

KIC 012833701

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})
012833701-01	OBS	No	6.046650	132.060399	88.9	40.749	7.4	8.6	0.68	5280	0.64	93.75

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012833701-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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

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

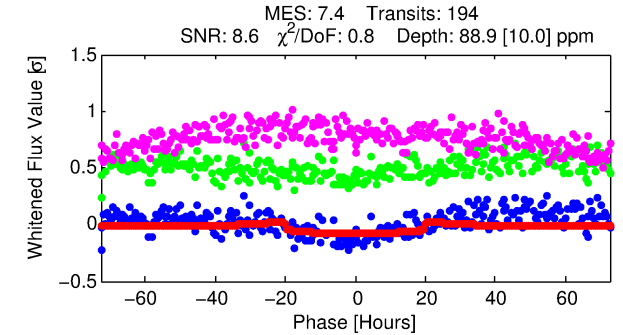
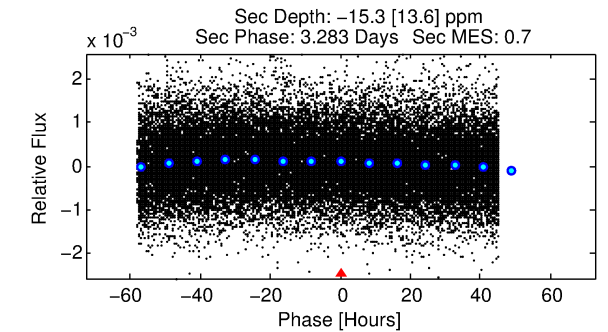
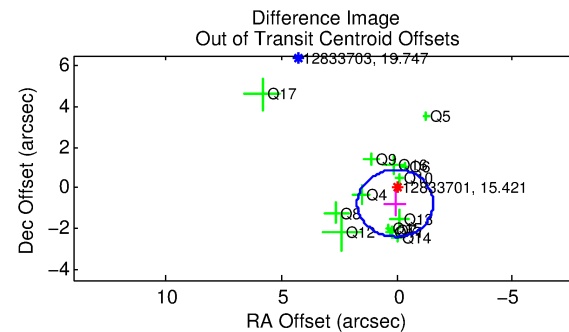
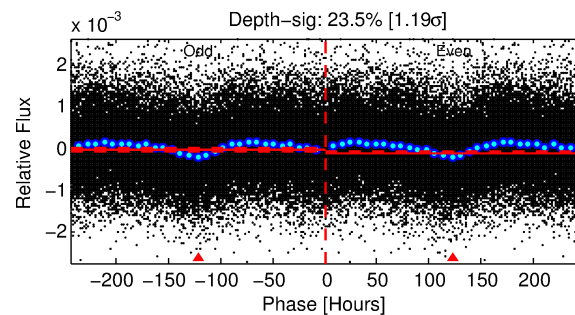
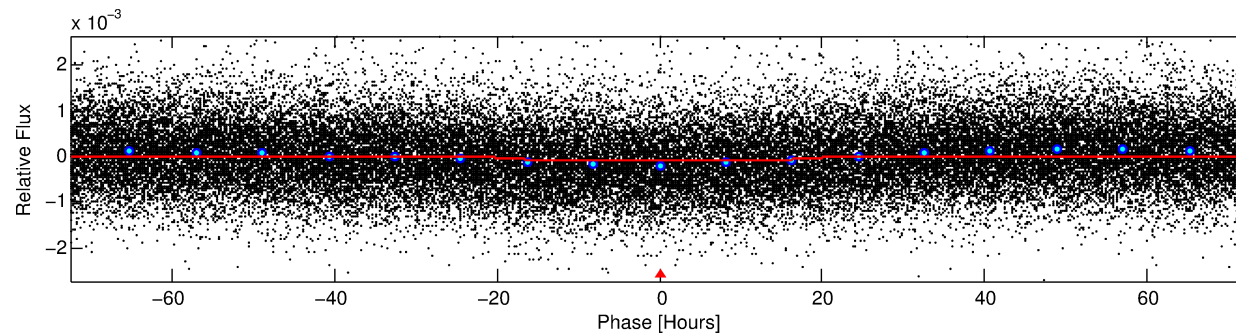
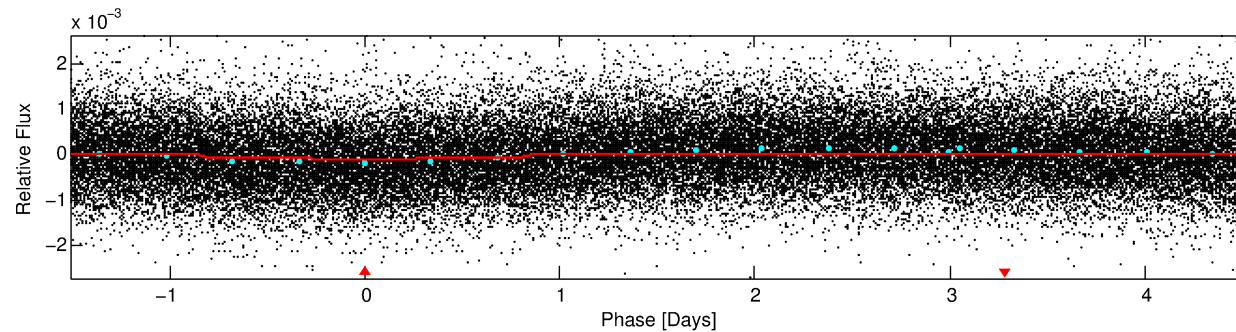
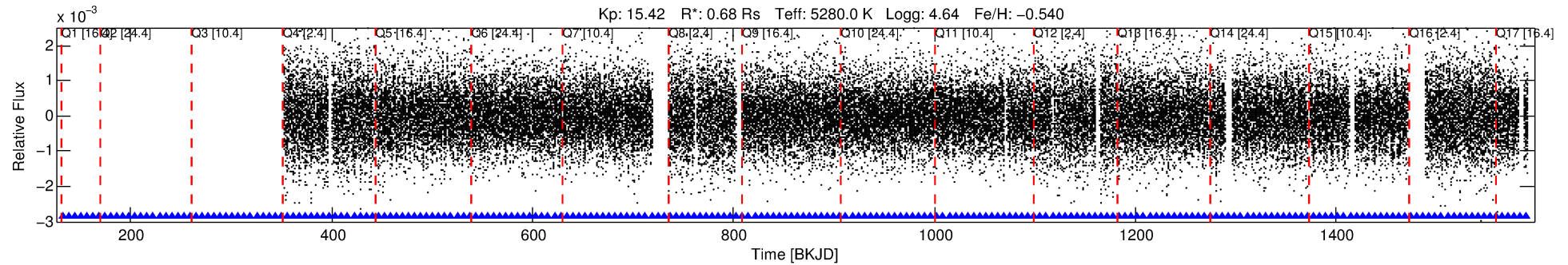
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012833701-01

No Significant Match Found

DV One-Page Summary

KIC: 12833701 Candidate: 1 of 1 Period: 6.047 d



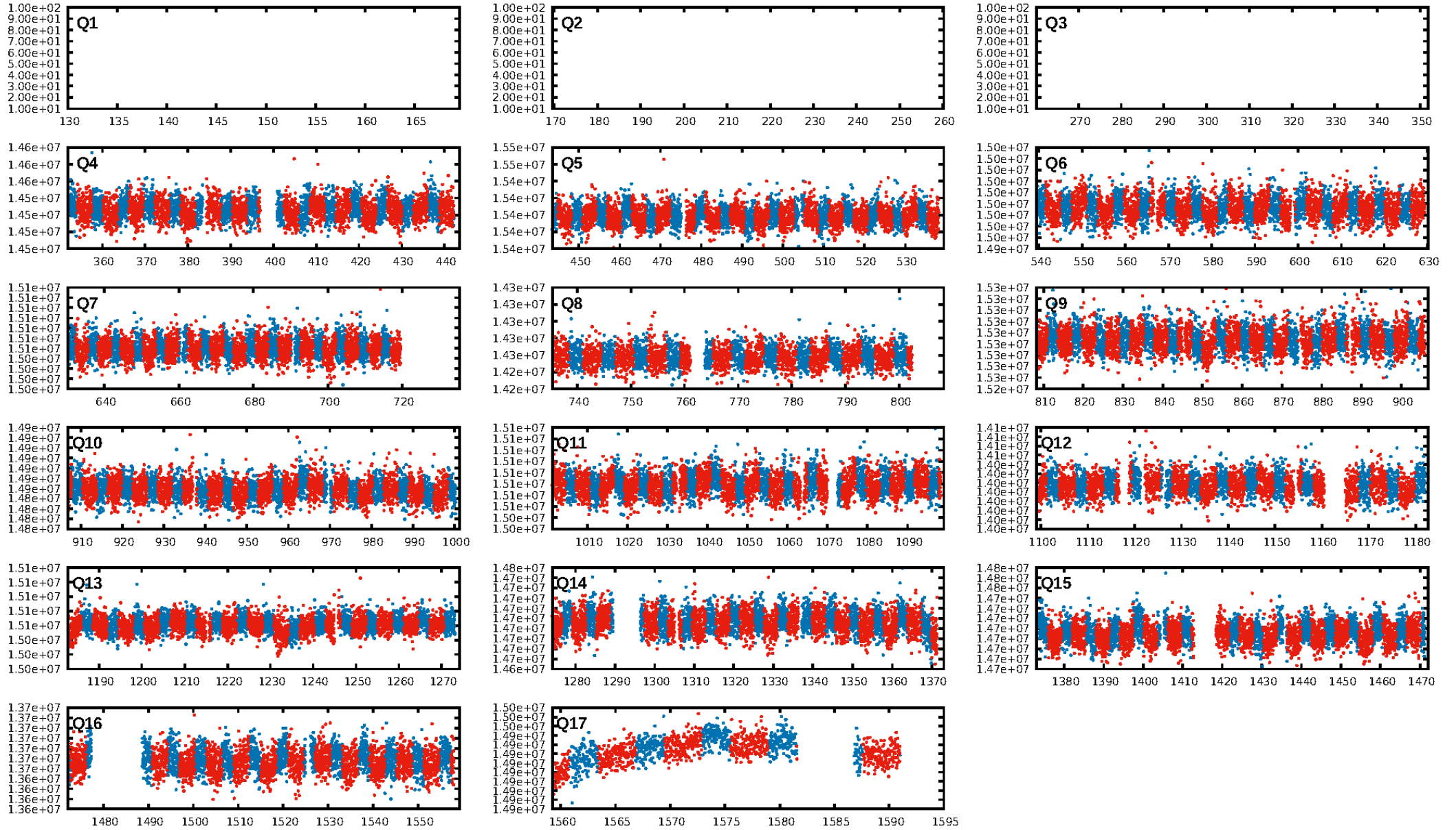
DV Fit Results:

