

KIC 004826110

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})
004826110-01	OBS	1524.01	1.333376	132.855862	85.2	1.115	8.6	8.4	0.81	5199	0.90	883.05

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004826110-01	OBS	FP	0.00	0	0	1	0	CENT_RESOLVED_OFFSET

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

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

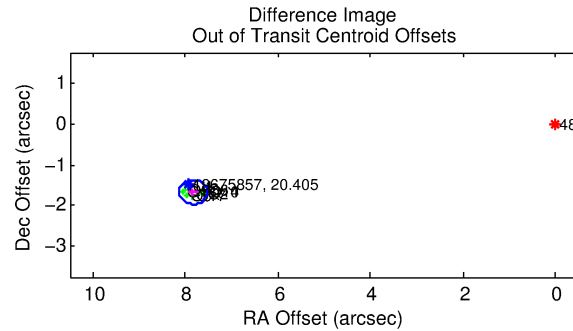
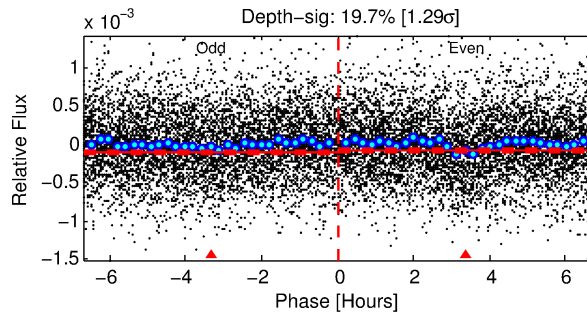
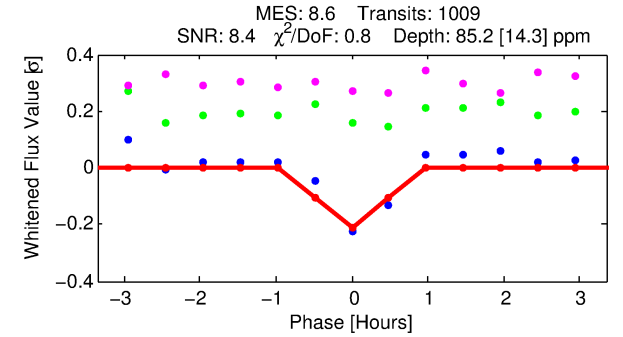
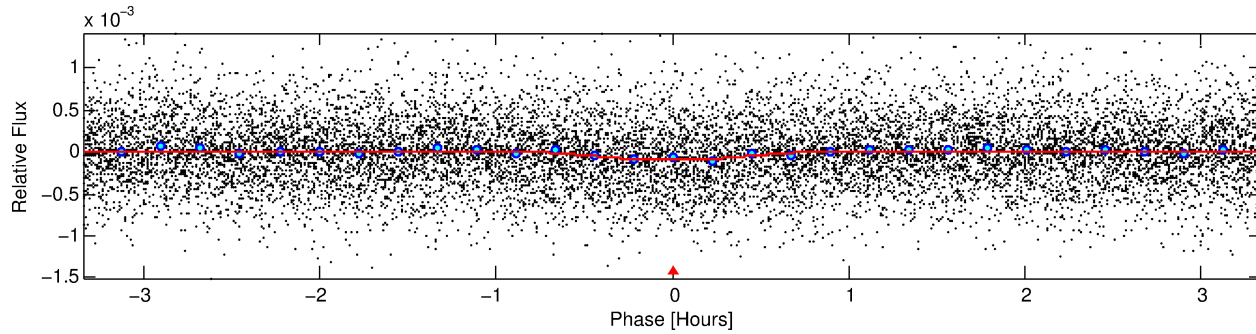
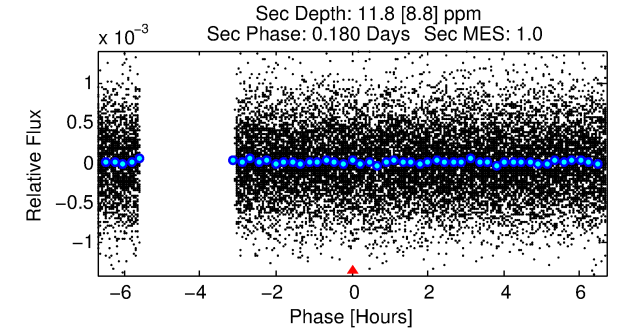
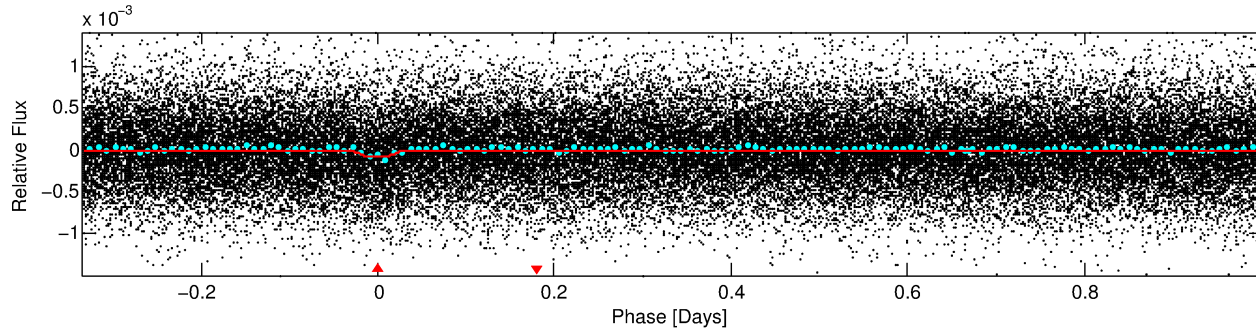
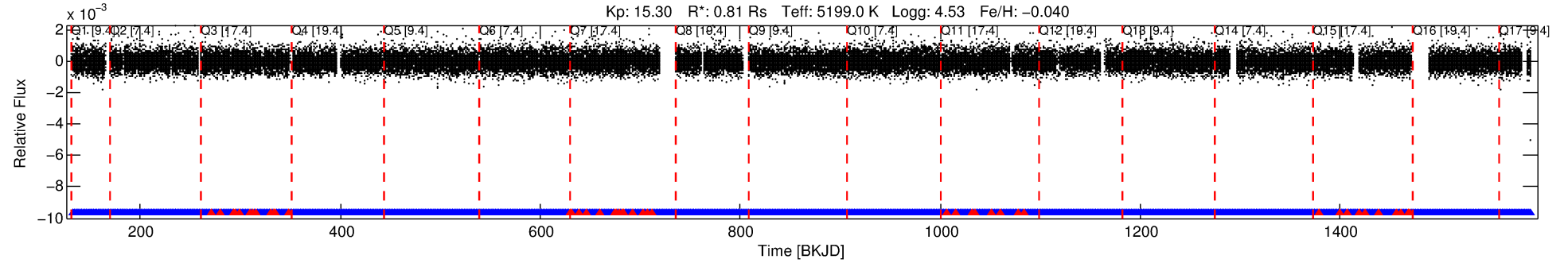
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004826110-01

No Significant Match Found

DV One-Page Summary

KIC: 4826110 Candidate: 1 of 1 Period: 1.333 d
KOI: K01524.01 Corr: 0.837



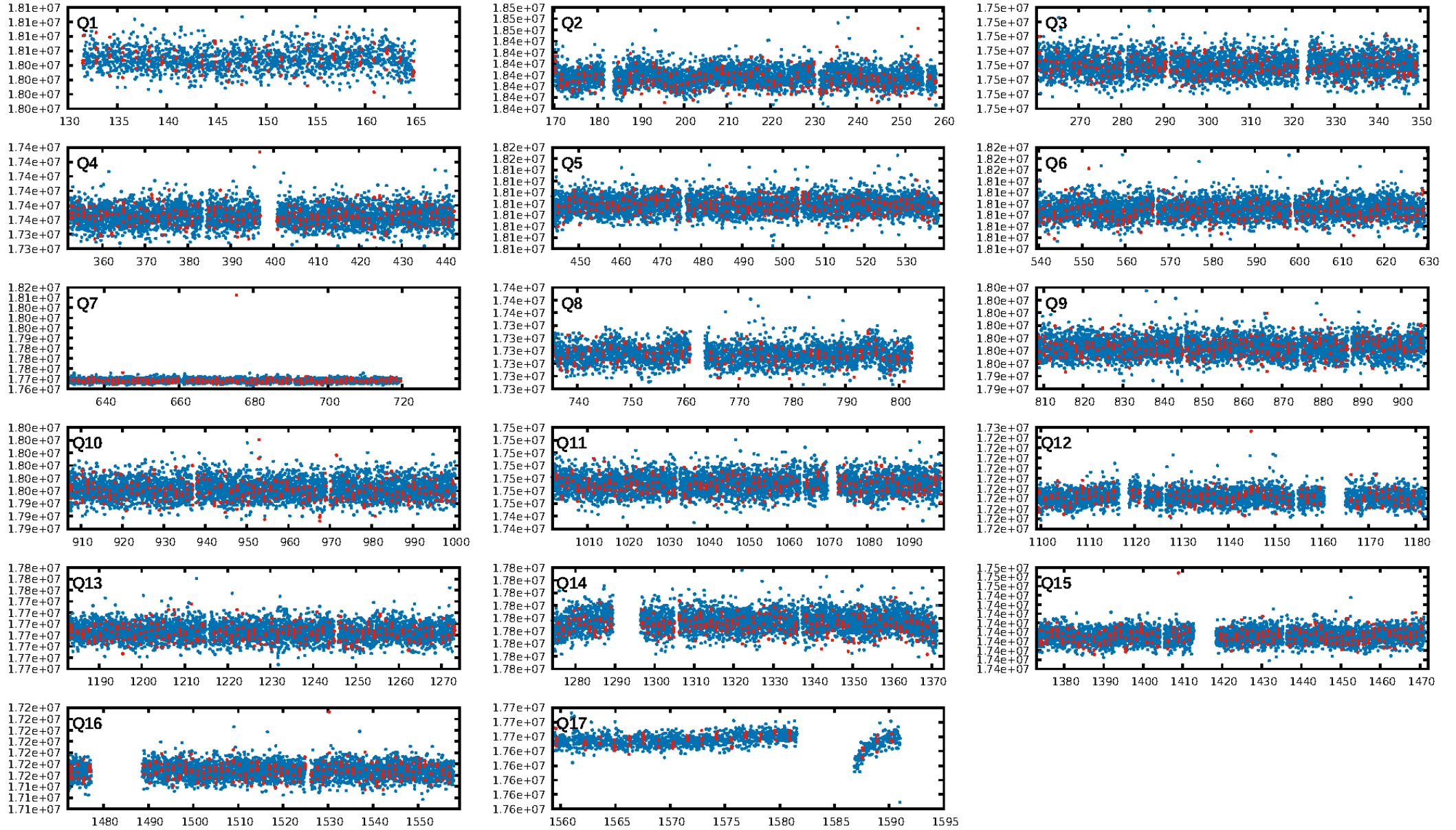
DV Fit Results:

