

Asymptotic Properties of Atomic Hamiltonians

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We present sharp upper bounds for the behaviour of the ground state eigenfunctions of N -electron atoms with general charge Z . This result is generalisation of the result recently accepted for publication about Helium atom (Hundermark-Jex-Lange 2026). The proof relies on careful energy estimates and use of non-conical regions. Furthermore, we show why using conical regions can not lead to sharp bounds.