



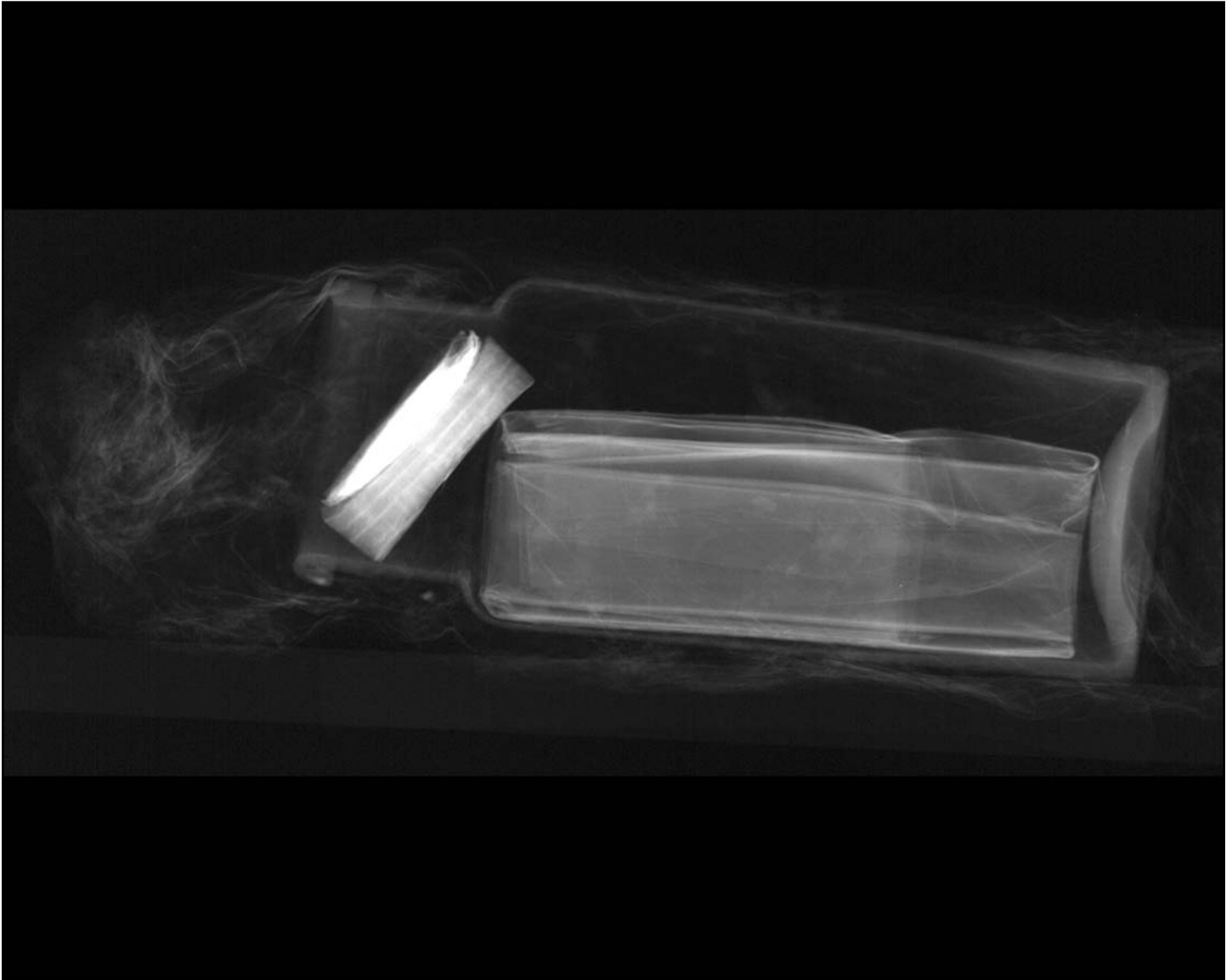
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NRAY Neutron Radiography Sample Image - Archaeology



An archaeological dig uncovered the item imaged above. This neutron radiograph reveals a letter, written on paper, inside a glass bottle. The cork in the opening of the bottle is displaced and has a wax seal on its outer surface. Lead foil is wrapped around the bottle. In order to preserve the item, the foil was not removed, and a neutron radiograph was prepared. Since neutron interaction with matter is random with atomic mass, neutrons are attenuated only slightly by lead (unlike X-rays) and the contents of the lead foil were imaged clearly. Due to the discovery of the apparently common document preservation technique used in packaging this letter, its authenticity and time origin were verified; an exciting application of neutron radiography.