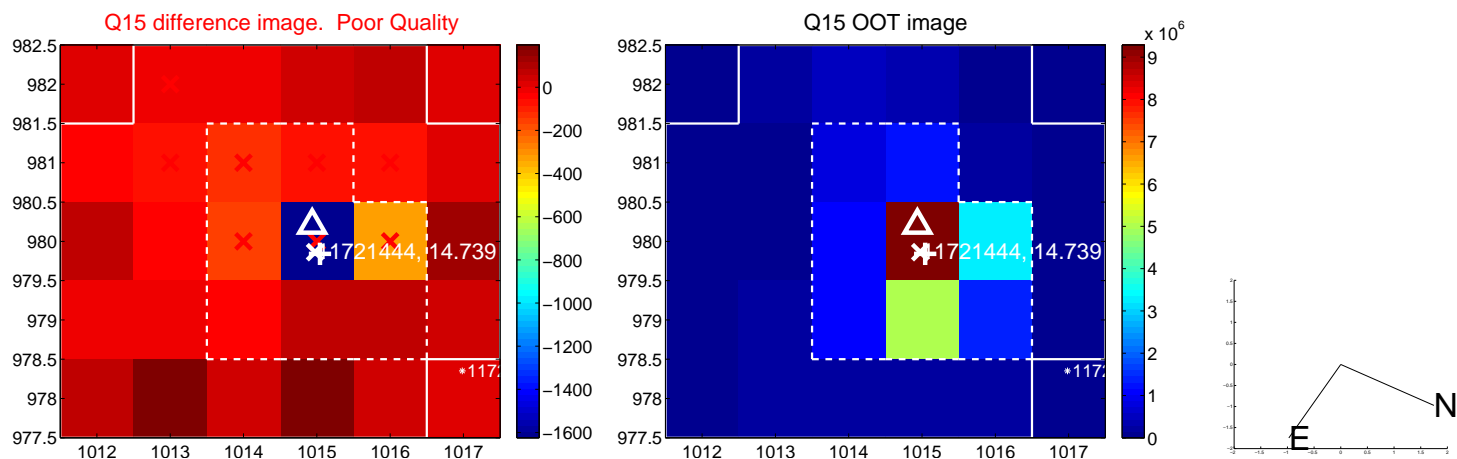
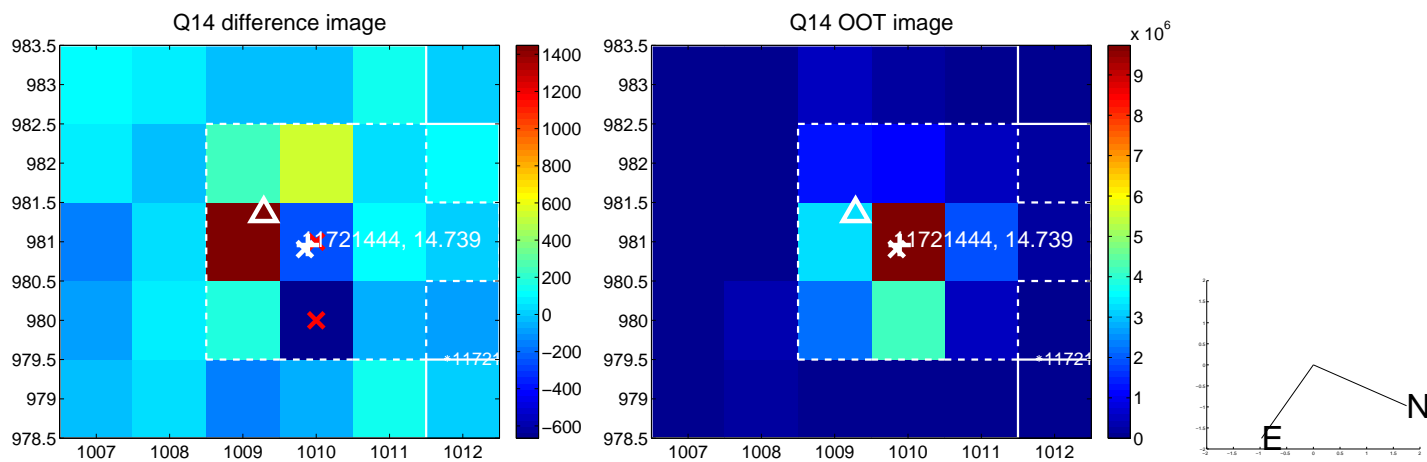
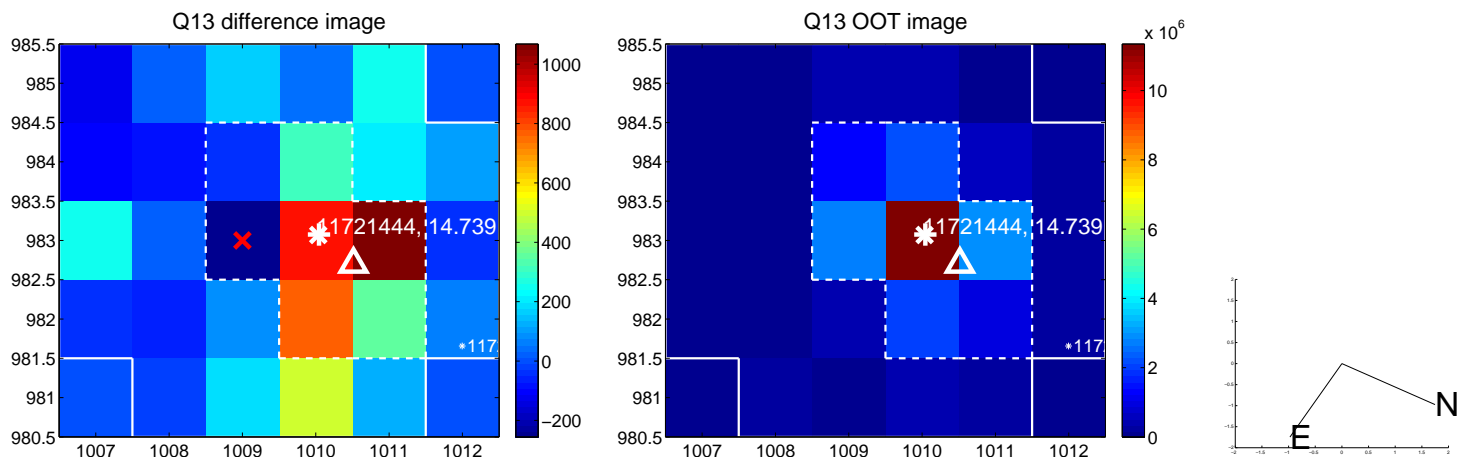
