

KIC 008023668

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})
008023668-01	OBS	No	0.837927	132.085164	2.4	8.507	8.7	1.7	2.06	7000	0.32	22053.86

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008023668-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—CENT_FEW_DIFFS

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

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

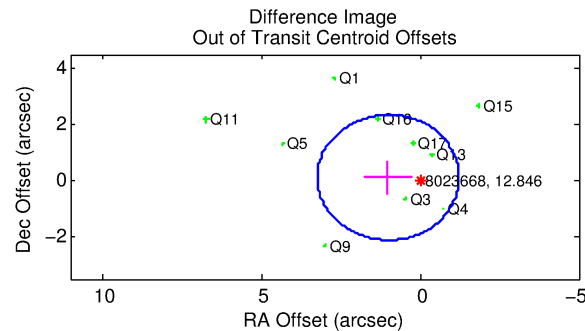
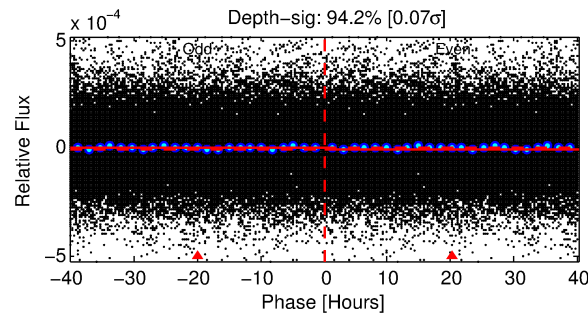
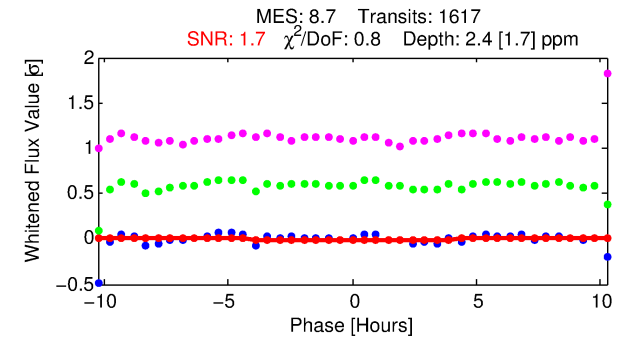
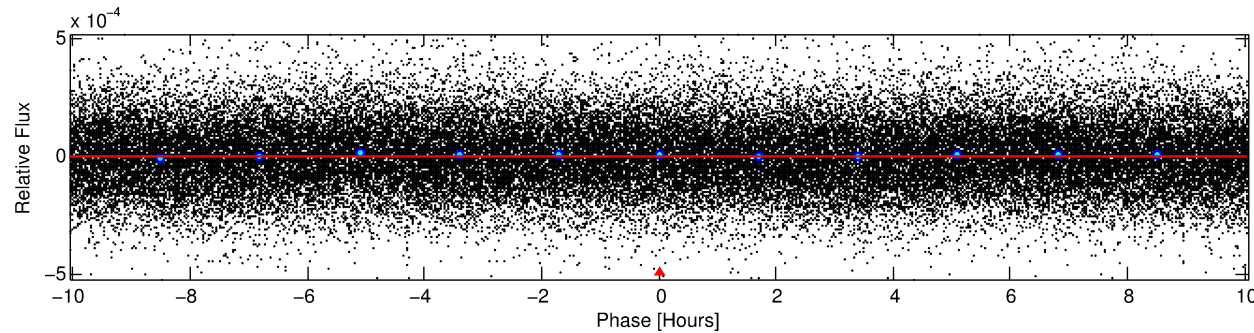
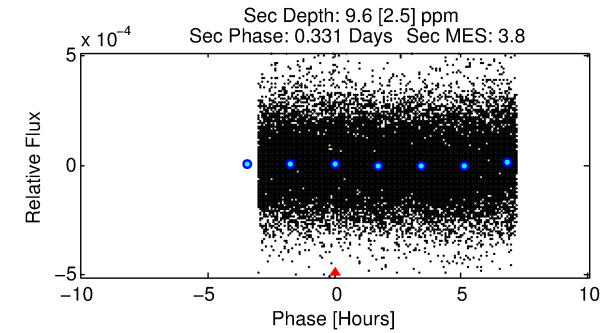
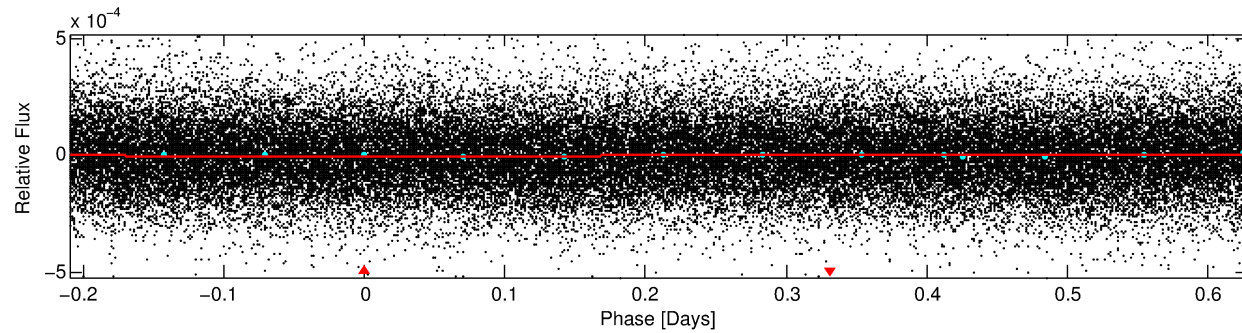
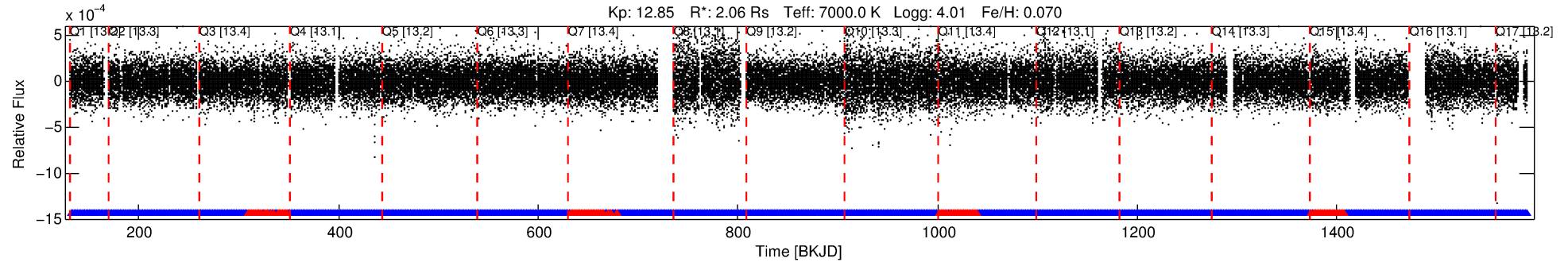
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008023668-01

No Significant Match Found

DV One-Page Summary

KIC: 8023668 Candidate: 1 of 1 Period: 0.838 d



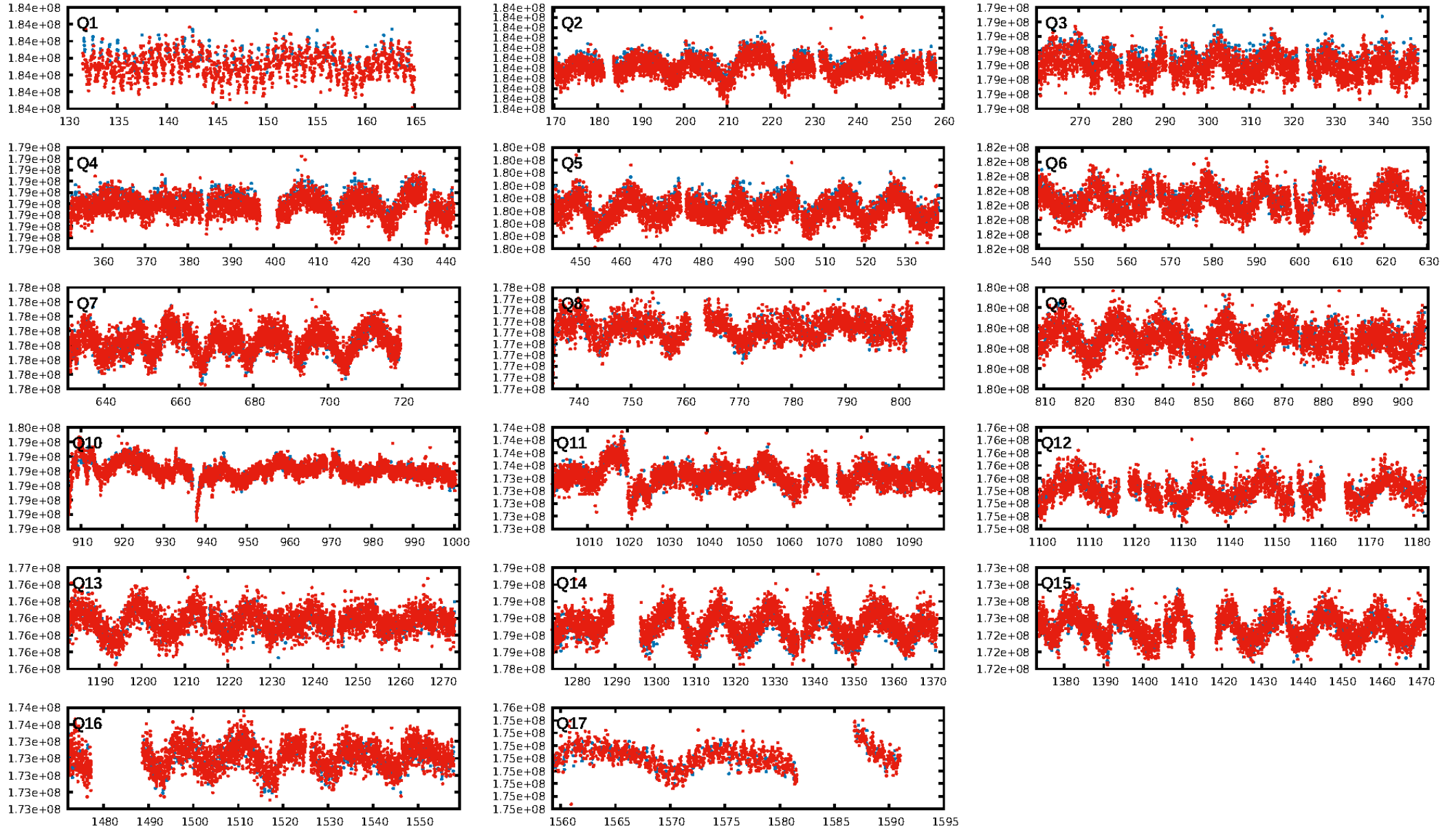
DV Fit Results:

