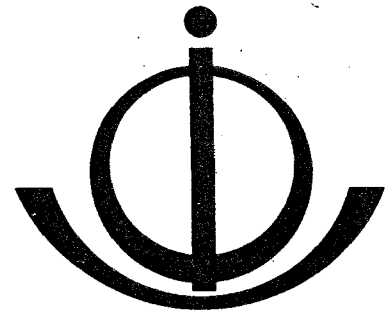




INTERNATIONAL TSUNAMI INFORMATION CENTER



INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION
COMMISSION OCEANOGRAPHIQUE INTERGOUVERNEMENTALE
COMISION OCEANOGRAFICA INTERGUBERNAMENTAL
МЕЖПРАВИТЕЛЬСТВЕННАЯ ОКЕАНОГРАФИЧЕСКАЯ КОМИССИЯ

P. O. Box 3650, Honolulu, Hawaii 96811 USA

Volume VIII, Number 2
May 1975

NEWSLETTER

ASSOCIATE DIRECTOR, ITIC

In accordance with a resolution of the fourth session of the International Coordination Group for the International Tsunami Warning System in the Pacific (ICG/ITSU), Wellington, New Zealand, February 1974, the Intergovernmental Oceanographic Commission (IOC) at the fourth session of its Executive Council in June 1974 established a new international position of Associate Director for the ITIC. Mr. Sydney Wigen, Regional Tidal Superintendent of the Pacific and Western Arctic Regions of the Canadian Hydrographic Service, has been selected for this post for an initial period of one year. Mr. Wigen will move from Victoria, B.C. to Honolulu on September 1 to formally begin his duties.

The new Associate Director of ITIC visited Honolulu for a second time during the period of April 28 to May 9 for a period of preliminary orientation to his new position and to increase familiarity with ITIC operations. Mr. Wigen, a graduate of the University of British Columbia and a professional engineer, comes to his post with high qualifications, being actively involved both in Canada and internationally in the monitoring and interpretation of tsunamis, and in the tsunami warning system.

It is believed that this new position will provide an opportunity for more liason and communication among people concerned with tsunamis, and agencies participating in the Tsunami Warning System. The Director of ITIC, Dr. George Pararas-Carayannis, and Mr. Sydney Wigen will be working together during the coming months on the development of an overall plan for the Tsunami Warning System that will take advantage of electronic data storage and transmission and satellite communications. This plan will be presented at the forthcoming ITSU V meeting in Peru in February 1976.

RELOCATION OF THE WORLD DATA CENTER-A TSUNAMI

The activities of the World Data Center-A Tsunami, and the World Data Center-A for Solid Earth Geophysics, have been consolidated under the National Oceanic and Atmospheric Administrations Environmental Data Service (EDS). The WDC-A Tsunami now operates in Boulder, Colorado under the direction of Mr. James F. Lander.

Mr. Lander, the new Director of WDC-A Tsunami, visited ITIC briefly in January and obtained all available WDC-A Tsunami data. It is believed that the WDC-A Tsunami will benefit from the closer association with the WDC-A Solid Earth Geophysics, and from the availability of staff and facilities of the National Geophysical and Solar-Terrestrial Data Center, in Boulder.

The new address of the WDC-A Tsunami is:

World Data Center-A Tsunami
National Oceanic and Atmospheric Administration (NOAA)
Environmental Data Service (EDS)
Boulder, Colorado 80302 U.S.A.

IOC SPONSORS SCIENTISTS' VISITS TO ITIC

The Intergovernmental Oceanographic Commission, in accordance with resolution EC-IV.6 Annex (Functions of the International Tsunami Information Center), has offered funds for two scientists to visit the International Tsunami Information Center in Honolulu, for a period of about 6 weeks, during 1975. This offer was extended to all Member States of the International Co-ordination Group for the Tsunami Warning System in the Pacific. Candidate scientists who desire to visit and work at ITIC should express their interest in writing to the Secretary, Intergovernmental Oceanographic Commission, 7 Place de Fontenoy 75700, Paris, France, and to the Director, ITIC, P.O. Box 3650, Honolulu, Hawaii 96811, U.S.A., and should send their curriculum-vitae and a brief statement on what they would like to work on while at ITIC. Because of funding limitations, only two candidates will be considered for 1975, and other candidates will have to wait for 1976.