Period = 6.04665 [0.00028] d
Epoch = 132.0604 [0.0382] BKJD
Rp/R* = 0.0086 [0.0066]
a/R* = 1.28 [1.60]
b = 0.30 [9.70]
Seff = 93.75 [19.96]
Teff = 793 [42] K
Rp = 0.64 [0.50] Re
a = 0.0585 [0.0068] AU
Ag = N/A
Teffp = N/A

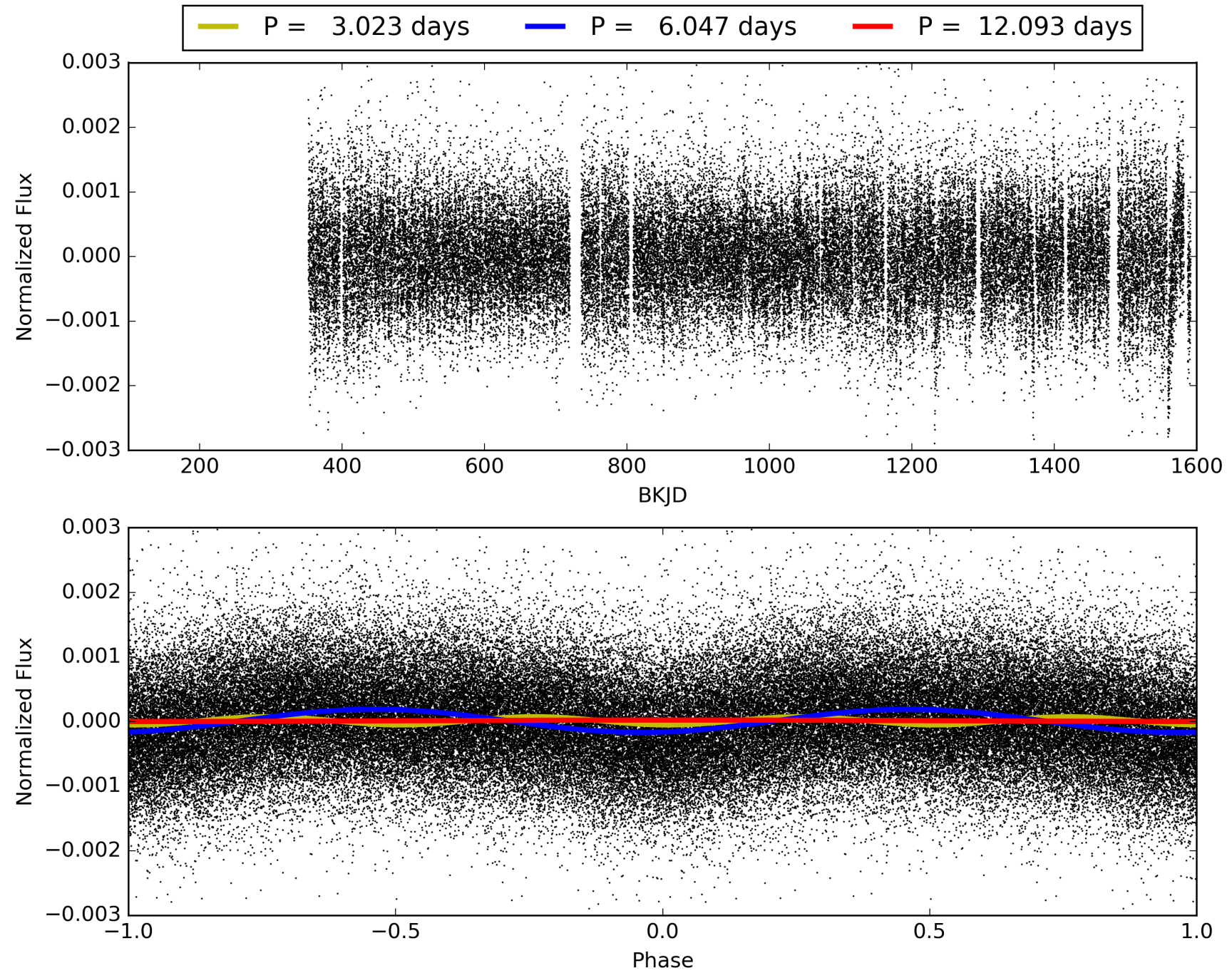
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.43e-15
RollingBand-fgt: 1.00 [189/189]
GhostDiagnostic-chr: 3.924
Centroid-sig: 0.0%
Centroid-so: 2.478 arcsec [3.36 σ]
OotOffset-rm: 0.753 arcsec [1.37 σ]
KicOffset-rm: 0.521 arcsec [0.90 σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 0.79 [11/14]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 012833701-01, PDC Light Curves

