



NUSTAR Seminar

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Wednesday, Aug. 07, 2019 at 14:30 p.m.

Seminar Room Theory SB3.3.170a

GSI, Planckstraße 1, 64291 Darmstadt

“Excursion to limits of nuclear existence: studies of three-proton and four-proton precursors ^{17}Na , ^{20}Al , ^{18}Mg ”

Unbound nuclear systems are expected to demonstrate individual discrete states (and therefore they may be named as nuclear isotopes) within restricted areas just beyond the drip lines. For example, the limits of existence of nuclear structure were predicted for Argon and Chlorine isotopic chains, where the lightest possible isotopes are located by 5-6 atomic nuclear mass beyond the proton drip line. Within such a region, new multi-proton decay channels are predicted. I report the three- and four-proton decays of the previously-unknown isotopes ^{17}Na , ^{20}Al , ^{18}Mg which were observed by detecting all products of their decay in-flight by tracking technique in the middle of FRS.

Coordinators: Timo Dickel
Secretary: Luise Dörsching-Steitz/Daniela Preß
<https://indico.gsi.de/event/9256/>