DIRECTOR OF ITIC VISITS UN AND UNDP

George Pararas-Carayannis, Director of ITIC, recently visited the United Nations' Office of Ocean Economics and Technology Development, the United Nations Development Programme (UNDP) Headquarters, and other U.N. offices in New York responsible for the transfer of technology to developing countries. The purpose of Dr. Pararas-Carayannis' visit was to gain familiarity with UN ocean-related programs and sources of support, in order to formulate an action plan for UN support of proposed National Tsunami Warning Systems in Ecuador, Peru, and Chile. Agencies in these countries have asked for technical support in establishing their own National Warning Systems, through the Intergovernmental Oceanographic Commission (IOC). ITIC staff are presently in the process of completing a comprehensive plan which will be presented to agencies in these countries when Dr. Pararas-Carayannis visits South America in June, under IOC sponsorship and support.

UN ASSISTANCE FOR TSUNAMI RELATED PROJECTS

The International Tsunami Information Center (ITIC), in fulfillment of its responsibility to Member States of the International Co-ordination Group on the Tsunami Warning System in the Pacific (ICG/ITSU) of the Intergovernmental Oceanographic Commission (IOC), has for the past several weeks been gathering materials to prepare a report on technical assistance available from the UN System for support of

National Tsunami Warning Systems, requested by interested developing nations. The report, when completed, will provide agencies in such nations with guidelines for the preparation and submission of project proposals, assistance available from the UN, responsibilities of all contracting parties undertaking a project, technical advice, and procedures to be followed at all stages of project development and implementation.

RUSSIAN SCIENTIST VISITS ITIC

Dr. Alexander A. Poplavsky, was a fine emissary of cultural and human understanding, as well as of scientific cooperation. Dr. Poplavsky, Director of the Tsunami Laboratory of Sakhalin Complex, Scientific Research Institute of the Far East Science Center of the Academy of Sciences, USSR, completed a 40 day working visit to ITIC, in January. His working visit to ITIC was sponsored and funded by the Intergovernmental Oceanographic Commission (IOC) as part of the ITIC administered, visiting scientist program.

During his stay at ITIC, Dr. Poplavsky familiarized himself with all aspects of the International Tsunami Warning System, working and sharing information with the staffs of ITIC, Honolulu Observatory, the Joint Tsunami Research Effort and the University of Hawaii. The parallel visit of Mr. Riccardo Montaner, Director of Operations of the National Tsunami Warning System in Chile, created an opportunity for a truly international exchange of ideas and information.

The Russian scientist completed a list of tsunamigenic earthquakes for Kamchatka, the Kurile Islands and the Aleutian Islands, updating the listings with ITIC data. His main project was a statistical correlation study using records of tsunamigenic and nontsunamigenic Pacific earthquakes, undertaken to improve tsunami forecasting. In conjunction with this, he initiated a study on seismic record pattern recognition using digitized seismograms, utilizing data processing equipment at Honolulu Observatory with the aid of Mr. Thomas Sokolowski. The work on this project will be continued through correspondence.

IUGG-IAPSO TSUNAMI MEETING, GRENOBLE, FRANCE

As announced previously, a symposium on tsunamis will be held at the regular IUGG-IAPSO meeting in Grenoble, France, on Friday, 29 August 1975. The following are the abstracts of the reports to be presented at the symposium on tsunami, (part of the IUGG-IAPSO Meetings) Aug. 29, 1975 in Grenoble, France.

AN ATLAS OF TSUNAMI SOURCES AND THEIR
COMPUTED CIRCUM-PACIFIC INFLUENCES

Li-San Hwang and David Divoky
Tetra Tech, Incorporated
Pasadena, California, U.S.A.

Abstract

An effective tsunami warning system (TWS) requires not only a reliable and fast communication system but also accurate and speedy wave predictions. While the present TWS is limited to prediction of arrival time, it would be extremely valuable to also provide quantitative information regarding the tsunami height distribution.

Certain recent advances in the understanding of tectonics and in numerical tsunami modeling have made such improvement feasible. It is possible to define a number of representative seismic sources around the Pacific and to precompute their relative effects throughout the Pacific basin. Practical value would be given by development of a scheme to rapidly choose and calibrate a member of this precomputed set which would then reliably forecast the developing tsunami.