Period = 1.33338 [0.00001] d
Epoch = 132.8559 [0.0023] BKJD
Rp/R* = 0.0102 [0.0089]
a/R* = 4.45 [15.25]
b = 0.89 [0.86]
Seff = 883.05 [176.41]
Teq = 1390 [69] K
Rp = 0.90 [0.80] Re
a = 0.0221 [0.0023] AU
Ag = 3.86 [7.38] [0.39σ]
Teffp = 3013 [1438] K [1.13σ]

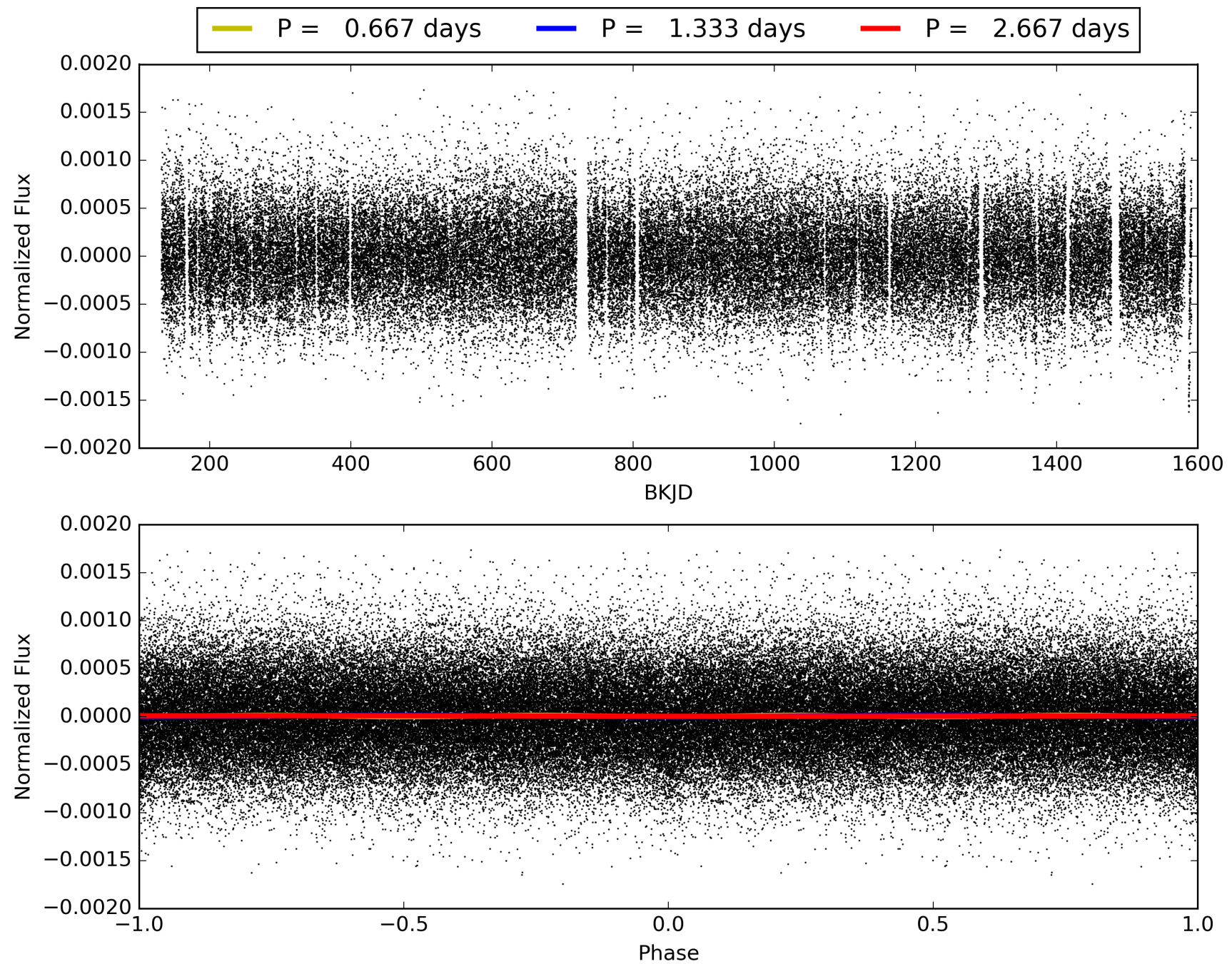
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 9.71e-18
RollingBand-fgt: 0.95 [919/964]
GhostDiagnostic-chr: -0.9273
Centroid-sig: 0.0%
Centroid-so: 37.170 arcsec [20.84σ]
OotOffset-rm: 8.012 arcsec [80.38σ]
KicOffset-rm: 8.017 arcsec [97.85σ]
OotOffset-st: 4/0/0/5 [9]
KicOffset-st: 4/0/0/5 [9]
DiffImageQuality-fgm: 1.00 [9/9]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 004826110-01, PDC Light Curves

