

KIC 008843082

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})
008843082-01	OBS	No	0.842903	132.218150	34.7	8.055	9.5	4.8	1.50	6407	0.91	10196.46

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008843082-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_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.

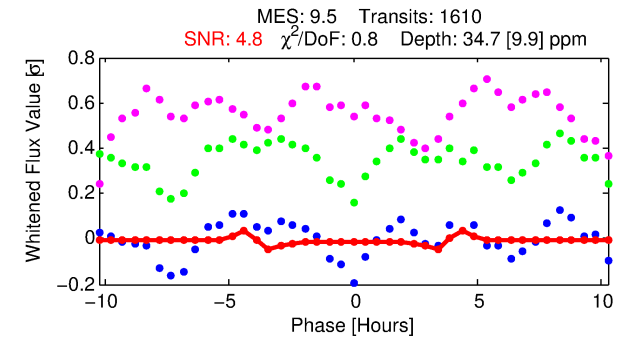
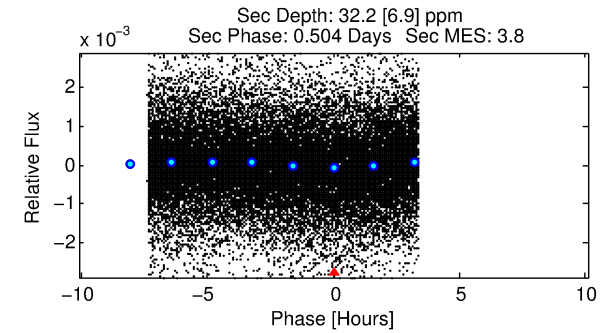
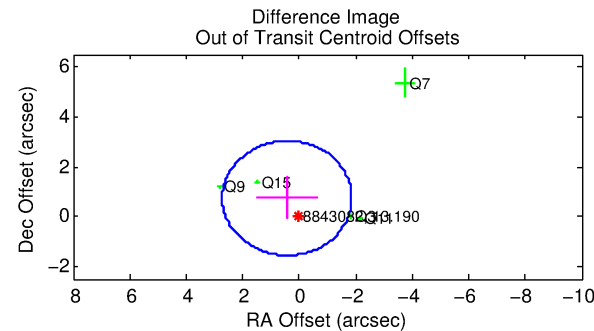
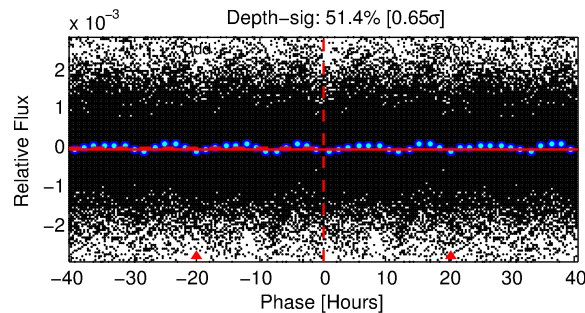
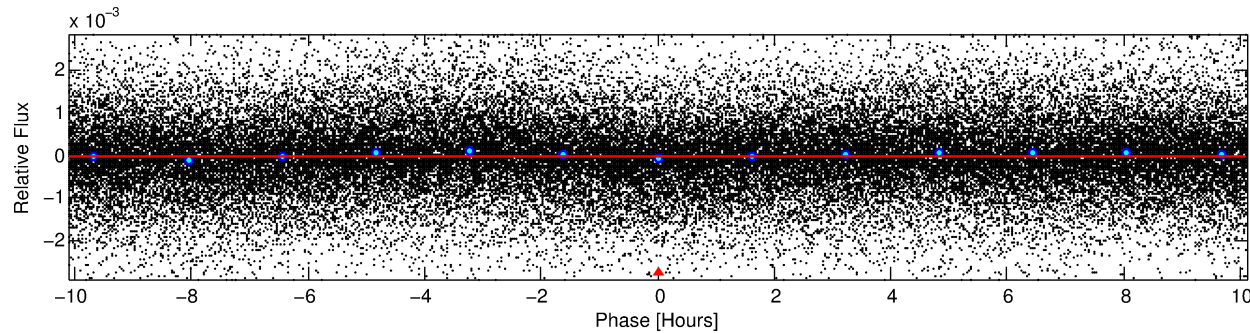
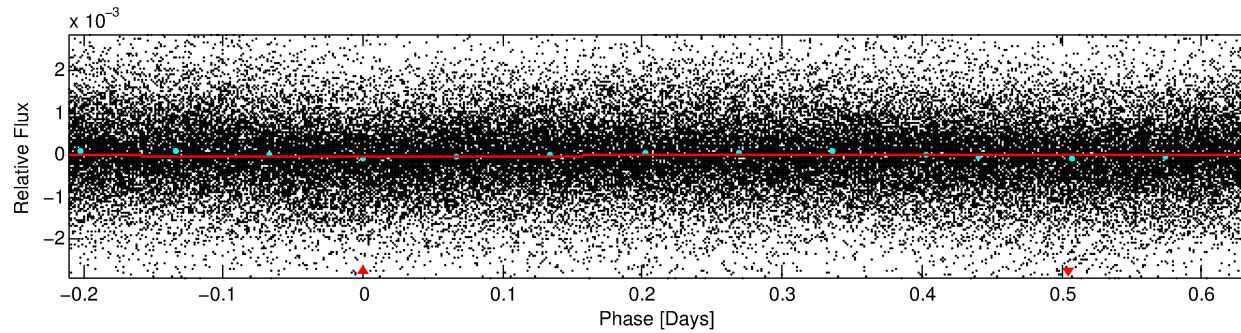
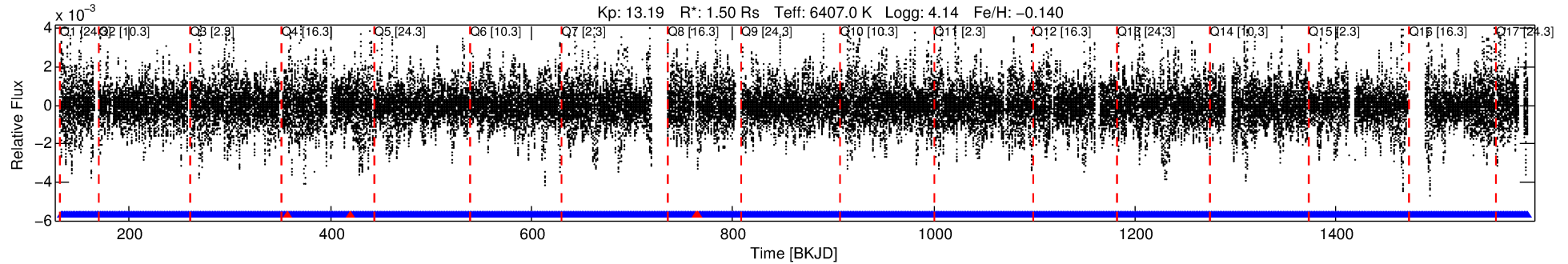
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008843082-01

No Significant Match Found

DV One-Page Summary

KIC: 8843082 Candidate: 1 of 1 Period: 0.843 d



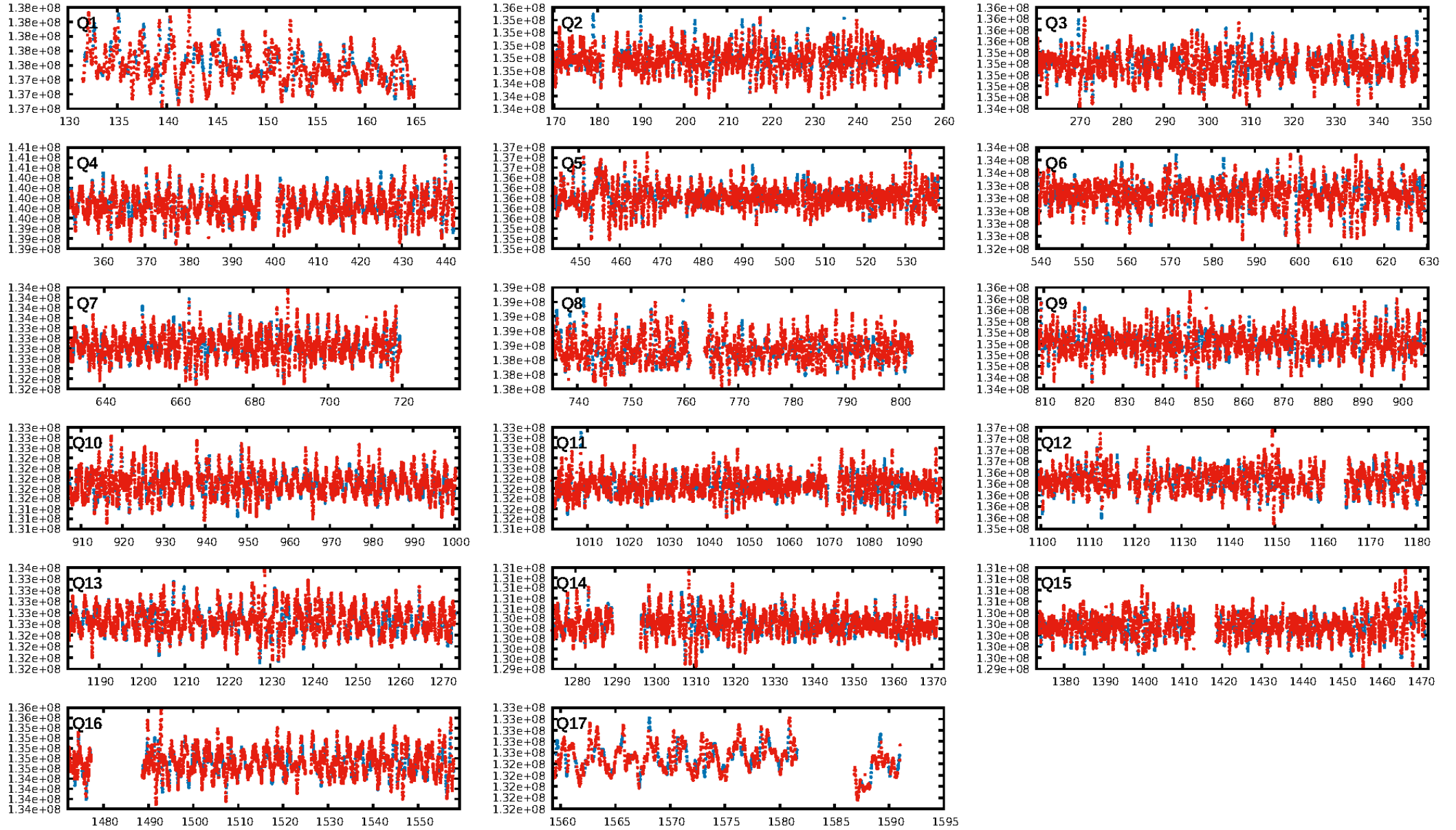
DV Fit Results:

