

KIC 008847111

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})
008847111-01	OBS	2985.01	0.575878	132.014113	90.5	1.282	15.8	18.7	1.04	6290	1.17	7813.70

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008847111-01	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.

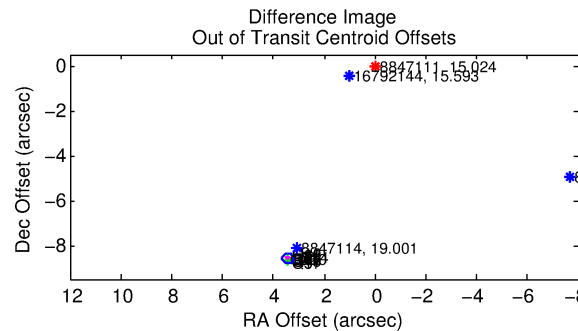
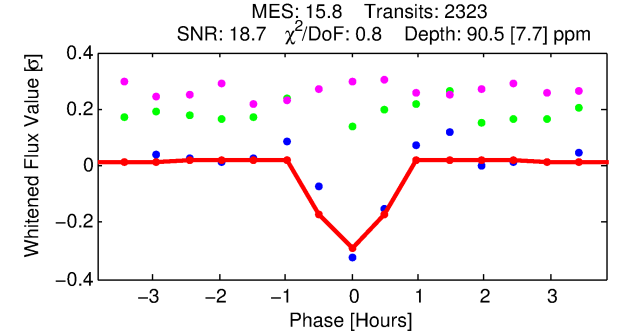
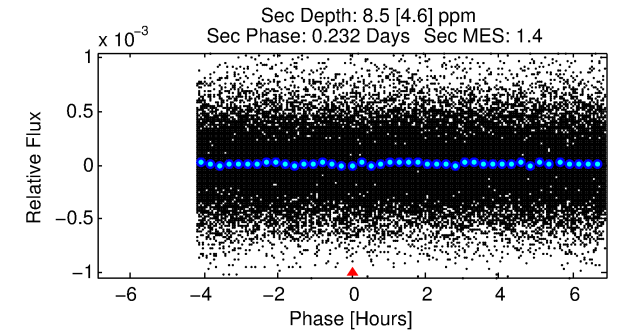
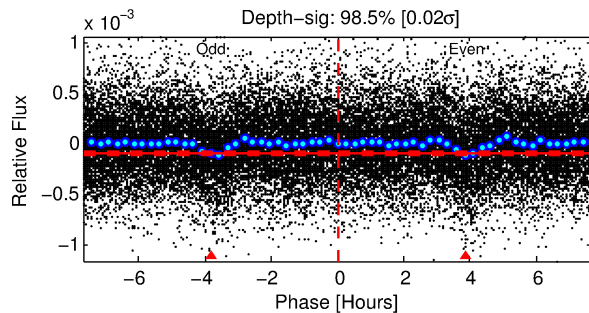
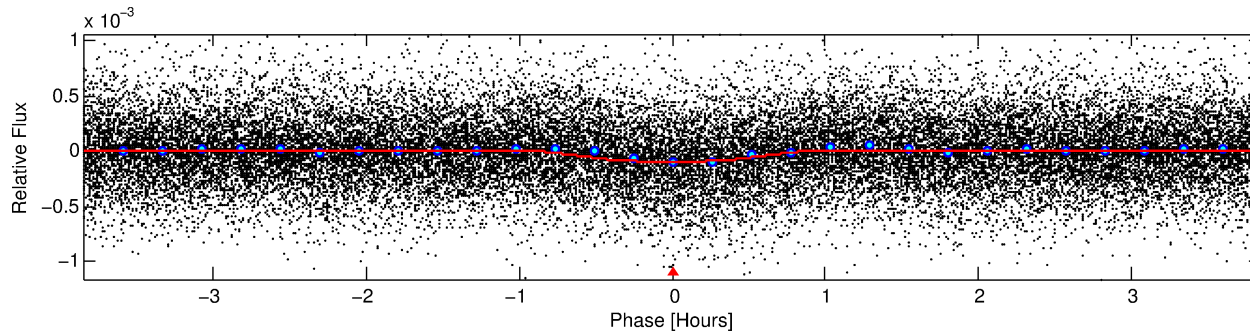
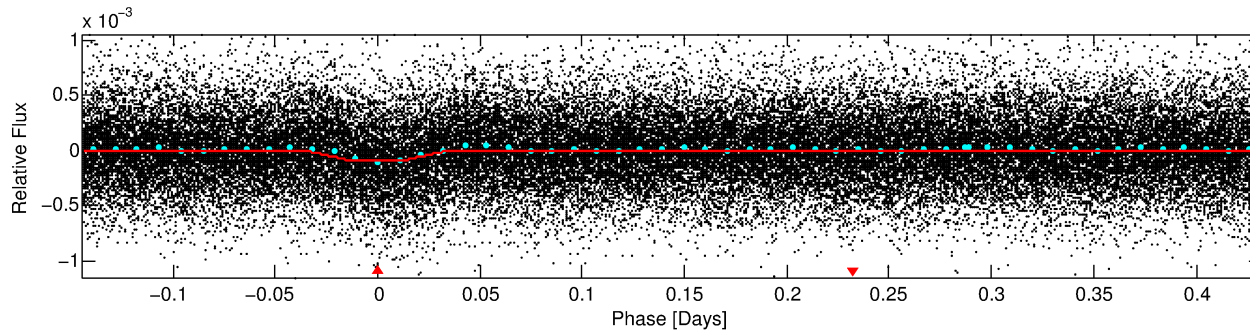
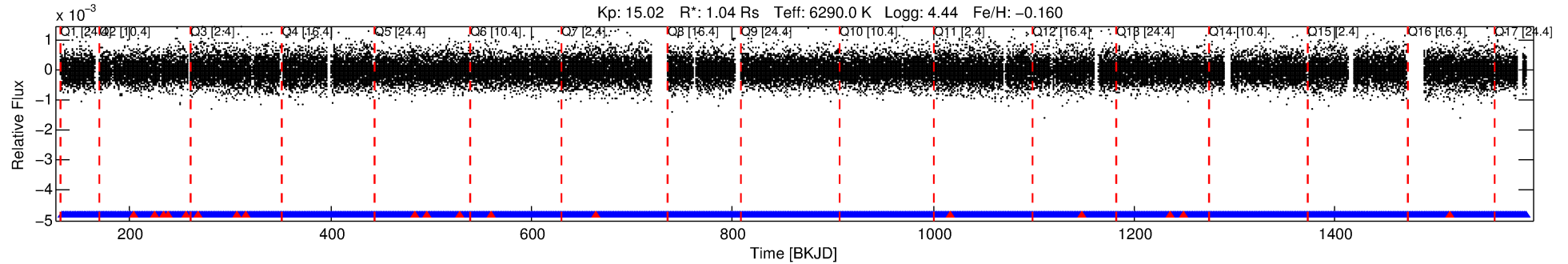
Ephemeris Match Information For 008847111-01

No Significant Match Found

DV One-Page Summary

KIC: 8847111 Candidate: 1 of 1 Period: 0.576 d
KOI: K02985.01 Corr: 0.784

Kp: 15.02 R*: 1.04 Rs Teff: 6290.0 K Logg: 4.44 Fe/H: -0.160



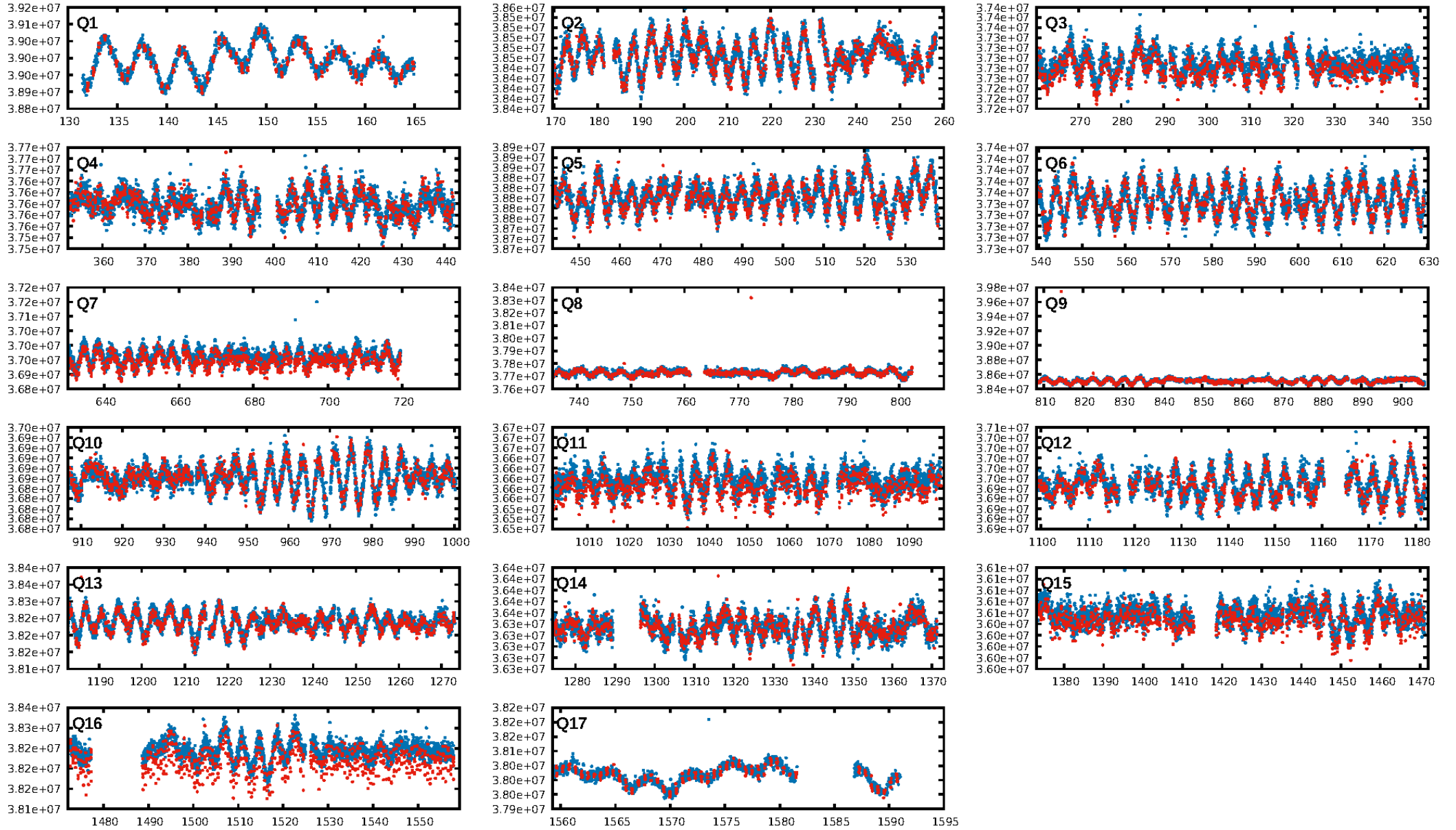
DV Fit Results:

