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# The Simulation Library of the Belle II Experiment

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SuperKEKB, a next generation B factory, has finished being constructed in Japan as an upgrade of the KEKB e+e- collider. Currently it is running with the BEAST II detector, whose purpose is to understand the interaction and background events at the beam collision region in preparation for the 2018 launch of the Belle II detector. Overall SuperKEKB is expected to deliver a rich data set for the Belle II experiment, which will be 50 times larger than the previous Belle sample. Both the triggered physics event rate and the background event rate will be at least 10 times that of the previous experiment, which creates a challenging data taking environment. The software system of the Belle II experiment has been designed to execute this demanding task. A full detector simulation library, which is a part of the Belle II software system, has been created based on Geant4 and tested thoroughly. Recently the library was updated to Geant4 version 10.1. The library is behaving as expected and is utilized actively in producing Monte Carlo data sets for diverse physics and background situations. In this talk we explain the detailed structure of the simulation library and its interfaces to other packages such as generators, geometry, and background event simulation.

## Primary Keyword (Mandatory)

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## Secondary Keyword (Optional)

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**Author:** KIM, Doris (Soongsil University)

**Co-author:** RITTER, Martin (LMU Munich)

**Presenter:** RITTER, Martin (LMU Munich)

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