Period = 0.84290 [0.00002] d
Epoch = 132.2181 [0.0032] BKJD
Rp/R* = 0.0055 [0.0039]
a/R* = 1.05 [0.38]
b = 0.44 [7.43]
Seff = 10196.46 [4206.26]
Teq = 2562 [264] K
Rp = 0.91 [0.70] Re
a = 0.0183 [0.0048] AU
Ag = 7.21 [10.76] [0.58 σ]
Teffp = 6491 [2350] K [1.66 σ]

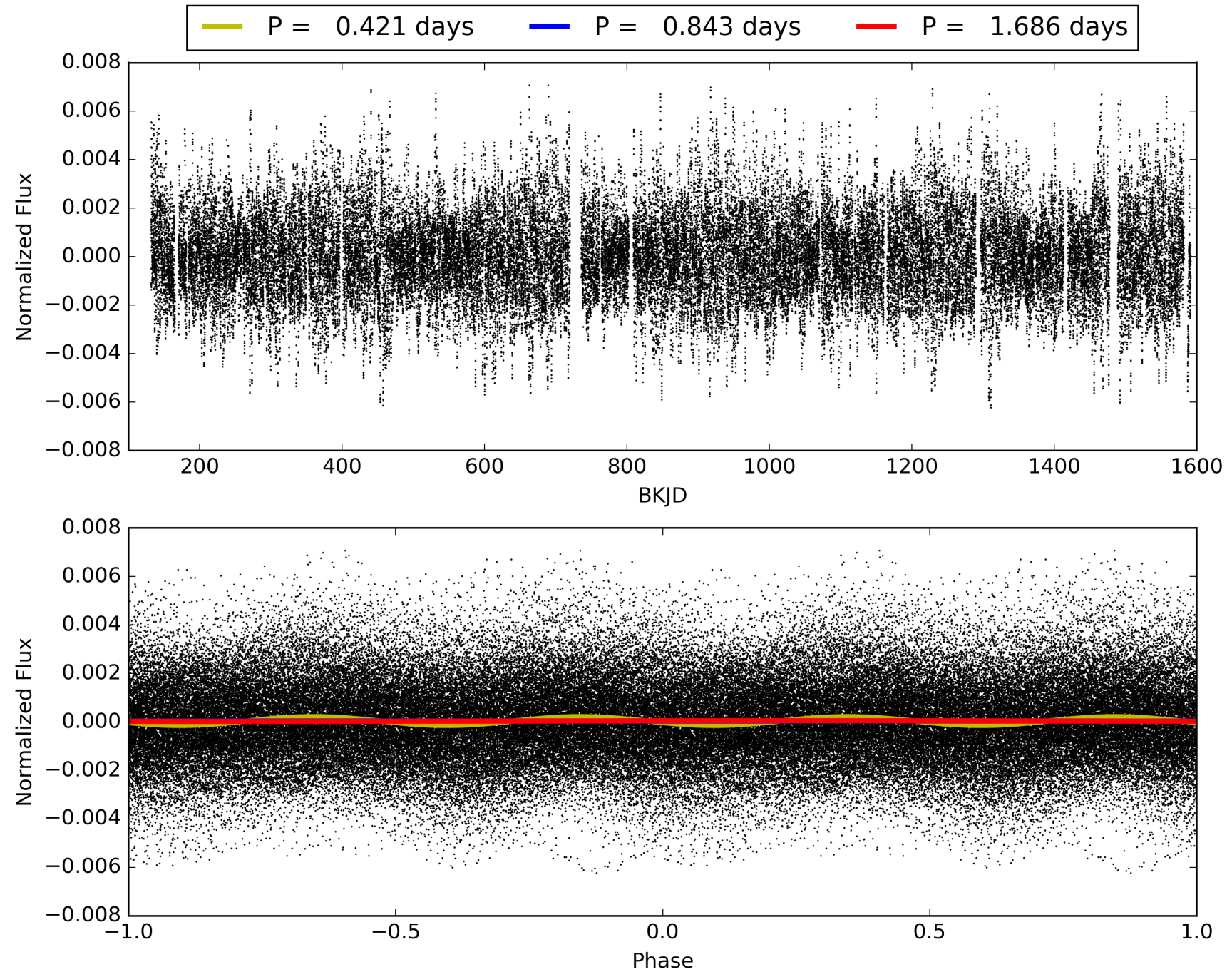
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1533/1537]
GhostDiagnostic-chr: 29
Centroid-sig: 0.4%
Centroid-so: 0.784 arcsec [1.78 σ]
OotOffset-rm: 0.856 arcsec [1.12 σ]
KicOffset-rm: 0.773 arcsec [0.89 σ]
OotOffset-st: 0/4/0/1 [5]
KicOffset-st: 0/4/0/1 [5]
DiffImageQuality-fgm: 0.20 [1/5]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008843082-01, PDC Light Curves