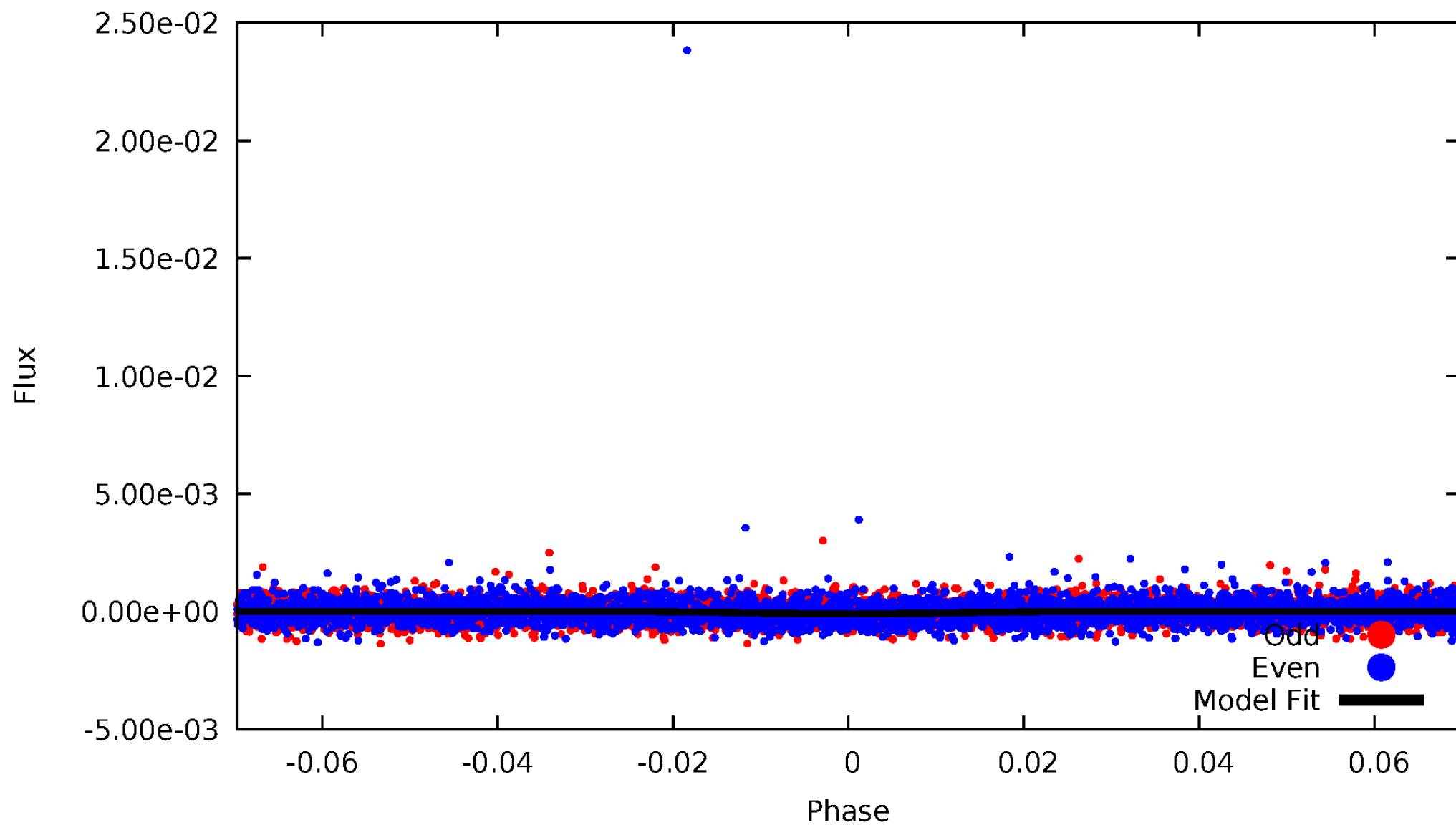


TCE 004826110-01



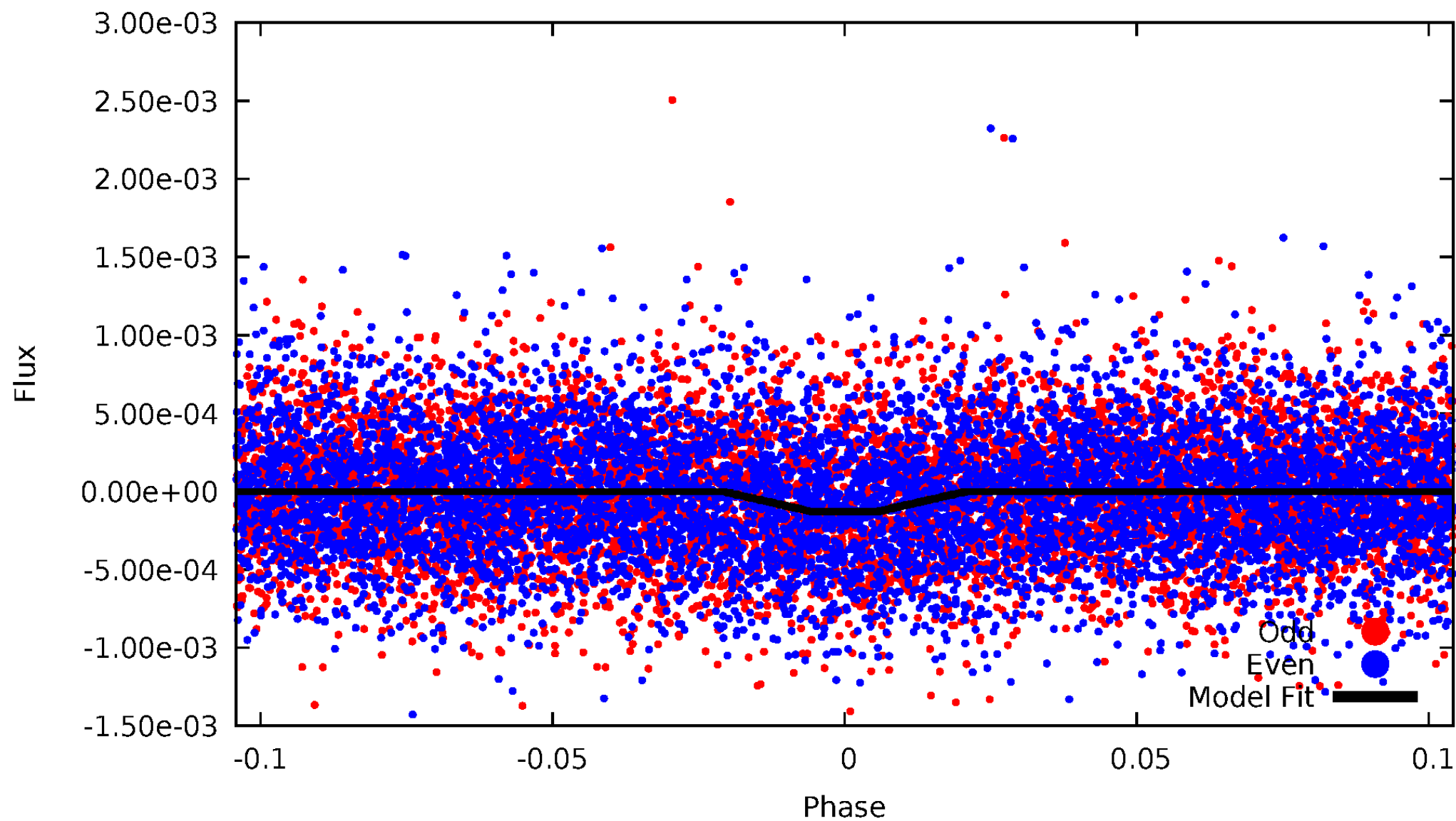
DV Odd/Even

TCE 004826110-01



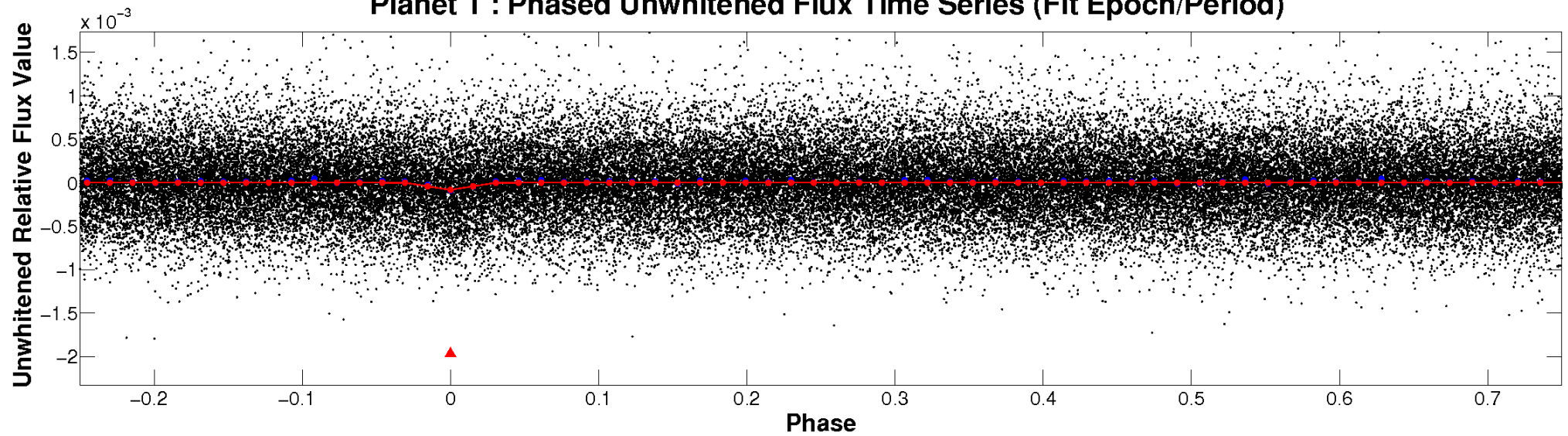
ALT Odd/Even

TCE 004826110-01

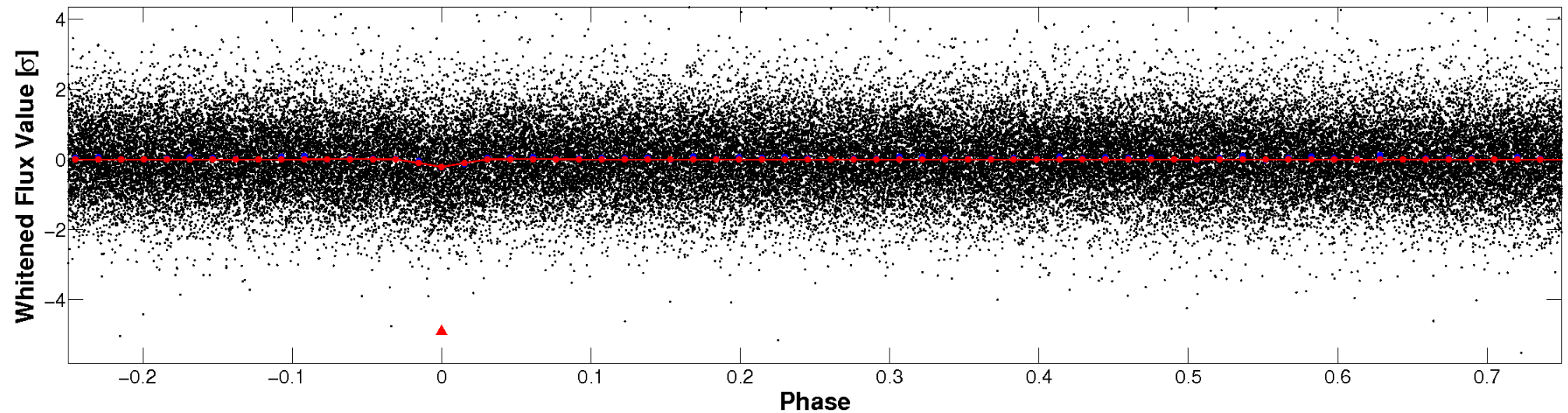


Non-Whitened Vs. Whitened Light Curve

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

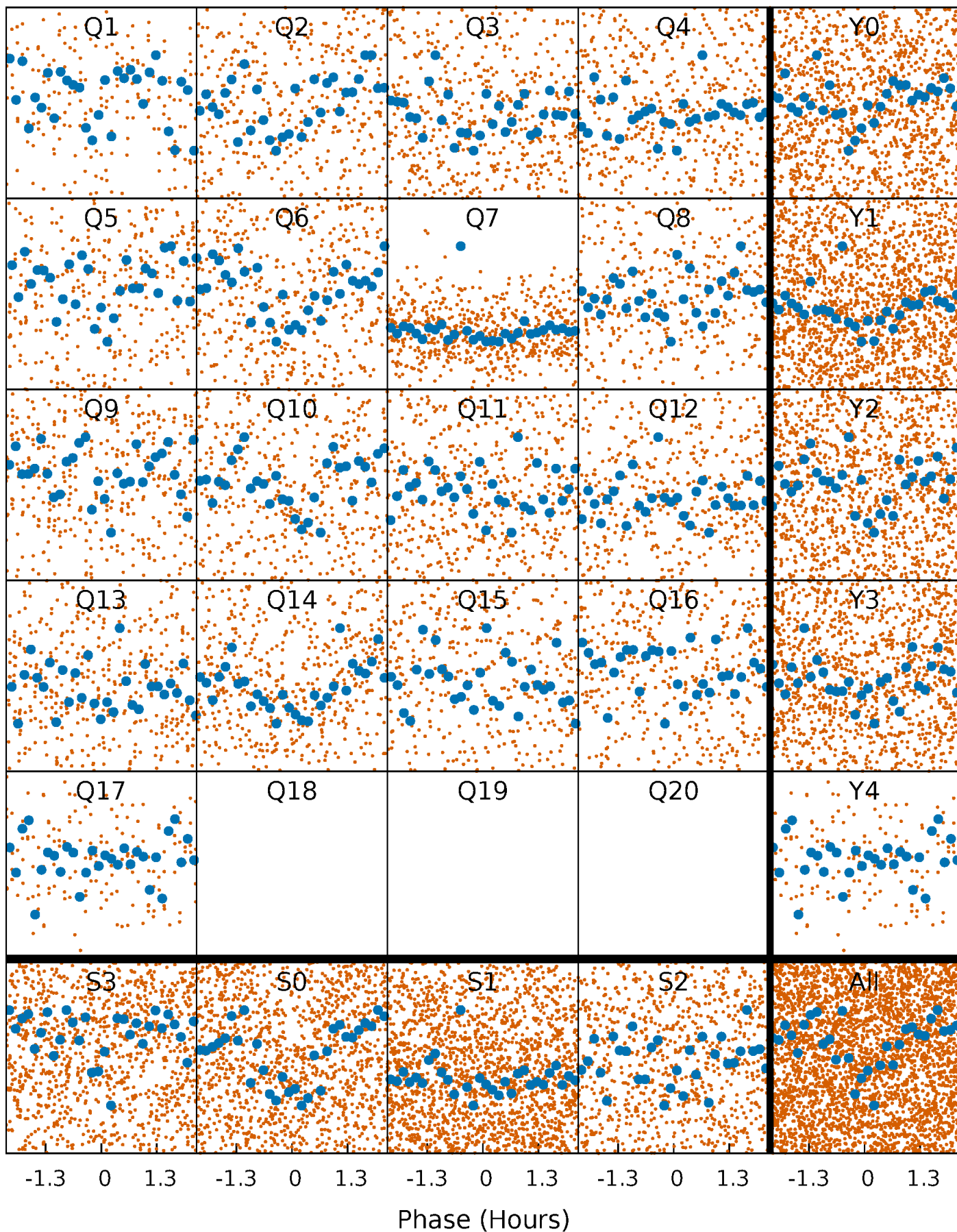