Period = 0.83793 [0.00009] d
Epoch = 132.0852 [0.0349] BKJD
Rp/R* = 0.0014 [0.0063]
a/R* = 1.03 [1.48]
b = 0.20 [121.91]
Seff = 22053.86 [5675.28]
Teff = 3107 [200] K
Rp = 0.32 [1.41] Re
a = 0.0204 [0.0034] AU
Ag = 21.06 [184.50] [0.11σ]
Teffp = 10293 [22529] K [0.32σ]

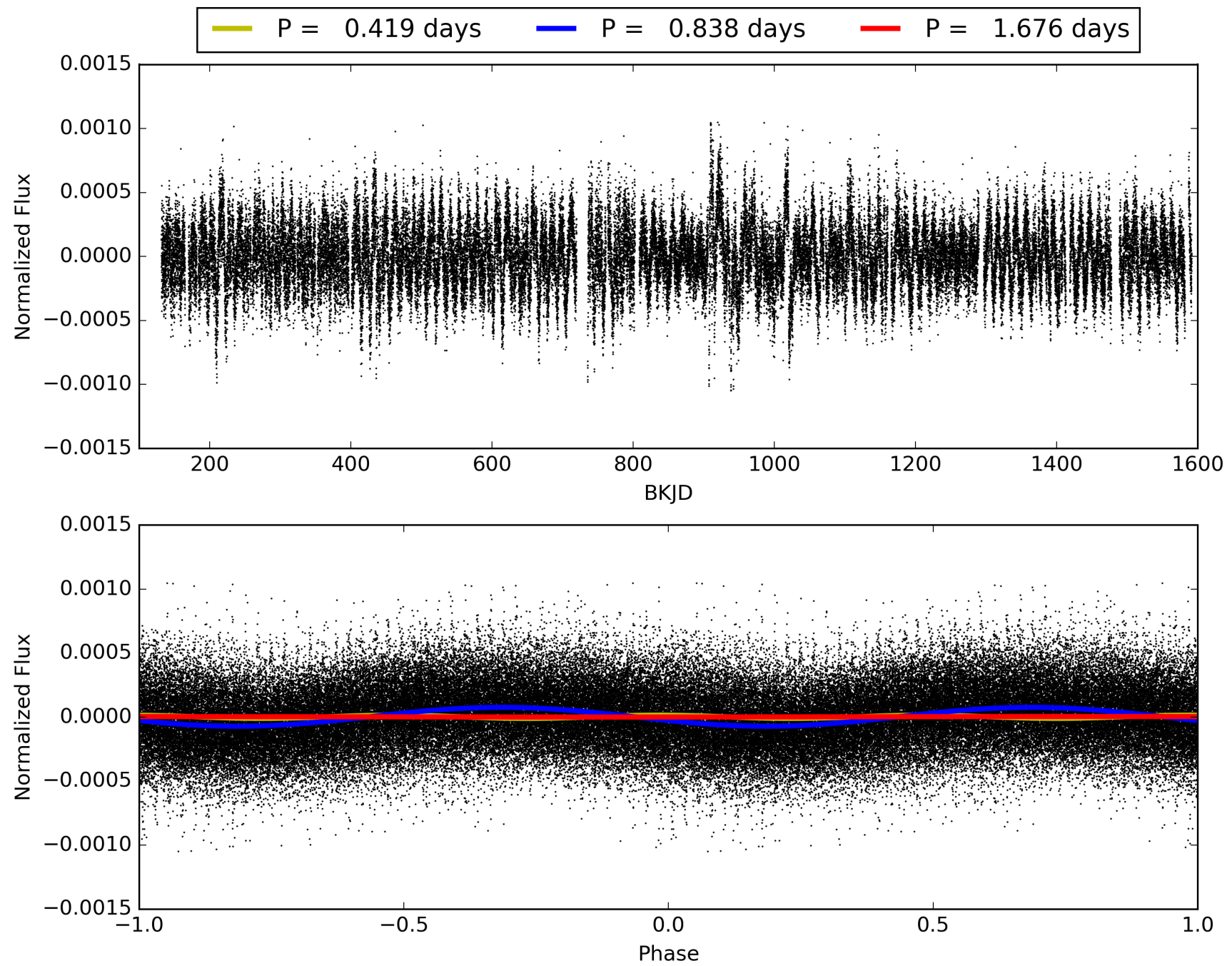
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.90 [1394/1543]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 1.008 arcsec [1.35σ]
KicOffset-rm: 1.031 arcsec [1.28σ]
OotOffset-st: 0/3/2/5 [10]
KicOffset-st: 0/3/2/5 [10]
DiffImageQuality-fgm: 0.20 [2/10]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008023668-01, PDC Light Curves

