

Review of: "Evanescent Electron Wave Spin"

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Potential competing interests: No potential competing interests to declare.

This manuscript is very well written and easy to understand. The work is mainly about the nature of electron spin outside a finite cylindrical potential well as an evanescent wave. In particular, the evanescent wave function of electron outside the well gives a circulating current density. The circulating current density corresponds to the spin of an electron. This means that the spin information can also be obtained outside the potential giving us possible application in sensing and quantum computer.

There are some comments:

1. The labels for z-axis in Fig. 5 upper and lower plots should be given directly in the figure, not only in the caption. Also, the color label in Fig. 4 should be given directly in the figure.
2. This reference should be cited: Ohanian, Hans C. "What is spin?." *American Journal of Physics* 54.6 (1986): 500-505.
Can you comment on that paper in this manuscript?
3. In this work, the spin is represented by the circulating current density. Can you comment on the spin angular momentum itself (Eq. 18 of the reference in comment #2)? Is the S_z equal to $\hbar/2$ in your calculation?