

## Microscopic evidence for scission neutrons

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While nuclear fission has been extensively studied for over 80 years, this phenomenon still lacks a complete and fully microscopic description. One of its most intriguing properties are the spin distributions of the fission fragments (FFs), quantities that are not directly observable in experiment yet play an important role in determining the properties of the neutrons and gammas emitted from the FFs, which are essential experimental tools for understanding and characterizing fission.

In my presentation I will cover the first microscopic extractions of the FF spin distributions, starting with a summary of the microscopic framework, namely the time-dependent density functional theory or equivalently time-dependent density functional theory, then touch upon the projection procedure used to obtain the spin distributions. I will show qualitative results obtained for nuclear systems  $^{240}\text{Pu}$ ,  $^{236}\text{U}$ , and  $^{252}\text{Cf}$ . Finally, I will summarize the progress on ongoing extensions including fission fragment (FF) charge and mass distributions, and the FF particle projected energy spectra.

**Author:** ABDURRAHMAN, Ibrahim

**Presenter:** ABDURRAHMAN, Ibrahim

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