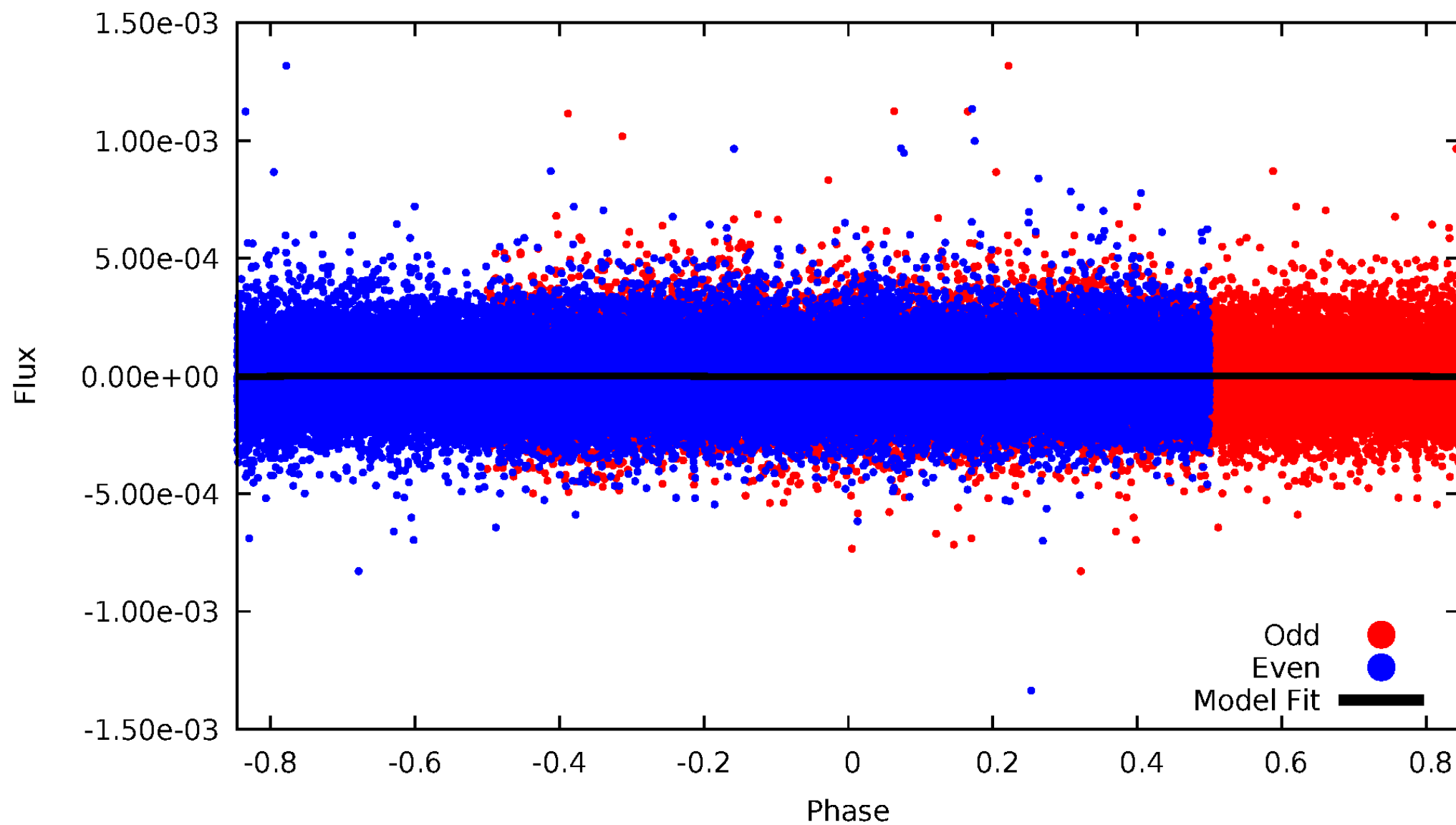


TCE 008023668-01



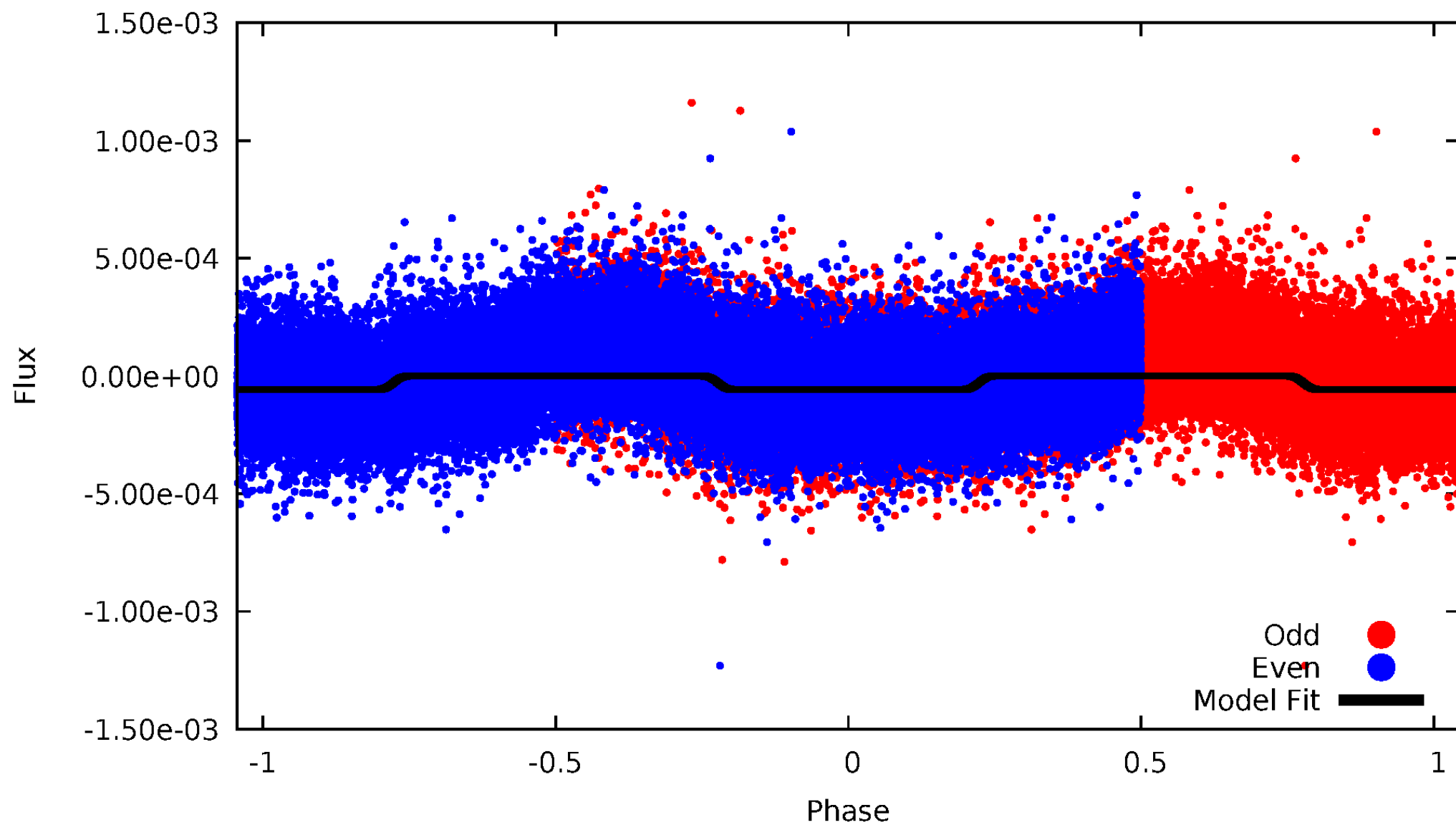
DV Odd/Even

TCE 008023668-01



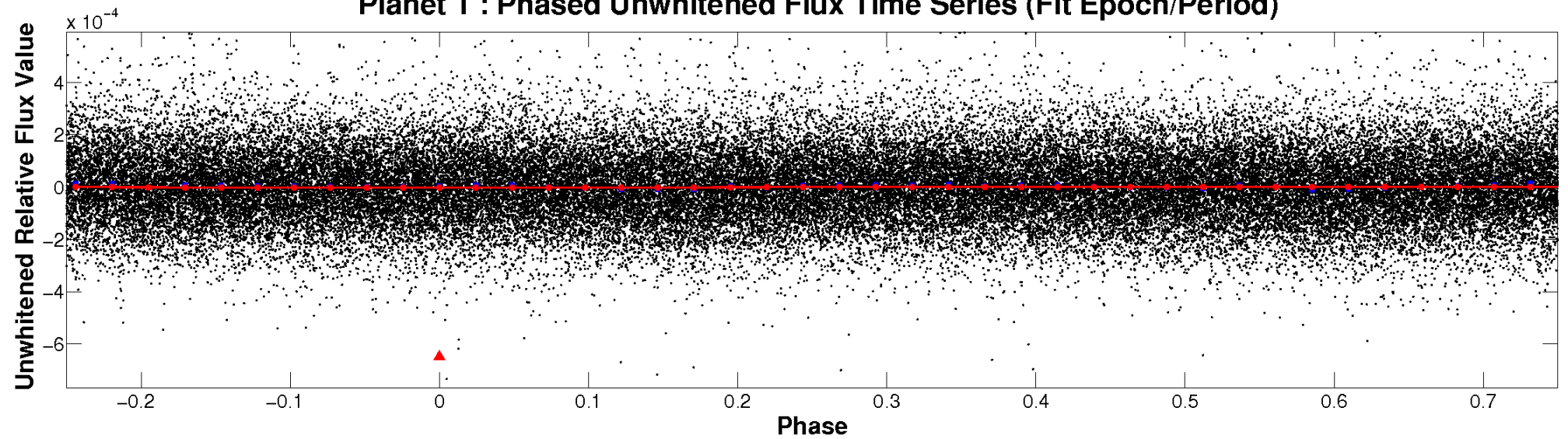
ALT Odd/Even

TCE 008023668-01

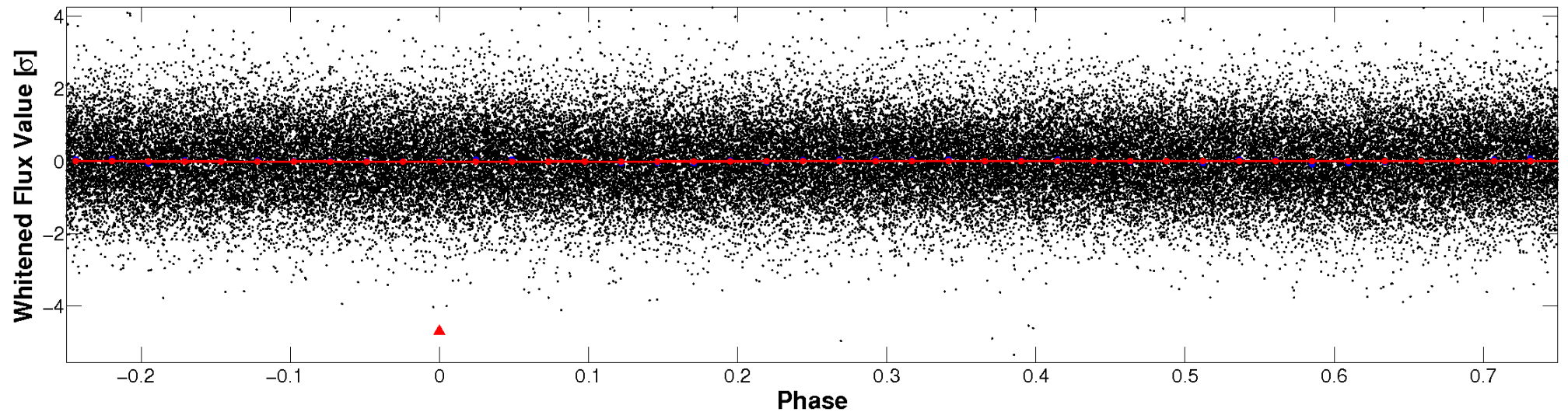


Non-Whitened Vs. Whitened Light Curve

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

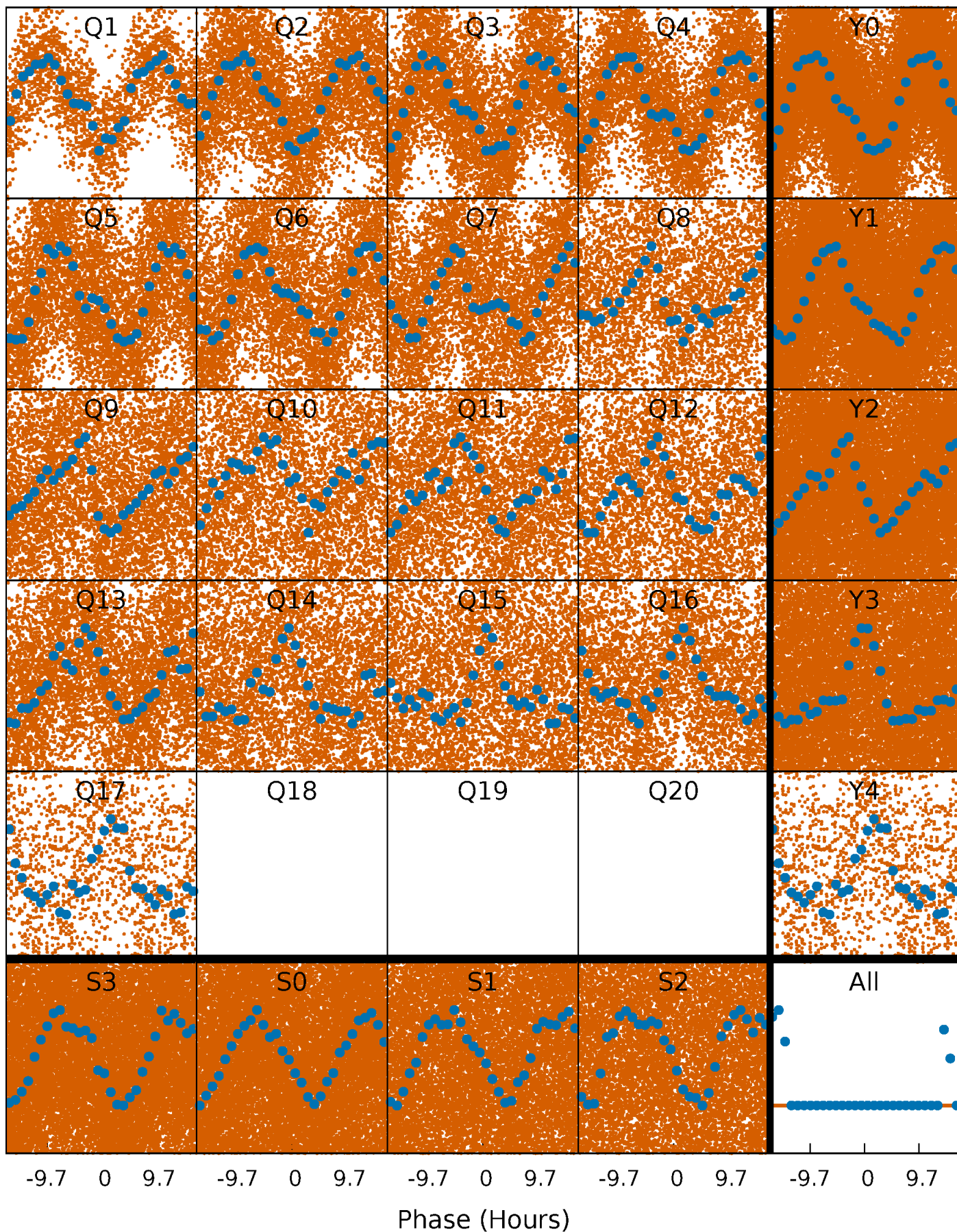


