

Magnetic Pole Encyclopedia Article

Magnetic Pole

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The knowledge that some rocks, such as lodestone, could attract iron has been attributed to the ancient Greek philosopher Thales. He had no explanation for the phenomena; he merely noted it. The next advancement in magnetism didn't occur until Petrus Peregrinus looked into the matter nearly thirteen hundred years later.

To say that little is known about Peregrinus is a definite understatement. This French scholar was born sometime between the years of 1220 and 1240. He was a friend of Roger Bacon (c. 1214-1294) and was one of the rare individuals to propose experimentation, a practice that Galileo developed into a science.

It had been discovered, by whom no one is certain, that a magnet that was suspended or floated on water would align itself in the directions of north and south. Europeans had made use of this knowledge to create compasses for navigating. Peregrinus developed the idea that magnetic force had the potential of being converted into kinetic energy to perform work. In his examination of magnetism, he made several startling discoveries. Peregrinus discovered he could improve the compass by suspending the magnetic needle on a pivot, and adding a graduated ring by which to make a more accurate determination of direction.

In addition, Peregrinus discovered how to determine the polarity (north and south poles) of a magnet. He found that opposite poles attracted each other and that breaking a magnet in half did not destroy it; it created two complete magnets, each having a north and south pole.

Peregrinus had no idea why the compass pointed north and south; in fact, he made the erroneous conclusion that a compass pointed to the north celestial pole, rather than the earth's north magnetic pole. It wasn't until 250 years later that William Gilbert made the distinction.