

KIC 010604429

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 _⊕)
010604429-01	OBS	No	0.856960	131.906502	43.8	3.111	13.8	12.1	4.31	7841	3.33	111417.32

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010604429-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

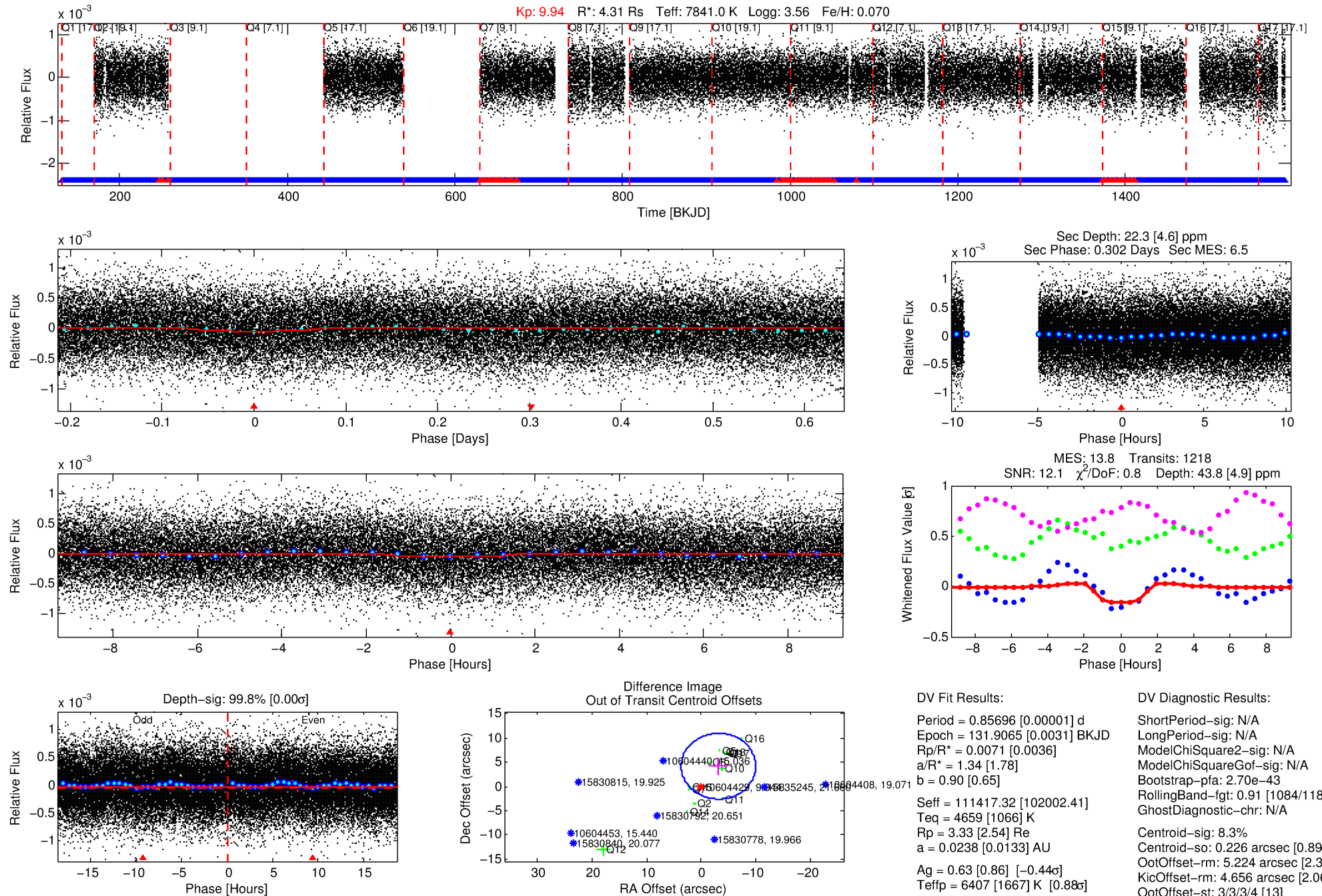
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010604429-01

No Significant Match Found

DV One-Page Summary

KIC: 10604429 Candidate: 1 of 1 Period: 0.857 d



DV Fit Results:

Period = 0.85696 [0.00001] d
Epoch = 131.9065 [0.0031] BKJD
Rp/R* = 0.0071 [0.0036]
a/R* = 1.34 [1.78]
b = 0.90 [0.65]
Seff = 111417.32 [102002.41]
Teff = 4659 [1066] K
Rp = 3.33 [2.54] Re
a = 0.0238 [0.0133] AU
Ag = 0.63 [0.86] [-0.44σ]
Teffp = 6407 [1667] K [0.88σ]

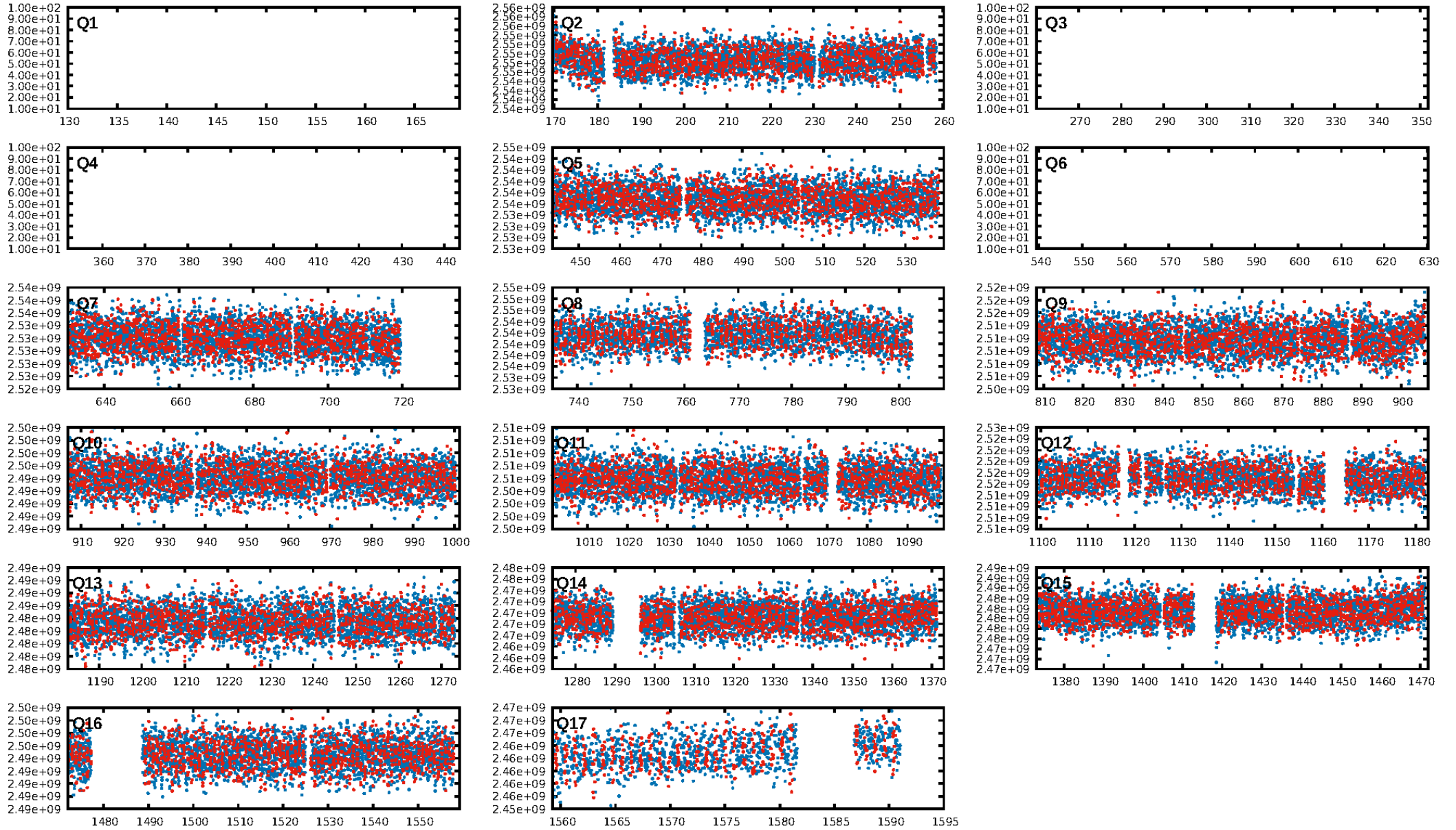
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.70e-43
RollingBand-fgt: 0.91 [1084/1187]
GhostDiagnostic-chr: N/A
Centroid-sig: 8.3%
Centroid-so: 0.226 arcsec [0.89σ]
OotOffset-rm: 5.224 arcsec [2.30σ]
KicOffset-rm: 4.656 arcsec [2.06σ]
OotOffset-st: 3/3/3/4 [13]
KicOffset-st: 3/3/3/4 [13]
DiffImageQuality-fgm: 0.08 [1/13]
DiffImageOverlap-fno: 1.00 [13/13]