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



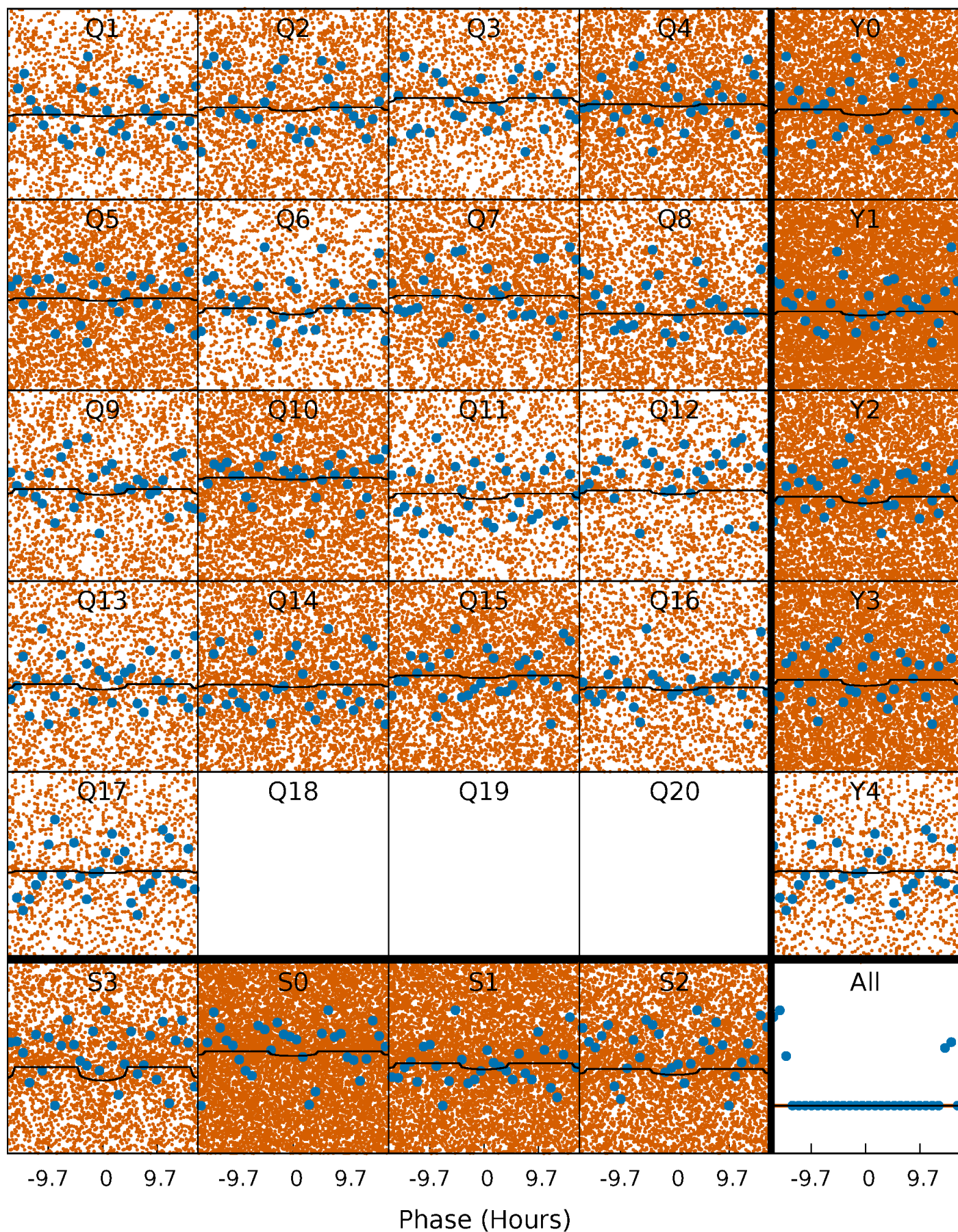
PDC Quarter-Phased Transit Curves

TCE 008023668-01 P= 0.837927 Days $T_0=132.085164$ (BKJD)



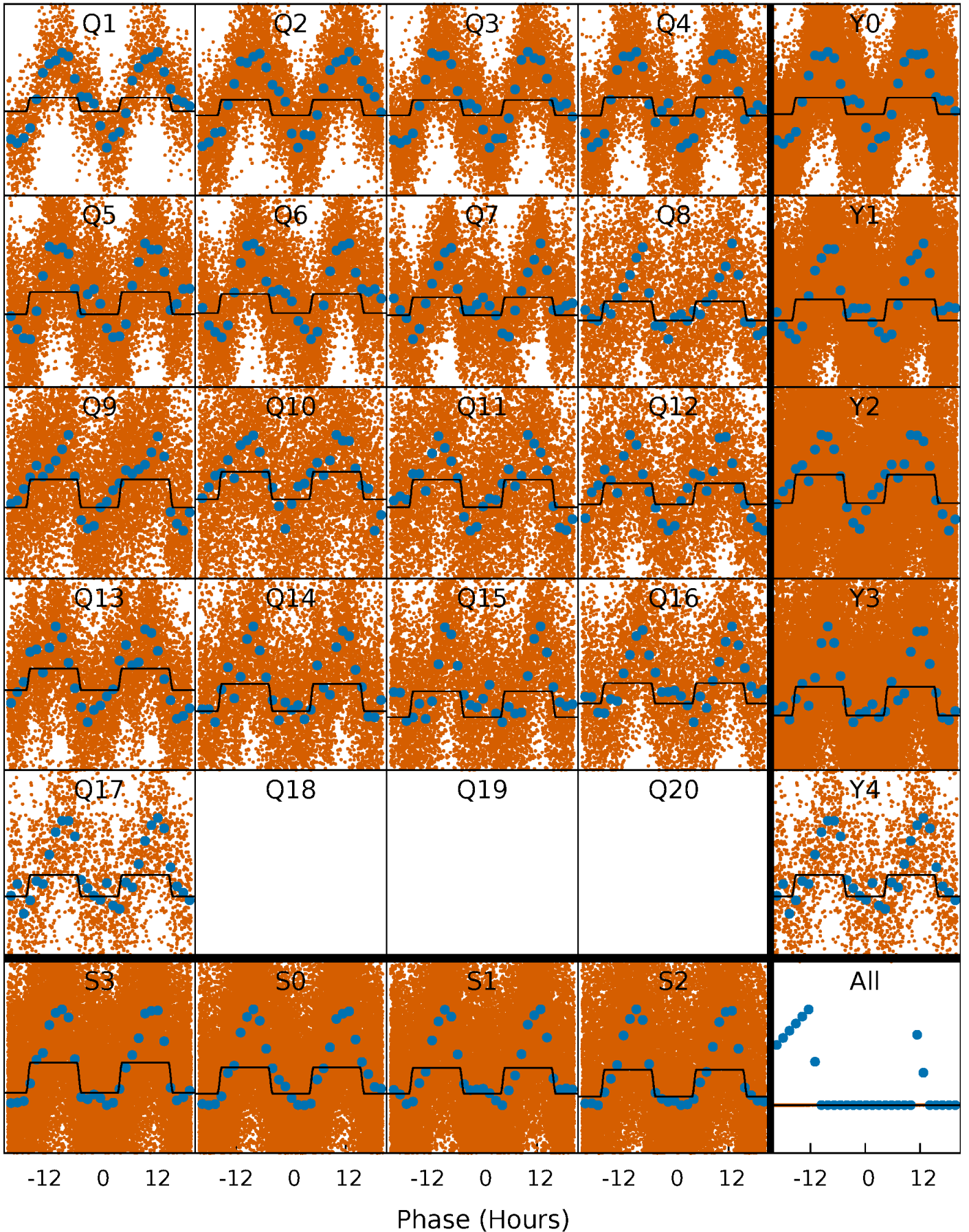
DV Quarter-Phased Transit Curves

TCE 008023668-01 P= 0.837927 Days $T_0=132.085164$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