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



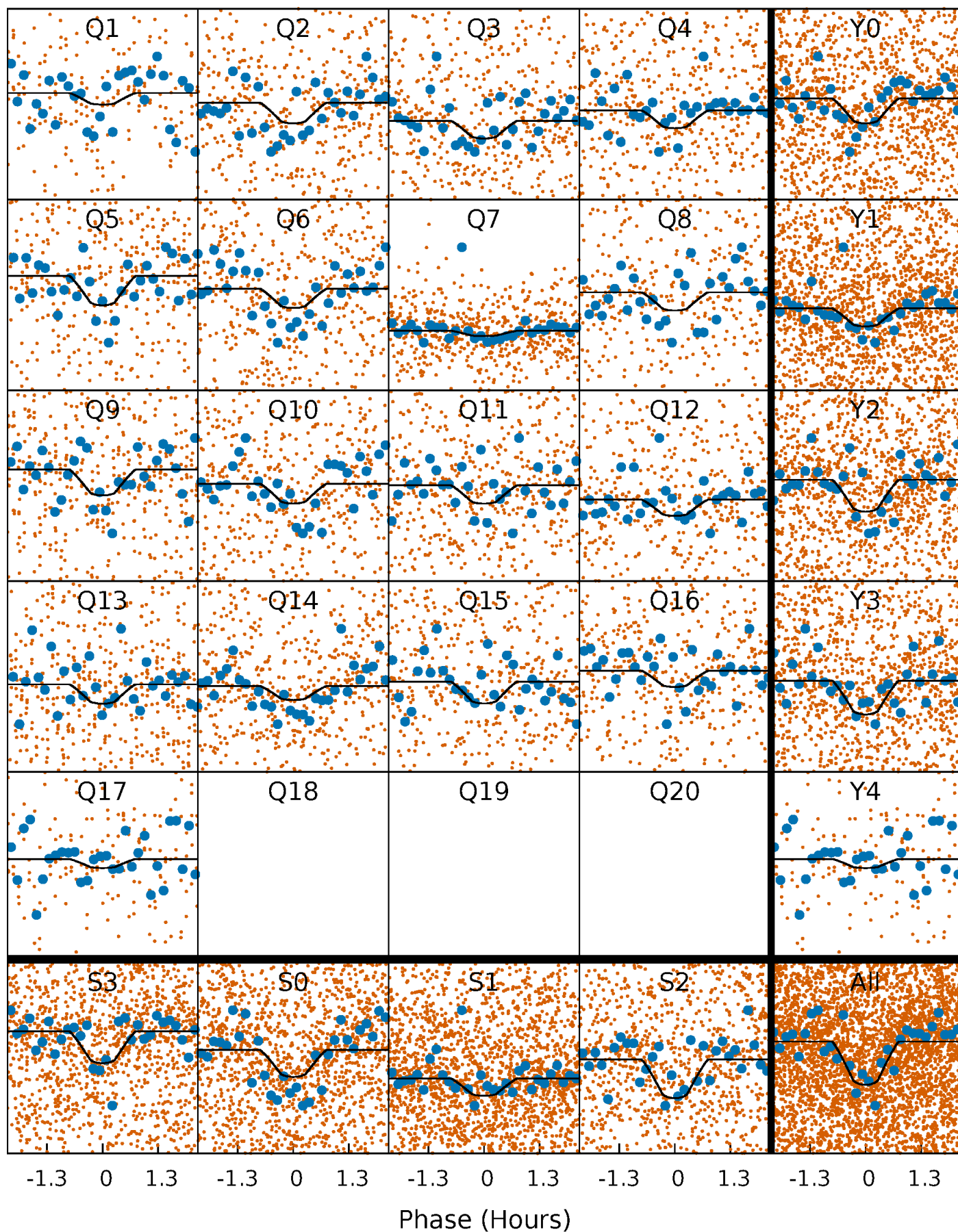
PDC Quarter-Phased Transit Curves

TCE 004826110-01 P= 1.333376 Days $T_0=132.855862$ (BKJD)



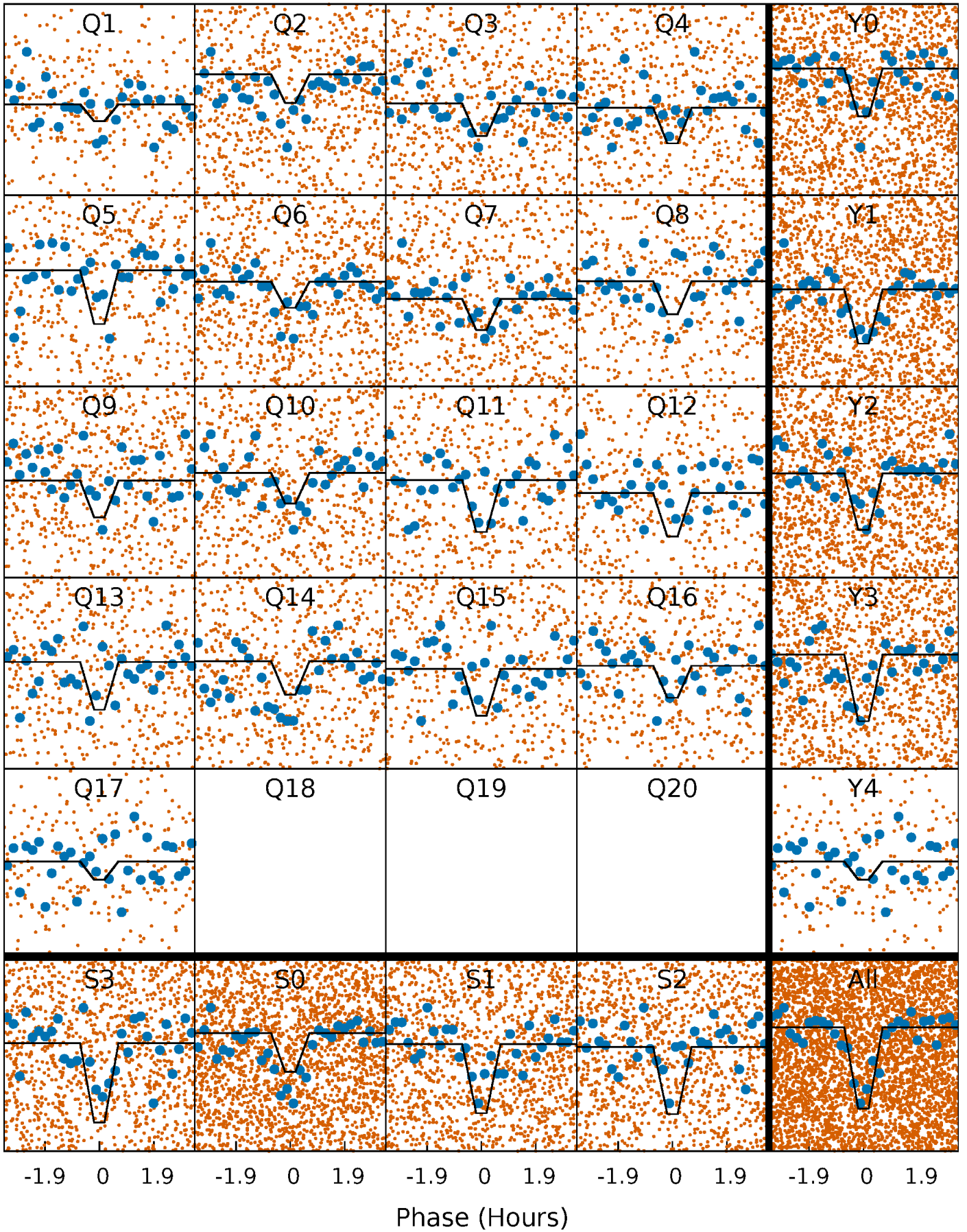
DV Quarter-Phased Transit Curves

TCE 004826110-01 P= 1.333376 Days $T_0=132.855862$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

