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Green-oriented upgrade of accelerator complex at the SPring-8 campus

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In recent years, even accelerators, which are fundamental tools for advanced researches, should be green regarding energy/resource consumption and operation efficiency. How to improve the performance of accelerators in such an environment will be a major challenge for the field of accelerator science and technology. Against this backdrop, we have developed a long-term plan to promote the green-oriented upgrade of accelerator complex at the SPring-8 campus. We have started to integrate and rationalize the two independent accelerator systems, SPring-8 and SACLA, achieving a 20 % energy saving in a synchrotron radiation facility. We will then, as a next step, renovate the current SPring-8 storage ring by incorporating cutting-edge technologies not only to improve its performance but also to significantly reduce energy consumption by half. Upgrade of current SACLA will follow the SPring-8 upgrade. This presentation will describe our strategic accelerator upgrade plan, its progress and achievements, and future developments.

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Footnotes

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Yes

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