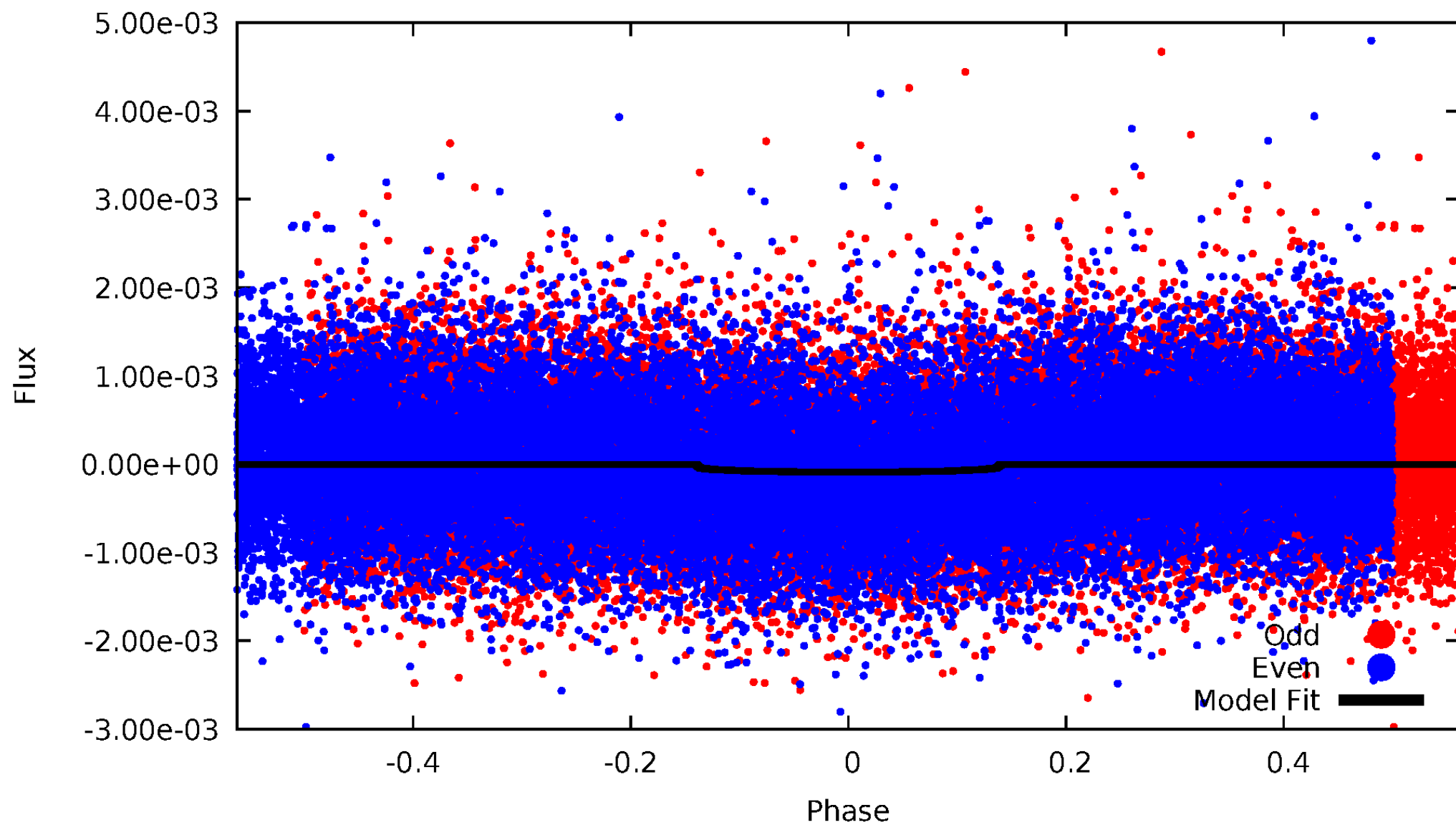


TCE 012833701-01



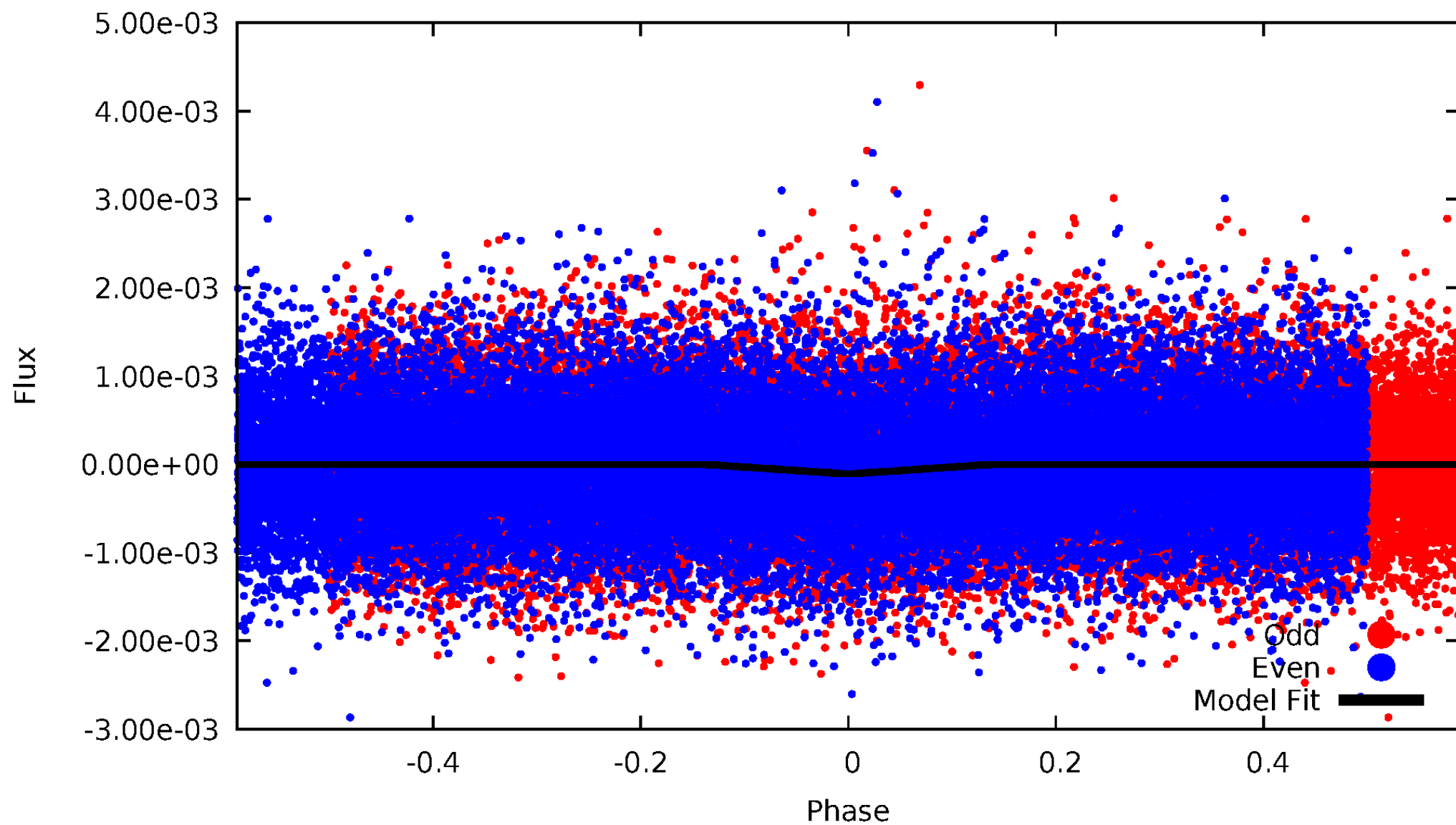
DV Odd/Even

TCE 012833701-01



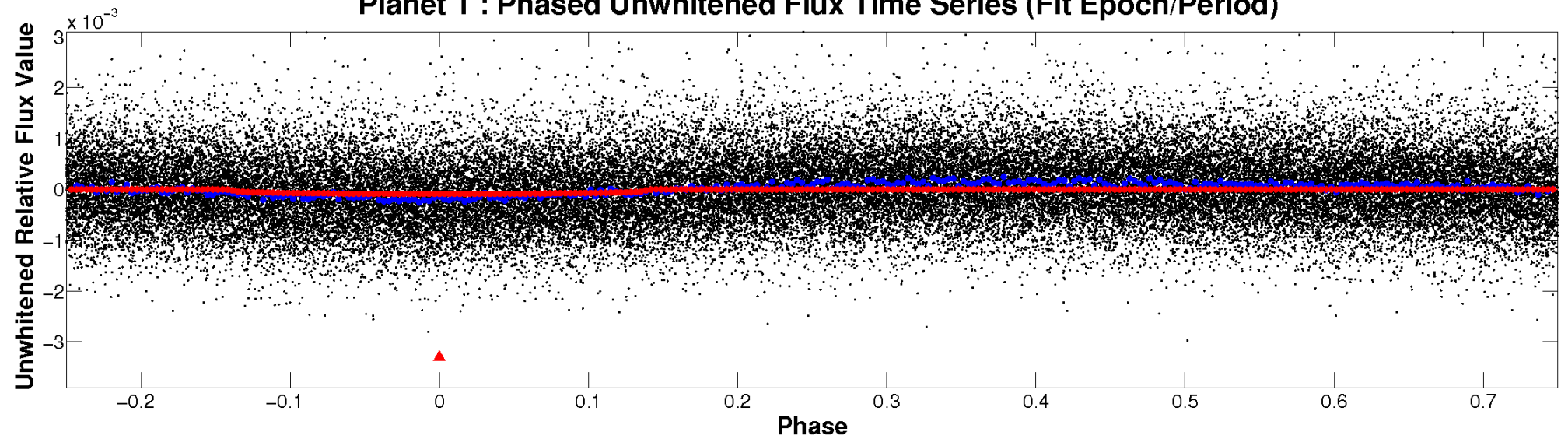
ALT Odd/Even

TCE 012833701-01

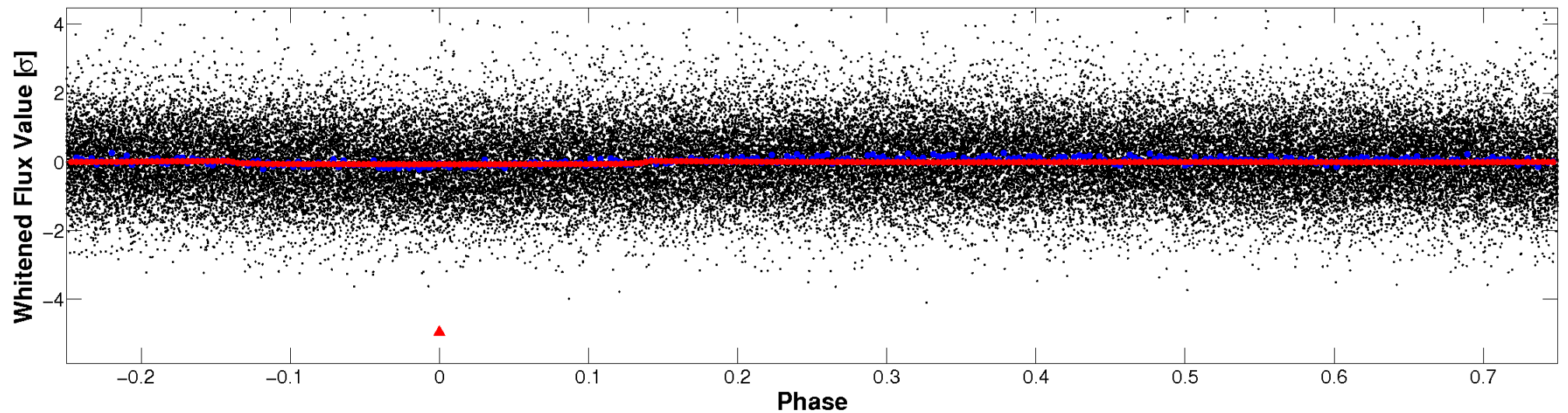


Non-Whitened Vs. Whitened Light Curve

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

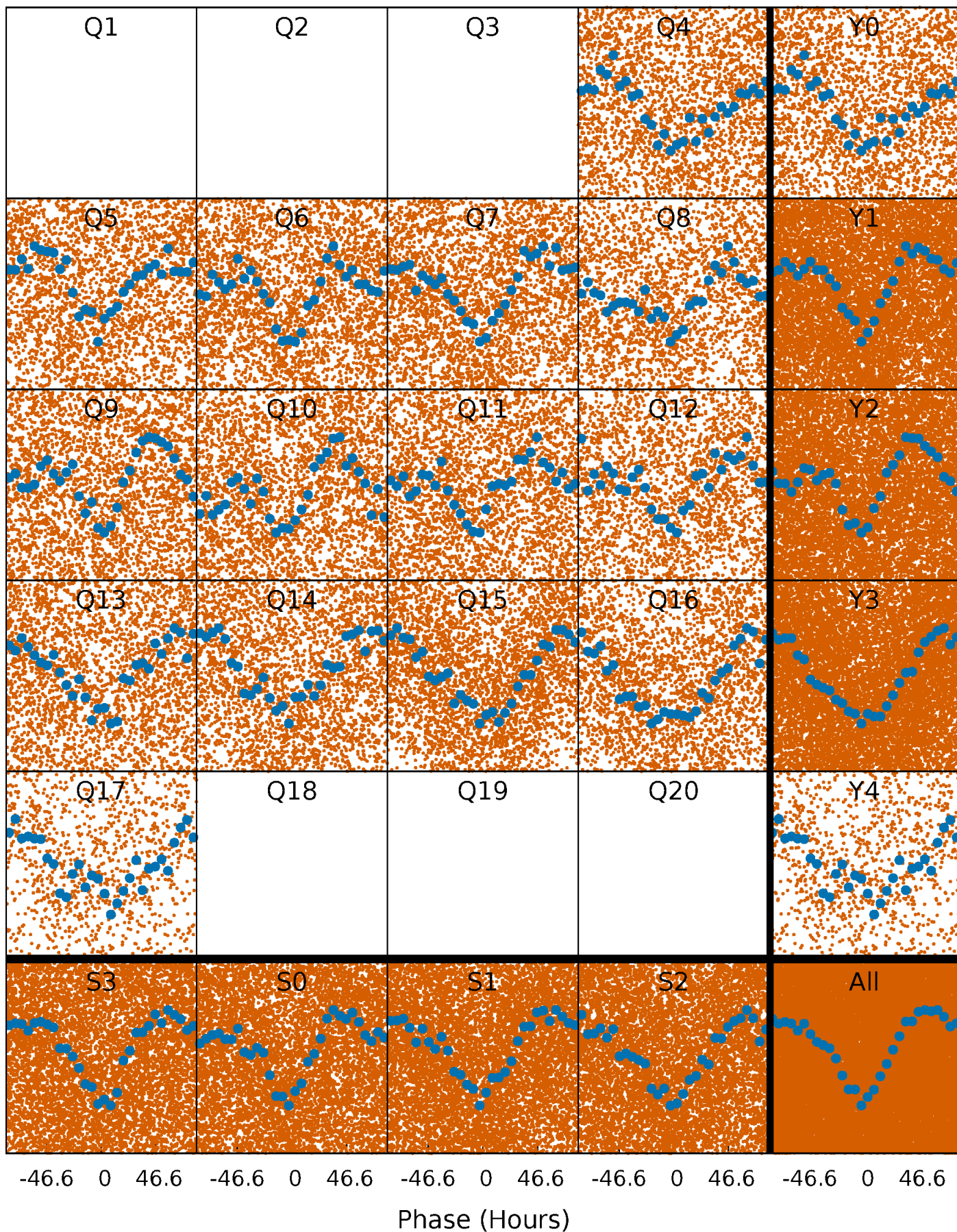


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



