

KIC 008231299

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})
008231299-01	OBS	7874.01	0.562252	131.556894	11.8	2.199	8.3	7.5	0.85	5632	0.31	4455.46

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008231299-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—CENT_KIC_POS

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

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

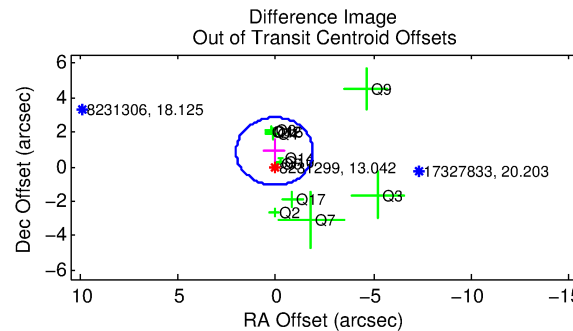
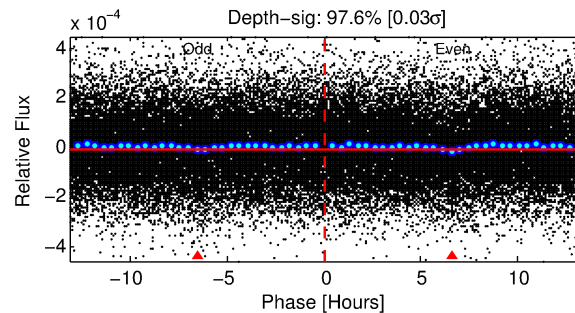
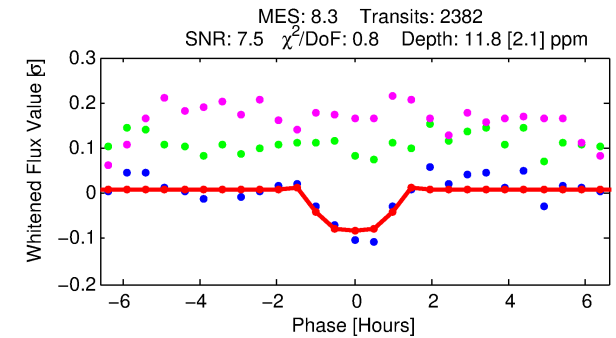
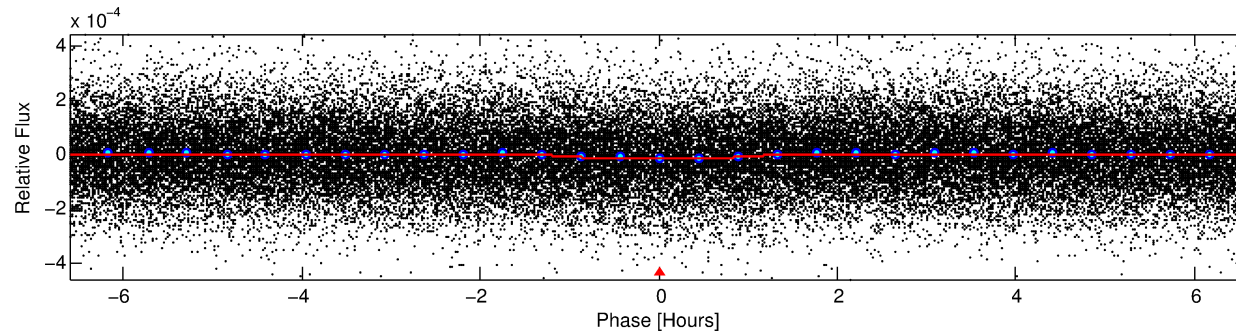
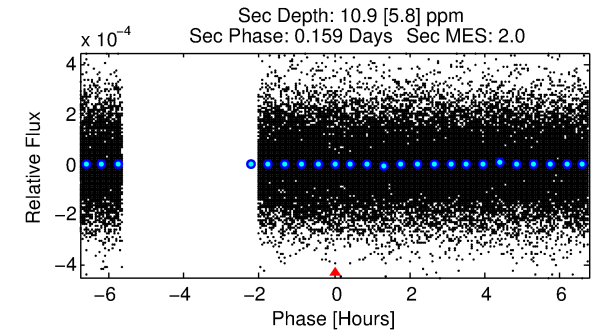
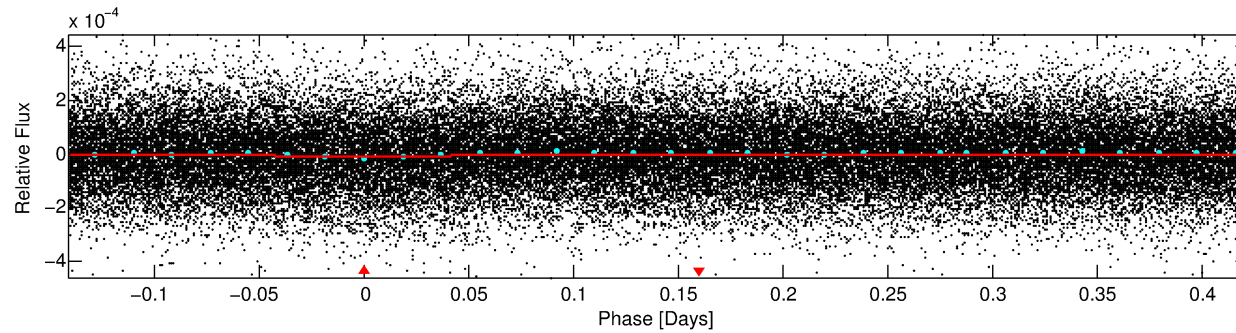
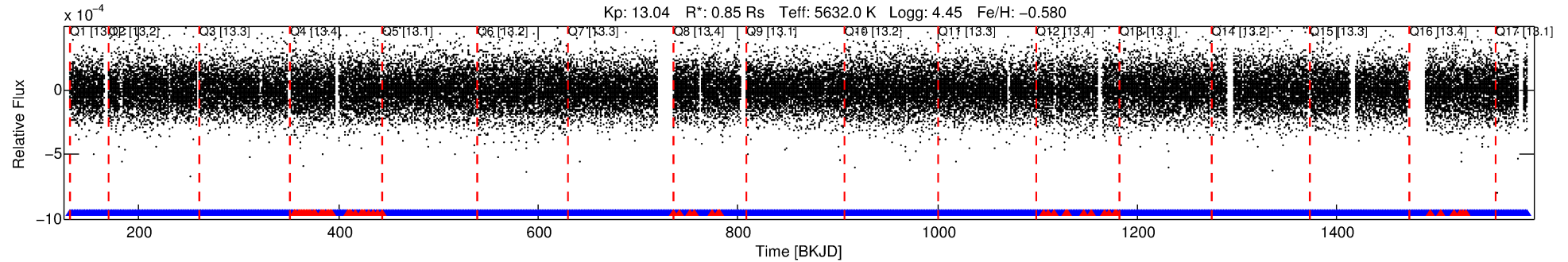
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008231299-01

No Significant Match Found

DV One-Page Summary

KIC: 8231299 Candidate: 1 of 1 Period: 0.562 d



DV Fit Results:

Period = 0.56225 [0.00001] d
Epoch = 131.5569 [0.0035] BKJD
Rp/R* = 0.0033 [0.0010]
a/R* = 1.69 [1.42]
b = 0.65 [1.16]
Seff = 4455.46 [920.27]
Teq = 2083 [108] K
Rp = 0.31 [0.10] Re
a = 0.0120 [0.0014] AU
Ag = 9.18 [7.48] [1.09σ]
Teffp = 5606 [1112] K [3.15σ]

