

KIC 008516686

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})
008516686-01	OBS	No	0.623244	132.006163	4.3	4.903	11.0	9.3	2.12	8454	0.45	68394.35

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008516686-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_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.

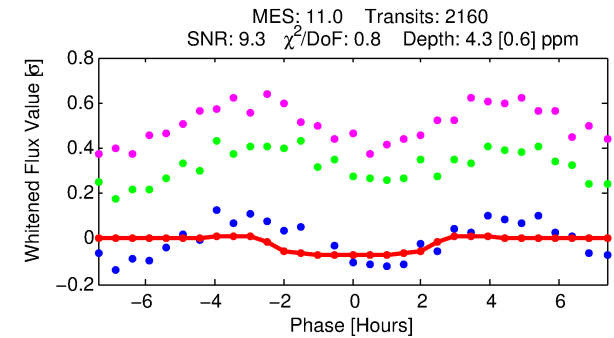
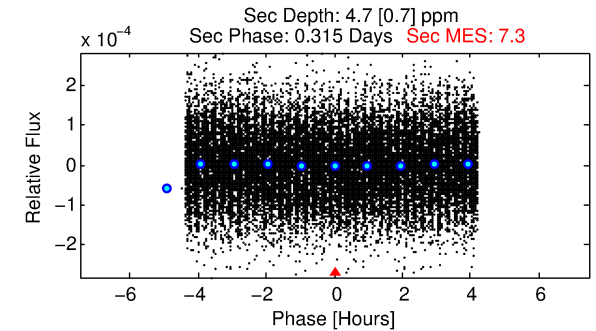
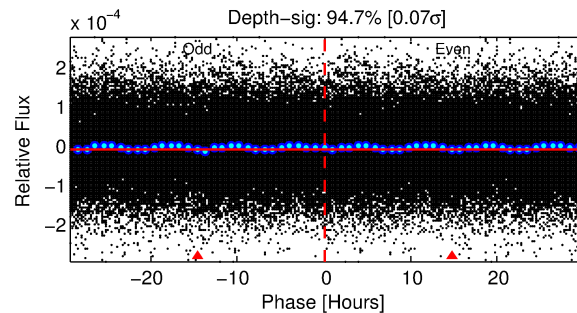
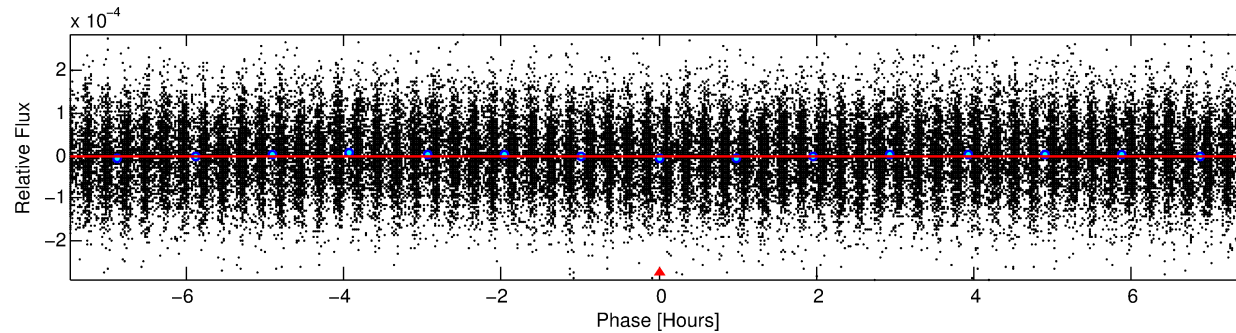
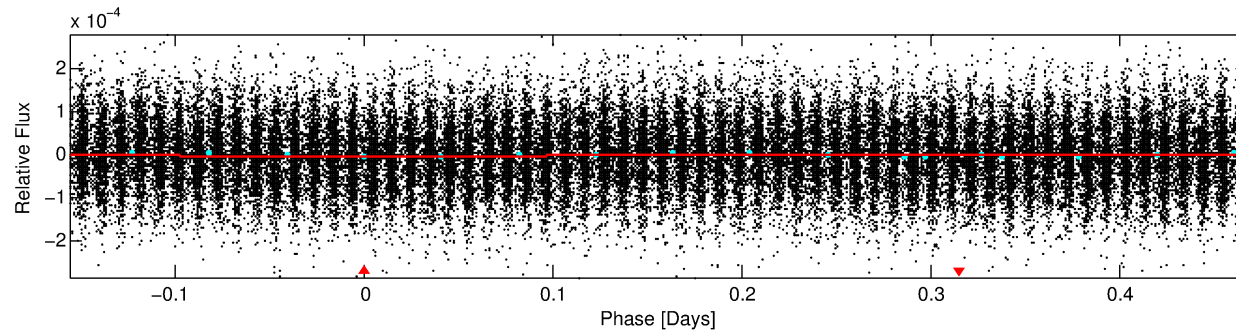
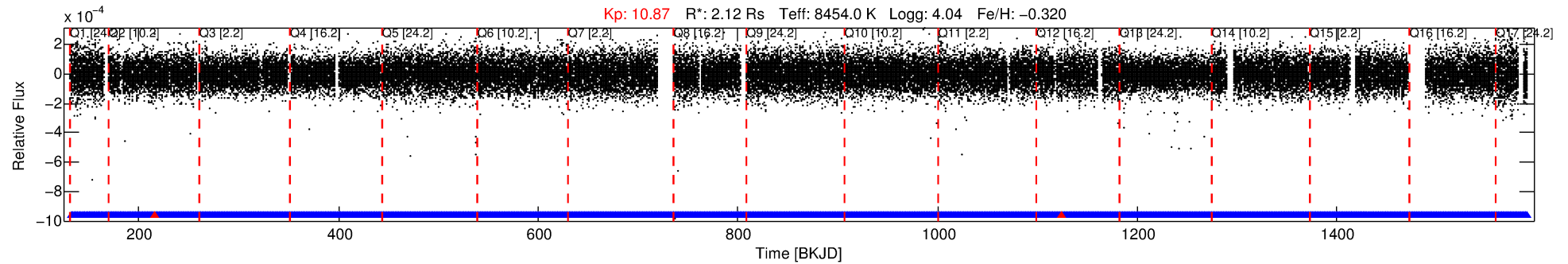
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008516686-01

No Significant Match Found

DV One-Page Summary

KIC: 8516686 Candidate: 1 of 1 Period: 0.623 d



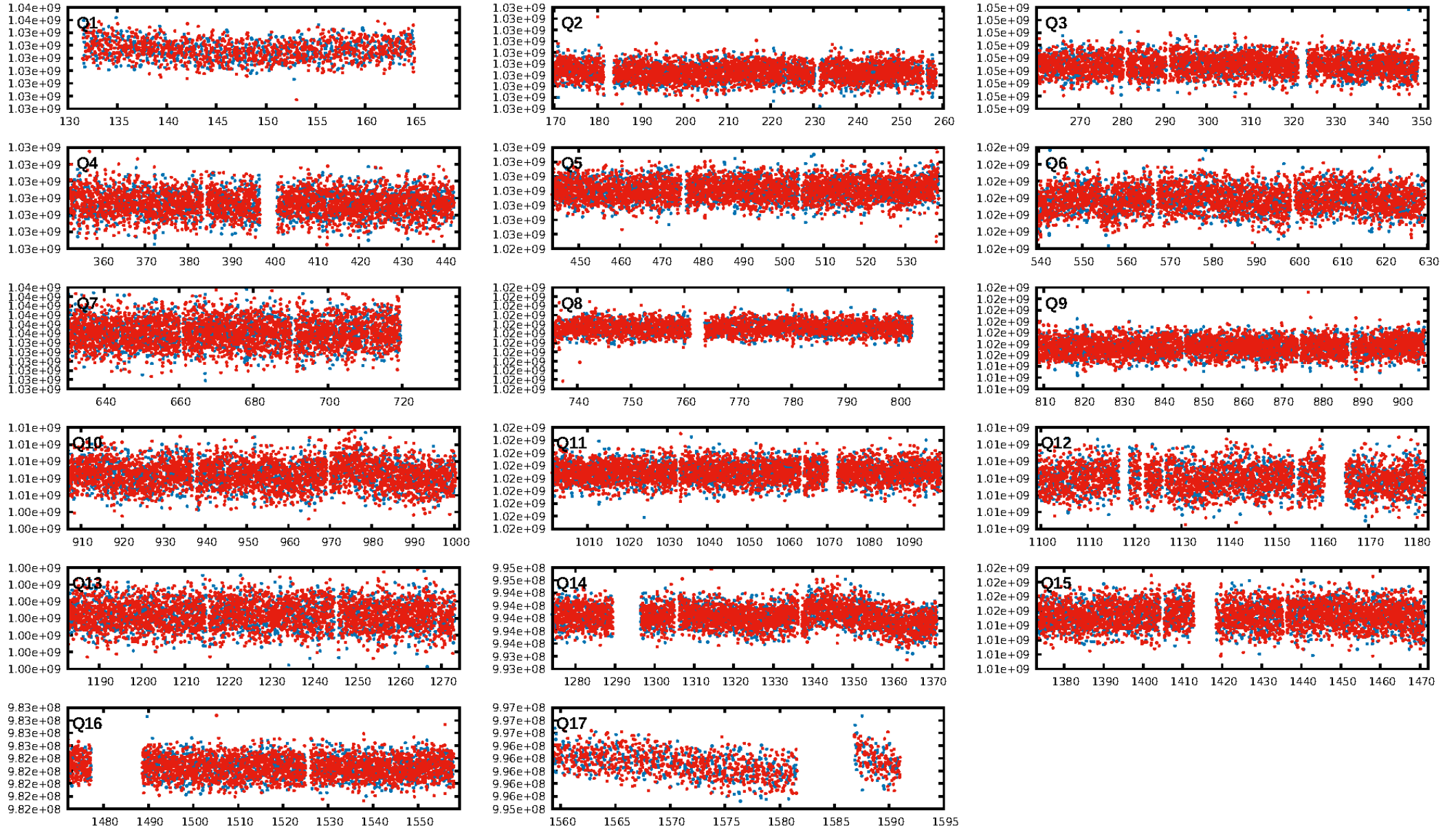
DV Fit Results:

