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## Characterization of large-size diamond sensors for medical and nuclear applications

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For several years, LPSC Grenoble and collaborators have been studying the particle detection performance of large-size diamond sensors with the prospect of using them in medical or/and nuclear applications. CVD single & poly crystals as long as heteroepitaxial sensors have been exposed to beta and alpha particles, to 8.5 keV x-ray bunches at ESRF, to fission products at ILL, to protons at ARRANAX and CAL and carbon ions at GANIL. They were also scanned with an EBIC setup at Institut Néel in order to draw a 2D map of their response. The charge collection, time and energy performance has been measured. A summary of the results will be presented together with a prospect for the targeted applications.

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