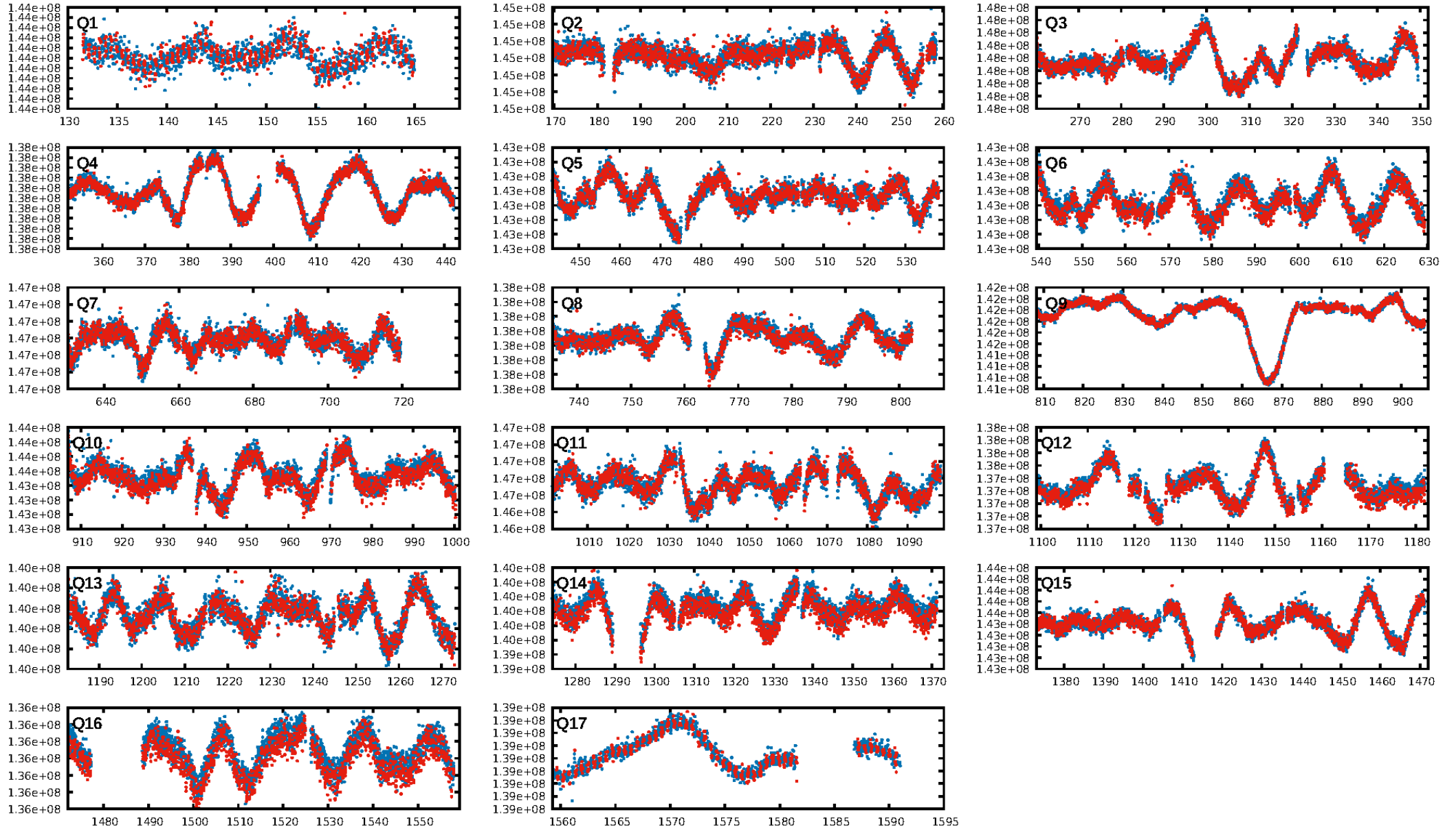
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.08e-14
RollingBand-fgt: 0.97 [2209/2275]
GhostDiagnostic-chr: 1.636
Centroid-sig: 43.1%
Centroid-so: 1.396 arcsec [0.91σ]
OotOffset-rm: 0.882 arcsec [1.35σ]
OotOffset-st: 4/2/4/2 [12]
KicOffset-rm: 1.065 arcsec [1.75σ]
KicOffset-st: 4/2/4/2 [12]
DiffImageQuality-fgm: 0.75 [9/12]
DiffImageOverlap-fno: 1.00 [17/17]

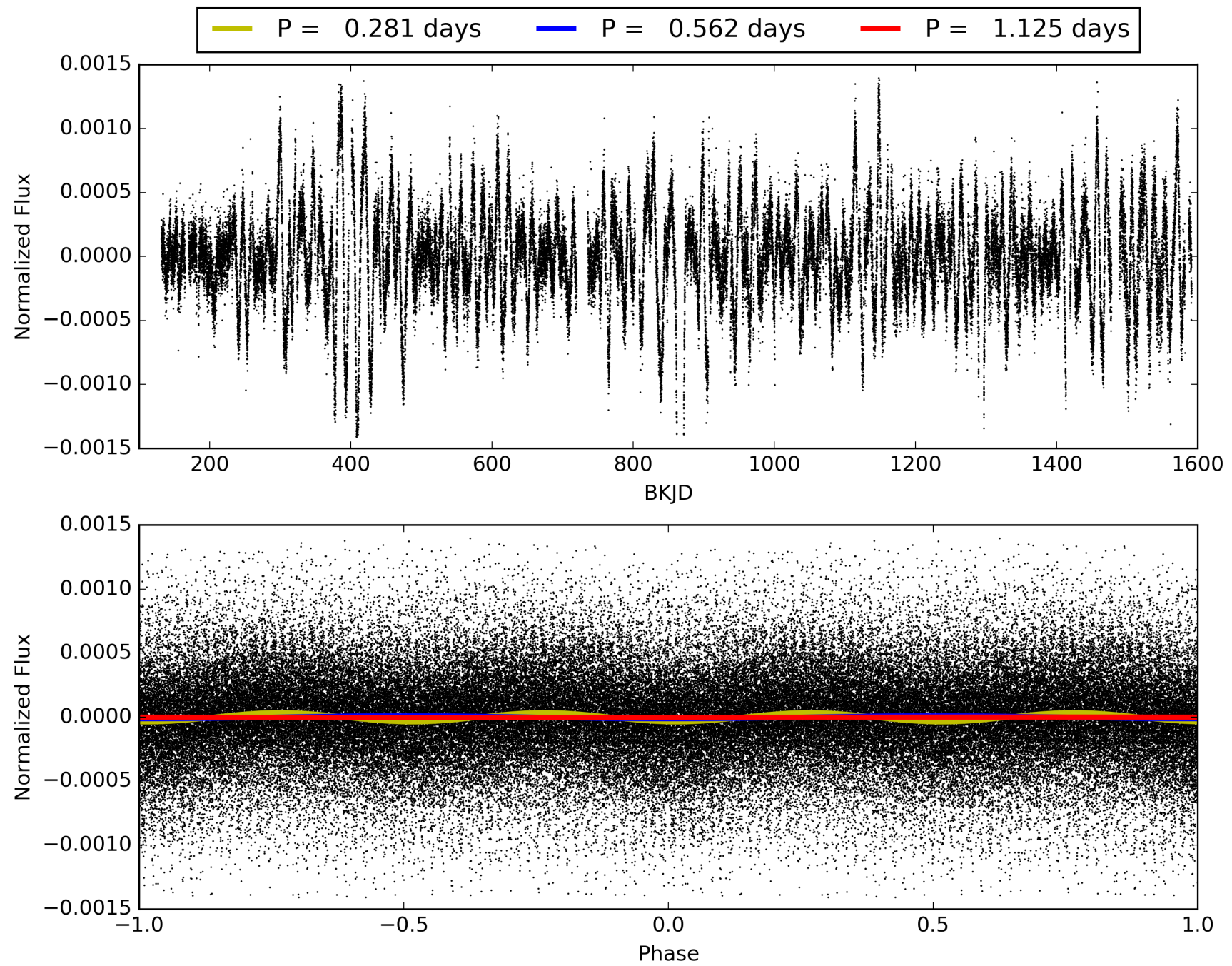
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 17:33:32 Z

