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# The Optical Potential in direct and compound nuclear reactions

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The nucleon-nucleus optical potential (OP) is one of the essential ingredients in both direct and compound reaction calculations. Phenomenological parametrizations based on fits to elastic scattering data are widely used for many applications in astrophysics, basic nuclear science, and nuclear data. However, the explicit connection of the OP with the underlying nuclear structure has always been an active line of research since the seminal papers of Feshbach were published in the 50's. This connection contributes to a better microscopic understanding of nuclear collisions, to a more transparent extraction of structure information from reaction experiments, and to a better controlled extrapolation to scarcely explored regions of the nuclear chart. We will present a brief overview of the status of the field of OPs, as well as of the open lines of investigation.

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