Period = 0.57588 [0.00001] d
Epoch = 132.0141 [0.0010] BKJD
Rp/R* = 0.0103 [0.0039]
a/R* = 1.82 [2.62]
b = 0.90 [0.43]
Seff = 7813.70 [3384.15]
Teq = 2397 [260] K
Rp = 1.17 [0.59] Re
a = 0.0140 [0.0039] AU
Ag = 0.67 [0.67] [-0.49σ]
Teffp = 3351 [788] K [1.15σ]

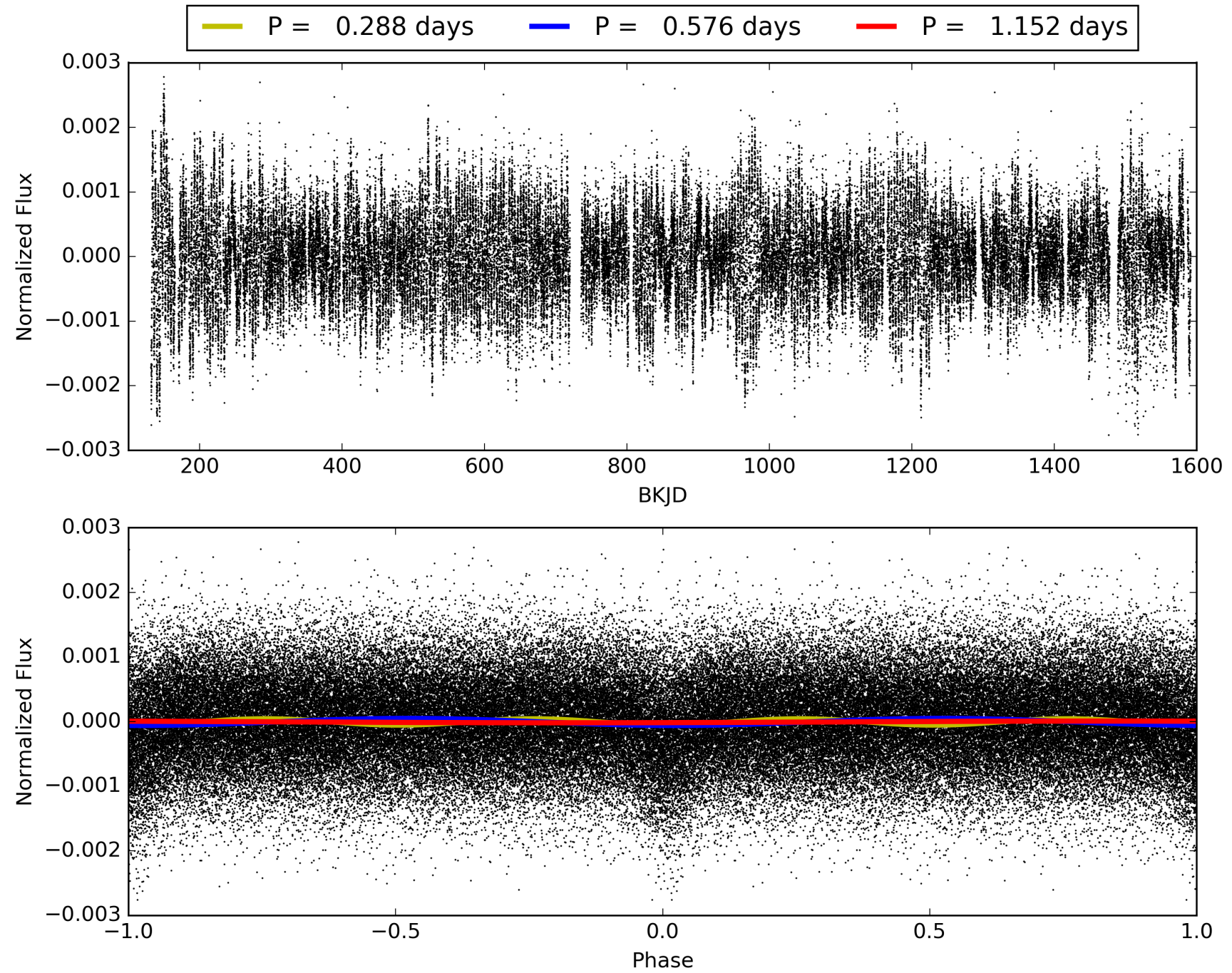
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.04e-52
RollingBand-fgt: 0.99 [2201/2219]
GhostDiagnostic-chr: -0.6673
Centroid-sig: 0.0%
Centroid-so: 12.918 arcsec [21.20σ]
OotOffset-rm: 9.239 arcsec [127.33σ]
KicOffset-rm: 9.213 arcsec [117.97σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008847111-01, PDC Light Curves