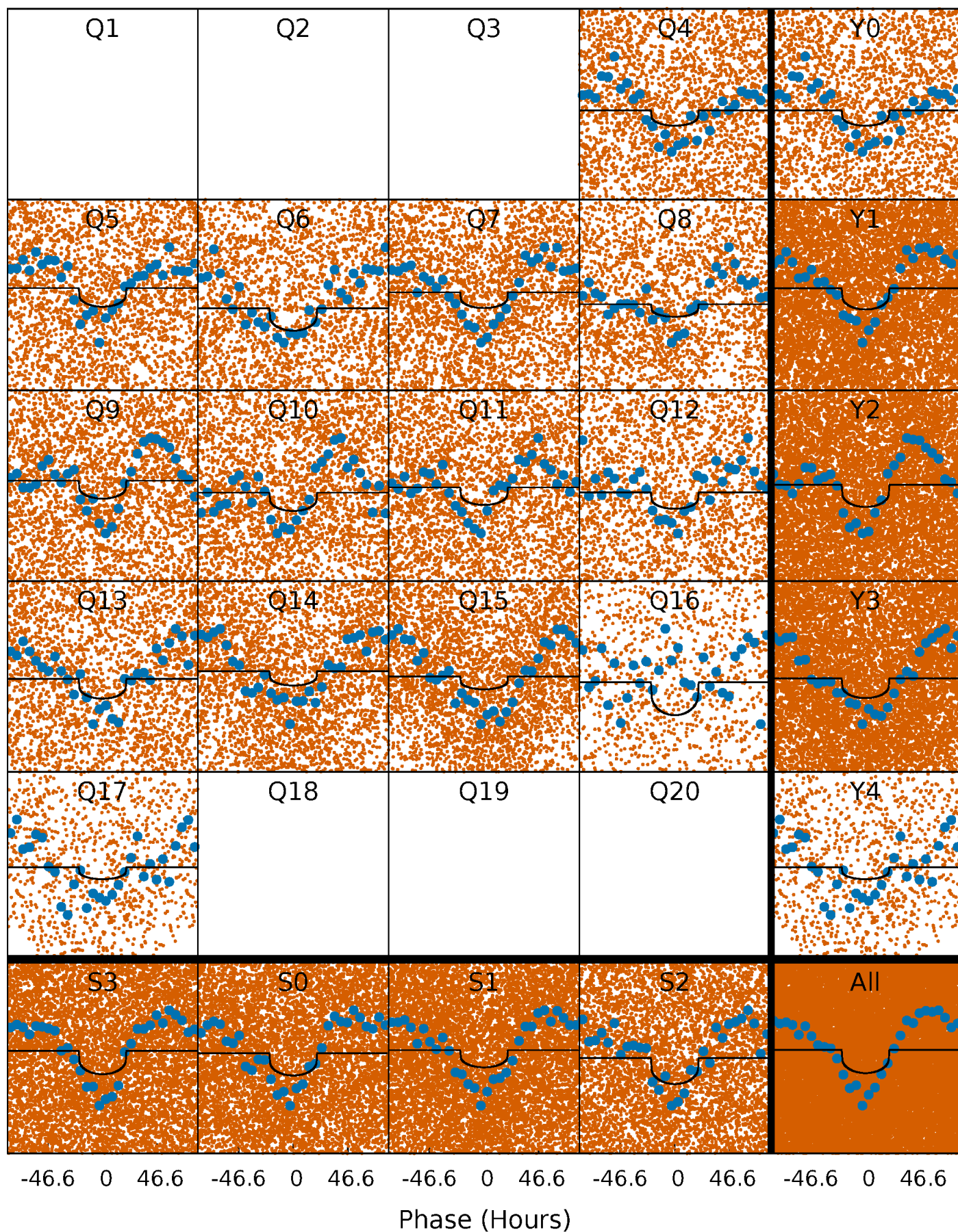
PDC Quarter-Phased Transit Curves

TCE 012833701-01 P= 6.046650 Days $T_0=132.060399$ (BKJD)



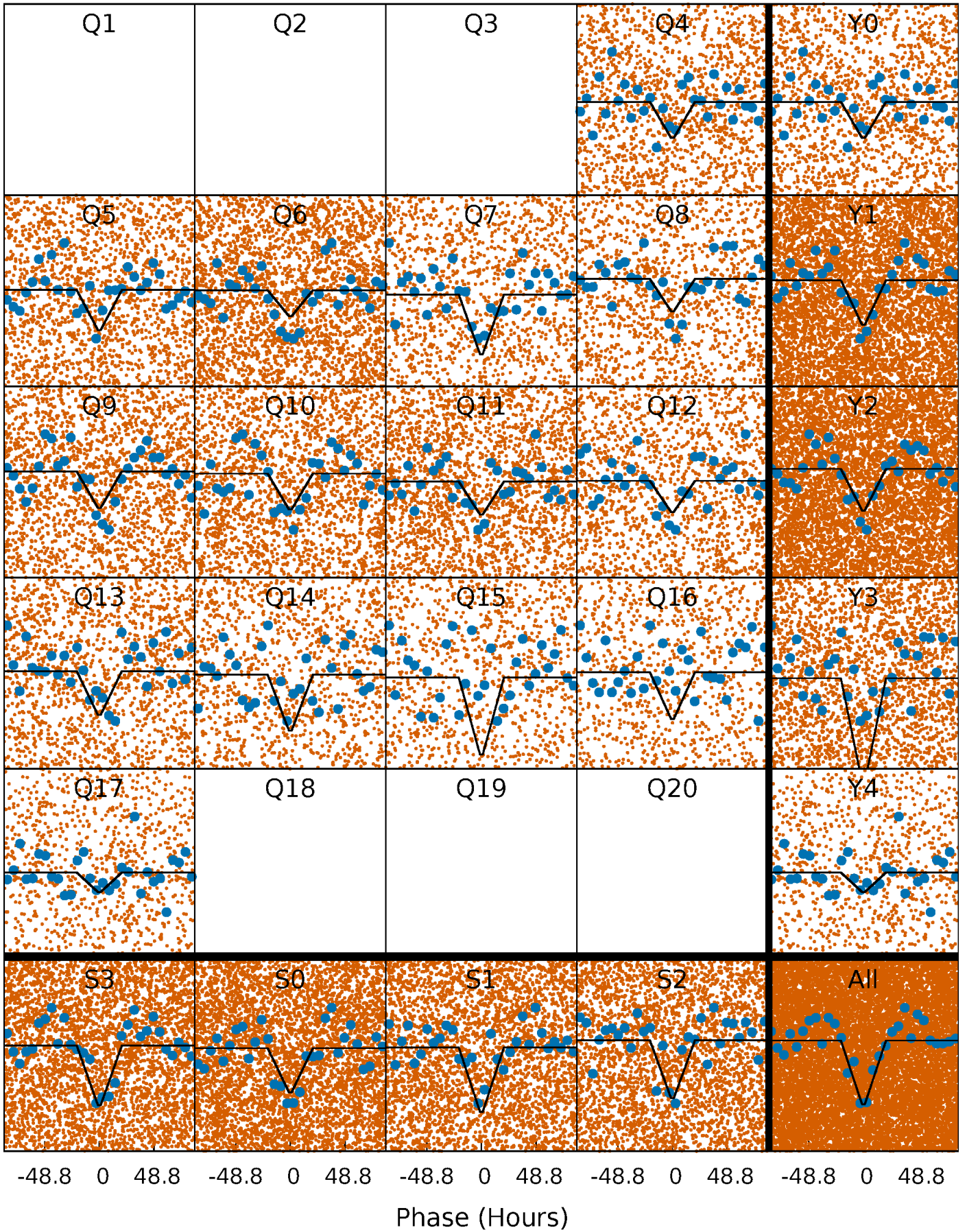
DV Quarter-Phased Transit Curves

TCE 012833701-01 P= 6.046650 Days $T_0=132.060399$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

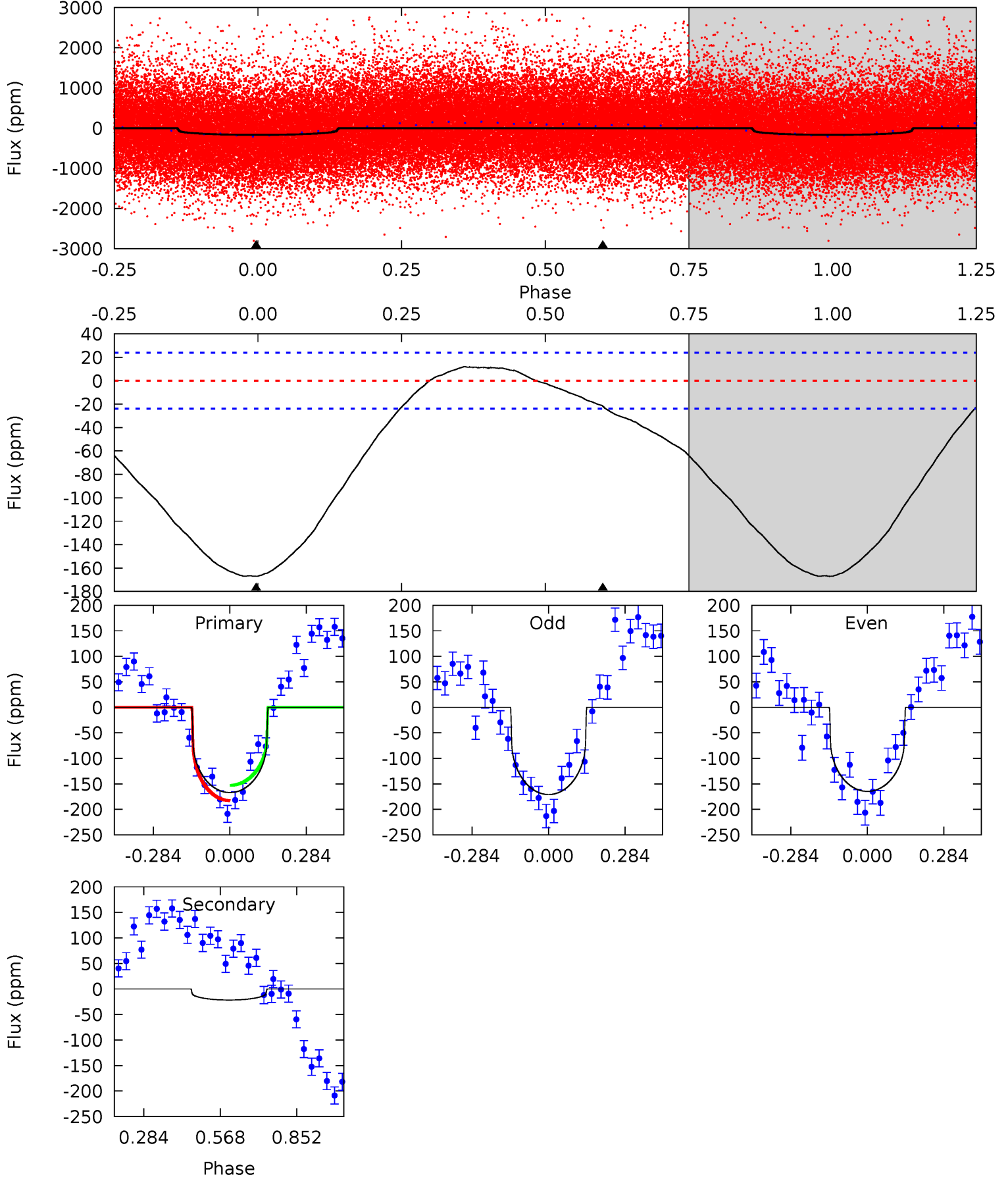
TCE 012833701-01 P= 6.045950 Days $T_0=132.111215$ (BKJD)