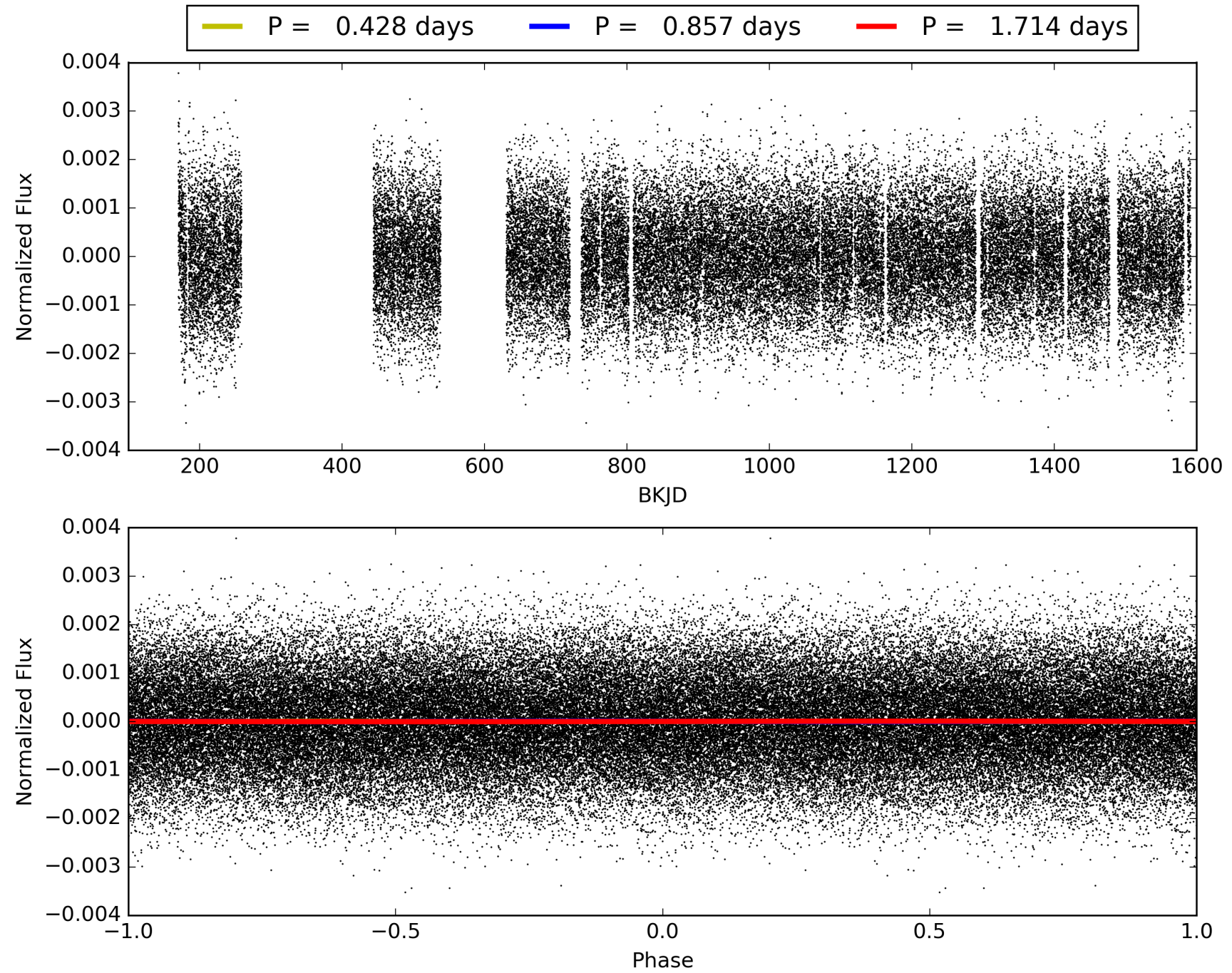
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 23:27:15 Z

