Pietro Angelo Secchi

Pietro Angelo Secchi (June 18, 1818 – February 26, 1878) was an Italian astronomer.

Born in Reggio Emilia, Father Angelo Secchi spent his latter years in Rome, where he died in 1878.

He was a pioneer of **astronomical spectroscopy** along with Joseph von Fraunhofer. At the age of 16, he entered the Jesuit Order, and later, at the age of 32, he became the director of the Vatican Observatory. Through his solar observations, he discovered the **existence of solar spicules**. He also discovered **comet Secchi** (C/1853 E1).

He drew one of the early maps of Mars in 1858, in which he called Syrtis Major the "Atlantic Canal". He thus anticipated Schiaparelli's use of the term canali, although Secchi's canals were not the long straight-line Martian canals of Schiaparelli and Lowell.

Of decisive importance for Secchi's later achievements in the domain of meteorology was his close friendship with the celebrated hydrographer, meteorologist, author oceanographer and astronomer , Commander Matthew Fontaine Maury , the first superintendent of the "U. S. National Observatory" -- later called the United States Naval Observatory, -- who lived and worked in Washington. Secchi meet and studied under Cmdr. M. F. Maury in Washington for two years (1848-49) while Secchi and other Jesuits were refuges from Rome.

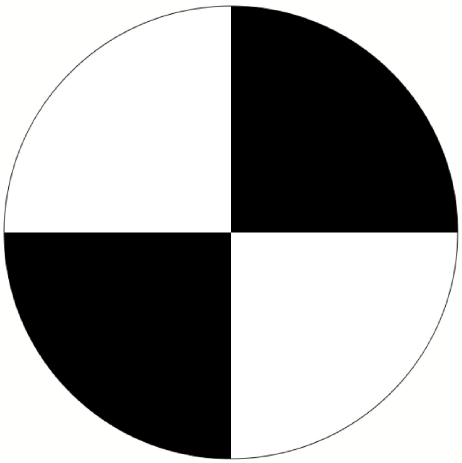
To this friendship, through the medium of Angelo Secchi, Italy owed its first acquaintance with the epoch-making discoveries of the great American, whose valuable services in marine meteorology and navigation cannot be overrated.

In later years Secchi dedicated to this friend, "as a token of our mutual friendship", his work, Sui recenti progressi della Meteorologia (Rome, 1861), and on Maury's death in 1873 Secchi gave Commander M. F. Maury an enduring memorial in a warm and touching necrology (cf. Bollettino meteorologico del Collegio Romano, X/II, Rome, 1873).

The Secchi crater on the Moon and a crater on Mars are named after him. Secchi also developed an oceanographic instrument, known as a **Secchi disk**.

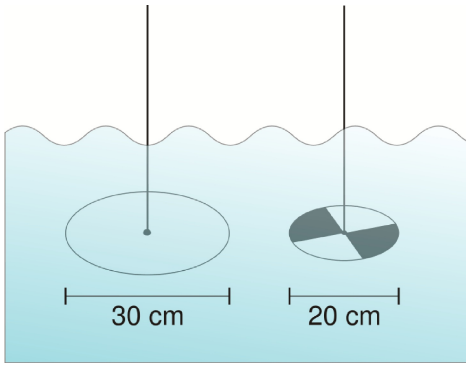
From Wikipedia, the free encyclopedia
http://en.wikipedia.org/wiki/Angelo_Secchi

Secchi Disk



Secchi disk pattern.

Created in 1865 by Pietro Angelo Secchi, the Secchi disk is a device used to measure water transparency in open waters of lakes, bays, and the ocean. The pattern shown in the image is drawn or painted onto a card or acrylic, mounted on a pole or line, and lowered slowly down in the water. The depth at which the pattern on the disk is no longer visible is taken as a measure of the transparency of the water. This measure is known as the Secchi depth and is related to water turbidity.



Different kinds of Secchi disks.

Secchi disk readings do not provide an exact measure of transparency, as there can be errors due to the sun's glare on the water, or one person may see the disk at one depth, but another, with better eyesight, may see it at a greater depth. However a Secchi disk is an inexpensive and straightforward method of measuring water clarity. Because of the potential for variation between practitioners, methods should be standardized as much as possible.

A Secchi disk measurement should always be taken off the shady side of a boat or dock between 9 a.m. and 3 p.m. (Lind, 1979). According to Cole (1994), the period for best results is between 10 a.m. and 2 p.m.. The same observer should take Secchi depth measurements in the same manner every time.

One can approach the measurement by lowering the disk beyond a point of disappearance, then raising it and lowering it slightly to set the Secchi depth. Another method is to record the depth at which the disk disappears, lower another few feet, then record the depth at which the disk reappears as it is slowly brought up. The Secchi depth is taken as the average of the two values.

Secchi disk measurements have been an integral component of Minnesota's lake water quality assessment programs for some time; lake residents make periodic measurements and submit their readings to state and local agencies. The aggregated longitudinal data are used to reveal general trends in water quality.

Scientifically accurate measurements of turbidity are performed using a nephelometer.

From Wikipedia, the free encyclopedia
http://en.wikipedia.org/wiki/Secchi_disk