**Measurement of the reactions with light nuclei by AMBER experiment at CERN**

Dzyuba A.A.1, Inglessi A.G.1, Ivshin K.А.1, Maev E.M.1, Solovev A.Н.1, Solovyev I.Н.1, Vasiliev A.A.1, Vznuzdaev M.E.1 for the AMBER Collaboration

*1 NRC «Kurchatov Institute» - PNPI*

E-mail: dzyuba\_aa@pnpi.nrcki.ru

The recently approved NA66/AMBER experiment (Apparatus for Meson and Baryon Experimental Research) at the CERN Super Proton Synchrotron pursues a broad research program [1]. An essential part of the program is a measurement of the antiproton production cross section in proton-helium collisions, which will provide much needed input for the searches of Dark Matter. This, as well as other proposed experimental studies to address the various aspects of the so-called Emergence of Hadron Mass mechanism: the proton and mesons charge radii, the mesonic parton momentum distributions, will be discussed.

1. COMPASS++/AMBER: Proposal for Measurements at the M2 beam line of the CERN SPS Phase-1: 2022-2024, CERN-SPSC-2019-022; http://cds.cern.ch/record/2676885