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

TCE 010604429-01, PDC Light Curves

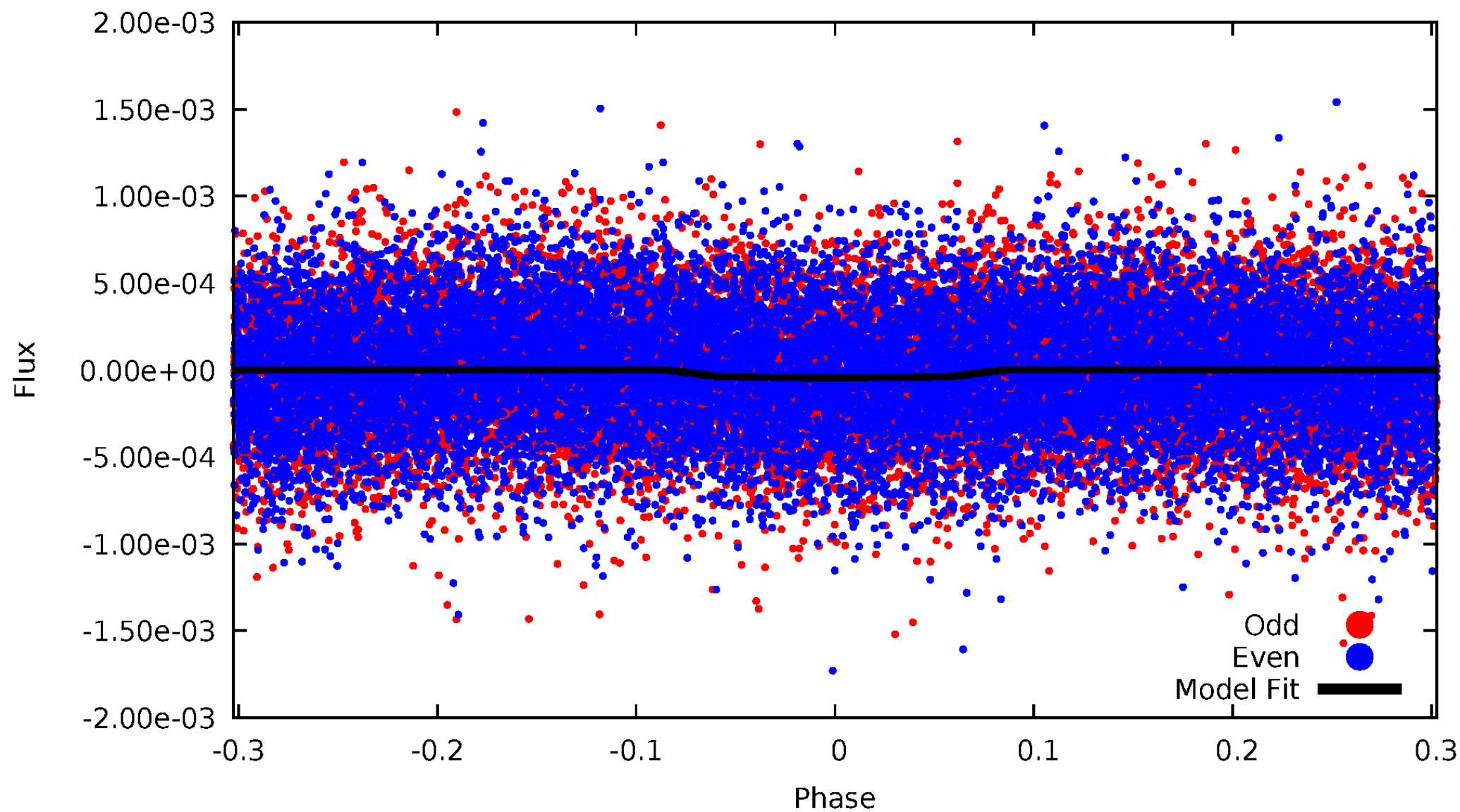


TCE 010604429-01



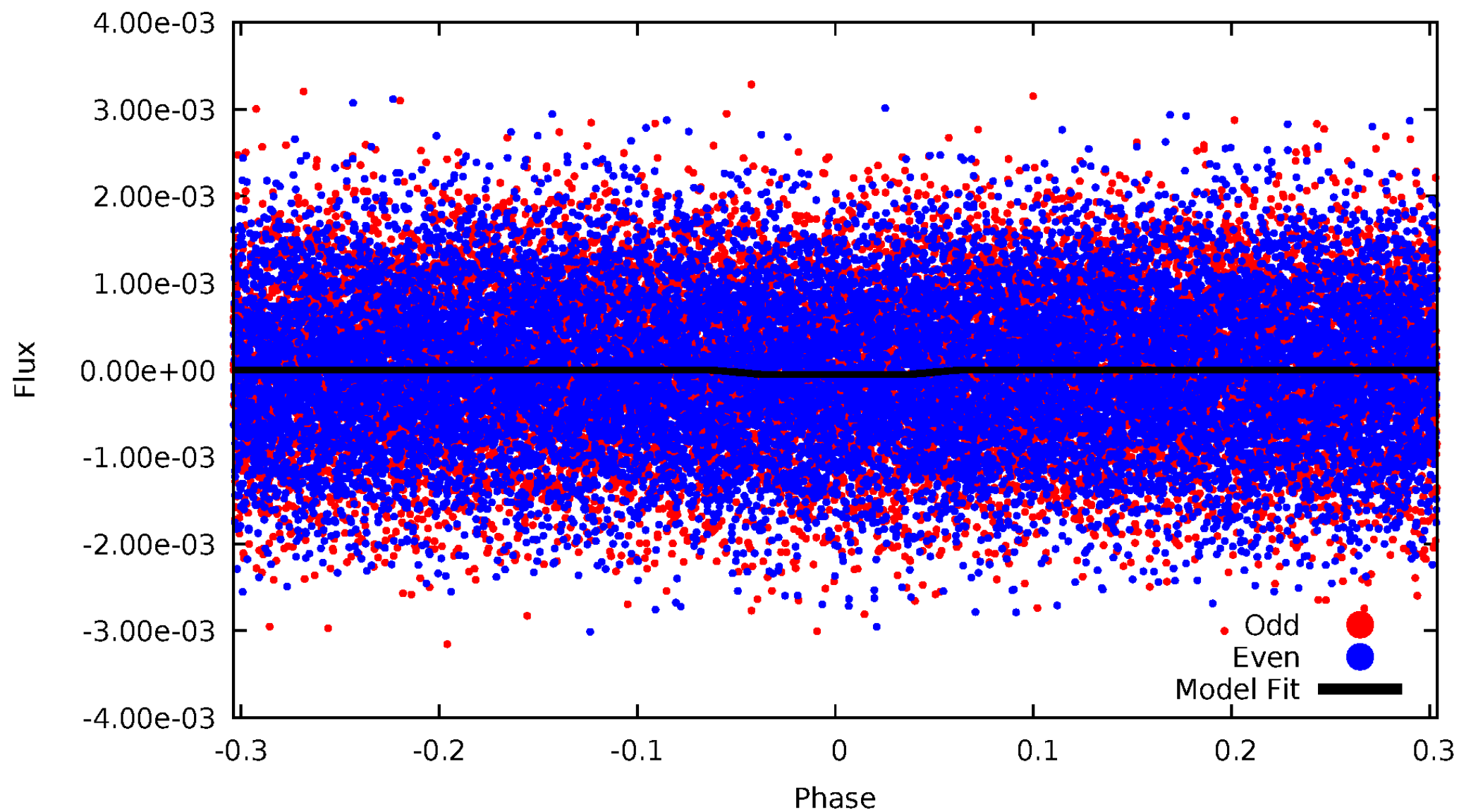
DV Odd/Even

TCE 010604429-01



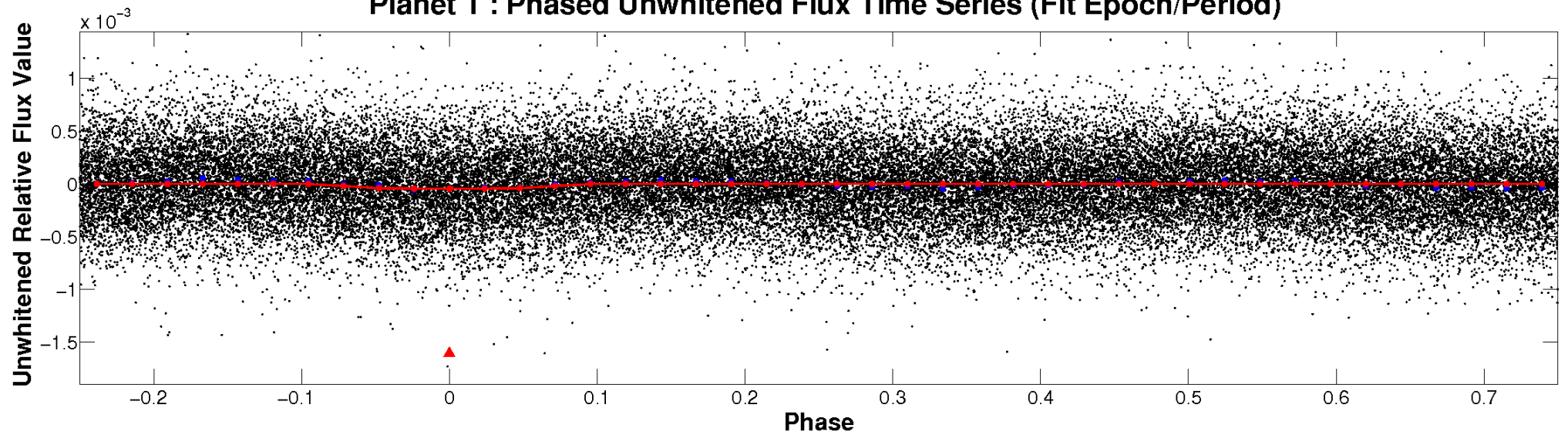
ALT Odd/Even

TCE 010604429-01

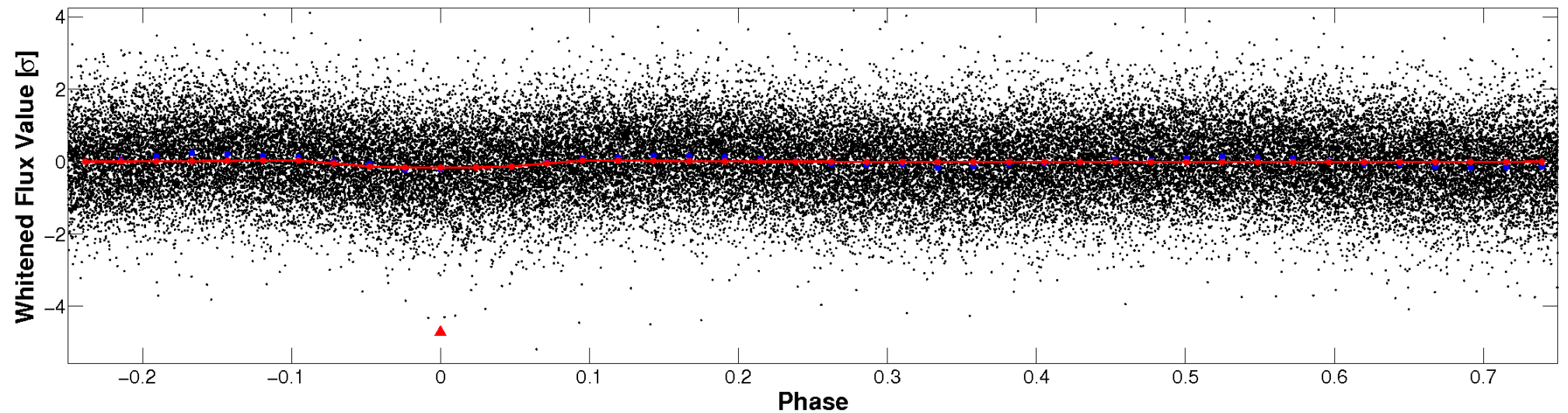


Non-Whitened Vs. Whitened Light Curve

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