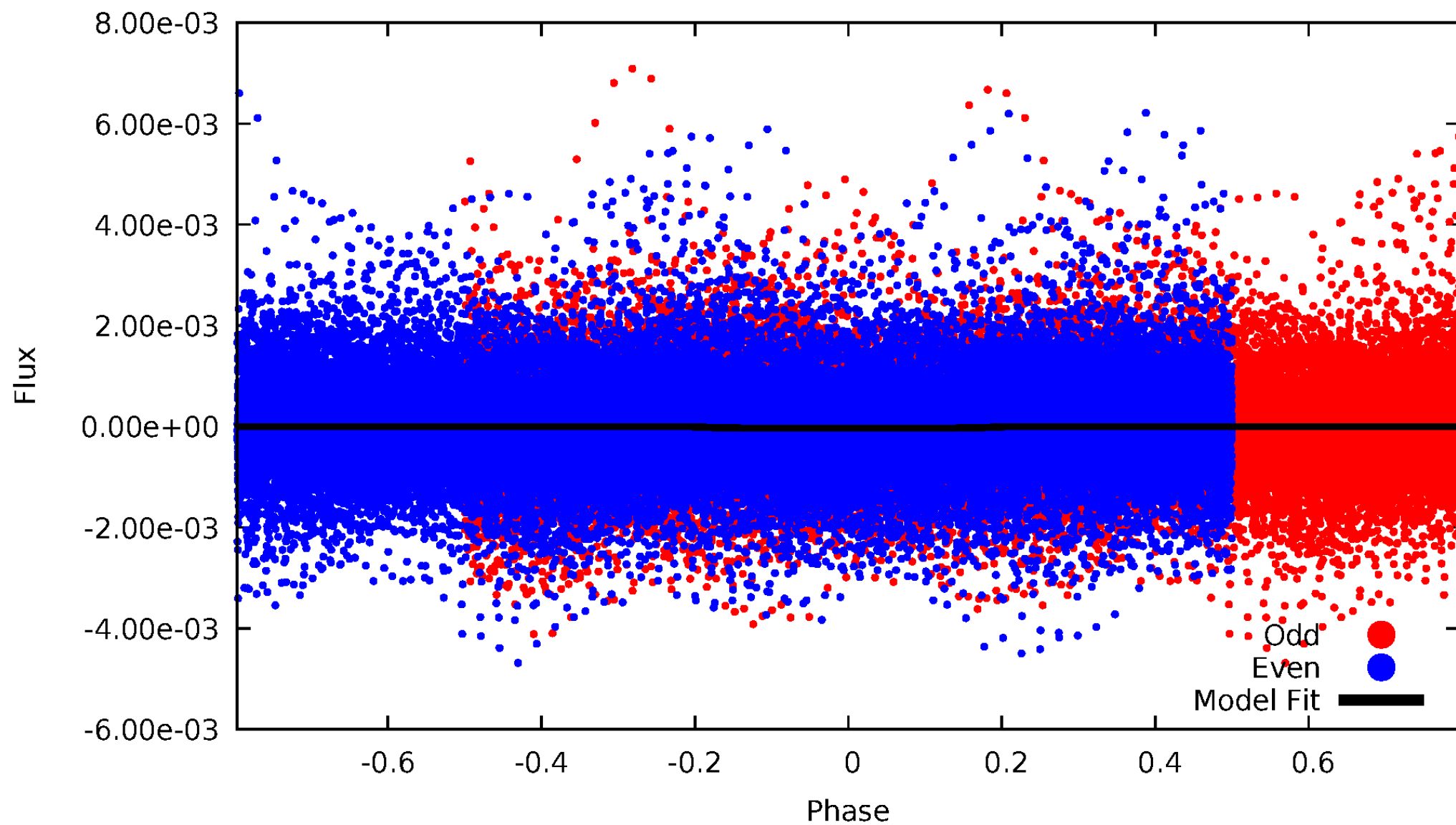


TCE 008843082-01



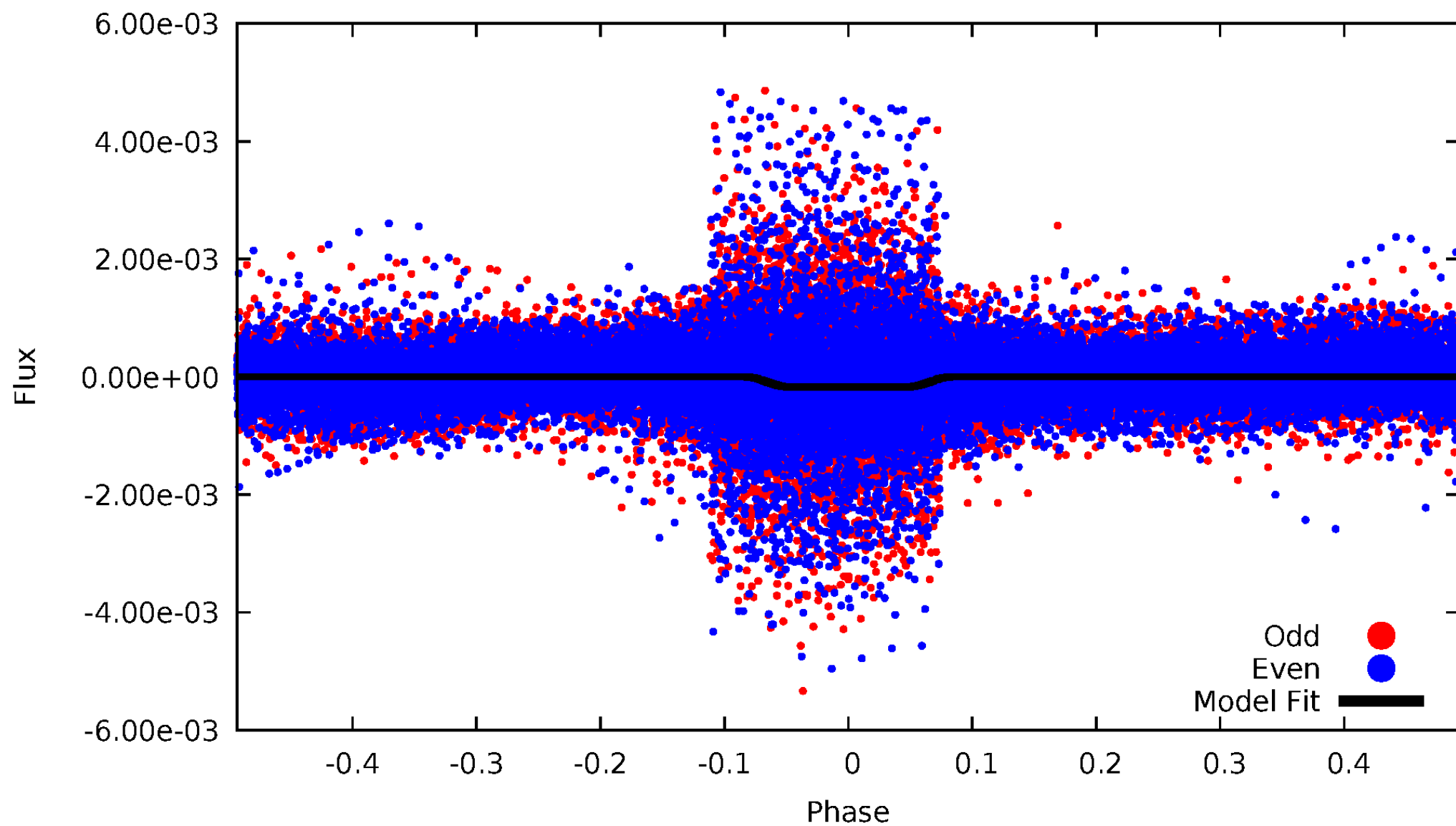
DV Odd/Even

TCE 008843082-01



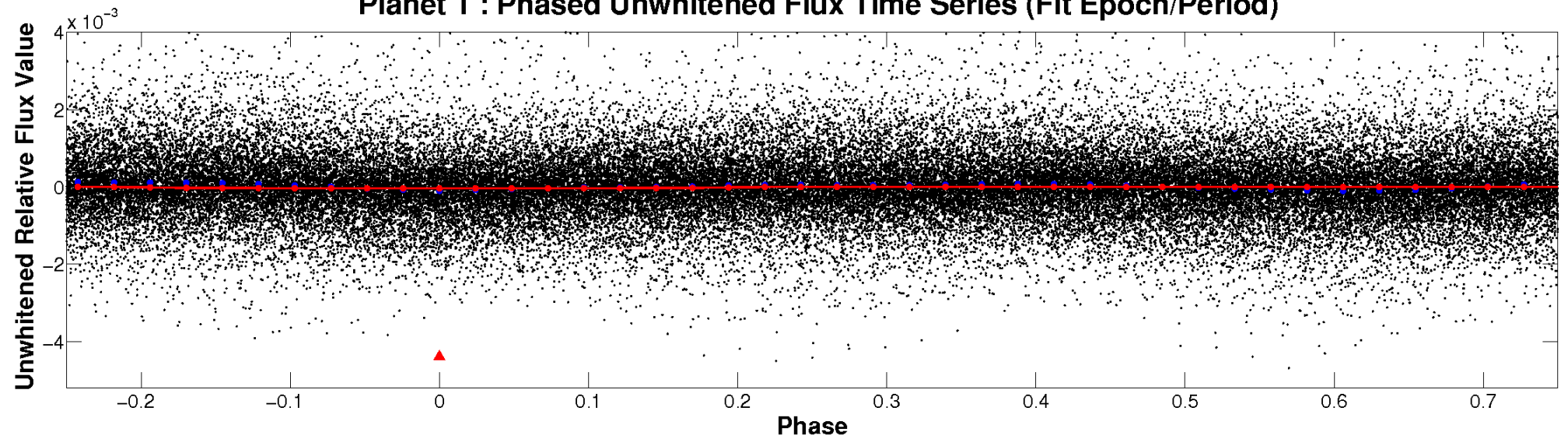
ALT Odd/Even

TCE 008843082-01

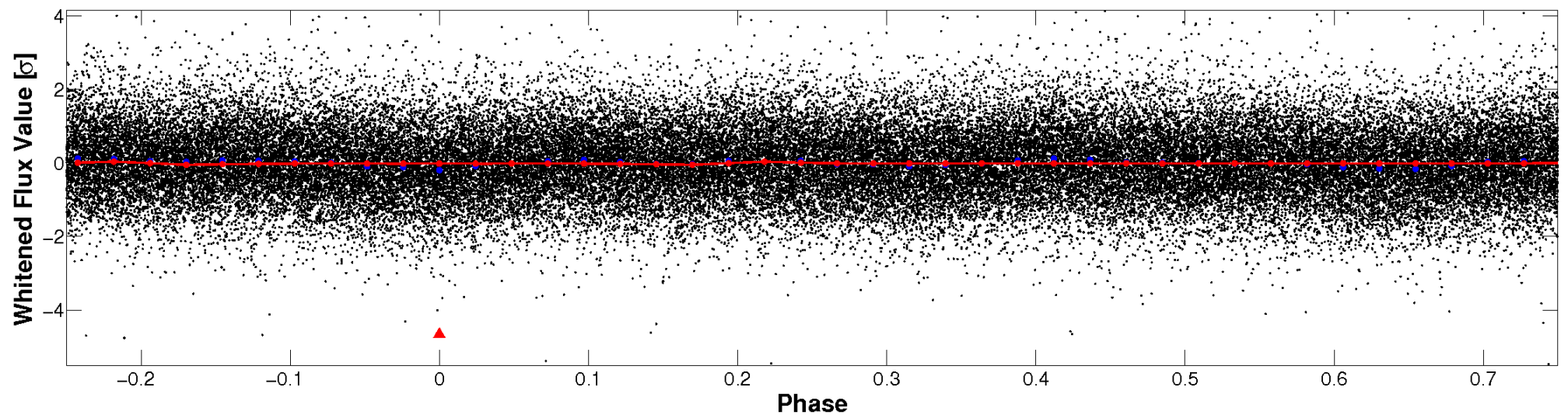


Non-Whitened Vs. Whitened Light Curve

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

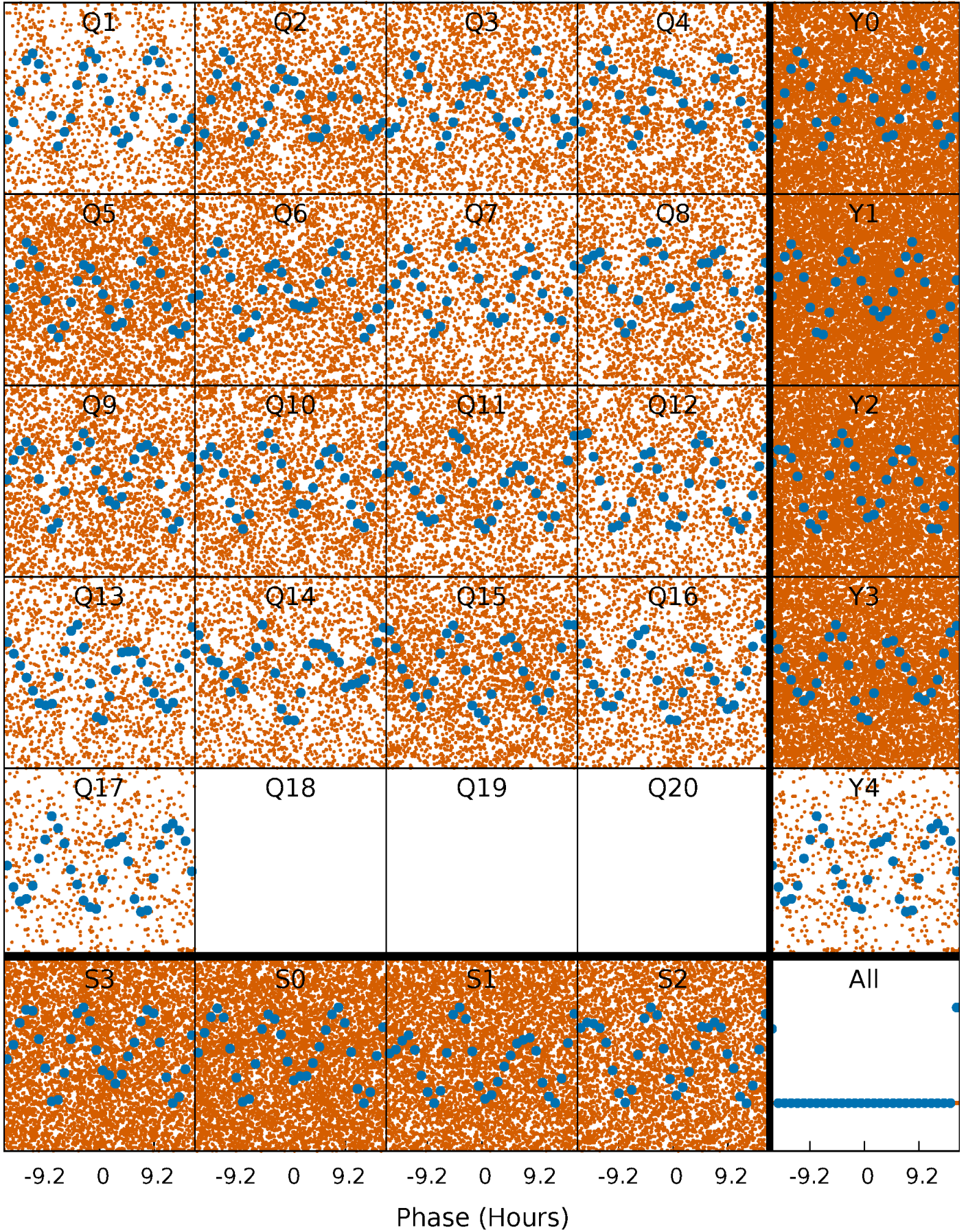


