



Contribution ID: 19

Type: **not specified**

Symmetries of the IBFFM and transfer reactions between odd-odd and even-even nuclei by using IBFFM

Thursday, 13 July 2023 17:30 (20 minutes)

Symmetries of the IBFFM will be discussed and Spectroscopic Amplitudes (SA) in the Interacting Boson Fermion Fermion Model (IBFFM) are necessary for the computation of $0\nu\beta\beta$ decays but also for cross-sections of heavy-ion reactions, in particular, Double Charge Exchange reactions for the NUMEN collaboration, if one does not want to use the closure limit. We present for the first time: the formalism and operators to compute in a general case the spectroscopic amplitudes in the scheme IBFFM from an even-even to odd-odd nuclei, in a way suited to be used in reaction code, i.e., extracting the contribution of each orbital. The one-body transition densities for $116\text{Cd} \rightarrow 116\text{In}$ and $116\text{In} \rightarrow 116\text{Sn}$ [1] are part of the experimental program of the NUMEN experiment, which aims to find constraints on Neutrinoless double beta decay matrix elements.

[1] Ruslan Idelfonso Magaña Vsevolodovna, Elena Santopinto, Roelof Bijker, Phys.Rev.C 106 (2022) 4, 044307
• e-Print: 2101.05659 [nucl-th]

Primary author: SANTOPINTO, Elena (Istituto Nazionale di Fisica Nucleare)

Co-authors: BIJKER, Roelof; MAGAÑA VSEVOLODOVNA, Ruslan Idelfonso

Presenter: SANTOPINTO, Elena (Istituto Nazionale di Fisica Nucleare)

Session Classification: Oral contributions