The paper presents:

- (1) the rationale of this approach,
- (2) the manner in which source sizes, shapes, and orientations are chosen,
- (3) the techniques and procedures by which tsunami height distributions are calculated,
- (4) results of preliminary calculations of circum-Pacific tsunami height distributions.

STATISTICAL DATA ON TSUNAMI IN THE PACIFIC

S.L. Soloviev, Ch.N. Go
Sakhalin Complex Scientific Research Institute
Far East Science Center of the Academy of Sciences
of the USSR, Novoalexandrovsk, Sakhalin 694050 USSR

Abstract

A detailed catalogue of Pacific tsunamis is published in Russian. It contains descriptions of about one thousand events. An attempt is made to define tsunami sources. A map showing tsunami sources and the maximum inundation heights is included. The recurrence of tsunamis in different zones is estimated according to the scale by Iida-Imamura-Soloviev. Data is presented on the orientation of ocean bottom dislocations as well as data on the behaviour of tsunami height with distance. A correlation between intensities of tsunamis and earthquakes is made. Other statistical correlations are included.

THE TIDE WELL PROBLEM

R.D. Braddock
c/-Dept. Applied Mathematics & Theoretical
Physics University of Cambridge, Cambridge, England

Abstract

Recent uses to which tide gauge records have been put has revealed that modern analytical and computing techniques have outstripped the quality of the available data. Lack of knowledge of the response of a conventional tide well has handicapped research in the interpretation of tide and tsunami records. In this paper, the equation for the tide well is developed and discussed in relation to the geometry of the tide well. The response of the well to periodic inputs is discussed and the response curves are determined. It is found that the tide well is essentially non-linear for disturbances at periods typical of tsunamis. The transient effects of the arrival of a tsunami are considered. Generally these transients last for approximately one oscillation of the tsunami.

THE DEFORMATION OF TSUNAMI WAVES DURING THE MOVEMENT IN THE COASTAL ZONE

Prof. Cherkesov L.V., Ivanov V.F., Dr. Knysh V.V.
Marine Hydrophysical Institute, Ukrainian
Academy of Sciences, Sevastopol, USSR

Abstract

The results of theoretical investigations of tsunami waves deformation during their movement in a shallow zone carried out at the Marine Hydrophysical Institute are given.

1. In a non-linear statement of the problem deformation of a tsunami wave during its movement from the epicenter to the shore over the continental slope and the shelf is investigated by means of characteristics method. The changes of amplitudes, velocity field, profiles and of a tsunami wave energy distribution during its movement with a following breaking are investigated.
2. In a linear statement the deformation of internal waves of a tsunami type during their movement in the coastal zone of a two-layer sea is investigated by means of analytical methods. These waves are generated by a surface tsunami wave moving over a zone of a variable depth.

TSUNAMI PROPAGATION THROUGH A FIELD OF PACK ICE

T.S. Murty
Ocean and Aquatic Affairs
Department of the Environment
Ottawa, Canada

Abstract

There appears to be a controversy in the literature on the travel of a long wave such as a tsunami through a field of pack ice. While theoretical studies generally predict that the propagation of the tsunami should not significantly be influenced by the presence of pack ice, some available observational data shows the impediment to tsunami propagation when pack ice was encountered. In this paper the literature on this topic is reviewed and simple analytical considerations of gravity flexural waves were used to account for some of the observations.

ATLANTIC OCEAN TSUNAMIS: EFFECTS ON THE EAST COAST OF NORTH AMERICA

T.S. Murty		S.O. Wigen
Ocean and Aquatic Affairs	and	Ocean and Aquatic Affairs
Department of the Environment		Department of the Environment
Ottawa, Canada		Victoria, Canada

Abstract

For a dozen tsunamis that have originated in the Atlantic Ocean during the period 1867 to 1960, a systematic examination of some of the tide gauge records on the east coast of the North American Continent was made. Although the only tsunami that caused significant damage was due to the Grandbanks earthquake of November 18, 1929, nevertheless, some of the other tsunamis showed noticeable effects. Some of the available mareograms were analysed and the dominant periods in the spectra were determined. Analytical methods invoking resonance considerations were used to account for some of these periodicities.

CONDITIONAL EXPECTED TSUNAMI INUNDATION AT ARBITRARY COASTAL LOCATIONS IN HAWAII

Wm. Mansfield Adams
University of Hawaii

Abstract

Values were reported for a priori estimates of expected tsunami inundation--conditioned by values for epicenter location and tsunami magnitude, both of which are usually

of the Kuril Islands. An exchange of computer techniques will be made on those topics relating to tsunami propagation.

