The p-He cross section measurement: a physics case from cosmic rays

Monday, 6 July 2015 - Tuesday, 7 July 2015 Torino

Book of Abstracts

Contents

welcome	1
The p-He cross section: the physics case	1
Results from AMS-02	1
Indirect dark matter detection and the effect of cross section uncertainties	1
The antiproton cosmic ray flux and the antiproton production cross section	1
The COMPASS experiment	1
Nuclear data for cosmic ray physics with AMS	1
Proposal to use the LHCb-SMOG detector to measure the antiproton production in p-He at LHC	2
Discussion: What next about theory, experiments, dissemination	2
The need for antideuteron production cross section measurements	2
A new evaluation of the antiproton production cross section for cosmic ray studies	2
Cross sections problems for antiprotons	2
Cosmic rays and accelerators: future	2
DISCUSSION	3
Nuclear interaction studies with AMS	3

2

Welcome

3

The p-He cross section: the physics case

Corresponding Author: fiorenza.donato@to.infn.it

4

Results from AMS-02

Corresponding Author: bruna.bertucci@pg.infn.it

5

Indirect dark matter detection and the effect of cross section uncertainties

Corresponding Author: andrea.vittino@to.infn.it

6

The antiproton cosmic ray flux and the antiproton production cross section

Corresponding Author: paolo.lipari@roma1.infn.it

7

The COMPASS experiment

Corresponding Author: oleg.denisov@to.infn.it

8

Nuclear data for cosmic ray physics with AMS
Corresponding Author: nicola.tomassetti@cern.ch
9
Proposal to use the LHCb-SMOG detector to measure the antiproton production in p-He at LHC
Corresponding Author: alessia.tricomi@ct.infn.it
10
Discussion: What next about theory, experiments, dissemination.
11
The need for antideuteron production cross section measurements
Corresponding Author: philipvd@hawaii.edu
12
12
A new evaluation of the antiproton production cross section for cosmic ray studies
Corresponding Author: mattia.dimauro@to.infn.it
13
Cross sections problems for antiprotons

14

Cosmic rays and accelerators: future

The p-He cross section measurement: a physics case from cosmic rays / Book of Abstracts

 $\textbf{Corresponding Author:} \ adriani@fi.infn.it$

15

DISCUSSION

17

Nuclear interaction studies with AMS

 $\textbf{Corresponding Author:} \ valerio. for mato@cern.ch$