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Florida's own Foucault Pendulum

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Photouring Florida

By HAMPTON DUNN



FLORIDA'S OWN FOUCAULT PENDULUM

By HAMPTON DUNN

TAMPA --- The central attraction in the interesting physics building at the University of South Florida here is the Foucault Pendulum, which educates as it entertains.

Encased in a glass tower surrounded by a staircase, the pendulum is suspended from the ceiling three stories above the "bob."

This pendulum provides experimental evidence that the earth is rotating on its axis, according to a marker explaining the exhibit. The original pendulum was demonstrated by the French physicist Leon Foucault in 1851. The South Florida pendulum was copied from a Paris newspaper clipping of that year. It showed a design of the pendulum that swung from the dome of the Pantheon.

According to the laws of motion, an object moving in a given direction will maintain its direction of motion unchanged unless it is acted upon by some force to change its direction. If a pendulum is suspended on bearings at the geographic North Pole and is started vibrating in a given direction, it will continue in this plane of swing, since there is no countering force. However, as time passes the plane of the vibrating pendulum is observed to be shifting in a clockwise direction with respect to the earth (floor) beneath it. The rate of shift is 15 degrees per hour, so that it will make one complete turn of 360 degrees in 24 hours. Because the latitude of Tampa is 28 degrees, it takes 51 hours and six minutes, to make a complete rotation.