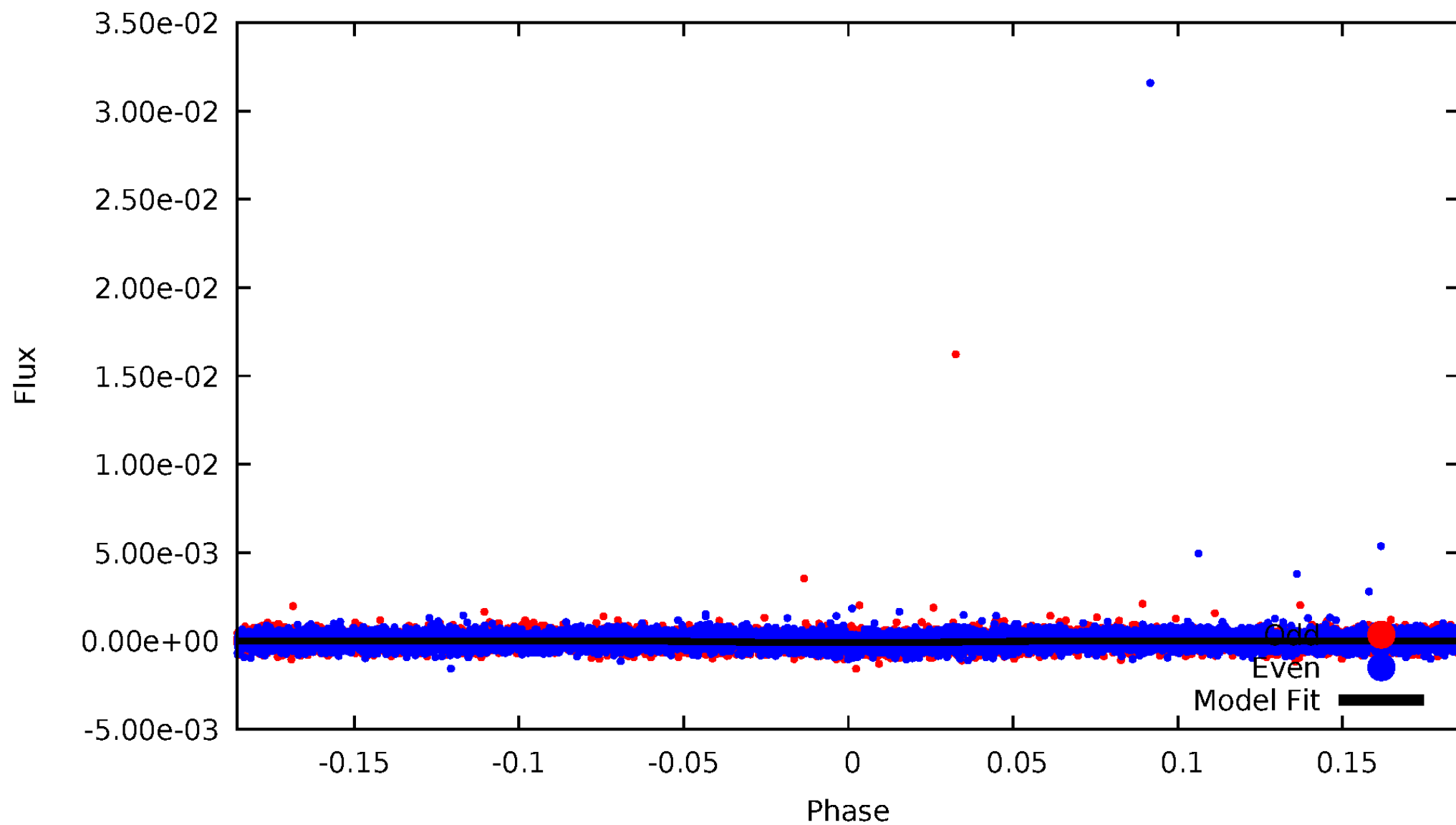


TCE 008847111-01



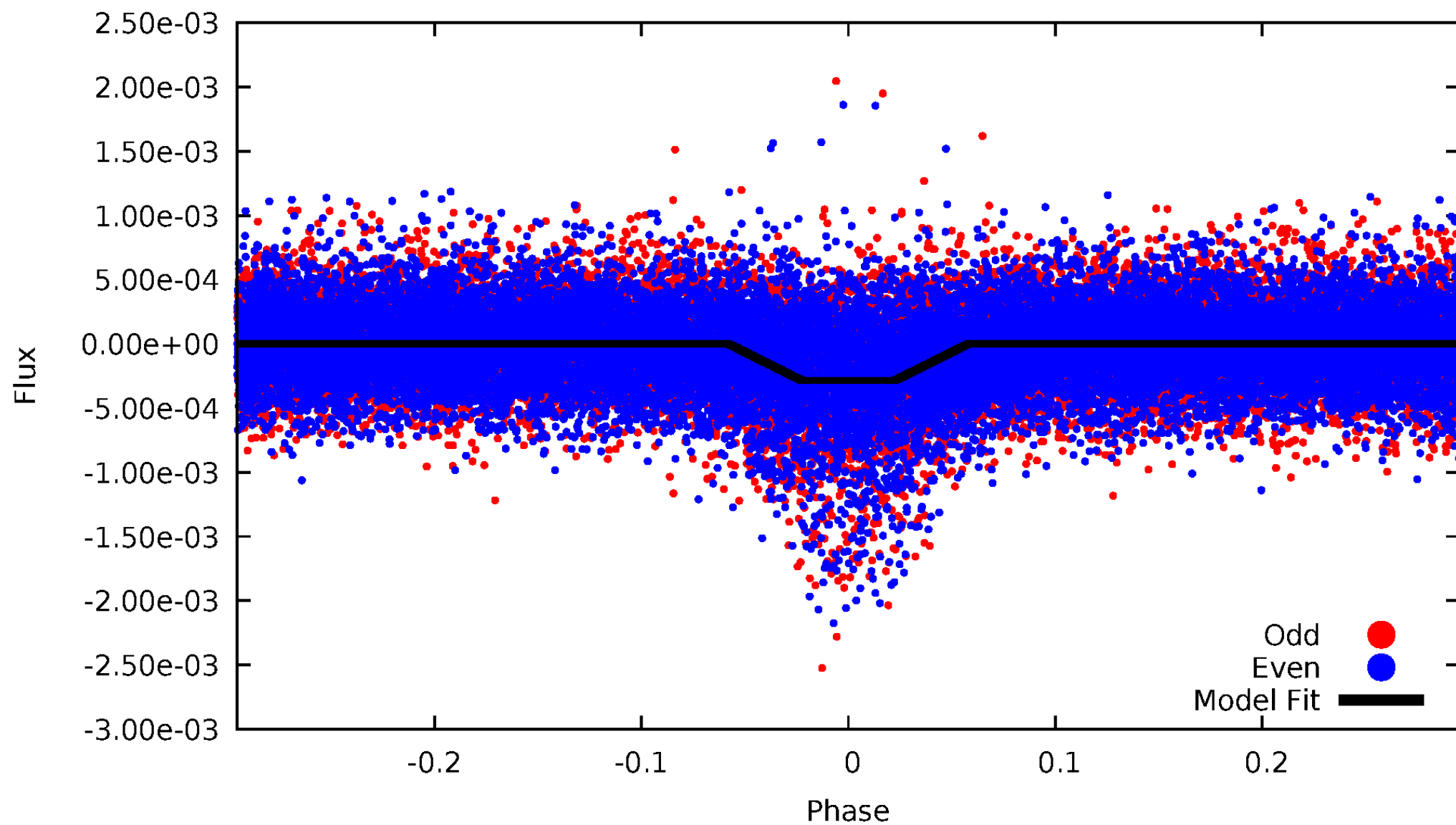
DV Odd/Even

TCE 008847111-01

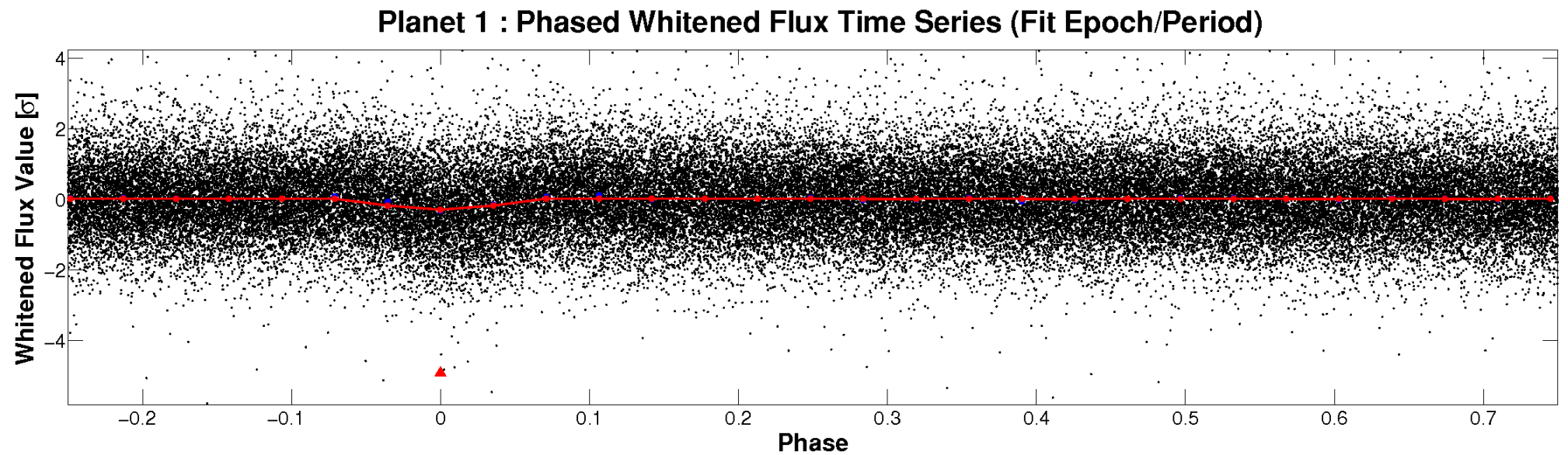
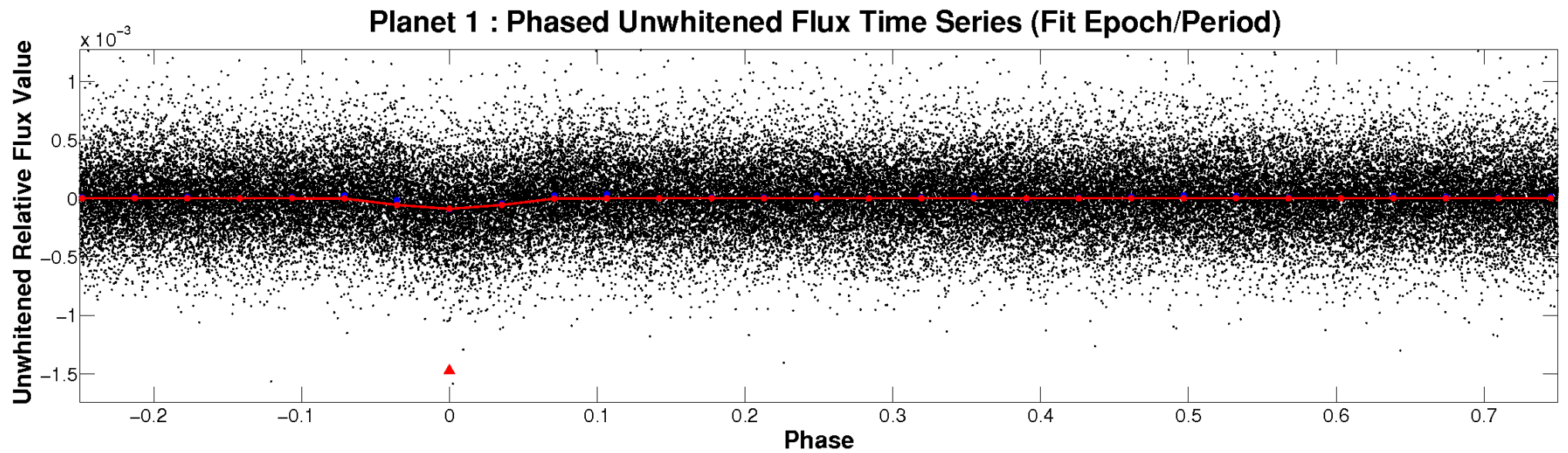


