CHAPTER IV

THE CENTRAL STATION

By James B. Macelwane, S. J.

In accordance with the decisions of the delegates at the organization meeting in Chicago steps were immediately taken to establish the Central Station of the Jesuit Seismological Association at Saint Louis University.

The initial quarters were very modest. A small room back of the University Library in DuBourg Hall was assigned and the total personnel consisted of the Director, Father Macelwane, and a small fraction of the time of the clerical assistant of the President of the University.

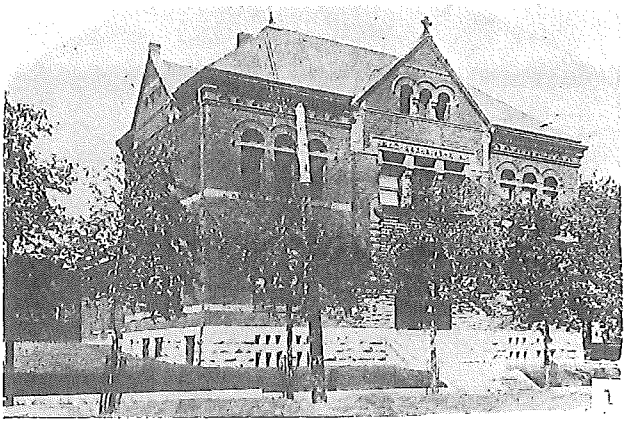
But the activities of the Central Station expanded so rapidly that a large laboratory room in Sodality Hall at 15 North Grand Boulevard was occupied and Miss Margaret Flotte was engaged to do the clerical work inevitably associated with such a widespread organization. The headquarters of the Department of Geophysics and its growing library were simultaneously transferred to this laboratory. Epicenters were determined at first by stereographic projection methods. But as the number of reported earthquakes increased, this process proved too slow and a globe seventeen inches in diameter was pressed into service. Later a thirty-inch Dietrich Reimer

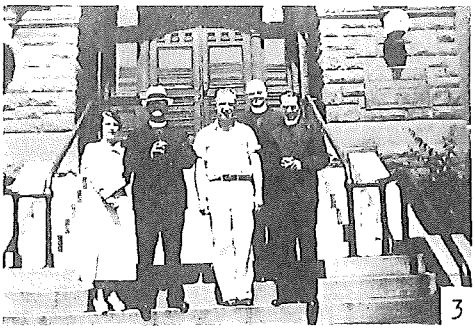
globe was imported from Germany and calibrated for true longitudes and geocentric latitudes.

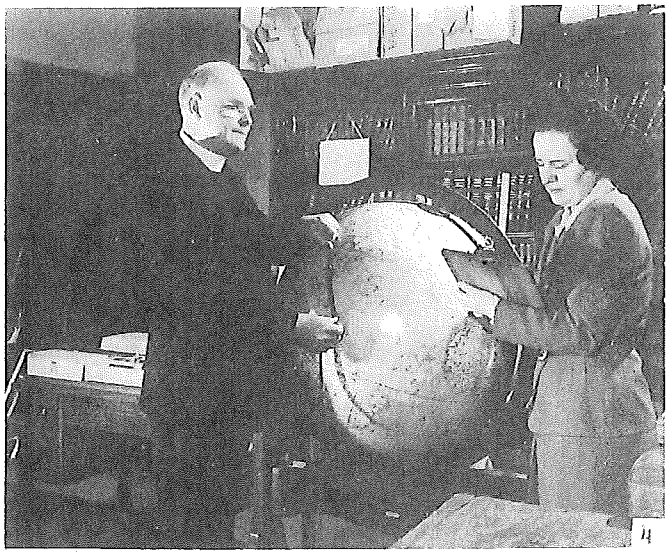
The first graduate student to assist in the work of the Central Station was the Reverend William C. Repetti, S. J., who arrived in 1926 and departed for the Manila Observatory after receiving his doctorate in seismology in 1928. Several Undergraduate Assistants helped with the work.