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



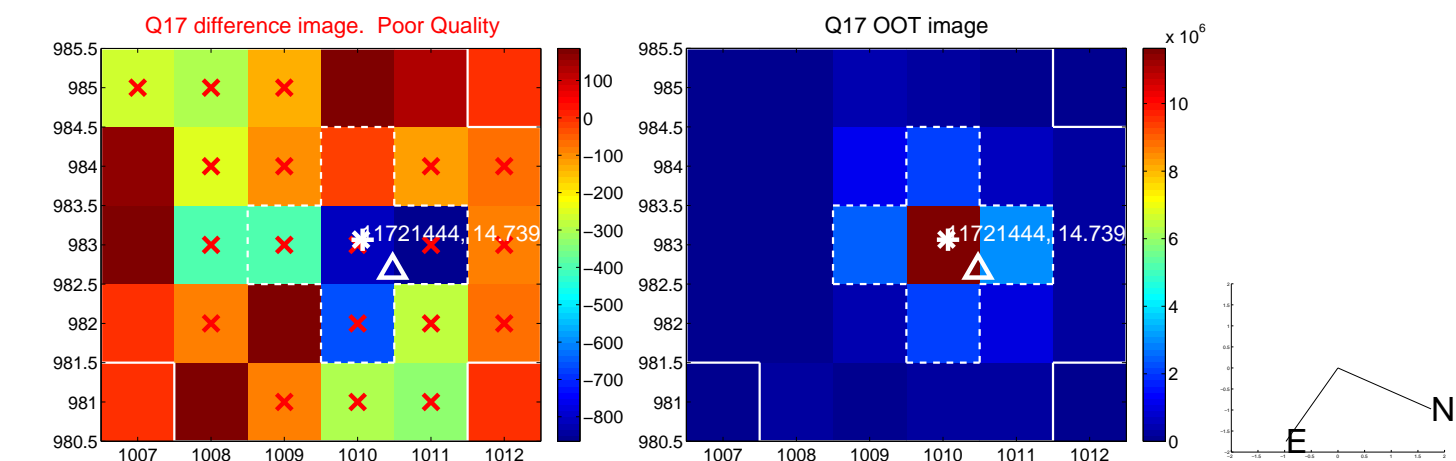
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