DV Model-Shift Uniqueness Test

012833701-01, P = 6.046650 Days, E = 132.060399 Days

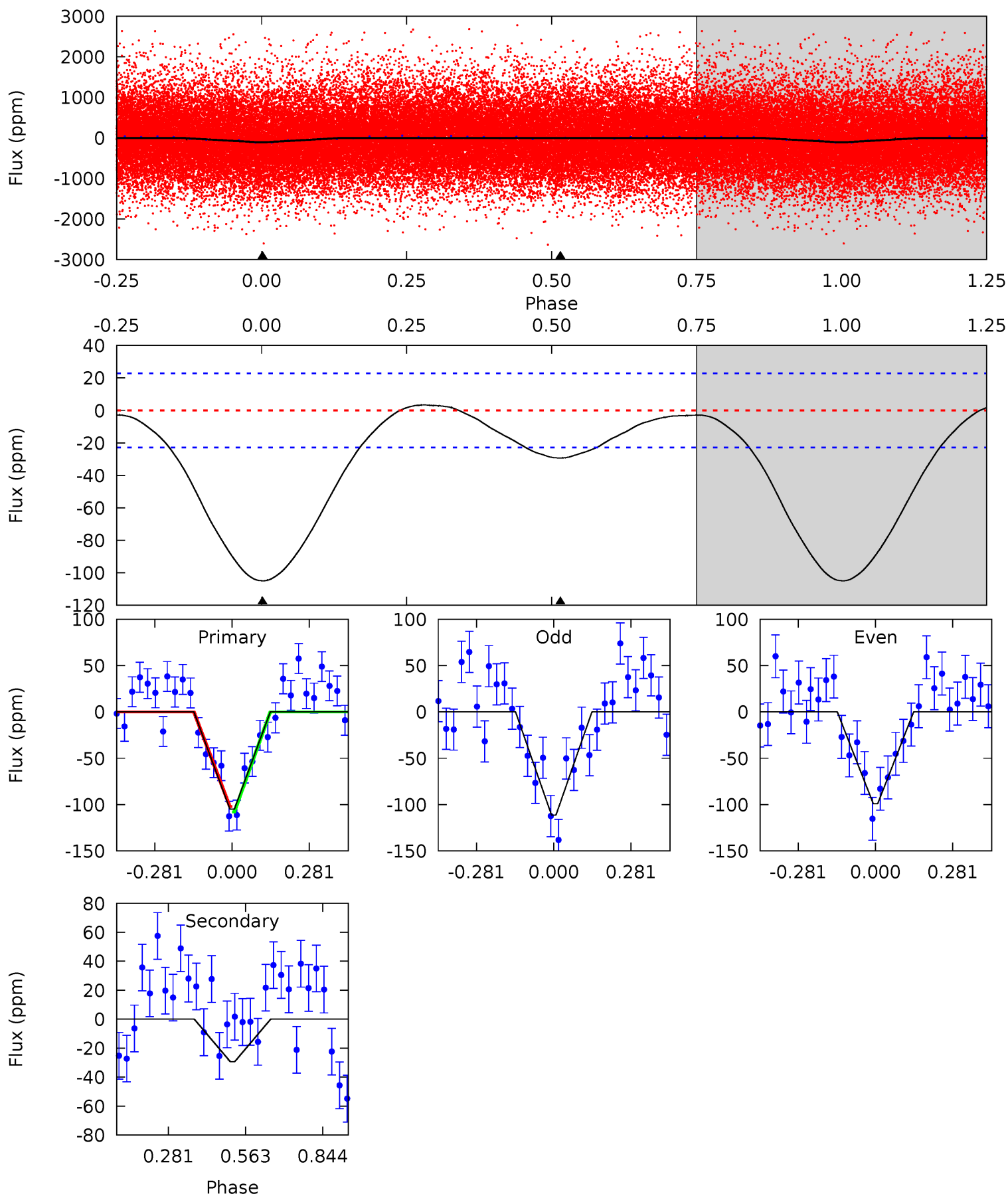
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.4	3.95	0	0	4.34	1.07	1.81	30.4	30.4	3.95	3.95	0.56	0.98	0.07	2.75



Alt Model-Shift Uniqueness Test

012833701-01, P = 6.045950 Days, E = 132.111215 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.9	5.57	0	0	4.34	1.08	0.54	19.9	19.9	5.57	5.57	1.17	1.12	0.03	0.56



Stellar Parameters For KIC 012833701

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5280^{+184}_{-184}	$4.638^{+0.036}_{-0.084}$	$-0.540^{+0.350}_{-0.300}$	$0.679^{+0.098}_{-0.053}$	$0.731^{+0.078}_{-0.064}$	$3.281^{+0.607}_{-0.888}$
	+3%/-3%	+1%/-2%	+65%/-56%	+14%/-8%	+11%/-9%	+19%/-27%
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 012833701-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-22 ± 6	$0.70^{+0.50}_{-0.39}$	1123^{+48}_{-49}	3993^{+1589}_{-670}	80^{+328}_{-55}
Alt.	-29 ± 5	$0.83^{+0.50}_{-0.47}$	1120^{+48}_{-44}	3987^{+1505}_{-621}	76^{+319}_{-46}

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 $A_{obs} \gg 1.0$

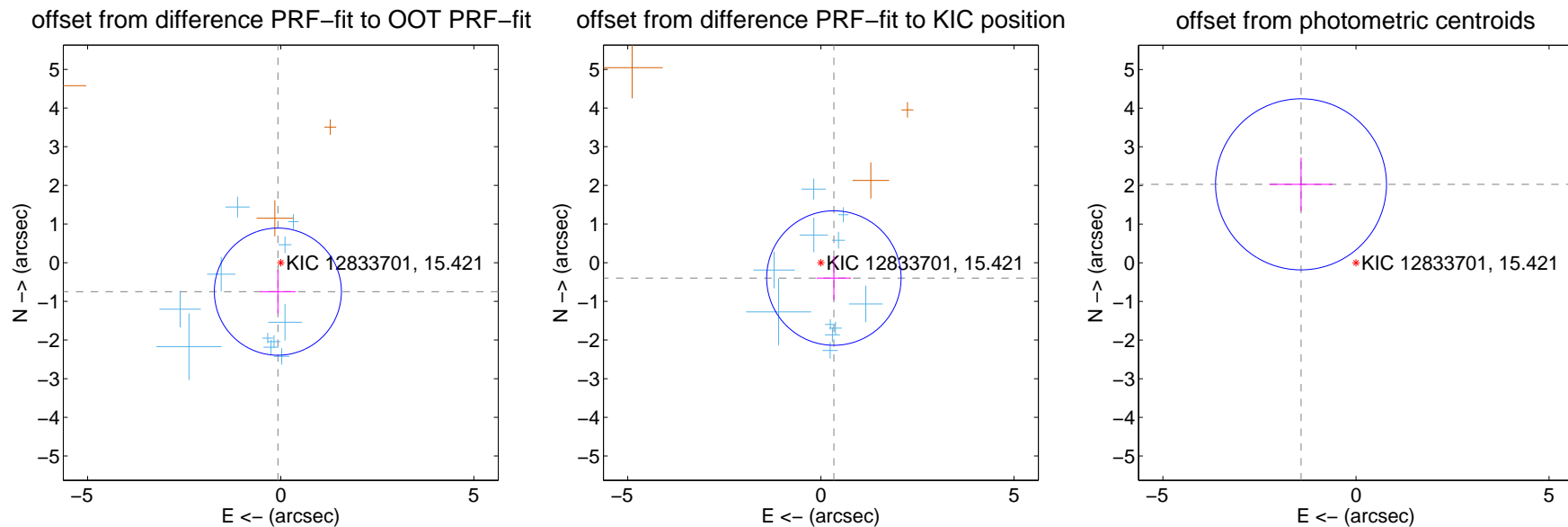
DV Centroid Data

Supplemental centroid analysis for 012833701-01. Kepler magnitude: 15.42. Transit SNR 8.61

There are 11 quarters with good PRF difference image offsets

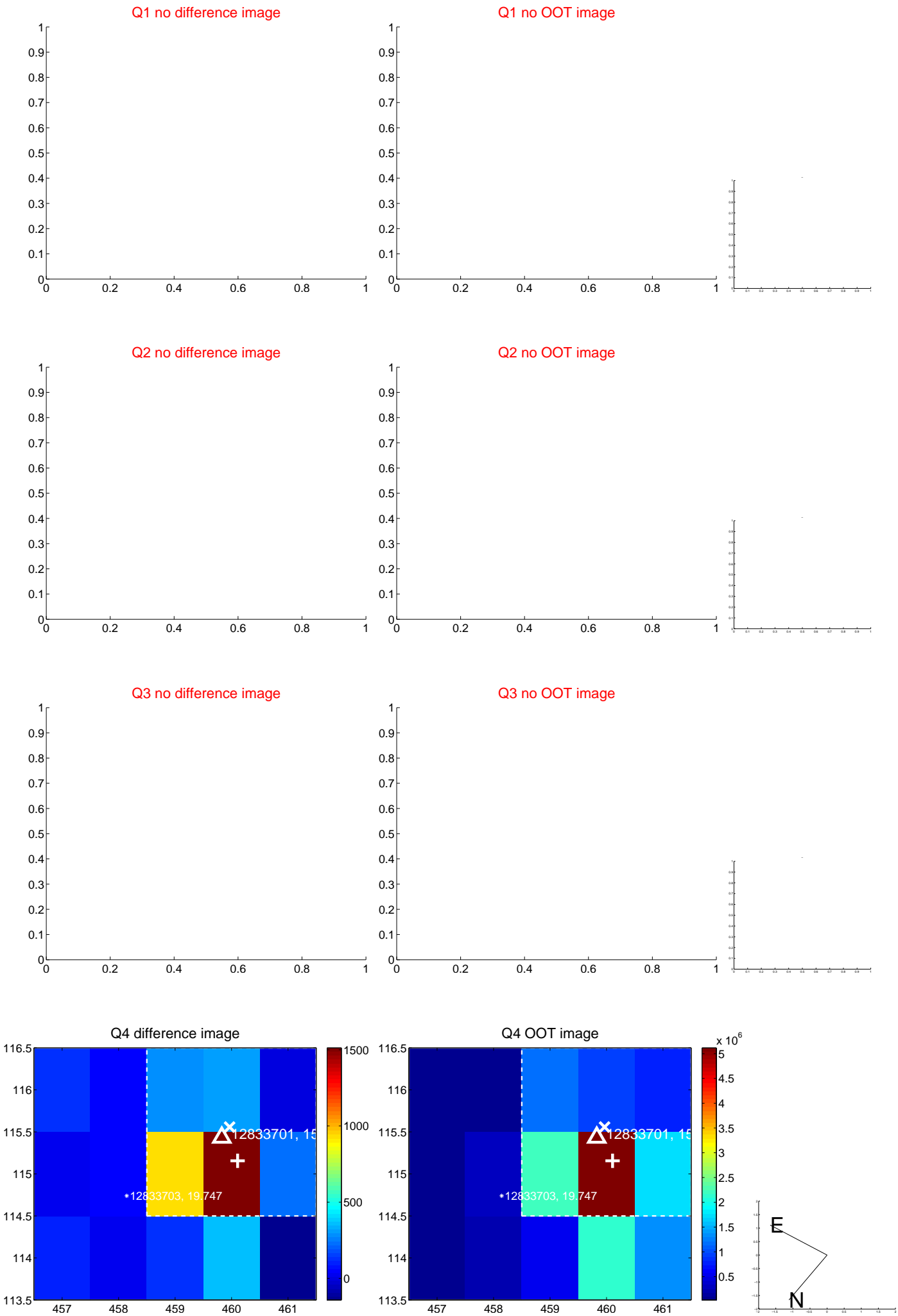
The direct PRF centroid is offset from the target star catalog position by about 1.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.753 ± 0.548	1.37	0.074 ± 0.466	-0.749 ± 0.562
PRF-fit source offset from KIC position	0.521 ± 0.580	0.90	-0.337 ± 0.443	-0.397 ± 0.564
photometric centroid source offset	2.48 ± 0.74	3.36	1.42 ± 0.82	2.03 ± 0.69

