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Recent studies of astrophysical interest using transfer reactions

Our understanding of stellar evolution has greatly advanced thanks to the synergy between observation, stellar modeling, and nuclear physics. Nuclear reaction rates are fundamental inputs in stellar models, making their study essential for addressing key questions in nuclear astrophysics. Two main experimental approaches are used to determine cross sections: direct measurements and indirect methods such as transfer reactions. However, direct measurements at stellar energies are challenging due to low cross sections, particularly when charged particles or radioactive nuclei are involved. Transfer reactions offer a valuable alternative, allowing the study of both resonant and non-resonant reactions and enabling the extraction of important nuclear structure information such as excitation energies, spin-parity assignments, and decay widths. This talk will present an overview of key astrophysical reactions recently investigated using the transfer reaction method.

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