



Contribution ID: 343

Type: **Workshop**

Contributions of Prof Anthony Cowley to the field of knockout reaction studies

Thursday, 30 November 2023 09:00 (25 minutes)

Knockout reaction studies have historically been used as an ideal mechanism to probe the nature of nuclear structure, especially single-particle properties of nuclei by means of proton knockout reactions such as $(p, 2p)$. Nucleon-induced knockout reactions have also proven useful to unravel details of the nucleon-nucleon interaction, as well as the notion of ground state α -clustering in nuclei through $(p, p\alpha)$ reaction studies. From the early $(p, 2p)$ knockout reaction experiments performed on light ${}^2\text{H}$, ${}^3\text{He}$ and ${}^4\text{He}$ targets in the 1970's, to his recent 2021 publication looking at the extent to which knockout, as opposed to a pickup reaction mechanism contributes in preequilibrium (p, α) reactions, Anthony Cowley leaves behind a legacy of experimental nuclear physics research and training in South Africa. In this talk we will look at knockout reactions through the different experimental contributions that Anthony Cowley made throughout his 50-year career in nuclear physics research.

Attendance Type

In-person

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