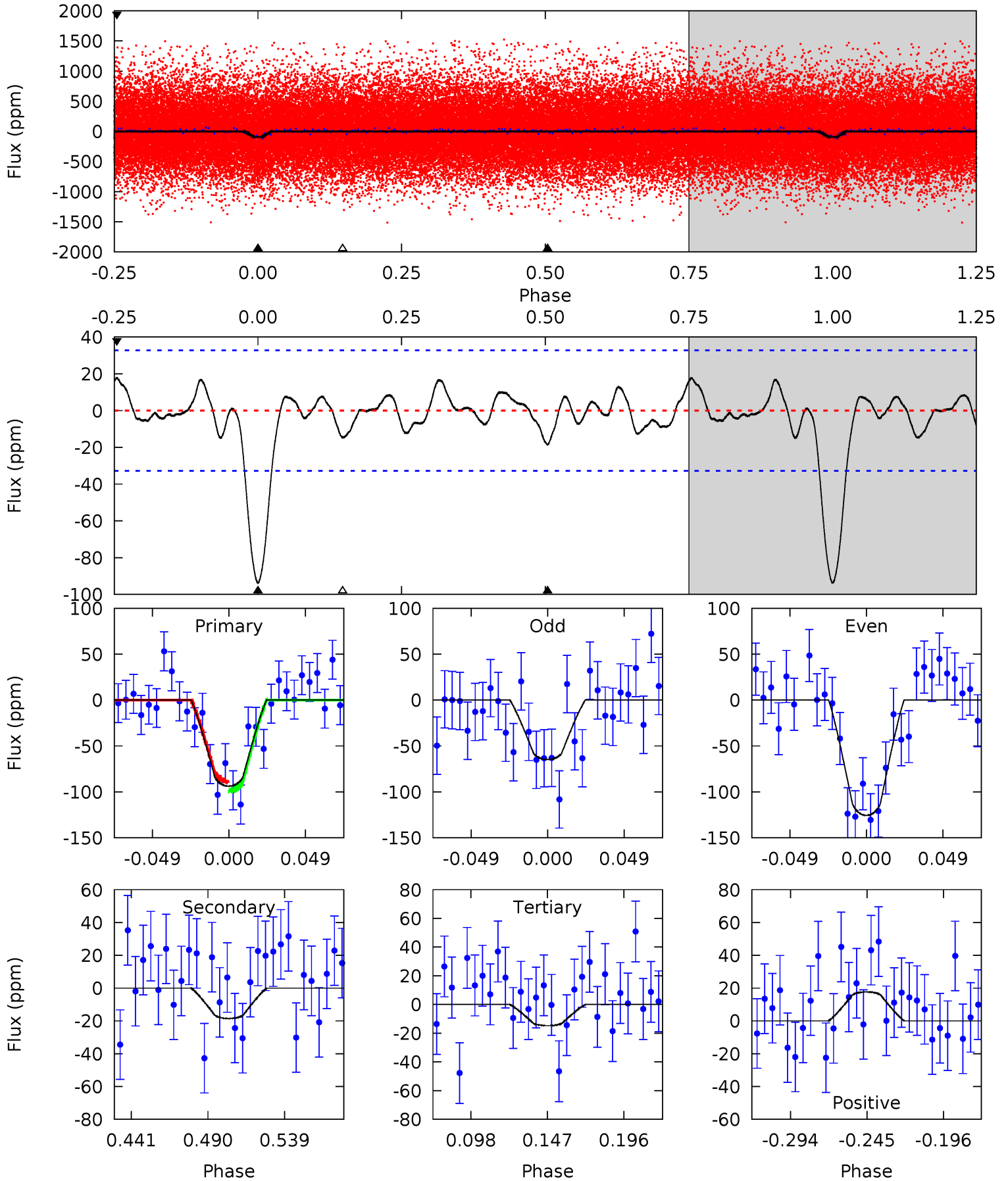
TCE 004826110-01 P= 1.333401 Days $T_0=132.844668$ (BKJD)



DV Model-Shift Uniqueness Test

004826110-01, P = 1.333376 Days, E = 130.189110 Days

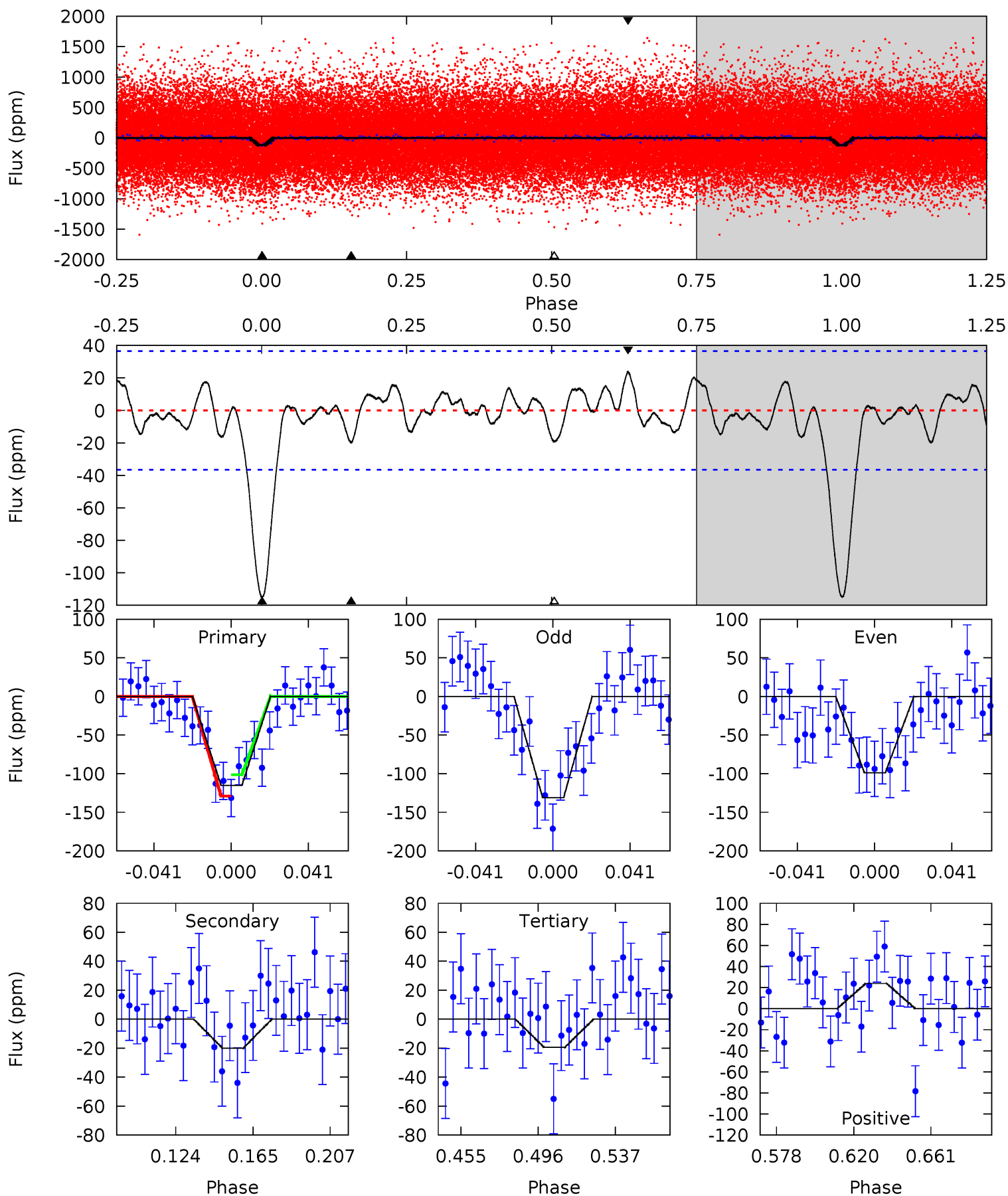
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.5	2.67	2.12	2.55	4.71	1.97	1.07	11.4	10.9	0.54	0.12	4.40	0.84	0.16	0.73



Alt Model-Shift Uniqueness Test

004826110-01, P = 1.333401 Days, E = 131.511267 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.9	2.59	2.52	3.10	4.75	2.04	1.16	12.4	11.8	0.08	-0.51	2.11	0.91	0.17	1.80



Stellar Parameters For KIC 004826110

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5199^{+171}_{-155}	$4.527^{+0.060}_{-0.082}$	$-0.040^{+0.300}_{-0.300}$	$0.811^{+0.100}_{-0.082}$	$0.807^{+0.092}_{-0.069}$	$2.132^{+0.596}_{-0.553}$
	+3%/-3%	+1%/-2%	+750%/-750%	+12%/-10%	+11%/-9%	+28%/-26%
Source	PHO1	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 004826110-01 / KOI 1524.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-19 ± 7	$1.02^{+0.86}_{-0.61}$	1948^{+88}_{-72}	3516^{+1509}_{-687}	$4.419^{+22.834}_{-3.179}$
Alt.	-20 ± 8	$1.13^{+0.76}_{-0.64}$	1954^{+80}_{-79}	3454^{+1274}_{-635}	$3.962^{+17.939}_{-2.780}$

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 $A_{obs} \gg 1.0$

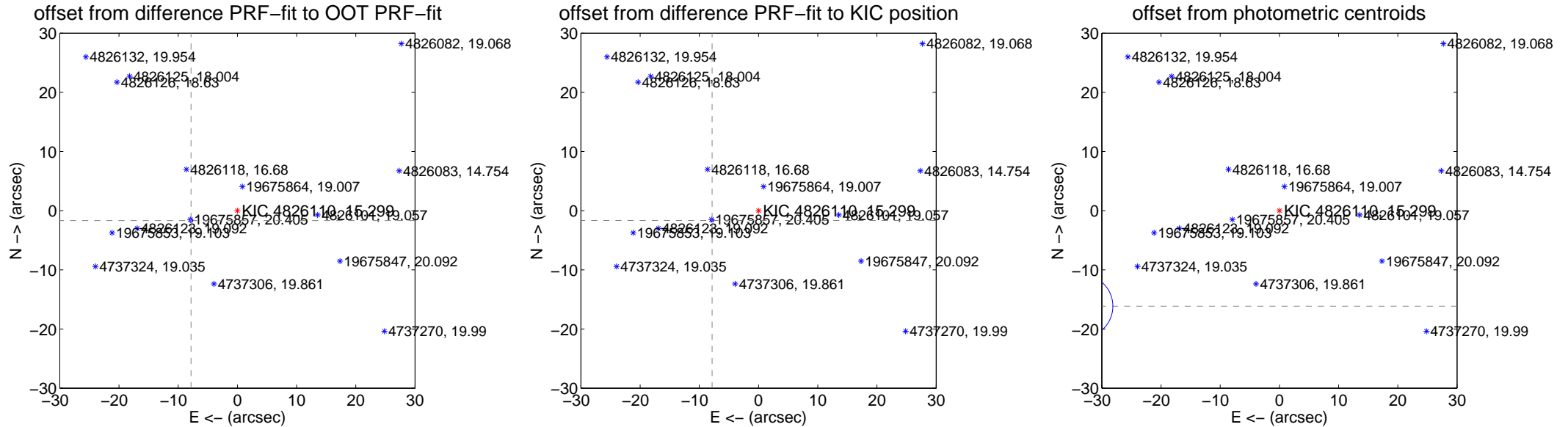
DV Centroid Data

Supplemental centroid analysis for 004826110-01. Kepler magnitude: 15.30. Transit SNR 8.37