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

TCE 008231299-01, PDC Light Curves

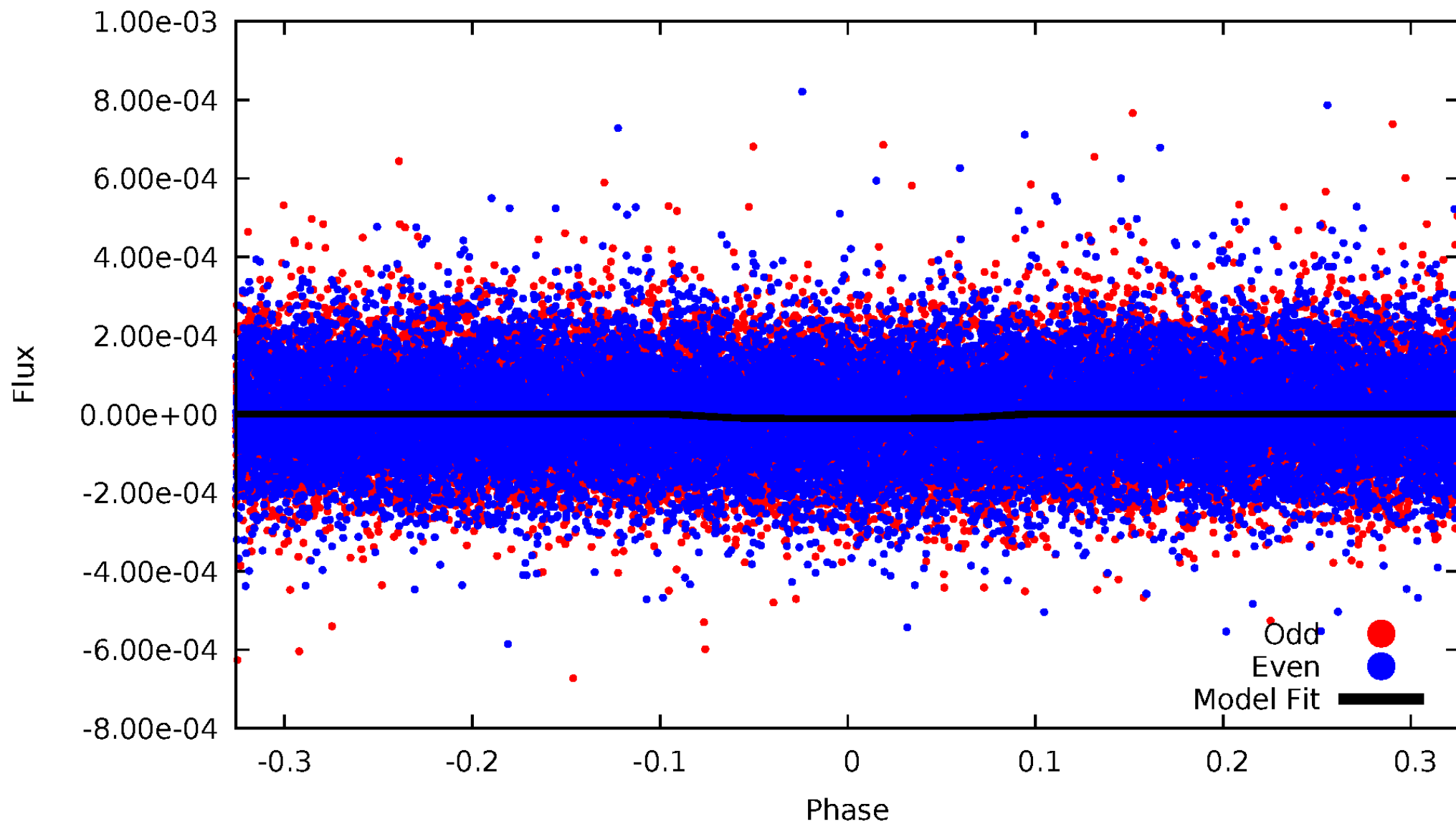


TCE 008231299-01



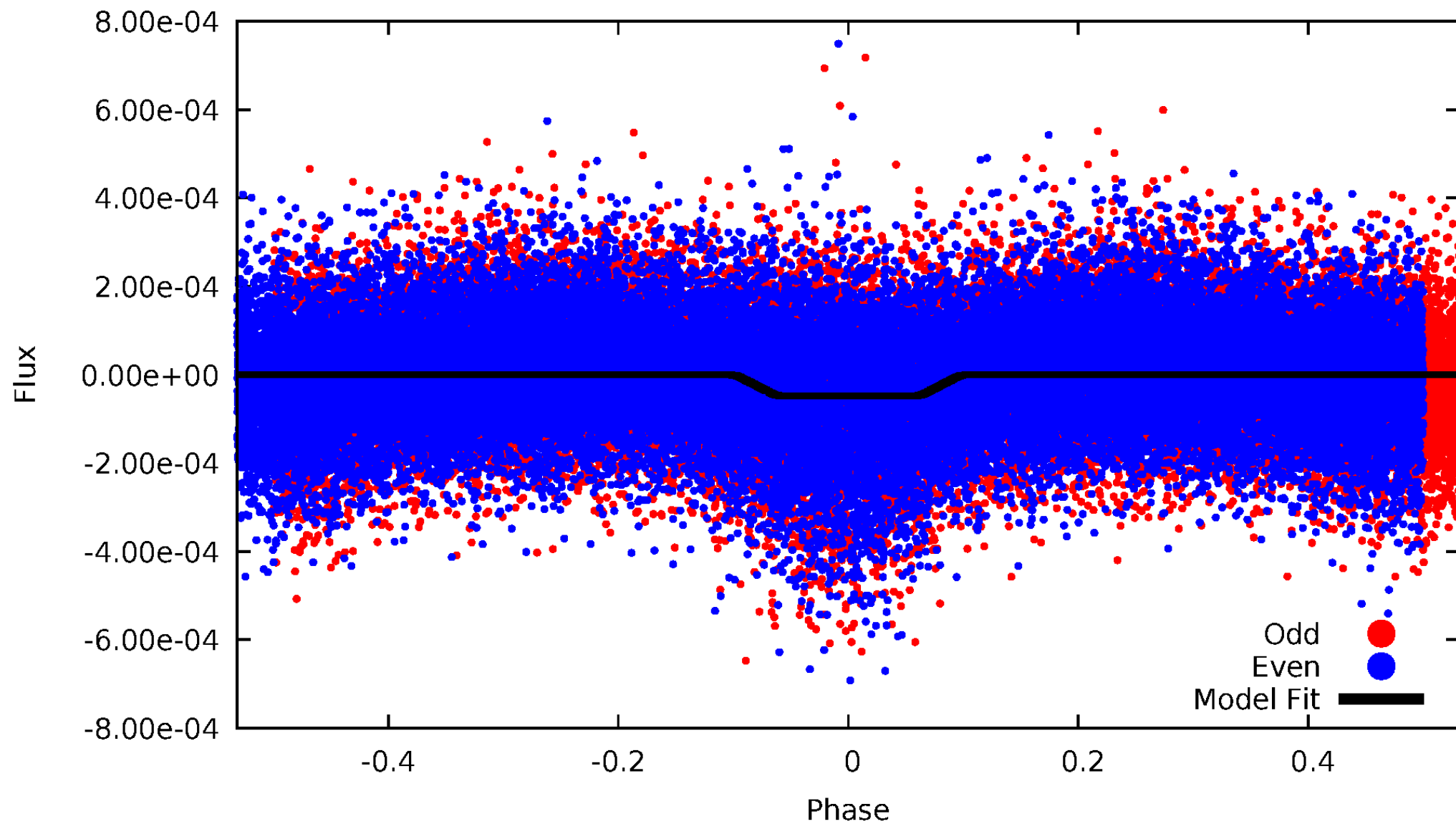
DV Odd/Even

TCE 008231299-01



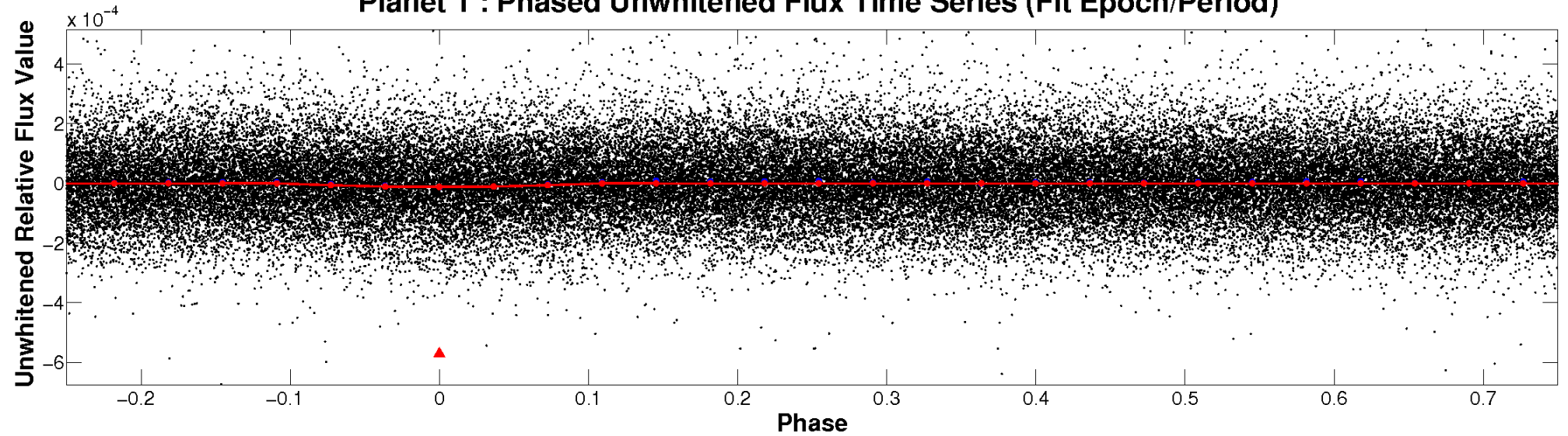
ALT Odd/Even

TCE 008231299-01

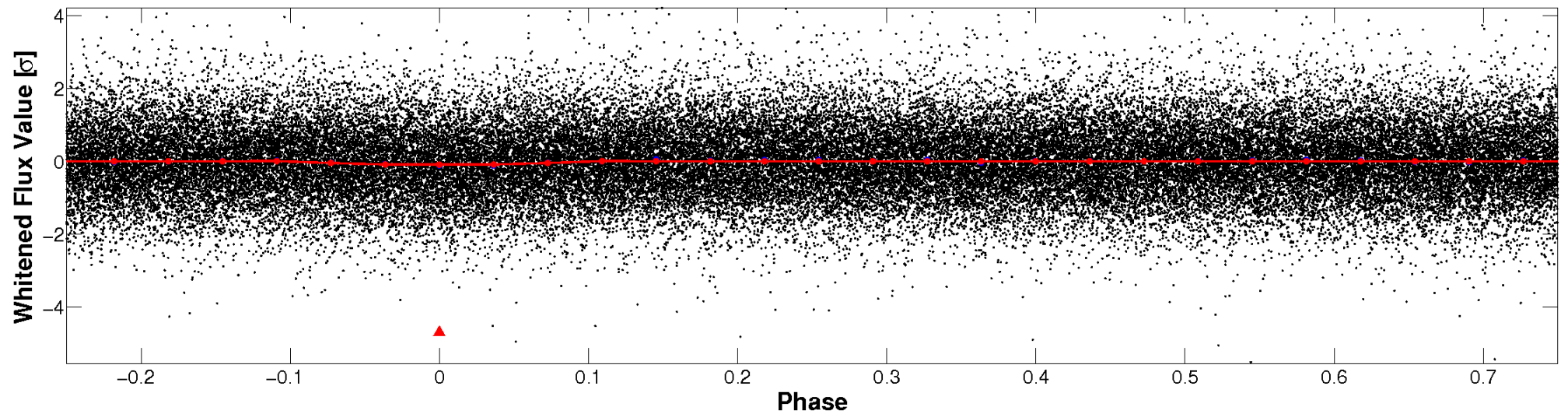


