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## (I) Belle II Experiment Highlights and Future Prospects

*Wednesday 21 June 2023 10:30 (30 minutes)*

The Belle II experiment at the SuperKEKB asymmetric  $e^+e^-$  collider in Japan is a state-of-the-art upgrade to the original Belle experiment and is searching for new physics at the Intensity Frontier. Since commencing physics data taking in 2019, SuperKEKB has become the world's highest luminosity particle collider as Belle II approaches its target integrated luminosity of  $50 \text{ ab}^{-1}$ , which will be 40 times larger than the combined datasets of the previous BaBar and Belle experiments. Enhanced by new dark sector triggers and its clean  $e^+e^-$  collision environment, Belle II is pursuing a vast physics program that includes searches for rare decays of heavy hadrons and leptons, precision measurements of Charge-Parity Violation and cross-sections, and dark sector searches. This talk will present highlights of recent Belle II physics results and discuss the experiment's exciting future prospects.

### Keyword-1

Belle II Experiment

### Keyword-2

Intensity Frontier

### Keyword-3

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