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INFN-CHNet at work: X-ray fluorescence analyses on works of art at the CCR "La Venaria Reale"

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Summary. — INFN-CHNet, the network of the Italian National Institute for Nuclear Physics (INFN) devoted to Cultural Heritage, has the mission to develop instruments and methods for heritage science. Within this network, a Macro X-Ray Fluorescence (MA-XRF) scanner was realised for both elemental imaging and spectroscopy. It has been used for a number of applications, such as paintings, ceramics, mosaics and manuscripts. As an example, some measurements conducted at the Centro di Conservazione e Restauro "La Venaria Reale" will be presented. Furthermore, general aspects of the analysis with the INFN-CHNet MA-XRF scanner will be discussed.

1. – The INFN-CHNet Collaboration

The National Institute for Nuclear Physics (INFN) is the Italian research agency dedicated to the study of the fundamental constituents of matter and the laws that govern them. The main fields of research are nuclear, particle, theoretical and astroparticle physics. However, it conducts technological research and promotes the use of fundamental physics instruments, methods and technologies in other sectors. One of the fields of application of nuclear techniques is heritage science and, in 2017, the network of the INFN for cultural heritage, INFN-CHNet [1,2], was founded, with the mission to harmonise and to enhance the expertise of the Institute in the field towards its structures spread over the Italian territory. Several results have already been achieved by developing facilities for heritage science applications as reported in [3, 4].

