

## Software for Processing and analyzing data for detectors of the Medipix family

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This report describe the current stage of developing a new multi-energy X-ray tomograph, which based on hybrid semiconductor pixel detector Widepix. The Widepix analyser software was written for processing the data of the detector during this work.

The Widepix detector is one of Medipix series detectors, which are hybrid semiconductor pixel detectors developed by the Medipix collaboration. They consist of two parts: a sensor and a readout chip. In sensor substance a hitting charged particle cause appearing of a signal. The signal is digitized and compared with adjustable threshold in the pixels of the chip part. By this way, Medipix series detectors are able to register radiation in different energy diapasons [1, 2].

The developed software operates only with raw detector's data. The software provides possibilities to construct different types of spectra, frames and distributions. It can make a lot of operations with the data like as flat field correction, pixel filtering, arithmetic operation with spectra. The software is possible to calculate statistical parameters of frames data. The result of the program operations can be saved in different types of files.

### The speaker is a student or young scientist

Yes

### Section

1. Nuclear technology and methods in medicine, radioecology

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