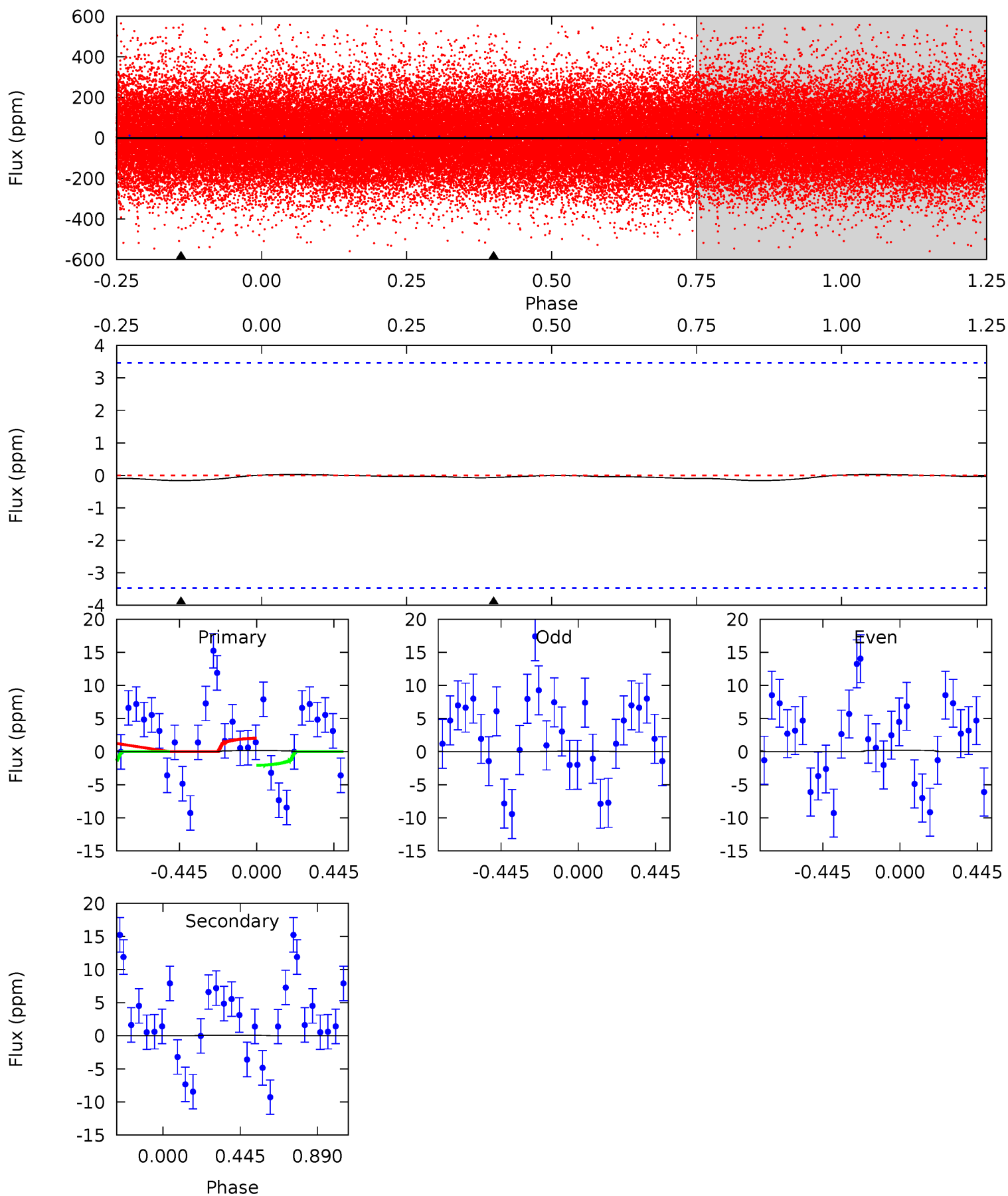
TCE 008023668-01 P= 0.838201 Days $T_0=132.013653$ (BKJD)



DV Model-Shift Uniqueness Test

008023668-01, P = 0.837927 Days, E = 131.247237 Days

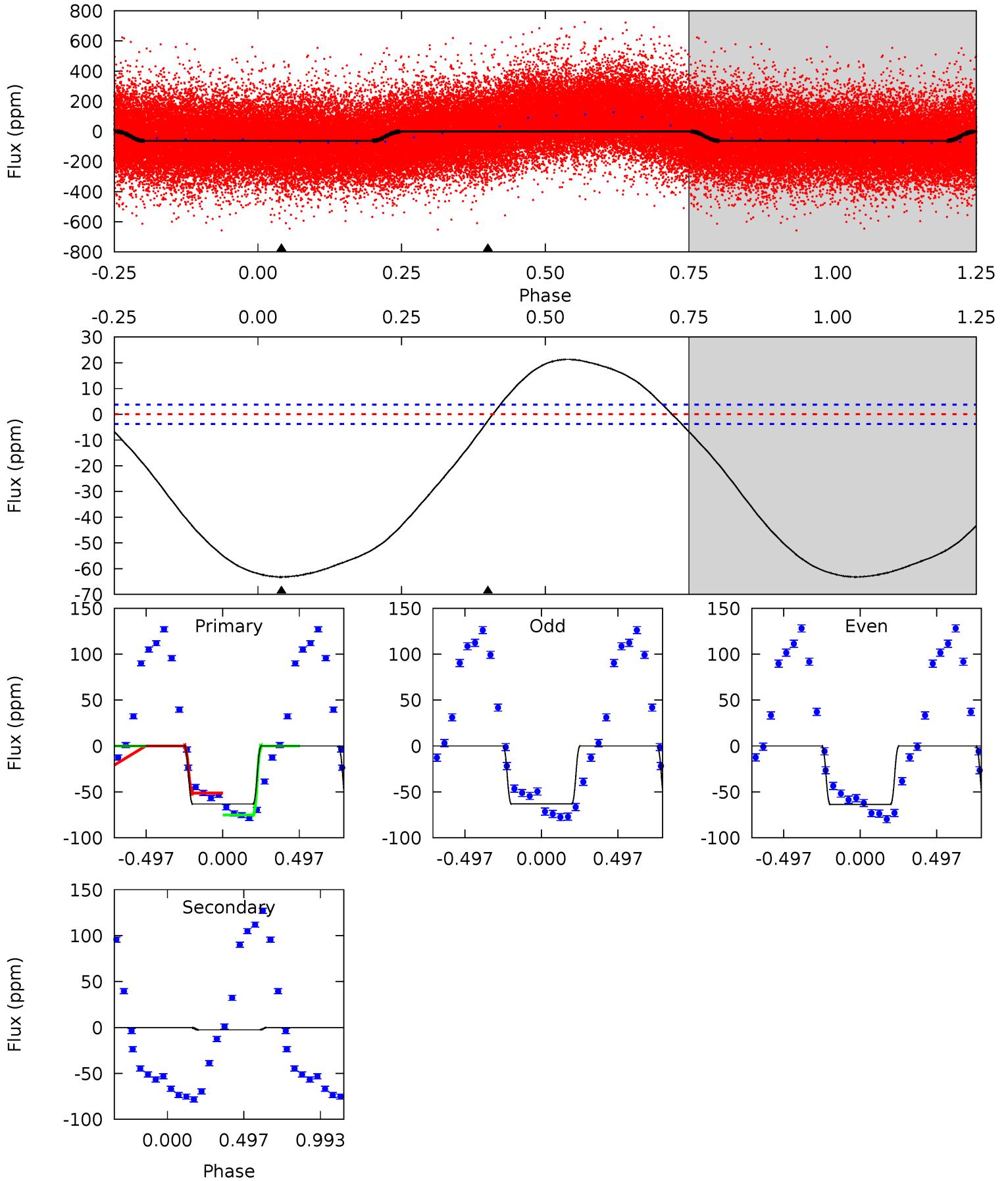
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.20	0.08	0	0	4.24	0.76	0.02	0.20	0.20	0.08	0.08	0.10	21.9	0.14	0.04



Alt Model-Shift Uniqueness Test

008023668-01, P = 0.838201 Days, E = 131.175452 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
71.2	2.86	0	0	4.22	0.68	7.66	71.2	71.2	2.86	2.86	0.31	0.99	0.25	14.1



Stellar Parameters For KIC 008023668

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7000^{+73}_{-83}	$4.015^{+0.143}_{-0.117}$	$0.070^{+0.150}_{-0.150}$	$2.064^{+0.350}_{-0.389}$	$1.607^{+0.121}_{-0.148}$	$0.257^{+0.200}_{-0.082}$
	+1%/-1%	+4%/-3%	+214%/-214%	+17%/-19%	+8%/-9%	+78%/-32%
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 008023668-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-0±1	$1.04^{+1.20}_{-0.72}$	4349^{+187}_{-227}	-3875^{+6922}_{-551}	$0.007^{+0.353}_{-0.326}$
Alt.	-3±1	$1.85^{+1.33}_{-1.06}$	4328^{+210}_{-196}	-3398^{+7708}_{-386}	$0.159^{+0.735}_{-0.108}$

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

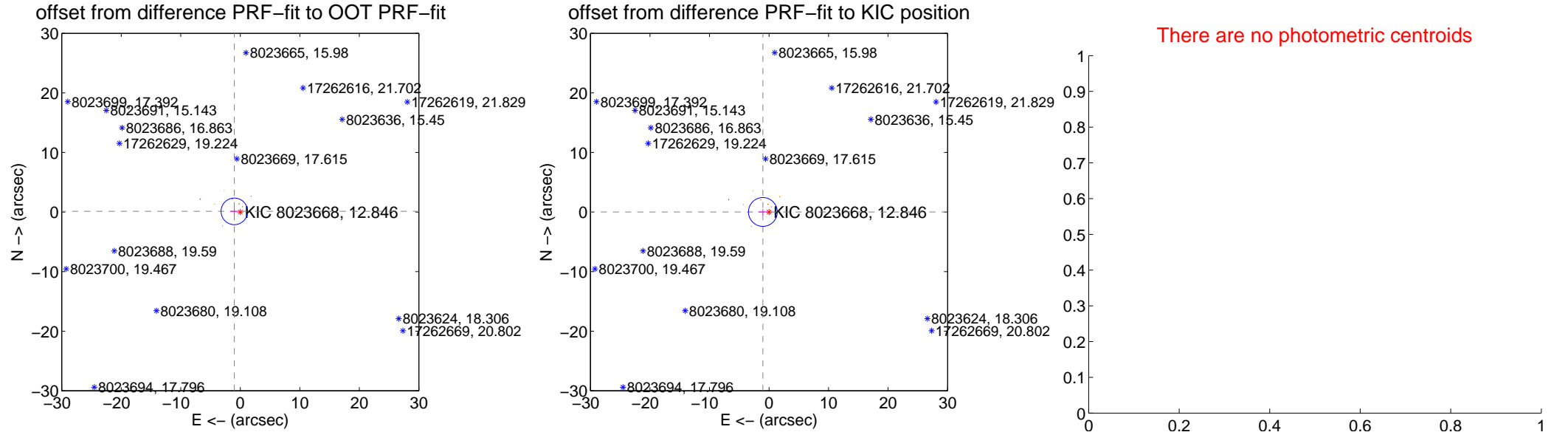
DV Centroid Data

Supplemental centroid analysis for 008023668-01. Kepler magnitude: 12.85. Transit SNR 1.71