ALT Odd/Even

TCE 008847111-01

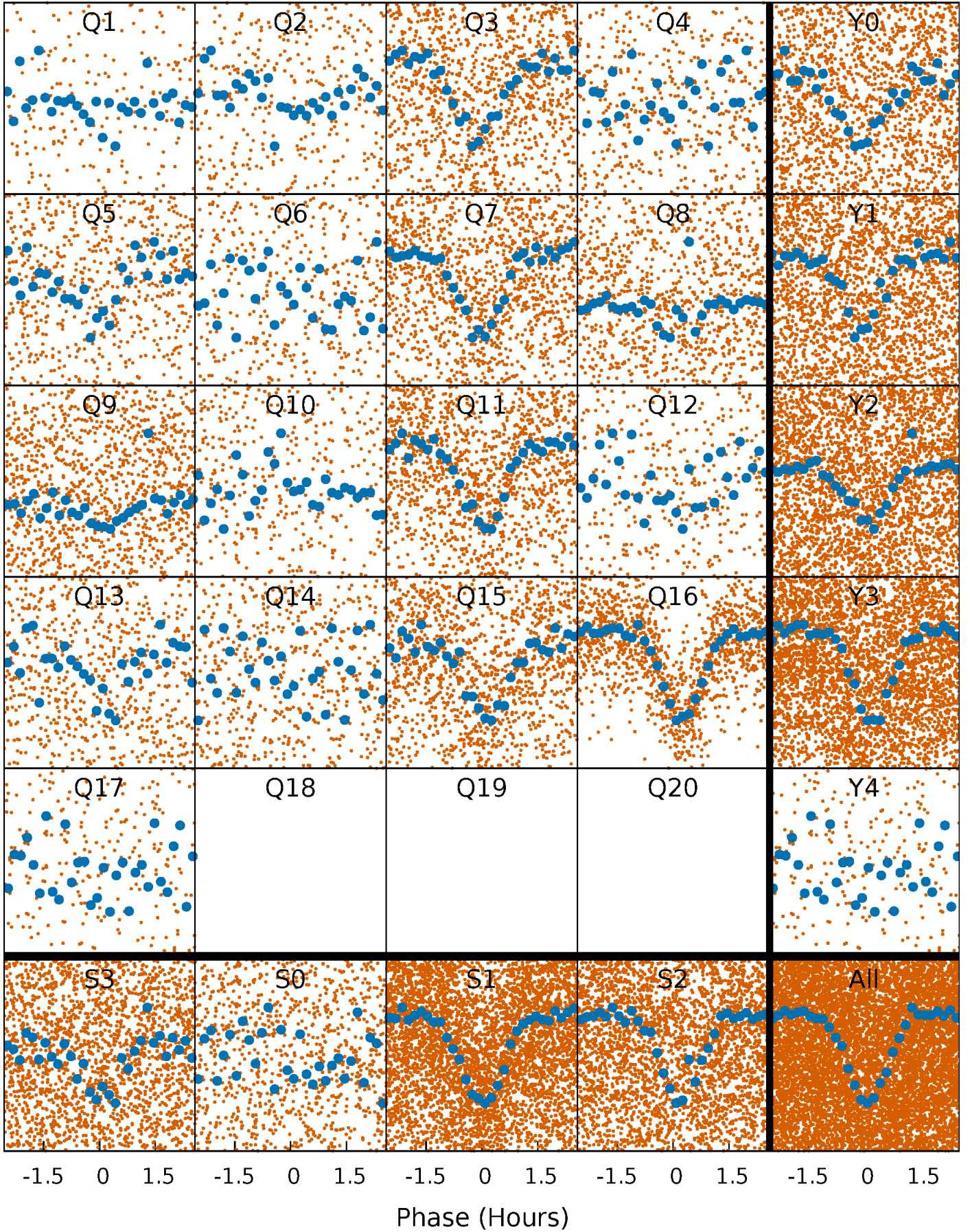


Non-Whitened Vs. Whitened Light Curve



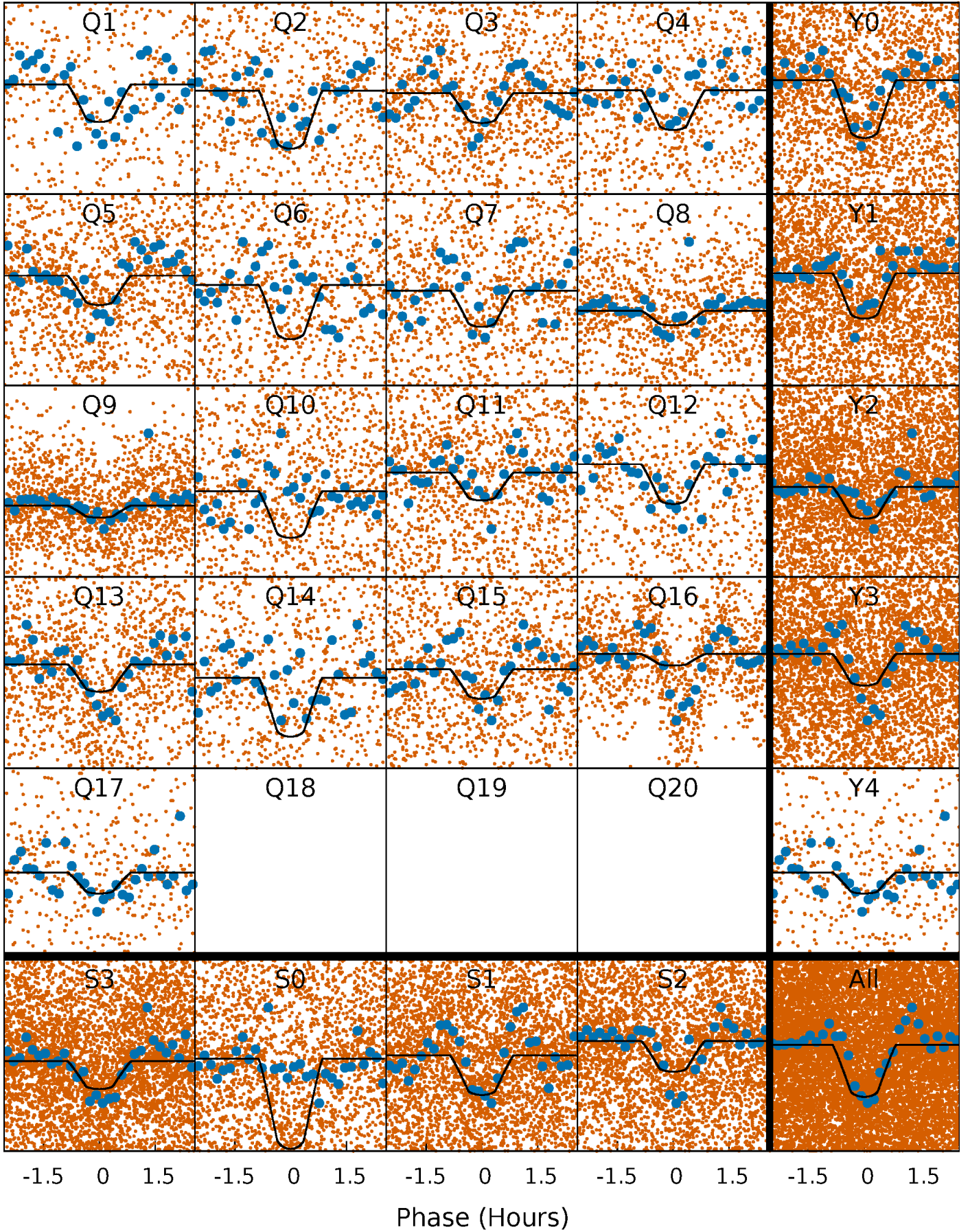
PDC Quarter-Phased Transit Curves

TCE 008847111-01 P= 0.575878 Days $T_0=132.014113$ (BKJD)



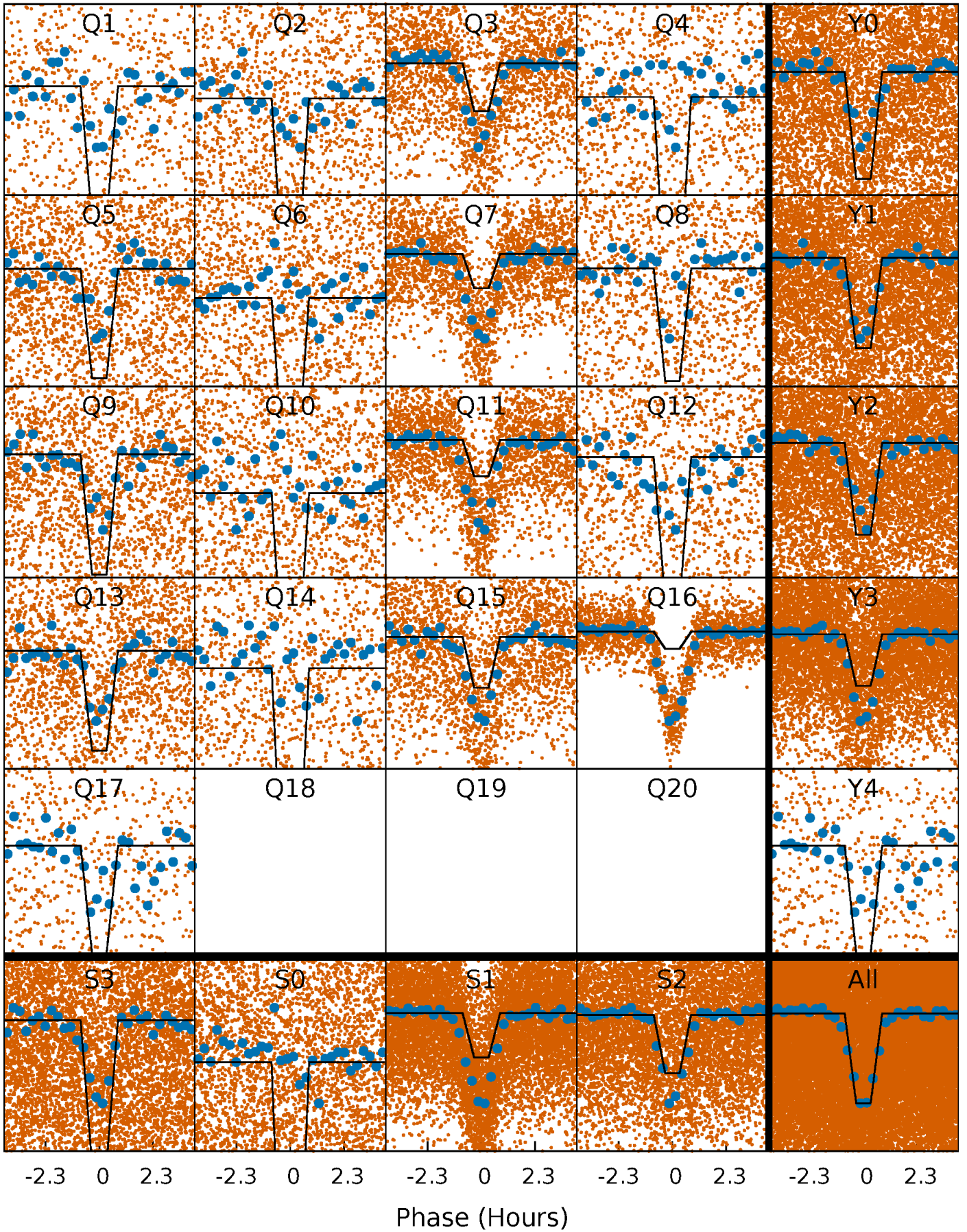
DV Quarter-Phased Transit Curves

TCE 008847111-01 P= 0.575878 Days $T_0=132.014113$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

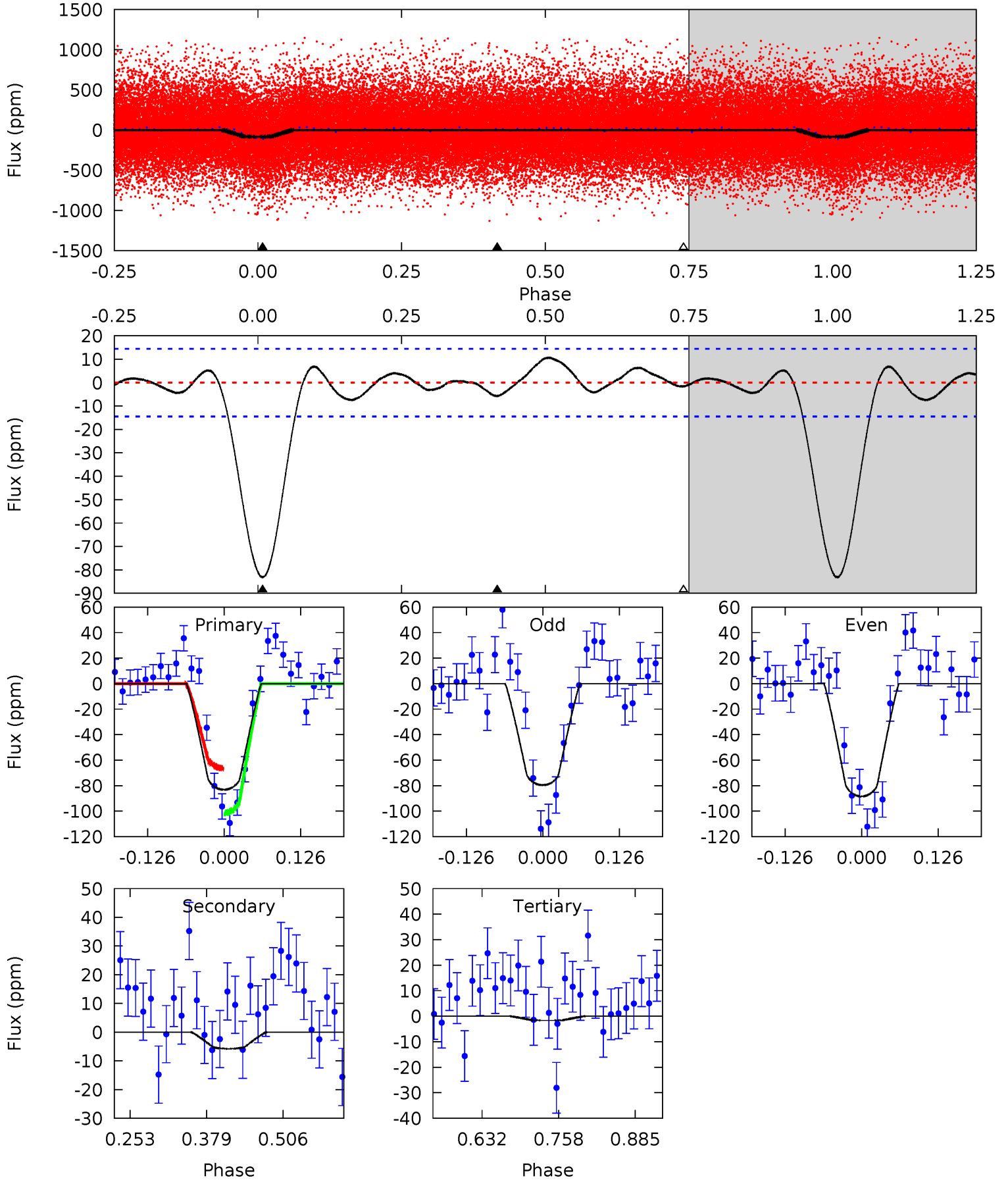
TCE 008847111-01 P= 0.575883 Days $T_0=132.009688$ (BKJD)