Non-Whitened Vs. Whitened Light Curve

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

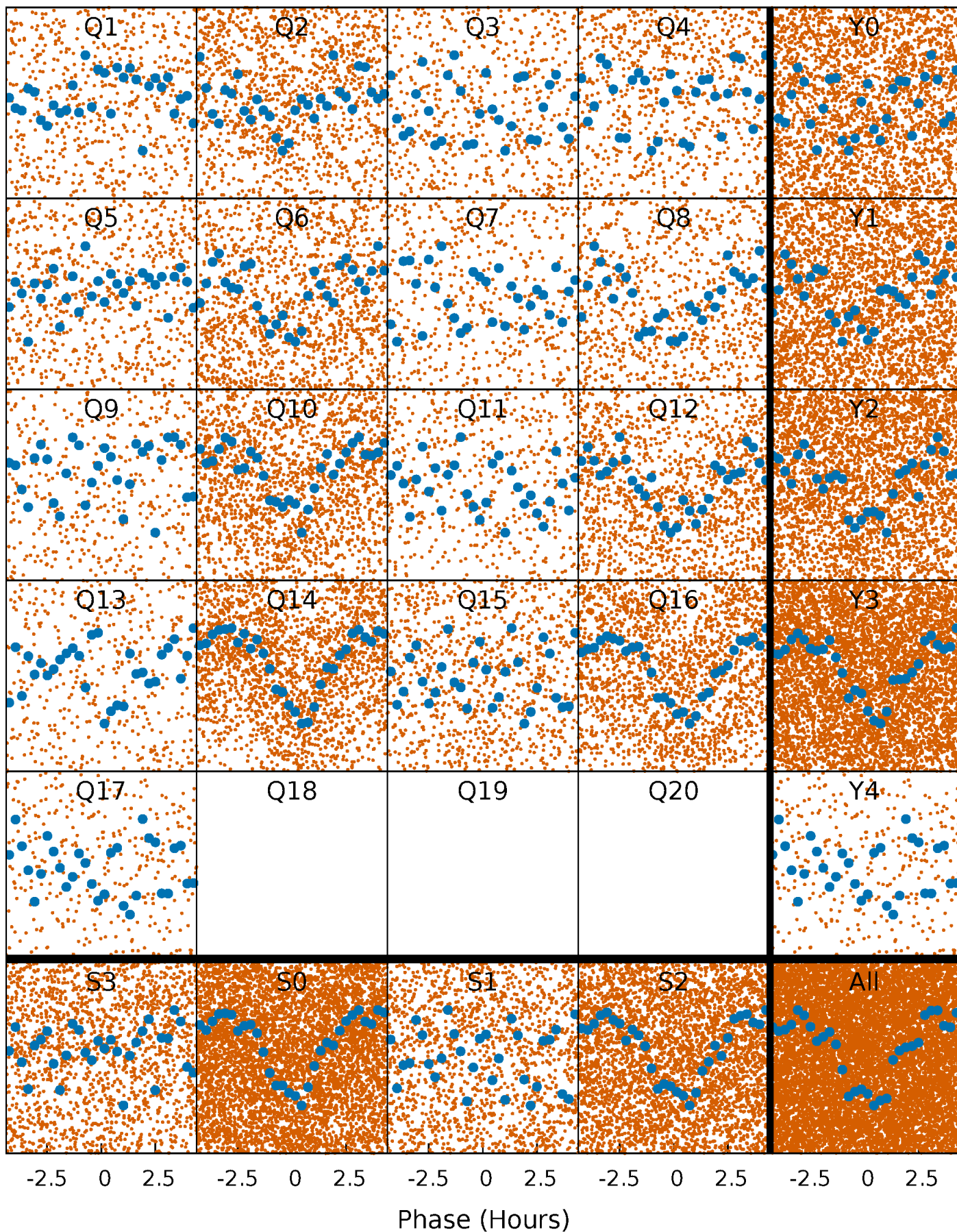


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



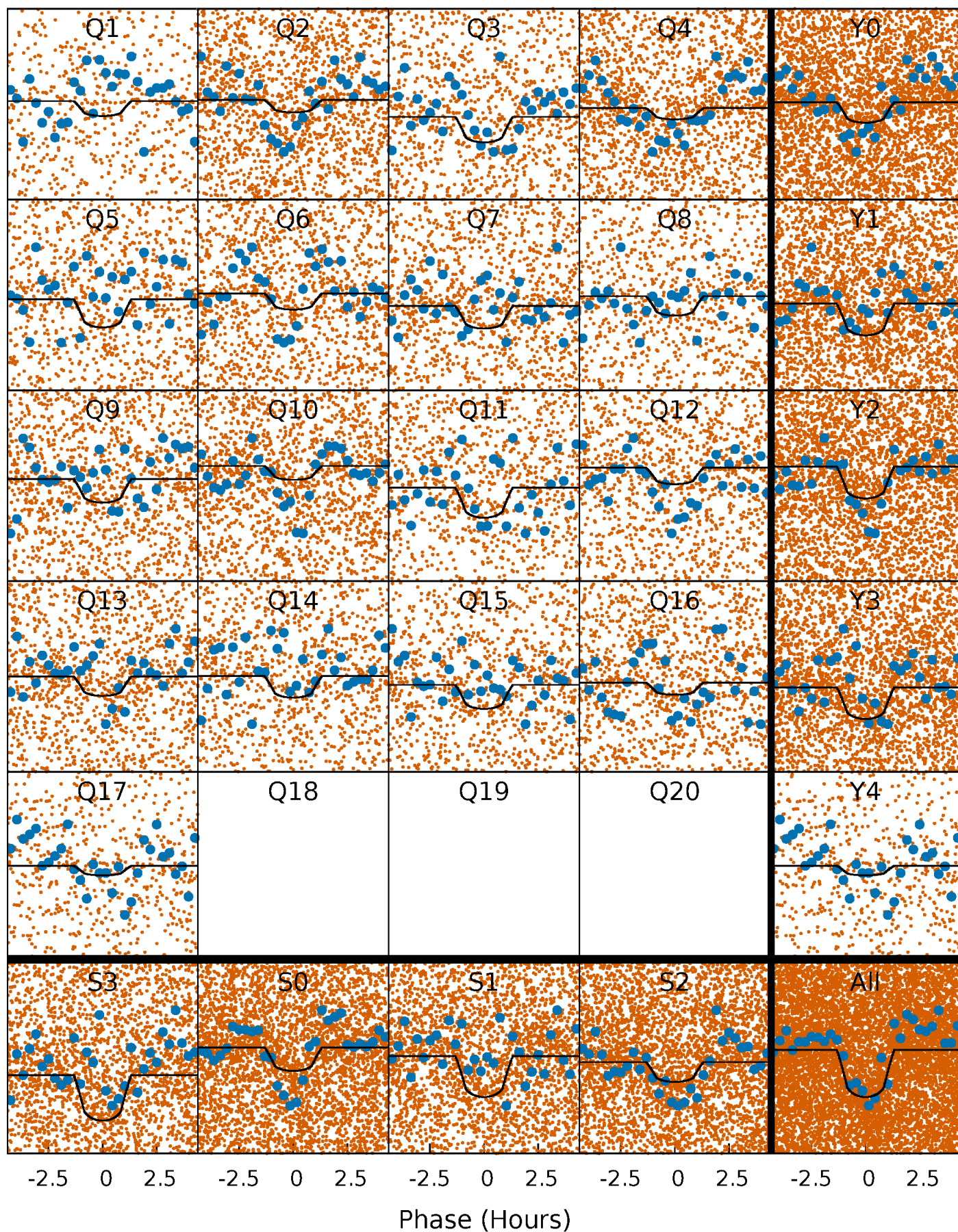
PDC Quarter-Phased Transit Curves

TCE 008231299-01 P= 0.562252 Days $T_0=131.556894$ (BKJD)