Period = 0.62324 [0.00001] d
Epoch = 132.0062 [0.0058] BKJD
 R_p/R^* = 0.0019 [0.0019]
 a/R^* = 1.16 [1.80]
 b = 0.22 [25.64]
 S_{eff} = 68394.35 [28796.30]
 T_{eq} = 4124 [434] K
 R_p = 0.45 [0.47] R_e
 a = 0.0173 [0.0045] AU
 A_g = 3.89 [7.99] [0.36 σ]
 T_{effp} = 8956 [4525] K [1.06 σ]

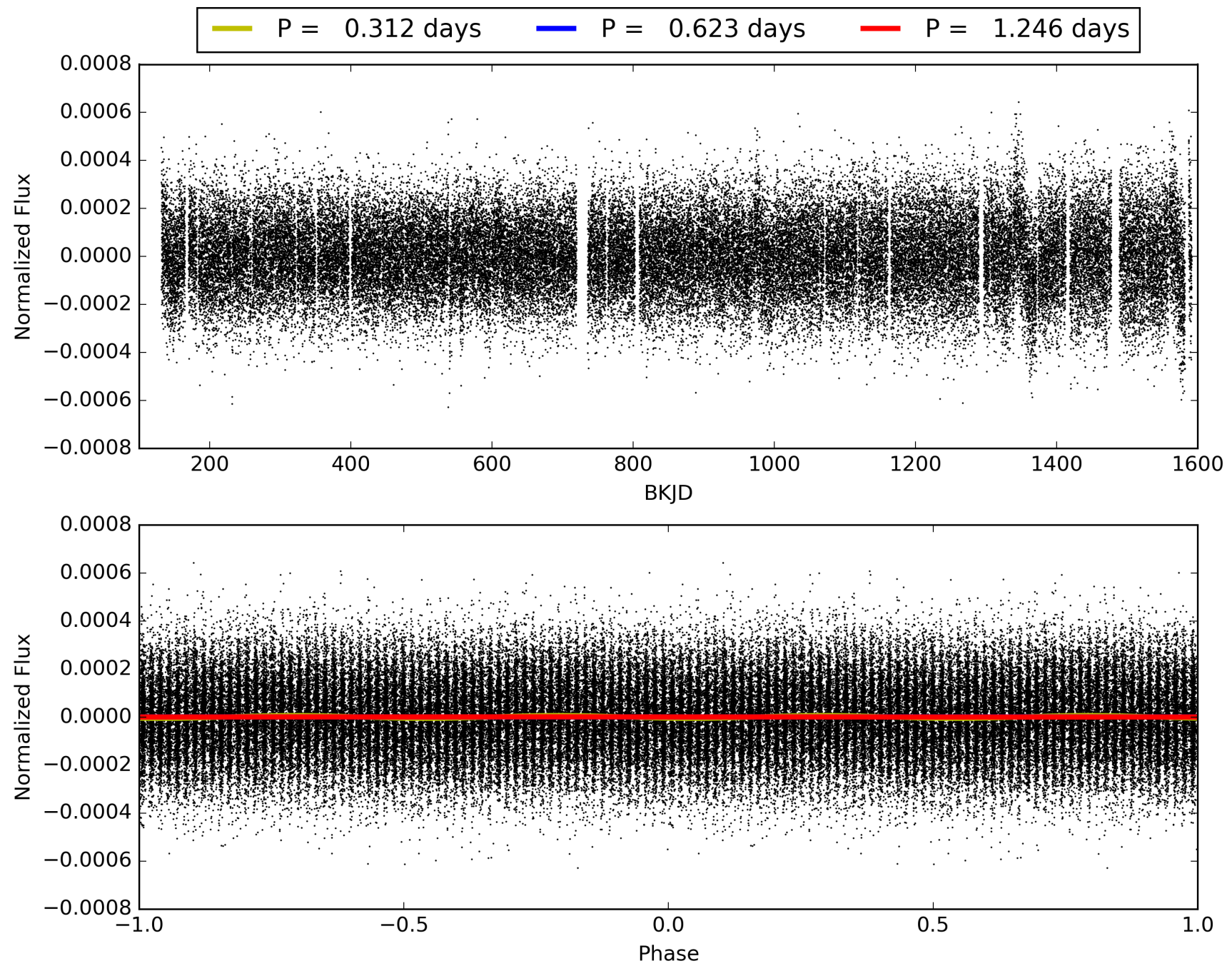
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2060/2062]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008516686-01, PDC Light Curves