Mr. Bernard will travel to Novosibirsk in June or July of 1975 for an extended visit of approximately six-weeks duration. Initial stages of computer programming is already underway -- in fact, the first successful run of a program designed to test some of the compatibility features of the USSR/US FORTRAN compilers has been successfully executed on the BSM-6 computer at Novosibirsk. Dr. Alekseev of the USSR has pointed out some of the differences between the operating systems at Novosibirsk and at the University of Hawaii.

The computer studies will represent a modelling of the tsunami activity, both for past and future tsunamis in the Kuril Islands. This will be done hand-in-hand with the experiment to be conducted in the Kurils which will utilize both sea-floor seismometers and ocean-bottom pressure-recording systems. These pressure-recording systems have the capability of measuring tsunami wave heights as small as 1 cm. The many small earthquakes which occur in the Kuril Islands have a high probability of producing a tsunami during the experiment.

Upon completion of studies in Novosibirsk and the exchange of the computer technologies between the USSR/US tsunami scientists, Mr. Eddie Bernard will proceed to the IUGG tsunami symposium to be held in Grenoble, France. There he will present a paper on his work on the relative susceptibility of the various areas of the Hawaiian Islands to tsunamis. Additionally, he will show a movie which is a compilation of all the various wave action films which have been collected by JTRE and ITIC.

TETRA TECH COMPUTES TSUNAMI HAZARD TO COASTAL NUCLEAR POWER PLANTS

Tetra Tech Inc., has recently received a contract to do a series of computations relating the relative tsunami hazard to coastal nuclear power plants. This study is being funded by the U.S. Energy Resources Development Agency (ERDA) and represents a major effort to obtain the best estimate of the tsunami hazard in selecting potential sites for the construction of nuclear power plants. The computations Tetra Tech is preparing are based on the numerical time-stepping solution of the linear long wave equations by finite difference methods. To conduct this study Tetra Tech scientists will assume certain standard and reasonable source functions or generating functions for tsunamis and computations will be done to propagate the wave into the offshore coastal areas of the states of Washington, Oregon, and California. From there, an additional computation will be made onshore with a slightly higher spatial resolution thereby permitting a more detailed description of what the magnitude and variability of the wave heights might be along the coast. Only those source regions are being chosen which present a major hazard to the West Coast of the United States.

CANADIAN TIDE GAUGES

In reference to recommendations 2 and 3 made at the Fourth Session of the Inter-governmental Coordinating Group for the Tsunami Warning System in the Pacific (ICG/ITSU) (Wellington, New Zealand, February 4-7, 1974), Canada submitted the following: Annex to recommendation 2 (Categories of stations of the Tsunami Warning System).

The gauging station at Tofino, British Columbia, to be classified under category 1 (Stations which automatically report data in real time, utilizing existing or future communication systems. The station can be interrogated either nationally or internationally.) and the gauging station at Langara, British Columbia, under category 3 (Stations which require observers to transmit data or messages.) (See ITIC Newsletter, Vol. VII, No. 1, Mar. 1974)

In response to recommendation 3 on Wave Reporting procedure: The gauging station at Tofino can be interrogated directly from Honolulu in accordance with the procedures described in the ITIC Newsletter, Vol. III, No. 2, June 25, 1970.

INTERNATIONAL COASTAL ENGINEERING CONFERENCE

The 15th International Conference on Coastal Engineering will be held July 11-17, 1976 at the Hilton Hawaiian Village, Honolulu, Hawaii, U.S.A. The conference objective is to provide an opportunity for the presentation and discussion of progress in the field of Coastal Engineering by specialists from all parts of the world. The conference will be held in English and welcomes all interested persons. In addition to the presentations of papers and their discussion, there will be special programs for non-technically oriented spouses, technical and social tours, receptions and a banquet.

Original papers or well documented case histories are solicited. They are to be presented by authors only and will not be published in the Proceedings unless presented at the conference. Conference subjects are: 1. Wind, current and wave action; 2. Tide, storm surge and tsunami; 3. Coastal sediment problems; 4. Estuary and inlet behavior; 5. Environmental impact of coastal engineering works; 6. Dispersion and diffusion; 7. Coastal structures; 8. Coastal morphology, including beach and dune behavior; 9. Design of recreational facilities.

