Copernicus's remains reburied in Polish cathedral

May 22 2010, by Stanislaw Waszak

A computer reconstruction of Nicolas Copernicus made from the skull discovered in the cathedral in Frombork, northern Poland, in 2005. The remains of the 16th century father of modern astronomy, were reburied in a Polish cathedral Saturday as a cleric expressed regret for Church condemnation of his theories.

The remains of Nicolas Copernicus, the 16th century father of modern astronomy, were reburied in a Polish cathedral Saturday as a cleric expressed regret for Church condemnation of his theories.
Copernicus was finally laid to rest in a marked grave, the day following the 467th anniversary of his death, after a hunt by experts worthy of a detective story.

His coffin was entombed in the 14th century cathedral of Frombork, his northern Polish hometown, with his grave marked by a black granite headstone engraved with a map of the solar system.

The coffin had been taken Friday on a tour of the towns and villages of the northern Polish region around Frombork which Copernicus had known as a canon of the cathedral and an administrator of Church property.

In 1616, the Vatican labelled as heresy the Copernican theory that the sun, rather than the Earth, is at the centre of the universe.

It banned his pioneering work *De Revolutionibus Orbium Coelestium* (On the Revolution of the Heavenly Spheres), which shocked contemporaries when it was published shortly before his death in 1543 at the age of 70.

Copernicus had postulated that the Earth rotated on its axis once a day and travelled around the sun once a year, opposing the Church-backed Ptolemaic theory that the Earth was fixed at the centre of the universe, with the sun and stars revolving around it.

The Church only struck his work from its list of banned books in 1835, and in 1999 Polish pope John Paul II visited the astronomer's birthplace in Torun and praised his scientific achievements.

In an address at the burial service, archbishop of Lublin Jozef Zycinski criticised the "excesses of the self-proclaimed defenders of the Church" in condemning Copernicus's theories.
A mathematician, economist and physician as well as a cleric, Copernicus was buried like many other priests and laymen of Frombork in an unmarked tomb beneath the cathedral floor.

Researchers had spent the past two centuries trying to identify his grave, before finally locating it in 2005.

The remains found were positively identified by DNA testing on two strands of hair and a tooth.

"The history of the discovery was a real detective story," said Jerzy Gassowski, of the Institute of Anthropology and Archeology in Pultusk, central Poland, who located the grave.

"I found it right here," he said, pointing to a square of marble flooring at the foot of one of the cathedral's 16 altars.

Researchers discovered that Copernicus had been responsible for caring for the altar, and carried out painstaking probes, before Gassowski located the skull and bones of a man in his seventies in a pile of other remains.

The skull was sent to a police forensics laboratory in Warsaw, where experts created a computer-generated reconstruction of the man's face. The result bore a startling resemblance to portraits of Copernicus.

"Only DNA tests could offer certainty. But we needed to find some genetic material to allow comparison. And that seemed impossibly difficult, because casting a wide genealogical net failed," said Gassowski.

The precious material was finally located however -- in Sweden.
Among the booty carried off by the Swedes during their 17th century war with Poland was the Calendarium Romanum Magnum, an ancient tome by Johannes Stoeffler published in 1518 that belonged to Copernicus for many years.

It ended up in the library of Sweden's University of Uppsala.

"I had the idea to go and get the book, just in the hope of finding something by chance. And I did. There were some strands of hair in it," said Goran Henriksson, a University of Uppsala astronomer.

Swedish and Polish scientists compared the hair with a tooth from the skull found in Frombork and made a positive DNA match in 2008.

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