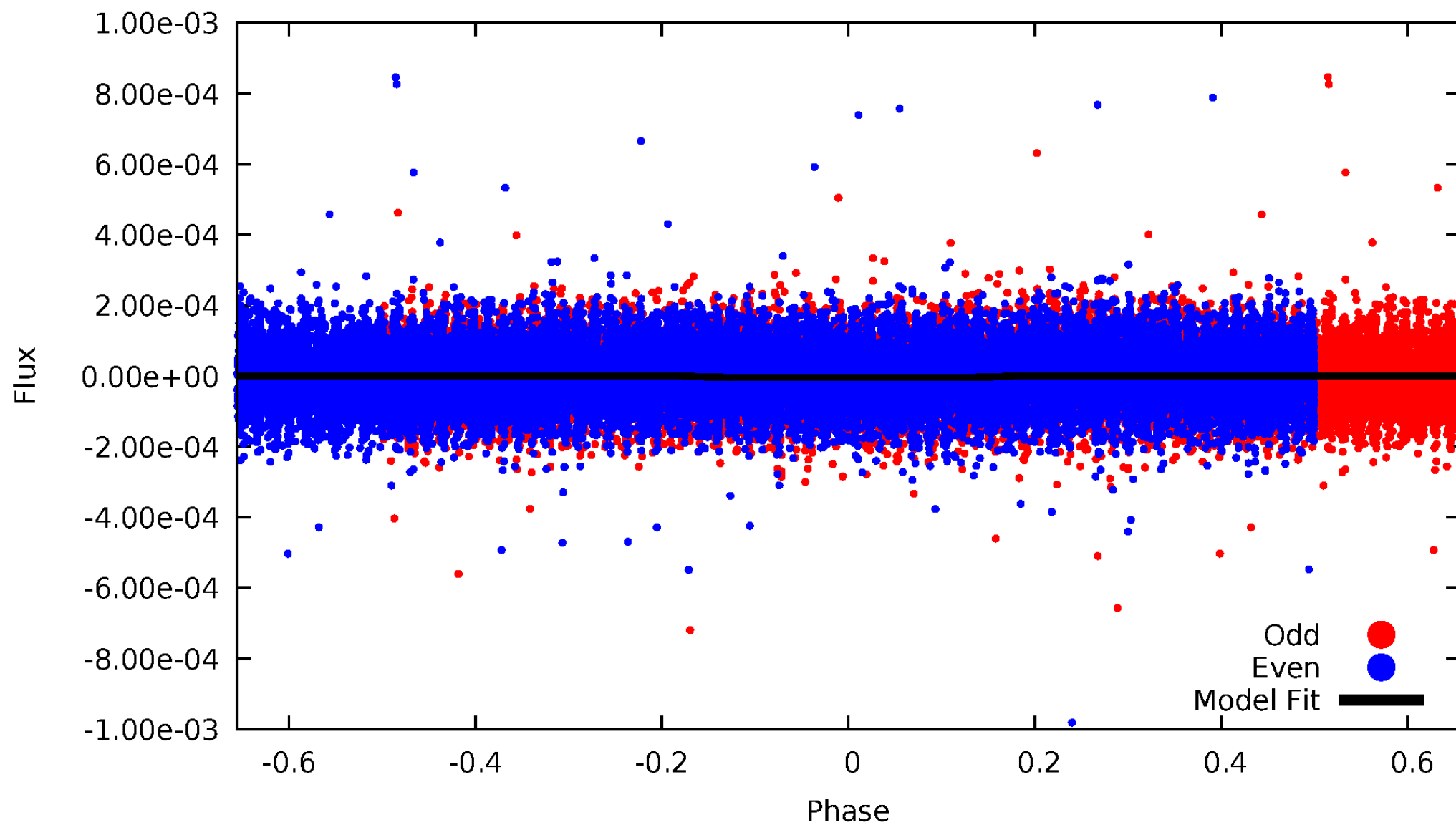


TCE 008516686-01



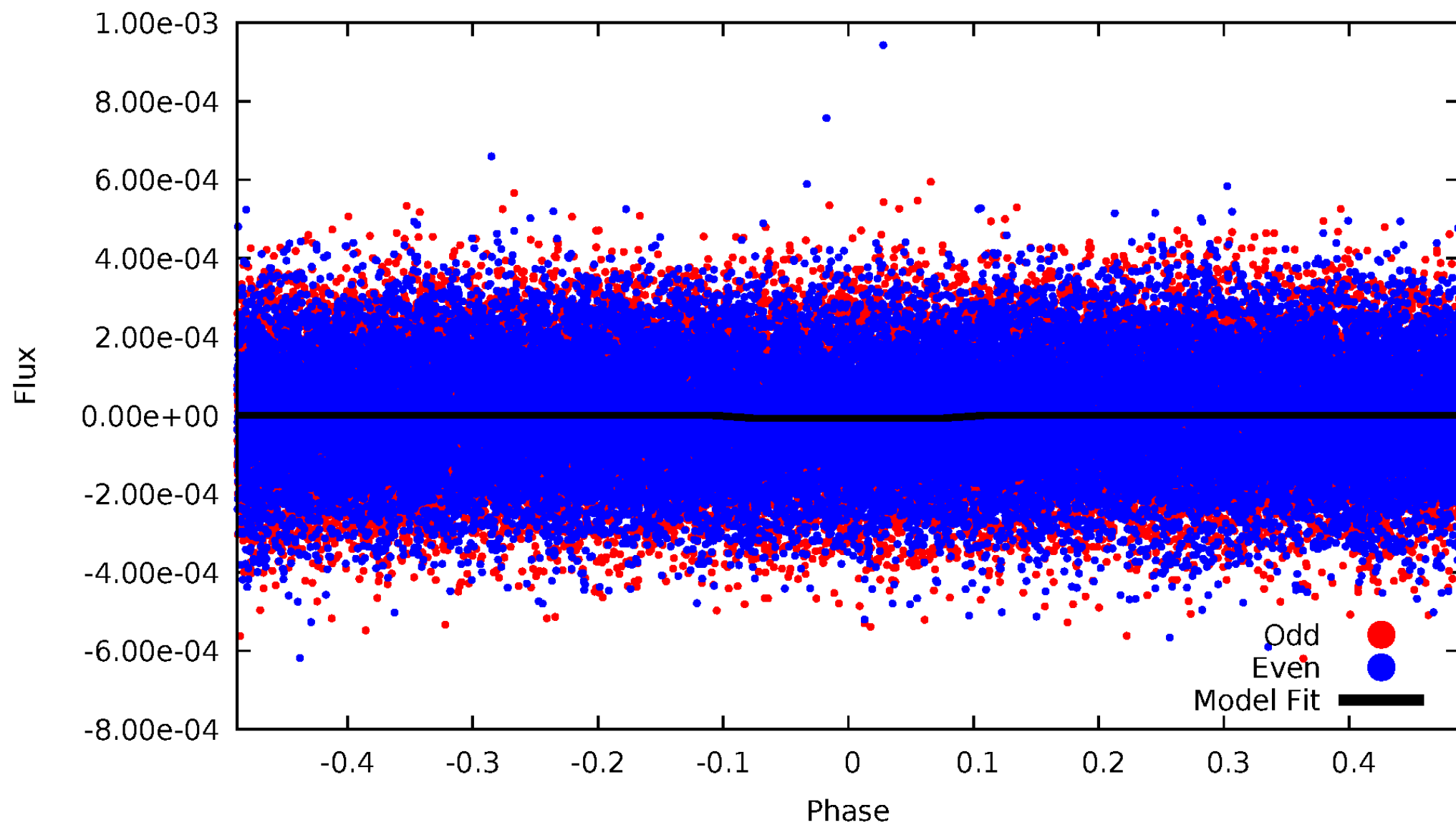
DV Odd/Even

TCE 008516686-01



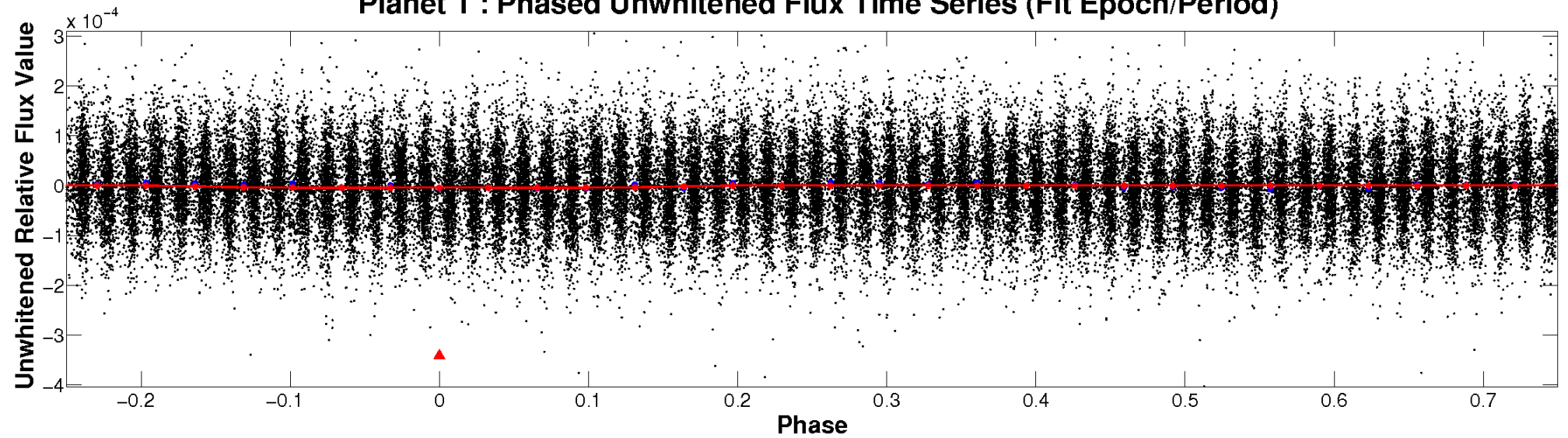
ALT Odd/Even

TCE 008516686-01

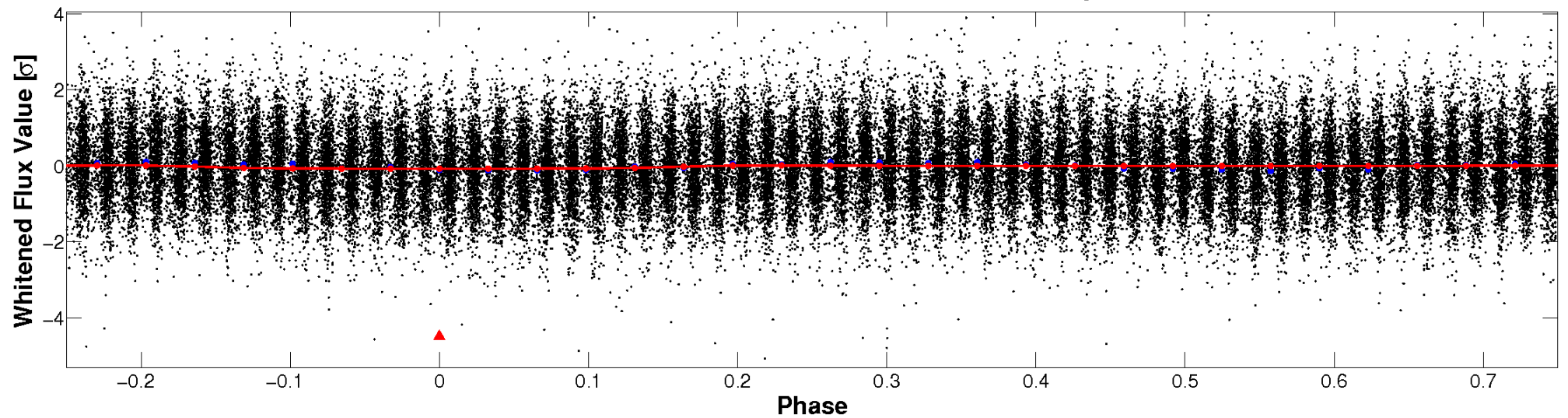


Non-Whitened Vs. Whitened Light Curve

