

### **A NEW SPIN ON THE WORLD'S OLDEST COGWHEELS**

An amazing new working reconstruction of the Antikythera Mechanism, the oldest set of gears in the world and the ancestor of all modern mechanical technology has been developed at the Science Museum, London. The model goes on display in the exhibition Ancient Technology, at Technopolis, Athens on the 16 September 2002.

The new model is based on mechanism fragments dated from approximately 50 BC which have puzzled generations of engineers and historians. Found in amongst other treasures of an ancient wrecked ship - the Antikythera - the machine was packed with little cogwheels like a squashed clock.

It had been suggested by scholars that the main dial showed the positions of the Sun and Moon amongst the stars at any chosen date, the other dials showing information on the lunar month and further functions which could not be understood because of its poor state. Nicknamed the "calendar computer", it was hailed as the world's first computer, but no one really knew what the gadget was for.

Michael Wright, curator of Mechanical Engineering at the Science Museum, has taken a long hard look at the original fragments and has come up with a new theory.

He said,

"It could have been an amazingly sophisticated planetarium. The user could dial in any date he or she wanted, and the instrument would show the positions in the sky of the Sun, the Moon and of all the five planets then known, just what you would need for a horoscope."

After years of research, Wright has made a precise model - in the style of the original and using techniques available at the time - to demonstrate that his idea works. He said,

"Unfortunately historians do not know too much about the astronomy of that time, because later scholars paid so much more attention to the work of the famous astronomer Ptolemy, who lived a few generations later, that earlier works were lost. But Ptolemy provided some clues, which helped in building the reconstruction."

Referring to ancient texts by the famous Roman author Cicero who was alive when the Antikythera ship was wrecked. He was just one of several ancient writers who referred to mechanical astronomical models, but scholars have been unsure just how literally to interpret these descriptions. Wright's reconstruction fits these references, and, although many details remain conjectural, it makes sense both of them and of otherwise unexplained features of the original fragments.

Colleagues around the world have already enthusiastically received Wright's intricate work. Wright returns to Greece in September to address the international Scientific Instrument Symposium in Athens and to give a public lecture on the Mechanism.

The model represents only one of the two faces, and about half of the gearing, of the original. Wright is now working on the problems of the other half, developing a new reconstruction of the whole instrument. Although, the planetarium reconstruction suggests that the ability of instrument-makers of the time of Julius Caesar may have been seriously underestimated.

#### Notes to Editors

- i) Michael Wright is currently in Greece but available for interview on 003010 723 8097

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