

【Abstract of 2009 Grant – in – Aid for Scientific Research on Innovative Areas
(Research in a proposed research area)】

Title of project	The Physical Origin of the Universe viewed through the Cosmic Background Radiation - from Cosmological Inflation to Dark Ages -
Head Investigator Name	HAZUMI Masashi , Inter-University Research Institute Corporation High Energy Accelerator Research Organization, Institute of Particle and Nuclear Studies, Professor
Abstract of Research Project	How did the universe begin ? What are the fundamental laws of nature behind the origin of the universe ? The purpose of the project is to answer these questions. To this end, we form a large collaboration with researchers from space science, particle physics, astrophysics, astronomy and superconducting device studies. We focus on cosmic background radiation. Based upon state-of-the-art technologies as well as theoretical studies, we will scientifically investigate the era “before the Big Bang”. This project will allow us to produce world-leading new observational results. We also expect that theoretical analyses on the results will provide a breakthrough on ultra-high energy physics.
Term of Project: 2009–2013	