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

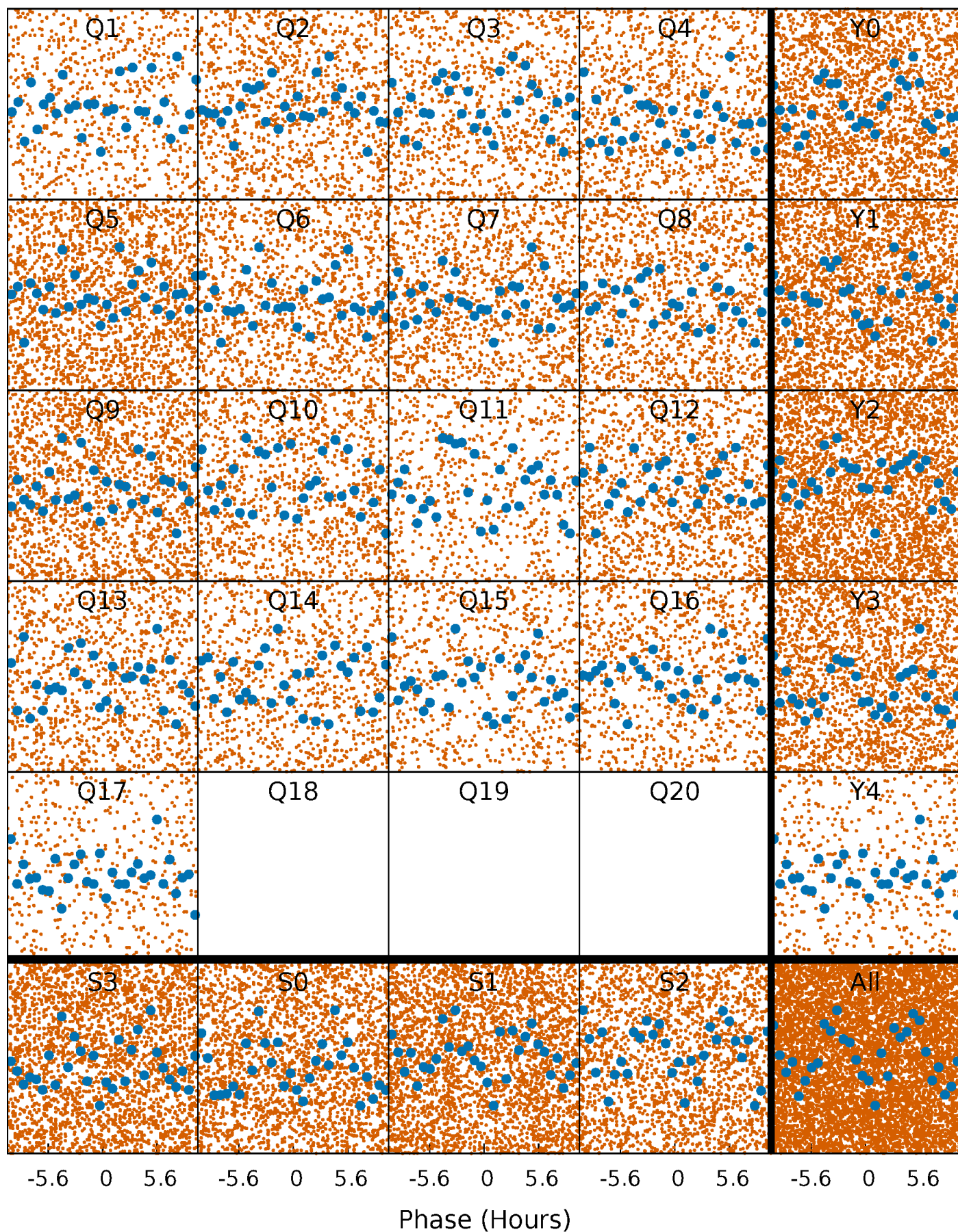


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



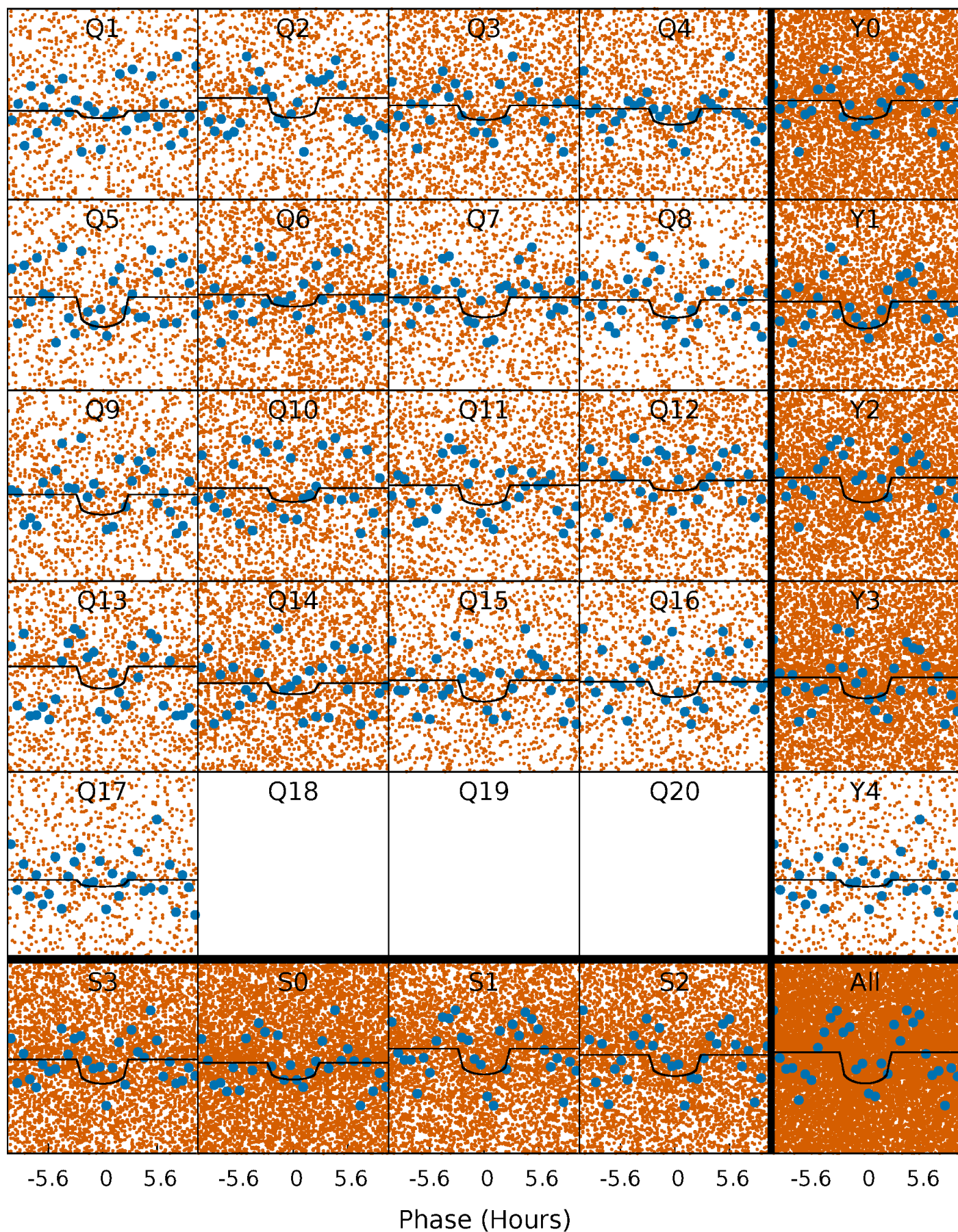
PDC Quarter-Phased Transit Curves

TCE 008516686-01 P= 0.623244 Days $T_0=132.006163$ (BKJD)