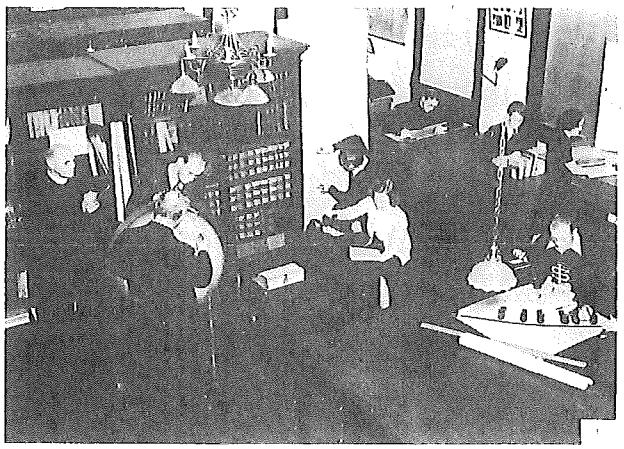
In the late autumn of 1927 when the Director of the Central Station was appointed Dean of the Graduate School several adjustments were made. Father Joseph S. Joliat, S. J., was transferred from Florissant to Saint Louis and became full time assistant to the Director, in time assuming almost entire responsibility for epicenter determinations and editorship of the Preliminary Bulletin of the Central Station. Shortly afterward Father Joliat was elected Secretary-Treasurer of the Jesuit Seismological Association, being reelected each year for several years, even after he was transferred to John Carroll University in Cleveland in 1933 to become director of the meteorological and seismological observatory there after the death of Father Odenbach.

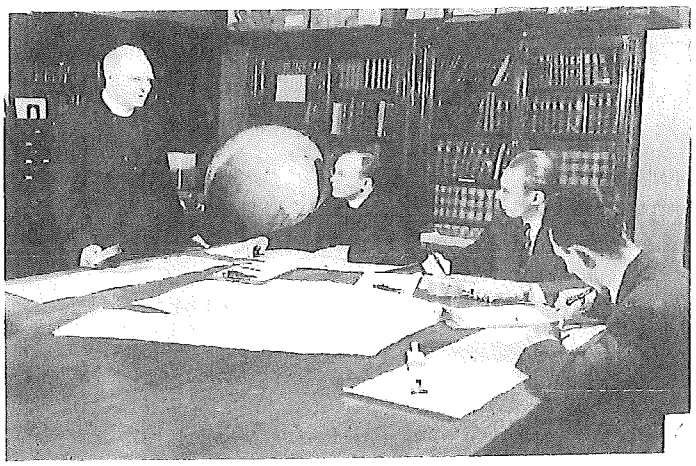
In 1931 Father George Joseph Brunner was added to the staff of the Department of Geophysics and took an active part in the work of the Central Station, concentrating particularly on the determination of the focal depth of the earthquakes whose epicenters were to be located. Graduate students who assisted in the work of the Central Station during those years











1) Sodality Hall
2) Office, 1926
3) Left to right: Miss Helen Leuer (now Mrs. W. E. Roberts), Donald C. Bradford, Father James B. Macelwane, S. J. and Father Vincent M. O'Flaherty, S. J.
4) The Dietrich-Reimer 30-inch Globe, 1928
5) Determination of Epicenters and the Plotting of Time-Distance Curves
6) Staff Conference, 1940

were Mr. Donald Comnick Bradford and Mr. Cornelius George Dahm. The latter joined the staff as Instructor in Geophysics after receiving his doctorate in 1934 and remained in that position until 1936.

Other graduate students who were destined to play an important part in Central Station activities in the years between 1936 and 1944 were Doctors Ross Raymond Heinrich, Florence Robertson, Edward Joseph Walter and Fathers Henry Francis Birkenhauer, S. J. and Victor Joseph Blum, S. J. all of whom received their Ph. D. degrees in Geophysics. Father Blum has held the office of Secretary-Treasurer of the Jesuit Seismological Association ever since the resignation of Father Joliat because of ill health.