Initially, only abstracts (400 - 100 words) including illustrations, with a first page containing only title of paper, author's name and title and a short biography should be sent for review and approval to:

Secretary
Coastal Engineering Research Council
American Society of Civil Engineering
412 O'Brien Hall
University of California
Berkeley, California 94720

Submission deadline is September 15, 1975.

For information on the conference write to:

Chairman
Conference on Coastal Engineering
Dept. of Ocean Engineering
U. of Hawaii; Honolulu, HI 96822

2ND SYMPOSIUM ON MODELING TECHNIQUES FOR WATERWAYS, HARBORS AND COASTAL ENGINEERING

This important forum for the state-of-the-art of modeling techniques is drawing closer to its September 3-5, 1975 date at the Hyatt on Union Square, San Francisco, California, sponsored by the American Society of Civil Engineers, the Canadian Department of Public Works, the National Science Foundation, and the Office of Sea Grant. It will be the second conference for the ASCE Waterways, Harbors, and Coastal Engineering Research Committee. The first was held in New Orleans last September.

The conference will be preceded by a one-day short course on modeling directed by Professor Young Kim, Civil Engineering Department, California State University, Los Angeles, California, 90032. More than 100 technical papers on modeling topics will be presented by specialists of 10 nations. All papers will be printed in the proceedings, available at the conference, or by purchase from the American Society of Civil Engineers. A preliminary program, including a listing of paper titles and authors, is available by writing to MODELING '75, Civil Engineering Department, Clemson University, Clemson, South Carolina 29631.

INTERNATIONAL NUMBERING SYSTEM FOR TIDES (INST)

The International Tsunami Information Center (ITIC) at Honolulu is adopting a 10-digit reference system for storage and retrieval of tidal and tsunami data. This system provides instant identification of gauge location. The first digit identifies in which of four earth sectors the station is located, as follows: Digit 1, Northern and western hemispheres; Digit 2, Northern and eastern hemispheres; Digit 3, Southern and western hemispheres; Digit 4, Southern and eastern hemispheres.

The next four digits designate the latitude, with fraction of a minute deleted, and the last five, similarly, the longitude. As an example, the Honolulu tide gauge, Lat. $21^{\circ} 18.39' N$, Long. $157^{\circ} 52.04' W$ will be indexed as 1/2118/15752. The "/" is used for easier reading but will not be used in computer storage. Zeros will be inserted where necessary to maintain the 10 digits. For example, Baltra Island, Ecuador, Lat. $0^{\circ} 26.75' S$, Long. $90^{\circ} 17.5' W$ would be indexed as 3/0026/09017. The referencing was recently introduced in Canada to identify tide stations on their continental shelves and on seamounts.

VISITORS TO ITIC

Mr. Bruno Friedman, Senior Regional Information Officer for UNESCO's Regional Office, Asia and Oceania, and his wife Ruth, visited ITIC and the Honolulu Observatory in March on their return trip to Bangkok, Thailand. Mr. Friedman familiarized himself with the operations of the International Tsunami Warning System and collected information on ITIC and the operation of the TWS in the Pacific for an article. Mr. Friedman plans to publish this article in a UNESCO publication.

INSTRUMENTAL IMPROVEMENTS AT HONOLULU OBSERVATORY

Installation and tests of the uninterruptable AC power system has been completed and is now in full time use at Honolulu Observatory. All seismic recording and communications equipment will be fully powered without interruption in the event of commercial power failure. Automation of Honolulu Observatory's activities has been progressing by the addition of a 5-8 channel converter. Preparation of communication messages and earthquake epicenter determination is now done by computer.

