

CHAPTER XXIII

HOLY CROSS COLLEGE SEISMIC STATION

WORCESTER, MASSACHUSETTS

By Daniel Linehan, S. J.

Following Father Odenbach's letter to all the Jesuit Colleges in the United States, the Worcester, Massachusetts, newspapers announced that Holy Cross College would also join the newly organized association. The headlines were:

JESUITS PLAN SEISMIC GIRDLE OF THE WORLD

(Worcester POST for March 15, 1909)

TO OBSERVE EARTHQUAKES, SEISMIC STATION WILL
BE ESTABLISHED AT HOLY CROSS COLLEGE

(Worcester TELEGRAM, March 16, 1909)

Mr. Henry M. Brock, S. J. was placed in charge of ordering the Wiechert 80 kg. astatic pendulum and the Spindler and Hoyer Clock from Germany. But before the equipment arrived from the manufacturer, Mr. Brock was to leave Holy Cross to begin his theological studies at Woodstock College, Maryland and Reverend F. Rousseau, S. J. was appointed Director of the Station.

On September 29, 1909, the TELEGRAM ran an item concerning the station:

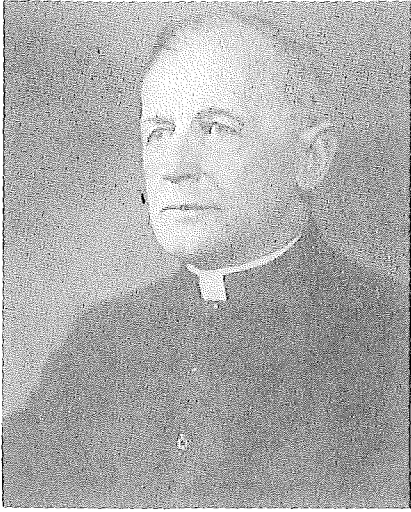
"Reverend Father Ferdinand Rousseau, S. J., began the installation of an astatic horizontal seismograph at Holy Cross College yesterday afternoon. The machine (sic) is placed in the room under the tower on the southern side of the O'Kane building and opens off the gymnasium. A foundation of solid concrete 4-1/2 feet thick was sunk into the earth in this room and on top was placed a heavy slab of polished marble. This is isolated on all sides from contact with the foundations or any part of the building, so that no shock may be communicated to the foundation or disturbances within."

On January 2, 1910, the TELEGRAM gave notice of an earthquake that had been recorded on the Holy Cross instruments. Mr. M. J. McGillicudy, Assistant Chemist was operator at the time. Mr. McGillicudy interpreted the quake waves as coming from Mexico.

One of the most diligent operators during the early days of the station was Mr. Louis Haubert, S. J. In spite of the local difficulties and the lack of any qualified expert on this equipment, Mr. Haubert performed yeoman service. Some of the local difficulties were due to the proximity of the railroads to the College Campus. Examination of some old grams that were left in the vault, or room, showed unmistakable traces of heavy local traffic, and apparently were from the passing of the railroad trains that run on either side of the College hill, the Boston and Albany, and the Blackstone River Branch of the New York, New Haven and Hartford. There must have been other difficulties from temperature changes, students changing classes or the