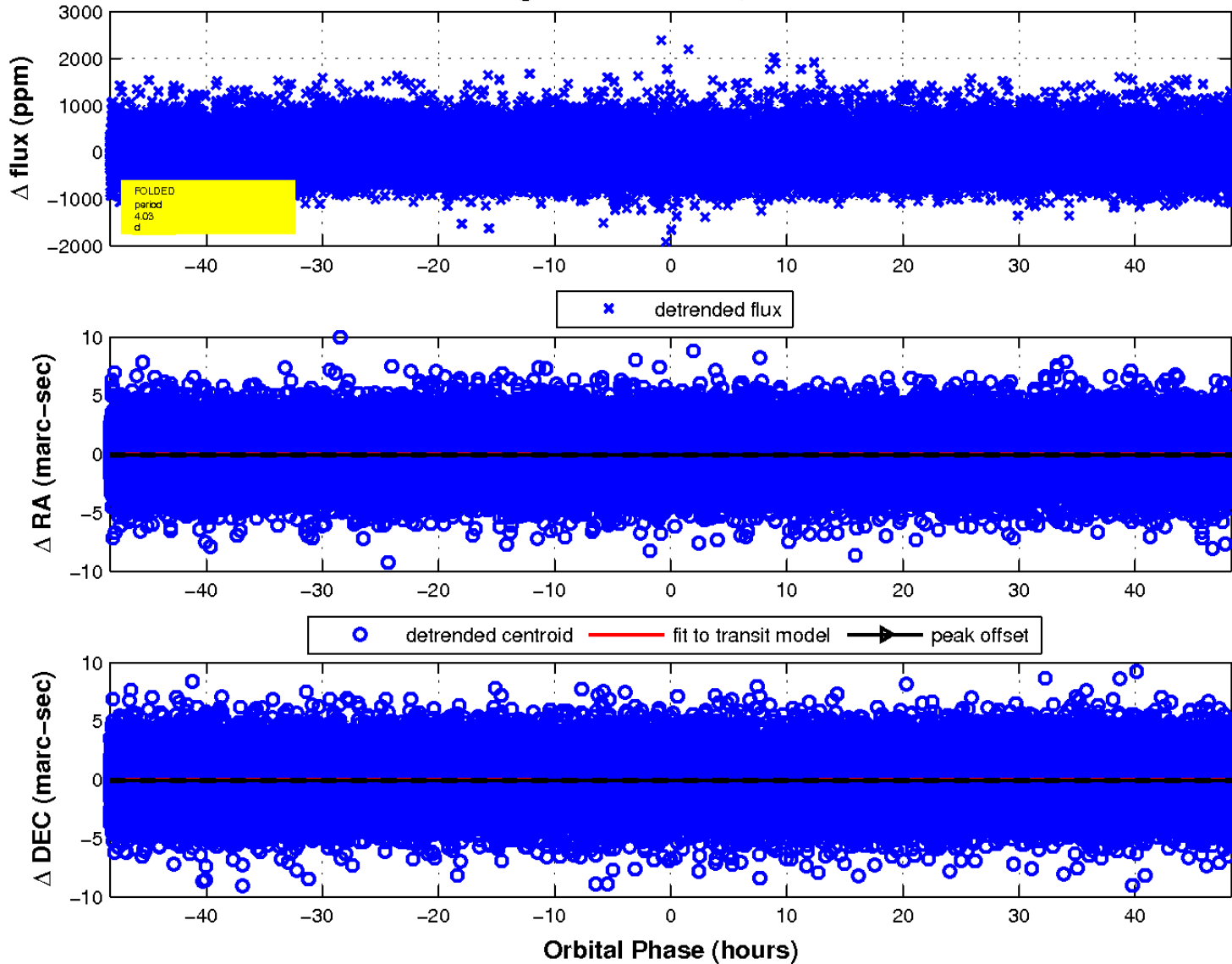
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

