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Hadronic probes of dense matter at RHIC: from light to heavy flavors YASUYUKI AKIBA, RIKEN, Institute of Physical and Chemical Research

A new state of dense matter has been discovered in collisions of heavy nuclei at RHIC. The matter is characterized by extremely high density, very rapid thermalization, and strong collective flow. The discovery is mainly based on an extensive set of measurements such as particle ratios, momentum distributions and elliptic flow patterns of light flavored hadrons. New measurements of heavy quarks (charm and beauty) at RHIC will start shedding additional new light on the property of the matter. Due to their much larger mass, heavy quarks can interact with the dense medium in a way very different from light quarks. Therefore heavy quark measurements will provide new information on the property of the matter. In this talk, I review the present status and future prospect of the study of the dense matter at RHIC through hadronic probes of light and heavy flavors with emphasis of the new data of heavy flavor measurements at RHIC.