There are 2 quarters with good PRF difference image offsets

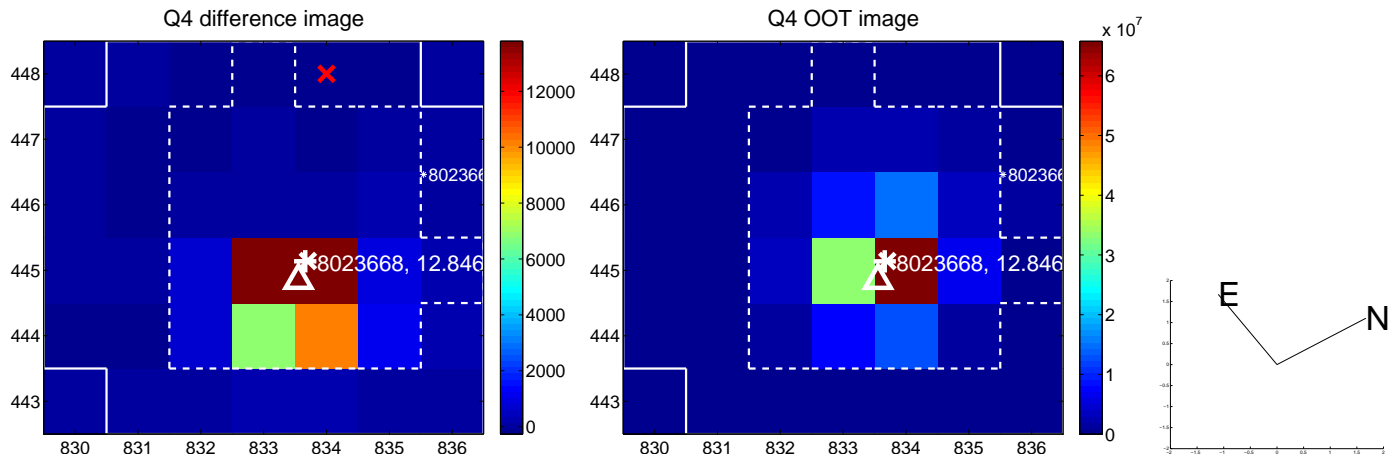
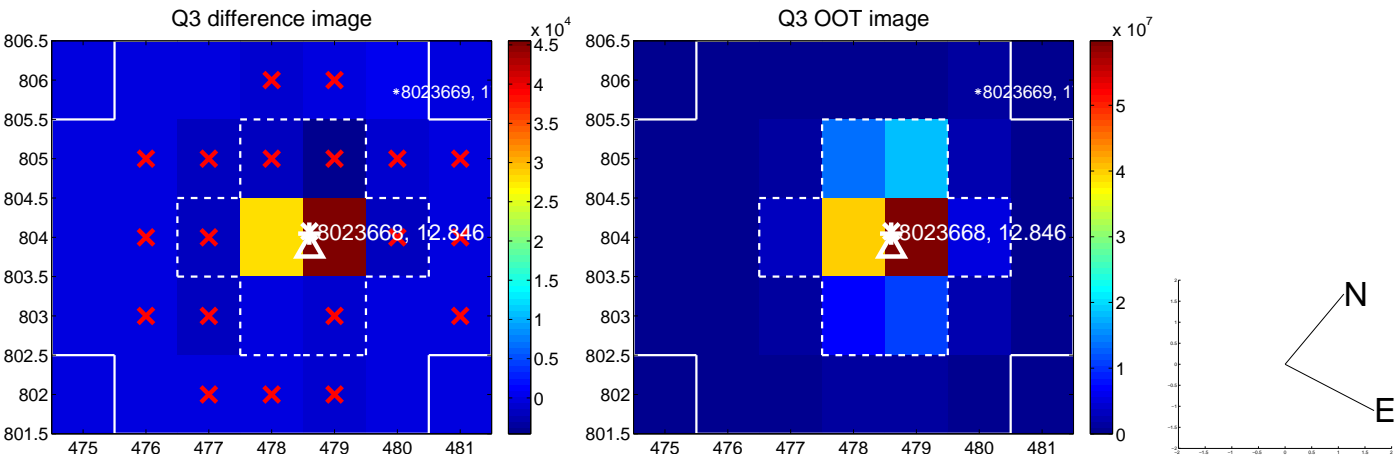
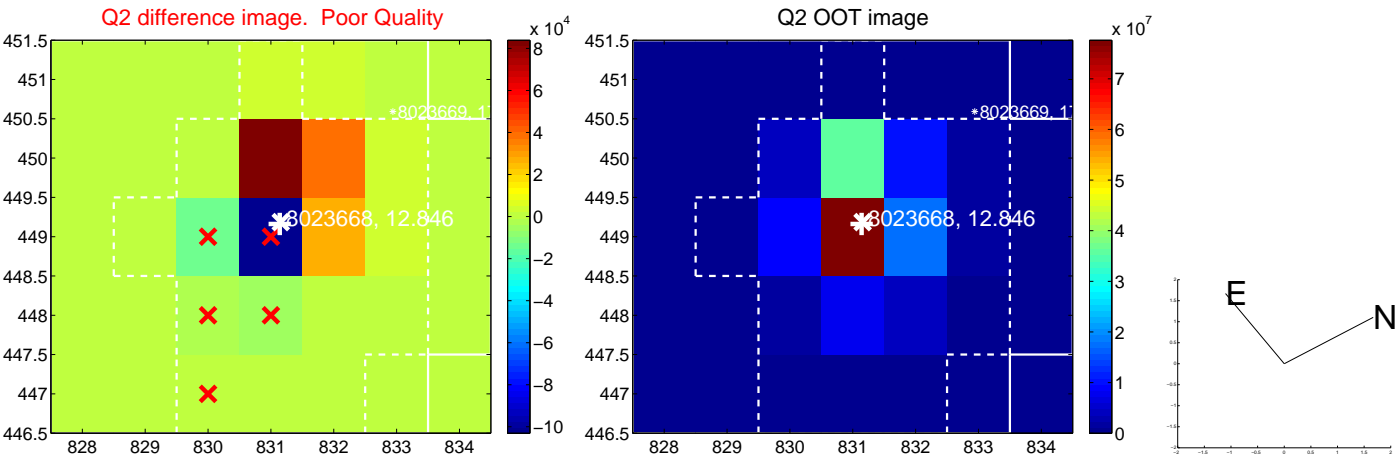
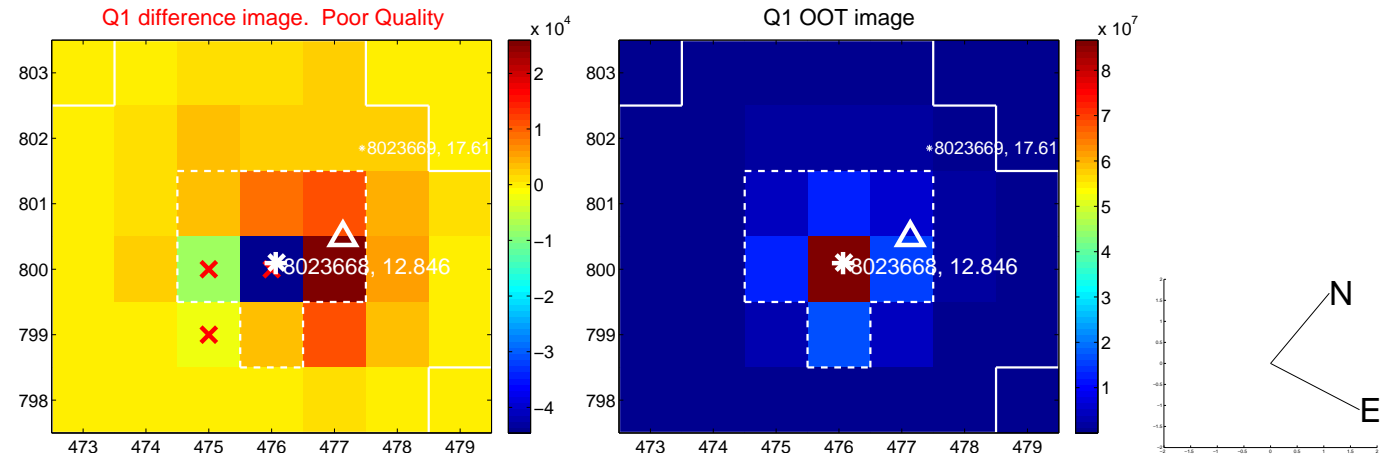
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.008 ± 0.744	1.35	1.001 ± 0.742	0.114 ± 0.571
PRF-fit source offset from KIC position	1.031 ± 0.807	1.28	1.031 ± 0.805	0.013 ± 0.496
photometric centroid source offset	—	—	—	—

