

Spectroscopy studies in the $A = 18 - 26$ Ne-F region using the AGATA-PRISMA spectrometer

venerdì 21 giugno 2024 09:00 (20 minuti)

I present recent AGATA-PRISMA results obtained at Laboratori Nazionali di Legnaro to study the transition into the $N = 20$ Island of Inversion by multi-nucleon transfer reactions using a ^{22}Ne beam and a ^{238}U target. The experiment aims at exploring the boundaries of the Island of Inversion, following the evolution of negative parity states from the fp shell, locate excited intruder configurations and tracking the development of quadrupole and octupole collectivity toward $N = 20$. This study is primarily focused on the spectroscopy of Ne and F isotopes with neutron number $N = 10 - 16$ to benchmark state-of-the-art nuclear structure theories. The experimental setup, comprising the AGATA γ array coupled to the PRISMA magnetic spectrometer, allowed us to detect and identify the ions of interest and measure, in coincidence, γ rays from excited states. AGATA-PRISMA calibrations and preliminary results will be discussed.

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Classifica Sessioni: On-going analysis

Classificazione della track: Spectroscopy