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Determinations of physical constants and nuclear properties via few-body atomic systems[1]

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Few-body atomic systems provide sources for deriving fundamental physical constants and nuclear properties, such as the fine structure constant, the proton-electron mass ratio, the Rydberg constant, and the nuclear charge radius, provided both theory and experimental measurement can be carried out to a sufficiently high precision. In this talk, I will discuss recent progress along this line and demonstrate the importance of explicitly correlated methods for quantum few-body systems.

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