TSUNAMI WARNING FOR THE ALEUTIAN ISLANDS, 2 FEBRUARY, 1975

On Feb. 2, 1975 at 08:43Z, an earthquake occurred and was recorded by seismic stations in Alaska, Hawaii, and elsewhere. After analyzing available data, the Palmer Observatory of the Alaska Regional Tsunami Warning System issued a tsunami watch from Adak to Kodiak, and advised that the Alaskan coastal area from Shemya to Adak should be evacuated at once. The preliminary earthquake epicenter was determined as being near Attu Island in the Aleutians, at 53.56° N, 173.79° E. Its magnitude was 7.5 on the Richter scale. Estimated times of arrival (ETAs) for Shemya and Adak were given as 09:10 & 10:00, respectively. After repeated attempts by Adak to contact Shemya and Attu, it was discovered that the quake had caused a power failure at Shemya, and that the runway had been damaged. There was no word from Attu. At 09:50Z a message was received from Shemya that no wave had been sighted. A second communication at 10:03Z repeated the negative wave report, and advised the intention to cancel the alert if no wave occurred at Adak by ETA + 15 min. At 10:15Z, no wave was reported at the Adak tide gage, and Palmer Observatory issued a tsunami warning cancellation.

CHILEAN QUAKE OF 10 May, 1975

A severe earthquake occurred in Chile at 14:28Z, May 10, 1975 at 35.7° S Latitude, 74.6° W Longitude having a magnitude of 7.8 on the Richter scale. ITIC's Honolulu Observatory issued a tsunami watch stating that stations at Valparaiso, Arica, Talcahuano, & Puerto Montt had been queried for possible tsunami action. A second bulletin from Honolulu Observatory reiterated the previous information with the addition of estimated times of arrival for: (10 May) La Punta, 18:33Z, Acapulco, 23:38Z, Balboa, 23:43Z (11 May) Rikitea, 00:18Z, Papeete, 02:18Z, Hilo, 15:13Z, Honolulu, 15:43Z. By 20:00Z, May 10, a negative tsunami report was received from La Punta tide Observatory, it was concluded that no Pacific wide tsunami had been generated, and the watch status was cancelled.

EARTHQUAKE & ALARM SUMMARY FOR 1974 INTERNATIONAL TSUNAMI WARNING SYSTEM IN THE PACIFIC

In 1974 the International Tsunami Information Center's Honolulu Observatory answered 69 alarms from possible tsunami generating sources. Of these, 19 earthquakes from the Pacific Basin area were considered serious enough to do actual workups on; 10 of these quakes had magnitudes of 7.0 or greater on the Richter scale. One of these, the quake of October 3, 1974 at Lima, Peru, with a magnitude of 7.7 was sufficiently threatening for a tsunami watch to be issued. The tsunami had a range (trough to crest) of 1.6 meters at the La Punta (Callao) tide gage and 1.2 meters at the San Juan tide gage in Peru. A 25 cm. rise in the tide was reported at Hilo, Hawaii. The following is a month by month summary of investigations undertaken by Honolulu Observatory of the International Tsunami Warning System in the Pacific.

EARTHQUAKE & ALARM SUMMARY 1974

INTERNATIONAL TSUNAMI WARNING SYSTEM OF THE PACIFIC, HONOLULU OBSERVATORY

69 Alarms answered during 1974

19 Earthquake Workups during 1974

10 Earthquakes over 7.0 magnitude

1 Tsunami Watch

5 Local Earthquakes

Hawaii - - - 11/30/74 - - - - MB 5 (HVO)
5/10 mi SW Kilauea - 12/1/74 - MB 5 - 5.5 (HVO)
Hawaii - - - 12/16/74 - - - - MB 4.5 (HVO)
S. side Kilauea - - - 12/25/74 MB 4.5 (HVO)
Hawaii - - - 12/31/74 - - - - MB 5.5

	<u>Jan.</u>	<u>Feb.</u>	<u>Mar.</u>	<u>Apr.</u>	<u>May</u>	<u>Jun.</u>
<u>Workups</u>	3	1	0	0	0	1
<u>Alarms</u> (Includes Workups)	6	4	11	0	7	3

Watch/Warning

	<u>Jul.</u>	<u>Aug.</u>	<u>Sep.</u>	<u>Oct.</u>	<u>Nov.</u>	<u>Dec.</u>
<u>Workups</u>	3	1	1	3	2	4*
<u>Alarms</u>	9	8	1	8	5	7

