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FIRST RESULTS OF REACTIONS INDUCED WITH EXOTIC BEAMS IN THE REGION OF ^{11}Be WITH CHIMERA ARRAY

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Nowadays our understanding of atomic nuclei is strongly oriented to the study of exotic nuclei. The availability of energetic beams of short-lived nuclei, referred to as radioactive ion beams (RIBs), has opened the way to the study of the structure and dynamics of new nuclear species, and to investigate nuclear matter under extreme conditions.

In Catania, at Laboratory Nazionali del Sud is available a facility that produces radioactive beams at Fermi energies through in flight separation technique of projectile fragmentation products. With these beams and the CHIMERA multidetector, we have performed two experiments by using ^{13}C and ^{18}O as primary beams at 55 MeV/A impinging on ^9Be target and measuring reactions induced by various exotic beams as $^{10,11,12}\text{Be}$, $^{12,13,14}\text{B}$ and $^{16,17}\text{C}$. We report preliminary results obtained on the reactions $^{11}\text{Be}(p,d)^{10}\text{Be}$ and $^{10}\text{Be}(d,p)^{11}\text{Be}$: the two reactions allow to study ^{11}Be nuclear halo structure.

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