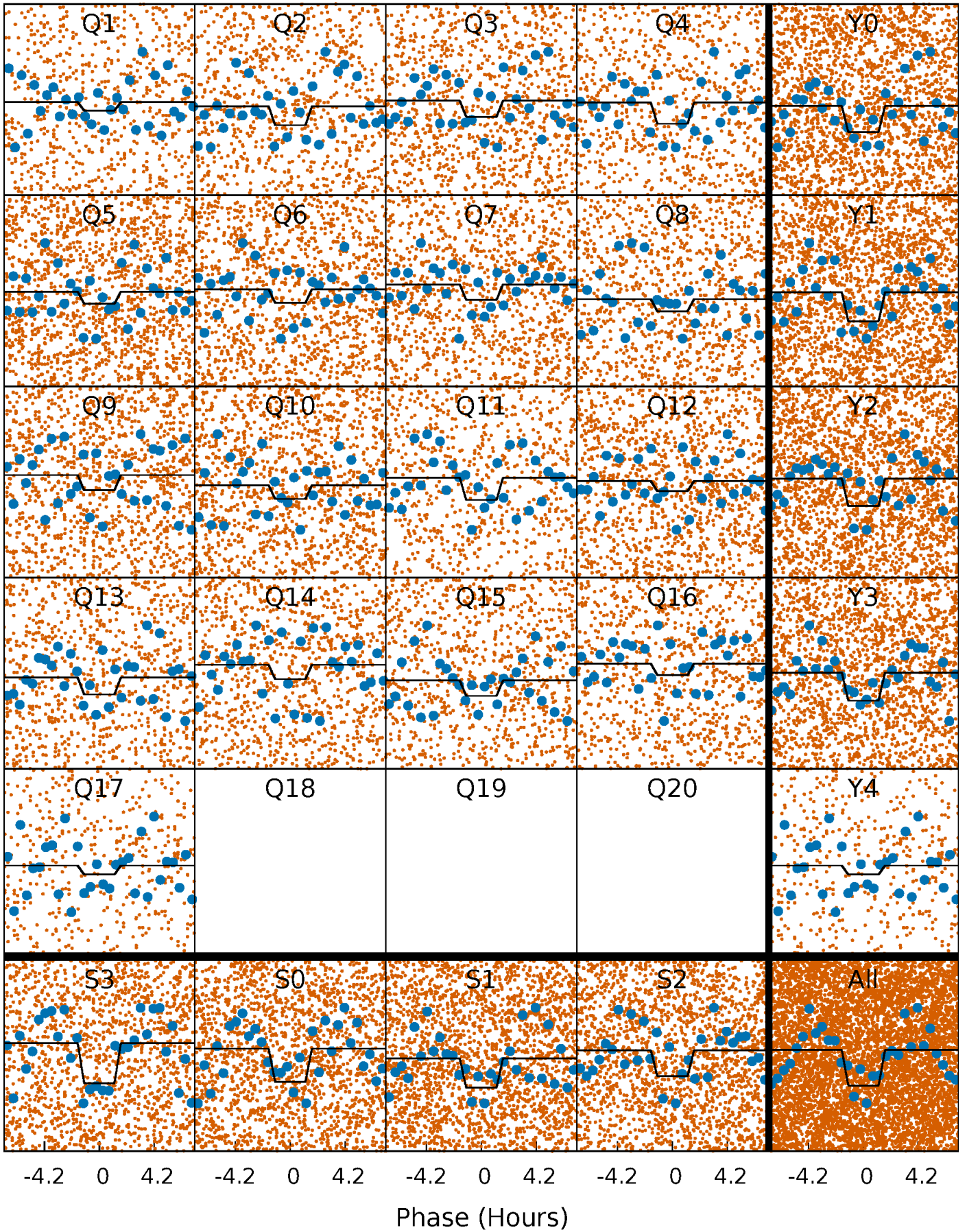
DV Quarter-Phased Transit Curves

TCE 008516686-01 P= 0.623244 Days $T_0=132.006163$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

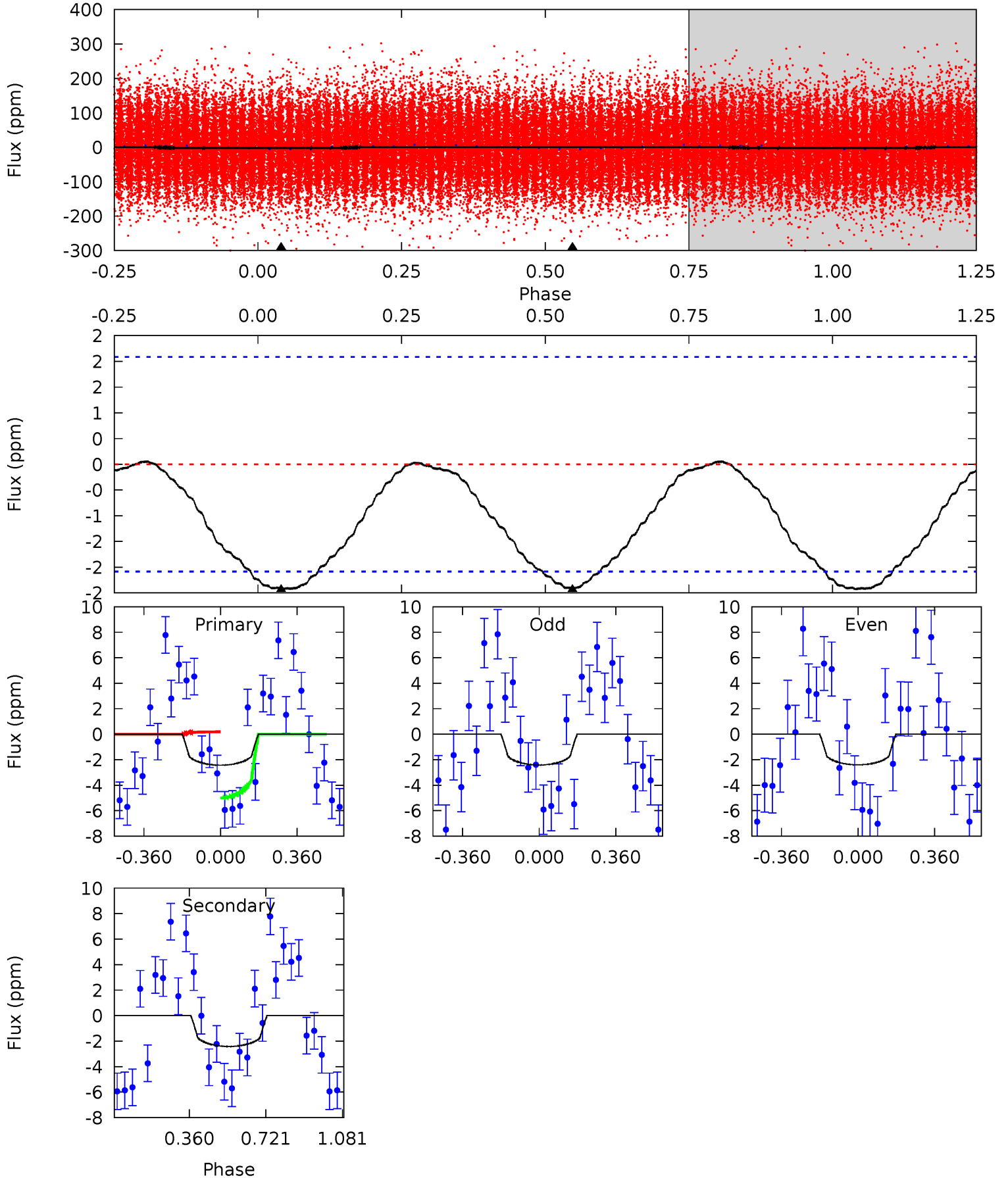
TCE 008516686-01 P= 0.623274 Days $T_0=131.993127$ (BKJD)