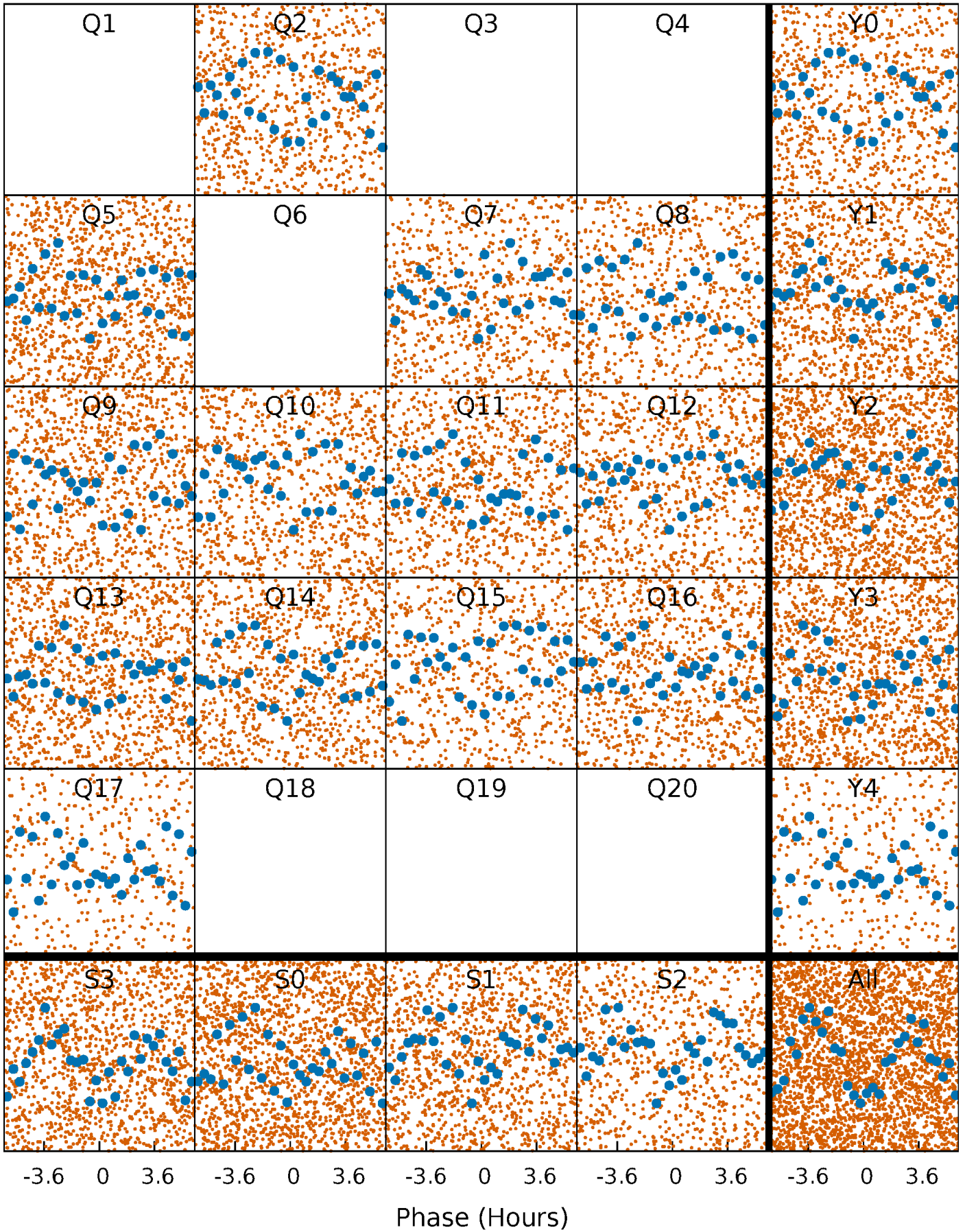


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



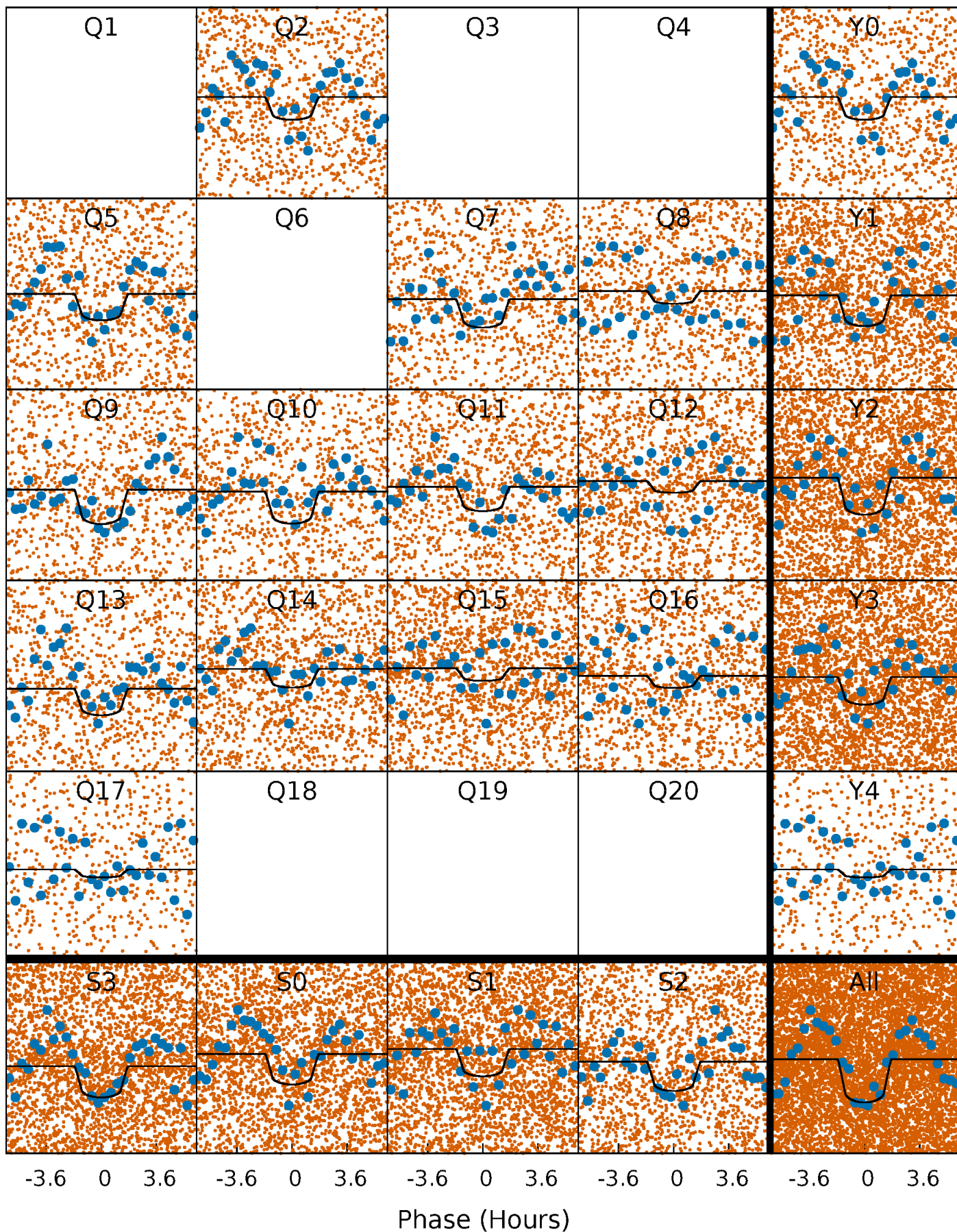
PDC Quarter-Phased Transit Curves

TCE 010604429-01 P= 0.856960 Days $T_0=131.906502$ (BKJD)



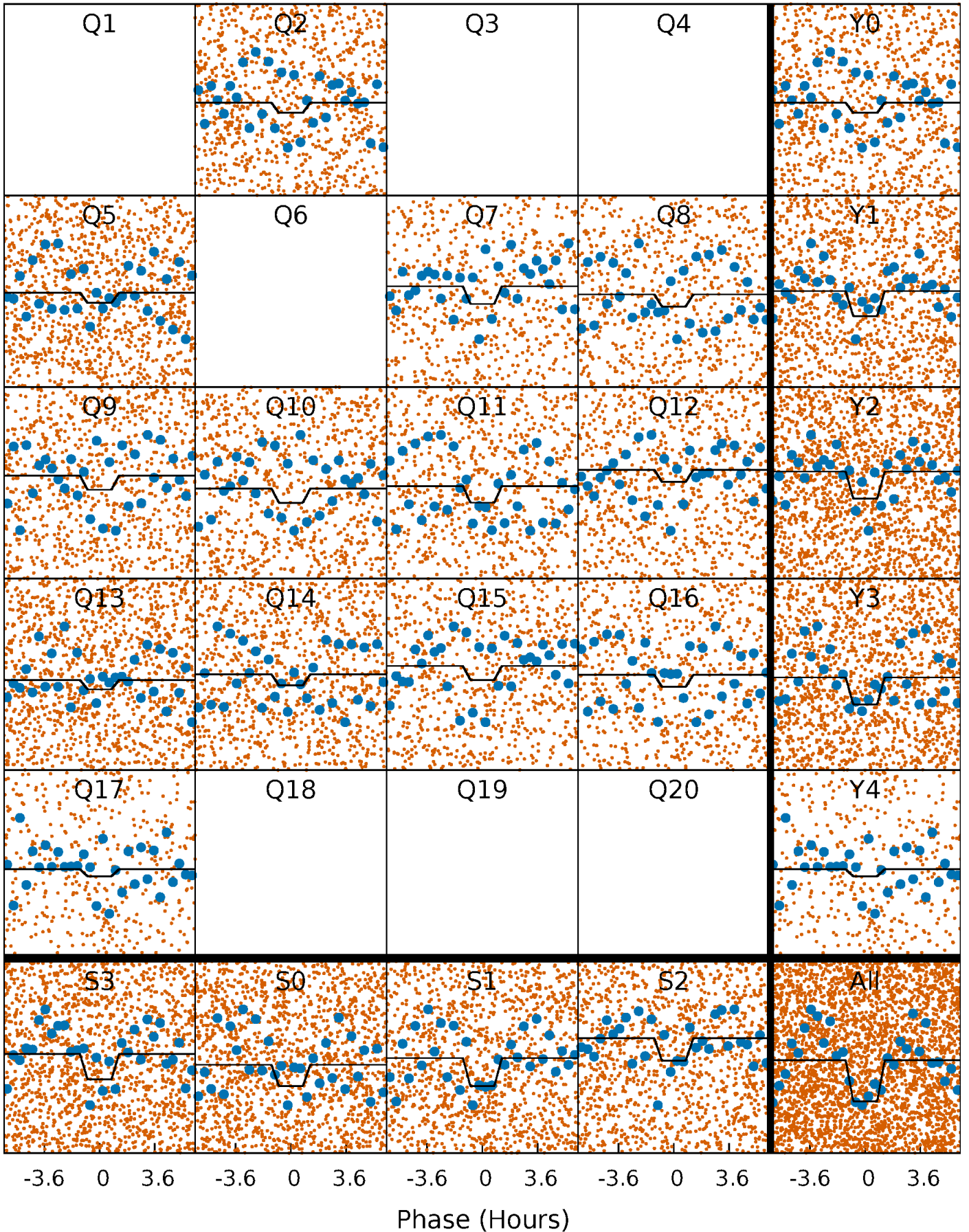
DV Quarter-Phased Transit Curves

TCE 010604429-01 P= 0.856960 Days $T_0=131.906502$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

