

FOREWORD

The Proceedings includes selected papers presented at the International Workshop “Local Tsunami Warning and Mitigation” (Petropavlovsk-Kamchatskiy, Russia, on September 10-15, 2002). The Proceedings is published in English and in Russian. The content of English and Russian volumes is identical.

The workshop was jointly organized by the IUGG Tsunami Commission and the International Co-ordination Group for the Tsunami Warning System in the Pacific of the UNESCO in response to the recommendations of the XVIII Session of UNESCO/IOC/ICG/ITSU. P.P. Shirshov Institute of Oceanology of the Russian Academy of Sciences (RAS) and the Kamchatka Seismological Department of Geophysical Service of the RAS led the Workshop as local organizers.

Destructive effects of many tsunamis are confined to the areas within one hour of the propagation time (that is, within several hundred km of their source location). These tsunamis are classified as local, as opposed to the regional and the Pacific-wide tsunamis whose destructive effects can be exposed well outside (up to 10 thousand km) their area of origin. In all the main Pacific tsunamigenic regions, the majority of tsunami-related casualties and property damage come from local tsunamis. A very short travel time increases a local tsunami hazard. It is therefore an important challenge for the research community and decision-makers to identify the ways for reducing losses of lives and property damage from the local tsunamis. The main purpose of the Workshop was to consider the state-of-the-art of the local tsunami problem and to discuss fundamental and applied studies directed at the reduction of a local tsunami hazard.

As one of the most active seismic- and tsunami-prone areas in the Pacific, having a long history of historical and paleo-tsunamis and complemented by interesting environmental features, Kamchatka was an appropriate place for the international tsunami community members to discuss the local tsunami problem. Additionally, the workshop was held in commemoration of the 50th anniversary of the 1952 Great Kamchatka Earthquake and Tsunami. The magnitude 8.3 Kamchatka earthquake of November 4, 1952 generated a catastrophic tsunami that killed more than two thousand people in the Northern Kuriles. The town of Severo-Kurilsk (Paramushir Island) was completely destroyed. This catastrophic event initiated the scientific study of the tsunami problem in Russia and resulted in the creation of the Soviet Far East Tsunami Warning System at the end of the 50s.

Over 100 scientists (42 registered participants) from 12 countries (Bulgaria, Canada, France, French Polynesia, Indonesia, Italy, Japan, New Zealand, Republic of Korea, Russia, Turkey, the USA) attended the Workshop. The Workshop programme and the submitted abstracts can be found at <http://oceanc47.phys.msu.su/>.

The oral presentations made at the Workshop were grouped in the following topics:

- 1952 Kamchatka Earthquake and Tsunami,
- Historical Catalogues and Databases,
- Seismo-tectonics of Tsunami,
- Numerical and Analytical Models of Local Tsunami Behavior,
- Mitigation and Risk Assessment,
- Tsunami Geology and Paleotsunamis,
- Tsunami Measurement and Data Analysis,
- Hydroacoustic Methods in Tsunami Research.

A special student session, that was unanimously recognized as of a high scientific quality by all the workshop participants, was included in the Workshop programme to facilitate the participation of young scientists.

The Workshop was followed by a one-day geological field excursion led by Dr. J. Bourgeois and Dr. T. Pinegina. Participants were familiarized with paleotsunami methodology and field practice. At several coastal locations on the Khalaktyrskiy Beach, 30 km north-east of Petropavlovsk-Kamchatskiy, the geological traces of the 1737 and 1952 Kamchatka tsunamis were demonstrated.

The participants of the Workshop would like to thank the Kamchatka Seismological Department of the Geophysical Service RAS and members of the Local Organizing Committee for the excellent organization of the Workshop.

Special thanks to the individuals who kindly agreed to serve as session chairpersons: Boris Levin (Russia), Jody Bourgeois (USA), Viacheslav Gusiakov (Russia), Francois Schindele (France), Evgueny Kulikov (Russia), Ahmet Yalciner (Turkey), Boyko Rangelov (Bulgaria), Evgueny Gordeev (Russia), Yoshinobu Tsuji (Japan), and Victor Kaistrenko (Russia).

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