Much of the credit for the mechanics of the Preliminary Bulletin, its format, typing, mimeographing and mailing, and for the efficient communication and maintenance of exchanges is due to the succession of very efficient young ladies who had charge of the Central Station office. Among them were Miss Margaret Flotte who was mentioned above, Miss Antoinette Grover (now Mrs. R. T. Niemeier), Miss Helen Leuer (now Mrs. W. E. Roberts), Miss Erma Schleicher (now Mrs. C. S. Mihanovich), Miss Margaret Hediger and Miss Virginia Hediger.

A new phase in the development of the Central Station was reached in 1944 when the Department of Geophysics was incorporated into the new Institute of Geophysical Technology and moved from Sodality Hall at 15 North Grand Boulevard to much

JESUIT SEISMOLOGICAL ASSOCIATION

PRELIMINARY BULLETIN

PUBLISHED BY THE CENTRAL STATION

3621 OLIVE STREET, ST. LOUIS 8, MO., U. S. A.

IN COOPERATION WITH SCIENCE SERVICE AND THE UNITED STATES COAST AND GEODETIC SURVEY

GEOGRAPHICAL LIST OF JESUIT SEISMOLOGICAL STATIONS IN THE UNITED STATES

BUFFALO (inaugurated, 1910; moved to new location, 1912)

Latitude: geographical, 42°56'N; geocentric, 42°44'N.
Longitude: 78° 51'W. Altitude: h = 191m, H+h = 2 km.
Lithologic foundation: cherty limestone
Seismographs: Wiechert (80 kg) EN, Galitzin-Wilip Z, Sprengnether long period EN, Sprengnether short period Z
Clock: Wiechert, Seth-Thomas regulator No. 71
Director: Doctor Austin C. McTigue
Address: Seismological Station, Canisius College, Main and Jefferson Streets, Buffalo 8, N. Y., U. S. A.

CHICAGO (inaugurated, 1912)

Latitude: geographical, 42°N; geocentric, 41°48'N.
Longitude: 87°39'30"W. Altitude: h = 183m, H+h = 3 km.
Lithologic foundation: sand.
Seismograph: Wiechert (80 kg) EN.
Clock: Wiechert
Director: Reverend Alphonse R. Schmitt, S.J.
Address: Seismological Station, Loyola University, 6525 Sheridan Road, Chicago 26, Ill., U. S. A.

CINCINNATI (inaugurated, 1927)

Latitude: geographical, 39°08'.7N; geocentric, 38°58'N.
Longitude: 84° 29'.8W. Altitude: h = 203m, H+h = 4 km.
Lithologic foundation: clay
Seismographs: Electromagnetic type EN and short period Z, Galitzin-Wilip Z.
Clock: Springfield
Director: Reverend Victor C. Stechschulte, S.J.
Address: Seismological Observatory, Xavier University, Cincinnati 7, Ohio, U. S. A.

CLEVELAND (inaugurated, 1904; moved to new location, 1935)

Latitude: geographical, 41°29'27.90"N; geocentric, 41°17'N.
Longitude: 81°31'52.22"W. Altitude: H = 326m, H+h = 3 km.
Lithologic foundation: clay
Seismographs: Sprengnether EN short period and long period, Sprengnether Z short period.
Clock: Wiechert, Thomas
Director: Reverend Henry F. Birkenhauer, S.J.
Address: Seismological Observatory, John Carroll University, University Heights, Cleveland 18, Ohio, U. S. A.

DENVER (inaugurated, September, 1909)

Latitude: geographical, 39°47.5'N; geocentric, 39°36'N.
Longitude: 105°02'W. Altitude: h = 1655m, H+h = 5 km.
Lithologic foundation: conglomerate
Seismograph: Wiechert (80 kg) EN, Macelwane Sprengnether EN long period
Clock: Wiechert, International
Director: Reverend Joseph V. Downey, S.J.
Address: Regis College Seismic Station, West 50th Avenue and Lowell Boulevard, Denver 11, Colorado, U. S. A.