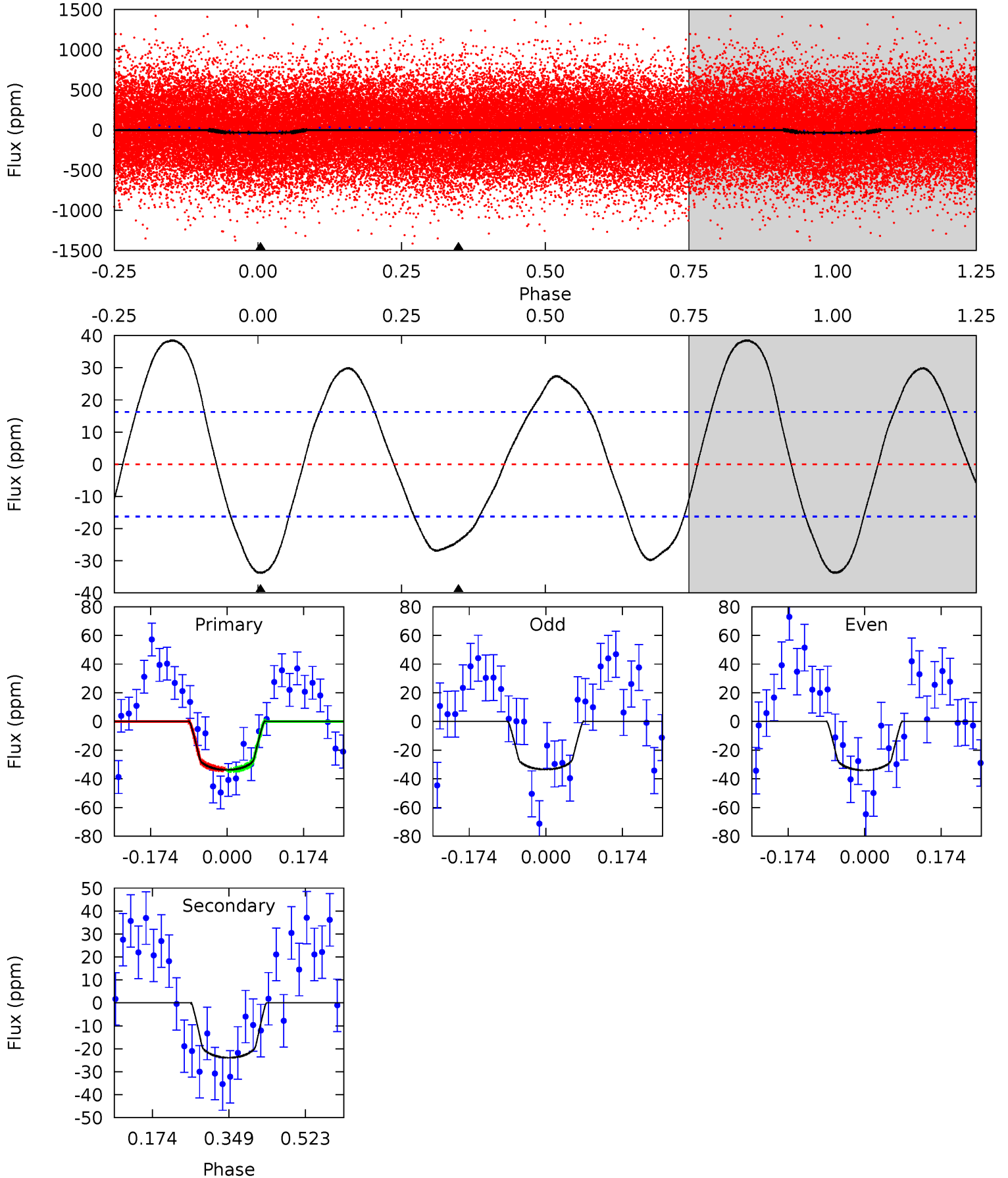
TCE 010604429-01 P= 0.856963 Days $T_0=131.906266$ (BKJD)



DV Model-Shift Uniqueness Test

010604429-01, P = 0.856960 Days, E = 131.906502 Days

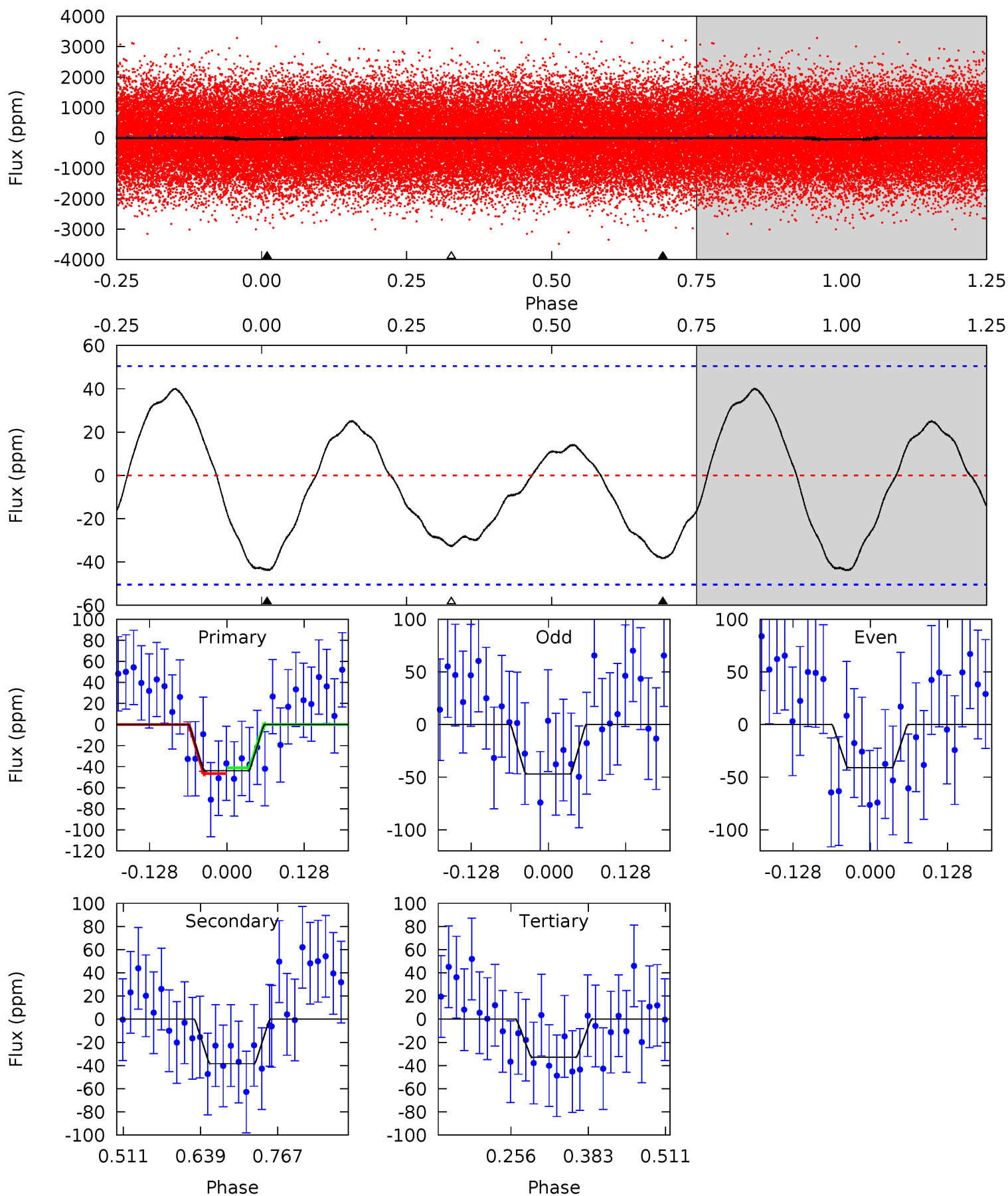
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.22	6.53	0	0	4.45	1.36	5.79	9.22	9.22	6.53	6.53	0.08	0.95	0.53	0.07



Alt Model-Shift Uniqueness Test

010604429-01, P = 0.856963 Days, E = 131.906266 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.92	3.43	2.93	0	4.51	1.52	1.96	0.99	3.92	0.50	3.43	0.27	1.12	0.48	0.24



Stellar Parameters For KIC 010604429

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7841^{+217}_{-325}	$3.556^{+0.531}_{-0.059}$	$0.070^{+0.250}_{-0.400}$	$4.313^{+0.437}_{-2.474}$	$2.442^{+0.211}_{-0.844}$	$0.043^{+0.304}_{-0.009}$
	+3%/-4%	+15%/-2%	+357%/-571%	+10%/-57%	+9%/-35%	+708%/-21%
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 010604429-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-24 ± 4	$2.96^{+1.77}_{-1.50}$	6274^{+418}_{-818}	5634^{+2992}_{-2597}	$0.838^{+2.474}_{-0.523}$
Alt.	-38 ± 11	$2.93^{+1.79}_{-1.50}$	6228^{+436}_{-823}	6599^{+3775}_{-1907}	$1.342^{+3.803}_{-0.844}$