There are 9 quarters with good PRF difference image offsets

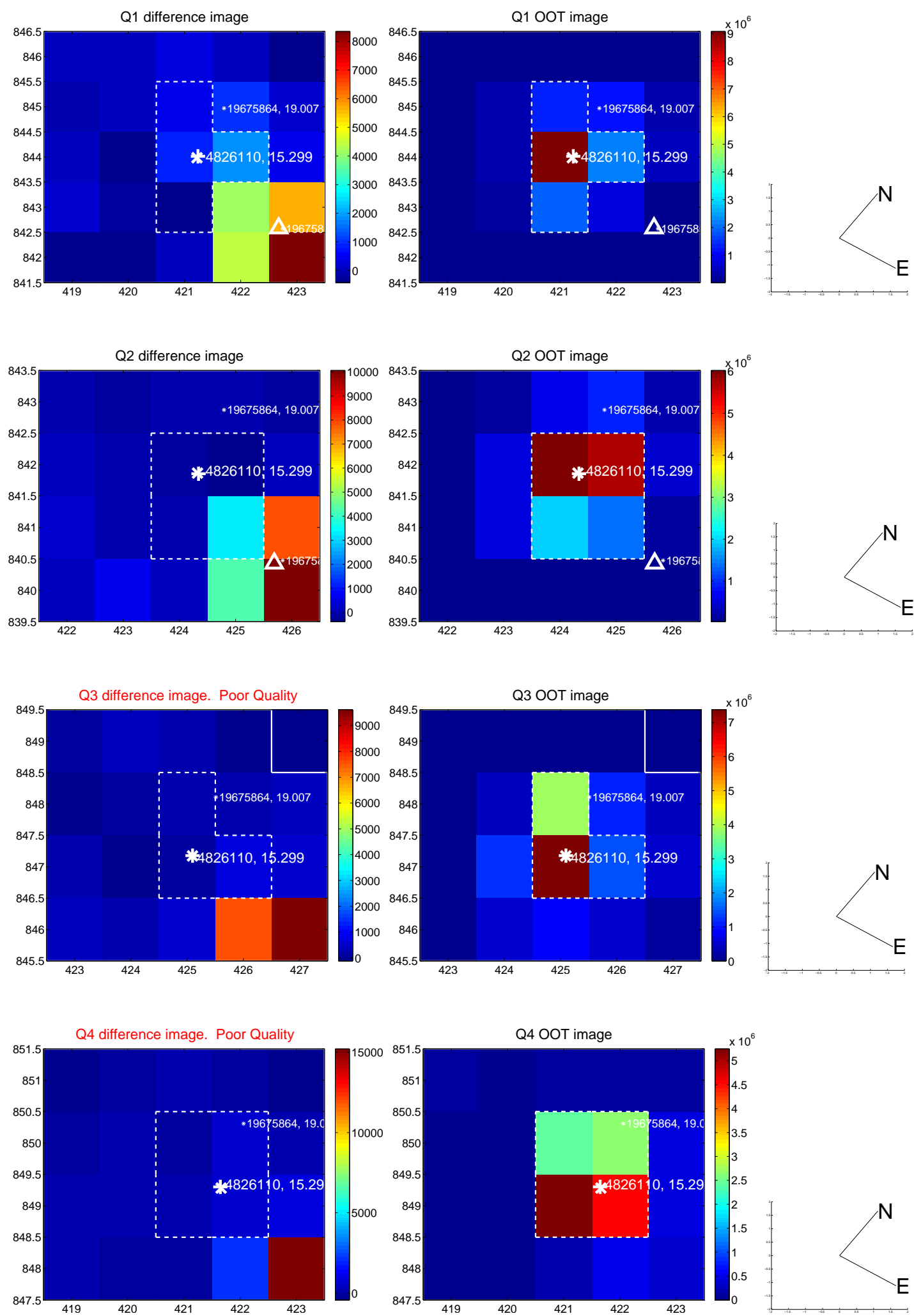
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	8.012 ± 0.100	80.38	7.836 ± 0.101	-1.672 ± 0.070
PRF-fit source offset from KIC position	8.017 ± 0.082	97.85	7.845 ± 0.082	-1.654 ± 0.081
photometric centroid source offset	37.17 ± 1.78	20.84	33.48 ± 1.79	-16.14 ± 1.74

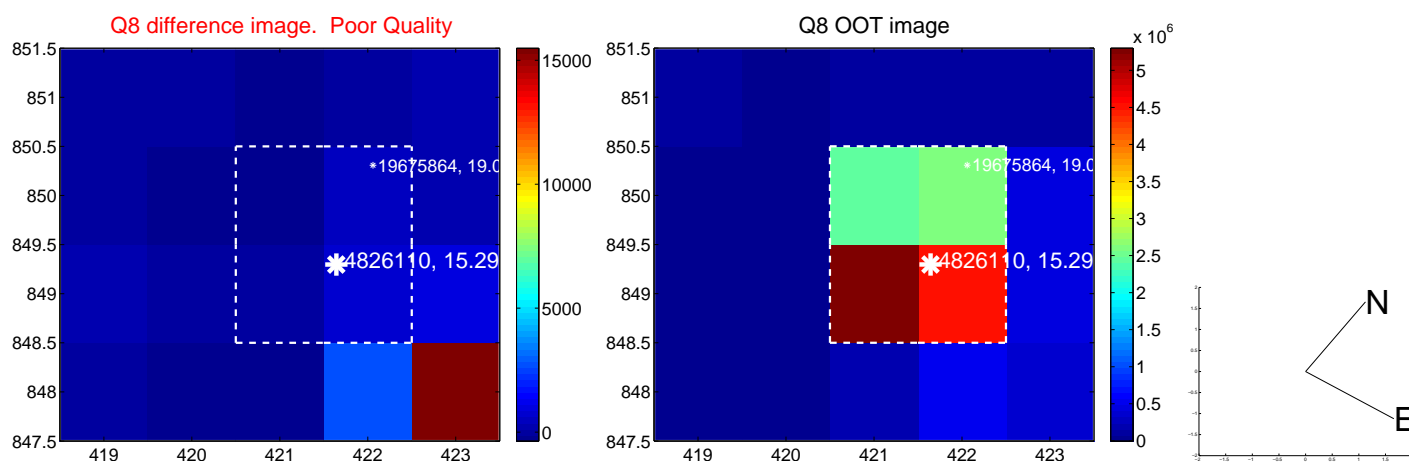
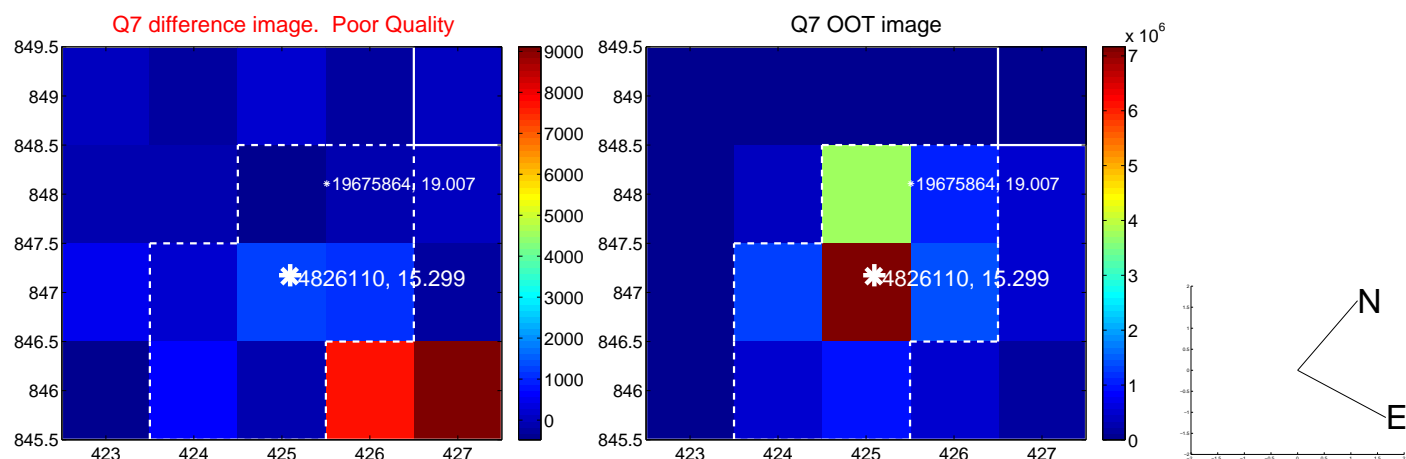
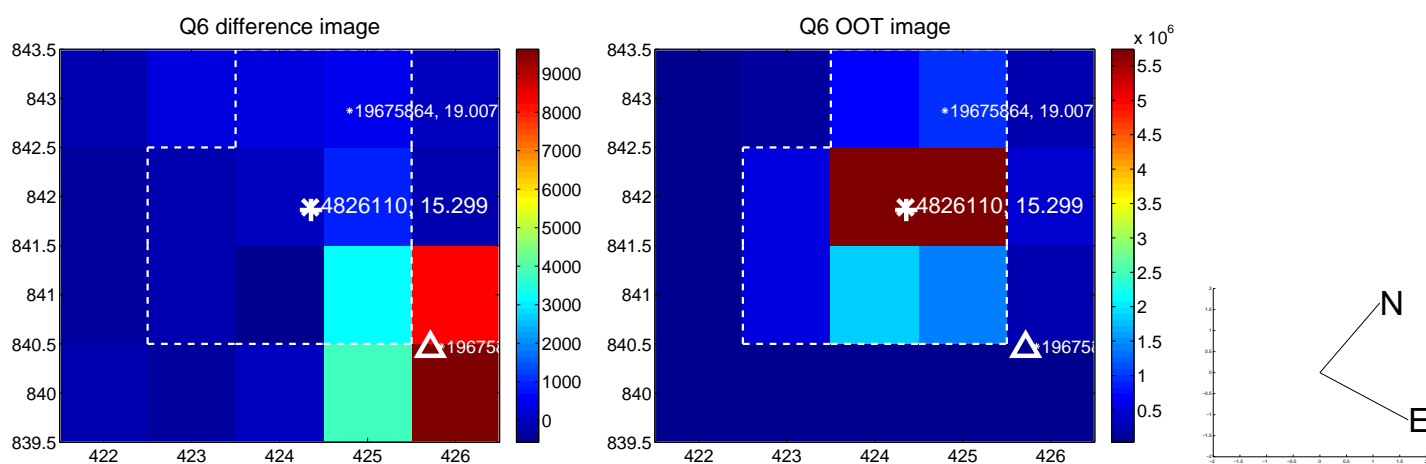
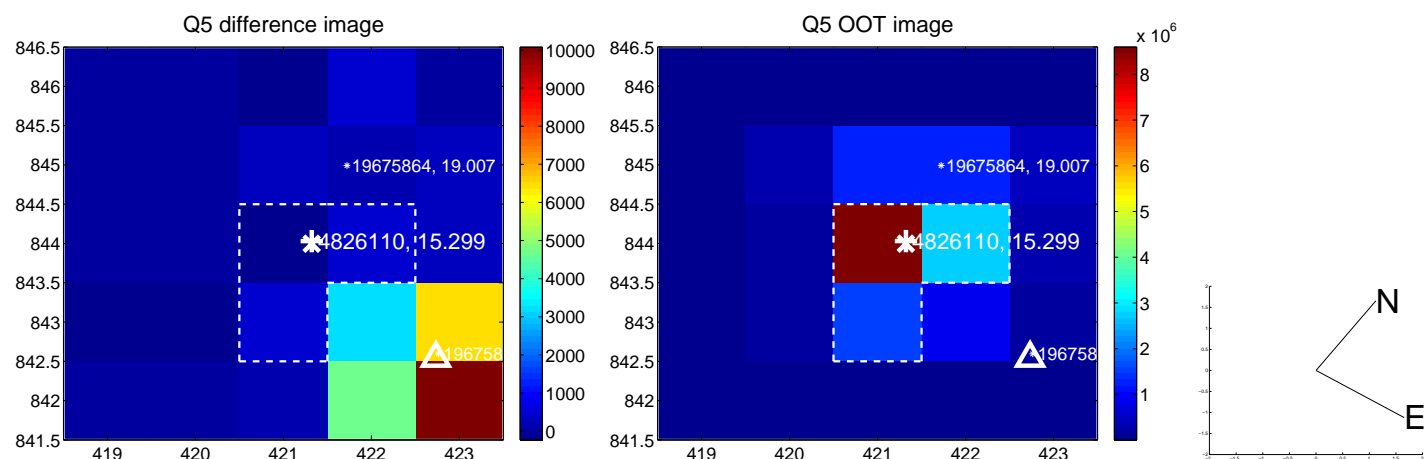


