Contribution ID: **223** Type: **Poster**

Semiclassical approach to sequential fission in peripheral collisions

**Click here to download the template: <a href="https://agenda.infn.it/materialDisplay.py?mater
Word , <a href="https://agenda.infn.it/materialDisplay.py?materialId=2&confId=5235">Lat**

```
\documentstyle[12pt,epsf]{article}
\pagestyle{plain}
\tolerance=10000
\renewcommand{\baselinestretch} [0] {0.95}
\setlength {\textheight}{24.0cm}
\setlength {\topmargin}{-3.0cm}
\setlength {\textwidth}{17.0cm}
\setlength {\hoffset}{1.5cm}
\setlength {\evensidemargin}{-2cm}
\setlength {\oddsidemargin}{-2cm}
\parskip 0pt

\begin{document}
% do not change the conference title
\noindent{\underline{The 12th International Conference on Nucleus-Nucleus Collisions, June 21-26, 2015, Catania, Italy}}

\vspace*{0.5cm}
\begin{center}
% insert the title of your abstract here
{\large \bf Semiclassical approach to sequential fission in peripheral collisions}
\end{center}

\begin{center}
% insert the authors here. The presenter is underlined
{A. Strazzeri}[1], A. Italiano[2]
\end{center}

\begin{center}
% these are the corresponding institutions
{\em [1] Dipartimento di Fisica e Astronomia dell'Universit\'{a} di Catania, Italy} \\
{\em [2] Istituto Nazionale di Fisica Nucleare, Gr. Coll. di Messina, Italy}
\end{center}

% write your abstract here
A closed-form semiclassical approach describing in a
single picture both the evaporation
component and the fast nonequilibrium component of the
sequential fission of projectilelike fragments in a peripheral heavy-ion
collision is derived and then applied to the dynamical fission observed in
```

the ^{124}Sn+^{64}Ni peripheral collision at 35A MeV. Information on opposite polarization effects of the fissioning projectilelike fragments and on “dynamical fission lifetimes” are obtained. This approach allows, in spite of its simplicity, to reproduce many of the observed features of both E and NE in-plane angular distributions of the heavier fragment from the PL nucleus splitting.

\vspace*{0.5cm}

\setlength \parindent{0 cm}

% write your references here
[1] E. De Filippo \emph{et al.}, Phys. Rev. C {\bf 71}, (2005) 064604, and references therein.

[2] A. Strazzeri and A. Italiano,
Int. J. Mod. Phys. E {\bf 23}, (2014) 1450081, and references therein.

\end{document}

Primary author: Prof. STRAZZERI, Andrea (Dip. Fisica e Astronomia, Universita’ di Catania)

Co-author: Dr ITALIANO, Antonio (INFN, G.C. Messina, Italy)

Presenter: Dr ITALIANO, Antonio (INFN, G.C. Messina, Italy)

Track Classification: Fusion and Fission