DV Model-Shift Uniqueness Test

008847111-01, P = 0.575878 Days, E = 131.438235 Days

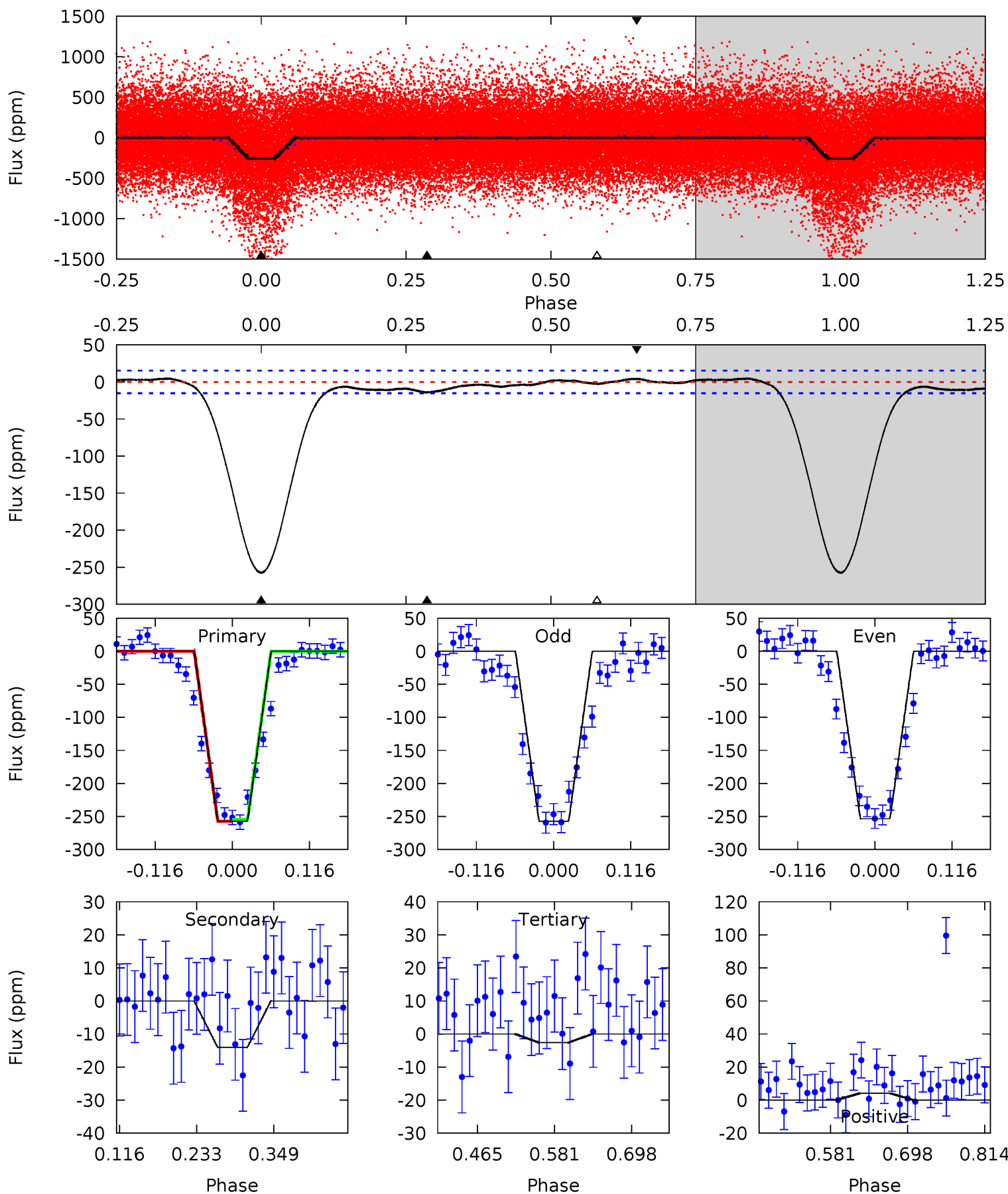
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.0	1.80	0.53	0	4.52	1.53	1.06	25.4	26.0	1.27	1.80	1.37	0.96	0.11	5.51



Alt Model-Shift Uniqueness Test

008847111-01, P = 0.575883 Days, E = 131.433805 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
76.1	4.16	0.77	1.24	4.53	1.57	1.10	75.3	74.9	3.39	2.92	0.56	1.34	0.02	0.41



Stellar Parameters For KIC 008847111

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6290^{+175}_{-263}	$4.442^{+0.067}_{-0.216}$	$-0.160^{+0.250}_{-0.300}$	$1.044^{+0.349}_{-0.116}$	$1.097^{+0.154}_{-0.154}$	$1.357^{+0.408}_{-0.739}$
	+3%/-4%	+2%/-5%	+156%/-188%	+33%/-11%	+14%/-14%	+30%/-54%
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 008847111-01 / KOI 2985.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-6 ± 3	$1.21^{+0.53}_{-0.41}$	3407^{+284}_{-197}	2712^{+1157}_{-5834}	$0.371^{+0.667}_{-0.249}$
Alt.	-14 ± 3	$2.01^{+0.57}_{-0.51}$	3394^{+262}_{-182}	2667^{+768}_{-5523}	$0.365^{+0.295}_{-0.161}$

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 $A_{obs} \gg 1.0$

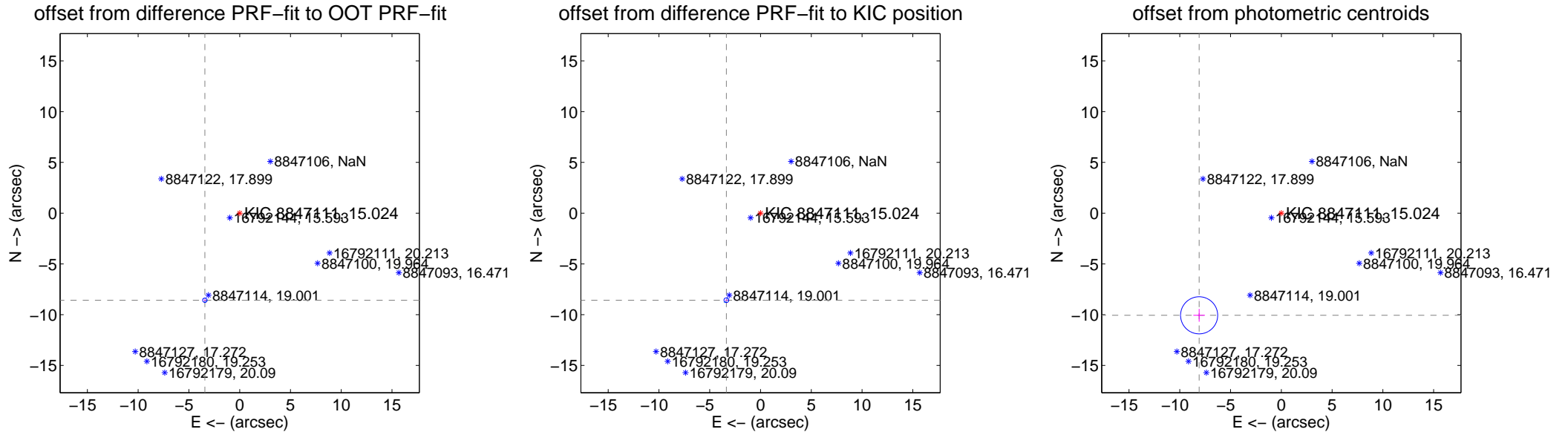
DV Centroid Data

Supplemental centroid analysis for 0088471111-01. Kepler magnitude: 15.02. Transit SNR 18.69