DV Model-Shift Uniqueness Test

008516686-01, P = 0.623244 Days, E = 131.382919 Days

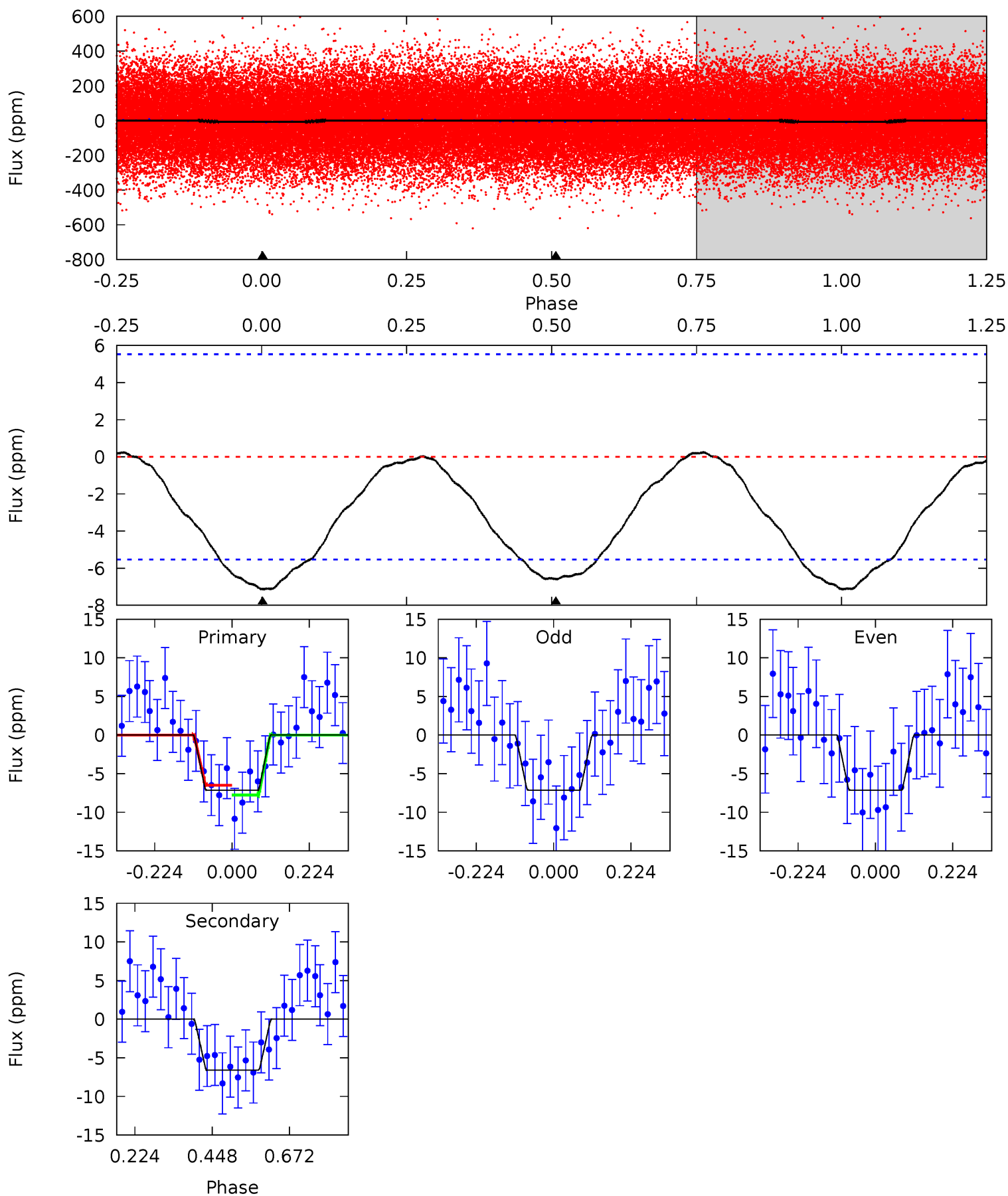
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.99	4.98	0	0	4.29	0.91	0.10	4.99	4.99	4.98	4.98	0.01	0.85	0.02	4.99



Alt Model-Shift Uniqueness Test

008516686-01, P = 0.623274 Days, E = 131.369853 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.67	5.24	0	0	4.39	1.22	0.16	5.67	5.67	5.24	5.24	0.01	1.05	0.03	0.50



Stellar Parameters For KIC 008516686

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8454^{+236}_{-354}	$4.038^{+0.215}_{-0.116}$	$-0.320^{+0.150}_{-0.350}$	$2.119^{+0.392}_{-0.638}$	$1.788^{+0.089}_{-0.333}$	$0.265^{+0.333}_{-0.093}$
	+3%/-4%	+5%/-3%	+47%/-109%	+18%/-30%	+5%/-19%	+126%/-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 008516686-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-2 ± 0	$0.52^{+0.40}_{-0.32}$	5683^{+354}_{-433}	6253^{+5788}_{-2233}	$1.476^{+7.897}_{-1.048}$
Alt.	-7 ± 1	$0.66^{+0.44}_{-0.39}$	5680^{+356}_{-421}	7408^{+7461}_{-2122}	$2.497^{+12.922}_{-1.625}$

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 $A_{obs} \gg 1.0$

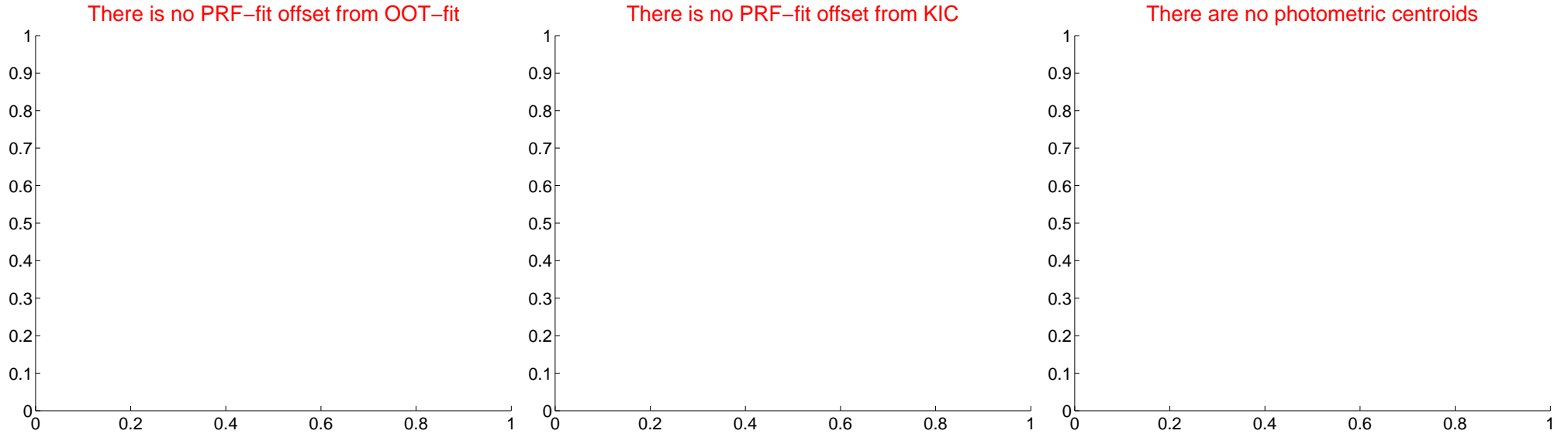
DV Centroid Data

Supplemental centroid analysis for 008516686-01. **Kepler magnitude: 10.87.** Transit SNR 9.34