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



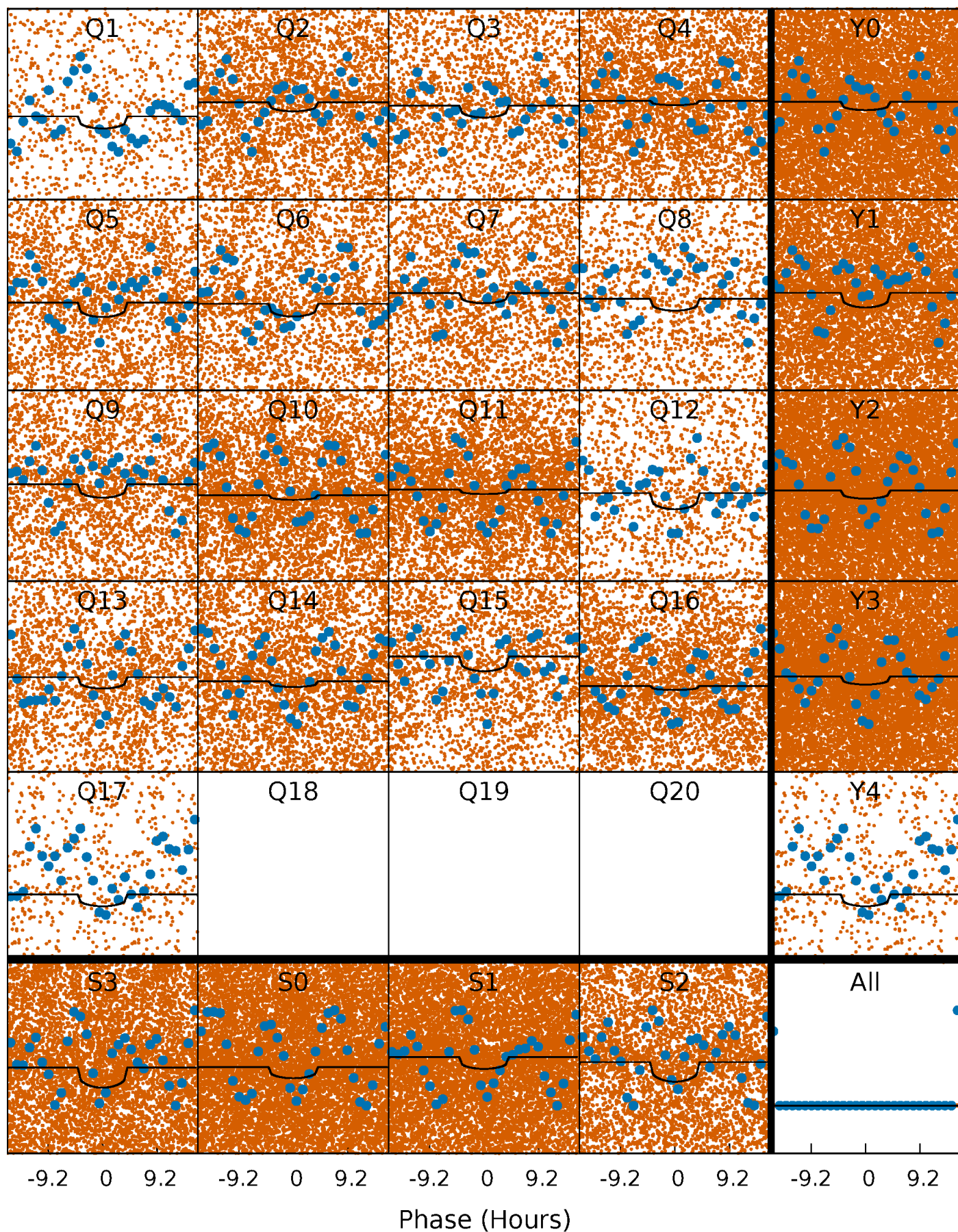
PDC Quarter-Phased Transit Curves

TCE 008843082-01 P= 0.842903 Days $T_0=132.218150$ (BKJD)



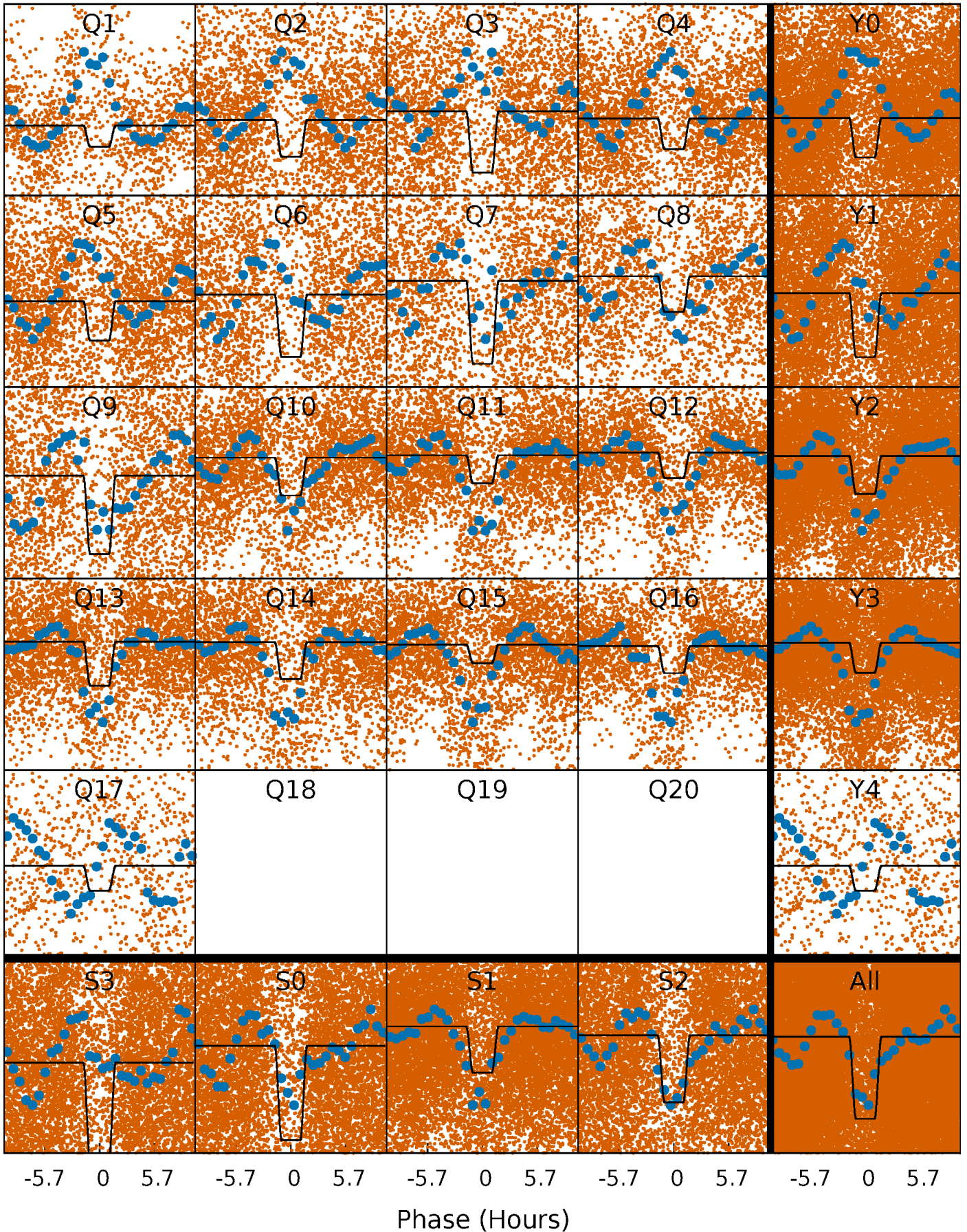
DV Quarter-Phased Transit Curves

TCE 008843082-01 P= 0.842903 Days $T_0=132.218150$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

