

## Recent searches for fast and heavy proton emitters at ATLAS\*

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Proton decay is a unique and a very sensitive probe of nuclear structure far from the line of stability. Proton-decay  $Q$ -values provide information on nuclear masses beyond the proton drip line. Proton-decay widths can be used to deduce spins and parities of proton-decaying ground states and isomers and constrain their deformation. The ATLAS facility at Argonne National Laboratory has a long tradition of proton emitter studies using the Fragment Mass Analyzer. In recent years, these studies were focused on rapidly-decaying proton emitters, which can be observed using digital electronics, and on heavy proton emitters which can be studied using the recently constructed Argonne Gas-Filled Analyzer. Preliminary results from these searches will be presented. Prospects for proton-decay studies at ATLAS and at other facilities will be also discussed.

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