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## **Atomic Response Functions for Light Dark Matter Direct Searches**

*Wednesday 30 August 2023 18:00 (15 minutes)*

Direct searches of sub-GeV light dark matter and its interactions with electrons has been a fast-progressing area. Because the observable energies overlap with typical atomic, molecular, or condensed-matter scales, the detector responses play a crucial role in experimental data analyses and interpretation (so far, in terms of exclusion limits).

In this talk, I will discuss our approach in obtaining atomic response functions based on well-benchmarked many-body methods, and its comparison with other atomic approaches. Our progress of compiling an atomic response function database for general use will also be reported.

### **Submitted on behalf of a Collaboration?**

No

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