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## Quarkonium studies at Belle II

*Tuesday, April 9, 2019 5:25 PM (35 minutes)*

The Belle II experiment at the SuperKEKB energy-asymmetric  $e^+e^-$  collider is a substantial upgrade of the B factory facility at the Japanese KEK laboratory. The design luminosity of the machine is  $8 \times 10^{35} \text{ cm}^{-2} \text{ s}^{-1}$  and the Belle II experiment aims to record  $50 \text{ ab}^{-1}$  of data, a factor of 50 more than its predecessor. From February to July of this year, the machine has completed a commissioning run, achieved a peak luminosity of  $5.5 \times 10^{33} \text{ cm}^{-2} \text{ s}^{-1}$ , and Belle II has recorded a data sample of about  $0.5 \text{ fb}^{-1}$ . Belle II is uniquely capable of studying the so-called “XYZ” particles: heavy exotic hadrons consisting of more than three quarks. First discovered by Belle, these now number in the dozens, and represent the emergence of a new category within quantum chromodynamics.

This talk will present the prospects of Belle II to explore both exotic and conventional quarkonium physics.

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