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Pseudoscalar and vector mesons in cold nuclear matter

We present updated and extended results mass shift and nuclear bound states pseudoscalar and vector mesons in nuclear matter and nuclei.
The mass shift for these mesons are computed using the quark-meson coupling model and effective lagrangians, while the nuclear bound state energies are obtained by solving the Schrödinger and Klein-Gordon equations with complex optical potentials, for a wide range of nuclei.
The nuclear potentials are obtained in the local density approximation from the mass shift of these mesons in nuclear matter
Our results show that the mesons studied are expected to form mesic nuclei with all the nuclei considered. However, the signal for the formation of the mesic nuclei may be difficult to identify experimentally due to possible large widths.

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