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 $A_{obs} \gg 1.0$

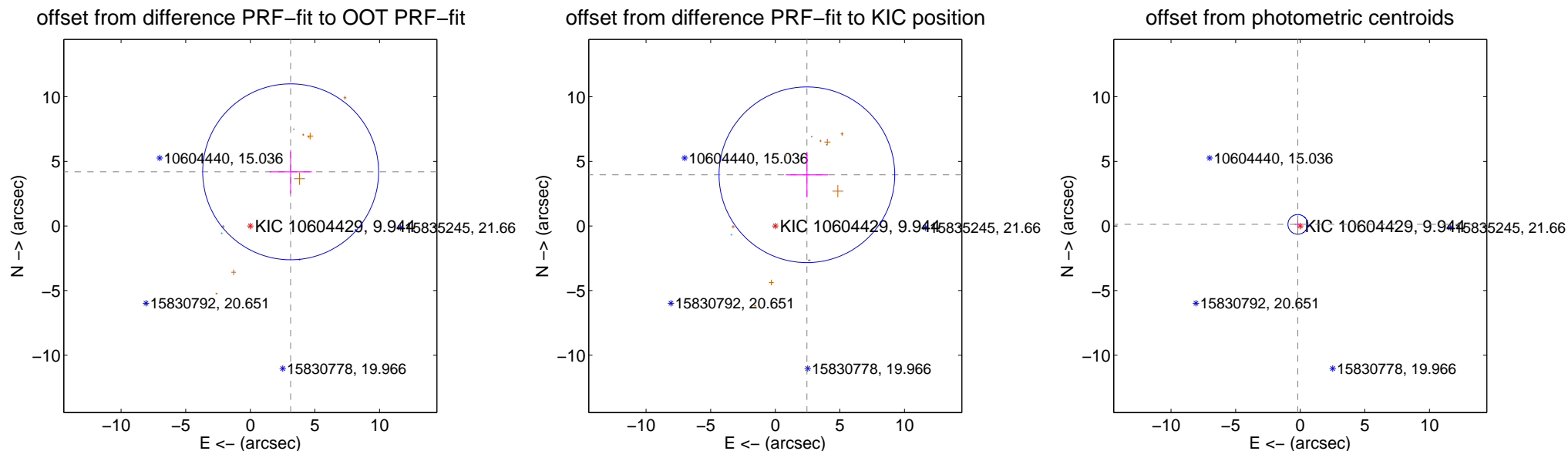
DV Centroid Data

Supplemental centroid analysis for 010604429-01. **Kepler magnitude: 9.94.** Transit SNR 12.06

There are 1 quarters with good PRF difference image offsets

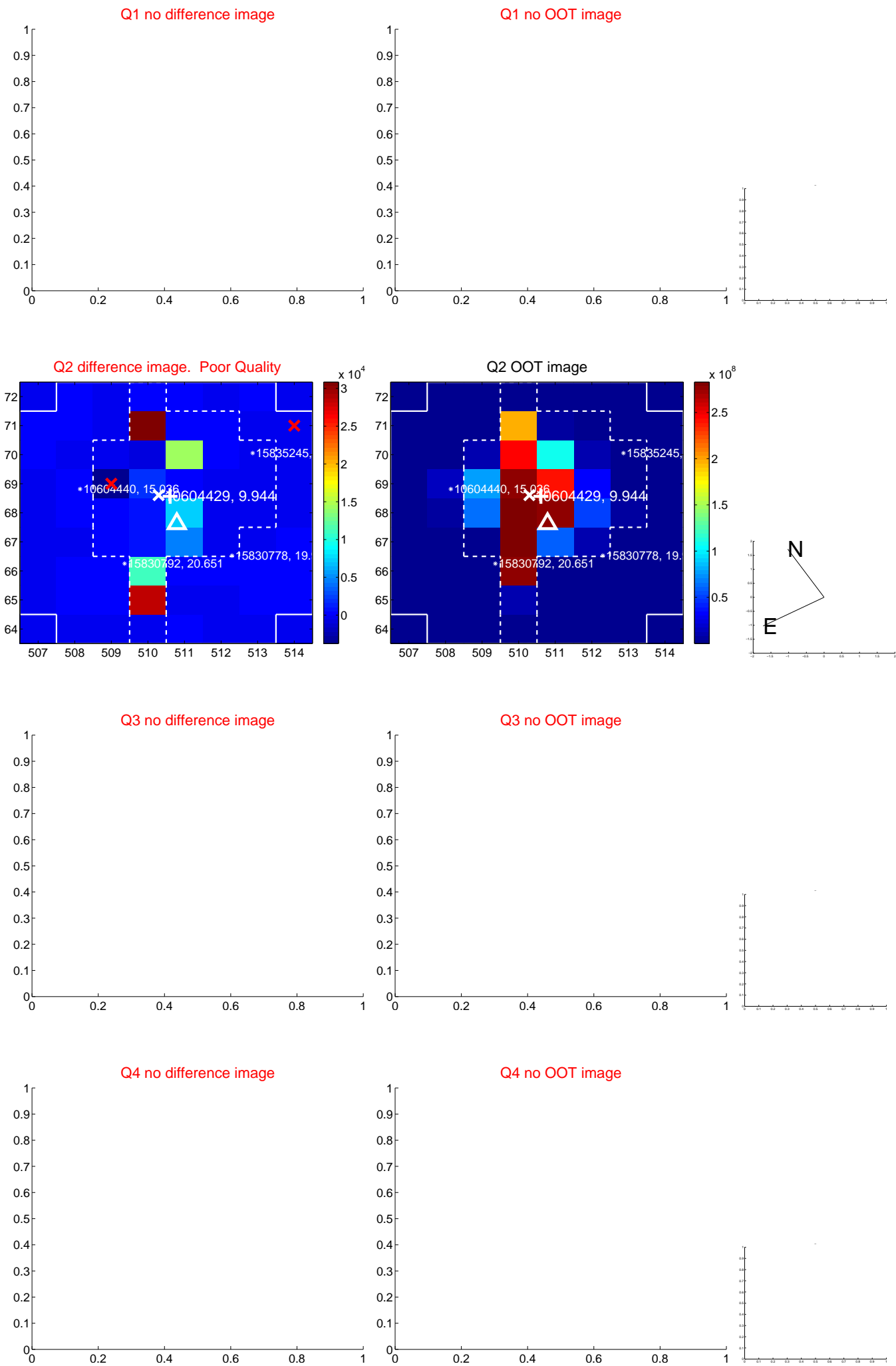
The direct PRF centroid is offset from the target star catalog position by about 0.76 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.224 ± 2.269	2.30	-3.121 ± 1.635	4.190 ± 1.690
PRF-fit source offset from KIC position	4.656 ± 2.266	2.06	-2.446 ± 1.645	3.962 ± 1.744
photometric centroid source offset	0.23 ± 0.25	0.89	0.19 ± 0.23	0.12 ± 0.30