There are 0 quarters with good PRF difference image offsets

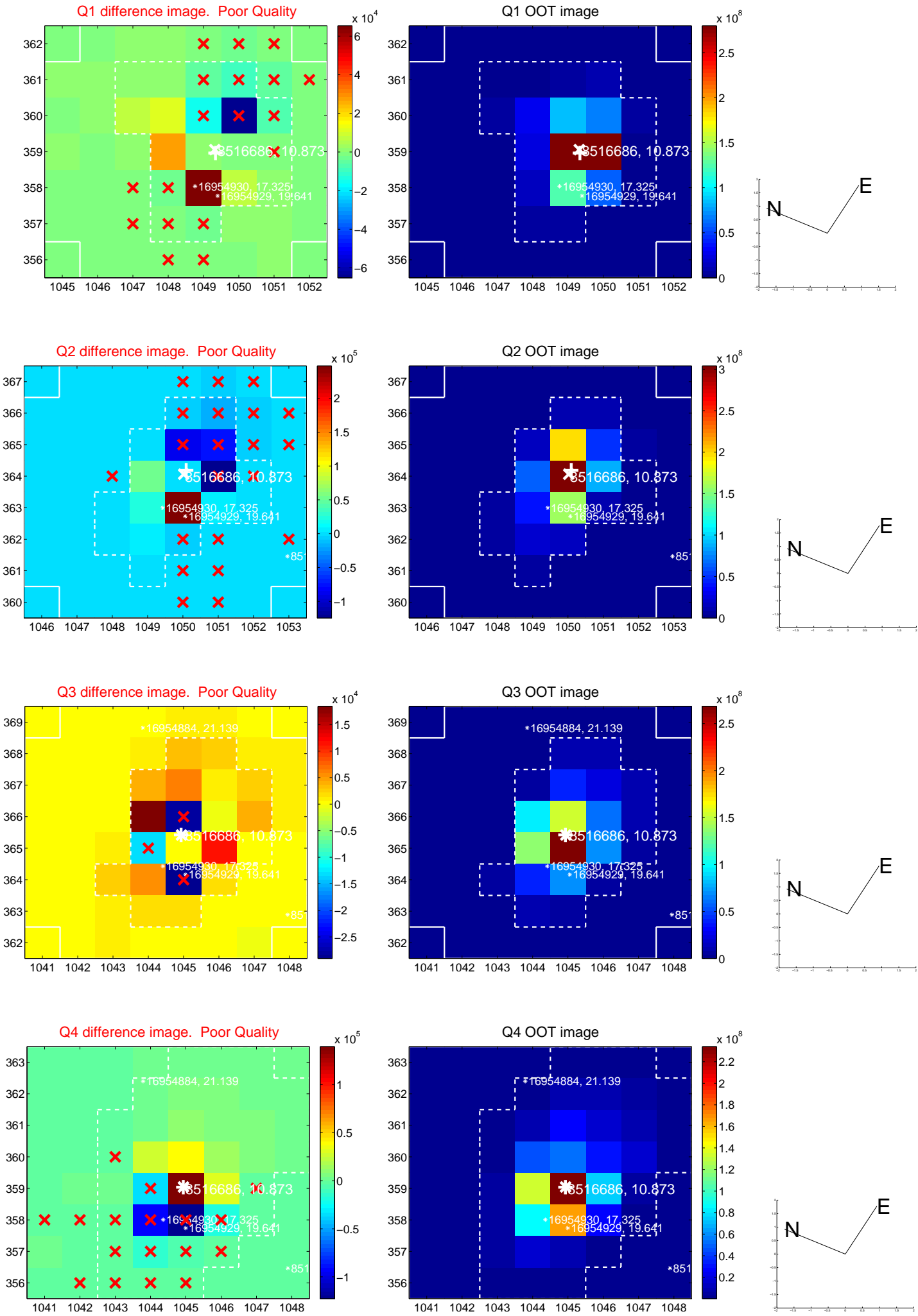
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	—	—	—	—

