



Contribution ID: 21

Type: poster

## On the possibility of resonance capture of valence electrons by non-relativistic protons channeled in carbon nanotubes

*Monday, 9 September 2024 18:30 (1 hour)*

In the paper, calculations were made on resonance capture of valence electrons by non-relativistic protons channeled in carbon nanotubes. The probabilities of the formation of hydrogen atoms with such capture were calculated using the non-stationary perturbed theory. Ionization processes are also analyzed and it is shown that in a certain range of speeds a sufficiently high yield of neutral hydrogen atoms is achieved.

**Primary author:** MAKSYUTA, Mykola (Taras Shevchenko National University of Kyiv, Ukraine)

**Co-authors:** VYSOTSKII, Vladimir (Kiev National Shevchenko Univ, Kiev, Ukraine); DABAGOV, Sultan (Istituto Nazionale di Fisica Nucleare); Mr MAKSYUTA, Dmytro (Taras Shevchenko National University of Kyiv, Ukraine)

**Presenter:** MAKSYUTA, Mykola (Taras Shevchenko National University of Kyiv, Ukraine)

**Session Classification:** Poster Session 1