

## **2003 IASPEI Annual Report for the Working Group on Seismic Imaging of the Lithosphere.**

The year 2003 marked the first year for this Working Group. However, we have a long and proud history, having been born more than thirty years ago as the Commission on Controlled Source Seismology (CCSS).

The initial CCSS workshop in Moscow has been followed by frequent meeting and workshop. This follows from the fact that active and passive source seismic studies of the crust and upper mantle have been one of the primary research activities in geophysics during the past several decades. At present, passive seismological methods, such as seismic tomography and receiver functions, have found broad acceptance and application. Therefore, our scientific community embraced the concept of a "bigger tent" to encompass all of our interested colleague. The result is the much broader Working Group on Seismic Imaging of the Lithosphere to replace the CCSS.

Highlights of the year include the very successful international symposium on "Seismic imaging of the continental and their margins" in beautiful Taupo, New Zealand. This meeting attracted over 200 participants, and has resulted in an impressive volume, now complete, that will be published by Tectonophysics.

A second highlight was the workshop on seismic analysis methods held nearby to the Virginia Tech in Blacksburg, Va., USA. John Hole of Virginia Tech and Colin Zelt of Rice University were the co-convenors. The goals of the workshop were to exploit the vast improvements that are underway in seismic field instrumentation and computer processing capabilities. These technical capabilities are allowing the development of procedures to determine subsurface structure with higher resolution, to better investigate lithologic properties through  $V_p/V_s$ , anisotropy, attenuation, and AVO reflectivity, and to better determine out-of-plane and 3-D structure. This improved imaging has in turn allowed new important geologic questions to be addressed relating to faulting, fluids, rheology, and deformation. To this end, the workshop succeeded in testing and evaluating the latest approaches, and to discuss strengths and limitations of different methods. About thirty-five people from around the world attended.

The final highlight to be mentioned is the participation of members of this Working Group in the IUGG meeting in Sapporo, Japan. This meeting attracted a large number of scientific contributions concerning the deep structure, composition, and evolution of the oceanic and continental lithosphere. Many topics were debated, and many new results were presented. In addition, a formal meeting of the Working Group was organized by Walter Mooney, and the future plans for participation in IASPEI congresses and other important workshops were discuss.

The Working Group on Seismic Imaging of the Lithosphere is one of the largest and most active groups within IASPEI, and looks forward to a very active year during 2004.

Walter Mooney