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Review of beam dynamics issues during RHIC Beam Energy Scan Phase-II. CHUYU LIU, Brookhaven National Laboratory, RHIC TEAM — To explore the first-order phase transition and determine the location of a possible critical point, the Beam Energy Scan Phase II (BES-II) is being performed at the Relativistic Heavy Ion Collider (RHIC) with collisions of beams in the energy range from 9.8 GeV to 3.85 GeV. The operation at such a low energy range at RHIC are very challenging due to multiple beam dynamics, of which the most significant are intra-beam scattering, space charge, beam-beam, beam instability, and persistent current effects. This presentation will review these issues and the measures being taken to combat them during the first two years of BES-II operation. A outlook of the final year BES-II operation will be presented as well.

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