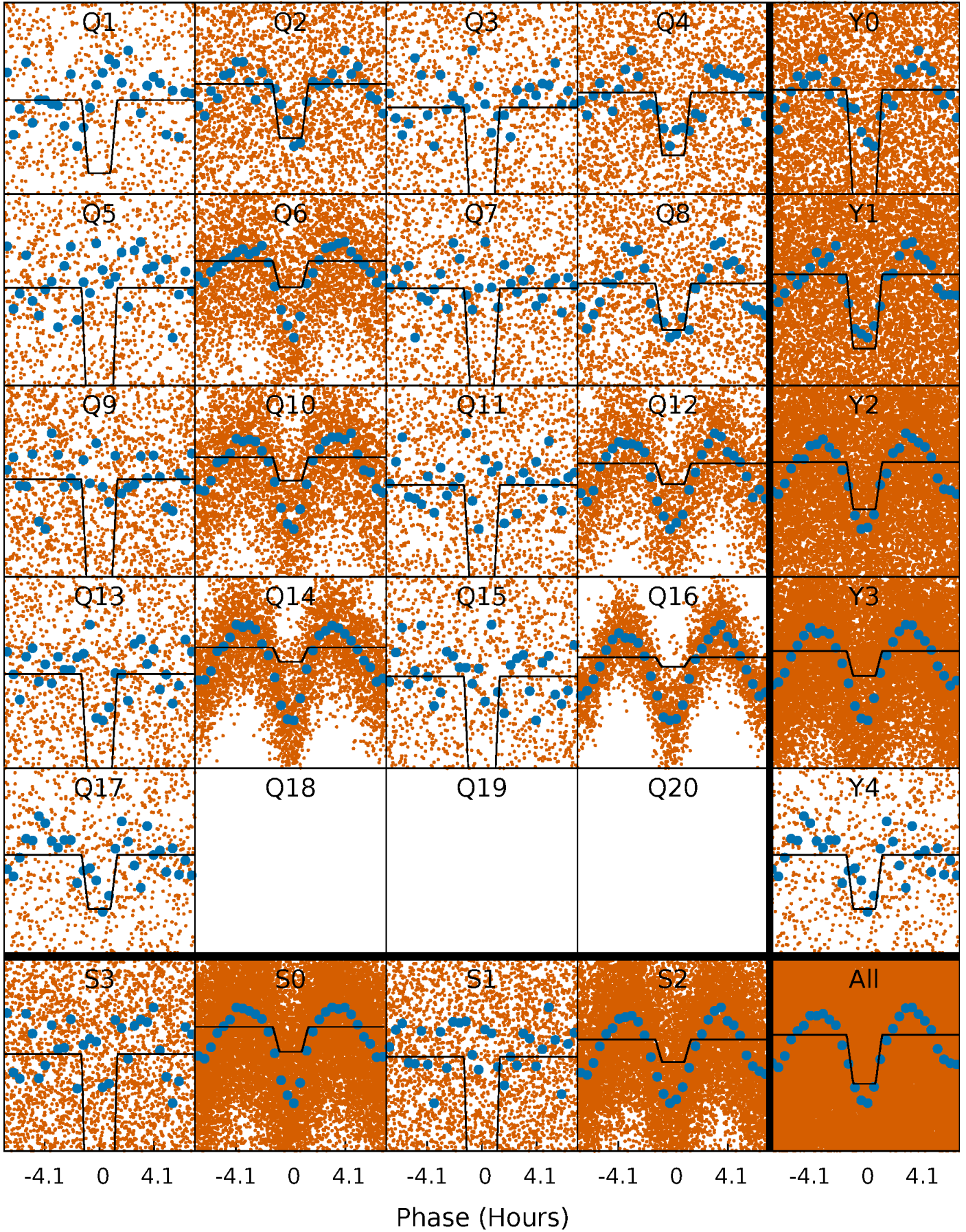
DV Quarter-Phased Transit Curves

TCE 008231299-01 P= 0.562252 Days $T_0=131.556894$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

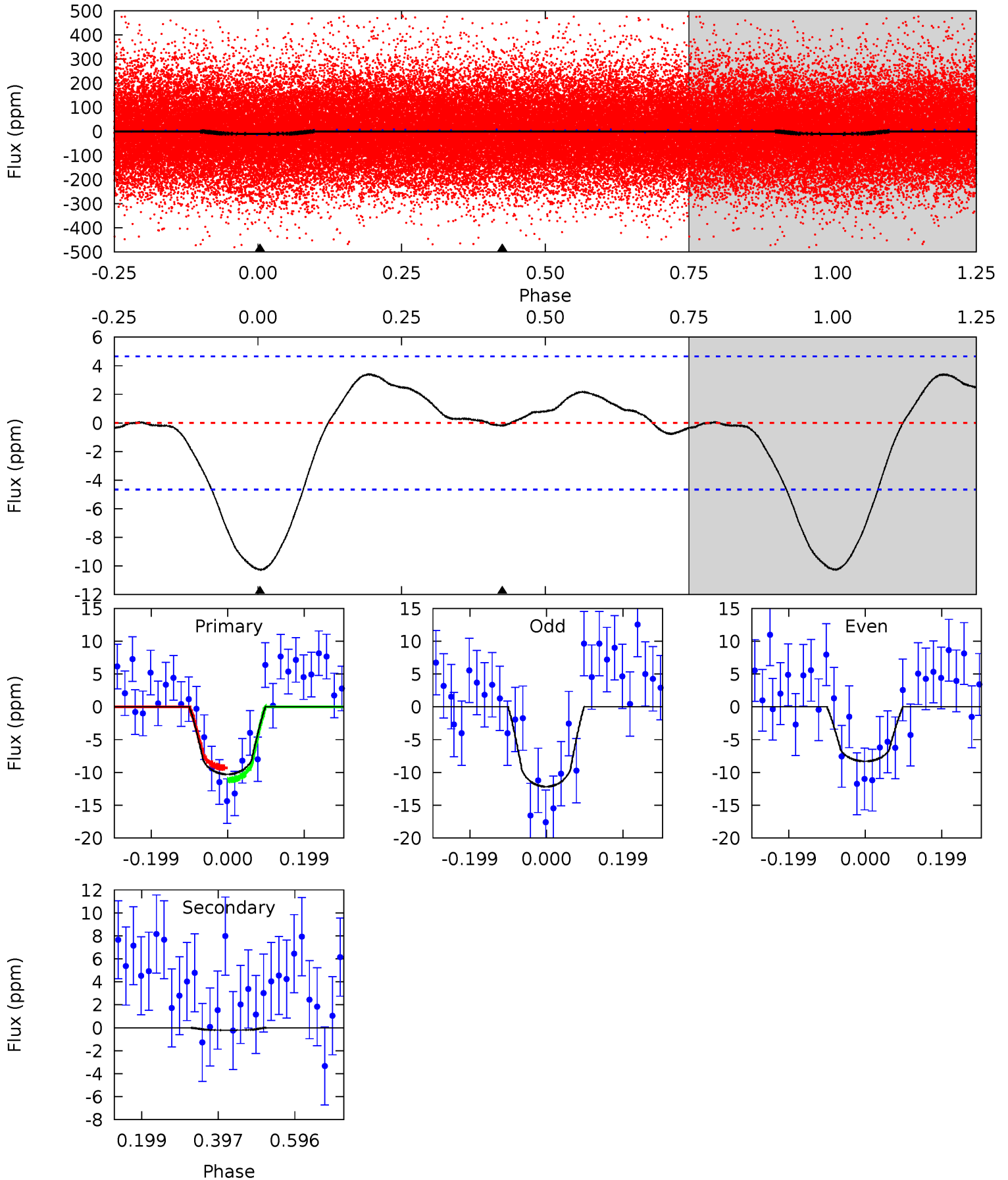
TCE 008231299-01 P= 0.562279 Days $T_0=131.518946$ (BKJD)



DV Model-Shift Uniqueness Test

008231299-01, P = 0.562252 Days, E = 130.994642 Days

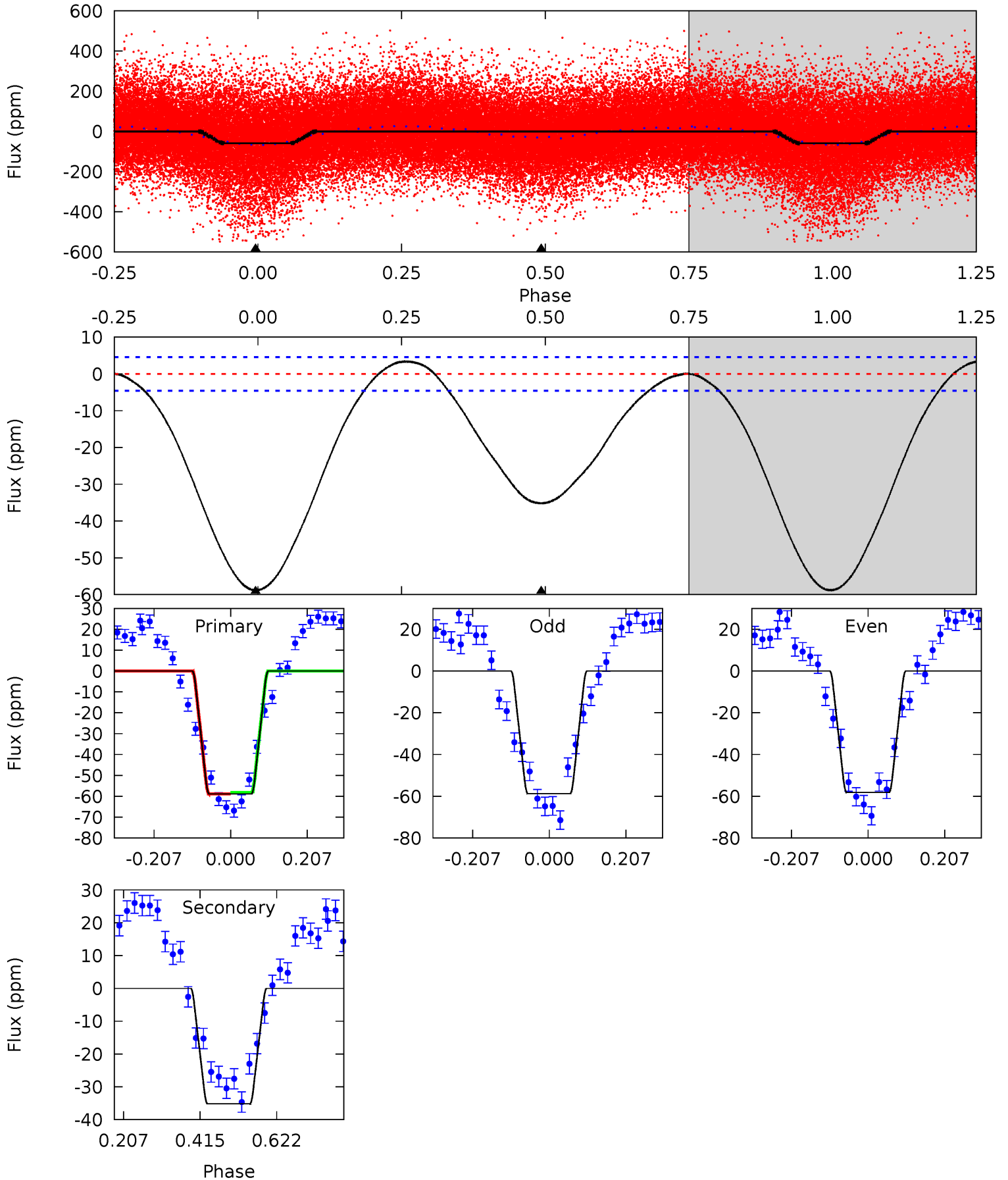
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.76	0.20	0	0	4.42	1.29	1.07	9.76	9.76	0.20	0.20	1.85	0.94	0.25	0.88