Watch/Warning

10/3 - Watch -
Lima, Peru
- 7.7

* Local Quakes

TSUNAMI INVESTIGATIONS MADE BY HONOLULU OBSERVATORY

DATE	ORIGIN		EPICENTER	REGION	MAGNITUDE	BULLETIN	
	TIME					ISSUED	ACTIVITY
1974							
JAN 02	10-42-18	20 S 71 W		Bolivia-Chile Border	MS 6.9	Press Release	
JAN 10	08-51-13	13 S 167 E		New Hebrides	MS 7.1	Press Release	
JAN 31	23-29-50	6.8S 156.2 E		Solomon Islands	MB 6.8	Press Release	
FEB 01	03-12-	8.5S 153.6 E		Solomon Islands	MS 7.2	Press Release	
JUN 04	04-14-15	13.6S 175.7 W		Fiji	MS 6.7	Press Release	
JUL 02	23-26-18	26 S 177 W		Kermadec Is.	MS 7.2	Press Release	
JUL 04	19-30-42	46 N 93 E		Sinkeang, China	MS 6.7	Press Release	
JUL 13	01-18-23	8 N 77 W		Columbia/Panama Bdr	MS 7.3	Press Release	
AUG 11	01-13-	37.5N 73 E		Hindu Kush/Tadzik Area	MS 7.4	Press Release	
SEP 27	05-47-07	41.7N 144.5 E		Hokkaido, Japan	MS 6.8	Press Release	
OCT 03	14-21-23	11.5S 77 W		Lima, Peru	MS 7.7	WATCH Watch Cancelled Press Release	25CM (9.7") rise in tide reported at Hilo
OCT 08	09-51-16	18.4N 62.8 W		Leeward Is., Carribian	MS 7.2	Press Release	
OCT 23	06-14-57	6 S 166 E		Solomon Is. Area	MB 6.7	Press Release	
NOV 09	13-00-08	9 S 73 W		Peru	MS 7.2	Press Release	
NOV 20	04-14-36	16 S 167 E		New Hebrides	MB 7.2	Press Release	
DEC 01	13-54-23	19.3N 155.3 W		5-10 mi. SW Kilauea HI	MB 5-5.5 (HVO)		Felt on Island of Hawaii, Oahu
DEC 16	09-17-29			Hawaii	MB 4.5 (HVO)		
DEC 25	17-47-49	19.21S 155.17W		So. of Kilauea, HI	MB 4.5 (HVO)		
DEC 31	22-41-			Hawaii	MB 5.5	Press Release	

TSUNAMI INVESTIGATIONS, JAN.-APRIL 1975

During the months of Jan., Feb., March & April of 1975, the International Tsunami Information Center's Honolulu Observatory undertook the following investigations of possible tsunamigenic earthquakes:

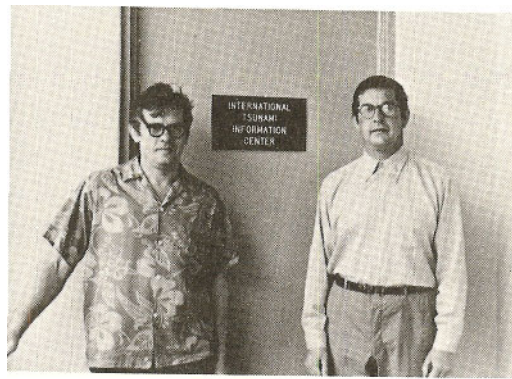
<u>Date and Origin Time (U.T.)</u>	<u>Epicenter</u>	<u>Magnitude</u>	<u>Region</u>	<u>Comments</u>
February 02 08-43-00	53.5N 1.73E	7.3-7.5	Near Is., Aleutians	Damage at Shemya no wave action
February 04 11-36-00	40.8N 122 E	7.3	Eastern China	
February 22 08-35-55	51.5N 179.1W	6.6	Adak, Alaska	
March 13 15-27-21	26.0S 75.0W	6.7	Northern Chile	
March 13 18-45-26	21.5S 171 E	6.8	Loyalty Islands	



Mr. Sydney Wigen, Associate Director of ITIC (right) being greeted by the Director of ITIC, Dr. George Pararas-Carayannis at Honolulu Airport.



Mr. and Mrs. Wigen arriving at Honolulu Airport.



Dr. Alexander Poplavsky, Chief Tsunami Laboratory at Sackalin Scientific Center, USSR, and Mr. Riccardo Montaner, Chief of Operations, Chilean Tsunami Warning System, at ITIC.



Left to right: Mr. Riccardo Montaner, Mr. Thomas Sokolowski of Honolulu Observatory Dr. George Pararas-Carayannis, and Dr. Alexander Poplavsky at ITIC, discussing a problem related to the International Tsunami Warning System in the Pacific.