

**EXPERIMENTAL STUDY OF ECR ION SOURCE
PARAMETERS USING SHORT PULSE INJECTIONS
OF HG AND NOBLE GASES LEAKAGES AT MASHA SETUP**

Vedenev V.Yu.¹, Rodin A.M.¹, Krupa L.^{1,2}, Chernysheva E.V.¹, Dmitriev S.N.¹,
Gulyaev A.V.¹, Gulyaeva A.V.¹, Kamas D.³, Komarov A.B.¹, Novoselov A.S.¹,
Opíchal A.⁴, Salamatín V.S.¹, Stepanov S.V.¹, Podshibyakin A.V.¹,
Yukhimchuk S.A.¹

¹ *Joint Institute for Nuclear Research, Flerov Laboratory of Nuclear Reactions, Joliot Curie
6, Dubna, Moscow region, 141980 Russia;* ² *Institute of Experimental and Applied Physics,
Czech Technical University in Prague, Horská 3a/22, Prague 2, 12800, Czech Republic;*

³ *Institute of Physics, Slovak Academy of Sciences, Dubravská cesta, 9, Bratislava, 84228
Slovakia;* ⁴ *Palacký University Olomouc, Křížkovského 511/8, CZ-771 47 Olomouc, Czech
Republic*

E-mail: vvedeneyev@gmail.com

A short pulse injection of mercury as a homologue of Copernicium and Flerovium and noble gases such as leakages of Xenon and Krypton inside the ECRIS represents more real picture on a processes inside the system during an experiment than continuous one. A large extraction time of mercury makes detection and research of mercury-like SHEs almost impossible. An extraction time could be decreased using different ion source chamber and transportation line wall coverings. For that reasons an extraction time and efficiency of ECR ion source were measured at MASHA installation, FLNR, using short-time gas valve “Parker”, which could make injections with a duration up to 2 ms and compared to results gathered with continuous calibrated leakages. In a present speech a question and a solving of these problems would be risen.