There are 17 quarters with good PRF difference image offsets

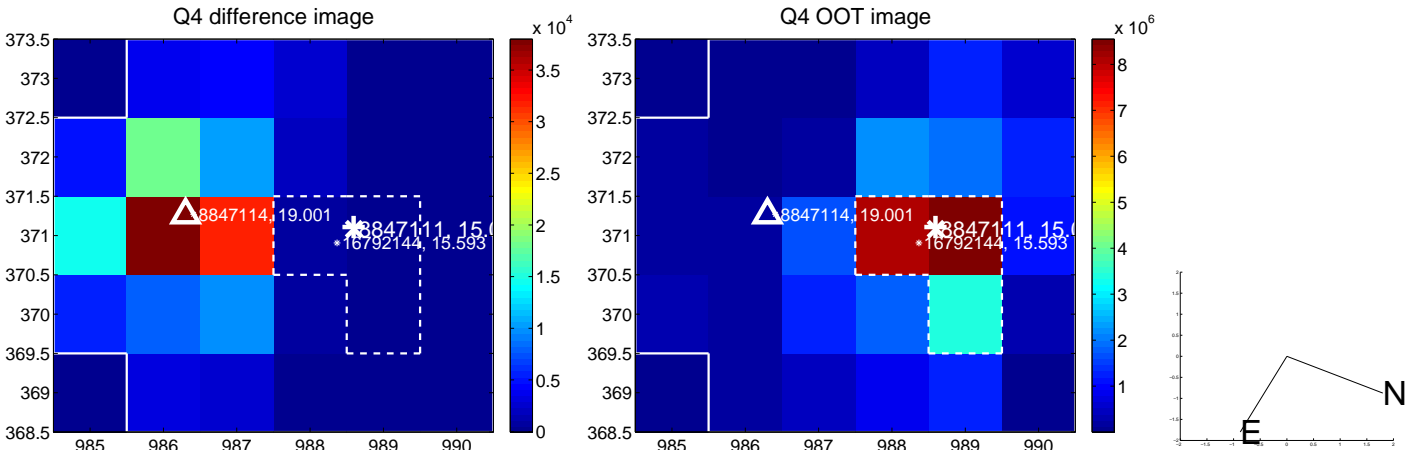
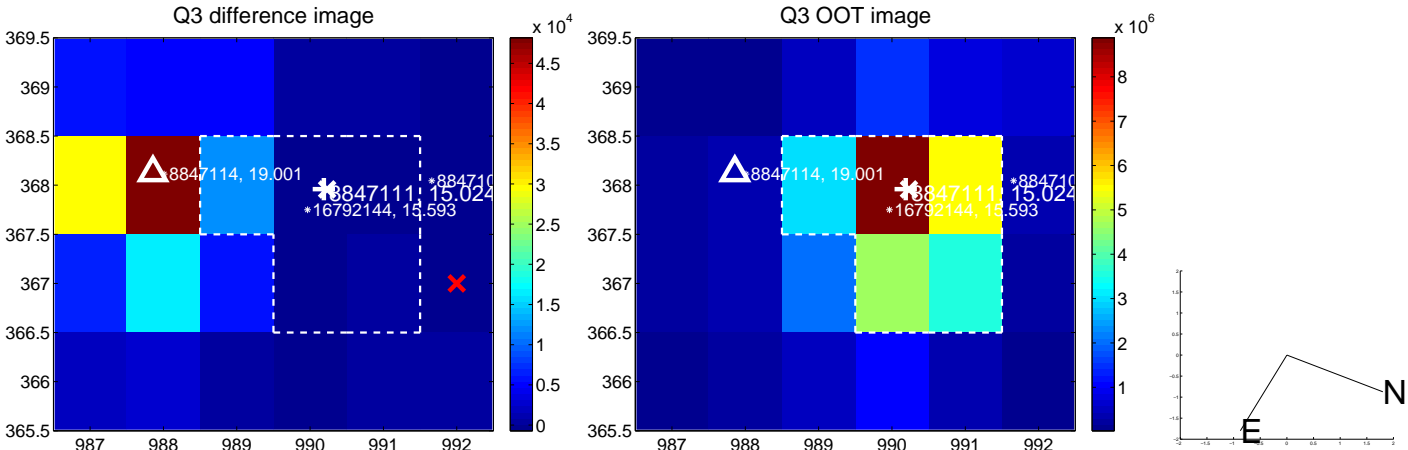
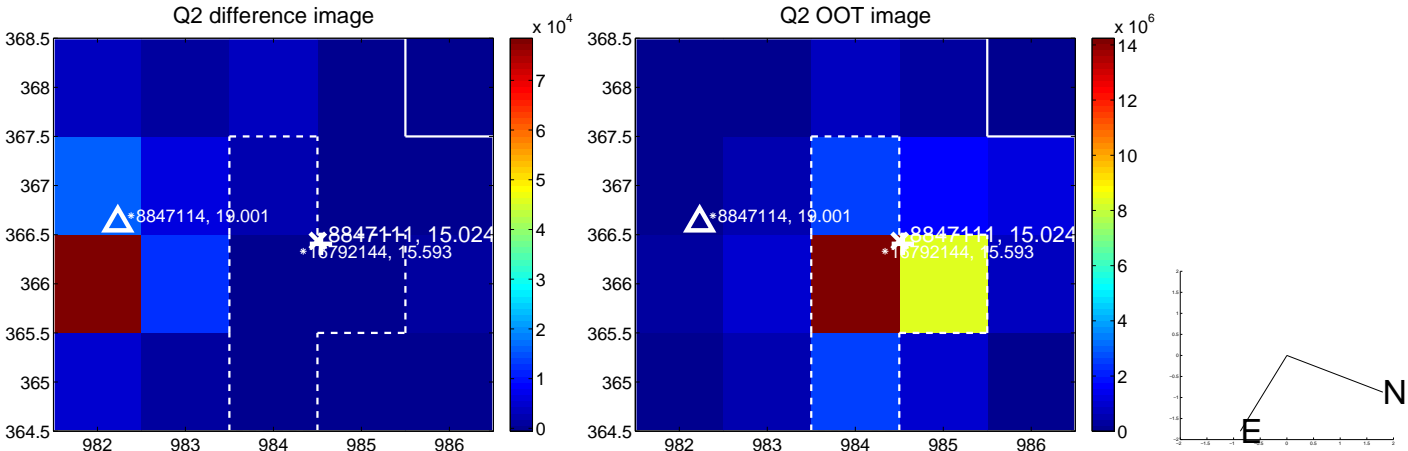
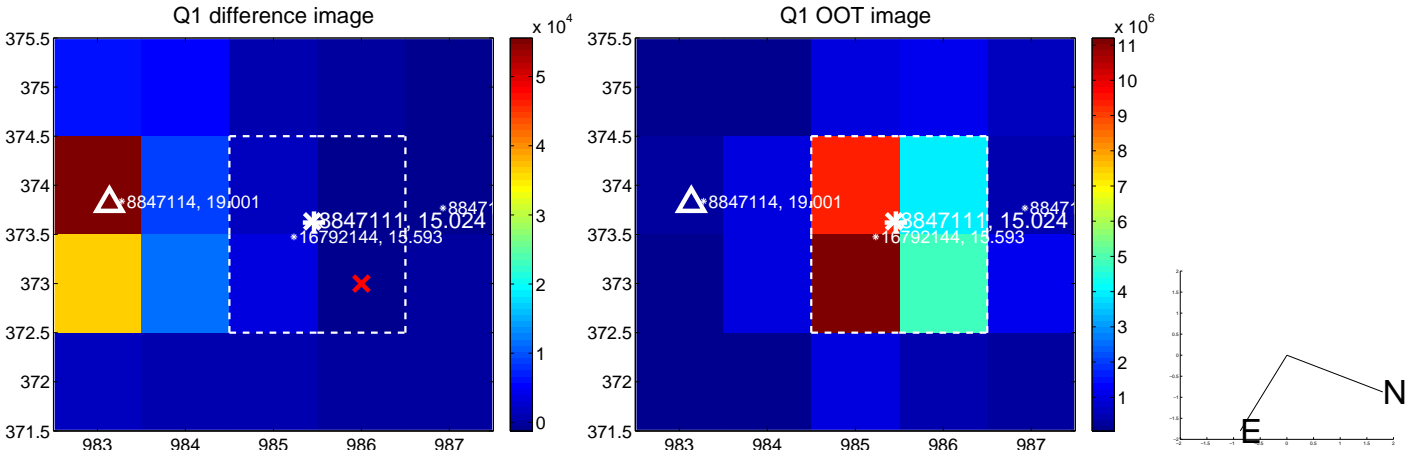
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	9.239 \pm 0.073	127.33	3.431 \pm 0.071	-8.578 \pm 0.072
PRF-fit source offset from KIC position	9.213 \pm 0.078	117.97	3.366 \pm 0.071	-8.576 \pm 0.079
photometric centroid source offset	12.92 \pm 0.61	21.20	8.10 \pm 0.57	-10.07 \pm 0.63

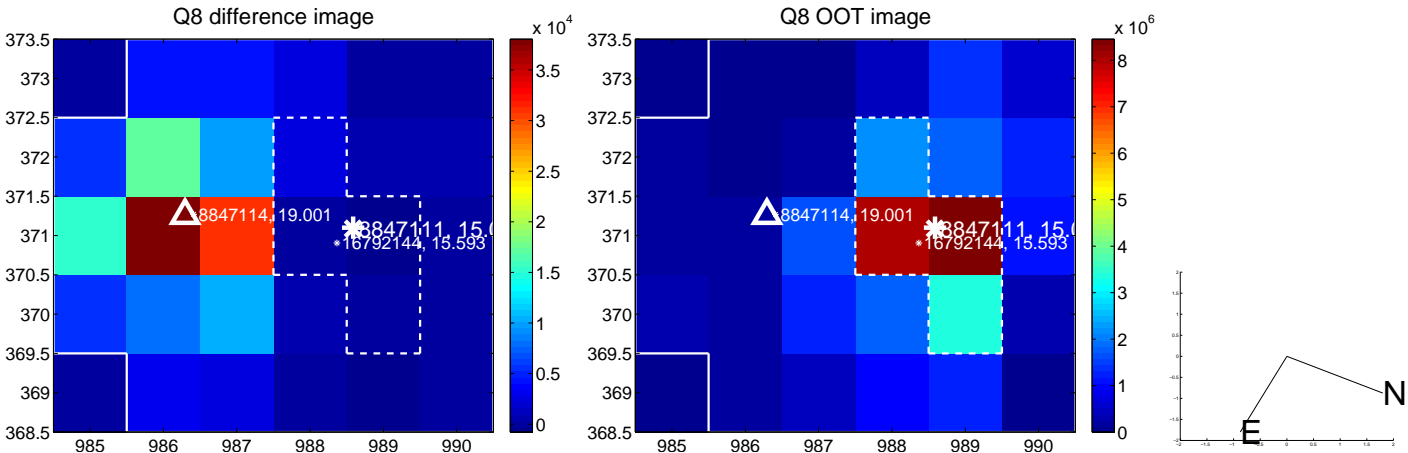
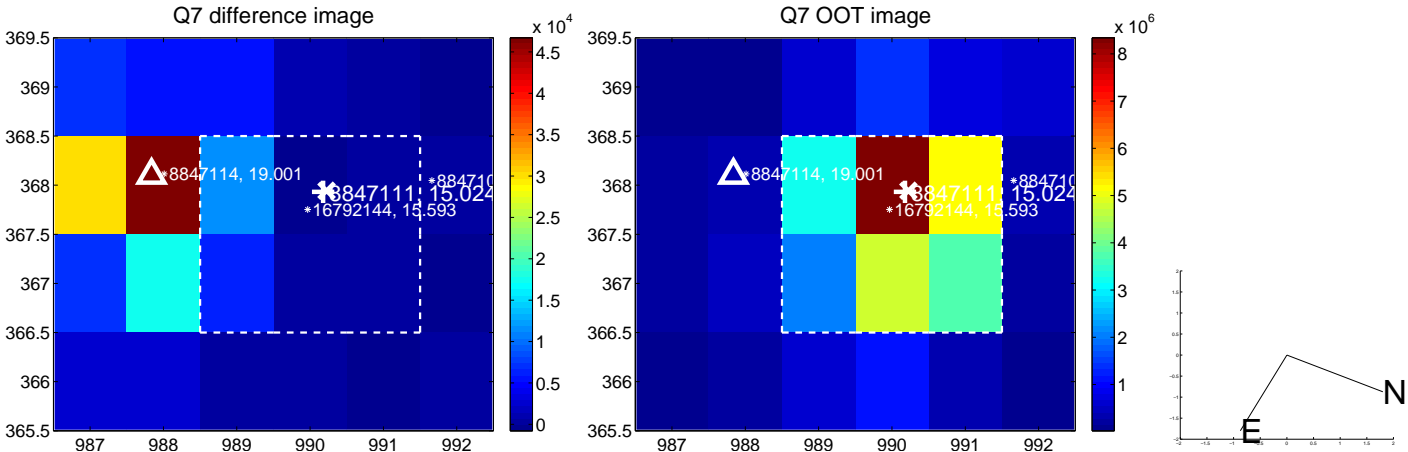
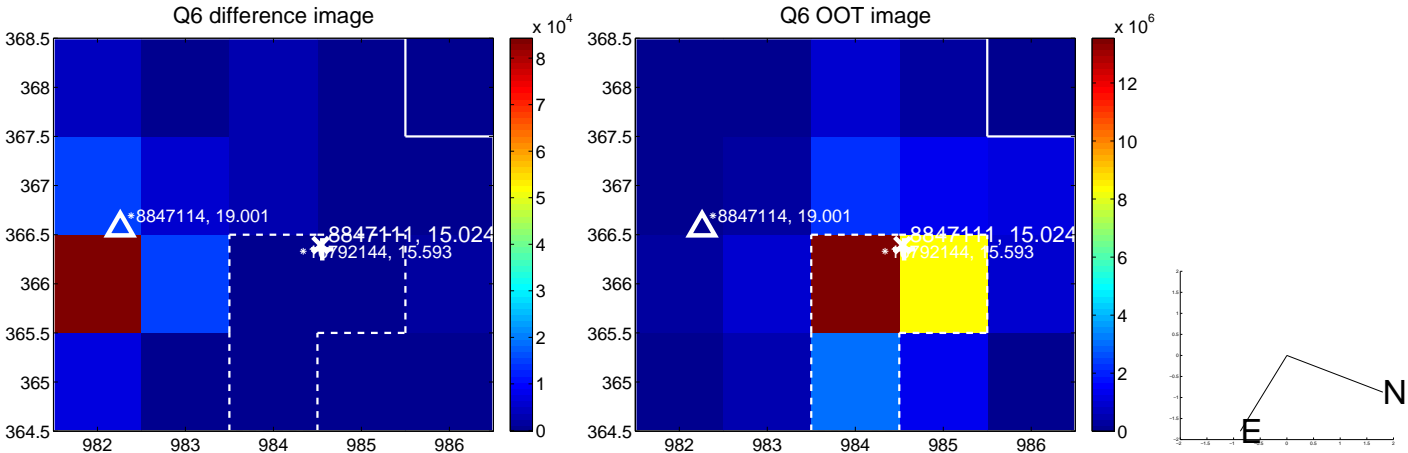
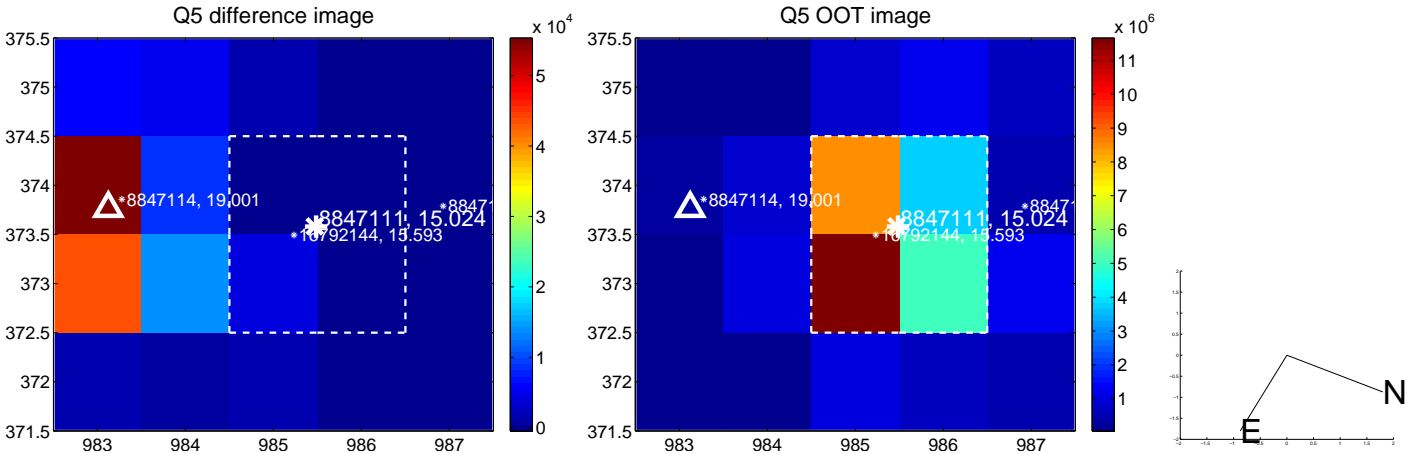