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

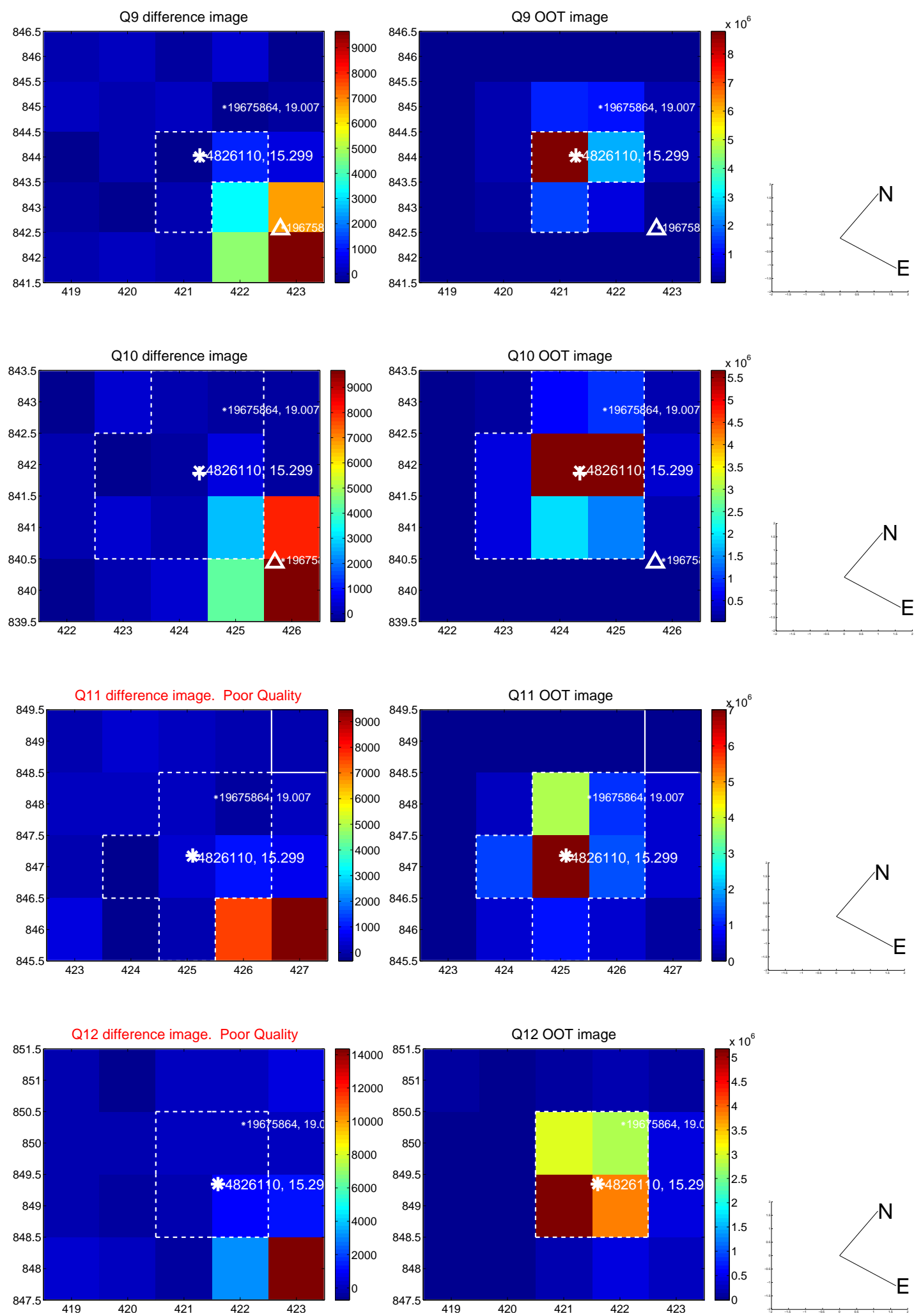
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



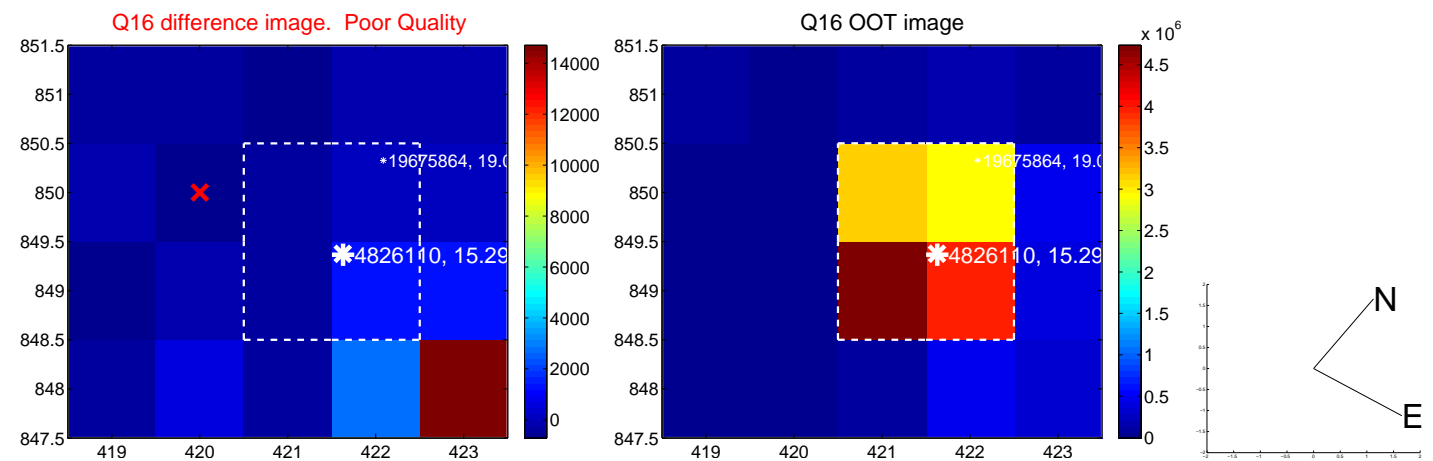
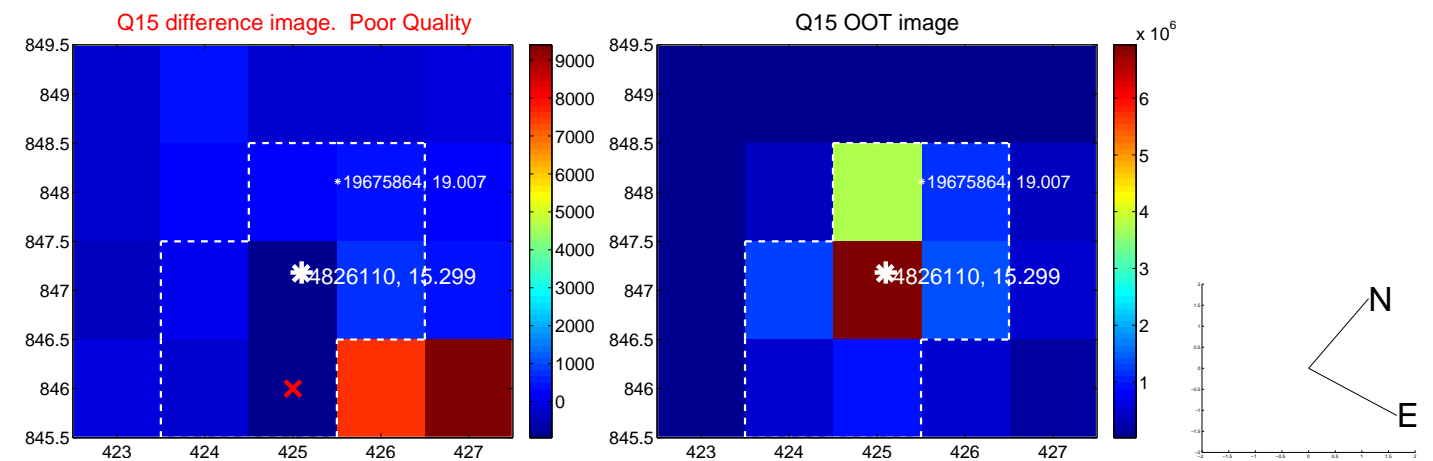
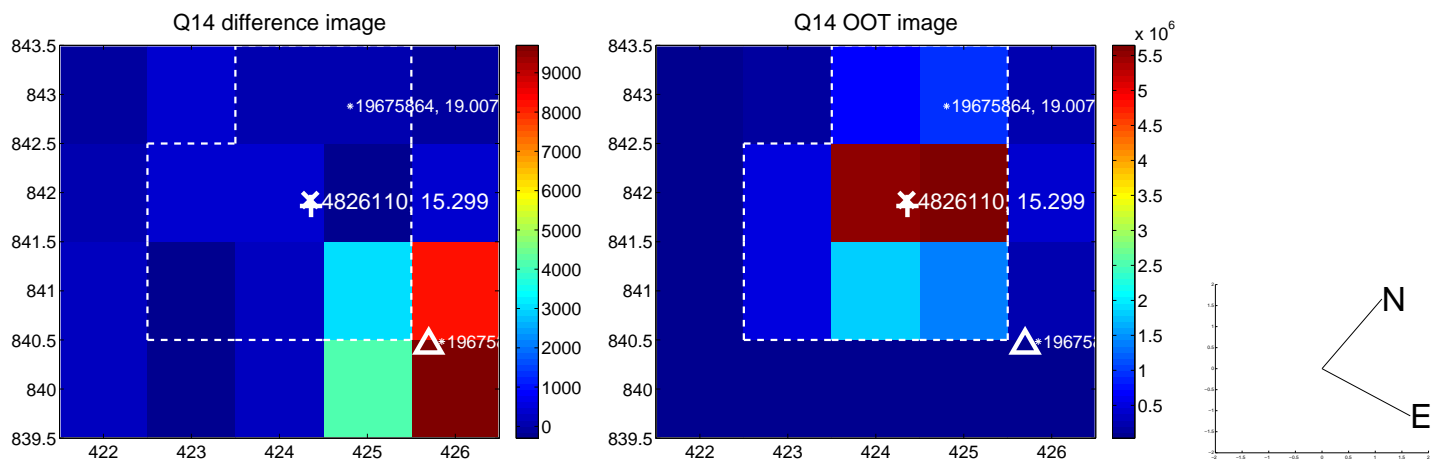
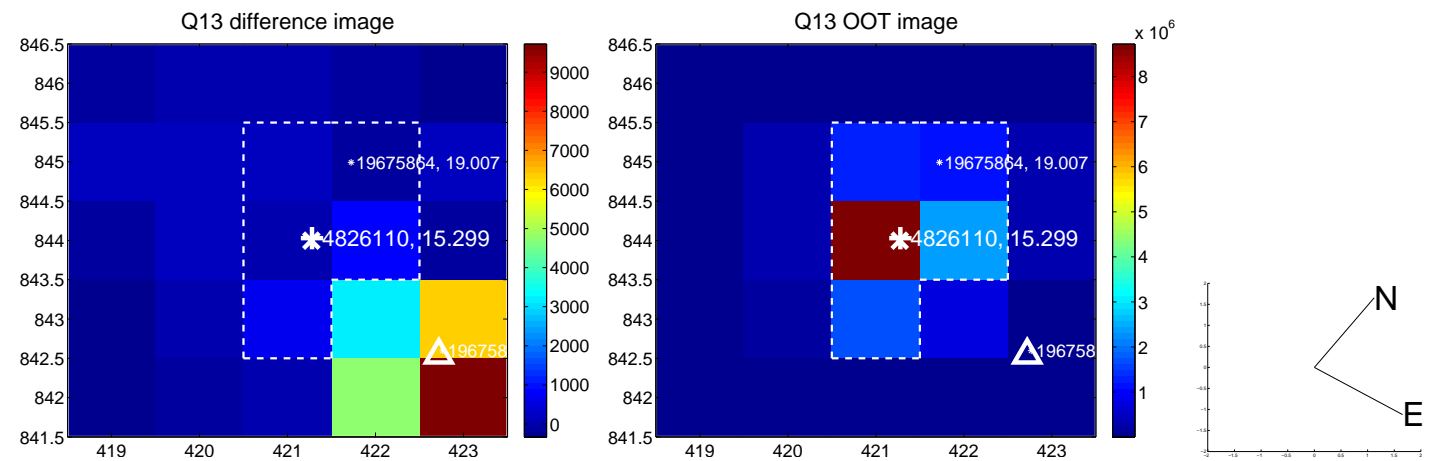
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



