OAO program, which in the next three years is scheduled to launch three more observatories. Since April 1966, when a $69 million OAO went dead in orbit before it could return any useful information, NASA scientists have been aware that another failure might well spur Congress into cutting off the program’s remaining funds.

NASA will apparently get its money’s worth from the current $75 million observatory, which was planned to operate for at least six months. The craft is performing so perfectly, says OAO Project Scientist James Kupperian Jr., that “it now appears that all we have to worry about is the observatory’s simply wearing out. It could last for two, three, four or even five years.”

**ARCHAEOLOGY**

**A Pleasurable Find**

Of all the cities of the ancient world, none was more opulent than Sybaris, which was settled by Greek colonists on the isthmus of the Italian boot near the Ionian coast. Wealthy Sybarites had wine piped from vineyards to their homes, dressed in fine woolens, decorated themselves with gold ornaments, enjoyed vapor rubs in their bathubs and spent as long as a year preparing for parties. They walked on roads canopied to protect them from the sun, abhorred manual labor and so enjoyed sleeping late that they banned noisy blacksmiths, carpenters and even roosters from the city.

This endless quest for pleasure may well have led to the downfall of Sybaris. To amuse themselves, according to legend, the superb Sybarite cavalymen trained their horses to dance to pipe music. Armed with pipes, an invading army from nearby Crotonia assailed the Sybarite cavalry with music, then plunged through the dancing horses to victory. The Sybarites were dispersed, and their proud city mysteriously disappeared. TheyPosterity the chamber pot, which they may well have invented, and the word sybaritic, which has come to mean luxurious or voluptuous. Last week, 2,500 years later, Sybaris again became a center of attention. U.S. and Italian archaeologists announced that after an eight-year search, they had finally located the site of the long-lost city.

Despite plentiful references to Sybaris in ancient literature, finding it was no easy task. The ruins of the city lie under as much as 18 ft. of earth and are below sea level in an area about six miles in circumference. Because water gushes up through the sandy subsoil to flood excavations, digging has been limited only to a few test cuts. But the scientists, led by Archaeologist Froelich Rainey, director of the University of Pennsylvania museum, were aided in their discovery by an exotic space-age tool that “sees” beneath the earth: a cesium magnetometer.

The magnetometer, an offspring of instruments carried on space probes to measure magnetic fields, is carried like a divining rod over a suspected archaeological site. It can detect anomalies, or disturbances in the earth’s magnetic field, that are caused by objects buried as much as 20 ft. beneath the soil. Using the instrument, the archaeologists found and mapped the outlines of foundation walls, building columns, tile and pottery.

To confirm the magnetometer finds, the team used a high-speed drill, which penetrated to the ruins and brought to the surface tile and pottery samples that were later found to date from the time of Sybaris. By 1966, the port of Sybaris had been located and mapped. And by this fall, Rainey says, his team “beyond any reasonable doubt” had located the central city.

Test drillings also show that Sybaris was located on dunes above a flat plain, a finding that apparently demolishes the legend that the victorious Crotonians diverted a river to flood and destroy the ancient city. What is more likely, says Rainey, is that the city sank to a lower level after an earthquake, allowing the sea to rush in. “After all,” he says, “that is an area in which earthquakes are common.”

Because of the constant water seepage, a full excavation of Sybaris seems highly unlikely; it would require millions of dollars and a major technological effort. But Rainey is confident that thousands of valuable Sybarite artifacts can be recovered by drilling and hopes that the Italian government will prevent industrialization of the historical area.