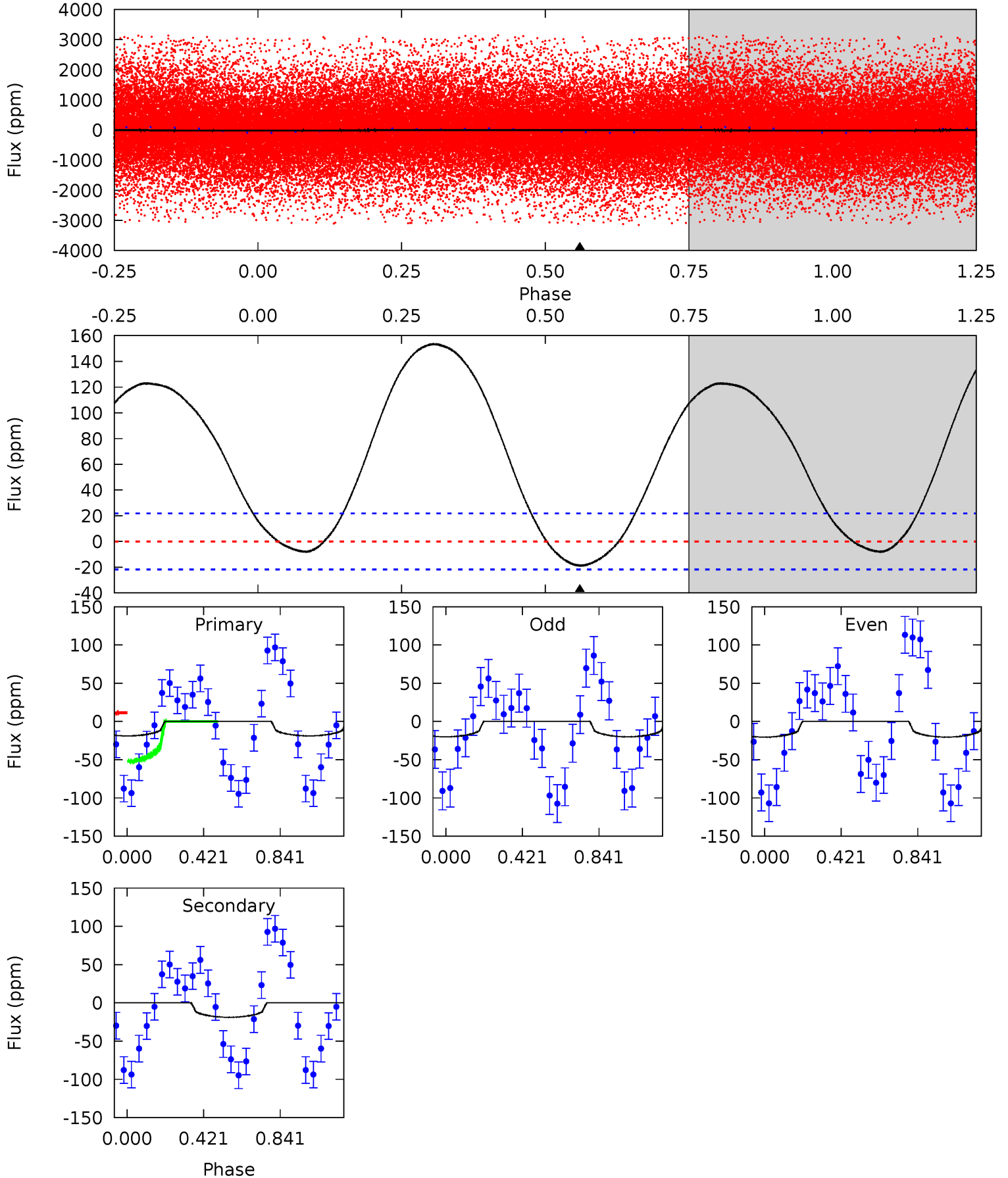
TCE 008843082-01 P= 0.842930 Days $T_0=132.201662$ (BKJD)



DV Model-Shift Uniqueness Test

008843082-01, P = 0.842903 Days, E = 131.375247 Days

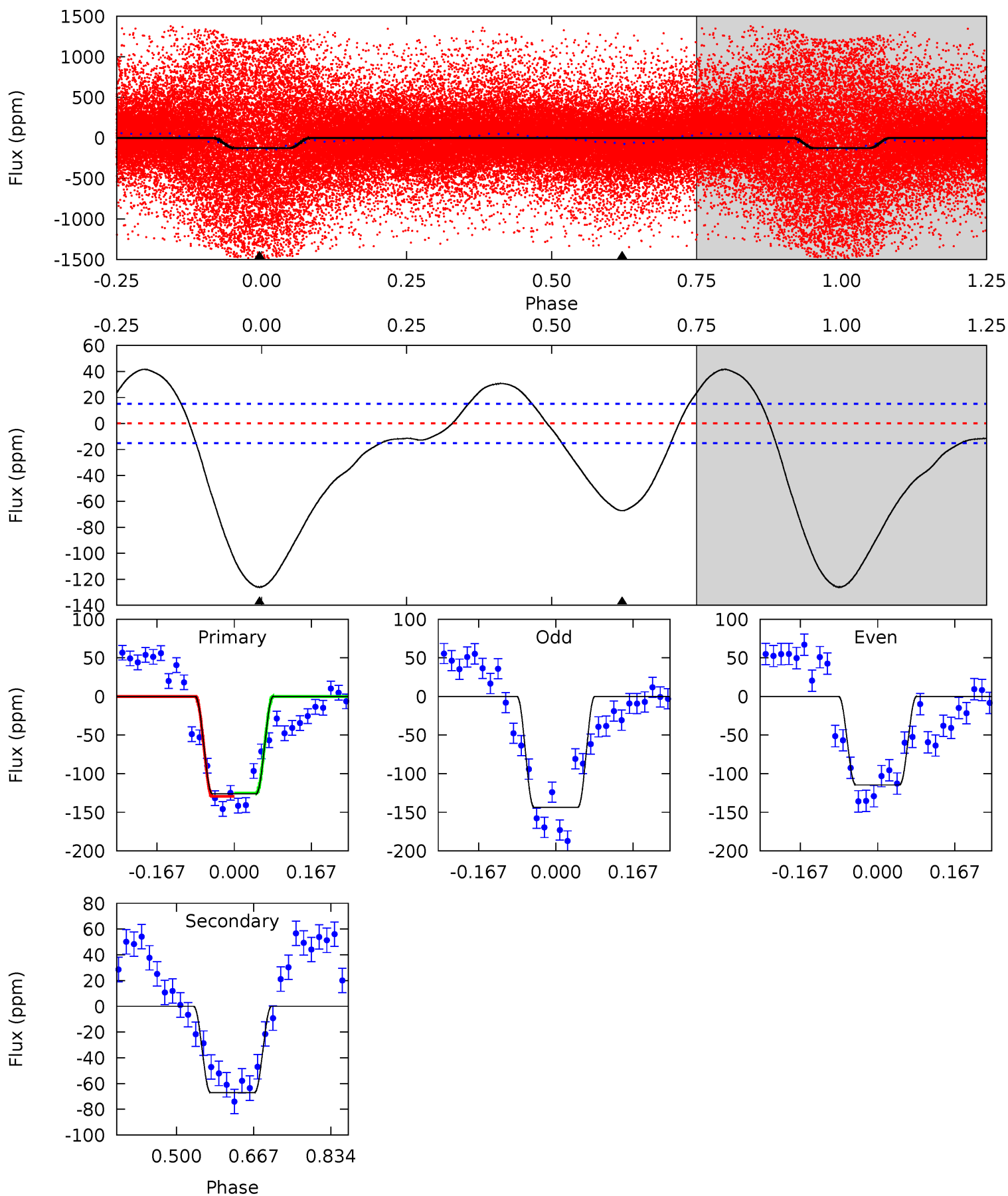
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.67	3.67	0	0	4.25	0.81	1.94	3.67	3.67	3.67	3.67	0.04	-0.21	0.89	3.95



Alt Model-Shift Uniqueness Test

008843082-01, P = 0.842930 Days, E = 131.358732 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
37.1	19.8	0	0	4.46	1.38	6.41	37.1	37.1	19.8	19.8	4.24	0.99	0.25	0.64



Stellar Parameters For KIC 008843082

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6407^{+181}_{-227}	$4.144^{+0.214}_{-0.175}$	$-0.140^{+0.250}_{-0.300}$	$1.503^{+0.463}_{-0.378}$	$1.147^{+0.209}_{-0.157}$	$0.476^{+0.590}_{-0.229}$
	+3%/-4%	+5%/-4%	+179%/-214%	+31%/-25%	+18%/-14%	+124%/-48%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 008843082-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-19 ± 5	$0.99^{+0.67}_{-0.56}$	3545^{+283}_{-249}	5271^{+2974}_{-1167}	$3.526^{+15.395}_{-2.341}$
Alt.	-67 ± 3	$2.12^{+0.78}_{-0.68}$	3564^{+297}_{-257}	5003^{+930}_{-603}	$2.749^{+3.079}_{-1.255}$