FORDHAM (inaugurated, November, 1910; moved 1921, 1926 and 1934)

Latitude: geographical, 40°51'N; geocentric, 40°39'N.
Longitude: 73°53'W. Altitude: h = 24m, H+h = 3 km.
Lithologic foundation: Fordham gneiss
Seismographs: Galitzin-Wilip ENZ, Wood-Anderson short period EN, Milne-Shaw EN, Wiechert (80 kg) EN, Benioff Z long and short period, Sprengnether short period ENZ.
Clocks: Wiechert; Standard Electric Time, Invar Pendulum —self-winding
Director: Reverend J. Joseph Lynch, S.J.
Address: William Spain Seismic Station, Fordham University, New York 58, N. Y., U. S. A.
Sub-stations (tripartite) at Iona College, New Rochelle; New York State Maritime College, Fort Schuyler; and St. Andrew-on-Hudson, Poughkeepsie, New York.

GEORGETOWN (inaugurated, 1911)

Latitude: geographical, 38°54'N; geocentric, 38°43'N.
Longitude: 77°04'W. Altitude: h = 43m, H+h = 4 km.
Lithologic foundation: weathered diorite
Seismographs: Galitzin ENZ, Mainka (135 kg) EN, Wiechert (200 kg) EN
Clocks: Thomas, Wiechert
Director: Reverend Frederick W. Sohon, S.J.
Address: Seismological Observatory, Georgetown University, Washington 7, D. C., U. S. A.

MILWAUKEE (inaugurated, 1909)
Latitude: geographical, 43°02′N; geocentric, 42°50′N.
Longitude: 87°55′W. Altitude: h = 194m, H+h = 2 km.
Lithologic foundation: alluvium
Seismograph: Wiechert (80 kg) EN
Clock: Wiechert
Director: Reverend Joseph F. Carroll, S.J.
Address: Seismological Station, Marquette University 1131 West Wisconsin Avenue, Milwaukee 3, Wisconsin, U. S. A.

MOUNT SAINT MICHAEL'S (inaugurated at Gonzaga University; moved to Mount Saint Michael's, 1930)
Latitude: geographical, 47°43′48″N; geocentric, 47°32′N.
Longitude: 117°20′32″W. Altitude: h = 713m, H+h = 1 km.
Lithologic foundation: basalt
Seismographs: Wiechert (80 kg) EN, Wood-Anderson long period EN
Clock: Wiechert
Address: Seismographic Station, Mount Saint Michael's, Spokane 14, Washington, U. S. A.

NEW ORLEANS (inaugurated, 1910)
Latitude: geographical, 29°56′54″N; geocentric, 29°47′N.
Longitude: 90°07′12″W. Altitude: h= 2m, H+h = 7 km.
Lithologic foundation: deep alluvium
Seismographs: Wiechert (80 kg) ENZ, Sprengnether long period EN, Sprengnether short period Z.
Clocks: Wiechert; Standard Electric Time, Invar Pendulum
Director: Reverend Karl A. Maring, S.J.
Address: Nicholas D. Burke Seismic Observatory, Loyola University, 6363 St. Charles Avenue, New Orleans 15, Louisiana, U. S. A.

SANTA CLARA (inaugurated, 1909; expanded, 1929)
Latitude: geographical, 37°21′N; geocentric, 37°10′N.
Longitude: 121°57′W. Altitude: h = 28m, H+h = 4 km.
Lithologic foundation: sand and gravel
Seismographs: Galitzin-Wilip ENZ, Wood-Anderson short period EN, Wiechert (80 kg) ENZ
Clocks: Grimshaw and Baxter (after Mead); Wiechert
Director: Reverend John A. Weber, S.J.
Address: Ricard Observatory, University of Santa Clara, Santa Clara, California, U. S. A.

SPRING HILL (inaugurated, October, 1910)
Latitude: geographical, 30°42′N; geocentric, 30°32′N.
Longitude: 88°09′W. Altitude: h = 60m, H+h = 7 km.
Lithologic foundation: alluvium (sand mixed with red clay)
Seismographs: Wiechert (80 kg) EN, McComb-Romberg EN.
Clock: modified Wiechert (mercury compensated metal pendulum.
Director: Reverend Louis J. Eisele, S.J.
Address: Seismic Observatory, Spring Hill College, Spring Hill, Mobile Co., Alabama, U. S. A.

