

Paddling onwards

This apparatus, held in London's Science Museum, has some significant purpose — or curiosity value — in the history of physics. Can you guess what it is?

THE RESULTS ACHIEVED WITH THIS APPARATUS CAUSED HEATED DEBATE AT LONDON'S ROYAL SOCIETY. ANSWER NEXT MONTH.



Last month: As the Moon always presents the same side to the Earth, it was not until the advent of space exploration that the features of its far side were revealed. The first spacecraft to return photographs of the Moon's hidden side was Lunik III (also known as Luna 3), launched from the Soviet

Union in October 1959. This globe was made around 1962 to celebrate Lunik III's feat. It shows an incomplete map of the Moon's far side, with a blank strip for still uncharted areas.

Lunik III was successfully manoeuvred to the Moon's far side, which was sunlit at the



Last month:
Soviet moon globe

time, and stabilized. During a 40-minute period on 7 October 1959, the spacecraft took 29 photographs of the lunar surface, spanning about 70% of the then uncharted area. Problems with signal strength impeded the transmission of the images back to Earth, but the team succeeded in obtaining about 17 images. These were very indistinct but with some computer enhancement they could be built into the first picture of the far side of the Moon.

The globe shows a lunar landscape that is quite different from the familiar near side with its large dark 'seas'. The Lunik III images revealed just two dark regions — named Mare Moscovrae (Sea of Moscow) and Mare Desiderii (Sea of Dreams) — and many craters. Theories as to the origins of lunar craters varied. Possibly the most outlandish explanation came from a Spanish proponent of lunar inhabitation named Sixto Ocampo, who suggested that they were walled formations left over from a nuclear war, during which the lunar seas had swelled and fallen back to Earth, causing the biblical flood. It is more generally accepted that the craters were caused by asteroid impact.

Also marked on the globe is the estimated location of the September 1959 impact site of Lunik II, the first man-made object to land on another world. The Moon's far side was not seen directly by human eyes until 1968, during the Apollo 8 mission. No one has set foot on the Moon since Gene Cernan in 1972.



ALISON BOYLE

Alison Boyle is a curator at the Science Museum, Exhibition Road, South Kensington, London SW7 2DD, UK.
www.science-museum.org.uk