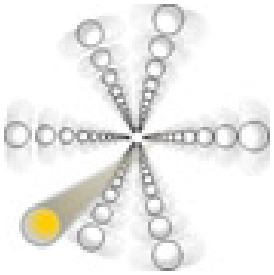

Contribution ID: **44** Type: **not specified**

X-ray microflurescence analysis of Augustan coins

Tuesday, 25 September 2012 19:00 (15 minutes)

Augustus has been the first Roman Emperor (27 B.C. - A.D. 14). He introduced a radical reform (23 B.C.) of the Roman monetization. Gold and silver coins were struck under his direct control, while the copper-based money (aes) were under the control of the Senatus.
X-ray microfluorescence analysis has been applied to 477 Augustan coins coming from the National Archaeologic Museum of Florence, an important collection owned in origin by the powerful Medicean family. This study has included several alloys used in that period's coinage: gold , silver, copper-based. The spectrometer equipped with policapillary optics, focuses the X-ray beam down to 50 μ, a unique feature of this device is the possibility of focusing on the small patina free areas already present on the coin surface, with no need for further cleaning. The chemical elements investigated are Ti, Fe, Ni, Cu, Zn, As, Br, Ag, Au, Pb, Sn, Sb, Hg, depending on the coin type examined. Interesting trends are found between the composition and the different issues/year struck. In particular, few coins outlined suspect by numismatic properties have been confirmed to be possible fakes.

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Session Classification: S4.2 X-ray Channeling & X-ray Optics

Track Classification: X-ray Channeling & X-ray Optics