WESTON (inaugurated, 1930) a Department of Boston College.
Latitude: geodetic, 42°23′04.88″N.
Longitude: geodetic, 71°19′19.46″W. Altitude h = 60.04m.
Lithologic foundation: metamorphosed igneous and sediments.
Seismographs: Bosch-Omori (25 kg) EN, Wiechert (80 kg) EN, Beinoff (100 kg) ENZ (0.5 and 60 sec.).
Clock: Standard Master corrected four times daily from NSS.
Director: Reverend Daniel Linehan, S.J.
Address: Seismological Observatory, Weston College, Weston 93, Massachusetts, U. S. A.

SAINT LOUIS UNIVERSITY GROUP OF STATIONS

All records kept in Saint Louis

General Address: Institute of Technology
Saint Louis University, 3621 Olive Street
Saint Louis 8, Missouri, U. S. A.

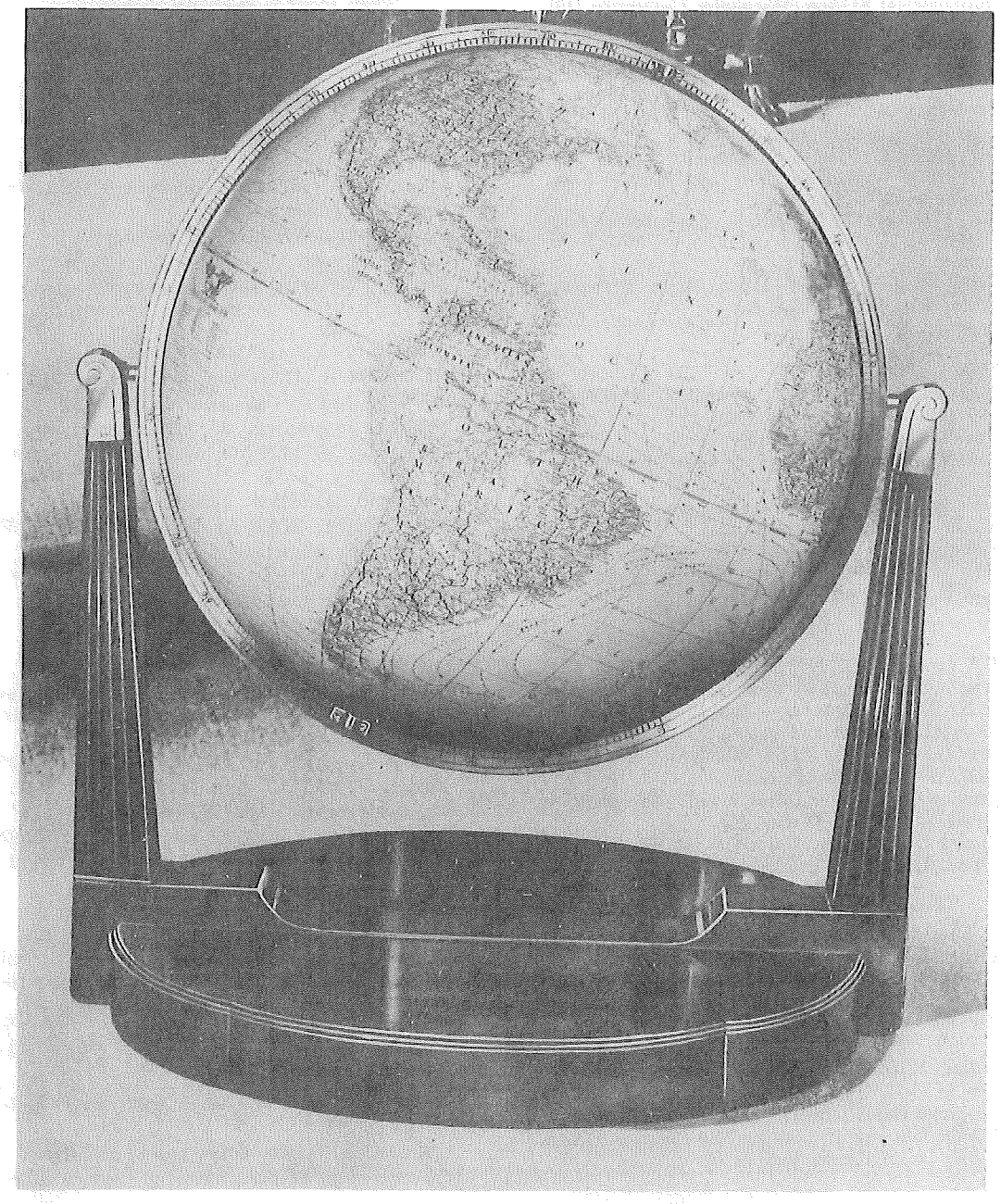
SAINT LOUIS I. Administration Building of Saint Louis University, 221 North Grand Boulevard — (inaugurated, January 1, 1910)
Latitude: geographical, 38°38′11″N; geocentric, 38°27′N.
Longitude: 90°14′00″W. Altitude: h = 160m, H+h = 4 km.
Lithologic foundation: clay
Seismograph: Wiechert (80 kg) EN
Clock: Wiechert
Director: Reverend James B. Macelwane, S.J.