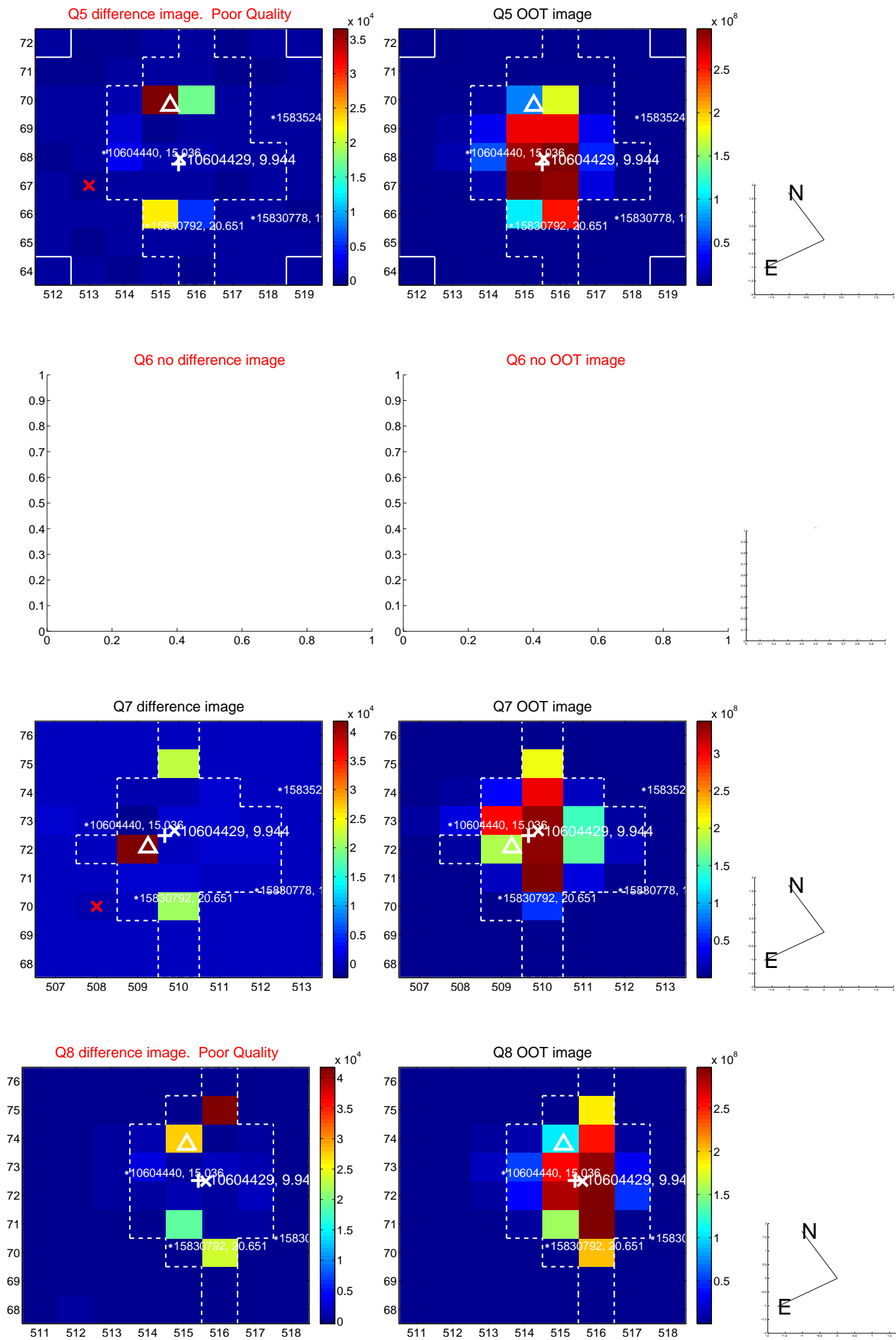


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

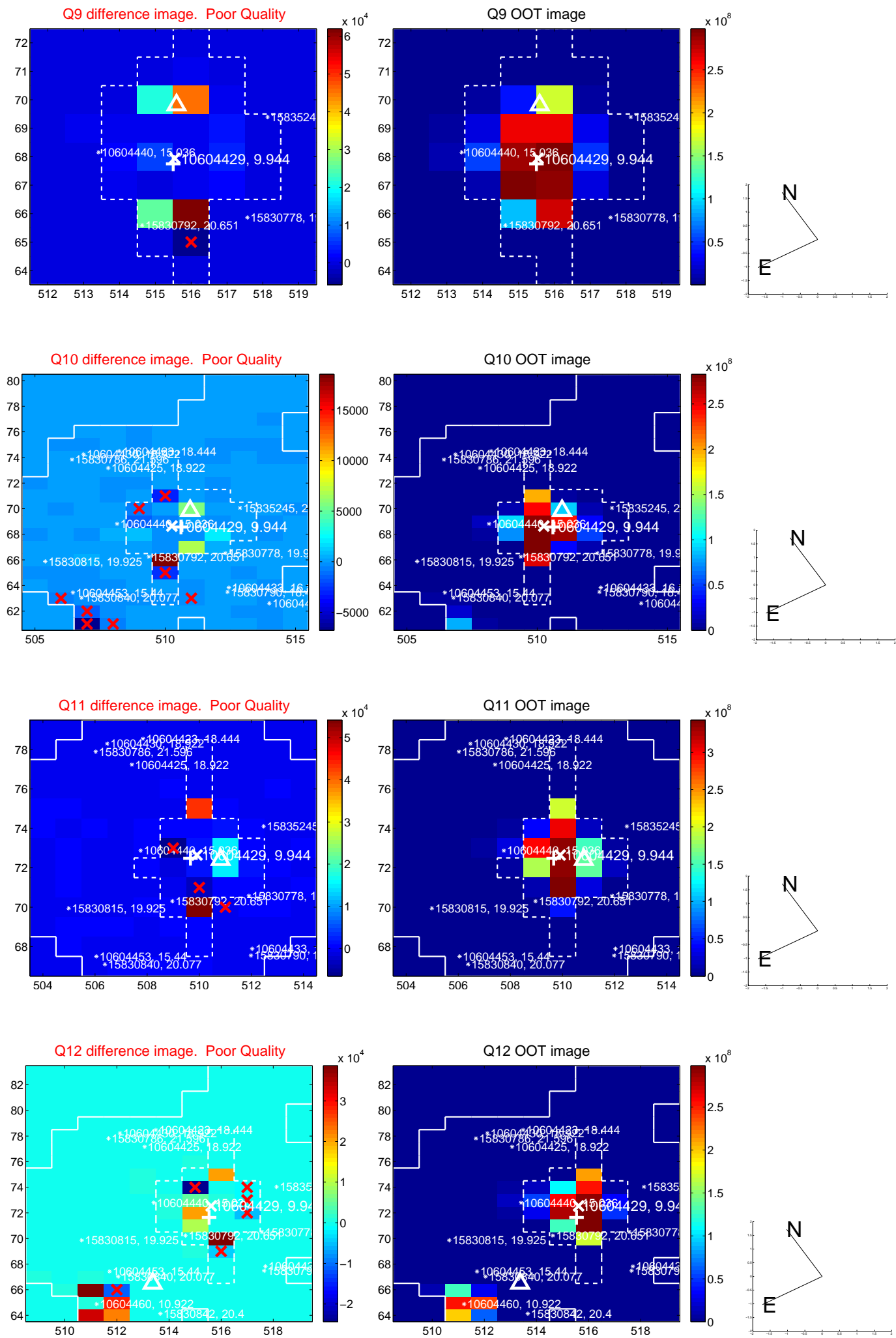
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



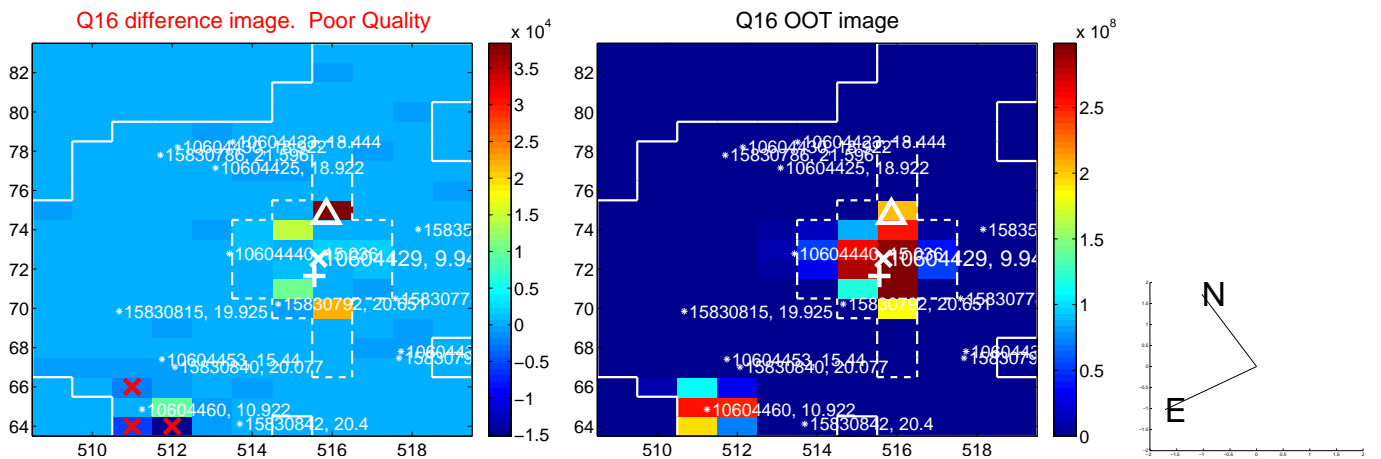
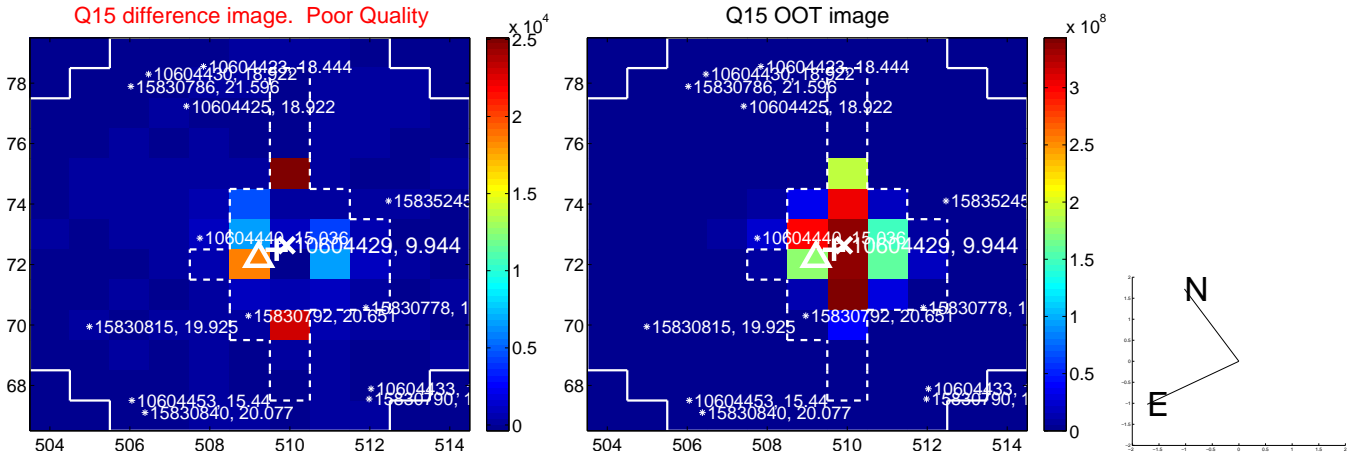
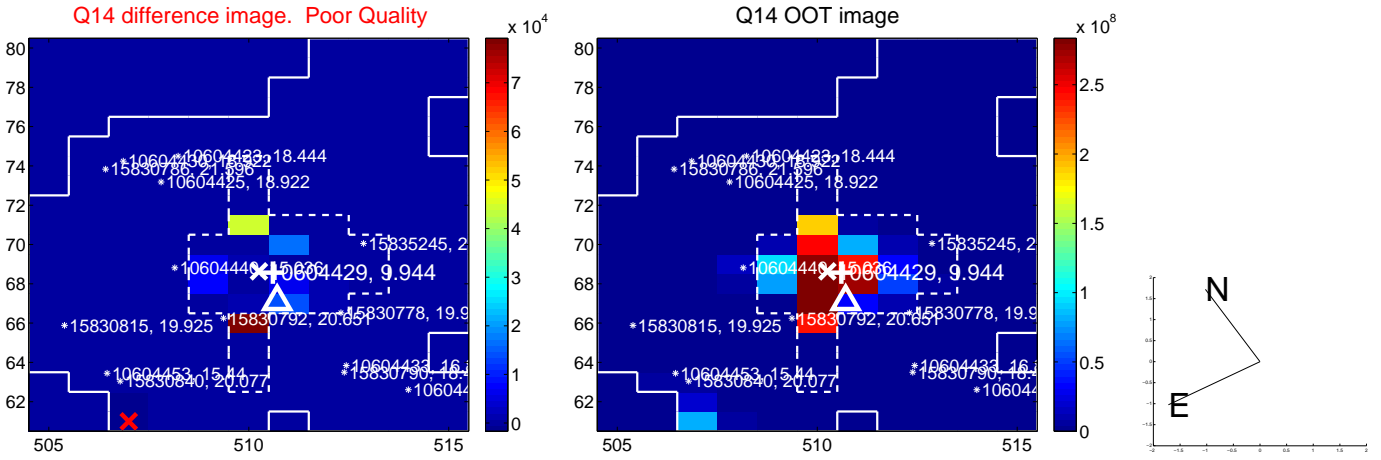
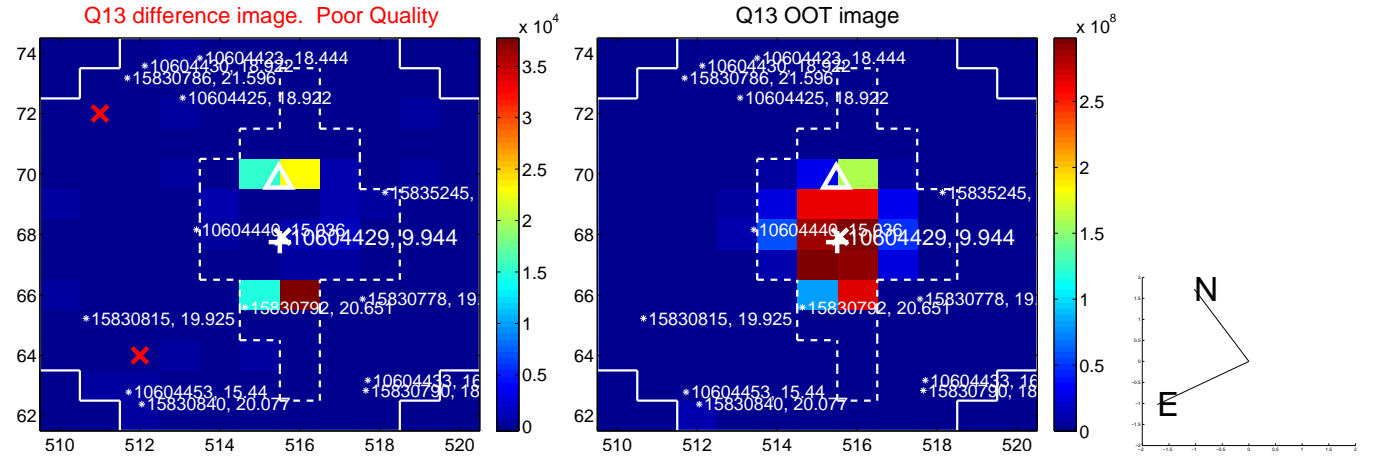
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