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 $A_{obs} \gg 1.0$

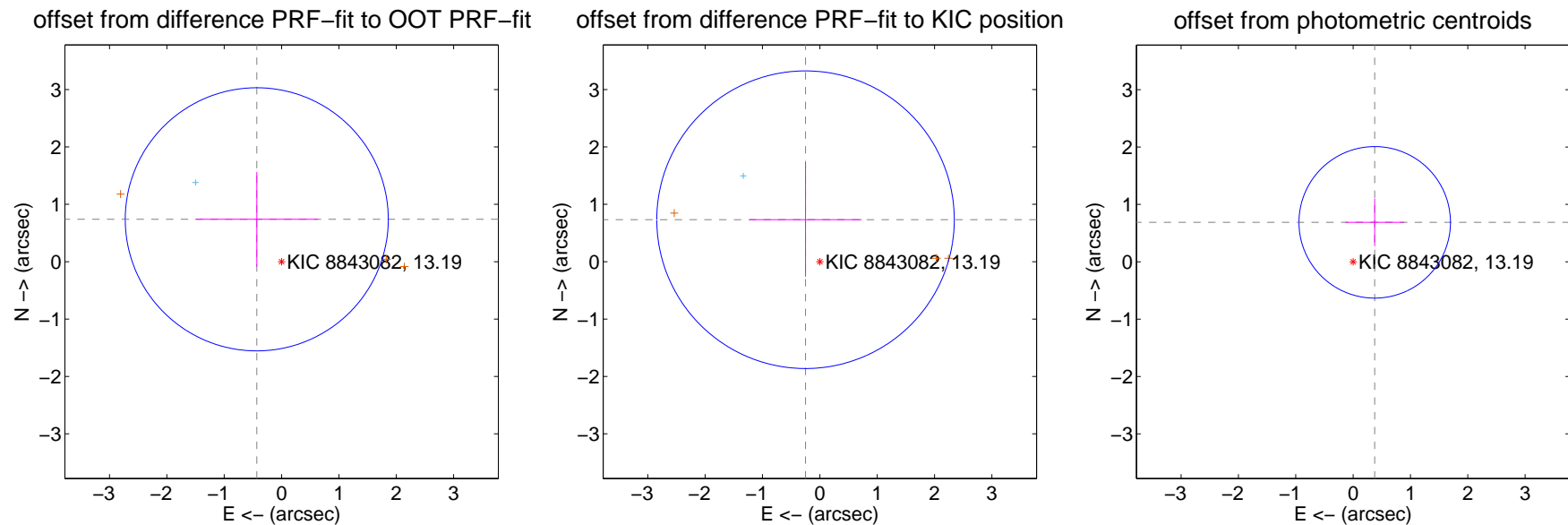
DV Centroid Data

Supplemental centroid analysis for 008843082-01. Kepler magnitude: 13.19. Transit SNR 4.83

There are 1 quarters with good PRF difference image offsets

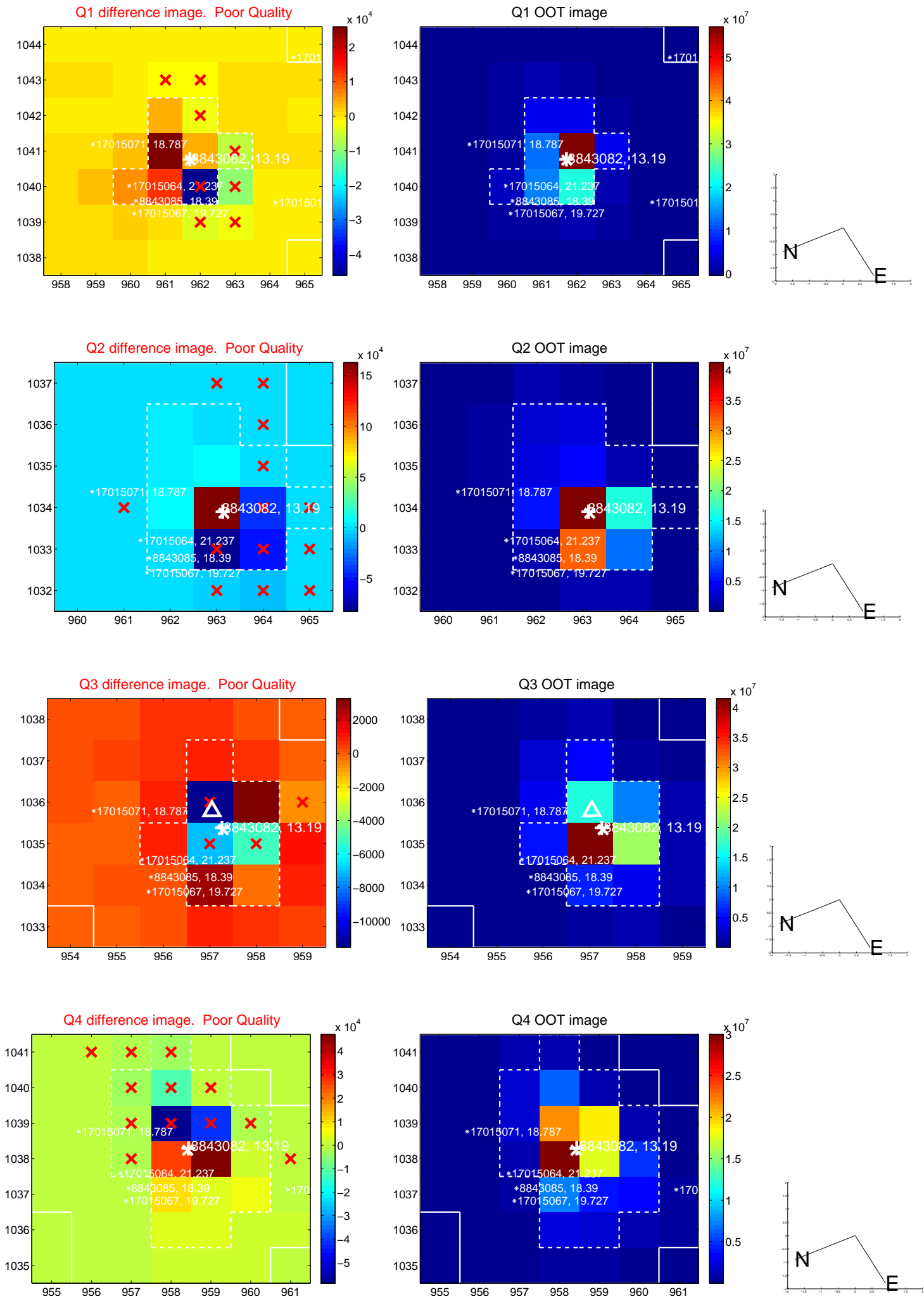
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.856 ± 0.764	1.12	0.433 ± 1.065	0.738 ± 0.825
PRF-fit source offset from KIC position	0.773 ± 0.864	0.89	0.249 ± 0.978	0.732 ± 0.992
photometric centroid source offset	0.78 ± 0.44	1.78	-0.38 ± 0.51	0.69 ± 0.42

