THE 1960 CHILEAN TSUNAMI

KIYOSHI HORIKAWA

- Initiation of Tsunami Studies in Japan
- Field Trip, Sanriku Coast (1955)
- U.C. Berkeley (1957-1959)
- The 1960 Chilean Tsunami (Japan)
- The 1960 Chilean Tsunami (Chile)
- The 1960 Chilean Tsunami (Hilo)
- Further Activities
Initiation of Tsunami Studies in Japan

- Initiation of Earthquake Observation (around 1872)
- Meiji Sanriku Tsunami (1896)
- Great Kanto Earthquake (1923)
- Earthquake Research Institute (ERI)
  The Univ. of Tokyo (1925), Tsunami & Storm Surge Section
- Showa Sanriku Tsunami (1933)
  Separate Volume, Bulletin of ERI
Meiji Sanriku Tsunami (1896)

(Watanabe, H., 1998)
Showa Sanriku Tsunami (1933)

(Watanabe, H., 1998)
Showa Sanriku Tsunami (1933)

(Taro, before 1933 tsunami)
Showa Sanriku Tsunami (1933)

(Taro, after 1933 tsunami)
Field Trip, Sanriku Coast (1955)

Members:
- Nasu, Shinji (ERI, UT)
- Takahasi, Ryutaro (ERI, UT)
- Hom-ma, Masashi (CE Dept., UT)
- Horikawa, Kiyoshi (CE Dept., UT)

Itinerary:
U.C. Berkeley (1957-1959)

Takahasi, R. Research Scientist (1956-1957)
Model Basin, Richmond Field Station
Horikawa, K. Visiting Assistant Professor (1957-1959)
Assistant Research Engineer

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Johnson, J.W. Professor
Wiegel, R.L. Associate Research Engineer
Lecturer, Associate Professor
The 1960 Chilean Tsunami (Japan)

The Wave Front of Tsunami in the Pacific Ocean

Takahasi, R. & Hatori, T.
Committee of the Field Investigation of
the 1960 Chilean Tsunami
Chairman  Takahasi, R. ERI, UT
Members  about 100

1) Provisional Report of the Investigation, July 1960
   (in Japanese)
2) Report on the Chilean Tsunami of May 24, 1960,
   As Observed along the Coast of Japan, December
   1961, 397 p. (in English or in Japanese)
   Horikawa, K.: Tsunami Phenomena in the Light of
   Engineering View Point, pp.136-150 (in English)
Fig. 11. Tsunami running upstream at the mouth of Niita River, Hachinohe, Aomori Pref. at 9 h 30 m, May 24. (Courtesy of Mr. Fusao Tabata.)
Fig. 21. House crushed down by a fishing boat at Ofunato, Iwate Pref. (Courtesy of Asahi Shimbun.)
Fig. 39. Utter confusion of the Shimizu Harbour, Shimizu, Shizuoka Pref. caused by stray timbers. (Courtesy of Yomiuri Shimbun.)
Initiation of Tsunami Studies in Japan Field Trip, Sanriku Coast (1955)
U.C. Berkeley (1957-1959)
The 1960 Chilean Tsunami (Japan)
The 1960 Chilean Tsunami (Chile)
The 1960 Chilean Tsunami (Hilo)
Further Activities

(Tsunami Workshop, Dec 26-28, 2006, Hilo, Hawaii)

(Eno-shima)
(Comparison of maximum water level due to tsunamis In 1896, 1933 and 1960)
The 1960 Chilean Tsunami (Chile)

FINAL REPORT
TO
THE COMPAÑÍA DE ACERO DEL PACIFICO

KIYOSHI HORIKAWA

DEPARTMENT OF CIVIL ENGINEERING
UNIVERSITY OF TOKYO
TOKYO, JAPAN
Rio Valdivia of Chile, 1960, courtesy Prof Towhata, The Univ of Tokyo
The 1960 Chilean Tsunami (Hilo)

Tsunami of May 22, 1960, Hilo, Hawaii. Originated from Earthquake in Chile.
Initiation of Tsunami Studies in Japan Field Trip, Sanriku Coast (1955)
U.C. Berkeley (1957-1959)
The 1960 Chilean Tsunami (Japan)
The 1960 Chilean Tsunami (Chile)
The 1960 Chilean Tsunami (Hilo)
Further Activities
Technical Committee on Tsunami Disaster Prevention in Hilo

Members:
From Japan
  Suzuki, M.
  Takahashi, R.
  Hom-ma, M.

From U.S.A.
  Cox, D.C.
  Munk, W.H.
  Wiegel, R. L.

Laboratory Investigation
Look Hydraulic Laboratory, University of Hawaii
Further Activities

Tsunami Symposium, Organizer Cox, D.C., in 1961
Takahashi, R., Kajiura, K. & Horikawa, K.

National Science Foundation Workshop, “Tsunamis”,
May 1979

International Workshop on Long-Wave Runup Models,
US National Science Foundation.
Tsunami Protection Dike, Taro
Tsunami Forest, Rikuzen Takada
GPS Tsunami detection system

Off Muroto 13km, h=100m

GPS satellites

GPS tsunami buoy

Internet

Tsunami Workshop, Dec 26-28, 2006, Hilo, Hawaii

HORIKAWA, K. 28/29
Thank you for attention.