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

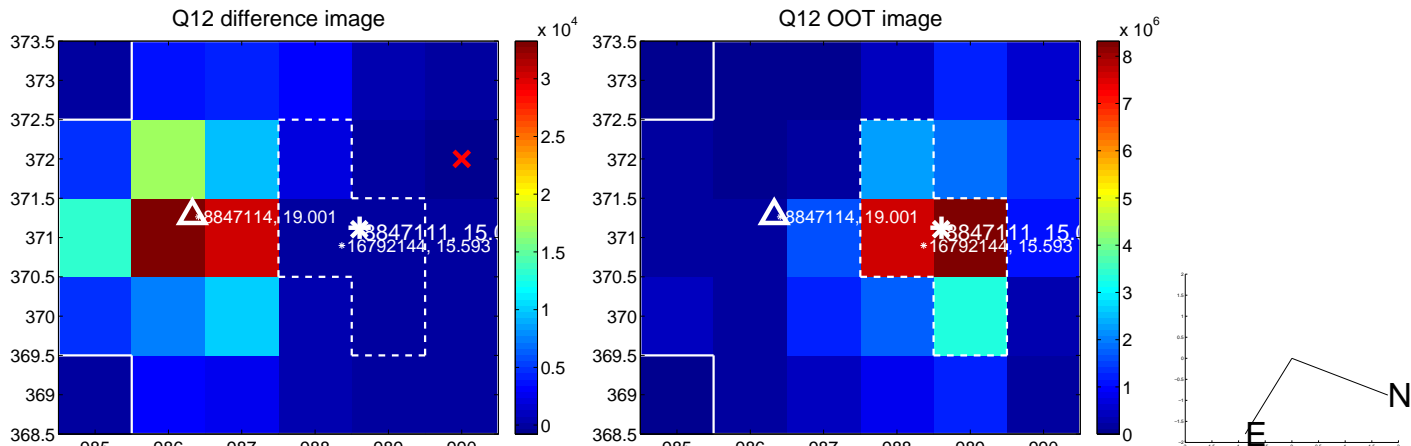
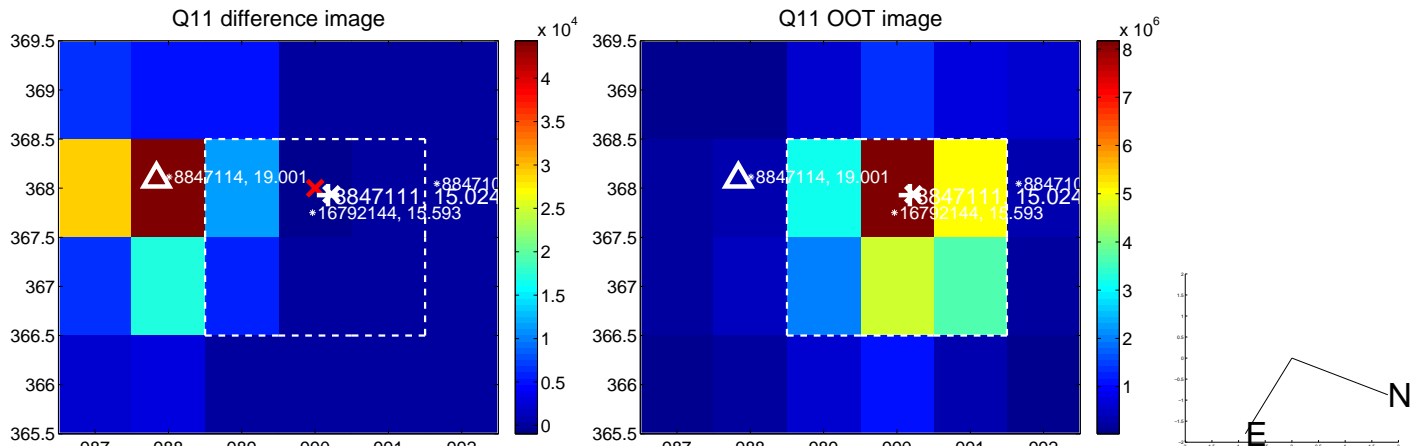
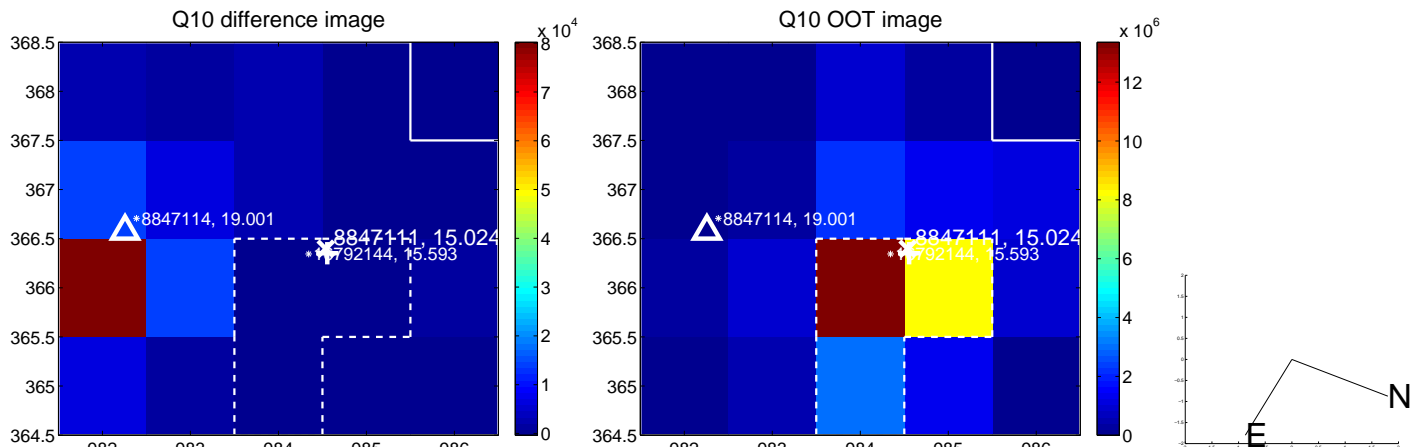
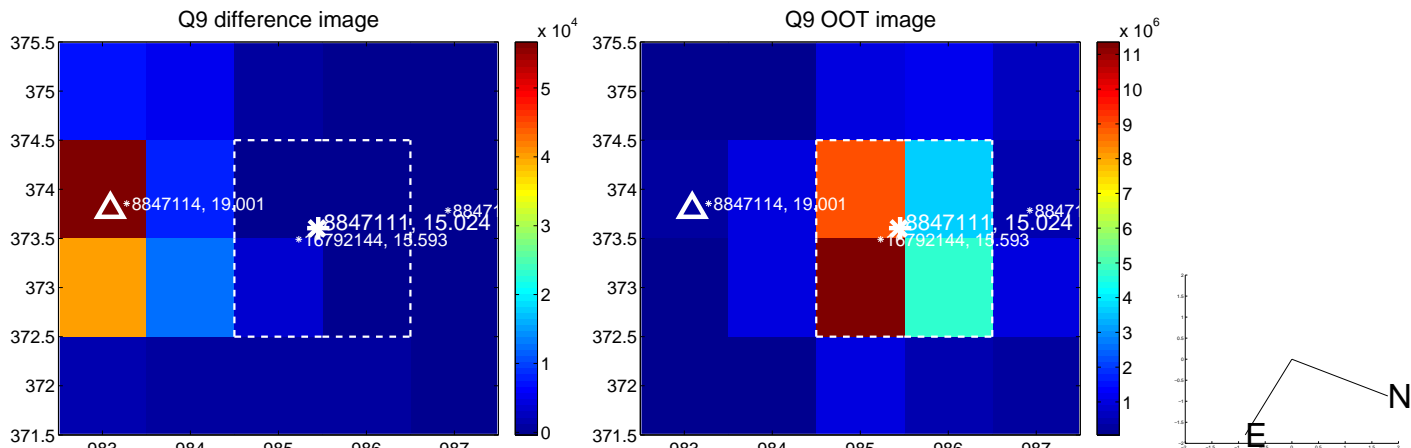
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