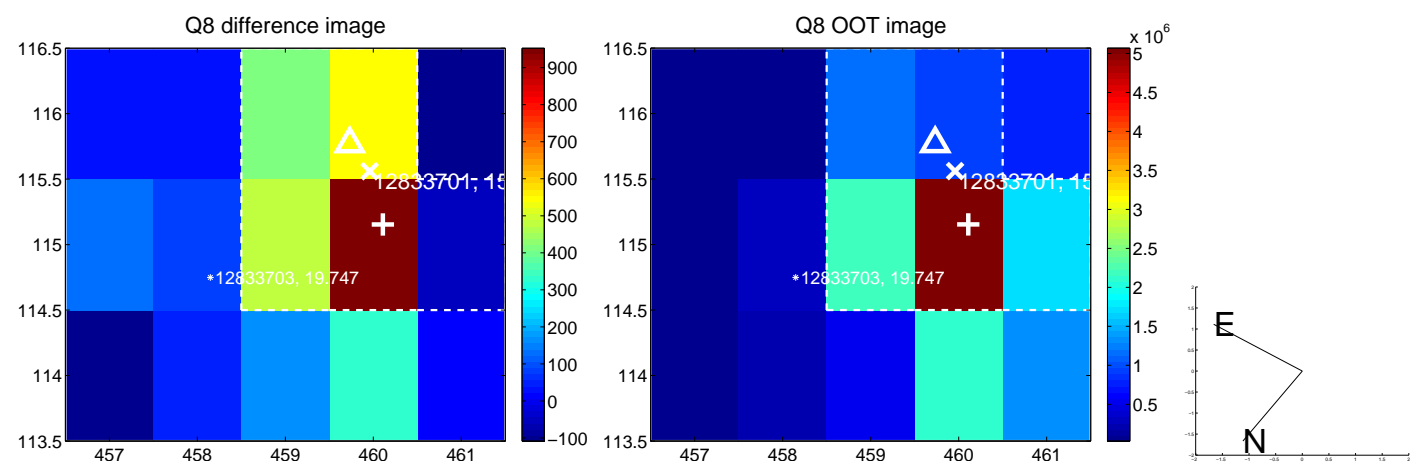
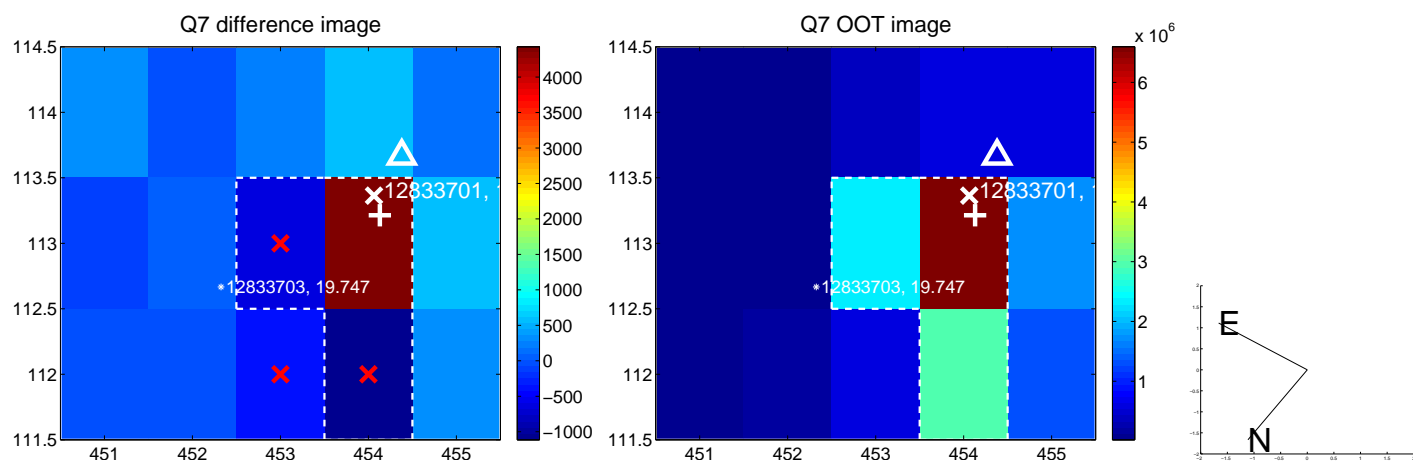
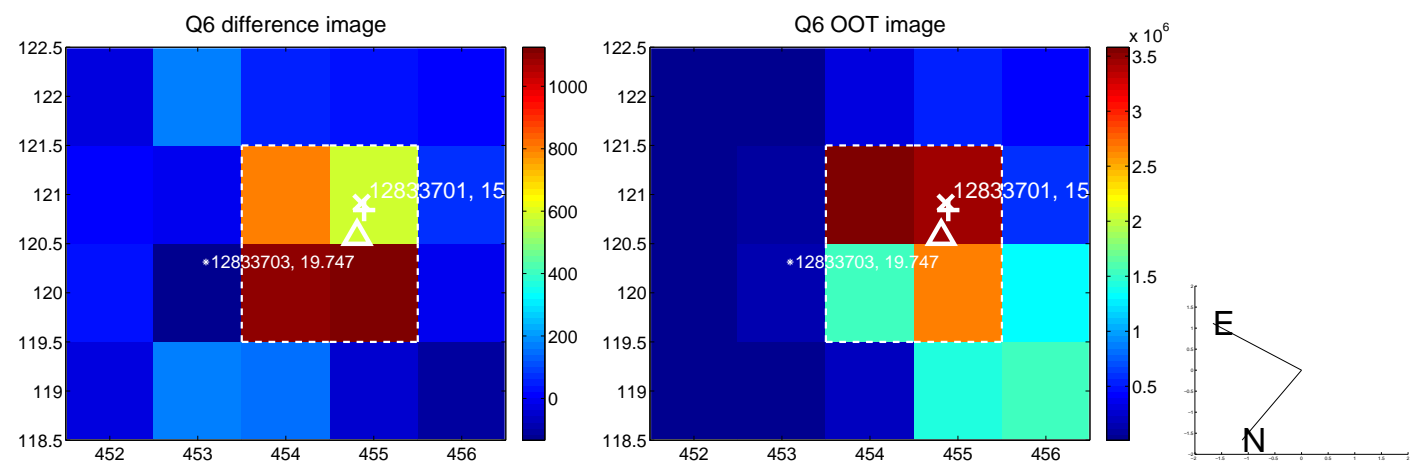
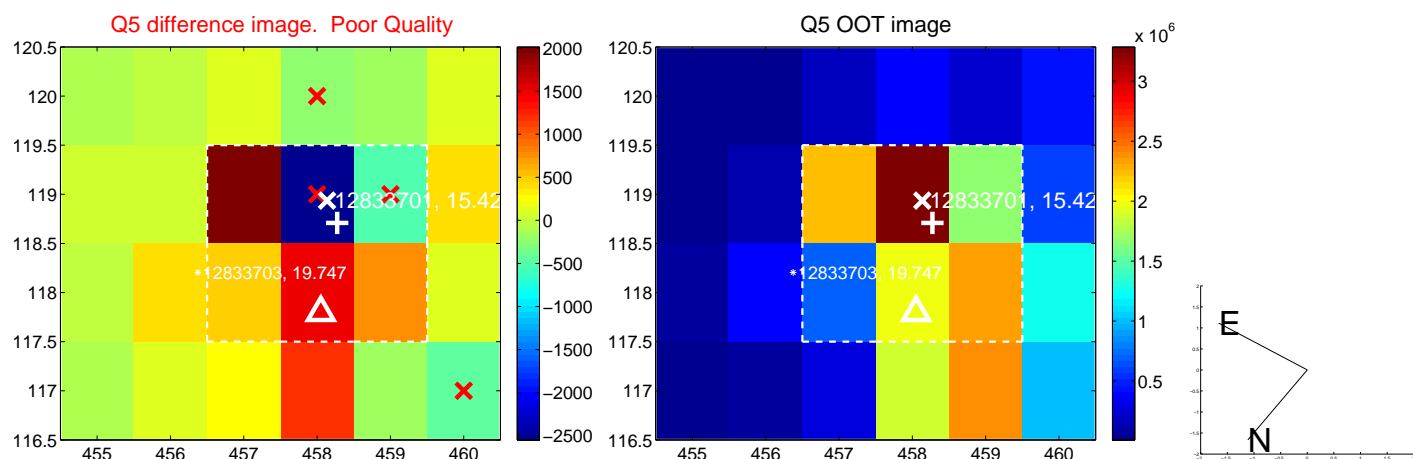


