Preface

The Active Fault and Earthquake Research Center (AFERC), Geological Survey of Japan, AIST has been newly established in this April, 2009. This new research center combines the former Active Fault Research Center (AFRC) which had been studying active faults, paleoearthquakes, and earthquake disasters, and two research groups in the Institute of Geoscience and Geoinformation which had been focusing on earthquake source mechanisms and earthquake-related hydrology. Researchers, in geology and geophysics, in the new center are expected to cooperate more closely in order to bridge a gap between studies of near-surface phenomena and of deep underground processes and to respond to the following earthquake-related situations in Japan.

The 2008 Iwate-Miyagi Inland Earthquake occurred in an area where no active fault had been recognized, while post-earthquake surveys told us that this earthquake occurred on an active fault that repeatedly caused large earthquakes. This demonstrates the existence of active faults that are difficult to identify through conventional methods. In addition, probabilities of the next Tokai, Tonankai, and Nankai earthquakes occurring within the next 30 years are very high, at 50% or more. We believe the missions of the new research center should respond to these situations.

The Geological Survey of Japan will continue to publish the Annual Report on Active Fault and Paleoearthquake Researches. 2000 copies will be printed and distributed to related organizations and individuals as previously. This volume contains 12 reports based mainly on activities of the former AFRC in 2008. Among them, the following studies are supported by external funds: paleoearthquake and related studies on the Kanto–heiya–hokuseien fault zone, on the Takayama-Oppara fault zone and on the Matsumoto-bonchi-toen faults were results of the projects contracted by MEXT; constructions of velocity structures in the Ishikari plane and in the Niigata basin and a study of a fault structure model of the 2003 Northern Miyagi earthquake were supported by METI and by JNES, respectively.

We welcome comments from readers on the contents of this report, and the ways to publicize the results of our surveys and researches. Finally, we would like to express our sincere gratitude to land owners, local communities and municipalities that allowed us to work in private properties.

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October 23, 2009