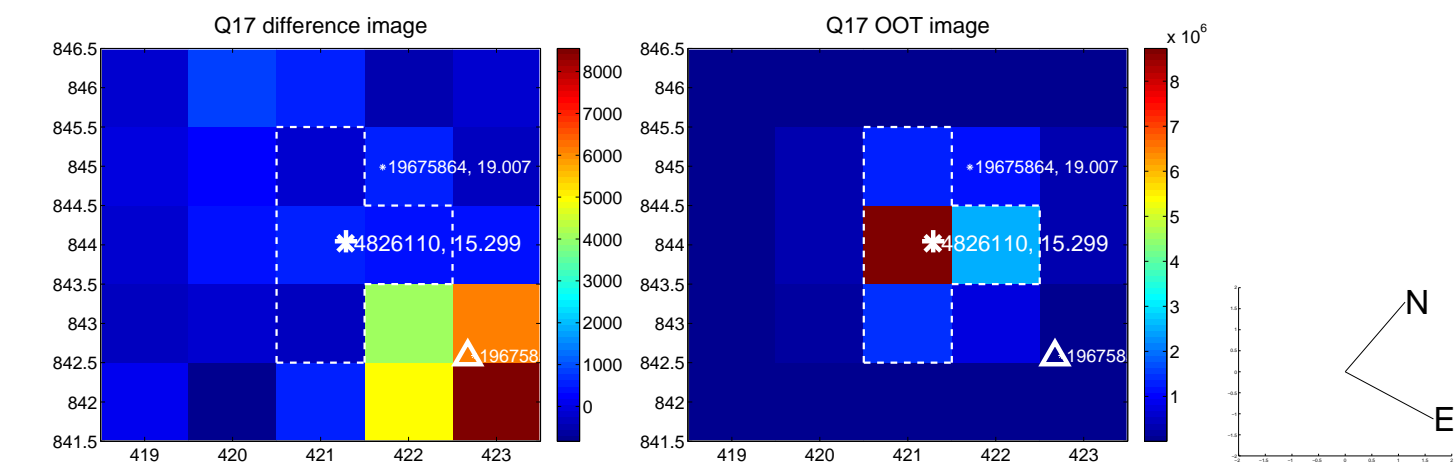
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



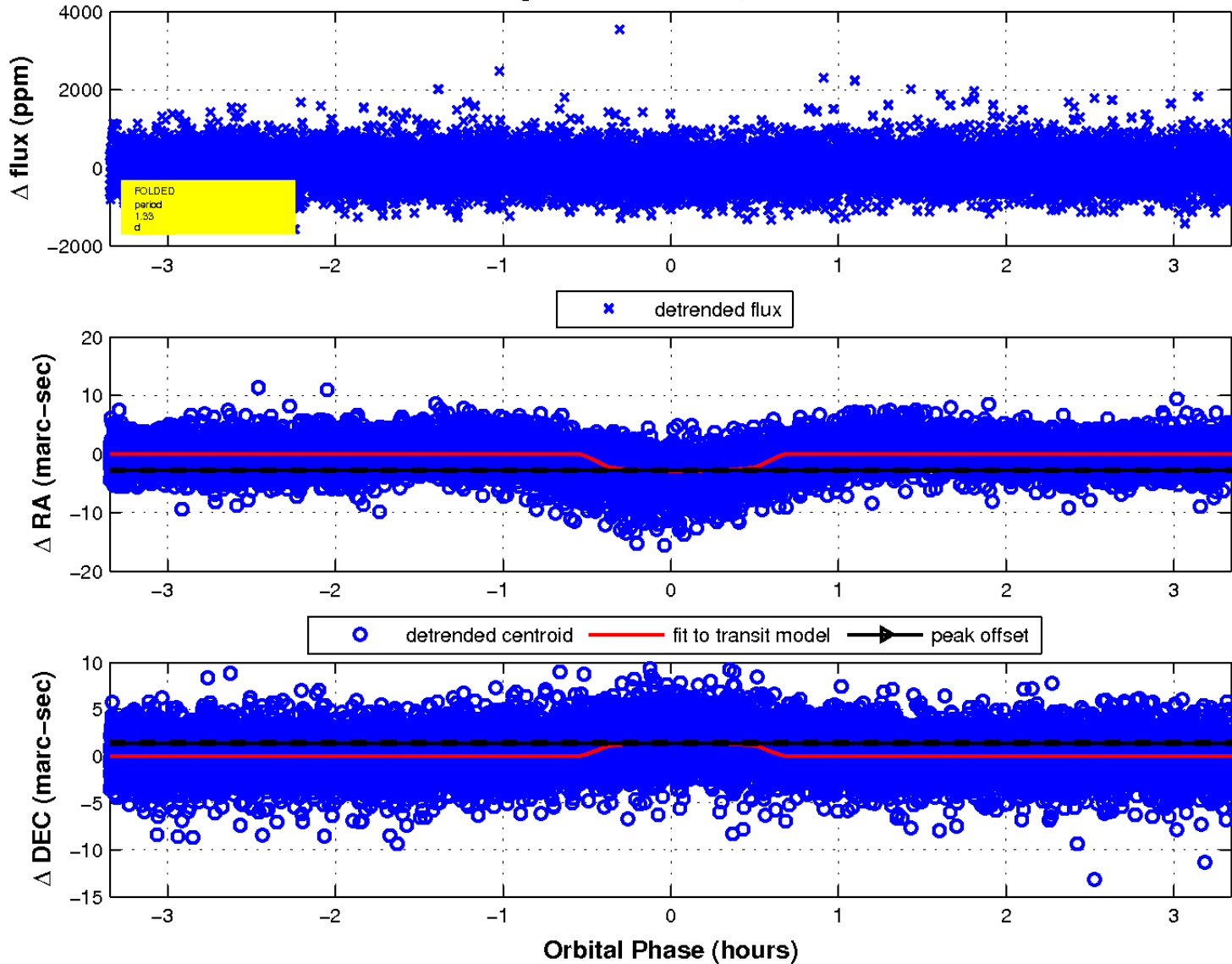
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

