

Abstract Submitted  
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**The Last/Heaviest element of the Periodic table and the neutrons-proton diagram** ALBERT KHAZAN — The raised stability of the atomic nucleus containing 2, 8, 20, 28, 50, 82 and 126 protons and neutrons, is caused by that growth of number of neutrons advances quantity of protons in heavy nucleus. As a result they become energetically steadier. The nucleus we have calculated, including an element 155, is located in the line of a trend whose size of reliability makes 0.9966. The element predicted by some scientists, with nucleus  $Z=114$ ,  $N=184$ , is far distant in the party. Thus it was found out, that with  $Z=114$  the  $N$  should be 179, and also  $N=184$  results  $Z=116$ . In the field of the numbers 104-114 there are essential fluctuations of the nuclear masses and the numbers of neutrons. It is due to the fact that, in the Periodic Table, the nuclear mass of the most long-living isotopes of an element is a result of that fact that the breaking of the strict law of increase in the mass with the growing up of the charge of a nucleus. Independence of the line of a trend of the position of the last element has been verified by calculation. Therefore it is offered to consider  $N$  155 for diagnosing products of nuclear reactions. (Progr. Physics, 2007, v.1, 38; v.2, 83; v.2, 104; 2008, v.3, 56).

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