SAINT LOUIS II. University Gymnasium, 3672 West Pine Boulevard — (inaugurated, 1927)
Latitude: geographical, 38°38′10″N; geocentric, 38°27′N.
Longitude: 90°14′10″W. Altitude: h = 161m, H+h = 4 km.
Lithologic foundation: limestone
Seismographs: Wood-Anderson short period EN, Macelwane-Sprengnether Z, Sprengnether EN.
Clocks: Wiechert; Standard Electric Time, Invar Pendulum
Director: Reverend James B. Macelwane, S.J.

CAPE GIRARDEAU (in cooperation with Southeast Missouri State Teachers College, Cape Girardeau, Mo., U. S. A.) — (inaugurated, 1938)
Latitude: geographical, 37°19′N; geocentric, 37°08′N.
Longitude: 89°32′W. Altitude: h = 134m, H+h = 4 km.
Lithologic foundation: limestone
Seismographs: Wood-Anderson short period EN
Director of the Station: Doctor A. C. Magill.

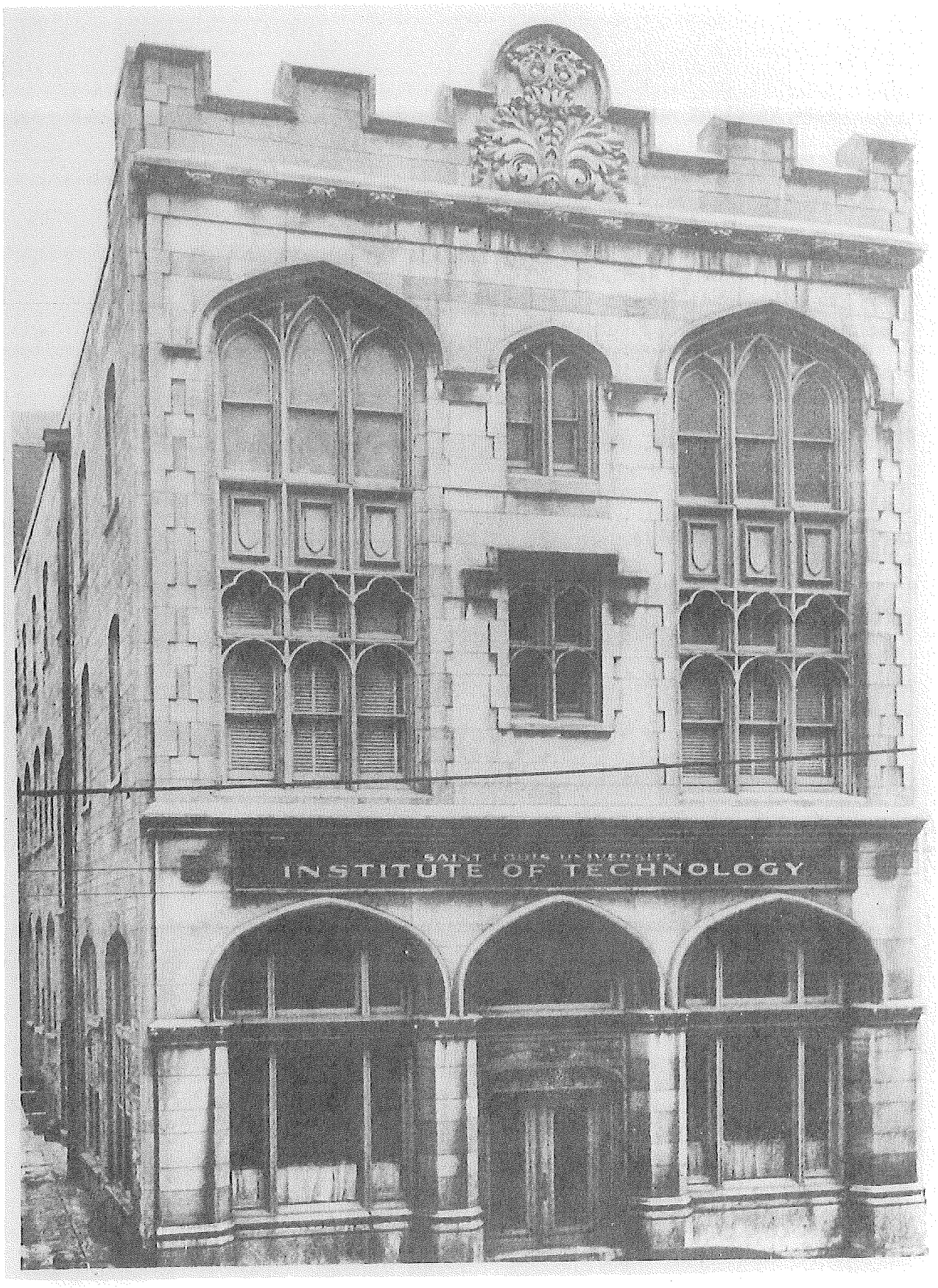
FLORISSANT (in cooperation with Saint Stanislaus Seminary, Florissant, Missouri, U. S. A.) — (inaugurated, 1928)
Latitude: geographical, 38°48′06″N; geocentric, 38°37′N.
Longitude: 90°22′12″W. Altitude: h = 160m, H+h = 4 km.
Lithologic foundation: shale
Seismographs: Galitzin-Wilip ENZ, Wood-Anderson short period EN
Clock: Shortt synchronome master and slave
Director of the Station: Reverend James B. Macelwane, S.J.

LITTLE ROCK (in cooperation with Saint John's Seminary, Pulaski Heights, Little Rock, Arkansas, U. S. A.) — (inaugurated, 1930)
Latitude: geographical, 34°47′N; geocentric, 34°36′N.
Longitude: 92°21′W. Altitude: h = 135m, H+h = 5 km
Lithologic foundation: sandstone
Seismographs: Wood-Anderson short period EN