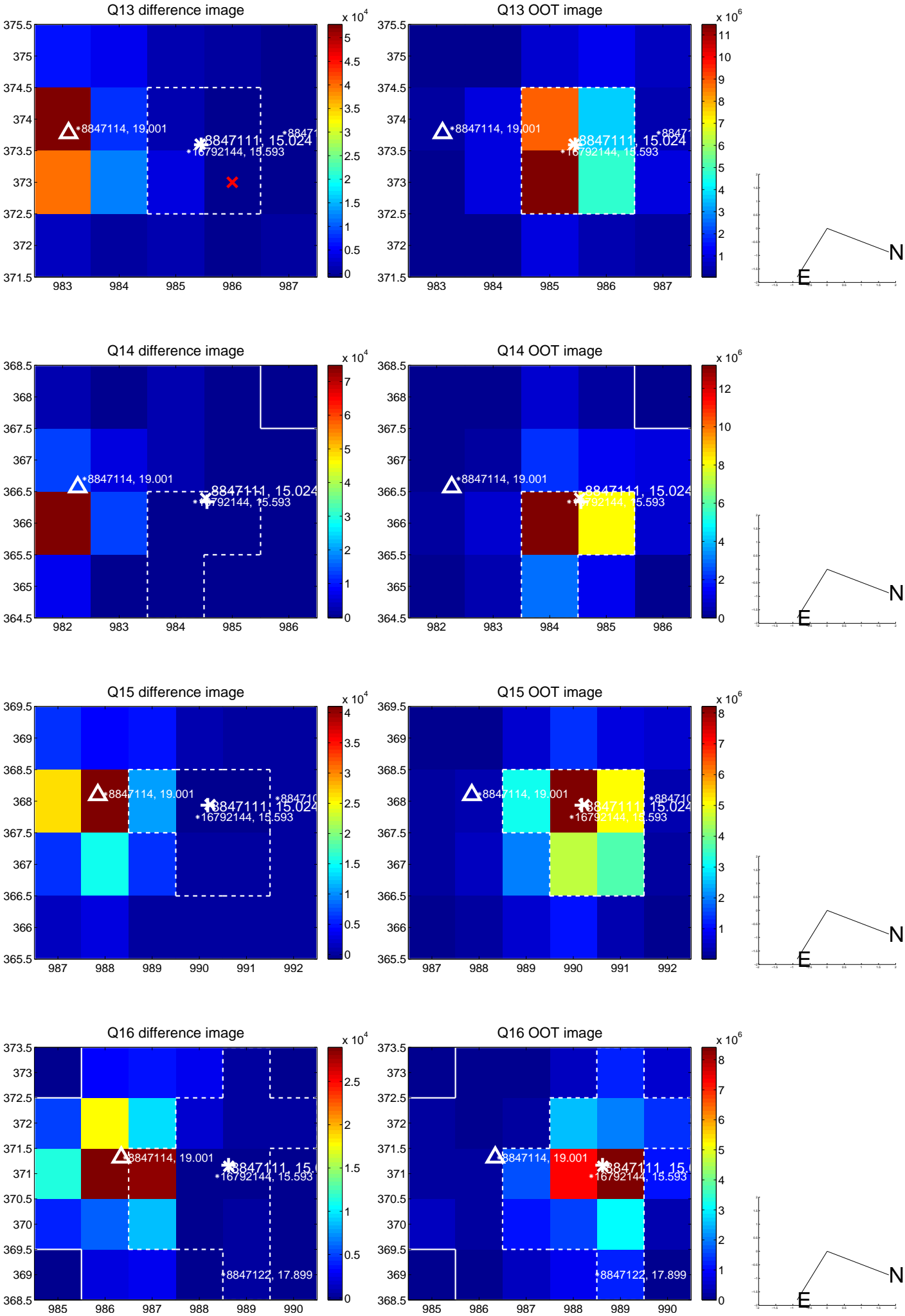
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



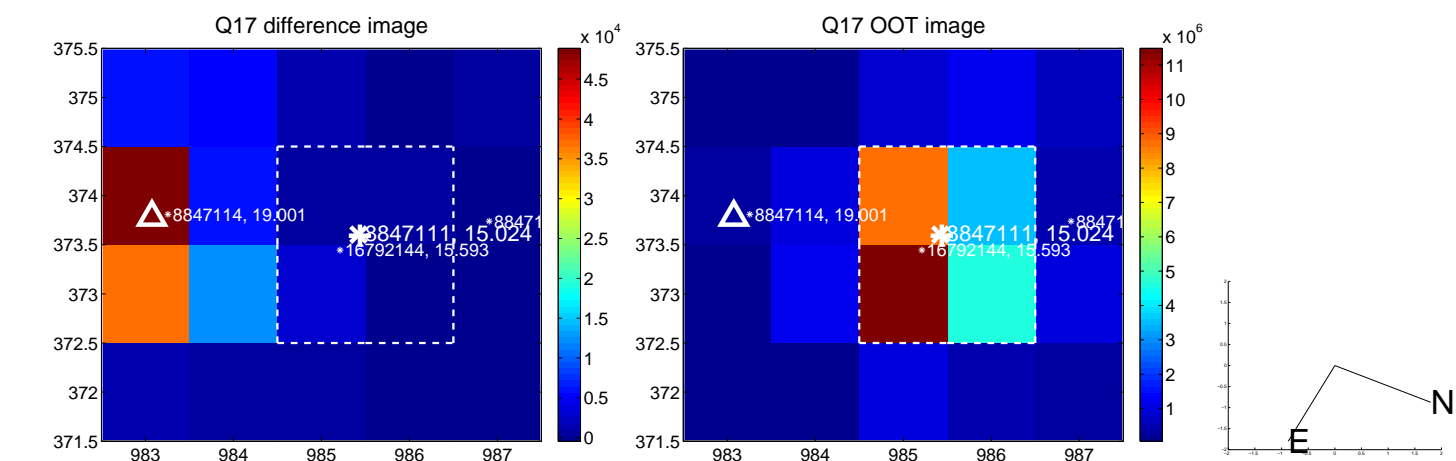
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



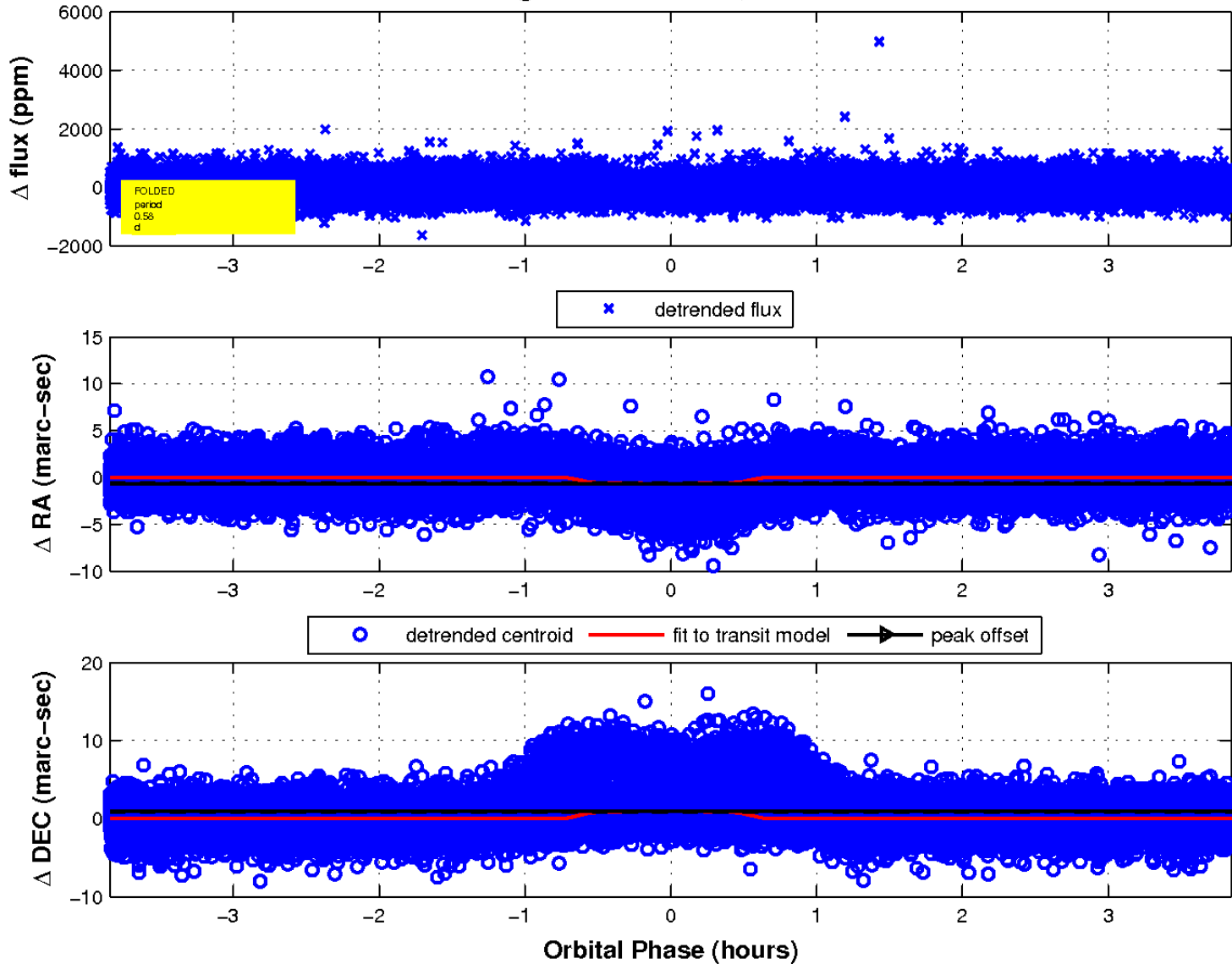
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