Aerial View of Holy Cross College



Reverend Henry M. Brock, S. J.
Director, 1909



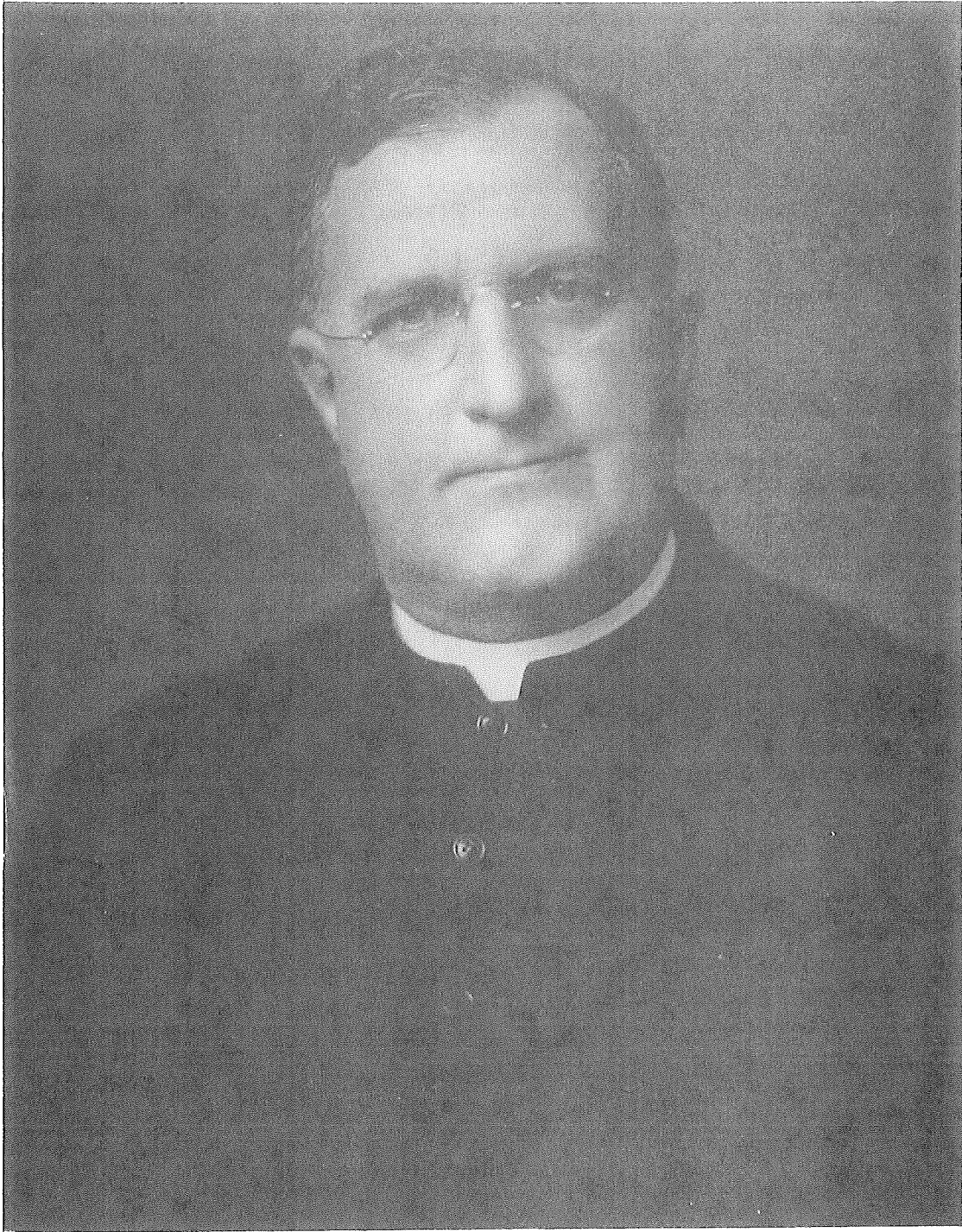
Reverend Ferdinand Rousseau, S. J.
Director, 1909 - 1910

close proximity of husky athletes exercising in the College gymnasium, just outside the instrument room, enough to discourage any budding seismologist.

There was a report that the instruments were moved at one time to a shed higher up on St. James Hill above the College elevation, but the author could find no verification of this site from the older residents of the College. When the instrument was moved to the northern side of O'Kane Building is uncertain, but that was the final site of the instrument location. This room was under the North tower beneath the entrance to O'Kane.

We find at least two letters to Mr. Haubert from Father Odenbach concerning the operation of the Wiechert and an explanation of its instrumental characteristics. Father Odenbach emphasized the necessity of the operator "growing up" with such a seismograph, and "acquiring a feel for it". On one occasion, Brother Ramage, S. J. visited from Georgetown University to adjust the instruments and explain their workings to the Holy Cross observer.

Operation of the Holy Cross Station was, at best, intermittent. Due to changing personnel it was impossible to keep the instruments in running order. Various members of the Physics Department attempted from time to time to place the Wiechert in running order, but without notable success. Despite the fact that the College contributed



----- photo by Alfred Brown

Reverend Daniel P. Mahoney, S. J.
Director, 1928 - 1929

little instrumental data to the Jesuit Seismological Association they remained a member until 1934.

During the rectorship of Reverend F. J. Dolan, S.J., the Wiechert was sent to Weston College in 1934. It was sent on a loan basis, and has remained on that arrangement ever since. In 1941 the Spindler and Hoyer Clock was also sent to Weston. The clock had remained idle for many years at Holy Cross, but at Weston it was cleaned, new time contacts installed, and the clock was found to be in excellent running order, and the rate not too bad. Later, with the permission of the authorities of Holy Cross College, this clock was loaned to Fairfield University, Fairfield, Connecticut, where a seismic installation was being contemplated.

It is hoped that Holy Cross College may find the opportunity in the near future to reestablish a seismic station in the vicinity of Worcester. Such an installation would prove an important link in the stations that now study the minor seismic activity of eastern Massachusetts. It would also prove of great assistance in the courses pertaining to geophysics now on the College curriculum.

The author wishes to thank Reverend Walter J. Meagher, S. J. of the Holy Cross Faculty who contributed most of the material in this brief history of the Holy Cross Seismic Station.