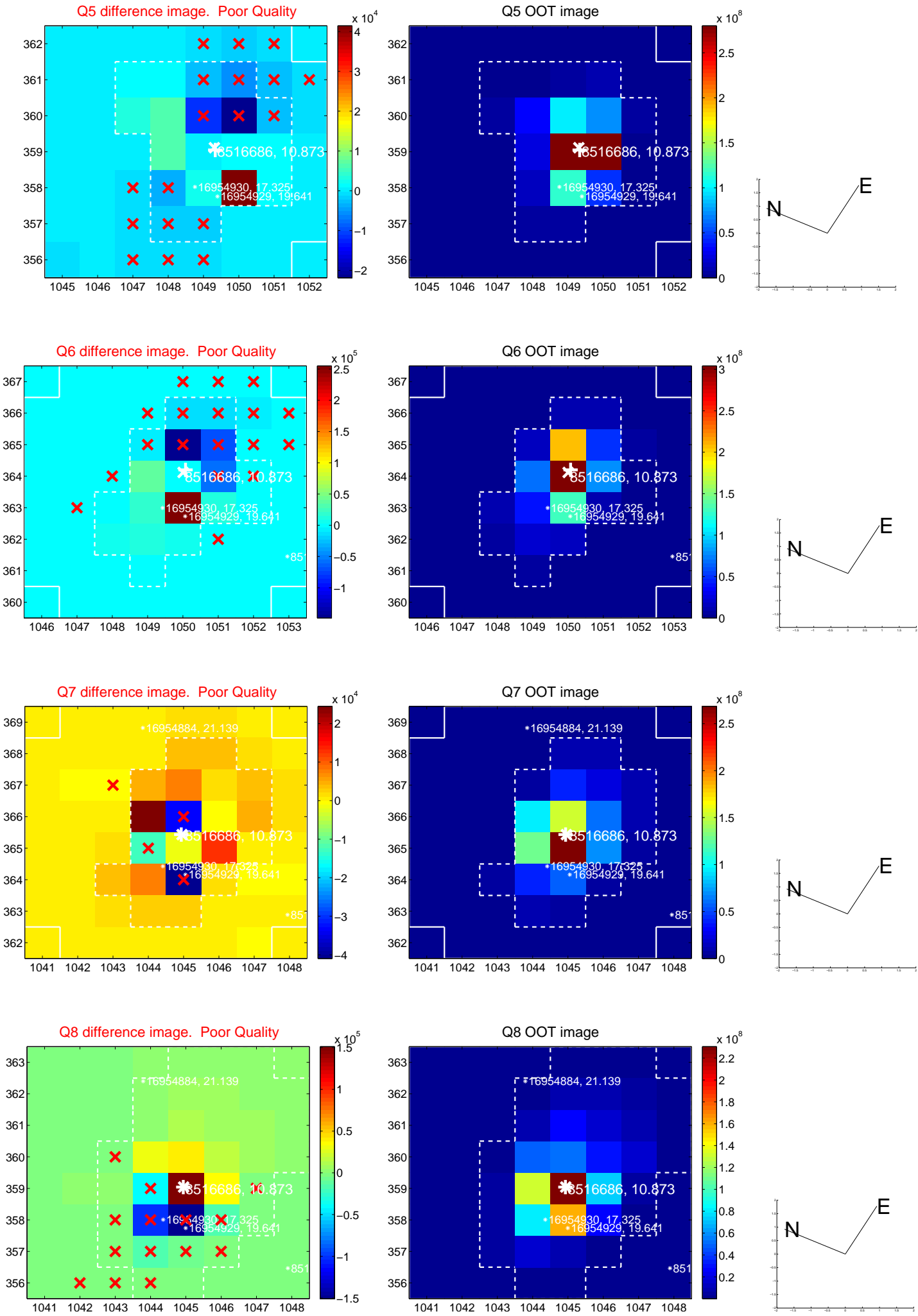


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

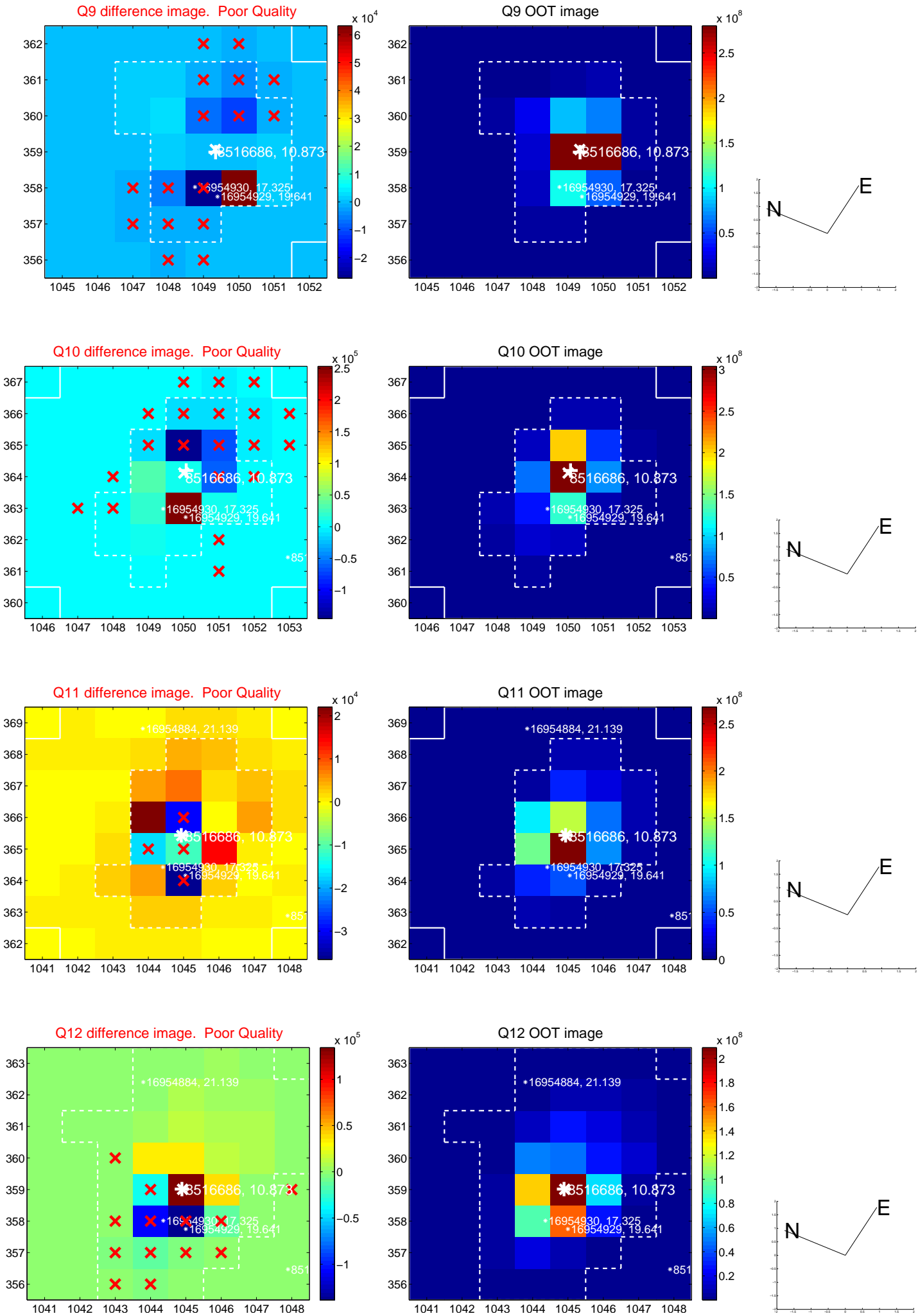
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



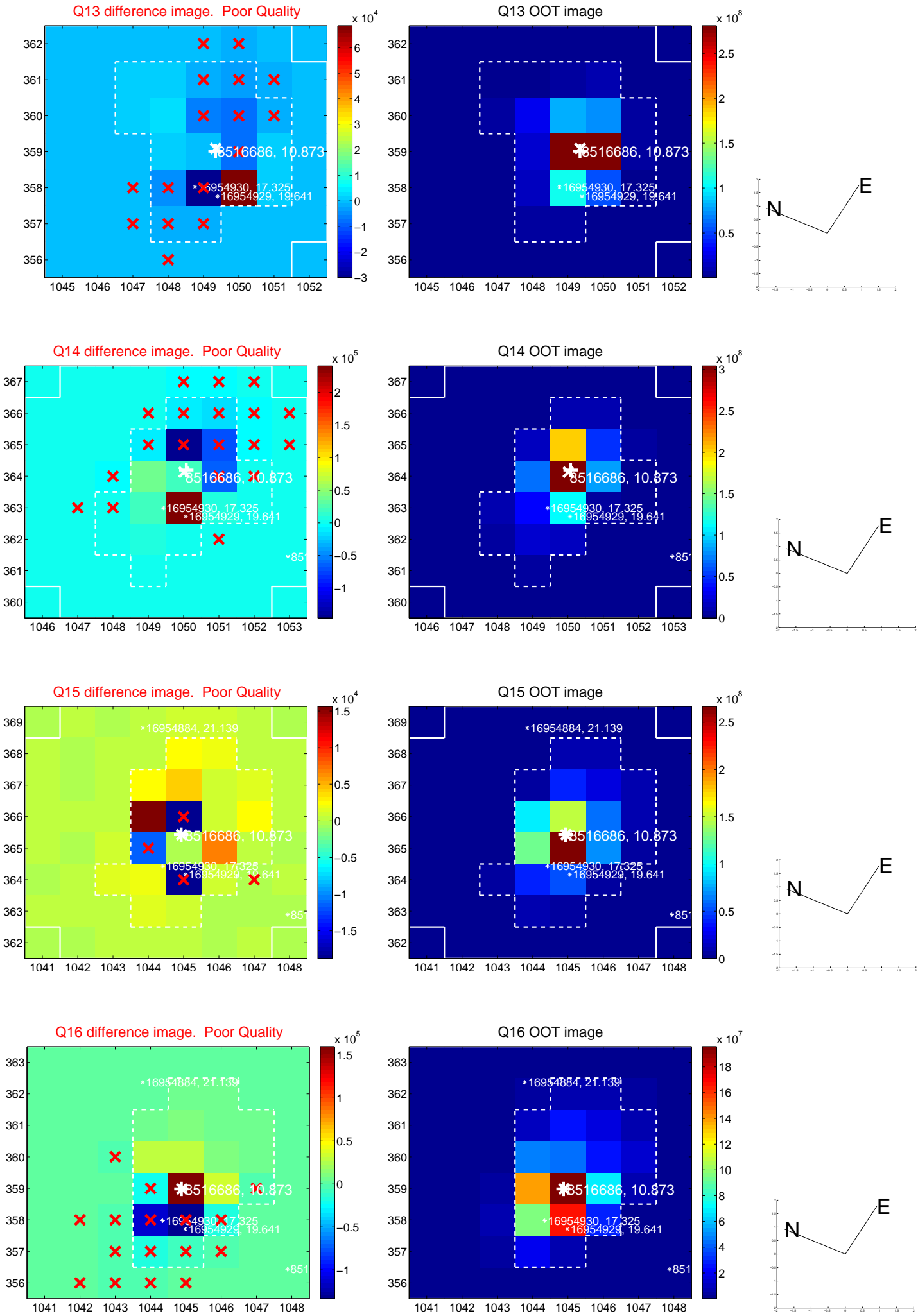
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



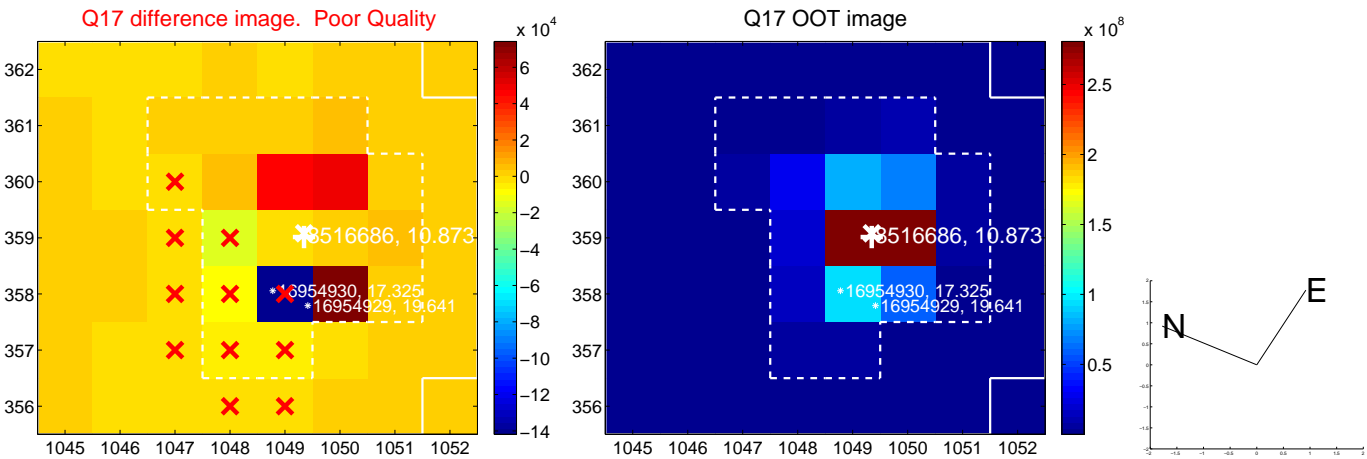
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



folded centroid time series figure for this object.

UKIRT Image

Declination