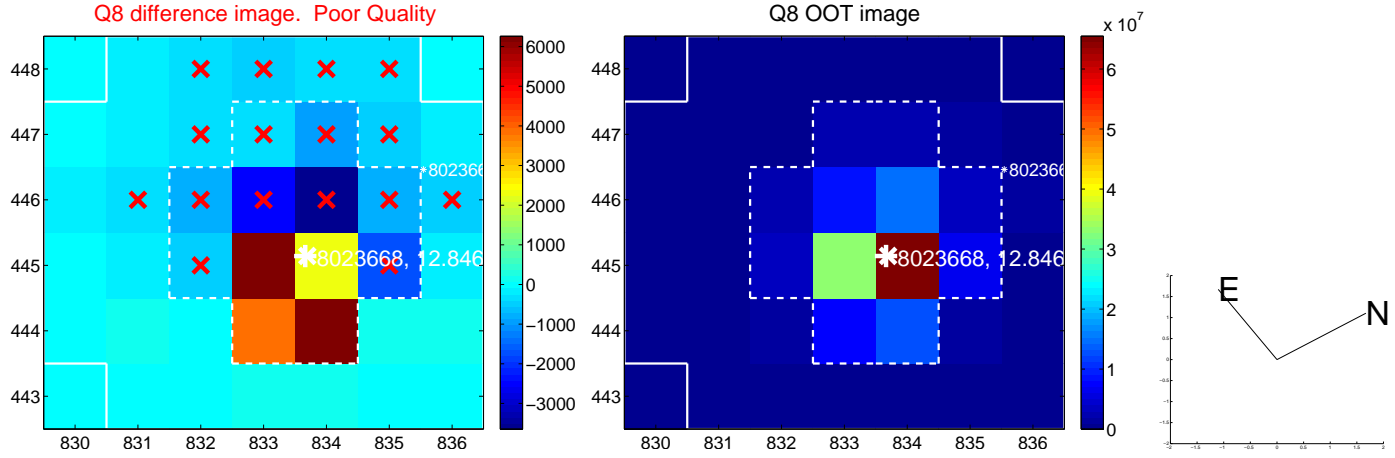
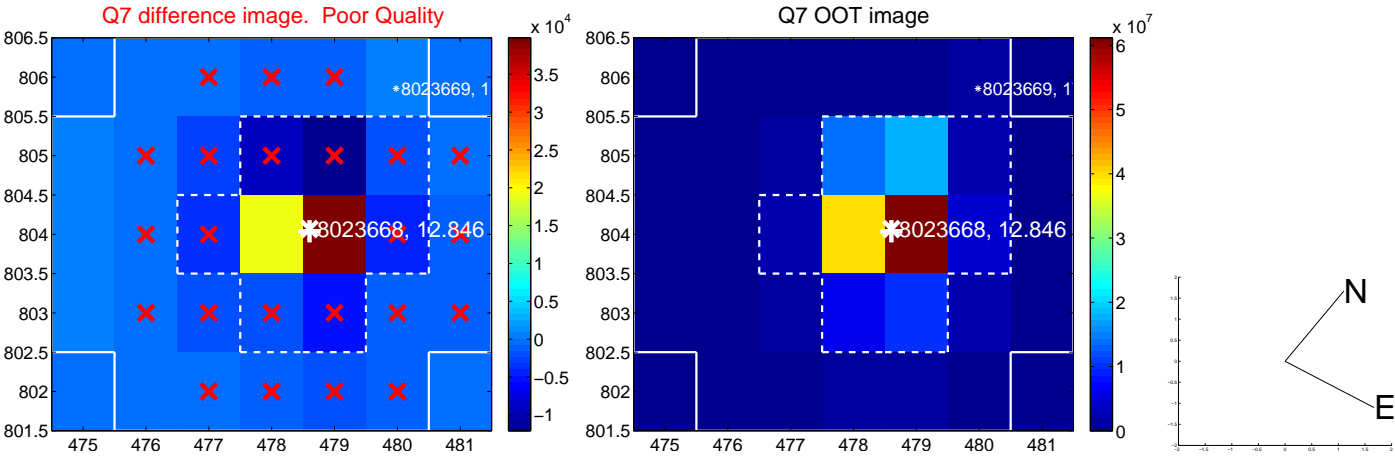
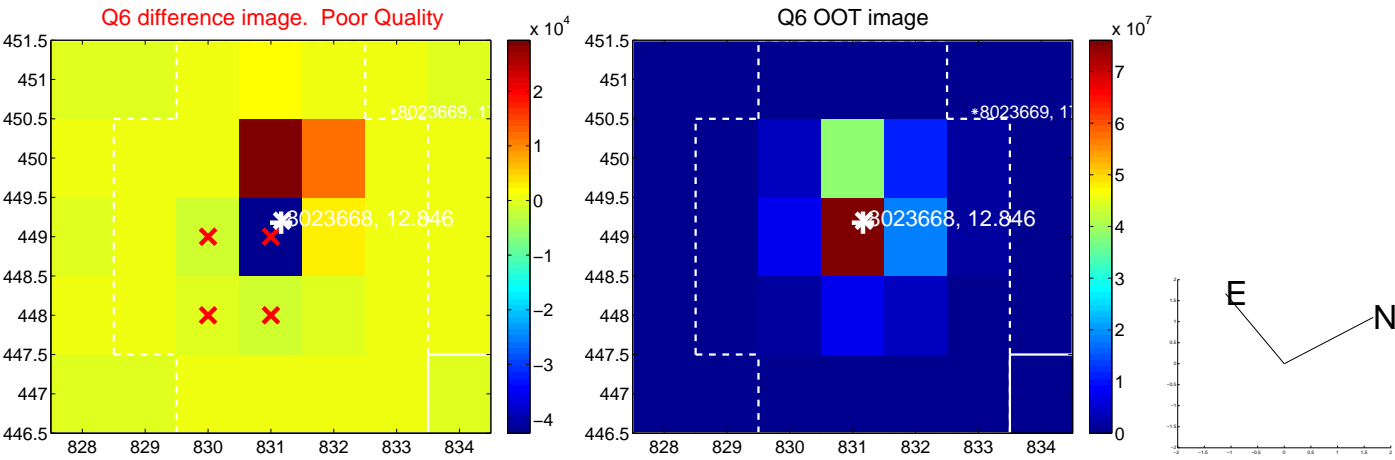
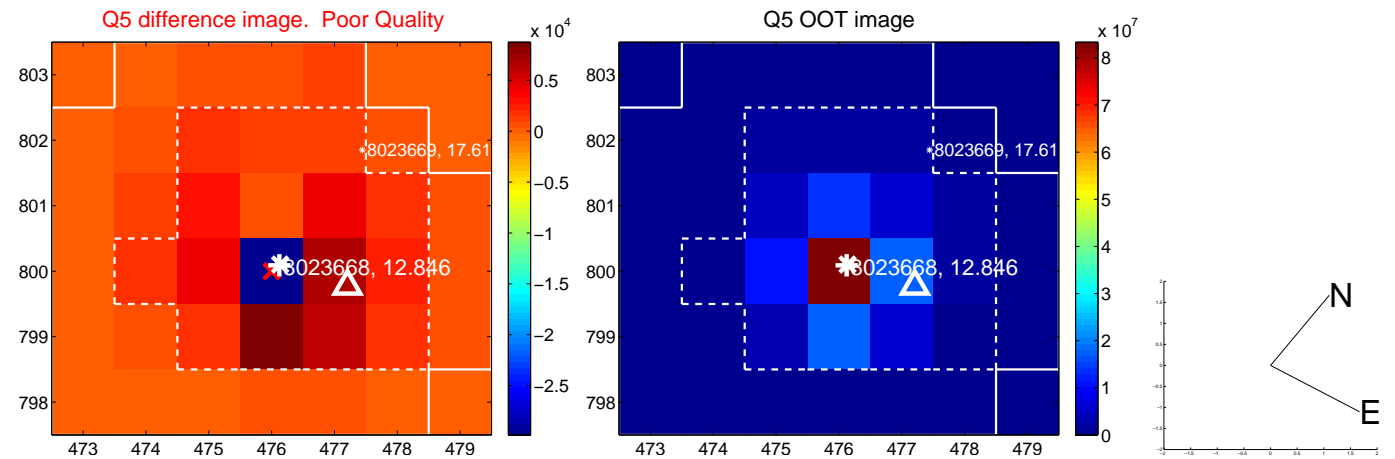


