LETTER TO THE EDITOR

Synchrotron emission in molecular cloud cores: the SKA view (Corrigendum)

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The specific intensity (Eq. (5)) has not been correctly evaluated¹. This affects the computation of the flux densities, whose correct trends are shown in the new versions of Figs. 3 and 4. We recovered the signal-to-noise ratios (S/Ns) quoted in the paper by assuming a magnetic field strength B_0 larger by a factor of 2.74–4.20, 2.02–2.72, and 1.55–1.80 than originally assumed for models A, B, and C, respectively (the lower and upper values corresponding to $\kappa = 0.5$ and $\kappa = 0.7$, respectively). The conclusions of the paper are unaffected.

Fig. 3. Radial flux density profiles for the starless core models described in Sect. 5.1 (upper row) and for B68 and FeSt 1-457 (lower row, see Sect. 5.2). The observing frequency is shown in black at the top of each column, while numbers in the upper-right corner of each subplot represent the radius-averaged S/N for the two values of κ (0.5 and 0.7 for models A, B, C, and B68, and 0.68 and 0.88 for FeSt 1-457, see Eq. (9)). Shaded areas encompass the curves obtained with Eq. (9) by using the two values of κ (see Fig. 2 for colour-coding). The telescope beam is shown in the leftmost column for models A, B, and C (dotted black line, 300''), B68 (short-dashed black line, 330''), and FeSt 1-457 (long-dashed black line, 284''). Hatched areas display SKA sensitivities for one hour of integration at different frequencies. The two panels on the right side show the flux density as a function of frequency. Empty (solid) circles refer to an S/N smaller (larger) than 3, respectively. The spectral index α is shown on the right of each curve.

¹ We thank Alexei Ivlev for pointing out this mistake.

Fig. 4. Flux density at 60, 114, and 218 MHz (lower-left labels) as a function of magnetic field strength B_0 for model B (see Sect. 5.1). Green shaded areas encompass the curves obtained with Eq. (9) by using $\kappa = 0.5$ and 0.7 . Grey areas correspond to an $S/N < 3$ and dashed lines are power-law fits of $S_\nu \propto B_0^\delta$ with δ listed in the upper-right corner.