

Foucault's Pendulum Apparatus

- **Precise Demonstration Model Shows Earth's Rotation**
- **Electrically Maintained — Needs no Attention**
- **Ideal Display Item for Science Rooms, Foyers, and Museums**

Léon Foucault's famous 1851 experiment in the Panthéon in Paris used a 27 kg pendulum bob suspended on a 67m wire, and demonstrated that the pendulum's plane of swing precessed with the rotation of the Earth. This was the first direct dynamic evidence that the Earth rotates about a polar axis, and the phenomenon has been a popular topic of discussion ever since.

The precession of Foucault's pendulum is often poorly explained. At the Earth's poles, the plane of the swing remains constant relative to the fixed stars and appears to an Earth-based observer to rotate once every sidereal day. At the equator, the plane of swing co-rotates with the Earth and the pendulum does not appear to precess. At other latitudes, the behavior is intermediate between these extremes and the pendulum precesses with respect to both the Earth and the fixed stars. At 30°, the apparent precession takes two days. If the motion is analyzed using a co-rotating coordinate system, then the force causing the precession is just the Coriolis force experienced by the moving bob.

This Foucault's Pendulum Apparatus is a carefully constructed miniature version of Foucault's device. Since the forces causing the precession are small, the effect is easily disturbed by other small environmental forces. To eliminate drafts, the pendulum is enclosed in a glass case, and the heavy vibration-damping base is equipped with leveling feet. The pendulum is electrically maintained to counter air resistance damping, and the swing amplitude can be adjusted using a potentiometer.

The suspension device ensures accurate centering of the pendulum's rest position over the graduated circle below the bob.

The graduated circle carries an adjustable double-ended marker bar for precise measurement of the plane of swing when tracking the precession rate.

The durable steel case is attractively finished suitable for permanent display, with a plaque carrying a brief description of Foucault's experiment.

Specifications

Overall dimensions are 16" x 16" x 57" high, weight is 110 lb.

Requires 110VAC.



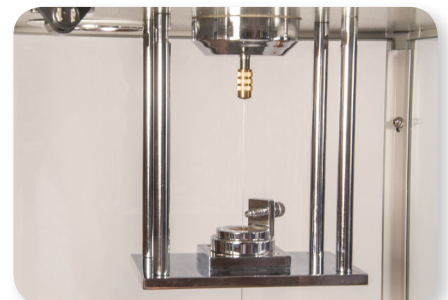
Item No.	Description
FCPN01	Foucault's Pendulum Apparatus



The durable steel case includes a plaque with a brief description of Foucault's experiment.



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