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

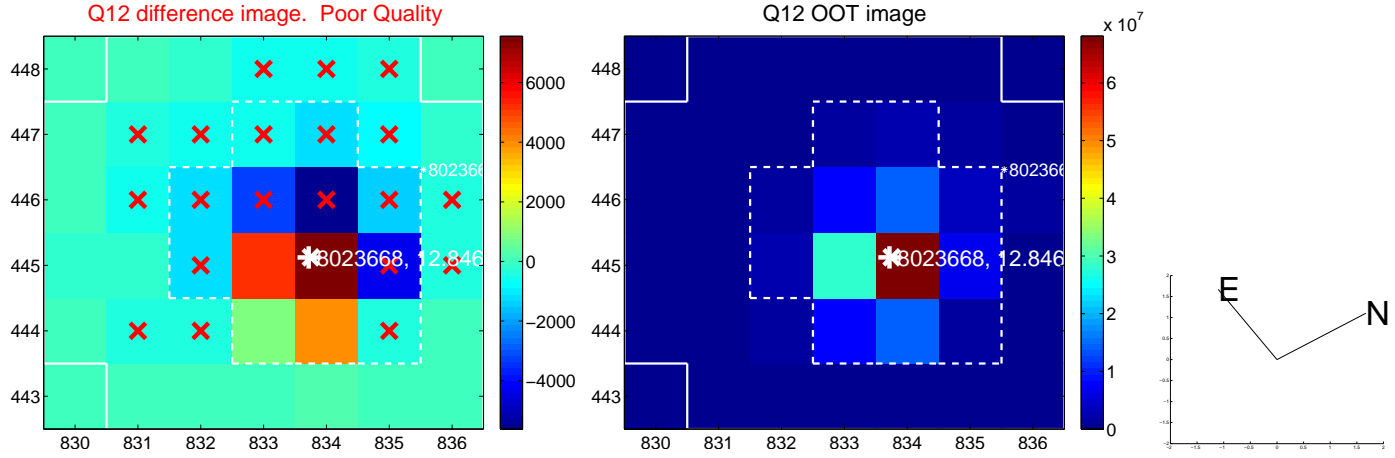
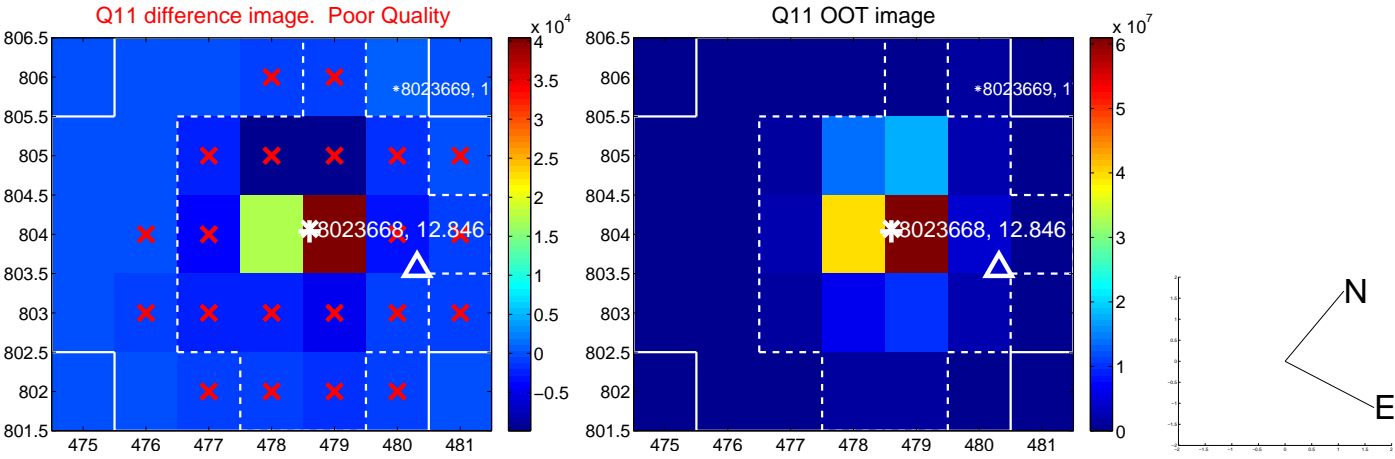
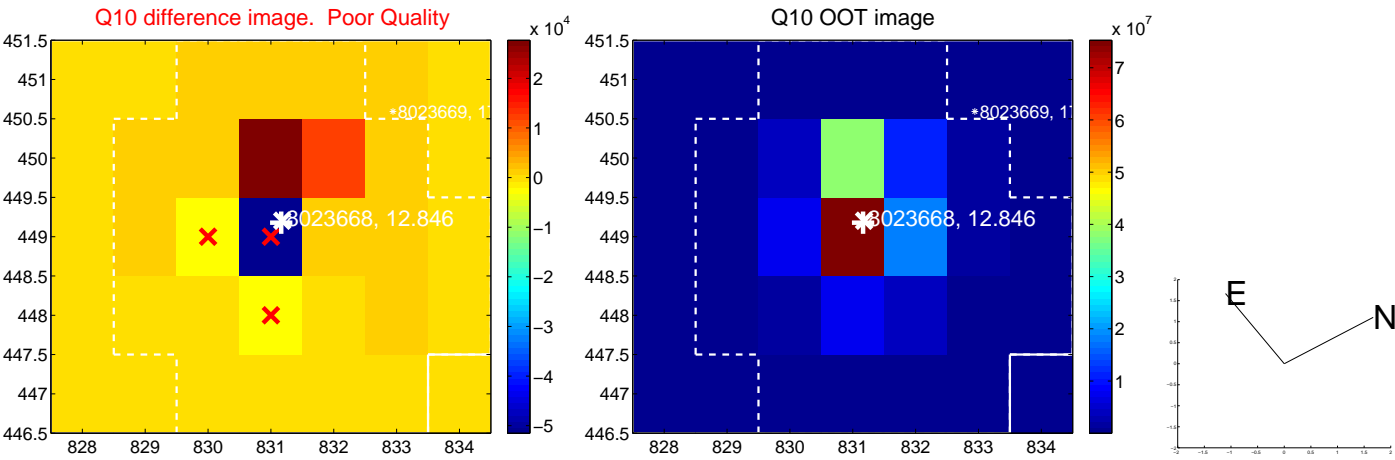
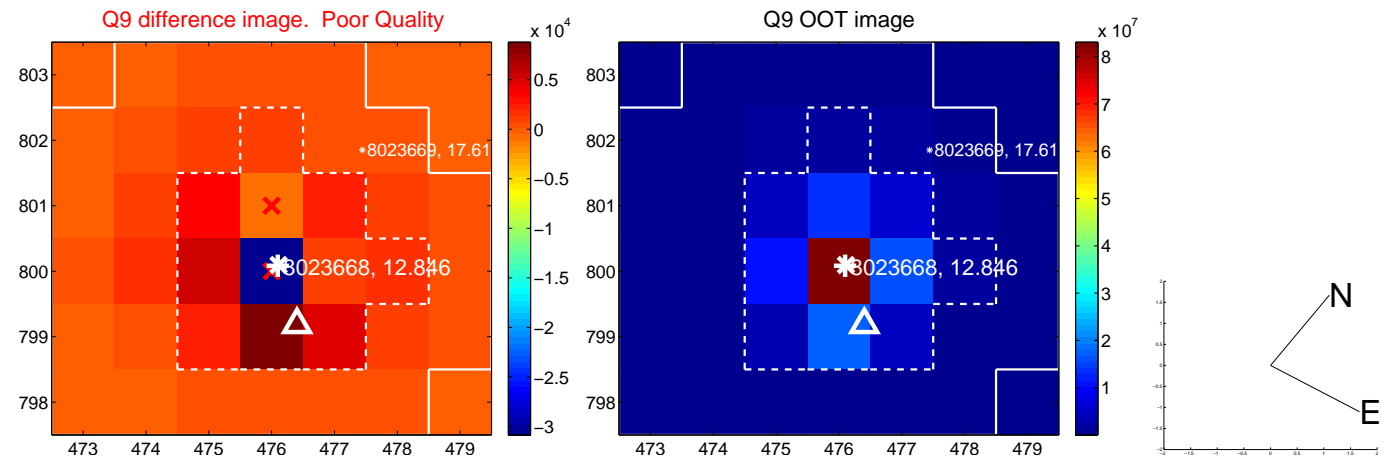
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



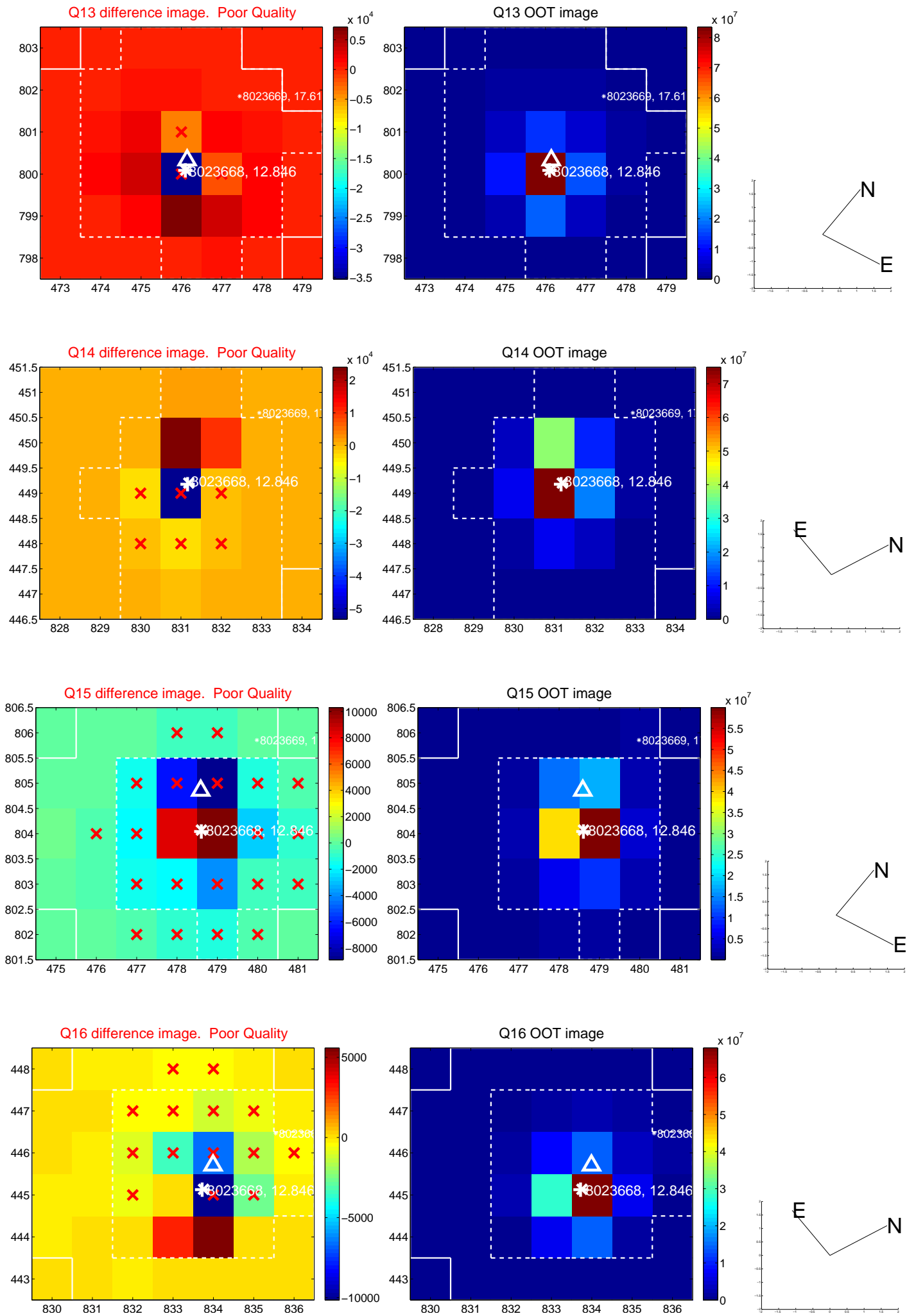
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



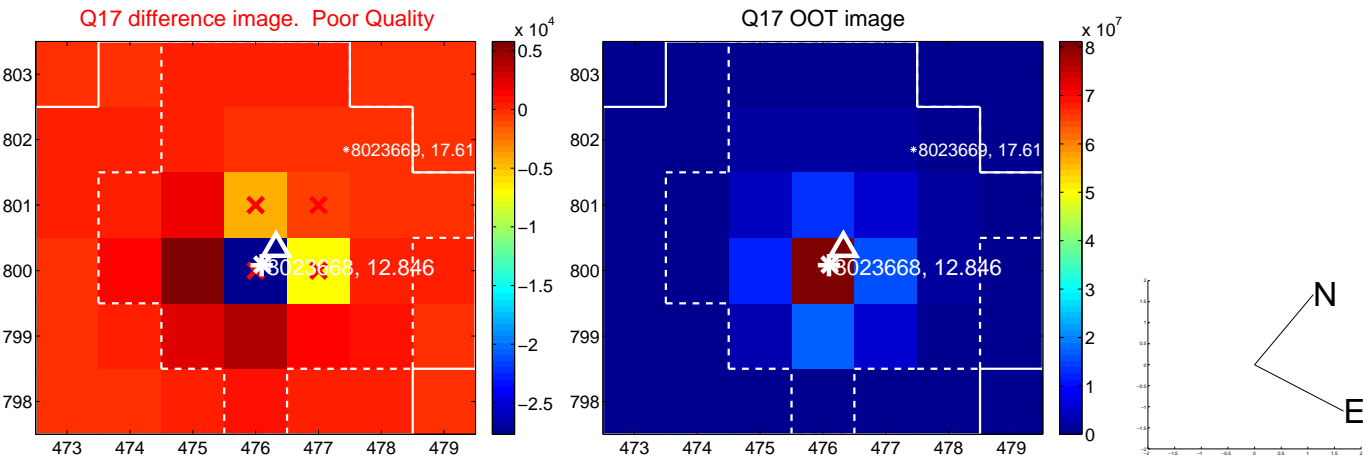
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination