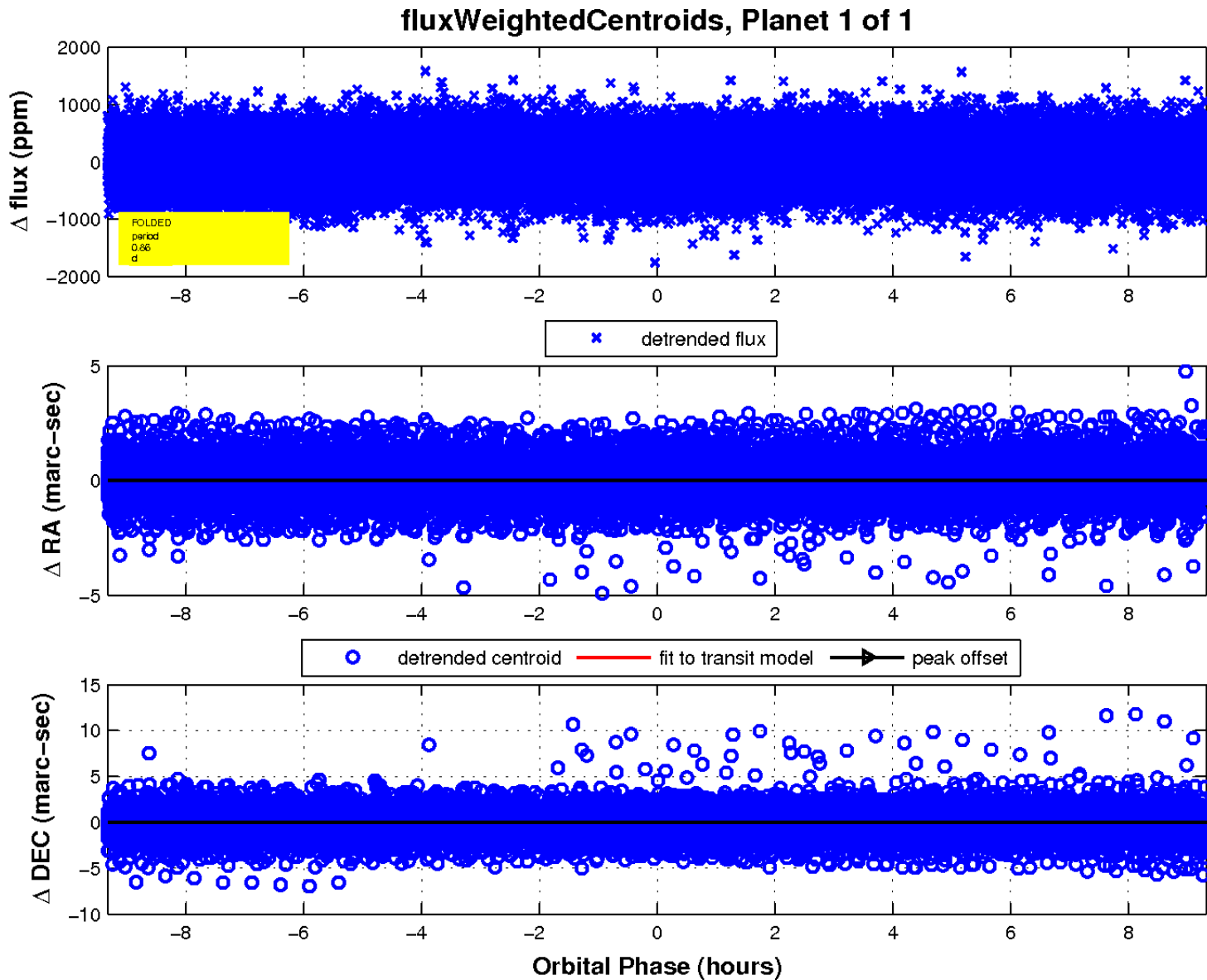
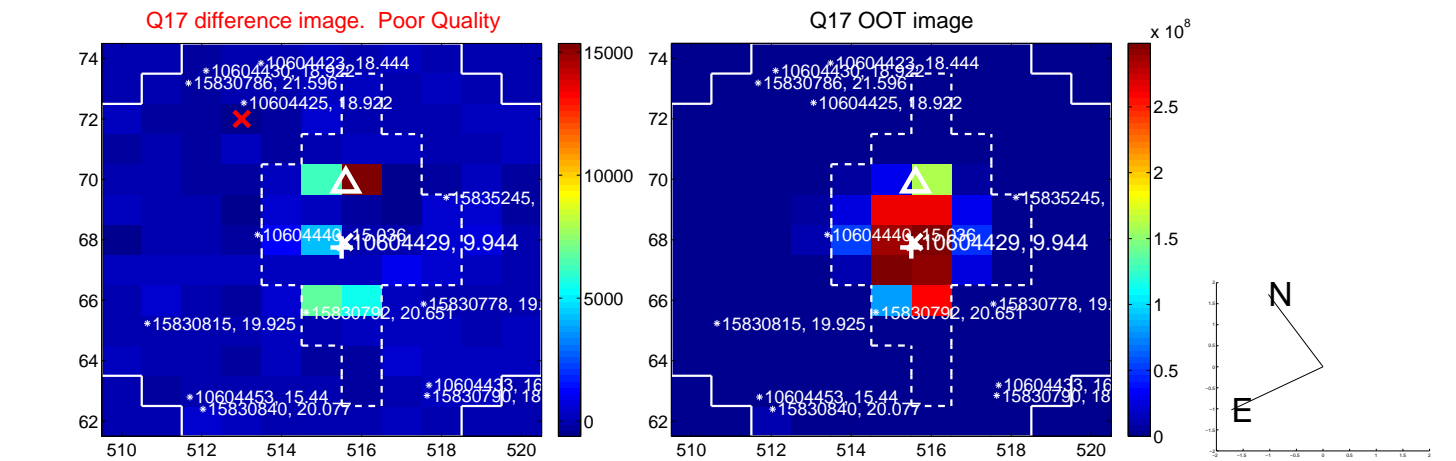
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

