Contribution ID: **32** Type: **Oral**

Production and characterization of 7Be targets for neutron cross section measurements

Monday, 19 June 2017 18:50 (20 minutes)

Nuclear Physics in Astrophysics 8 template for abstract
%
% Format: LaTeX2e.
%
% Rename this file to name.tex, where 'name' is the family name
% of the first author, and edit it to produce your abstract.
%
\begin{document}
\documentstyle[11pt]{article}
%
% PAGE LAYOUT:
%
\textheight=9.9in
\textwidth=6.3in
\voffset -0.85in
\hoffset -0.35in
\topmargin 0.305in
\oddsidemargin +0.35in
\evensidemargin -0.35in

%\renewcommand{\rmdefault}{ptm} % to use Times font

\long\def\TITLE#1{{\Large{\bf#1}}}\long\def\AUTHORS#1{ #1\\[3mm]}
\long\def\AFFILIATION#1#2{[1] #2\\}
\begin{document}
{\small \it Nuclear Physics in Astrophysics 8, NPA8: 18-23 June 2017, Catania, Italy}

\vspace{12pt}

\thispagestyle{empty}

\begin{center}
%%%
%%% Title goes here.
%%%
\TITLE{Production and characterization of 7Be targets for neutron cross section measurements }\\[3mm]
%%%
%%% Authors and affiliations are next. The presenter should be
%%% underlined as shown below.
%%%
$AUTHORSE.A.Maugeri$^{1}, $S.Heinitz$^1, $R.Dressler$^1, $D.Schumann$^1

AFFILIATION1Paul Scherrer Institut, Switzerland
vspace12pt

centerlineContact email: emilio-andrea.maugeri@psi.ch

vspace18pt

This contribution presents the production and the characterization of ^{7}Be targets used for the measurement of the ^{7}Be(n,\$alpha$)^{4}He and the ^{7}Be(n, p)^{7}Li cross sections in the energy range of interest for the Big-Bang nucleosynthesis.
In particular, two targets of 25 GBq and one of 4 GBq of ^{7}Be were produced via molecular plating and via droplets deposition at PSI-Switzerland. These targets were used for the measurements of the ^{7}Be(n, \$alpha$)^{4}He cross section at n$_T$$OF - CERN - Switzerlandandat$$SARAF - Israelfacilities.Thethicknessandtheuniformityoftheobtainedtargetswerecharacterizedbymeasuringtheenergydeg spectroscopysimulationprogram(AASI)$.
$Onetarget, usedtomeasurethe^{7}Be(n,p)^{7}Licrosssectionatn_TOF-CERNfacility, wasobtainedviaimplantation$ activity in the target and its spatial distribution were measured at PSI-Switzerland.

\bigskip
{\small

%%%
%%% End of abstract.
%%%
\end{document}

Primary author: Dr MAUGERI, Emilio Andrea (Paul Scherrer Institut)

Co-authors: Dr STEPHAN, Heinitz (Paul Scherrer Institut); Dr SCHUMANN, Maria Dorothea (Paul Scherrer Institut); DRESSLER, Rugard (Paul Scherrer Institut)

Presenter: Dr MAUGERI, Emilio Andrea (Paul Scherrer Institut)

Session Classification: Direct measurements 1