

Foucault – the man who swung the pendulum

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One hundred and fifty years ago Foucault (1819-1868) successfully demonstrated using a pendulum the special effect of the influence of the rotation of Earth which henceforth became known as the experiment of Foucault's Pendulum. In January of 1851 Foucault conducted the first of his successful pendulum experiments in the house in which he lived with his widowed mother on the corner of the rue d'Assas and the rue de Vaugirard, Paris. His experimental pendulum was no more than two and a half metres long.

Told of the success, Arago (1786-1853) – then Acting Director of the Office of Longitudes since the death of Bouvard (1767-1843) – invited him to stage the experiment in the room on the second floor of the Paris Observatory which is nowadays known as the Salle Cassini. This second demonstration was held in the beginning of February 1851 with a pendulum which was ten or eleven metres long.

The Prince-president (1808-1873), who would become a little later Napoleon III (1852-1870), told in his turn of the success of the venture, invited Foucault to stage his pendulum in a place more suited to a large public demonstration. The Pantheon was chosen and all who went there in March of 1851 were the witnesses, through this third experience, of an Earth which, turning under their feet, gave the impression that the pendulum itself produced this rotation.

In 1902 Flammarion (1842-1925) restaged the operation, which *l'Astronomie* bears witness of in its February 1996 issue. In 1994, on the occasion of the Festival of Science at the Paris Observatory, which had as its theme the Rotation of the Earth, the experience of Foucault's pendulum was repeated in the Salle Cassini with the help of the Athanor Society of Montluçon (for the "ball" of the pendulum), the participation of the Conservatorium of Arts and Trades, in particular one of its engineers, and the carrying through of the project to completion by the staff of the Paris Observatory. The success of the operation was such that for the following festival, in 1995, the Conservatorium of Arts and Trades restaged the operation of the pendulum of sixty metres at the Pantheon.

There have been many demonstrations throughout the world of Foucault's pendulum since the first successful demonstration in 1851. To mark the occasion of the one hundred and fiftieth anniversary the "History of Astronomy" commission of the Astronomical Society of France launched a project to make an inventory of the pendulums of Foucault which have existed or exist throughout the world.

A search like this can be done in many ways: for example you can help by investigating a pendulum found during the course of a journey, or do research without even leaving your home or library, by consulting tourist guides or books, or by asking friends in any part of the world.

Please send any information you may collect to the Société Astronomique de France, 3 rue Beethoven, 75016 PARIS, clearly marked on the envelope to the attention of: Commission "Histoire de l'astronomie" – Opération Foucault. A first appraisal is already being made of the items received before the first cut-off date of 2001 December 31. Further material is eagerly awaited as – if the pursuit of the pendulum continues – we shall be able to look forward to an annual classification of the catch.