Clock: Howard-Gaertner
Director of the Station: Monsignor Joseph A. Murray.



—.—.— Photo by Replogle Globe Co., Inc.

Replogle Aluminum Globe for the Determination of Epicenters



Rueppel Hall, 3621 Olive Street, St. Louis, Missouri

more spacious quarters at 3621 Olive Street now known as Rueppel Hall. The reduced manpower of the war years and the greatly increased number of recorded earthquakes had caused the piling up of a backlog of records unread and of bulletins to be issued. The task of bringing up to date the station reports and issues of the Preliminary Bulletin was entrusted to a corps of student assistants under the direction of Doctor Ross R. Heinrich, who became officially the Assistant to the Director of the Central Station. Almost as soon as this program was well under way the volume of data available was enormously increased by the teletype distribution of reports from foreign sources supplied through the good offices of the Department of State.

In 1947 the Institute was asked to take over the curriculum in Industrial Engineering. In view of this change in scope and of the inclusion of Professional Geology and of Geological Engineering, it was felt that the name Institute of Geophysical Technology was no longer appropriate and the Board of Trustees of the University changed the designation of the school to Institute of Technology. The relationship of the Central Station of the Jesuit Seismological Association to the Institute remains the same, the address of the Central Station being 3621 Olive Street, Saint Louis 8, Missouri.