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The radioactive beam facilityExperiments with slowed-down and stopped beams; The low-energy branch; High-resolution in-flight spectroscopy (HISPEC); Decay spectroscopy (DESPEC); The advanced trapping system MATS; The laser-spectroscopy experiment LASPEC; Reactions with Relativistic Radioactive Beams (R3B); Experiments with stored and cooled beams; Isomeric beams, lifetimes, and masses (ILIMA); Reactions at internal targets in the NESR (EXL); Electron scattering with short-lived nuclei (ELISe); The Antiproton-Ion-Collider AIC; Conclusion
Nuclear structure studies at RIKEN: New measurements with in-flight fast radioactive beams

Sommario/riassunto

Physicists have devoted much effort to reproducing the conditions of the primordial universe in laboratory conditions in their quest to work out a comprehensive theory of the appearance and evolution of nuclear matter. Whether it be trying to recreate the predicted primordial state of high-energy density matter in which quarks and gluons are effectively deconfined - the so-called Quark Gluon Plasma (QGP) - or exploring the structure and reaction properties of very unstable nuclei in experiments using radioactive beams, they have striven to understand the events which characterized the Big Bang