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

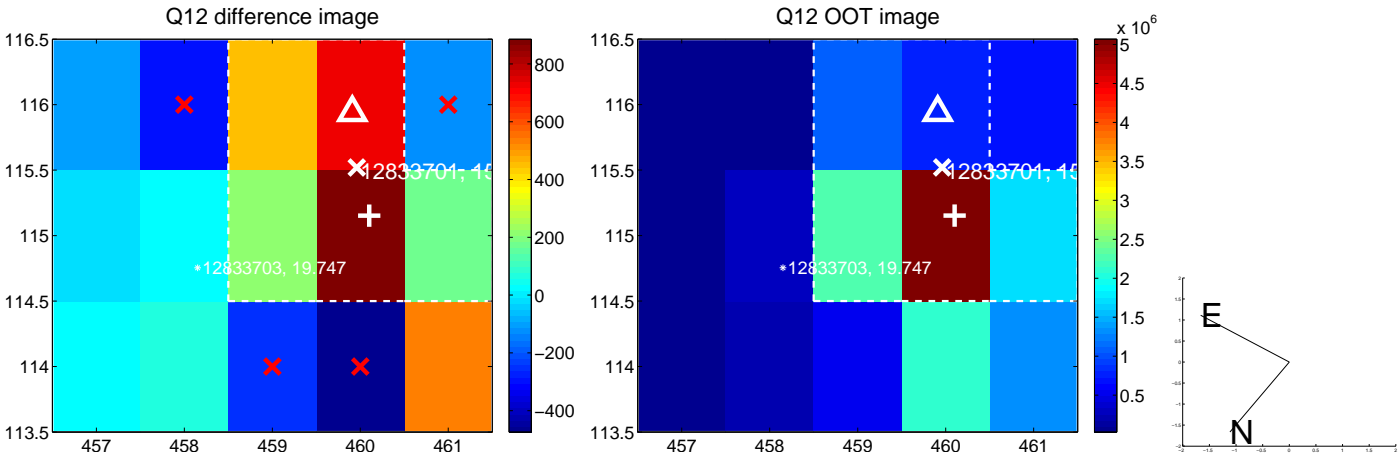
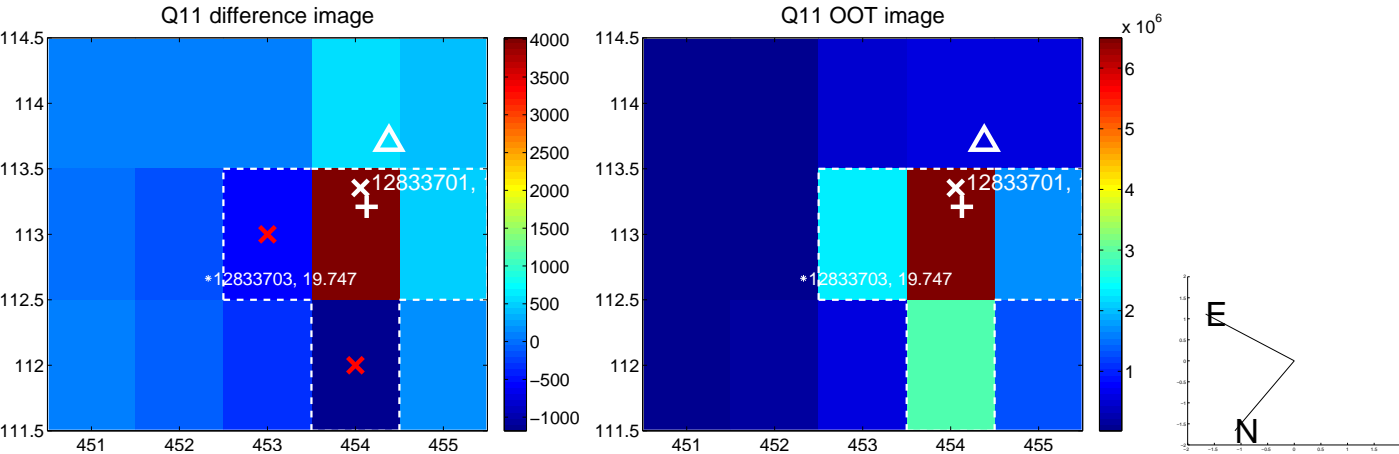
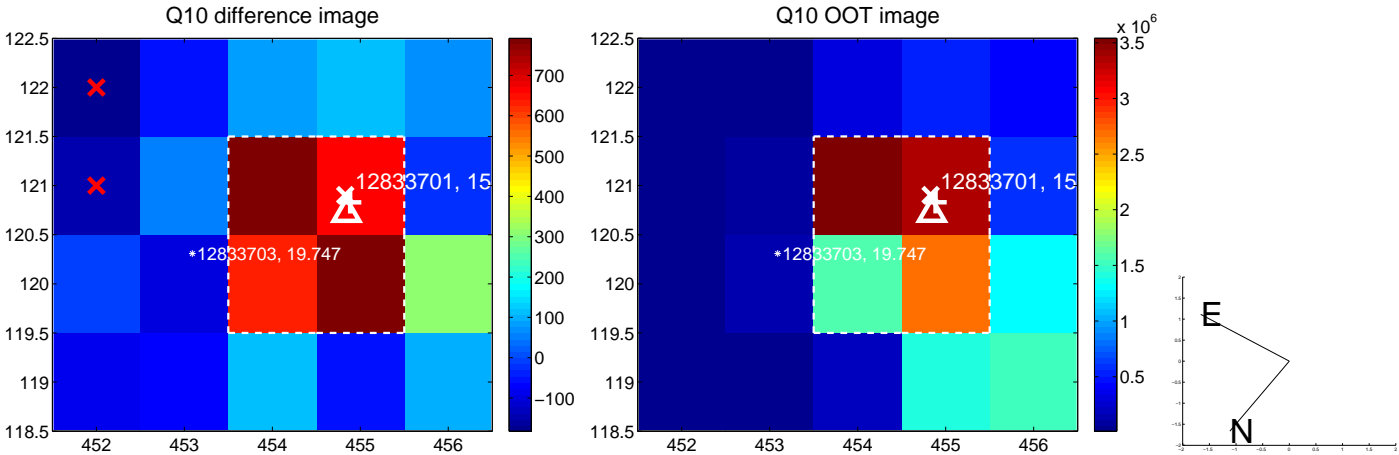
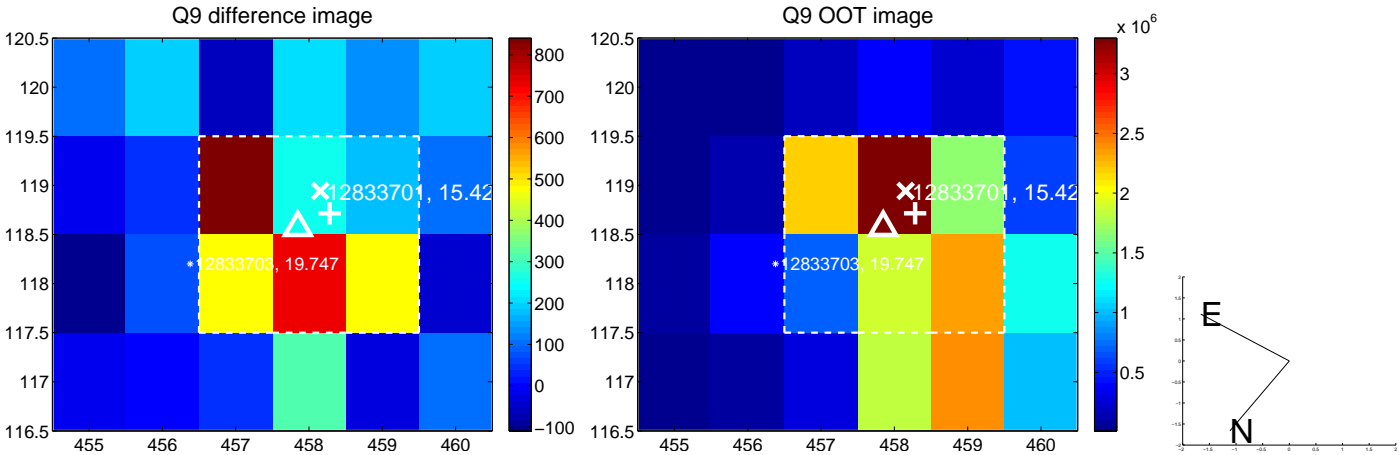
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