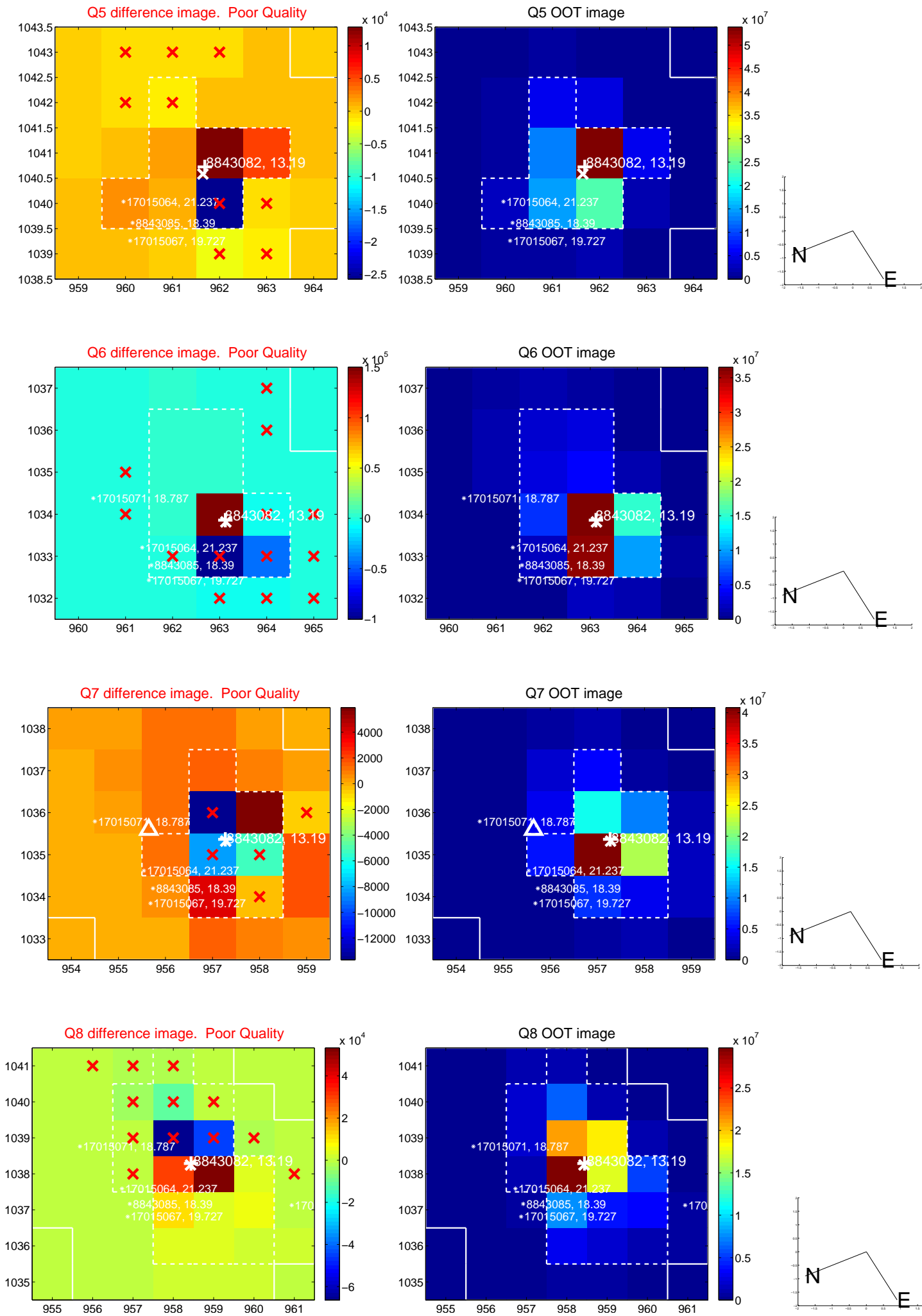


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

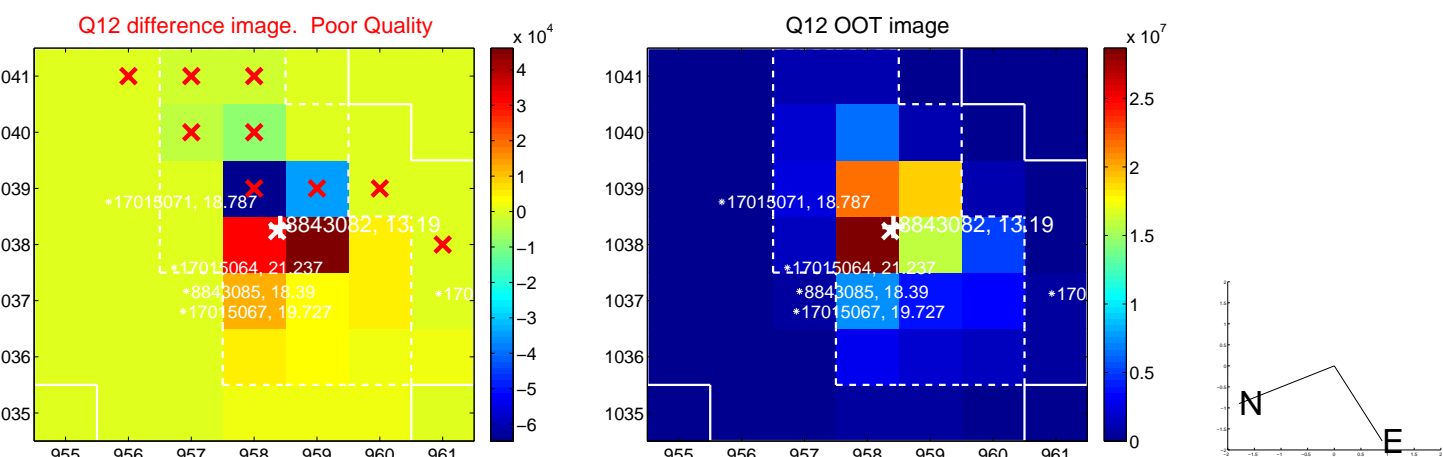
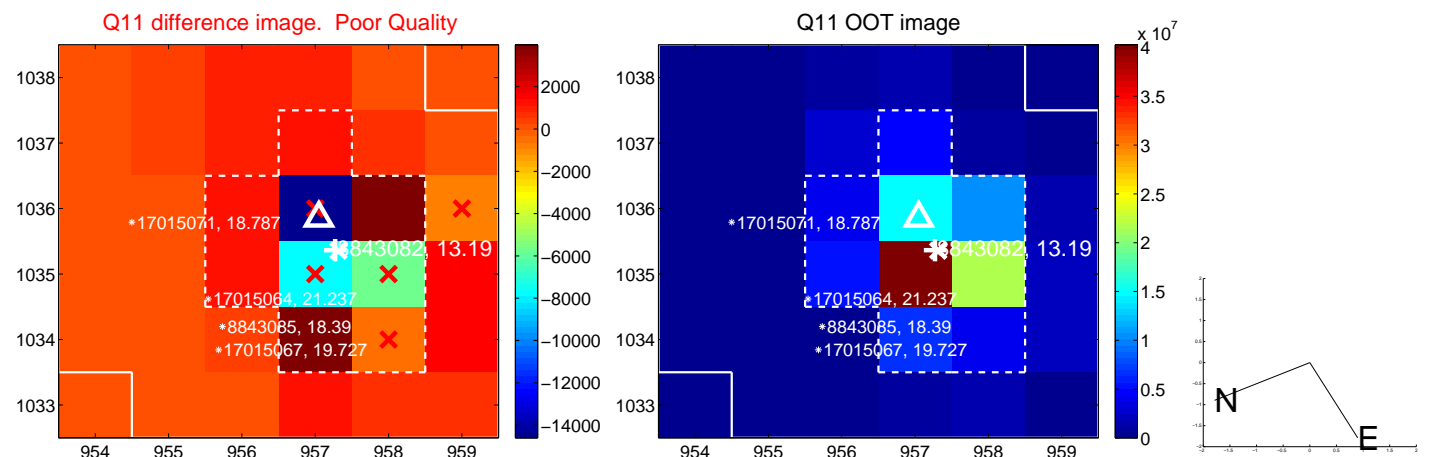
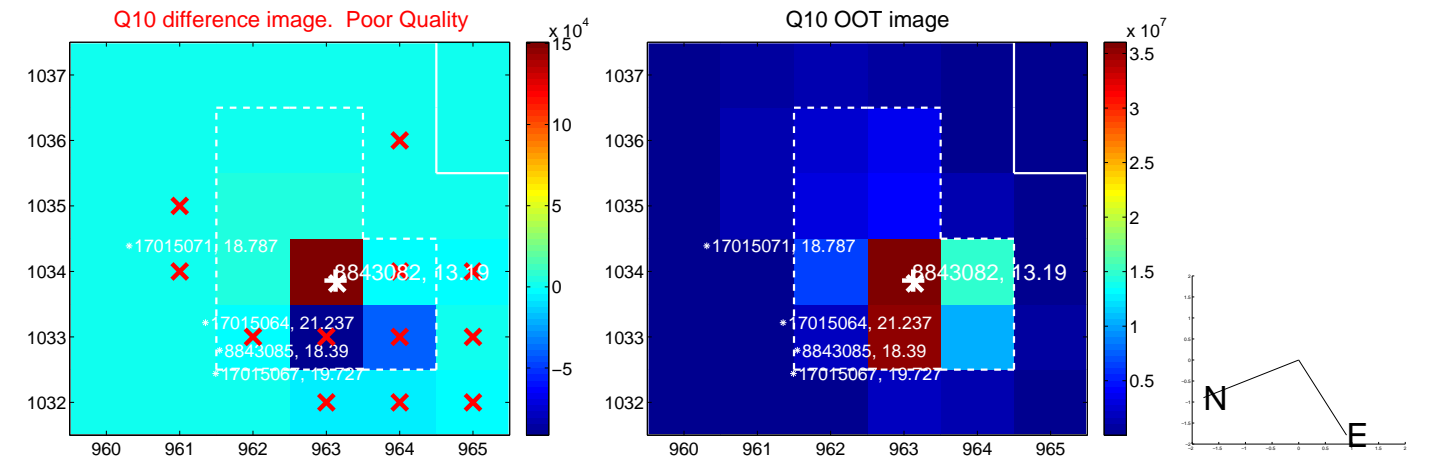
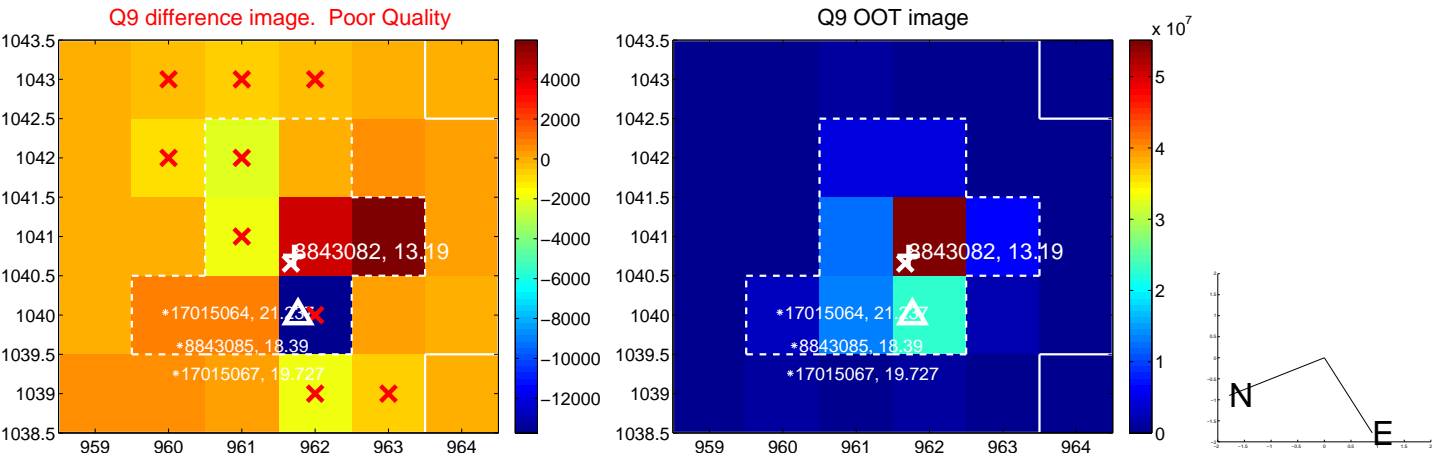
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



