SCIENTIFIC COMPUTING IN PYTHON

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Python is used in many ways. There are libraries for scientific calculations that make life easier for scientists. This language is fond of physics and mathematics for its easy to use.

Keywords: Python, MATLAB, NumPy, SciPy, Scikitlearn.

The Python programming language quite rapidly. Its scope is quite extensive, it is used in Web development, system administration, software and games, as well as in scientific research. Python is used and distributed free of charge, you can download it from official sites www.python.org. It is used in such campaigns as Google, Facebook, Dropbox, NASA, Fermilab, JPL. Using Python you can implement machine learning, an example is the prediction of the financial market. Intel, Cisco, and IBM use Python for hardware testing. The ease of this language, his love of mathematics and physics. MATLAB was originally written for scientific computing, unlike Python. But Python has many libraries that make life easier for scientists. An example of such libraries are SciPy is the library of scientific tools. It has modules to integrate and allows to solve the differential equation, signal processing, and helps in various problems that are solved in science and engineering. On top of it implemented a variety of modules for different fields of science. One of them Scikitlearn. These modules can be compared to MATLAB Toolbox. NumPy package allows you to conveniently work with vectors and matrices, the realization of all operations with them are carefully optimized. NumPy can be compared with the "core" of the MATLAB language. In the vast majority of research projects are written in Python using NumPy. Were also developed the Anaconda distribution, containing 720 packages, libraries for scientific and engineering computing.

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THE STATE OF CALCIUM METABOLISM IN RAT PLATELETS IN THE NEAREST AND LONG TERM AFTER IRRADIATION

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The investigation of the status of calcium metabolism in platelets of rats in the early and late periods after irradiation.Under the action of γ-radiation on platelets of rats revealed a change in indices of calcium metabolism in the early and late periods after irradiation (3rd, 10th and 30th day).

Keywords: calcium metabolism, platelets, irradiation.

Under ionizing radiation on the body one of the most sensory systems is the blood system. Among the cell elements, platelets play a crucial role in changing hemodynamic properties.One of the factors triggering platelet aggregation is Ca^{2+}. The calcium metabolism in rat platelets was analyzedin the experiment. Studies were carried out on mature white male rats (3 to 6 months age). Two groups of animals were studied. One group, the control group, was kept in the usual conditions of the vivarium. The animals of the second group were irradiated with