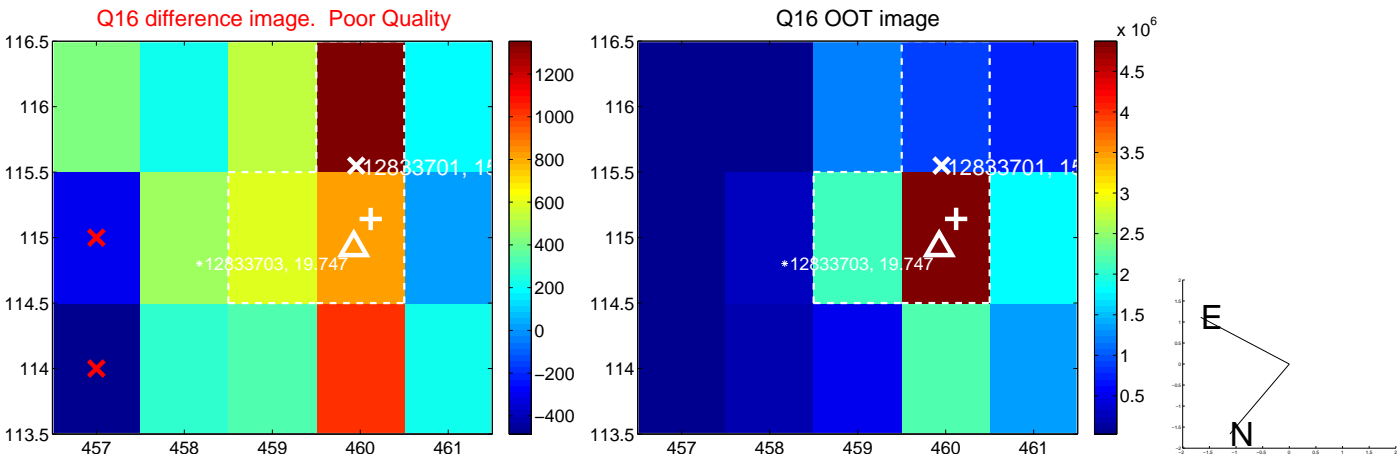
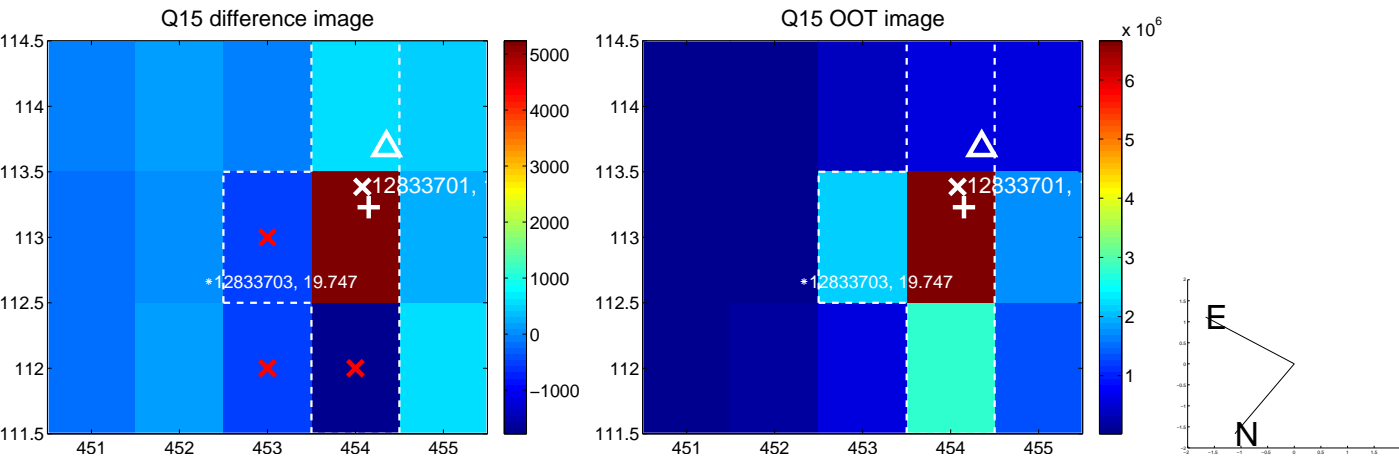
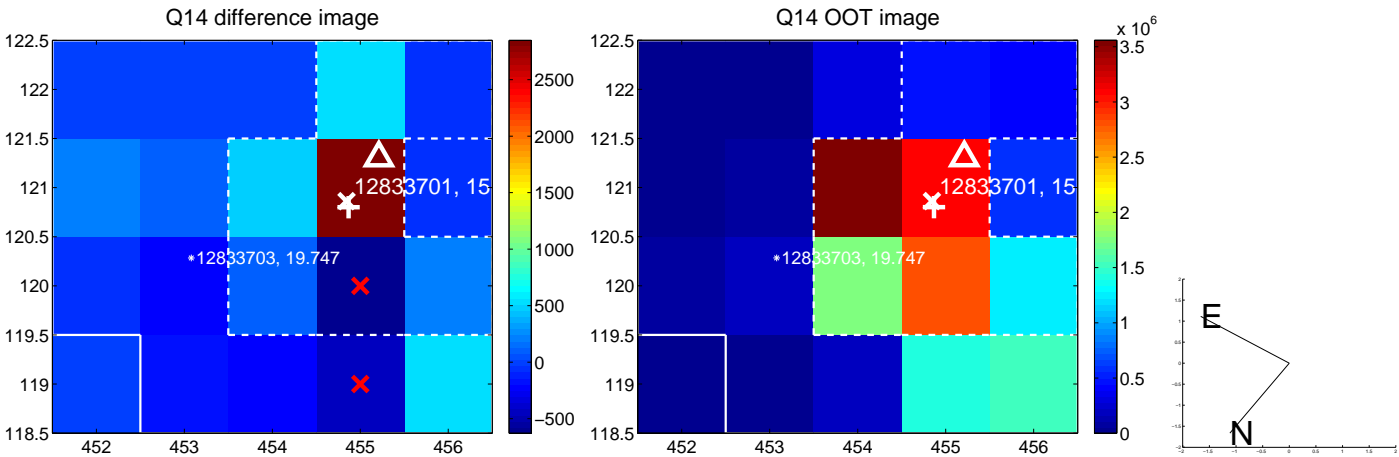
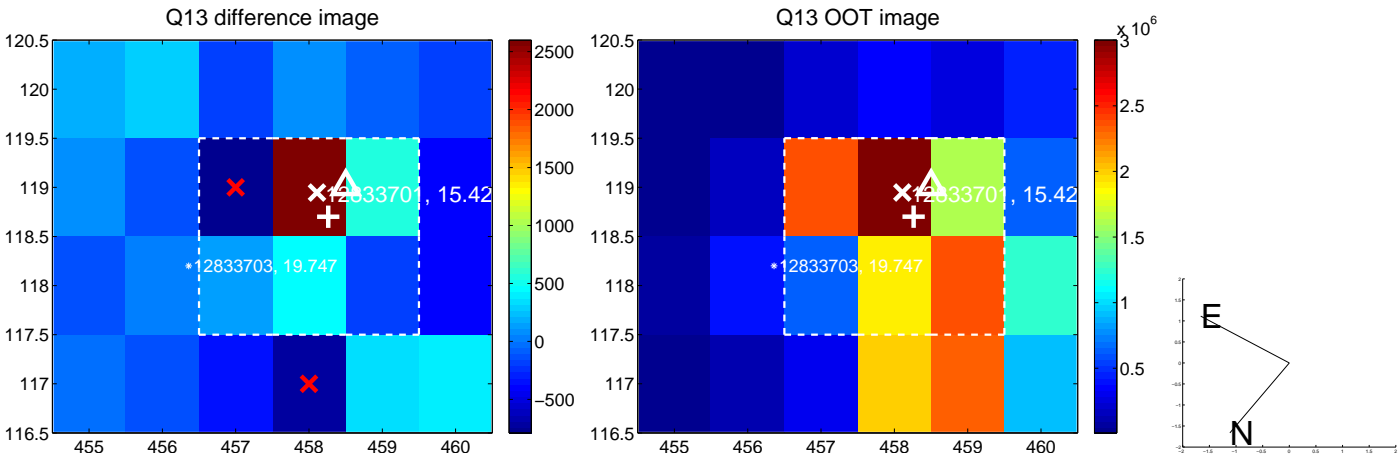
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



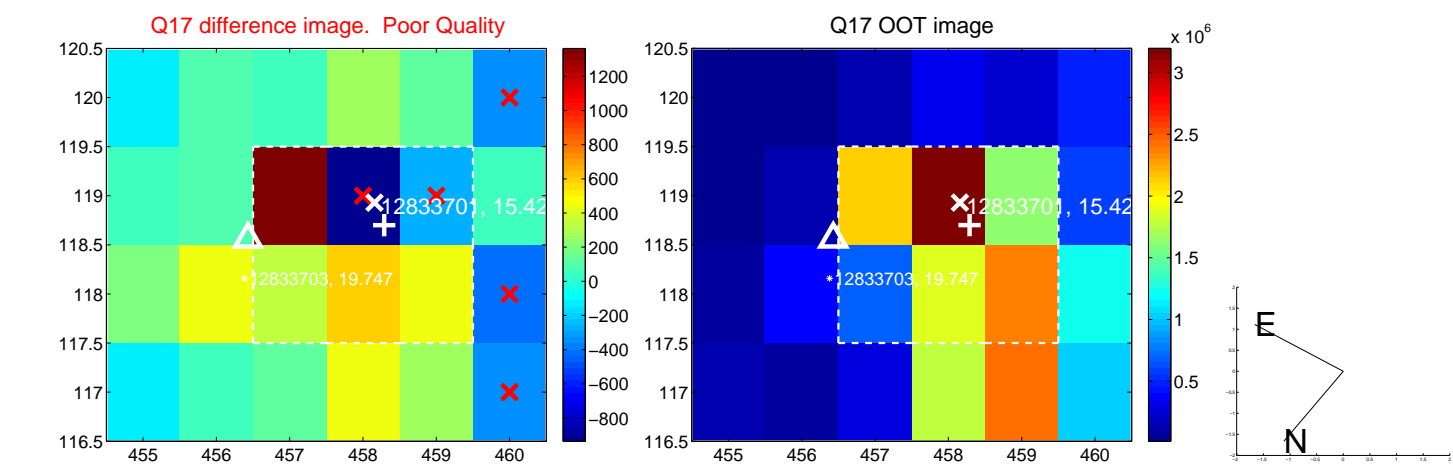
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



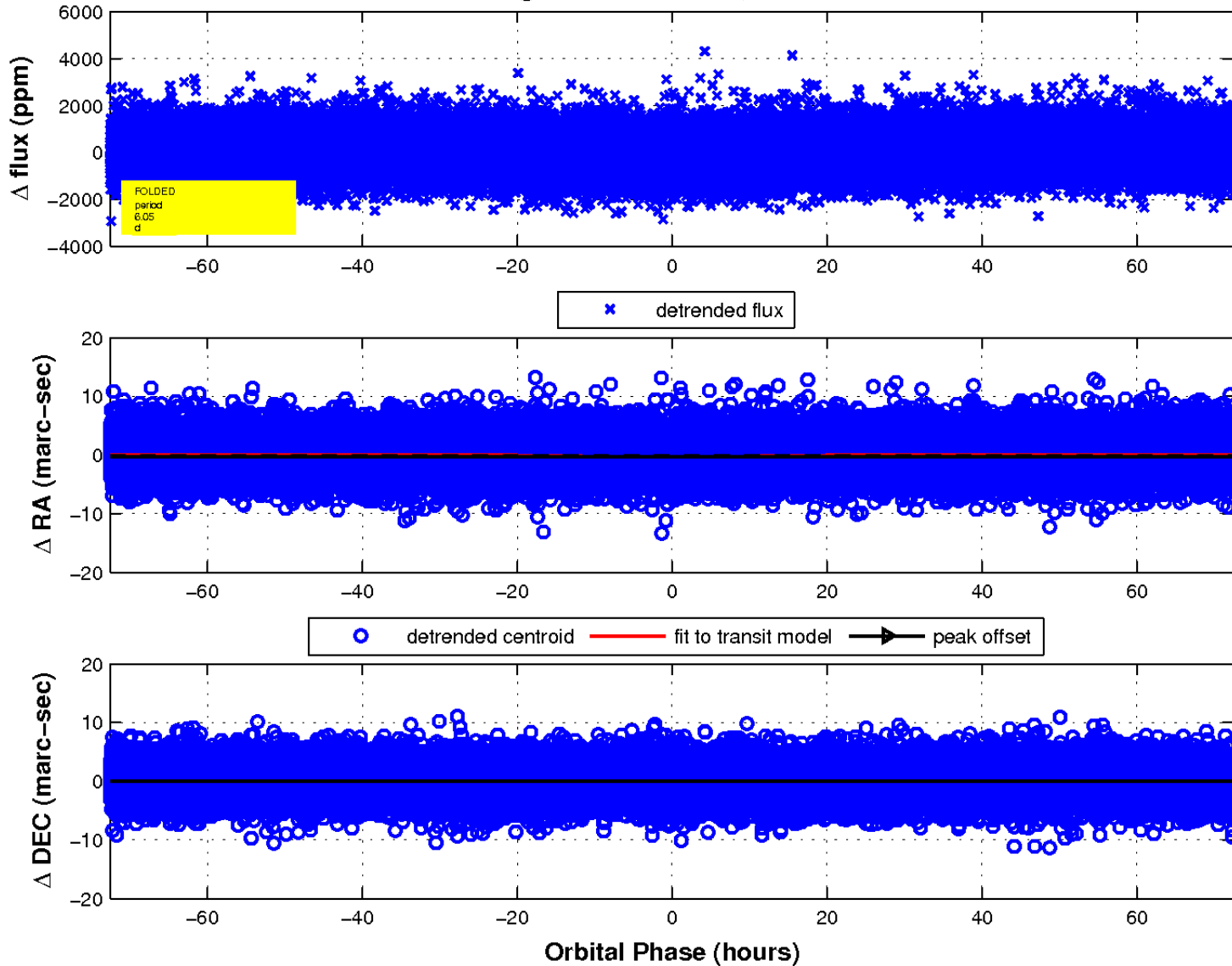
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