Alt Model-Shift Uniqueness Test

008231299-01, P = 0.562279 Days, E = 130.956667 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
56.8	34.0	0	0	4.41	1.26	1.81	56.8	56.8	34.0	34.0	0.24	1.45	0.05	0.40



Stellar Parameters For KIC 008231299

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5632^{+90}_{-78}	$4.450^{+0.117}_{-0.063}$	$-0.580^{+0.150}_{-0.150}$	$0.847^{+0.073}_{-0.101}$	$0.736^{+0.057}_{-0.022}$	$1.709^{+0.851}_{-0.334}$
	+2%/-1%	+3%/-1%	+26%/-26%	+9%/-12%	+8%/-3%	+50%/-20%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 008231299-01 / KOI 7874.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-0 ± 1	$0.30^{+0.09}_{-0.09}$	2900^{+86}_{-103}	-2790^{+6325}_{-912}	$0.142^{+1.008}_{-0.970}$
Alt.	-35 ± 1	$0.64^{+0.10}_{-0.10}$	2894^{+89}_{-99}	5203^{+405}_{-301}	$7.082^{+2.845}_{-1.757}$

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 $A_{obs} \gg 1.0$

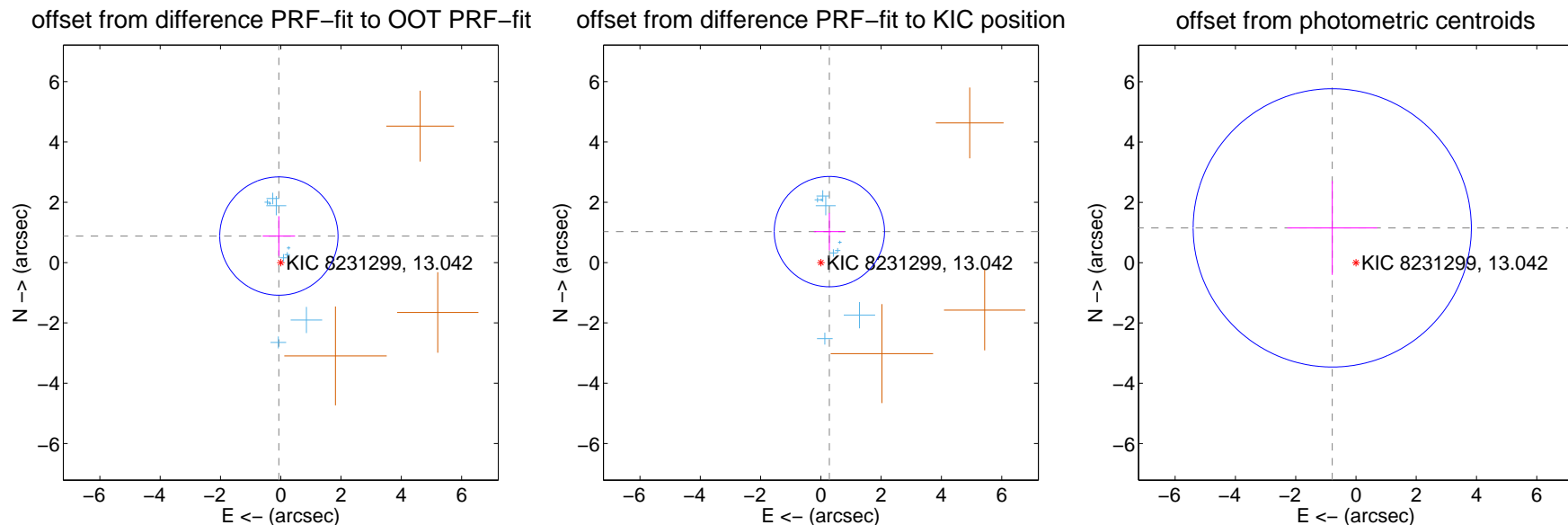
DV Centroid Data

Supplemental centroid analysis for 008231299-01. Kepler magnitude: 13.04. Transit SNR 7.45

There are 9 quarters with good PRF difference image offsets

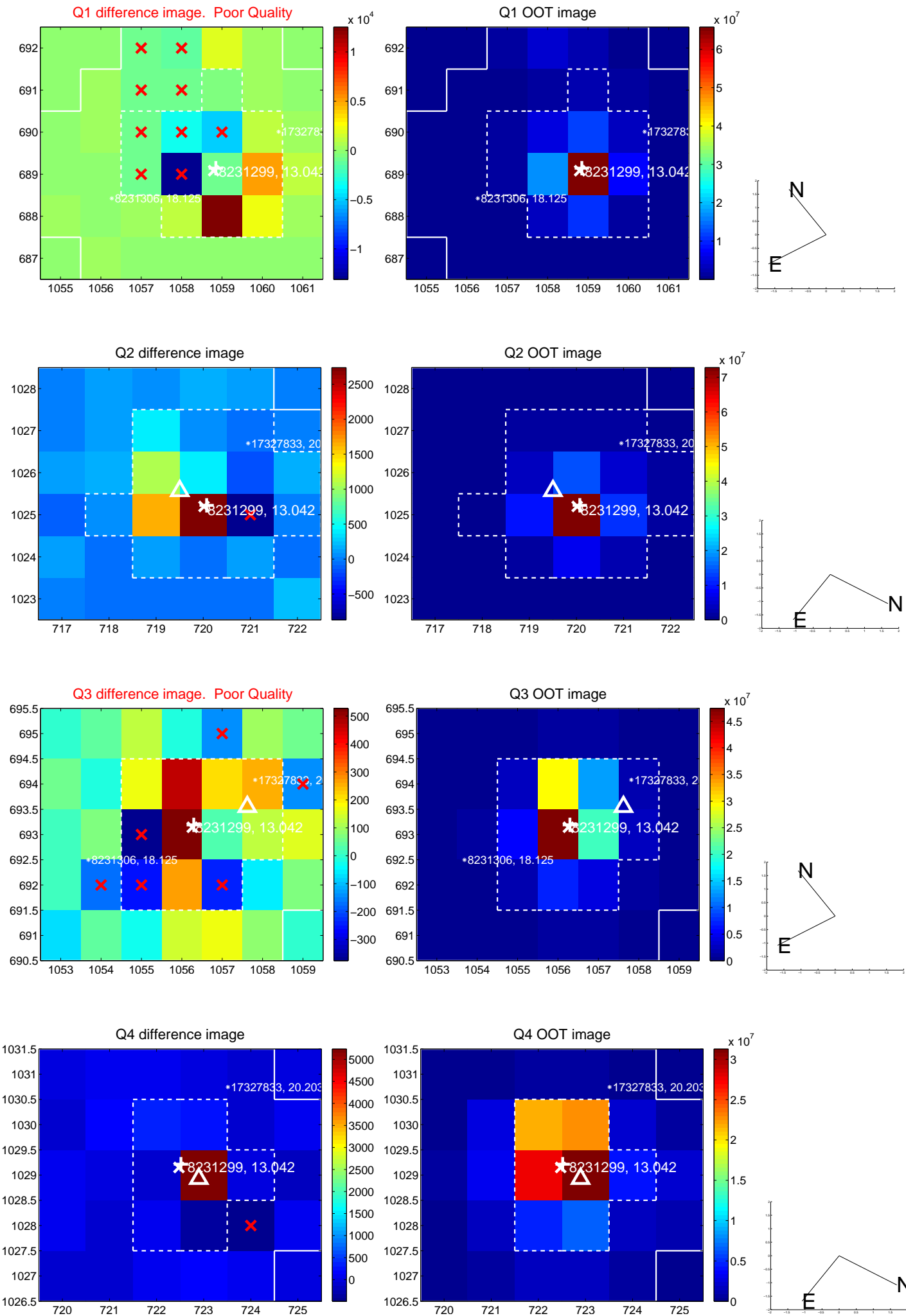
The direct PRF centroid is offset from the target star catalog position by about 0.46 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.882 ± 0.654	1.35	0.062 ± 0.537	0.880 ± 0.657
PRF-fit source offset from KIC position	1.065 ± 0.610	1.75	-0.282 ± 0.512	1.027 ± 0.618
photometric centroid source offset	1.40 ± 1.54	0.91	0.79 ± 1.49	1.15 ± 1.56