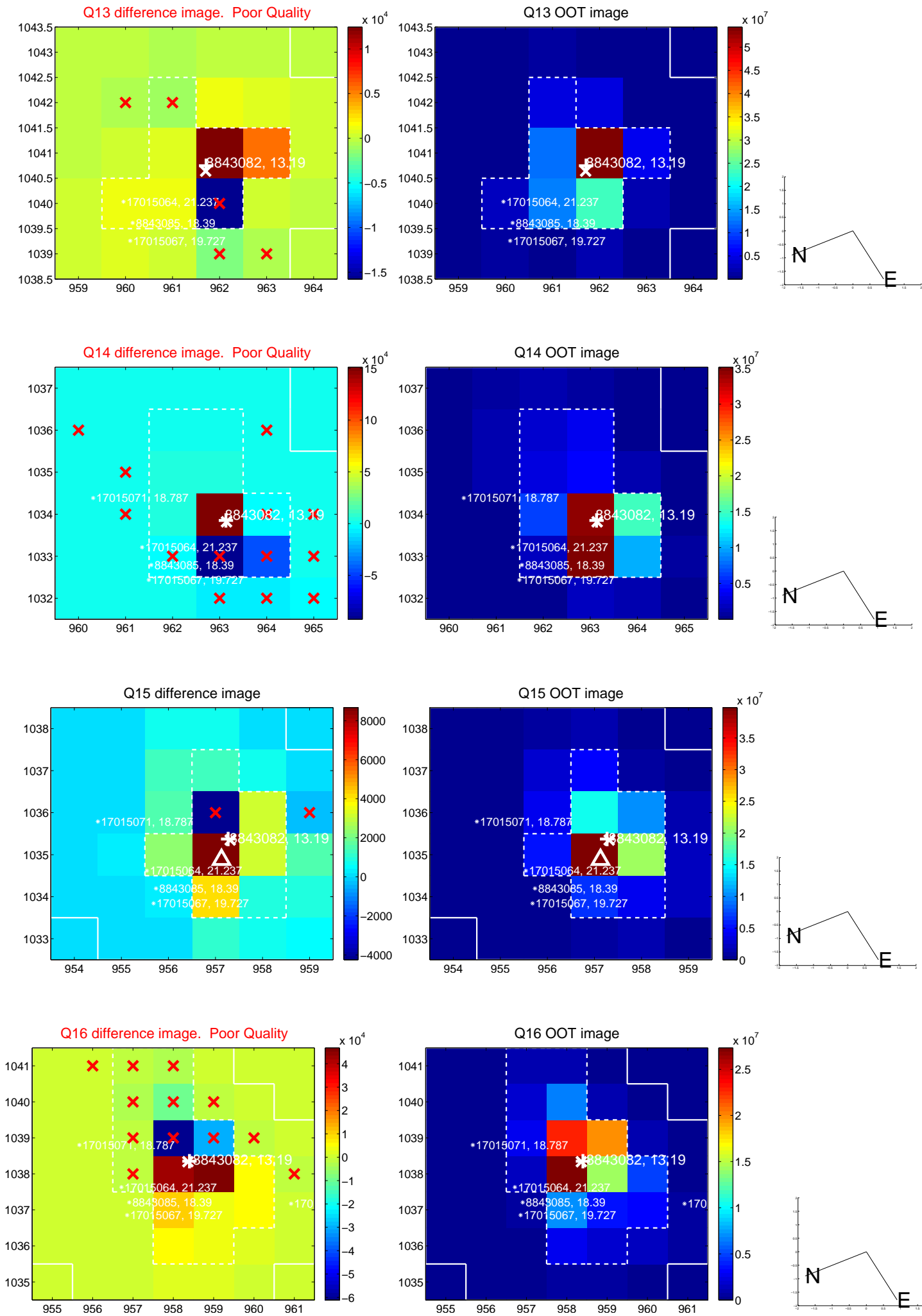
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



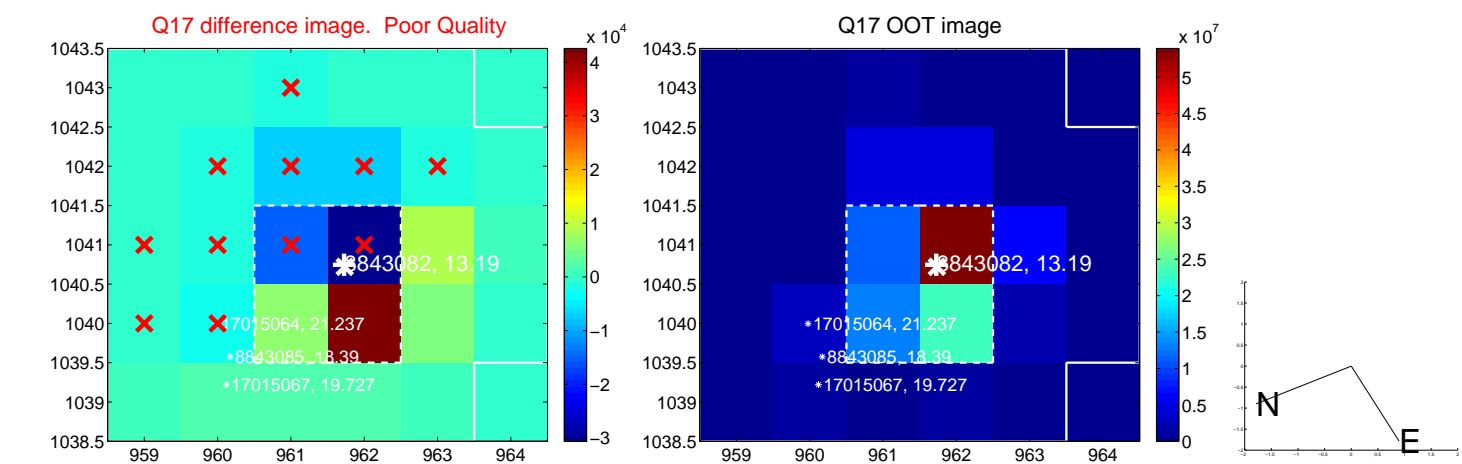
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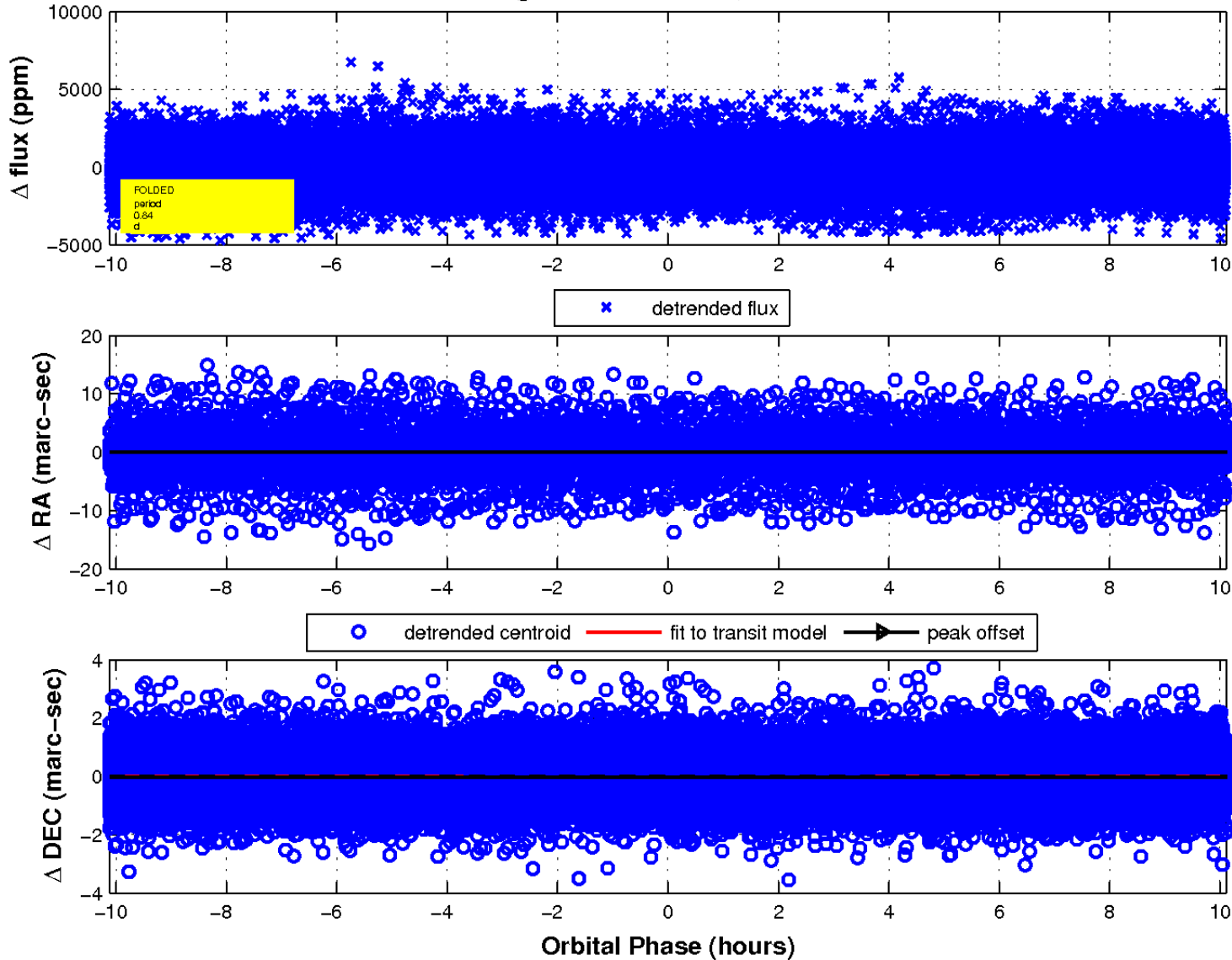
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

