A semi-empirical method was developed to calculate range and stopping power of heavy ions from Hydrogen to Uranium in the 1-1200 MeV/amu specific energy range by Barkas and Berger [1]. Benton and Henke [2] modified the program to extend it's applicability down to 0.1 MeV/amu specific energy, and to eliminate a discontinuity in the Bragg curves calculated with the above mentioned method. This modified program has been widely used in medical physics, space dosimetry, and radiation biophysics in the past two decades.

An error have been found in Benton and Henke's extension of the method, which leads again to discontinuity in the Bragg curves. While the original discontinuity has been eliminated by Benton and Henke, they have introduced another discontinuity.

This error has been corrected, and the corrected method has been implemented in C language. Stopping power calculated with this code, experimental stopping power data, and stopping power calculated with the RMI_Toolbox [3], are compared, and will be presented.

[1] Barkas W.H. and M.J. Berger, National Academy of Sciences-National Research Council, Publication 1133, (1964)

[2] Benton E.V. and R.P. Henke, Nuclear Instruments and Methods, 67 (1969) p.87.

[3] Almassy J.J., "A Software System for Simulation of the Penetration of Photons, Electrons, Positrons, and Heavy Ions in Matter" (abstract), Medical Physics 18(3), (1991) p. 607.