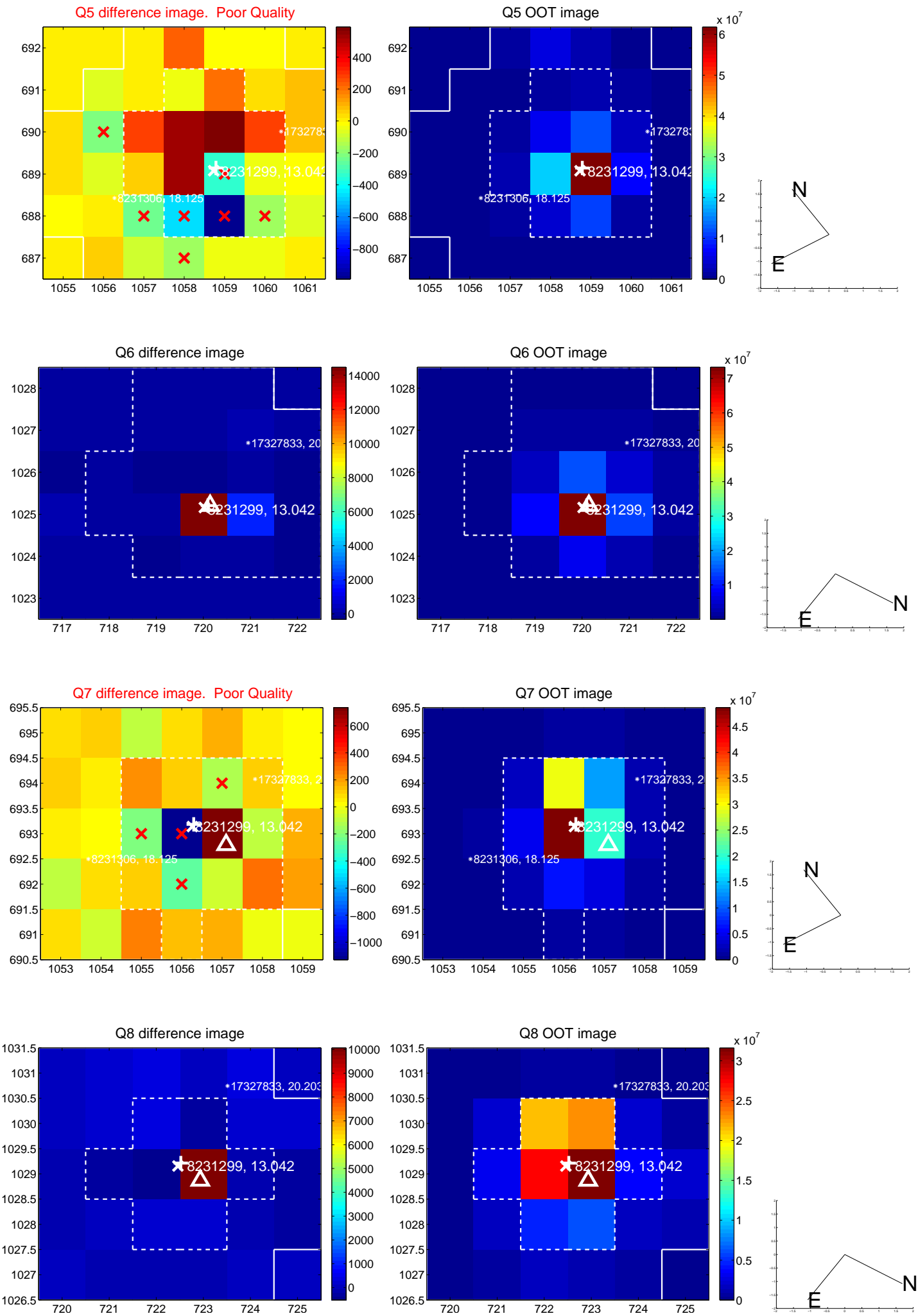


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

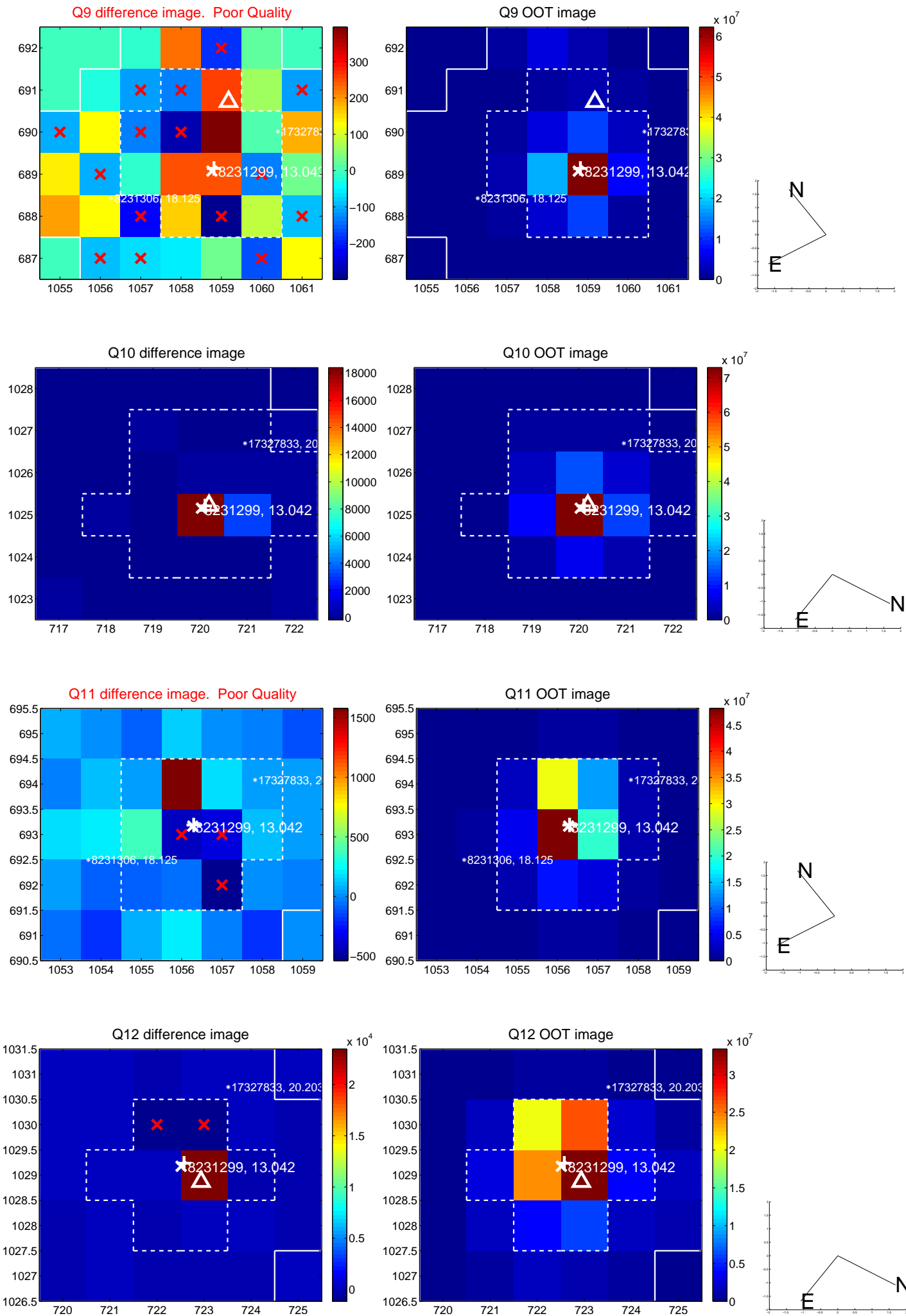
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



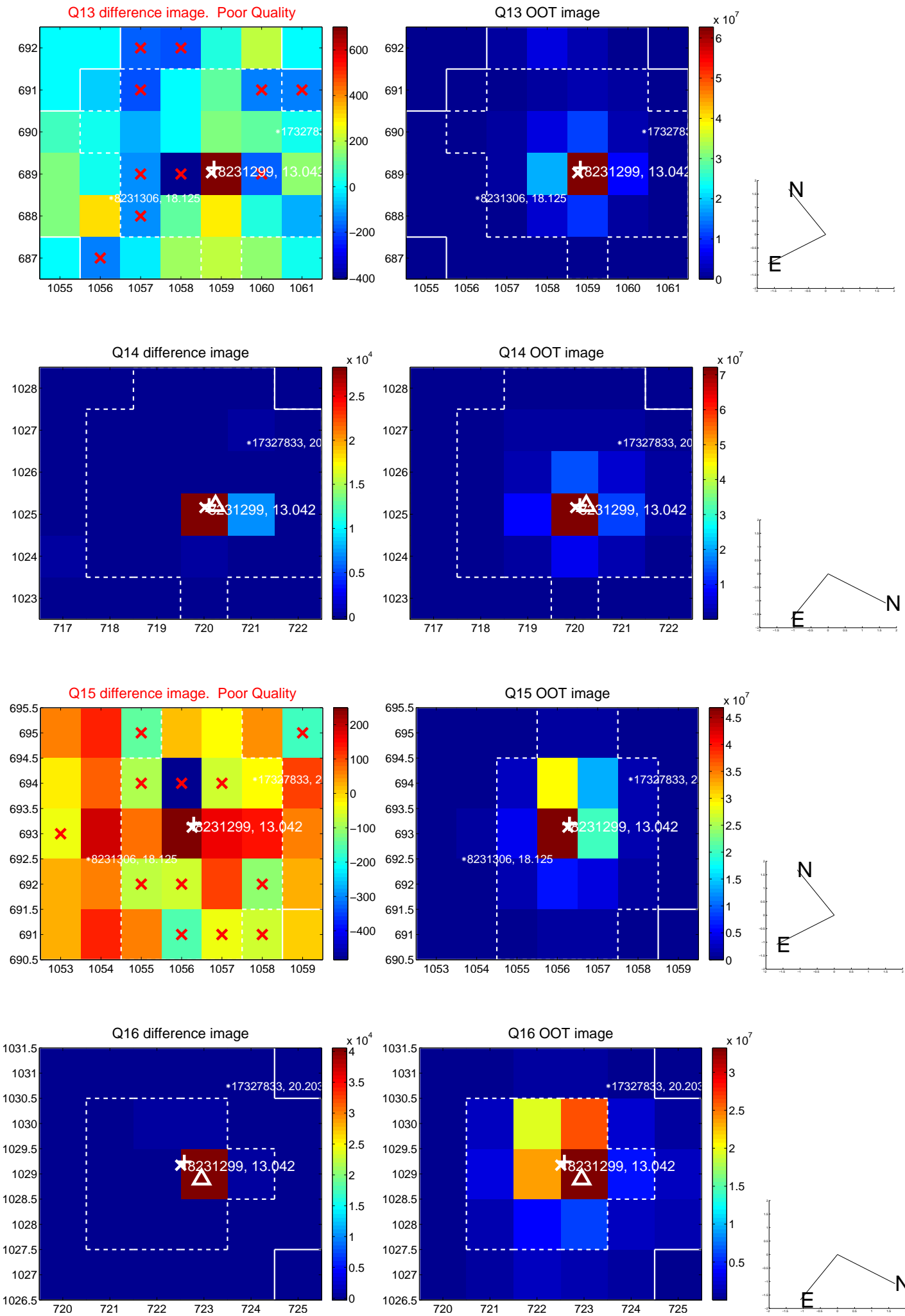
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



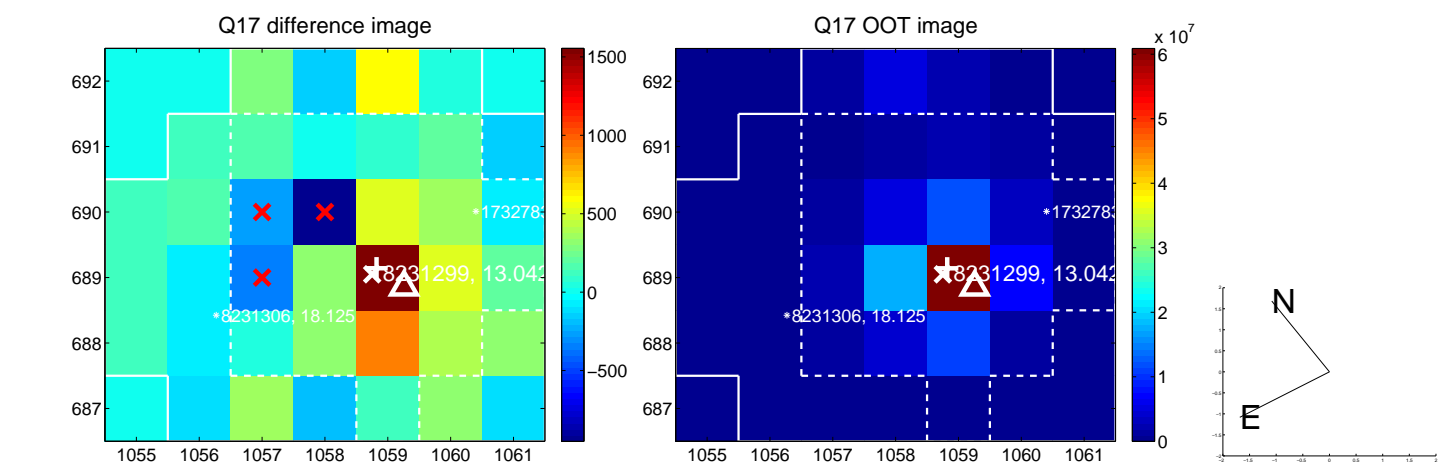
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



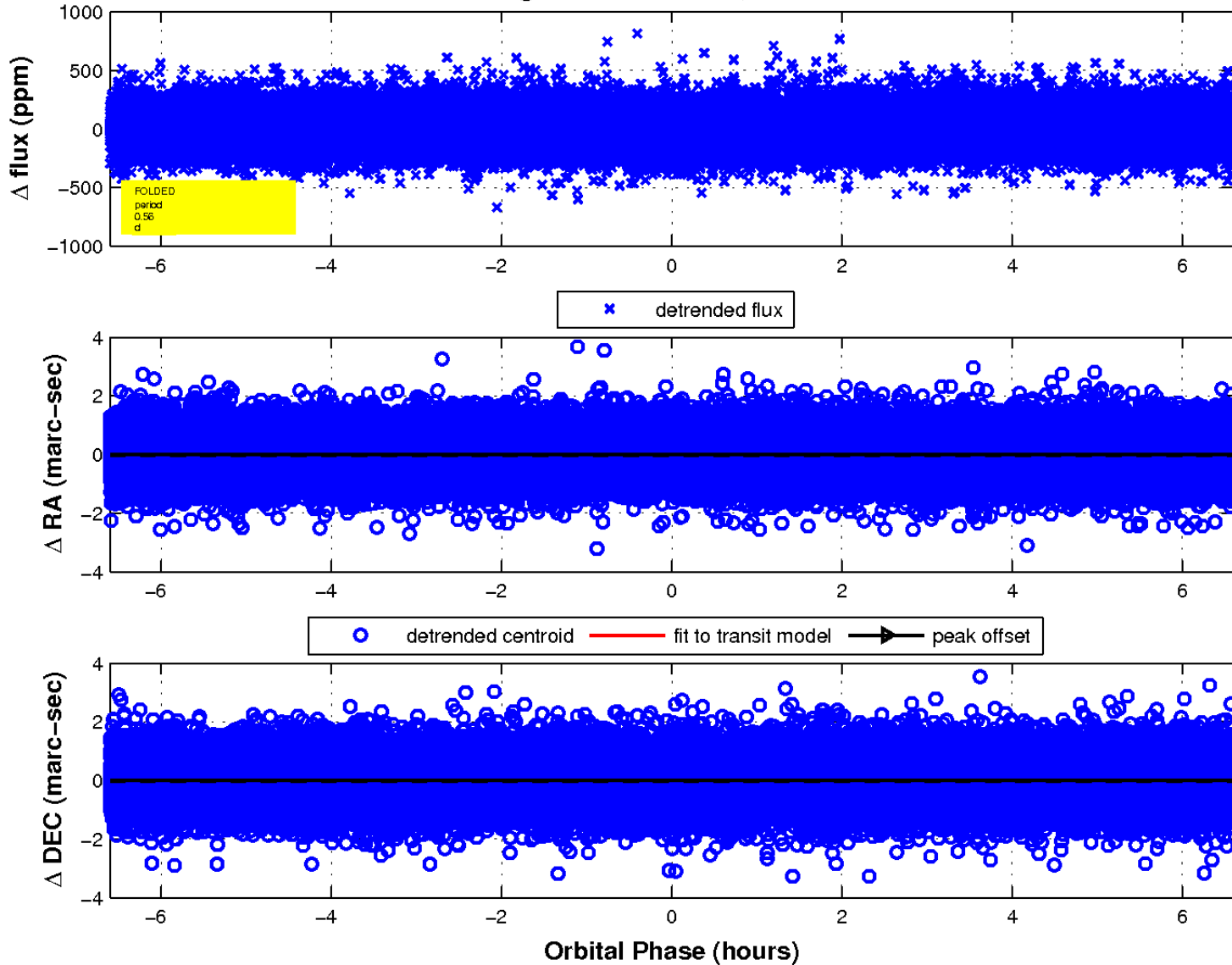
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

